FCC Part 15C
Measurement and Test Report

For

Etung Technology Co., Ltd

RM305 Geng Fang Plaza, Jia 13 Huayuan Road Haidian Dist.

Beijing, China

FCC ID: 2AEWIER-800

FCC Rule(s):	FCC Part 15C
Product Description:	ROUTER
Tested Model:	ER-800
Report No.:	STR16018203I-2
Tested Date:	2016-01-26 to 2016-03-07
Issued Date:	2016-03-07
Tested By:	Jason Su / Engineer
Reviewed By:	Silin Chen / EMC Manager
Approved & Authorized By:	Jandy so / PSQ Manager

Prepared By:

Shenzhen SEM.Test Technology Co., Ltd.
1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road,
Bao'an District, Shenzhen, P.R.C.（518101）
Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Etung Technology Co., Ltd
Address of applicant:	RM305 Geng Fang Plaza, jia 13 Huayuan Road Haidian Dist. Beijing, China
Manufacturer:	Etung Technology Co., Ltd
Address of manufacturer:	RM305 Geng Fang Plaza, jia 13 Huayuan Road Haidian Dist. Beijing, China

General Description of EUT:	
Product Name:	ROUTER
Brand Name:	ETUNG
Model No.:	ER-800
Adding Model(s):	WXXX-OTV200 ; NXXX-OTV200A ; WXXX-OTV200A
Hardware version:	V1.4 20151113
Software version:	V1.4 20151113
IMEI:	240305003081404
Rated Voltage:	Adapter DC12V
Battery:	/
Device Category:	Fixed Device
The EUT Main board support GSM850/PCS1900, WCDMA Band 2/5 function. It is intended for speech, Multimedia Message Service (MMS) transmission and Alba 5400. It is equipped with GPRS/EDGE class 12 for GSM850/PCS1900, Wi-Fi functions. For more information see the following datasheet	
Note: The test data is gathered from a production sample provided by the manufacturer. The appearance of others models listed in the report is different from main-test model ER-800, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT	
Support Standards:	802.11b, 802.11g, 802.11n
Frequency Range:	2412-2462MHz
RF Output Power:	16.06 dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels:	11
Channel Separation:	5MHz
Type of Antenna:	External uniqueness Antenna
Antenna Gain:	2dBi
Lowest Internal Frequency	12MHz

1.2 Test Standards

The following report is prepared on behalf of the Etung Technology Co., 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 C63.10-2013, American National Standard for Testing Unlicensed Wireless Devices, and ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. The measurement guide KDB 558074 D01 v03r04 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, 2437MHz, 2462MHz
TM2	802.11g	2412MHz, 2437MHz, 2462MHz
TM3	802.11n-HT20	2412MHz, 2437MHz, 2462MHz
TM4	802.11n-HT40	2422MHz, 2437MHz, 2452MHz

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
DC Cable	1.15	Unshielded	Without Ferrite
RJ45 Cable	1.40	Unshielded	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
/	/	/	/

1.6 Measurement Uncertainty

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

1.7 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Spectrum Analyzer	Agilent	E4407B	MY41440400	2015-06-17	2016-06-16
Spectrum Analyzer	Rohde & Schwarz	FSP	836079/035	2015-06-17	2016-06-16
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2015-06-17	2016-06-16
Amplifier	Agilent	8447F	3113A06717	2015-06-17	2016-06-16
Amplifier	C&D	PAP-1G18	2002	2015-06-17	2016-06-16
Broadband Antenna	Schwarz beck	VULB9163	9163-333	2015-06-17	2016-06-16
Horn Antenna	ETS	3117	00086197	2015-06-17	2016-06-16
Horn Antenna	ETS	3116B	00088203	2015-06-17	2016-06-16
Loop Antenna	Schwarz beck	FMZB 1516	9773	2015-06-17	2016-06-16
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2015-06-17	2016-06-16
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2015-06-17	2016-06-16
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2015-06-17	2016-06-16

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 RF Exposure Report.

4. Antenna Requirement

4.1 Standard Applicable

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

4.2 Evaluation Information

This product has an integral antenna, fulfill the requirement of this section.

5. Power Spectral Density

5.1 Standard Applicable

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

5.2 Test Procedure

According to the KDB 558074 D01 v03r04, such specifications require that the same method as used to determine the conducted output power shall also be used to determine the power spectral density. The test method of power spectral density as below:

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

5.3 Environmental Conditions

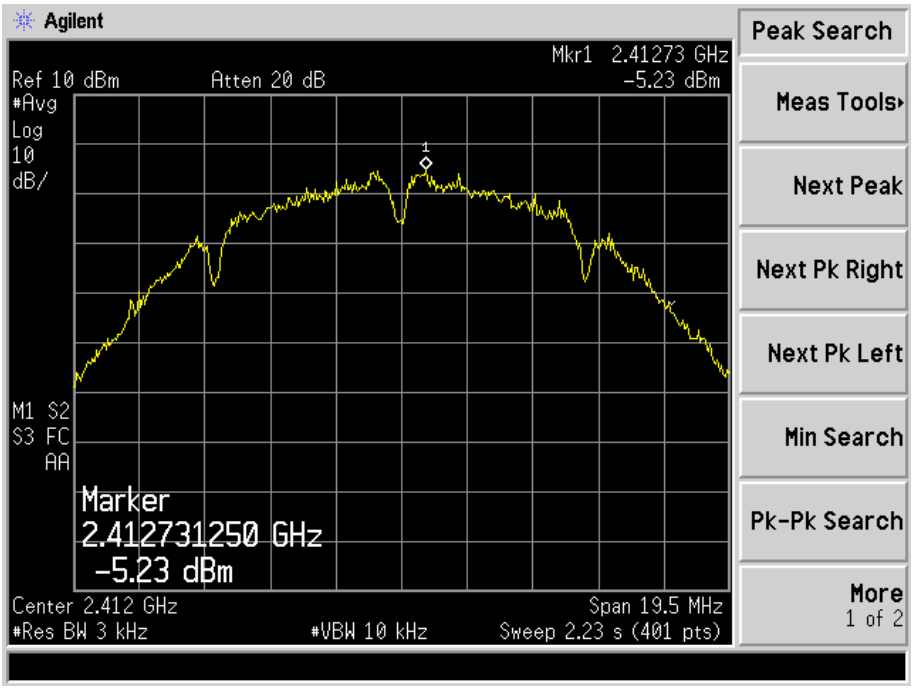
Temperature:	26° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

5.4 Summary of Test Results/Plots

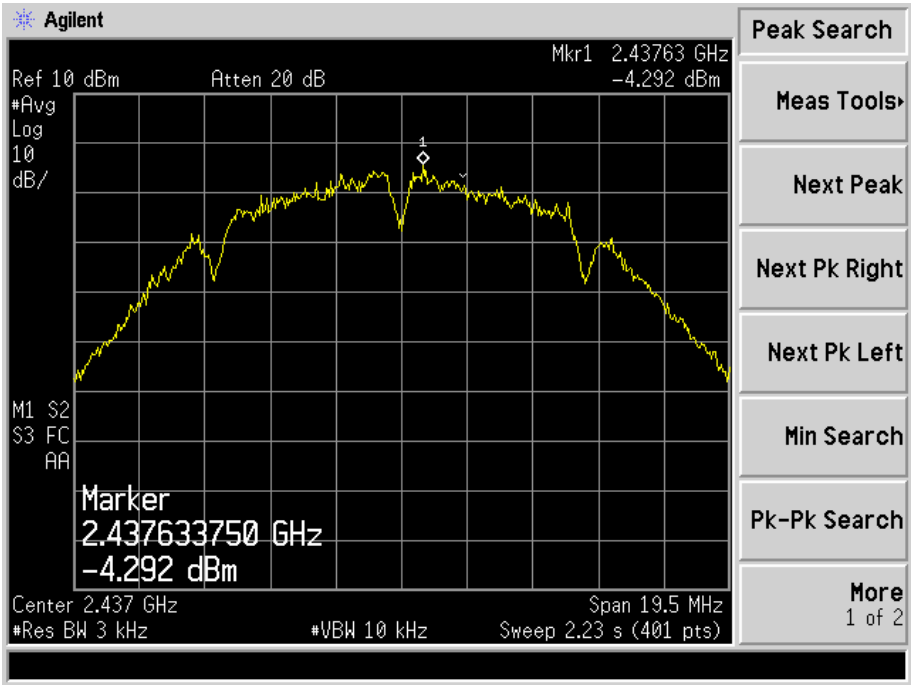
Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
802.11b	2412	-5.230	8
	2437	-4.292	8
	2462	-5.444	8
802.11g	2412	-8.664	8
	2437	-7.596	8
	2462	-8.991	8
802.11n HT20	2412	-8.340	8
	2437	-9.620	8
	2462	-8.842	8
802.11n HT40	2422	-19.66	8
	2437	-20.44	8
	2452	-20.18	8

Please refer to the following test plots:

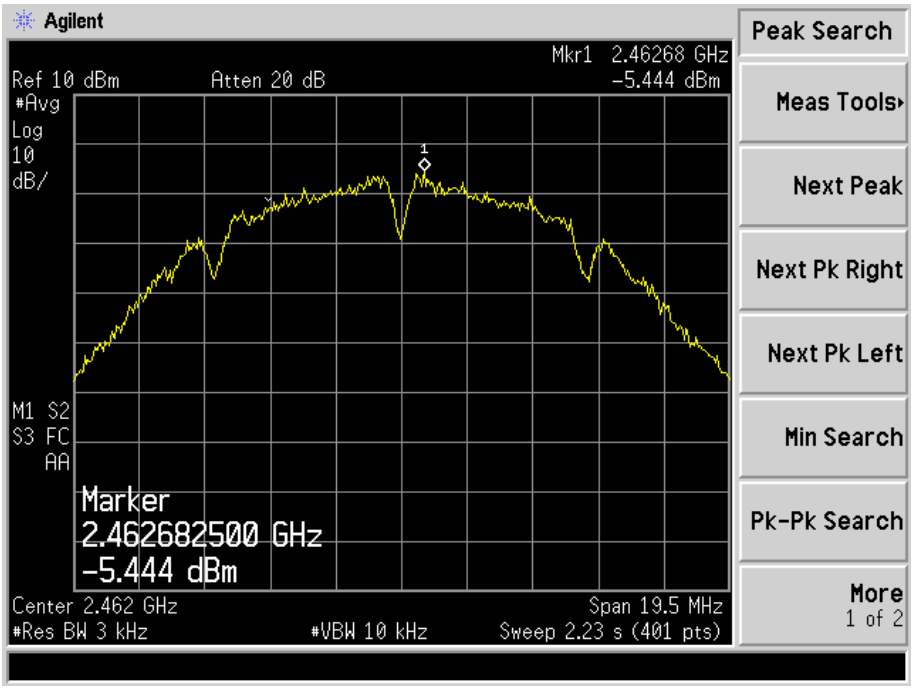
802.11b-Low Channel



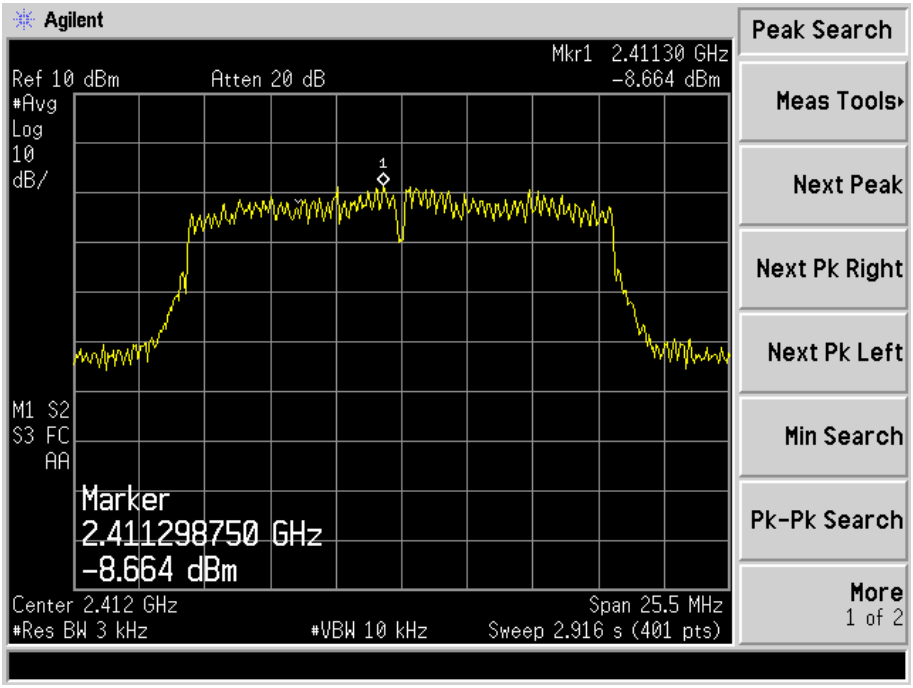
802.11b-Middle Channel



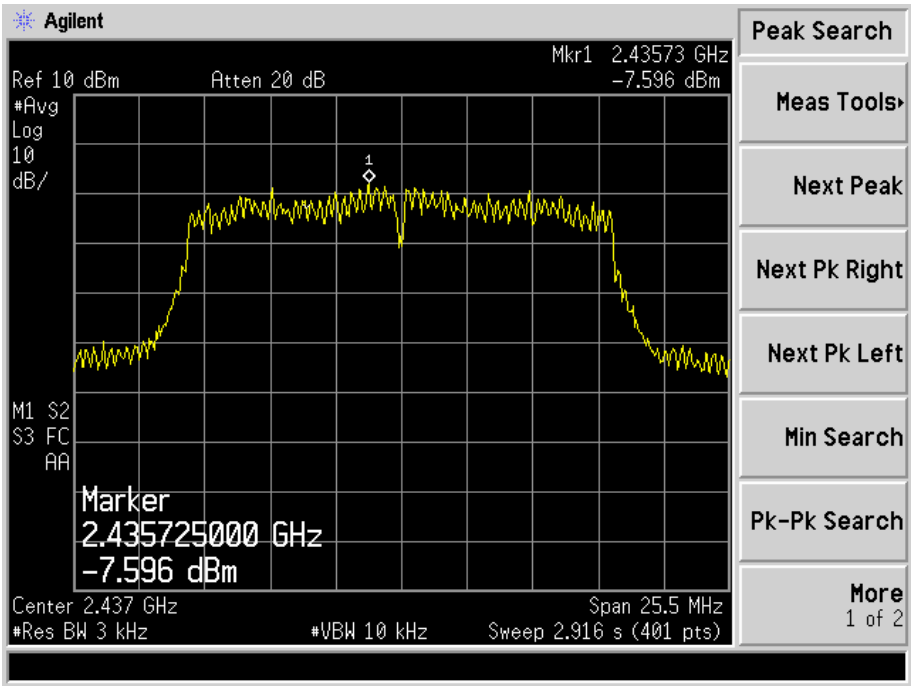
802.11b-High Channel



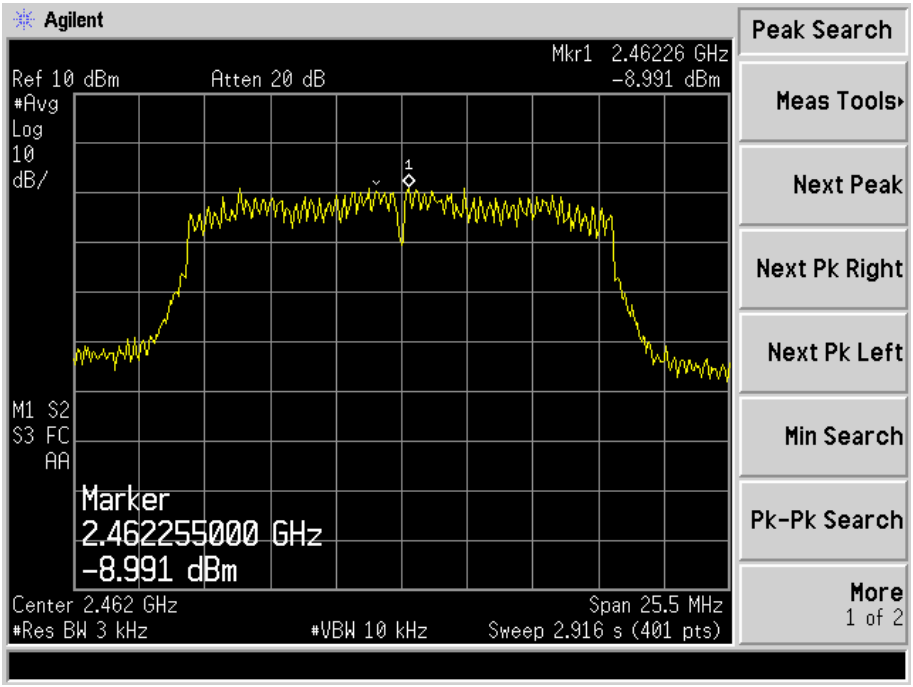
802.11g-Low Channel



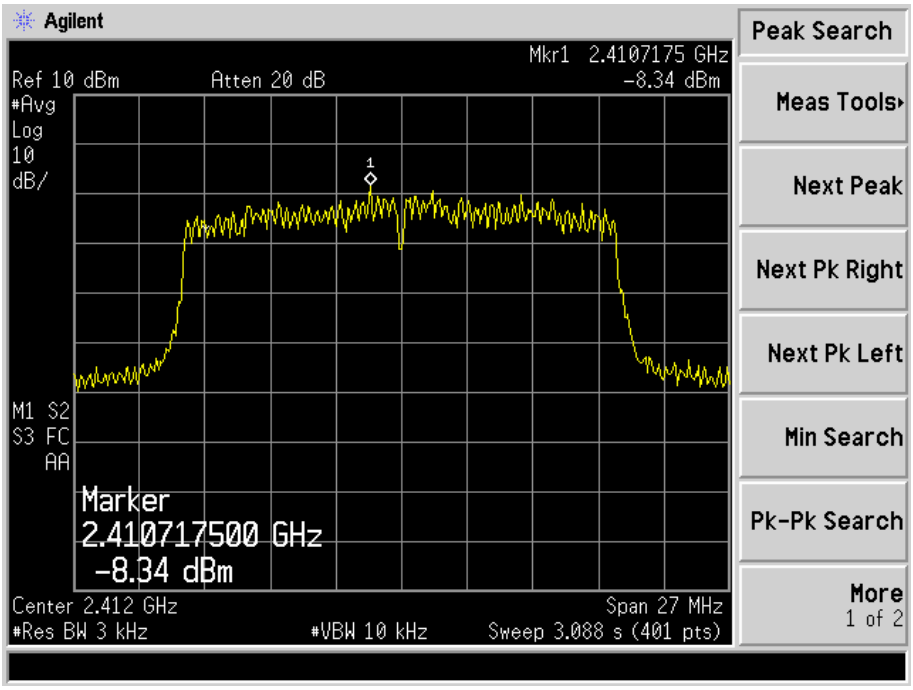
802.11g-Middle Channel



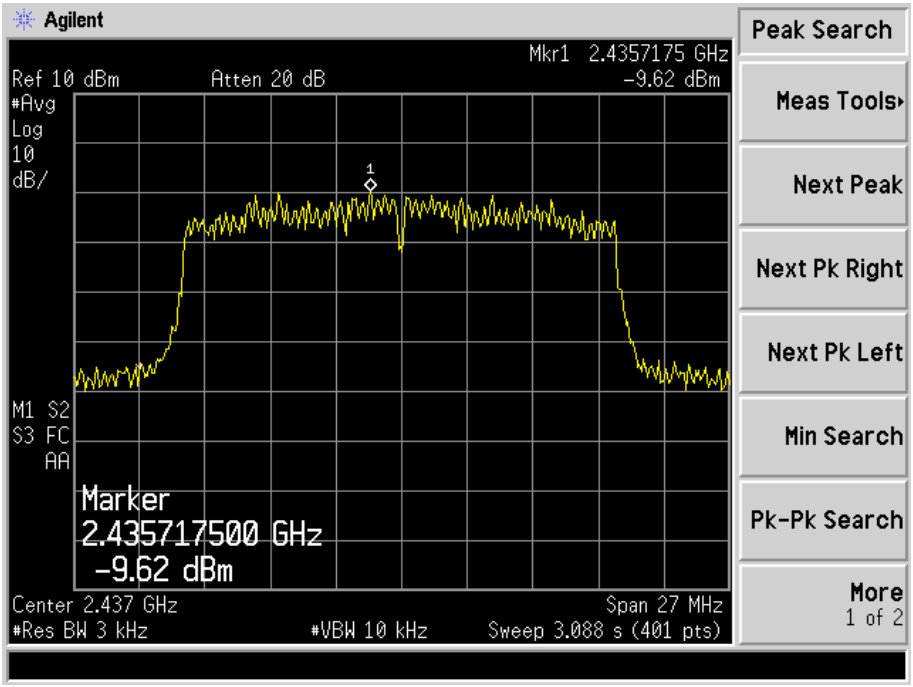
802.11g-High Channel



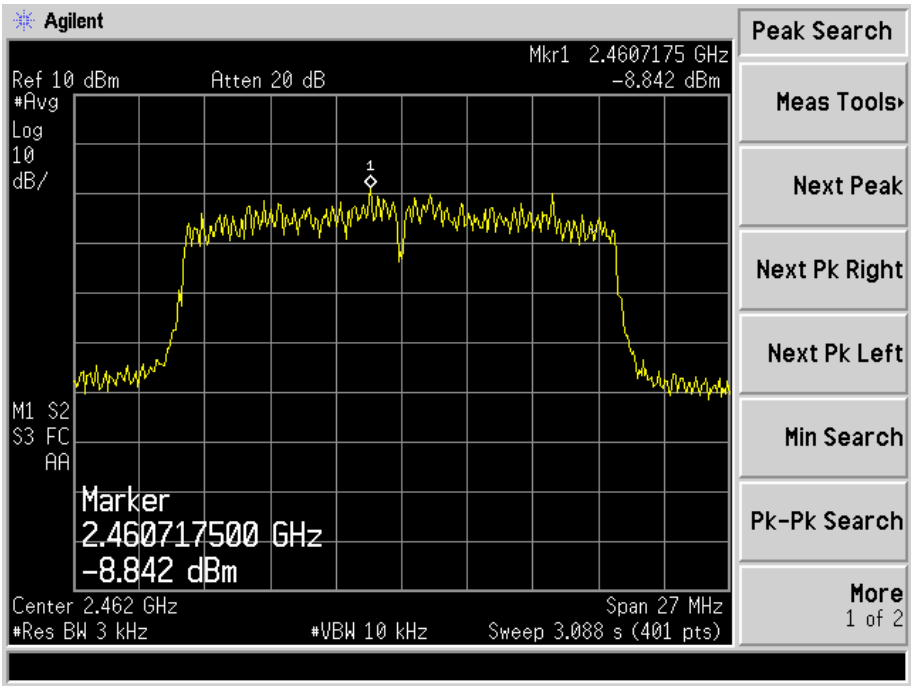
802.11n-HT20-Low Channel



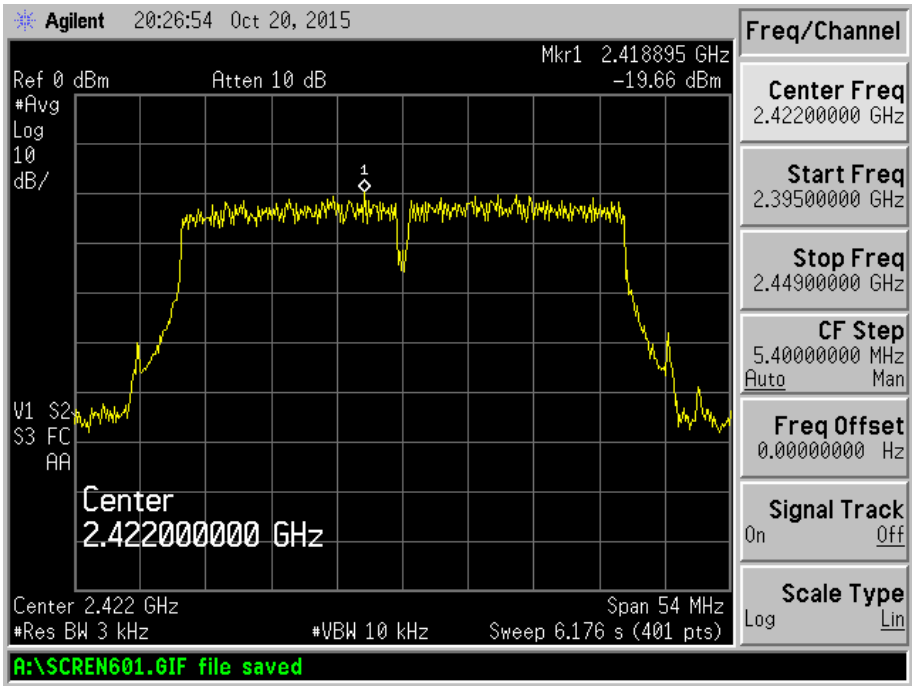
802.11n-HT20-Middle Channel



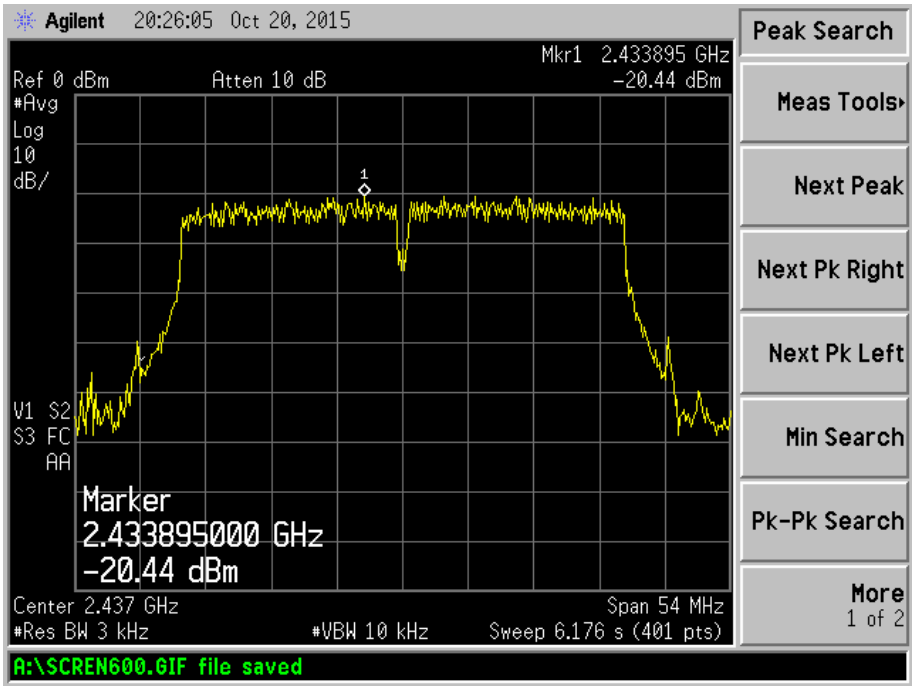
802.11n-HT20-High Channel



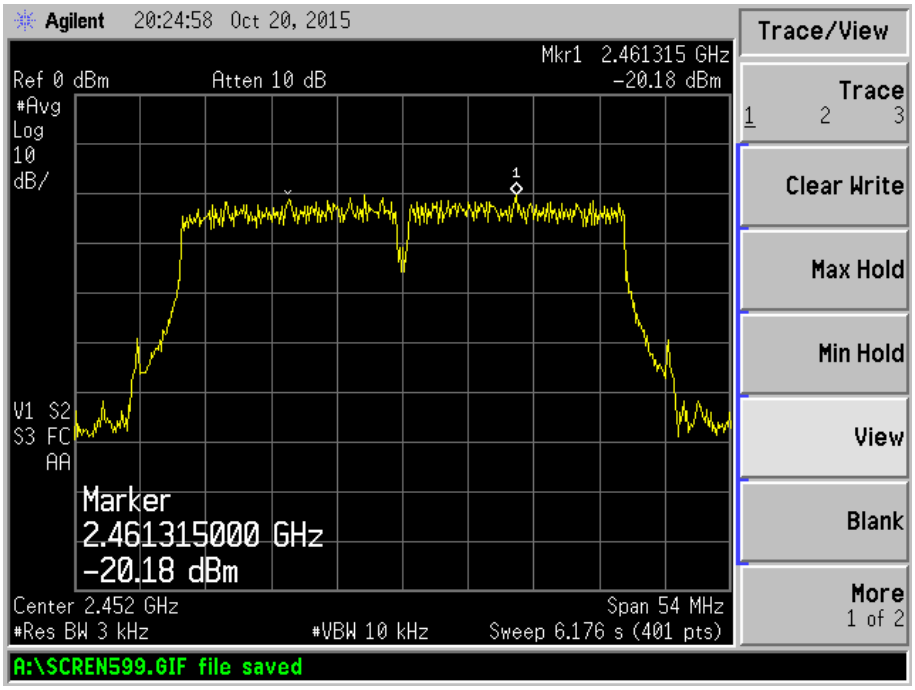
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel



