

FCC Part 15C Measurement and Test Report

For

LM Technologies Ltd.

Unit19, Spectrum House, 32-34, Gordon House Road, London, NW5 1LP,

United Kingdom

FCC ID: VVXLM005

FCC Rule(s): FCC Part 15C

Product Description: LM005 802.11n USB Adapter 300 Mbps

Tested Model: 005-1007

Report No.: STR14038373I-1

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

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: LM Technologies Ltd.
Address of applicant: Unit19, Spectrum House, 32-34, Gordon House Road,
London, NW5 1LP, United Kingdom
Manufacturer: LM Technologies Ltd.
Address of manufacturer: Unit19, Spectrum House, 32-34, Gordon House Road,
London, NW5 1LP, United Kingdom

General Description of EUT	
Product Name:	LM005 802.11n USB Adapter 300 Mbps
Trade Name:	LM005 WLAN USB Adapter
Model No.:	005-1007
Adding Model(s):	/
Rated Voltage:	USB: DC 5V
Power Adapter Model:	/
Note: The test data is gathered from a production sample provided by the manufacturer.	

Technical Characteristics of EUT	
Support Standards:	802.11b, 802.11g, 802.11n
Frequency Range:	2412-2472MHz, 2422-2462MHz
RF Output Power:	22.40dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 300Mbps
Quantity of Channels:	13/9
Channel Separation:	5MHz
Type of Antenna:	Antenna 0: PCB Antenna Antenna 1: PCB Antenna
Antenna Gain:	Antenna 0: -4.9dBi Antenna 1: -3.4dBi
Lowest Internal Frequency	40MHz

1.2 Test Standards

The following report is prepared on behalf of the LM Technologies Ltd. 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 C63.4-2003, 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 public notice KDB 558074 D01 V03 for digital transmission systems shall be performed also.

1.4 Test Facility

FCC – Registration No.: 934118

Shenzhen SEM.Test Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 934118.

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.

CNAS Registration No.: L4062

Shenzhen SEM.Test Technology Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101).

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, 2442MHz, 2472MHz
TM2	802.11g	2412MHz, 2442MHz, 2472MHz
TM3	802.11n-HT20	2412MHz, 2442MHz, 2472MHz
TM4	802.11n-HT40	2422MHz, 2442MHz, 2462MHz

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
/	/	/	/

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

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Notebook Computer	Lenovo	20007	EB12648265

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
§ 15.207(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 have two PCB antenna, fulfill the requirement of this section.

5. Power Spectral Density

5.1 Standard Applicable

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

5.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2013-05-07	2014-05-06
Attenuator	ATTEN	ATS100-4-20	/	2013-05-07	2014-05-06

5.3 Test Procedure

According to the KDB 558074 D01 V03, the test method of power spectral density as below:

1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set analyzer center frequency to DTS channel center frequency.
3. Set the span to 1.5 times the DTS channel bandwidth.
4. Set the RBW ≥ 3 kHz.
5. Set the VBW $\geq 3 \times$ RBW.
6. Detector = peak.
7. Sweep time = auto couple.
8. Trace mode = max hold.
9. Allow trace to fully stabilize.
10. Use the peak marker function to determine the maximum amplitude level.
11. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.4 Environmental Conditions

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

5.5 Summary of Test Results/Plots

Test Mode	Test Channel MHz	PSD 0 dBm/3kHz	PSD 1 dBm/3kHz	Total PSD dBm/3kHz	Limit dBm/3kHz
802.11b	2412	-8.984	-11.43	/	8
	2442	-12.21	-13.22	/	8
	2472	-12.25	-12.27	/	8
802.11g	2412	-11.15	-13.27	/	8
	2442	-14.87	-14.14	/	8
	2472	-12.94	-14.52	/	8
802.11n-MCS7 HT20	2412	-10.38	-13.55	/	8
	2442	-11.61	-13.24	/	8
	2472	-13.31	-14.54	/	8
802.11n-MCS7 HT40	2422	-13.44	-16.36	/	8
	2442	-14.19	-15.67	/	8
	2462	-14.81	-15.98	/	8
802.11n-MCS8 (HT20)	2412	-11.87	-14.99	-10.15	8
	2442	-12.25	-15.16	-10.46	8
	2472	-14.02	-15.30	-11.60	8
802.11n-MCS8 (HT40)	2422	-15.68	-17.03	-13.29	8
	2442	-16.73	-17.72	-14.19	8
	2462	-17.59	-18.81	-15.15	8

Remark: Summary of Test Results

Total PSD=10 Log^(PSD 0+PSD 1)

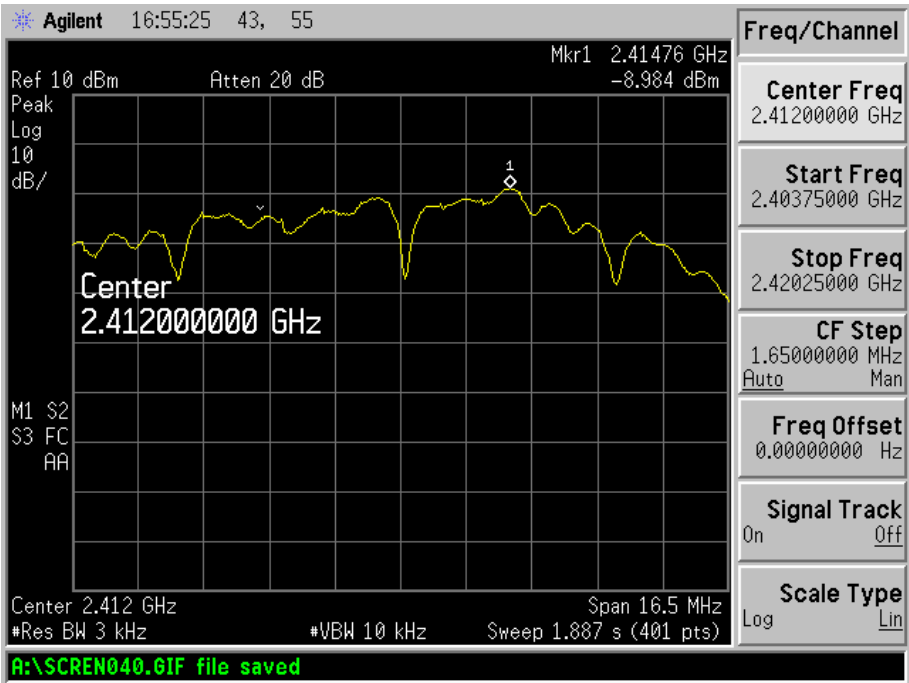
PSD 0=10^{(Measured 0+ Antenna 0)/10}

PSD 1=10^{(Measured 1+ Antenna 1)/10}

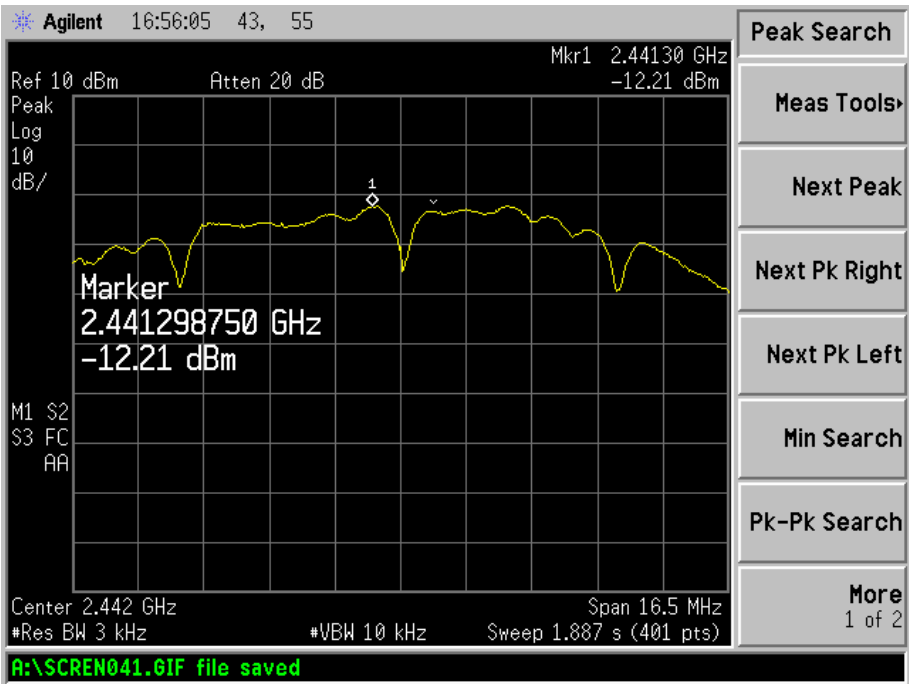
Note: The EUT shall be simultaneous transmission at the Antenna 0 and Antenna 1 for 802.11n MCS8, but transmission only at Antenna 0 or Antenna 1 for 802.11b, 802.11g and 802.11n MCS0~7.

Please refer to the following test plots:

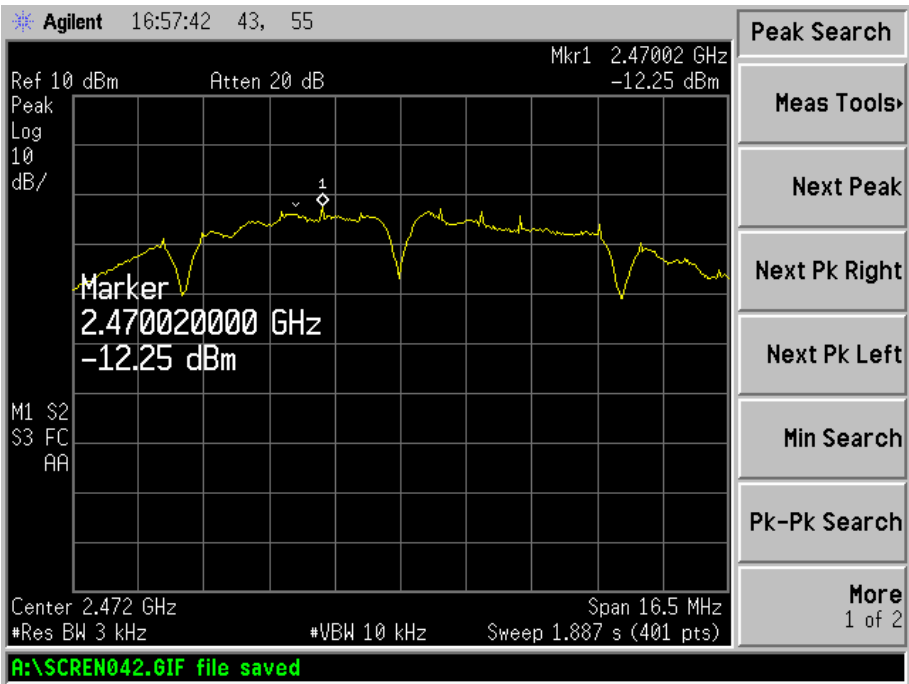
Antenna 0:
802.11b-Low Channel



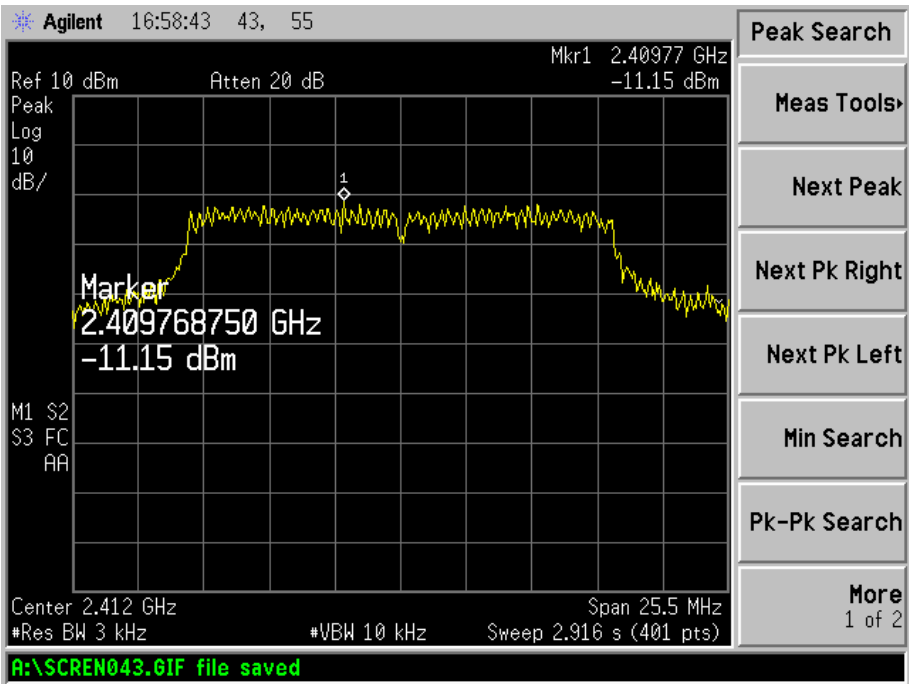
802.11b-Middle Channel



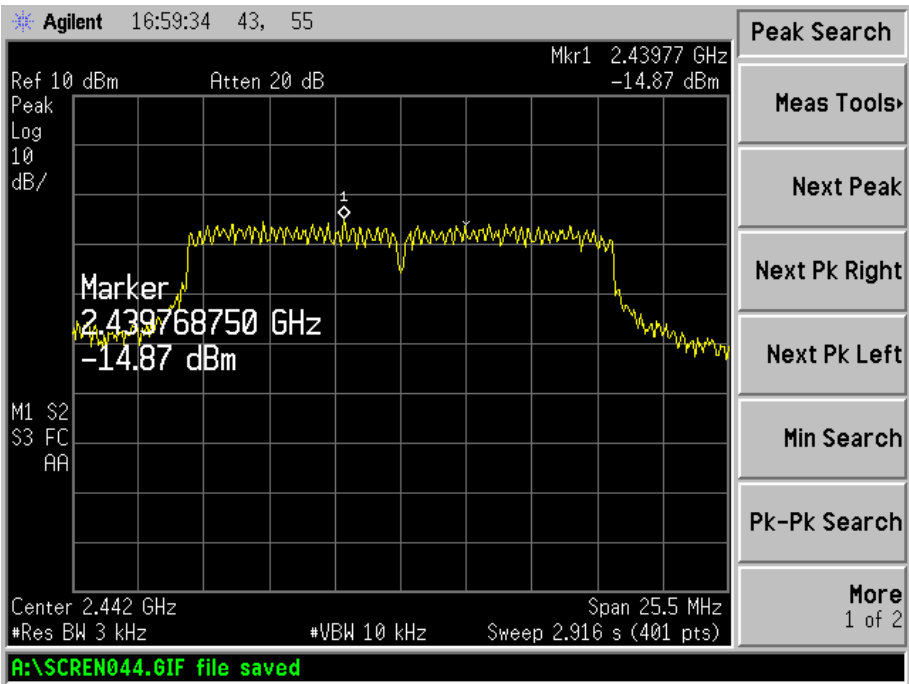
802.11b-High Channel



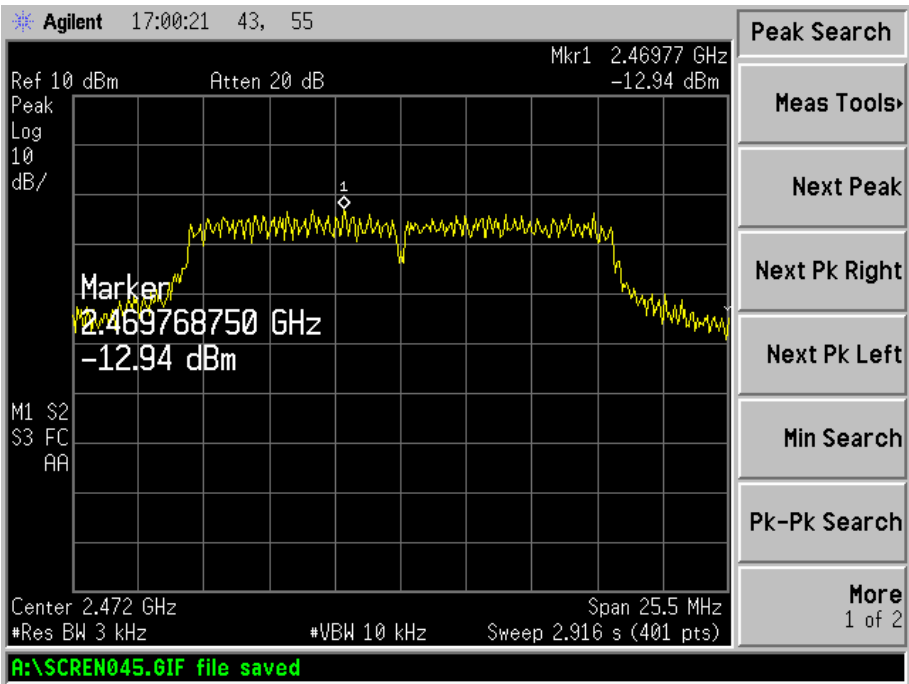
802.11g-Low Channel



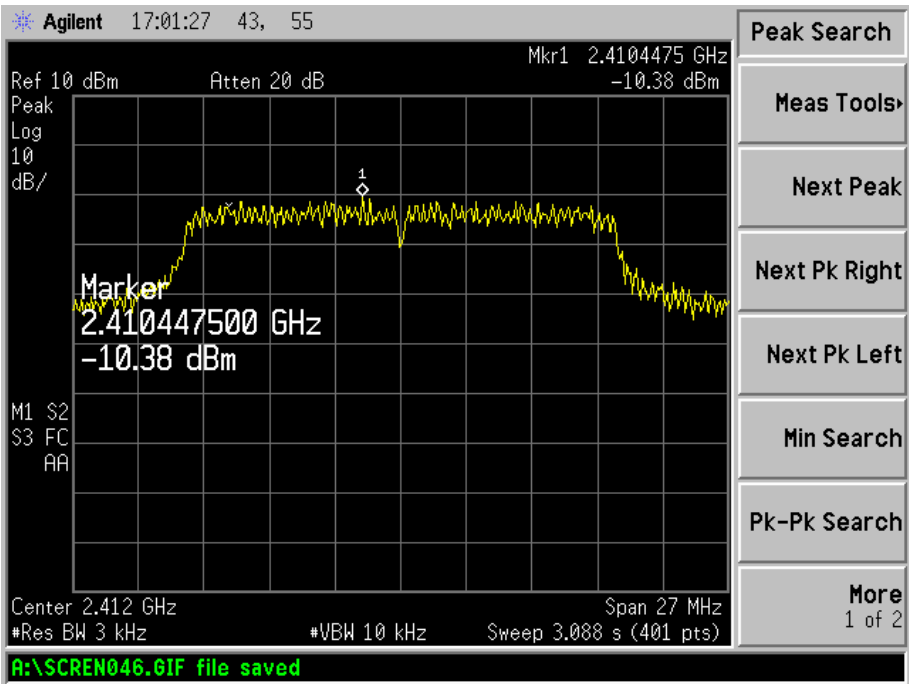
802.11g-Middle Channel



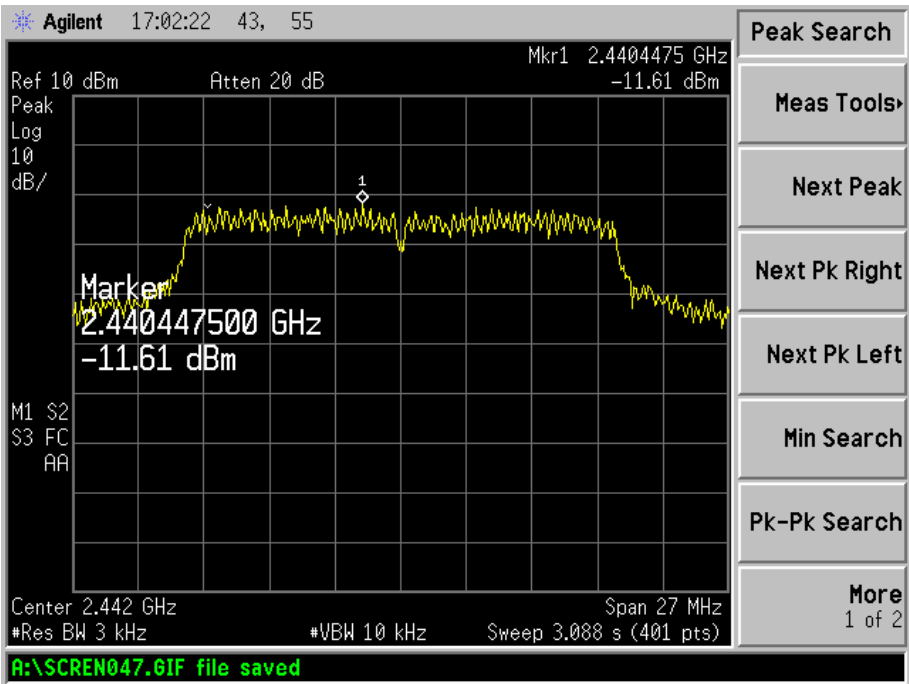
802.11g-High Channel



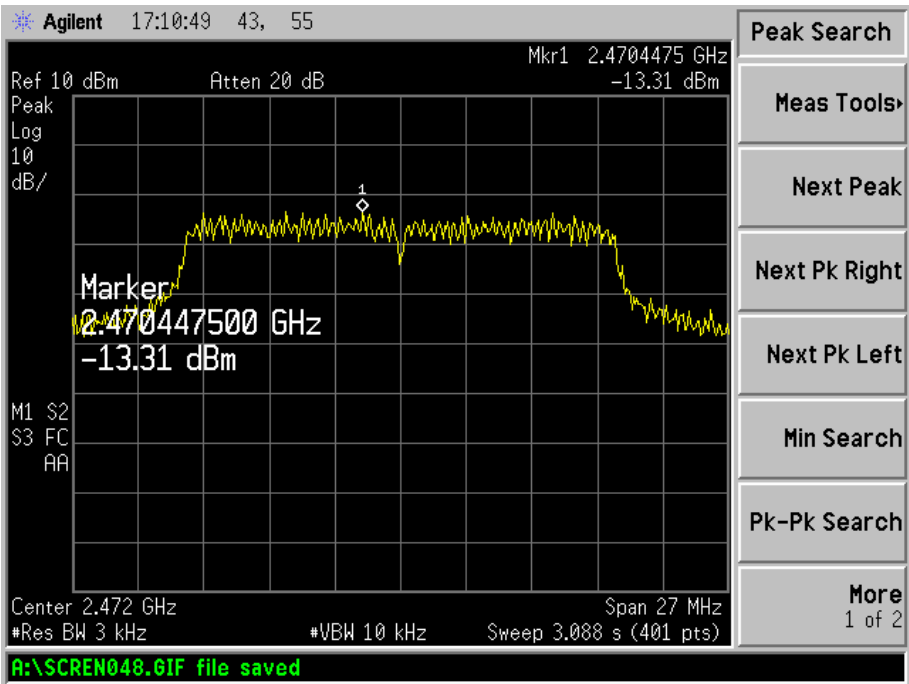
802.11n-MCS7-HT20-Low Channel



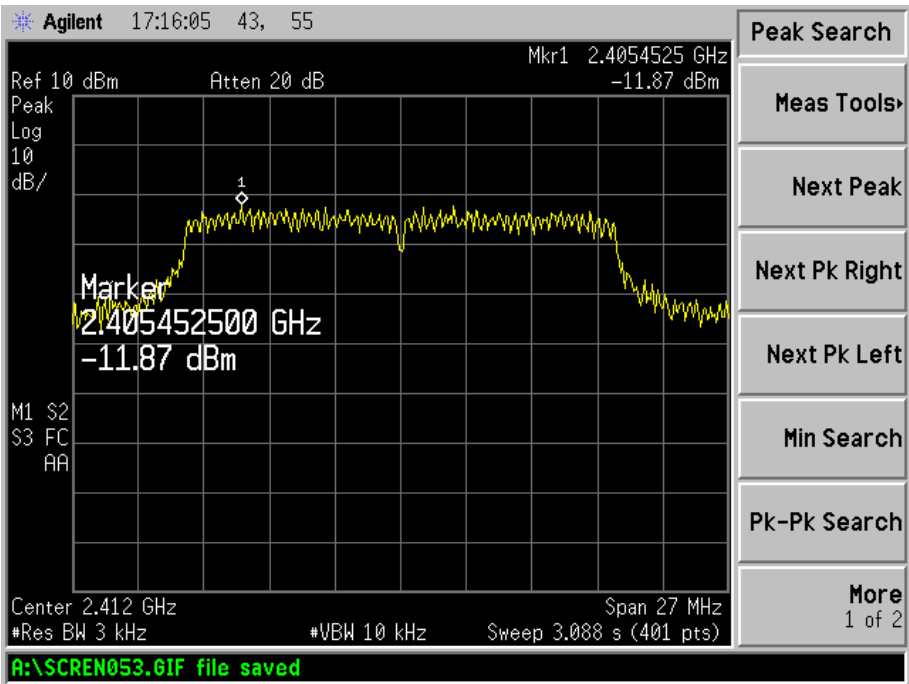
802.11n--MCS7-HT20-Middle Channel



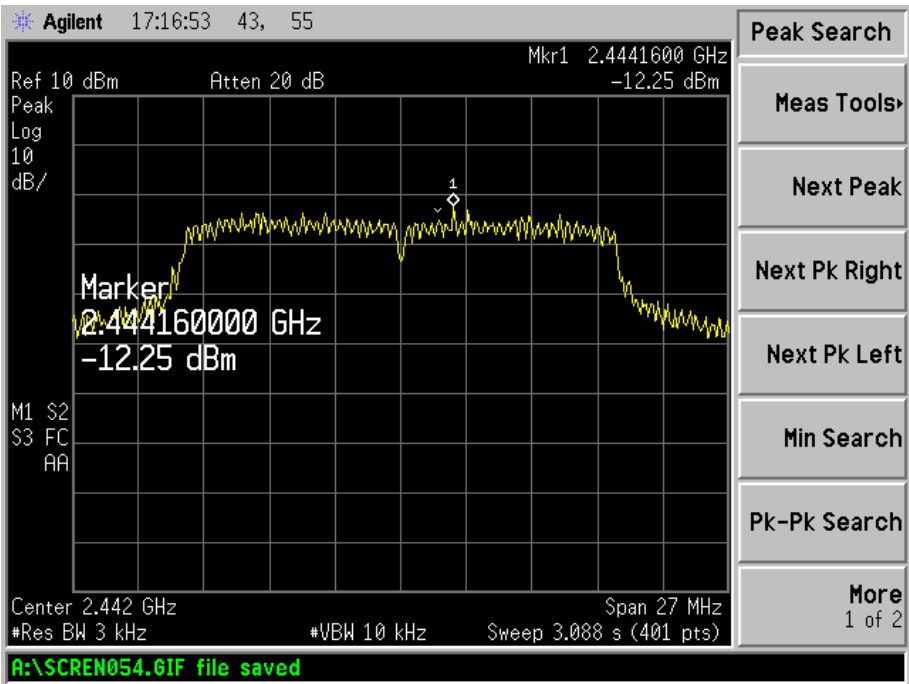
802.11n-MCS7-HT20-High Channel



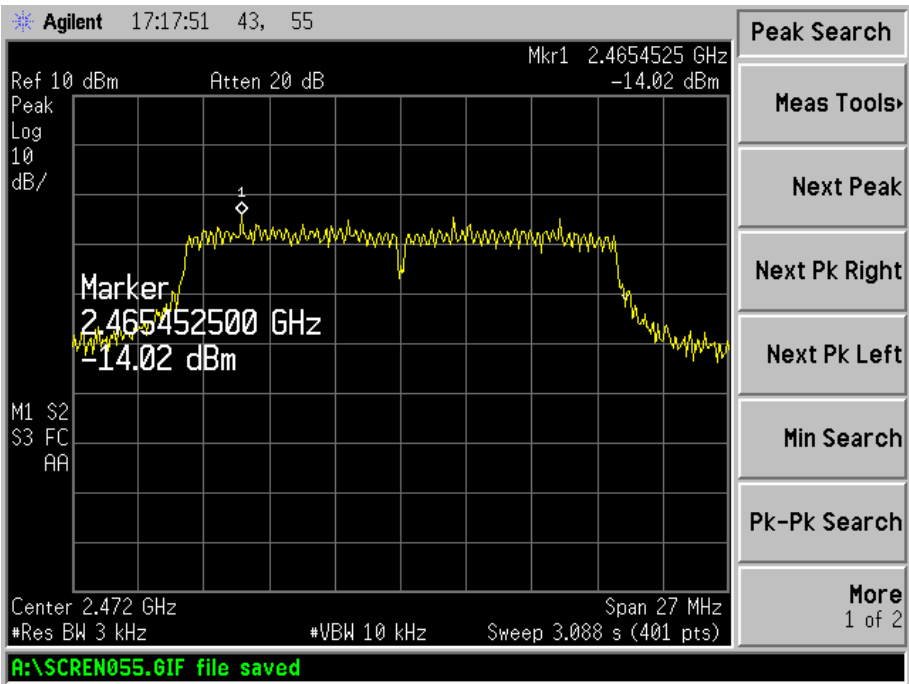
802.11n-MCS8-HT20-Low Channel



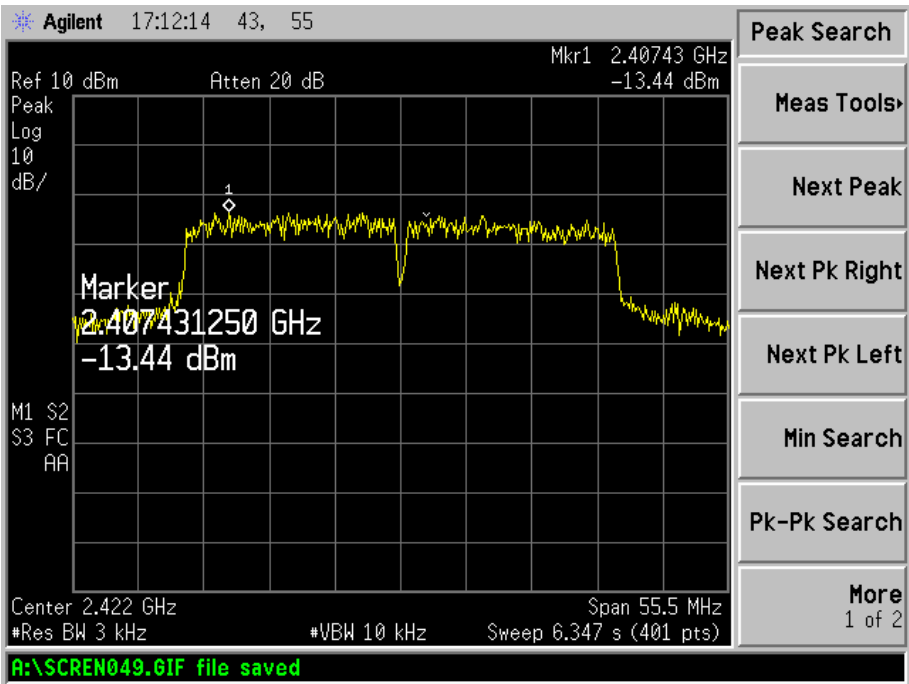
802.11n-MCS8-HT20-Middle Channel



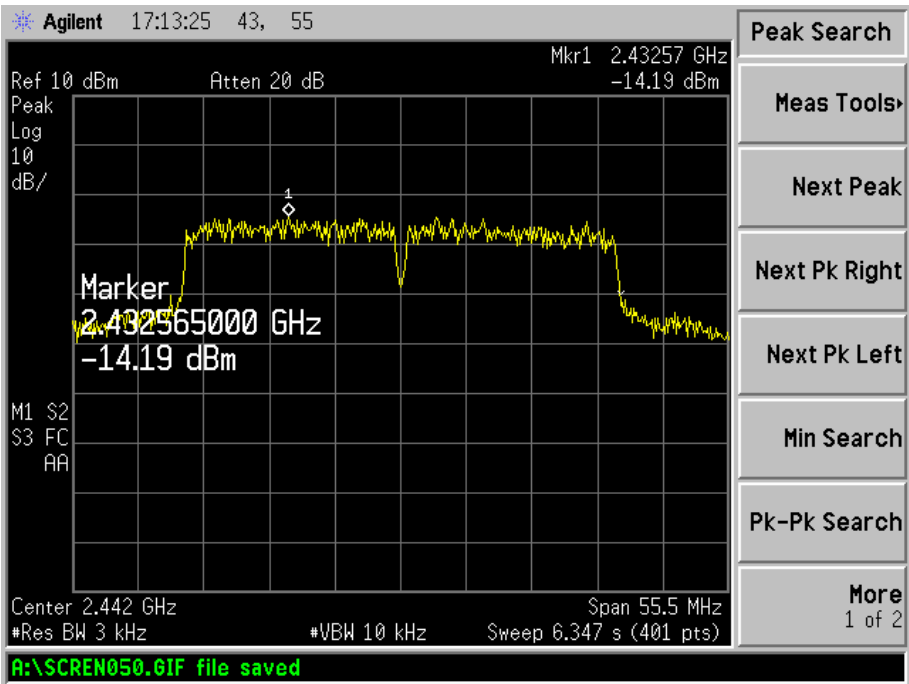
802.11n-MCS8-HT20-High Channel



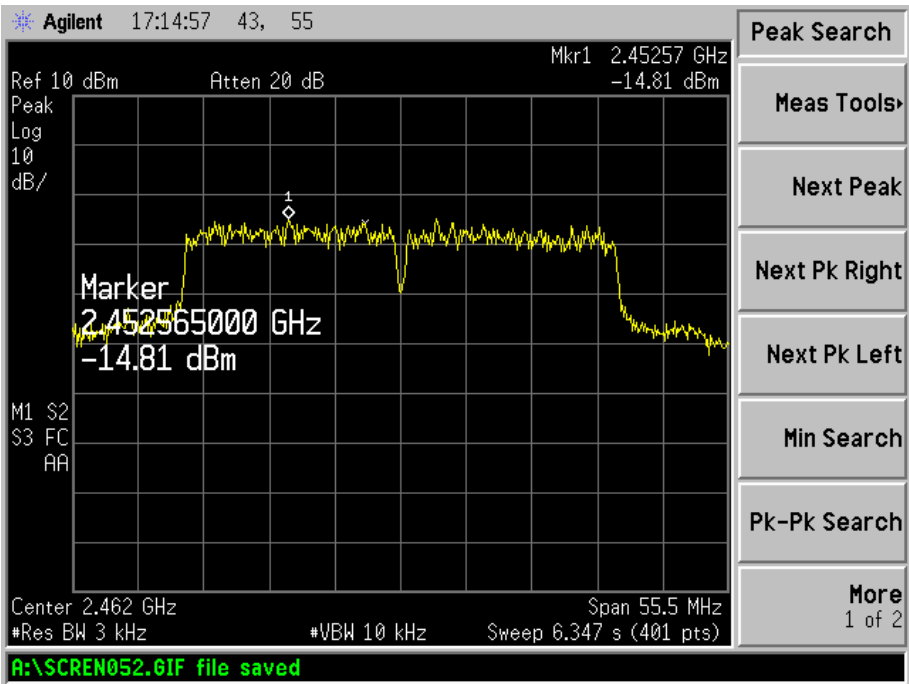
802.11n-MCS7-HT40-Low Channel



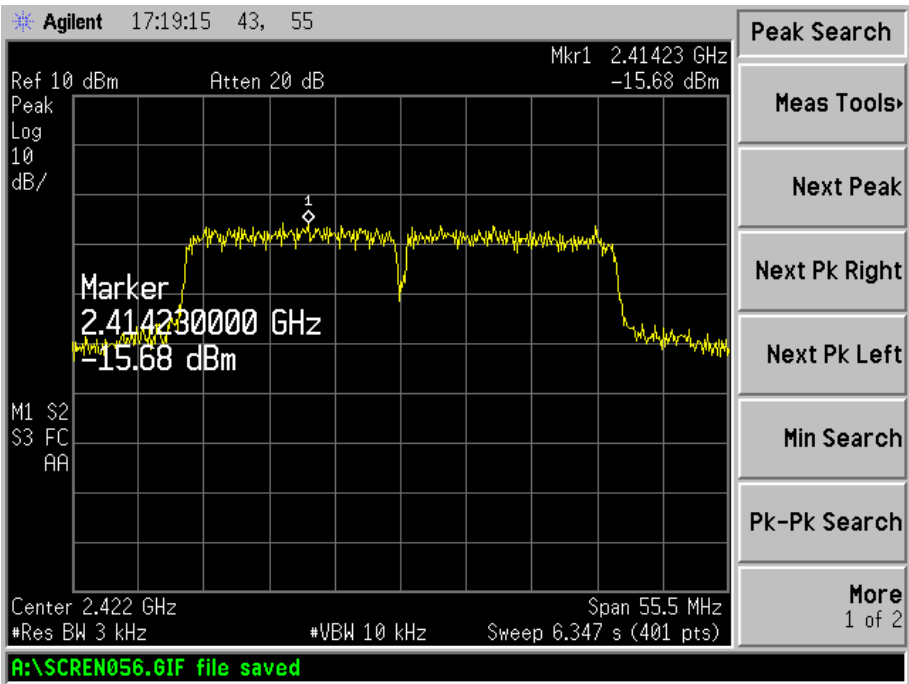
802.11n-MCS7-HT40-Middle Channel



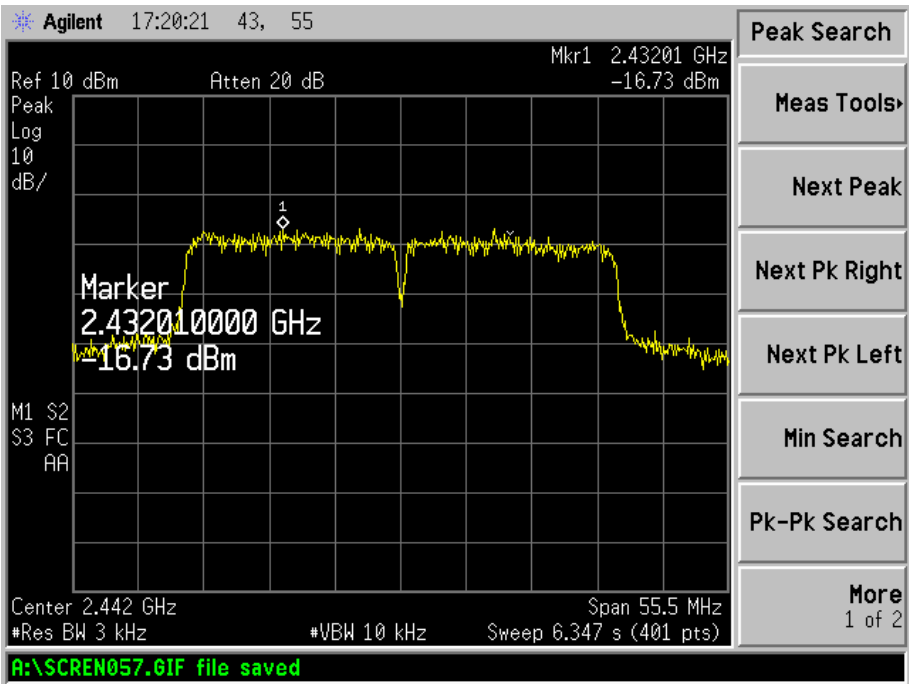
802.11n-MCS7-HT40-High Channel



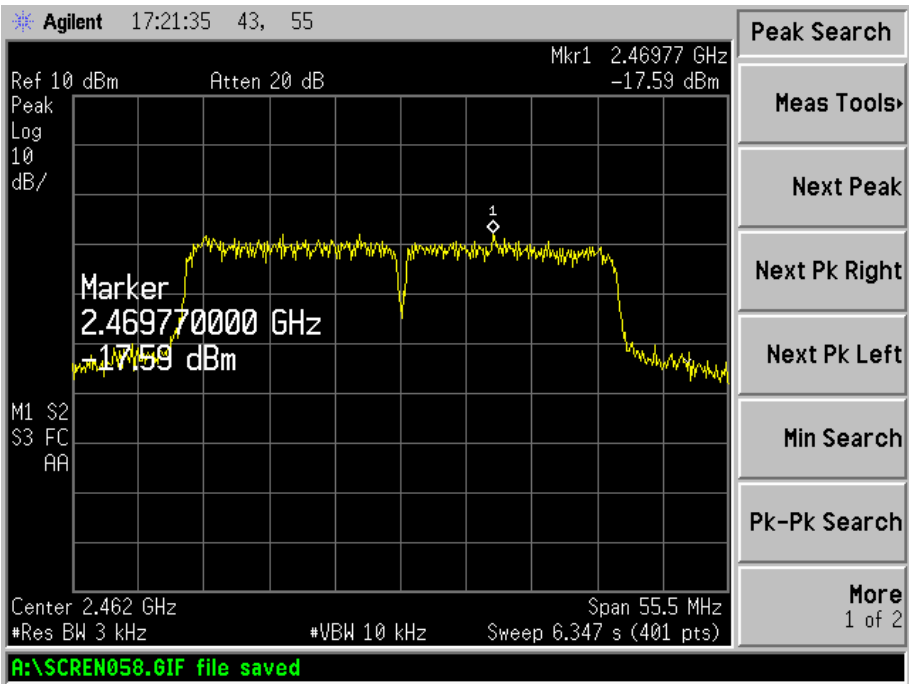
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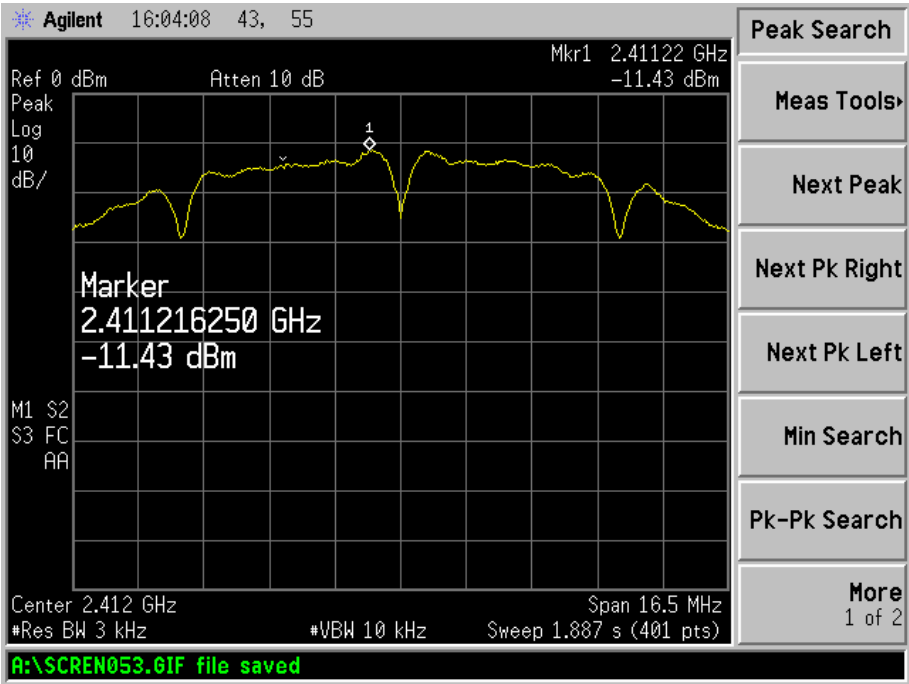
802.11n-MCS8-HT40-Middle Channel



