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

For

All In One Panel PC

Model: 3365-199

Trade Name: ADLINK TECHNOLOGY INC.

Issued for

ADLINK TECHNOLOGY INC.

9F, No. 166, Jian Yi Road, Chungho City, Taipei, Taiwan ZIP:235, R.O.C

Issued by

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ilac-MRA TAF Testing Laboratory 0240

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	01/05/2016	Initial Issue	All Page 121	Gloria Chang
01	04/22/2016	Revised Applicant Address & Antenna Information	P.1, P.4-5	Gloria Chang

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1. TEST REPORT CERTIFICATION

Applicant : ADLINK TECHNOLOGY INC.

Address : 9F, No. 166, Jian Yi Road, Chungho City, Taipei, Taiwan ZIP:235, R.O.C

Equipment Under Test : All In One Panel PC

Model : 3365-199

Trade Name :

Tested Date : September 02 ~ October 13, 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	All In One Panel PC
Model Number	3365-199
Identify Number	T150902D01
Received Date	September 02, 2015
Frequency Range	IEEE 802.11b/g, 802.11gn HT20: 2412MHz ~ 2462MHz IEEE 802.11gn HT40: 2422MHz ~ 2452MHz
Transmit Power	IEEE 802.11b mode: 14.40 dBm (0.0275 W) IEEE 802.11g mode: 26.12 dBm (0.4093 W) IEEE 802.11gn HT20 mode: 25.03 dBm (0.3184 W) IEEE 802.11gn HT40 mode: 24.12 dBm (0.2582 W)
Channel Spacing	5MHz
Channel Number	IEEE 802.11b/g, 802.11gn HT20: 11 Channels IEEE 802.11gn HT40: 7 Channels
Transmit Data Rate	IEEE 802.11b mode: up to 11 Mbps IEEE 802.11g mode: up to 54 Mbps IEEE 802.11gn HT20 mode (800ns GI): up to 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
Type of Modulation	IEEE 802.11b mode: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g mode: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11gn HT20/40 mode: OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Type	PIFA Antenna × 2: Ant. 1 / Chain 1, Antenna Gain: 4.69 dBi Ant. 2 / Chain 0, Antenna Gain : 4.24 dBi
Power Rating	12Vdc
Test Voltage	120Vac, 60Hz
AC Power Cord Type	Non-shielded cable, 1.8m (Detachable)
DC Power Cable Type	Non-shielded cable, 1.2m (Non-detachable), with a ferrite core
I/O Port	RS-232 Port × 2, RJ-45 Port × 1, USB Port × 5, Power Port × 1

Power Adapter:

No.	Manufacturer	Model No.	Power Input	Power Output
1	FSP	FSP060-DIBAN2	100-240Vac, 1.5A, 50-60Hz	12Vdc, 5.0A 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. *This submittal(s) (test report) is intended for FCC ID: X4D-3365-199 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 is a 802.11a/b/g/n transceiver in All In One Panel PC.

IEEE 802.11b/g, 802.11gn HT20/HT40 mode: 2TX / 2RX

Ant. 1 / Chain 1 & Ant. 2 / 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

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.

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 stand-up position (Z axis) and the worst case was recorded.*

4. TEST METHODOLOGY

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

5. FACILITIES AND ACCREDITATION

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

No.989-1, Wenshan Rd., Shangshan Village,
Qionglin Township, Hsinchu County 30741, Taiwan (R.O.C.)

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

5.2 ACCREDITATIONS

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

Taiwan	TAF

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

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 10
     IEEE 802.11b Channel Mid (2437MHz) Chain 0/1 Power set 10.5
     IEEE 802.11b Channel High (2462MHz) Chain 0/1 Power set 9.5
     IEEE 802.11g Channel Low (2412MHz) Chain 0/1 Power set 13
     IEEE 802.11g Channel Mid (2437MHz) Chain 0/1 Power set 15
     IEEE 802.11g Channel High (2462MHz) Chain 0/1 Power set 13.5
     IEEE 802.11gn HT20 Channel Low (2412MHz) Chain 0/1 Power set 12.5
     IEEE 802.11gn HT20 Channel Mid (2437MHz) Chain 0/1 Power set 14
     IEEE 802.11gn HT20 Channel High (2462MHz) Chain 0/1 Power set 11.5
     IEEE 802.11gn HT40 Channel Low (2422MHz) Chain 0/1 Power set 8.5
     IEEE 802.11gn HT40 Channel Mid (2437MHz) Chain 0/1 Power set 12.5
     IEEE 802.11gn HT40 Channel High (2452MHz) Chain 0/1 Power set 11
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
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/04/2016

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) ≥ 3 x 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)		Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	2412	10.0400	10.0550	500	PASS
Middle	2437	10.0500	10.0300	500	PASS
High	2462	10.0450	10.0450	500	PASS

IEEE 802.11gmode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	2412	16.3400	16.3500	500	PASS
Middle	2437	16.3350	16.3350	500	PASS
High	2462	16.3500	16.3350	500	PASS

IEEE 802.11gn HT20 mode

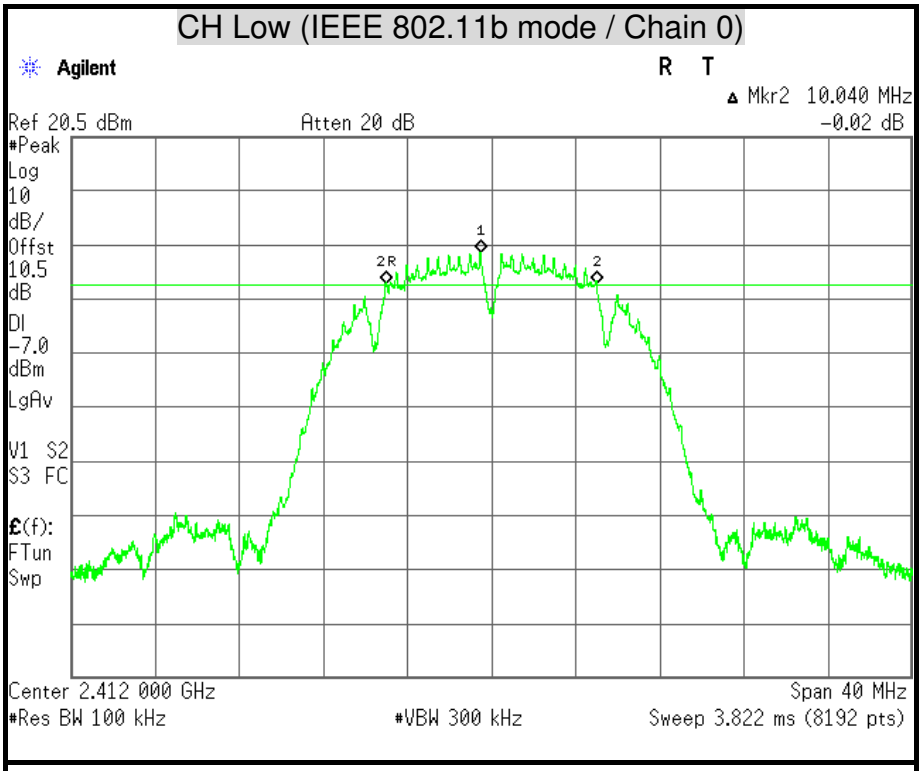
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	2412	17.5500	17.5700	500	PASS
Middle	2437	16.9800	17.5650	500	PASS
High	2462	17.3000	17.3200	500	PASS

IEEE 802.11gn HT40 mode

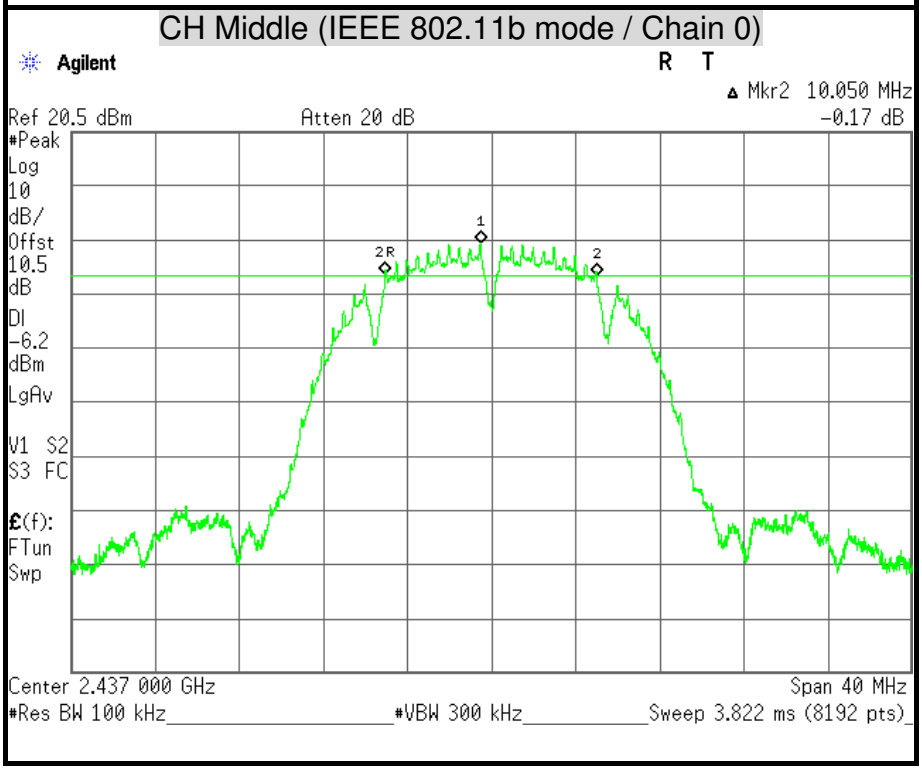
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	2422	36.0750	36.3300	500	PASS
Middle	2437	36.3400	36.3300	500	PASS
High	2452	36.3300	36.3400	500	PASS

6dB BANDWIDTH

CH Low (IEEE 802.11b mode / Chain 0)



CH Middle (IEEE 802.11b mode / Chain 0)



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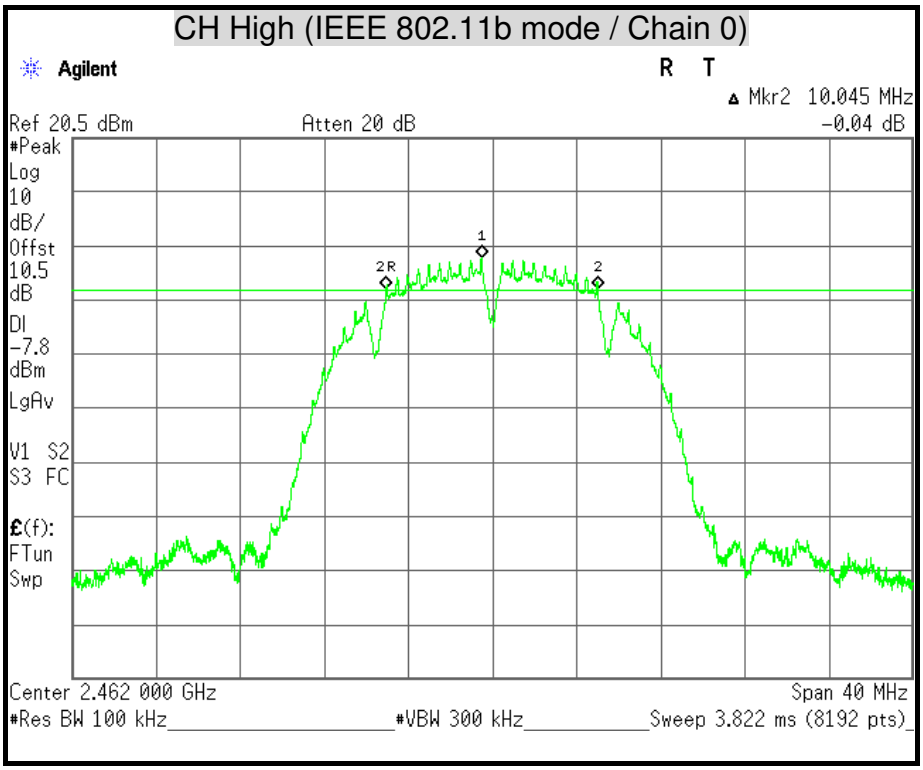

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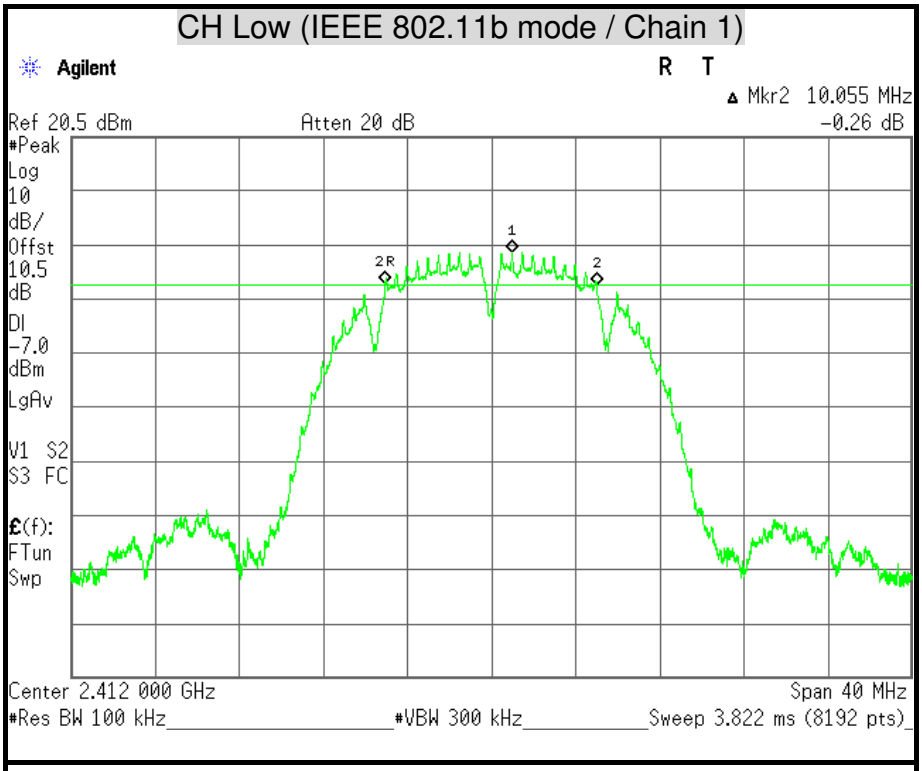

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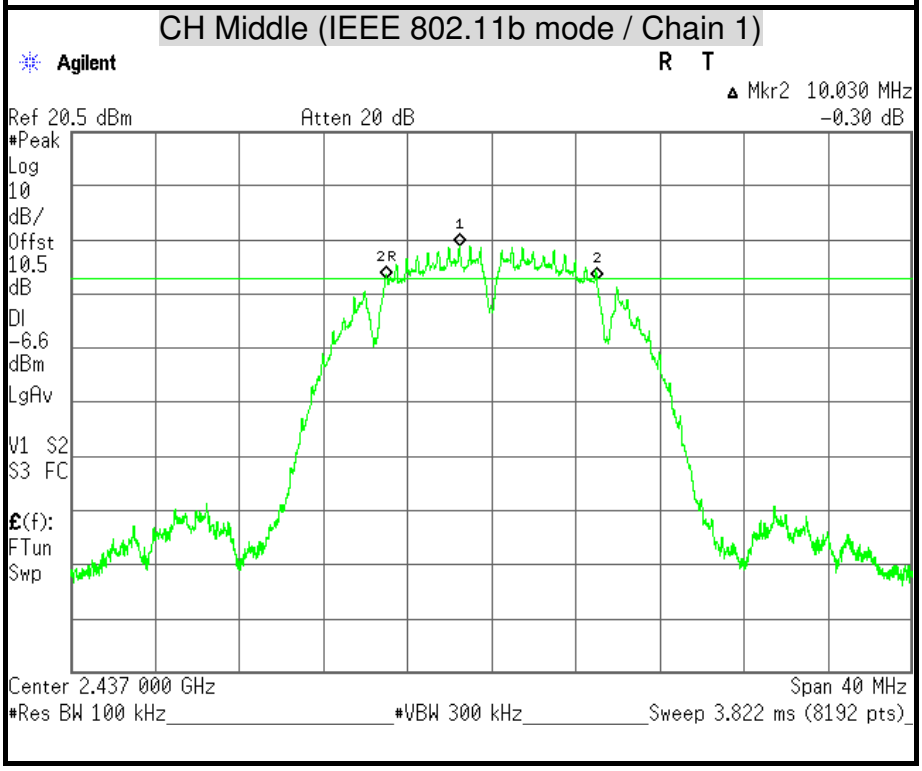

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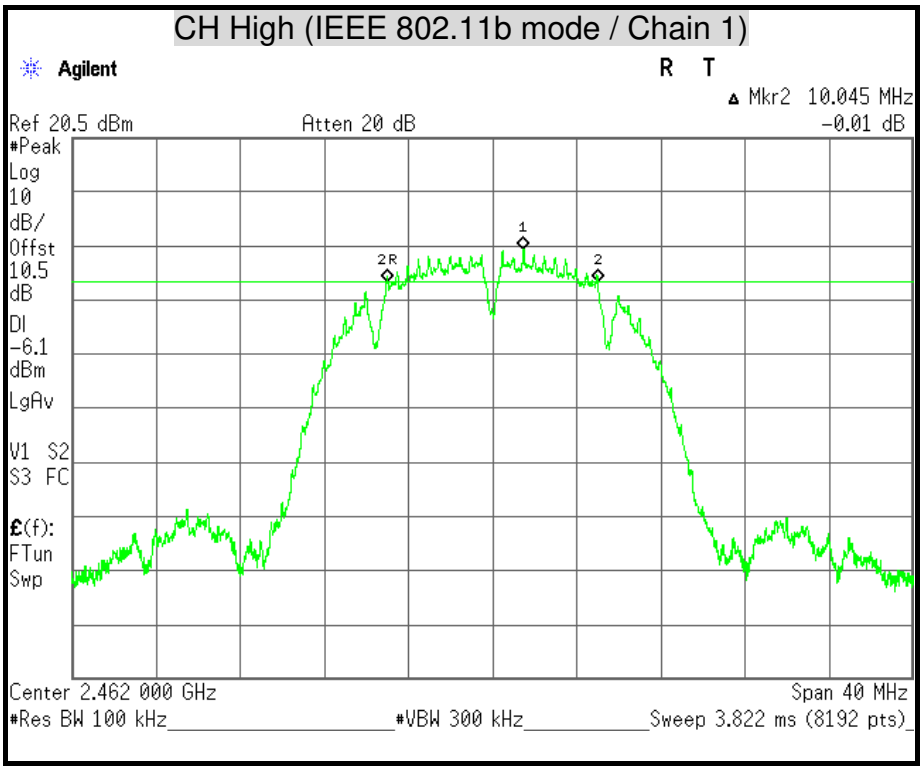
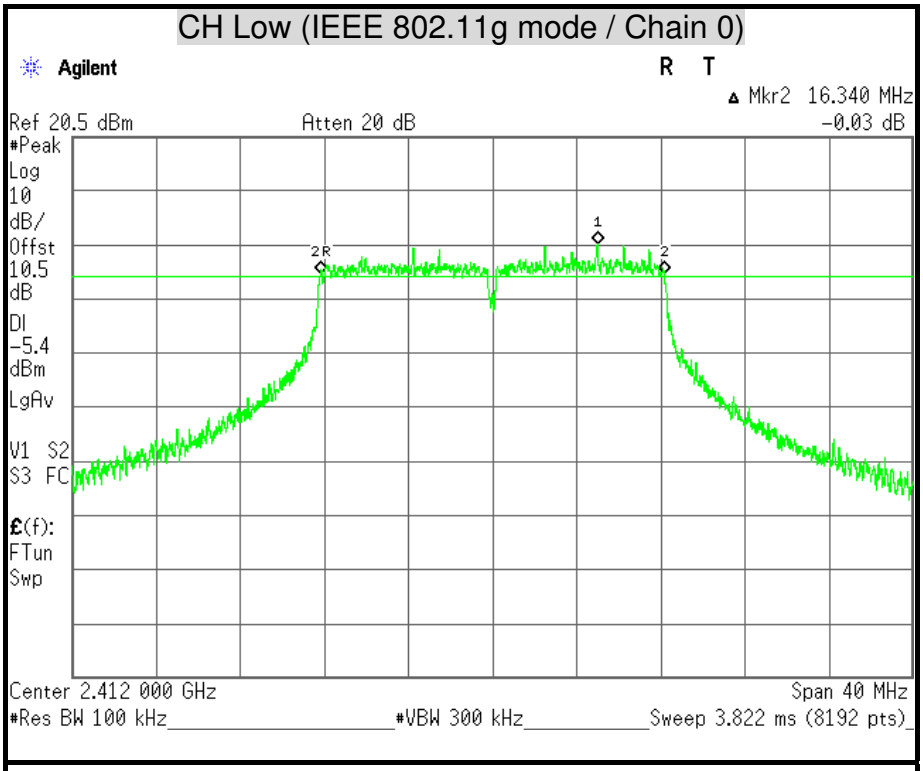
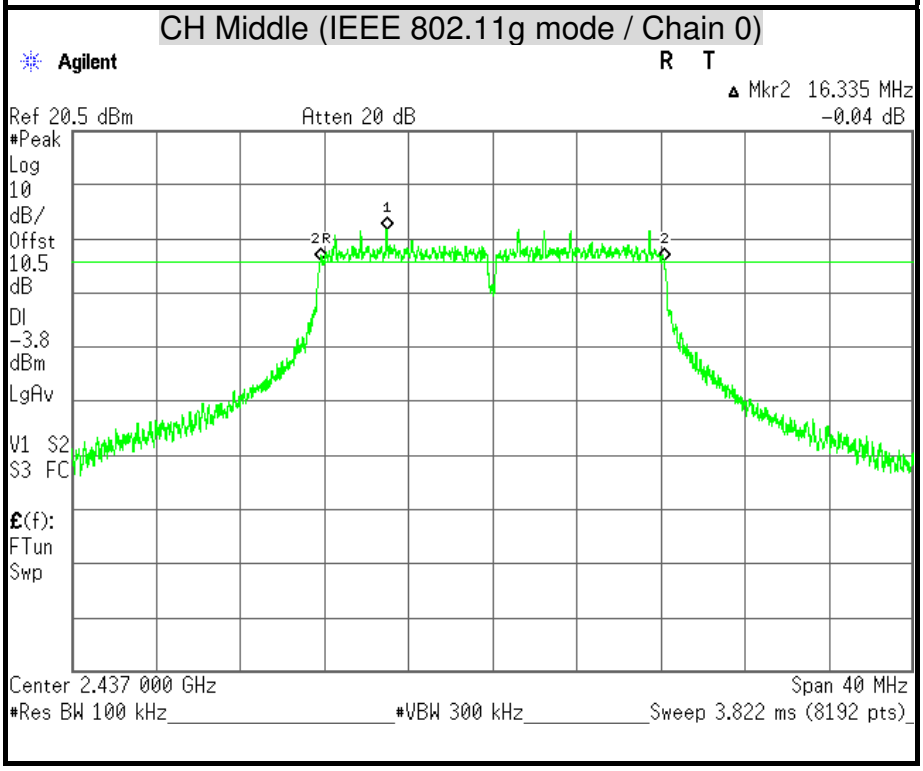


CH Low (IEEE 802.11g mode / Chain 0)



CH Middle (IEEE 802.11g mode / Chain 0)



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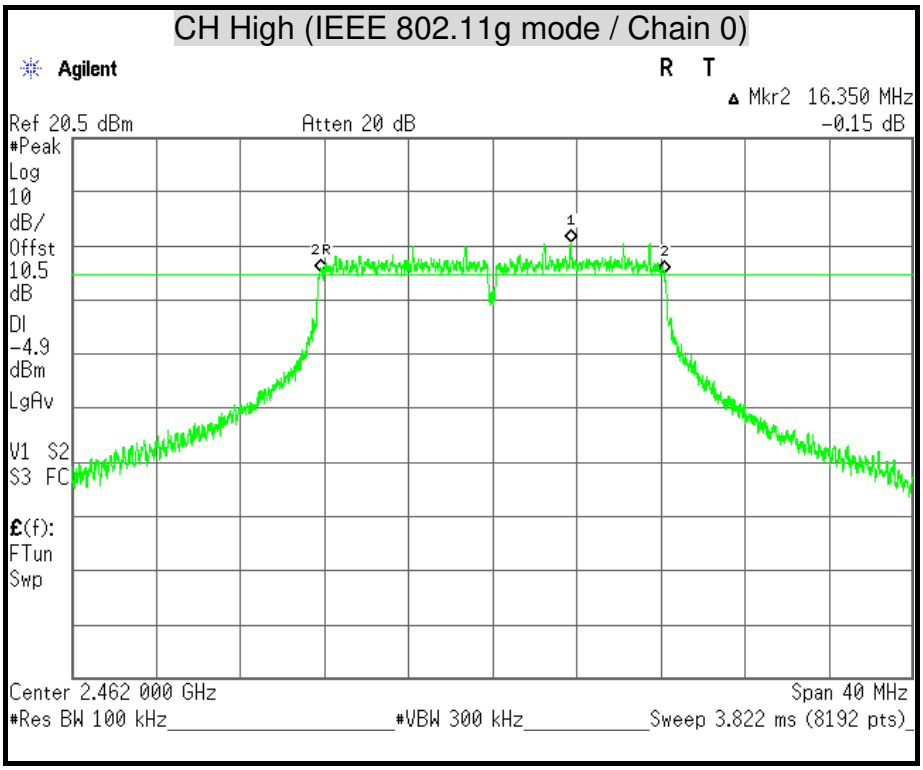
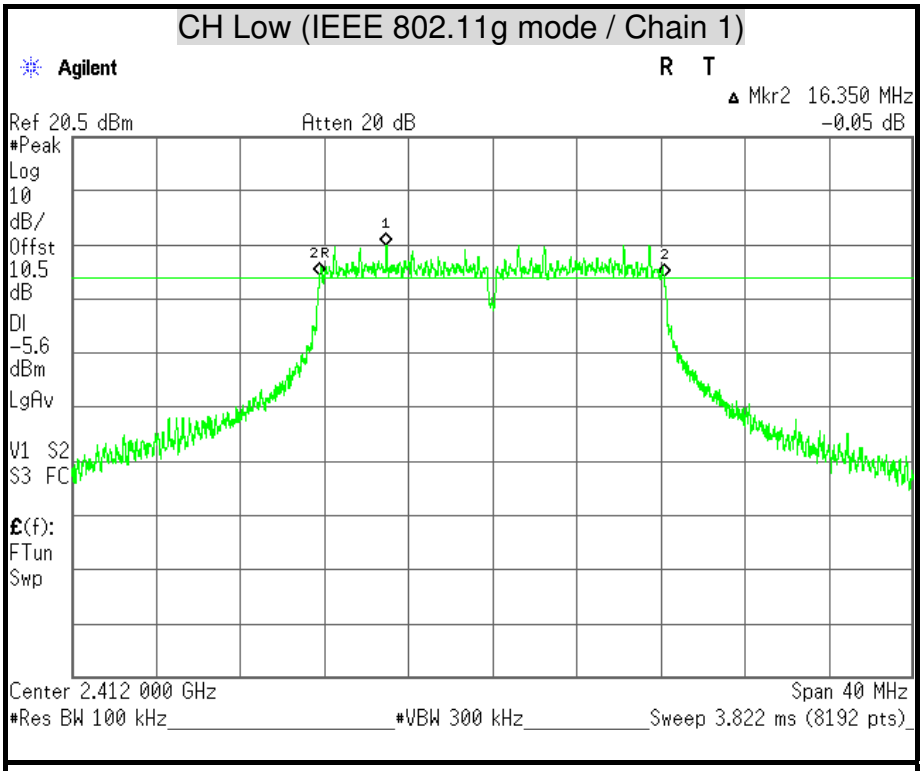


CH Low (IEEE 802.11g mode / Chain 1)



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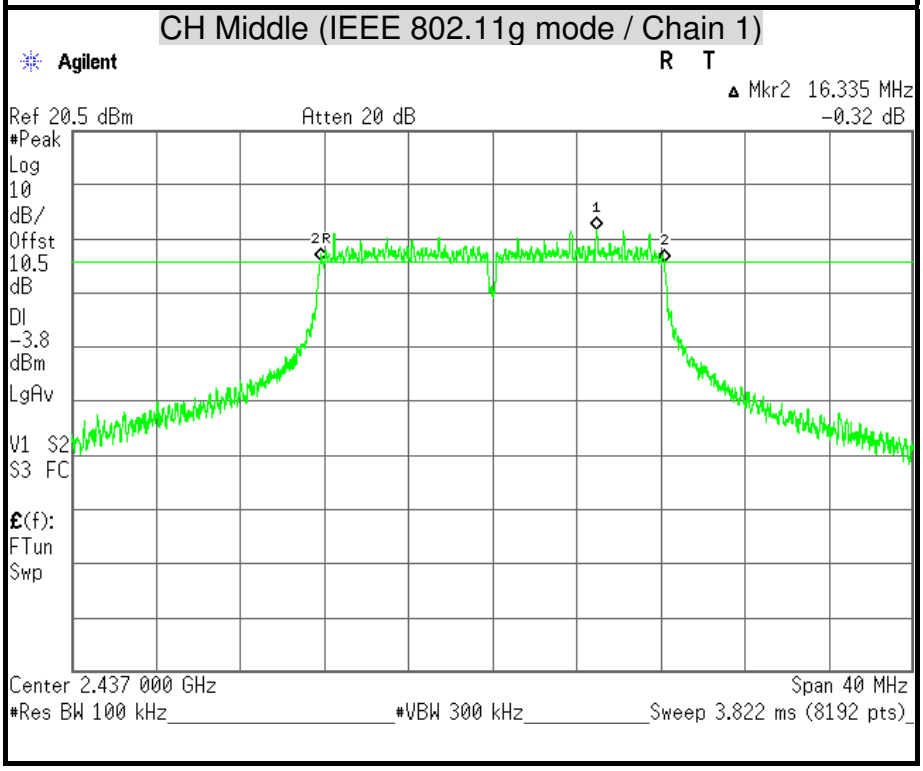
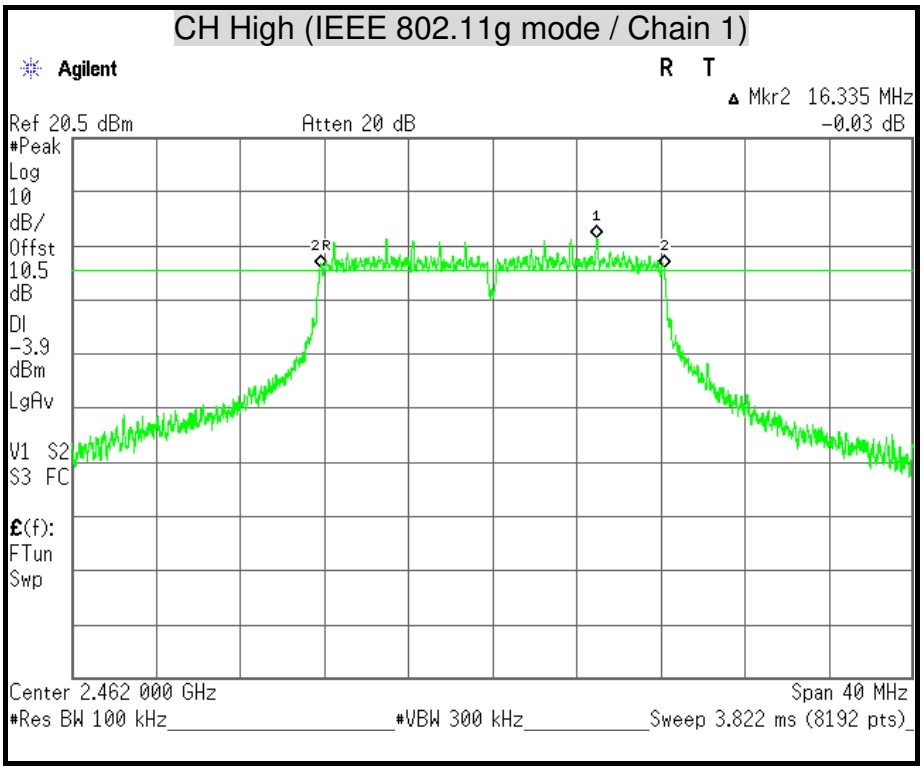
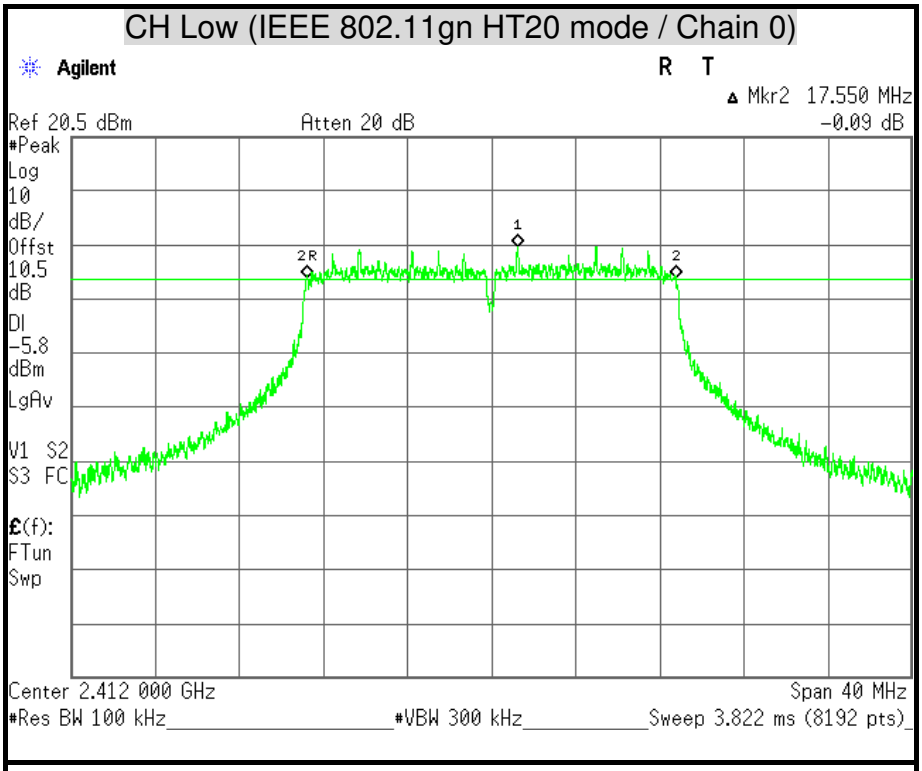


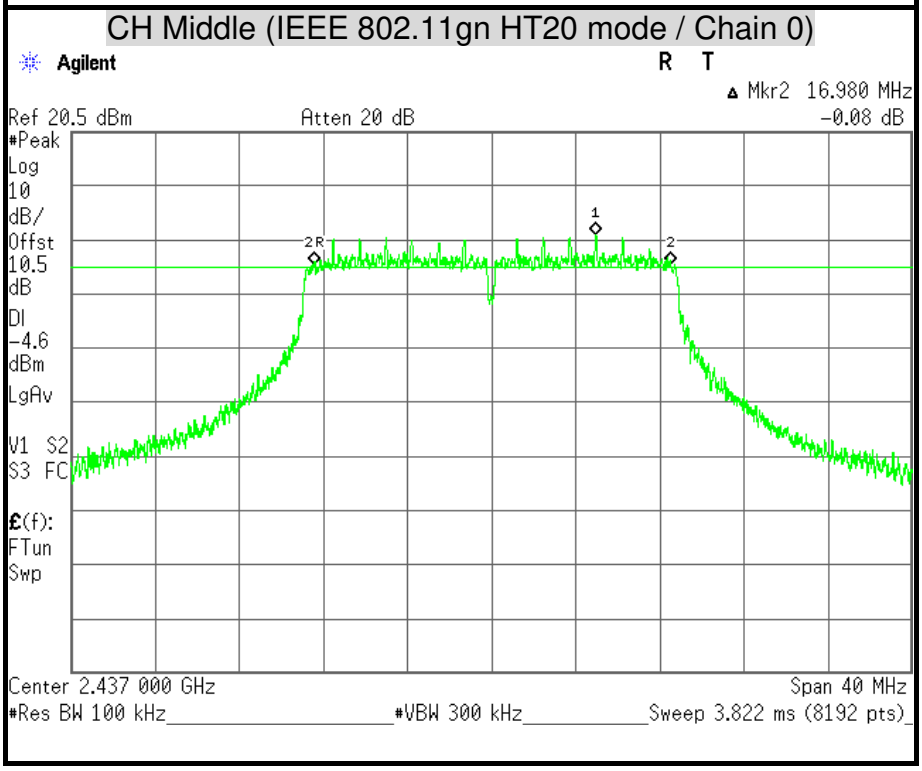
CH High (IEEE 802.11g mode / Chain 1)

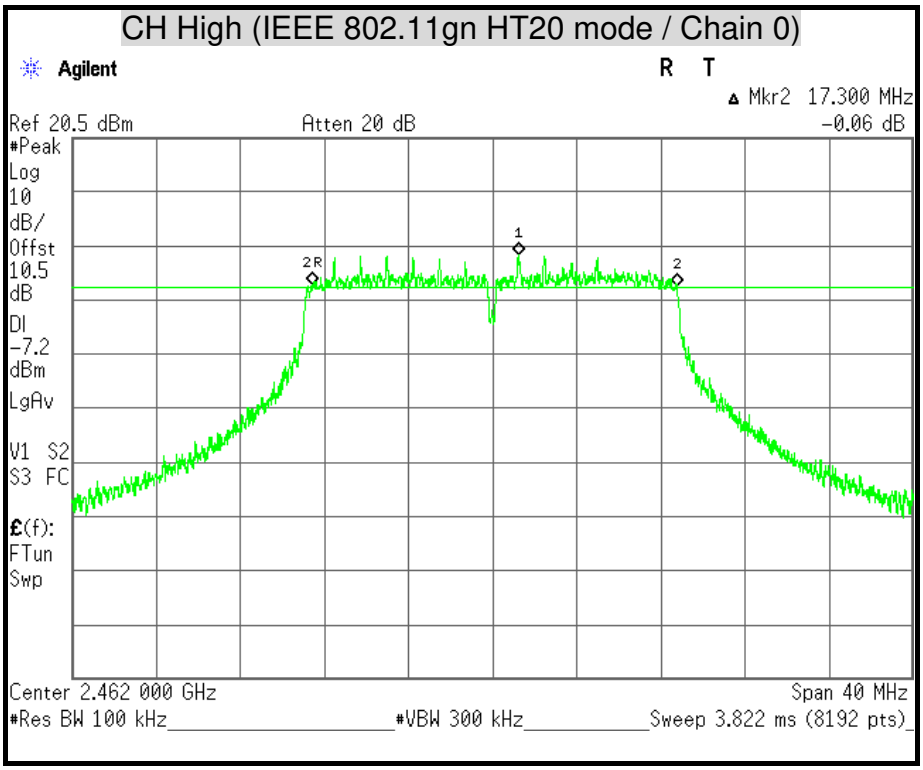


CH Low (IEEE 802.11gn HT20 mode / Chain 0)

