

FCC Part 15C

Measurement and Test Report

For

Yinlips Technology (ShenZhen) Co., Ltd.

Building #3, Zone 1, BaiWangXin High Technology Industrial Park,

NanShan District, ShenZhen 518108, P.R.China

FCC ID: 2AA2LYDP-G28S

FCC Rule(s):	<u>FCC Part 15C</u>
Product Description:	<u>Portable Multimedia Player</u>
Tested Model:	<u>YDP-G28S</u>
Report No.:	<u>STR13088460I-1</u>
Tested Date:	<u>2013-08-28 to 2013-09-24</u>
Issued Date:	<u>2013-09-24</u>
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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: Yinlips Technology (ShenZhen) Co., Ltd.
Address of applicant: Building #3, Zone 1, BaiWangXin High Technology Industrial Park, NanShan District, ShenZhen 518108, P.R.China
Manufacturer: Yinlips Technology (ShenZhen) Co., Ltd.
Address of manufacturer: Building #3, Zone 1, BaiWangXin High Technology Industrial Park, NanShan District, ShenZhen 518108, P.R.China

General Description of EUT	
Product Name:	Portable Multimedia Player
Trade Name:	/
Model No.:	YDP-G28S
Adding Model(s):	YDP-G28, YDP-G26, YDP-G18D, YDP-G18Q, YDP-G20, YDP-G65, YDP-G65D, YDP-G65Q, GP700, GP700D, GP700Q, GP706, GP706D, G706Q, GP708, GP708D, GP708Q, GP800, GP800D, GP800Q
Rated Voltage:	Charger: DC 5V Battery: DC 3.7V
Power Adaptor Model:	YMK-10W052000A
	Input: AC 100-240V, Output: DC 5.0V
<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 YDP-G28S, 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:	2412-2462MHz
RF Output Power:	7.52 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 Gain:	2.0dBi
Lowest Internal Frequency:	32.768kHz

1.2 Test Standards

The following report is prepared on behalf of the Yinlips Technology (ShenZhen) Co., Ltd. in accordance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 of the Federal Communication Commissions rules.

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

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

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. The public notice KDB 558074 D01 V03 for digital transmission systems shall be performed also.

1.4 Test Facility

- **FCC – Registration No.: 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:

Test Mode List		
Test Mode	Description	Remark
TM1	802.11b	2412MHz, 2437MHz, 2462MHz
TM2	802.11g	2412MHz, 2437MHz, 2462MHz
TM3	802.11n-HT20	2412MHz, 2437MHz, 2462MHz
TM4	802.11n-HT40	2422MHz, 2437MHz, 2452MHz

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
USB Cable	0.8	Unshielded	Without Ferrite

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
HDMI Cable	1.5	Shielded	Without Ferrite
Earphone Cable	1.25	Unshielded	Without Ferrite

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Notebook	Lenove	E23	EB12648265
Display	DELL	U2410f	/

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)(d)	Radiated Emission	Compliant
§ 15.247(d)	Band Edge (Out of Band Emissions)	Compliant

N/A: not applicable

3. RF Exposure

3.1 Standard Applicable

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

3.2 Test Result

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

4. Antenna Requirement

4.1 Standard Applicable

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

4.2 Evaluation Information

This product has a 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	2013-05-07	2014-05-06
Attenuator	ATTEN	ATS100-4-20	/	2013-05-07	2014-05-06

5.3 Test Procedure

According to the KDB 558074 D01v03r01, 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 to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
5. Set the VBW $\geq 3 \times \text{RBW}$.
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

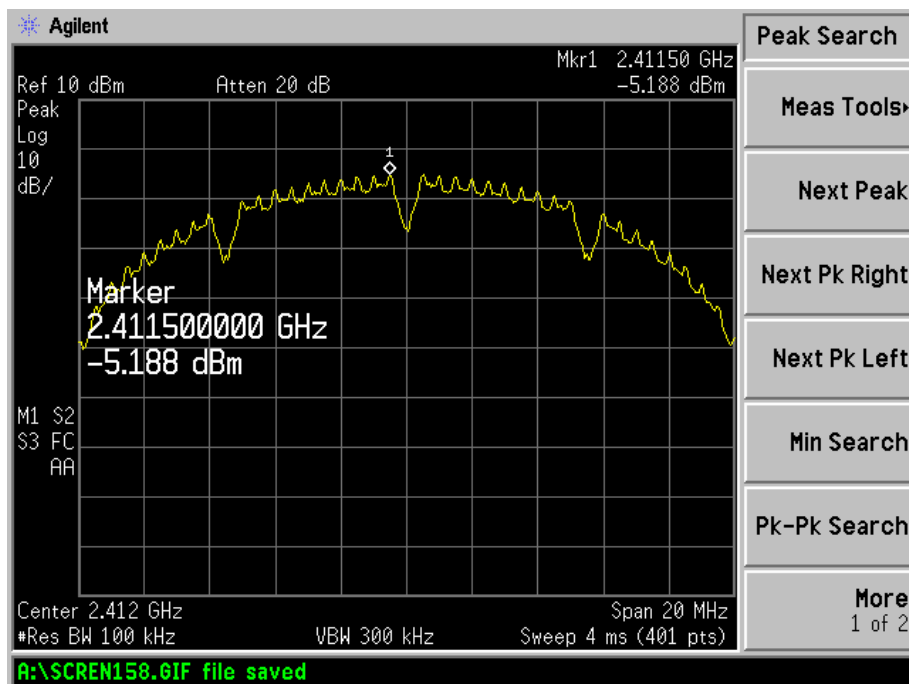
Temperature:	26° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

5.5 Summary of Test Results/Plots

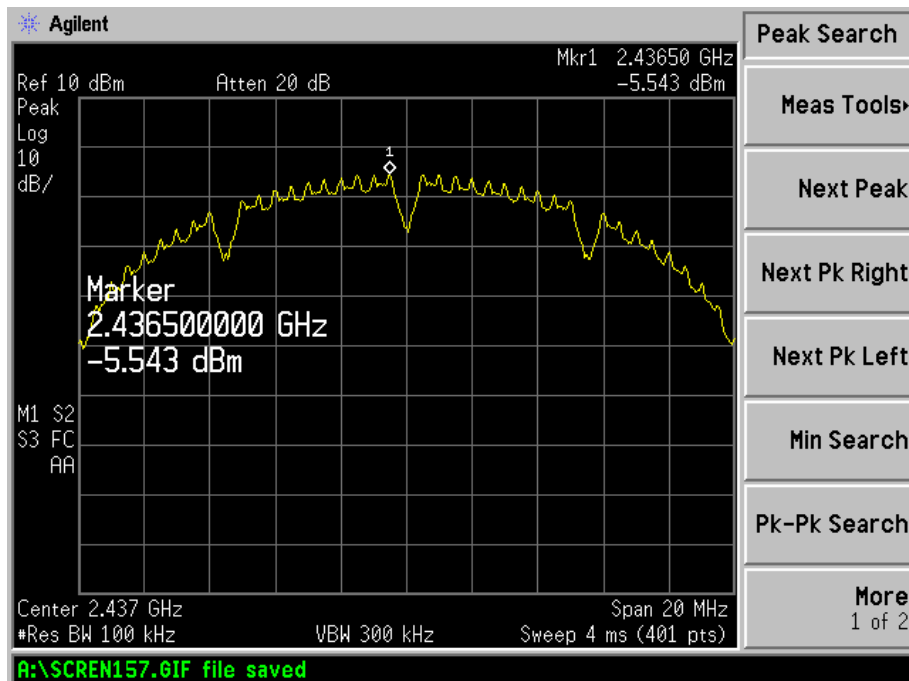
Test Mode	Test Channel MHz	Power Spectral Density dBm/100kHz	Limit dBm/3kHz
802.11b	2412	-5.188	8
	2437	-5.543	8
	2462	-5.87	8
802.11g	2412	-10.17	8
	2437	-10.67	8
	2462	-11.16	8
802.11n HT20	2412	-11.85	8
	2437	-12.25	8
	2462	-12.35	8
802.11n HT40	2422	-14.88	8
	2437	-15.25	8
	2452	-15.57	8

Please refer to the following test plots:

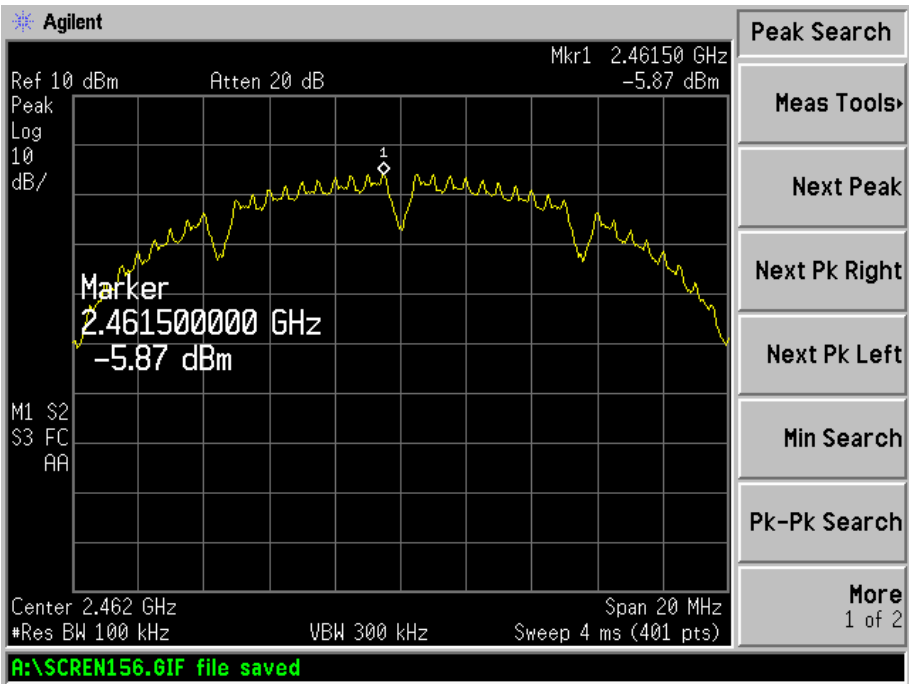
802.11b-Low Channel



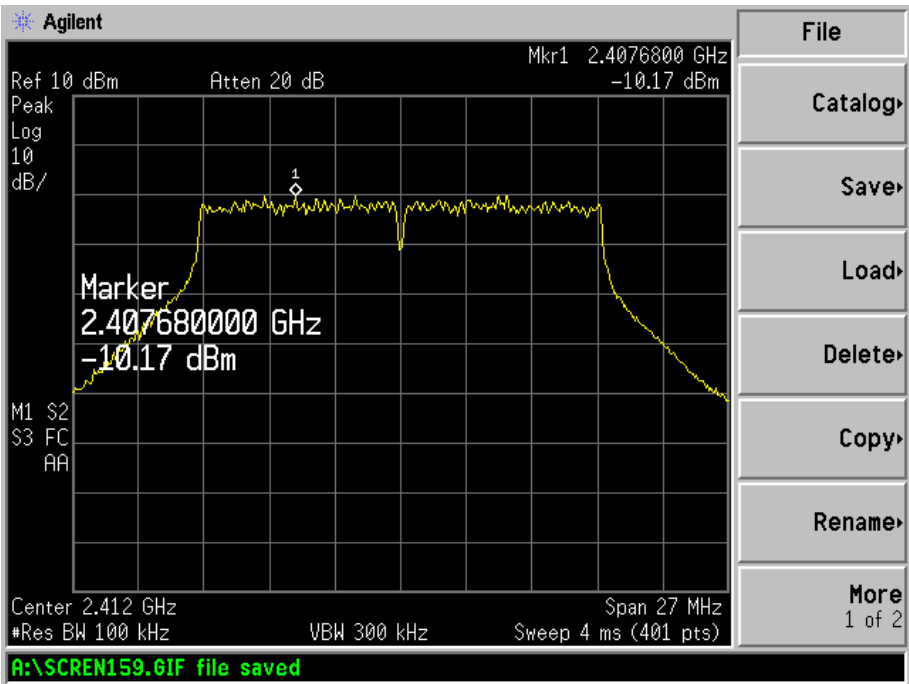
802.11b-Middle Channel



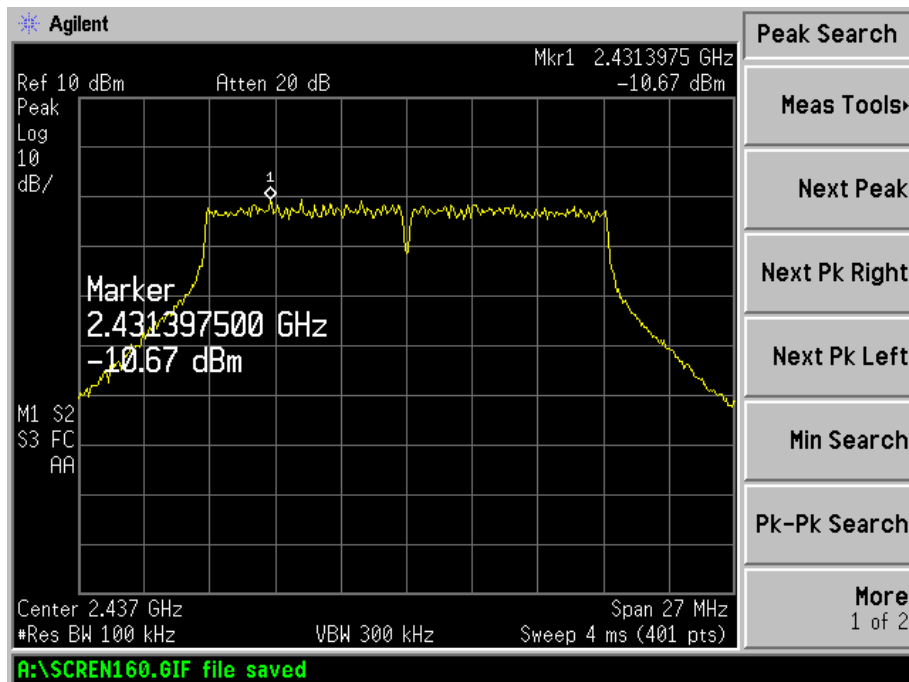
802.11b-High Channel



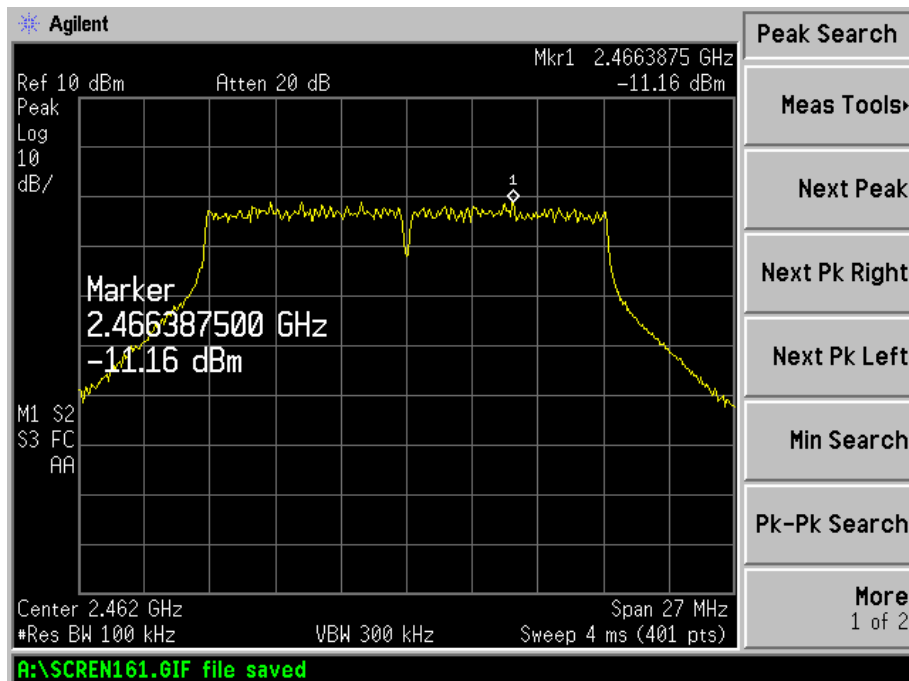
802.11g-Low Channel



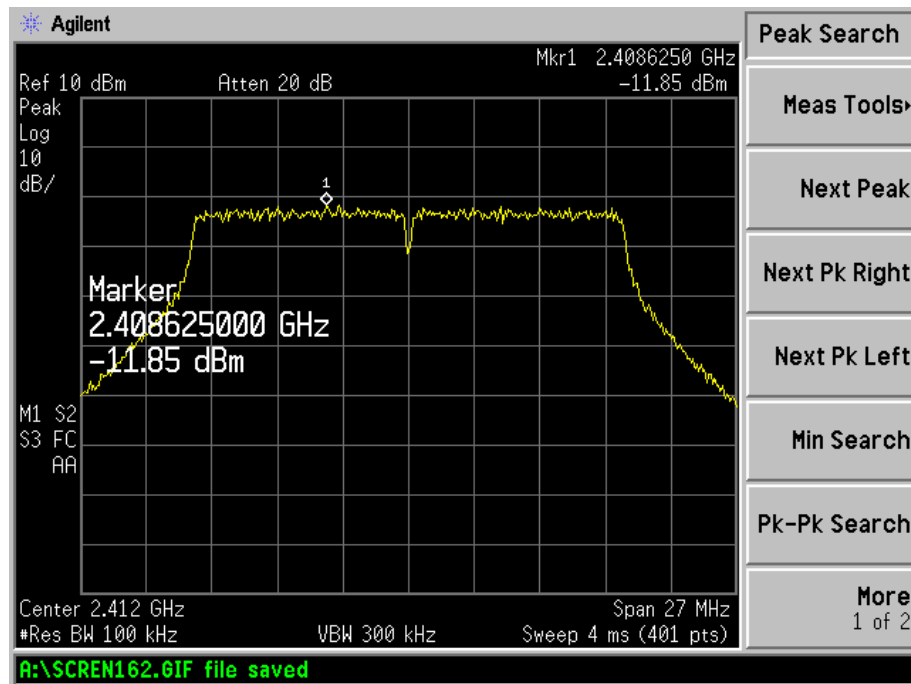
802.11g-Middle Channel



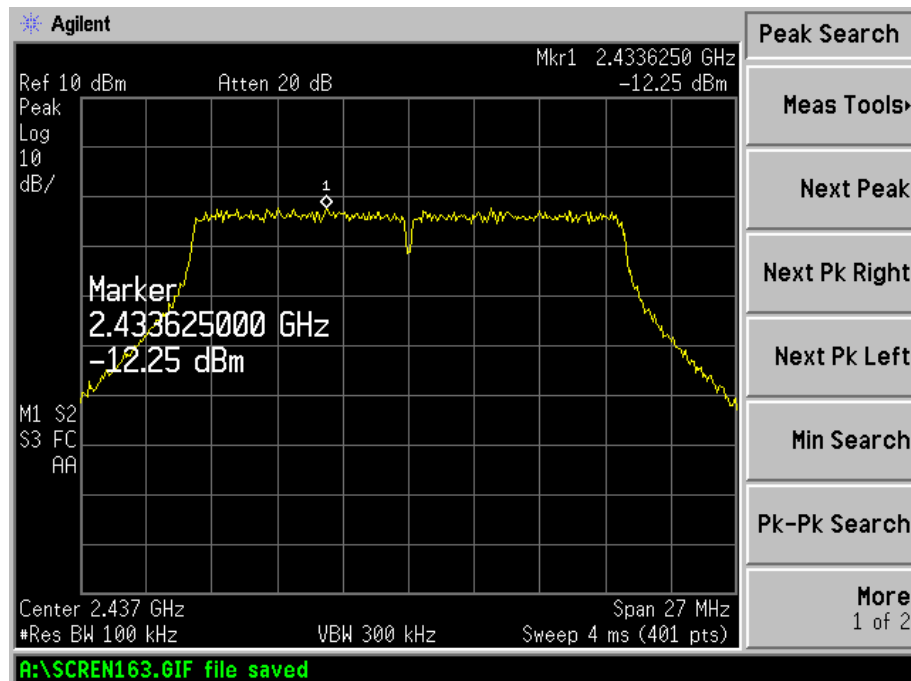
802.11g-High Channel



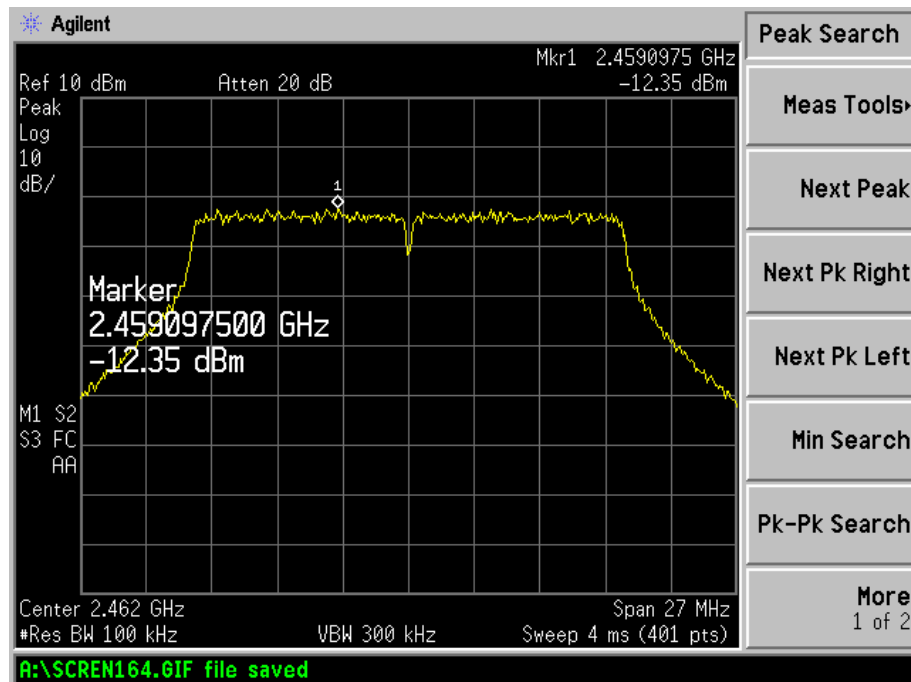
802.11n-HT20-Low Channel



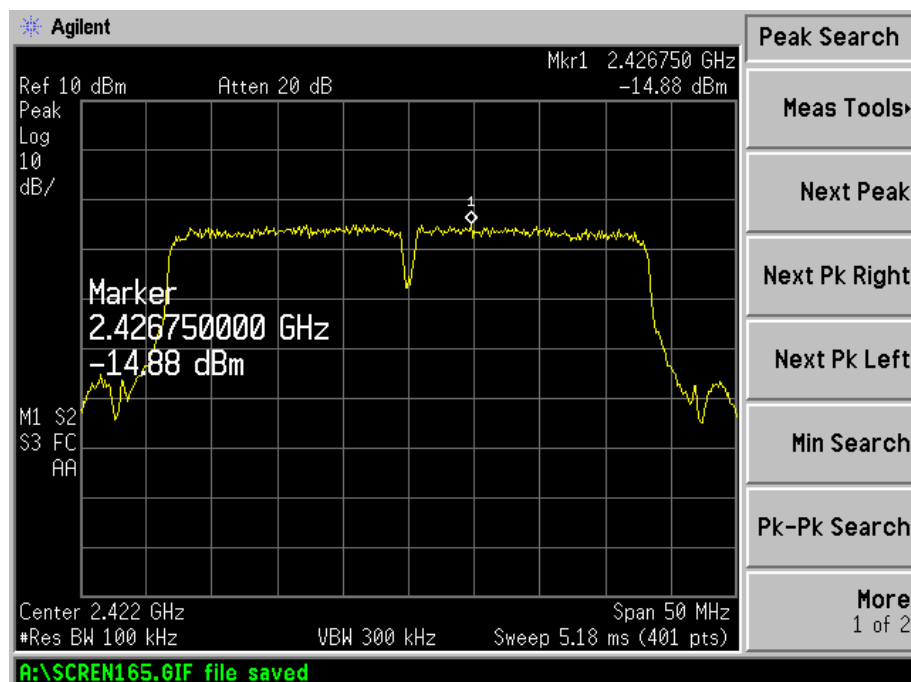
802.11n-HT20-Middle Channel



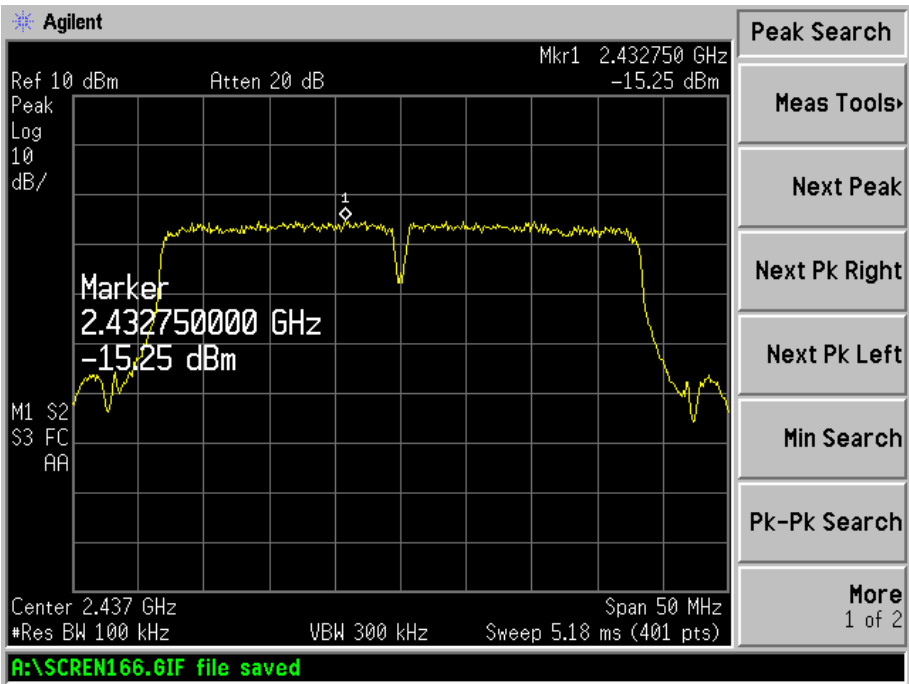
802.11n-HT20-High Channel



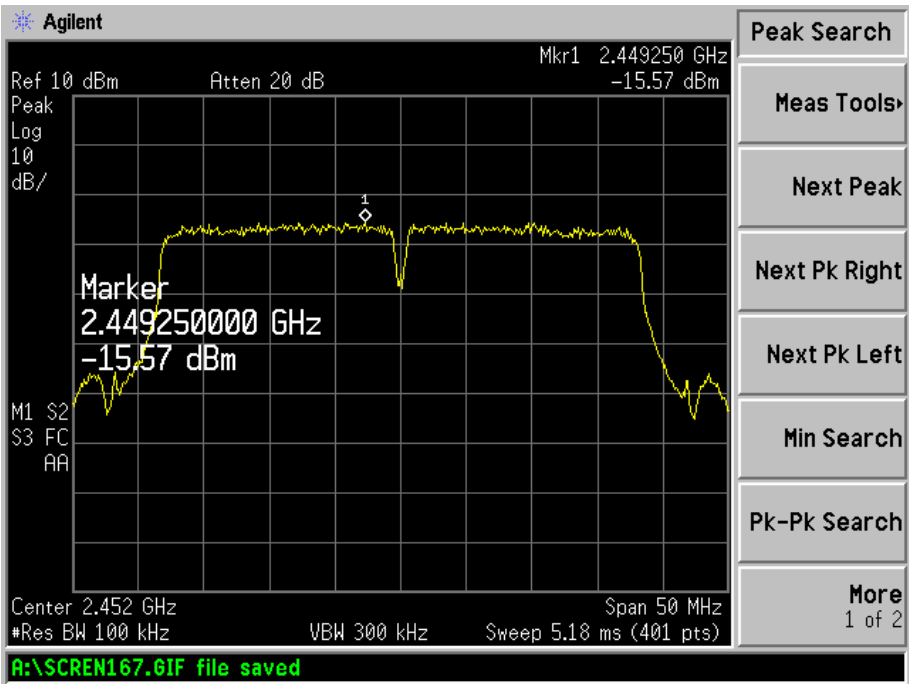
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel



802.11n-HT40-High Channel



6. 6dB Bandwidth

6.1 Standard Applicable

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

6.2 Test Equipment List and Details

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

6.3 Test Procedure

1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set RBW = 100 kHz.
3. Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$.
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 frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.4 Environmental Conditions

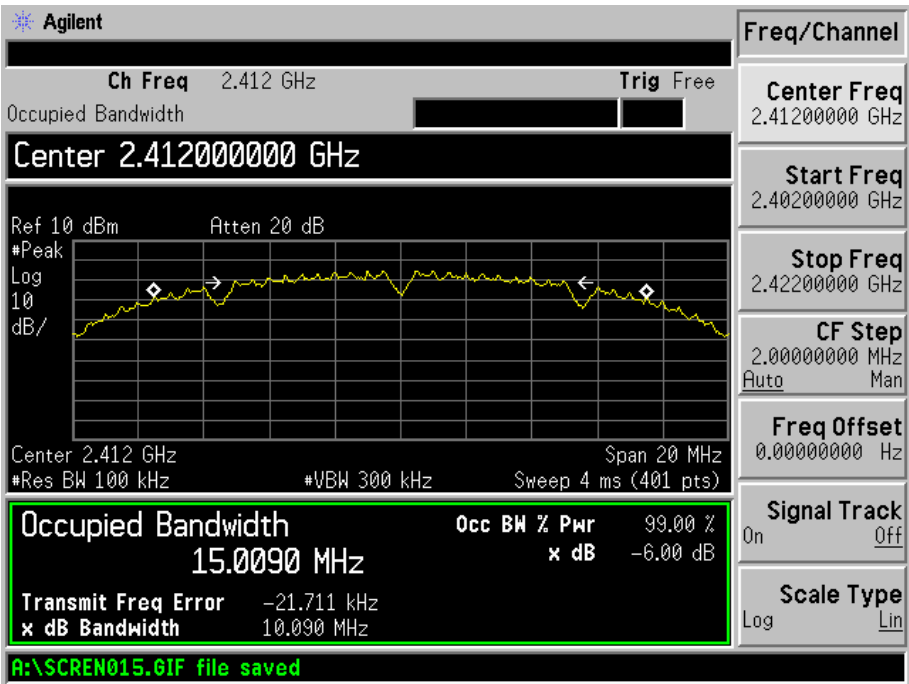
Temperature:	25° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

6.5 Summary of Test Results/Plots

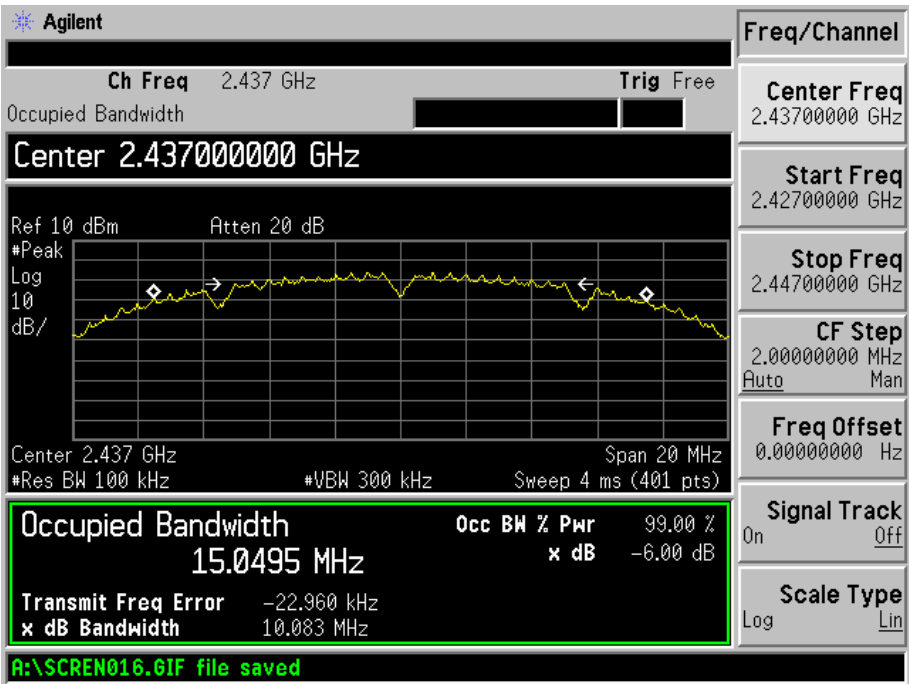
Test Mode	Test Channel MHz	6 dB Bandwidth kHz	99% Bandwidth kHz	Limit kHz
802.11b	2412	10090.0	15009.0	500
	2437	10083.0	15049.5	500
	2462	10081.0	15028.3	500
802.11g	2412	16557.0	16445.3	500
	2437	16562.0	16468.3	500
	2462	16546.0	16455.3	500
802.11n-HT20	2412	17804.0	17722.8	500
	2437	17757.0	17698.4	500
	2462	17760.0	17677.2	500
802.11n-HT40	2422	36108.0	35813.3	500
	2437	36380.0	35880.6	500
	2452	36388.0	35890.3	500

Please refer to the following test plots:

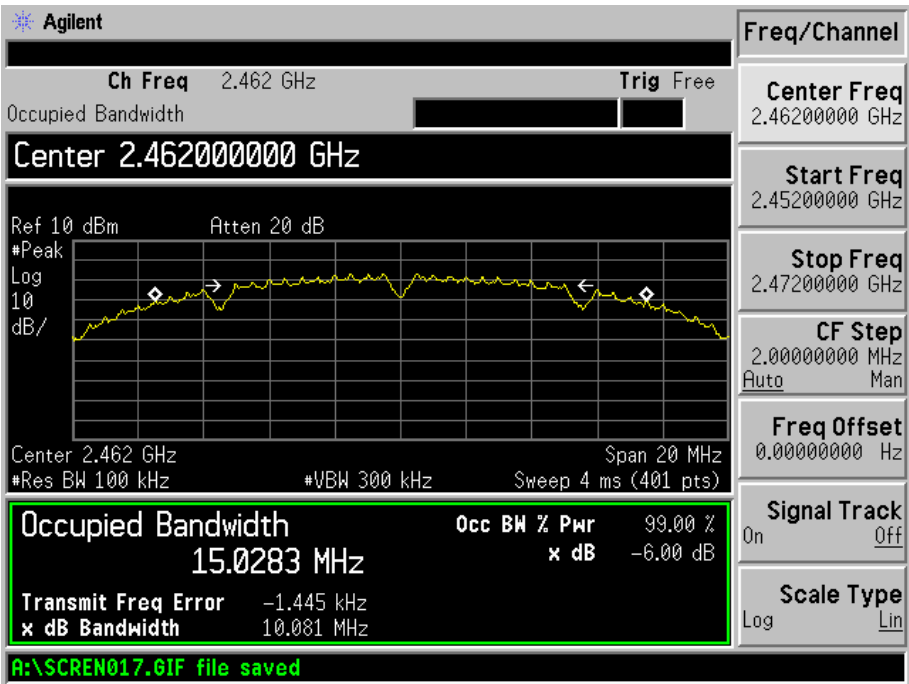
802.11b-Low Channel



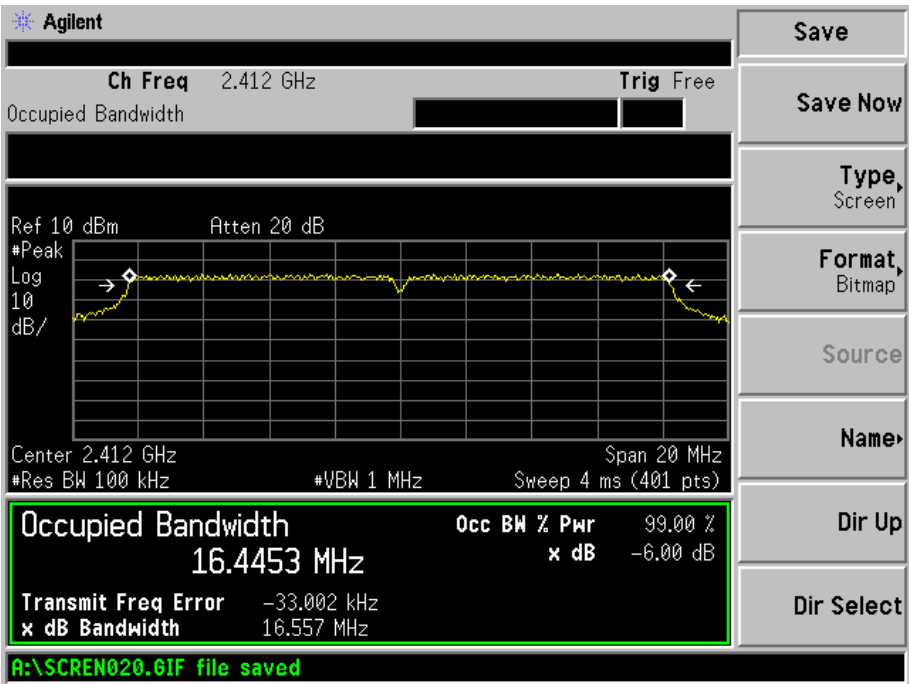
802.11b-Middle Channel



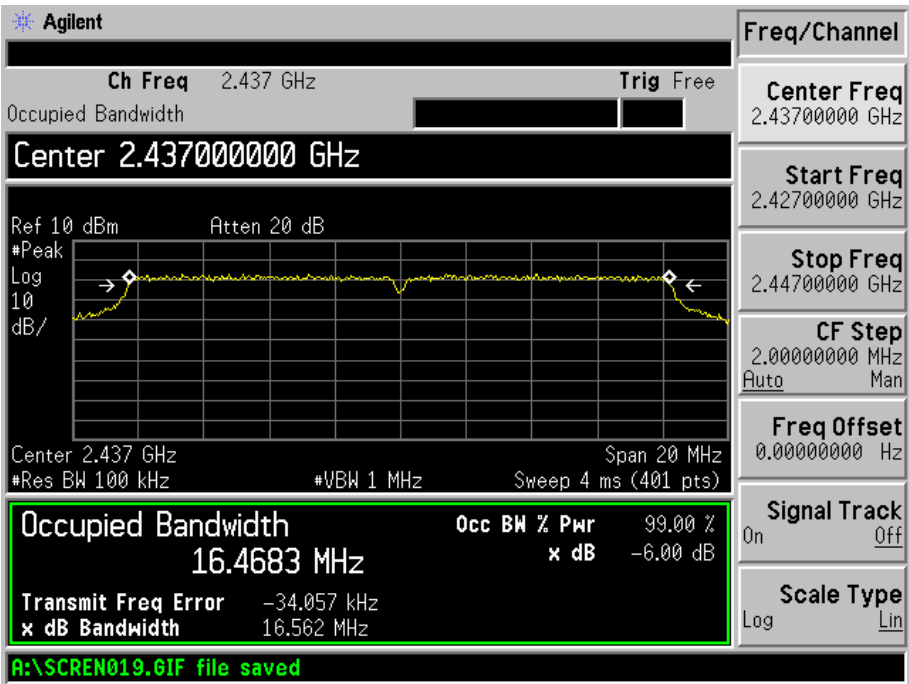
802.11b-High Channel



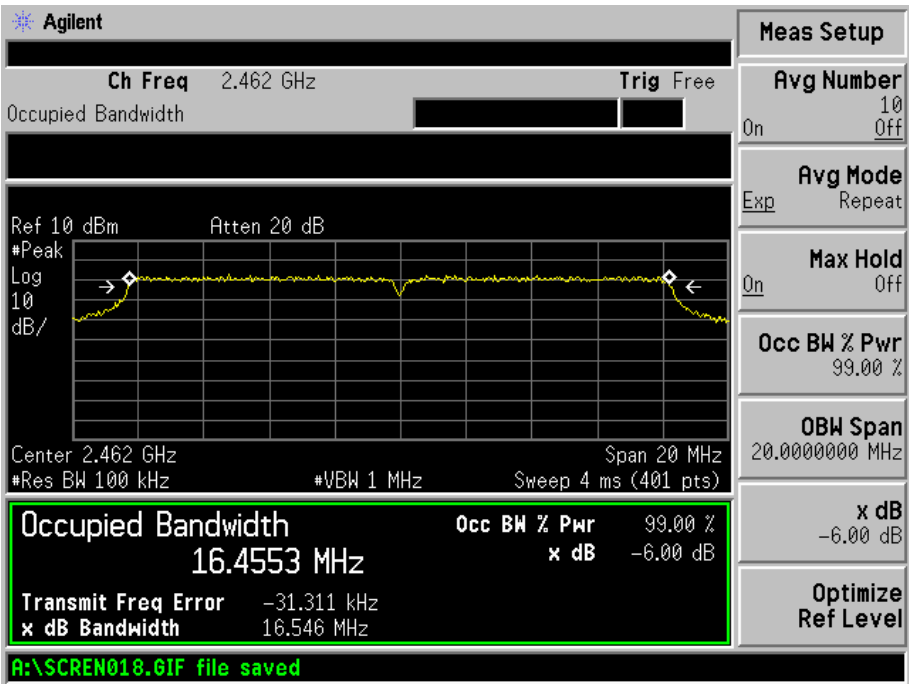
802.11g-Low Channel



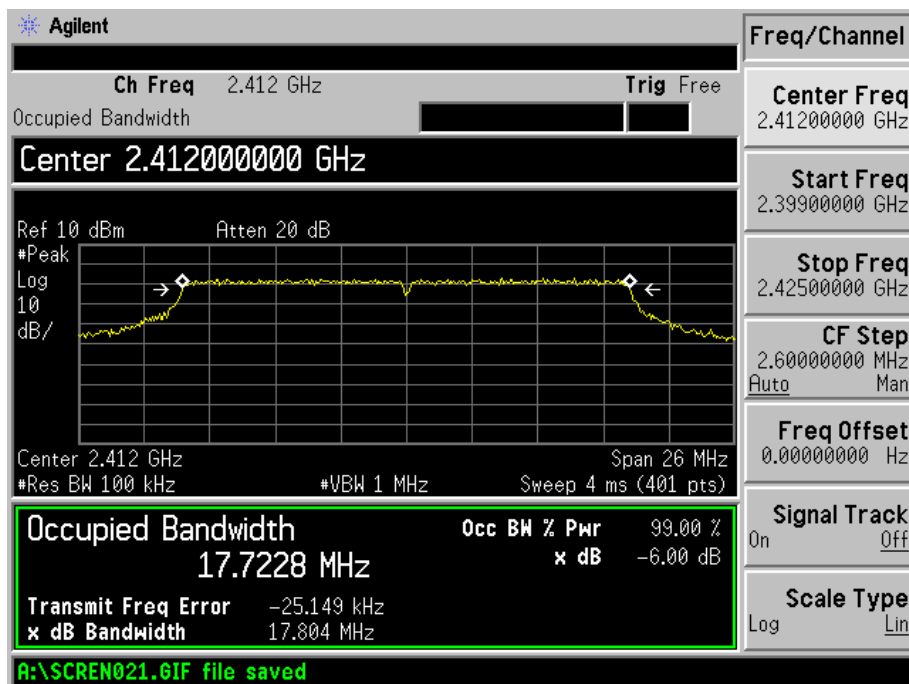
802.11g-Middle Channel



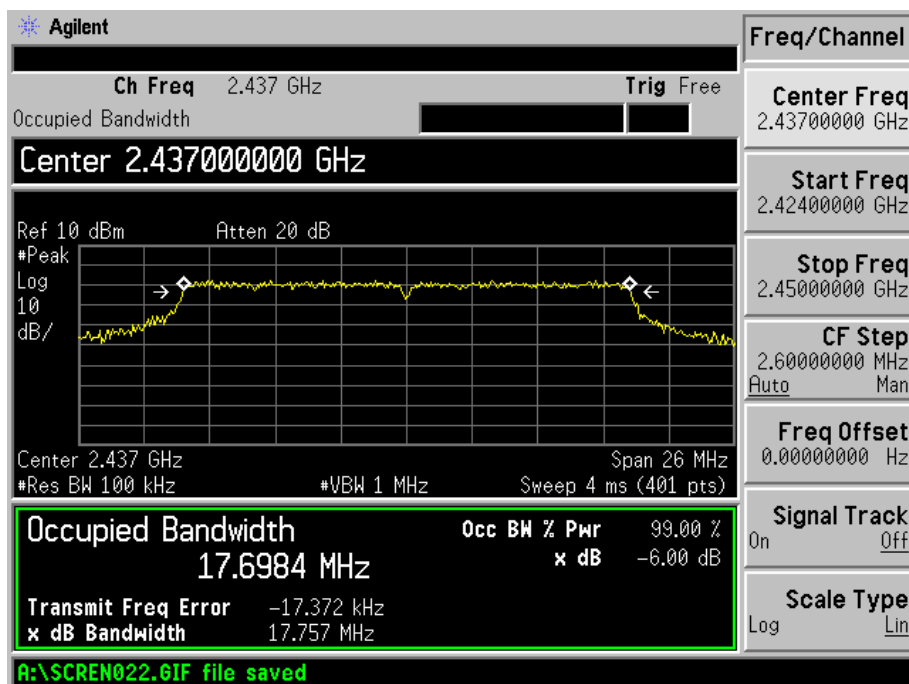
802.11g-High Channel



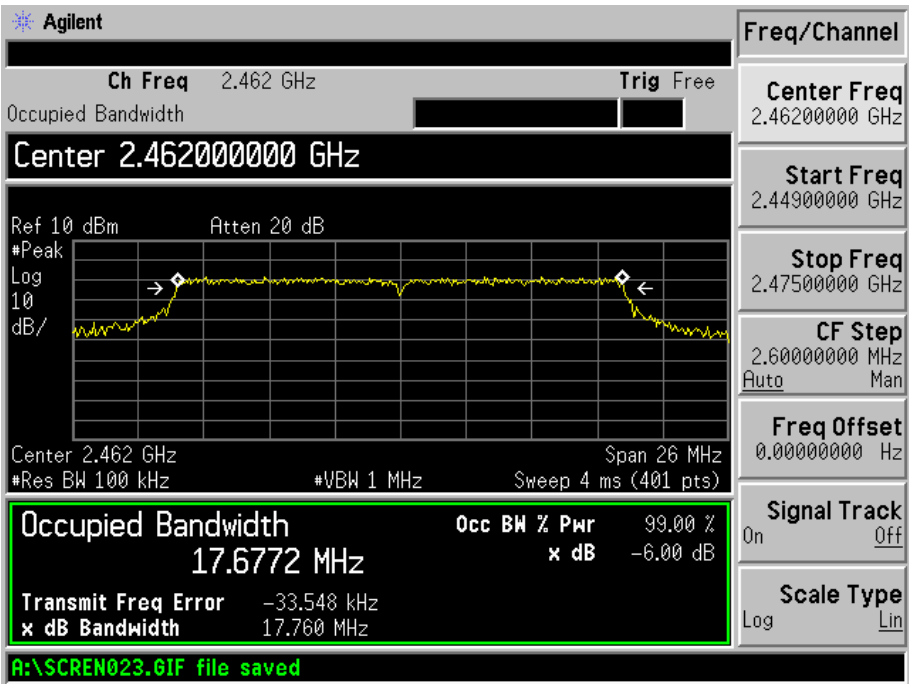
802.11n-HT20-Low Channel



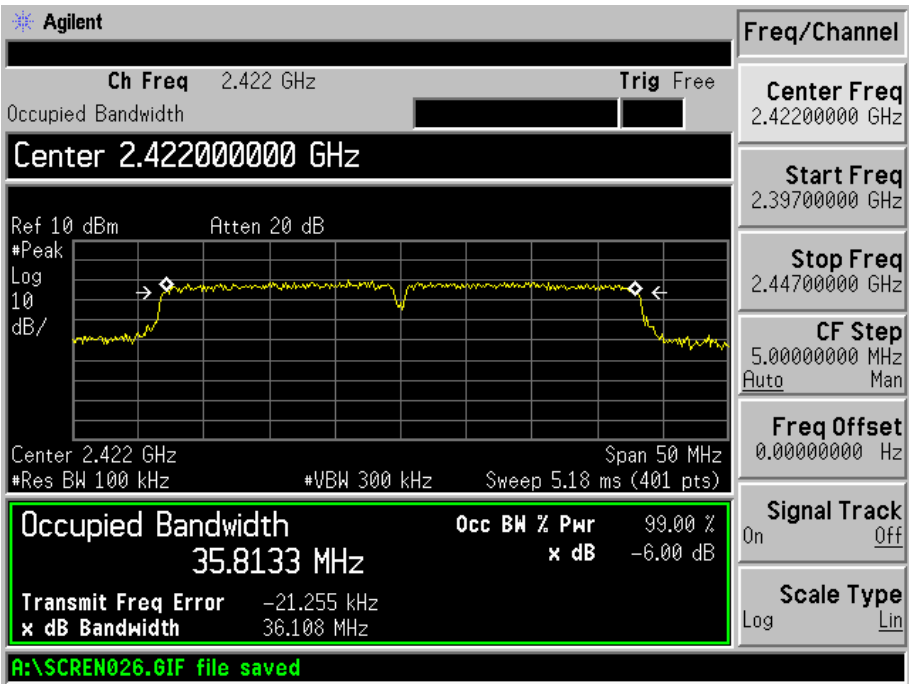
802.11n-HT20-Middle Channel



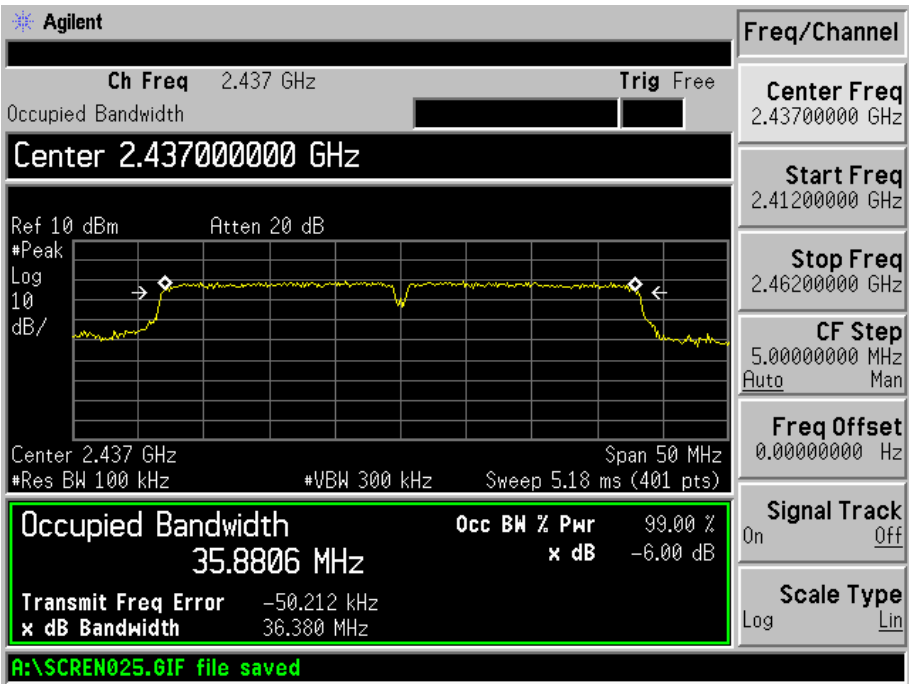
802.11n-HT20-High Channel



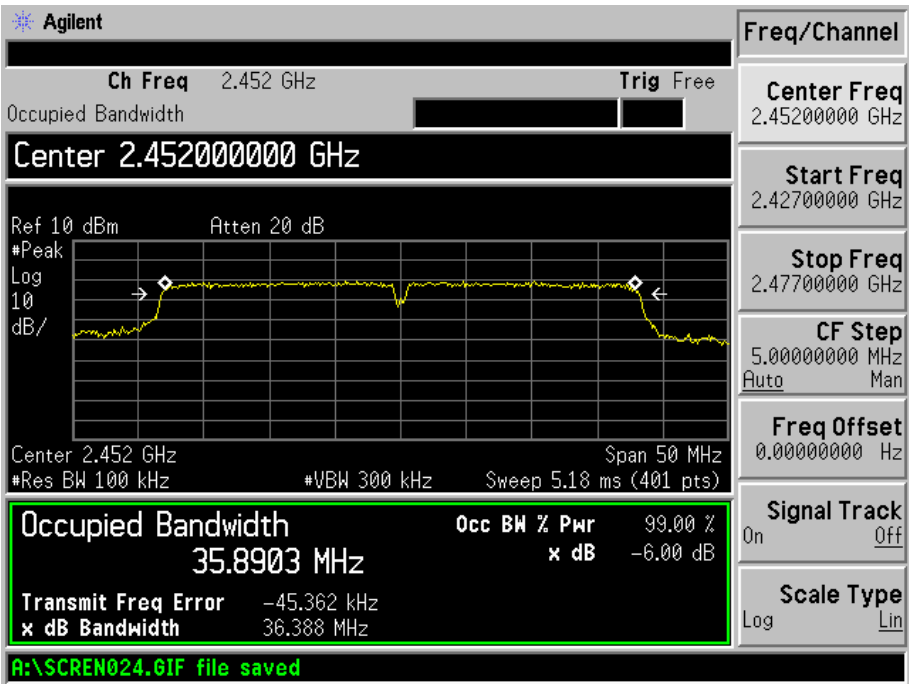
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel



802.11n-HT40-High Channel



7. RF Output Power

7.1 Standard Applicable

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

7.2 Test Equipment List and Details

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

7.3 Test Procedure

According to section 15.247(b)-power output of the KDB 558074 D01 v03r01, 8.1.2 Option 2 (channel integration method) this procedure should only be used when the maximum available RBW of the spectrum/signal analyzer is less than the DTS bandwidth.

