

FCC Part 15C

Measurement and Test Report

For

Shenzhen Qiyue Optronics Company Limited

Flat3, Tower 3, Excellence Meilin Center Plaza, Zhongkang Road 128, Shangmeilin, Futian District, Shenzhen, China

FCC ID: XOMRWBXXX55XXX

FCC Rule(s): FCC Part 15C

Product Description: 55" UHD LED TV

Tested Model: D55RWB714-U-A-I RNSMU5536
XXXXXXXXXXXX55XXXXXXXXXXXX
(Where "X" can be any alphanumeric of a-z, A-Z or 0-9 or blank & "-".)

Report No.: STR18057002E-1

Sample Receipt Date: May 14, 2018

Tested Date: May 14~ 23, 2018

Issued Date: May 23, 2018

Tested By: Jason Su / Engineer *Jason Su*

Reviewed By: Silin Chen / EMC Manager *Silin Chen*

Approved & Authorized By: Jandy So / PSQ Manager *Jandy So*

Prepared By:

Shenzhen SEM Test Technology Co., Ltd

1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road,
Bao'an District, Shenzhen, P.R.C. 518101, China

Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM Test Technology Co., Ltd.

TABLE OF CONTENTS

1. GENERAL INFORMATION	3
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....	3
1.2 TEST STANDARDS.....	4
1.3 TEST METHODOLOGY.....	4
1.4 TEST FACILITY.....	4
1.5 EUT SETUP AND TEST MODE.....	5
1.6 MEASUREMENT UNCERTAINTY.....	5
1.7 TEST EQUIPMENT LIST AND DETAILS.....	6
2. SUMMARY OF TEST RESULTS	7
3. RF EXPOSURE	8
3.1 STANDARD APPLICABLE.....	8
3.2 TEST RESULT.....	8
4. ANTENNA REQUIREMENT	9
4.1 STANDARD APPLICABLE.....	9
4.2 EVALUATION INFORMATION.....	9
5. POWER SPECTRAL DENSITY	10
5.1 STANDARD APPLICABLE.....	10
5.2 TEST PROCEDURE.....	10
5.3 ENVIRONMENTAL CONDITIONS.....	10
5.4 SUMMARY OF TEST RESULTS/PLOTS.....	11
6. 6DB BANDWIDTH	24
6.1 STANDARD APPLICABLE.....	24
6.2 TEST PROCEDURE.....	24
6.3 ENVIRONMENTAL CONDITIONS.....	24
6.4 SUMMARY OF TEST RESULTS/PLOTS.....	24
7. RF OUTPUT POWER	37
7.1 STANDARD APPLICABLE.....	37
7.2 TEST PROCEDURE.....	37
7.3 ENVIRONMENTAL CONDITIONS.....	37
7.4 SUMMARY OF TEST RESULTS/PLOTS.....	38
8. FIELD STRENGTH OF SPURIOUS EMISSIONS	39
8.1 MEASUREMENT UNCERTAINTY.....	39
8.2 STANDARD APPLICABLE.....	39
8.3 TEST PROCEDURE.....	39
8.4 CORRECTED AMPLITUDE & MARGIN CALCULATION.....	41
8.5 ENVIRONMENTAL CONDITIONS.....	41
8.6 SUMMARY OF TEST RESULTS/PLOTS.....	41
9. OUT OF BAND EMISSIONS	52
9.1 STANDARD APPLICABLE.....	52
9.2 TEST PROCEDURE.....	52
9.3 ENVIRONMENTAL CONDITIONS.....	53
9.4 SUMMARY OF TEST RESULTS/PLOTS.....	53
10. CONDUCTED EMISSIONS	81
10.1 MEASUREMENT UNCERTAINTY.....	81
10.2 TEST PROCEDURE.....	81
10.3 BASIC TEST SETUP BLOCK DIAGRAM.....	81
10.4 ENVIRONMENTAL CONDITIONS.....	81
10.5 TEST RECEIVER SETUP.....	82
10.6 SUMMARY OF TEST RESULTS/PLOTS.....	82
10.7 CONDUCTED EMISSIONS TEST DATA.....	82

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information	
Applicant:	Shenzhen Qiyue Optronics Company Limited
Address of applicant:	Flat3,Tower 3, Excellence Meilin Center Plaza, Zhongkang Road 128, Shangmeilin, Futian District, Shenzhen, China
Manufacturer:	SHENZHEN QIYUE OPTRONICS COMPANY LIMITED BRANCH
Address of manufacturer:	SEIYU INDUSTRIAL PARK, DA SAN VILLAGE, DA SHUI KENG, GUANLAN TOWN, LONGHUA NEW DISTRICT, SHENZHEN, P.R.C

General Description of EUT	
Product Name:	55" UHD LED TV
Trade Name:	RCA/SYLVANIA/PROSCAN/TECHNICOLOR
Model No.:	D55RWB714-U-A-I RNSMU5536 XXXXXXXXXXXX55XXXXXXXXXXXX (Where "X" can be any alphanumeric of a-z, A-Z or 0-9 or blank & "-".)
Rated Voltage:	Input: AC 100-240V
Power Adapter Model:	/
<i>Note: The test data is gathered from a production sample provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Frequency Range:	IEEE 802.11b/ g / nHT20: 2412MHz~2462MHz IEEE802.11nHT40: 2422MHz~2452MHz
RF Output Power:	15.45dBm (Conducted)
Modulation:	IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK)
Quantity of Channels:	11 for 802.11b/g/n(HT20); 7 for 802.11n(HT40)
Type of Antenna:	Wi-Fi Antenna
Antenna Gain:	Antenna 1: 3 dBi Antenna 2: 3 dBi

1.2 Test Standards

The following report is prepared on behalf of the **Shenzhen Qiyue Optronics Company Limited** in accordance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 of the Federal Communication Commission rules.

The objective is to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 of the Federal Communication Commission rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard for Testing Unlicensed Wireless Devices.

1.4 Test Facility

FCC – Registration No.: 125990

Shenzhen SEM Test Technology Co., Ltd. Laboratory has been recognized to perform compliance testing on equipment subject to the Commissions Declaration of Conformity (DOC). The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM. Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

1.5 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	802.11b	2412MHz, 2437MHz, 2462MHz
TM2	802.11g	2412MHz, 2437MHz, 2462MHz
TM3	802.11n-HT20	2412MHz, 2437MHz, 2462MHz
TM4	802.11n-HT40	2422MHz, 2437MHz, 2452MHz

Note: All test modes (different data rate and different modulation) are performed, but only the worst case is recorded in this report.

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Core
AC Net Cord	1.5	Unshielded	With Core

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
Signal Cable	0.16	Unshielded	Without Ferrite
/	/	/	/

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Laptop	Lenovo	G50-45	PF04Q53E
/	/	/	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	$\pm 0.42\text{dB}$
Occupied Bandwidth	Conducted	$\pm 1.5\%$
Power Spectral Density	Conducted	$\pm 1.8\text{dB}$
Conducted Spurious Emission	Conducted	$\pm 2.17\text{dB}$
Conducted Emissions	Conducted	$\pm 2.88\text{dB}$
Transmitter Spurious Emissions	Radiated	$\pm 5.1\text{dB}$

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2017-06-12	2018-06-11
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2017-06-12	2018-06-11
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2017-06-12	2018-06-11
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2017-06-12	2018-06-11
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2017-06-12	2018-06-11
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2017-06-08	2018-06-07
SEMT-1042	Horn Antenna	ETS	3117	00086197	2017-06-08	2018-06-07
SEMT-1121	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170582	2017-06-08	2018-06-07
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2017-06-08	2018-06-07
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2017-06-12	2018-06-11
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2017-06-12	2018-06-11
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2017-06-12	2018-06-11

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§ 2.1093	RF Exposure	Compliant
§ 15.203; § 15.247(b)(4)(i)	Antenna Requirement	Compliant
§ 15.205	Restricted Band of Operation	Compliant
§ 15.207(a)	Conducted Emission	Compliant
§ 15.247(e)	Power Spectral Density	Compliant
§ 15.247(a)(2)	6 dB Bandwidth	Compliant
§ 15.247(b)(3)	RF Output Power	Compliant
§ 15.209(a)	Radiated Emission	Compliant
§ 15.247(d)	Band Edge (Out of Band Emissions)	Compliant

N/A: not applicable

3. RF Exposure

3.1 Standard Applicable

According to § 1.1307 and § 2.1091, the mobile transmitter must comply the RF exposure requirements.

3.2 Test Result

This product complied with the requirement of the RF Exposure, please see the MPE Report.

4. Antenna Requirement

4.1 Standard Applicable

According to FCC Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

4.2 Evaluation Information

This product has two internal Antenna, fulfill the requirement of this section.

5. Power Spectral Density

5.1 Standard Applicable

According to 15.247(a)(1)(iii), For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

5.2 Test Procedure

According to the KDB 558074 D01 V04, such specifications require that the same method as used to determine the conducted output power shall also be used to determine the power spectral density. The test method of power spectral density as below:

- a) Set instrument center frequency to DTS channel center frequency.
- b) Set span to at least 1.5 times the OBW.
- c) Set RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- d) Set VBW $\geq 3 \times \text{RBW}$.
- e) Detector = power averaging (RMS) or sample detector (when RMS not available).
- f) Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span/RBW}$.
- g) Sweep time = auto couple.
- h) Employ trace averaging (RMS) mode over a minimum of 100 traces.
- i) Use the peak marker function to determine the maximum amplitude level.
- j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span in order to meet the minimum measurement point requirement as the RBW is reduced).

5.3 Environmental Conditions

Temperature:	26° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

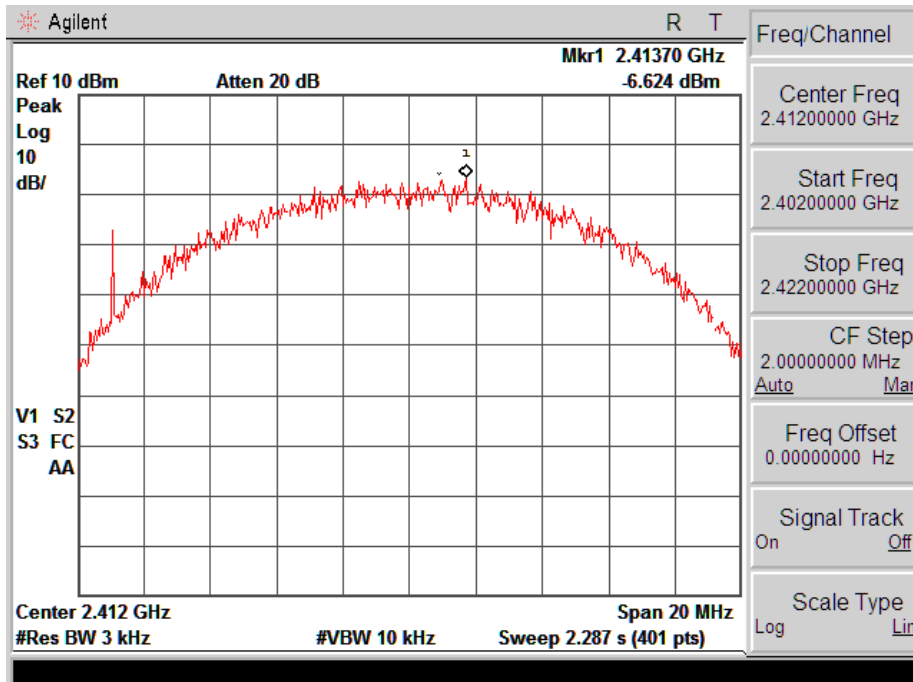
5.4 Summary of Test Results/Plots

Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz			Limit dBm/3kHz
		Antenna 1	Antenna 2	total	
802.11b	2412	-6.624	-6.678	-3.64	8
	2437	-7.984	-7.784	-4.87	8
	2462	-8.828	-8.456	-5.63	8
802.11g	2412	-11.57	-11.58	-8.56	8
	2437	-11.77	-11.73	-8.74	8
	2462	-13.3	-13.16	-10.22	8
802.11n HT20	2412	-11.41	-11.16	-8.27	8
	2437	-11.44	-11.54	-8.48	8
	2462	-13.58	-13.75	-10.65	8
802.11n HT40	2422	-14.5	-14.03	-11.25	8
	2437	-15.72	-15.89	-12.79	8
	2452	-17.1	-17.26	-14.17	8

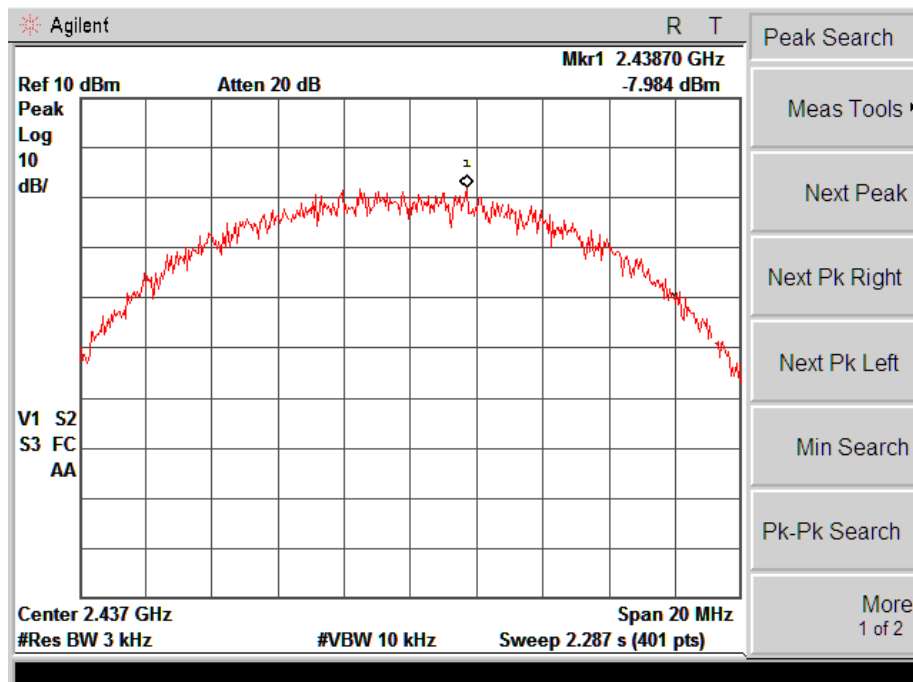
Please refer to the following test plots:

Antenna 1

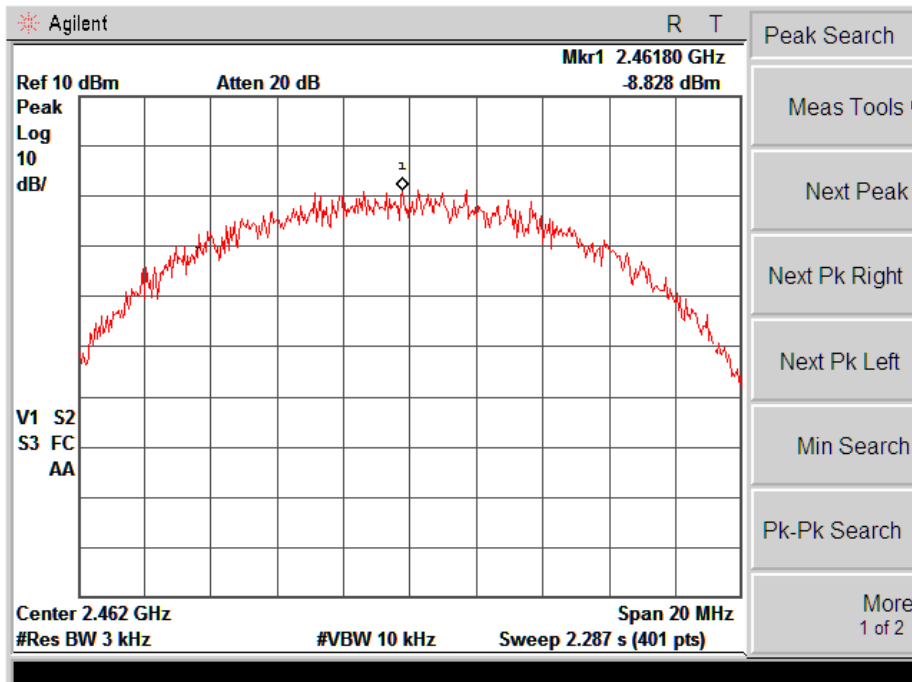
802.11b-Low Channel



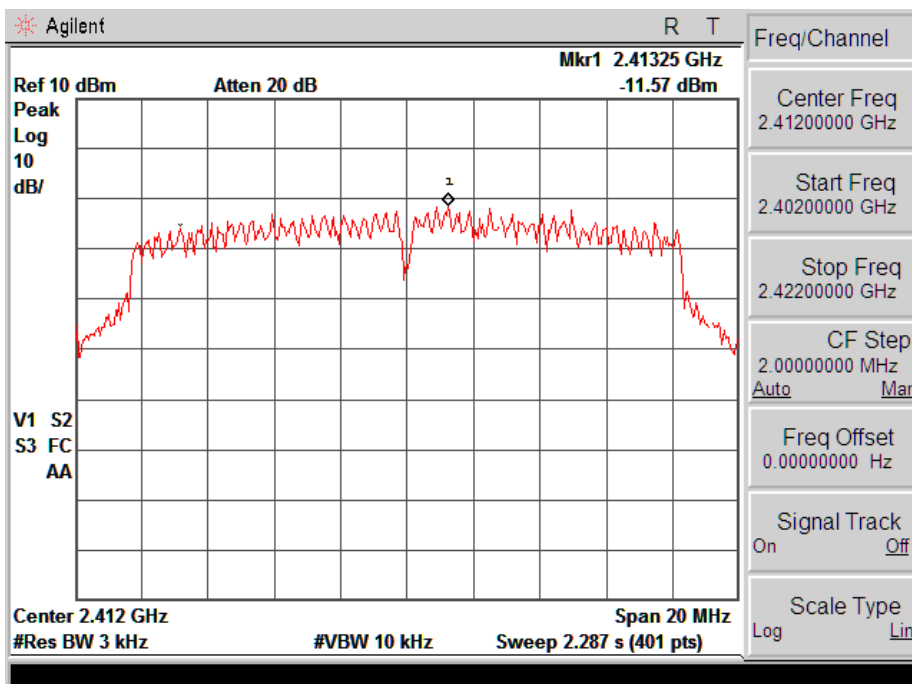
802.11b-Middle Channel



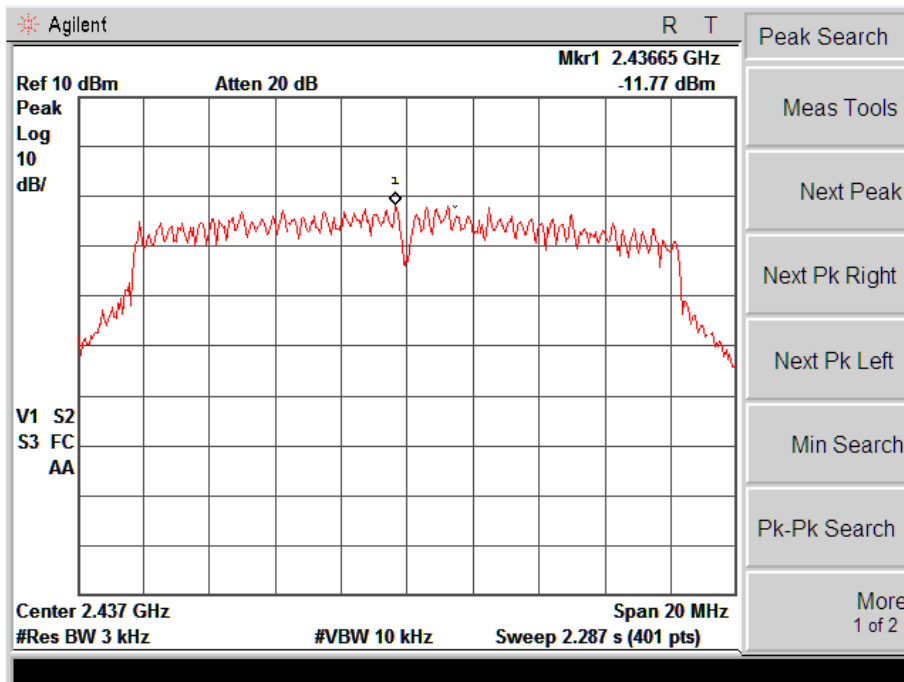
802.11b-High Channel



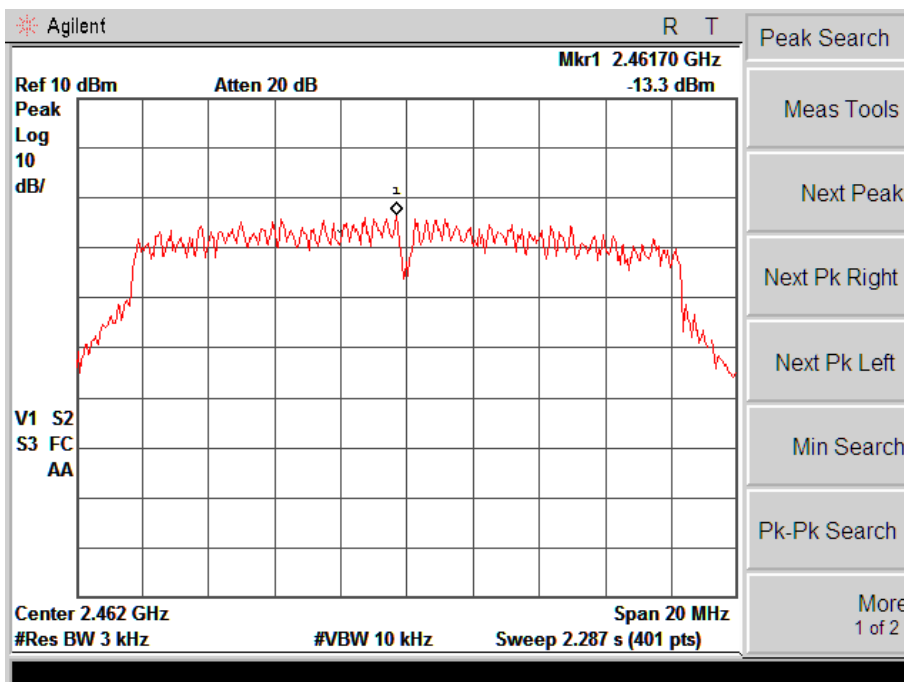
802.11g-Low Channel



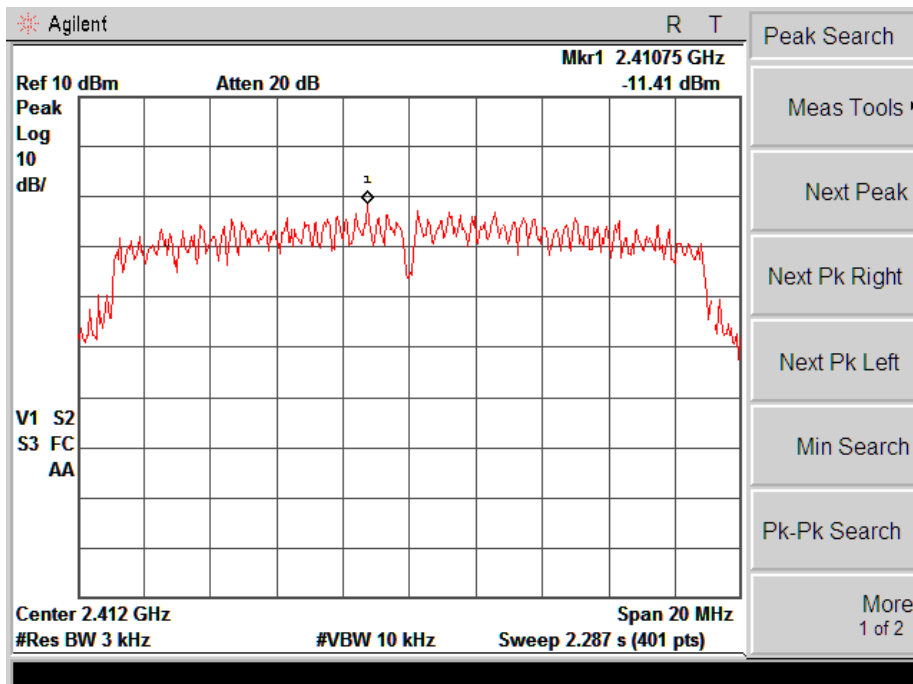
802.11g-Middle Channel



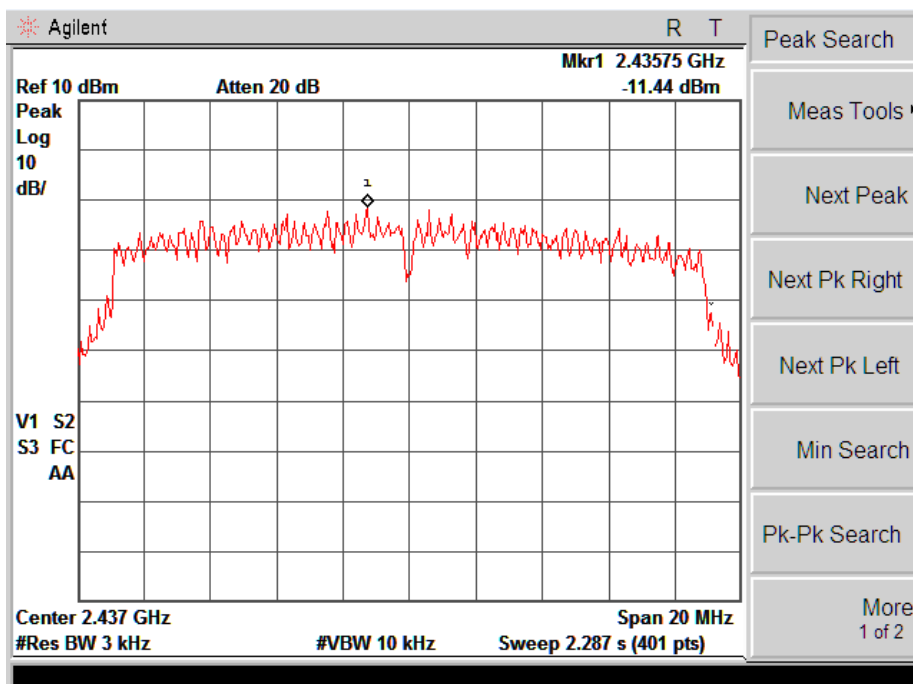
802.11g-High Channel



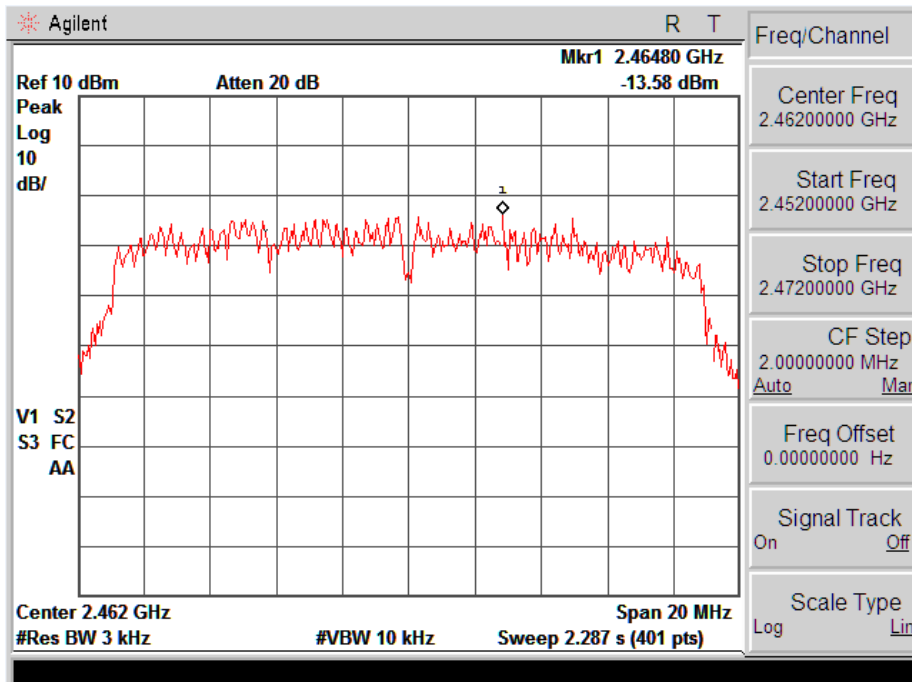
802.11n-HT20-Low Channel



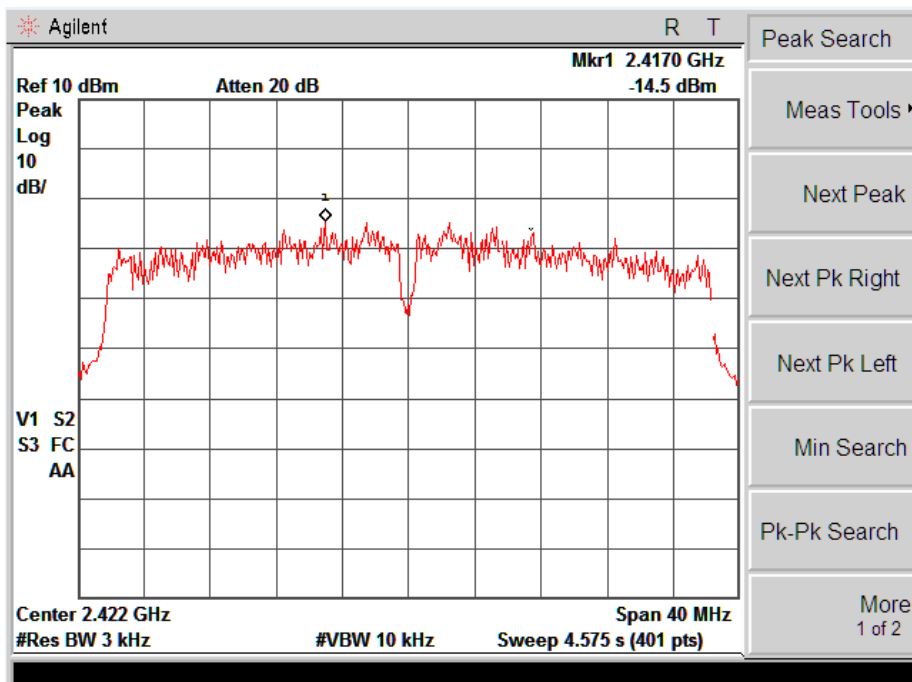
802.11n-HT20-Middle Channel



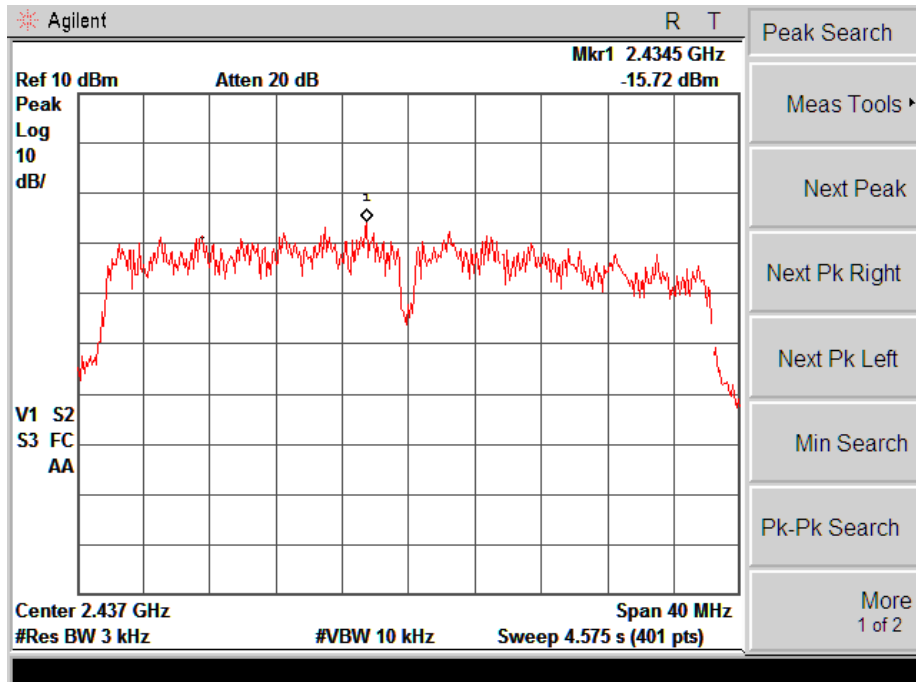
802.11n-HT20-High Channel



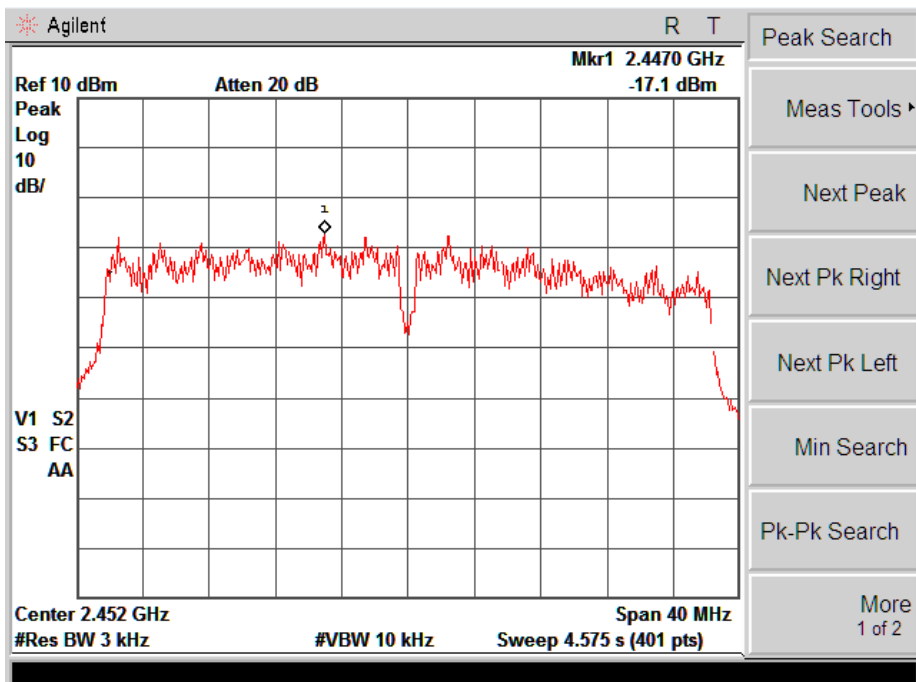
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel

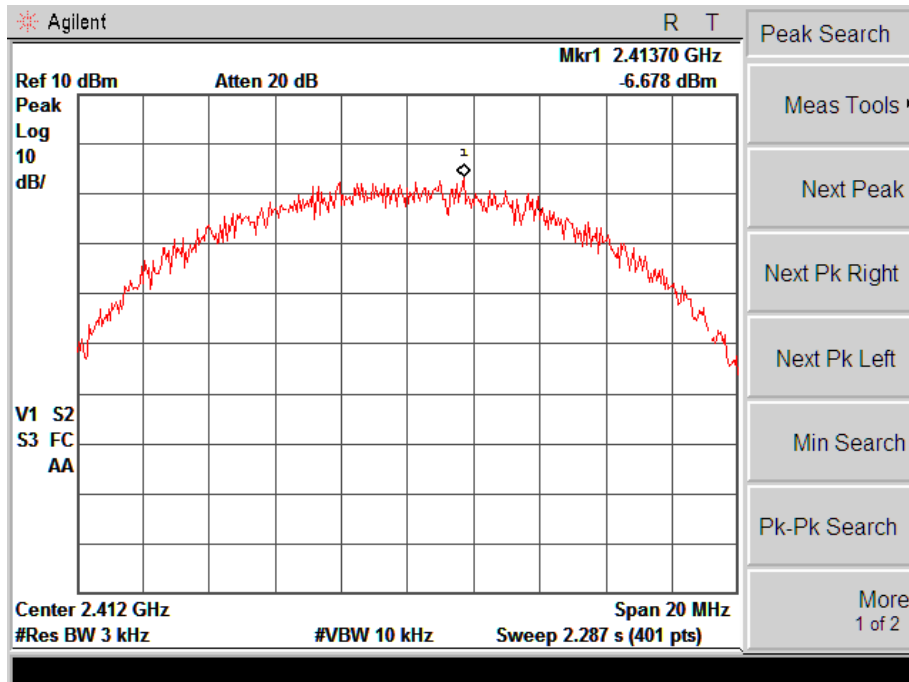


802.11n-HT40-High Channel

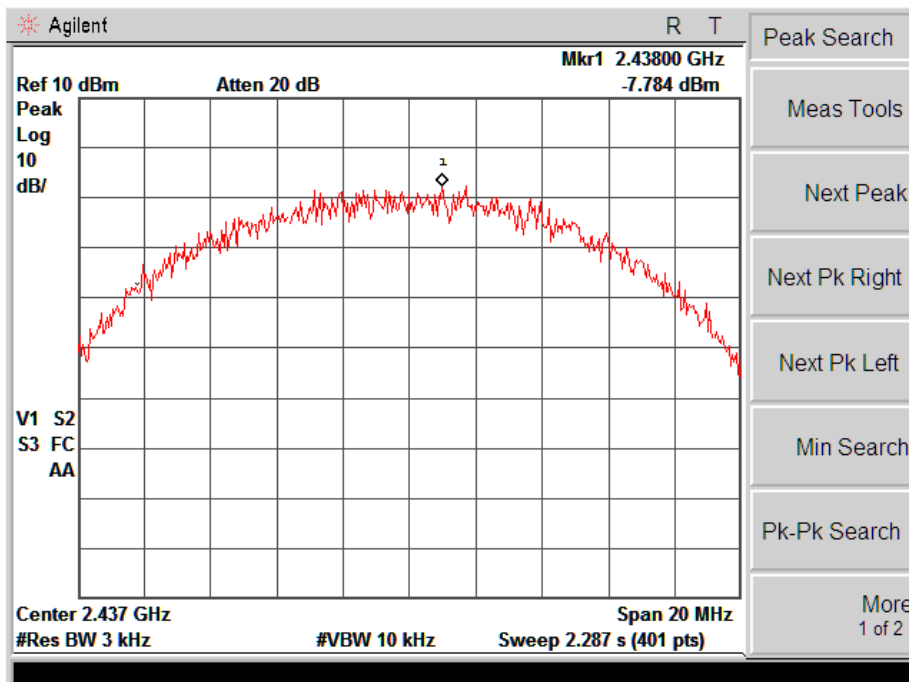


Antenna 2

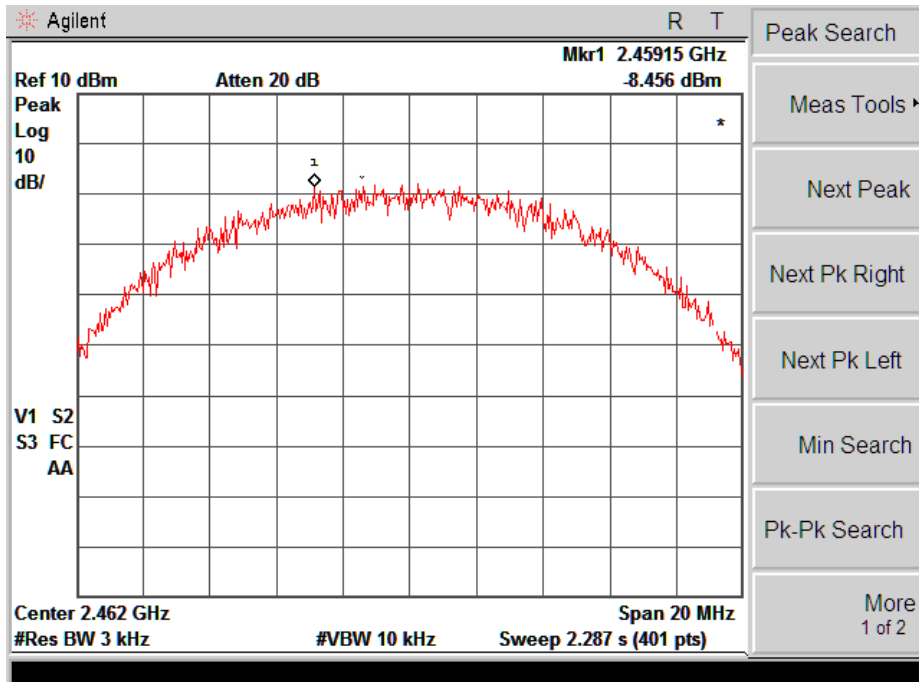
802.11b-Low Channel



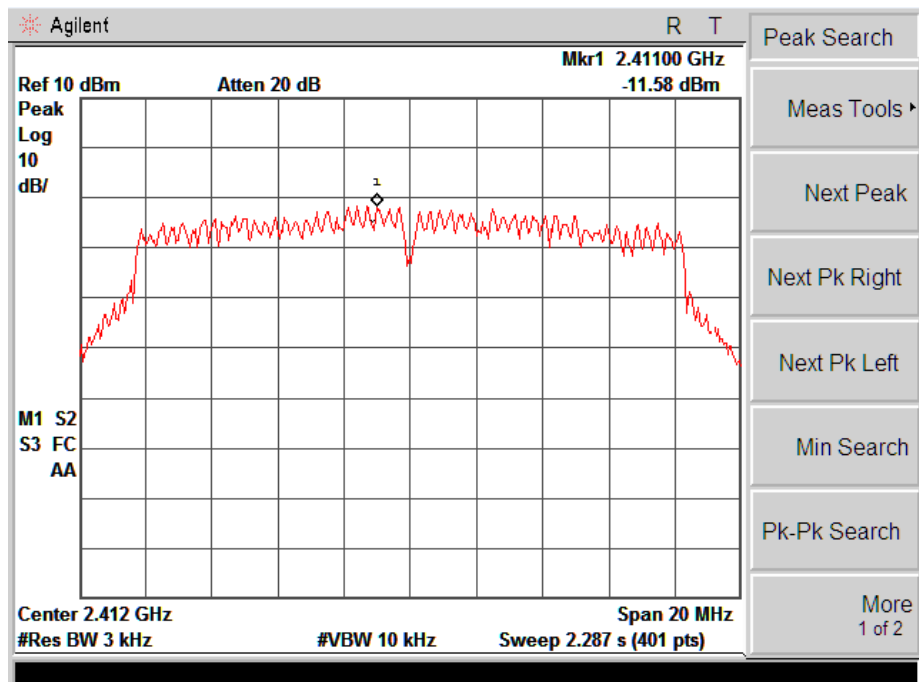
802.11b-Middle Channel



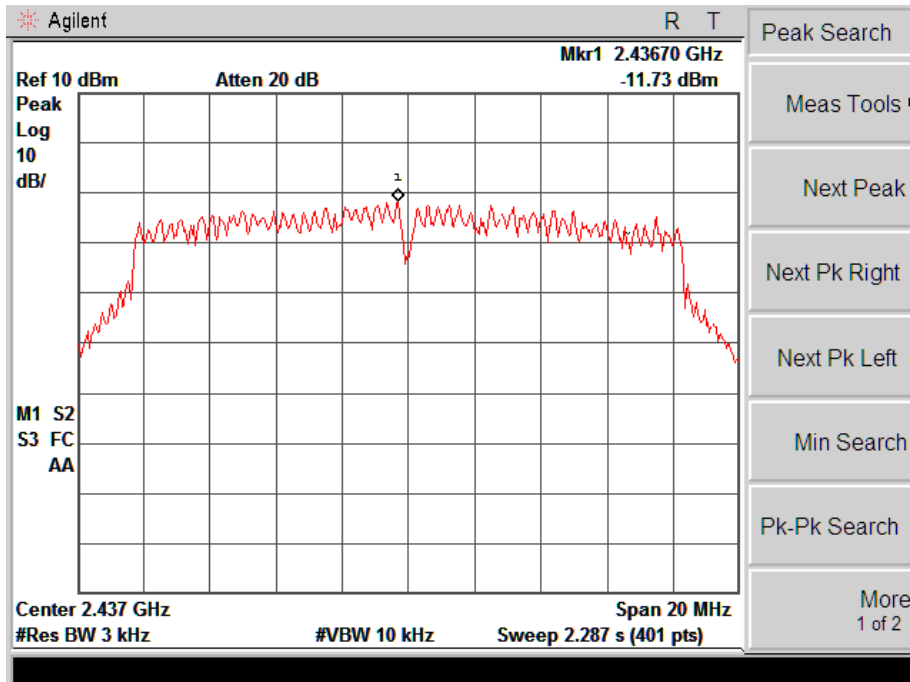
802.11b-High Channel



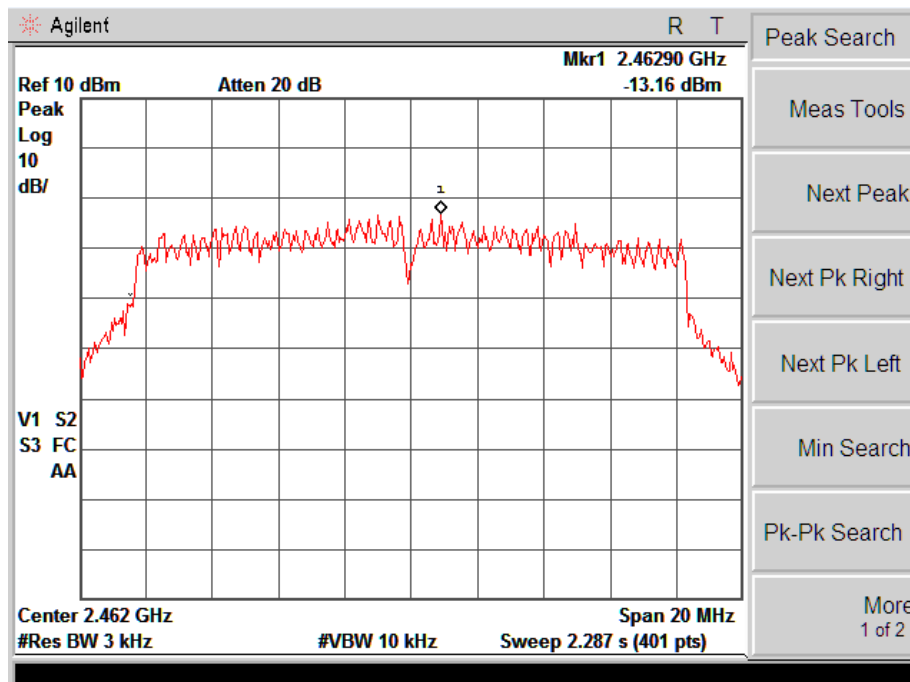
802.11g-Low Channel



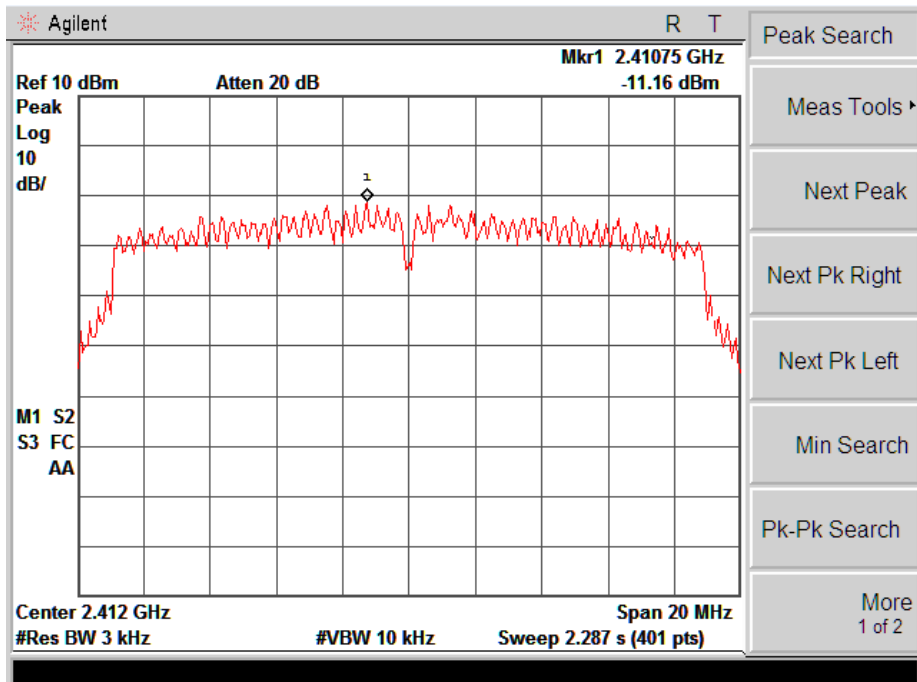
802.11g-Middle Channel



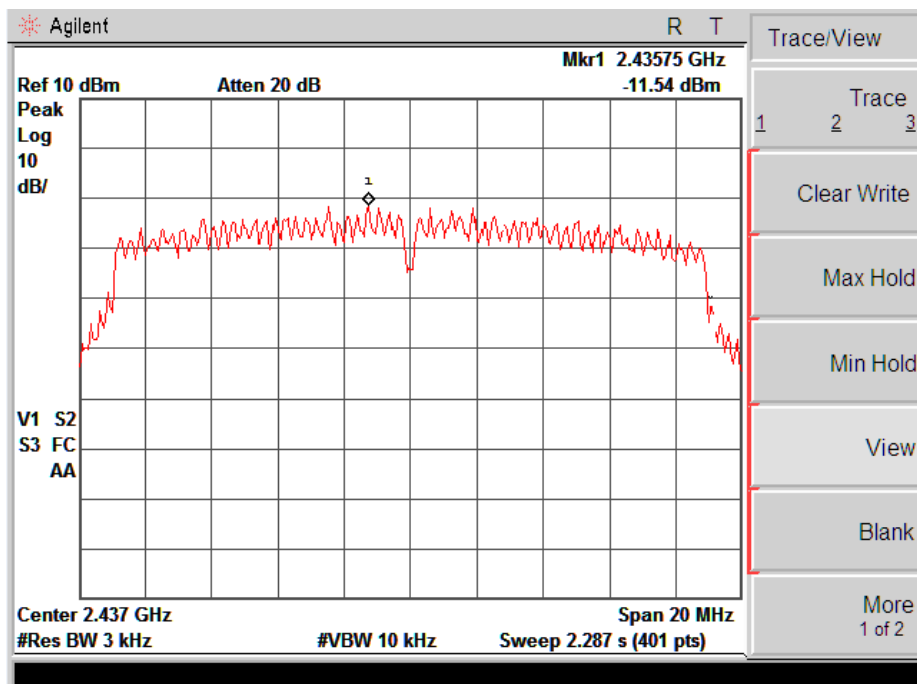
802.11g-High Channel



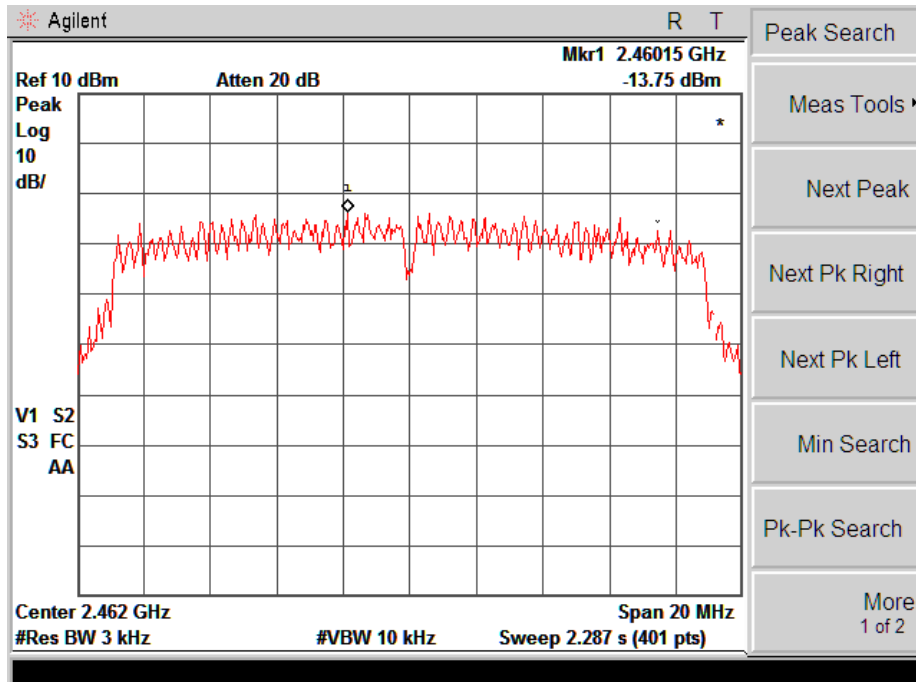
802.11n-HT20-Low Channel



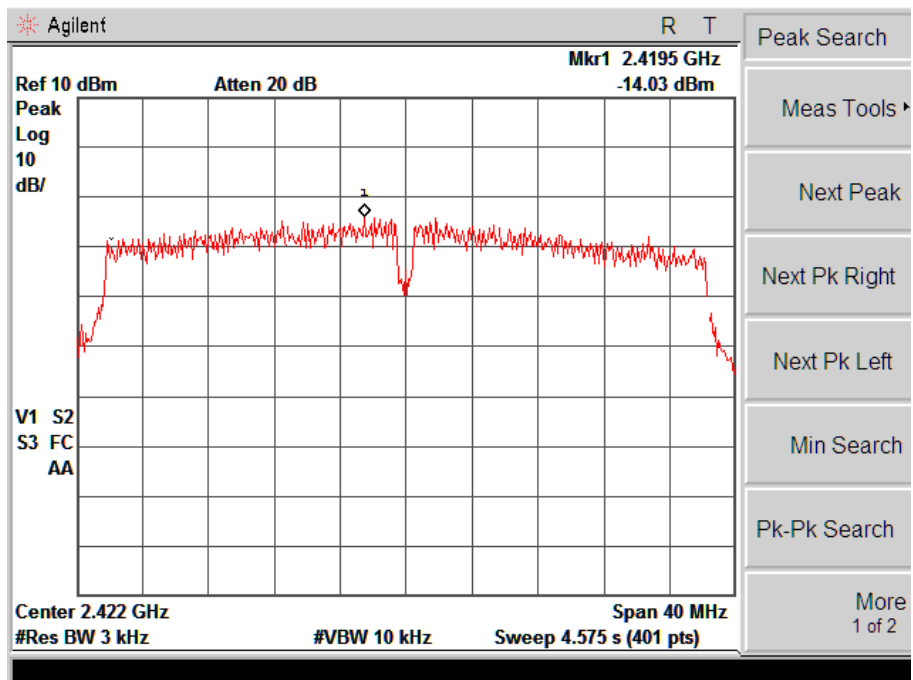
802.11n-HT20-Middle Channel



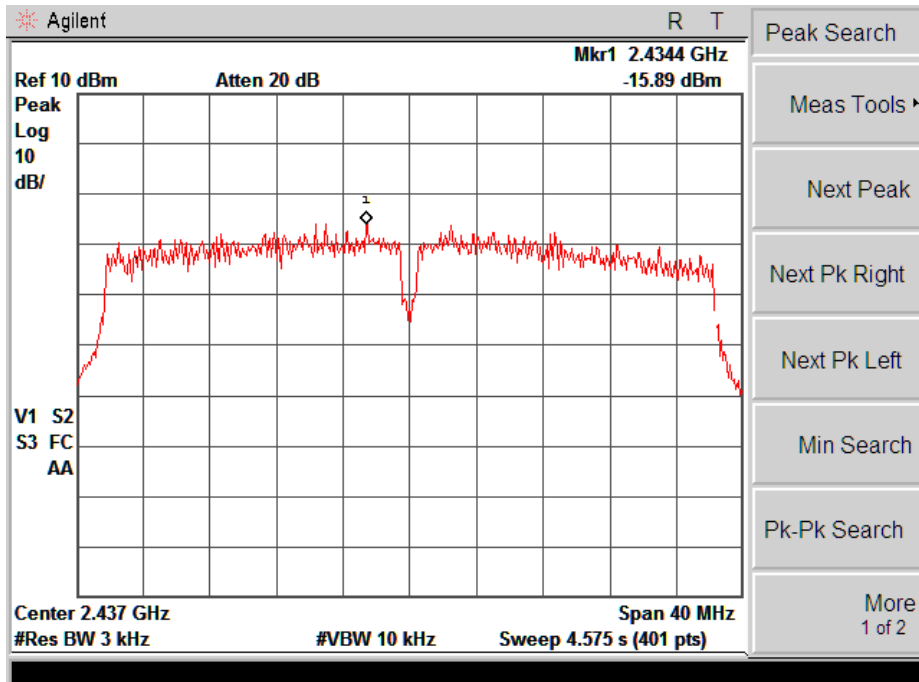
802.11n-HT20-High Channel



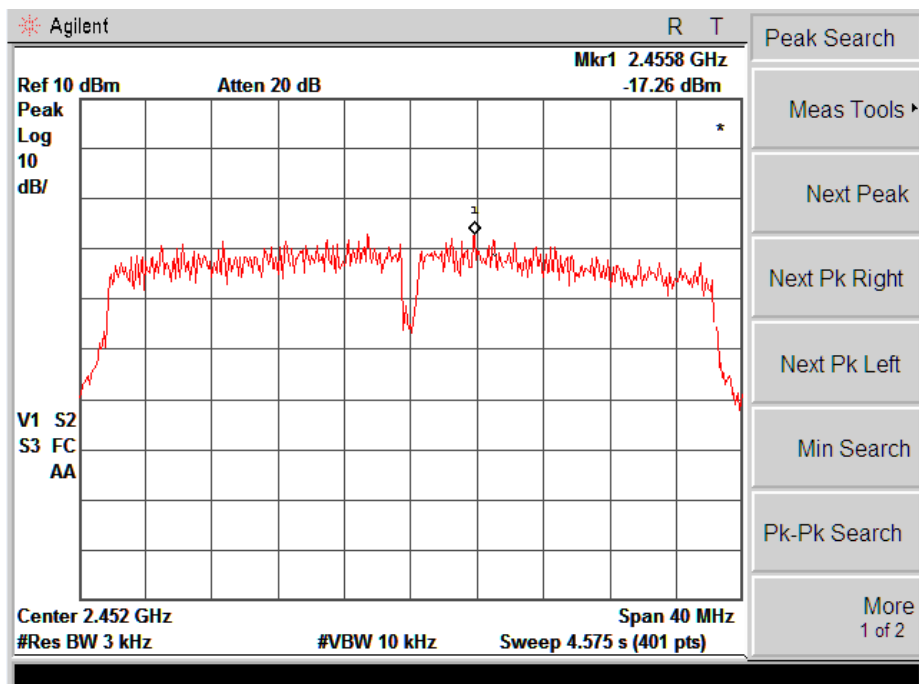
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel



802.11n-HT40-High Channel



6. 6dB Bandwidth

6.1 Standard Applicable

According to 15.247(a) (2). Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz.

6.2 Test Procedure

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) 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.

6.3 Environmental Conditions

Temperature:	25° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

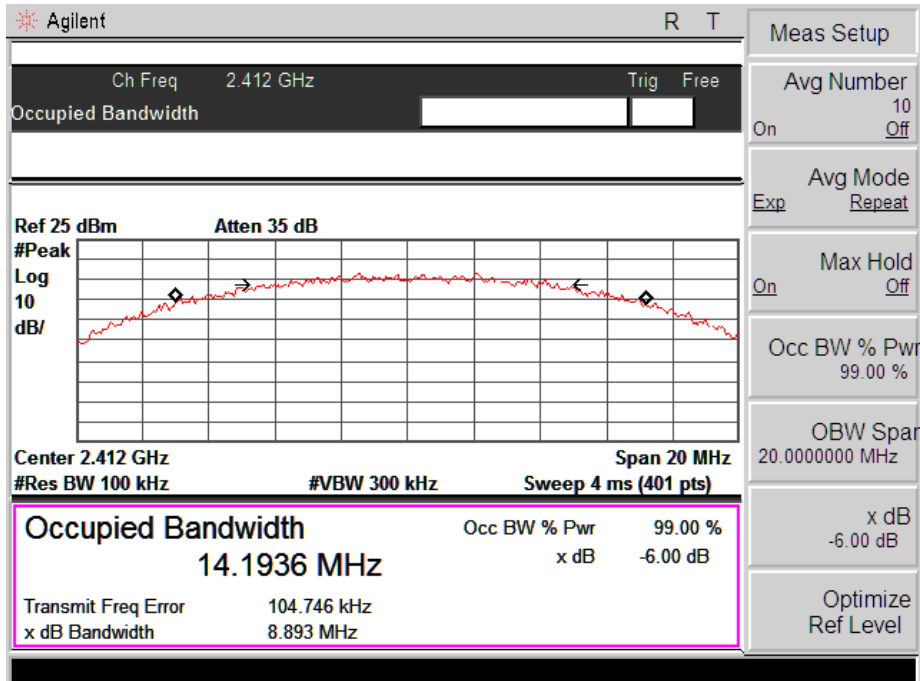
6.4 Summary of Test Results/Plots

Test Mode	Test Channel MHz	6 dB Bandwidth MHz		99% Bandwidth MHz		Limit kHz
		Antenna1	Antenna 2	Antenna1	Antenna 2	
802.11b	2412	8.893	9.415	14.1936	14.2494	≥ 500
	2437	9.677	9.680	14.3752	14.2798	≥ 500
	2462	8.703	7.729	14.2508	14.2676	≥ 500
802.11g	2412	13.800	15.166	16.2261	16.2777	≥ 500
	2437	13.887	13.921	16.1371	16.2770	≥ 500
	2462	13.852	15.159	16.1728	16.2707	≥ 500
802.11n-HT20	2412	15.727	15.118	17.3914	17.4752	≥ 500
	2437	15.773	15.135	17.3155	17.3898	≥ 500
	2462	14.412	15.159	17.2970	17.4279	≥ 500
802.11n-HT40	2422	32.566	35.087	35.4918	35.7093	≥ 500
	2437	30.151	33.779	35.5486	35.6245	≥ 500
	2452	30.197	35.109	35.5191	35.6693	≥ 500

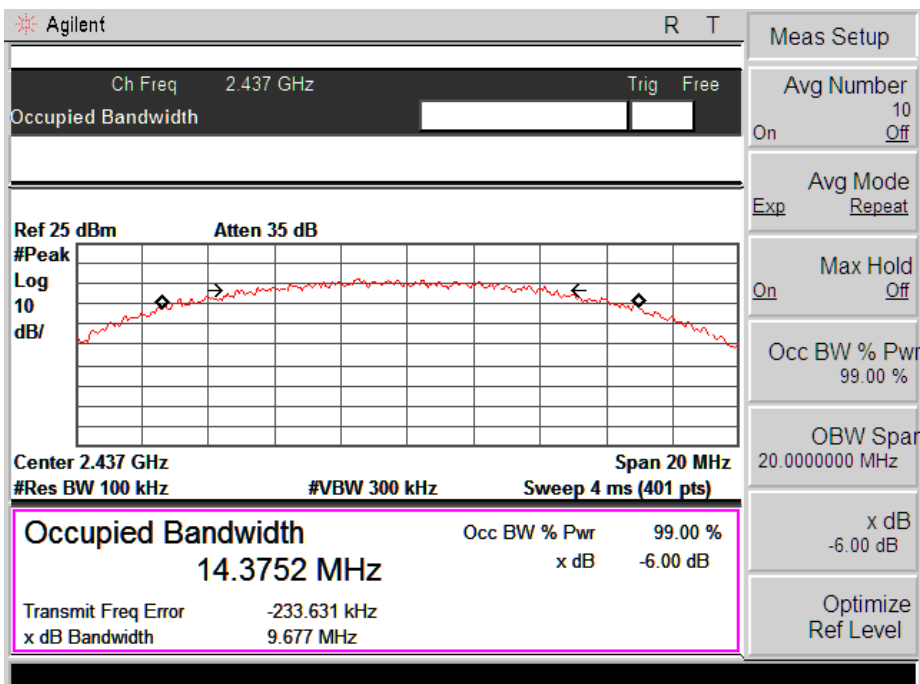
Please refer to the following test plots:

Antenna 1

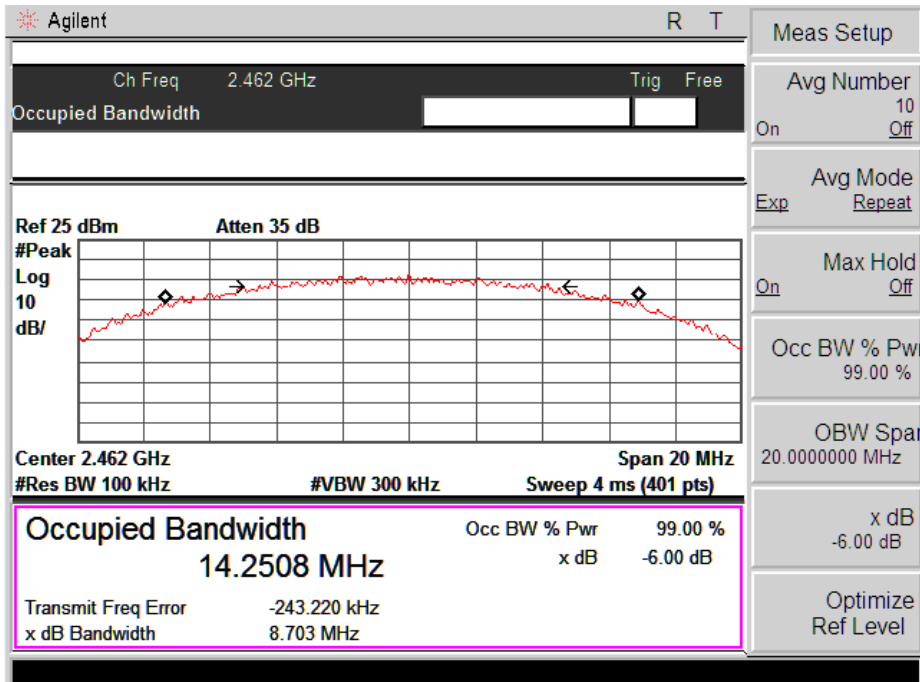
802.11b-Low Channel



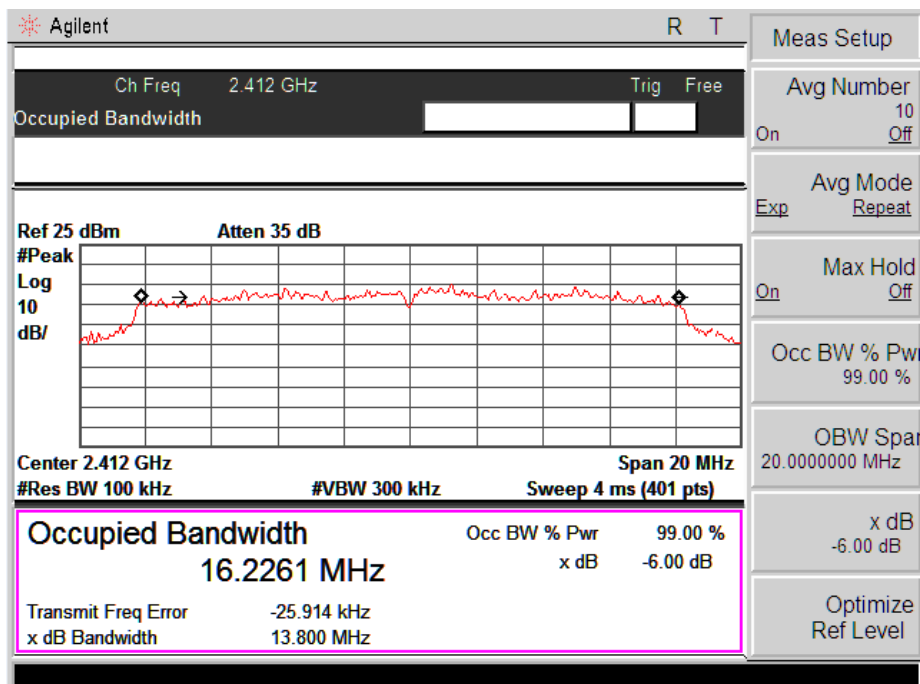
802.11b-Middle Channel



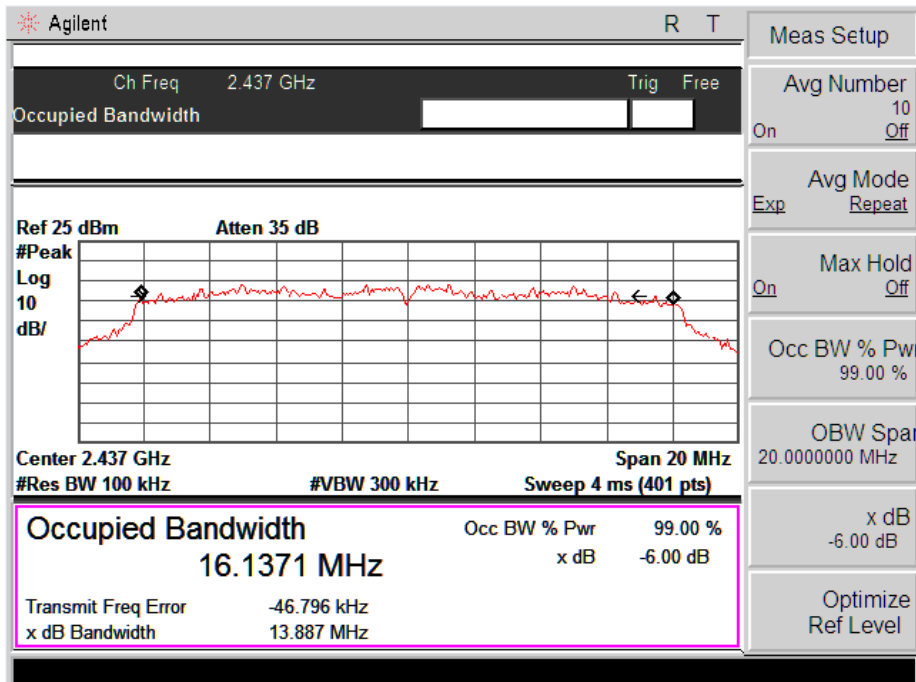
802.11b-High Channel



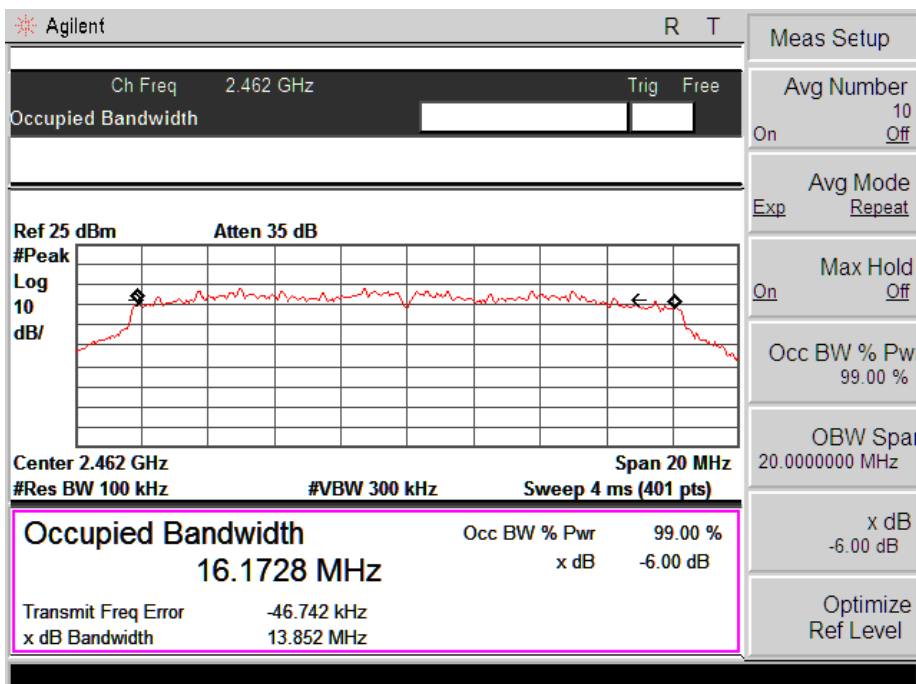
802.11 g-Low Channel



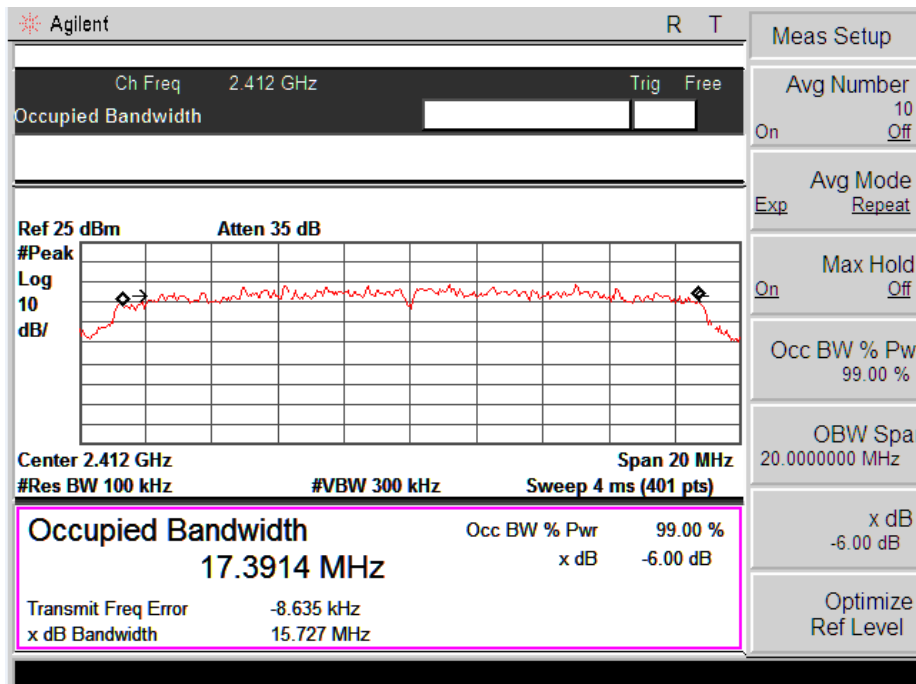
802.11g-Middle Channel



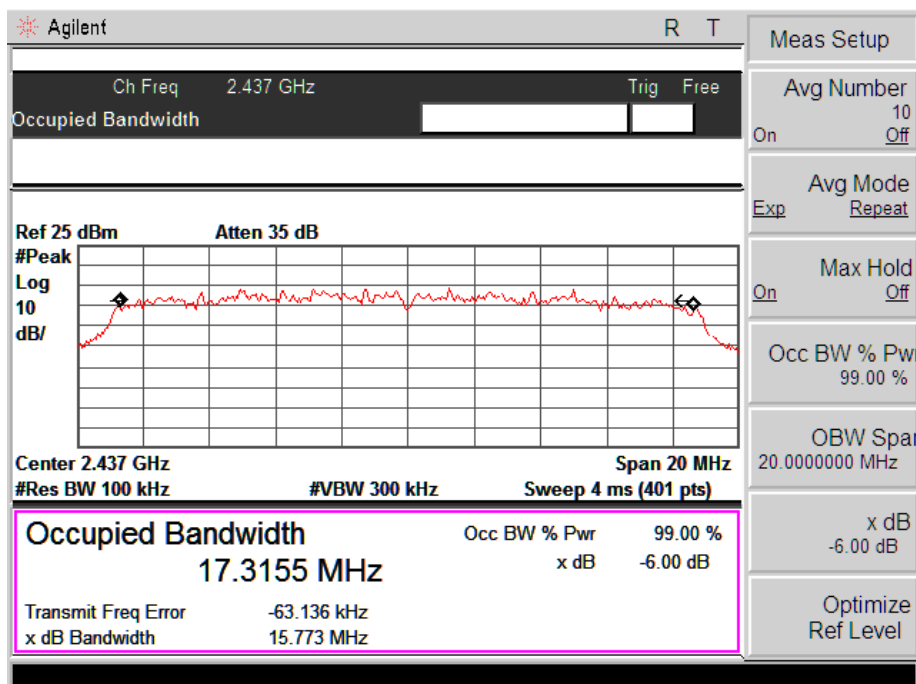
802.11g-High Channel



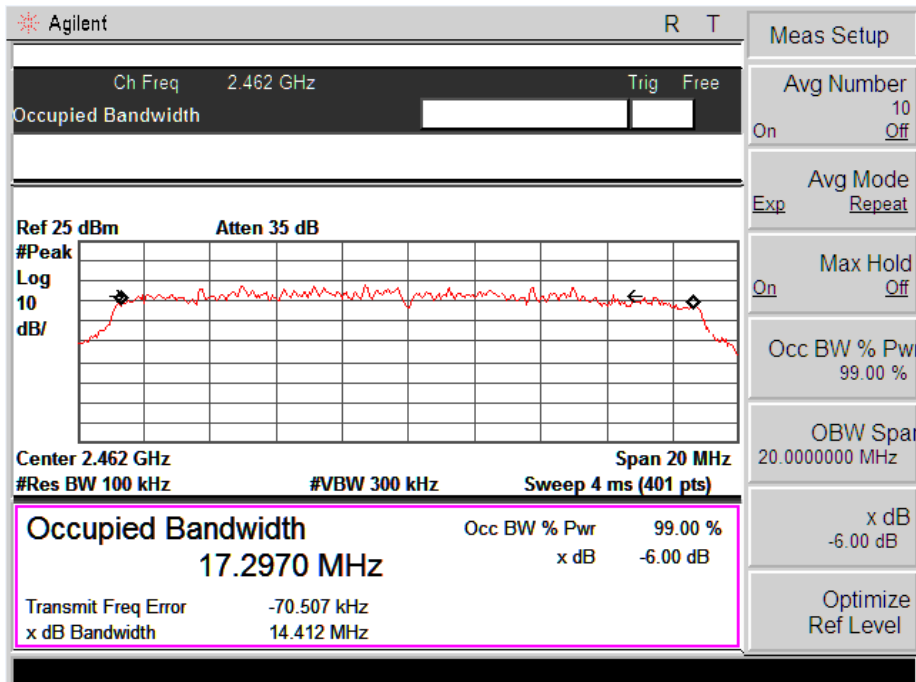
802.11n-HT20-Low Channel



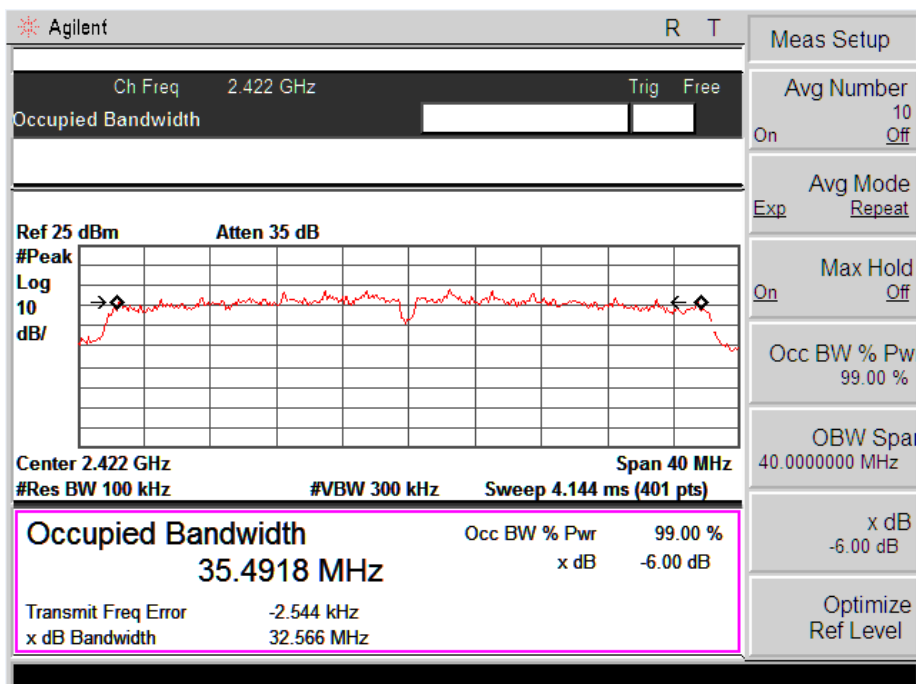
802.11n-HT20-Middle Channel



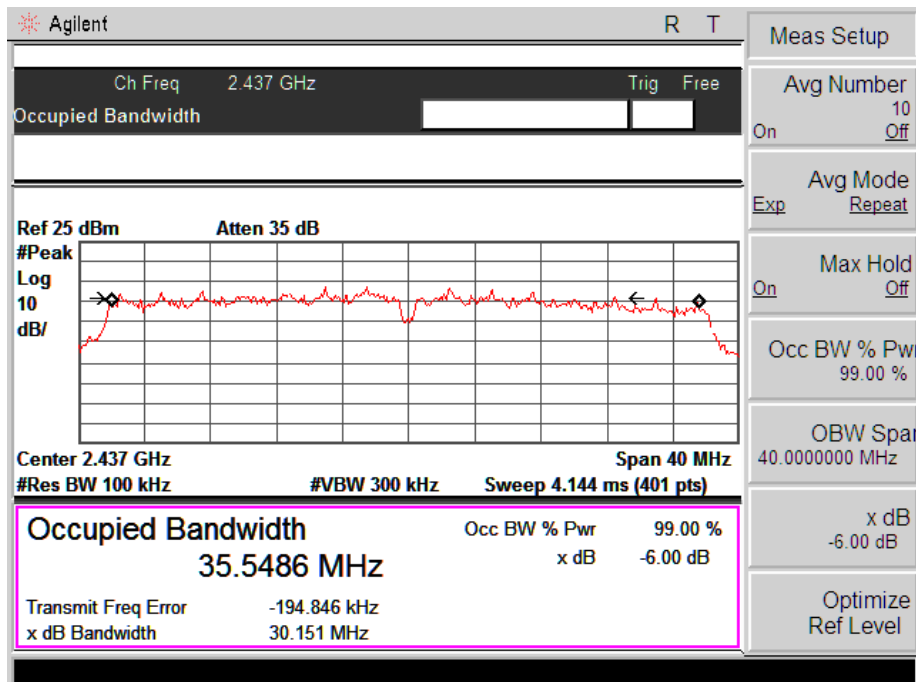
802.11n-HT20-High Channel



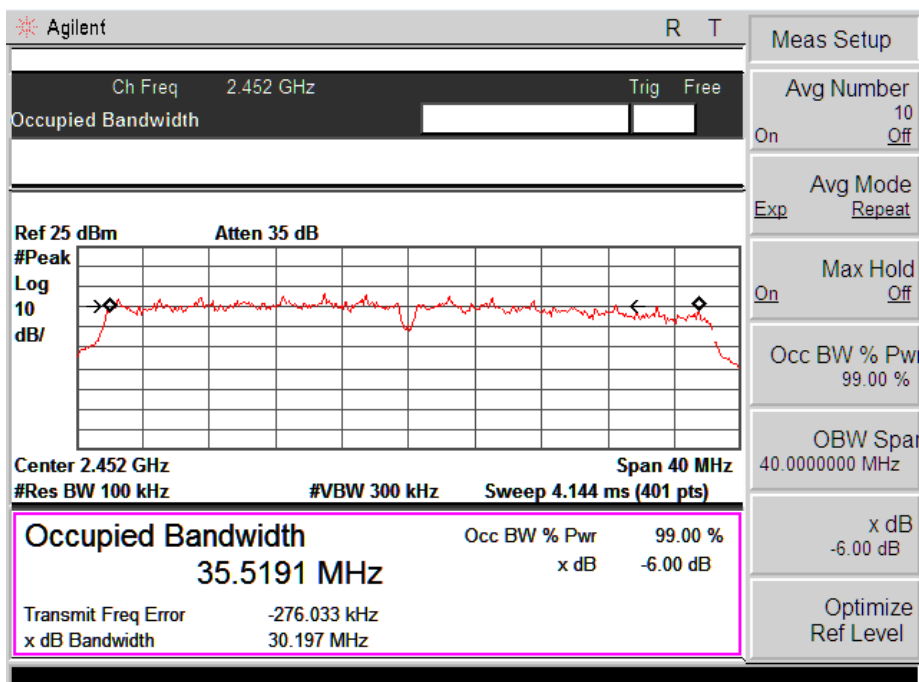
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel

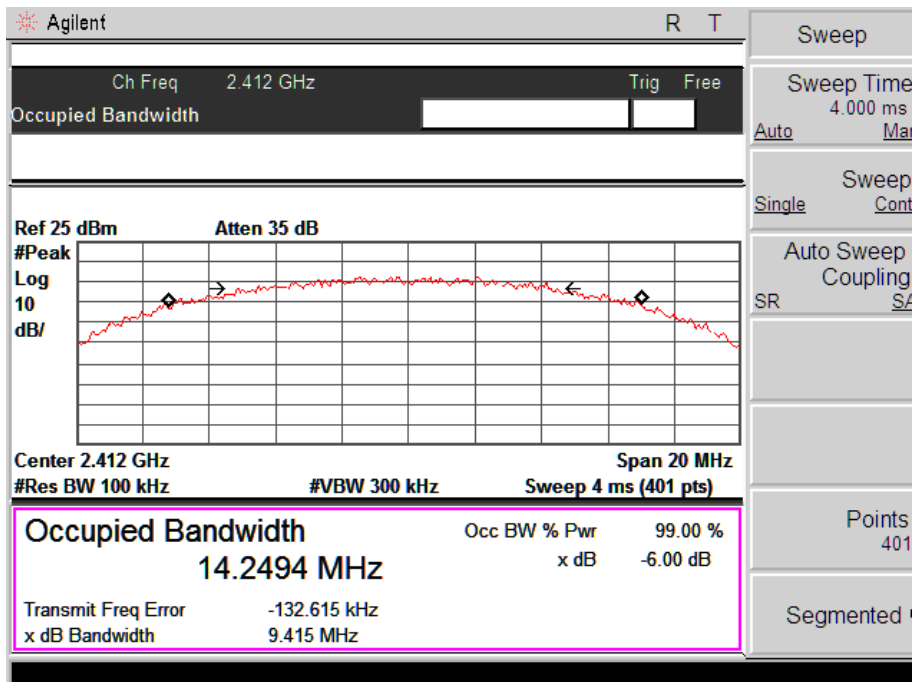


802.11n-HT40-High Channel

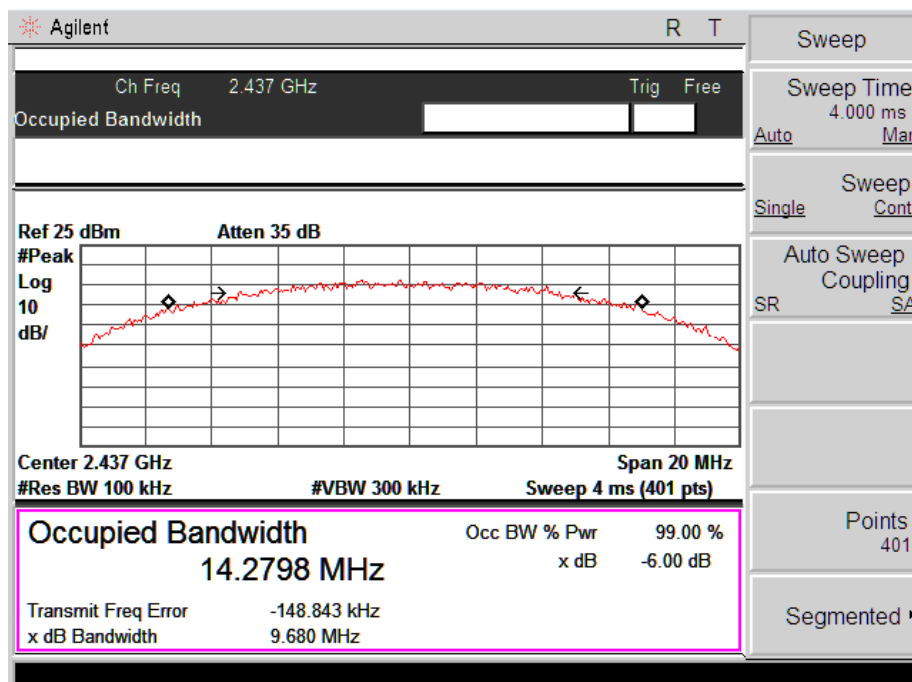


Antenna 2

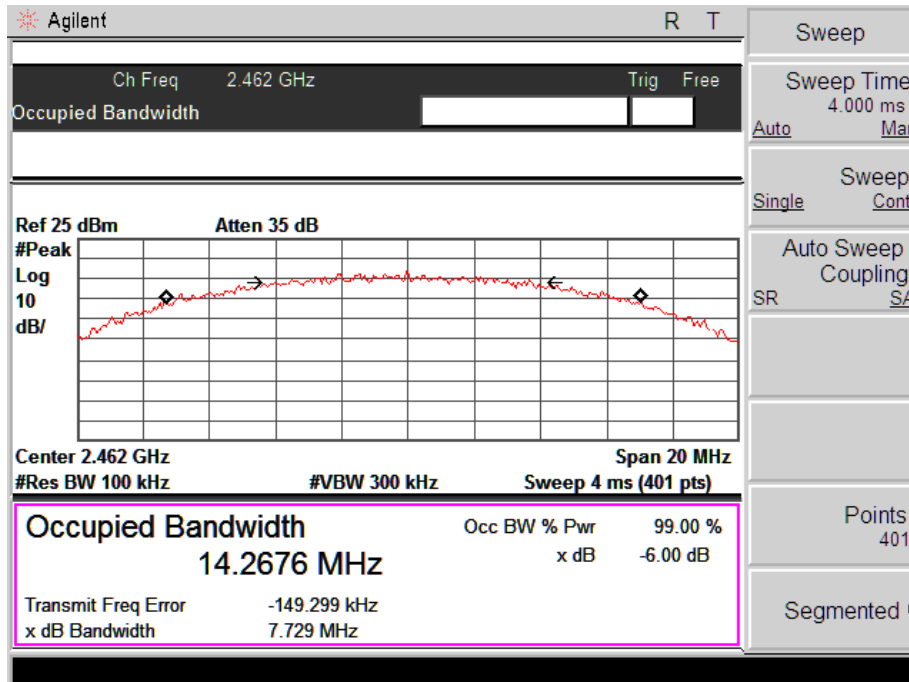
802.11b-Low Channel



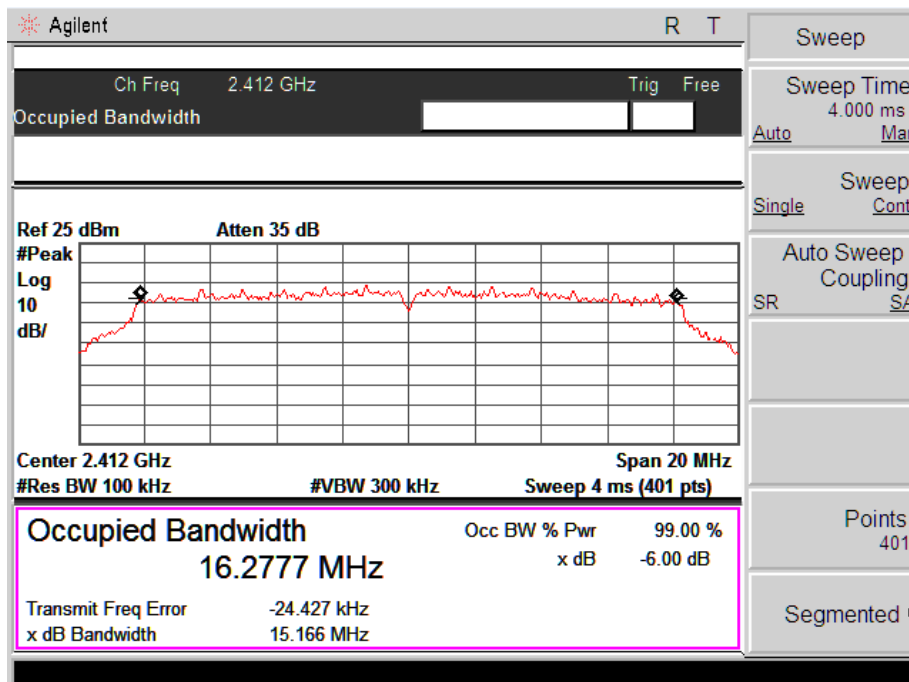
802.11b-Middle Channel



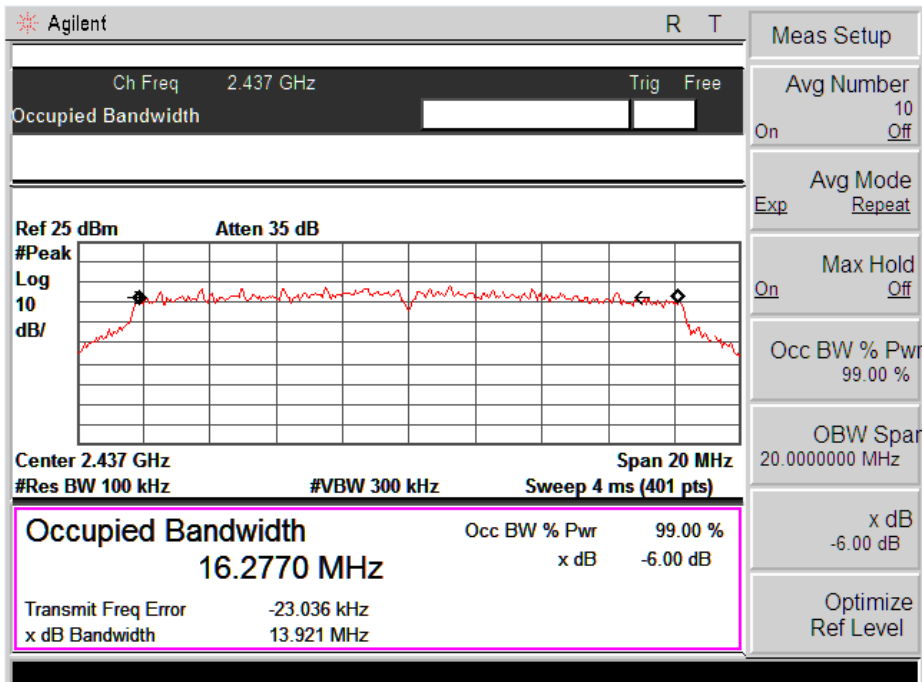
802.11b-High Channel



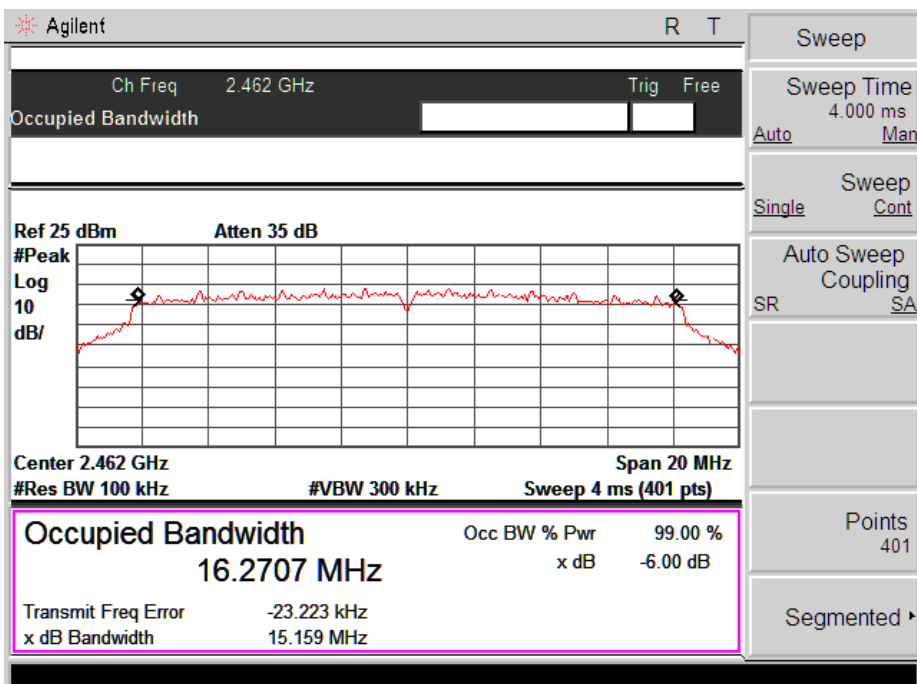
802.11 g-Low Channel



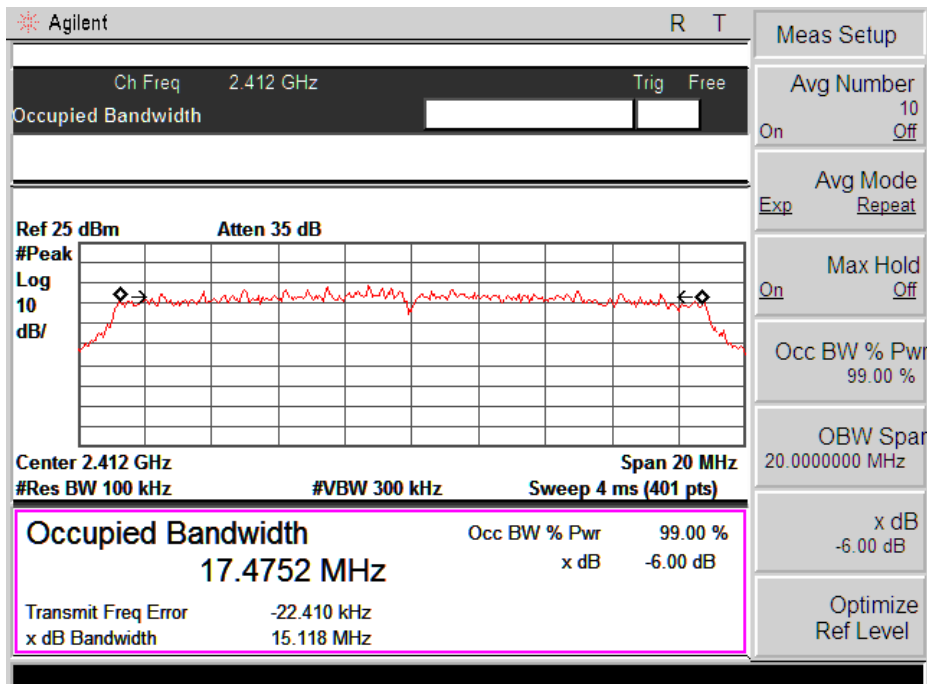
802.11g-Middle Channel



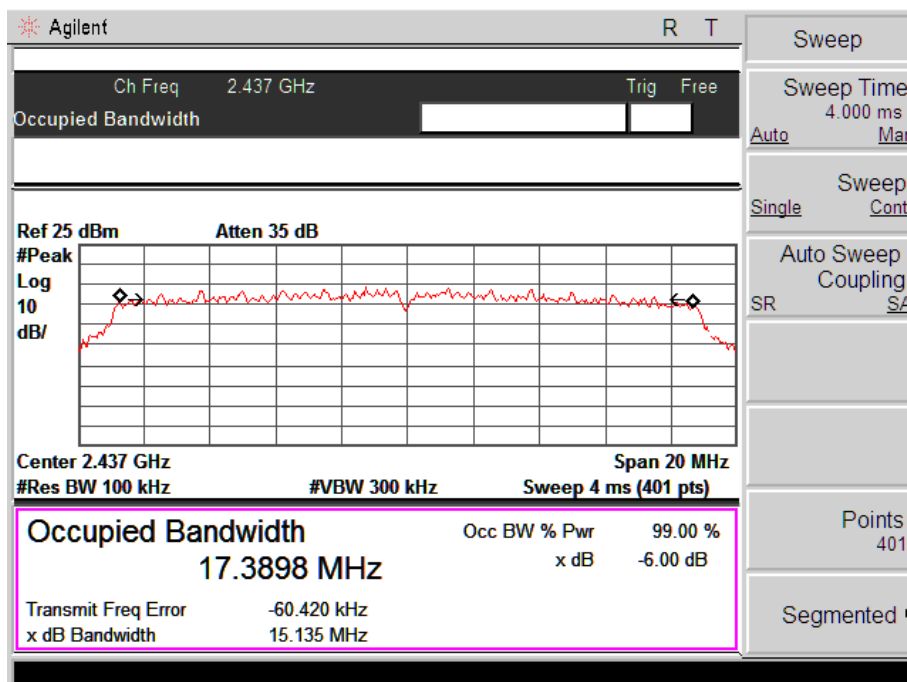
802.11g-High Channel



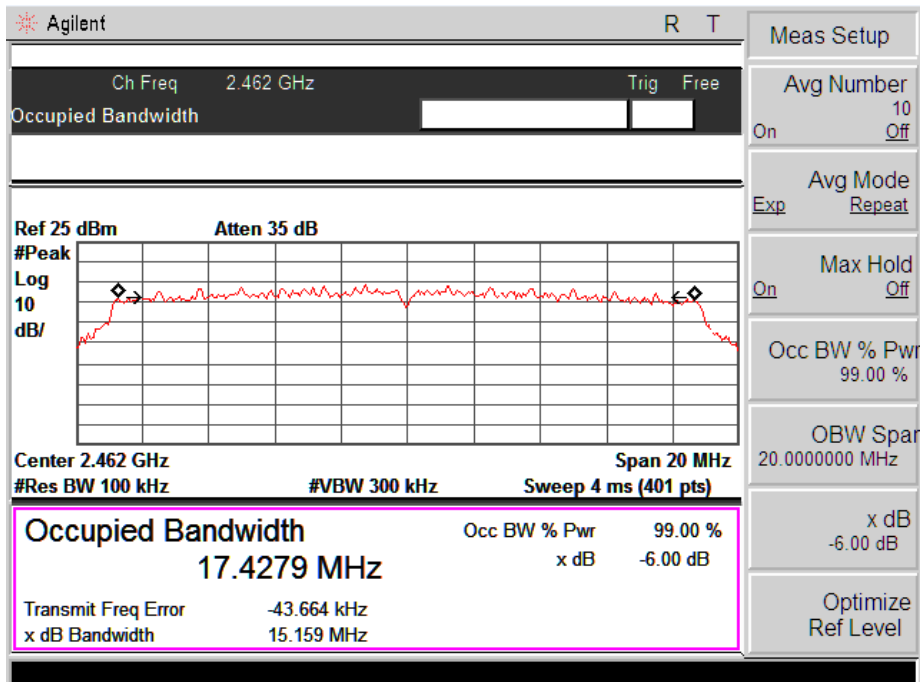
802.11n-HT20-Low Channel



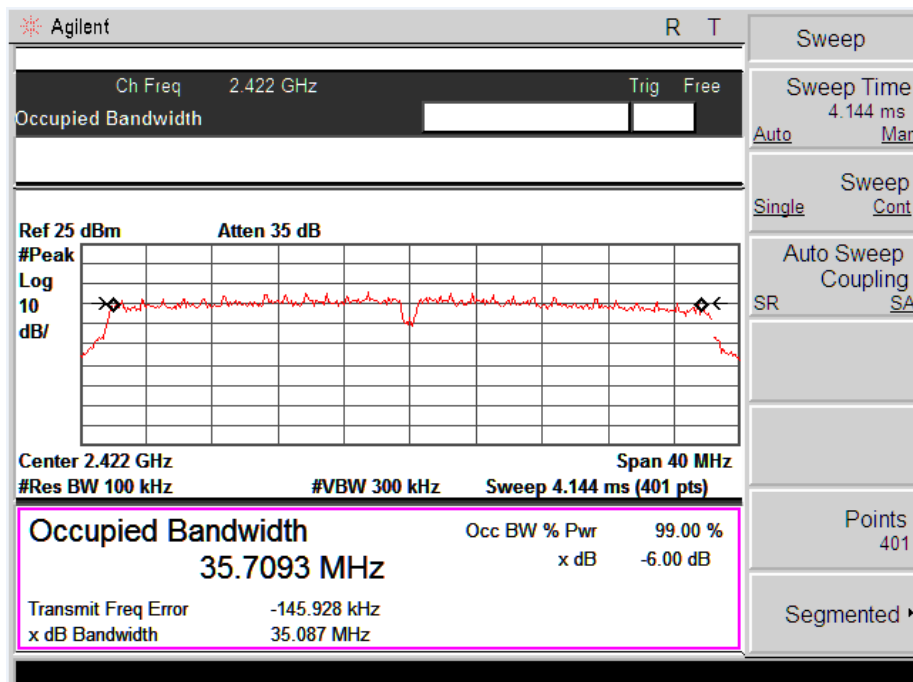
802.11n-HT20-Middle Channel



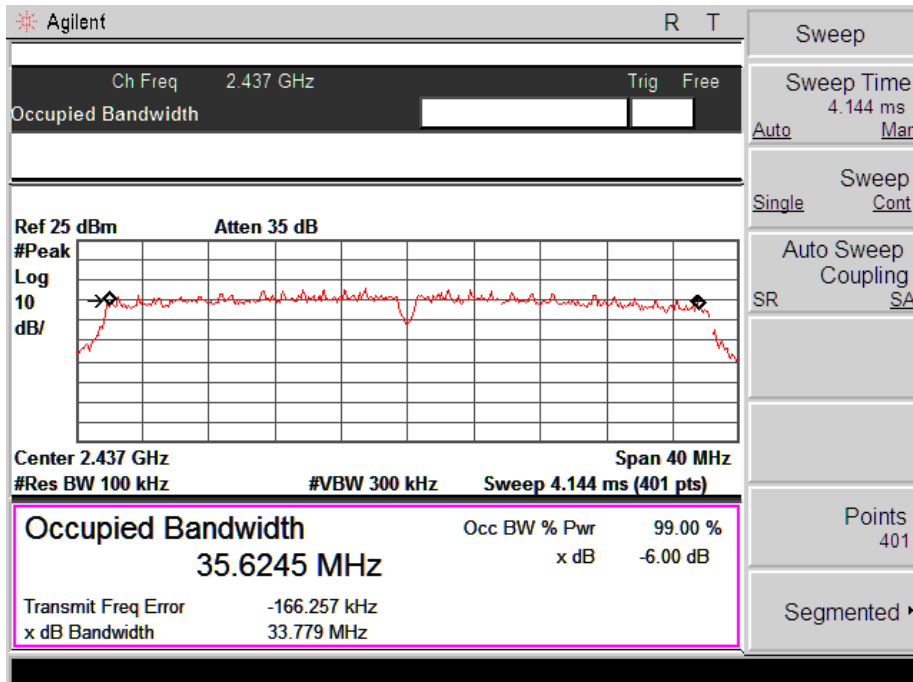
802.11n-HT20-High Channel



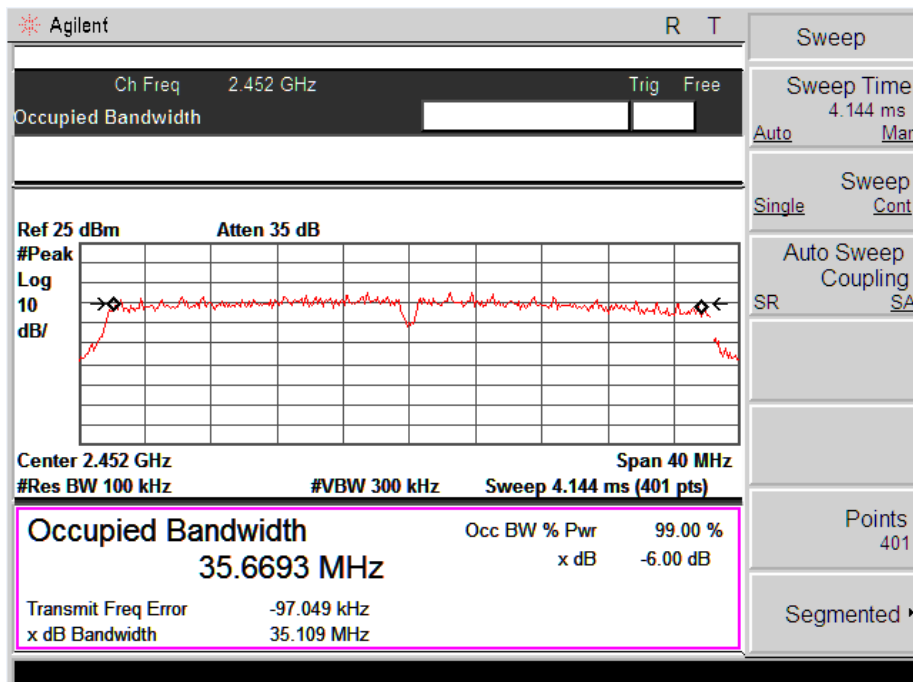
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel



802.11n-HT40-High Channel



7. RF Output Power

7.1 Standard Applicable

According to 15.247(b)(3). For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz bands: 1 Watt.

7.2 Test Procedure

According to KDB-558074 D01 V04, (channel integration method) When this option is exercised, the measured power is to be referenced to the OBW rather than the DTS bandwidth

- a) Set span to at least 1.5 times the OBW.
- b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
- c) Set VBW $\geq 3 \times$ RBW.
- d) Number of points in sweep $\geq 2 \times$ span / RBW. (This gives bin-to-bin spacing \leq RBW/2, so that narrowband signals are not lost between frequency bins.)
- e) Sweep time = auto.
- f) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- g) If transmit duty cycle $< 98 \%$, use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle $\geq 98 \%$, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run” .
- h) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- i) Compute power by integrating the spectrum across the OBW of the signal using the instrument’s band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

7.3 Environmental Conditions

Temperature:	26° C
Relative Humidity:	57%
ATM Pressure:	1011 mbar

7.4 Summary of Test Results/Plots

Test Mode	Frequency MHz	Power dBm		Output Power mW		Limit mW
		Antenna 1	Antenna 2	Antenna 1	Antenna 2	
802.11b	2412	14.85	14.82	30.5	30.3	1000
	2437	14.06	14.71	25.5	29.6	1000
	2462	13.8	13.56	24.0	22.7	1000
802.11g	2412	13.55	13.65	22.6	23.2	1000
	2437	12.57	12.58	18.1	18.1	1000
	2462	12.57	12.74	18.1	18.8	1000

Test Mode	Frequency MHz	Power dBm			Output Power mW	Limit mW
		Antenna 1	Antenna 2	total	total	
802.11n HT20	2412	12.73	12.13	15.45	35.1	1000
	2437	12.34	12.41	15.39	34.6	1000
	2462	11.61	12.49	15.08	32.2	1000
802.11n HT40	2422	11.09	9.953	13.57	22.8	1000
	2437	10.34	9.715	13.05	20.2	1000
	2452	8.484	8.764	11.64	14.6	1000

8. Field Strength of Spurious Emissions

8.1 Measurement Uncertainty

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement is ± 5.10 dB.

8.2 Standard Applicable

According to §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. 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).

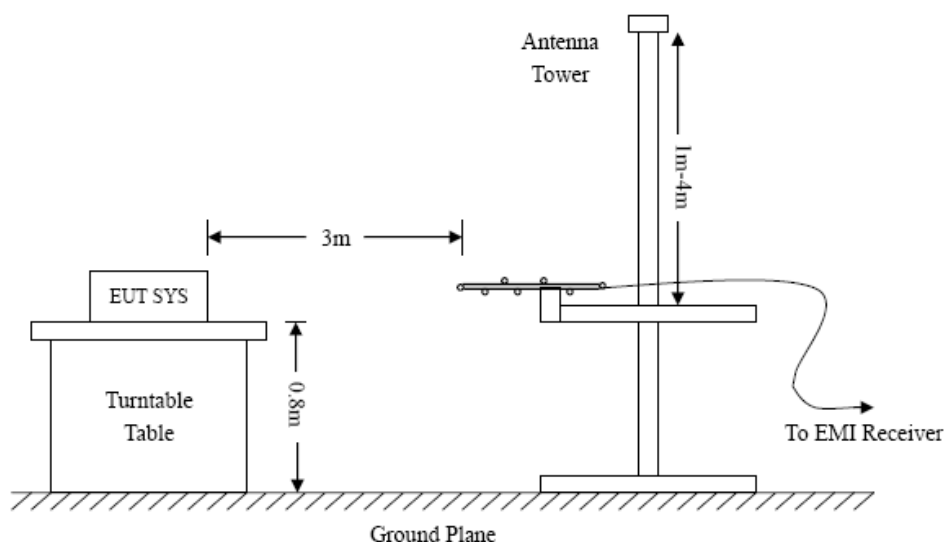
The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

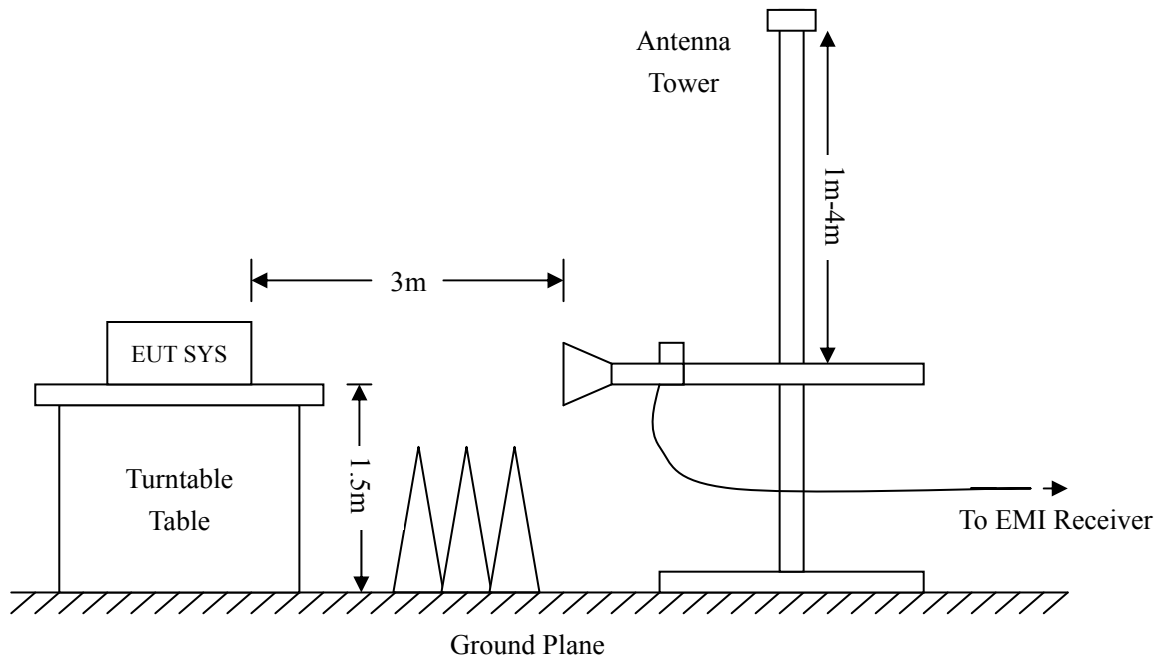
8.3 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.205 15.247(a) and FCC Part 15.209 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.





Frequency: 9kHz-30MHz
 RBW=10 KHz,
 VBW =30 KHz
 Sweep time= Auto
 Trace = max hold
 Detector function = peak

Frequency: 30MHz-1GHz
 RBW=120 KHz,
 VBW=300 KHz
 Sweep time= Auto
 Trace = max hold
 Detector function = peak, QP

Frequency: Above 1GHz
 RBW=1MHz,
 VBW=3MHz (Peak), 10Hz (AV)
 Sweep time= Auto
 Trace = max hold
 Detector function = peak, AV

8.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Ant. Factor} + \text{Cable Loss} - \text{Ampl. Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15 Limit}$$

8.5 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

8.6 Summary of Test Results/Plots

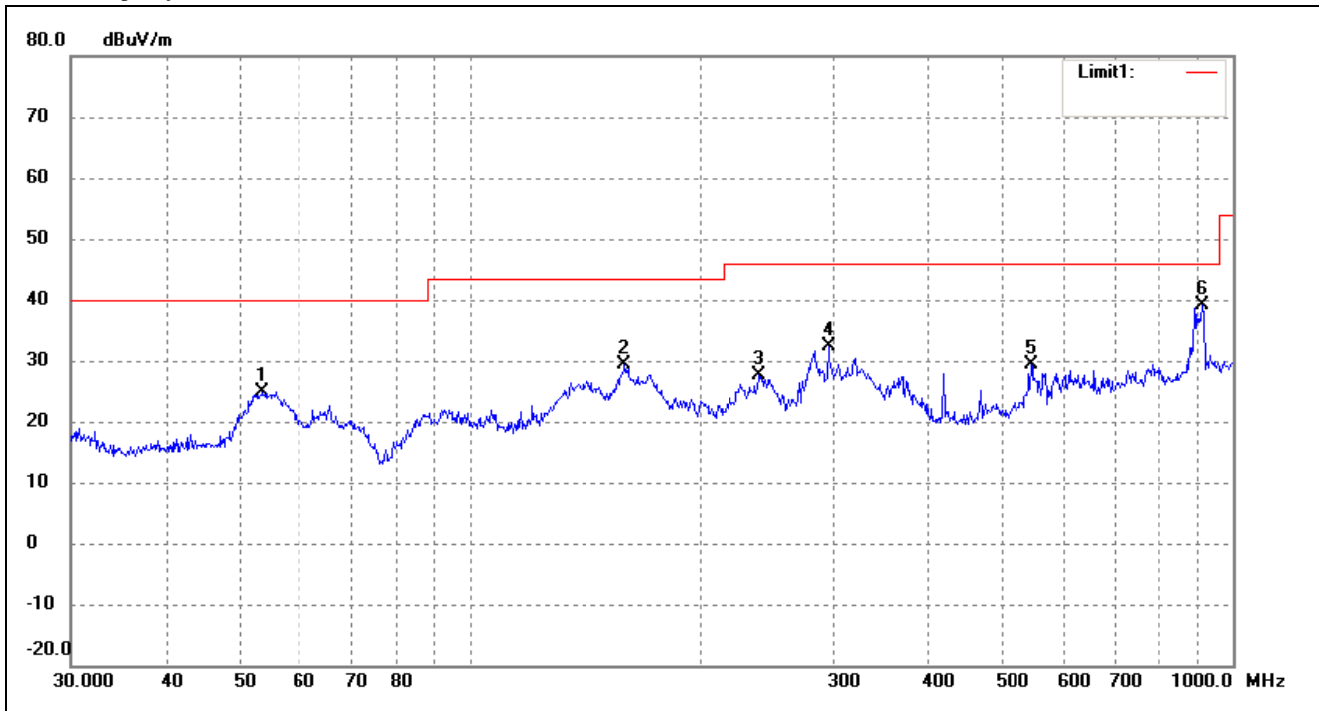
According to the data below, the FCC Part 15.205, 15.209 and 15.247 standards, and had the worst cases:

Note: this EUT was tested in 3 orthogonal positions and the worst case position and the worst mode IEEE 802.11b (channel low, middle, high)) data was reported.

Plot of Radiated Emissions Test Data (30MHz to 1GHz)

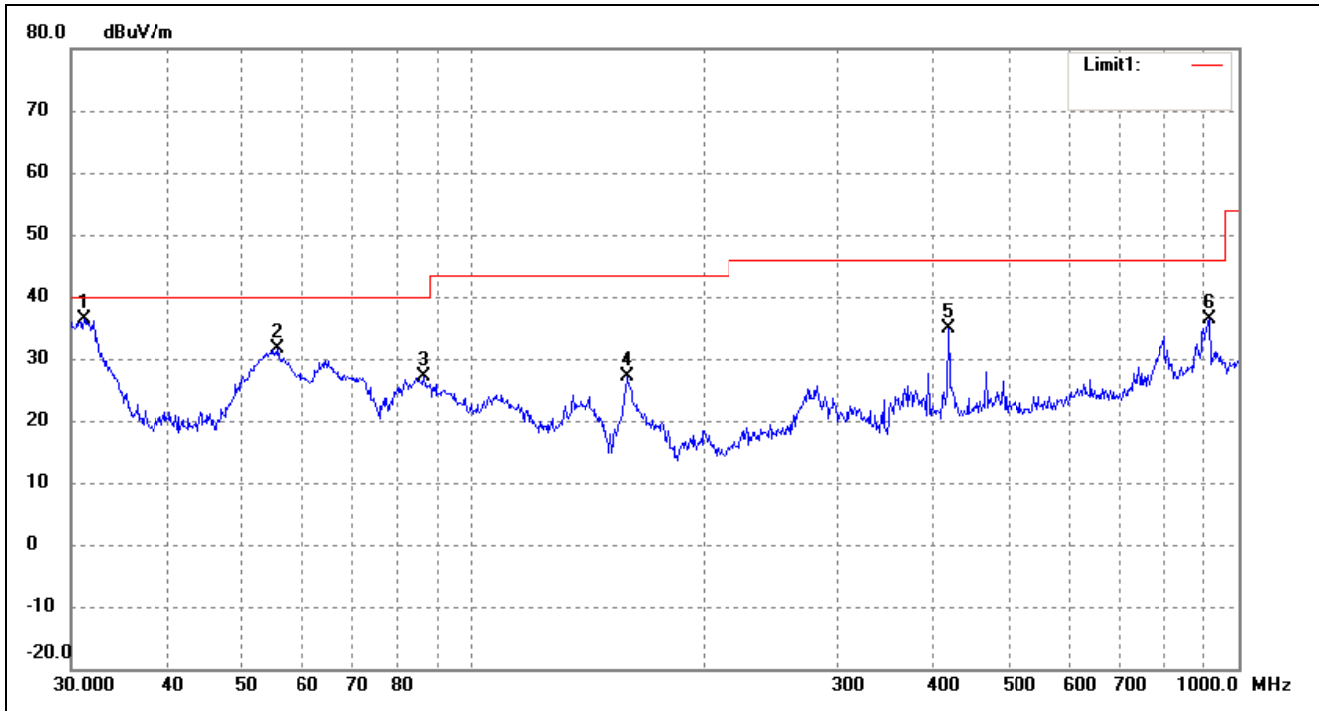
EUT: 55" UHD LED TV
 D55RWB714-U-A-1 RNSMU5536
 Tested Model: XXXXXXXXXXXXX55XXXXXXXXXXXXX
 (Where "X" can be any alphanumeric of a-z, A-Z or 0-9 or blank & "-".)
 Operating Condition: 802.11b Transmitting Low Channel-2412MHz
 Comment: 120V/60Hz

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	53.5052	35.97	-11.08	24.89	40.00	-15.11	336	100	peak
2	159.7844	44.37	-15.03	29.34	43.50	-14.16	59	100	peak
3	239.9874	38.66	-10.96	27.70	46.00	-18.30	99	100	peak
4	295.1469	42.08	-9.69	32.39	46.00	-13.61	301	100	peak
5	545.1826	35.09	-5.75	29.34	46.00	-16.66	142	100	peak
6	912.8620	37.60	1.63	39.23	46.00	-6.77	36	100	peak

Test Specification: Vertical

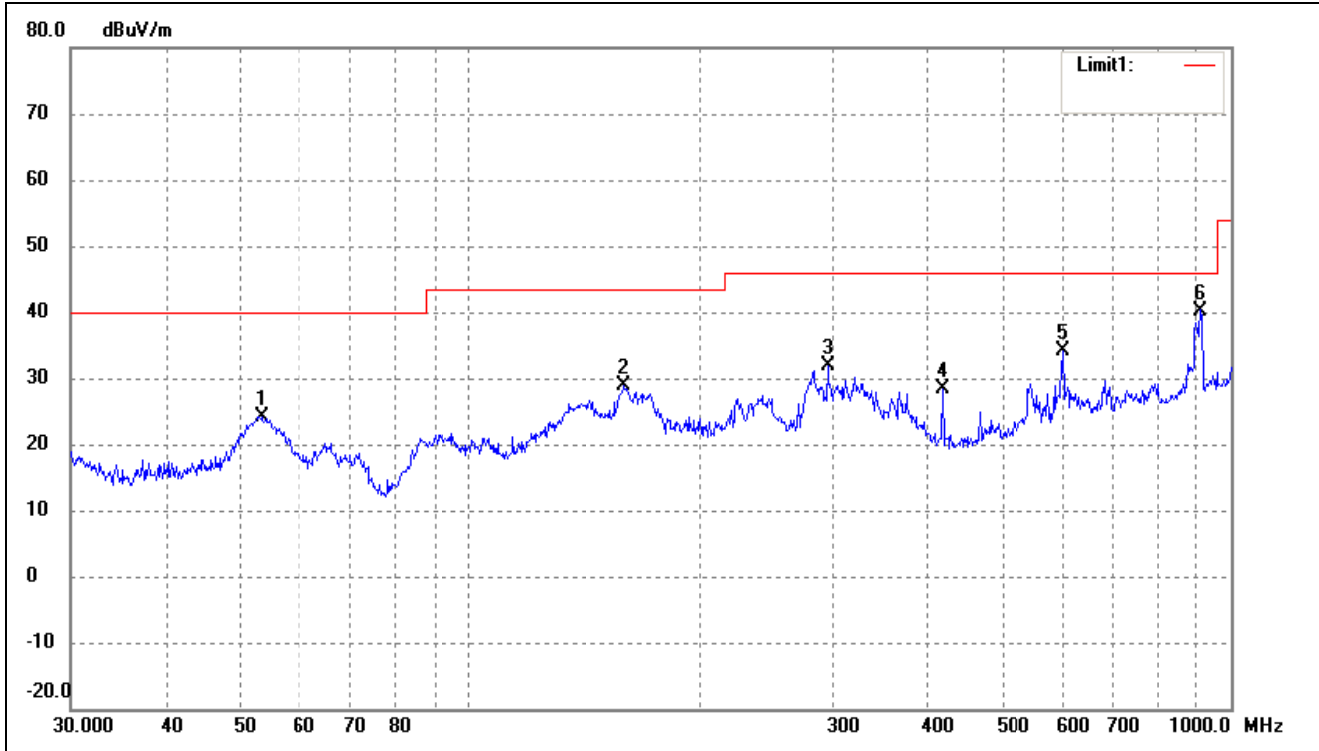


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	31.1798	48.75	-12.43	36.32	40.00	-3.68	300	100	peak
2	55.8047	43.99	-12.31	31.68	40.00	-8.32	123	100	peak
3	86.5029	42.26	-15.20	27.06	40.00	-12.94	90	100	peak
4	159.7844	42.19	-15.03	27.16	43.50	-16.34	13	100	peak
5	417.6411	42.74	-7.88	34.86	46.00	-11.14	152	100	peak
6	916.0687	34.62	1.68	36.30	46.00	-9.70	36	100	peak

Operating Condition: 802.11b Transmitting Middle Channel-2437MHz

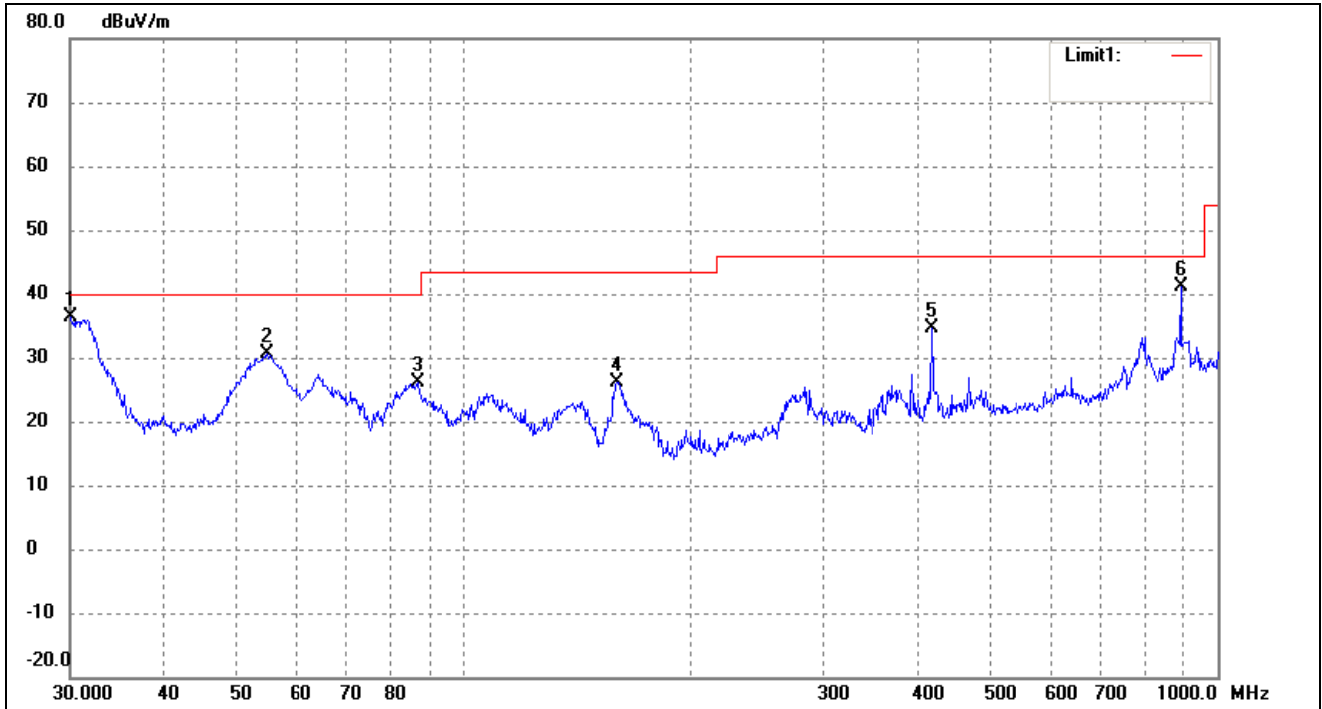
Comment: 120V/60Hz

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	53.3179	35.26	-11.06	24.20	40.00	-15.80	30	100	peak
2	159.7844	44.02	-15.03	28.99	43.50	-14.51	153	100	peak
3	295.1469	41.54	-9.69	31.85	46.00	-14.15	206	100	peak
4	417.6411	36.24	-7.88	28.36	46.00	-17.64	114	100	peak
5	601.4265	38.36	-4.20	34.16	46.00	-11.84	125	100	peak
6	912.8620	38.62	1.63	40.25	46.00	-5.75	135	100	peak

Test Specification: Vertical

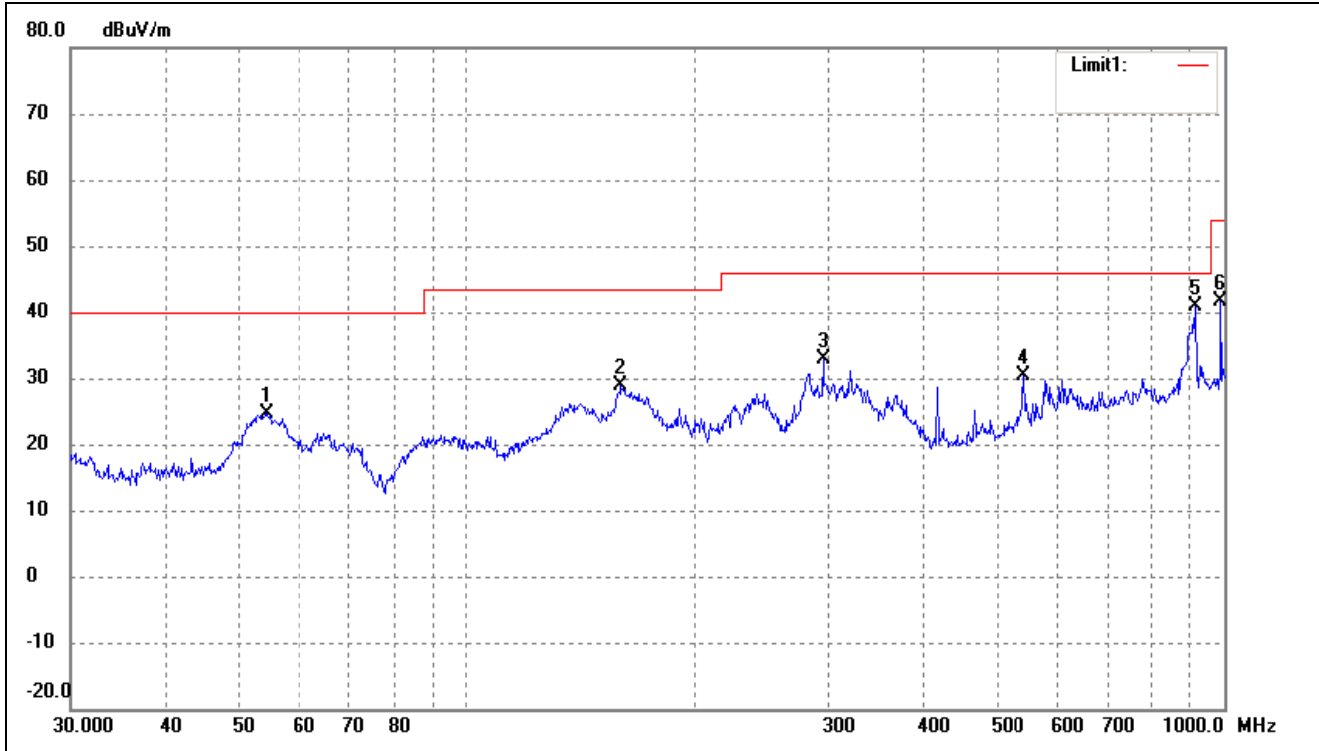


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	30.1054	48.98	-12.67	36.31	40.00	-3.69	360	100	peak
2	54.6429	42.52	-11.92	30.60	40.00	-9.40	23	100	peak
3	86.8068	41.16	-15.07	26.09	40.00	-13.91	66	100	peak
4	159.7844	41.26	-15.03	26.23	43.50	-17.27	58	100	peak
5	417.6411	42.56	-7.88	34.68	46.00	-11.32	132	100	peak
6	893.8567	39.75	1.43	41.18	46.00	-4.82	214	100	peak

