

# FCC Part 15C Measurement and Test Report

For

**KOBIAN CANADA INC.**

**560 Denison Street, Unit#5, Markham, Ontario, Canada**

**FCC ID: YH5HS-7DTB14**

**FCC Rules:** FCC Part 15C

**Product Description:** MID

**Tested Model:** HS-7DTB14

**Report No.:** STR13038186I-1

**Tested Date:** 2013-03-28 to 2013-04-23

**Issued Date:** 2013-04-24

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

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## 1. GENERAL INFORMATION

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

#### Client Information

Applicant: KOBIAN CANADA INC.  
Address of applicant: 560 Denison Street, Unit#5, Markham, Ontario, Canada

Manufacturer: SHENZHEN GAOXINQI TECHNOLOGY CO., LTD  
Address of manufacturer: GaoXinQi industrial park, liuxian 1<sup>st</sup> road, district 67, baoan, Shenzhen.P.R China

General Description of EUT	
Product Name:	MID
Trade Name:	hipstreet
Model No.:	HS-7DTB14
Adding Model(s):	/
Rated Voltage:	DC3.7V Lithium Battery
Power Adapter:	Model: XHY050200LCZ
	Input: 100-240V, Output:DC 5V
<i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Support Standards:	802.11b, 802.11g, 802.11n(HT20)
Frequency Range:	2412-2462MHz
RF Output Power:	7.90 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:	Integral Antenna
Antenna Gain:	2 dBi
Lowest Internal Frequency of EUT:	32.768kHz

## 1.2 Test Standards

The following report is prepared on behalf of the KOBIAN CANADA INC. in accordance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 of the Federal Communication Commissions rules.

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

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

## 1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. The public notice KDB 558074 for digital transmission systems shall be performed also.

## 1.4 Test Facility

- **FCC – Registration No.: 994117**

SEM.Test Compliance Services 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 994117.

- **Industry Canada (IC) Registration No.: 7673A**

The 3m Semi-anechoic chamber of SEM.Test Compliance Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 7673A.

- **CNAS Registration No.: L4062**

Shenzhen SEM.Test Electronics Service 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 3/F, Jinbao Commerce Building, Xin'an Fanshen 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:

<b>Test Mode List</b>		
Test Mode	Description	Remark
TM1	802.11b	2412MHz, 2437MHz, 2462MHz
TM2	802.11g	2412MHz, 2437MHz, 2462MHz
TM3	802.11n-HT20	2412MHz, 2437MHz, 2462MHz

<b>Special Cable List and Details</b>			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
USB Cable 1	1.0	Shielded	Without Ferrite
UsB Cable 2	0.1	Unshielded	Without Ferrite
DC Cable	1.2	Unshielded	Without Ferrite

<b>Auxiliary Equipment List and Details</b>			
Description	Manufacturer	Model	Serial Number
Notebook	SAMSUNG	R20	N/A

## 2. SUMMARY OF TEST RESULTS

<b>FCC Rules</b>	<b>Description of Test Item</b>	<b>Result</b>
§ 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)(d)	Radiated Emission	Compliant
§ 15.247(d)	Band Edge (Out of Band Emissions)	Compliant

N/A: not applicable

### **3. Antenna Requirement**

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#### **3.1 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.

#### **3.2 Evaluation Information**

This product has a permanent antenna, fulfill the requirement of this section.

## 4. Power Spectral Density

### 4.1 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.

### 4.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2013-03-28	2014-03-27
Attenuator	ATTEN	ATS100-4-20	/	2013-03-28	2014-03-27

**Statement of Traceability:** All calibrations have been performed per the NVLAP requirements traceable to the NIST.

### 4.3 Test Procedure

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

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

### 4.4 Environmental Conditions

Temperature:	20° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

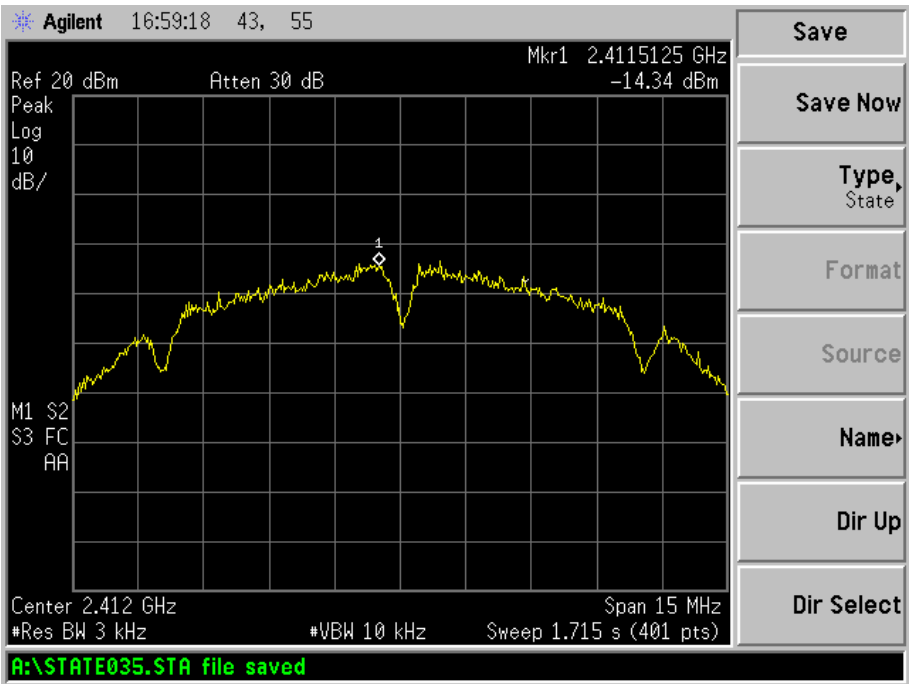


#### 4.5 Summary of Test Results/Plots

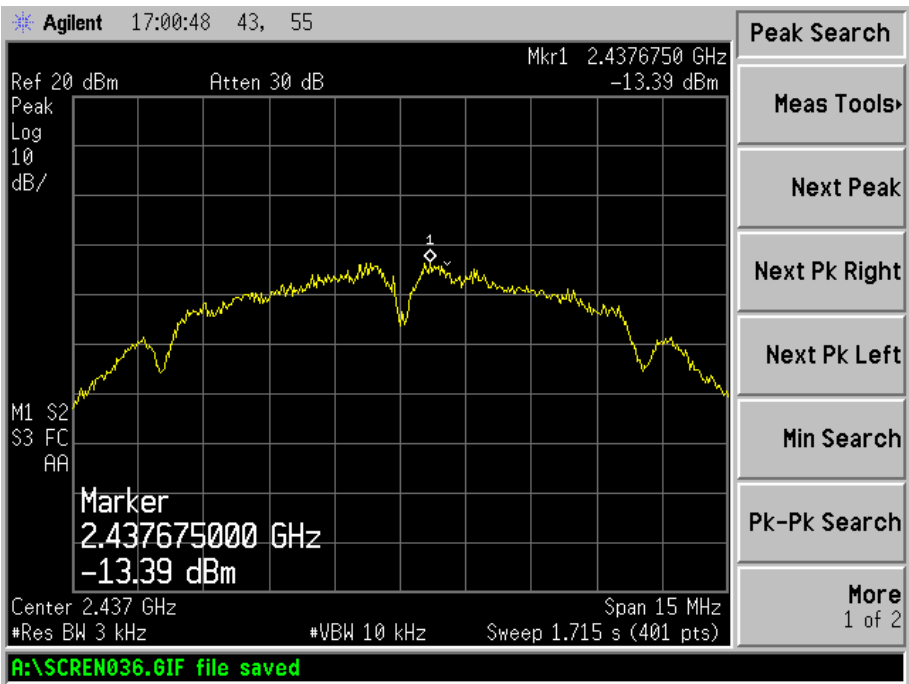
Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
802.11b	2412	-14.34	8
	2437	-13.39	8
	2462	-14.18	8
802.11g	2412	-17.00	8
	2437	-16.55	8
	2462	-15.75	8
802.11n HT20	2412	-16.30	8
	2437	-16.61	8
	2462	-16.10	8

Please refer to the following test plots:

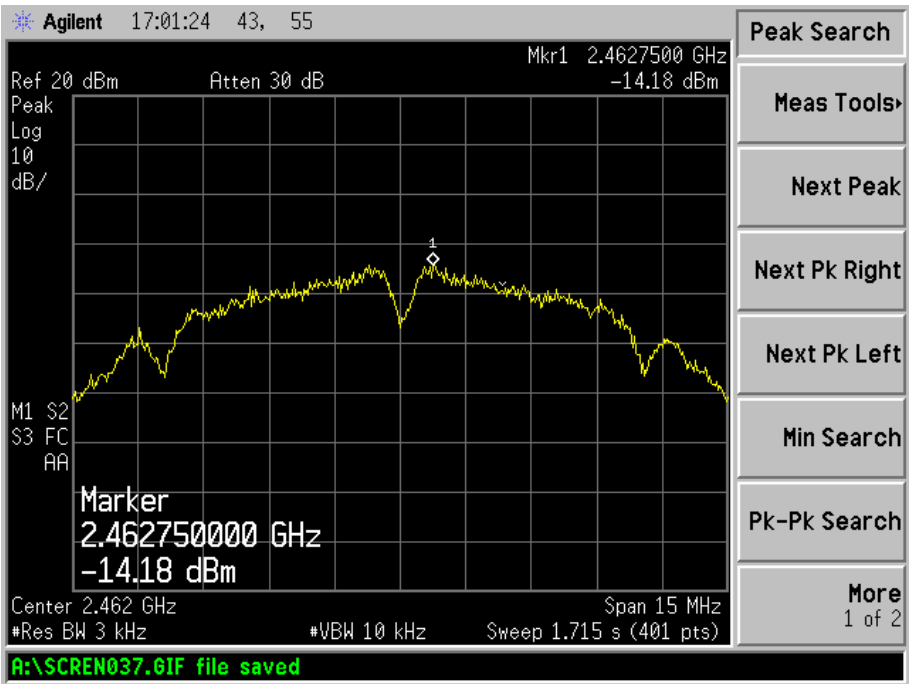
802.11b-Low Channel



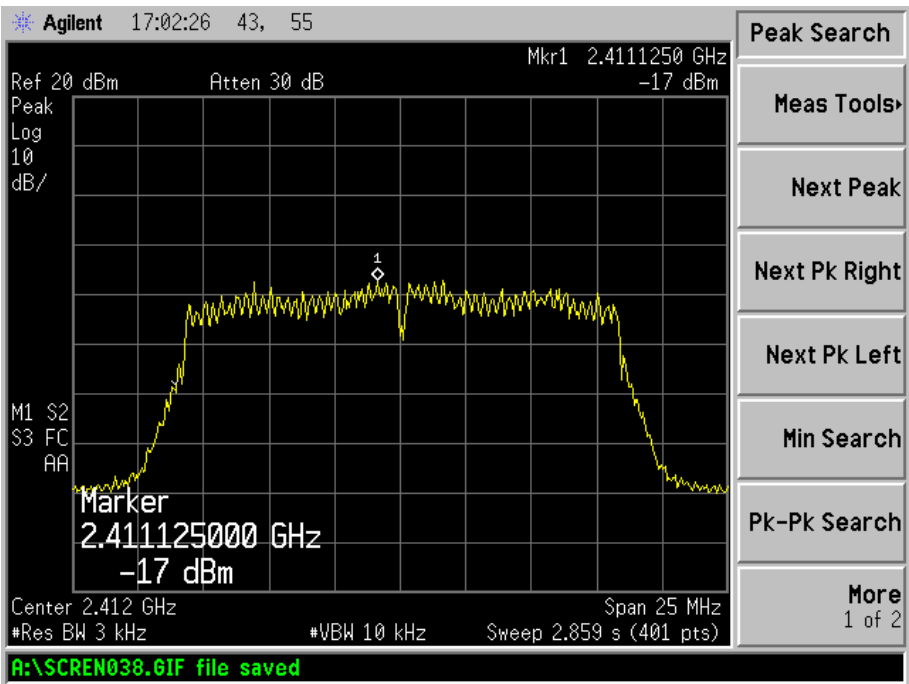
802.11b-Middle Channel



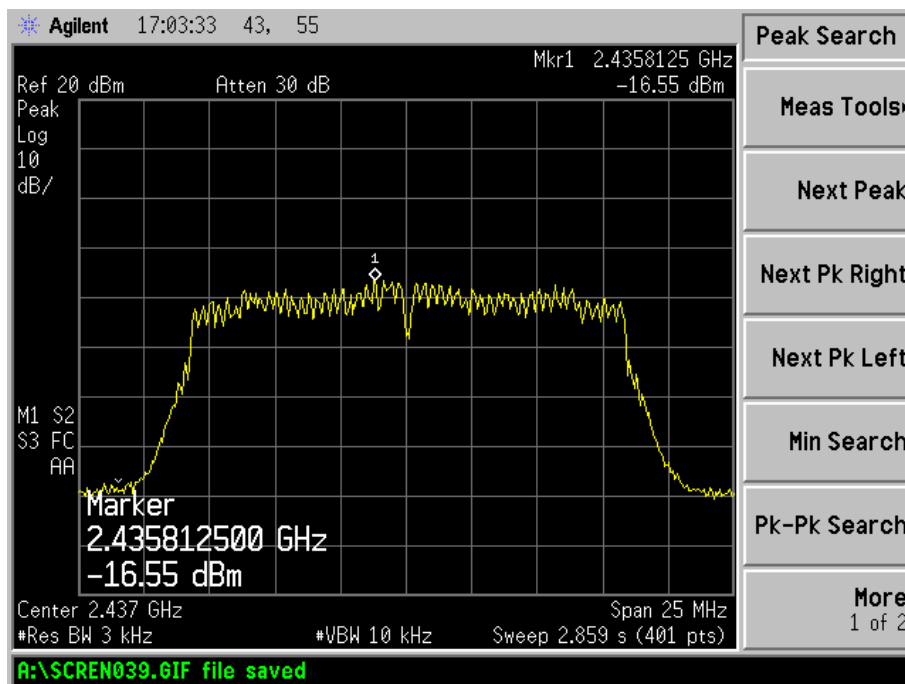
802.11b-High Channel



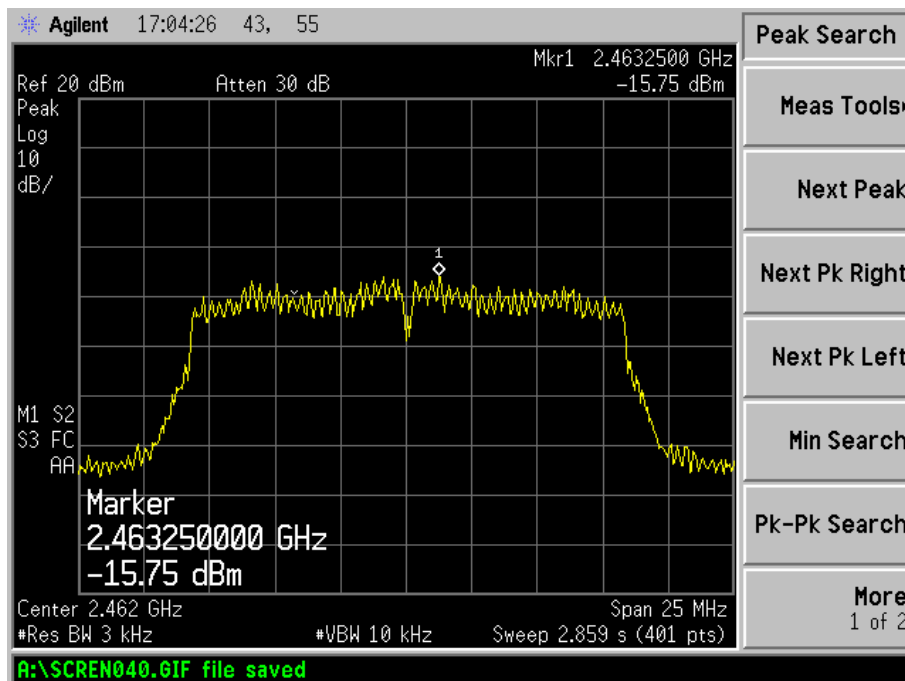
802.11g-Low Channel



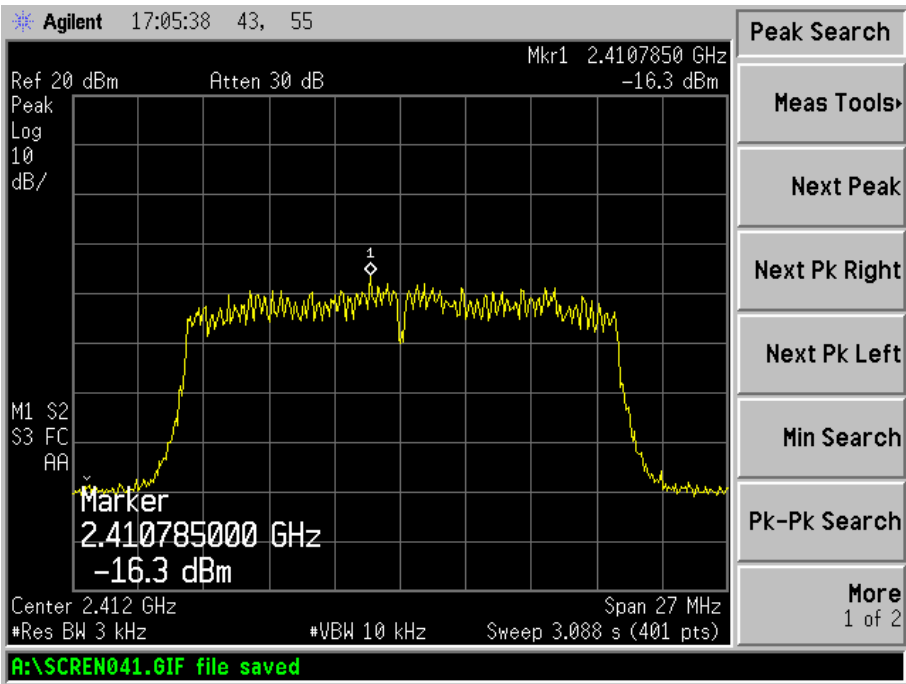
## 802.11g-Middle Channel



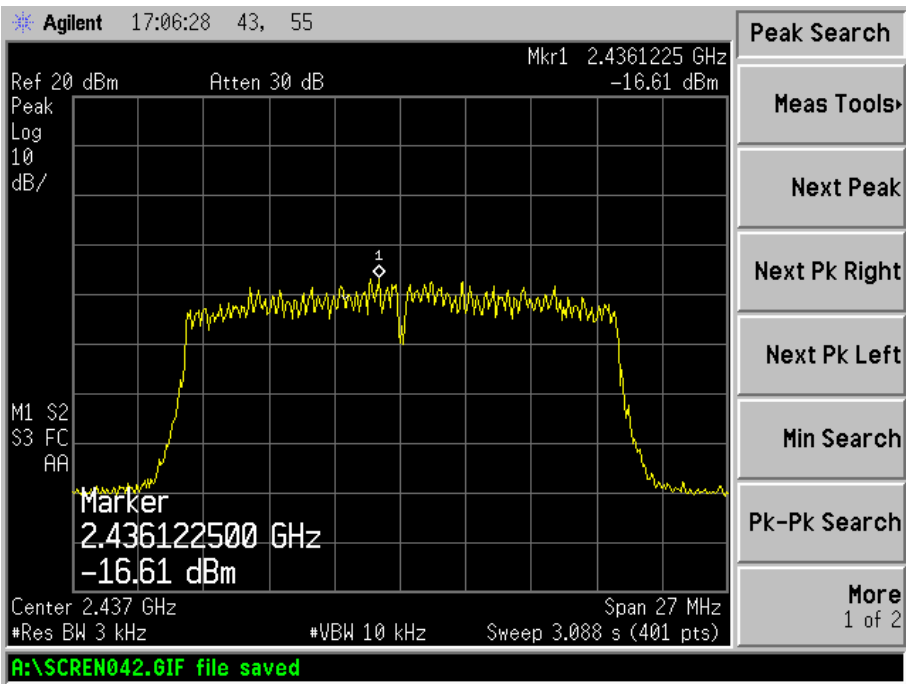
## 802.11g-High Channel



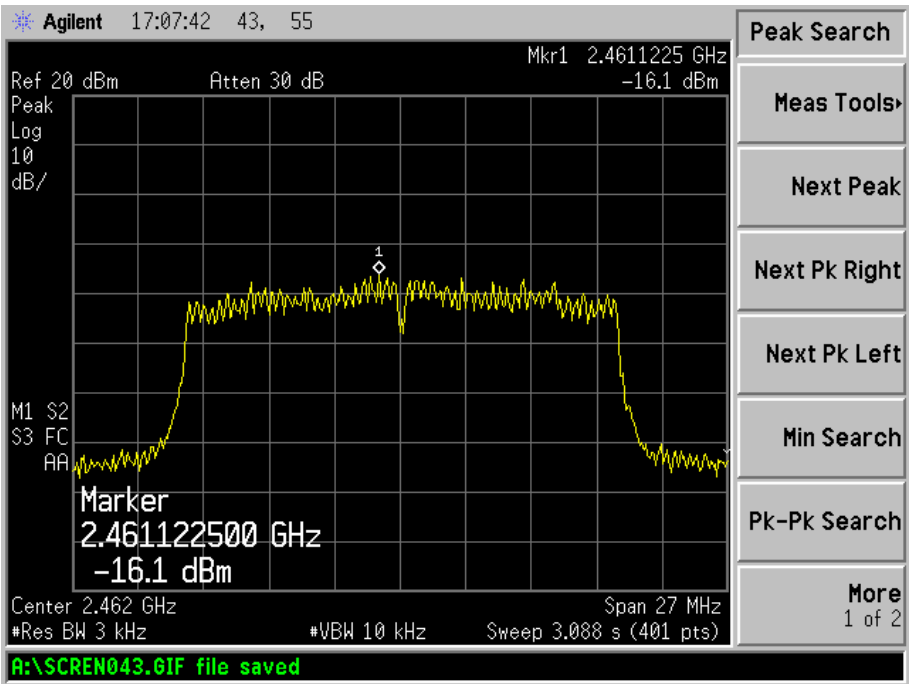
802.11n-HT20-Low Channel



802.11n-HT20-Middle Channel



802.11n-HT20-High Channel



## 5. 6dB Bandwidth

### 5.1 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.

### 5.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2013-03-28	2014-03-27
Attenuator	ATTEN	ATS100-4-20	/	2013-03-28	2014-03-27

**Statement of Traceability:** All calibrations have been performed per the NVLAP requirements traceable to the NIST.

### 5.3 Test Procedure

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

### 5.4 Environmental Conditions

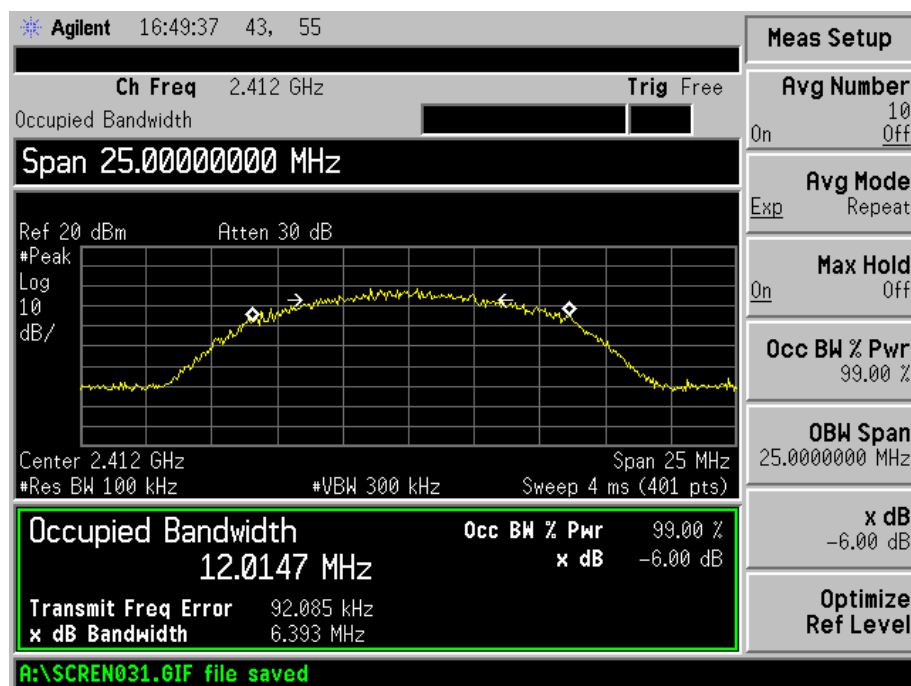
Temperature:	24° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

### 5.5 Summary of Test Results/Plots

Test Mode	Test Channel MHz	6 dB Bandwidth kHz	Limit kHz
802.11b	2412	6393	500
	2437	7548	500
	2462	7732	500
802.11g	2412	15771	500
	2437	15705	500
	2462	15522	500
802.11n-HT20	2412	17124	500
	2437	16946	500
	2462	17191	500

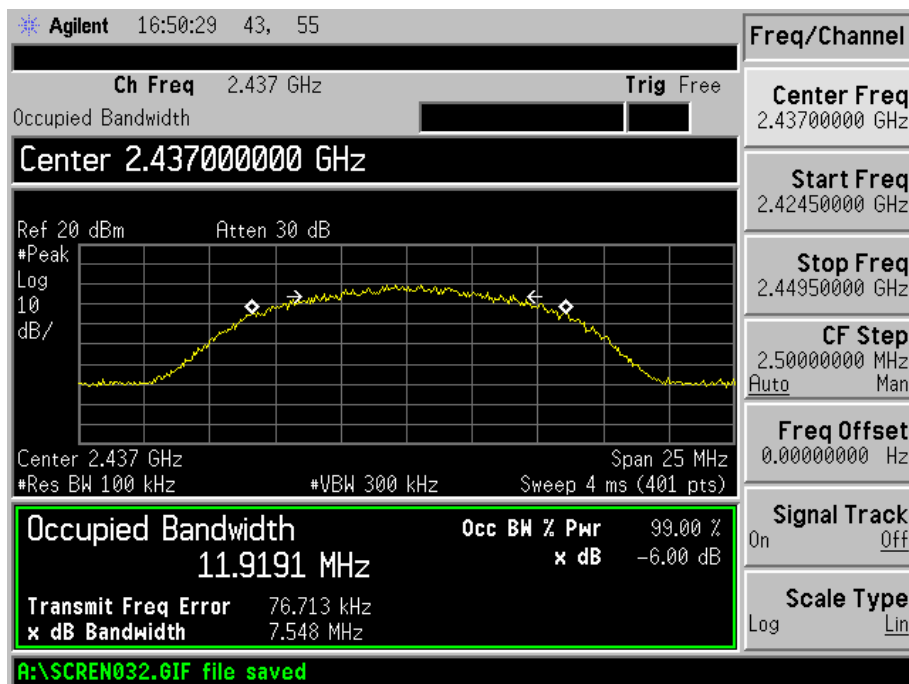
Please refer to the following test plots:

#### 802.11b-Low Channel

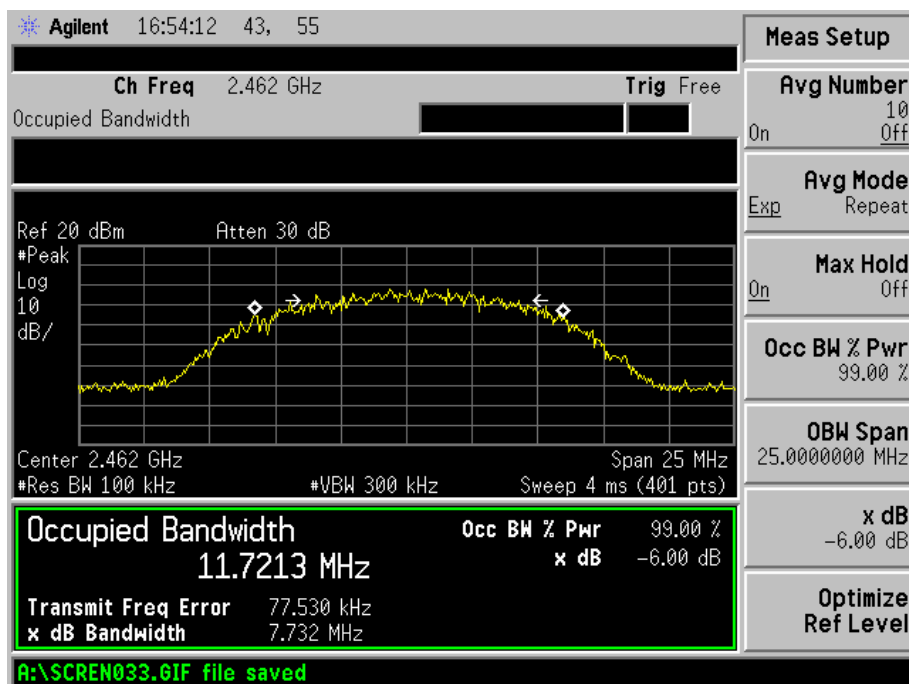




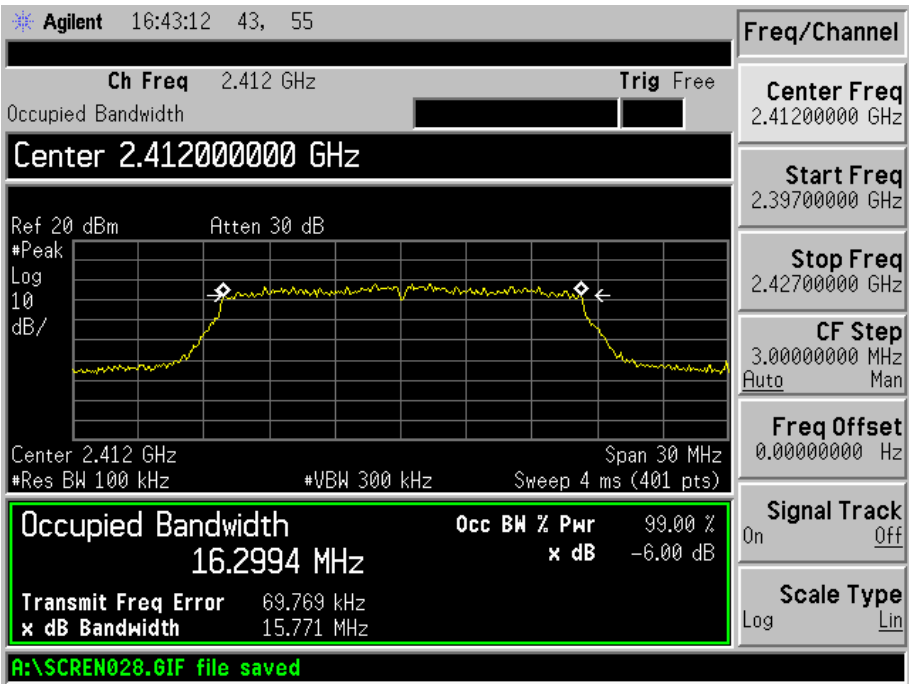
## 802.11b-Middle Channel



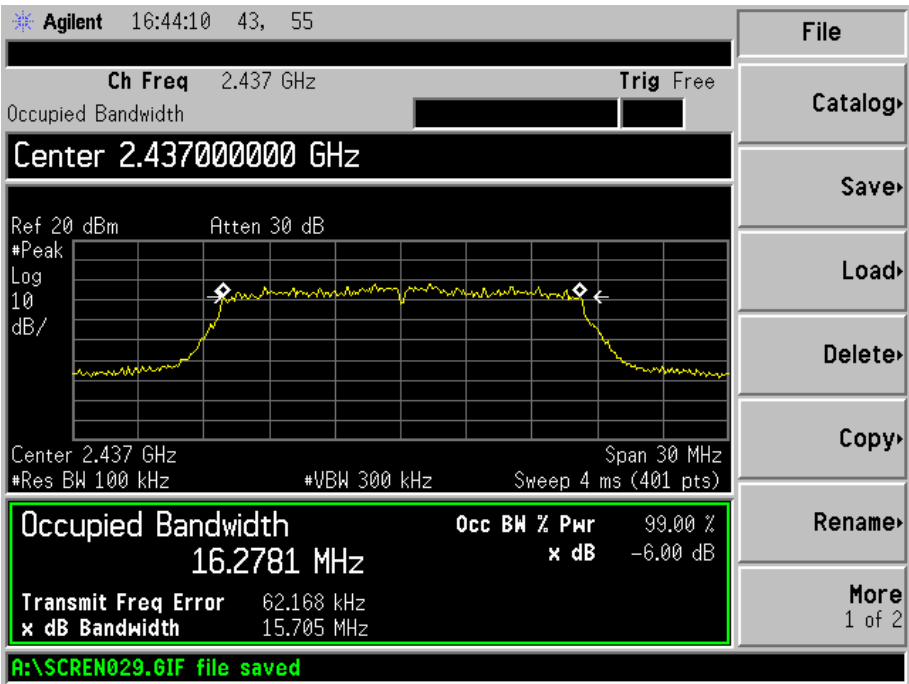
## 802.11b-High Channel



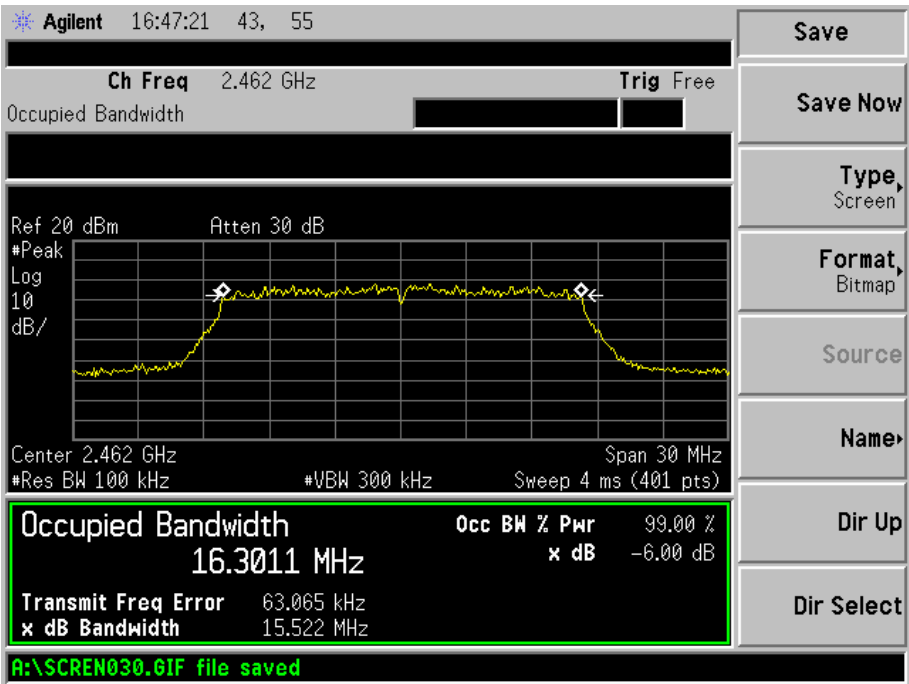
802.11g-Low Channel



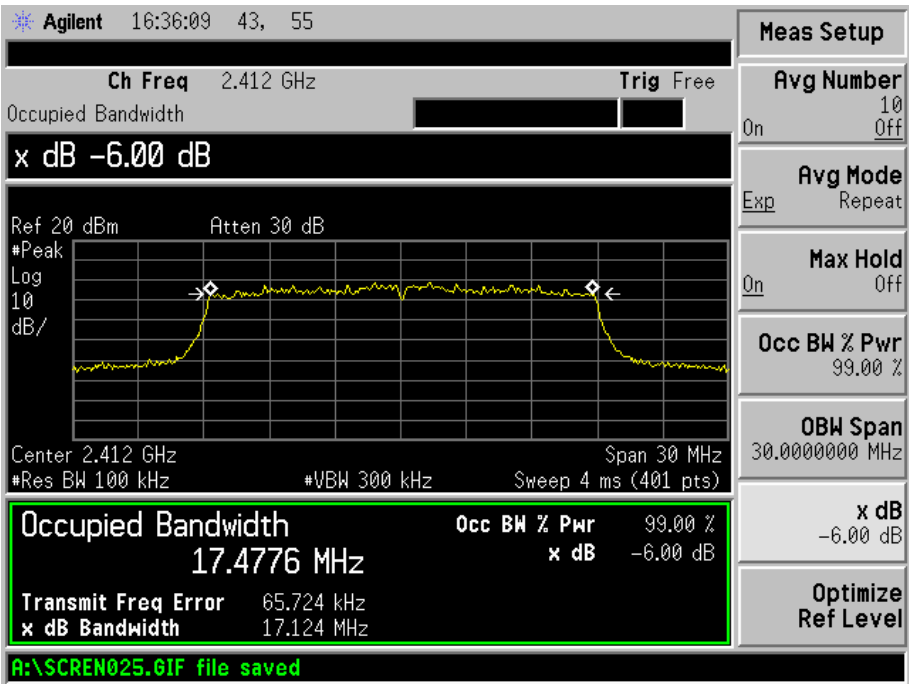
802.11g-Middle Channel



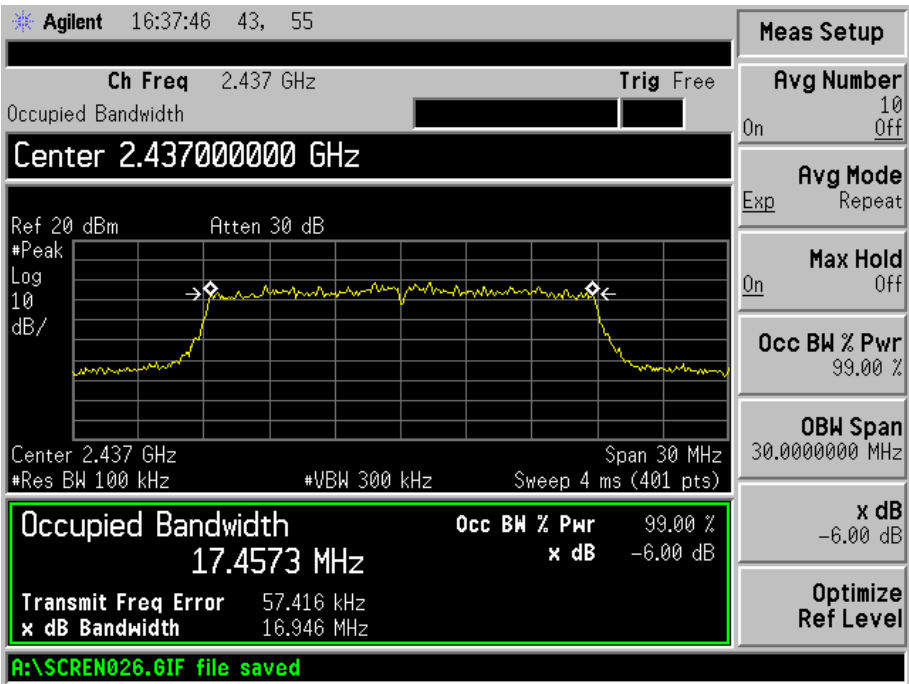
802.11g-High Channel



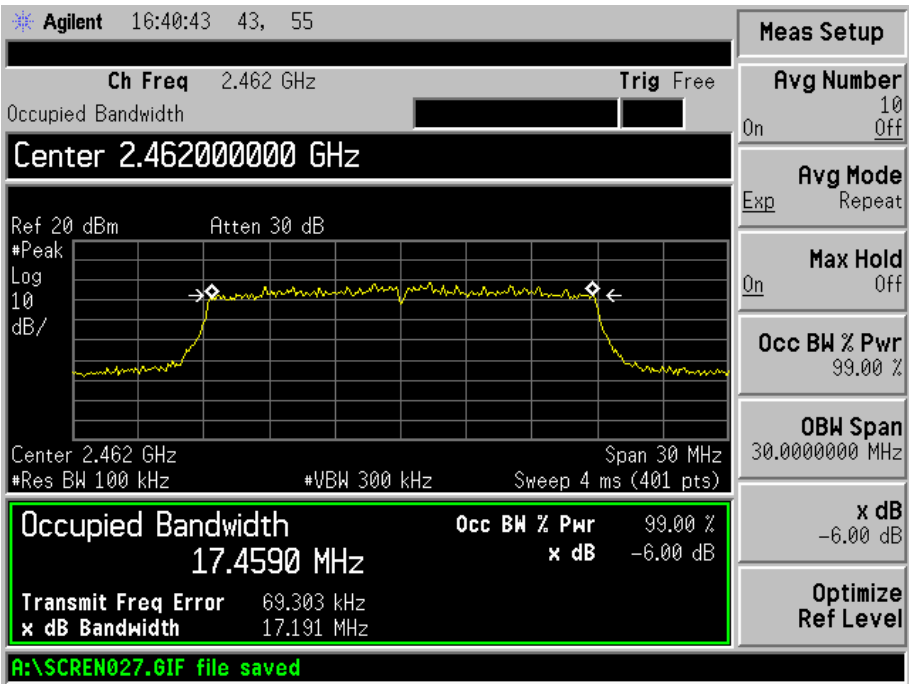
802.11n-HT20-Low Channel



802.11n-HT20-Middle Channel



802.11n-HT20-High Channel



## 6. RF Output Power

### 6.1 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.

### 6.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2013-03-28	2014-03-27
Attenuator	ATTEN	ATS100-4-20	/	2013-03-28	2014-03-27

**Statement of Traceability:** All calibrations have been performed per the NVLAP requirements traceable to the NIST.

### 6.3 Test Procedure

According to section 15.247(b)-power output of the KDB-558074 (2012),

1. This procedure provides an integrated measurement alternative when the maximum available RBW < EBW.
2. Set the RBW = 1 MHz.
3. Set the VBW = 3 MHz.
4. Set the span to a value that is 5-30 % greater than the EBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the spectrum analyzer's integrated band power measurement function with band limits set equal to the EBW band edges (for some analyzers, this may require a manual override to ensure use of peak detector). If the spectrum analyzer does not have a band power function, sum the spectrum levels (in linear power units) at 1 MHz intervals extending across the EBW of the spectrum.

### 6.4 Environmental Conditions

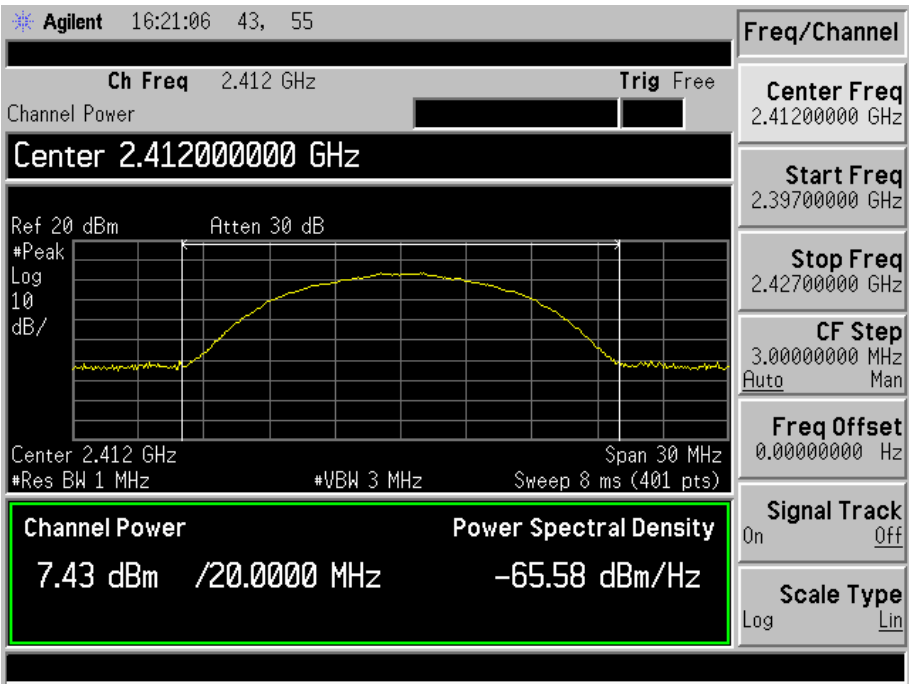
Temperature:	21° C
Relative Humidity:	55%
ATM Pressure:	1011 mbar

## 6.5 Summary of Test Results/Plots

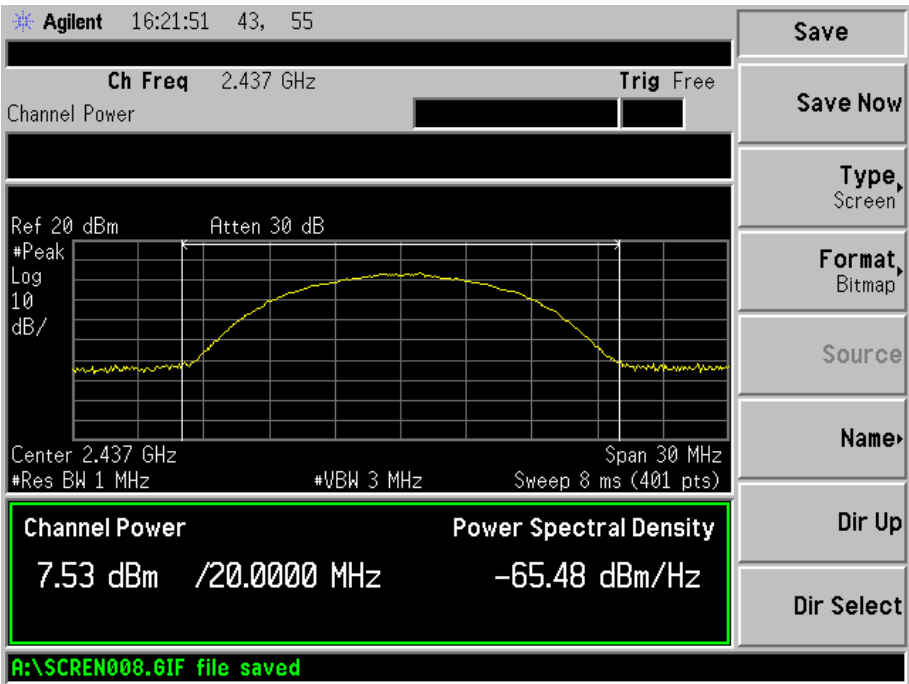
Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b_1Mbps	2412	7.43	5.5335	1000
	2437	7.53	5.6624	1000
	2462	7.79	6.0117	1000
802.11b_11Mbps	2412	7.10	5.1286	1000
	2437	7.24	5.2966	1000
	2462	7.47	5.5847	1000
802.11g_6Mbps	2412	7.55	5.6885	1000
	2437	7.90	6.1660	1000
	2462	7.84	6.0814	1000
802.11g_54Mbps	2412	7.04	5.0582	1000
	2437	6.89	4.8865	1000
	2462	7.39	5.4828	1000
802.11n HT20_MCS0	2412	7.87	6.1235	1000
	2437	7.69	5.8749	1000
	2462	7.38	5.4702	1000
802.11n HT20_MCS7	2412	7.21	5.2602	1000
	2437	7.12	5.1523	1000
	2462	6.80	4.7863	1000

Please refer to the following test plots:

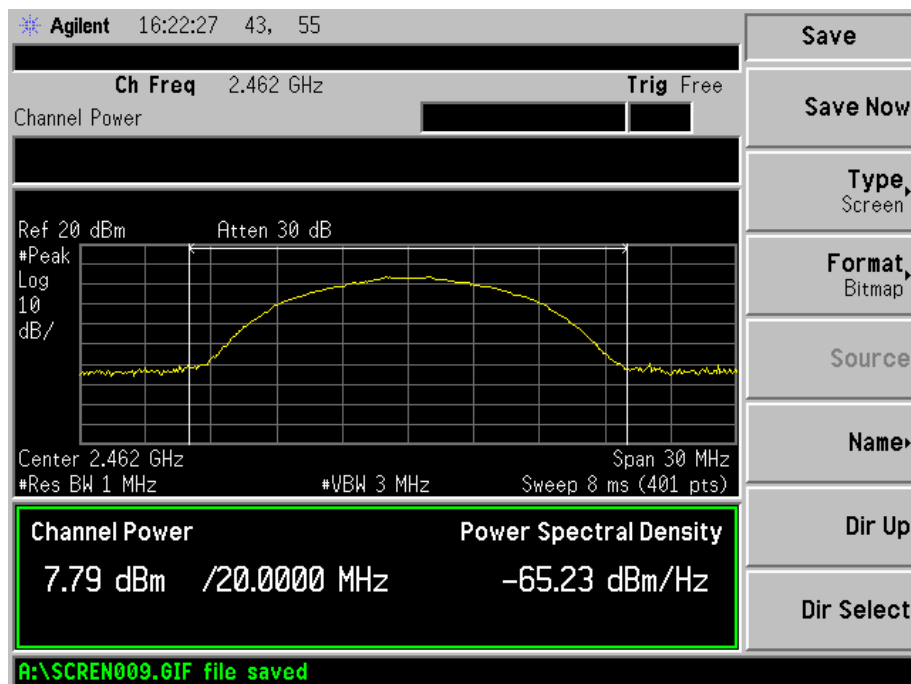
802.11b-1Mbps-Low Channel



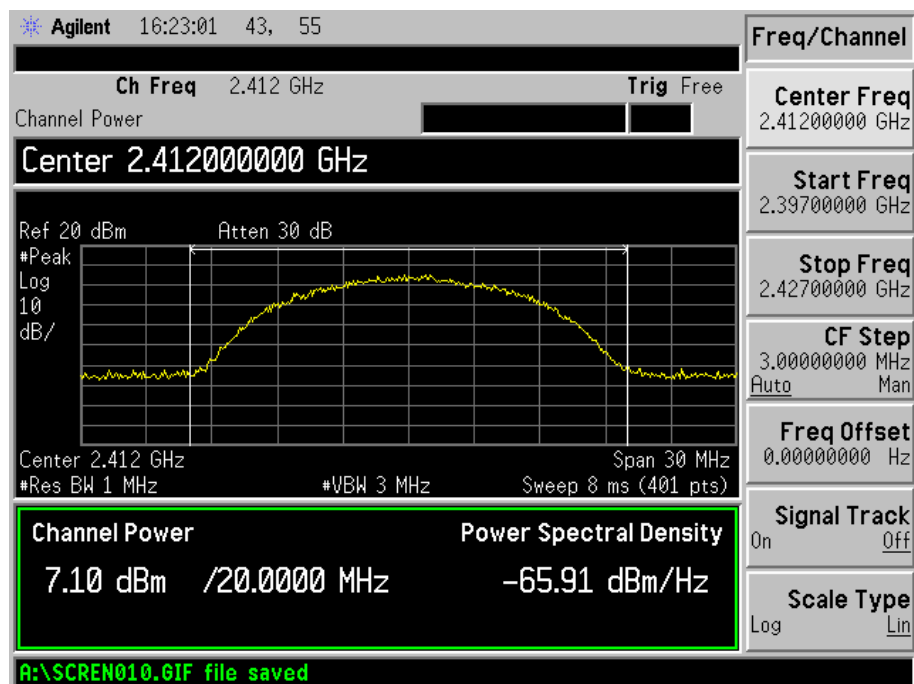
802.11b-1Mbps-Middle Channel



## 802.11b-1Mbps-High Channel

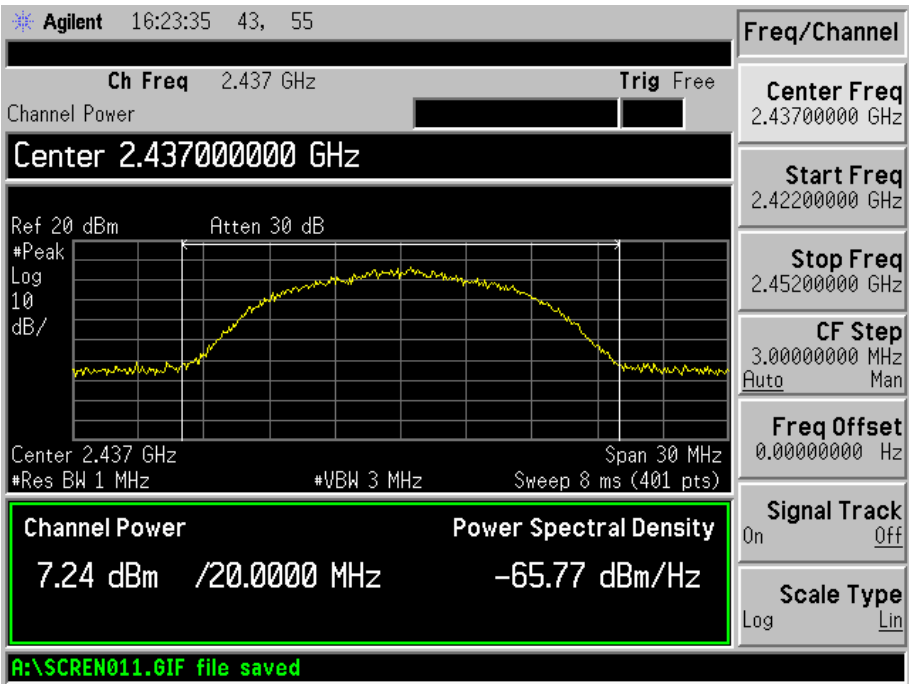


## 802.11b-11Mbps-Low Channel

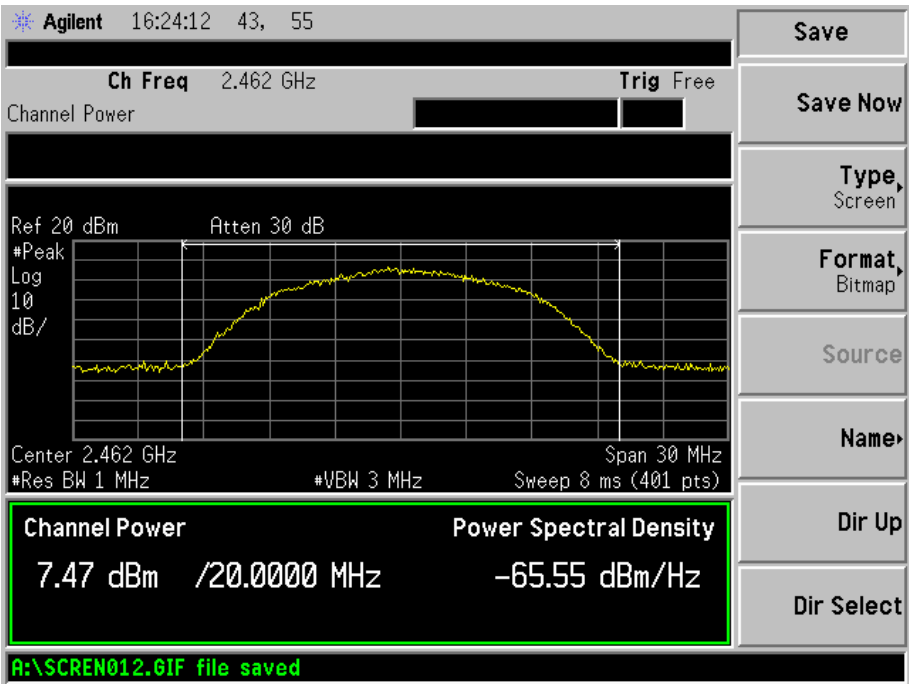




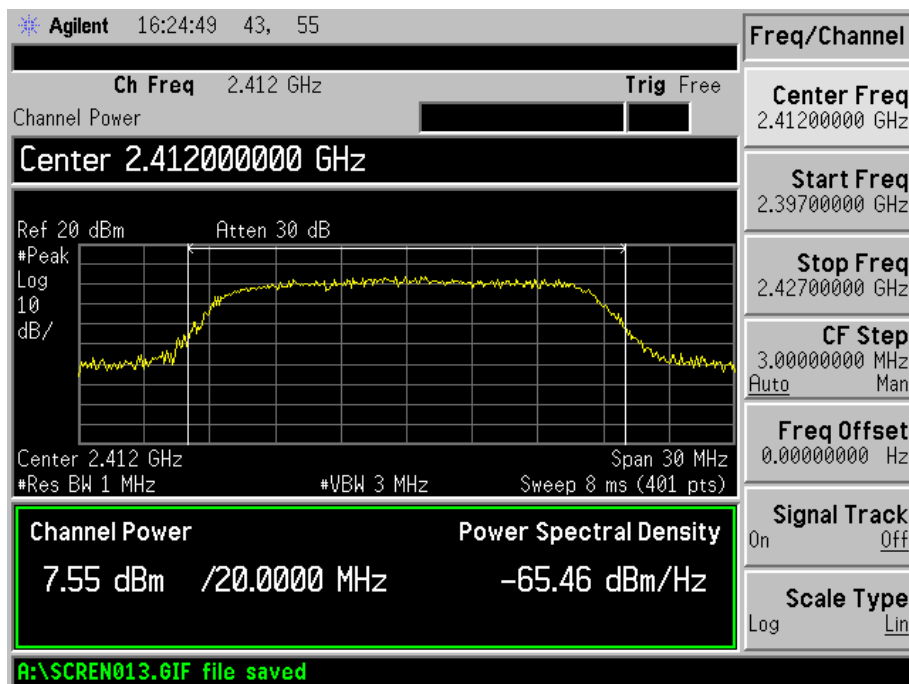
802.11b-11Mbps-Middle Channel



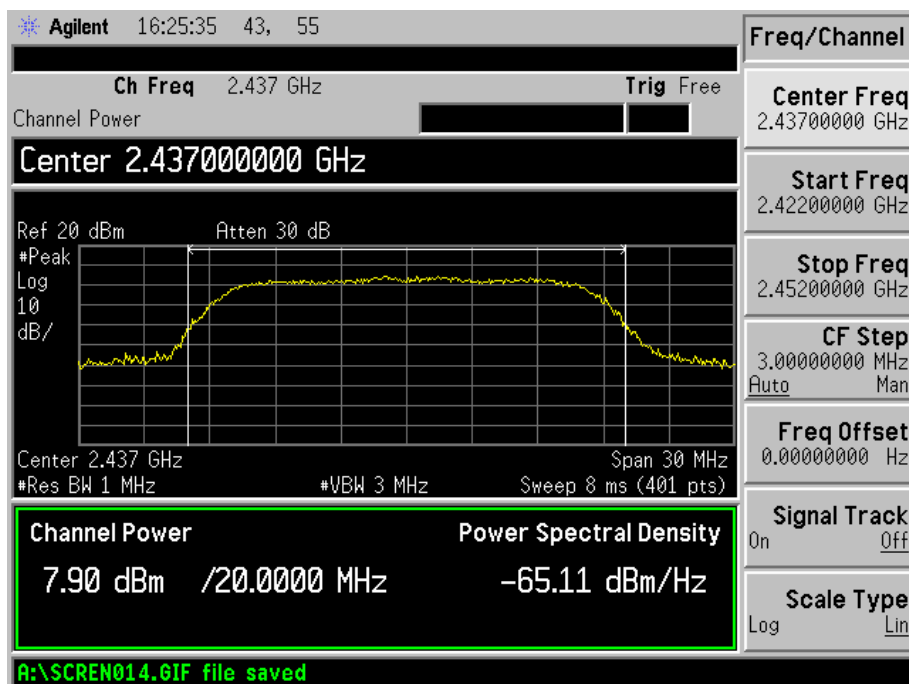
802.11b-11Mbps-High Channel



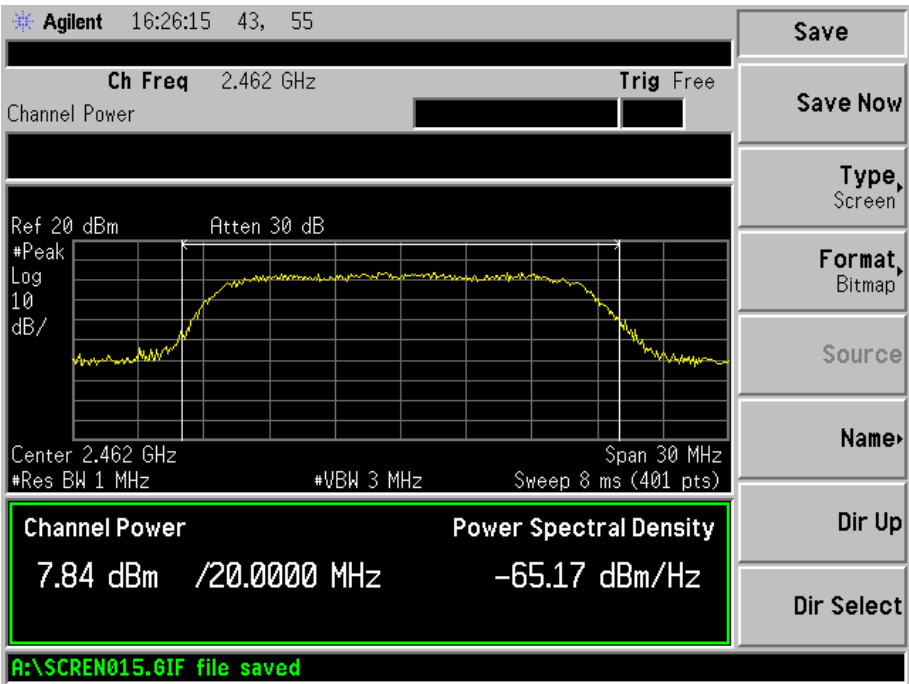
## 802.11g-6Mbps-Low Channel



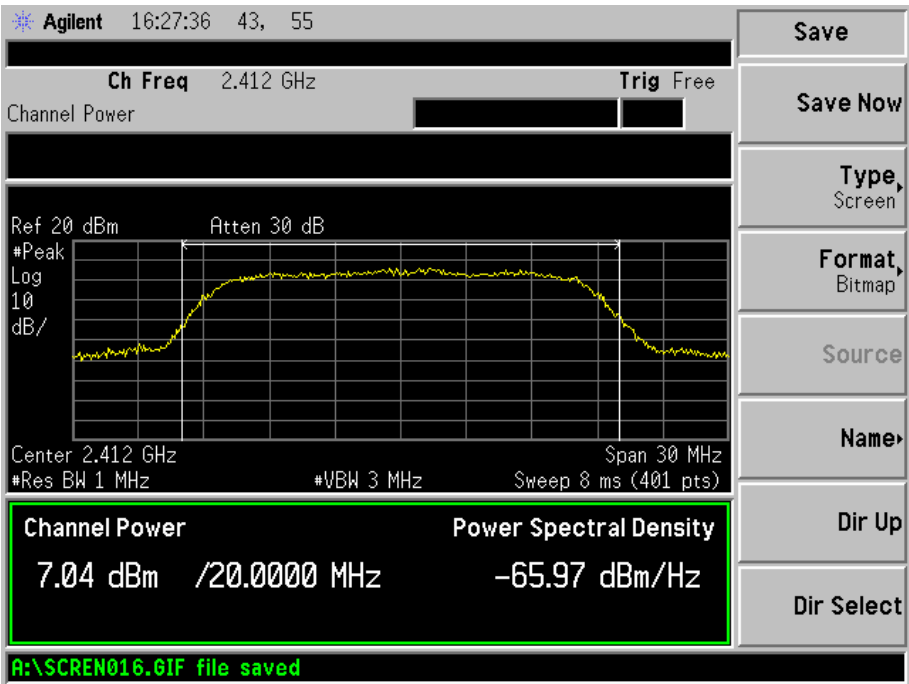
## 802.11g-6Mbps-Middle Channel



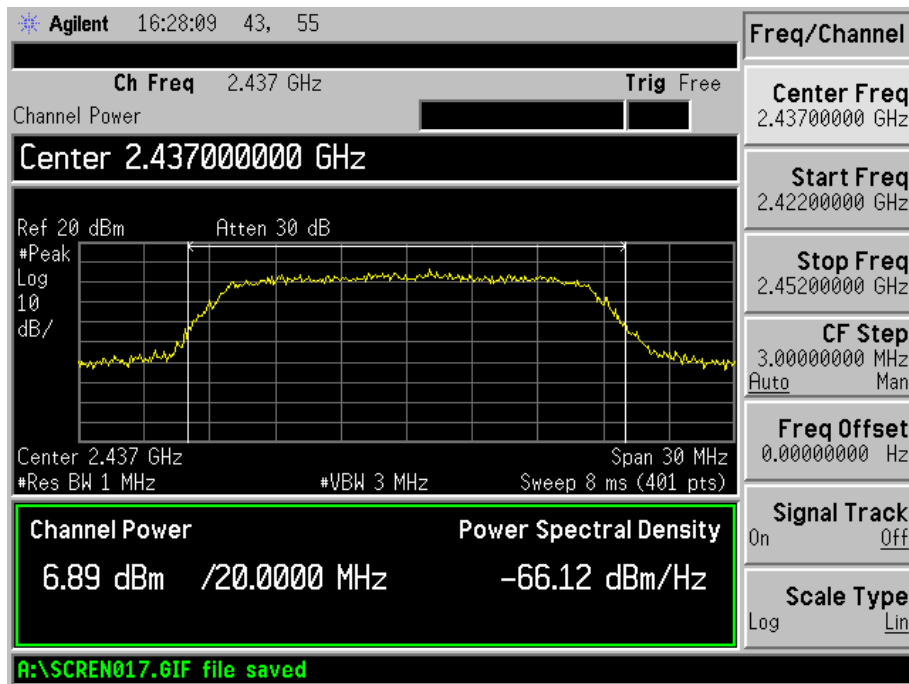
802.11g-6Mbps-High Channel



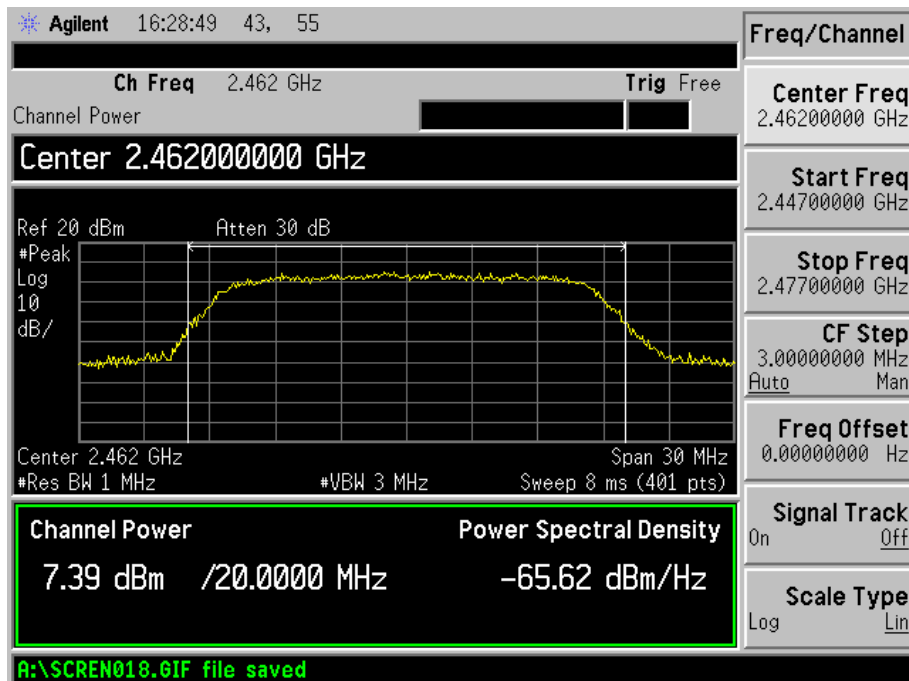
802.11g-54Mbps-Low Channel



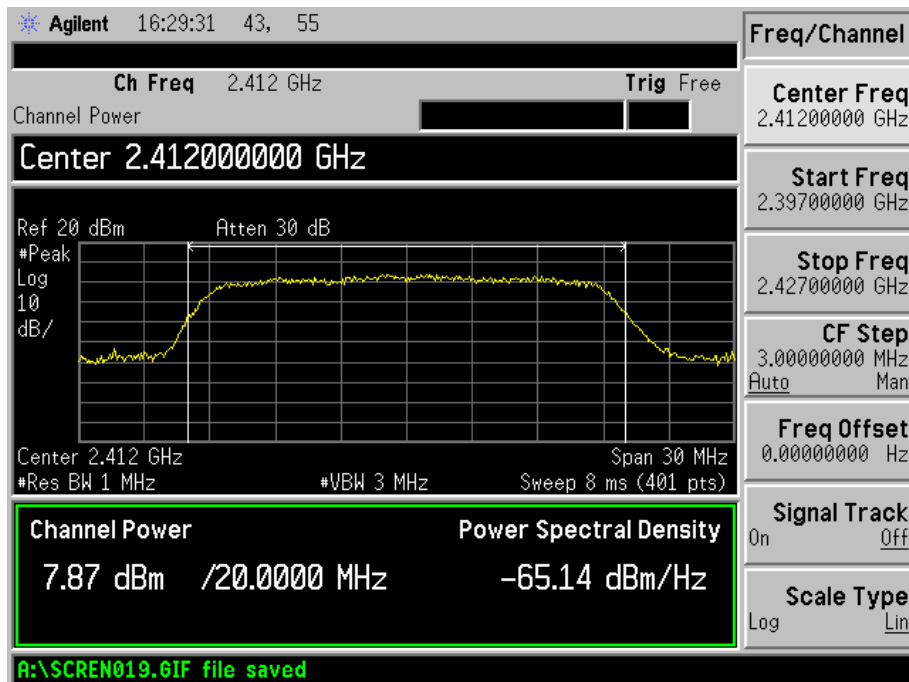
## 802.11g-54Mbps-Middle Channel



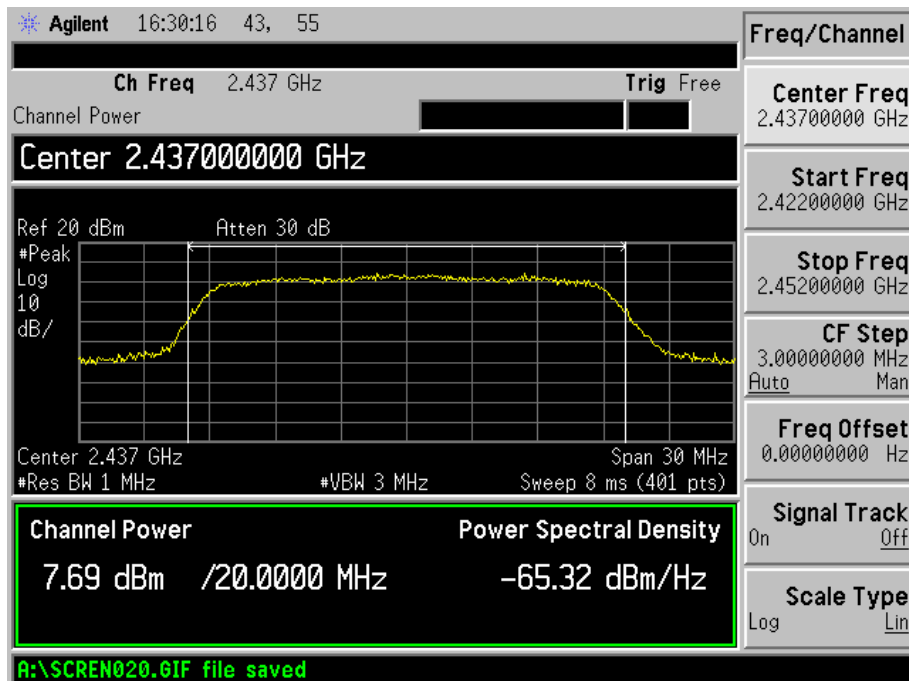
## 802.11g-54Mbps-High Channel



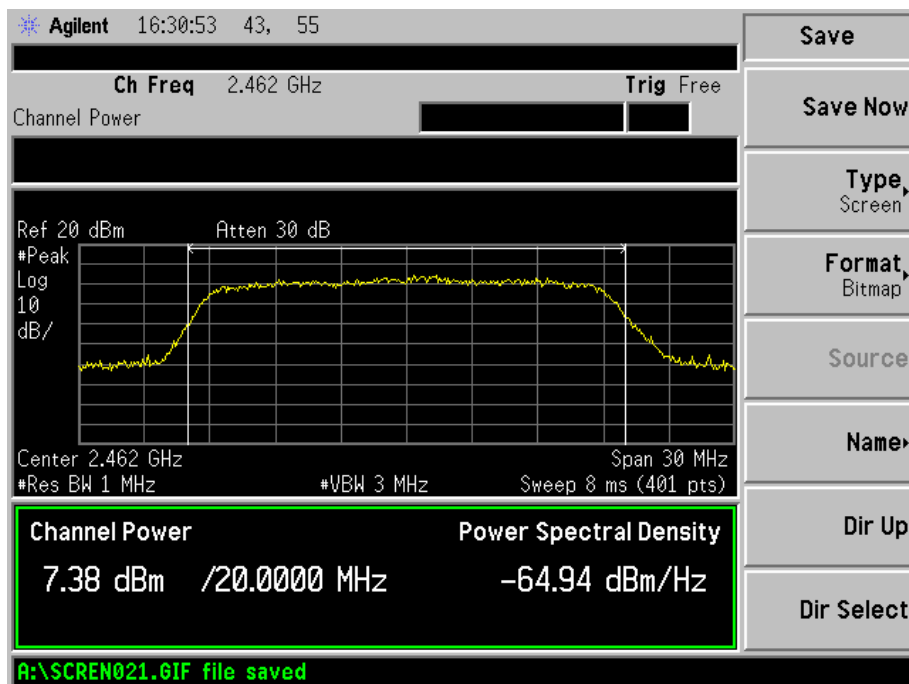
## 802.11n HT20\_MCS0-Low Channel



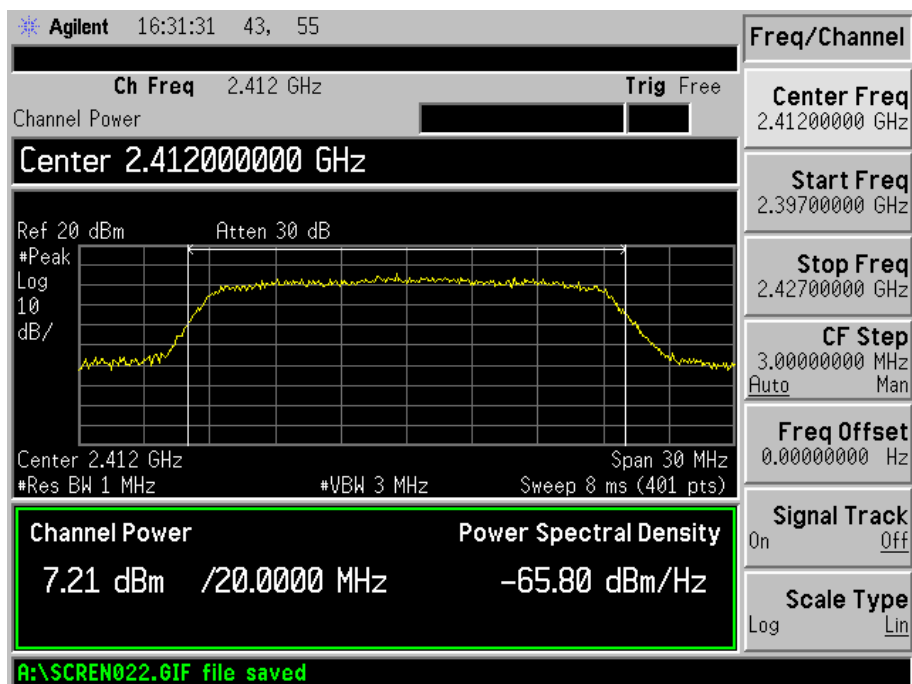
## 802.11n-HT20\_ MCS0-Middle Channel



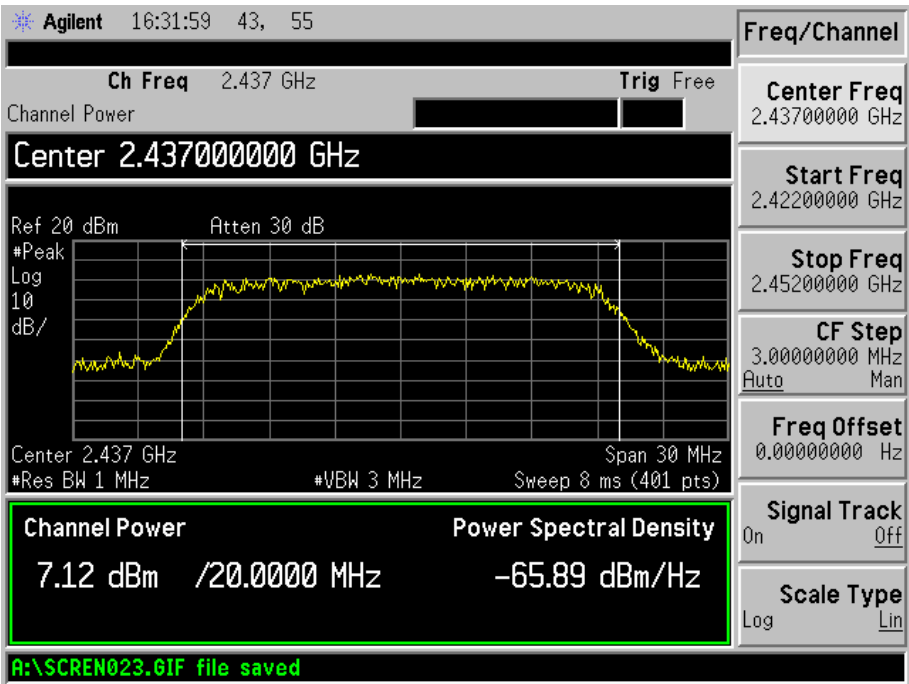
## 802.11n-HT20\_ MCS0-High Channel



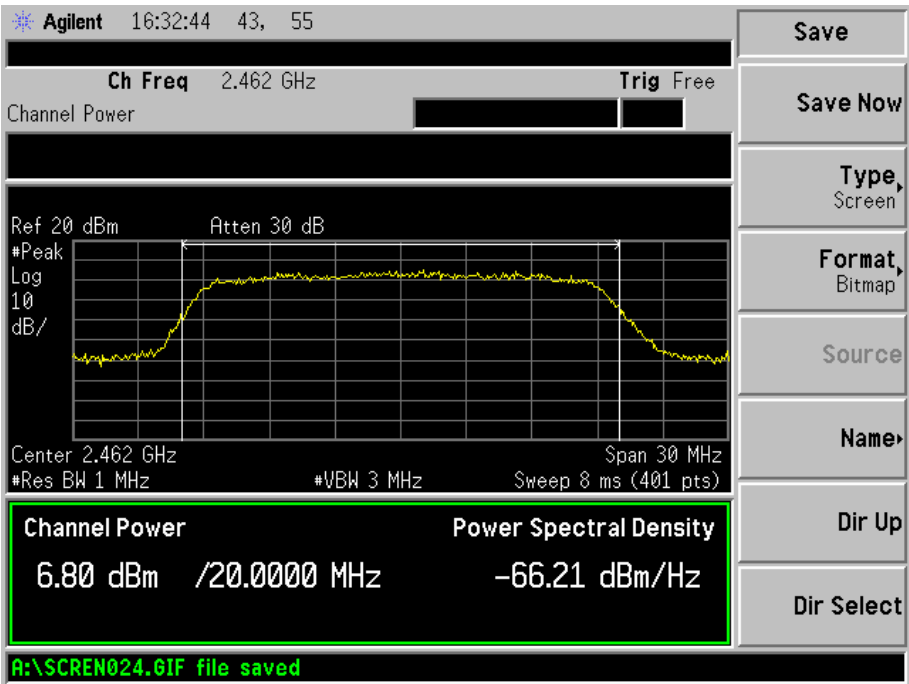
## 802.11n-HT20\_ MCS7-Low Channel



802.11n-HT20\_ MCS7-Middle Channel



802.11n-HT20\_ MCS7-High Channel



## 7. Field Strength of Spurious Emissions

### 7.1 Measurement Uncertainty

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

### 7.2 Standard Applicable

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

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

### 7.3 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2013-03-28	2014-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2013-03-28	2014-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2013-03-28	2014-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2013-03-28	2014-03-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2013-02-25	2014-02-24
Horn Antenna	ETS	3117	00086197	2013-02-25	2014-02-24
Horn Antenna	ETS	3116B	00088203	2013-02-25	2014-02-24
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2013-02-25	2014-02-24