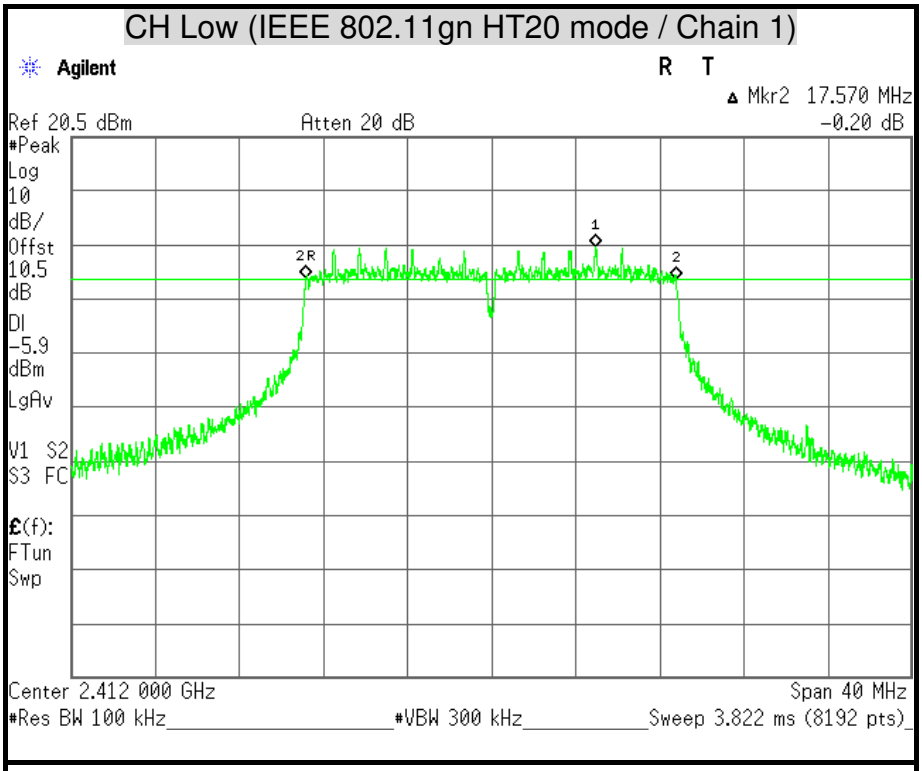


CH Middle (IEEE 802.11gn HT20 mode / Chain 0)

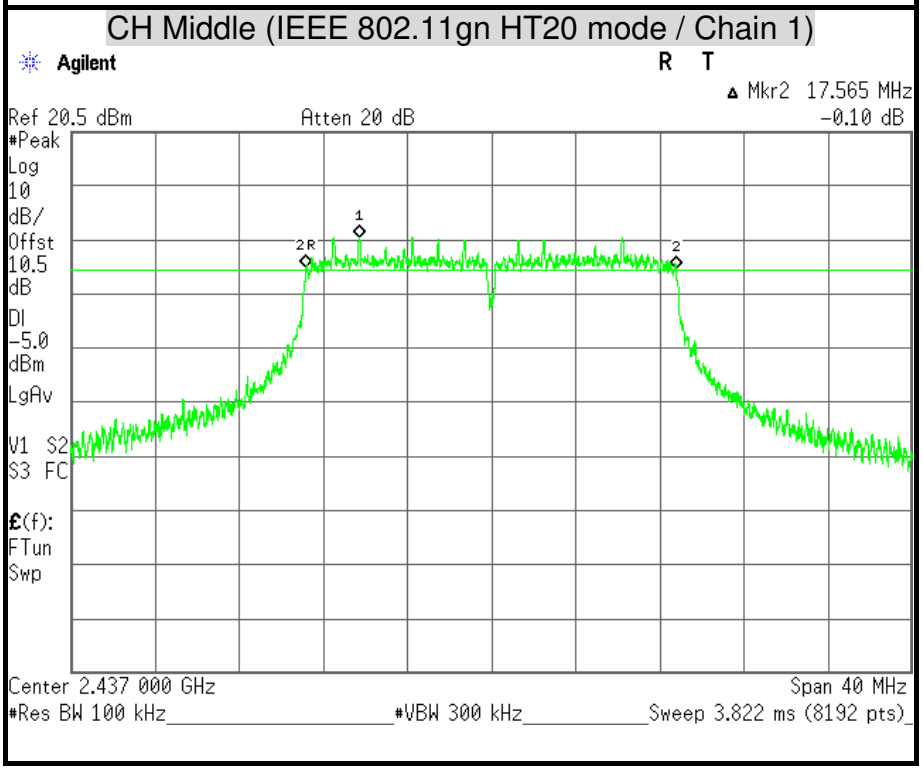


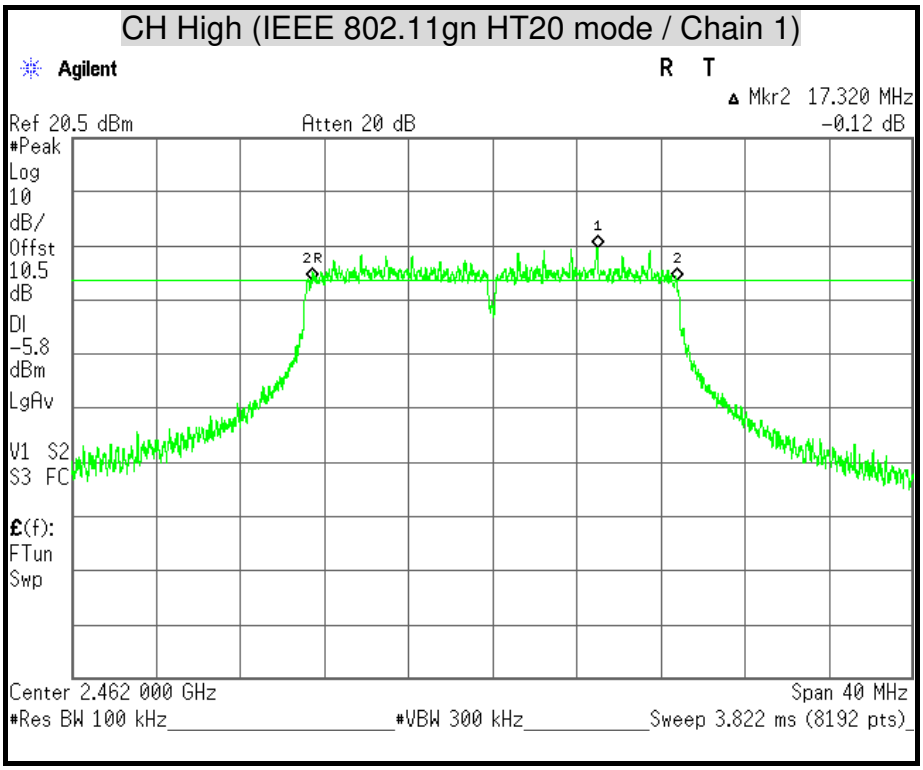


CH Low (IEEE 802.11gn HT20 mode / Chain 1)

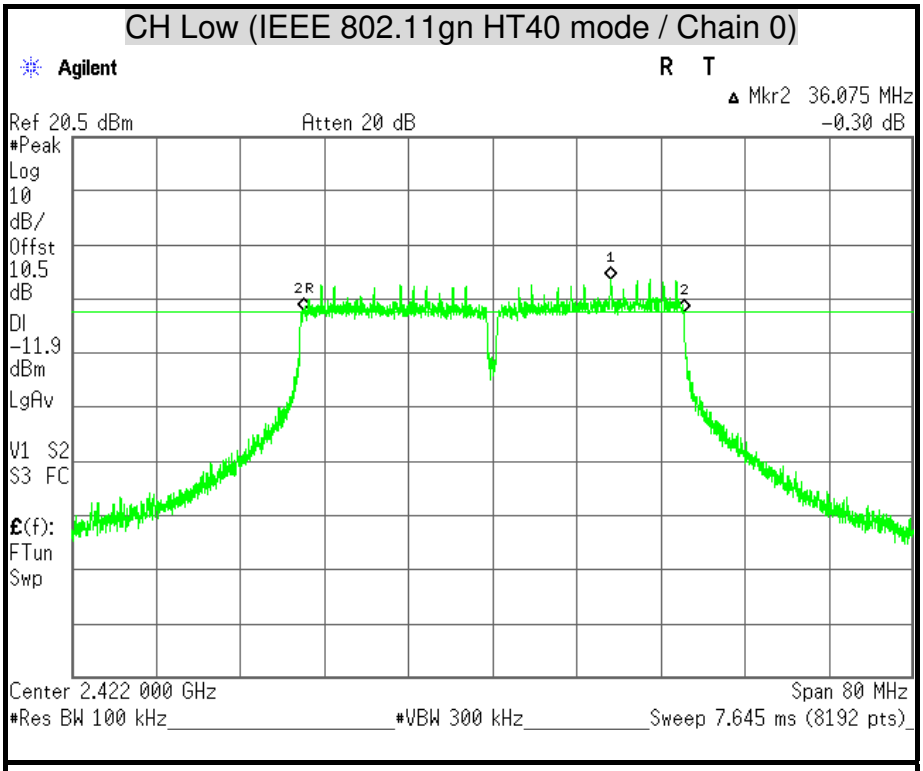


CH Middle (IEEE 802.11gn HT20 mode / Chain 1)

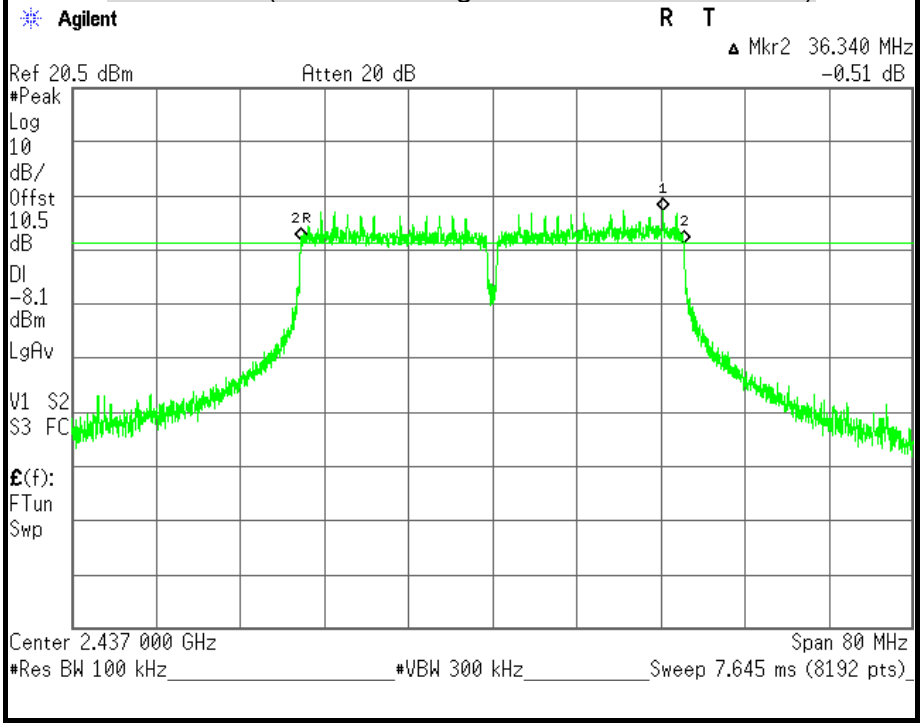


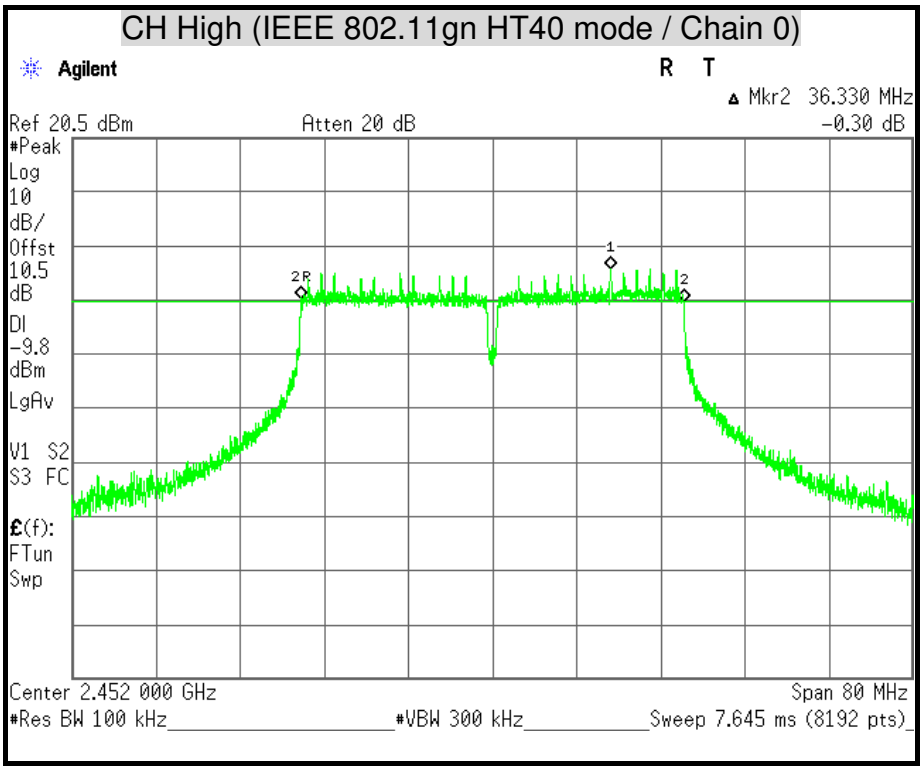


CH Low (IEEE 802.11gn HT40 mode / Chain 0)

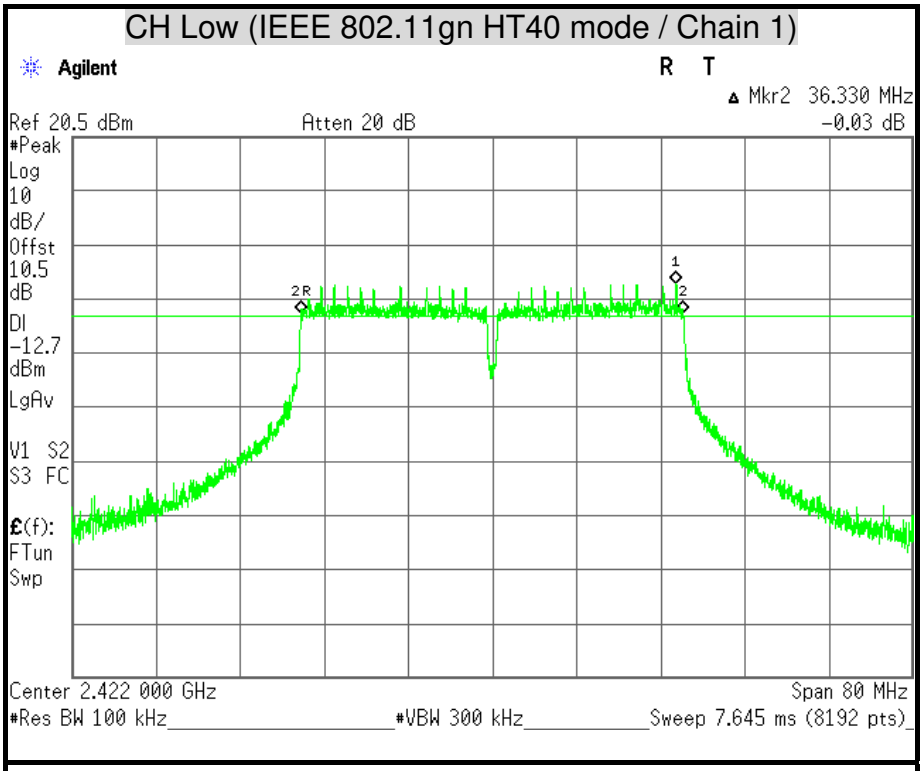


CH Middle (IEEE 802.11gn HT40 mode / Chain 0)





CH Low (IEEE 802.11gn HT40 mode / Chain 1)



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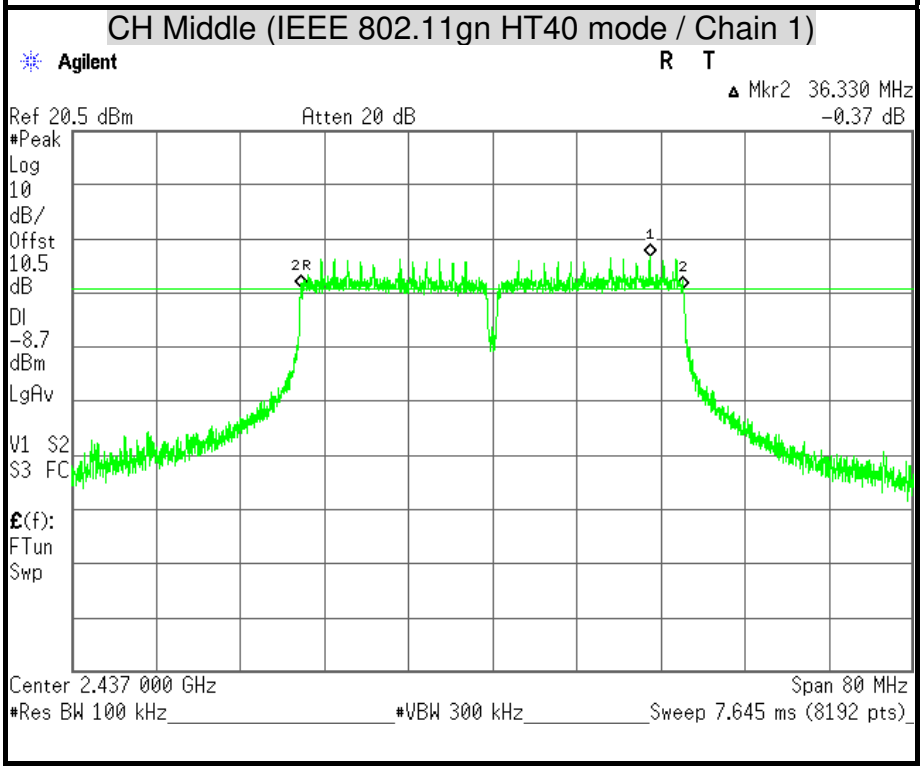
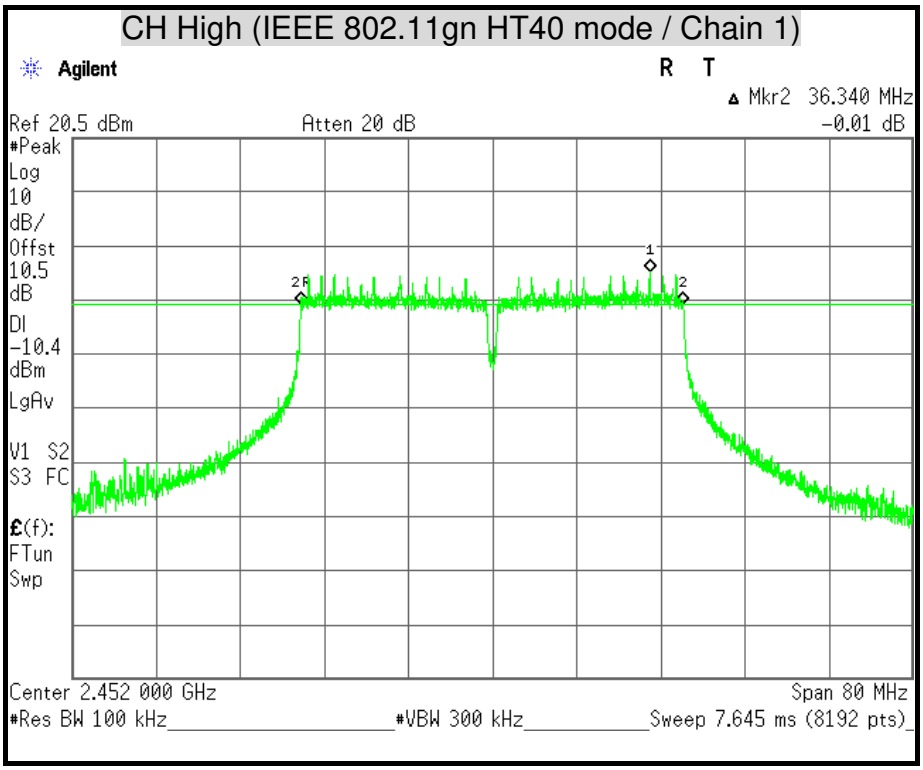




7.2 MAXIMUM PEAK OUTPUT POWER

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	11.41	10.93	14.19	0.0262	28.52	0.7112	PASS
Middle	2437	11.67	11.10	14.40	0.0275	28.52	0.7112	PASS
High	2462	10.22	11.25	13.78	0.0239	28.52	0.7112	PASS

Remark:

1. *At finial 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.*
3. *Total peak power = Chain 0 + Chain 1.*
4. *The directional gain is 7.48dBi which is less than 6dBi, the limit should be 6.52dBm.*

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	21.80	21.55	24.69	0.2944	28.52	0.7112	PASS
Middle	2437	23.00	23.22	26.12	0.4093	28.52	0.7112	PASS
High	2462	21.88	22.96	25.46	0.3516	28.52	0.7112	PASS

Remark:

1. *At finial 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.*
3. *Total peak power = Chain 0 + Chain 1.*
4. *The directional gain is 7.48dBi which is less than 6dBi, the limit should be 6.52dBm.*

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	20.95	20.73	23.85	0.2427	28.52	0.7112	PASS
Middle	2437	21.98	22.05	25.03	0.3184	28.52	0.7112	PASS
High	2462	19.59	20.84	23.27	0.2123	28.52	0.7112	PASS

Remark:

1. *At finial 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.*
3. *Total peak power = Chain 0 + Chain 1.*
4. *The directional gain is 7.48dBi which is less than 6dBi, the limit should be 6.52dBm.*

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	17.15	16.80	19.99	0.0998	28.52	0.7112	PASS
Middle	2437	21.64	20.50	24.12	0.2582	28.52	0.7112	PASS
High	2452	19.22	19.18	22.21	0.1663	28.52	0.7112	PASS

Remark:

1. *At finial 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.*
3. *Total peak power = Chain 0 + Chain 1.*
4. *The directional gain is 7.48dBi which is less than 6dBi, the limit should be 6.52dBm.*

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	9.14	8.67
Middle	2437	9.40	8.84
High	2462	7.90	9.01

Remark:

1. At finial 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	12.30	12.07
Middle	2437	13.70	13.71
High	2462	12.67	13.34

Remark:

1. At finial 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	11.74	11.68
Middle	2437	12.86	12.68
High	2462	10.48	11.53

Remark:

1. *At finial 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	8.03	7.61
Middle	2437	12.23	11.57
High	2452	10.16	9.86

Remark:

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

7.4 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
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/04/2016

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 kHz ≤ RBW ≤ 100 kHz.
5. Set the VBW ≥ 3 x 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)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
Low	2412	-14.50	-15.03	-11.75	6.52	PASS
Middle	2437	-14.60	-14.69	-11.64	6.52	PASS
High	2462	-15.38	-14.43	-11.87	6.52	PASS

Remark:

1. *At finial test to get the worst-case emission at 1Mbps.*
2. *The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.*
3. *Total power spectral density = Chain 0 + Chain 1*
4. *The directional gain is 7.48dBi which is less than 6dBi, the limit should be 6.52dBm.*

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
Low	2412	-12.99	-13.65	-10.30	6.52	PASS
Middle	2437	-11.95	-12.36	-9.14	6.52	PASS
High	2462	-12.71	-11.51	-9.06	6.52	PASS

Remark:

1. *At finial test to get the worst-case emission at 6Mbps.*
2. *The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.*
3. *Total power spectral density = Chain 0 + Chain 1*
4. *The directional gain is 7.48dBi which is less than 6dBi, the limit should be 6.52dBm.*

IEEE 802.11gn HT20 mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
Low	2412	-14.67	-14.85	-11.75	6.52	PASS
Middle	2437	-13.22	-13.07	-10.14	6.52	PASS
High	2462	-16.20	-14.25	-12.11	6.52	PASS

Remark:

1. *At finial test to get the worst-case emission at 6.5Mbps.*
2. *The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.*
3. *Total power spectral density = Chain 0 + Chain 1*
4. *The directional gain is 7.48dBi which is less than 6dBi, the limit should be 6.52dBm.*

IEEE 802.11gn HT40 mode

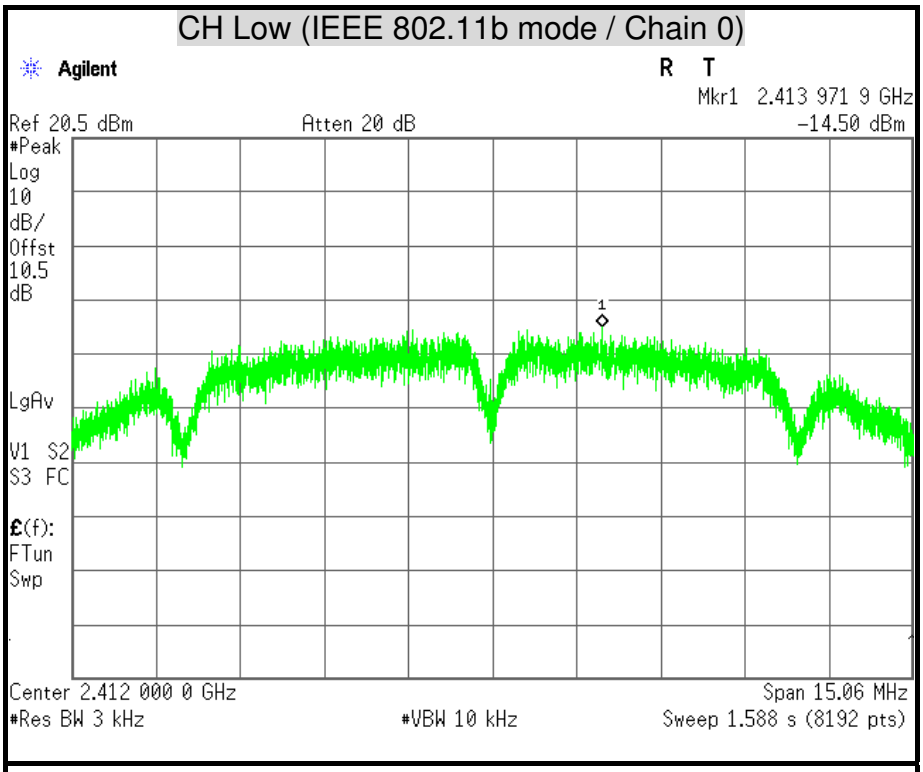
Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
Low	2422	-20.94	-21.42	-18.16	6.52	PASS
Middle	2437	-16.16	-17.50	-13.77	6.52	PASS
High	2452	-18.23	-16.99	-14.56	6.52	PASS

Remark:

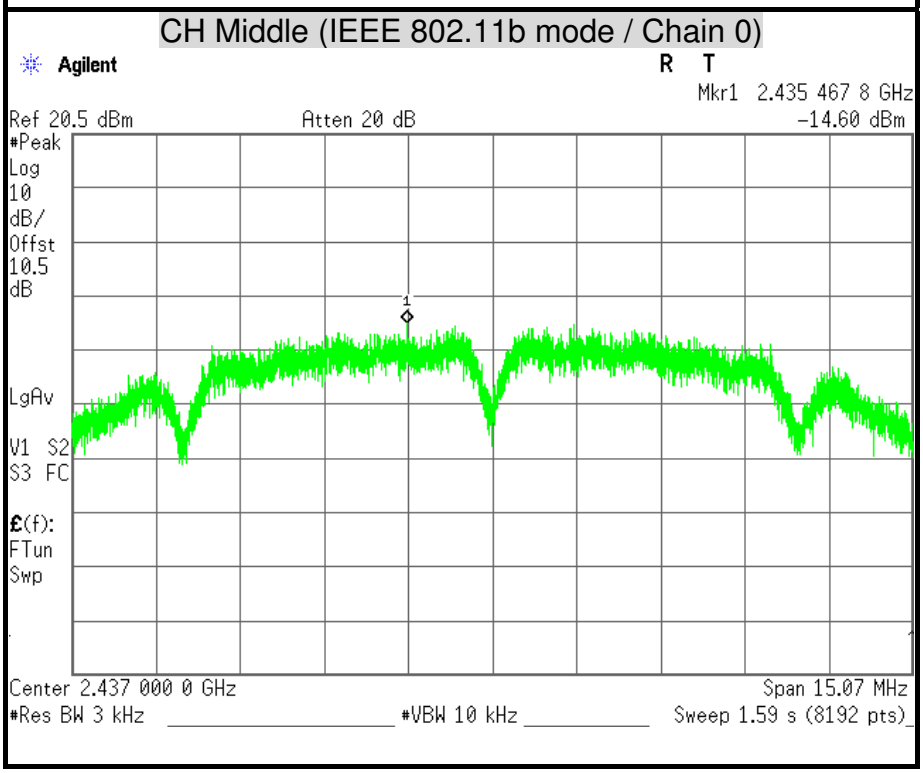
1. *At finial test to get the worst-case emission at 13.5Mbps.*
2. *The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.*
3. *Total power spectral density = Chain 0 + Chain 1*
4. *The directional gain is 7.48dBi which is less than 6dBi, the limit should be 6.52dBm.*

POWER SPECTRAL DENSITY

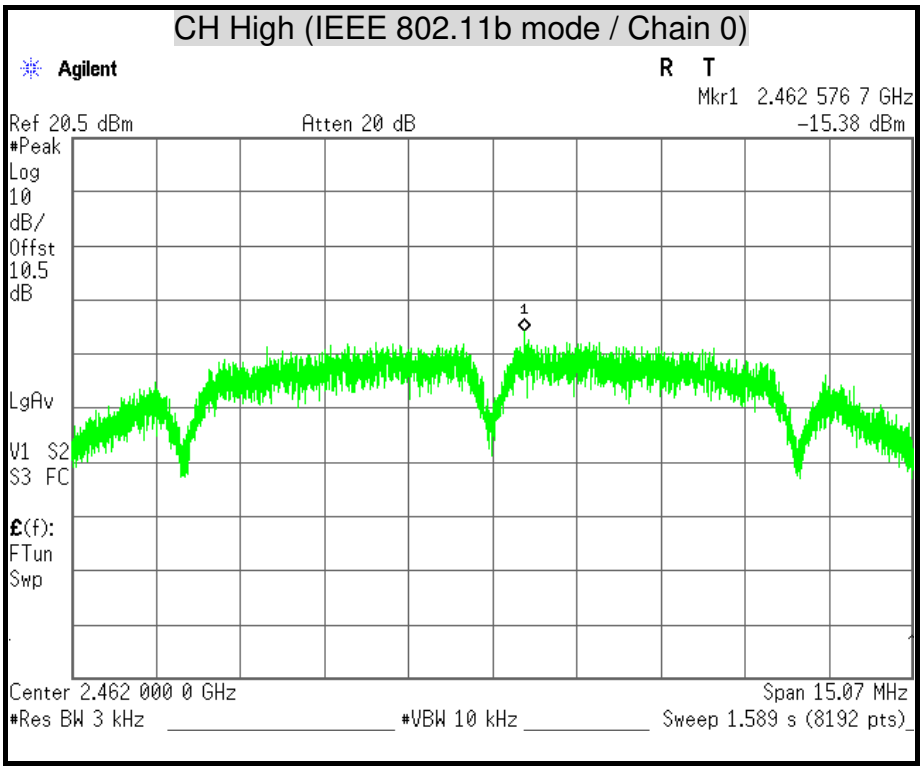
CH Low (IEEE 802.11b mode / Chain 0)



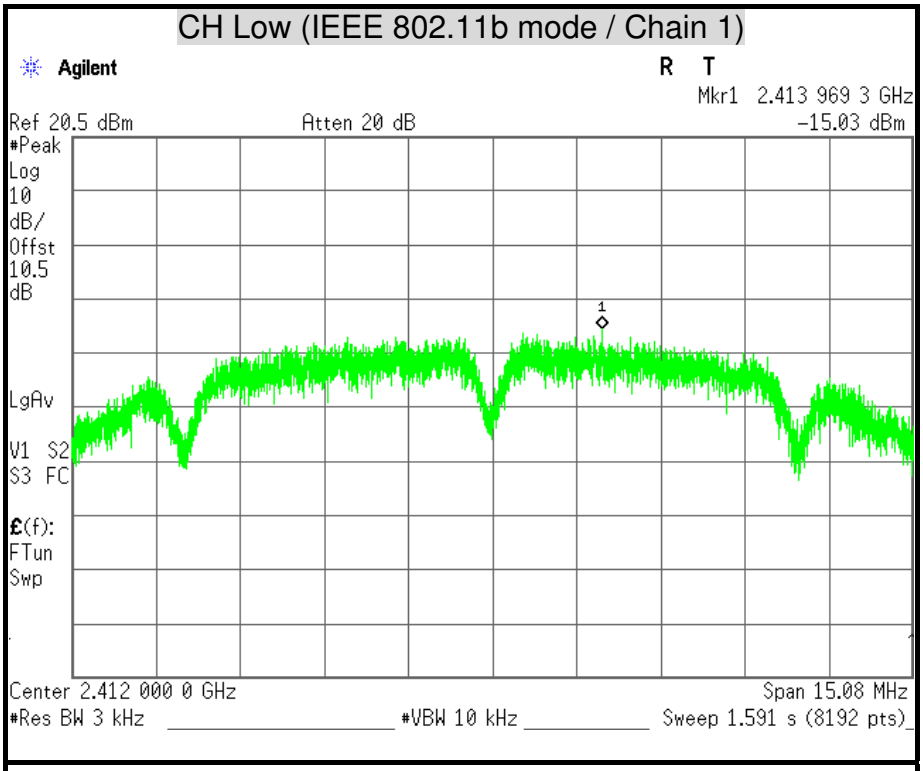
CH Middle (IEEE 802.11b mode / Chain 0)



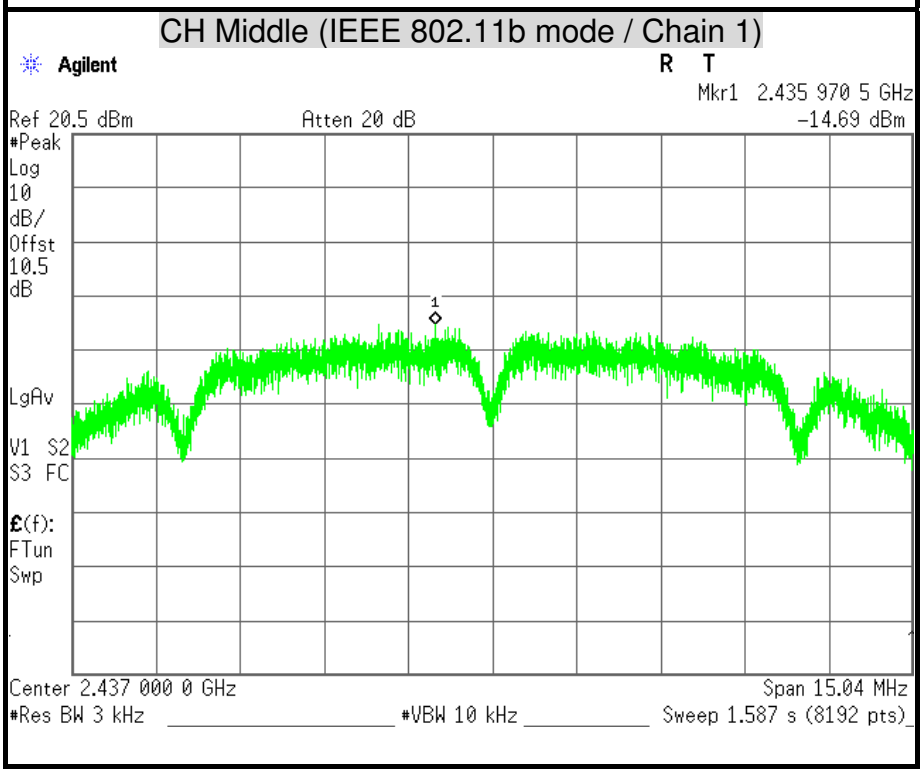
CH High (IEEE 802.11b mode / Chain 0)



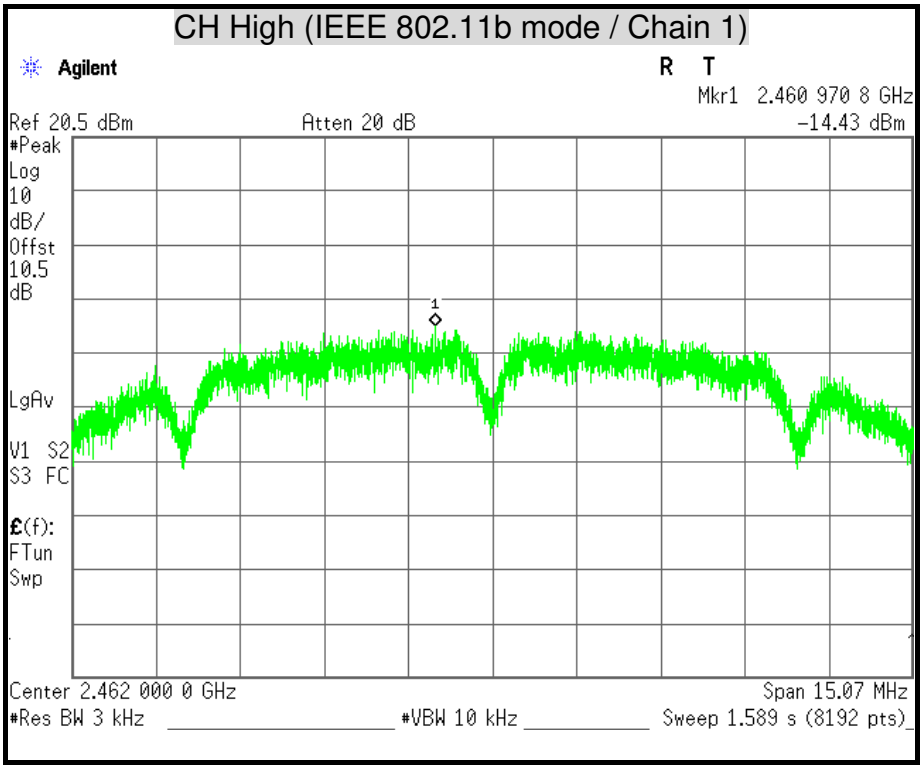
CH Low (IEEE 802.11b mode / Chain 1)