802.11n-HT40-High Channel



6. 6dB Bandwidth

6.1 Standard Applicable

According to 15.247(a)(2). Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

6.2 Test Procedure

a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.3 Environmental Conditions

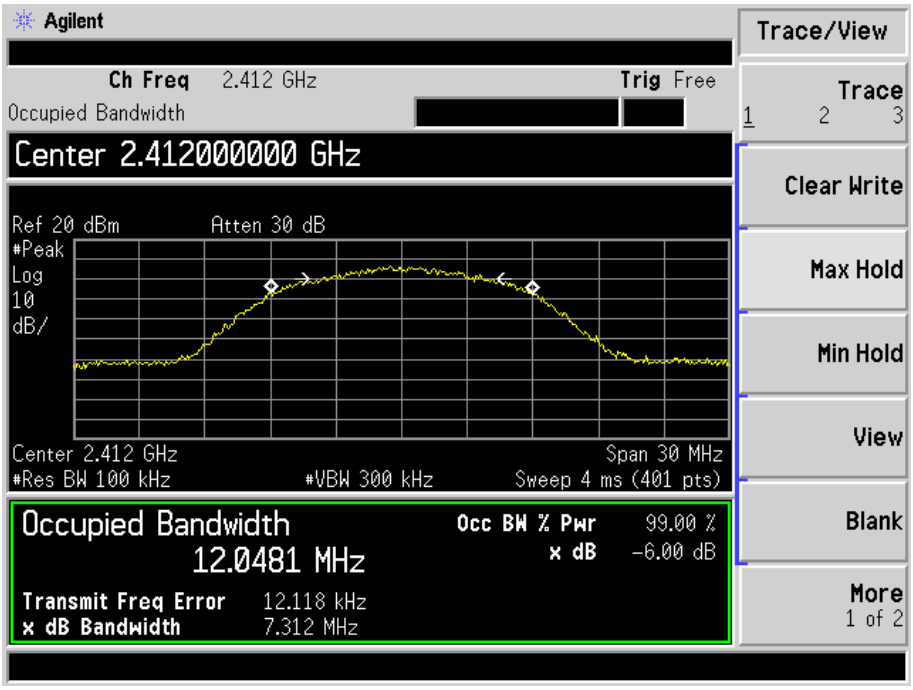
Temperature:	25° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

6.4 Summary of Test Results/Plots

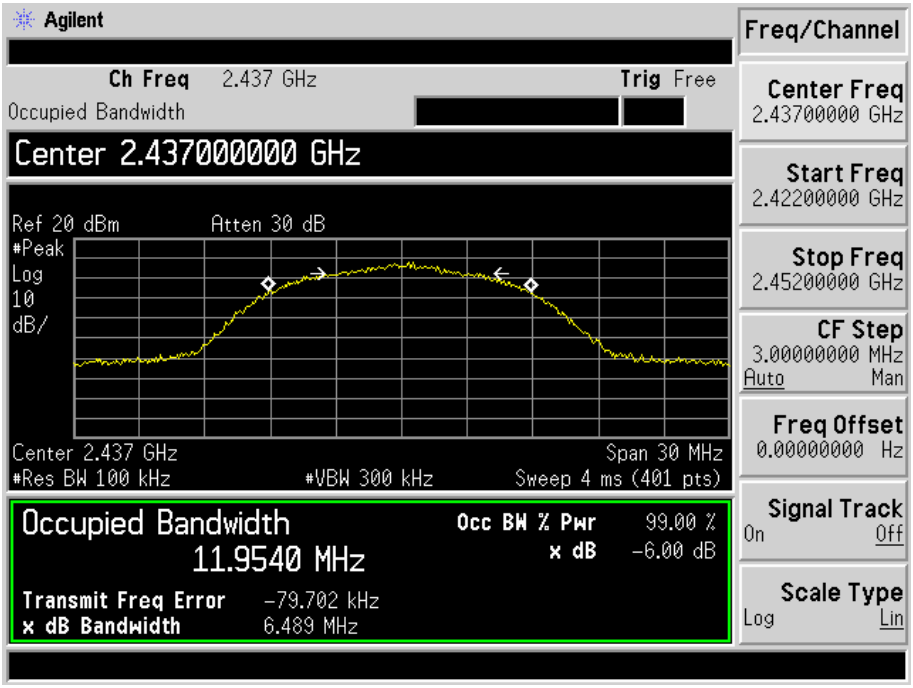
Test Mode	Test Channel MHz	6 dB Bandwidth kHz	99% Bandwidth kHz	Limit kHz
802.11b	2412	7312	12048.1	≥500
	2437	6489	11954.0	≥500
	2462	7489	12010.6	≥500
802.11g	2412	15479	16300.8	≥500
	2437	15174	16304.7	≥500
	2462	15188	16296.9	≥500
802.11n-HT20	2412	16571	17439.3	≥500
	2437	16955	17455.4	≥500
	2462	16325	17433.4	≥500
802.11n-HT40	2422	36221	35994.3	≥500
	2437	36383	36059.0	≥500
	2452	36368	35934.1	≥500

Please refer to the following test plots:

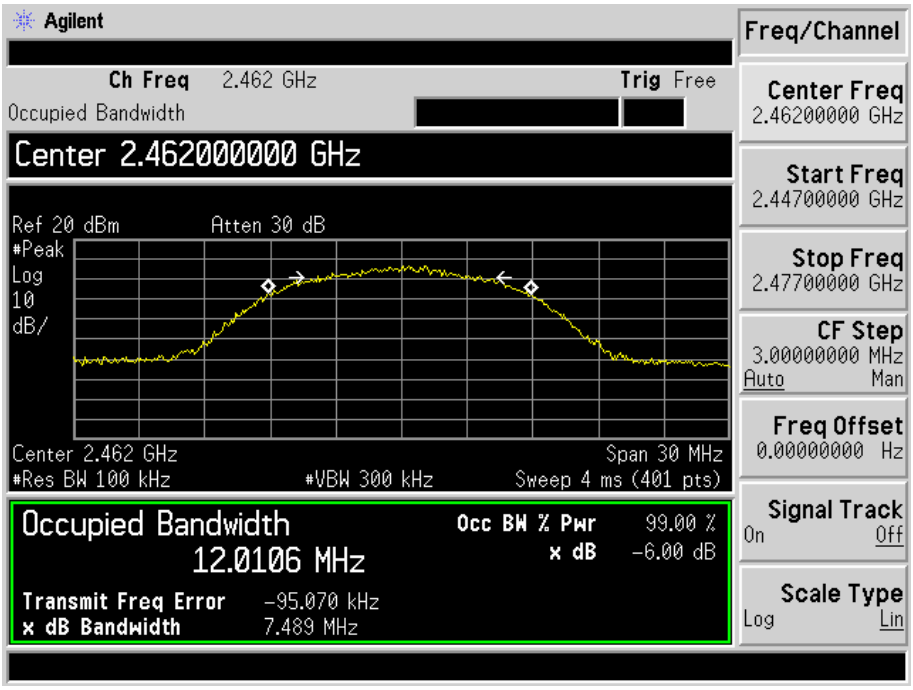
802.11b-Low Channel



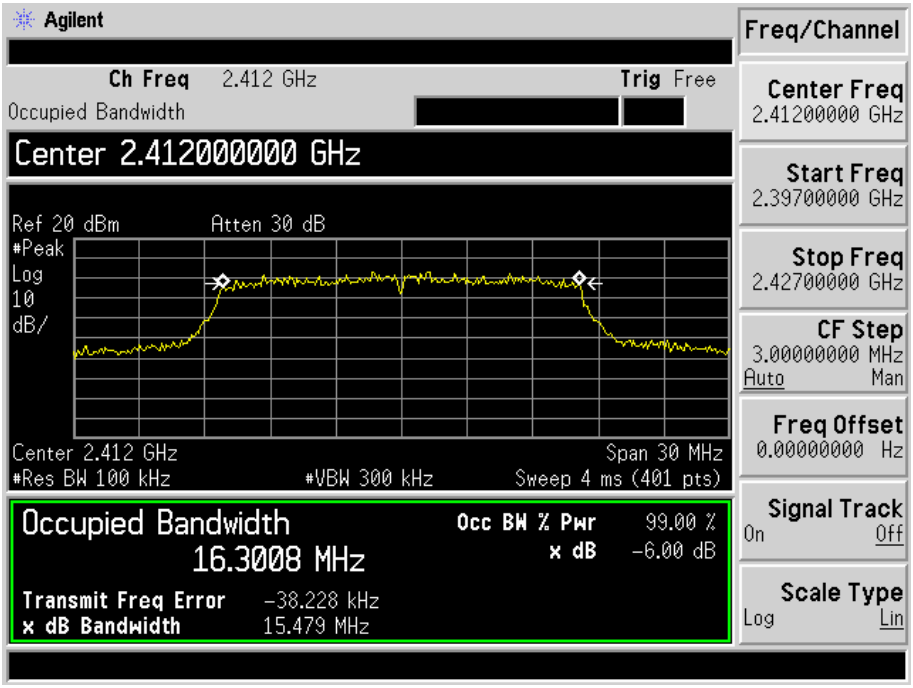
802.11b-Middle Channel



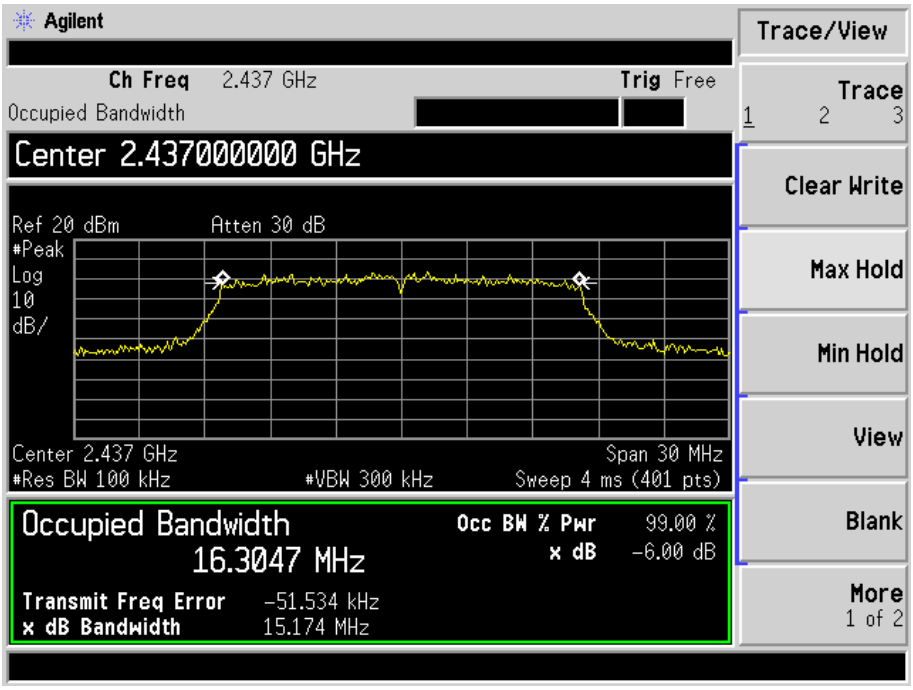
802.11b-High Channel



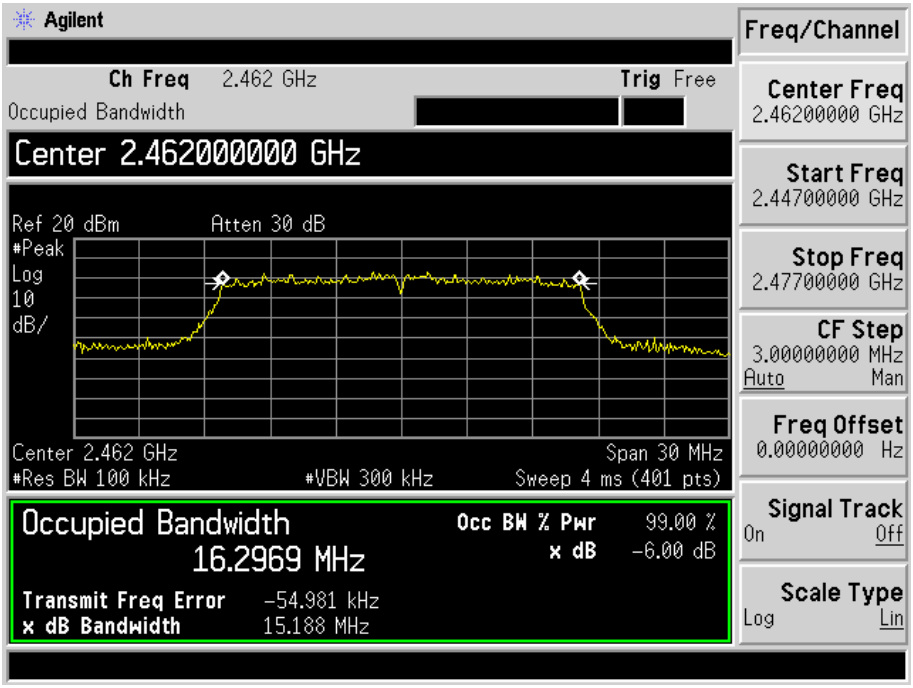
802.11g-Low Channel



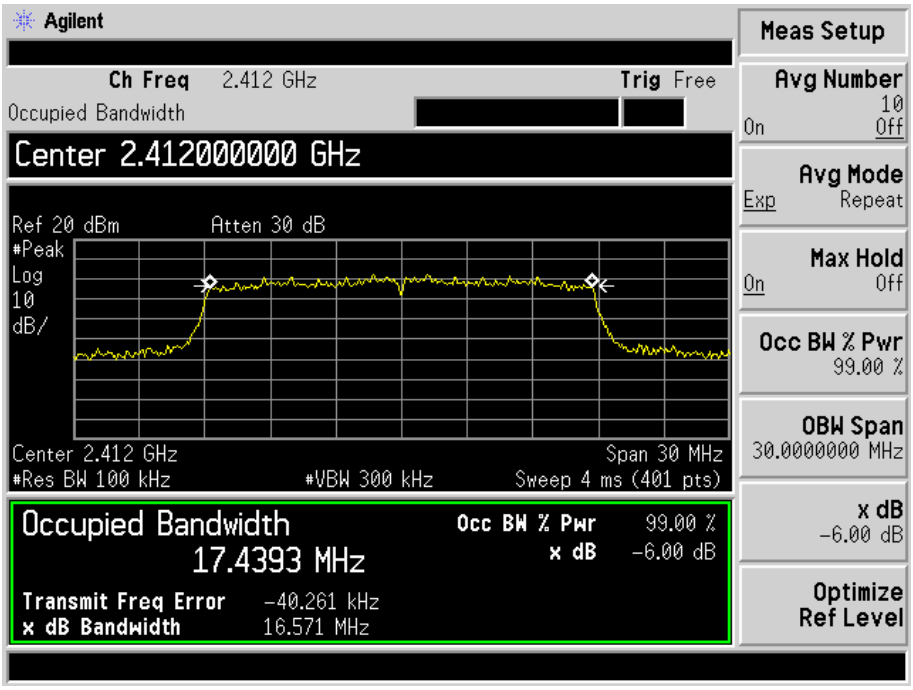
802.11g-Middle Channel



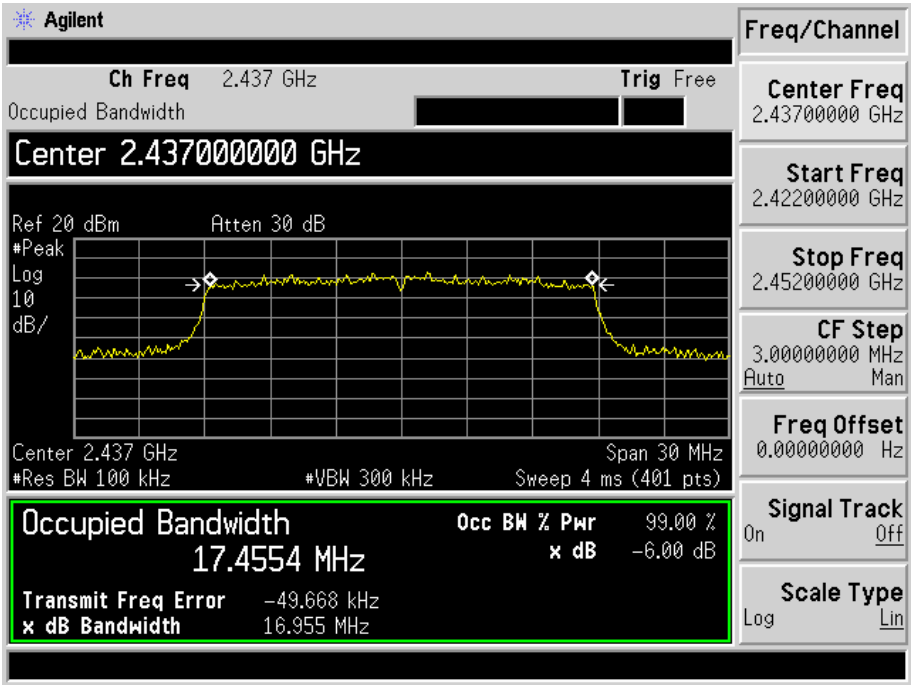
802.11g-High Channel



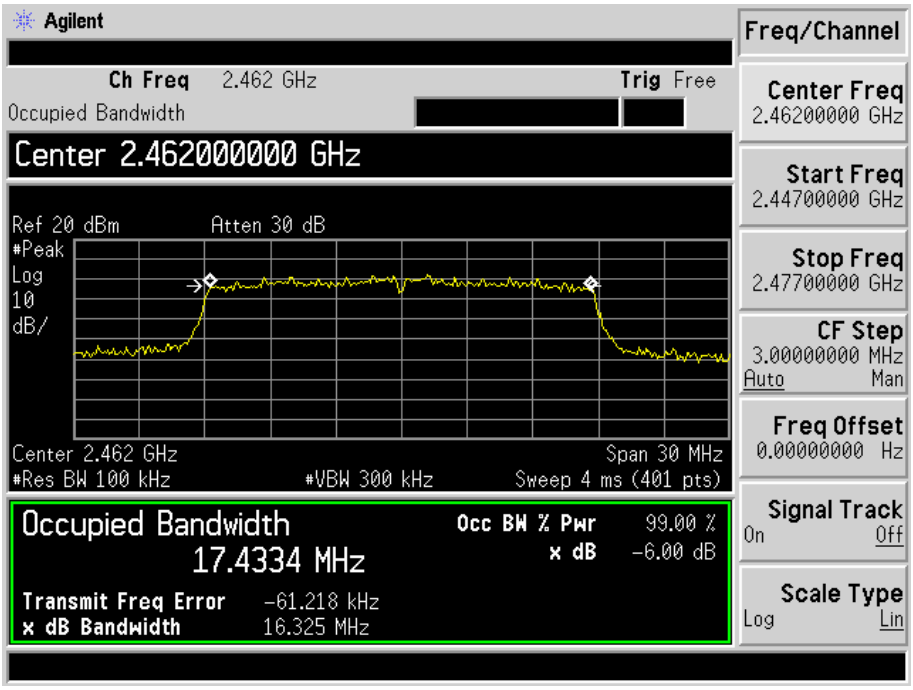
802.11n-HT20-Low Channel



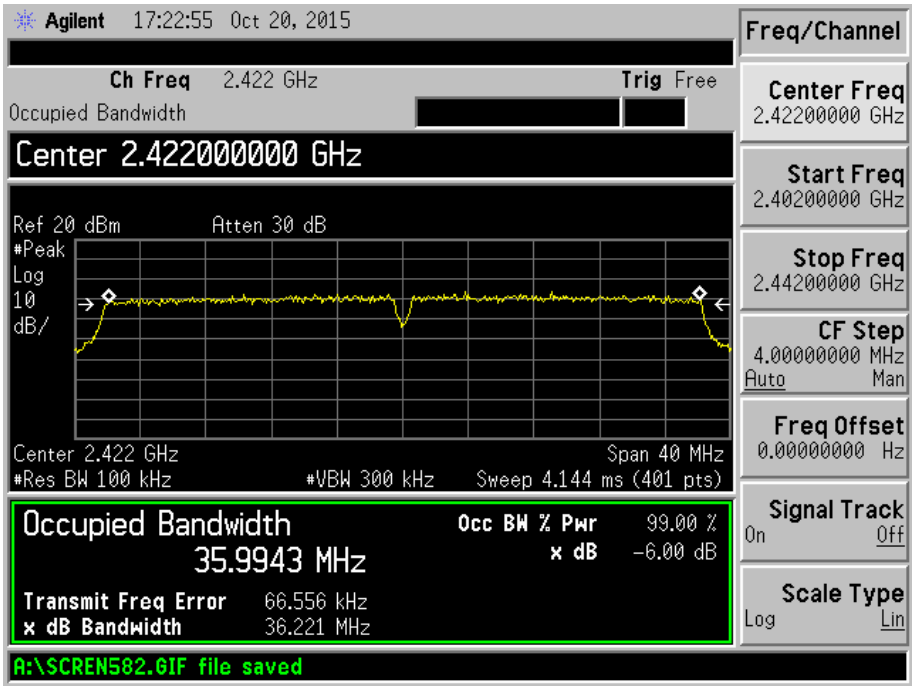
802.11n-HT20-Middle Channel



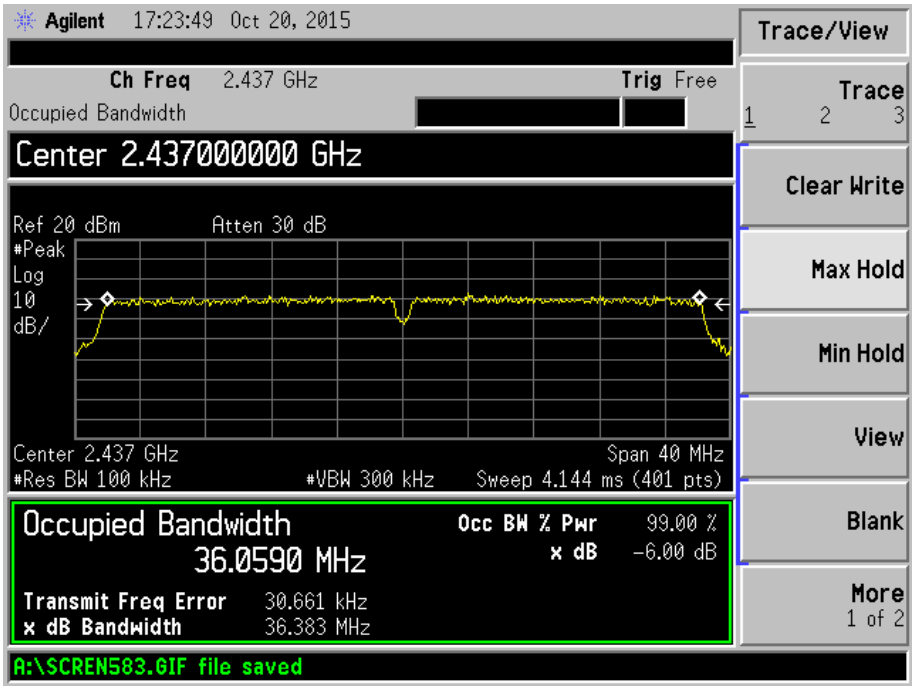
802.11n-HT20-High Channel



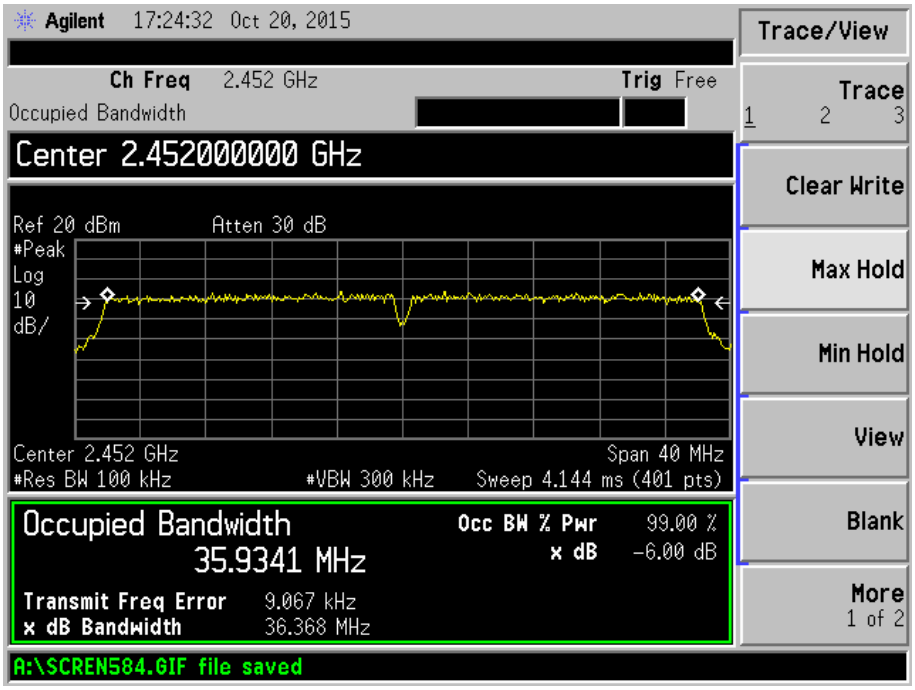
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel



802.11n-HT40-High Channel



7. RF Output Power

7.1 Standard Applicable

According to 15.247(b)(3). For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt.

