

FCC Part 15C

Measurement and Test Report

For

ELECTRONICS TECHNOLOGY(DONG GUAN) COMPANY LIMITED

No. 161, Xin Min Road, Tong Luo Wei Industrial Zone, Dong Guan, China

FCC ID:ZL9-M72BW2

FCC Rule(s):	<u>FCC Part 15C</u>
Product Description:	<u>Tablet</u>
Tested Model:	<u>M72BW2-WP(AP)</u>
Report No.:	<u>STR14118242I-1</u>
Tested Date:	<u>2014-11-26 to 2014-12-03</u>
Issued Date:	<u>2014-12-03</u>
Tested By:	<u>Lebron Wang / Engineer</u>
Reviewed By:	<u>Lahm Peng / EMC Manager</u>
Approved & Authorized By:	<u>Jandy So / PSO Manager</u>
Prepared By:	

Lebron Wang

Lahm peng

Jandyso

Shenzhen SEM.Test Technology Co., Ltd.

1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road,
Bao'an District, Shenzhen, P.R.C. (518101)

Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

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

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: ELECTRONICS TECHNOLOGY(DONG GUAN) COMPANY LIMITED

Address of applicant: No. 161, Xin Min Road, Tong Luo Wei Industrial Zone, Dong Guan, China

Manufacturer: ELECTRONICS TECHNOLOGY(DONG GUAN) COMPANY LIMITED

Address of manufacturer: No. 161, Xin Min Road, Tong Luo Wei Industrial Zone, Dong Guan, China

General Description of EUT

Product Name:	Tablet
Trade Name:	/
Model No.:	M72BW2-WP(AP)
Adding Model(s):	Xtreme Play Tab v2
Rated Voltage:	Adapter: DC 5V/1.5A, Battery: DC 3.7V
Power Adapter Model:	PGAE0500150U1UL
<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 M72BW2-WP(AP), 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
Frequency Range:	2412-2472MHz, 2422-2462MHz
RF Output Power:	15.78dBm(Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels:	13/9
Channel Separation:	5MHz
Type of Antenna:	Integral
Antenna Gain:	0dBi

1.2 Test Standards

The following report is prepared on behalf of the ELECTRONICS TECHNOLOGY(DONG GUAN) COMPANY LIMITED 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 measurement guide KDB 558074 D01 V03r02 for digital transmission systems shall be performed also.

1.4 Test Facility

FCC – Registration No.: 934118

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

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM.Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

CNAS Registration No.: L4062

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

1.5 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	802.11b	2412MHz, 2442MHz, 2462MHz, 2467MHz, 2472MHz
TM2	802.11g	2412MHz, 2442MHz, 2462MHz, 2467MHz, 2472MHz
TM3	802.11n-HT20	2412MHz, 2442MHz, 2462MHz, 2467MHz, 2472MHz
TM4	802.11n-HT40	2422MHz, 2442MHz, 2462MHz

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
USB Cable	0.6	Unshielded	Without Ferrite

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
Earphone Cable	1.2	Unshielded	Without Ferrite

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Notebook Computer	ASUS	X42J	/

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§ 2.1093	RF Exposure	Compliant
§ 15.203; § 15.247(b)(4)(i)	Antenna Requirement	Compliant
§ 15.207(a)	Conducted Emission	Compliant
§ 15.247(e)	Power Spectral Density	Compliant
§ 15.247(a)(2)	6 dB Bandwidth	Compliant
§ 15.247(b)(3)	RF Output Power	Compliant
§ 15.209(a)	Radiated Emission	Compliant
§ 15.247(d)	Band Edge (Out of Band Emissions)	Compliant

N/A: not applicable

3. RF Exposure

3.1 Standard Applicable

According to § 1.1307 and § 2.1093, the portable transmitter must comply the RF exposure requirements.

3.2 Test Result

This product complied with the requirement of the RF exposure, please see the SAR Report.

4. Antenna Requirement

4.1 Standard Applicable

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

4.2 Evaluation Information

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

5. Power Spectral Density

5.1 Standard Applicable

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

5.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2014-05-28	2015-05-27
Attenuator	ATTEN	ATS100-4-20	/	2014-05-28	2015-05-27

5.3 Test Procedure

According to the KDB 558074 D01 V03r02, the test method of power spectral density as below:

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

5.4 Environmental Conditions

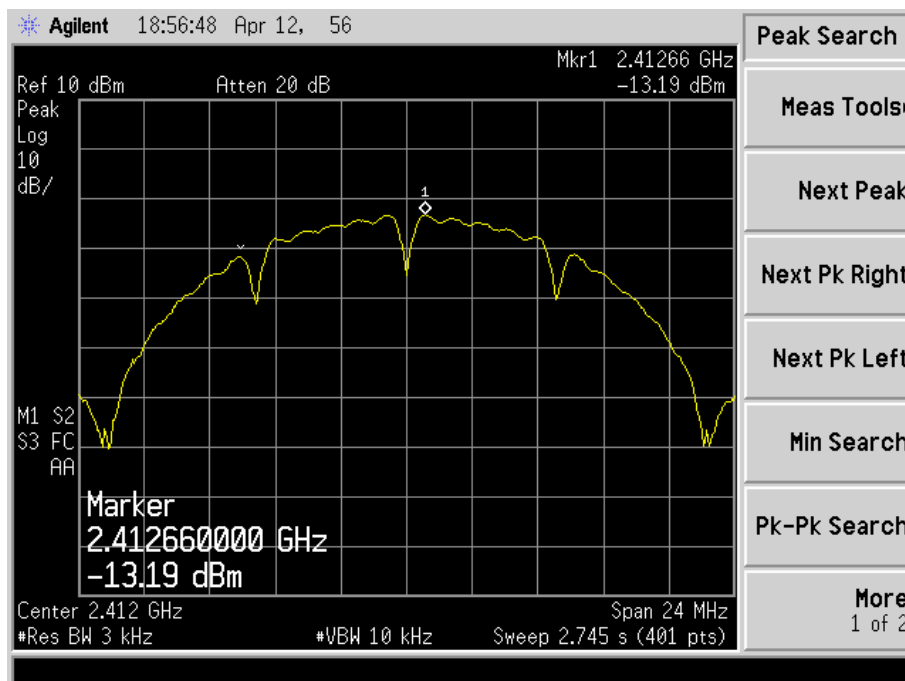
Temperature:	26° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

5.5 Summary of Test Results/Plots

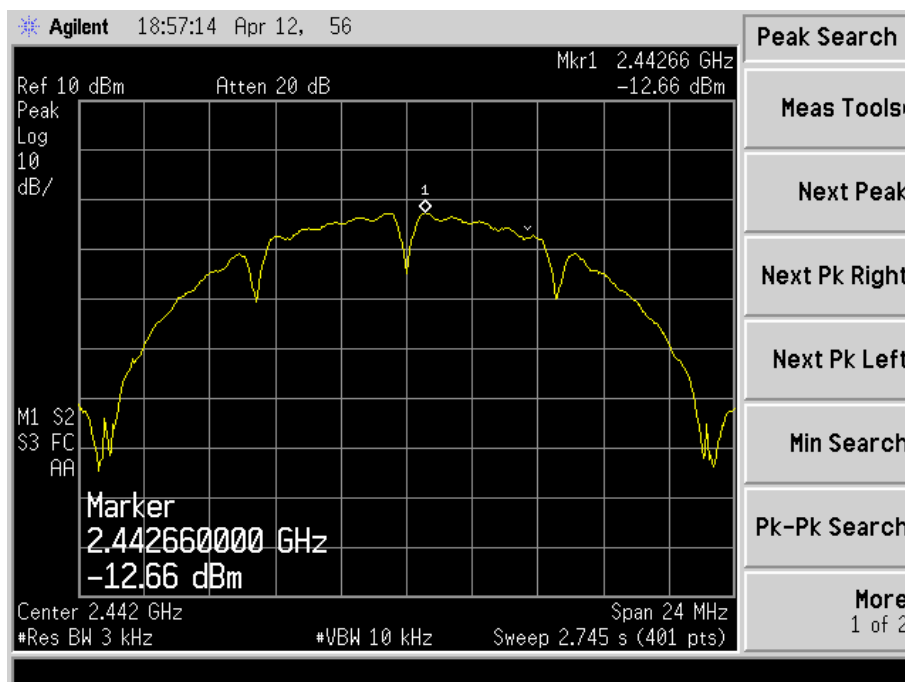
Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
802.11b	2412	-13.19	8
	2442	-12.66	8
	2462	-12.22	8
	2467	-12.12	8
	2472	-12.92	8
802.11g	2412	-14.27	8
	2442	-13.68	8
	2462	-13.11	8
	2467	-13.33	8
	2472	-13.54	8
802.11n HT20	2412	-14.51	8
	2442	-13.43	8
	2462	-12.23	8
	2467	-14.41	8
	2472	-13.64	8
802.11n HT40	2422	-16.71	8
	2442	-17.42	8
	2462	-17.19	8

Please refer to the following test plots:

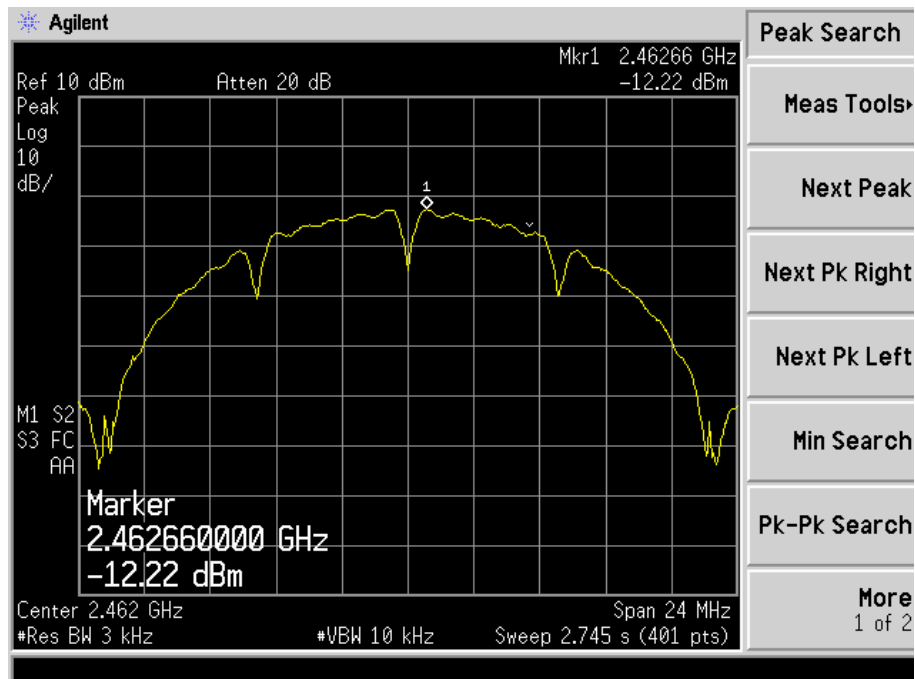
802.11b-Channel 1-2412MHz



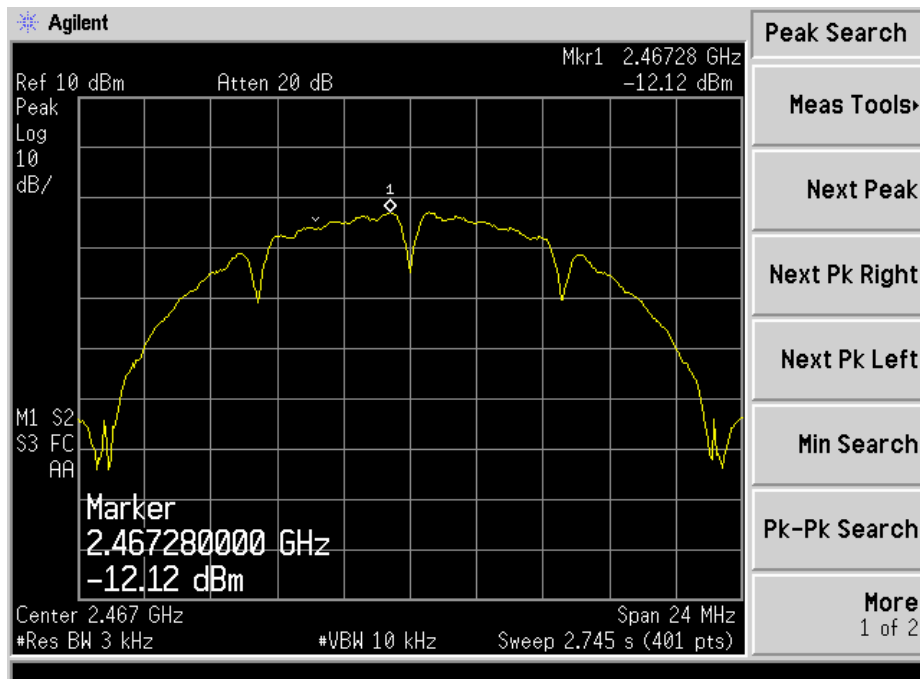
802.11b- Channel 7-2442MHz



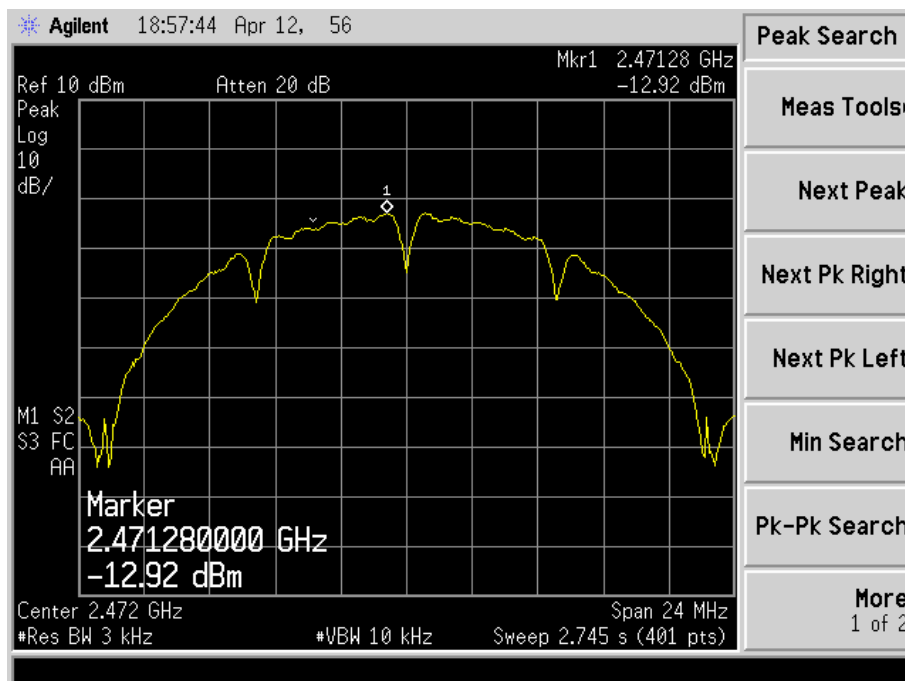
802.11b-Channel 11-2462MHz



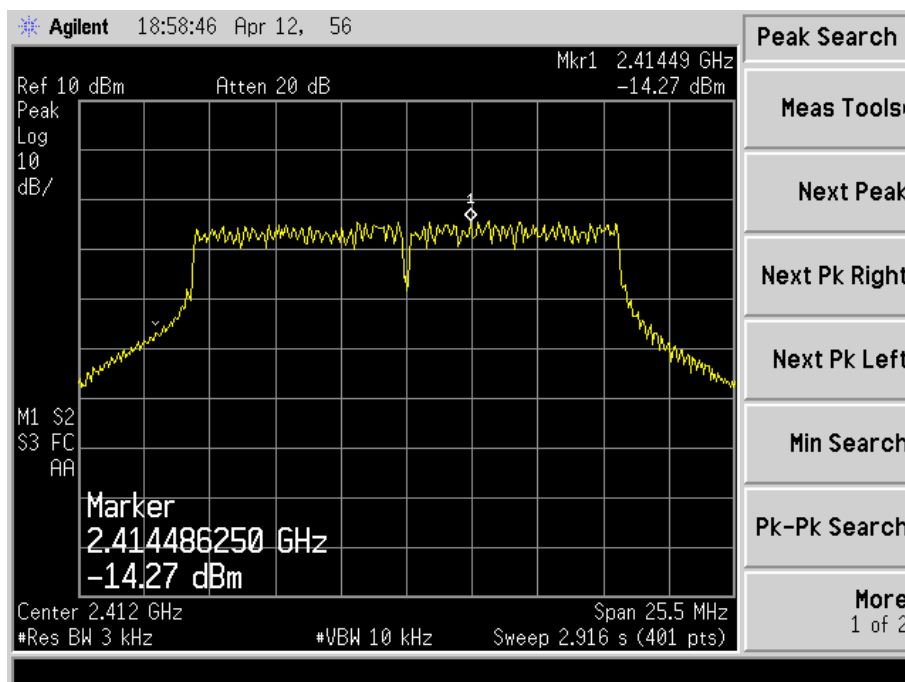
802.11b-Channel 12-2467MHz



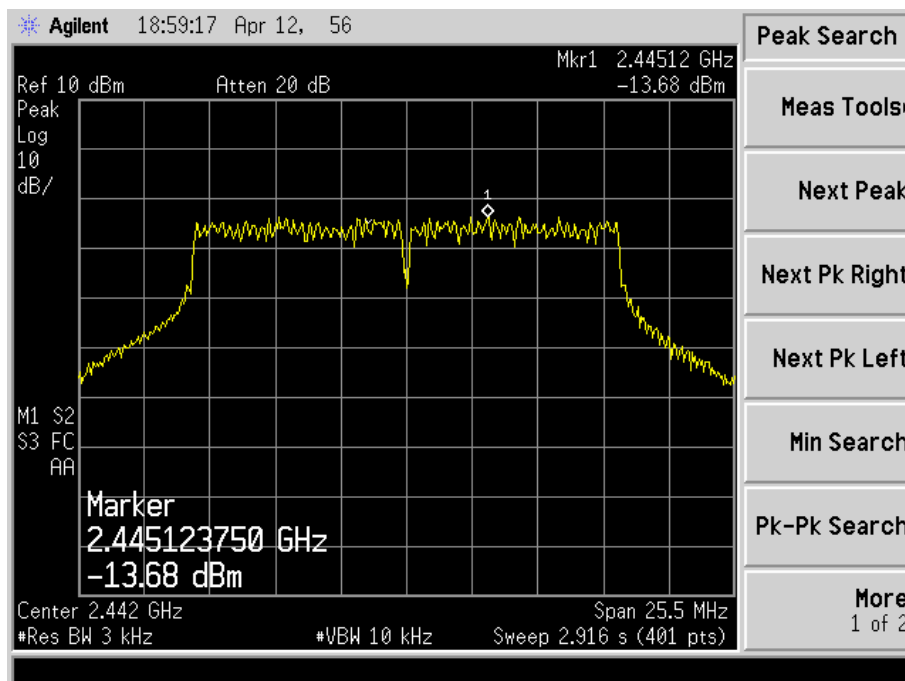
802.11b-Channel 13-2472MHz



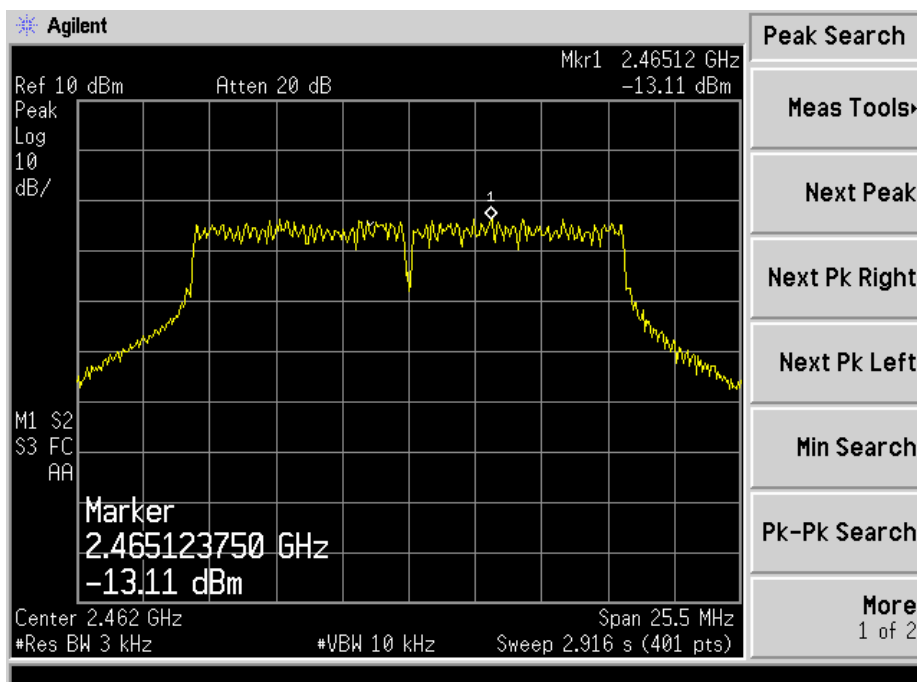
802.11g-Channel 1-2412MHz



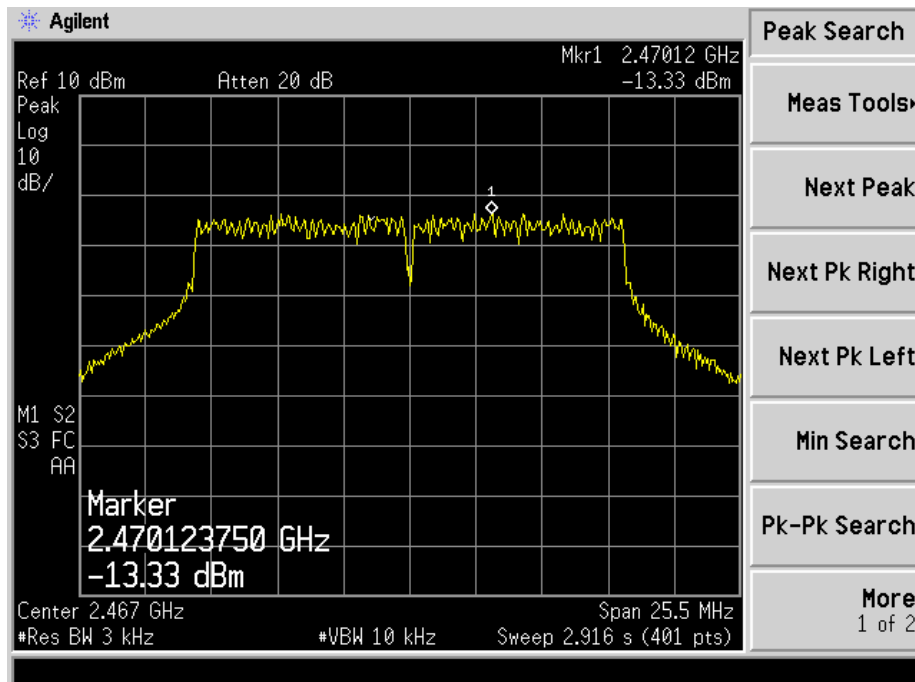
802.11g- Channel 7-2442MHz



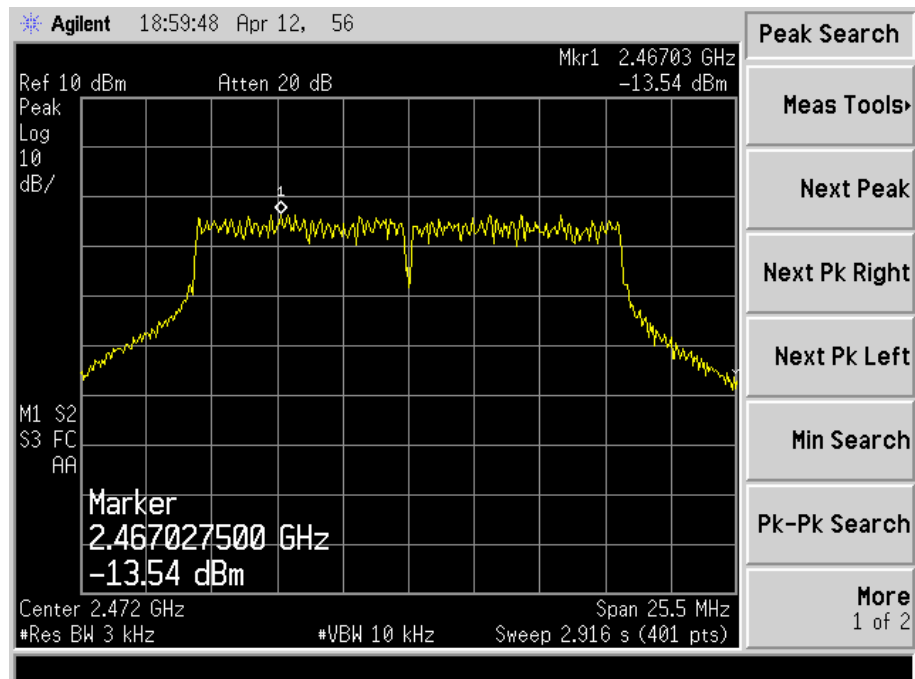
802.11g-Channel 11-2462MHz



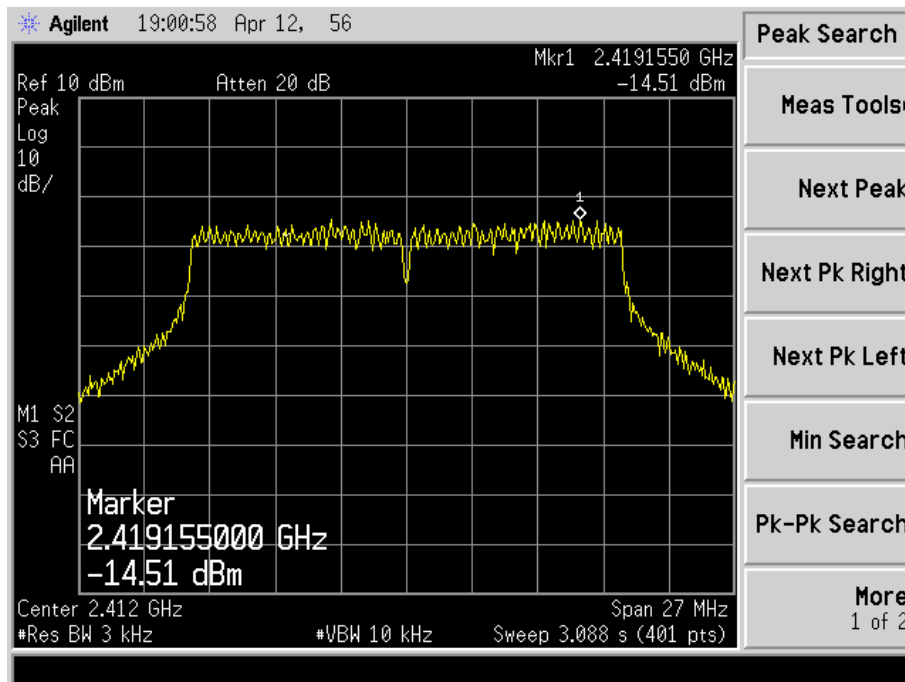
802.11g-Channel 12-2467MHz



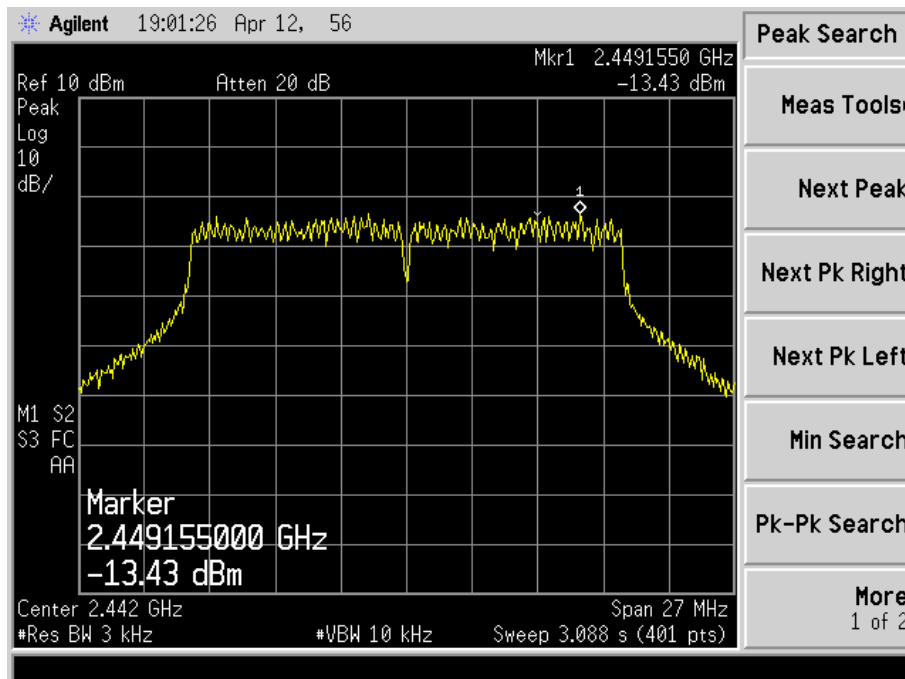
802.11g-Channel 13-2472MHz



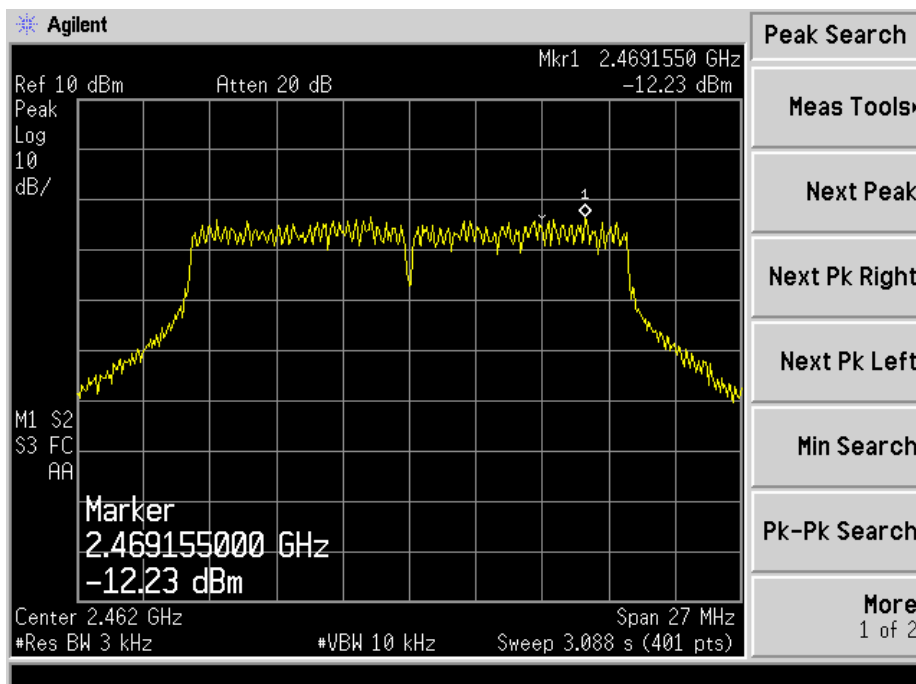
802.11n-HT20-Channel 1-2412MHz



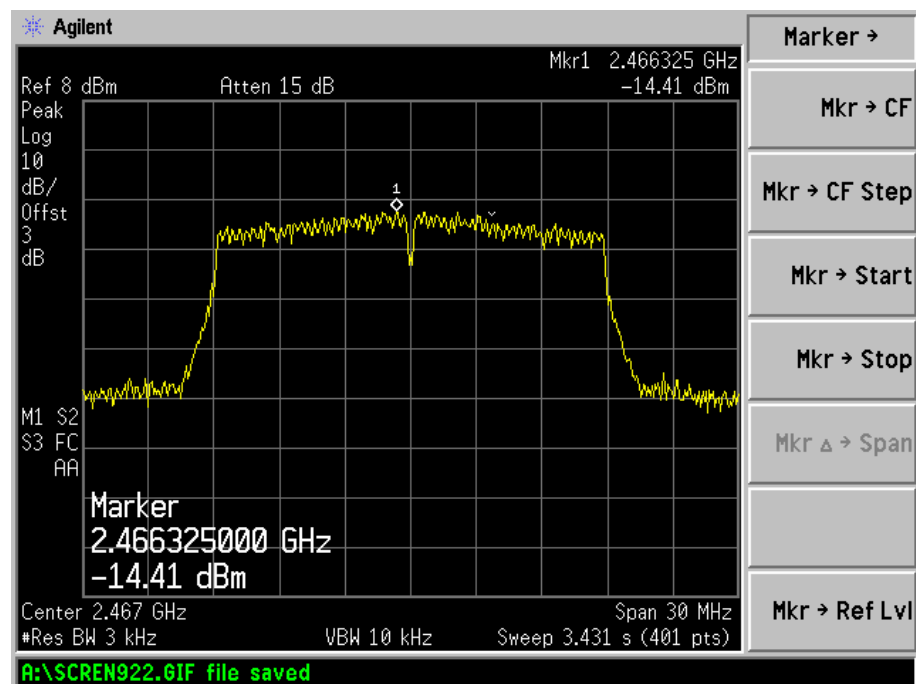
802.11n-HT20-Channel 7-2442MHz



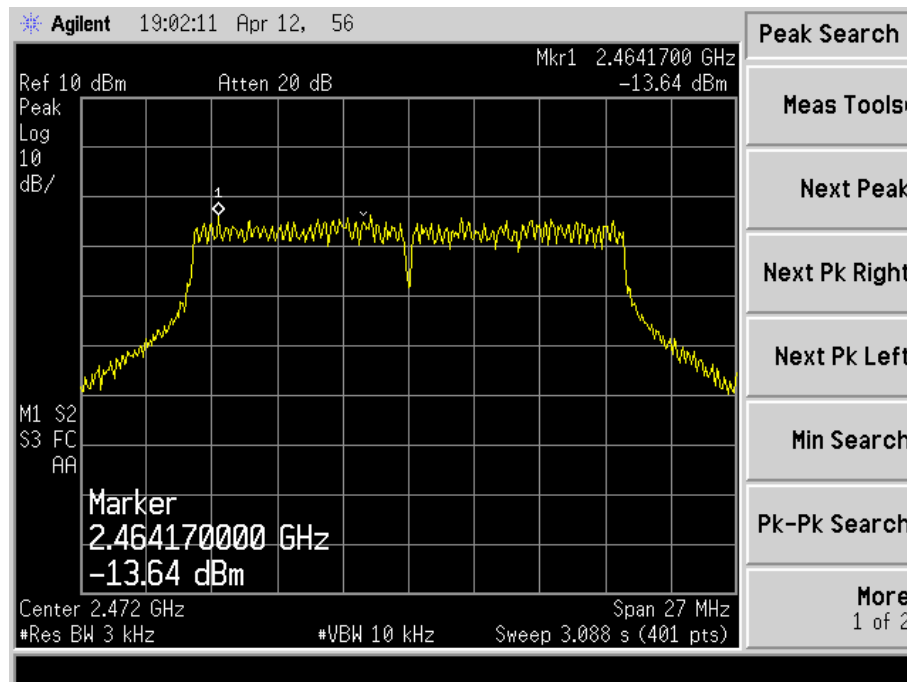
802.11n-HT20 Channel 11-2462MHz



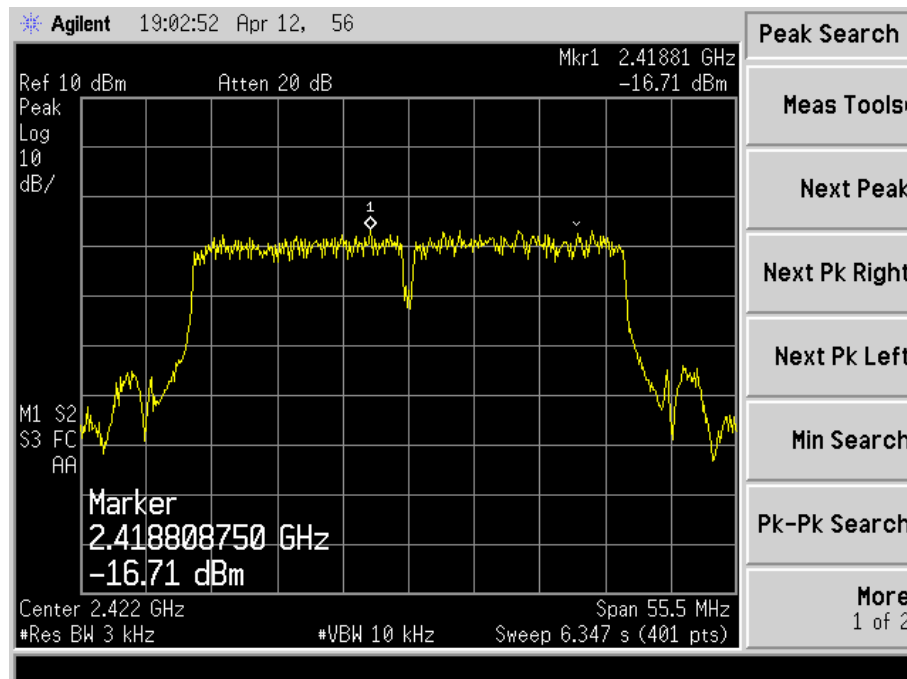
802.11n-HT20 Channel 12-2467MHz



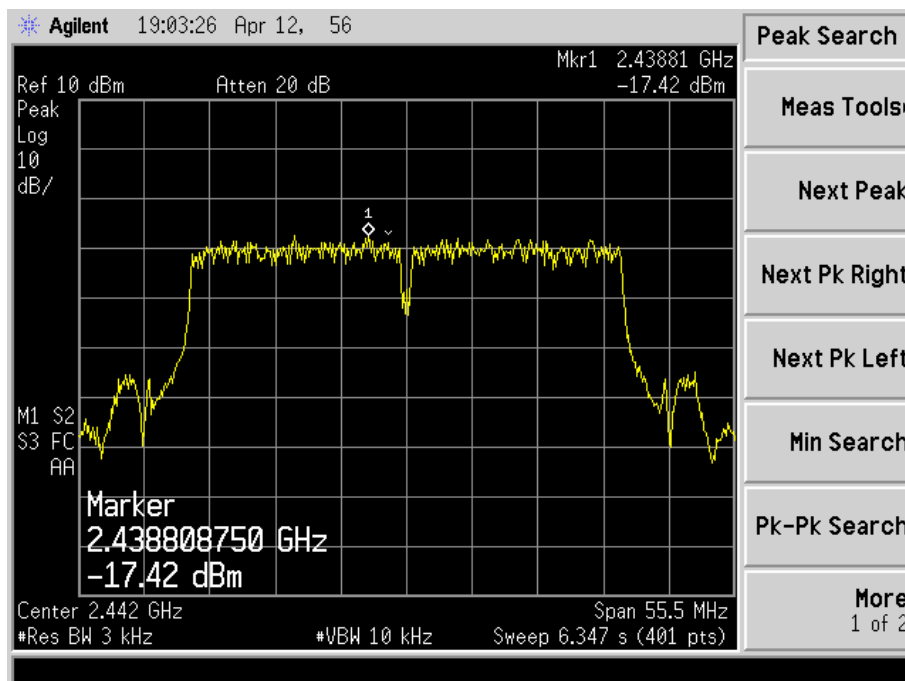
802.11n-HT20-Channel 13-2472MHz



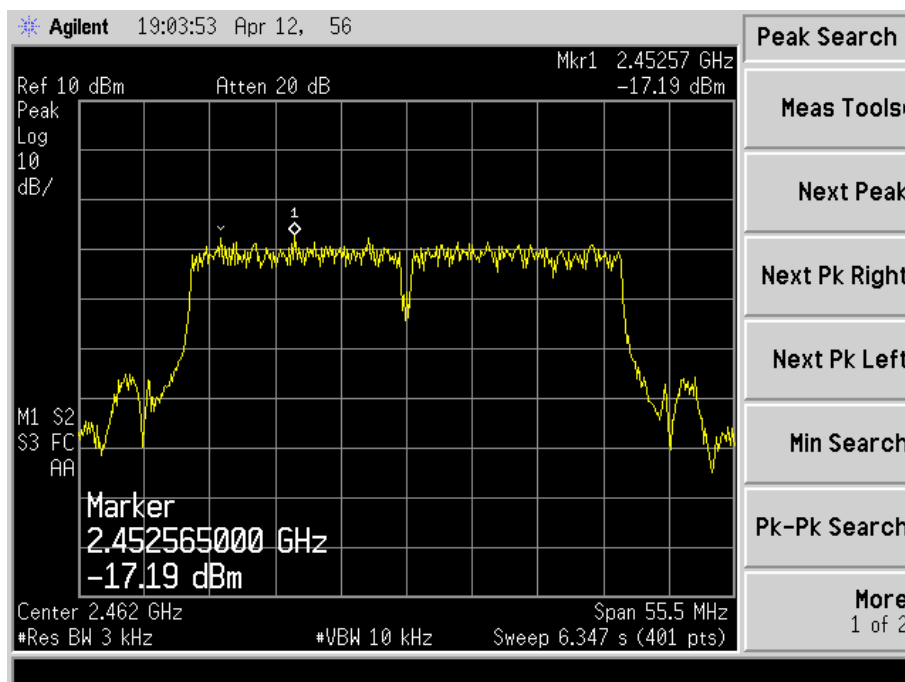
802.11n-HT40-Channel 3-2422MHz



802.11n-HT40-Channel 7-2442MHz



802.11n-HT40-Channel 11-2462MHz



6. 6dB Bandwidth

6.1 Standard Applicable

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

6.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2014-05-28	2015-05-27
Attenuator	ATTEN	ATS100-4-20	/	2014-05-28	2015-05-27