1. Set the RBW = 1 MHz.
2. Set the VBW \geq 3 RBW
3. Set the span \geq 1.5 x DTS bandwidth.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select peak detector). If the instrument does not have a band power function, sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS bandwidth.

7.4 Environmental Conditions

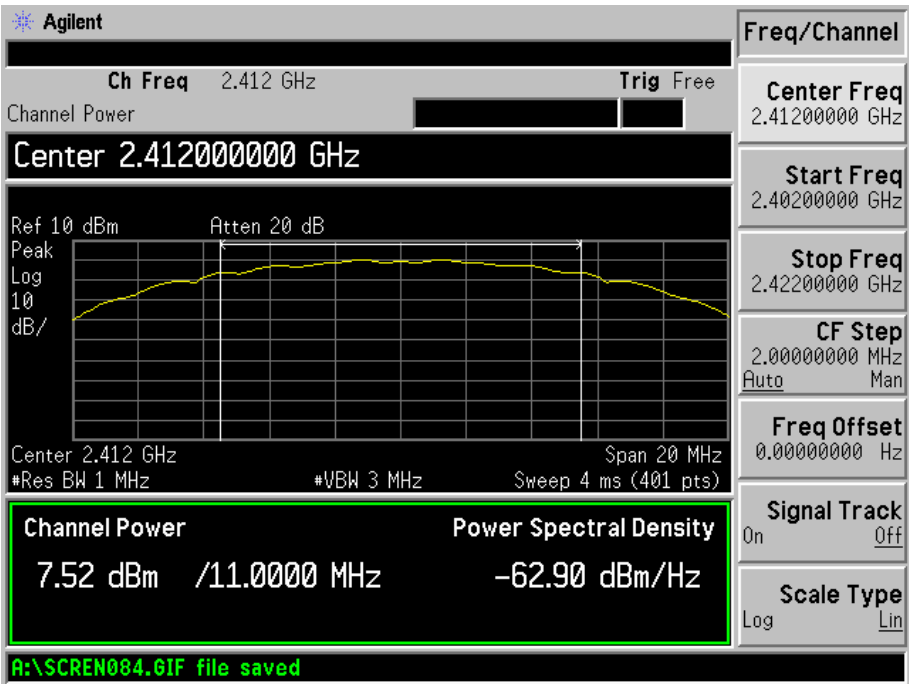
Temperature:	26° C
Relative Humidity:	57%
ATM Pressure:	1011 mbar

7.5 Summary of Test Results/Plots

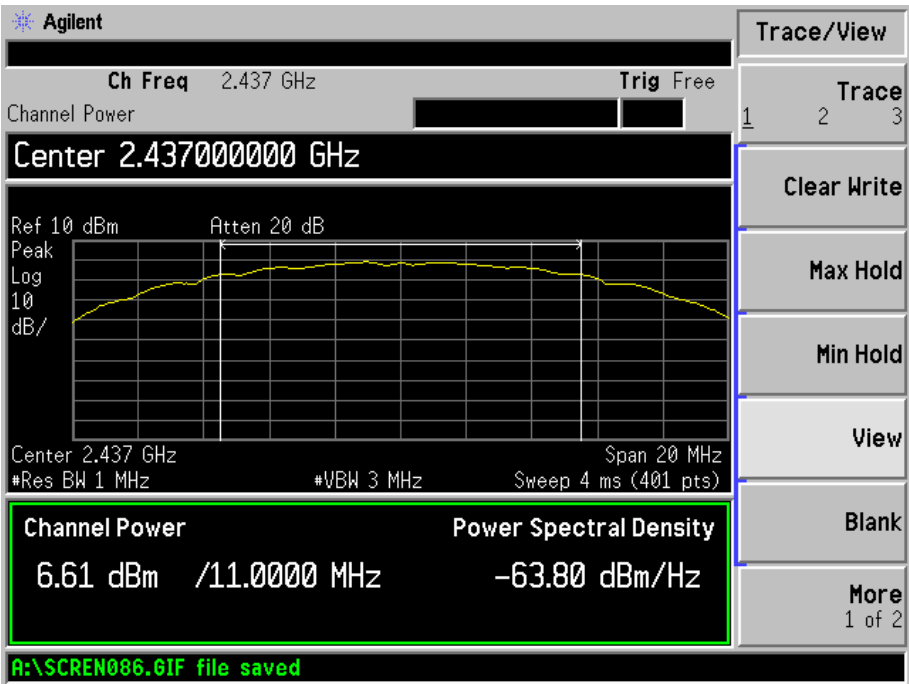
Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b_11Mbps	2412	7.52	5.65	1000
	2437	6.61	4.58	1000
	2462	6.71	4.69	1000
802.11g_54Mbps	2412	7.10	5.13	1000
	2437	6.24	4.21	1000
	2462	6.32	4.29	1000
802.11n HT20_MCS7	2412	6.89	4.89	1000
	2437	6.15	4.12	1000
	2462	5.65	3.67	1000
802.11n HT40_MCS7	2422	7.23	5.28	1000
	2437	6.82	4.81	1000
	2452	6.68	4.66	1000

Please refer to the following test plots:

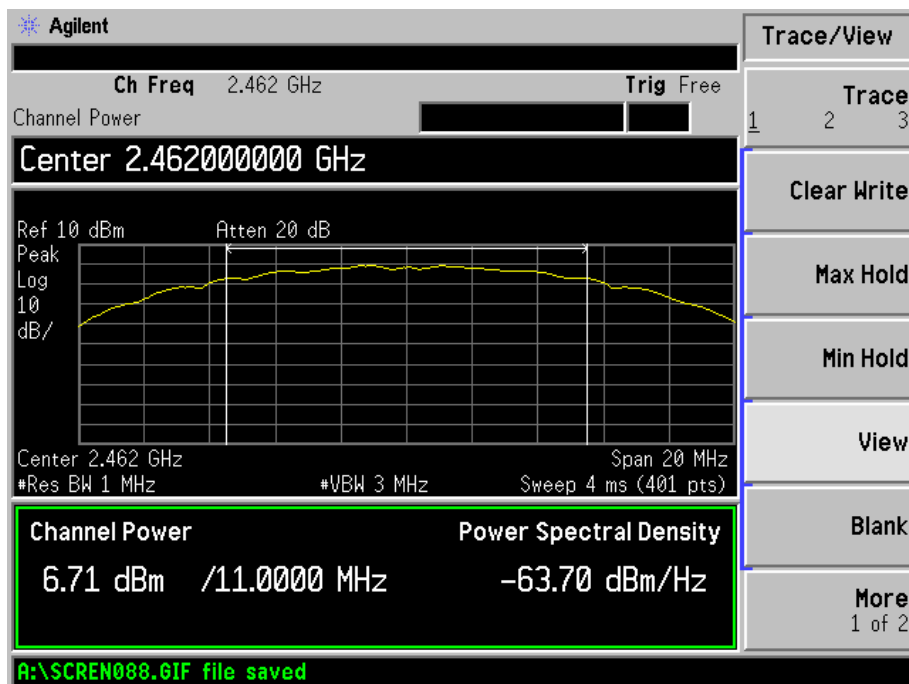
802.11-11Mbps-Low Channel



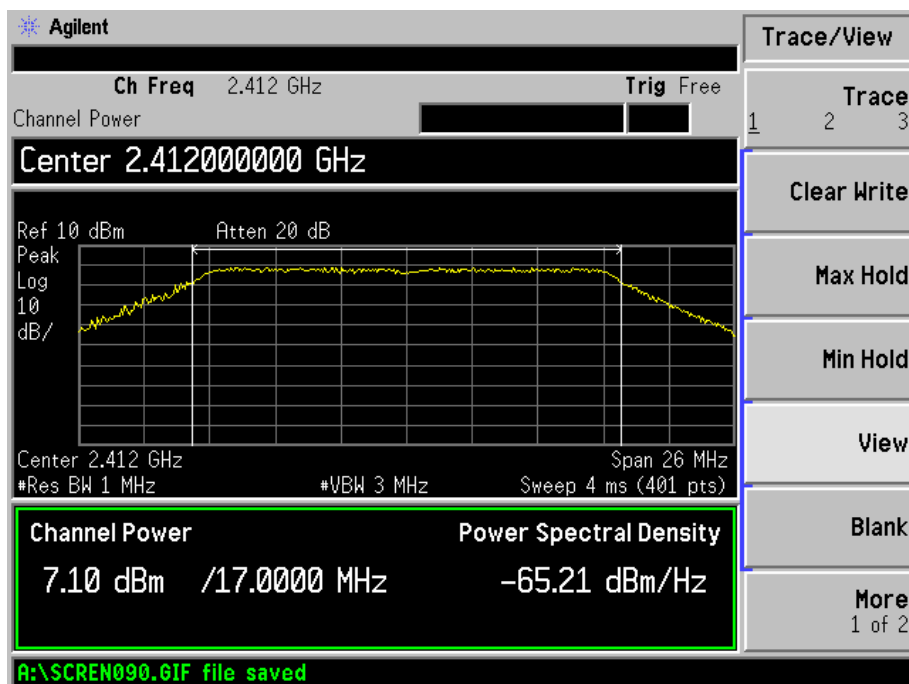
802.11b -11Mbps-Middle Channel



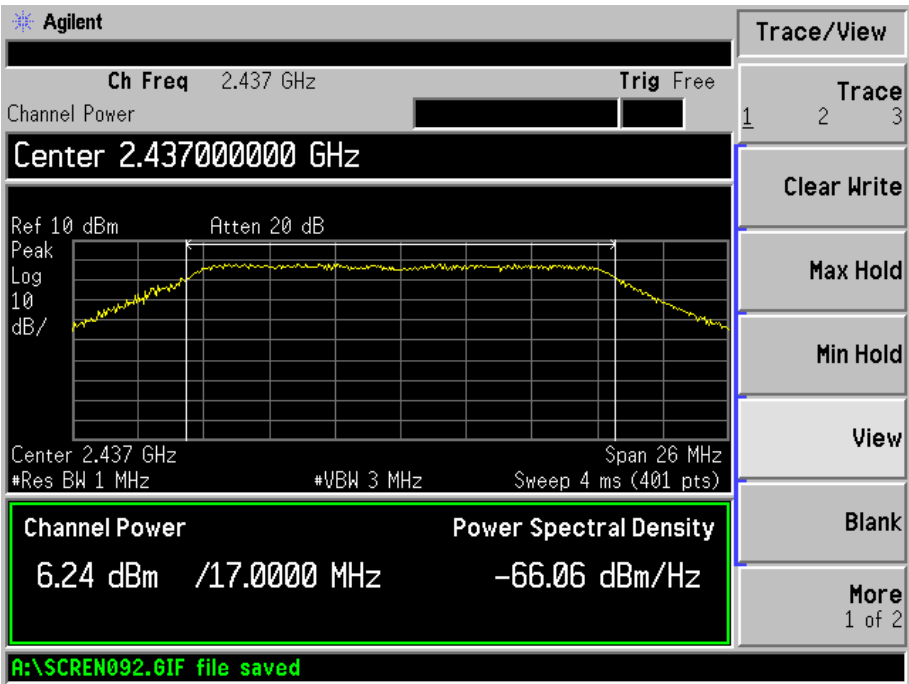
802.11b -11Mbps-High Channel



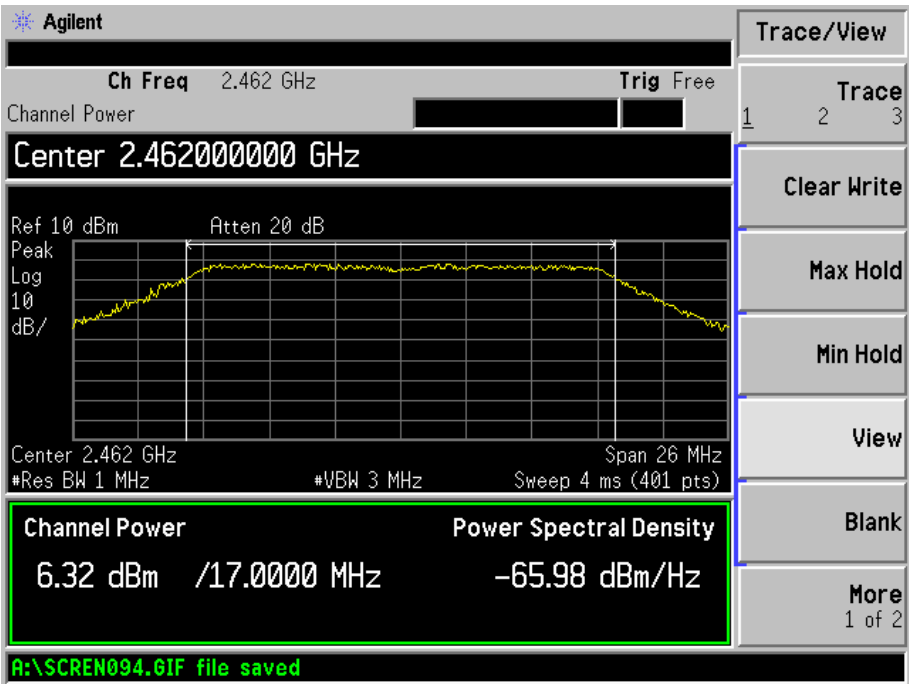
802.11g-54Mbps-Low Channel



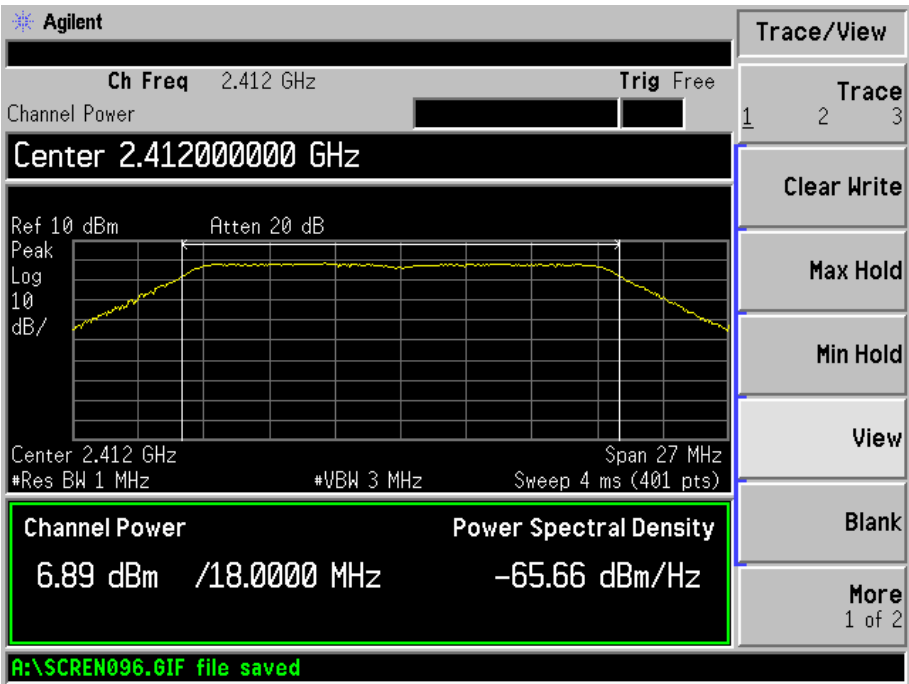
802.11g-54Mbps-Middle Channel



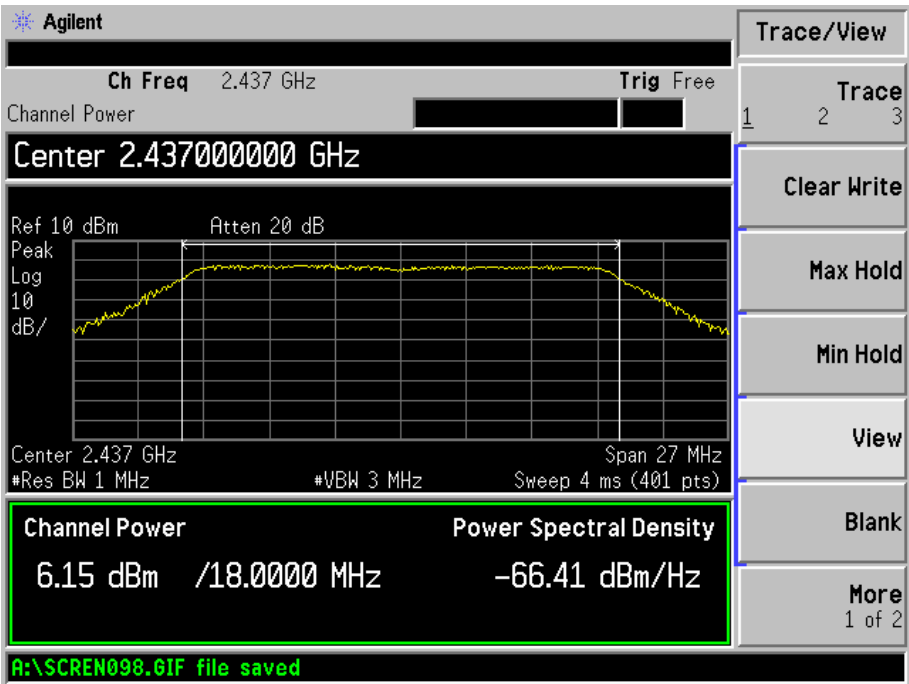
802.11g-54Mbps-High Channel



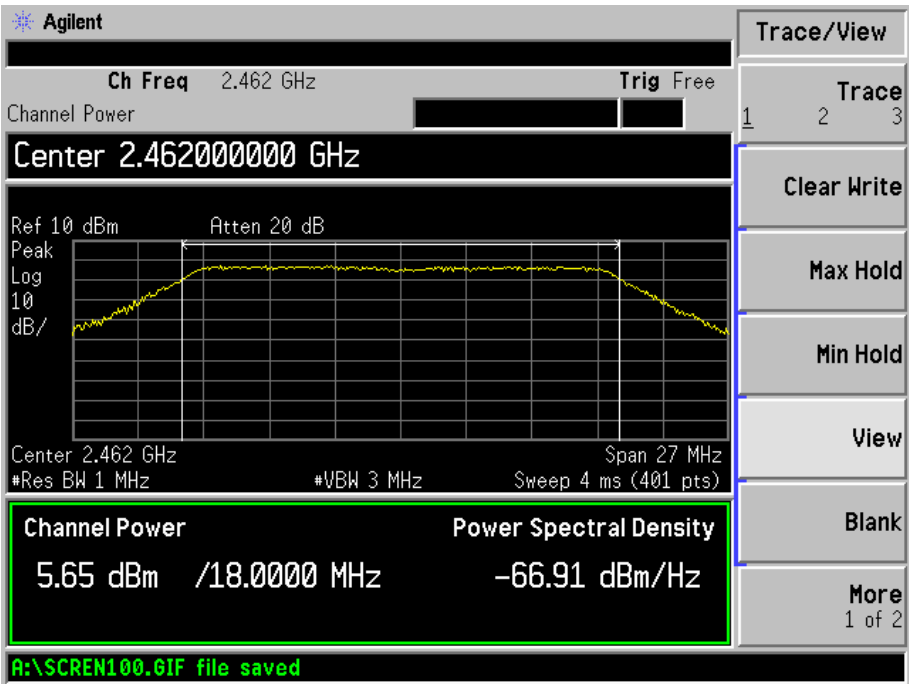
802.11n-HT20-MCS7-Low Channel



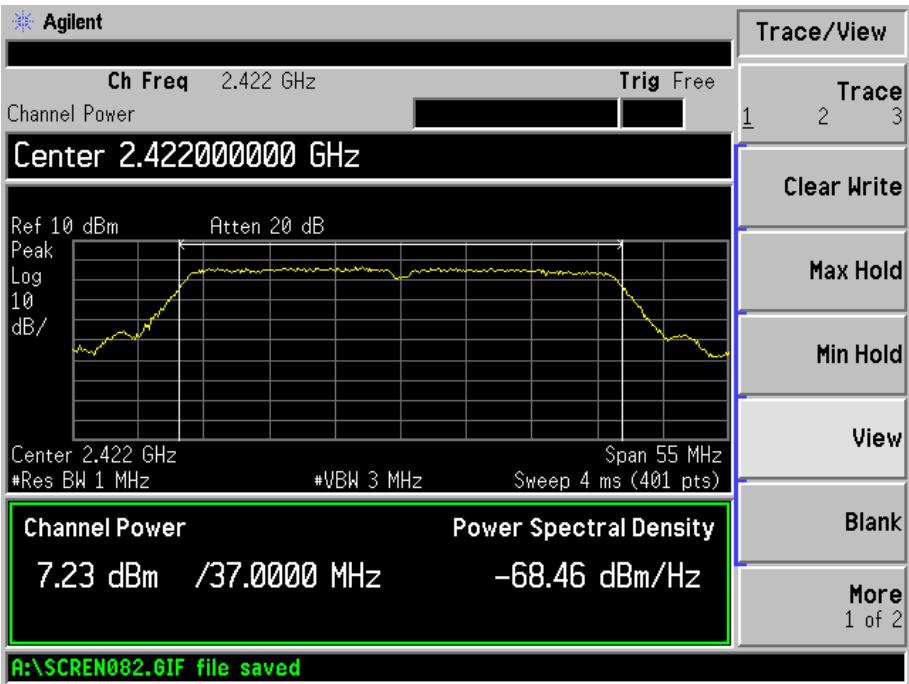
802.11n-HT20-MCS7-Middle Channel



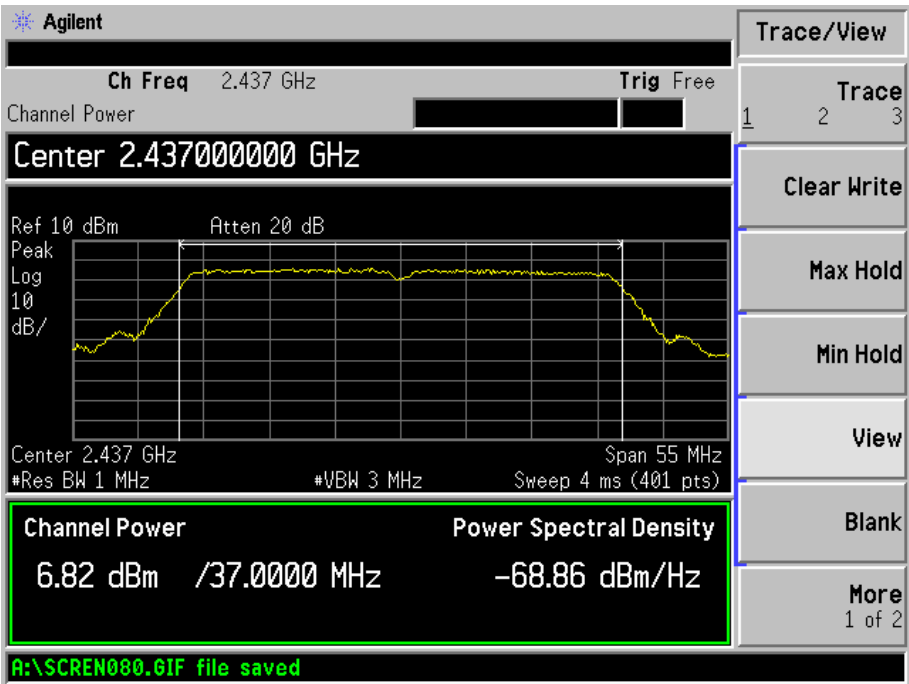
802.11n-HT20-MCS7-High Channel



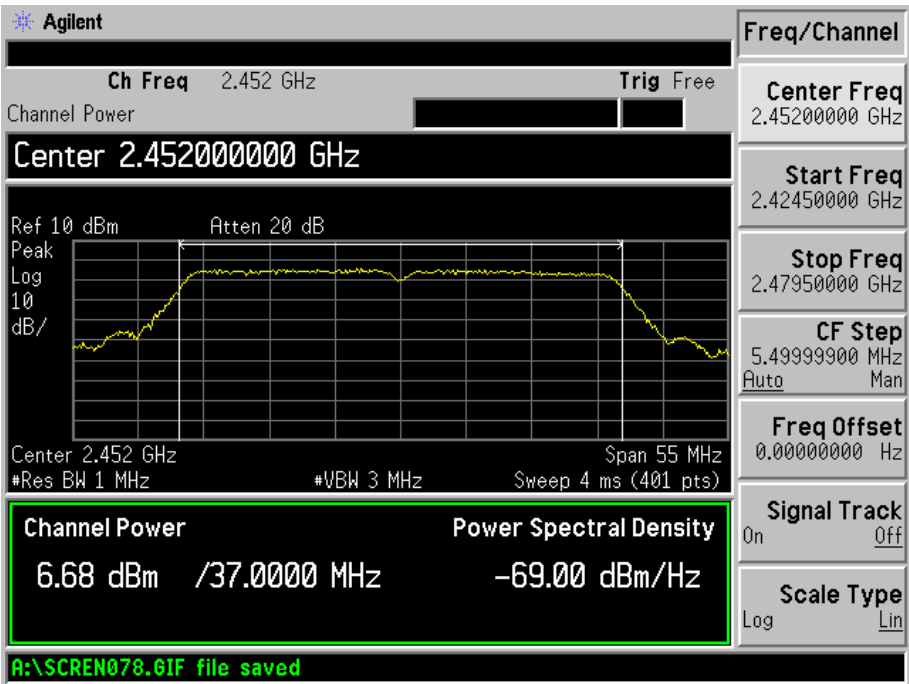
802.11n-HT40-MCS7-Low Channel



802.11n-HT40-MCS7-Middle Channel



802.11n-HT40-MCS7-High Channel



8. Field Strength of Spurious Emissions

8.1 Measurement Uncertainty

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

8.2 Standard Applicable

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

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

8.3 Test Equipment List and Details

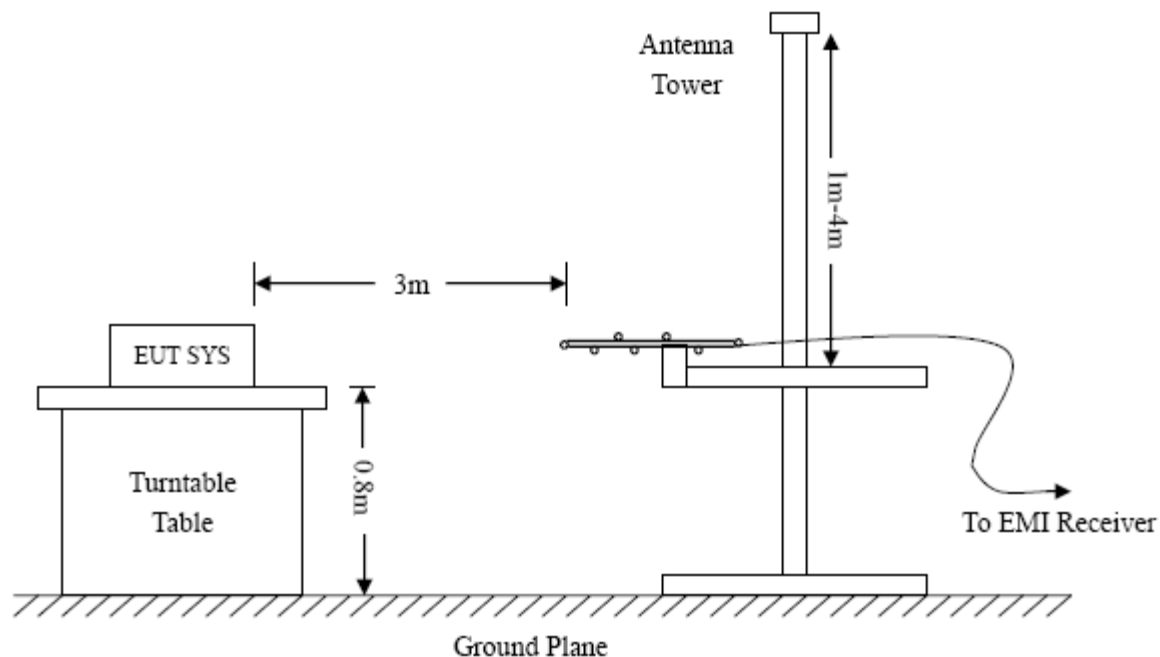
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2013-05-07	2014-05-06
EMI Test Receiver	R&S	ESVB	825471/005	2013-05-07	2014-05-06
Pre-amplifier	Agilent	8447F	3113A06717	2013-05-07	2014-05-06
Pre-amplifier	Compliance Direction	PAP-0118	24002	2013-05-07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

8.4 Test Procedure

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

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

The spacing between the peripherals was 10 cm.



