FCC Part 15C
Measurement and Test Report

For

Inventec Appliances Corp.

37 Wugong 5th road, New Taipei Industrial Park, Wugu District

FCC ID: POT-NC125A

FCC Rule(s):	FCC Part 15C
Product Description:	Notebook
Tested Model:	NEBP12
Report No.:	STR17108171I-1
Sample Receipt Date:	2017-10-19
Tested Date:	2017-10-20 to 2017-11-07
Issued Date:	2017-11-08
Tested By:	Long Tang / Engineer
Reviewed By:	Silin Chen / EMC Manager
Approved & Authorized By:	Jandy So / PSQ Manager

Prepared By:

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Inventec Appliances Corp.
Address of applicant:	37 Wugong 5th road, New Taipei Industrial Park, Wugu District
Manufacturer:	Inventec Appliances(Pudong) Corporation
Address of manufacturer:	No.789 Pu Xing Road, Shanghai, PRC

General Description of EUT	
Product Name:	Notebook
Brand Name:	NuVision
Model No.	NEBP12
Adding Model(s):	NEBP12-C464SSA; NEBP12-C464SBA; NEBP12-C464SGA; NEBP12-C464SBLA ; NEBP12-C464SGNA;NEBP12-C464SPA;
Rated Voltage:	Battery DC 7.6V
Battery Capacity:	4200mAh
Power Adapter:	Model: B036-120 Input: AC100-240,50/60Hz, 0.6A; Output: DC12.0V~3A
Note: The test data is gathered from a production sample provided by the manufacturer. The appearance of others models listed in the report is different from main-test model NEBP12, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT	
Support Standards:	802.11b, 802.11g, 802.11n
Frequency Range:	2412-2462MHz for 11b/g/n(HT20) 2422-2452MHz for 11n(HT40)
RF Output Power:	Antenna A : 12.41dBm(Conducted) Antenna B : 12.78dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels:	11/7
Channel Separation:	5MHz
Antenna Type:	Antenna A : Integral Antenna Antenna B : Integral Antenna
Antenna Gain:	2.0dBi

1.2 Test Standards

The following report is prepared on behalf of the Inventec Appliances Corp. 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 Commissions 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 Commissions 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, and ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. The measurement guide KDB 558074 D01 v04 for digital transmission systems shall be performed also.

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.		

Accessories Equipment List and Details			
Description	**Manufacturer**	**Model No.**	**Serial Number**
/	/	/	/
Accessories Cable List and Details			
Cable Description	**Length (m)**	**Shielded/Unshielded**	**With Core/Without Core**
/	/	/	/
EUT Cable List and Details			
Cable Description	**Length (m)**	**Shielded/Unshielded**	**With Core/Without Core**
/	/	/	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	±0.42dB
Occupied Bandwidth	Conducted	±1.5%
Power Spectral Density	Conducted	±1.8dB
Conducted Spurious Emission	Conducted	±2.17dB
Conducted Emissions	Conducted	±2.88dB
Transmitter Spurious Emissions	Radiated	±5.1dB

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 § 2.1093, the portable transmitter must comply the RF exposure requirements.

3.2 Test Result

This product complied with the requirement of the RF exposure, please see the SAR 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 integral antennas, 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 kHz ≤ RBW ≤ 100 kHz. .
d) Set VBW ≥3 x RBW.
e) Detector = power averaging (RMS) or sample detector (when RMS not available).
f) Ensure that the number of measurement points in the sweep ≥ 2 x 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

WiFi A

Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
802.11b	2412	-19.25	8
	2437	-18.35	8
	2462	-19.40	8
802.11g	2412	-22.20	8
	2437	-21.56	8
	2462	-22.90	8
802.11n HT20	2412	-23.13	8
	2437	-22.82	8
	2462	-23.66	8
802.11n HT40	2422	-26.05	8
	2437	-25.85	8
	2452	-26.64	8

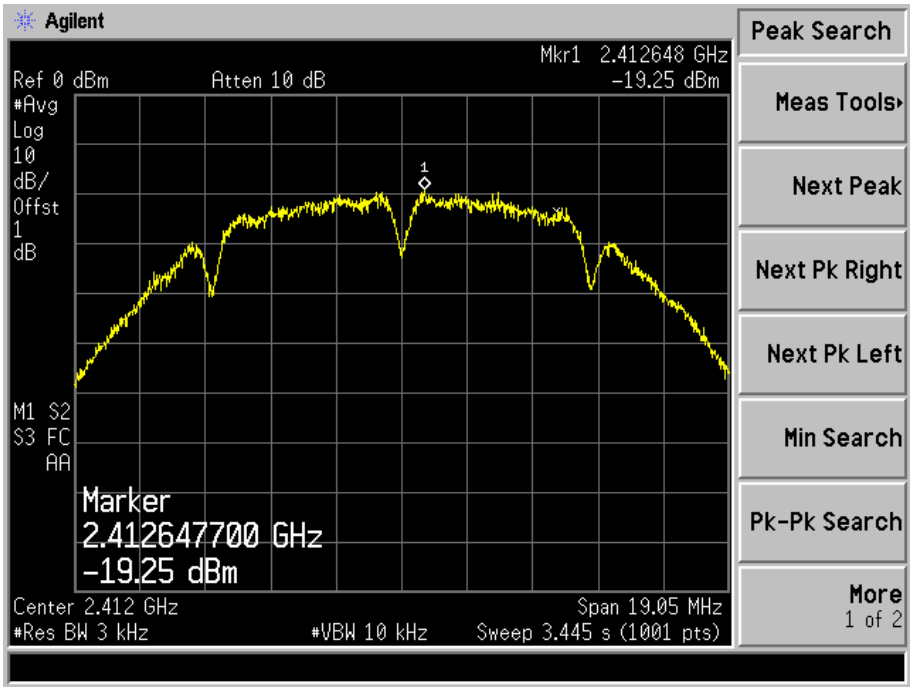
WiFi B

Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
802.11b	2412	-20.22	8
	2437	-20.62	8
	2462	-21.03	8
802.11g	2412	-22.09	8
	2437	-21.90	8
	2462	-22.67	8
802.11n HT20	2412	-21.74	8
	2437	-22.53	8
	2462	-22.11	8
802.11n HT40	2422	-26.36	8
	2437	-26.26	8
	2452	-26.61	8

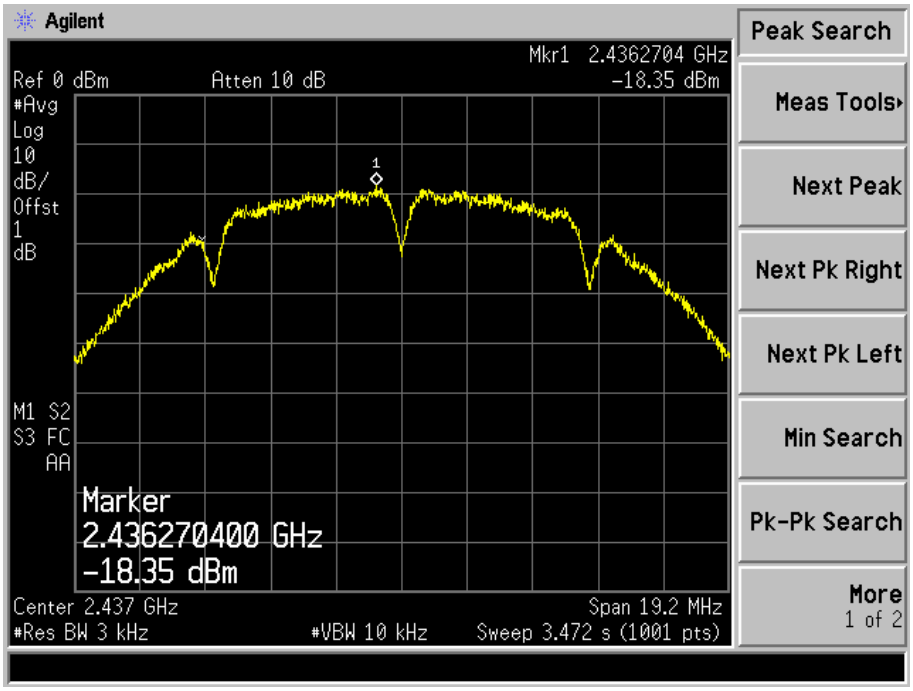
Please refer to the following test plots:

WiFi A

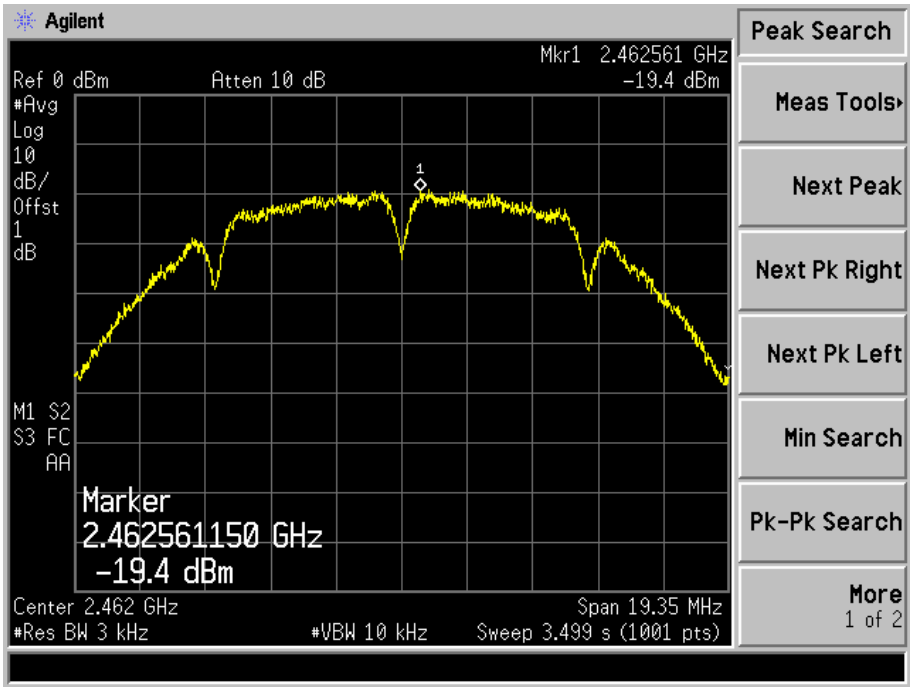
802.11b-Low Channel



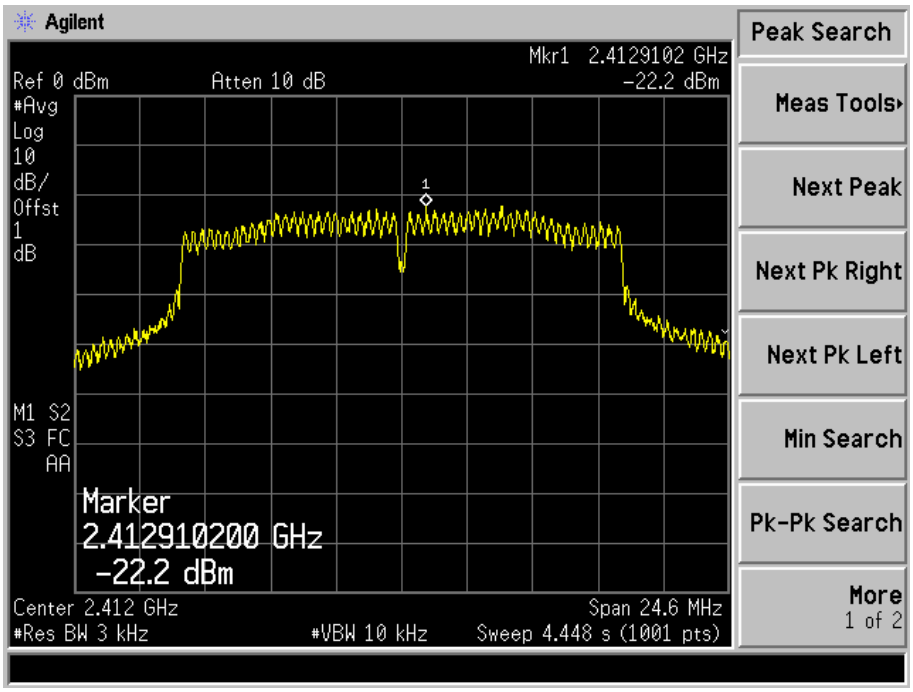
802.11b-Middle Channel



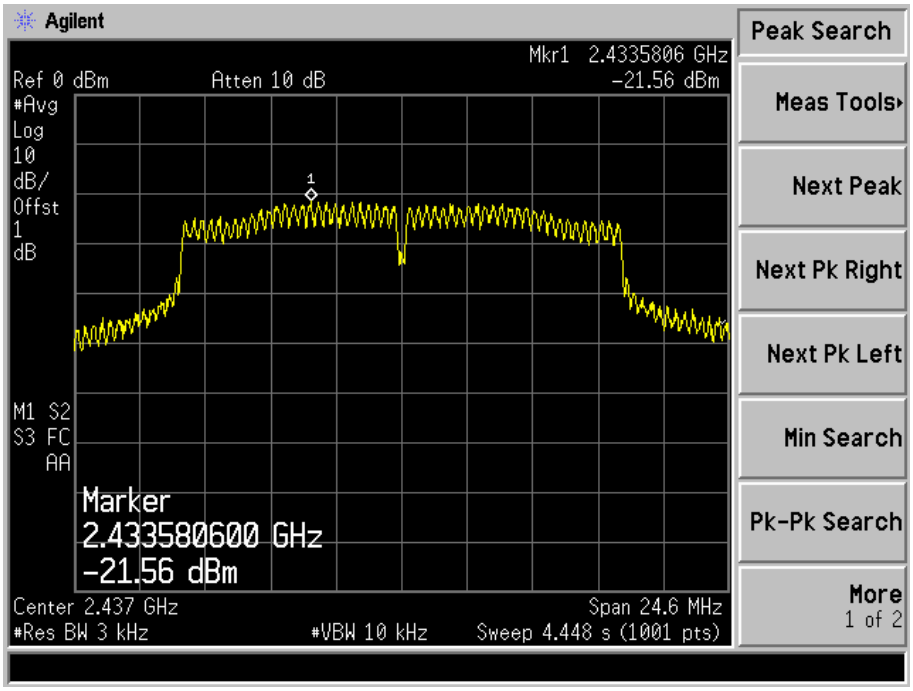
802.11b-High Channel



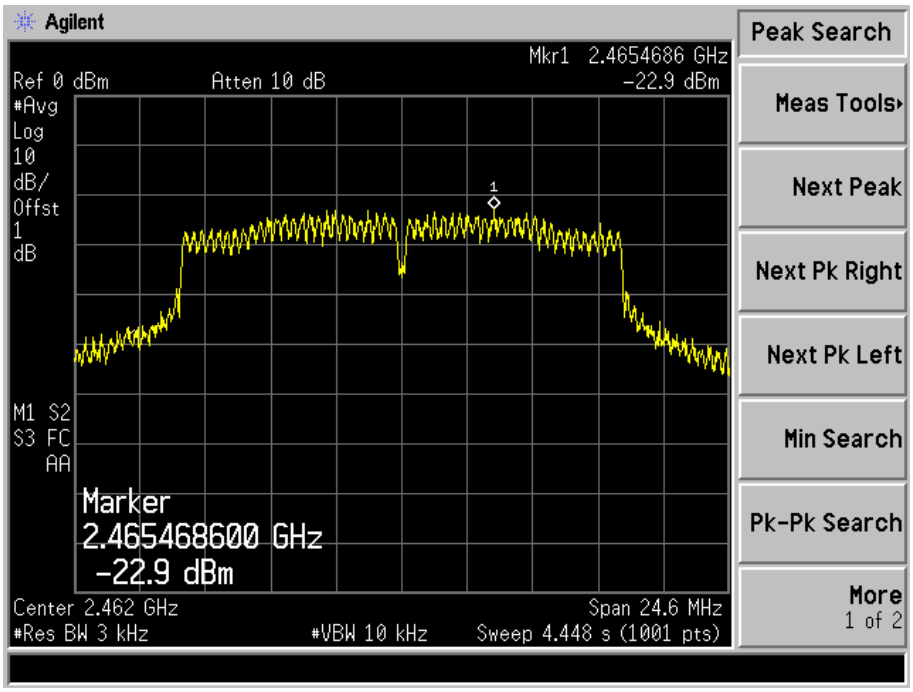
802.11g-Low Channel



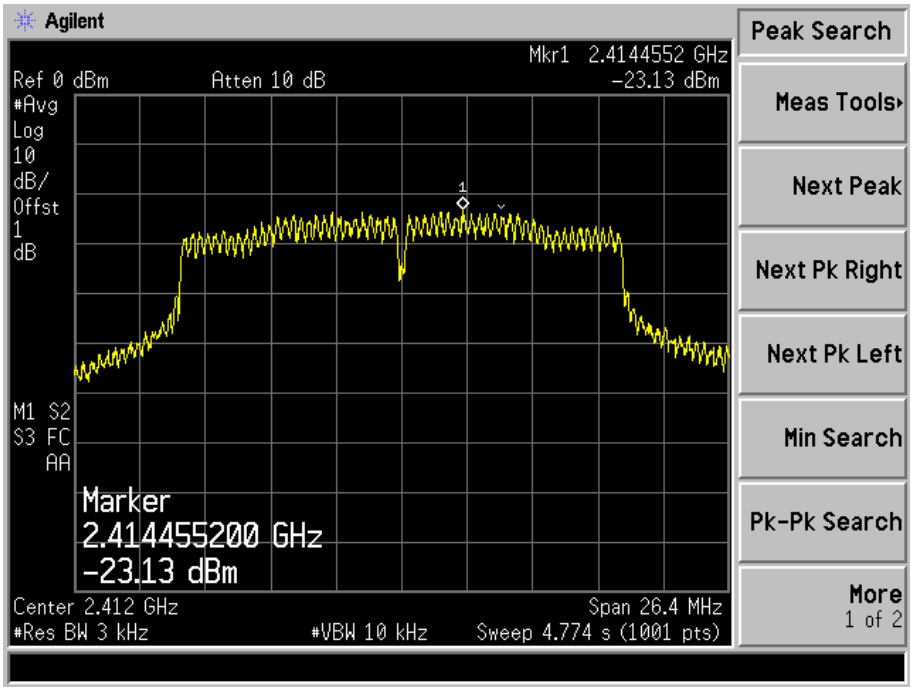
802.11g-Middle Channel



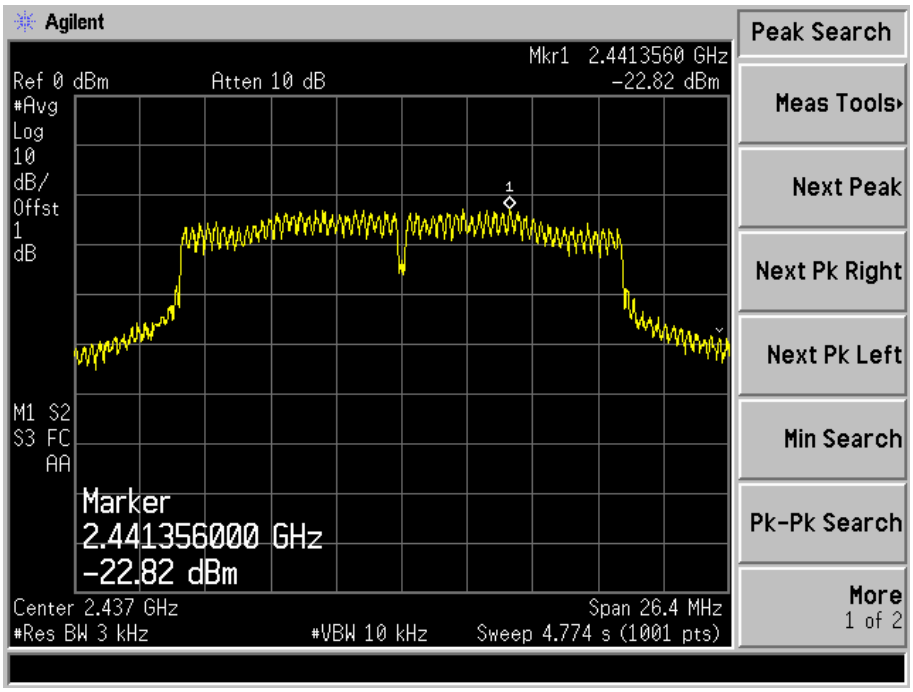
802.11g-High Channel



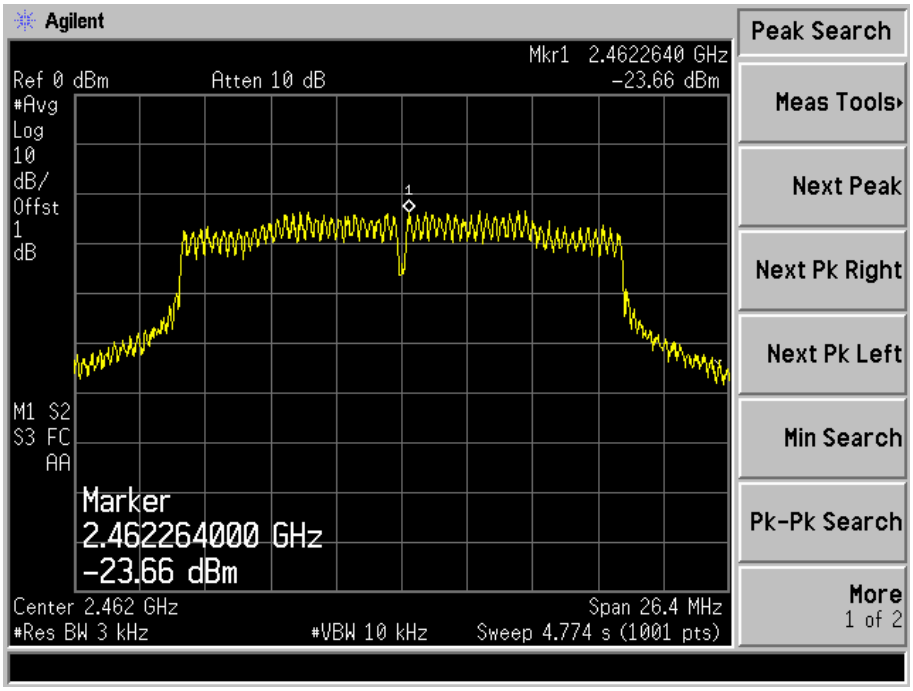
802.11n-HT20-Low Channel



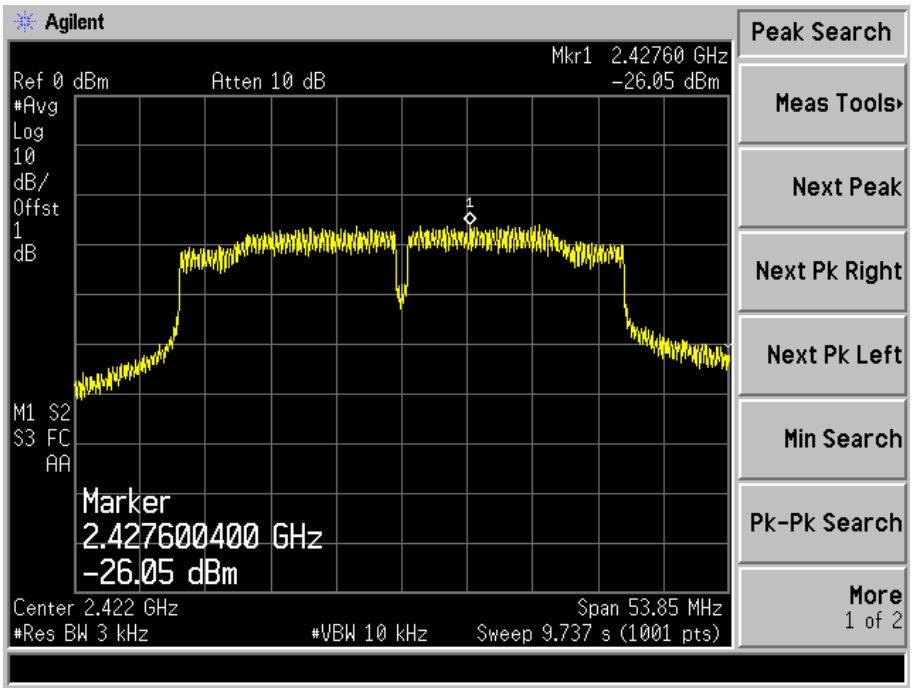
802.11n-HT20-Middle Channel



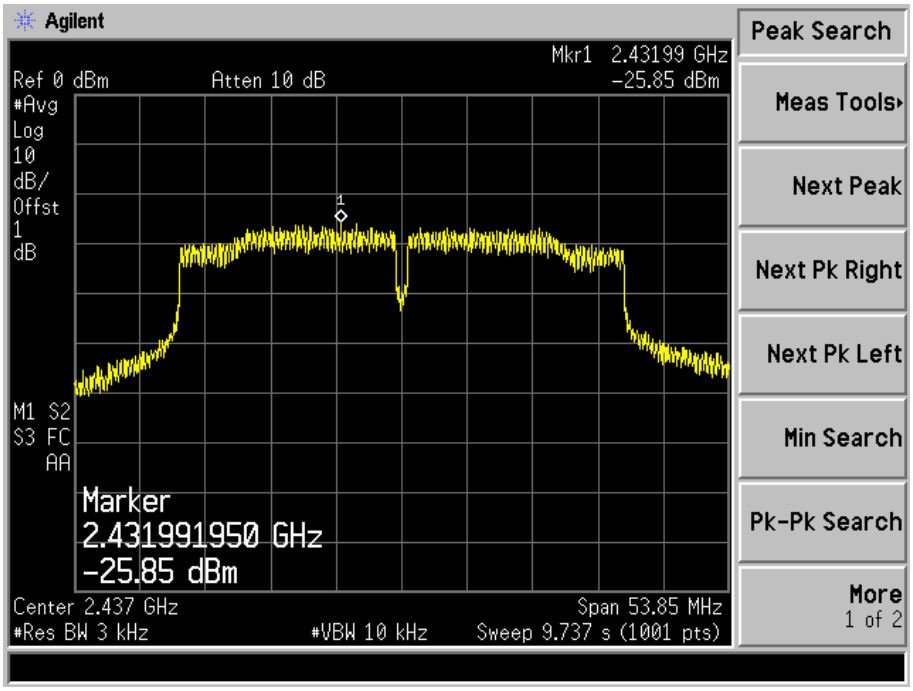
802.11n-HT20-High Channel



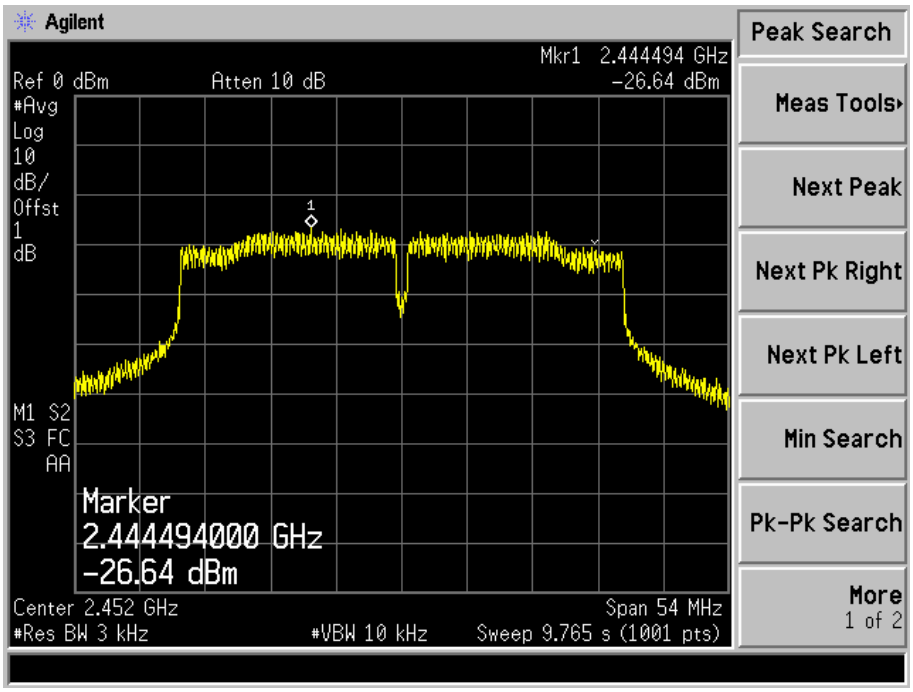
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel

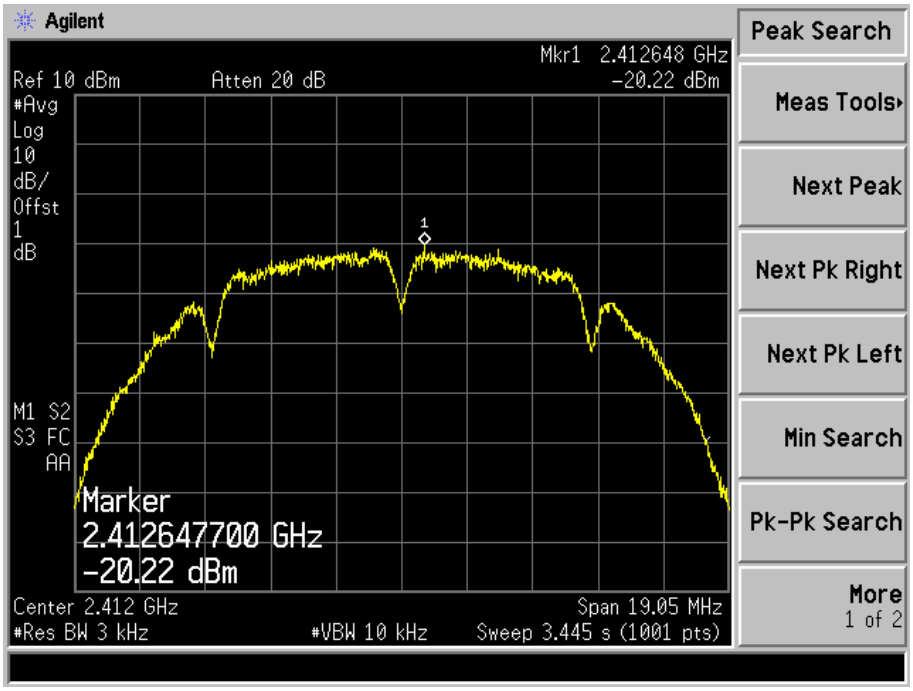


802.11n-HT40-High Channel

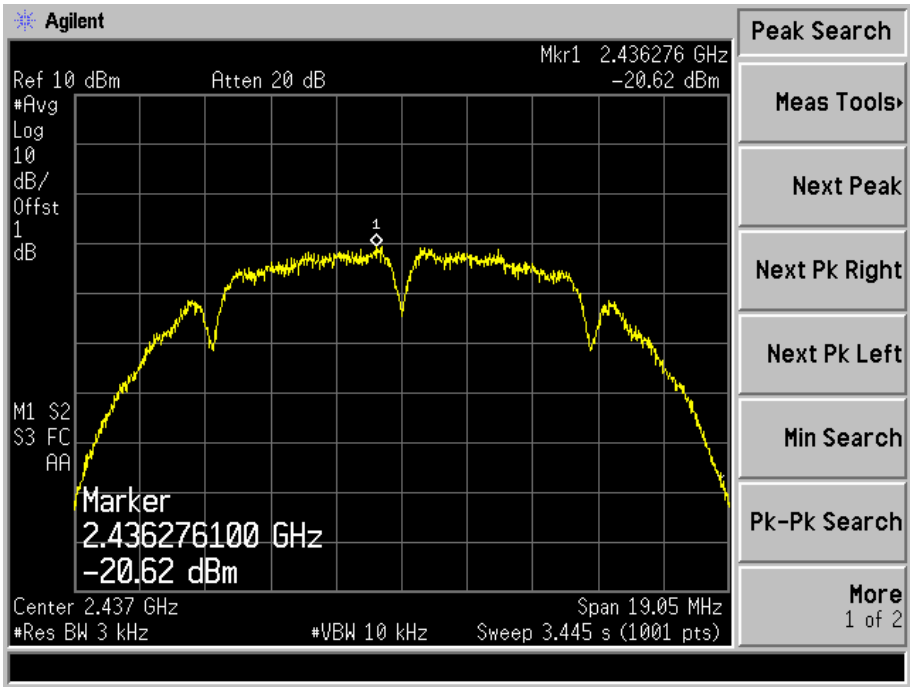


WiFi B

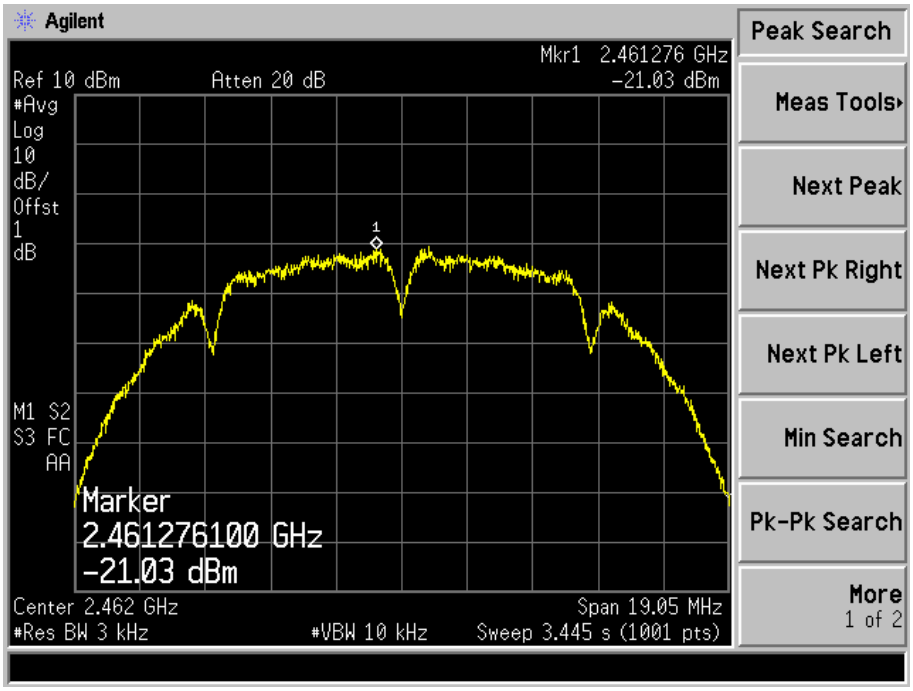
802.11b-Low Channel



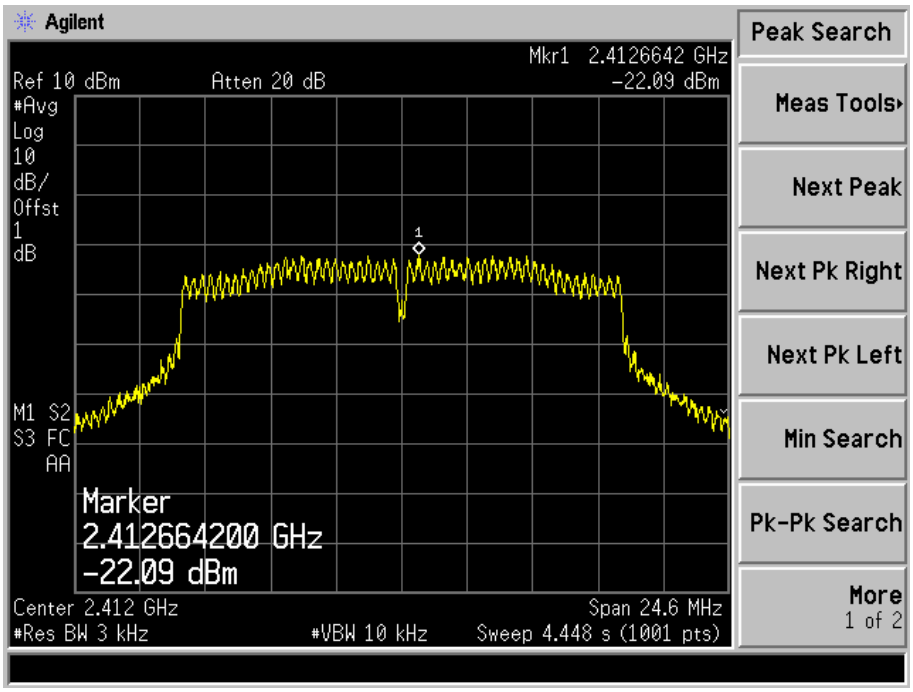
802.11b-Middle Channel



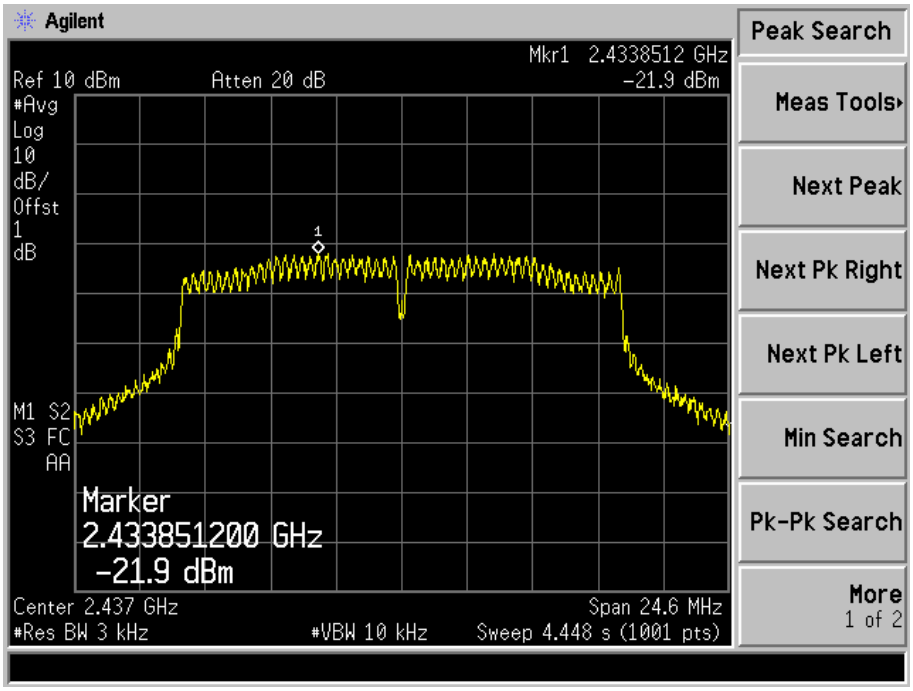
802.11b-High Channel



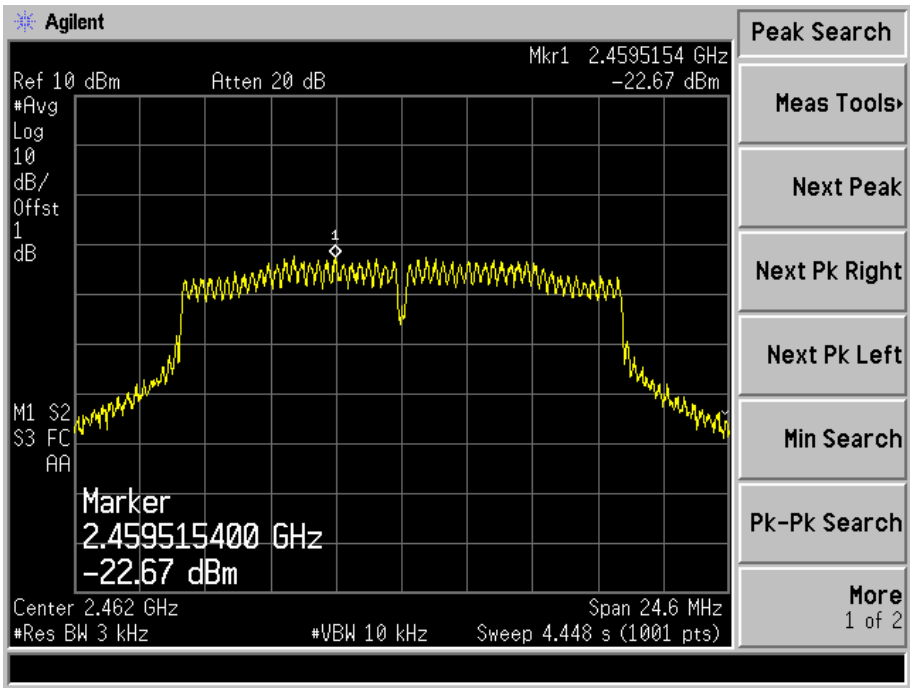
802.11g-Low Channel



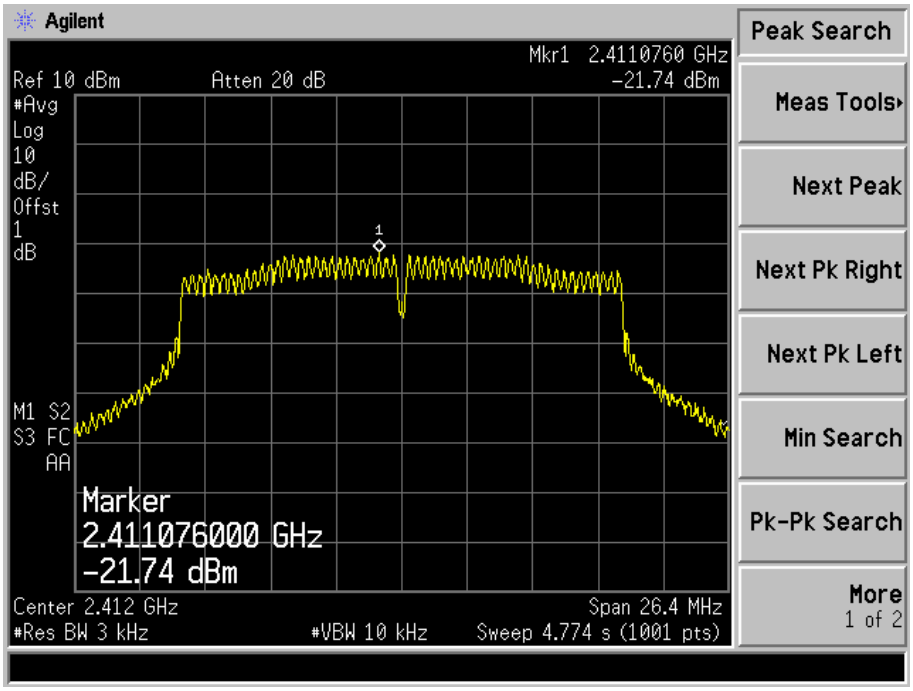
802.11g-Middle Channel



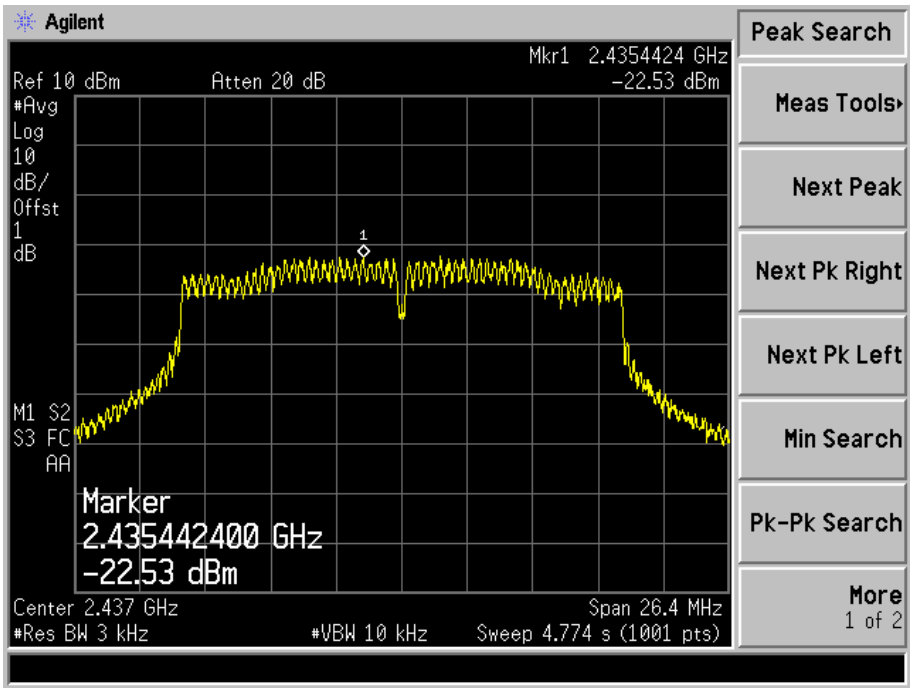
802.11g-High Channel



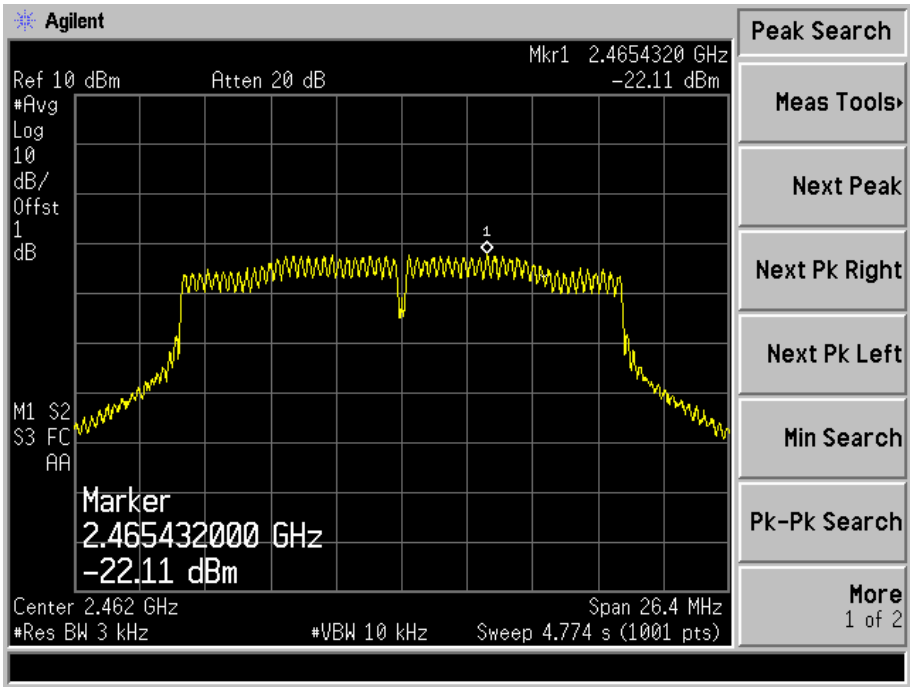
802.11n-HT20-Low Channel



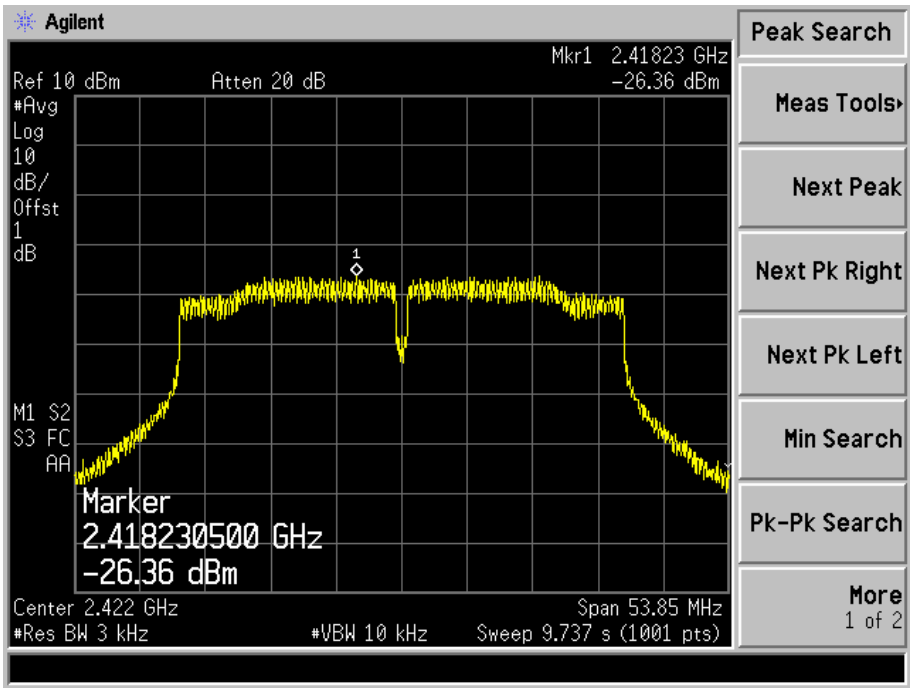
802.11n-HT20-Middle Channel



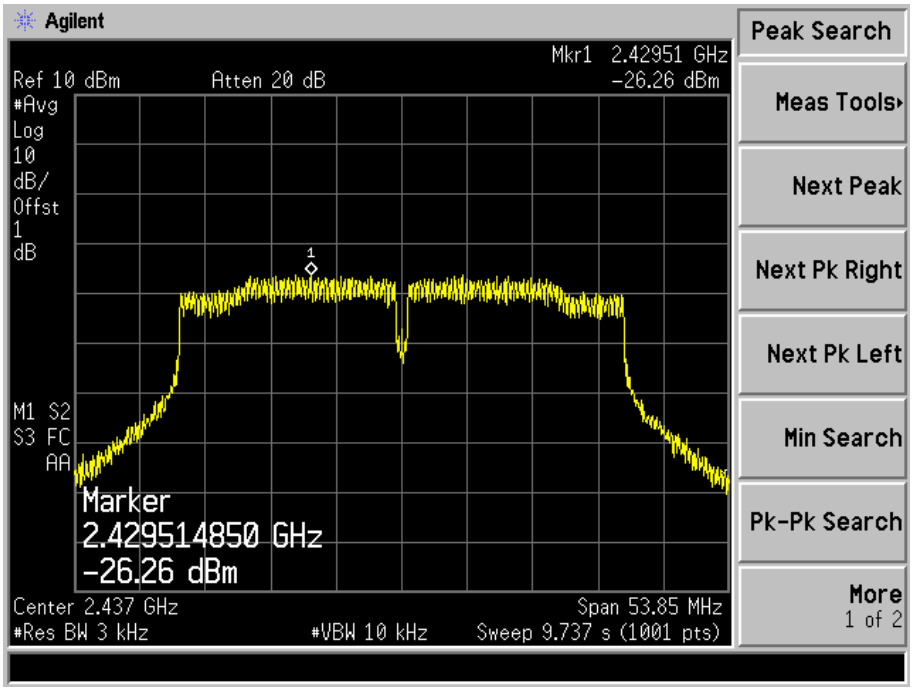
802.11n-HT20-High Channel



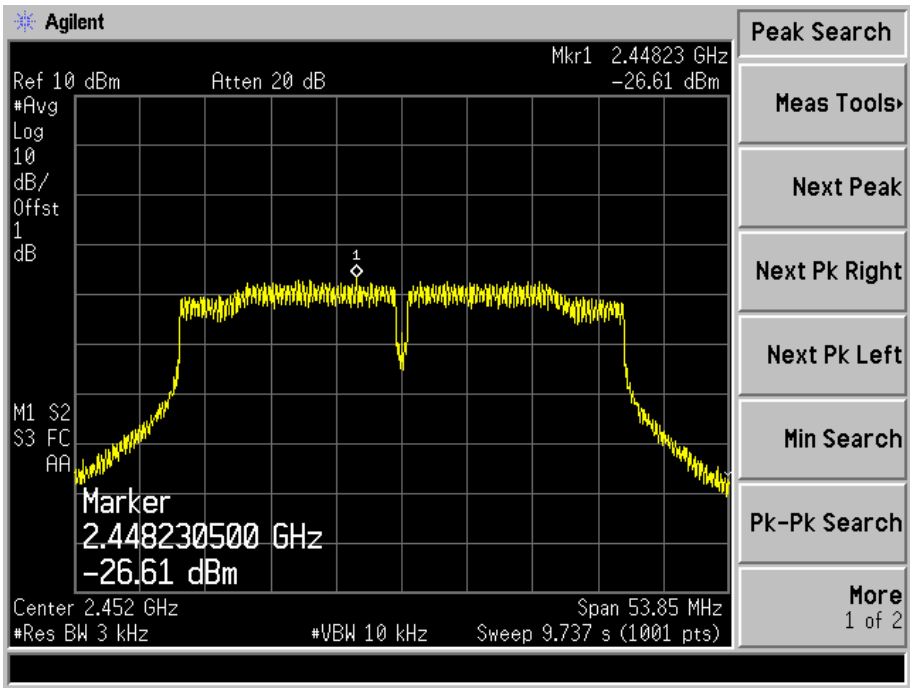
802.11n-HT40-Low Channel



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, and 5725–5850 MHz bands. 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) ≥ 3 × 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