**Statement of Traceability:** All calibrations have been performed per the NVLAP requirements traceable to the NIST.

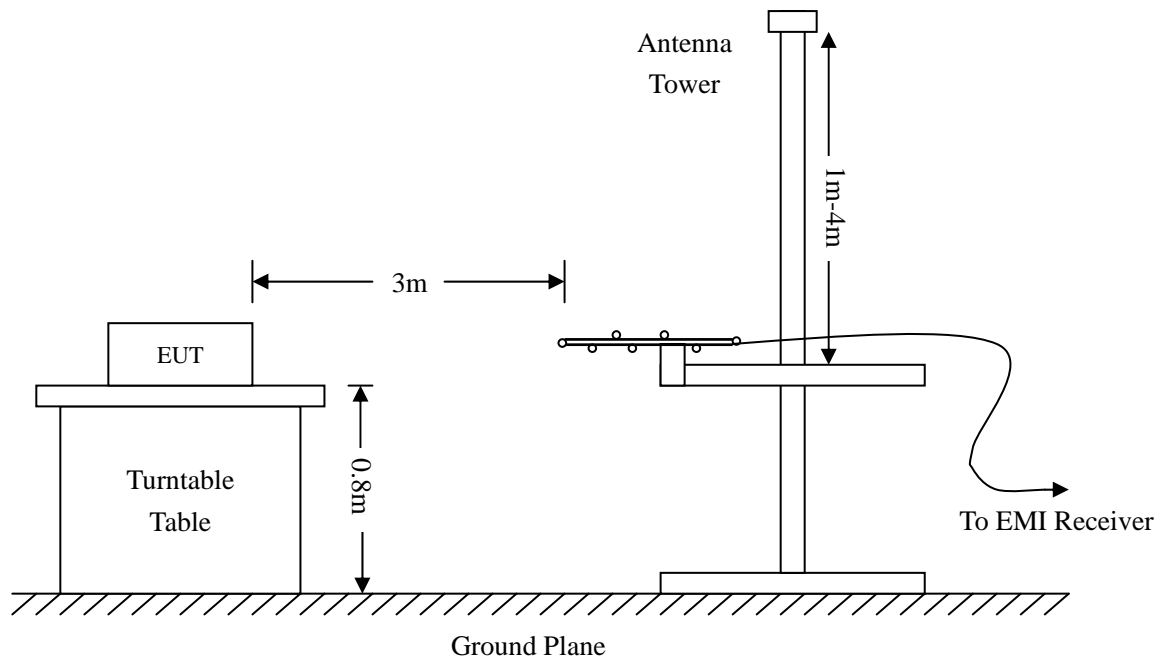


## 7.4 Test Procedure

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

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

The spacing between the peripherals was 10 cm.



Frequency :9kHz-30MHz

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Detector function = peak

Frequency :Above 1GHz

RBW=1MHz,

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

Sweep time= Auto

Detector function = peak, AV

## 7.5 Corrected Amplitude & Margin Calculation

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

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

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

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

## 7.6 Environmental Conditions

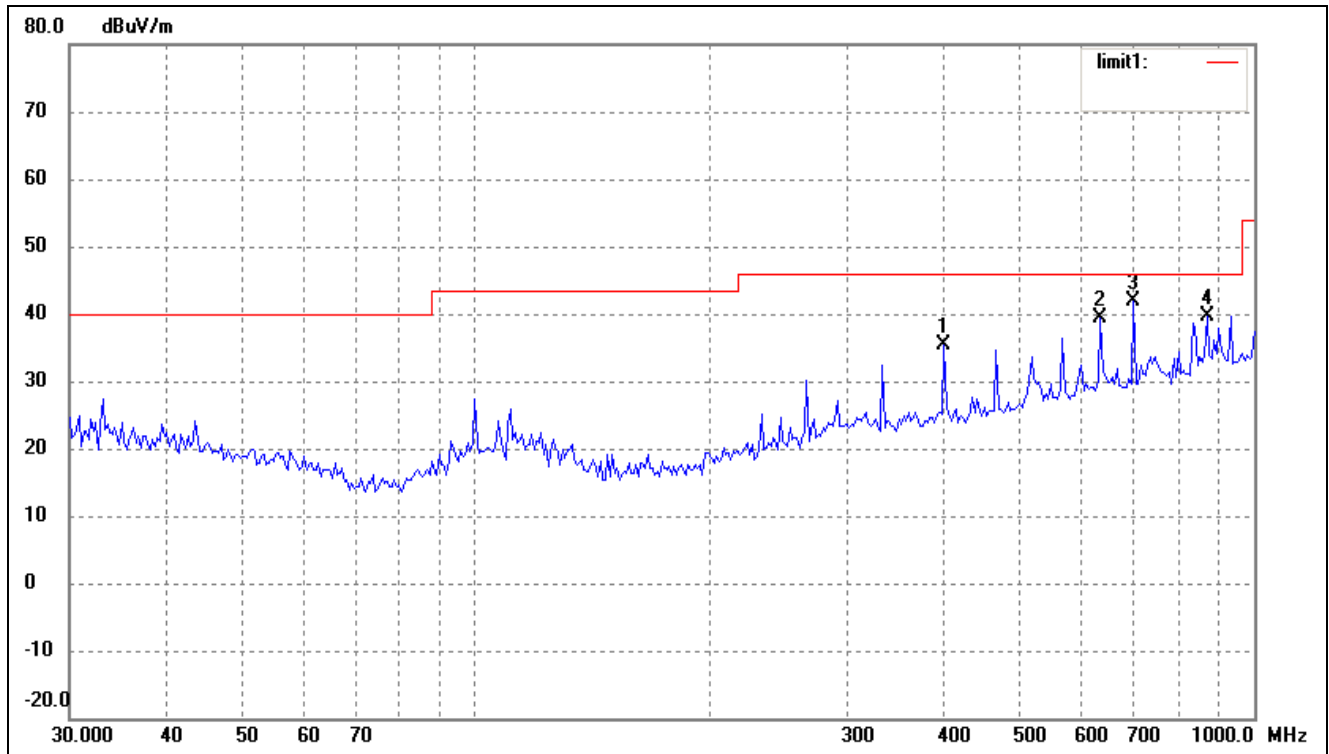
Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

## 7.7 Summary of Test Results/Plots

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

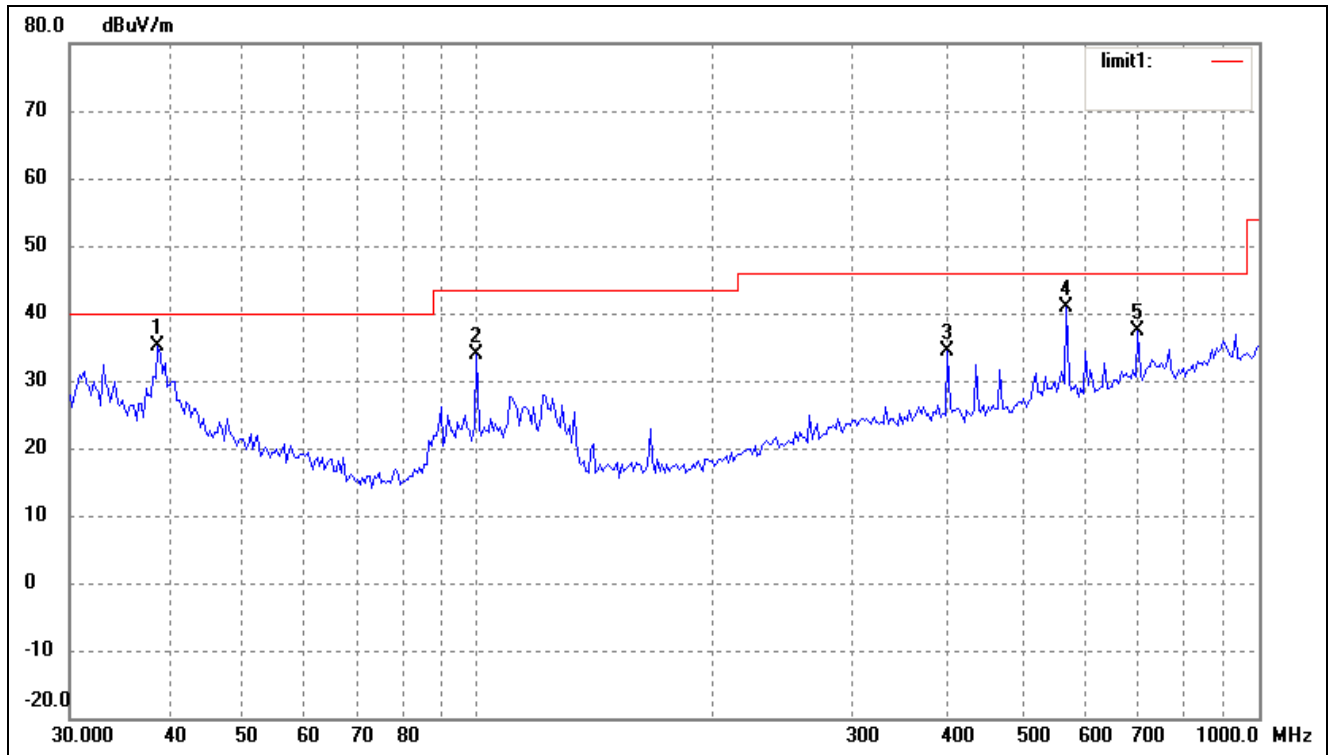
**-0.90 dB at 4924 MHz in the Vertical polarization for 802.11n-HT20 High Channel, 9kHz to 25 GHz, 3 Meters**

*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:* *MID**Tested Model:* *HS-7DTB14**Operating Condition:* *802.11b Transmitting Low Channel-2412MHz**Comment:* *3.7V lithium battery**Test Specification:* *Horizontal*

No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	399.0302	23.95	11.50	35.45	46.00	-10.55	264	100	peak
2	633.9073	24.61	14.77	39.38	46.00	-6.62	113	200	peak
3	699.3046	26.04	15.73	41.77	46.00	-4.23	287	100	peak
4	869.1302	21.08	18.54	39.62	46.00	-6.38	185	200	peak

Test Specification: Vertical

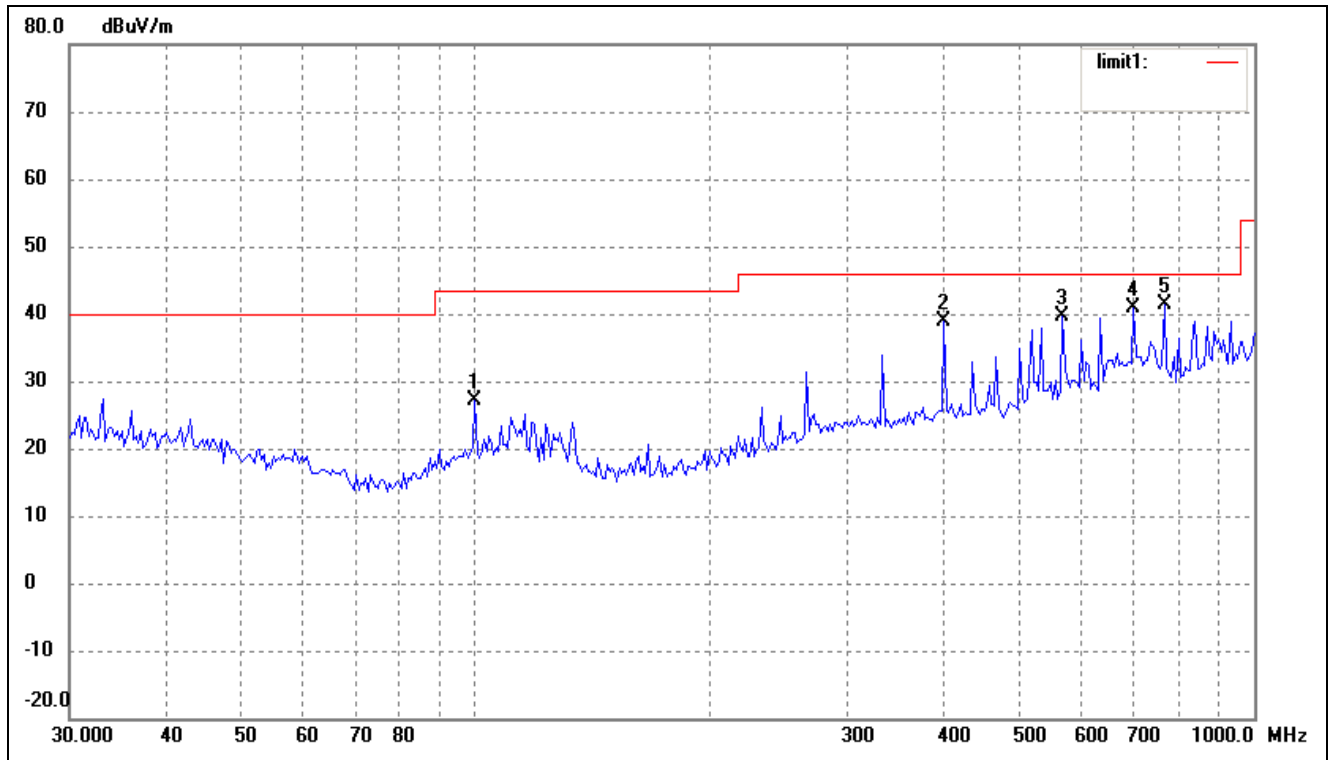


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	38.8879	25.60	9.50	35.10	40.00	-4.90	240	100	peak
2	99.5281	27.10	6.72	33.82	43.50	-9.68	187	100	peak
3	399.0302	22.96	11.50	34.46	46.00	-11.54	240	100	peak
4	566.6223	27.41	13.58	40.99	46.00	-5.01	240	100	peak
5	699.3046	21.60	15.73	37.33	46.00	-8.67	240	100	peak

Operating Condition: 802.11b Transmitting Middle Channel-2437MHz

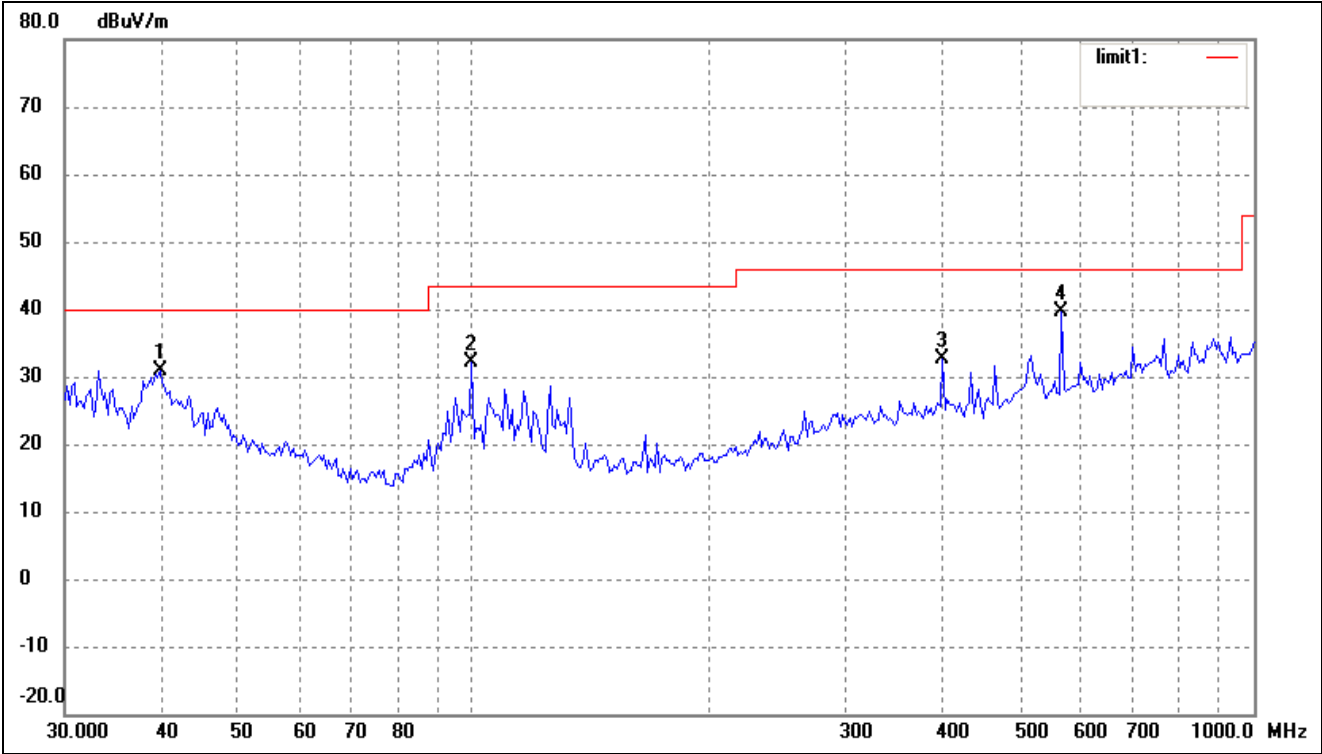
Comment: 3.7V lithium battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	99.5281	20.38	6.72	27.10	43.50	-16.40	162	100	peak
2	399.0302	27.44	11.50	38.94	46.00	-7.06	162	100	peak
3	566.6223	26.12	13.58	39.70	46.00	-6.30	162	100	peak
4	699.3046	25.22	15.73	40.95	46.00	-5.05	162	100	peak
5	766.0572	24.69	16.77	41.46	46.00	-4.54	200	100	peak

Test Specification: Vertical

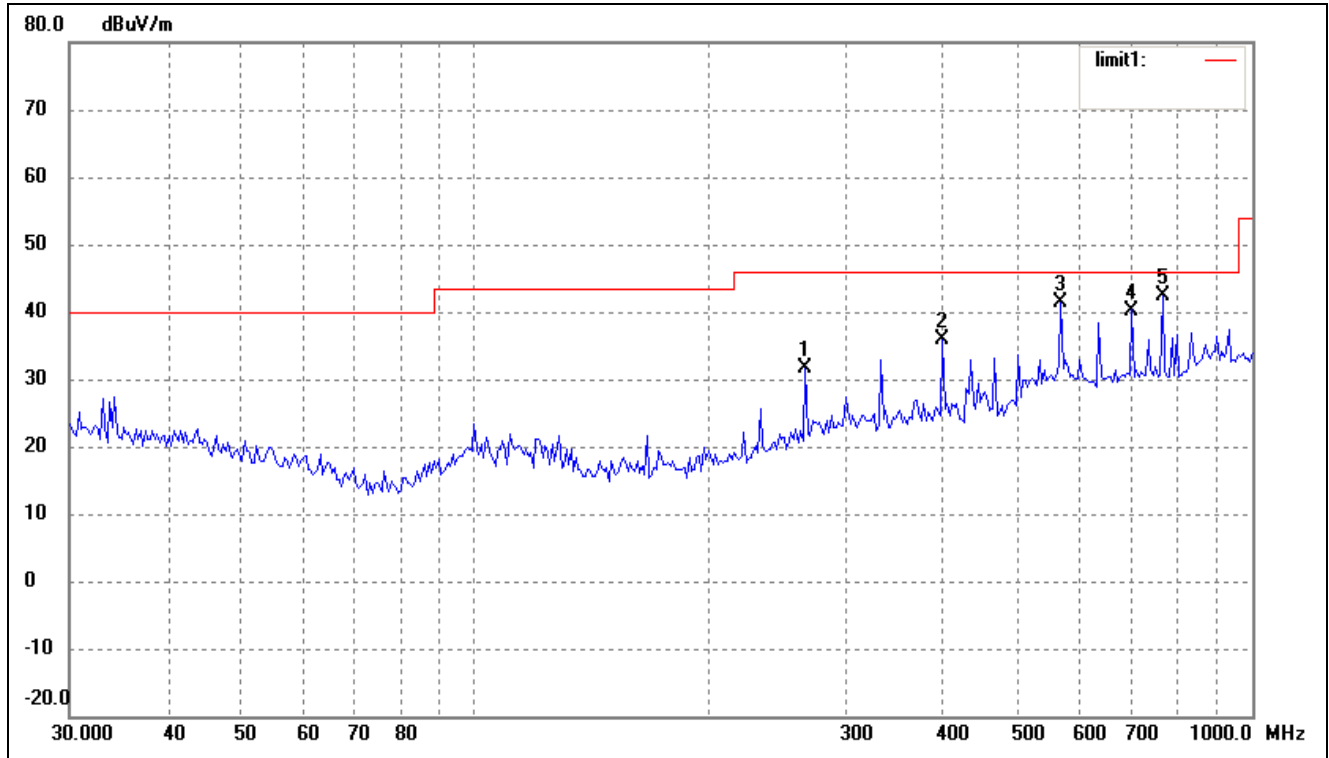


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	39.7147	21.26	9.64	30.90	40.00	-9.10	240	100	peak
2	99.5281	25.41	6.72	32.13	43.50	-11.37	187	100	peak
3	399.0302	21.11	11.50	32.61	46.00	-13.39	187	100	peak
4	566.6223	26.01	13.58	39.59	46.00	-6.41	220	100	peak

