

# FCC Part 15C Measurement and Test Report

For

**SHENZHEN DIT SECURITY&SURVEILLANCE**

**TECHNOLOGY CO.,LTD**

**3-4F,Building 5th,Wandaiheng High-Tech Park, Guangming,**

**Shenzhen**

**FCC ID: 2ADESDITN8152**

**FCC Rule(s):** FCC Part 15C

**Product Description:** IP CAMERA

**Tested Model:** N8152HH-E

**Report No.:** STR16038260I

**Tested Date:** 2016-03-29 to 2016-04-06

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*Jandyso*

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

**TABLE OF CONTENTS**

<b>1. GENERAL INFORMATION.....</b>	<b>3</b>
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....	3
1.2 TEST STANDARDS.....	4
1.3 TEST METHODOLOGY.....	4
1.4 TEST FACILITY.....	4
1.5 EUT SETUP AND TEST MODE.....	5
1.6 MEASUREMENT UNCERTAINTY.....	5
1.7 TEST EQUIPMENT LIST AND DETAILS.....	6
<b>2. SUMMARY OF TEST RESULTS.....</b>	<b>7</b>
<b>3. RF EXPOSURE.....</b>	<b>8</b>
3.1 STANDARD APPLICABLE.....	8
3.2 TEST RESULT.....	8
<b>4. ANTENNA REQUIREMENT.....</b>	<b>9</b>
4.1 STANDARD APPLICABLE.....	9
4.2 EVALUATION INFORMATION.....	9
<b>5. POWER SPECTRAL DENSITY.....</b>	<b>10</b>
5.1 STANDARD APPLICABLE.....	10
5.2 TEST PROCEDURE.....	10
5.3 ENVIRONMENTAL CONDITIONS.....	10
5.4 SUMMARY OF TEST RESULTS/PLOTS.....	11
<b>6. GDB BANDWIDTH.....</b>	<b>17</b>
6.1 STANDARD APPLICABLE.....	17
6.2 TEST PROCEDURE.....	17
6.3 ENVIRONMENTAL CONDITIONS.....	17
6.4 SUMMARY OF TEST RESULTS/PLOTS.....	17
<b>7. RF OUTPUT POWER.....</b>	<b>23</b>
7.1 STANDARD APPLICABLE.....	23
7.2 TEST PROCEDURE.....	23
7.3 ENVIRONMENTAL CONDITIONS.....	23
7.4 SUMMARY OF TEST RESULTS/PLOTS.....	24
<b>8. FIELD STRENGTH OF SPURIOUS EMISSIONS.....</b>	<b>30</b>
8.1 STANDARD APPLICABLE.....	30
8.2 TEST PROCEDURE.....	30
8.3 CORRECTED AMPLITUDE & MARGIN CALCULATION.....	31
8.4 ENVIRONMENTAL CONDITIONS.....	31
8.5 SUMMARY OF TEST RESULTS/PLOTS.....	32
<b>9. OUT OF BAND EMISSIONS.....</b>	<b>53</b>
9.1 STANDARD APPLICABLE.....	53
9.2 TEST PROCEDURE.....	53
9.3 ENVIRONMENTAL CONDITIONS.....	54
9.4 SUMMARY OF TEST RESULTS/PLOTS.....	54
<b>10. CONDUCTED EMISSIONS.....</b>	<b>60</b>
10.1 TEST PROCEDURE.....	60
10.2 BASIC TEST SETUP BLOCK DIAGRAM.....	60
10.3 ENVIRONMENTAL CONDITIONS.....	60
10.4 TEST RECEIVER SETUP.....	61
10.5 SUMMARY OF TEST RESULTS/PLOTS.....	61
10.6 CONDUCTED EMISSIONS TEST DATA.....	61

## 1. GENERAL INFORMATION

### 1.1 Product Description for Equipment Under Test (EUT)

#### Client Information

Applicant: SHENZHEN DIT SECURITY&SURVEILLANCE  
TECHNOLOGY CO.,LTD

Address of applicant: 3-4F,Building 5th,Wandaiheng High-Tech Park,  
Guangming,Shenzhen

Manufacturer: SHENZHEN DIT SECURITY&SURVEILLANCE  
TECHNOLOGY CO.,LTD

Address of manufacturer: 3-4F,Building 5th,Wandaiheng High-Tech Park,  
Guangming,Shenzhen

General Description of EUT	
Product Name:	IP CAMERA
Trade Name:	/
Model No.:	N8152HH-E
Adding Model(s):	N5402HH-E, N7514HH-E, N6714HH-E, N3309HH-E, N7504HH-E, N2064HH-E, N2164HH-E, N1504HH-E, L-I1720-B
Rated Voltage:	Adapter DC 12V
Power Adapter Model:	XED-UL 120100C I/P: AC 100-240V, 50/60Hz; O/P: DC 12V/1A
<i>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 N8152HH-E, but the circuit and the electronic construction do not change, declared by the manufacturer.</i>	

Technical Characteristics of EUT	
Support Standards:	802.11b, 802.11g, 802.11n(HT20)
Frequency Range:	2412-2462MHz
RF Output Power:	16.54 dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 65Mbps
Quantity of Channels:	11
Channel Separation:	5MHz
Type of Antenna:	SMA-reverse antenna
Antenna Gain:	2.0dBi
Lowest Internal Frequency	32.768kHz

## 1.2 Test Standards

The following report is prepared on behalf of the SHENZHEN DIT SECURITY&SURVEILLANCE 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 2<sup>nd</sup> 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

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
LAN cable	1.43	Unshielded	Without Ferrite
DC cable	0.48	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	Remark
Notebook	ASUS	X42J	Supplied by SEM
Adapter	\	XED-UL 120100C	Supplied by Applicant

## 1.6 Measurement Uncertainty

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

## 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
§15.205	Restricted Band of Operation	Compliant
§ 15.207(a)	Conducted Emission	Compliant
§ 15.247(e)	Power Spectral Density	Compliant
§ 15.247(a)(2)	6 dB Bandwidth	Compliant
§ 15.247(b)(3)	RF Output Power	Compliant
§ 15.209(a)	Radiated Emission	Compliant
§ 15.247(d)	Band Edge (Out of Band Emissions)	Compliant

N/A: not applicable

### **3. RF Exposure**

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#### **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**

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

### 5.3 Environmental Conditions

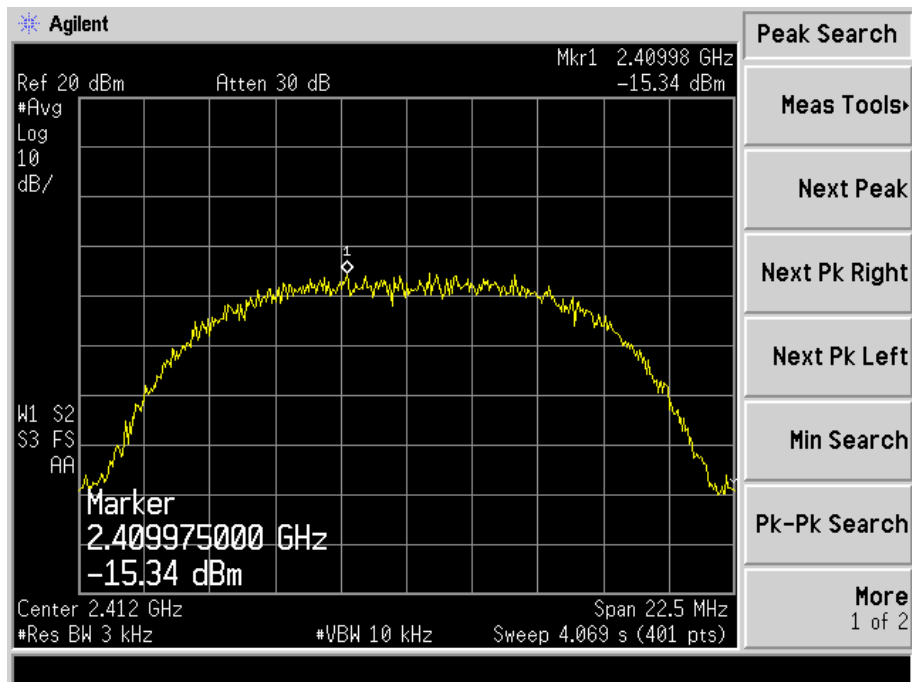
Temperature:	26° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

## 5.4 Summary of Test Results/Plots

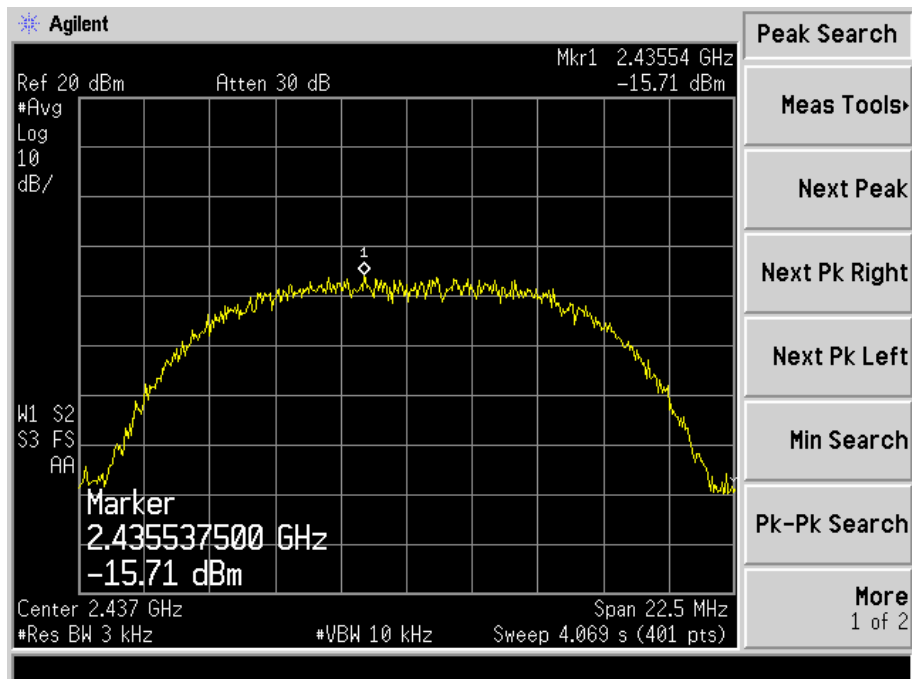
Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
802.11b	2412	-15.34	8
	2437	-15.71	8
	2462	-16.27	8
802.11g	2412	-21.7	8
	2437	-21.59	8
	2462	-21.39	8
802.11n HT20	2412	-20.66	8
	2437	-20.76	8
	2462	-21.42	8

Please refer to the following test plots:

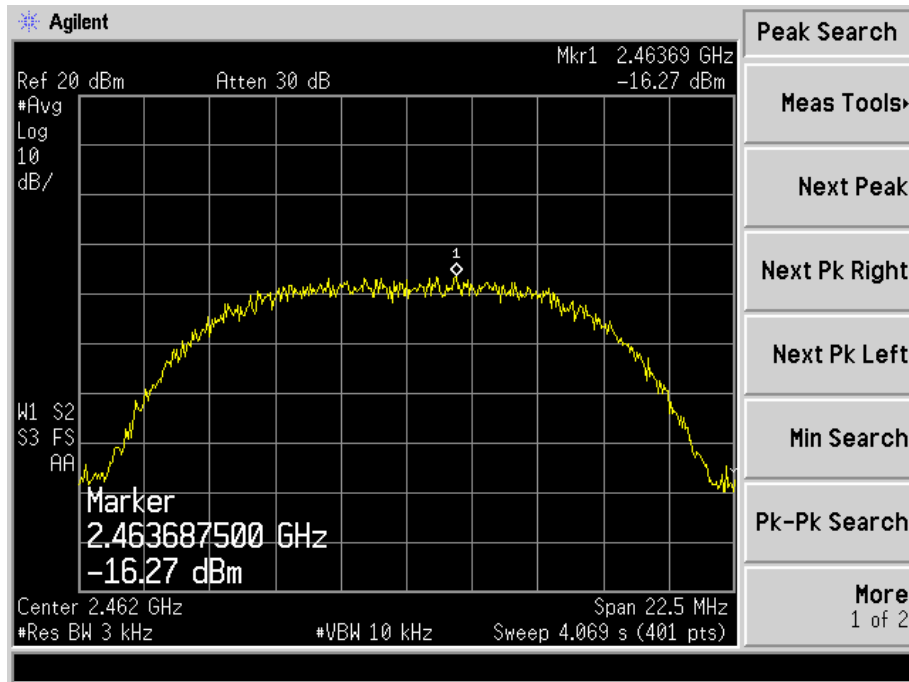
## 802.11b-Low Channel



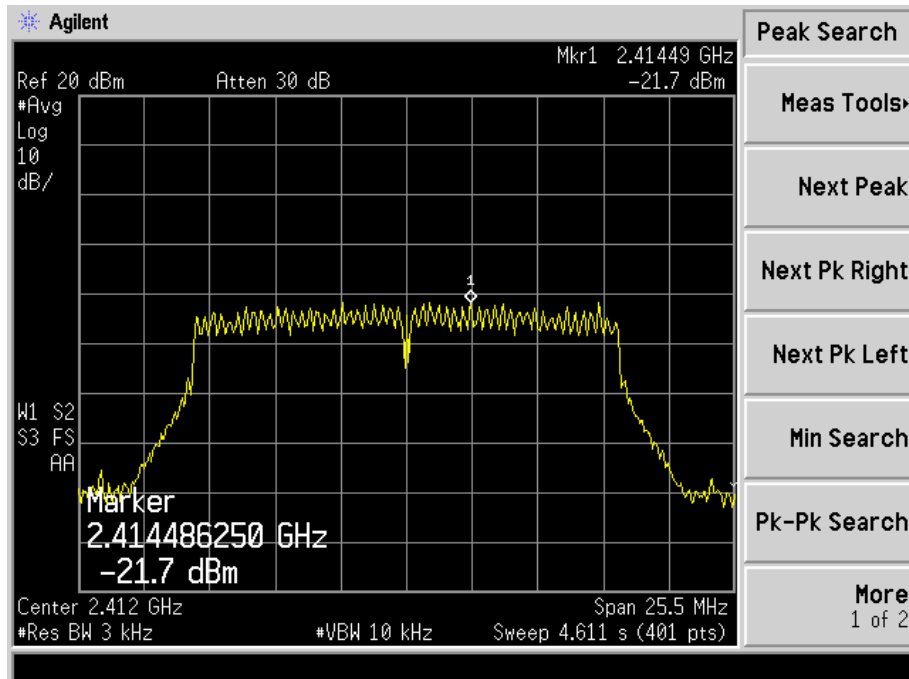
## 802.11b-Middle Channel



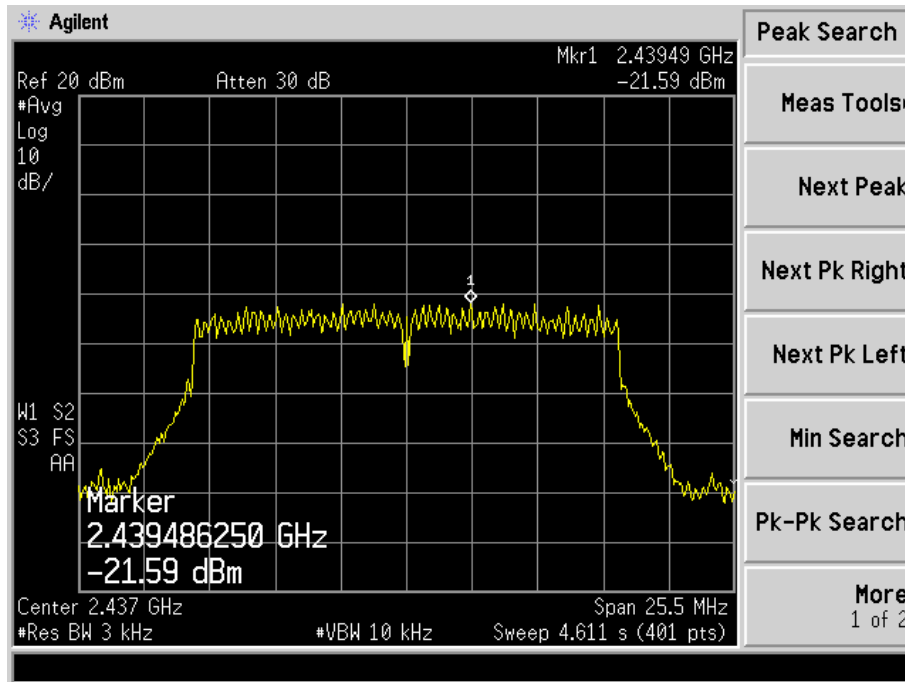
## 802.11b-High Channel



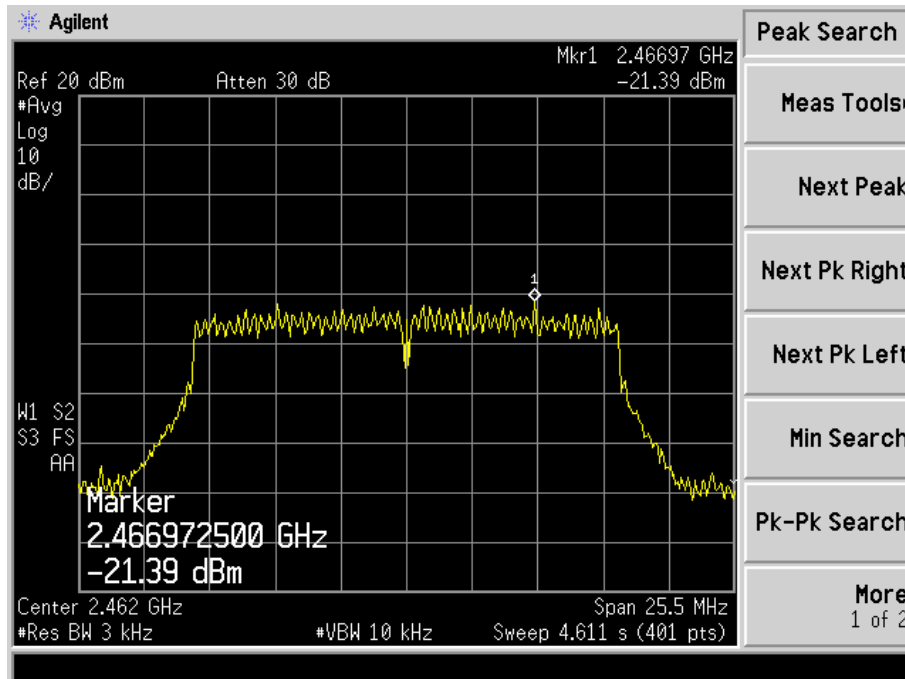
## 802.11g-Low Channel



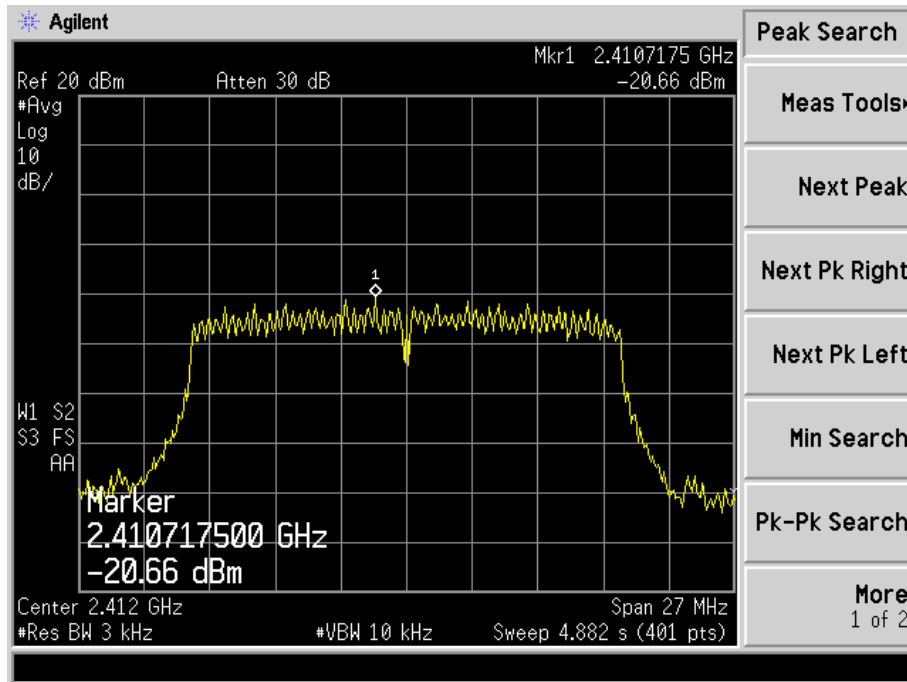
## 802.11g-Middle Channel



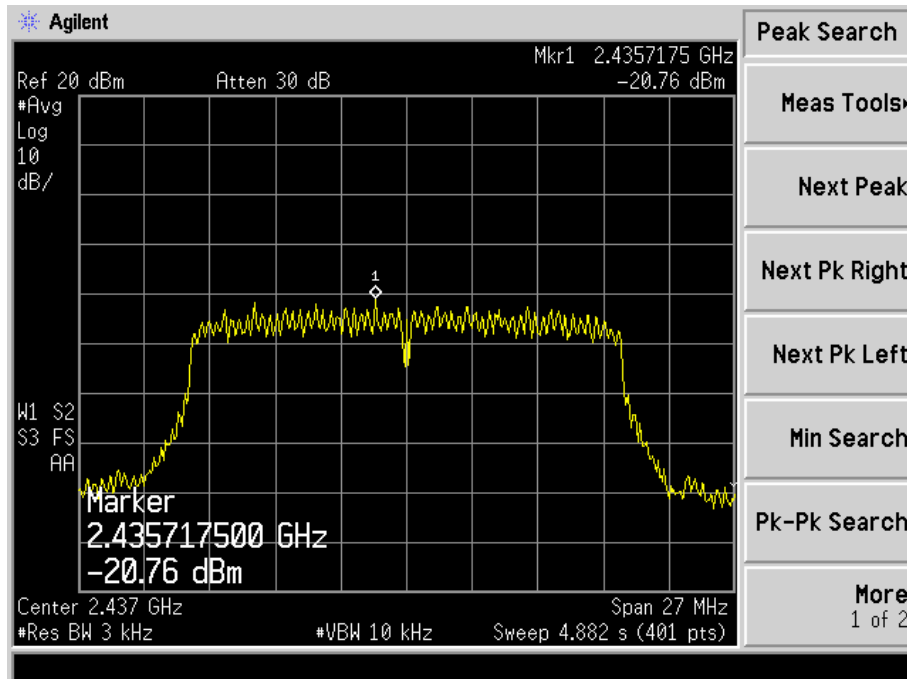
## 802.11g-High Channel



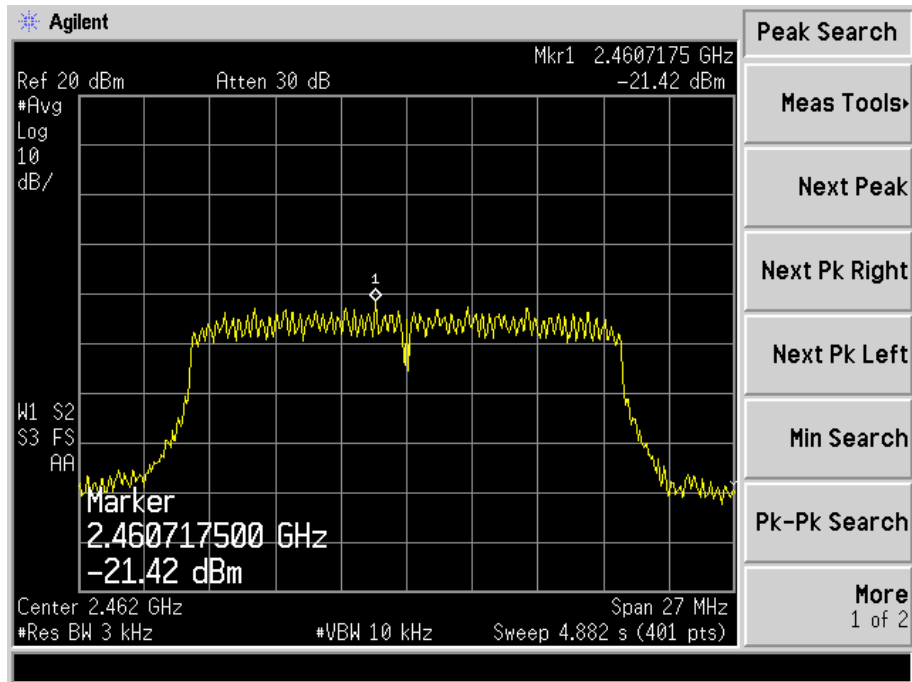
## 802.11n-HT20-Low Channel



## 802.11n-HT20-Middle Channel



## 802.11n-HT20-High Channel





## 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

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

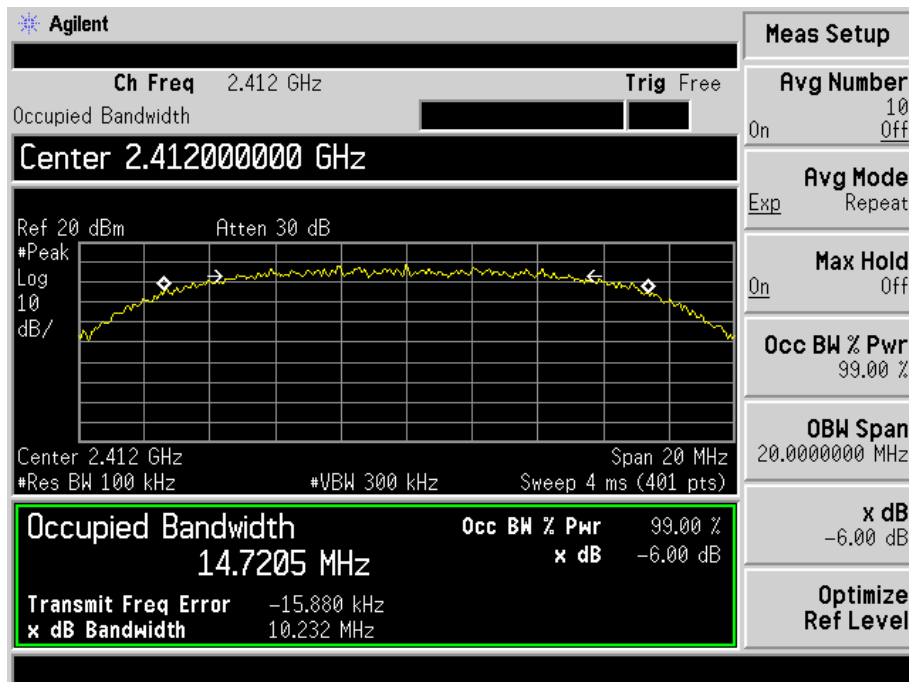
Temperature:	25° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

### 6.4 Summary of Test Results/Plots

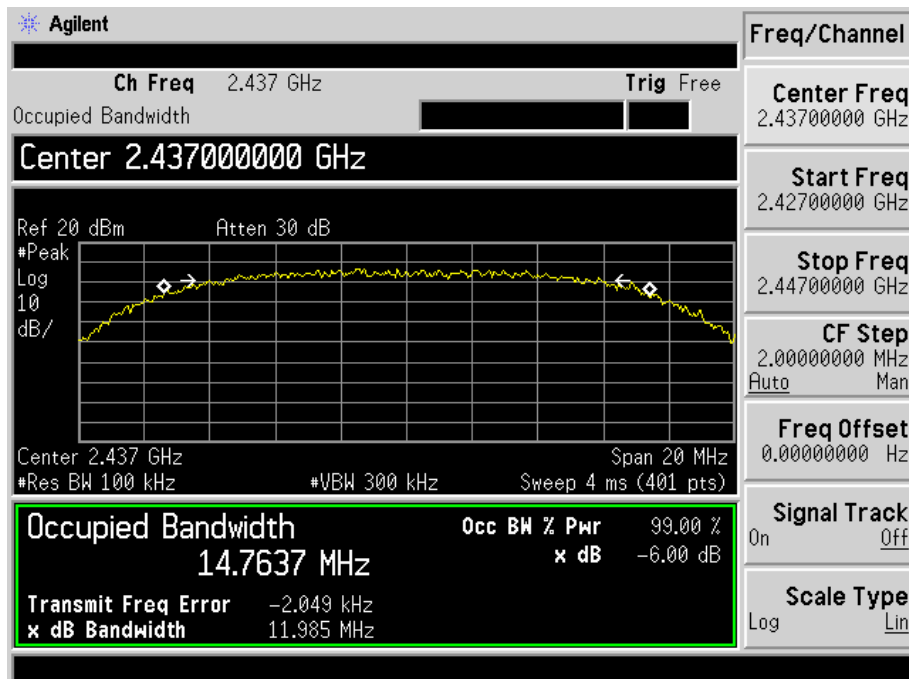
Test Mode	Test Channel MHz	6 dB Bandwidth kHz	99% Bandwidth kHz	Limit kHz
802.11b	2412	10232	14720.5	$\geq 500$
	2437	11985	14763.7	$\geq 500$
	2462	11431	14744.3	$\geq 500$
802.11g	2412	16256	16366.8	$\geq 500$
	2437	16449	16374.5	$\geq 500$
	2462	16371	16357.4	$\geq 500$
802.11n-HT20	2412	17252	17457.1	$\geq 500$
	2437	17560	17473.0	$\geq 500$
	2462	17063	174325	$\geq 500$

Please refer to the following test plots:

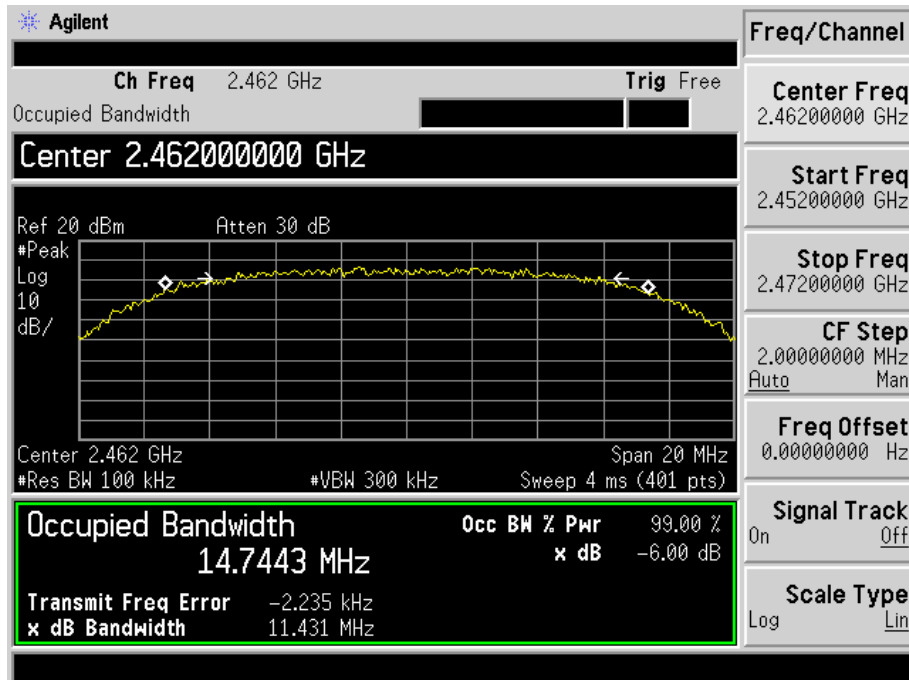
### 802.11b-Low Channel



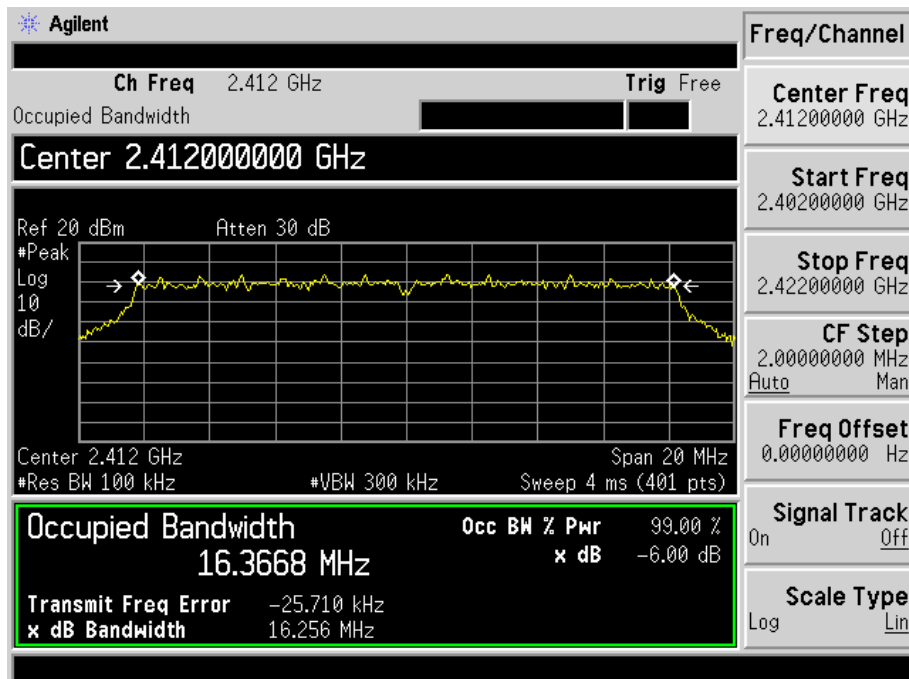
### 802.11b-Middle Channel



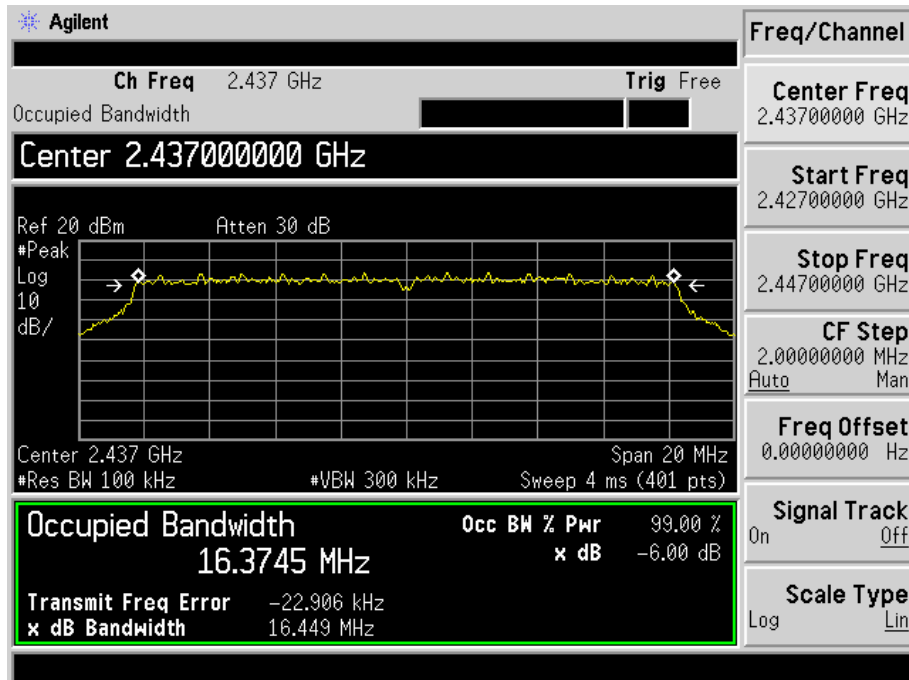
## 802.11b-High Channel



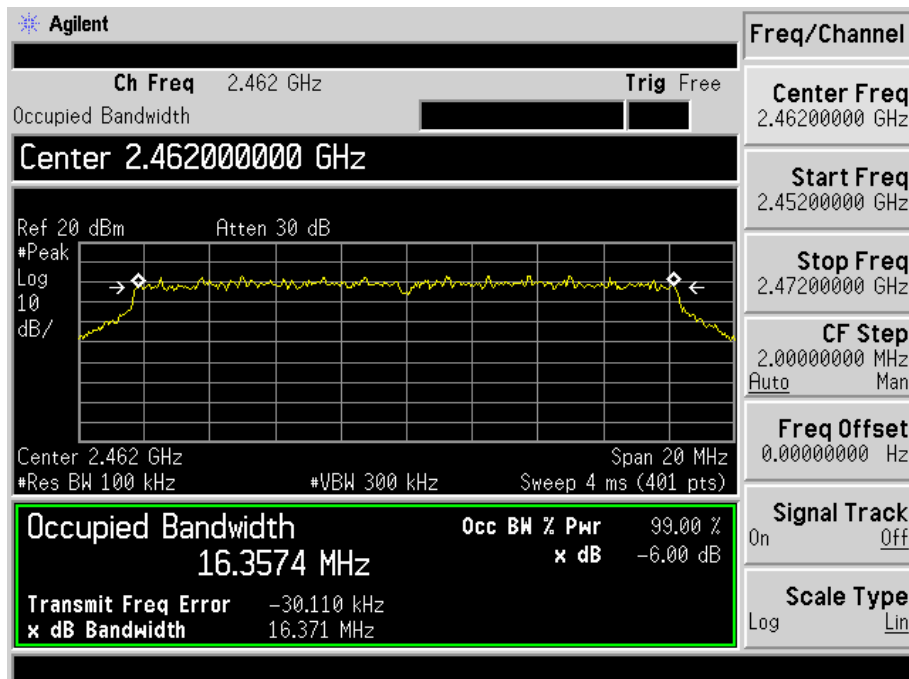
## 802.11g-Low Channel



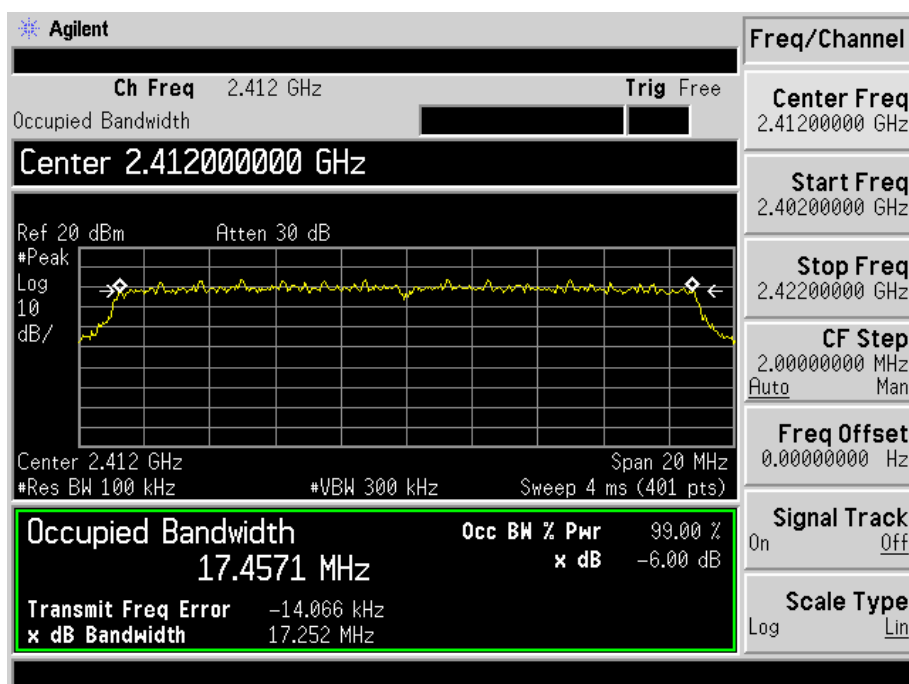
## 802.11g-Middle Channel



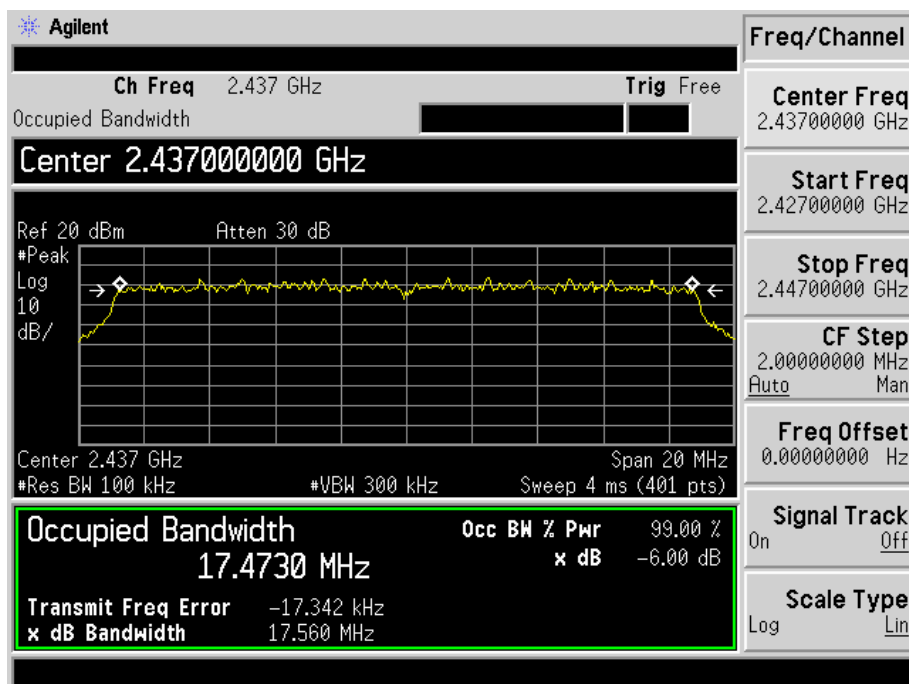
## 802.11g-High Channel



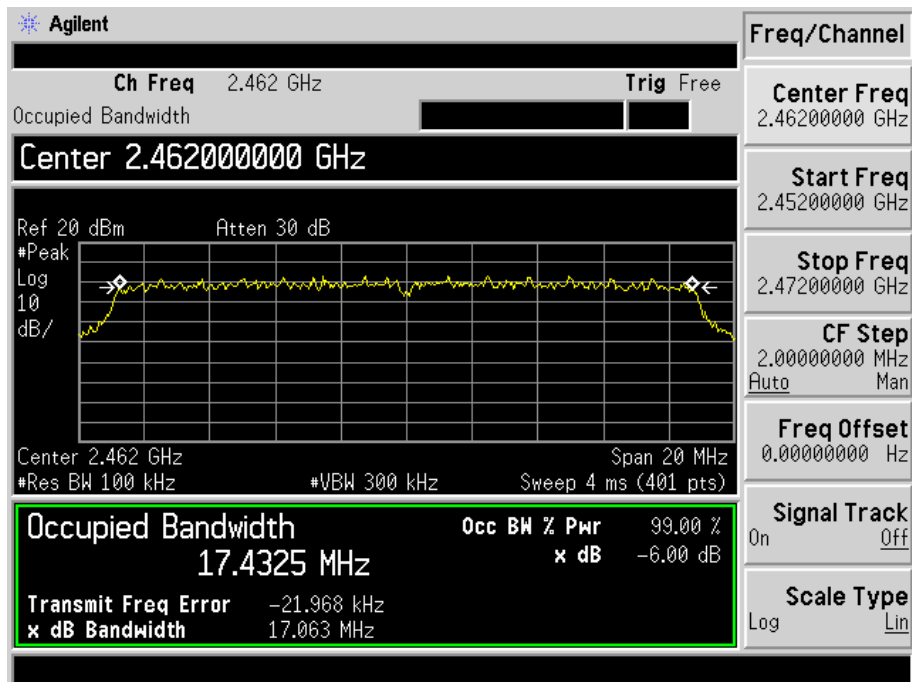
## 802.11n-HT20-Low Channel



## 802.11n-HT20-Middle Channel



## 802.11n-HT20-High Channel



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

### 7.3 Environmental Conditions

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

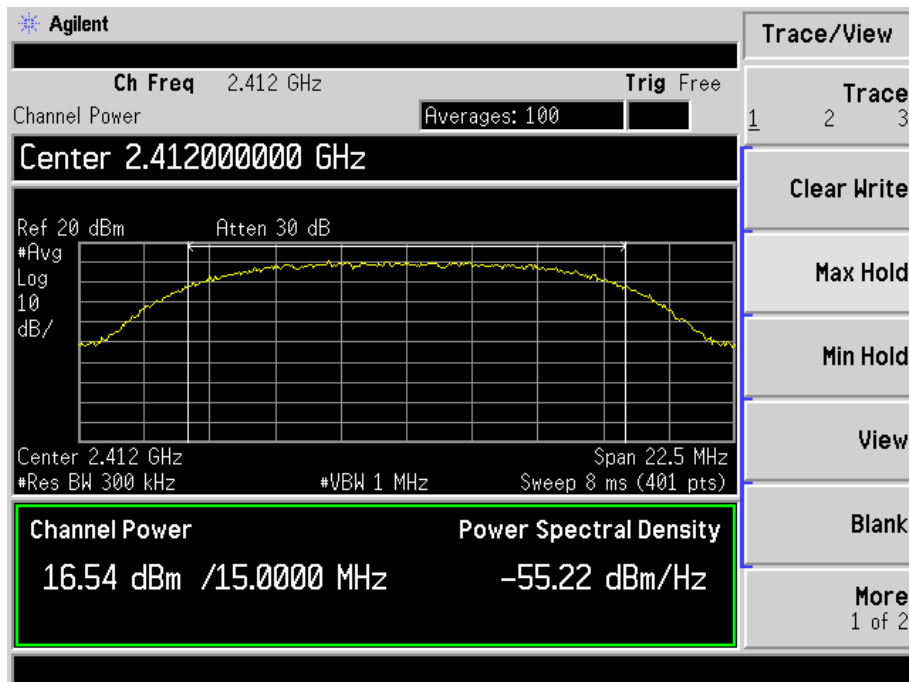
#### 7.4 Summary of Test Results/Plots

Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b_11Mbps	2412	16.54	45.08	1000
	2437	16.16	41.30	1000
	2462	15.86	38.55	1000
802.11g_54Mbps	2412	11.23	13.27	1000
	2437	11.17	13.09	1000
	2462	10.85	12.16	1000
802.11n HT20_MCS7	2412	11.47	14.03	1000
	2437	10.96	12.47	1000
	2462	10.74	11.86	1000

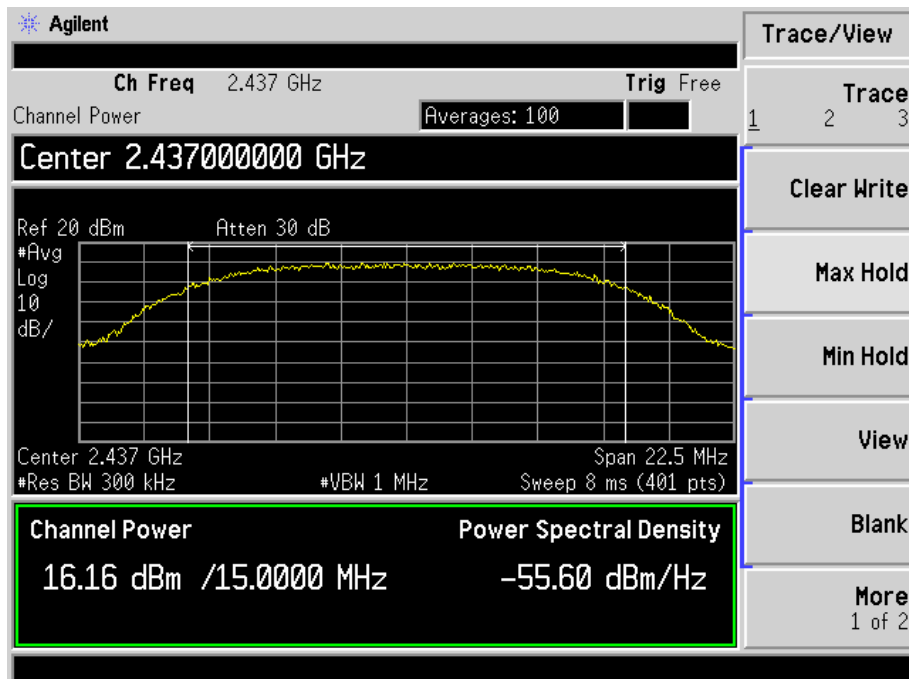
Please refer to the following test plots:



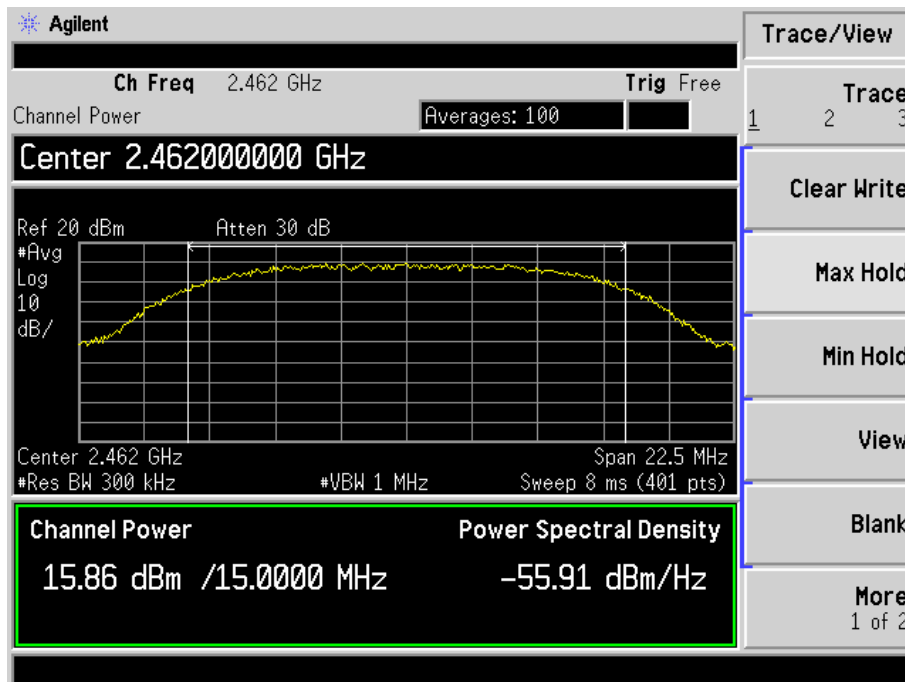
## 802.11b-11Mbps-Low Channel



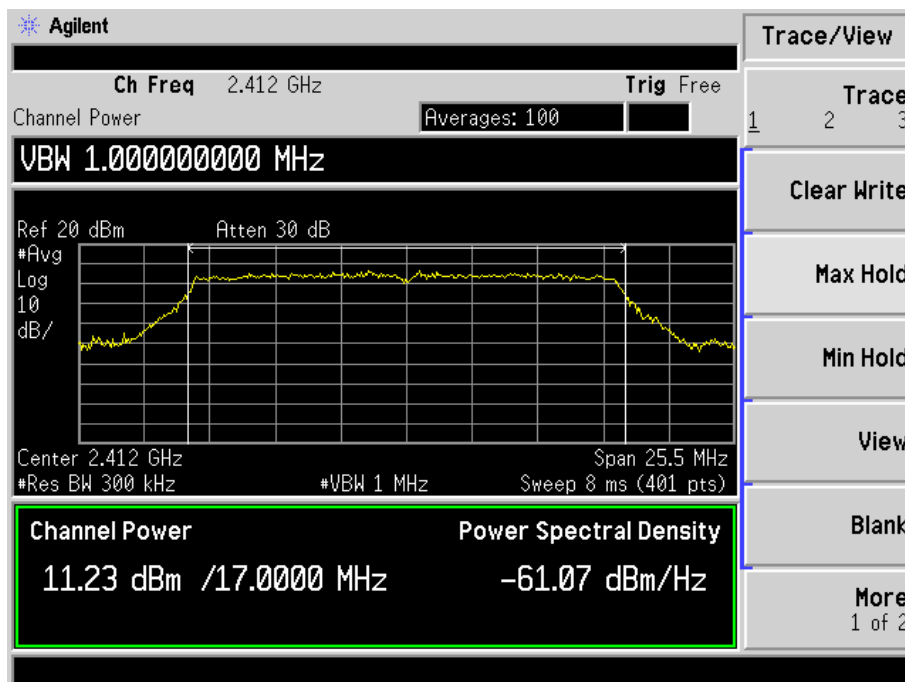
## 802.11b -11Mbps-Middle Channel



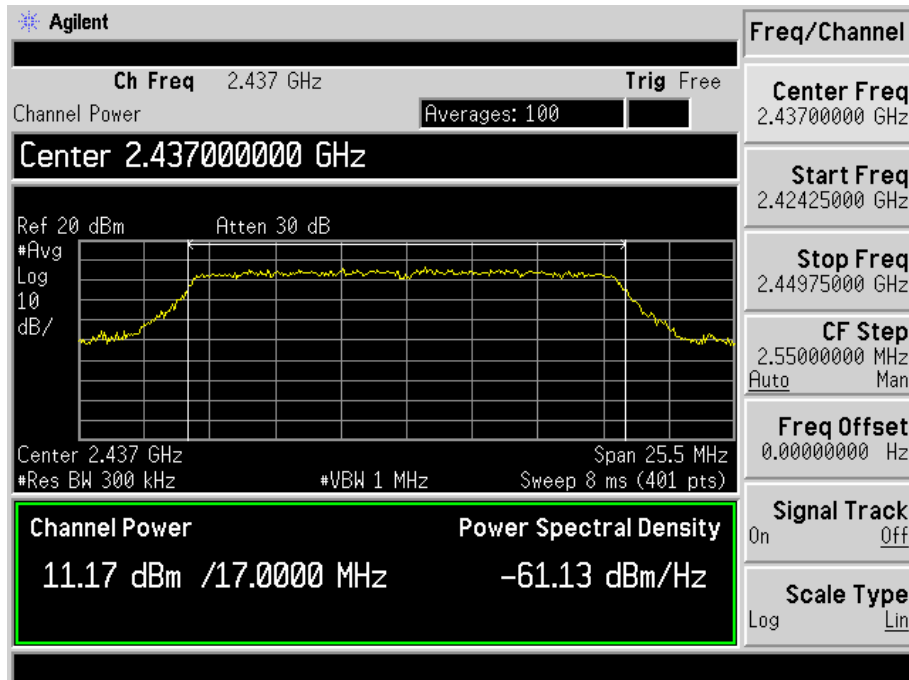
## 802.11b -11Mbps-High Channel



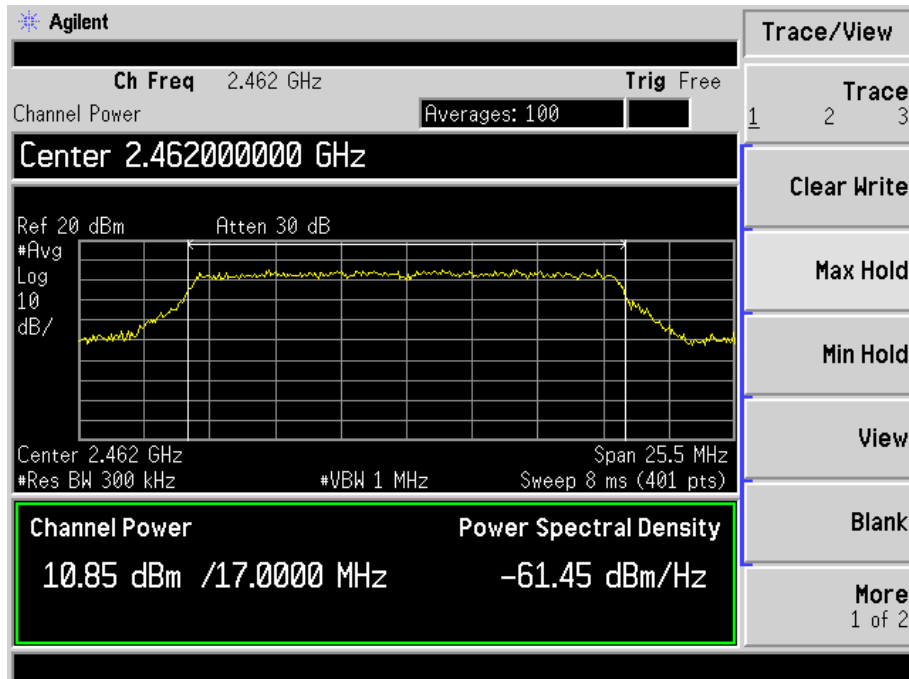
## 802.11g-54Mbps-Low Channel



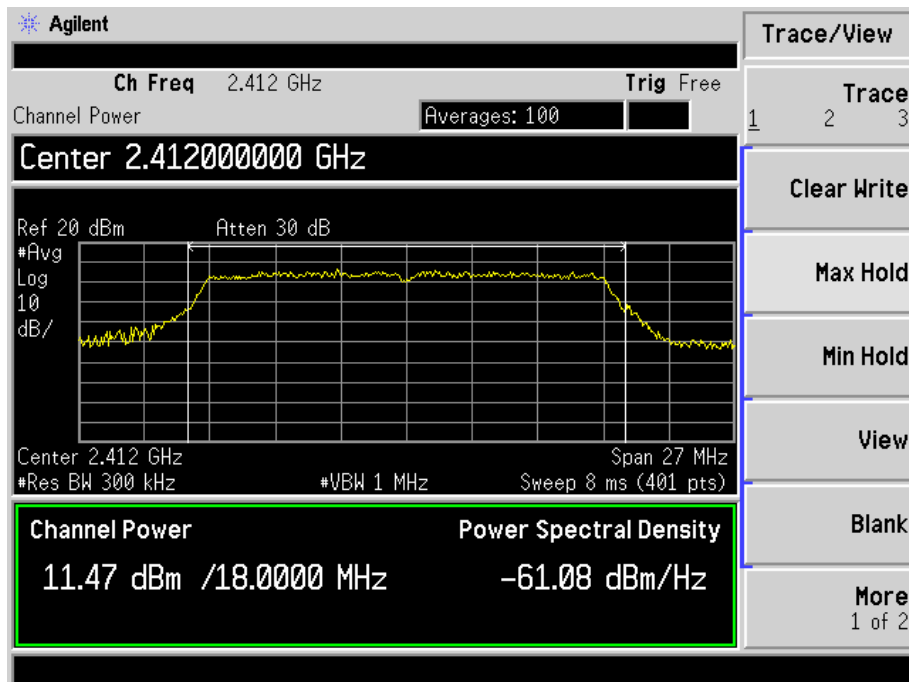
## 802.11g-54Mbps-Middle Channel



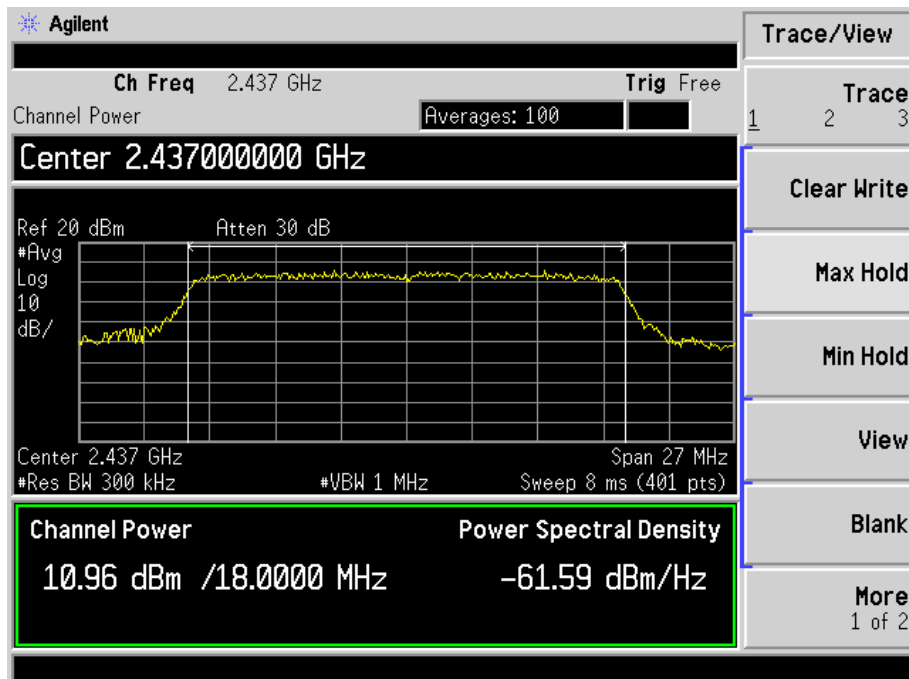
## 802.11g-54Mbps-High Channel



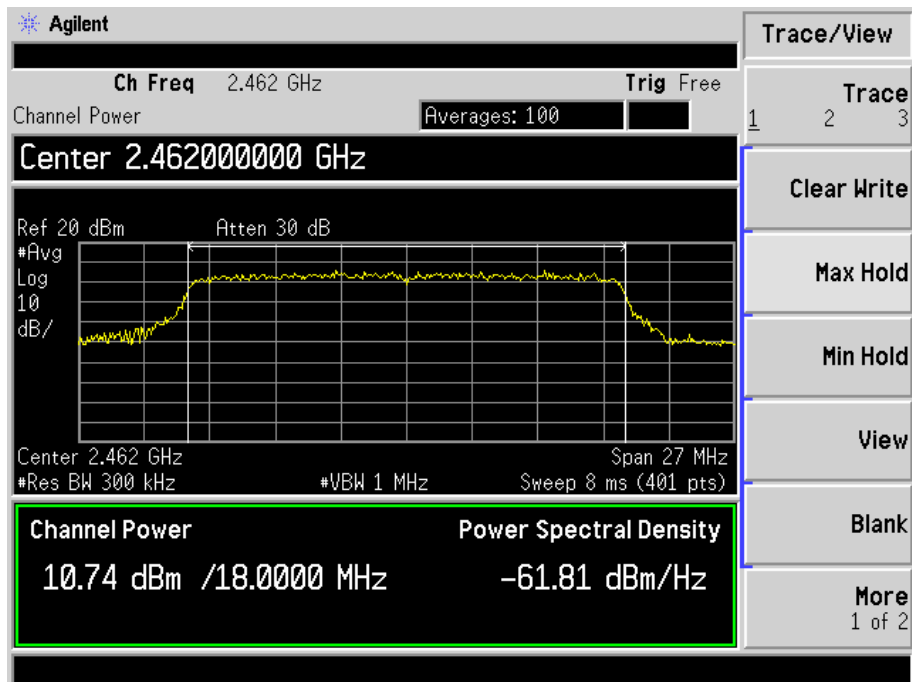
## 802.11n-HT20-MCS7-Low Channel



## 802.11n-HT20-MCS7-Middle Channel



## 802.11n-HT20-MCS7-High Channel



## 8. Field Strength of Spurious Emissions

### 8.1 Standard Applicable

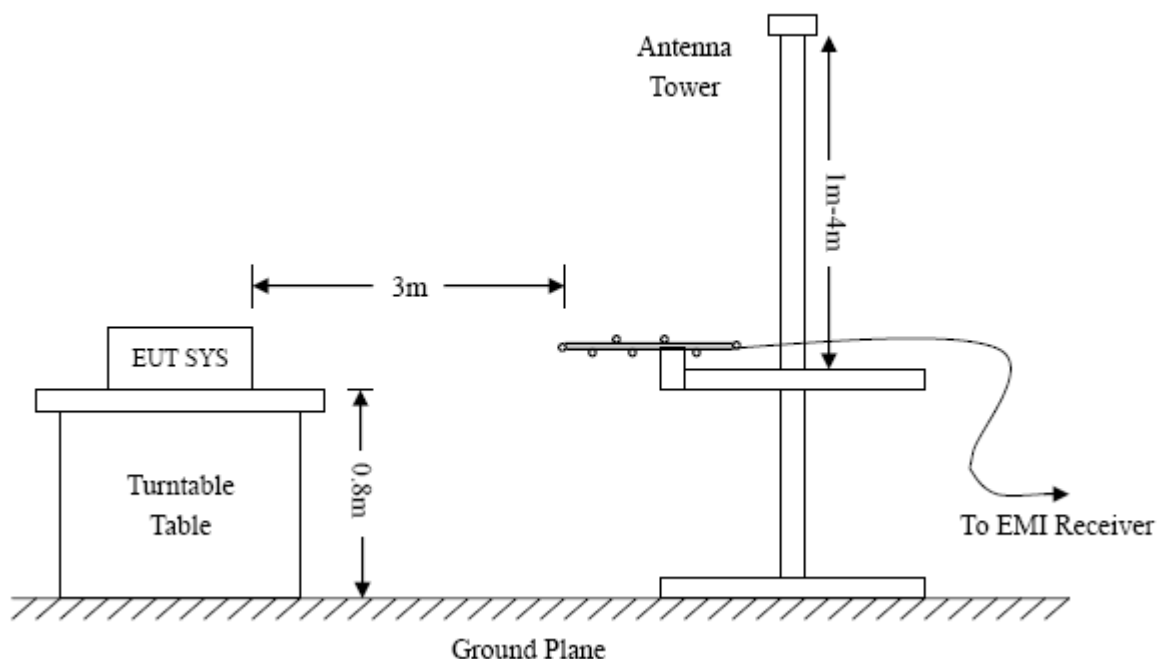
According to §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within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