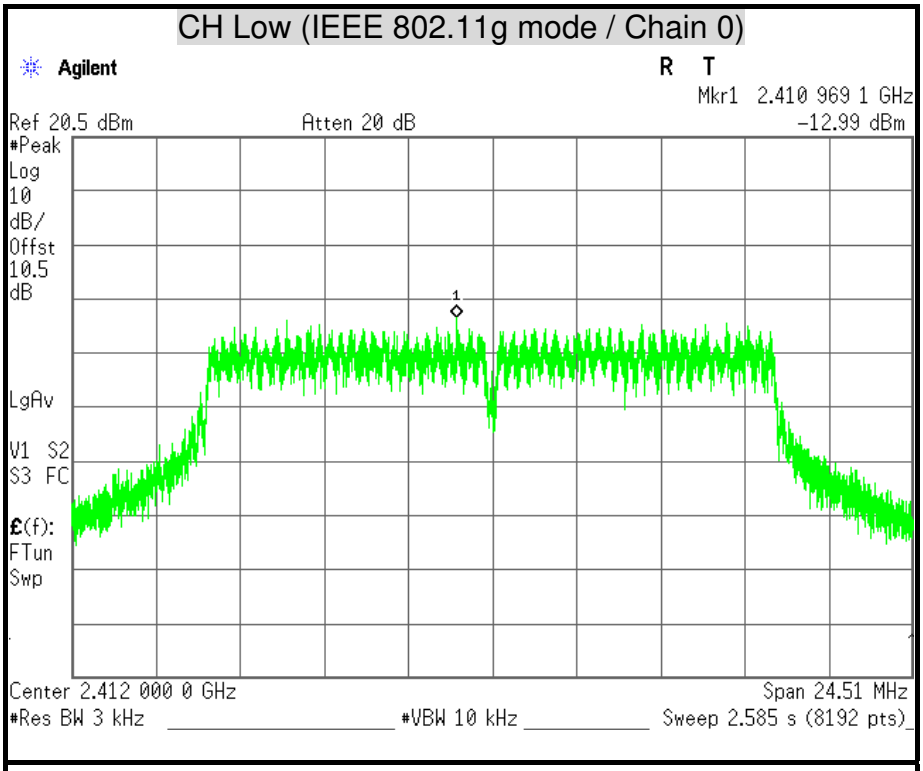
CH Middle (IEEE 802.11b mode / Chain 1)



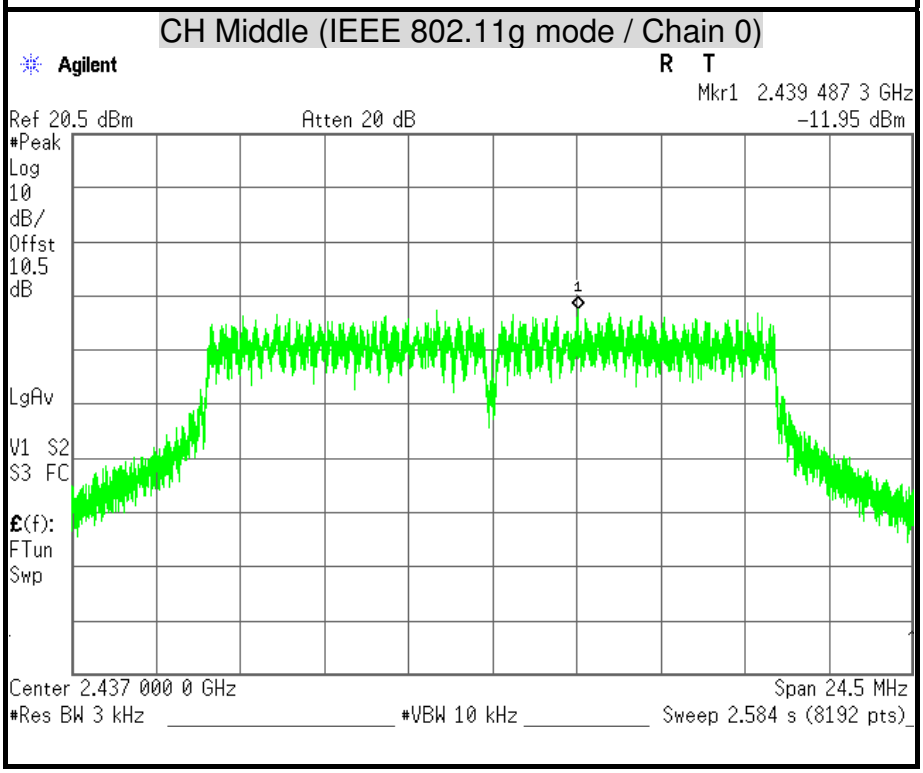
CH High (IEEE 802.11b mode / Chain 1)

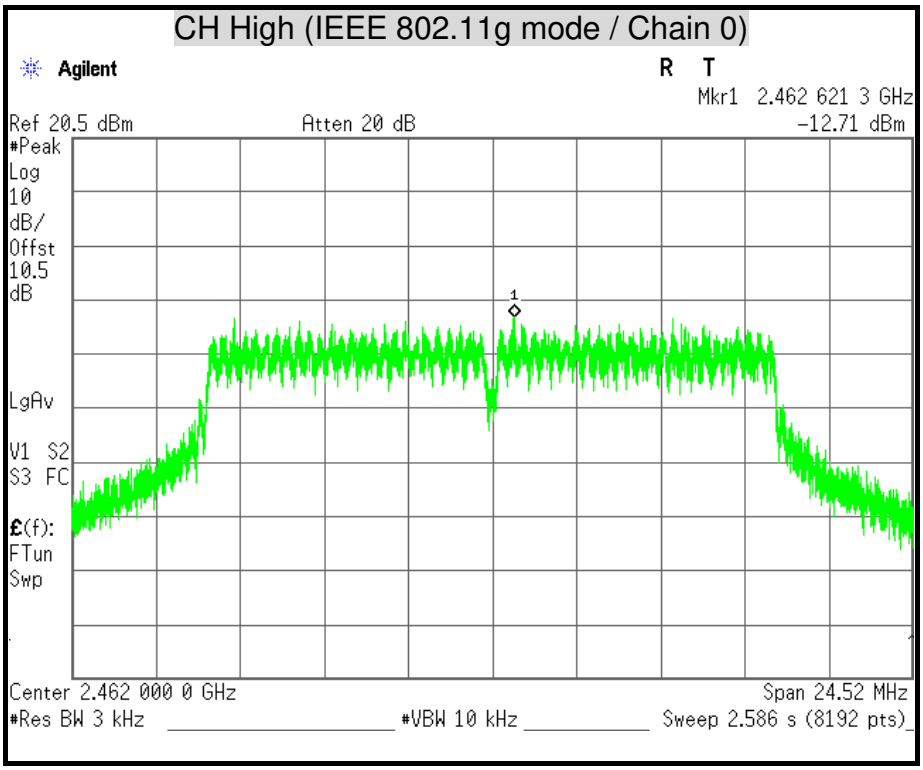


CH Low (IEEE 802.11g mode / Chain 0)

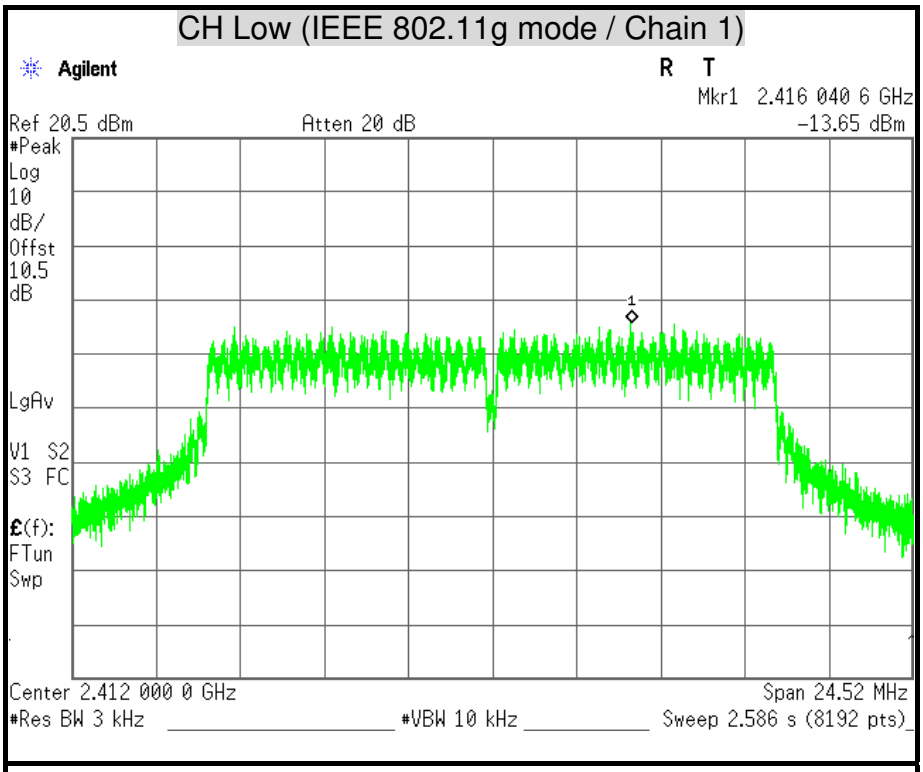


CH Middle (IEEE 802.11g mode / Chain 0)

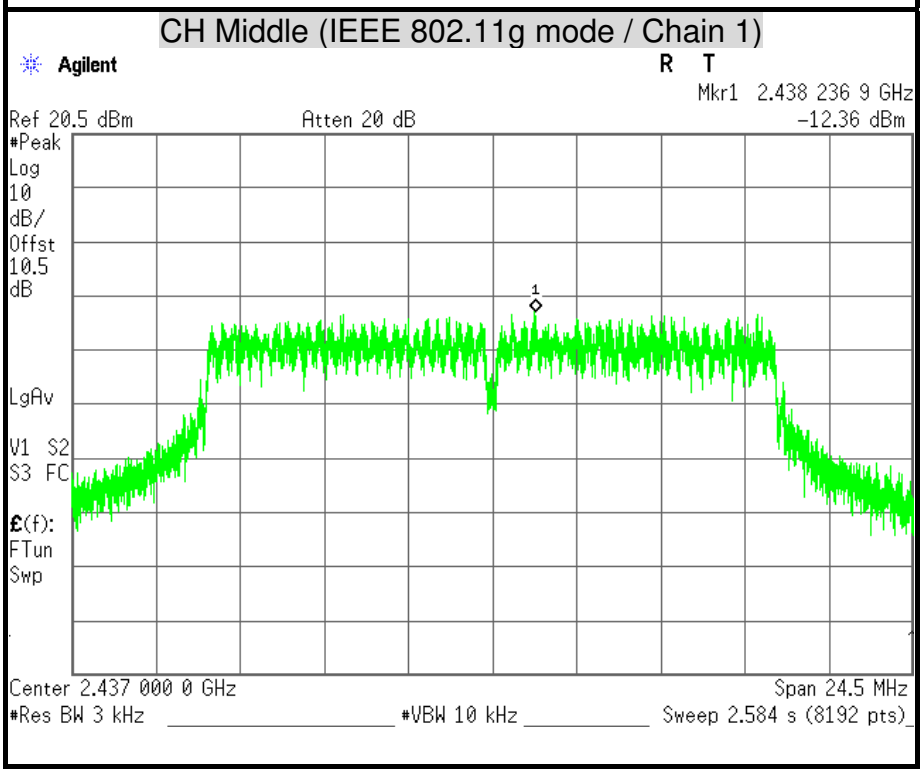


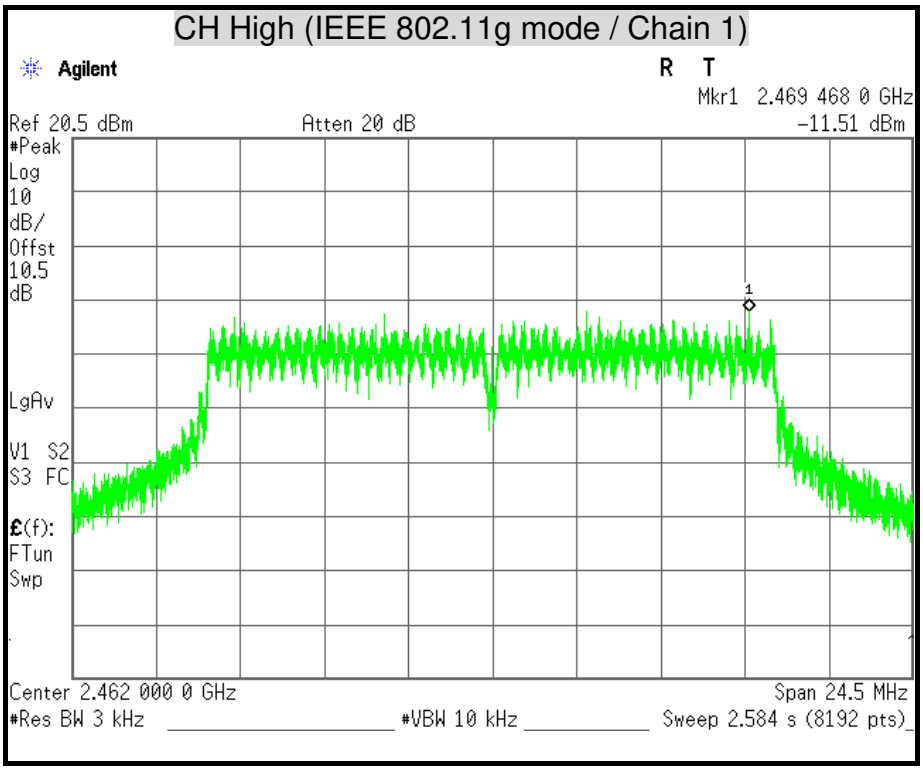


CH Low (IEEE 802.11g mode / Chain 1)

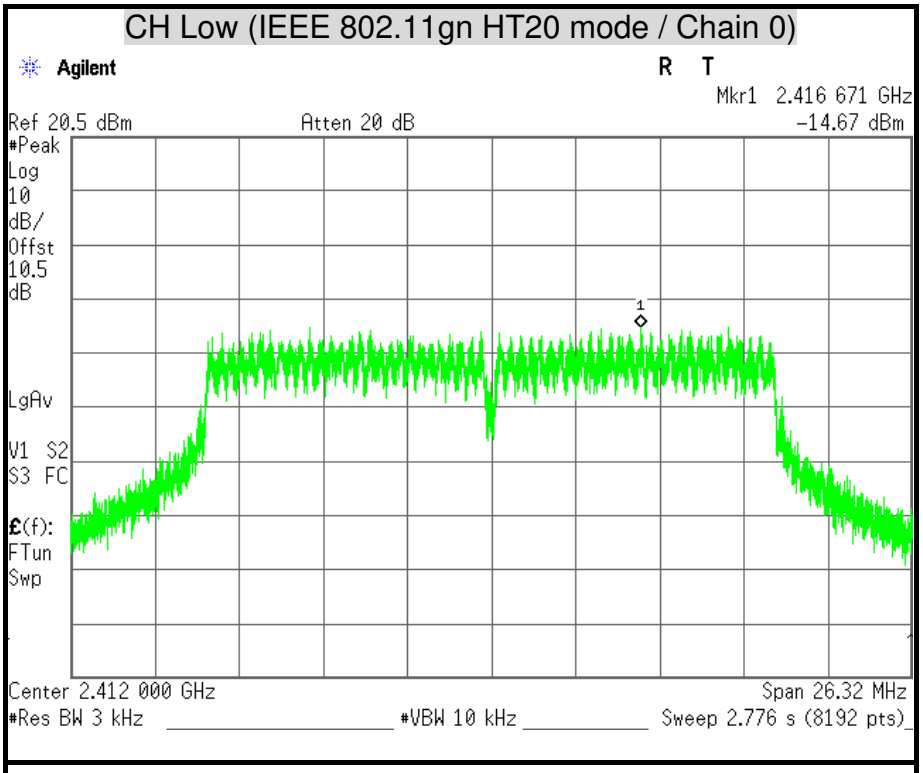


CH Middle (IEEE 802.11g mode / Chain 1)

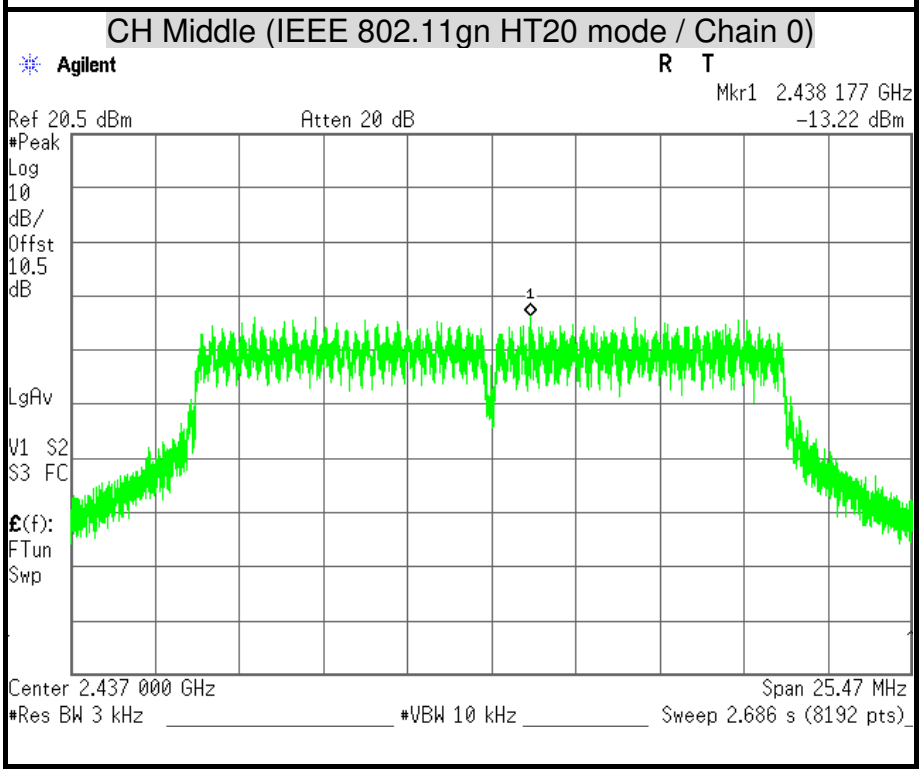


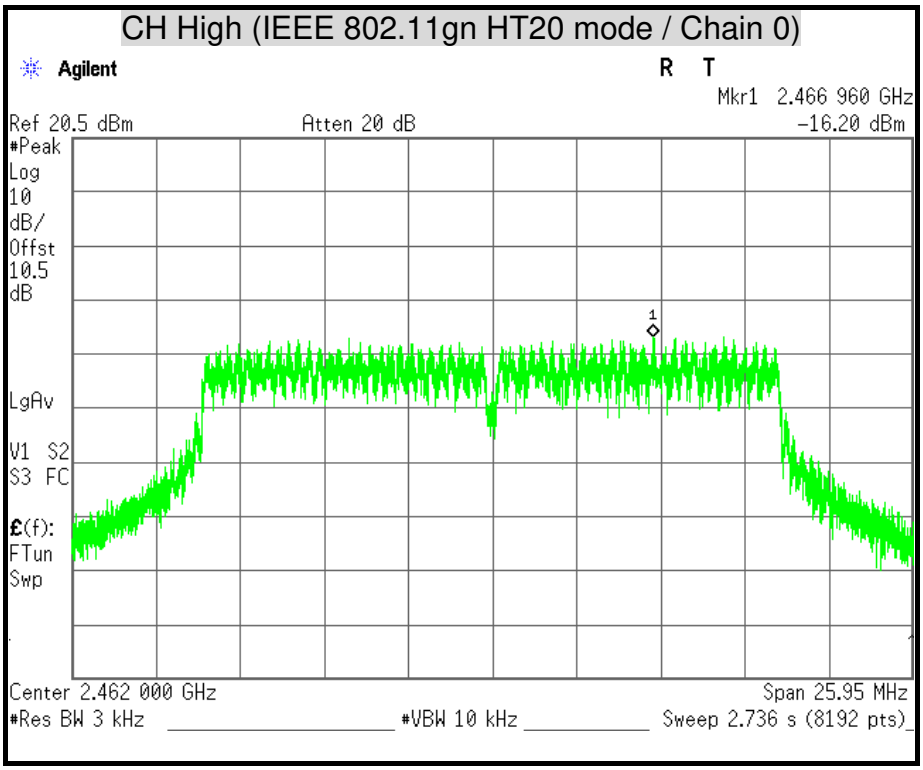


CH Low (IEEE 802.11gn HT20 mode / Chain 0)

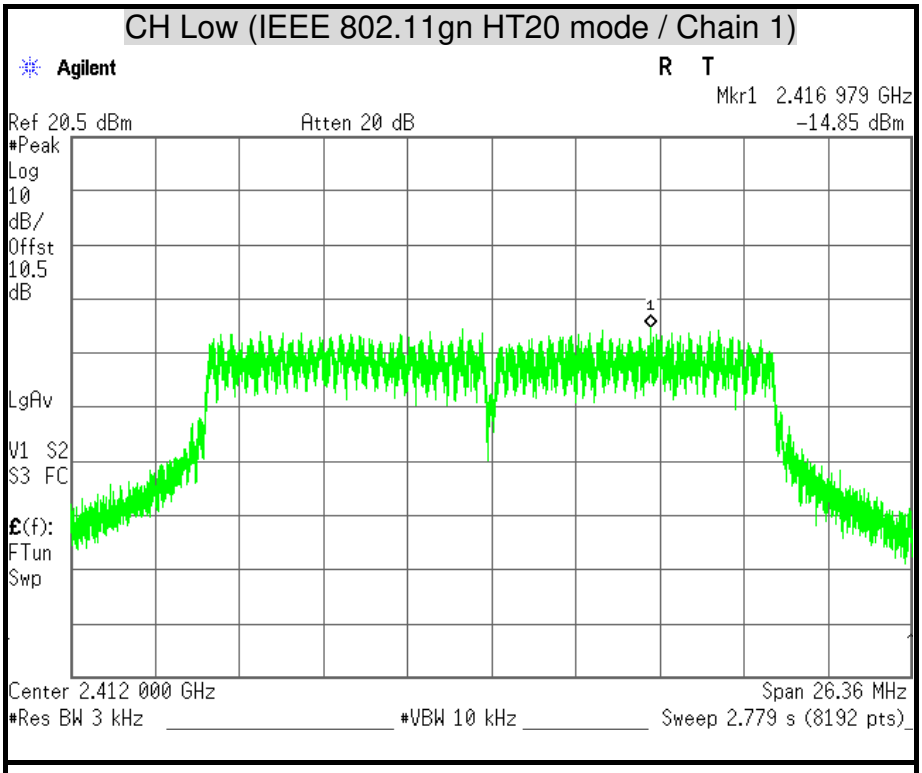


CH Middle (IEEE 802.11gn HT20 mode / Chain 0)

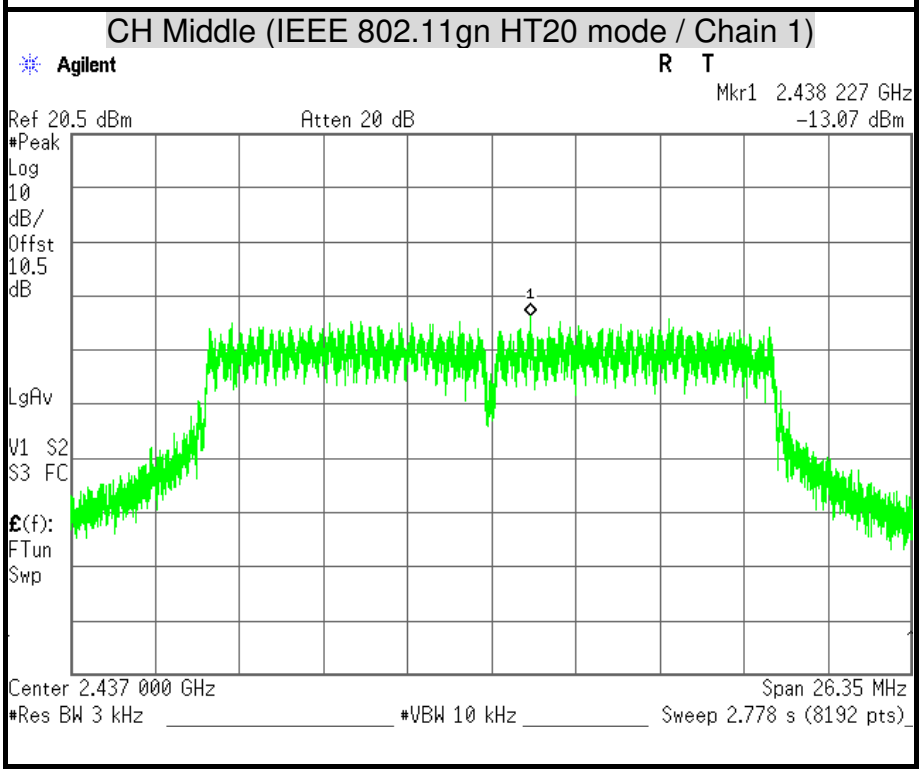


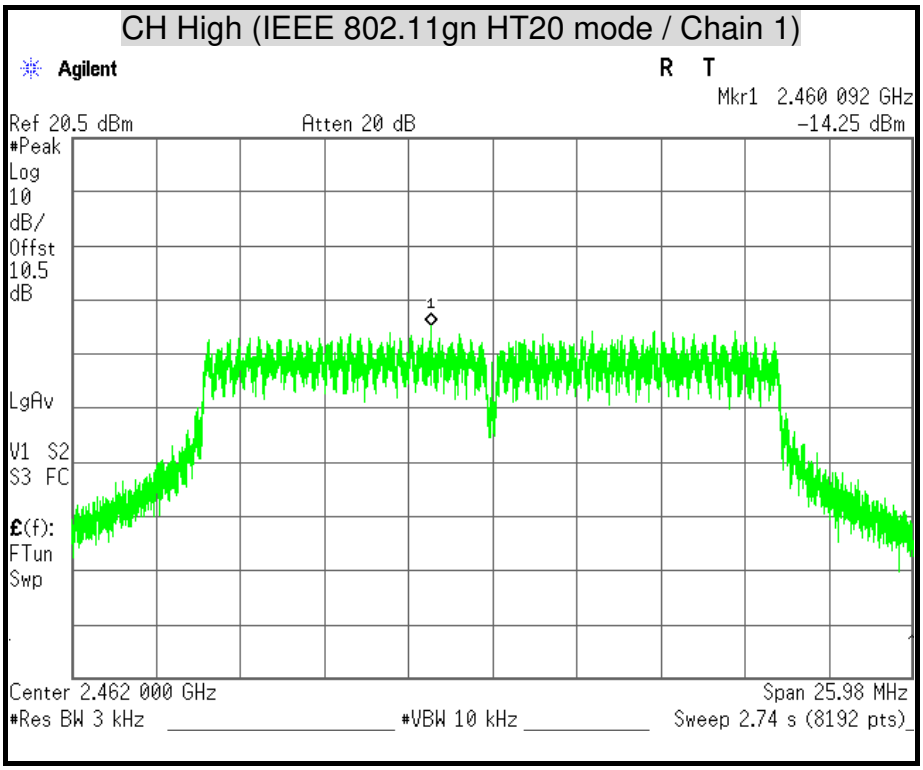


CH Low (IEEE 802.11gn HT20 mode / Chain 1)

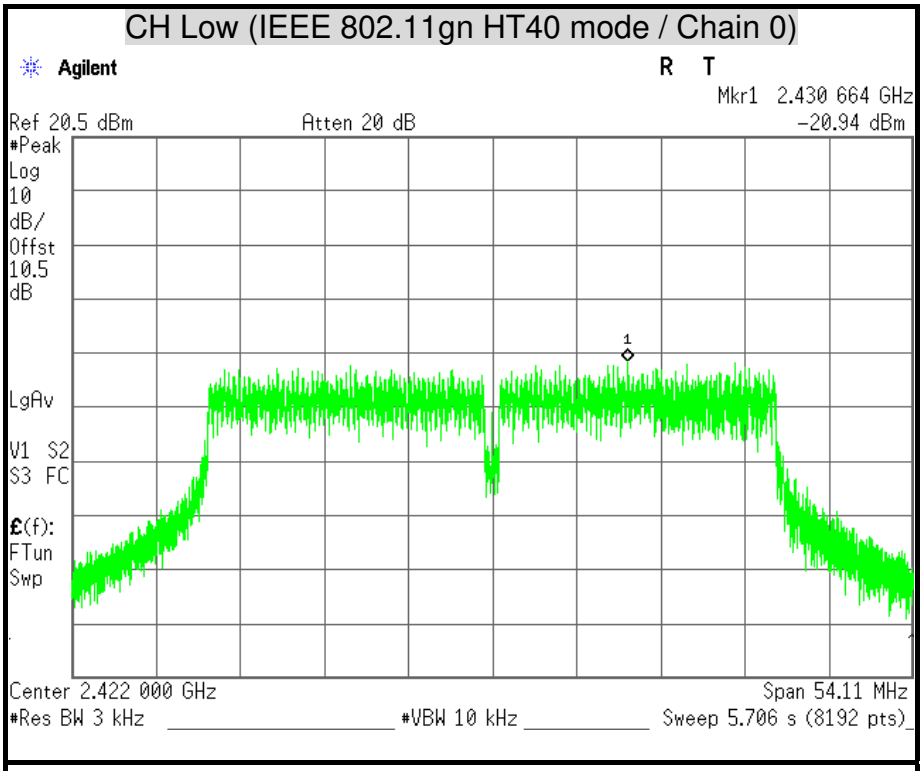


CH Middle (IEEE 802.11gn HT20 mode / Chain 1)

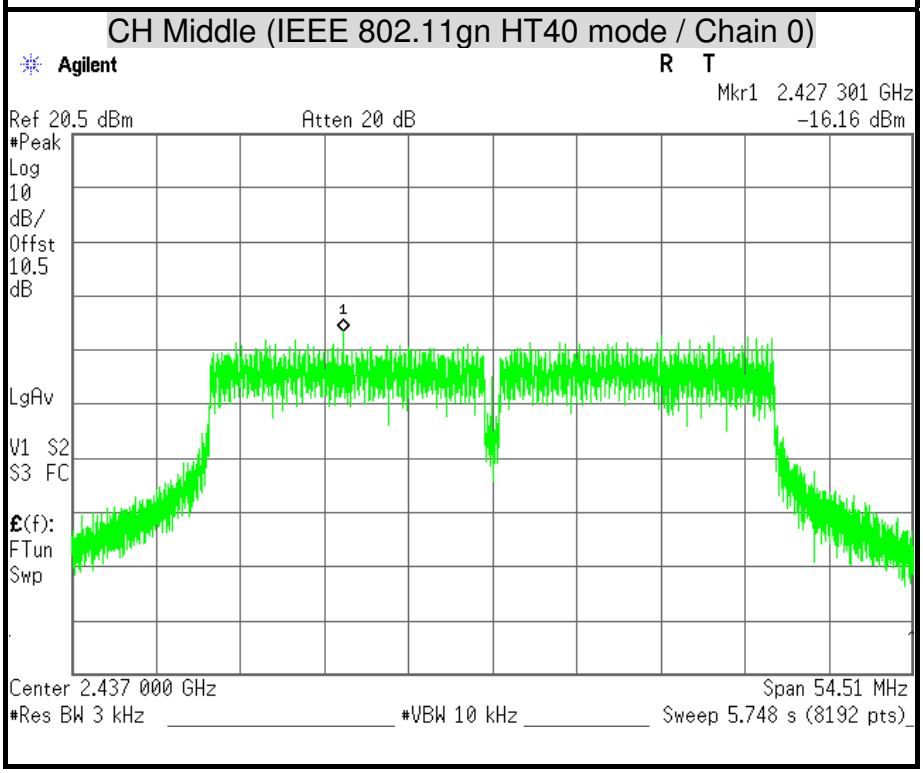




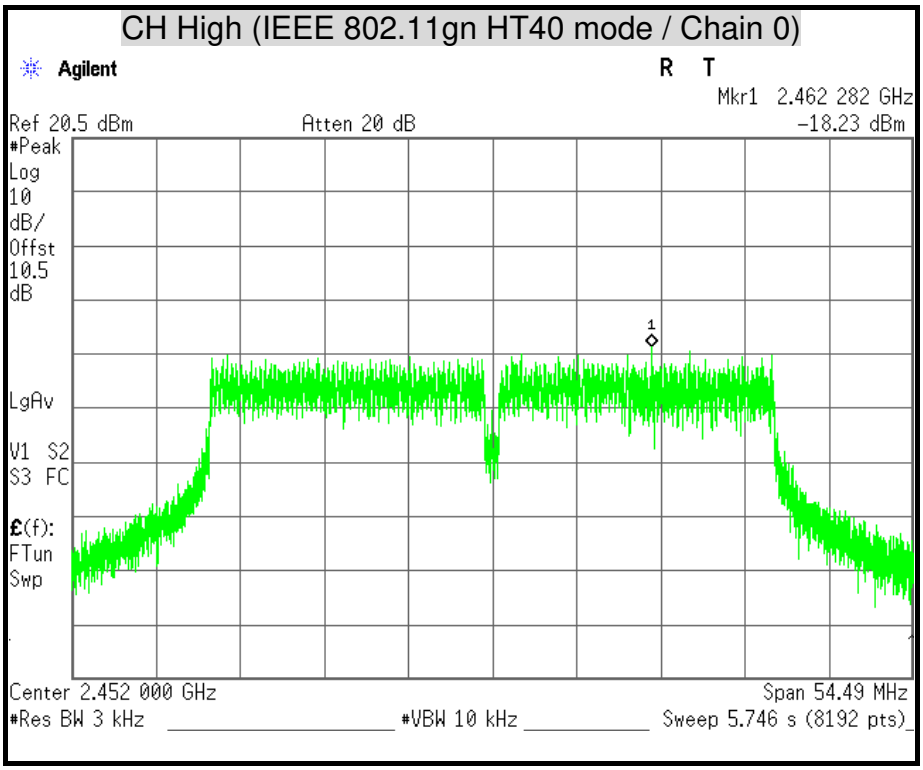
CH Low (IEEE 802.11gn HT40 mode / Chain 0)



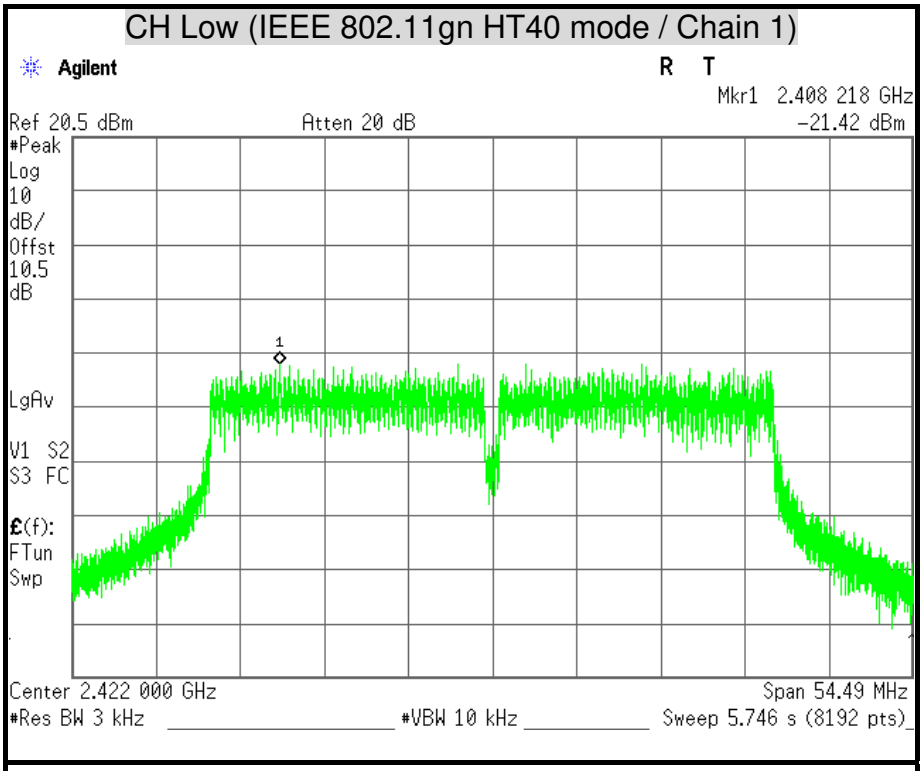
CH Middle (IEEE 802.11gn HT40 mode / Chain 0)