WiFi A

Test Mode	Test Channel MHz	6 dB Bandwidth MHz	99% Bandwidth MHz	Limit kHz
802.11b	2412	9.133	12.6988	≥500
	2437	9.152	12.7533	≥500
	2462	9.130	12.8228	≥500
802.11g	2412	15.464	16.3574	≥500
	2437	14.412	16.3803	≥500
	2462	16.333	16.3975	≥500
802.11n-HT20	2412	15.072	17.5787	≥500
	2437	13.805	17.5645	≥500
	2462	15.054	17.5882	≥500
802.11n-HT40	2422	35.029	35.8583	≥500
	2437	35.116	35.8831	≥500
	2452	35.176	35.9303	≥500

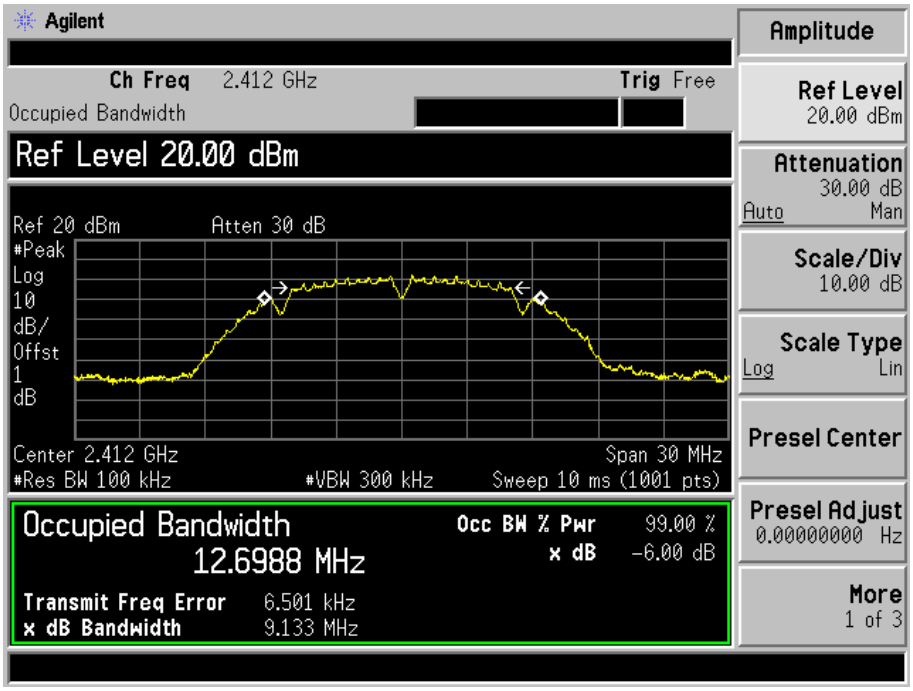
WiFi B

Test Mode	Test Channel MHz	6 dB Bandwidth MHz	99% Bandwidth MHz	Limit kHz
802.11b	2412	9.143	12.6290	≥500
	2437	9.143	12.6018	≥500
	2462	9.988	12.6353	≥500
802.11g	2412	15.273	16.3728	≥500
	2437	15.095	16.3636	≥500
	2462	15.606	16.3709	≥500
802.11n-HT20	2412	15.110	17.5637	≥500
	2437	15.447	17.5518	≥500
	2462	15.097	17.5502	≥500
802.11n-HT40	2422	35.158	35.8565	≥500
	2437	35.128	35.8515	≥500
	2452	35.177	35.8947	≥500

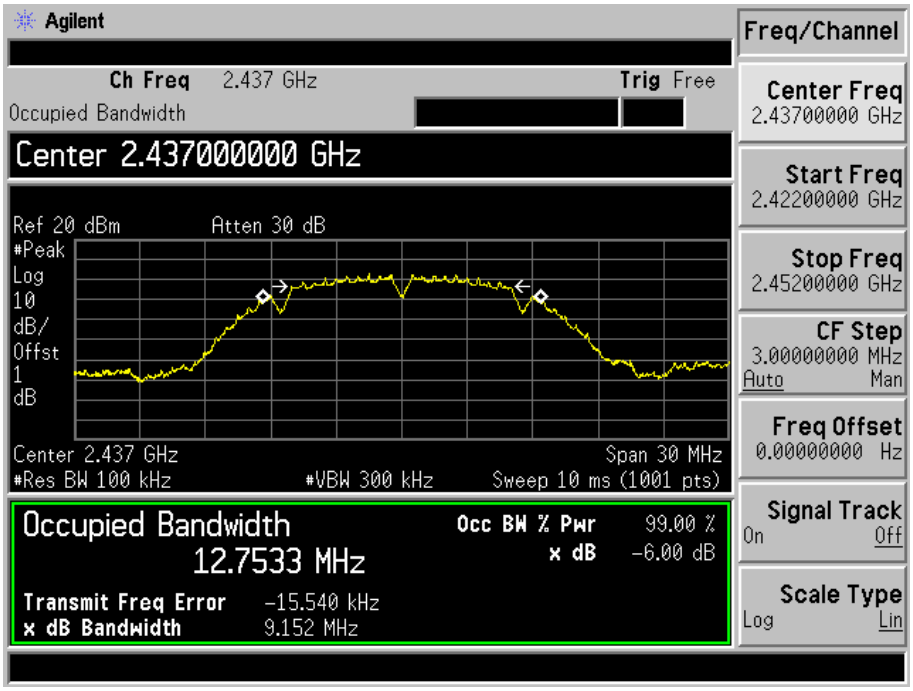
Please refer to the following test plots:

WiFi A

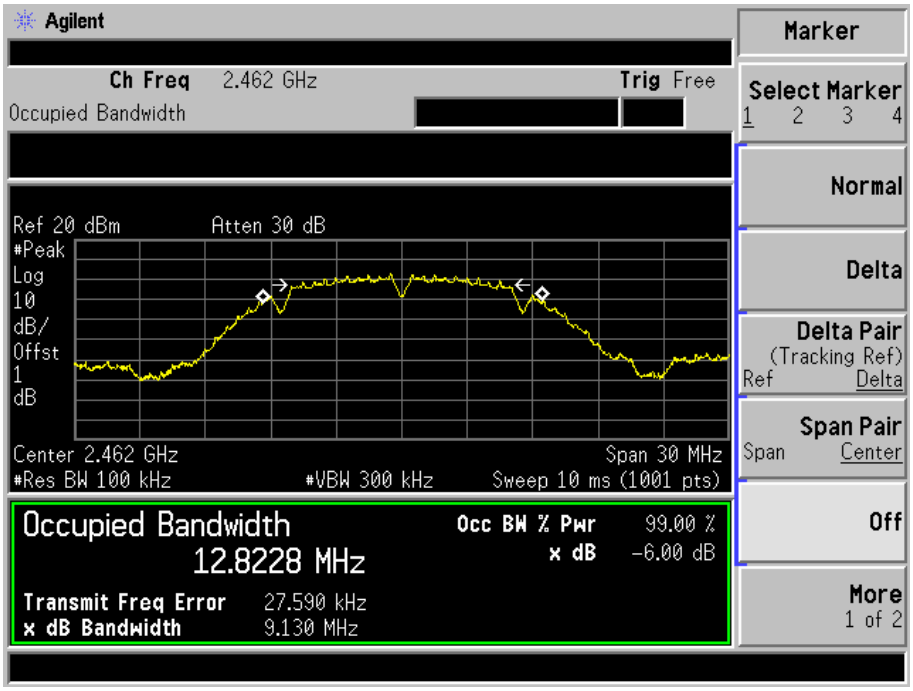
802.11b-Low Channel



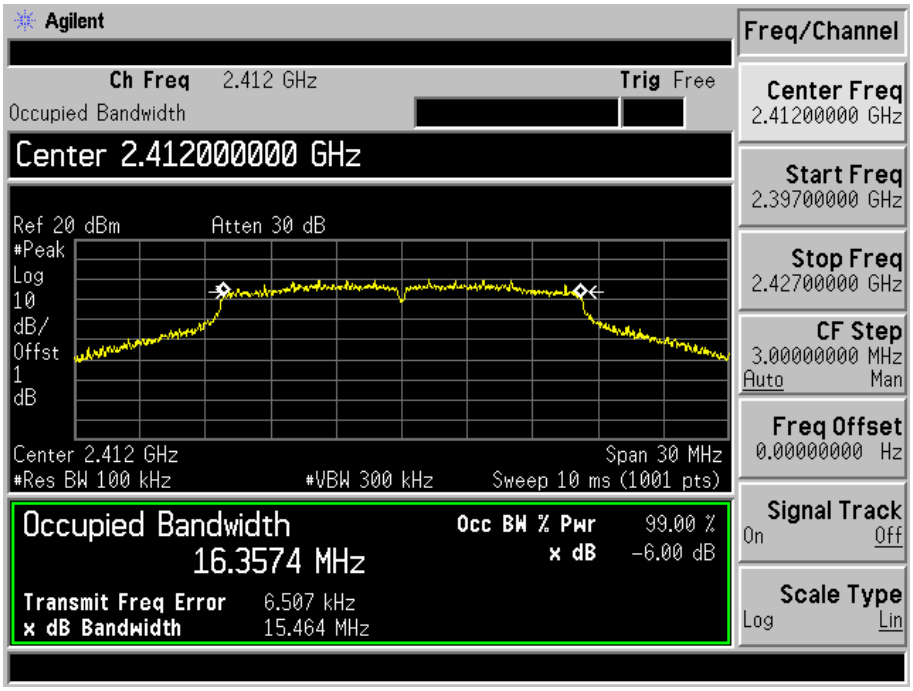
802.11b-Middle Channel



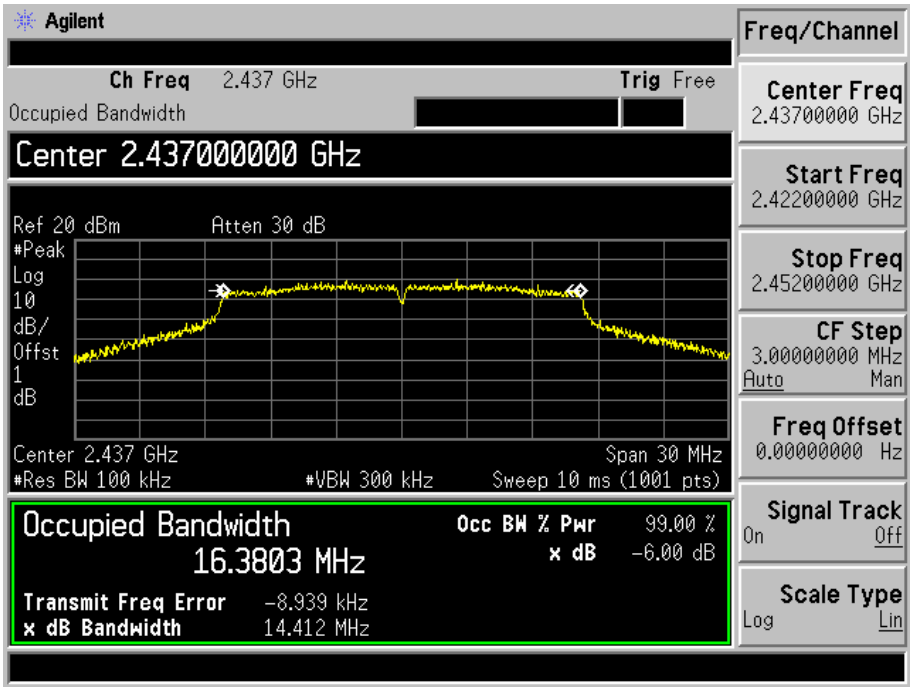
802.11b-High Channel



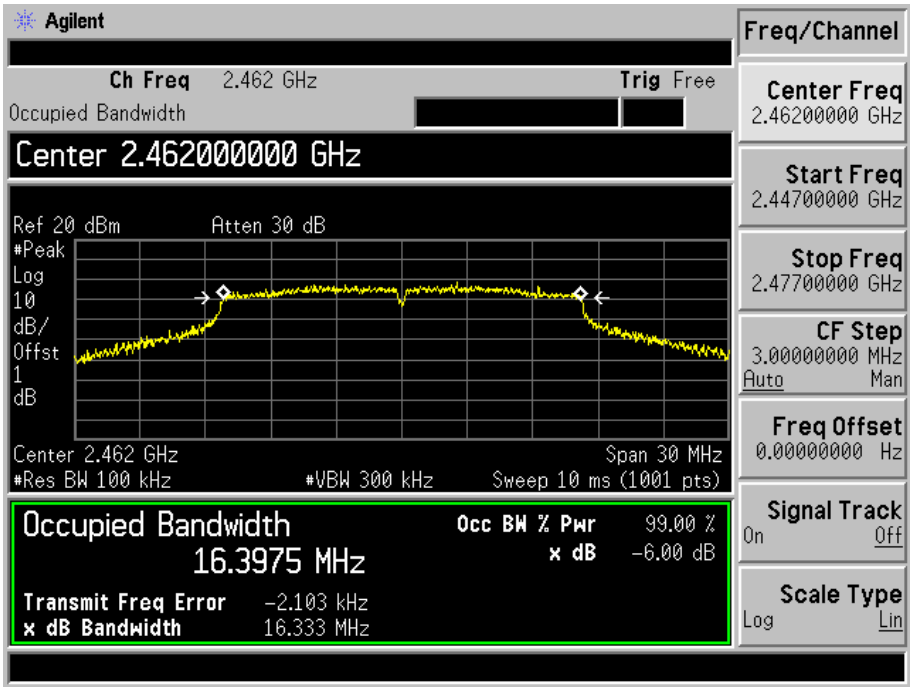
802.11g-Low Channel



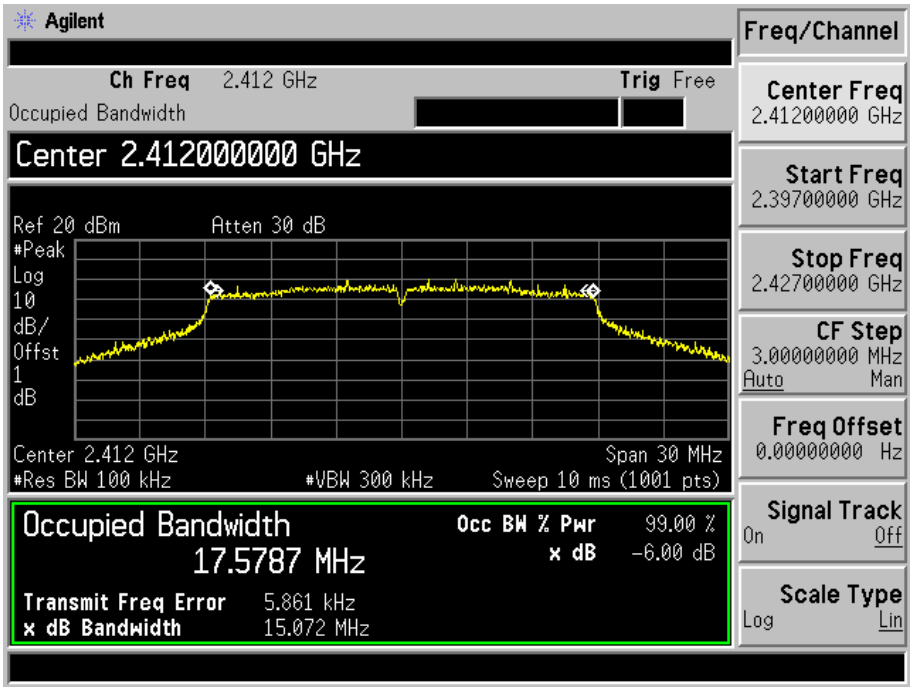
802.11g-Middle Channel



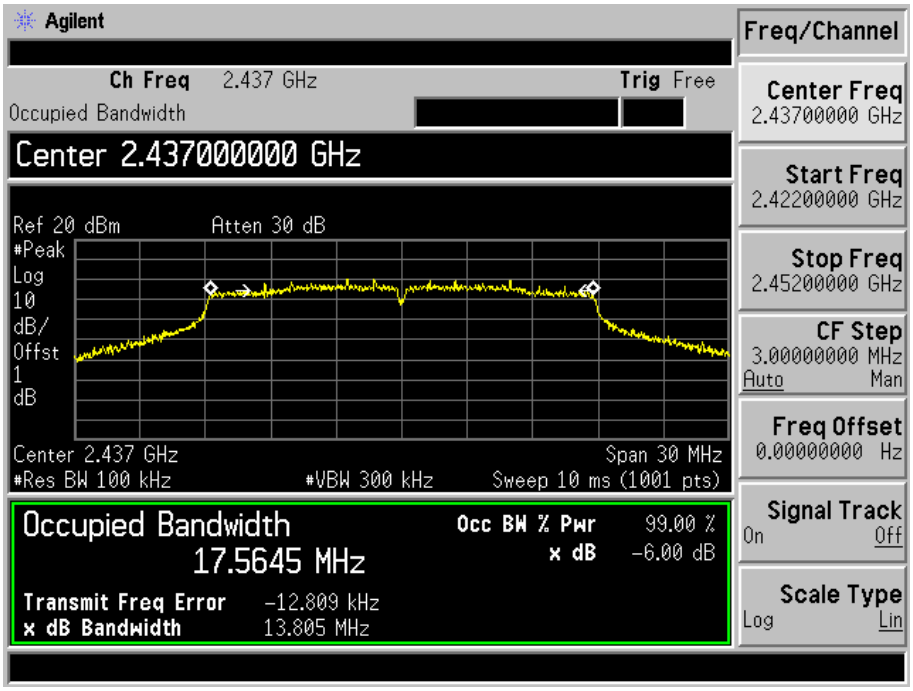
802.11g-High Channel



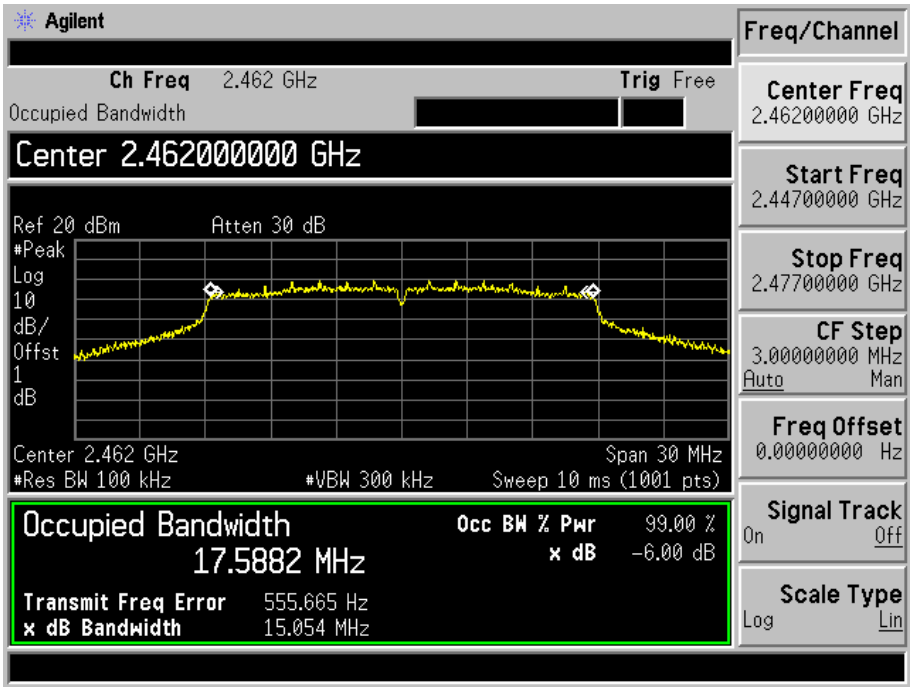
802.11n-HT20-Low Channel



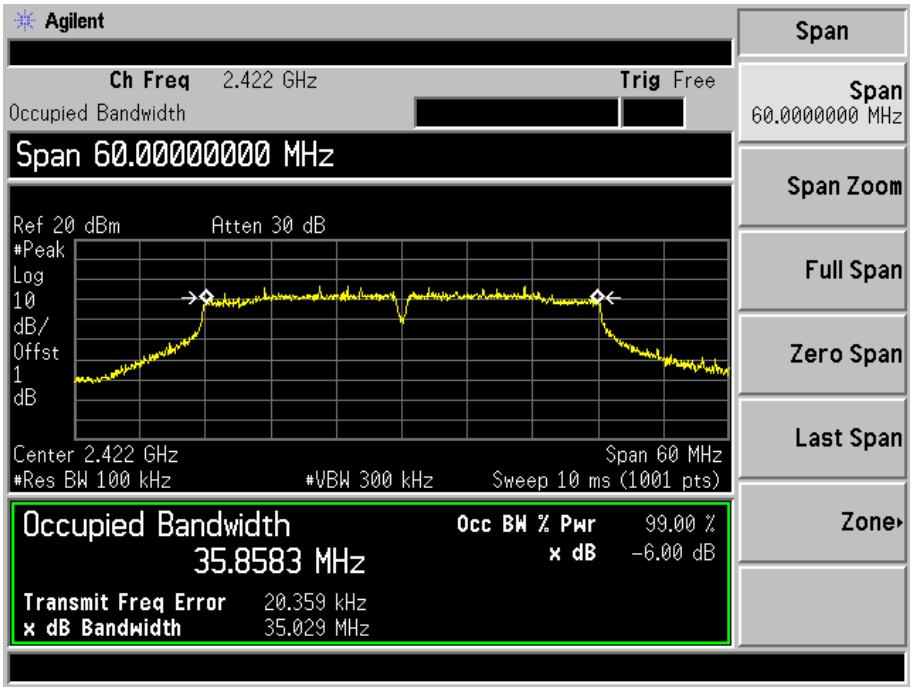
802.11n-HT20-Middle Channel



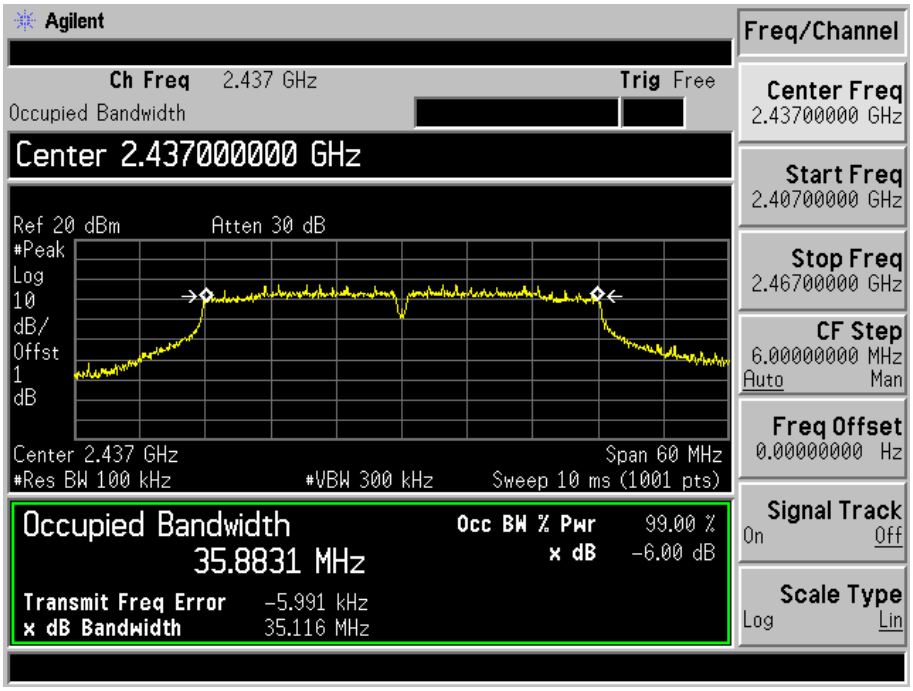
802.11n-HT20-High Channel



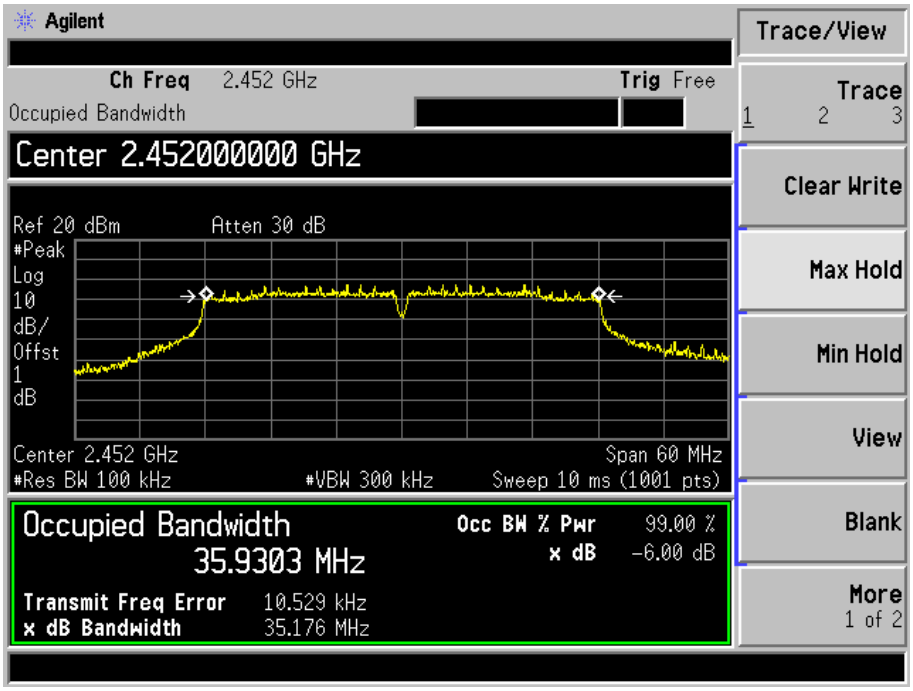
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel

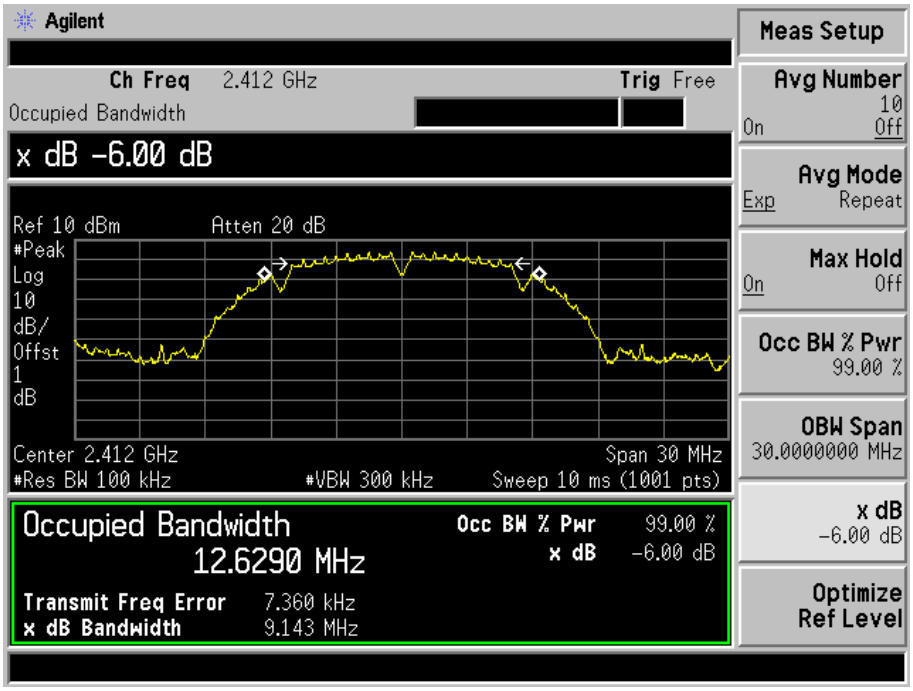


802.11n-HT40-High Channel

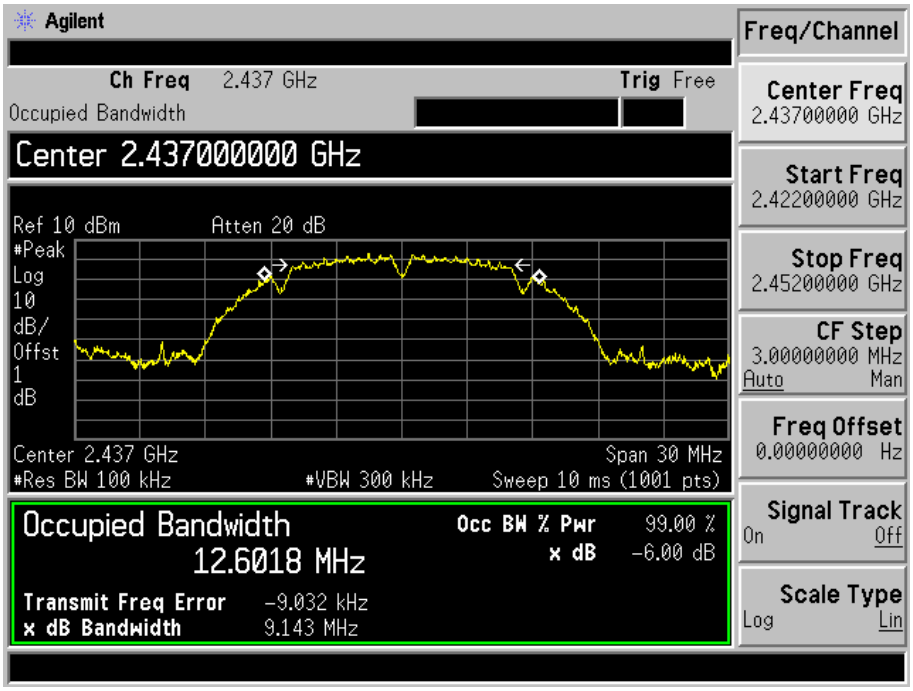


WiFi B

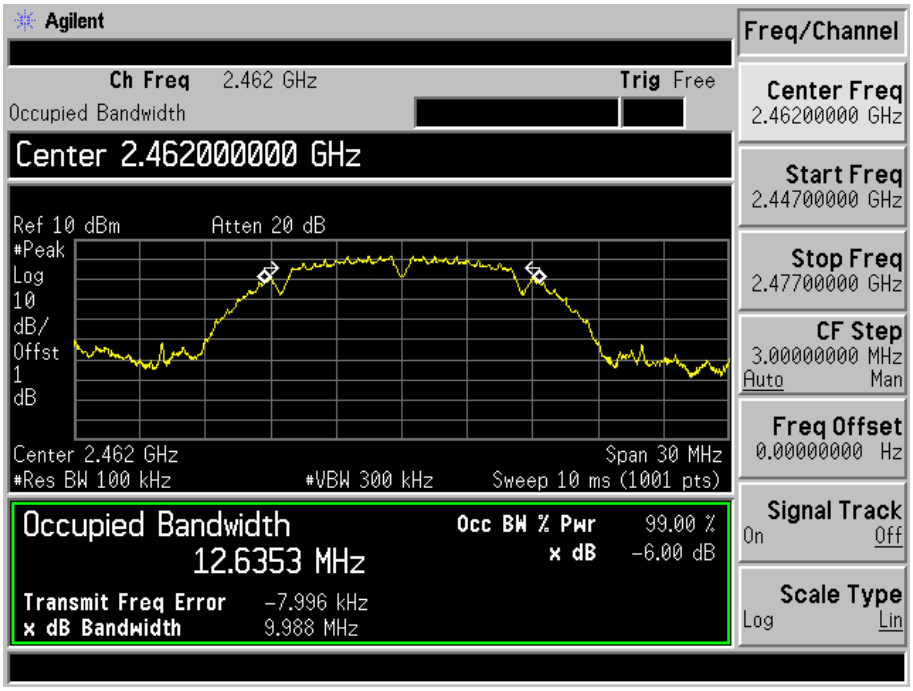
802.11b-Low Channel



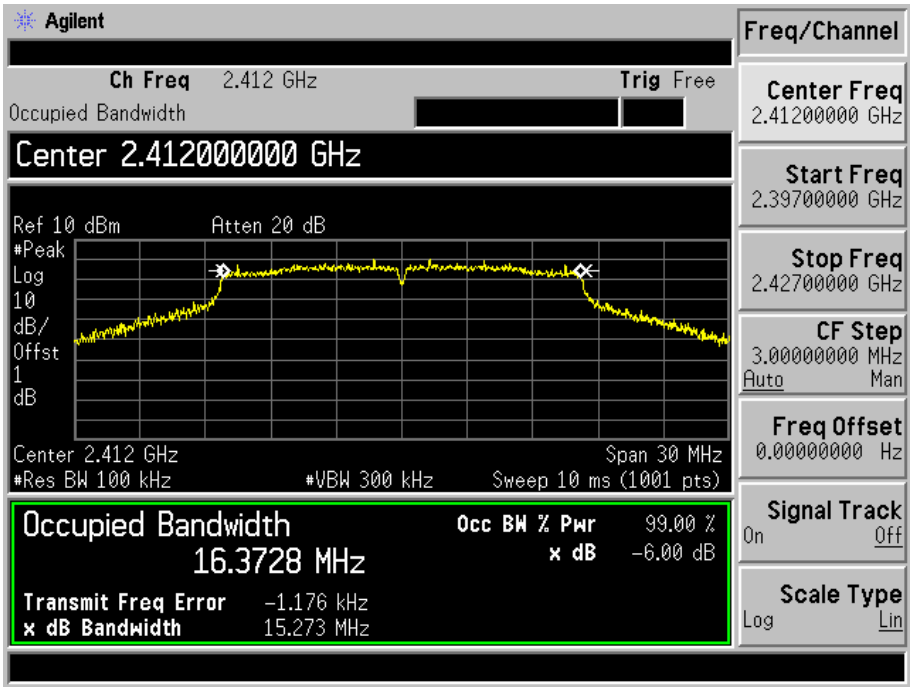
802.11b-Middle Channel



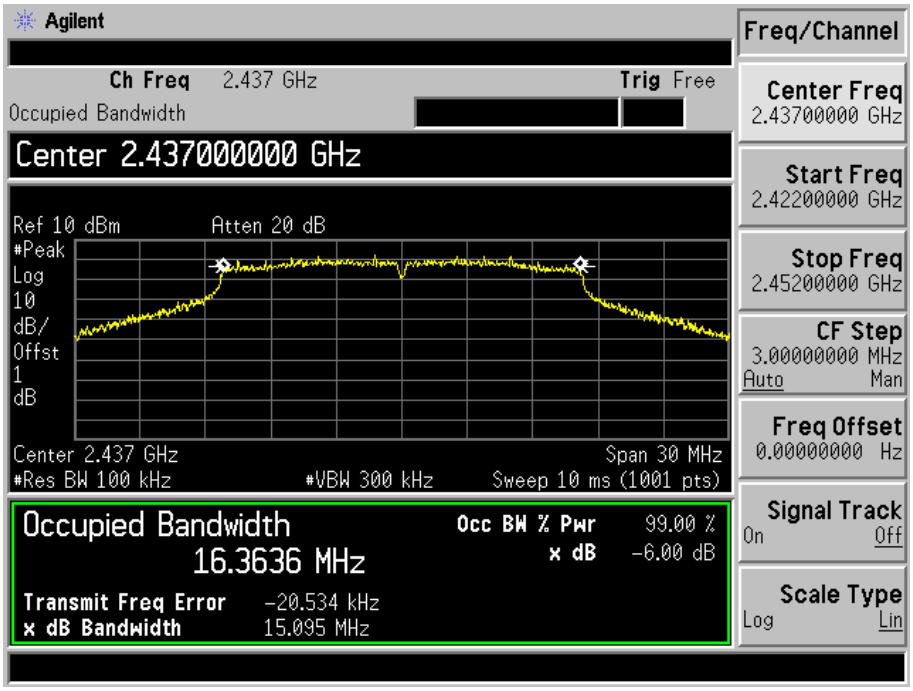
802.11b-High Channel



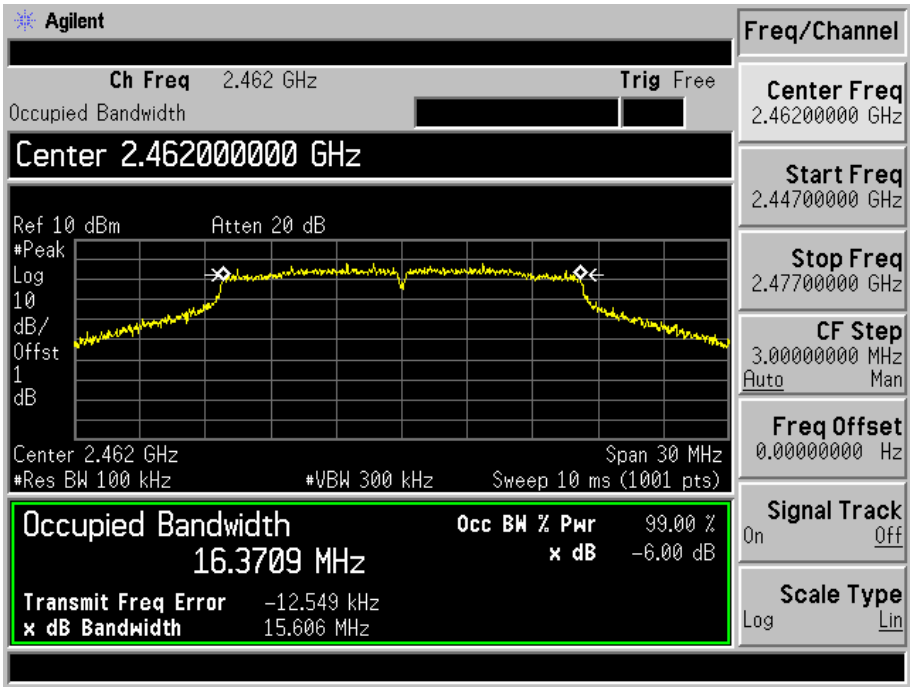
802.11g-Low Channel



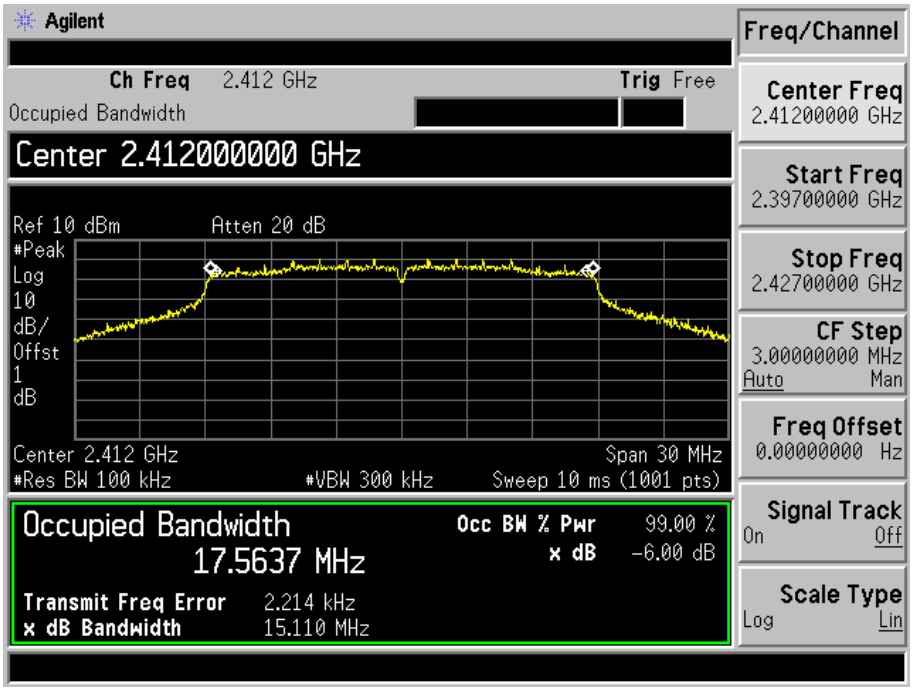
802.11g-Middle Channel



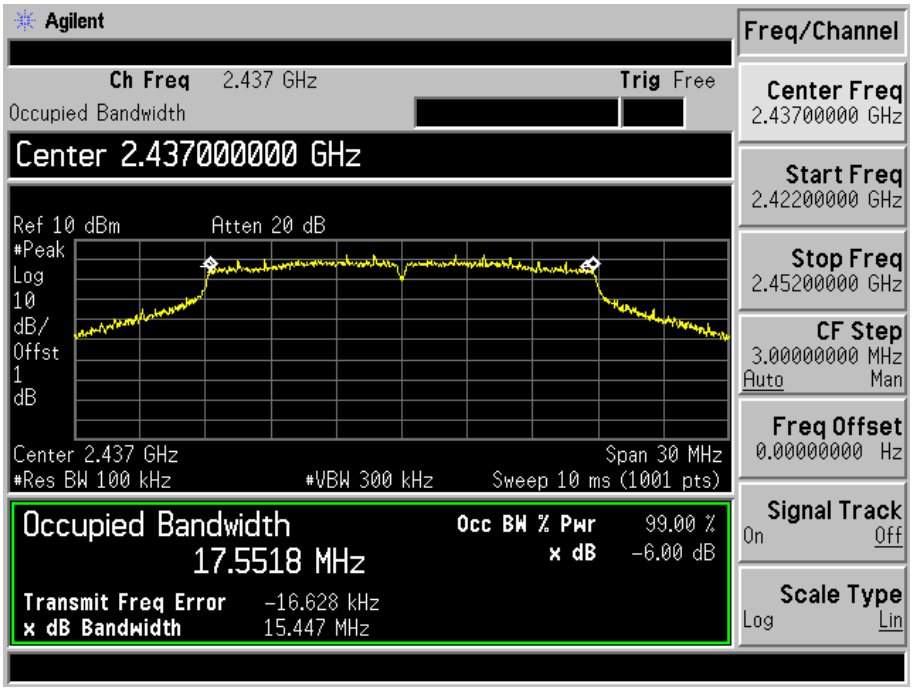
802.11g-High Channel



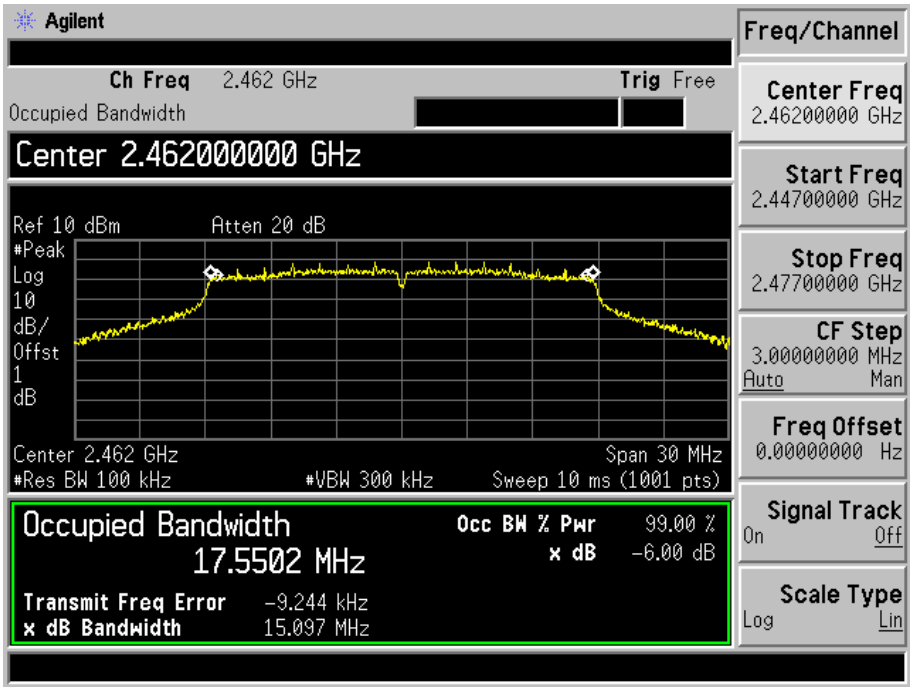
802.11n-HT20-Low Channel



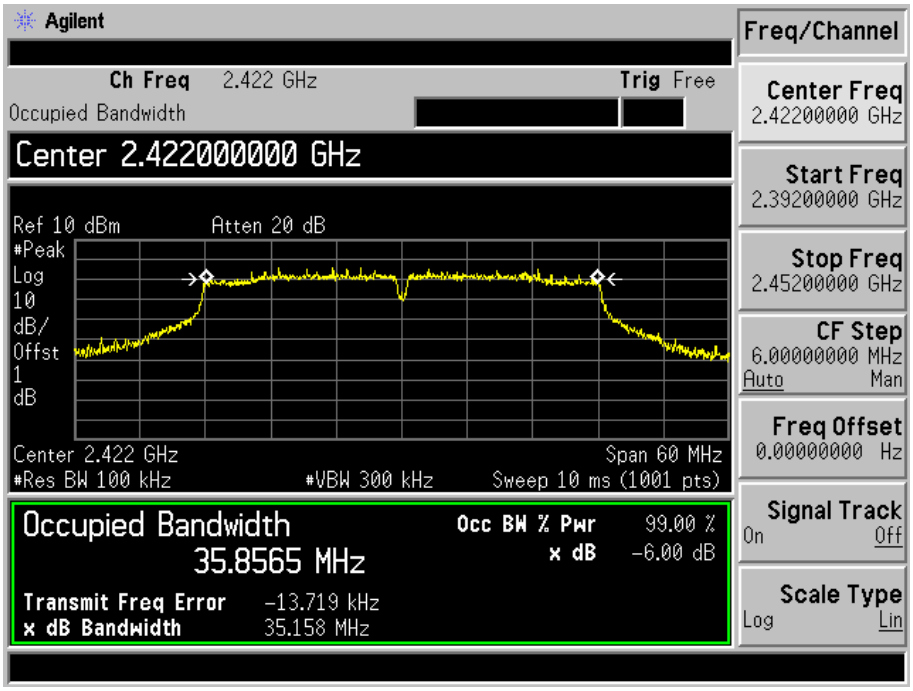
802.11n-HT20-Middle Channel



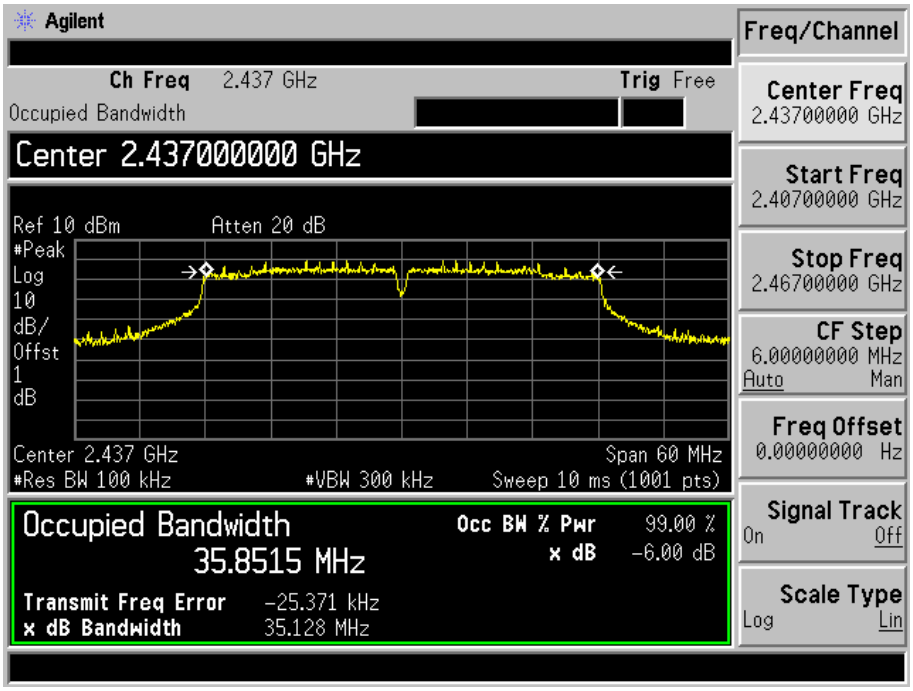
802.11n-HT20-High Channel



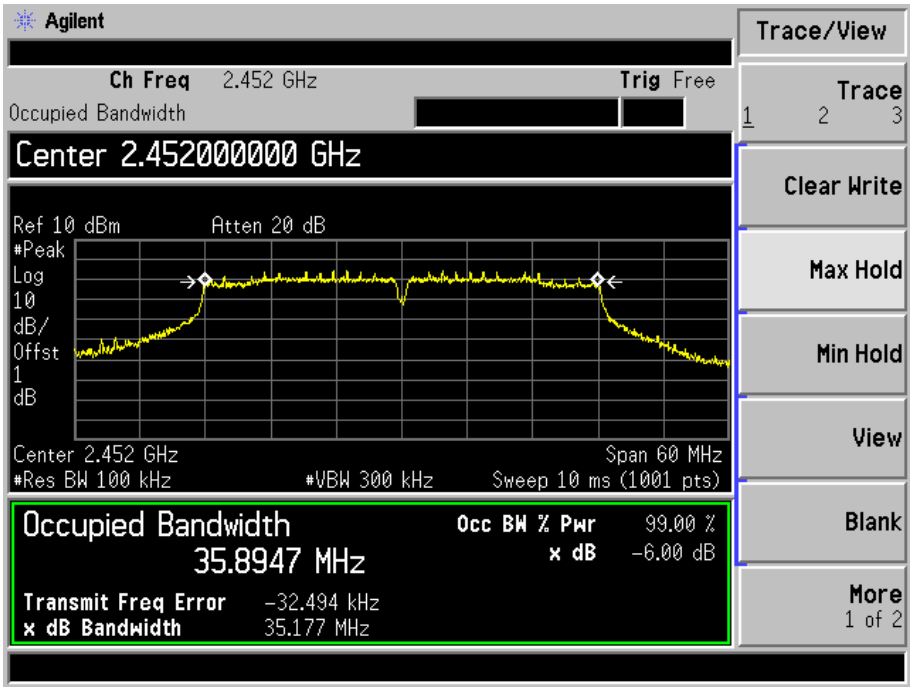
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel



802.11n-HT40-High Channel



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, and 5725–5850 MHz bands: 1 Watt.