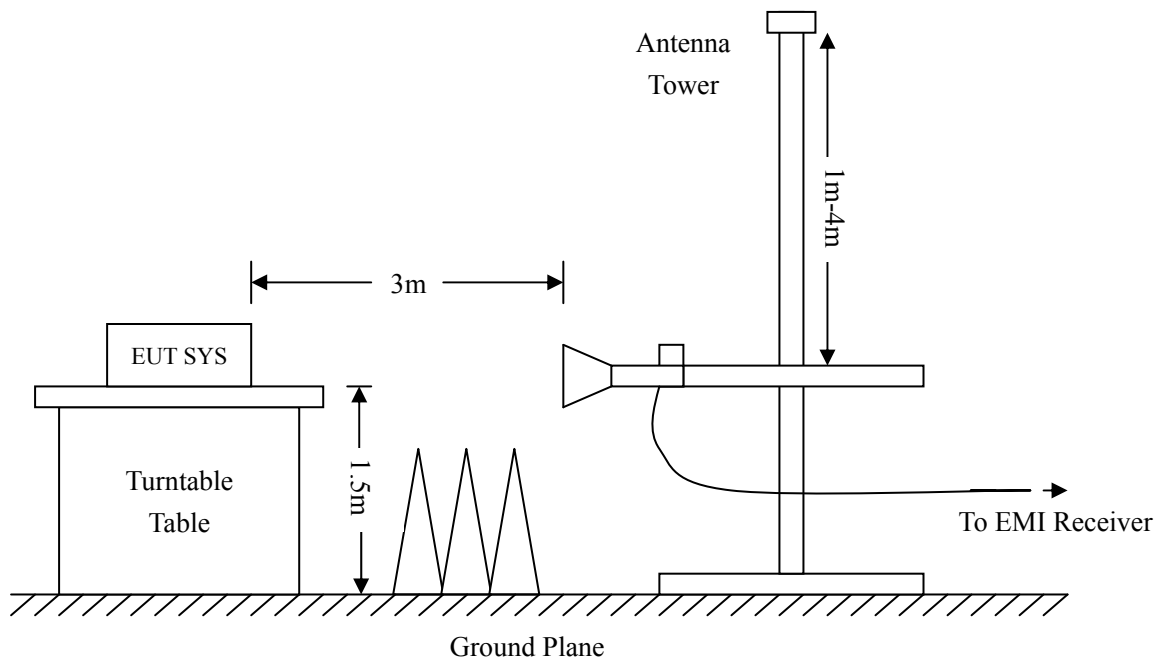
The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

### 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

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

### 8.3 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:

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

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. The equation for margin calculation is as follows:

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

### 8.4 Environmental Conditions

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

## 8.5 Summary of Test Results/Plots

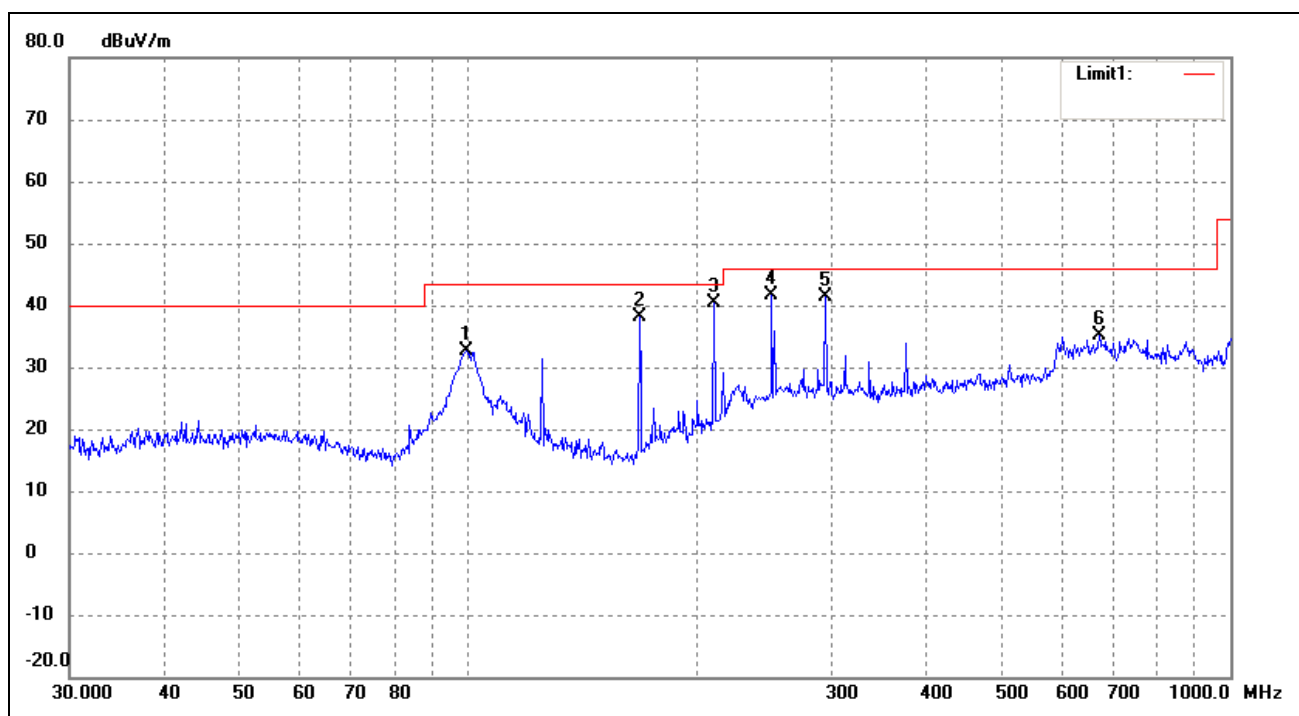
According to the data below, the FCC Part 15.205, 15.209 and 15.247 standards, and had the worst cases:

*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: IP CAMERA  
 Tested Model: N8152HH-E  
 Operating Condition: 802.11b Transmitting Low Channel-2412MHz  
 Comment: AC 120V/60Hz; Adapter DC 12V

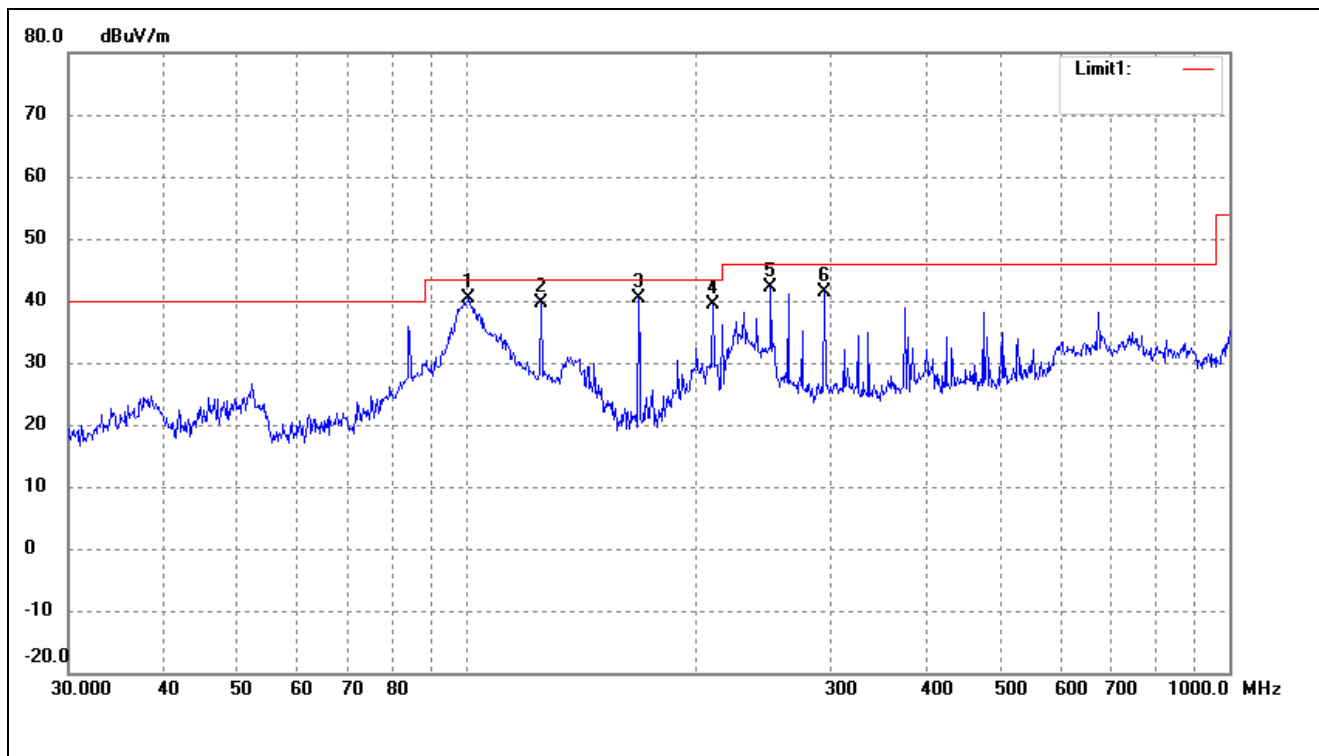
Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	99.5281	27.59	5.06	32.65	43.50	-10.85	254	100	peak
2	167.8243	35.55	2.67	38.22	43.50	-5.28	113	100	peak
3	210.0482	34.36	5.90	40.26	43.50	-3.24	284	100	peak
4	250.3012	31.88	9.71	41.59	46.00	-4.41	157	100	peak
5	294.1137	29.40	11.94	41.34	46.00	-4.66	139	100	peak
6	672.8445	16.31	18.87	35.18	46.00	-10.82	268	100	peak



Test Specification: Vertical

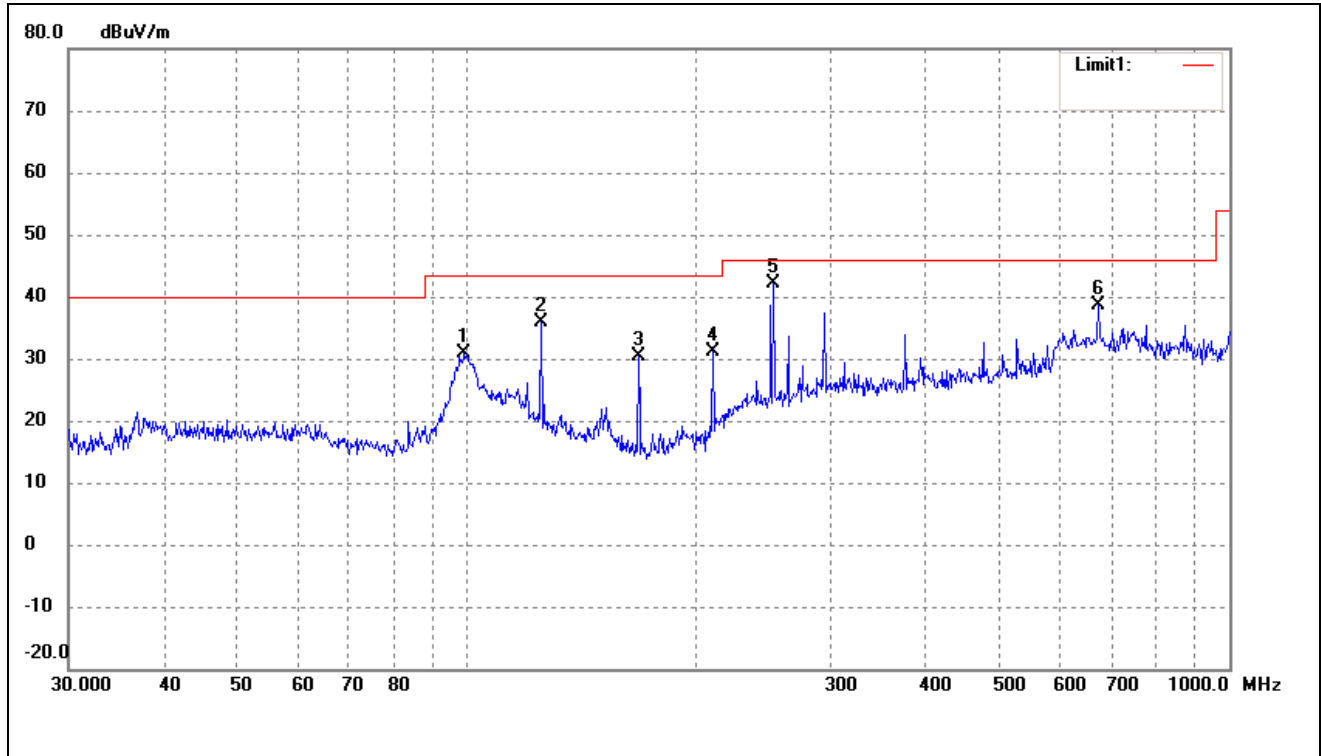


No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	100.5806	35.14	5.12	40.26	43.50	-3.24	114	100	peak
2	125.0066	35.01	4.61	39.62	43.50	-3.88	270	100	peak
3	167.8243	37.64	2.67	40.31	43.50	-3.19	360	100	peak
4	210.0482	33.43	5.90	39.33	43.50	-4.17	157	100	peak
5	250.3012	32.39	9.71	42.10	46.00	-3.90	139	100	peak
6	294.1137	29.33	11.94	41.27	46.00	-4.73	166	100	peak

Operating Condition: 802.11b Transmitting Middle Channel-2437MHz

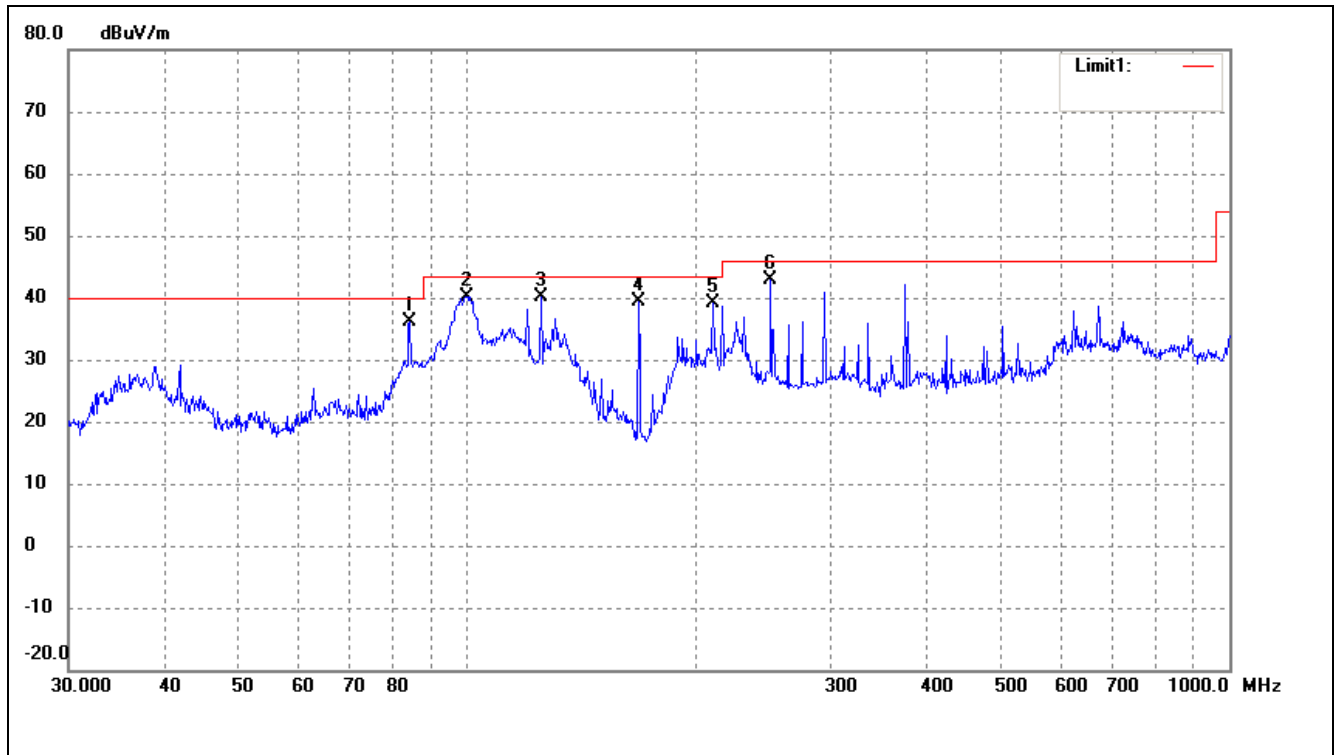
Comment: AC 120V/60Hz; Adapter DC 12V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	99.1797	25.98	5.01	30.99	43.50	-12.51	178	100	peak
2	125.0066	31.33	4.61	35.94	43.50	-7.56	224	100	peak
3	167.8243	27.65	2.67	30.32	43.50	-13.18	160	100	peak
4	210.0482	25.16	5.90	31.06	43.50	-12.44	157	100	peak
5	252.0627	32.37	9.76	42.13	46.00	-3.87	139	100	peak
6	672.8445	19.79	18.87	38.66	46.00	-7.34	258	100	peak

Test Specification: Vertical

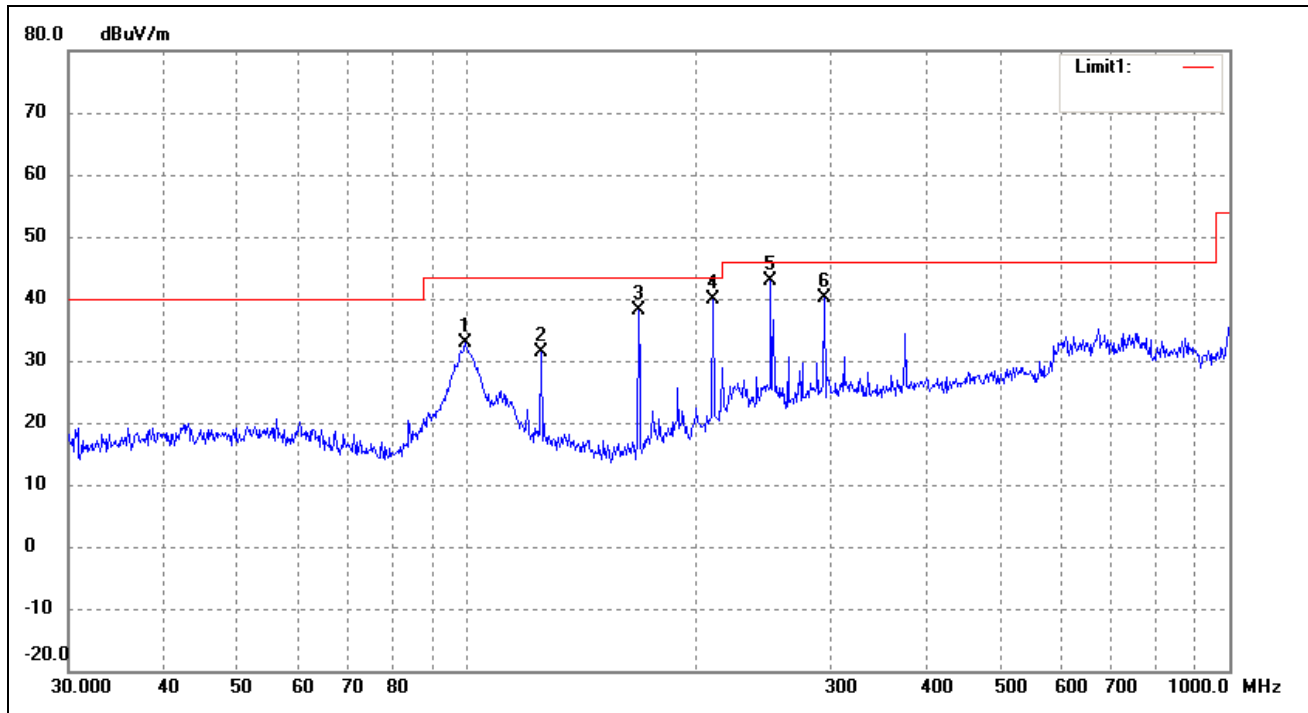


No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	84.1100	33.45	2.67	36.12	40.00	-3.88	256	100	peak
2	99.8777	35.07	5.11	40.18	43.50	-3.32	360	100	peak
3	125.0066	35.50	4.61	40.11	43.50	-3.39	360	100	peak
4	167.8243	36.80	2.67	39.47	43.50	-4.03	137	100	peak
5	210.0482	33.31	5.90	39.21	43.50	-4.29	229	100	peak
6	250.3012	33.26	9.71	42.97	46.00	-3.03	136	100	peak