6.3 Test Procedure

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

6.4 Environmental Conditions

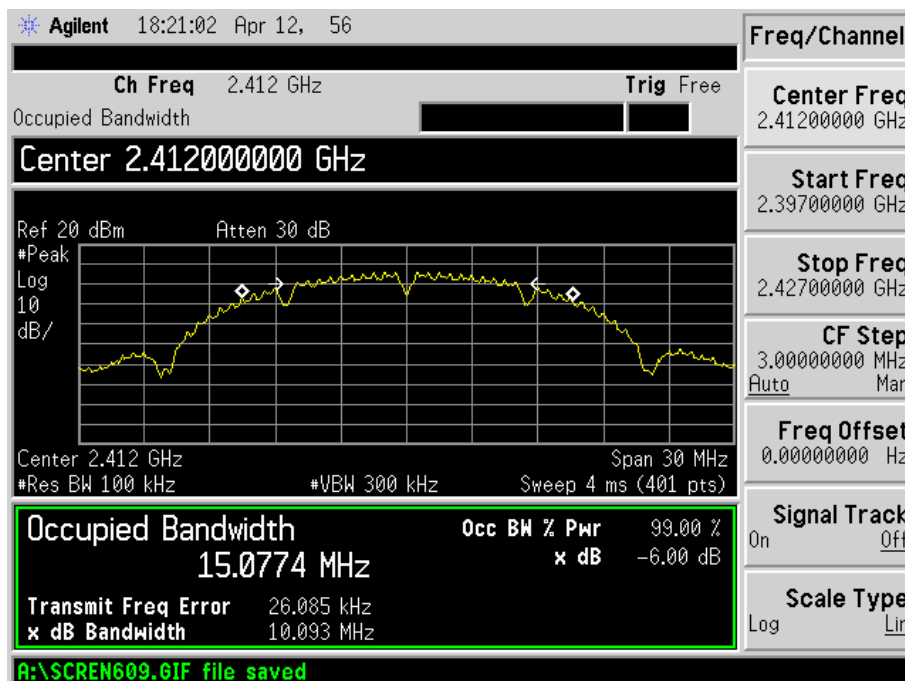
Temperature:	25° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

6.5 Summary of Test Results/Plots

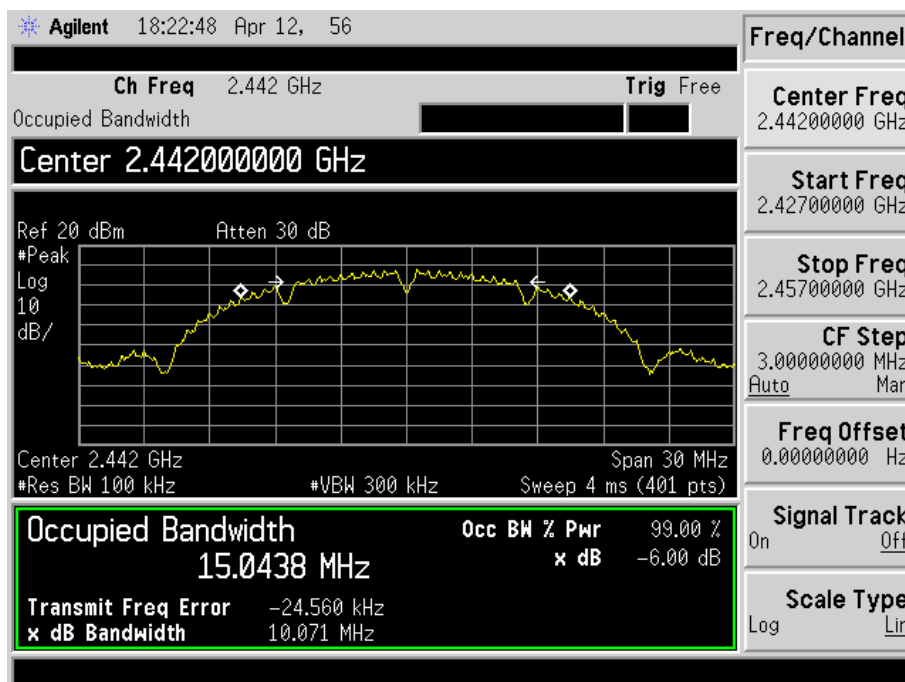
Test Mode	Test Channel MHz	6 dB Bandwidth kHz	99% Bandwidth kHz	Limit kHz
802.11b	2412	10093	15077.4	500
	2442	10071	15043.8	500
	2462	9209	13040.7	500
	2467	9184	13041.7	500
	2472	10059	15014.3	500
802.11g	2412	16605	16515.8	500
	2442	16564	16497.2	500
	2462	16626	16185.8	500
	2467	16430	16409.2	500
	2472	16581	16518.4	500
802.11n-HT20	2412	17836	17717.0	500
	2442	17820	17704.5	500
	2462	17646	17544.1	500
	2467	17653	17549.3	500
	2472	17835	17703.0	500
802.11n-HT40	2422	36485	36055.1	500
	2442	36501	36083.1	500
	2462	36525	36060.3	500

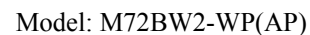
Please refer to the following test plots:

802.11b-Channel 1-2412MHz



802.11b-Channel 7-2442MHz





The screenshot displays an Agilent spectrum analyzer interface. At the top, the center frequency is set to 2.462 GHz. The main display shows a spectrum plot with a yellow trace. Two white diamonds with arrows point to the upper and lower bounds of the signal, indicating the occupied bandwidth. The bottom status bar shows the following measurements:

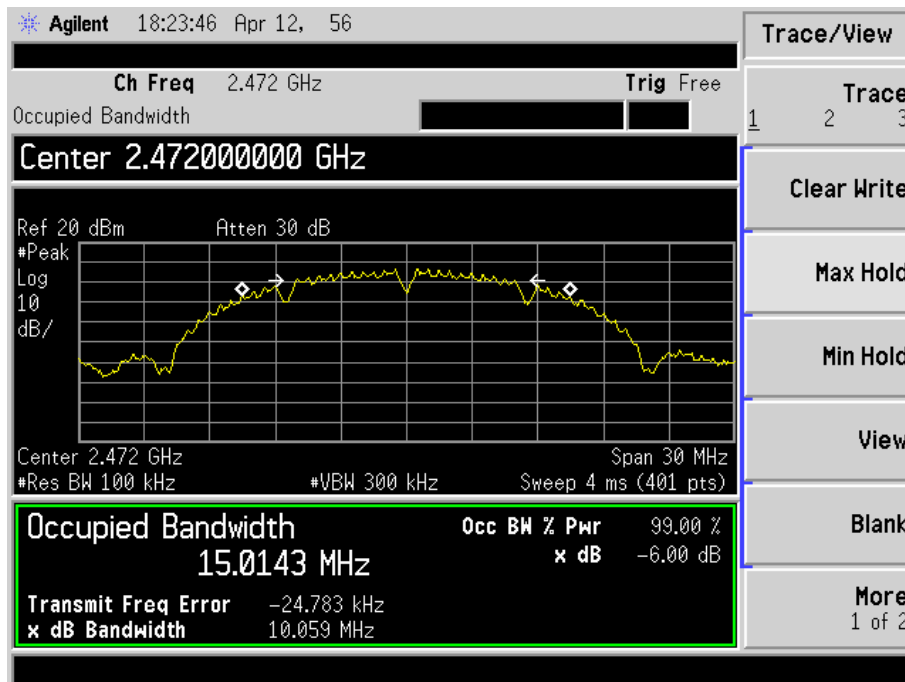
Measurement	Value
Center	2.462 GHz
Res BW	100 kHz
Span	30 MHz
Sweep	4 ms (401 pts)
Ref	20 dBm
Atten	30 dB
Occupied Bandwidth	13.0407 MHz
Occ BW % Pwr	99.00 %
x dB Bandwidth	-6.00 dB
Transmit Freq Error	-16.404 kHz

A green box highlights the Occupied Bandwidth, Occ BW % Pwr, x dB Bandwidth, and Transmit Freq Error measurements. On the right side, there are buttons for 'Trace', 'Clear Write', 'Max Hold', 'Min Hold', 'View', 'Blank', and 'More'.

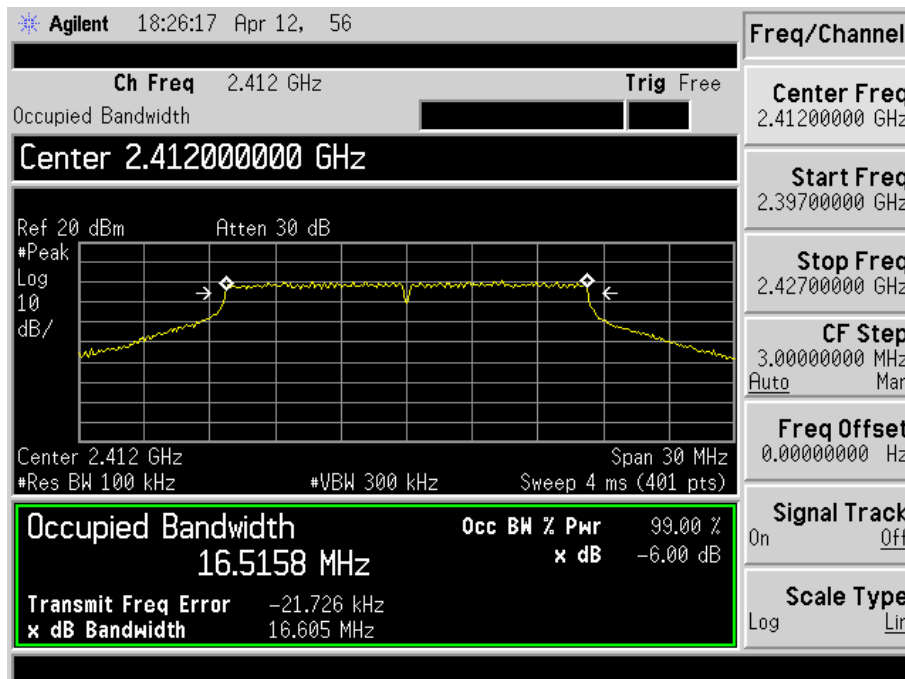
The screenshot shows an Agilent spectrum analyzer interface. The main display area shows a signal trace with a peak at 2.467 GHz. The peak is marked with a diamond and arrows. The display includes various measurement parameters and settings.

Parameter	Value
Ch Freq	2.467 GHz
Trig	Free
Center	2.467000000 GHz
Ref	20 dBm
Atten	35 dB
#Peak	10
Log	dB/
Offst	-3 dB
Center	2.467 GHz
#Res BW	100 kHz
#VBW	300 kHz
Sweep	4 ms (401 pts)
Span	30 MHz
Occupied Bandwidth	13.0417 MHz
Occ BW % Pwr	99.00 %
x dB	-6.00 dB
Transmit Freq Error	-35.703 kHz
x dB Bandwidth	9.184 MHz

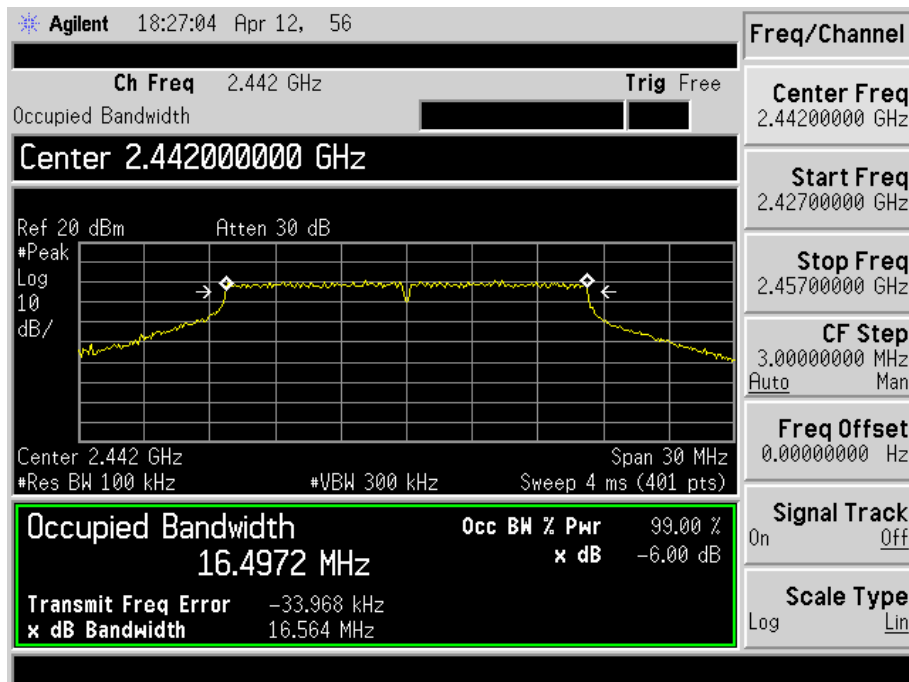
802.11b-Channel 13-2472MHz



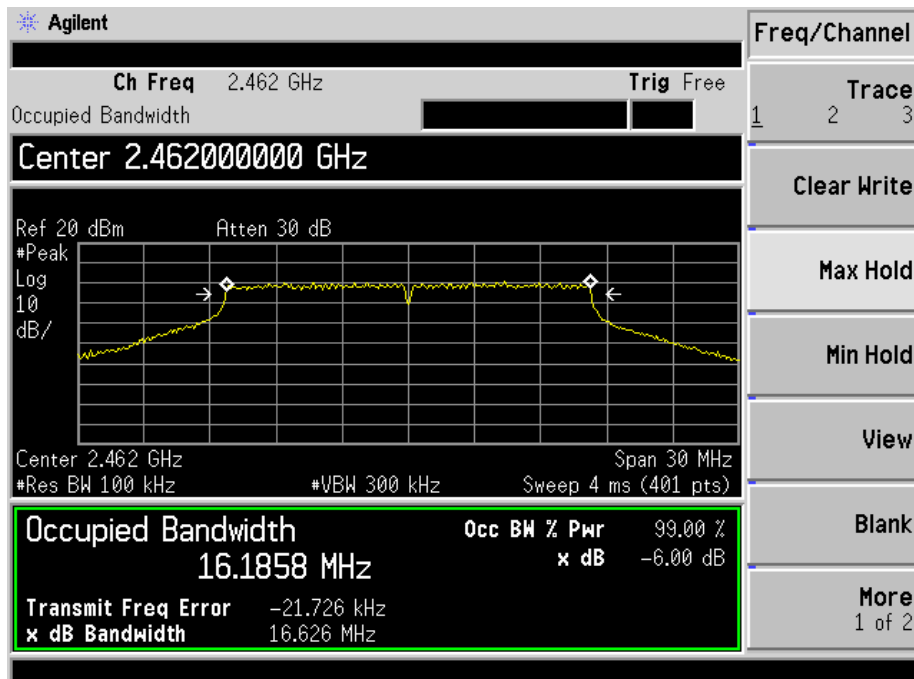
802.11g-Channel 1-2412MHz



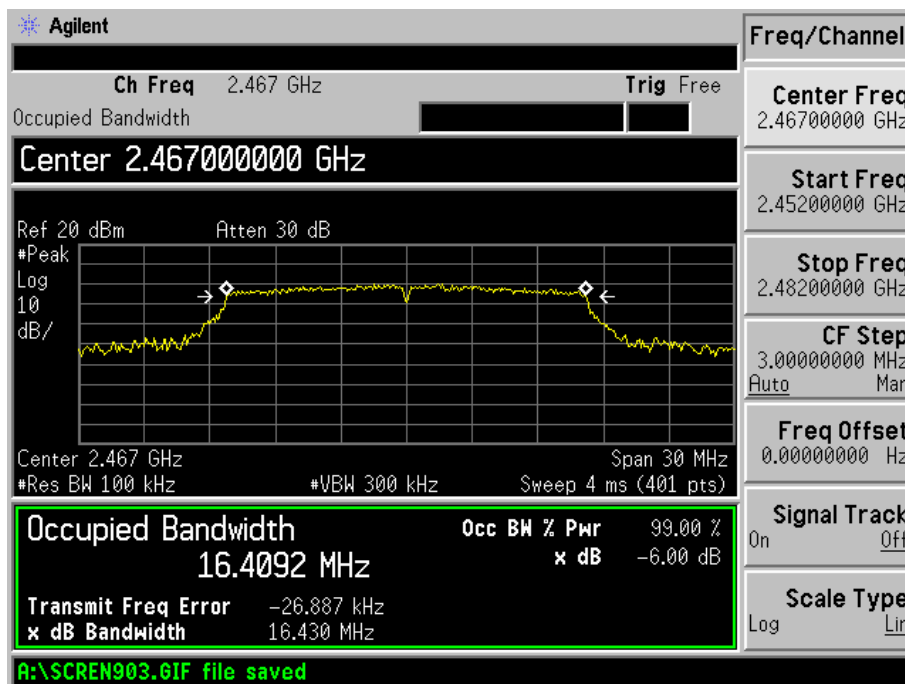
802.11g- Channel 7-2442MHz



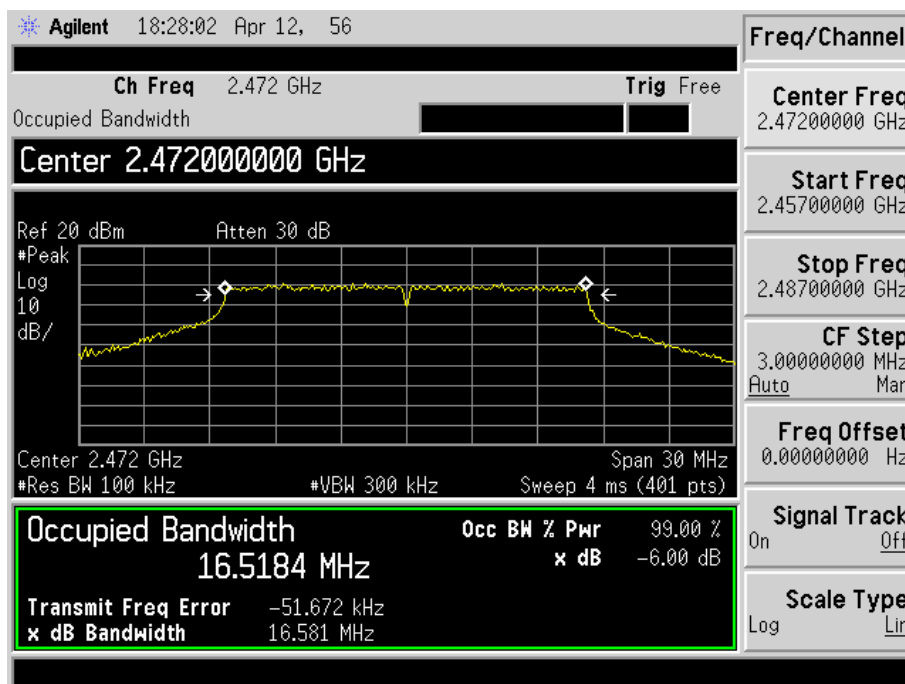
802.11g-Channel 11-2462MHz



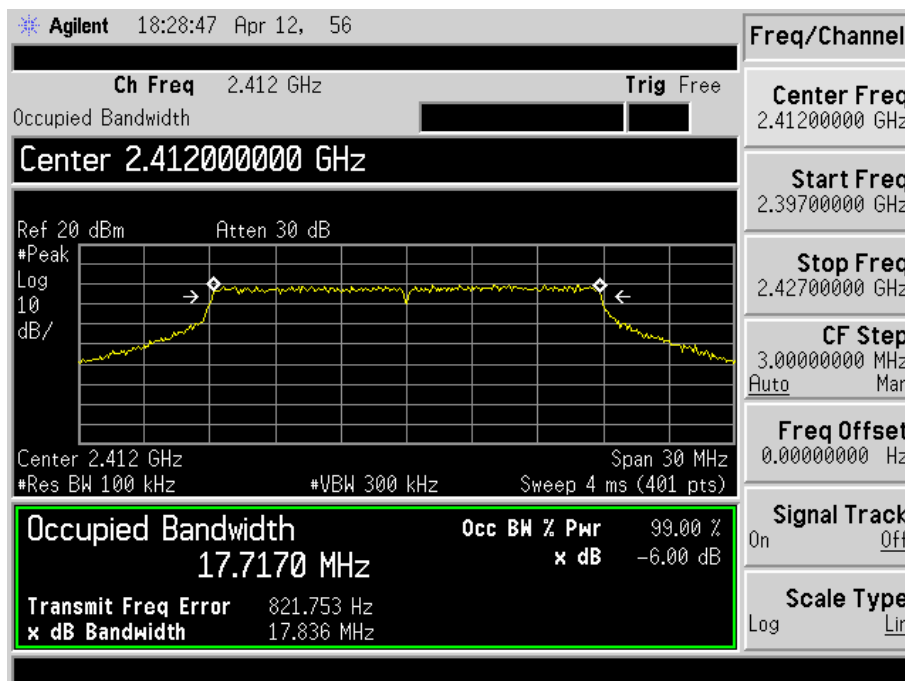
802.11g-Channel 12-2467MHz



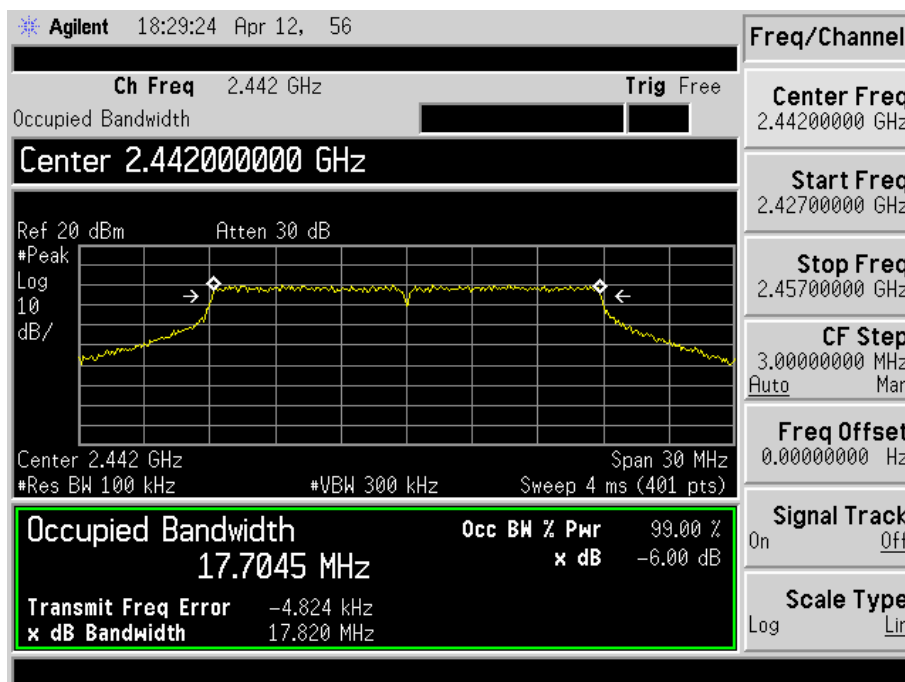
802.11g- Channel 13-2472MHz



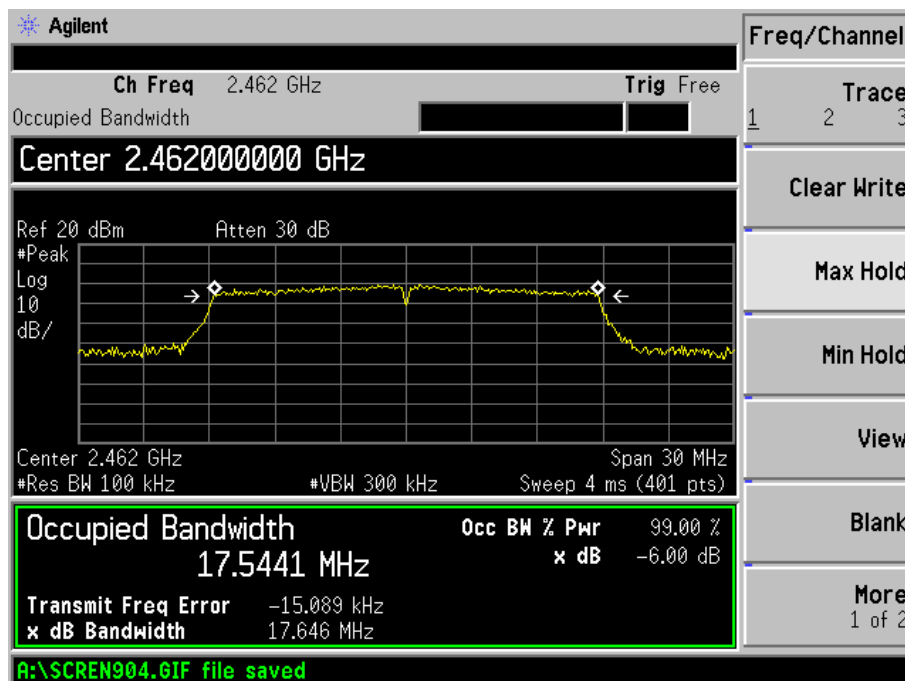
802.11n-HT20-Channel 1-2412MHz



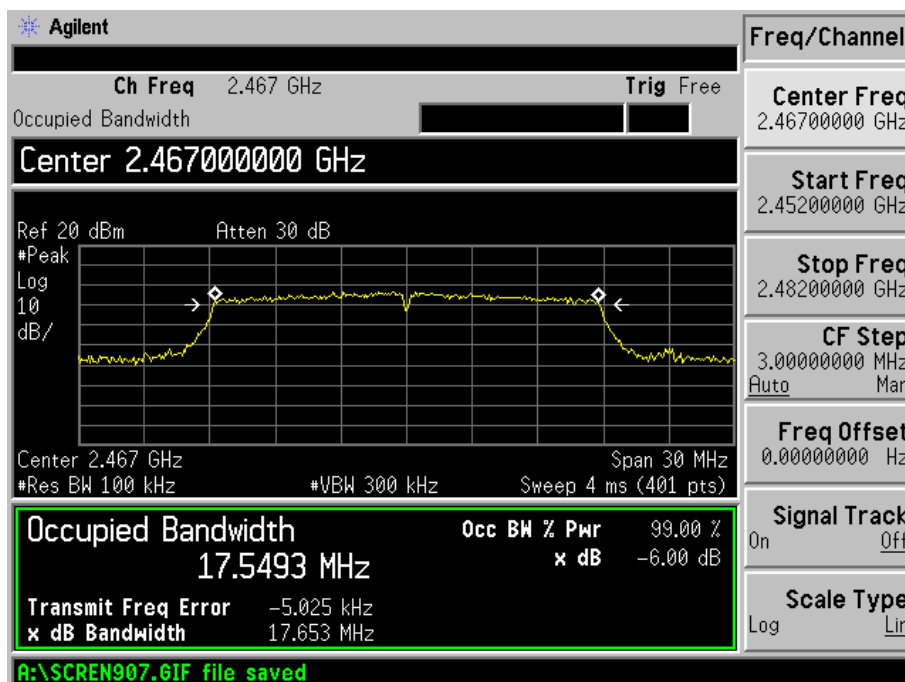
802.11n-HT20-Channel 7-2442MHz



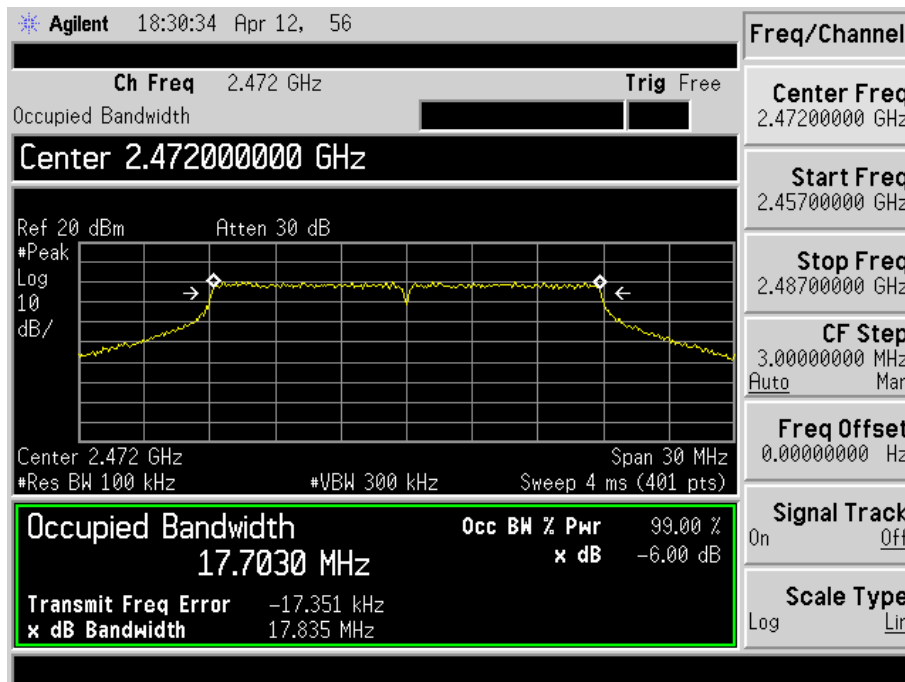
802.11n-HT20-Channel 11-2462MHz



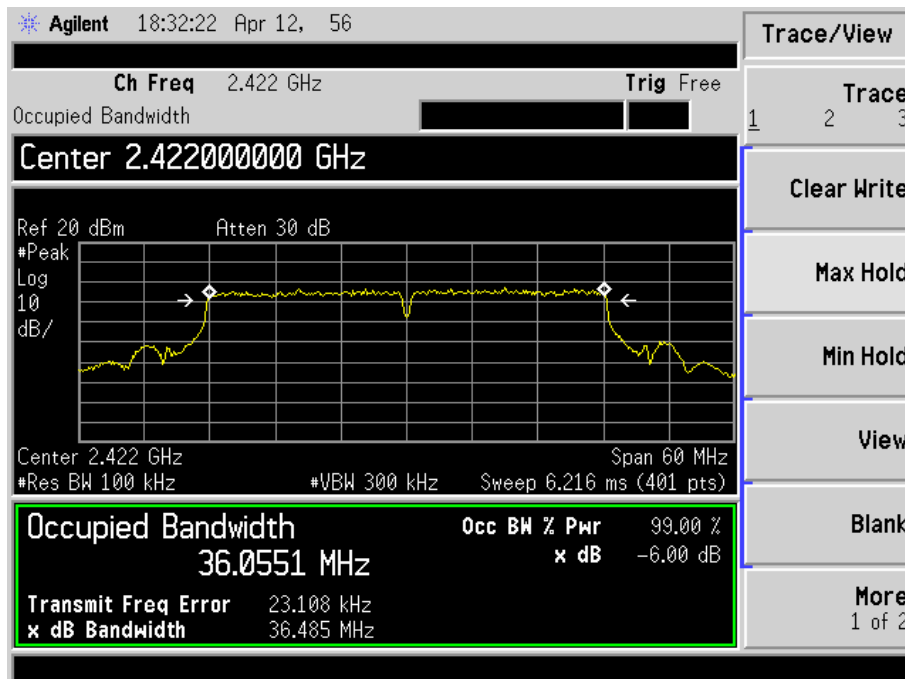
802.11n-HT20-Channel 12-2467MHz



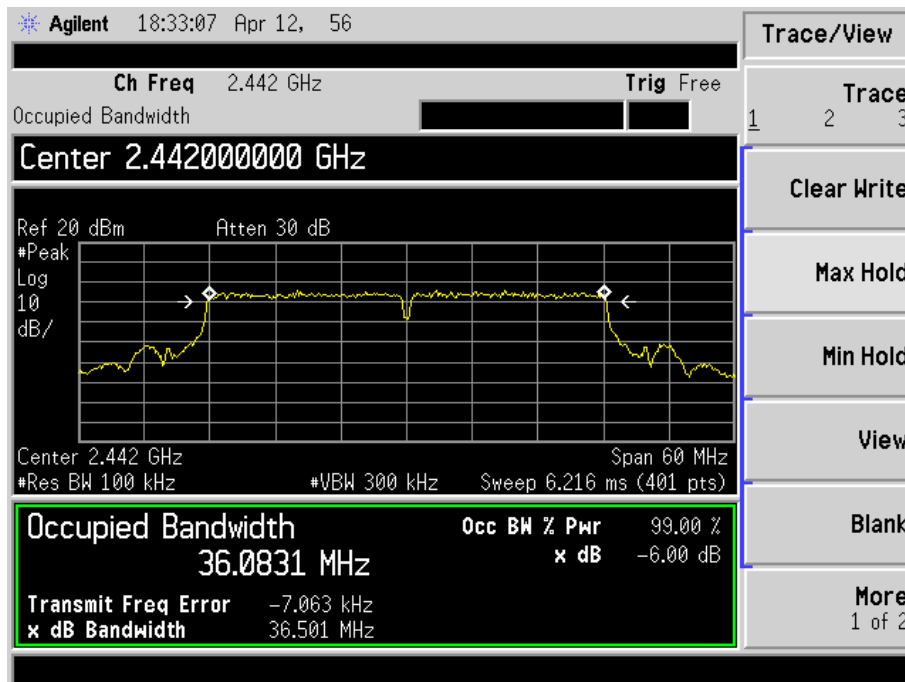
802.11n-HT20-Channel 13-2472MHz



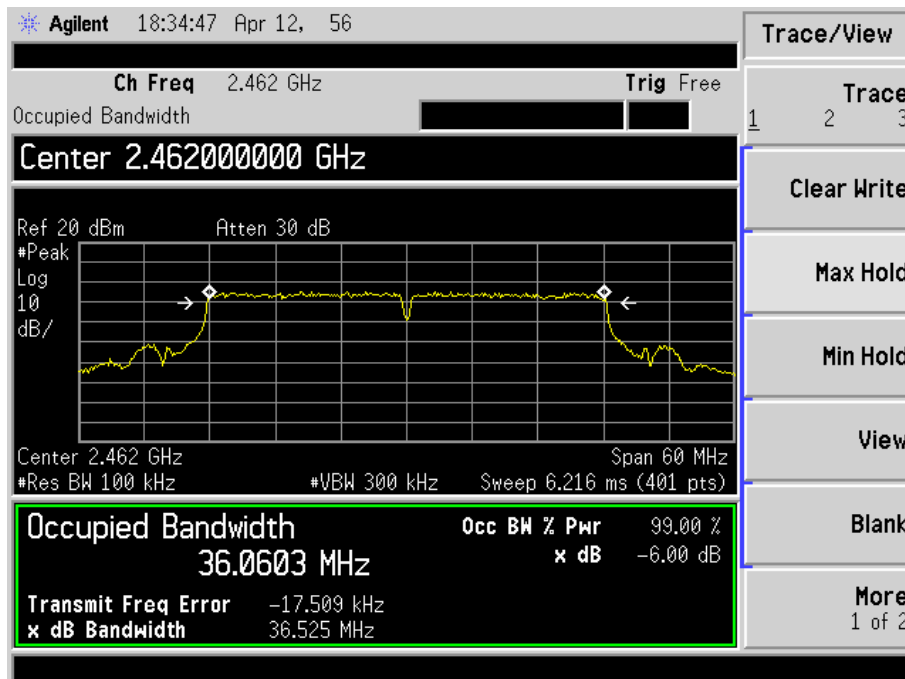
802.11n-HT40-Channel-2422MHz



802.11n-HT40-Channel-2442MHz



802.11n-HT40-Channel-2462MHz



7. RF Output Power

7.1 Standard Applicable

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

7.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2014-05-28	2015-05-27
Attenuator	ATTEN	ATS100-4-20	/	2014-05-28	2015-05-27

7.3 Test Procedure

According to section 15.247(b)-power output of the KDB-558074 D01 V03r02, 8.1.2 Option 2 (channel integration method) this procedure should only be used when the maximum available RBW of the spectrum/signal analyzer is less than the DTS bandwidth.