7.2 Test Procedure

According to the KDB-558074 D01 v04, 9.2.2.2, 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 ≥ 3 x RBW.
d) Number of points in sweep ≥ 2 × span / RBW. (This gives bin-to-bin spacing ≤ 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 ≥ 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

WiFi A

Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b _ 11Mbps	2412	12.41	17.42	1000
	2437	11.98	15.78	1000
	2462	11.08	12.82	1000
802.11g_54Mbps	2412	10.30	10.72	1000
	2437	10.87	12.22	1000
	2462	10.39	10.94	1000
802.11n HT20_MCS7	2412	9.64	9.20	1000
	2437	11.11	12.91	1000
	2462	10.08	10.19	1000
802.11n HT40_MCS7	2422	9.62	9.16	1000
	2437	10.13	10.30	1000
	2452	9.29	8.49	1000

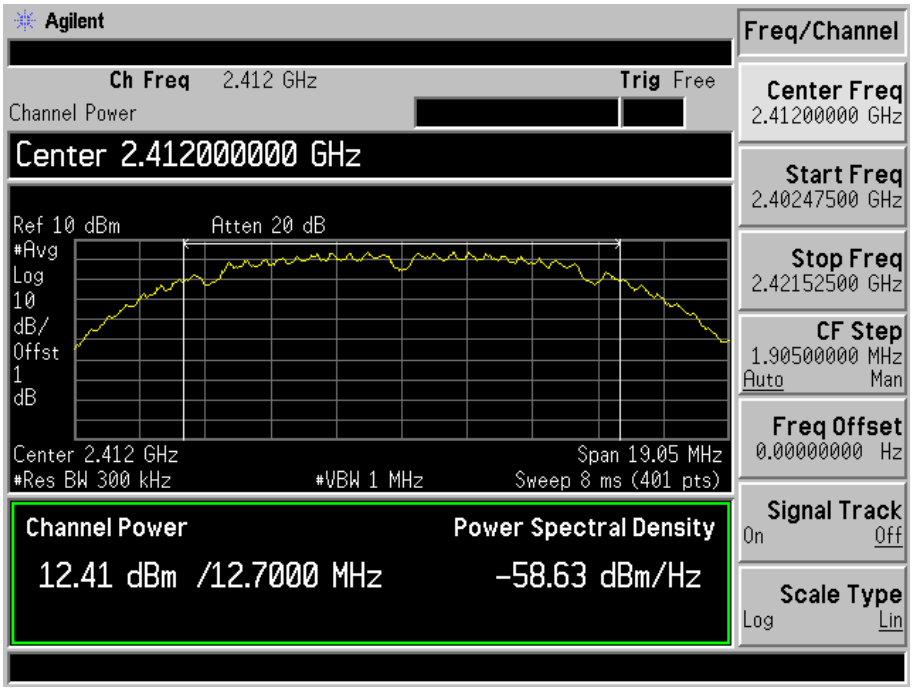
WiFi B

Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b _ 11Mbps	2412	12.31	17.02	1000
	2437	12.78	18.97	1000
	2462	11.70	14.79	1000
802.11g_54Mbps	2412	10.52	11.27	1000
	2437	12.07	16.11	1000
	2462	10.03	10.07	1000
802.11n HT20_MCS7	2412	9.86	9.68	1000
	2437	10.10	10.23	1000
	2462	9.71	9.35	1000
802.11n HT40_MCS7	2422	9.14	8.20	1000
	2437	9.15	8.22	1000
	2452	8.74	7.48	1000

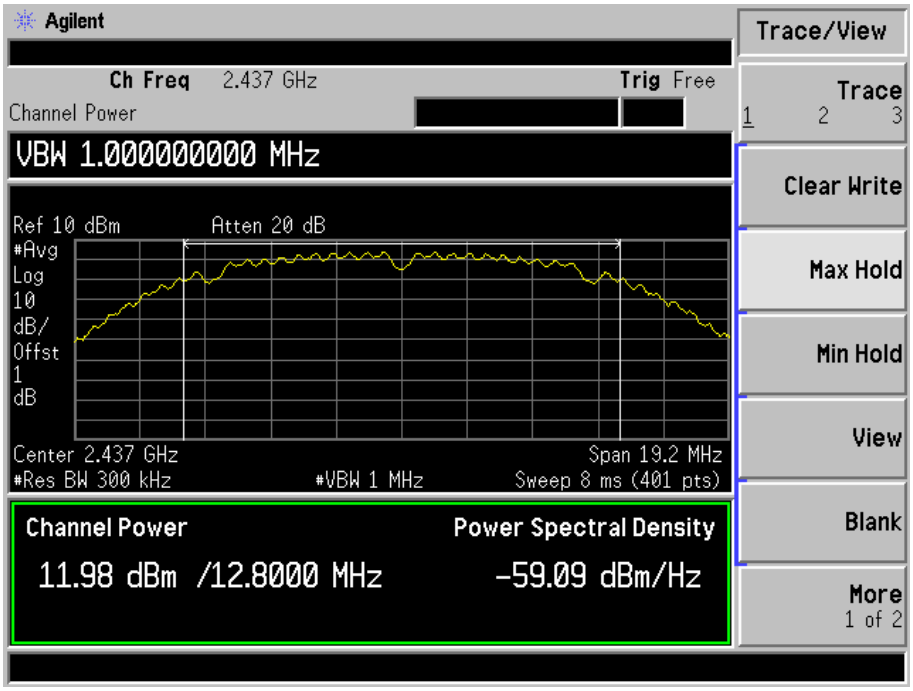
Please refer to the following test plots:

WiFi A

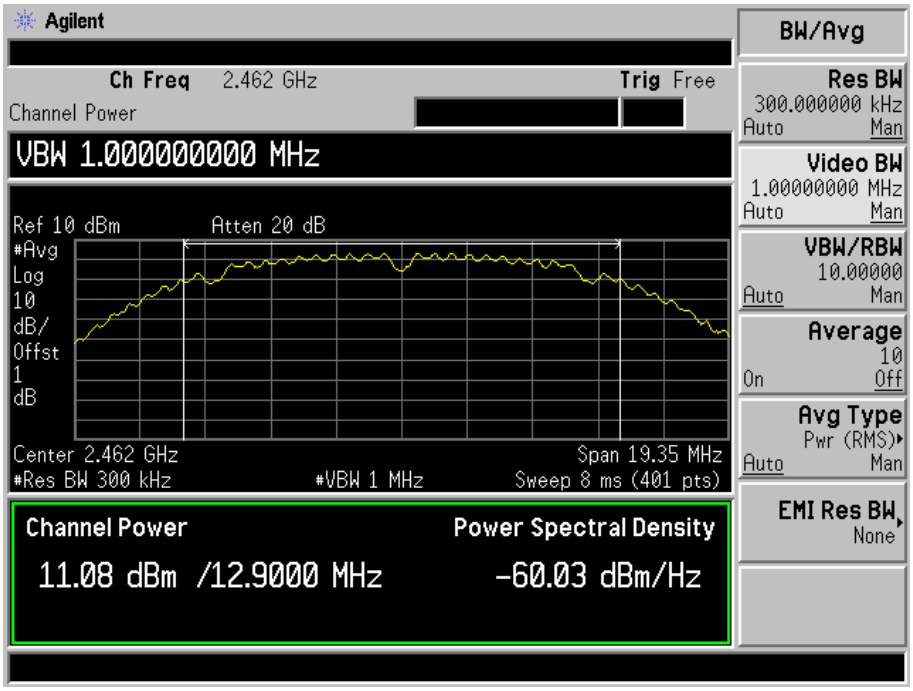
802.11b-11Mbps-Low Channel



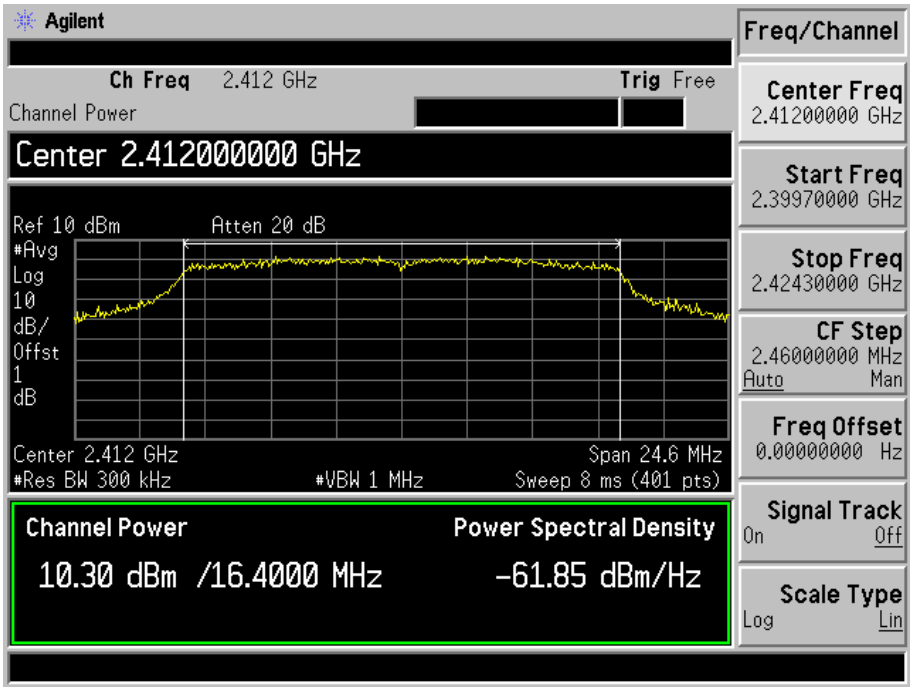
802.11b -11Mbps-Middle Channel



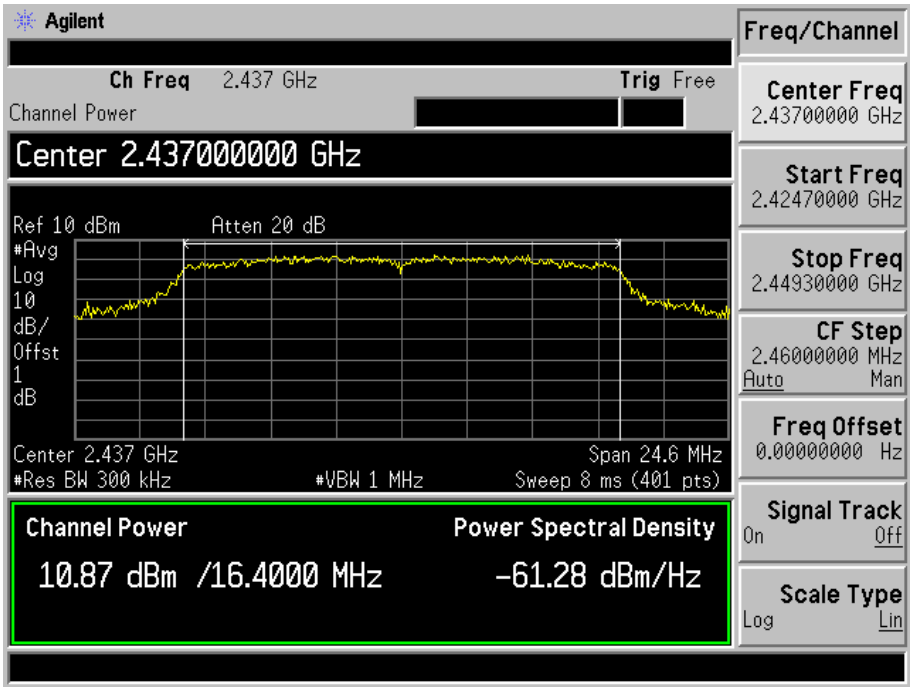
802.11b -11Mpbs-High Channel



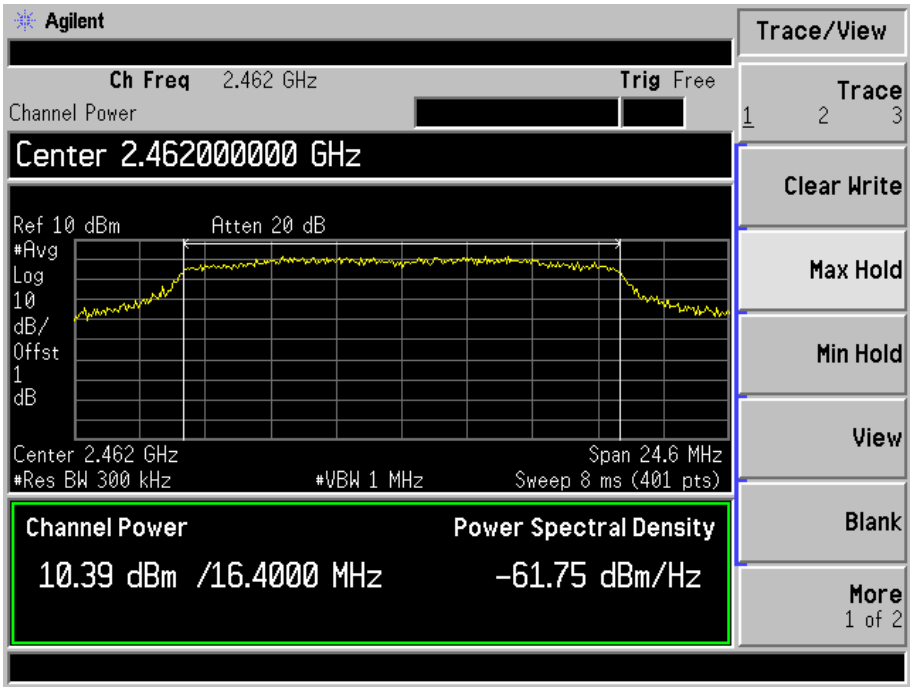
802.11g-54Mbps-Low Channel



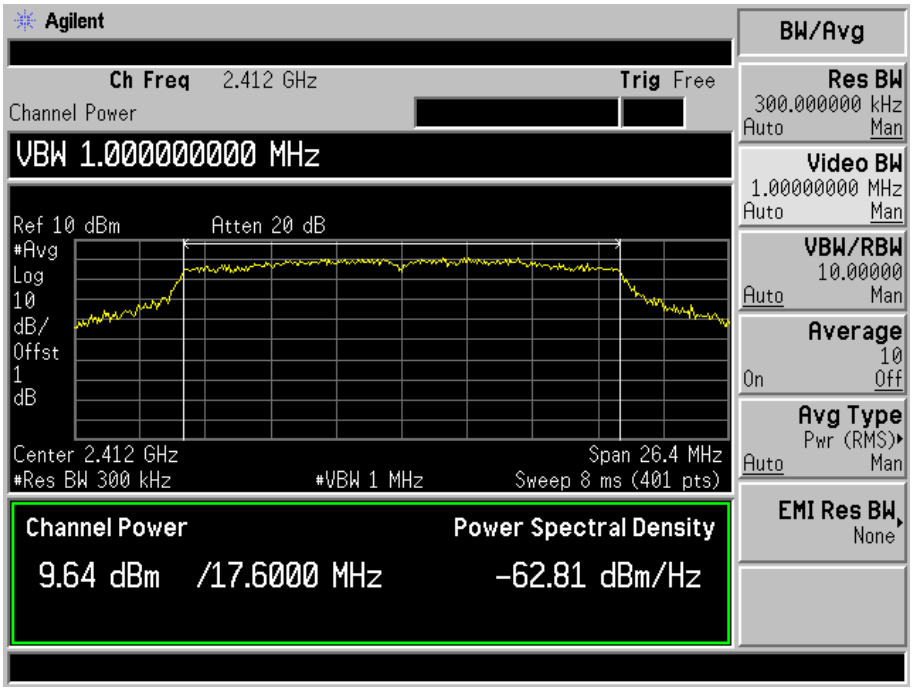
802.11g-54Mbps-Middle Channel



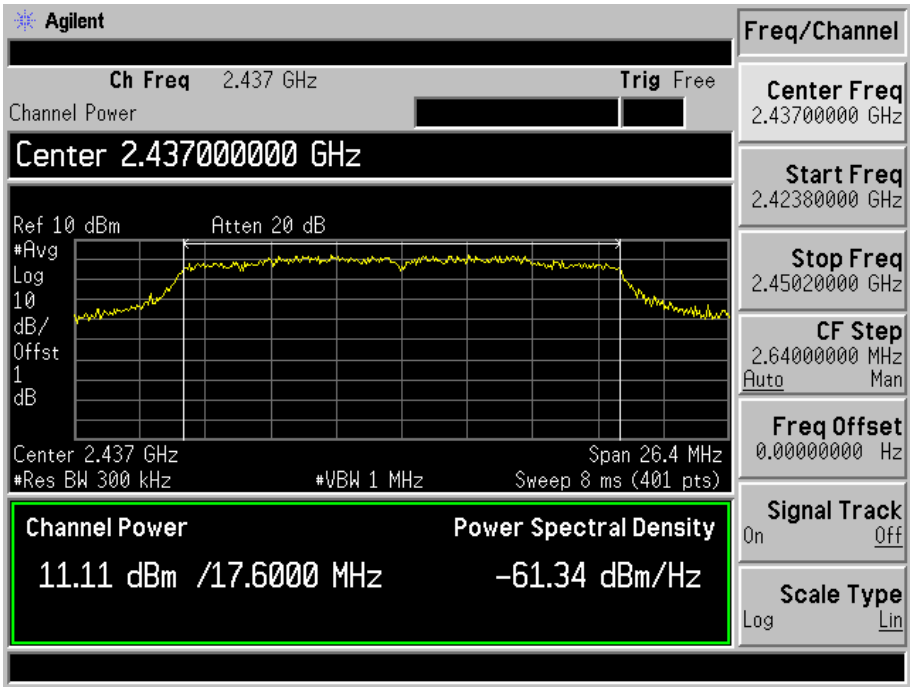
802.11g-54Mpbs-High Channel



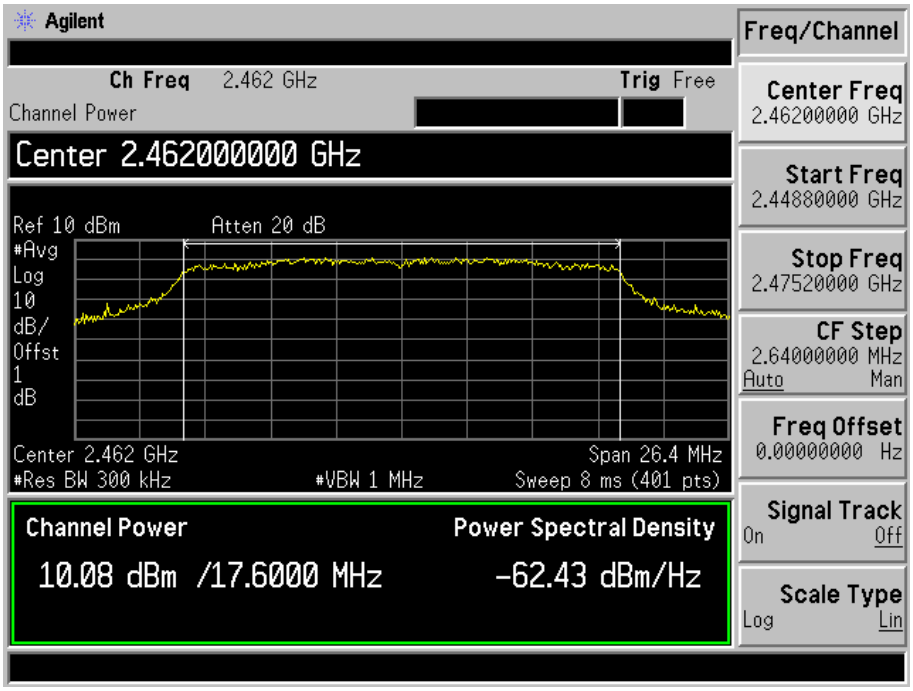
802.11n-HT20-MCS7-Low Channel



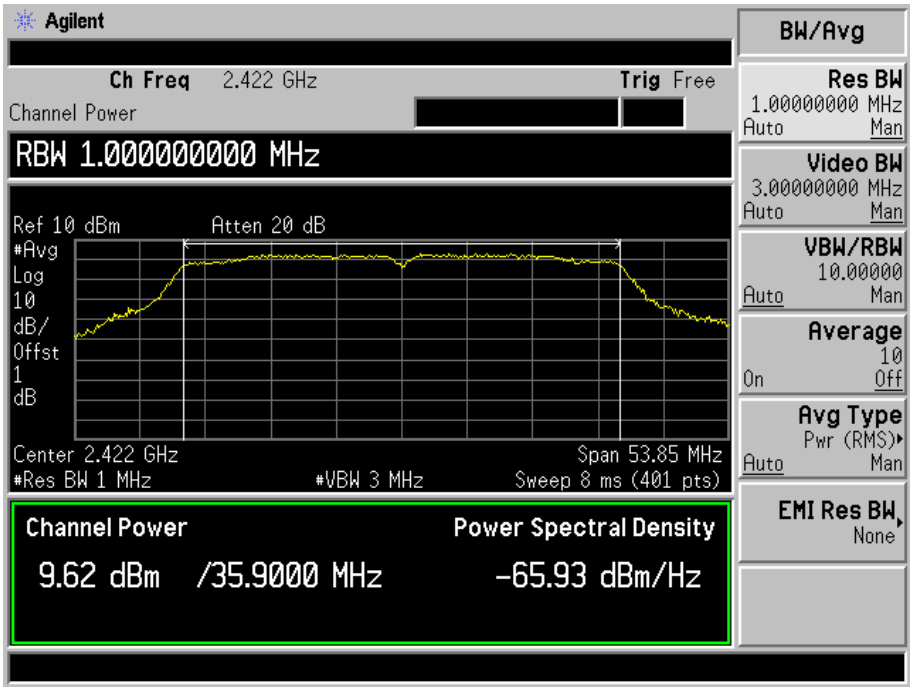
802.11n-HT20-MCS7-Middle Channel



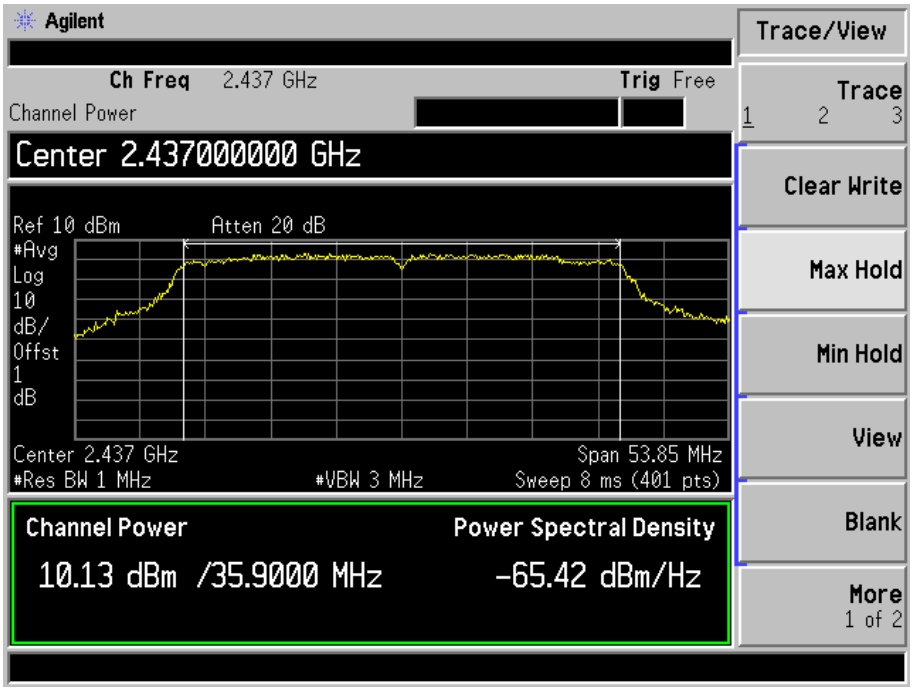
802.11n-HT20-MCS7-High Channel



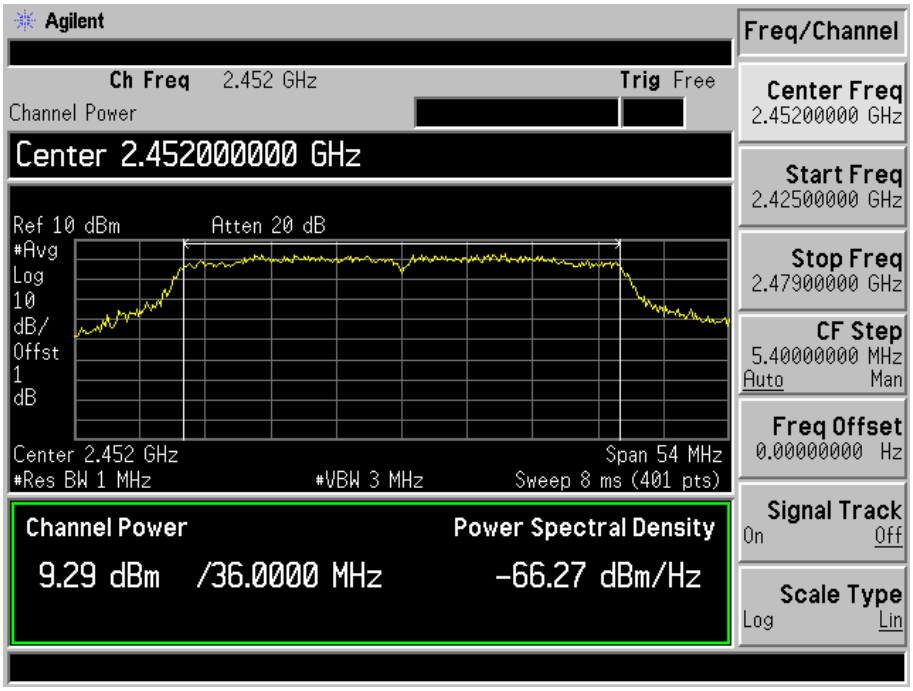
802.11n-HT40-MCS7-Low Channel



802.11n-HT40-MCS7-Middle Channel

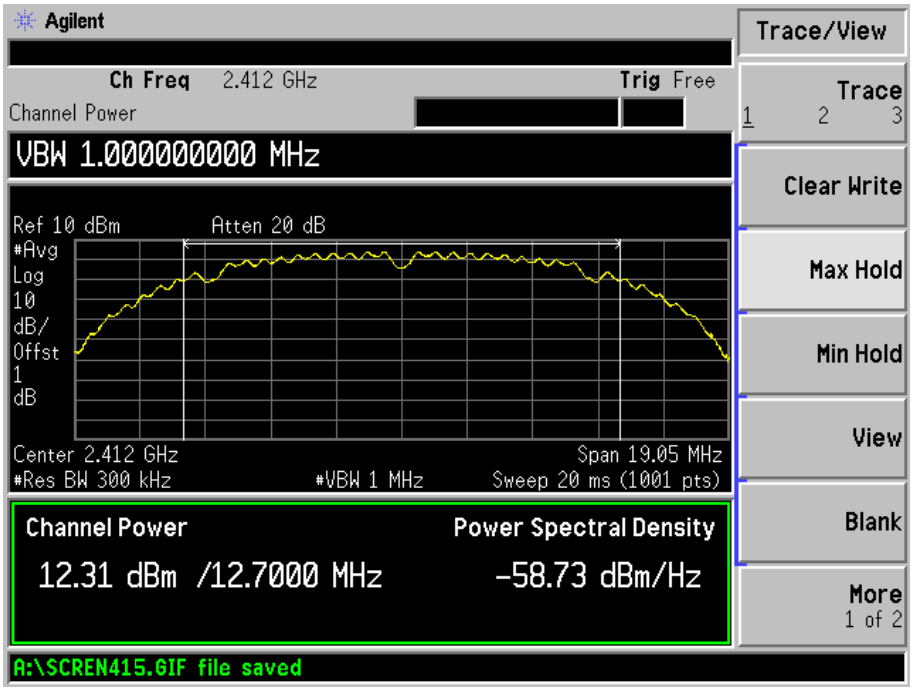


802.11n-HT40-MCS7-High Channel

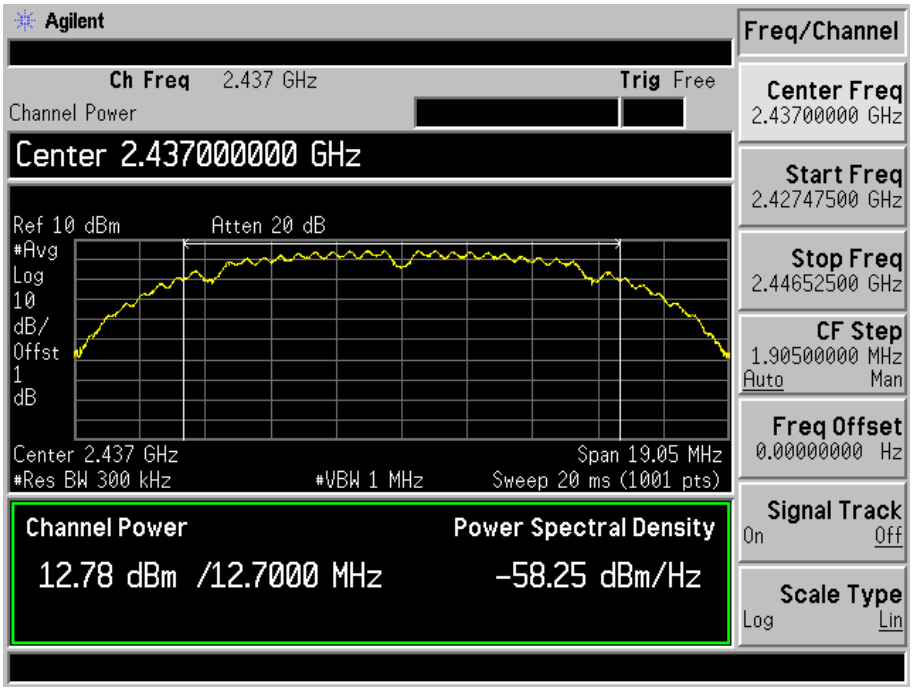


WiFi B

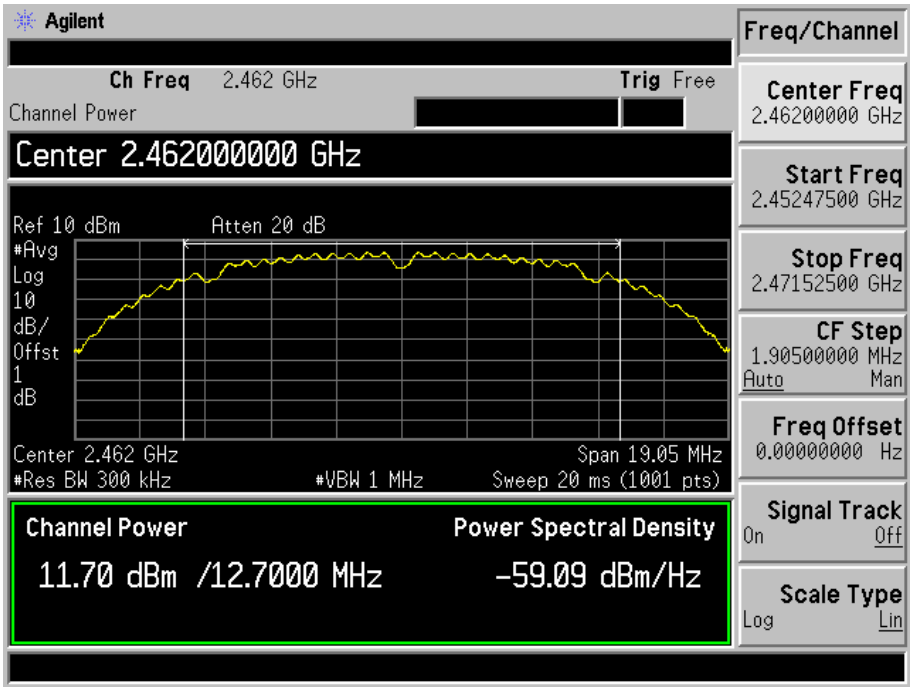
802.11b-11Mbps-Low Channel



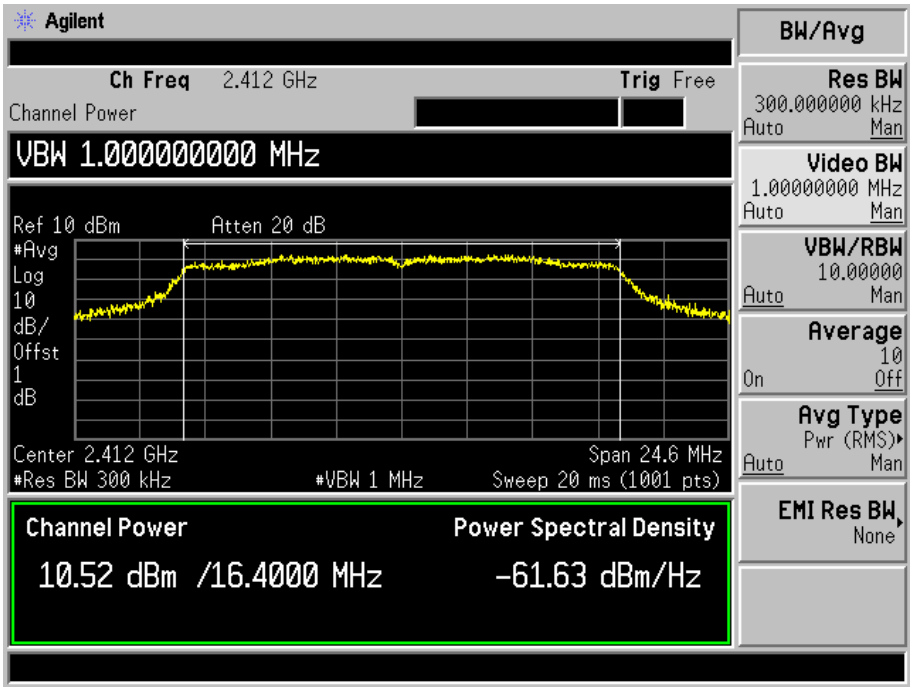
802.11b -11Mbps-Middle Channel



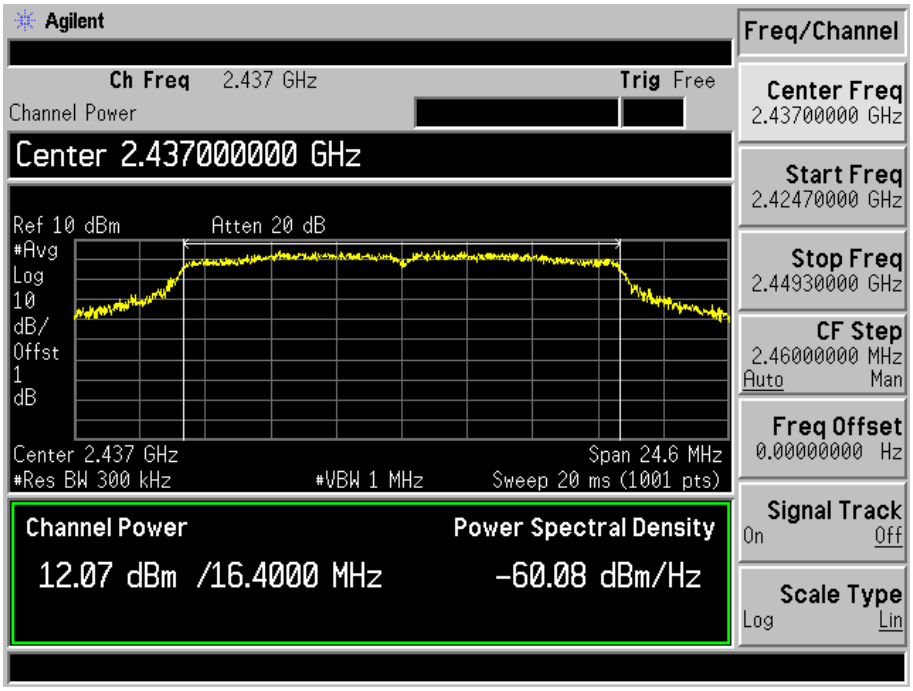
802.11b -11Mpbs-High Channel



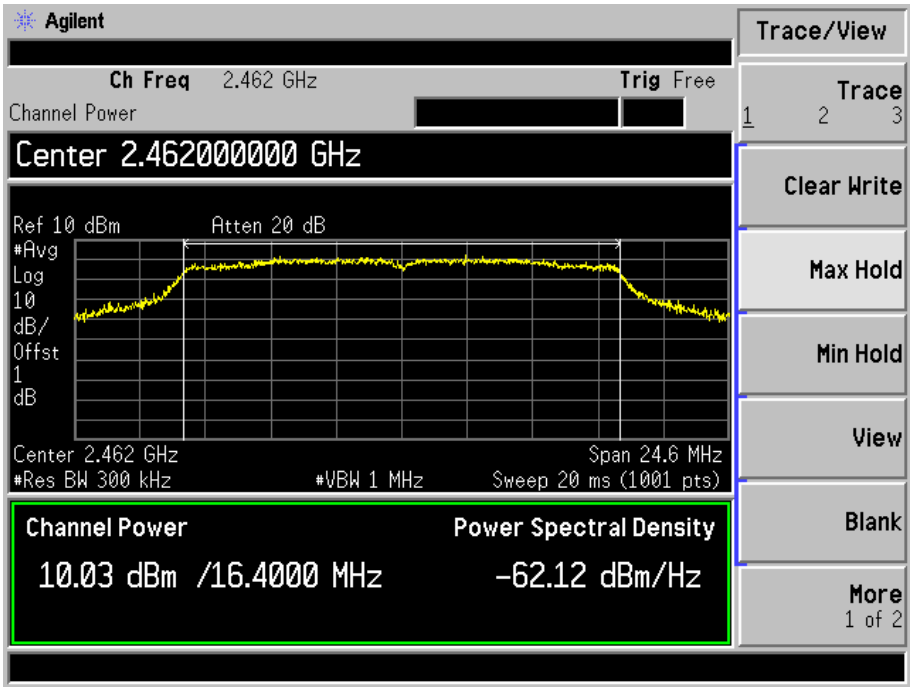
802.11g-54Mbps-Low Channel



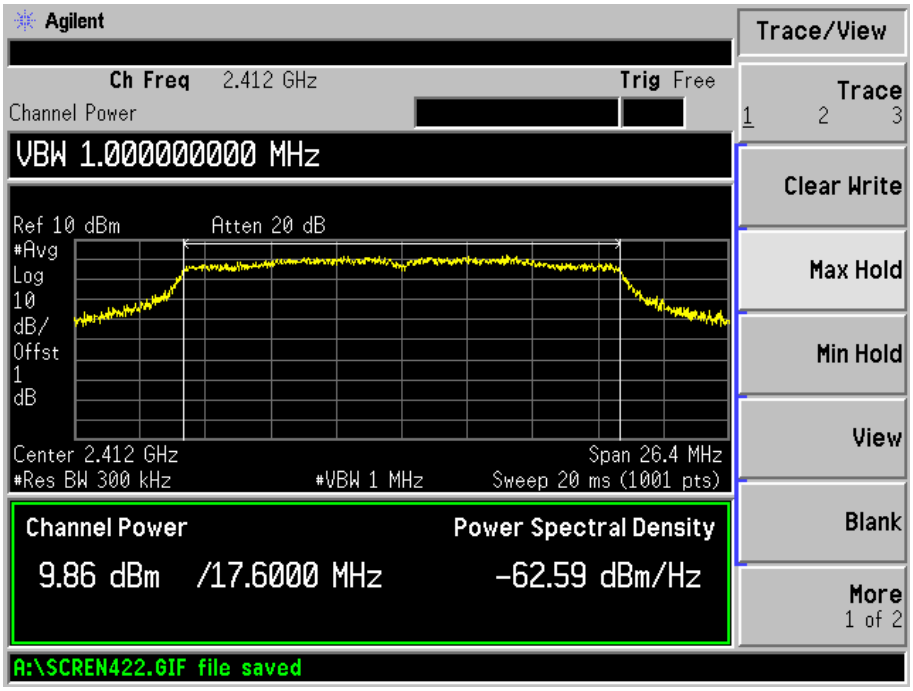
802.11g-54Mbps-Middle Channel



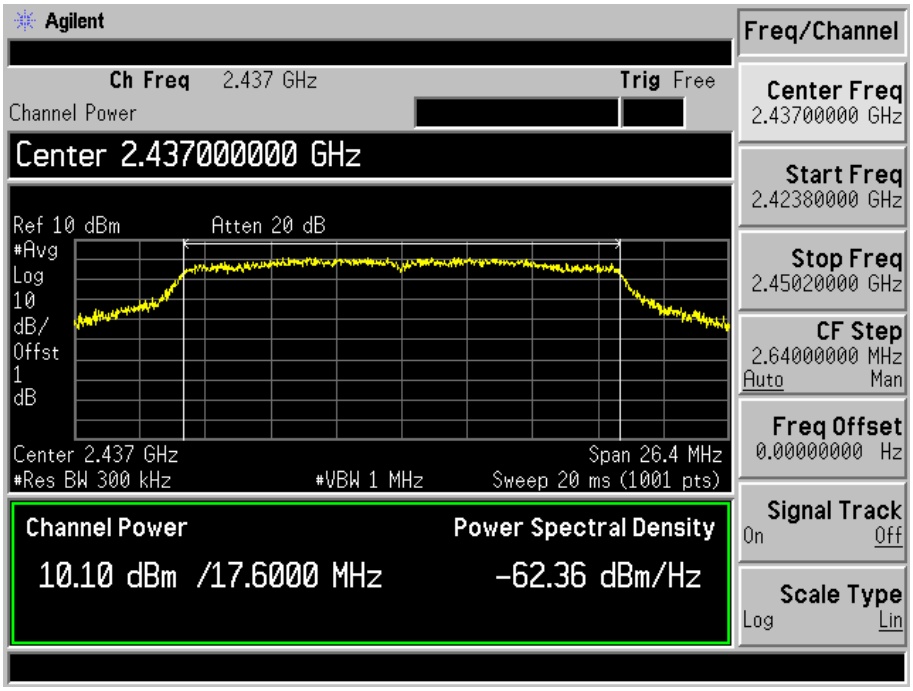
802.11g-54Mpbs-High Channel



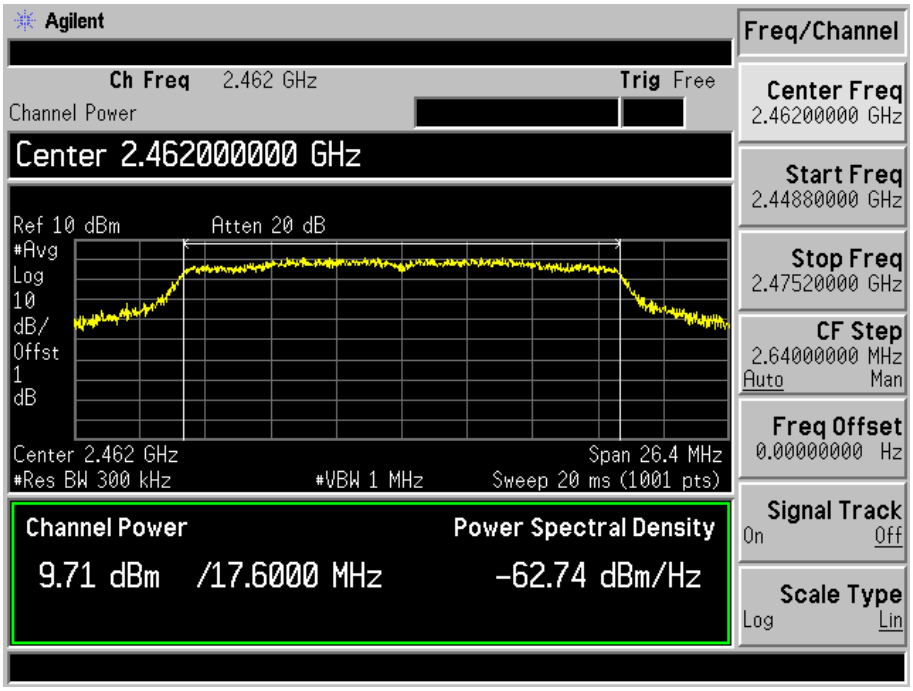
802.11n-HT20-MCS7-Low Channel



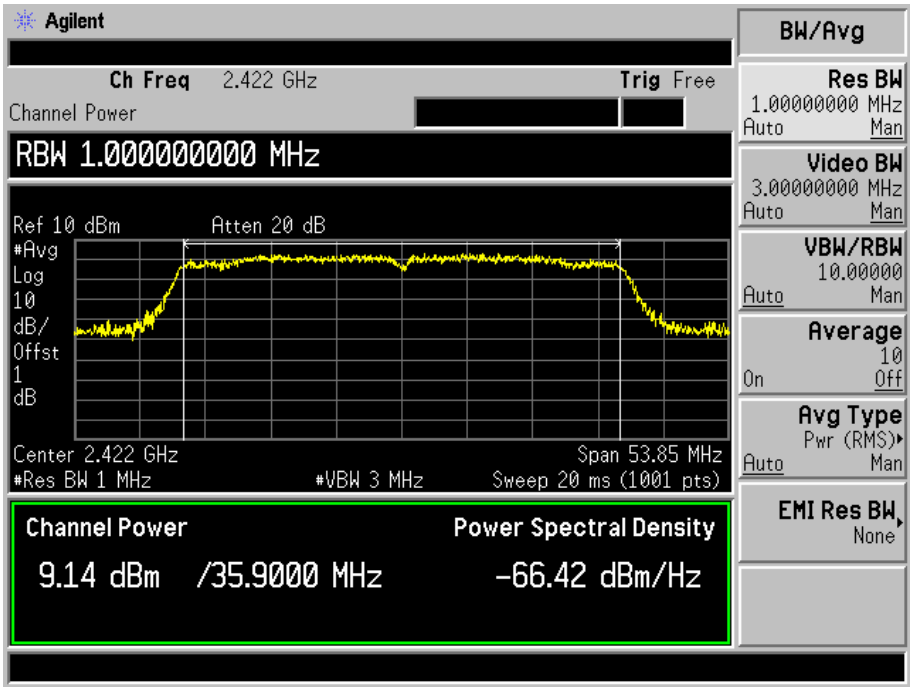
802.11n-HT20-MCS7-Middle Channel



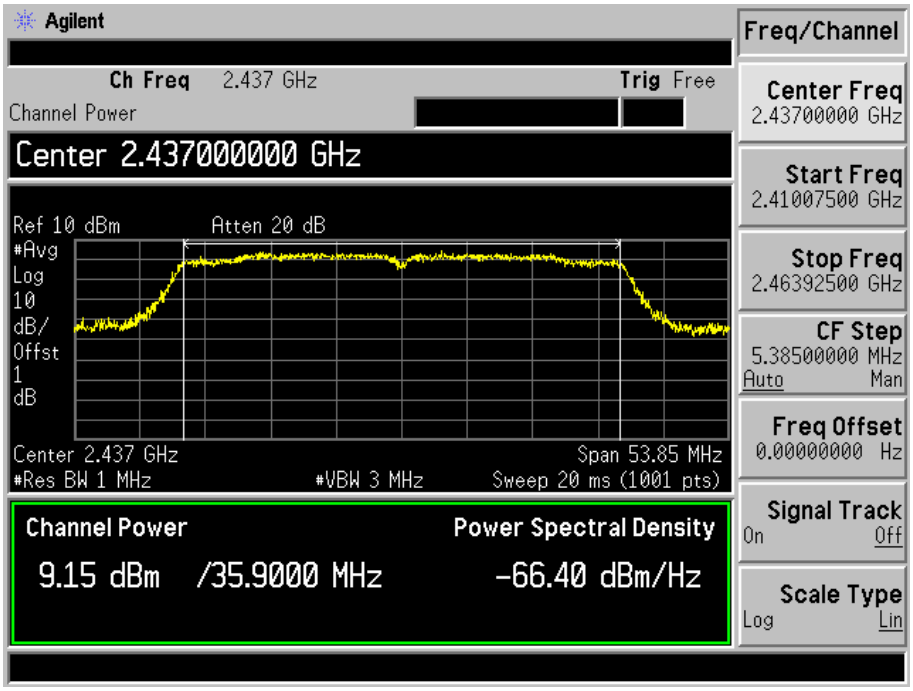
802.11n-HT20-MCS7-High Channel



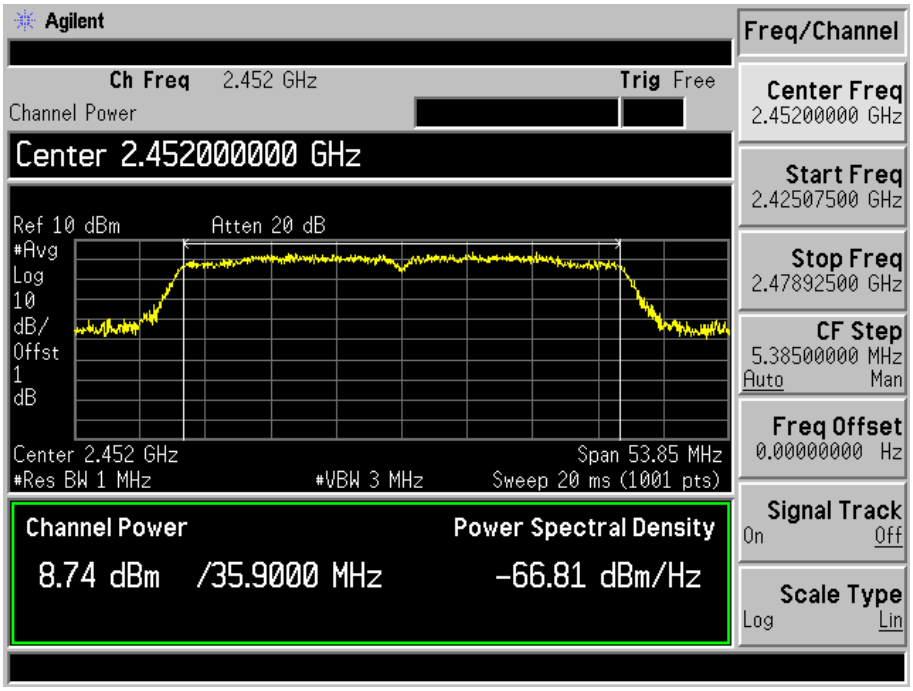
802.11n-HT40-MCS7-Low Channel



802.11n-HT40-MCS7-Middle Channel



802.11n-HT40-MCS7-High Channel



8. Field Strength of Spurious Emissions

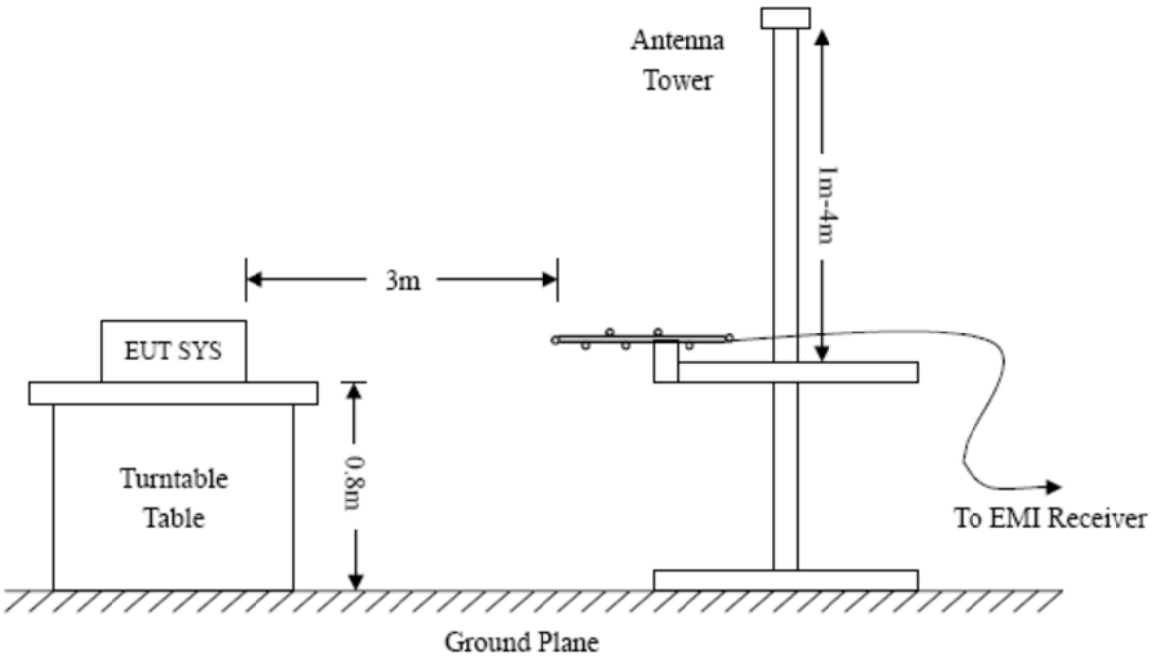
8.1 Standard Applicable

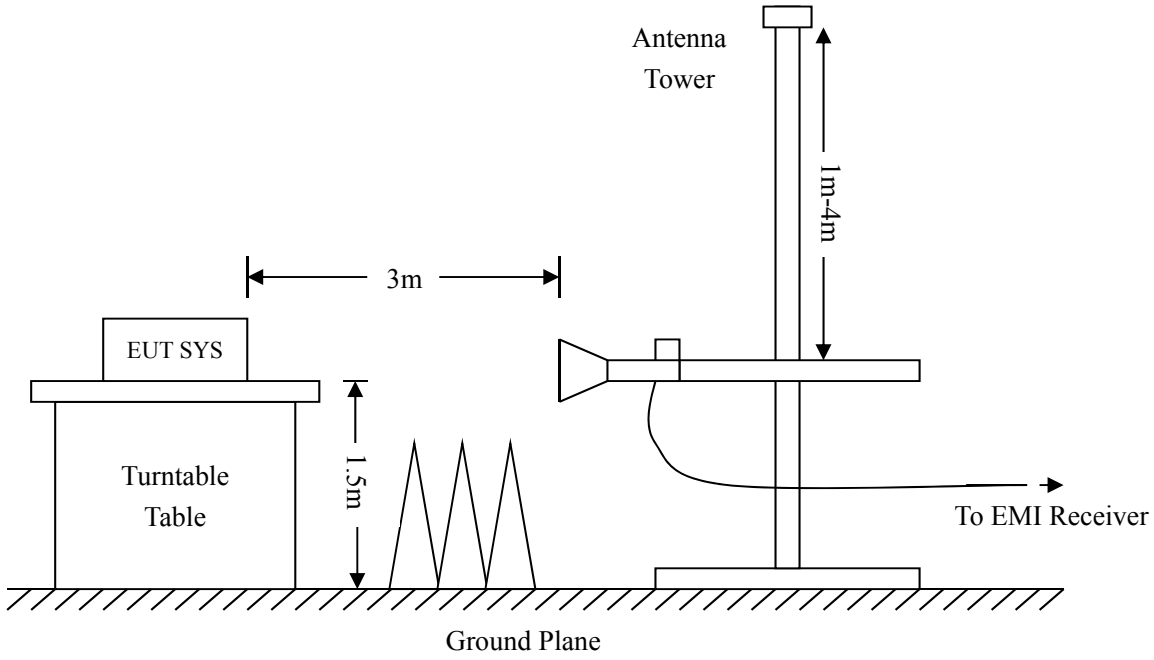
According to §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within 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).