Operating Condition: 802.11b Transmitting High Channel-2462MHz

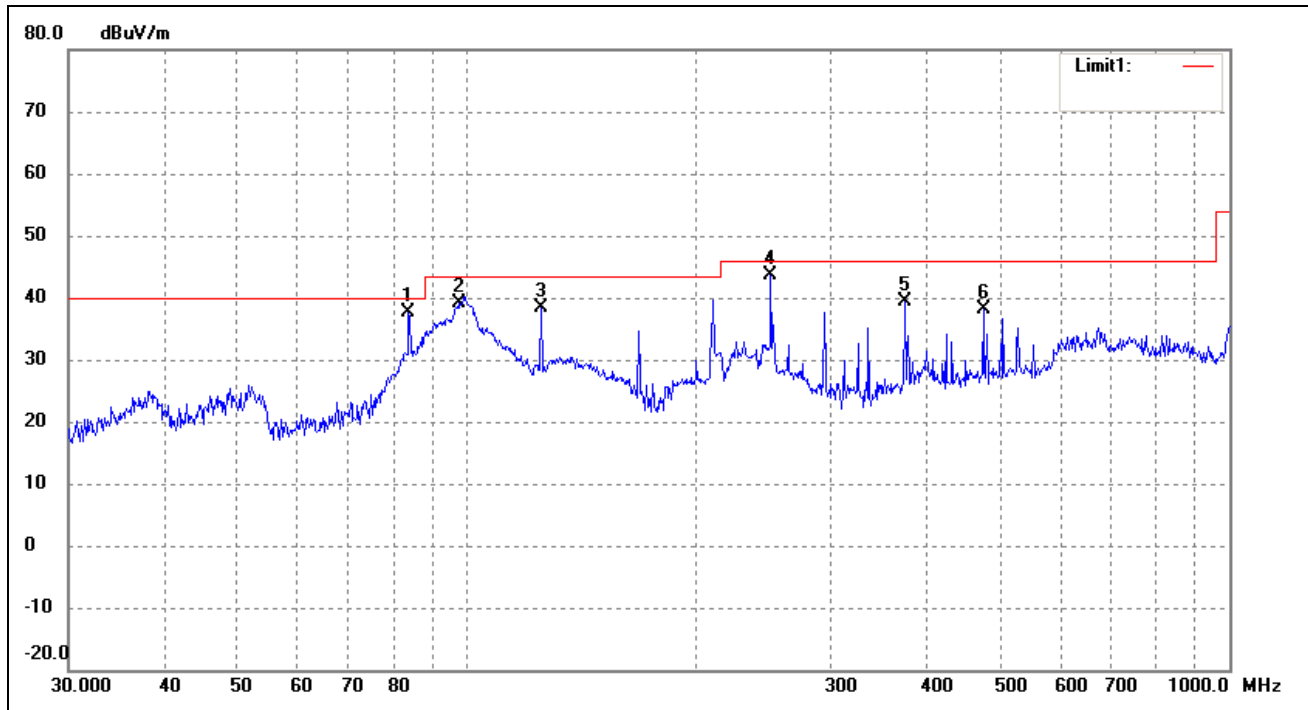
Comment: AC 120V/60Hz; Adapter DC 12V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	99.5281	27.70	5.06	32.76	43.50	-10.74	176	100	peak
2	125.0066	26.65	4.61	31.26	43.50	-12.24	279	100	peak
3	167.8243	35.42	2.67	38.09	43.50	-5.41	360	100	peak
4	210.0482	33.97	5.90	39.87	43.50	-3.63	163	100	peak
5	250.3012	33.22	9.71	42.93	46.00	-3.07	197	100	peak
6	294.1137	28.19	11.94	40.13	46.00	-5.87	188	100	peak

Test Specification: Vertical

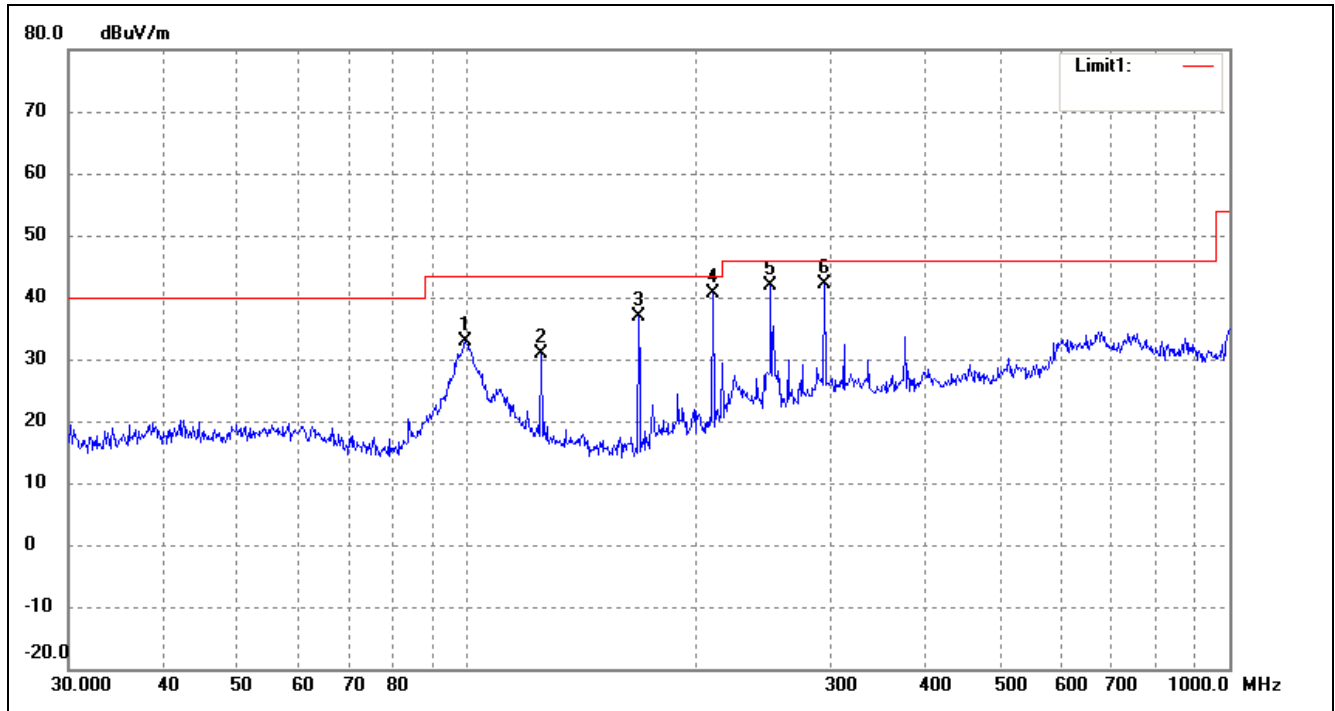


No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	83.8156	34.90	2.62	37.52	40.00	-2.48	360	100	peak
2	97.4560	34.38	4.75	39.13	43.50	-4.37	225	100	peak
3	125.0066	33.65	4.61	38.26	43.50	-5.24	160	100	peak
4	250.3012	33.98	9.71	43.69	46.00	-2.31	147	100	peak
5	375.9385	27.09	12.20	39.29	46.00	-6.71	90	100	peak
6	475.4991	25.02	13.21	38.23	46.00	-7.77	159	100	peak

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

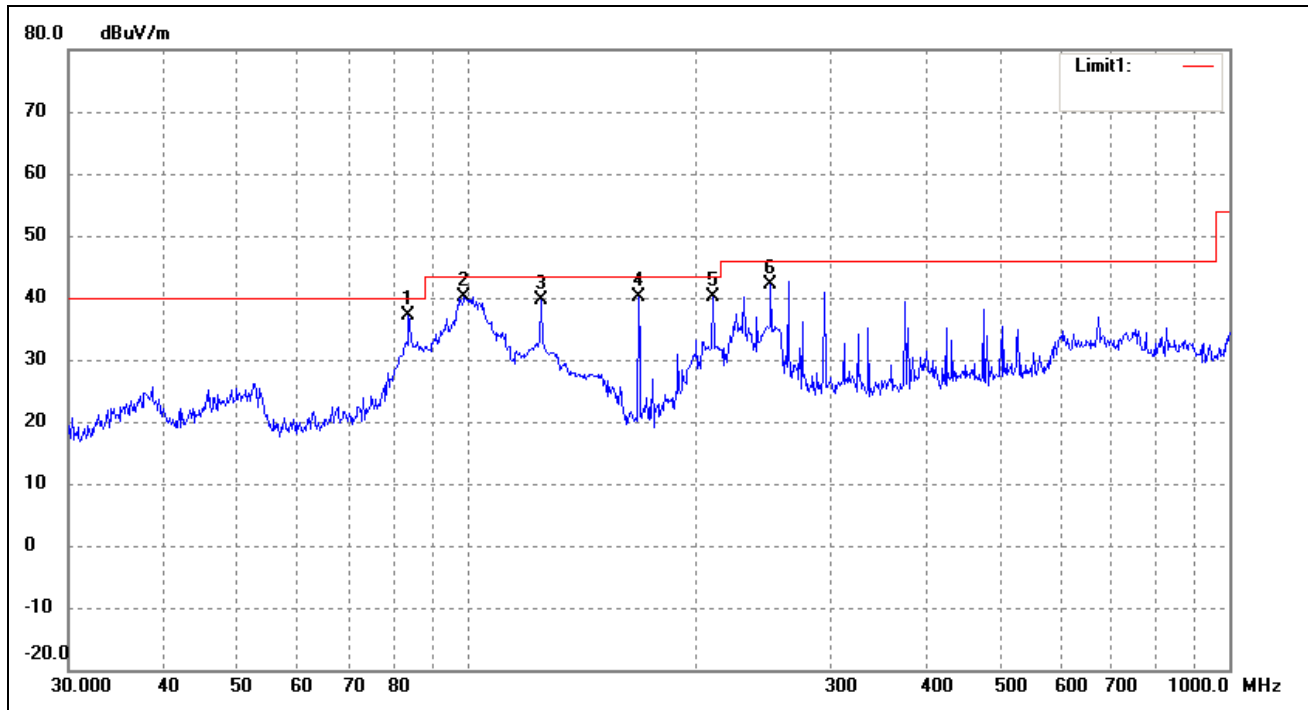
EUT: IP CAMERA  
 Tested Model: N8152HH-E  
 Operating Condition: 802.11g Transmitting Low Channel-2412MHz  
 Comment: AC 120V/60Hz; Adapter DC 12V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	99.5281	27.85	5.06	32.91	43.50	-10.59	174	100	peak
2	125.0066	26.15	4.61	30.76	43.50	-12.74	160	100	peak
3	167.8243	34.14	2.67	36.81	43.50	-6.69	320	100	peak
4	210.0482	34.78	5.90	40.68	43.50	-2.82	156	100	peak
5	250.3012	32.17	9.71	41.88	46.00	-4.12	137	100	peak
6	294.1137	30.21	11.94	42.15	46.00	-3.85	169	100	peak

Test Specification: Vertical

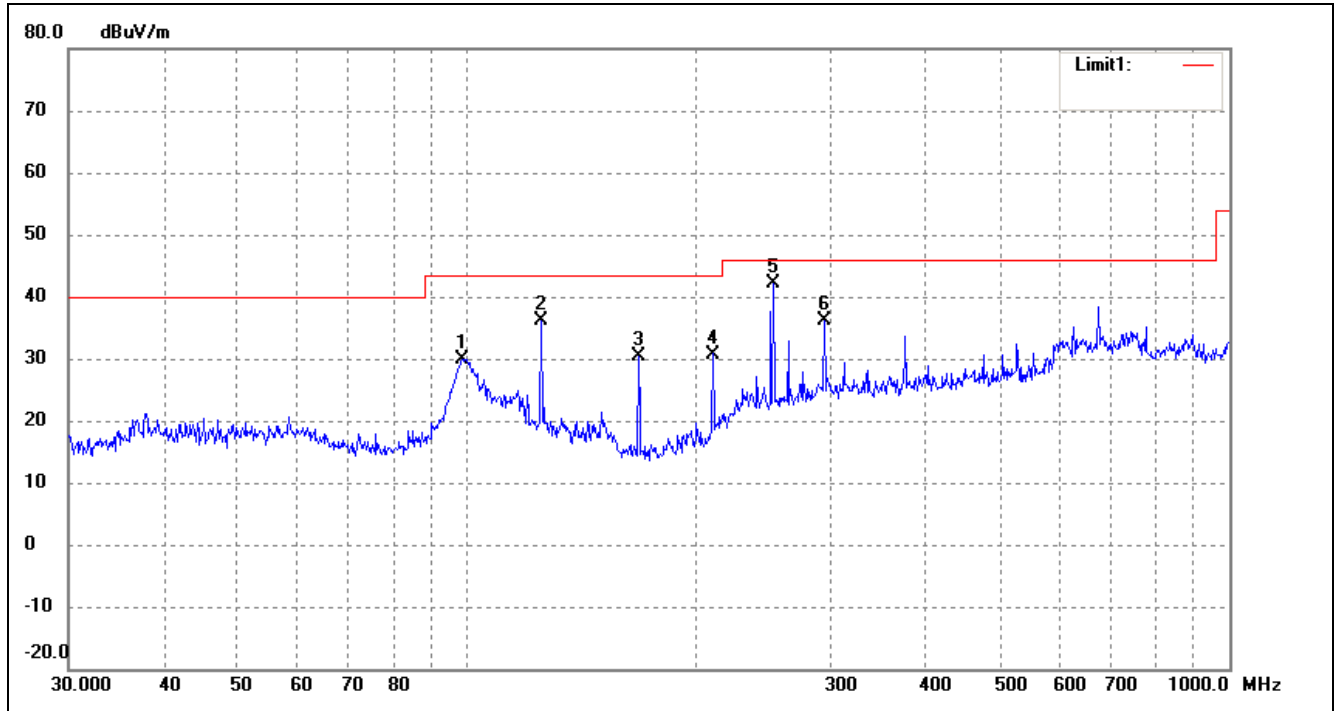


No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	83.8156	34.46	2.62	37.08	40.00	-2.92	177	100	peak
2	99.1797	35.08	5.01	40.09	43.50	-3.41	90	100	peak
3	125.0066	35.13	4.61	39.74	43.50	-3.76	336	100	peak
4	167.8243	37.52	2.67	40.19	43.50	-3.31	157	100	peak
5	210.0482	34.14	5.90	40.04	43.50	-3.46	165	100	peak
6	250.3012	32.47	9.71	42.18	46.00	-3.82	133	100	peak

Operating Condition: 802.11g Transmitting Middle Channel-2437MHz

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

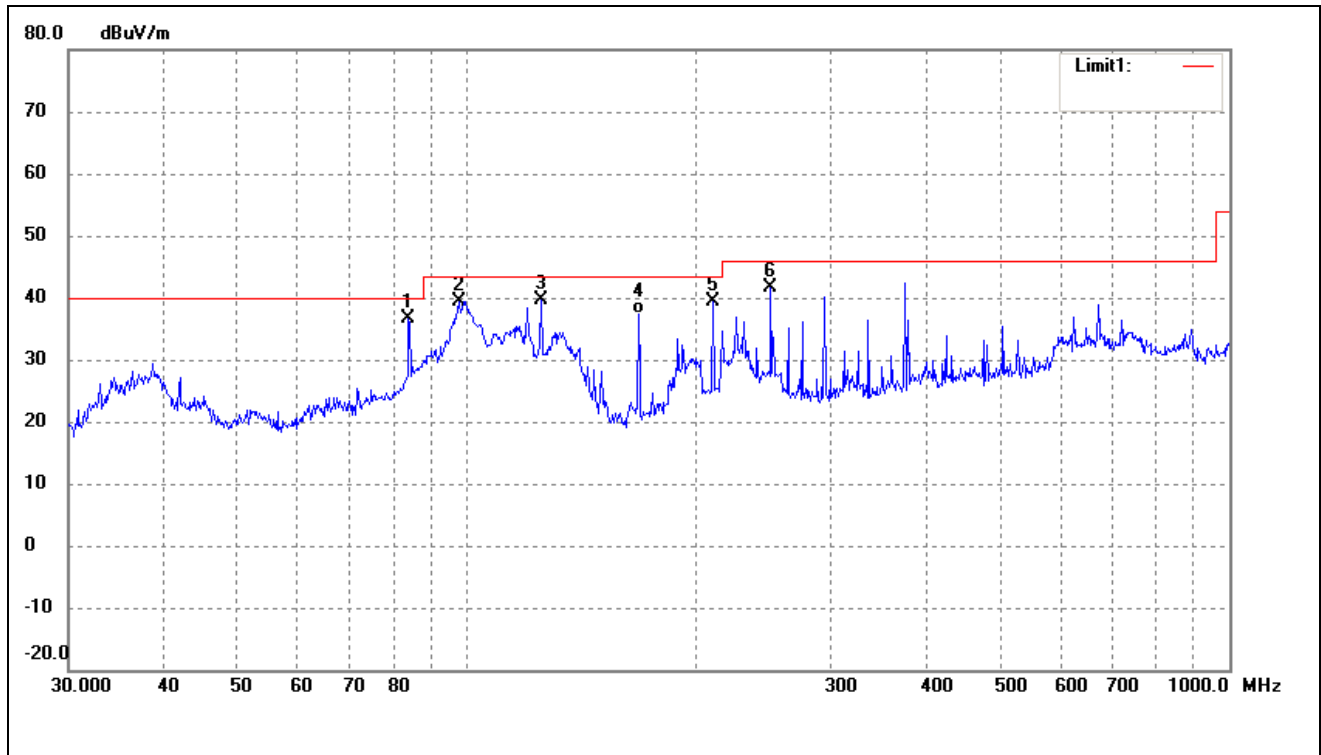
Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	98.4866	25.03	4.90	29.93	43.50	-13.57	270	100	peak
2	125.0066	31.42	4.61	36.03	43.50	-7.47	164	100	peak
3	167.8243	27.67	2.67	30.34	43.50	-13.16	228	200	peak
4	210.0482	24.85	5.90	30.75	43.50	-12.75	159	100	peak
5	252.0627	32.42	9.76	42.18	46.00	-3.82	166	100	peak
6	294.1137	24.30	11.94	36.24	46.00	-9.76	138	100	peak



Test Specification: Vertical

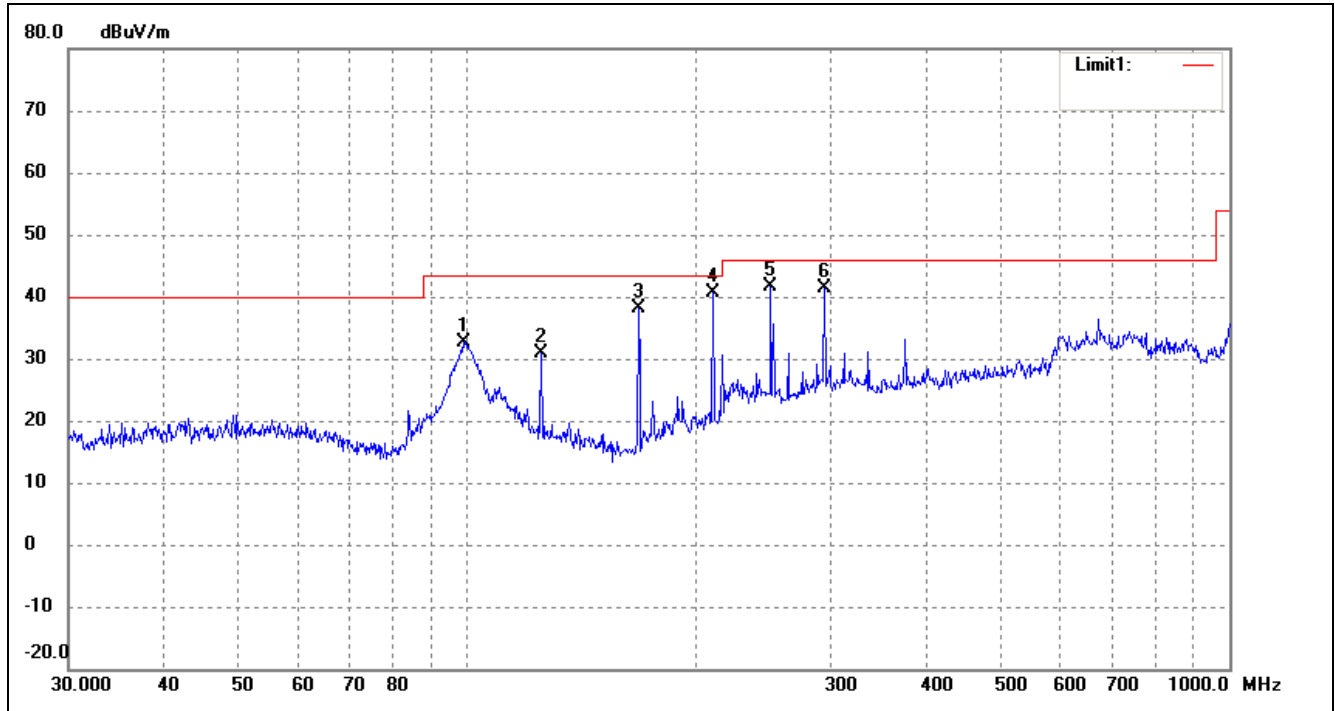


No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	83.8156	34.05	2.62	36.67	40.00	-3.33	360	100	peak
2	97.4560	34.67	4.75	39.42	43.50	-4.08	255	100	peak
3	125.0066	35.09	4.61	39.70	43.50	-3.80	270	100	peak
4	167.8243	34.66	2.67	37.33	43.50	-6.17	158	100	peak
5	210.0482	33.49	5.90	39.39	43.50	-4.11	166	100	peak
6	250.3012	32.02	9.71	41.73	46.00	-4.27	138	100	peak