7.2 Test Procedure

According to the KDB-558074 D01 v03r04, 9.2.2.2, when this option is exercised, the measured power is to be referenced to the OBW rather than the DTS bandwidth

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

7.3 Environmental Conditions

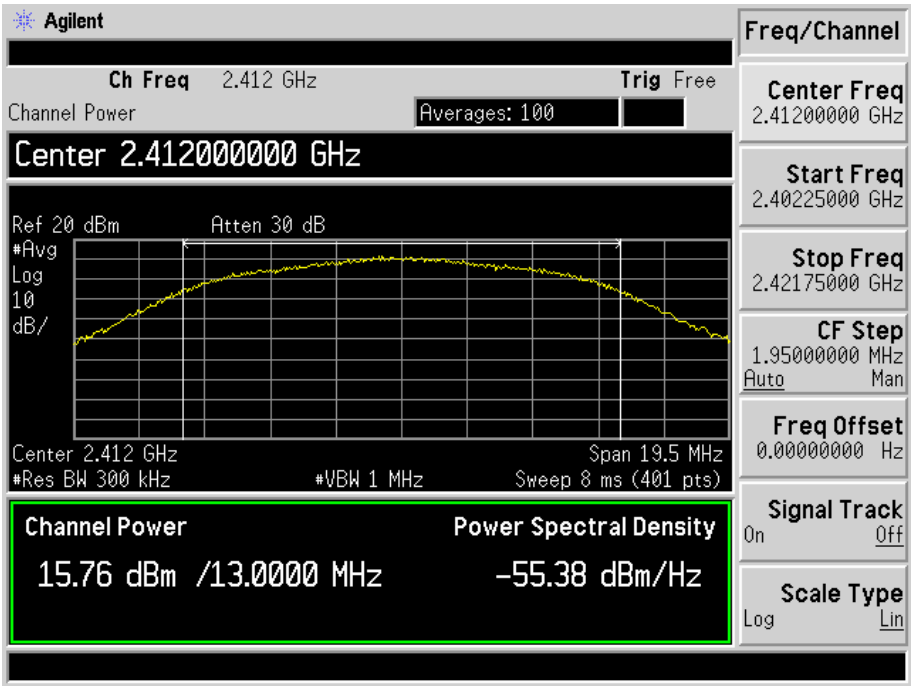
Temperature:	26° C
Relative Humidity:	57%
ATM Pressure:	1011 mbar

7.4 Summary of Test Results/Plots

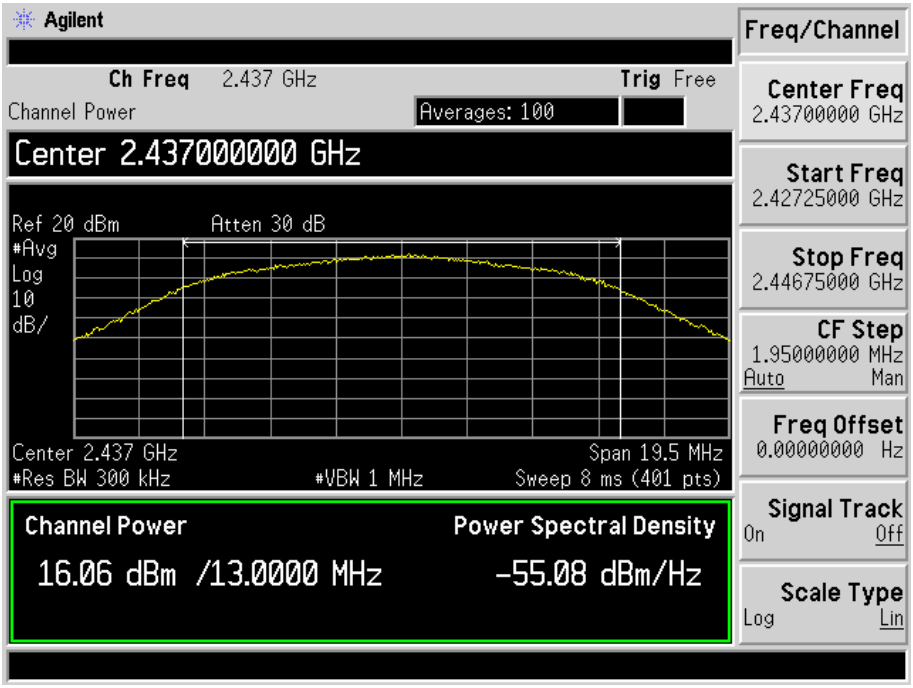
Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b _ 11Mbps	2412	15.76	37.67	1000
	2437	16.06	40.36	1000
	2462	15.51	35.56	1000
802.11g_54Mbps	2412	14.96	31.33	1000
	2437	15.24	33.42	1000
	2462	14.71	29.58	1000
802.11n HT20_MCS7	2412	13.37	21.73	1000
	2437	13.68	23.33	1000
	2462	13.10	20.42	1000
802.11n HT40_MCS7	2422	9.14	8.20	1000
	2437	9.61	9.14	1000
	2452	9.77	9.48	1000

Please refer to the following test plots:

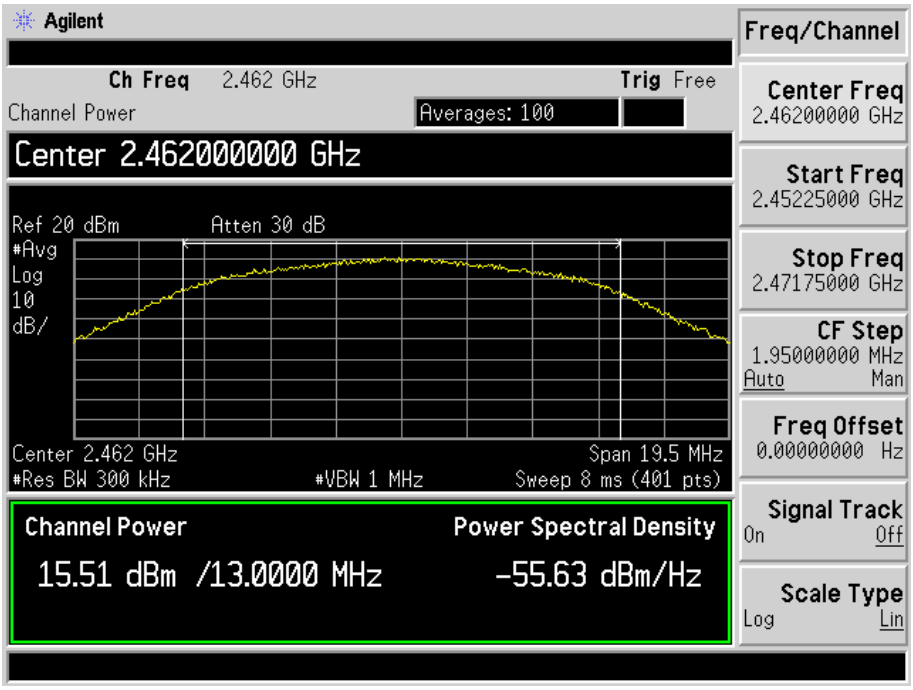
802.11-11Mbps-Low Channel



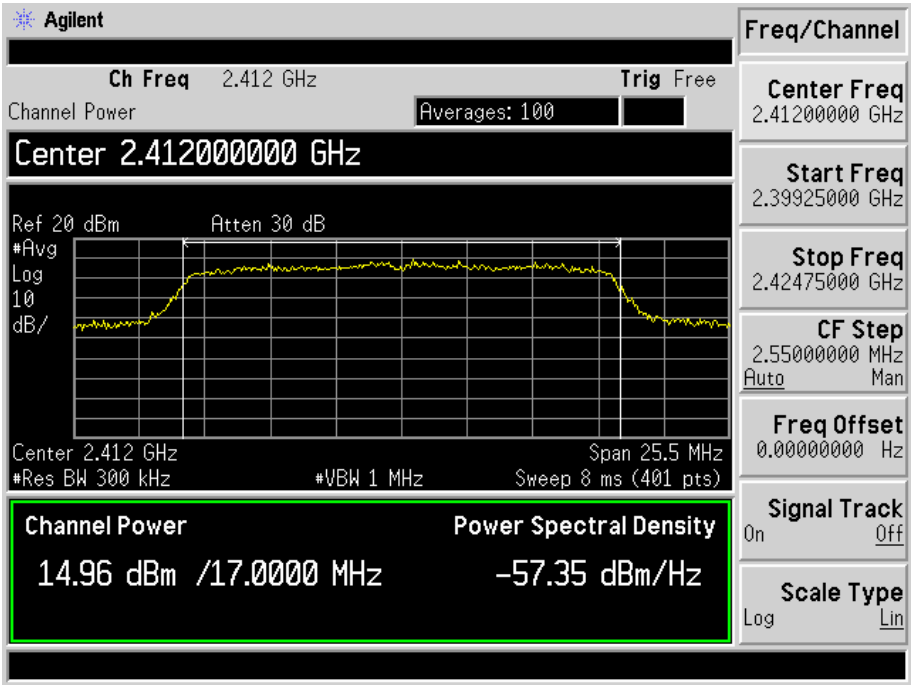
802.11b -11Mbps-Middle Channel



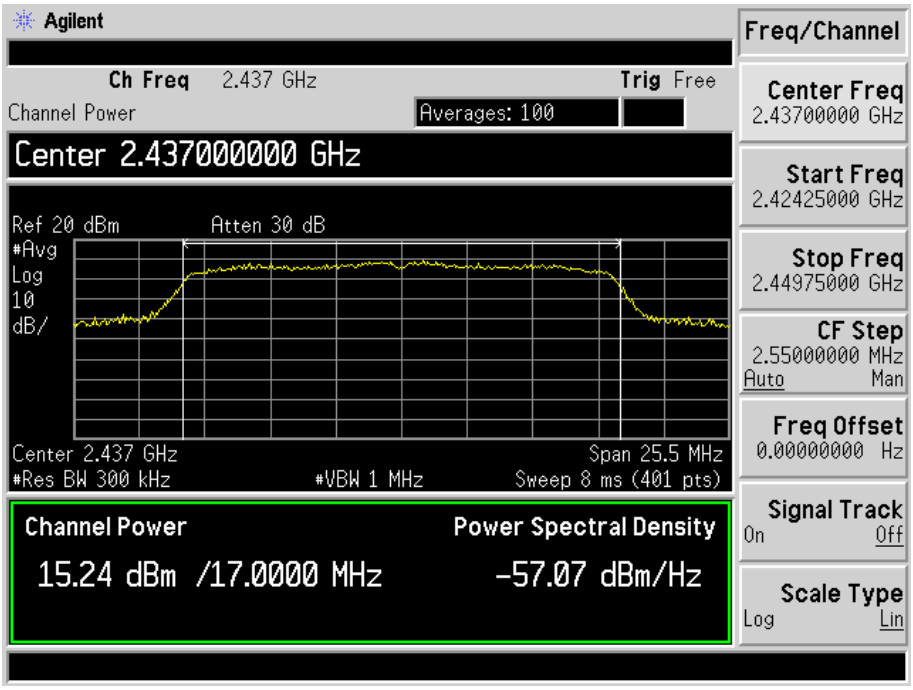
802.11b -11Mpbs-High Channel



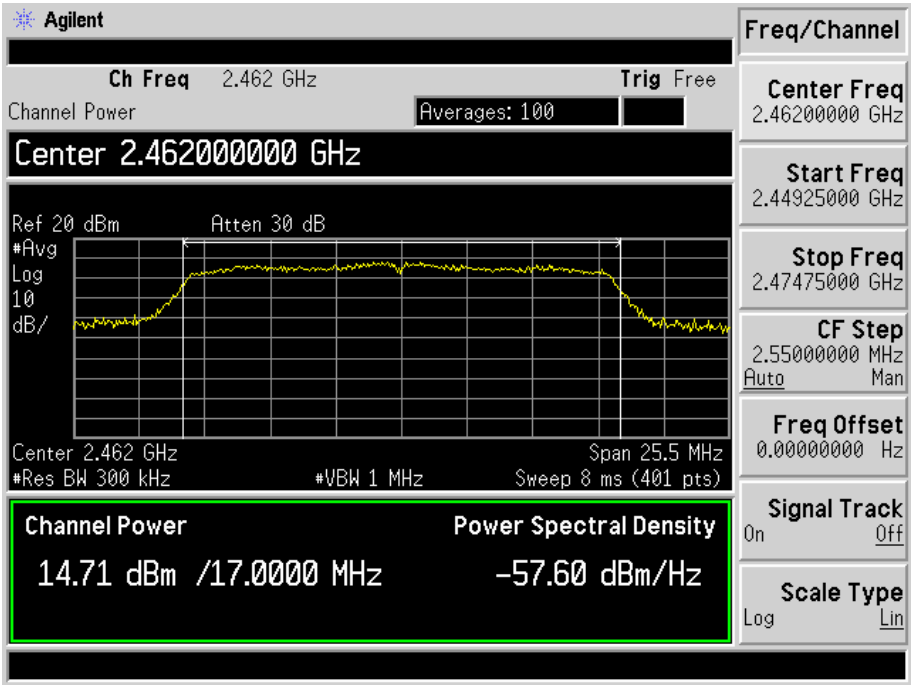
802.11g-54Mbps-Low Channel



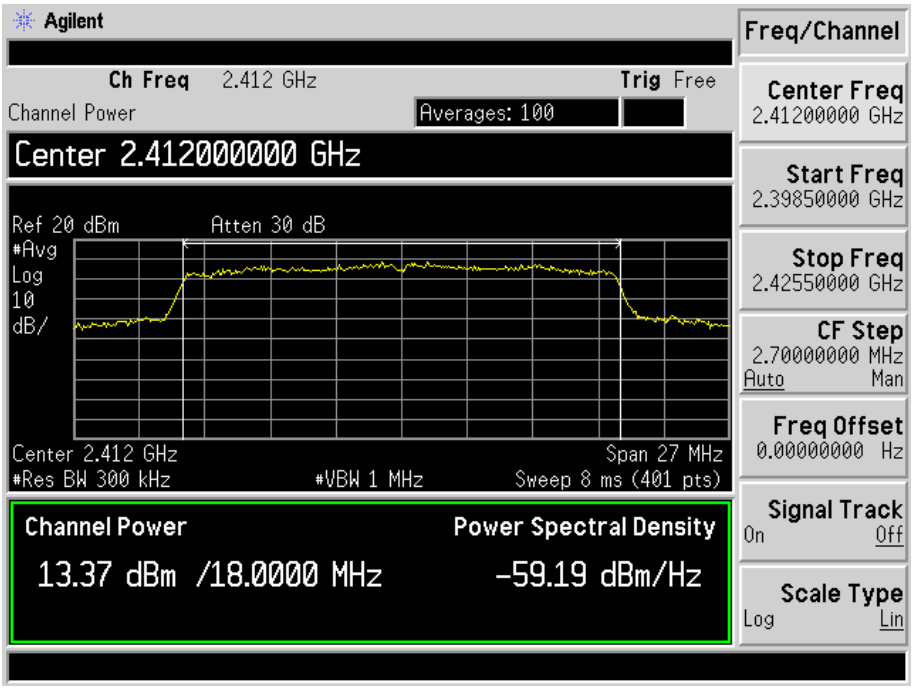
802.11g-54Mbps-Middle Channel



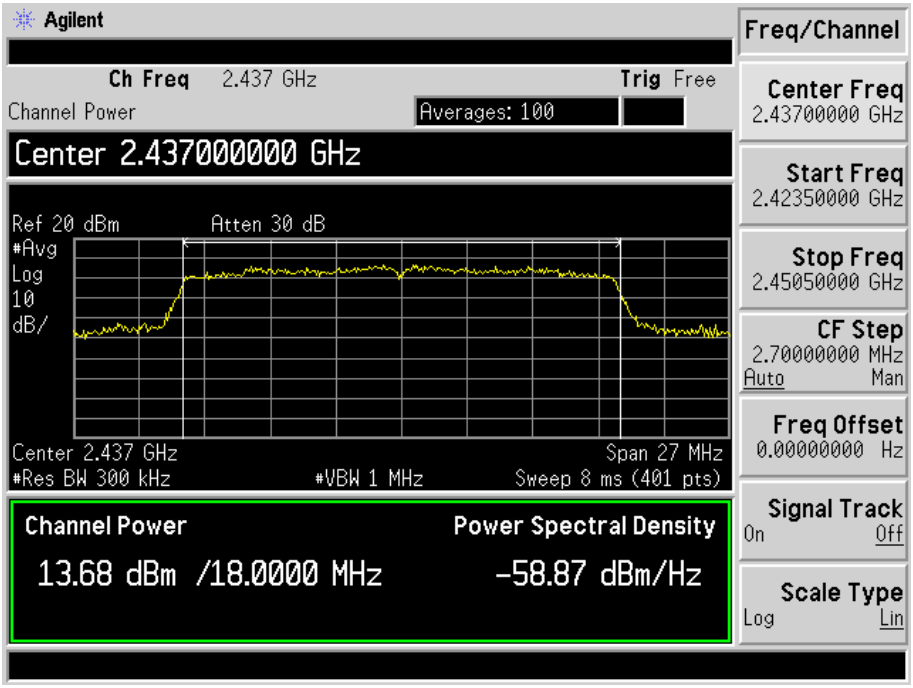
802.11g-54Mpbs-High Channel



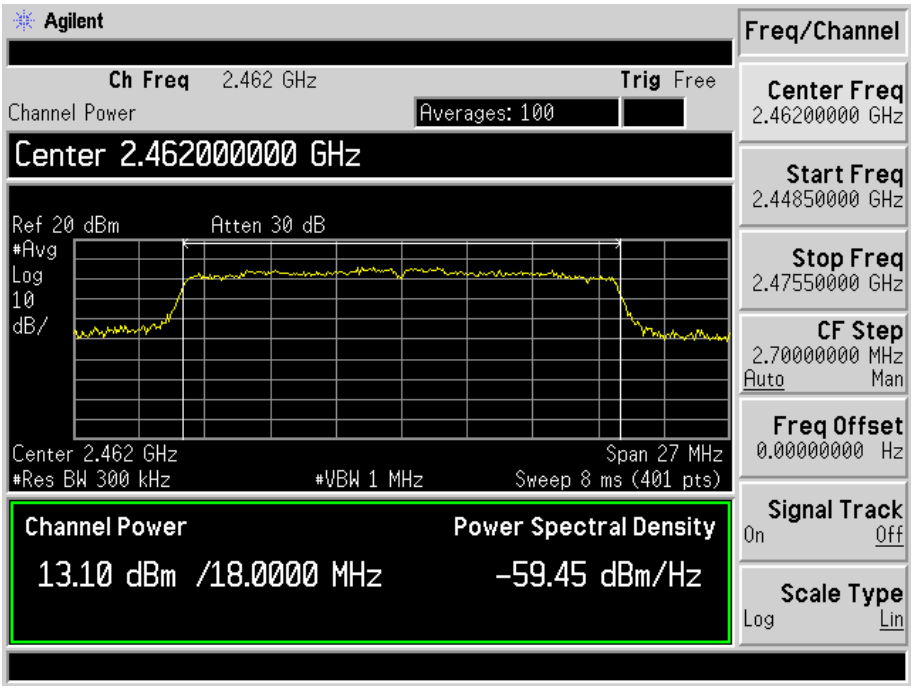
802.11n-HT20-MCS7-Low Channel



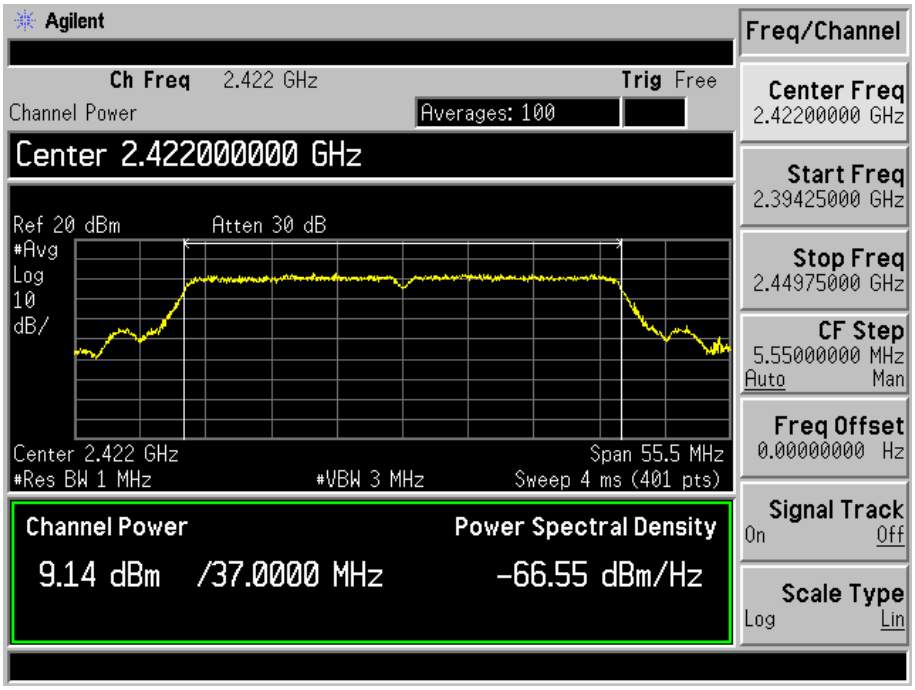
802.11n-HT20-MCS7-Middle Channel



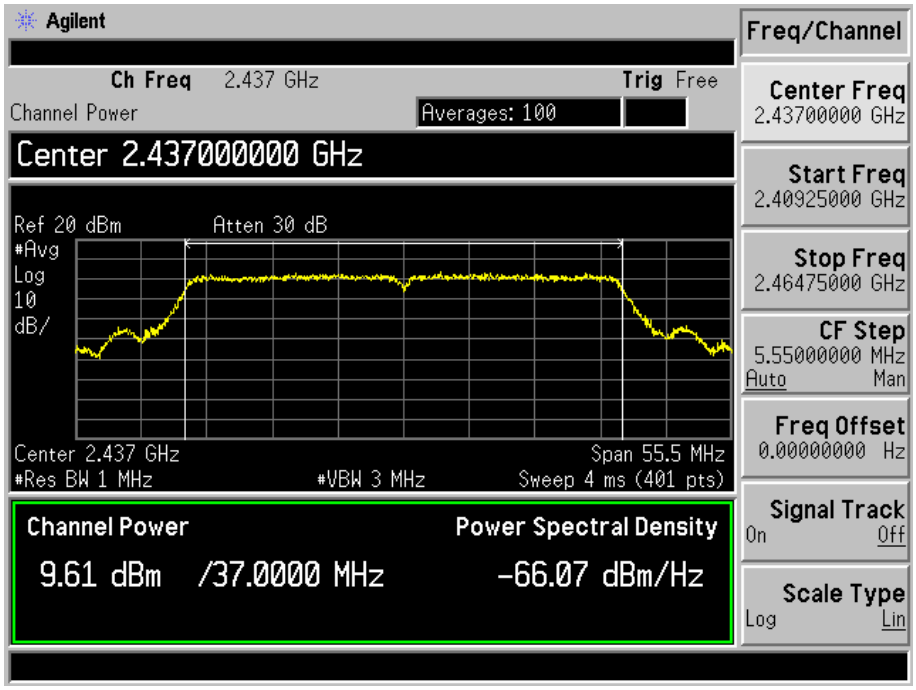
802.11n-HT20-MCS7-High Channel



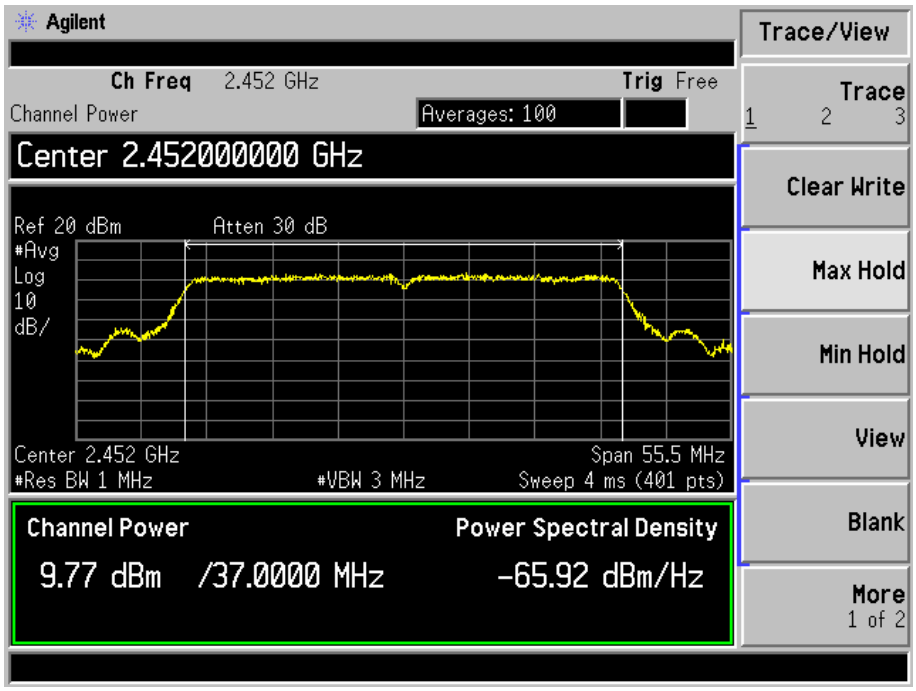
802.11n-HT40-MCS7-Low Channel



802.11n-HT40-MCS7-Middle Channel



802.11n-HT40-MCS7-High Channel



8. Field Strength of Spurious Emissions

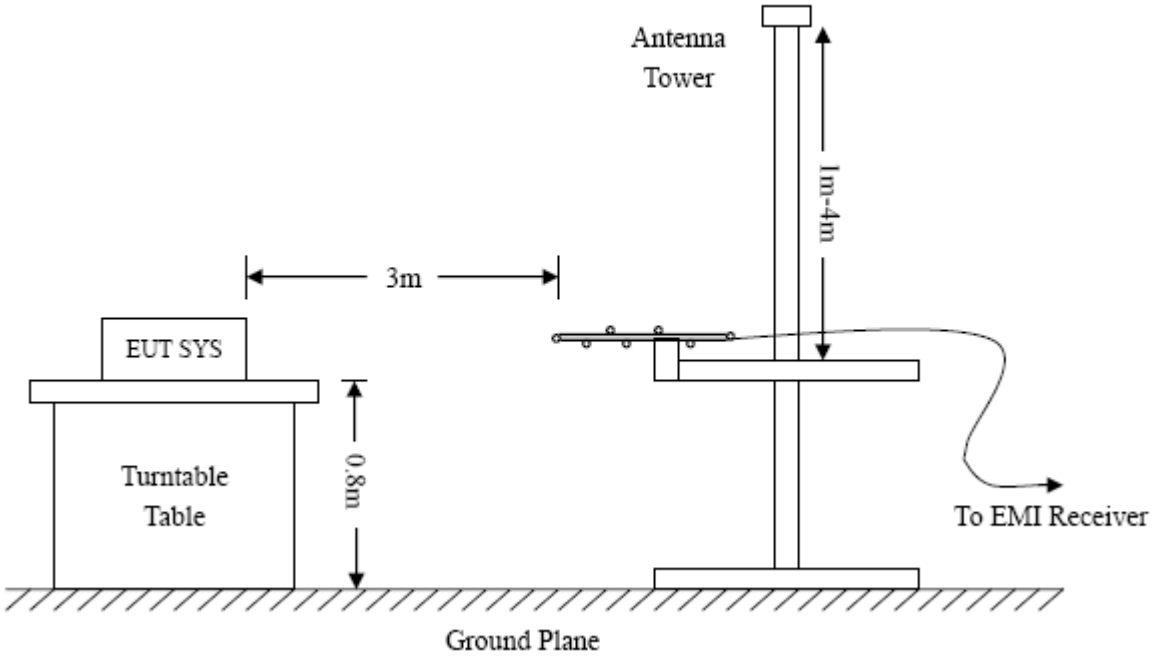
8.1 Standard Applicable

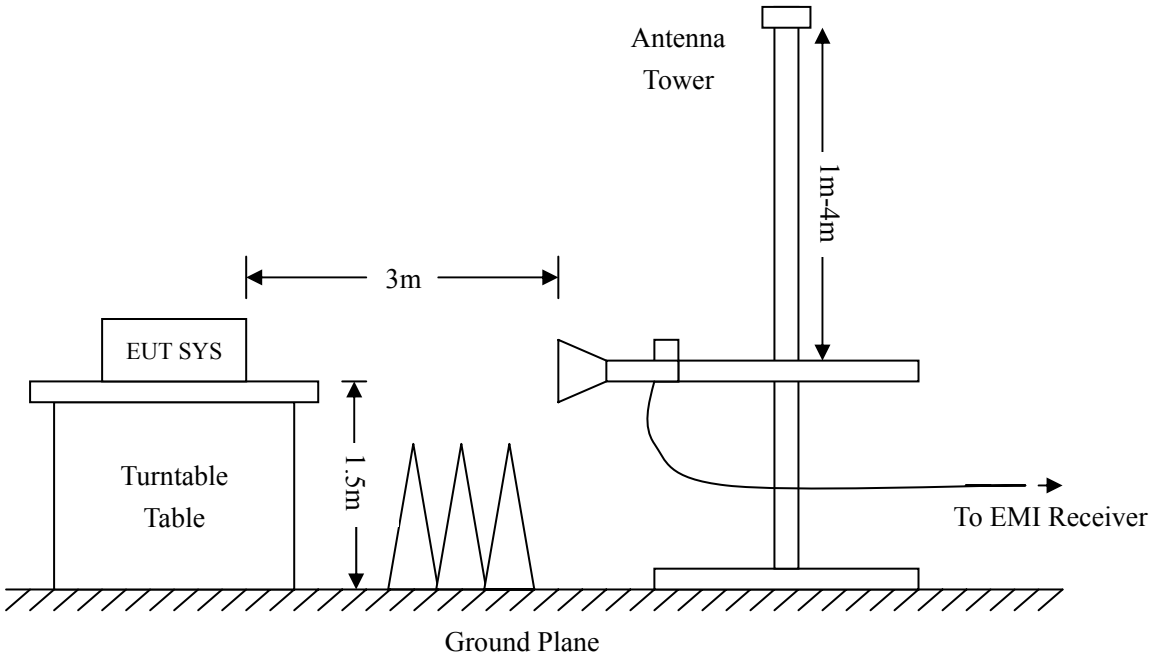
According to §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within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

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

8.2 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15.205 15.247(a) and FCC Part 15.209 Limit.
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.
The spacing between the peripherals was 10 cm.





Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

8.3 Corrected Amplitude & Margin Calculation

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

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

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

Margin = Corr. Ampl. – FCC Part 15 Limit

8.4 Environmental Conditions

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

8.5 Summary of Test Results/Plots

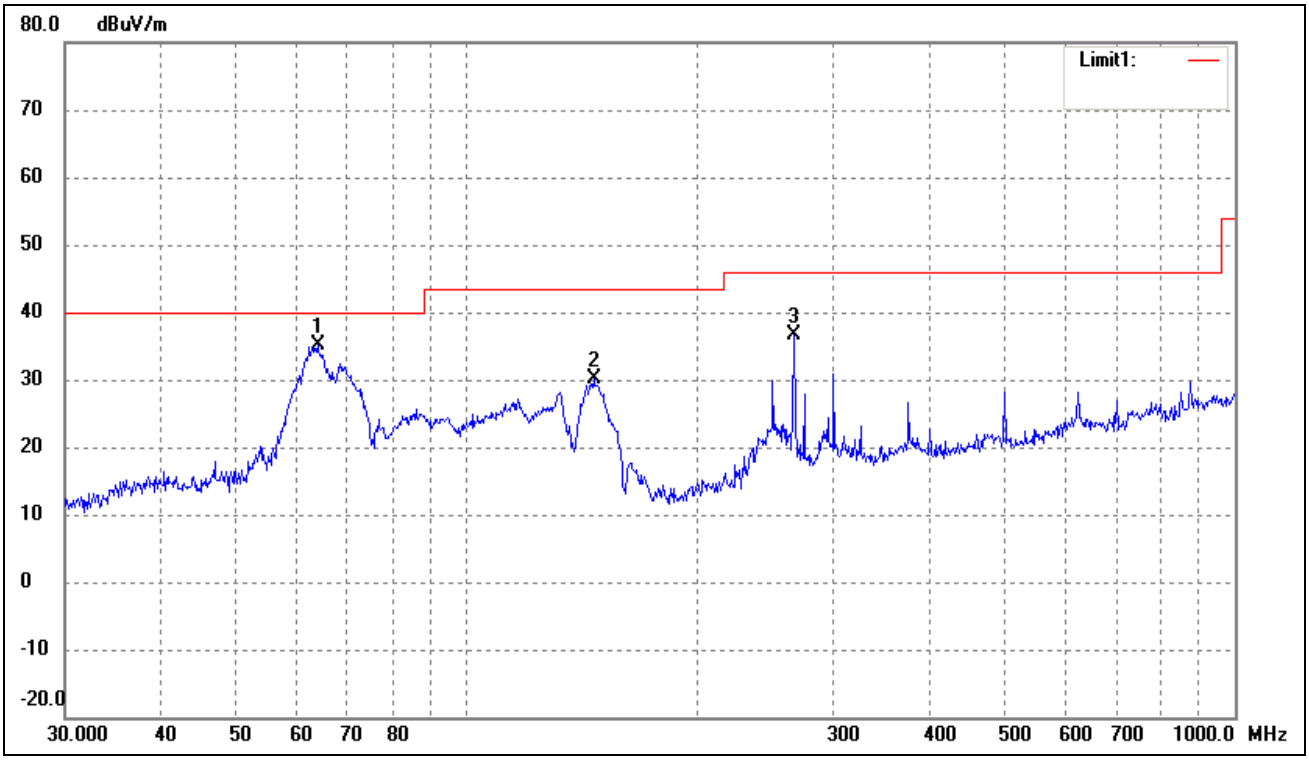
According to the data below, the FCC Part 15.205, 15.209 and 15.247 standards, and had the worst cases:

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

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

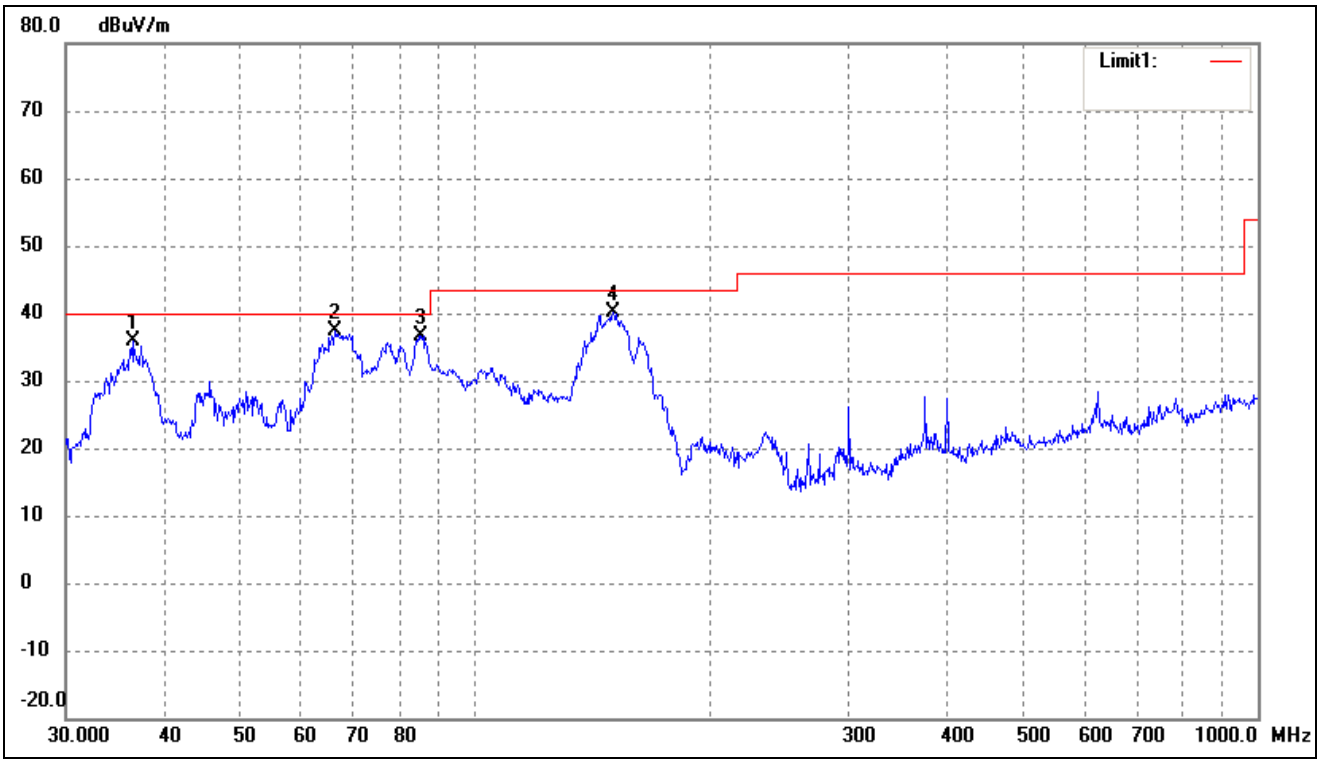
EUT: *ROUTER*
Tested Model: *ER-800*
Operating Condition: *802.11b Transmitting Low Channel-2412MHz*
Comment: *Adapter DC12V*

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	63.9828	46.05	-10.87	35.18	40.00	-4.82	165	100	peak
2	146.3735	42.66	-12.47	30.19	43.50	-13.31	21	100	peak
3	266.6089	43.26	-6.67	36.59	46.00	-9.41	47	100	peak

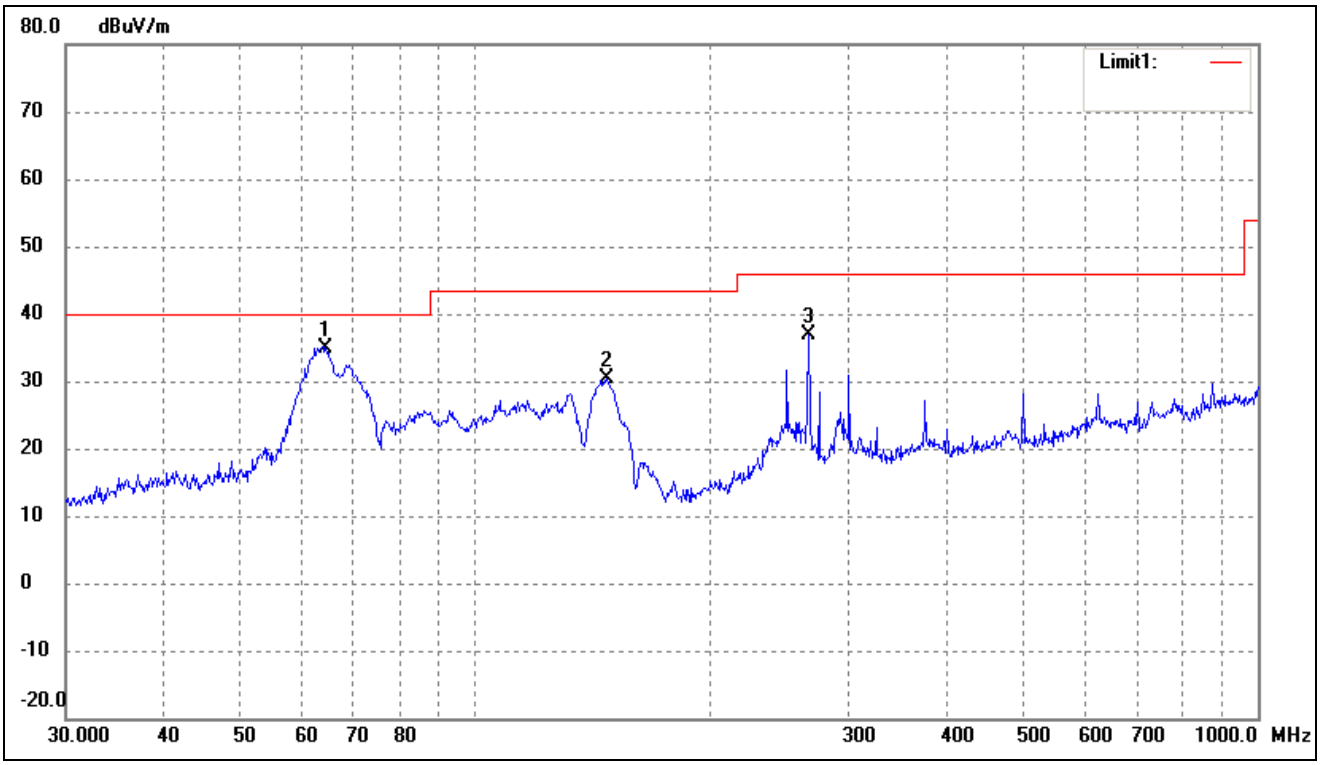
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	36.6375	44.49	-8.59	35.90	40.00	-4.10	78	100	peak
2	66.2662	48.90	-11.62	37.28	40.00	-2.72	44	100	peak
3	85.2981	49.11	-12.50	36.61	40.00	-3.39	168	100	peak
4	150.0108	52.62	-12.42	40.20	43.50	-3.30	201	100	peak

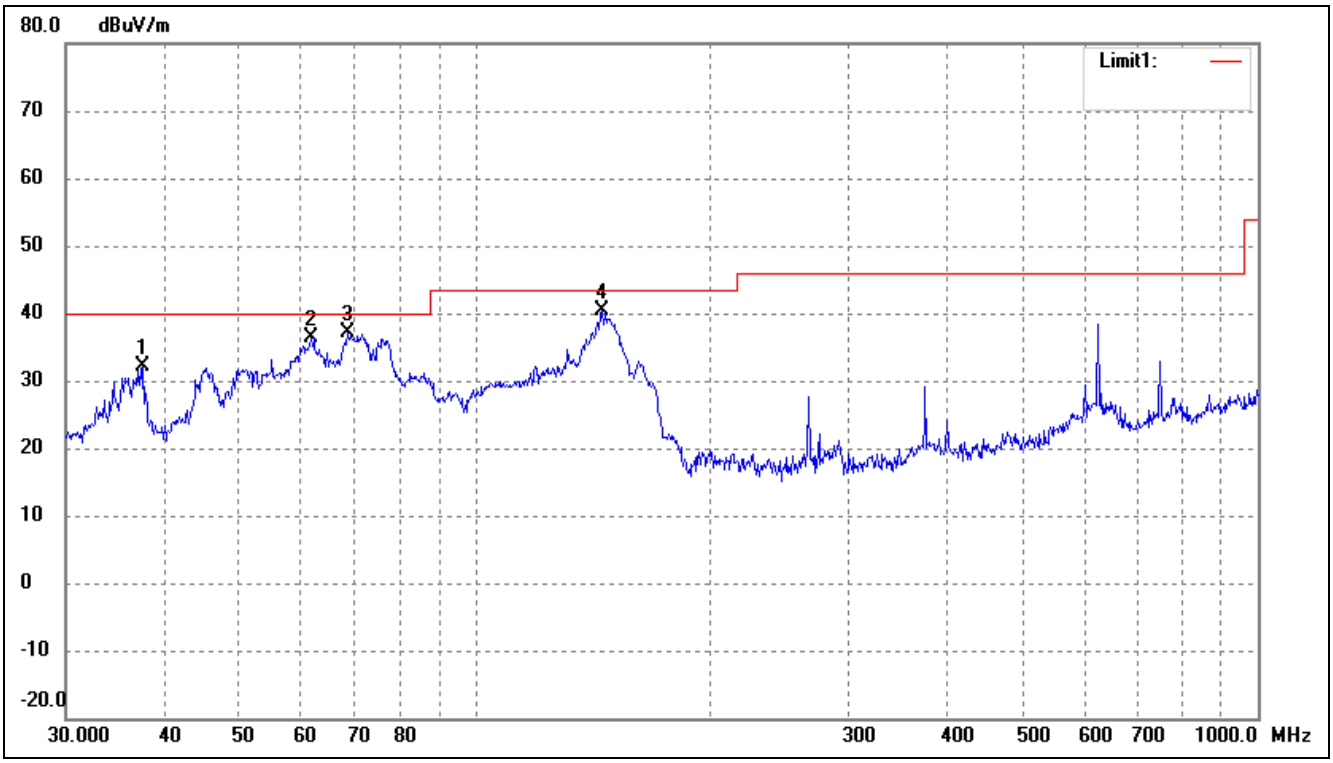
Operating Condition: *802.11b Transmitting Middle Channel-2437MHz*
Comment: *Adapter DC12V*

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	64.4331	45.93	-11.02	34.91	40.00	-5.09	178	100	peak
2	147.4036	42.78	-12.46	30.32	43.50	-13.18	224	100	peak
3	266.6089	43.45	-6.67	36.78	46.00	-9.22	160	100	peak

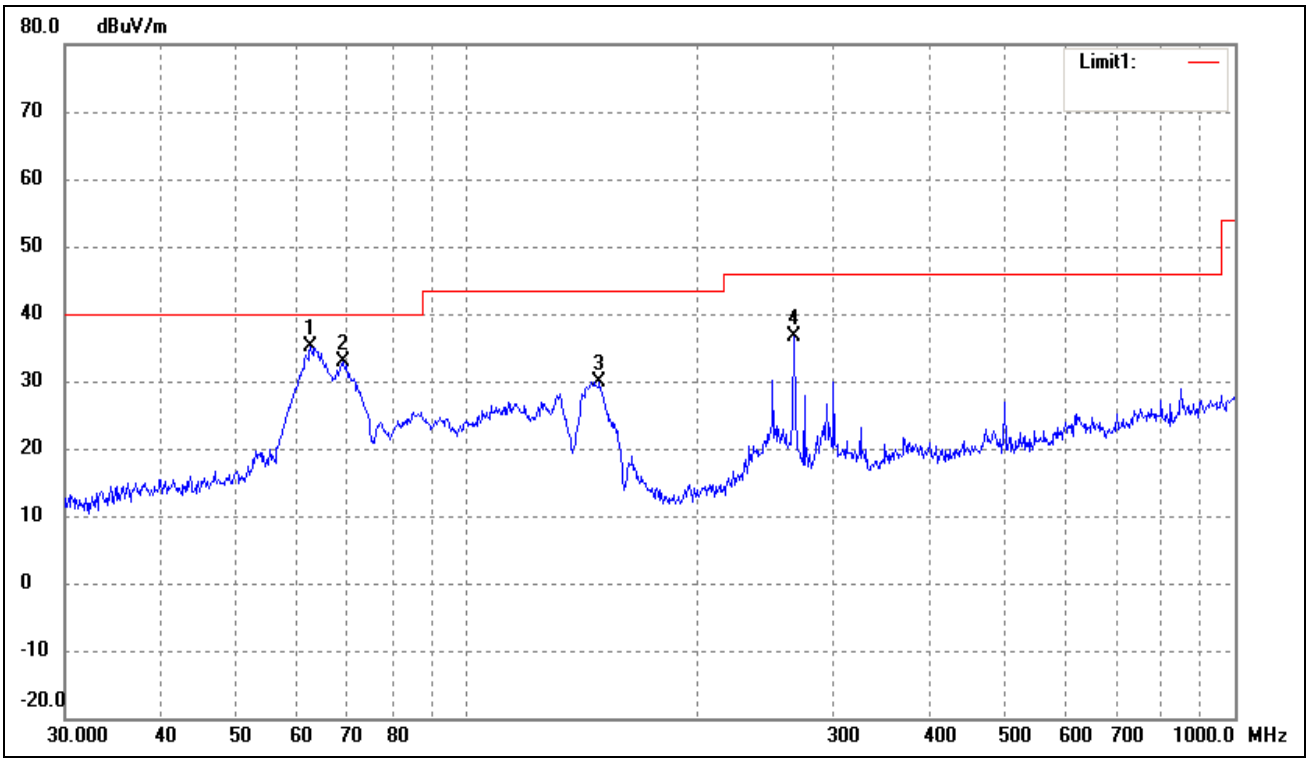
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	37.6798	40.54	-8.30	32.24	40.00	-7.76	185	100	peak
2	61.7781	46.64	-10.16	36.48	40.00	-3.52	201	100	peak
3	68.6310	49.62	-12.39	37.23	40.00	-2.77	111	100	peak
4	145.3506	52.87	-12.48	40.39	43.50	-3.11	69	100	peak

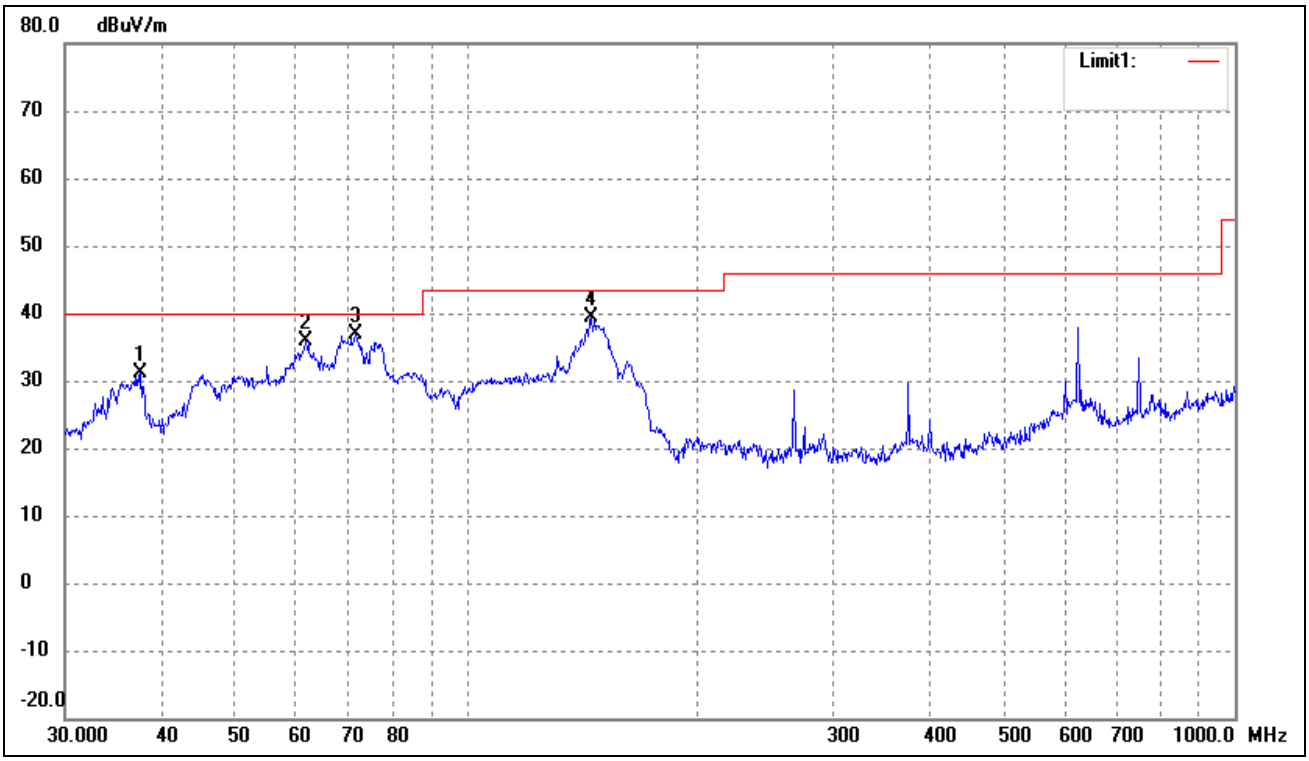
Operating Condition: *802.11b Transmitting High Channel-2462MHz*
Comment: *Adapter DC12V*

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	62.6507	45.46	-10.44	35.02	40.00	-4.98	165	100	peak
2	69.1141	45.46	-12.55	32.91	40.00	-7.09	201	100	peak
3	148.9625	42.39	-12.44	29.95	43.50	-13.55	59	100	peak
4	266.6089	43.40	-6.67	36.73	46.00	-9.27	87	100	peak

Test Specification: *Vertical*

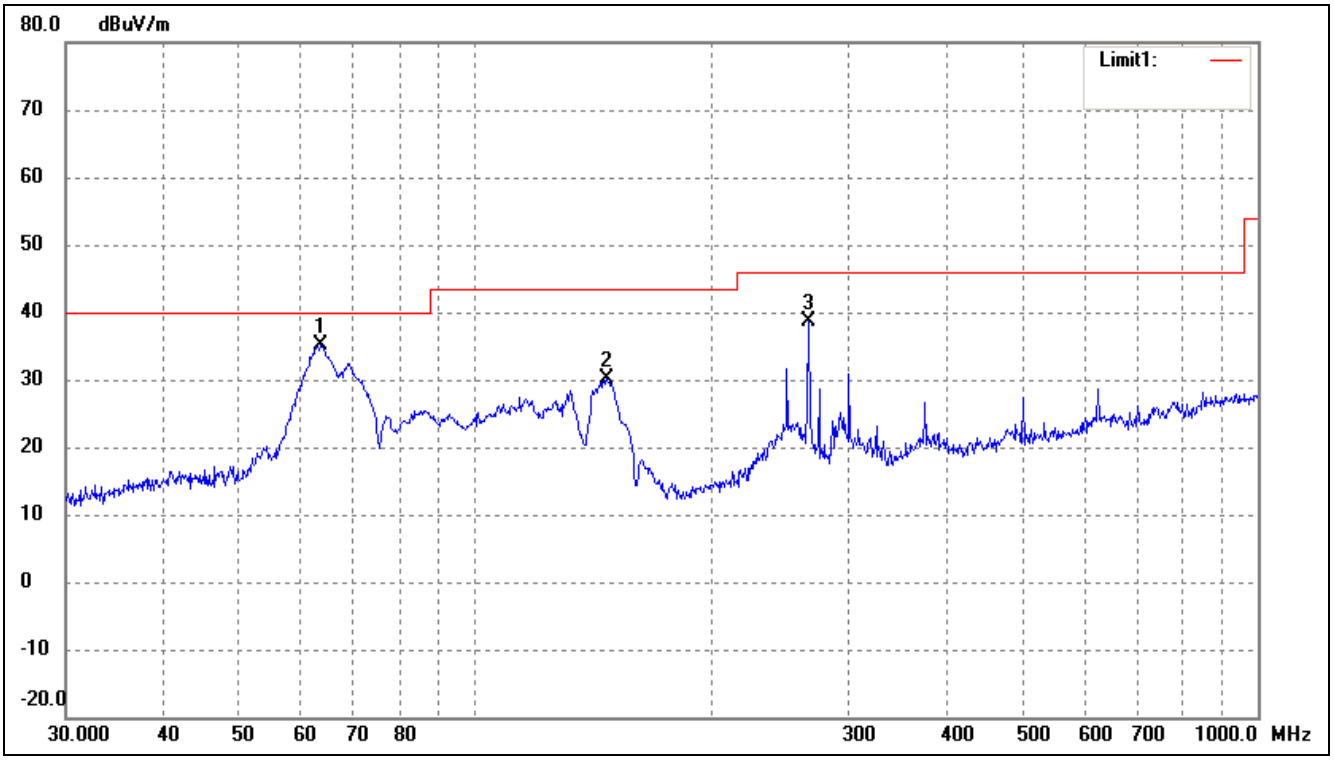


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	37.6798	39.54	-8.30	31.24	40.00	-8.76	188	100	peak
2	61.7781	46.14	-10.16	35.98	40.00	-4.02	52	100	peak
3	71.8320	49.59	-12.68	36.91	40.00	-3.09	126	100	peak
4	145.3506	51.87	-12.48	39.39	43.50	-4.11	88	100	peak