- Set span to at least 1.5 times the OBW.
- Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
- Set VBW $\geq 3 \times$ RBW.
- Number of points in sweep $\geq 2 \times$ span / RBW. (This gives bin-to-bin spacing $\leq$ RBW/2, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto.
- Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- 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”.
- Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- 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.

7.4 Environmental Conditions

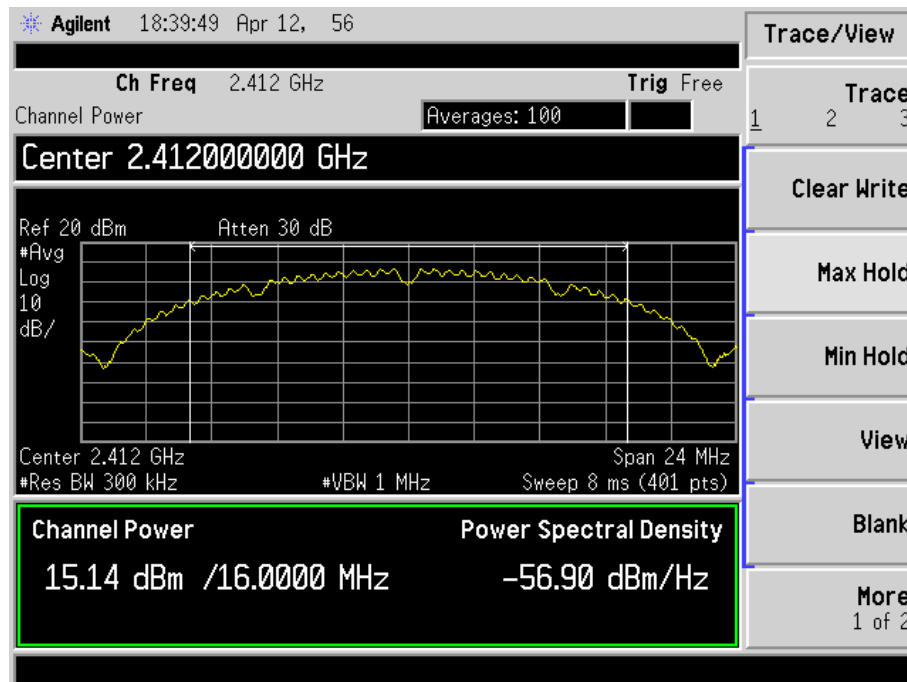
Temperature:	26° C
Relative Humidity:	57%
ATM Pressure:	1011 mbar

7.5 Summary of Test Results/Plots

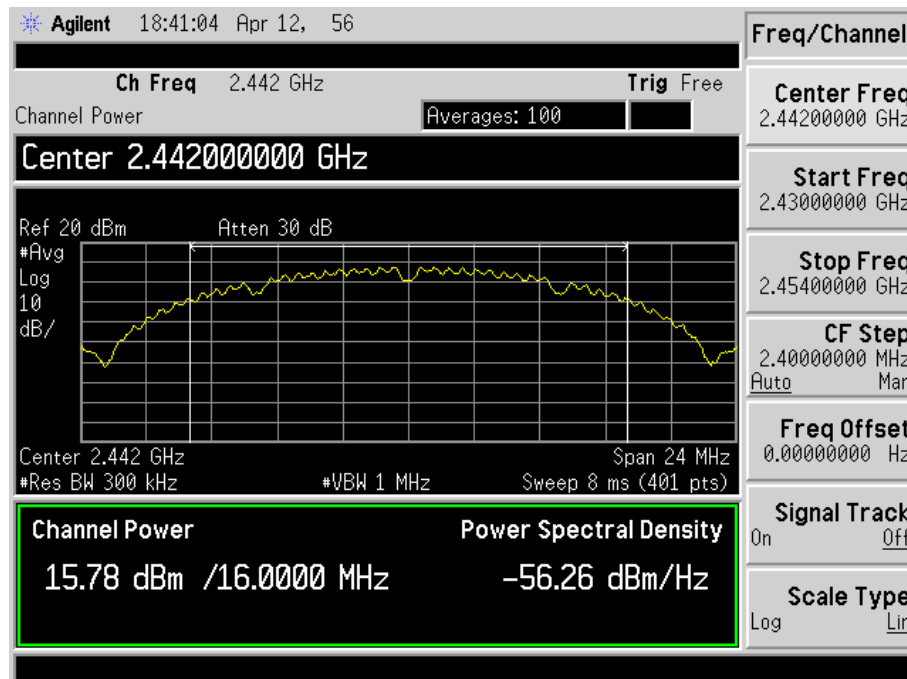
Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b _ 11Mbps	2412	15.14	32.66	1000
	2442	15.78	37.84	1000
	2462	15.00	31.62	1000
	2467	15.41	34.75	1000
	2472	15.41	34.75	1000
802.11g_54Mbps	2412	12.02	15.92	1000
	2442	12.69	18.58	1000
	2462	11.72	14.86	1000
	2467	12.00	15.85	1000
	2472	12.24	16.75	1000
802.11n HT20_MCS7	2412	12.20	16.60	1000
	2442	12.68	18.54	1000
	2462	12.18	16.52	1000
	2467	12.79	19.01	1000
	2472	12.34	17.14	1000
802.11n HT40_MCS7	2422	10.64	11.59	1000
	2442	10.13	10.30	1000
	2462	9.85	9.66	1000

Please refer to the following test plots:

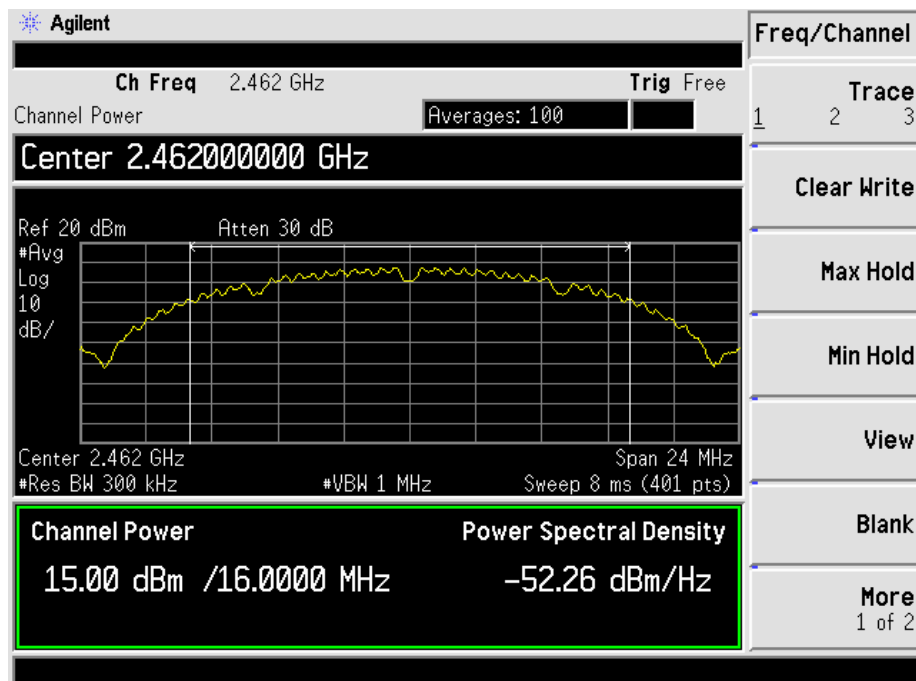
802.11b-Channel 1-2412MHz



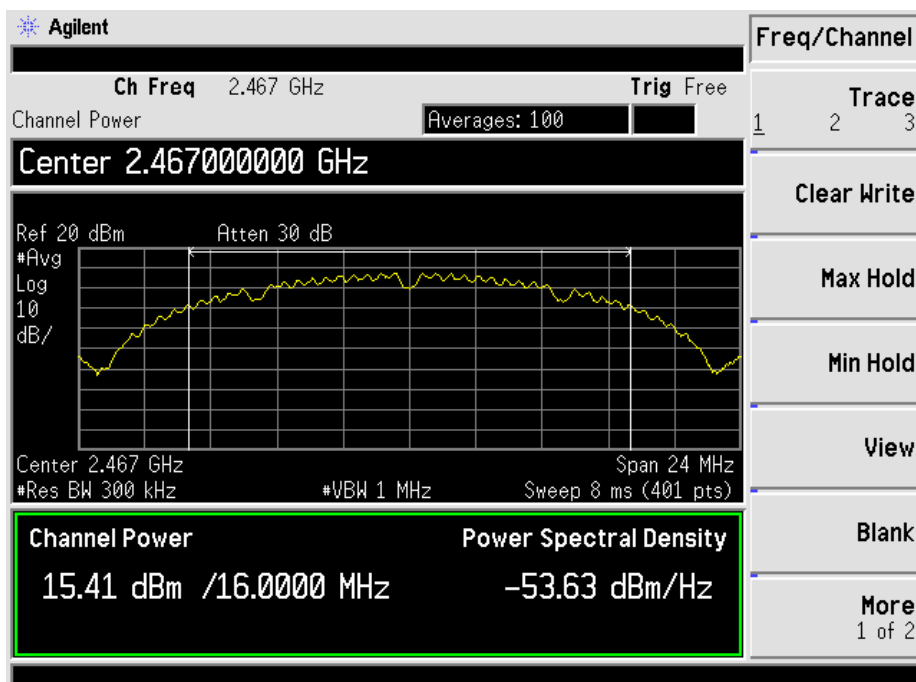
802.11b- Channel 7-2442MHz



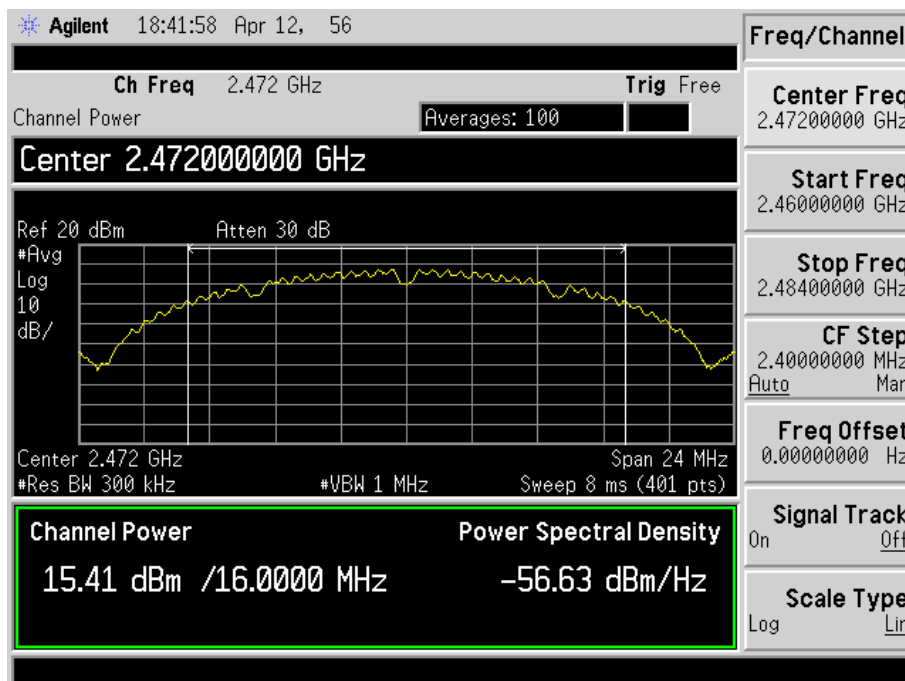
802.11b- Channel 11-2462MHz



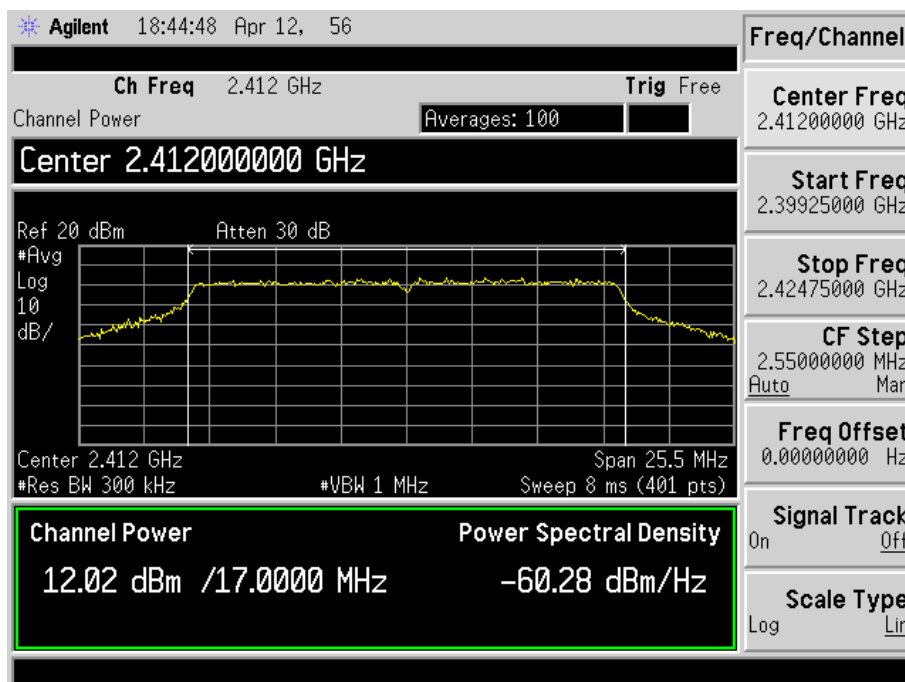
802.11b- Channel 12-2467MHz



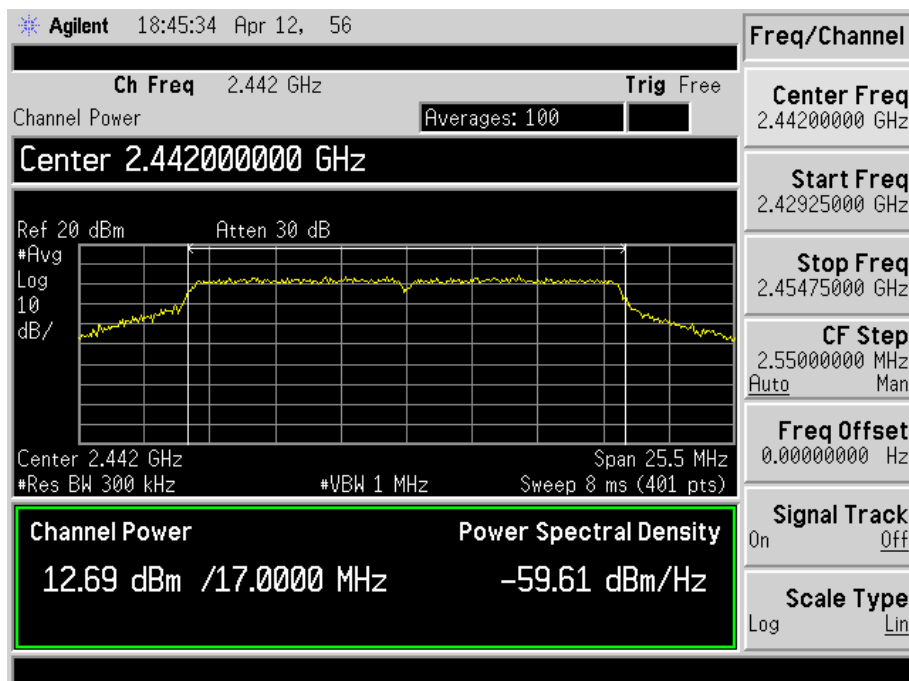
802.11b-Channel 13-2472MHz



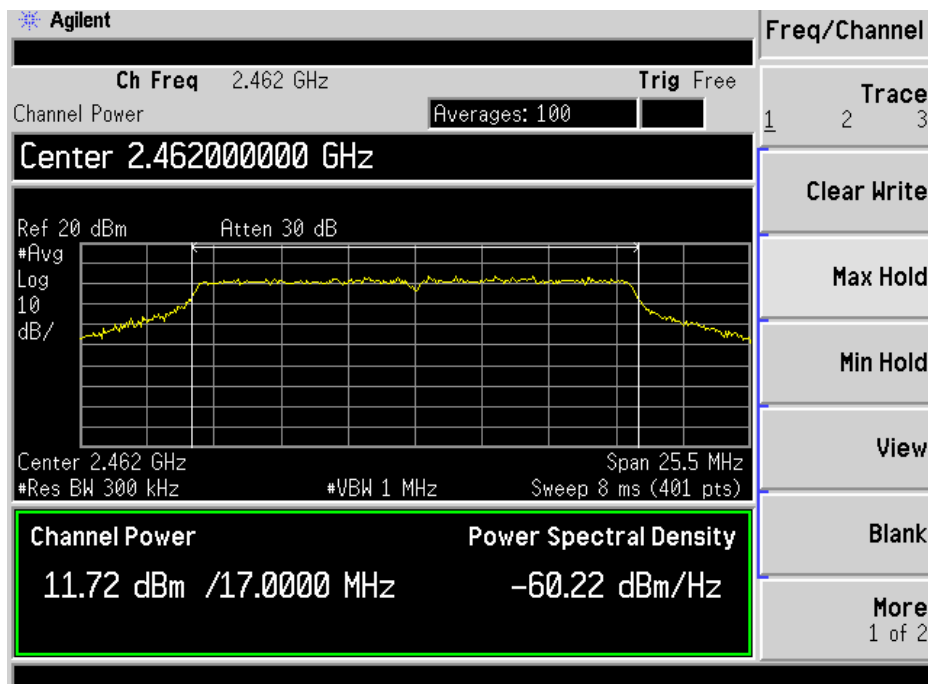
802.11g-Channel 1-2412MHz



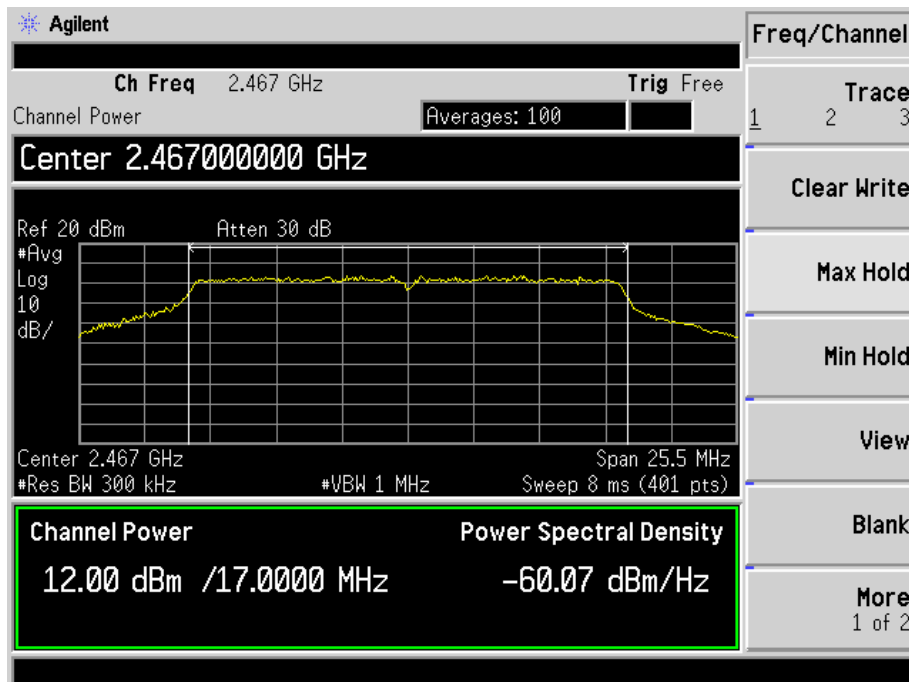
802.11g-Channel 7-2442MHz



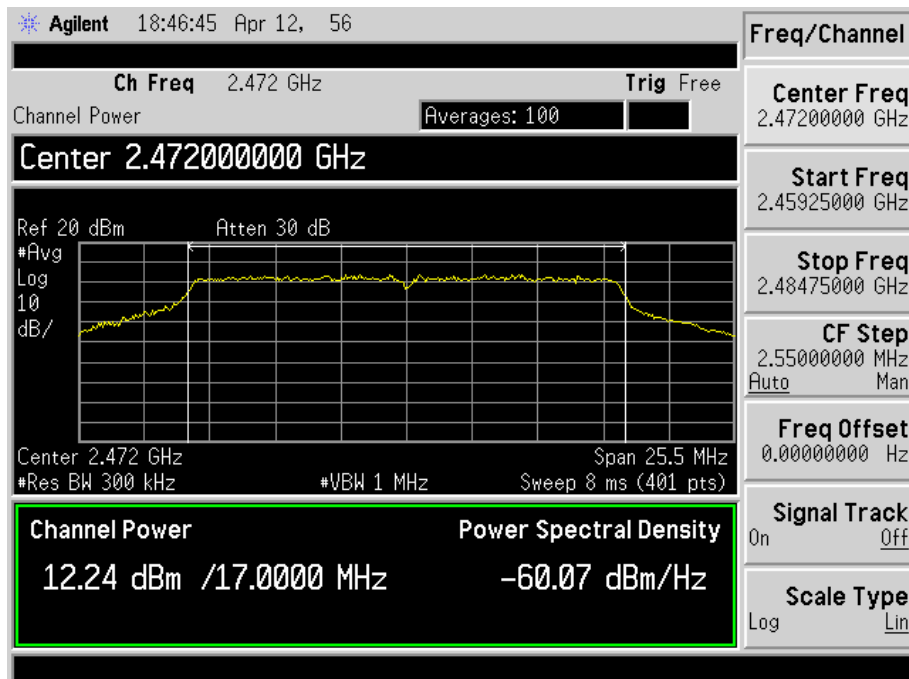
802.11g-Channel 11-2462MHz



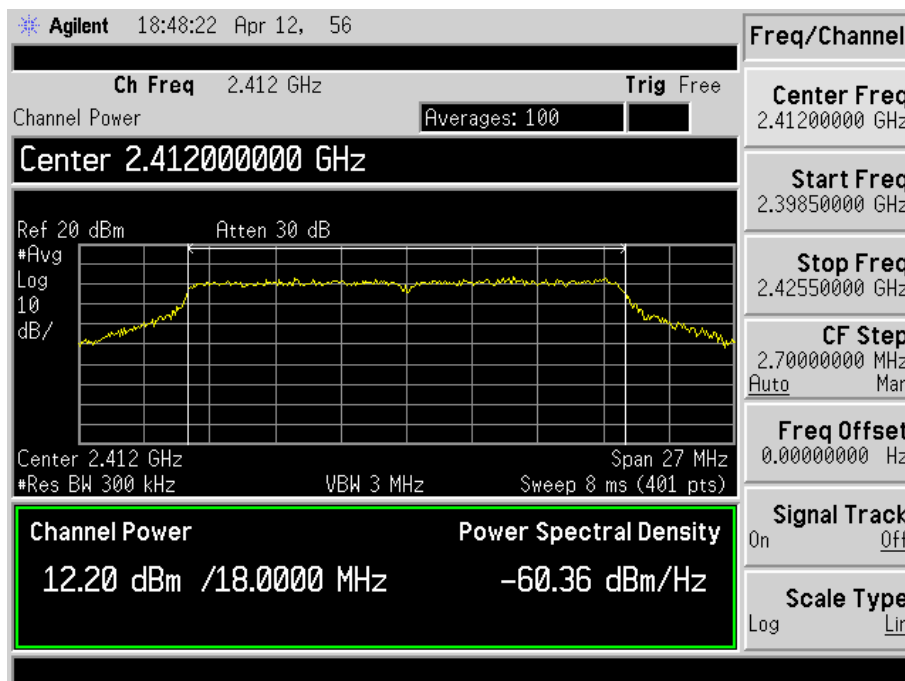
802.11g-Channel 12-2467MHz



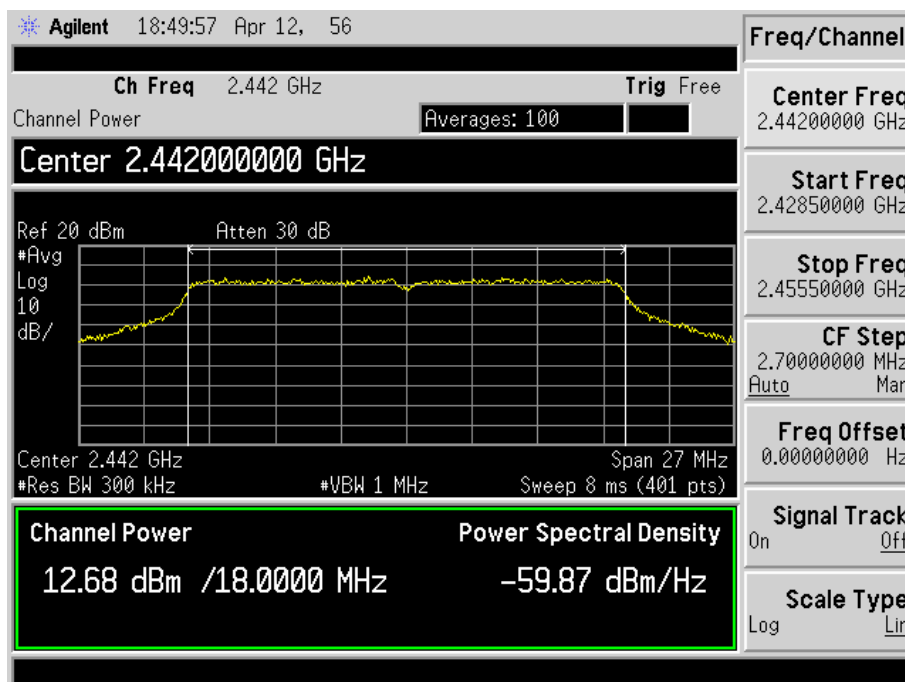
802.11g-Channel 13-2472MHz



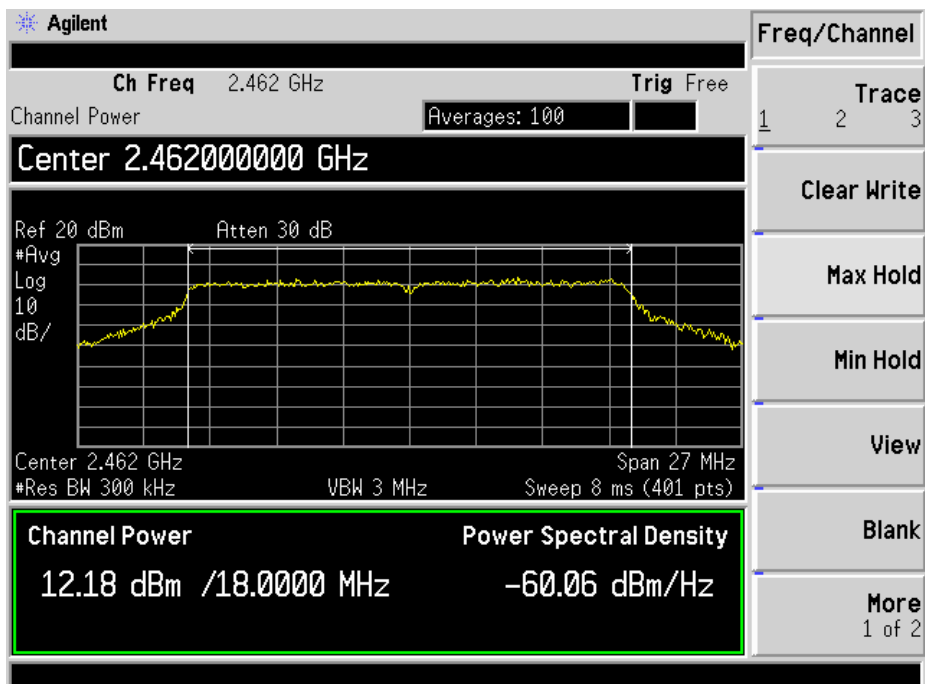
802.11n-HT20-Channel 1-2412MHz



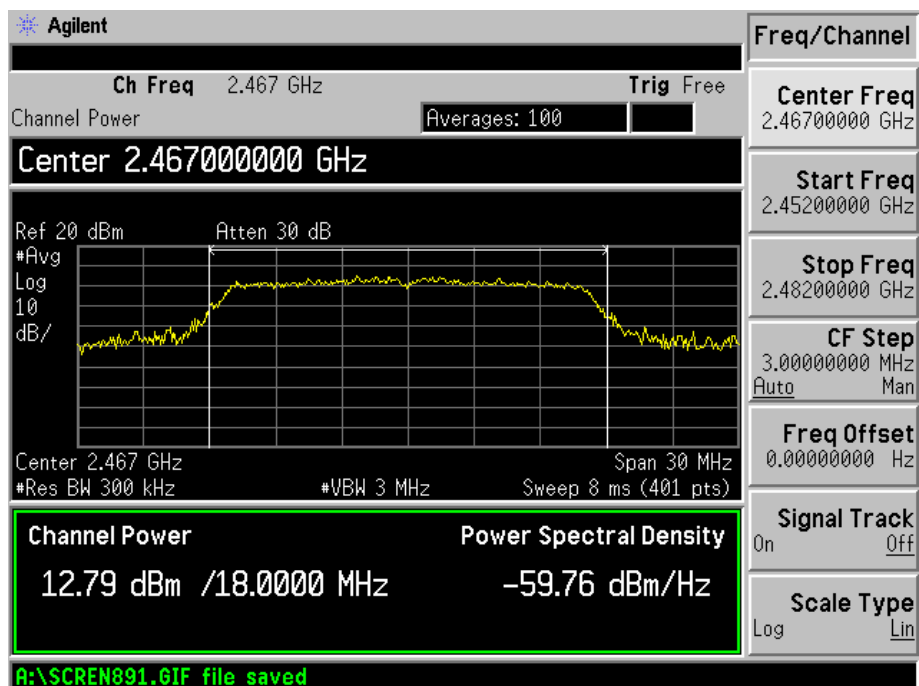
802.11n-HT20-Channel 7-2442MHz



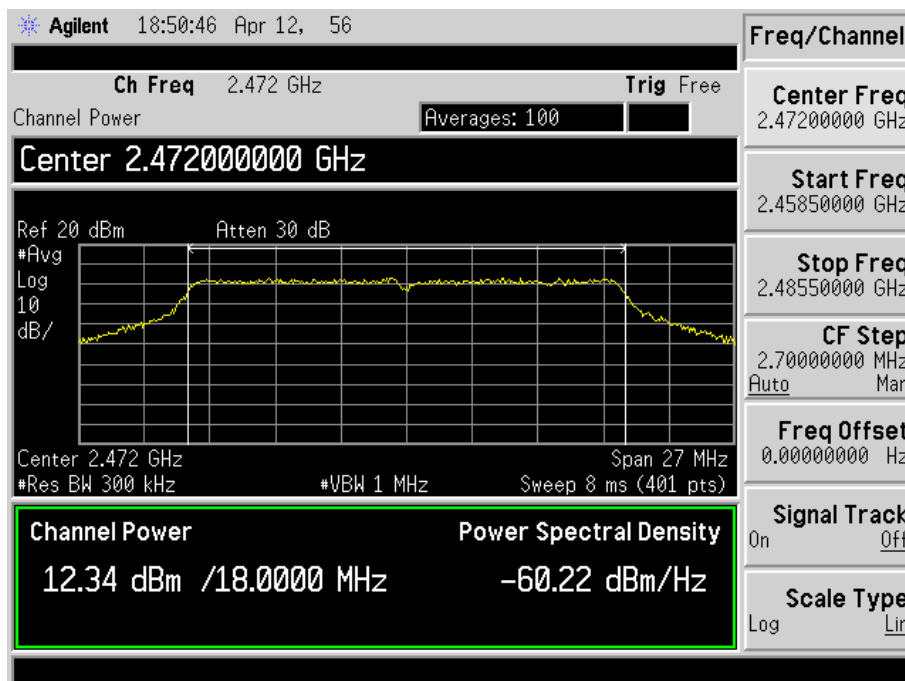
802.11n-HT20-Channel 11-2462MHz



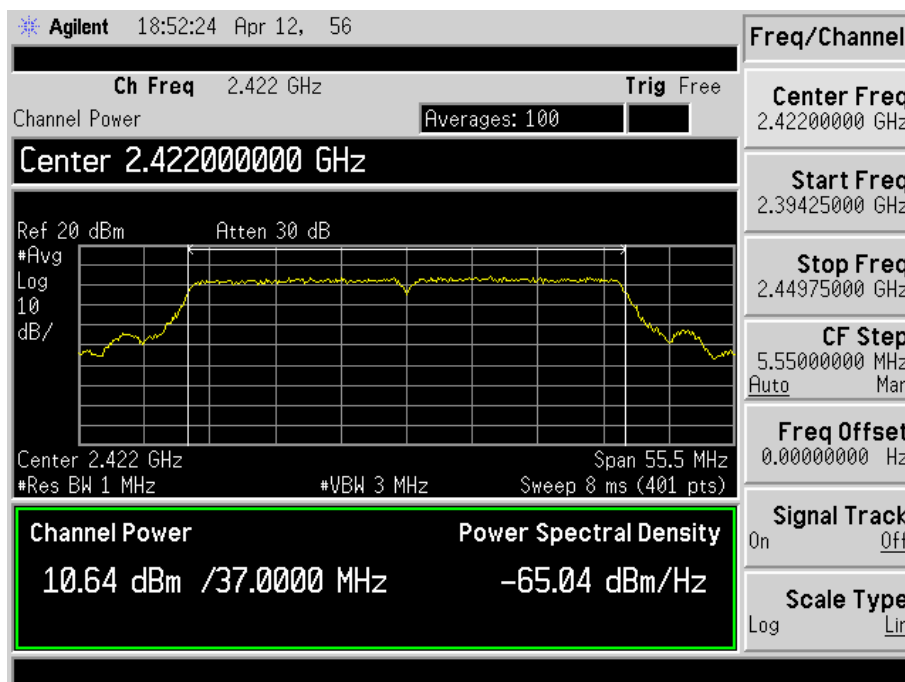
802.11n-HT20-Channel 12-2467MHz



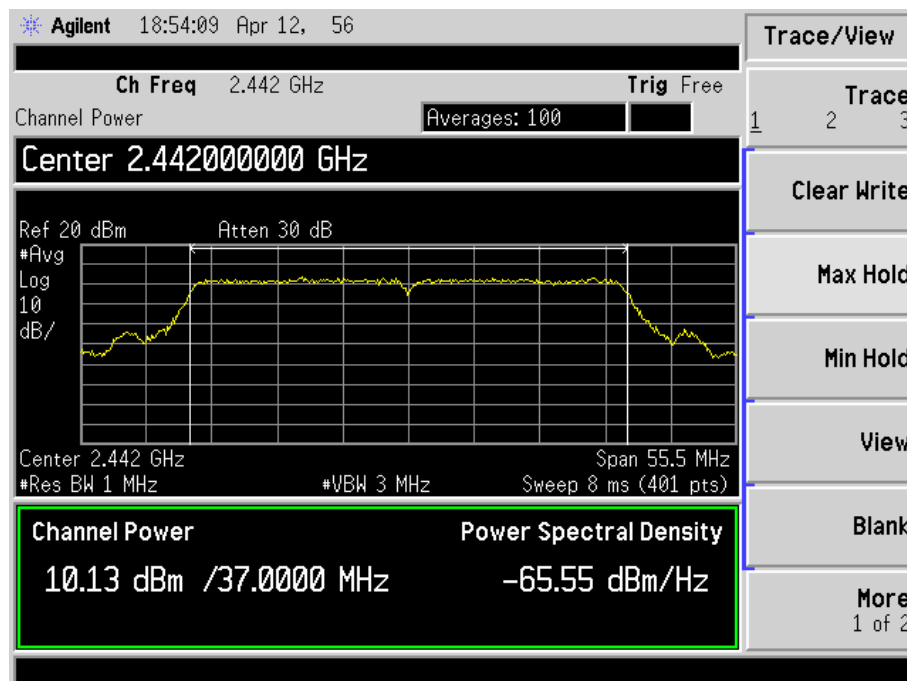
802.11n-HT20-Channel 13-2472MHz



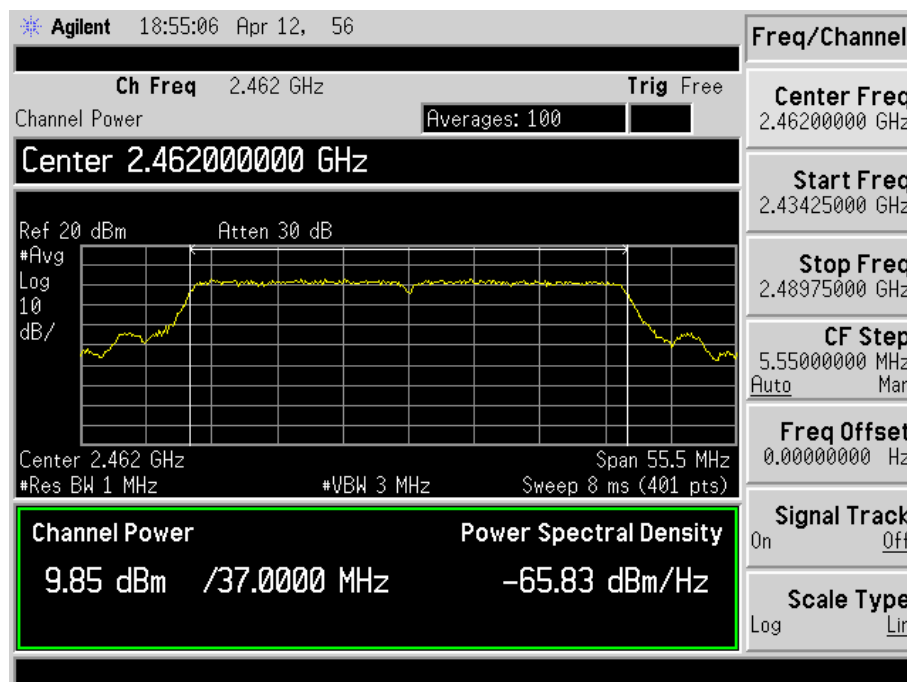
802.11n-HT40-Channel 3-2422MHz



802.11n-HT40-Channel 7-2442MHz



802.11n-HT40-Channel 11-2462MHz



8. Field Strength of Spurious Emissions

8.1 Measurement Uncertainty

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

8.2 Standard Applicable

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

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

8.3 Test Equipment List and Details

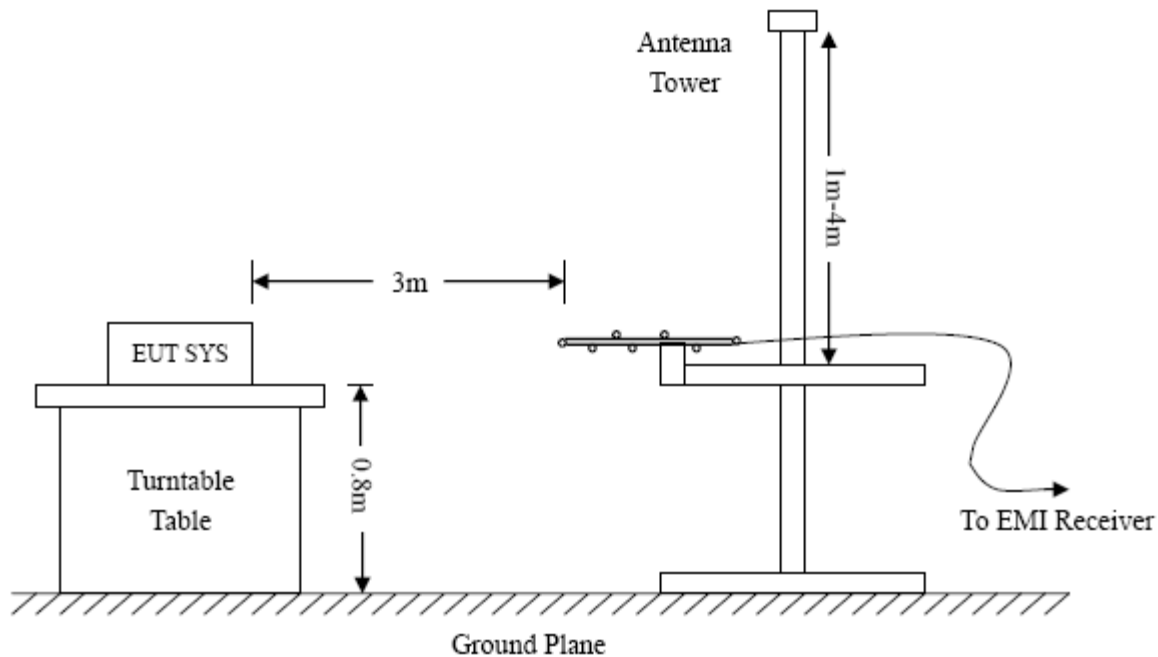
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2014-05-28	2015-05-27
EMI Test Receiver	R&S	ESVB	825471/005	2014-05-28	2015-05-27
Pre-amplifier	Agilent	8447F	3113A06717	2014-05-28	2015-05-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2014-05-28	2015-05-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2014-05-24	2015-05-23
Horn Antenna	ETS	3117	00086197	2014-05-24	2015-05-23
Horn Antenna	ETS	3116B	00088203	2014-05-24	2015-05-23
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2014-05-24	2015-05-23

8.4 Test Procedure

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

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

The spacing between the peripherals was 10 cm.



Frequency :9kHz-30MHz

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

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

Sweep time= Auto

Trace = max hold

Detector function = peak, AV

8.5 Corrected Amplitude & Margin Calculation

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

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

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

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

8.6 Environmental Conditions

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

8.7 Summary of Test Results/Plots

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

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

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

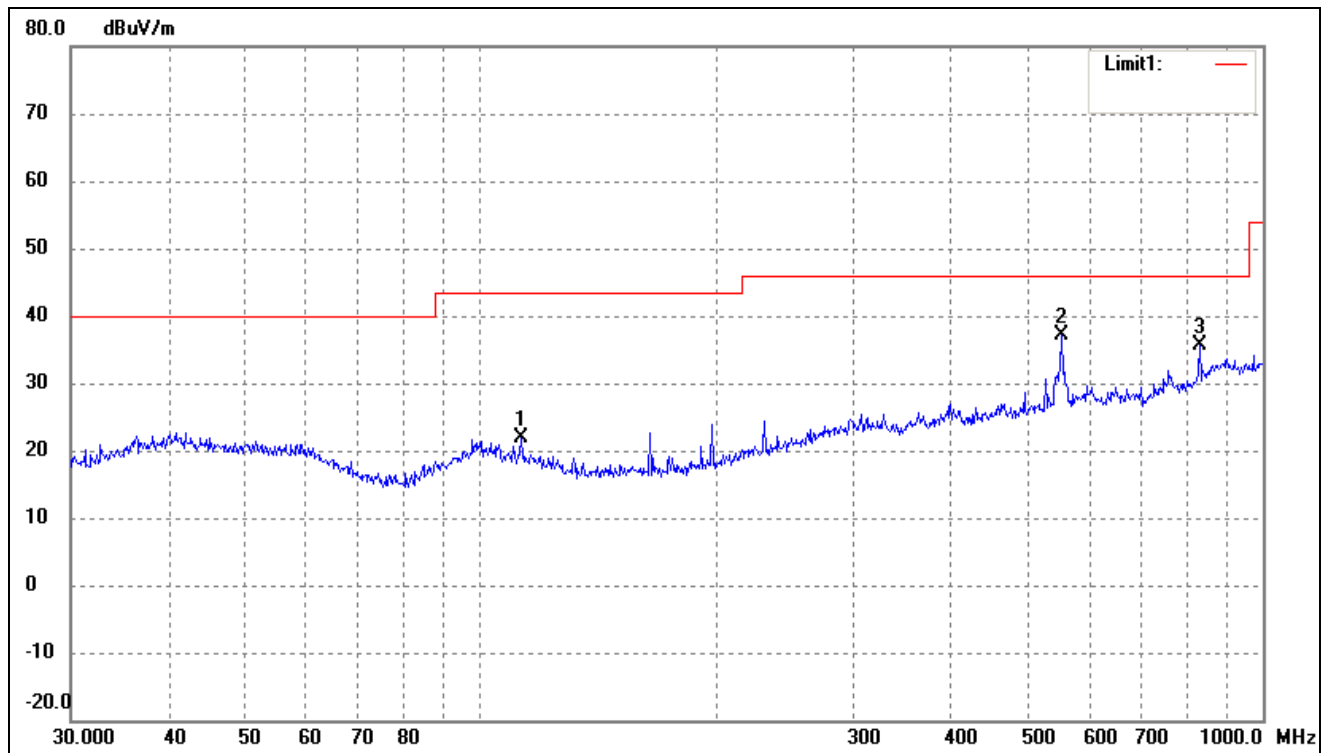
EUT: Tablet

Tested Model: M72BW2-WP(AP)

Operating Condition: 802.11b Transmitting Channel 1-2412MHz

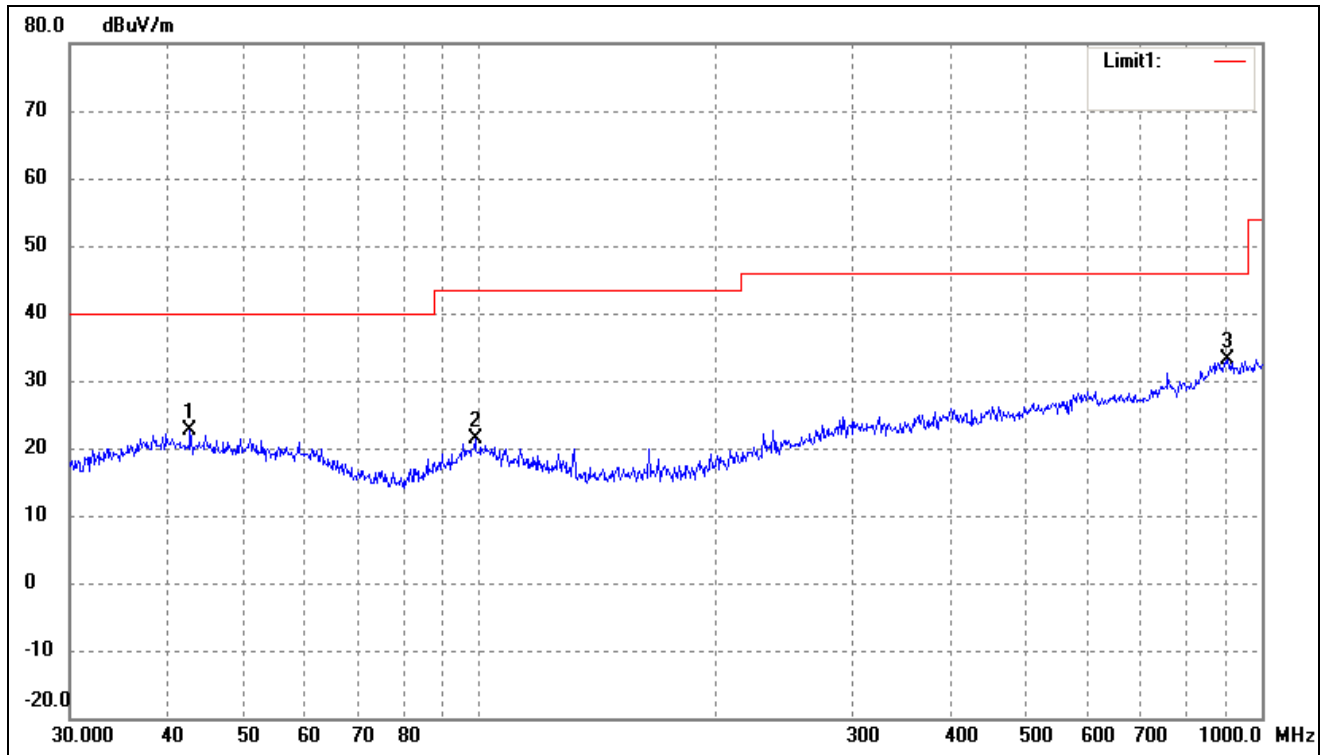
Comment: Battery DC 3.7V

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	112.9196	17.07	4.77	21.84	43.50	-21.66	178	100	peak
2	552.8833	25.68	11.45	37.13	46.00	-8.87	180	100	peak
3	830.4002	20.29	15.26	35.55	46.00	-10.45	102	100	peak

Test Specification: Vertical

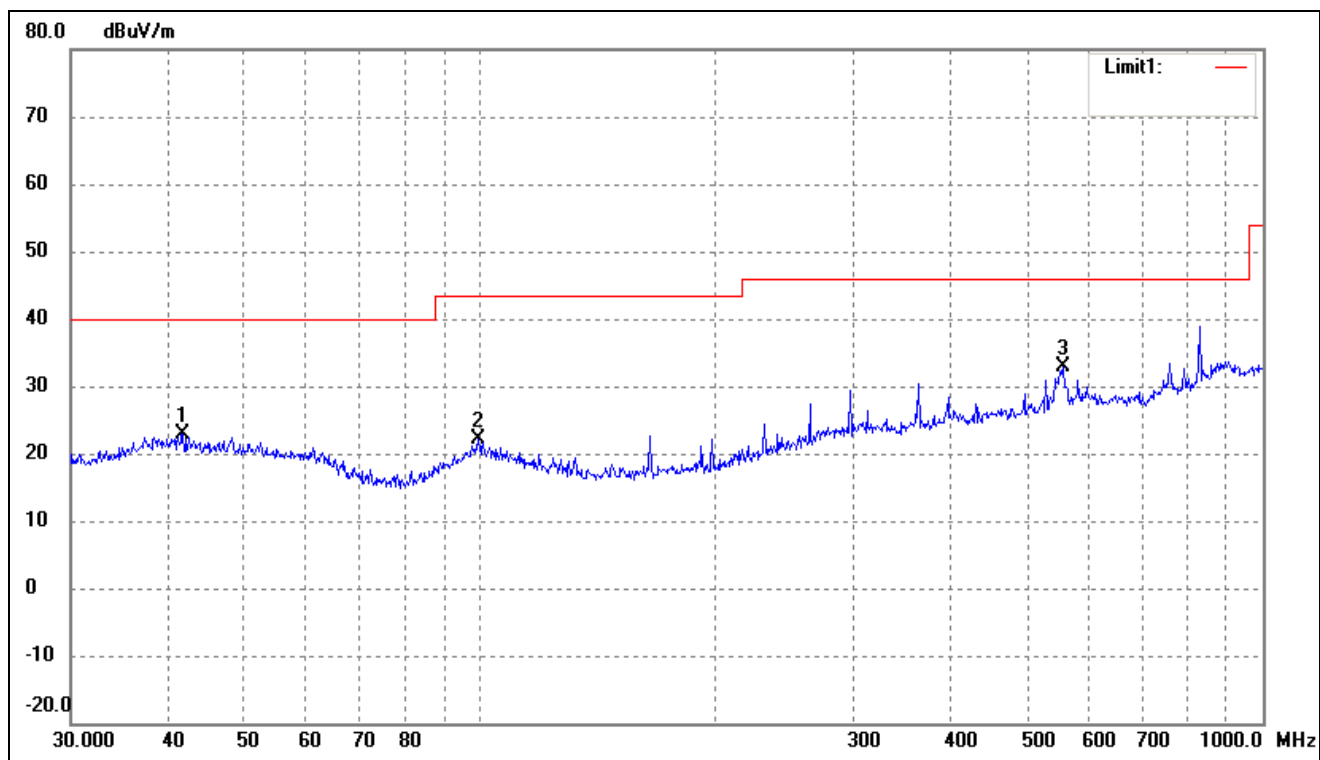


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	42.7496	14.09	8.43	22.52	40.00	-17.48	110	100	peak
2	98.8326	15.56	5.84	21.40	43.50	-22.10	270	100	peak
3	903.3094	16.27	16.79	33.06	46.00	-12.94	360	100	peak

Operating Condition: 802.11b Transmitting Channel 7-2442MHz

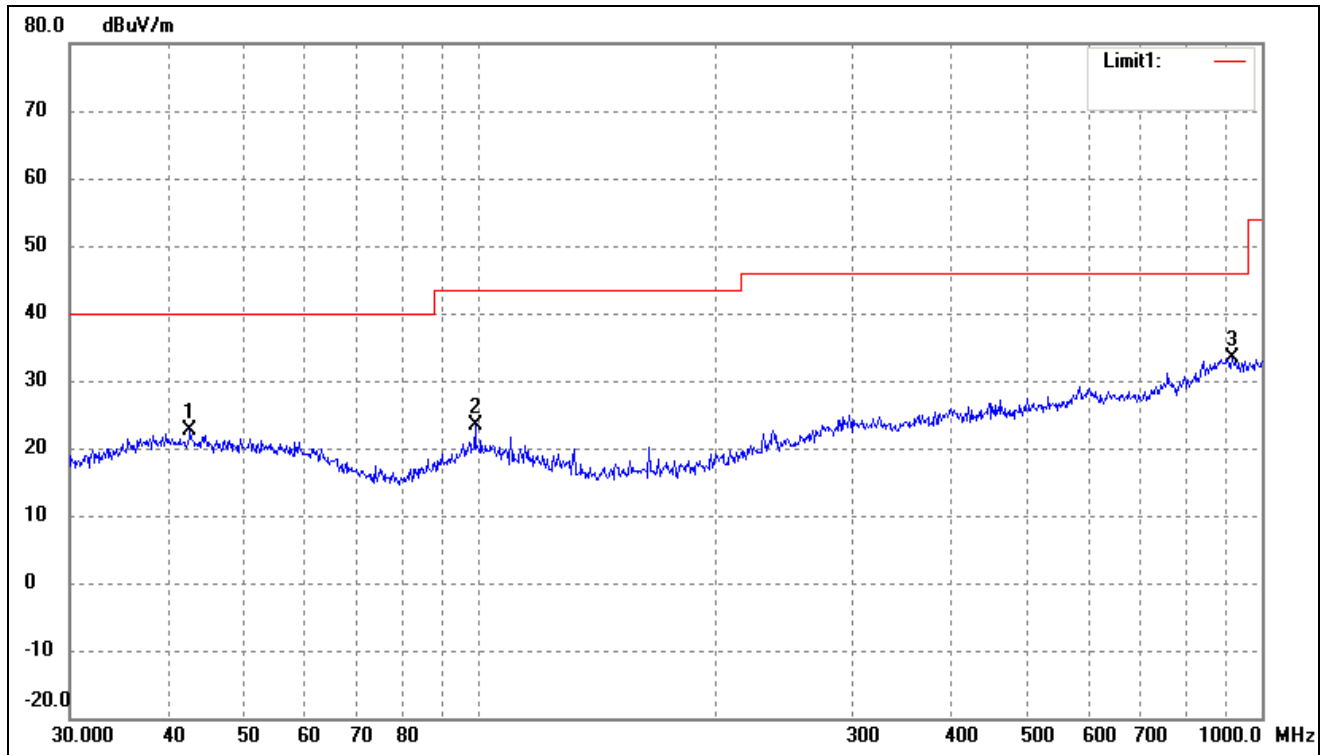
Comment: Battery DC 3.7V

Test Specification: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	41.7130	15.85	7.08	22.93	40.00	-17.07	180	100	peak
2	99.5281	16.14	6.01	22.15	43.50	-21.35	140	100	peak
3	556.7744	21.41	11.49	32.90	46.00	-13.10	160	100	peak

Test Specification: Vertical

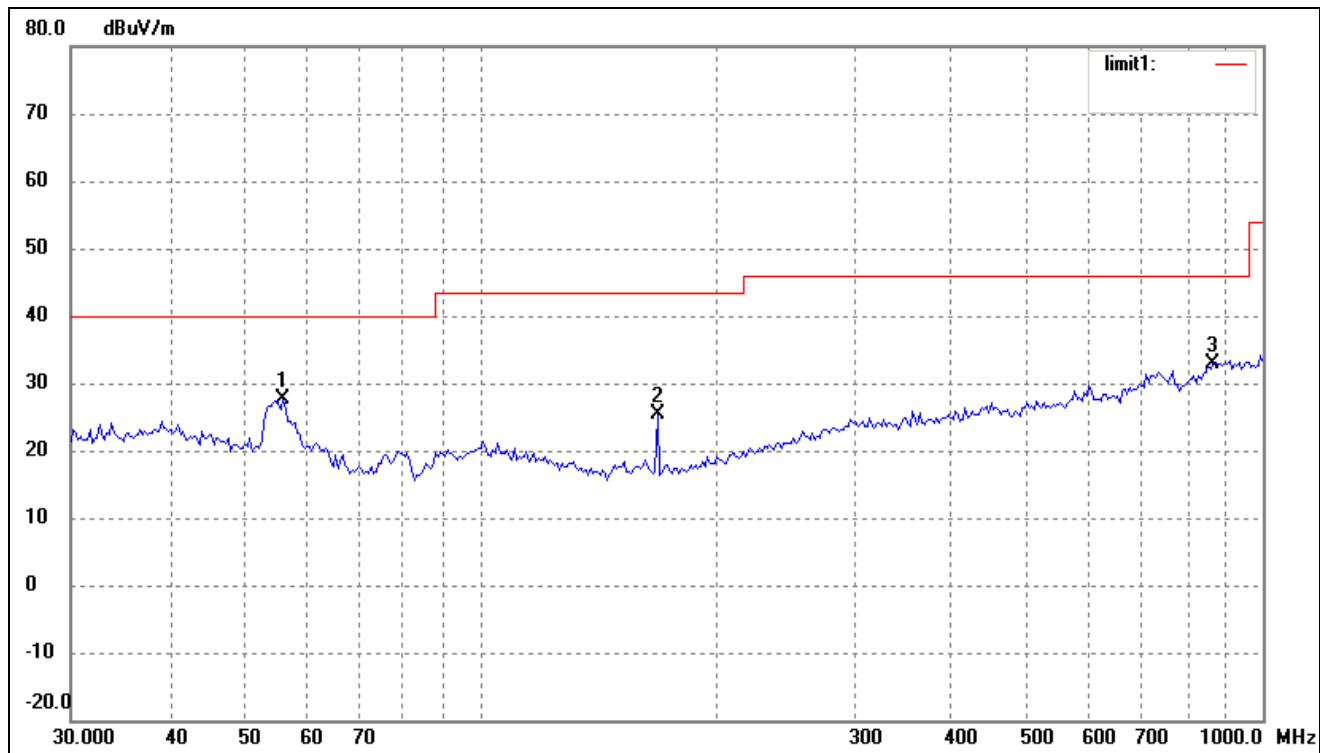


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	42.7496	14.09	8.43	22.52	40.00	-17.48	270	100	peak
2	98.8326	17.49	5.84	23.33	43.50	-20.17	158	100	peak
3	916.0687	16.79	16.56	33.35	46.00	-12.65	360	100	peak

Operating Condition: 802.11b Transmitting Channel 11-2462MHz

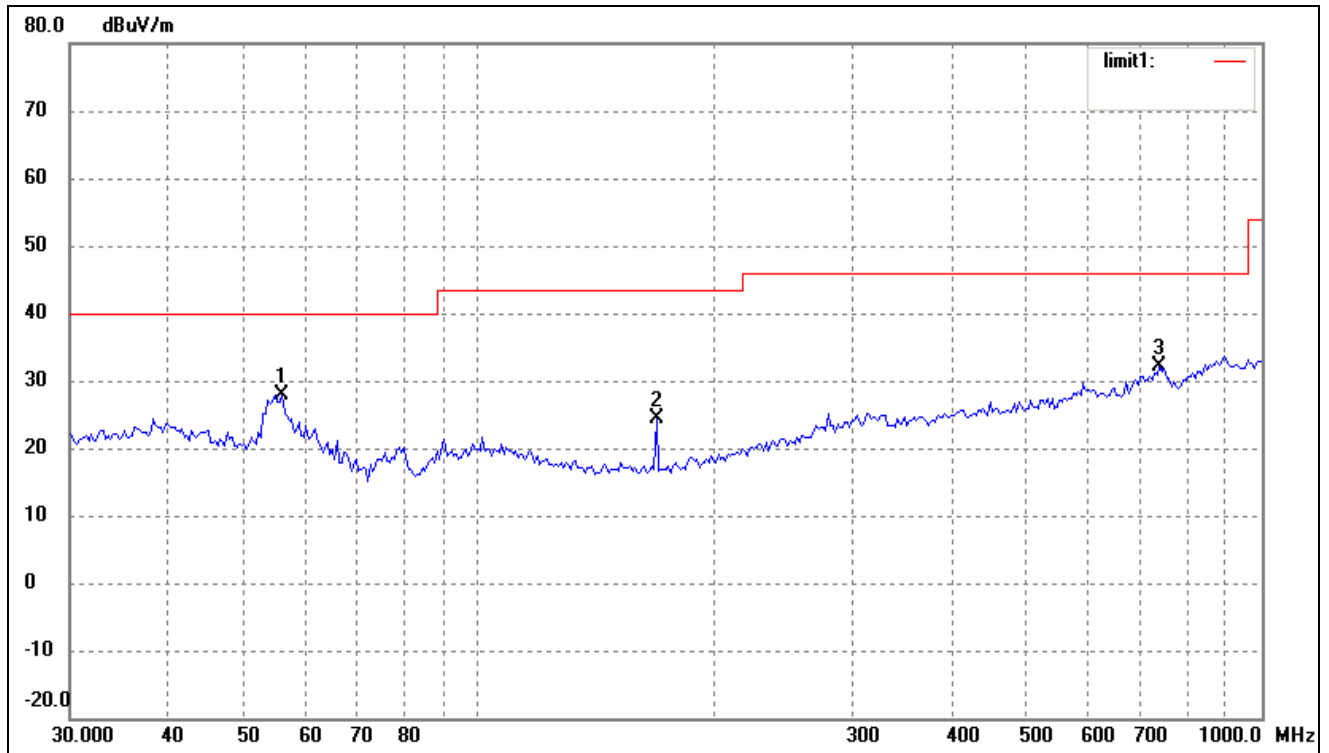
Comment: Battery DC 3.7V

Test Specification: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	56.0007	21.98	5.73	27.71	40.00	-12.29	148	100	peak
2	168.4138	22.78	2.67	25.45	43.50	-18.05	152	100	peak
3	863.0562	16.49	16.38	32.87	46.00	-13.13	115	100	peak

Test Specification: Vertical

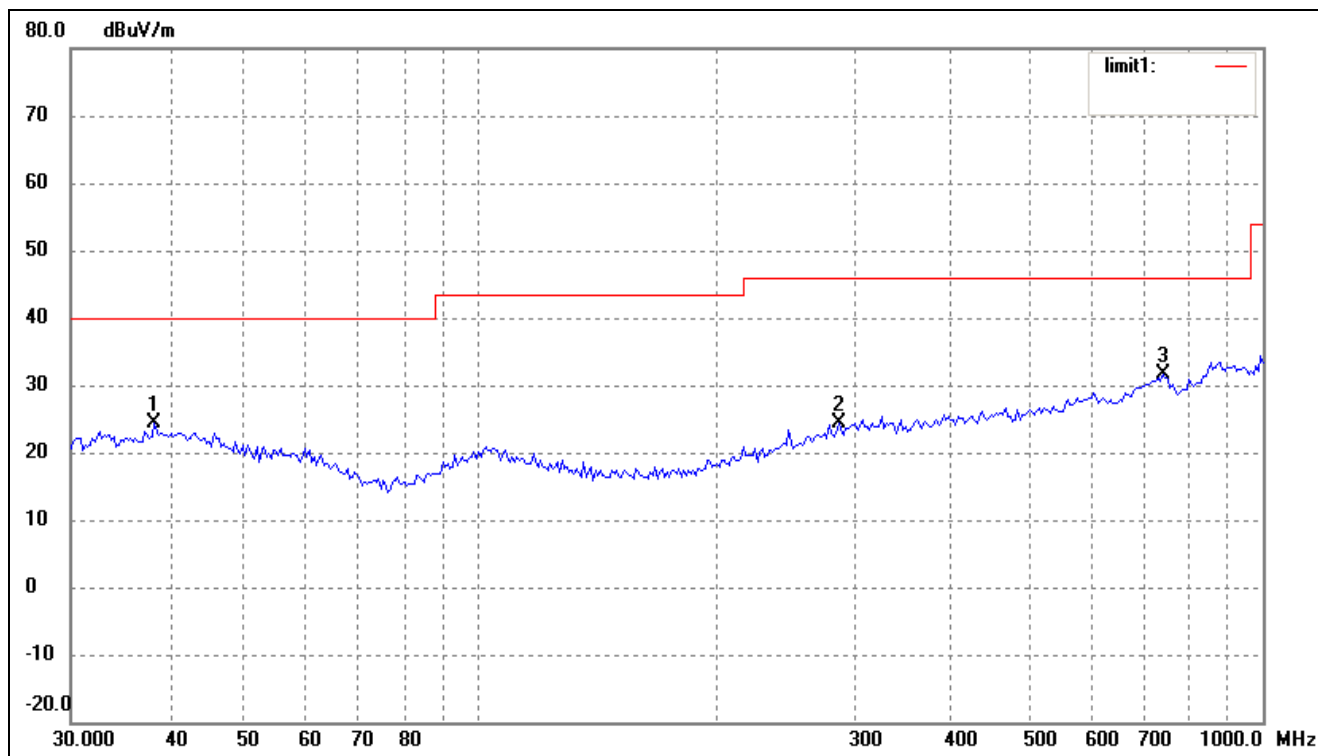


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	56.0007	22.18	5.73	27.91	40.00	-12.09	102	100	peak
2	168.4138	21.70	2.67	24.37	43.50	-19.13	128	100	peak
3	739.6605	16.57	15.53	32.10	46.00	-13.90	165	100	peak

Operating Condition: 802.11b Transmitting Channel 12-2467MHz

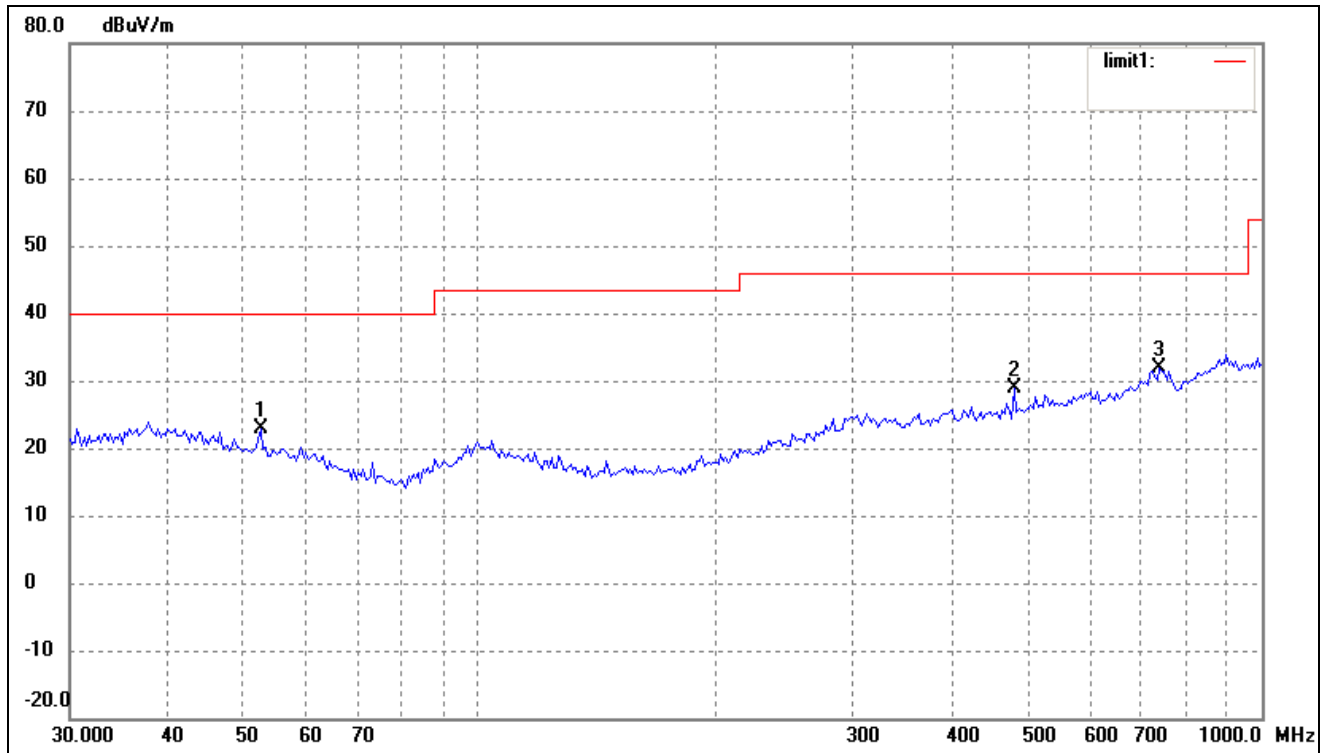
Comment: Battery DC 3.7V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	38.3462	15.37	8.97	24.34	40.00	-15.66	148	100	peak
2	286.9823	15.80	8.67	24.47	46.00	-21.53	154	100	peak
3	744.8661	16.40	15.33	31.73	46.00	-14.27	168	100	peak

