FCC Part 15C
Measurement and Test Report

For

OLIVESKY INTERNATIONAL ELECTRONIC CO., LTD

5C11 Huafeng Times Plaza Bao'an 25 Area, Shenzhen,518101 Guangdong China.

FCC ID: 2AAL9901GKLPT

FCC Rule(s):	FCC Part 15C
Product Description:	Mobile Internet Device
Tested Model:	S901
Report No.:	STR13098208I-1
Tested Date:	2013-09-12 to 2013-10-25
Issued Date:	2013-10-25
Tested By:	Lebron Wang / Engineer
Reviewed By:	Lahm Peng / EMC Manager
Approved & Authorized By:	Jandy so / PSQ Manager

Prepared By:

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	OLIVESKY INTERNATIONAL ELECTRONIC CO., LTD
Address of applicant:	5C11 Huafeng Times Plaza Bao'an 25 Area, Shenzhen,518101 Guangdong China.
Manufacturer:	OLIVESKY INTERNATIONAL ELECTRONIC CO.,LTD
Address of manufacturer:	5C11 Huafeng Times Plaza Bao'an 25 Area, Shenzhen,518101 Guangdong China.

General Description of EUT	
Product Name:	Mobile Internet Device
Trade Name:	/
Model No.:	S901
Adding Model(s):	S902, S903, S904, S102, S103, S104
Rated Voltage:	Adapter: DC 5V/3A Battery: DC 7.4V
Power Adapter Model:	AW018WR-0500300UV Input: AC 100-240V, 50/60Hz, 0.5A Output: DC 5V, 3A
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 S901, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT	
Support Standards:	802.11b, 802.11g, 802.11n-HT20, 802.11n-HT40
Frequency Range:	2412-2472MHz for 11b/g/n-HT20; 2422-2462MHz for 11n-HT40
RF Output Power:	7.34 dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels	13 for 11b/g/n-HT20 9 for 11n-HT40
Channel Separation:	5MHz
Type of Antenna:	Integral
Antenna Gain:	2.0dBi
Lowest Internal Frequency	32.768kHz
Device Category:	Portable Device

1.2 Test Standards

The following report is prepared on behalf of the OLIVESKY INTERNATIONAL ELECTRONIC 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, 2442MHz, 2472MHz
TM2	802.11g	2412MHz, 2442MHz, 2472MHz
TM3	802.11n-HT20	2412MHz, 2442MHz, 2472MHz
TM4	802.11n-HT40	2422MHz, 2442MHz, 2462MHz

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
Adapter Cable	1.5	Unshielded	Without Ferrite
USB Cable	0.8	Unshielded	Without Ferrite
USB Patch Cord	0.1	Unshielded	Without Ferrite

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

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
LCD TV	DELL	IN1920C	Q40G18N-700-1B2A
TF Card	Kingston	4GB	/
U-Disk	SanDisk	2GB	/
Notebook Computer	Lenovo	20007	EB12648265

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 D01 v03r01, the test method of power spectral density as below:

a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span to 1.5 times the DTS bandwidth.
c) Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
d) Set the VBW ≥ 3 RBW.
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.
j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.4 Environmental Conditions

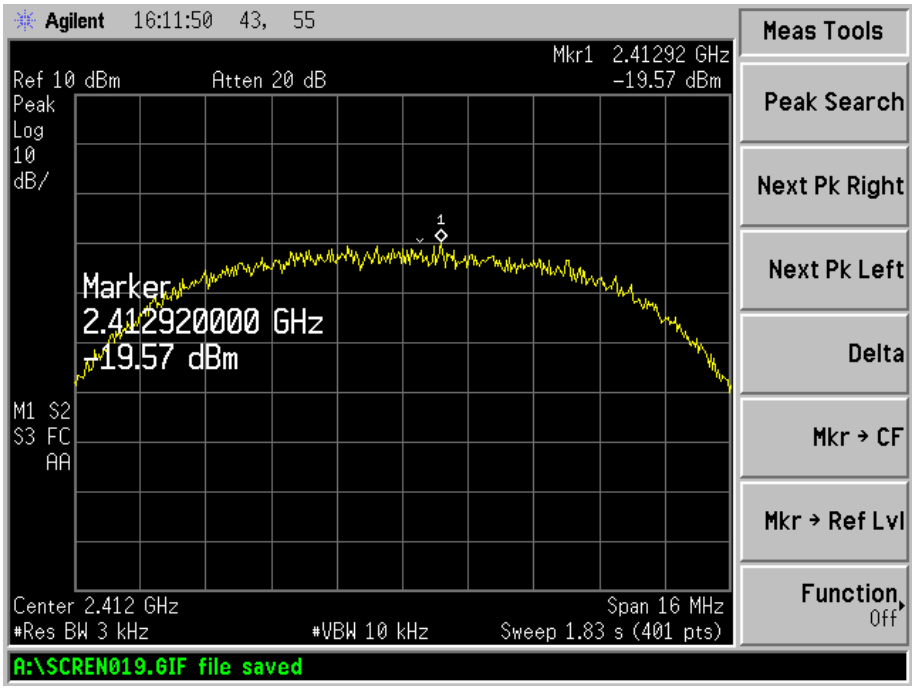
Temperature:	26° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

5.5 Summary of Test Results/Plots

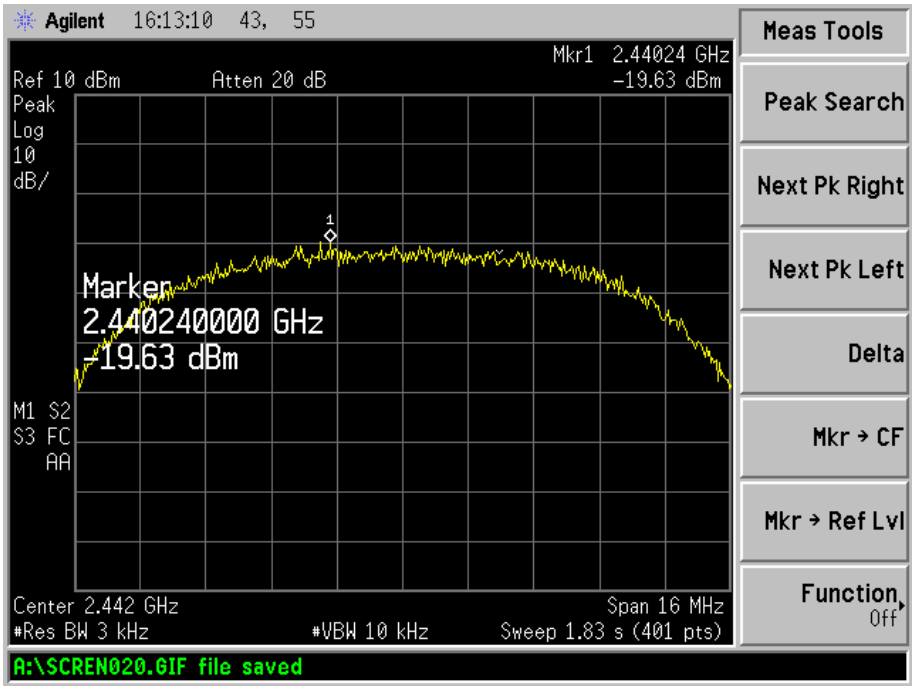
Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
802.11b	2412	-19.57	8
	2442	-19.63	8
	2472	-20.10	8
802.11g	2412	-22.87	8
	2442	-21.12	8
	2472	-23.24	8
802.11n HT20	2412	-22.95	8
	2442	-21.48	8
	2472	-23.22	8
802.11n HT40	2422	-24.99	8
	2442	-24.94	8
	2462	-25.74	8

Please refer to the following test plots:

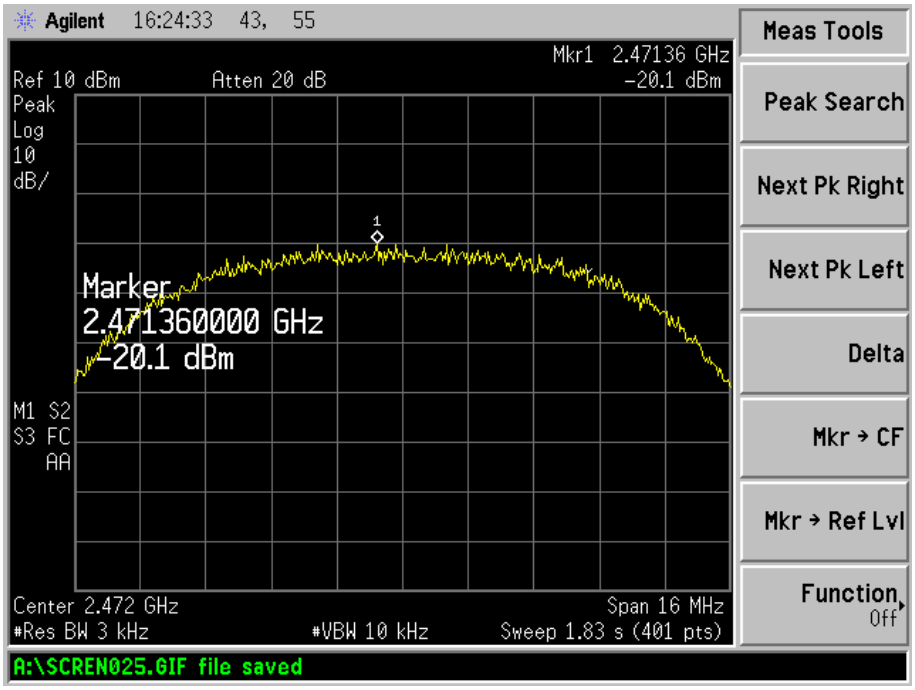
802.11b-Low Channel



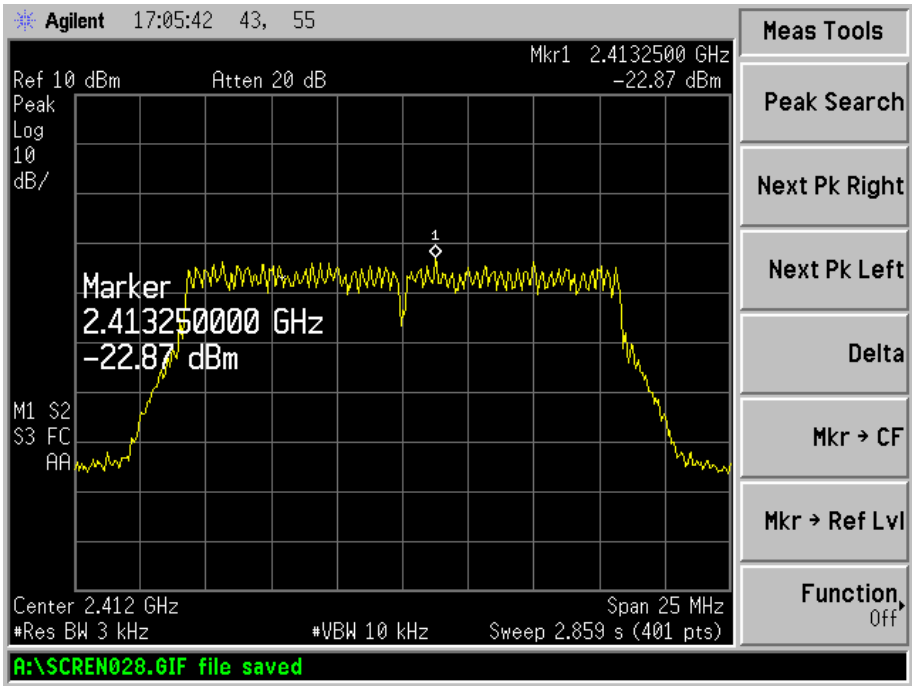
802.11b-Middle Channel



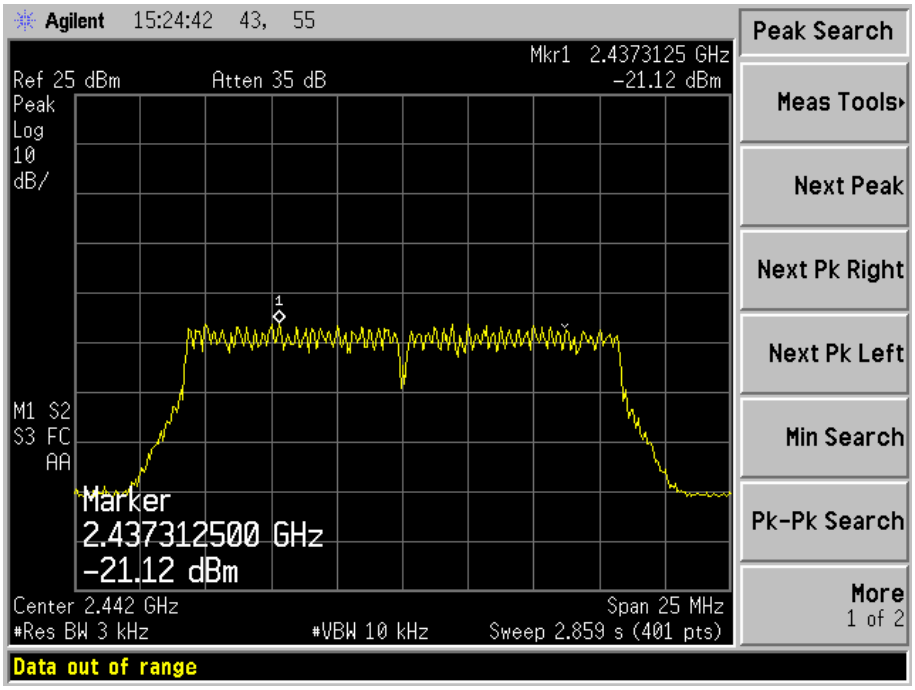
802.11b-High Channel



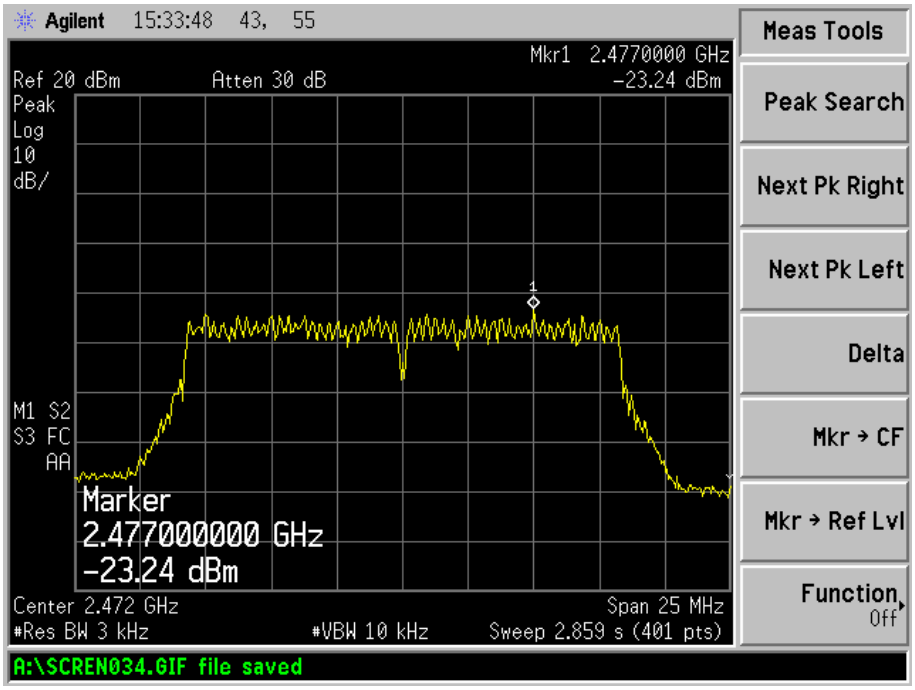
802.11g-Low Channel



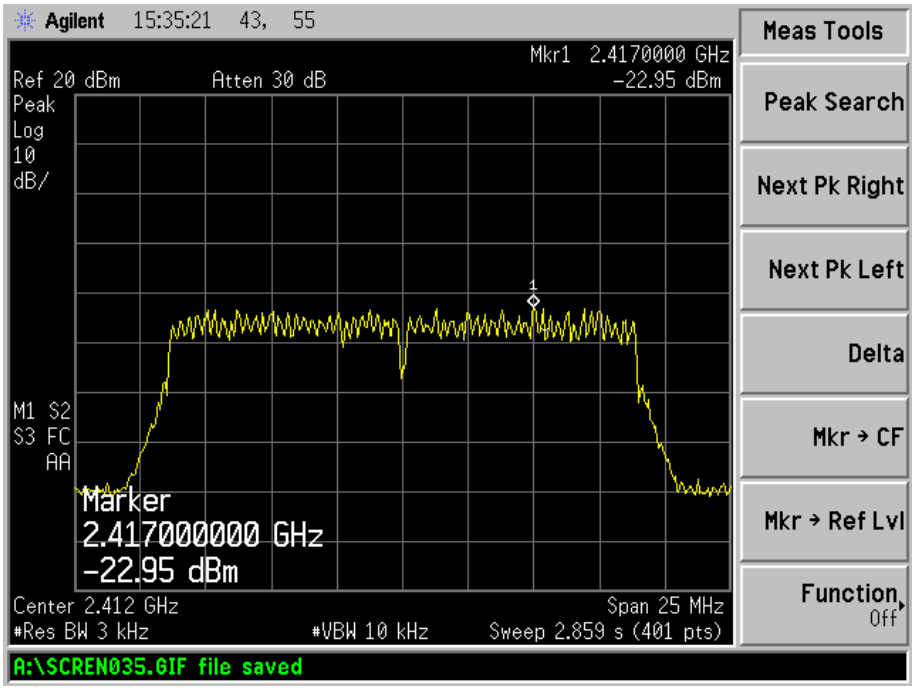
802.11g-Middle Channel



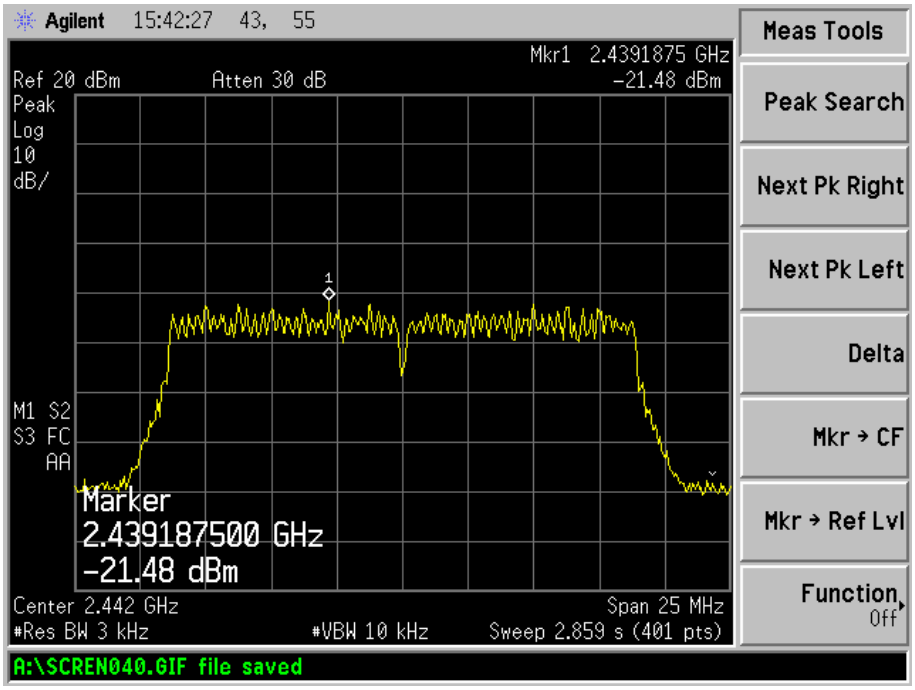
802.11g-High Channel



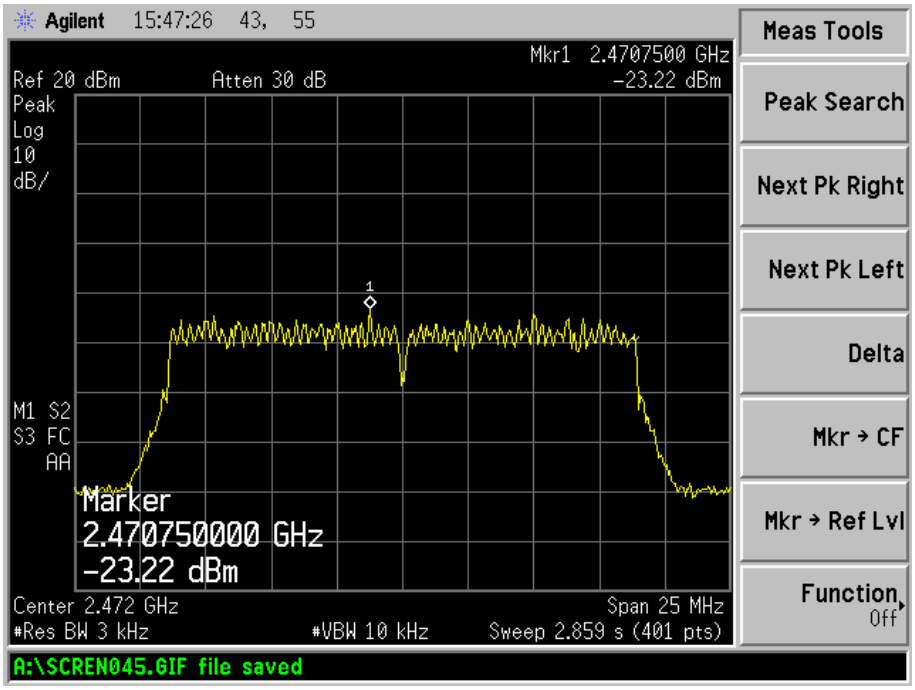
802.11n-HT20-Low Channel



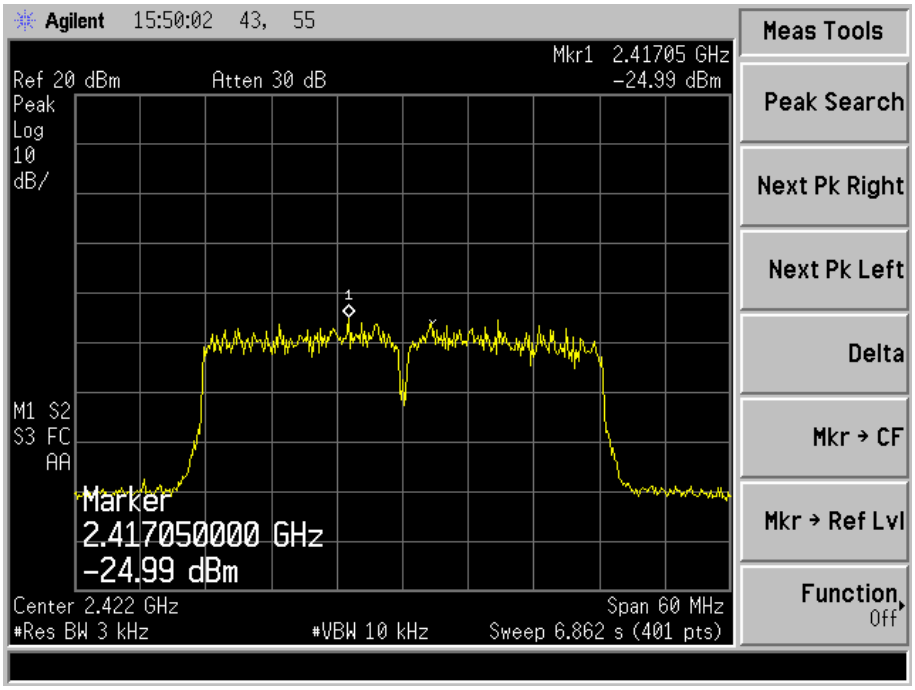
802.11n-HT20-Middle Channel



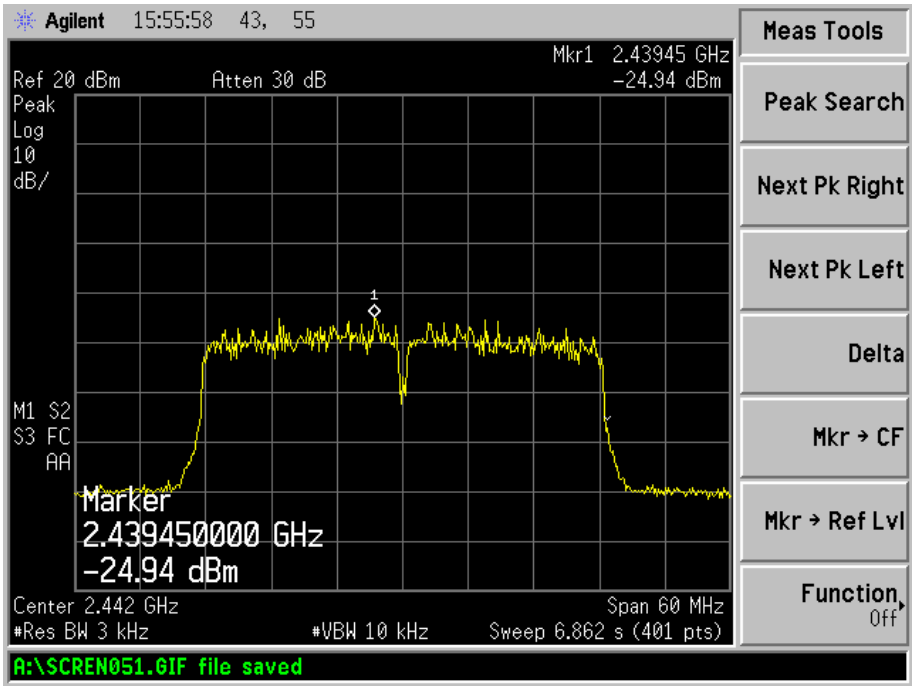
802.11n-HT20-High Channel



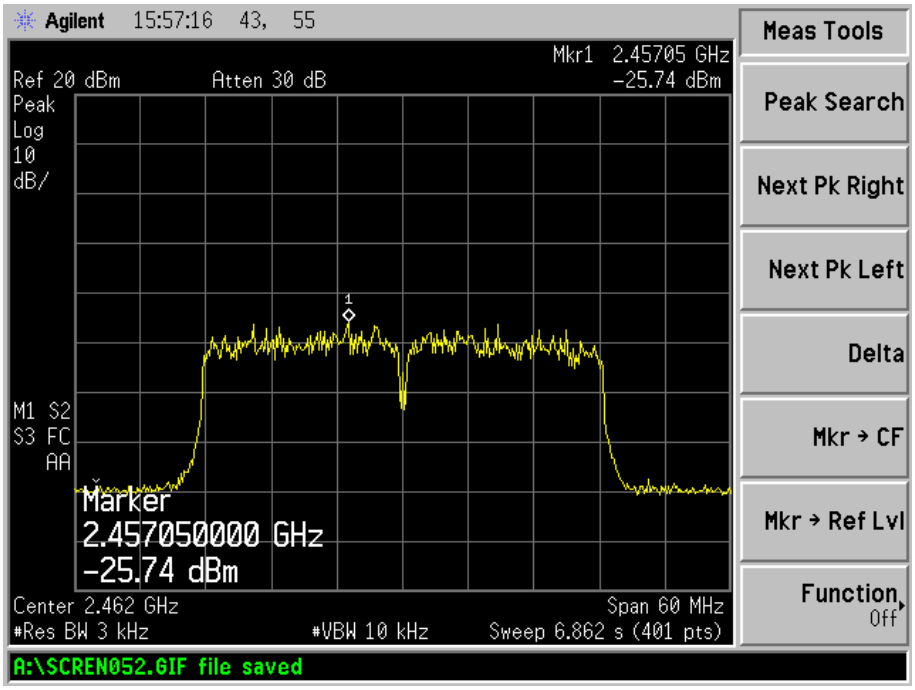
802.11n-HT40-Low Channel



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) ≥ 3XRBW.