Operating Condition: 802.11g Transmitting High Channel-2462MHz

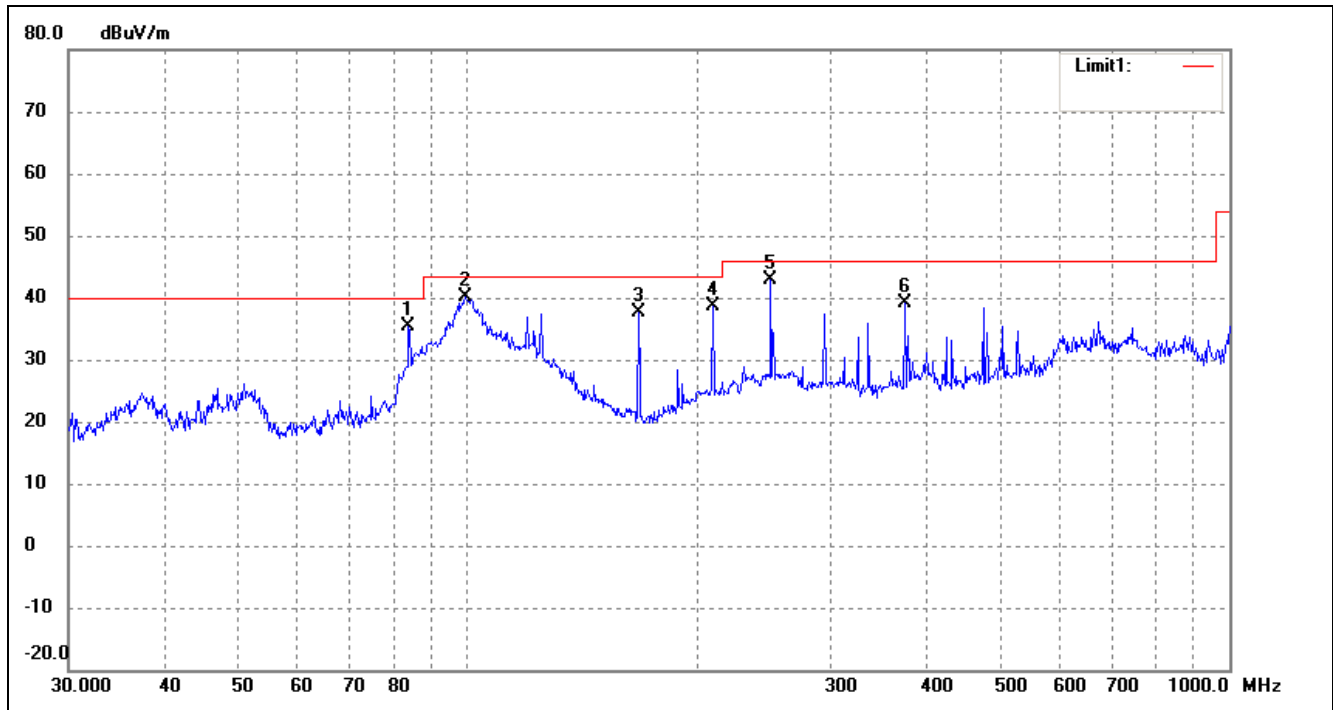
Comment: AC 120V/60Hz; Adapter DC 12V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	98.8326	27.77	4.95	32.72	43.50	-10.78	270	100	peak
2	125.0066	26.29	4.61	30.90	43.50	-12.60	51	200	peak
3	167.8243	35.40	2.67	38.07	43.50	-5.43	360	100	peak
4	210.0482	34.74	5.90	40.64	43.50	-2.86	153	100	peak
5	250.3012	31.97	9.71	41.68	46.00	-4.32	186	100	peak
6	294.1137	29.56	11.94	41.50	46.00	-4.50	192	100	peak

Test Specification: Vertical

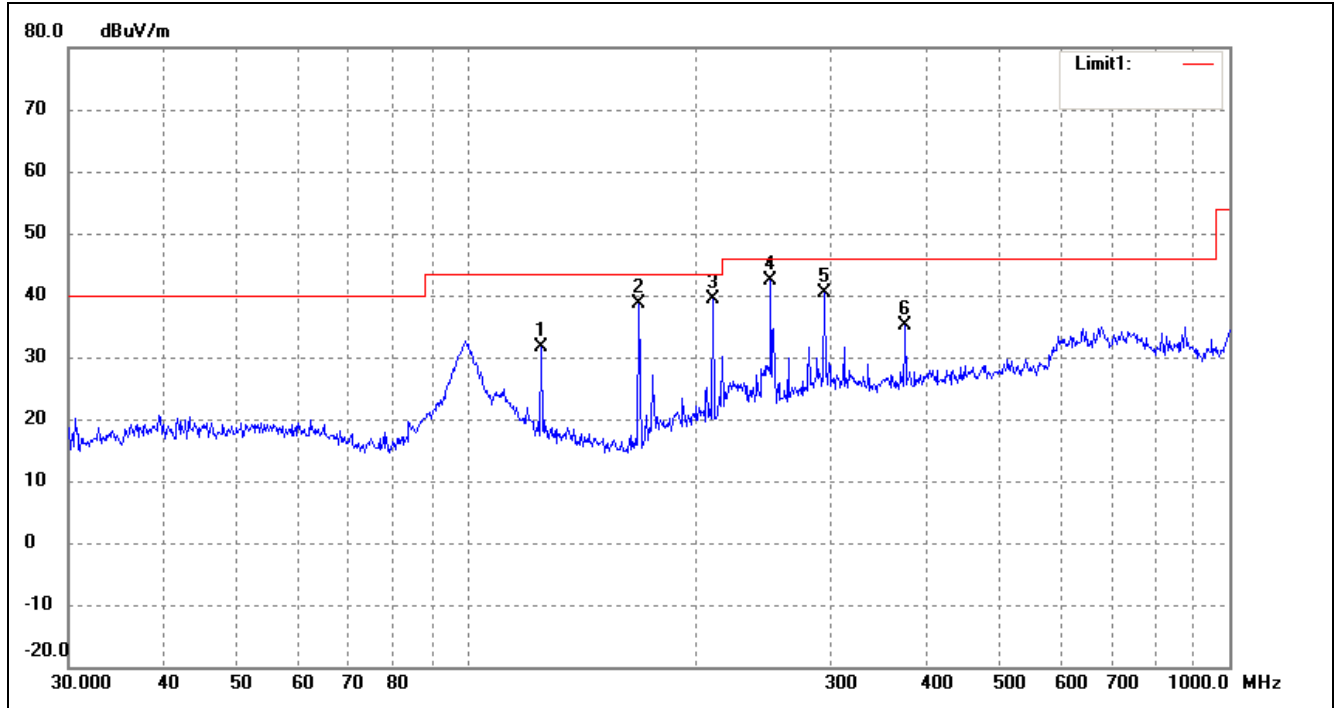


No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	83.8156	32.88	2.62	35.50	40.00	-4.50	360	100	peak
2	99.5281	34.97	5.06	40.03	43.50	-3.47	180	100	peak
3	167.8243	34.89	2.67	37.56	43.50	-5.94	225	100	peak
4	210.0482	32.69	5.90	38.59	43.50	-4.91	157	100	peak
5	250.3012	33.07	9.71	42.78	46.00	-3.22	139	100	peak
6	375.9385	27.04	12.20	39.24	46.00	-6.76	187	100	peak

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

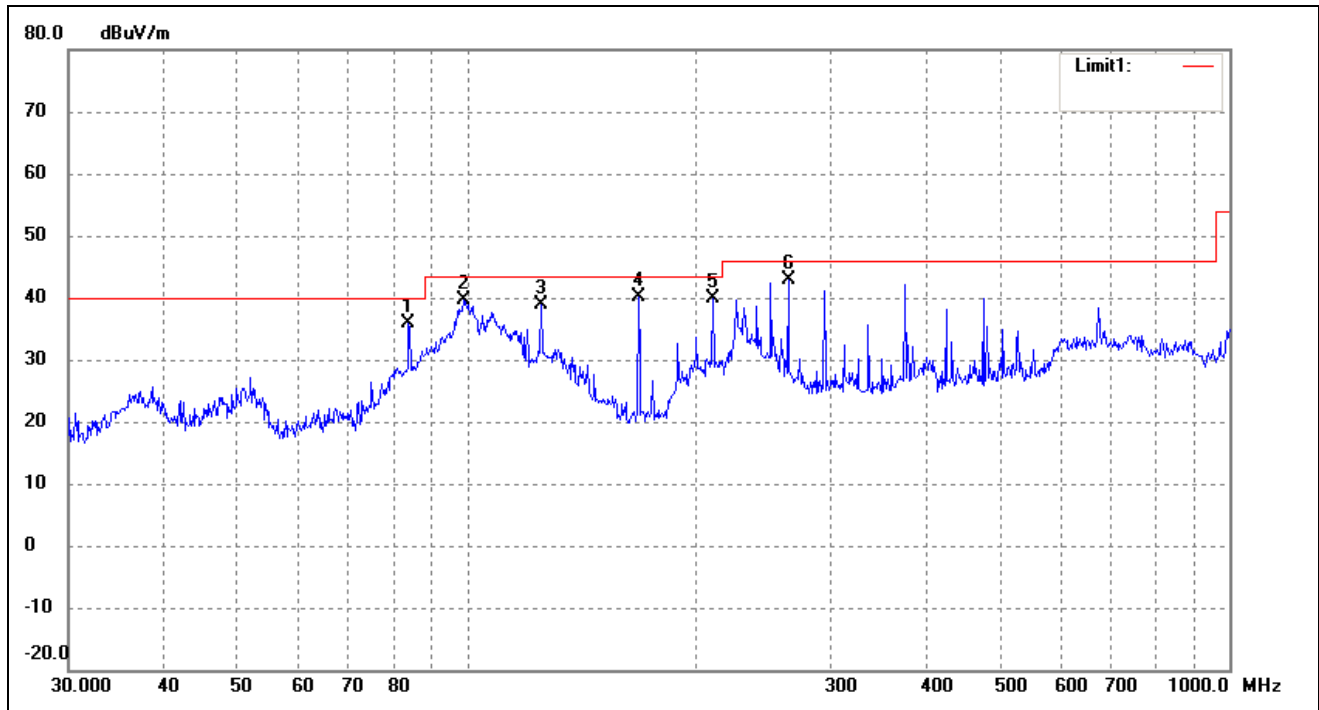
EUT: IP CAMERA  
 Tested Model: N8152HH-E  
 Operating Condition: 802.11n-HT20 Transmitting Low Channel-2412MHz  
 Comment: AC 120V/60Hz; Adapter DC 12V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	125.0066	27.00	4.61	31.61	43.50	-11.89	260	100	peak
2	167.8243	35.90	2.67	38.57	43.50	-4.93	131	100	peak
3	210.0482	33.51	5.90	39.41	43.50	-4.09	285	100	peak
4	250.3012	32.59	9.71	42.30	46.00	-3.70	125	100	peak
5	294.1137	28.54	11.94	40.48	46.00	-5.52	157	100	peak
6	375.9385	23.03	12.20	35.23	46.00	-10.77	166	100	peak

Test Specification: Vertical

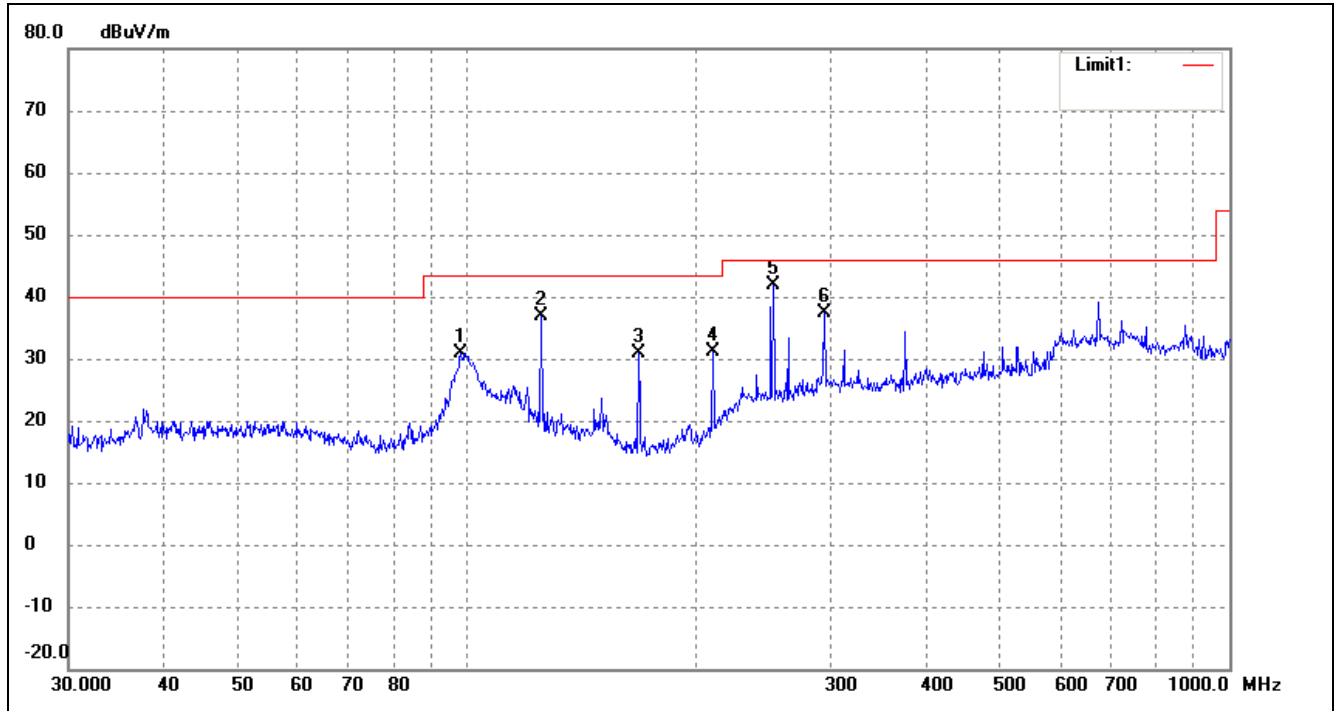


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	83.8156	33.34	2.62	35.96	40.00	-4.04	155	100	peak
2	98.8326	34.58	4.95	39.53	43.50	-3.97	197	100	peak
3	125.0066	34.29	4.61	38.90	43.50	-4.60	310	100	peak
4	167.8243	37.55	2.67	40.22	43.50	-3.28	186	100	peak
5	210.0482	33.90	5.90	39.80	43.50	-3.70	137	100	peak
6	263.8190	32.55	10.29	42.84	46.00	-3.16	159	100	peak

Operating Condition: 802.11n-HT20 Transmitting Middle Channel-2437MHz

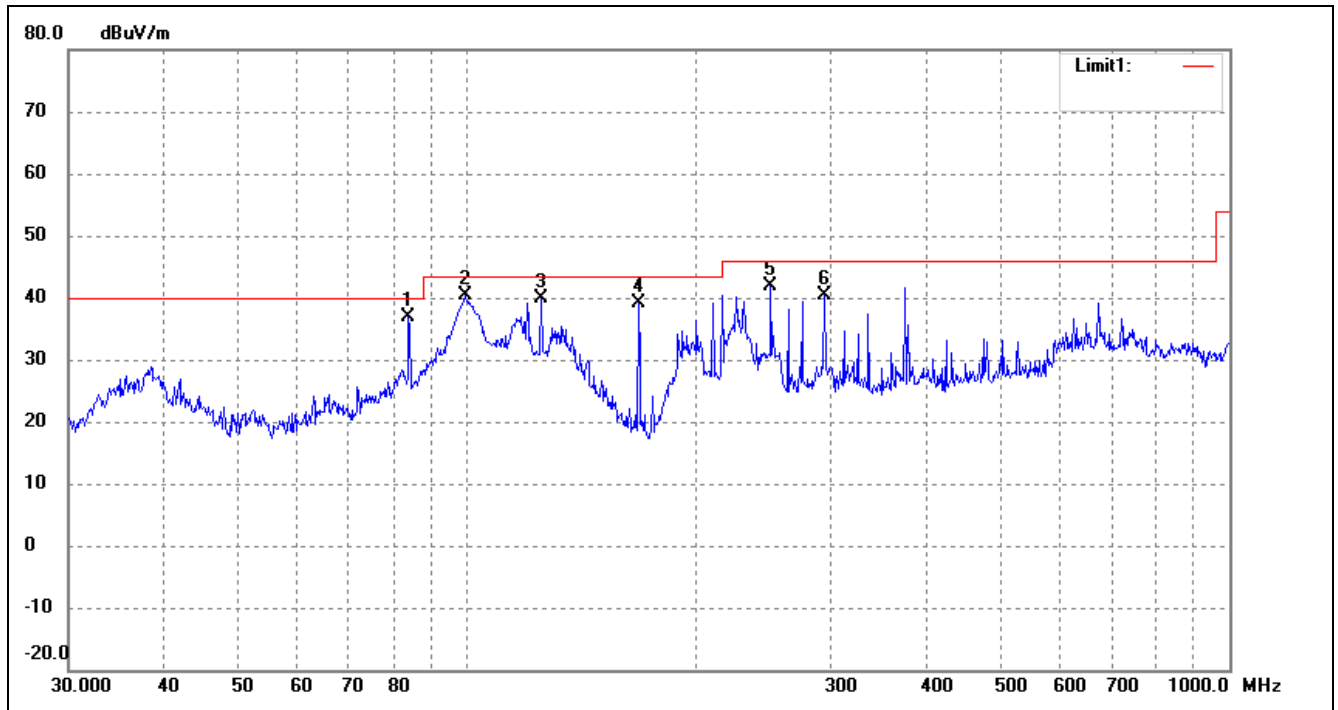
Comment: AC 120V/60Hz; Adapter DC 12V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	98.1419	26.08	4.85	30.93	43.50	-12.57	274	100	peak
2	125.0066	32.22	4.61	36.83	43.50	-6.67	116	100	peak
3	167.8243	28.10	2.67	30.77	43.50	-12.73	82	100	peak
4	210.0482	25.25	5.90	31.15	43.50	-12.35	157	100	peak
5	252.0627	32.20	9.76	41.96	46.00	-4.04	163	100	peak
6	294.1137	25.34	11.94	37.28	46.00	-8.72	258	100	peak