Frequency :9kHz-30MHz

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

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

Sweep time= Auto

Trace = max hold

Detector function = peak, AV

8.5 Corrected Amplitude & Margin Calculation

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

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

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

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

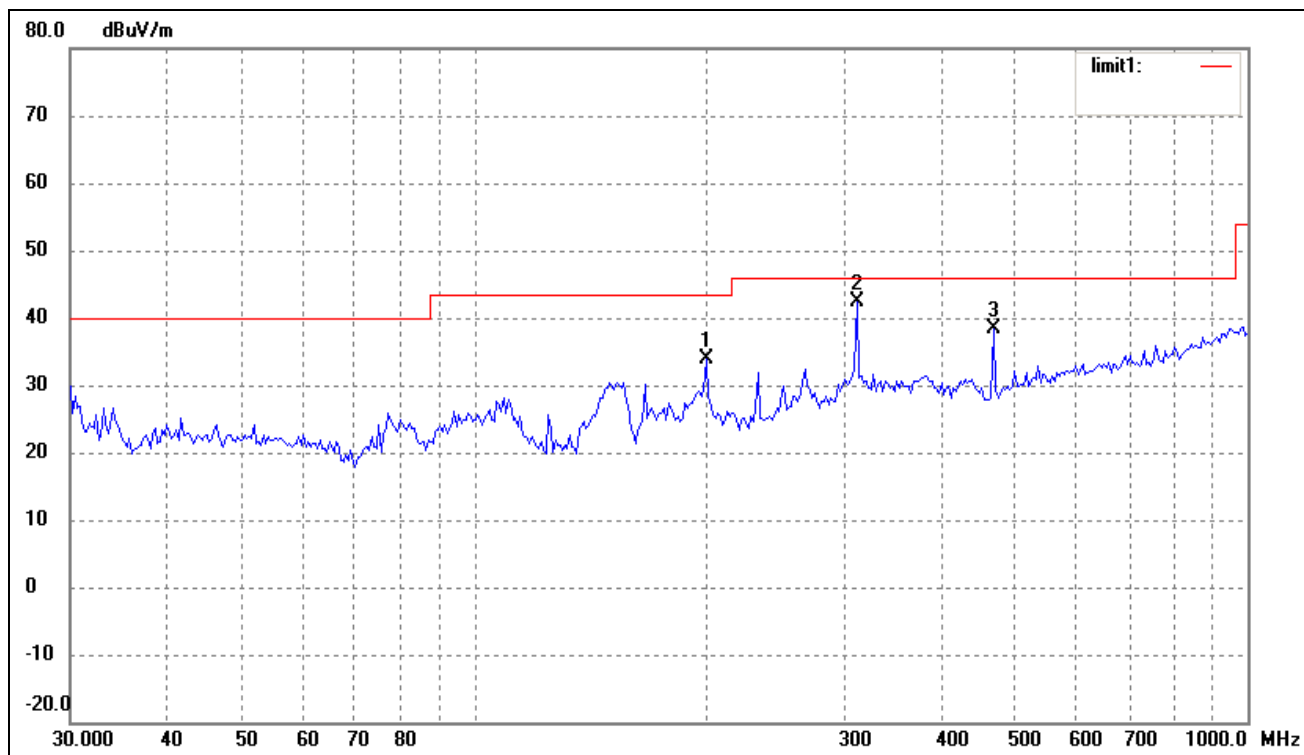
8.6 Environmental Conditions

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

8.7 Summary of Test Results/Plots

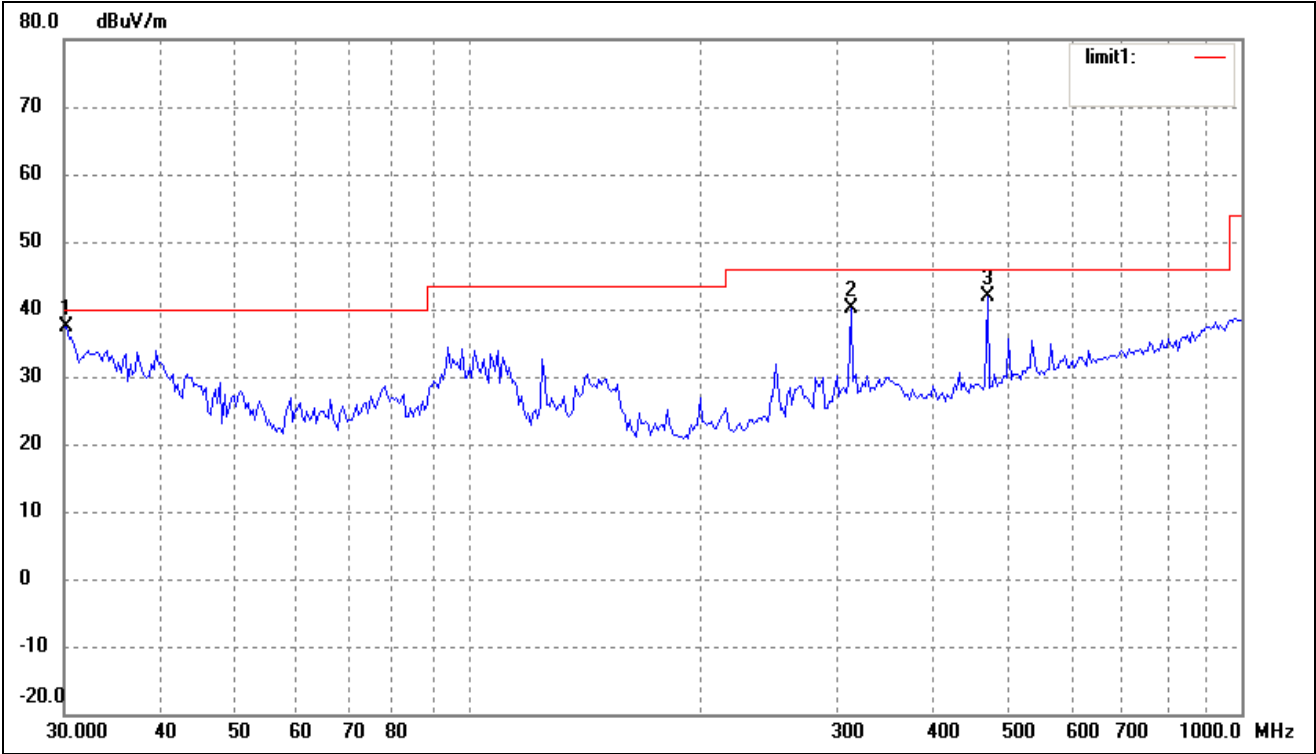
According to the data below, the FCC Part 15.205, 15.209 and 15.247 standards, and had the worst cases:

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

Plot of Radiated Emissions Test Data (30MHz to 1GHz)*EUT:* Portable Multimedia Player*Tested Model:* YDP-G28S*Operating Condition:* 802.11b Transmitting Low Channel-2412MHz*Comment:* 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	199.2855	27.29	6.58	33.87	43.50	-9.63	360	100	peak
2	312.1794	32.58	9.90	42.48	46.00	-3.52	360	100	peak
3	468.8762	26.20	12.06	38.26	46.00	-7.74	360	100	peak

Test Specification: Vertical

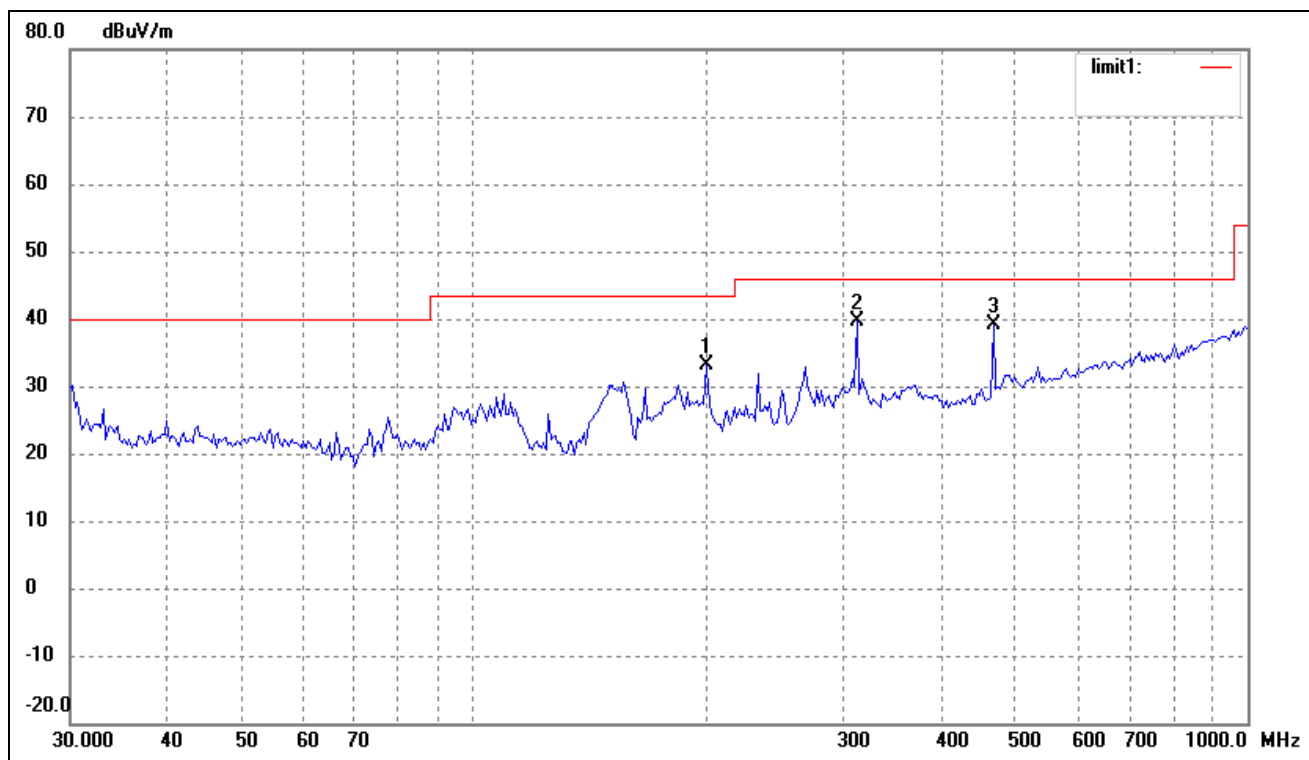


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.2111	30.58	6.77	37.35	40.00	-2.65	360	100	peak
2	312.1794	30.34	9.90	40.24	46.00	-5.76	360	100	peak
3	468.8762	29.71	12.06	41.77	46.00	-4.23	360	100	peak

Operating Condition: 802.11b Transmitting Middle Channel-2437MHz

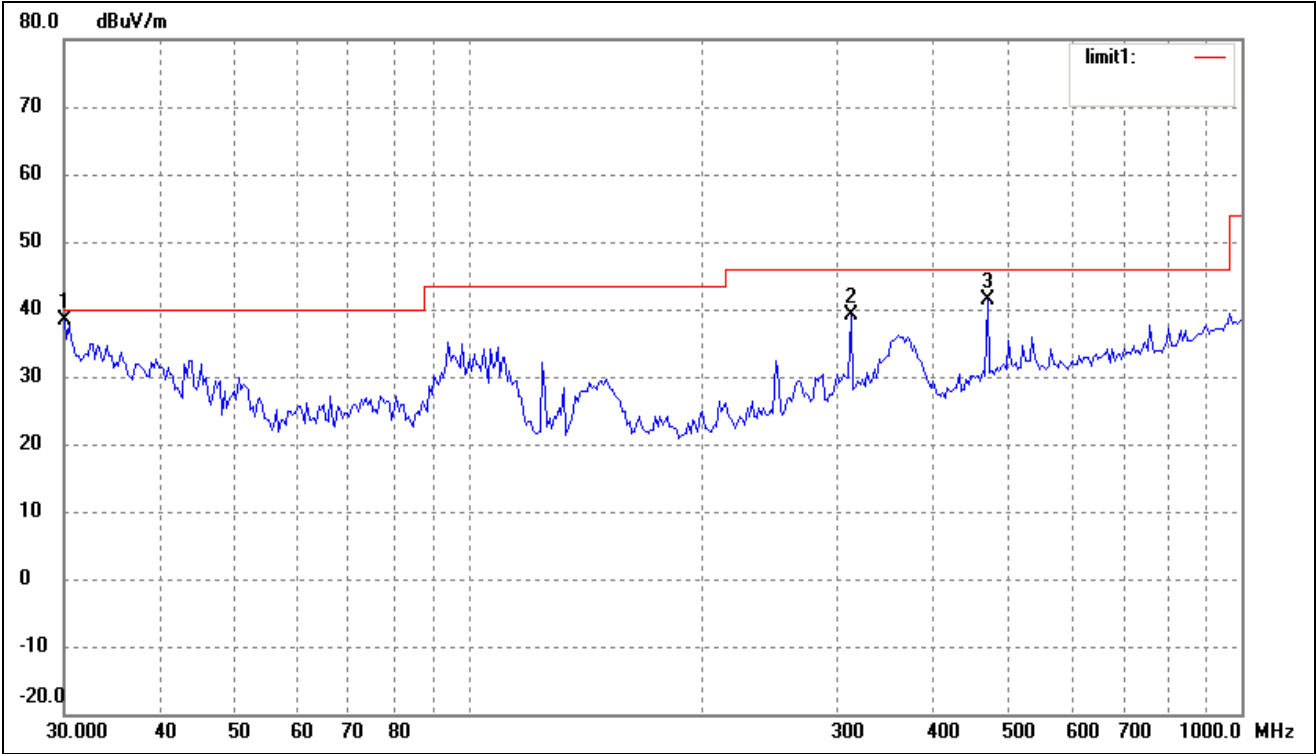
Comment: DC 3.7V

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	199.2855	26.49	6.58	33.07	43.50	-10.43	360	100	peak
2	312.1794	29.61	9.90	39.51	46.00	-6.49	360	100	peak
3	468.8762	26.95	12.06	39.01	46.00	-6.99	360	100	peak

Test Specification: Vertical

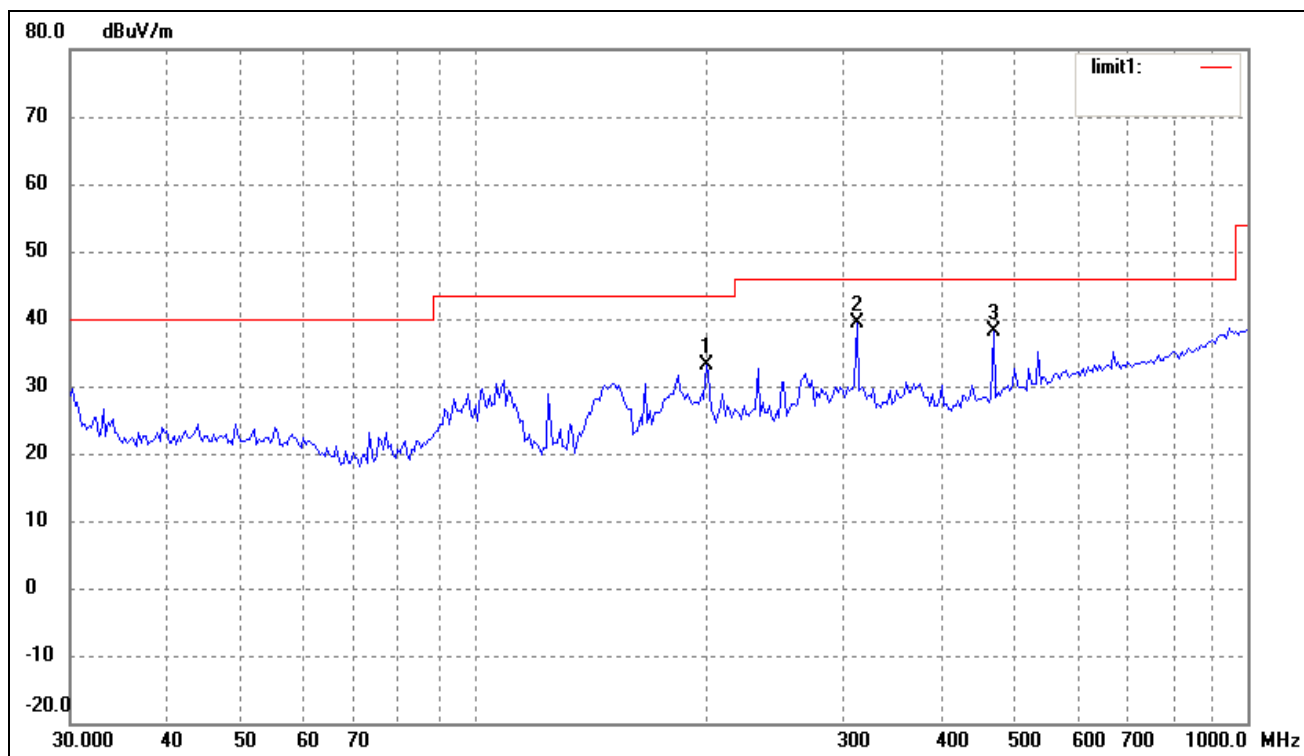


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.0000	31.67	6.77	38.44	40.00	-1.56	360	100	peak
2	312.1794	29.17	9.90	39.07	46.00	-6.93	360	100	peak
3	468.8762	29.40	12.06	41.46	46.00	-4.54	360	100	peak

Operating Condition: 802.11b Transmitting High Channel-2462MHz

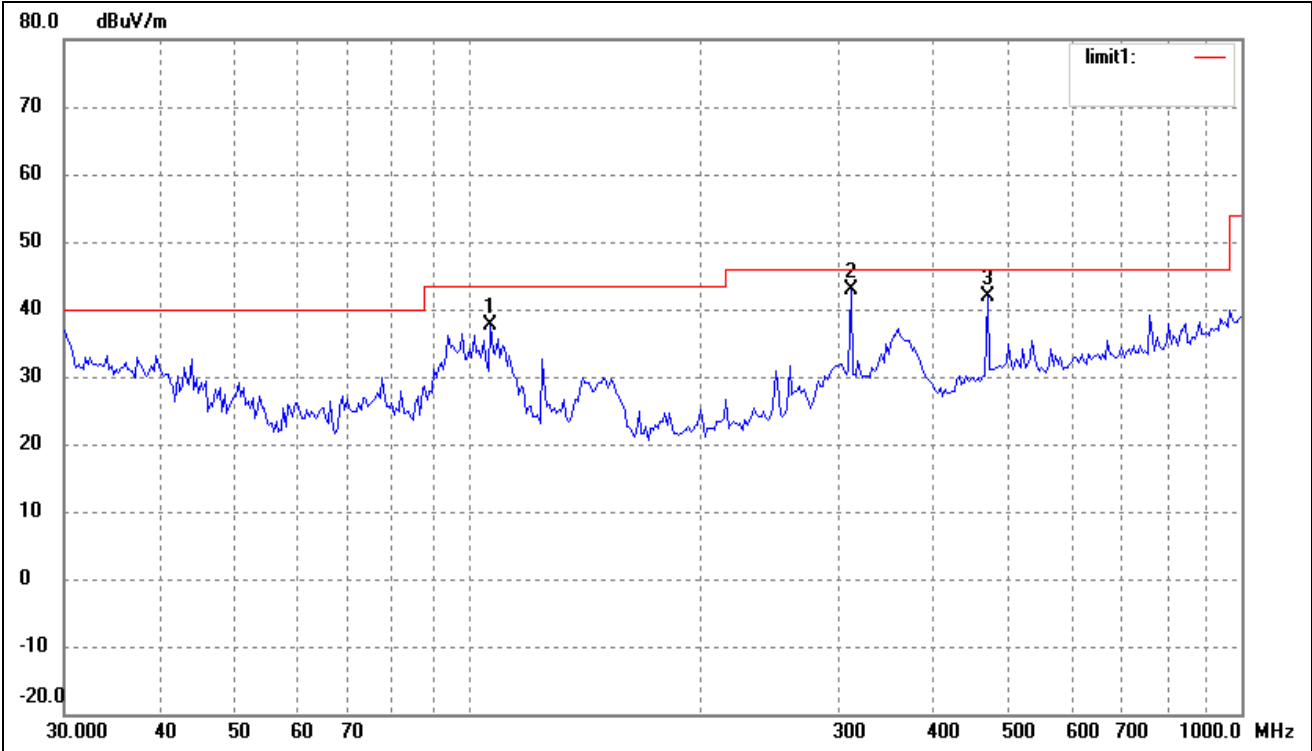
Comment: DC 3.7V

Test Specification: Horizontal

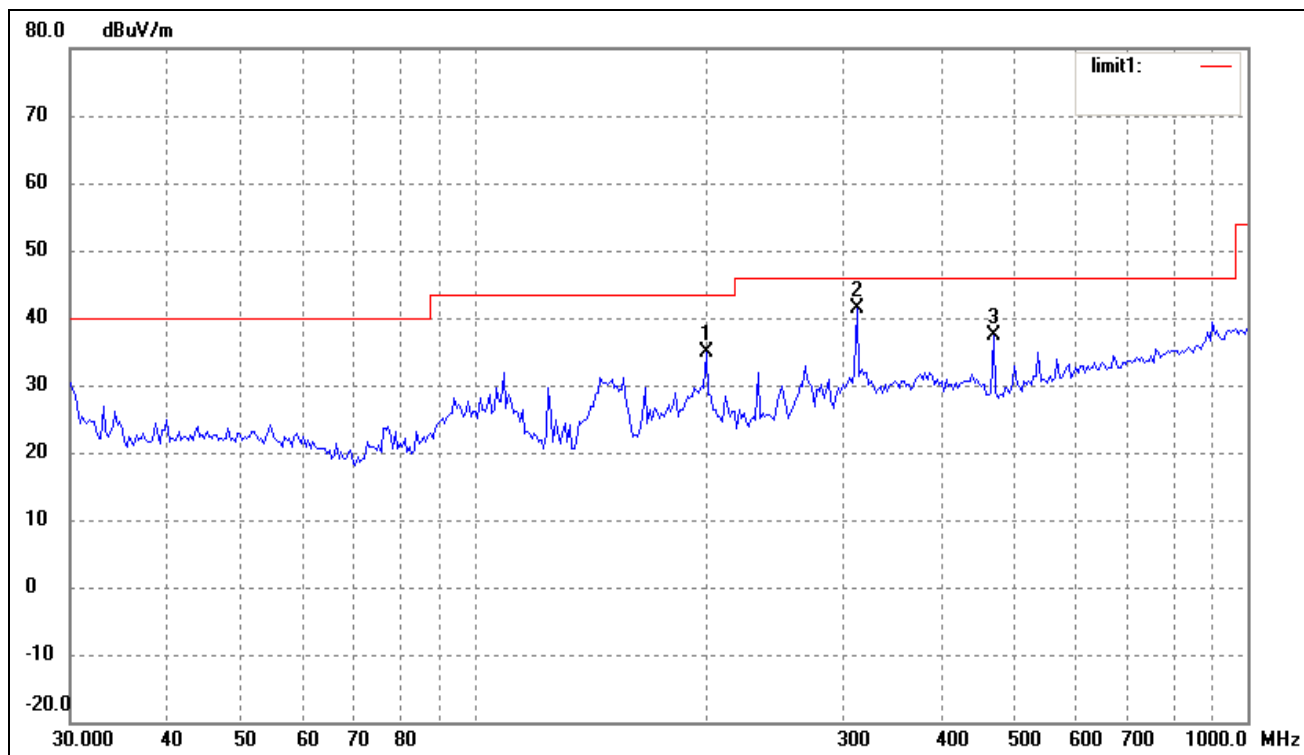


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	199.2855	26.67	6.58	33.25	43.50	-10.25	360	100	peak
2	312.1794	29.59	9.90	39.49	46.00	-6.51	360	100	peak
3	468.8762	25.96	12.06	38.02	46.00	-7.98	360	100	peak