Operating Condition: 802.11b Transmitting High Channel-2462MHz

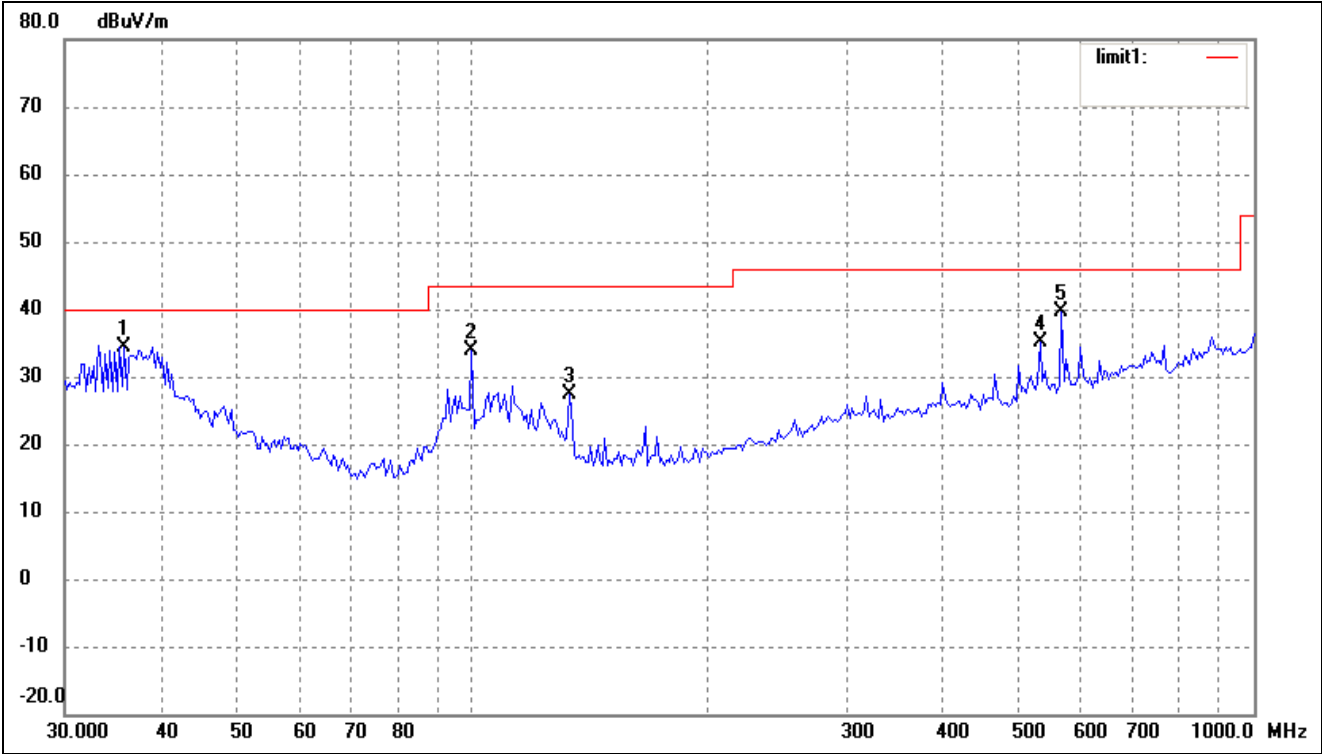
Comment: 3.7V lithium battery

Test Specification: Horizontal



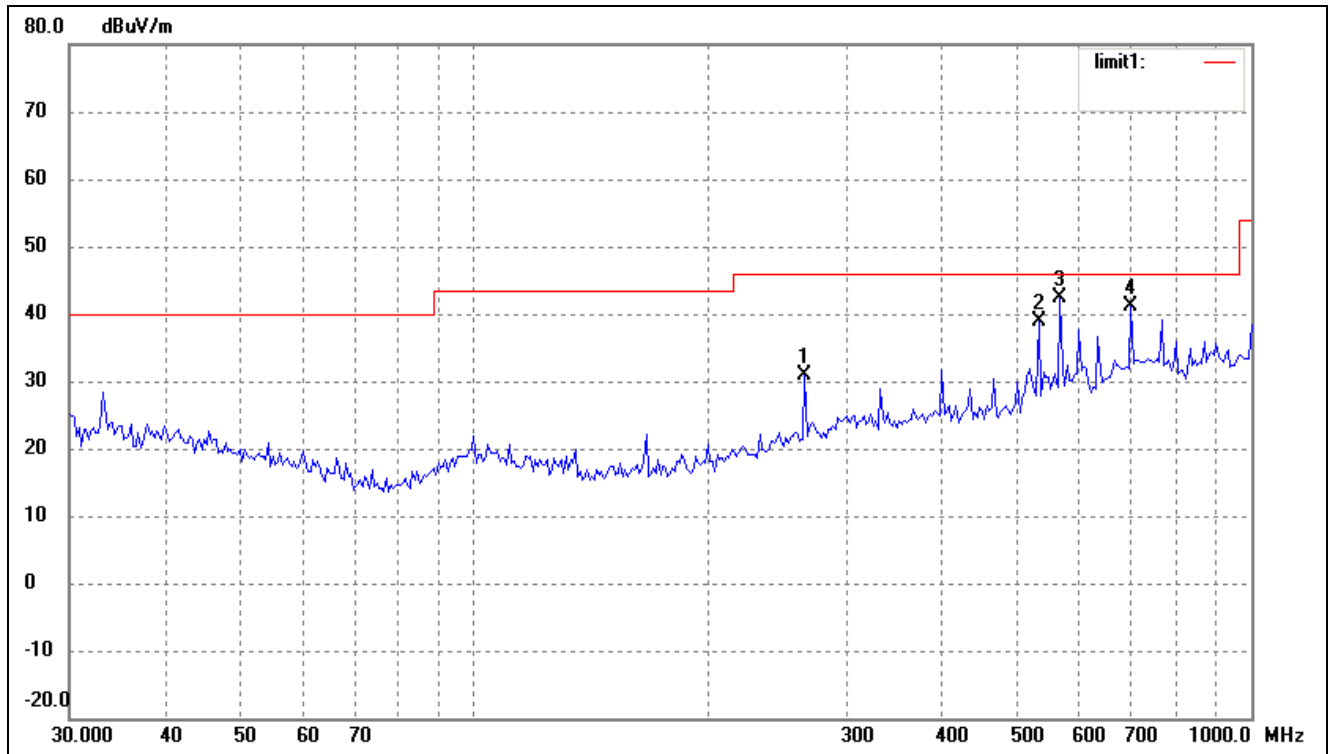
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	265.6757	23.48	8.15	31.63	46.00	-14.37	162	100	peak
2	399.0302	24.48	11.50	35.98	46.00	-10.02	162	100	peak
3	566.6223	27.79	13.58	41.37	46.00	-4.63	162	100	peak
4	699.3046	24.52	15.73	40.25	46.00	-5.75	162	100	peak
5	766.0572	25.52	16.77	42.29	46.00	-3.71	200	100	peak

Test Specification: Vertical



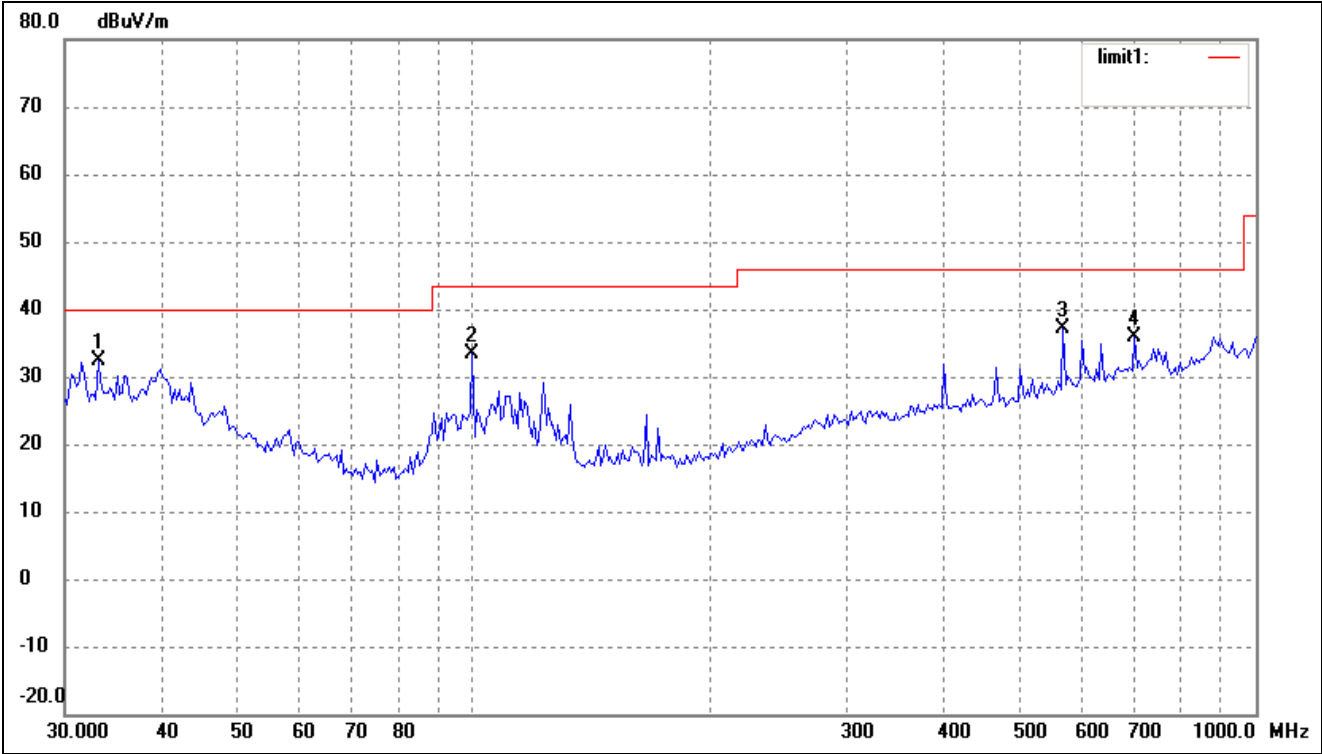
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	35.7491	25.45	9.00	34.45	40.00	-5.55	240	100	peak
2	99.5281	27.09	6.72	33.81	43.50	-9.69	187	100	peak
3	132.6850	23.34	3.93	27.27	43.50	-16.23	220	100	peak
4	531.9635	22.22	12.99	35.21	46.00	-10.79	220	100	peak
5	566.6223	25.99	13.58	39.57	46.00	-6.43	220	100	peak



**Plot of Radiated Emissions Test Data (30MHz to 1GHz)***EUT:* *MID**Tested Model:* *HS-7DTB14**Operating Condition:* *802.11g Transmitting Low Channel-2412MHz**Comment:* *3.7V lithium battery**Test Specification:* *Horizontal*

No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	265.6757	22.77	8.15	30.92	46.00	-15.08	264	100	peak
2	531.9635	25.86	12.99	38.85	46.00	-7.15	113	200	peak
3	566.6223	28.74	13.58	42.32	46.00	-3.68	287	100	peak
4	699.3046	25.34	15.73	41.07	46.00	-4.93	185	200	peak

Test Specification: Vertical

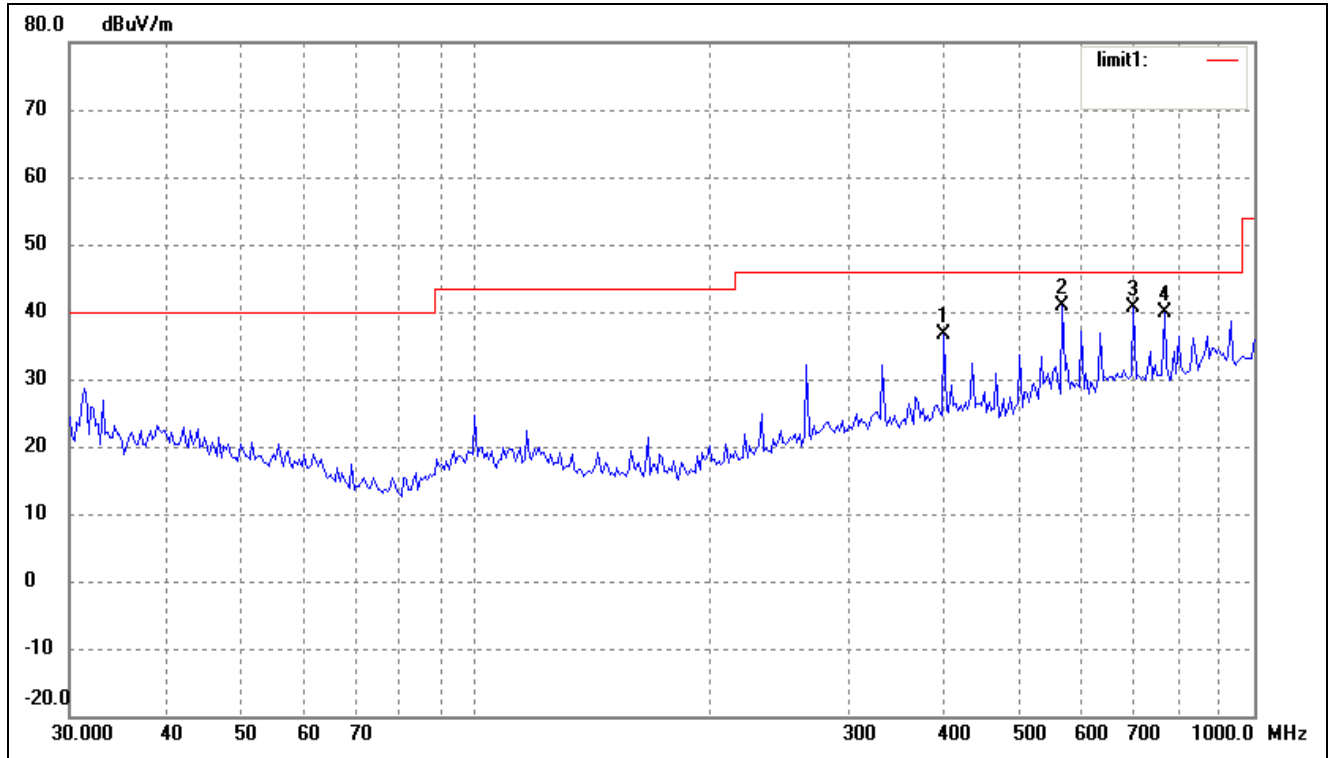


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	33.0950	23.70	8.56	32.26	40.00	-7.74	240	100	peak
2	99.5281	26.58	6.72	33.30	43.50	-10.20	187	100	peak
3	566.6223	23.61	13.58	37.19	46.00	-8.81	240	100	peak
4	699.3046	20.23	15.73	35.96	46.00	-10.04	240	100	peak

Operating Condition: 802.11g Transmitting Middle Channel-2437MHz

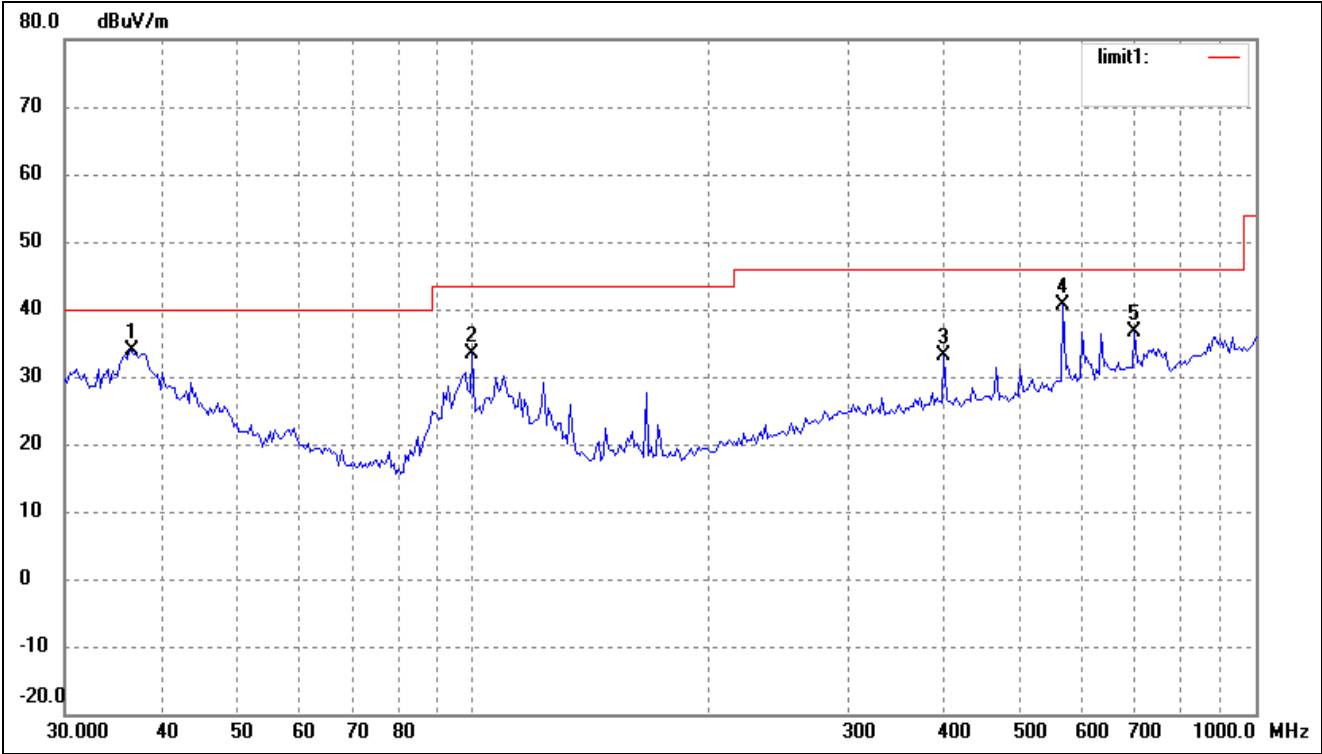
Comment: 3.7V lithium battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	399.0302	25.08	11.50	36.58	46.00	-9.42	162	100	peak
2	566.6223	27.31	13.58	40.89	46.00	-5.11	162	100	peak
3	699.3046	24.95	15.73	40.68	46.00	-5.32	162	100	peak
4	766.0572	23.09	16.77	39.86	46.00	-6.14	162	100	peak

Test Specification: Vertical

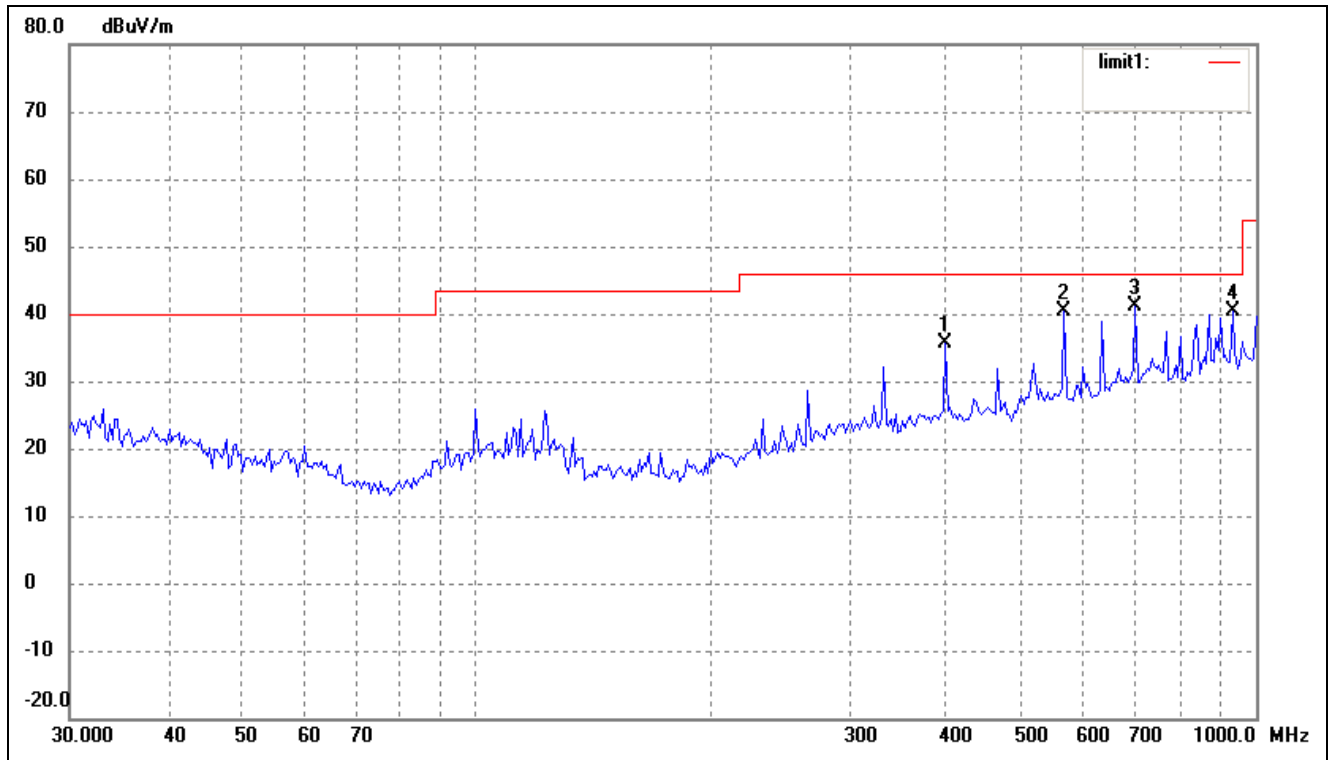


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	36.5092	24.70	9.13	33.83	40.00	-6.17	240	100	peak
2	99.5281	26.58	6.72	33.30	43.50	-10.20	187	100	peak
3	399.0302	21.63	11.50	33.13	46.00	-12.87	187	100	peak
4	566.6223	27.03	13.58	40.61	46.00	-5.39	220	100	peak
5	699.3046	20.94	15.73	36.67	46.00	-9.33	220	100	peak

Operating Condition: 802.11g Transmitting High Channel-2462MHz

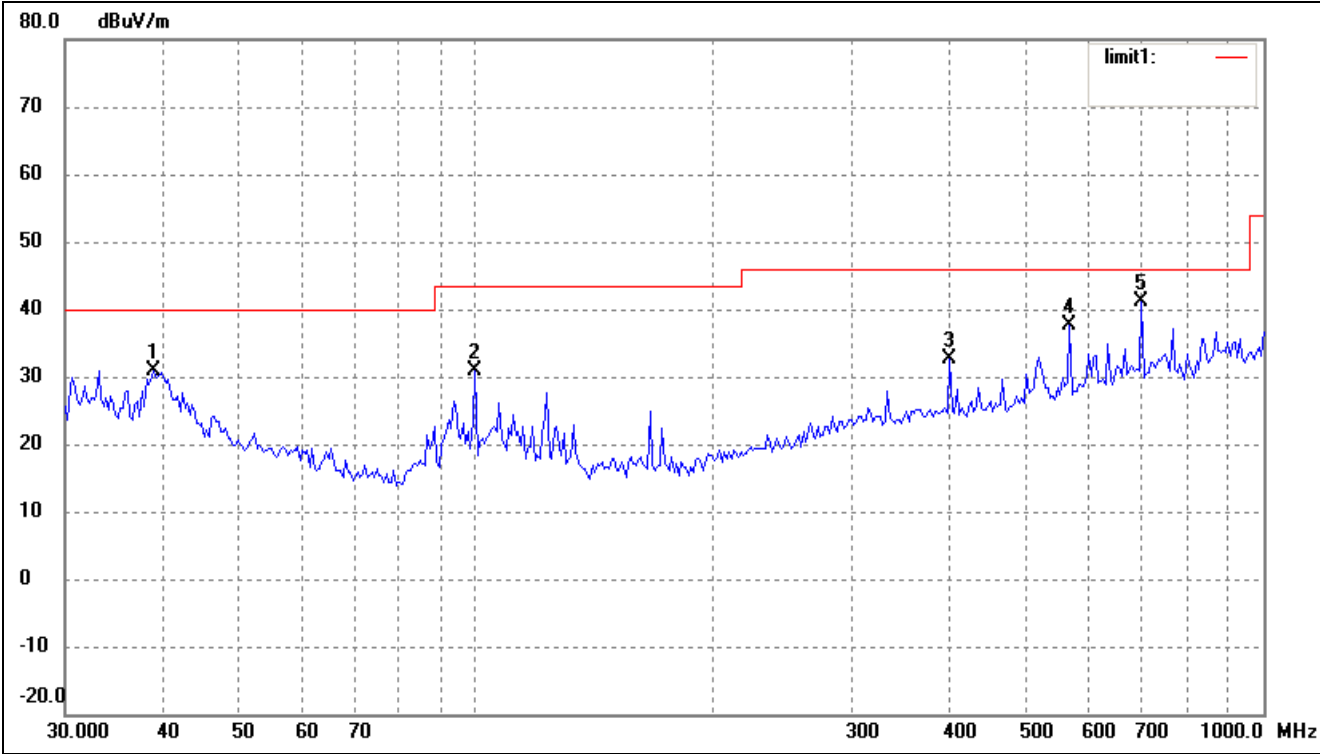
Comment: 3.7V lithium battery

Test Specification: Horizontal

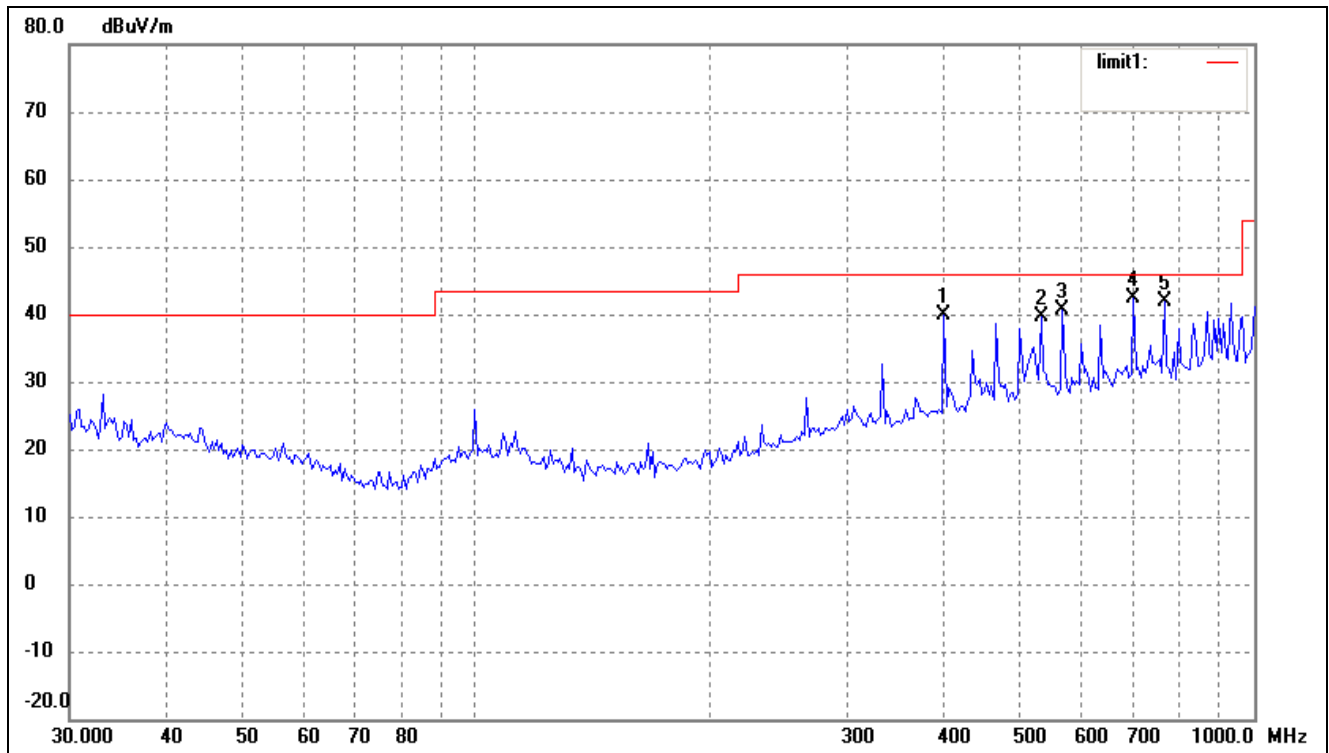


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	399.0302	24.19	11.50	35.69	46.00	-10.31	162	100	peak
2	566.6223	26.90	13.58	40.48	46.00	-5.52	162	100	peak
3	699.3046	25.36	15.73	41.09	46.00	-4.91	162	100	peak
4	932.2715	22.15	18.31	40.46	46.00	-5.54	162	100	peak