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

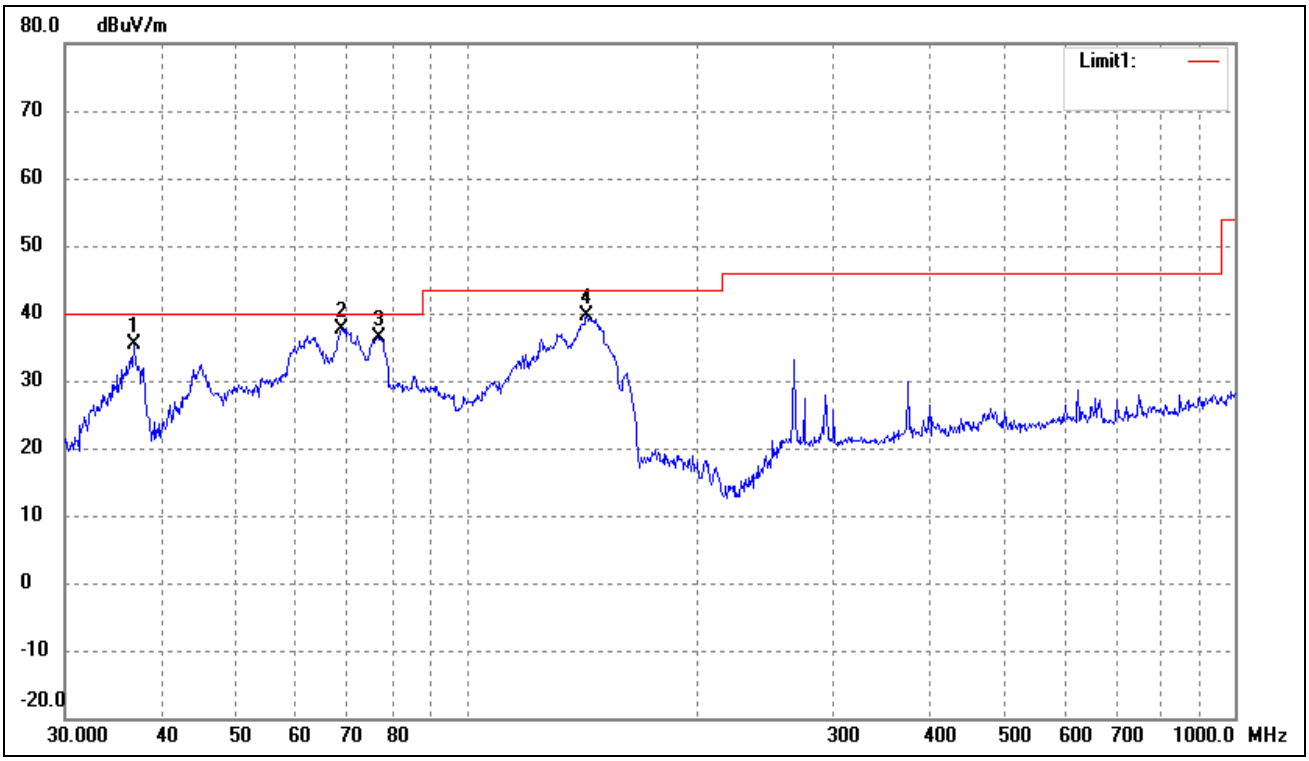
EUT: *ROUTER*
Tested Model: *ER-800*
Operating Condition: *802.11g Transmitting Low Channel-2412MHz*
Comment: *Adapter DC12V*

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	63.5356	45.77	-10.73	35.04	40.00	-4.96	78	100	peak
2	147.4036	42.47	-12.46	30.01	43.50	-13.49	98	100	peak
3	266.6089	45.20	-6.67	38.53	46.00	-7.47	165	100	peak

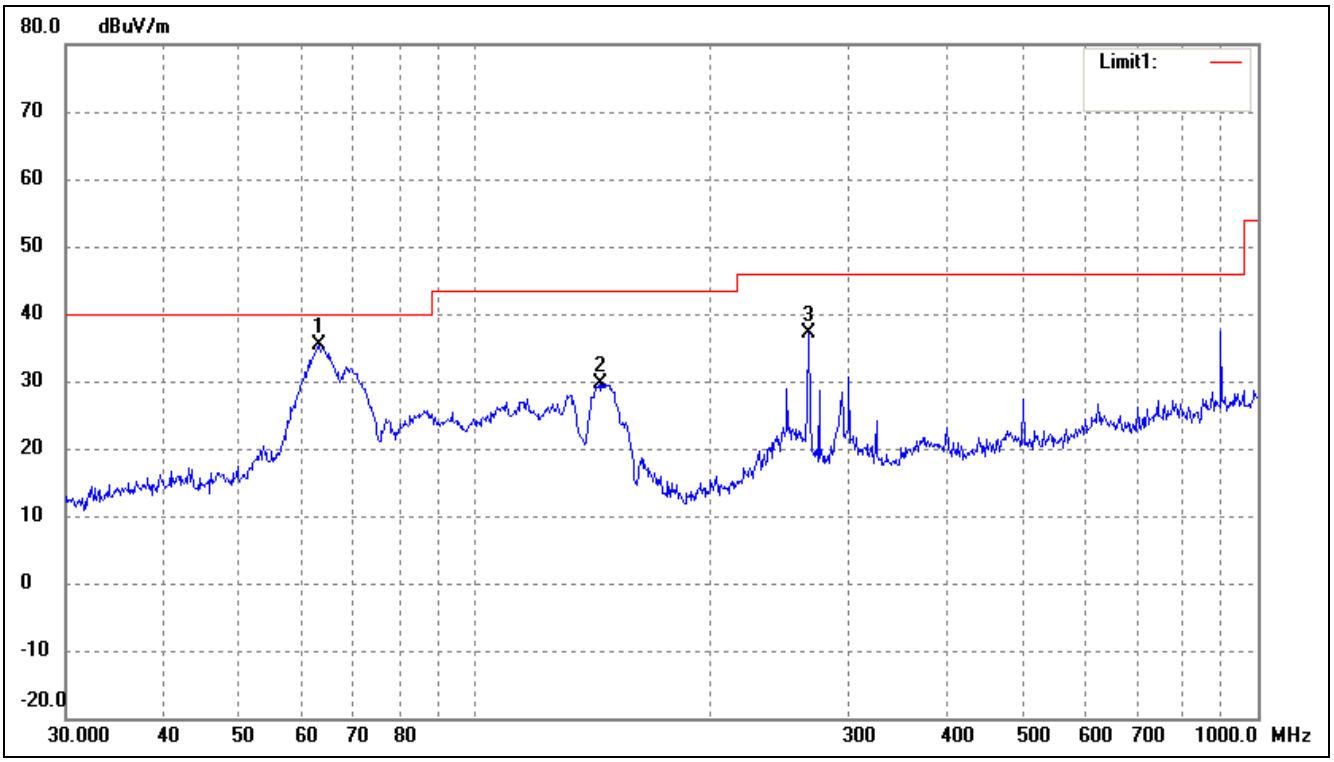
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	36.8953	43.90	-8.52	35.38	40.00	-4.62	185	100	peak
2	68.6310	50.04	-12.39	37.65	40.00	-2.35	221	100	peak
3	77.0505	48.61	-12.24	36.37	40.00	-3.63	156	100	peak
4	143.3261	52.17	-12.51	39.66	43.50	-3.84	58	100	peak

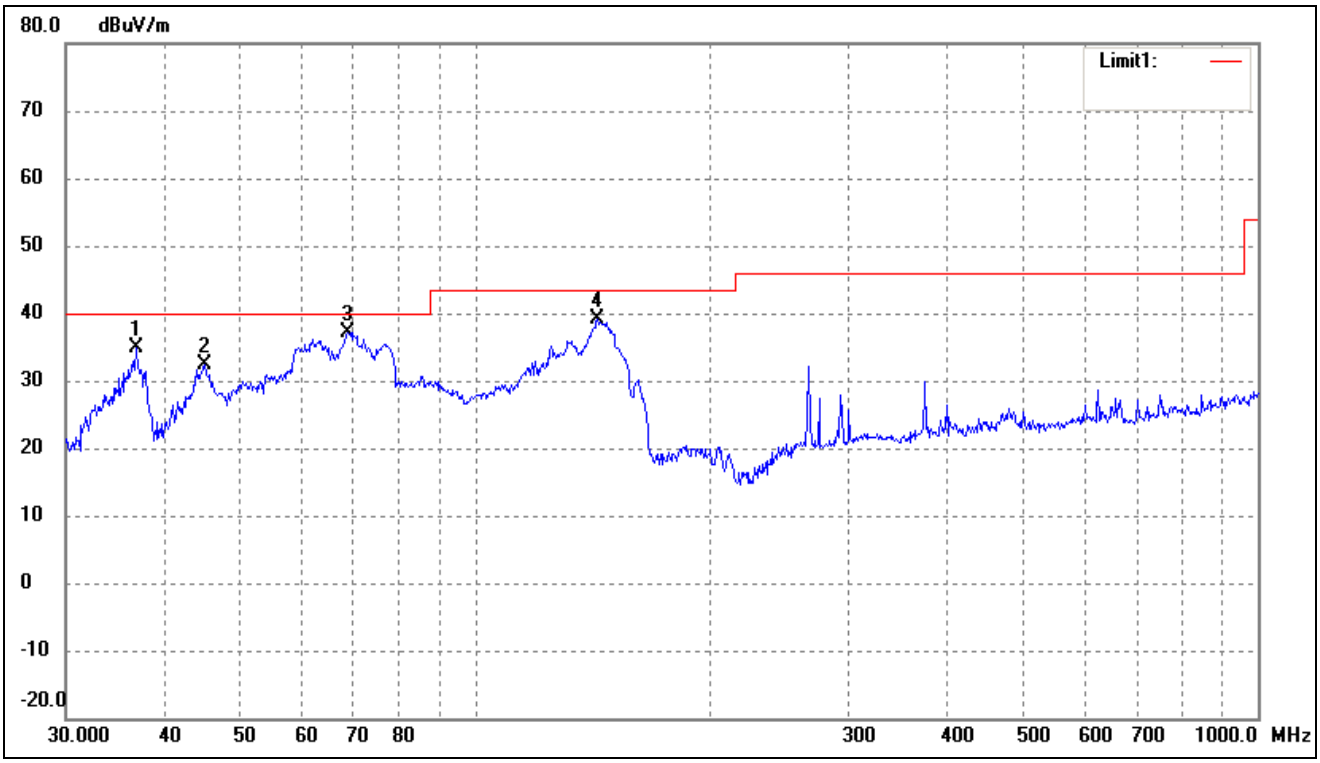
Operating Condition: *802.11g Transmitting Middle Channel-2437MHz*
Comment: *Adapter DC12V*

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	63.3132	46.12	-10.66	35.46	40.00	-4.54	95	100	peak
2	144.3348	42.24	-12.50	29.74	43.50	-13.76	155	100	peak
3	266.6089	43.83	-6.67	37.16	46.00	-8.84	87	100	peak

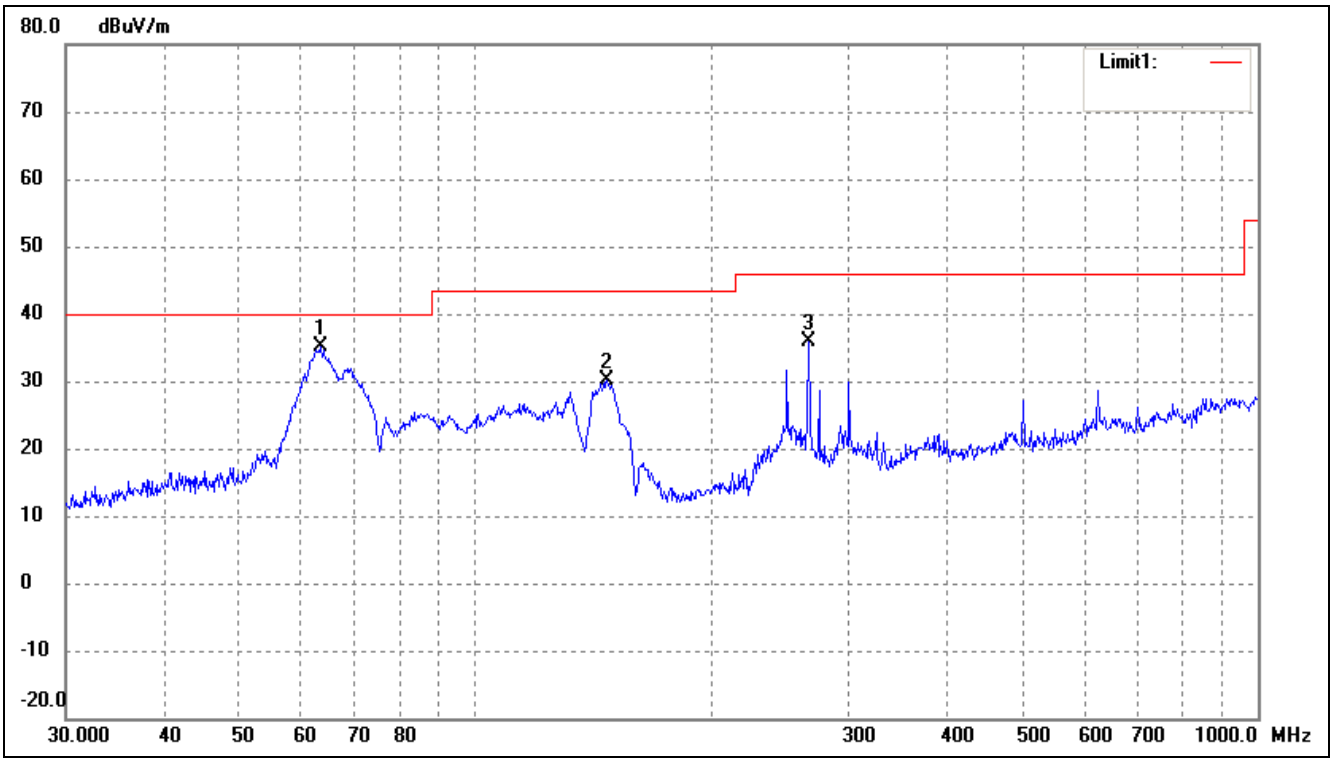
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	36.8953	43.40	-8.52	34.88	40.00	-5.12	168	100	peak
2	45.0583	40.37	-7.99	32.38	40.00	-7.62	87	100	peak
3	68.6310	49.54	-12.39	37.15	40.00	-2.85	144	100	peak
4	143.3261	51.67	-12.51	39.16	43.50	-4.34	268	100	peak

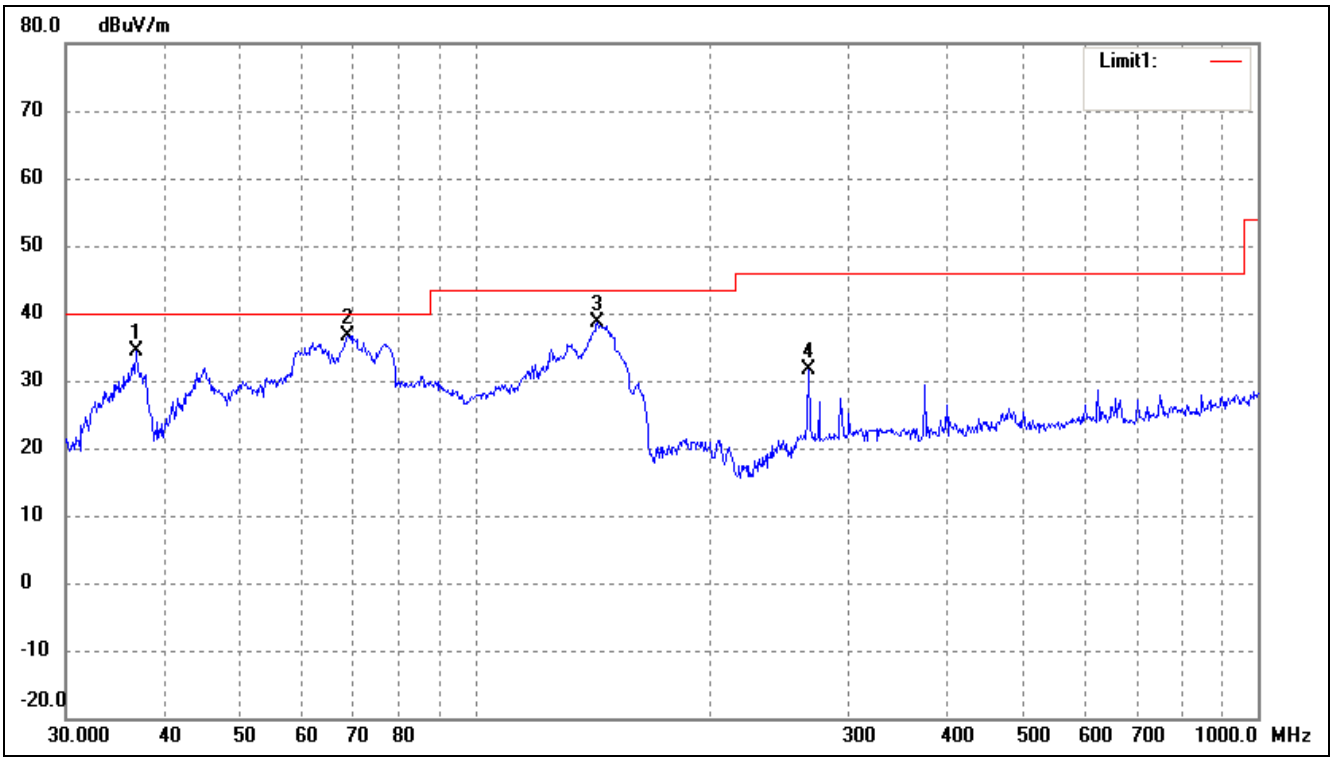
Operating Condition: *802.11g Transmitting High Channel-2462MHz*
Comment: *Adapter DC12V*

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	63.5356	45.77	-10.73	35.04	40.00	-4.96	187	100	peak
2	147.4036	42.47	-12.46	30.01	43.50	-13.49	47	200	peak
3	266.6089	42.66	-6.67	35.99	46.00	-10.01	201	200	peak

Test Specification: *Vertical*

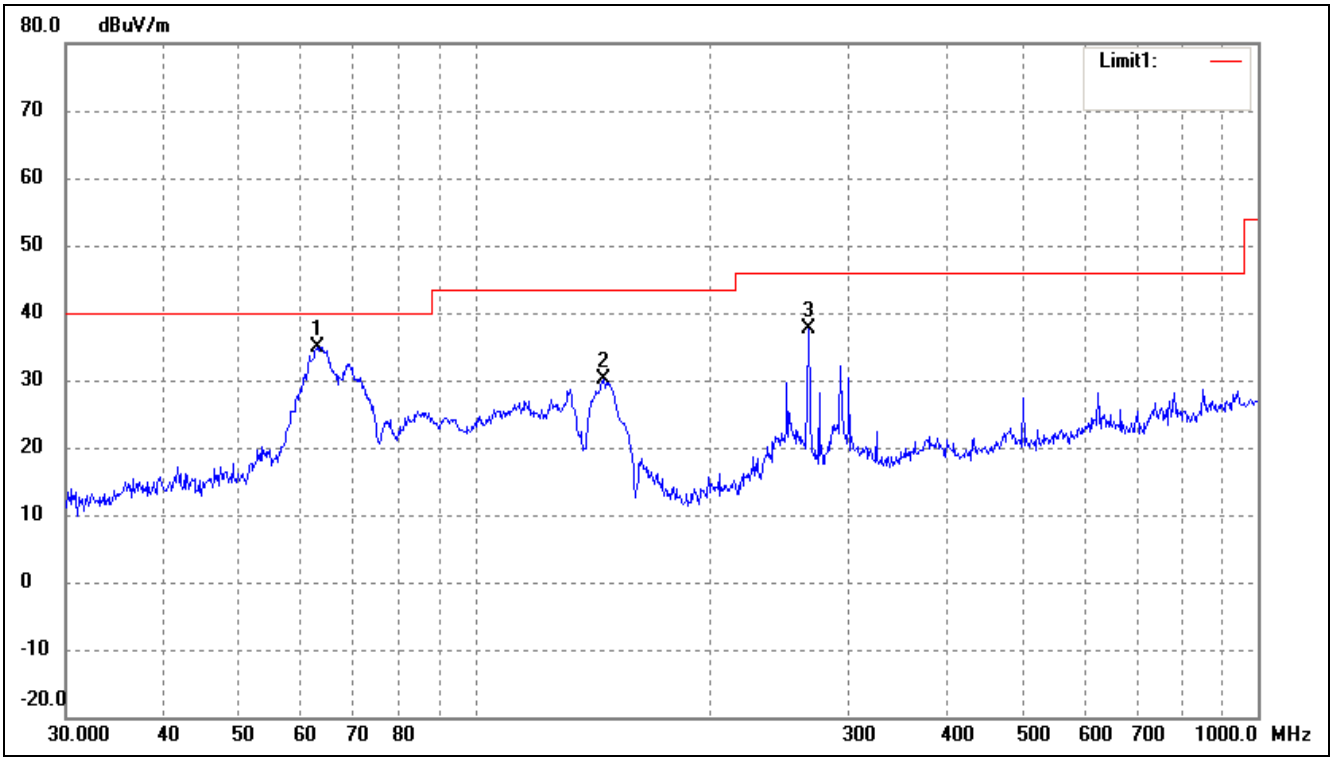


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	36.8953	42.90	-8.52	34.38	40.00	-5.62	178	100	peak
2	68.6310	49.04	-12.39	36.65	40.00	-3.35	51	100	peak
3	143.3261	51.17	-12.51	38.66	43.50	-4.84	229	100	peak
4	266.6089	38.23	-6.67	31.56	46.00	-14.44	97	100	peak

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

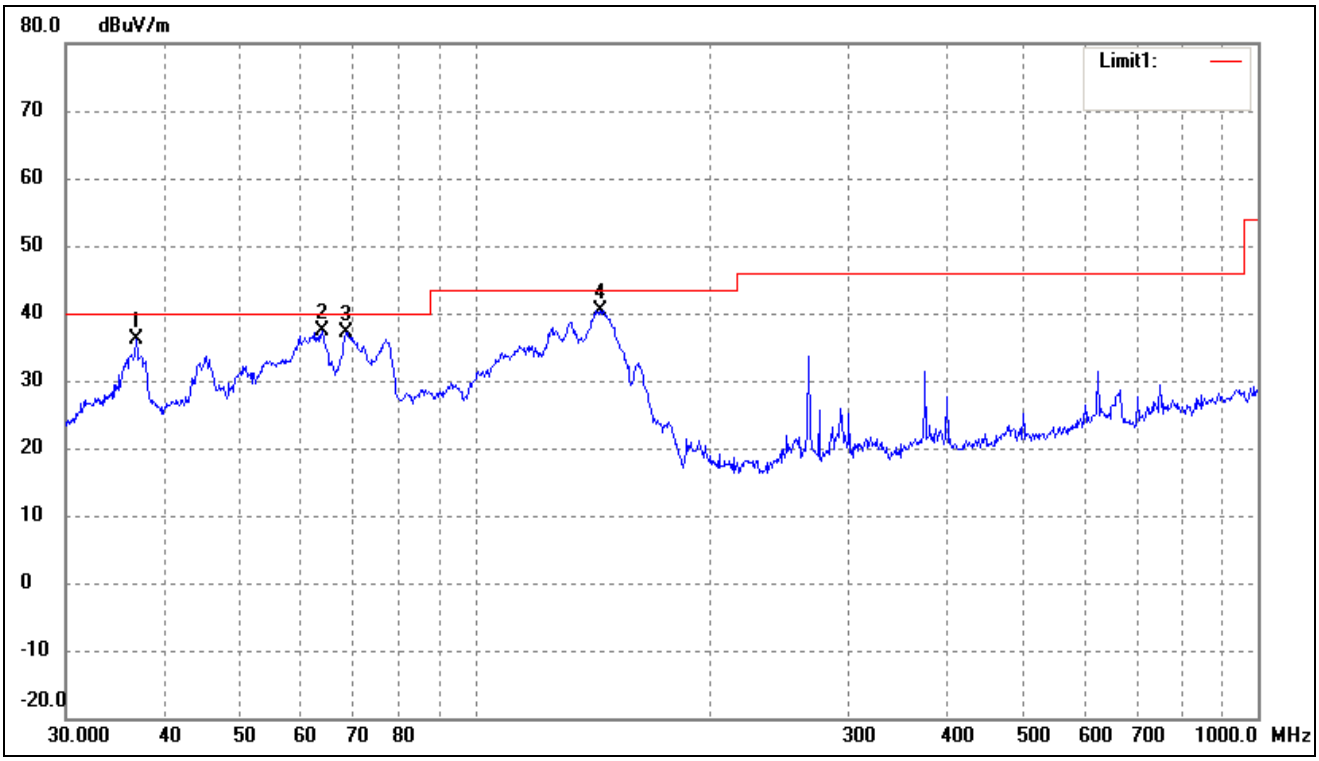
EUT: *ROUTER*
Tested Model: *ER-800*
Operating Condition: *802.11n-HT20 Transmitting Low Channel-2412MHz*
Comment: *Adapter DC12V*

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	62.8708	45.46	-10.51	34.95	40.00	-5.05	18	100	peak
2	145.8611	42.62	-12.48	30.14	43.50	-13.36	244	200	peak
3	266.6089	44.40	-6.67	37.73	46.00	-8.27	197	200	peak

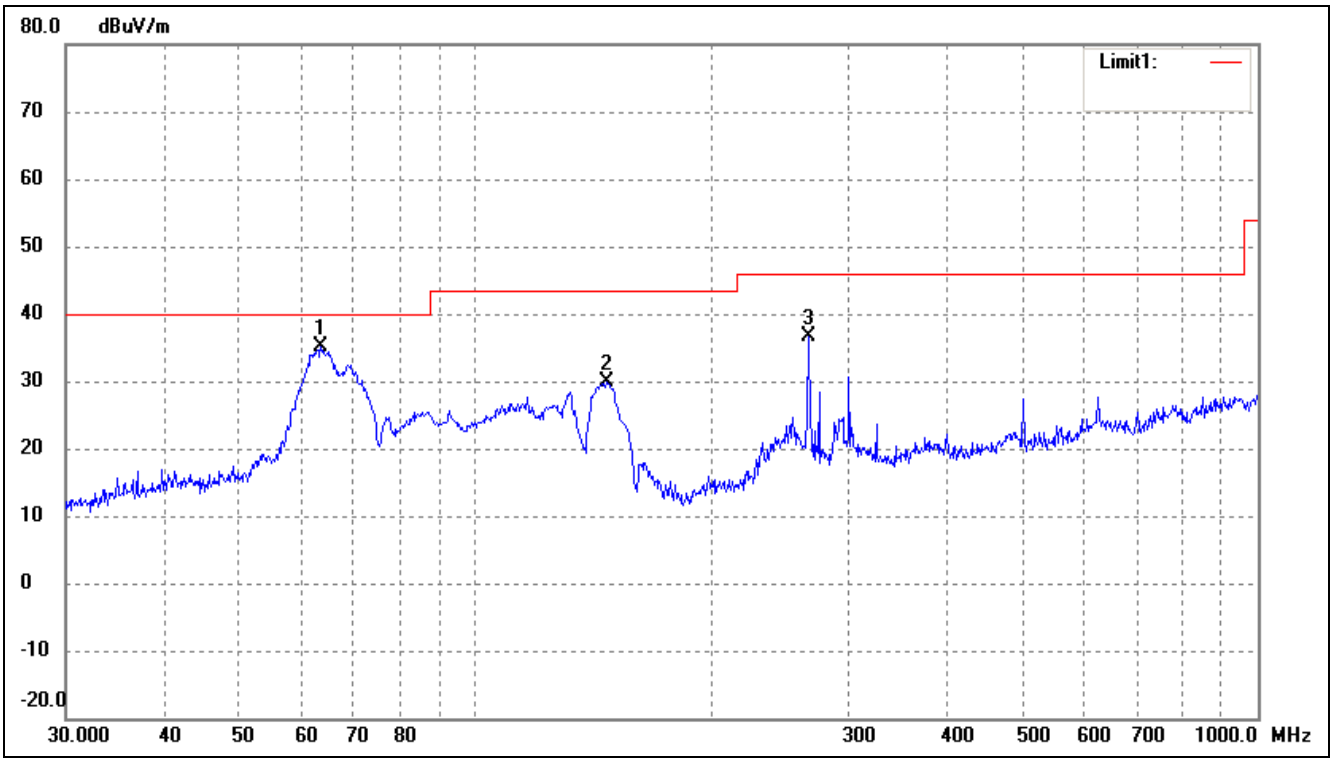
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	36.8953	44.60	-8.52	36.08	40.00	-3.92	265	100	peak
2	63.7588	48.16	-10.80	37.36	40.00	-2.64	201	100	peak
3	68.3908	49.49	-12.31	37.18	40.00	-2.82	114	100	peak
4	144.8418	52.91	-12.50	40.41	43.50	-3.09	88	100	peak