Test Specification: Vertical

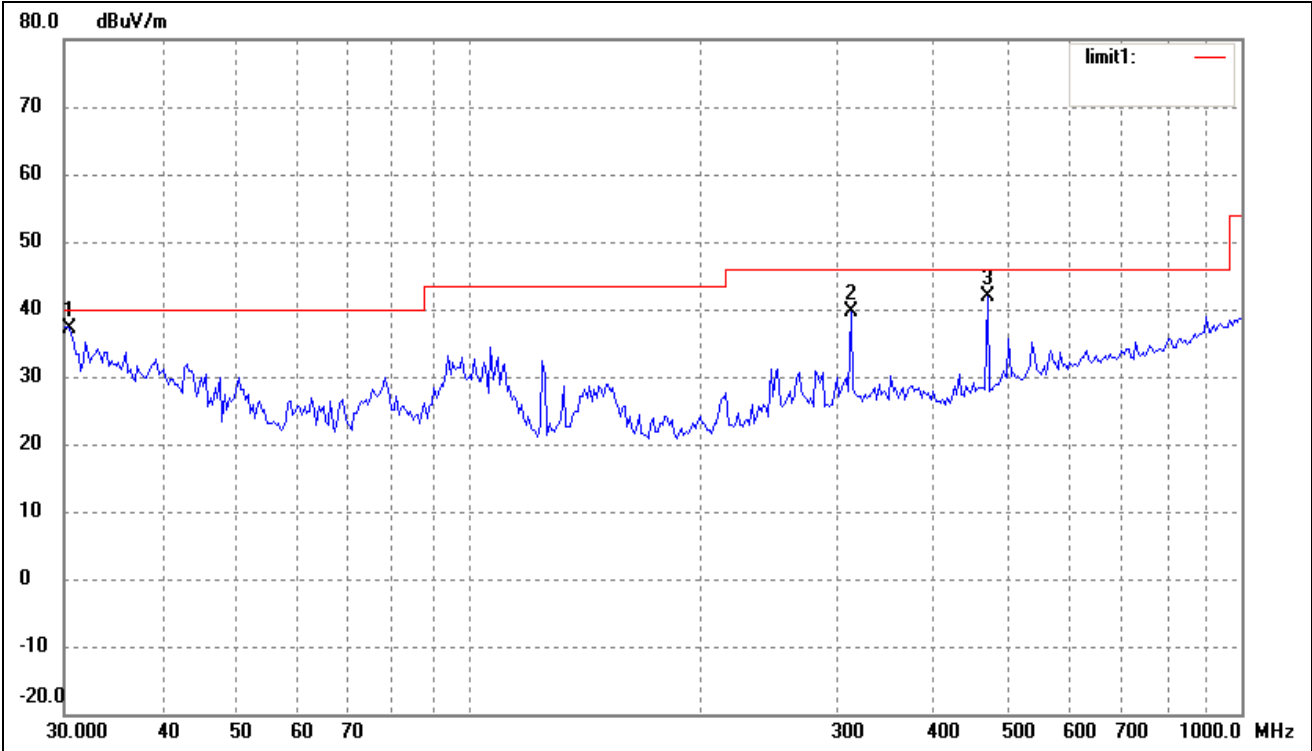


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	106.7587	29.80	7.86	37.66	43.50	-5.84	360	100	peak
2	312.1794	33.01	9.90	42.91	46.00	-3.09	360	100	peak
3	468.8762	29.73	12.06	41.79	46.00	-4.21	360	100	peak

Plot of Radiated Emissions Test Data (30MHz to 1GHz)*EUT:* Portable Multimedia Player*Tested Model:* YDP-G28S*Operating Condition:* 802.11g Transmitting Low Channel-2412MHz*Comment:* 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	199.2855	28.40	6.58	34.98	43.50	-8.52	360	100	peak
2	312.1794	31.57	9.90	41.47	46.00	-4.53	360	100	peak
3	468.8762	25.29	12.06	37.35	46.00	-8.65	360	100	peak

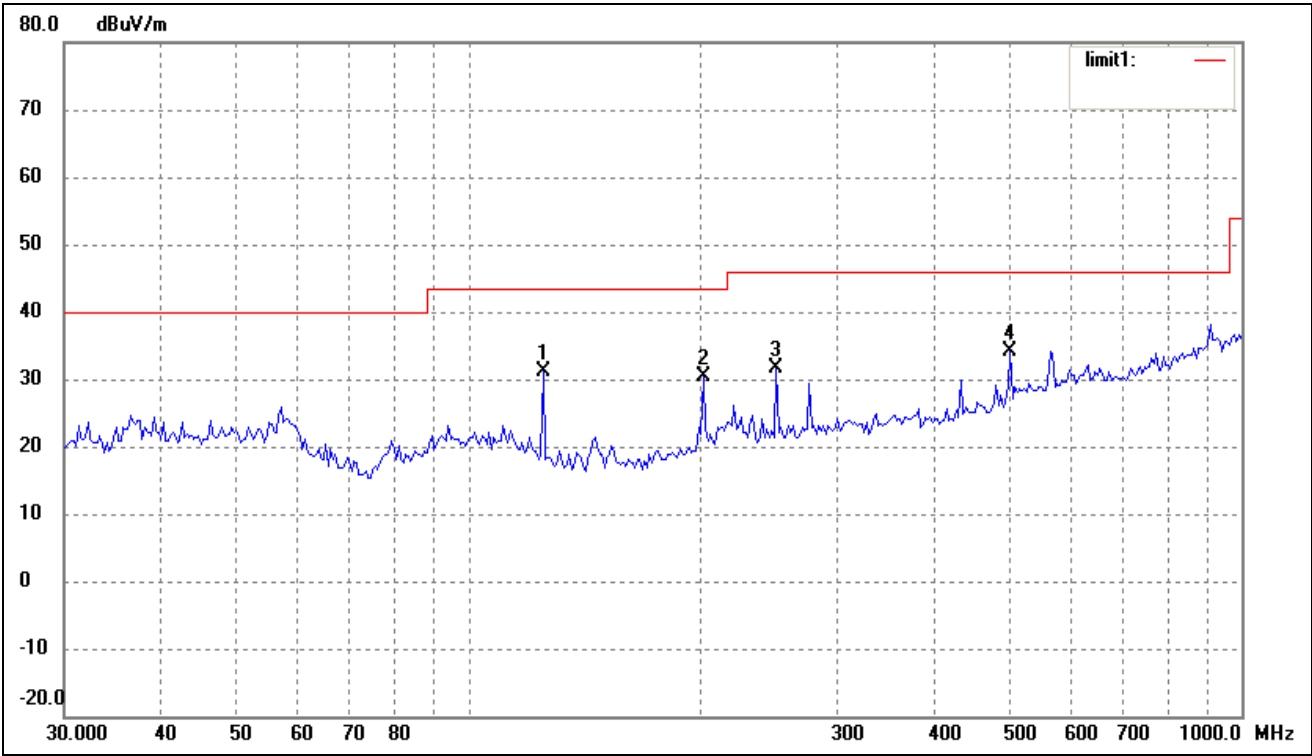
Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.4238	30.25	6.77	37.02	40.00	-2.98	360	100	peak
2	312.1794	29.64	9.90	39.54	46.00	-6.46	360	100	peak
3	468.8762	29.75	12.06	41.81	46.00	-4.19	360	100	peak

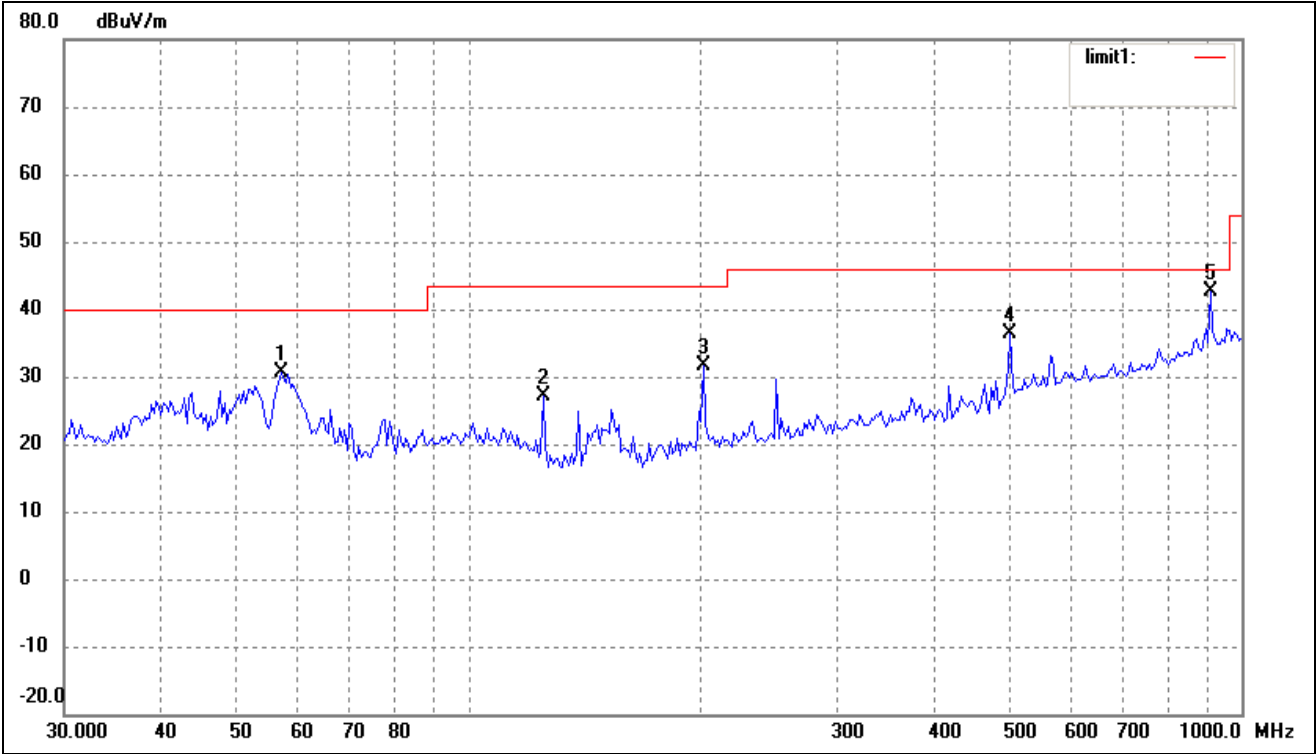
Operating Condition: 802.11g Transmitting Middle Channel-2437MHz
Comment: DC 3.7V

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	124.9249	26.53	4.57	31.10	43.50	-12.40	360	100	peak
2	201.4539	24.63	5.73	30.36	43.50	-13.14	360	100	peak
3	250.4859	23.82	7.69	31.51	46.00	-14.49	360	100	peak
4	502.2473	21.20	12.97	34.17	46.00	-11.83	360	100	peak

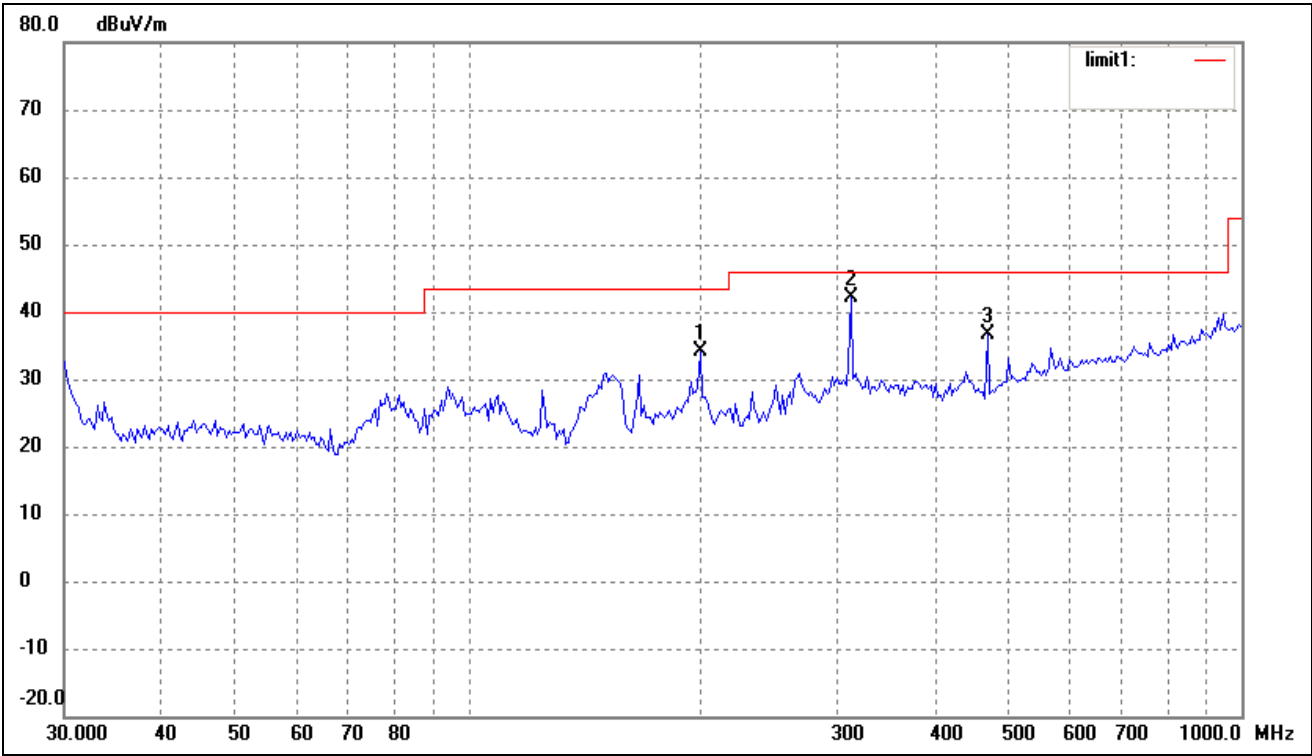
Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	57.2654	23.23	7.34	30.57	40.00	-9.43	360	100	peak
2	124.9249	22.56	4.57	27.13	43.50	-16.37	360	100	peak
3	201.4539	25.83	5.73	31.56	43.50	-11.94	360	100	peak
4	502.2473	23.41	12.97	36.38	46.00	-9.62	360	100	peak
5	912.6953	23.61	19.02	42.63	46.00	-3.37	360	100	peak

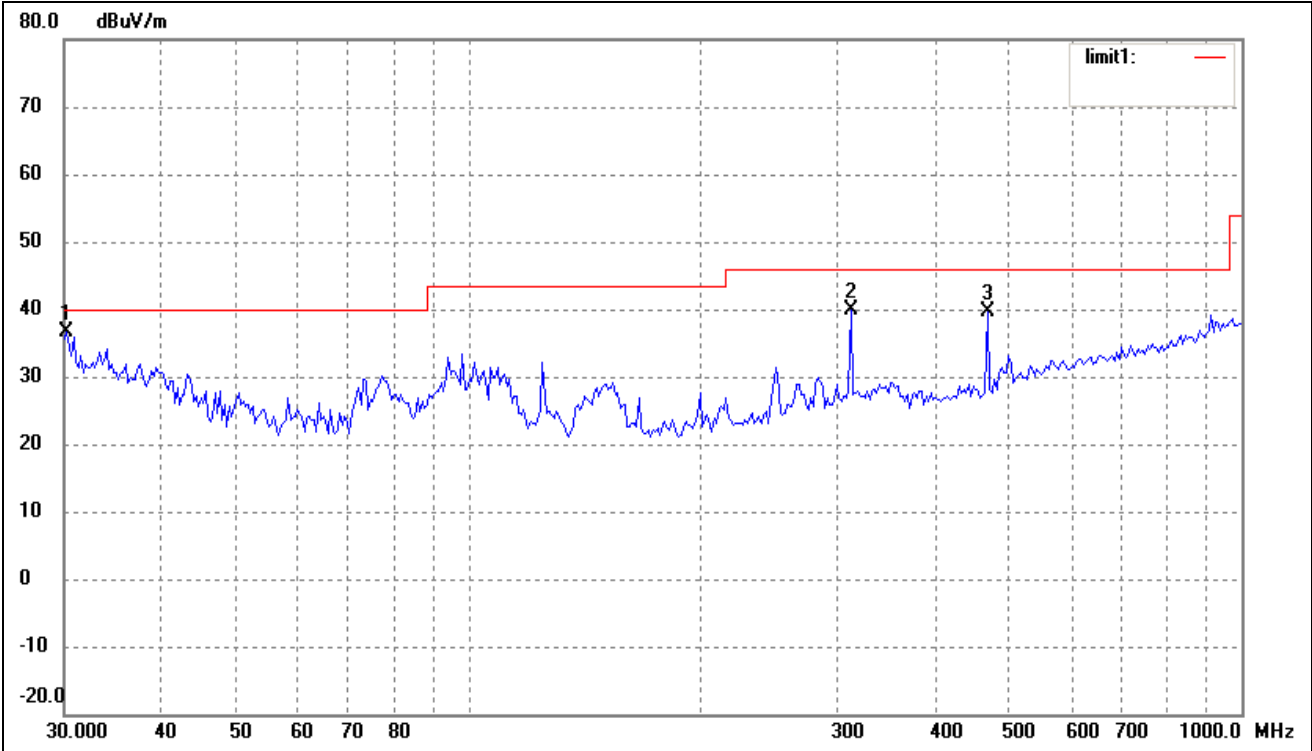
Operating Condition: 802.11g Transmitting High Channel-2462MHz
Comment: DC 3.7V

Test Specification: Horizontal

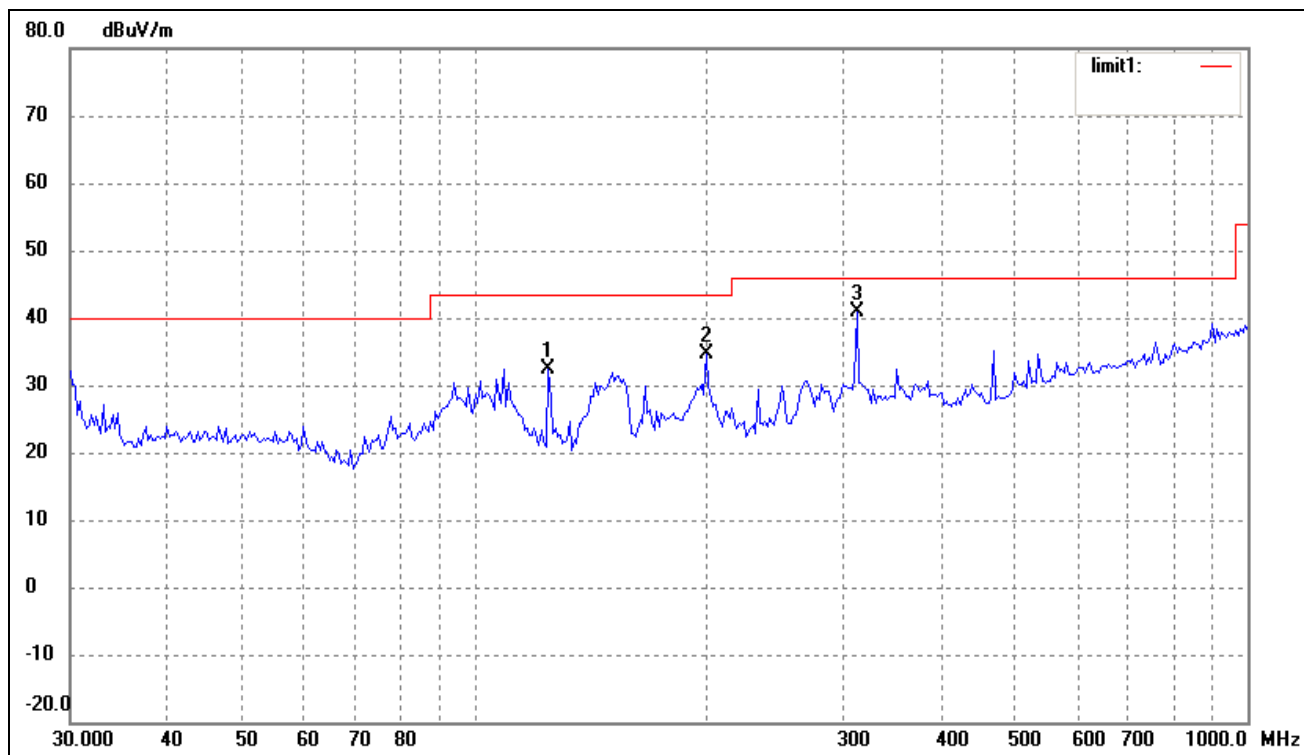


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	199.2855	27.50	6.58	34.08	43.50	-9.42	360	100	peak
2	312.1794	32.27	9.90	42.17	46.00	-3.83	360	100	peak
3	468.8762	24.47	12.06	36.53	46.00	-9.47	360	100	peak

Test Specification: Vertical

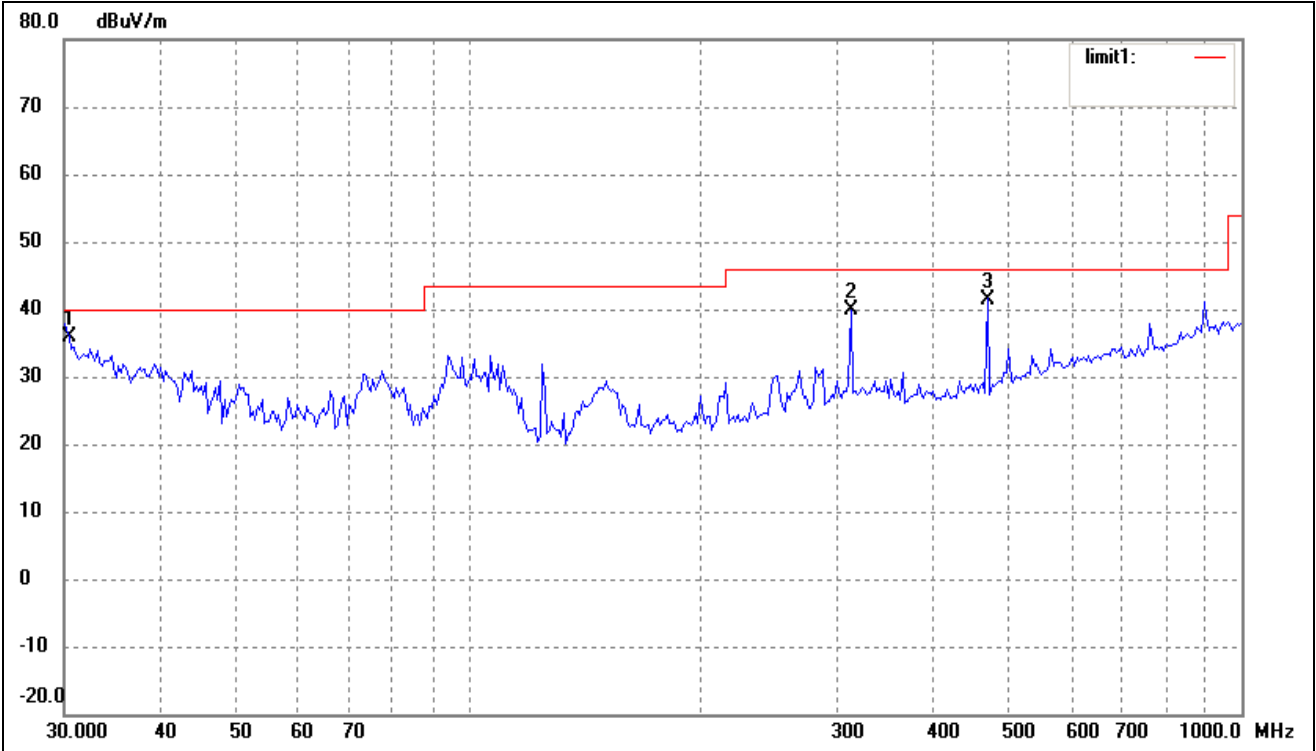


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.2111	29.92	6.77	36.69	40.00	-3.31	360	100	peak
2	312.1794	29.95	9.90	39.85	46.00	-6.15	360	100	peak
3	468.8762	27.68	12.06	39.74	46.00	-6.26	360	100	peak

Plot of Radiated Emissions Test Data (30MHz to 1GHz)*EUT: Portable Multimedia Player**Tested Model: YDP-G28S**Operating Condition: 802.11n-HT20 Transmitting Low Channel-2412MHz**Comment: 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	124.5690	27.11	5.32	32.43	43.50	-11.07	360	100	peak
2	199.2855	28.15	6.58	34.73	43.50	-8.77	360	100	peak
3	312.1794	30.98	9.90	40.88	46.00	-5.12	360	100	peak