Test Specification: Vertical

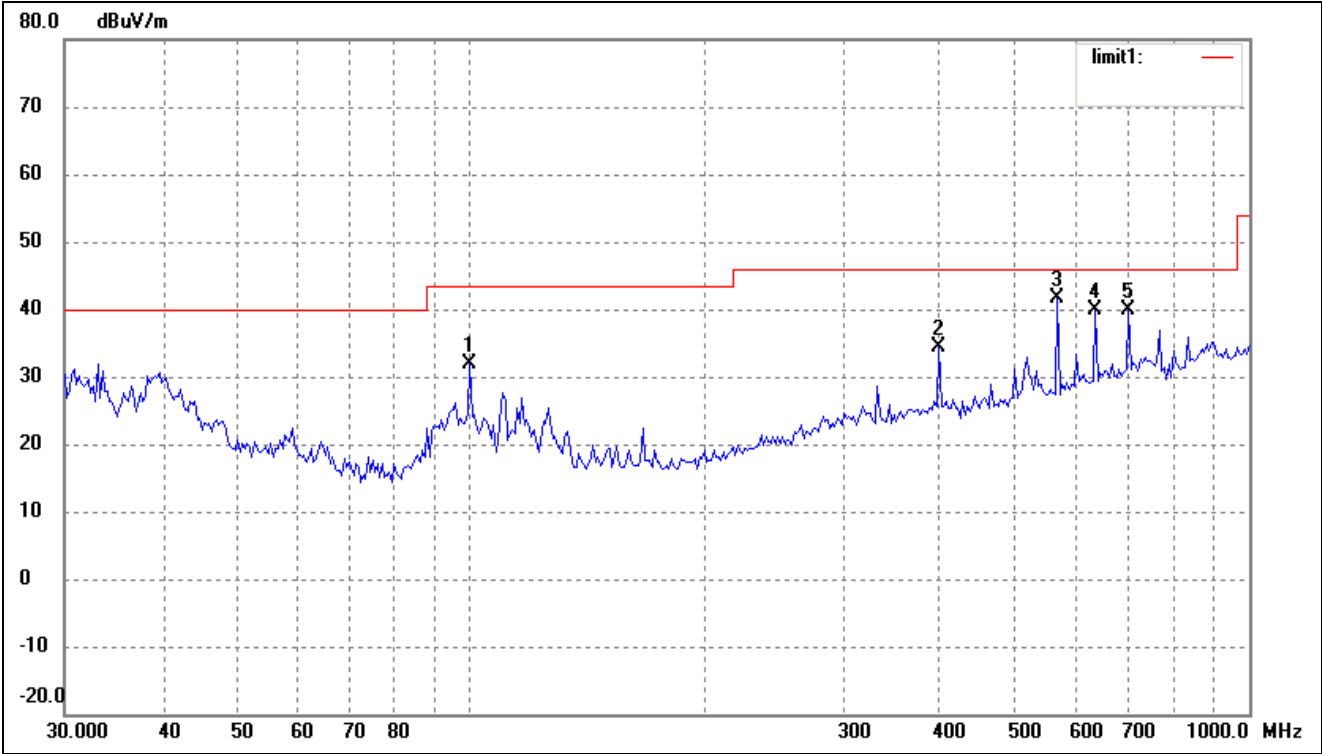


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	38.8879	21.45	9.50	30.95	40.00	-9.05	240	100	peak
2	99.5281	24.25	6.72	30.97	43.50	-12.53	187	100	peak
3	399.0302	21.13	11.50	32.63	46.00	-13.37	220	100	peak
4	566.6223	24.11	13.58	37.69	46.00	-8.31	220	100	peak
5	699.3046	25.41	15.73	41.14	46.00	-4.86	220	100	peak

**Plot of Radiated Emissions Test Data (30MHz to 1GHz)***EUT:* MID*Tested Model:* HS-7DTB14*Operating Condition:* 802.11n-HT20 Transmitting Low Channel-2412MHz*Comment:* 3.7V lithium battery*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	399.0302	28.28	11.50	39.78	46.00	-6.22	264	100	peak
2	531.9635	26.64	12.99	39.63	46.00	-6.37	113	200	peak
3	566.6223	27.05	13.58	40.63	46.00	-5.37	287	100	peak
4	699.3046	26.75	15.73	42.48	46.00	-3.52	185	200	peak
5	766.0572	25.13	16.77	41.90	46.00	-4.10	185	200	peak

Test Specification: Vertical



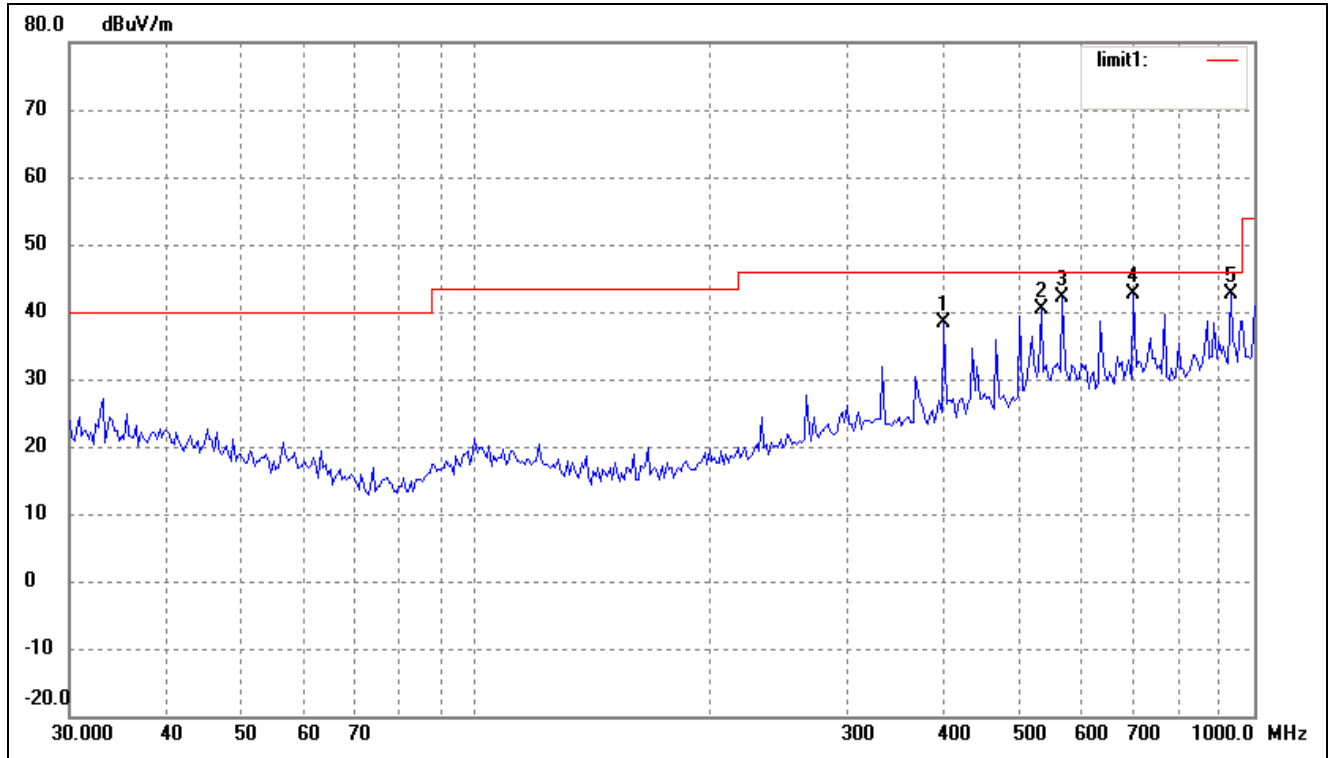
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	99.5281	25.04	6.72	31.76	43.50	-11.74	240	100	peak
2	399.0302	22.94	11.50	34.44	46.00	-11.56	187	100	peak
3	566.6223	27.95	13.58	41.53	46.00	-4.47	240	100	peak
4	633.9073	25.08	14.77	39.85	46.00	-6.15	240	100	peak
5	699.3046	24.24	15.73	39.97	46.00	-6.03	240	100	peak



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

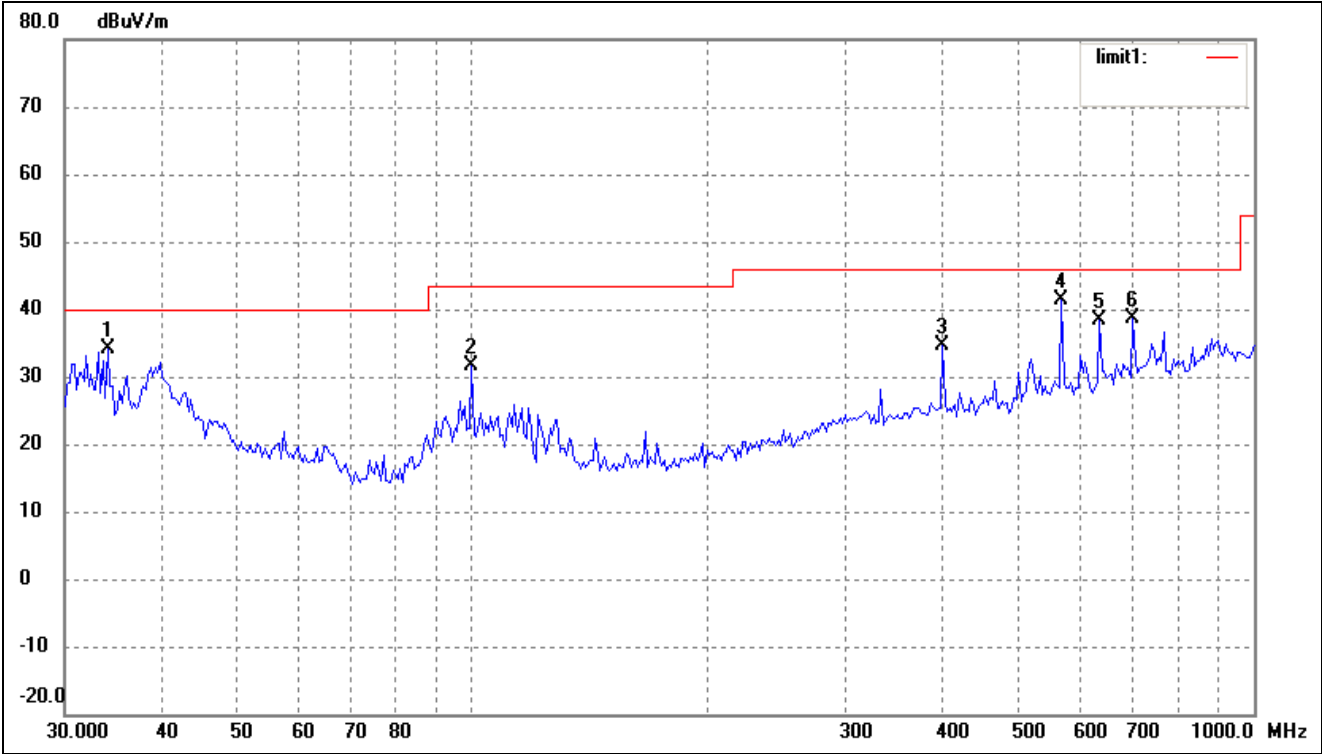
Comment: 3.7V lithium battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	399.0302	26.83	11.50	38.33	46.00	-7.67	162	100	peak
2	531.9635	27.31	12.99	40.30	46.00	-5.70	162	100	peak
3	566.6223	28.49	13.58	42.07	46.00	-3.93	162	100	peak
4	699.3046	26.84	15.73	42.57	46.00	-3.43	162	100	peak
5	932.2715	24.20	18.31	42.51	46.00	-3.49	200	100	peak

Test Specification: Vertical

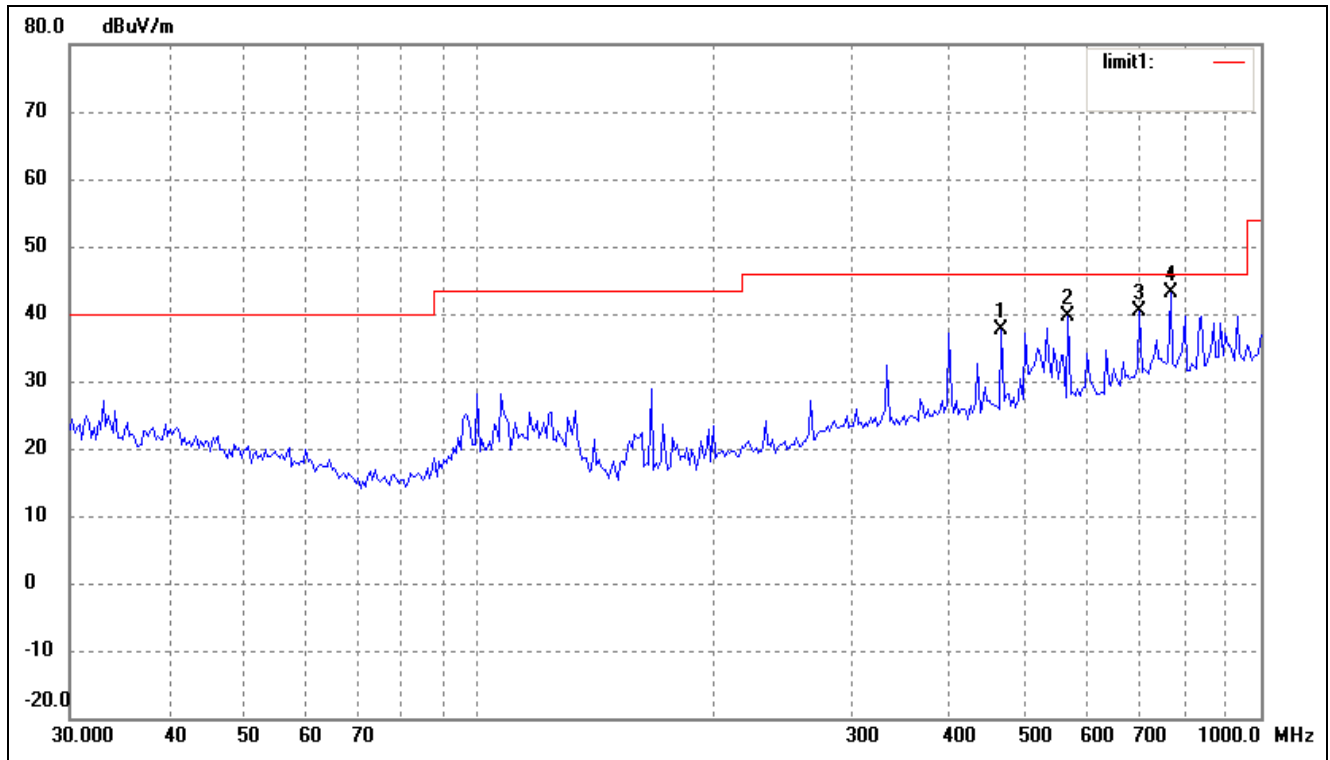


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	34.0365	25.52	8.72	34.24	40.00	-5.76	240	100	peak
2	99.5281	24.83	6.72	31.55	43.50	-11.95	187	100	peak
3	399.0302	23.18	11.50	34.68	46.00	-11.32	187	100	peak
4	566.6223	27.91	13.58	41.49	46.00	-4.51	187	100	peak
5	633.9073	23.70	14.77	38.47	46.00	-7.53	187	100	peak
6	699.3046	22.83	15.73	38.56	46.00	-7.44	220	100	peak

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

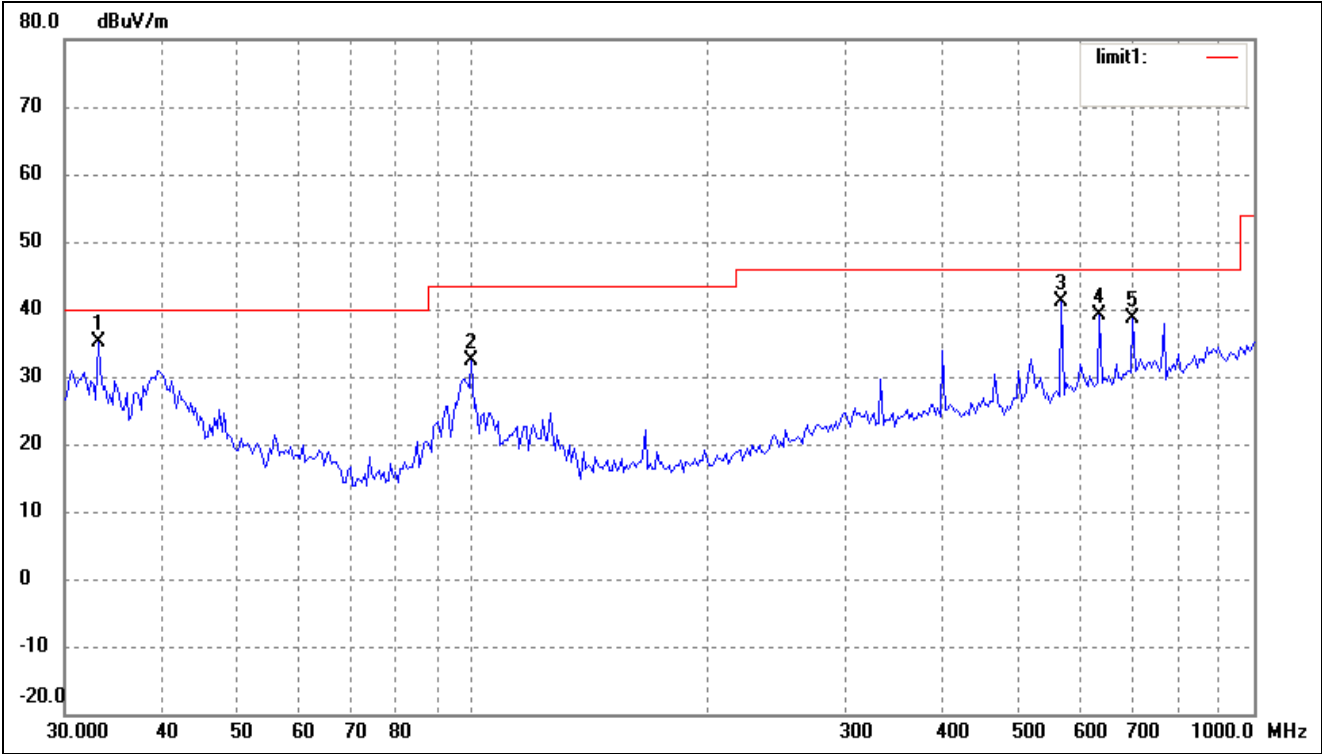
Comment: 3.7V lithium battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	465.5994	26.01	11.69	37.70	46.00	-8.30	162	100	peak
2	566.6223	26.02	13.58	39.60	46.00	-6.40	162	100	peak
3	699.3046	24.62	15.73	40.35	46.00	-5.65	162	100	peak
4	766.0572	26.25	16.77	43.02	46.00	-2.98	162	100	peak

Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	33.0950	26.51	8.56	35.07	40.00	-4.93	240	100	peak
2	99.5281	25.66	6.72	32.38	43.50	-11.12	187	100	peak
3	566.6223	27.55	13.58	41.13	46.00	-4.87	220	100	peak
4	633.9073	24.39	14.77	39.16	46.00	-6.84	220	100	peak
5	699.3046	22.93	15.73	38.66	46.00	-7.34	220	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	60.07	-3.85	56.22	74.00	-17.78	H	PK
4824	42.96	-3.85	39.11	54.00	-14.89	H	AV
7236	46.02	1.14	47.16	74.00	-26.84	H	PK
7236	35.05	1.14	36.19	54.00	-17.81	H	AV
4824	63.01	-3.85	59.16	74.00	-14.84	V	PK
4824	46.55	-3.85	42.70	54.00	-11.3	V	AV
7236	48.41	1.14	49.55	74.00	-24.45	V	PK
7236	35.49	1.14	36.63	54.00	-17.37	V	AV
Middle Channel-2437MHz							
4874	56.70	-3.71	52.99	74.00	-21.01	H	PK
4874	43.84	-3.71	40.13	54.00	-13.87	H	AV
7311	48.35	1.59	49.94	74.00	-24.06	H	PK
7311	35.52	1.59	37.11	54.00	-16.89	H	AV
4874	62.53	-3.71	58.82	74.00	-15.18	V	PK
4874	44.85	-3.71	41.14	54.00	-12.86	V	AV
7311	48.76	1.59	50.35	74.00	-23.65	V	PK
7311	36.09	1.59	37.68	54.00	-16.32	V	AV
High Channel-2462MHz							
4924	57.88	-3.57	54.31	74.00	-19.69	H	PK
4924	42.22	-3.57	38.65	54.00	-15.35	H	AV
7386	47.74	1.91	49.65	74.00	-24.35	H	PK
7386	35.71	1.91	37.62	54.00	-16.38	H	AV
4924	66.25	-3.57	62.68	74.00	-11.32	V	PK
4924	49.02	-3.57	45.45	54.00	-8.55	V	AV
7386	49.58	1.91	51.49	74.00	-22.51	V	PK
7386	36.97	1.91	38.88	54.00	-15.12	V	AV

*Test Mode: 802.11g*

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824	65.25	-3.85	61.40	74.00	-12.6	H	PK
4824	51.1	-3.85	47.25	54.00	-6.75	H	AV
7236	54.92	1.14	56.06	74.00	-17.94	H	PK
7236	38.53	1.14	39.67	54.00	-14.33	H	AV
4824	68.46	-3.85	64.61	74.00	-9.39	V	PK
4824	52.81	-3.85	48.96	54.00	-5.04	V	AV
7236	57.6	1.14	58.74	74.00	-15.26	V	PK
7236	38.26	1.14	39.40	54.00	-14.6	V	AV
Middle Channel-2437MHz							
4874	62.88	-3.71	59.17	74.00	-14.83	H	PK
4874	49.39	-3.71	45.68	54.00	-8.32	H	AV
7311	50.42	1.59	52.01	74.00	-21.99	H	PK
7311	36.66	1.59	38.25	54.00	-15.75	H	AV
4874	64.92	-3.71	61.21	74.00	-12.79	V	PK
4874	51.46	-3.71	47.75	54.00	-6.25	V	AV
7311	53.13	1.59	54.72	74.00	-19.28	V	PK
7311	38.42	1.59	40.01	54.00	-13.99	V	AV
High Channel-2462MHz							
4924	63.27	-3.57	59.70	74.00	-14.3	H	PK
4924	49.08	-3.57	45.51	54.00	-8.49	H	AV
7386	48.13	1.91	50.04	74.00	-23.96	H	PK
7386	36.3	1.91	38.21	54.00	-15.79	H	AV
4924	60.98	-3.57	57.41	74.00	-16.59	V	PK
4924	47.97	-3.57	44.40	54.00	-9.6	V	AV
7386	48.91	1.91	50.82	74.00	-23.18	V	PK
7386	36.92	1.91	38.83	54.00	-15.17	V	AV

Test Mode: 802.11n-HT20

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824	60.5	-3.85	56.65	74.00	-17.35	H	PK
4824	45.67	-3.85	41.82	54.00	-12.18	H	AV
7236	36.48	1.14	37.62	54.00	-16.38	H	PK
7236	48.37	1.14	49.51	74.00	-24.49	H	AV
4824	65.09	-3.85	61.24	74.00	-12.76	V	PK
4824	53.45	-3.85	49.60	54.00	-4.40	V	AV
7236	54.17	1.14	55.31	74.00	-18.69	V	PK
7236	37.36	1.14	38.50	54.00	-15.5	V	AV
Middle Channel-2437MHz							
4874	68.56	-3.71	64.85	74.00	-9.15	H	PK
4874	53.49	-3.71	49.78	54.00	-4.22	H	AV
7311	54.62	1.59	56.21	74.00	-17.79	H	PK
7311	38.32	1.59	39.91	54.00	-14.09	H	AV
4874	64.05	-3.71	60.34	74.00	-13.66	V	PK
4874	49.4	-3.71	45.69	54.00	-8.31	V	AV
7311	53.88	1.59	55.47	74.00	-18.53	V	PK
7311	38.94	1.59	40.53	54.00	-13.47	V	AV
High Channel-2462MHz							
4924	63.84	-3.57	60.27	74.00	-13.73	H	PK
4924	49.98	-3.57	46.41	54.00	-7.59	H	AV
7386	54.05	1.91	55.96	74.00	-18.04	H	PK
7386	37.19	1.91	39.10	54.00	-14.9	H	AV
4924	67.3	-3.57	63.73	74.00	-10.27	V	PK
4924	56.67	-3.57	53.10	54.00	-0.90	V	AV
7386	55.04	1.91	56.95	74.00	-17.05	V	PK
7386	39.61	1.91	41.52	54.00	-12.48	V	AV

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 5<sup>th</sup> 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.

## 8. Out of Band 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).

### 8.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2013-03-28	2014-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2013-03-28	2014-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2013-03-28	2014-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2013-03-28	2014-03-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2013-02-25	2014-02-24
Horn Antenna	ETS	3117	00086197	2013-02-25	2014-02-24

### 8.3 Test Procedure

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

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

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

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

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

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



According to the DA 00-705, the band-edge conducted 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 (2380MHz to 2410MHz for low bandedge, 2470MHz to 2500MHz for the high bandedge)

RBW = 1MHz, VBW = 3MHz

Sweep = auto; Detector function = peak; 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 limit specified in this section (at least 20dB attenuation).