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

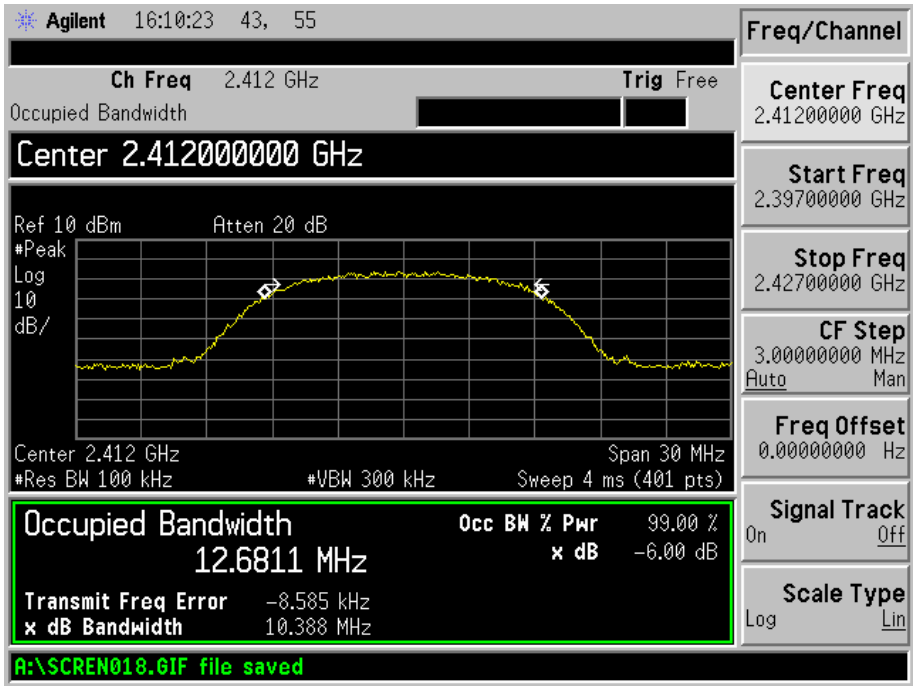
Temperature:	25° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

6.5 Summary of Test Results/Plots

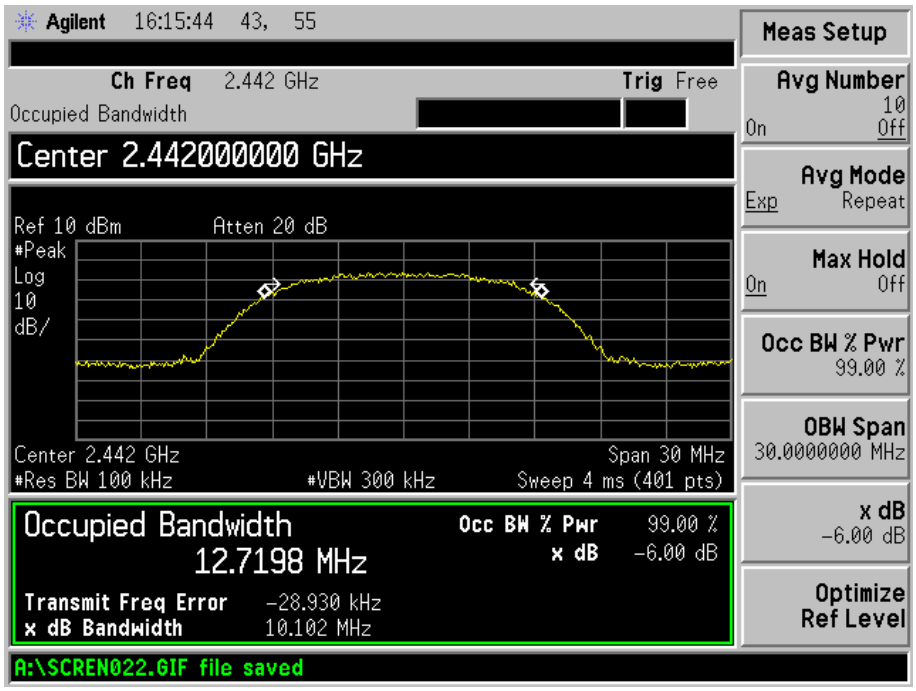
Test Mode	Test Channel MHz	6 dB Bandwidth kHz	99% Bandwidth kHz	Limit kHz
802.11b	2412	10388	12681.1	500
	2442	10102	12719.8	500
	2472	10156	12646.3	500
802.11g	2412	16490	16401.2	500
	2442	16610	16878.5	500
	2472	16613	16837.5	500
802.11n-HT20	2412	17824	17798.1	500
	2442	17743	17621.7	500
	2472	17747	17625.1	500
802.11n-HT40	2422	35734	35954.0	500
	2442	35534	35800.0	500
	2462	35656	35794.4	500

Please refer to the following test plots:

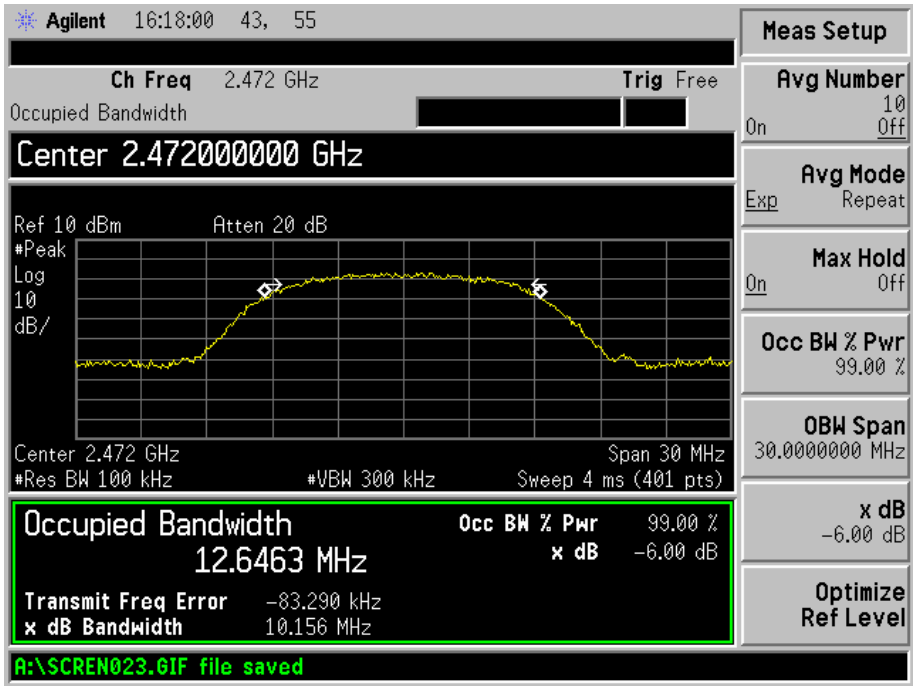
802.11b-Low Channel



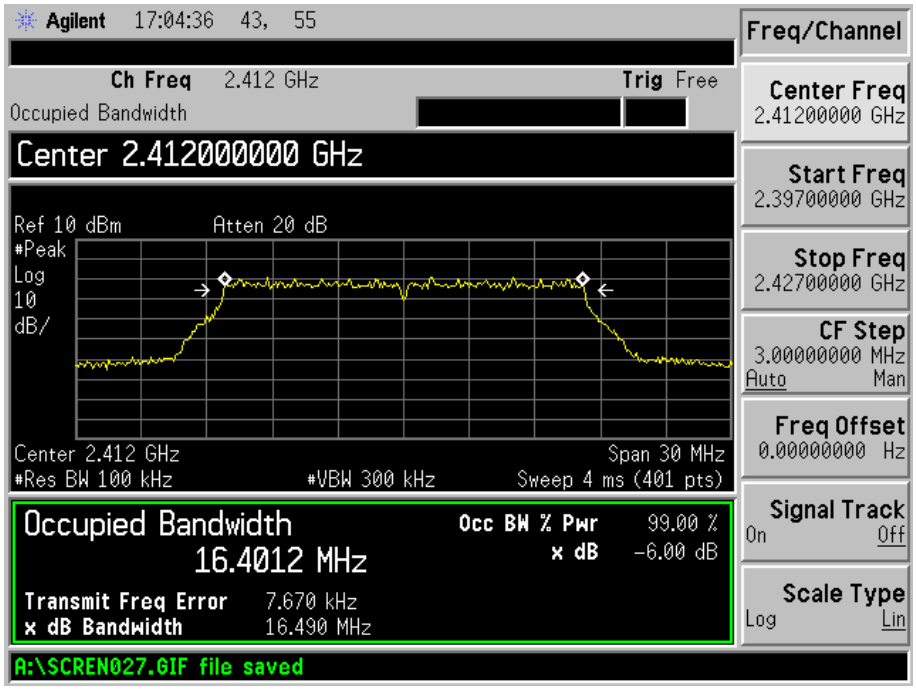
802.11b-Middle Channel



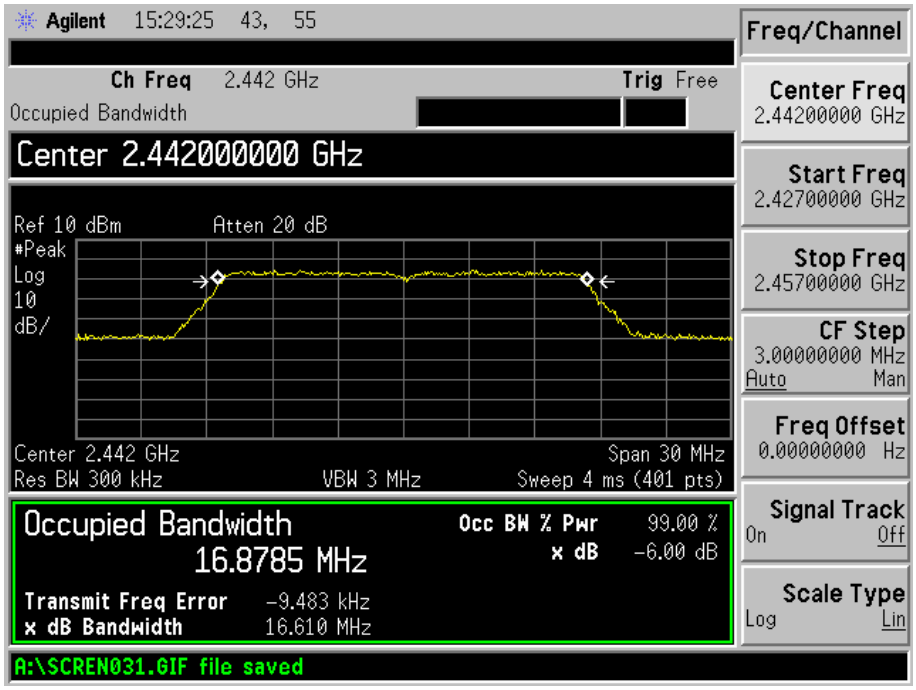
802.11b-High Channel



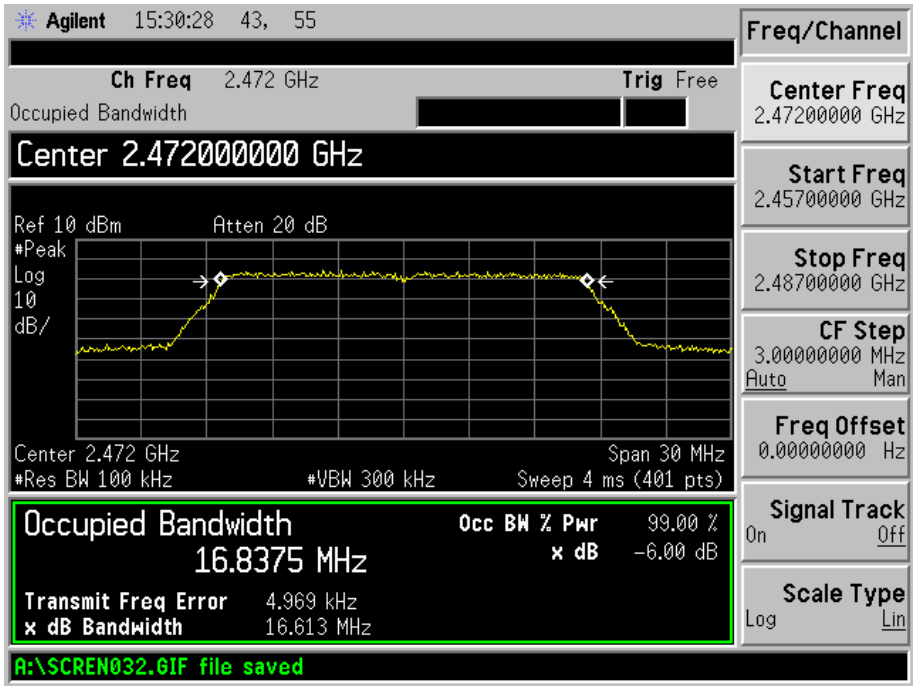
802.11g-Low Channel



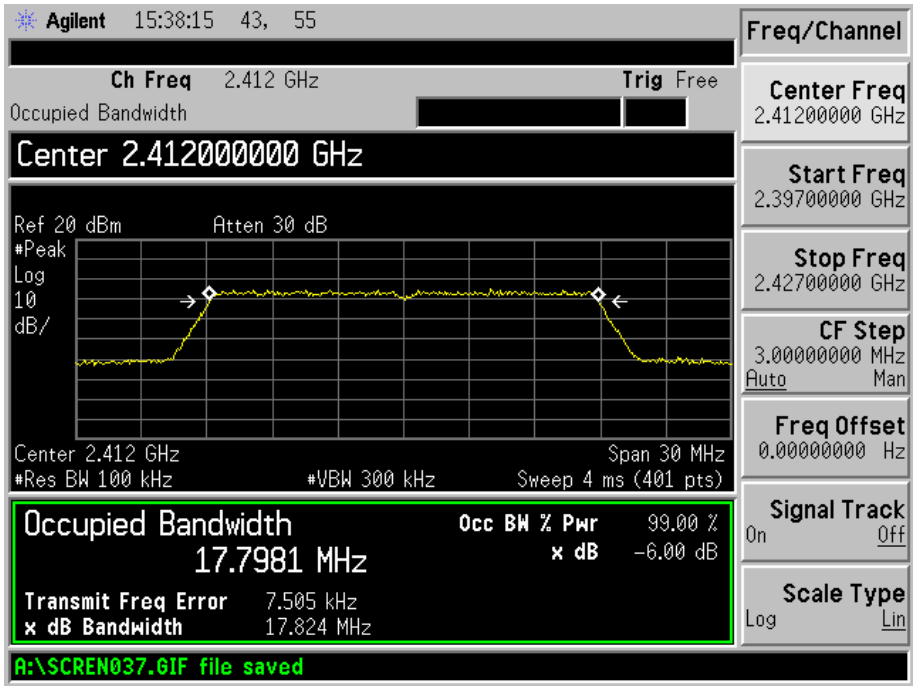
802.11g-Middle Channel



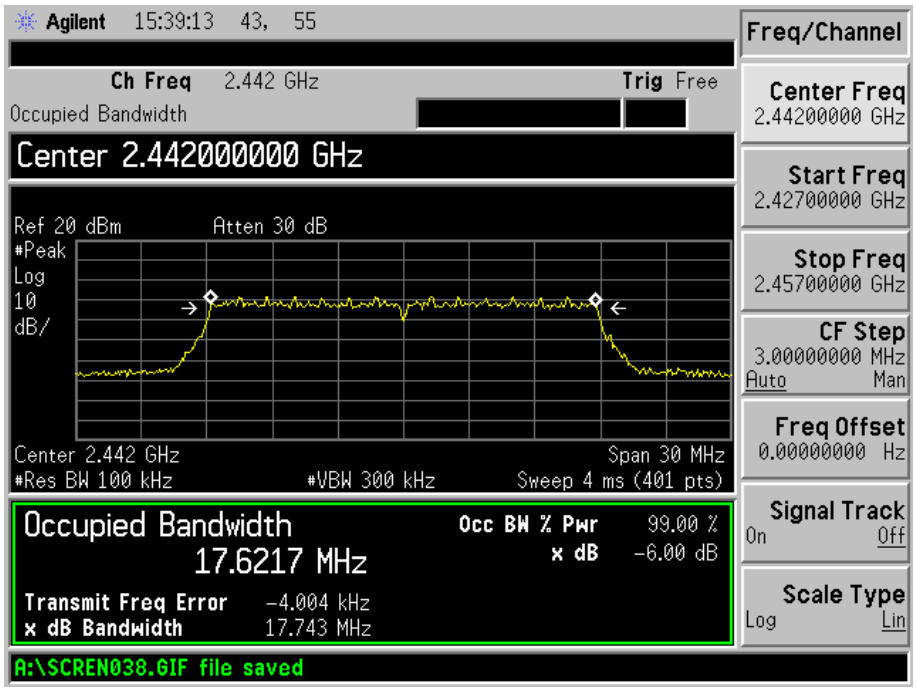
802.11g-High Channel



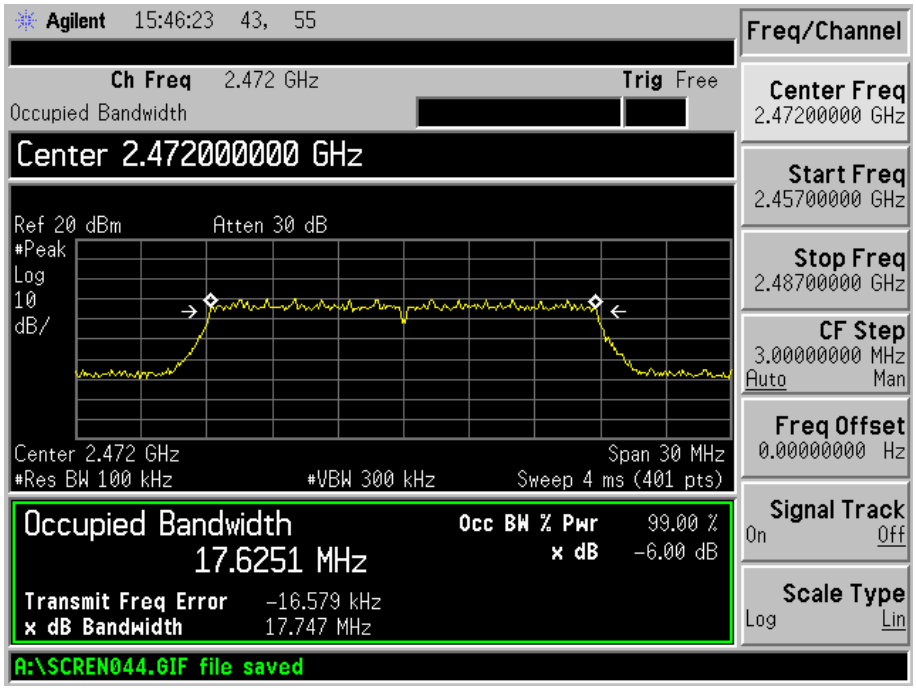
802.11n-HT20-Low Channel



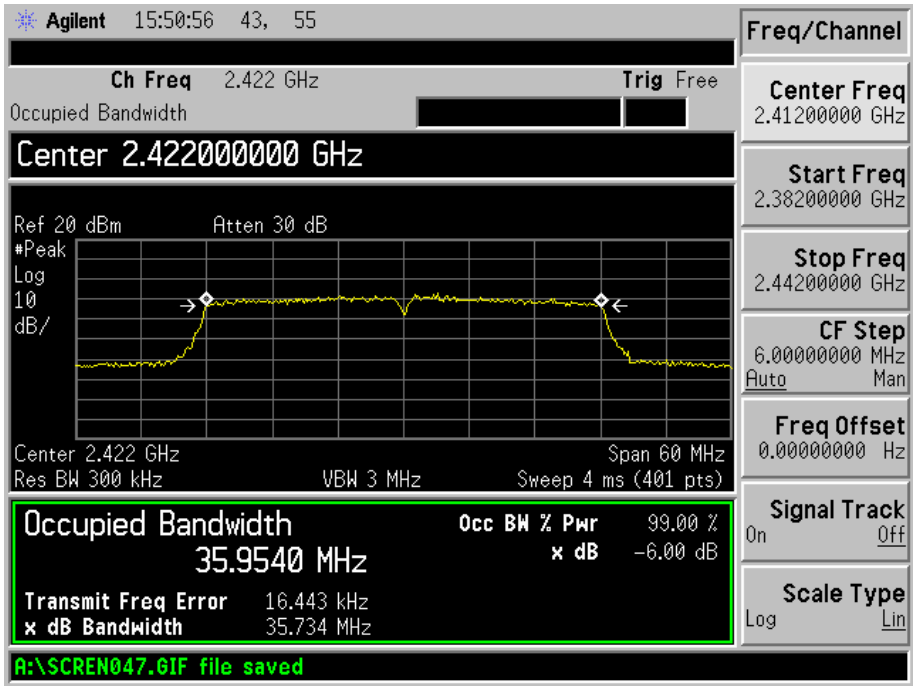
802.11n-HT20-Middle Channel



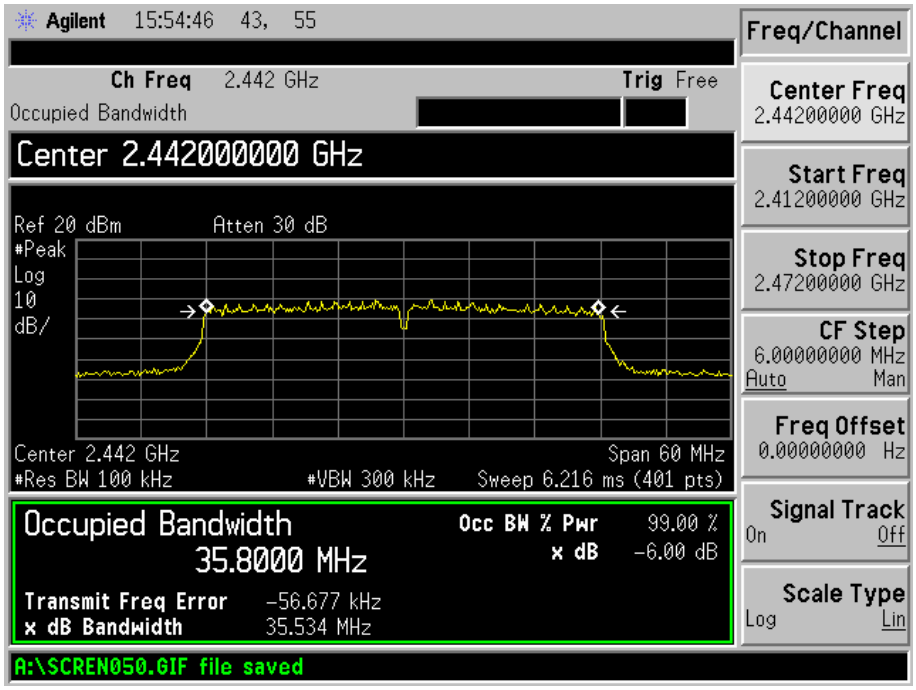
802.11n-HT20-High Channel



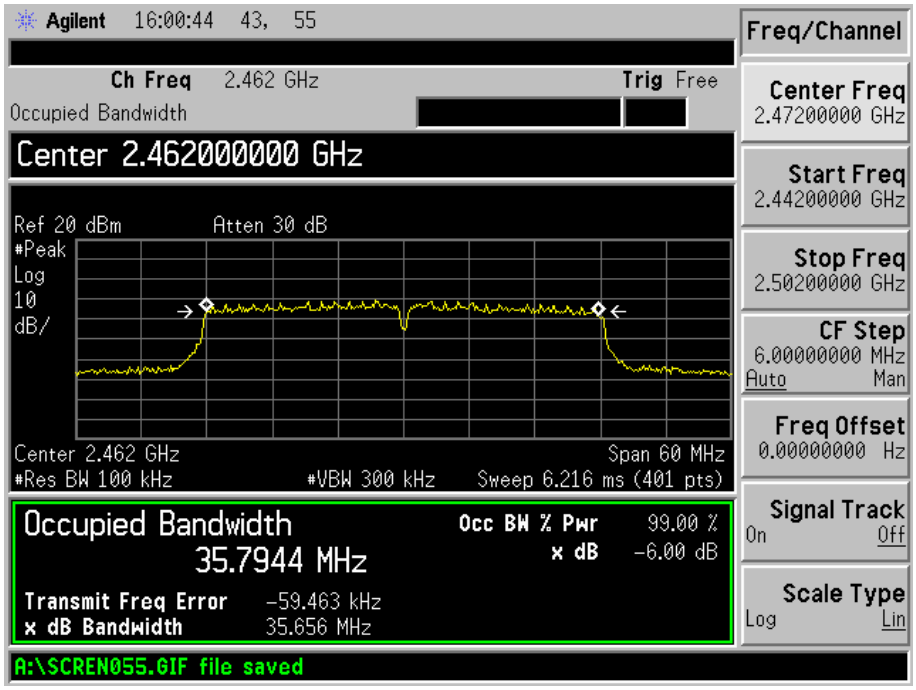
802.11n-HT40-Low Channel



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 theKDB 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 ≥ 3 RBW
3. Set the span ≥ 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