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.

8.2 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.205 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	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=360KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

8.3 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:

Corr. Ampl. = Indicated Reading + Ant. Factor + Cable Loss – Ampl. Gain

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

Margin = Corr. Ampl. – FCC Part 15 Limit

8.4 Environmental Conditions

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

8.5 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:

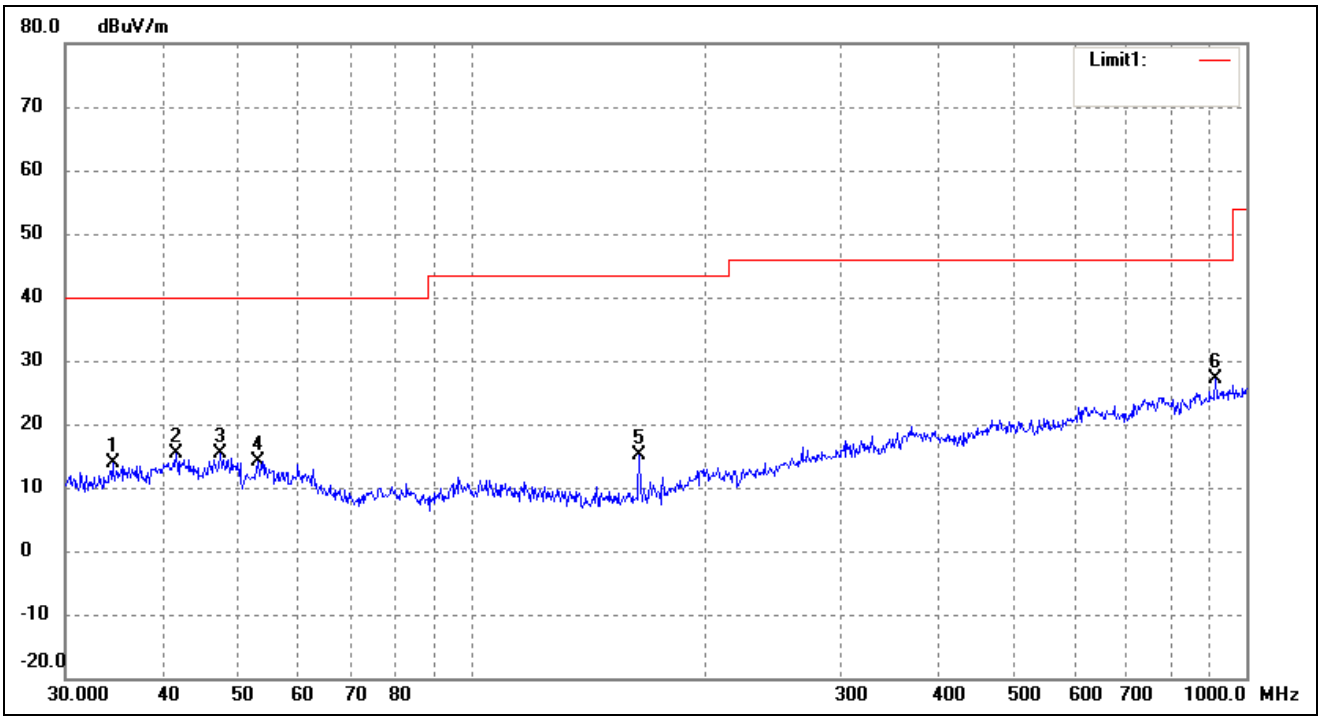
Note: this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

WiFi Antenna A

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

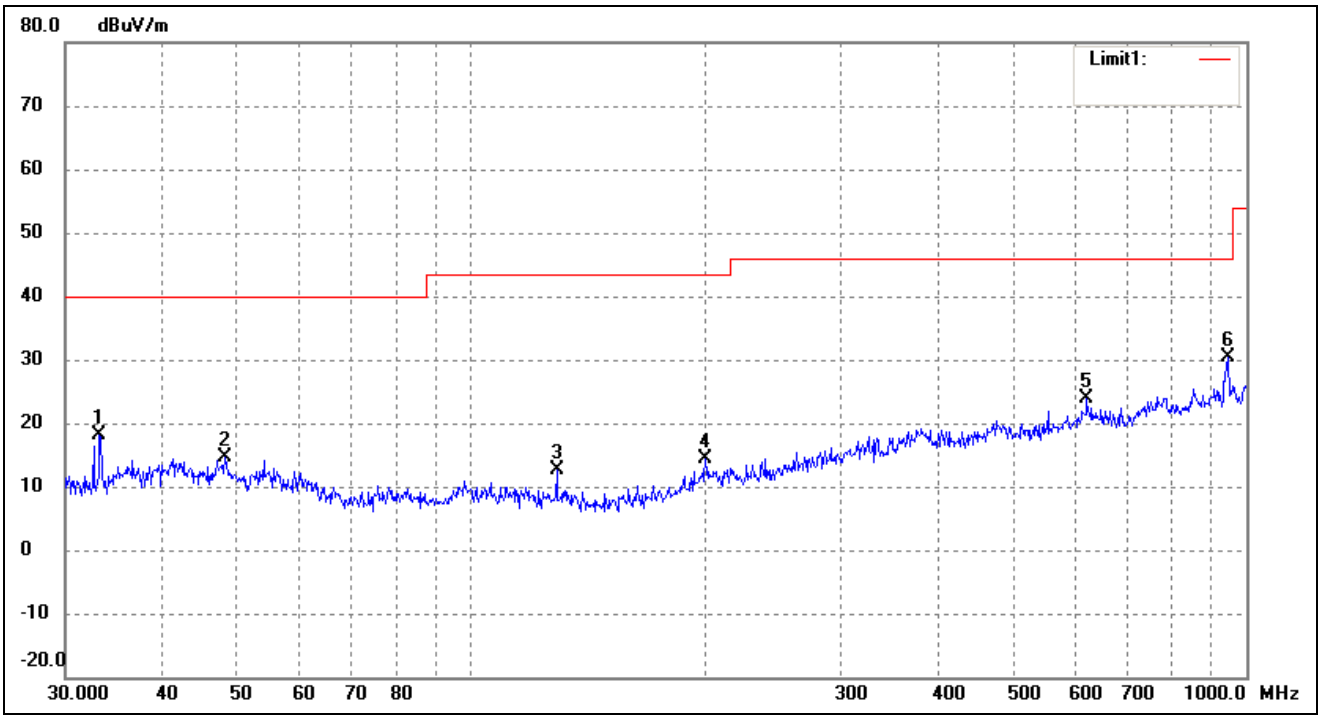
EUT: *Notebook*
Tested Model: *NEBP12*
Operating Condition: *802.11b Transmitting*
Comment: *DC 7.6V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	34.5173	23.02	-9.17	13.85	40.00	-26.15	144	100	peak
2	41.7130	23.17	-7.78	15.39	40.00	-24.61	295	100	peak
3	47.4918	23.42	-8.16	15.26	40.00	-24.74	71	100	peak
4	53.1313	22.94	-8.72	14.22	40.00	-25.78	342	100	peak
5	164.9075	27.13	-12.04	15.09	43.50	-28.41	314	100	peak
6	912.8620	23.68	3.49	27.17	46.00	-18.83	114	100	peak

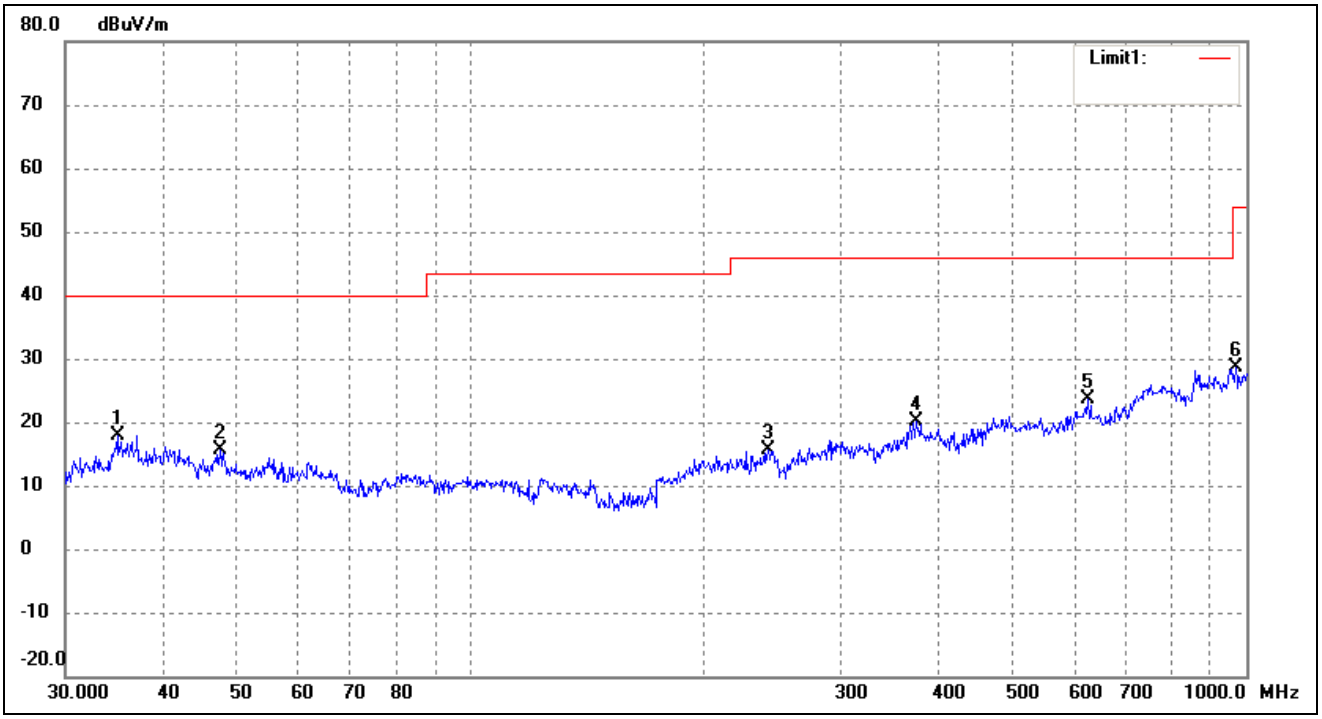
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.2112	27.58	-9.50	18.08	40.00	-21.92	331	100	peak
2	48.1626	22.72	-8.20	14.52	40.00	-25.48	285	100	peak
3	129.0146	24.53	-11.94	12.59	43.50	-30.91	95	100	peak
4	200.6881	23.07	-8.66	14.41	43.50	-29.09	347	100	peak
5	622.8900	22.67	1.16	23.83	46.00	-22.17	54	100	peak
6	948.7610	26.46	3.97	30.43	46.00	-15.57	208	100	peak

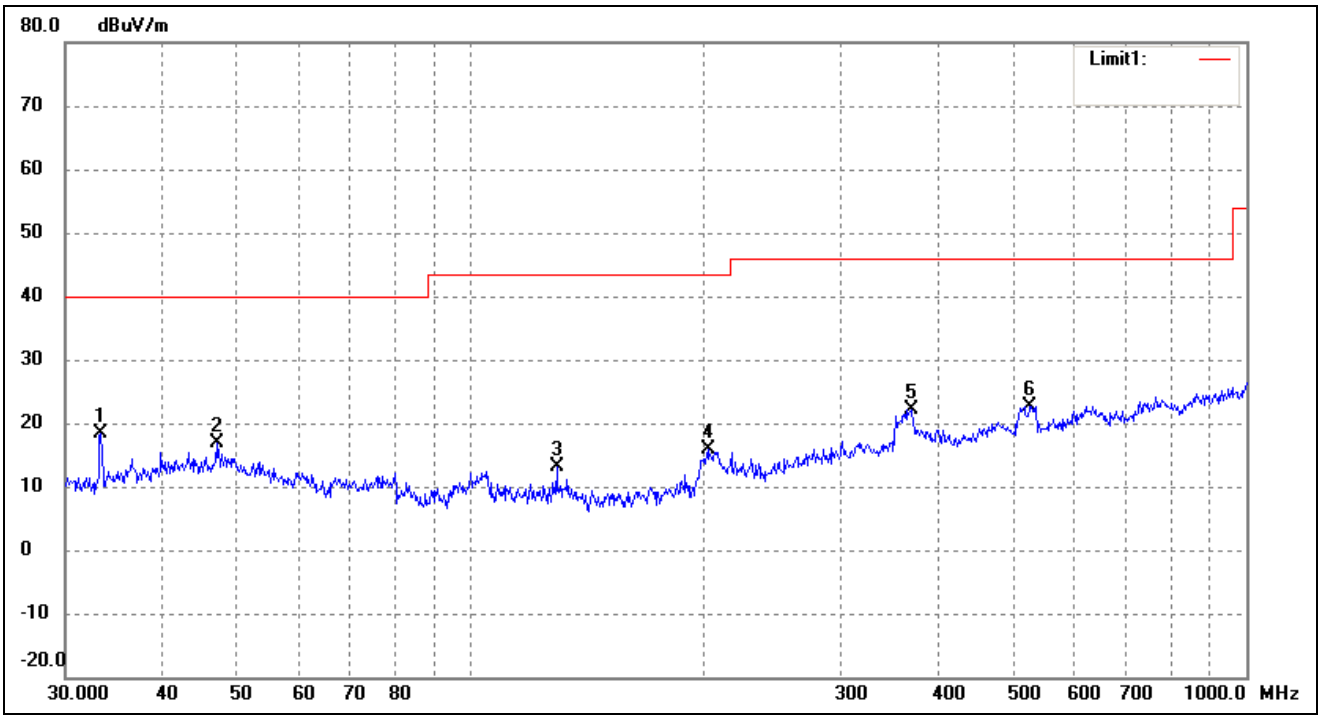
Operating Condition: *802.11g Transmitting*
Comment: *DC 7.6V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.0048	26.99	-9.04	17.95	40.00	-22.05	340	100	peak
2	47.4918	23.90	-8.16	15.74	40.00	-24.26	92	100	peak
3	241.6763	23.79	-8.20	15.59	46.00	-30.41	126	100	peak
4	374.6226	22.43	-2.41	20.02	46.00	-25.98	100	100	peak
5	625.0780	22.64	1.11	23.75	46.00	-22.25	244	100	peak
6	968.9338	24.89	3.72	28.61	54.00	-25.39	302	100	peak

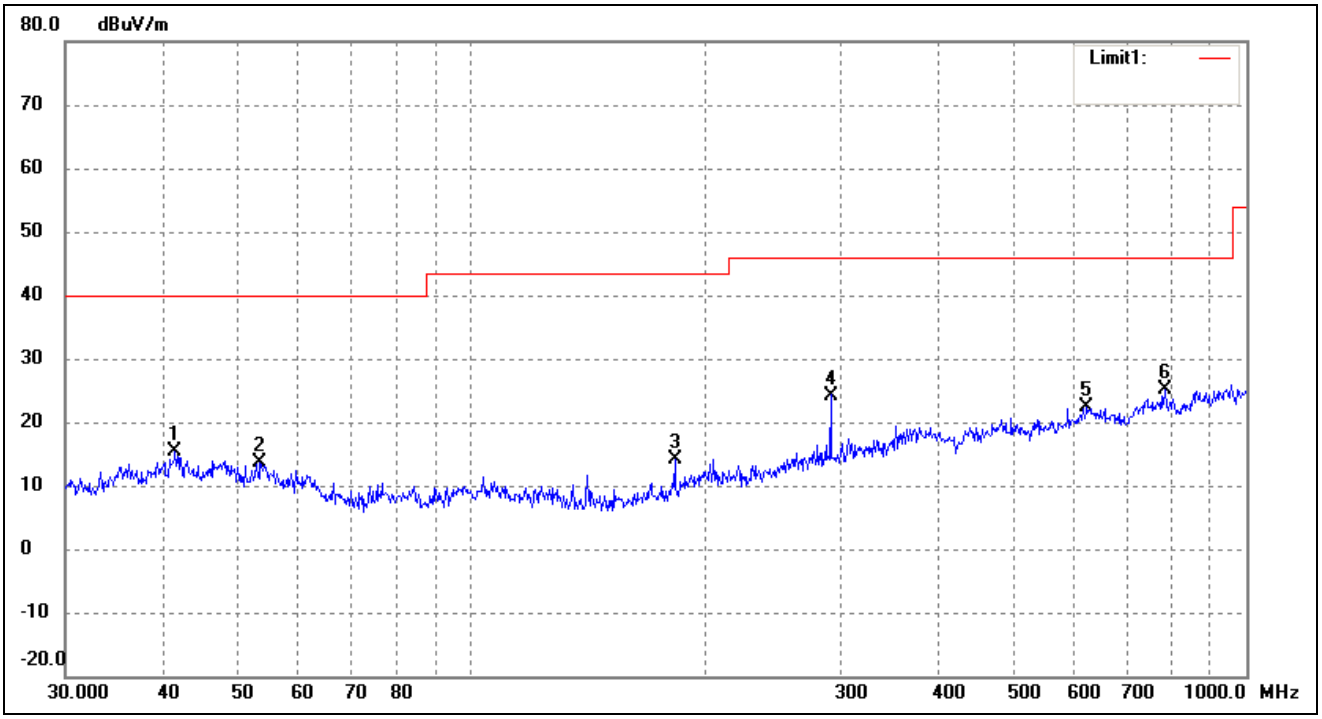
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.3279	27.92	-9.46	18.46	40.00	-21.54	202	100	peak
2	46.9948	25.01	-8.13	16.88	40.00	-23.12	94	100	peak
3	129.0146	25.13	-11.94	13.19	43.50	-30.31	294	100	peak
4	202.8104	24.63	-8.68	15.95	43.50	-27.55	93	100	peak
5	369.4047	24.87	-2.71	22.16	46.00	-23.84	191	100	peak
6	526.3967	24.57	-1.86	22.71	46.00	-23.29	269	100	peak

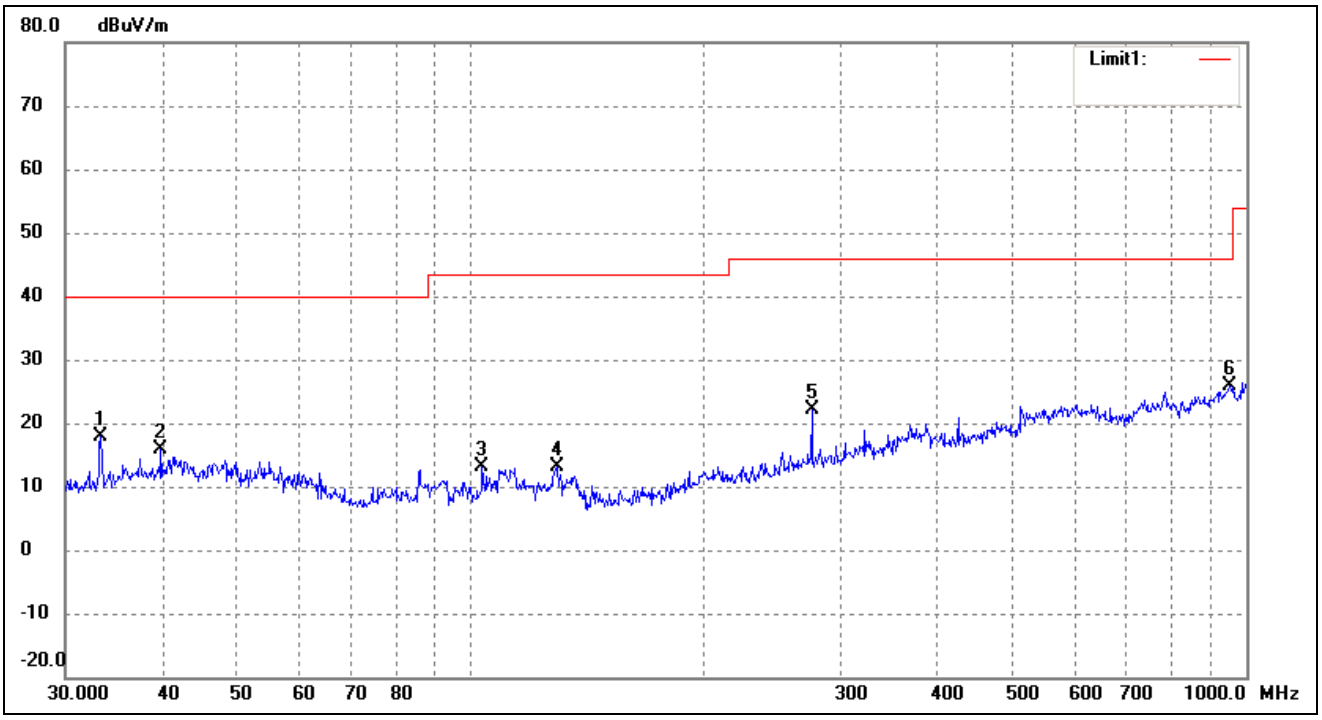
Operating Condition: *802.11n HT20 Transmitting*
Comment: *DC 7.6V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	41.5670	23.08	-7.77	15.31	40.00	-24.69	152	100	peak
2	53.5052	22.40	-8.76	13.64	40.00	-26.36	120	100	peak
3	183.2005	25.03	-10.93	14.10	43.50	-29.40	93	100	peak
4	291.0360	30.10	-5.85	24.25	46.00	-21.75	107	100	peak
5	622.8900	21.22	1.16	22.38	46.00	-23.62	335	100	peak
6	785.0935	22.46	2.65	25.11	46.00	-20.89	156	100	peak

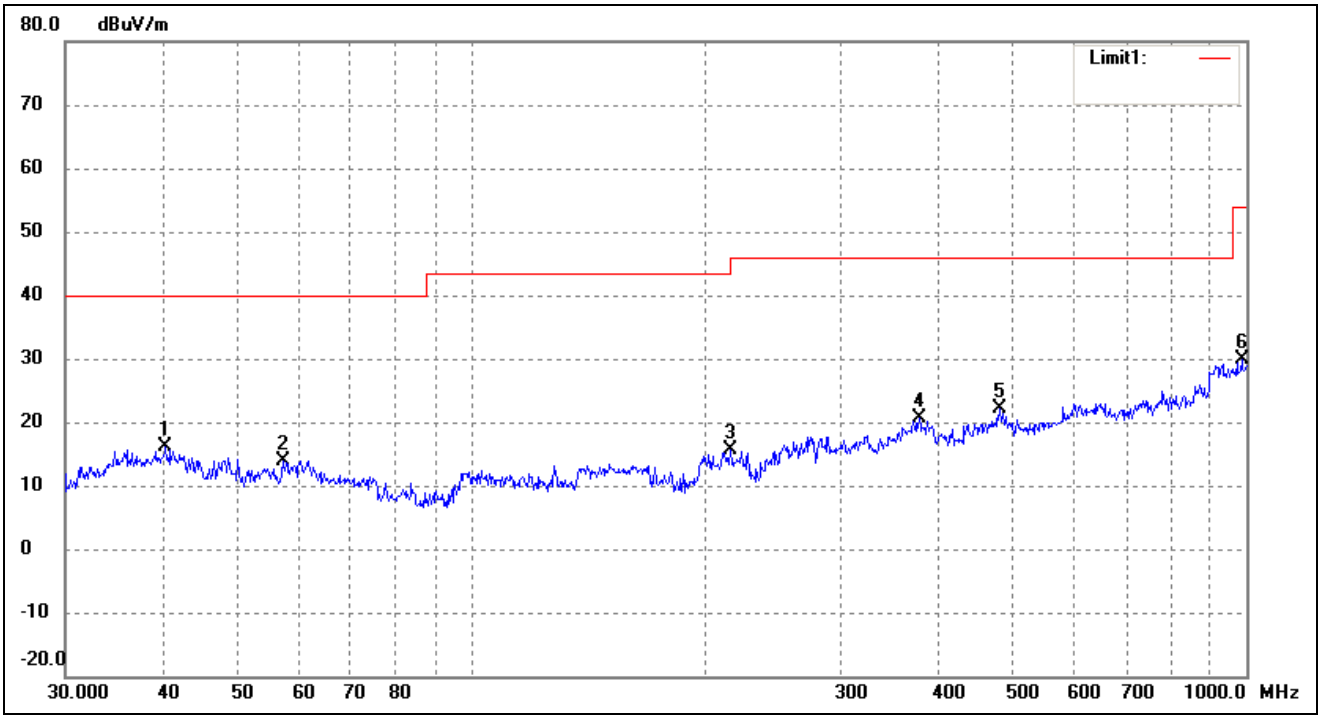
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.3279	27.27	-9.46	17.81	40.00	-22.19	57	100	peak
2	39.8542	23.58	-7.71	15.87	40.00	-24.13	150	100	peak
3	103.4421	24.16	-10.99	13.17	43.50	-30.33	114	100	peak
4	129.4678	24.98	-11.97	13.01	43.50	-30.49	95	100	peak
5	275.1570	28.44	-6.30	22.14	46.00	-23.86	134	100	peak
6	952.0937	22.07	3.85	25.92	46.00	-20.08	293	100	peak

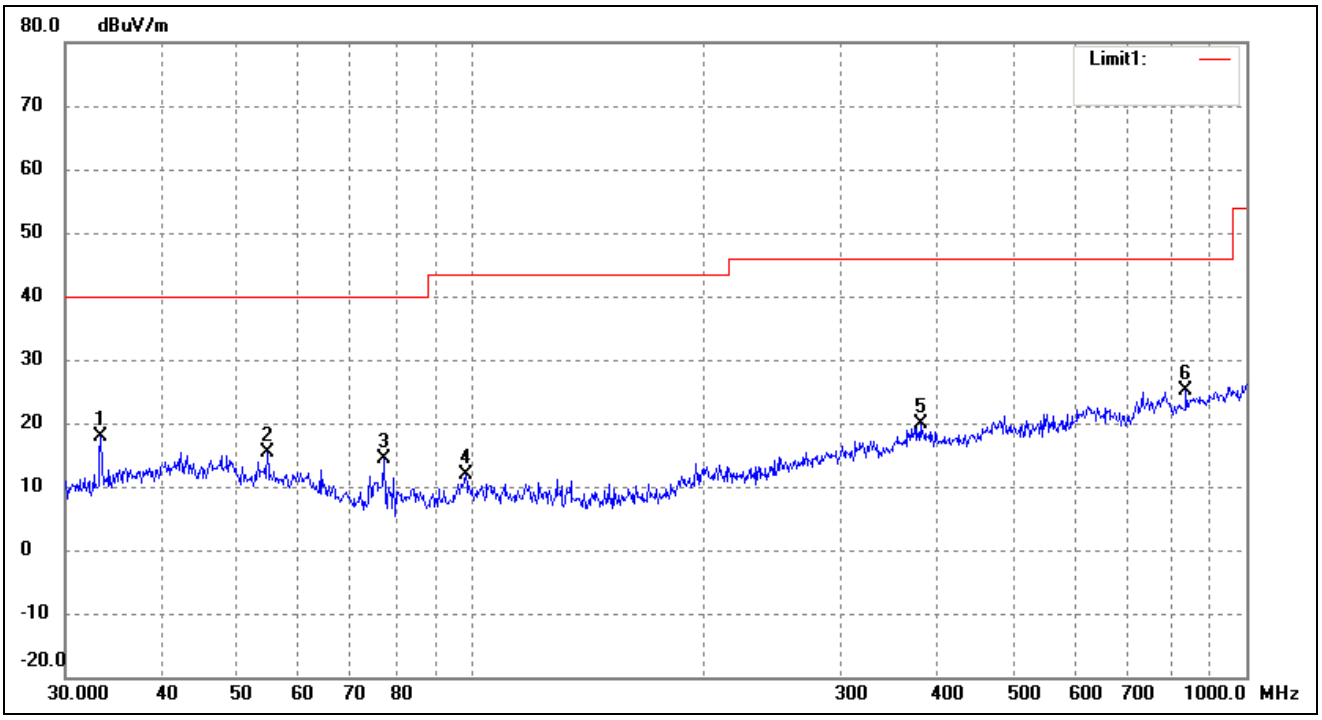
Operating Condition: *802.11n HT40 Transmitting*
Comment: *DC 7.6V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	40.4172	23.89	-7.70	16.19	40.00	-23.81	104	100	peak
2	57.1914	23.21	-9.22	13.99	40.00	-26.01	211	100	peak
3	216.0240	24.55	-8.81	15.74	46.00	-30.26	64	100	peak
4	378.5843	22.70	-2.17	20.53	46.00	-25.47	299	100	peak
5	480.5276	23.15	-1.08	22.07	46.00	-23.93	76	100	peak
6	986.0717	25.80	4.16	29.96	54.00	-24.04	347	100	peak

Test Specification: *Vertical*



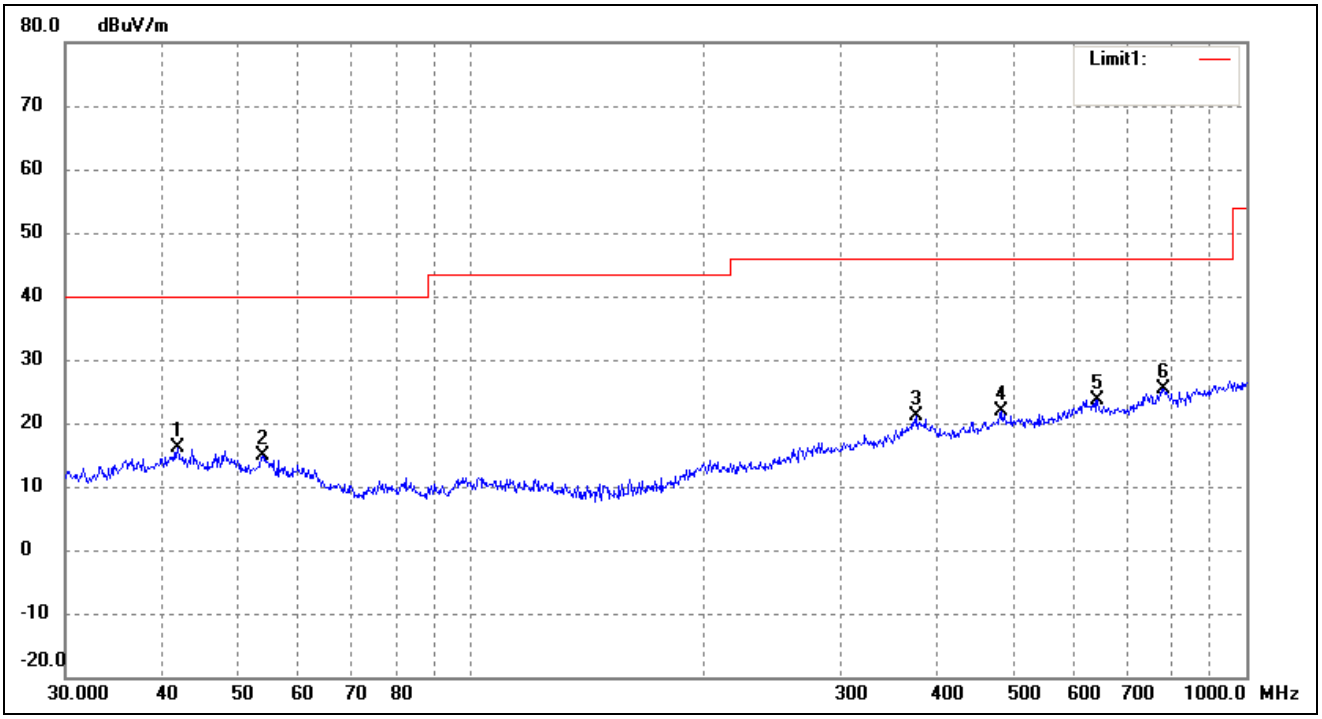
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.3279	27.24	-9.46	17.78	40.00	-22.22	185	100	peak
2	54.6429	24.23	-8.91	15.32	40.00	-24.68	276	100	peak
3	77.3212	26.57	-12.21	14.36	40.00	-25.64	81	100	peak
4	98.4866	23.13	-11.21	11.92	43.50	-31.58	297	100	peak
5	379.9141	22.08	-2.11	19.97	46.00	-26.03	63	100	peak
6	836.2443	23.25	1.84	25.09	46.00	-20.91	308	100	peak

WiFi Antenna B

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

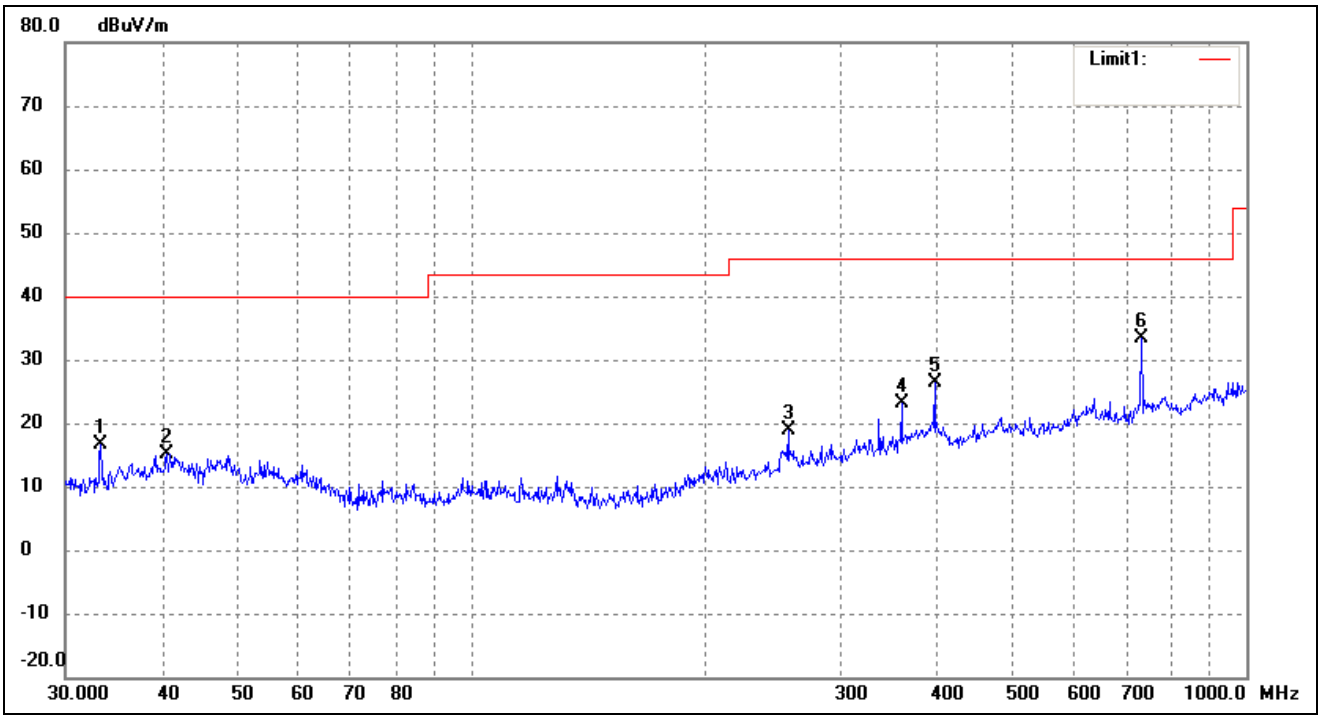
EUT: *Notebook*
Tested Model: *NEBP12*
Operating Condition: *802.11b Transmitting*
Comment: *DC 7.6V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	41.8596	23.85	-7.79	16.06	40.00	-23.94	279	100	peak
2	53.8818	23.75	-8.81	14.94	40.00	-25.06	96	100	peak
3	375.9385	23.42	-2.33	21.09	46.00	-24.91	55	100	peak
4	483.9094	23.03	-1.27	21.76	46.00	-24.24	93	100	peak
5	642.8613	22.99	0.65	23.64	46.00	-22.36	208	100	peak
6	782.3453	22.63	2.78	25.41	46.00	-20.59	224	100	peak

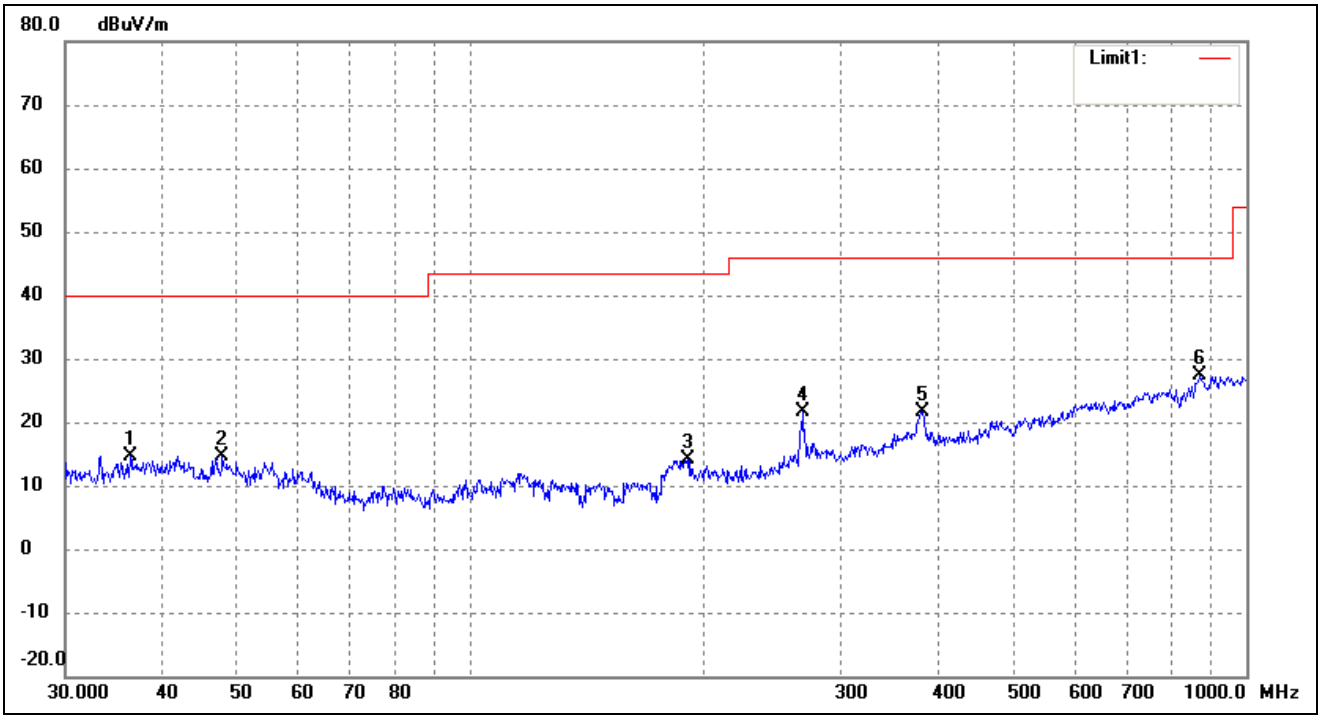
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.3279	26.14	-9.46	16.68	40.00	-23.32	296	100	peak
2	40.5591	22.85	-7.70	15.15	40.00	-24.85	94	100	peak
3	256.5211	26.02	-7.18	18.84	46.00	-27.16	178	100	peak
4	359.1860	26.57	-3.32	23.25	46.00	-22.75	115	100	peak
5	396.2415	29.28	-2.95	26.33	46.00	-19.67	124	100	peak
6	731.9203	31.73	1.66	33.39	46.00	-12.61	275	100	peak

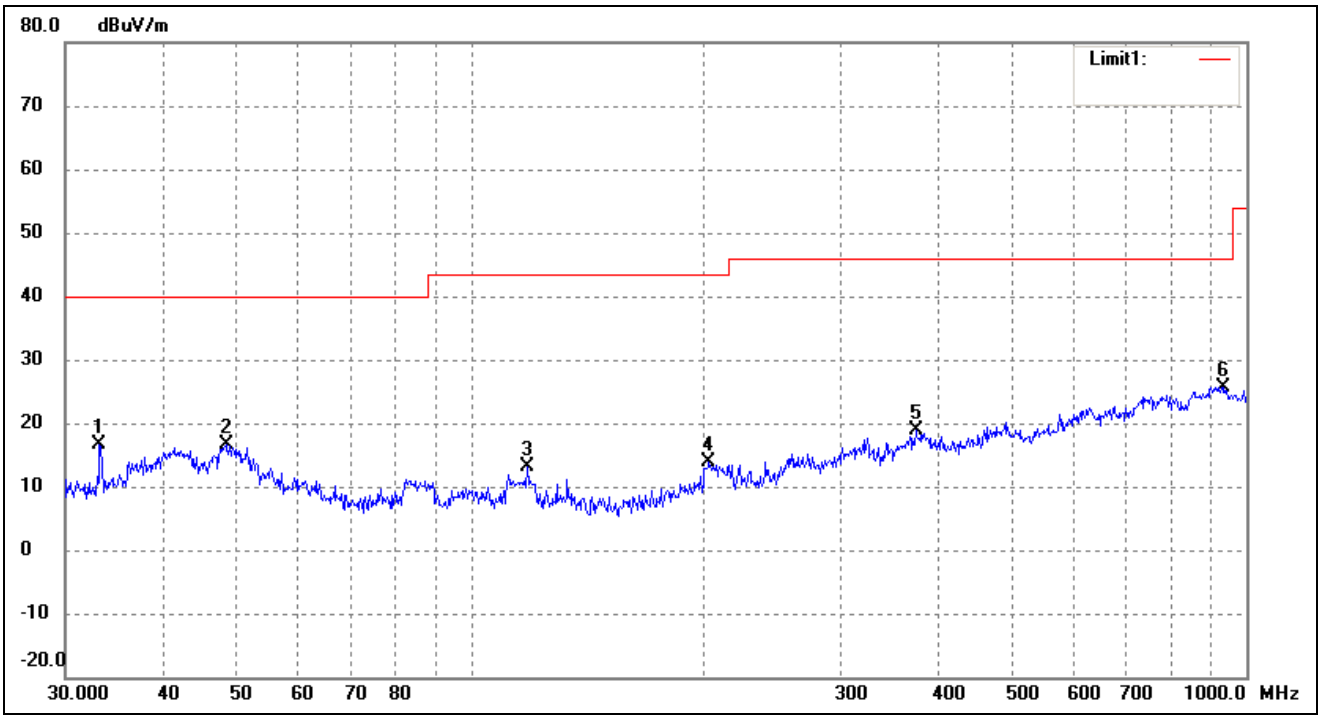
Operating Condition: *802.11g Transmitting*
Comment: *DC 7.6V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	36.3814	23.36	-8.66	14.70	40.00	-25.30	130	100	peak
2	47.8260	22.92	-8.18	14.74	40.00	-25.26	159	100	peak
3	190.4050	23.97	-9.96	14.01	43.50	-29.49	66	100	peak
4	267.5455	28.23	-6.63	21.60	46.00	-24.40	126	100	peak
5	382.5879	23.97	-2.23	21.74	46.00	-24.26	278	100	peak
6	872.1832	24.34	3.05	27.39	46.00	-18.61	154	100	peak

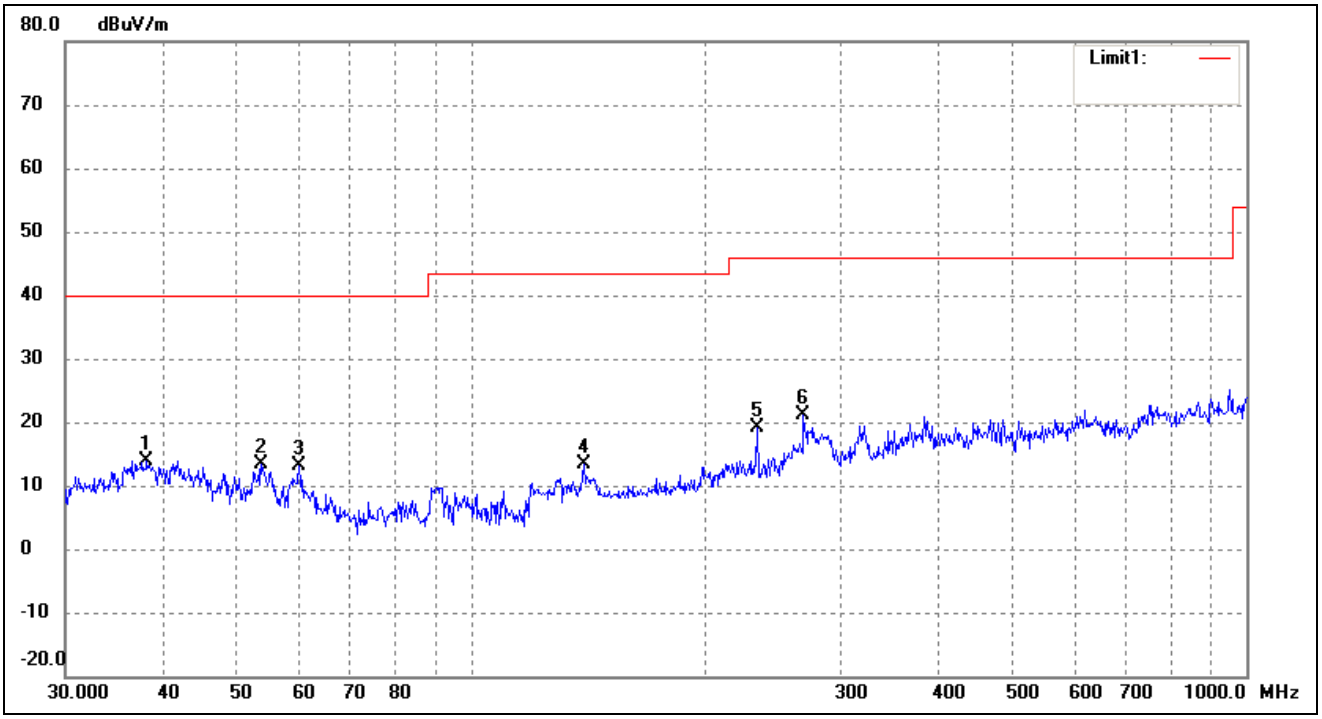
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.2112	26.04	-9.50	16.54	40.00	-23.46	87	100	peak
2	48.3318	24.80	-8.21	16.59	40.00	-23.41	179	100	peak
3	118.1862	24.59	-11.38	13.21	43.50	-30.29	122	100	peak
4	202.8104	22.51	-8.68	13.83	43.50	-29.67	106	100	peak
5	374.6226	21.32	-2.41	18.91	46.00	-27.09	255	100	peak
6	935.5463	21.57	4.13	25.70	46.00	-20.30	105	100	peak