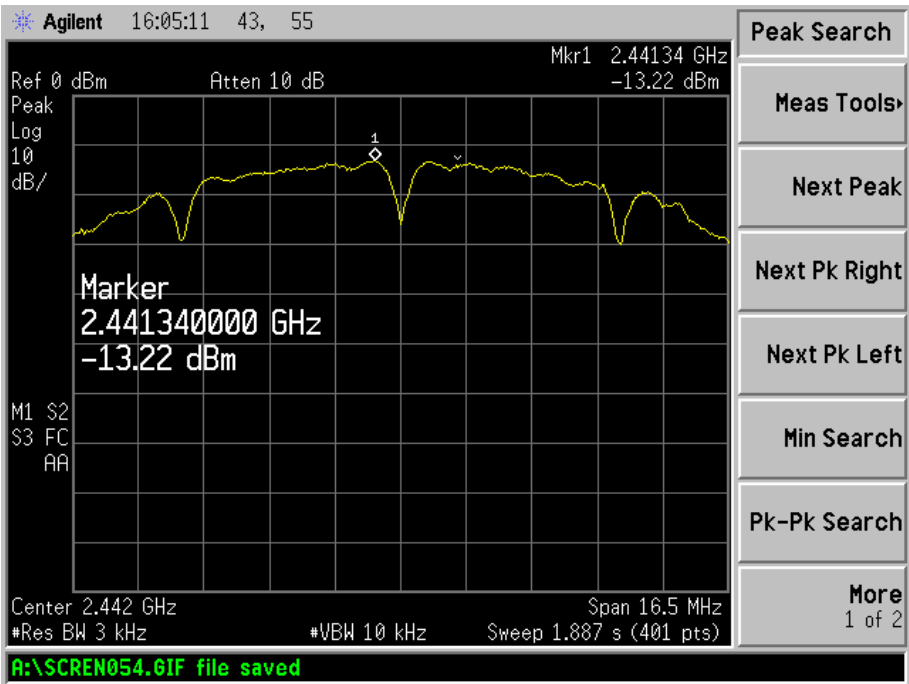
802.11n-MCS8-HT40-High Channel



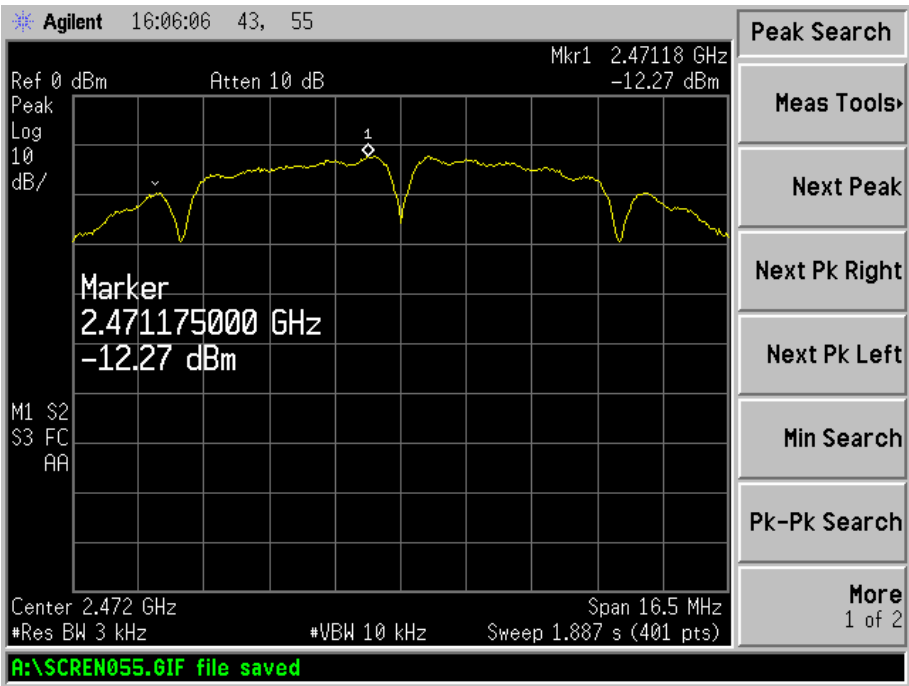
Antenna 1:
802.11b-Low Channel



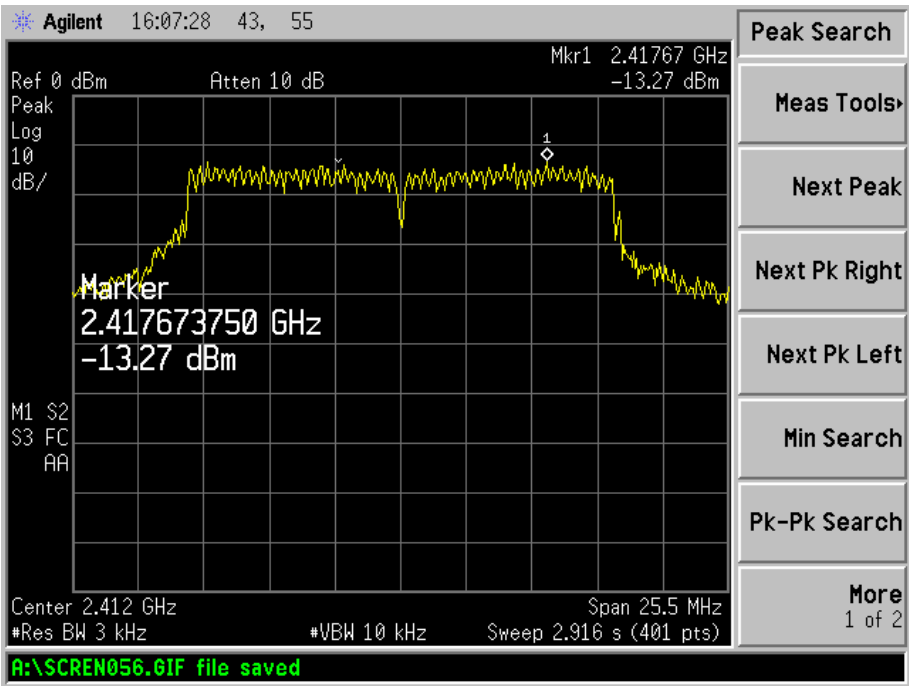
802.11b-Middle Channel



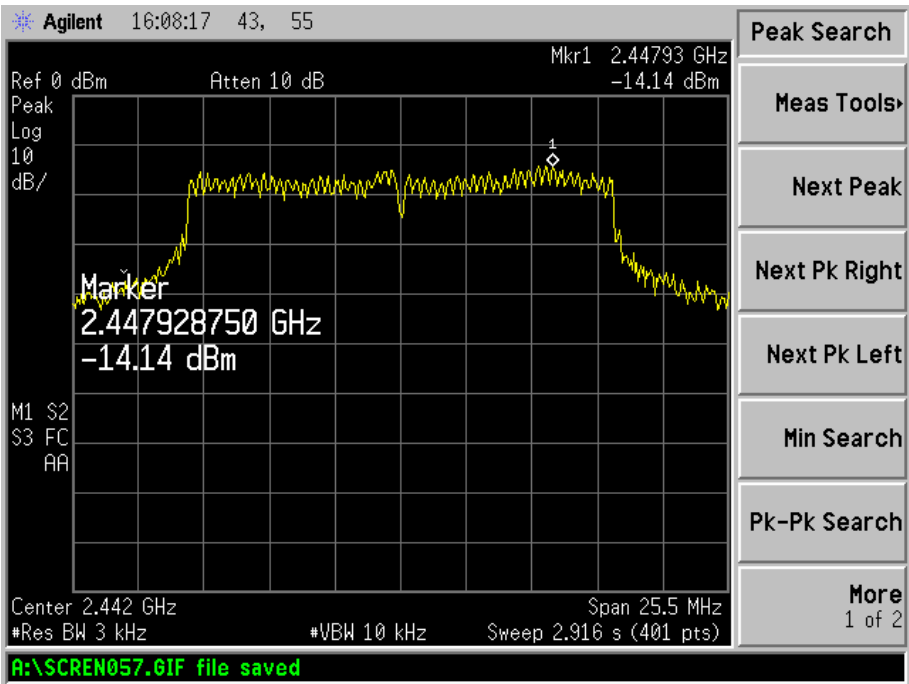
802.11b-High Channel



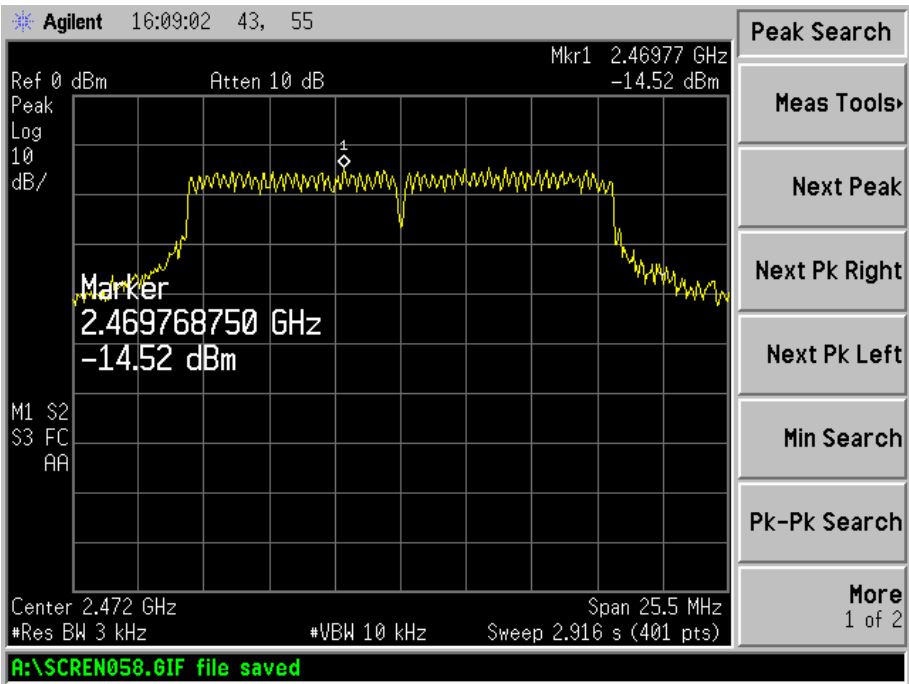
802.11g-Low Channel



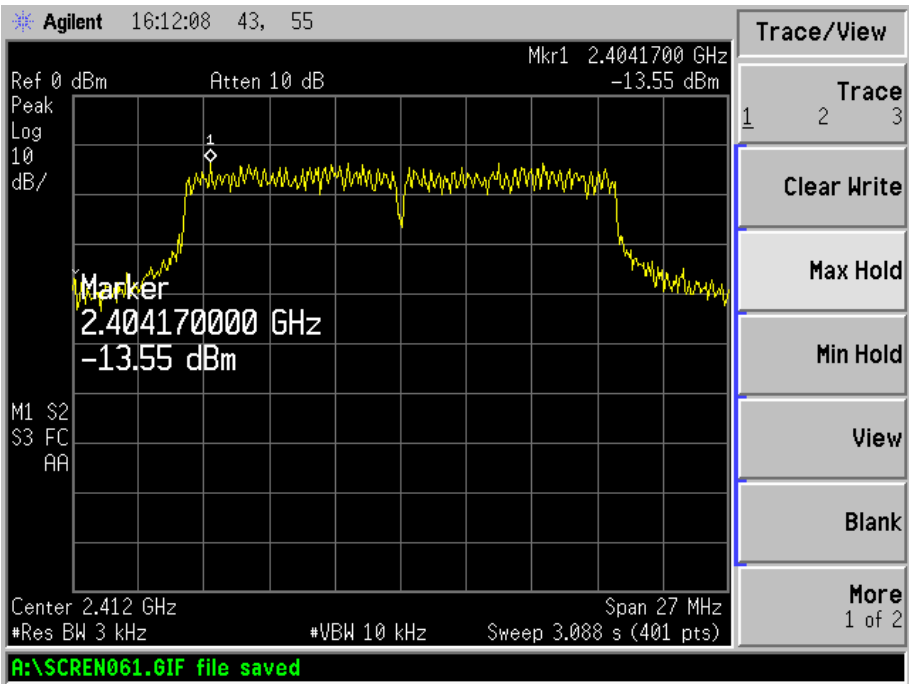
802.11g-Middle Channel



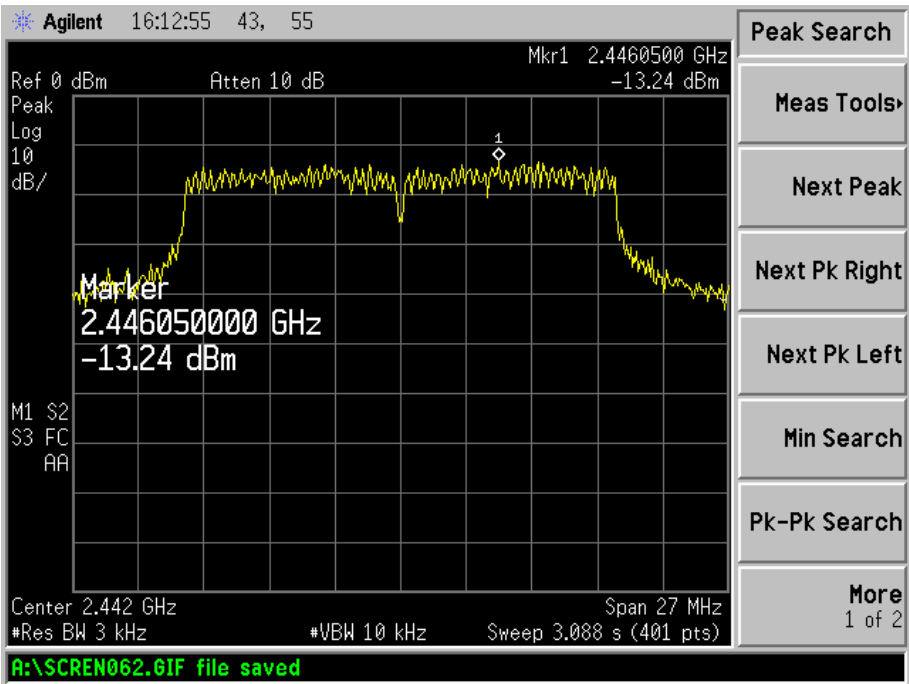
802.11g-High Channel



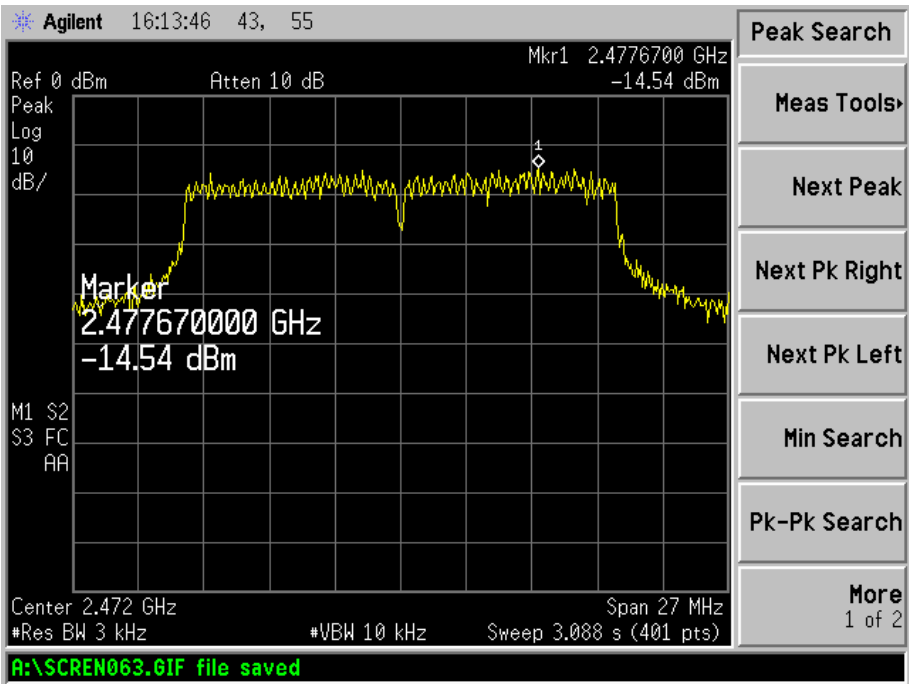
802.11n-MCS7-HT20-Low Channel



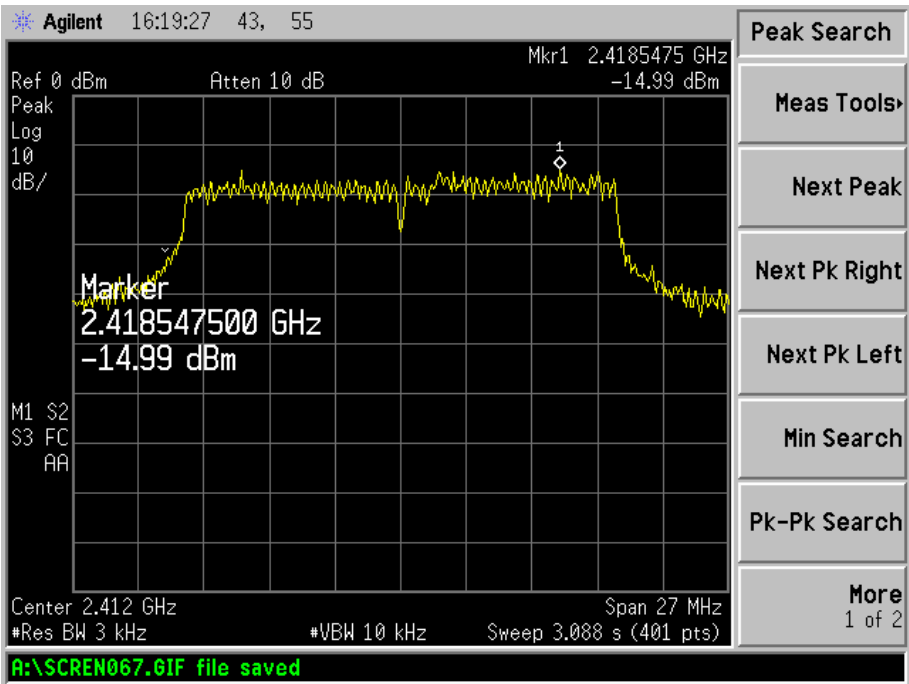
802.11n-MCS7-HT20-Middle Channel



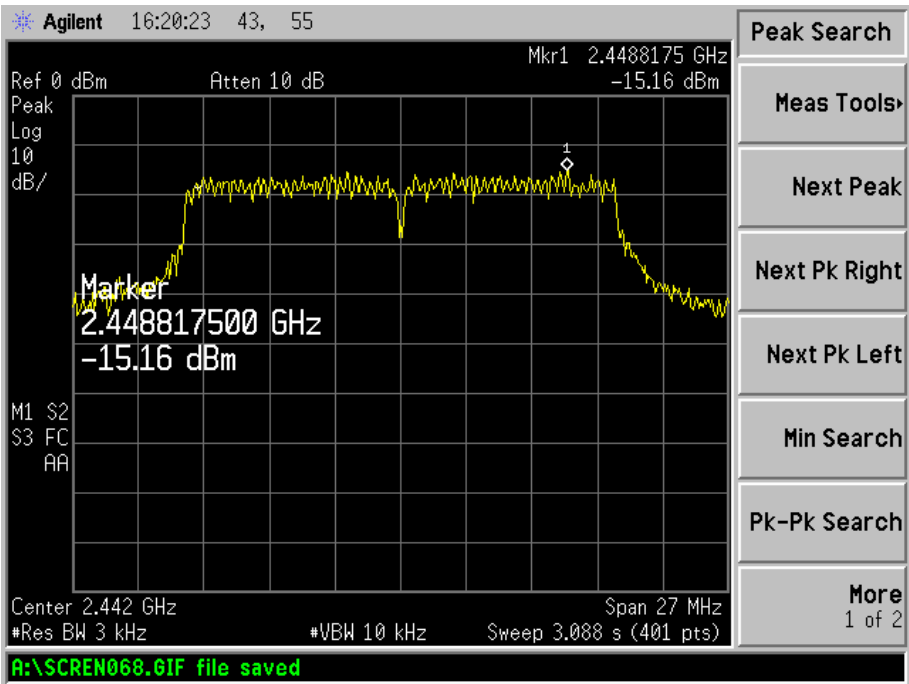
802.11n-MCS7-HT20-High Channel



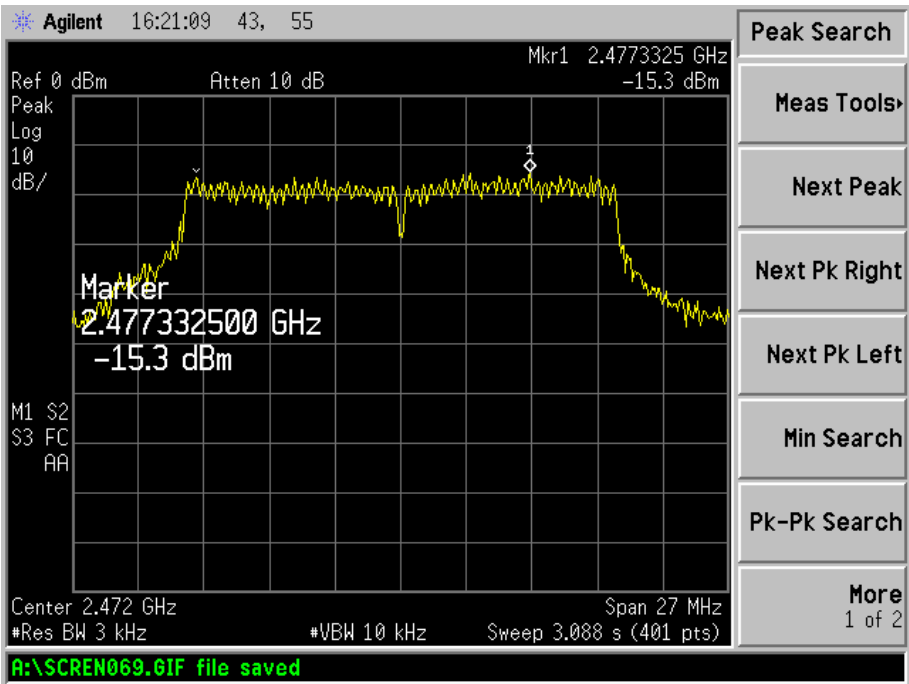
802.11n-MCS8-HT20-Low Channel



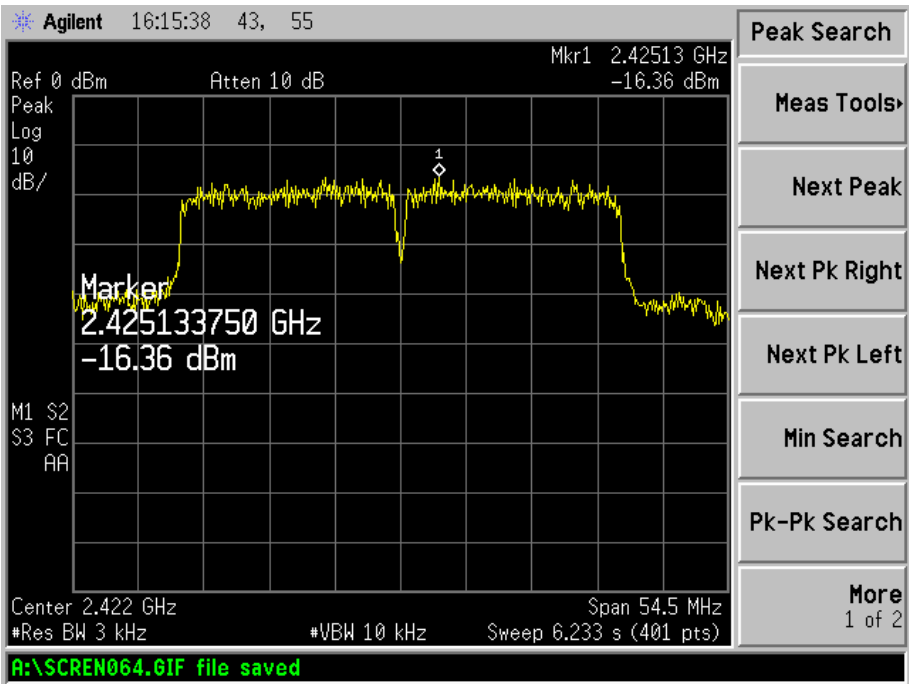
802.11n-MCS8-HT20-Middle Channel



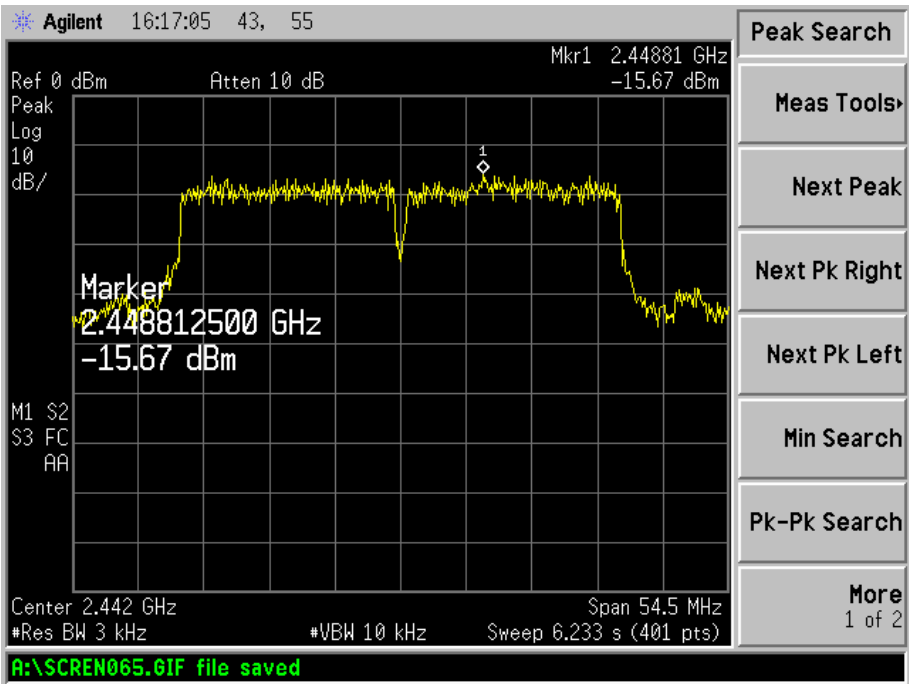
802.11n-MCS8-HT20-High Channel



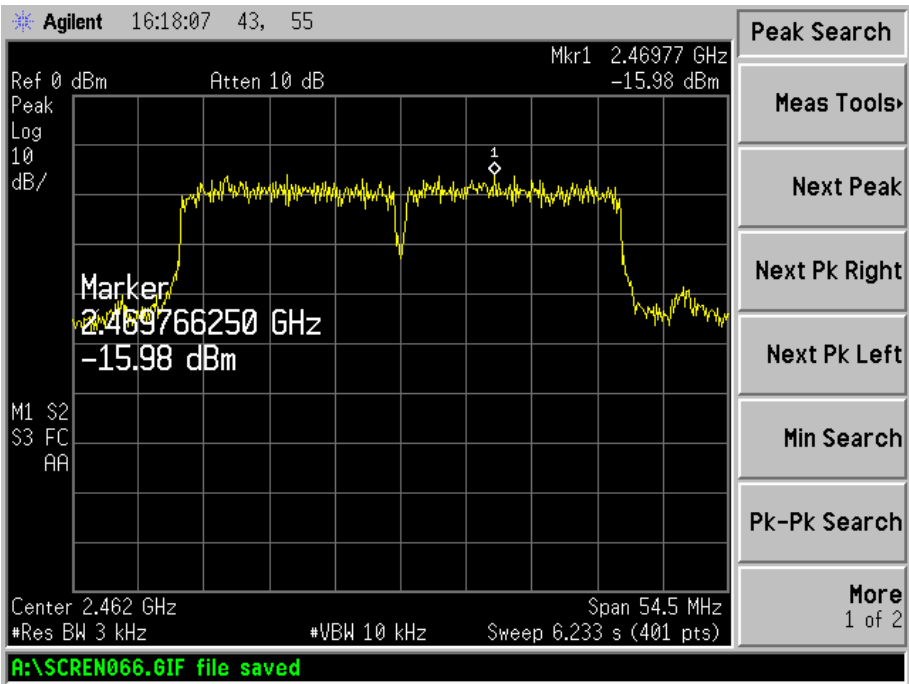
802.11n-MCS7-HT40-Low Channel



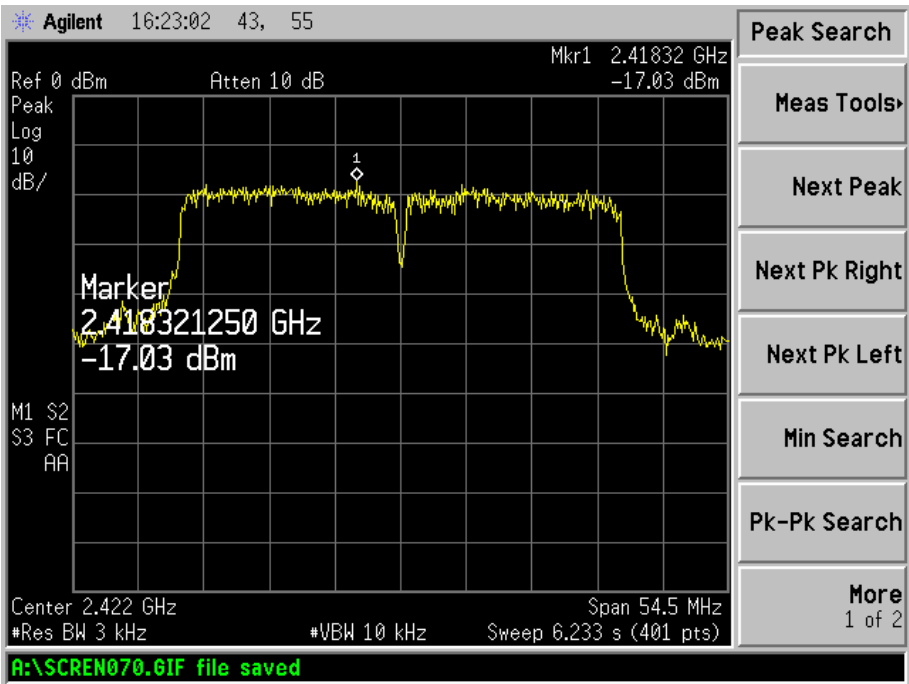
802.11n-MCS7-HT40-Middle Channel



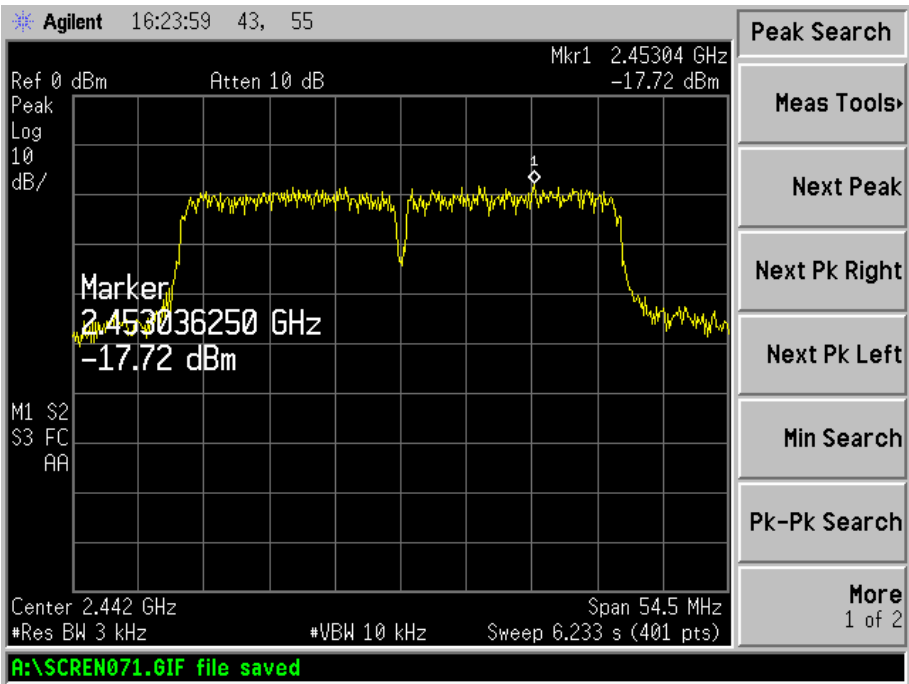
802.11n-MCS7-HT40-High Channel



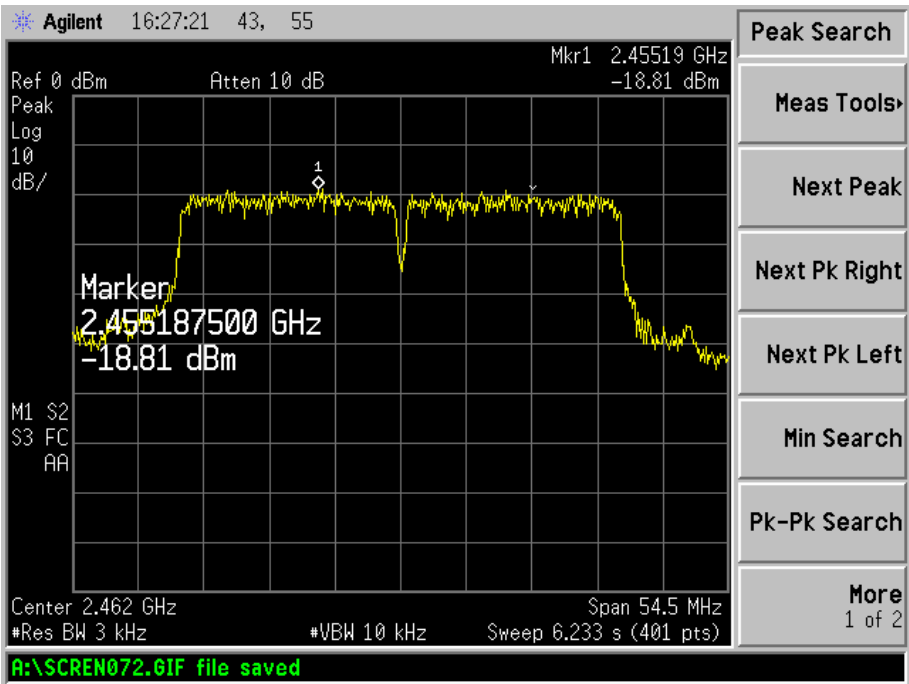
802.11n-MCS8-HT40-Low Channel



802.11n-MCS8-HT40-Middle Channel



802.11n-MCS8-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 Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2013-05-07	2014-05-06
Attenuator	ATTEN	ATS100-4-20	/	2013-05-07	2014-05-06

6.3 Test Procedure

1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set resolution bandwidth (RBW) = 1-5% or DTS BW, not to exceed 100 kHz.
3. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission..

6.4 Environmental Conditions

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

6.5 Summary of Test Results/Plots

Antenna 0:

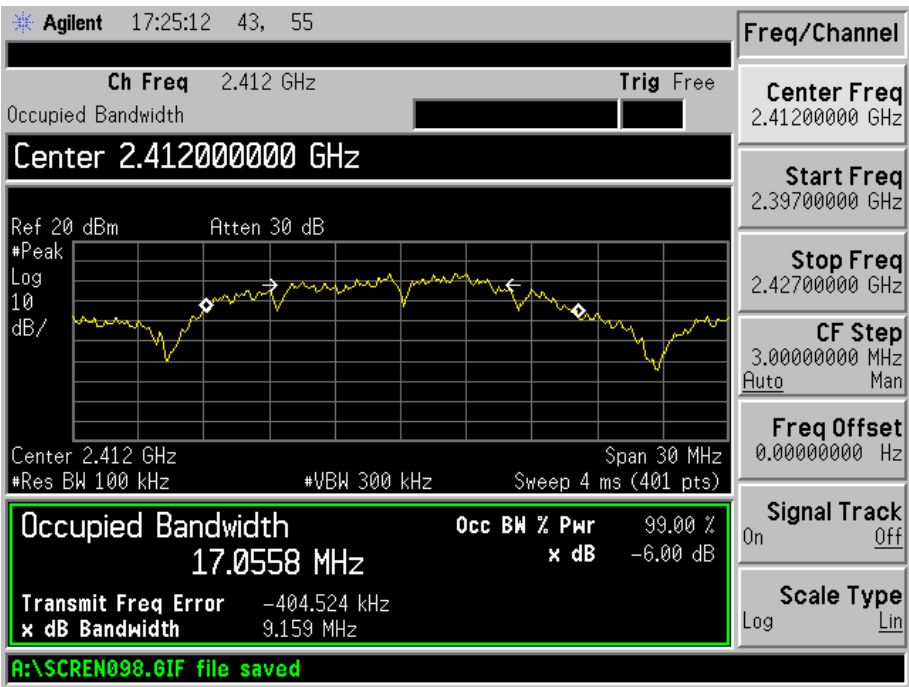
Test Mode	Test Channel MHz	6 dB Bandwidth kHz	99% Bandwidth kHz	Limit kHz
802.11b	2412	9159.0	17055.8	500
	2442	10133.0	17151.3	500
	2472	10150.0	16685.8	500
802.11g	2412	16511.0	21165.2	500
	2442	16490.0	20012.7	500
	2472	16496.0	19718.3	500
802.11n-HT20-MCS7	2412	17849.0	20961.0	500
	2442	17798.0	19731.4	500
	2472	17818.0	18962.7	500
802.11n-HT20-MCS8	2412	17755.0	20369.5	500
	2442	17737.0	18932.3	500
	2472	17768.0	18152.3	500
802.11n-HT40-MCS7	2422	36501.0	38813.3	500
	2442	36521.0	36833.2	500
	2462	36594.0	36974.7	500
802.11n-HT40-MCS8	2422	36349.0	36301.7	500
	2442	36348.0	36179.8	500
	2462	36437.0	36212.2	500

Antenna 1:

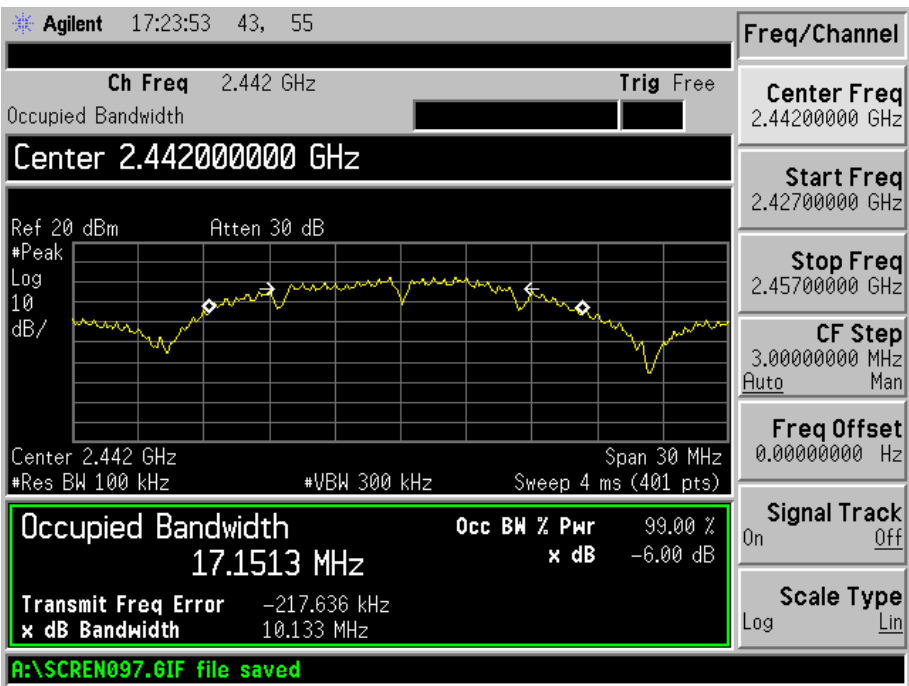
Test Mode	Test Channel MHz	6 dB Bandwidth kHz	99% Bandwidth kHz	Limit kHz
802.11b	2412	10128.0	16635.3	500
	2442	10158.0	16445.9	500
	2472	10089.0	16085.9	500
802.11g	2412	16556.0	18429.2	500
	2442	16524.0	17907.0	500
	2472	16479.0	16673.5	500
802.11n-HT20-MCS7	2412	17754.0	17781.6	500
	2442	17857.0	17876.6	500
	2472	17805.0	17745.9	500
802.11n-HT20-MCS8	2412	17723.0	18104.5	500
	2442	17757.0	18298.8	500
	2472	17695.0	17710.8	500
802.11n-HT40-MCS7	2422	36379.0	36323.5	500
	2442	36380.0	36254.7	500
	2462	36444.0	36304.1	500
802.11n-HT40-MCS8	2422	36324.0	36157.0	500
	2442	36168.0	36083.2	500
	2462	36387.0	36081.7	500

Please refer to the following test plots:

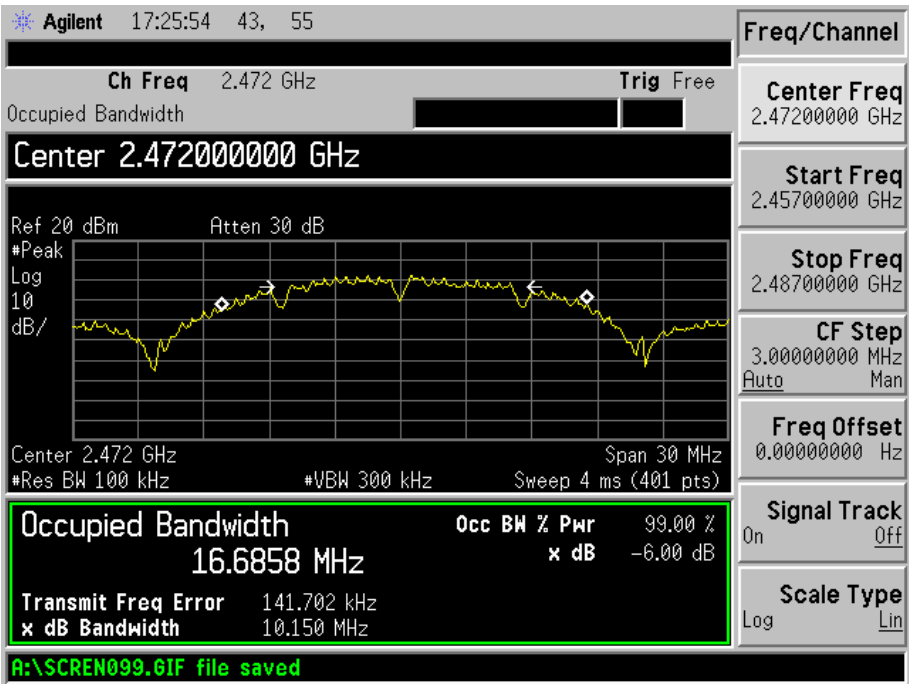
Antenna 0:
802.11b-Low Channel



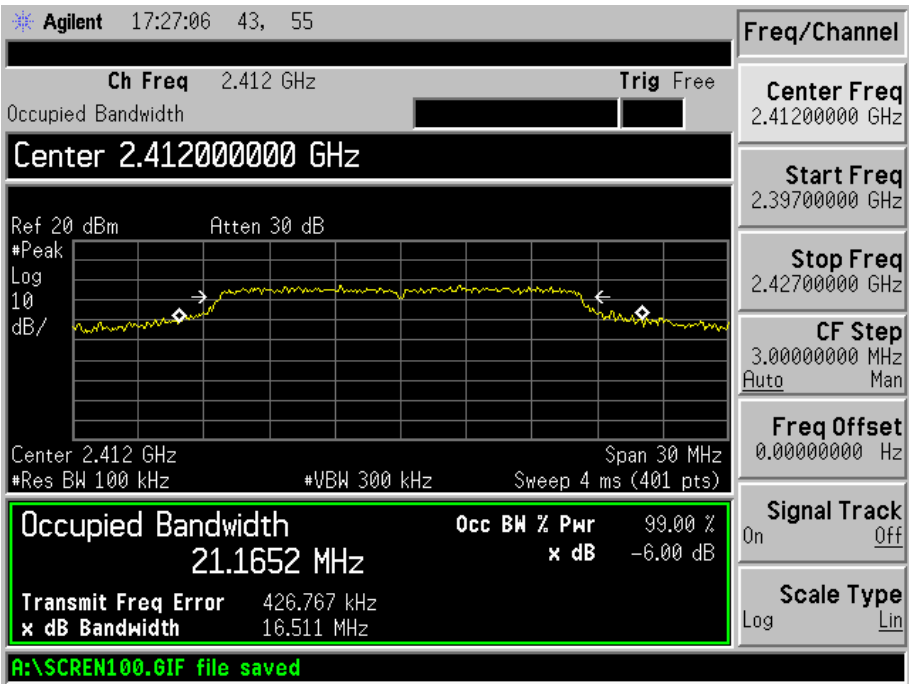
802.11b-Middle Channel



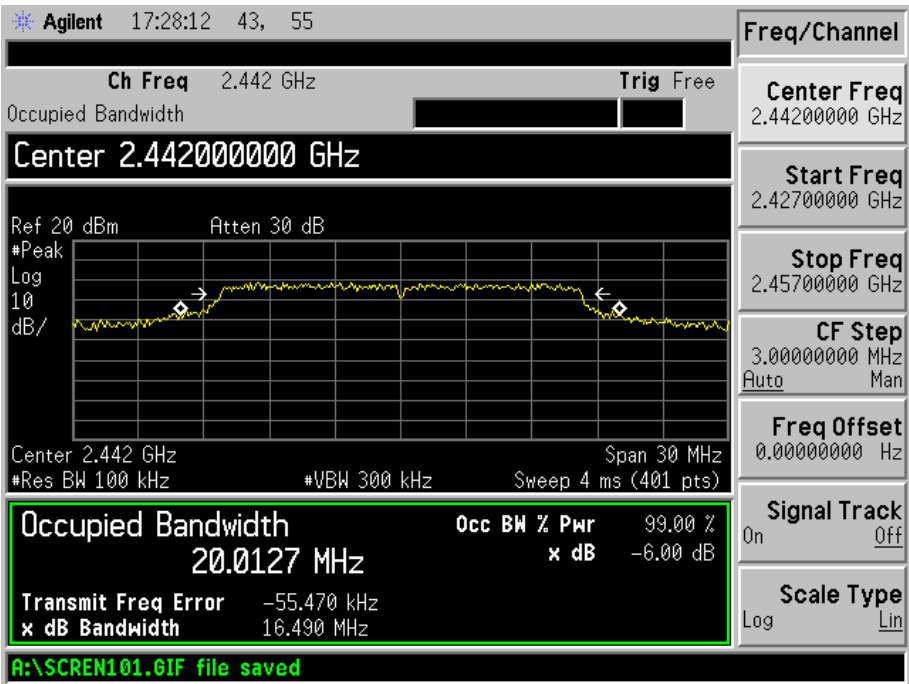
802.11b-High Channel



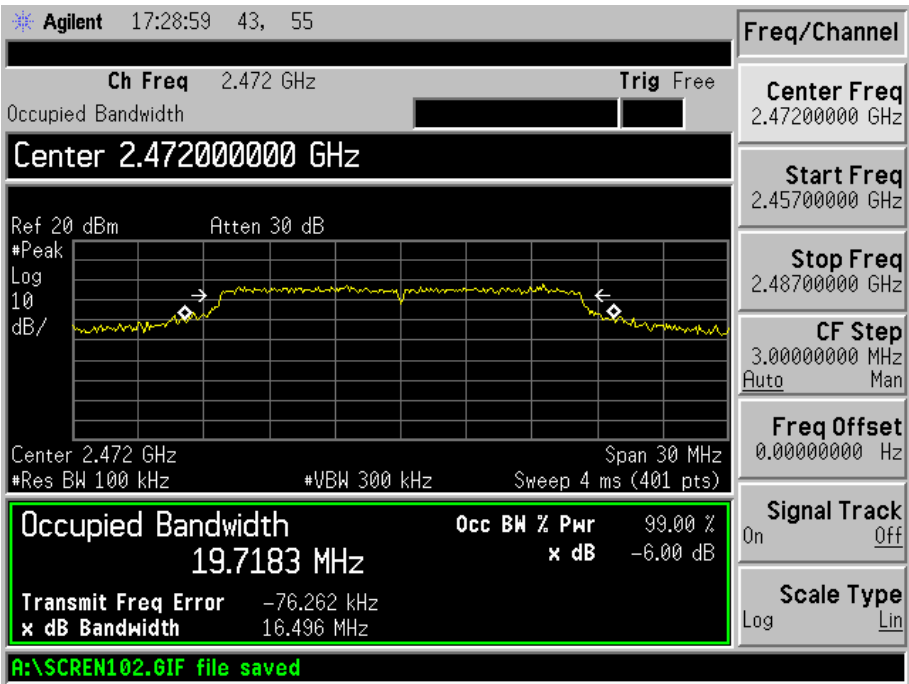
802.11g-Low Channel



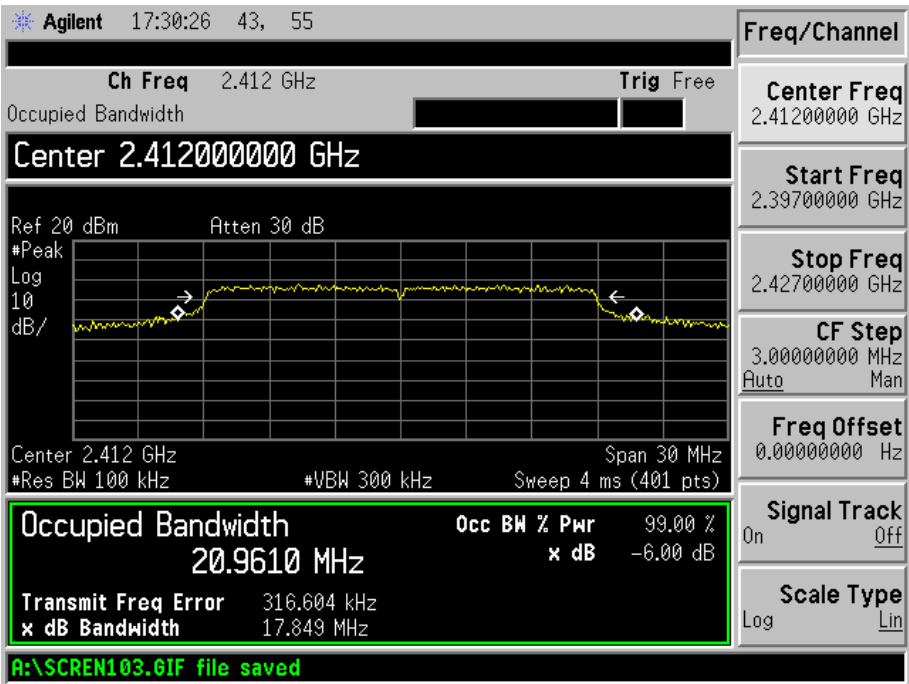
802.11g-Middle Channel



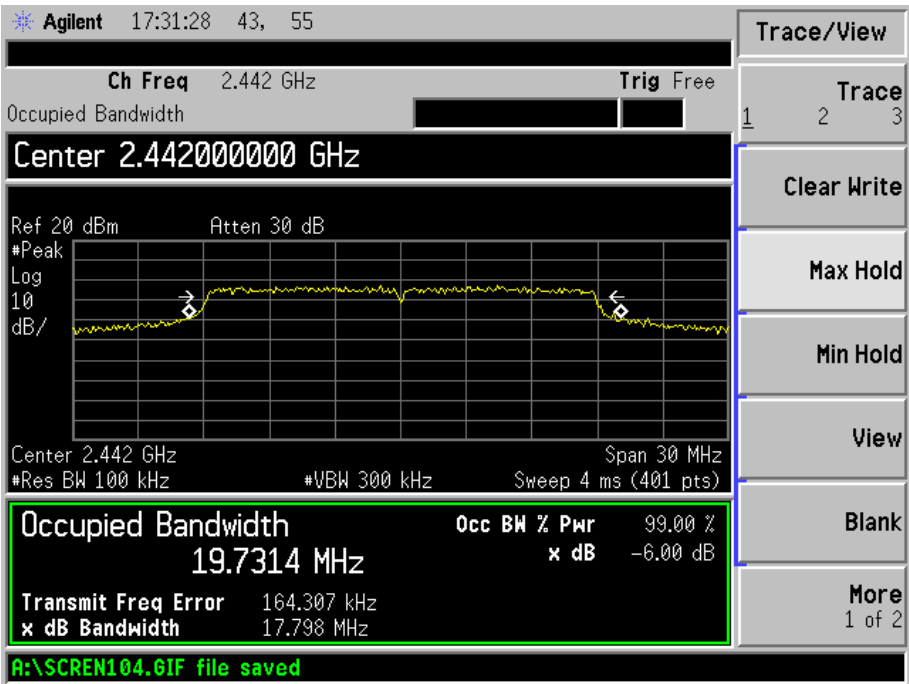
802.11g-High Channel



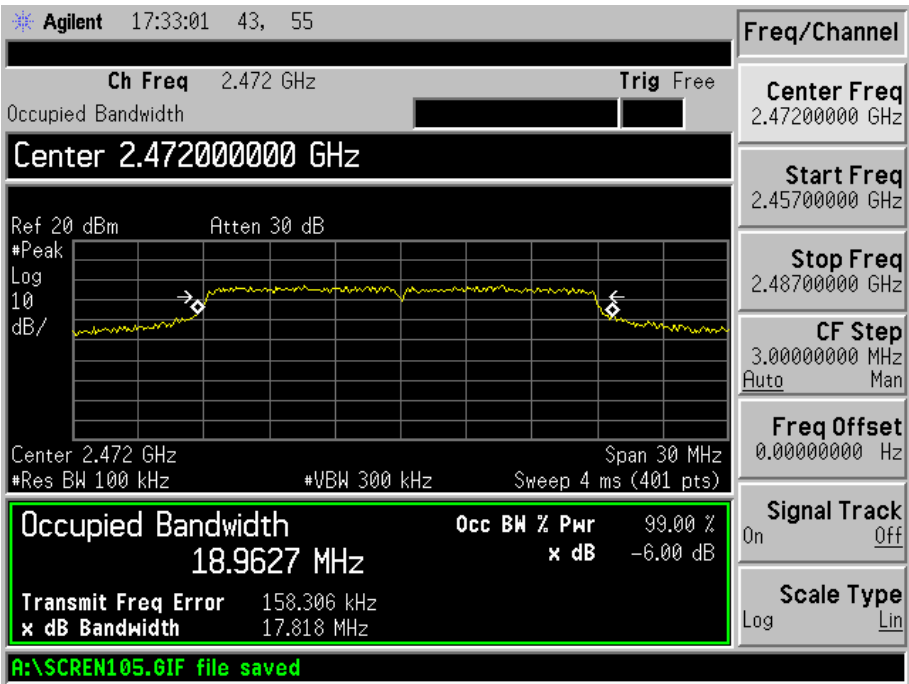
802.11n-HT20-MCS7-Low Channel



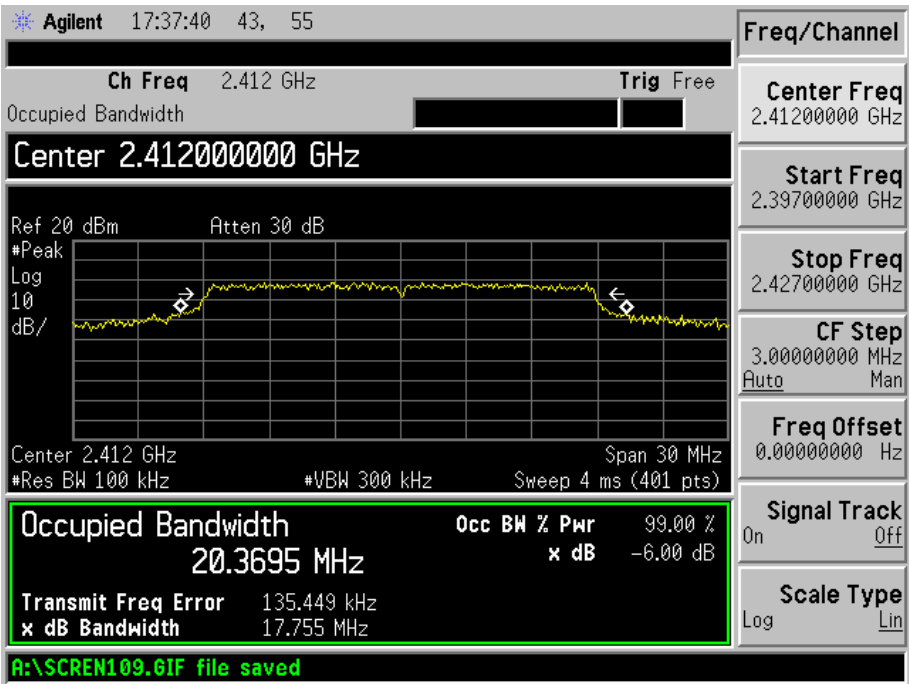
802.11n-HT20-MCS7-Middle Channel



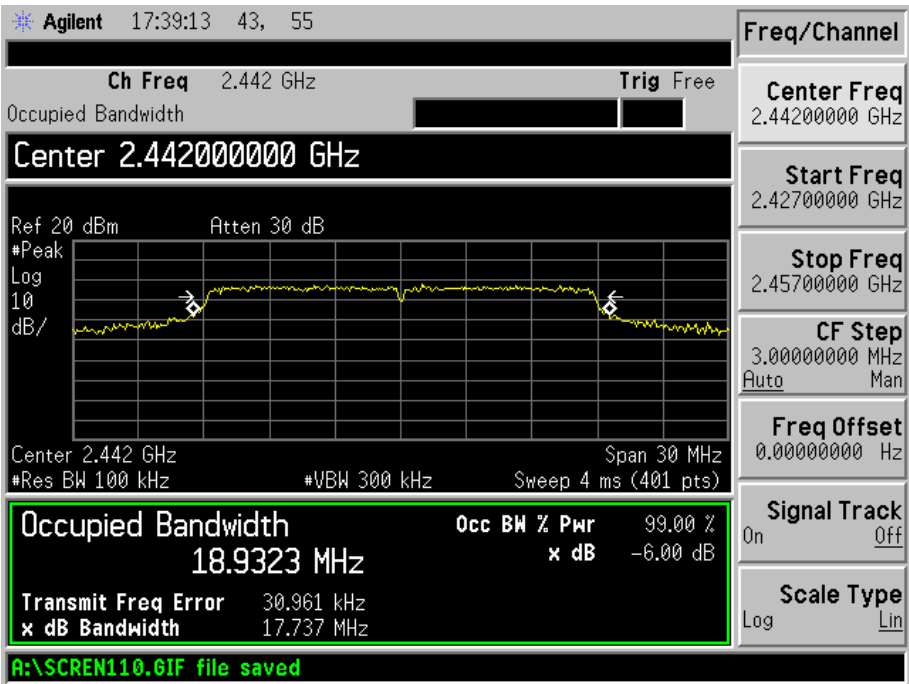
802.11n-HT20-MCS7-High Channel



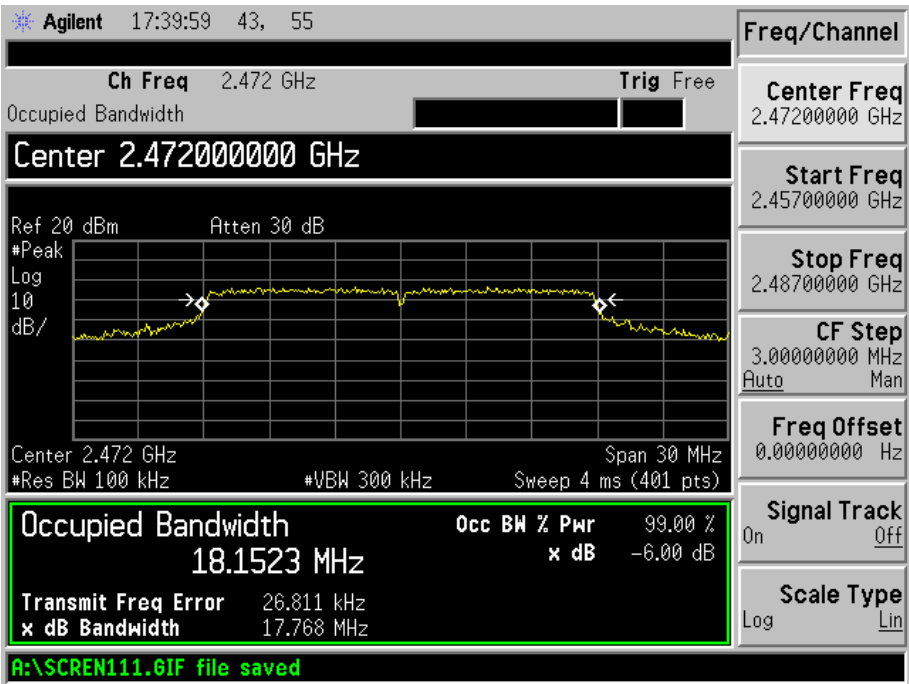
802.11n-HT20-MCS8-Low Channel



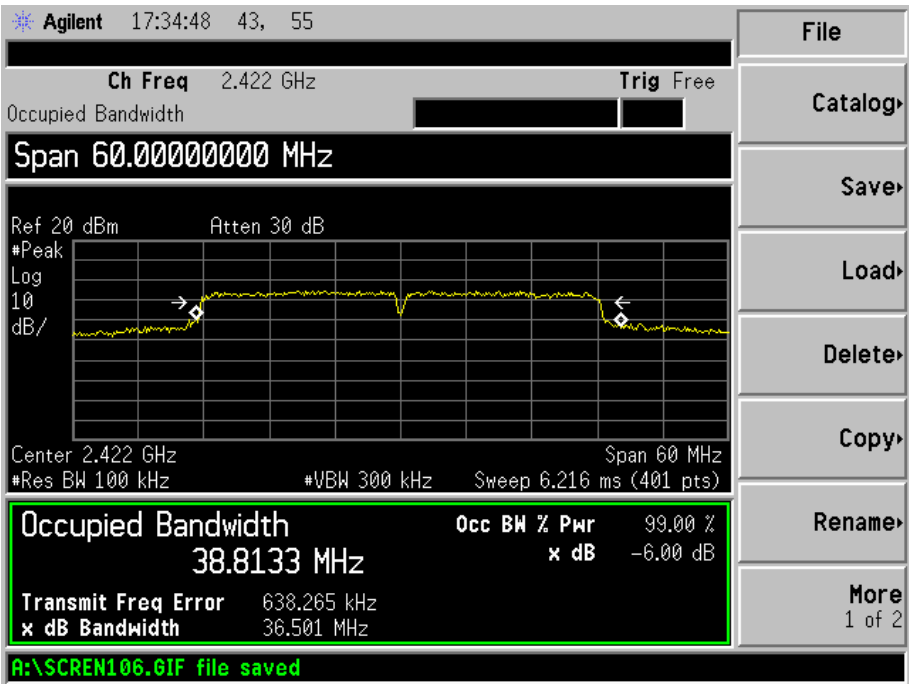
802.11n-HT20-MCS8-Middle Channel



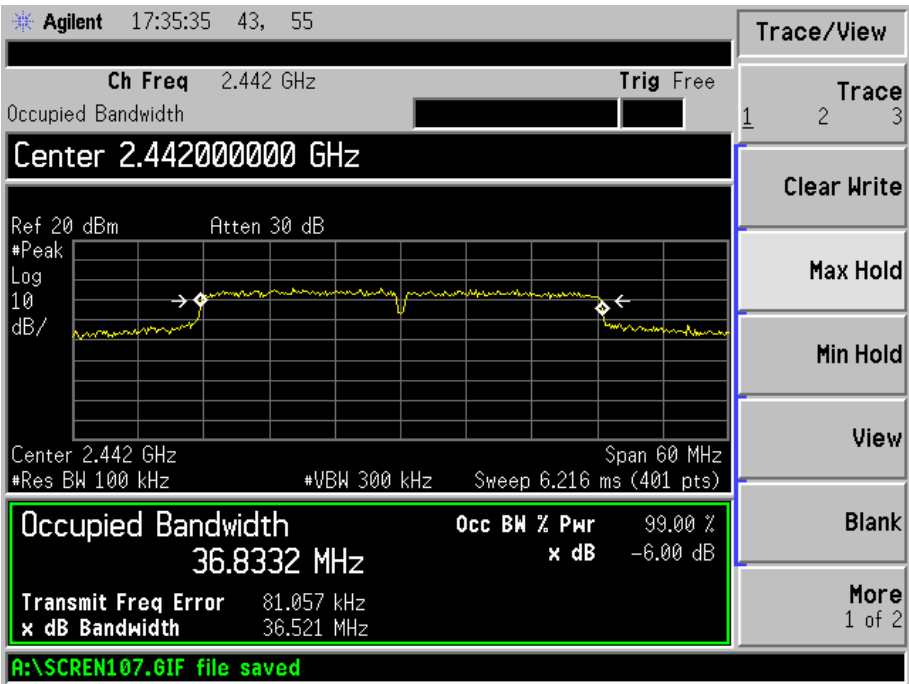
802.11n-HT20-MCS8-High Channel



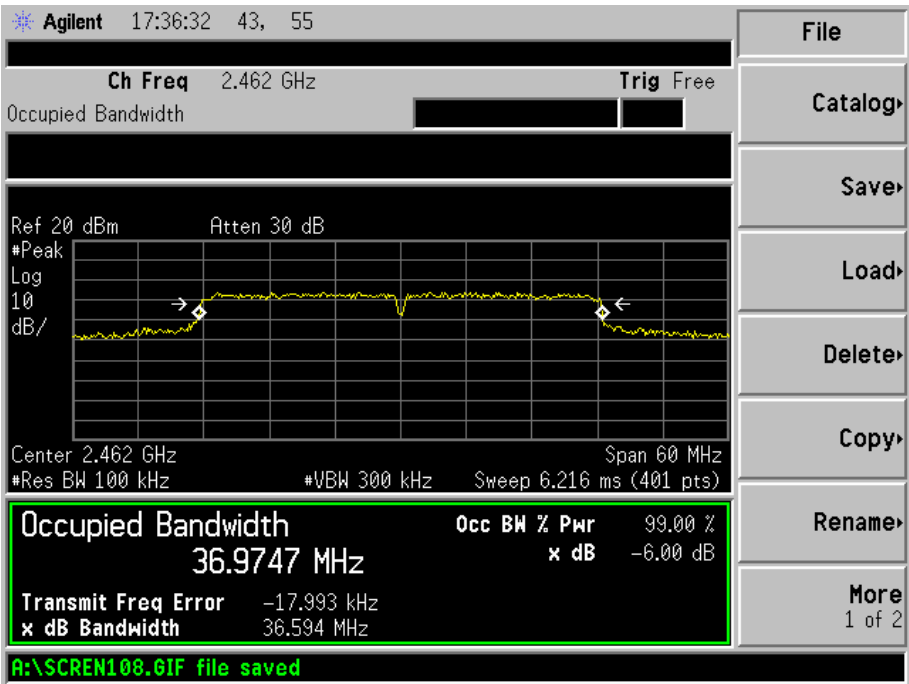
802.11n-HT40-MCS7-Low Channel



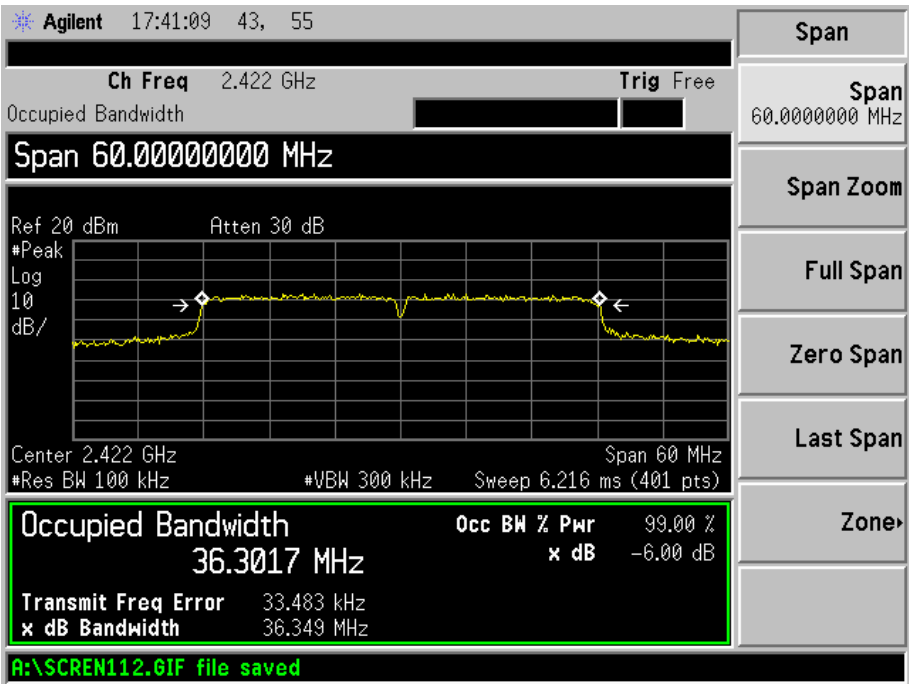
802.11n-HT40-MCS7-Middle Channel



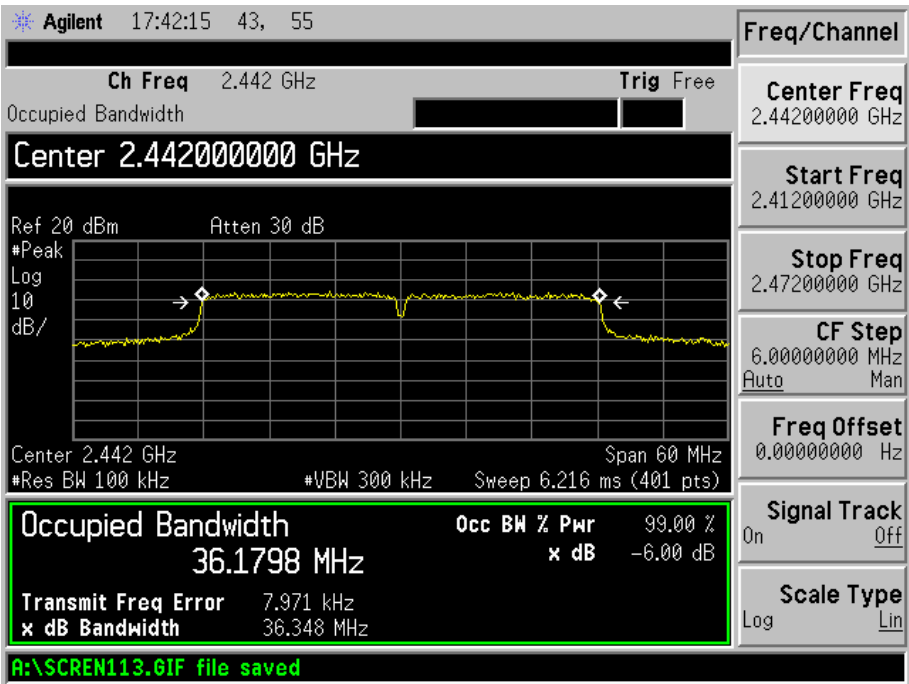
802.11n-HT40-MCS7-High Channel



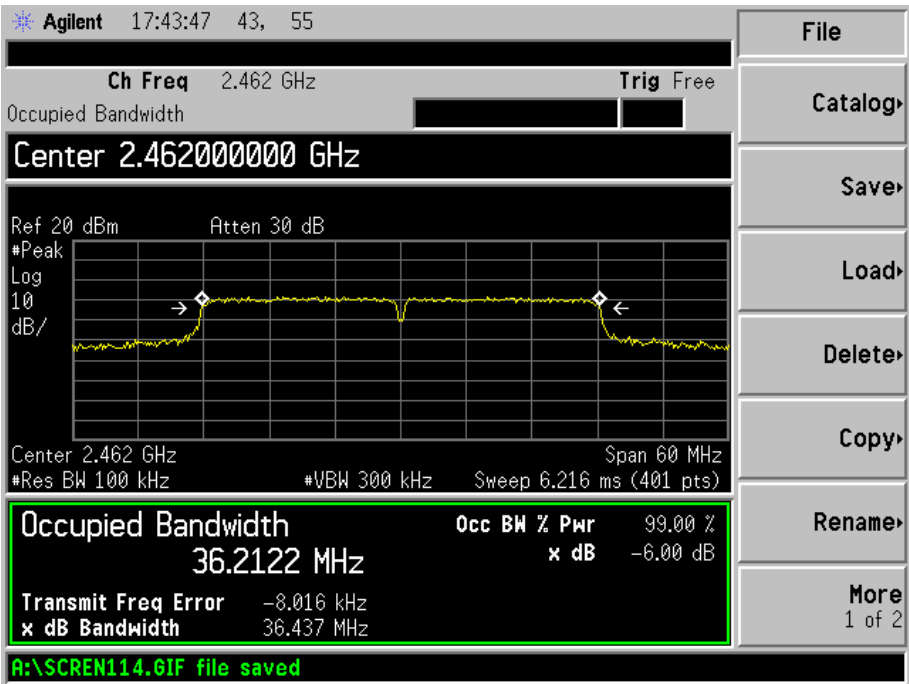
802.11n-HT40-MCS8-Low Channel



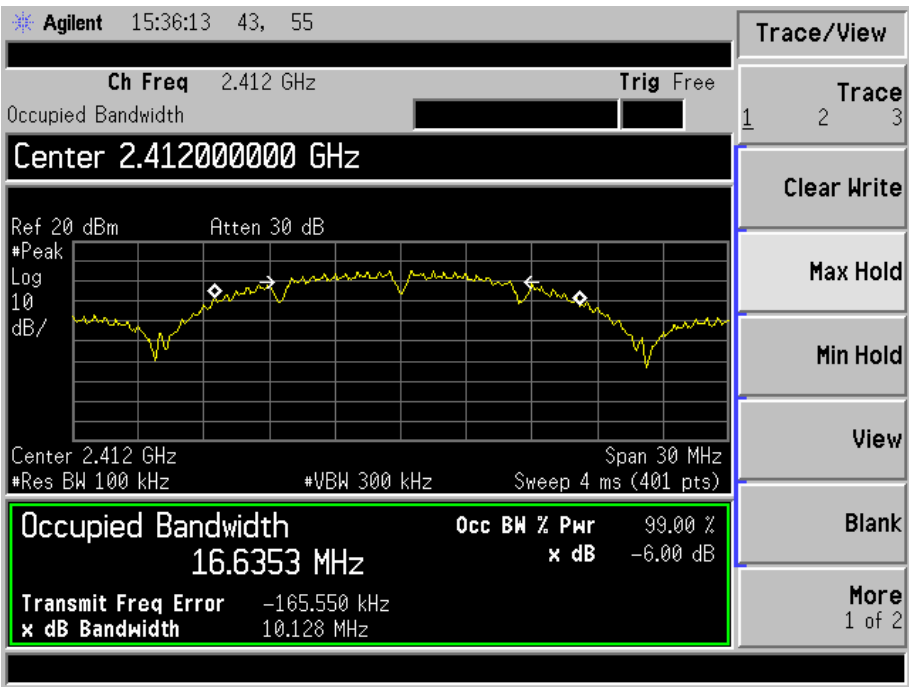
802.11n-HT40-MCS8-Middle Channel



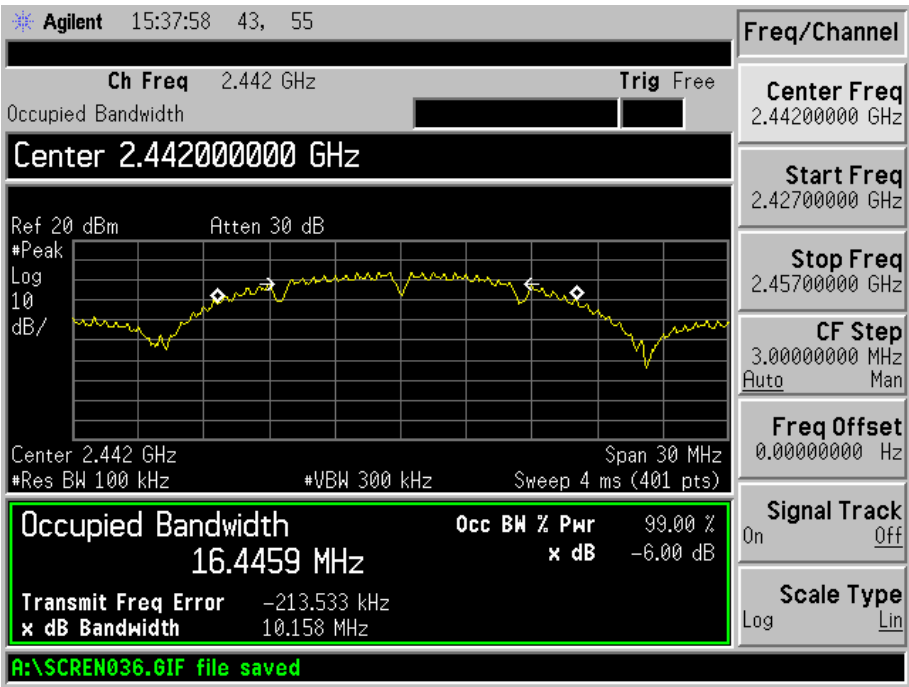
802.11n-HT40-MCS8-High Channel



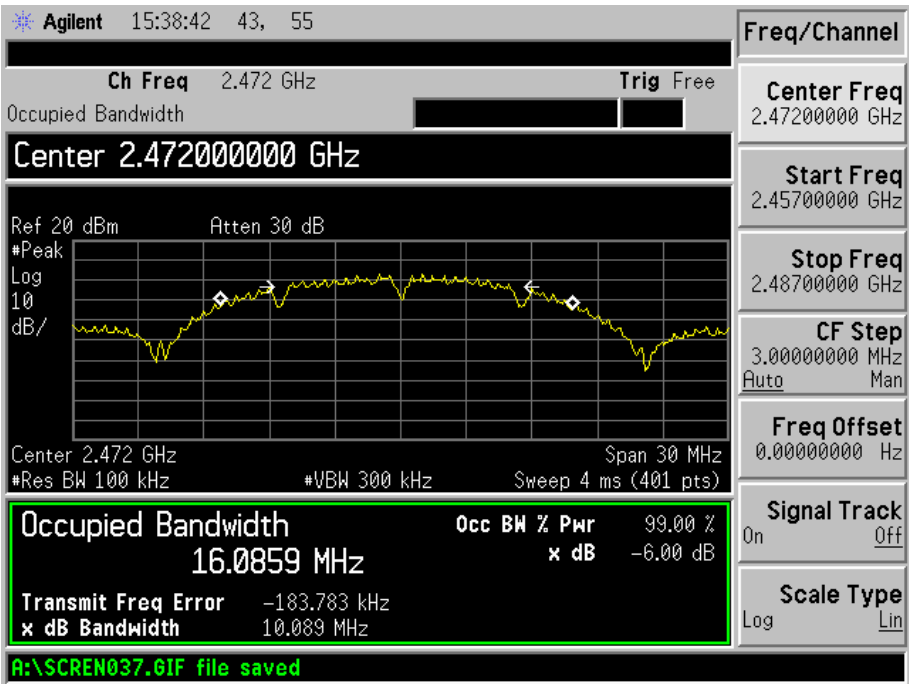
Antenna 1:
802.11b-Low Channel



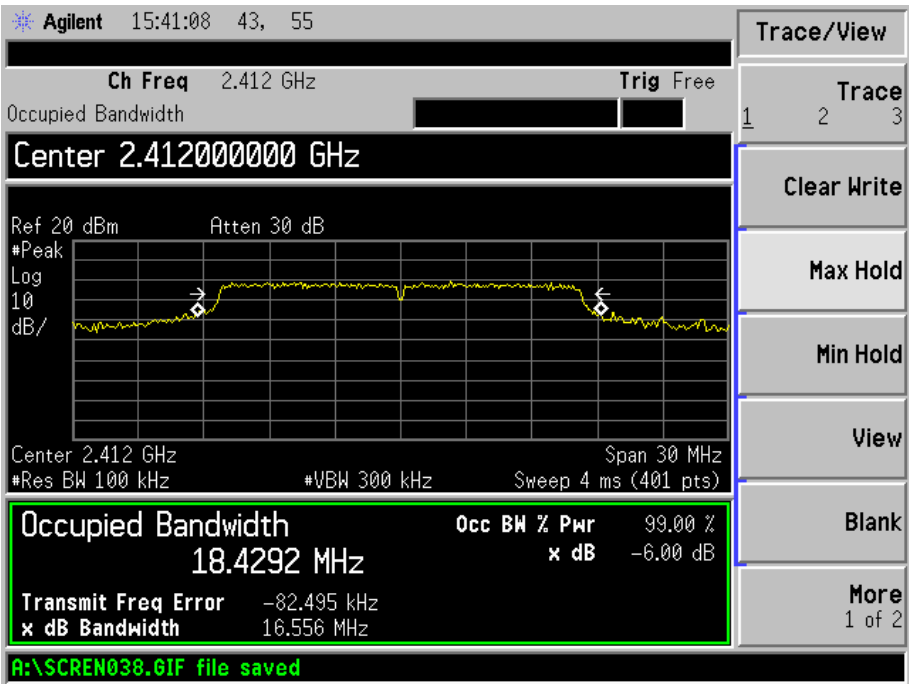
802.11b-Middle Channel



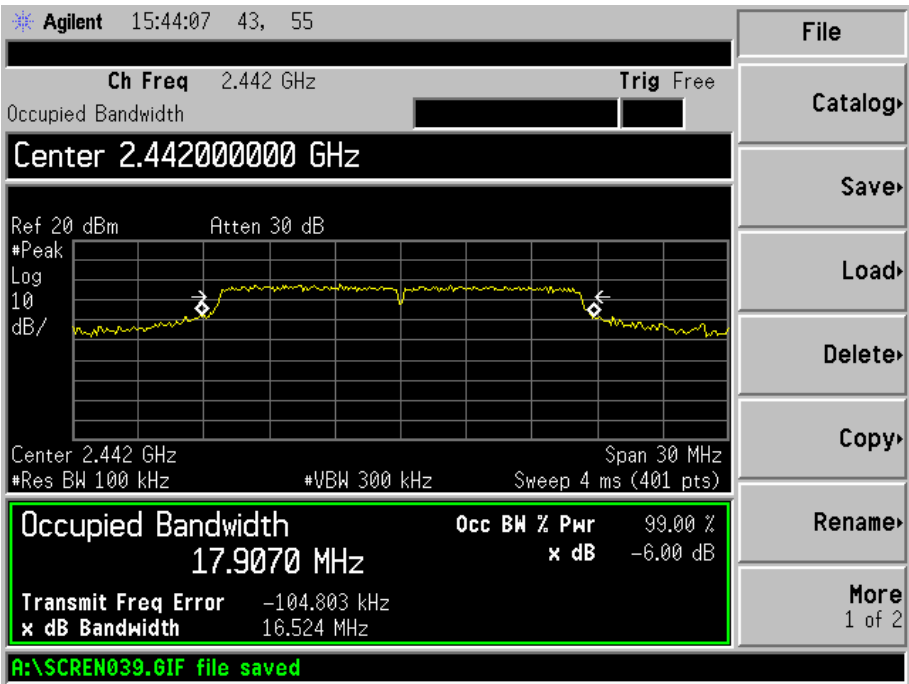
802.11b-High Channel



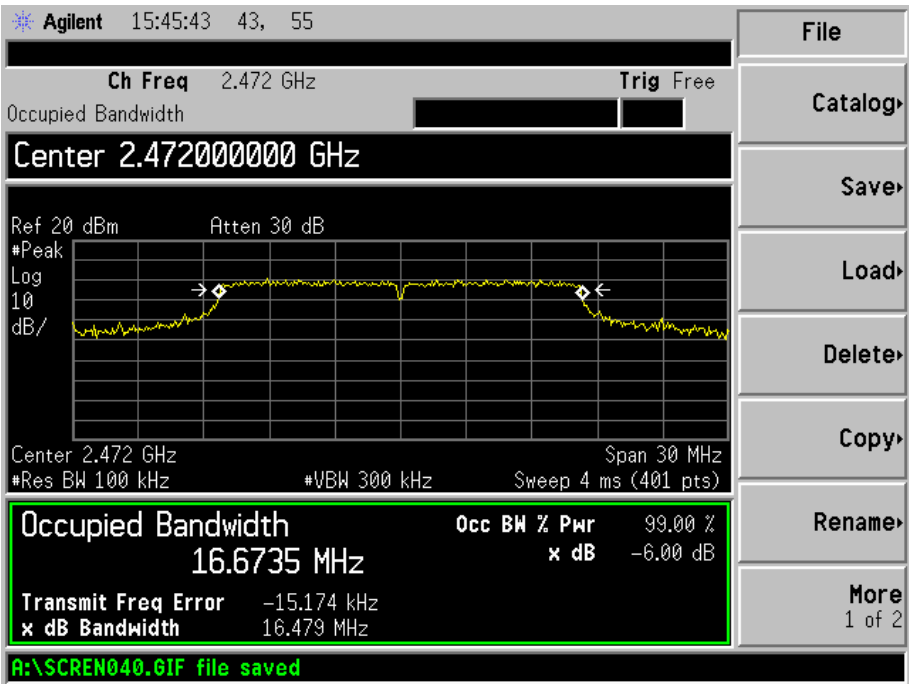
802.11g-Low Channel



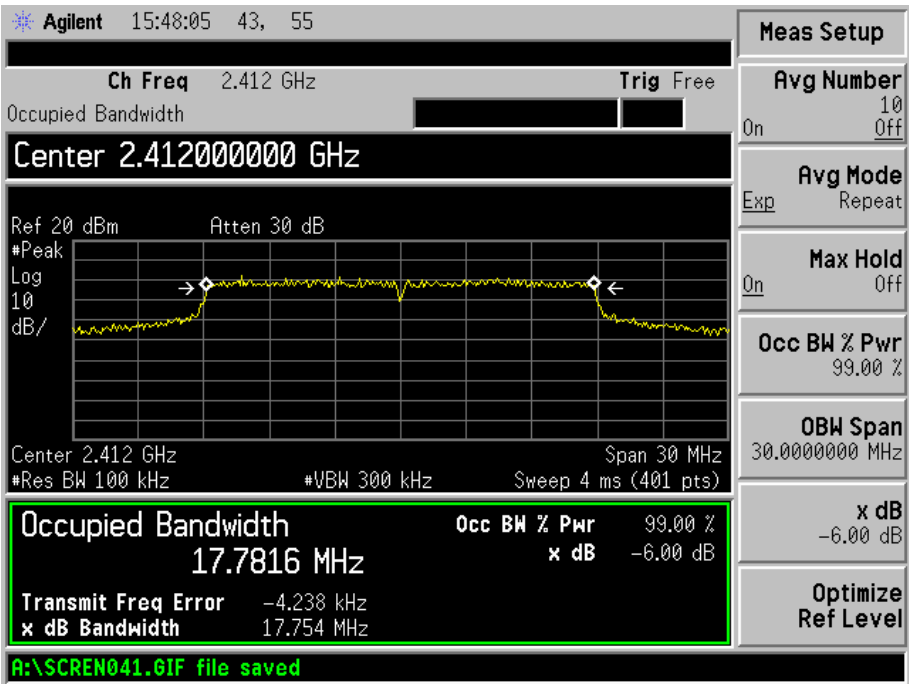
802.11g-Middle Channel



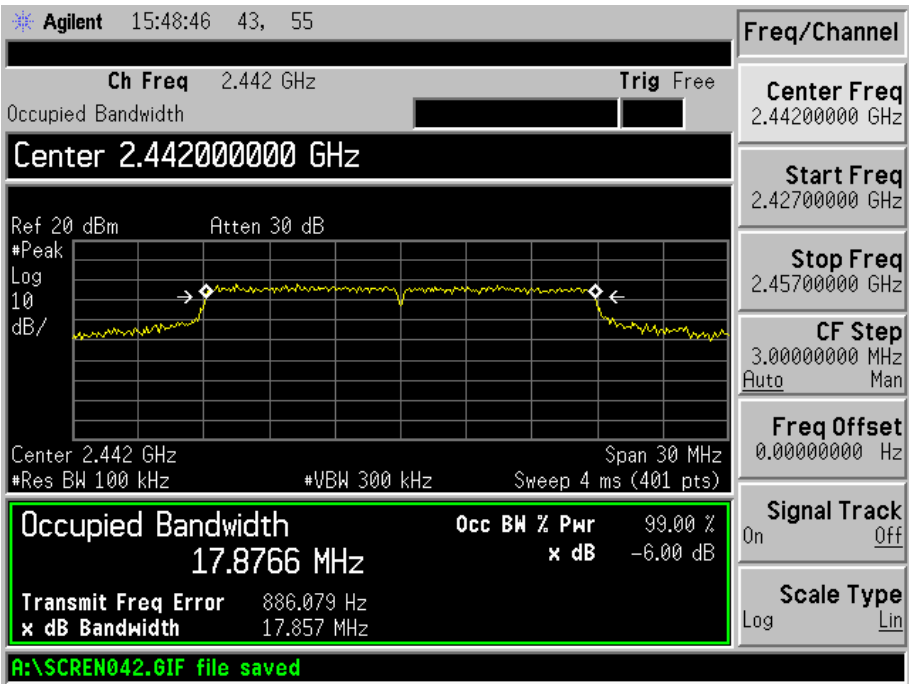
802.11g-High Channel



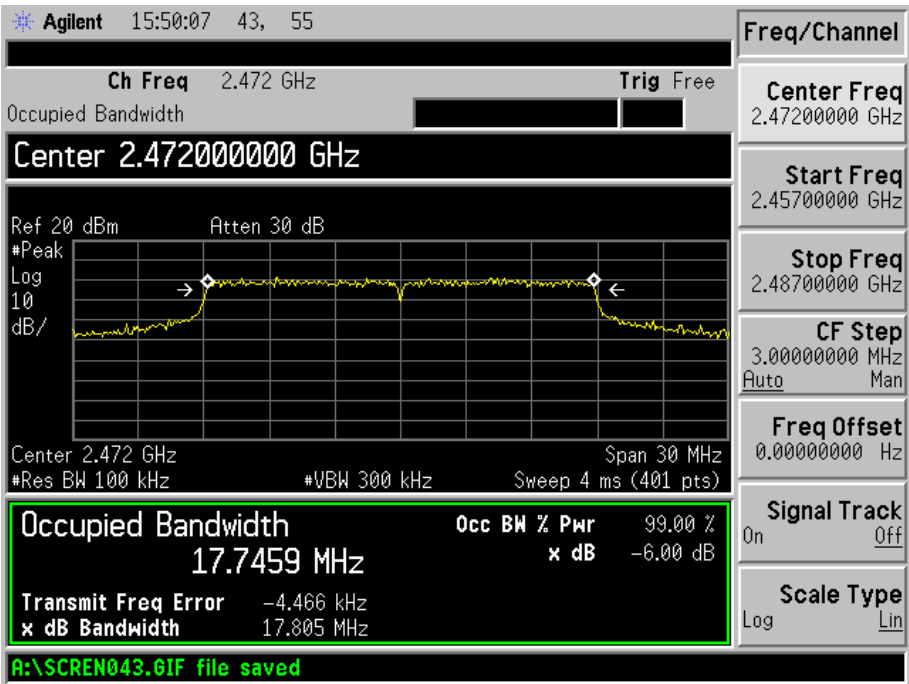
802.11n-HT20-MCS7-Low Channel



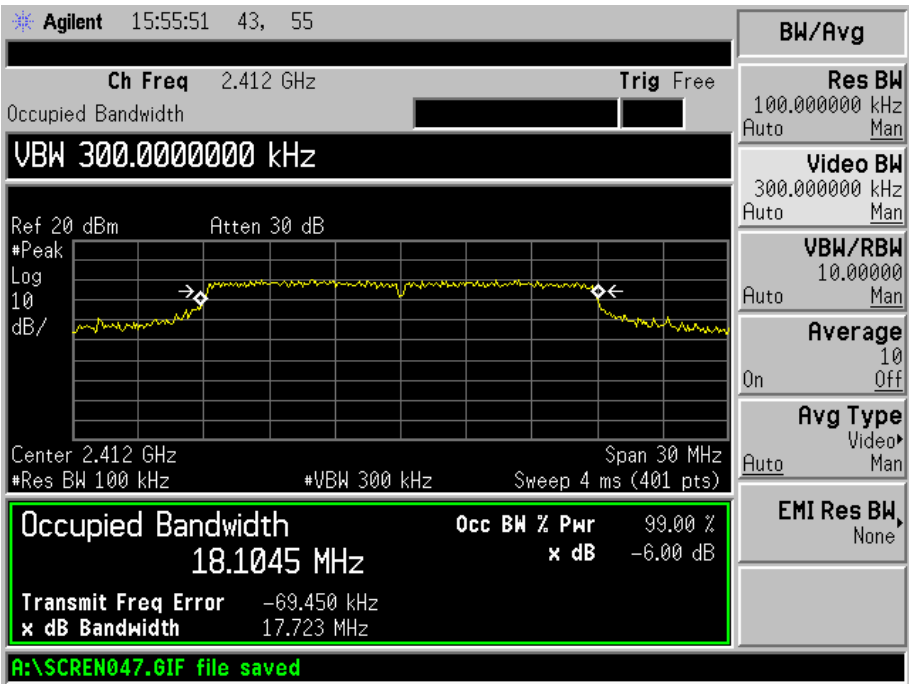
802.11n-HT20-MCS7-Middle Channel



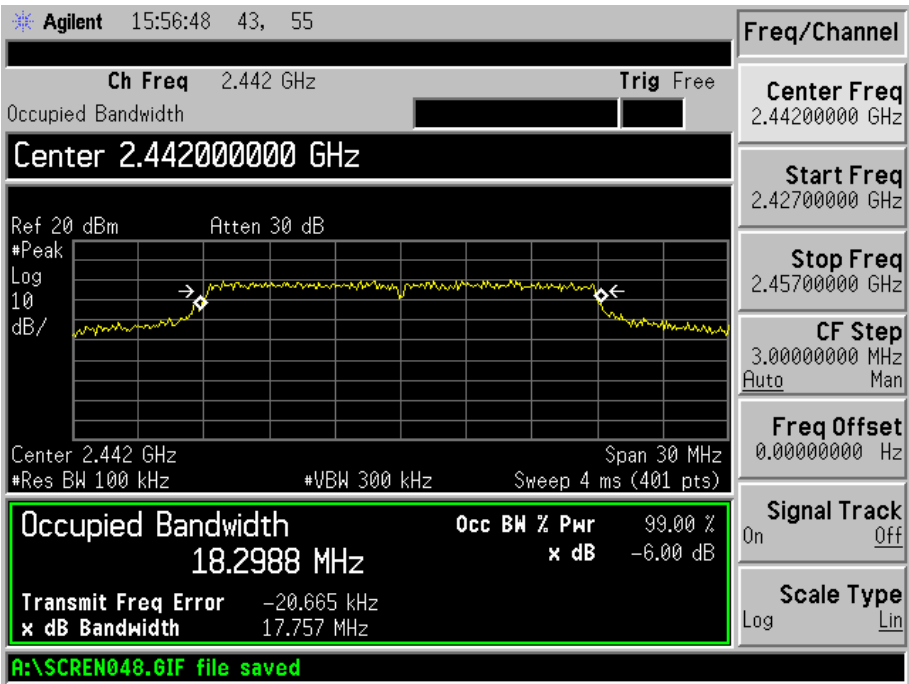
802.11n-HT20-MCS7-High Channel



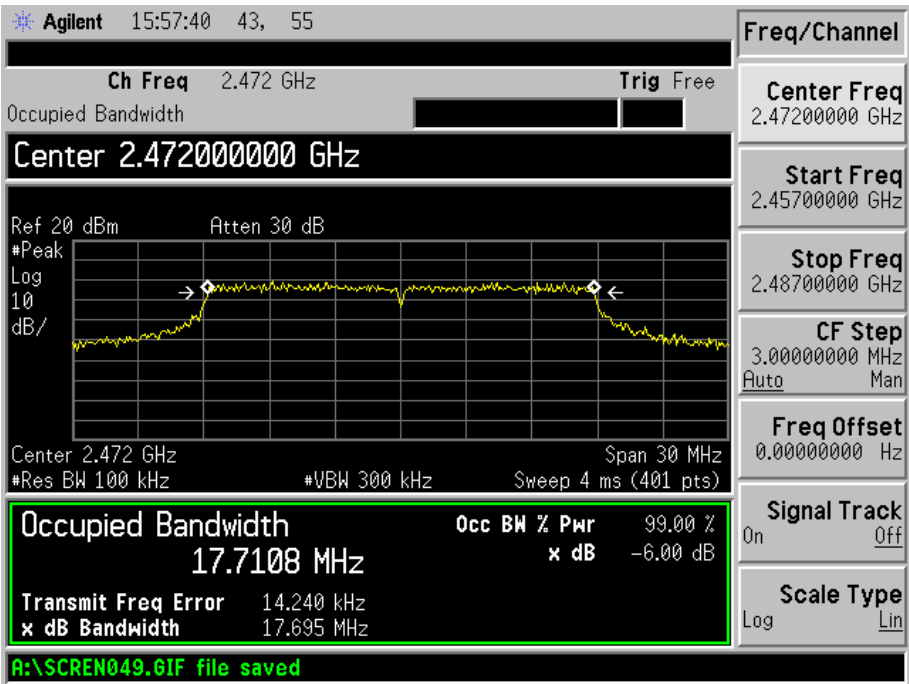
802.11n-HT20-MCS8-Low Channel



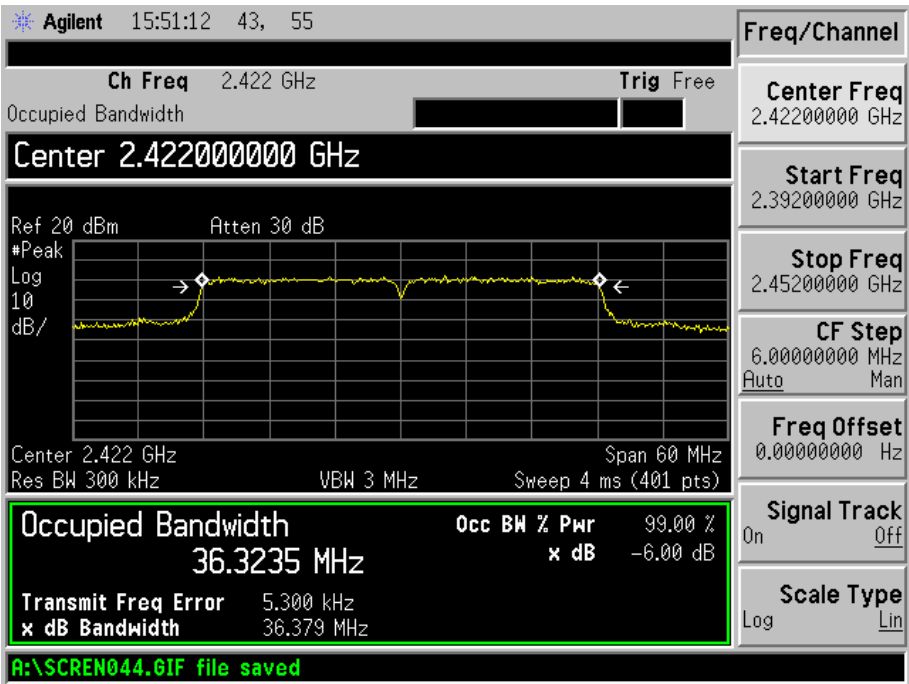
802.11n-HT20-MCS8-Middle Channel



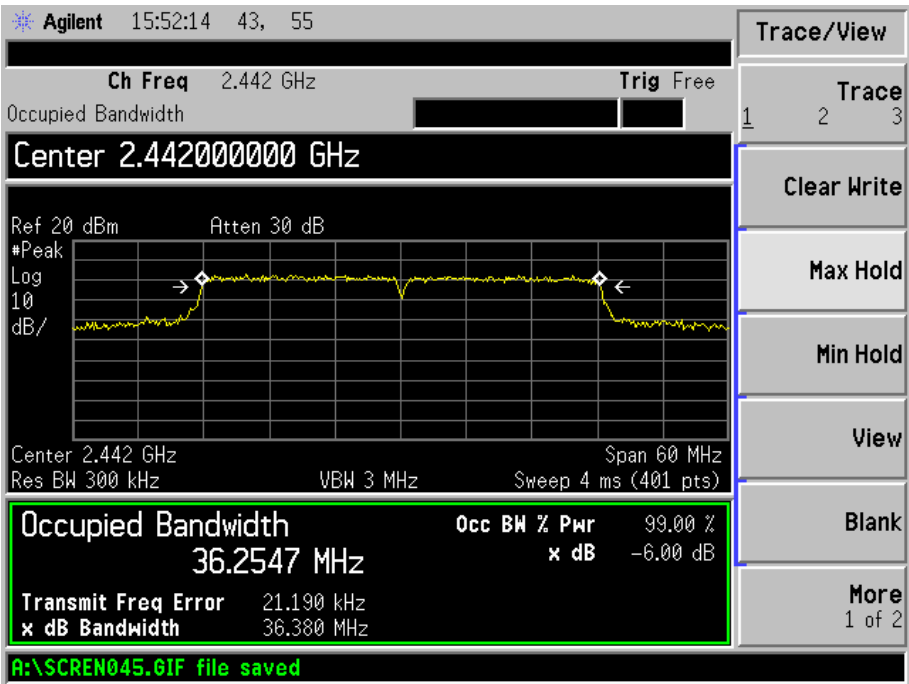
802.11n-HT20-MCS8-High Channel



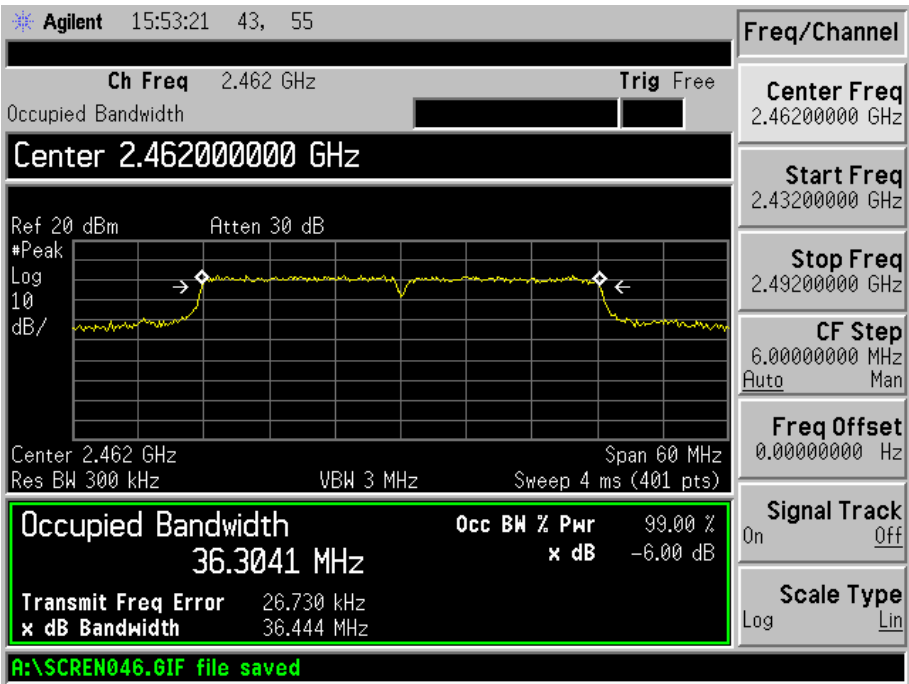
802.11n-HT40-MCS7-Low Channel



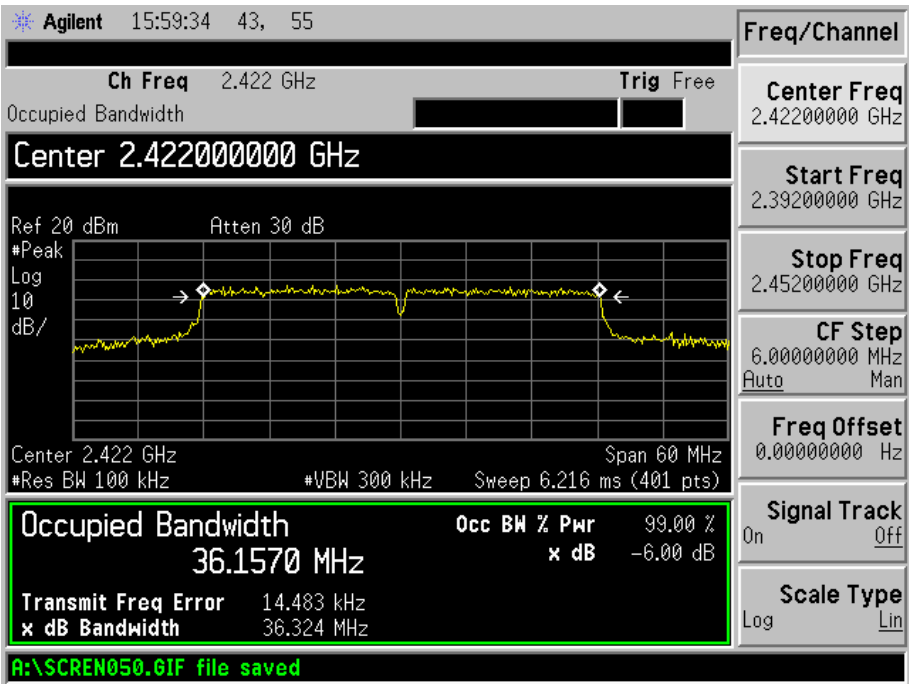
802.11n-HT40-MCS7-Middle Channel



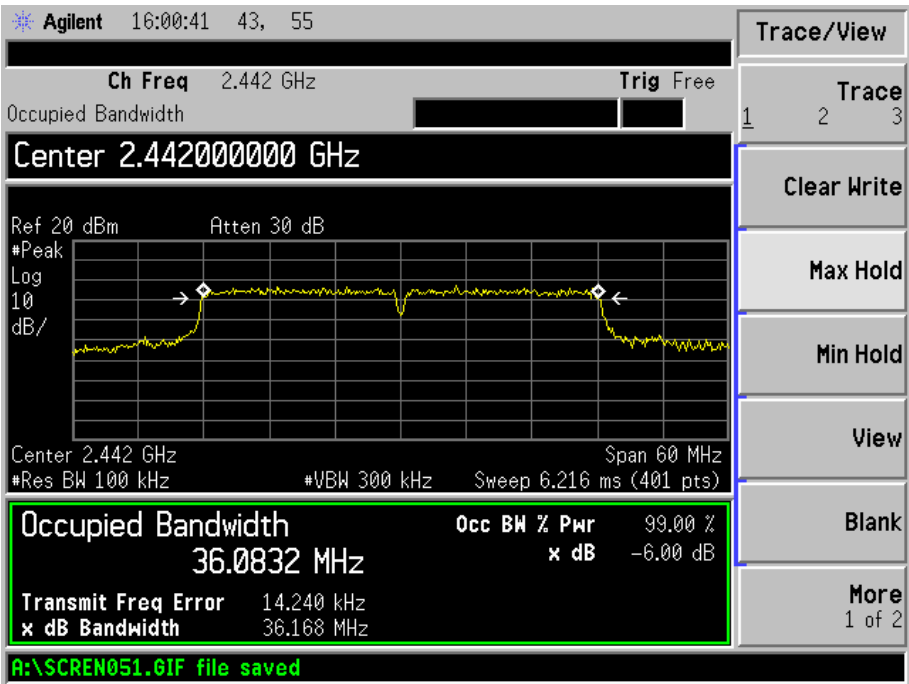
802.11n-HT40-MCS7-High Channel



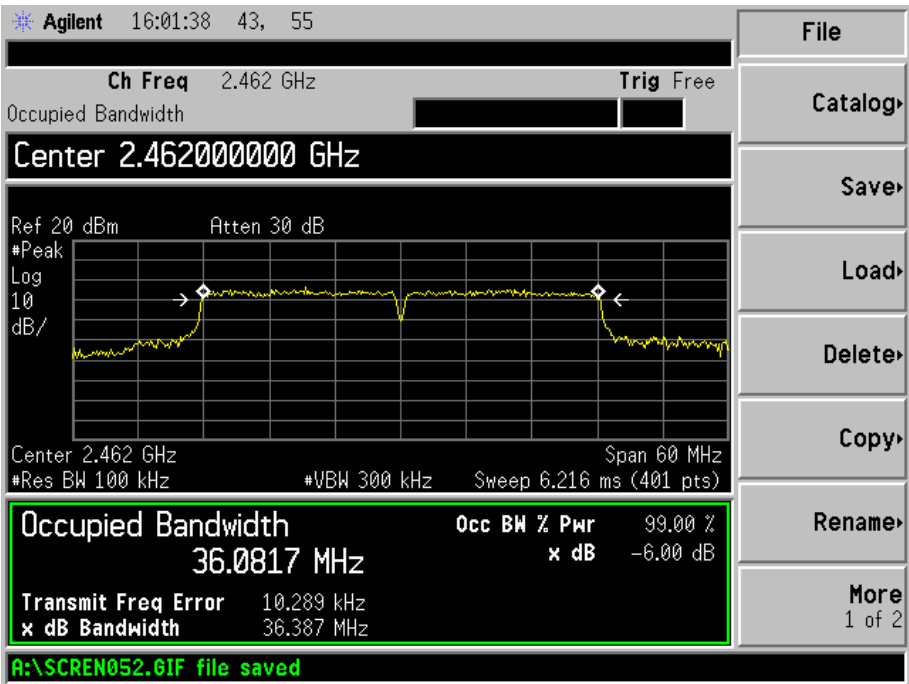
802.11n-HT40-MCS8-Low Channel



802.11n-HT40-MCS8-Middle Channel



802.11n-HT40-MCS8-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 Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2013-05-07	2014-05-06
Attenuator	ATTEN	ATS100-4-20	/	2013-05-07	2014-05-06

7.3 Test Procedure

According to section 15.247(b)-power output of the KDB-558074 D01 V03 (2013), 8.1.2 Option 2 (channel integration method) this procedure should only be used when the maximum available RBW of the spectrum/signal analyzer is less than the DTS bandwidth.

1. Set the RBW = maximum available (at least 1 MHz).
2. Set the VBW = 3 x RBW or maximum available setting (must be $\geq$ RBW).
3. Set the span to fully encompass the DTS bandwidth.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the spectrum analyzer's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some analyzers, this may require a manual override to ensure use of peak detector).

7.4 Environmental Conditions

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

7.5 Summary of Test Results/Plots

Test Mode	Frequency MHz	Reading 0 dBm	Reading 1 dBm	Output Power 0 mW	Output Power 1 mW	Total Power mW	Limit mW
802.11b	2412	21.36	18.52	136.77	71.12	/	1000
	2442	19.83	17.15	96.16	51.88	/	1000
	2472	18.60	15.77	72.44	37.76	/	1000
802.11g	2412	20.89	18.26	122.74	66.99	/	1000
	2442	19.88	17.00	97.27	50.12	/	1000
	2472	18.66	16.10	73.45	40.74	/	1000
802.11n HT20_MCS7	2412	21.11	18.73	129.12	74.64	/	1000
	2442	19.79	17.37	95.28	54.58	/	1000
	2472	18.55	16.09	71.61	40.64	/	1000
802.11n HT40_MCS7	2422	20.72	18.12	118.03	64.86	/	1000
	2442	19.74	17.35	94.19	54.33	/	1000
	2462	18.89	16.45	77.45	44.16	/	1000
802.11n HT20_MCS8	2412	20.34	18.17	108.14	65.61	173.76	1000
	2442	18.66	16.33	73.45	42.95	116.41	1000
	2472	17.70	15.77	58.88	37.76	96.64	1000
802.11n HT40_MCS8	2422	19.71	17.75	93.54	59.57	153.11	1000
	2442	18.59	16.68	72.28	46.56	118.84	1000
	2462	18.05	15.44	63.83	34.99	98.82	1000

Remark: Summary of Test Results

Total Power=10 Log ^(Power 0+Power 1)

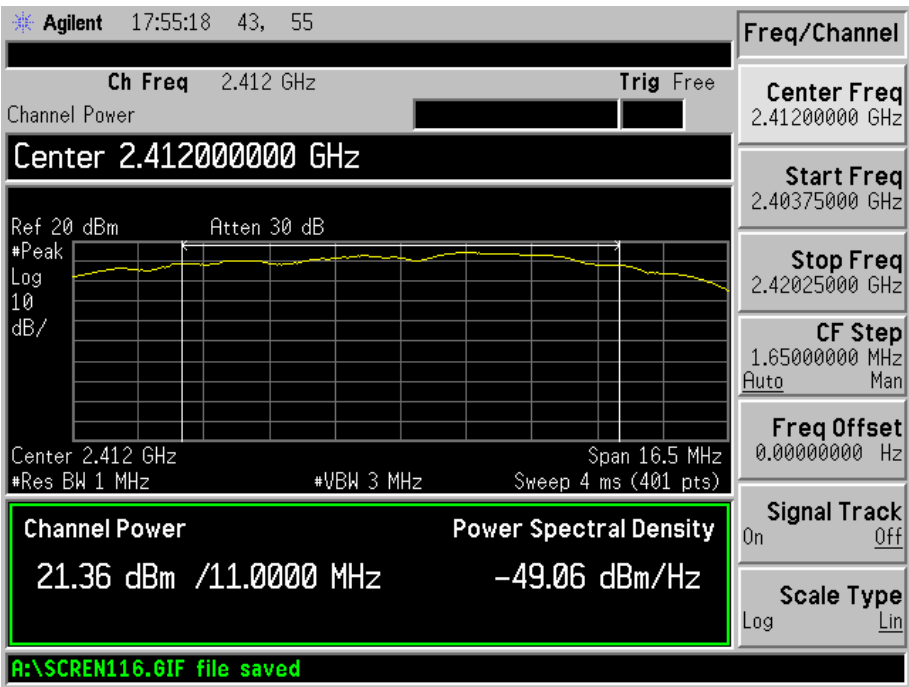
Power 0=10 ^{(Measured 0+ Antenna 0)/10}

Power 1=10 ^{(Measured 1+ Antenna 1)/10}

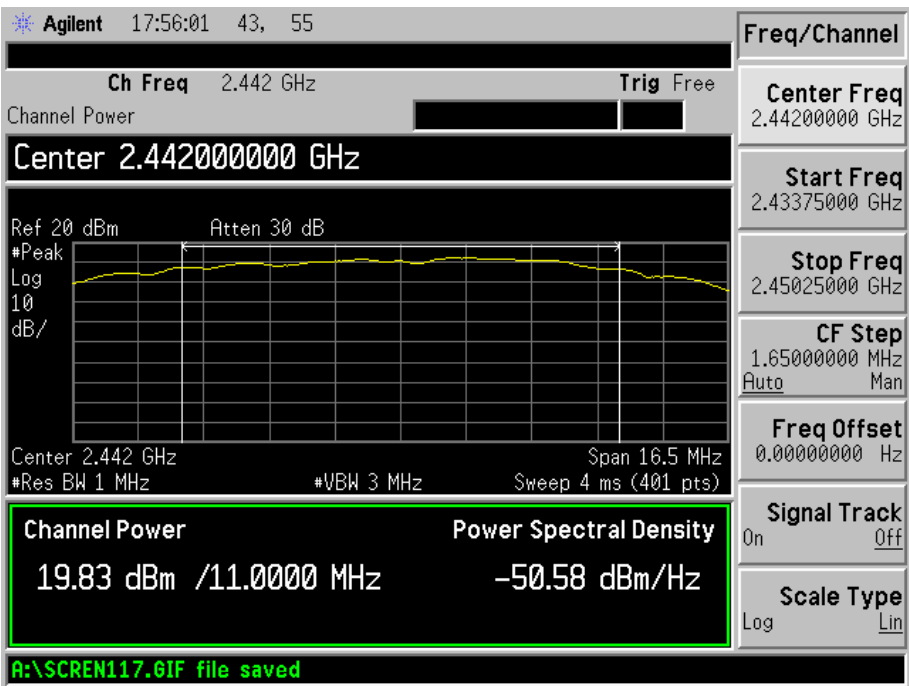
Note: The EUT shall be simultaneous transmission at the Antenna 0 and Antenna 1 for 802.11n MCS8, but transmission only at Antenna 0 or Antenna 1 for 802.11b, 802.11g and 802.11n MCS0~7.

Please refer to the following test plots:

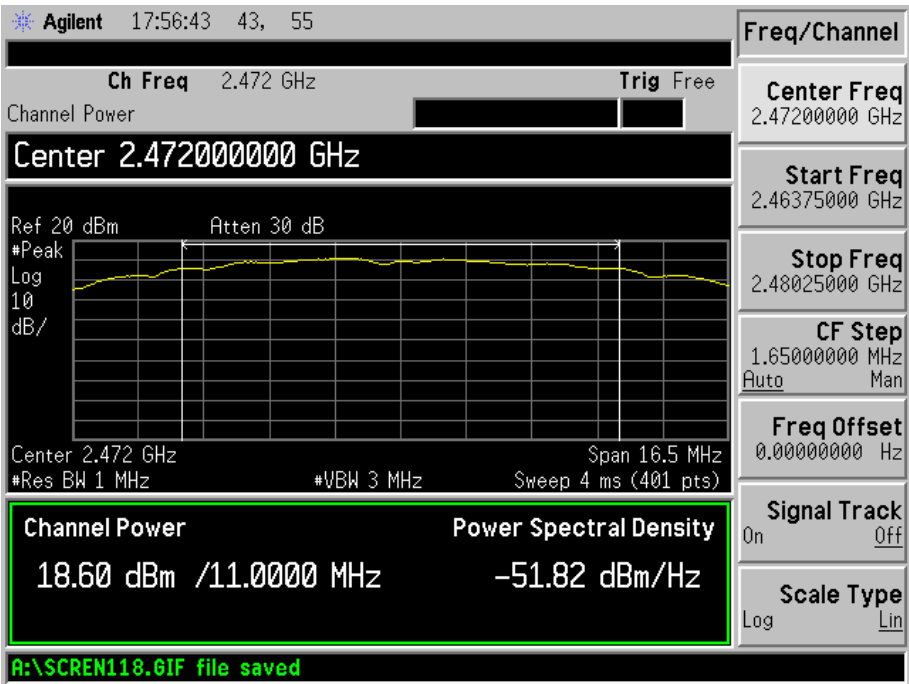
Antenna 0:
802.11b-1Mbps-Low Channel



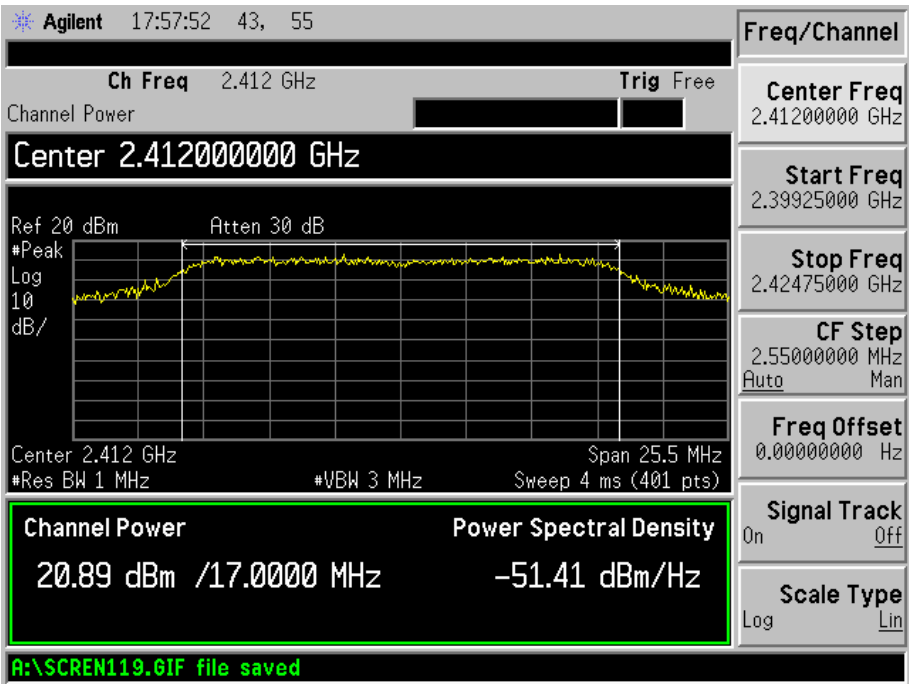
802.11b -1Mbps-Middle Channel



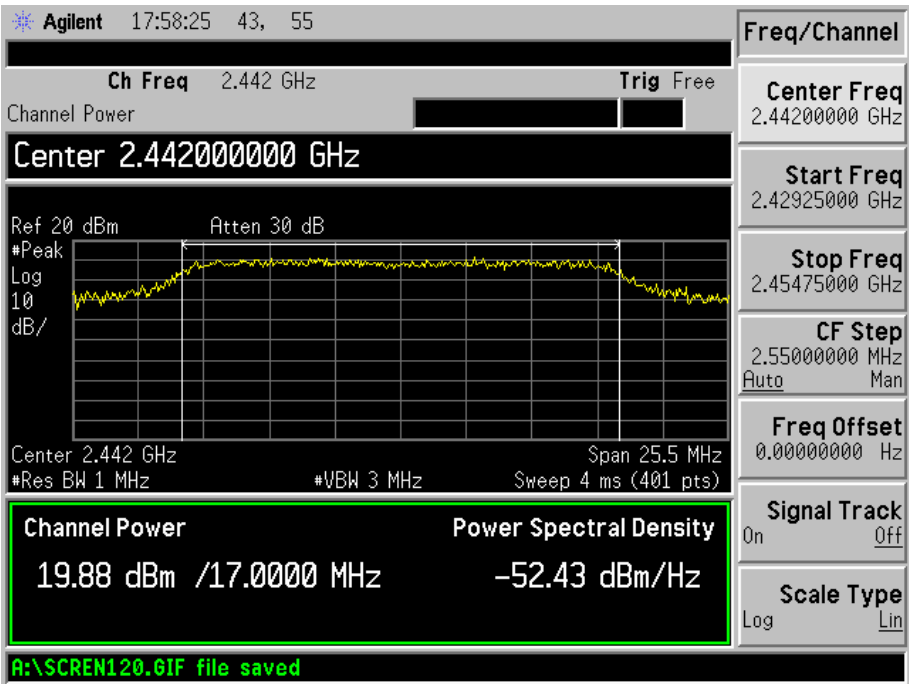
802.11b -1Mbps-High Channel



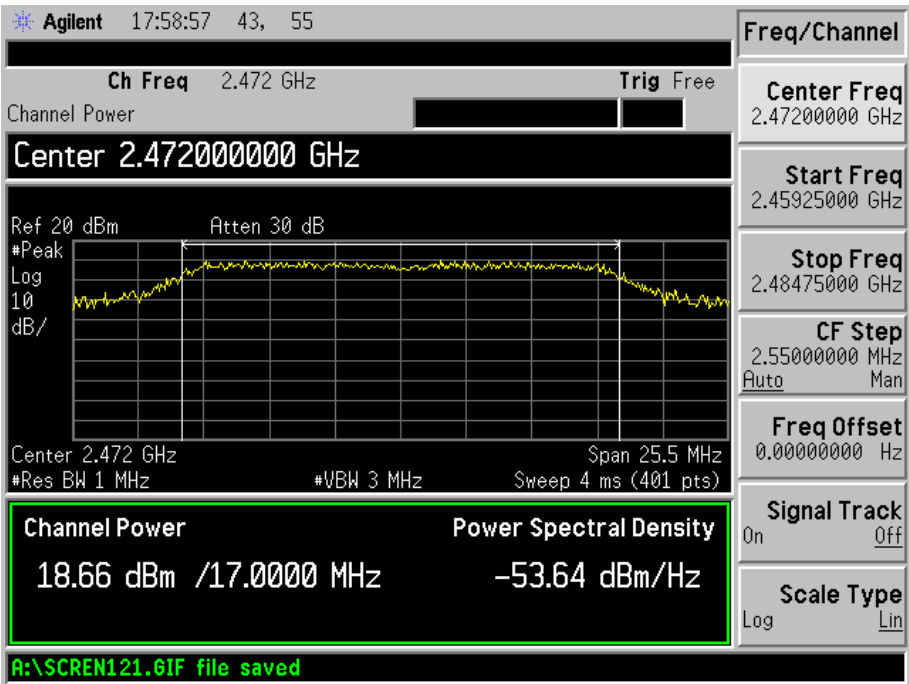
802.11g-6Mbps-Low Channel



802.11g-6Mbps-Middle Channel



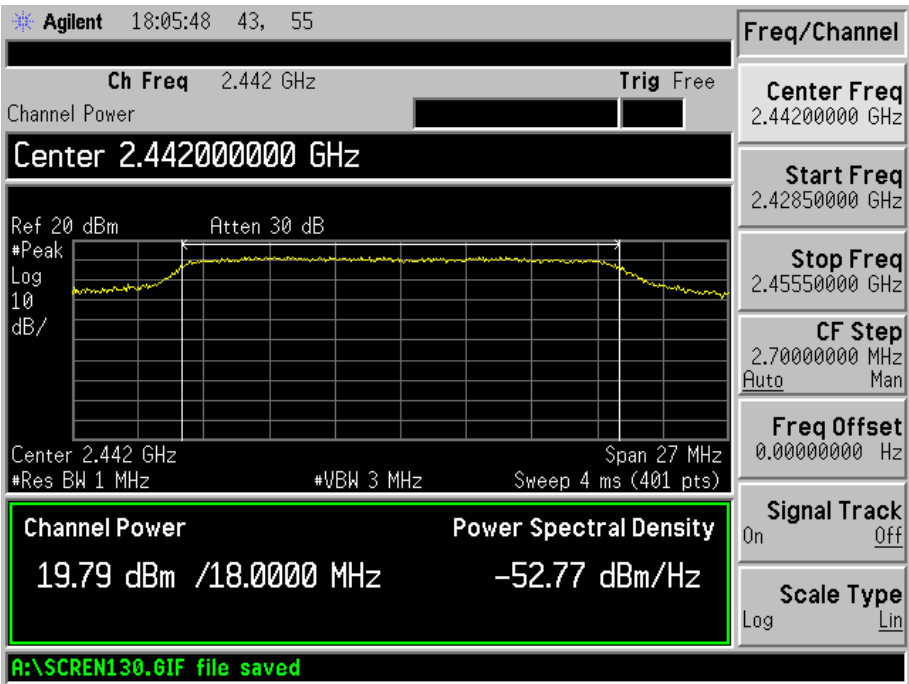
802.11g-6Mbps-High Channel



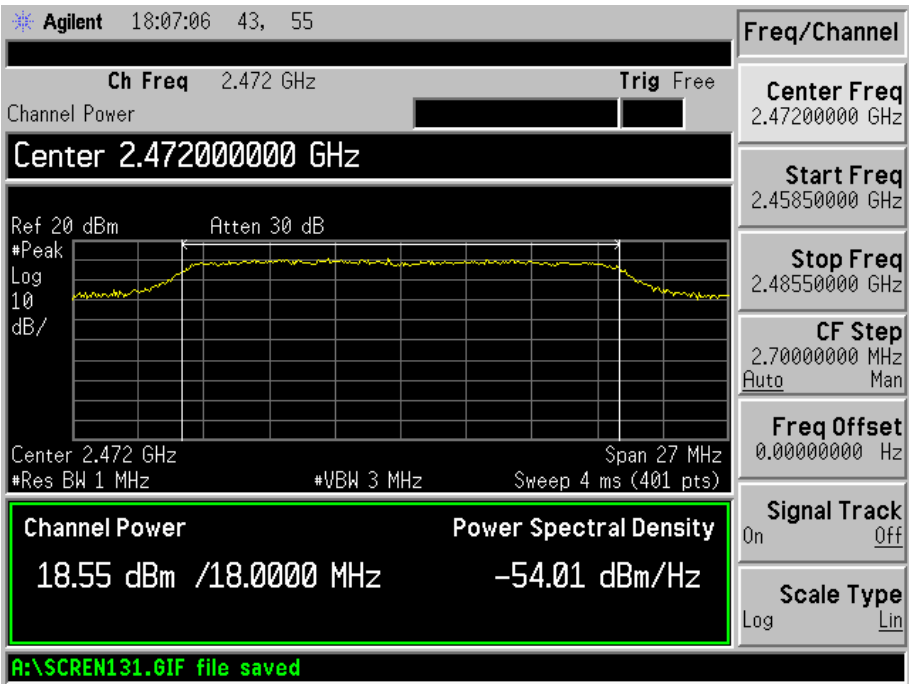
802.11n-HT20-MCS7-Low Channel



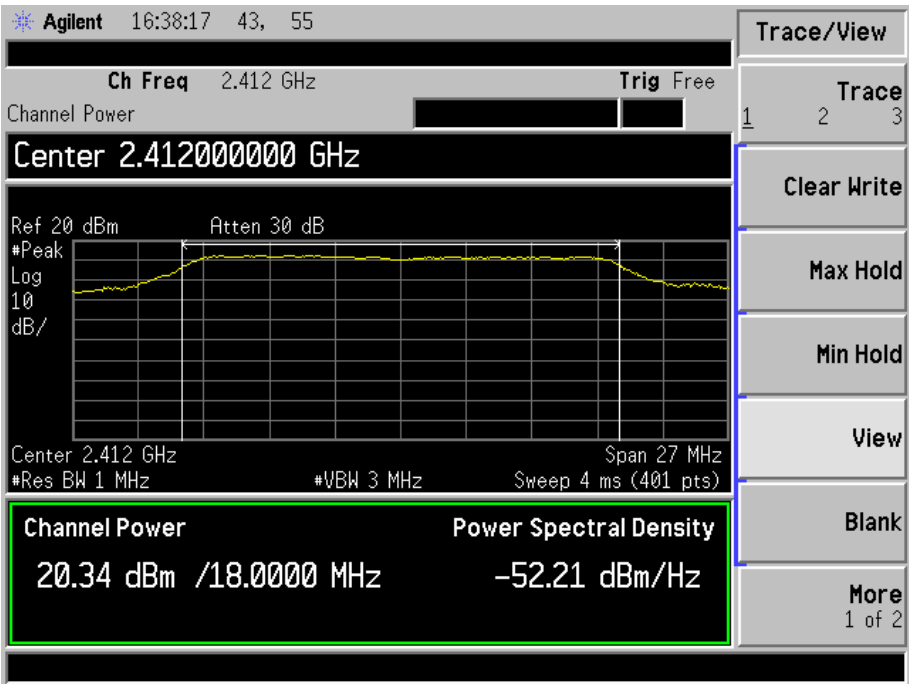
802.11n-HT20-MCS7-Middle Channel



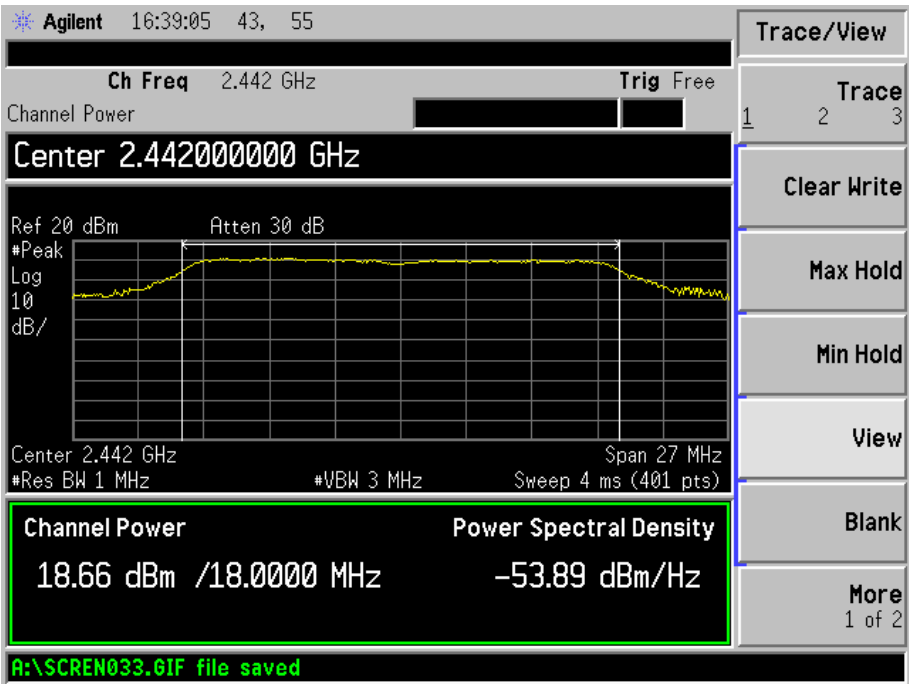
802.11n-HT20-MCS7-High Channel



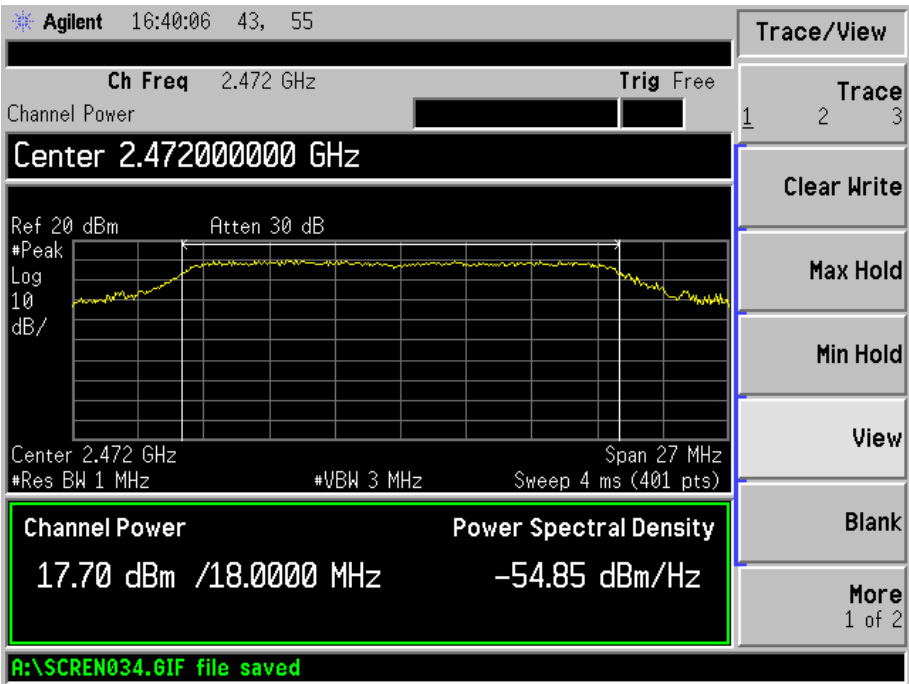
802.11n-HT20-MCS8-Low Channel



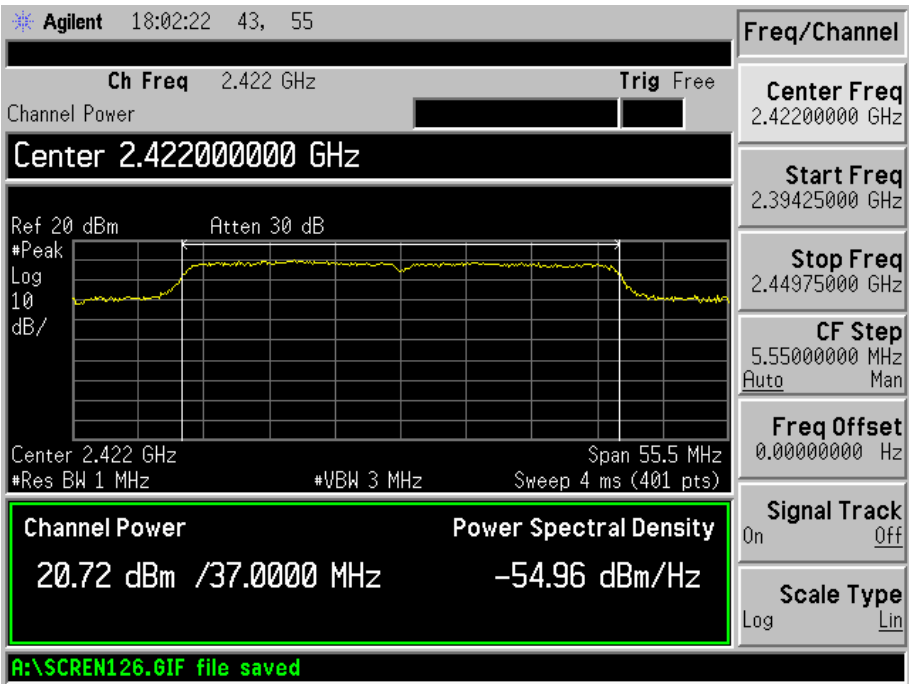
802.11n-HT20-MCS8-Middle Channel



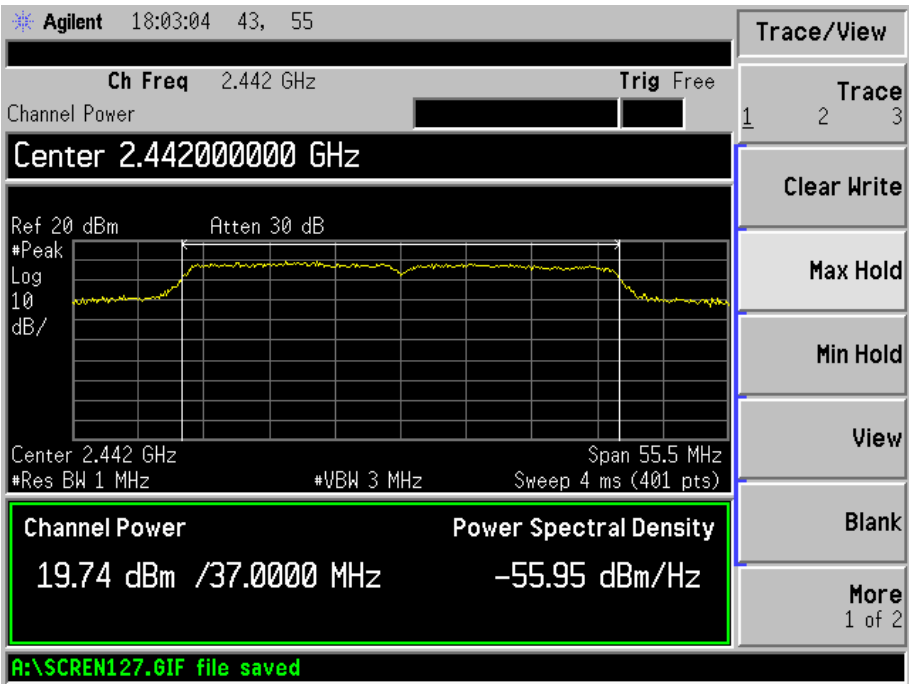
802.11n-HT20-MCS8-High Channel



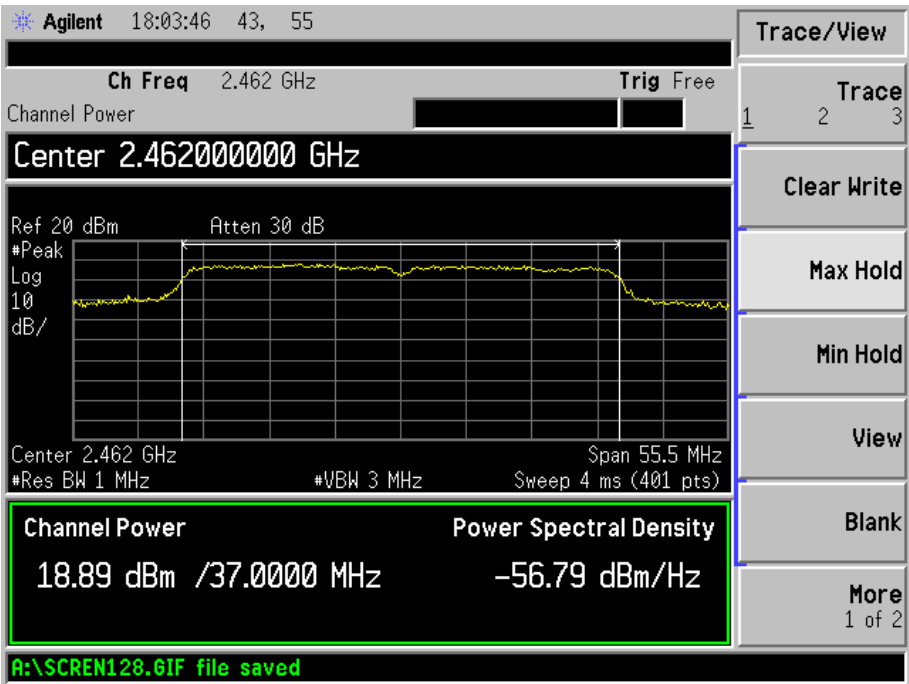
802.11n-HT40-MCS7-Low Channel



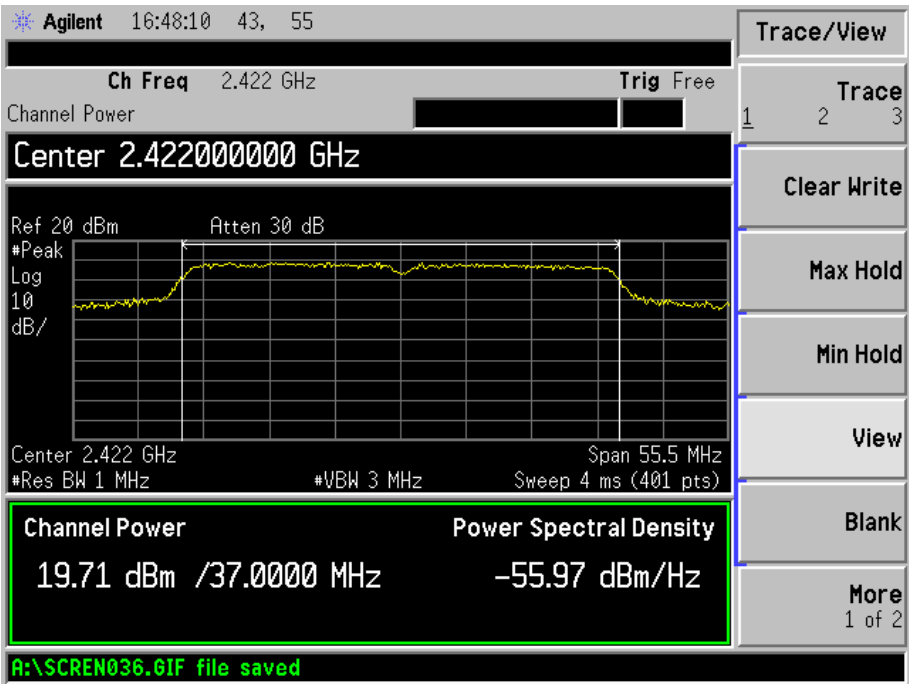
802.11n-HT40-MCS7-Middle Channel



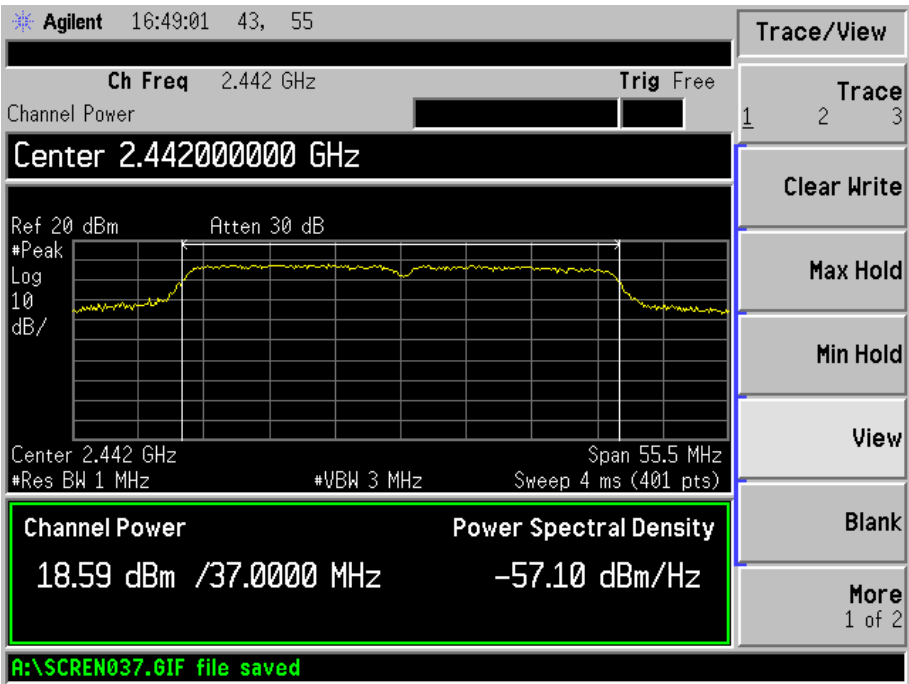
802.11n-HT40-MCS7-High Channel



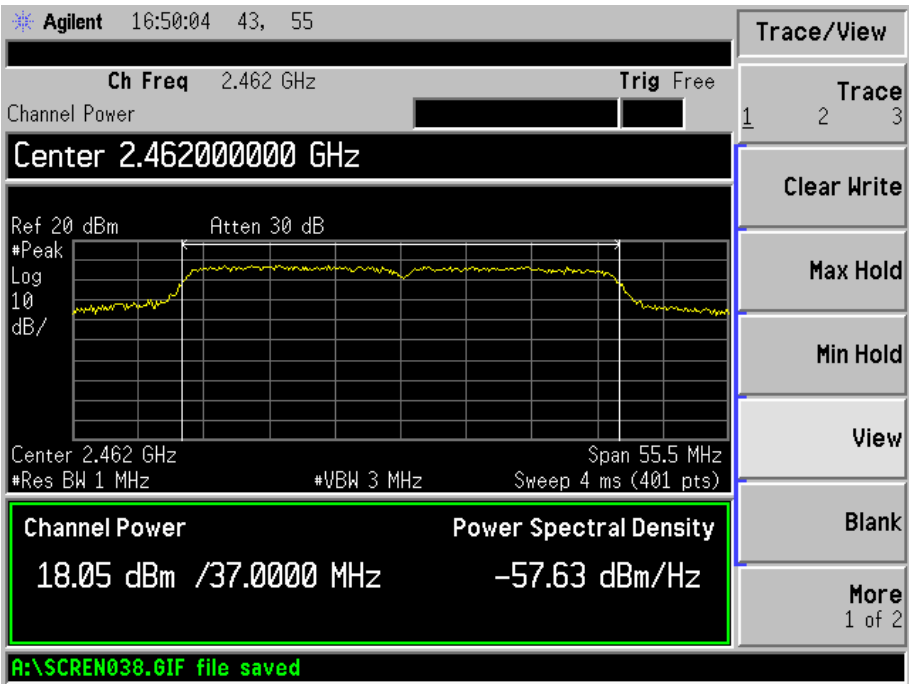
802.11n-HT40-MCS8-Low Channel



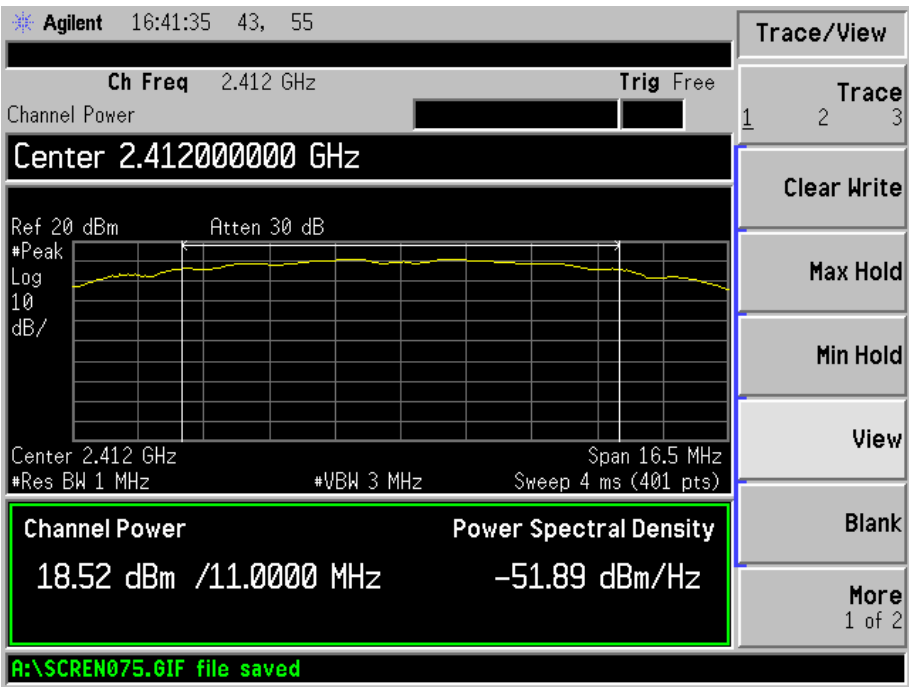
802.11n-HT40-MCS8-Middle Channel



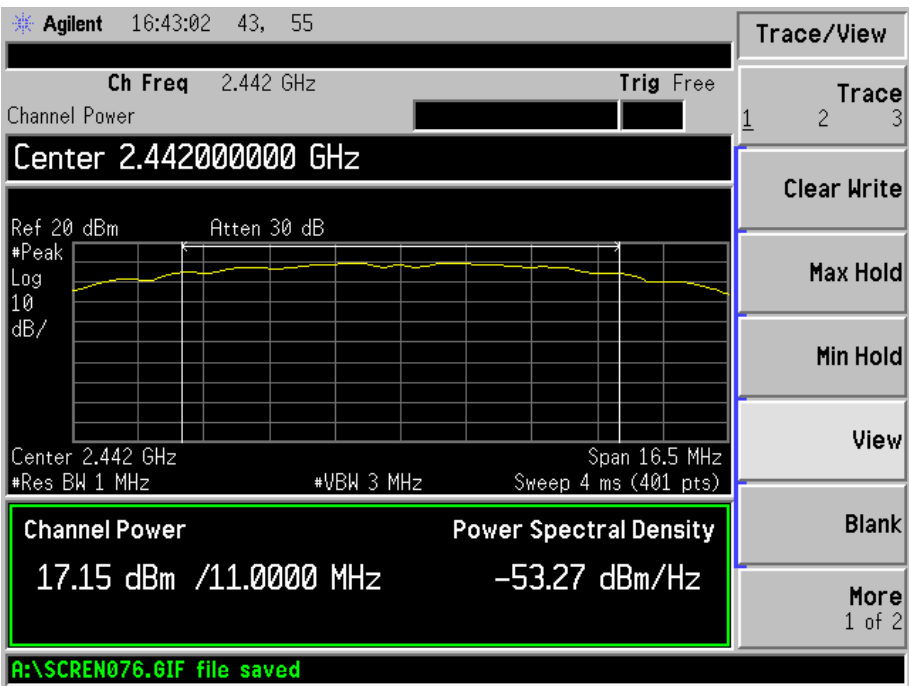
802.11n-HT40-MCS8-High Channel



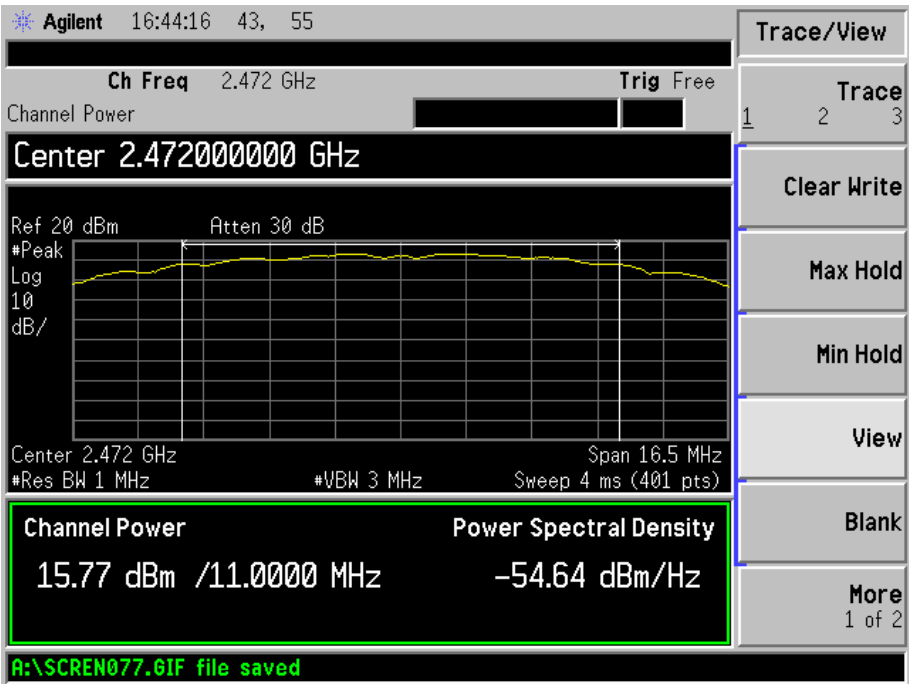
Antenna 1:
802.11b-1Mbps-Low Channel



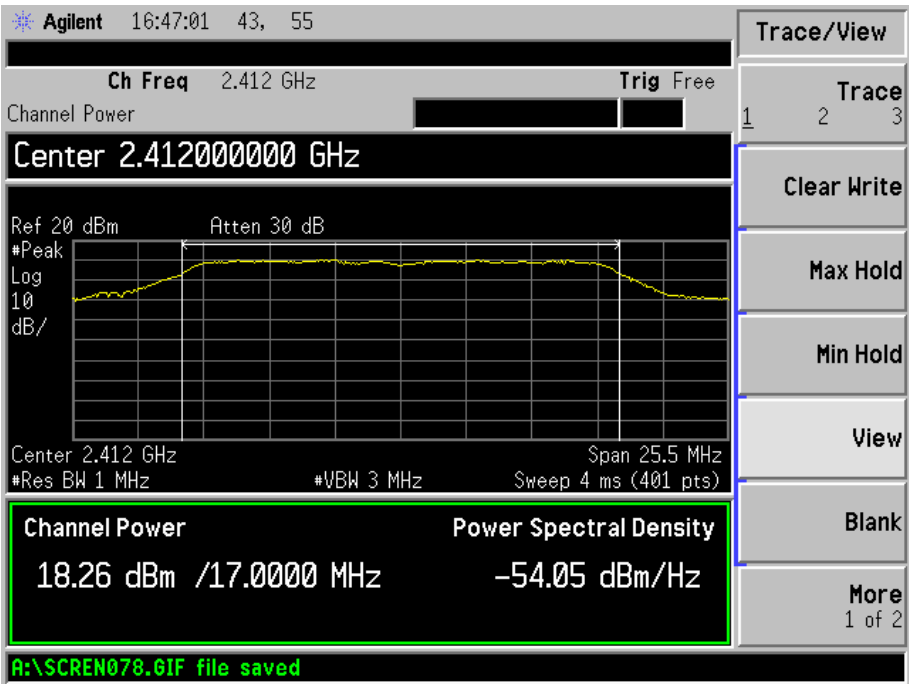
802.11b -1Mbps-Middle Channel



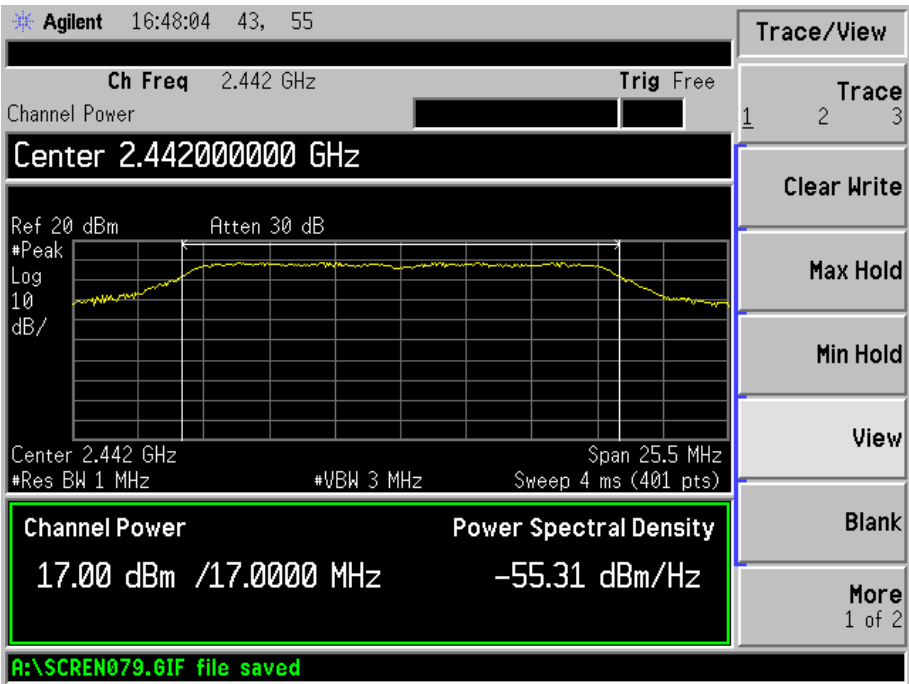
802.11b -1Mbps-High Channel



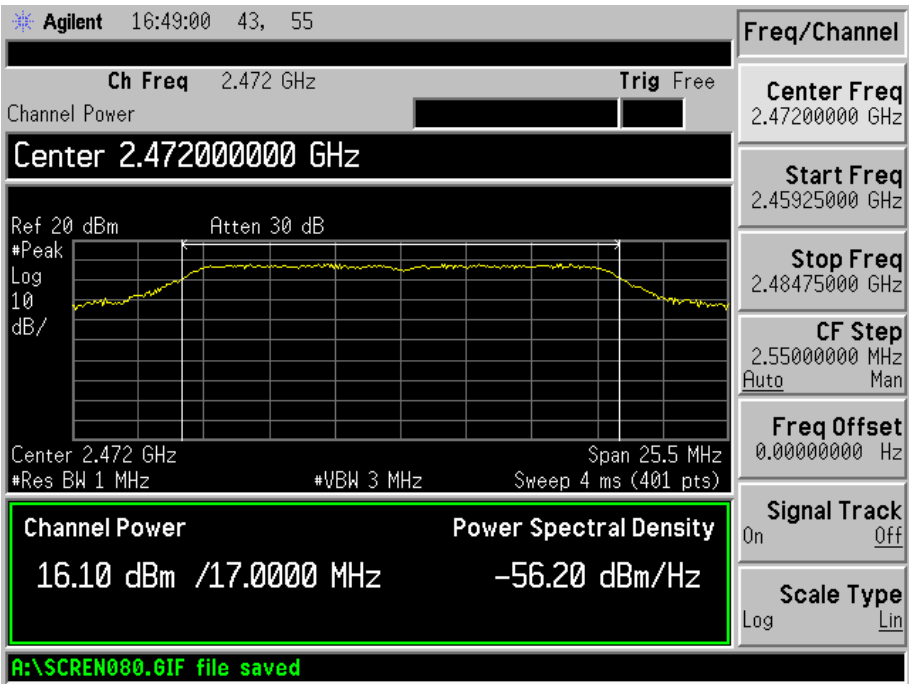
802.11g-6Mbps-Low Channel



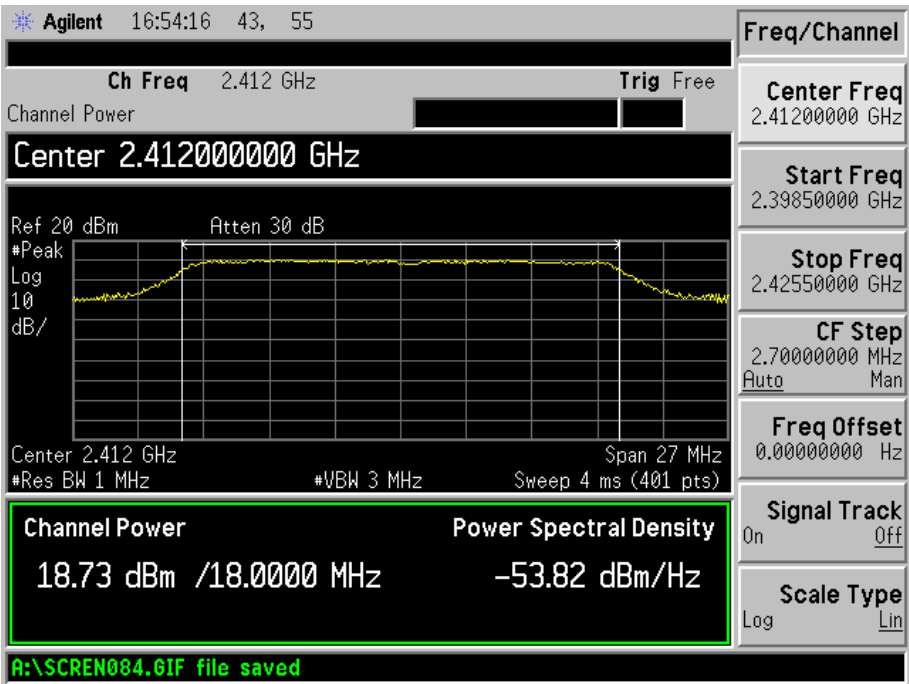
802.11g-6Mbps-Middle Channel



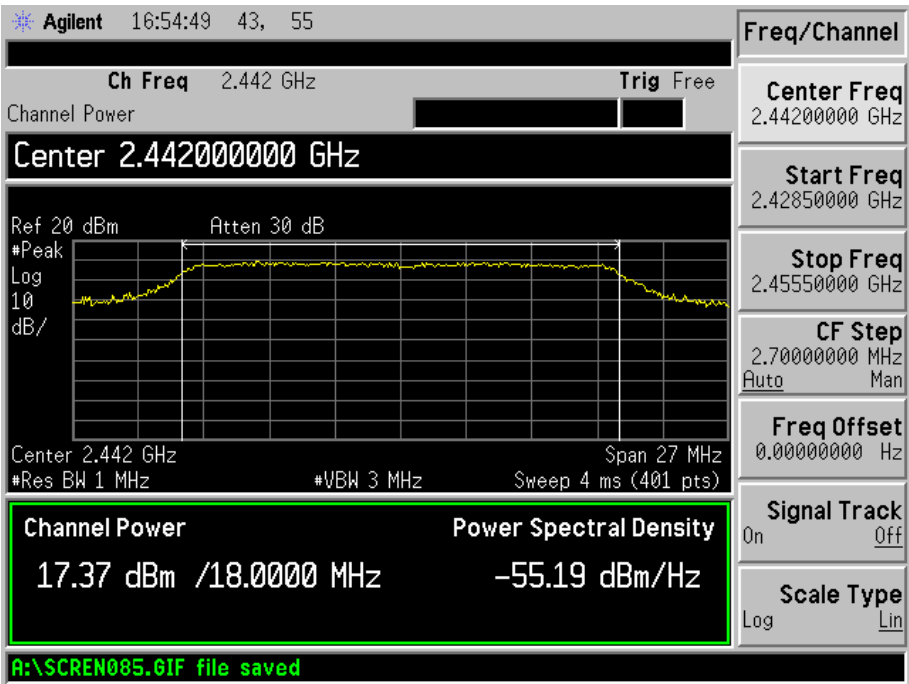
802.11g-6Mbps-High Channel



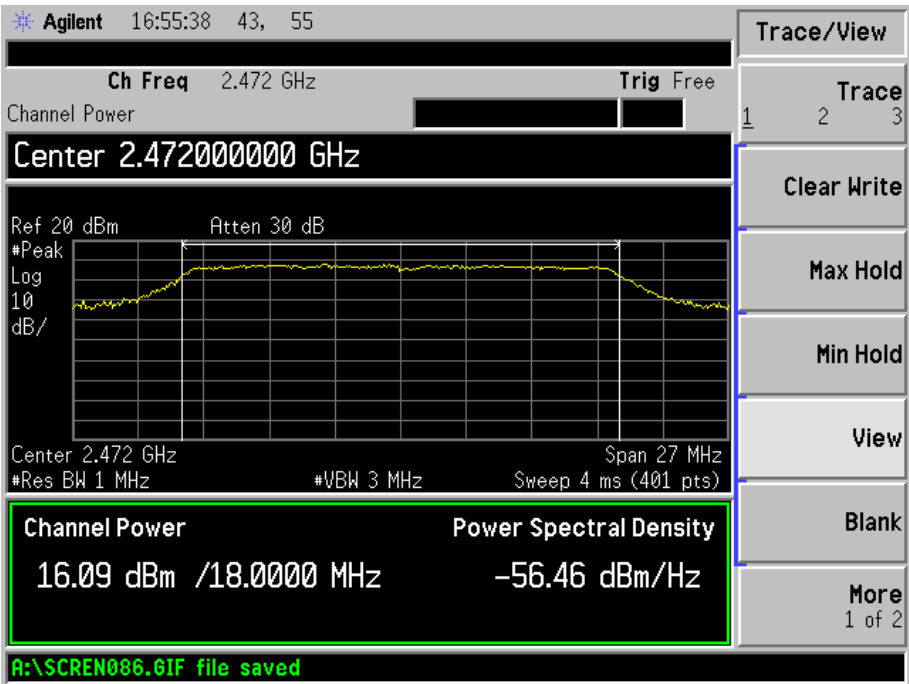
802.11n-HT20-MCS7-Low Channel



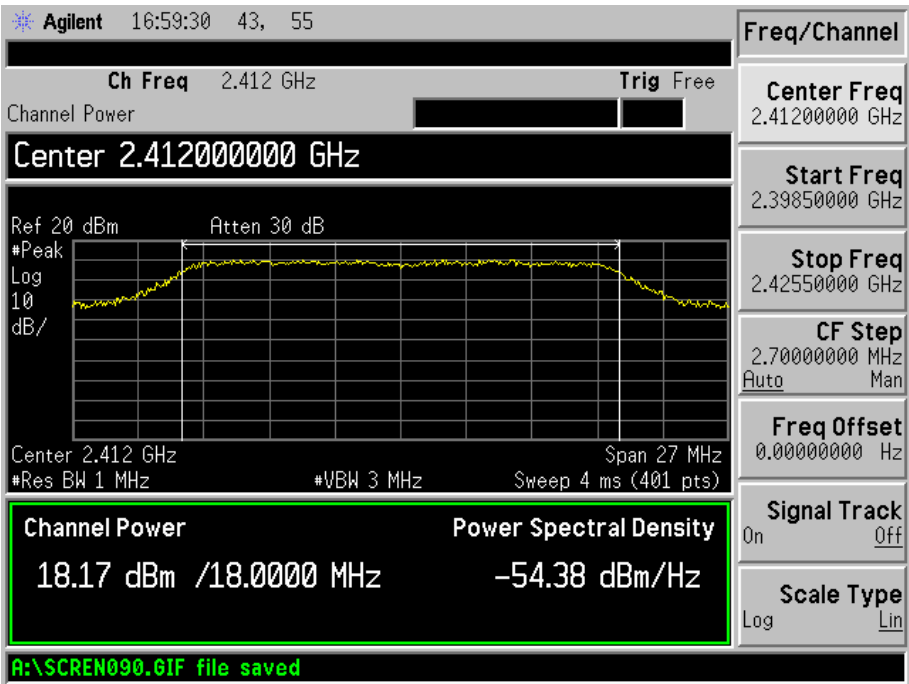
802.11n-HT20-MCS7-Middle Channel



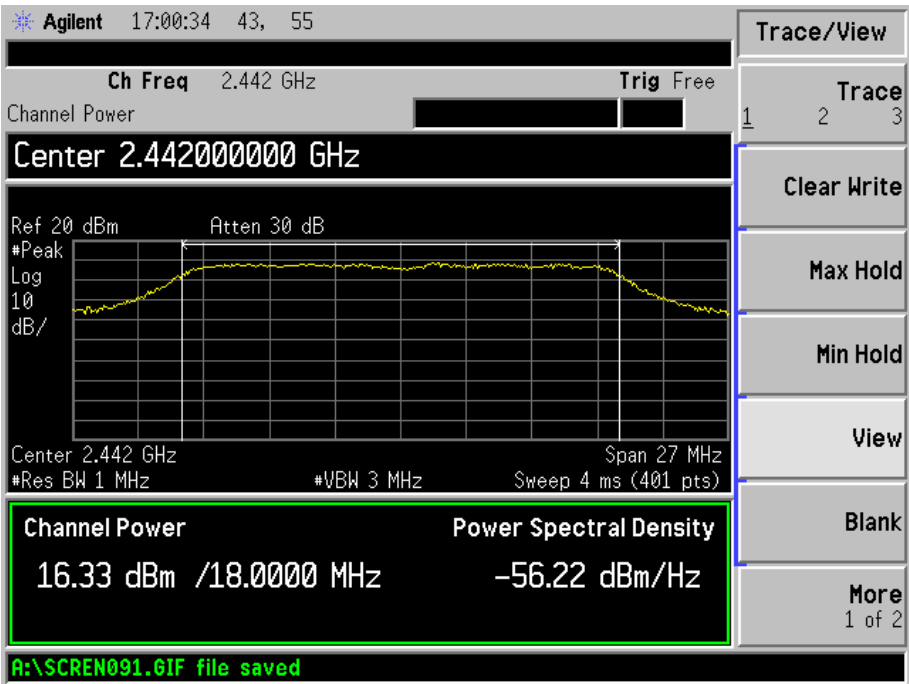
802.11n-HT20-MCS7-High Channel



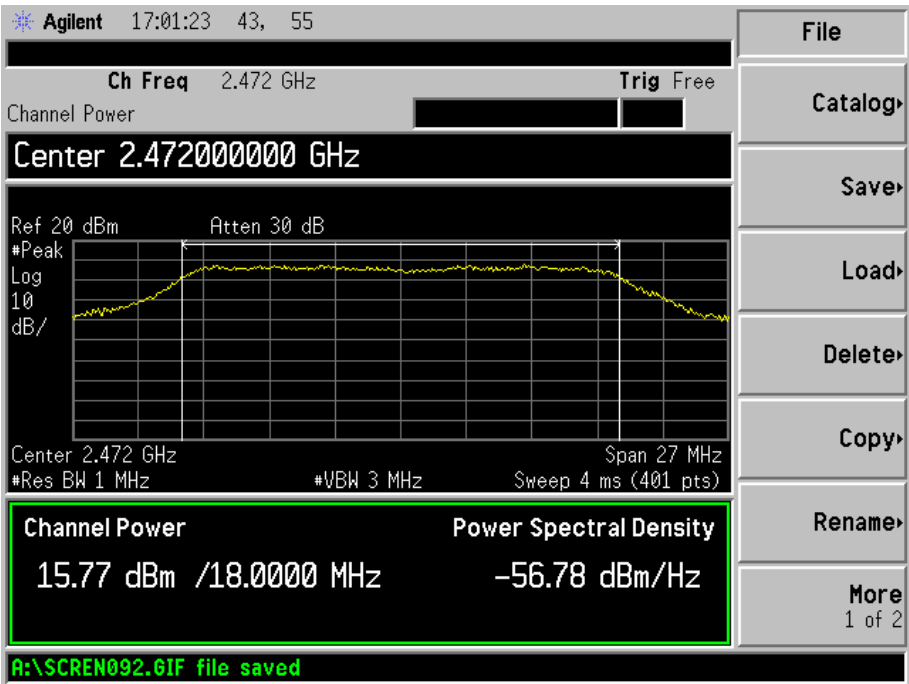
802.11n-HT20-MCS8-Low Channel



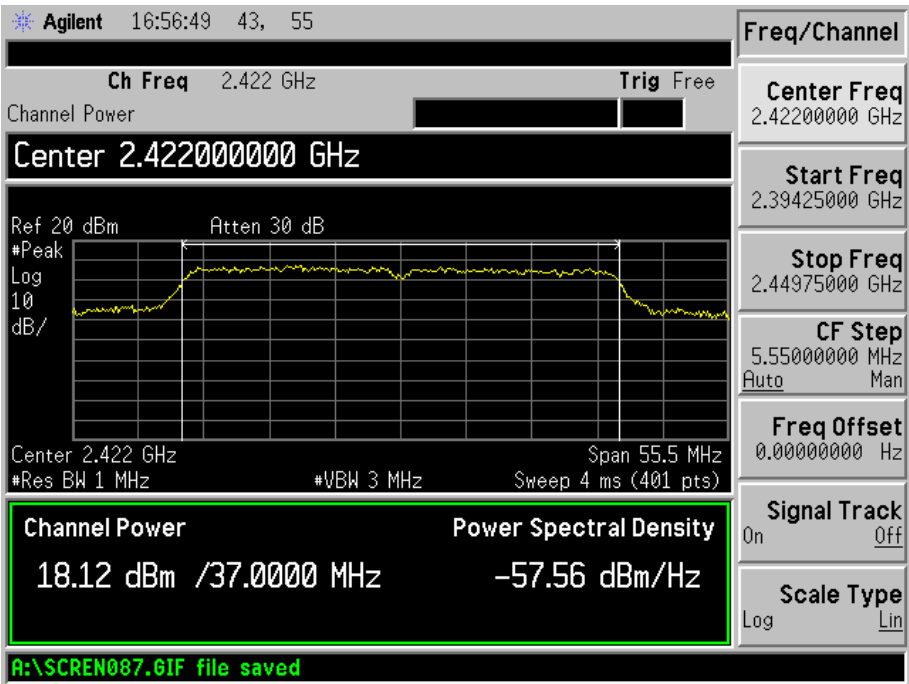
802.11n-HT20-MCS8-Middle Channel



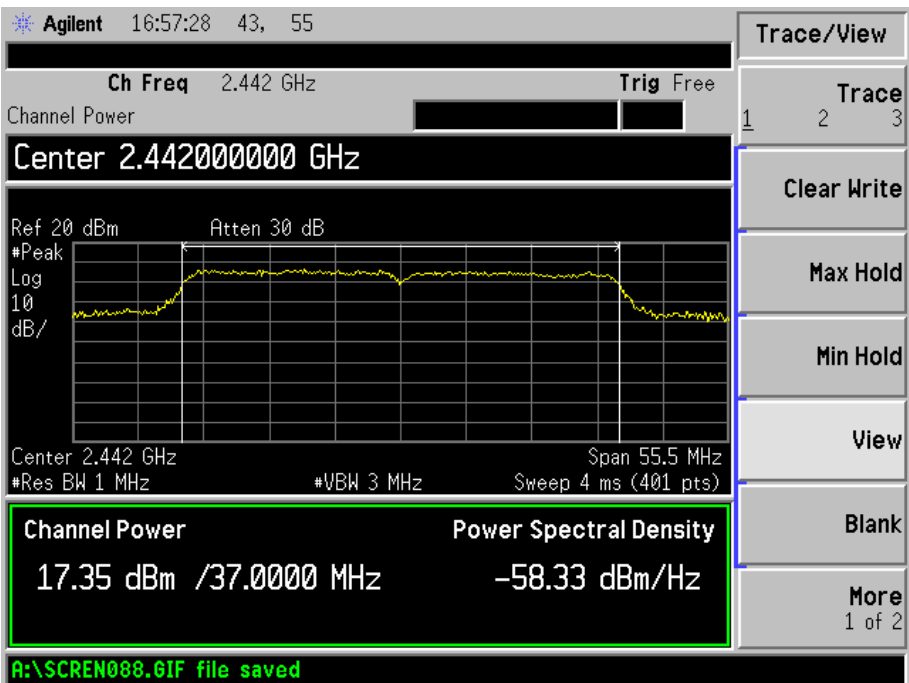
802.11n-HT20-MCS8-High Channel



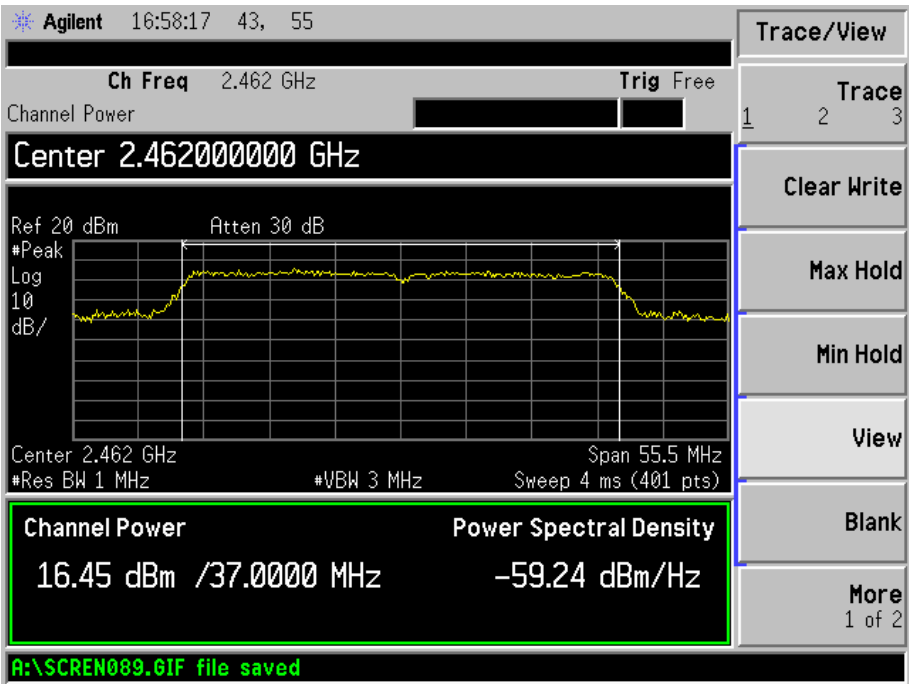
802.11n-HT40-MCS7-Low Channel



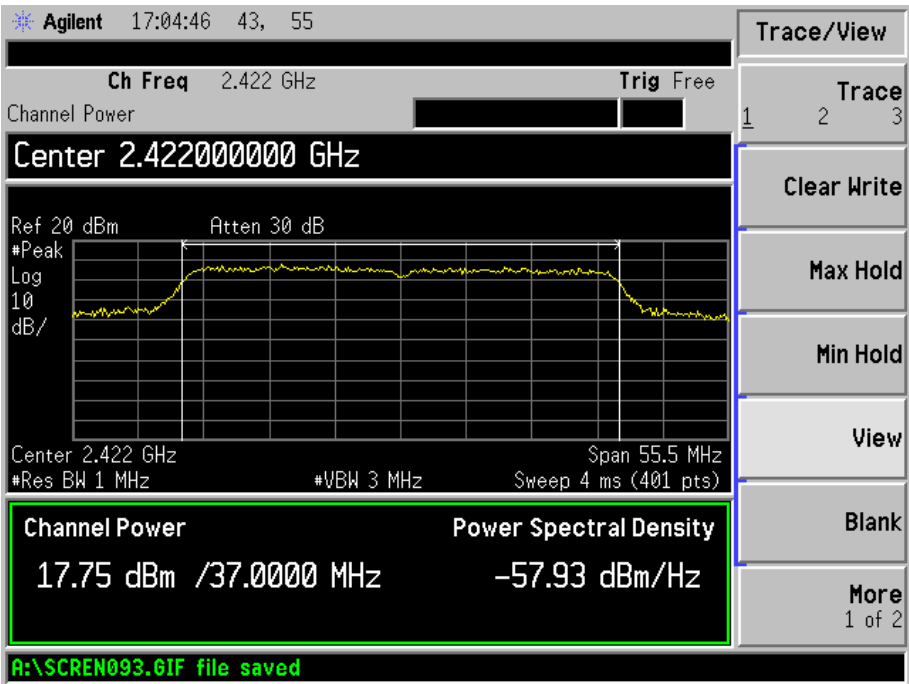
802.11n-HT40-MCS7-Middle Channel



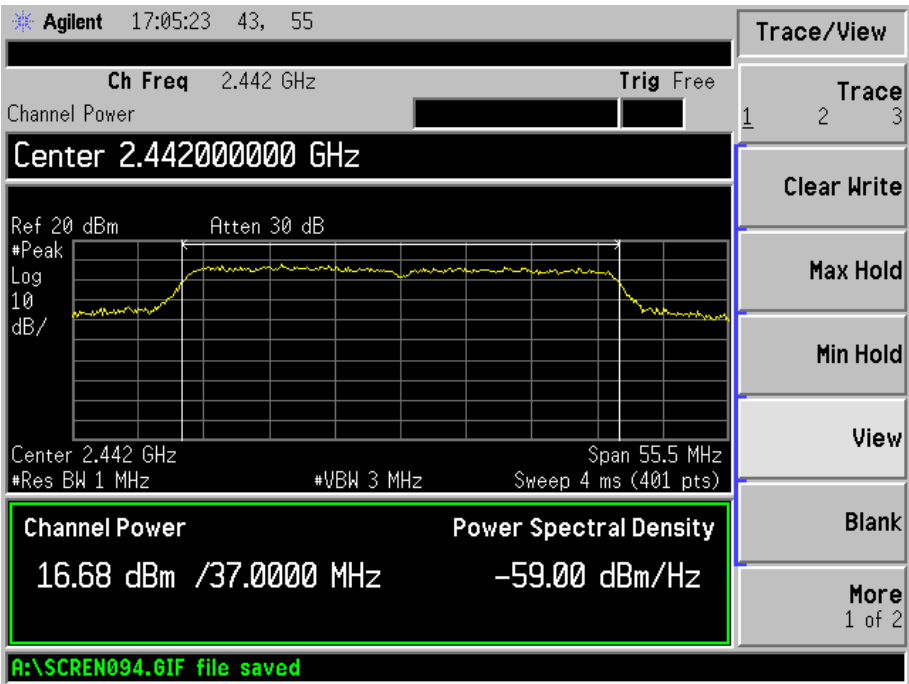
802.11n-HT40-MCS7-High Channel



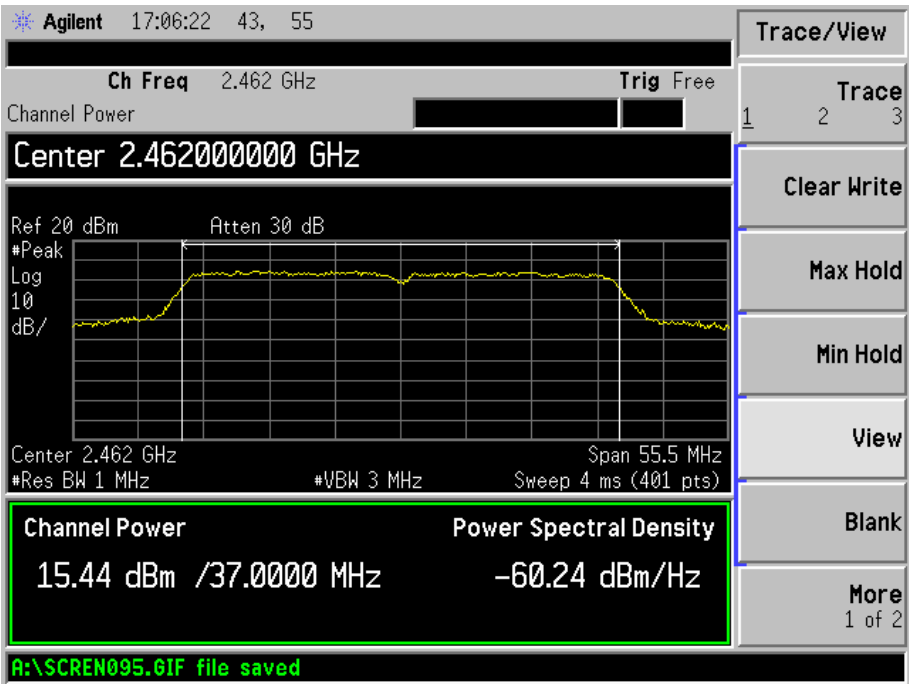
802.11n-HT40-MCS8-Low Channel



802.11n-HT40-MCS8-Middle Channel



802.11n-HT40-MCS8-High Channel



8. Field Strength of Spurious Emissions

8.1 Measurement Uncertainty

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

8.2 Standard Applicable

According to §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

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

8.3 Test Equipment List and Details

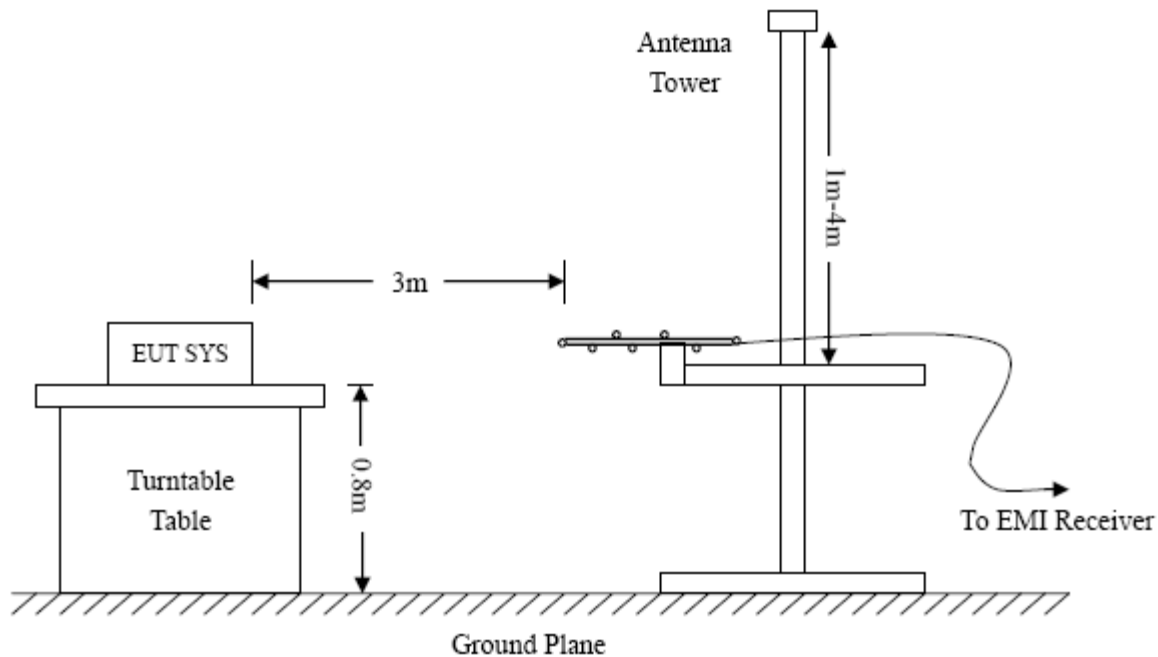
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2013-05-07	2014-05-06
EMI Test Receiver	R&S	ESVB	825471/005	2013-05-07	2014-05-06
Pre-amplifier	Agilent	8447F	3113A06717	2013-05-07	2014-05-06
Pre-amplifier	Compliance Direction	PAP-0118	24002	2013-05-07	2014-05-06
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2013-04-20	2014-04-19
Horn Antenna	ETS	3117	00086197	2013-04-20	2014-04-19
Horn Antenna	ETS	3116B	00088203	2013-04-20	2014-04-19
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2013-04-20	2014-04-19

8.4 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.205 15.247(a) and FCC Part 15.209 Limit.

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

The spacing between the peripherals was 10 cm.



Frequency :9kHz-30MHz

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

VBW=3MHz(Peak), 10Hz(AV)

Sweep time= Auto

Trace = max hold

Detector function = peak, AV

8.5 Corrected Amplitude & Margin Calculation

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

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

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

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

8.6 Environmental Conditions

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

8.7 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.

Antenna 0:

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

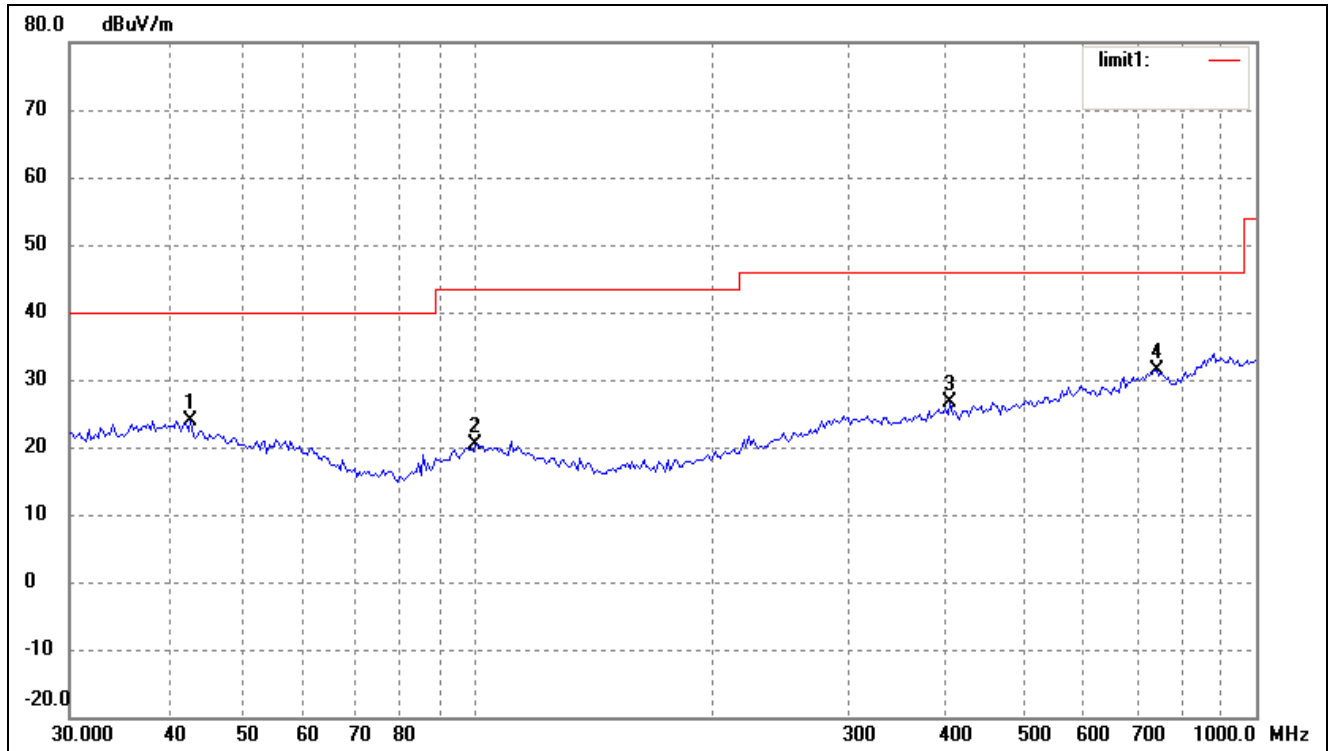
EUT: LM005 802.11n USB Adapter 300Mbps

Tested Model: 005-1007

Operating Condition: 802.11b Transmitting Low Channel-2412MHz

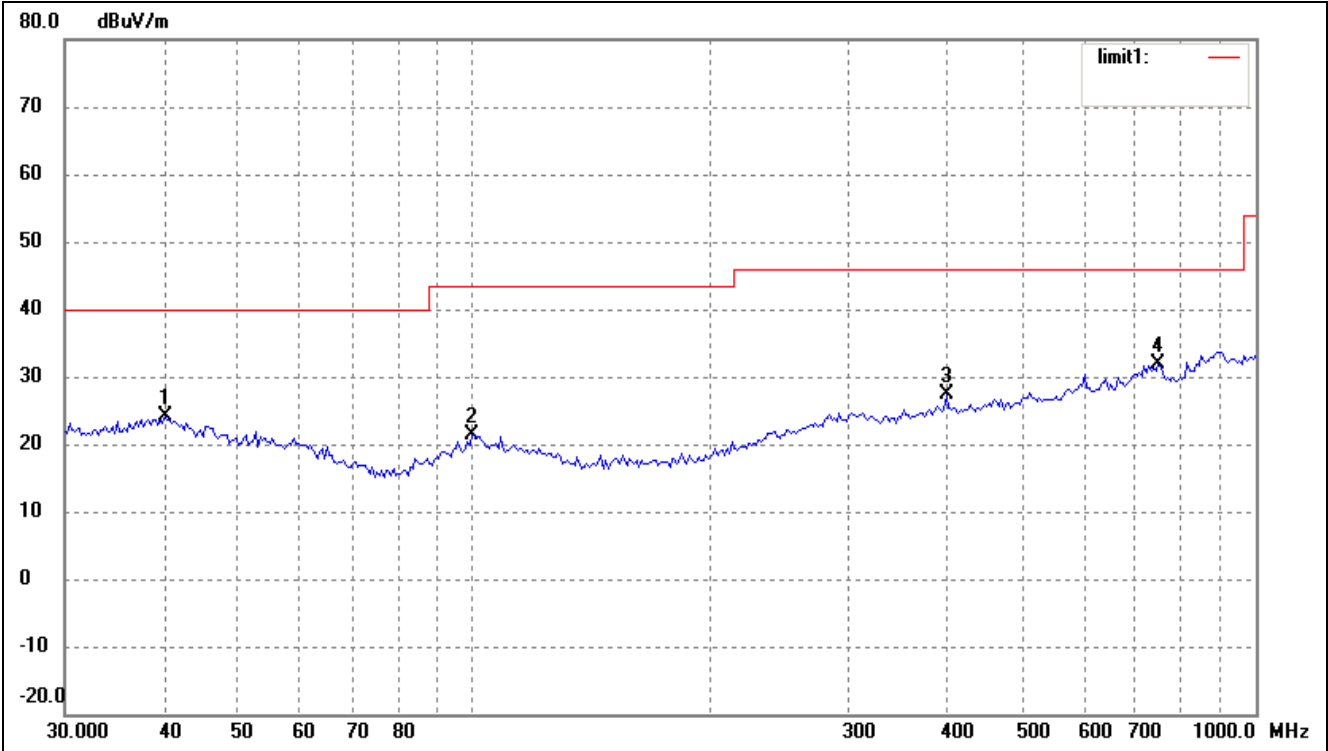
Comment: DC 5V

Test Specification: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	42.8998	15.54	8.38	23.92	40.00	-16.08	114	100	peak
2	99.5281	14.42	6.01	20.43	43.50	-23.07	270	100	peak
3	404.6665	16.56	9.96	26.52	46.00	-19.48	360	100	peak
4	744.8661	16.07	15.33	31.40	46.00	-14.60	116	100	peak

Test Specification: Vertical

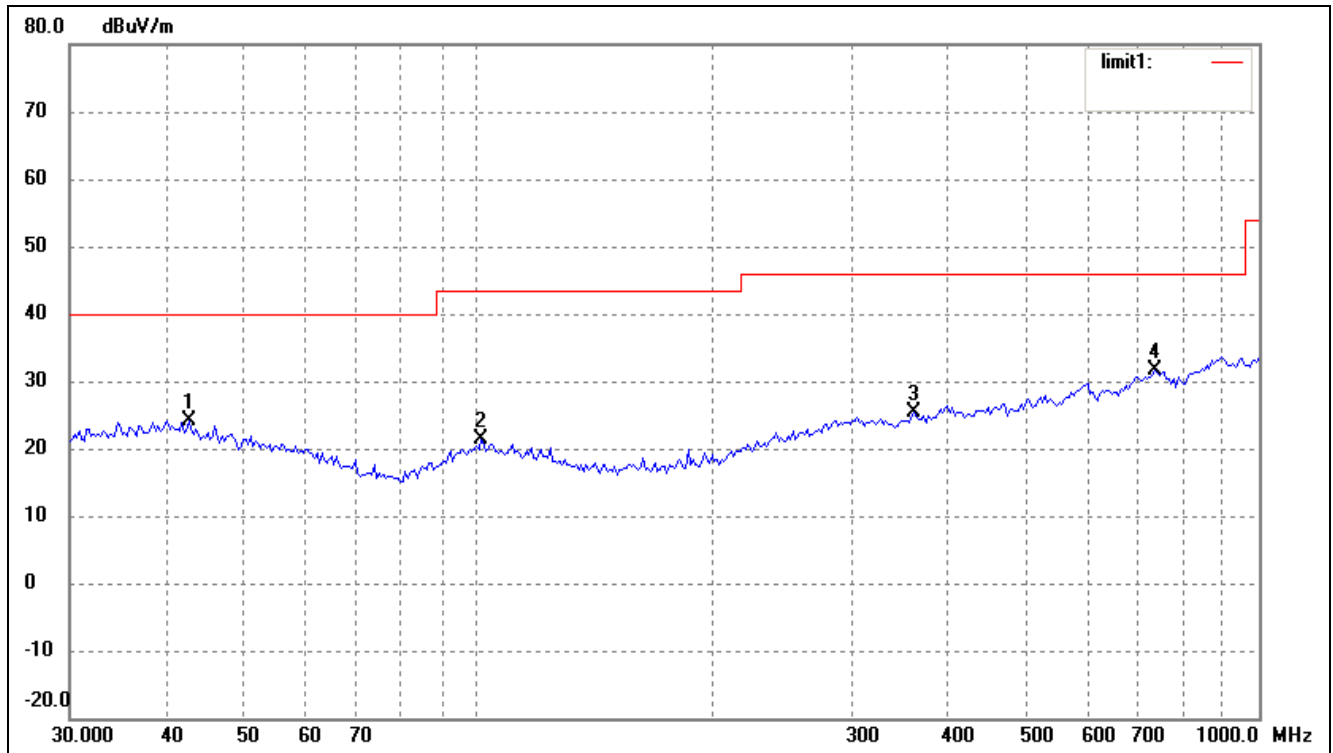


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	40.2757	14.85	9.17	24.02	40.00	-15.98	178	100	peak
2	99.5281	15.34	6.01	21.35	43.50	-22.15	224	100	peak
3	401.8385	17.34	10.06	27.40	46.00	-18.60	160	100	peak
4	750.1083	16.70	15.09	31.79	46.00	-14.21	290	100	peak

Operating Condition: 802.11b Transmitting Middle Channel-2442MHz

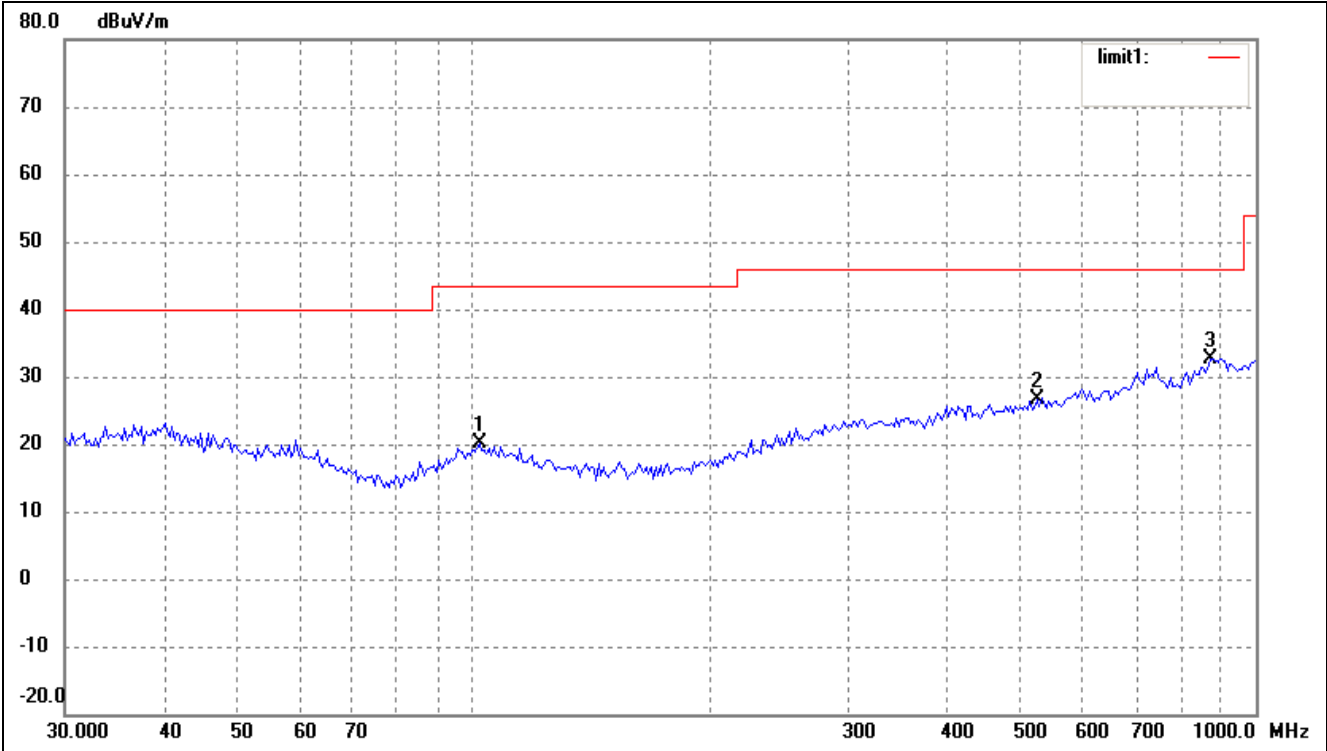
Comment: DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	42.6000	15.76	8.47	24.23	40.00	-15.77	256	100	peak
2	100.9339	15.43	6.03	21.46	43.50	-22.04	360	100	peak
3	361.7139	16.18	9.24	25.42	46.00	-20.58	360	100	peak
4	734.4913	16.40	15.22	31.62	46.00	-14.38	360	100	peak

Test Specification: Vertical

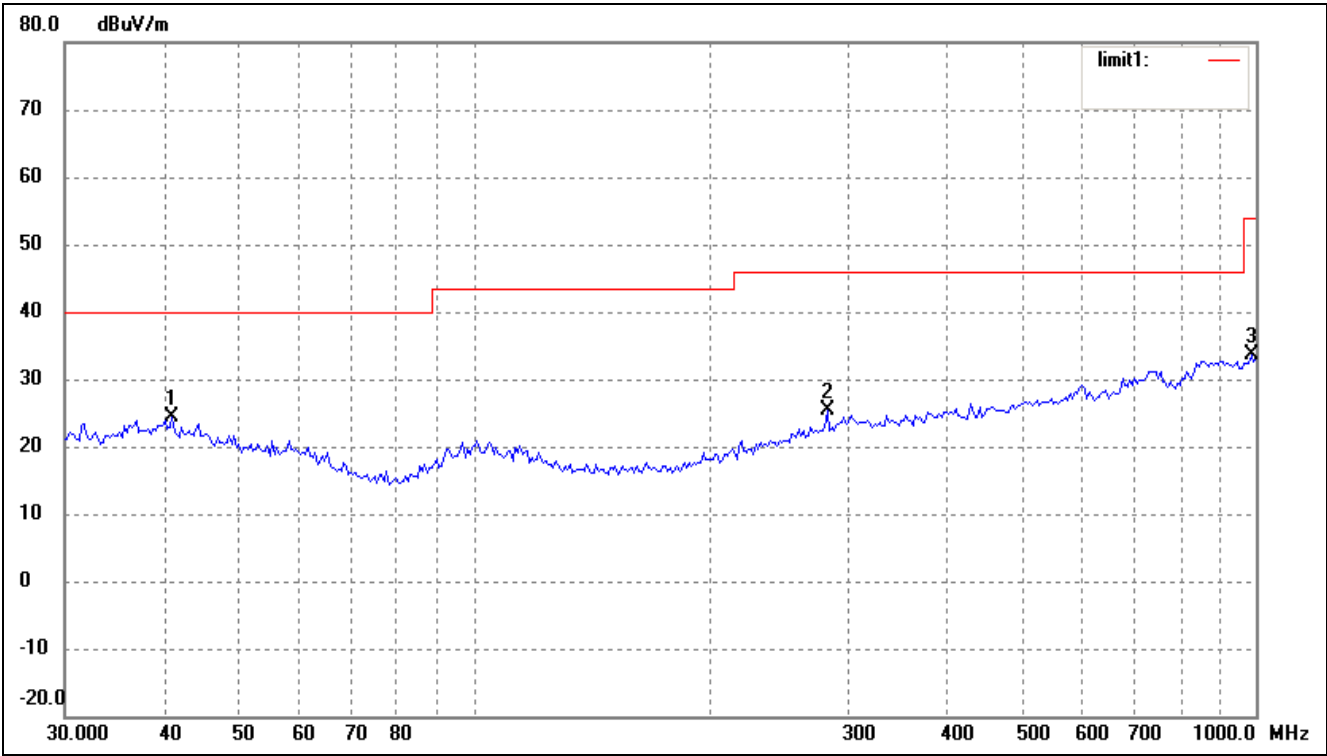


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	101.6443	14.15	5.95	20.10	43.50	-23.40	176	100	peak
2	524.5541	15.21	11.36	26.57	46.00	-19.43	255	100	peak
3	875.2470	16.03	16.70	32.73	46.00	-13.27	360	100	peak