Operating Condition: 802.11b Transmitting High Channel-2462MHz

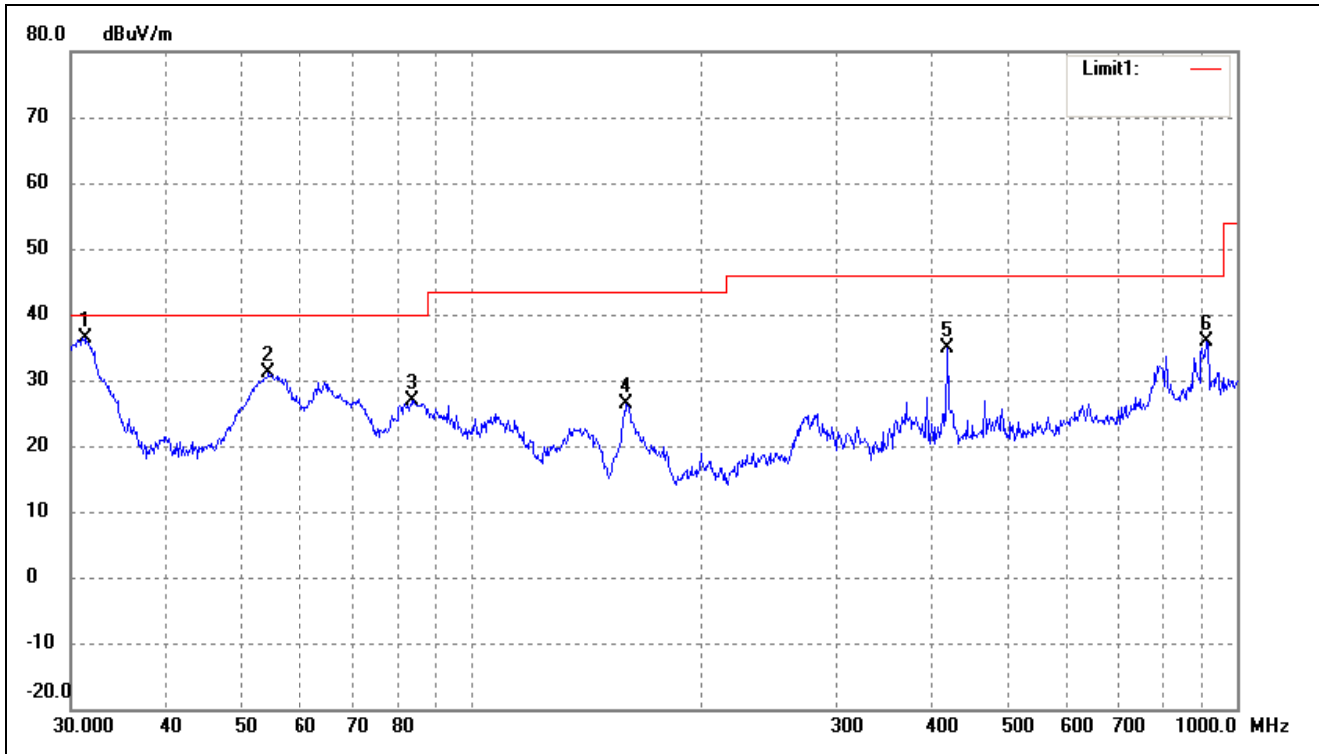
Comment: 120V/60Hz

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	54.4516	35.87	-11.18	24.69	40.00	-15.31	32	100	peak
2	159.7844	43.80	-15.03	28.77	43.50	-14.73	56	100	peak
3	295.1469	42.67	-9.69	32.98	46.00	-13.02	264	100	peak
4	543.2742	36.15	-5.74	30.41	46.00	-15.59	236	100	peak
5	916.0687	39.22	1.68	40.90	46.00	-5.10	120	100	peak
6	989.5355	39.21	2.31	41.52	54.00	-12.48	236	100	peak

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	31.2893	48.88	-12.41	36.47	40.00	-3.53	133	100	peak
2	54.2610	42.90	-11.80	31.10	40.00	-8.90	256	100	peak
3	83.8156	43.28	-16.41	26.87	40.00	-13.13	145	100	peak
4	159.7844	41.30	-15.03	26.27	43.50	-17.23	266	100	peak
5	417.6411	42.66	-7.88	34.78	46.00	-11.22	121	100	peak
6	912.8620	34.36	1.63	35.99	46.00	-10.01	36	100	peak

Test Mode: 802.11b

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	52.85	-3.42	49.43	74	-24.57	H	PK
4824.000	37.8	-3.22	34.58	54	-19.42	H	AV
7236.000	45.46	1.99	47.45	74	-26.55	H	PK
7236.000	34.24	2.14	36.38	54	-17.62	H	AV
4824.000	55.97	-3.51	52.46	74	-21.54	V	PK
4824.000	39.56	-3.11	36.45	54	-17.55	V	AV
7236.000	47.97	1.65	49.62	74	-24.38	V	PK
7236.000	36.30	1.65	37.95	54	-16.05	V	AV
Middle Channel-2437MHz							
4874.000	55.85	-3.29	52.56	74	-21.44	H	PK
4874.000	41.30	-3.09	38.21	54	-15.79	H	AV
7311.000	49.28	2.32	51.6	74	-22.40	H	PK
7311.000	34.71	2.42	37.13	54	-16.87	H	AV
4874.000	54.98	-3.39	51.59	74	-22.41	V	PK
4874.000	42.30	-2.99	39.31	54	-14.69	V	AV
7311.000	49.19	2.02	51.21	74	-22.79	V	PK
7311.000	35.29	2.02	37.31	54	-16.69	V	AV
High Channel-2462MHz							
4924.000	56.68	-2.89	53.79	74	-20.21	H	PK
4924.000	42.82	-2.69	40.13	54	-13.87	H	AV
7386.000	47.64	2.89	50.53	74	-23.47	H	PK
7386.000	36.19	2.99	39.18	54	-14.82	H	AV
4924.000	55.7	-2.99	52.71	74	-21.29	V	PK
4924.000	43.2	-2.59	40.61	54	-13.39	V	AV
7386.000	48.95	2.59	51.54	74	-22.46	V	PK
7386.000	36.14	2.59	38.73	54	-15.27	V	AV

Test Mode: 802.11g

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	54.01	-3.16	50.85	74	-23.15	H	PK
4824.000	40.94	-2.96	37.98	54	-16.02	H	AV
7236.000	47.33	2.2	49.53	74	-24.47	H	PK
7236.000	33.41	2.3	35.71	54	-18.29	H	AV
4824.000	54.4	-3.26	51.14	74	-22.86	V	PK
4824.000	41.46	-2.86	38.6	54	-15.40	V	AV
7236.000	47.83	1.9	49.73	74	-24.27	V	PK
7236.000	34.15	1.9	36.05	54	-17.95	V	AV
Middle Channel-2437MHz							
4874.000	53.61	-3.04	50.57	74	-23.43	H	PK
4874.000	41.99	-2.84	39.15	54	-14.85	H	AV
7311.000	46.29	2.57	48.86	74	-25.14	H	PK
7311.000	34.28	2.67	36.95	54	-17.05	H	AV
4874.000	55.48	-3.14	52.34	74	-21.66	V	PK
4874.000	42.67	-2.74	39.93	54	-14.07	V	AV
7311.000	47.01	2.27	49.28	74	-24.72	V	PK
7311.000	33.94	2.27	36.21	54	-17.79	V	AV
High Channel-2462MHz							
4924.000	52.51	-2.89	49.62	74	-24.38	H	PK
4924.000	39.46	-2.69	36.77	54	-17.23	H	AV
7386.000	46.09	2.89	48.98	74	-25.02	H	PK
7386.000	33.74	2.99	36.73	54	-17.27	H	AV
4924.000	54.52	-2.99	51.53	74	-22.47	V	PK
4924.000	41.50	-2.59	38.91	54	-15.09	V	AV
7386.000	47.19	2.59	49.78	74	-24.22	V	PK
7386.000	34.56	2.59	37.15	54	-16.85	V	AV

Test Mode: 802.11n-HT20

Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2412MHz							
4824.000	54.11	-3.16	50.95	74	-23.05	H	PK
4824.000	39.25	-2.96	36.29	54	-17.71	H	AV
7236.000	46.17	2.2	48.37	74	-25.63	H	PK
7236.000	33.45	2.3	35.75	54	-18.25	H	AV
4824.000	55.12	-3.26	51.86	74	-22.14	V	PK
4824.000	41.99	-2.86	39.13	54	-14.87	V	AV
7236.000	47.82	1.9	49.72	74	-24.28	V	PK
7236.000	34.38	1.9	36.28	54	-17.72	V	AV
Middle Channel-2437MHz							
4874.000	52.67	-3.04	49.63	74	-24.37	H	PK
4874.000	41.19	-2.84	38.35	54	-15.65	H	AV
7311.000	47.65	2.57	50.22	74	-23.78	H	PK
7311.000	32.11	2.67	34.78	54	-19.22	H	AV
4874.000	53.33	-3.14	50.19	74	-23.81	V	PK
4874.000	41.43	-2.74	38.69	54	-15.31	V	AV
7311.000	47.10	2.27	49.37	74	-24.63	V	PK
7311.000	33.81	2.27	36.08	54	-17.92	V	AV
High Channel-2462MHz							
4924.000	52.41	-2.89	49.52	74	-24.48	H	PK
4924.000	41.94	-2.69	39.25	54	-14.75	H	AV
7386.000	47.22	2.89	50.11	74	-23.89	H	PK
7386.000	35.11	2.99	38.1	54	-15.9	H	AV
4924.000	54.11	-2.99	51.12	74	-22.88	V	PK
4924.000	40.29	-2.59	37.7	54	-16.30	V	AV
7386.000	47.16	2.59	49.75	74	-24.25	V	PK
7386.000	33.97	2.59	36.56	54	-17.44	V	AV

Test Mode: 802.11n-HT40

Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2422MHz							
4844.000	52.52	-3.2	49.32	74	-24.68	H	PK
4824.000	37.72	-3	34.72	54	-19.28	H	AV
7266.000	46.15	2.16	48.31	74	-25.69	H	PK
7266.000	32.33	2.26	34.59	54	-19.41	H	AV
4844.000	53.39	-3.3	50.09	74	-23.91	V	PK
4824.000	38.99	-2.9	36.09	54	-17.91	V	AV
7266.000	48.18	1.86	50.04	74	-23.96	V	PK
7266.000	34.15	1.86	36.01	54	-17.99	V	AV
Middle Channel-2437MHz							
4874.000	51.8	-3.04	48.76	74	-25.24	H	PK
4874.000	37.35	-2.84	34.51	54	-19.49	H	AV
7311.000	44.55	2.57	47.12	74	-26.88	H	PK
7311.000	31.8	2.67	34.47	54	-19.53	H	AV
4874.000	52.91	-3.14	49.77	74	-24.23	V	PK
4874.000	39.52	-2.74	36.78	54	-17.22	V	AV
7311.000	45.15	2.27	47.42	74	-26.58	V	PK
7311.000	33.37	2.27	35.64	54	-18.36	V	AV
High Channel-2452MHz							
4904.000	51.92	-2.93	48.99	74	-25.01	H	PK
4904.000	38.84	-2.73	36.11	54	-17.89	H	AV
7356.000	45.3	2.72	48.02	74	-25.98	H	PK
7356.000	30.5	2.82	33.32	54	-20.68	H	AV
4904.000	54.01	-3.03	50.98	74	-23.02	V	PK
4904.000	40.4	-2.63	37.77	54	-16.23	V	AV
7356.000	47.55	2.42	49.97	74	-24.03	V	PK
7356.000	34.49	2.42	36.91	54	-17.09	V	AV

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 3th Harmonics are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

The measurements greater than 20dB below the limit from 9kHz to 30MHz.

9. Out of Band Emissions

9.1 Standard Applicable

According to §15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. 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).

9.2 Test Procedure

According to the KDB 558074D01 v04, the band-edge radiated test method as follows:

Set span = wide enough to capture the peak level of the emission operating on the channel closest to the bandedge, as well as any modulation products which fall outside of the authorized band of operation (2310MHz to 2420MHz for low bandedge, 2460MHz to 2500MHz for the high bandedge)

RBW = 1MHz, VBW = 1MHz for peak value measured

RBW = 1MHz, VBW = 10Hz for average value measured

Sweep = auto; Detector function = peak/average; Trace = max hold

All the trace to stabilize, set the marker on the emission at the bandedge, or on the highest modulation product outside of the band, if this level is greater than that at the bandedge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission. Those emission must comply with the 15.209 limit for fall in the restricted bands listed in section 15.205. Note that the method of measurement KDB publication number: 913591 may be used for the radiated bandedge measurements.

According to the KDB 558074 D01 V04, the conducted spurious emissions test method as follows:

1. Set start frequency to DTS channel edge frequency.
2. Set stop frequency so as to encompass the spectrum to be examined.
3. Set RBW = 100 kHz.
4. Set VBW \geq 300 kHz.
5. Detector = peak.
6. Trace Mode = max hold.
7. Sweep = auto couple.
8. Allow the trace to stabilize (this may take some time, depending on the extent of the span).
9. Use peak marker function to determine maximum amplitude of all unwanted emissions within any 100 kHz bandwidth.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in section 8.1. Report the three highest emissions relative to the limit.

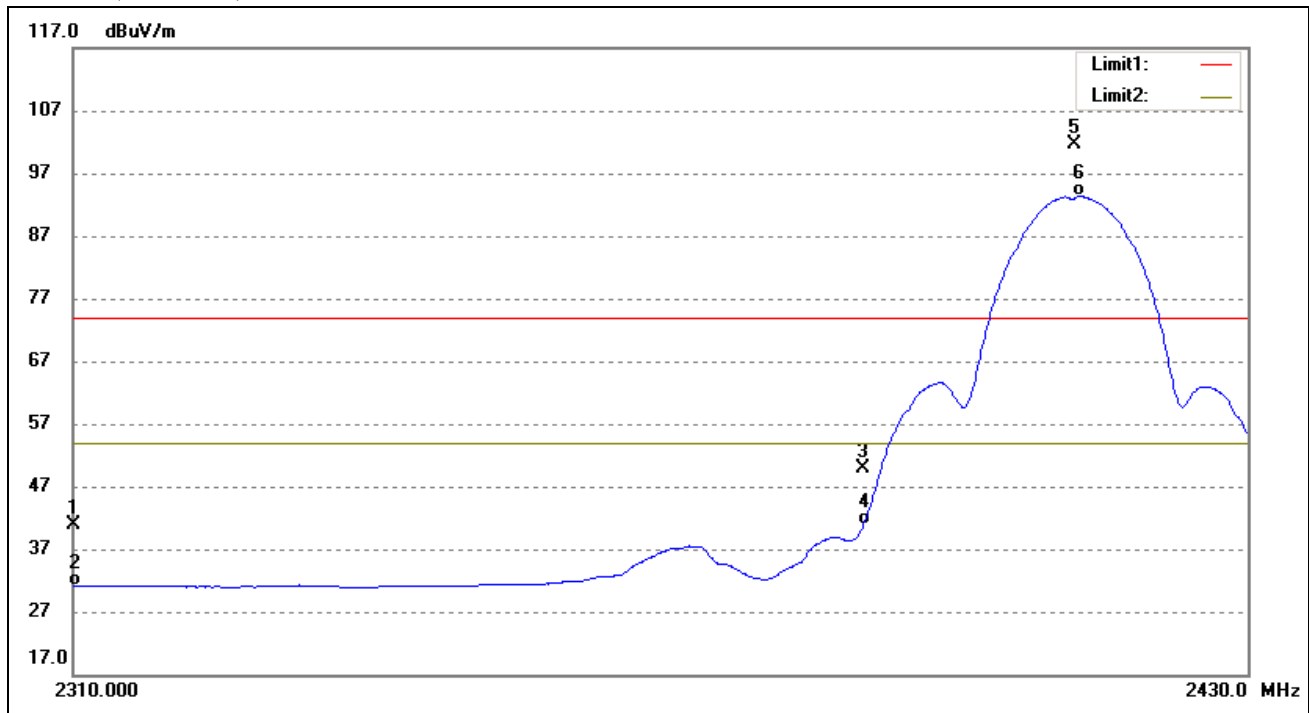
9.3 Environmental Conditions

Temperature:	23°C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

9.4 Summary of Test Results/Plots

802.11b-Lowest Band edge

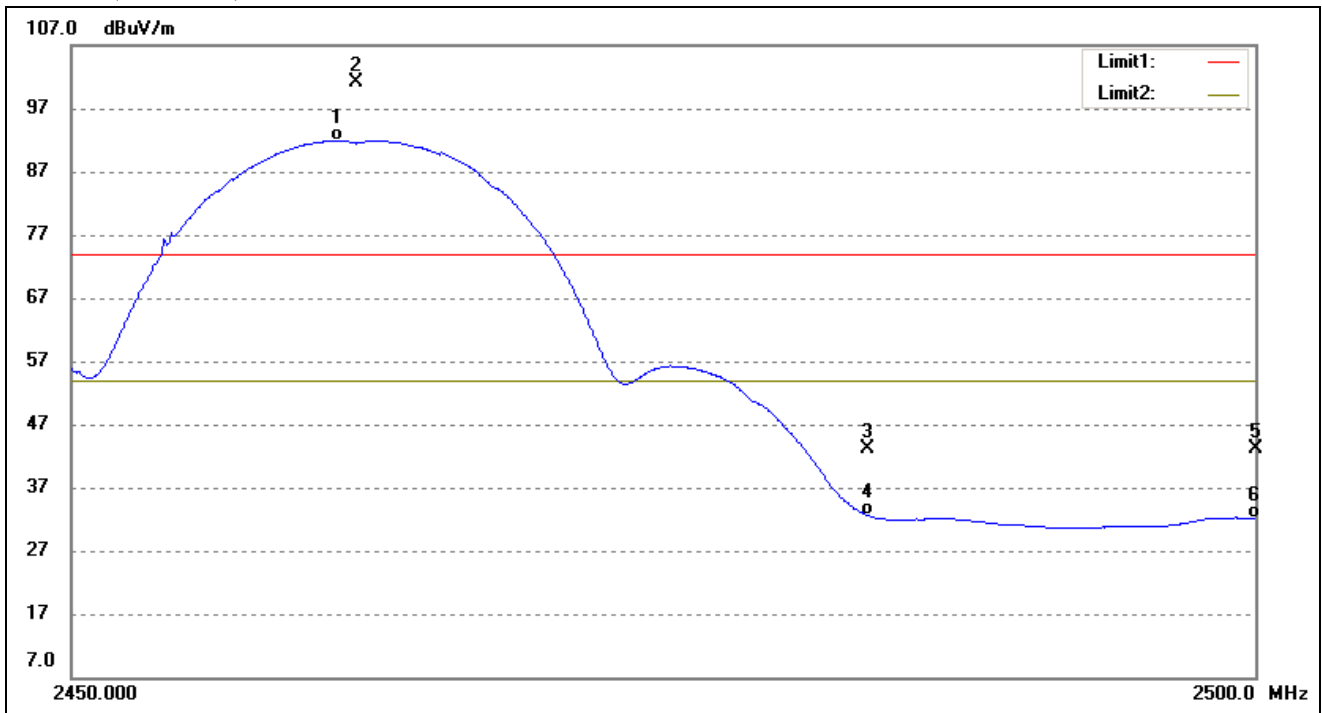
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	2310.000	47.30	-6.38	40.92	74.00	-33.08	169	100	peak
2	2310.000	37.45	-6.38	31.07	54.00	-22.93	169	100	AVG
3	2390.000	57.22	-7.26	49.96	74.00	-24.04	169	100	peak
4	2390.000	48.12	-7.26	40.86	54.00	-13.14	169	100	AVG
5	2411.880	109.00	-7.41	101.59	/	/	169	(cm)	peak
6	2412.465	100.74	-7.40	93.34	/	/	169	100	AVG

802.11b-Highest Band edge

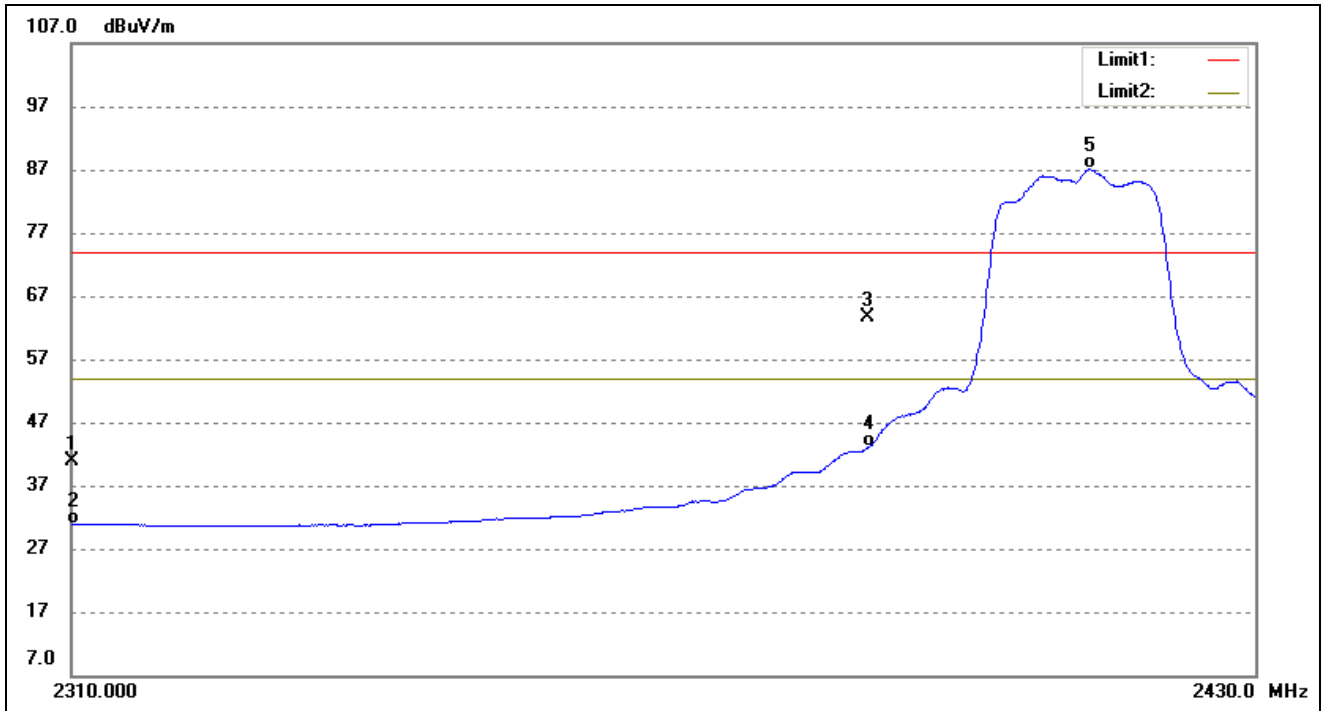
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	2461.162	99.31	-7.32	91.99	/	/	198	100	AVG
2	2461.950	108.39	-7.32	101.07	/	/	198	100	peak
3	2483.500	50.50	-7.28	43.22	74.00	-30.78	198	100	peak
4	2483.500	39.89	-7.28	32.61	54.00	-21.39	198	100	AVG
5	2500.000	50.46	-7.25	43.21	74.00	-30.79	198	(cm)	peak
6	2500.000	39.48	-7.25	32.23	54.00	-21.77	198	100	AVG

802.11g-Lowest Band edge

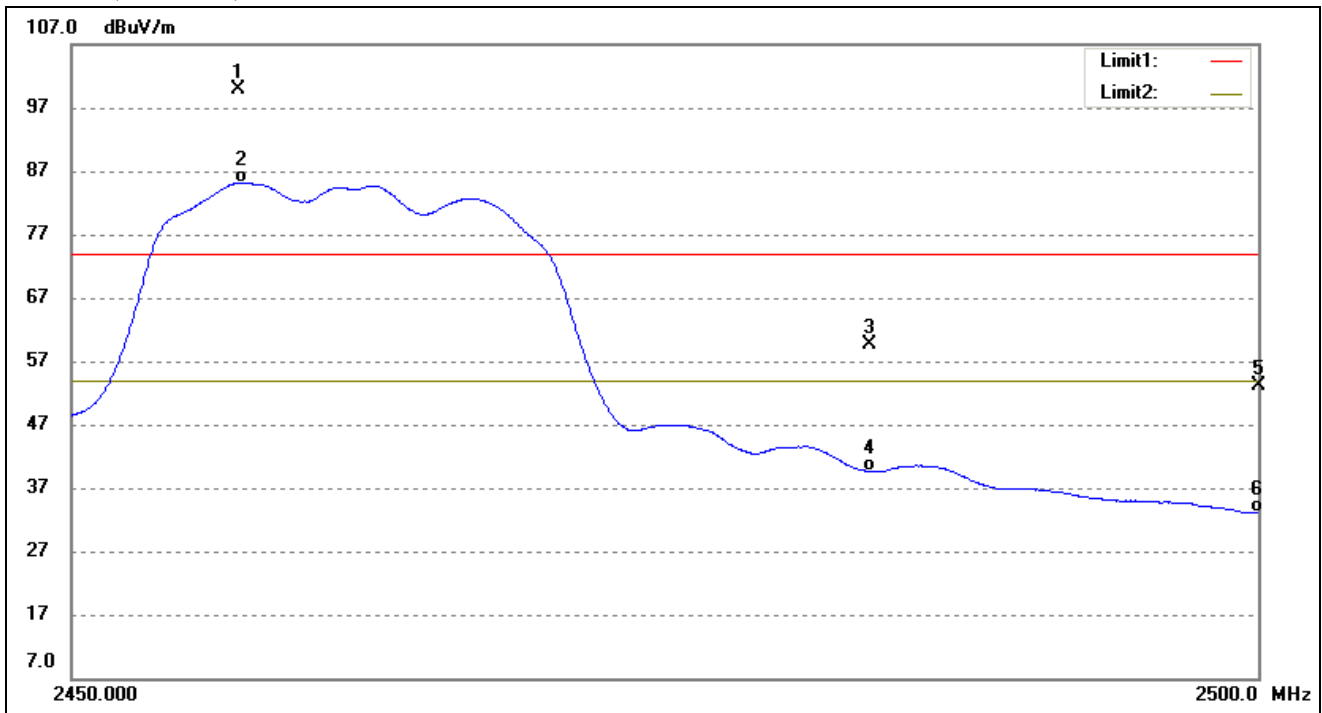
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	2310.000	47.27	-6.38	40.89	74.00	-33.11	76	100	peak
2	2310.000	37.32	-6.38	30.94	54.00	-23.06	76	100	AVG
3	2390.000	70.98	-7.26	63.72	74.00	-10.28	76	100	peak
4	2390.000	50.28	-7.26	43.02	54.00	-10.98	76	100	AVG
5	2412.832	94.45	-7.40	87.05	/	/	76	100	AVG
6	2413.560	109.50	-7.40	102.10	/	/	76	100	peak

802.11g-Highest Band edge

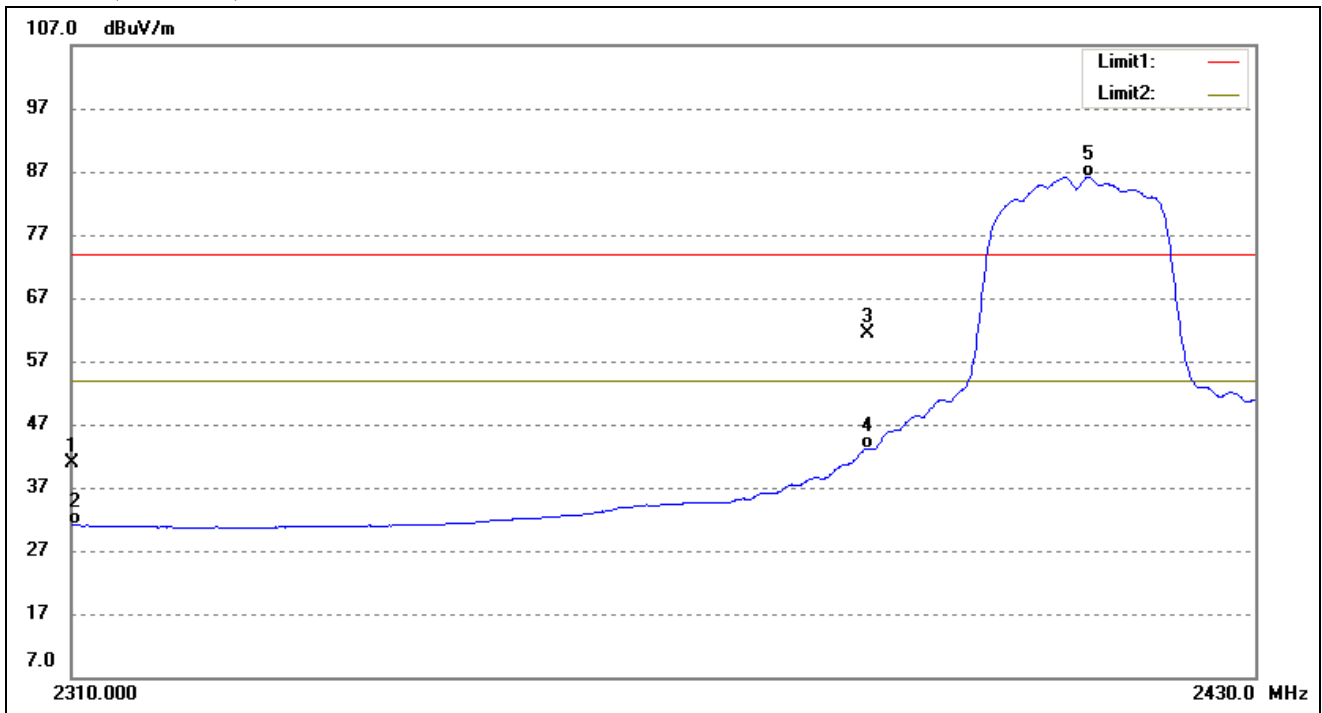
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	2456.950	107.28	-7.33	99.95	/	/	265	100	peak
2	2457.088	92.49	-7.33	85.16	/	/	265	100	AVG
3	2483.500	66.82	-7.28	59.54	74.00	-14.46	265	100	peak
4	2483.500	46.92	-7.28	39.64	54.00	-14.36	265	100	AVG
5	2500.000	60.44	-7.25	53.19	74.00	-20.81	265	(cm)	peak
6	2500.000	40.38	-7.25	33.13	54.00	-20.87	265	100	AVG

802.11n-HT20-Lowest Band edge

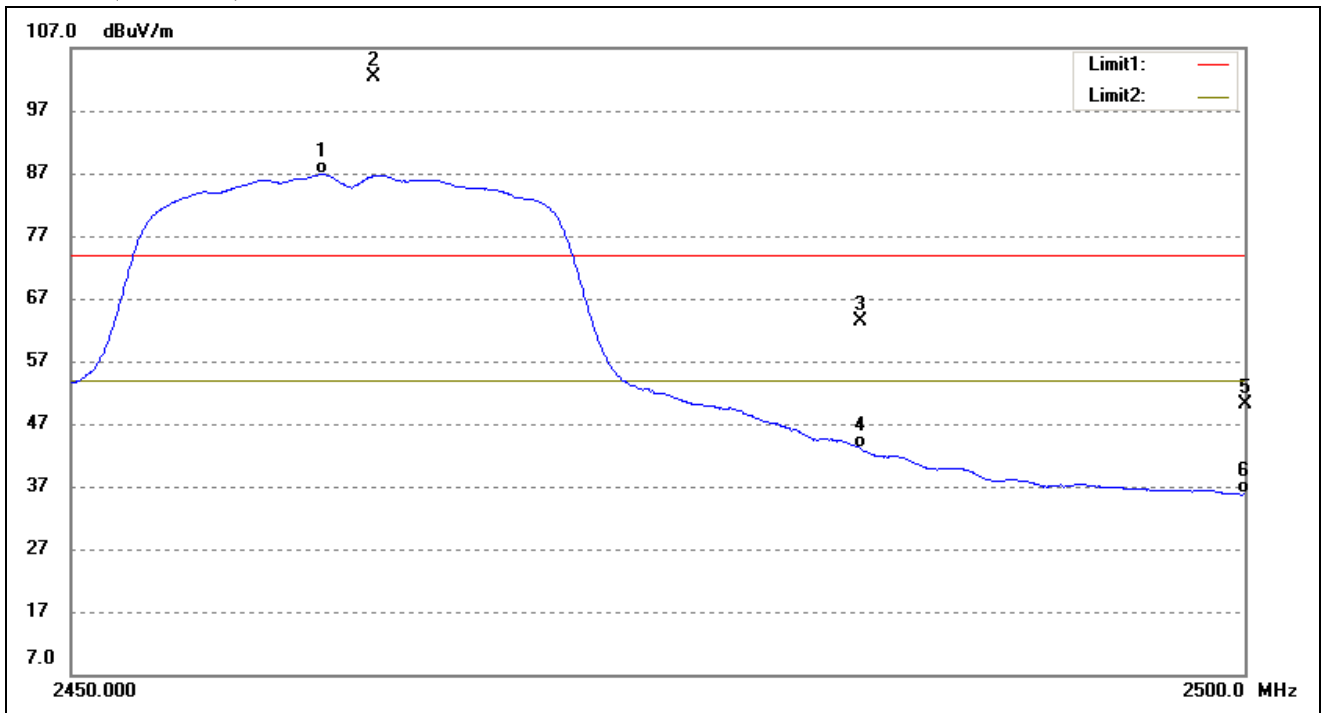
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	2310.000	47.22	-6.38	40.84	74.00	-33.16	146	100	peak
2	2310.000	37.41	-6.38	31.03	54.00	-22.97	146	100	AVG
3	2390.000	68.69	-7.26	61.43	74.00	-12.57	146	100	peak
4	2390.000	50.42	-7.26	43.16	54.00	-10.84	146	100	AVG
5	2412.710	93.57	-7.40	86.17	/	/	146	100	AVG
6	2412.720	108.63	-7.40	101.23	/	/	146	100	peak