Test Specification: Vertical

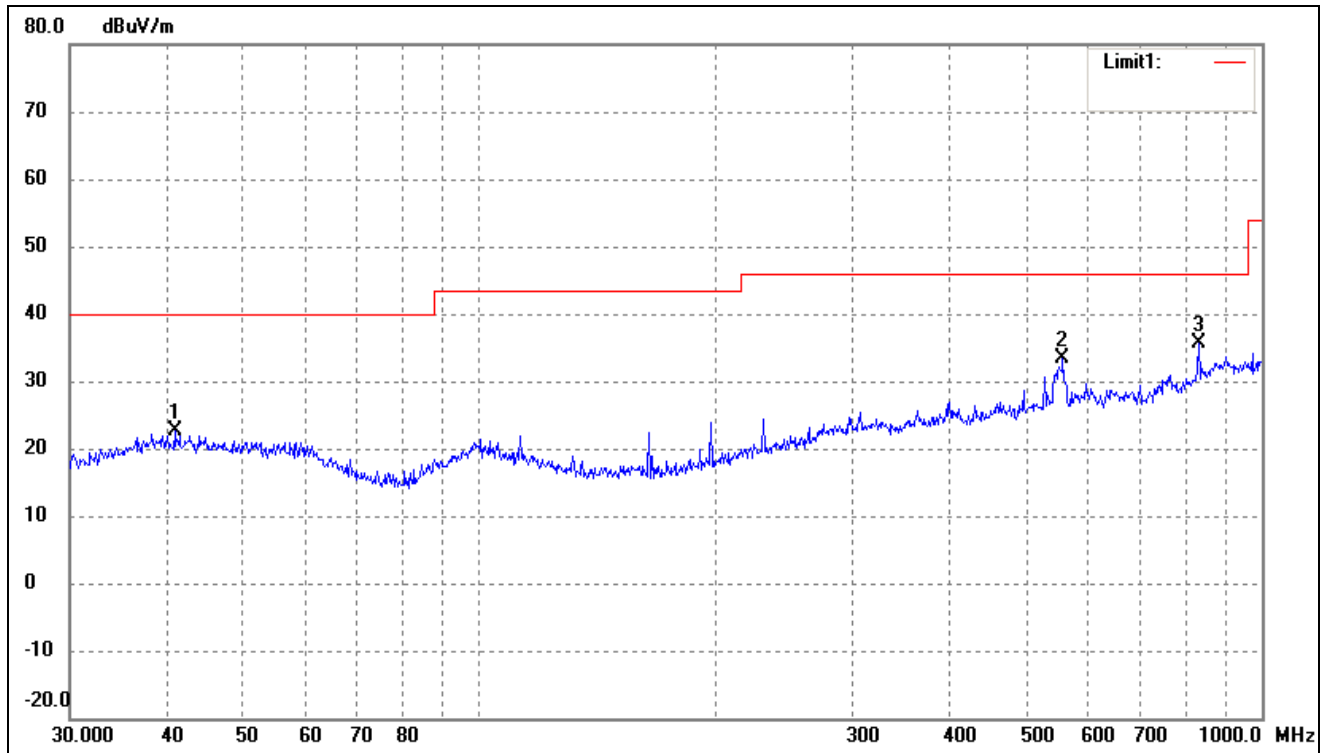


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	52.5753	16.77	6.04	22.81	40.00	-17.19	125	100	peak
2	482.2156	18.63	10.19	28.82	46.00	-17.18	102	100	peak
3	739.6605	16.43	15.53	31.96	46.00	-14.04	185	100	peak

Operating Condition: 802.11b Transmitting High Channel-2472MHz

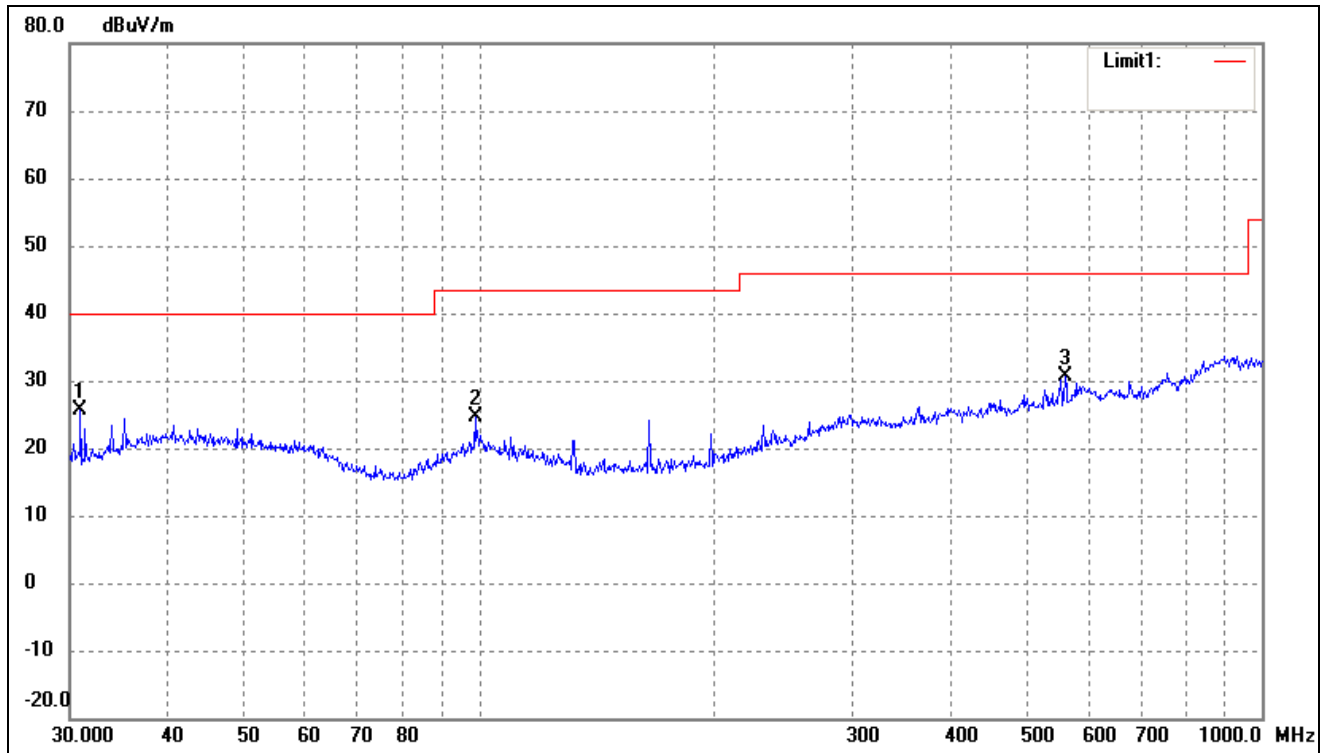
Comment: Battery DC 3.7V

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	40.8446	15.44	7.17	22.61	40.00	-17.39	120	100	peak
2	556.7744	21.80	11.49	33.29	46.00	-12.71	250	100	peak
3	830.4002	20.29	15.26	35.55	46.00	-10.45	360	100	peak

Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.9619	17.75	7.78	25.53	40.00	-14.47	360	100	peak
2	98.8326	18.81	5.84	24.65	43.50	-18.85	200	100	peak
3	560.6928	19.10	11.56	30.66	46.00	-15.34	120	100	peak

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

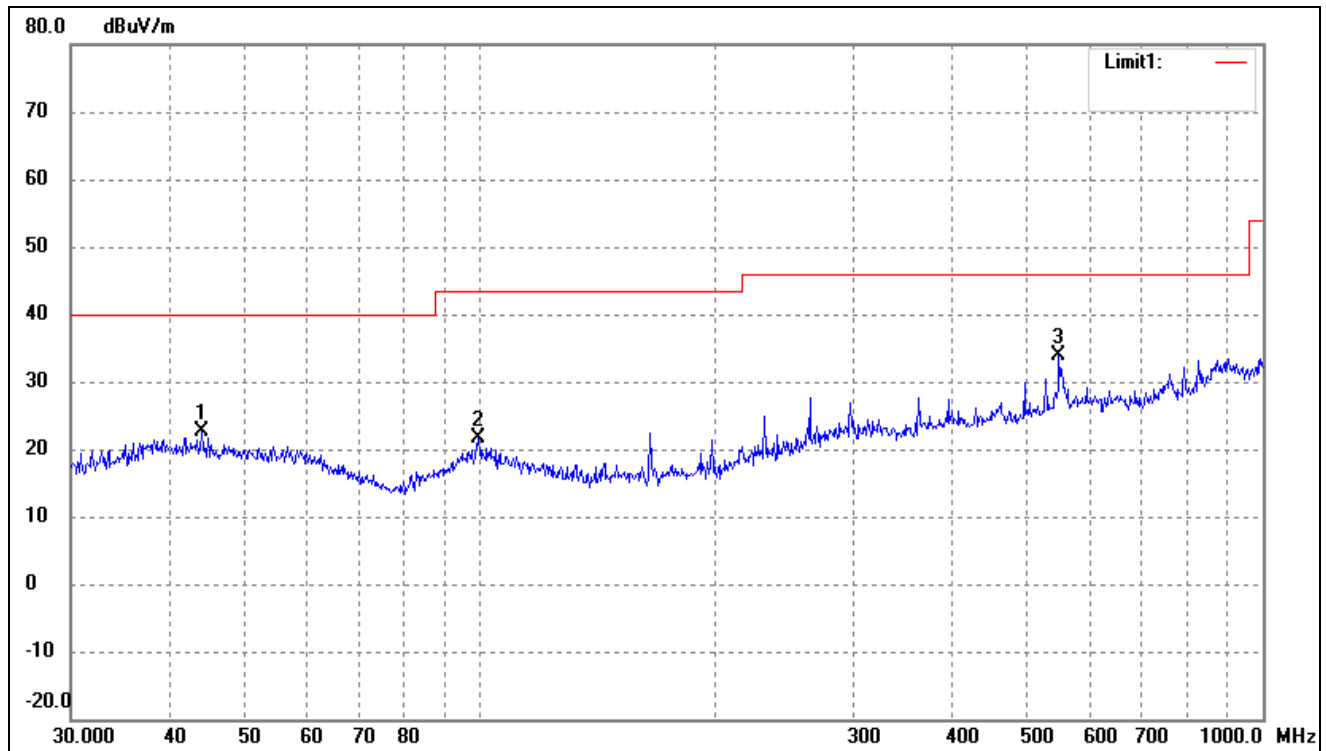
EUT: Tablet

Tested Model: M72BW2-WP(AP)

Operating Condition: 802.11g Transmitting Channel 1-2412MHz

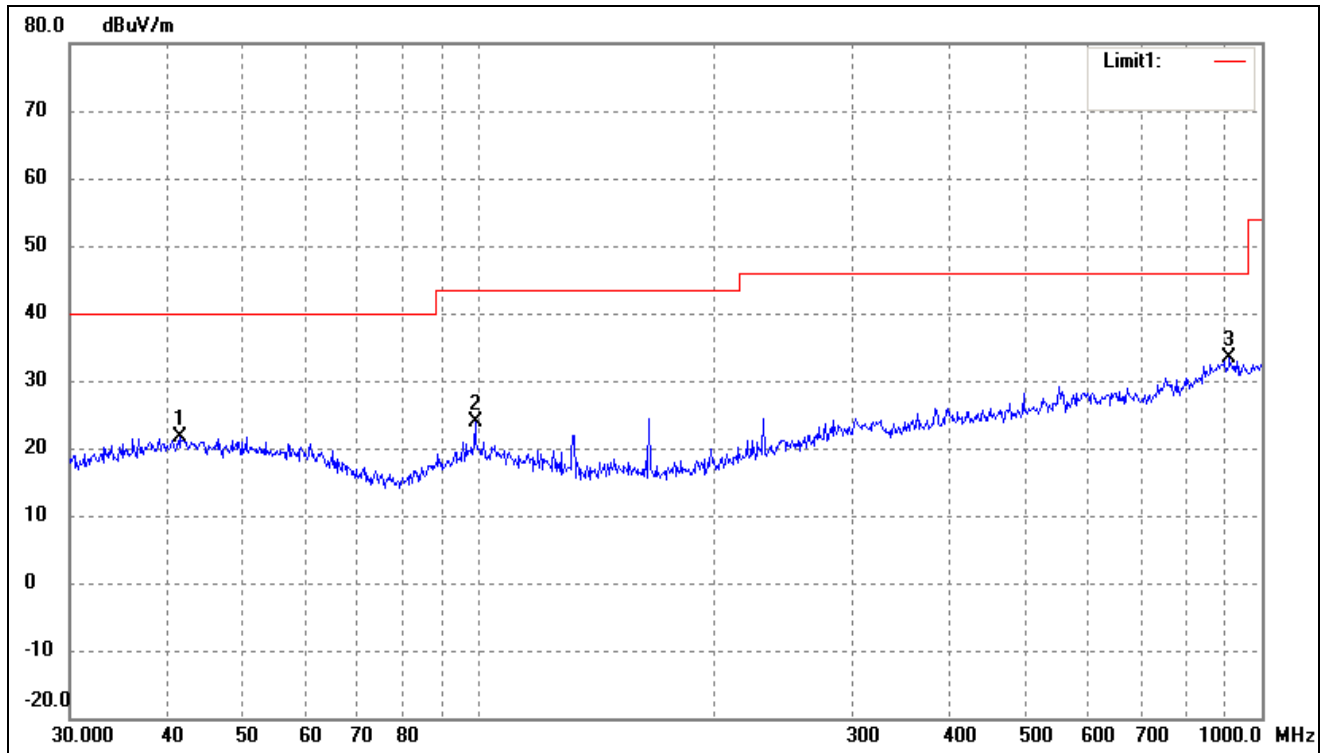
Comment: Battery DC 3.7V

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	44.1202	15.80	6.85	22.65	40.00	-17.35	170	100	peak
2	99.5281	15.74	6.01	21.75	43.50	-21.75	220	100	peak
3	549.0195	22.53	11.40	33.93	46.00	-12.07	320	100	peak

Test Specification: Vertical

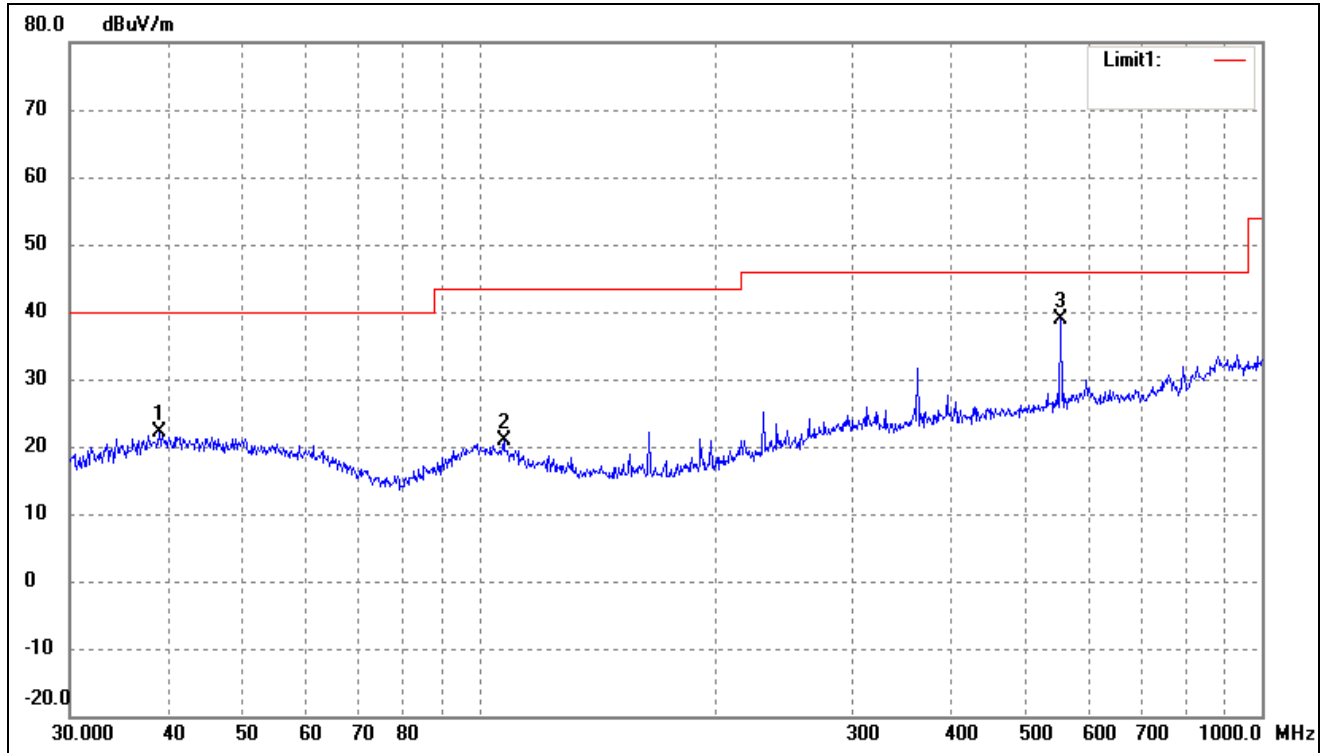


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	41.5670	12.91	8.78	21.69	40.00	-18.31	270	100	peak
2	98.8326	18.00	5.84	23.84	43.50	-19.66	190	100	peak
3	909.6667	16.59	16.68	33.27	46.00	-12.73	360	100	peak

Operating Condition: 802.11g Transmitting Channel 7-2442MHz

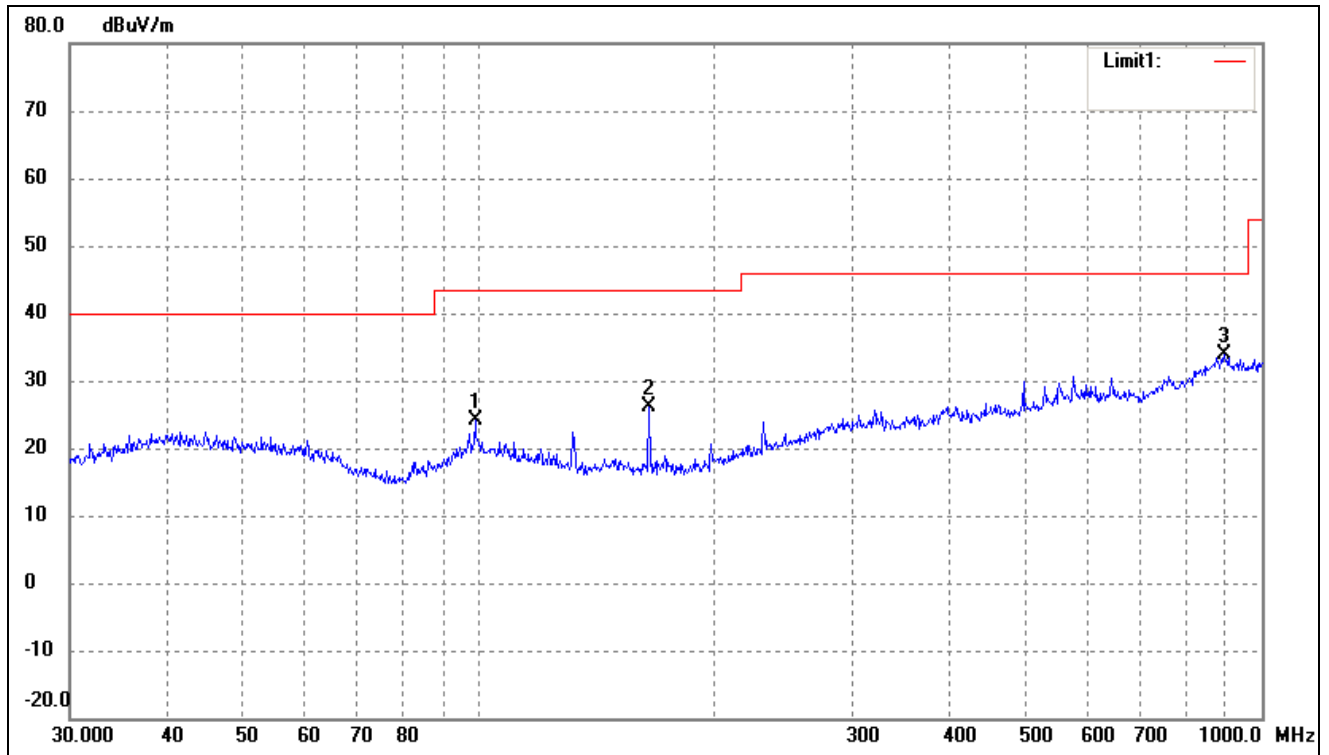
Comment: Battery DC 3.7V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.0245	15.23	6.99	22.22	40.00	-17.78	270	100	peak
2	107.5101	15.46	5.34	20.80	43.50	-22.70	160	100	peak
3	552.8833	27.53	11.45	38.98	46.00	-7.02	228	200	peak

Test Specification: Vertical

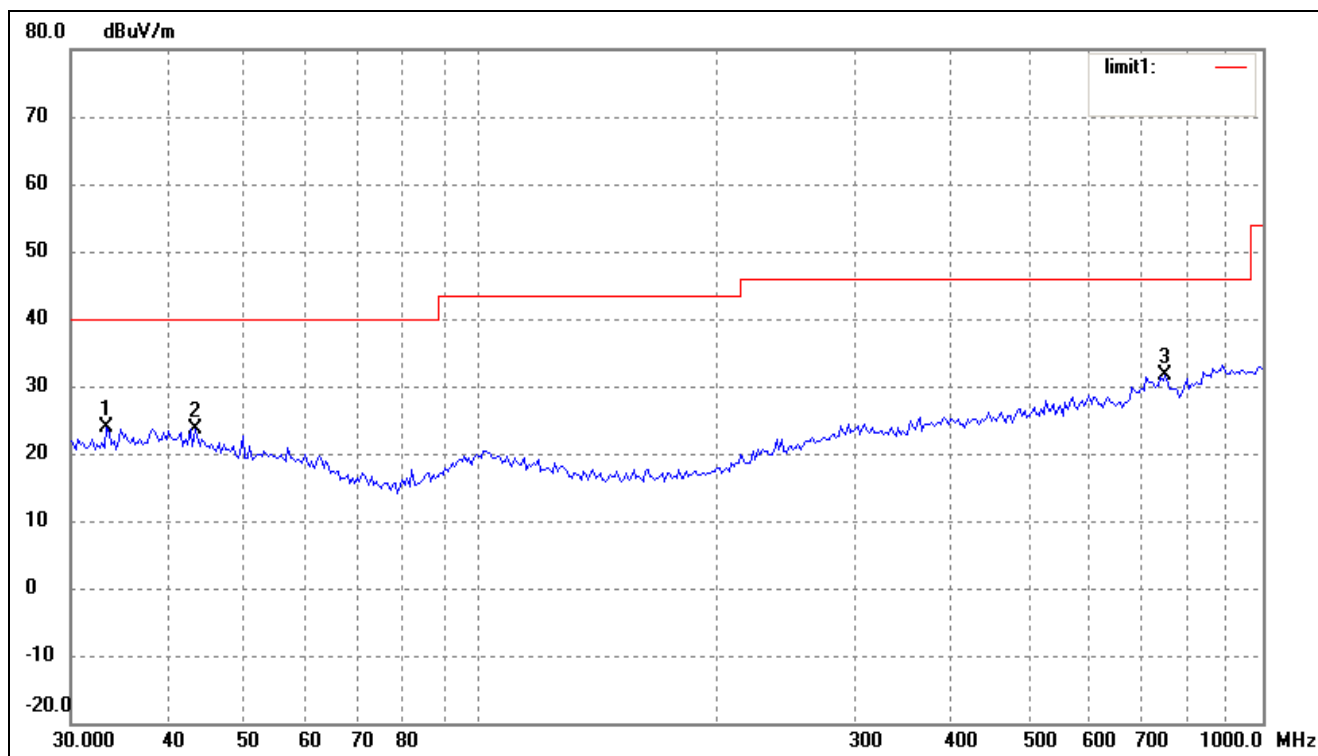


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	98.8326	18.20	5.84	24.04	43.50	-19.46	360	100	peak
2	164.9075	23.39	2.65	26.04	43.50	-17.46	120	100	peak
3	893.8567	16.91	16.85	33.76	46.00	-12.24	270	100	peak

Operating Condition: 802.11g Transmitting Channel 11-2462MHz

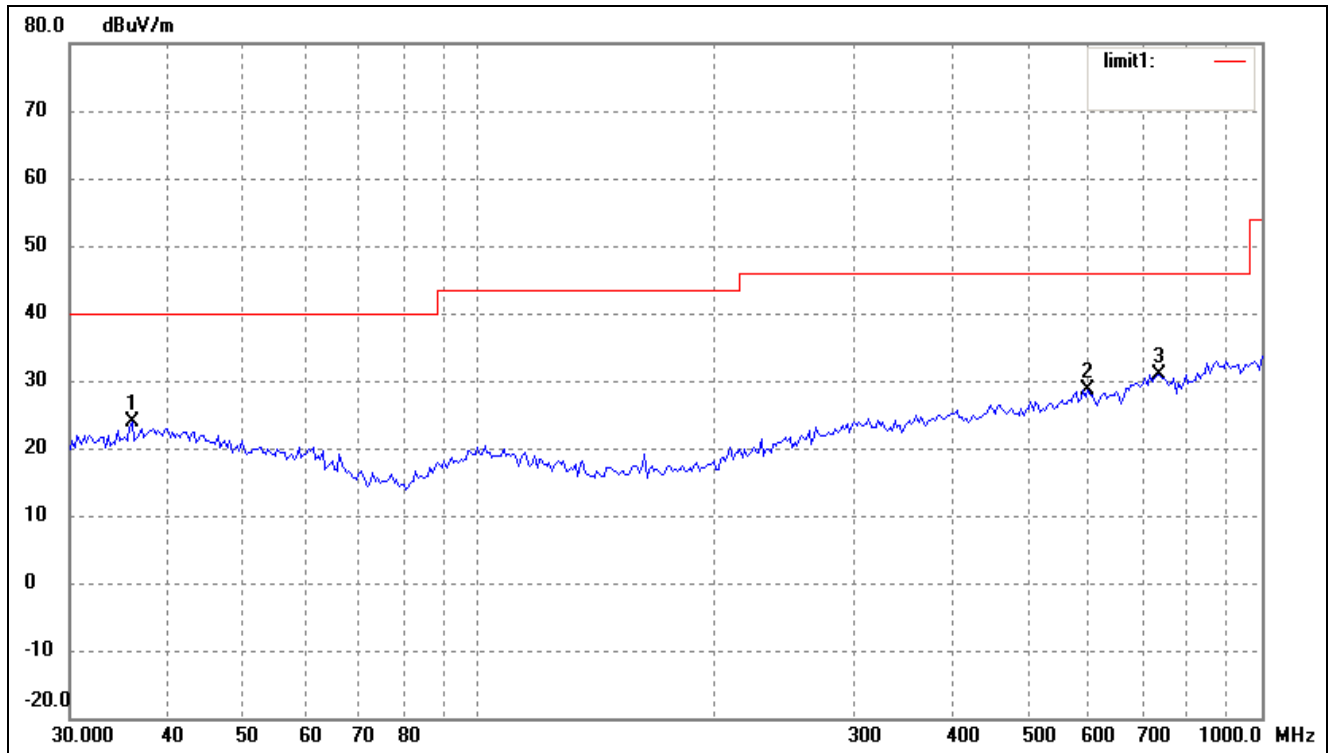
Comment: Battery DC 3.7V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.3279	15.71	8.14	23.85	40.00	-16.15	148	100	peak
2	43.2017	15.39	8.29	23.68	40.00	-16.32	152	100	peak
3	750.1083	16.43	15.09	31.52	46.00	-14.48	136	100	peak

Test Specification: Vertical

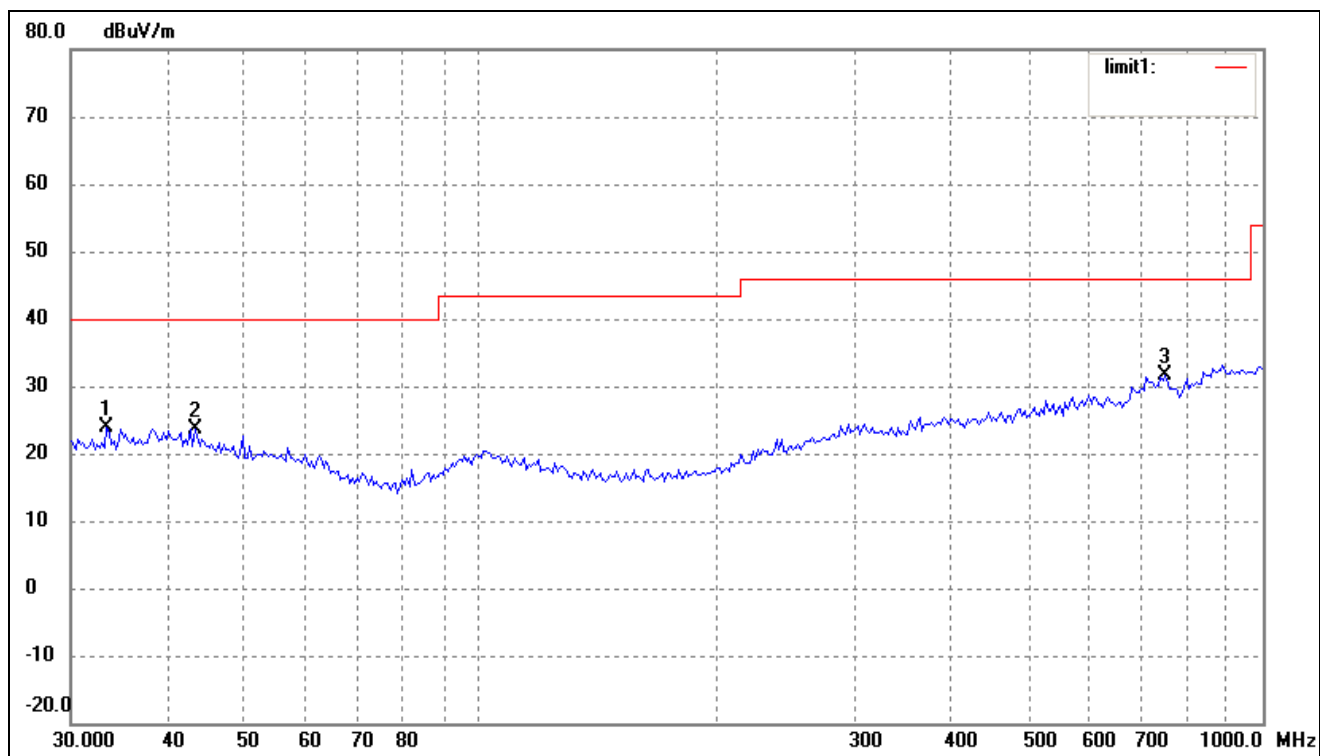


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	36.0007	15.41	8.56	23.97	40.00	-16.03	168	100	peak
2	599.3213	15.33	13.30	28.63	46.00	-17.37	152	100	peak
3	739.6605	15.45	15.53	30.98	46.00	-15.02	178	100	peak

Operating Condition: 802.11g Transmitting Channel 12-2467MHz

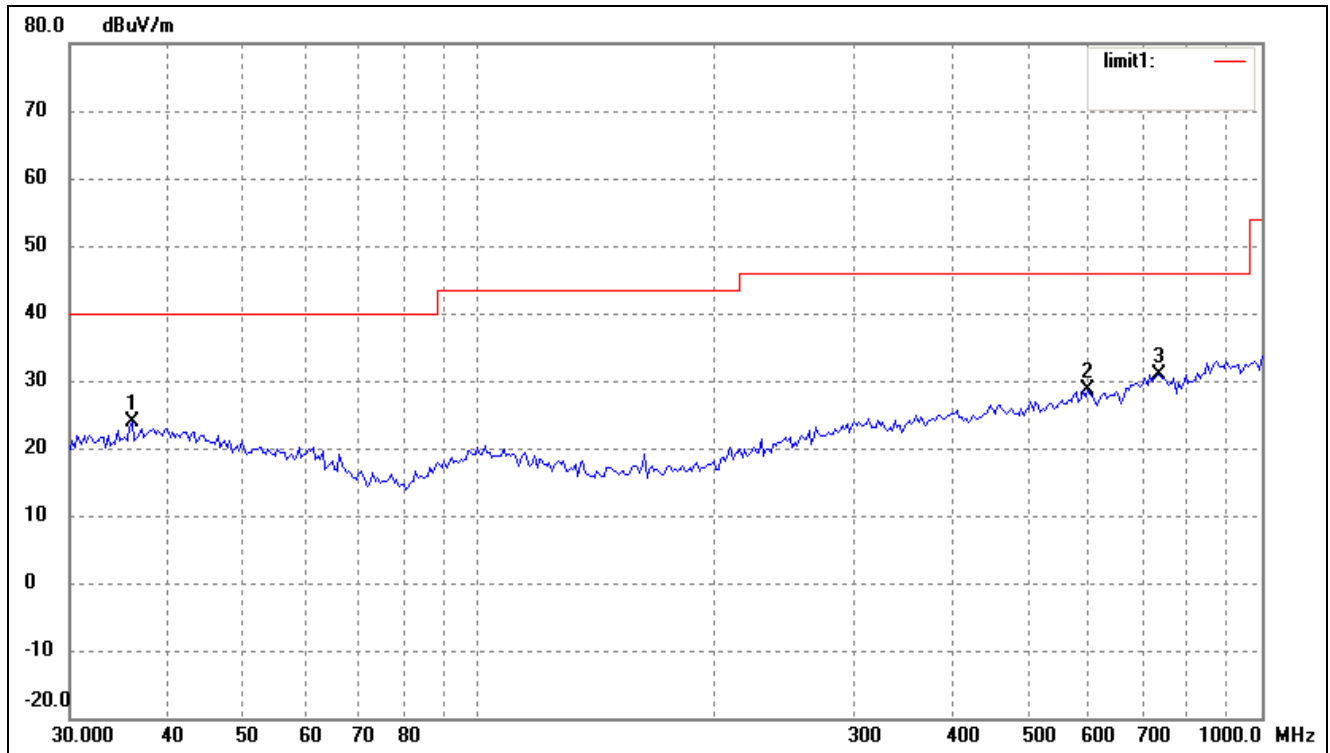
Comment: Battery DC 3.7V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.3279	15.71	8.14	23.85	40.00	-16.15	148	100	peak
2	43.2017	15.39	8.29	23.68	40.00	-16.32	152	100	peak
3	750.1083	16.43	15.09	31.52	46.00	-14.48	136	100	peak

Test Specification: Vertical

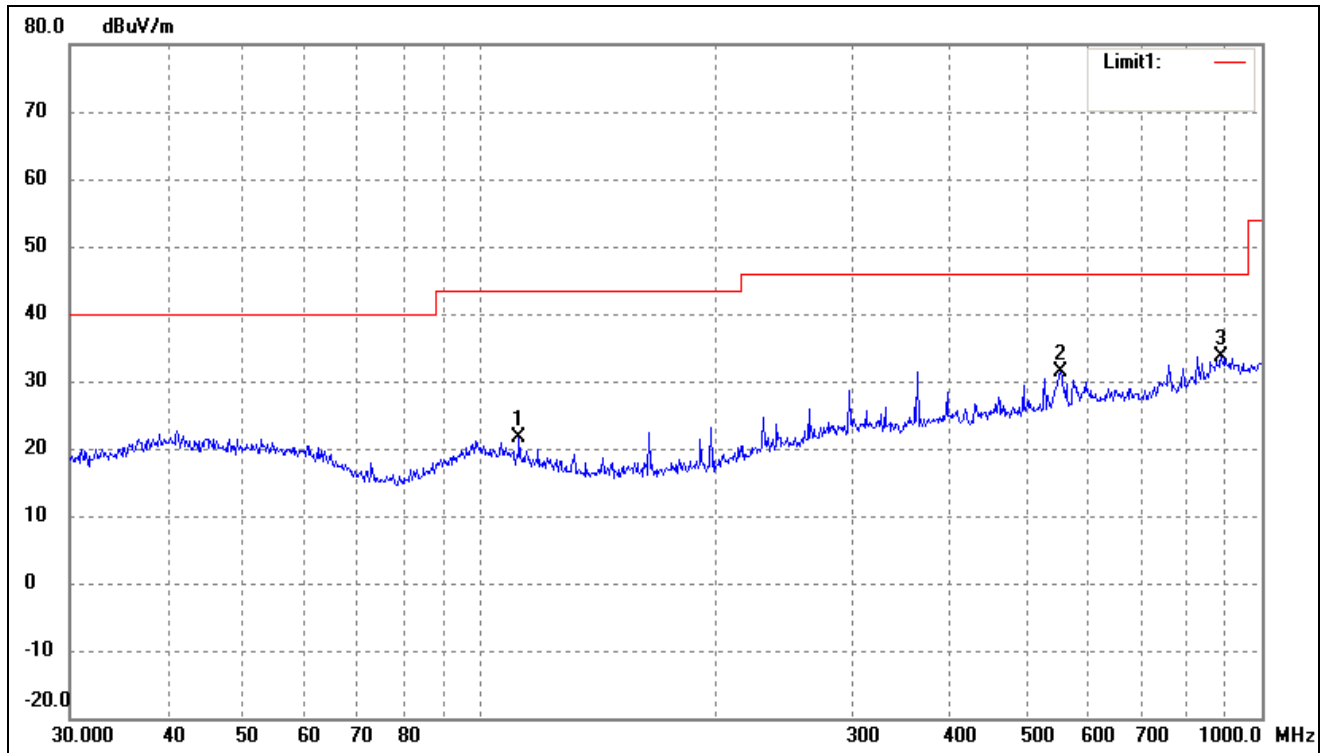


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	36.0007	15.41	8.56	23.97	40.00	-16.03	168	100	peak
2	599.3213	15.33	13.30	28.63	46.00	-17.37	152	100	peak
3	739.6605	15.45	15.53	30.98	46.00	-15.02	178	100	peak