Test Specification: Vertical

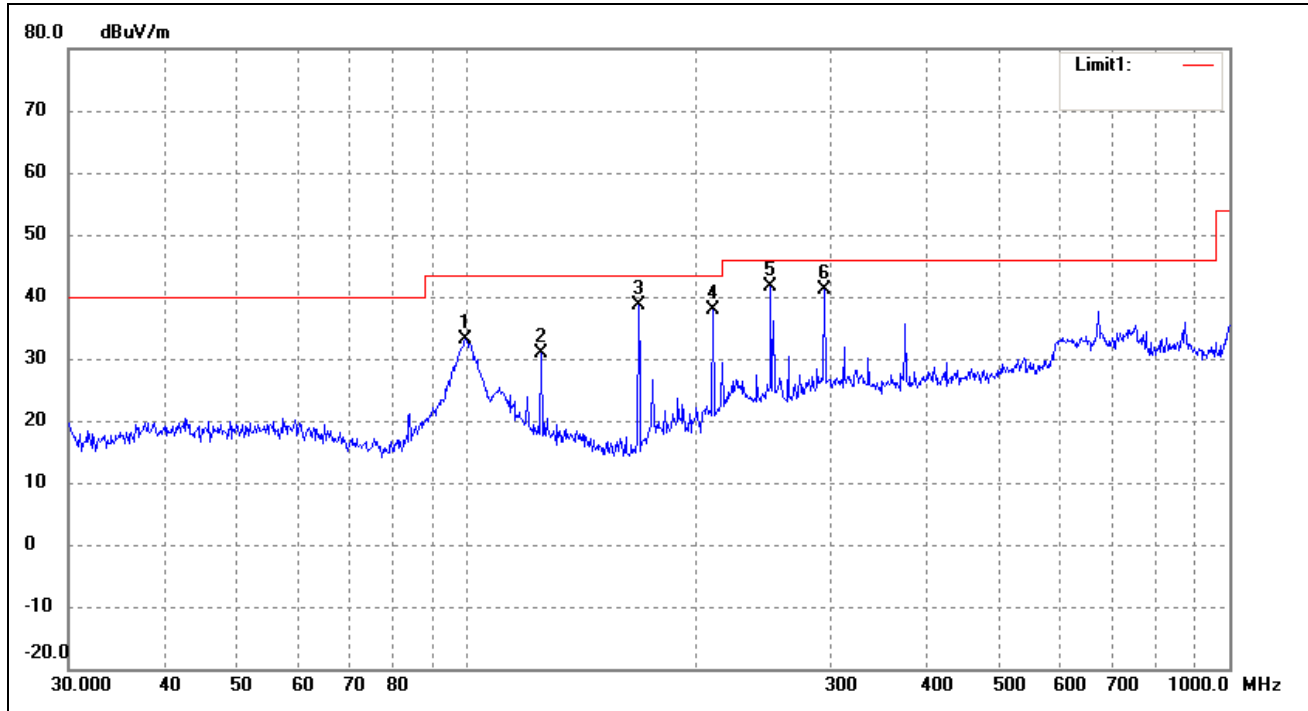


No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	83.8156	34.34	2.62	36.96	40.00	-3.04	264	100	peak
2	99.5281	35.26	5.06	40.32	43.50	-3.18	110	100	peak
3	125.0066	35.30	4.61	39.91	43.50	-3.59	136	100	peak
4	167.8243	36.56	2.67	39.23	43.50	-4.27	167	100	peak
5	250.3012	32.06	9.71	41.77	46.00	-4.23	184	100	peak
6	294.1137	28.40	11.94	40.34	46.00	-5.66	152	100	peak

Operating Condition: 802.11n-HT20 Transmitting High Channel-2462MHz

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

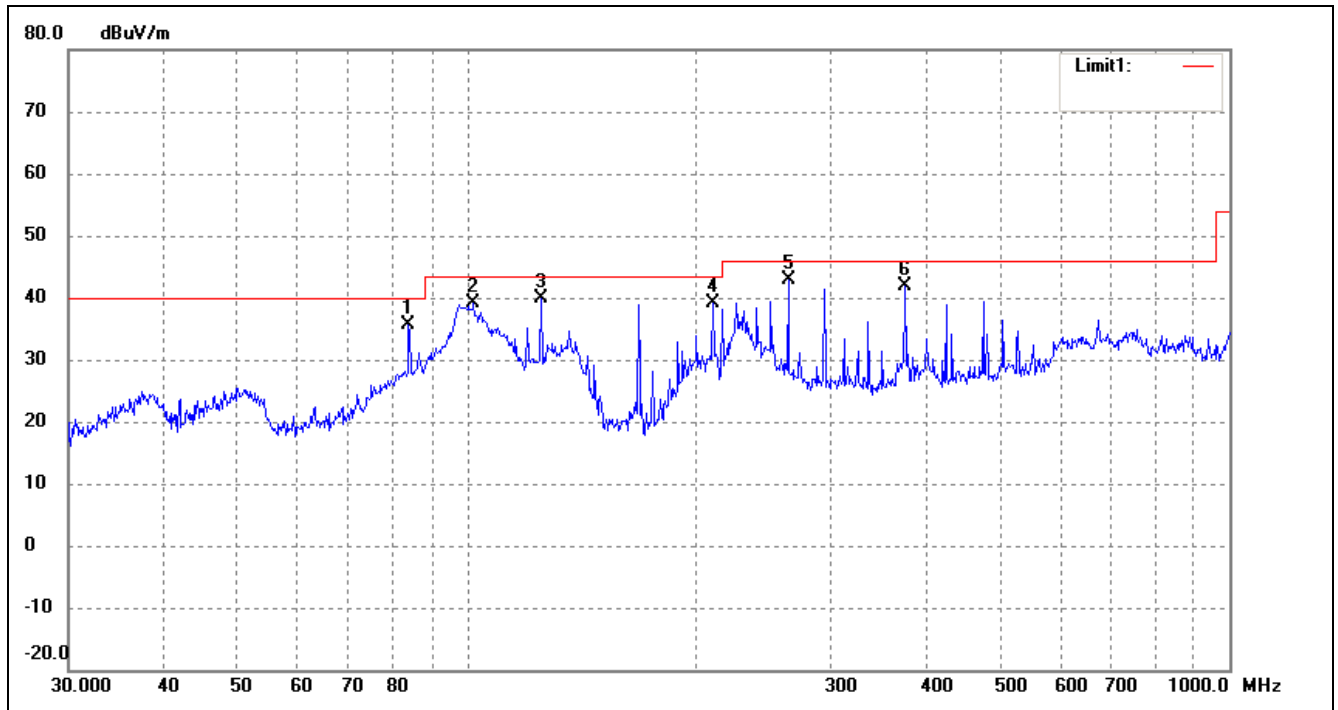
Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	99.5281	28.18	5.06	33.24	43.50	-10.26	360	100	peak
2	125.0066	26.19	4.61	30.80	43.50	-12.70	112	100	peak
3	167.8243	36.07	2.67	38.74	43.50	-4.76	180	100	peak
4	210.0482	31.92	5.90	37.82	43.50	-5.68	162	100	peak
5	250.3012	31.88	9.71	41.59	46.00	-4.41	198	100	peak
6	294.1137	29.29	11.94	41.23	46.00	-4.77	254	200	peak



Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	83.8156	32.91	2.62	35.53	40.00	-4.47	267	100	peak
2	102.0014	33.90	5.11	39.01	43.50	-4.49	116	100	peak
3	125.0066	35.20	4.61	39.81	43.50	-3.69	360	100	peak
4	210.0482	33.13	5.90	39.03	43.50	-4.47	127	100	peak
5	263.8190	32.51	10.29	42.80	46.00	-3.20	139	100	peak
6	375.9385	29.70	12.20	41.90	46.00	-4.10	185	100	peak

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

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	55.32	-3.87	51.45	74	-22.55	H	PK
4824.000	41.52	-3.87	37.65	54	-16.35	H	AV
7236.000	45.57	1.14	46.71	74	-27.29	H	PK
7236.000	34.82	1.19	36.01	54	-17.99	H	AV
4824.000	54.63	-3.86	50.77	74	-23.23	V	PK
4824.000	45.82	-3.86	41.96	54	-12.04	V	AV
7236.000	46.91	1.1	48.01	74	-25.99	V	PK
7236.000	38.69	1.1	39.79	54	-14.21	V	AV
Middle Channel-2437MHz							
4874.000	53.73	-3.74	49.99	74	-24.01	H	PK
4874.000	43.67	-3.74	39.93	54	-14.07	H	AV
7311.000	43.59	1.47	45.06	74	-28.94	H	PK
7311.000	30.57	1.47	32.04	54	-21.96	H	AV
4874.000	56.19	-3.74	52.45	74	-21.55	V	PK
4874.000	43.82	-3.74	40.08	54	-13.92	V	AV
7311.000	56.37	1.47	57.84	74	-16.16	V	PK
7311.000	32.59	1.47	34.06	54	-19.94	V	AV
High Channel-2462MHz							
4924.000	54.12	-3.59	50.53	74	-23.47	H	PK
4924.000	41.84	-3.59	38.25	54	-15.75	H	AV
7386.000	48.63	1.79	50.42	74	-23.58	H	PK
7386.000	33.57	1.79	35.36	54	-18.64	H	AV
4924.000	58.69	-3.59	55.1	74	-18.9	V	PK
4924.000	42.55	-3.59	38.96	54	-15.04	V	AV
7386.000	50.82	1.79	52.61	74	-21.39	V	PK
7386.000	34.69	1.79	36.48	54	-17.52	V	AV

Test Mode: 802.11g

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	54.16	-3.87	50.29	74	-23.71	H	PK
4824.000	42.48	-3.87	38.61	54	-15.39	H	AV
7236.000	48.74	1.14	49.88	74	-24.12	H	PK
7236.000	33.1	1.19	34.29	54	-19.71	H	AV
4824.000	54.92	-3.86	51.06	74	-22.94	V	PK
4824.000	42.62	-3.86	38.76	54	-15.24	V	AV
7236.000	48.49	1.1	49.59	74	-24.41	V	PK
7236.000	35.2	1.1	36.3	54	-17.7	V	AV
Middle Channel-2437MHz							
4874.000	56.91	-3.74	53.17	74	-20.83	H	PK
4874.000	46.37	-3.74	42.63	54	-11.37	H	AV
7311.000	42.98	1.47	44.45	74	-29.55	H	PK
7311.000	36.59	1.47	38.06	54	-15.94	H	AV
4874.000	51.62	-3.74	47.88	74	-26.12	V	PK
4874.000	41.93	-3.74	38.19	54	-15.81	V	AV
7311.000	44.92	1.47	46.39	74	-27.61	V	PK
7311.000	38.59	1.47	40.06	54	-13.94	V	AV
High Channel-2462MHz							
4924.000	55.5	-3.59	51.91	74	-22.09	H	PK
4924.000	42.23	-3.59	38.64	54	-15.36	H	AV
7386.000	48.42	1.79	50.21	74	-23.79	H	PK
7386.000	34.4	1.79	36.19	54	-17.81	H	AV
4924.000	55.99	-3.59	52.4	74	-21.6	V	PK
4924.000	42.65	-3.59	39.06	54	-14.94	V	AV
7386.000	49.22	1.79	51.01	74	-22.99	V	PK
7386.000	35.54	1.79	37.33	54	-16.67	V	AV

Test Mode: 802.11n-HT20

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	55.6	-3.87	51.73	74	-22.27	H	PK
4824.000	40.54	-3.87	36.67	54	-17.33	H	AV
7236.000	47.26	1.14	48.4	74	-25.6	H	PK
7236.000	34.44	1.19	35.63	54	-18.37	H	AV
4824.000	56.71	-3.86	52.85	74	-21.15	V	PK
4824.000	43.18	-3.86	39.32	54	-14.68	V	AV
7236.000	49.21	1.1	50.31	74	-23.69	V	PK
7236.000	35.77	1.1	36.87	54	-17.13	V	AV
Middle Channel-2437MHz							
4874.000	51.85	-3.74	48.11	74	-25.89	H	PK
4874.000	42.61	-3.74	38.87	54	-15.13	H	AV
7311.000	44.82	1.47	46.29	74	-27.71	H	PK
7311.000	31.97	1.47	33.44	54	-20.56	H	AV
4874.000	56.14	-3.74	52.4	74	-21.6	V	PK
4874.000	43.52	-3.74	39.78	54	-14.22	V	AV
7311.000	55.79	1.47	57.26	74	-16.74	V	PK
7311.000	31.59	1.47	33.06	54	-20.94	V	AV
High Channel-2462MHz							
4924.000	56.91	-3.59	53.32	74	-20.68	H	PK
4924.000	46.37	-3.59	42.78	54	-11.22	H	AV
7386.000	42.98	1.79	44.77	74	-29.23	H	PK
7386.000	36.59	1.79	38.38	54	-15.62	H	AV
4924.000	51.62	-3.59	48.03	74	-25.97	V	PK
4924.000	41.93	-3.59	38.34	54	-15.66	V	AV
7386.000	44.92	1.79	46.71	74	-27.29	V	PK
7386.000	38.59	1.79	40.38	54	-13.62	V	AV

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

## 9. Out of Band Emissions

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### 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  $\geq$  300 kHz.
5. Detector = peak.
6. Trace Mode = max hold.
7. Sweep = auto couple.
8. Allow the trace to stabilize (this may take some time, depending on the extent of the span).
9. Use peak marker function to determine maximum amplitude of all unwanted emissions within any 100 kHz bandwidth.

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

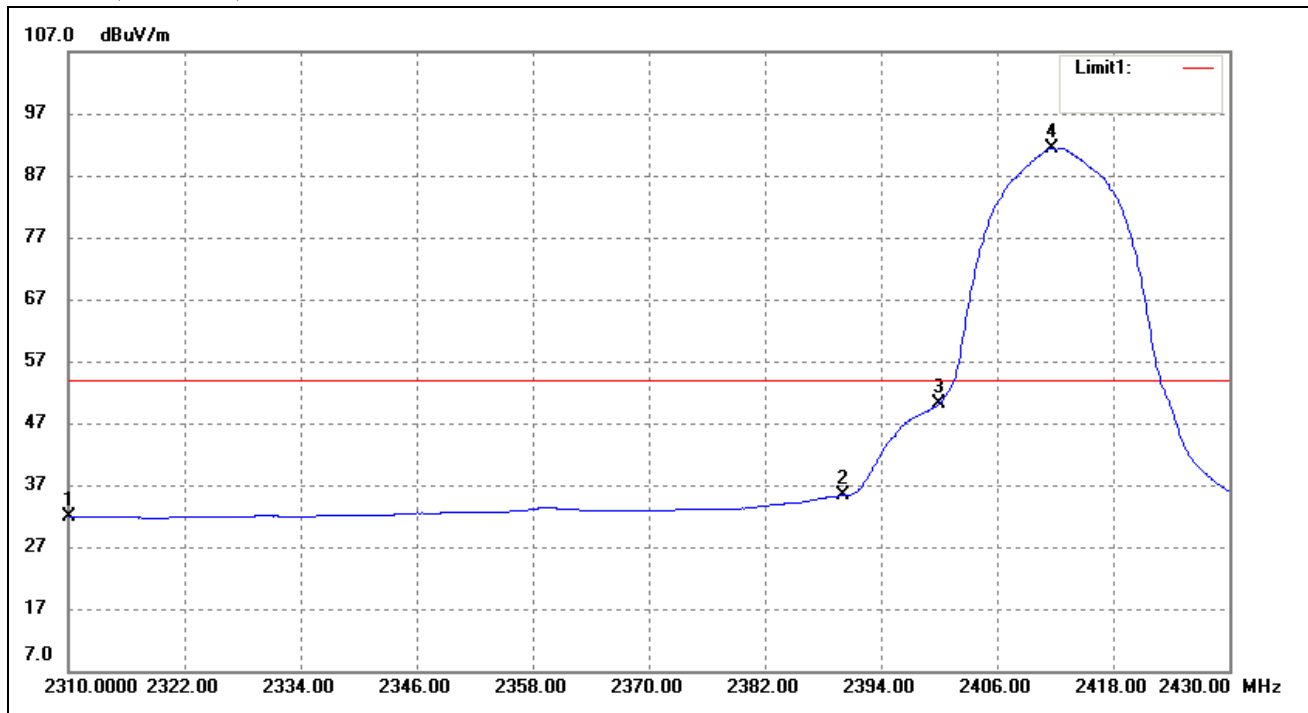
### 9.3 Environmental Conditions

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

### 9.4 Summary of Test Results/Plots

802.11b-Lowest Bandedge

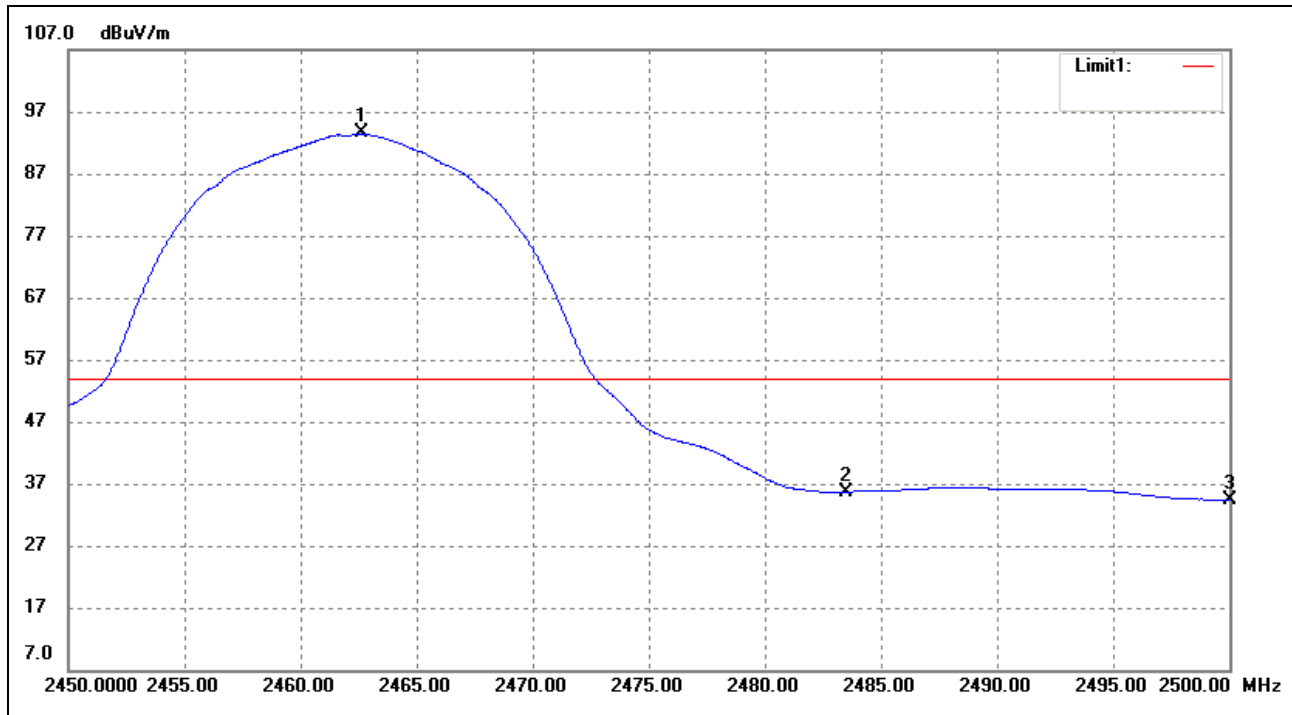
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	35.66	-3.80	31.86	54.00	-22.14	Average Detector
	2310.000	46.35	-3.80	42.55	74.00	-31.45	Peak Detector
2	2390.000	38.32	-3.00	35.32	54.00	-18.68	Average Detector
	2390.000	51.07	-3.00	48.07	74.00	-25.93	Peak Detector
3	2400.000	52.95	-2.90	50.05	54.00	-3.95	Average Detector
	2400.000	63.57	-2.90	60.67	74.00	-13.33	Peak Detector

## 802.11b-Highest Bandedge

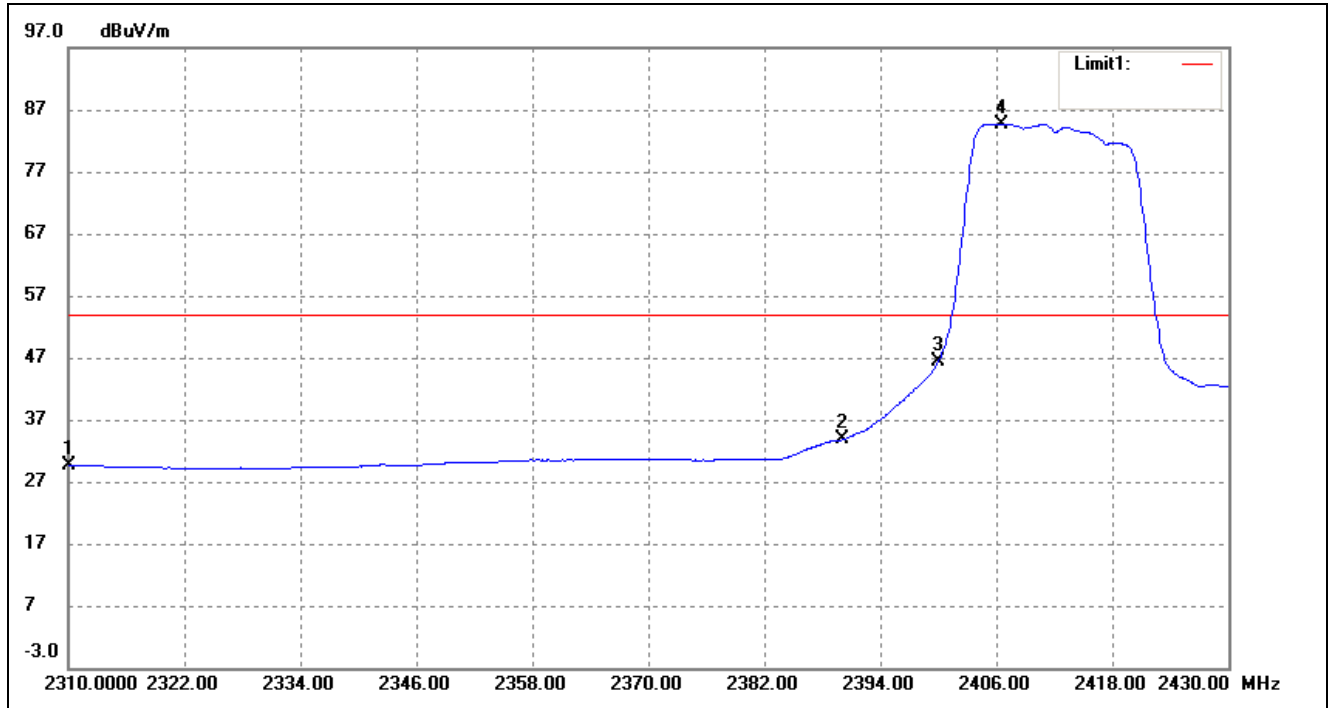
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2462.650	96.09	-2.58	93.51	/	/	Average Detector
	2462.700	107.46	-2.58	104.88	/	/	Peak Detector
2	2483.500	Delta = 59.15dBc		34.36	54.00	-19.64	Average Detector
	2483.500			45.73	74.00	-28.27	Peak Detector
3	2500.000	36.72	-2.40	34.32	54.00	-19.68	Average Detector
	2500.000	48.94	-2.40	46.54	74.00	-27.46	Peak Detector