802.11n-HT20-Highest Band edge

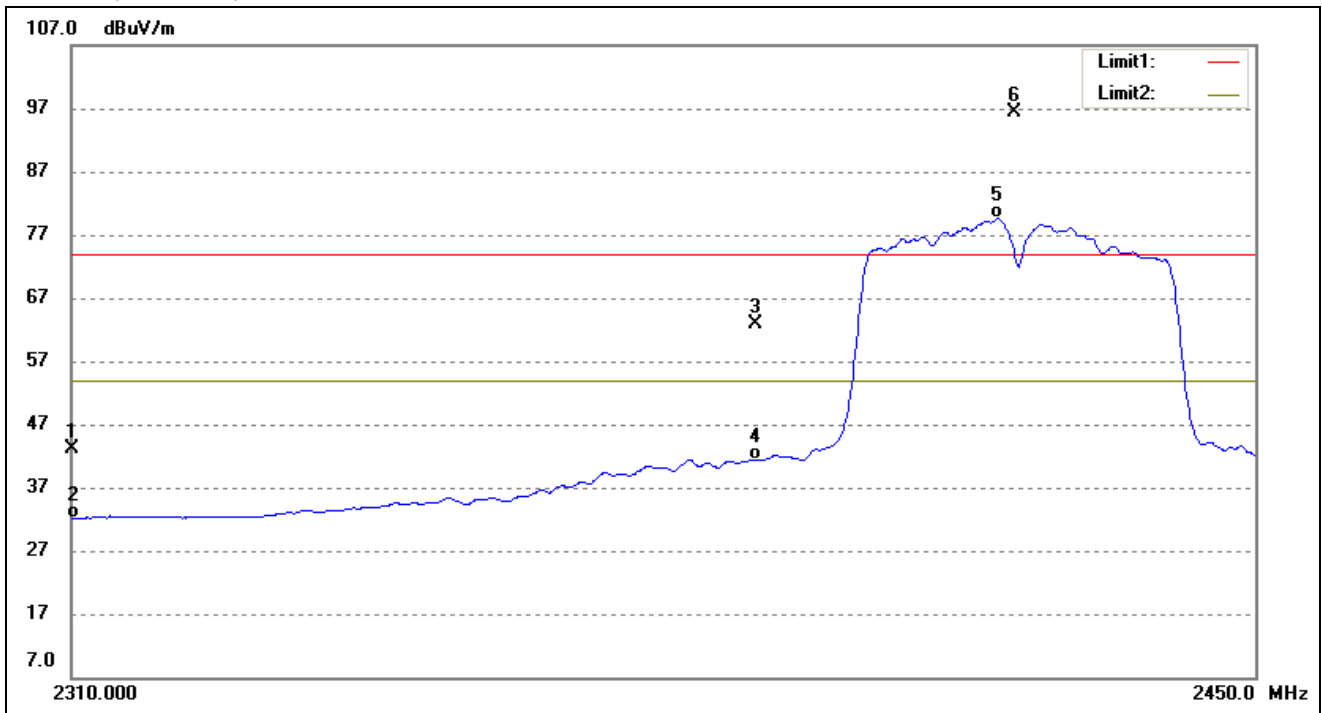
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	2460.615	94.15	-7.32	86.83	/	/	147	100	AVG
2	2462.800	109.60	-7.31	102.29	/	/	147	100	peak
3	2483.500	70.58	-7.28	63.30	74.00	-10.70	147	100	peak
4	2483.500	50.41	-7.28	43.13	54.00	-10.87	147	100	AVG
5	2500.000	57.36	-7.25	50.11	74.00	-23.89	147	100	peak
6	2500.000	43.01	-7.25	35.76	54.00	-18.24	147	100	AVG

802.11n-HT40-Lowest Band edge

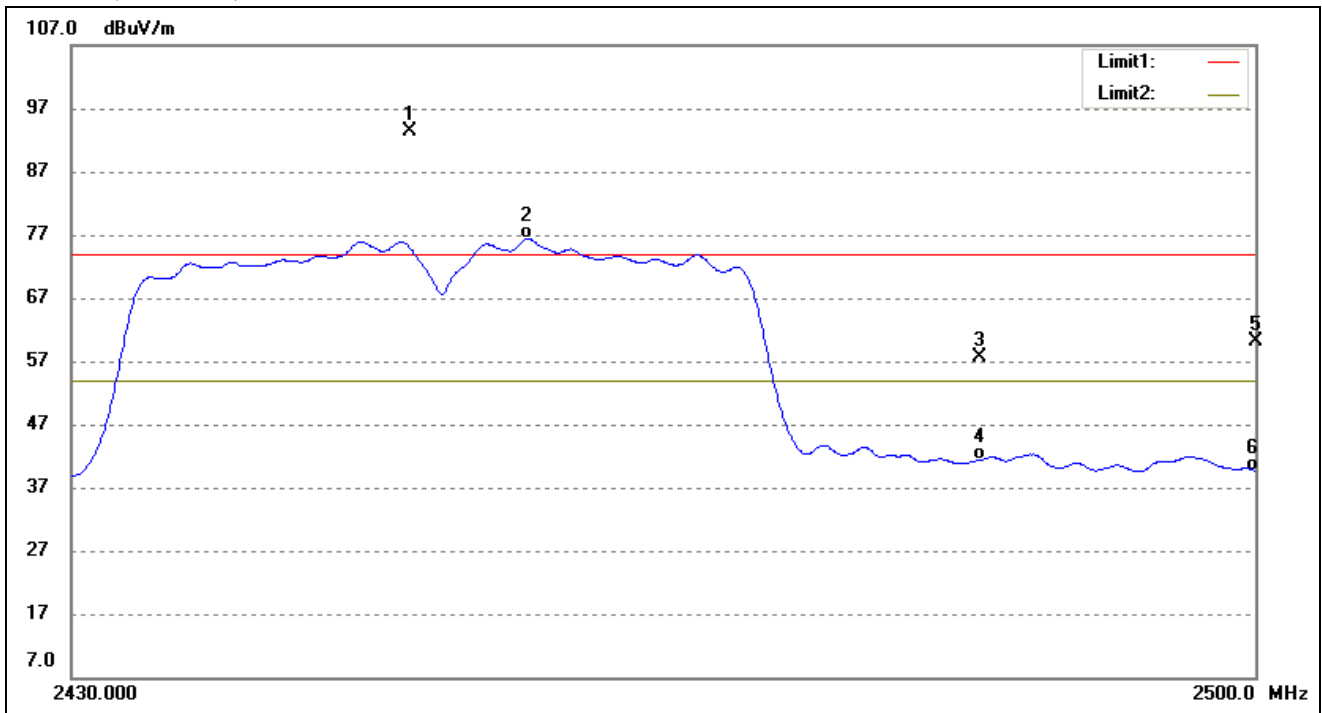
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	2310.000	49.52	-6.38	43.14	74.00	-30.86	135	100	peak
2	2310.000	38.43	-6.38	32.05	54.00	-21.95	135	100	AVG
3	2390.000	70.13	-7.26	62.87	74.00	-11.13	135	100	peak
4	2390.000	48.56	-7.26	41.30	54.00	-12.70	135	100	AVG
5	2418.774	86.92	-7.39	79.53	/	/	135	100	AVG
6	2421.020	103.70	-7.39	96.31	/	/	135	100	peak

802.11n-HT40-Highest Band edge

Vertical (Worst case)



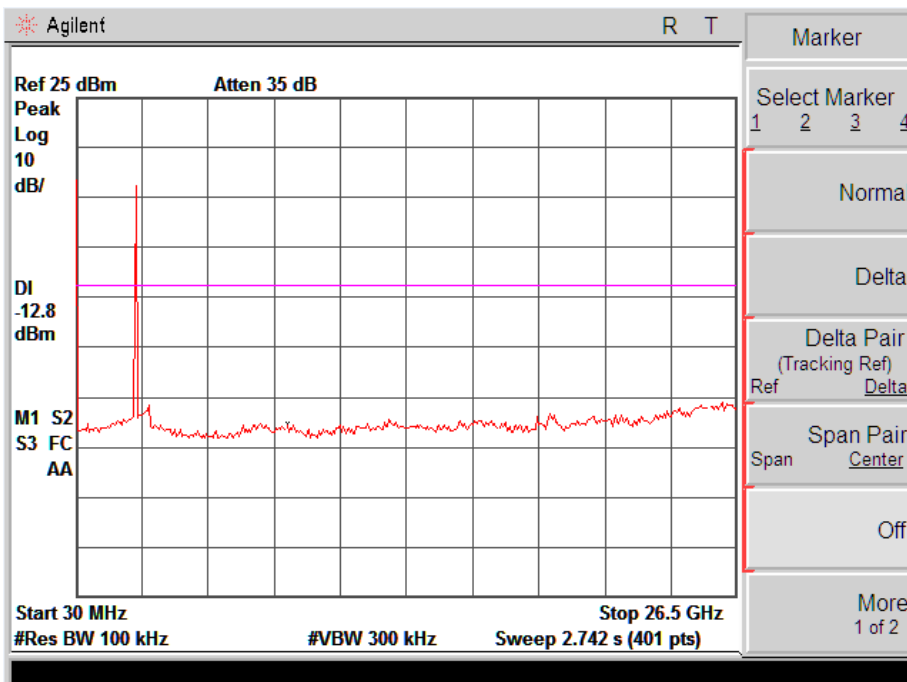
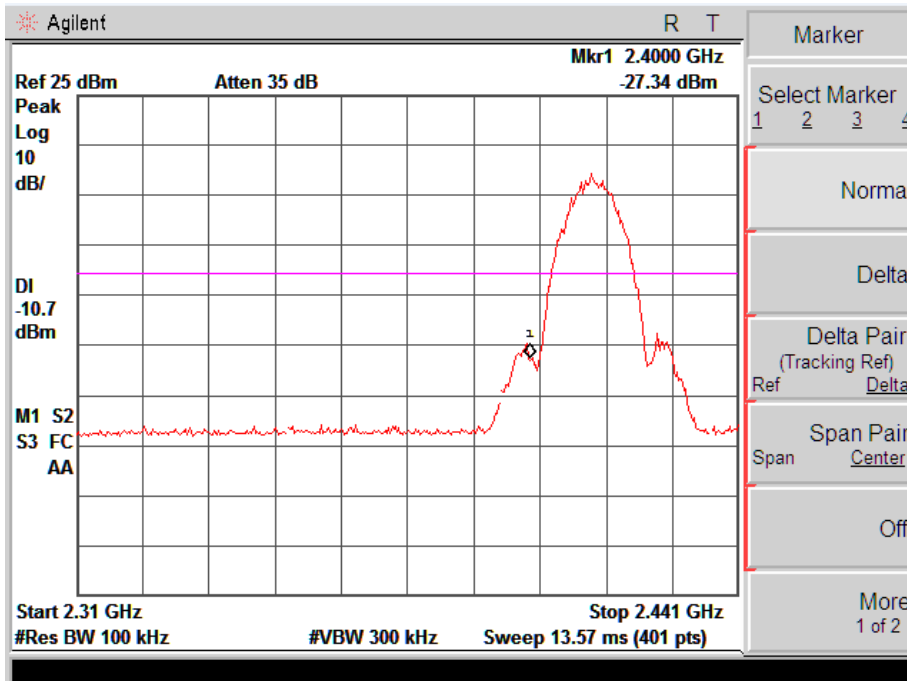
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	2449.880	100.70	-7.34	93.36	/	/	246	100	peak
2	2456.715	83.71	-7.33	76.38	/	/	246	100	AVG
3	2483.500	64.94	-7.28	57.66	74.00	-16.34	246	100	peak
4	2483.500	48.70	-7.28	41.42	54.00	-12.58	246	100	AVG
5	2500.000	67.42	-7.25	60.17	74.00	-13.83	246	100	peak
6	2500.000	46.95	-7.25	39.70	54.00	-14.30	246	100	AVG

Out-of-Band and Spurious Emission (Conducted)

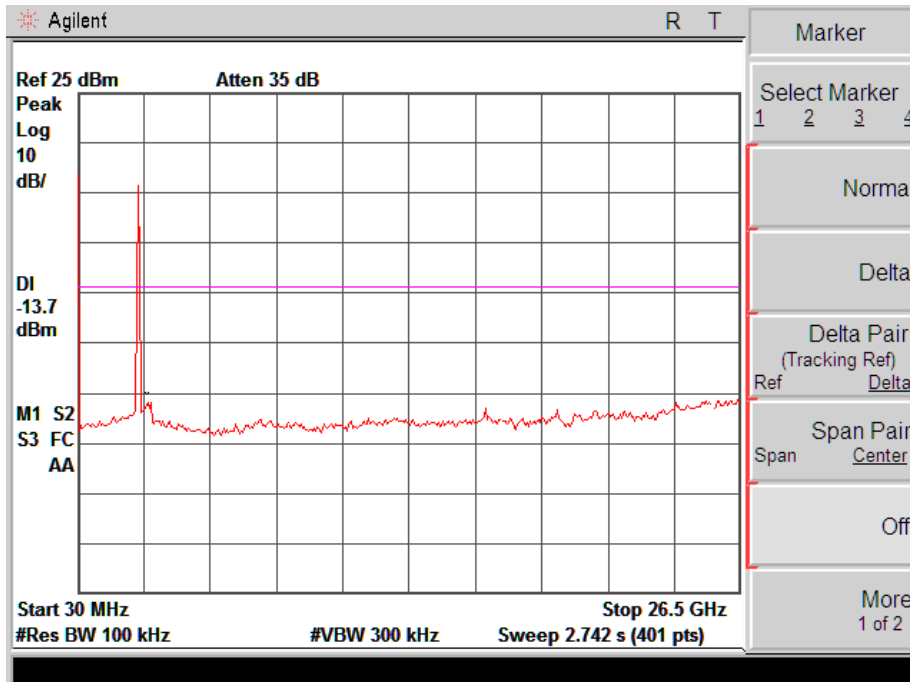
Antenna 1

802.11b

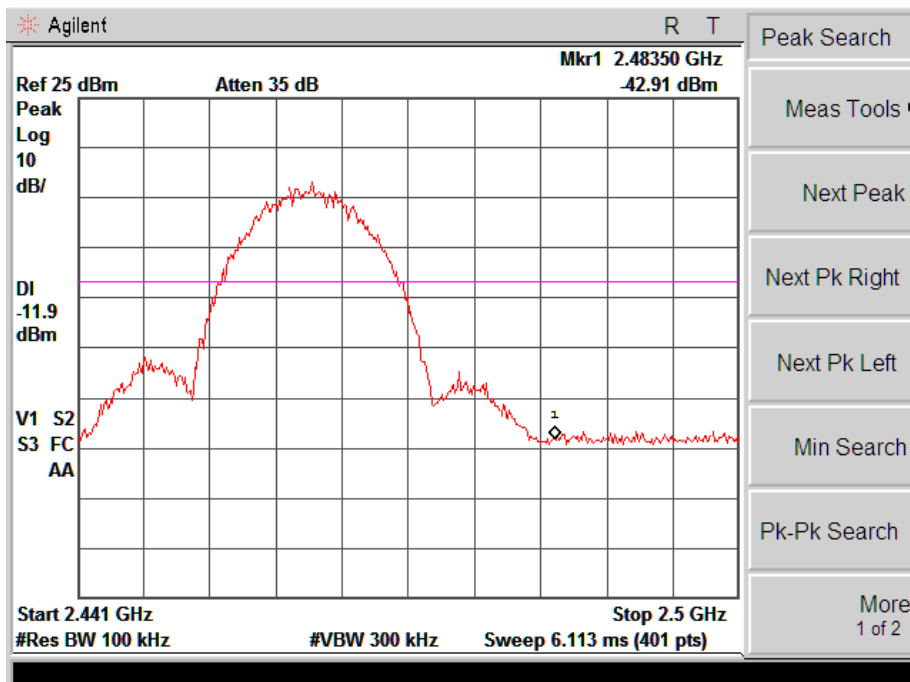
Low Channel

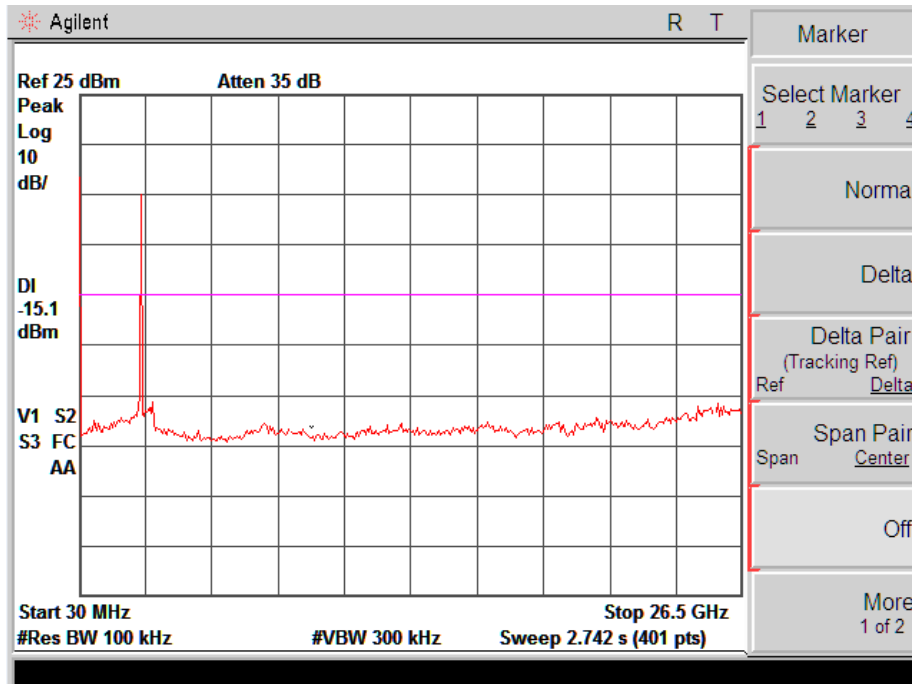


Middle Channel

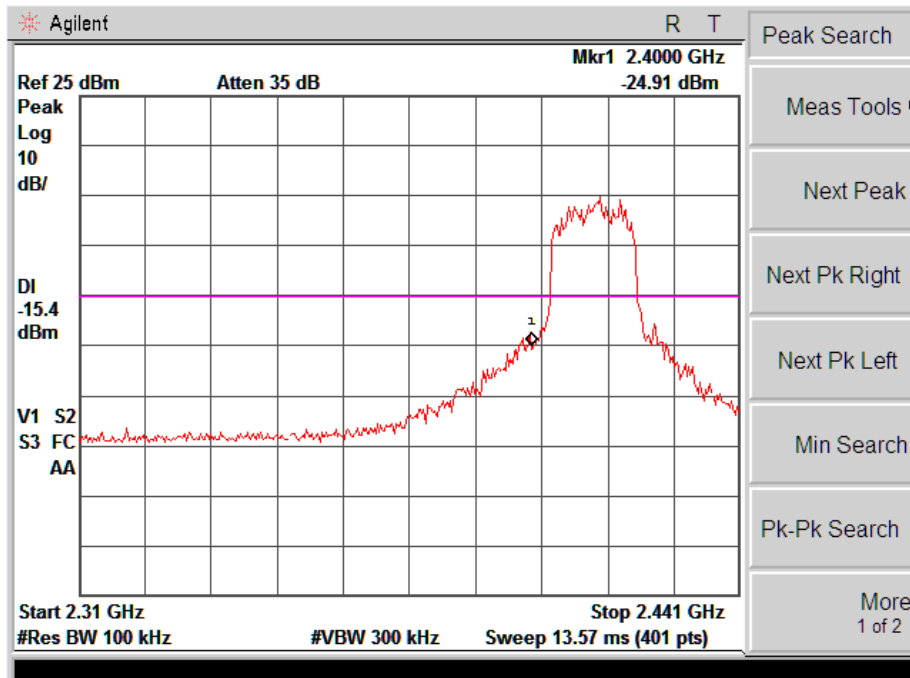


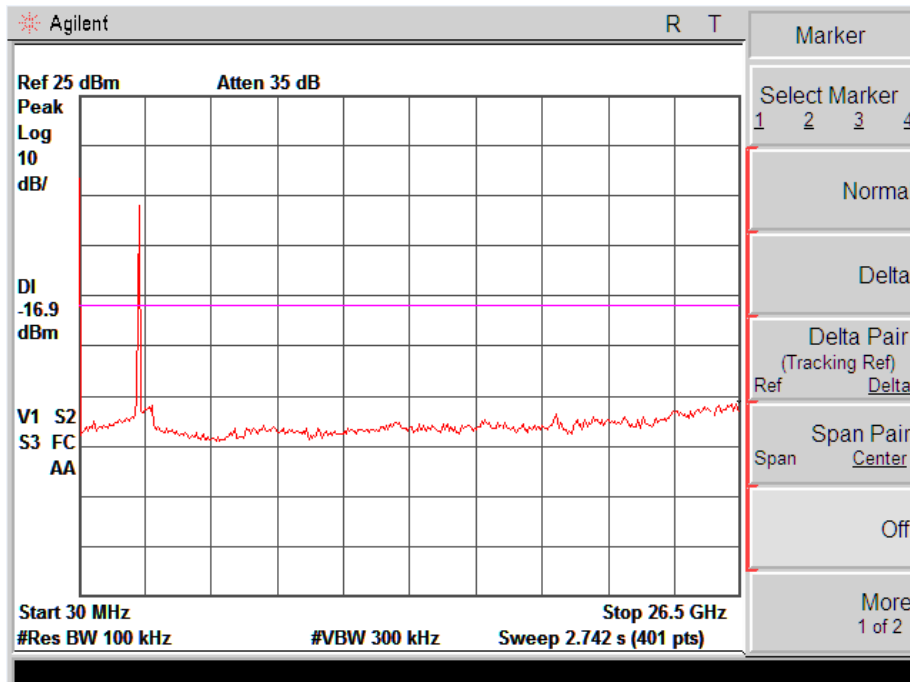
High Channel



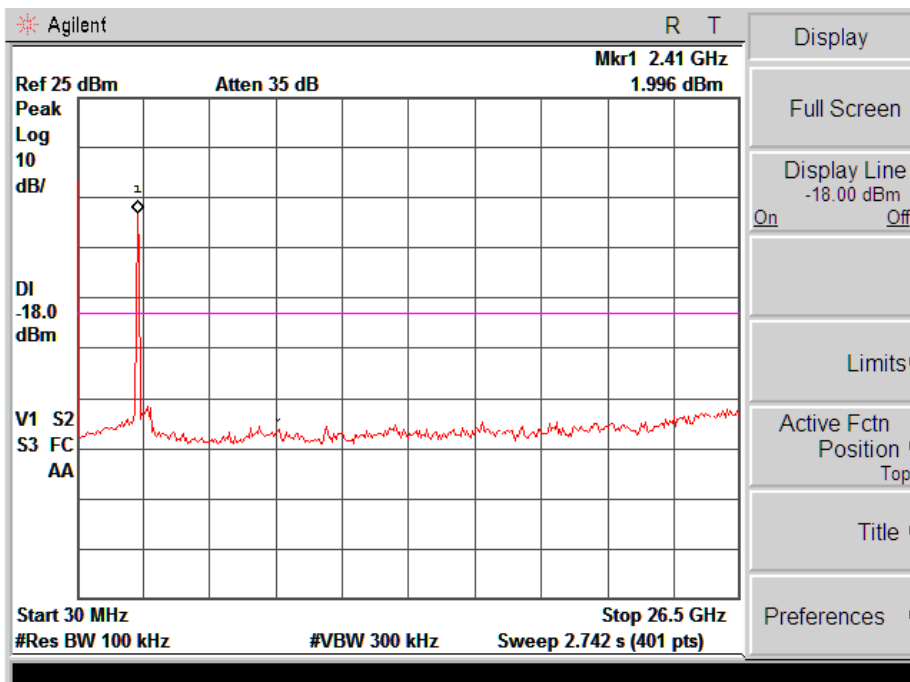


802.11g
Low Channel

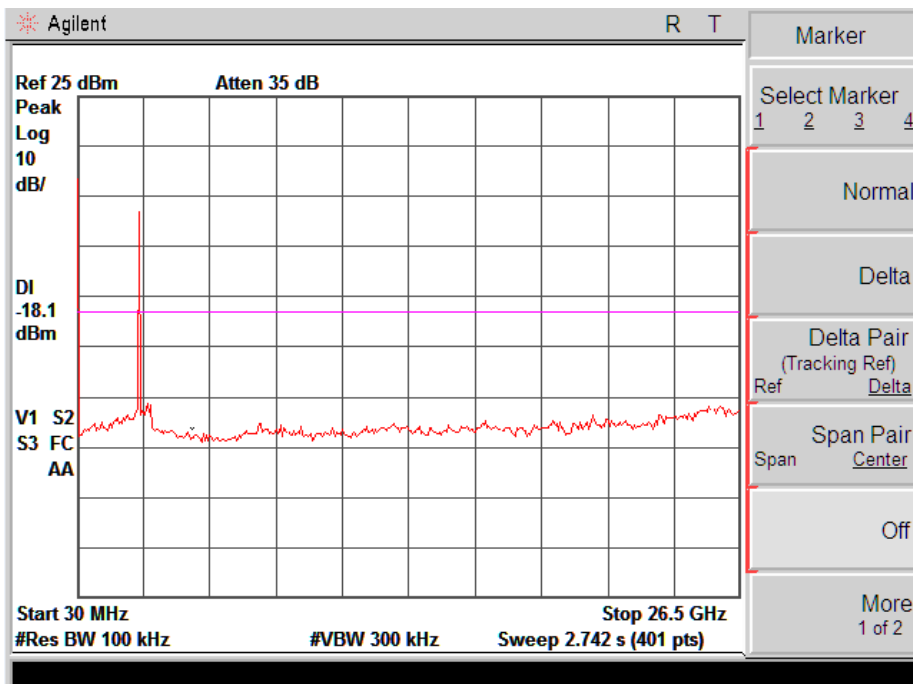
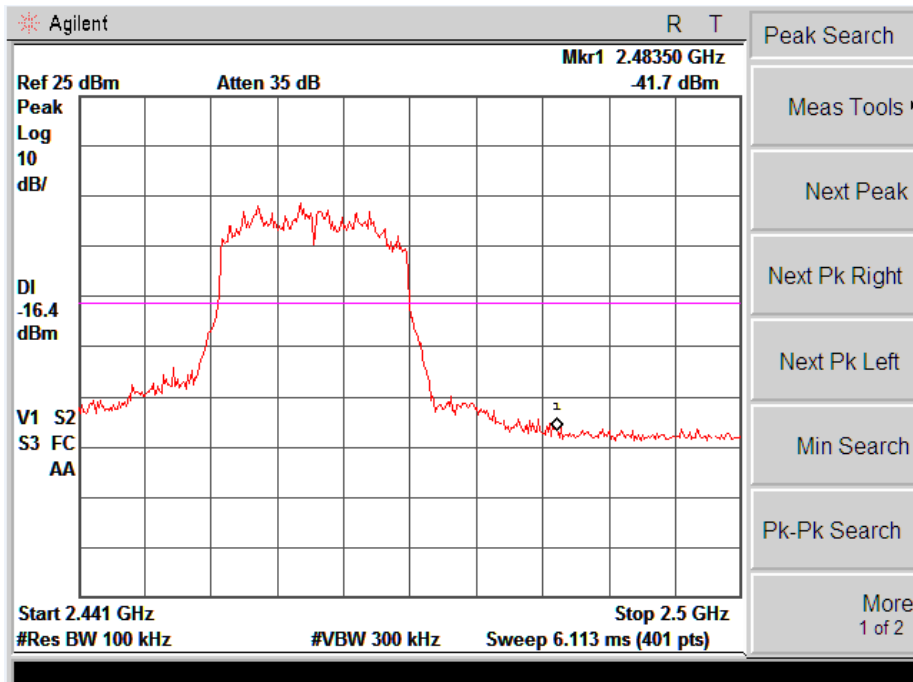




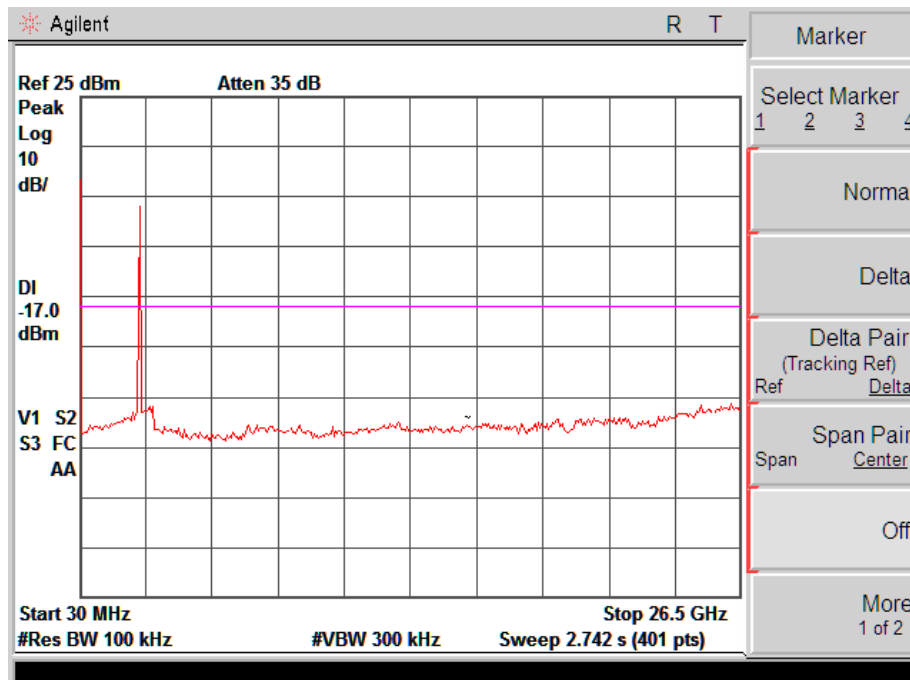
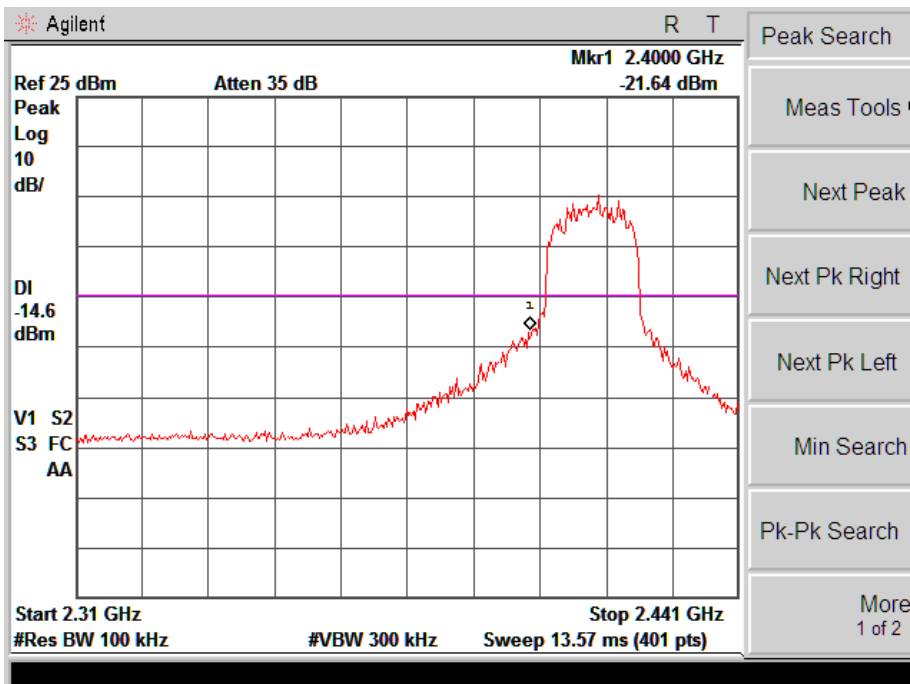
Middle Channel