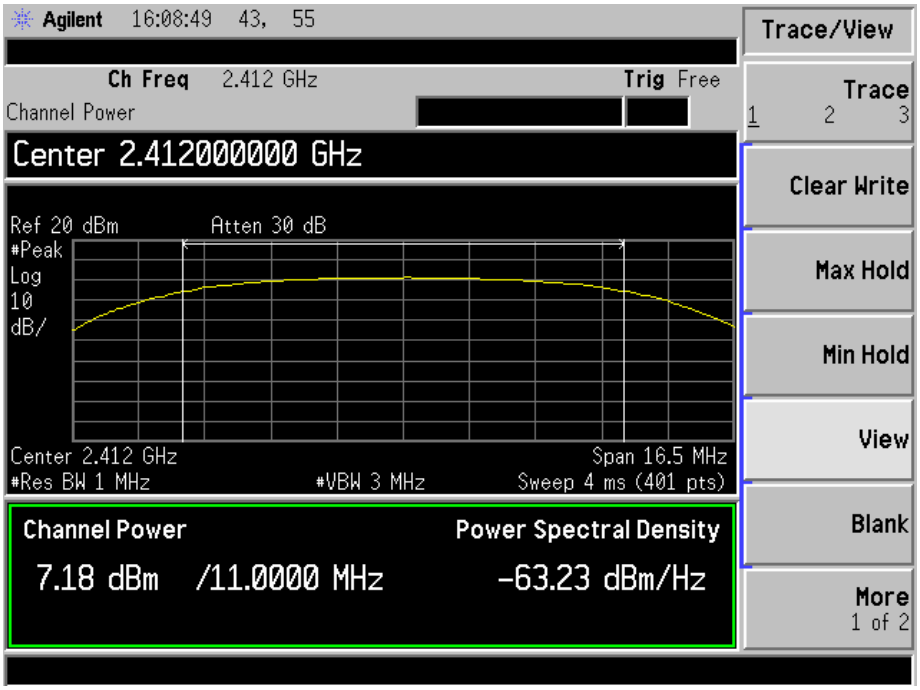
Temperature:	26° C
Relative Humidity:	57%
ATM Pressure:	1011 mbar

7.5 Summary of Test Results/Plots

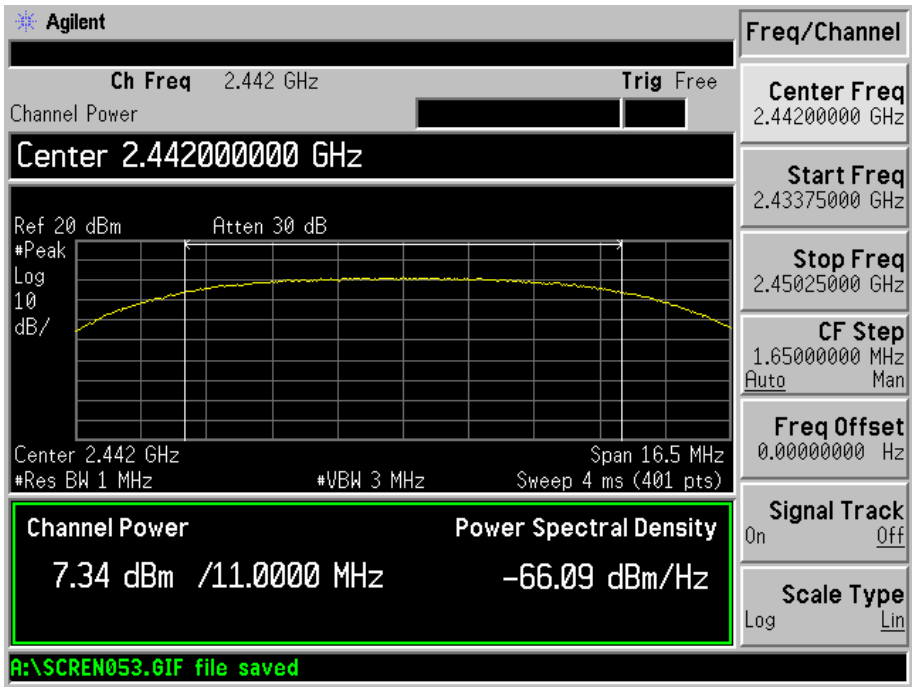
Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b _ 11Mbps	2412	7.18	5.22	1000
	2442	7.34	5.42	1000
	2472	6.75	4.73	1000
802.11g_54Mbps	2412	6.52	4.49	1000
	2442	6.85	4.84	1000
	2472	6.39	4.36	1000
802.11n HT20_MCS7	2412	6.36	4.33	1000
	2442	6.75	4.73	1000
	2472	5.53	3.57	1000
802.11n HT40_MCS7	2422	6.77	4.75	1000
	2442	6.42	4.39	1000
	2462	6.32	4.29	1000

Please refer to the following test plots:

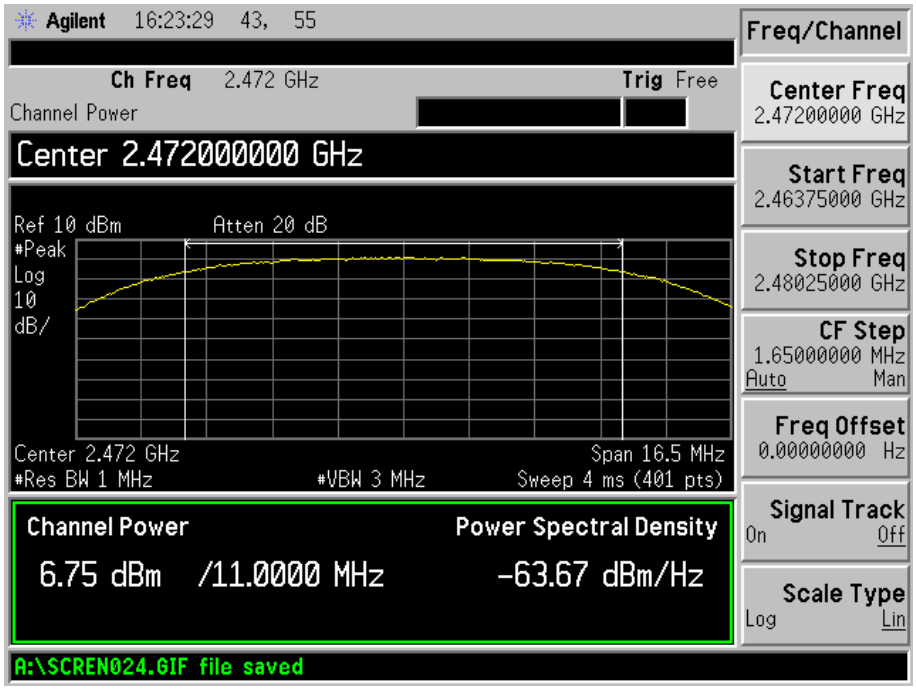
802.11-11Mbps-Low Channel



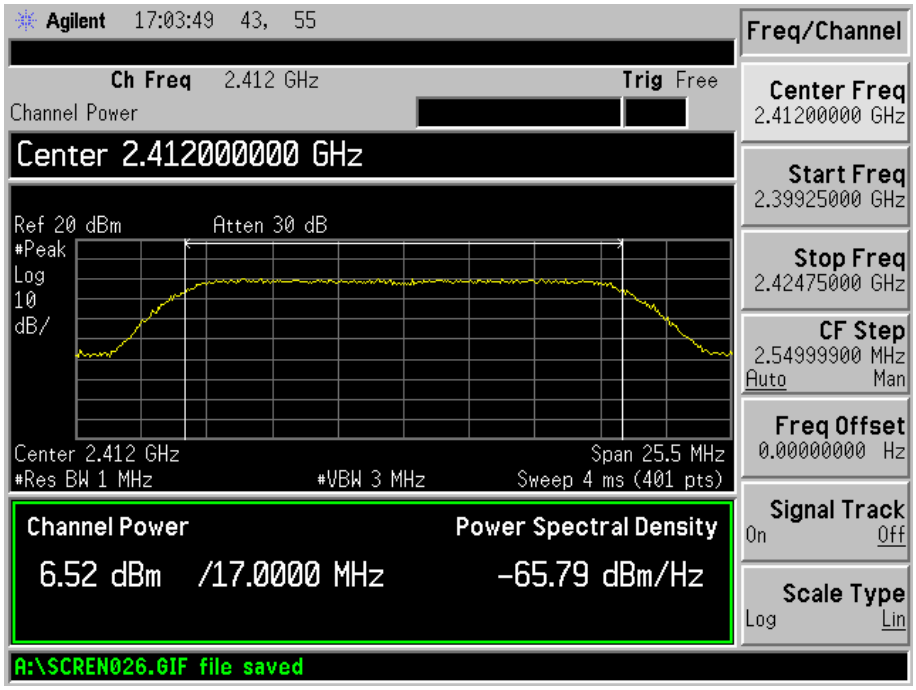
802.11b -11Mbps-Middle Channel



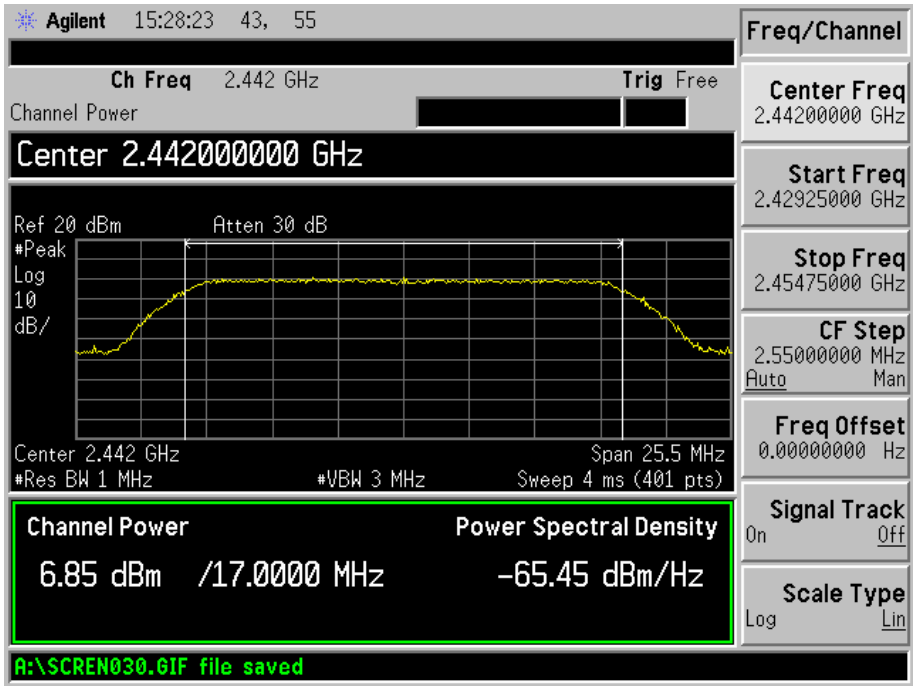
802.11b -11Mpbs-High Channel



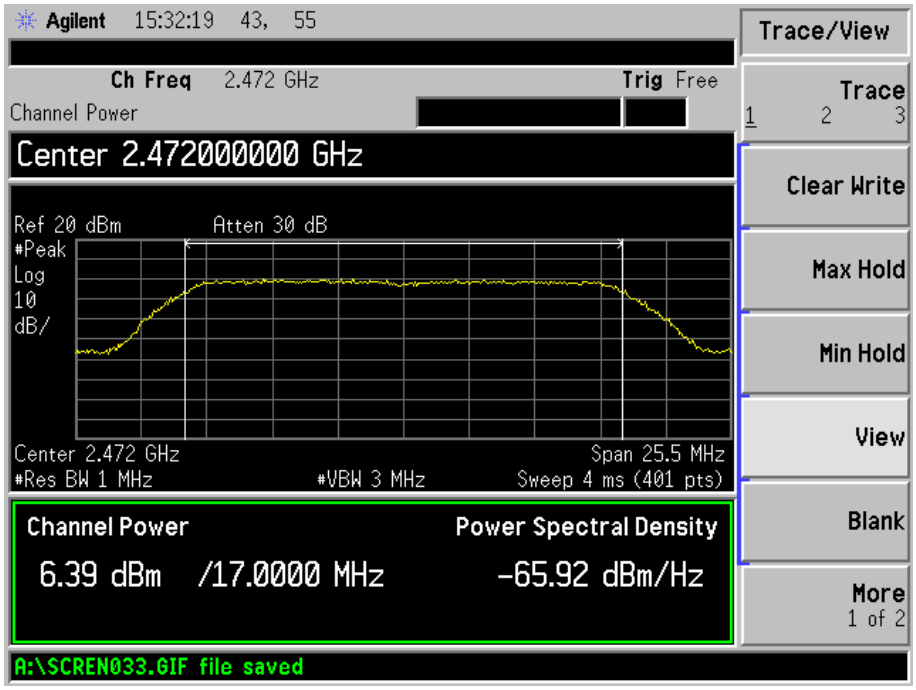
802.11g-54Mbps-Low Channel



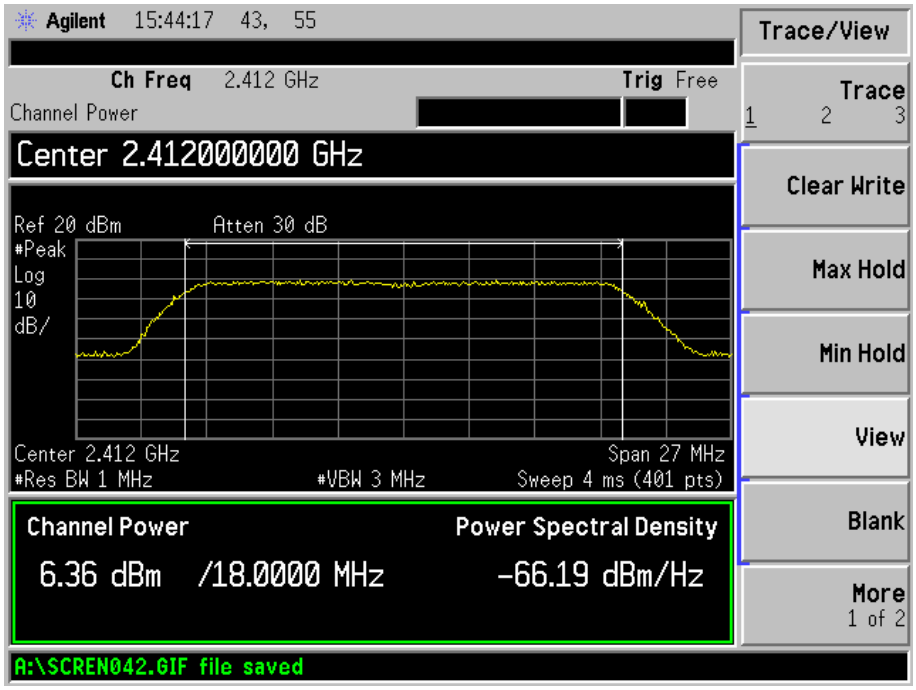
802.11g-54Mbps-Middle Channel



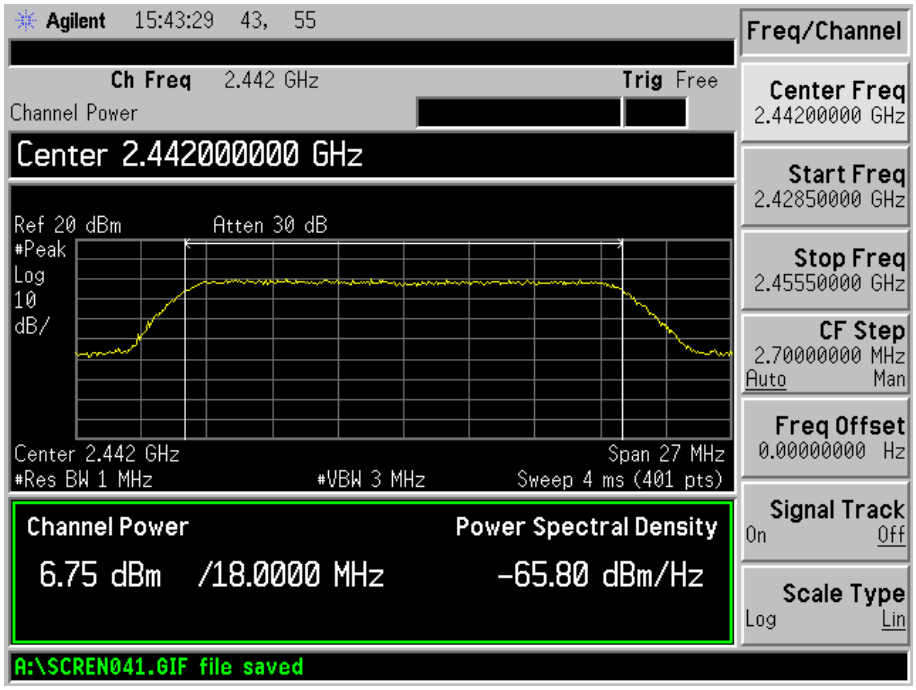
802.11g-54Mpbs-High Channel



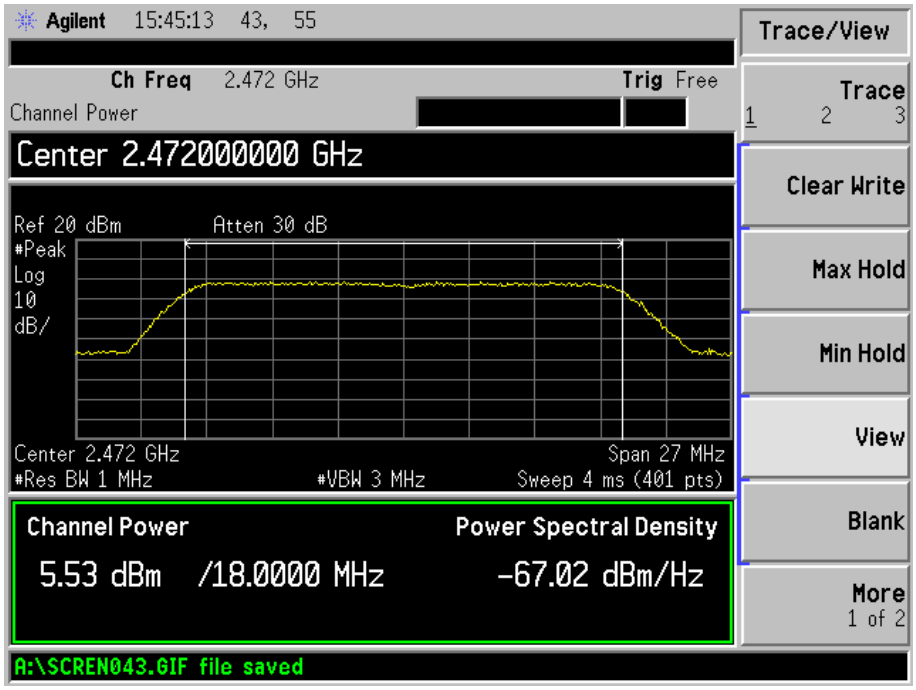
802.11n-HT20-MCS7-Low Channel



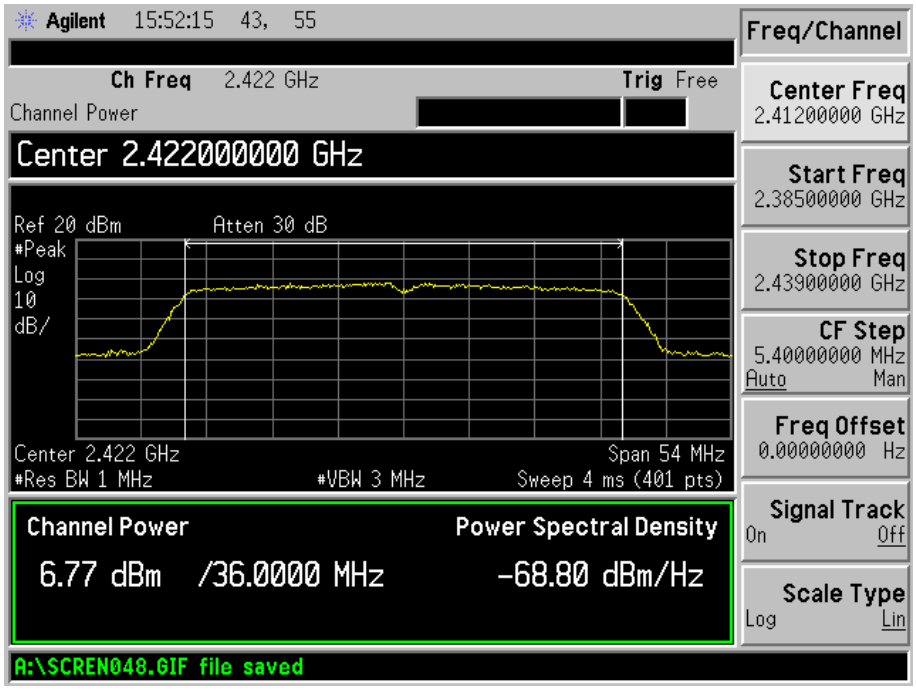
802.11n-HT20-MCS7-Middle Channel



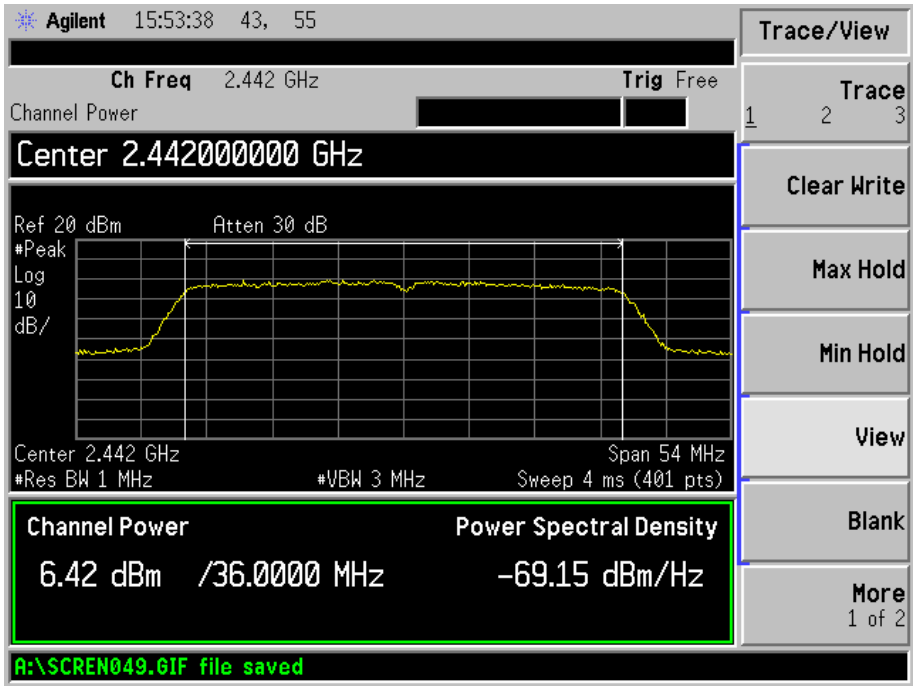
802.11n-HT20-MCS7-High Channel



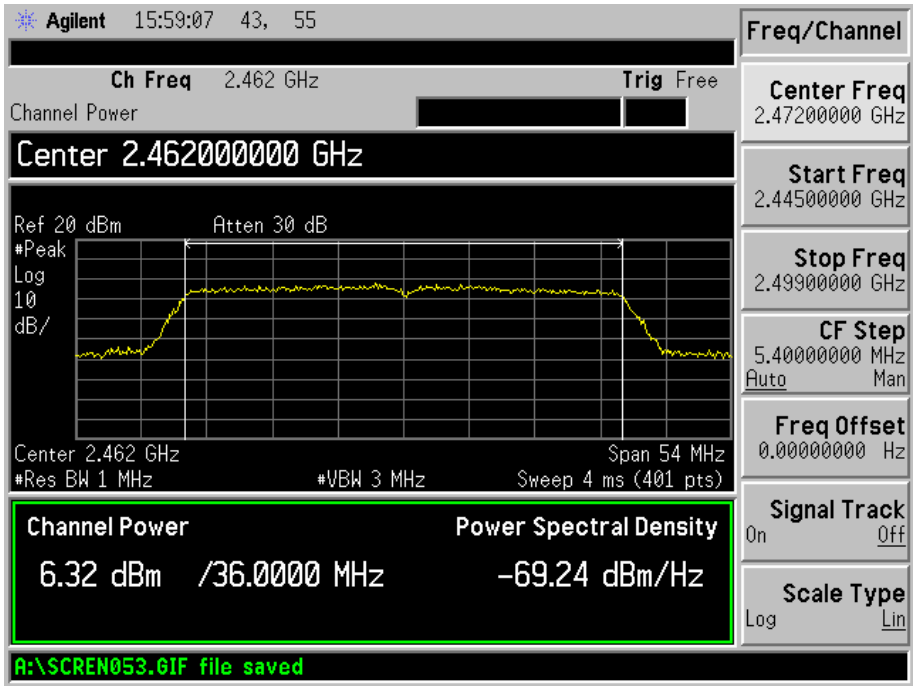
802.11n-HT40-MCS7-Low Channel



802.11n-HT40-MCS7-Middle Channel



802.11n-HT40-MCS7-High Channel



8. Field Strength of Spurious Emissions

8.1 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).