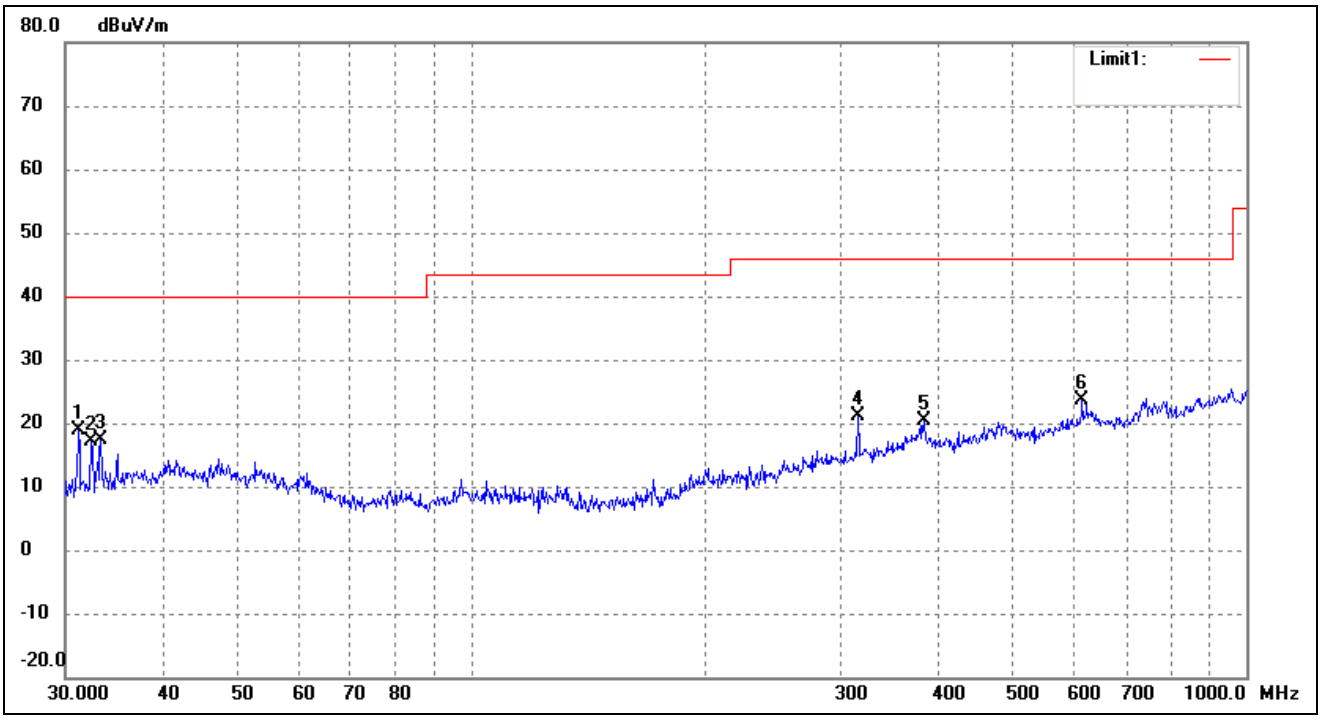
Operating Condition: *802.11n HT20 Transmitting*
Comment: *DC 7.6V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	38.2120	22.15	-8.16	13.99	40.00	-26.01	286	100	peak
2	53.6932	22.07	-8.78	13.29	40.00	-26.71	285	100	peak
3	60.0691	22.72	-9.60	13.12	40.00	-26.88	92	100	peak
4	139.8508	25.87	-12.55	13.32	43.50	-30.18	298	100	peak
5	234.1684	27.52	-8.48	19.04	46.00	-26.96	283	100	peak
6	268.4853	27.78	-6.59	21.19	46.00	-24.81	271	100	peak

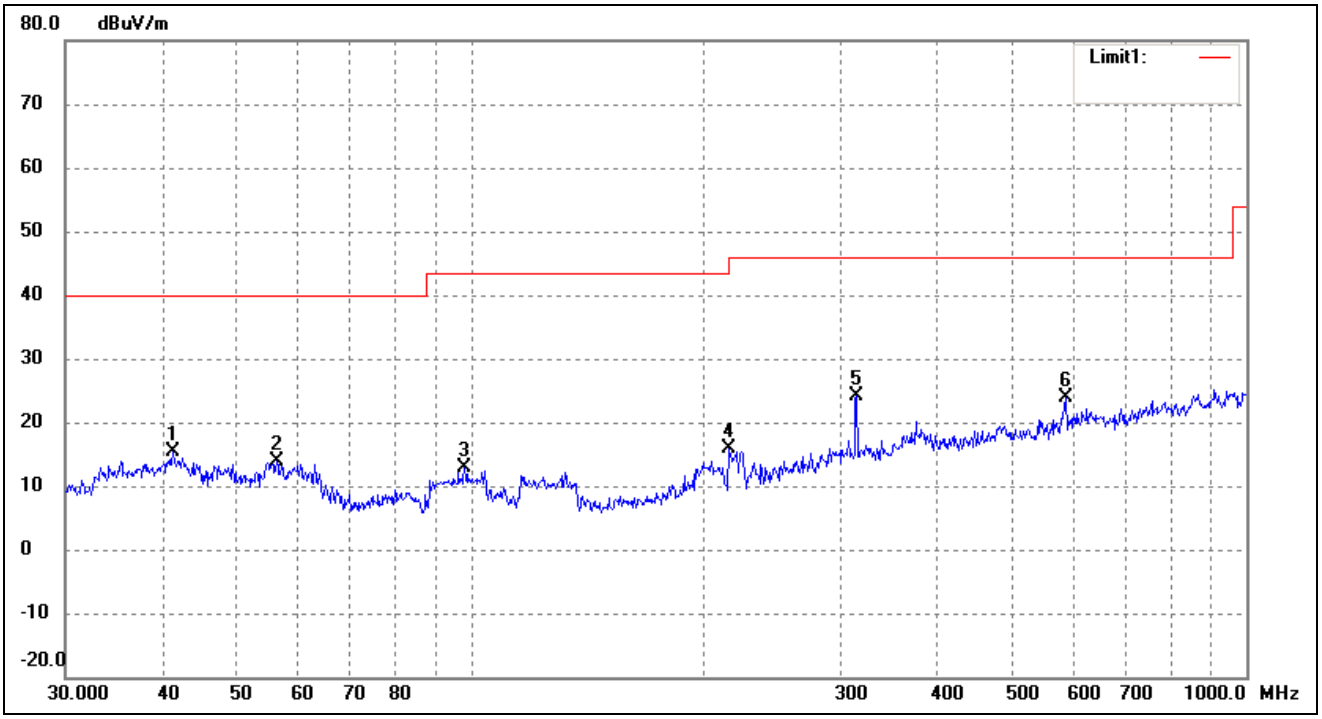
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	31.1798	28.97	-10.01	18.96	40.00	-21.04	198	100	peak
2	32.4059	26.89	-9.69	17.20	40.00	-22.80	96	100	peak
3	33.3279	26.87	-9.46	17.41	40.00	-22.59	90	100	peak
4	315.4808	26.08	-4.85	21.23	46.00	-24.77	271	100	peak
5	383.9318	22.78	-2.30	20.48	46.00	-25.52	99	100	peak
6	614.2142	22.78	0.83	23.61	46.00	-22.39	305	100	peak

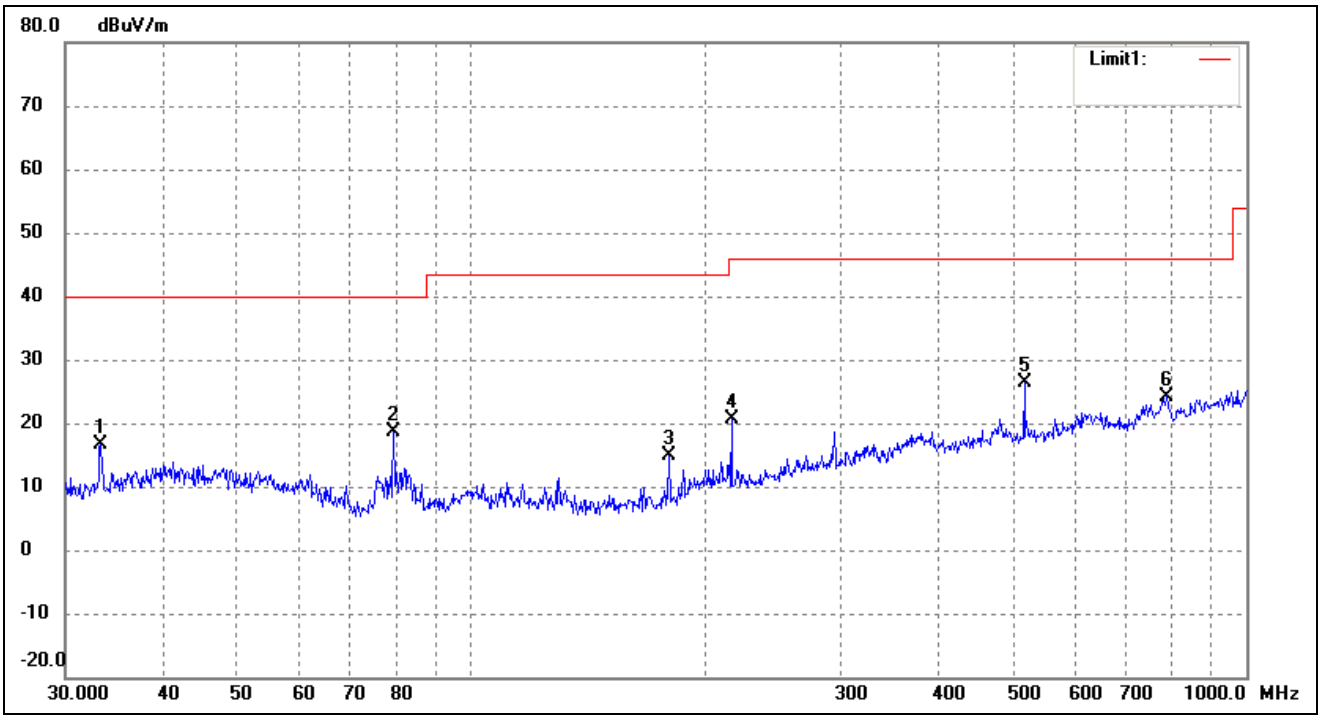
Operating Condition: *802.11n HT40 Transmitting*
Comment: *DC 7.6V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	41.2765	23.20	-7.75	15.45	40.00	-24.55	212	100	peak
2	56.1974	22.86	-9.10	13.76	40.00	-26.24	97	100	peak
3	98.1419	24.14	-11.28	12.86	43.50	-30.64	209	100	peak
4	215.2678	24.74	-8.79	15.95	43.50	-27.55	115	100	peak
5	314.3765	29.04	-4.92	24.12	46.00	-21.88	299	100	peak
6	584.7895	24.60	-0.77	23.83	46.00	-22.17	339	100	peak

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.3279	26.18	-9.46	16.72	40.00	-23.28	274	100	peak
2	79.5209	30.62	-12.03	18.59	40.00	-21.41	94	100	peak
3	180.0165	26.14	-11.36	14.78	43.50	-28.72	197	100	peak
4	216.7828	29.40	-8.81	20.59	46.00	-25.41	105	100	peak
5	517.2480	28.21	-1.94	26.27	46.00	-19.73	153	100	peak
6	790.6188	21.88	2.37	24.25	46.00	-21.75	118	100	peak

WiFi Antenna A

Spurious Emissions Above 1GHz

Test Mode: 802.11b

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.00	56.15	-3.87	52.28	74	-21.72	H	PK
4824.00	45.28	-3.87	41.41	54	-12.59	H	AV
7236.00	59.58	1.14	60.72	74	-13.28	H	PK
7236.00	45.58	1.19	46.77	54	-7.23	H	AV
4824.00	57.43	-3.86	53.57	74	-20.43	V	PK
4824.00	42.16	-3.86	38.3	54	-15.7	V	AV
7236.00	56.29	1.1	57.39	74	-16.61	V	PK
7236.00	43.58	1.1	44.68	54	-9.32	V	AV
Middle Channel-2437MHz							
4874.00	59.23	-3.74	55.49	74	-18.51	H	PK
4874.00	44.17	-3.74	40.43	54	-13.57	H	AV
7311.00	56.42	1.47	57.89	74	-16.11	H	PK
7311.00	46.58	1.47	48.05	54	-5.95	H	AV
4874.00	57.47	-3.74	53.73	74	-20.27	V	PK
4874.00	46.27	-3.74	42.53	54	-11.47	V	AV
7311.00	55.05	1.47	56.52	74	-17.48	V	PK
7311.00	42.06	1.47	43.53	54	-10.47	V	AV
High Channel-2462MHz							
4924.00	58.49	-3.59	54.9	74	-19.1	H	PK
4924.00	43.5	-3.59	39.91	54	-14.09	H	AV
7386.00	56.26	1.79	58.05	74	-15.95	H	PK
7386.00	43.18	1.79	44.97	54	-9.03	H	AV
4924.00	57.58	-3.59	53.99	74	-20.01	V	PK
4924.00	46.19	-3.59	42.6	54	-11.4	V	AV
7386.00	59.65	1.79	61.44	74	-12.56	V	PK
7386.00	46.35	1.79	48.14	54	-5.86	V	AV

Test Mode: 802.11g

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.00	59.83	-3.87	55.96	74	-18.04	H	PK
4824.00	43.21	-3.87	39.34	54	-14.66	H	AV
7236.00	53.17	1.14	54.31	74	-19.69	H	PK
7236.00	38.48	1.19	39.67	54	-14.33	H	AV
4824.00	59.66	-3.86	55.8	74	-18.2	V	PK
4824.00	41.26	-3.86	37.4	54	-16.6	V	AV
7236.00	54.18	1.1	55.28	74	-18.72	V	PK
7236.00	39.7	1.1	40.8	54	-13.2	V	AV
Middle Channel-2437MHz							
4874.00	59.04	-3.74	55.3	74	-18.7	H	PK
4874.00	42.81	-3.74	39.07	54	-14.93	H	AV
7311.00	52.13	1.47	53.6	74	-20.4	H	PK
7311.00	40.9	1.47	42.37	54	-11.63	H	AV
4874.00	58.01	-3.74	54.27	74	-19.73	V	PK
4874.00	41.3	-3.74	37.56	54	-16.44	V	AV
7311.00	52.14	1.47	53.61	74	-20.39	V	PK
7311.00	38.66	1.47	40.13	54	-13.87	V	AV
High Channel-2462MHz							
4924.00	60.12	-3.59	56.53	74	-17.47	H	PK
4924.00	43.35	-3.59	39.76	54	-14.24	H	AV
7386.00	53.11	1.79	54.9	74	-19.1	H	PK
7386.00	40.25	1.79	42.04	54	-11.96	H	AV
4924.00	60.8	-3.59	57.21	74	-16.79	V	PK
4924.00	41.17	-3.59	37.58	54	-16.42	V	AV
7386.00	55.14	1.79	56.93	74	-17.07	V	PK
7386.00	40.88	1.79	42.67	54	-11.33	V	AV

Test Mode: 802.11n-HT20

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.00	61.78	-3.87	57.91	74	-16.09	H	PK
4824.00	42.55	-3.87	38.68	54	-15.32	H	AV
7236.00	52.03	1.14	53.17	74	-20.83	H	PK
7236.00	39.77	1.19	40.96	54	-13.04	H	AV
4824.00	60.3	-3.86	56.44	74	-17.56	V	PK
4824.00	43.73	-3.86	39.87	54	-14.13	V	AV
7236.00	53.83	1.1	54.93	74	-19.07	V	PK
7236.00	40.46	1.1	41.56	54	-12.44	V	AV
Middle Channel-2437MHz							
4874.00	59.07	-3.74	55.33	74	-18.67	H	PK
4874.00	41.74	-3.74	38	54	-16	H	AV
7311.00	54.86	1.47	56.33	74	-17.67	H	PK
7311.00	40.64	1.47	42.11	54	-11.89	H	AV
4874.00	61.82	-3.74	58.08	74	-15.92	V	PK
4874.00	43.35	-3.74	39.61	54	-14.39	V	AV
7311.00	53.53	1.47	55	74	-19	V	PK
7311.00	40.03	1.47	41.5	54	-12.5	V	AV
High Channel-2462MHz							
4924.00	60.27	-3.59	56.68	74	-17.32	H	PK
4924.00	43.14	-3.59	39.55	54	-14.45	H	AV
7386.00	54.28	1.79	56.07	74	-17.93	H	PK
7386.00	39.17	1.79	40.96	54	-13.04	H	AV
4924.00	61.55	-3.59	57.96	74	-16.04	V	PK
4924.00	42.99	-3.59	39.4	54	-14.6	V	AV
7386.00	52.74	1.79	54.53	74	-19.47	V	PK
7386.00	39.41	1.79	41.2	54	-12.8	V	AV

Test Mode: 802.11n-HT40

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2422MHz							
4844.00	57.04	-3.9	53.14	74	-20.86	H	PK
4844.00	41.91	-3.9	38.01	54	-15.99	H	AV
7266.00	53.11	1.06	54.17	74	-19.83	H	PK
7266.00	39.08	1.06	40.14	54	-13.86	H	AV
4844.00	59.97	-3.9	56.07	74	-17.93	V	PK
4844.00	42.47	-3.9	38.57	54	-15.43	V	AV
7266.00	54.17	1.06	55.23	74	-18.77	V	PK
7266.00	38.49	1.06	39.55	54	-14.45	V	AV
Middle Channel-2437MHz							
4874.00	59.26	-3.74	55.52	74	-18.48	H	PK
4874.00	40.1	-3.74	36.36	54	-17.64	H	AV
7311.00	53.05	1.47	54.52	74	-19.48	H	PK
7311.00	40.64	1.47	42.11	54	-11.89	H	AV
4874.00	57.69	-3.74	53.95	74	-20.05	V	PK
4874.00	41.96	-3.74	38.22	54	-15.78	V	AV
7311.00	52.86	1.47	54.33	74	-19.67	V	PK
7311.00	39.86	1.47	41.33	54	-12.67	V	AV
High Channel-2452MHz							
4904.00	60.44	-3.63	56.81	74	-17.19	H	PK
4904.00	41.27	-3.63	37.64	54	-16.36	H	AV
7356.00	51.98	1.62	53.6	74	-20.4	H	PK
7356.00	40.67	1.62	42.29	54	-11.71	H	AV
4904.00	57.2	-3.63	53.57	74	-20.43	V	PK
4904.00	42.58	-3.63	38.95	54	-15.05	V	AV
7356.00	51.68	1.62	53.3	74	-20.7	V	PK
7356.00	39.18	1.62	40.8	54	-13.2	V	AV

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

WiFi Antenna B

Spurious Emissions Above 1GHz

Test Mode: 802.11b

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.00	57.12	-3.87	53.25	74	-20.75	H	PK
4824.00	49.58	-3.87	45.71	54	-8.29	H	AV
7236.00	56.84	1.14	57.98	74	-16.02	H	PK
7236.00	43.28	1.19	44.47	54	-9.53	H	AV
4824.00	59.14	-3.86	55.28	74	-18.72	V	PK
4824.00	45.18	-3.86	41.32	54	-12.68	V	AV
7236.00	54.84	1.1	55.94	74	-18.06	V	PK
7236.00	46.89	1.1	47.99	54	-6.01	V	AV
Middle Channel-2437MHz							
4874.00	58.685	-3.74	54.945	74	-19.055	H	PK
4874.00	46.25	-3.74	42.51	54	-11.49	H	AV
7311.00	54.29	1.47	55.76	74	-18.24	H	PK
7311.00	42.18	1.47	43.65	54	-10.35	H	AV
4874.00	59.25	-3.74	55.51	74	-18.49	V	PK
4874.00	45.25	-3.74	41.51	54	-12.49	V	AV
7311.00	54.14	1.47	55.61	74	-18.39	V	PK
7311.00	43.25	1.47	44.72	54	-9.28	V	AV
High Channel-2462MHz							
4924.00	61.42	-3.59	57.83	74	-16.17	H	PK
4924.00	48.52	-3.59	44.93	54	-9.07	H	AV
7386.00	57.44	1.79	59.23	74	-14.77	H	PK
7386.00	42.58	1.79	44.37	54	-9.63	H	AV
4924.00	58.52	-3.59	54.93	74	-19.07	V	PK
4924.00	43.25	-3.59	39.66	54	-14.34	V	AV
7386.00	57.48	1.79	59.27	74	-14.73	V	PK
7386.00	45.58	1.79	47.37	54	-6.63	V	AV

Test Mode: 802.11g

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.00	58.58	-3.87	54.71	74	-19.29	H	PK
4824.00	42.02	-3.87	38.15	54	-15.85	H	AV
7236.00	54.16	1.14	55.3	74	-18.7	H	PK
7236.00	40.23	1.19	41.42	54	-12.58	H	AV
4824.00	60.41	-3.86	56.55	74	-17.45	V	PK
4824.00	42.84	-3.86	38.98	54	-15.02	V	AV
7236.00	55.72	1.1	56.82	74	-17.18	V	PK
7236.00	38.56	1.1	39.66	54	-14.34	V	AV
Middle Channel-2437MHz							
4874.00	59.38	-3.74	55.64	74	-18.36	H	PK
4874.00	43.06	-3.74	39.32	54	-14.68	H	AV
7311.00	53.5	1.47	54.97	74	-19.03	H	PK
7311.00	38.54	1.47	40.01	54	-13.99	H	AV
4874.00	59.5	-3.74	55.76	74	-18.24	V	PK
4874.00	43.29	-3.74	39.55	54	-14.45	V	AV
7311.00	55.71	1.47	57.18	74	-16.82	V	PK
7311.00	39.03	1.47	40.5	54	-13.5	V	AV
High Channel-2462MHz							
4924.00	60.78	-3.59	57.19	74	-16.81	H	PK
4924.00	41.68	-3.59	38.09	54	-15.91	H	AV
7386.00	55.66	1.79	57.45	74	-16.55	H	PK
7386.00	38.4	1.79	40.19	54	-13.81	H	AV
4924.00	61.12	-3.59	57.53	74	-16.47	V	PK
4924.00	41.27	-3.59	37.68	54	-16.32	V	AV
7386.00	54.42	1.79	56.21	74	-17.79	V	PK
7386.00	39.6	1.79	41.39	54	-12.61	V	AV

Test Mode: 802.11n-HT20

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.00	60.33	-3.87	56.46	74	-17.54	H	PK
4824.00	43.7	-3.87	39.83	54	-14.17	H	AV
7236.00	53.87	1.14	55.01	74	-18.99	H	PK
7236.00	40.19	1.19	41.38	54	-12.62	H	AV
4824.00	58.02	-3.86	54.16	74	-19.84	V	PK
4824.00	43.11	-3.86	39.25	54	-14.75	V	AV
7236.00	54.74	1.1	55.84	74	-18.16	V	PK
7236.00	40.51	1.1	41.61	54	-12.39	V	AV
Middle Channel-2437MHz							
4874.00	60.64	-3.74	56.9	74	-17.1	H	PK
4874.00	42.14	-3.74	38.4	54	-15.6	H	AV
7311.00	53.92	1.47	55.39	74	-18.61	H	PK
7311.00	38.56	1.47	40.03	54	-13.97	H	AV
4874.00	59.86	-3.74	56.12	74	-17.88	V	PK
4874.00	41.07	-3.74	37.33	54	-16.67	V	AV
7311.00	55.9	1.47	57.37	74	-16.63	V	PK
7311.00	38.69	1.47	40.16	54	-13.84	V	AV
High Channel-2462MHz							
4924.00	60.55	-3.59	56.96	74	-17.04	H	PK
4924.00	42.98	-3.59	39.39	54	-14.61	H	AV
7386.00	55.71	1.79	57.5	74	-16.5	H	PK
7386.00	38.07	1.79	39.86	54	-14.14	H	AV
4924.00	58.41	-3.59	54.82	74	-19.18	V	PK
4924.00	42.56	-3.59	38.97	54	-15.03	V	AV
7386.00	52.84	1.79	54.63	74	-19.37	V	PK
7386.00	38.02	1.79	39.81	54	-14.19	V	AV

Test Mode: 802.11n-HT40

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2422MHz							
4844.00	58.59	-3.9	54.69	74	-19.31	H	PK
4844.00	41.99	-3.9	38.09	54	-15.91	H	AV
7266.00	54.5	1.06	55.56	74	-18.44	H	PK
7266.00	39.07	1.06	40.13	54	-13.87	H	AV
4844.00	60.48	-3.9	56.58	74	-17.42	V	PK
4844.00	42.36	-3.9	38.46	54	-15.54	V	AV
7266.00	51.09	1.06	52.15	74	-21.85	V	PK
7266.00	38.76	1.06	39.82	54	-14.18	V	AV
Middle Channel-2437MHz							
4874.00	60.09	-3.74	56.35	74	-17.65	H	PK
4874.00	41.69	-3.74	37.95	54	-16.05	H	AV
7311.00	51.96	1.47	53.43	74	-20.57	H	PK
7311.00	40.47	1.47	41.94	54	-12.06	H	AV
4874.00	58.8	-3.74	55.06	74	-18.94	V	PK
4874.00	40.11	-3.74	36.37	54	-17.63	V	AV
7311.00	53.27	1.47	54.74	74	-19.26	V	PK
7311.00	40.78	1.47	42.25	54	-11.75	V	AV
High Channel-2452MHz							
4904.00	57.03	-3.63	53.4	74	-20.6	H	PK
4904.00	42.24	-3.63	38.61	54	-15.39	H	AV
7356.00	54.01	1.62	55.63	74	-18.37	H	PK
7356.00	38.33	1.62	39.95	54	-14.05	H	AV
4904.00	58.48	-3.63	54.85	74	-19.15	V	PK
4904.00	41.67	-3.63	38.04	54	-15.96	V	AV
7356.00	53.11	1.62	54.73	74	-19.27	V	PK
7356.00	39.89	1.62	41.51	54	-12.49	V	AV

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

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 ≥ 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

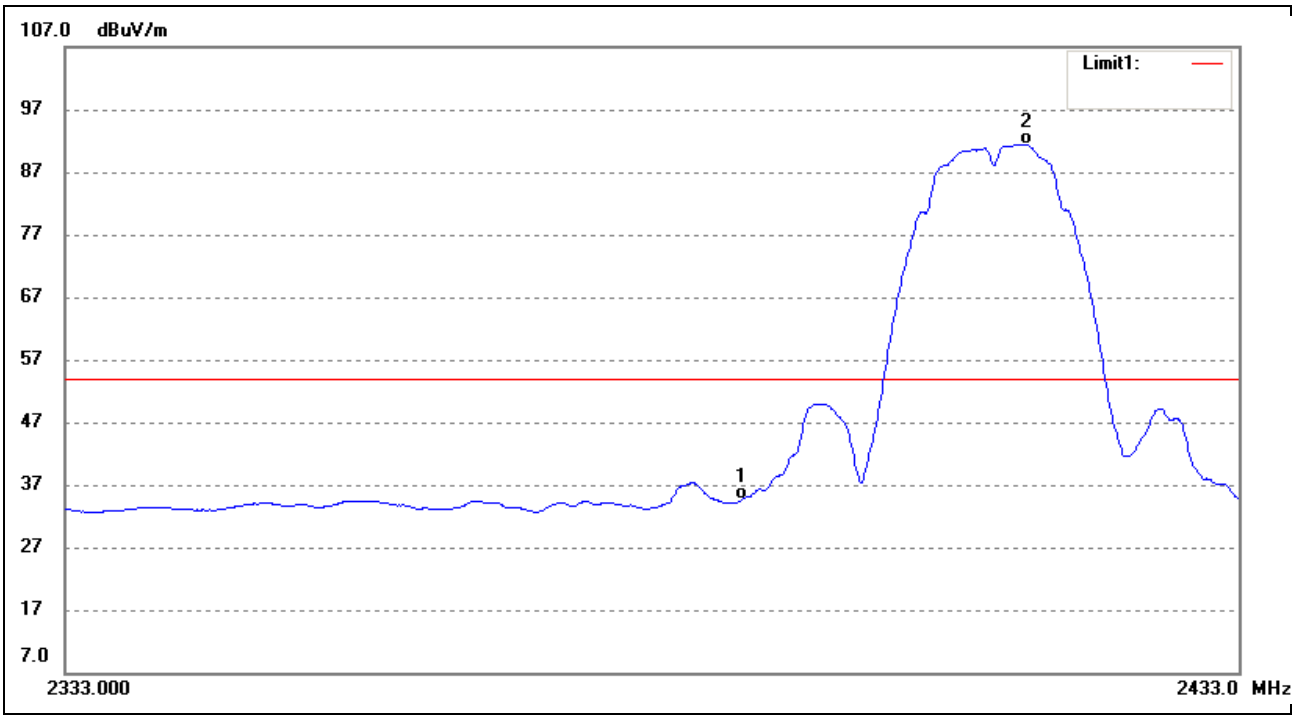
Temperature:	23°C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

9.4 Summary of Test Results/Plots

WiFi Antenna A

802.11b-Lowest Bandedge

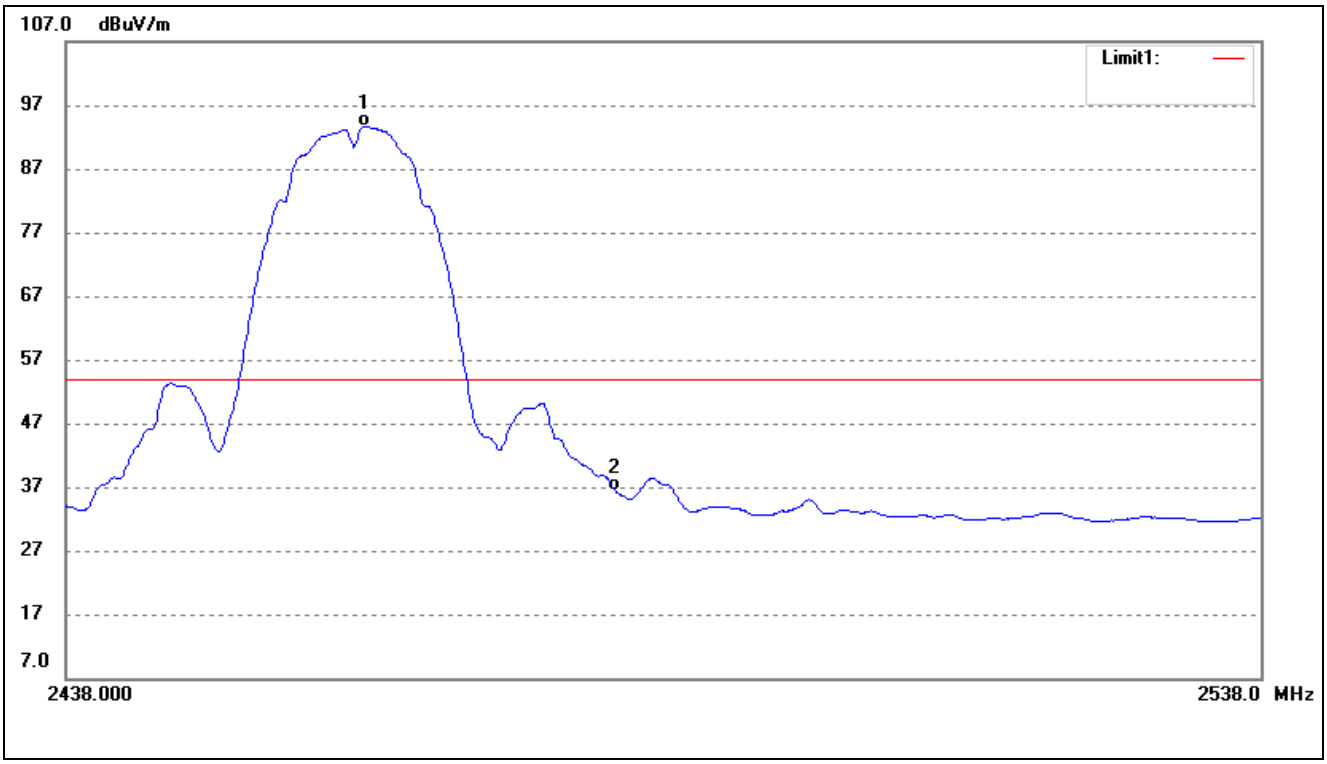
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.00	41.81	-7.26	34.55	54.00	-19.45	Average Detector
	2390.00	52.13	-7.26	44.87	74.00	-29.13	Peak Detector
2	2414.59	98.89	-7.40	91.49	/	/	Average Detector
	2413.27	104.10	-7.40	96.70	/	/	Peak Detector

802.11b-Highest Bandedge

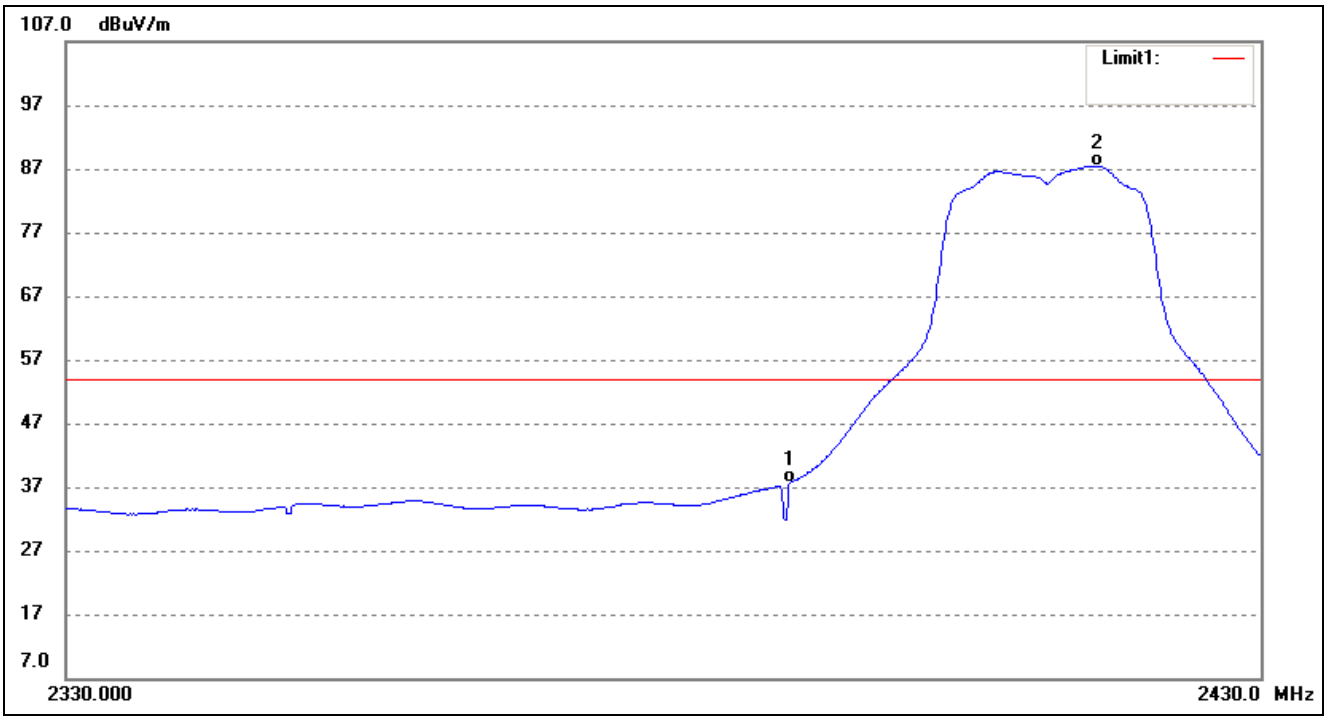
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2462.62	100.96	-7.31	93.65	/	/	Average Detector
	2463.12	105.18	-7.31	97.87	/	/	Peak Detector
2	2483.50	43.62	-7.28	36.34	54.00	-17.66	Average Detector
	2483.50	52.42	-7.28	45.14	74.00	-28.86	Peak Detector

802.11g-Lowest Bandedge

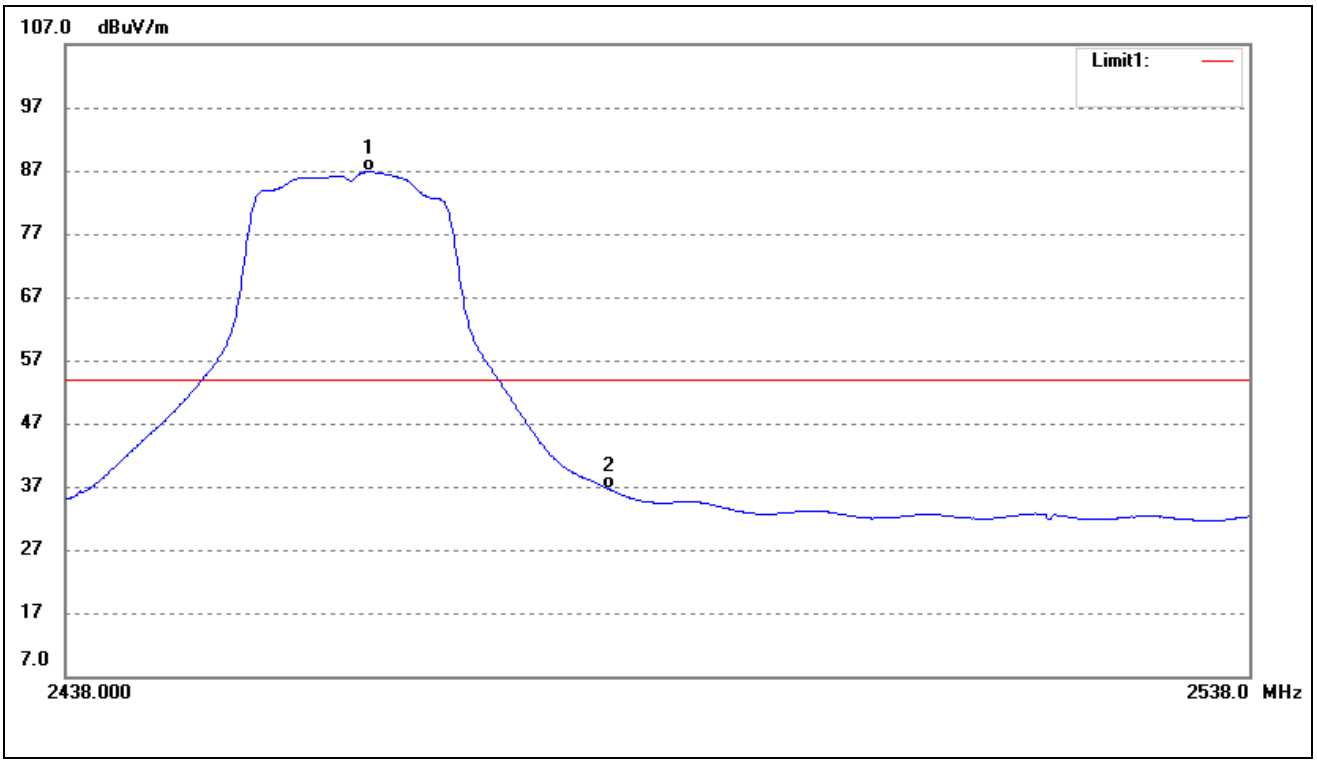
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.00	45.00	-7.26	37.74	54.00	-16.26	Average Detector
	2390.00	55.88	-7.26	48.62	74.00	-25.38	Peak Detector
2	2416.05	94.83	-7.39	87.44	/	/	Average Detector
	2416.46	104.26	-7.39	96.87	/	/	Peak Detector

802.11g-Highest Bandedge

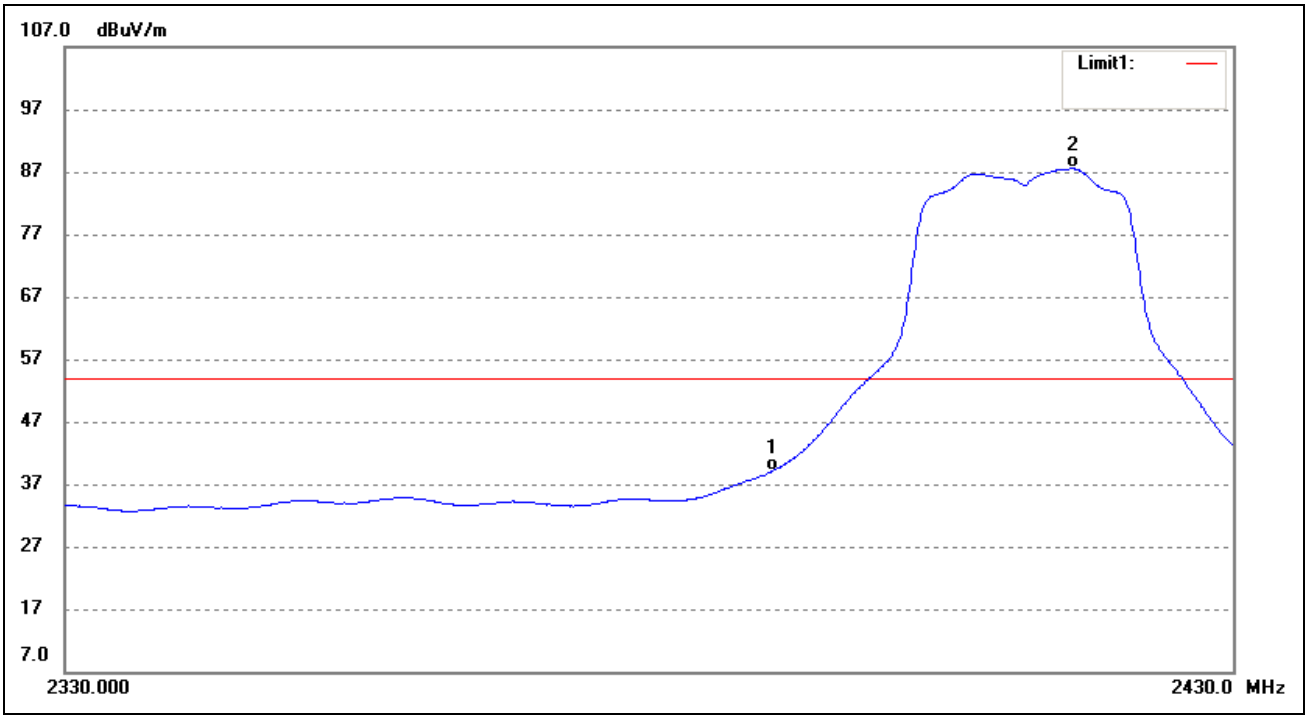
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2463.22	94.15	-7.31	86.84	/	/	Average Detector
	2463.12	103.98	-7.31	96.67	/	/	Peak Detector
2	2483.50	43.82	-7.28	36.54	54.00	-17.46	Average Detector
	2483.50	54.70	-7.28	47.42	74.00	-26.58	Peak Detector

802.11n-HT20-Lowest Bandedge

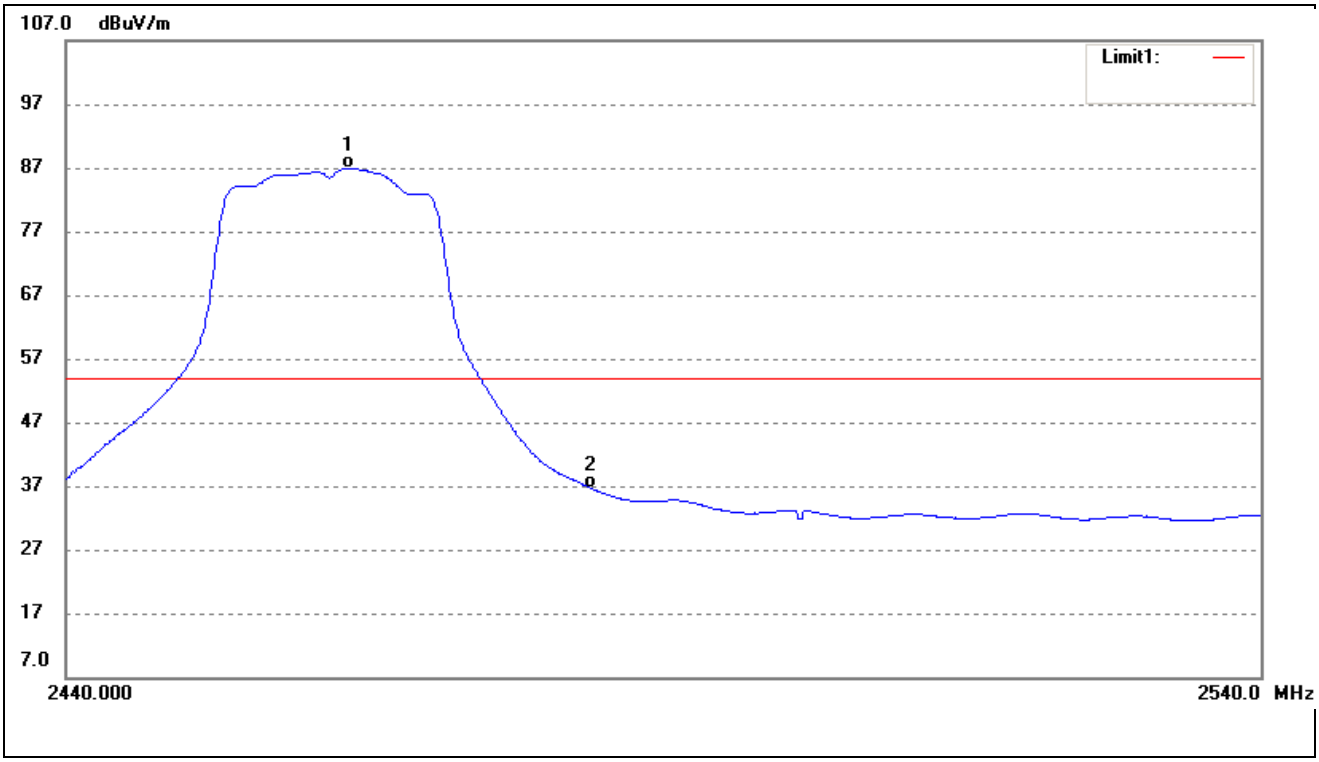
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.00	46.36	-7.26	39.10	54.00	-14.90	Average Detector
	2390.00	59.55	-7.26	52.29	74.00	-21.71	Peak Detector
2	2416.05	94.93	-7.39	87.54	/	/	Average Detector
	2416.15	104.48	-7.39	97.09	/	/	Peak Detector

802.11n-HT20-Highest Bandedge

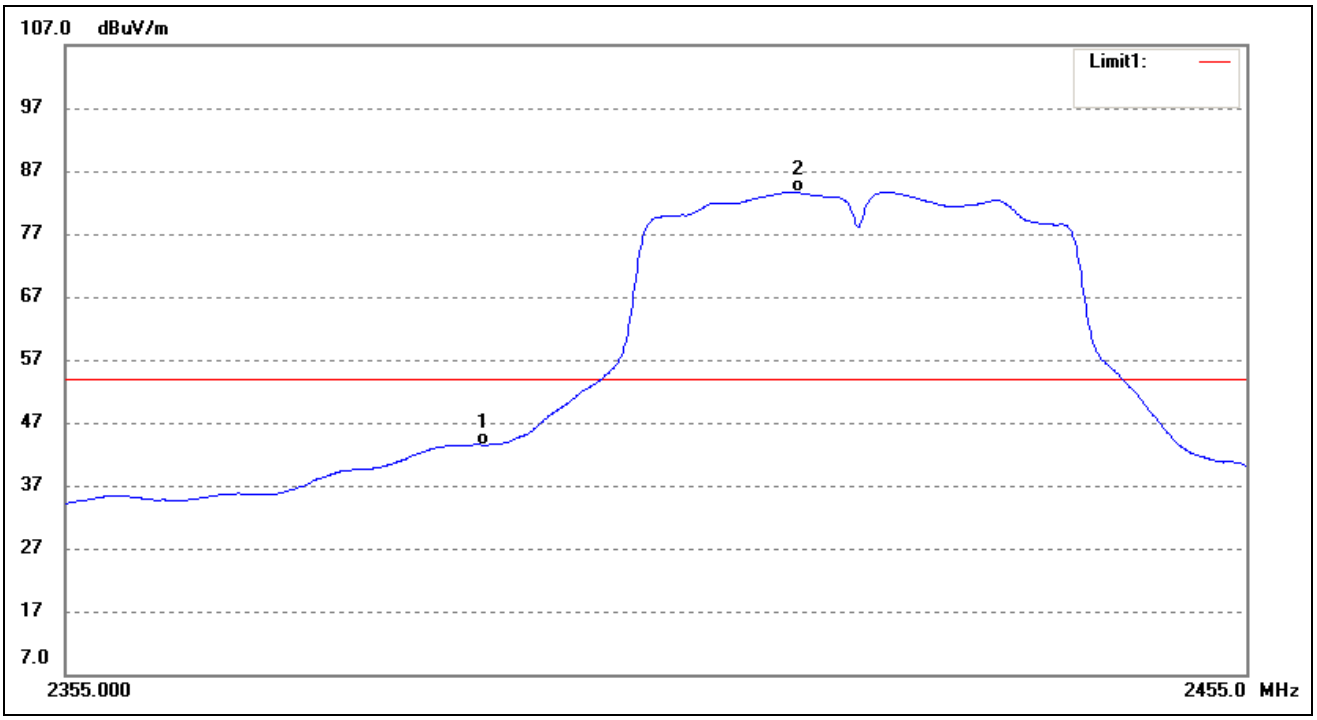
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2463.24	94.27	-7.31	86.96	/	/	Average Detector
	2464.43	103.44	-7.31	96.13	/	/	Peak Detector
2	2483.50	43.90	-7.28	36.62	54.00	-17.38	Average Detector
	2483.50	56.08	-7.28	48.80	74.00	-25.20	Peak Detector