Operating Condition: 802.11g Transmitting Channel 13-2472MHz

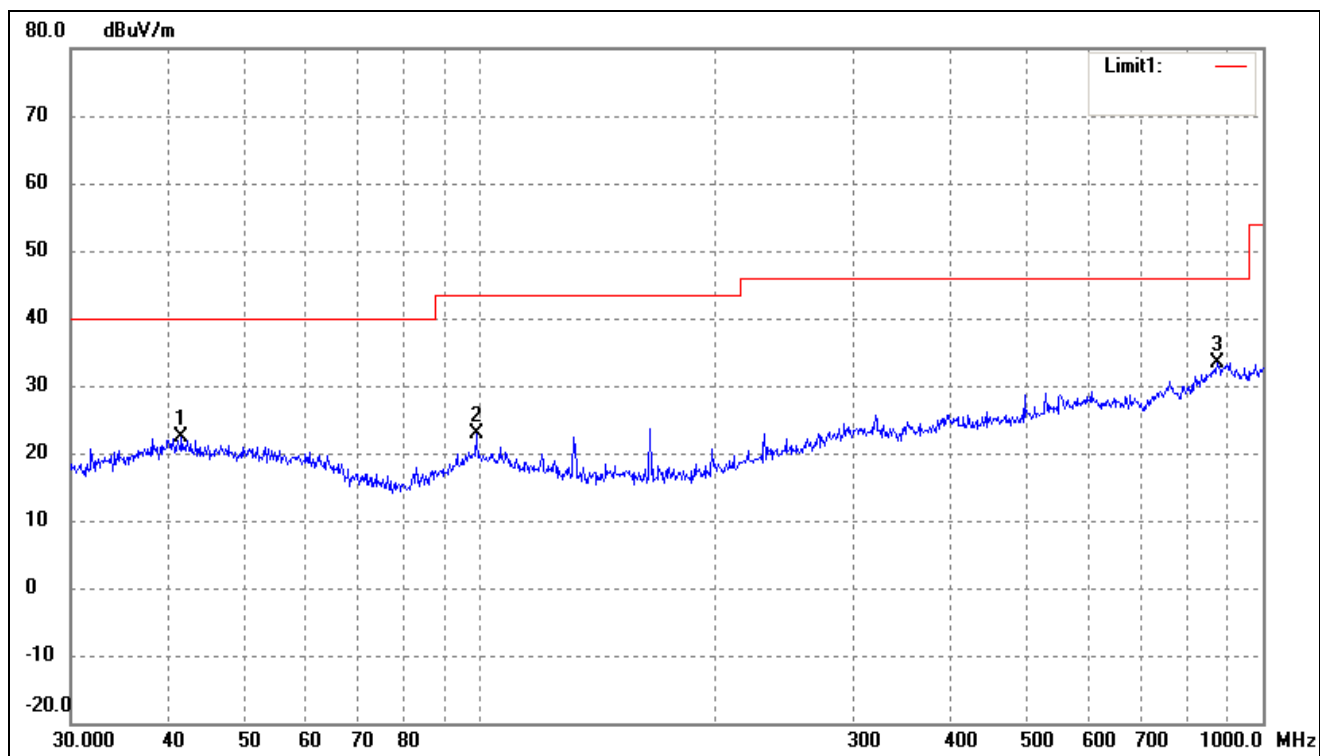
Comment: Battery DC 3.7V

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	112.5244	16.78	4.81	21.59	43.50	-21.91	270	100	peak
2	552.8833	19.98	11.45	31.43	46.00	-14.57	150	100	peak
3	887.6099	16.75	16.84	33.59	46.00	-12.41	360	100	peak

Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	41.5670	13.69	8.78	22.47	40.00	-17.53	360	100	peak
2	98.8326	16.99	5.84	22.83	43.50	-20.67	180	100	peak
3	875.2470	16.70	16.70	33.40	46.00	-12.60	120	100	peak

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

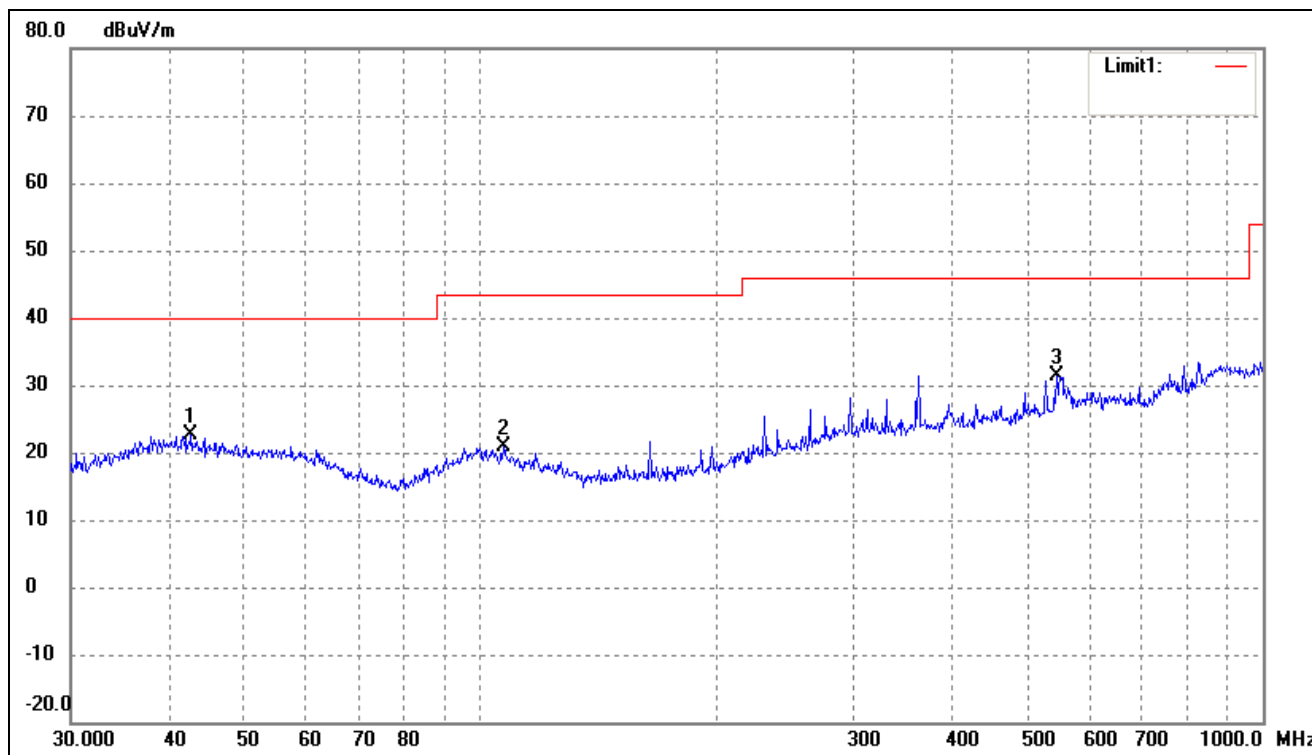
EUT: Tablet

Tested Model: M72BW2-WP(AP)

Operating Condition: 802.11n-HT20 Transmitting Channel 1-2412MHz

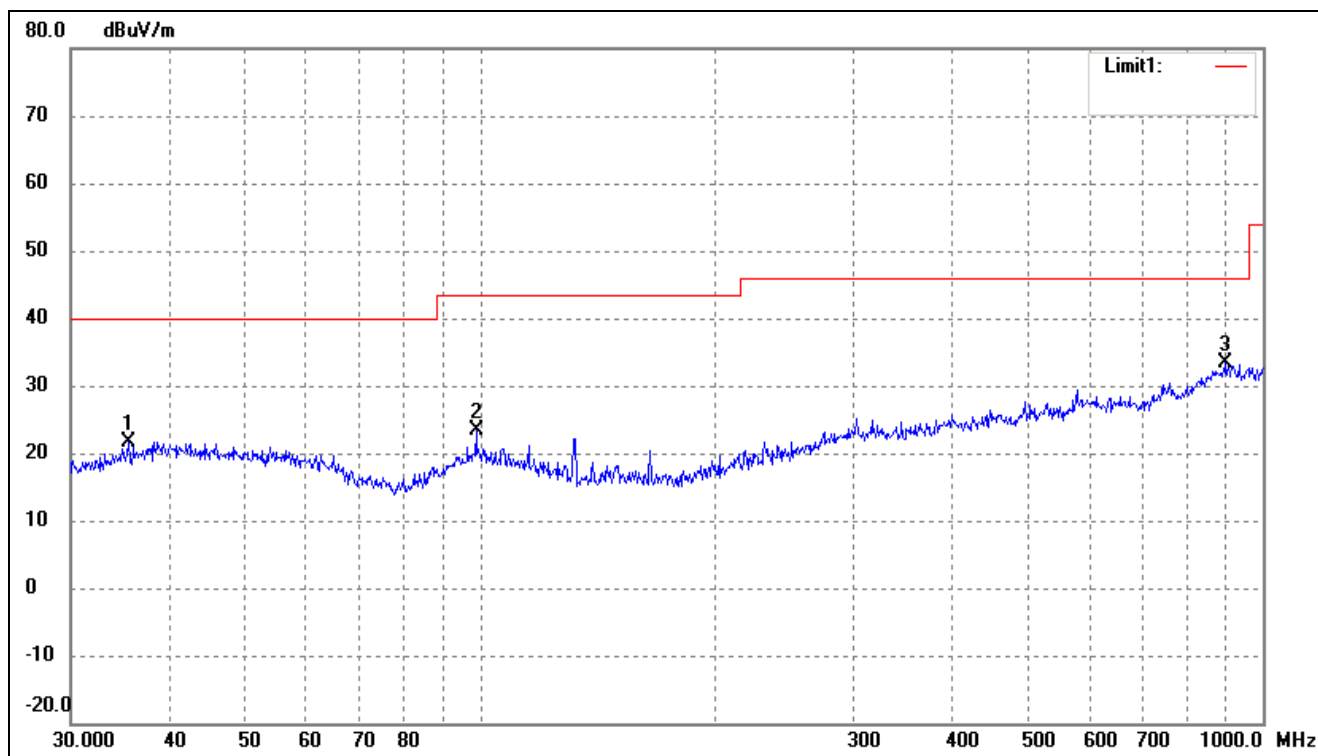
Comment: Battery DC 3.7V

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	42.7496	15.58	6.98	22.56	40.00	-17.44	260	100	peak
2	107.1337	15.53	5.38	20.91	43.50	-22.59	120	200	peak
3	545.1826	19.95	11.35	31.30	46.00	-14.70	289	200	peak

Test Specification: Vertical

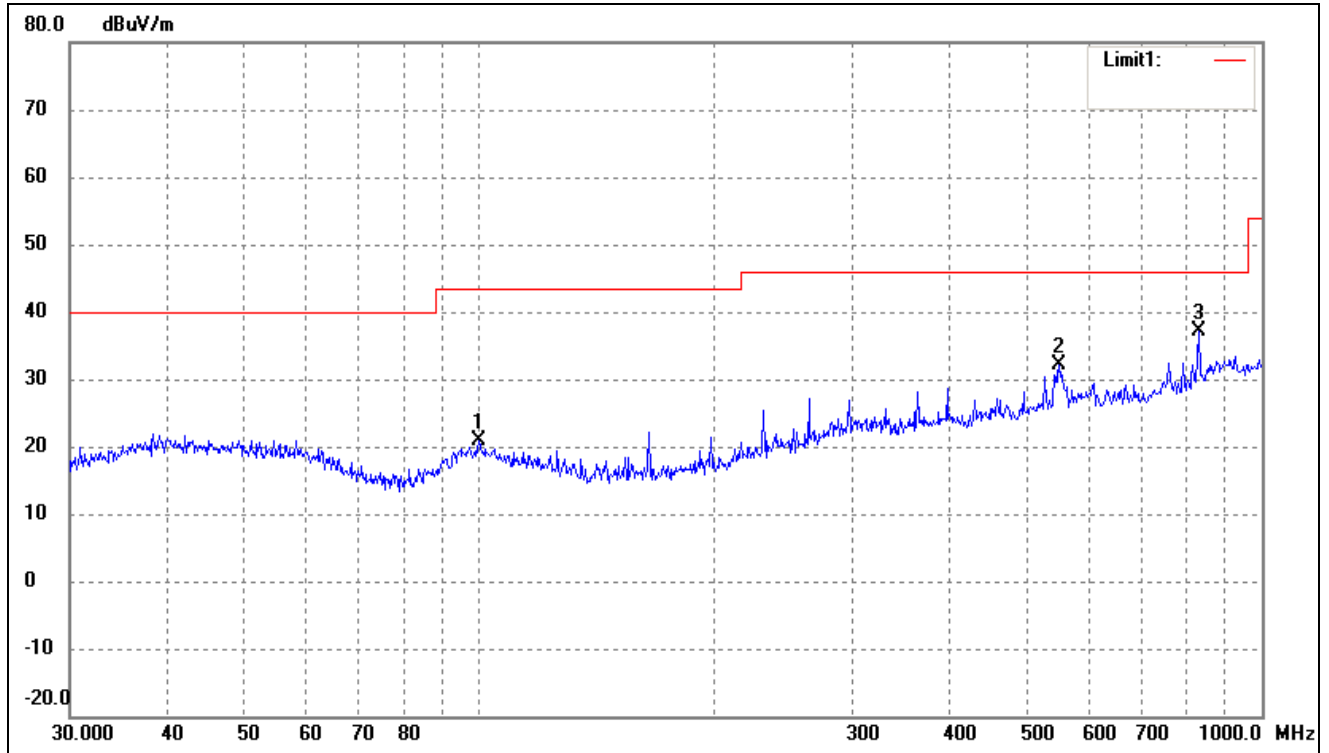


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	35.6240	13.26	8.49	21.75	40.00	-18.25	130	100	peak
2	98.8326	17.60	5.84	23.44	43.50	-20.06	120	100	peak
3	896.9965	16.57	16.85	33.42	46.00	-12.58	360	100	peak

Operating Condition: 802.11n-HT20 Transmitting Channel 7-2442MHz

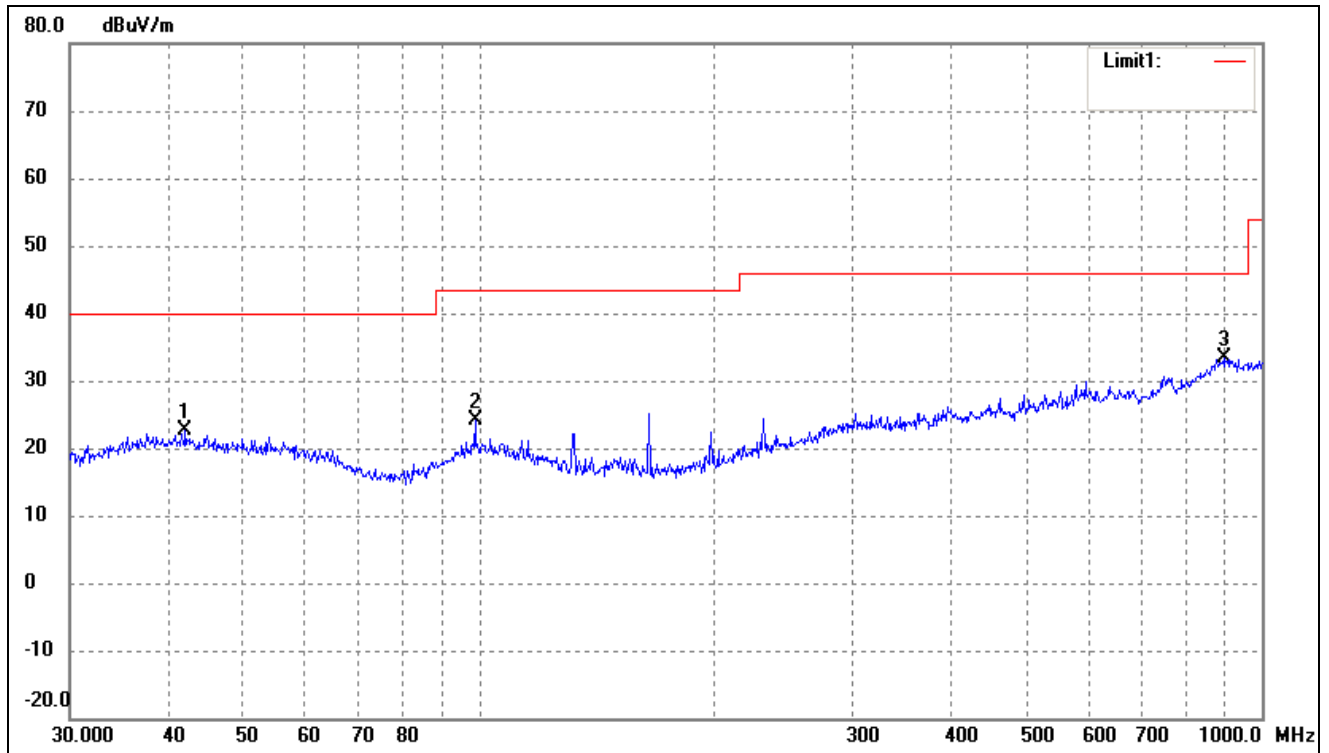
Comment: Battery DC 3.7V

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	99.8777	14.86	6.10	20.96	43.50	-22.54	274	100	peak
2	550.9480	20.63	11.42	32.05	46.00	-13.95	130	100	peak
3	830.4002	21.98	15.26	37.24	46.00	-8.76	120	100	peak

Test Specification: Vertical

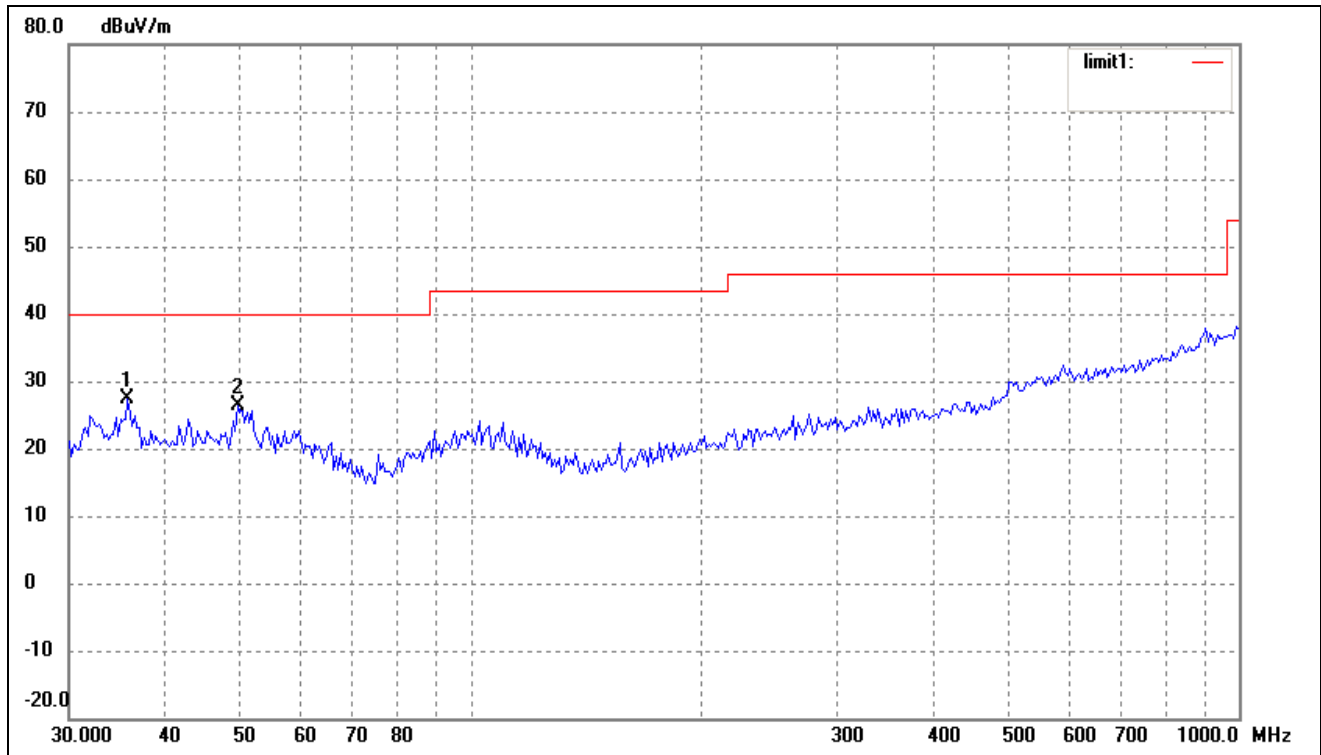


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	42.1542	13.95	8.60	22.55	40.00	-17.45	360	100	peak
2	98.8326	18.29	5.84	24.13	43.50	-19.37	110	100	peak
3	896.9965	16.57	16.85	33.42	46.00	-12.58	120	100	peak

Operating Condition: 802.11n-HT20 Transmitting Channel 11-2462MHz

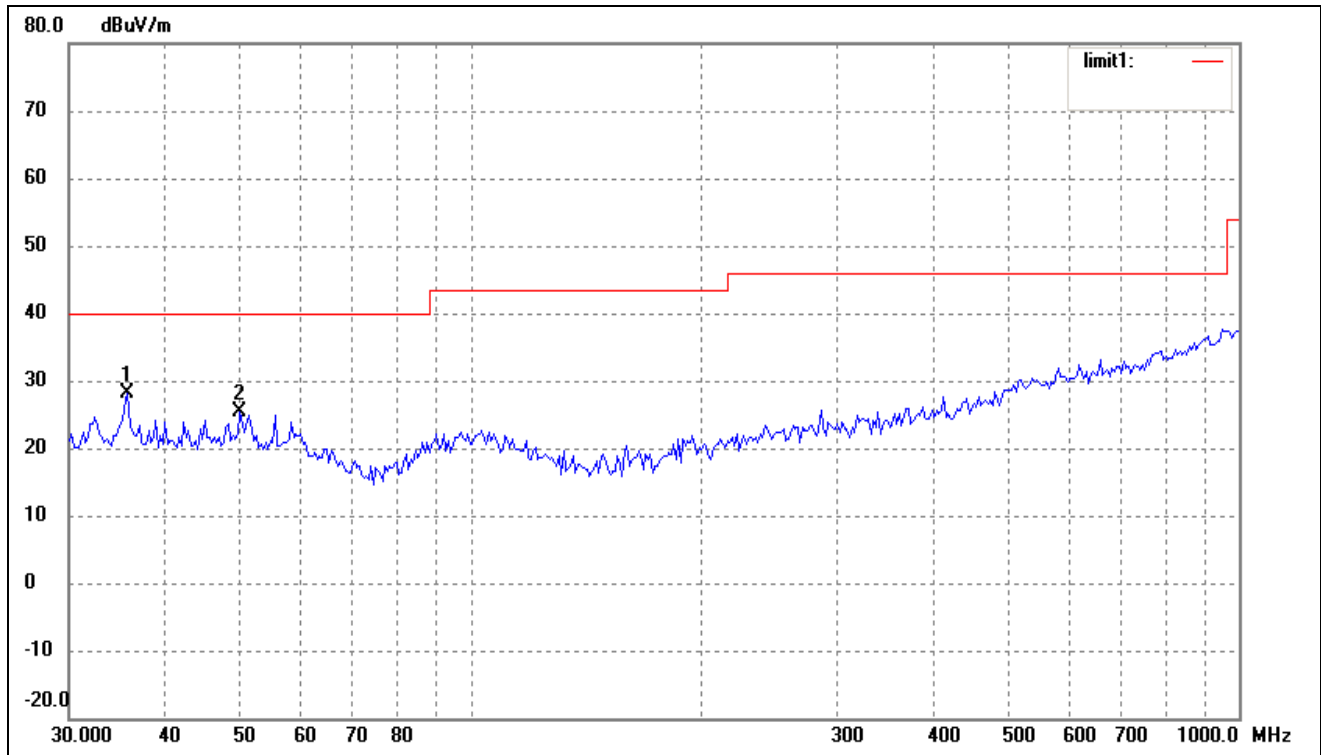
Comment: Battery DC 3.7V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	35.7617	20.53	6.80	27.33	40.00	-12.67	33	100	peak
2	49.7571	18.60	7.70	26.30	40.00	-13.70	151	100	peak

Test Specification: Vertical

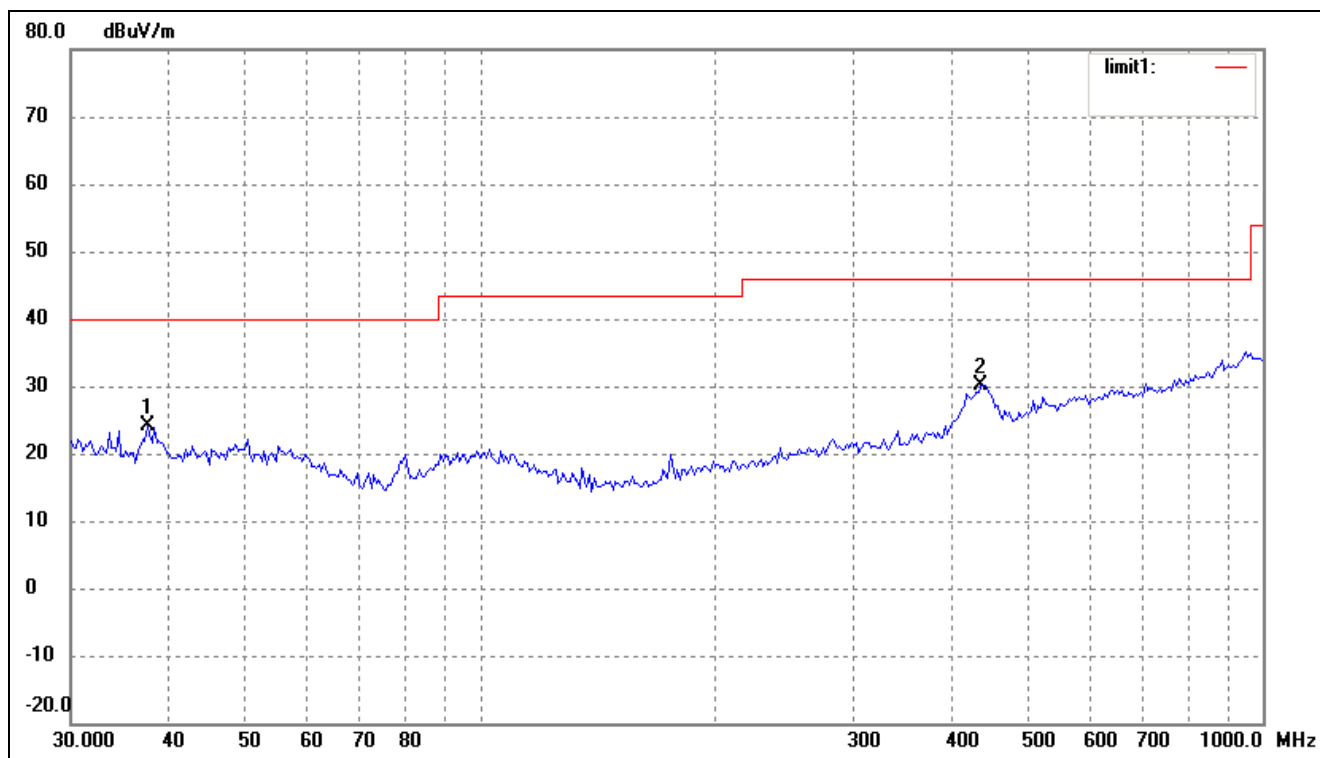


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	35.7617	21.38	6.80	28.18	40.00	-11.82	26	100	peak
2	50.1080	17.68	7.69	25.37	40.00	-14.63	132	100	peak

Operating Condition: 802.11n-HT20 Transmitting Channel 12-2467MHz

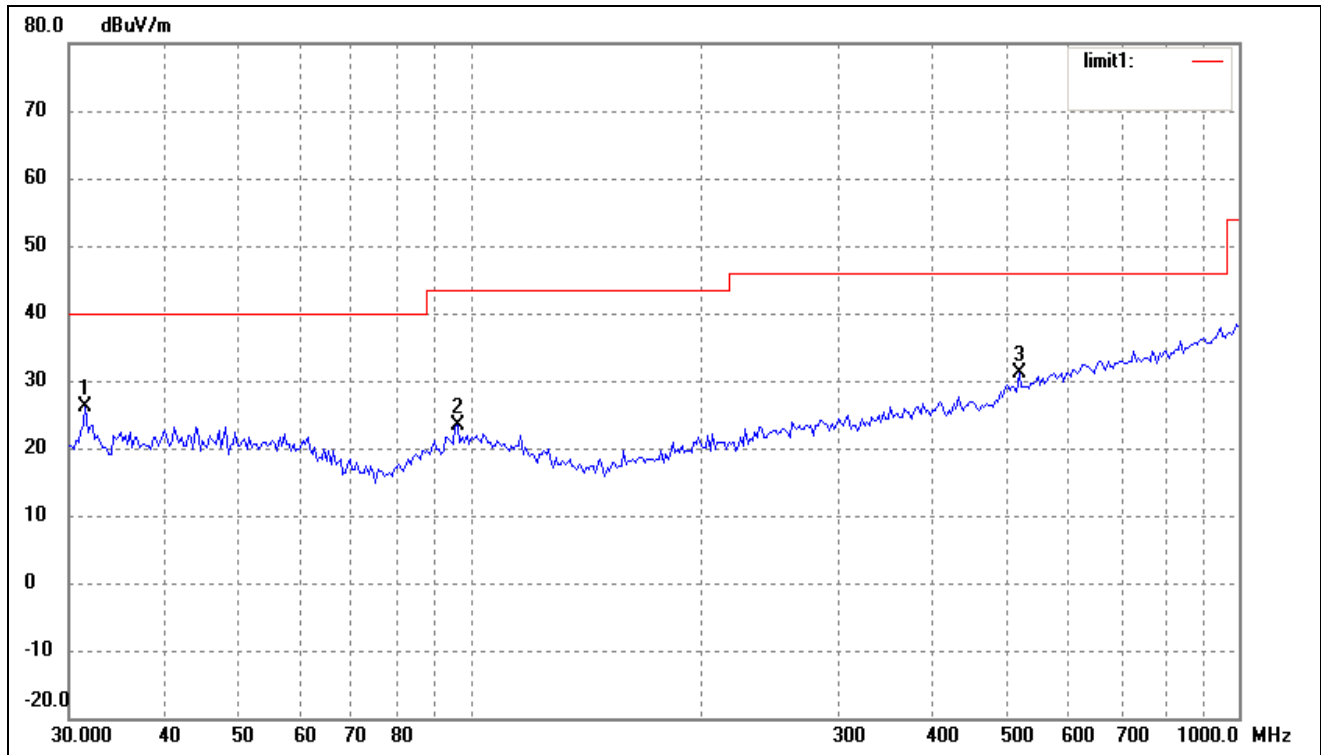
Comment: Battery DC 3.7V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	37.5648	16.76	7.29	24.05	40.00	-15.95	336	100	peak
2	436.3956	19.52	10.65	30.17	46.00	-15.83	264	100	peak

Test Specification: Vertical

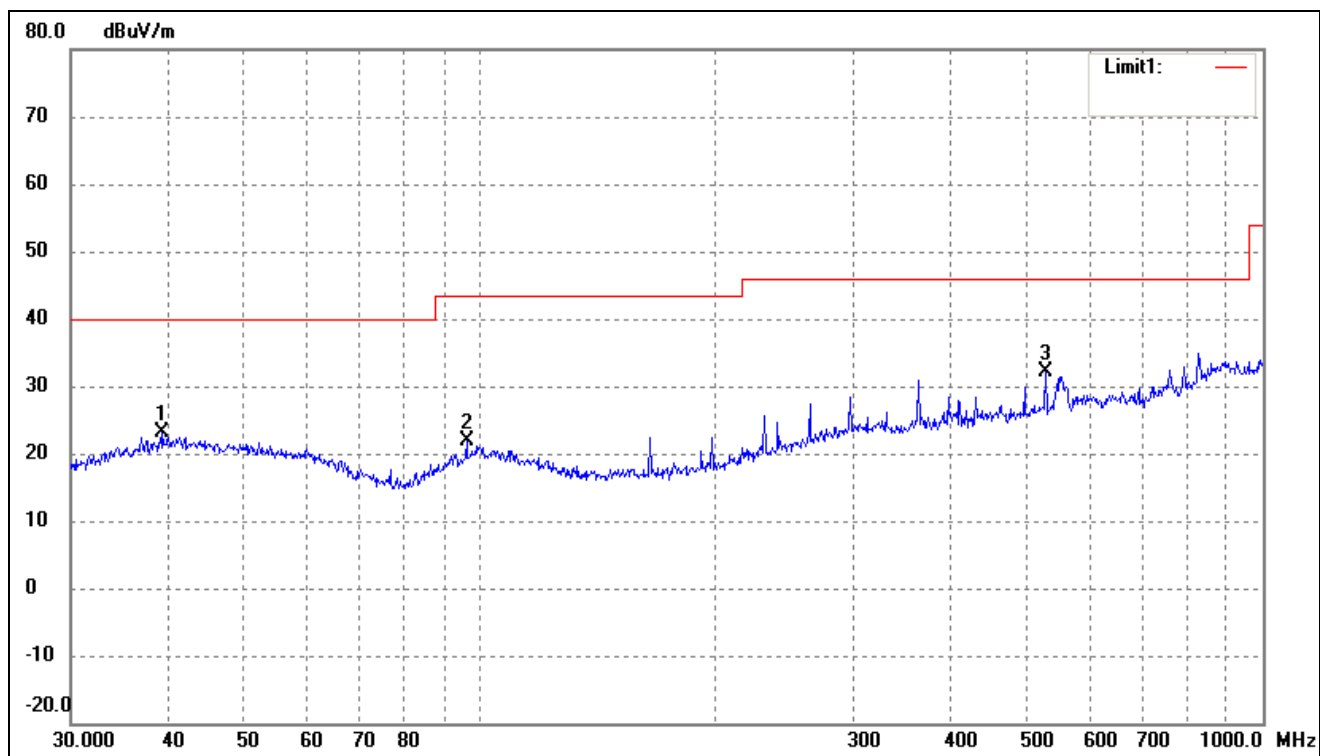


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	31.5095	19.46	6.77	26.23	40.00	-13.77	240	100	peak
2	96.0986	15.12	8.14	23.26	43.50	-20.24	187	100	peak
3	517.2480	16.25	14.80	31.05	46.00	-14.95	220	100	peak