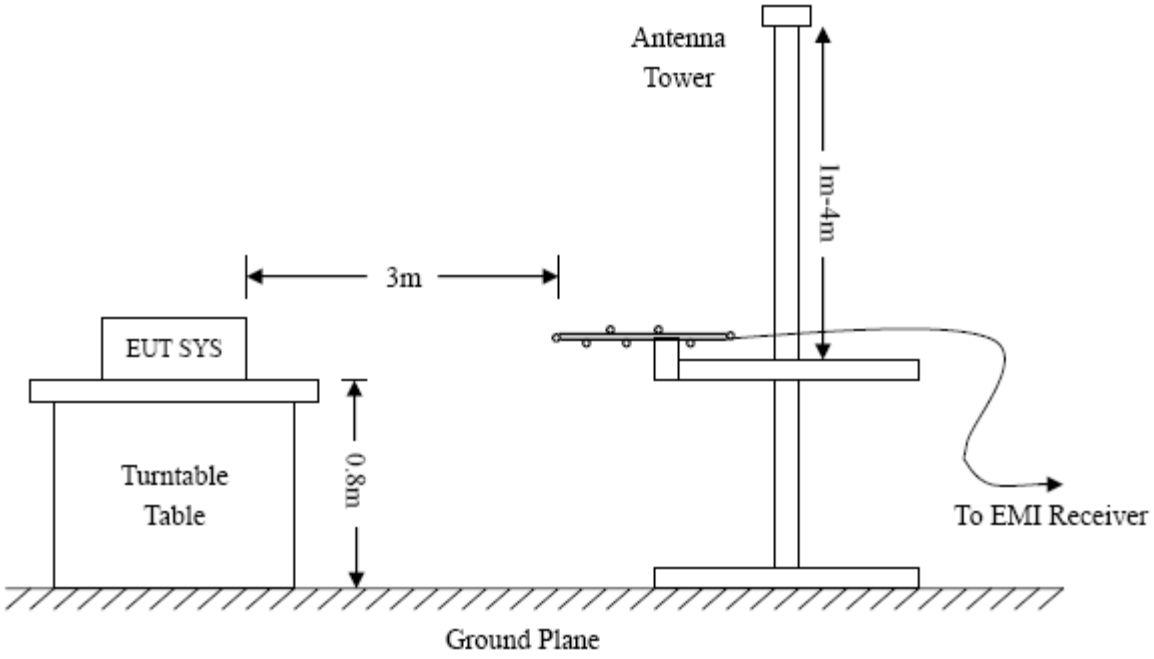
The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

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

8.5 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:

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

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

Margin = Corr. Ampl. – 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

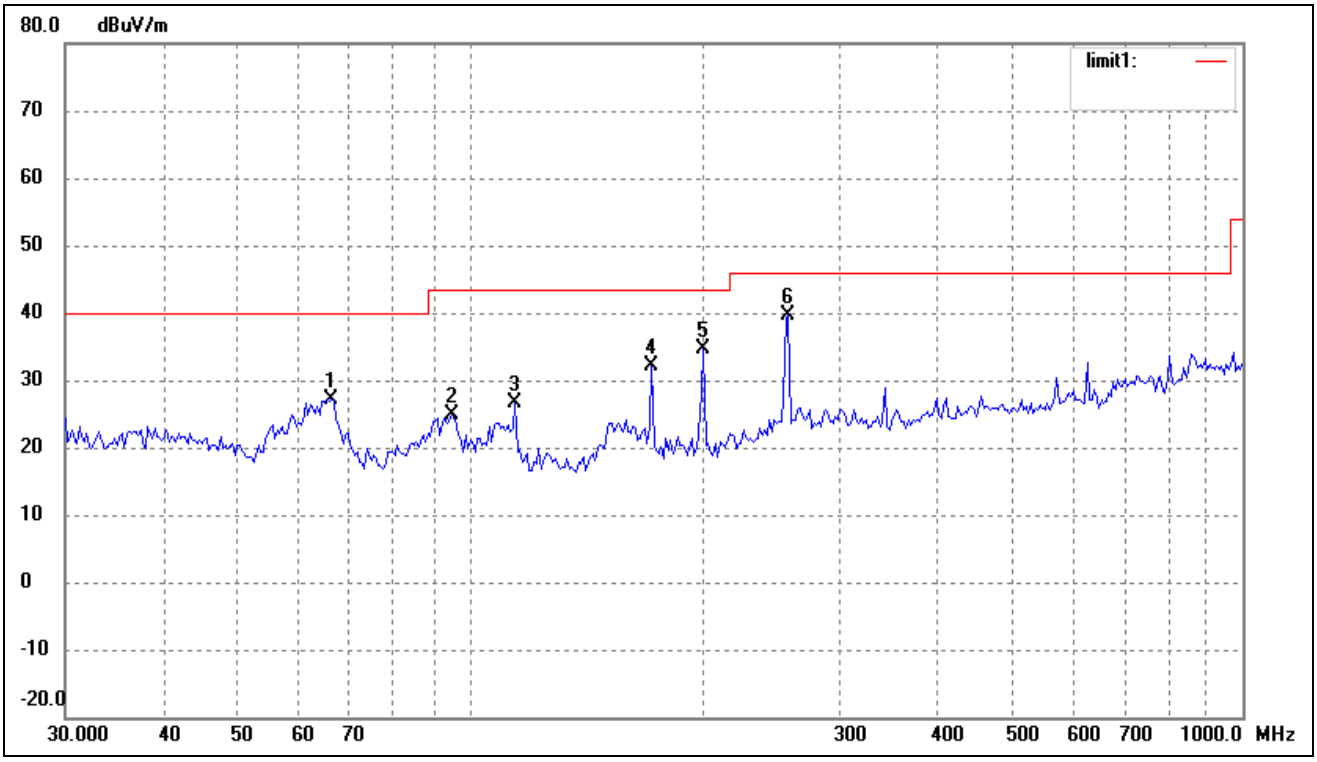
According to the data below, the FCC Part 15.205, 15.209 and 15.247 standards, and had the worst cases:

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)

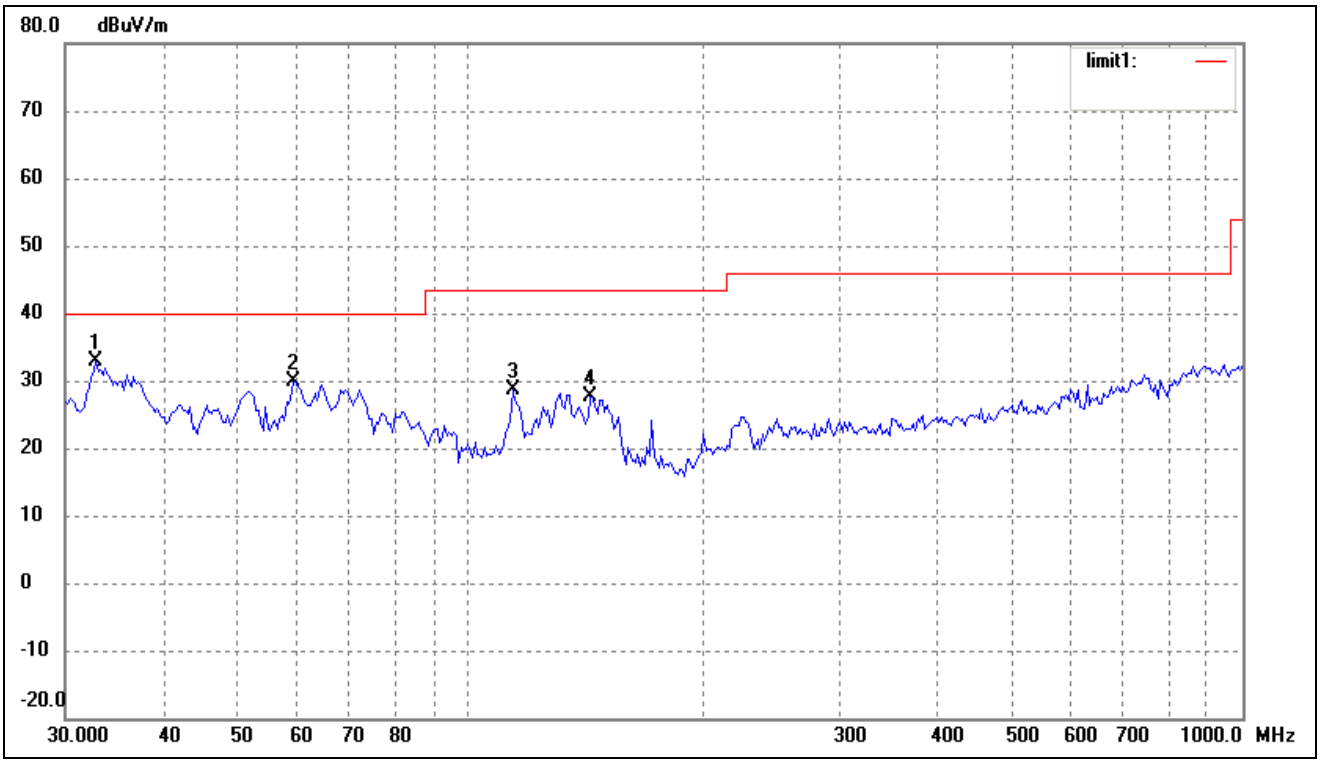
EUT: *Mobile Internet Device*
Tested Model: *S901*
Operating Condition: *802.11b Transmitting Low Channel-2412MHz*
Comment: *DC 7.4V*

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	66.2662	23.69	3.38	27.07	40.00	-12.93	255	100	peak
2	94.7601	20.18	4.81	24.99	43.50	-18.51	225	100	peak
3	114.5146	22.03	4.60	26.63	43.50	-16.87	145	100	peak
4	171.9946	29.33	2.70	32.03	43.50	-11.47	185	100	peak
5	200.6881	30.93	3.72	34.65	43.50	-8.85	165	100	peak
6	258.3264	32.63	6.98	39.61	46.00	-6.39	120	100	peak

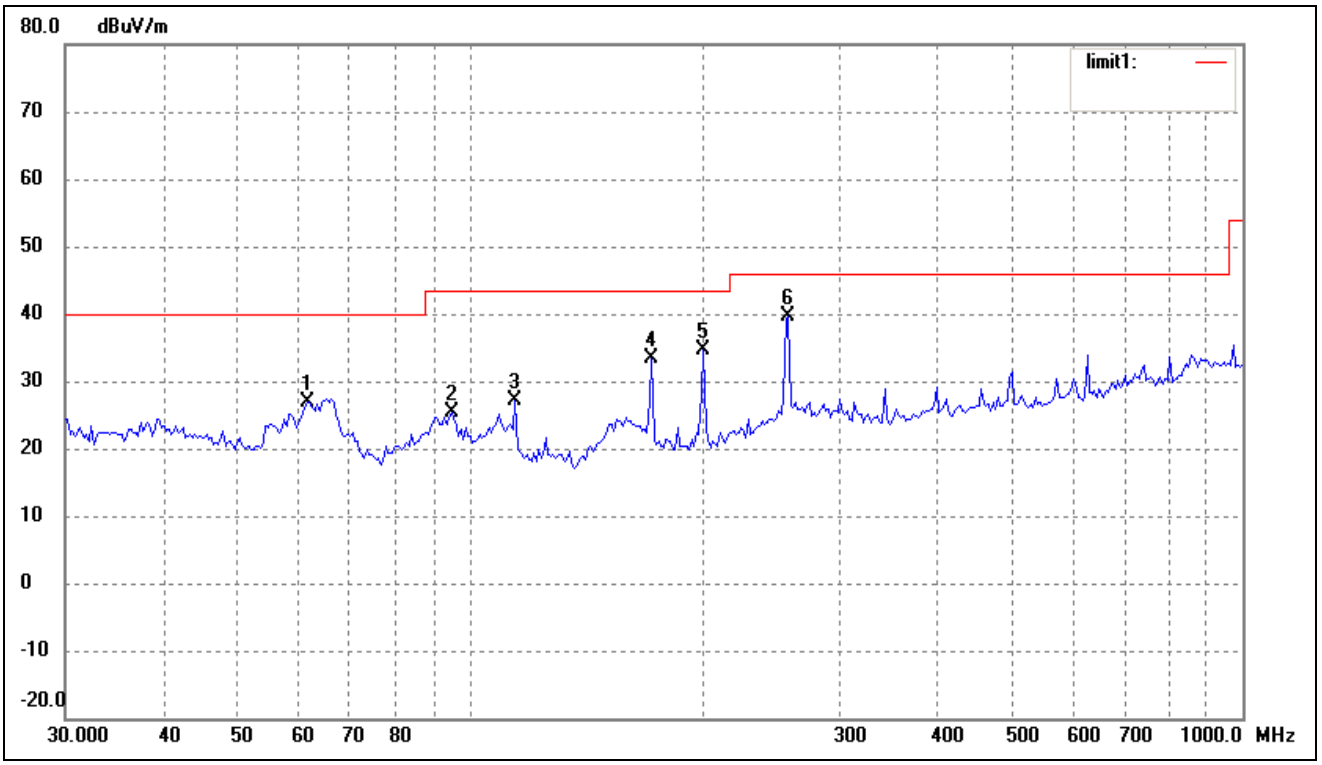
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(。)	(cm)	
1	32.8637	24.81	8.07	32.88	40.00	-7.12	185	100	peak
2	59.2325	24.47	5.45	29.92	40.00	-10.08	160	100	peak
3	113.7143	23.85	4.68	28.53	43.50	-14.97	125	100	peak
4	143.3261	25.21	2.45	27.66	43.50	-15.84	110	100	peak