Operating Condition:802.11b Transmitting High Channel-2472MHz

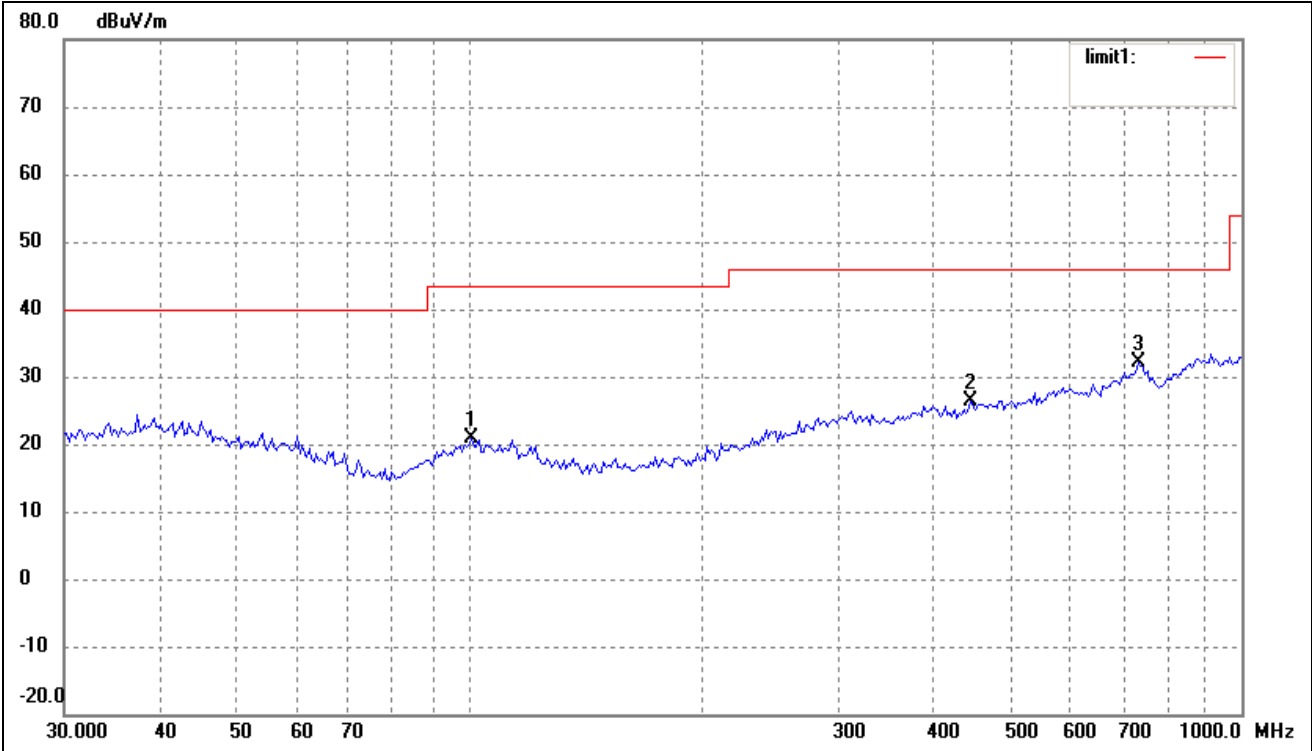
Comment:DC 5V

Test Specification:Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	41.1320	15.58	8.91	24.49	40.00	-15.51	360	100	peak
2	282.9852	16.87	8.51	25.38	46.00	-20.62	225	100	peak
3	986.0717	16.79	16.90	33.69	54.00	-20.31	160	100	peak

Test Specification: Vertical

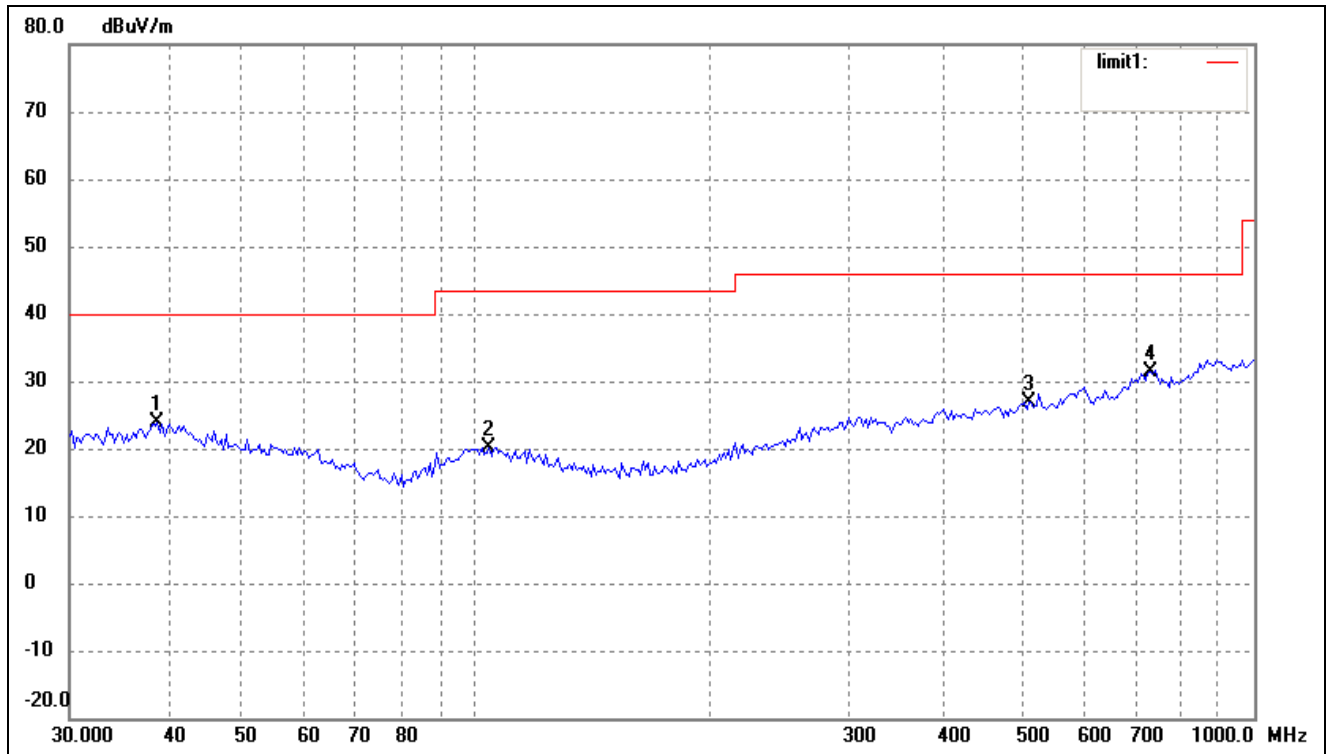


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	100.9340	14.78	6.03	20.81	43.50	-22.69	174	100	peak
2	446.4141	16.14	10.19	26.33	46.00	-19.67	160	100	peak
3	734.4913	16.85	15.22	32.07	46.00	-13.93	320	100	peak

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

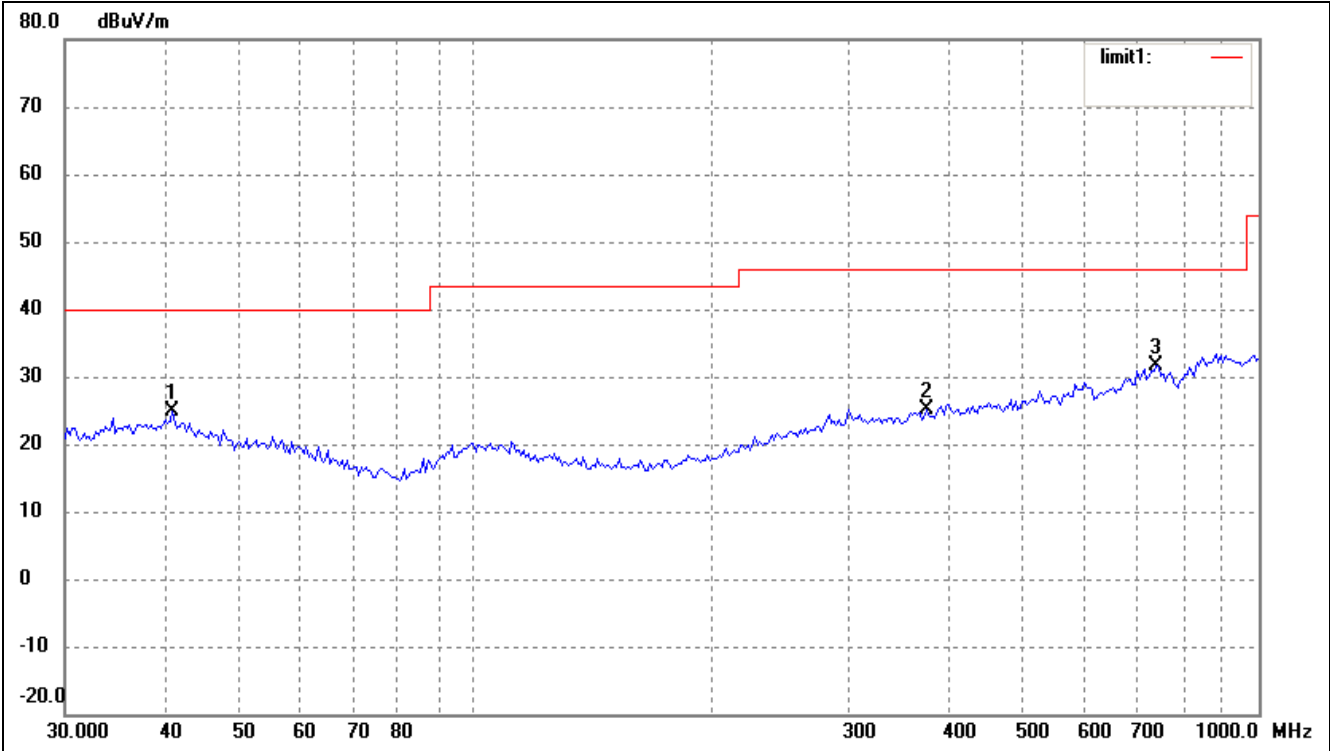
EUT: LM005 802.11n USB Adapter 300Mbps
 Tested Model: 005-1007
 Operating Condition: 802.11g Transmitting Low Channel-2412MHz
 Comment: DC 5V

Test Specification: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	38.8879	14.75	9.06	23.81	40.00	-16.19	177	100	peak
2	103.8055	14.46	5.73	20.19	43.50	-23.31	90	100	peak
3	513.6331	15.58	11.21	26.79	46.00	-19.21	336	100	peak
4	734.4913	16.04	15.22	31.26	46.00	-14.74	360	100	peak

Test Specification: Vertical

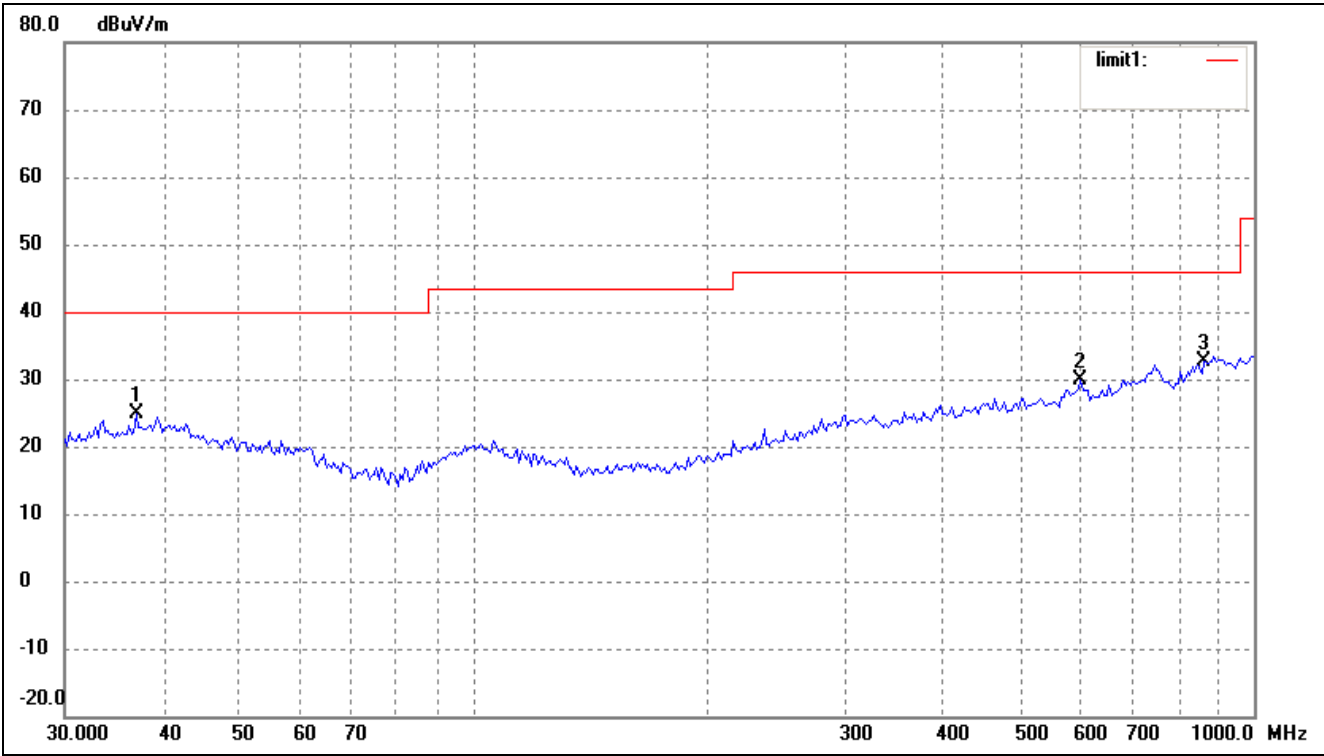


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	41.1320	15.91	8.91	24.82	40.00	-15.18	270	100	peak
2	377.2591	16.03	9.20	25.23	46.00	-20.77	164	100	peak
3	739.6605	16.06	15.53	31.59	46.00	-14.41	228	200	peak

Operating Condition:802.11g Transmitting Middle Channel-2442MHz

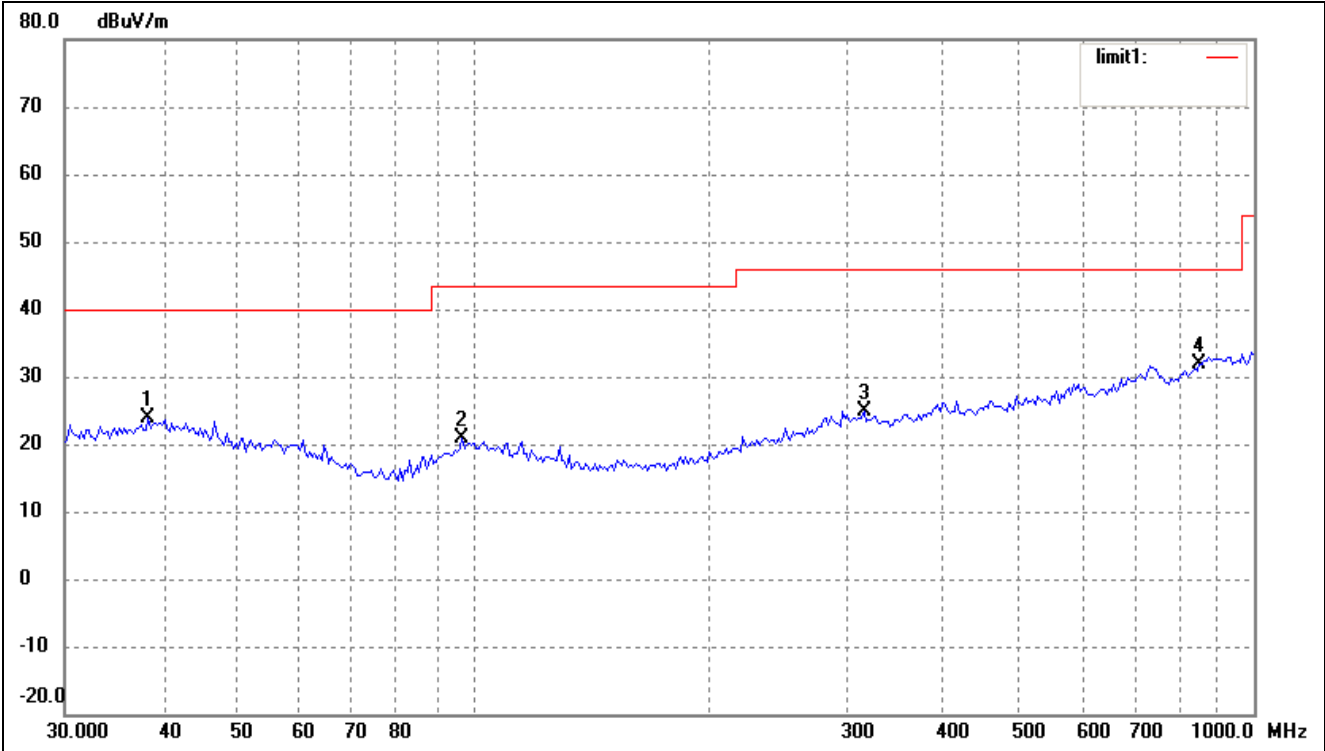
Comment:DC 5V

Test Specification:Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	37.0249	16.07	8.74	24.81	40.00	-15.19	360	100	peak
2	599.3213	16.46	13.30	29.76	46.00	-16.24	255	100	peak
3	863.0562	16.29	16.38	32.67	46.00	-13.33	270	100	peak

Test Specification: Vertical

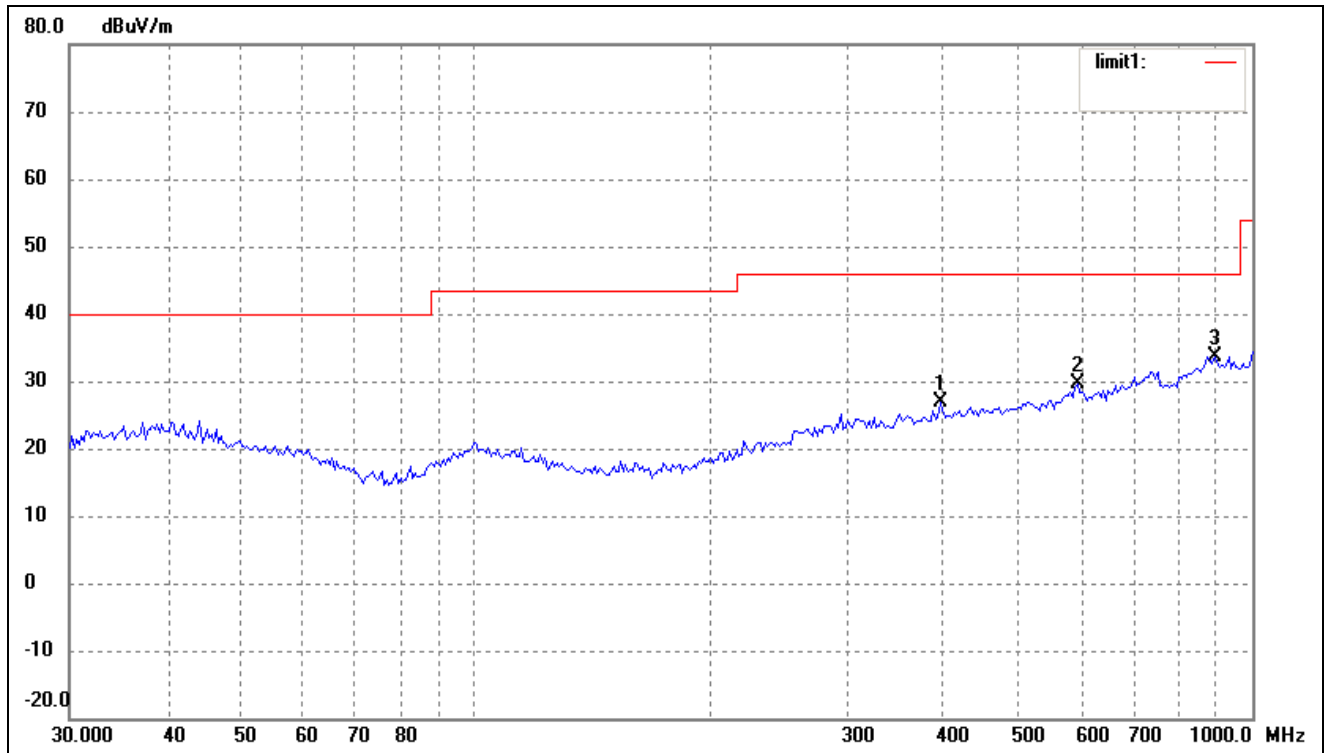


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	38.3462	14.80	8.97	23.77	40.00	-16.23	270	100	peak
2	96.7749	15.52	5.32	20.84	43.50	-22.66	51	200	peak
3	316.5890	15.66	9.28	24.94	46.00	-21.06	360	200	peak
4	851.0353	15.81	15.97	31.78	46.00	-14.22	360	100	peak

Operating Condition: 802.11g Transmitting High Channel-2472MHz

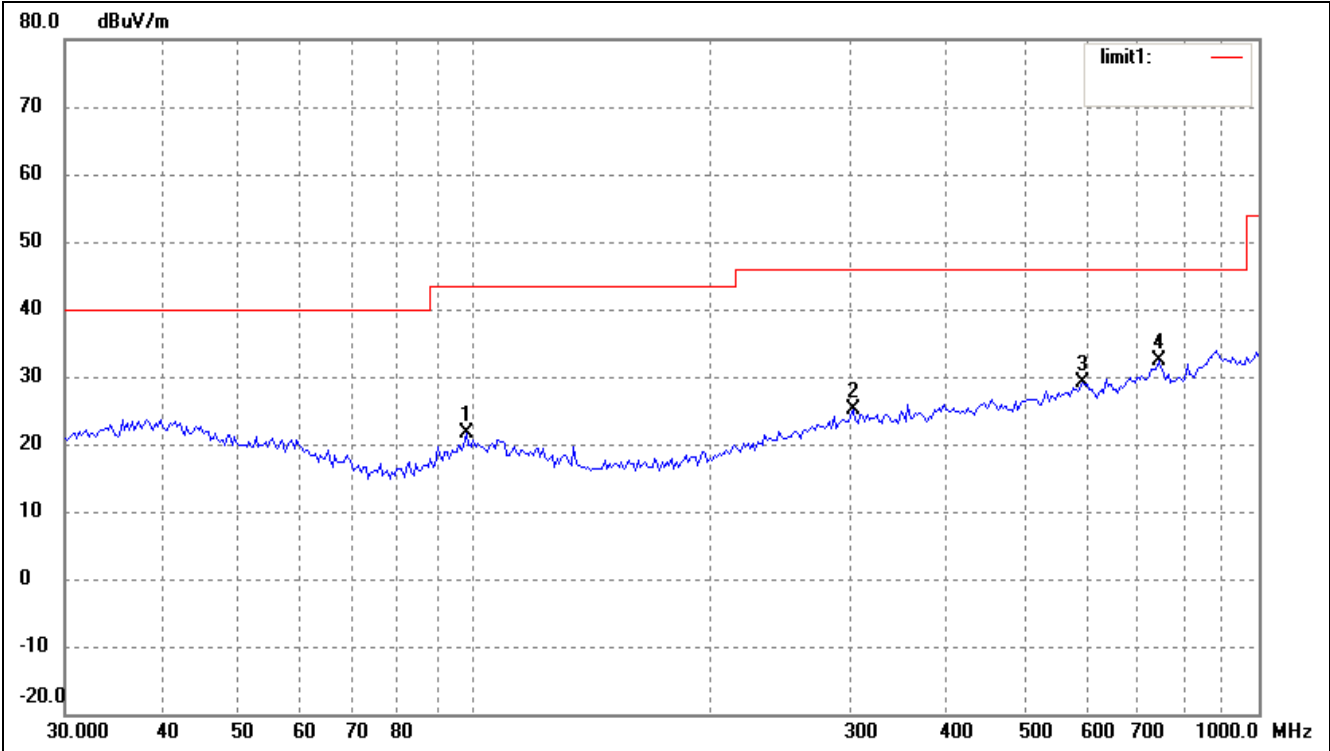
Comment: DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	396.2415	16.87	9.95	26.82	46.00	-19.18	360	100	peak
2	595.1329	16.45	13.14	29.59	46.00	-16.41	180	100	peak
3	893.8567	16.88	16.85	33.73	46.00	-12.27	225	100	peak

Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	97.4560	16.14	5.49	21.63	43.50	-21.87	260	100	peak
2	303.5437	15.82	9.19	25.01	46.00	-20.99	131	200	peak
3	595.1329	15.93	13.14	29.07	46.00	-16.93	285	200	peak
4	744.8661	16.95	15.33	32.28	46.00	-13.72	224	100	peak

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

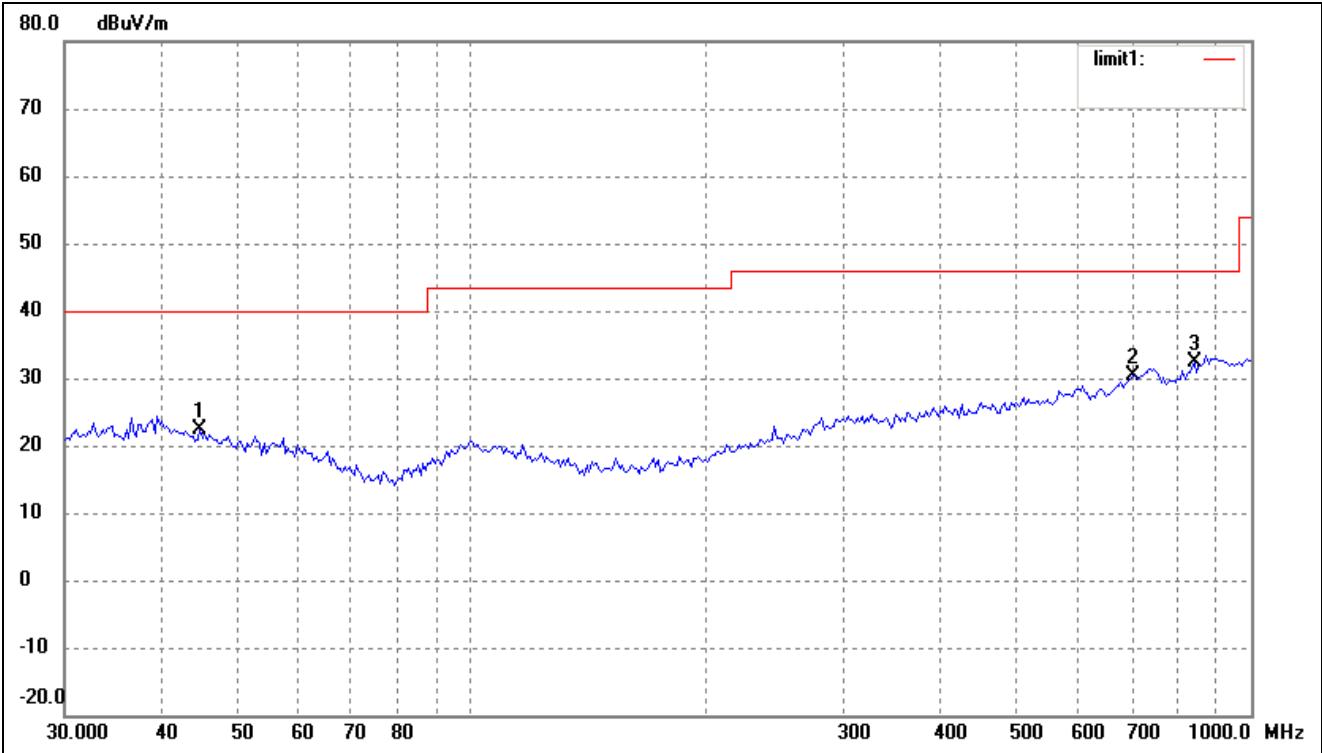
EUT:LM005 802.11n USB Adapter 300Mbps

Tested Model:005-1007

Operating Condition:802.11n-HT20 Transmitting Low Channel-2412MHz

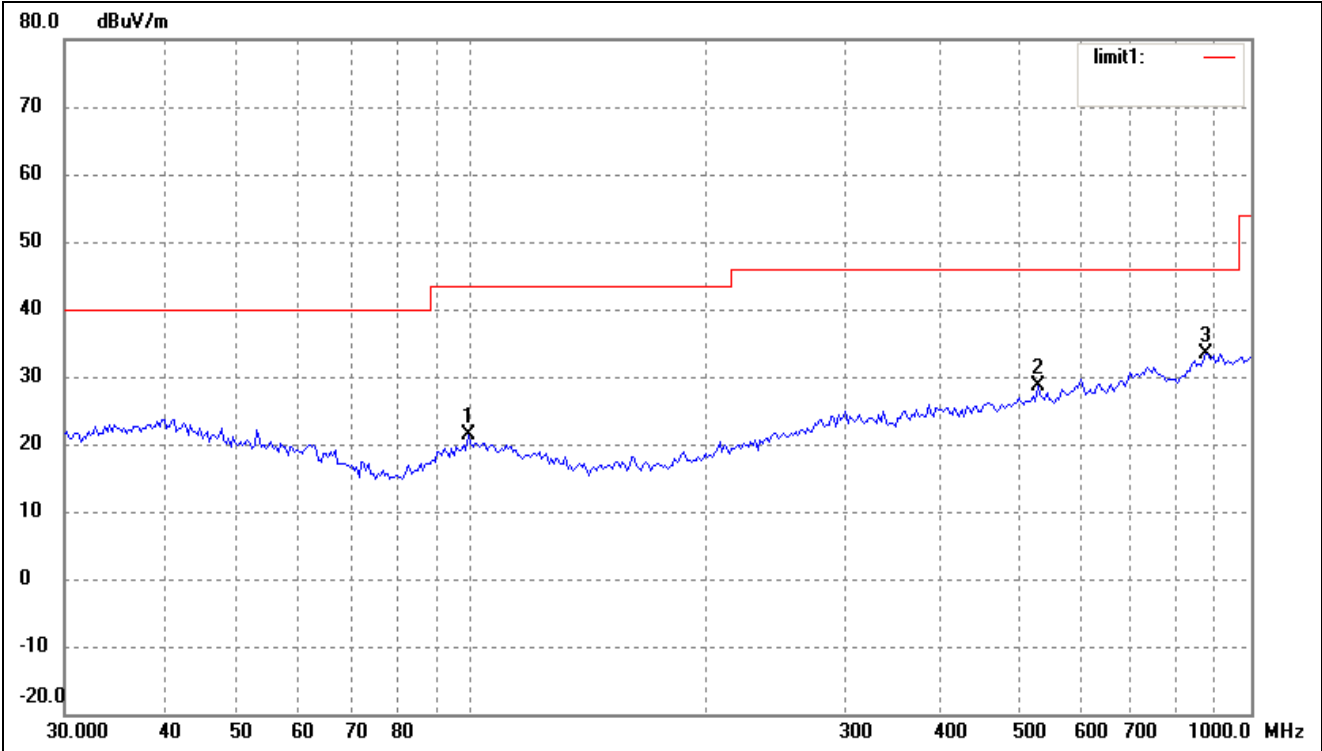
Comment:DC 5V

Test Specification:Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	44.7434	14.58	7.84	22.42	40.00	-17.58	155	100	peak
2	704.2261	16.46	13.91	30.37	46.00	-15.63	197	100	peak
3	845.0878	16.51	15.75	32.26	46.00	-13.74	310	100	peak

Test Specification: Vertical

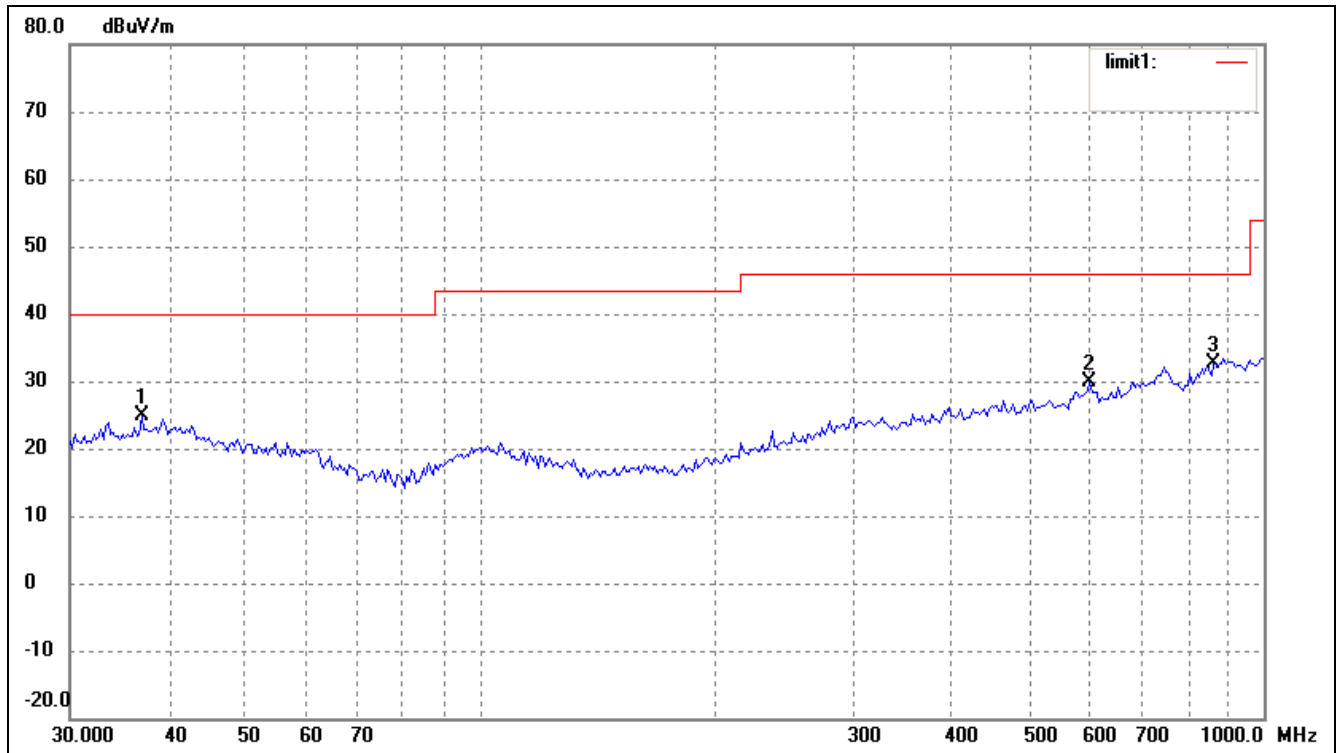


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	98.8326	15.53	5.84	21.37	43.50	-22.13	274	100	peak
2	531.9635	17.31	11.32	28.63	46.00	-17.37	116	100	peak
3	875.2470	16.71	16.70	33.41	46.00	-12.59	82	100	peak

Operating Condition: 802.11n-HT20 Transmitting Middle Channel-2442MHz

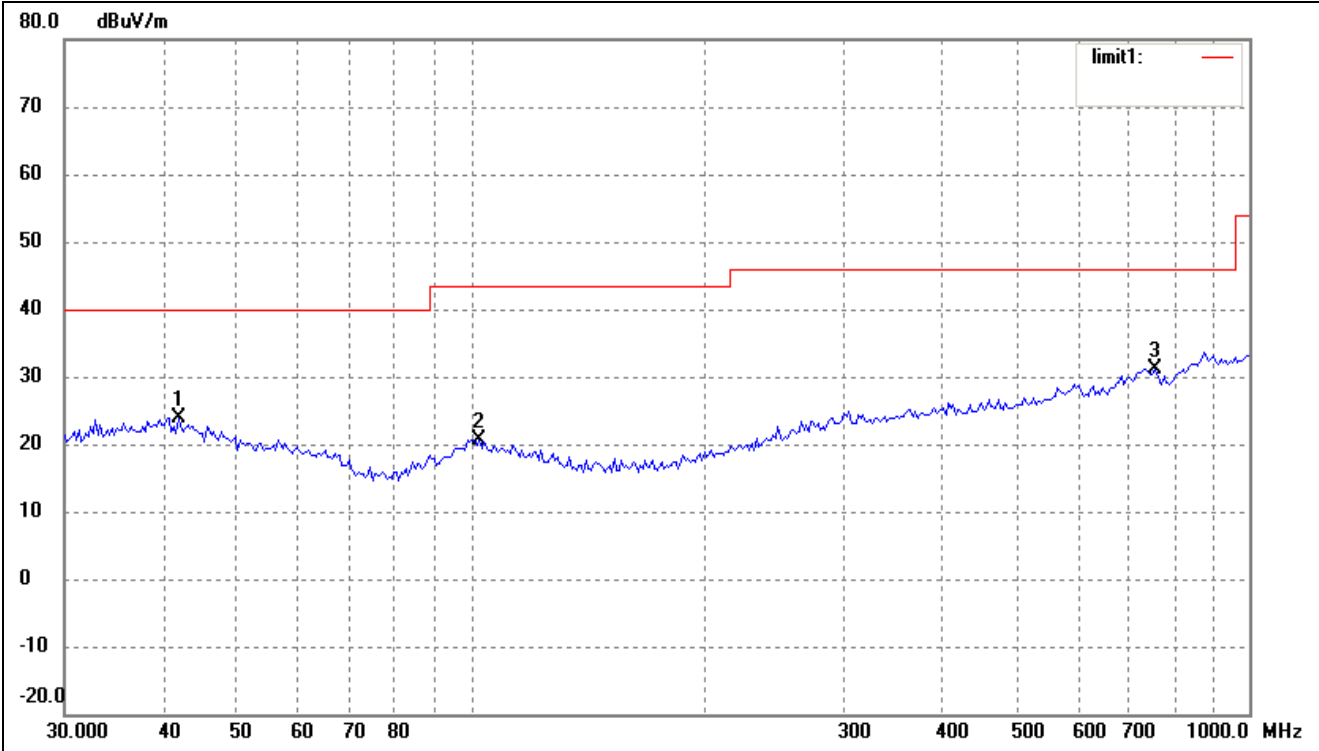
Comment: DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	37.0249	16.07	8.74	24.81	40.00	-15.19	264	100	peak
2	599.3213	16.46	13.30	29.76	46.00	-16.24	110	100	peak
3	863.0562	16.29	16.38	32.67	46.00	-13.33	136	100	peak

Test Specification: Vertical

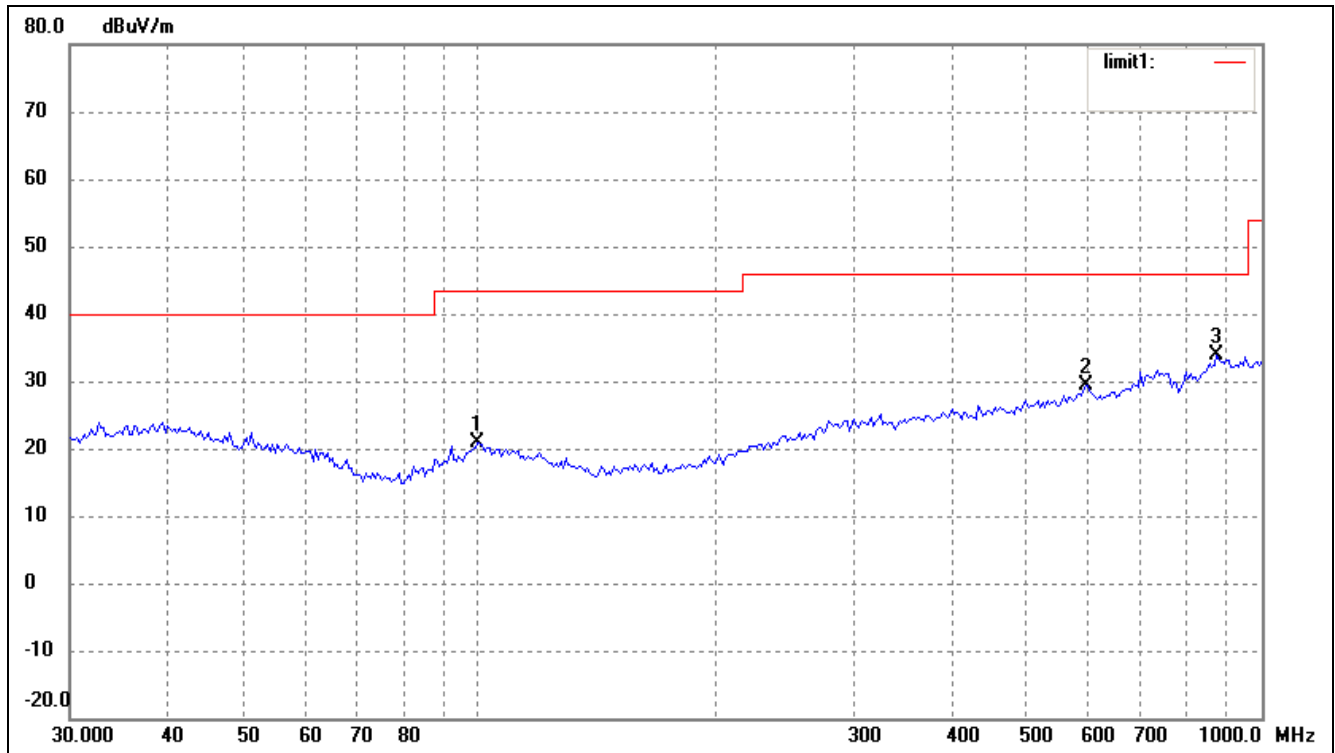


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	42.0066	15.29	8.65	23.94	40.00	-16.06	360	100	peak
2	102.3597	14.80	5.88	20.68	43.50	-22.82	112	100	peak
3	755.3873	16.28	14.86	31.14	46.00	-14.86	180	200	peak

Operating Condition: 802.11n-HT20 Transmitting High Channel-2472MHz

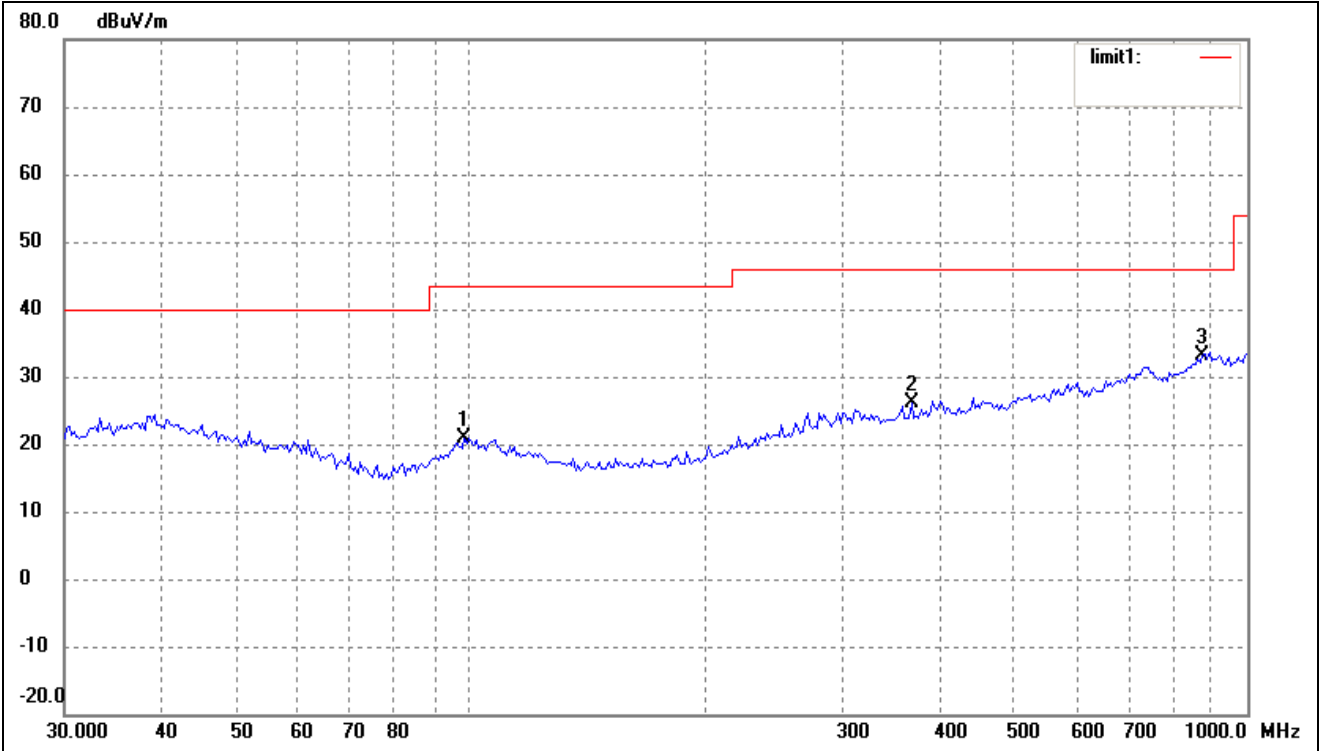
Comment: DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	99.5281	14.85	6.01	20.86	43.50	-22.64	267	100	peak
2	595.1329	16.28	13.14	29.42	46.00	-16.58	116	100	peak
3	875.2470	17.12	16.70	33.82	46.00	-12.18	360	100	peak

Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	98.1419	15.19	5.67	20.86	43.50	-22.64	267	100	peak
2	369.4047	16.92	9.23	26.15	46.00	-19.85	114	200	peak
3	875.2470	16.54	16.70	33.24	46.00	-12.76	35	200	peak

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

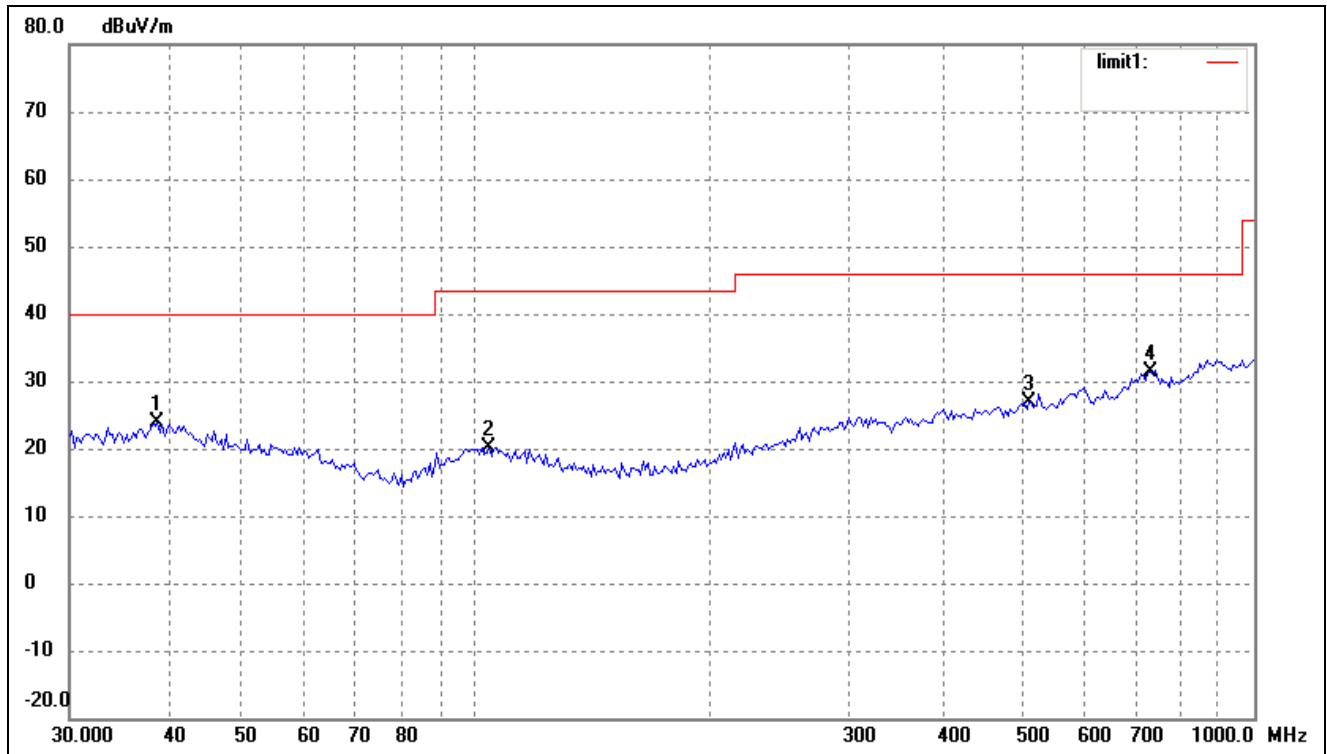
EUT: LM005 802.11n USB Adapter 300Mbps

Tested Model: 005-1007

Operating Condition: 802.11n-HT40 Transmitting Low Channel-2422MHz

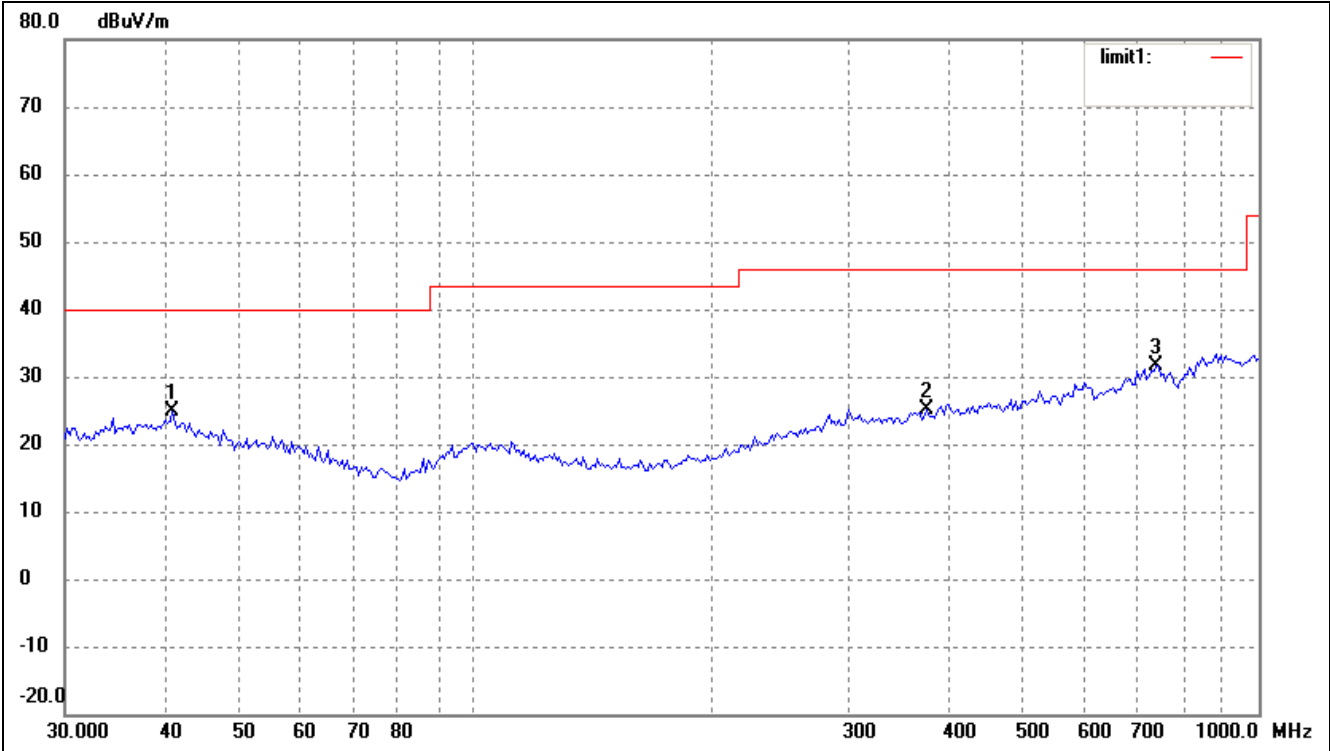
Comment: DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	38.8879	14.75	9.06	23.81	40.00	-16.19	177	100	peak
2	103.8055	14.46	5.73	20.19	43.50	-23.31	90	100	peak
3	513.6331	15.58	11.21	26.79	46.00	-19.21	336	100	peak
4	734.4913	16.04	15.22	31.26	46.00	-14.74	360	100	peak

Test Specification: Vertical

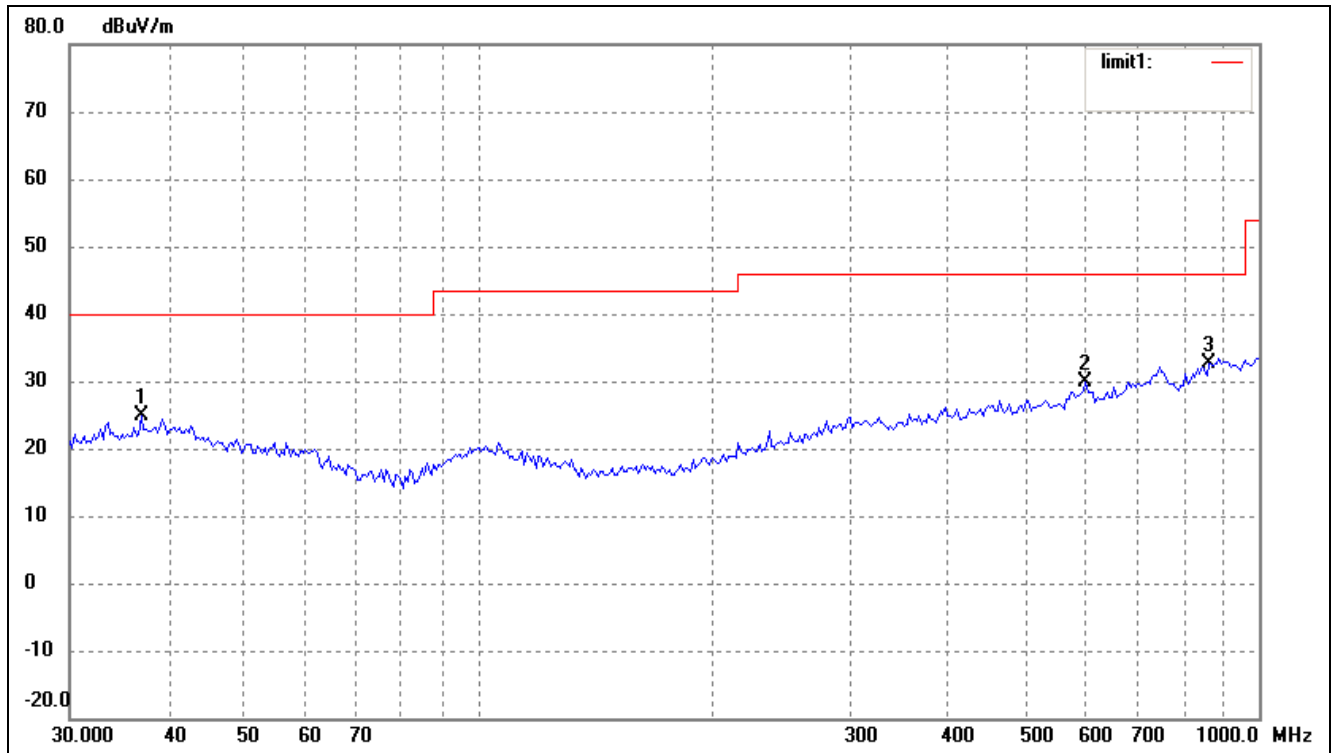


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	41.1320	15.91	8.91	24.82	40.00	-15.18	270	100	peak
2	377.2591	16.03	9.20	25.23	46.00	-20.77	164	100	peak
3	739.6605	16.06	15.53	31.59	46.00	-14.41	228	200	peak

Operating Condition: 802.11n-HT40 Transmitting Middle Channel-2442MHz

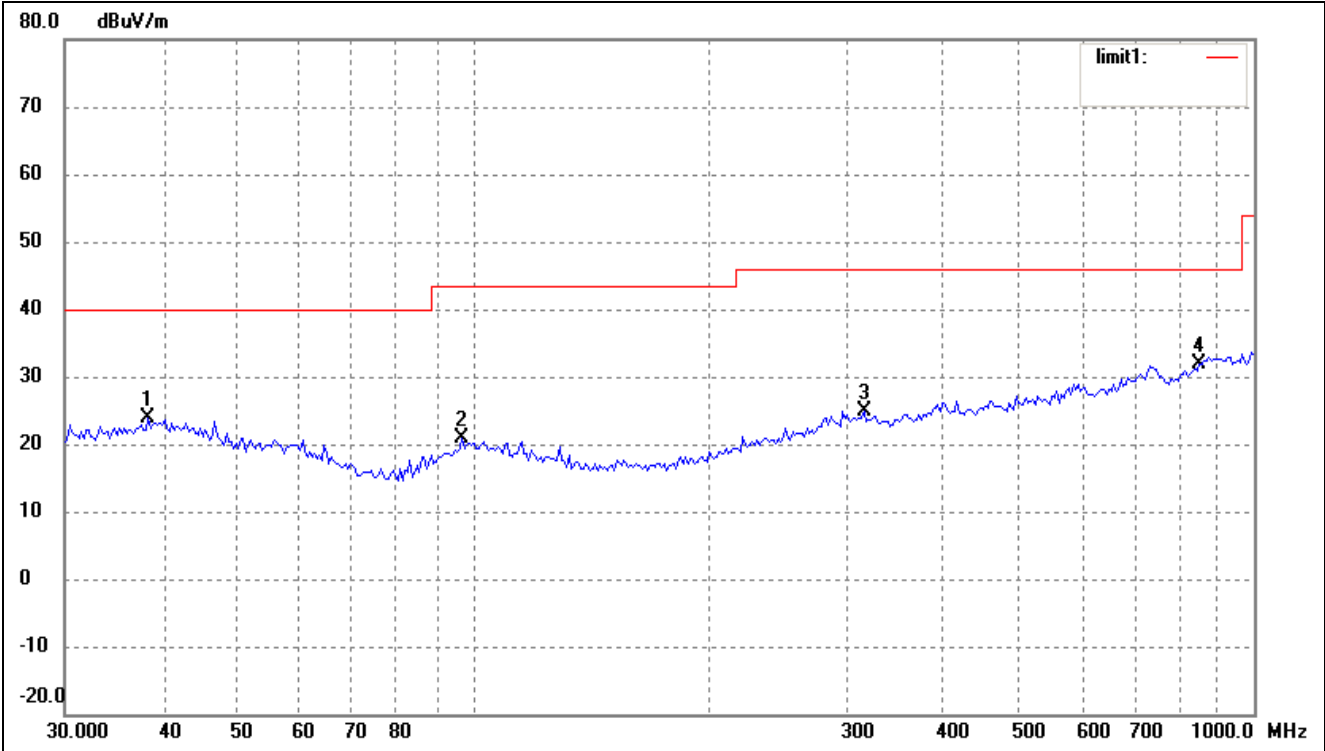
Comment: DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	37.0249	16.07	8.74	24.81	40.00	-15.19	360	100	peak
2	599.3213	16.46	13.30	29.76	46.00	-16.24	255	100	peak
3	863.0562	16.29	16.38	32.67	46.00	-13.33	270	100	peak

Test Specification: Vertical

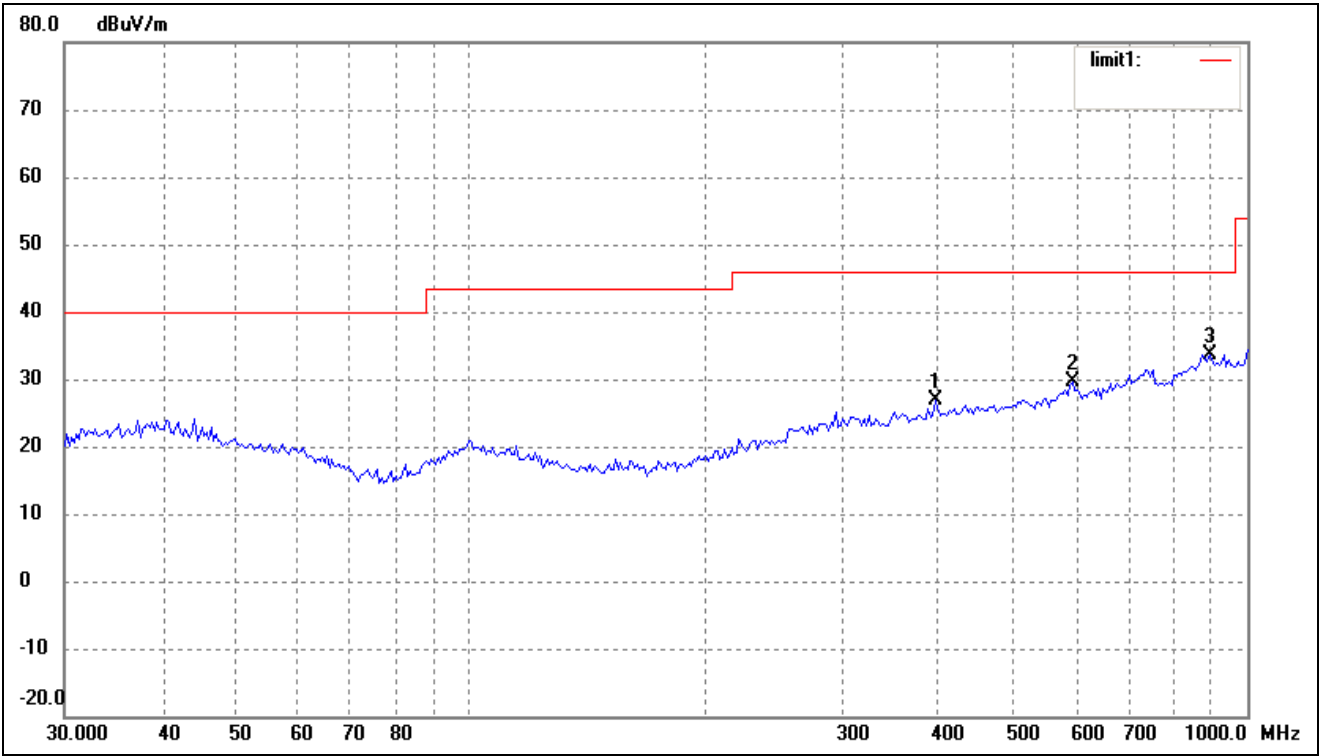


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	38.3462	14.80	8.97	23.77	40.00	-16.23	270	100	peak
2	96.7749	15.52	5.32	20.84	43.50	-22.66	51	200	peak
3	316.5890	15.66	9.28	24.94	46.00	-21.06	360	200	peak
4	851.0353	15.81	15.97	31.78	46.00	-14.22	360	100	peak