Operating Condition: 802.11n-HT20 Transmitting Channel 13-2472MHz

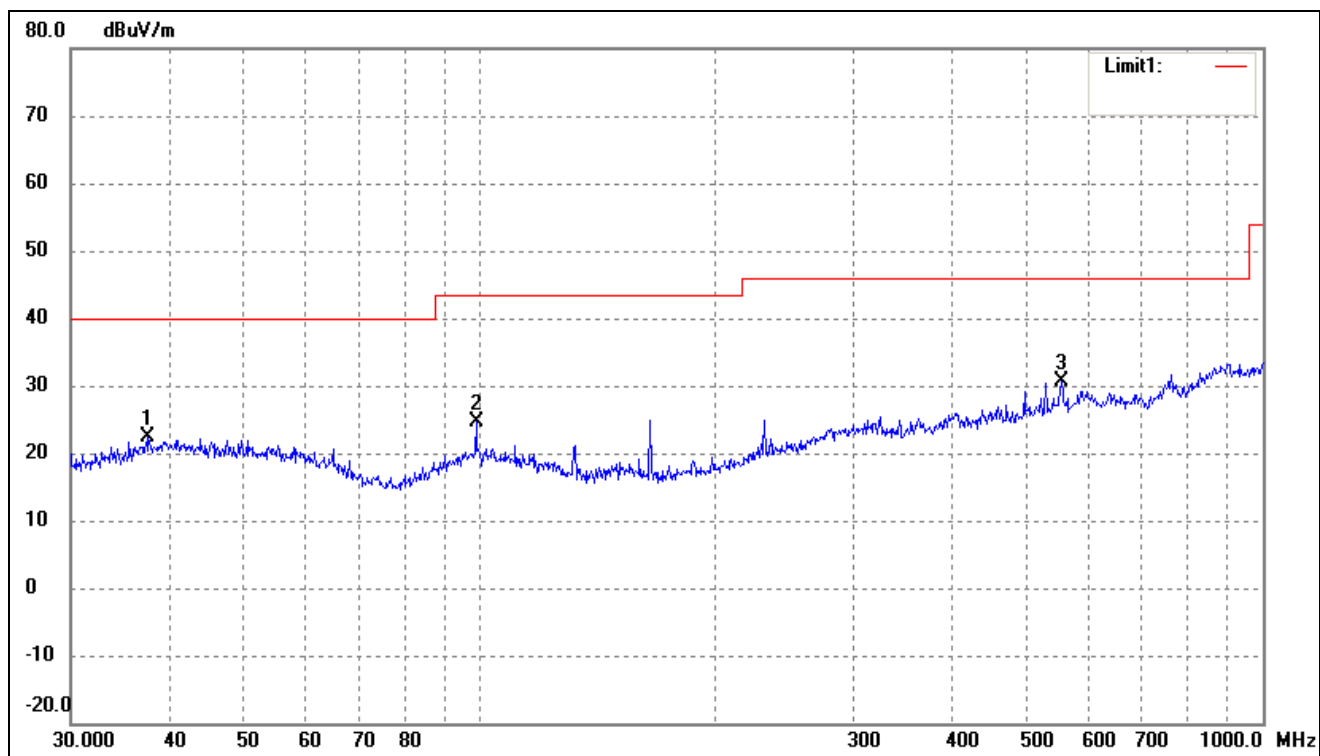
Comment: Battery DC 3.7V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.2991	15.99	7.06	23.05	40.00	-16.95	360	100	peak
2	96.0986	16.62	5.14	21.76	43.50	-21.74	138	100	peak
3	528.2458	20.74	11.35	32.09	46.00	-13.91	180	200	peak

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	37.6798	13.61	8.85	22.46	40.00	-17.54	270	100	peak
2	98.8326	18.77	5.84	24.61	43.50	-18.89	120	100	peak
3	552.8833	19.07	11.45	30.52	46.00	-15.48	360	100	peak

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

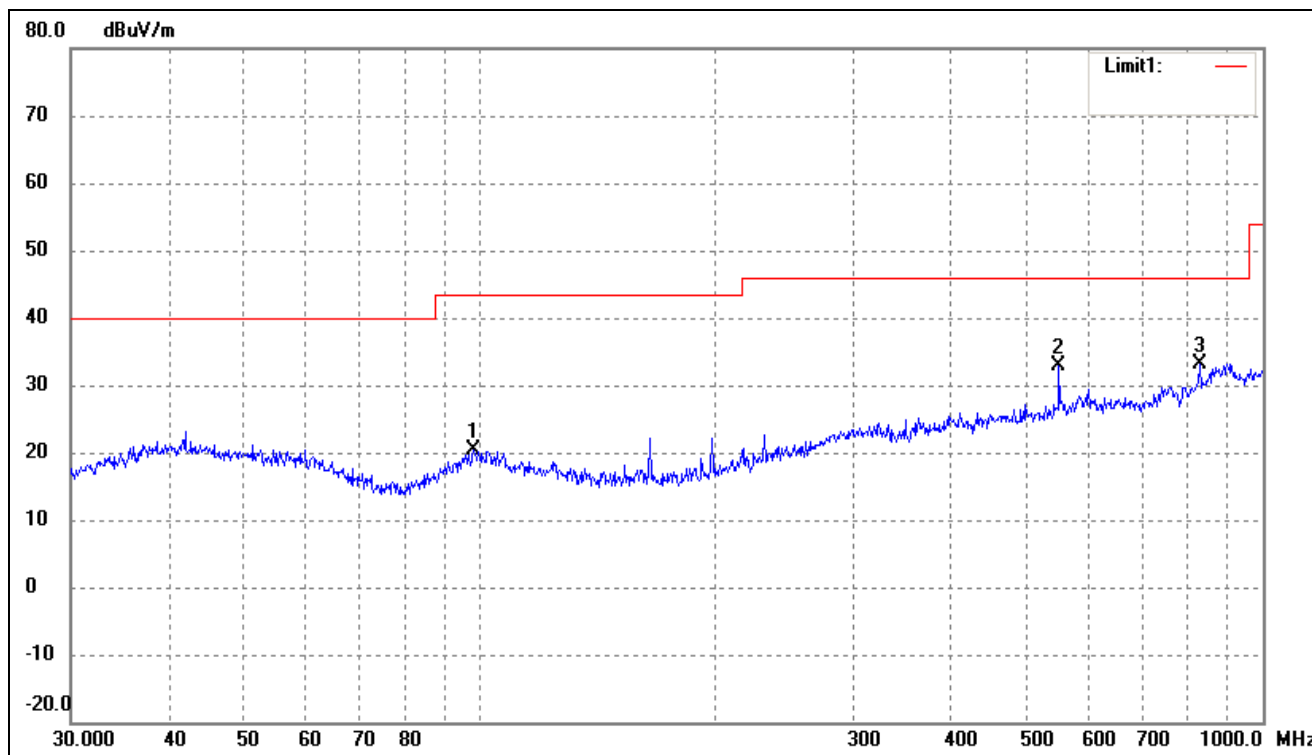
EUT: Tablet

Tested Model: M72BW2-WP(AP)

Operating Condition: 802.11n-HT40 Transmitting Channel 3-2422MHz

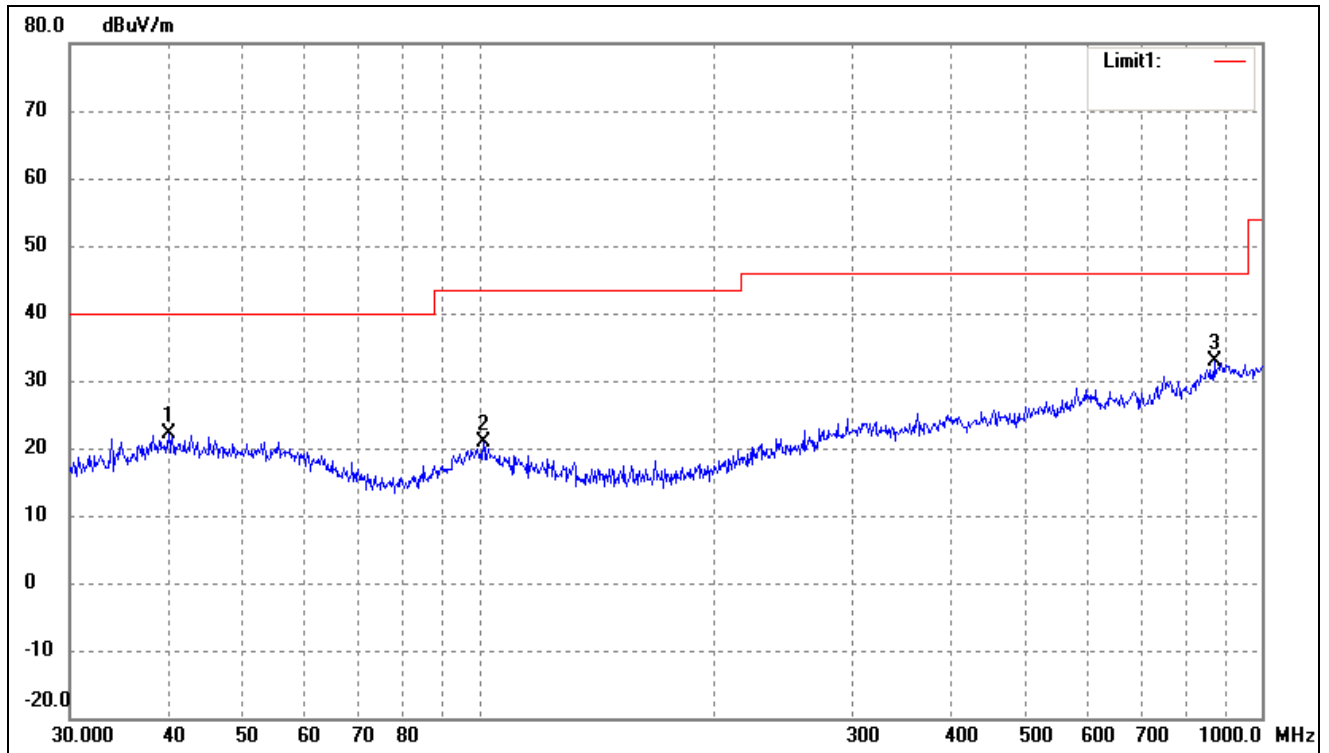
Comment: Battery DC 3.7V

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	98.1419	14.70	5.67	20.37	43.50	-23.13	260	100	peak
2	549.0195	21.55	11.40	32.95	46.00	-13.05	120	200	peak
3	830.4002	17.93	15.26	33.19	46.00	-12.81	289	200	peak

Test Specification: Vertical

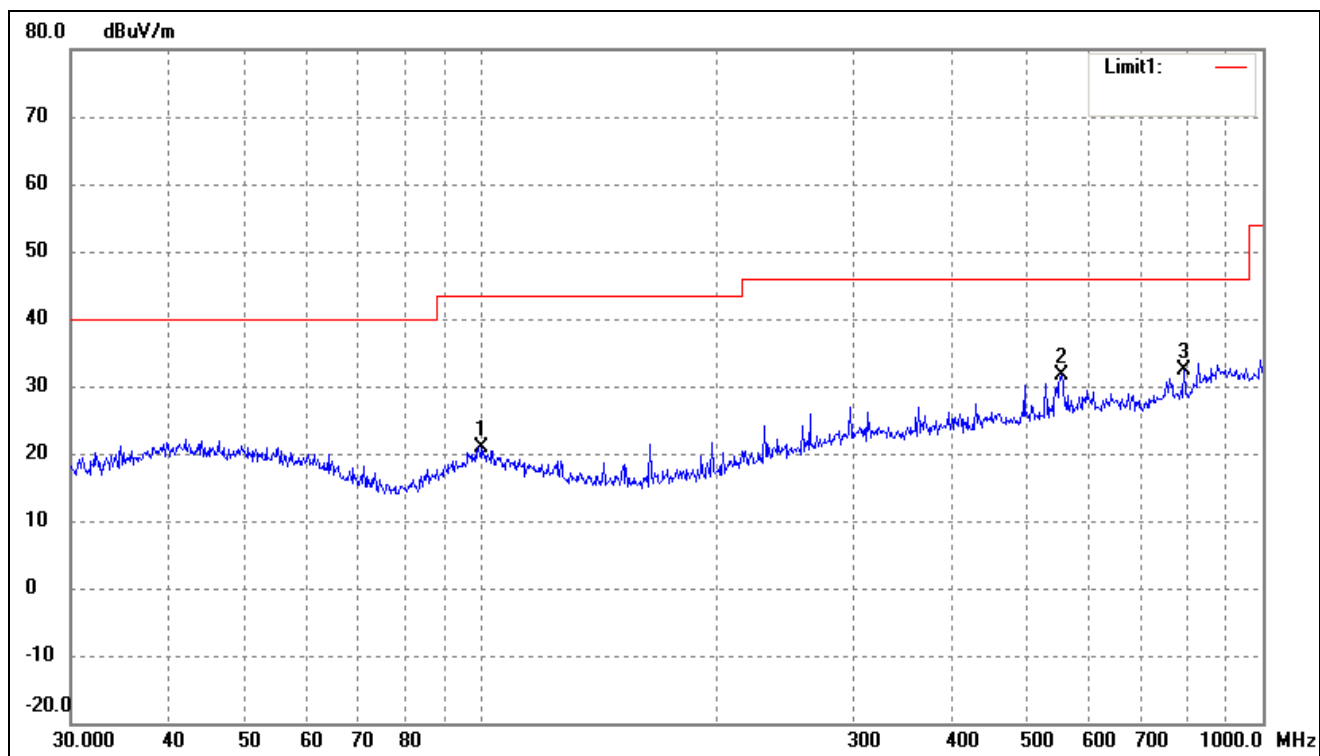


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	40.1347	13.00	9.21	22.21	40.00	-17.79	130	100	peak
2	101.2885	14.82	5.99	20.81	43.50	-22.69	120	100	peak
3	869.1302	16.23	16.54	32.77	46.00	-13.23	360	100	peak

Operating Condition: 802.11n-HT40 Transmitting Channel 7-2442MHz

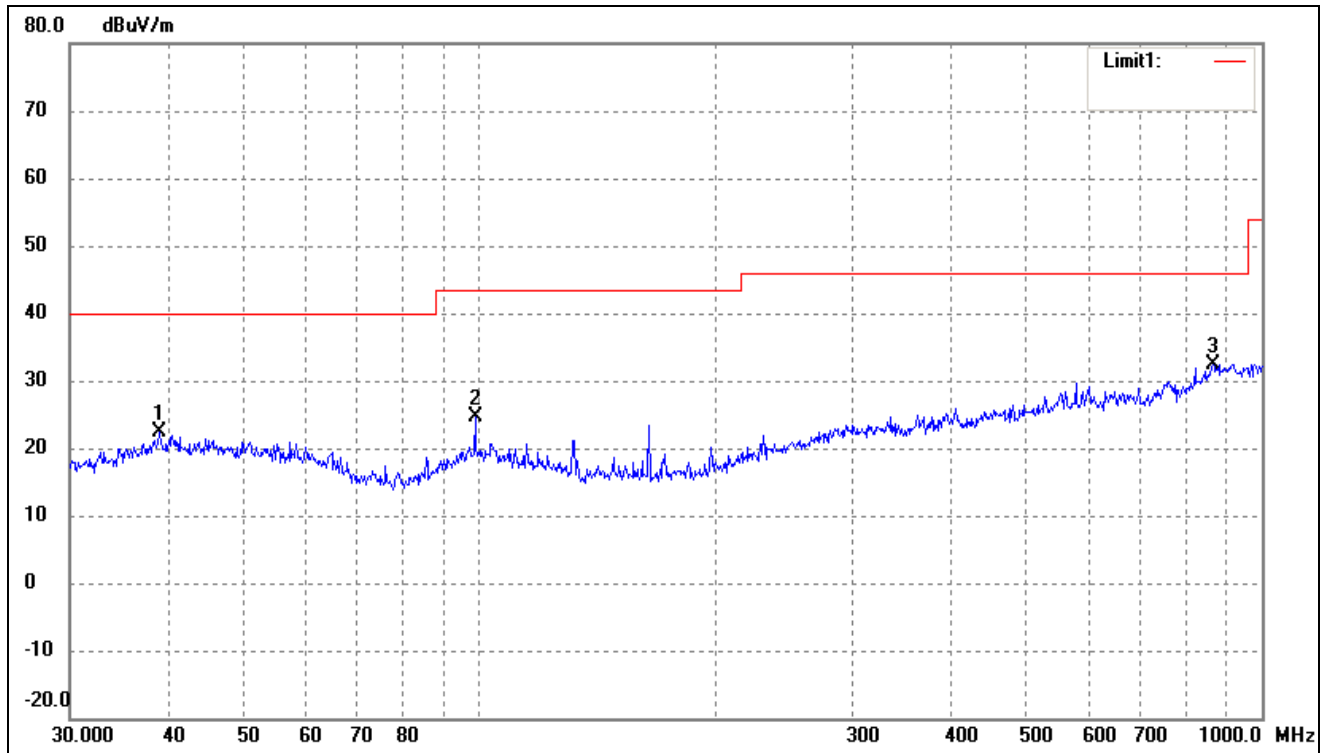
Comment: Battery DC 3.7V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	100.2286	14.71	6.10	20.81	43.50	-22.69	274	100	peak
2	552.8833	20.08	11.45	31.53	46.00	-14.47	130	100	peak
3	793.3960	18.22	14.04	32.26	46.00	-13.74	120	100	peak

Test Specification: Vertical

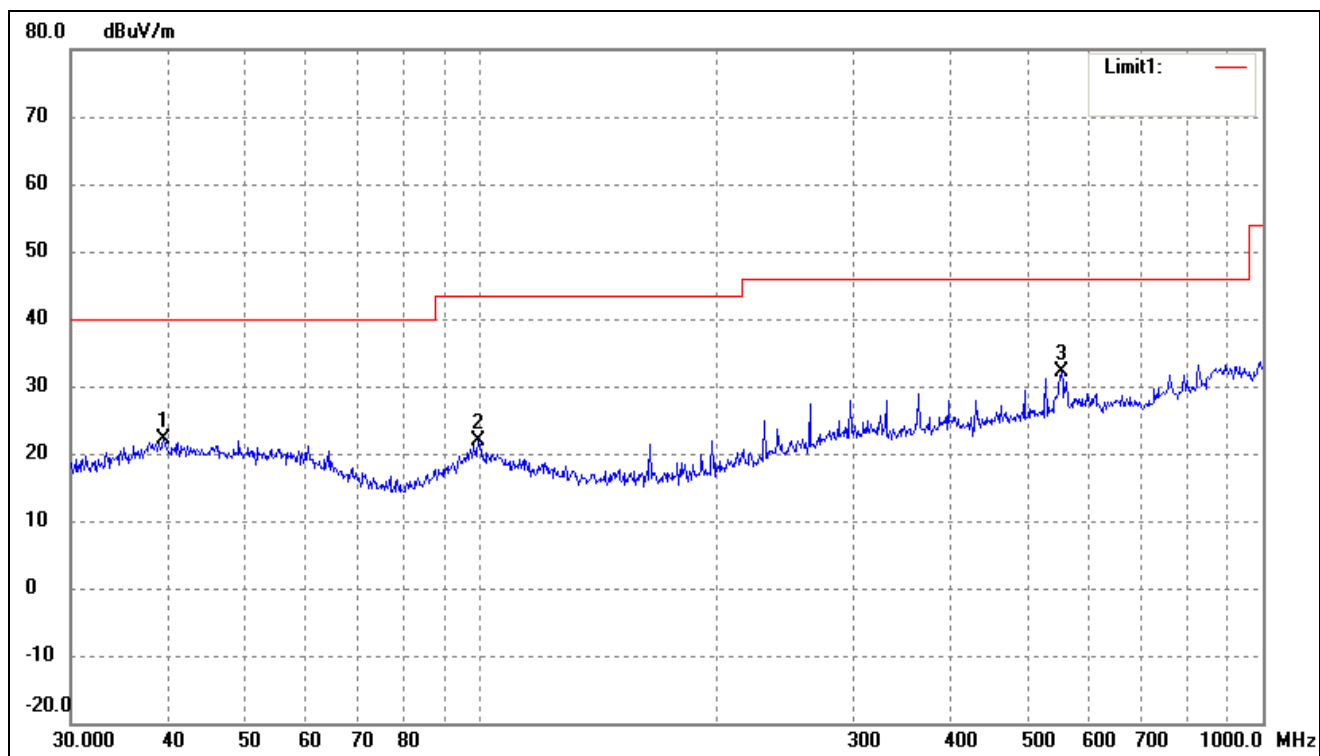


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.0245	13.23	9.08	22.31	40.00	-17.69	360	100	peak
2	98.8326	18.75	5.84	24.59	43.50	-18.91	110	100	peak
3	866.0879	16.03	16.45	32.48	46.00	-13.52	120	100	peak

Operating Condition: 802.11n-HT40 Transmitting Channel 11-2462MHz

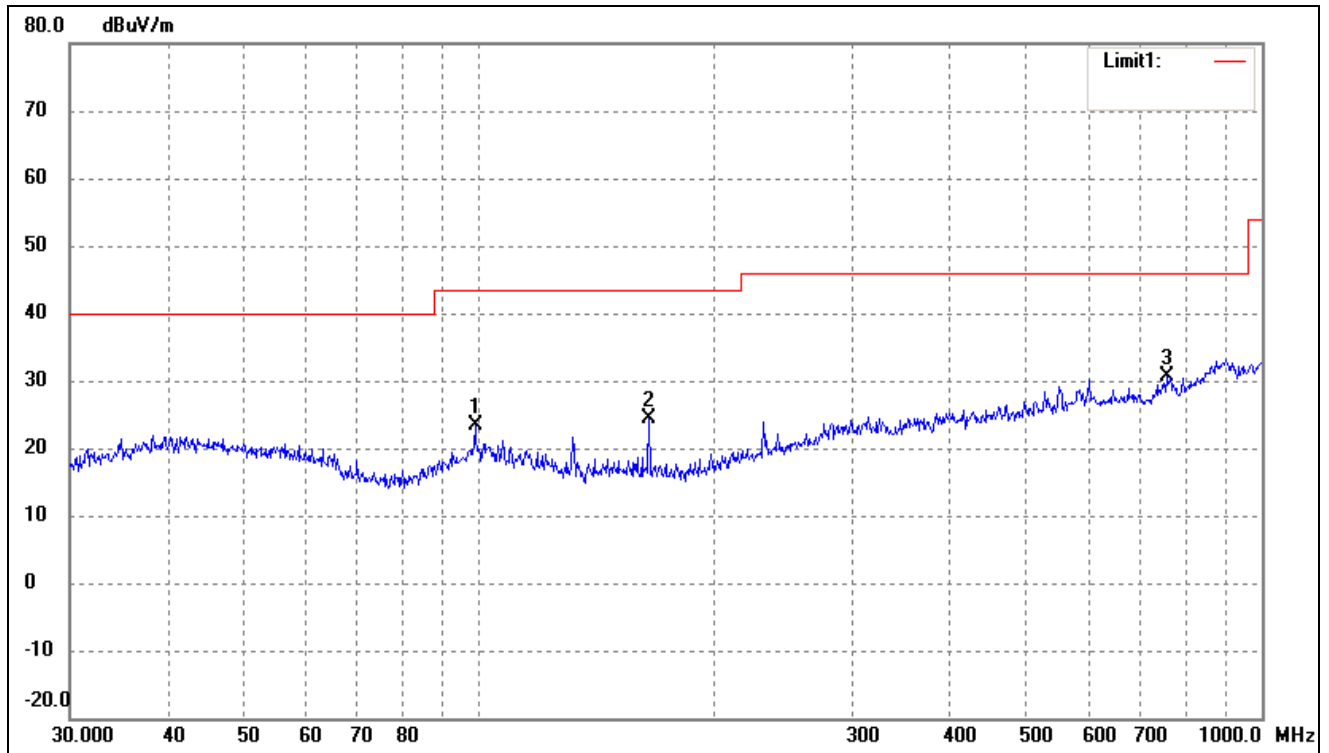
Comment: Battery DC 3.7V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.4372	15.01	7.10	22.11	40.00	-17.89	360	100	peak
2	99.5281	15.91	6.01	21.92	43.50	-21.58	138	100	peak
3	552.8833	20.79	11.45	32.24	46.00	-13.76	180	200	peak

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	98.8326	17.44	5.84	23.28	43.50	-20.22	270	100	peak
2	164.9075	21.67	2.65	24.32	43.50	-19.18	120	100	peak
3	755.3873	15.65	14.86	30.51	46.00	-15.49	360	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	
Channel 1-2412MHz							
4824	42.29	12.37	54.66	74	-19.34	H	PK
4824	27.04	12.37	39.41	54	-14.59	H	AV
7236	34.50	15.49	49.99	74	-24.01	H	PK
7236	23.18	15.49	38.67	54	-15.33	H	AV
4824	45.51	12.37	57.88	74	-16.12	V	PK
4824	28.70	12.37	41.07	54	-12.93	V	AV
7236	37.31	15.49	52.8	74	-21.20	V	PK
7236	25.64	15.49	41.13	54	-12.87	V	AV
Channel 7-2442MHz							
4884	42.94	12.46	55.4	74	-18.60	H	PK
4884	28.19	12.46	40.65	54	-13.35	H	AV
7326	35.97	15.56	51.53	74	-22.47	H	PK
7326	21.30	15.56	36.86	54	-17.14	H	AV
4884	42.17	12.46	54.63	74	-19.37	V	PK
4884	29.09	12.46	41.55	54	-12.45	V	AV
7326	36.18	15.56	51.74	74	-22.26	V	PK
7326	22.28	15.56	37.84	54	-16.16	V	AV
Channel 11-2462MHz							
4924	41.09	12.49	53.58	74	-20.42	H	PK
4924	29.73	12.49	42.22	54	-11.78	H	AV
7386	43.28	15.58	58.86	74	-15.14	H	PK
7386	32.21	15.58	47.79	54	-6.21	H	AV
4924	42.48	12.49	54.97	74	-19.03	V	PK
4924	30.21	12.49	42.7	54	-11.30	V	AV
7386	43.40	15.58	58.98	74	-15.02	V	PK
7386	30.51	15.58	46.09	54	-7.91	V	AV
Channel 12-2467MHz							
4934	41.08	12.5	53.58	74	-20.42	H	PK
4934	29.72	12.5	42.22	54	-11.78	H	AV
7401	43.28	15.58	58.86	74	-15.14	H	PK
7401	32.21	15.58	47.79	54	-6.21	H	AV
4934	42.47	12.5	54.97	74	-19.03	V	PK
4934	30.20	12.5	42.7	54	-11.30	V	AV
7401	43.40	15.58	58.98	74	-15.02	V	PK
7401	30.51	15.58	46.09	54	-7.91	V	AV

High Channel-2472MHz							
4944	44.01	12.55	56.56	74	-17.44	H	PK
4944	29.95	12.55	42.5	54	-11.50	H	AV
7416	34.57	15.64	50.21	74	-23.79	H	PK
7416	23.02	15.64	38.66	54	-15.34	H	AV
4944	43.13	12.55	55.68	74	-18.32	V	PK
4944	30.23	12.55	42.78	54	-11.22	V	AV
7416	36.18	15.64	51.82	74	-22.18	V	PK
7416	23.37	15.64	39.01	54	-14.99	V	AV

Test Mode: 802.11g

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Channel 1-2412MHz							
4824	44.30	12.37	56.67	74	-17.33	H	PK
4824	30.16	12.37	42.53	54	-11.47	H	AV
7236	30.22	15.49	45.71	74	-28.29	H	PK
7236	21.43	15.49	36.92	54	-17.08	H	AV
4824	39.96	12.37	52.33	74	-21.67	V	PK
4824	28.90	12.37	41.27	54	-12.73	V	AV
7236	30.54	15.49	46.03	74	-27.97	V	PK
7236	20.75	15.49	36.24	54	-17.76	V	AV
Channel 7-2442MHz							
4884	42.06	12.46	54.52	74	-19.48	H	PK
4884	27.44	12.46	39.9	54	-14.10	H	AV
7326	31.91	15.56	47.47	74	-26.53	H	PK
7326	21.76	15.56	37.32	54	-16.68	H	AV
4884	43.45	12.46	55.91	74	-18.09	V	PK
4884	28.99	12.46	41.45	54	-12.55	V	AV
7326	29.17	15.56	44.73	74	-29.27	V	PK
7326	21.97	15.56	37.53	54	-16.47	V	AV
Channel 11-2462MHz							
4924	42.41	12.49	54.9	74	-19.10	H	PK
4924	28.72	12.49	41.21	54	-12.79	H	AV
7386	31.26	15.58	46.84	74	-27.16	H	PK
7386	21.11	15.58	36.69	54	-17.31	H	AV
4924	39.38	12.49	51.87	74	-22.13	V	PK
4924	26.83	12.49	39.32	54	-14.68	V	AV
7386	29.79	15.58	45.37	74	-28.63	V	PK
7386	20.08	15.58	35.66	54	-18.34	V	AV

Channel 12-2467MHz							
4934	42.32	12.5	54.82	74	-19.18	H	PK
4934	26.34	12.5	38.84	54	-15.16	H	AV
7401	32.74	15.58	48.32	74	-25.68	H	PK
7401	16.87	15.58	32.45	54	-21.55	H	AV
4934	39.24	12.5	51.74	74	-22.26	V	PK
4934	26.51	12.5	39.01	54	-14.99	V	AV
7401	30.77	15.58	46.35	74	-27.65	V	PK
7401	19.90	15.58	35.48	54	-18.52	V	AV
High Channel-2472MHz							
4944	41.34	12.55	53.89	74	-20.11	H	PK
4944	32.76	12.55	45.31	54	-8.69	H	AV
7416	31.73	15.64	47.37	74	-26.63	H	PK
7416	20.74	15.64	36.38	54	-17.62	H	AV
4944	38.00	12.55	50.55	74	-23.45	V	PK
4944	27.29	12.55	39.84	54	-14.16	V	AV
7416	29.72	15.64	45.36	74	-28.64	V	PK
7416	19.70	15.64	35.34	54	-18.66	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	
Channel 1-2412MHz							
4824	41.13	12.37	53.5	74	-20.50	H	PK
4824	28.38	12.37	40.75	54	-13.25	H	AV
7236	32.86	15.49	48.35	74	-25.65	H	PK
7236	19.78	15.49	35.27	54	-18.73	H	AV
4824	38.02	12.37	50.39	74	-23.61	V	PK
4824	23.62	12.37	35.99	54	-18.01	V	AV
7236	28.74	15.49	44.23	74	-29.77	V	PK
7236	19.83	15.49	35.32	54	-18.68	V	AV
Channel 7-2442MHz							
4884	43.74	12.46	56.2	74	-17.80	H	PK
4884	24.91	12.46	37.37	54	-16.63	H	AV
7326	28.39	15.56	43.95	74	-30.05	H	PK
7326	20.89	15.56	36.45	54	-17.55	H	AV
4884	39.06	12.46	51.52	74	-22.48	V	PK
4884	26.37	12.46	38.83	54	-15.17	V	AV
7326	28.99	15.56	44.55	74	-29.45	V	PK
7326	19.87	15.56	35.43	54	-18.57	V	AV

Channel 11-2462MHz							
4924	44.79	12.49	57.28	74	-16.72	H	PK
4924	31.13	12.49	43.62	54	-10.38	H	AV
7386	32.75	15.58	48.33	74	-25.67	H	PK
7386	21.25	15.58	36.83	54	-17.17	H	AV
4924	42.03	12.49	54.52	74	-19.48	V	PK
4924	29.18	12.49	41.67	54	-12.33	V	AV
7386	31.59	15.58	47.17	74	-26.83	V	PK
7386	20.24	15.58	35.82	54	-18.18	V	AV
Channel 12-2467MHz							
4934	39.34	12.5	51.84	74	-22.16	H	PK
4934	22.12	12.5	34.62	54	-19.38	H	AV
7401	30.86	15.58	46.44	74	-27.56	H	PK
7401	19.67	15.58	35.25	54	-18.75	H	AV
4934	36.67	12.5	49.17	74	-24.83	V	PK
4934	28.37	12.5	40.87	54	-13.13	V	AV
7401	29.51	15.58	45.09	74	-28.91	V	PK
7401	21.70	15.58	37.28	54	-16.72	V	AV
High Channel-2472MHz							
4944	38.45	12.55	51	74	-23.00	H	PK
4944	22.58	12.55	35.13	54	-18.87	H	AV
7416	33.82	15.64	49.46	74	-24.54	H	PK
7416	21.18	15.64	36.82	54	-17.18	H	AV
4944	36.13	12.55	48.68	74	-25.32	V	PK
4944	23.82	12.55	36.37	54	-17.63	V	AV
7416	28.17	15.64	43.81	74	-30.19	V	PK
7416	20.08	15.64	35.72	54	-18.28	V	AV

Test Mode: 802.11n-HT40

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2422MHz							
4844	37.32	12.4	49.72	74	-24.28	H	PK
4844	23.22	12.4	35.62	54	-18.38	H	AV
7266	30.96	15.51	46.47	74	-27.53	H	PK
7266	19.78	15.51	35.29	54	-18.71	H	AV
4844	34.26	12.4	46.66	74	-27.34	V	PK
4844	33.30	12.4	45.7	54	-8.30	V	AV
7266	32.86	15.51	48.37	74	-25.63	V	PK
7266	20.60	15.51	36.11	54	-17.89	V	AV
Middle Channel-2442MHz							
4884	36.76	12.48	49.24	74	-24.76	H	PK
4884	22.62	12.48	35.1	54	-18.90	H	AV
7326	30.14	15.59	45.73	74	-28.27	H	PK
7326	20.62	15.59	36.21	54	-17.79	H	AV
4884	32.88	12.48	45.36	74	-28.64	V	PK
4884	32.25	12.48	44.73	54	-9.27	V	AV
7326	27.19	15.59	42.78	74	-31.22	V	PK
7326	21.25	15.59	36.84	54	-17.16	V	AV
High Channel-2462MHz							
4924	40.80	12.57	53.37	74	-20.63	H	PK
4924	27.52	12.57	40.09	54	-13.91	H	AV
7386	33.78	15.66	49.44	74	-24.56	H	PK
7386	18.88	15.66	34.54	54	-19.46	H	AV
4924	42.99	12.57	55.56	74	-18.44	V	PK
4924	28.98	12.57	41.55	54	-12.45	V	AV
7386	36.33	15.66	51.99	74	-22.01	V	PK
7386	23.27	15.66	38.93	54	-15.07	V	AV

Note: Margin= (Reading+ Correct)- Limit

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

The measurements greater than 20dB below the limit from 9kHz to 30MHz.

9. Out of Band Emissions

9.1 Standard Applicable

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

9.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2014-05-28	2015-05-27
EMI Test Receiver	R&S	ESVB	825471/005	2014-05-28	2015-05-27
Pre-amplifier	Agilent	8447F	3113A06717	2014-05-28	2015-05-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2014-05-28	2015-05-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2014-05-24	2015-05-23
Horn Antenna	ETS	3117	00086197	2014-05-24	2015-05-23

9.3 Test Procedure

According to the KDB 558074D01 v03r02, 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 V03r02, the conducted spurious emissions test method as follows:

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

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

9.4 Environmental Conditions

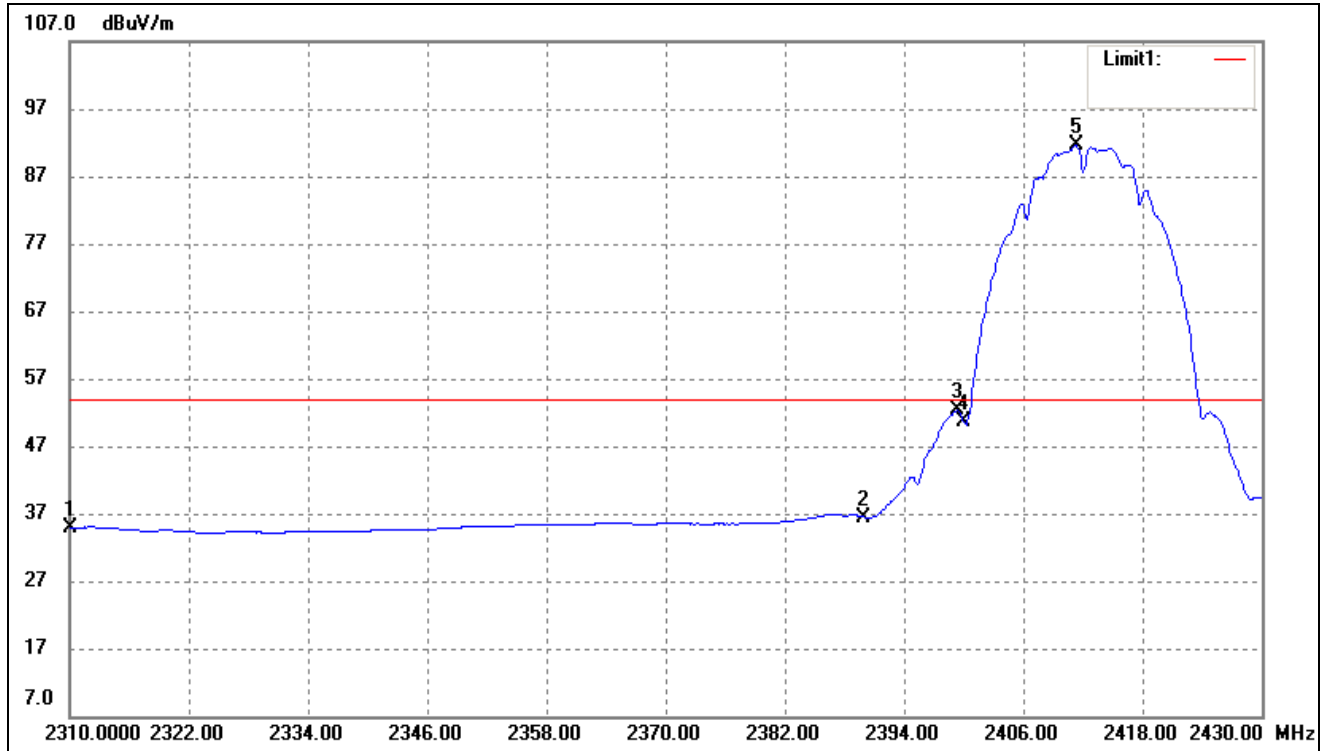
Temperature:	23°C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

9.5 Summary of Test Results/Plots

Please refer to the test plots as below.