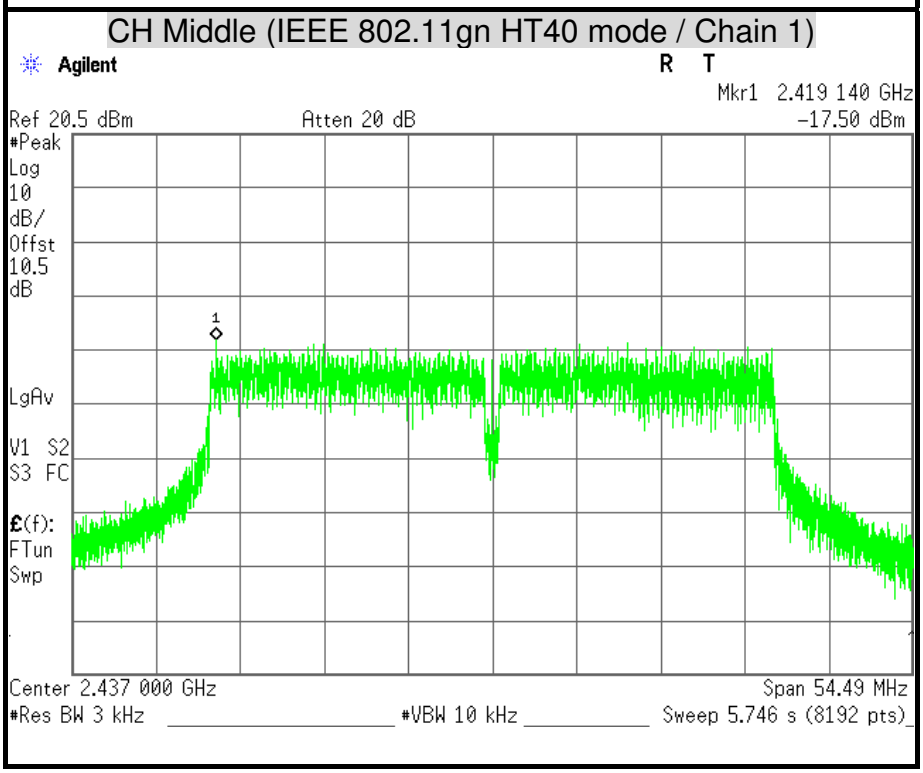
CH High (IEEE 802.11gn HT40 mode / Chain 0)

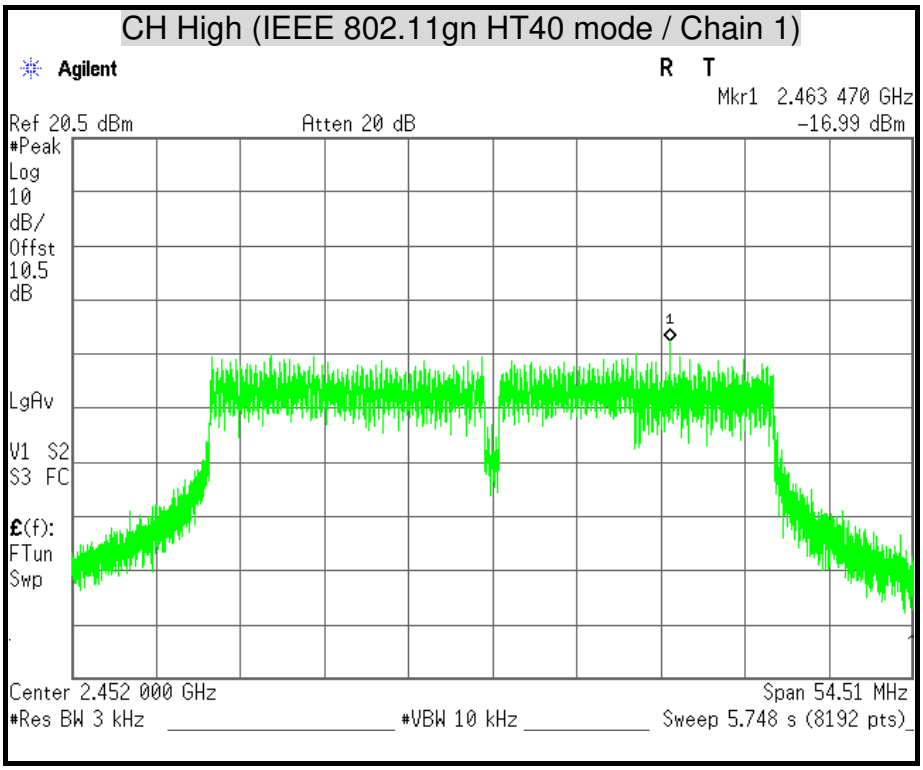


CH Low (IEEE 802.11gn HT40 mode / Chain 1)



CH Middle (IEEE 802.11gn HT40 mode / Chain 1)





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
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/04/2016

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

TEST SETUP

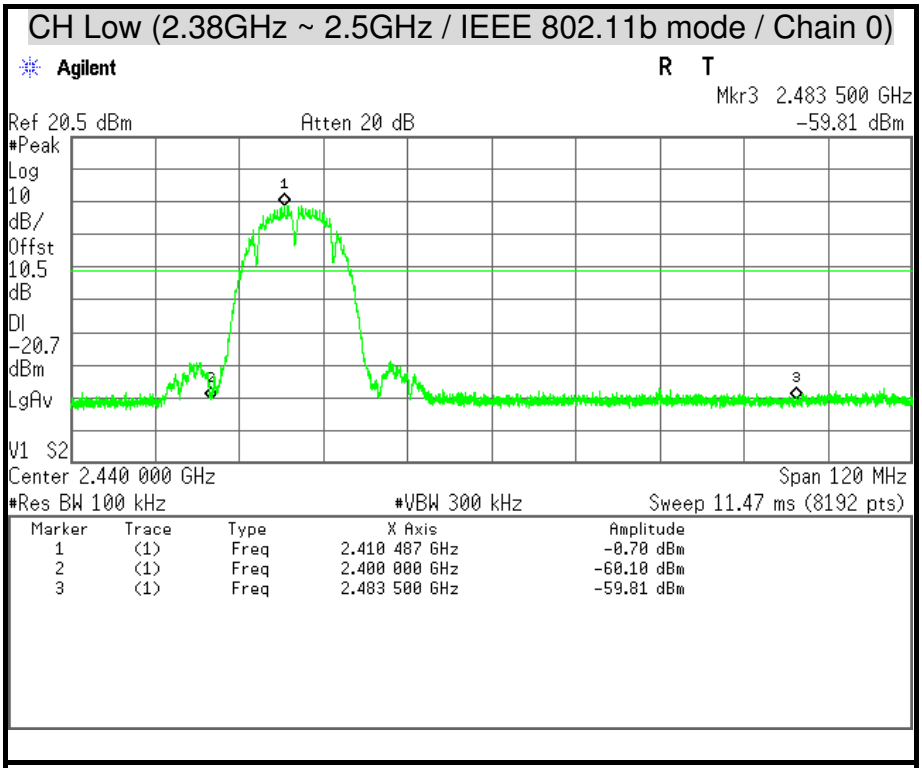
TEST PROCEDURE

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

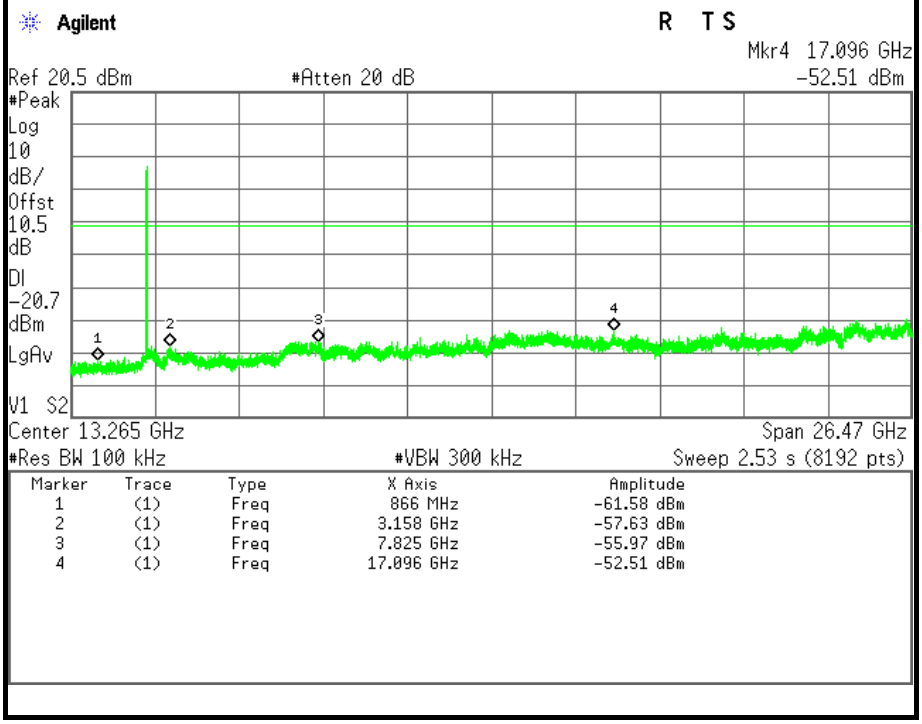
OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11b mode / Chain 0)



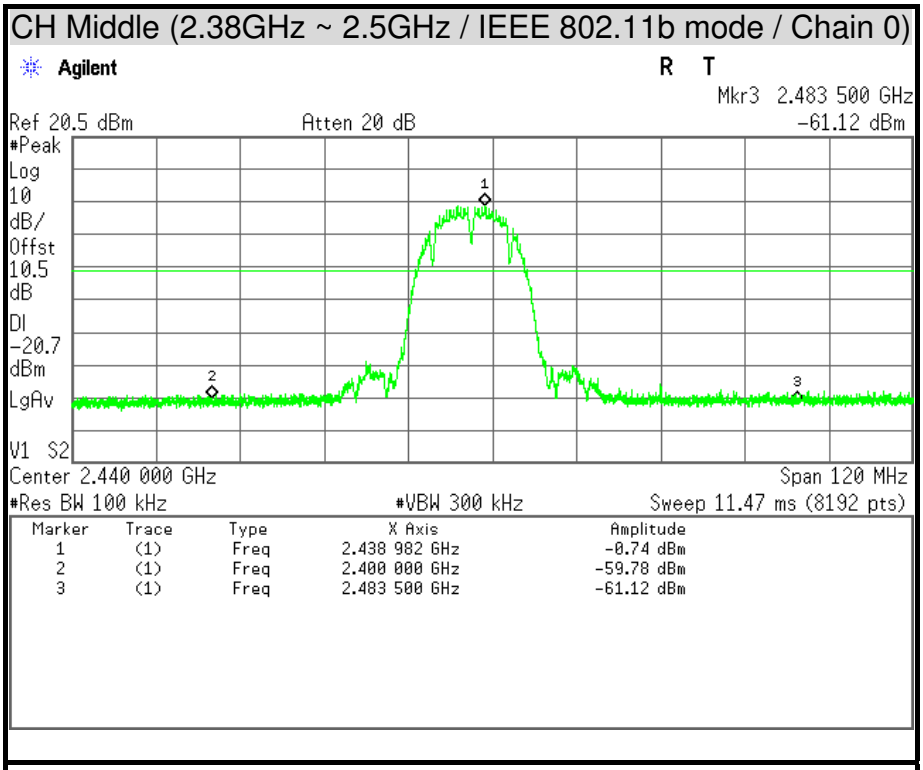
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.410 487 GHz	-0.70 dBm
2	(1)	Freq	2.400 000 GHz	-60.10 dBm
3	(1)	Freq	2.483 500 GHz	-59.81 dBm

CH Low (30MHz ~ 26.5GHz / IEEE 802.11b mode / Chain 0)

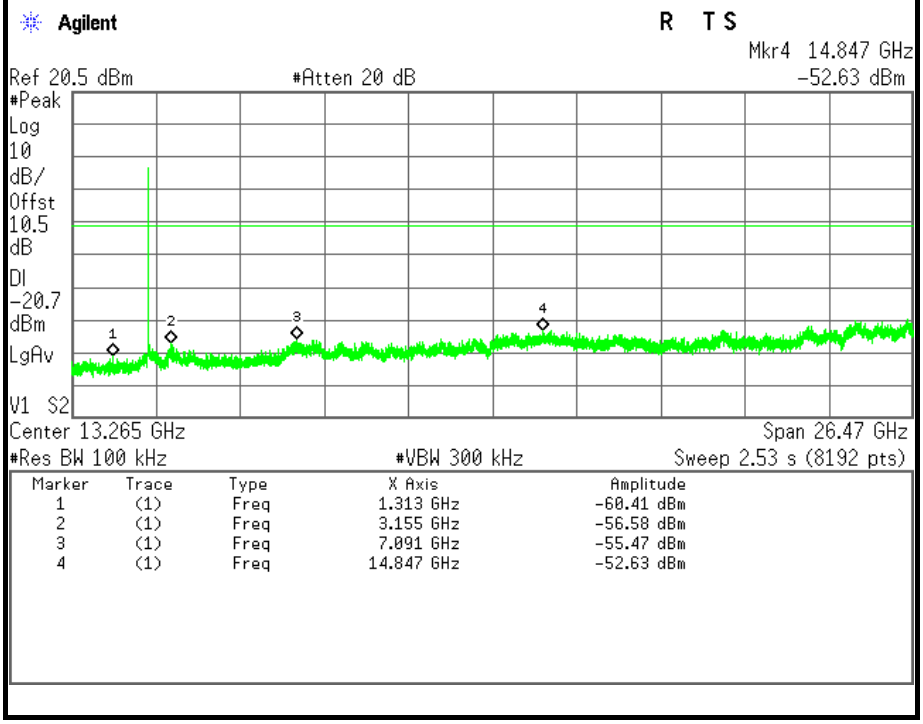


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	866 MHz	-61.58 dBm
2	(1)	Freq	3.158 GHz	-57.63 dBm
3	(1)	Freq	7.825 GHz	-55.97 dBm
4	(1)	Freq	17.096 GHz	-52.51 dBm

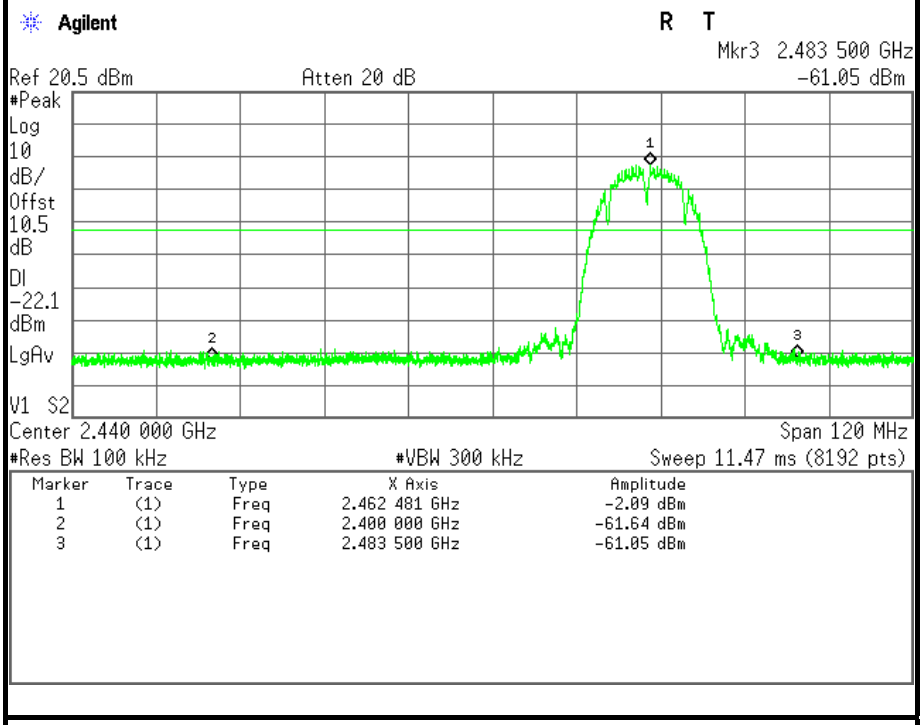
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11b mode / Chain 0)



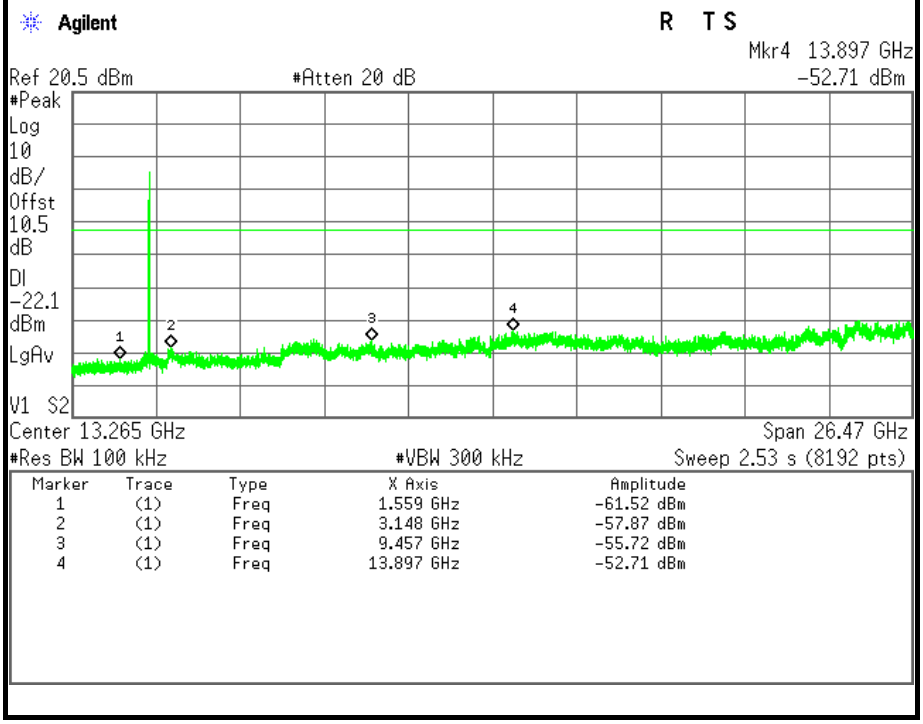
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11b mode / Chain 0)



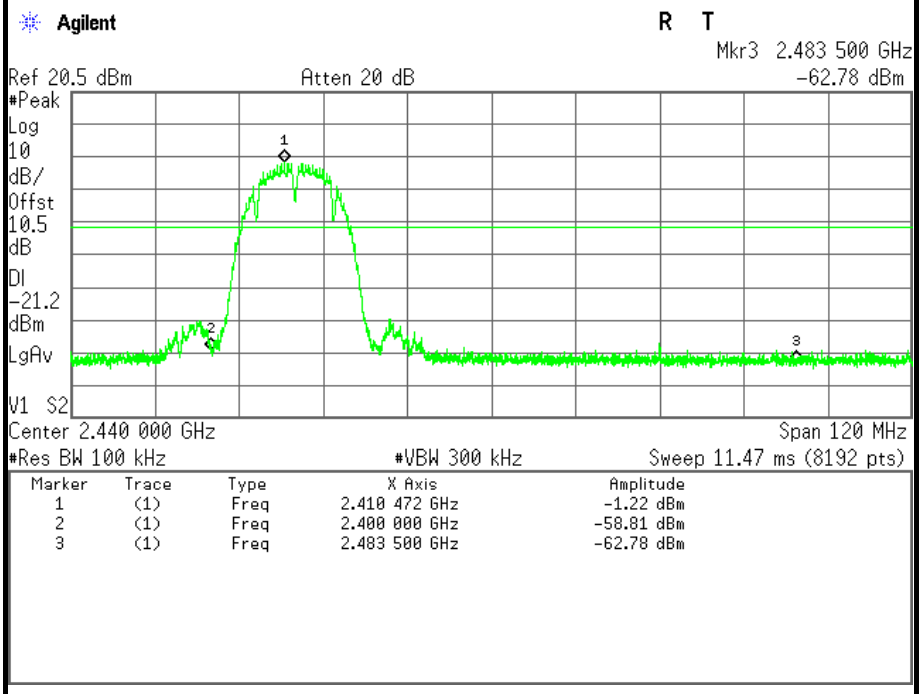
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11b mode / Chain 0)



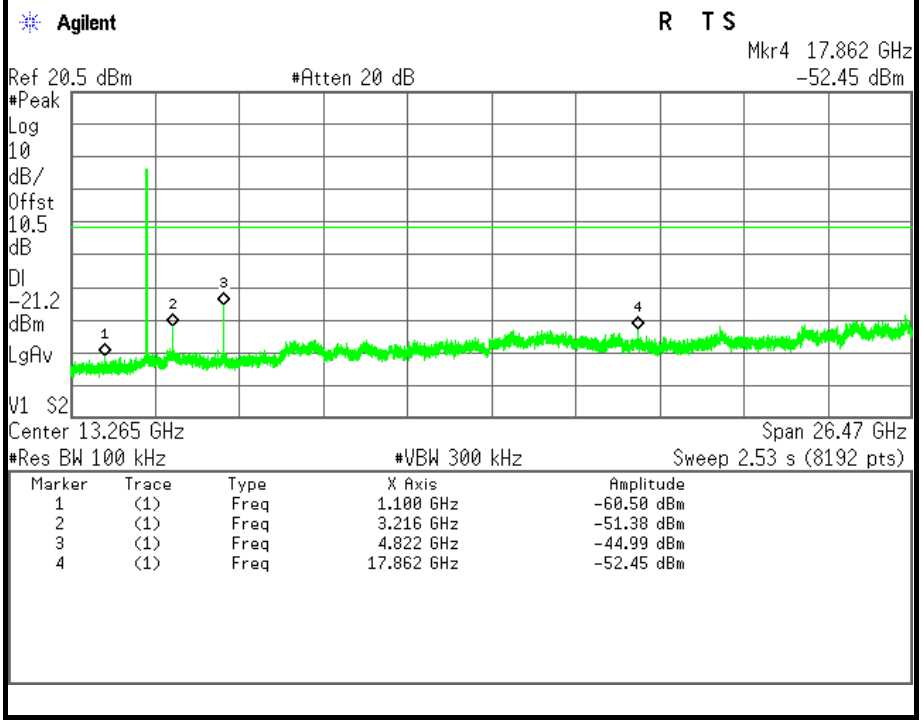
CH High (30MHz ~ 26.5GHz / IEEE 802.11b mode / Chain 0)



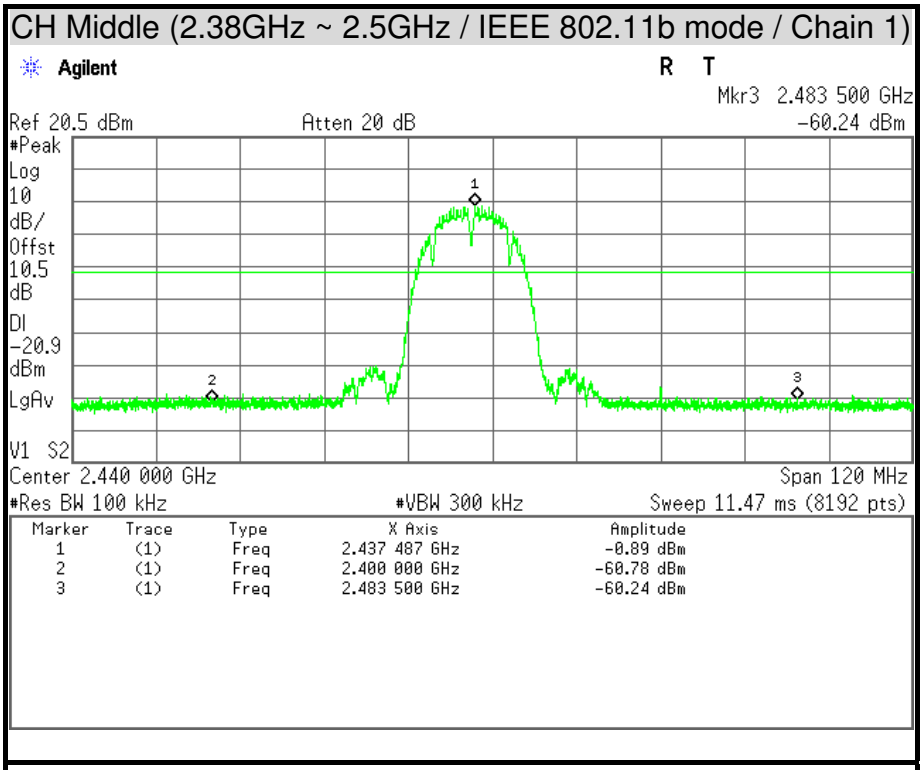
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11b mode / Chain 1)



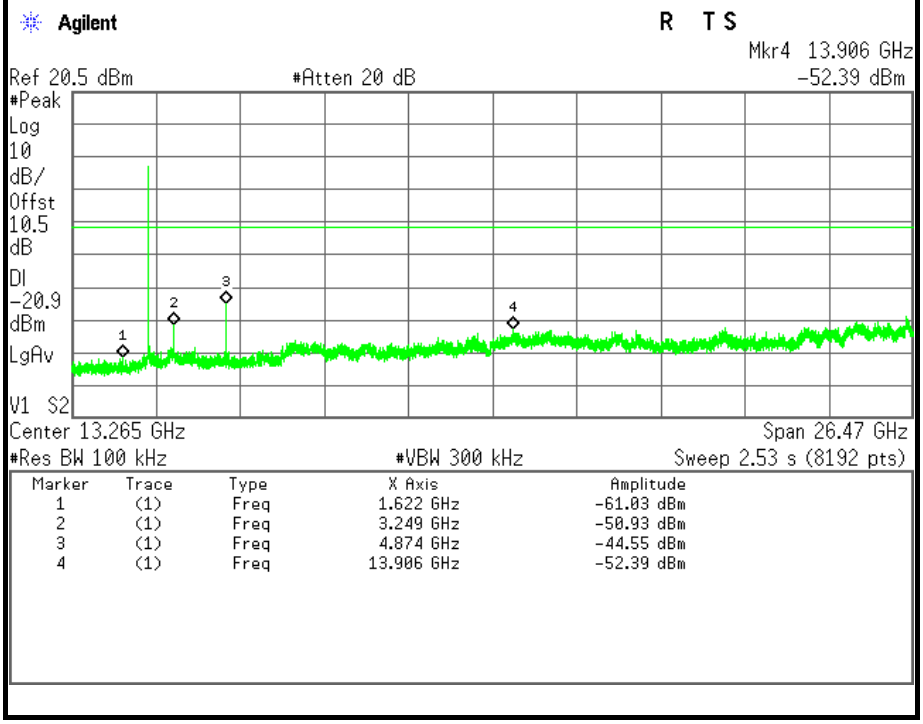
CH Low (30MHz ~ 26.5GHz / IEEE 802.11b mode / Chain 1)



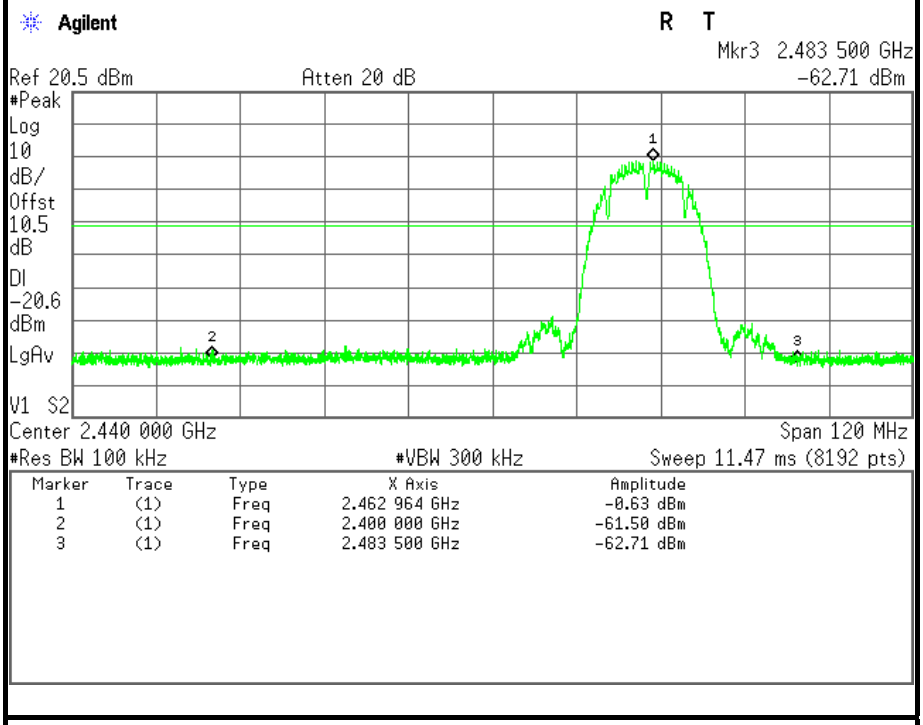
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11b mode / Chain 1)



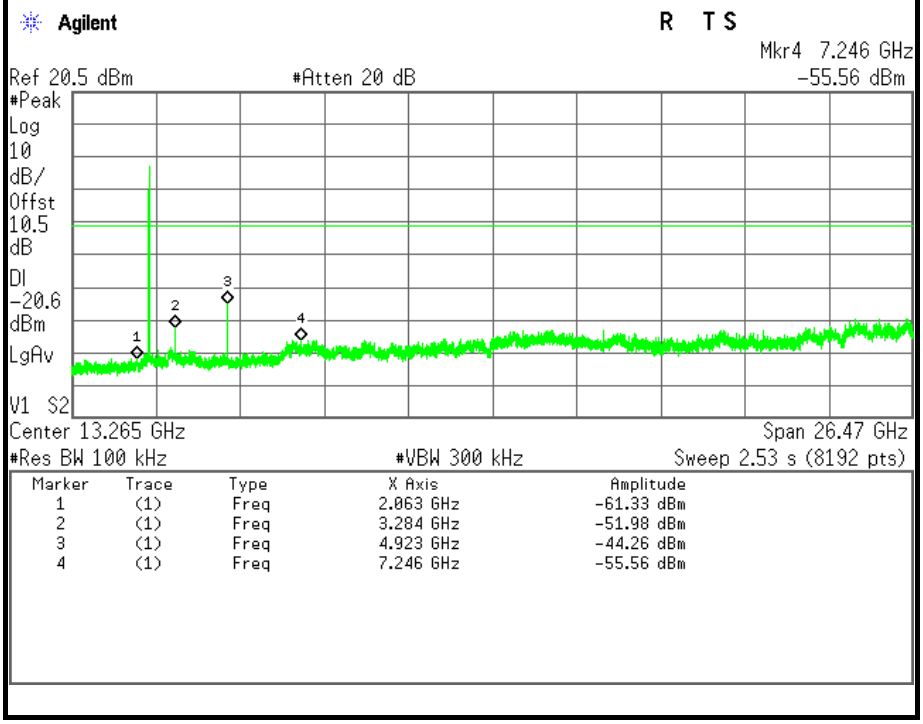
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11b mode / Chain 1)



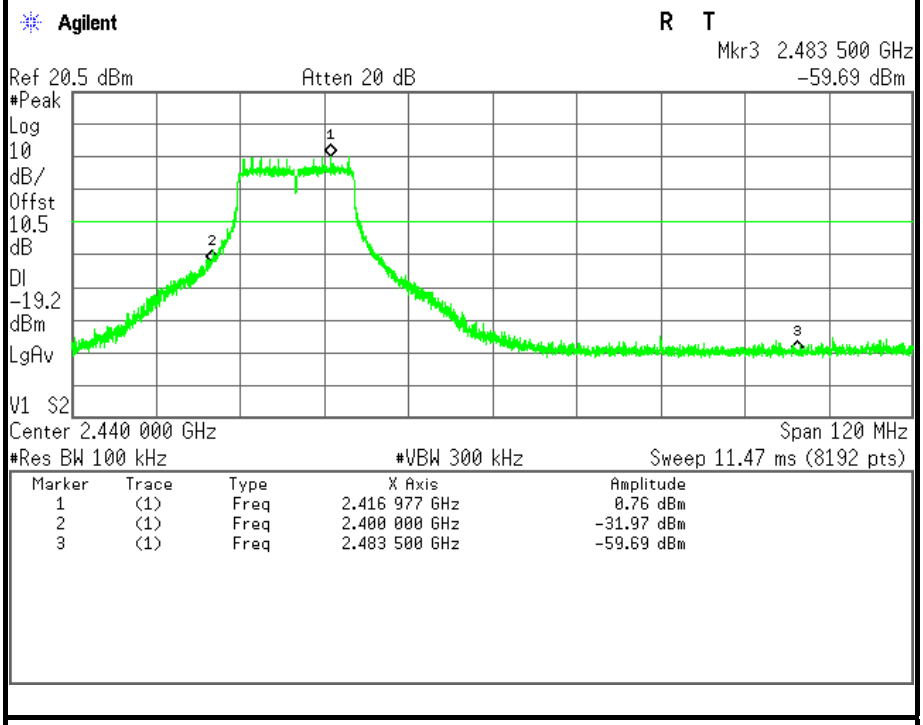
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11b mode / Chain 1)



CH High (30MHz ~ 26.5GHz / IEEE 802.11b mode / Chain 1)

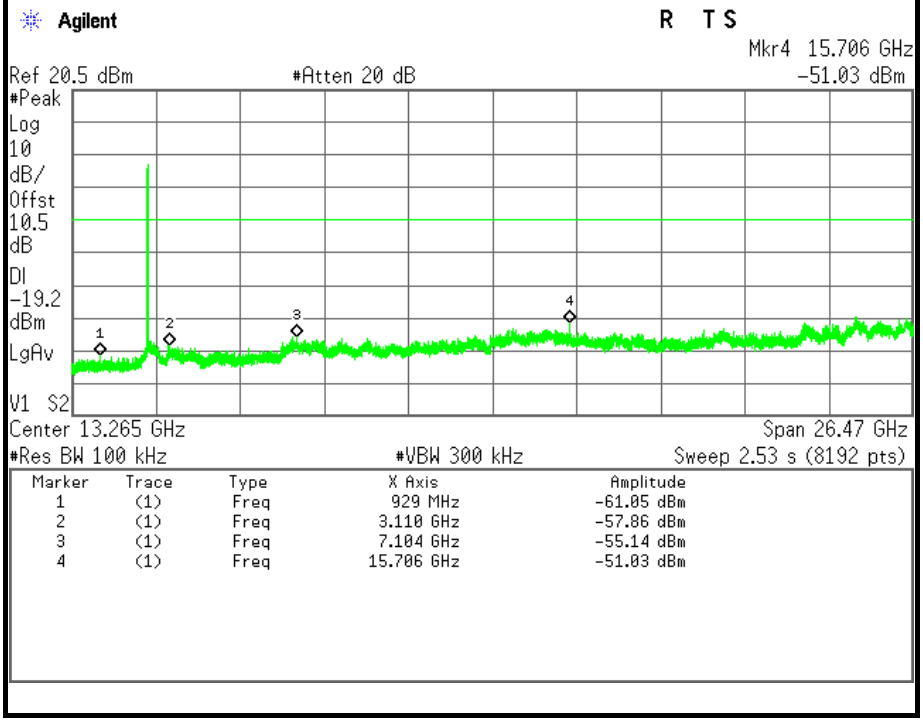


CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11g mode / Chain 0)



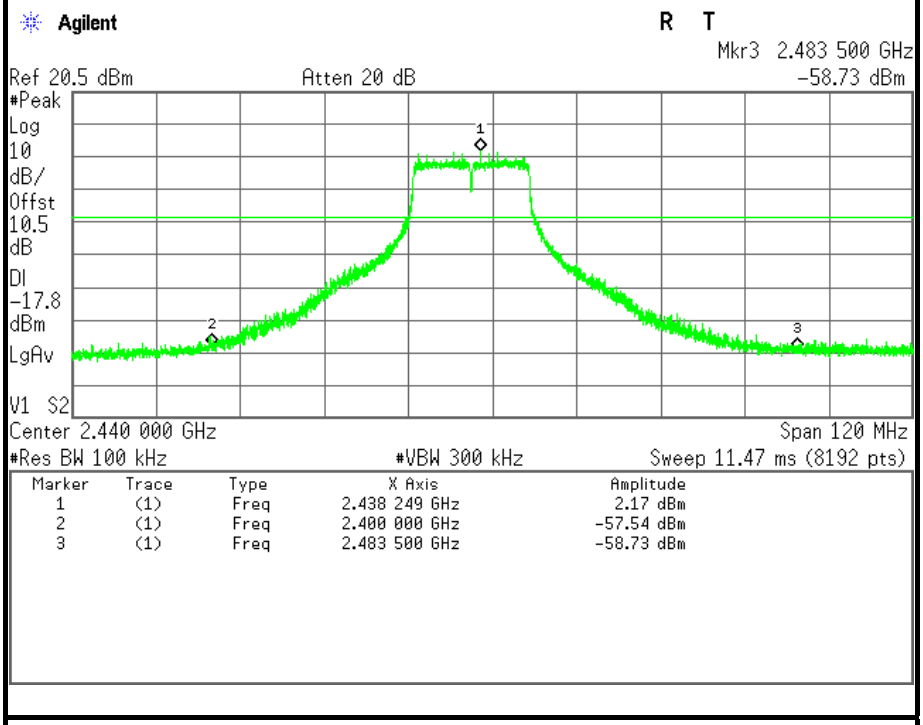
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.416 977 GHz	0.76 dBm
2	(1)	Freq	2.400 000 GHz	-31.97 dBm
3	(1)	Freq	2.483 500 GHz	-59.69 dBm

CH Low (30MHz ~ 26.5GHz / IEEE 802.11g mode / Chain 0)

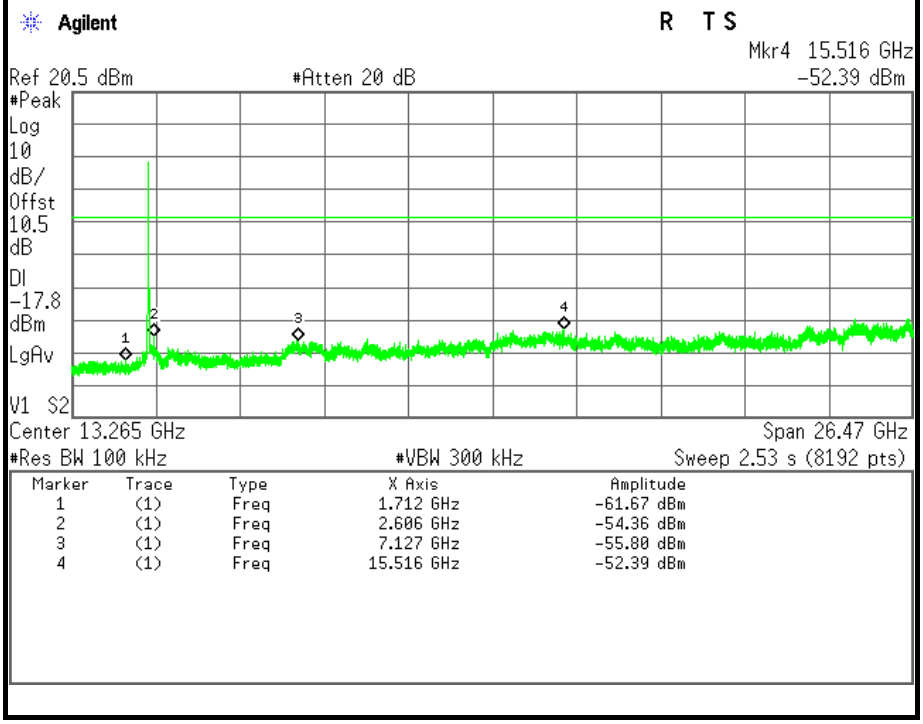


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	929 MHz	-61.05 dBm
2	(1)	Freq	3.110 GHz	-57.86 dBm
3	(1)	Freq	7.104 GHz	-55.14 dBm
4	(1)	Freq	15.706 GHz	-51.03 dBm