Operating Condition:802.11n-HT40 Transmitting High Channel-2462MHz

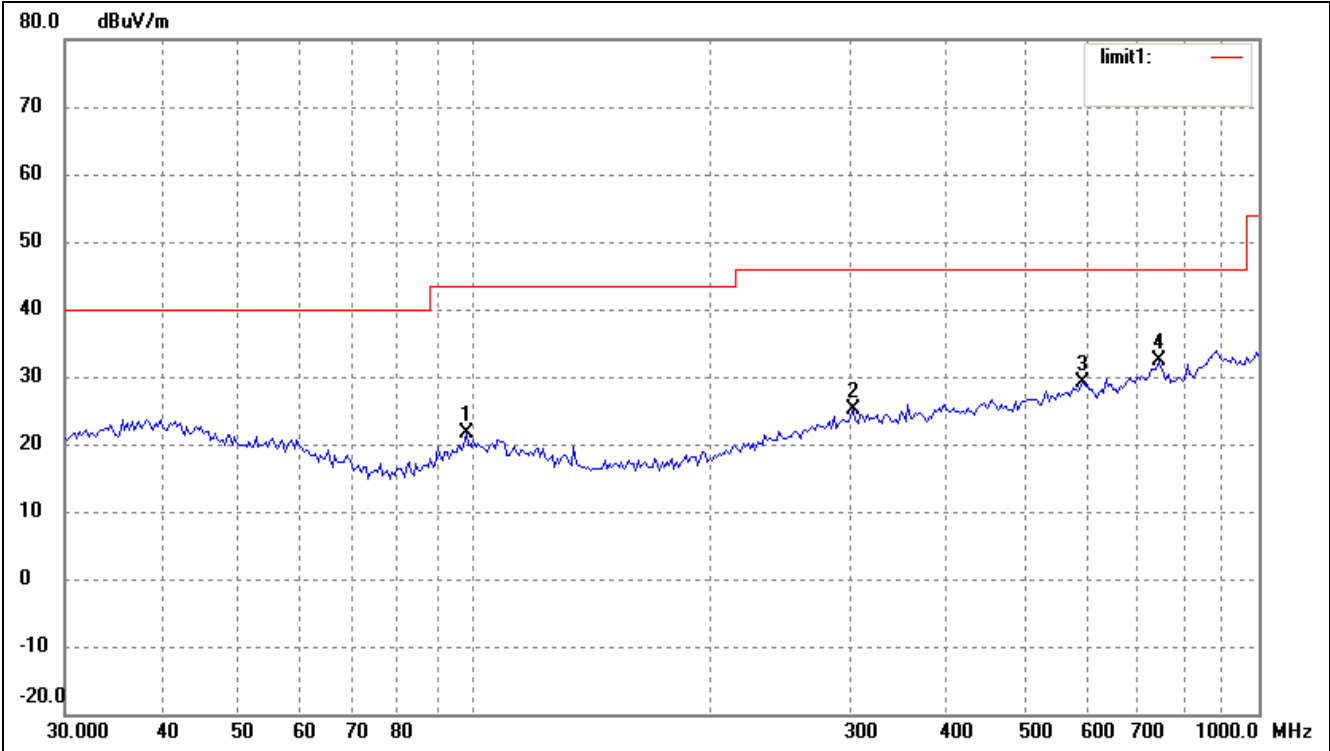
Comment:DC 5V

Test Specification:Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	396.2415	16.87	9.95	26.82	46.00	-19.18	360	100	peak
2	595.1329	16.45	13.14	29.59	46.00	-16.41	180	100	peak
3	893.8567	16.88	16.85	33.73	46.00	-12.27	225	100	peak

Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	97.4560	16.14	5.49	21.63	43.50	-21.87	260	100	peak
2	303.5437	15.82	9.19	25.01	46.00	-20.99	131	200	peak
3	595.1329	15.93	13.14	29.07	46.00	-16.93	285	200	peak
4	744.8661	16.95	15.33	32.28	46.00	-13.72	224	100	peak

Antenna 1:

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

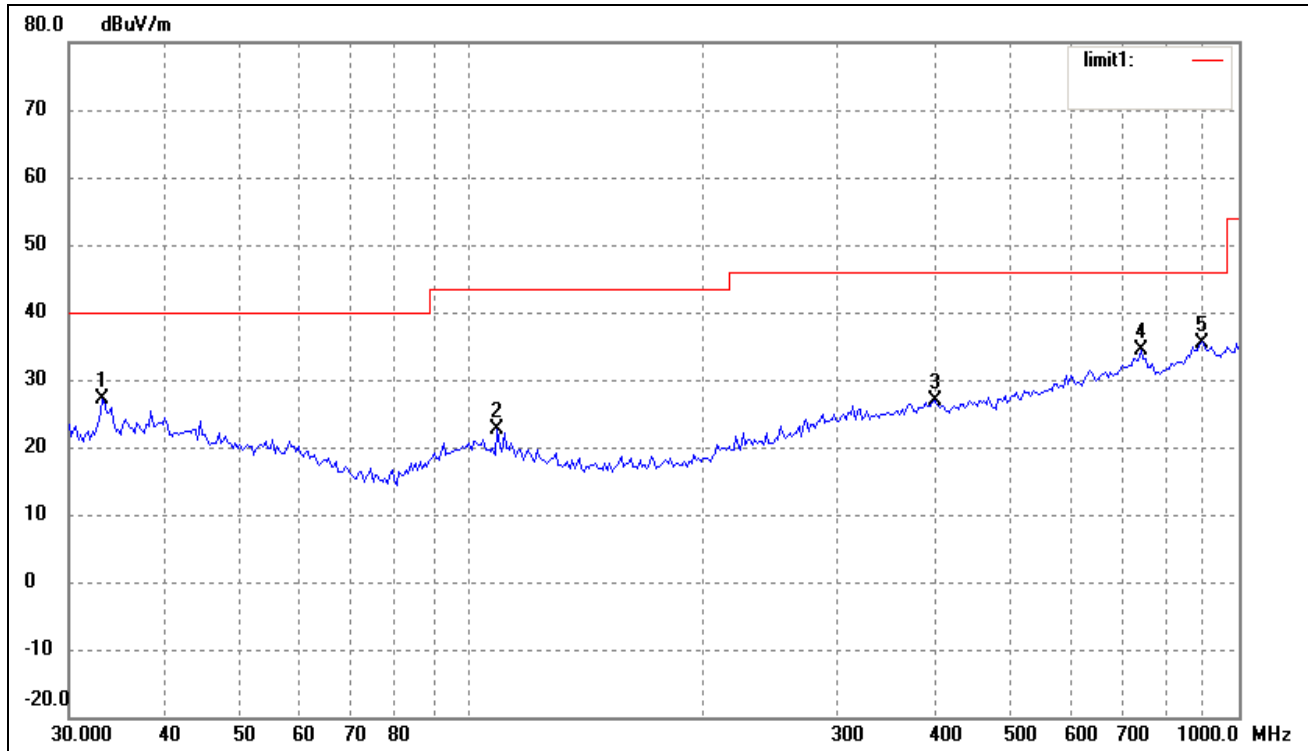
EUT: LM005 802.11n USB Adapter 300Mbps

Tested Model: 005-1007

Operating Condition: 802.11b Transmitting Low Channel-2412MHz

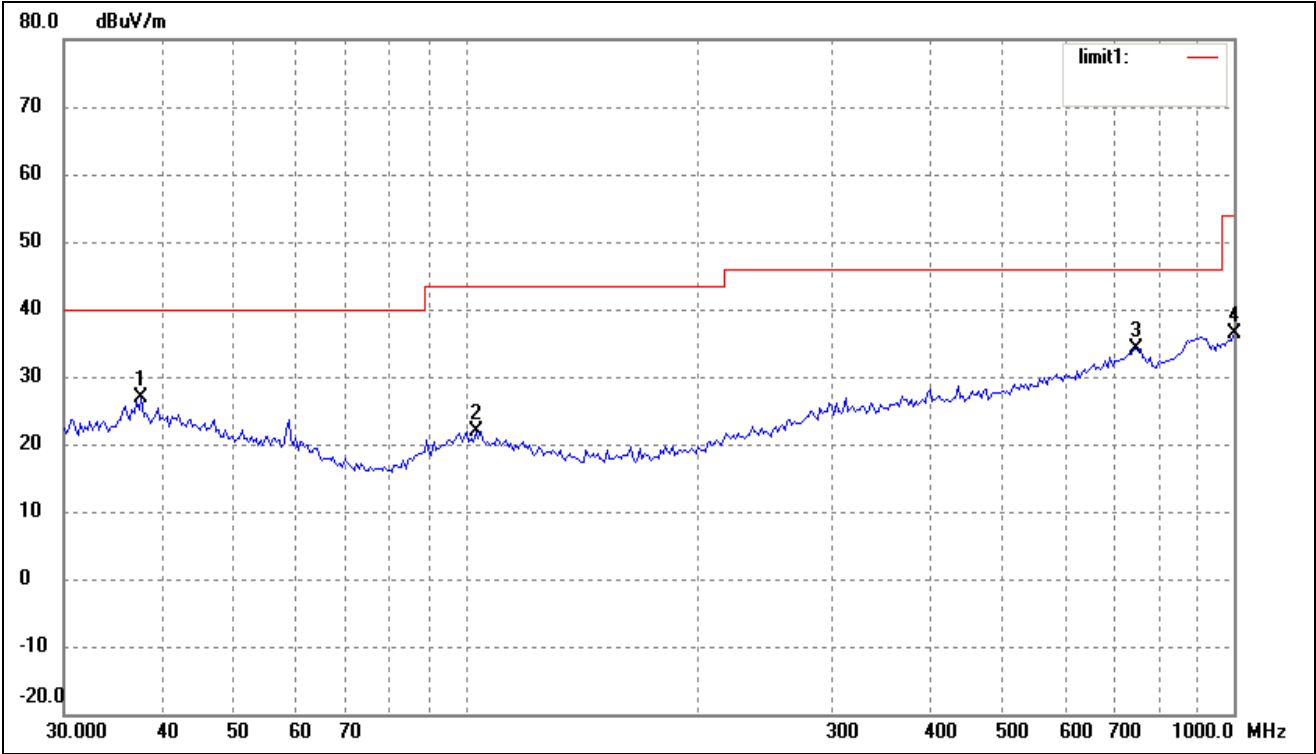
Comment: DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.0950	18.58	8.56	27.14	40.00	-12.86	254	100	peak
2	108.2667	16.51	6.02	22.53	43.50	-20.97	113	100	peak
3	401.8385	15.51	11.47	26.98	46.00	-19.02	284	100	peak
4	744.8661	16.35	17.95	34.30	46.00	-11.70	360	100	peak
5	893.8567	16.23	19.27	35.50	46.00	-10.50	100	100	peak

Test Specification: Vertical

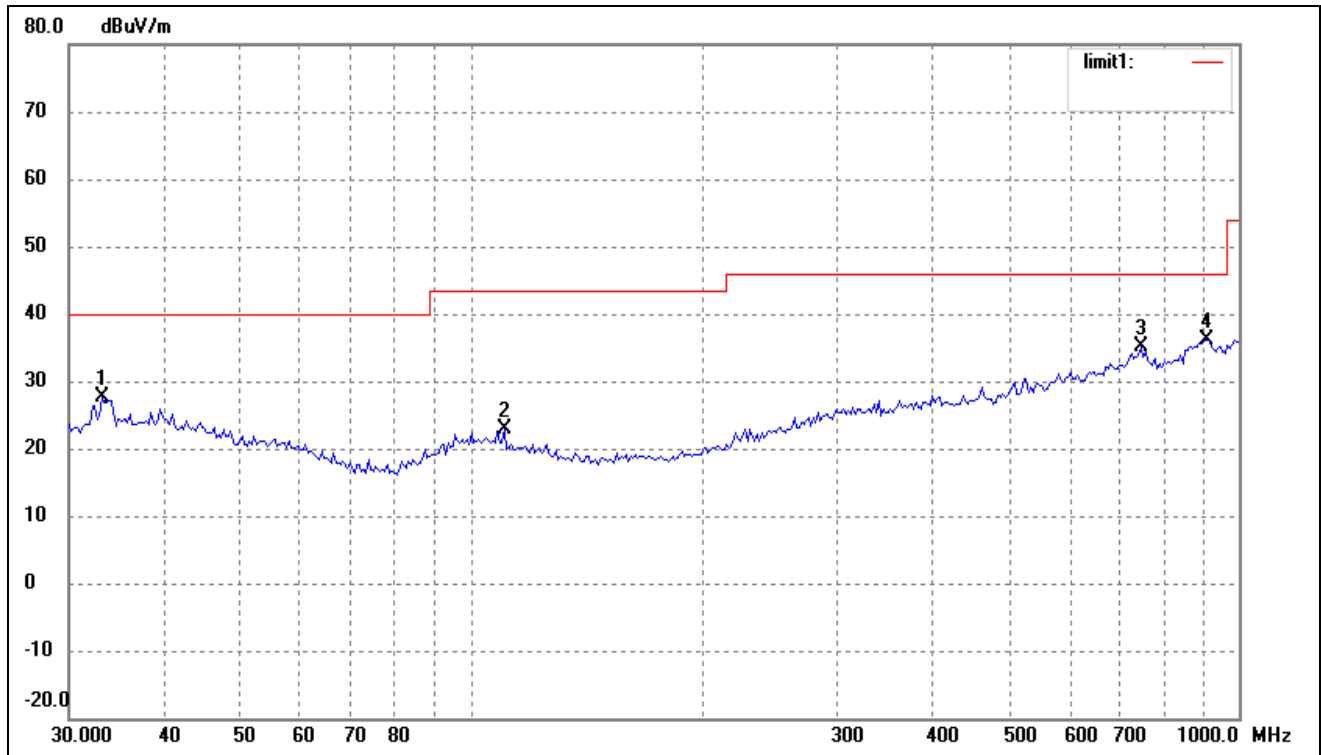


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	37.8121	17.52	9.33	26.85	40.00	-13.15	114	100	peak
2	103.0800	15.37	6.54	21.91	43.50	-21.59	270	100	peak
3	744.8661	16.16	17.95	34.11	46.00	-11.89	360	100	peak
4	1000.0000	16.41	19.90	36.31	54.00	-17.69	116	100	peak

Operating Condition: 802.11b Transmitting Middle Channel-2442MHz

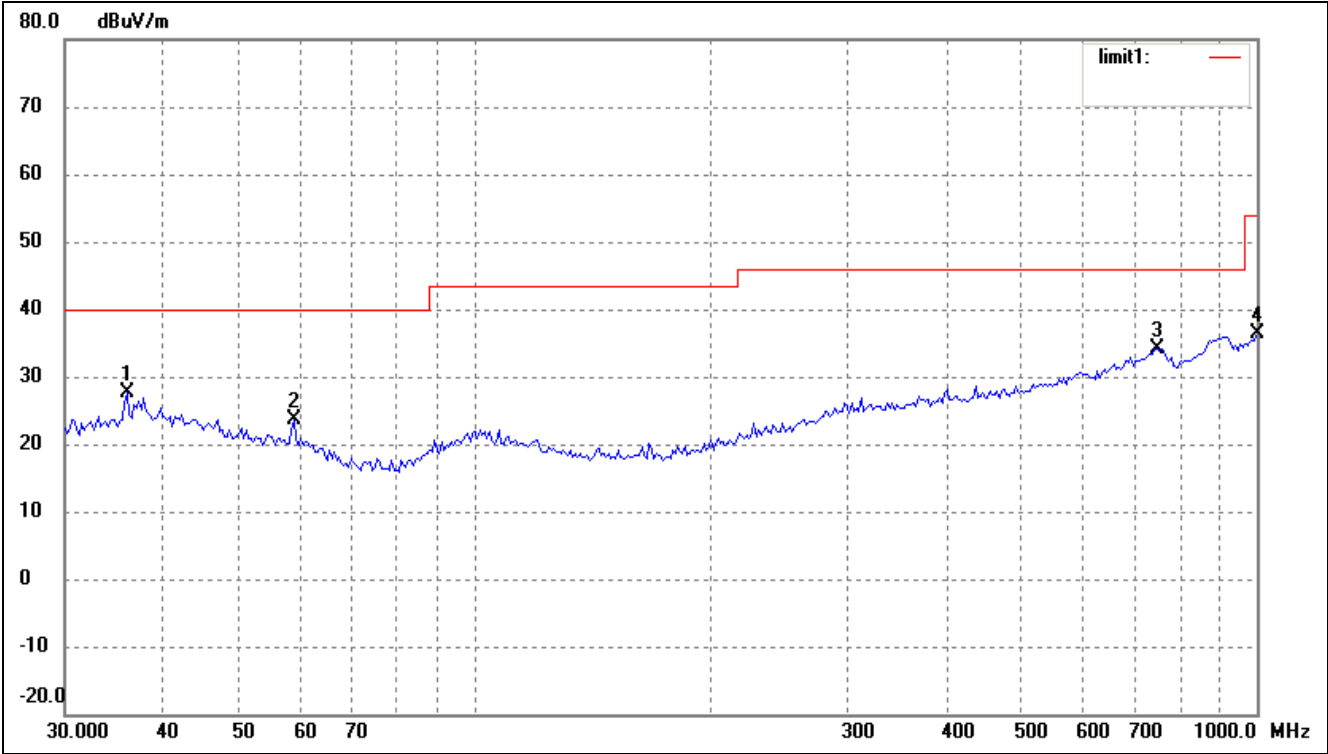
Comment: DC 5V

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	33.0950	19.05	8.56	27.61	40.00	-12.39	178	100	peak
2	110.5687	16.99	5.80	22.79	43.50	-20.71	224	100	peak
3	744.8661	17.06	17.95	35.01	46.00	-10.99	160	100	peak
4	906.4824	16.94	19.15	36.09	46.00	-9.91	290	100	peak

Test Specification: Vertical

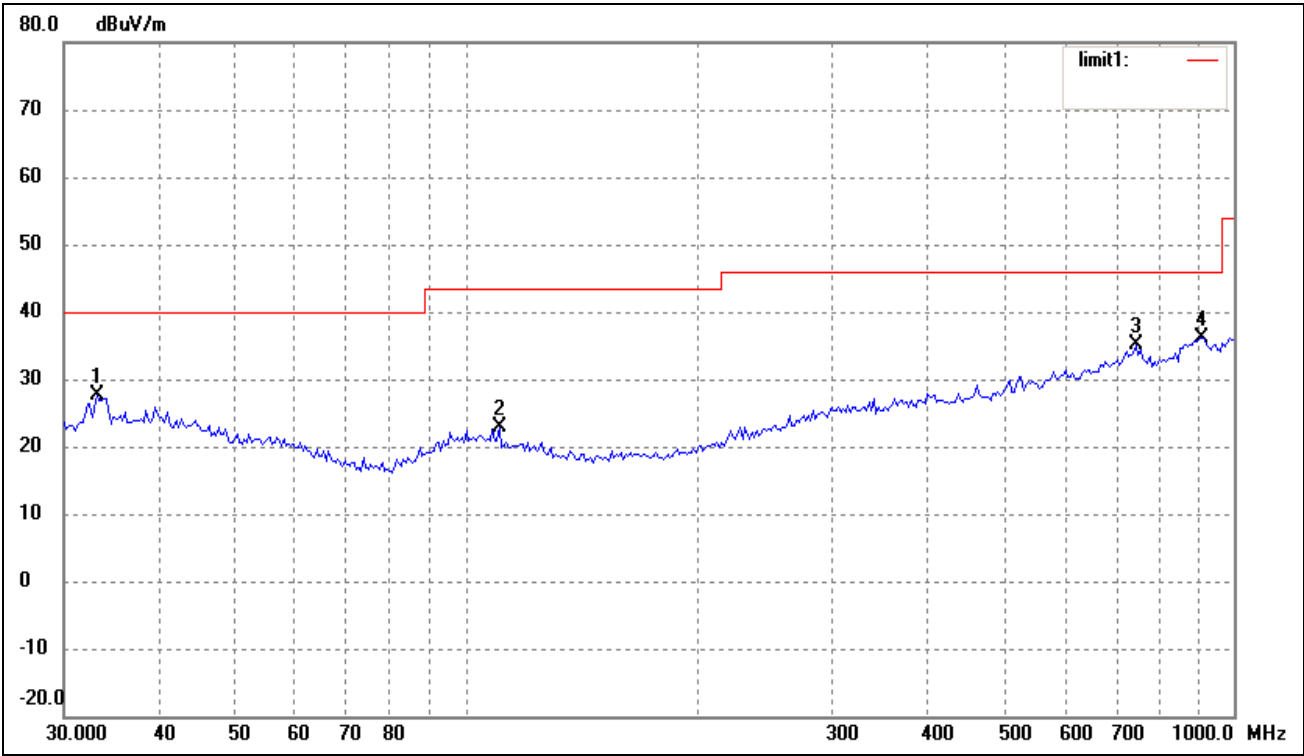


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	36.0007	18.59	9.04	27.63	40.00	-12.37	256	100	peak
2	58.8185	17.75	5.81	23.56	40.00	-16.44	360	100	peak
3	744.8661	16.16	17.95	34.11	46.00	-11.89	360	100	peak
4	1000.0000	16.41	19.90	36.31	54.00	-17.69	360	100	peak

Operating Condition:802.11b Transmitting High Channel-2472MHz

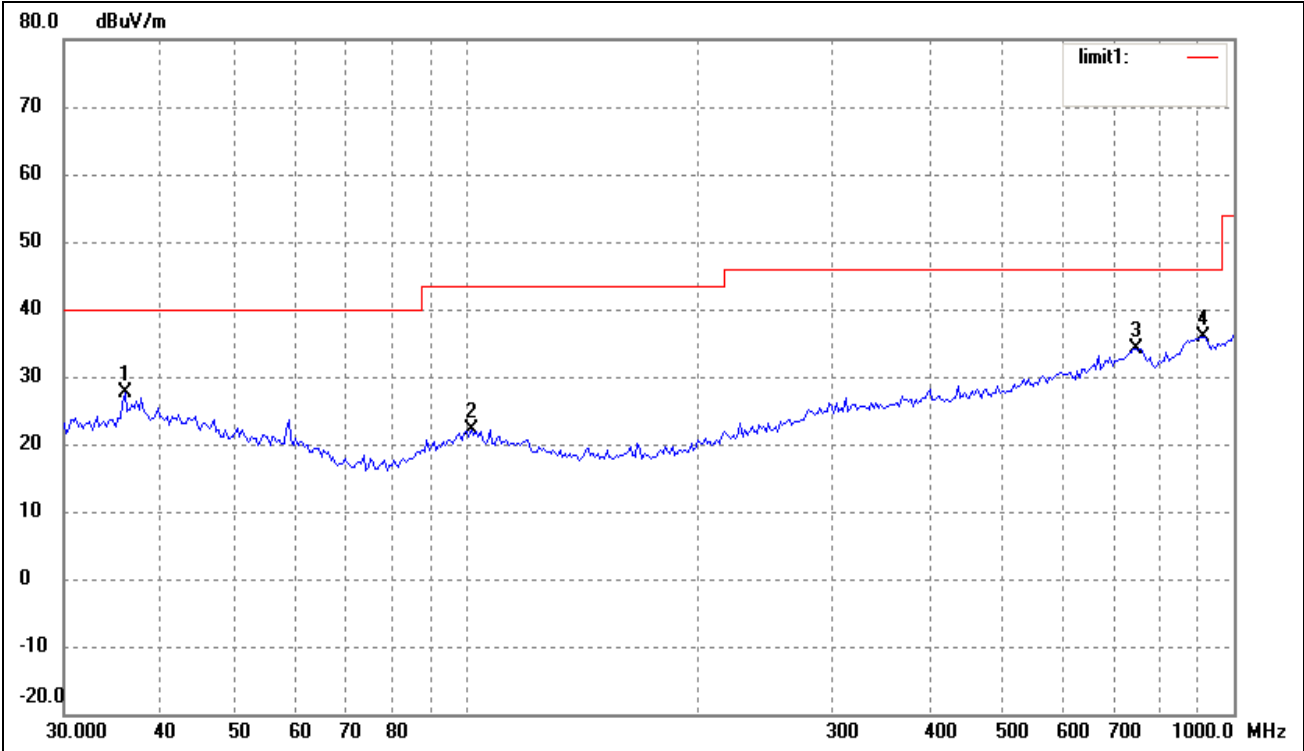
Comment:DC 5V

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	33.0950	19.05	8.56	27.61	40.00	-12.39	176	100	peak
2	110.5687	16.99	5.80	22.79	43.50	-20.71	255	100	peak
3	744.8661	17.06	17.95	35.01	46.00	-10.99	360	100	peak
4	906.4824	16.94	19.15	36.09	46.00	-9.91	178	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	36.0007	18.59	9.04	27.63	40.00	-12.37	360	100	peak
2	101.6443	15.50	6.67	22.17	43.50	-21.33	225	100	peak
3	744.8661	16.16	17.95	34.11	46.00	-11.89	160	100	peak
4	912.8620	16.92	18.93	35.85	46.00	-10.15	310	100	peak

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

EUT:

LM005 802.11n USB Adapter 300Mbps

Tested Model:

005-1007

Operating Condition:

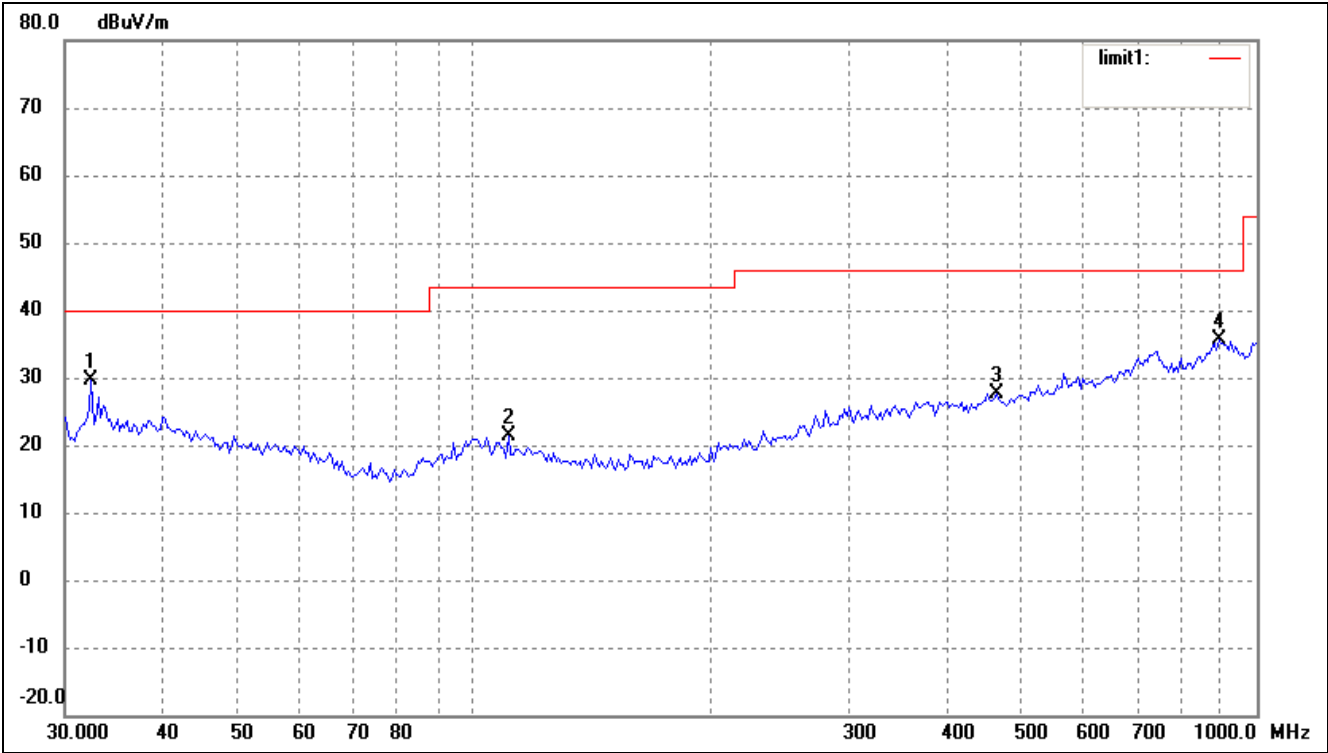
802.11g Transmitting Low Channel-2412MHz

Comment:

DC 5V

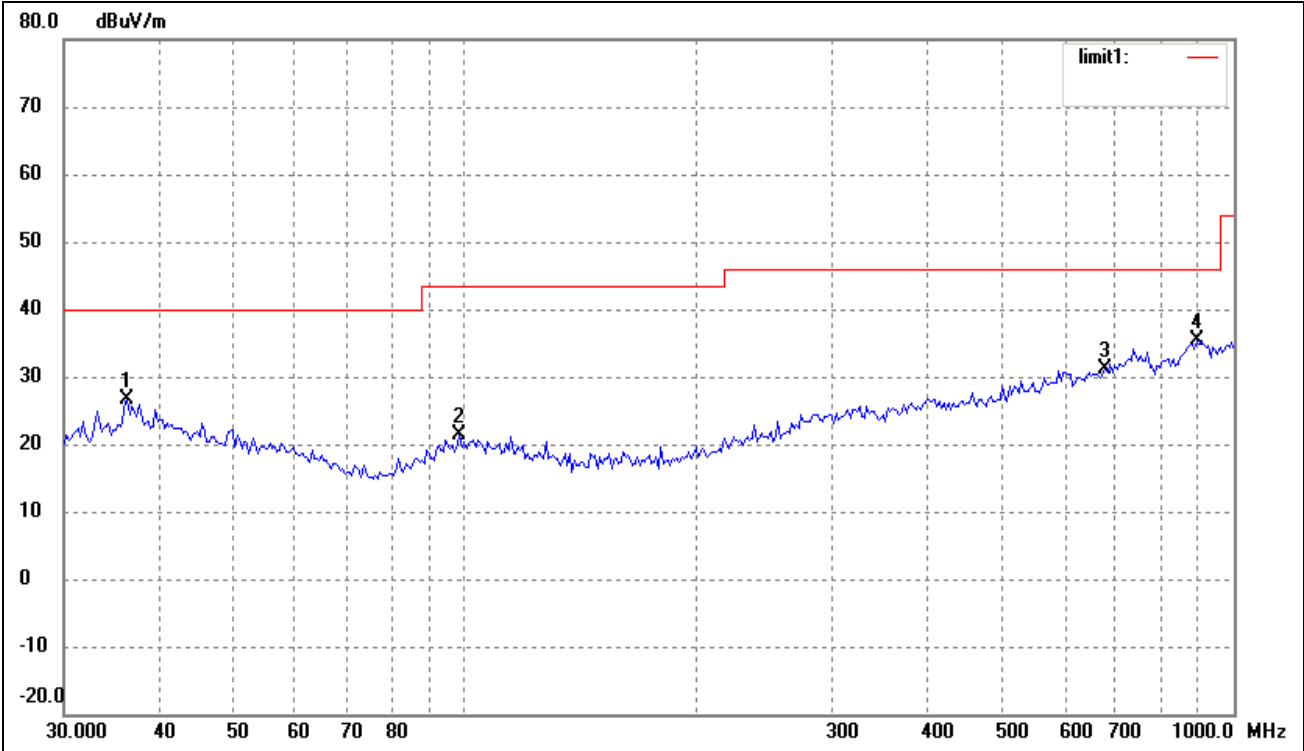
Test Specification:

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	32.4059	21.23	8.44	29.67	40.00	-10.33	174	100	peak
2	110.5687	15.56	5.80	21.36	43.50	-22.14	160	100	peak
3	465.5994	16.02	11.69	27.71	46.00	-18.29	320	100	peak
4	893.8567	16.34	19.27	35.61	46.00	-10.39	360	100	peak

Test Specification: Vertical

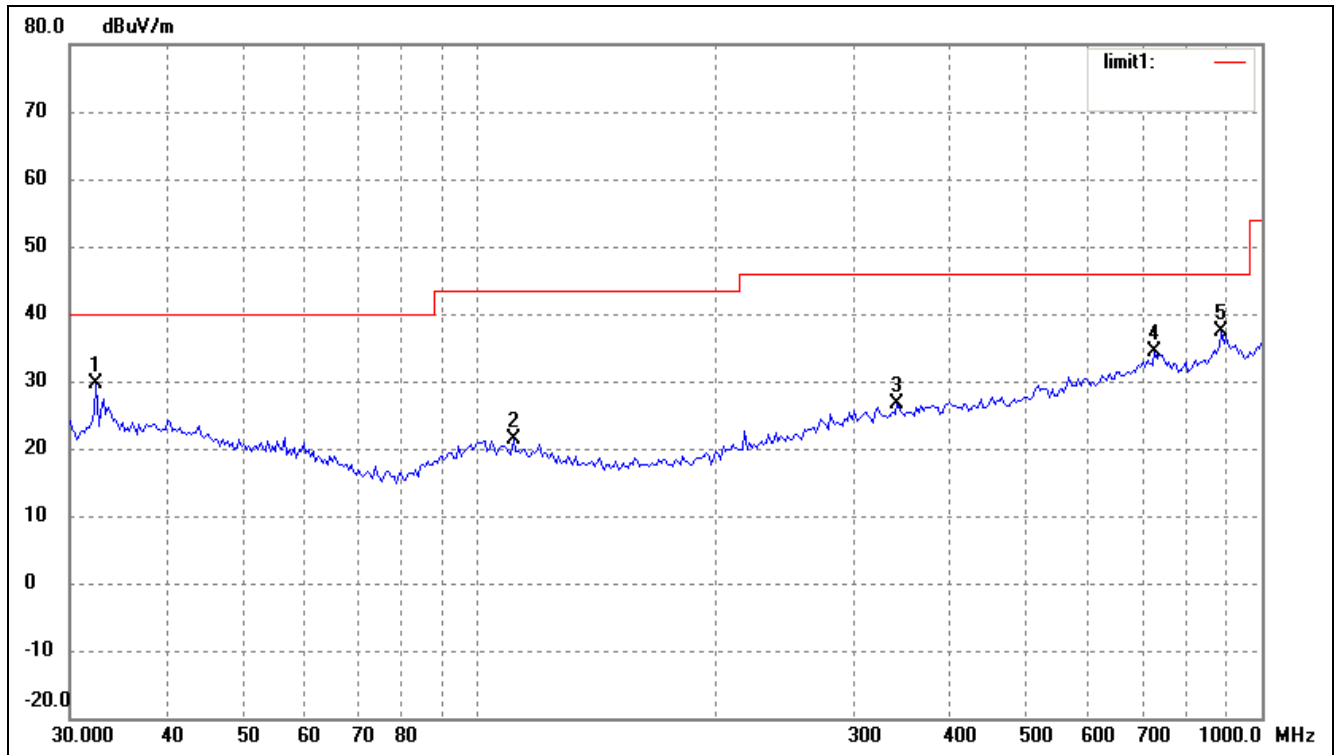


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	36.2541	17.45	9.09	26.54	40.00	-13.46	177	100	peak
2	98.1419	14.98	6.39	21.37	43.50	-22.13	90	100	peak
3	679.9600	15.48	15.55	31.03	46.00	-14.97	336	100	peak
4	893.8567	16.13	19.27	35.40	46.00	-10.60	360	100	peak

Operating Condition: 802.11g Transmitting Middle Channel-2442MHz

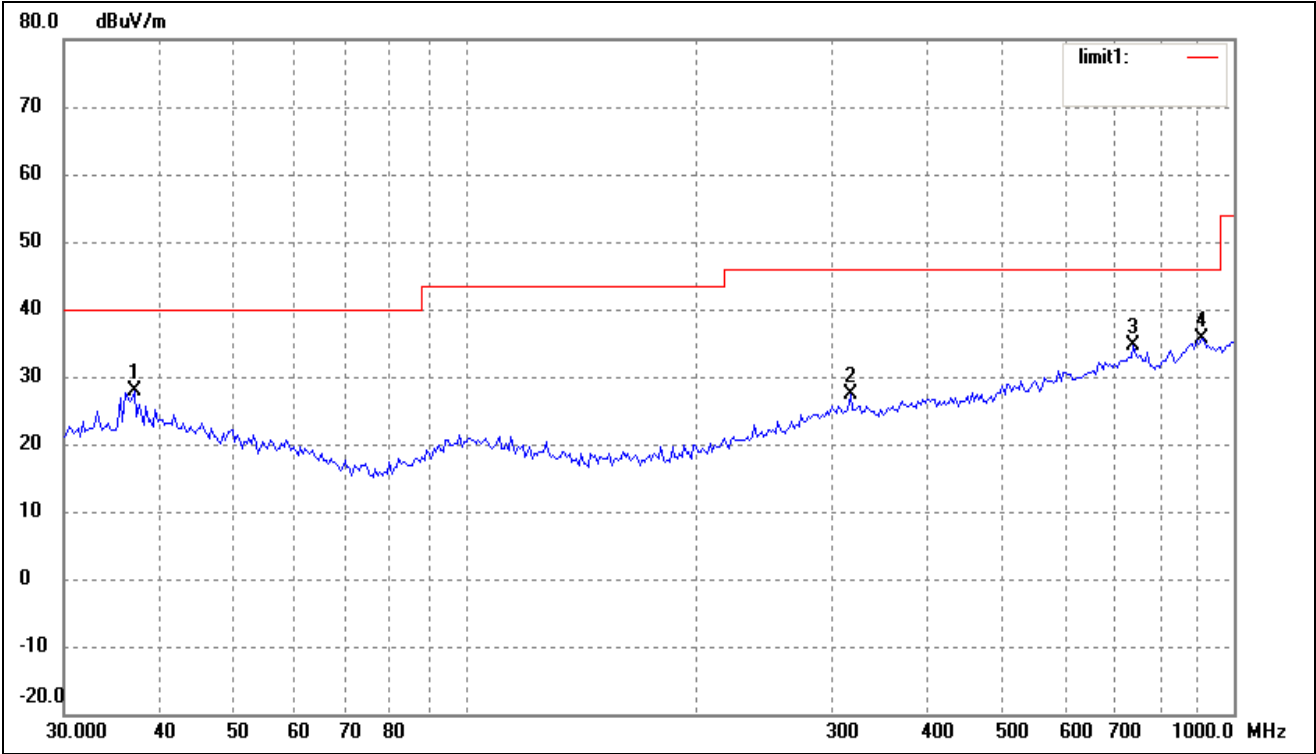
Comment: DC 5V

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	32.4059	21.23	8.44	29.67	40.00	-10.33	270	100	peak
2	110.5687	15.56	5.80	21.36	43.50	-22.14	164	100	peak
3	341.9787	16.40	10.16	26.56	46.00	-19.44	228	200	peak
4	729.3583	17.11	17.31	34.42	46.00	-11.58	130	200	peak
5	887.6099	18.21	19.15	37.36	46.00	-8.64	360	100	peak

Test Specification: Vertical

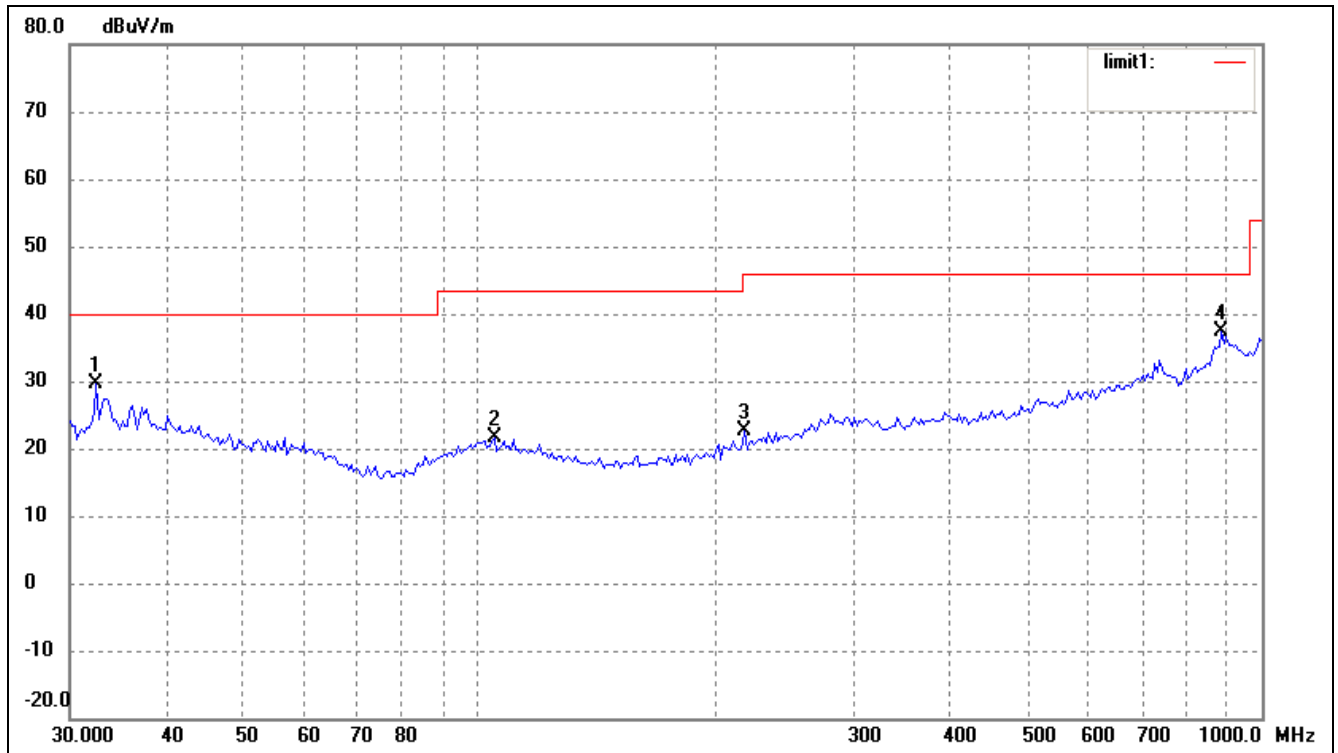


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	37.0249	18.59	9.21	27.80	40.00	-12.20	360	100	peak
2	316.5890	16.84	10.44	27.28	46.00	-18.72	255	100	peak
3	739.6605	16.54	18.07	34.61	46.00	-11.39	270	100	peak
4	906.4824	16.47	19.15	35.62	46.00	-10.38	180	100	peak

Operating Condition: 802.11g Transmitting High Channel-2472MHz

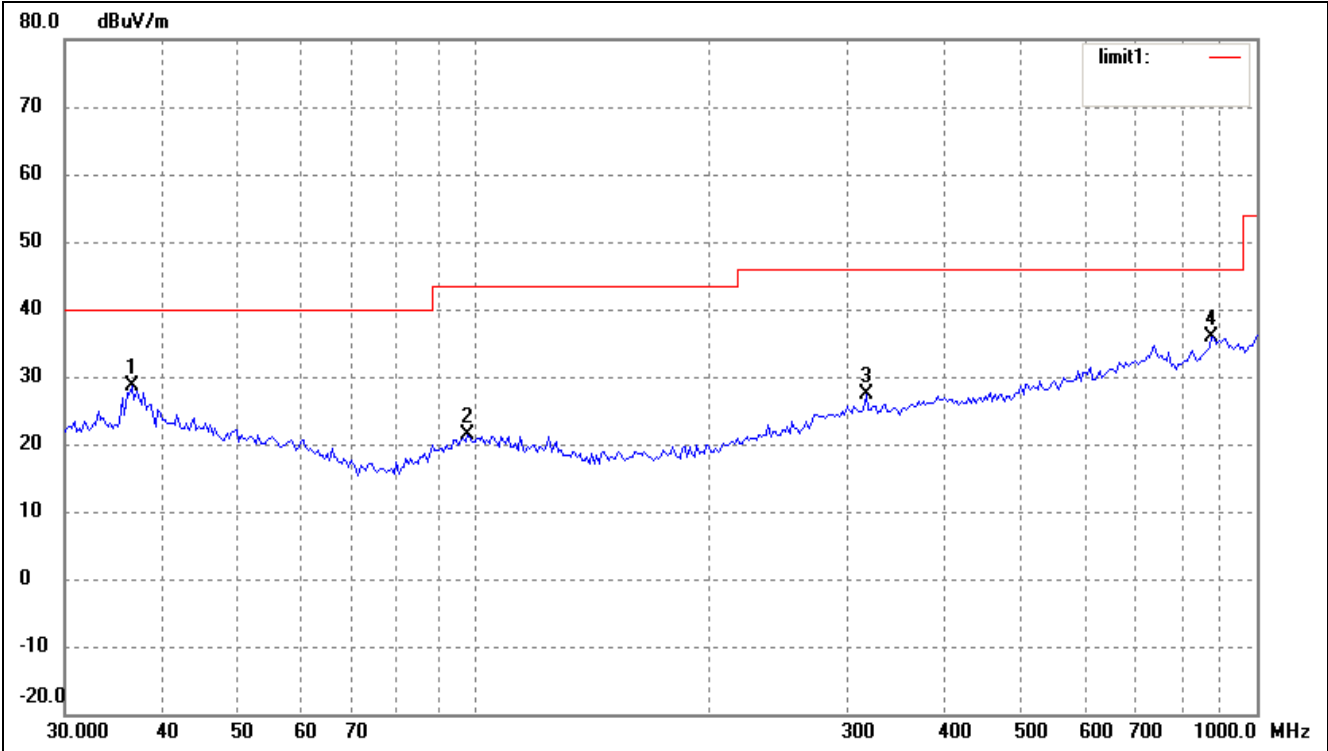
Comment: DC 5V

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	32.4059	21.23	8.44	29.67	40.00	-10.33	270	100	peak
2	104.5361	15.27	6.39	21.66	43.50	-21.84	51	200	peak
3	218.3085	16.82	5.81	22.63	46.00	-23.37	360	200	peak
4	887.6099	18.21	19.15	37.36	46.00	-8.64	360	100	peak

Test Specification: Vertical

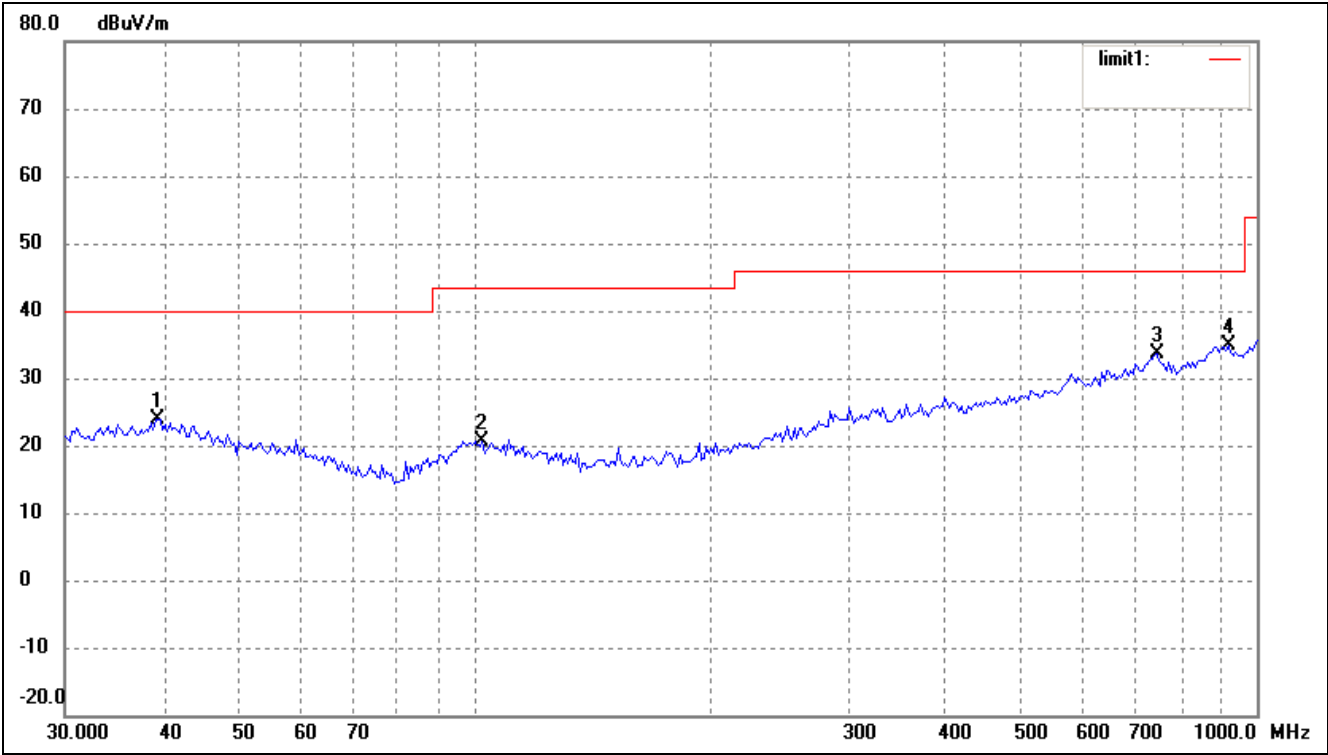


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	36.5092	19.47	9.13	28.60	40.00	-11.40	360	100	peak
2	98.1419	14.98	6.39	21.37	43.50	-22.13	180	100	peak
3	316.5890	16.84	10.44	27.28	46.00	-18.72	225	100	peak
4	875.2470	17.15	18.80	35.95	46.00	-10.05	67	100	peak

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

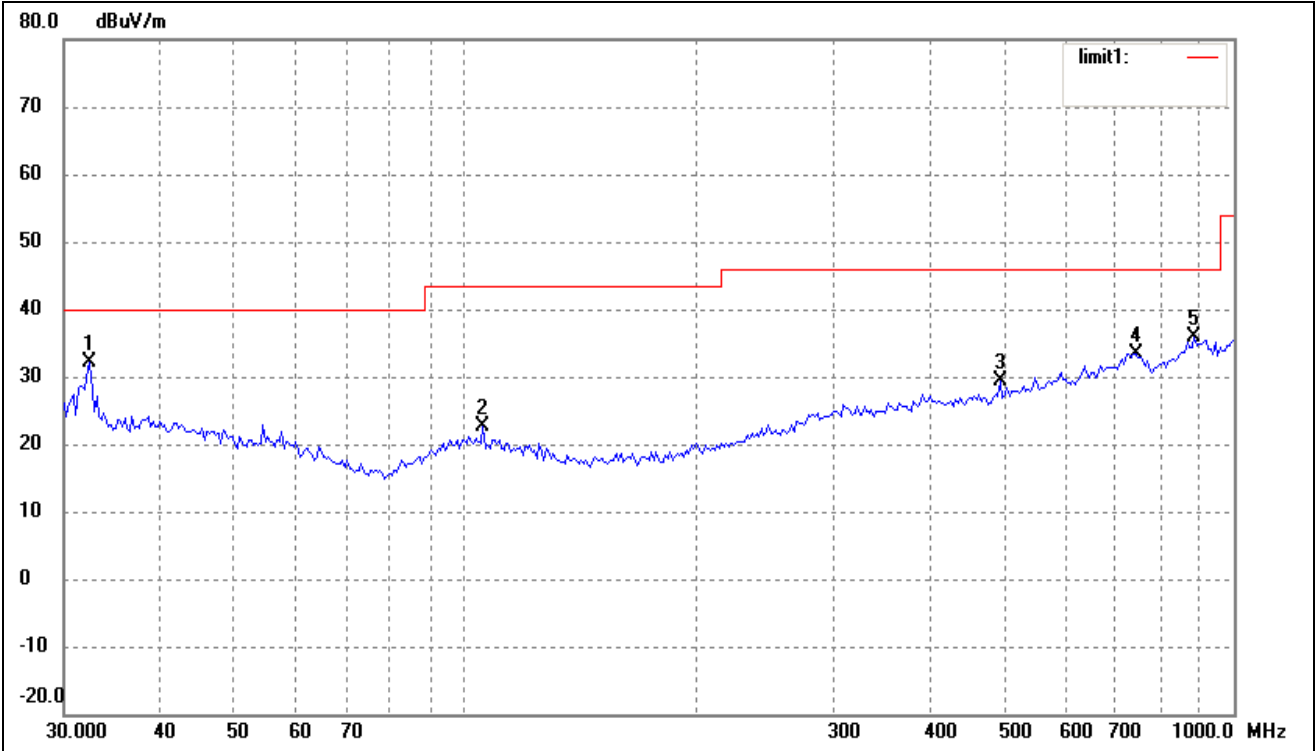
EUT: LM005 802.11n USB Adapter 300Mbps
Tested Model: 005-1007
Operating Condition: 802.11n-HT20 Transmitting Low Channel-2412MHz
Comment: DC 5V

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	39.4372	14.37	9.60	23.97	40.00	-16.03	260	100	peak
2	102.3597	14.14	6.61	20.75	43.50	-22.75	131	200	peak
3	744.8661	15.61	17.95	33.56	46.00	-12.44	285	200	peak
4	919.2866	16.27	18.70	34.97	46.00	-11.03	224	100	peak

Test Specification: Vertical

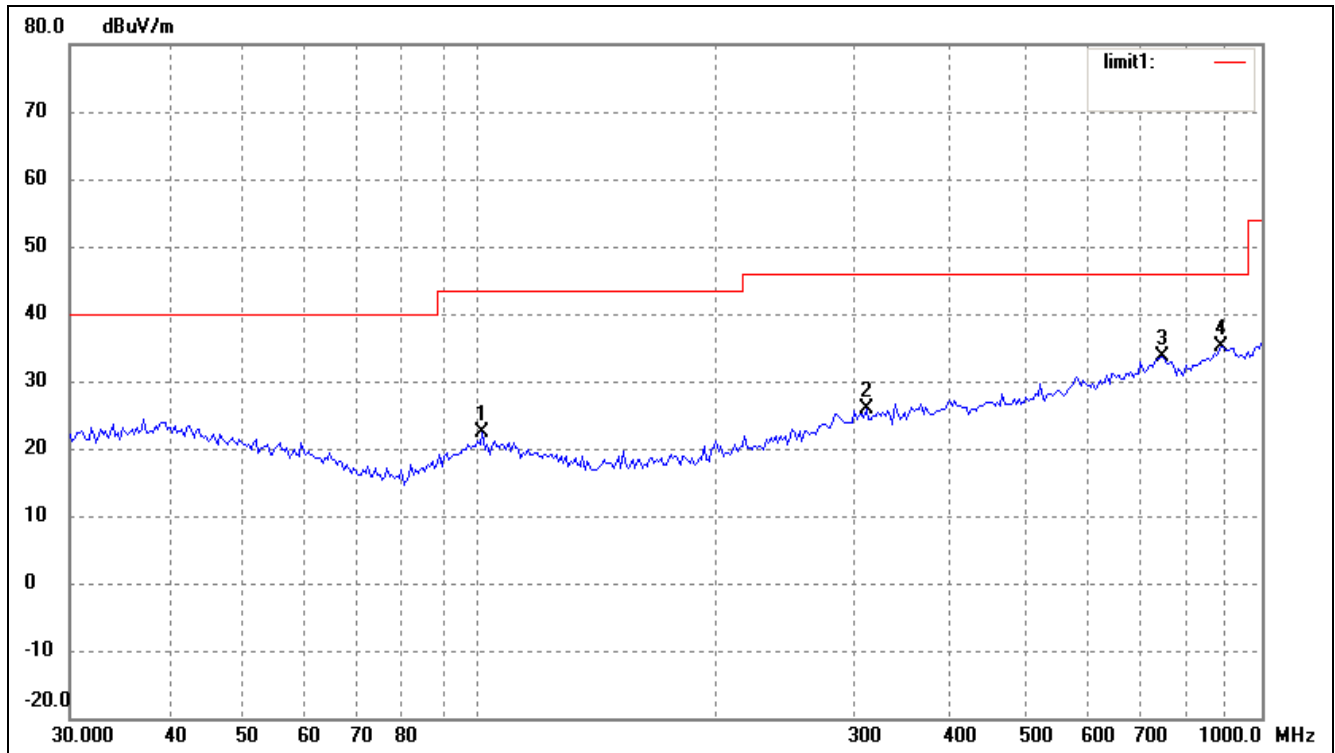


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	32.4059	23.69	8.44	32.13	40.00	-7.87	155	100	peak
2	105.2718	16.25	6.32	22.57	43.50	-20.93	197	100	peak
3	495.9344	17.25	12.04	29.29	46.00	-16.71	310	100	peak
4	744.8661	15.46	17.95	33.41	46.00	-12.59	229	100	peak
5	887.6099	16.71	19.15	35.86	46.00	-10.14	130	100	peak

Operating Condition: 802.11n-HT20 Transmitting Middle Channel-2442MHz

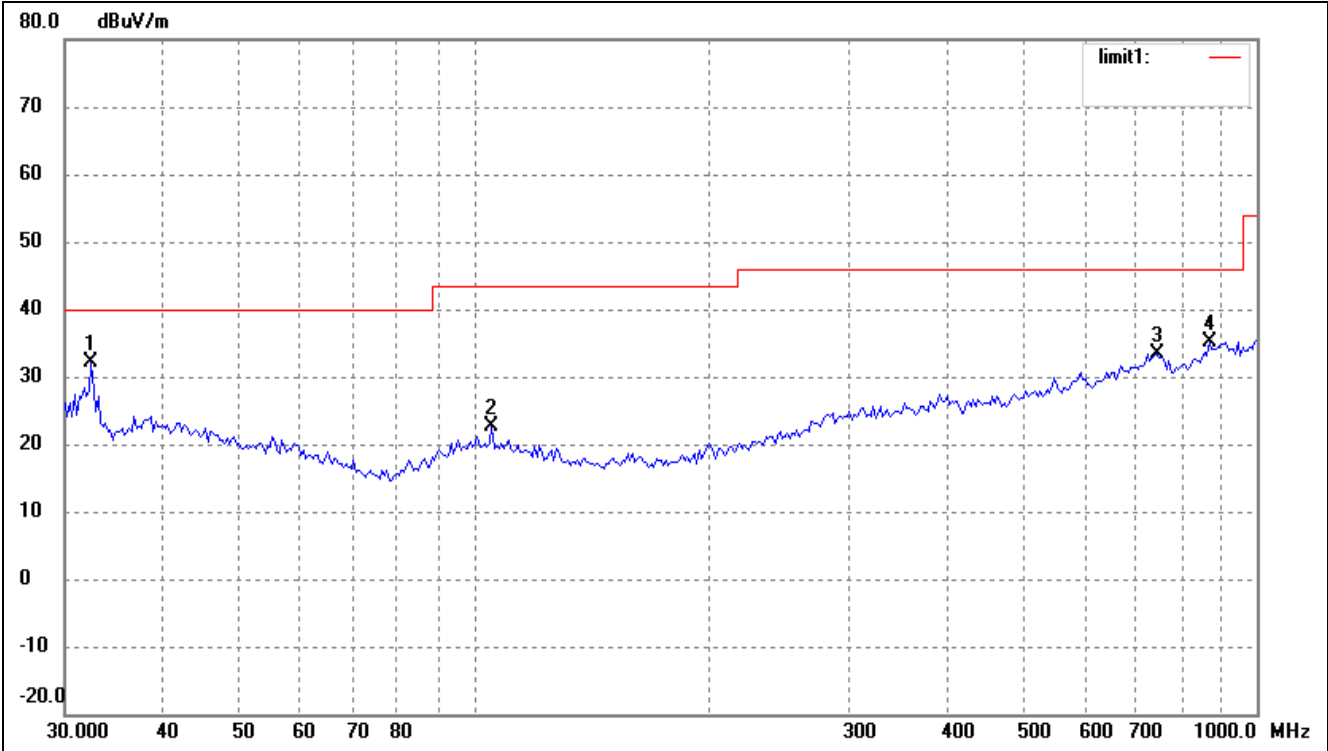
Comment: DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	100.9340	15.68	6.75	22.43	43.50	-21.07	274	100	peak
2	312.1794	15.59	10.36	25.95	46.00	-20.05	116	100	peak
3	744.8661	15.61	17.95	33.56	46.00	-12.44	82	100	peak
4	887.6099	15.93	19.15	35.08	46.00	-10.92	134	100	peak

Test Specification: Vertical

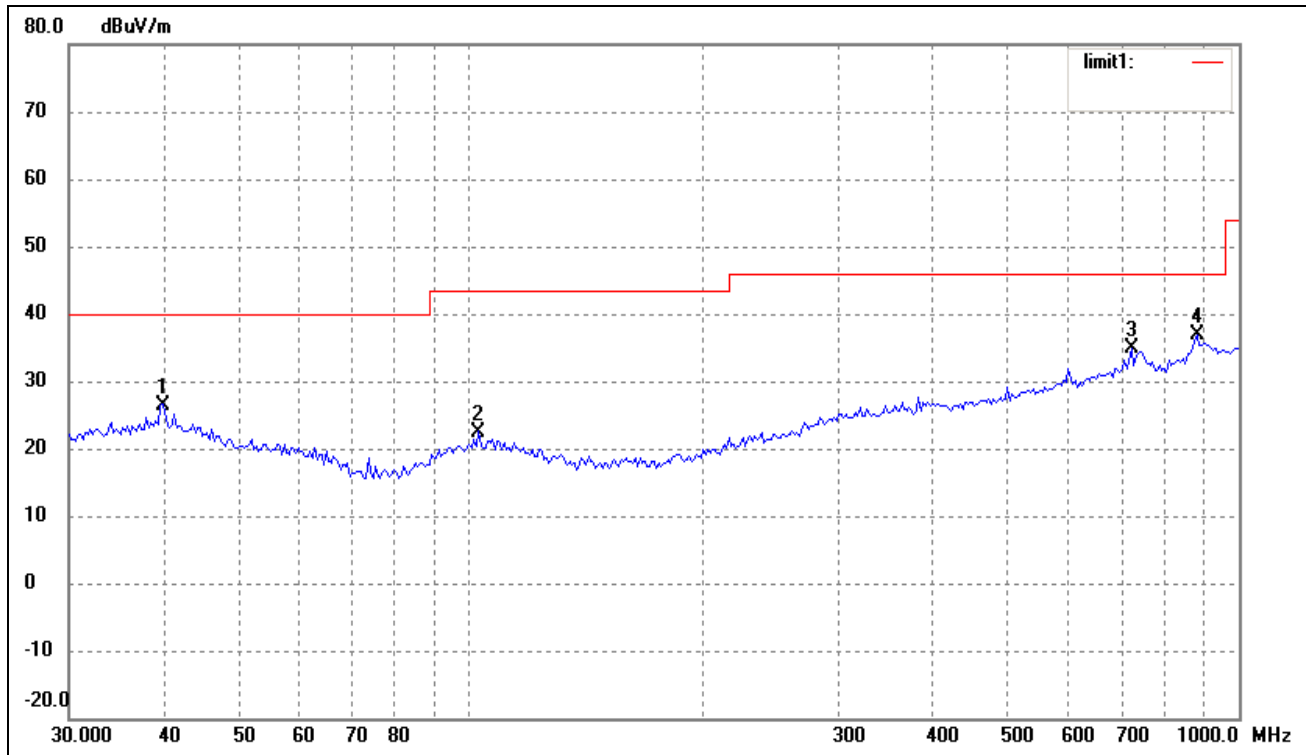


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	32.4059	23.69	8.44	32.13	40.00	-7.87	264	100	peak
2	105.2718	16.25	6.32	22.57	43.50	-20.93	110	100	peak
3	744.8661	15.46	17.95	33.41	46.00	-12.59	136	100	peak
4	869.1302	16.70	18.54	35.24	46.00	-10.76	90	100	peak