802.11g-Lowest Bandedge

Vertical (Worst case)

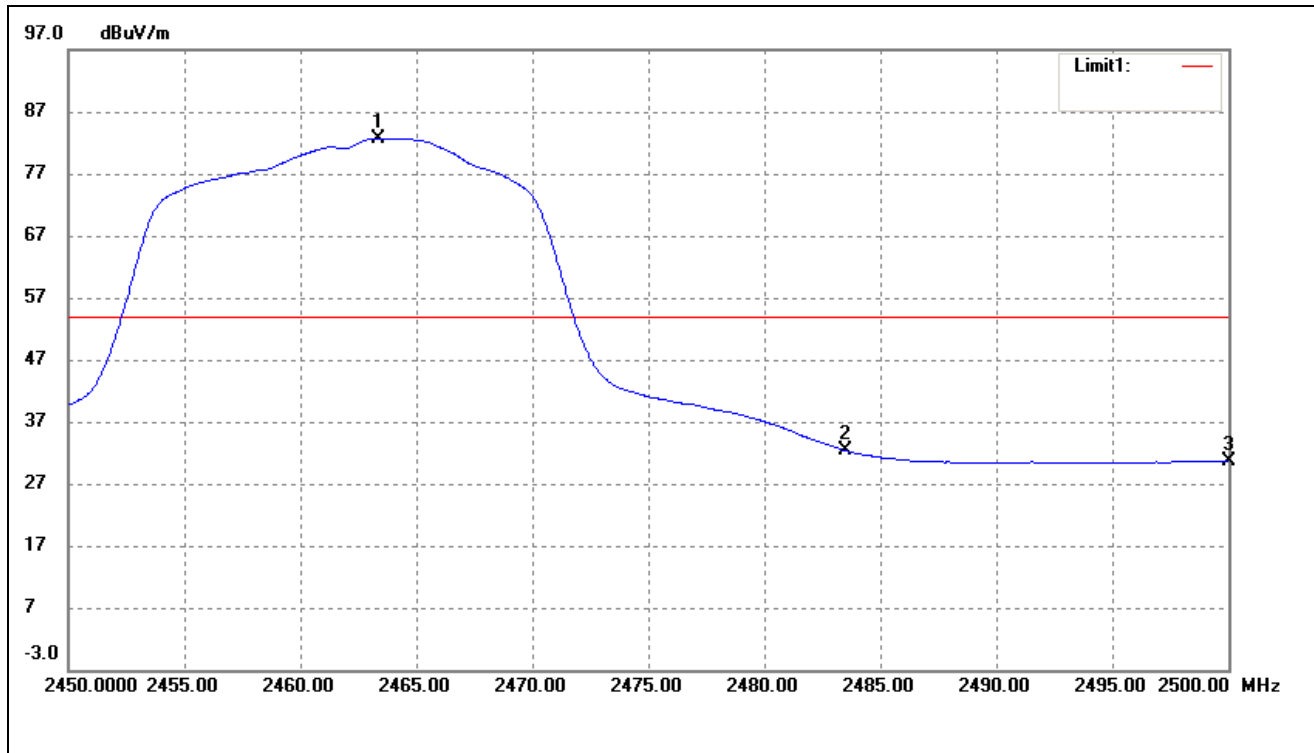


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	34.06	-4.42	29.64	54.00	-24.36	Average Detector
	2310.000	46.01	-4.42	41.59	74.00	-32.41	Peak Detector
2	2390.000	37.50	-3.72	33.78	54.00	-20.22	Average Detector
	2390.000	53.12	-3.72	49.40	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

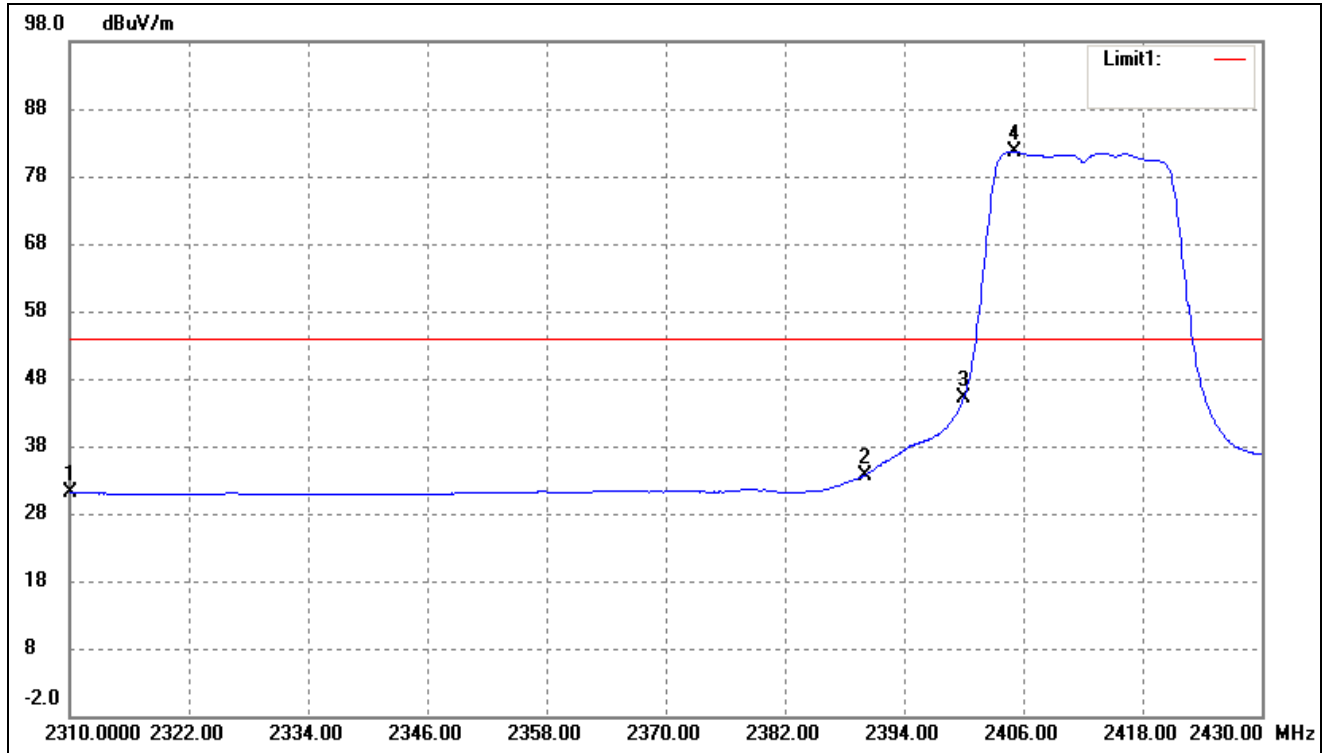
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
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

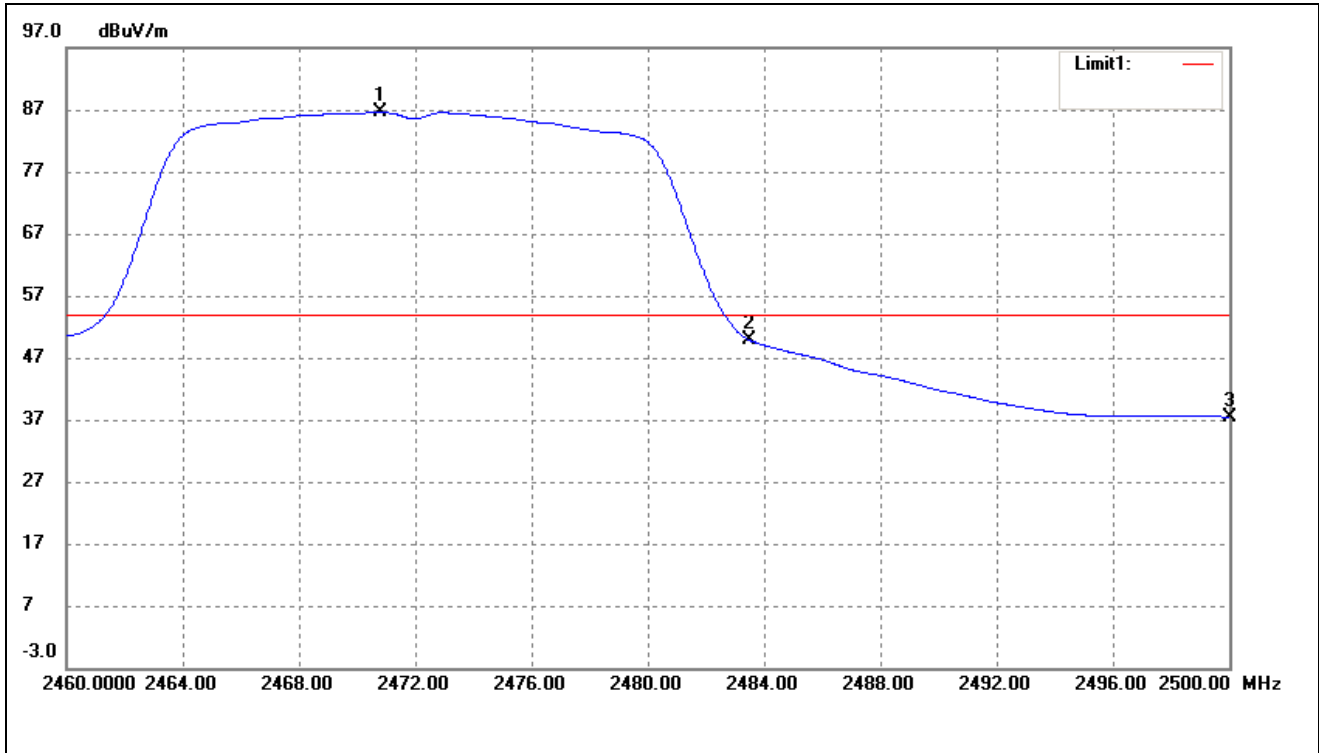
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	34.90	-3.82	31.08	54.00	-22.92	Average Detector
	2310.000	46.01	-3.82	42.19	74.00	-31.81	Peak Detector
2	2390.000	37.27	-3.59	33.68	54.00	-20.32	Average Detector
	2390.000	52.68	-3.59	49.09	74.00	-24.91	Peak Detector
3	2400.000	48.69	-3.56	45.13	Delta = 36.54dBc		Average Detector
4	2405.160	85.21	-3.54	81.67			Average Detector

## 802.11n-HT20-Highest Bandedge

Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2470.800	68.94	17.64	86.58	/	/	Average Detector
	2471.360	88.42	17.65	106.07	/	/	Peak Detector
2	2483.500	Delta = 36.81dBc		49.77	54.00	-4.23	Average Detector
	2483.500			69.26	74.00	-4.74	Peak Detector
3	2500.000	19.61	17.86	37.47	54.00	-16.53	Average Detector
	2500.000	37.65	17.86	55.51	74.00	-18.49	Peak Detector

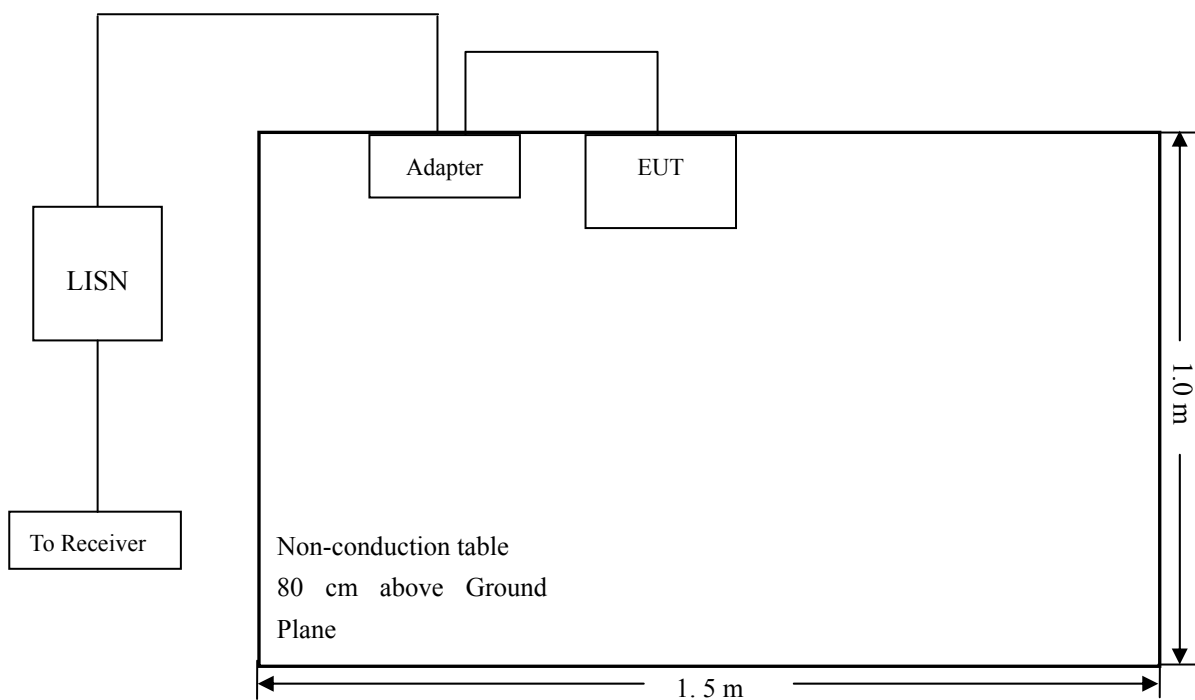
## 10. Conducted Emissions

### 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:

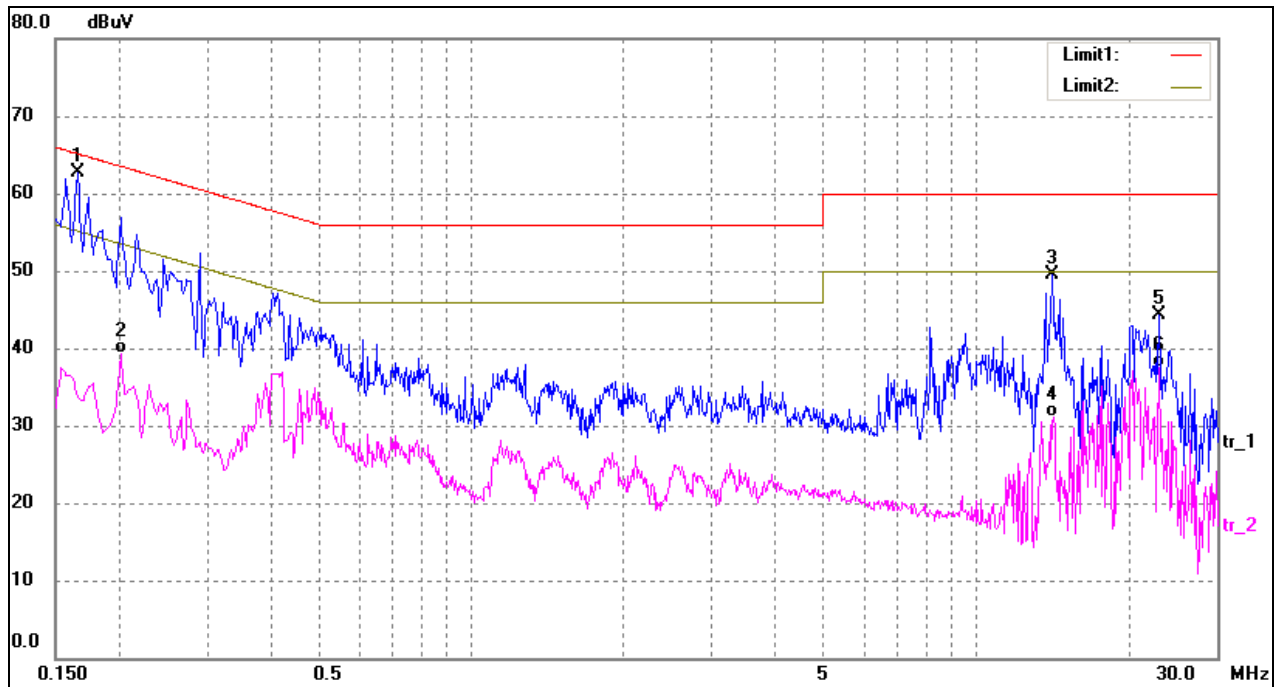
**-2.54 dB at 0.1660 MHz in the Line mode, Peak detector, 0.15-30MHz**

## 10.6 Conducted Emissions Test Data

### Plot of Conducted Emissions Test Data

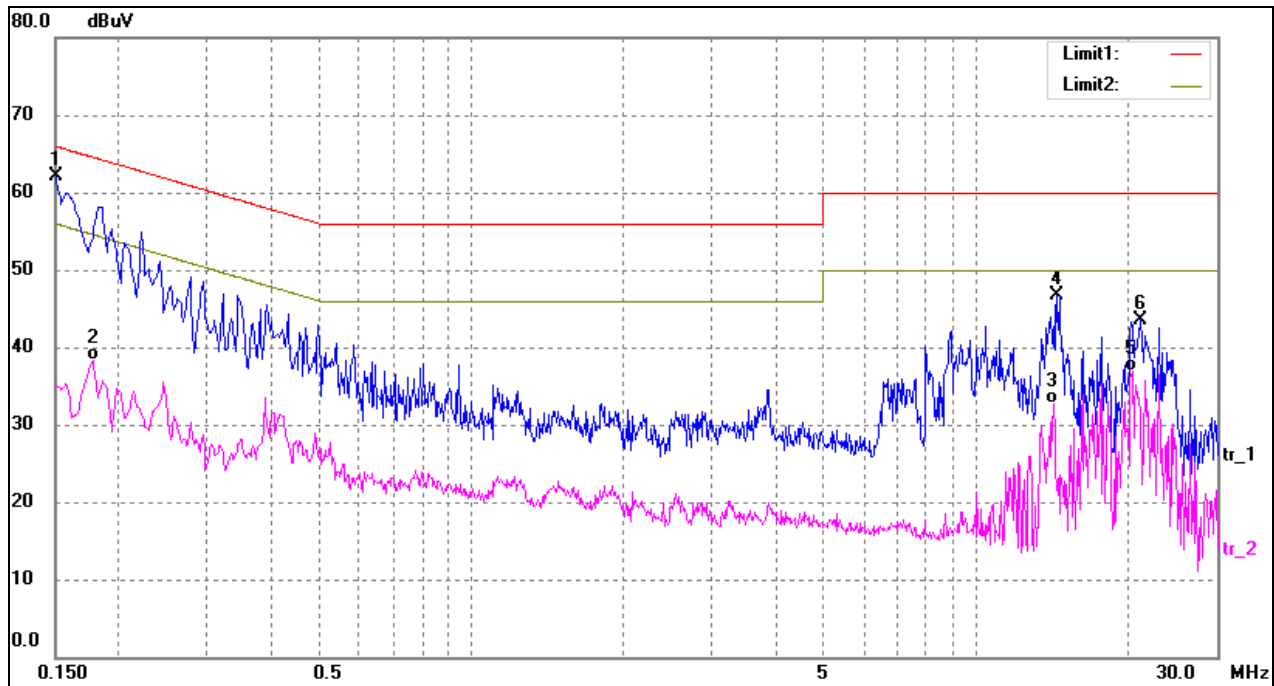
EUT: IP CAMERA  
 Tested Model: N8152HH-E  
 Operating Condition: Transmitting(Wi-Fi)  
 Comment: AC 120V/60Hz; Adapter DC 12V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1660	53.12	9.50	62.62	65.16	-2.54	peak
2	0.2020	29.89	9.50	39.39	53.53	-14.14	AVG
3	14.1540	39.01	10.41	49.42	60.00	-10.58	peak
4	14.2740	20.78	10.41	31.19	50.00	-18.81	AVG
5	23.1300	33.79	10.50	44.29	60.00	-15.71	peak
6	23.1300	27.01	10.50	37.51	50.00	-12.49	AVG

Test Specification: Live



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1500	52.57	9.50	62.07	66.00	-3.93	peak
2	0.1780	28.89	9.50	38.39	54.58	-16.19	AVG
3	14.2140	22.26	10.41	32.67	50.00	-17.33	AVG
4	14.4580	36.32	10.41	46.73	60.00	-13.27	peak
5	20.3820	26.45	10.47	36.92	50.00	-13.08	AVG
6	21.1740	33.12	10.48	43.60	60.00	-16.40	peak

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