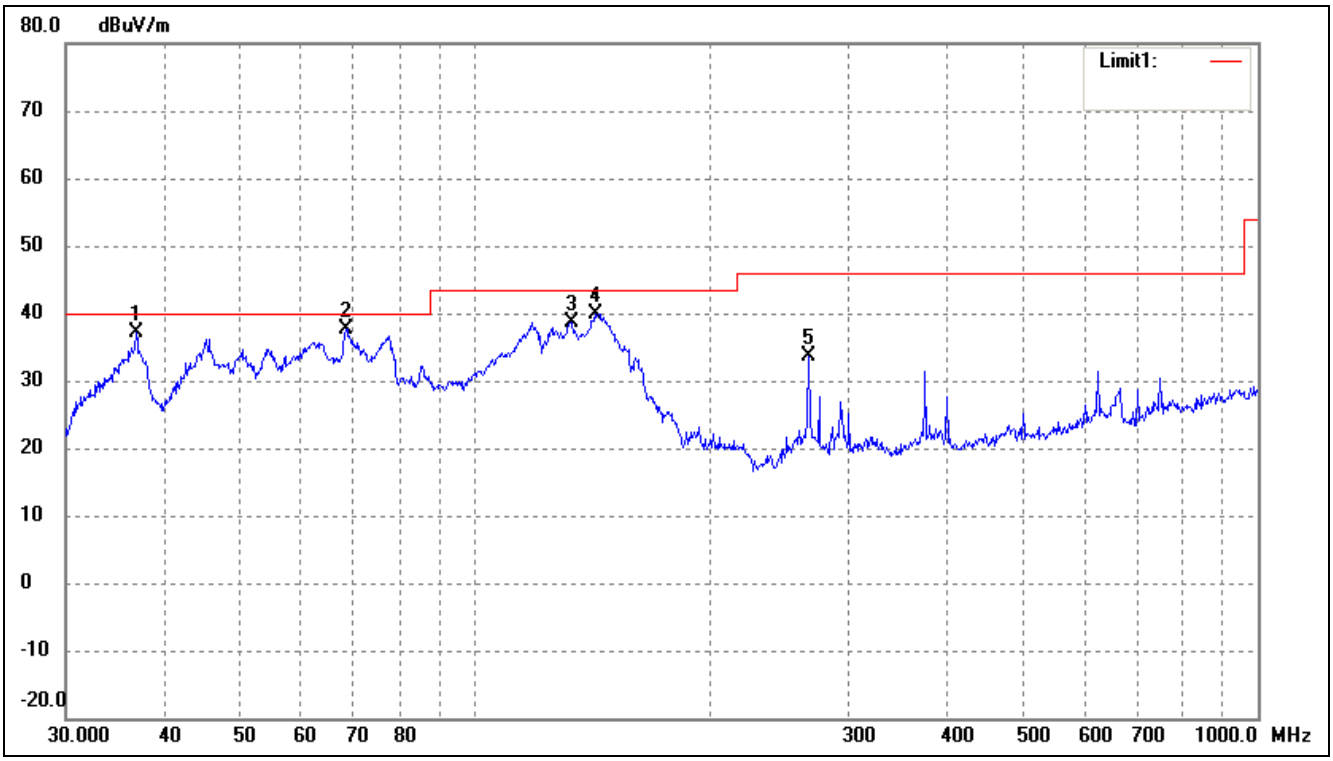
Operating Condition: *802.11n-HT20 Transmitting Middle Channel-2437MHz*
Comment: *Adapter DC12V*

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	63.5356	45.77	-10.73	35.04	40.00	-4.96	178	100	peak
2	147.4036	42.41	-12.46	29.95	43.50	-13.55	87	100	peak
3	266.6089	43.27	-6.67	36.60	46.00	-9.40	328	100	peak

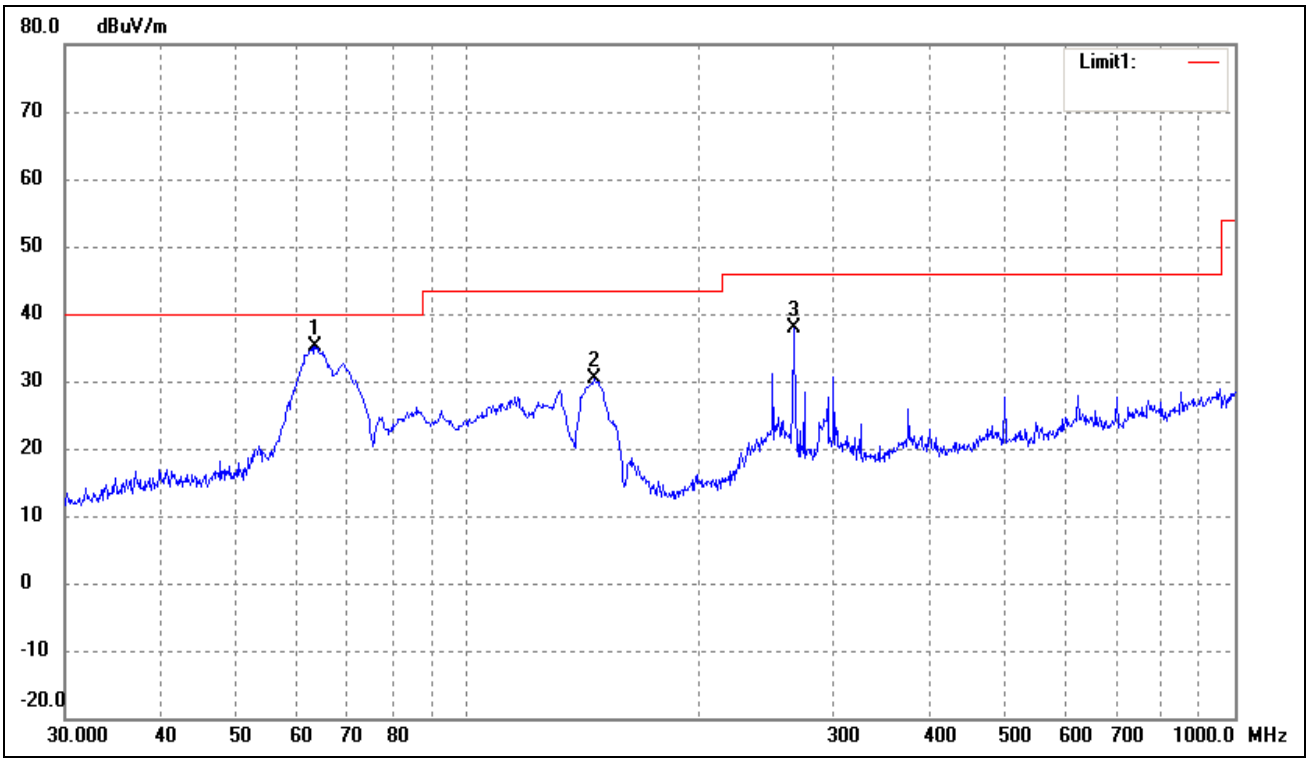
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	36.8953	45.60	-8.52	37.08	40.00	-2.92	188	100	peak
2	68.3908	49.99	-12.31	37.68	40.00	-2.32	201	100	peak
3	132.6850	50.87	-12.14	38.73	43.50	-4.77	14	100	peak
4	142.3244	52.44	-12.53	39.91	43.50	-3.59	98	100	peak
5	266.6089	40.41	-6.67	33.74	46.00	-12.26	201	100	peak

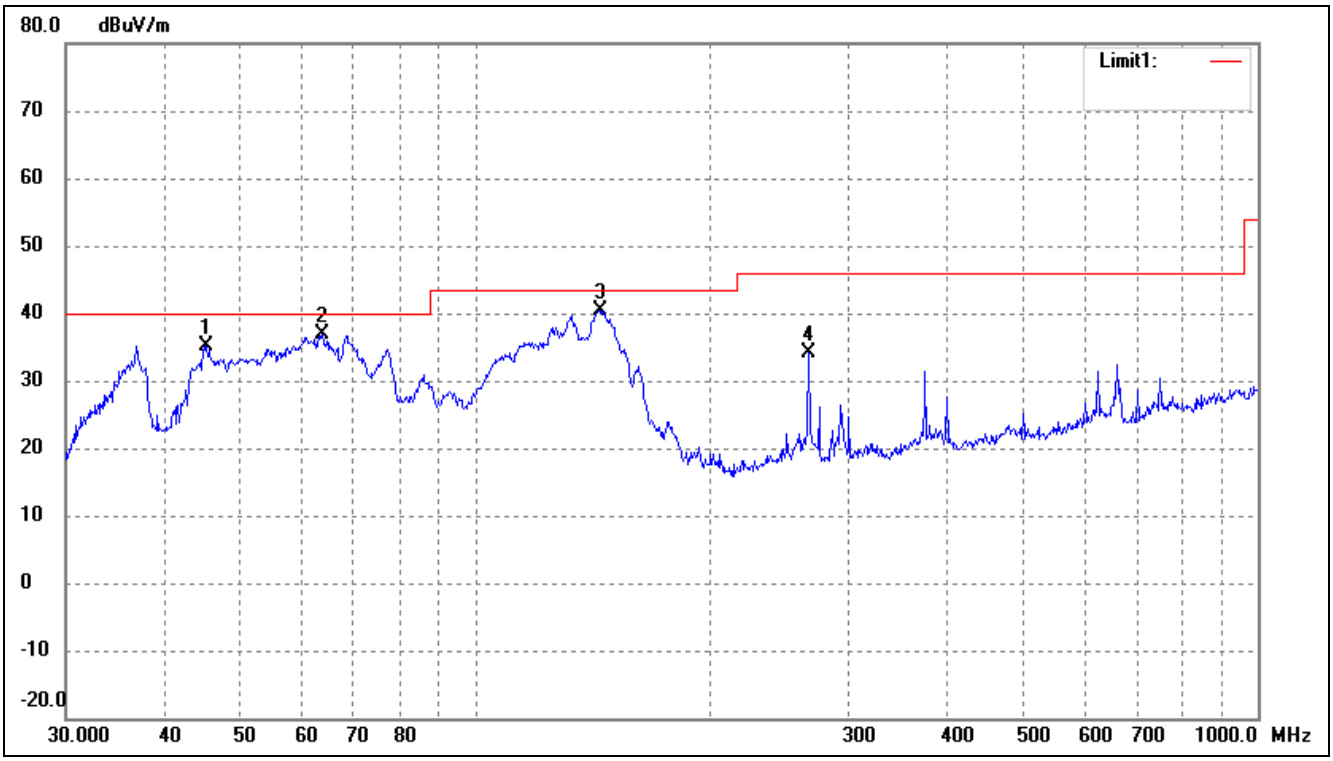
Operating Condition: *802.11n-HT20 Transmitting High Channel-2462MHz*
Comment: *Adapter DC12V*

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	63.5356	45.77	-10.73	35.04	40.00	-4.96	177	100	peak
2	146.8877	42.85	-12.47	30.38	43.50	-13.12	87	100	peak
3	266.6089	44.60	-6.67	37.93	46.00	-8.07	201	200	peak

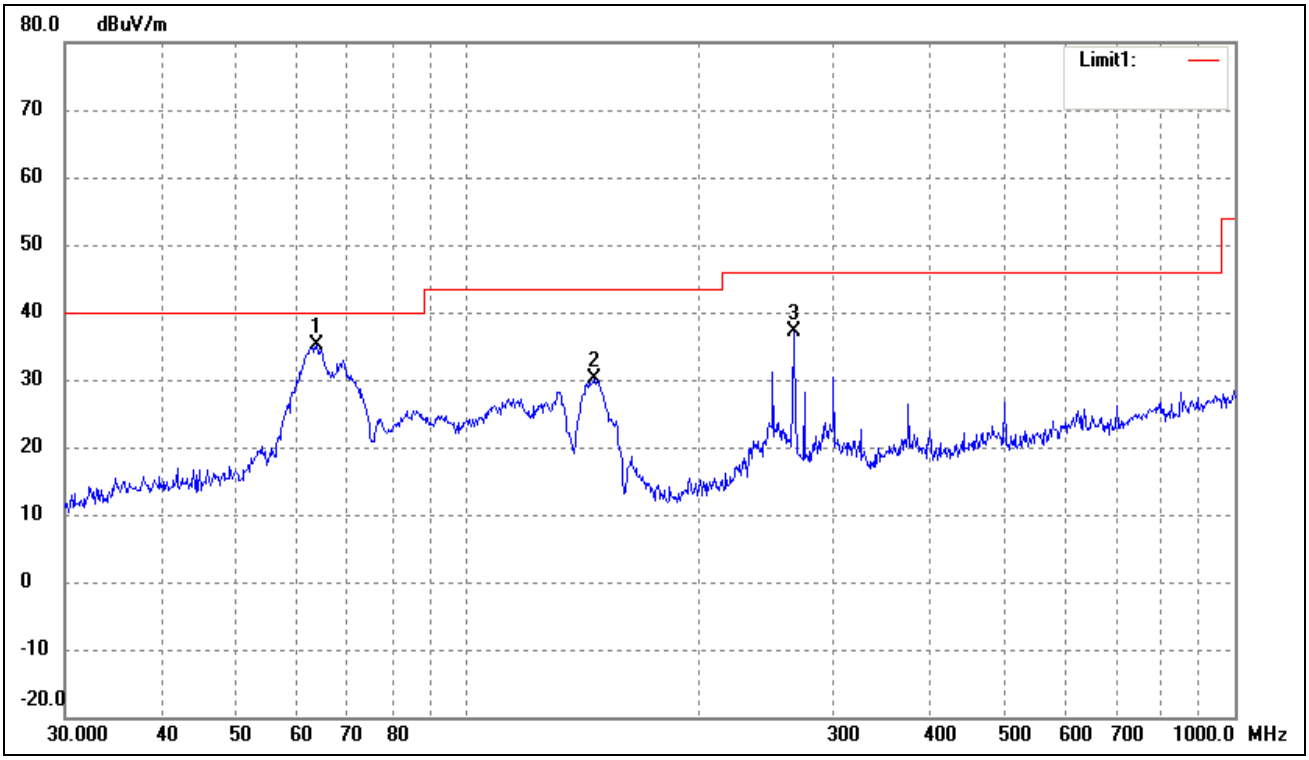
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	45.3755	43.17	-8.02	35.15	40.00	-4.85	18	100	peak
2	63.7588	47.66	-10.80	36.86	40.00	-3.14	256	100	peak
3	144.3348	52.94	-12.50	40.44	43.50	-3.06	87	100	peak
4	266.6089	40.91	-6.67	34.24	46.00	-11.76	115	100	peak

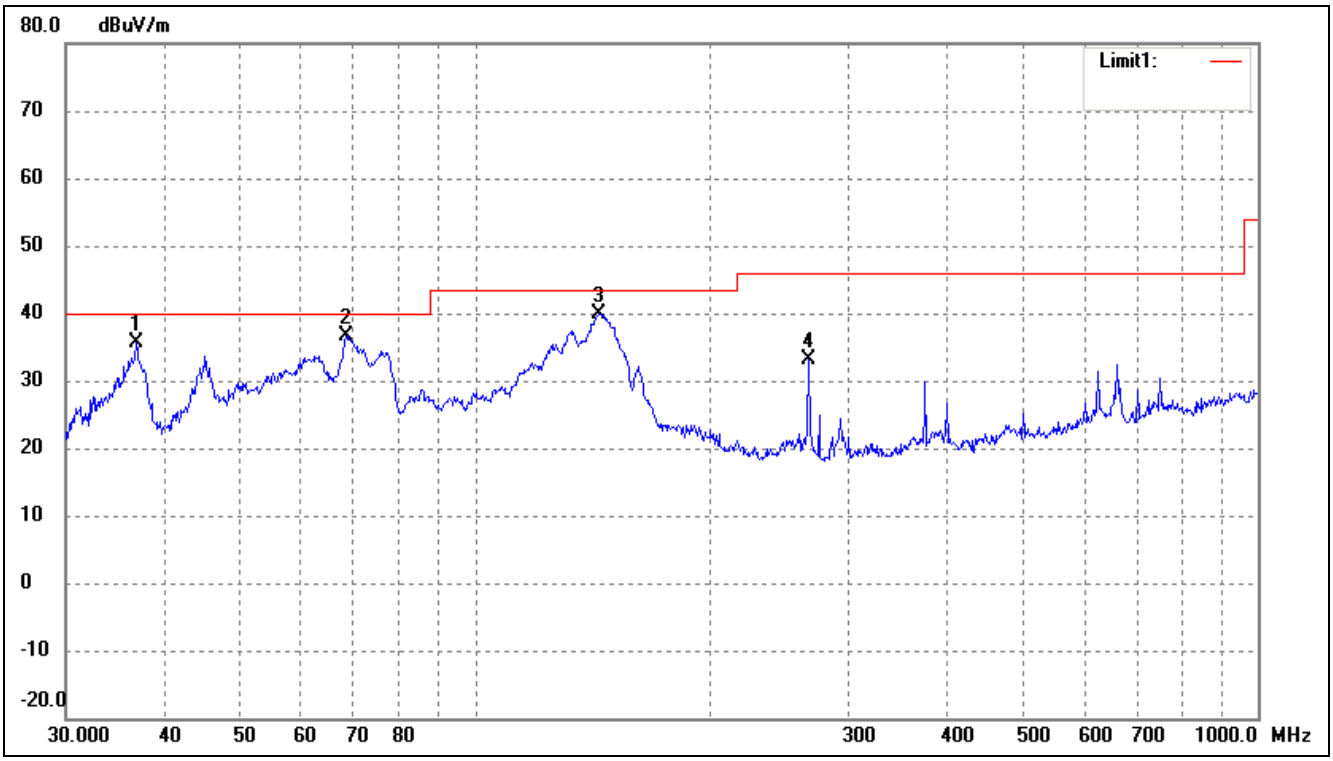
EUT: *ROUTER*
Tested Model: *ER-800*
Operating Condition: *802.11n-HT40 Transmitting Low Channel-2422MHz*
Comment: *Adapter DC12V*

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	63.7588	45.97	-10.80	35.17	40.00	-4.83	178	100	peak
2	146.8877	42.59	-12.47	30.12	43.50	-13.38	201	200	peak
3	266.6089	43.69	-6.67	37.02	46.00	-8.98	87	200	peak

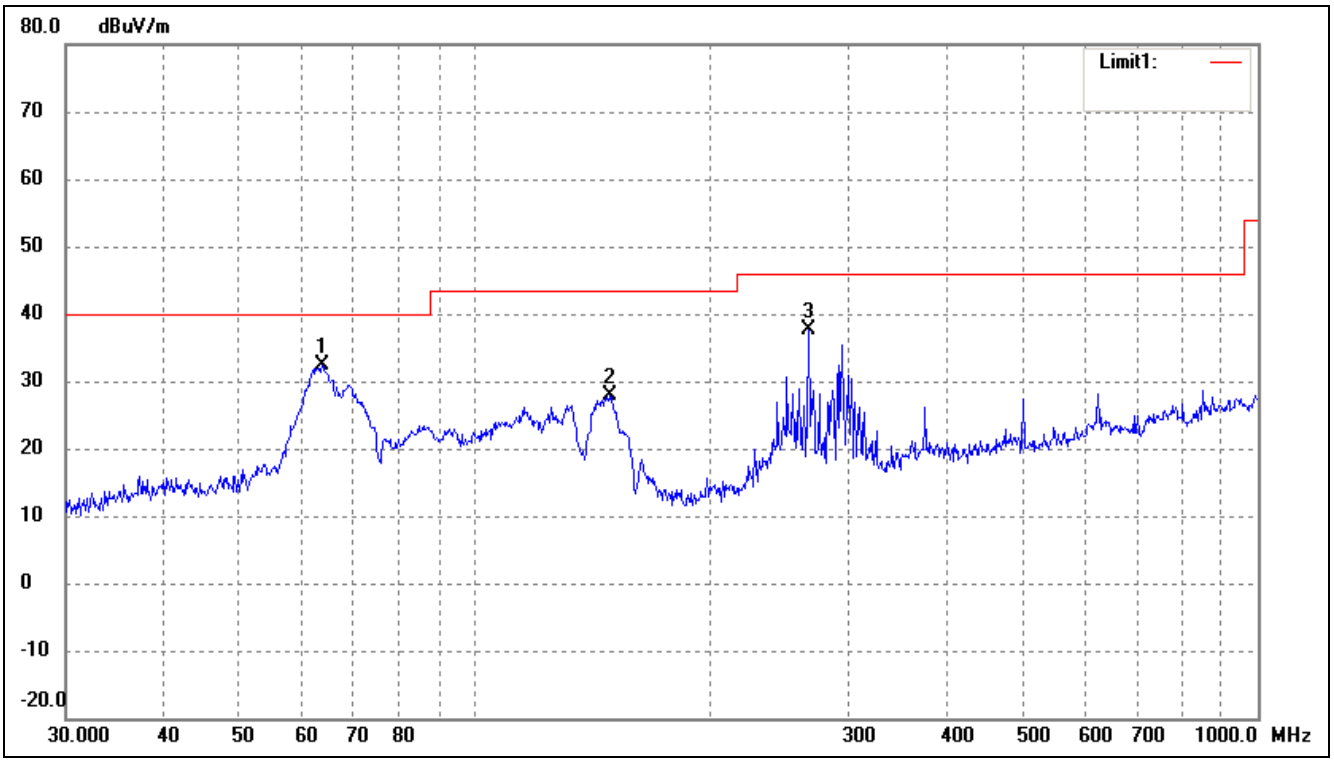
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	36.8953	44.10	-8.52	35.58	40.00	-4.42	185	100	peak
2	68.3908	48.99	-12.31	36.68	40.00	-3.32	126	100	peak
3	143.8295	52.46	-12.51	39.95	43.50	-3.55	201	100	peak
4	266.6089	39.91	-6.67	33.24	46.00	-12.76	159	100	peak

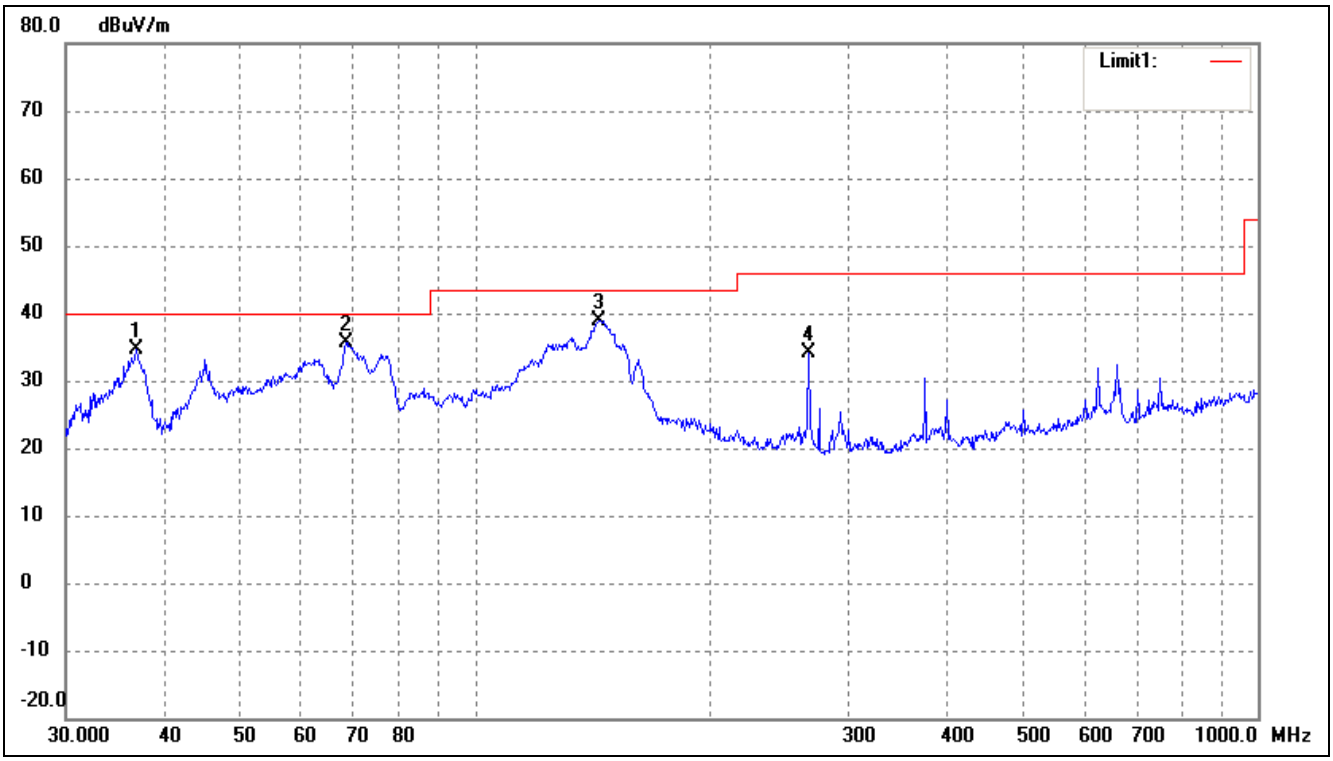
Operating Condition: *802.11n-HT40 Transmitting Middle Channel-2437MHz*
Comment:

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	63.7588	43.29	-10.80	32.49	40.00	-7.51	298	100	peak
2	148.4410	40.28	-12.44	27.84	43.50	-15.66	8	100	peak
3	266.6089	44.26	-6.67	37.59	46.00	-8.41	129	100	peak