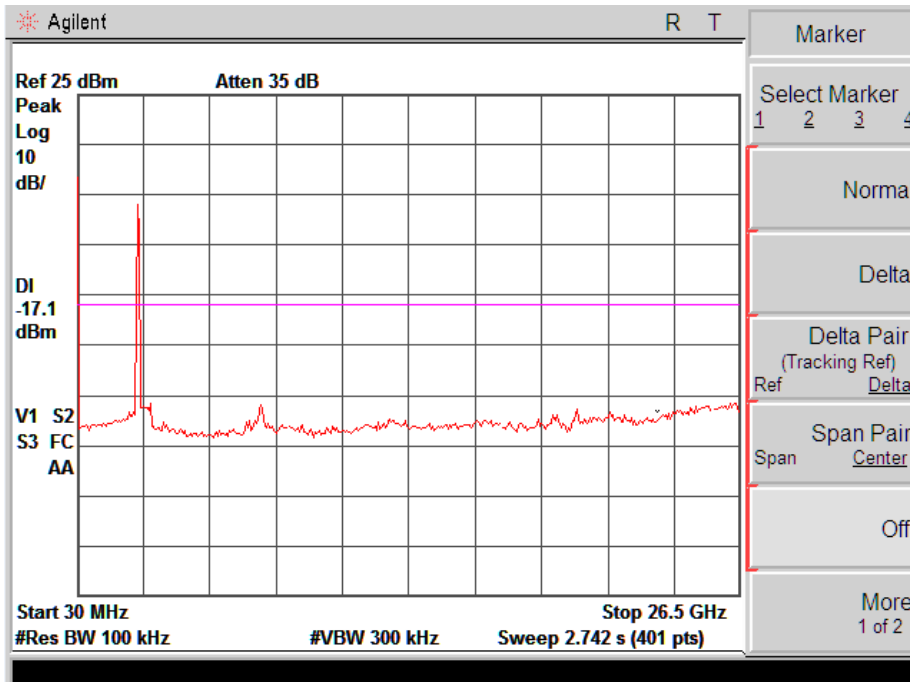
High Channel



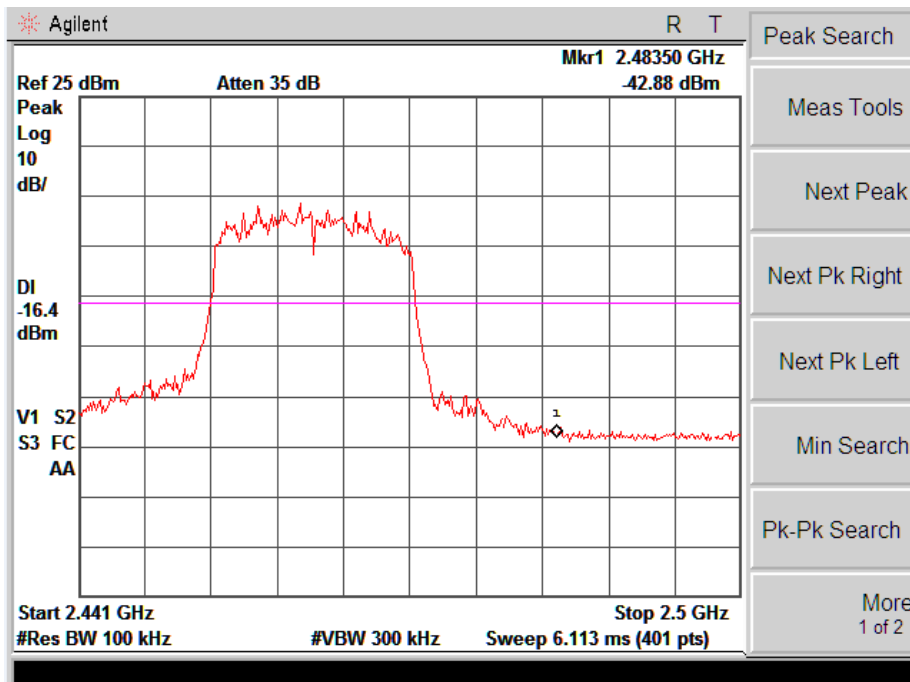
11n-HT20
Low Channel

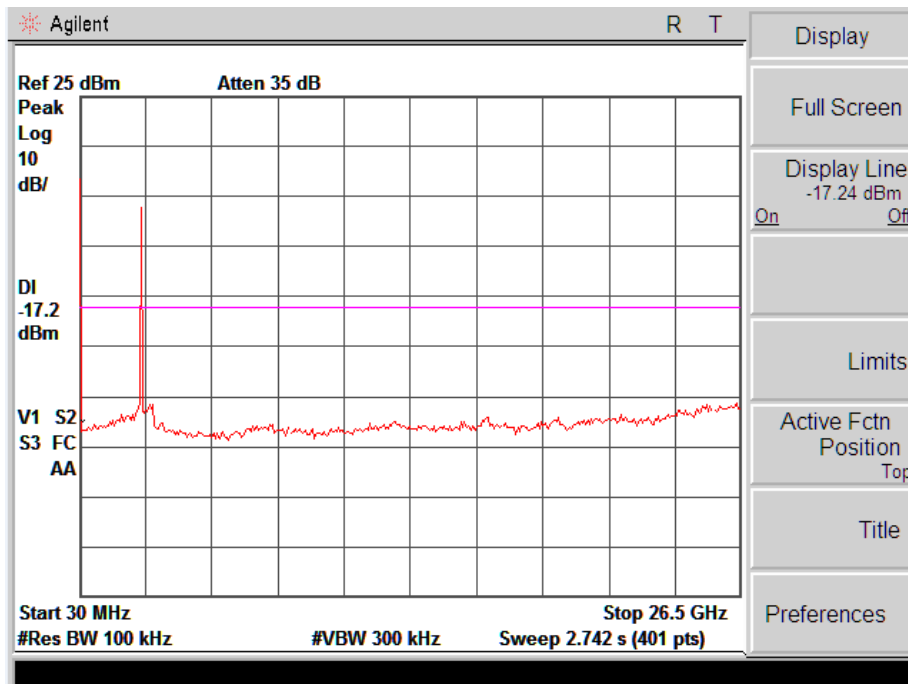


Middle Channel

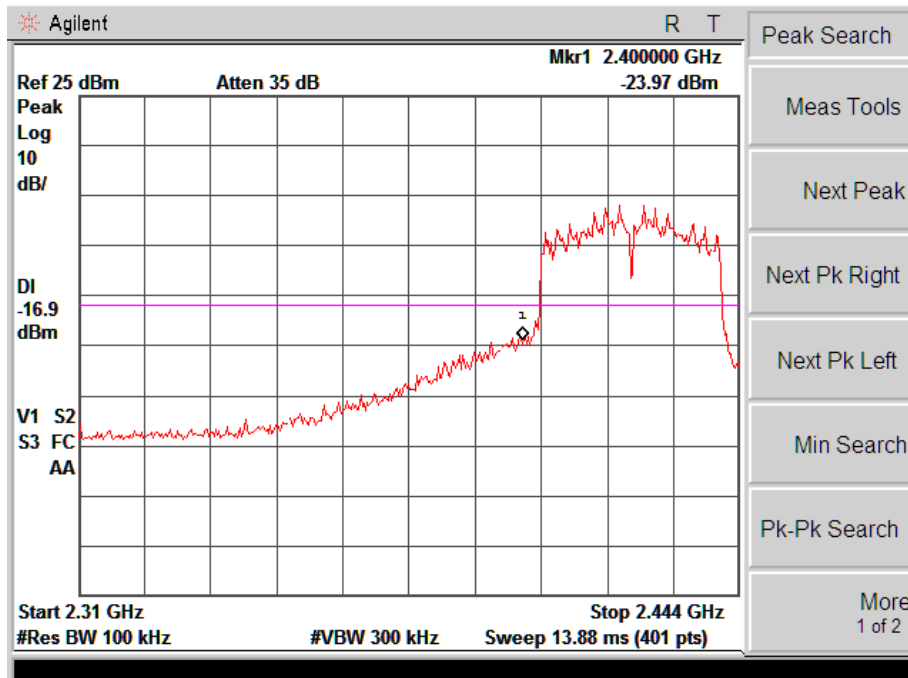


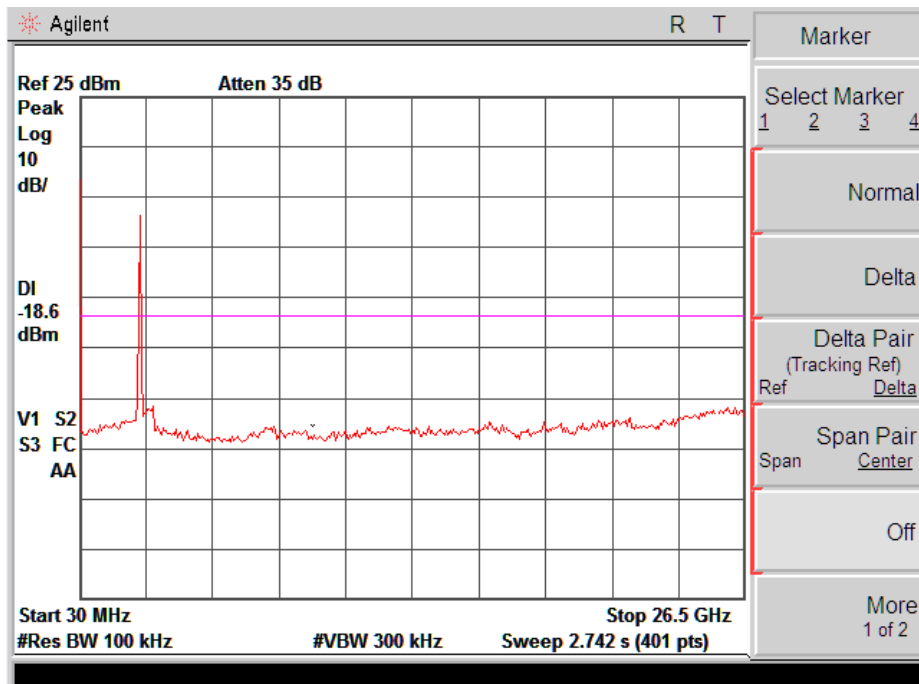
High Channel



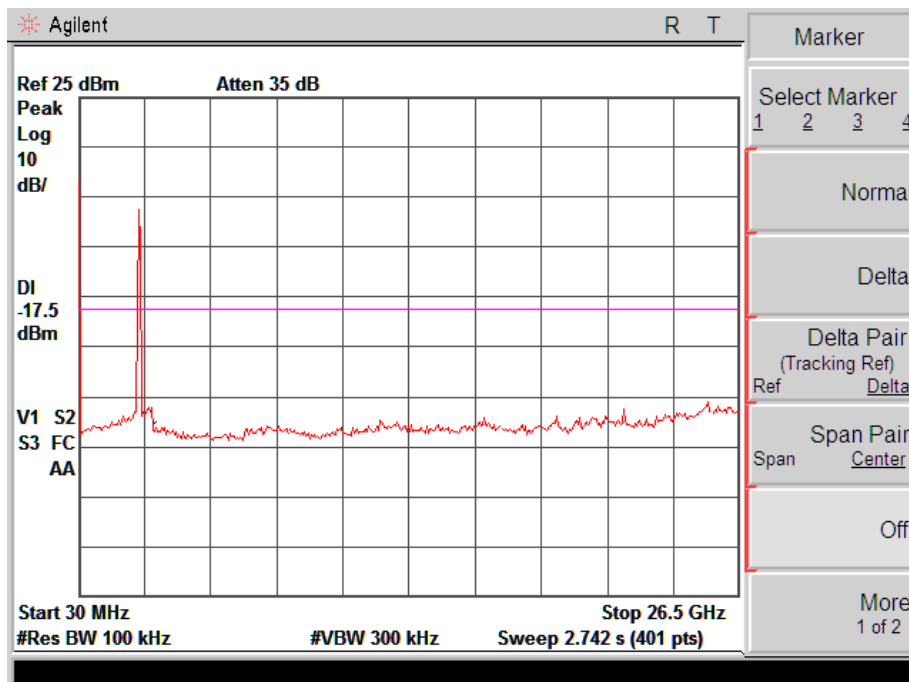


11n-HT40
Low Channel

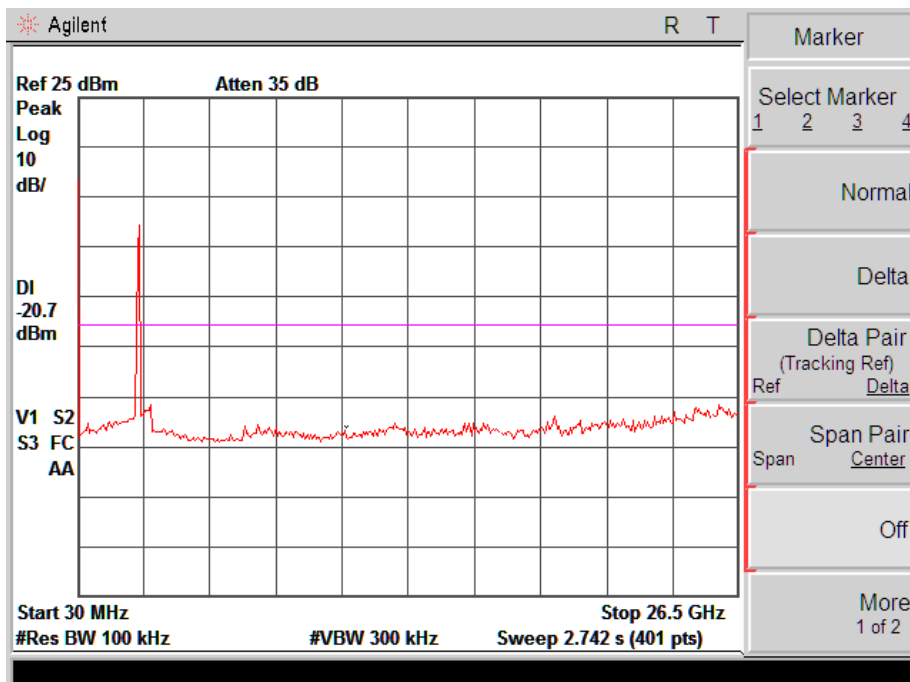
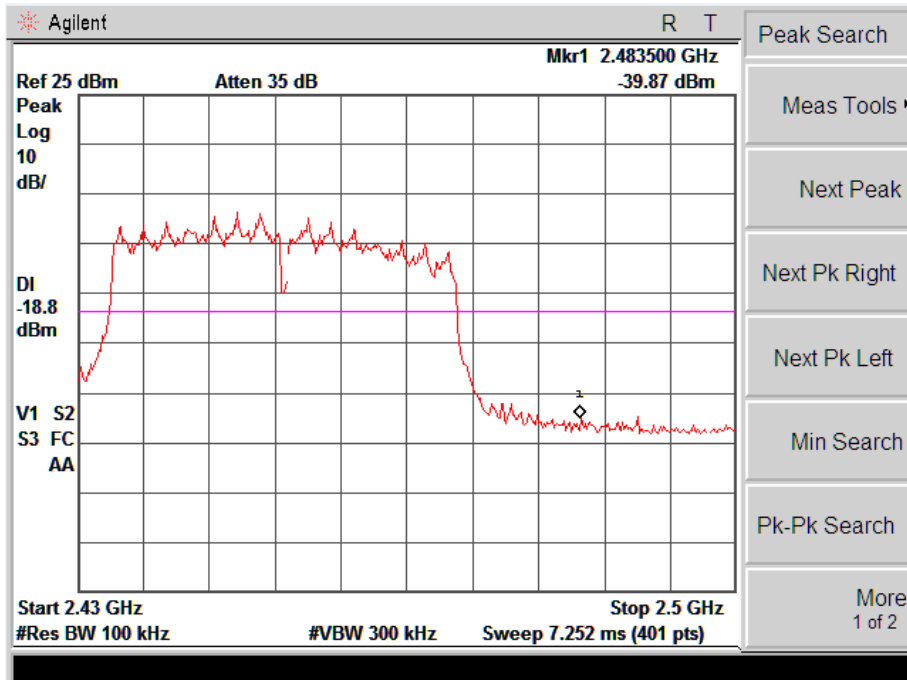




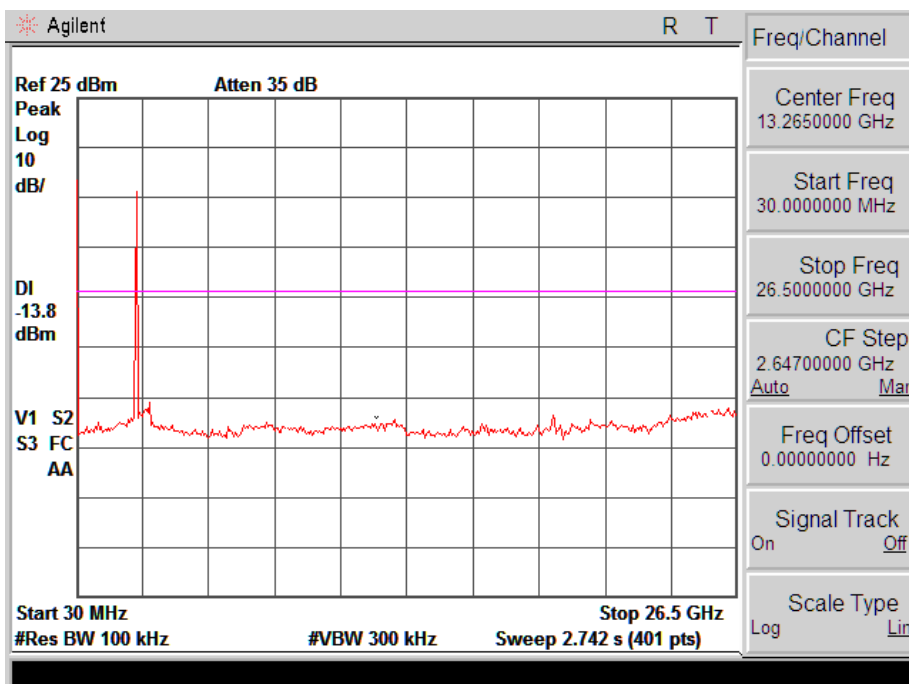
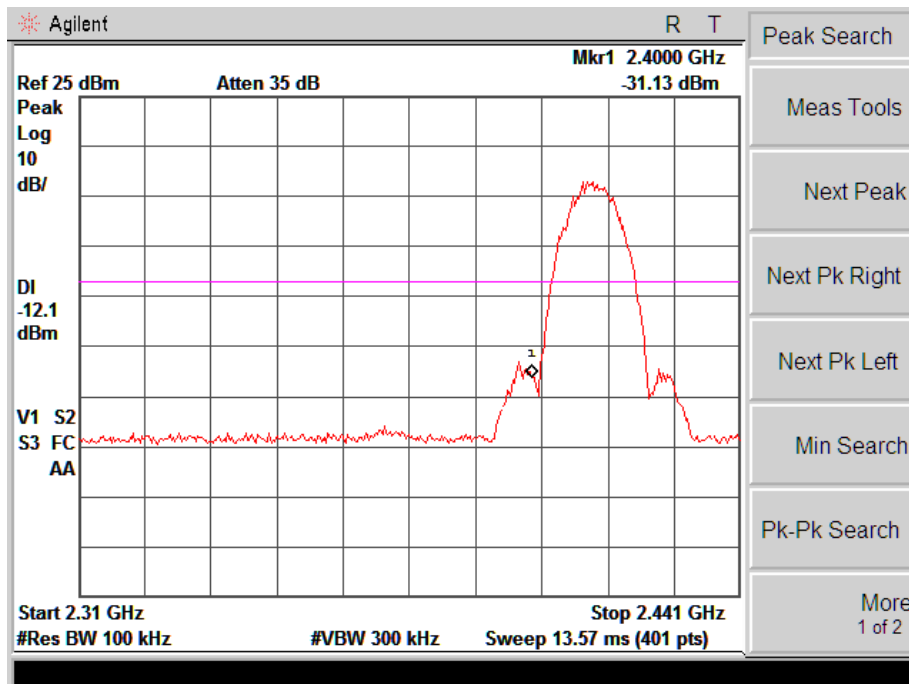
Middle Channel



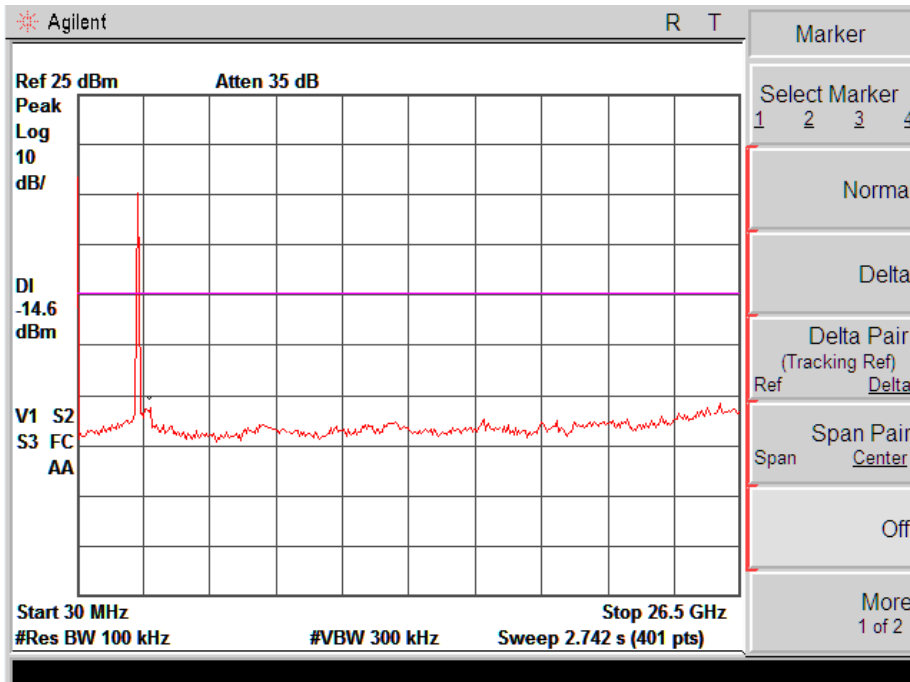
High Channel



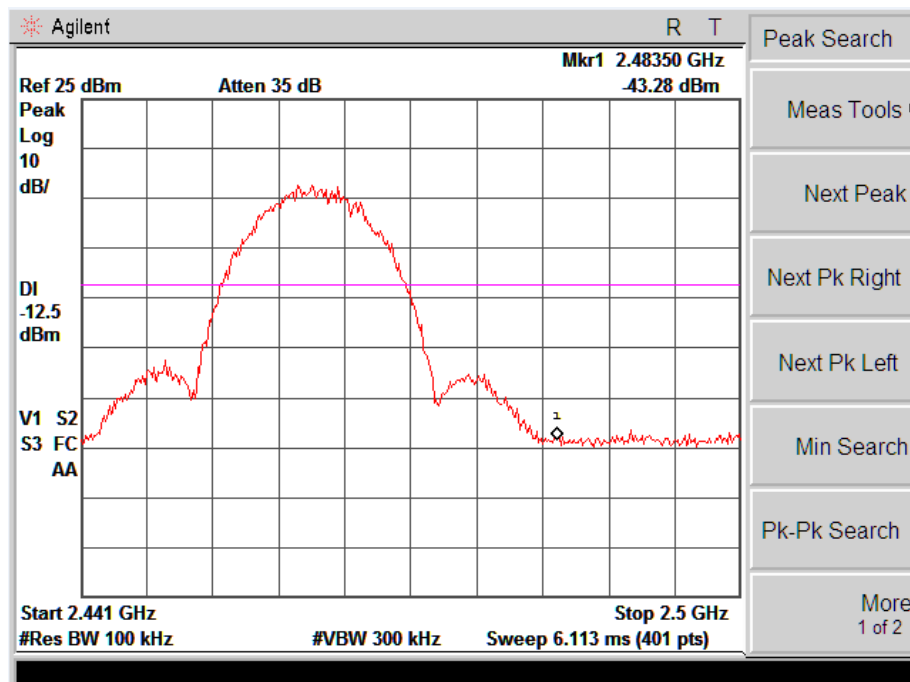
Antenna 2
802.11b
Low Channel

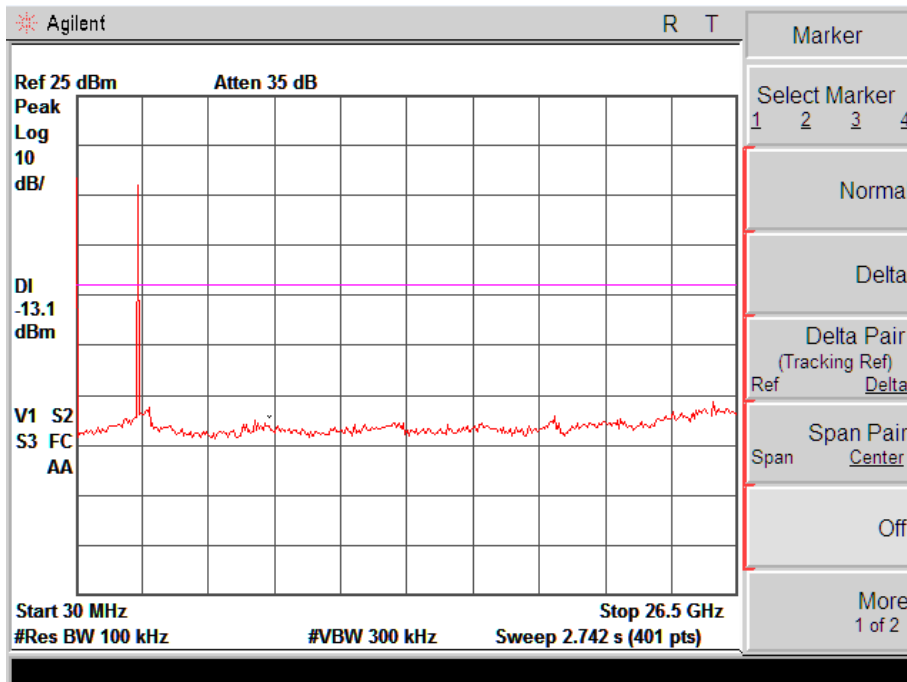


Middle Channel

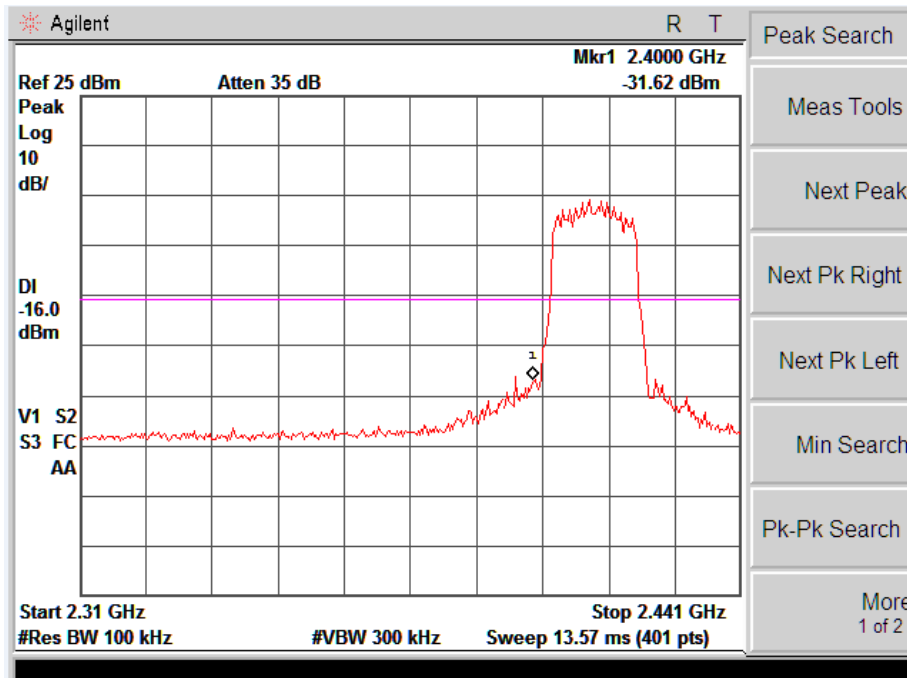


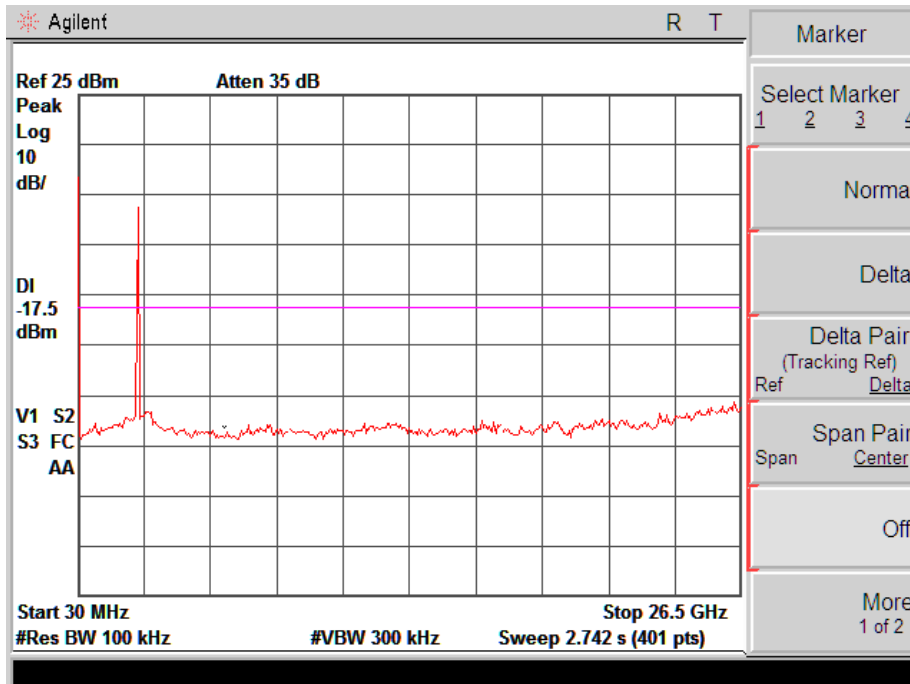
High Channel



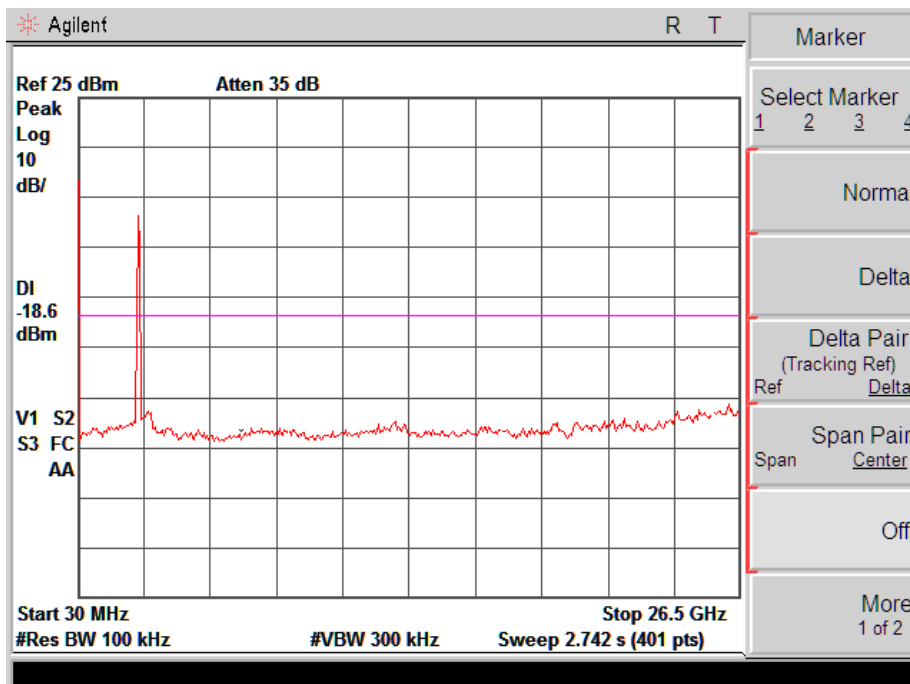


802.11g
Low Channel

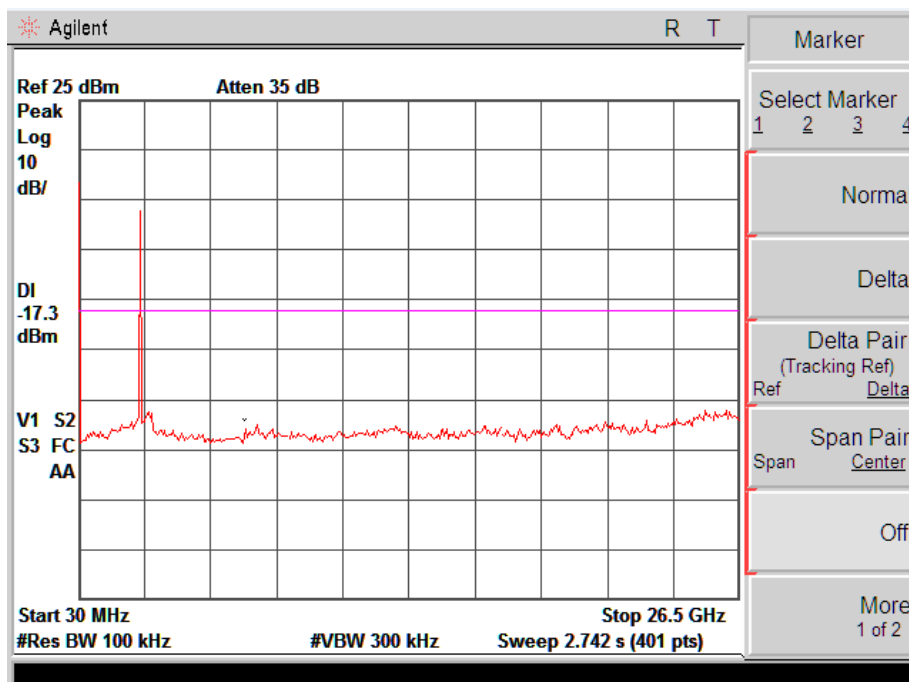
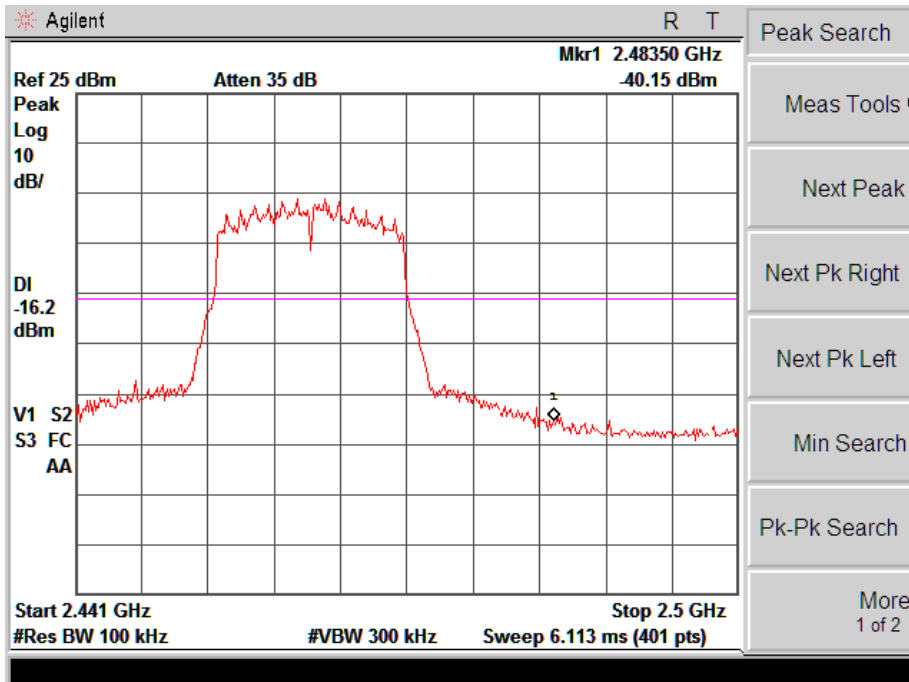