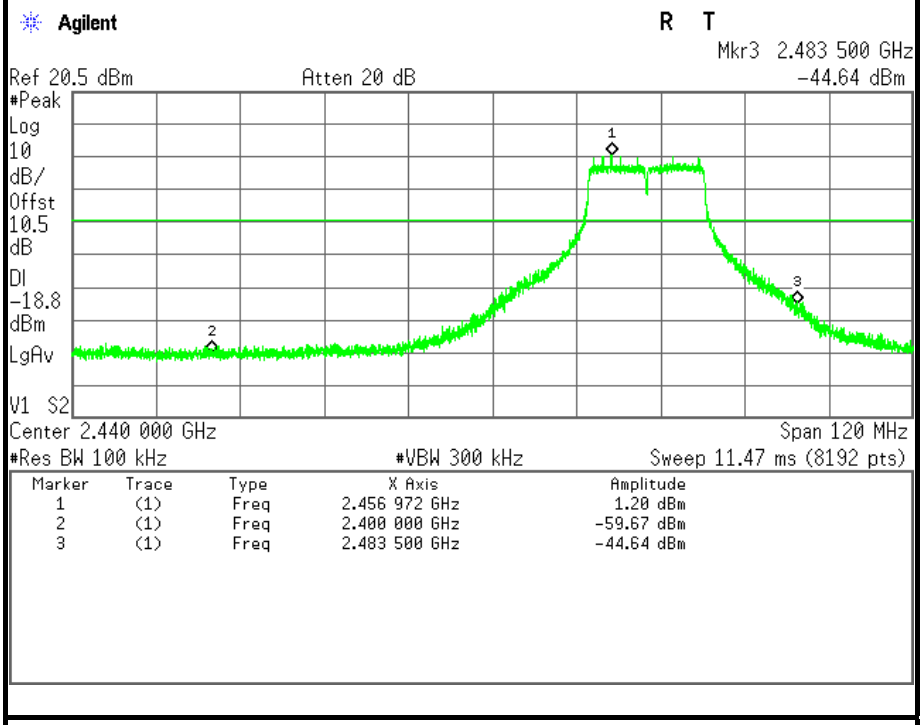
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11g mode / Chain 0)



CH Middle (30MHz ~ 26.5GHz / IEEE 802.11g mode / Chain 0)

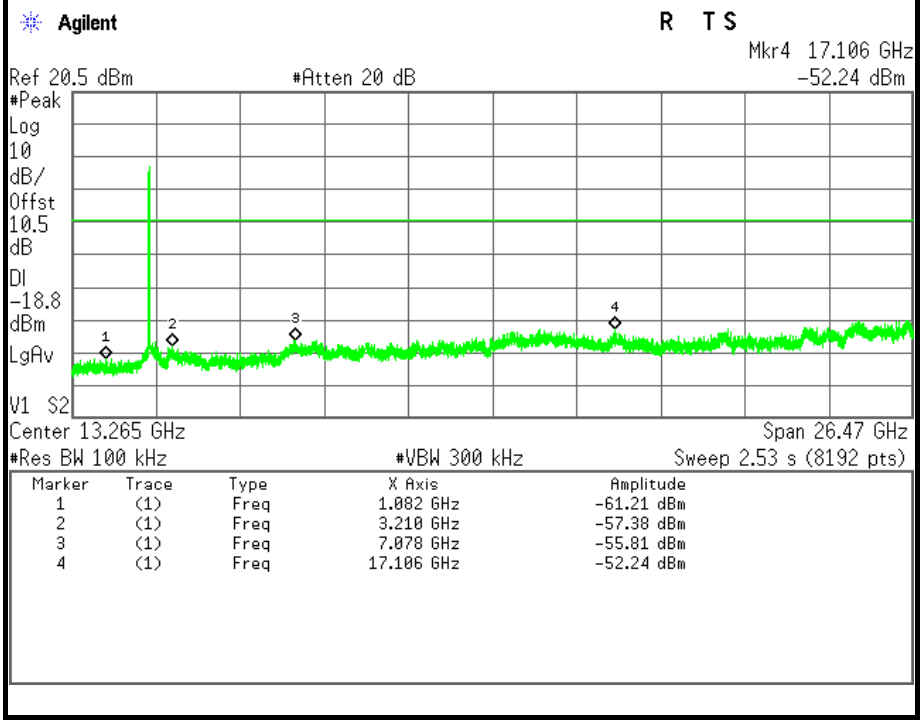


CH High (2.38GHz ~ 2.5GHz / IEEE 802.11g mode / Chain 0)



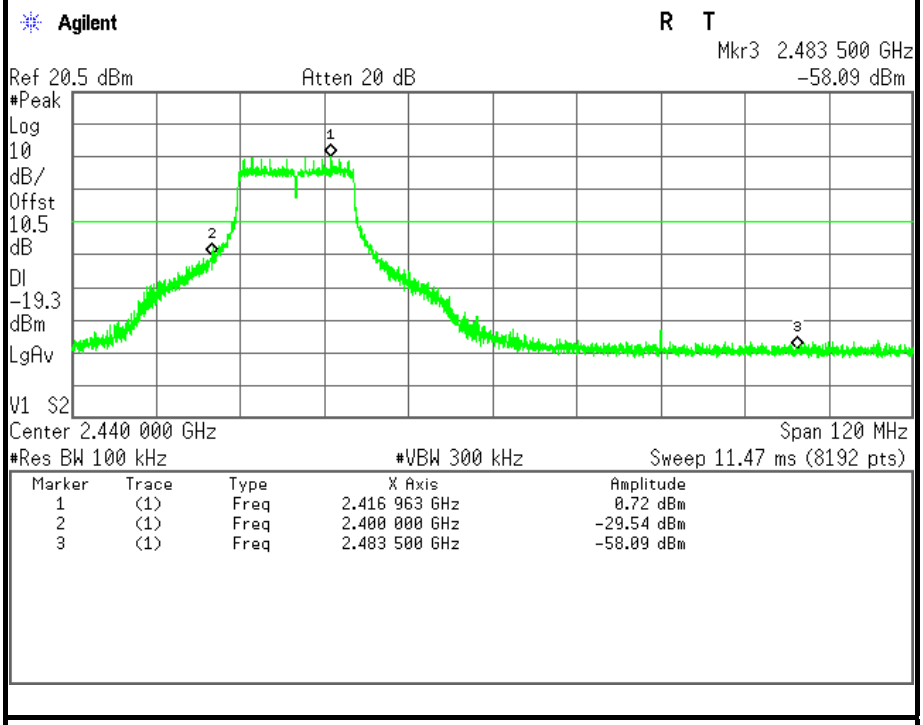
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.456 972 GHz	1.20 dBm
2	(1)	Freq	2.400 000 GHz	-59.67 dBm
3	(1)	Freq	2.483 500 GHz	-44.64 dBm

CH High (30MHz ~ 26.5GHz / IEEE 802.11g mode / Chain 0)



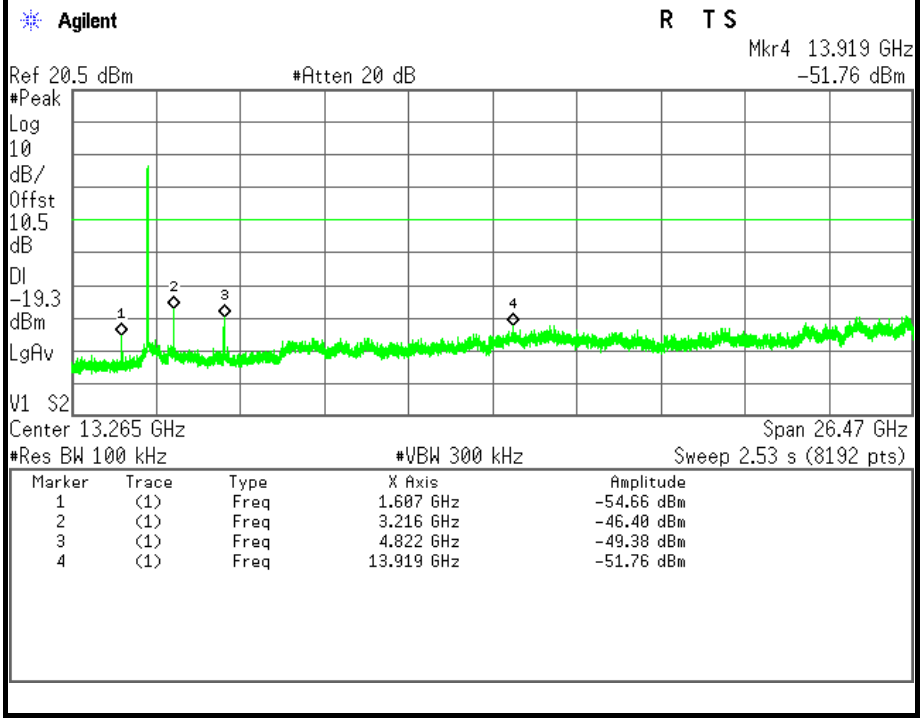
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.082 GHz	-61.21 dBm
2	(1)	Freq	3.210 GHz	-57.38 dBm
3	(1)	Freq	7.078 GHz	-55.81 dBm
4	(1)	Freq	17.106 GHz	-52.24 dBm

CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11g mode / Chain 1)



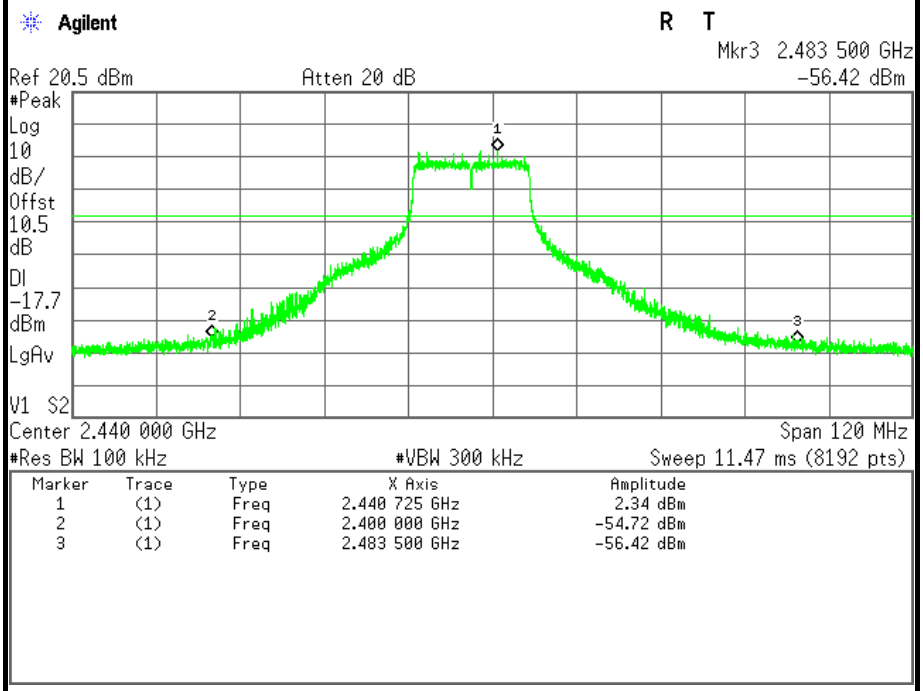
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.416 963 GHz	0.72 dBm
2	(1)	Freq	2.400 000 GHz	-29.54 dBm
3	(1)	Freq	2.483 500 GHz	-58.09 dBm

CH Low (30MHz ~ 26.5GHz / IEEE 802.11g mode / Chain 1)



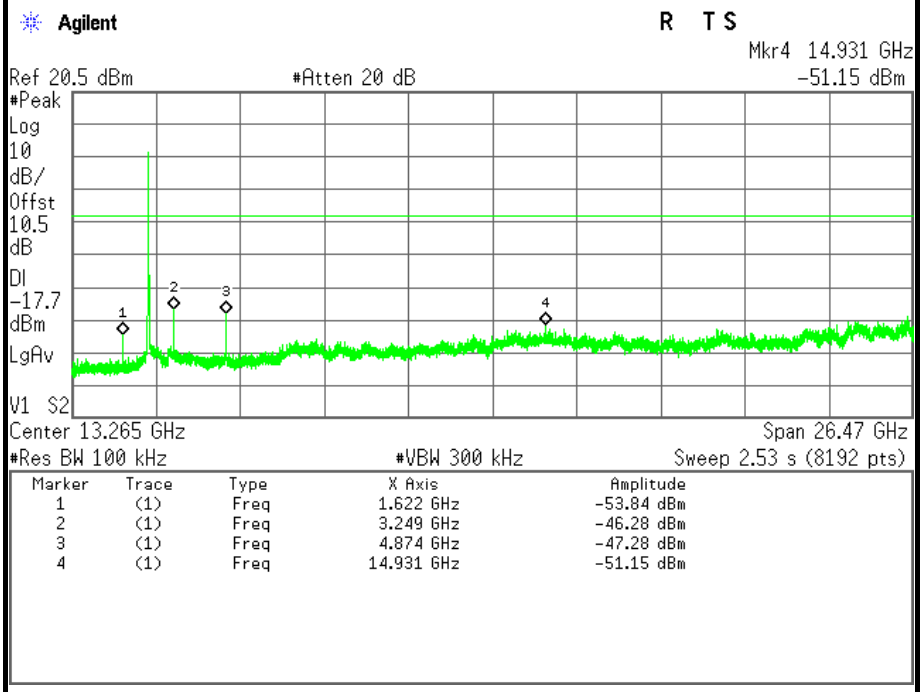
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.607 GHz	-54.66 dBm
2	(1)	Freq	3.216 GHz	-46.40 dBm
3	(1)	Freq	4.822 GHz	-49.38 dBm
4	(1)	Freq	13.919 GHz	-51.76 dBm

CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11g mode / Chain 1)



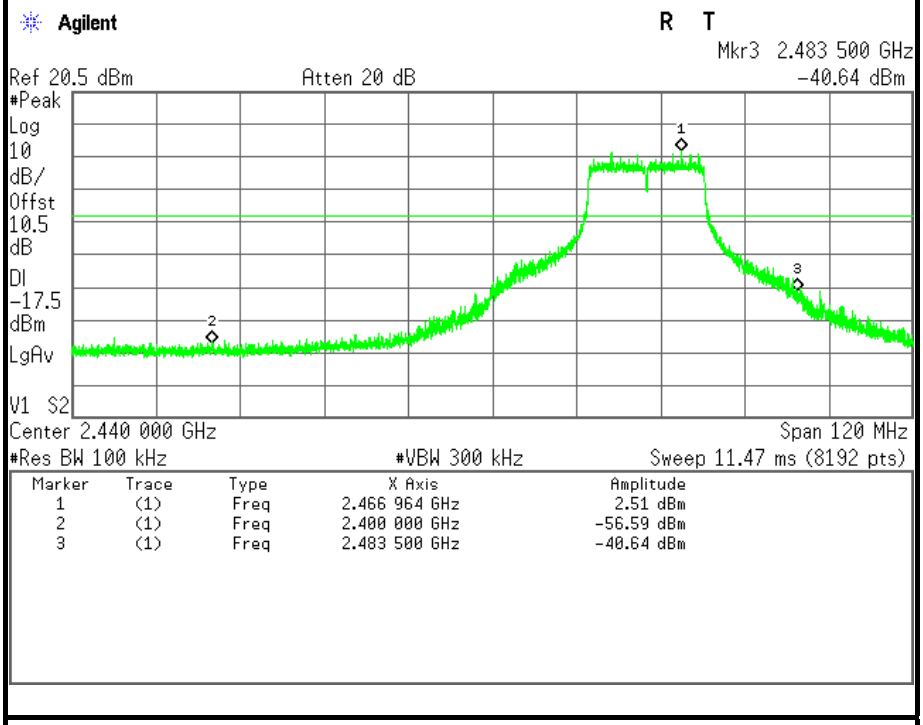
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.440 725 GHz	2.34 dBm
2	(1)	Freq	2.400 000 GHz	-54.72 dBm
3	(1)	Freq	2.483 500 GHz	-56.42 dBm

CH Middle (30MHz ~ 26.5GHz / IEEE 802.11g mode / Chain 1)



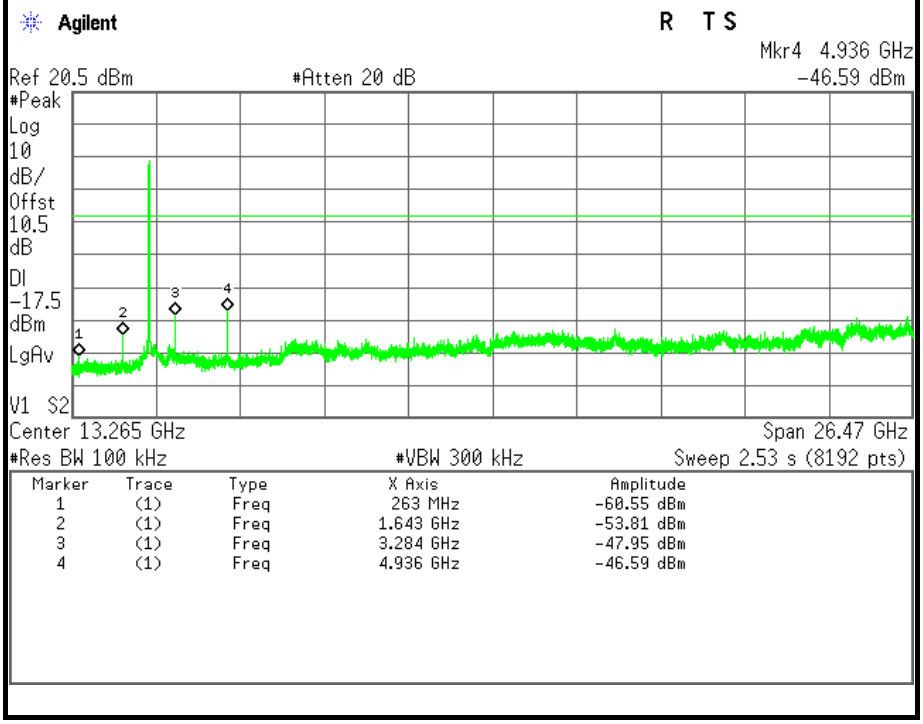
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.622 GHz	-53.84 dBm
2	(1)	Freq	3.249 GHz	-46.28 dBm
3	(1)	Freq	4.874 GHz	-47.28 dBm
4	(1)	Freq	14.931 GHz	-51.15 dBm

CH High (2.38GHz ~ 2.5GHz / IEEE 802.11g mode / Chain 1)



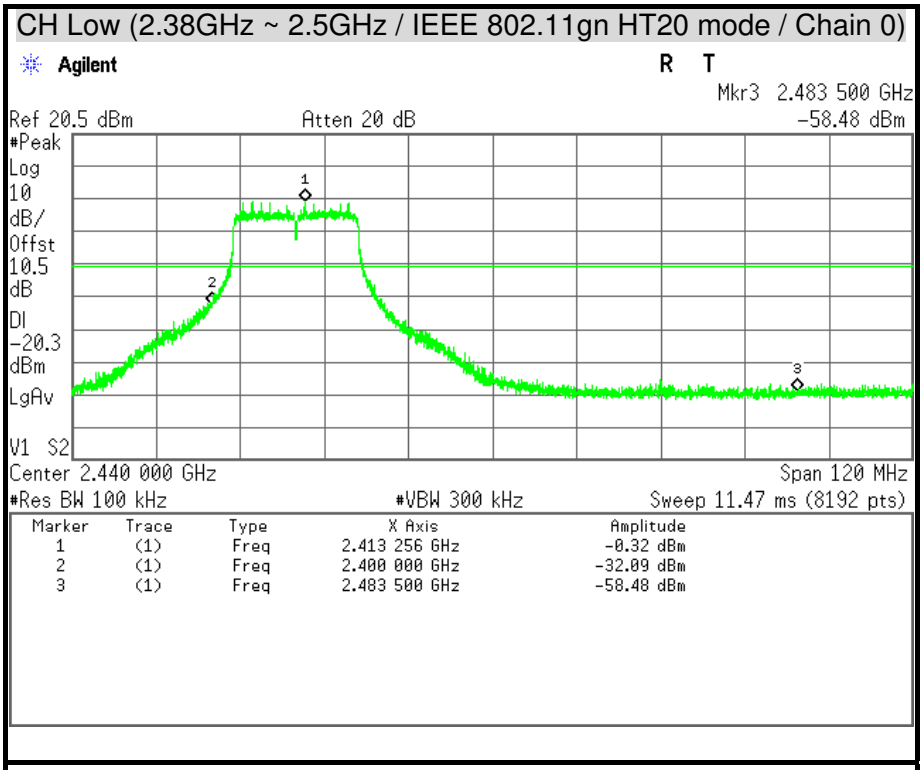
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.466 964 GHz	2.51 dBm
2	(1)	Freq	2.400 000 GHz	-56.59 dBm
3	(1)	Freq	2.483 500 GHz	-40.64 dBm

CH High (30MHz ~ 26.5GHz / IEEE 802.11g mode / Chain 1)

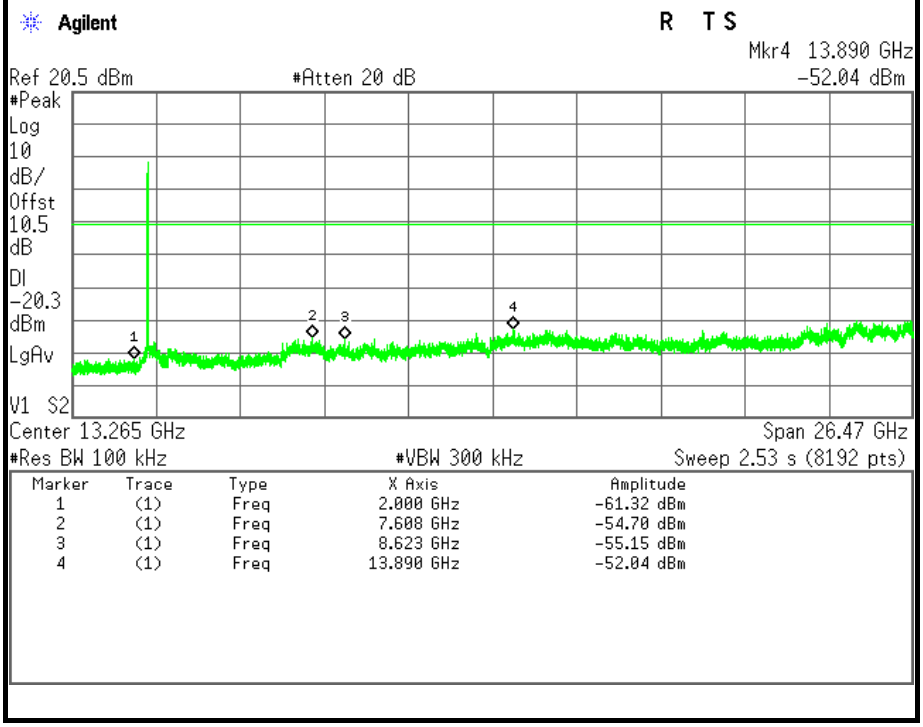


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	263 MHz	-60.55 dBm
2	(1)	Freq	1.643 GHz	-53.81 dBm
3	(1)	Freq	3.284 GHz	-47.95 dBm
4	(1)	Freq	4.936 GHz	-46.59 dBm

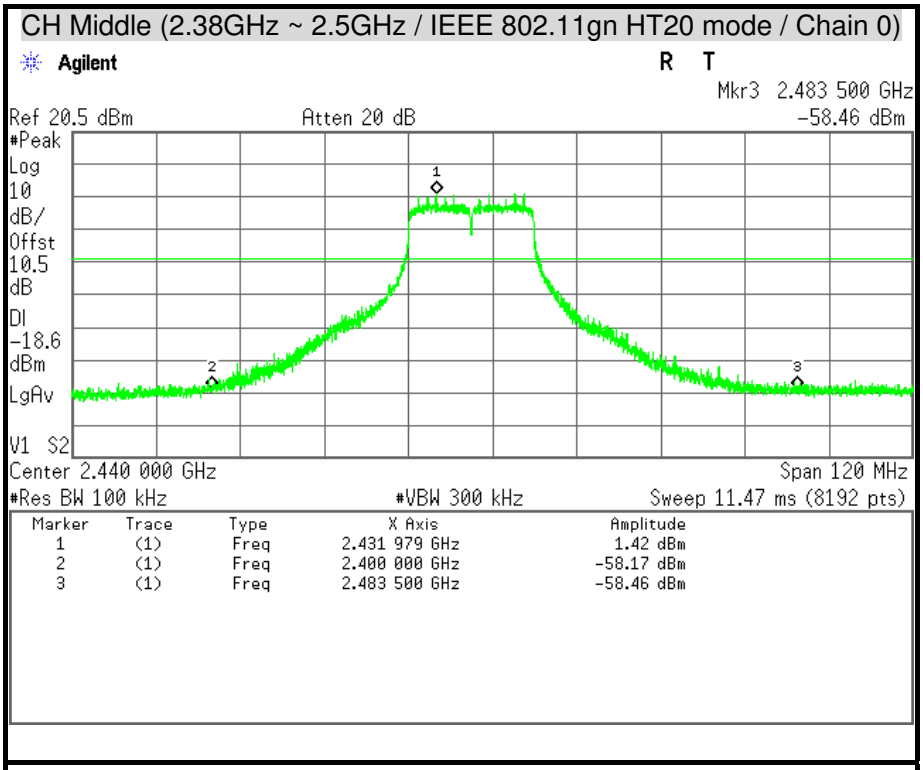
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 mode / Chain 0)



CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 mode / Chain 0)

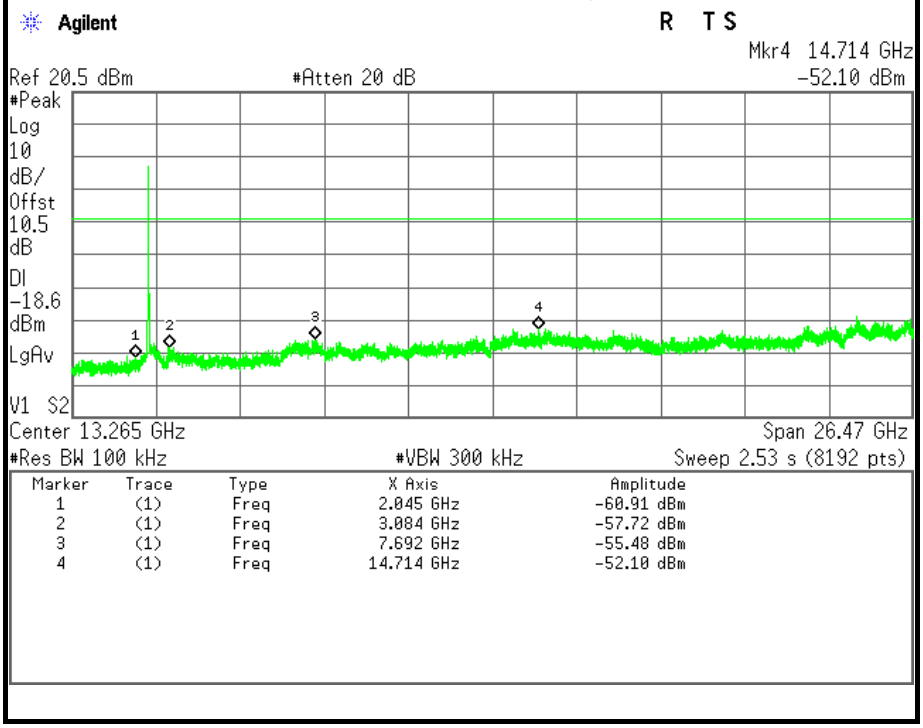


CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 mode / Chain 0)



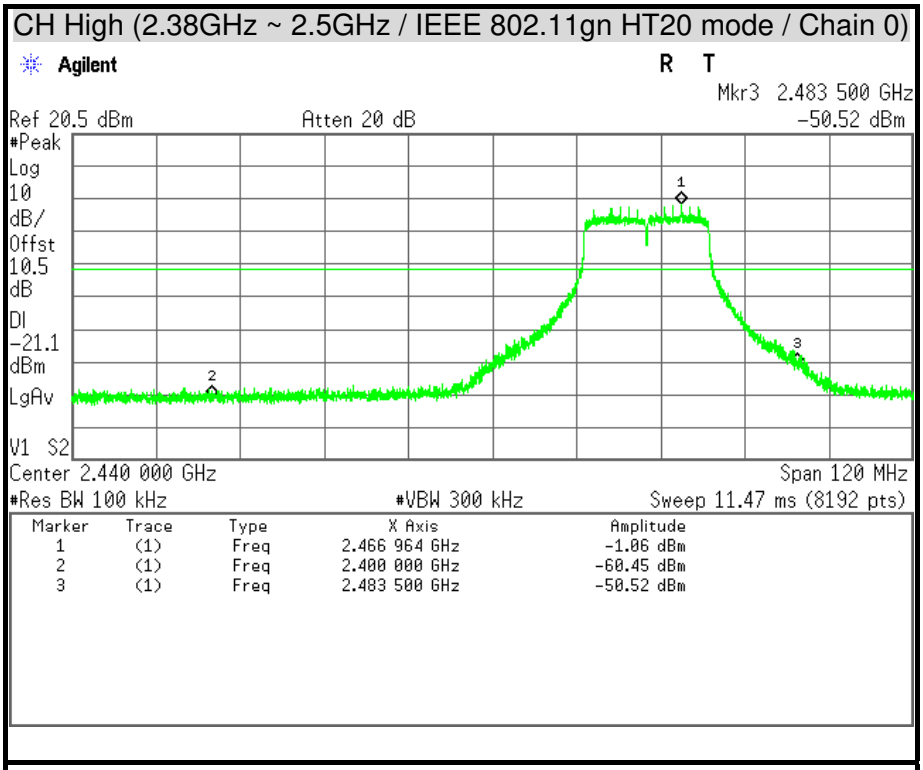
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.431 979 GHz	1.42 dBm
2	(1)	Freq	2.400 000 GHz	-58.17 dBm
3	(1)	Freq	2.483 500 GHz	-58.46 dBm

CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 mode / Chain 0)

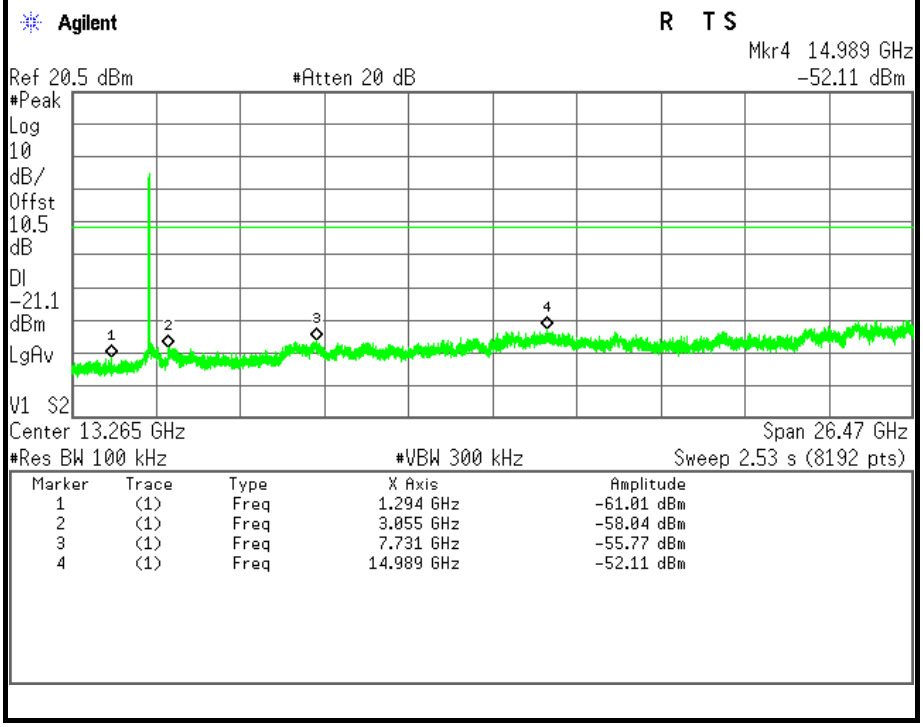


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.045 GHz	-60.91 dBm
2	(1)	Freq	3.084 GHz	-57.72 dBm
3	(1)	Freq	7.692 GHz	-55.48 dBm
4	(1)	Freq	14.714 GHz	-52.10 dBm

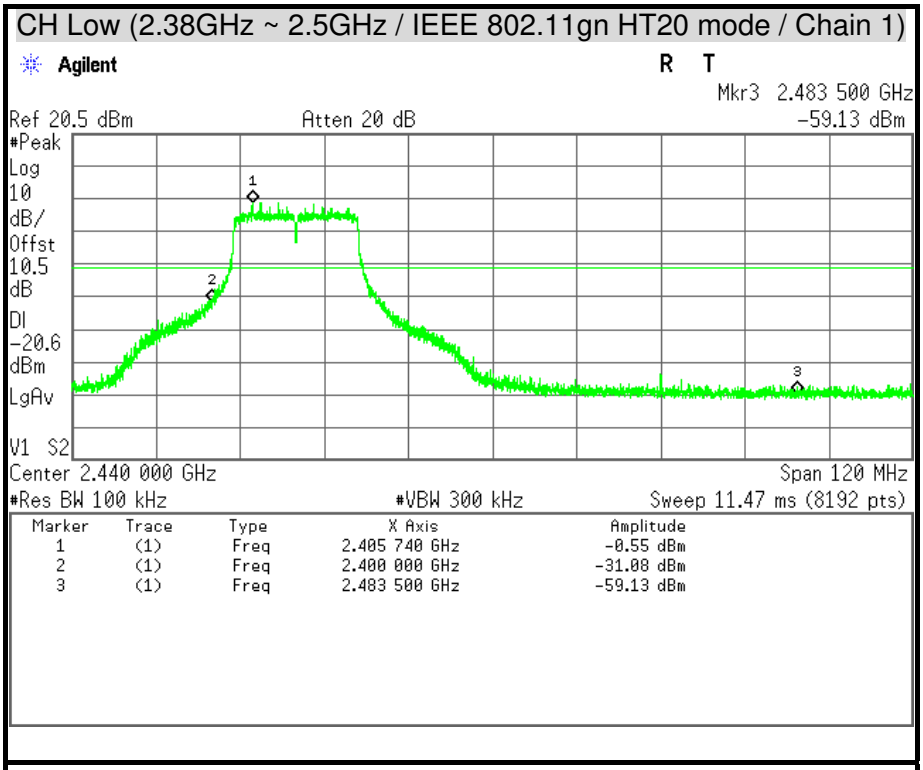
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 mode / Chain 0)



CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 mode / Chain 0)

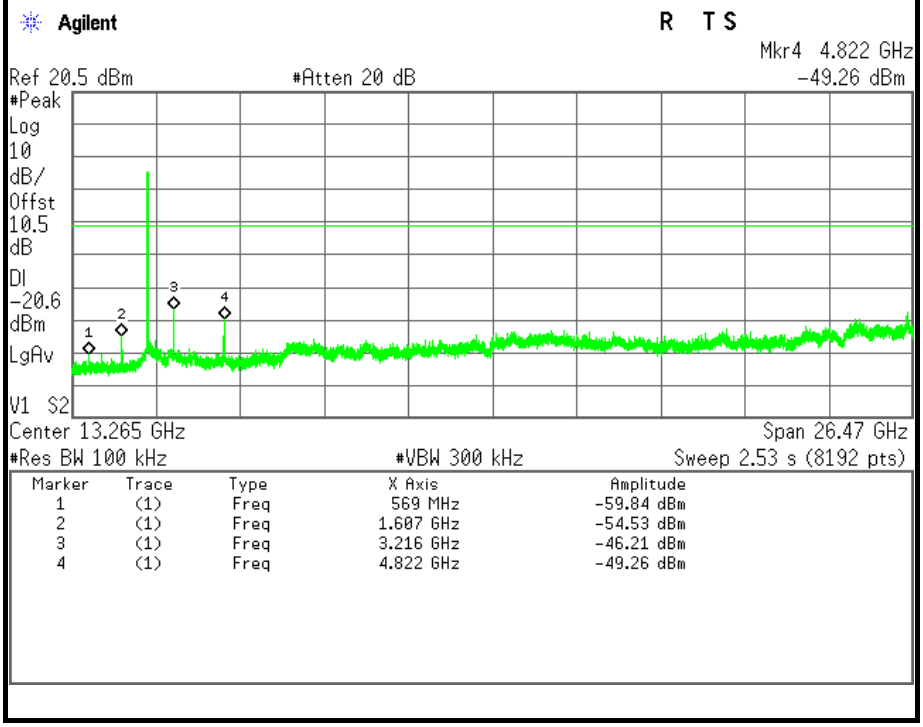


CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 mode / Chain 1)