802.11b-Lowest Bandedge

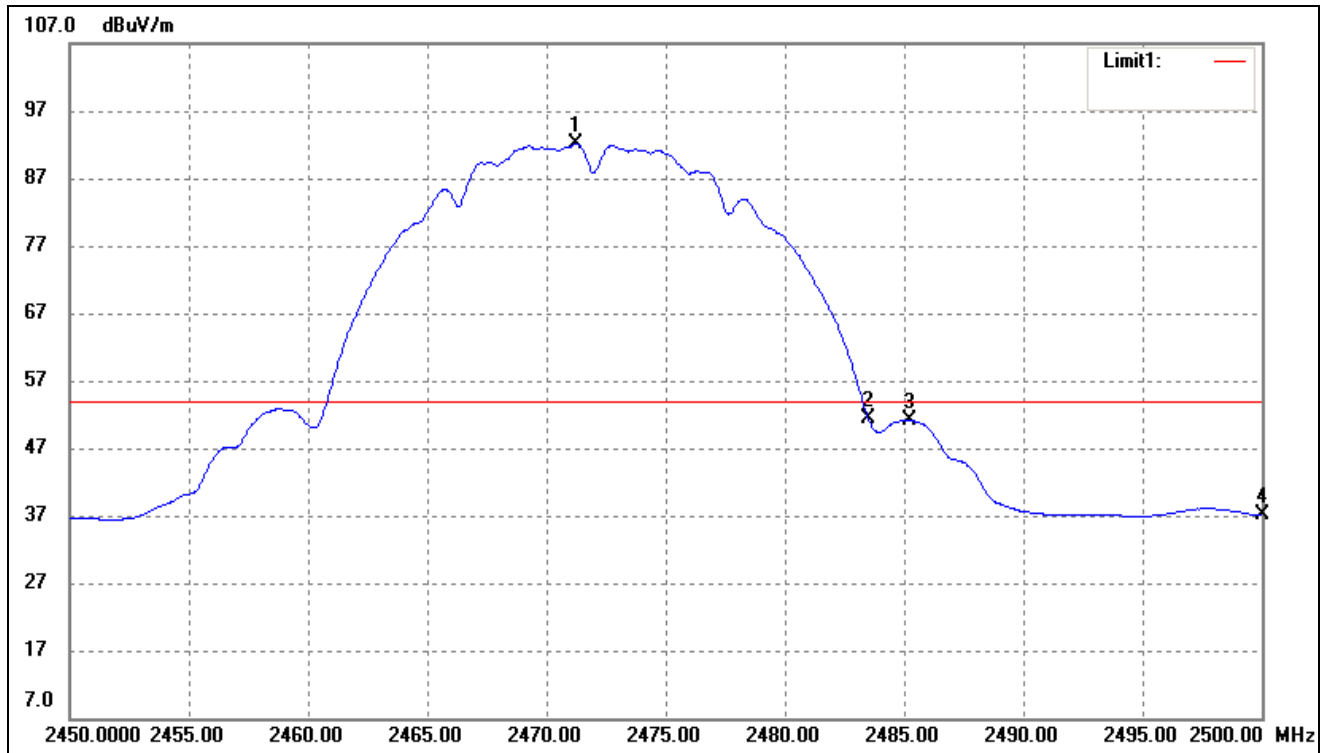
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	18.56	16.34	34.90	54.00	-19.10	Average Detector
	2310.000	32.04	16.34	48.38	74.00	-25.62	Peak Detector
2	2390.000	19.46	17.03	36.49	54.00	-17.51	Average Detector
	2390.000	32.36	17.03	49.39	74.00	-24.61	Peak Detector
3	2399.280	35.20	17.10	52.30	Delta=39.26dBc		Average Detector
4	2400.000	33.64	17.11	50.75			Average Detector
5	2411.280	74.37	17.19	91.56			Average Detector

802.11b-Highest Bandedge

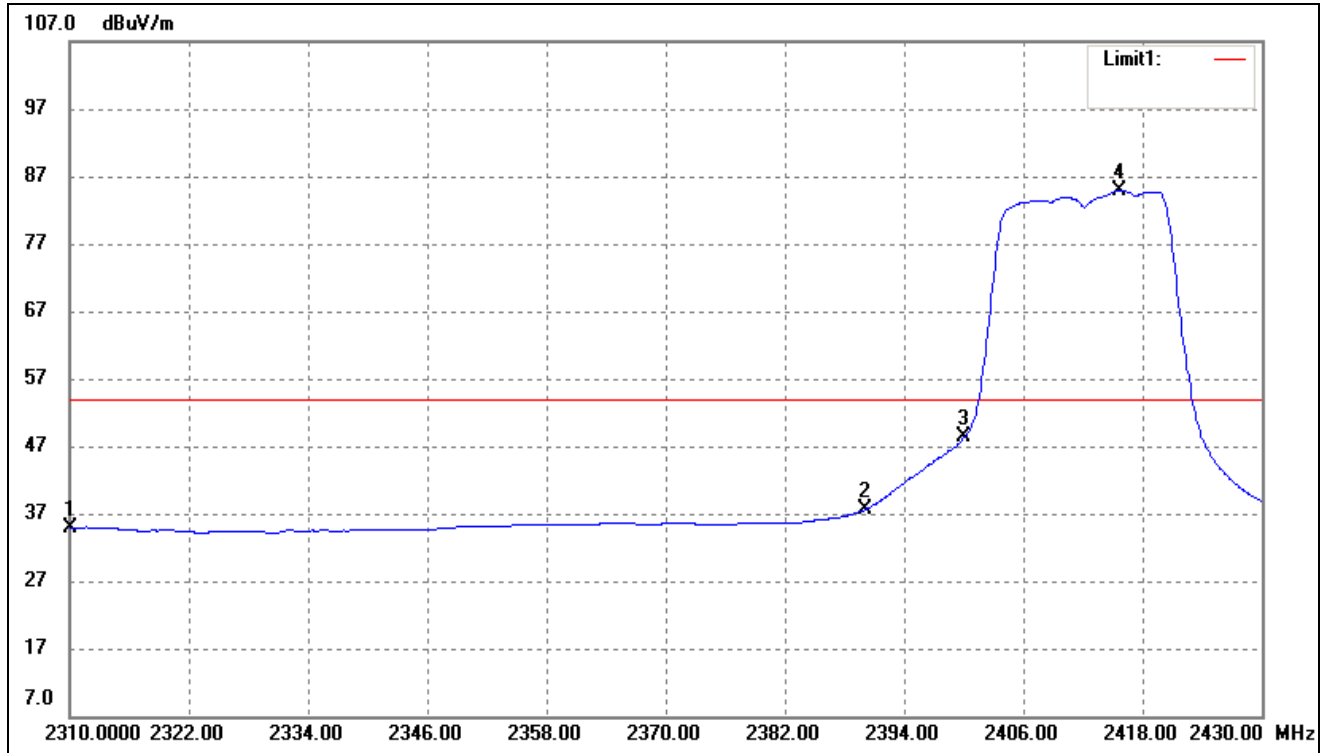
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2471.250	74.43	17.65	92.08	/	/	Average Detector
	2473.000	79.00	17.66	96.66	/	/	Peak Detector
2	2483.500	Delta =44.72dBc		47.36	54.00	-6.64	Average Detector
	2483.500			51.94	74.00	-22.06	Peak Detector
3	2485.200	33.47	17.74	51.21	54.00	-2.79	Average Detector
4	2500.000	19.33	17.86	37.19	54.00	-16.81	Average Detector
	2500.000	30.77	17.86	48.63	74.00	-25.37	Peak Detector

802.11g-Lowest Bandedge

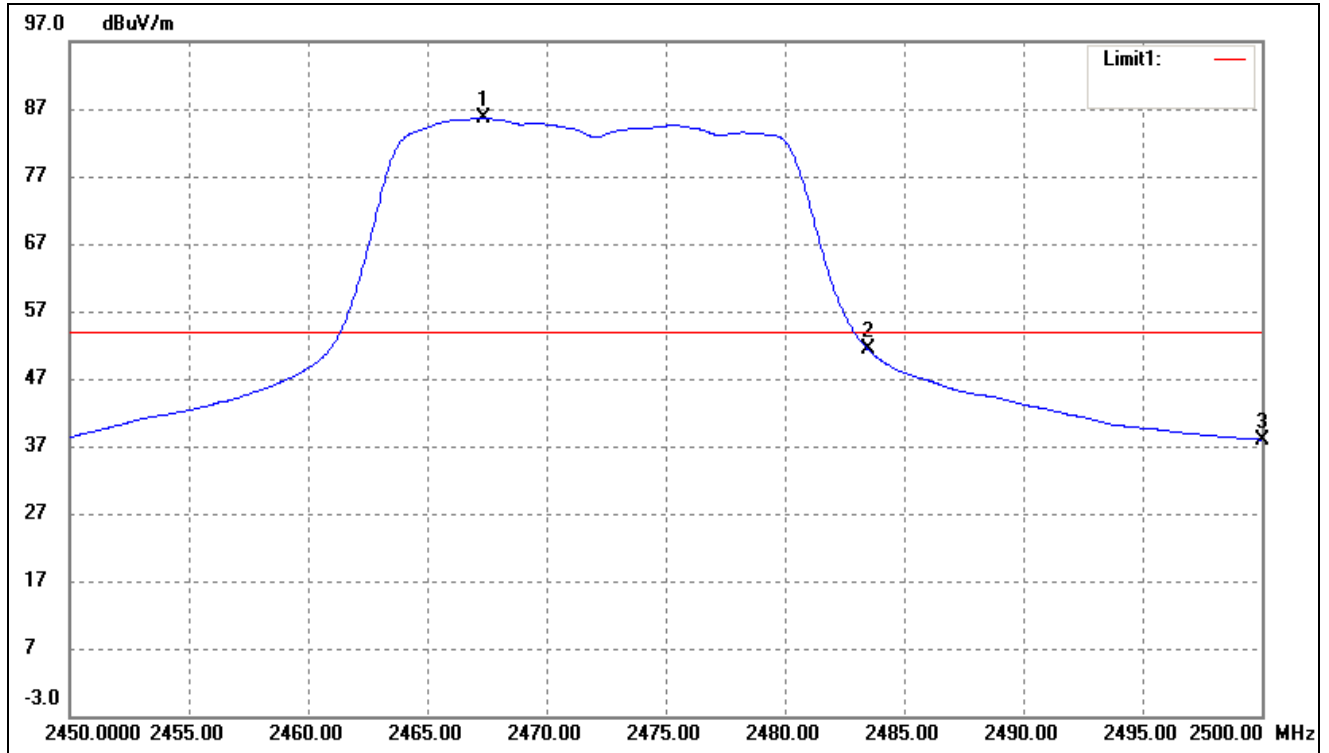
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	18.56	16.34	34.90	54.00	-19.10	Average Detector
	2310.000	29.61	16.34	45.95	74.00	-28.05	Peak Detector
2	2390.000	20.56	17.03	37.59	54.00	-16.41	Average Detector
	2390.000	36.19	17.03	53.22	74.00	-20.78	Peak Detector
3	2400.000	31.15	17.11	48.26	Delta=36.64dBc		Average Detector
4	2415.600	67.67	17.23	84.90			Average Detector

802.11g-Highest Bandedge

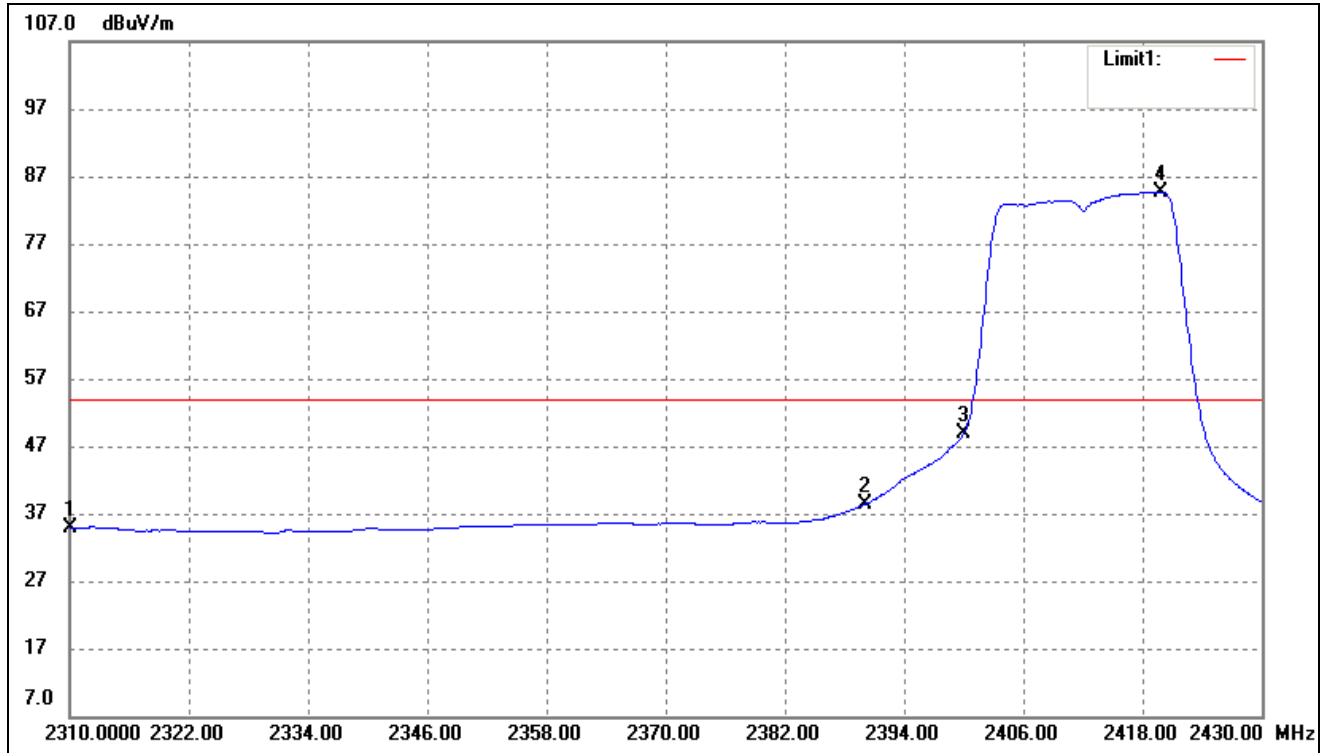
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2467.350	68.03	17.60	85.63	/	/	Average Detector
	2468.150	79.04	17.61	96.65	/	/	Peak Detector
2	2483.500	Delta = 41.43dBc		44.20	54.00	-9.80	Average Detector
	2483.500			55.22	74.00	-18.78	Peak Detector
3	2500.000	20.08	17.86	37.94	54.00	-16.06	Average Detector
	2500.000	37.57	17.86	55.43	74.00	-18.57	Peak Detector

802.11n-HT20-Lowest Bandedge

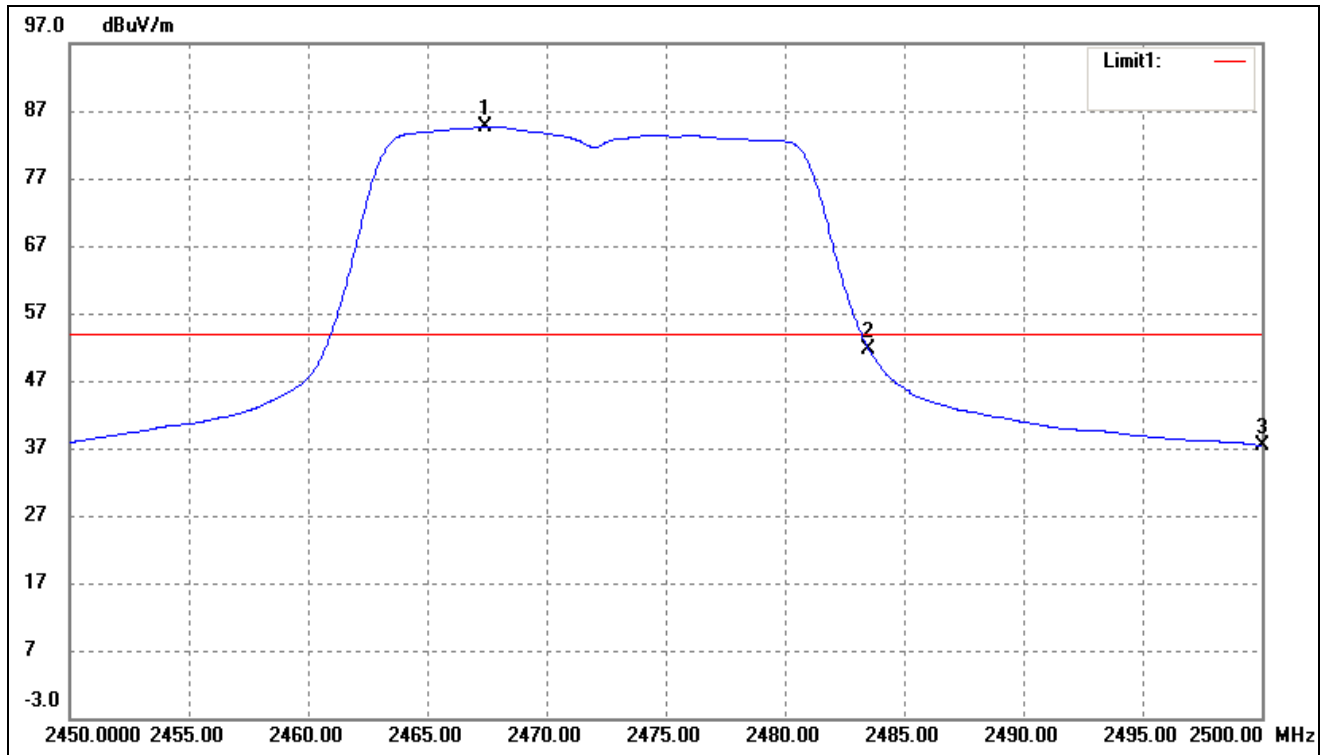
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	18.58	16.34	34.92	54.00	-19.08	Average Detector
	2310.000	31.05	16.34	47.39	74.00	-26.61	Peak Detector
2	2390.000	21.35	17.03	38.38	54.00	-15.62	Average Detector
	2390.000	36.94	17.03	53.97	74.00	-20.03	Peak Detector
3	2400.000	31.82	17.11	48.93	Delta=35.77dBc		Average Detector
4	2419.800	67.44	17.26	84.70			Average Detector

802.11n-HT20-Highest Bandedge

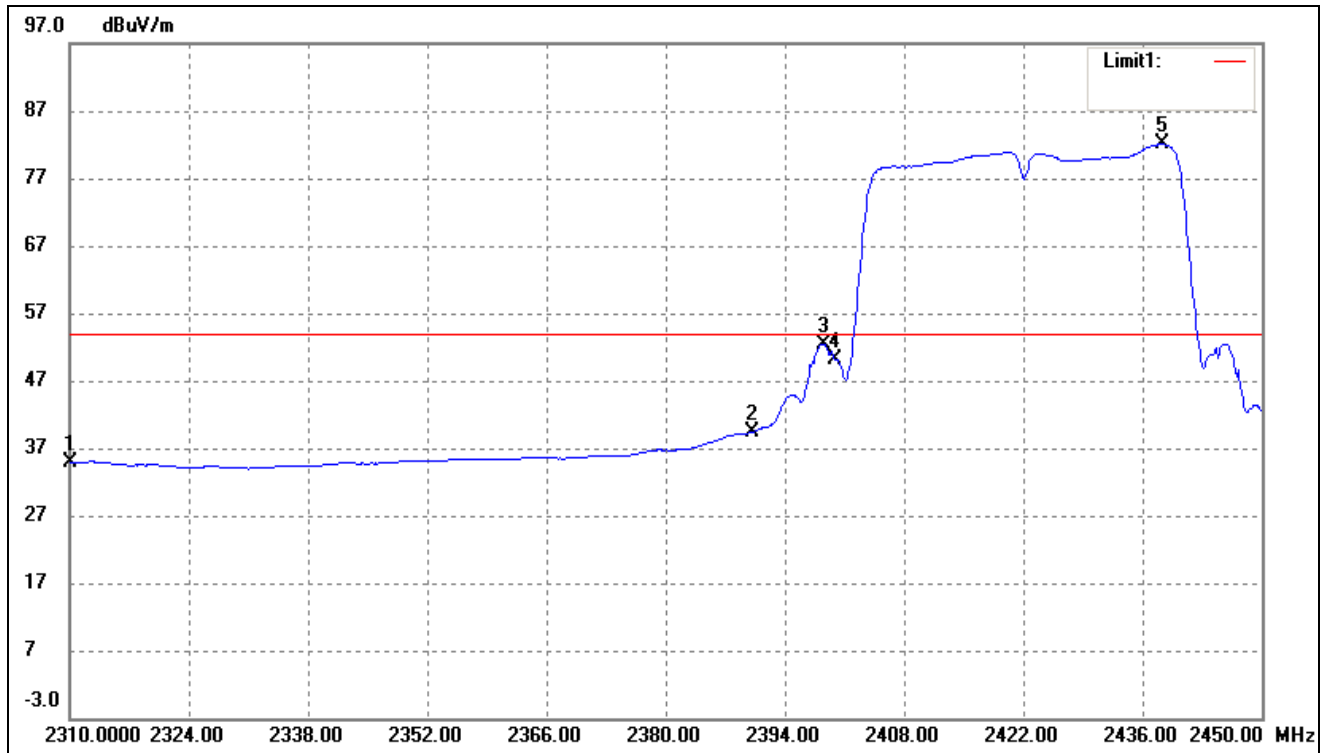
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2467.400	67.03	17.60	84.63	/	/	Average Detector
	2467.300	78.65	17.60	96.25	/	/	Peak Detector
2	2483.500	Delta = 39.91dBc		44.72	54.00	-9.28	Average Detector
	2483.500			56.34	74.00	-17.66	Peak Detector
3	2500.000	19.62	17.86	37.48	54.00	-16.52	Average Detector
	2500.000	37.40	17.86	55.26	74.00	-18.74	Peak Detector

802.11n-HT40-Lowest Bandedge

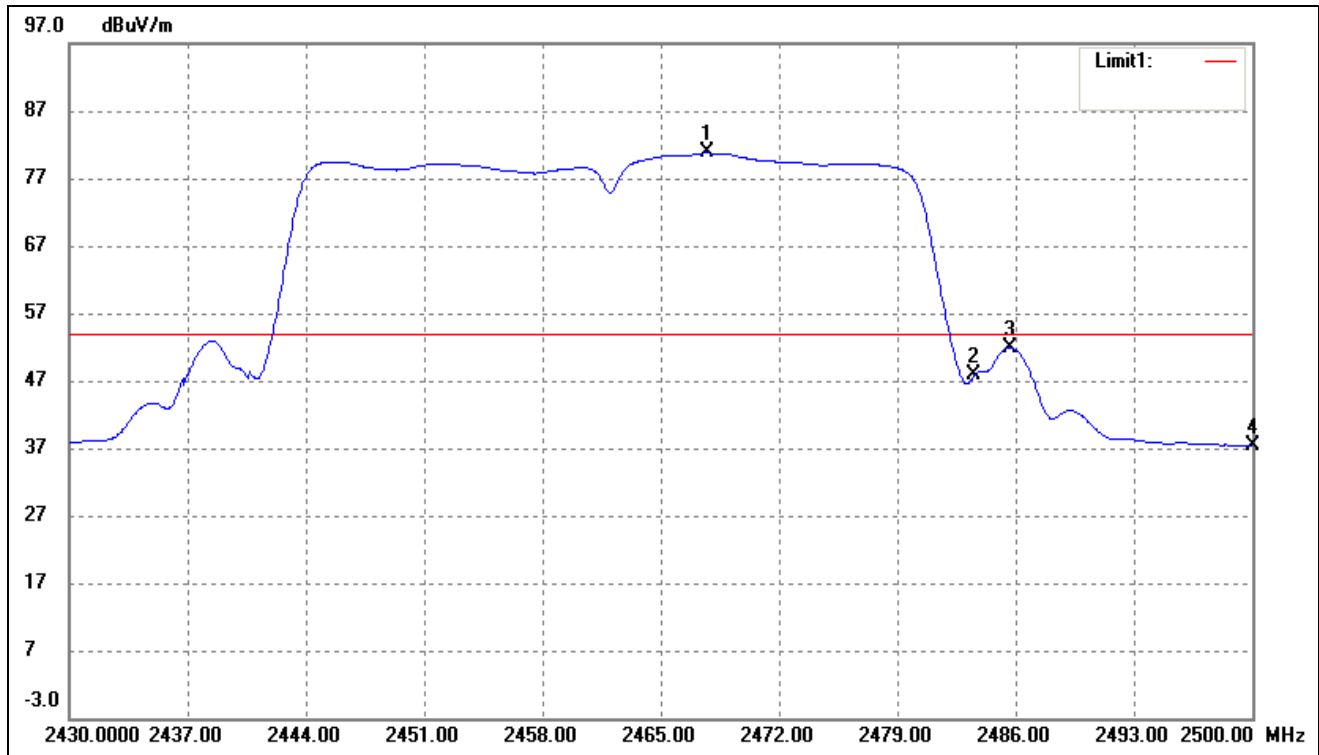
Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	18.55	16.34	34.89	54.00	-19.11	Average Detector
	2310.000	30.66	16.34	47.00	74.00	-27.00	Peak Detector
2	2390.000	22.32	17.03	39.35	54.00	-14.65	Average Detector
	2390.000	36.44	17.03	53.47	74.00	-20.53	Peak Detector
3	2398.480	35.36	17.10	52.46	Delta=29.56dBc		Average Detector
4	2400.000	32.95	17.11	50.06			Average Detector
5	2438.240	64.62	17.40	82.02			Average Detector

802.11n-HT40-Highest Bandedge

Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2467.730	63.17	17.61	80.78	/	/	Average Detector
	2469.340	74.07	17.62	91.69	/	/	Peak Detector
2	2483.500	Delta = 40.76dBc		40.02	54.00	-13.98	Average Detector
	2483.500			50.93	74.00	-23.07	Peak Detector
3	2485.650	34.19	17.74	51.93	54.00	-2.07	Average Detector
	2485.650	46.51	17.74	64.25	74.00	-9.75	Peak Detector
4	2500.000	19.41	17.86	37.27	54.00	-16.73	Average Detector
	2500.000	32.74	17.86	50.60	74.00	-23.40	Peak Detector

10. Conducted Emissions

10.1 Measurement Uncertainty

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

10.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2014-05-28	2015-05-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2014-05-28	2015-05-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2014-05-28	2015-05-27

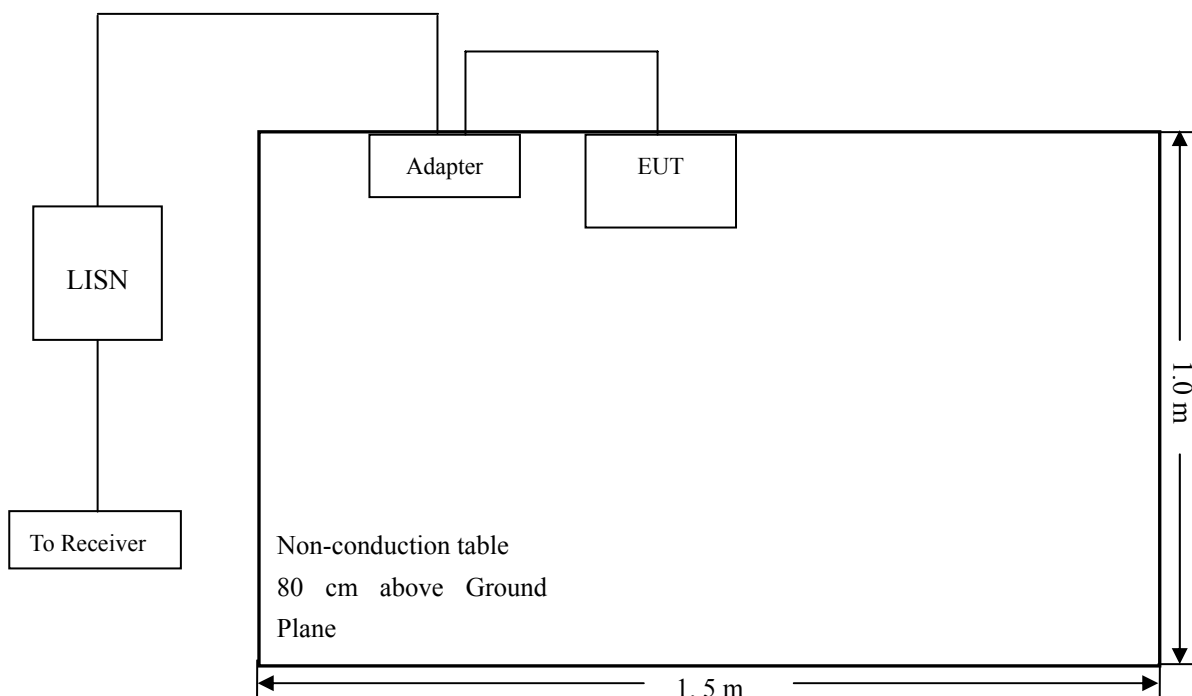
10.3 Test Procedure

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

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

The spacing between the peripherals was 10 cm.

10.4 Basic Test Setup Block Diagram



10.5 Environmental Conditions

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

10.6 Test Receiver Setup

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

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

10.7 Summary of Test Results/Plots

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

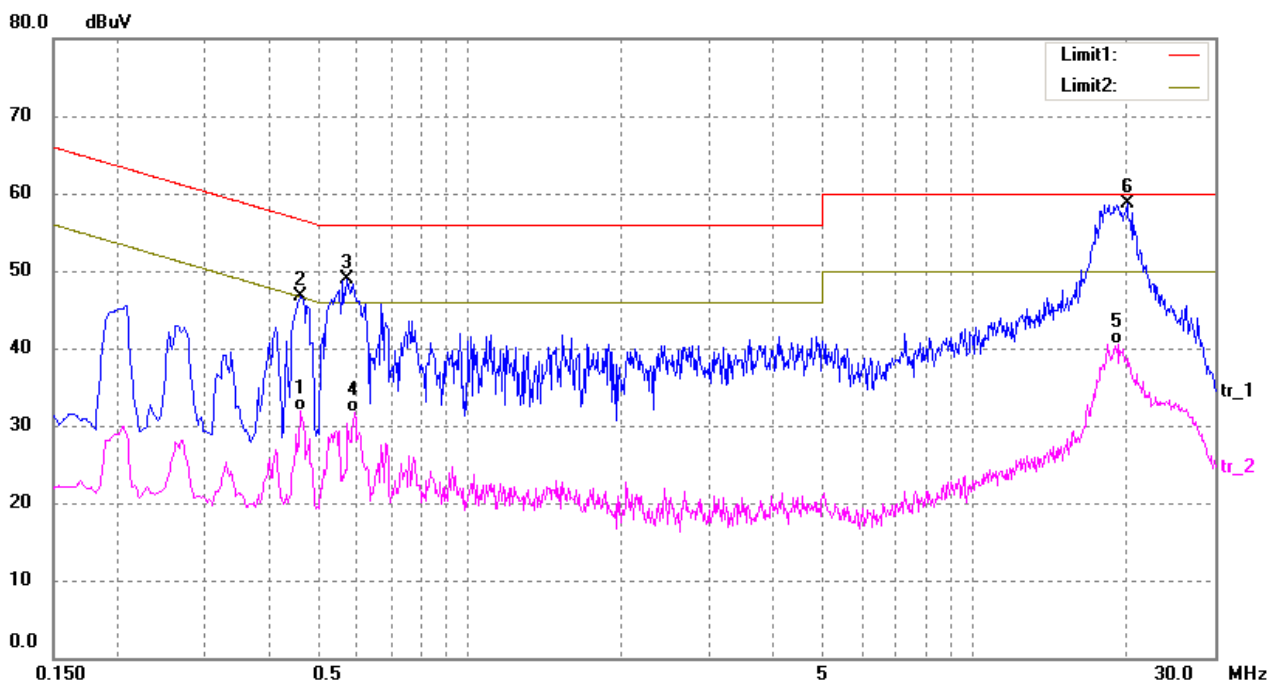
-1.38 dB at 20.1580 MHz in the Neutral mode, Peak detector, 0.15-30MHz

10.8 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

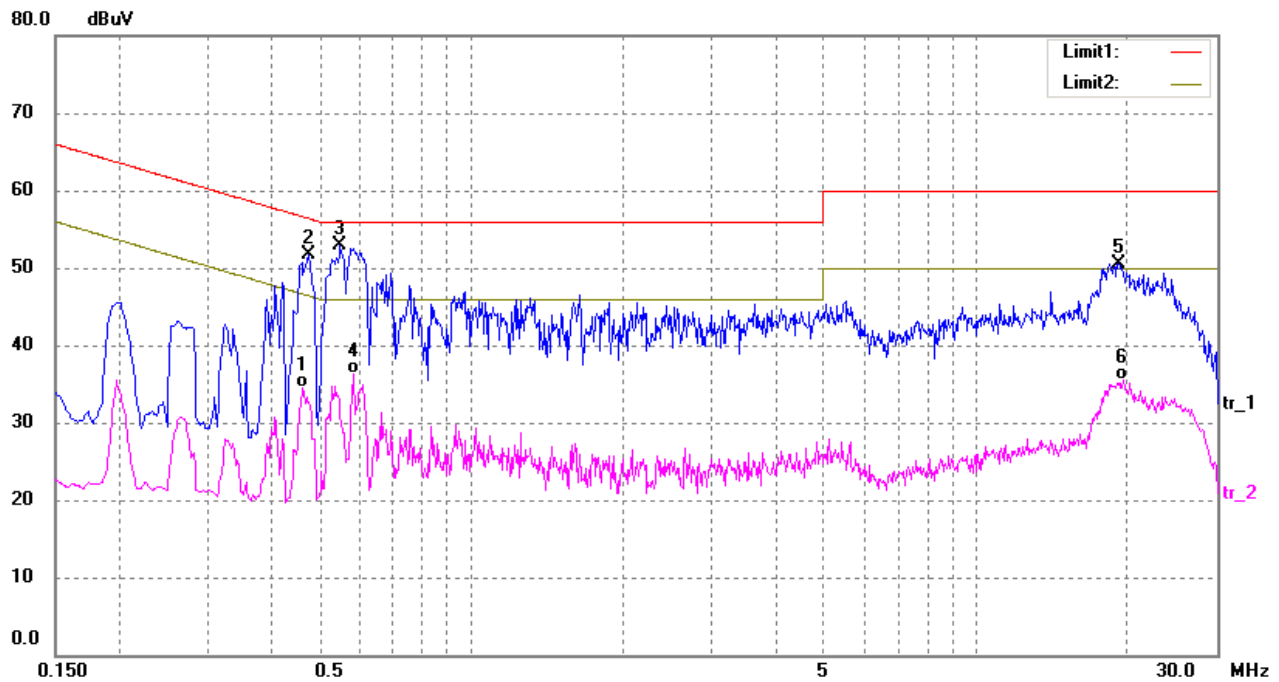
EUT: Tablet
 Tested Model: M72BW2-WP(AP)
 Operating Condition: Transmitting(Wi-Fi)
 Comment: AC 120V/60Hz, Adapter DC 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4620	22.39	9.50	31.89	46.66	-14.77	AVG
2	0.4660	37.14	9.50	46.64	56.58	-9.94	peak
3	0.5740	39.26	9.57	48.83	56.00	-7.17	peak
4	0.5940	22.10	9.59	31.69	46.00	-14.31	AVG
5	19.2780	28.68	11.86	40.54	50.00	-9.46	AVG
6	20.1580	46.62	12.00	58.62	60.00	-1.38	peak

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4620	25.06	9.50	34.56	46.66	-12.10	AVG
2	0.4780	42.17	9.50	51.67	56.37	-4.70	peak
3	0.5500	43.27	9.55	52.82	56.00	-3.18	peak
4	0.5860	26.69	9.59	36.28	46.00	-9.72	AVG
5	19.2060	38.70	11.84	50.54	60.00	-9.46	peak
6	19.6140	23.62	11.92	35.54	50.00	-14.46	AVG

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