802.11n-HT40-Lowest Bandedge

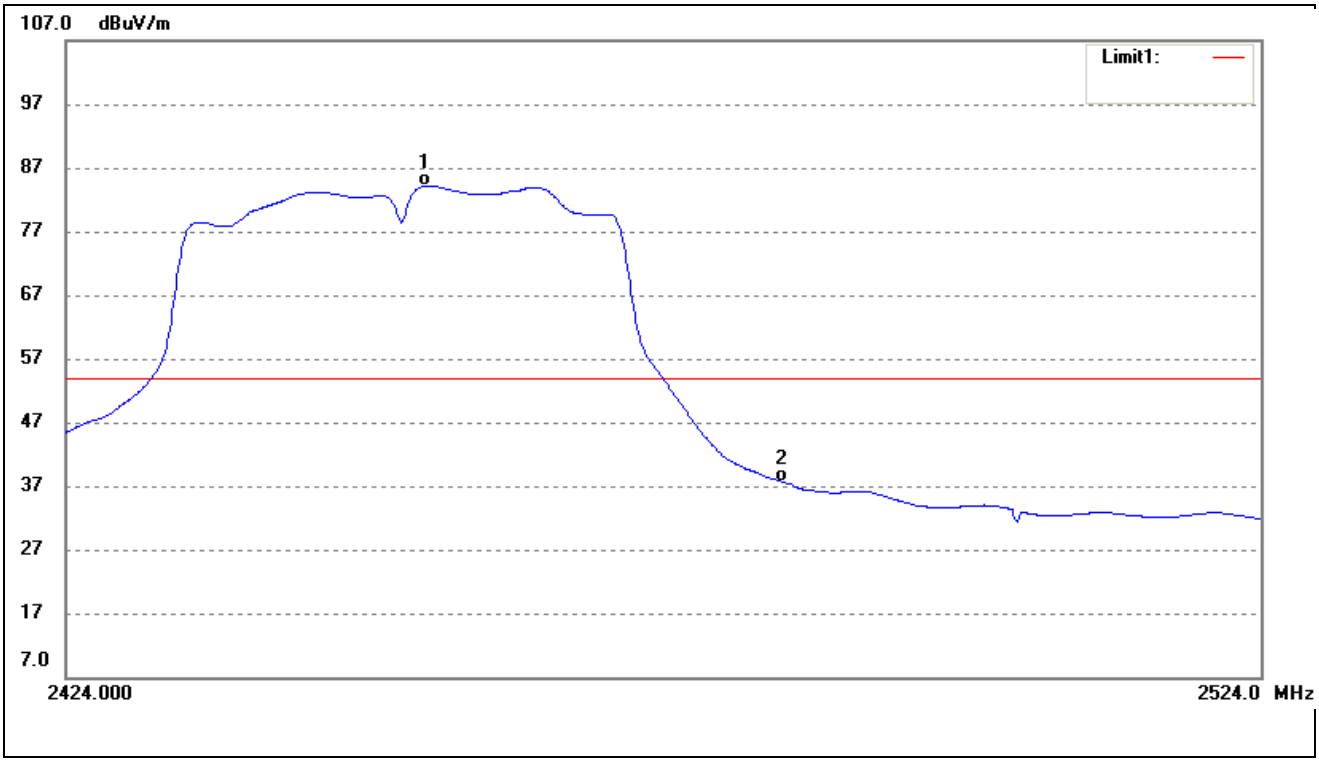
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.00	50.71	-7.26	43.45	54.00	-10.55	Average Detector
	2390.00	62.72	-7.26	55.46	74.00	-18.54	Peak Detector
2	2416.51	91.01	-7.39	83.62	/	/	Average Detector
	2424.66	100.66	-7.38	93.28	/	/	Peak Detector

802.11n-HT40-Highest Bandedge

Vertical (Worst case)

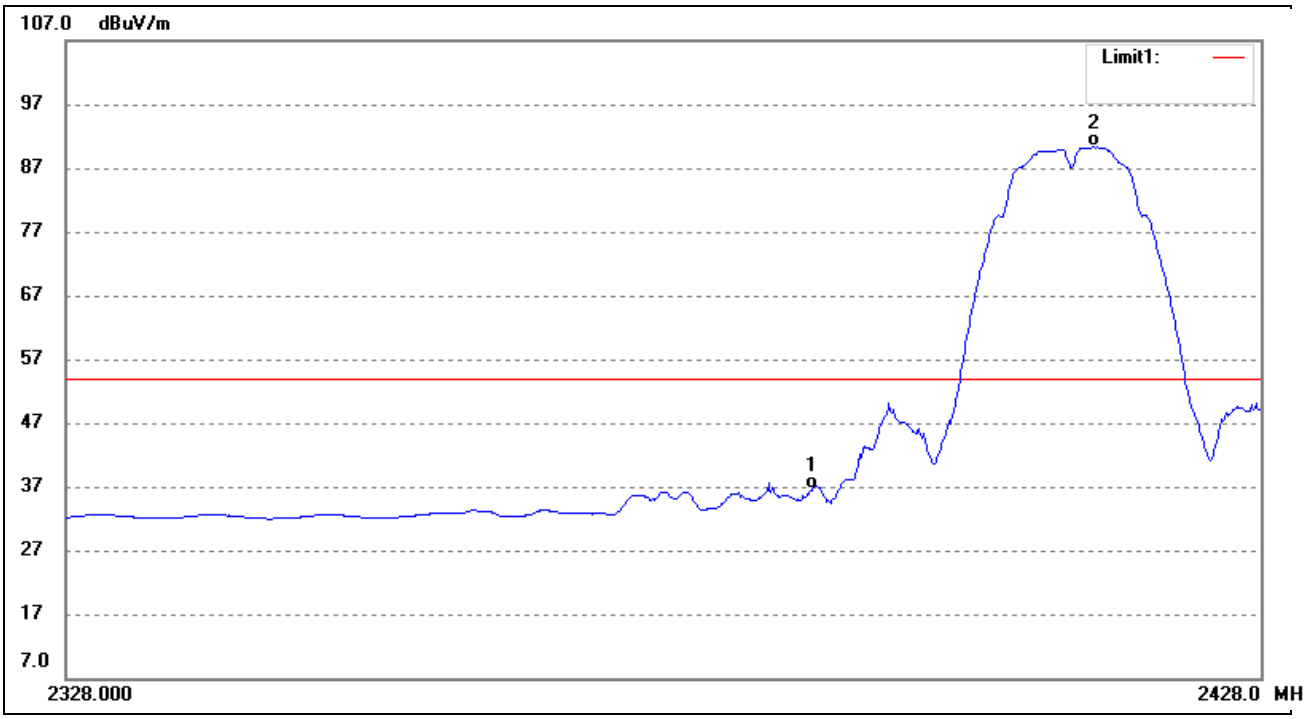


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2453.68	91.47	-7.33	84.14	/	/	Average Detector
	2454.77	100.65	-7.33	93.32	/	/	Peak Detector
2	2483.50	44.95	-7.28	37.67	54.00	-16.33	Average Detector
	2483.50	57.67	-7.28	50.39	74.00	-23.61	Peak Detector

WiFi Antenna B

802.11b-Lowest Bandedge

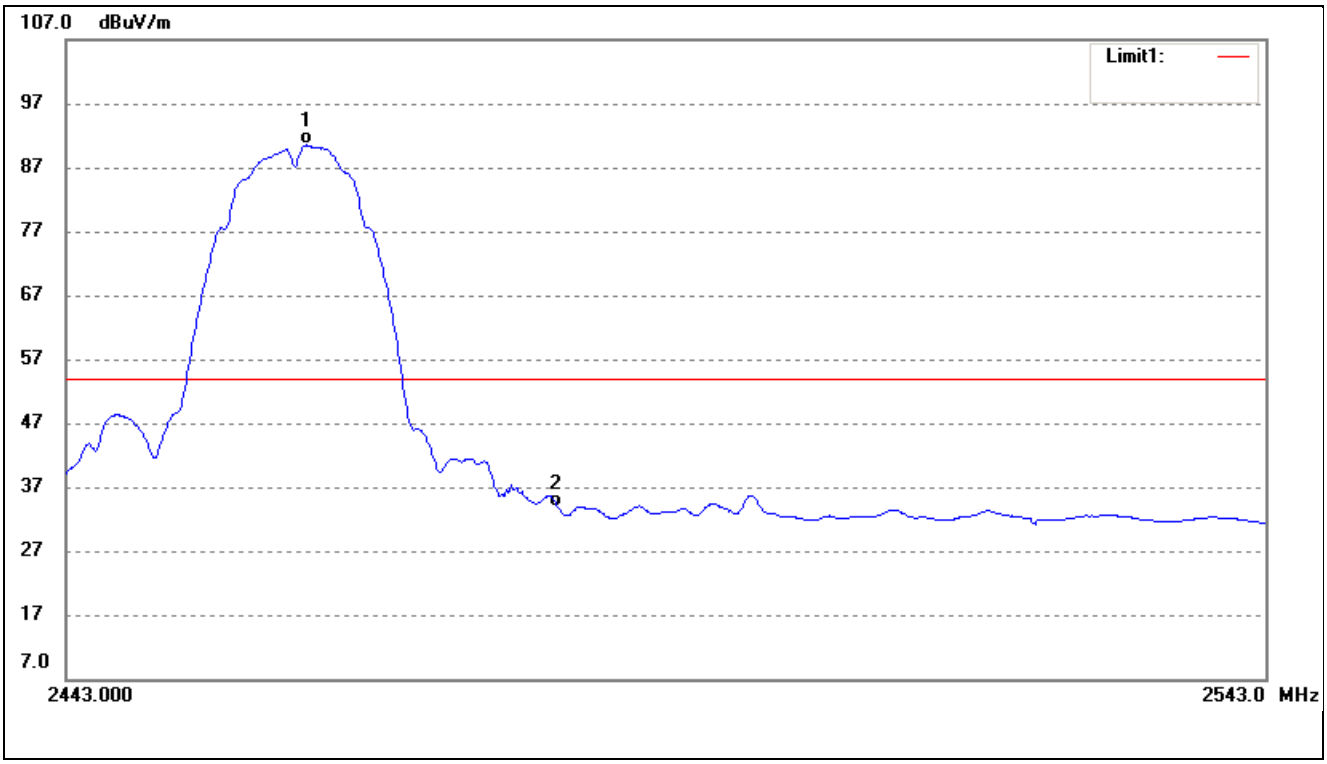
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.00	43.96	-7.26	36.70	54.00	-17.30	Average Detector
	2390.00	54.46	-7.26	47.20	74.00	-26.80	Peak Detector
2	2413.75	97.71	-7.40	90.31	/	/	Average Detector
	2413.34	102.78	-7.40	95.38	/	/	Peak Detector

802.11b-Highest Bandedge

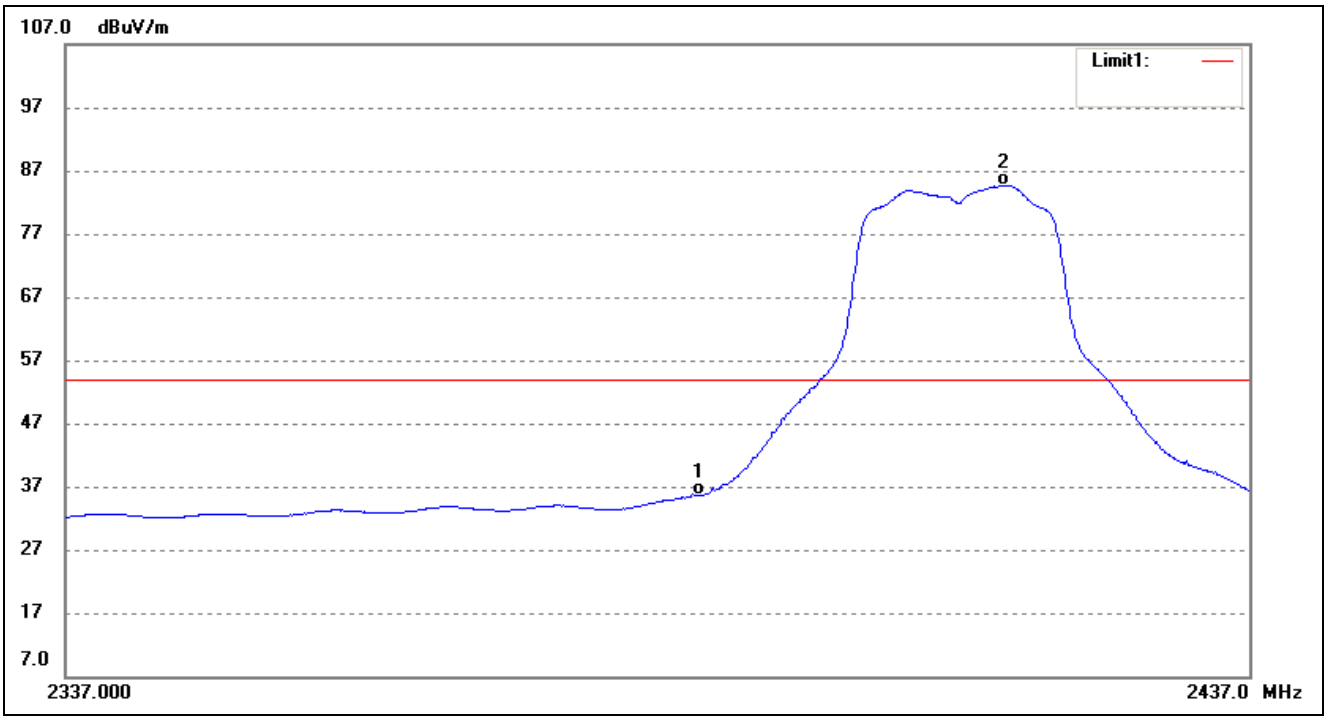
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2462.68	97.82	-7.31	90.51	/	/	Average Detector
	2463.27	102.28	-7.31	94.97	/	/	Peak Detector
2	2483.50	41.18	-7.28	33.90	54.00	-20.10	Average Detector
	2483.50	51.01	-7.28	43.73	74.00	-30.27	Peak Detector

802.11g-Lowest Bandedge

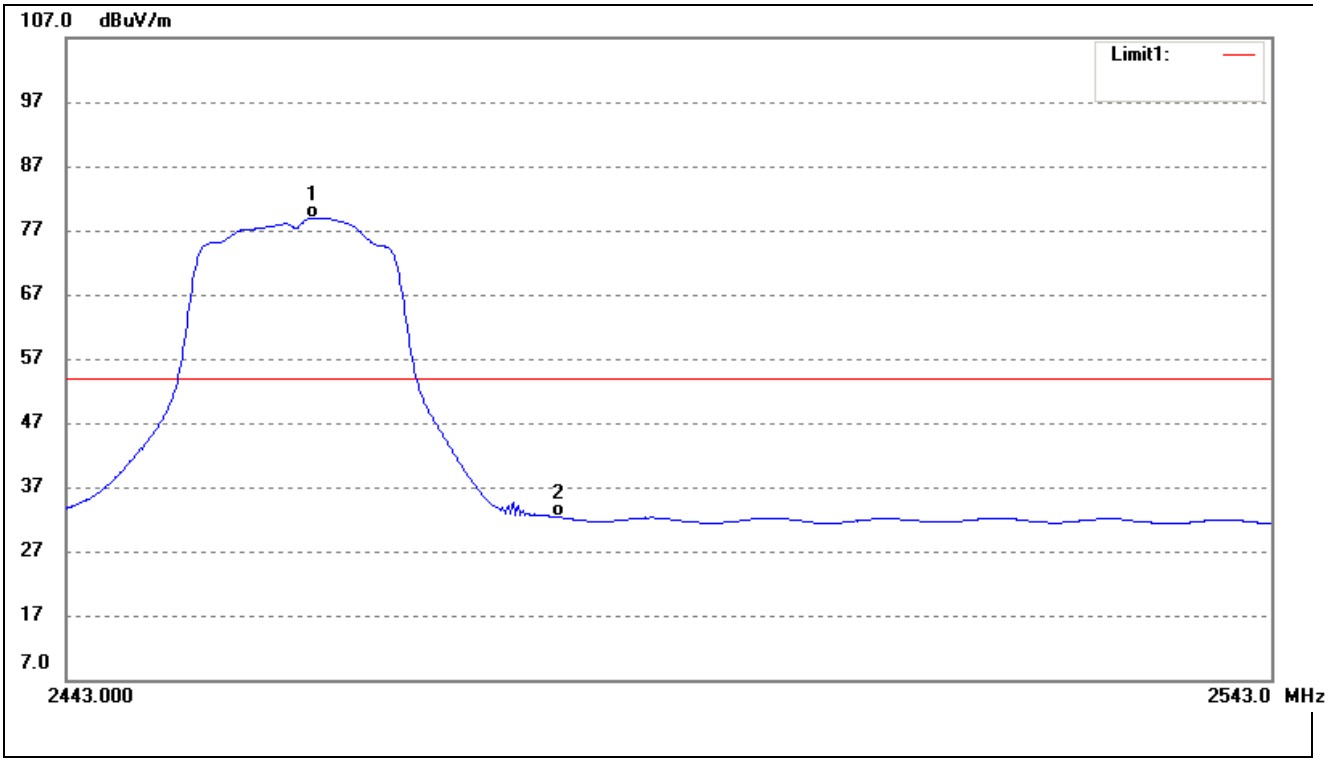
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.00	42.84	-7.26	35.58	54.00	-18.42	Average Detector
	2390.00	54.66	-7.26	47.40	74.00	-26.60	Peak Detector
2	2416.00	92.05	-7.39	84.66	/	/	Average Detector
	2415.15	101.13	-7.40	93.73	/	/	Peak Detector

802.11g-Highest Bandedge

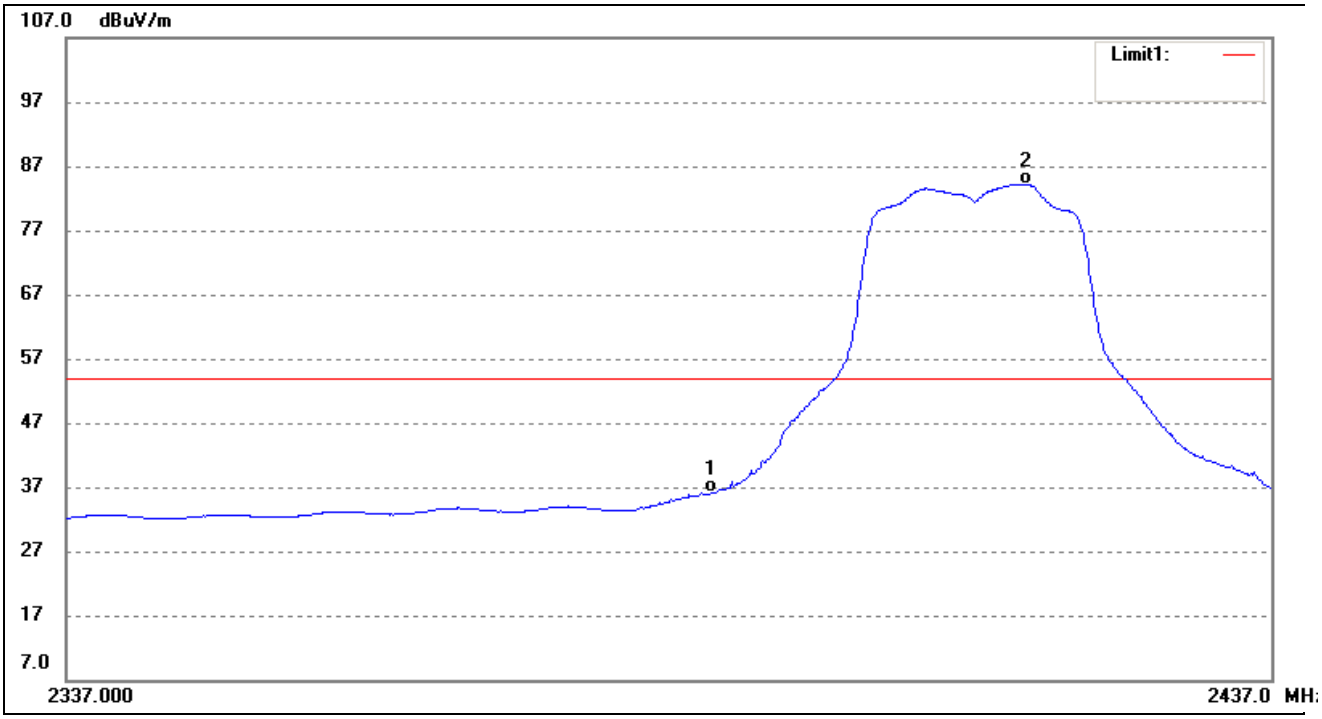
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2463.17	86.31	-7.31	79.00	/	/	Average Detector
	2463.57	96.64	-7.31	89.33	/	/	Peak Detector
2	2483.50	39.57	-7.28	32.29	54.00	-21.71	Average Detector
	2483.50	49.34	-7.28	42.06	74.00	-31.94	Peak Detector

802.11n-HT20-Lowest Bandedge

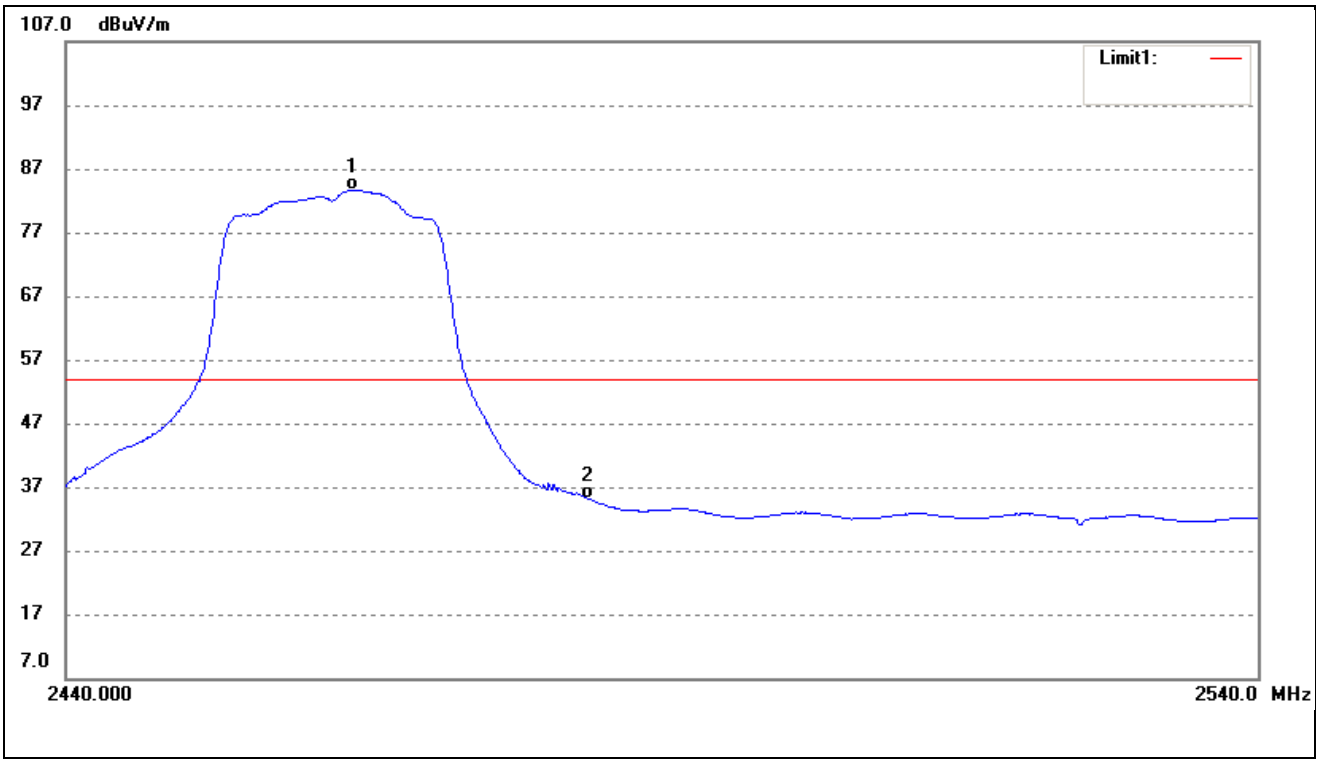
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.00	43.29	-7.26	36.03	54.00	-17.97	Average Detector
	2390.00	55.63	-7.26	48.37	74.00	-25.63	Peak Detector
2	2416.30	91.62	-7.39	84.23	/	/	Average Detector
	2416.20	101.45	-7.39	94.06	/	/	Peak Detector

802.11n-HT20-Highest Bandedge

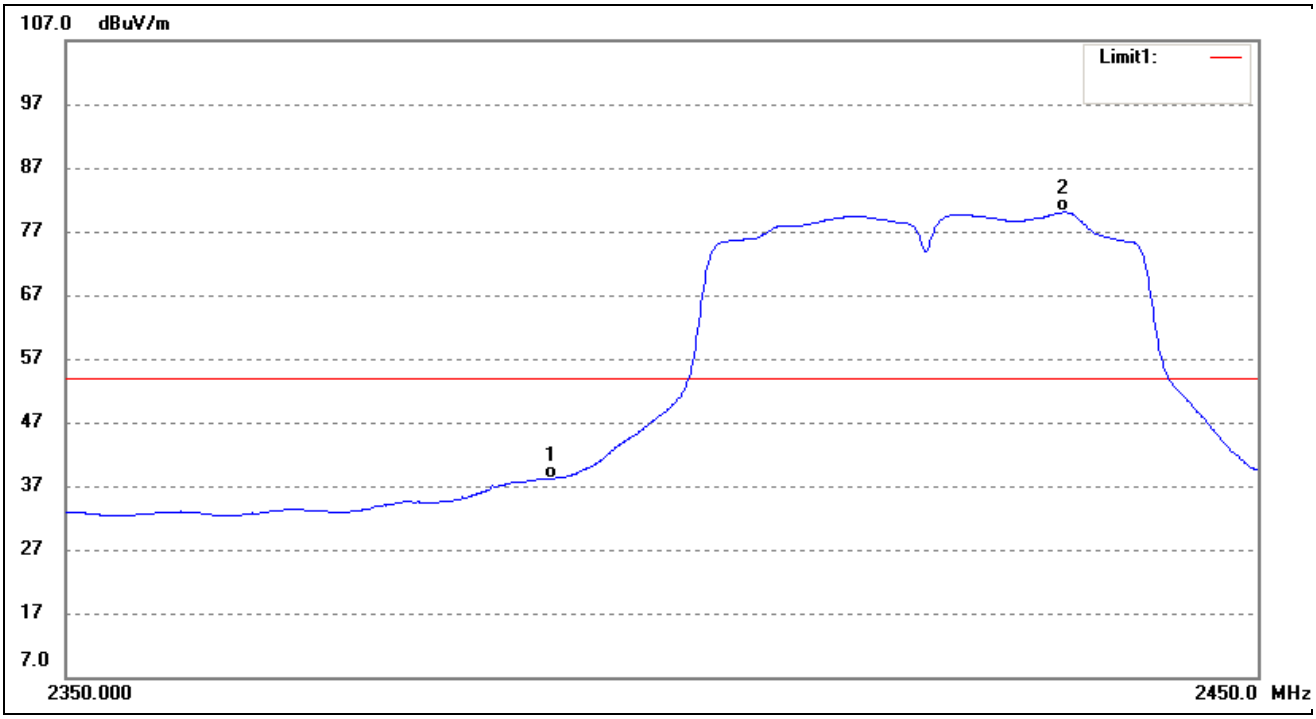
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2463.60	90.95	-7.31	83.64	/	/	Average Detector
	2463.70	100.06	-7.31	92.75	/	/	Peak Detector
2	2483.50	42.42	-7.28	35.14	54.00	-18.86	Average Detector
	2483.50	52.17	-7.28	44.89	74.00	-29.11	Peak Detector

802.11n-HT40-Lowest Bandedge

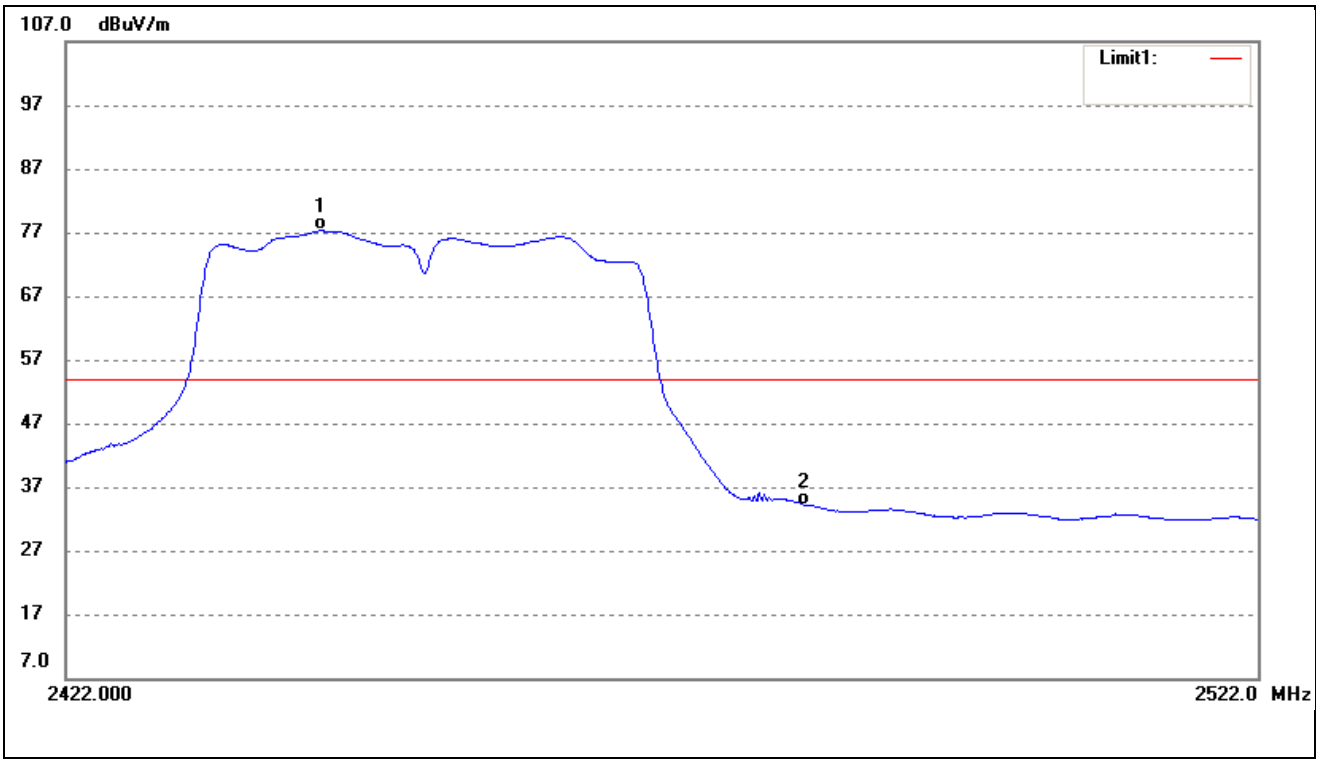
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.00	45.37	-7.26	38.11	54.00	-15.89	Average Detector
	2390.00	58.43	-7.26	51.17	74.00	-22.83	Peak Detector
2	2433.41	87.45	-7.37	80.08	/	/	Average Detector
	2424.63	98.03	-7.38	90.65	/	/	Peak Detector

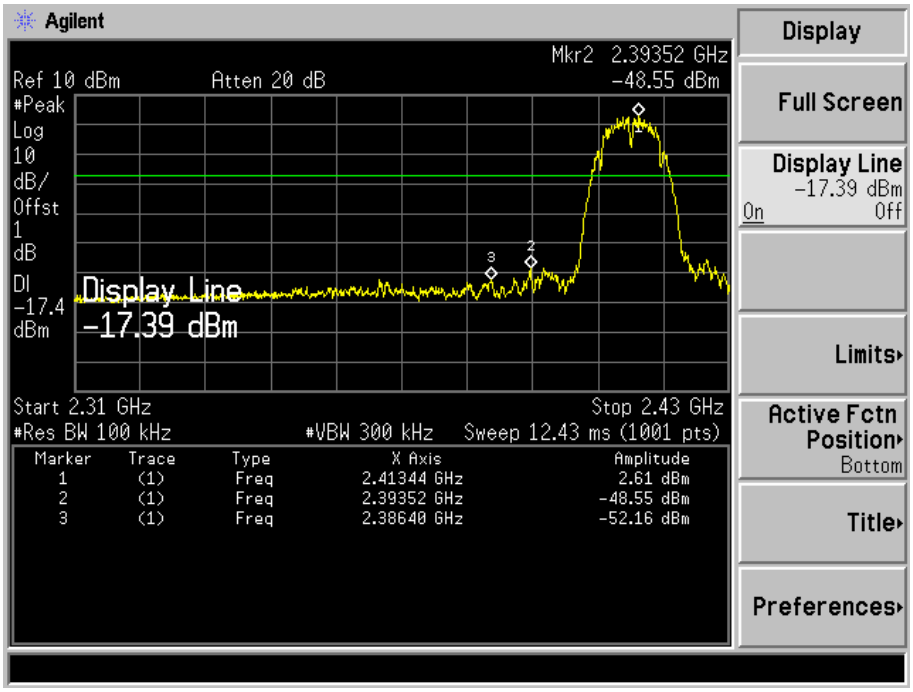
802.11n-HT40-Highest Bandedge

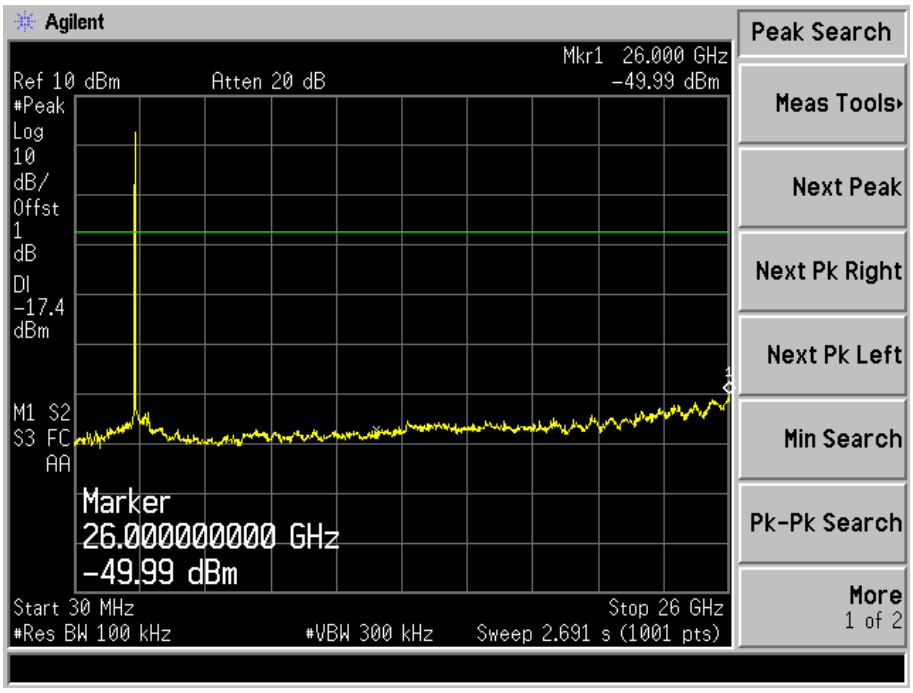
Vertical (Worst case)



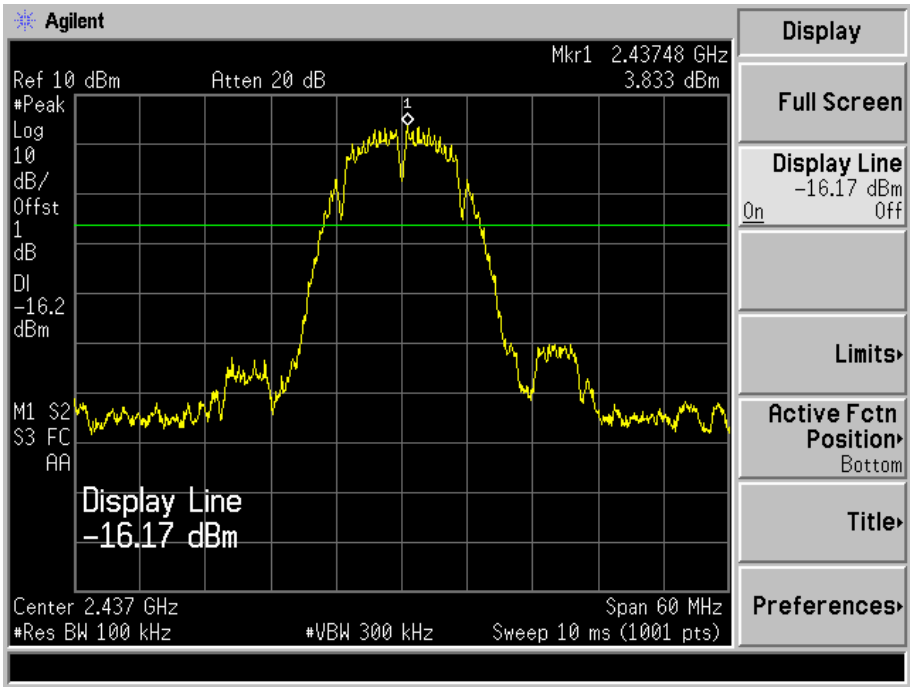
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2443.06	84.65	-7.35	77.30	/	/	Average Detector
	2443.26	94.04	-7.35	86.69	/	/	Peak Detector
2	2483.50	41.47	-7.28	34.19	54.00	-19.81	Average Detector
	2483.50	50.78	-7.28	43.50	74.00	-30.50	Peak Detector

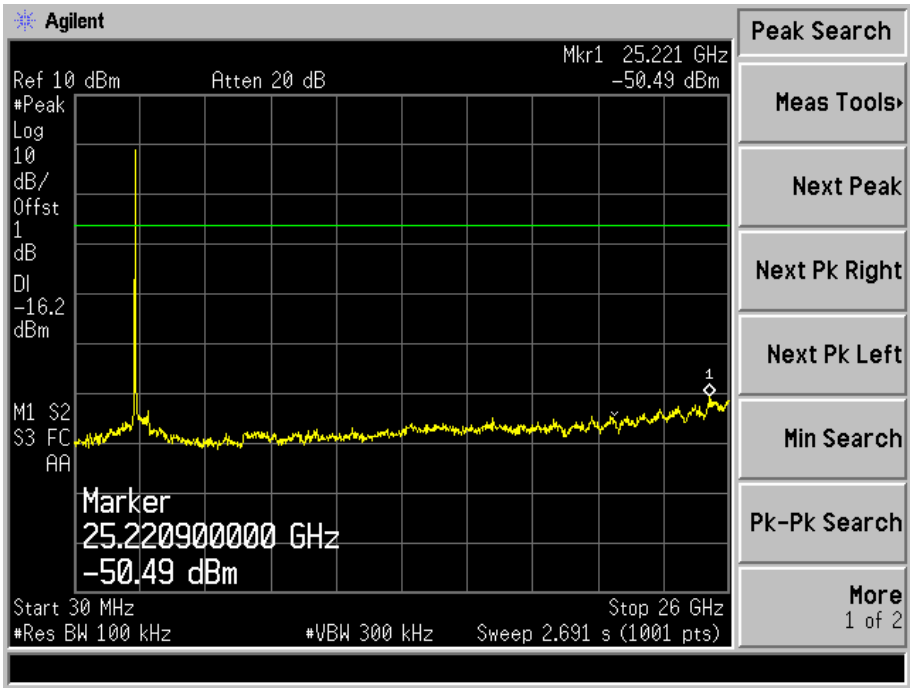
WiFi Antenna A
Spurious (Conducted)
802.11b-Lowest
Lowest



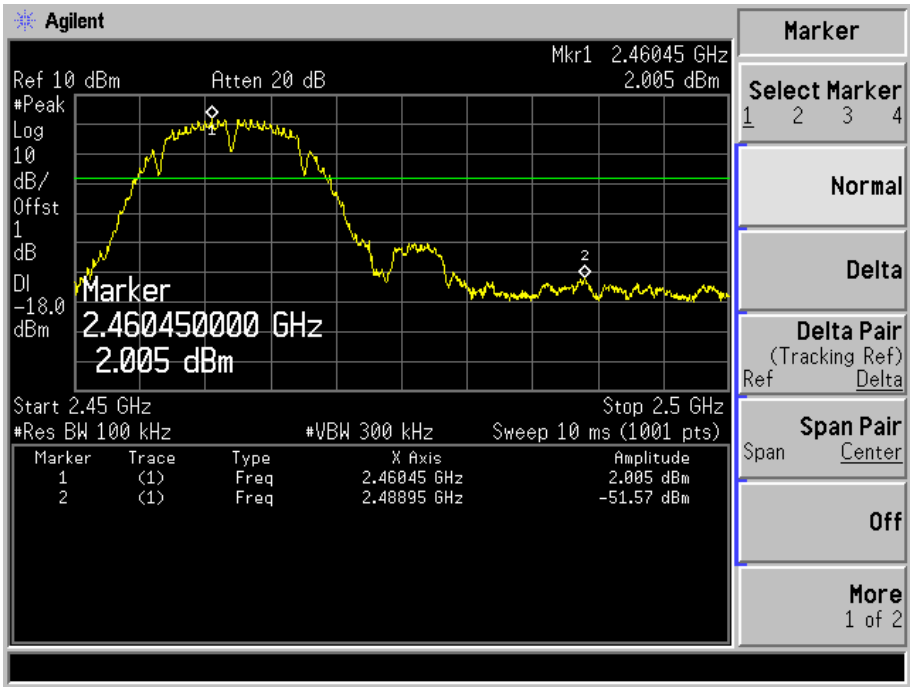


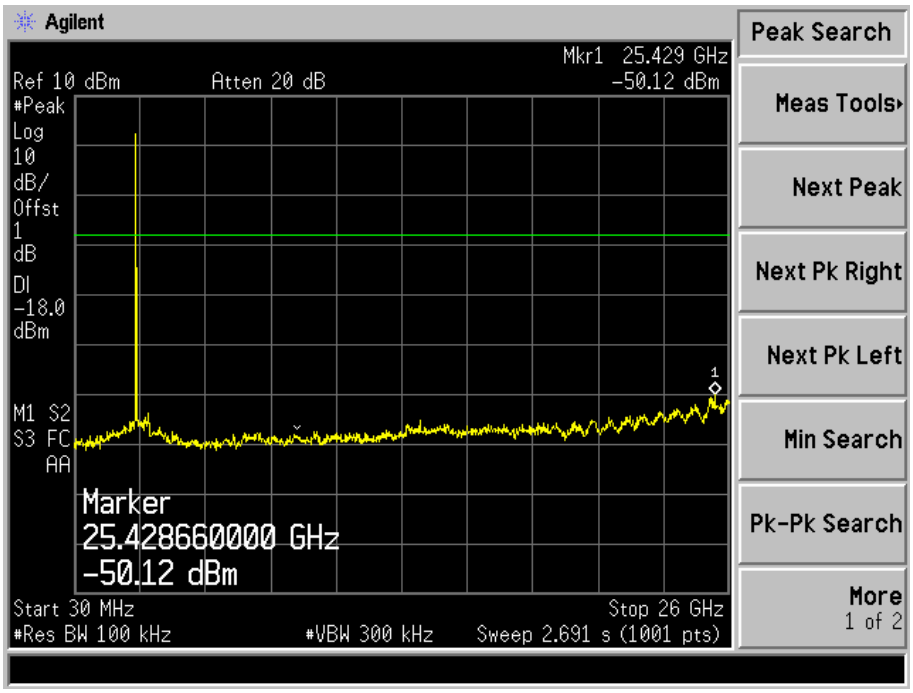
Middle


Agilent
Mkr1 2.43748 GHz
Ref 10 dBm
Atten 20 dB
3.833 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-16.2
dBm
M1 S2
S3 FC
AA
Display Line
-16.17 dBm
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 10 ms (1001 pts)
Display
Full Screen
Display Line
-16.17 dBm
On
Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

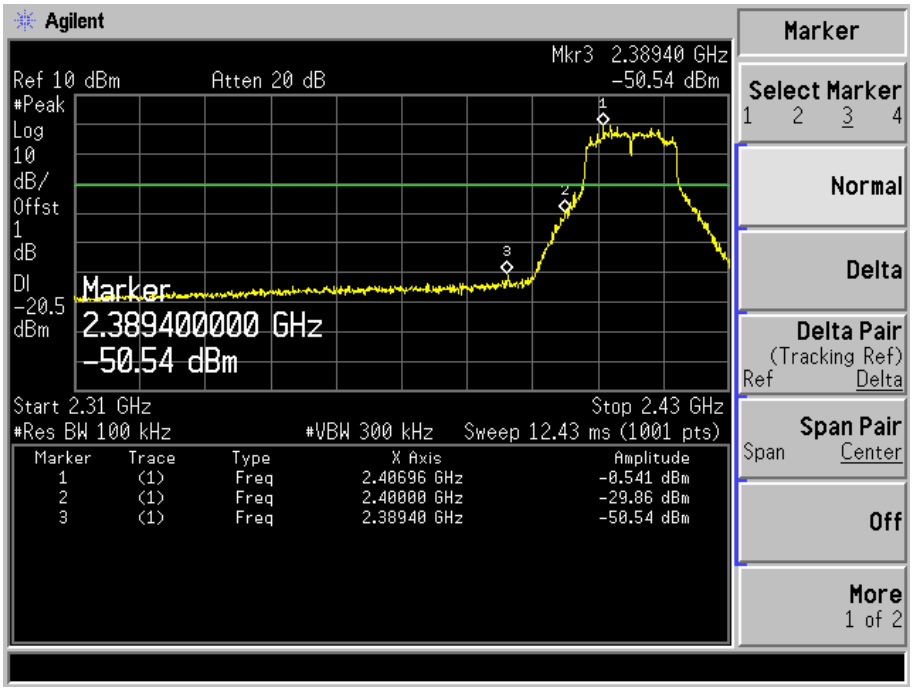

Agilent
Mkr1 25.221 GHz
Ref 10 dBm
Atten 20 dB
-50.49 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-16.2
dBm
M1 S2
S3 FC
AA
Marker
25.220900000 GHz
-50.49 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26 GHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

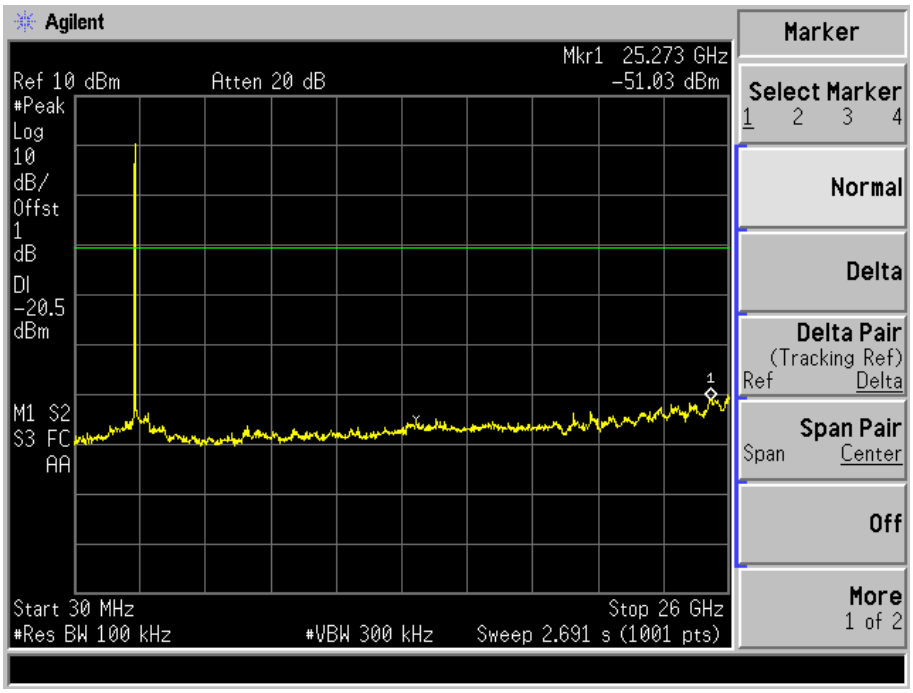
Highest


Agilent
Mkr1 2.46045 GHz
Ref 10 dBm
Atten 20 dB
2.005 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-18.0
dBm
Marker
2.460450000 GHz
2.005 dBm
Start 2.45 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.46045 GHz 2.005 dBm
2 (1) Freq 2.48895 GHz -51.57 dBm
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2

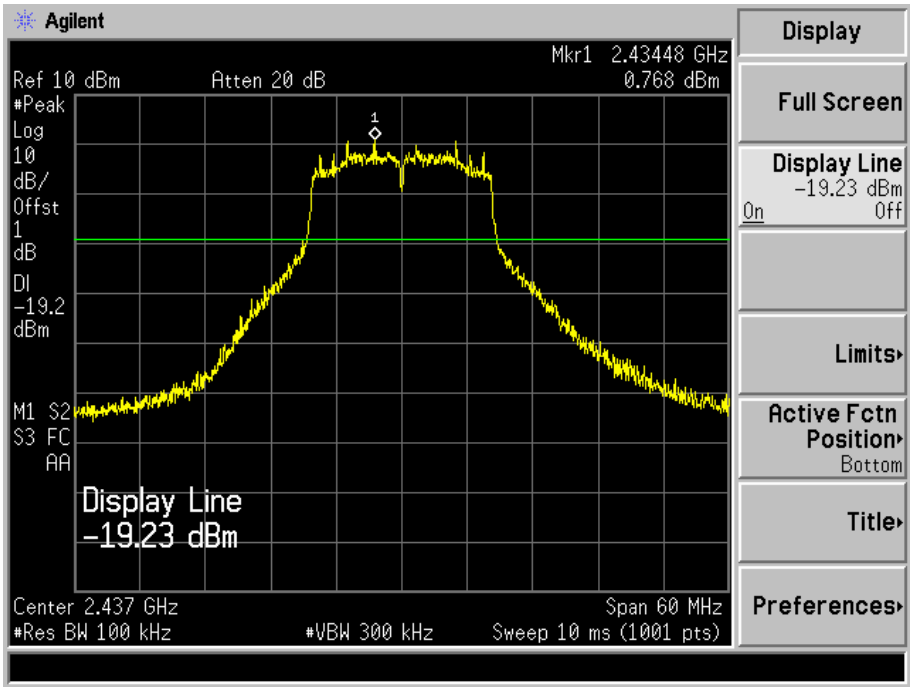

Agilent
Mkr1 25.429 GHz
Ref 10 dBm
Atten 20 dB
-50.12 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-18.0
dBm
M1 S2
S3 FC
AA
Marker
25.428660000 GHz
-50.12 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

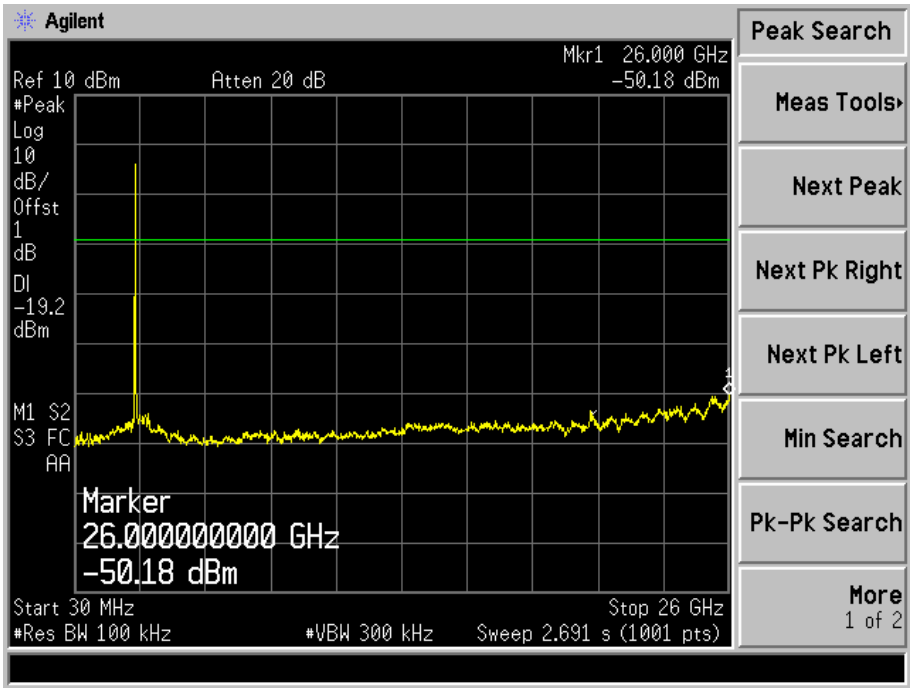
Spurious (Conducted)
802.11g-Lowest
Lowest