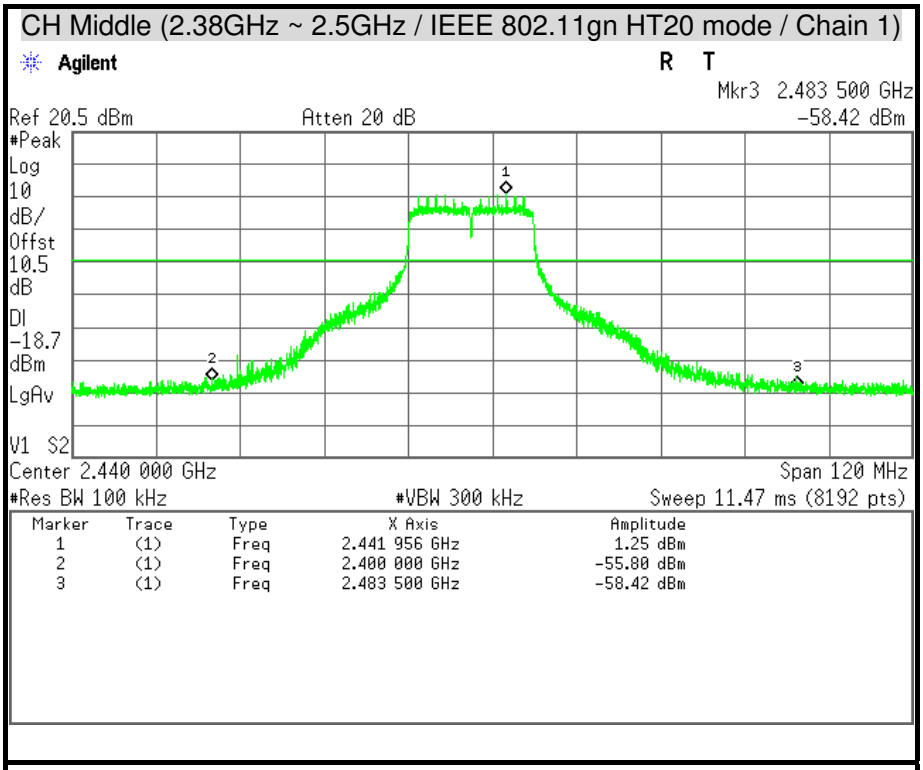
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.405 740 GHz	-0.55 dBm
2	(1)	Freq	2.400 000 GHz	-31.08 dBm
3	(1)	Freq	2.483 500 GHz	-59.13 dBm

CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 mode / Chain 1)

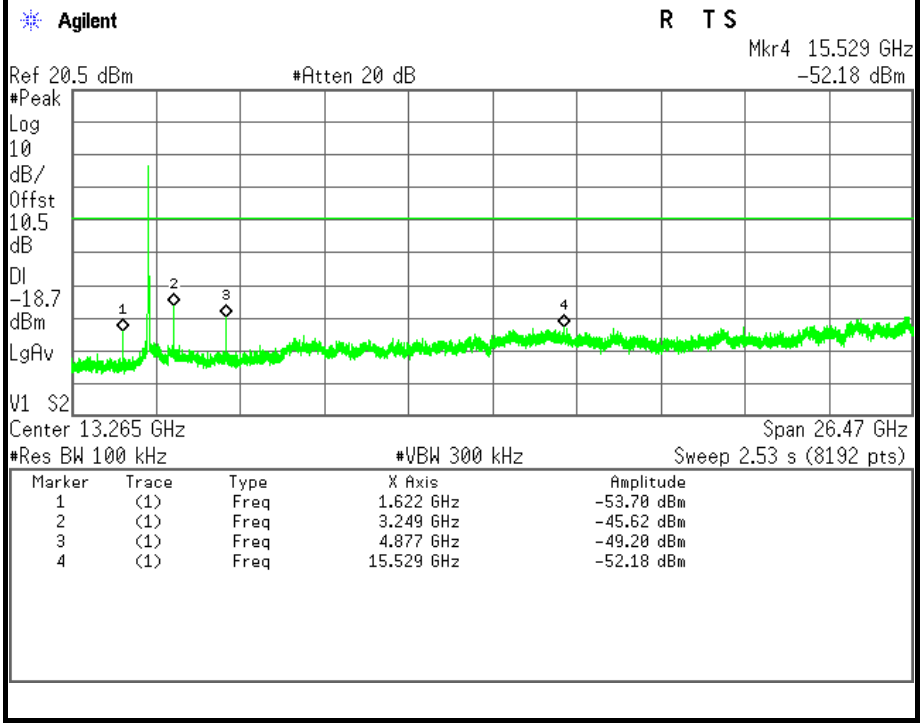


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	569 MHz	-59.84 dBm
2	(1)	Freq	1.607 GHz	-54.53 dBm
3	(1)	Freq	3.216 GHz	-46.21 dBm
4	(1)	Freq	4.822 GHz	-49.26 dBm

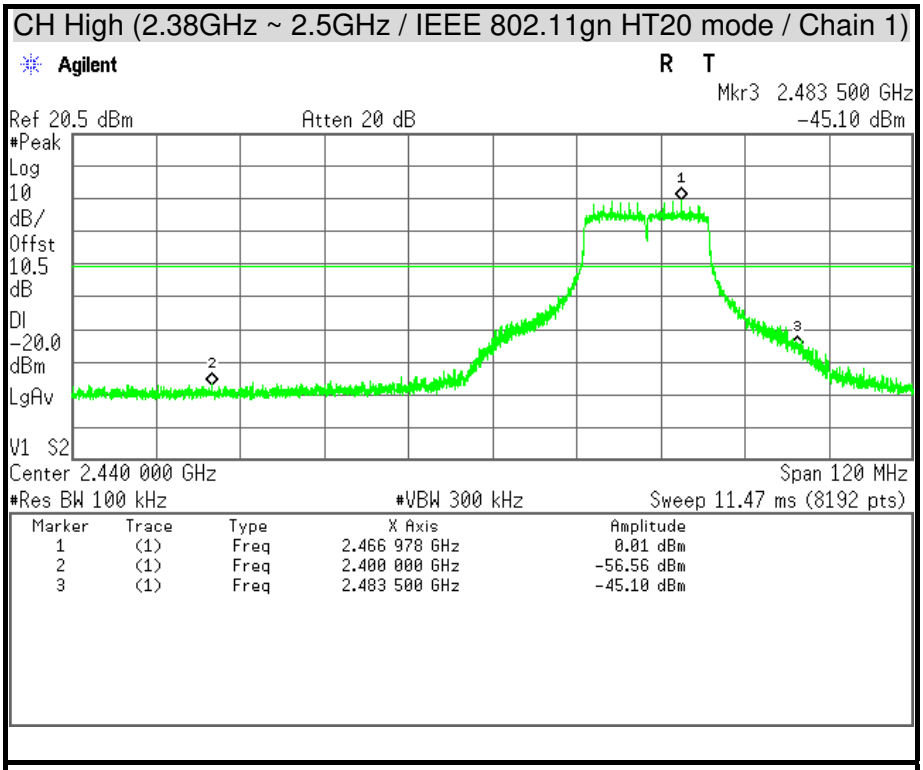
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 mode / Chain 1)



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

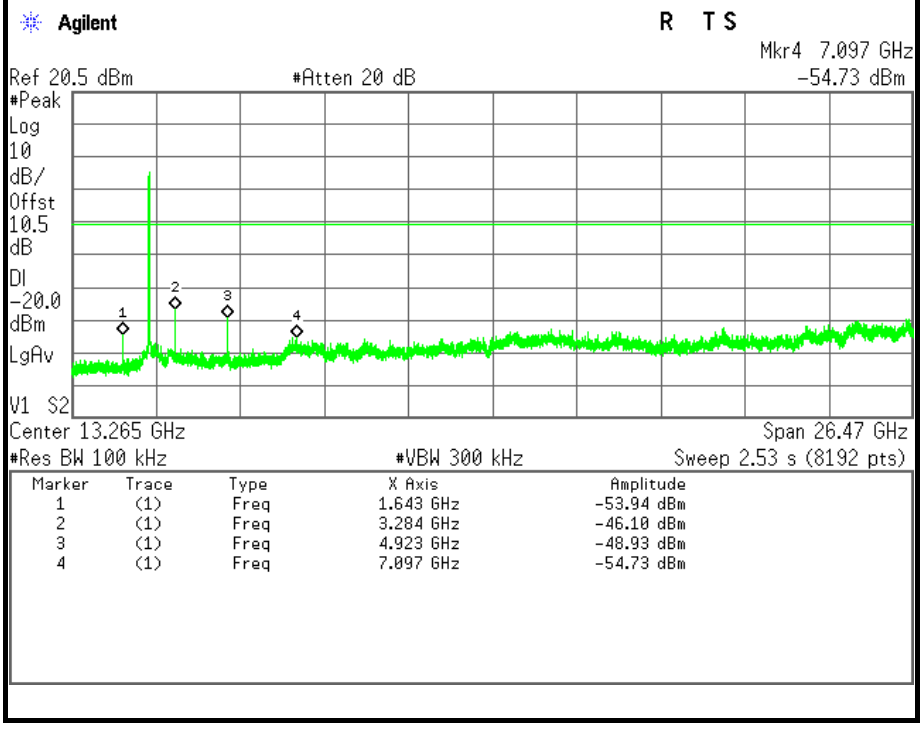


CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 mode / Chain 1)



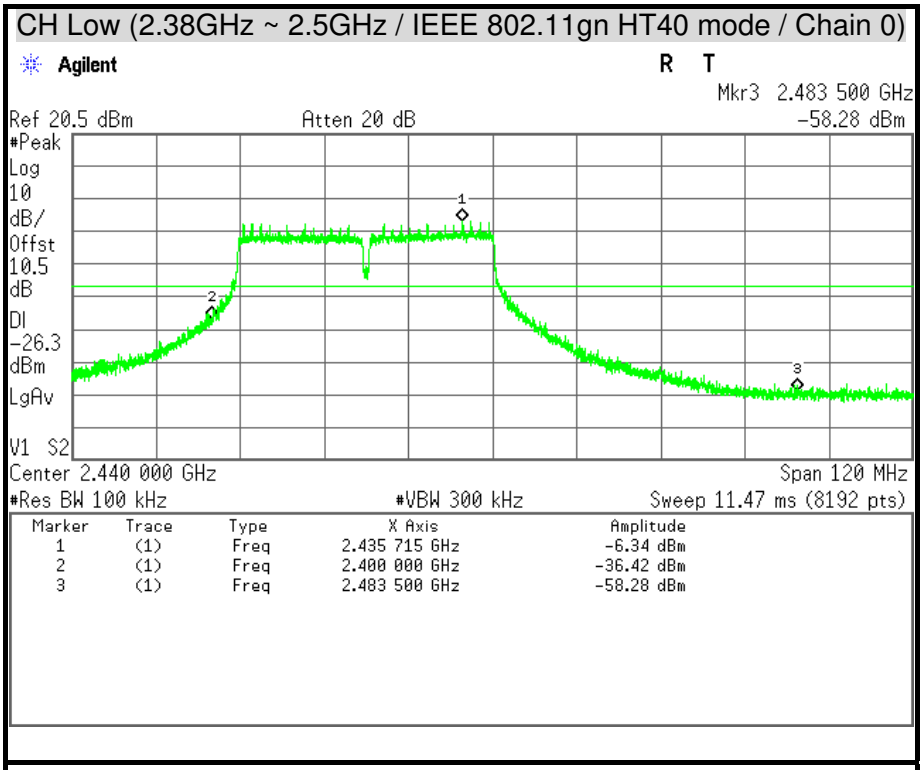
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.466 978 GHz	0.01 dBm
2	(1)	Freq	2.400 000 GHz	-56.56 dBm
3	(1)	Freq	2.483 500 GHz	-45.10 dBm

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

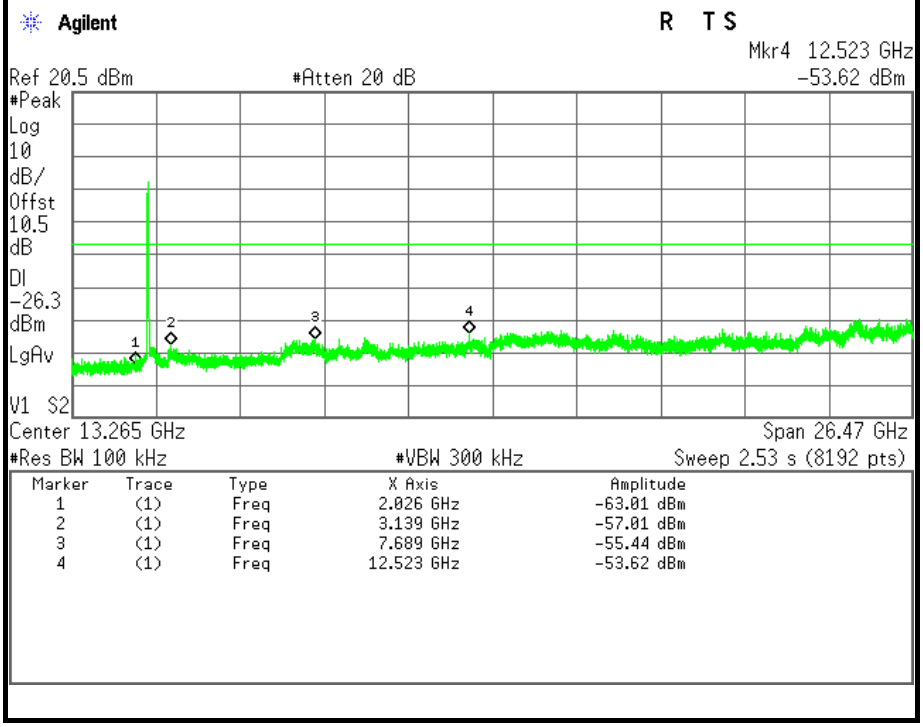


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.643 GHz	-53.94 dBm
2	(1)	Freq	3.284 GHz	-46.10 dBm
3	(1)	Freq	4.923 GHz	-48.93 dBm
4	(1)	Freq	7.097 GHz	-54.73 dBm

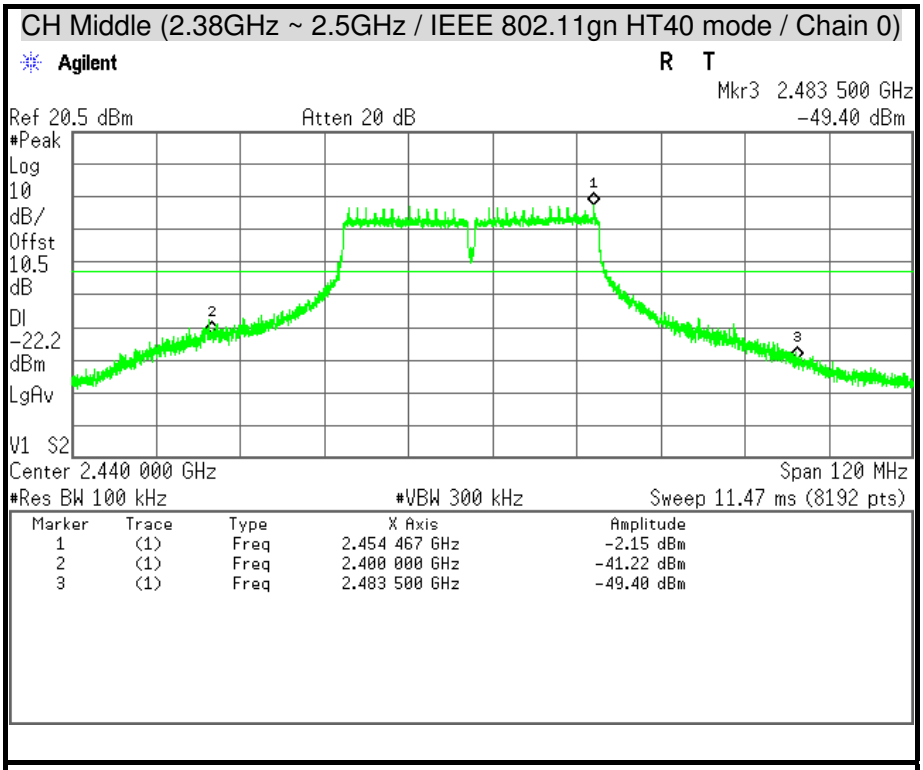
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 mode / Chain 0)



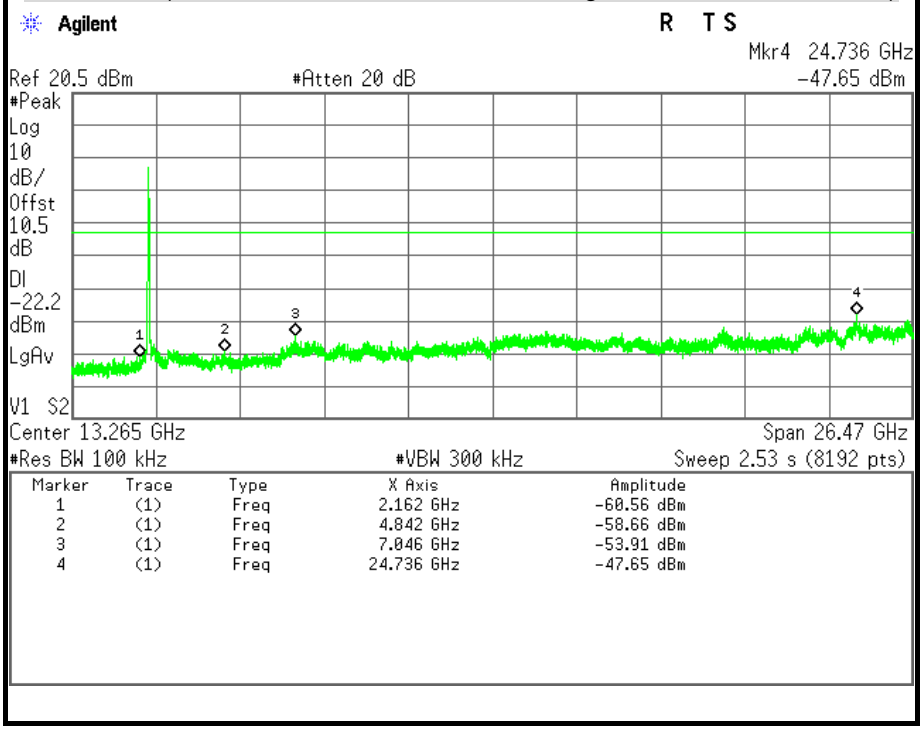
CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 mode / Chain 0)



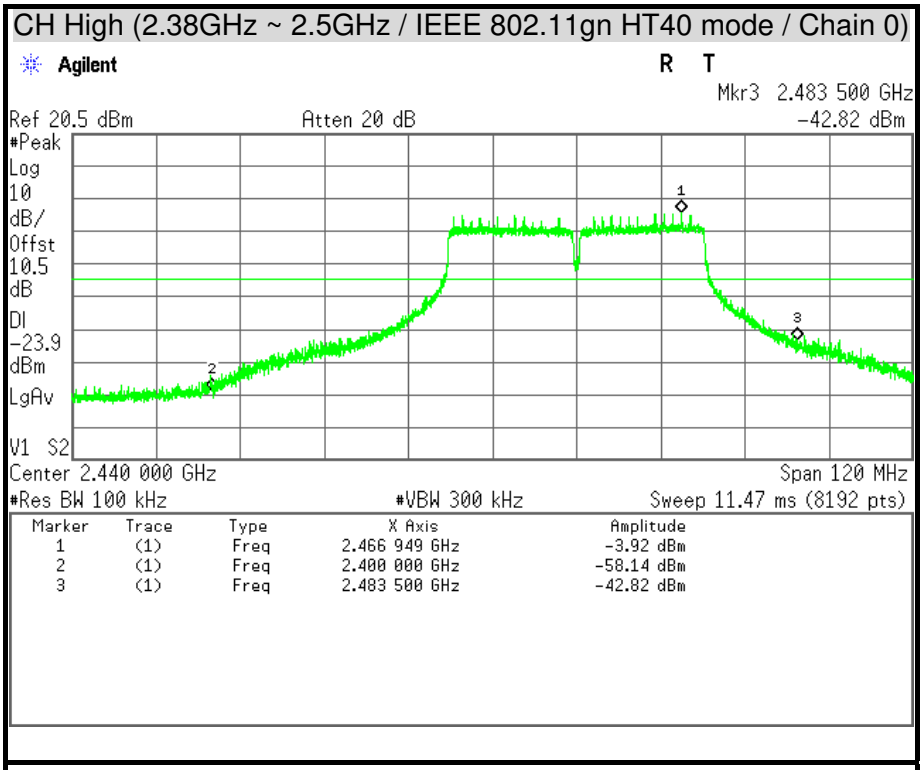
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 mode / Chain 0)



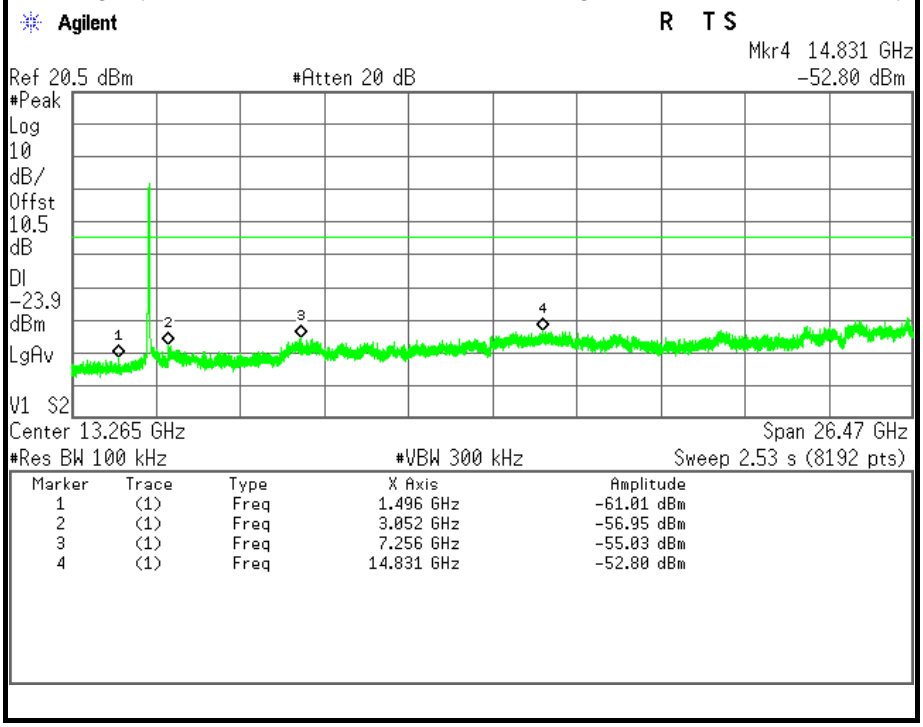
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 mode / Chain 0)



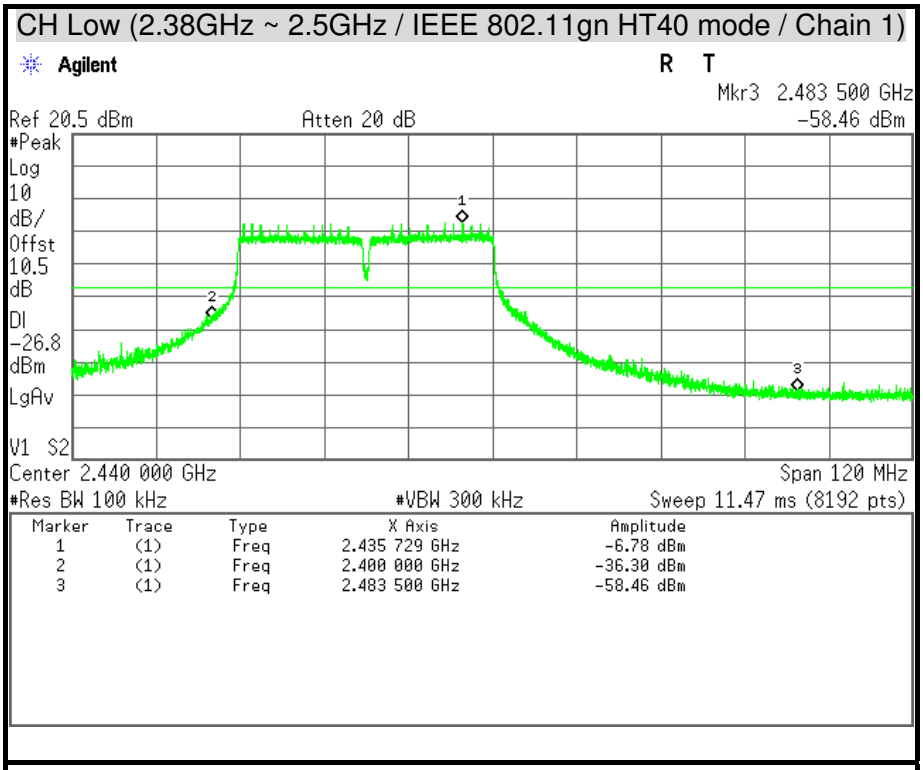
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 mode / Chain 0)



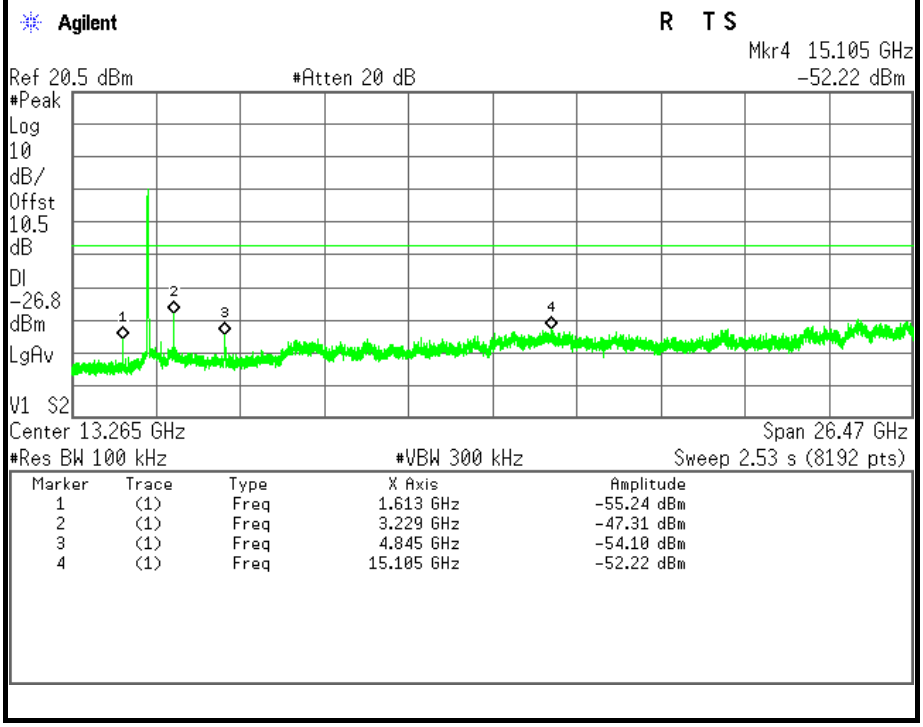
CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 mode / Chain 0)



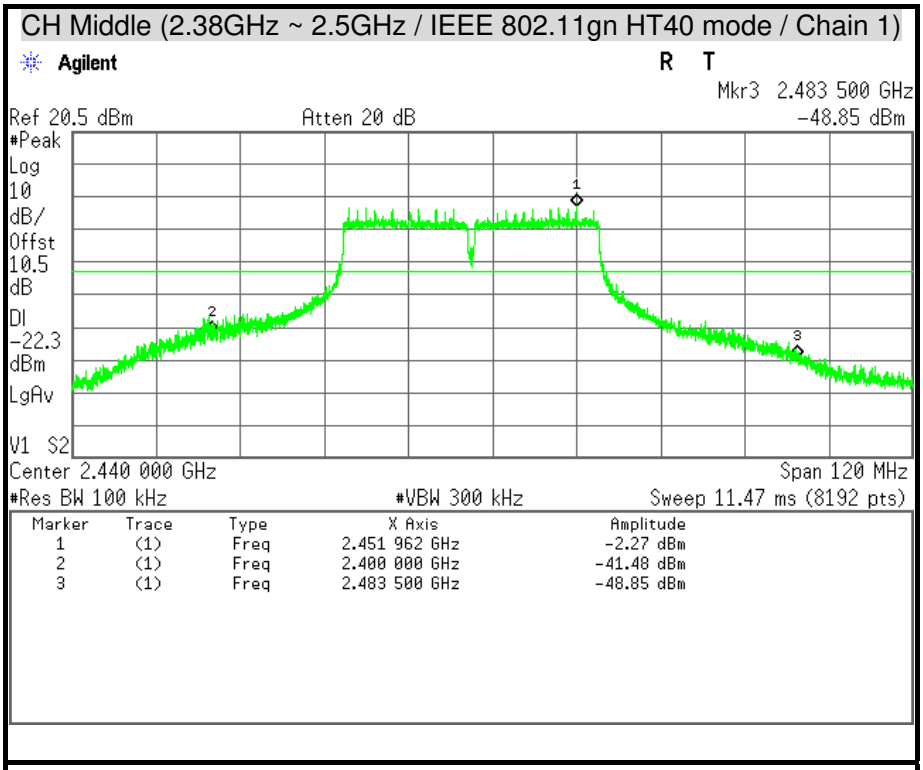
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 mode / Chain 1)



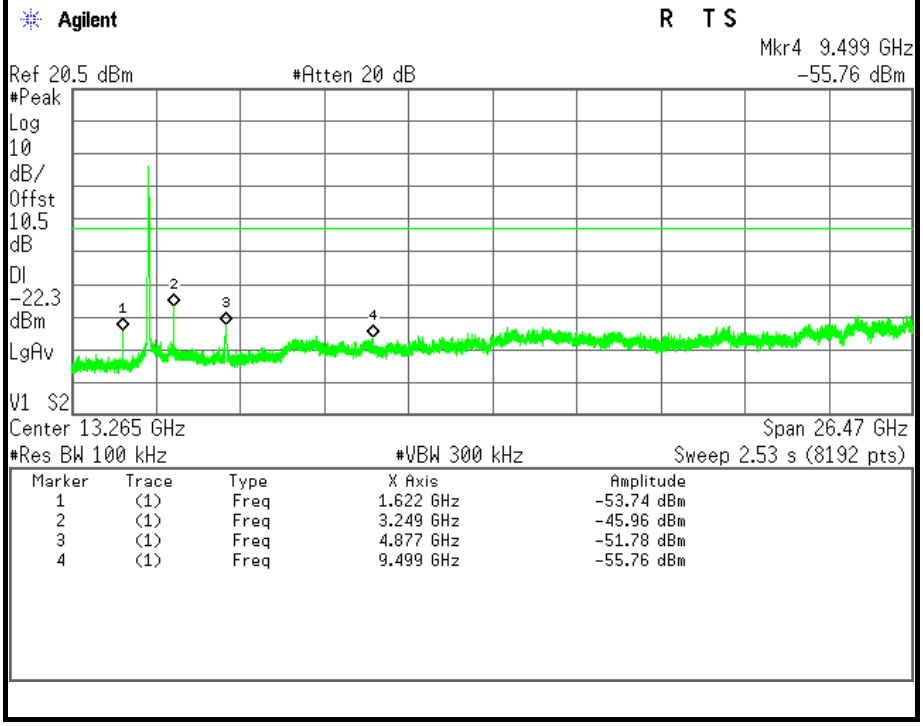
CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 mode / Chain 1)



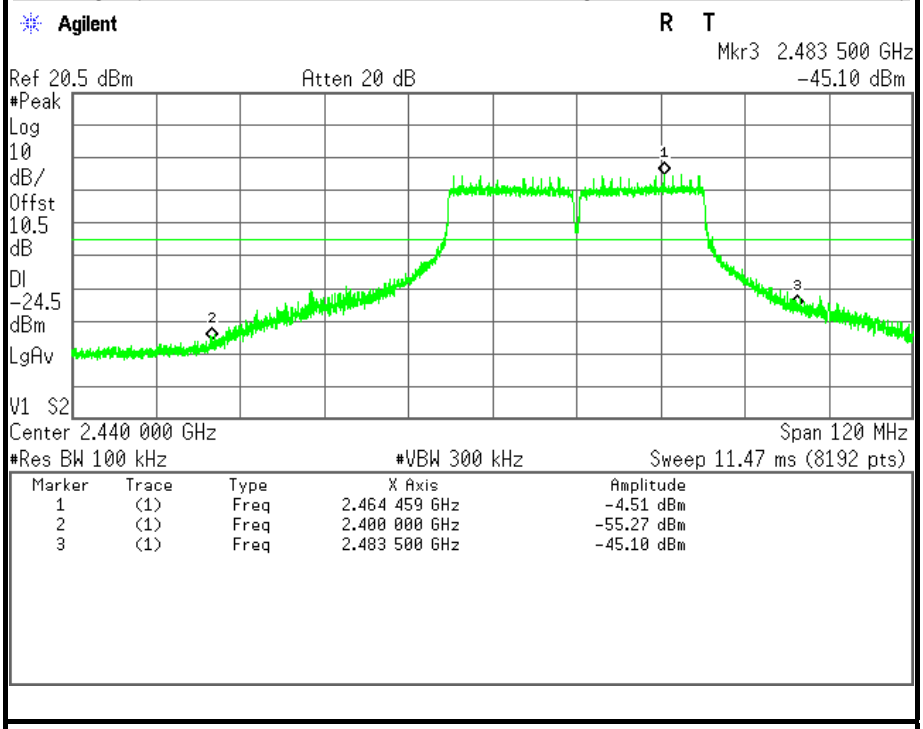
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 mode / Chain 1)



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

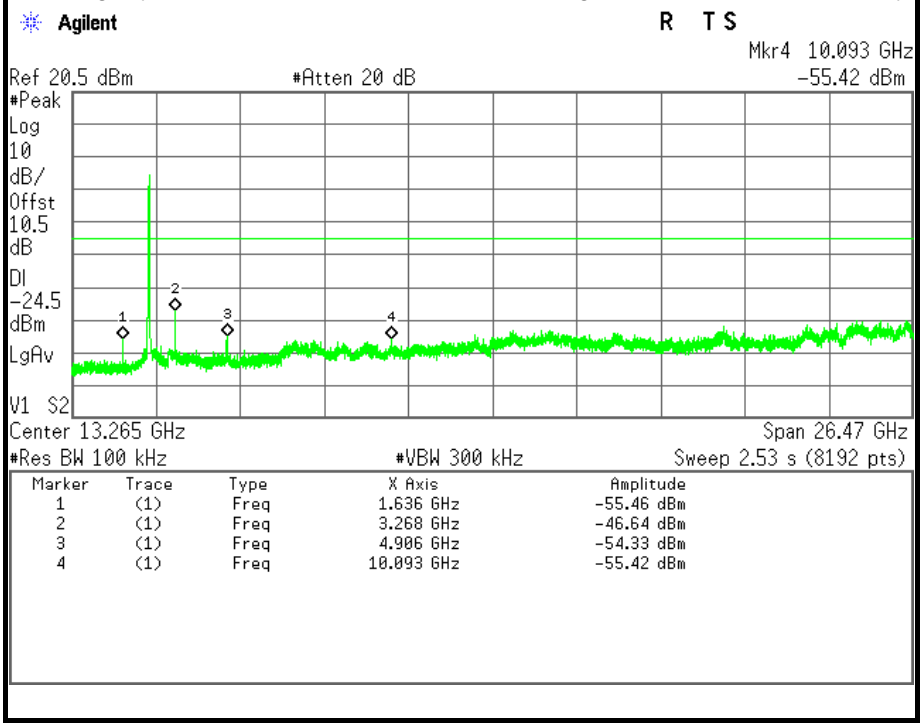


CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 mode / Chain 1)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.464 459 GHz	-4.51 dBm
2	(1)	Freq	2.400 000 GHz	-55.27 dBm
3	(1)	Freq	2.483 500 GHz	-45.10 dBm

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



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.636 GHz	-55.46 dBm
2	(1)	Freq	3.268 GHz	-46.64 dBm
3	(1)	Freq	4.906 GHz	-54.33 dBm
4	(1)	Freq	10.093 GHz	-55.42 dBm

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 is 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

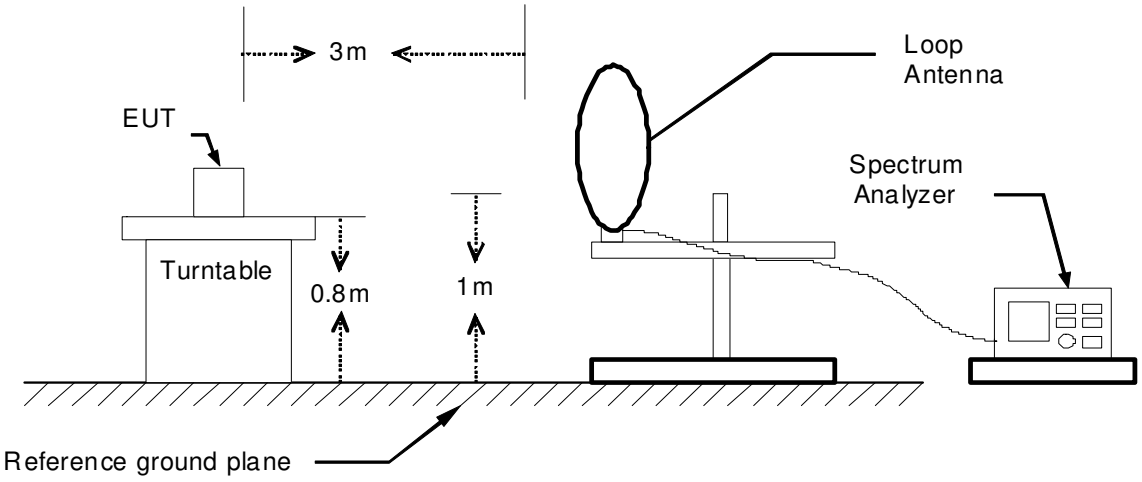
Name of Equipment	Manufacture	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY46180323	04/14/2016
EMI Test Receiver	Rohde & Schwarz	ESCI	100221	04/22/2016
Bi-log Antenna	TESEQ	CBL 6112D	35403	08/04/2016
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-778	08/09/2016
Double-Ridged Waveguide Horn	ETS-LINDGREN	3117	00078733	12/02/2015
Horn Antenna	COM-POWER	AH-840	03077	12/17/2015
Pre-Amplifier	Agilent	8447D	2944A10052	07/14/2016
Pre-Amplifier	Agilent	8449B	3008A01916	07/14/2016
LOOP Antenna	COM-POWER	AL-130	121060	05/24/2016