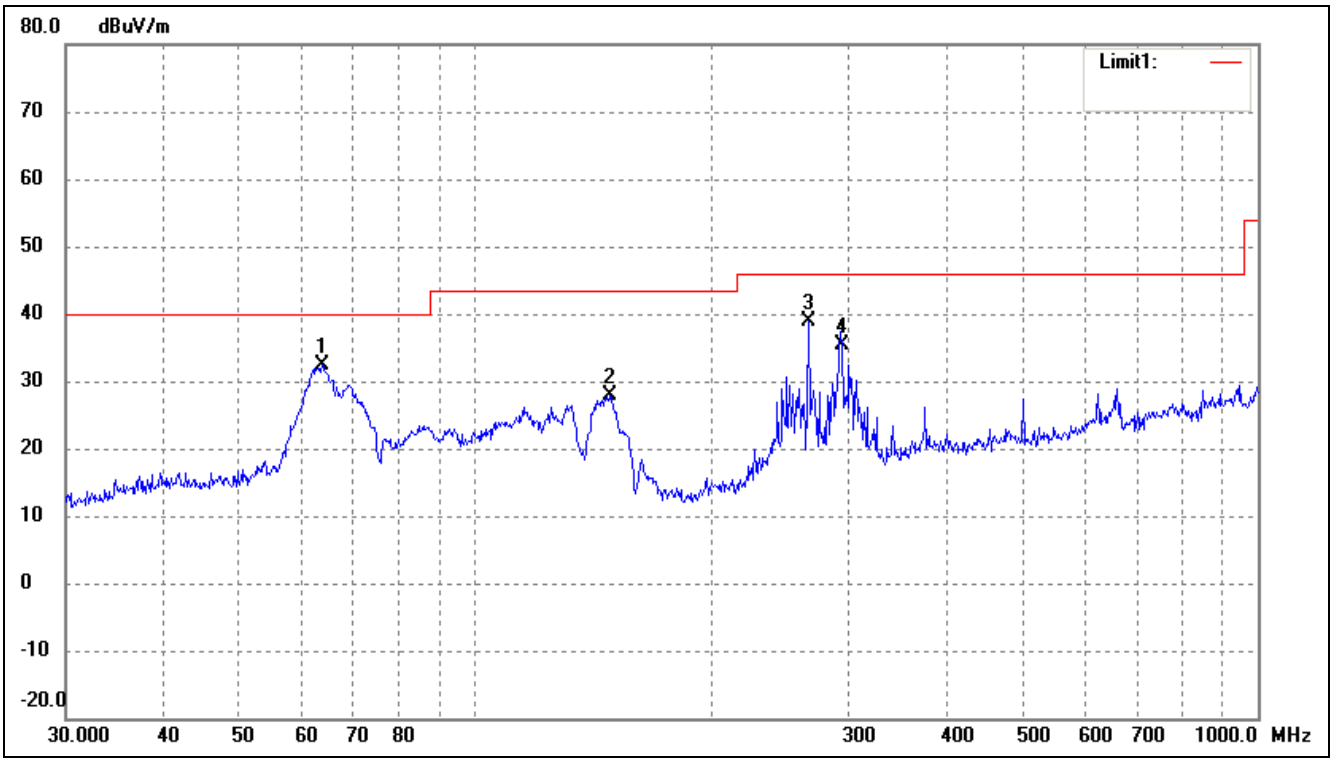
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	36.8953	43.10	-8.52	34.58	40.00	-5.42	188	100	peak
2	68.3908	47.99	-12.31	35.68	40.00	-4.32	55	100	peak
3	143.8295	51.46	-12.51	38.95	43.50	-4.55	165	100	peak
4	266.6089	40.91	-6.67	34.24	46.00	-11.76	201	100	peak

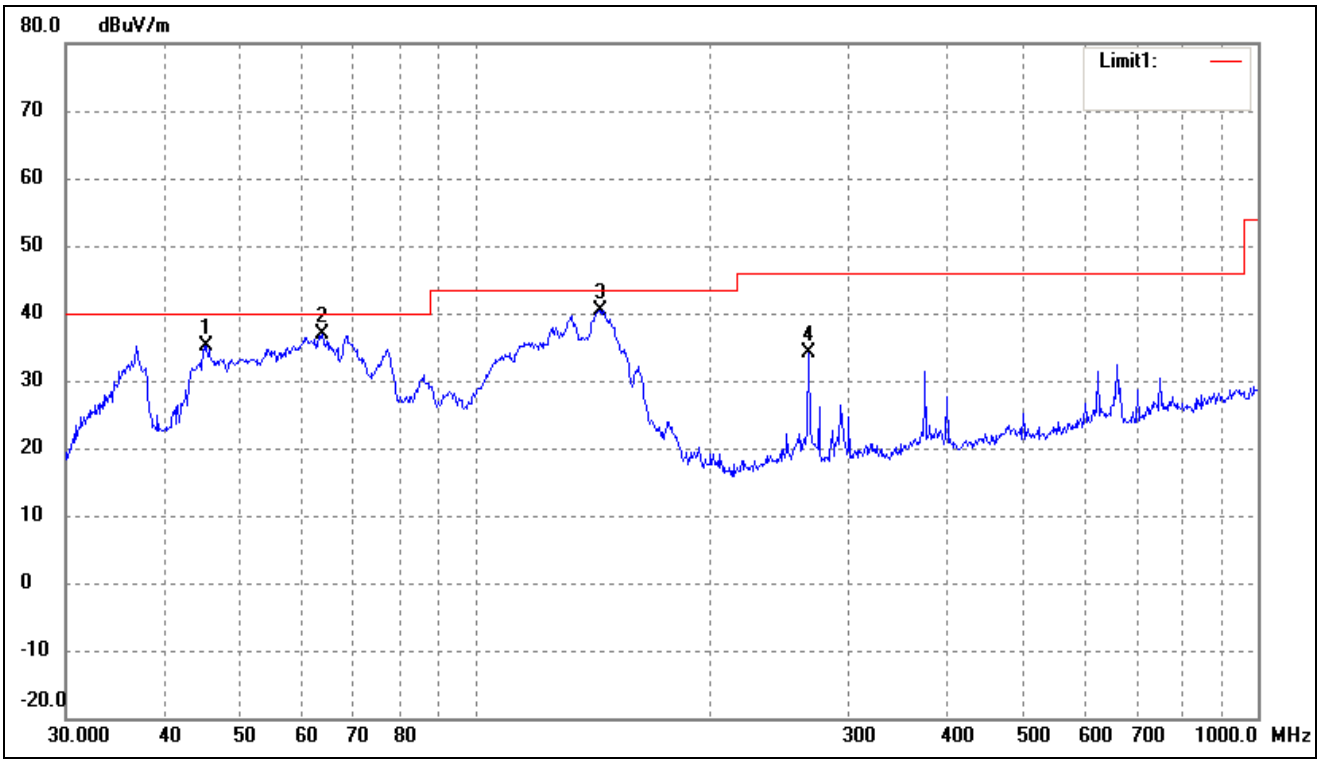
Operating Condition: *802.11n-HT40 Transmitting High Channel-2452MHz*
Comment: *Adapter DC12V*

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	63.7588	43.29	-10.80	32.49	40.00	-7.51	165	100	peak
2	148.4410	40.28	-12.44	27.84	43.50	-15.66	201	100	peak
3	266.6089	45.43	-6.67	38.76	46.00	-7.24	47	100	peak
4	294.1137	41.09	-5.79	35.30	46.00	-10.70	87	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	45.3755	43.17	-8.02	35.15	40.00	-4.85	165	100	peak
2	63.7588	47.66	-10.80	36.86	40.00	-3.14	201	100	peak
3	144.3348	52.94	-12.50	40.44	43.50	-3.06	158	100	peak
4	266.6089	40.91	-6.67	34.24	46.00	-11.76	97	100	peak

Spurious Emissions Above 1GHz

Test Mode: 802.11b

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	64.15	-3.87	60.28	74.00	-13.72	H	PK
4824.000	48.85	-3.87	44.98	54.00	-9.02	H	AV
7236.000	66.35	1.14	67.49	74.00	-6.51	H	PK
7236.000	44.94	1.19	46.13	54.00	-7.87	H	AV
4824.000	67.36	-3.86	63.50	74.00	-10.5	V	PK
4824.000	50.54	-3.86	46.68	54.00	-7.32	V	AV
7236.000	59.11	1.10	60.21	74.00	-13.79	V	PK
7236.000	47.45	1.10	48.55	54.00	-5.45	V	AV
Middle Channel-2437MHz							
4874.000	64.72	-3.74	60.98	74.00	-13.02	H	PK
4874.000	49.96	-3.74	46.22	54.00	-7.78	H	AV
7311.000	57.71	1.47	59.18	74.00	-14.82	H	PK
7311.000	43.12	1.47	44.59	54.00	-9.41	H	AV
4874.000	63.96	-3.74	60.22	74.00	-13.78	V	PK
4874.000	50.84	-3.74	47.10	54.00	-6.90	V	AV
7311.000	57.94	1.47	59.41	74.00	-14.59	V	PK
7311.000	44.07	1.47	45.54	54.00	-8.46	V	AV
High Channel-2462MHz							
4924.000	65.86	-3.59	62.27	74.00	-11.73	H	PK
4924.000	51.72	-3.59	48.13	54.00	-5.87	H	AV
7386.000	56.34	1.79	58.13	74.00	-15.87	H	PK
7386.000	44.85	1.79	46.64	54.00	-7.36	H	AV
4924.000	64.96	-3.59	61.37	74.00	-12.63	V	PK
4924.000	52.04	-3.59	48.45	54.00	-5.55	V	AV
7386.000	57.97	1.79	59.76	74.00	-14.24	V	PK
7386.000	45.14	1.79	46.93	54.00	-7.07	V	AV

Test Mode: 802.11g

Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2412MHz							
4824.000	65.55	-3.86	61.69	74.00	-12.31	H	PK
4824.000	52.22	-3.86	48.36	54.00	-5.64	H	AV
7236.000	58.46	1.10	59.56	74.00	-14.44	H	PK
7236.000	44.44	1.10	45.54	54.00	-8.46	H	AV
4824.000	65.91	-3.86	62.05	74.00	-11.95	V	PK
4824.000	52.67	-3.86	48.81	54.00	-5.19	V	AV
7236.000	59.28	1.10	60.38	74.00	-13.62	V	PK
7236.000	45.59	1.10	46.69	54.00	-7.31	V	AV
Middle Channel-2437MHz							
4874.000	65.11	-3.74	61.37	74.00	-12.63	H	PK
4874.000	53.22	-3.74	49.48	54.00	-4.52	H	AV
7311.000	57.36	1.47	58.83	74.00	-15.17	H	PK
7311.000	45.25	1.47	46.72	54.00	-7.28	H	AV
4874.000	67.04	-3.74	63.3	74.00	-10.70	V	PK
4874.000	53.88	-3.74	50.14	54.00	-3.86	V	AV
7311.000	58.44	1.47	59.91	74.00	-14.09	V	PK
7311.000	45.38	1.47	46.85	54.00	-7.15	V	AV
High Channel-2462MHz							
4924.000	64.01	-3.59	60.42	74.00	-13.58	H	PK
4924.000	50.72	-3.59	47.13	54.00	-6.87	H	AV
7386.000	57.17	1.79	58.96	74.00	-15.04	H	PK
7386.000	44.75	1.79	46.54	54.00	-7.46	H	AV
4924.000	66.14	-3.59	62.55	74.00	-11.45	V	PK
4924.000	52.66	-3.59	49.07	54.00	-4.93	V	AV
7386.000	58.51	1.79	60.3	74.00	-13.70	V	PK
7386.000	45.94	1.79	47.73	54.00	-6.27	V	AV

Test Mode: 802.11n-HT20

Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2412MHz							
4824.000	65.61	-3.86	61.75	74.00	-12.25	H	PK
4824.000	50.52	-3.86	46.66	54.00	-7.34	H	AV
7236.000	57.26	1.10	58.36	74.00	-15.64	H	PK
7236.000	44.44	1.10	45.54	54.00	-8.46	H	AV
4824.000	66.75	-3.86	62.89	74.00	-11.11	V	PK
4824.000	53.18	-3.86	49.32	54.00	-4.68	V	AV
7236.000	59.24	1.10	60.34	74.00	-13.66	V	PK
7236.000	45.77	1.10	46.87	54.00	-7.13	V	AV
Middle Channel-2437MHz							
4874.000	64.11	-3.74	60.37	74.00	-13.63	H	PK
4874.000	52.45	-3.74	48.71	54.00	-5.29	H	AV
7311.000	58.76	1.47	60.23	74.00	-13.77	H	PK
7311.000	43.11	1.47	44.58	54.00	-9.42	H	AV
4874.000	64.97	-3.74	61.23	74.00	-12.77	V	PK
4874.000	52.68	-3.74	48.94	54.00	-5.06	V	AV
7311.000	58.49	1.47	59.96	74.00	-14.04	V	PK
7311.000	45.21	1.47	46.68	54.00	-7.32	V	AV
High Channel-2462MHz							
4924.000	63.94	-3.59	60.35	74.00	-13.65	H	PK
4924.000	53.25	-3.59	49.66	54.00	-4.34	H	AV
7386.000	58.36	1.79	60.15	74.00	-13.85	H	PK
7386.000	46.11	1.79	47.9	54.00	-6.10	H	AV
4924.000	65.75	-3.59	62.16	74.00	-11.84	V	PK
4924.000	51.46	-3.59	47.87	54.00	-6.13	V	AV
7386.000	58.51	1.79	60.3	74.00	-13.70	V	PK
7386.000	45.35	1.79	47.14	54.00	-6.86	V	AV

Test Mode: 802.11n-HT40

Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2422MHz							
4844.000	63.26	-3.90	59.36	74.00	-14.64	H	PK
4824.000	48.21	-3.90	44.31	54.00	-9.69	H	AV
7266.000	56.45	1.06	57.51	74.00	-16.49	H	PK
7266.000	42.56	1.06	43.62	54.00	-10.38	H	AV
4844.000	64.24	-3.90	60.34	74.00	-13.66	V	PK
4824.000	49.45	-3.90	45.55	54.00	-8.45	V	AV
7266.000	58.86	1.06	59.92	74.00	-14.08	V	PK
7266.000	44.71	1.06	45.77	54.00	-8.23	V	AV
Middle Channel-2437MHz							
4874.000	62.55	-3.74	58.81	74.00	-15.19	H	PK
4874.000	47.86	-3.74	44.12	54.00	-9.88	H	AV
7311.000	54.81	1.47	56.28	74.00	-17.72	H	PK
7311.000	42.05	1.47	43.52	54.00	-10.48	H	AV
4874.000	63.71	-3.74	59.97	74.00	-14.03	V	PK
4874.000	49.94	-3.74	46.20	54.00	-7.80	V	AV
7311.000	55.74	1.47	57.21	74.00	-16.79	V	PK
7311.000	44.08	1.47	45.55	54.00	-8.45	V	AV
High Channel-2452MHz							
4904.000	62.66	-3.63	59.03	74.00	-14.97	H	PK
4904.000	49.31	-3.63	45.68	54.00	-8.32	H	AV
7356.000	55.65	1.62	57.27	74.00	-16.73	H	PK
7356.000	40.74	1.62	42.36	54.00	-11.64	H	AV
4904.000	64.87	-3.63	61.24	74.00	-12.76	V	PK
4904.000	50.88	-3.63	47.25	54.00	-6.75	V	AV
7356.000	58.19	1.62	59.81	74.00	-14.19	V	PK
7356.000	45.11	1.62	46.73	54.00	-7.27	V	AV

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

9. Out of Band Emissions

9.1 Standard Applicable

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

9.2 Test Procedure

According to the KDB 558074D01 v03r04, 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 v03r04, the conducted spurious emissions test method as follows:
1. Set start frequency to DTS channel edge frequency.
2. Set stop frequency so as to encompass the spectrum to be examined.
3. Set RBW = 100 kHz.
4. Set VBW ≥ 300 kHz.
5. Detector = peak.
6. Trace Mode = max hold.
7. Sweep = auto couple.
8. Allow the trace to stabilize (this may take some time, depending on the extent of the span).
9. Use peak marker function to determine maximum amplitude of all unwanted emissions within any 100 kHz bandwidth.

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

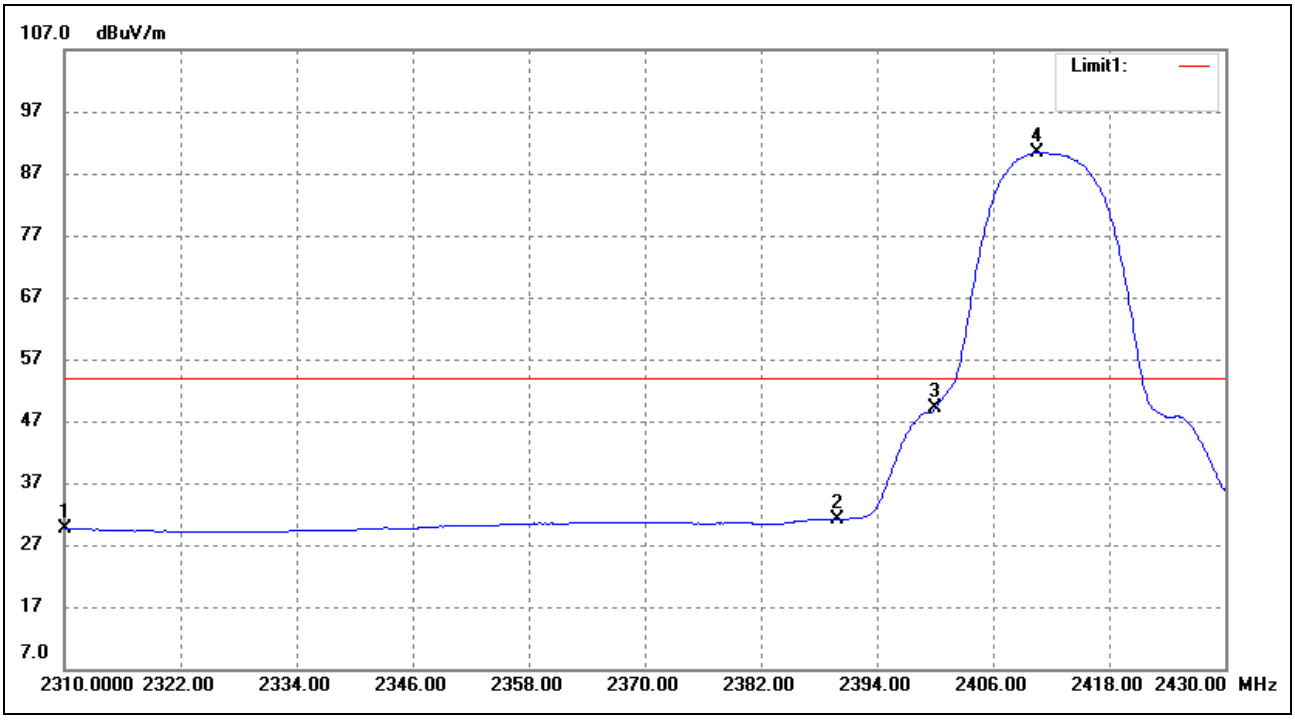
9.3 Environmental Conditions

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

9.4 Summary of Test Results/Plots

802.11b-Lowest Bandedge

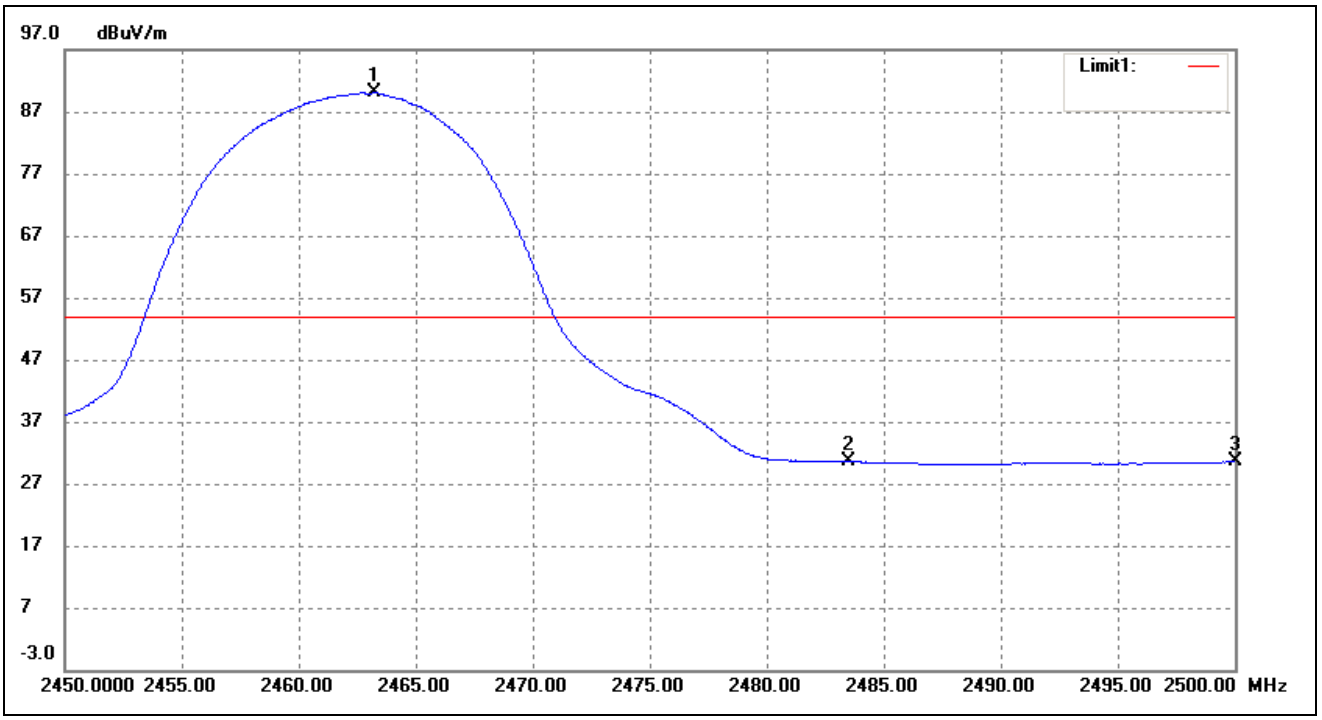
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	33.99	-4.42	29.57	54.00	-24.43	Average Detector
	2310.000	45.54	-4.42	41.12	74.00	-32.88	Peak Detector
2	2390.000	34.92	-3.72	31.20	54.00	-22.80	Average Detector
	2390.000	48.21	-3.72	44.49	74.00	-29.51	Peak Detector
3	2400.000	52.72	-3.64	49.08	Delta =41.34dBc		Average Detector
4	2410.560	93.98	-3.56	90.42			Average Detector

802.11b-Highest Bandedge

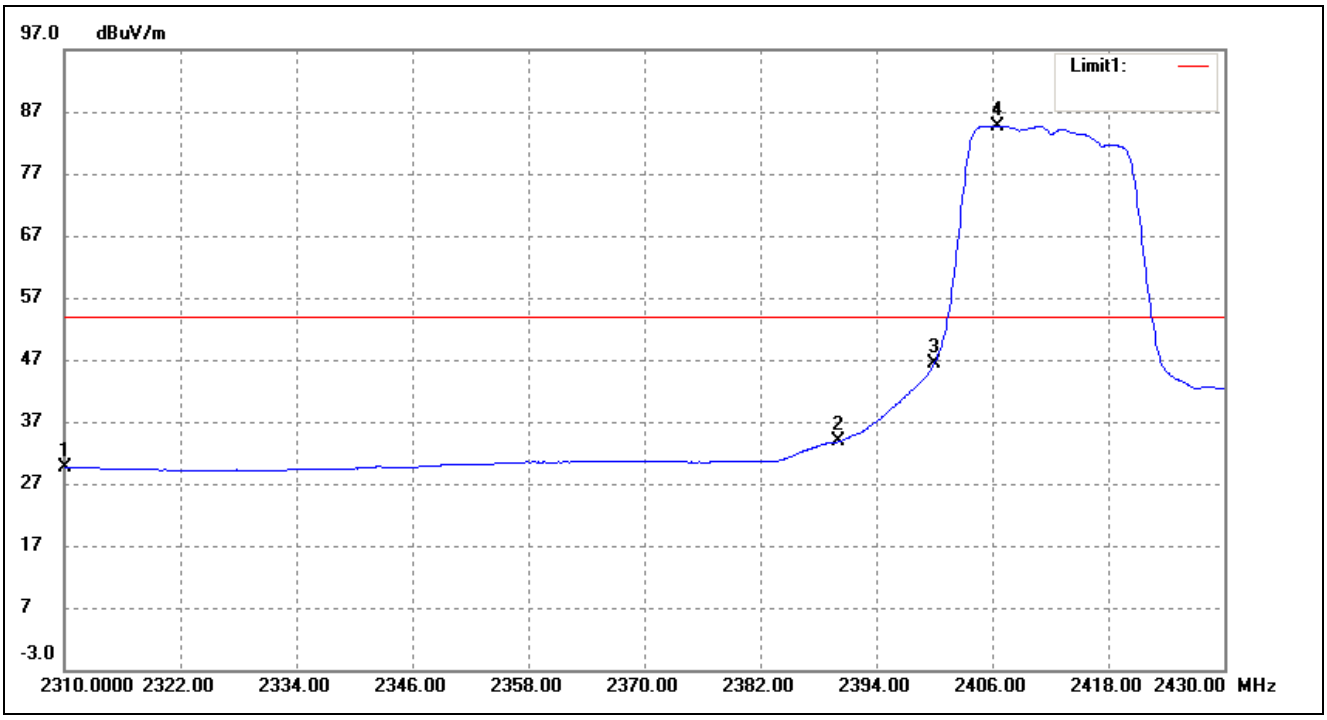
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2463.250	93.19	-3.16	90.03	/	/	Average Detector
	2463.150	104.73	-3.16	101.57	/	/	Peak Detector
2	2483.500	33.54	-3.01	30.53	54.00	-23.47	Average Detector
	2483.500	47.43	-3.01	44.42	74.00	-29.58	Peak Detector
3	2500.000	33.43	-2.88	30.55	54.00	-23.45	Average Detector
	2500.000	44.64	-2.88	41.76	74.00	-32.24	Peak Detector