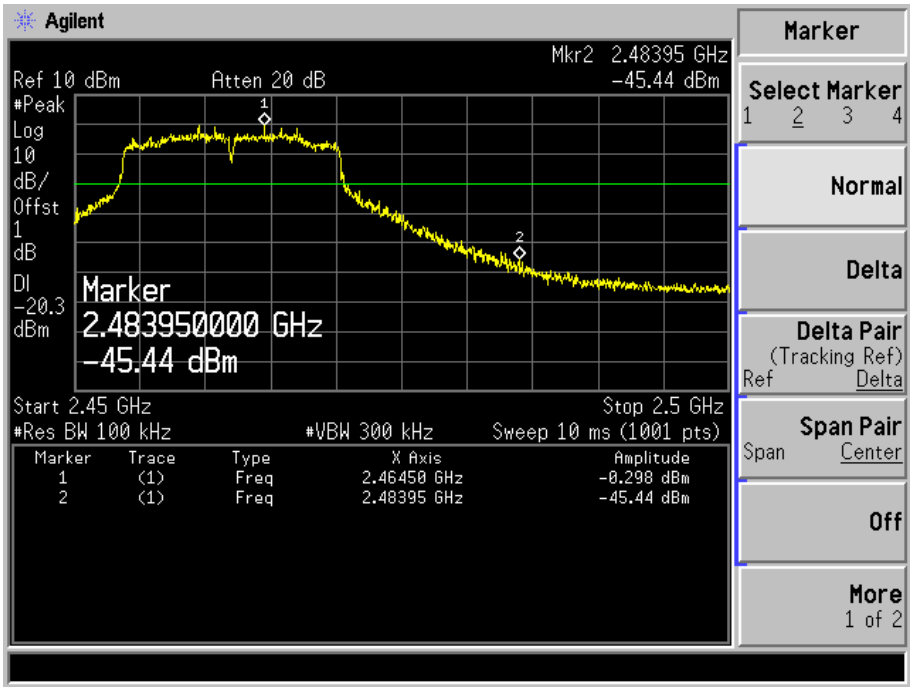


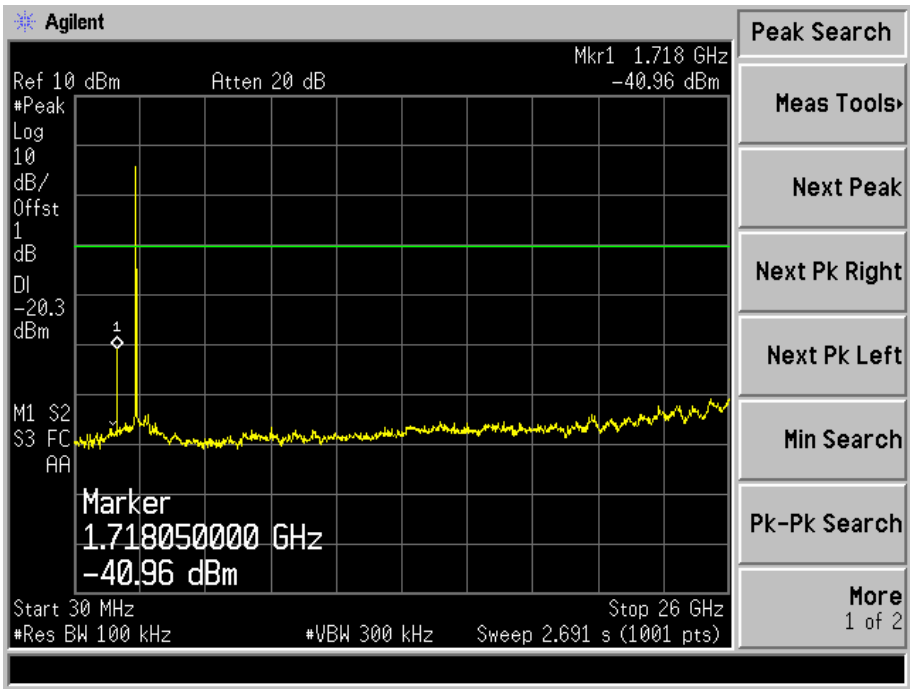
Middle


Agilent
Mkr1 2.43448 GHz
Ref 10 dBm
Atten 20 dB
0.768 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-19.2
dBm
M1 S2
S3 FC
AA
Display Line
-19.23 dBm
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 10 ms (1001 pts)
Display
Full Screen
Display Line
-19.23 dBm
On
Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

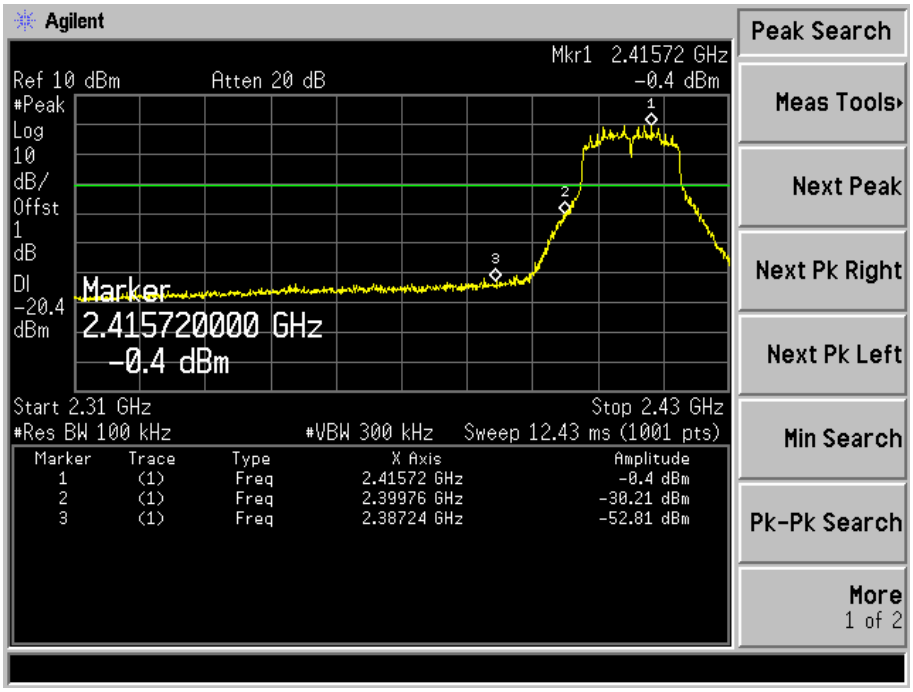

Agilent
Mkr1 26.000 GHz
Ref 10 dBm
Atten 20 dB
-50.18 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-19.2
dBm
M1 S2
S3 FC
AA
Marker
26.000000000 GHz
-50.18 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26 GHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

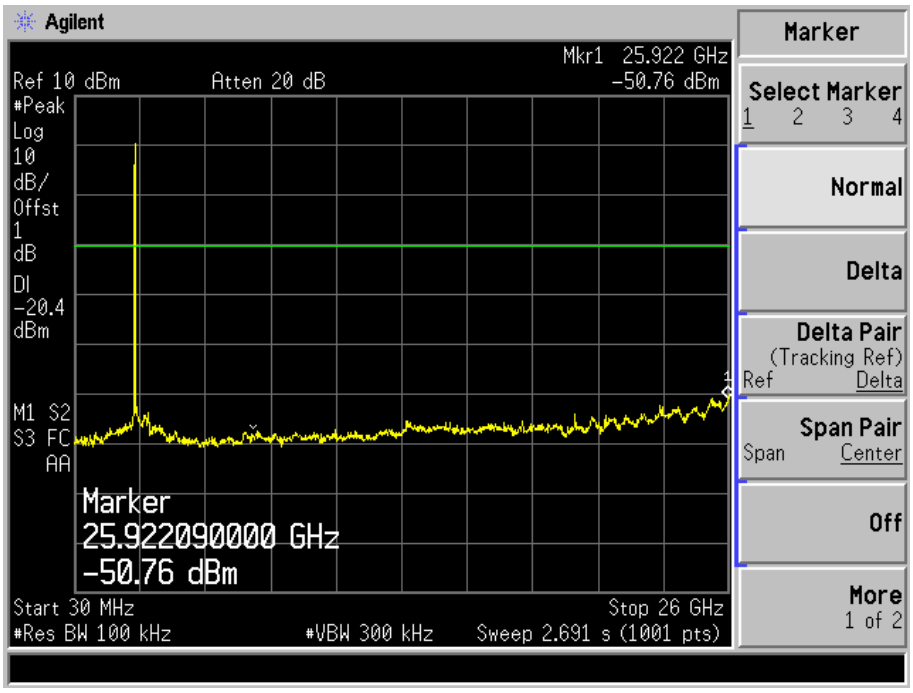
Highest


Agilent
Mkr2 2.48395 GHz
Ref 10 dBm
Atten 20 dB
-45.44 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-20.3
dBm
Marker
2.483950000 GHz
-45.44 dBm
Start 2.45 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.46450 GHz -0.298 dBm
2 (1) Freq 2.48395 GHz -45.44 dBm
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2

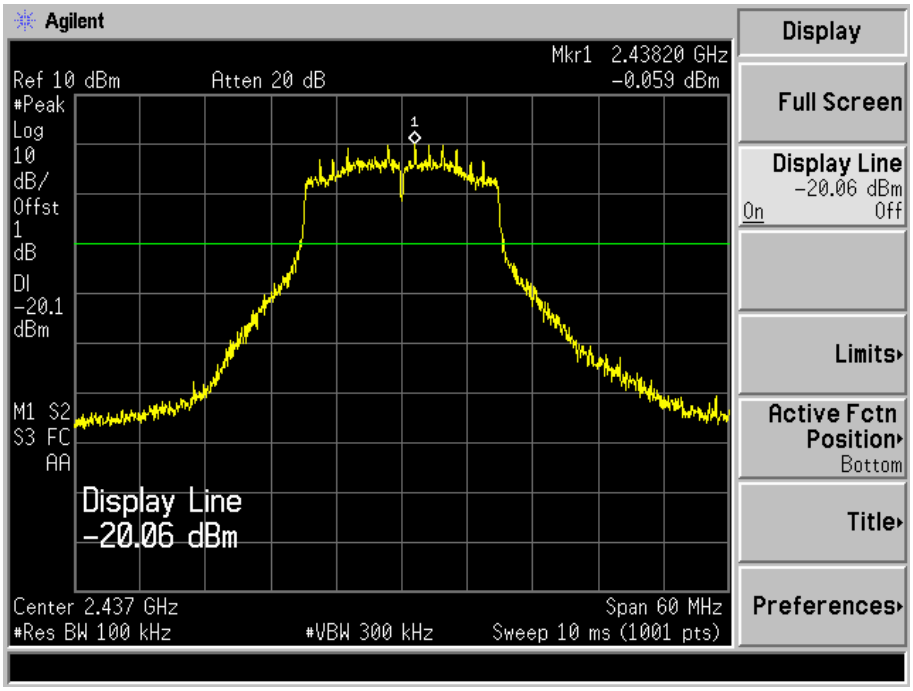

Agilent
Mkr1 1.718 GHz
Ref 10 dBm
Atten 20 dB
-40.96 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-20.3
dBm
M1 S2
S3 FC
AA
Marker
1.718050000 GHz
-40.96 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

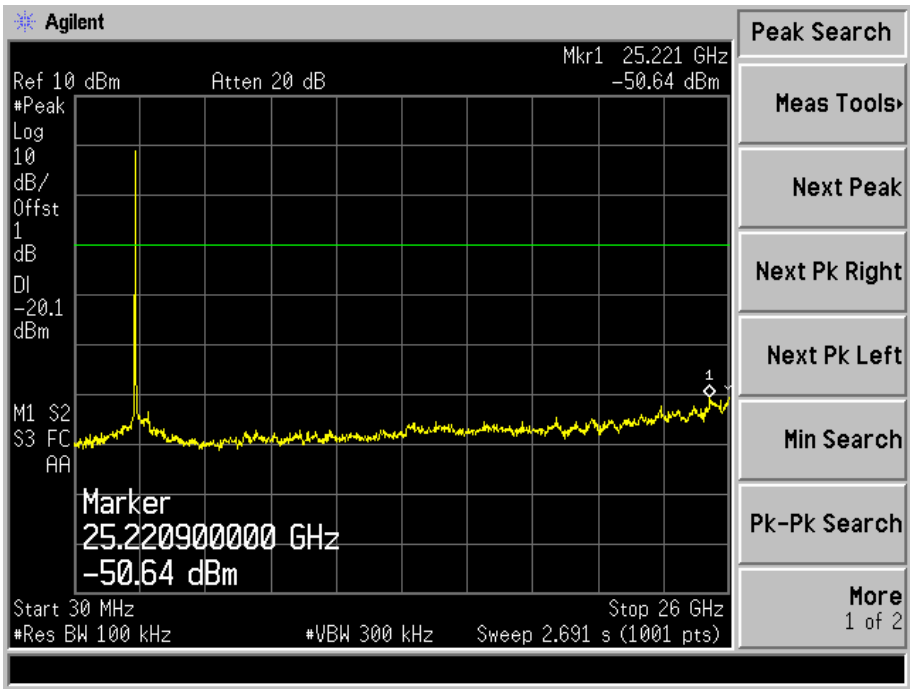
Spurious (Conducted)
802.11n-HT20-Lowest
Lowest



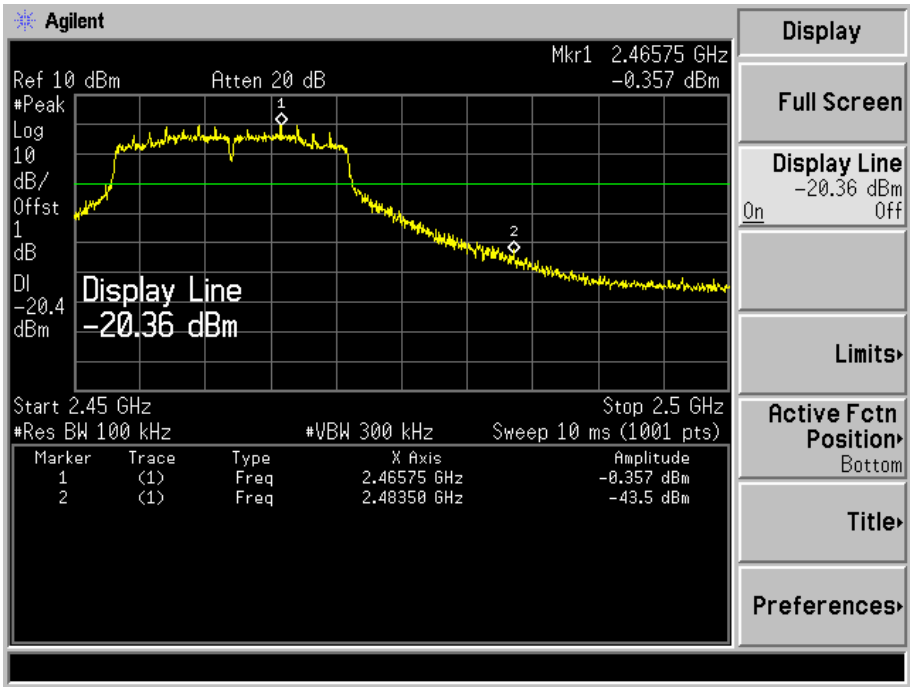


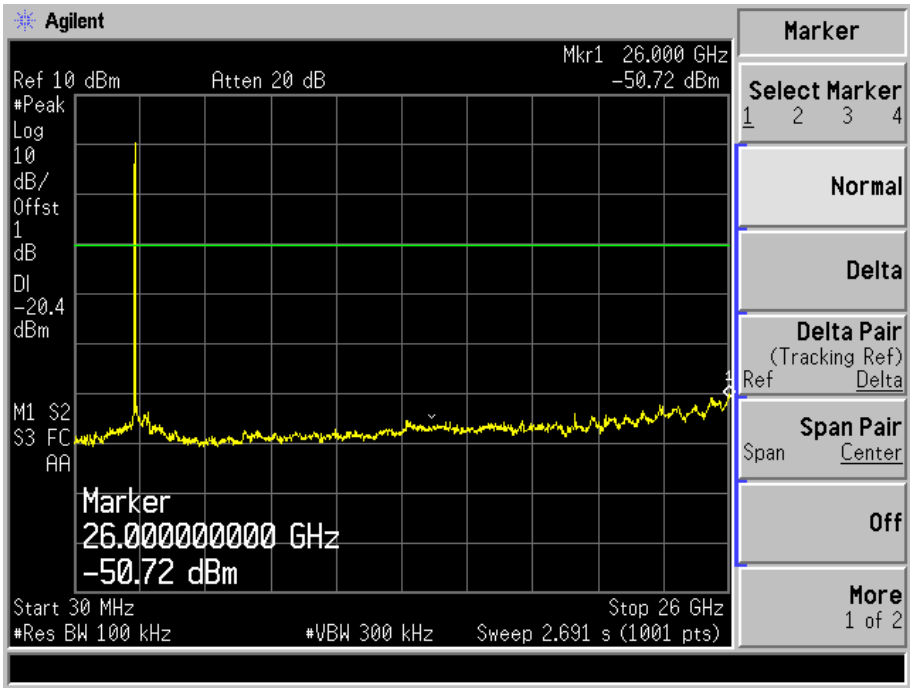
Middle


Agilent
Mkr1 2.43820 GHz
Ref 10 dBm
Atten 20 dB
-0.059 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-20.1
dBm
M1 S2
S3 FC
AA
Display Line
-20.06 dBm
Center 2.437 GHz
Span 60 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Display
Full Screen
Display Line
-20.06 dBm
On
Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

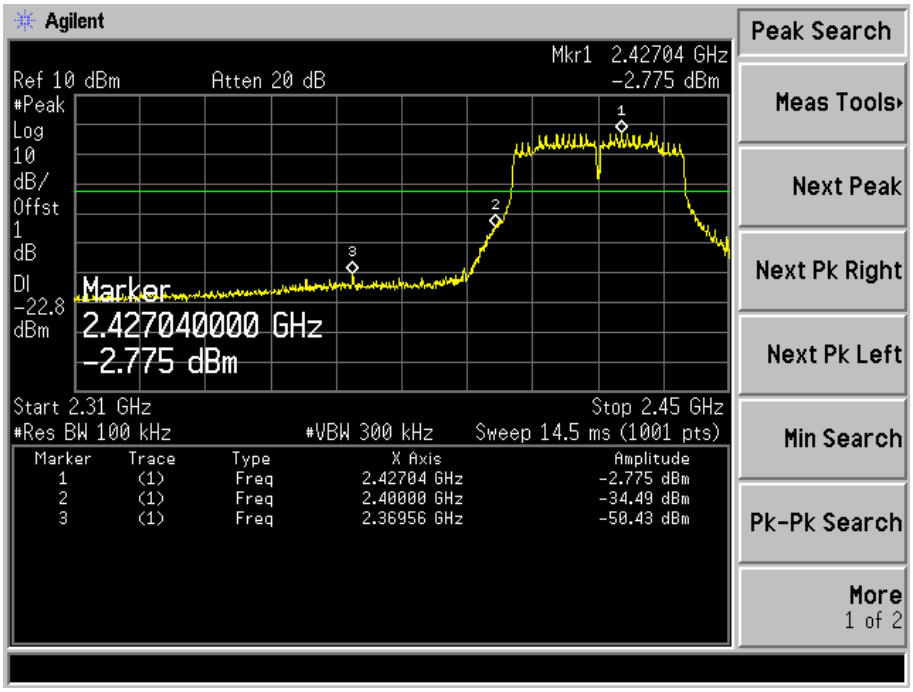

Agilent
Mkr1 25.221 GHz
Ref 10 dBm
Atten 20 dB
-50.64 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-20.1
dBm
M1 S2
S3 FC
AA
Marker
25.220900000 GHz
-50.64 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

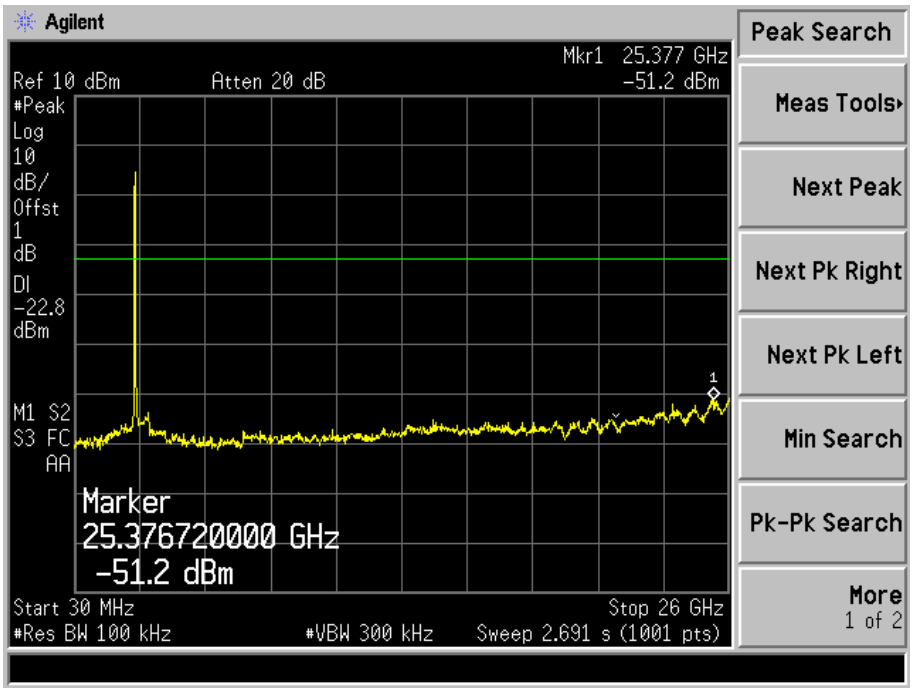
Highest


Agilent
Mkr1 2.46575 GHz
Ref 10 dBm
Atten 20 dB
-0.357 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-20.4
dBm
Display Line
-20.36 dBm
Start 2.45 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.46575 GHz -0.357 dBm
2 (1) Freq 2.48350 GHz -43.5 dBm
Display
Full Screen
Display Line
-20.36 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

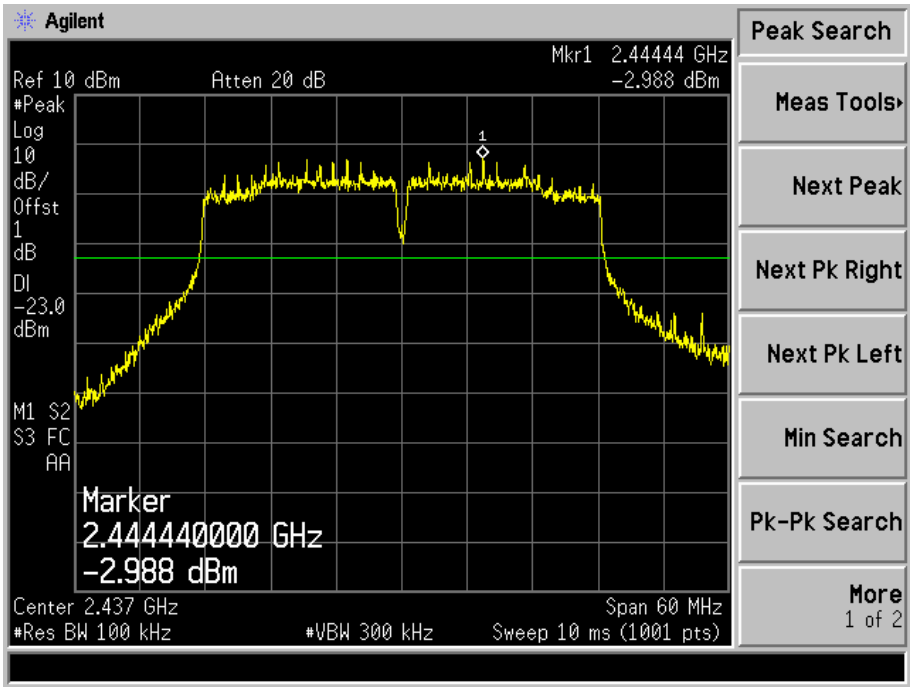

Agilent
Mkr1 26.000 GHz
Ref 10 dBm
Atten 20 dB
-50.72 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-20.4
dBm
M1 S2
S3 FC
AA
Marker
26.000000000 GHz
-50.72 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2

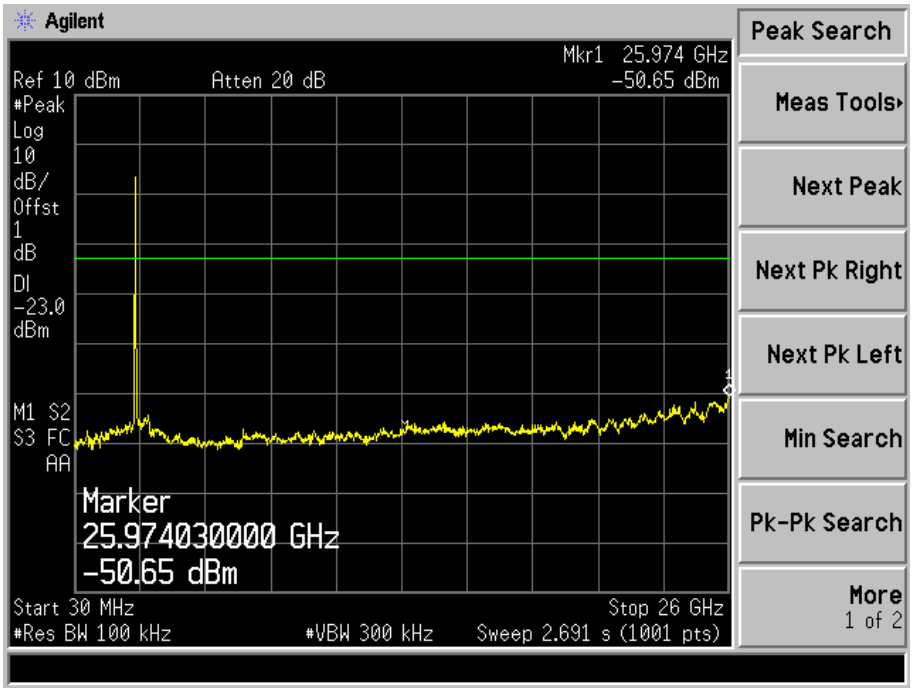
Spurious (Conducted)
802.11n-HT40-Lowest
Lowest



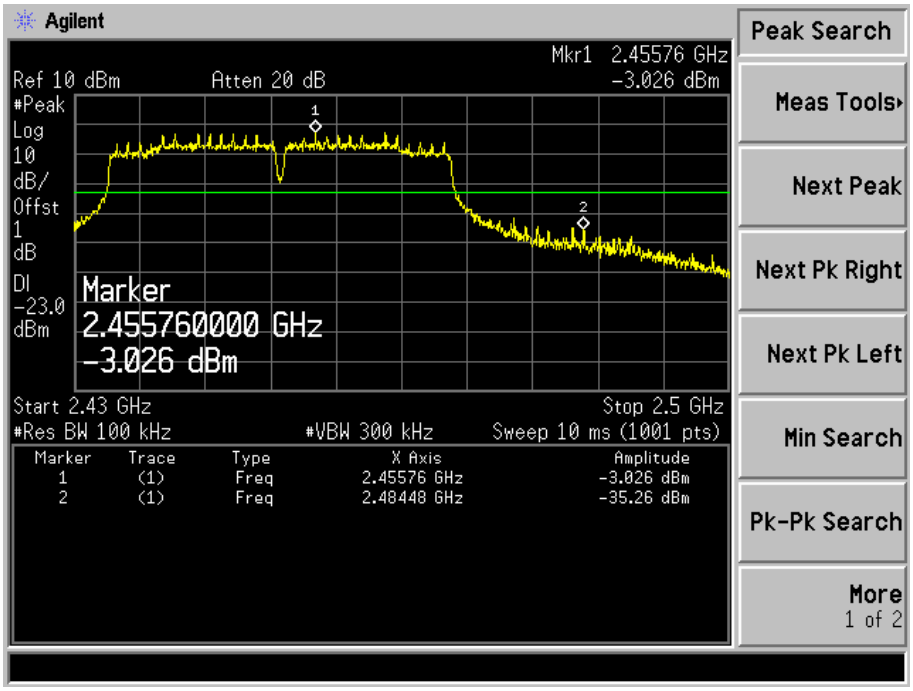


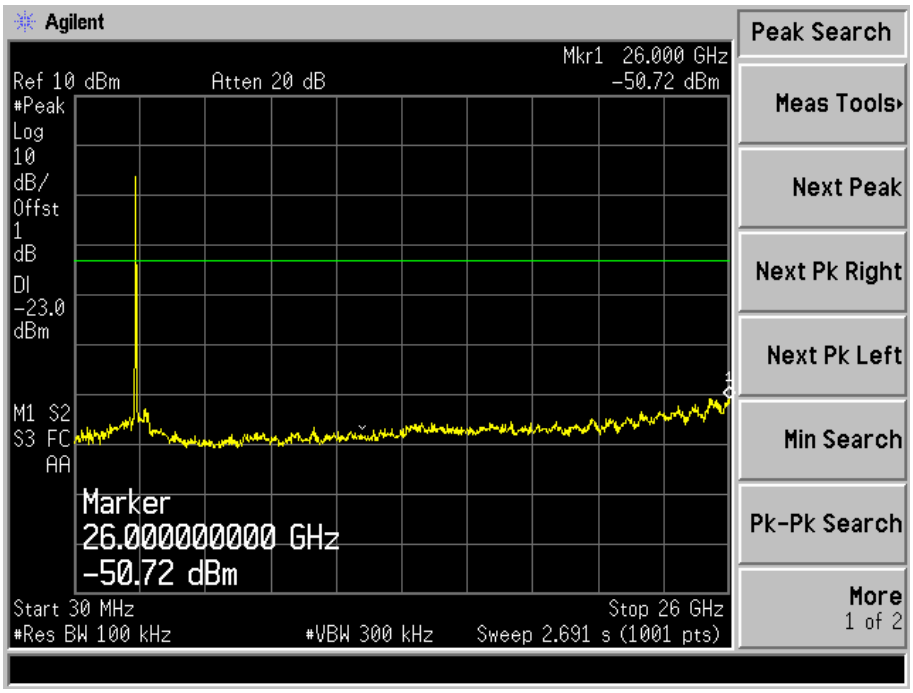
Middle


Agilent
Mkr1 2.44444 GHz
Ref 10 dBm
Atten 20 dB
-2.988 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-23.0
dBm
M1 S2
S3 FC
AA
Marker
2.444440000 GHz
-2.988 dBm
Center 2.437 GHz
Span 60 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

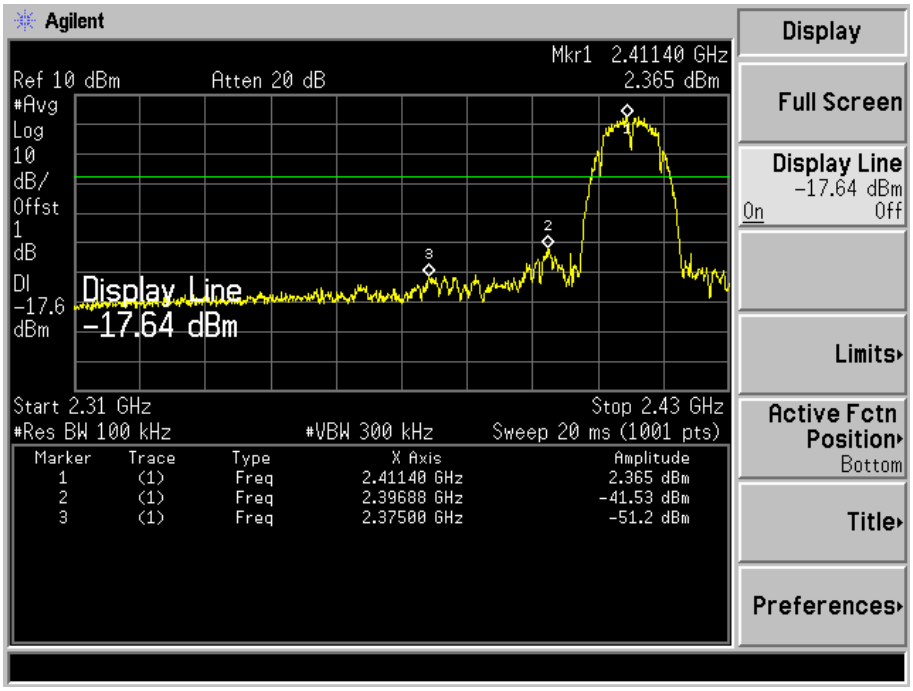

Agilent
Mkr1 25.974 GHz
Ref 10 dBm
Atten 20 dB
-50.65 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-23.0
dBm
M1 S2
S3 FC
AA
Marker
25.974030000 GHz
-50.65 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

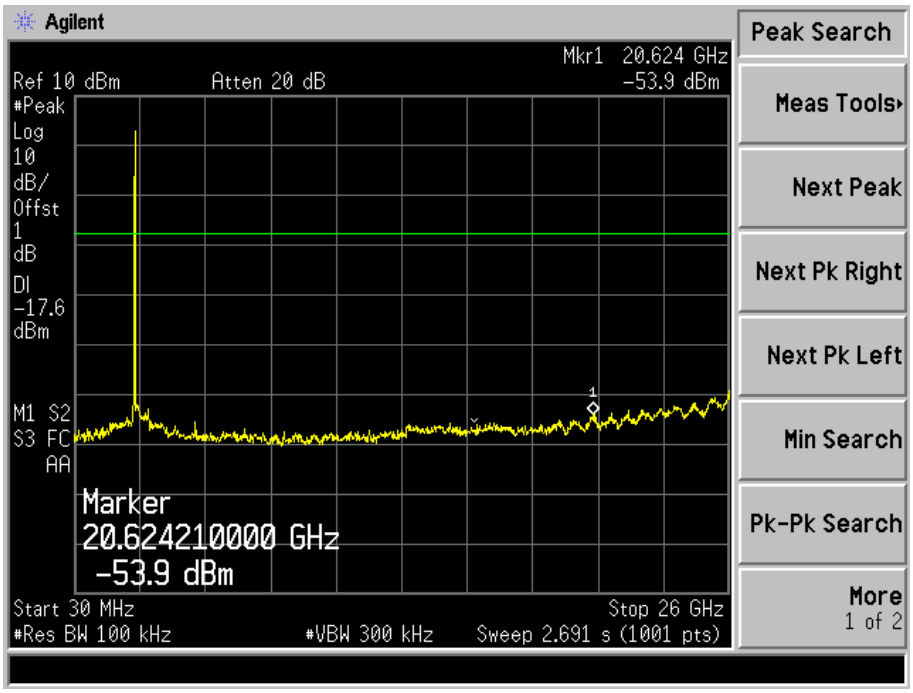
Highest


Agilent
Mkr1 2.45576 GHz
Ref 10 dBm
Atten 20 dB
-3.026 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-23.0
dBm
Marker
2.455760000 GHz
-3.026 dBm
Start 2.43 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.45576 GHz -3.026 dBm
2 (1) Freq 2.48448 GHz -35.26 dBm
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

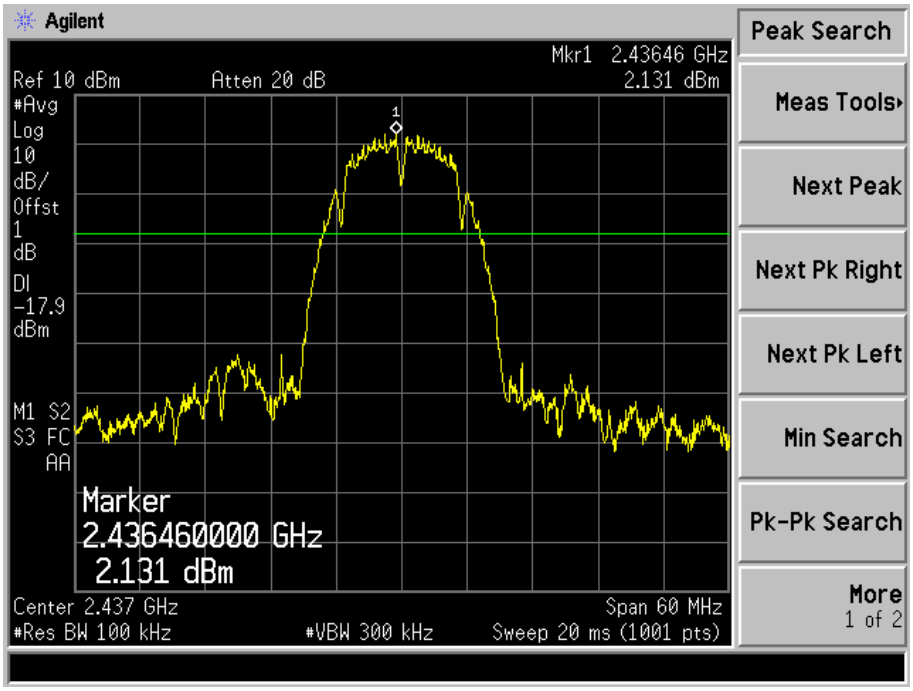

Agilent
Mkr1 26.000 GHz
Ref 10 dBm
Atten 20 dB
-50.72 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-23.0
dBm
M1 S2
S3 FC
AA
Marker
26.000000000 GHz
-50.72 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

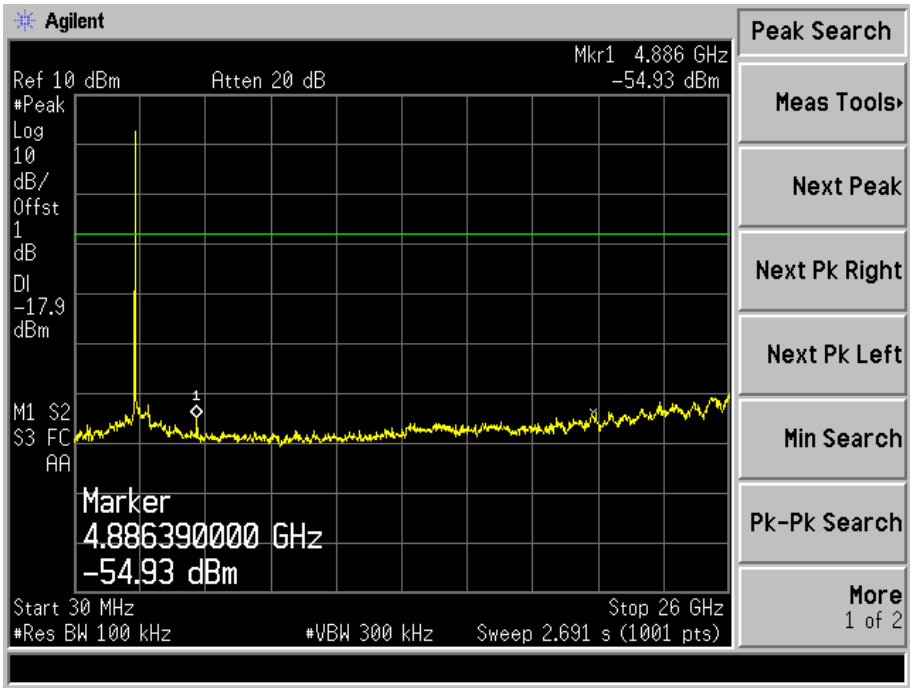
WiFi Antenna B
Spurious (Conducted)
802.11b-Lowest



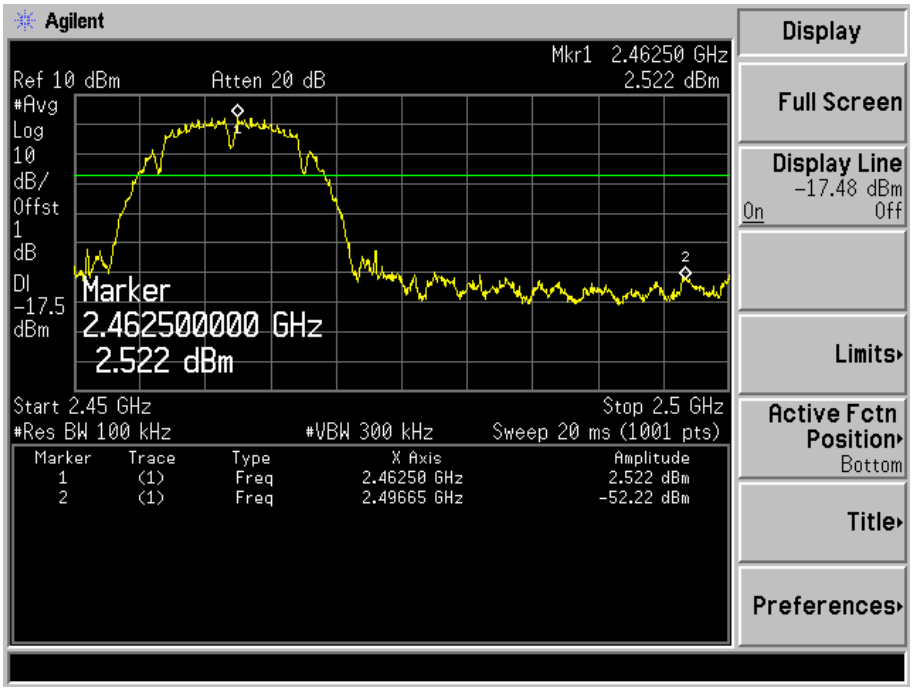


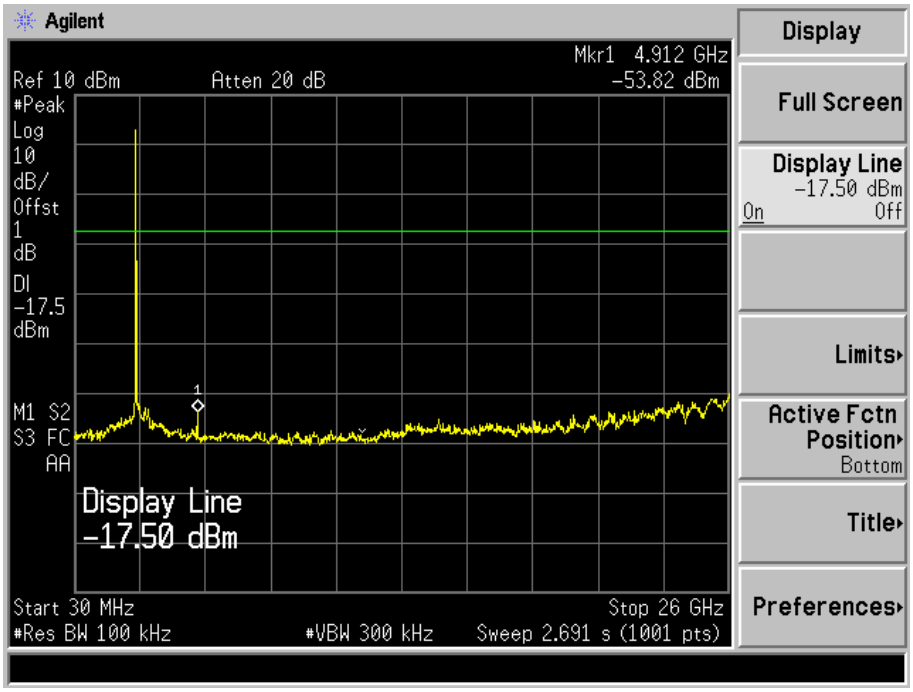
Middle


Agilent
Mkr1 2.43646 GHz
Ref 10 dBm
Atten 20 dB
2.131 dBm
#Avg
Log
10
dB/
Offst
1
dB
Dl
-17.9
dBm
M1 S2
S3 FC
AA
Marker
2.436460000 GHz
2.131 dBm
Center 2.437 GHz
Span 60 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 20 ms (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

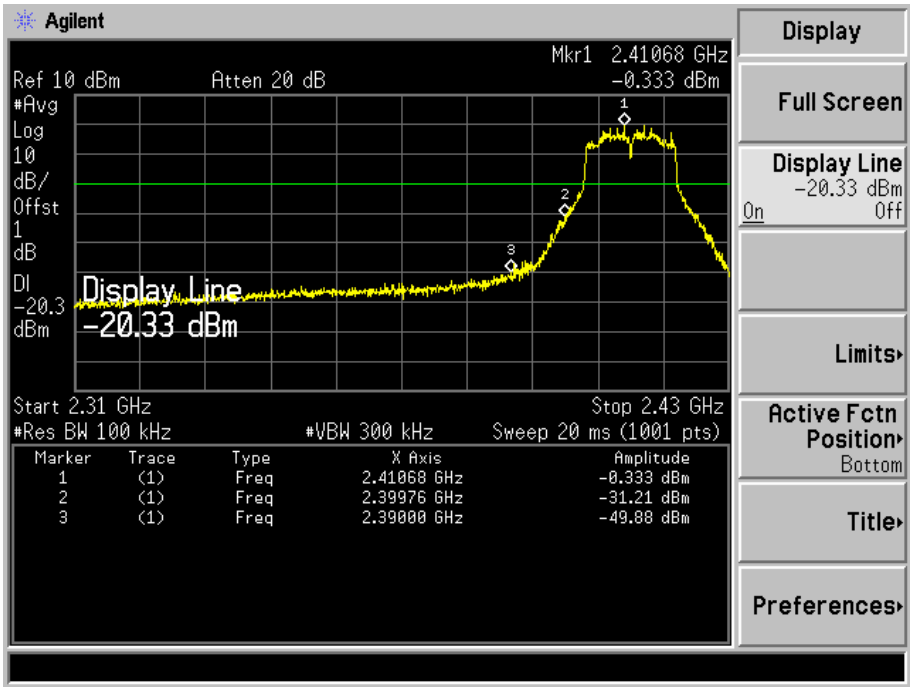

Agilent
Mkr1 4.886 GHz
Ref 10 dBm
Atten 20 dB
-54.93 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-17.9
dBm
M1 S2
S3 FC
AA
Marker
4.886390000 GHz
-54.93 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

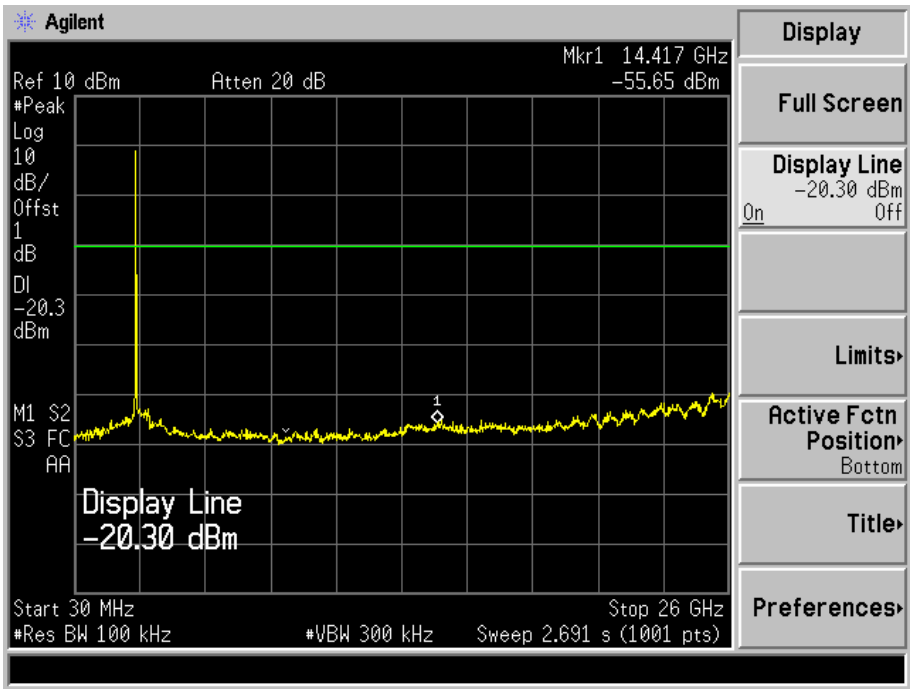
Highest


Agilent
Mkr1 2.46250 GHz
Ref 10 dBm
Atten 20 dB
2.522 dBm
#Avg
Log
10
dB/
Offst
1
dB
Dl
-17.5
dBm
Marker
2.462500000 GHz
2.522 dBm
Start 2.45 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 20 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.46250 GHz 2.522 dBm
2 (1) Freq 2.49665 GHz -52.22 dBm
Display
Full Screen
Display Line
-17.48 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

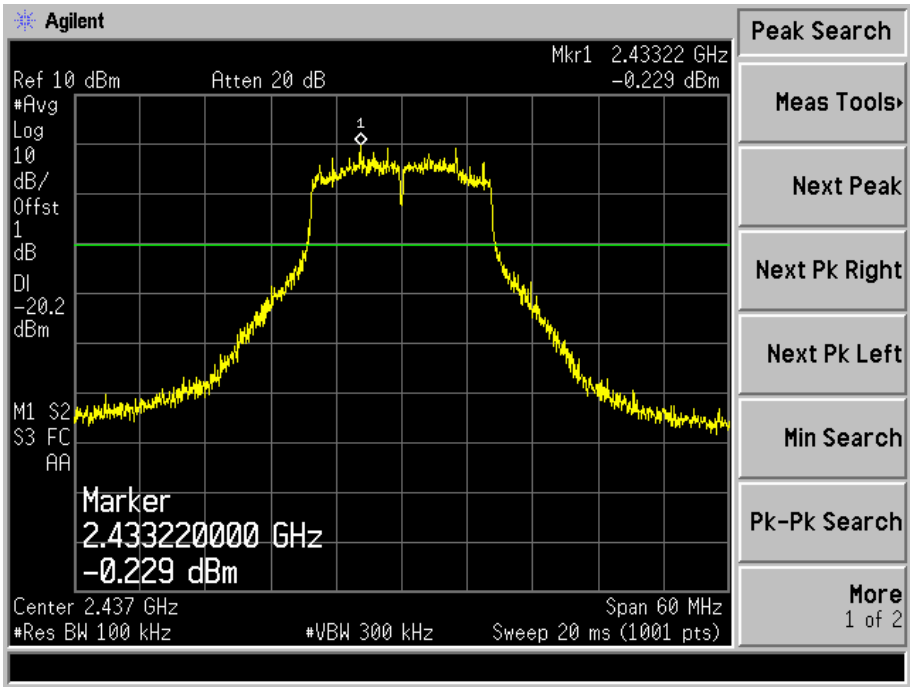

Agilent
Mkr1 4.912 GHz
Ref 10 dBm
Atten 20 dB
-53.82 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-17.5
dBm
M1 S2
S3 FC
AA
Display Line
-17.50 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Display
Full Screen
Display Line
-17.50 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