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

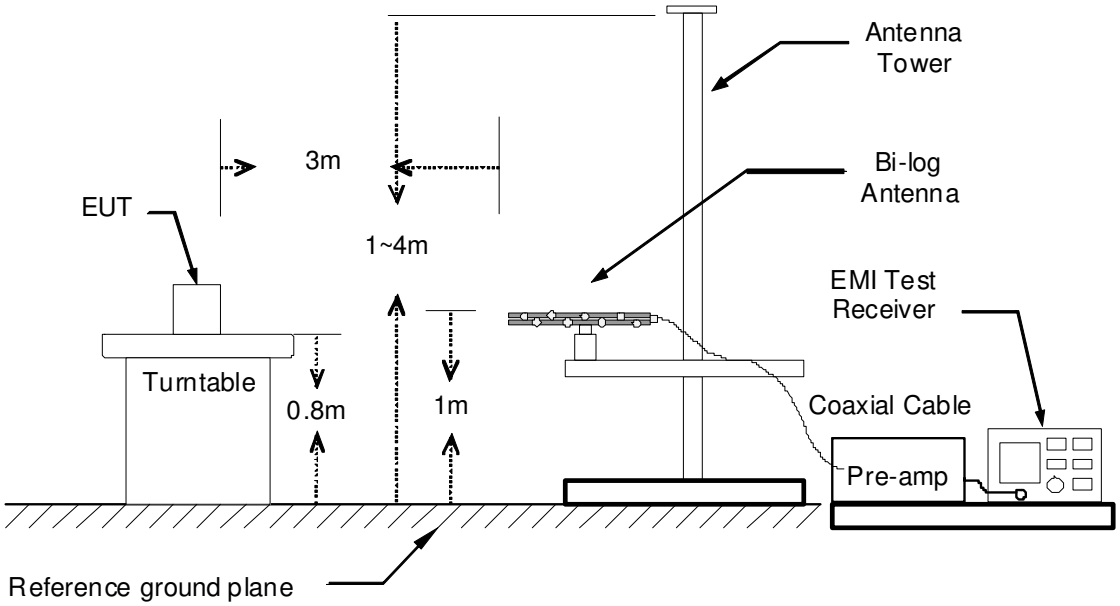
TEST SETUP

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

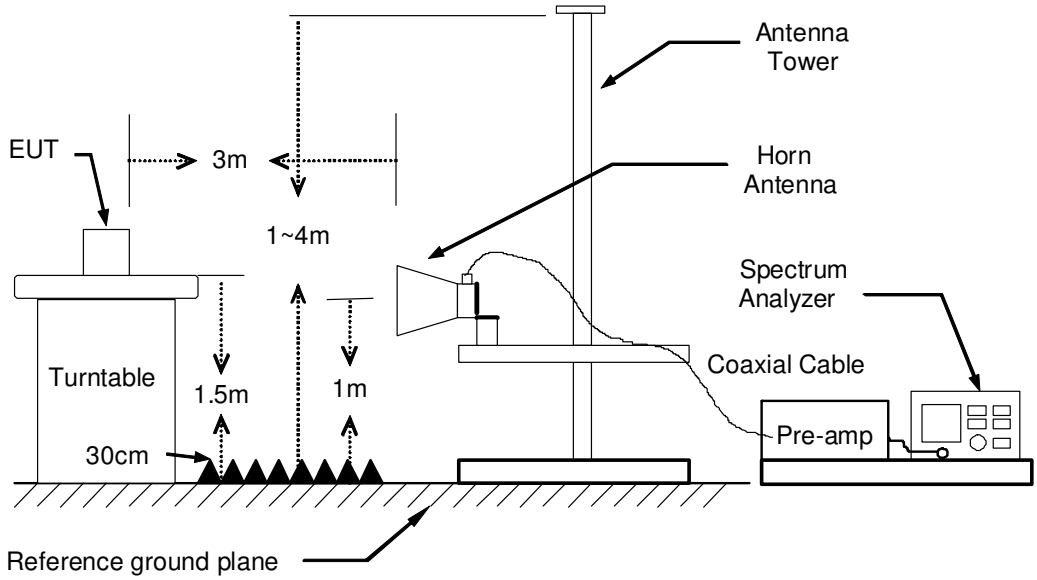
9kHz ~ 30MHz



30MHz ~ 1GHz



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



TEST PROCEDURE

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

Remark :

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

TEST RESULTS

Below 1 GHz (9kHz ~ 30MHz)

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

Below 1 GHz (30MHz ~ 1GHz)

Product Name	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/15
Test mode	Mode 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
100.81	49.09	-15.55	33.54	43.50	-9.96	265	200	Peak
179.38	55.53	-16.62	38.91	43.50	-4.59	78	200	Peak
250.19	50.51	-12.67	37.84	46.00	-8.16	269	100	Peak
342.34	49.37	-10.43	38.94	46.00	-7.06	148	100	Peak
500.45	40.34	-8.13	32.21	46.00	-13.79	214	200	Peak
666.32	42.23	-5.99	36.24	46.00	-9.76	312	100	Peak
940.83	41.48	-2.52	38.96	46.00	-7.04	150	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
39.70	48.32	-13.65	34.67	40.00	-5.33	42	100	Peak
121.18	48.77	-14.24	34.53	43.50	-8.97	128	100	Peak
179.38	54.52	-16.62	37.90	43.50	-5.60	104	100	Peak
256.01	44.06	-12.13	31.93	46.00	-14.07	345	200	Peak
341.37	42.12	-10.45	31.67	46.00	-14.33	62	100	Peak
427.70	42.07	-8.89	33.18	46.00	-12.82	359	100	Peak
940.83	35.91	-2.52	33.39	46.00	-12.61	132	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
2004.00	48.27	1.71	49.98	74.00	-24.02	293	100	Peak
2306.00	47.99	2.59	50.58	74.00	-23.42	263	100	Peak
2570.00	47.82	3.29	51.11	74.00	-22.89	232	200	Peak
4830.00	41.09	8.42	49.51	74.00	-24.49	163	100	Peak
5985.00	40.05	10.84	50.89	74.00	-23.11	218	200	Peak
9720.00	35.94	15.04	50.98	74.00	-23.02	40	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
2016.00	47.84	1.75	49.59	74.00	-24.41	148	100	Peak
2298.00	47.35	2.56	49.91	74.00	-24.09	251	200	Peak
2532.00	47.24	3.21	50.45	74.00	-23.55	62	100	Peak
4830.00	44.76	8.42	53.18	54.00	-0.82	236	133	Average
4830.00	47.84	8.42	56.26	74.00	-17.74	236	133	Peak
6000.00	40.26	10.87	51.13	74.00	-22.87	192	100	Peak
9705.00	36.97	15.02	51.99	74.00	-22.01	335	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
1924.00	49.11	1.04	50.15	74.00	-23.85	298	100	Peak
2264.00	48.10	2.47	50.57	74.00	-23.43	310	100	Peak
2490.00	48.49	3.12	51.61	74.00	-22.39	272	200	Peak
4875.00	40.03	8.53	48.56	74.00	-25.44	290	200	Peak
5970.00	39.96	10.80	50.76	74.00	-23.24	221	200	Peak
9555.00	36.91	14.82	51.73	74.00	-22.27	157	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
1886.00	48.41	0.71	49.12	74.00	-24.88	360	100	Peak
2254.00	47.90	2.44	50.34	74.00	-23.66	300	200	Peak
2516.00	46.87	3.18	50.05	74.00	-23.95	241	200	Peak
4875.00	43.60	8.53	52.13	54.00	-1.87	232	140	Average
4875.00	46.81	8.53	55.34	74.00	-18.66	232	140	Peak
5985.00	39.75	10.84	50.59	74.00	-23.41	193	100	Peak
9630.00	36.20	14.92	51.12	74.00	-22.88	126	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
1956.00	48.35	1.32	49.67	74.00	-24.33	263	100	Peak
2312.00	47.64	2.60	50.24	74.00	-23.76	123	100	Peak
2636.00	47.94	3.42	51.36	74.00	-22.64	229	100	Peak
4920.00	44.53	8.63	53.16	54.00	-0.84	196	100	Average
4920.00	47.28	8.63	55.91	74.00	-18.09	196	100	Peak
5985.00	39.18	10.84	50.02	74.00	-23.98	182	100	Peak
8760.00	36.90	13.23	50.13	74.00	-23.87	0	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
2002.00	47.86	1.71	49.57	74.00	-24.43	360	200	Peak
2260.00	47.43	2.45	49.88	74.00	-24.12	27	200	Peak
2536.00	46.77	3.22	49.99	74.00	-24.01	120	200	Peak
4920.00	44.06	8.63	52.69	54.00	-1.31	235	157	Average
4920.00	46.54	8.63	55.17	74.00	-18.83	235	157	Peak
5985.00	40.77	10.84	51.61	74.00	-22.39	191	100	Peak
9825.00	36.81	15.19	52.00	74.00	-22.00	32	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
2242.00	48.07	2.40	50.47	74.00	-23.53	252	100	Peak
2492.00	49.15	3.13	52.28	74.00	-21.72	265	200	Peak
2590.00	39.70	3.33	43.03	54.00	-10.97	241	100	Average
2590.00	49.60	3.33	52.93	74.00	-21.07	241	100	Peak
4815.00	43.75	8.39	52.14	74.00	-21.86	200	100	Peak
6000.00	40.22	10.87	51.09	74.00	-22.91	220	200	Peak
9525.00	37.01	14.77	51.78	74.00	-22.22	285	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
1838.00	48.43	0.29	48.72	74.00	-25.28	324	100	Peak
2132.00	47.91	2.08	49.99	74.00	-24.01	254	100	Peak
2592.00	47.72	3.33	51.05	74.00	-22.95	164	100	Peak
4830.00	35.90	8.42	44.32	54.00	-9.68	231	100	Average
4830.00	46.73	8.42	55.15	74.00	-18.85	231	100	Peak
6000.00	30.50	10.87	41.37	54.00	-12.63	190	100	Average
6000.00	42.54	10.87	53.41	74.00	-20.59	190	100	Peak
9600.00	36.46	14.88	51.34	74.00	-22.66	16	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
2102.00	48.22	2.00	50.22	74.00	-23.78	257	100	Peak
2362.00	41.10	2.75	43.85	54.00	-10.15	230	200	Average
2362.00	50.99	2.75	53.74	74.00	-20.26	230	200	Peak
2582.00	49.11	3.31	52.42	74.00	-21.58	232	100	Peak
4875.00	43.59	8.53	52.12	74.00	-21.88	218	100	Peak
5985.00	39.01	10.84	49.85	74.00	-24.15	261	200	Peak
8805.00	37.82	13.23	51.05	74.00	-22.95	185	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
2080.00	47.41	1.93	49.34	74.00	-24.66	2	100	Peak
2266.00	47.59	2.47	50.06	74.00	-23.94	195	100	Peak
2624.00	47.48	3.40	50.88	74.00	-23.12	331	100	Peak
4875.00	38.23	8.53	46.76	54.00	-7.24	224	126	Average
4875.00	52.84	8.53	61.37	74.00	-12.63	224	126	Peak
5985.00	41.44	10.84	52.28	74.00	-21.72	190	100	Peak
9630.00	36.19	14.92	51.11	74.00	-22.89	121	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
2068.00	47.64	1.90	49.54	74.00	-24.46	75	100	Peak
2368.00	49.77	2.77	52.54	74.00	-21.46	238	100	Peak
2508.00	41.30	3.17	44.47	54.00	-9.53	270	100	Average
2508.00	51.16	3.17	54.33	74.00	-19.67	270	100	Peak
4920.00	34.50	8.63	43.13	54.00	-10.87	211	100	Average
4920.00	44.29	8.63	52.92	74.00	-21.08	211	100	Peak
5985.00	39.98	10.84	50.82	74.00	-23.18	224	200	Peak
9495.00	36.70	14.73	51.43	74.00	-22.57	178	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
2132.00	47.21	2.08	49.29	74.00	-24.71	110	100	Peak
2306.00	47.30	2.59	49.89	74.00	-24.11	262	100	Peak
2604.00	47.83	3.36	51.19	74.00	-22.81	54	200	Peak
4920.00	36.89	8.63	45.52	54.00	-8.48	235	100	Average
4920.00	47.64	8.63	56.27	74.00	-17.73	235	100	Peak
5985.00	41.26	10.84	52.10	74.00	-21.90	190	100	Peak
9870.00	36.25	15.25	51.50	74.00	-22.50	247	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
1974.00	47.47	1.47	48.94	74.00	-25.06	292	100	Peak
2124.00	47.91	2.06	49.97	74.00	-24.03	217	100	Peak
2606.00	48.92	3.36	52.28	74.00	-21.72	242	100	Peak
4830.00	43.46	8.42	51.88	74.00	-22.12	211	100	Peak
6000.00	38.86	10.87	49.73	74.00	-24.27	224	200	Peak
9555.00	36.81	14.82	51.63	74.00	-22.37	223	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
1938.00	47.93	1.16	49.09	74.00	-24.91	74	200	Peak
2248.00	47.58	2.42	50.00	74.00	-24.00	189	200	Peak
2588.00	47.27	3.32	50.59	74.00	-23.41	332	200	Peak
4830.00	36.48	8.42	44.90	54.00	-9.10	221	100	Average
4830.00	46.32	8.42	54.74	74.00	-19.26	221	100	Peak
5985.00	40.34	10.84	51.18	74.00	-22.82	195	100	Peak
9585.00	37.04	14.86	51.90	74.00	-22.10	181	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
2140.00	48.08	2.11	50.19	74.00	-23.81	208	100	Peak
2352.00	49.50	2.72	52.22	74.00	-21.78	218	100	Peak
2506.00	39.90	3.16	43.06	54.00	-10.94	247	100	Average
2506.00	49.71	3.16	52.87	74.00	-21.13	247	100	Peak
4875.00	34.90	8.53	43.43	54.00	-10.57	192	100	Average
4875.00	44.78	8.53	53.31	74.00	-20.69	192	100	Peak
5970.00	40.52	10.80	51.32	74.00	-22.68	220	200	Peak
9615.00	36.49	14.90	51.39	74.00	-22.61	0	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
2180.00	47.52	2.22	49.74	74.00	-24.26	273	200	Peak
2318.00	48.54	2.62	51.16	74.00	-22.84	247	100	Peak
2508.00	47.33	3.17	50.50	74.00	-23.50	241	200	Peak
4875.00	36.30	8.53	44.83	54.00	-9.17	193	100	Average
4875.00	46.07	8.53	54.60	74.00	-19.40	193	100	Peak
5985.00	40.32	10.84	51.16	74.00	-22.84	193	100	Peak
9585.00	36.72	14.86	51.58	74.00	-22.42	250	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
2086.00	47.73	1.95	49.68	74.00	-24.32	263	100	Peak
2388.00	49.08	2.83	51.91	74.00	-22.09	245	100	Peak
2580.00	49.25	3.31	52.56	74.00	-21.44	239	200	Peak
4905.00	41.94	8.60	50.54	74.00	-23.46	191	100	Peak
5985.00	40.80	10.84	51.64	74.00	-22.36	227	200	Peak
9435.00	36.56	14.55	51.11	74.00	-22.89	338	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
2216.00	47.50	2.33	49.83	74.00	-24.17	234	100	Peak
2390.00	47.47	2.83	50.30	74.00	-23.70	175	100	Peak
2608.00	47.53	3.36	50.89	74.00	-23.11	227	100	Peak
4920.00	34.50	8.63	43.13	54.00	-10.87	230	100	Average
4920.00	44.14	8.63	52.77	74.00	-21.23	230	100	Peak
6000.00	30.10	10.87	40.97	54.00	-13.03	189	100	Average
6000.00	42.12	10.87	52.99	74.00	-21.01	189	100	Peak
9540.00	36.48	14.80	51.28	74.00	-22.72	173	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
2034.00	47.84	1.80	49.64	74.00	-24.36	251	200	Peak
2296.00	47.79	2.56	50.35	74.00	-23.65	324	200	Peak
2512.00	48.85	3.17	52.02	74.00	-21.98	224	100	Peak
5100.00	38.10	9.00	47.10	74.00	-26.90	166	200	Peak
5985.00	38.06	10.84	48.90	74.00	-25.10	223	200	Peak
9810.00	37.07	15.17	52.24	74.00	-21.76	28	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
2132.00	48.51	2.08	50.59	74.00	-23.41	72	200	Peak
2304.00	48.03	2.58	50.61	74.00	-23.39	113	200	Peak
2488.00	47.35	3.12	50.47	74.00	-23.53	63	200	Peak
4830.00	40.06	8.42	48.48	74.00	-25.52	163	100	Peak
5985.00	40.48	10.84	51.32	74.00	-22.68	194	100	Peak
9615.00	36.40	14.90	51.30	74.00	-22.70	334	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
2210.00	48.16	2.31	50.47	74.00	-23.53	226	100	Peak
2390.00	50.40	2.83	53.23	54.00	-0.77	237	278	Average
2390.00	69.70	2.83	72.53	74.00	-1.47	237	278	Peak
2484.00	44.60	3.10	47.70	54.00	-6.30	230	100	Average
2484.00	54.50	3.10	57.60	74.00	-16.40	230	100	Peak
4875.00	41.59	8.53	50.12	74.00	-23.88	192	100	Peak
5970.00	38.48	10.80	49.28	74.00	-24.72	185	100	Peak
9660.00	36.99	14.96	51.95	74.00	-22.05	12	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
2118.00	48.33	2.04	50.37	74.00	-23.63	298	200	Peak
2390.00	45.70	2.83	48.53	54.00	-5.47	198	200	Average
2390.00	55.55	2.83	58.38	74.00	-15.62	198	200	Peak
2484.00	40.10	3.10	43.20	54.00	-10.80	221	200	Average
2484.00	49.84	3.10	52.94	74.00	-21.06	221	200	Peak
4874.00	34.90	8.53	43.43	54.00	-10.57	225	100	Average
4874.00	44.77	8.53	53.30	74.00	-20.70	225	100	Peak
5985.00	41.00	10.84	51.84	74.00	-22.16	191	100	Peak
9450.00	36.97	14.59	51.56	74.00	-22.44	163	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	All In One Panel PC	Test By	Rex Chiu
Test Model	3365-199	Test Date	2015/09/07
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
2178.00	47.64	2.22	49.86	74.00	-24.14	256	200	Peak
2388.00	48.54	2.83	51.37	74.00	-22.63	245	200	Peak
2502.00	40.90	3.15	44.05	54.00	-9.95	249	200	Average
2502.00	50.82	3.15	53.97	74.00	-20.03	249	200	Peak
4920.00	39.20	8.63	47.83	74.00	-26.17	203	100	Peak
5970.00	39.97	10.80	50.77	74.00	-23.23	222	200	Peak
9720.00	36.56	15.04	51.60	74.00	-22.40	109	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
1994.00	48.58	1.65	50.23	74.00	-23.77	312	200	Peak
2384.00	47.34	2.81	50.15	74.00	-23.85	136	200	Peak
2532.00	47.71	3.21	50.92	74.00	-23.08	201	200	Peak
4890.00	39.58	8.56	48.14	74.00	-25.86	230	200	Peak
5985.00	40.84	10.84	51.68	74.00	-22.32	190	100	Peak
9705.00	36.40	15.02	51.42	74.00	-22.58	352	100	Peak

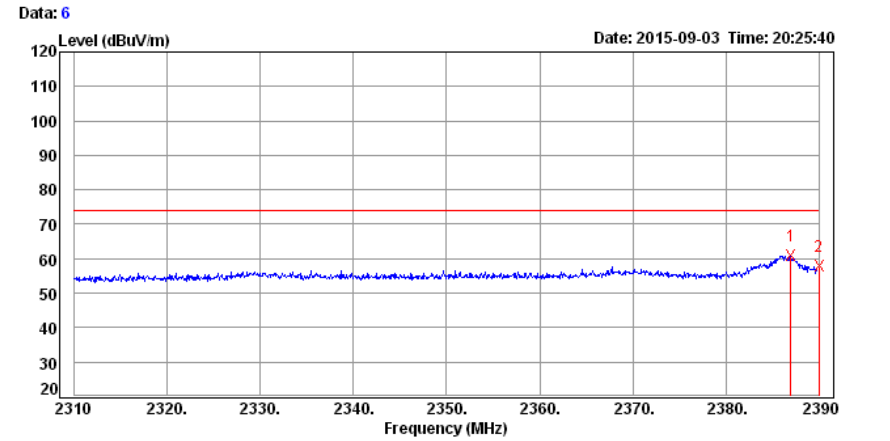
Remark:

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

Restricted Band Edges

Detector mode: Peak **Polarity: Horizontal**

CH Low (IEEE 802.11b mode)

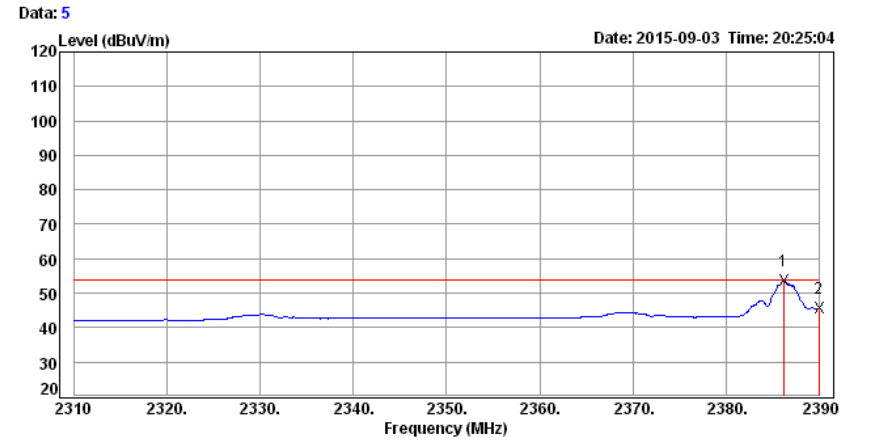


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2386.96	58.02	2.82	60.84	74.00	-13.16			Peak
2390.00	54.82	2.83	57.65	74.00	-16.35			Peak

Detector mode: Average **Polarity: Horizontal**

CH Low (IEEE 802.11b mode)

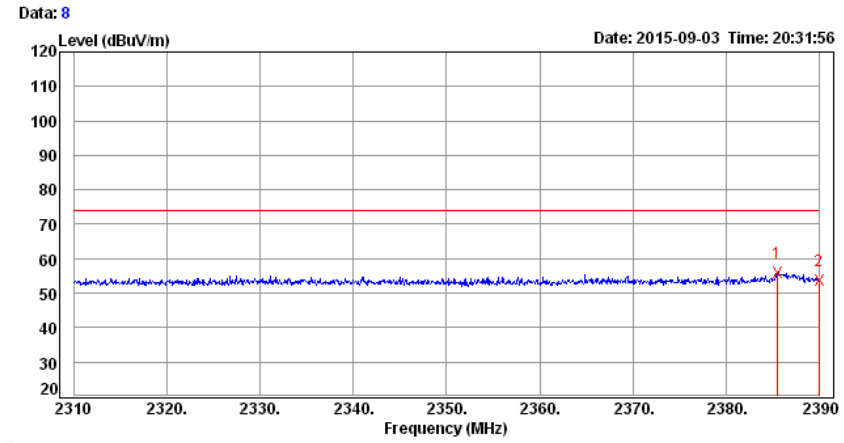


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2386.24	50.78	2.82	53.60	54.00	-0.40			Average
2390.00	42.81	2.83	45.64	54.00	-8.36			Average

Detector mode: Peak **Polarity: Vertical**

CH Low (IEEE 802.11b mode)

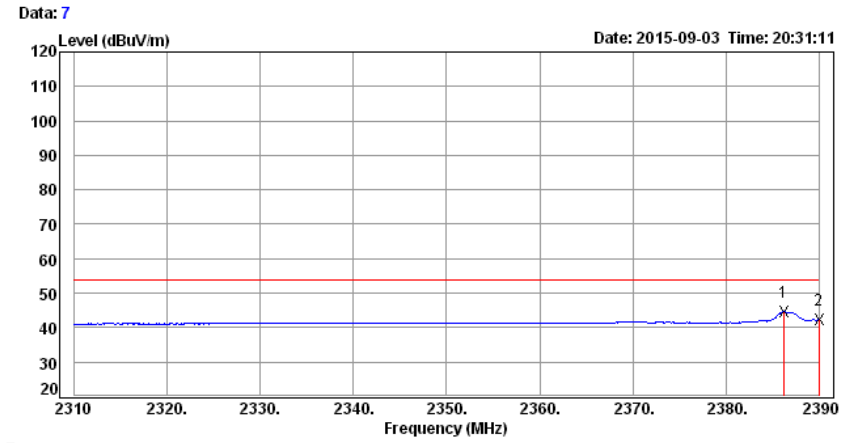


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2385.52	53.16	2.82	55.98	74.00	-18.02			Peak
2390.00	50.98	2.83	53.81	74.00	-20.19			Peak

Detector mode: Average **Polarity: Vertical**

CH Low (IEEE 802.11b mode)

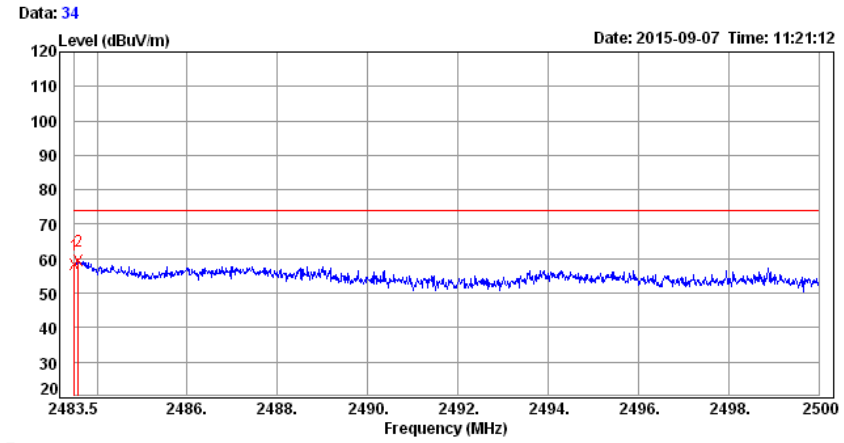


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2386.24	41.84	2.82	44.66	54.00	-9.34			Average
2390.00	39.44	2.83	42.27	54.00	-11.73			Average

Detector mode: Peak **Polarity: Horizontal**

CH High (IEEE 802.11b mode)

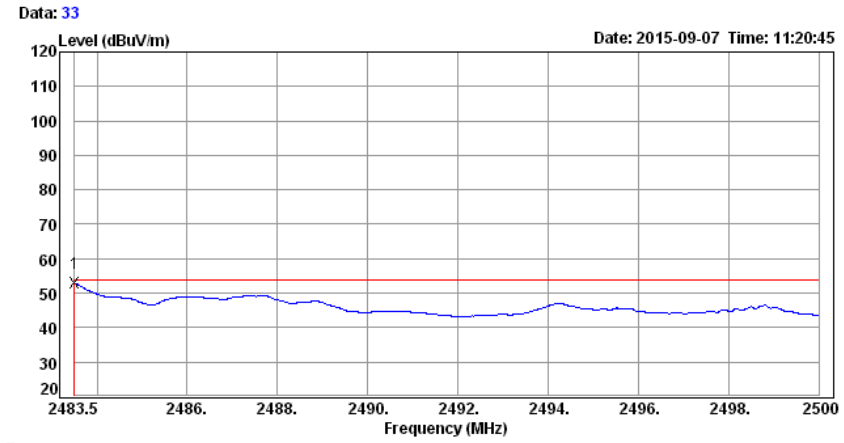


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	55.05	3.10	58.15	74.00	-15.85			Peak
2483.58	56.41	3.10	59.51	74.00	-14.49			Peak

Detector mode: Average **Polarity: Horizontal**

CH High (IEEE 802.11b mode)

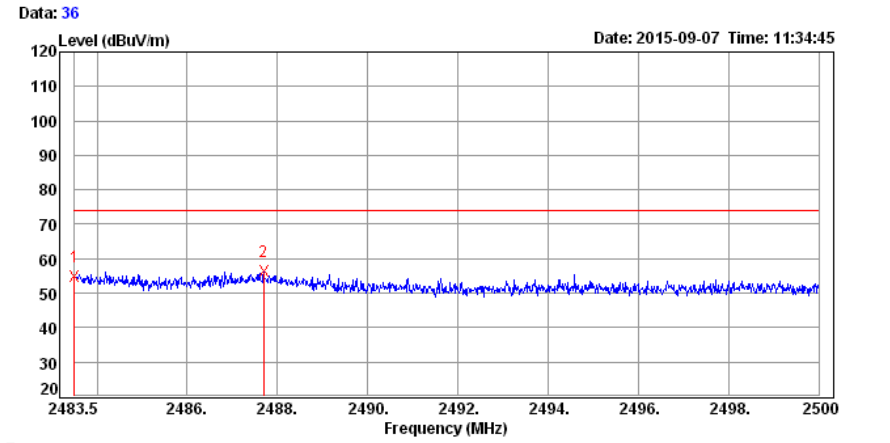


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	49.85	3.10	52.95	54.00	-1.05			Average

Detector mode: Peak **Polarity: Vertical**

CH High (IEEE 802.11b mode)

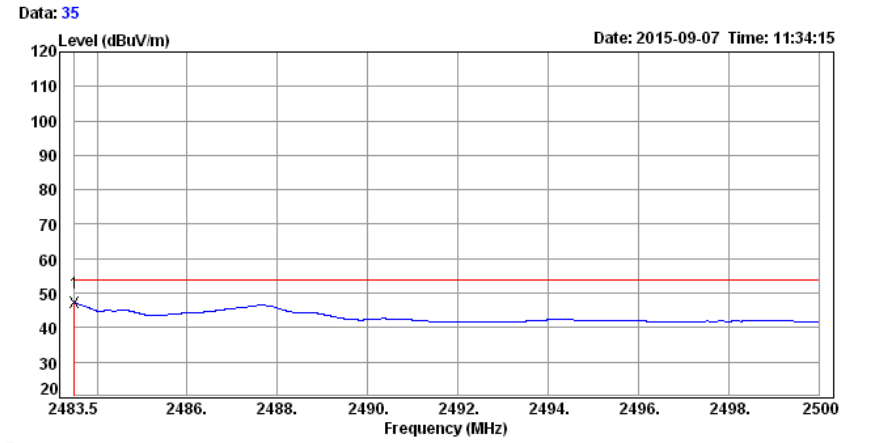


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	51.81	3.10	54.91	74.00	-19.09			Peak
2487.69	53.11	3.11	56.22	74.00	-17.78			Peak

Detector mode: Average **Polarity: Vertical**

CH High (IEEE 802.11b mode)

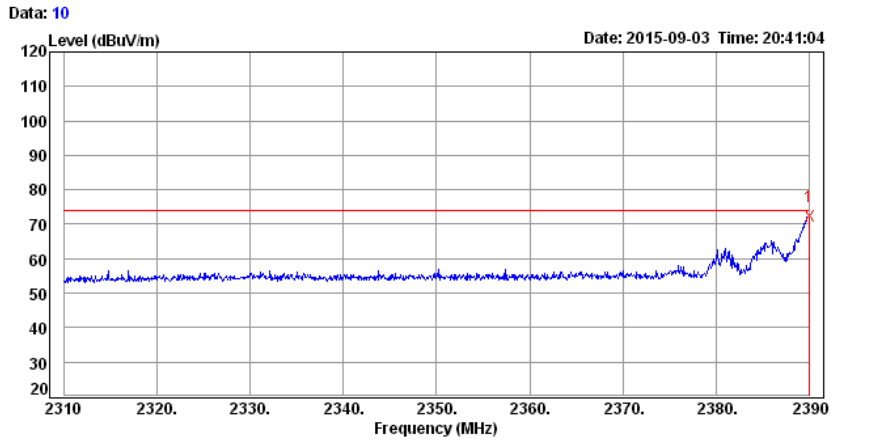


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	44.24	3.10	47.34	54.00	-6.66			Average

Detector mode: Peak **Polarity: Horizontal**

CH Low (IEEE 802.11g mode)

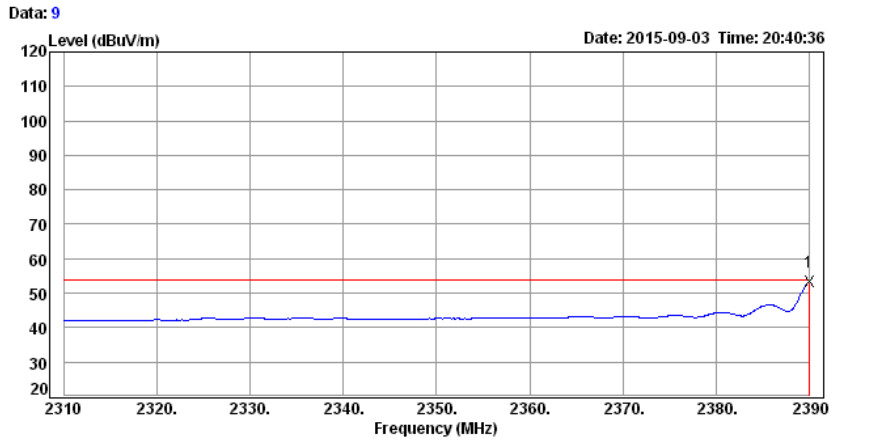


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	69.38	2.83	72.21	74.00	-1.79			Peak

Detector mode: Average **Polarity: Horizontal**

CH Low (IEEE 802.11g mode)

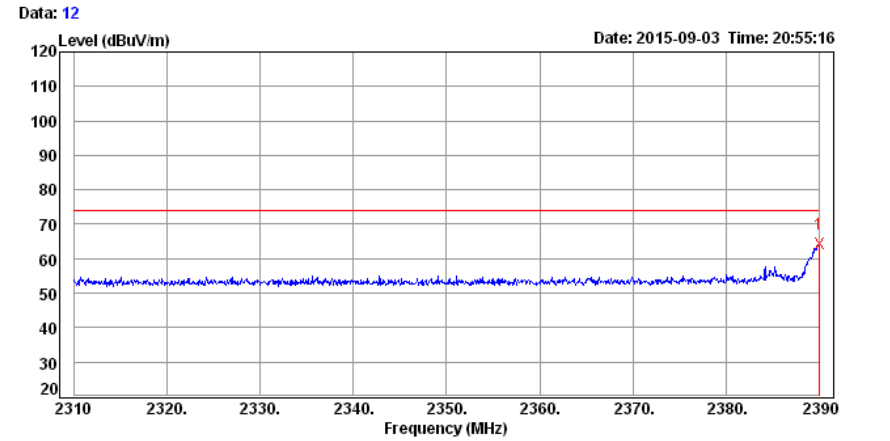


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	50.26	2.83	53.09	54.00	-0.91			Average

Detector mode: Peak **Polarity: Vertical**

CH Low (IEEE 802.11g mode)

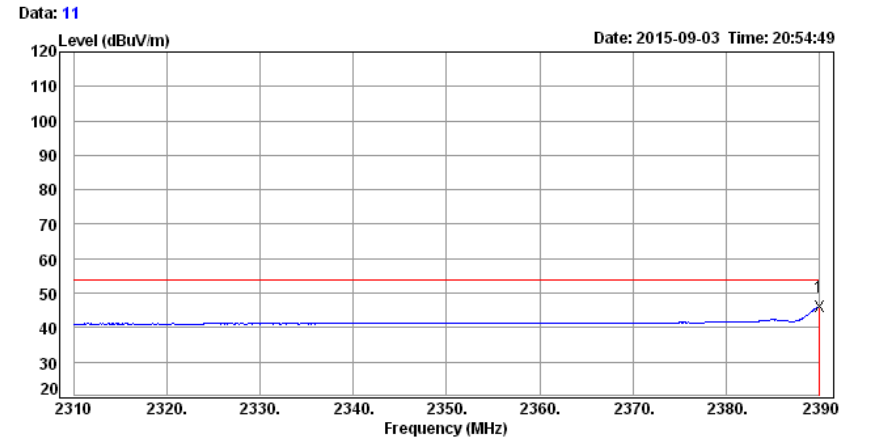


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	61.34	2.83	64.17	74.00	-9.83			Peak

Detector mode: Average **Polarity: Vertical**

CH Low (IEEE 802.11g mode)

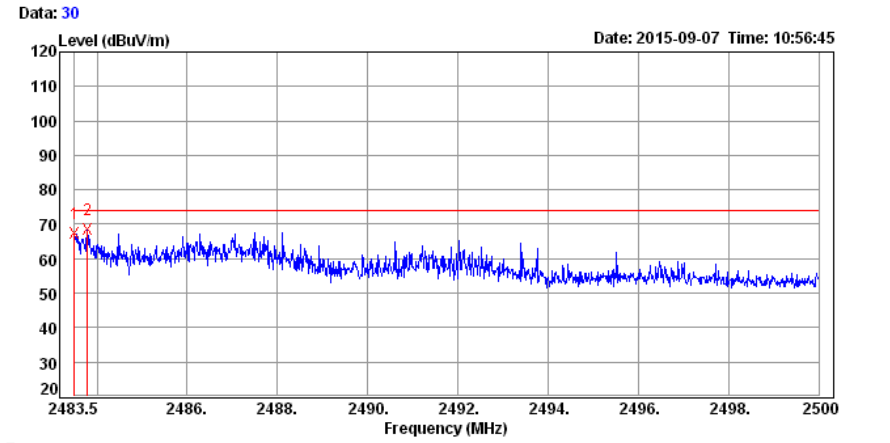


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	43.07	2.83	45.90	54.00	-8.10			Average

Detector mode: Peak **Polarity: Horizontal**

CH High (IEEE 802.11g mode)