Test Specification: Vertical

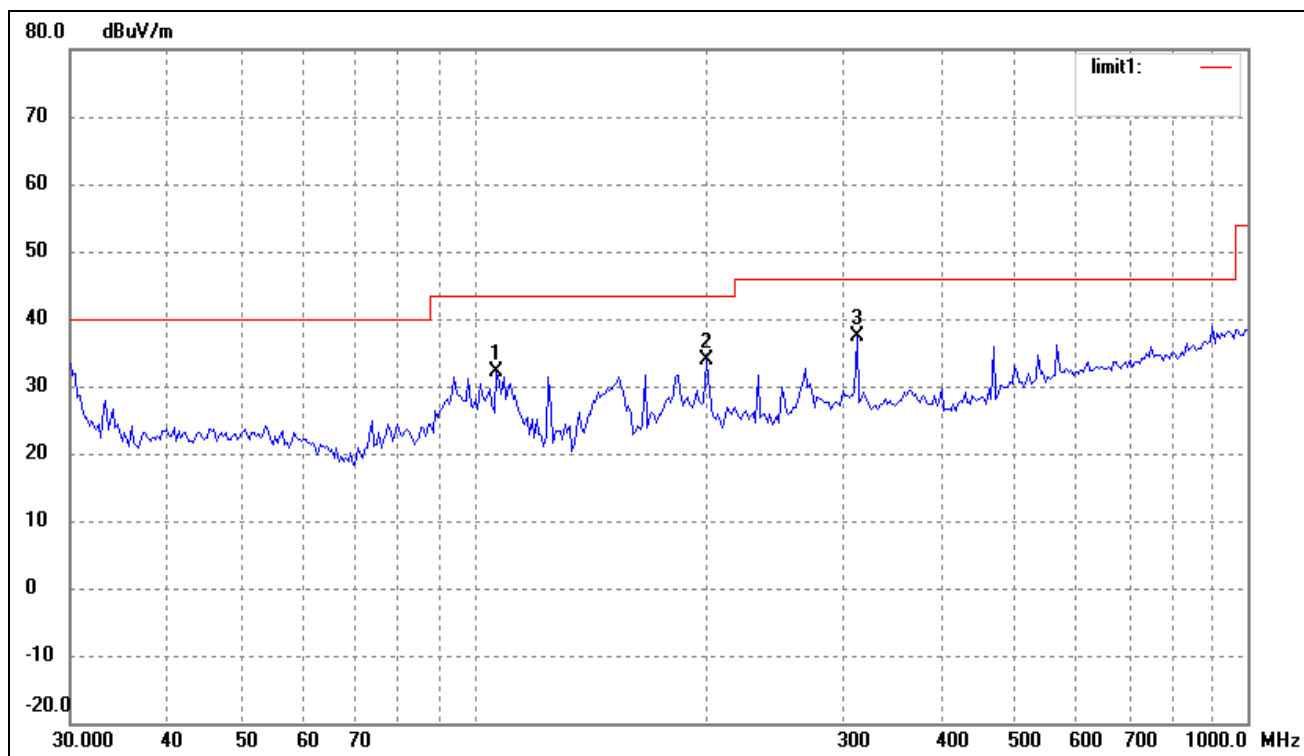


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.4238	29.09	6.77	35.86	40.00	-4.14	360	100	peak
2	312.1794	30.00	9.90	39.90	46.00	-6.10	360	100	peak
3	468.8762	29.44	12.06	41.50	46.00	-4.50	360	100	peak

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

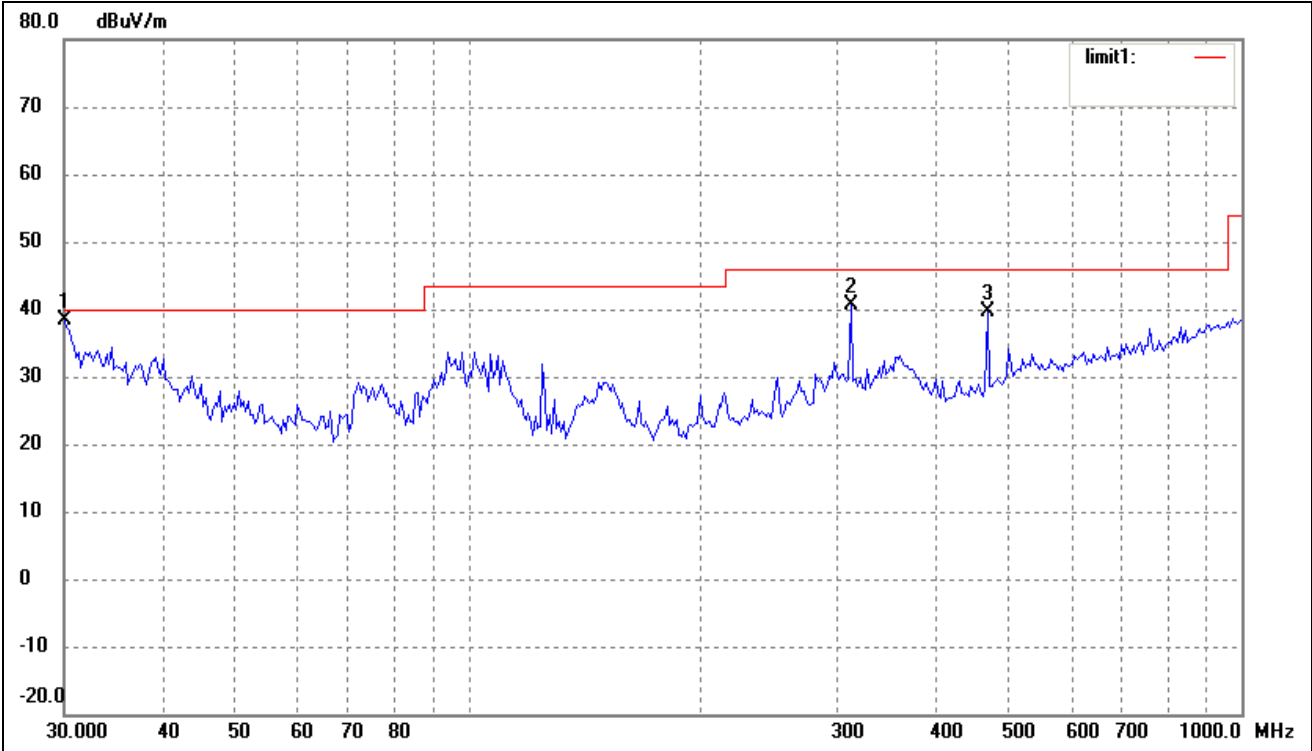
Comment: DC 3.7V

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	106.7587	24.20	7.86	32.06	43.50	-11.44	360	100	peak
2	199.2855	27.21	6.58	33.79	43.50	-9.71	360	100	peak
3	312.1794	27.37	9.90	37.27	46.00	-8.73	360	100	peak

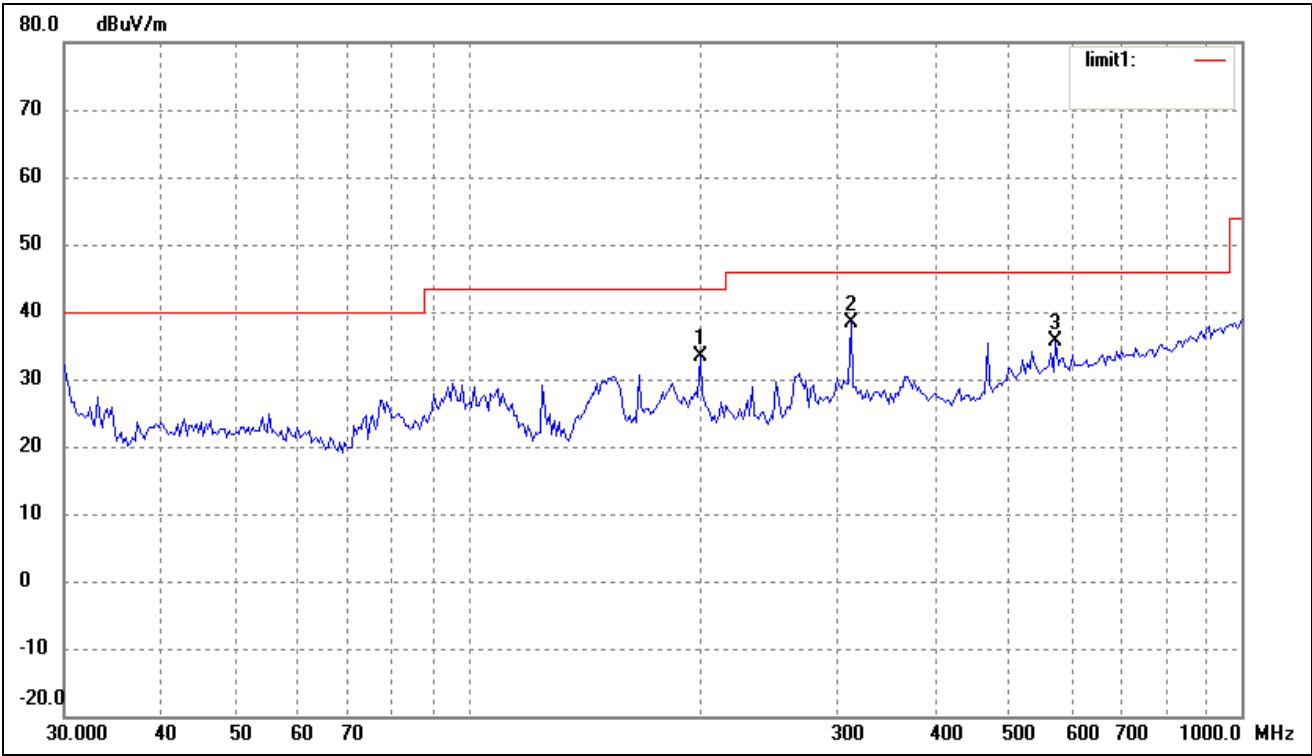
Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.0000	31.62	6.77	38.39	40.00	-1.61	360	100	peak
2	312.1794	30.80	9.90	40.70	46.00	-5.30	360	100	peak
3	468.8762	27.59	12.06	39.65	46.00	-6.35	360	100	peak

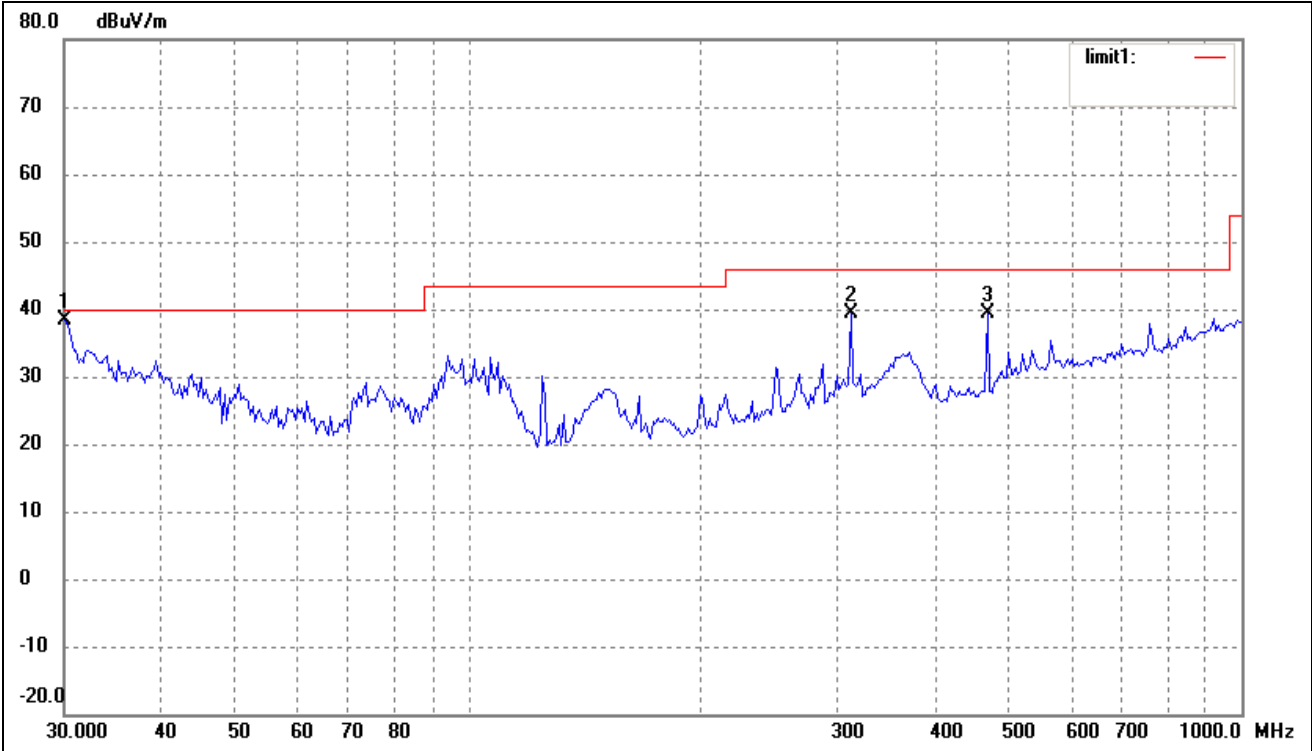
Operating Condition: 802.11n-HT20 Transmitting High Channel-2462MHz
Comment: DC 3.7V

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	199.2855	26.72	6.58	33.30	43.50	-10.20	360	100	peak
2	312.1794	28.60	9.90	38.50	46.00	-7.50	360	100	peak
3	574.6258	19.46	16.10	35.56	46.00	-10.44	360	100	peak

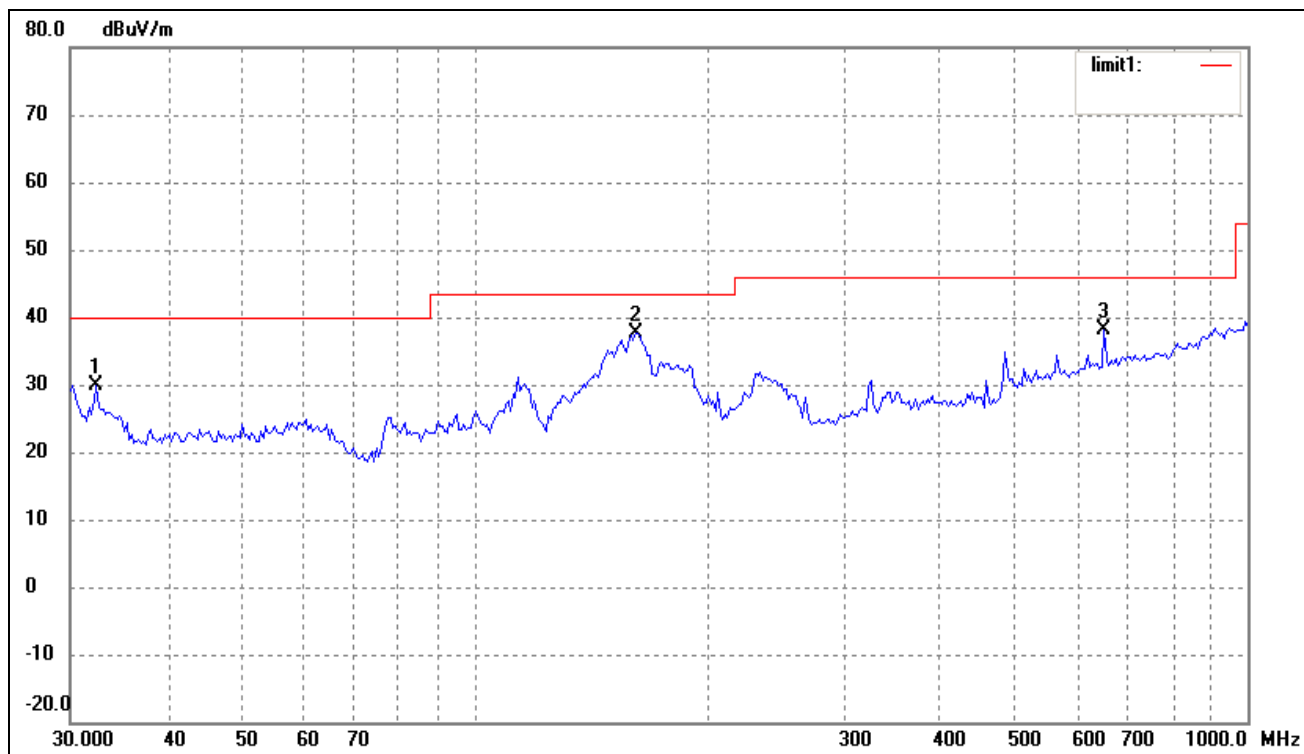
Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.0000	31.58	6.77	38.35	40.00	-1.65	360	100	peak
2	312.1794	29.53	9.90	39.43	46.00	-6.57	360	100	peak
3	468.8762	27.25	12.06	39.31	46.00	-6.69	360	100	peak

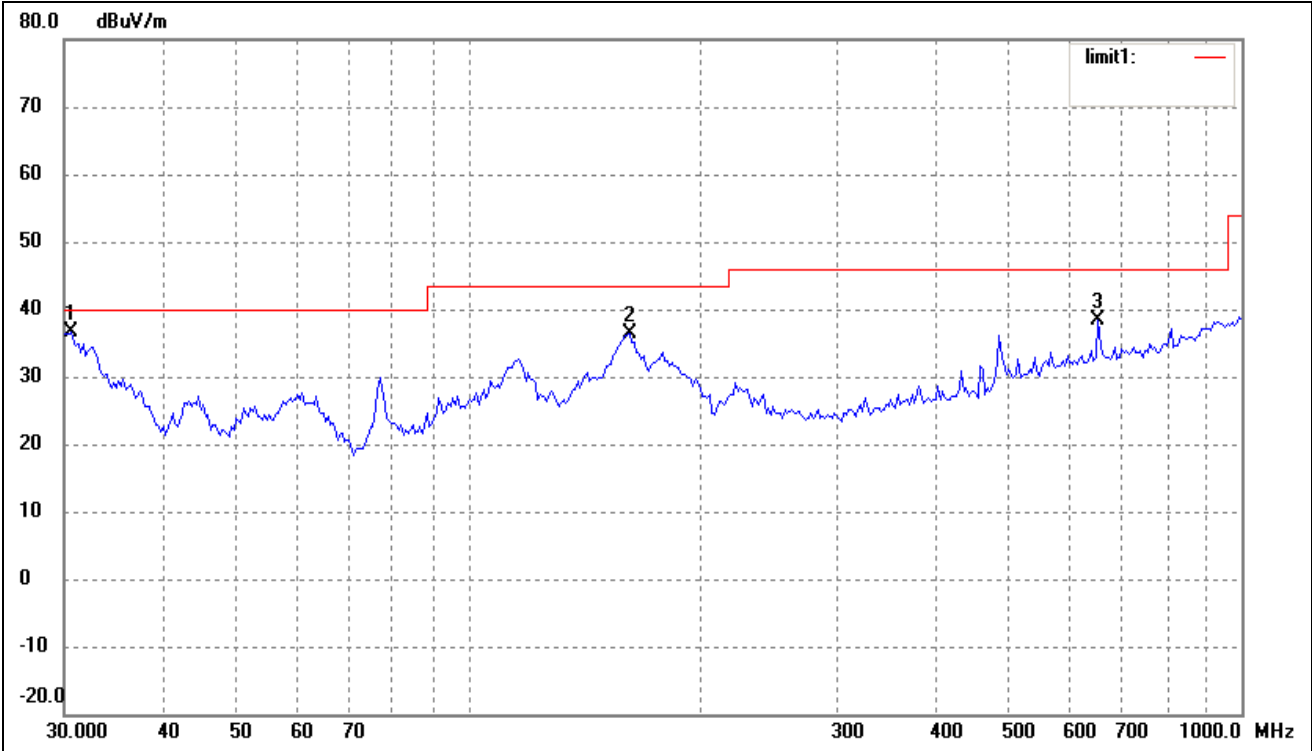
EUT: *Portable Multimedia Player*
 Tested Model: *YDP-G28S*
 Operating Condition: *802.11n-HT40 Transmitting Low Channel-2422MHz*
 Comment: *DC 3.7V*

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	32.4059	23.15	6.77	29.92	40.00	-10.08	360	100	peak
2	161.4742	33.06	4.59	37.65	43.50	-5.85	360	100	peak
3	651.9417	20.90	17.11	38.01	46.00	-7.99	360	100	peak

Test Specification: Vertical

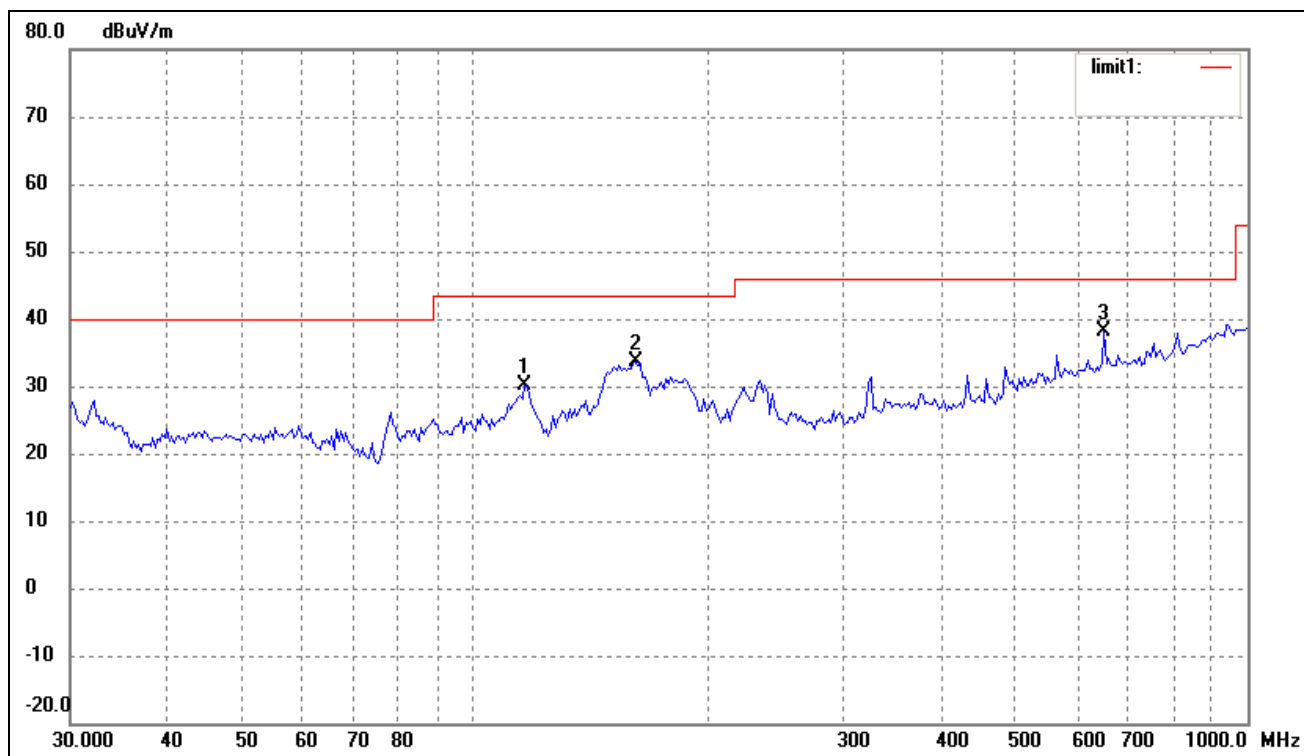


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.6379	29.88	6.77	36.65	40.00	-3.35	360	100	peak
2	161.4742	31.87	4.59	36.46	43.50	-7.04	360	100	peak
3	651.9417	21.15	17.11	38.26	46.00	-7.74	360	100	peak

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

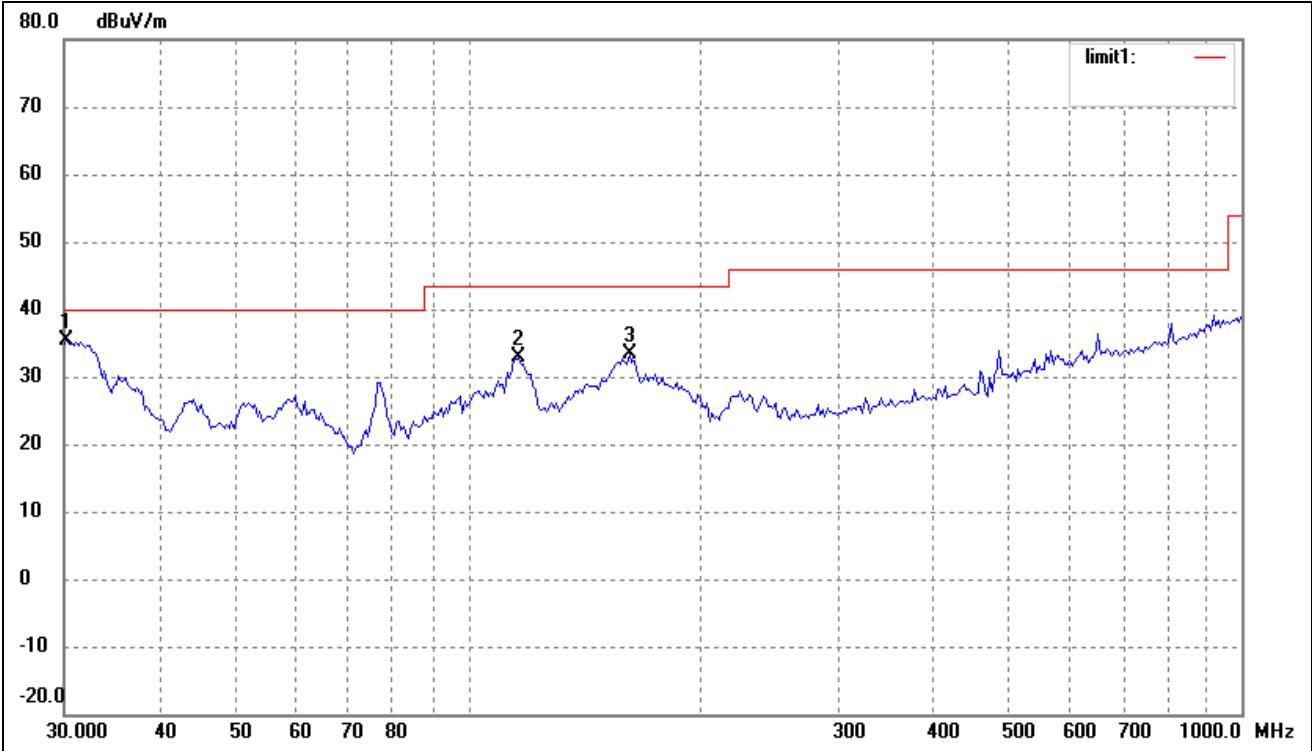
Comment: DC 3.7V

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	116.1321	23.62	6.58	30.20	43.50	-13.30	360	100	peak
2	161.4742	28.99	4.59	33.58	43.50	-9.92	360	100	peak
3	651.9417	21.00	17.11	38.11	46.00	-7.89	360	100	peak