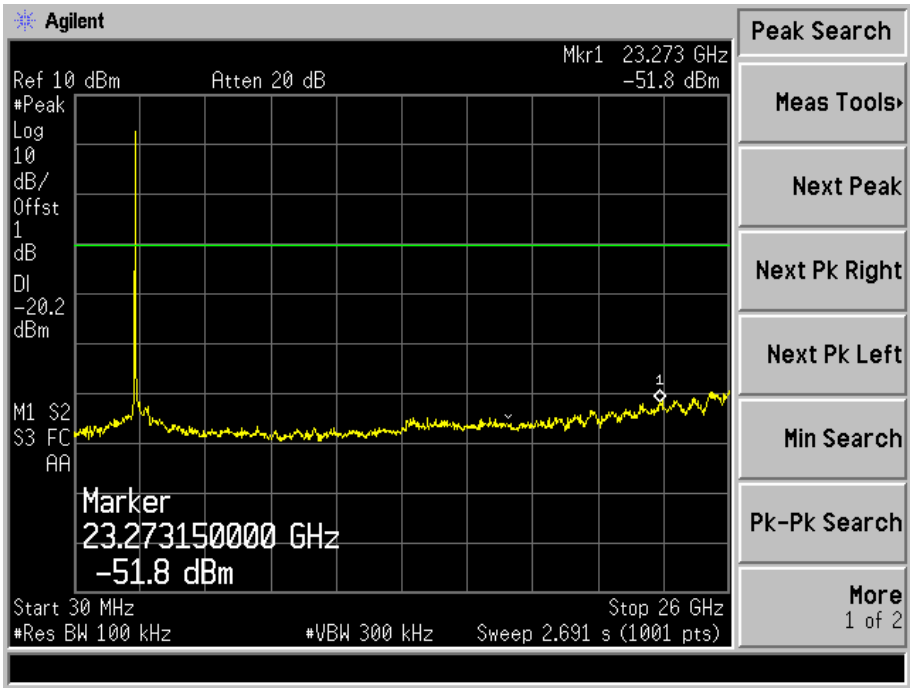
Spurious (Conducted)
802.11g-Lowest



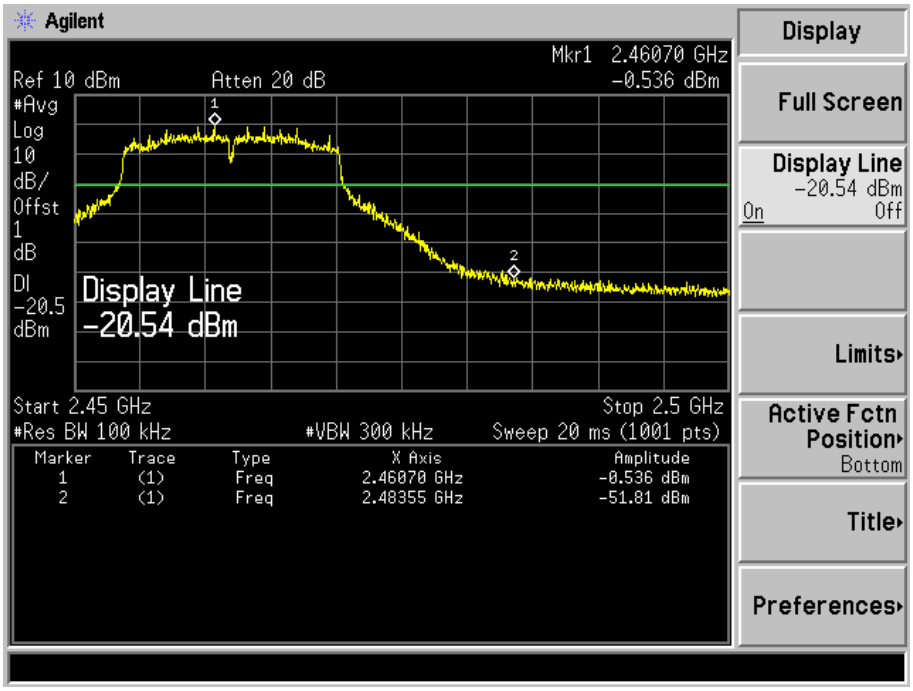


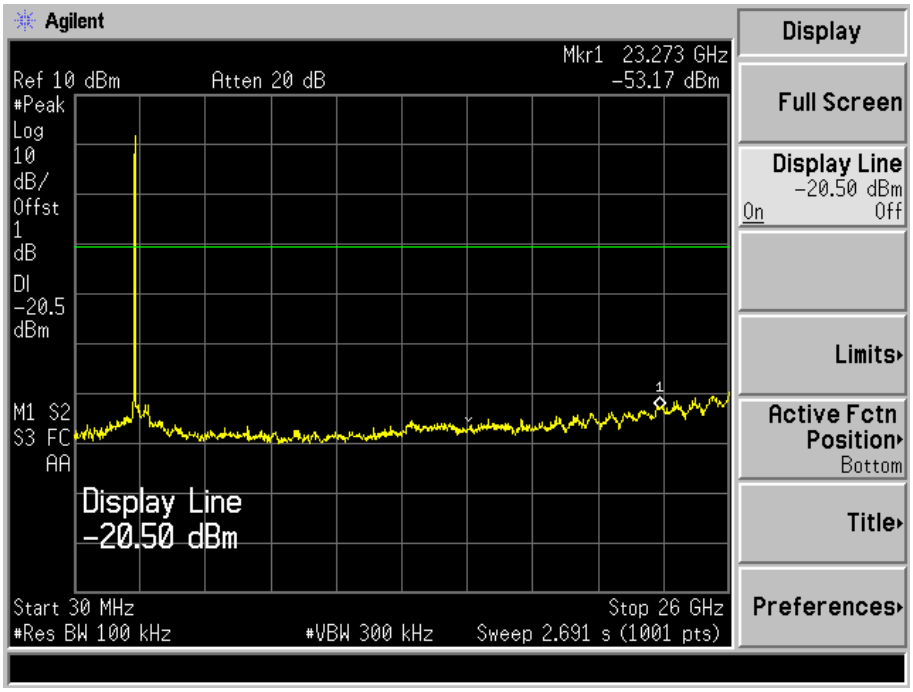
Middle


Agilent
Mkr1 2.43322 GHz
Ref 10 dBm
Atten 20 dB
-0.229 dBm
#Avg
Log
10
dB/
Offst
1
dB
Dl
-20.2
dBm
M1 S2
S3 FC
AA
Marker
2.433220000 GHz
-0.229 dBm
Center 2.437 GHz
Span 60 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 20 ms (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

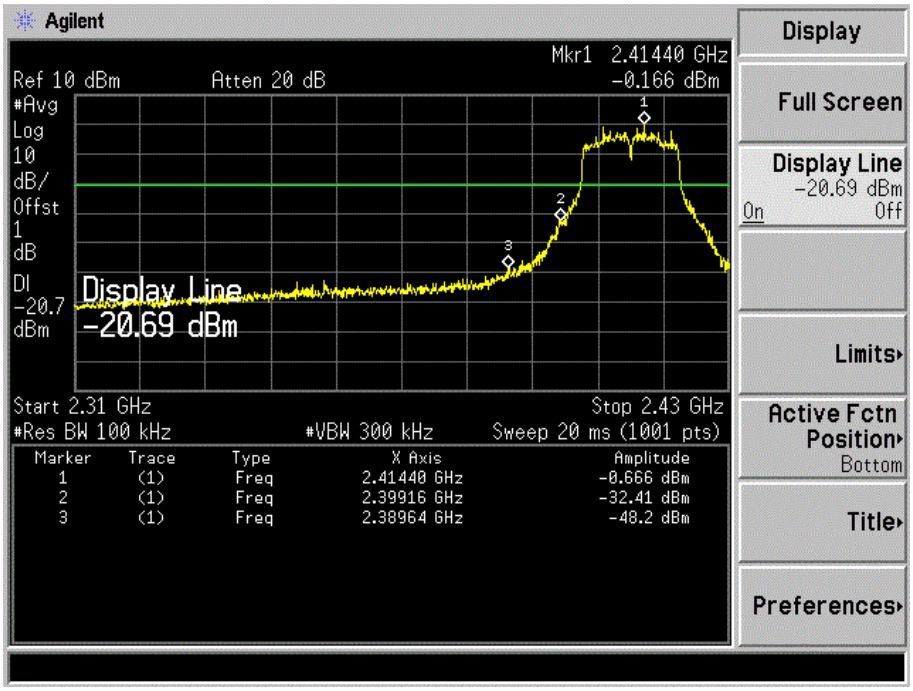

Agilent
Mkr1 23.273 GHz
Ref 10 dBm
Atten 20 dB
-51.8 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-20.2
dBm
M1 S2
S3 FC
AA
Marker
23.273150000 GHz
-51.8 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

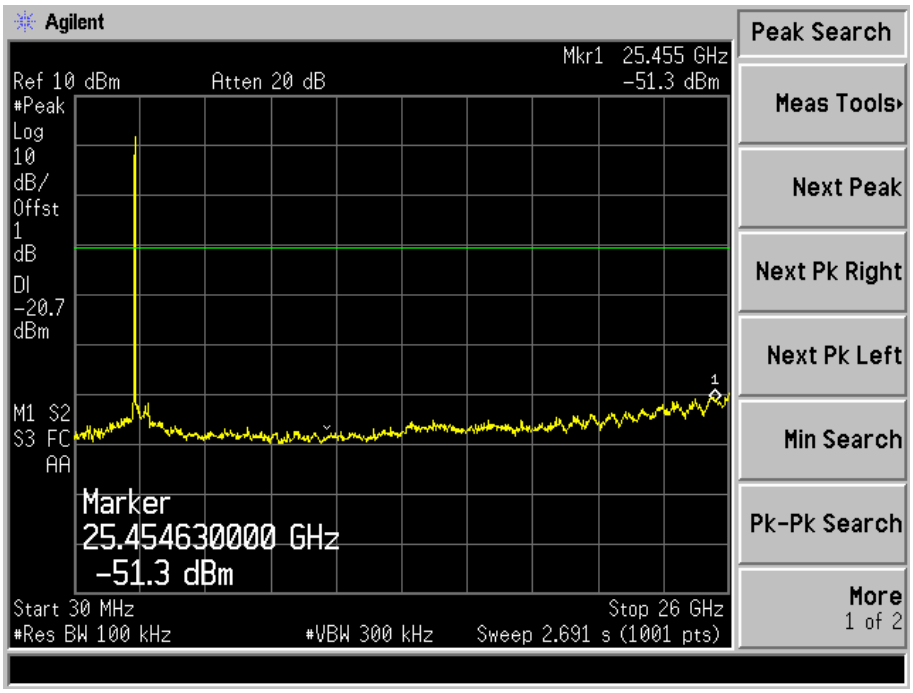
Highest


Agilent
Mkr1 2.46070 GHz
Ref 10 dBm
Atten 20 dB
-0.536 dBm
#Avg
Log
10
dB/
Offst
1
dB
Dl
-20.5
dBm
Display Line
-20.54 dBm
Start 2.45 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 20 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.46070 GHz -0.536 dBm
2 (1) Freq 2.48355 GHz -51.81 dBm
Display
Full Screen
Display Line
-20.54 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

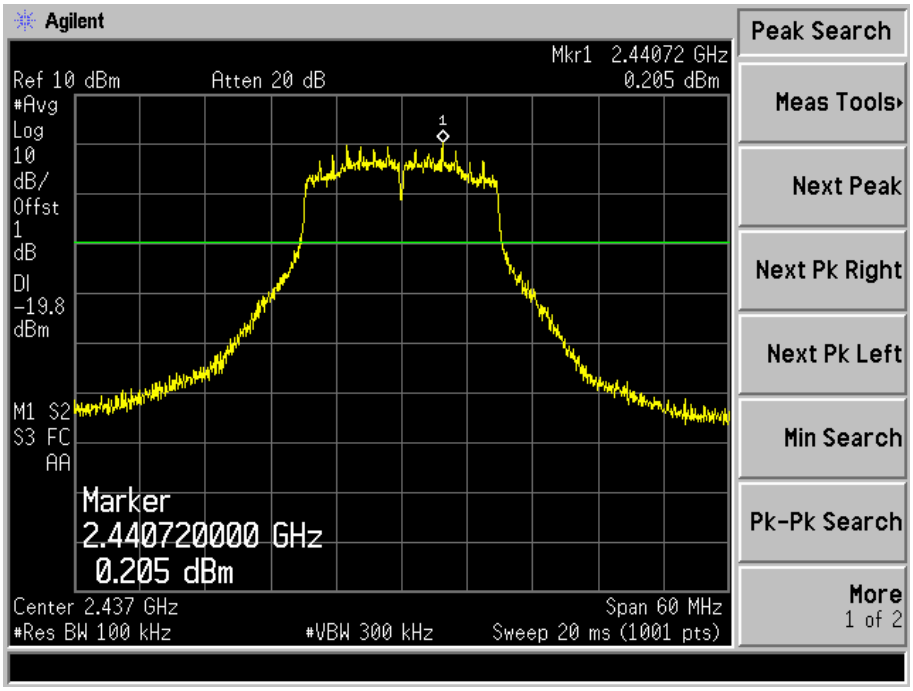

Agilent
Mkr1 23.273 GHz
Ref 10 dBm
Atten 20 dB
-53.17 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-20.5
dBm
M1 S2
S3 FC
AA
Display Line
-20.50 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Display
Full Screen
Display Line
-20.50 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

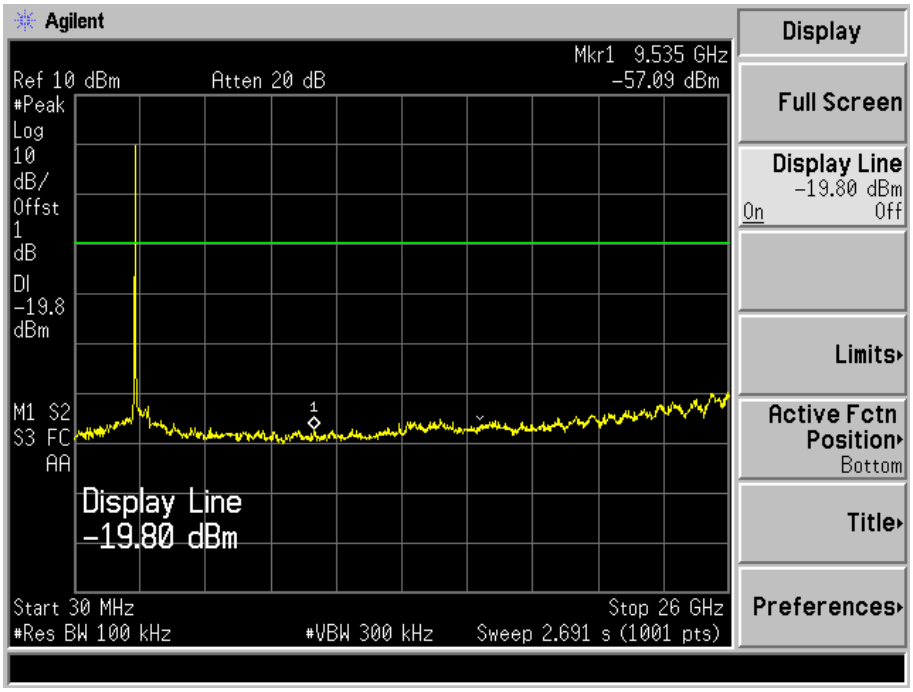
Spurious (Conducted)
802.11n-HT20-Lowest



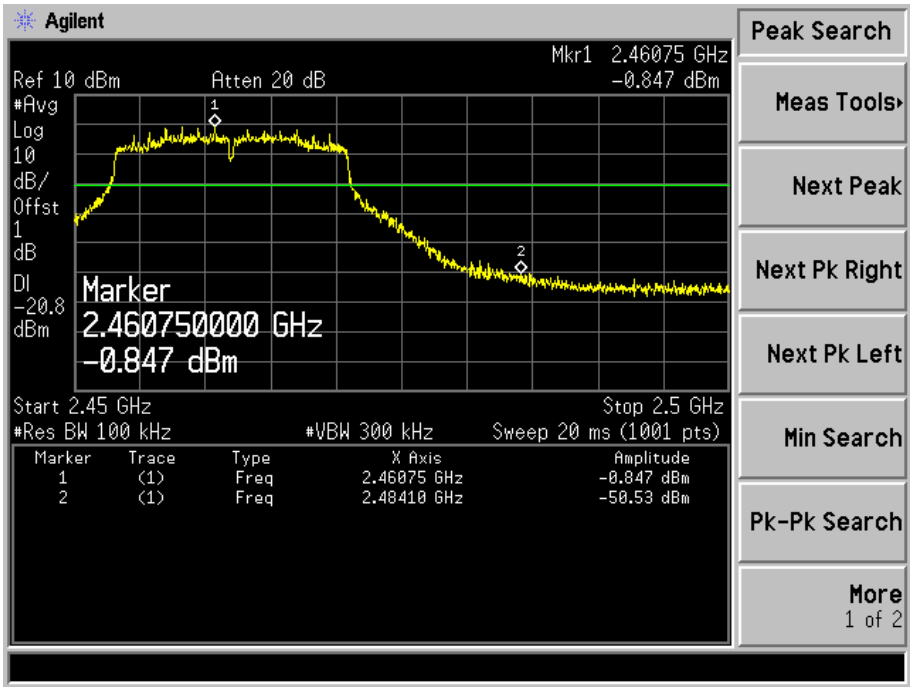


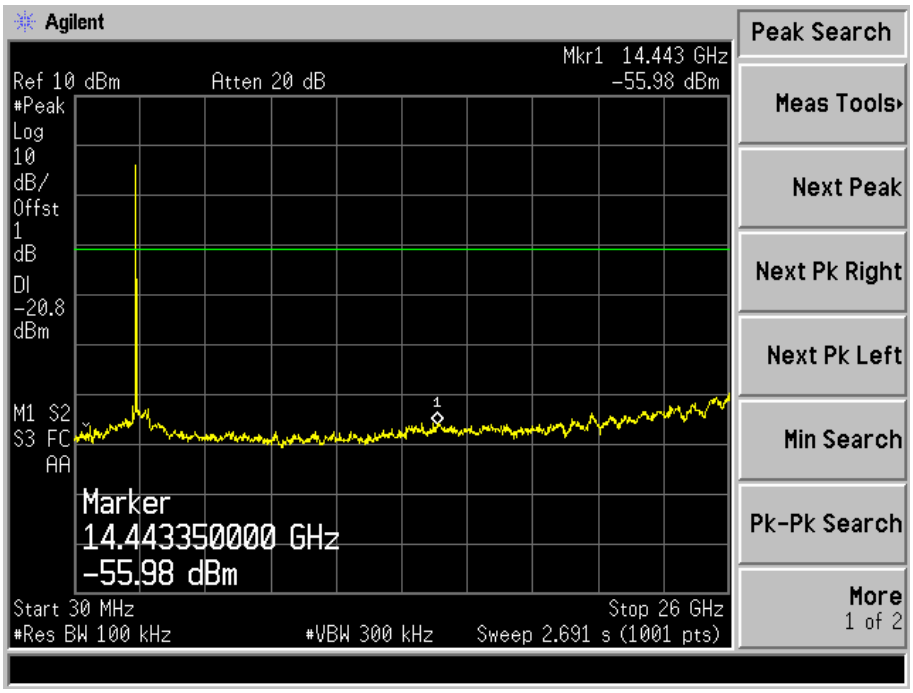
Middle


Agilent
Mkr1 2.44072 GHz
Ref 10 dBm
Atten 20 dB
0.205 dBm
#Avg
Log
10
dB/
Offst
1
dB
Dl
-19.8
dBm
M1 S2
S3 FC
AA
Marker
2.440720000 GHz
0.205 dBm
Center 2.437 GHz
Span 60 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 20 ms (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

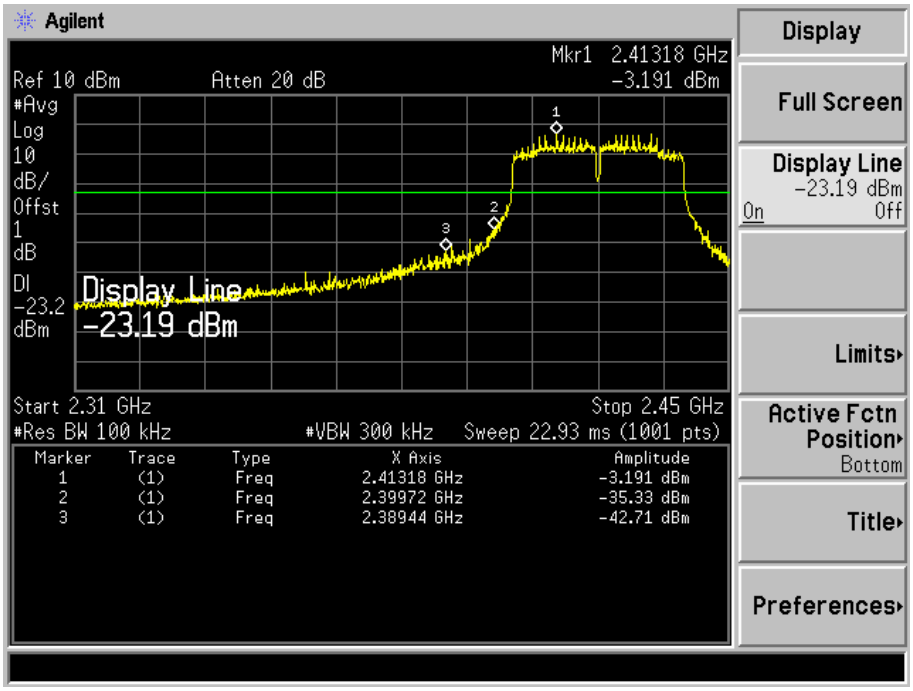

Agilent
Mkr1 9.535 GHz
Ref 10 dBm
Atten 20 dB
-57.09 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-19.8
dBm
M1 S2
S3 FC
AA
Display Line
-19.80 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Display
Full Screen
Display Line
-19.80 dBm
On
Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

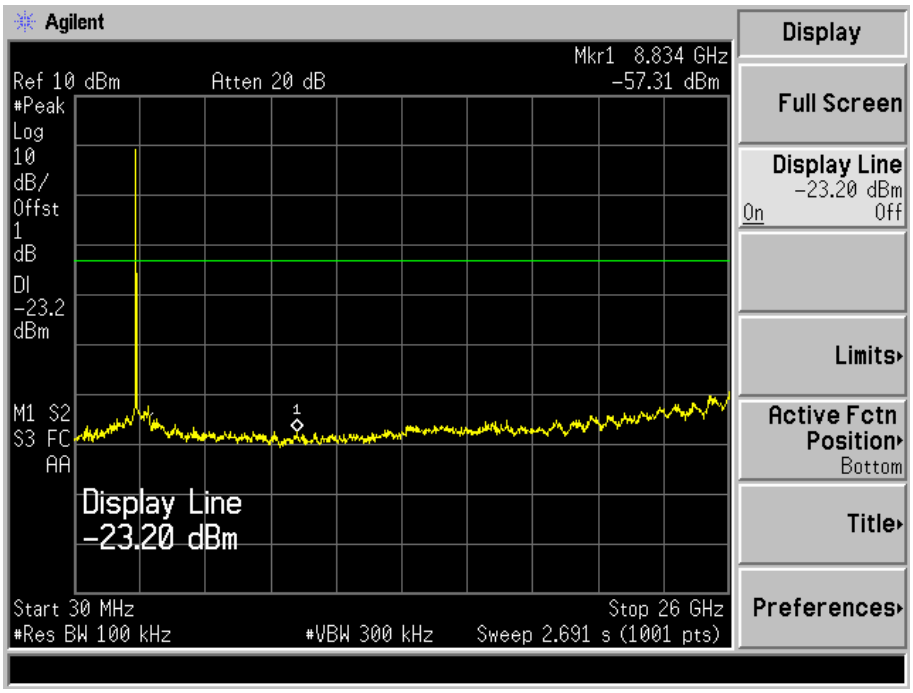
Highest


Agilent
Mkr1 2.46075 GHz
Ref 10 dBm
Atten 20 dB
-0.847 dBm
#Avg
Log
10
dB/
Offst
1
dB
Dl
-20.8
dBm
Marker
2.460750000 GHz
-0.847 dBm
Start 2.45 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 20 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.46075 GHz -0.847 dBm
2 (1) Freq 2.48410 GHz -50.53 dBm
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

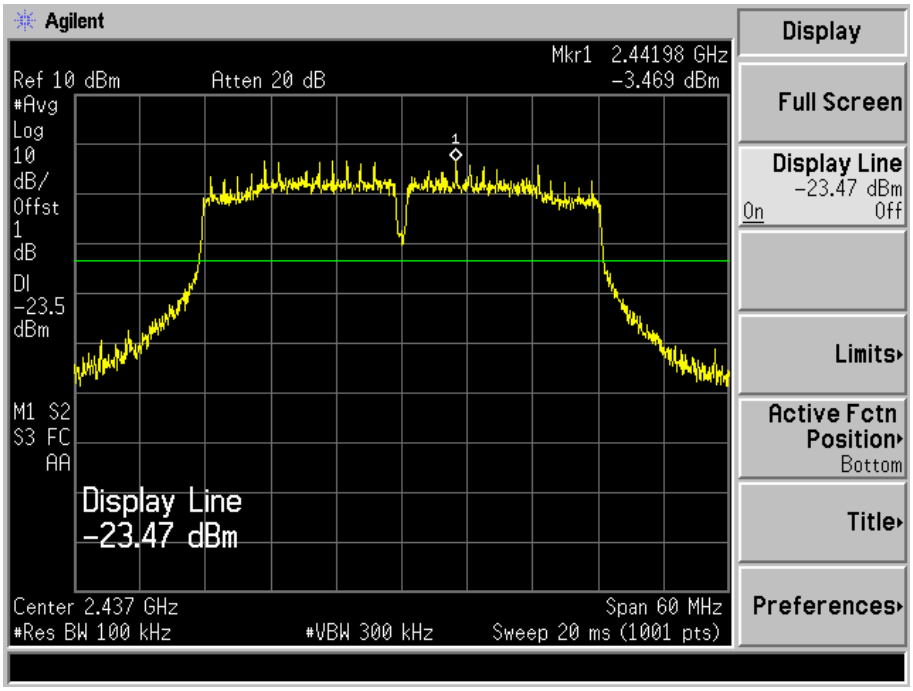

Agilent
Mkr1 14.443 GHz
Ref 10 dBm
Atten 20 dB
-55.98 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-20.8
dBm
M1 S2
S3 FC
AA
Marker
14.443350000 GHz
-55.98 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

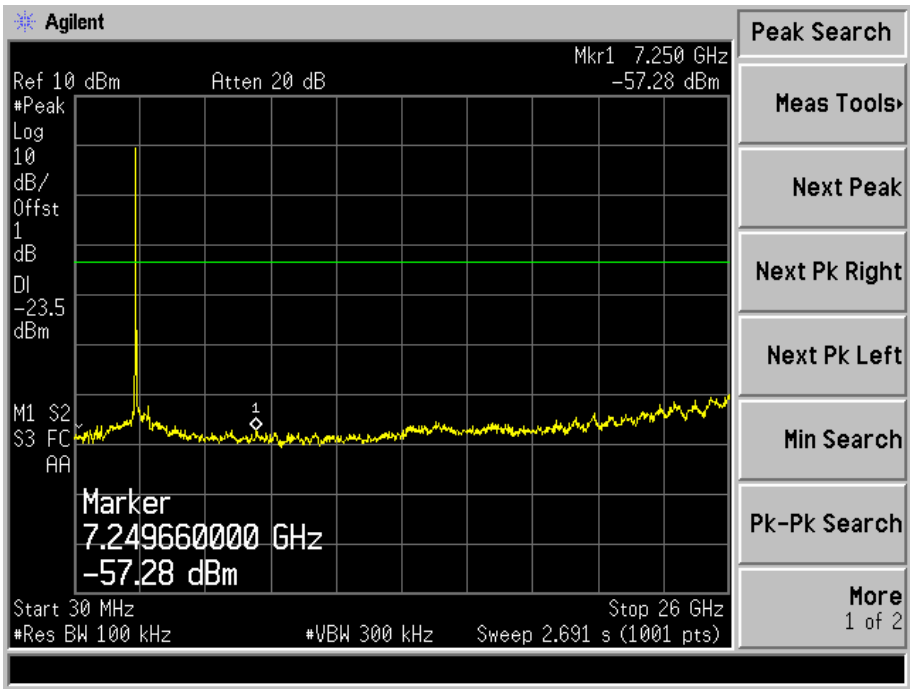
Spurious (Conducted)
802.11n-HT40-Lowest



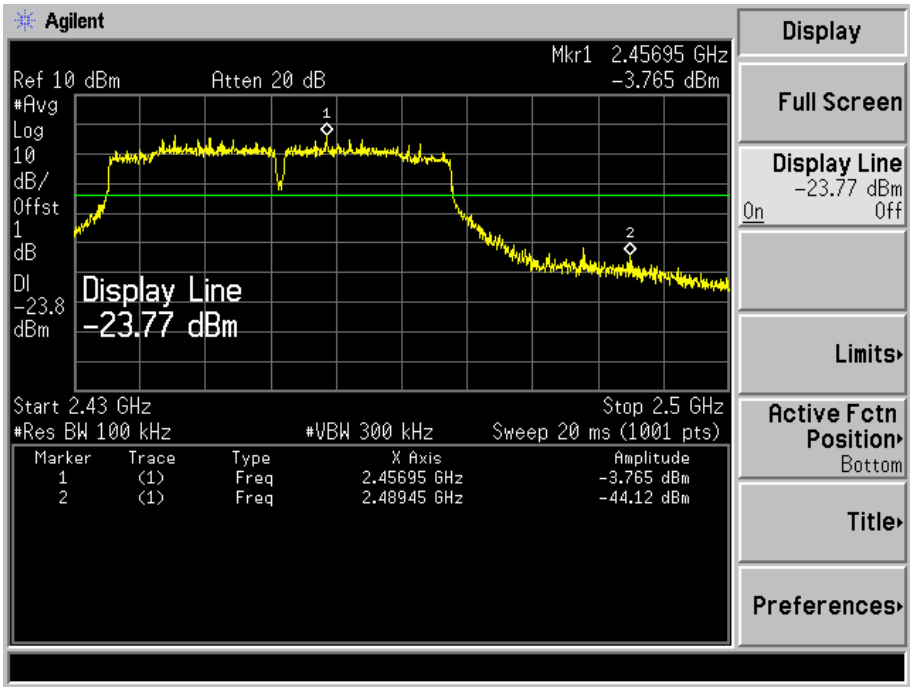


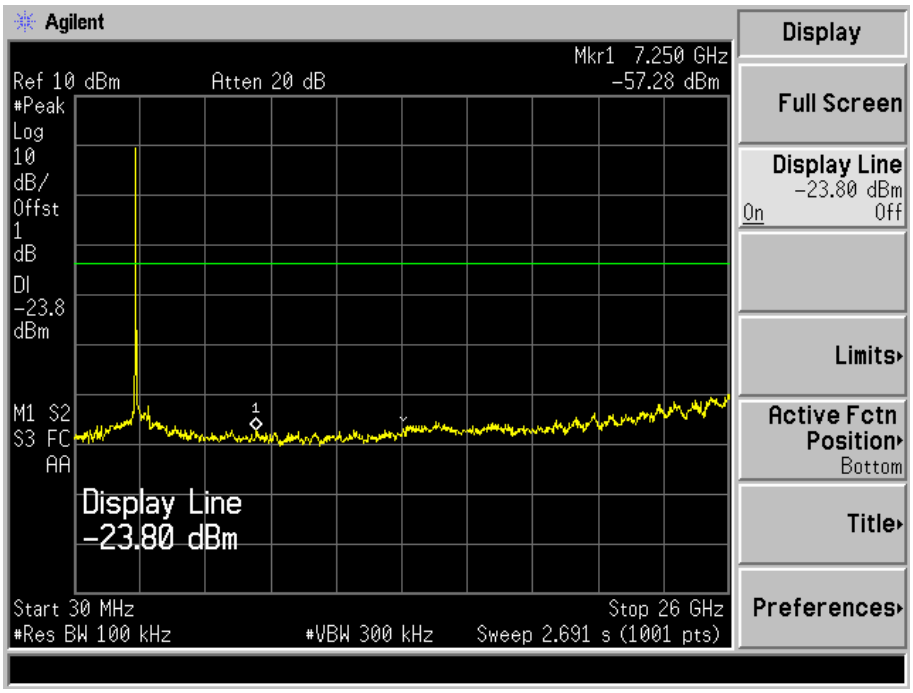
Middle


Agilent
Mkr1 2.44198 GHz
Ref 10 dBm
Atten 20 dB
-3.469 dBm
#Avg
Log
10
dB/
Offst
1
dB
Dl
-23.5
dBm
M1 S2
S3 FC
AA
Display Line
-23.47 dBm
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 20 ms (1001 pts)
Display
Full Screen
Display Line
-23.47 dBm
On
Off
Limits
Active Fctn
Position
Bottom
Title
Preferences


Agilent
Mkr1 7.250 GHz
Ref 10 dBm
Atten 20 dB
-57.28 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-23.5
dBm
M1 S2
S3 FC
AA
Marker
7.249660000 GHz
-57.28 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26 GHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

Highest


Agilent
Mkr1 2.45695 GHz
Ref 10 dBm
Atten 20 dB
-3.765 dBm
#Avg
Log
10
dB/
Offst
1
dB
Dl
-23.8
dBm
Display Line
-23.77 dBm
Start 2.43 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 20 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.45695 GHz -3.765 dBm
2 (1) Freq 2.48945 GHz -44.12 dBm
Display
Full Screen
Display Line
-23.77 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

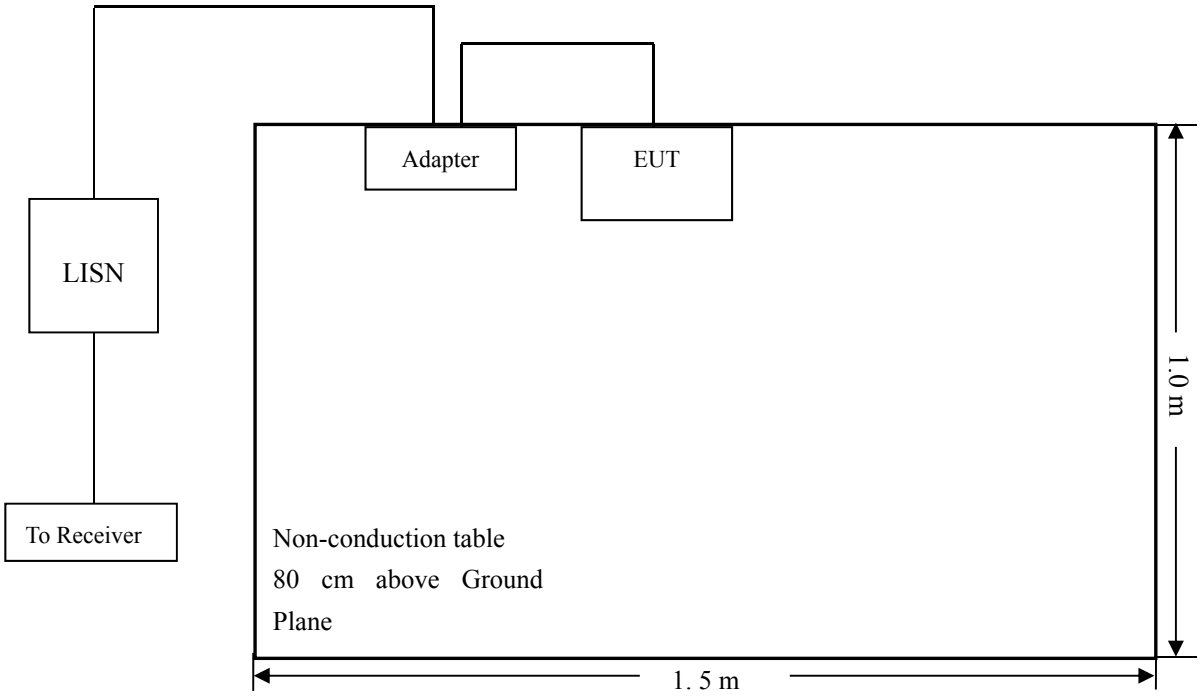

Agilent
Mkr1 7.250 GHz
Ref 10 dBm
Atten 20 dB
-57.28 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-23.8
dBm
M1 S2
S3 FC
AA
Display Line
-23.80 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Display
Full Screen
Display Line
-23.80 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

10. Conducted Emissions

10.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 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.

10.2 Basic Test Setup Block Diagram



10.3 Environmental Conditions

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

10.4 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

10.5 Summary of Test Results/Plots

According to the data in section 10.6, the EUT complied with the FCC Part 15.207 Conducted margin for this device, with the *worst* margin reading of:

-5.79 dB at 0.2540 MHz in the **Line** mode**, AVG** detector, **WiFi Antenna A, 0.15-30MHz**

10.6 Conducted Emissions Test Data

WiFi Antenna A

Plot of Conducted Emissions Test Data

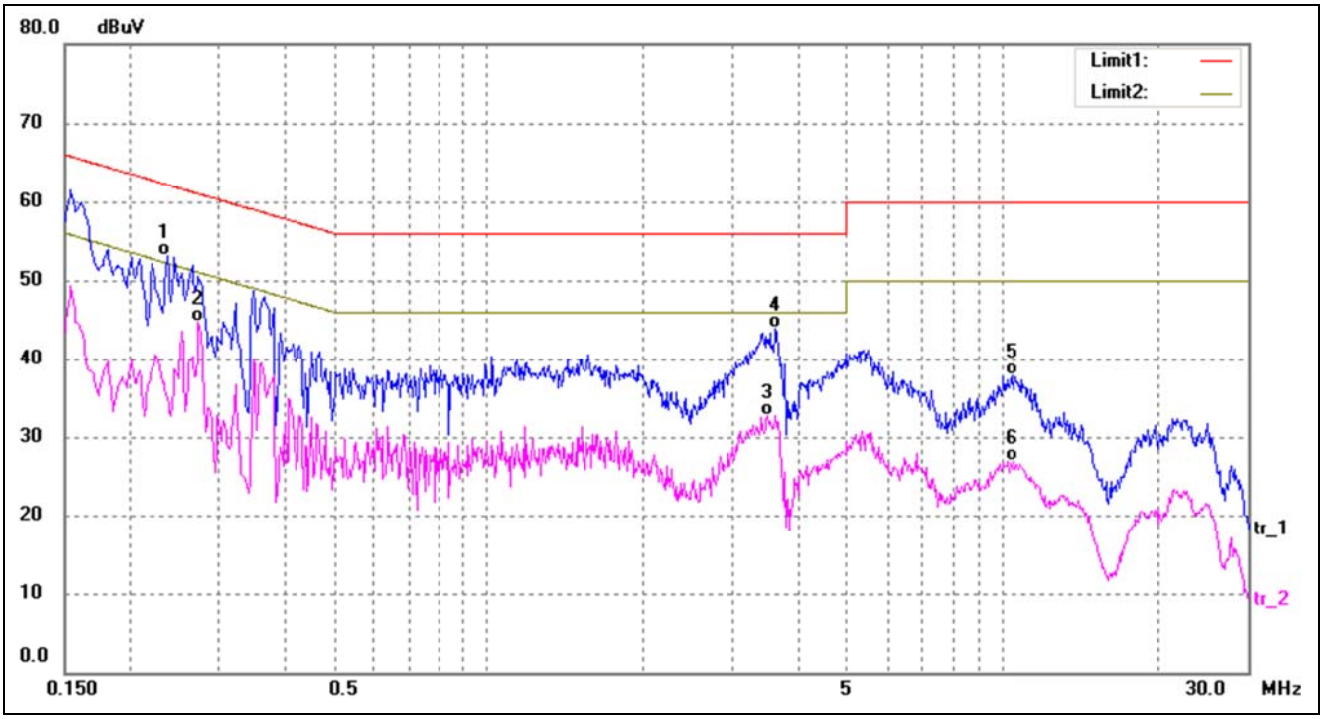
EUT: *Notebook*

Tested Model: *NEBP12*

Operating Condition: *Transmitting(Wi-Fi)*

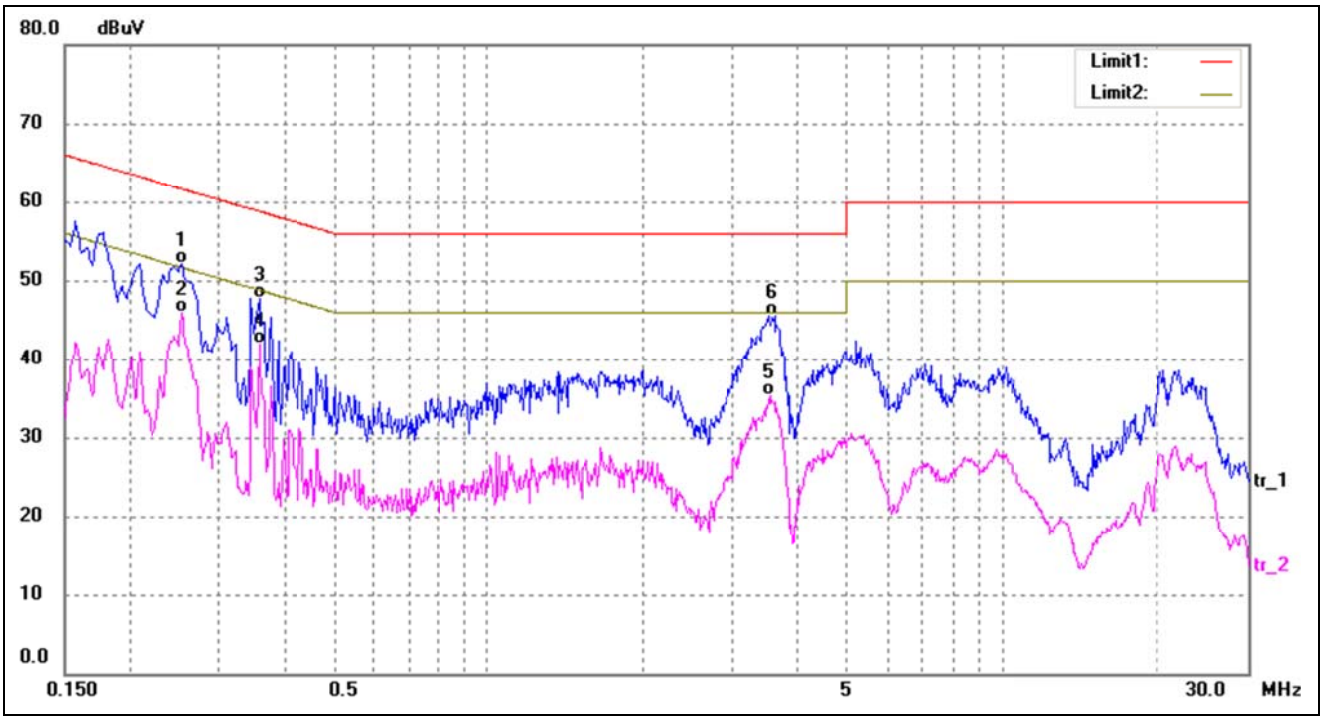
Comment: *AC 120V/60Hz ;Adapter DC 12V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.2380	43.32	9.80	53.12	62.17	-9.05	QP
2*	0.2740	34.91	9.80	44.71	51.00	-6.29	AVG
3	3.4940	23.05	9.70	32.75	46.00	-13.25	AVG
4	3.6260	34.23	9.69	43.92	56.00	-12.08	QP
5	10.4100	28.31	9.53	37.84	60.00	-22.16	QP
6	10.5500	17.43	9.53	26.96	50.00	-23.04	AVG

Test Specification: *Line*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.2540	42.28	9.80	52.08	61.63	-9.55	QP
2*	0.2540	36.04	9.80	45.84	51.63	-5.79	AVG
3	0.3580	37.90	9.80	47.70	58.77	-11.07	QP
4	0.3580	32.15	9.80	41.95	48.77	-6.82	AVG
5	3.5460	25.70	9.70	35.40	46.00	-10.60	AVG
6	3.6140	35.82	9.69	45.51	56.00	-10.49	QP

WiFi Antenna B

Plot of Conducted Emissions Test Data

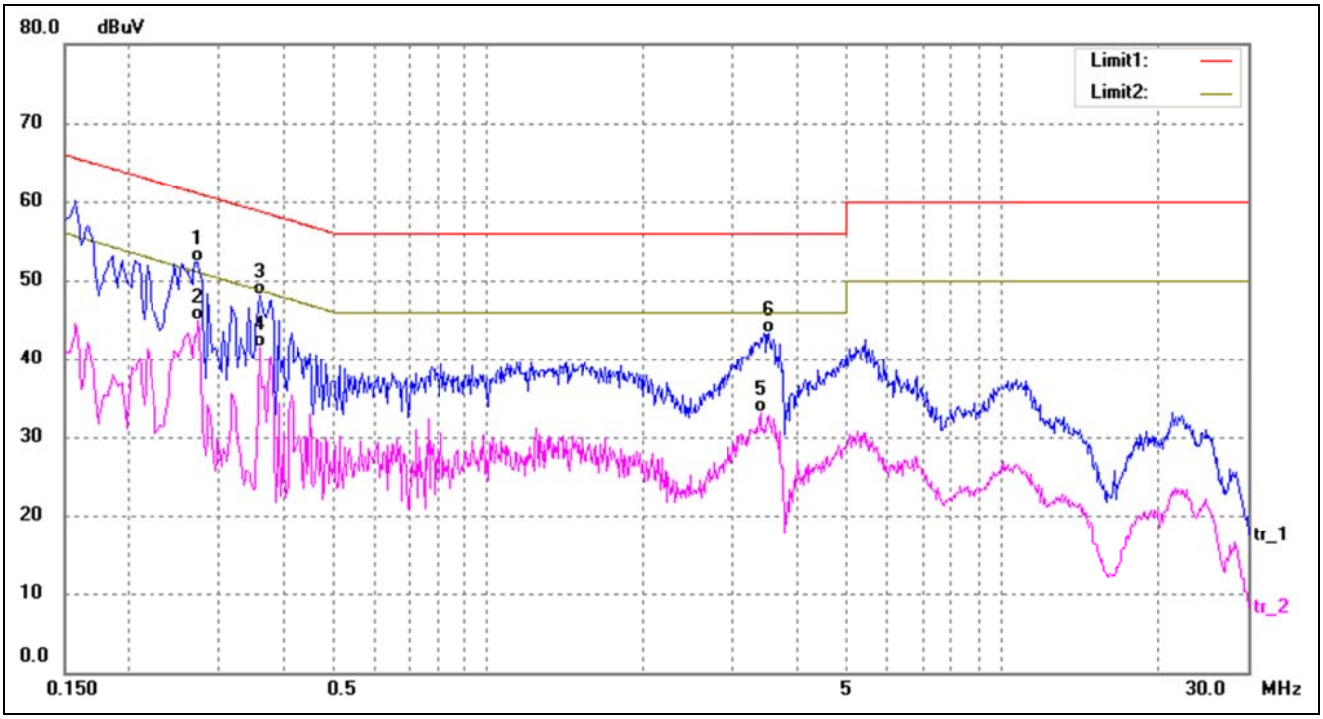
EUT: *Notebook*

Tested Model: *NEBP12*

Operating Condition: *Transmitting(Wi-Fi)*

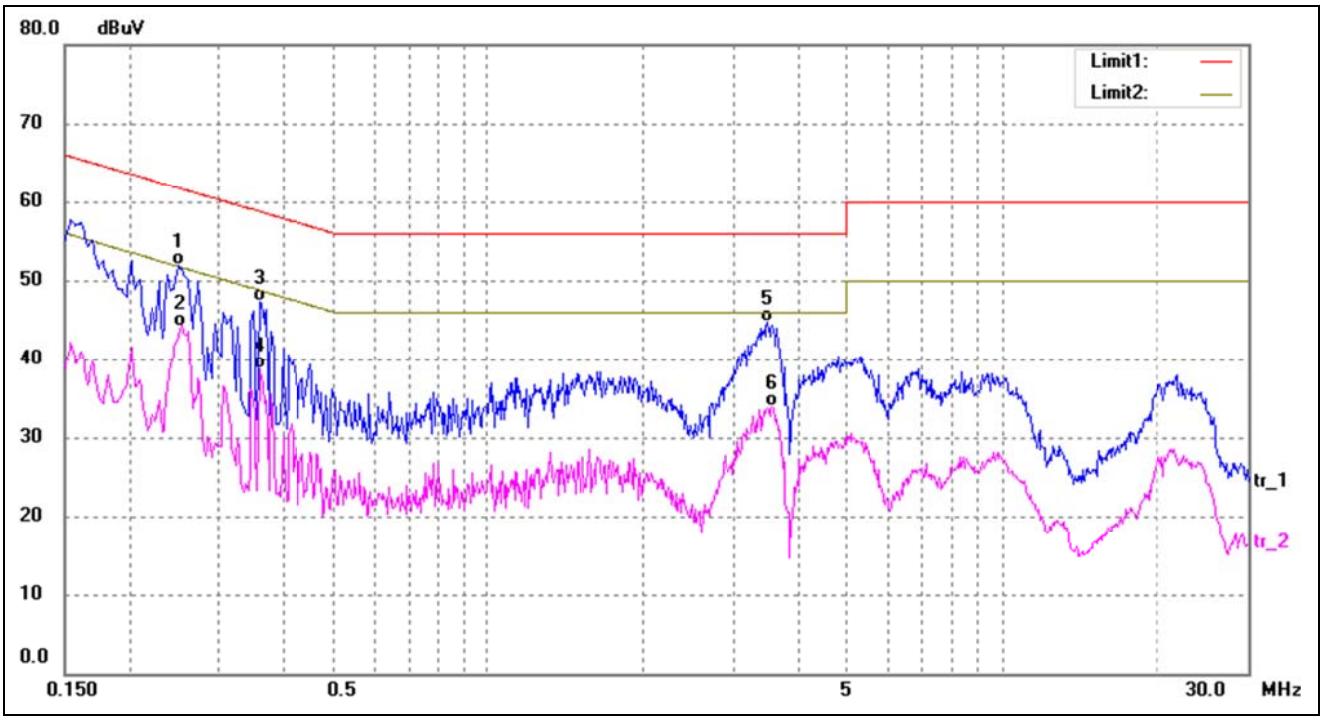
Comment: *AC 120V/60Hz ;Adapter DC 12V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.2700	42.58	9.80	52.38	61.12	-8.74	QP
2*	0.2740	35.02	9.80	44.82	50.99	-6.17	AVG
3	0.3580	38.29	9.80	48.09	58.77	-10.68	QP
4	0.3580	31.70	9.80	41.50	48.77	-7.27	AVG
5	3.3900	23.50	9.70	33.20	46.00	-12.80	AVG
6	3.5180	33.60	9.70	43.30	56.00	-12.70	QP

Test Specification: *Line*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.2500	42.02	9.80	51.82	61.76	-9.94	QP
2*	0.2540	34.40	9.80	44.20	51.63	-7.43	AVG
3	0.3580	37.45	9.80	47.25	58.77	-11.52	QP
4	0.3580	28.82	9.80	38.62	48.77	-10.15	AVG
5	3.5060	34.96	9.70	44.66	56.00	-11.34	QP
6	3.5820	24.11	9.70	33.81	46.00	-12.19	AVG

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