## 8.4 Environmental Conditions

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

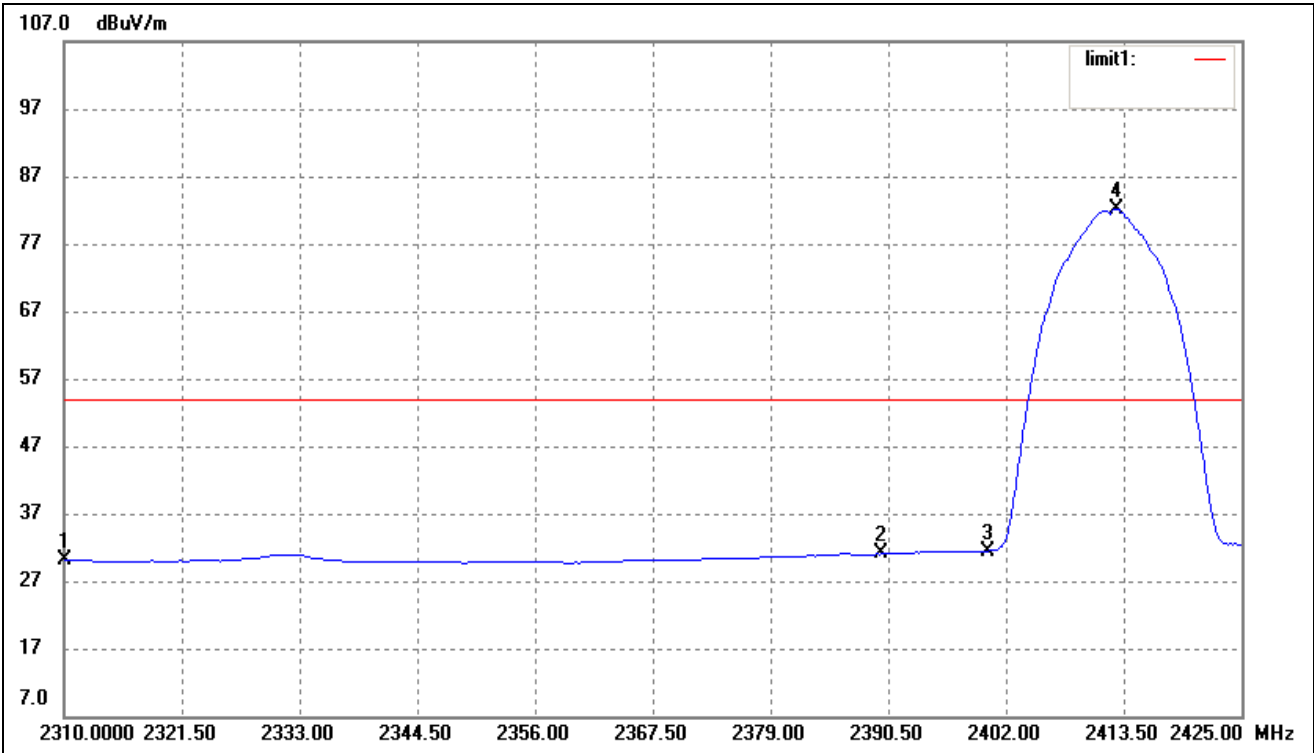
## 8.5 Summary of Test Results/Plots

Test Mode	Test Frequency MHz	Limit dBuV / dBc	Result
802.11b	2390.00	<54 dBuV	Pass
	2400.00	>20 dBc	Pass
	2483.50	<54 dBuV	Pass
802.11g	2390.00	<54 dBuV	Pass
	2400.00	>20 dBc	Pass
	2483.50	<54 dBuV	Pass
802.11n-HT20	2390.00	<54 dBuV	Pass
	2400.00	>20 dBc	Pass
	2483.50	<54 dBuV	Pass
802.11n-HT40	2390.00	<54 dBuV	Pass
	2400.00	>20 dBc	Pass
	2483.50	<54 dBuV	Pass

The edge emissions are below the FCC 15.209 Limits or complies with the 15.247(d) requirements.

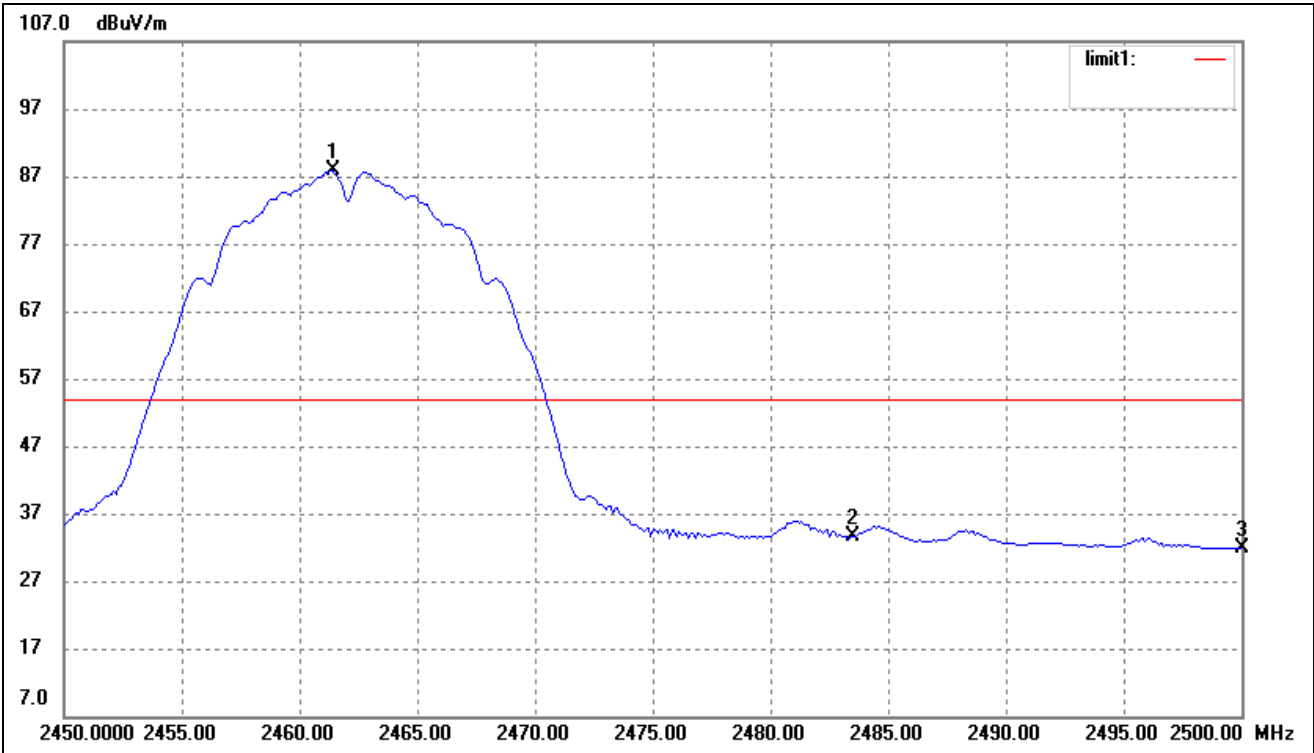
Please refer to the test plots as below.

802.11b-Lowest Bandedge



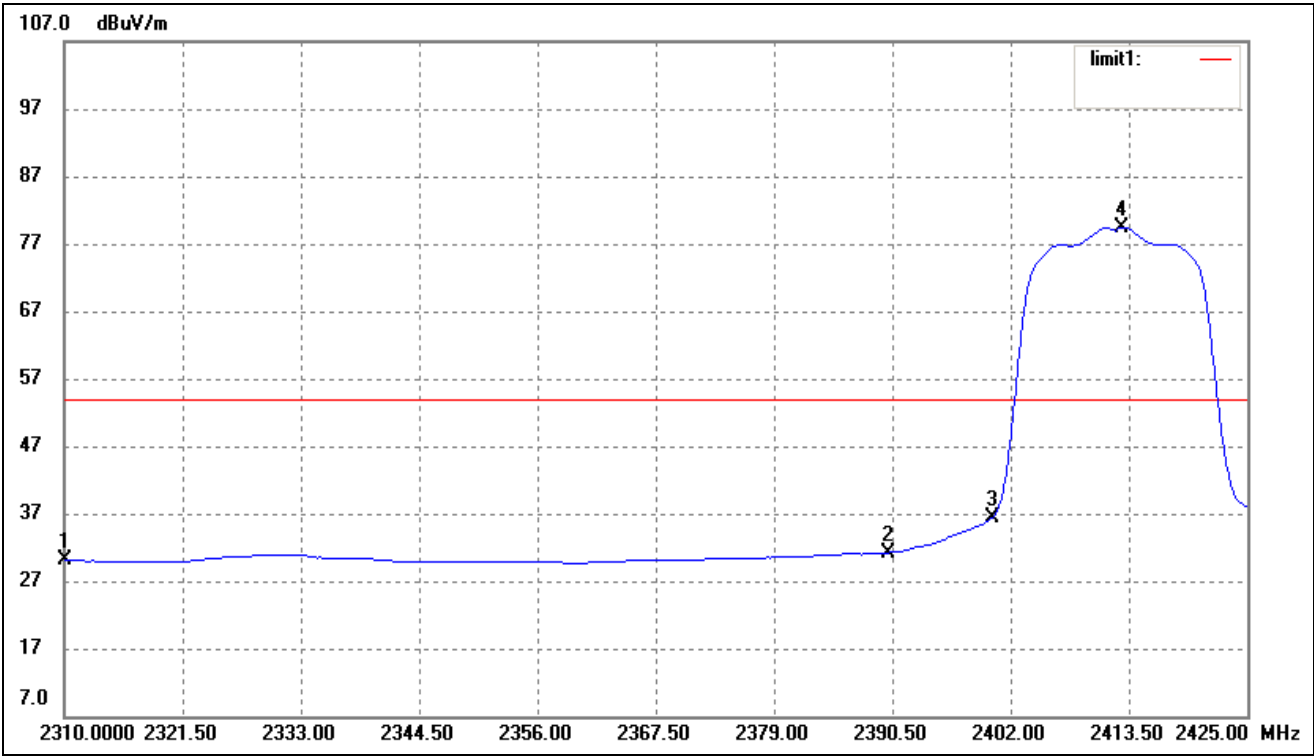
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	33.83	-3.71	30.12	54.00	-23.88	Average Detector
	2310.000	47.34	-3.71	43.63	74.00	-30.37	Peak Detector
2	2390.000	34.56	-3.54	31.02	54.00	-22.98	Average Detector
	2390.000	48.03	-3.54	44.49	74.00	-29.51	Peak Detector
4	2400.000	34.98	-3.51	31.47	Delta = 50.66 dBc		Average Detector
5	2412.810	85.61	-3.48	82.13			Average Detector

802.11b-Highest Bandedge



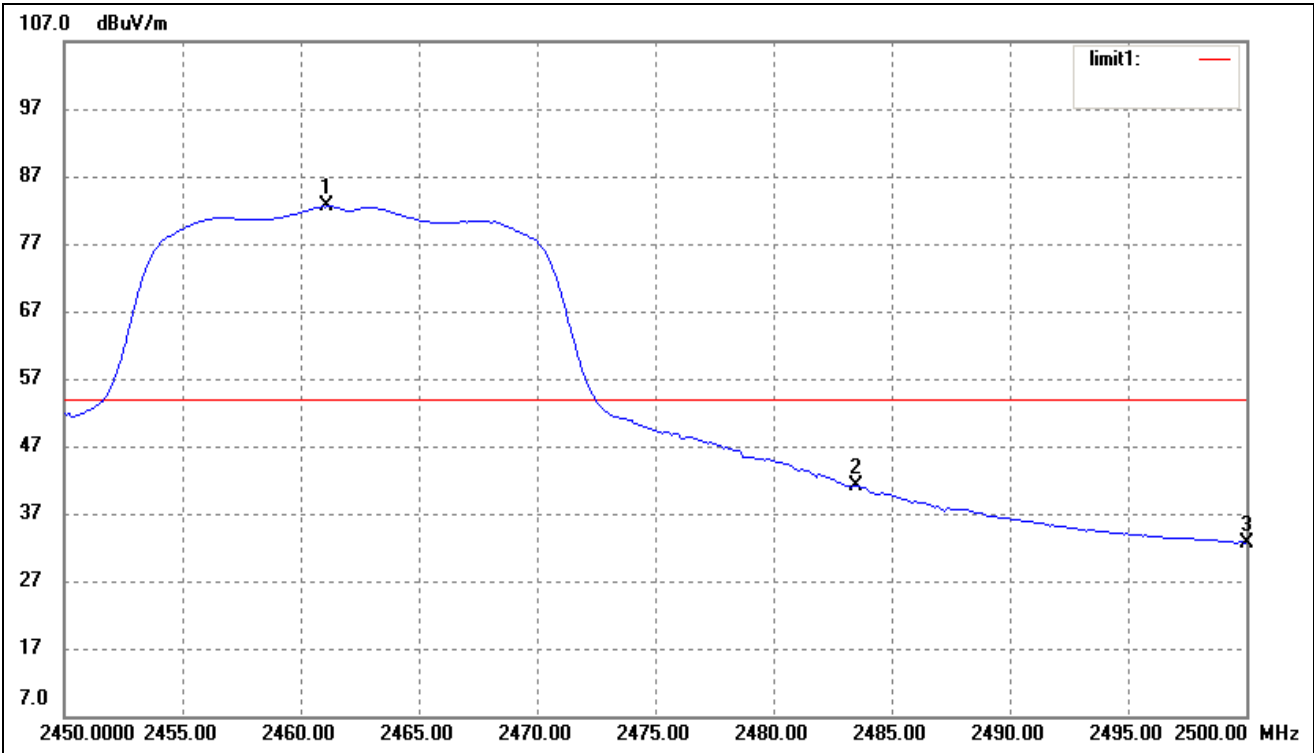
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2461.400	91.23	-3.37	87.86	/	/	Average Detector
	2461.000	95.92	-3.37	92.55	/	/	Peak Detector
2	2483.500	Delta = 53.52 dBc		34.34	54.00	-19.66	Average Detector
	2483.500			39.03	74.00	-34.97	Peak Detector
3	2500.000	35.12	-3.28	31.84	54.00	-22.16	Average Detector
	2500.000	49.08	-3.28	45.80	74.00	-28.20	Peak Detector

802.11g-Lowest Bandedge



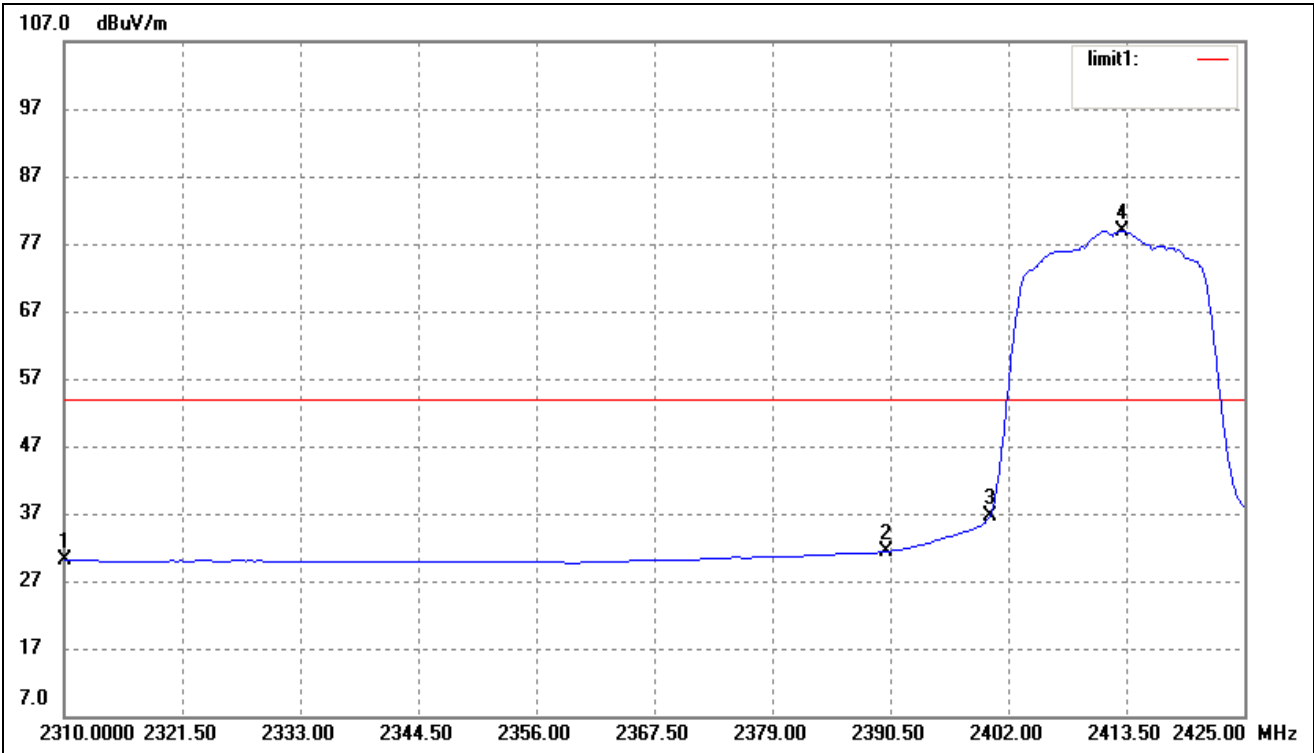
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	33.80	-3.71	30.09	54.00	-23.91	Average Detector
	2310.000	46.62	-3.71	42.91	74.00	-31.09	Peak Detector
2	2390.000	34.74	-3.54	31.20	54.00	-22.80	Average Detector
	2390.000	48.11	-3.54	44.57	74.00	-29.43	Peak Detector
3	2400.000	39.86	-3.51	36.35	Delta = 43.10 dBc		Average Detector
4	2412.810	82.93	-3.48	79.45			Average Detector

802.11g-Highest Bandedge



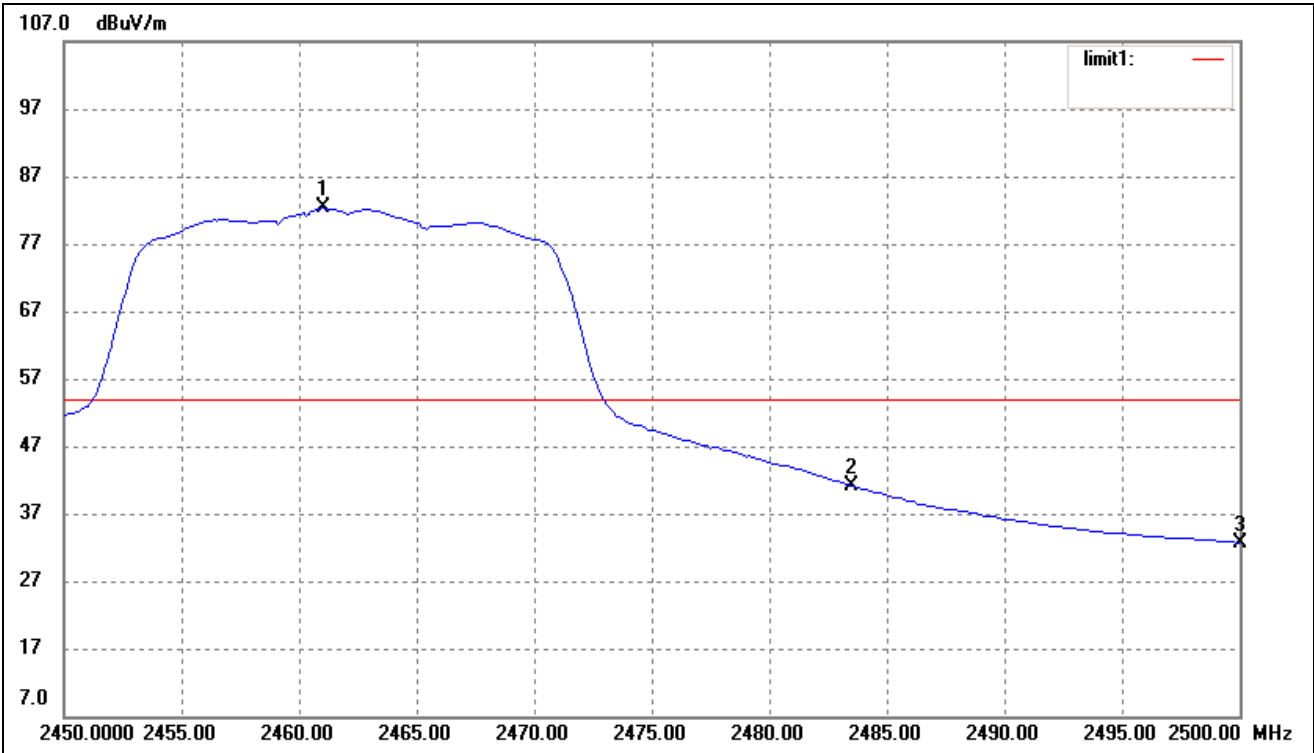
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2461.100	85.93	-3.37	82.56	/	/	Average Detector
	2461.200	100.47	-3.37	97.10	/	/	Peak Detector
2	2483.500	Delta = 45.29 dBc		37.27	54.00	-16.73	Average Detector
	2483.500			51.81	74.00	-22.19	Peak Detector
3	2500.000	35.94	-3.28	32.66	54.00	-21.34	Average Detector
	2500.000	50.04	-3.28	46.76	74.00	-27.24	Peak Detector

802.11n-HT20-Lowest Bandedge



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	33.82	-3.71	30.11	54.00	-23.89	Average Detector
	2310.000	46.92	-3.71	43.21	74.00	-30.79	Peak Detector
2	2390.000	34.90	-3.54	31.36	54.00	-22.64	Average Detector
	2390.000	50.44	-3.54	46.90	74.00	-27.10	Peak Detector
3	2400.000	40.12	-3.51	36.61	Delta = 42.31 dBc		Average Detector
4	2413.040	82.40	-3.48	78.92			Average Detector

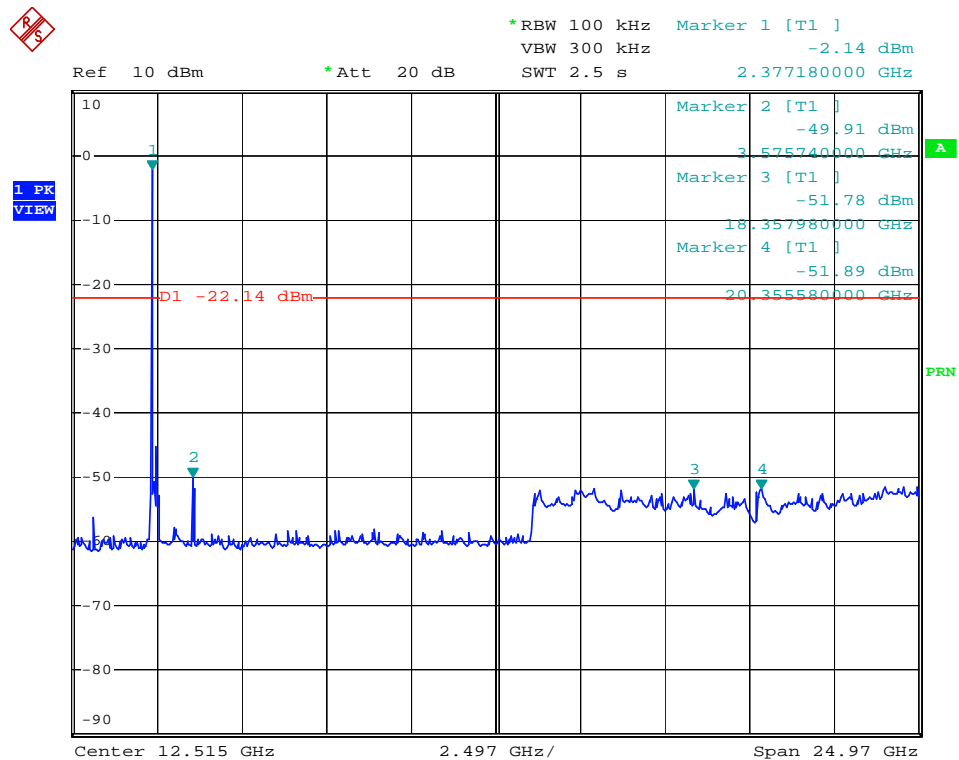
802.11n-HT20-Highest Bandedge



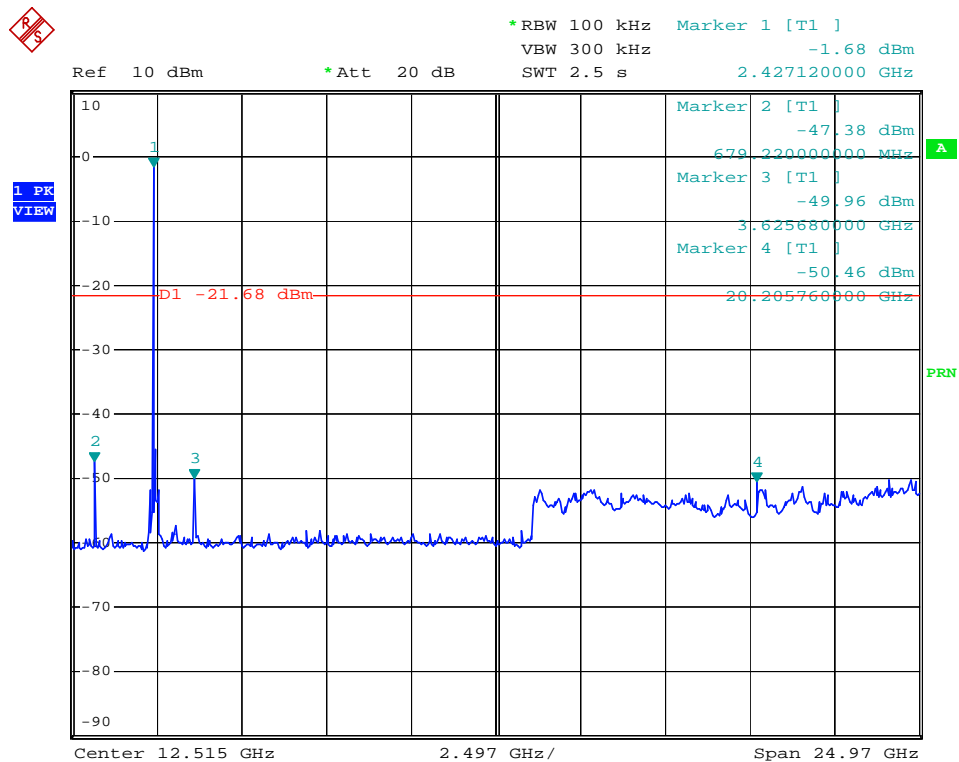
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2461.000	85.63	-3.37	82.26	/	/	Average Detector
	2461.800	100.30	-3.37	96.93	/	/	Peak Detector
2	2483.500	Delta = 48.42 dBc		33.84	54.00	-20.16	Average Detector
	2483.500			48.51	74.00	-25.49	Peak Detector
3	2500.000	35.96	-3.28	32.68	54.00	-21.32	Average Detector
	2500.000	50.72	-3.28	47.44	74.00	-26.56	Peak Detector