802.11g-Lowest Bandedge

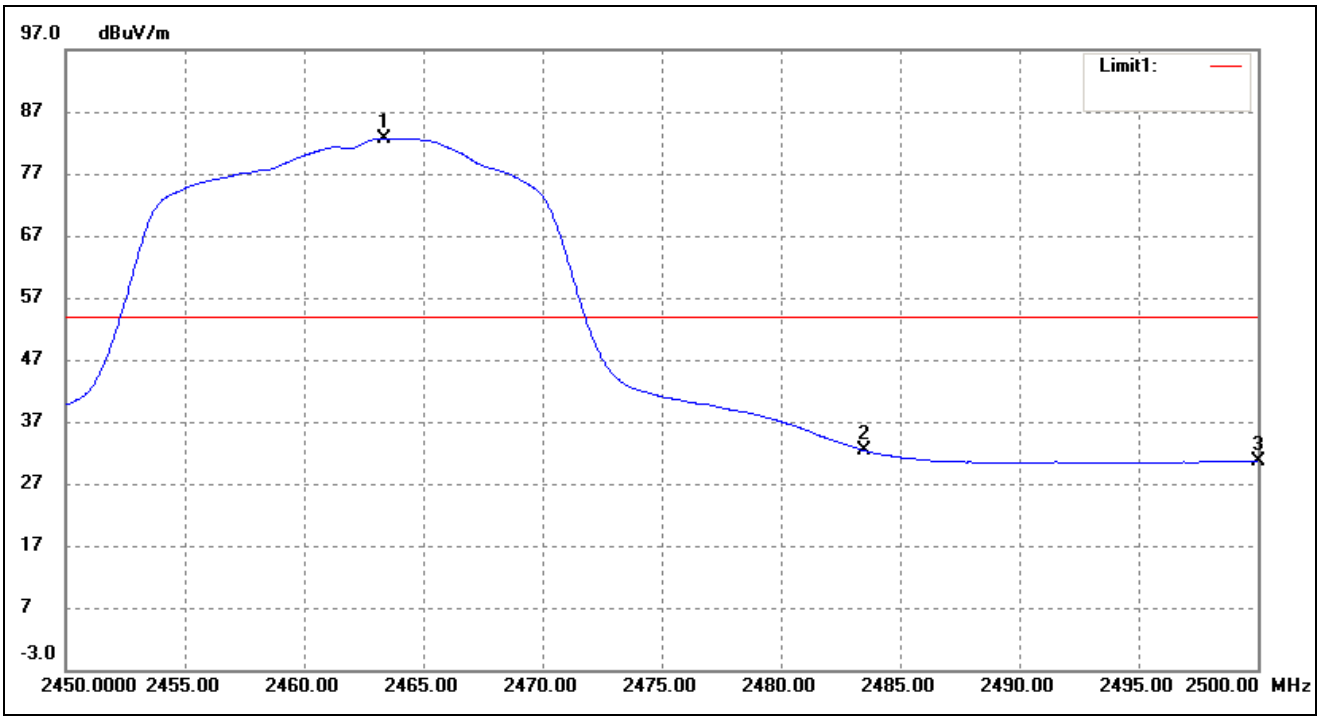
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	34.06	-4.42	29.64	54.00	-24.36	Average Detector
	2310.000	46.01	-4.42	41.59	74.00	-32.41	Peak Detector
2	2390.000	37.50	-3.72	33.78	54.00	-20.22	Average Detector
	2390.000	53.12	-3.72	49.40	74.00	-24.60	Peak Detector
3	2400.000	50.07	-3.64	46.43	Delta =38.31dBc		Average Detector
4	2406.480	88.33	-3.59	84.74			Average Detector

802.11g-Highest Bandedge

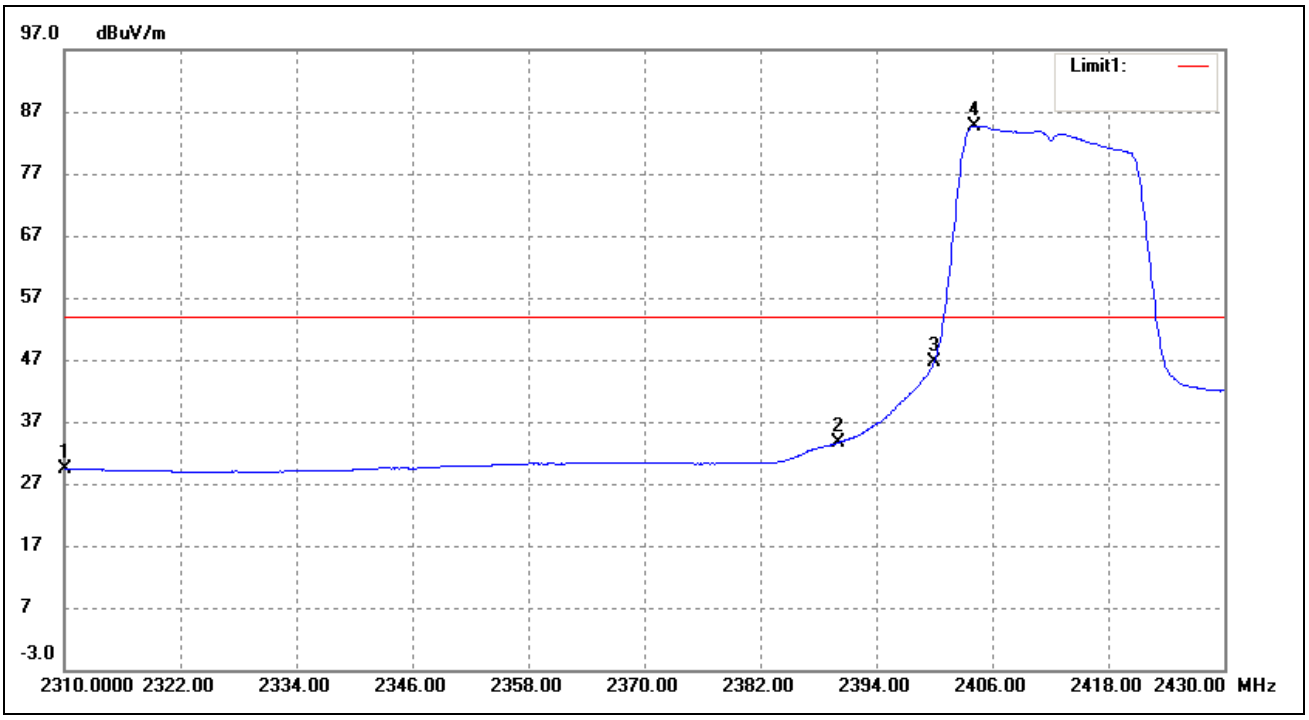
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2463.350	85.83	-3.16	82.67	/	/	Average Detector
	2463.700	98.03	-3.16	94.87	/	/	Peak Detector
2	2483.500	35.33	-3.01	32.32	54.00	-21.68	Average Detector
	2483.500	52.97	-3.01	49.96	74.00	-24.04	Peak Detector
3	2500.000	33.55	-2.88	30.67	54.00	-23.33	Average Detector
	2500.000	46.13	-2.88	43.25	74.00	-30.75	Peak Detector

802.11n-HT20-Lowest Bandedge

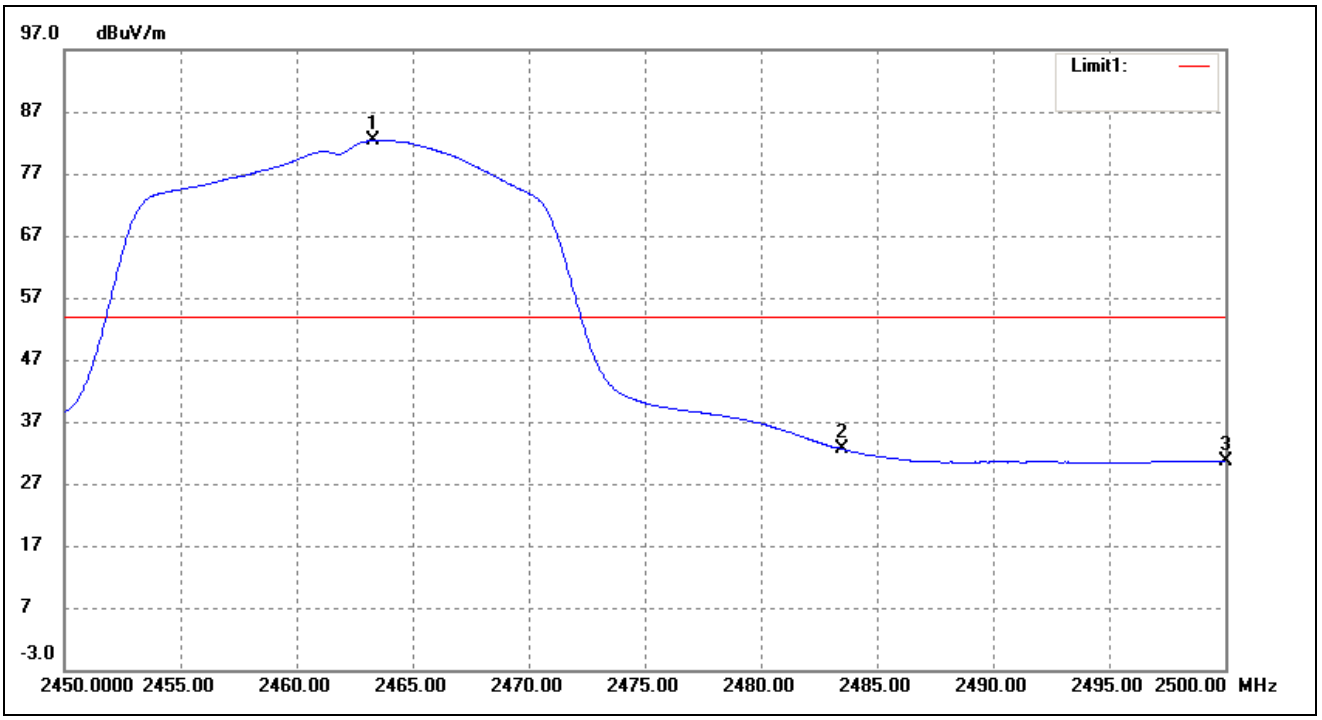
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	33.81	-4.42	29.39	54.00	-24.61	Average Detector
	2310.000	45.57	-4.42	41.15	74.00	-32.85	Peak Detector
2	2390.000	37.35	-3.72	33.63	54.00	-20.37	Average Detector
	2390.000	52.63	-3.72	48.91	74.00	-25.09	Peak Detector
3	2400.000	50.36	-3.64	46.72	Delta =37.95dBc		Average Detector
4	2404.200	88.27	-3.60	84.67			Average Detector

802.11n-HT20-Highest Bandedge

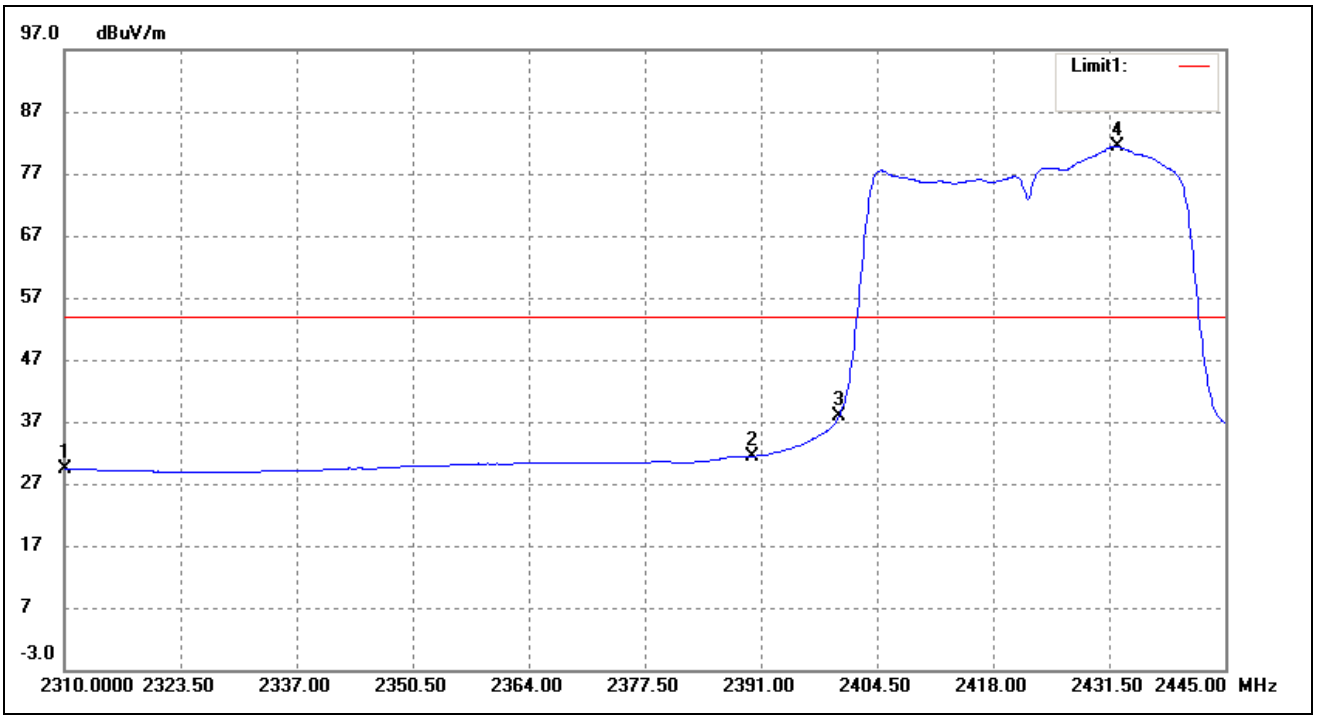
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2463.300	85.49	-3.16	82.33	/	/	Average Detector
	2463.300	96.27	-3.16	93.11	/	/	Peak Detector
2	2483.500	35.60	-3.01	32.59	54.00	-21.41	Average Detector
	2483.500	54.00	-3.01	50.99	74.00	-23.01	Peak Detector
3	2500.000	33.62	-2.88	30.74	54.00	-23.26	Average Detector
	2500.000	45.89	-2.88	43.01	74.00	-30.99	Peak Detector

802.11n-HT40-Lowest Bandedge

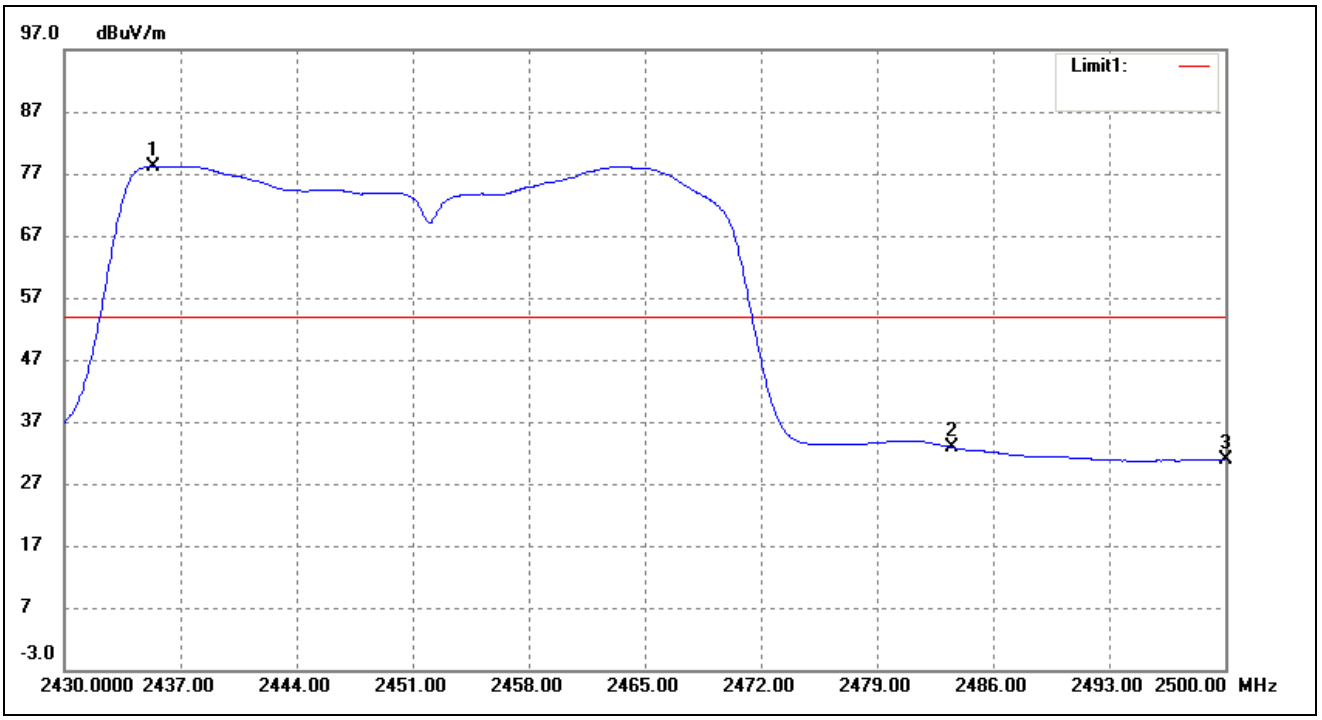
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	33.80	-4.42	29.38	54.00	-24.62	Average Detector
	2310.000	45.65	-4.42	41.23	74.00	-32.77	Peak Detector
2	2390.000	35.20	-3.72	31.48	54.00	-22.52	Average Detector
	2390.000	47.24	-3.72	43.52	74.00	-30.48	Peak Detector
3	2400.000	41.49	-3.64	37.85	Delta =43.46dBc		Average Detector
4	2432.445	84.71	-3.40	81.31			Average Detector

802.11n-HT40-Highest Bandedge

Vertical (Worst case)



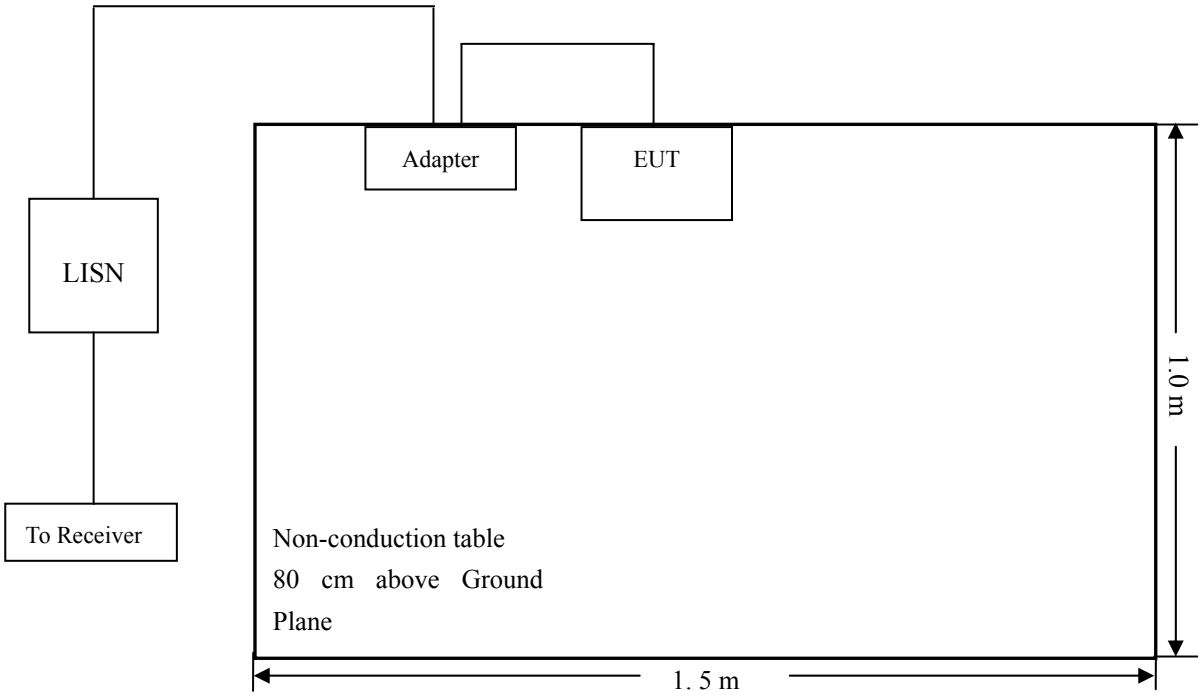
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2435.320	81.62	-3.37	78.25	/	/	Average Detector
	2434.760	92.68	-3.38	89.30	/	/	Peak Detector
2	2483.500	35.87	-3.01	32.86	54.00	-21.14	Average Detector
	2483.500	48.76	-3.01	45.75	74.00	-28.25	Peak Detector
3	2500.000	33.81	-2.88	30.93	54.00	-23.07	Average Detector
	2500.000	44.87	-2.88	41.99	74.00	-32.01	Peak Detector

10. Conducted Emissions

10.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15.207 Limit.
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.
The spacing between the peripherals was 10 cm.

10.2 Basic Test Setup Block Diagram



10.3 Environmental Conditions

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

10.4 Test Receiver Setup

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

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

10.5 Summary of Test Results/Plots

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

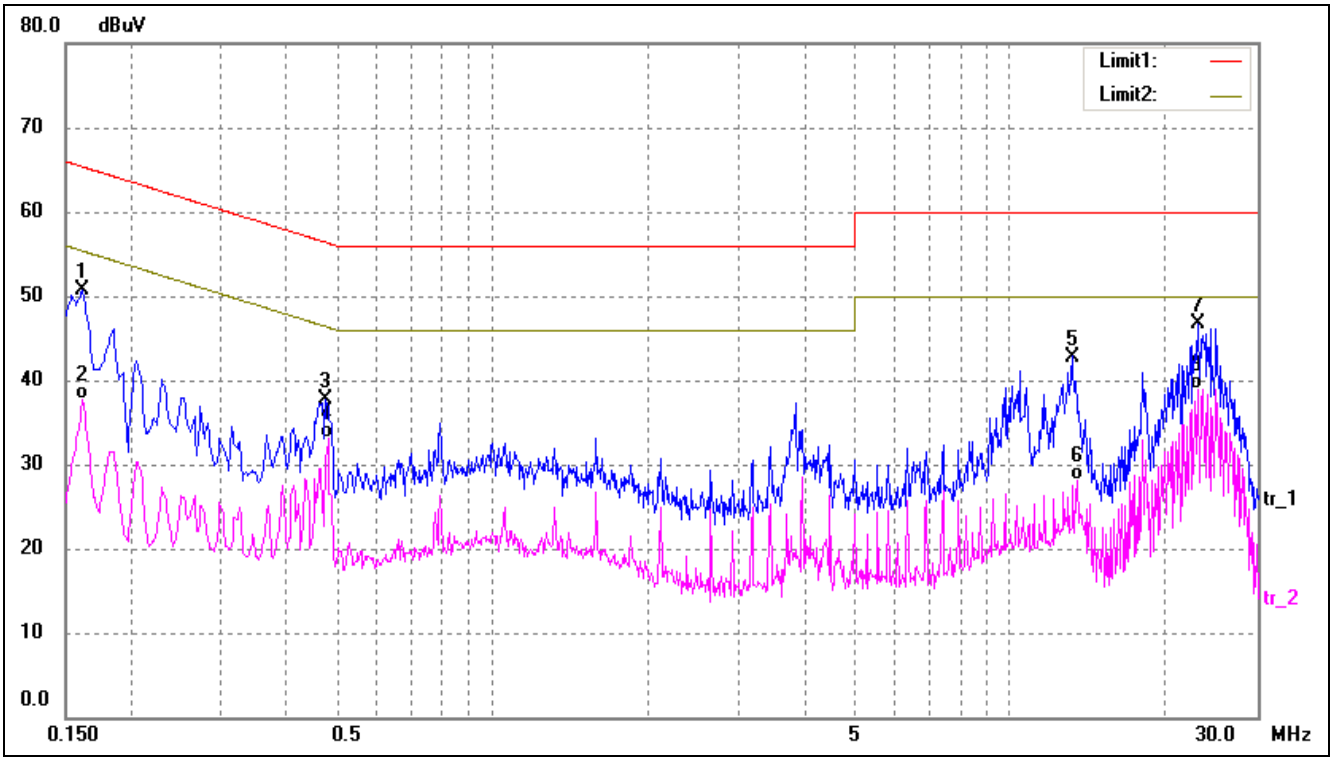
-10.74 dB at 24.0860 MHz in the **Line** mode**, AVG** detector, **0.15-30MHz**

10.6 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

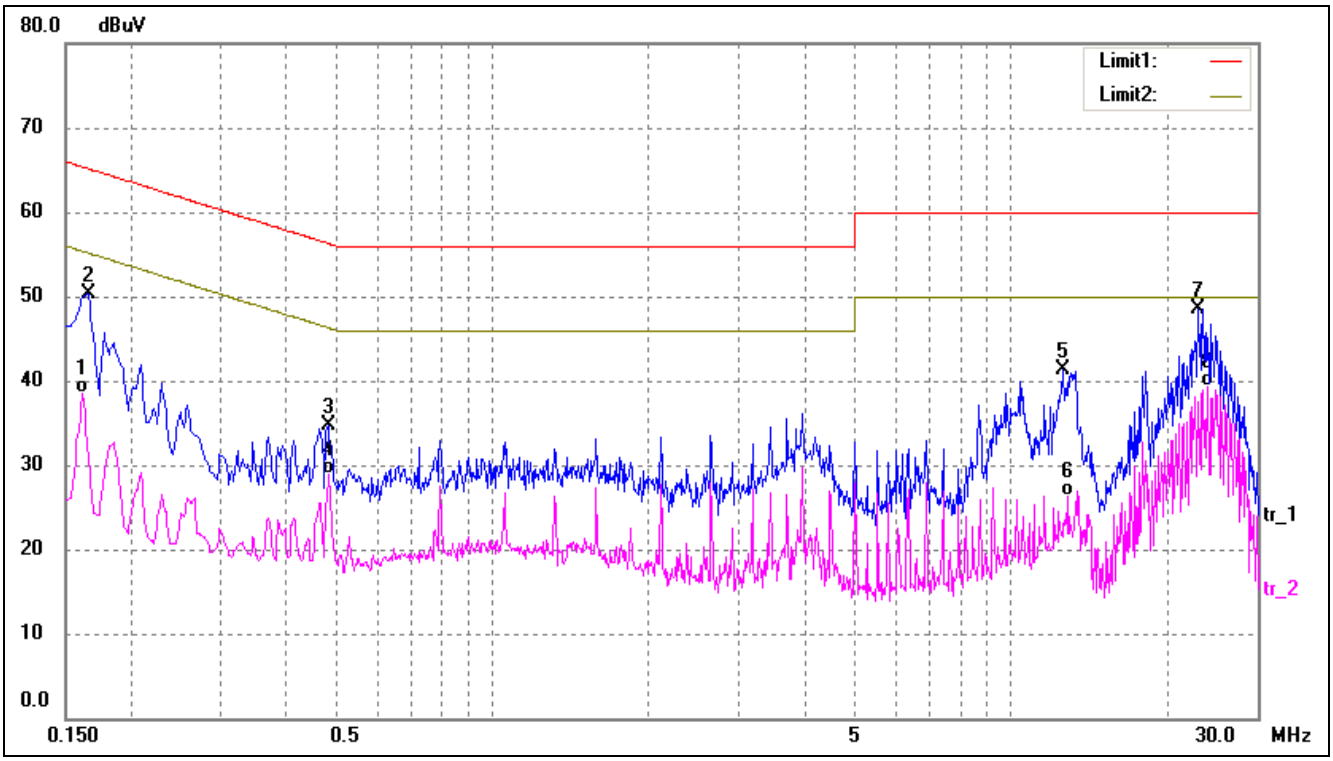
EUT: *Router*
Tested Model: *ER-800*
Operating Condition: *Transmitting(Wi-Fi)*
Comment: *Adapter DC12V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1620	40.91	9.78	50.69	65.36	-14.67	peak
2	0.1620	27.93	9.78	37.71	55.36	-17.65	AVG
3	0.4780	30.17	7.50	37.67	56.37	-18.70	peak
4	0.4820	25.51	7.50	33.01	46.30	-13.29	AVG
5	13.1860	31.80	11.00	42.80	60.00	-17.20	peak
6	13.4820	17.08	11.00	28.08	50.00	-21.92	AVG
7	23.1300	34.34	12.38	46.72	60.00	-13.28	peak
8	23.1300	26.62	12.38	39.00	50.00	-11.00	AVG

Test Specification: *Line*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1620	28.66	9.78	38.44	55.36	-16.92	AVG
2	0.1660	40.79	9.54	50.33	65.15	-14.82	peak
3	0.4820	27.27	7.50	34.77	56.30	-21.53	peak
4	0.4820	21.46	7.50	28.96	46.30	-17.34	AVG
5	12.6459	30.30	11.00	41.30	60.00	-18.70	peak
6	12.9619	15.39	11.00	26.39	50.00	-23.61	AVG
7	23.1300	36.18	12.38	48.56	60.00	-11.44	peak
8	24.0860	26.56	12.70	39.26	50.00	-10.74	AVG

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