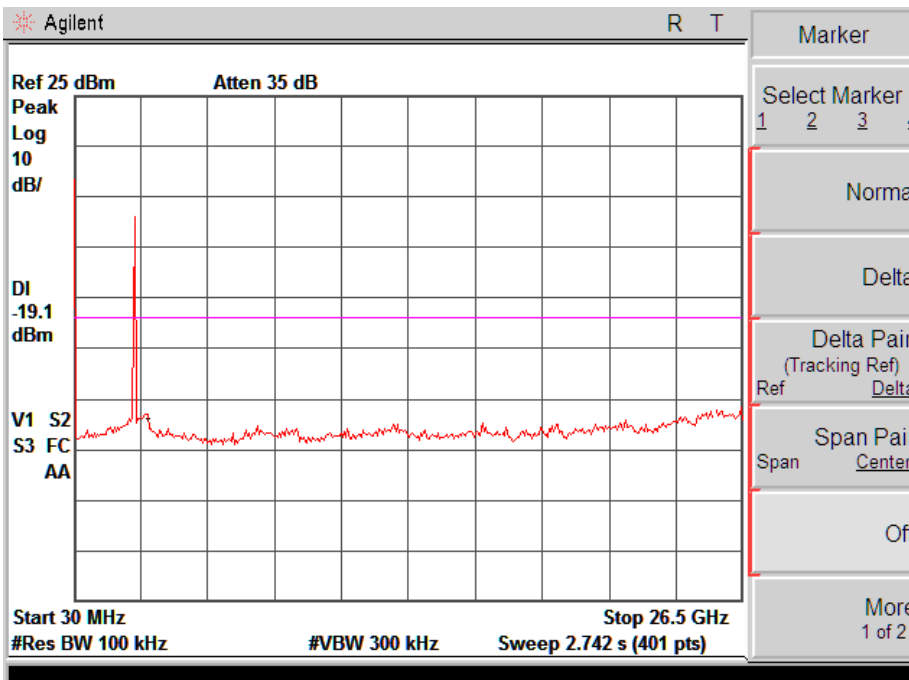
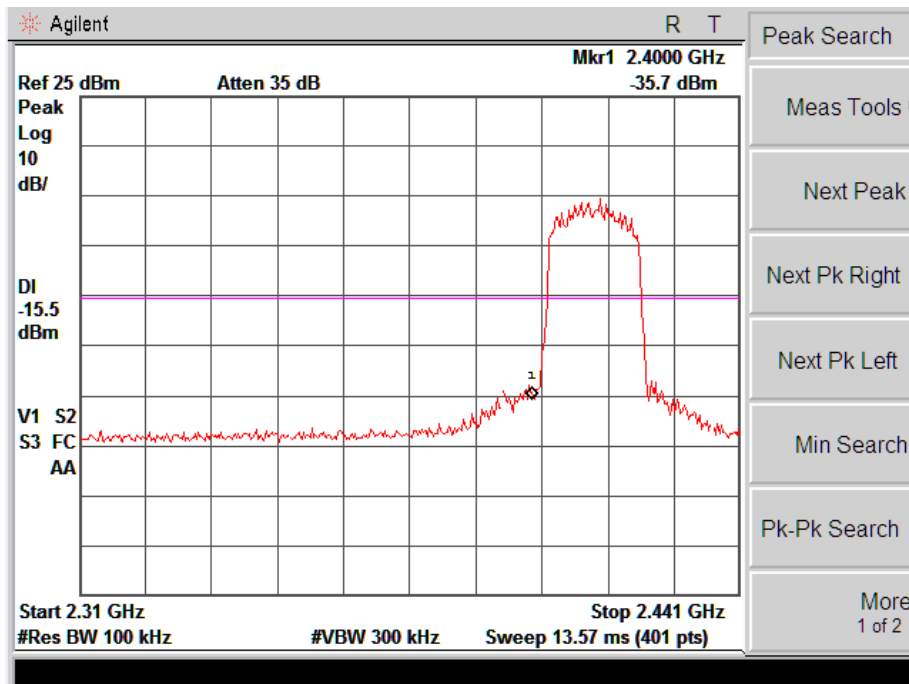
Middle Channel



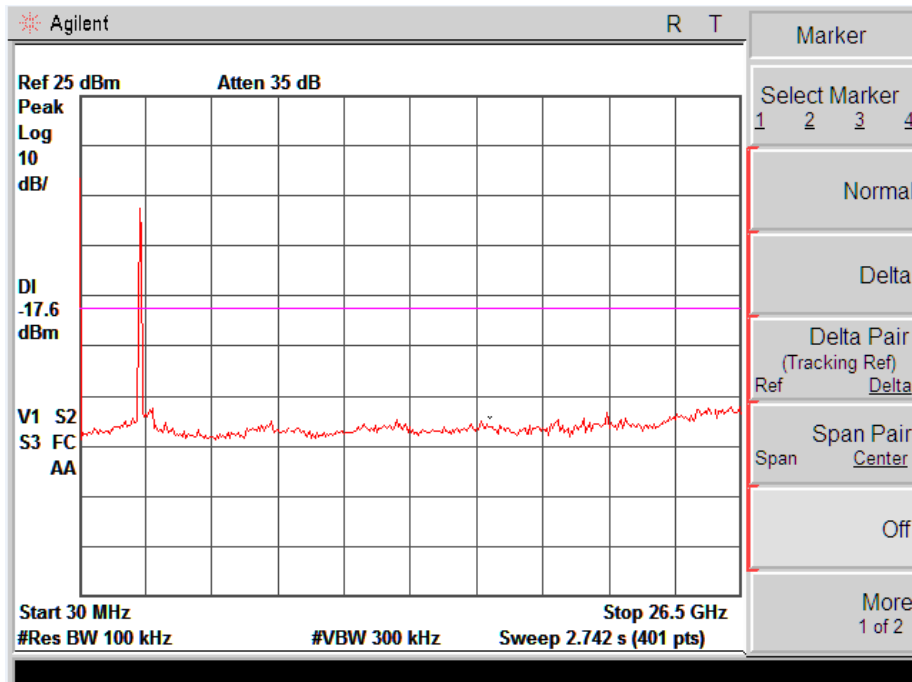
High Channel



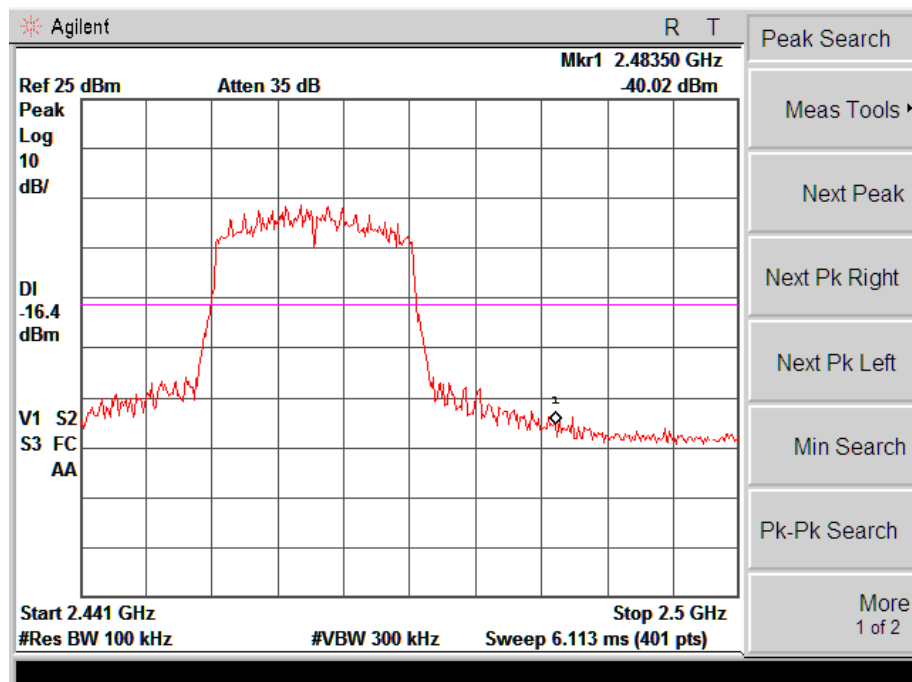
11n-HT20
Low Channel

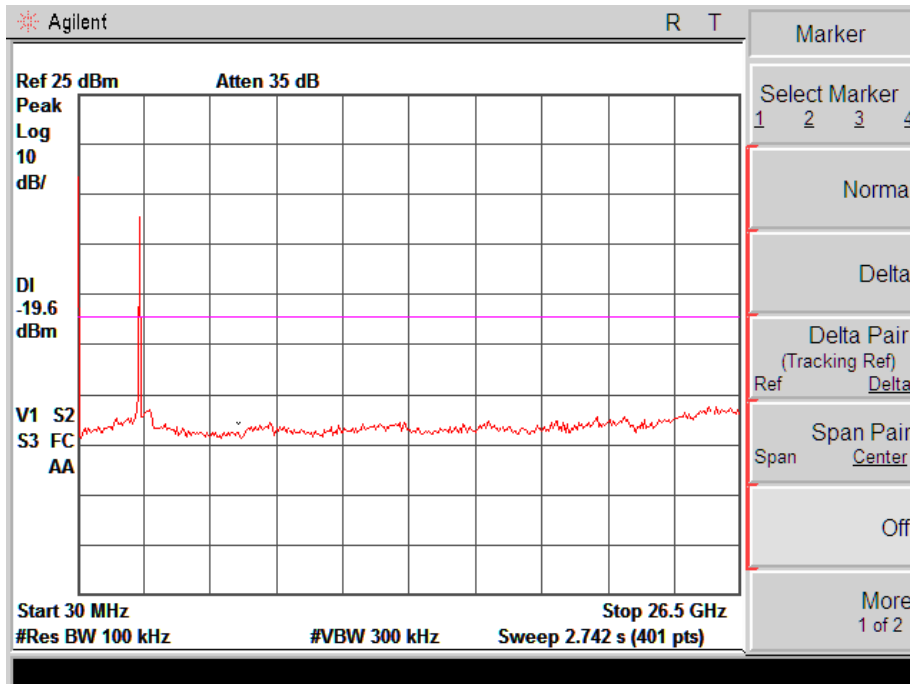


Middle Channel

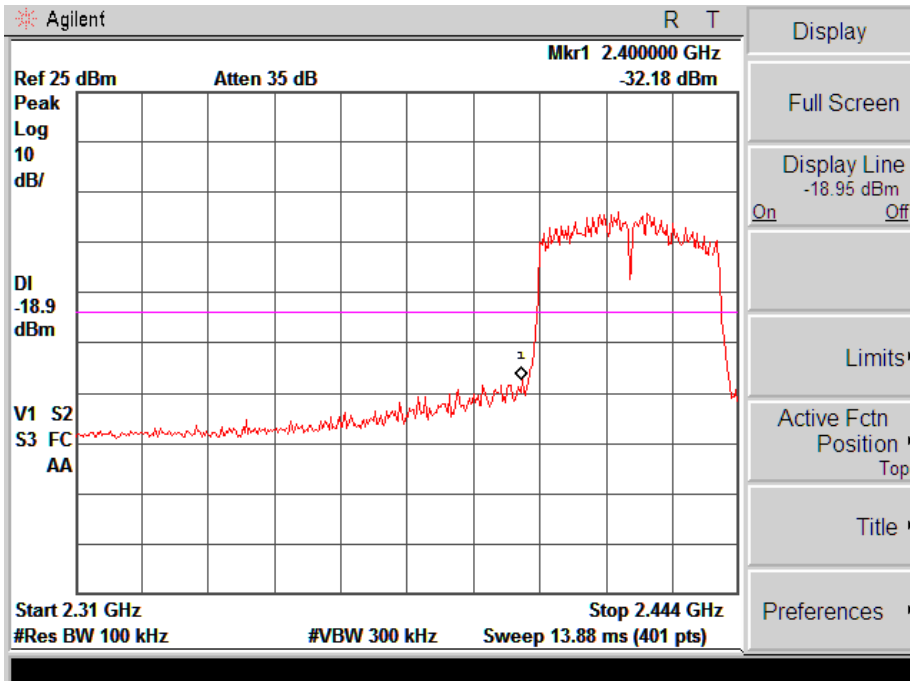


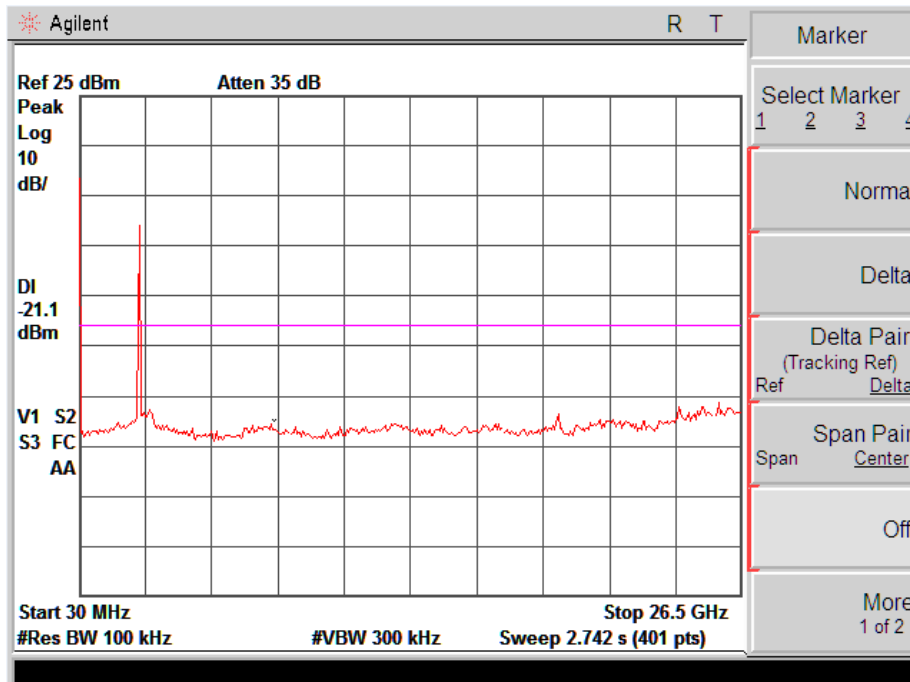
High Channel



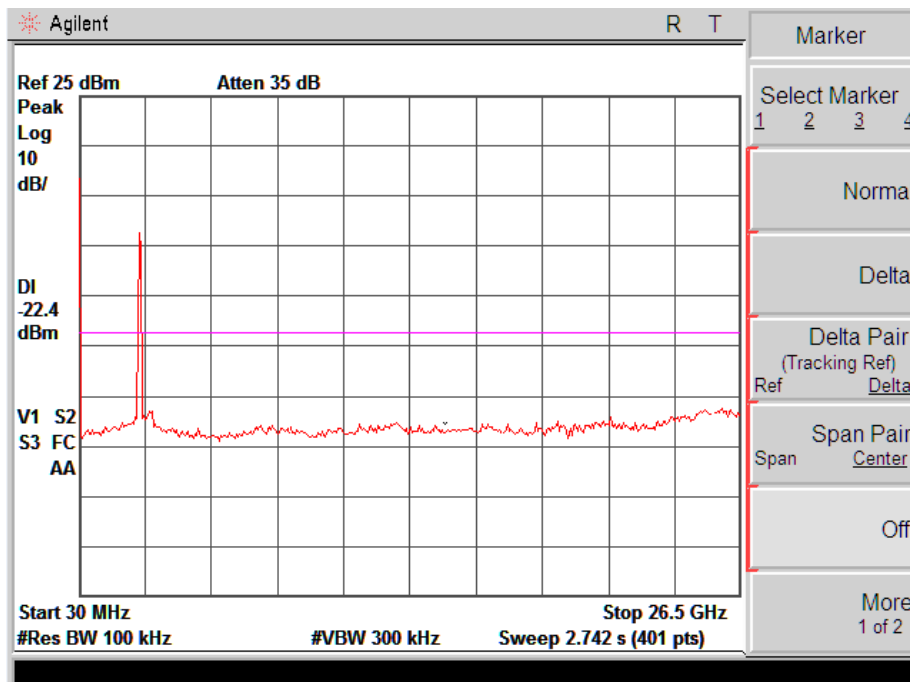


11n-HT40
Low Channel

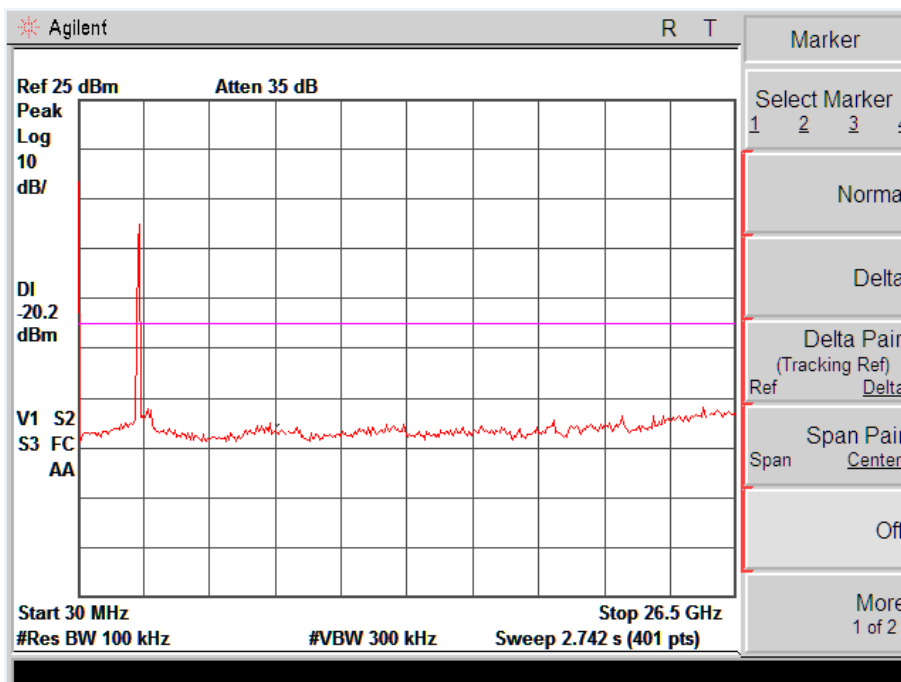
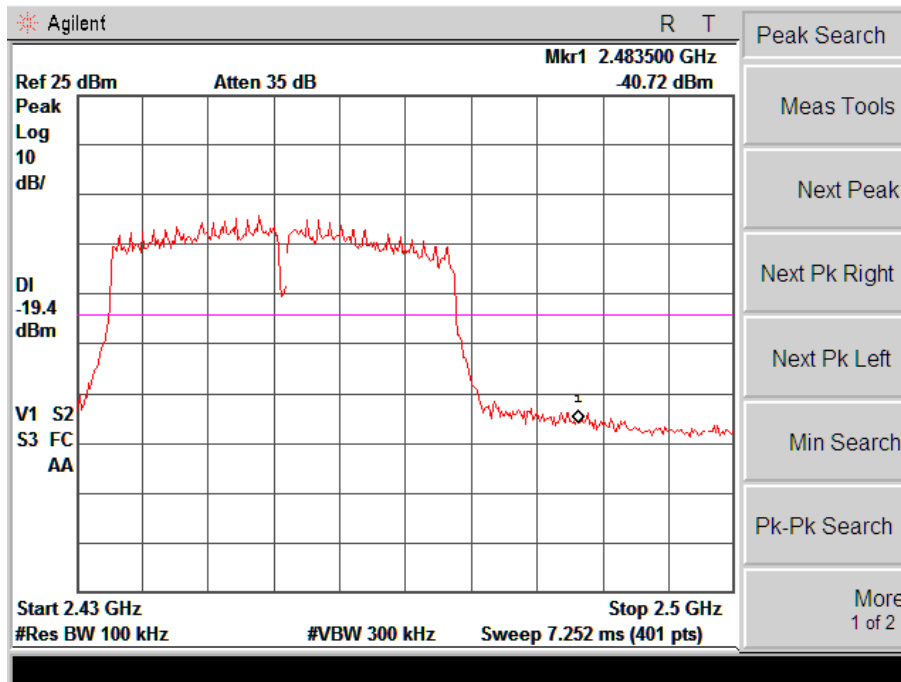




Middle Channel



High Channel



10. Conducted Emissions

10.1 Measurement Uncertainty

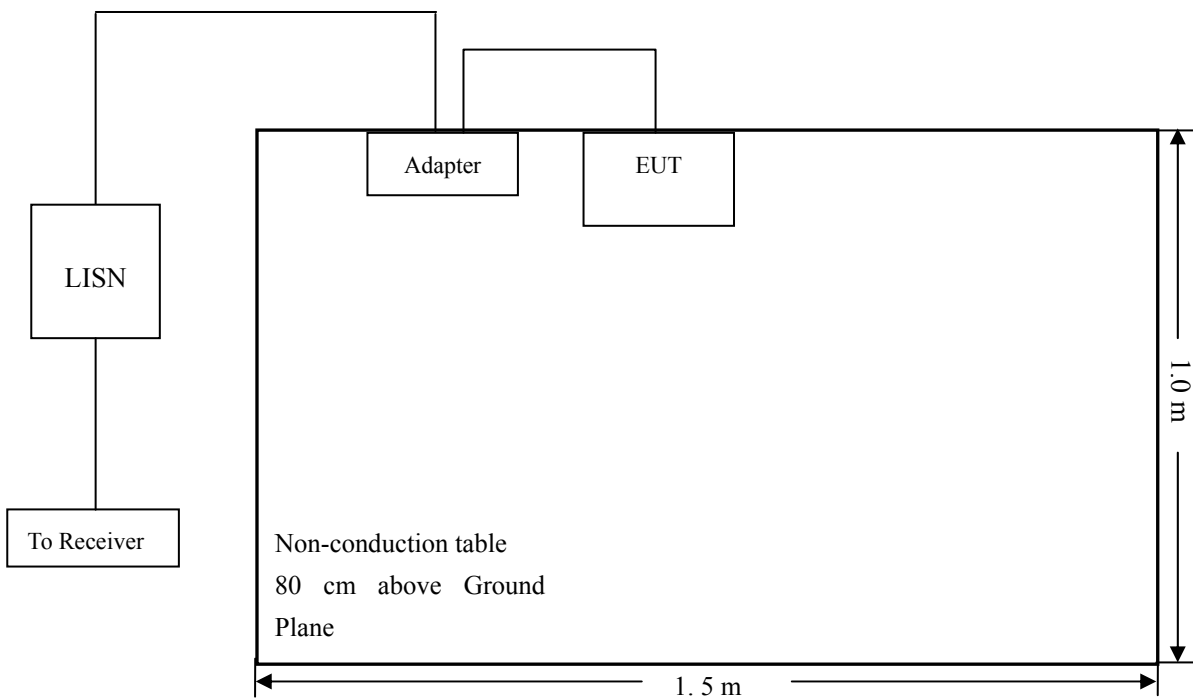
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is ± 2.88 dB.

10.2 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.

10.3 Basic Test Setup Block Diagram



10.4 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

10.5 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency	150 kHz
Stop Frequency	30 MHz
Sweep Speed	Auto
IF Bandwidth.....	10 kHz
Quasi-Peak Adapter Bandwidth	9 kHz
Quasi-Peak Adapter Mode	Normal

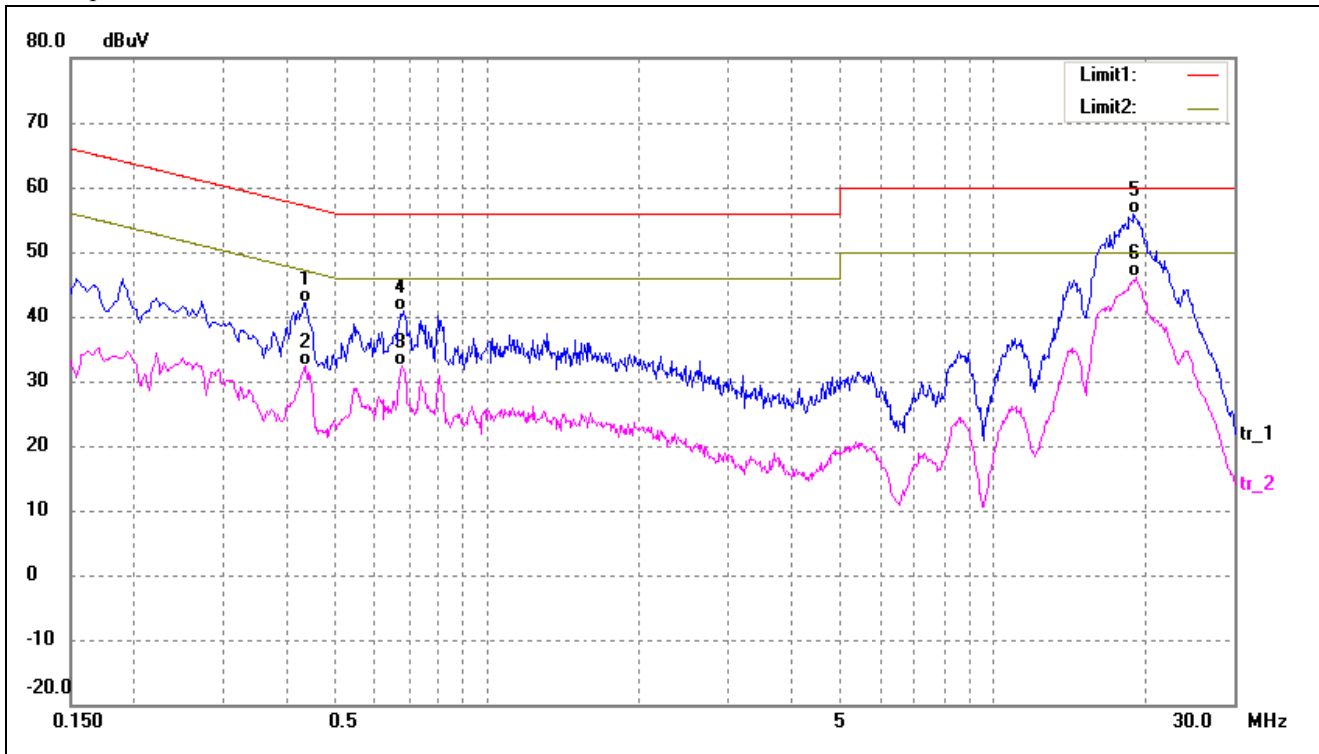
10.6 Summary of Test Results/Plots

According to the data in section 10.7, the EUT complied with the FCC Part 15.207 Conducted margin for this device, with the *worst* margin:

10.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

EUT: 55" UHD LED TV
 D55RWB714-U-A-I RNSMU5536
 Tested Model: XXXXXXXXXXXX55XXXXXXXXXXXXX
 (Where "X" can be any alphanumeric of a-z, A-Z or 0-9 or blank & "-".)
 Operating Condition: Transmitting
 Comment: AC 120V/60Hz
 Test Specification: Neutral

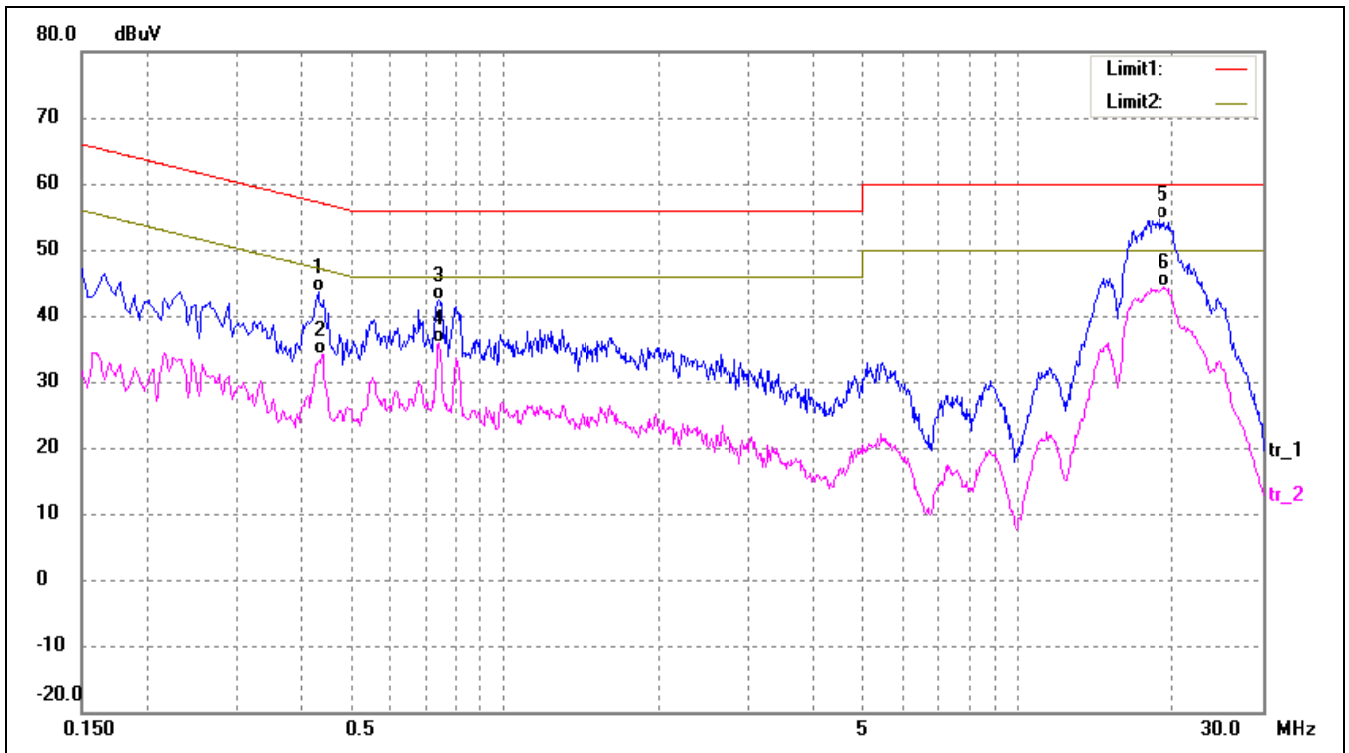


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4380	32.33	9.80	42.13	57.10	-14.97	QP
2	0.4380	22.61	9.80	32.41	47.10	-14.69	AVG
3	0.6780	22.68	9.79	32.47	46.00	-13.53	AVG
4	0.6860	31.03	9.79	40.82	56.00	-15.18	QP
5	18.9260	46.19	9.66	55.85	60.00	-4.15	QP
6*	19.1980	36.39	9.67	46.06	50.00	-3.94	AVG

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz), Step size: 4 kHz, Scan time: auto.

EUT: 55" UHD LED TV
 D55RWB714-U-A-I RNSMU5536
 Tested Model: XXXXXXXXXXXX55XXXXXXXXXXXX
 (Where "X" can be any alphanumeric of a-z, A-Z or 0-9 or blank & "-".)
 Operating Condition: Transmitting
 Comment: AC 120V/60Hz
 Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4340	33.95	9.80	43.75	57.18	-13.43	QP
2	0.4420	24.29	9.80	34.09	47.02	-12.93	AVG
3	0.7460	32.64	9.78	42.42	56.00	-13.58	QP
4	0.7460	26.00	9.78	35.78	46.00	-10.22	AVG
5*	19.0060	44.94	9.67	54.61	60.00	-5.39	QP
6	19.3180	34.77	9.67	44.44	50.00	-5.56	AVG

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz), Step size: 4 kHz, Scan time: auto.

***** END OF REPORT *****