Test Specification: Vertical

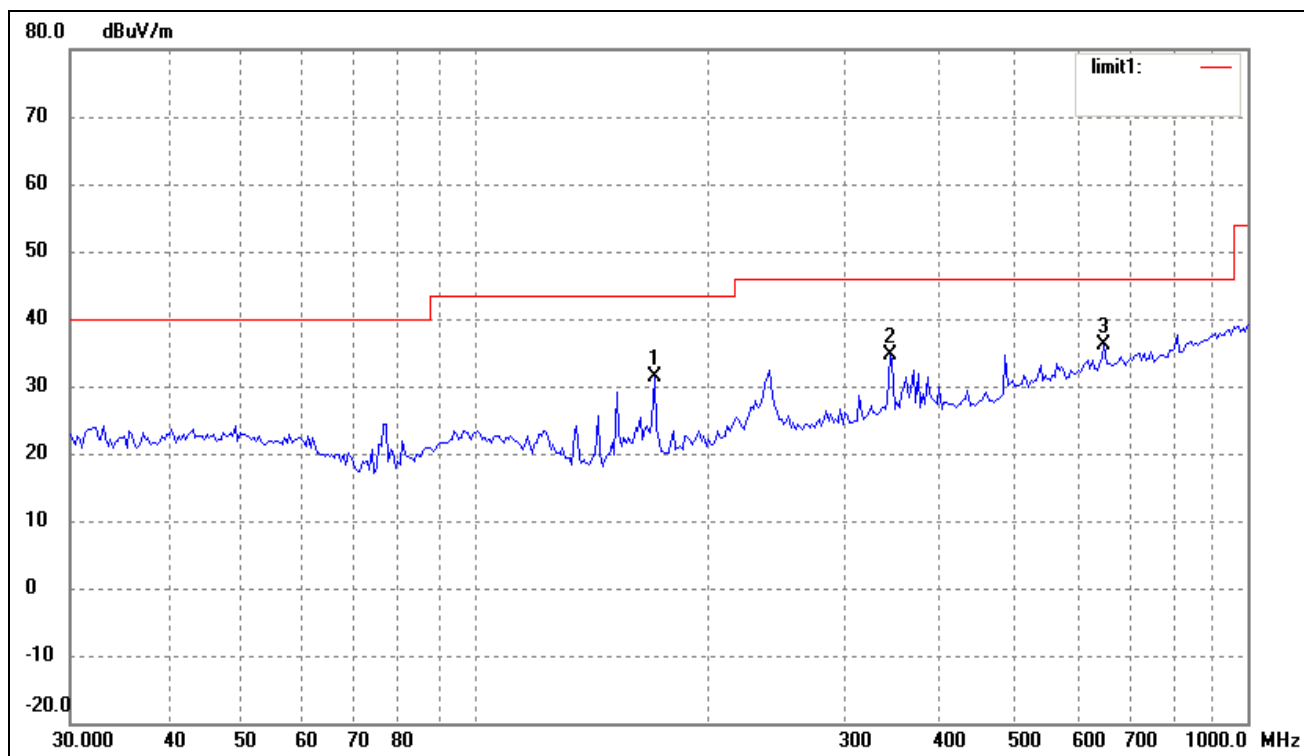


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.2111	28.51	6.77	35.28	40.00	-4.72	360	100	peak
2	116.1321	26.29	6.58	32.87	43.50	-10.63	360	100	peak
3	161.4742	28.71	4.59	33.30	43.50	-10.20	360	100	peak

Operating Condition: 802.11n-HT40 Transmitting High Channel-2452MHz

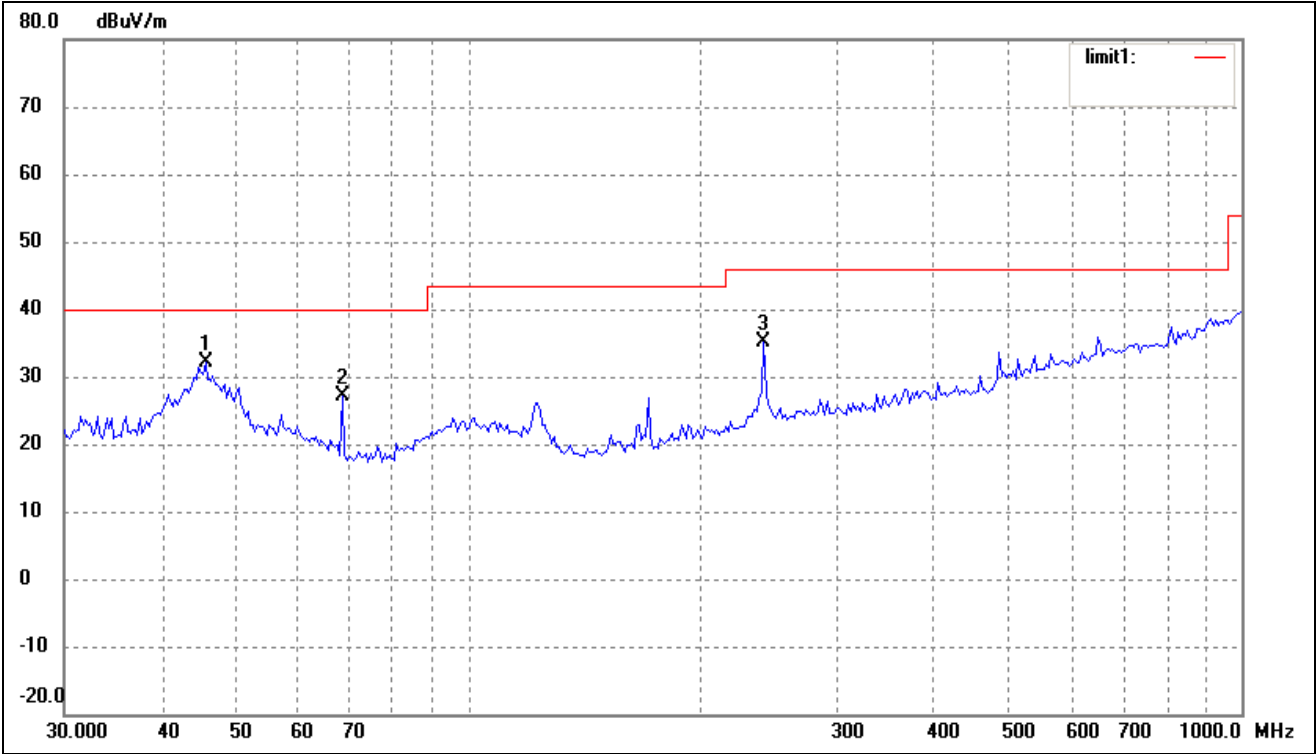
Comment: DC 3.7V

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	170.7926	26.42	4.95	31.37	43.50	-12.13	360	100	peak
2	344.3855	24.13	10.53	34.66	46.00	-11.34	360	100	peak
3	651.9417	18.93	17.11	36.04	46.00	-9.96	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	45.6948	23.91	8.20	32.11	40.00	-7.89	360	100	peak
2	68.6310	23.07	4.15	27.22	40.00	-12.78	360	100	peak
3	240.8304	26.74	8.45	35.19	46.00	-10.81	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	
Low Channel-2412MHz							
4824	54.06	0.57	54.63	74.00	-19.37	H	PK
4824	39.95	0.57	40.52	54.00	-13.48	H	AV
7236	42.16	3.69	45.85	74.00	-28.15	H	PK
7236	30.92	3.69	34.61	54.00	-19.39	H	AV
4824	58.73	0.57	59.30	74.00	-14.70	V	PK
4824	42.03	0.57	42.60	54.00	-11.40	V	AV
7236	42.42	3.69	46.11	74.00	-27.89	V	PK
7236	30.76	3.69	34.45	54.00	-19.55	V	AV
Middle Channel-2437MHz							
4874	62.37	0.64	63.01	74.00	-10.99	H	PK
4874	47.47	0.64	48.11	54.00	-5.89	H	AV
7311	45.73	3.75	49.48	74.00	-24.52	H	PK
7311	33.63	3.75	37.38	54.00	-16.62	H	AV
4874	55.72	0.64	56.36	74.00	-17.64	V	PK
4874	41.31	0.64	41.95	54.00	-12.05	V	AV
7311	43.57	3.75	47.32	74.00	-26.68	V	PK
7311	31.43	3.75	35.18	54.00	-18.82	V	AV
High Channel-2462MHz							
4924	60.18	0.72	60.90	74.00	-13.10	H	PK
4924	46.52	0.72	47.24	54.00	-6.76	H	AV
7386	44.74	3.81	48.55	74.00	-25.45	H	PK
7386	31.33	3.81	35.14	54.00	-18.86	H	AV
4924	55.29	0.72	56.01	74.00	-17.99	V	PK
4924	41.57	0.72	42.29	54.00	-11.71	V	AV
7386	42.36	3.81	46.17	74.00	-27.83	V	PK
7386	31.31	3.81	35.12	54.00	-18.88	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	44.16	0.57	44.73	74.00	-29.27	H	PK
4824	33.21	0.57	33.78	54.00	-20.22	H	AV
7236	42.47	3.69	46.16	74.00	-27.84	H	PK
7236	31.06	3.69	34.75	54.00	-19.25	H	AV
4824	50.45	0.57	51.02	74.00	-22.98	V	PK
4824	35.95	0.57	36.52	54.00	-17.48	V	AV
7236	42.93	3.69	46.62	74.00	-27.38	V	PK
7236	31.22	3.69	34.91	54.00	-19.09	V	AV
Middle Channel-2437MHz							
4874	45.23	0.64	45.87	74.00	-28.13	H	PK
4874	34.02	0.64	34.66	54.00	-19.34	H	AV
7311	42.52	3.75	46.27	74.00	-27.73	H	PK
7311	31.55	3.75	35.30	54.00	-18.70	H	AV
4874	57.02	0.64	57.66	74.00	-16.34	V	PK
4874	42.33	0.64	42.97	54.00	-11.03	V	AV
7311	45.59	3.75	49.34	74.00	-24.66	V	PK
7311	31.31	3.75	35.06	54.00	-18.94	V	AV
High Channel-2462MHz							
4924	45.12	0.72	45.84	74.00	-28.16	H	PK
4924	33.29	0.72	34.01	54.00	-19.99	H	AV
7386	42.83	3.81	46.64	74.00	-27.36	H	PK
7386	31.53	3.81	35.34	54.00	-18.66	H	AV
4924	52.45	0.72	53.17	74.00	-20.83	V	PK
4924	40.15	0.72	40.87	54.00	-13.13	V	AV
7386	43.28	3.81	47.09	74.00	-26.91	V	PK
7386	31.47	3.81	35.28	54.00	-18.72	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	45.99	0.57	46.56	74.00	-27.44	H	PK
4824	33.37	0.57	33.94	54.00	-20.06	H	AV
7236	45.38	3.69	49.07	74.00	-24.93	H	PK
7236	32.91	3.69	36.60	54.00	-17.40	H	AV
4824	49.71	0.57	50.28	74.00	-23.72	V	PK
4824	38.61	0.57	39.18	54.00	-14.82	V	AV
7236	45.09	3.69	48.78	74.00	-25.22	V	PK
7236	32.72	3.69	36.41	54.00	-17.59	V	AV
Middle Channel-2437MHz							
4874	55.44	0.64	56.08	74.00	-17.92	H	PK
4874	43.71	0.64	44.35	54.00	-9.65	H	AV
7311	43.38	3.75	47.13	74.00	-26.87	H	PK
7311	31.88	3.75	35.63	54.00	-18.37	H	AV
4874	50.87	0.64	51.51	74.00	-22.49	V	PK
4874	38.98	0.64	39.62	54.00	-14.38	V	AV
7311	43.40	3.75	47.15	74.00	-26.85	V	PK
7311	31.39	3.75	35.20	54.00	-18.80	V	AV
High Channel-2462MHz							
4924	52.19	0.72	52.91	74.00	-21.09	H	PK
4924	38.64	0.72	39.36	54.00	-14.64	H	AV
7386	44.28	3.81	48.09	74.00	-25.91	H	PK
7386	31.50	3.81	35.31	54.00	-18.69	H	AV
4924	48.76	0.72	49.48	74.00	-24.52	V	PK
4924	36.13	0.72	36.85	54.00	-17.15	V	AV
7386	43.13	3.81	46.94	74.00	-27.06	V	PK
7386	31.33	3.81	35.14	54.00	-18.86	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	49.96	0.60	50.56	74.00	-23.44	H	PK
4844	38.33	0.60	38.93	54.00	-15.07	H	AV
7266	42.17	3.72	45.89	74.00	-28.11	H	PK
7266	30.81	3.72	34.53	54.00	-19.47	H	AV
4844	48.62	0.60	49.22	74.00	-24.78	V	PK
4844	38.64	0.60	39.24	54.00	-14.76	V	AV
7266	41.34	3.72	45.06	74.00	-28.94	V	PK
7266	30.88	3.72	34.60	54.00	-19.40	V	AV
Middle Channel-2437MHz							
4874	53.69	0.64	54.33	74.00	-19.67	H	PK
4874	43.46	0.64	44.10	54.00	-9.90	H	AV
7311	43.86	3.75	47.61	74.00	-26.39	H	PK
7311	32.65	3.75	36.40	54.00	-17.60	H	AV
4874	47.89	0.64	48.53	74.00	-25.47	V	PK
4874	36.45	0.64	37.09	54.00	-16.91	V	AV
7311	42.36	3.75	46.11	74.00	-27.89	V	PK
7311	33.95	3.75	37.70	54.00	-16.30	V	AV
High Channel-2452MHz							
4904	54.72	0.68	55.40	74.00	-18.60	H	PK
4904	45.65	0.68	46.33	54.00	-7.67	H	AV
7356	45.75	3.79	49.54	74.00	-24.46	H	PK
7356	33.32	3.79	37.11	54.00	-16.89	H	AV
4904	52.82	0.68	53.50	74.00	-20.50	V	PK
4904	42.76	0.68	43.44	54.00	-10.56	V	AV
7356	44.01	3.79	47.80	74.00	-26.20	V	PK
7356	32.52	3.79	36.31	54.00	-17.69	V	AV

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

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

9. Out of Band Emissions

9.1 Standard Applicable

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

9.2 Test Equipment List and Details

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

9.3 Test Procedure

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

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

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

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

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

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

According to the KDB 558074 D01 V03, the conducted spurious emissions test method as follows:

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

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

9.4 Environmental Conditions

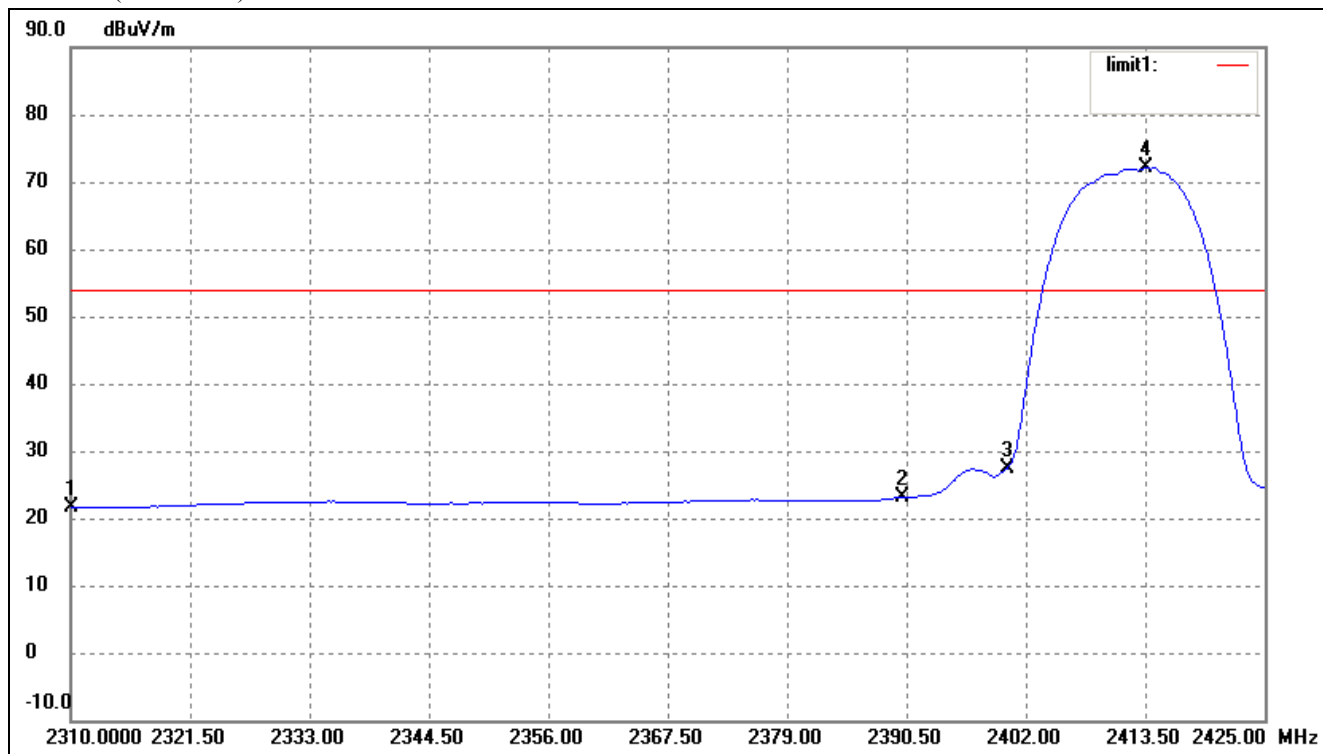
Temperature:	23°C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

9.5 Summary of Test Results/Plots

Please refer to the test plots as below.

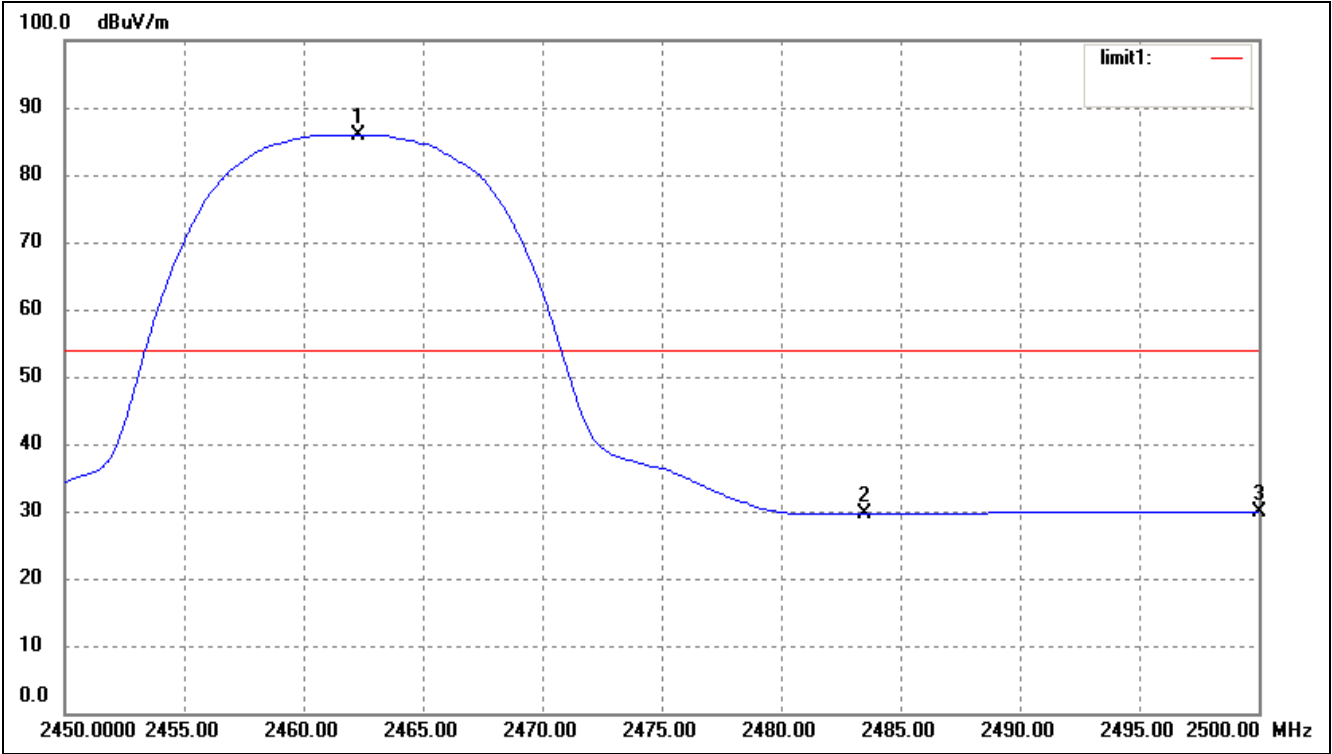
802.11b-Lowest Bandedge

Vertical (Worst case)



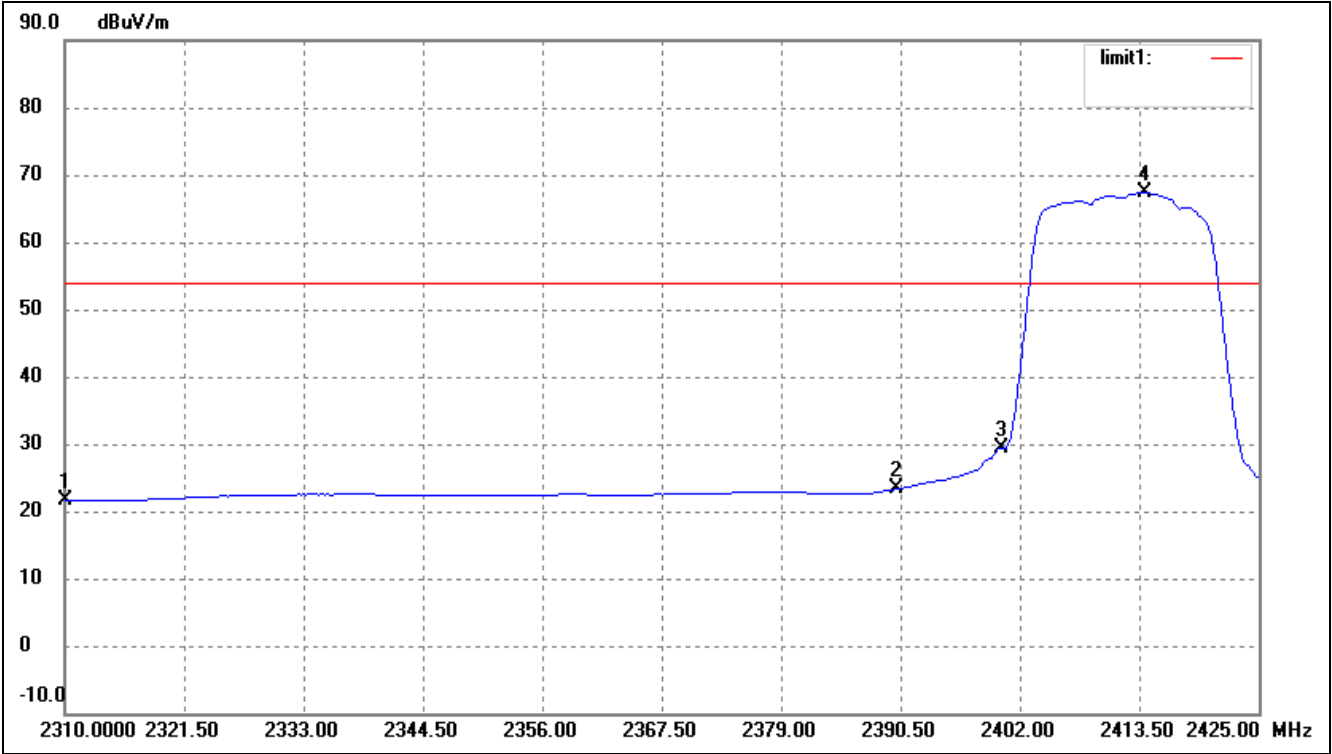
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	33.29	-11.72	21.57	54.00	-32.43	Average Detector
	2310.000	47.32	-11.72	35.60	74.00	-38.40	Peak Detector
2	2390.000	34.87	-11.75	23.12	54.00	-30.88	Average Detector
	2390.000	49.85	-11.75	38.10	74.00	-35.90	Peak Detector
3	2400.000	39.16	-11.75	27.41	Delta = 44.62 dBc		Average Detector
4	2413.500	83.79	-11.76	72.03			Average Detector

802.11b-Highest Bandedge
Vertical (Worst case)



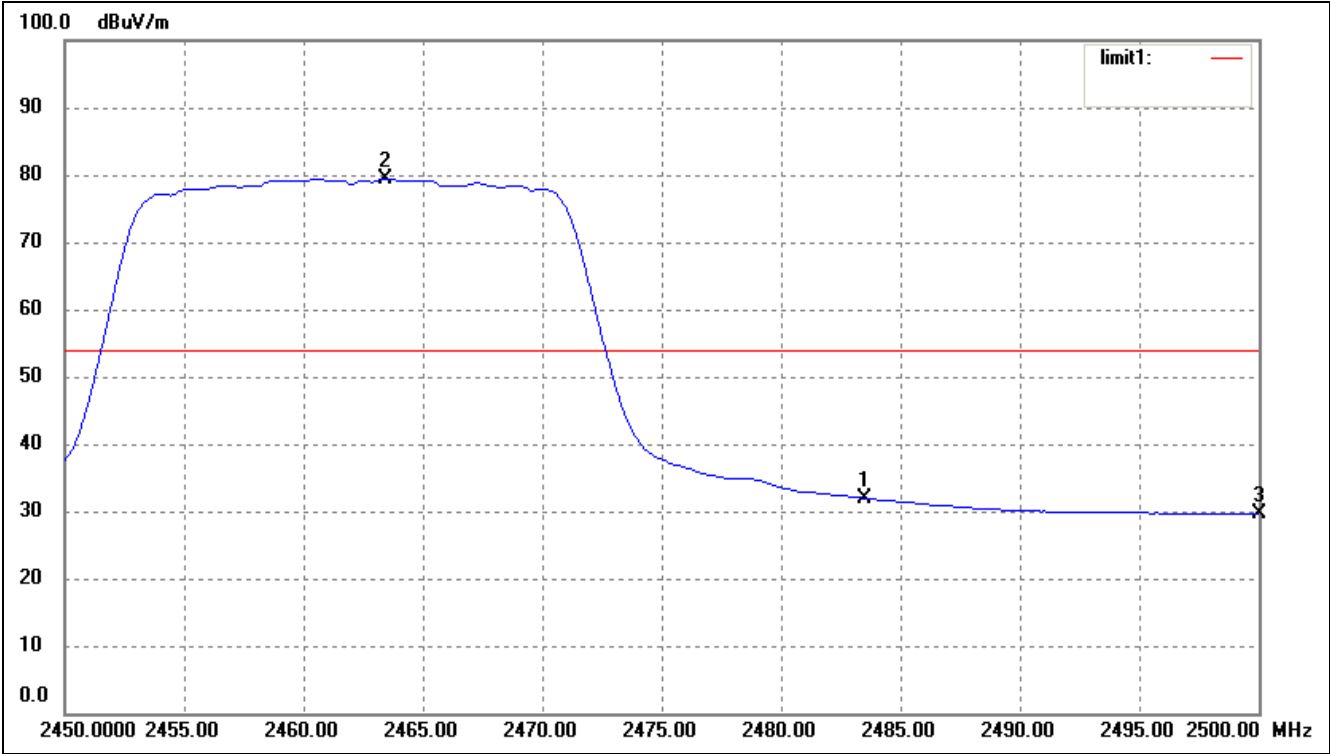
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2462.300	89.35	-3.37	85.98	/	/	Average Detector
	2462.300	97.99	-3.37	94.62	/	/	Peak Detector
2	2483.500	Delta = 56.6dBc		29.38	54.00	-24.62	Average Detector
	2483.500			38.02	74.00	-35.98	Peak Detector
3	2500.000	33.13	-3.28	29.85	54.00	-24.15	Average Detector
	2500.000	46.79	-3.28	43.51	74.00	-30.49	Peak Detector