Operating Condition: 802.11n-HT20 Transmitting High Channel-2472MHz

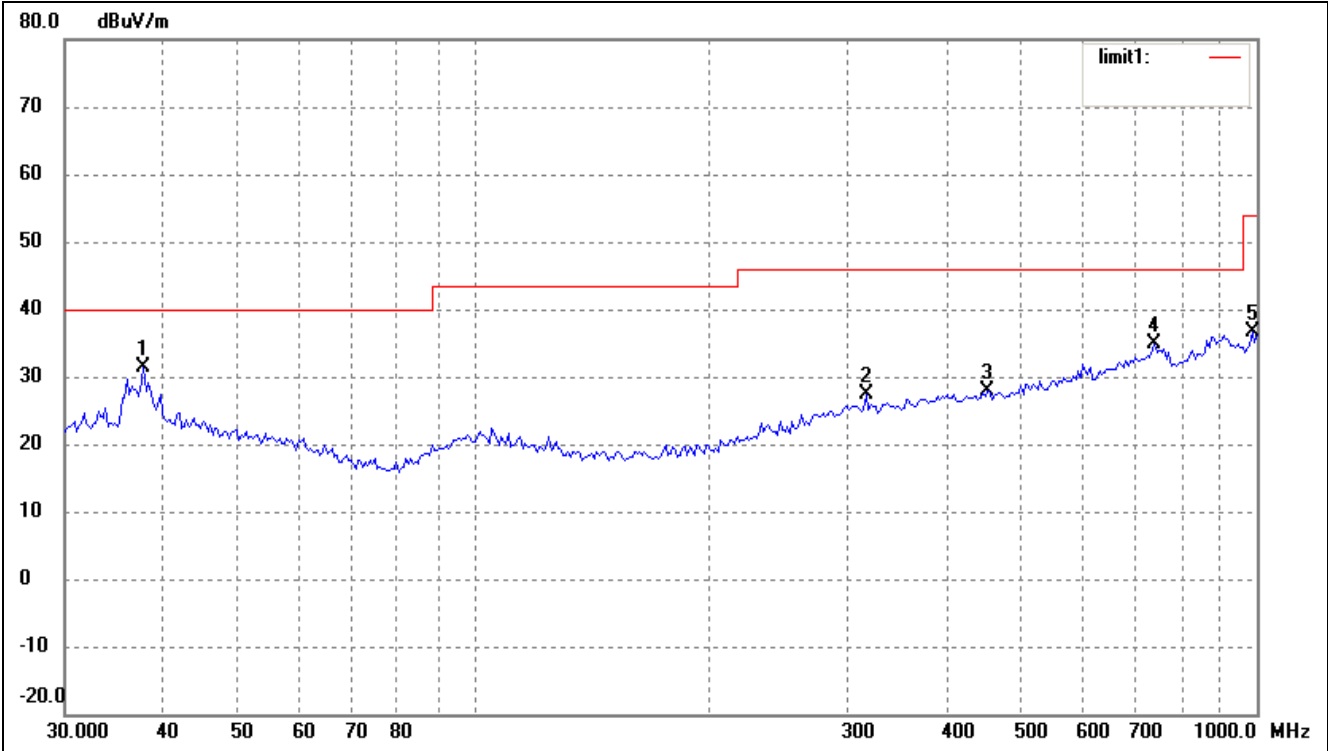
Comment: DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.7147	16.86	9.64	26.50	40.00	-13.50	360	100	peak
2	102.3597	15.89	6.61	22.50	43.50	-21.00	112	100	peak
3	724.2611	18.01	16.93	34.94	46.00	-11.06	180	200	peak
4	881.4067	17.84	19.03	36.87	46.00	-9.13	270	200	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	37.8121	21.98	9.33	31.31	40.00	-8.69	267	100	peak
2	316.5890	16.84	10.44	27.28	46.00	-18.72	116	100	peak
3	452.7197	16.27	11.58	27.85	46.00	-18.15	360	100	peak
4	739.6605	16.81	18.07	34.88	46.00	-11.12	228	100	peak
5	986.0717	17.36	19.17	36.53	54.00	-17.47	270	100	peak

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

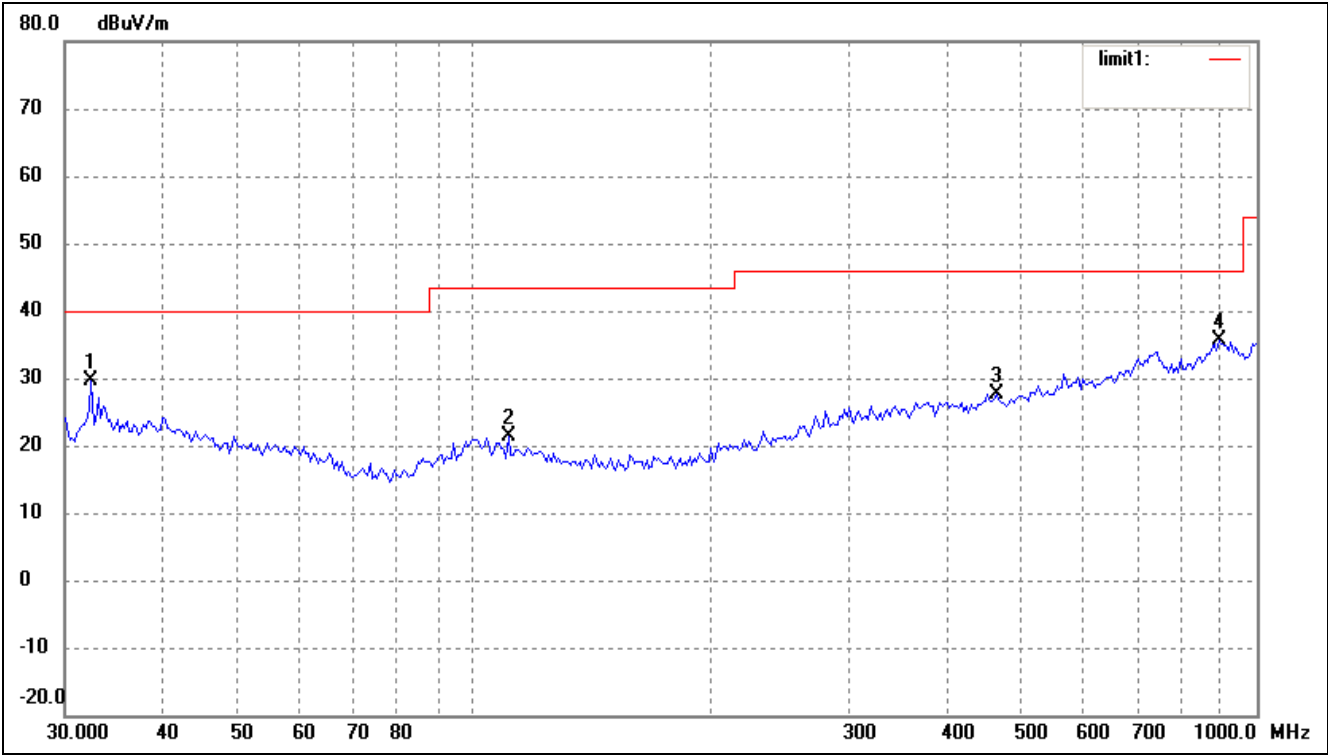
EUT:LM005 802.11n USB Adapter 300Mbps

Tested Model:005-1007

Operating Condition:802.11n-HT40 Transmitting Low Channel-2422MHz

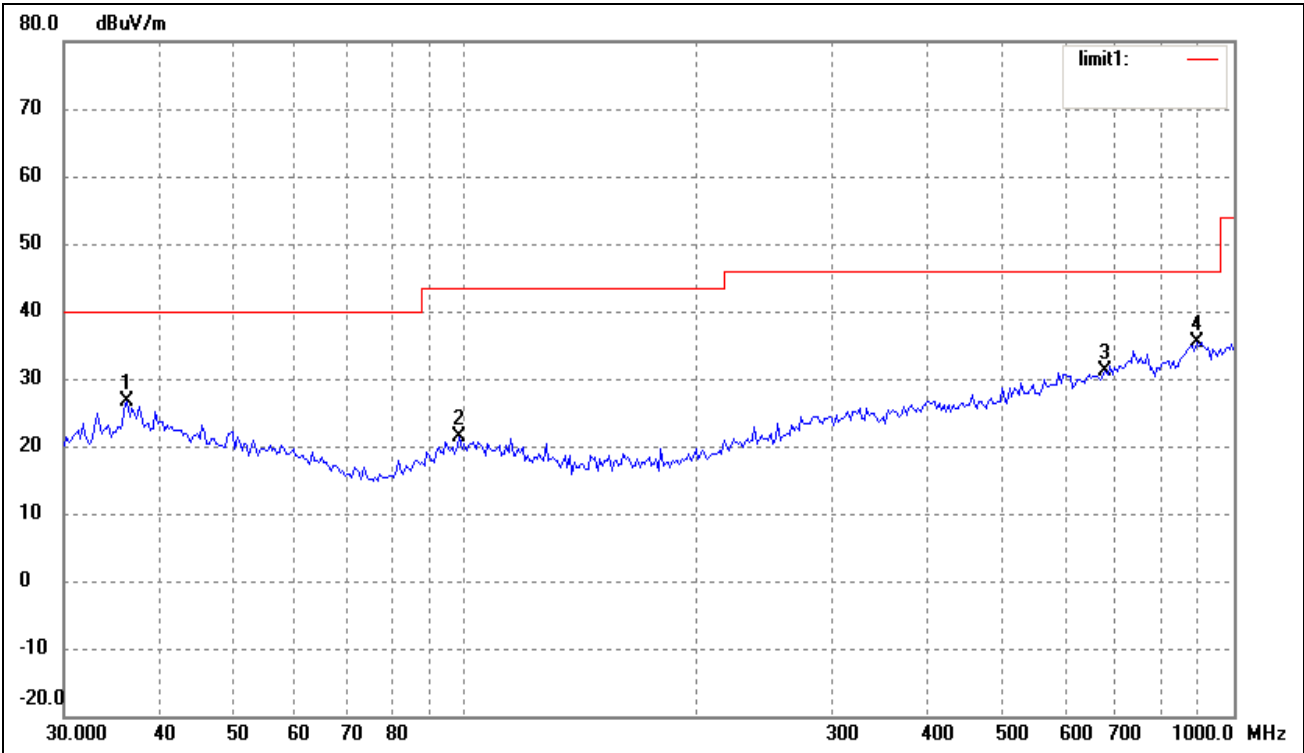
Comment:DC 5V

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	32.4059	21.23	8.44	29.67	40.00	-10.33	174	100	peak
2	110.5687	15.56	5.80	21.36	43.50	-22.14	160	100	peak
3	465.5994	16.02	11.69	27.71	46.00	-18.29	320	100	peak
4	893.8567	16.34	19.27	35.61	46.00	-10.39	360	100	peak

Test Specification: Vertical

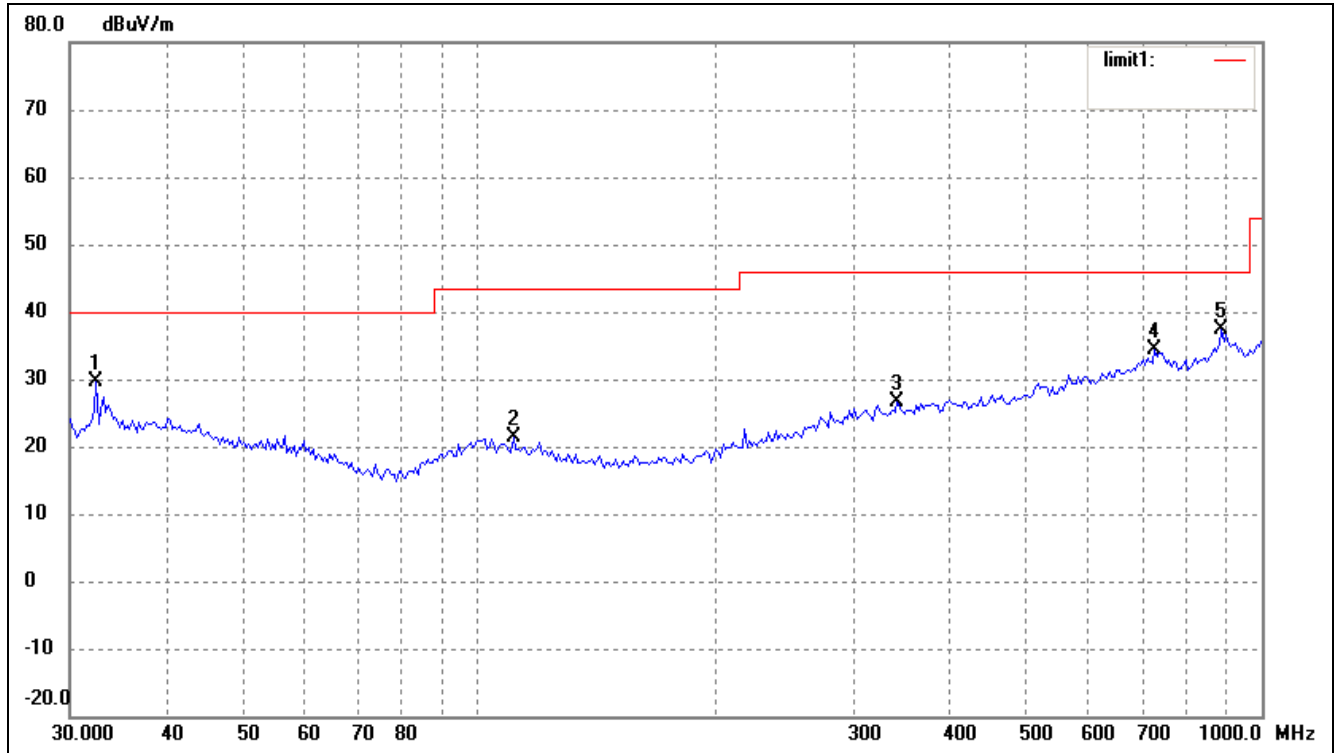


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	36.2541	17.45	9.09	26.54	40.00	-13.46	177	100	peak
2	98.1419	14.98	6.39	21.37	43.50	-22.13	90	100	peak
3	679.9600	15.48	15.55	31.03	46.00	-14.97	336	100	peak
4	893.8567	16.13	19.27	35.40	46.00	-10.60	360	100	peak

Operating Condition: 802.11n-HT40 Transmitting Middle Channel-2442MHz

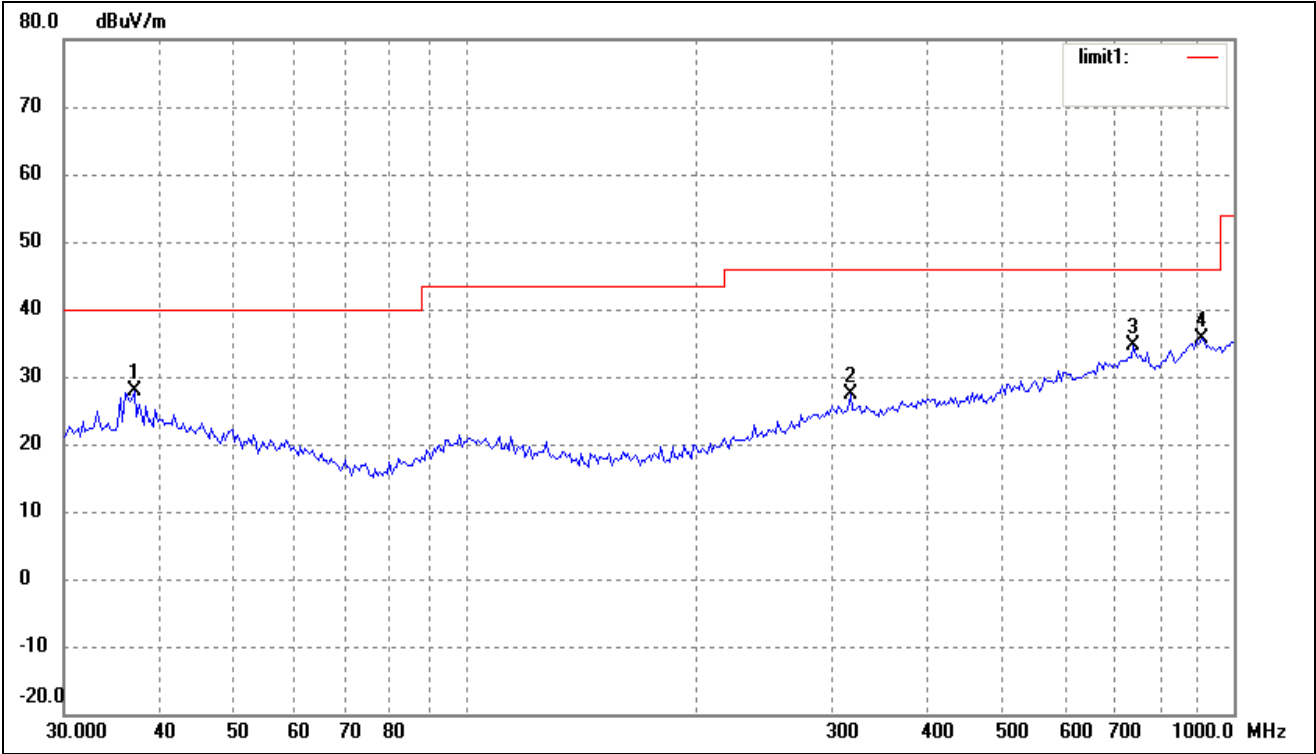
Comment: DC 5V

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	32.4059	21.23	8.44	29.67	40.00	-10.33	270	100	peak
2	110.5687	15.56	5.80	21.36	43.50	-22.14	164	100	peak
3	341.9787	16.40	10.16	26.56	46.00	-19.44	228	200	peak
4	729.3583	17.11	17.31	34.42	46.00	-11.58	130	200	peak
5	887.6099	18.21	19.15	37.36	46.00	-8.64	360	100	peak

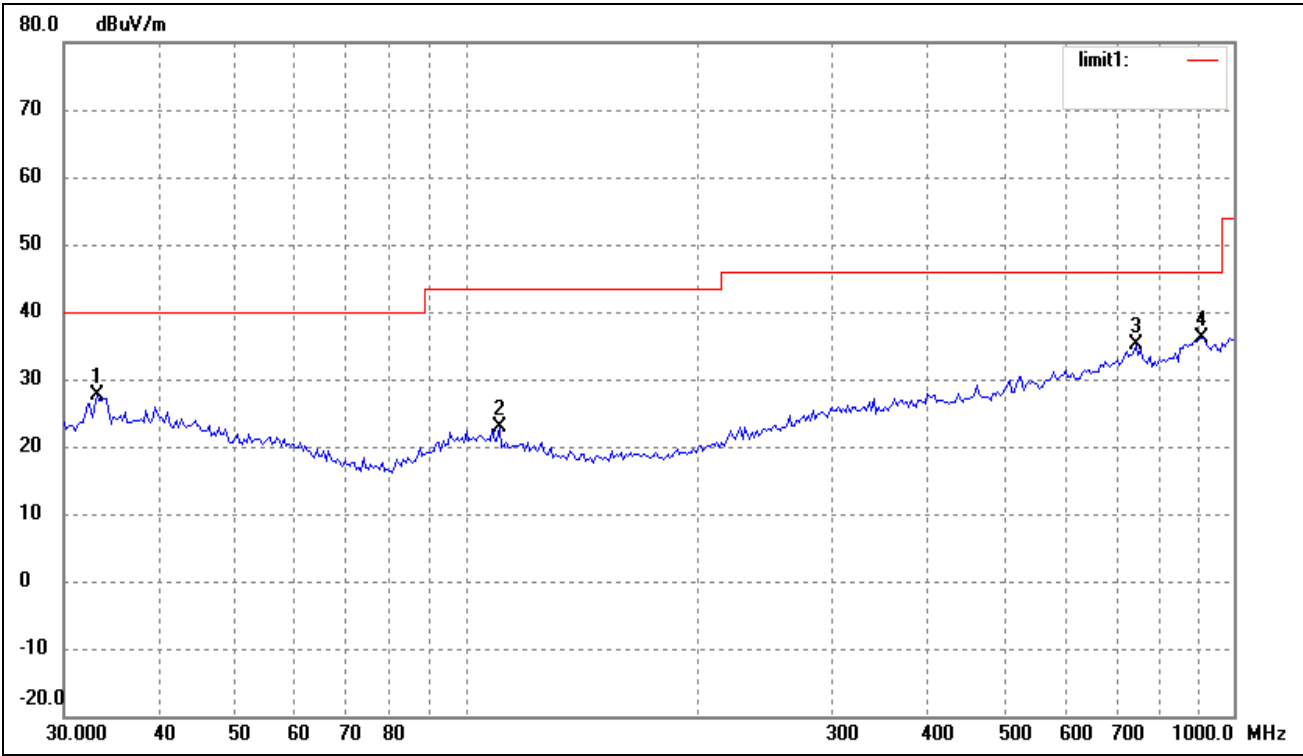
Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	37.0249	18.59	9.21	27.80	40.00	-12.20	360	100	peak
2	316.5890	16.84	10.44	27.28	46.00	-18.72	255	100	peak
3	739.6605	16.54	18.07	34.61	46.00	-11.39	270	100	peak
4	906.4824	16.47	19.15	35.62	46.00	-10.38	180	100	peak

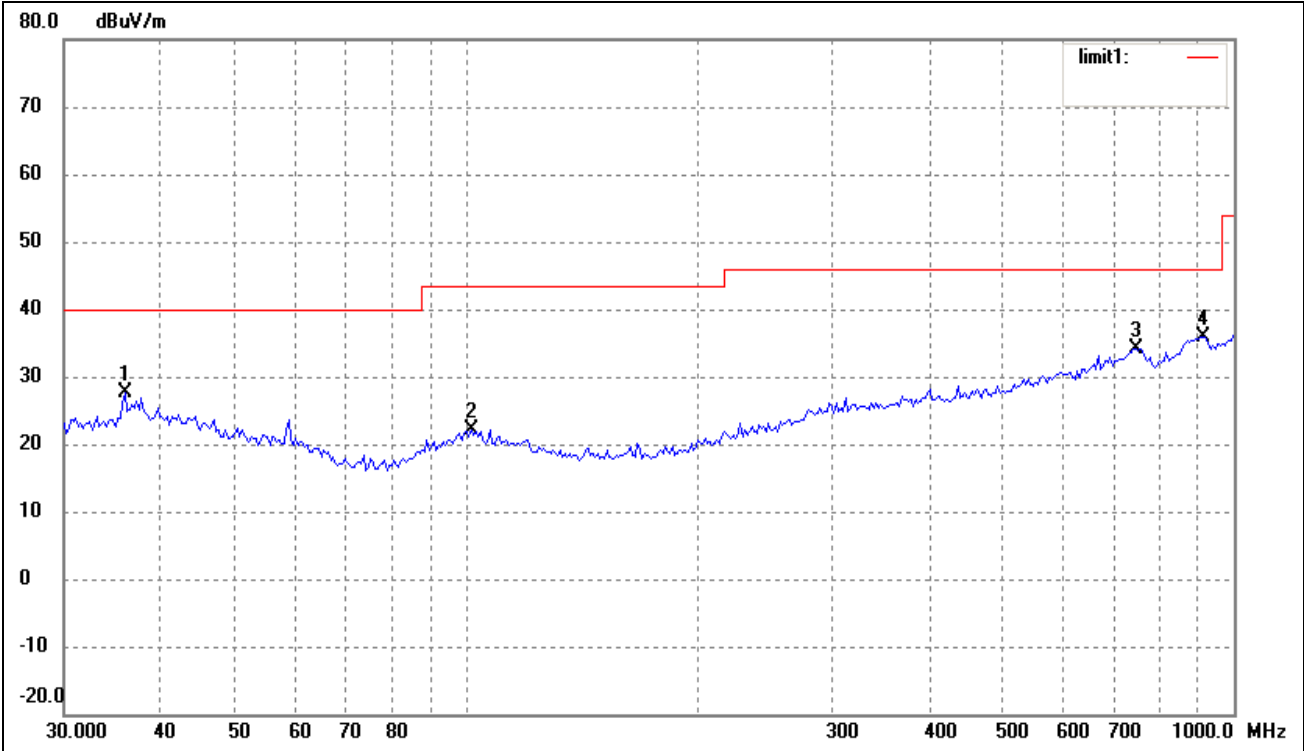
Operating Condition: 802.11n-HT40 Transmitting High Channel-2462MHz
Comment: DC 5V

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	33.0950	19.05	8.56	27.61	40.00	-12.39	176	100	peak
2	110.5687	16.99	5.80	22.79	43.50	-20.71	255	100	peak
3	744.8661	17.06	17.95	35.01	46.00	-10.99	360	100	peak
4	906.4824	16.94	19.15	36.09	46.00	-9.91	178	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	36.0007	18.59	9.04	27.63	40.00	-12.37	360	100	peak
2	101.6443	15.50	6.67	22.17	43.50	-21.33	225	100	peak
3	744.8661	16.16	17.95	34.11	46.00	-11.89	160	100	peak
4	912.8620	16.92	18.93	35.85	46.00	-10.15	310	100	peak

*Spurious Emissions Above 1GHz**Antenna 0:**Test Mode: 802.11b*

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824	54.09	0.57	54.66	74.00	-19.34	H	PK
4824	38.84	0.57	39.41	54.00	-14.59	H	AV
7236	46.30	3.69	49.99	74.00	-24.01	H	PK
7236	34.98	3.69	38.67	54.00	-15.33	H	AV
4824	57.31	0.57	57.88	74.00	-16.12	V	PK
4824	40.50	0.57	41.07	54.00	-12.93	V	AV
7236	49.11	3.69	52.80	74.00	-21.20	V	PK
7236	37.44	3.69	41.13	54.00	-12.87	V	AV
Middle Channel-2442MHz							
4884	54.74	0.66	55.40	74.00	-18.60	H	PK
4884	39.99	0.66	40.65	54.00	-13.35	H	AV
7326	47.77	3.76	51.53	74.00	-22.47	H	PK
7326	33.10	3.76	36.86	54.00	-17.14	H	AV
4884	53.97	0.66	54.63	74.00	-19.37	V	PK
4884	40.89	0.66	41.55	54.00	-12.45	V	AV
7326	47.98	3.76	51.74	74.00	-22.26	V	PK
7326	34.08	3.76	37.84	54.00	-16.16	V	AV
High Channel-2472MHz							
4944	55.82	0.74	56.56	74.00	-17.44	H	PK
4944	41.76	0.74	42.50	54.00	-11.50	H	AV
7416	46.38	3.83	50.21	74.00	-23.79	H	PK
7416	34.83	3.83	38.66	54.00	-15.34	H	AV
4944	54.94	0.74	55.68	74.00	-18.32	V	PK
4944	42.04	0.74	42.78	54.00	-11.22	V	AV
7416	47.99	3.83	51.82	74.00	-22.18	V	PK
7416	35.18	3.83	39.01	54.00	-14.99	V	AV

Test Mode: 802.11g

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824	55.50	0.57	56.07	74.00	-17.93	H	PK
4824	42.23	0.57	42.80	54.00	-11.20	H	AV
7236	48.42	3.69	52.11	74.00	-21.89	H	PK
7236	34.40	3.69	38.09	54.00	-15.91	H	AV
4824	55.99	0.57	56.56	74.00	-17.44	V	PK
4824	42.65	0.57	43.22	54.00	-10.78	V	AV
7236	49.22	3.69	52.91	74.00	-21.09	V	PK
7236	35.54	3.69	39.23	54.00	-14.77	V	AV
Middle Channel-2442MHz							
4884	55.10	0.66	55.76	74.00	-18.24	H	PK
4884	43.28	0.66	43.94	54.00	-10.06	H	AV
7326	47.38	3.76	51.14	74.00	-22.86	H	PK
7326	35.27	3.76	39.03	54.00	-14.97	H	AV
4884	57.07	0.66	57.73	74.00	-16.27	V	PK
4884	43.86	0.66	44.52	54.00	-9.48	V	AV
7326	48.40	3.76	52.16	74.00	-21.84	V	PK
7326	35.33	3.76	39.09	54.00	-14.91	V	AV
High Channel-2472MHz							
4944	54.00	0.74	54.74	74.00	-19.26	H	PK
4944	40.75	0.74	41.49	54.00	-12.51	H	AV
7416	47.18	3.83	51.01	74.00	-22.99	H	PK
7416	34.73	3.83	38.56	54.00	-15.44	H	AV
4944	56.11	0.74	56.85	74.00	-17.15	V	PK
4944	42.69	0.74	43.43	54.00	-10.57	V	AV
7416	48.58	3.83	52.41	74.00	-21.59	V	PK
7416	35.95	3.83	39.78	54.00	-14.22	V	AV

Test Mode: 802.11n-HT20

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824	55.60	0.57	56.17	74.00	-17.83	H	PK
4824	40.54	0.57	41.11	54.00	-12.89	H	AV
7236	47.26	3.69	50.95	74.00	-23.05	H	PK
7236	34.44	3.69	38.13	54.00	-15.87	H	AV
4824	56.71	0.57	57.28	74.00	-16.72	V	PK
4824	43.18	0.57	43.75	54.00	-10.25	V	AV
7236	49.21	3.69	52.90	74.00	-21.10	V	PK
7236	35.77	3.69	39.46	54.00	-14.54	V	AV
Middle Channel-2442MHz							
4884	54.16	0.66	54.82	74.00	-19.18	H	PK
4884	42.48	0.66	43.14	54.00	-10.86	H	AV
7326	48.74	3.76	52.50	74.00	-21.50	H	PK
7326	33.10	3.76	36.86	54.00	-17.14	H	AV
4884	54.92	0.66	55.58	74.00	-18.42	V	PK
4884	42.62	0.66	43.28	54.00	-10.72	V	AV
7326	48.49	3.76	52.25	74.00	-21.75	V	PK
7326	35.20	3.76	38.96	54.00	-15.04	V	AV
High Channel-2472MHz							
4944	53.90	0.74	54.64	74.00	-19.36	H	PK
4944	43.23	0.74	43.97	54.00	-10.03	H	AV
7416	48.31	3.83	52.14	74.00	-21.86	H	PK
7416	36.10	3.83	39.93	54.00	-14.07	H	AV
4944	55.70	0.74	56.44	74.00	-17.56	V	PK
4944	41.48	0.74	42.22	54.00	-11.78	V	AV
7416	48.55	3.83	52.38	74.00	-21.62	V	PK
7416	35.36	3.83	39.19	54.00	-14.81	V	AV

Test Mode: 802.11n-HT40

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2422MHz							
4844	53.25	0.60	53.85	74.00	-20.15	H	PK
4844	38.25	0.60	38.85	54.00	-15.15	H	AV
7266	46.48	3.72	50.20	74.00	-23.80	H	PK
7266	32.56	3.72	36.28	54.00	-17.72	H	AV
4844	54.22	0.60	54.82	74.00	-19.18	V	PK
4844	39.42	0.60	40.02	54.00	-13.98	V	AV
7266	48.81	3.72	52.53	74.00	-21.47	V	PK
7266	34.78	3.72	38.50	54.00	-15.50	V	AV
Middle Channel-2442MHz							
4884	52.53	0.66	53.19	74.00	-20.81	H	PK
4884	37.88	0.66	38.54	54.00	-15.46	H	AV
7326	44.88	3.76	48.64	74.00	-25.36	H	PK
7326	32.03	3.76	35.79	54.00	-18.21	H	AV
4884	53.74	0.66	54.40	74.00	-19.60	V	PK
4884	39.95	0.66	40.61	54.00	-13.39	V	AV
7326	45.78	3.76	49.54	74.00	-24.46	V	PK
7326	34.00	3.76	37.76	54.00	-16.24	V	AV
High Channel-2462MHz							
4924	52.65	0.72	53.37	74.00	-20.63	H	PK
4924	39.37	0.72	40.09	54.00	-13.91	H	AV
7386	45.63	3.81	49.44	74.00	-24.56	H	PK
7386	30.73	3.81	34.54	54.00	-19.46	H	AV
4924	54.84	0.72	55.56	74.00	-18.44	V	PK
4924	40.83	0.72	41.55	54.00	-12.45	V	AV
7386	48.18	3.81	51.99	74.00	-22.01	V	PK
7386	35.12	3.81	38.93	54.00	-15.07	V	AV

Antenna 1:

Test Mode: 802.11b

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824	44.12	0.57	44.69	74.00	-29.31	H	PK
4824	33.52	0.57	34.09	54.00	-19.91	H	AV
7236	46.84	3.69	50.53	74.00	-23.47	H	PK
7236	38.45	3.69	42.14	54.00	-11.86	H	AV
4824	43.20	0.57	43.77	74.00	-30.23	V	PK
4824	33.63	0.57	34.20	54.00	-19.80	V	AV
7236	48.50	3.69	52.19	74.00	-21.81	V	PK
7236	37.19	3.69	40.88	54.00	-13.12	V	AV
Middle Channel-2442MHz							
4884	44.90	0.66	45.56	74.00	-28.44	H	PK
4884	32.01	0.66	32.67	54.00	-21.33	H	AV
7326	47.95	3.76	51.71	74.00	-22.29	H	PK
7326	36.41	3.76	40.17	54.00	-13.83	H	AV
4884	44.41	0.66	45.07	74.00	-28.93	V	PK
4884	31.99	0.66	32.65	54.00	-21.35	V	AV
7326	48.51	3.76	52.27	74.00	-21.73	V	PK
7326	37.4	3.76	41.16	54.00	-12.84	V	AV
High Channel-2472MHz							
4944	43.17	0.74	43.91	74.00	-30.09	H	PK
4944	32.14	0.74	32.88	54.00	-21.12	H	AV
7416	47.74	3.83	51.57	74.00	-22.43	H	PK
7416	35.71	3.83	39.54	54.00	-14.46	H	AV
4944	43.52	0.74	44.26	74.00	-29.74	V	PK
4944	32.17	0.74	32.91	54.00	-21.09	V	AV
7416	49.58	3.83	53.41	74.00	-20.59	V	PK
7416	36.97	3.83	40.80	54.00	-13.20	V	AV

Test Mode: 802.11g

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824	43.22	0.57	43.79	74.00	-30.21	H	PK
4824	33.44	0.57	34.01	54.00	-19.99	H	AV
7236	51.85	3.69	55.54	74.00	-18.46	H	PK
7236	38.08	3.69	41.77	54.00	-12.23	H	AV
4824	43.41	0.57	43.98	74.00	-30.02	V	PK
4824	33.42	0.57	33.99	54.00	-20.01	V	AV
7236	51.08	3.69	54.77	74.00	-19.23	V	PK
7236	37.86	3.69	41.55	54.00	-12.45	V	AV
Middle Channel-2442MHz							
4884	44.60	0.66	45.26	74.00	-28.74	H	PK
4884	32.02	0.66	32.68	54.00	-21.32	H	AV
7326	50.42	3.76	54.18	74.00	-19.82	H	PK
7326	36.66	3.76	40.42	54.00	-13.58	H	AV
4884	43.90	0.66	44.56	74.00	-29.44	V	PK
4884	31.96	0.66	32.62	54.00	-21.38	V	AV
7326	53.12	3.76	56.88	74.00	-17.12	V	PK
7326	38.75	3.76	42.51	54.00	-11.49	V	AV
High Channel-2472MHz							
4944	43.28	0.74	44.02	74.00	-29.98	H	PK
4944	31.87	0.74	32.61	54.00	-21.39	H	AV
7416	48.11	3.83	51.94	74.00	-22.06	H	PK
7416	37.07	3.83	40.90	54.00	-13.10	H	AV
4944	41.50	0.74	42.24	74.00	-31.76	V	PK
4944	32.04	0.74	32.78	54.00	-21.22	V	AV
7416	48.19	3.83	52.02	74.00	-21.98	V	PK
7416	36.98	3.83	40.81	54.00	-13.19	V	AV

Test Mode: 802.11n-HT20

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824	42.52	0.57	43.09	74.00	-30.91	H	PK
4824	33.62	0.57	34.19	54.00	-19.81	H	AV
7236	36.52	3.69	40.21	74.00	-33.79	H	PK
7236	34.01	3.69	37.70	54.00	-16.30	H	AV
4824	43.82	0.57	44.39	74.00	-29.61	V	PK
4824	33.65	0.57	34.22	54.00	-19.78	V	AV
7236	54.17	3.69	57.86	74.00	-16.14	V	PK
7236	37.36	3.69	41.05	54.00	-12.95	V	AV
Middle Channel-2442MHz							
4884	45.17	0.66	45.83	74.00	-28.17	H	PK
4884	31.94	0.66	32.60	54.00	-21.40	H	AV
7326	48.62	3.76	52.38	74.00	-21.62	H	PK
7326	38.35	3.76	42.11	54.00	-11.89	H	AV
4884	44.60	0.66	45.26	74.00	-28.74	V	PK
4884	32.02	0.66	32.68	54.00	-21.32	V	AV
7326	53.52	3.76	57.28	74.00	-16.72	V	PK
7326	38.46	3.76	42.22	54.00	-11.78	V	AV
High Channel-2472MHz							
4944	42.76	0.74	43.50	74.00	-30.50	H	PK
4944	31.98	0.74	32.72	54.00	-21.28	H	AV
7416	50.45	3.83	54.28	74.00	-19.72	H	PK
7416	38.35	3.83	42.18	54.00	-11.82	H	AV
4944	42.40	0.74	43.14	74.00	-30.86	V	PK
4944	32.14	0.74	32.88	54.00	-21.12	V	AV
7416	54.24	3.83	58.07	74.00	-15.93	V	PK
7416	39.20	3.83	43.03	54.00	-10.97	V	AV

Test Mode: 802.11n-HT40

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2422MHz							
4844	42.52	0.60	43.12	74.00	-30.88	H	PK
4844	33.30	0.60	33.9	54.00	-20.10	H	AV
7266	46.53	3.72	50.25	74.00	-23.75	H	PK
7266	34.11	3.72	37.83	54.00	-16.17	H	AV
4844	43.25	0.60	43.85	74.00	-30.15	V	PK
4844	31.56	0.60	32.16	54.00	-21.84	V	AV
7266	44.36	3.72	48.08	74.00	-25.92	V	PK
7266	43.32	3.72	47.04	54.00	-6.96	V	AV
Middle Channel-2442MHz							
4884	44.21	0.66	44.87	74.00	-29.13	H	PK
4884	32.01	0.66	32.67	54.00	-21.33	H	AV
7326	35.98	3.76	39.74	74.00	-34.26	H	PK
7326	24.30	3.76	28.06	54.00	-25.94	H	AV
4884	53.86	0.66	54.52	74.00	-19.48	V	PK
4884	41.84	0.66	42.50	54.00	-11.5	V	AV
7326	45.92	3.76	49.68	74.00	-24.32	V	PK
7326	34.31	3.76	38.07	54.00	-15.93	V	AV
High Channel-2462MHz							
4924	43.62	0.72	44.34	74.00	-29.66	H	PK
4924	32.04	0.72	32.76	54.00	-21.24	H	AV
7386	35.25	3.81	39.06	74.00	-34.94	H	PK
7386	24.11	3.81	27.92	54.00	-26.08	H	AV
4924	52.63	0.72	53.35	74.00	-20.65	V	PK
4924	43.24	0.72	43.96	54.00	-10.04	V	AV
7386	45.03	3.81	48.84	74.00	-25.16	V	PK
7386	43.31	3.81	47.12	54.00	-6.88	V	AV

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 3th Harmonics are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
The measurements greater than 20dB below the limit from 9kHz to 30MHz.

9. Out of Band Emissions

9.1 Standard Applicable

According to §15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

9.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2013-05-07	2014-05-06
EMI Test Receiver	R&S	ESVB	825471/005	2013-05-07	2014-05-06
Pre-amplifier	Agilent	8447F	3113A06717	2013-05-07	2014-05-06
Pre-amplifier	Compliance Direction	PAP-0118	24002	2013-05-07	2014-05-06
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2013-04-20	2014-04-19
Horn Antenna	ETS	3117	00086197	2013-04-20	2014-04-19

9.3 Test Procedure

According to the KDB 558074, 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 V03, the conducted spurious emissions test method as follows:

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

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

9.4 Environmental Conditions

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

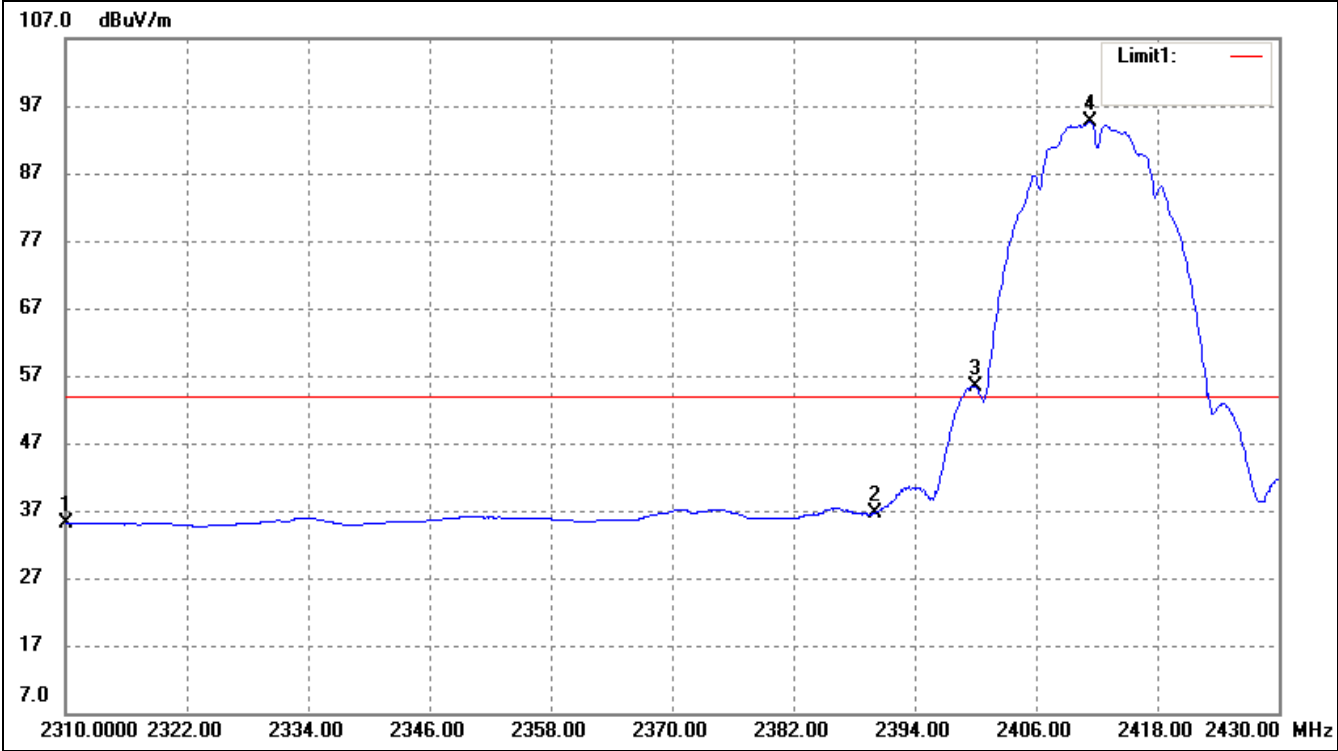
9.5 Summary of Test Results/Plots

Please refer to the test plots as below.

Antenna 0:

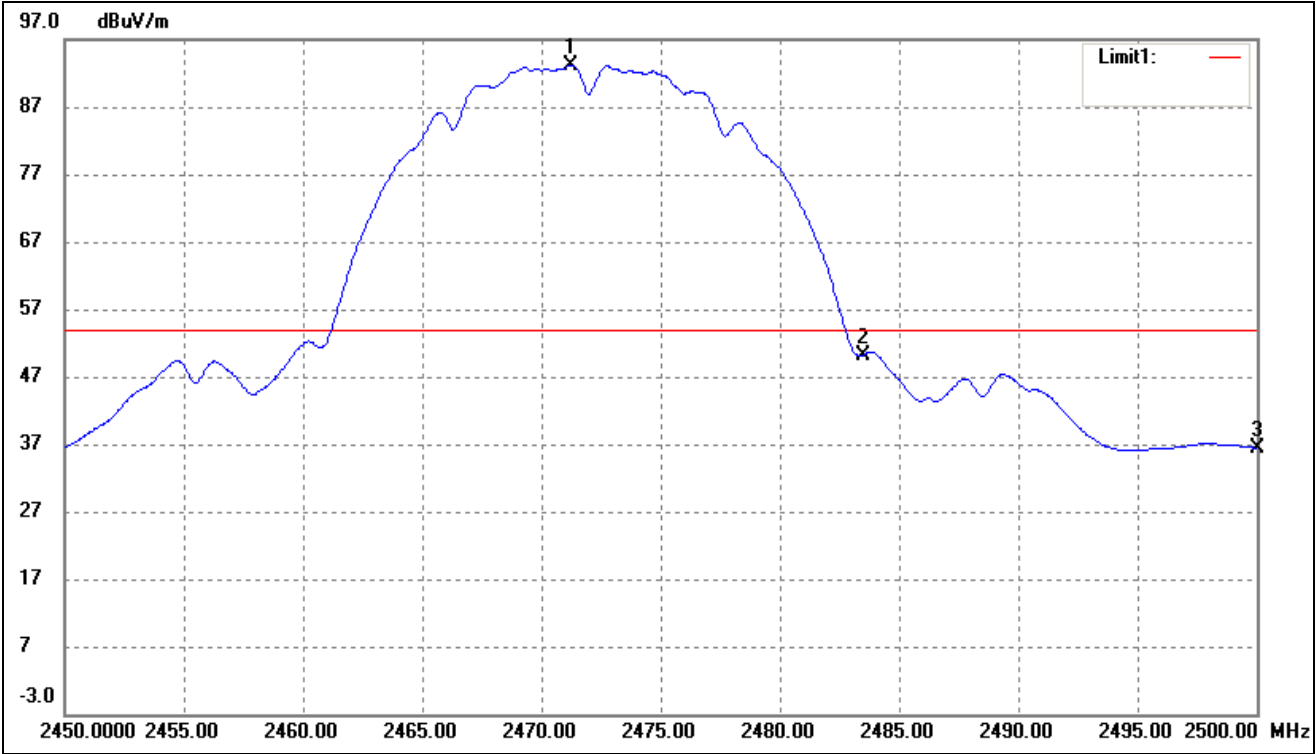
802.11b-Lowest Bandedge

Vertical (Worst case)



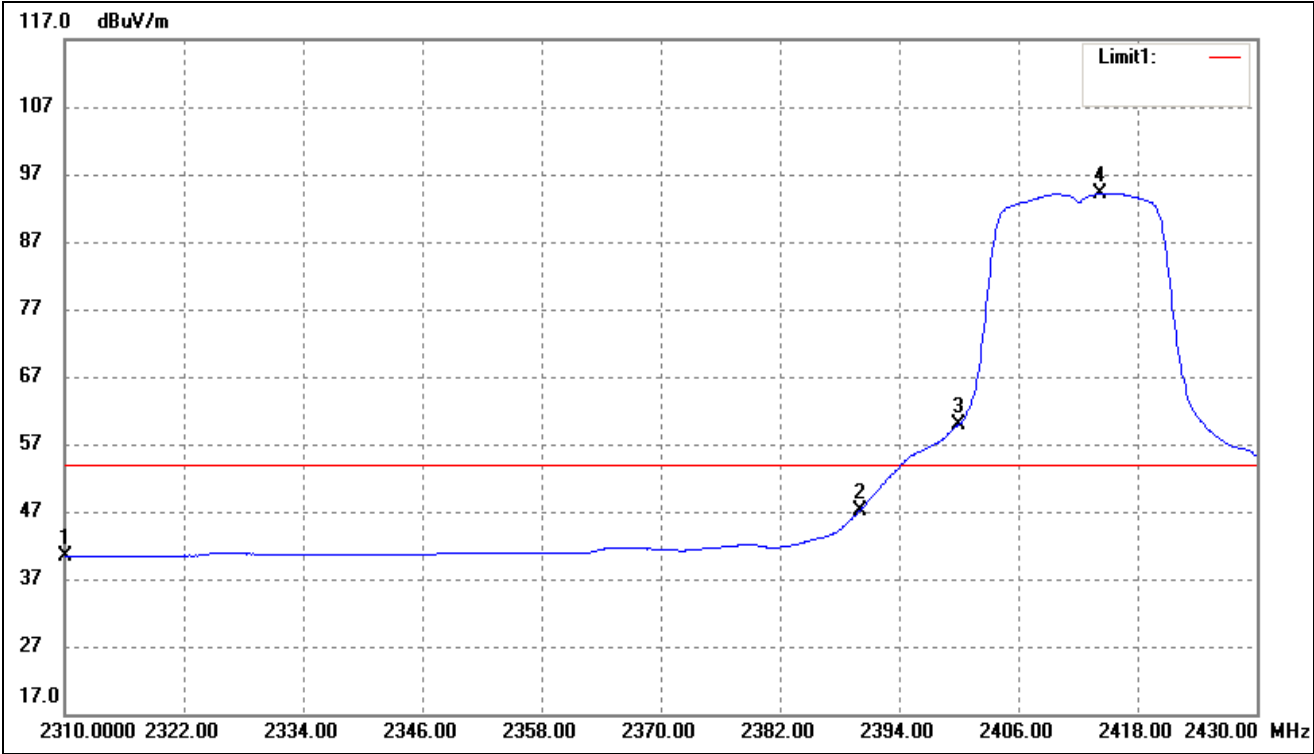
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	18.80	16.34	35.14	54.00	-18.86	Average Detector
	2310.000	31.04	16.34	47.38	74.00	-26.62	Peak Detector
2	2390.000	19.65	17.03	36.68	54.00	-17.32	Average Detector
	2390.000	31.44	17.03	48.47	74.00	-25.53	Peak Detector
3	2400.000	38.21	17.11	55.32	Delta=39.41		Average Detector
	2411.280	77.54	17.19	94.73			Peak Detector

802.11b-Highest Bandedge
Vertical (Worst case)



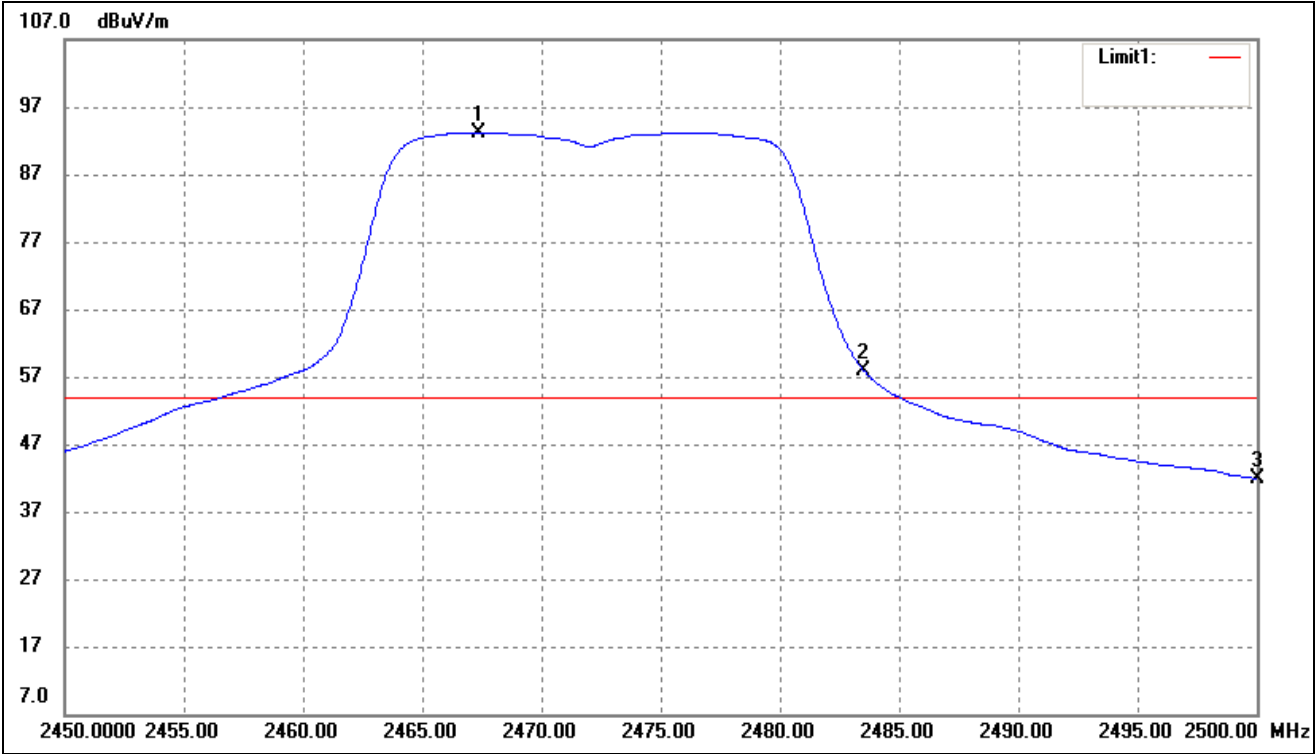
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2471.250	75.55	17.65	93.20	/	/	Average Detector
	2472.950	82.01	17.66	99.67	/	/	Peak Detector
2	2483.500	Delta = 44.91dBc		48.29	54.00	-5.71	Average Detector
	2483.500			54.76	74.00	-19.24	Peak Detector
3	2500.000	18.61	17.86	36.47	54.00	-17.53	Average Detector
	2500.000	31.21	17.86	49.07	74.00	-24.93	Peak Detector

802.11g-Lowest Bandedge
Vertical (Worst case)



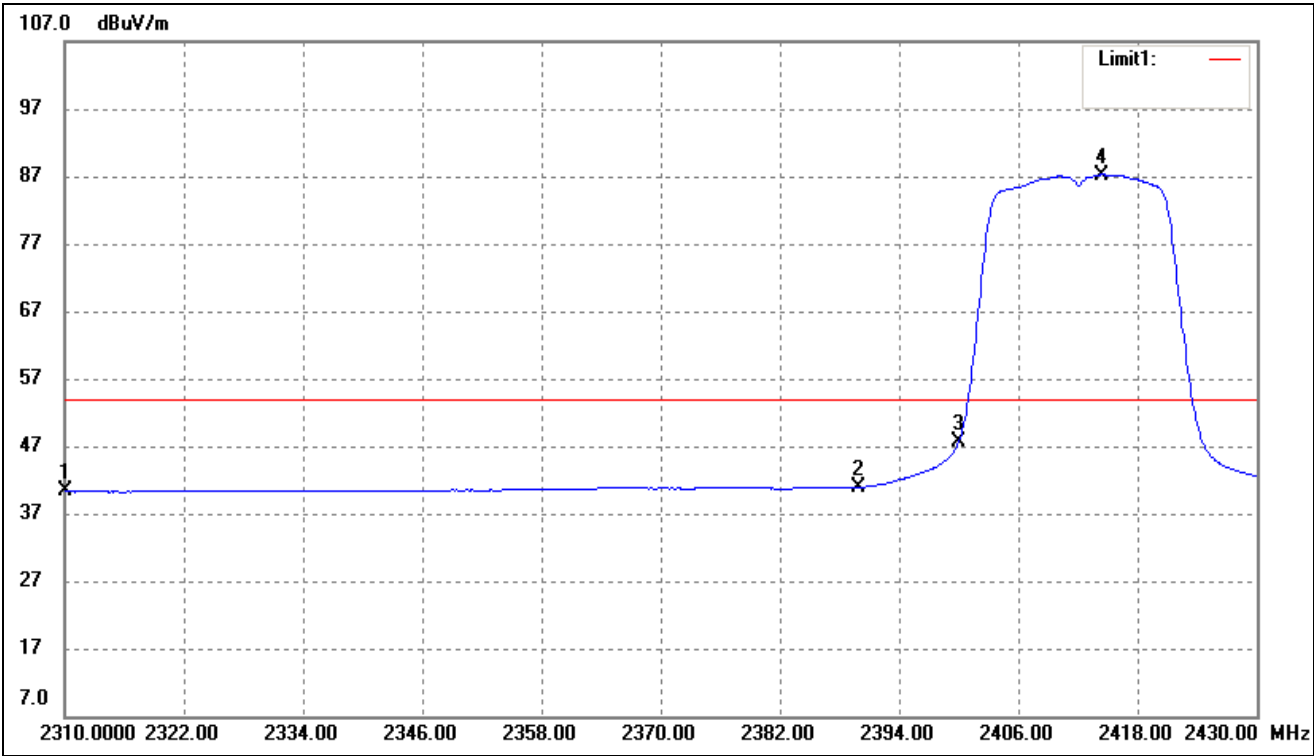
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	24.09	16.34	40.43	54.00	-13.57	Average Detector
	2310.000	35.88	16.34	52.22	74.00	-21.78	Peak Detector
2	2390.000	30.16	17.03	47.19	54.00	-6.81	Average Detector
	2390.000	48.68	17.03	65.71	74.00	-8.29	Peak Detector
3	2400.000	42.81	17.11	59.92	Delta=34.32		Average Detector
	2414.160	77.02	17.22	94.24			Peak Detector

802.11g-Highest Bandedge
Vertical (Worst case)



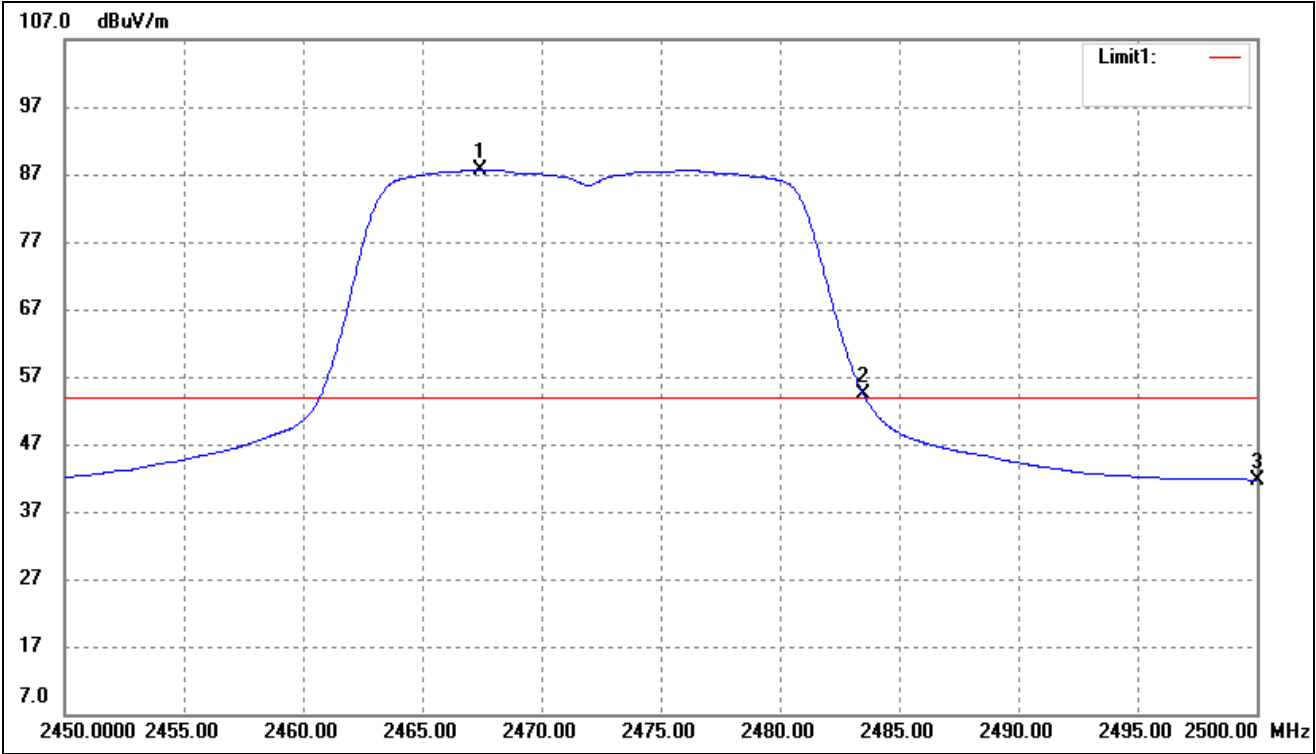
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2467.350	75.64	17.60	93.24	/	/	Average Detector
	2467.350	86.80	17.59	104.40	/	/	Peak Detector
1	2483.500	Delta = 52.78dBc		40.46	54.00	-13.54	Average Detector
	2483.500			51.62	74.00	-22.38	Peak Detector
3	2500.000	23.97	17.86	41.83	54.00	-12.17	Average Detector
	2500.000	39.43	17.86	57.29	74.00	-16.71	Peak Detector

802.11n-HT20-MCS7-Lowest Bandedge
Vertical (Worst case)