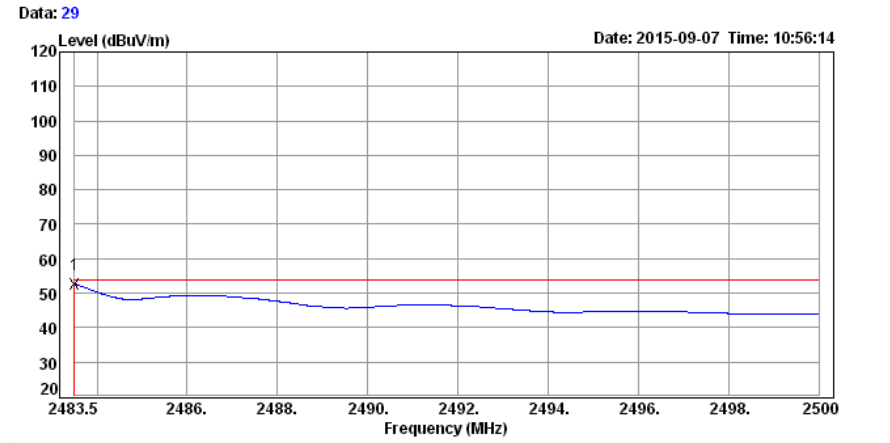


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	64.35	3.10	67.45	74.00	-6.55			Peak
2483.78	65.33	3.10	68.43	74.00	-5.57			Peak

Detector mode: Average **Polarity: Horizontal**

CH High (IEEE 802.11g mode)

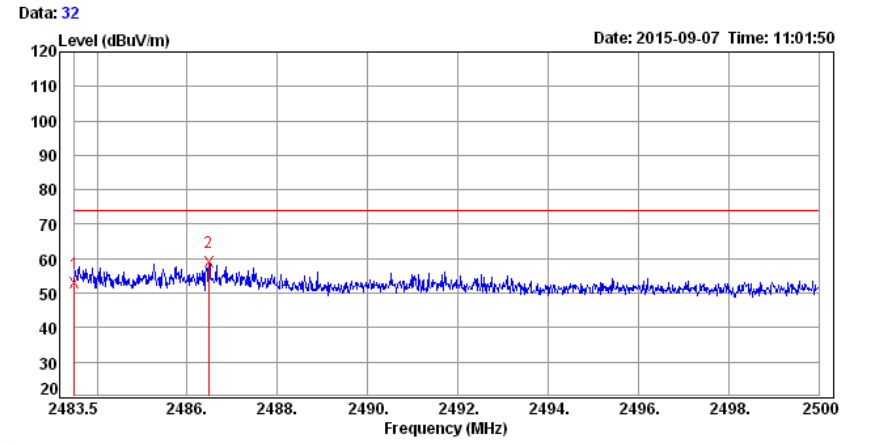


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	49.57	3.10	52.67	54.00	-1.33			Average

Detector mode: Peak **Polarity: Vertical**

CH High (IEEE 802.11g mode)

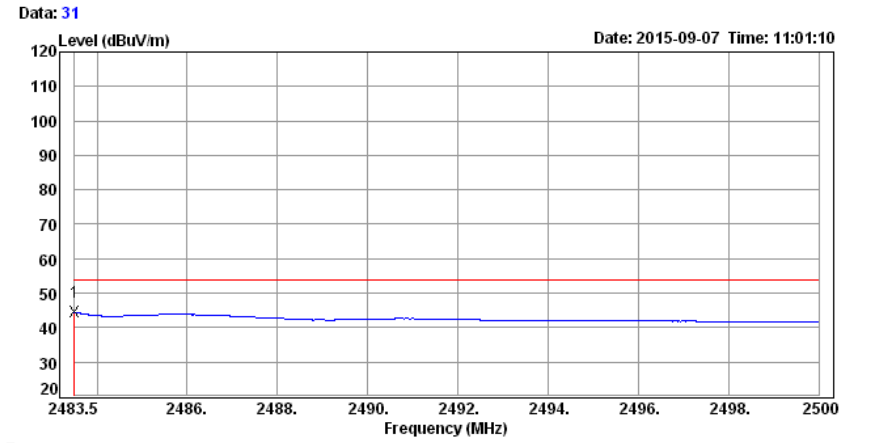


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	49.86	3.10	52.96	74.00	-21.04			Peak
2486.47	56.00	3.11	59.11	74.00	-14.89			Peak

Detector mode: Average **Polarity: Vertical**

CH High (IEEE 802.11g mode)

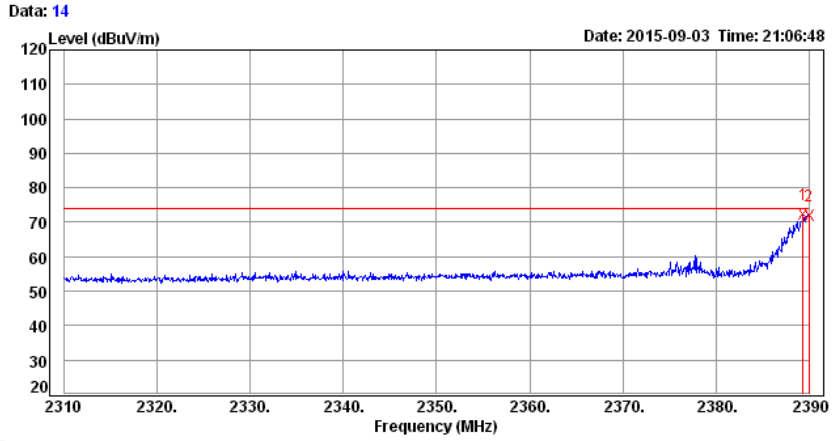


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	41.32	3.10	44.42	54.00	-9.58			Average

Detector mode: Peak **Polarity: Horizontal**

CH Low (IEEE 802.11gn HT20 mode)

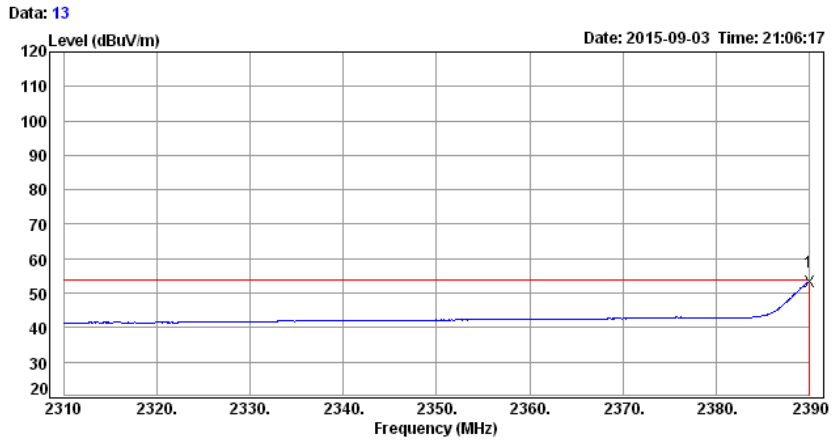


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2389.36	69.26	2.83	72.09	74.00	-1.91			Peak
2390.00	69.09	2.83	71.92	74.00	-2.08			Peak

Detector mode: Average **Polarity: Horizontal**

CH Low (IEEE 802.11gn HT20 mode)

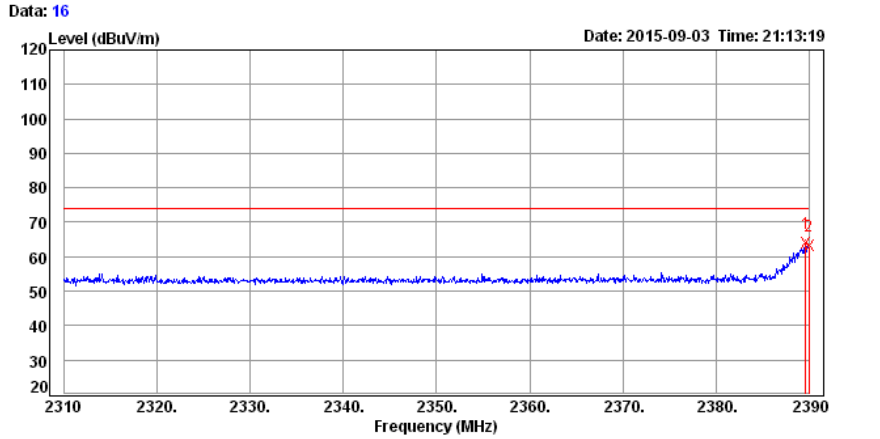


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	50.44	2.83	53.27	54.00	-0.73			Average

Detector mode: Peak **Polarity: Vertical**

CH Low (IEEE 802.11gn HT20 mode)

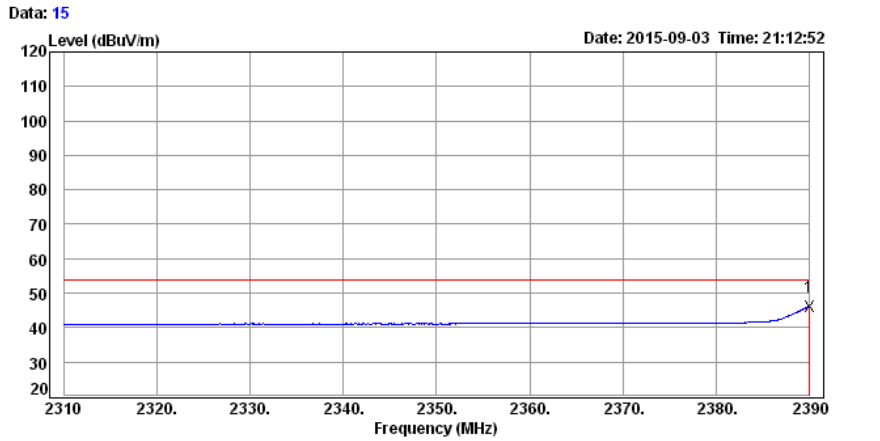


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2389.68	61.13	2.83	63.96	74.00	-10.04			Peak
2390.00	60.21	2.83	63.04	74.00	-10.96			Peak

Detector mode: Average **Polarity: Vertical**

CH Low (IEEE 802.11gn HT20 mode)

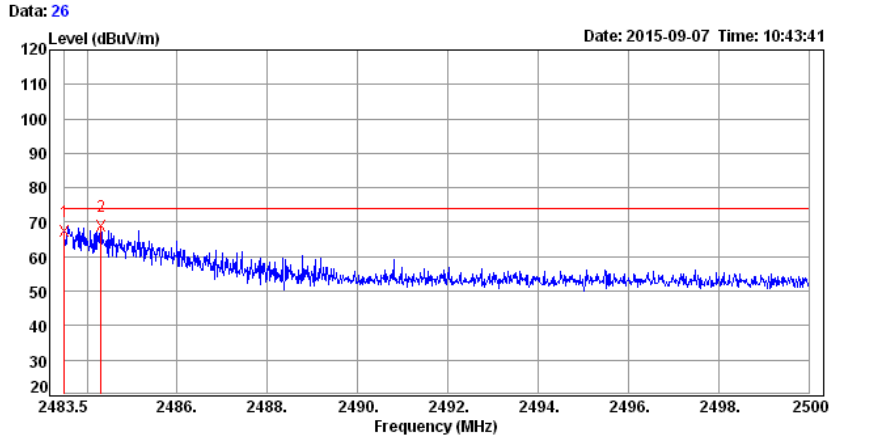


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	43.25	2.83	46.08	54.00	-7.92			Average

Detector mode: Peak **Polarity: Horizontal**

CH High (IEEE 802.11gn HT20 mode)

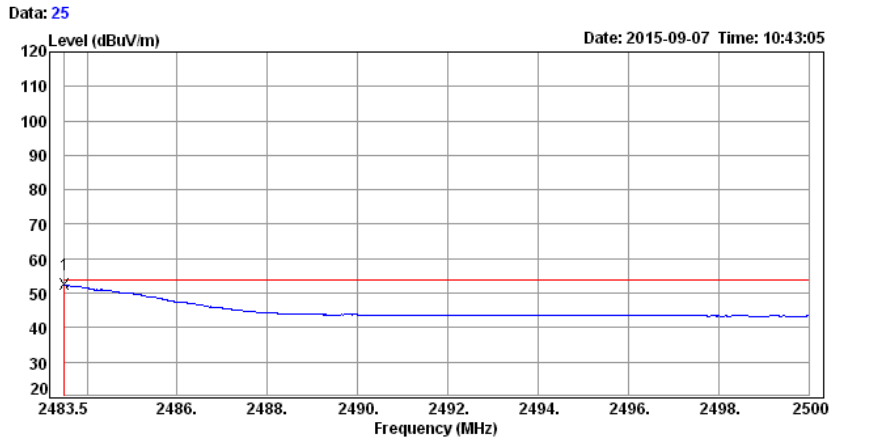


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	64.08	3.10	67.18	74.00	-6.82			Peak
2484.31	65.90	3.10	69.00	74.00	-5.00			Peak

Detector mode: Average **Polarity: Horizontal**

CH High (IEEE 802.11gn HT20 mode)

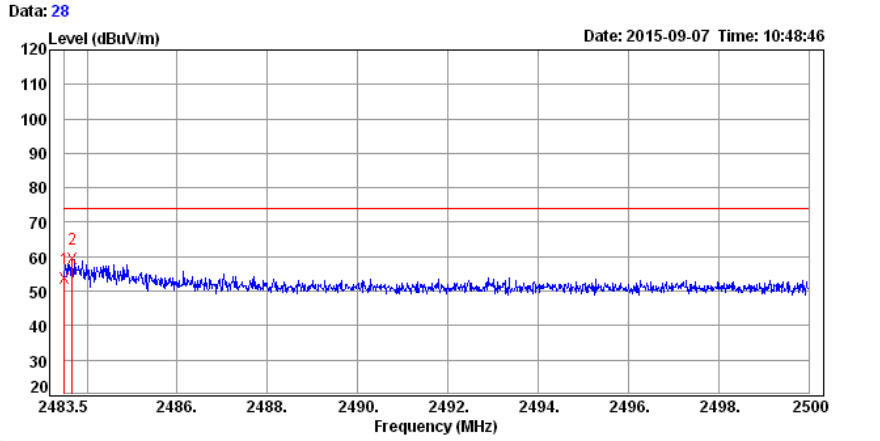


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	49.39	3.10	52.49	54.00	-1.51			Average

Detector mode: Peak **Polarity: Vertical**

CH High (IEEE 802.11gn HT20 mode)

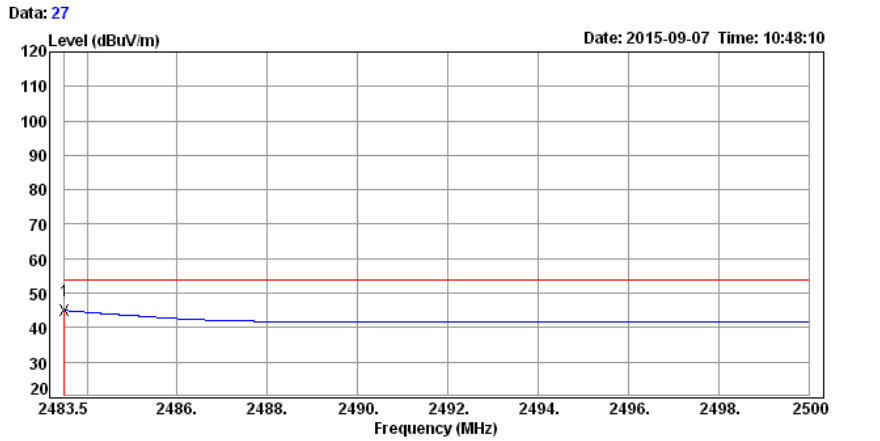


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	50.65	3.10	53.75	74.00	-20.25			Peak
2483.67	56.40	3.10	59.50	74.00	-14.50			Peak

Detector mode: Average **Polarity: Vertical**

CH High (IEEE 802.11gn HT20 mode)

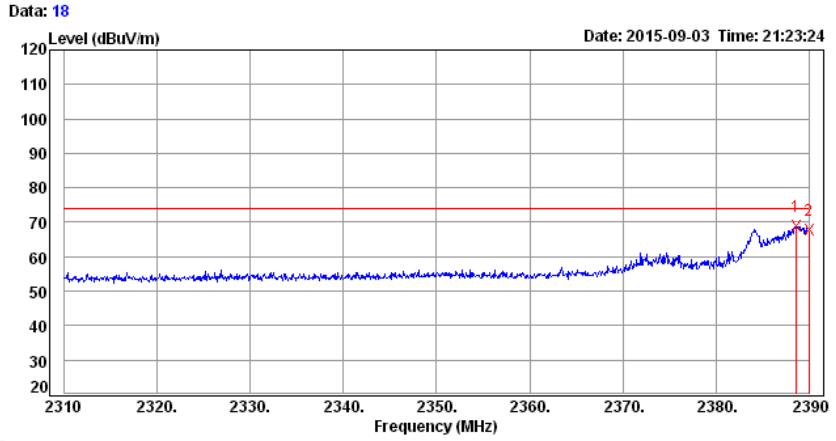


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	41.87	3.10	44.97	54.00	-9.03			Average

Detector mode: Peak **Polarity: Horizontal**

CH Low (IEEE 802.11gn HT40 mode)

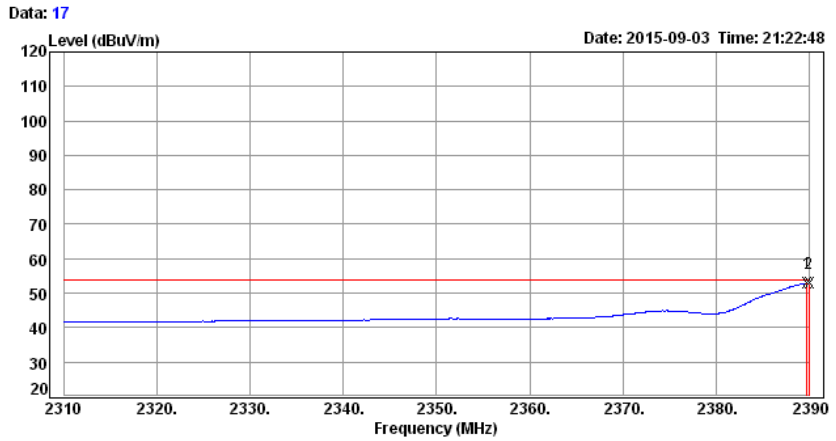


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2388.64	65.98	2.83	68.81	74.00	-5.19			Peak
2390.00	64.87	2.83	67.70	74.00	-6.30			Peak

Detector mode: Average **Polarity: Horizontal**

CH Low (IEEE 802.11gn HT40 mode)

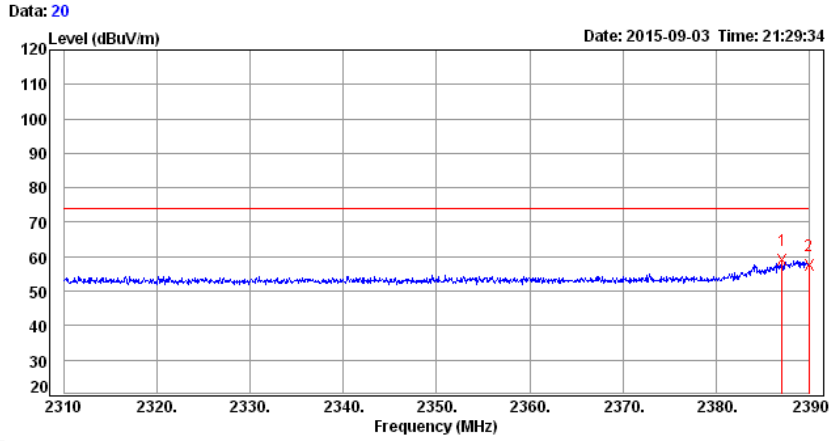


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2389.84	50.09	2.83	52.92	54.00	-1.08			Average
2390.00	50.05	2.83	52.88	54.00	-1.12			Average

Detector mode: Peak **Polarity: Vertical**

CH Low (IEEE 802.11gn HT40 mode)

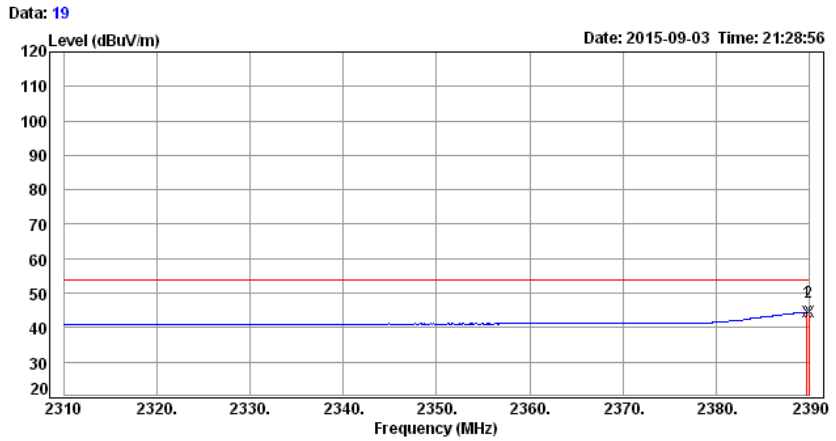


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2387.12	56.22	2.82	59.04	74.00	-14.96			Peak
2390.00	54.78	2.83	57.61	74.00	-16.39			Peak

Detector mode: Average **Polarity: Vertical**

CH Low (IEEE 802.11gn HT40 mode)

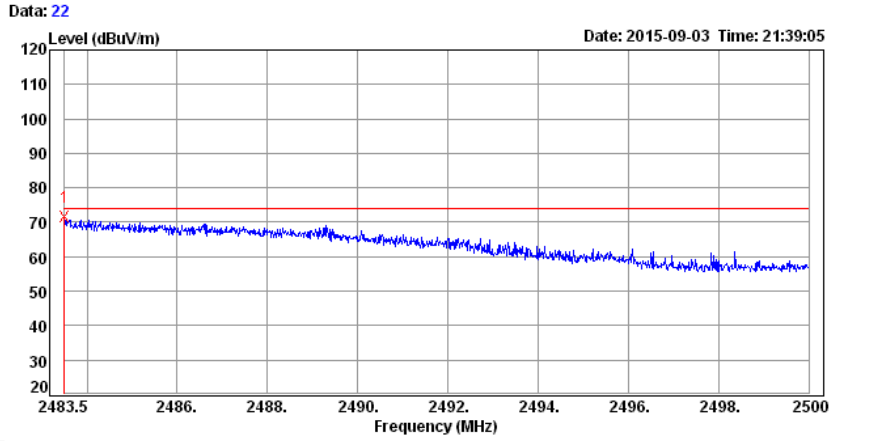


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2389.84	41.60	2.83	44.43	54.00	-9.57			Average
2390.00	41.56	2.83	44.39	54.00	-9.61			Average

Detector mode: Peak **Polarity: Horizontal**

CH High (IEEE 802.11gn HT40 mode)

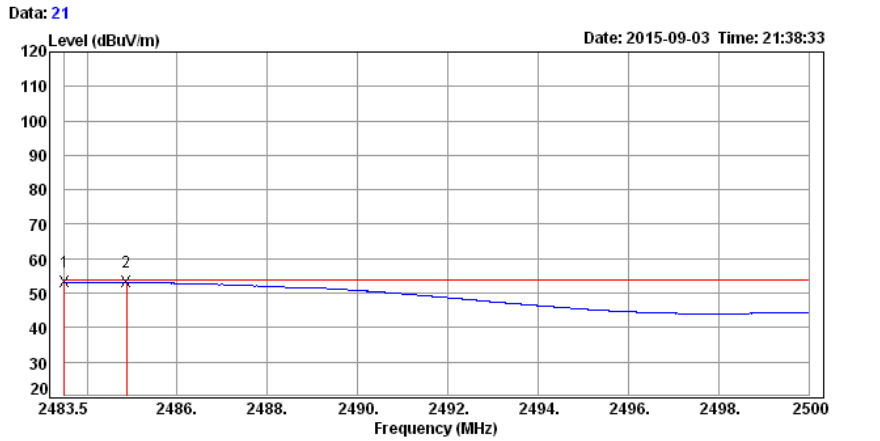


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	68.44	3.10	71.54	74.00	-2.46			Peak

Detector mode: Average **Polarity: Horizontal**

CH High (IEEE 802.11gn HT40 mode)

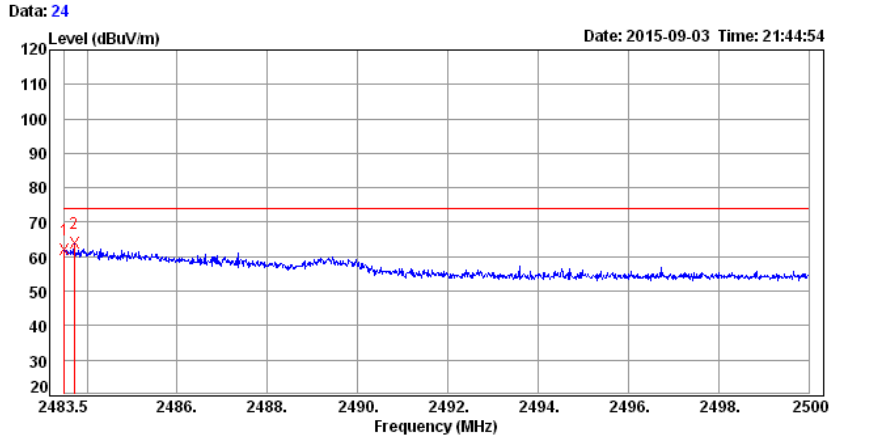


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	50.07	3.10	53.17	54.00	-0.83			Average
2484.87	50.12	3.11	53.23	54.00	-0.77			Average

Detector mode: Peak **Polarity: Vertical**

CH High (IEEE 802.11gn HT40 mode)

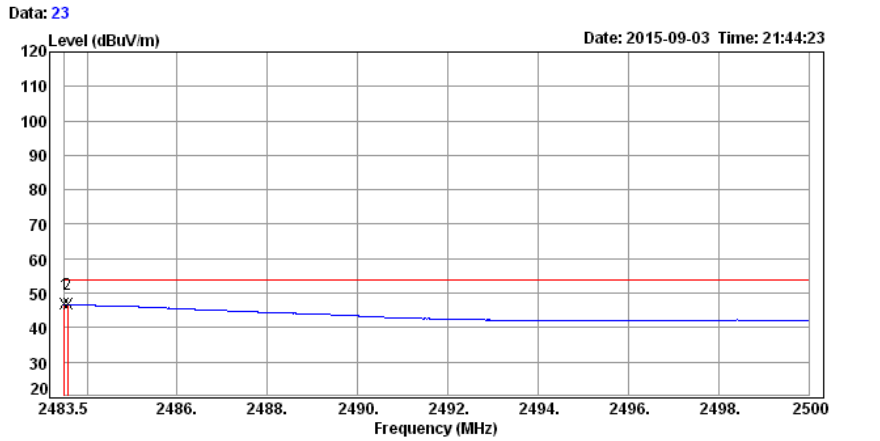


Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	58.91	3.10	62.01	74.00	-11.99			Peak
2483.72	60.70	3.10	63.80	74.00	-10.20			Peak

Detector mode: Average **Polarity: Vertical**

CH High (IEEE 802.11gn HT40 mode)



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	43.57	3.10	46.67	54.00	-7.33			Average
2483.57	43.59	3.10	46.69	54.00	-7.31			Average

7.7 CONDUCTED EMISSION

LIMITS

§ 15.207 (a) Except as shown in paragraph (b) and (c) this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/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.

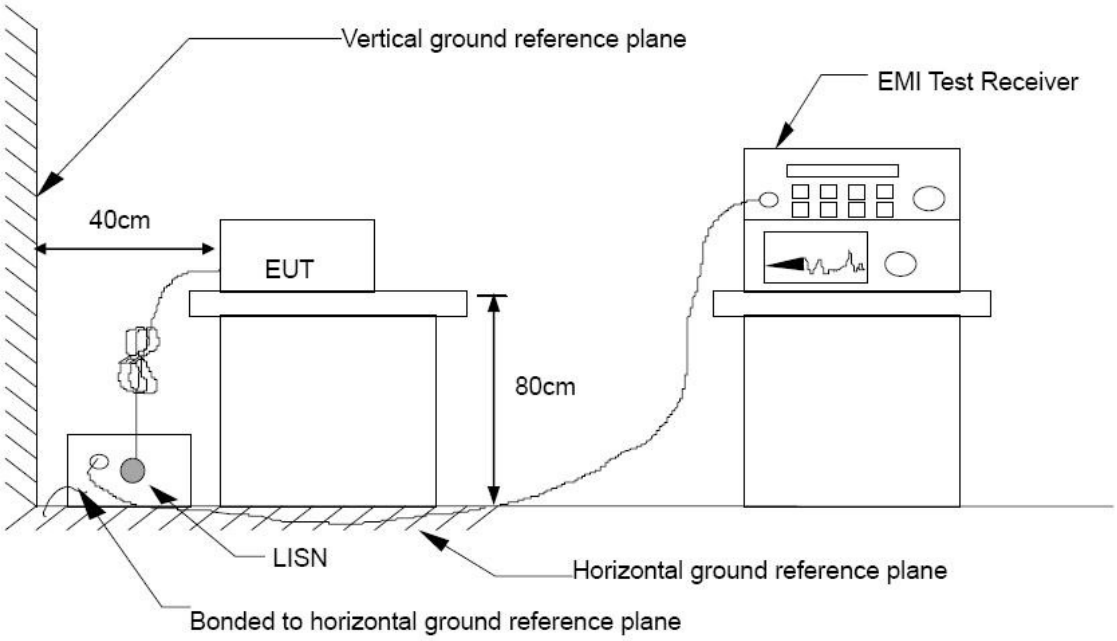
Frequency Range (MHz)	Conducted Limit (dBμv)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5.00	56	46
5.00 - 30.0	60	50

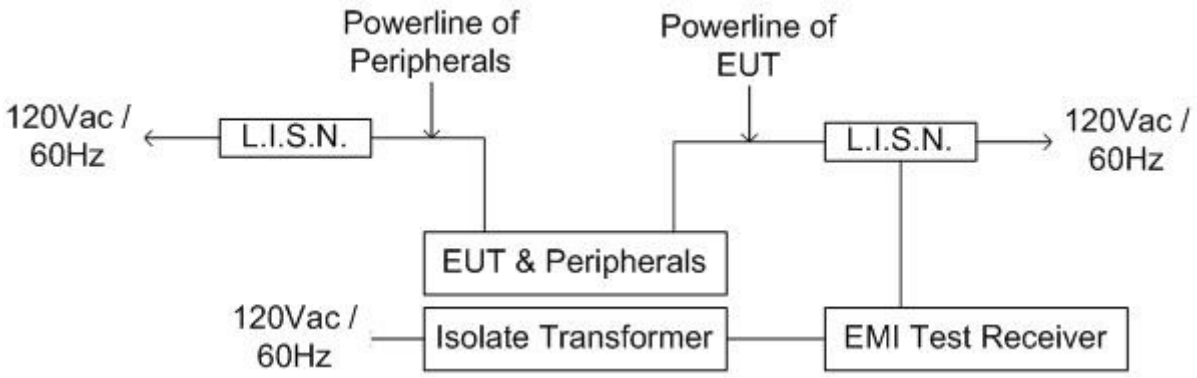
TEST EQUIPMENT

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

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

TEST SETUP





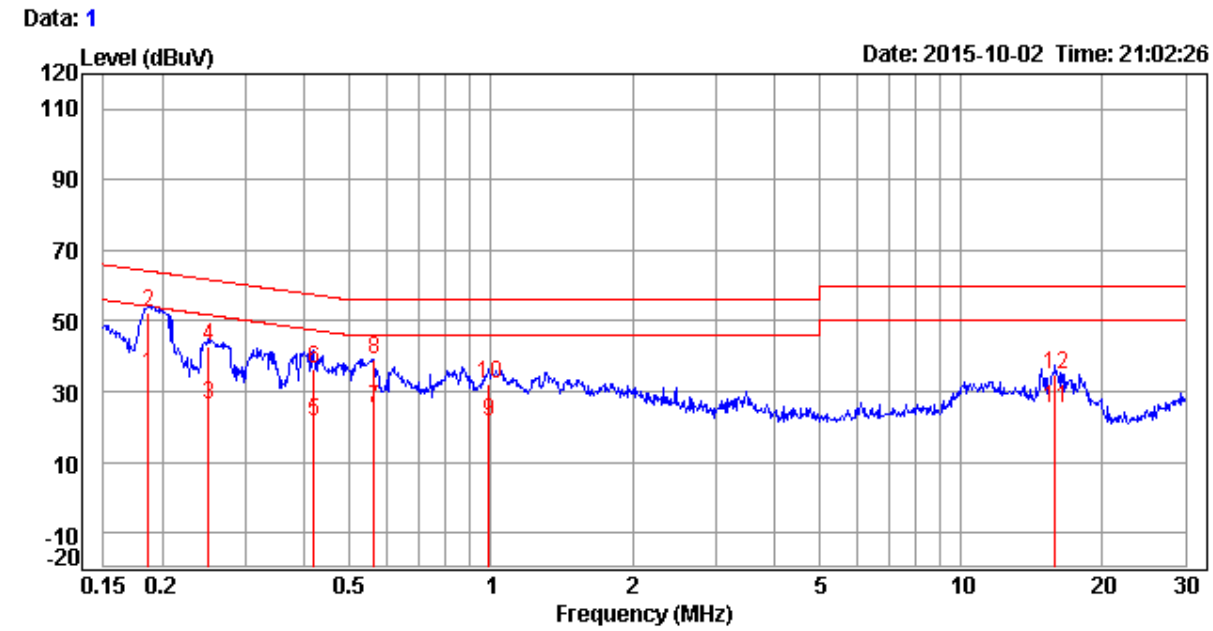
TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.10:2013.
The test procedure is performed in a 4m × 3m × 2.4m (L×W×H) shielded room.
The EUT along with its peripherals were placed on a 1.0m (W) × 1.5m (L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.
The EUT was located so that the distance between the boundary of the EUT and the closest surface of the LISN is 0.8 m. Where a mains flexible cord was provided by the manufacturer shall be 1 m long, or if in excess of 1 m, the excess cable was folded back and forth as far as possible so as to form a bundle not exceeding 0.4 m in length.

TEST RESULTS

Product Name	All In One Panel PC	Test By	Alan Wu
Test Model	3365-199	Test Date	2015/10/02
Test mode	Mode 1	Temp. & Humidity	23°C, 54%

LINE



Trace:

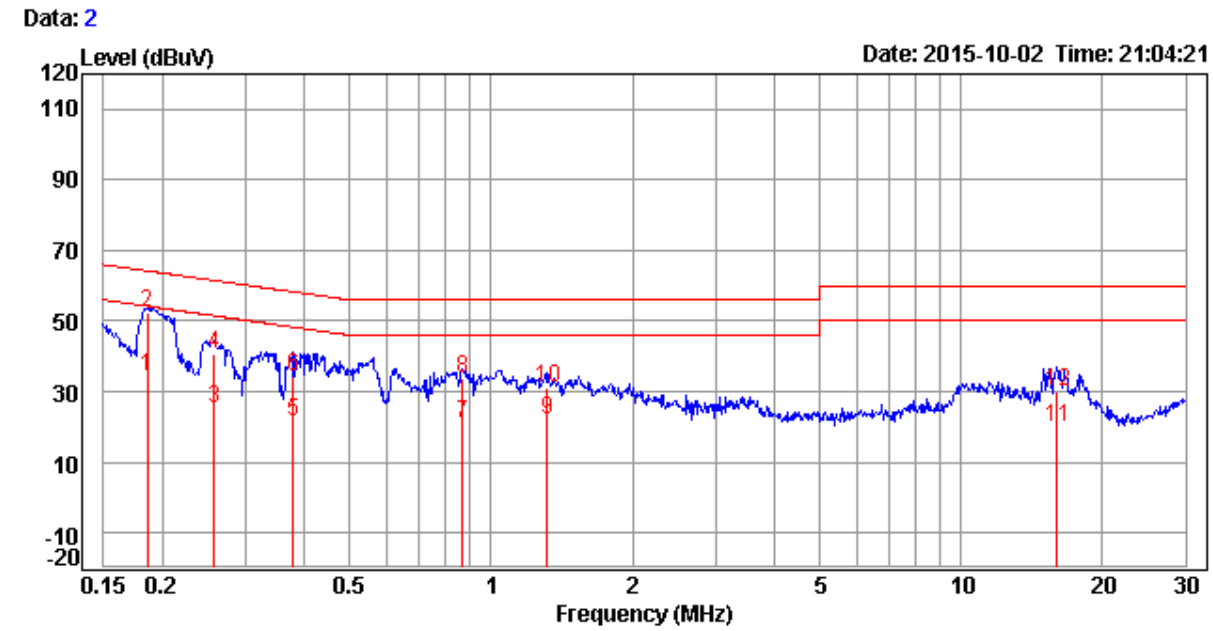
Freq. MHz	Reading dBuV Q.P.	Reading dBuV AV.	C.F. dB	Result dBuV Q.P.	Result dBuV AV.	Limit dBuV Q.P.	Limit dBuV AV.	Margin dB Q.P.	Margin dB AV.
0.186	42.64	24.87	9.97	52.61	34.84	64.20	54.20	-11.59	-19.36
0.249	32.61	16.37	9.98	42.59	26.35	61.78	51.78	-19.19	-25.43
0.419	26.51	11.49	9.99	36.50	21.48	57.46	47.46	-20.96	-25.98
0.561	28.96	15.27	10.00	38.96	25.27	56.00	46.00	-17.04	-20.73
0.989	22.19	11.63	10.02	32.21	21.65	56.00	46.00	-23.79	-24.35
15.885	23.96	14.54	10.64	34.60	25.18	60.00	50.00	-25.40	-24.82

Remark:

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

Product Name	All In One Panel PC	Test By	Alan Wu
Test Model	3365-199	Test Date	2015/10/02
Test Mode	Mode 1	Temp. & Humidity	23°C, 54%

NEUTRAL



Trace:

Freq. MHz	Reading dBuV Q.P.	Reading dBuV AV.	C.F. dB	Result dBuV Q.P.	Result dBuV AV.	Limit dBuV Q.P.	Limit dBuV AV.	Margin dB Q.P.	Margin dB AV.
0.185	42.24	24.46	9.99	52.23	34.45	64.24	54.24	-12.01	-19.79
0.258	30.89	15.14	10.00	40.89	25.14	61.51	51.51	-20.62	-26.37
0.377	24.25	11.44	10.01	34.26	21.45	58.34	48.34	-24.08	-26.89
0.866	23.49	10.71	10.03	33.52	20.74	56.00	46.00	-22.48	-25.26
1.317	21.24	11.83	10.06	31.30	21.89	56.00	46.00	-24.70	-24.11
15.970	19.49	9.35	10.48	29.97	19.83	60.00	50.00	-30.03	-30.17

Remark:

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