## Conducted Spurious Emissions

### 802.11b Low Bandedge

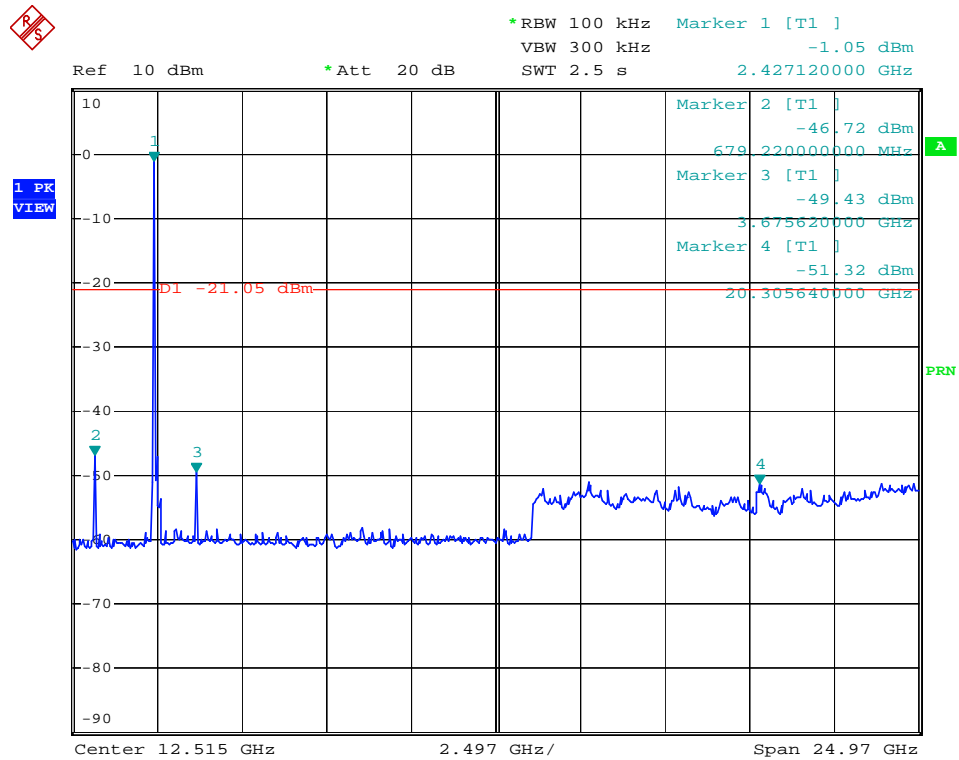


### 802.11b Middle Bandedge

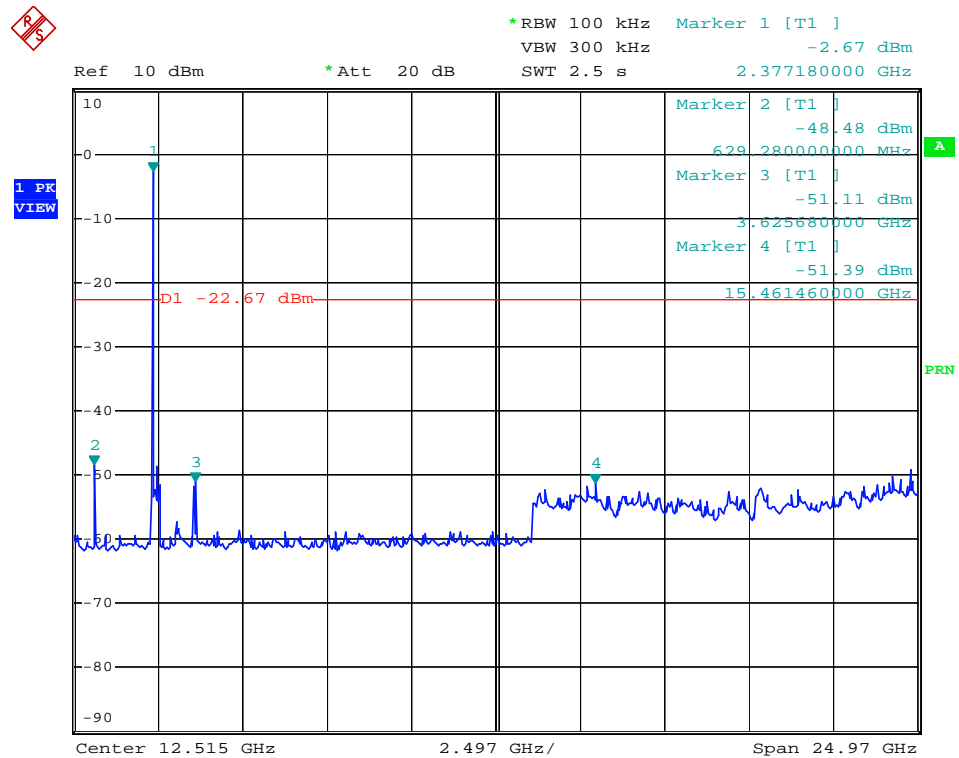




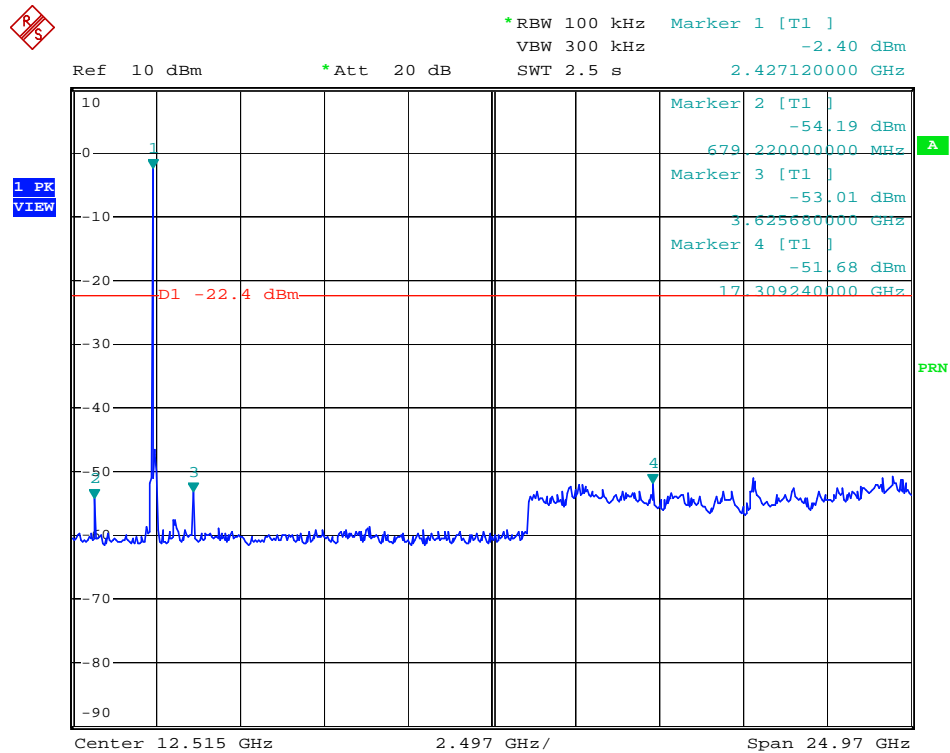
## 802.11b High Bandedge



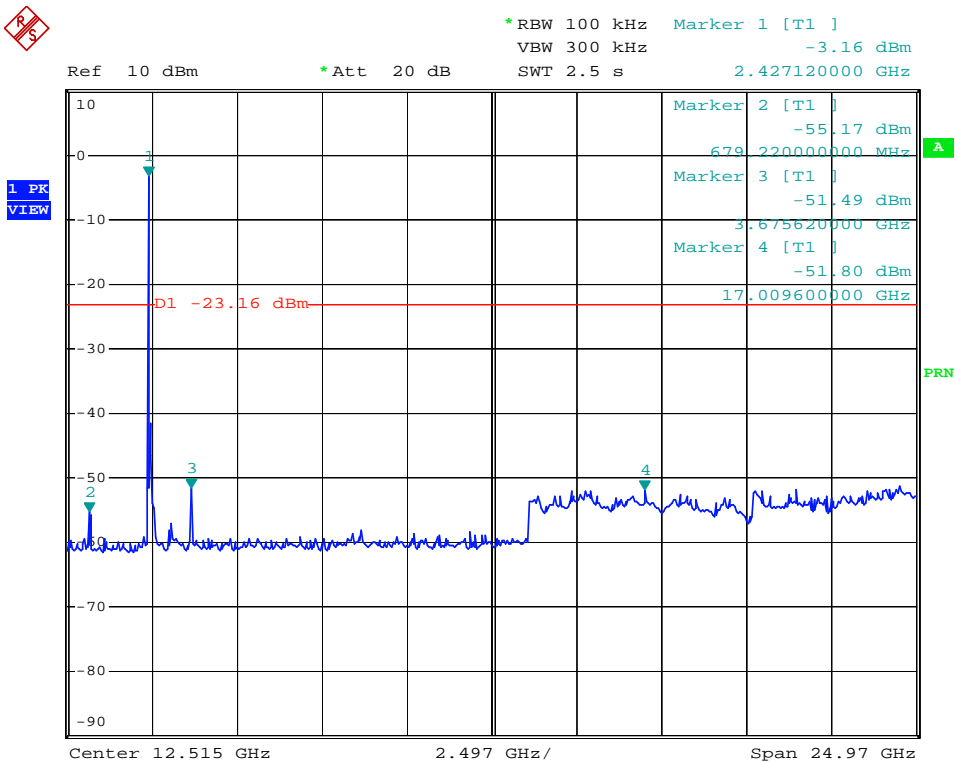
## 802.11g Low Bandedge



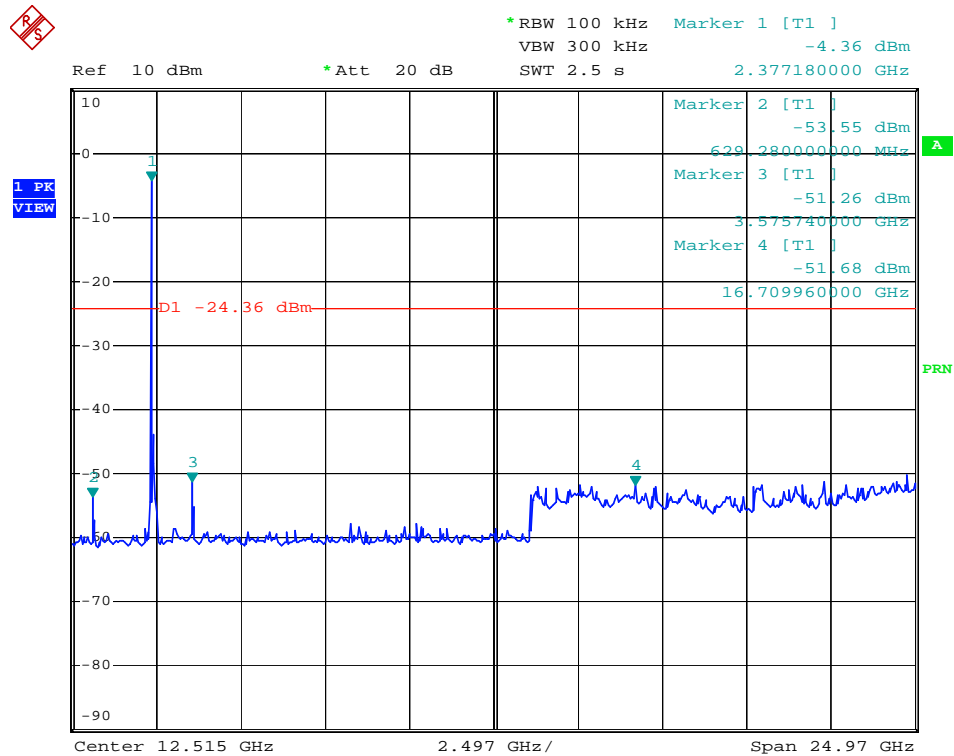
## 802.11g Middle Bandedge



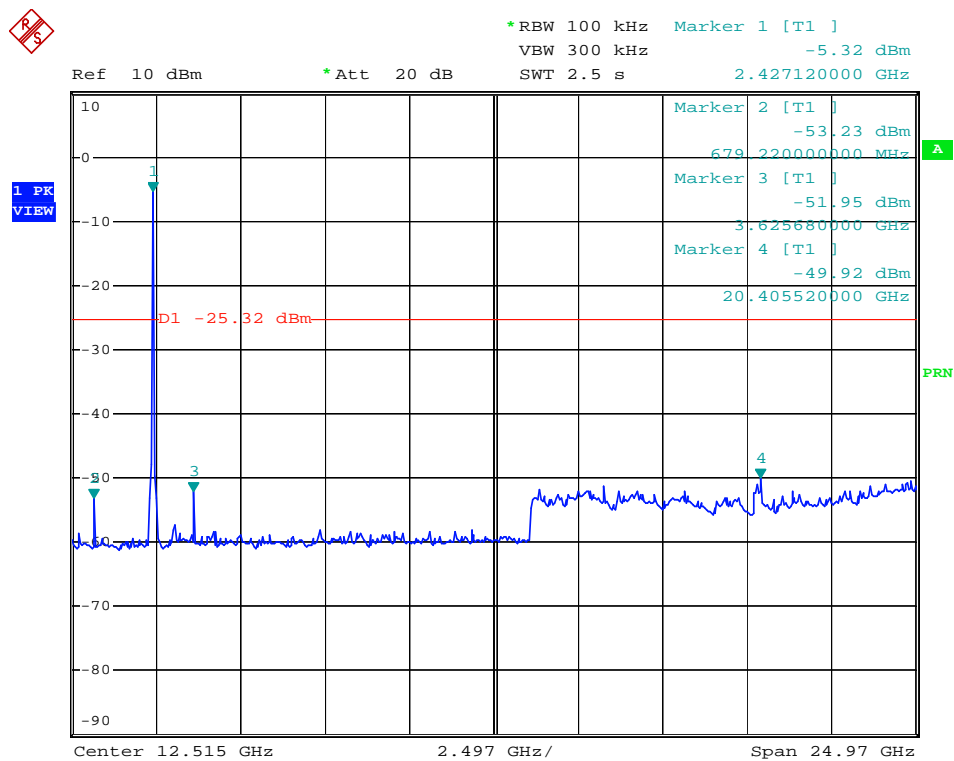
## 802.11g High Bandedge



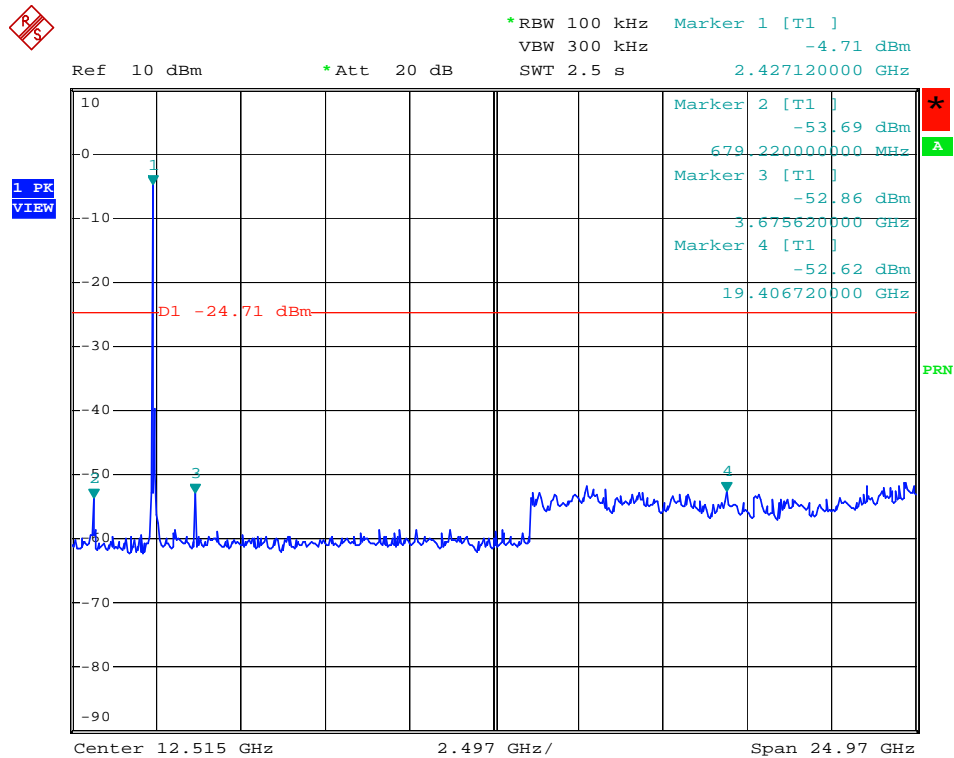
## 802.11n-HT20 Low Bandedge



## 802.11n-HT20 Middle Bandedge



## 802.11n-HT20 High Bandedge



## 9. Conducted Emissions

### 9.1 Measurement Uncertainty

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

### 9.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2013-03-28	2014-03-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2013-03-28	2014-03-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2013-03-28	2014-03-27

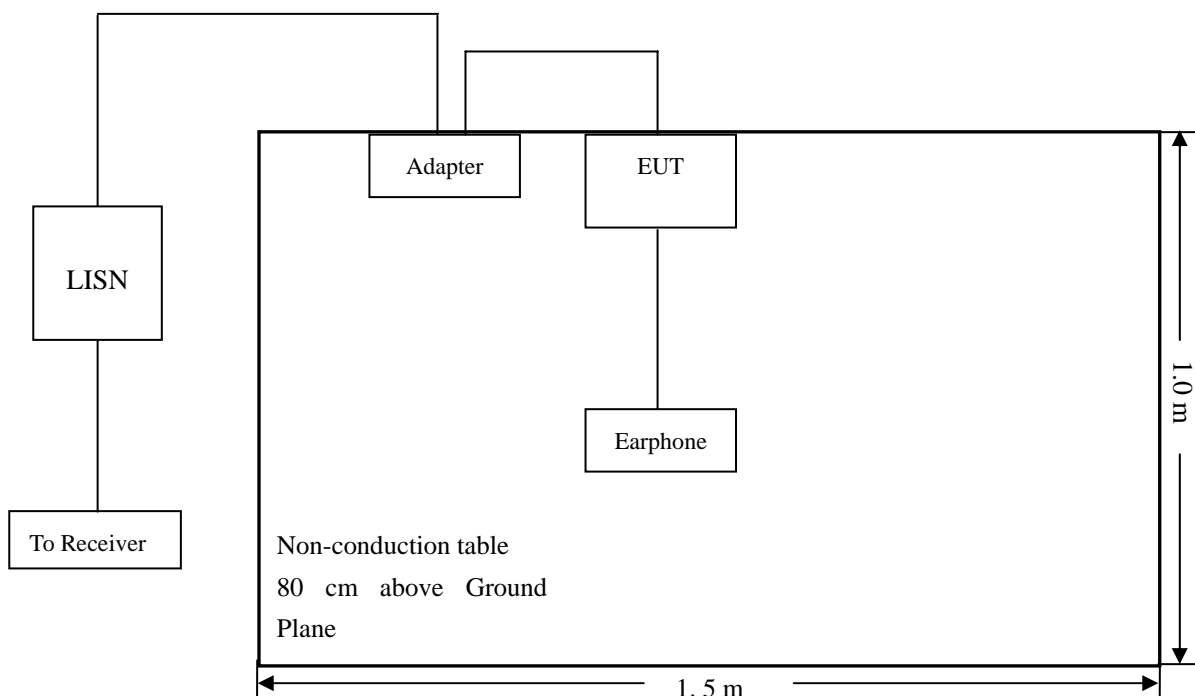
### 9.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.207 Limit.

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

The spacing between the peripherals was 10 cm.

### 9.4 Basic Test Setup Block Diagram



9.5 Environmental Conditions

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

9.6 Test Receiver Setup

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

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

9.7 Summary of Test Results/Plots

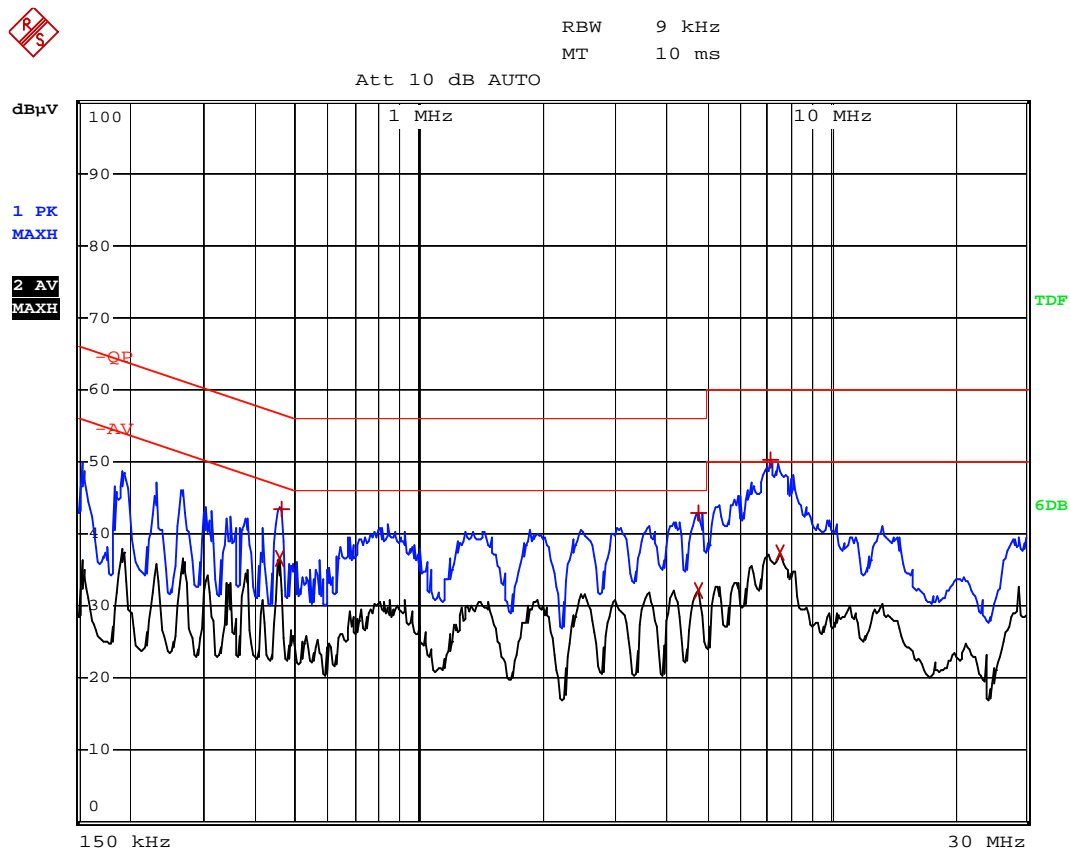
According to the data in section 9.8, the EUT complied with the FCC Part 15.207 Conducted margin for a Class B device, with the *worst* margin reading of:

**-4.50 dB at 0.338 MHz in the Line mode, Ave detector, 0.15-30MHz**

9.8 Conducted Emissions Test Data

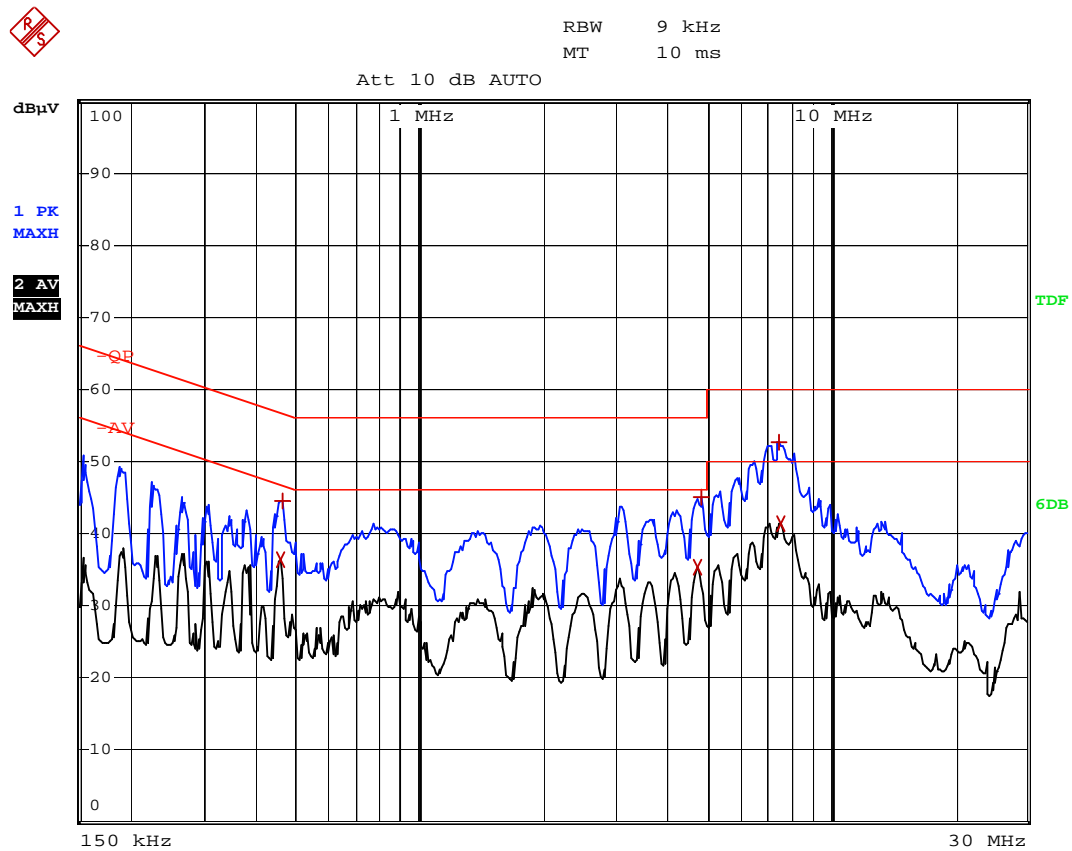
Plot of Conducted Emissions Test Data

EUT: MID  
Tested Model: HS-7DIB14  
Operating Condiation: Transmitting  
Comment: Input AC 120V/60Hz adapter, Output DC 5V  
  
Test Specification: Neutral



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	458 kHz	36.50	-10.22
1 Max Peak	462 kHz	43.56	-13.09
2 Average	4.79 MHz	32.26	-13.73
1 Max Peak	4.798 MHz	42.98	-13.01
1 Max Peak	7.202 MHz	50.33	-9.66
2 Average	7.574 MHz	37.42	-12.57

Test Specification:	Line
---------------------	------



EDIT PEAK LIST (Prescan Results)			
Trace1:		-QP	
Trace2:		-AV	
Trace3:		---	
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	458 kHz	36.33	-10.39
1 Max Peak	462 kHz	44.52	-12.12
2 Average	4.762 MHz	35.17	-10.82
1 Max Peak	4.846 MHz	45.06	-10.93
1 Max Peak	7.498 MHz	52.69	-7.30
2 Average	7.546 MHz	41.44	-8.55

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