802.11g-Lowest Bandedge
Vertical (Worst case)



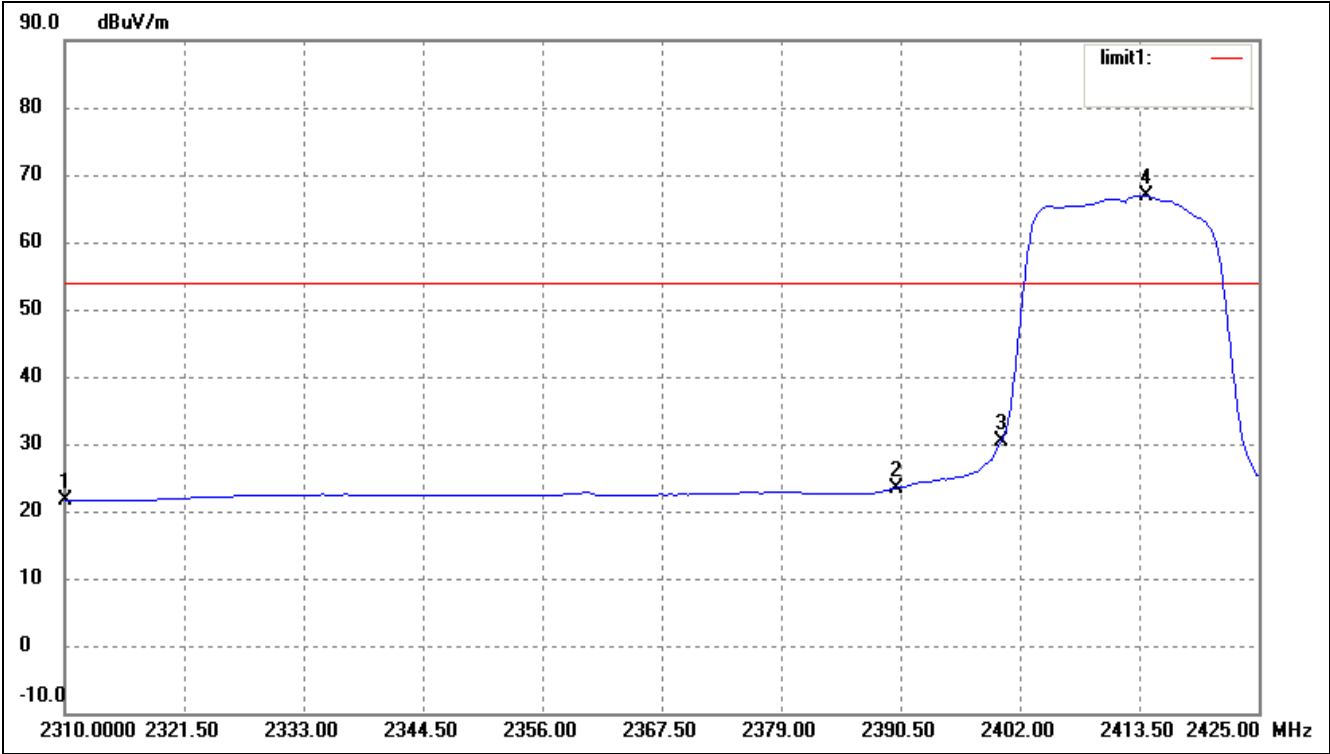
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	33.29	-11.72	21.57	54.00	-32.43	Average Detector
	2310.000	46.44	-11.72	34.72	74.00	-39.28	Peak Detector
2	2390.000	35.04	-11.75	23.29	54.00	-30.71	Average Detector
	2390.000	48.81	-11.75	37.06	74.00	-36.94	Peak Detector
3	2400.000	41.19	-11.75	29.44	Delta = 37.98 dBc		Average Detector
4	2413.960	79.18	-11.76	67.42			Average Detector

802.11g-Highest Bandedge
Vertical (Worst case)



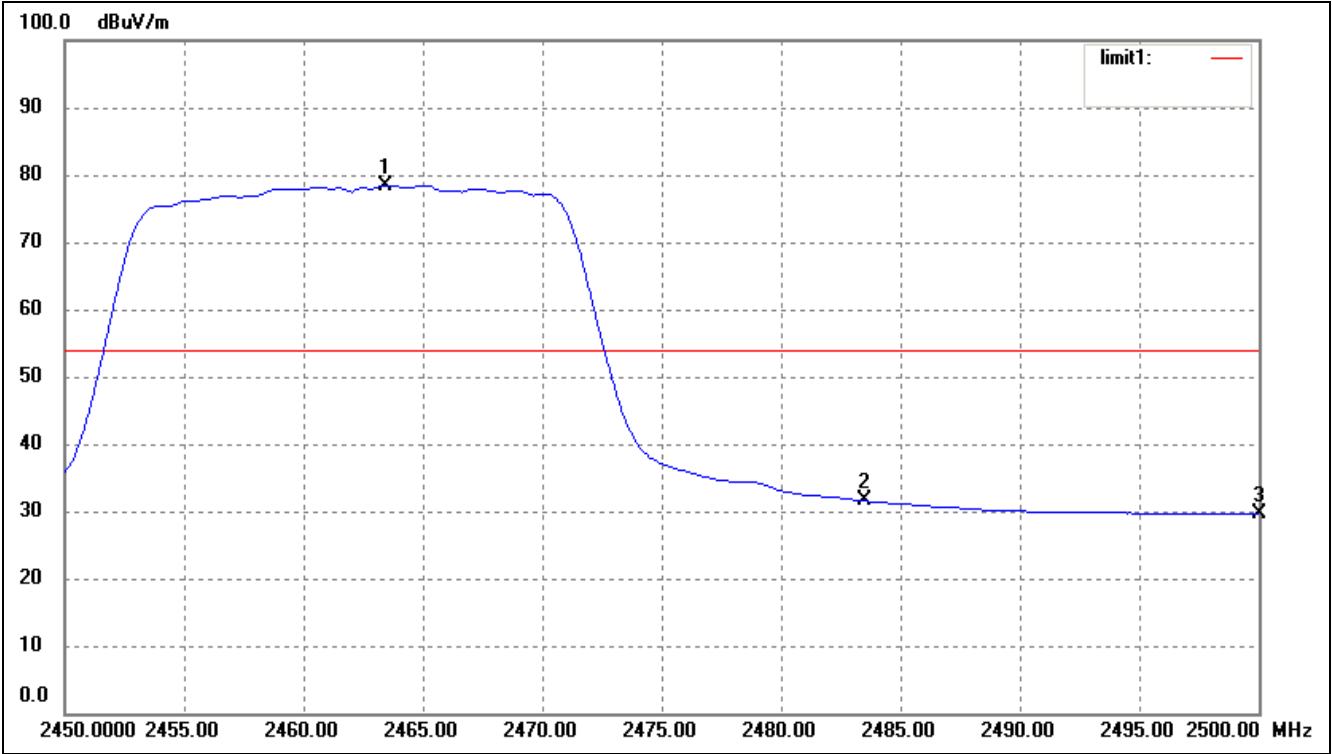
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.400	82.80	-3.36	79.44	/	/	Average Detector
	2463.400	93.60	-3.36	90.24	/	/	Peak Detector
2	2483.500	Delta = 50.07dBc		29.37	54.00	-24.63	Average Detector
	2483.500			45.14	74.00	-33.83	Peak Detector
3	2500.000	32.93	-3.28	29.65	54.00	-24.35	Average Detector
	2500.000	43.83	-3.28	40.55	74.00	-33.45	Peak Detector

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



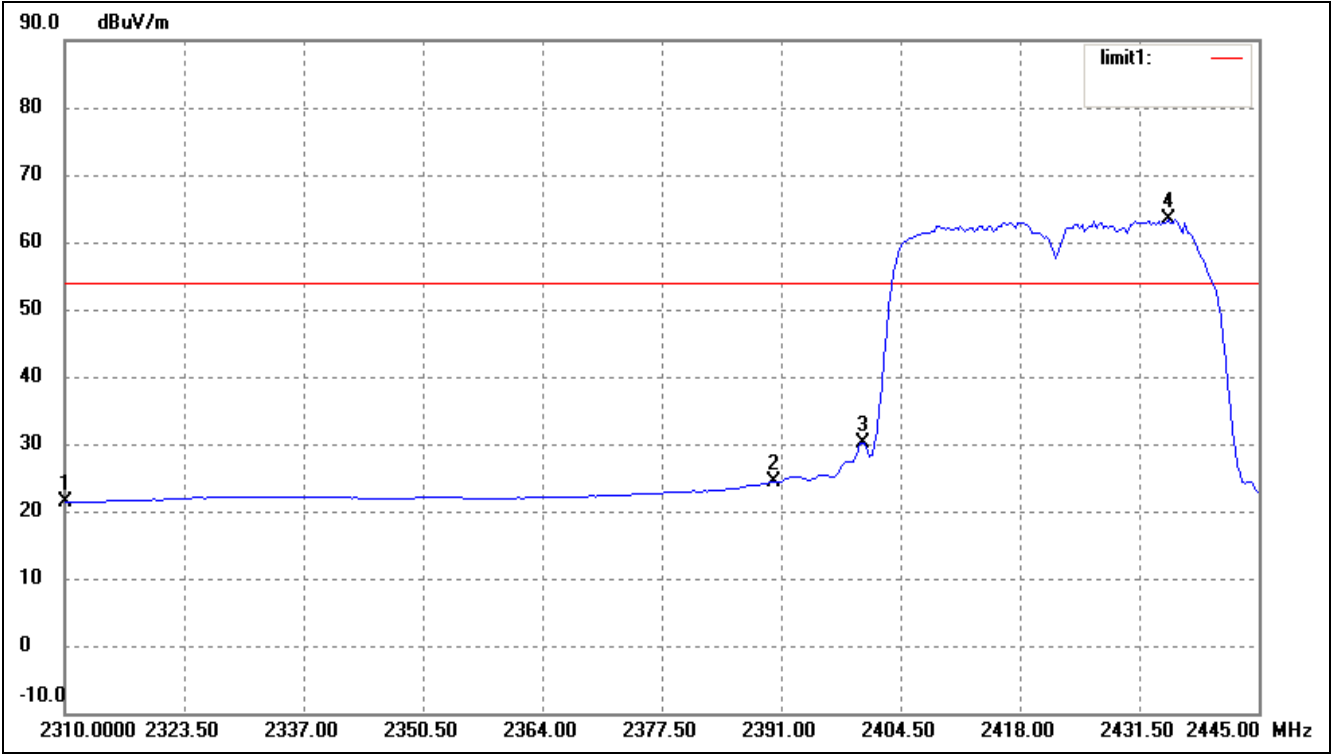
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	33.26	-11.72	21.54	54.00	-32.46	Average Detector
	2310.000	46.79	-11.72	35.07	74.00	-38.93	Peak Detector
2	2390.000	35.17	-11.75	23.42	54.00	-30.58	Average Detector
	2390.000	52.32	-11.75	40.57	74.00	-33.43	Peak Detector
3	2400.000	42.24	-11.75	30.49	Delta = 36.42 dBc		Average Detector
4	2414.190	78.67	-11.76	66.91			Average Detector

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



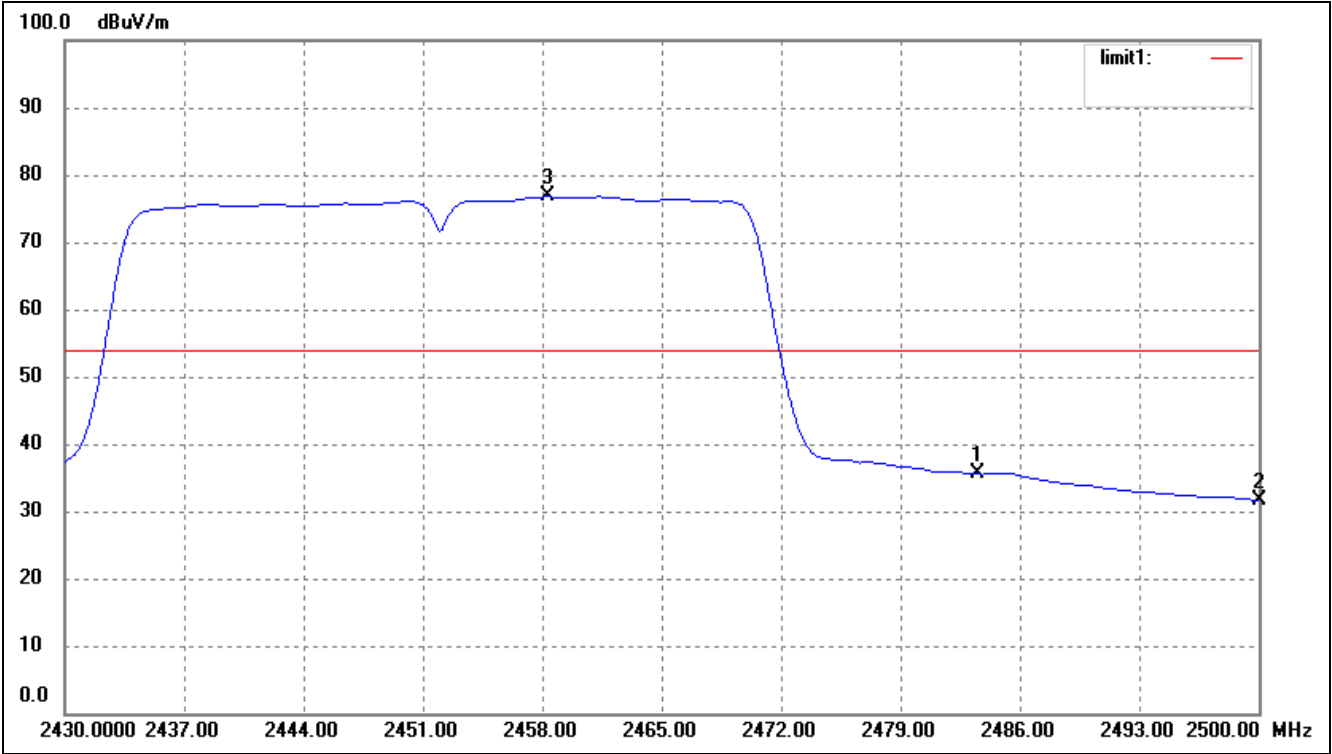
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.400	81.80	-3.36	78.44	/	/	Average Detector
	2463.400	92.56	-3.36	89.20	/	/	Peak Detector
2	2483.500	Delta = 47.46dBc		30.98	54.00	-23.02	Average Detector
	2483.500			41.74	74.00	-32.26	Peak Detector
3	2500.000	32.87	-3.28	29.59	54.00	-24.41	Average Detector
	2500.000	45.21	-3.28	41.93	74.00	-32.07	Peak Detector

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



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	33.13	-11.72	21.41	54.00	-32.59	Average Detector
	2310.000	46.45	-11.72	34.73	74.00	-39.27	Peak Detector
2	2390.000	36.20	-11.75	24.45	54.00	-29.55	Average Detector
	2390.000	55.96	-11.75	44.21	74.00	-29.79	Peak Detector
3	2400.000	41.92	-11.75	30.17	Delta = 33.27 dBc		Average Detector
4	2434.740	75.20	-11.76	63.44			Average Detector

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



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2458.280	80.15	-3.38	76.77	/	/	Average Detector
	2458.280	91.25	-3.38	87.87	/	/	Peak Detector
2	2483.500	Delta = 40.73dBc		36.04	54.00	-17.96	Average Detector
	2483.500			47.14	74.00	-26.86	Peak Detector
3	2500.000	34.98	-3.28	31.70	54.00	-22.30	Average Detector
	2500.000	48.54	-3.28	45.26	74.00	-28.74	Peak Detector

10. Conducted Emissions

10.1 Measurement Uncertainty

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

10.2 Test Equipment List and Details

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

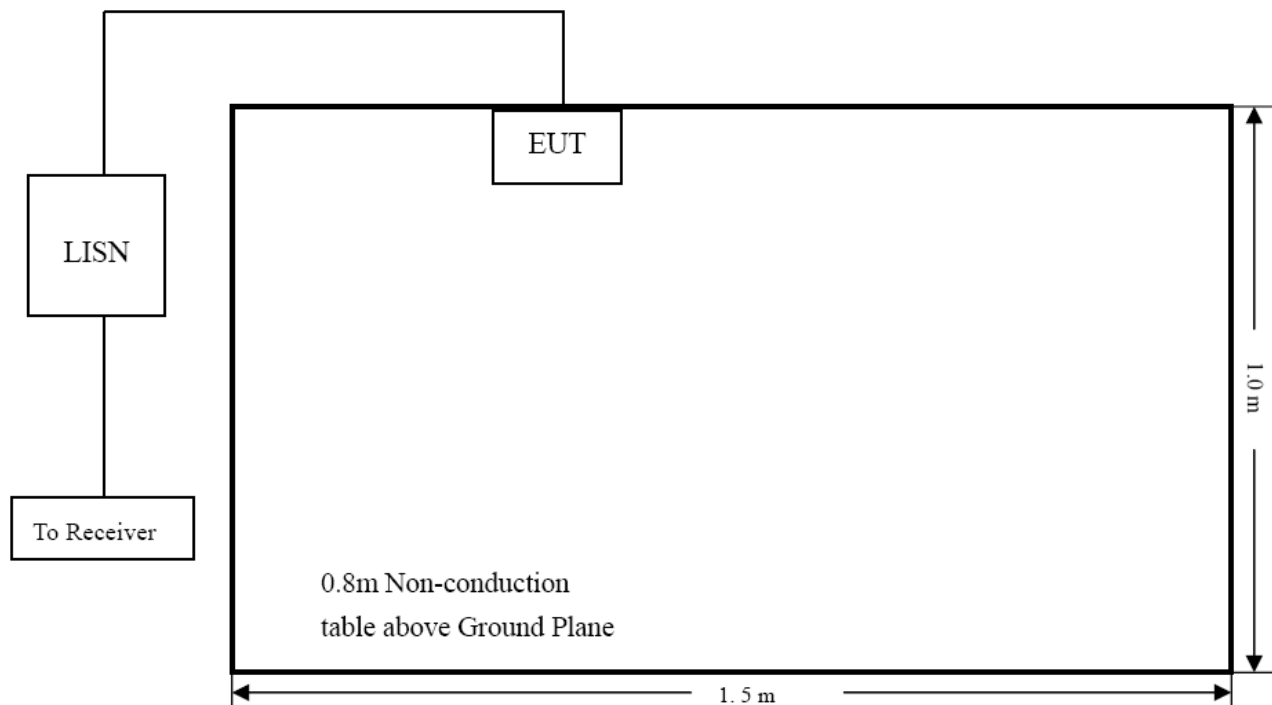
10.3 Test Procedure

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

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

The spacing between the peripherals was 10 cm.

10.4 Basic Test Setup Block Diagram



10.5 Environmental Conditions

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

10.6 Test Receiver Setup

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

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

10.7 Summary of Test Results/Plots

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

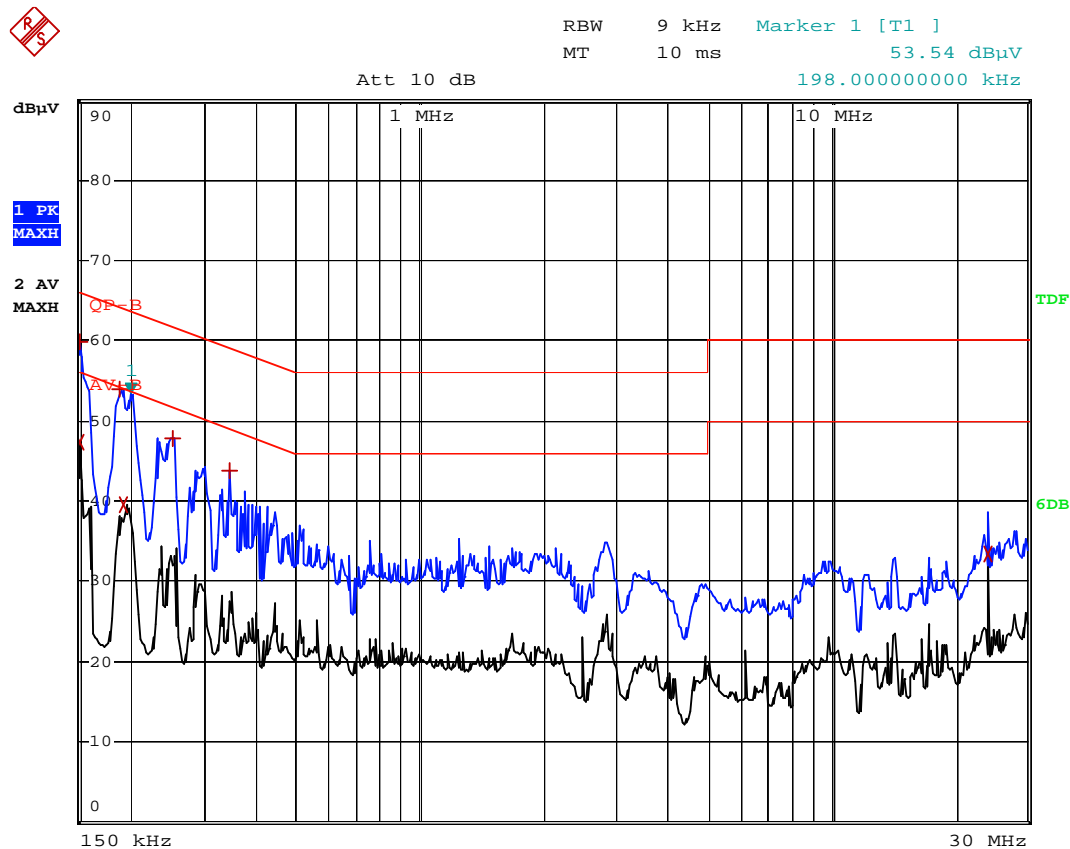
-6.05 dB at 0.15 MHz in the Line mode, Peak detector, 0.15-30MHz

10.8 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

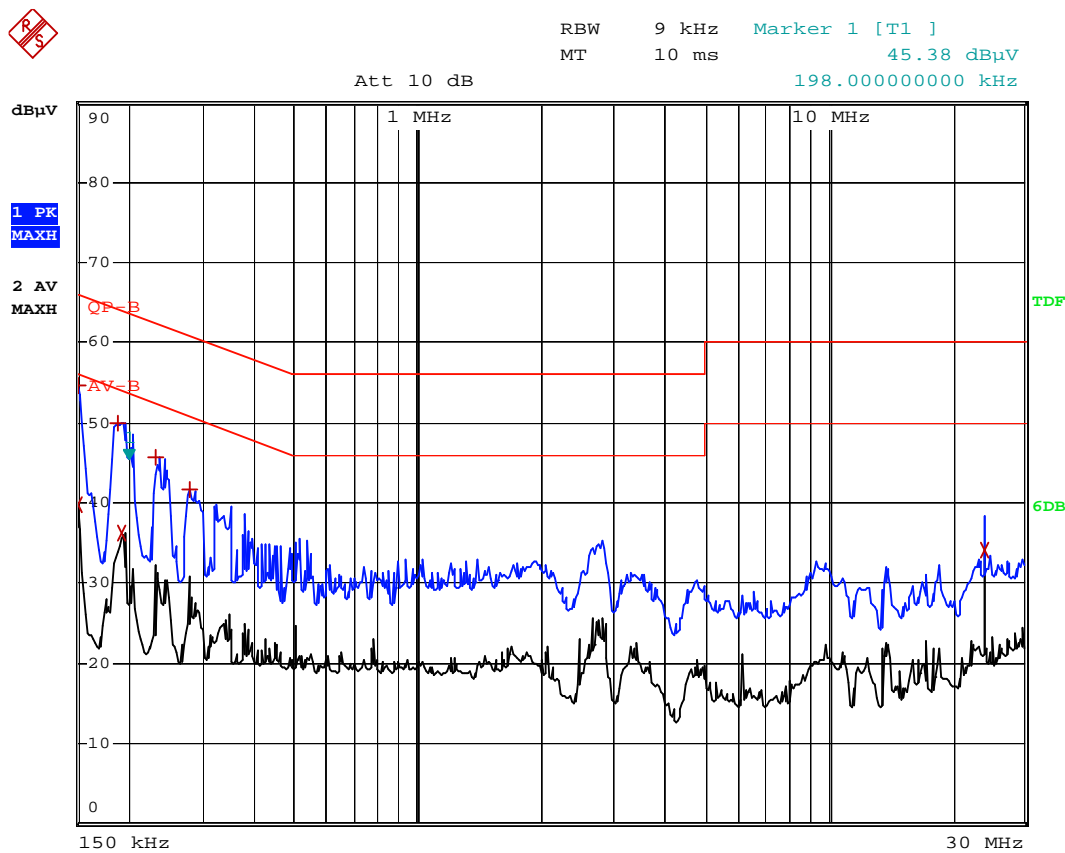
EUT: Portable Multimedia Player
Tested Model: YDP-G28S
Operating Condition: Transmitting(Wi-Fi)
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Line



EDIT PEAK LIST (Prescan Results)				
Trace1:	QP-B			
Trace2:	AV-B			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB	
1 Max Peak	150 kHz	59.94	-6.05	
2 Average	150 kHz	47.47	-8.52	
1 Max Peak	190 kHz	54.01	-10.01	
2 Average	194 kHz	39.50	-14.36	
1 Max Peak	250 kHz	47.90	-13.85	
1 Max Peak	342 kHz	43.82	-15.32	
2 Average	23.974 MHz	33.36	-16.63	

Test Specification: Neutral



EDIT PEAK LIST (Prescan Results)			
Trace1:	QP-B		
Trace2:	AV-B		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Max Peak	150 kHz	54.60	-11.39
2 Average	150 kHz	39.82	-16.17
1 Max Peak	190 kHz	49.90	-14.13
2 Average	194 kHz	36.33	-17.53
1 Max Peak	234 kHz	45.81	-16.49
1 Max Peak	278 kHz	41.77	-19.09
2 Average	23.974 MHz	34.02	-15.97

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