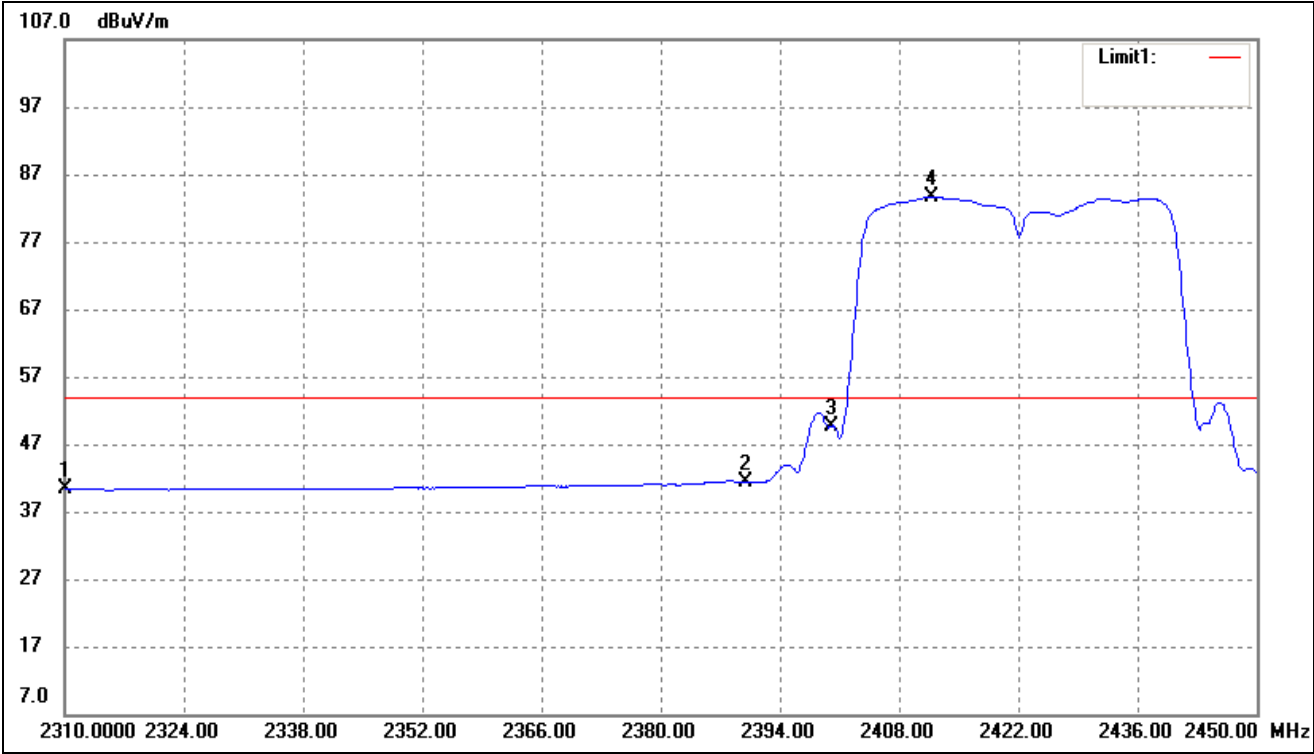
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	23.95	16.34	40.29	54.00	-13.71	Average Detector
	2310.000	35.16	16.34	51.50	74.00	-22.50	Peak Detector
2	2390.000	23.91	17.03	40.94	54.00	-13.06	Average Detector
	2390.000	34.92	17.03	51.95	74.00	-22.05	Peak Detector
3	2400.000	30.42	17.11	47.53	Delta=39.72		Average Detector
	2414.400	70.03	17.22	87.25			Peak Detector

802.11n-HT20-MCS7-Highest Bandedge
Vertical (Worst case)



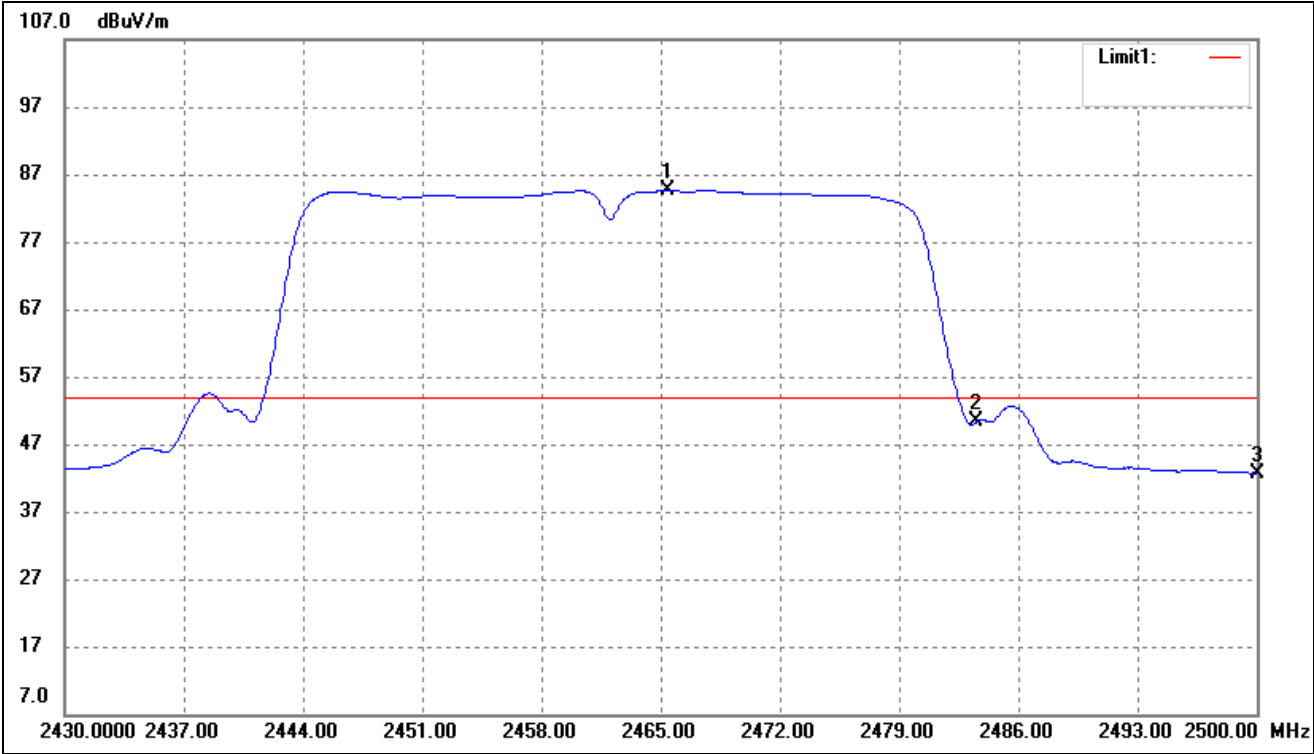
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2467.400	70.08	17.60	87.68	/	/	Average Detector
	2466.900	81.79	17.60	99.39	/	/	Peak Detector
2	2483.500	Delta =51.35dBc		36.33	54.00	-17.67	Average Detector
	2483.500			48.04	74.00	-25.96	Peak Detector
3	2500.000	23.86	17.86	41.72	54.00	-12.28	Average Detector
	2500.000	36.28	17.86	54.14	74.00	-19.86	Peak Detector

802.11n-HT40-MCS7-Lowest Bandedge
Vertical (Worst case)



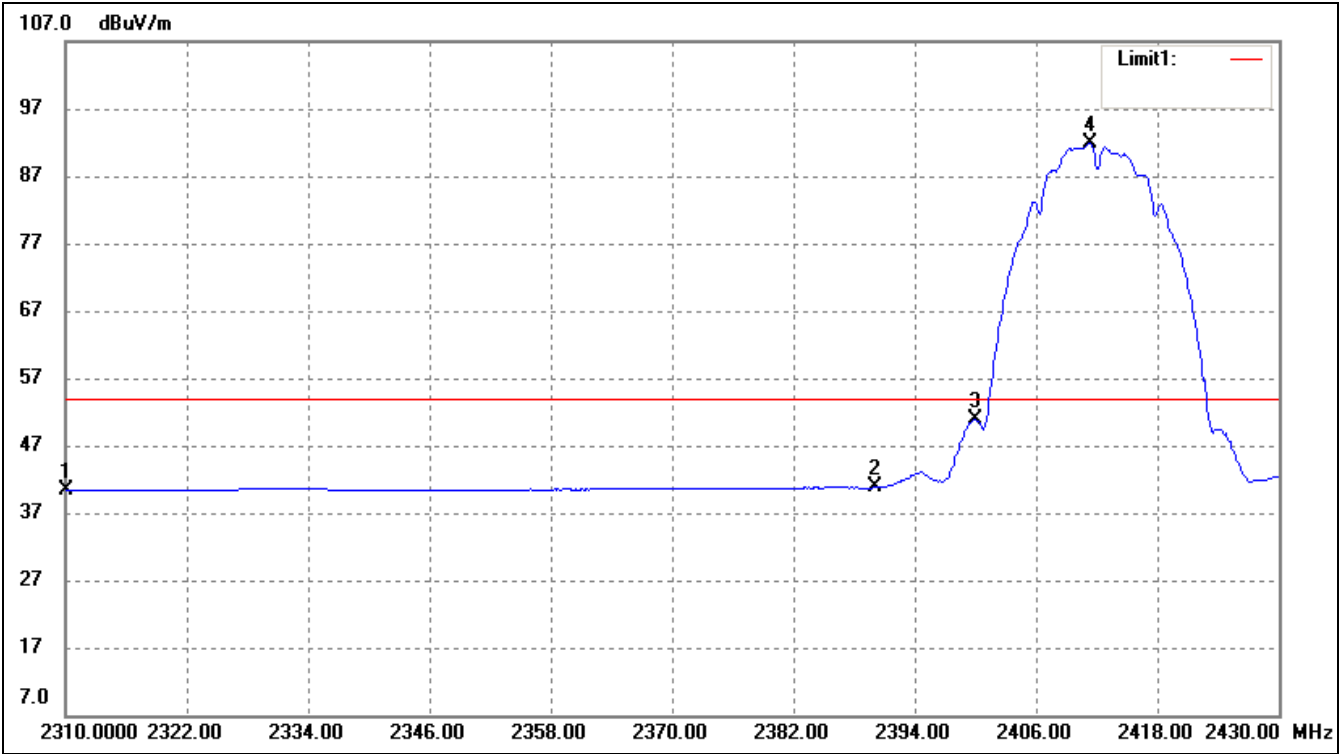
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	23.96	16.34	40.30	54.00	-13.70	Average Detector
	2310.000	35.63	16.34	51.97	74.00	-22.03	Peak Detector
2	2390.000	24.30	17.03	41.33	54.00	-12.67	Average Detector
	2390.000	35.51	17.03	52.54	74.00	-21.46	Peak Detector
3	2400.000	32.62	17.11	49.73	Delta=34.02		Average Detector
	2411.780	66.55	17.20	83.75			Peak Detector

802.11n-HT40-MCS7-Highest Bandedge
Vertical (Worst case)



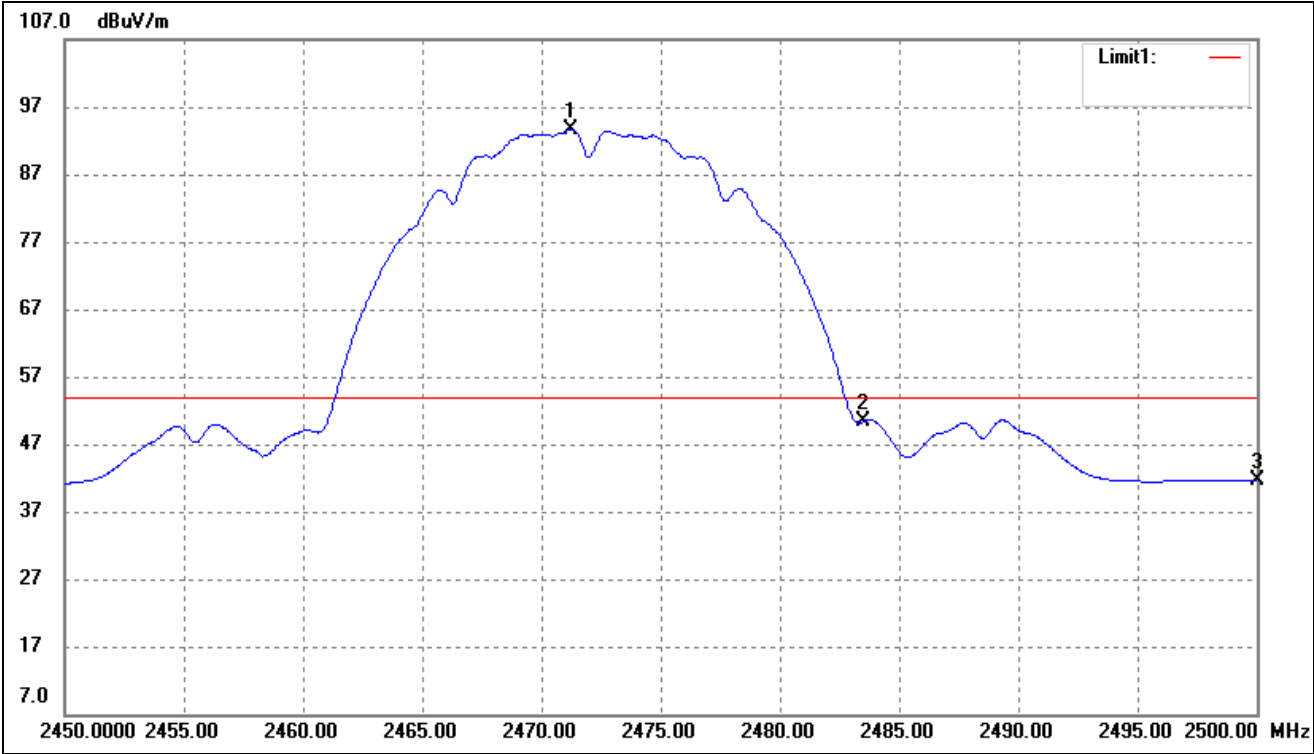
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2465.420	67.06	17.59	84.65	/	/	Average Detector
	2465.140	79.02	17.59	96.61	/	/	Peak Detector
2	2483.500	Delta = 51.52dBc		33.13	54.00	-20.87	Average Detector
	2483.500			45.09	74.00	-28.91	Peak Detector
3	2500.000	24.89	17.86	42.75	54.00	-11.25	Average Detector
4	2500.000	36.44	17.86	54.30	74.00	-19.70	Peak Detector

Antenna 1:
802.11b-Lowest Bandedge
Vertical (Worst case)



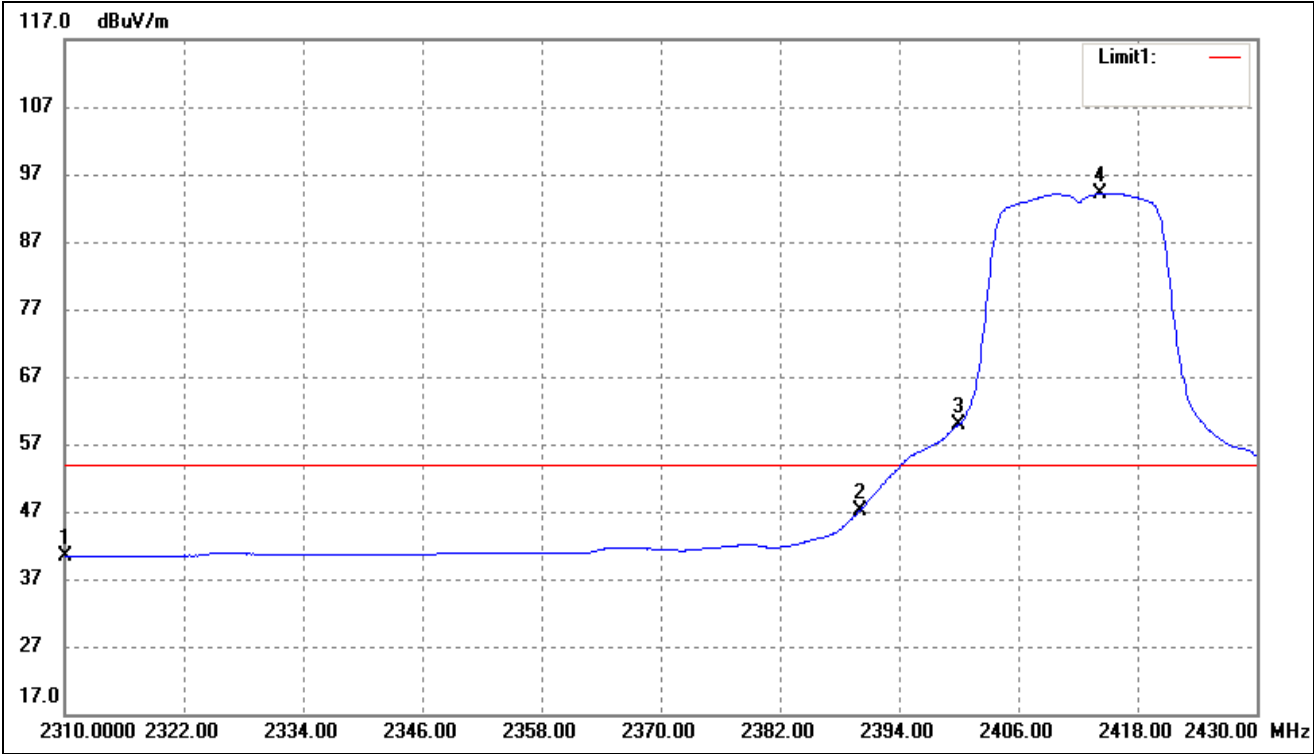
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	23.99	16.34	40.33	54.00	-13.67	Average Detector
	2310.000	35.58	16.34	51.92	74.00	-22.08	Peak Detector
2	2390.000	23.75	17.03	40.78	54.00	-13.22	Average Detector
	2390.000	35.19	17.03	52.22	74.00	-21.78	Peak Detector
3	2400.000	33.71	17.11	50.82	Delta=41.03		Average Detector
	2411.280	74.66	17.19	91.85			Peak Detector

802.11b-Highest Bandedge
Vertical (Worst case)



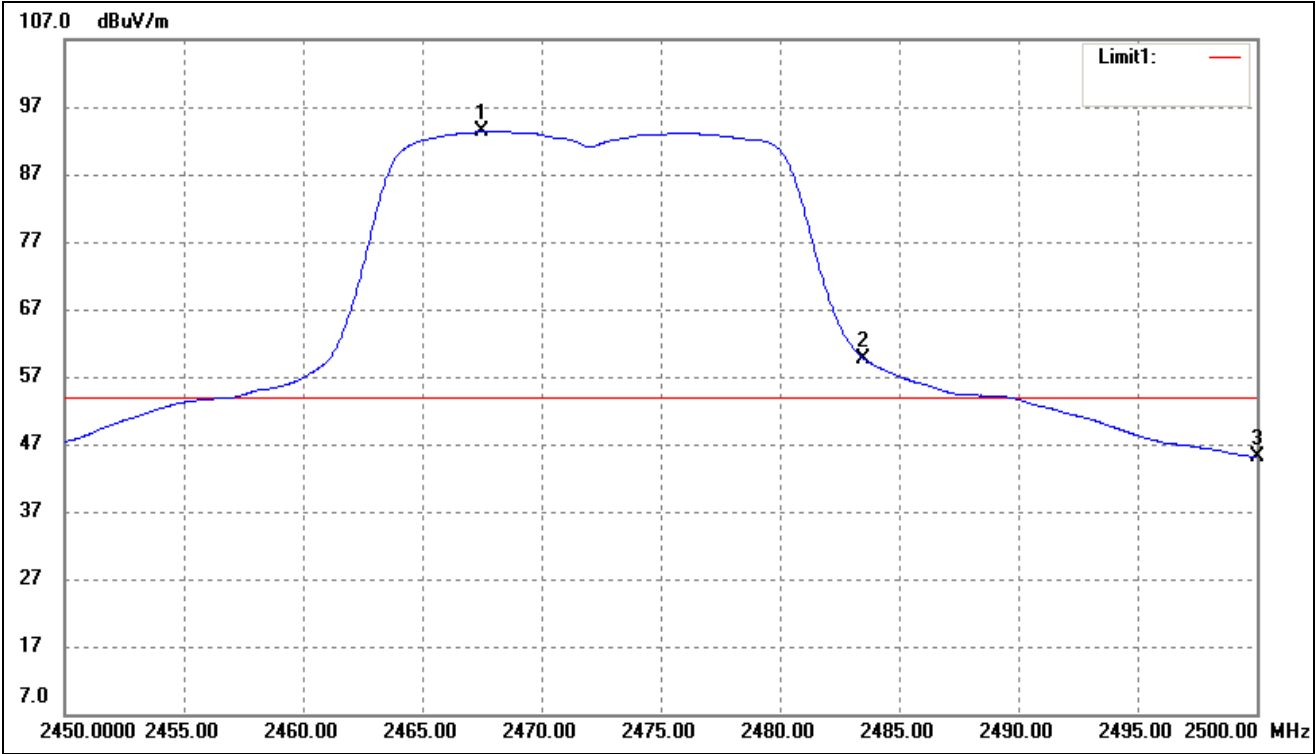
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2471.250	76.09	17.65	93.74	/	/	Average Detector
	2470.950	80.81	17.64	98.45	/	/	Peak Detector
2	2483.500	Delta = 58.50dBc		35.24	54.00	-18.76	Average Detector
	2483.500			39.95	74.00	-34.05	Peak Detector
3	2500.000	23.67	17.86	41.53	54.00	-12.47	Average Detector
	2500.000	35.92	17.86	53.78	74.00	-20.22	Peak Detector

802.11g-Lowest Bandedge
Vertical (Worst case)



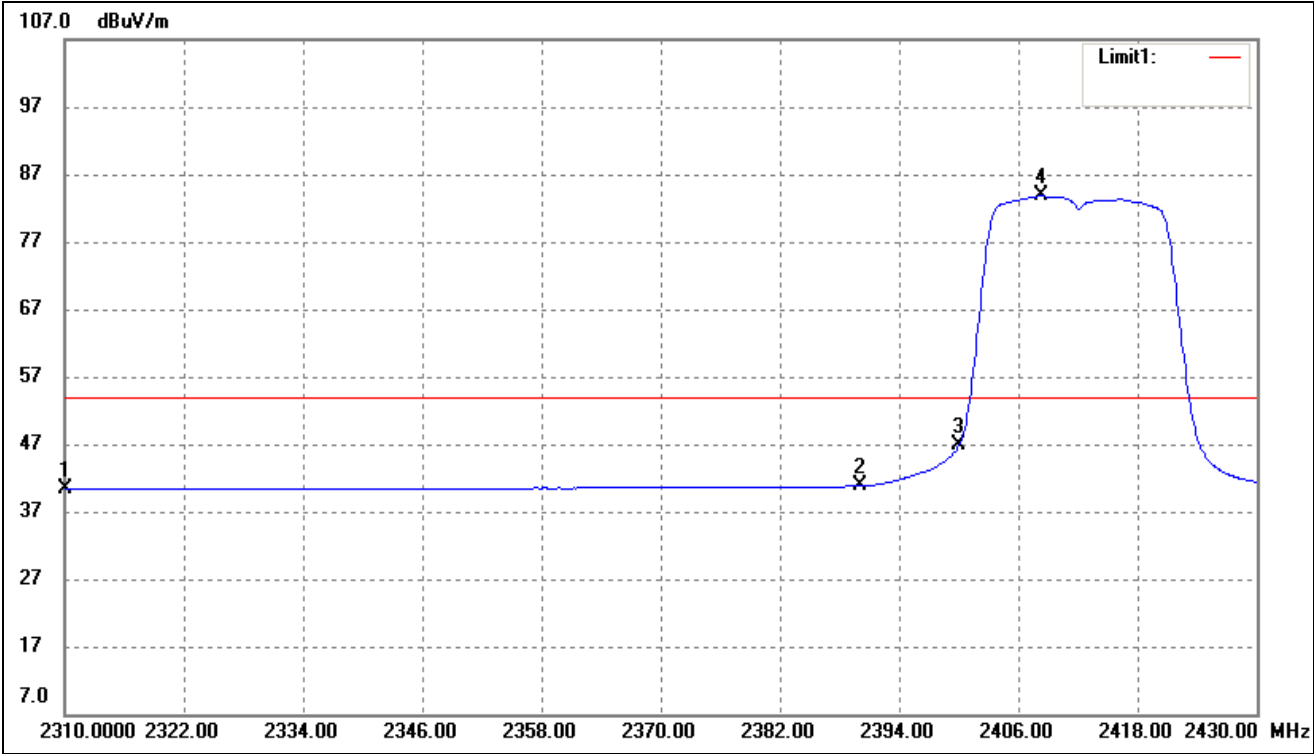
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	23.96	16.34	40.30	54.00	-13.70	Average Detector
	2310.000	34.03	16.34	50.37	74.00	-23.63	Peak Detector
2	2390.000	28.82	17.03	45.85	54.00	-8.15	Average Detector
	2390.000	45.25	17.03	62.28	74.00	-11.72	Peak Detector
3	2400.000	39.73	17.11	56.84	Delta=34.52dBc		Average Detector
	2409.600	74.19	17.17	91.36			Peak Detector

802.11g-Highest Bandedge
Vertical (Worst case)



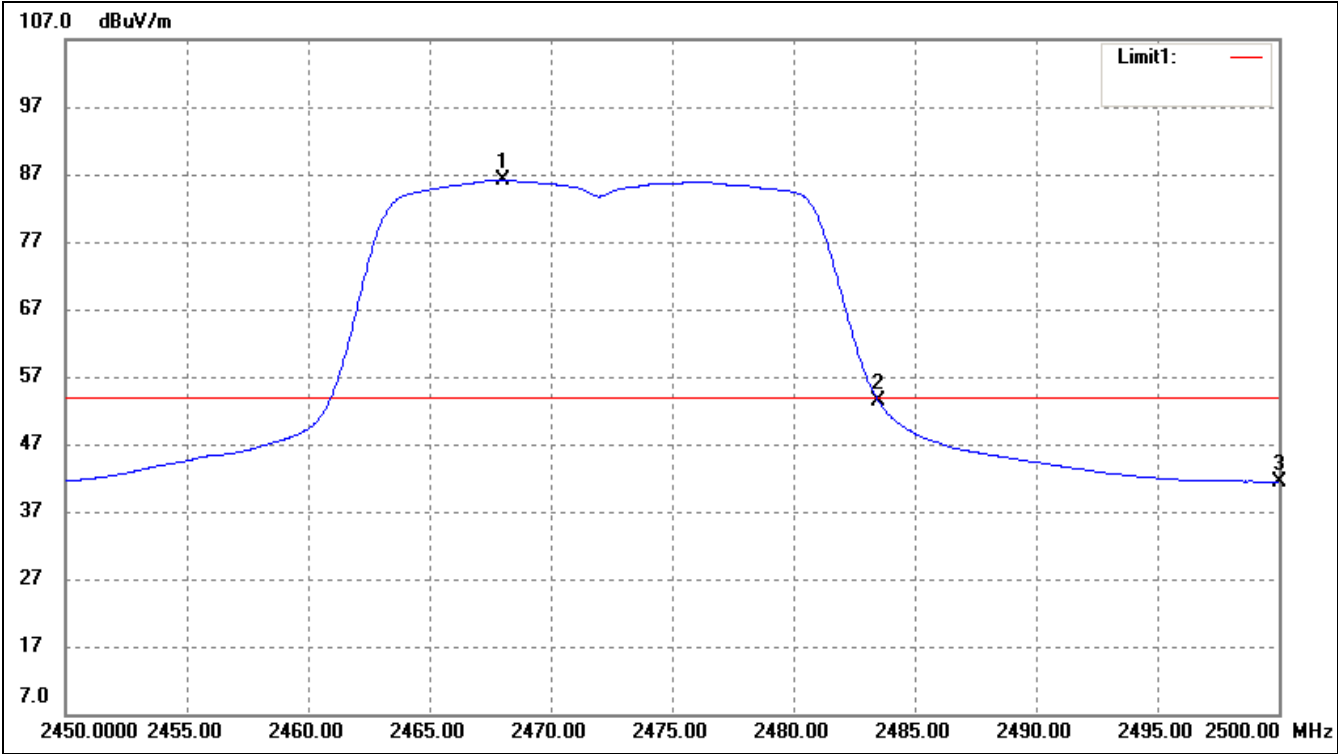
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2467.500	75.72	17.61	93.33	/	/	Average Detector
	2468.500	86.21	17.61	103.82	/	/	Peak Detector
1	2483.500	Delta = 50.49dBc		42.84	54.00	-11.16	Average Detector
	2483.500			53.33	74.00	-20.67	Peak Detector
3	2500.000	27.18	17.86	45.04	54.00	-8.96	Average Detector
	2500.000	42.77	17.86	60.63	74.00	-13.37	Peak Detector

802.11n-HT20-MCS7-Lowest Bandedge
Vertical (Worst case)



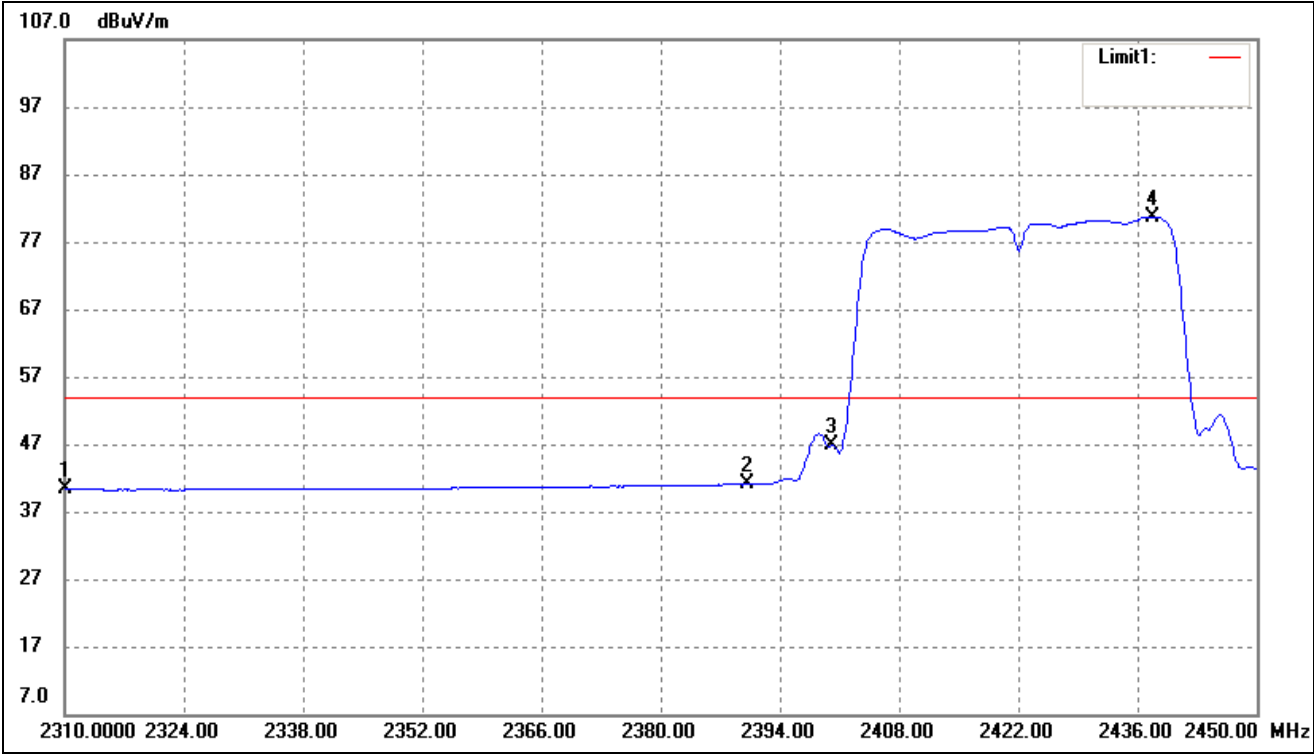
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	23.94	16.34	40.28	54.00	-13.72	Average Detector
	2310.000	35.60	16.34	51.94	74.00	-22.06	Peak Detector
2	2390.000	23.80	17.03	40.83	54.00	-13.17	Average Detector
	2390.000	34.67	17.03	51.70	74.00	-22.30	Peak Detector
3	2400.000	29.70	17.11	46.81	Delta=36.99dBc		Average Detector
	2408.280	66.64	17.16	83.80			Peak Detector

802.11n-HT20-MCS7-Highest Bandedge
Vertical (Worst case)



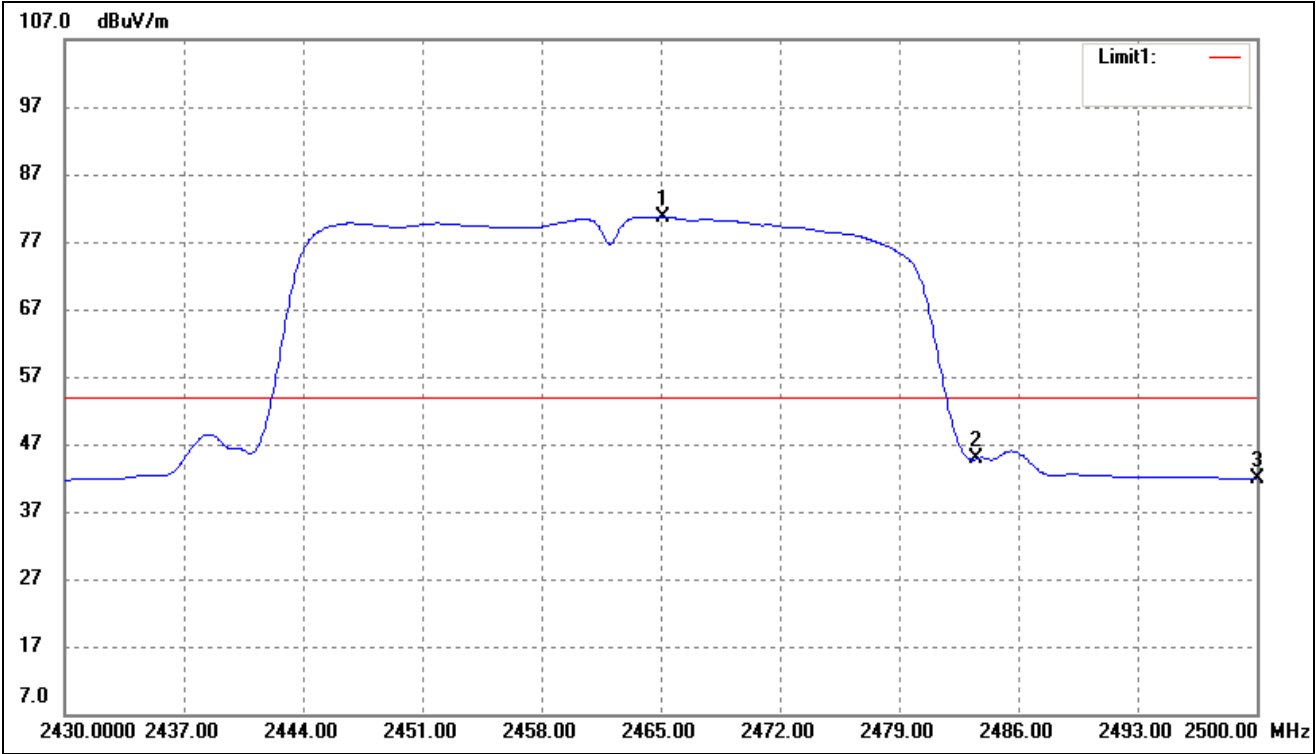
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2468.050	68.49	17.61	86.10	/	/	Average Detector
	2468.900	79.68	17.61	97.29	/	/	Peak Detector
2	2483.500	Delta = 51.16dBc		34.94	54.00	-19.06	Average Detector
	2483.500			46.13	74.00	-27.87	Peak Detector
3	2500.000	23.61	17.86	41.47	54.00	-12.53	Average Detector
	2500.000	35.85	17.86	53.71	74.00	-20.29	Peak Detector

802.11n-HT40-MCS7-Lowest Bandedge
Vertical (Worst case)



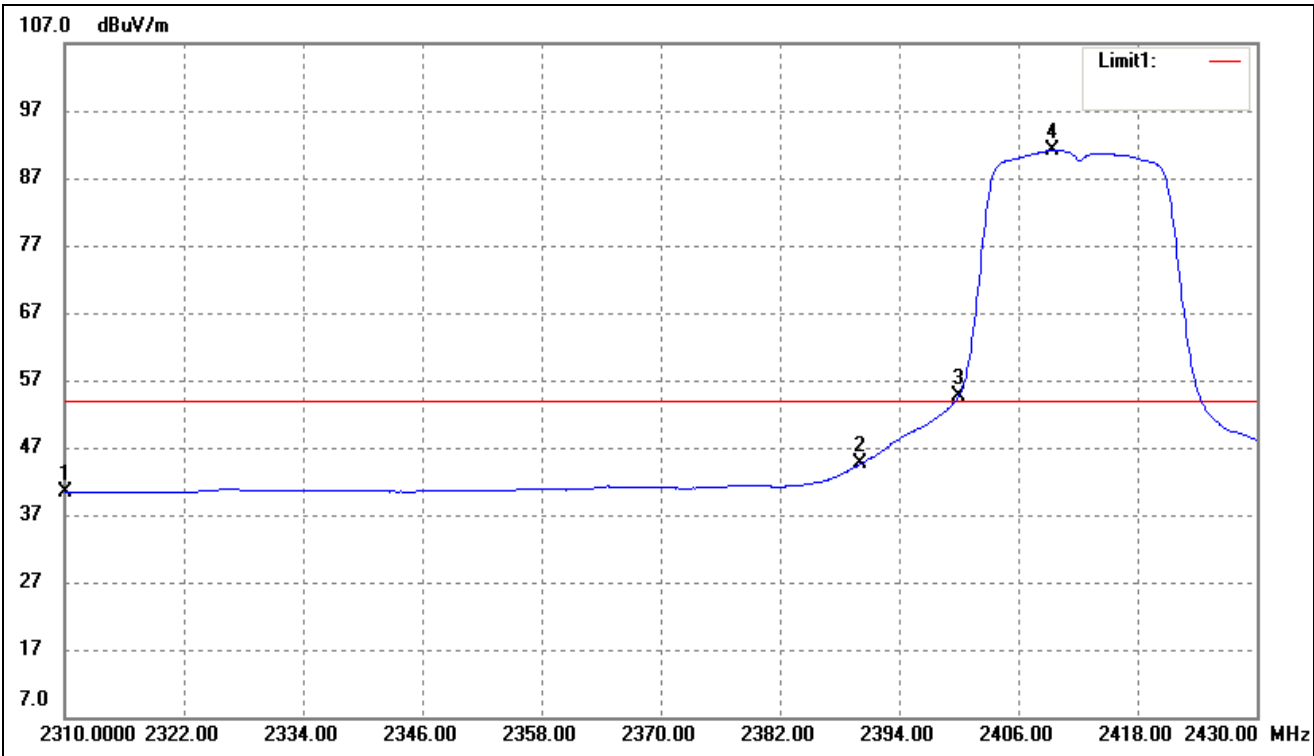
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	23.94	16.34	40.28	54.00	-13.72	Average Detector
	2310.000	35.76	16.34	52.10	74.00	-21.90	Peak Detector
2	2390.000	23.99	17.03	41.02	54.00	-12.98	Average Detector
	2390.000	35.75	17.03	52.78	74.00	-21.22	Peak Detector
3	2400.000	29.65	17.11	46.76	Delta=33.96dBc		Average Detector
	2437.680	63.33	17.39	80.72			Peak Detector

802.11n-HT40-MCS7-Highest Bandedge
Vertical (Worst case)



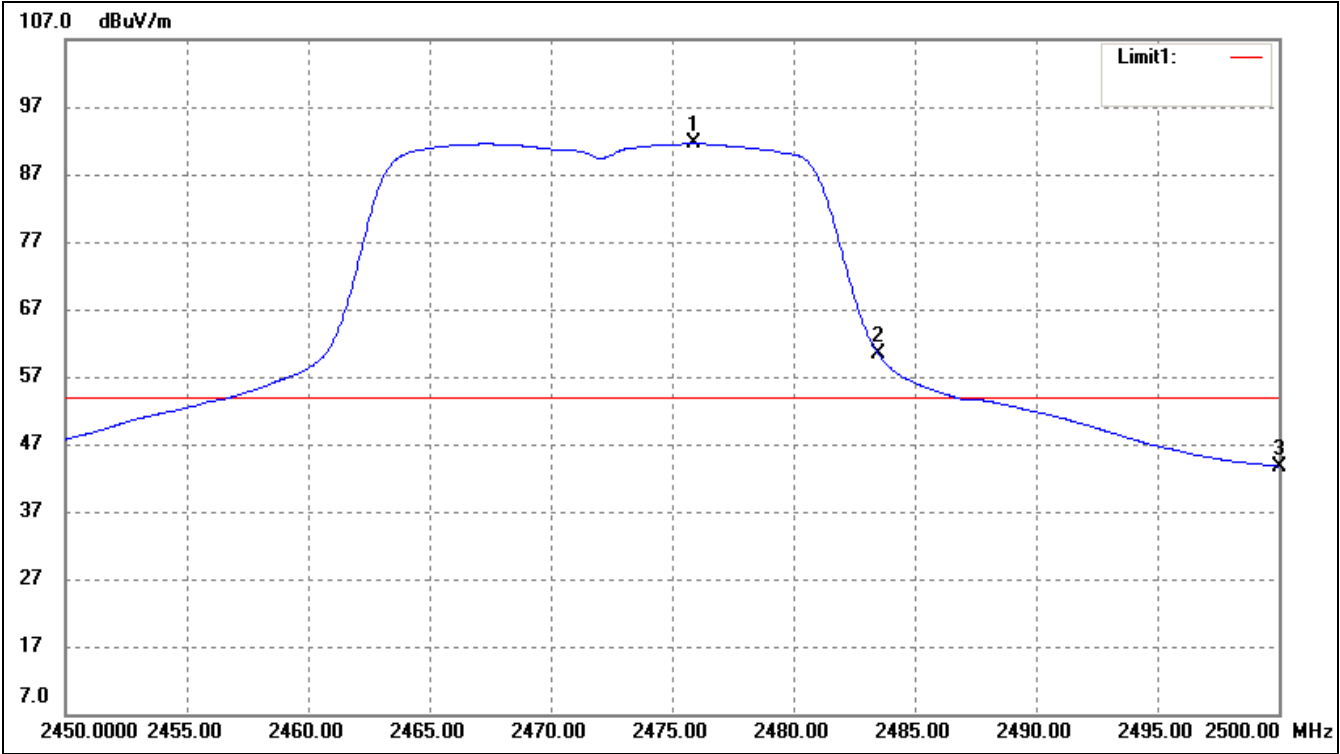
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2465.140	63.16	17.59	80.75	/	/	Average Detector
	2465.140	74.35	17.59	91.94	/	/	Peak Detector
2	2483.500	Delta = 49.04dBc		31.71	54.00	-22.29	Average Detector
	2483.500			42.90	74.00	-31.10	Peak Detector
3	2500.000	24.09	17.86	41.95	54.00	-12.05	Average Detector
4	2500.000	35.37	17.86	53.23	74.00	-20.77	Peak Detector

Antenna 0& Antenna 1:
802.11n-HT20-MCS8-Lowest Bandedge
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	23.99	16.34	40.33	54.00	-13.67	Average Detector
	2310.000	35.94	16.34	52.28	74.00	-21.72	Peak Detector
2	2390.000	27.49	17.03	44.52	54.00	-9.48	Average Detector
	2390.000	42.01	17.03	59.04	74.00	-14.96	Peak Detector
3	2400.000	37.62	17.11	54.73	Delta=36.34dBc		Average Detector
	2409.480	73.90	17.17	91.07			Peak Detector

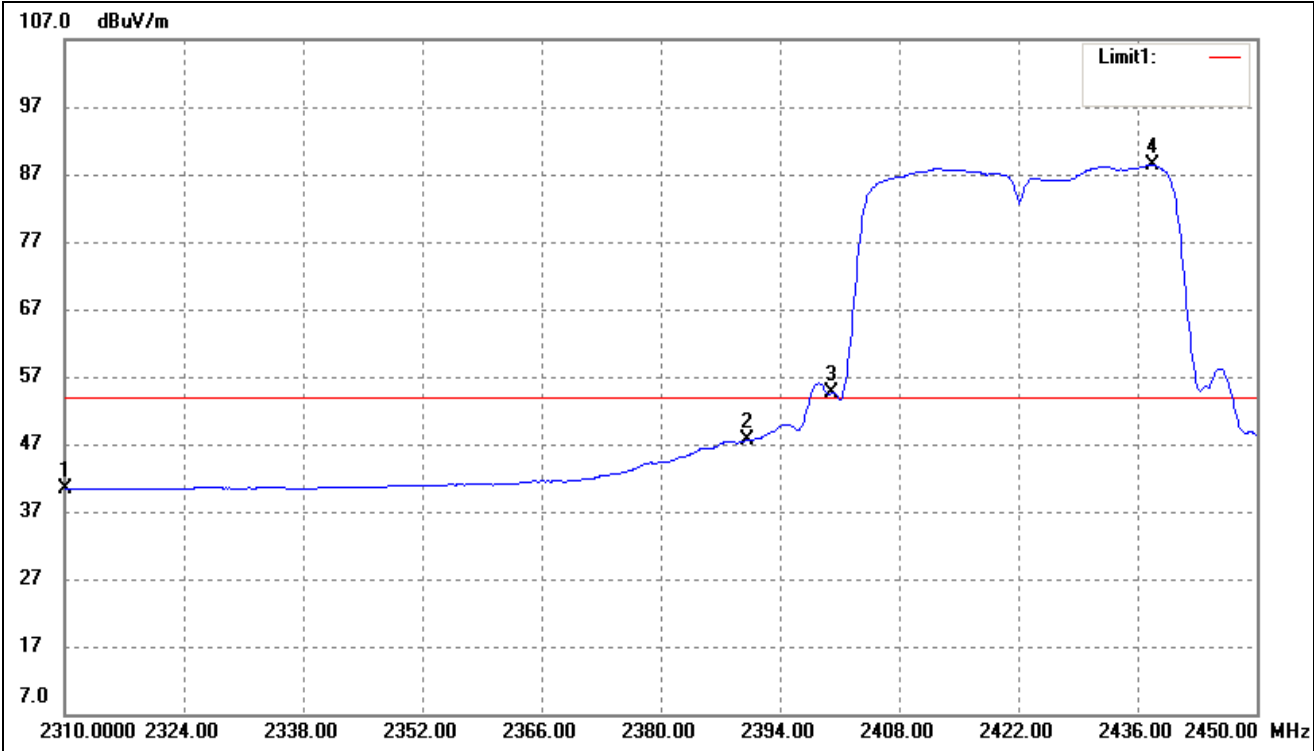
802.11n-HT20-MCS8-Highest Bandedge
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2475.900	73.92	17.68	91.60	/	/	Average Detector
	2467.550	87.04	17.61	104.65	/	/	Peak Detector
2	2483.500	Delta =54.24dBc		37.36	54.00	-16.64	Average Detector
	2483.500			50.41	74.00	-23.59	Peak Detector
3	2500.000	25.86	17.86	43.72	54.00	-10.28	Average Detector
	2500.000	41.69	17.86	59.55	74.00	-14.45	Peak Detector

802.11n-HT40-MCS8-Lowest Bandedge

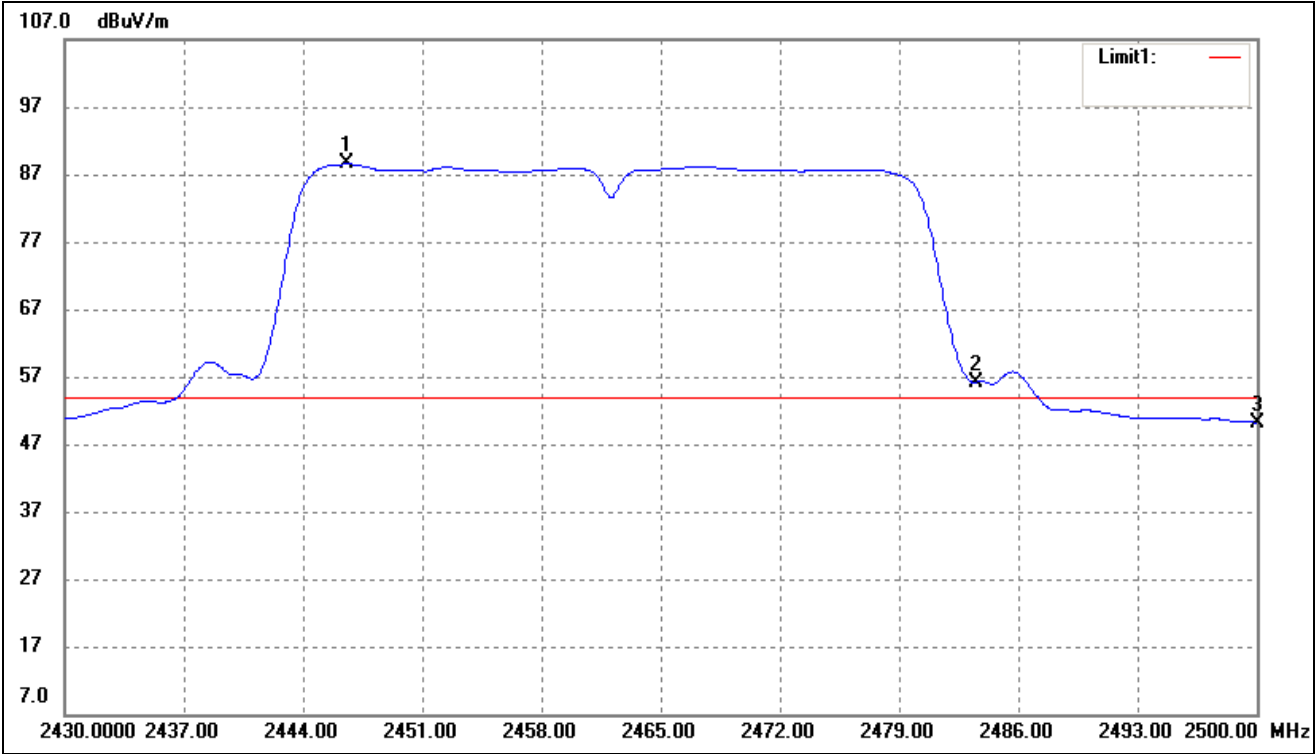
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	24.07	16.34	40.41	54.00	-13.59	Average Detector
	2310.000	35.29	16.34	51.63	74.00	-22.37	Peak Detector
2	2390.000	30.50	17.03	47.53	54.00	-6.47	Average Detector
	2390.000	47.62	17.03	64.65	74.00	-9.35	Peak Detector
3	2400.000	37.45	17.11	54.56	Delta=33.86dBc		Average Detector
	2437.680	71.03	17.39	88.42			Peak Detector

802.11n-HT40-MCS8-Highest Bandedge

Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2446.520	71.10	17.45	88.55	/	/	Average Detector
	2467.800	83.15	17.61	100.76	/	/	Peak Detector
2	2483.500	Delta = 54.11dBc		34.44	54.00	-19.56	Average Detector
	2483.500			46.65	74.00	-27.35	Peak Detector
3	2500.000	32.31	17.86	50.17	54.00	-3.83	Average Detector
4	2500.000	47.25	17.86	65.11	74.00	-8.89	Peak Detector

10. Conducted Emissions

10.1 Measurement Uncertainty

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

10.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2013-05-07	2014-05-06
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2013-05-07	2014-05-06
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2013-05-07	2014-05-06

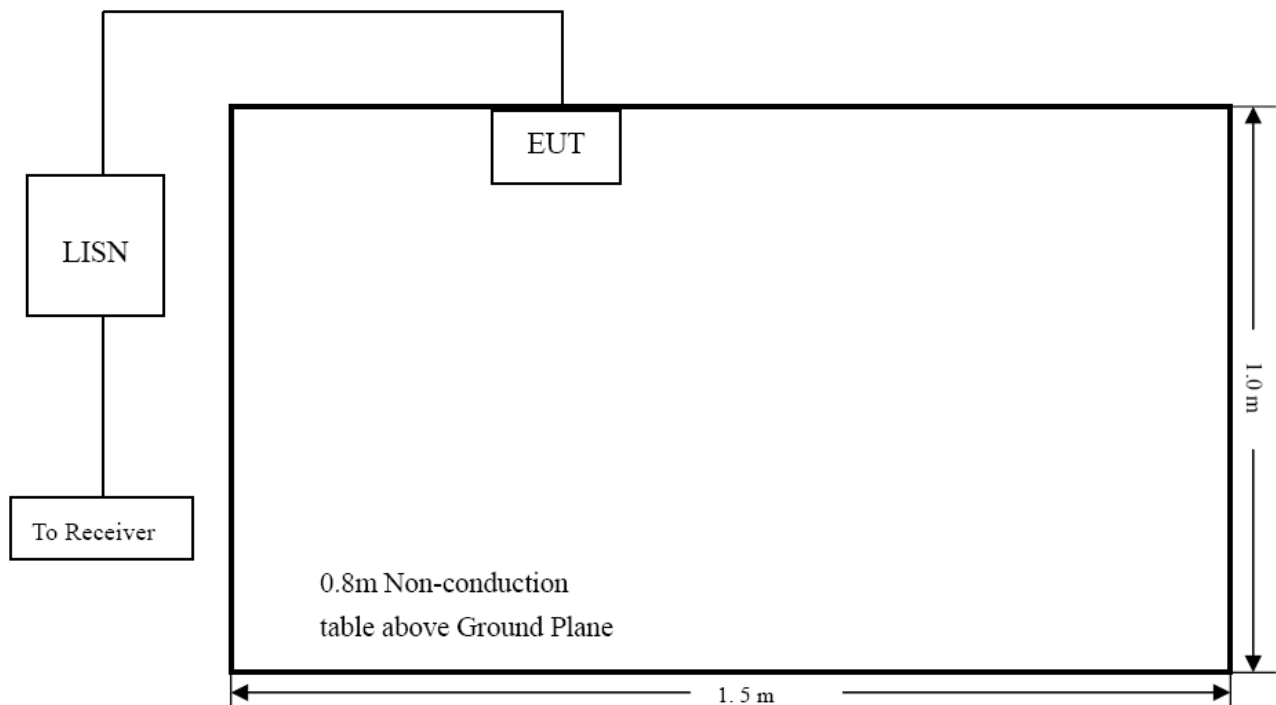
10.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 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.

10.4 Basic Test Setup Block Diagram



10.5 Environmental Conditions

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

10.6 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

10.7 Summary of Test Results/Plots

According to the data in section 9.8, the EUT complied with the FCC Part 15.207 Conducted margin for a Class B device, with the *worst* margin reading of:

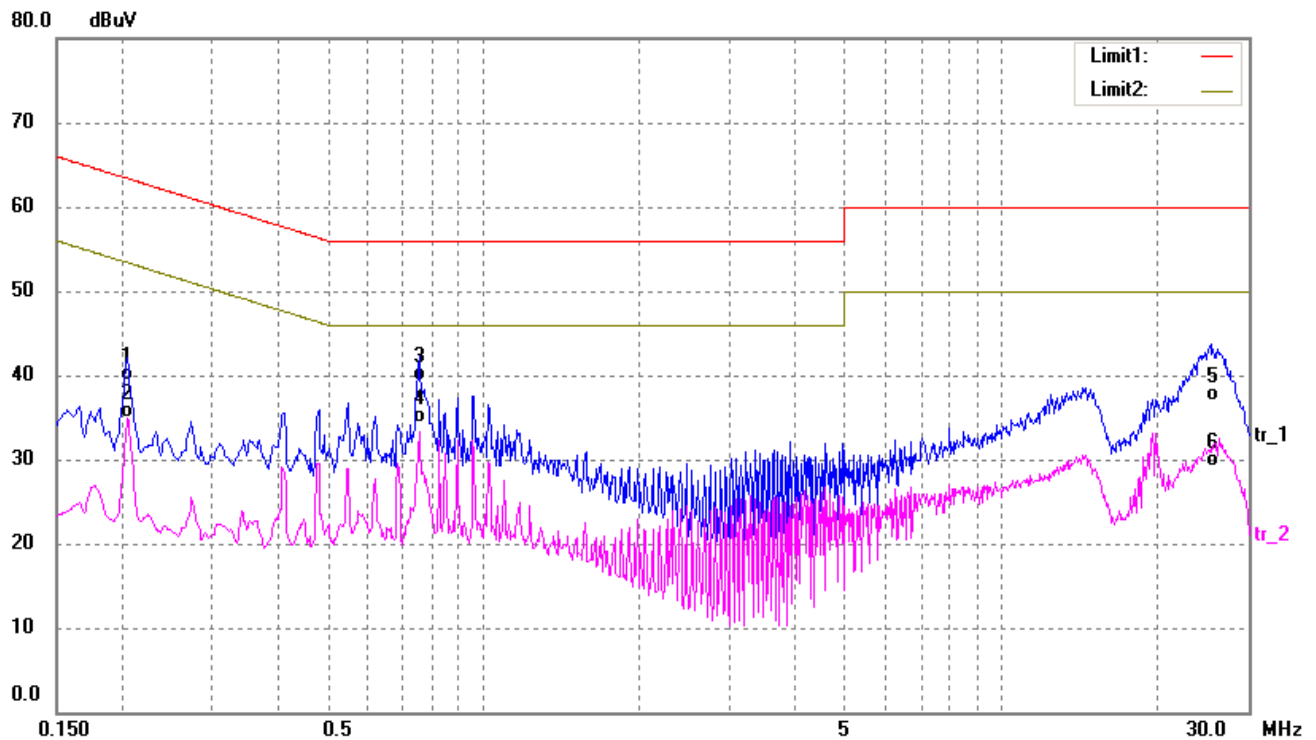
-11.66 dB at 0.7540 MHz in the Neutral mode, average detector, 0.15-30MHz

10.8 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

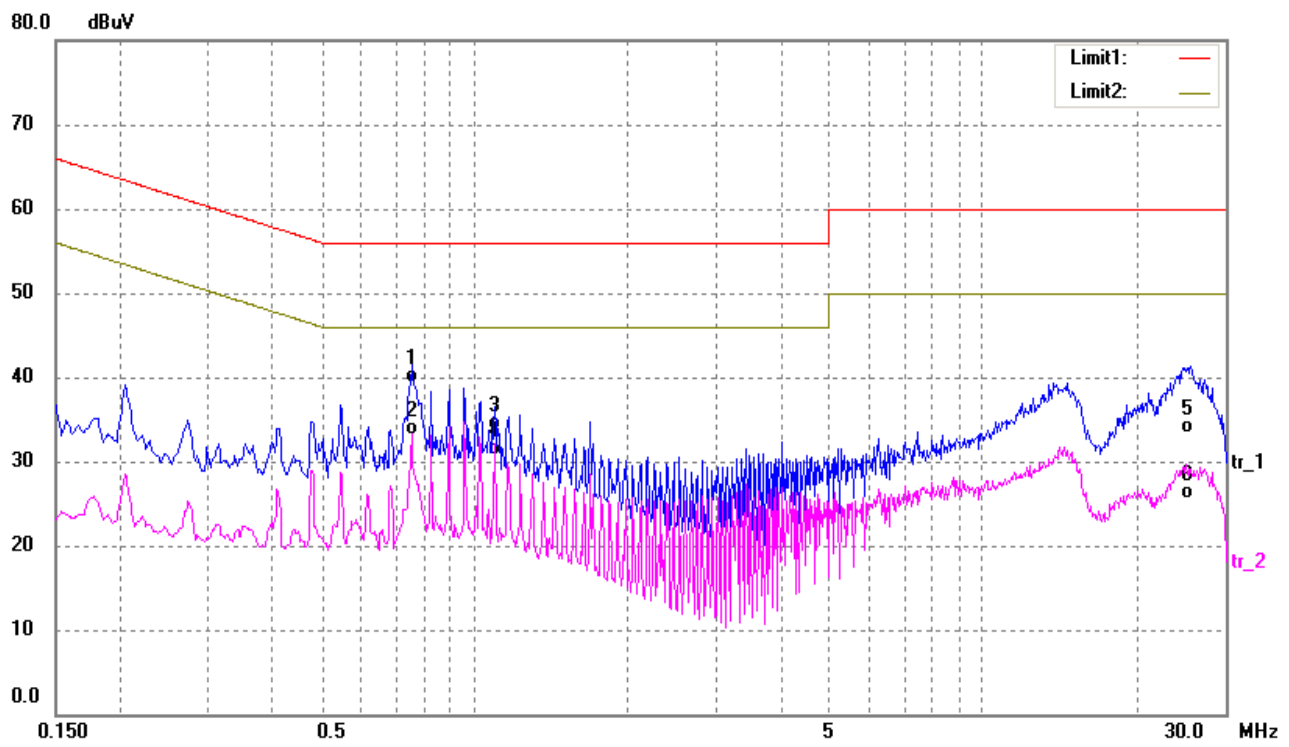
EUT: LM005 802.11n USB Adapter 300 Mbps
 Tested Model: 005-1007
 Operating Condition: Transmitting(Wi-Fi)
 Comment: USB DC 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2060	29.85	9.50	39.35	63.37	-24.02	QP
2	0.2060	25.45	9.50	34.95	53.37	-18.42	AVG
3	0.7540	29.63	9.75	39.38	56.00	-16.62	QP
4	0.7540	24.59	9.75	34.34	46.00	-11.66	AVG
5	25.4100	23.97	13.00	36.97	60.00	-23.03	QP
6	25.4100	16.20	13.00	29.20	50.00	-20.80	AVG

Test Specification: Line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.7540	29.55	9.75	39.30	56.00	-16.70	QP
2	0.7540	23.43	9.75	33.18	46.00	-12.82	AVG
3	1.0940	23.65	10.00	33.65	56.00	-22.35	QP
4	1.0940	20.69	10.00	30.69	46.00	-15.31	AVG
5	25.7100	20.26	13.00	33.26	60.00	-26.74	QP
6	25.7100	12.57	13.00	25.57	50.00	-24.43	AVG

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