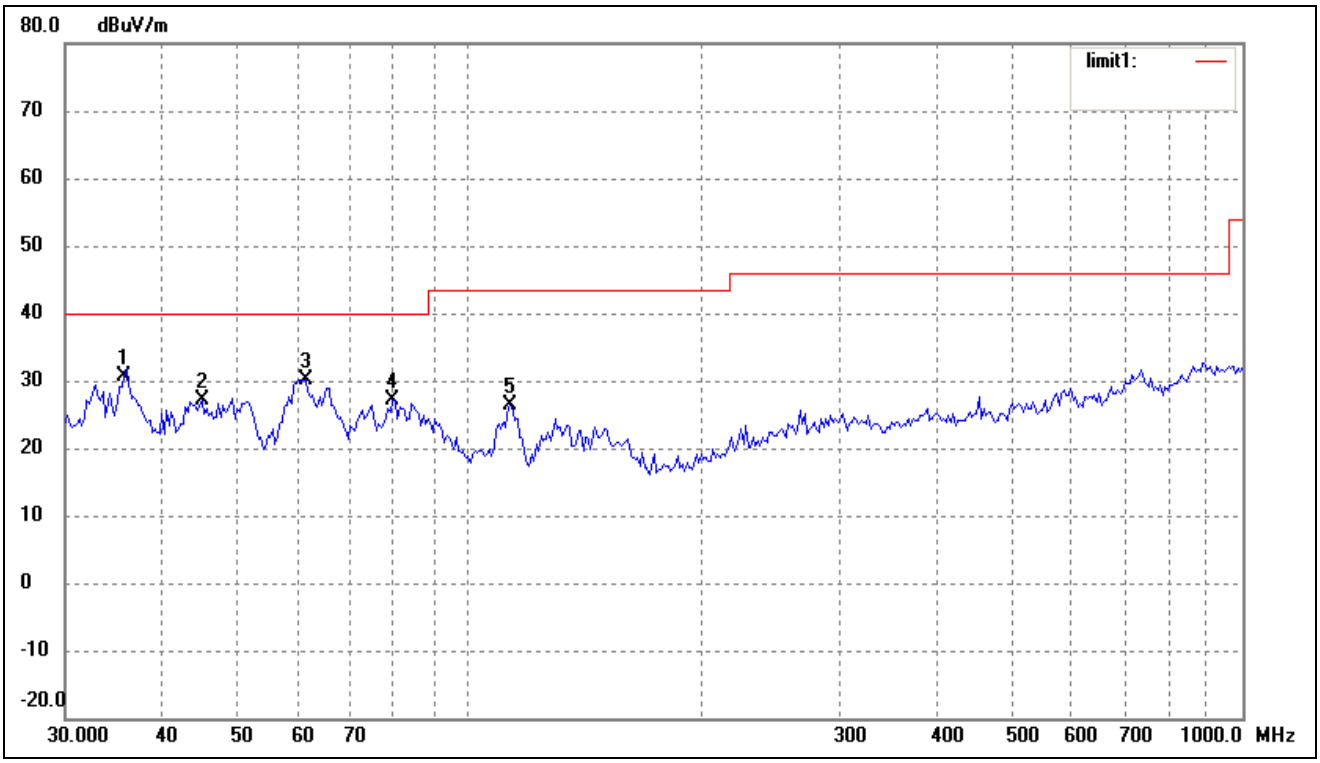
Operating Condition: *802.11b Transmitting Middle Channel-2442MHz*
Comment: *DC 7.4V*

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	61.7781	22.09	4.81	26.90	40.00	-13.10	145	100	peak
2	94.7601	20.63	4.81	25.44	43.50	-18.06	125	100	peak
3	114.5146	22.57	4.60	27.17	43.50	-16.33	160	100	peak
4	171.9946	30.68	2.70	33.38	43.50	-10.12	135	100	peak
5	200.6881	30.93	3.72	34.65	43.50	-8.85	178	100	peak
6	258.3264	32.63	6.98	39.61	46.00	-6.39	195	100	peak

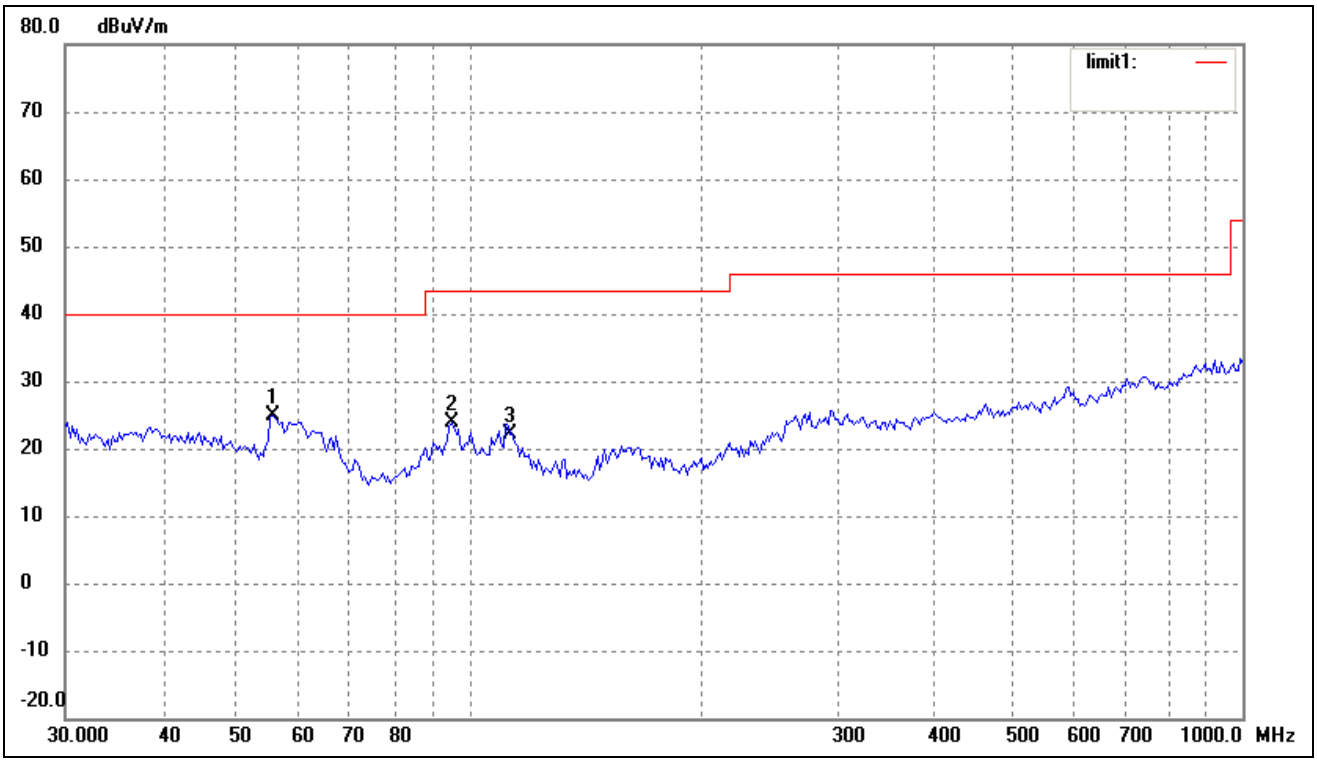
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(。)	(cm)	
1	35.7491	22.21	8.51	30.72	40.00	-9.28	165	100	peak
2	45.0583	19.47	7.74	27.21	40.00	-12.79	152	100	peak
3	61.3463	25.26	4.95	30.21	40.00	-9.79	148	100	peak
4	79.5209	25.98	1.06	27.04	40.00	-12.96	125	100	peak
5	112.9196	21.67	4.77	26.44	43.50	-17.06	105	100	peak

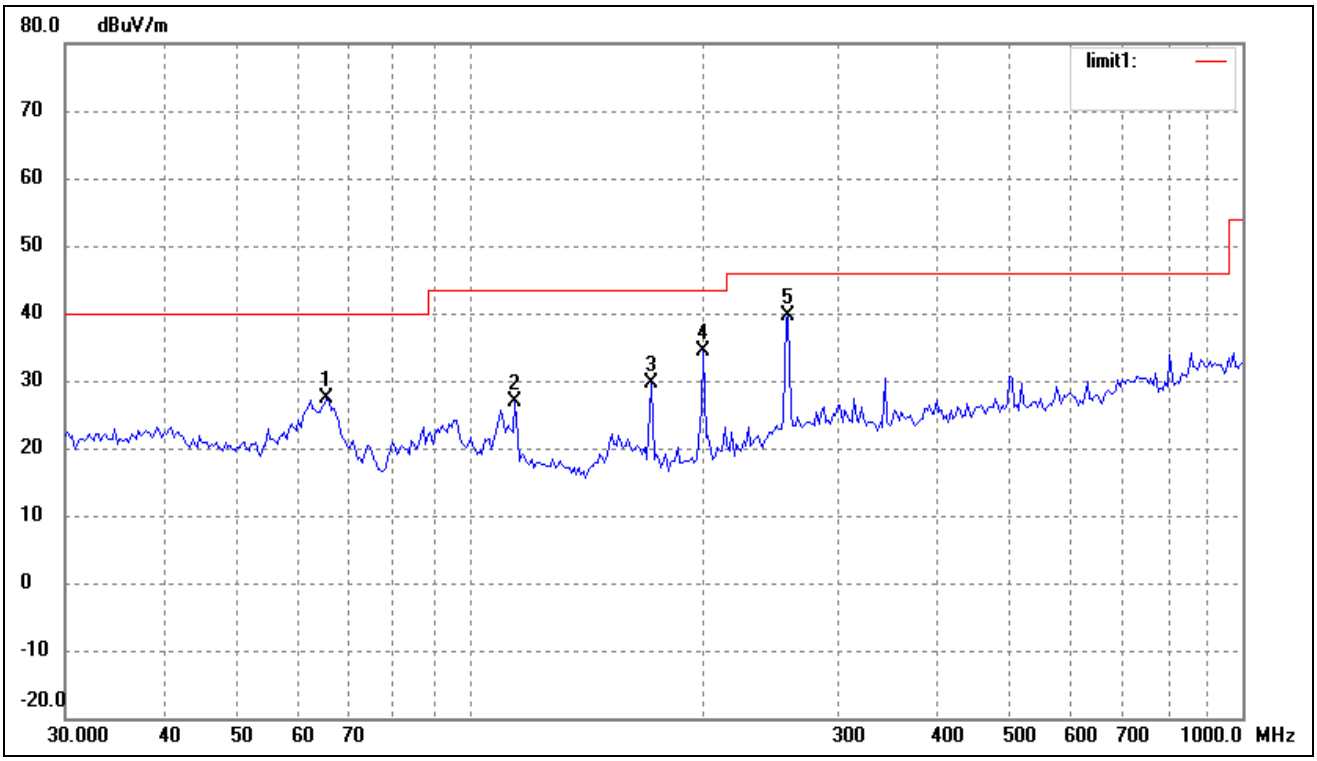
Operating Condition: *802.11b Transmitting High Channel-2472MHz*
Comment: *DC 7.4V*

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	55.6094	19.05	5.77	24.82	40.00	-15.18	165	100	peak
2	94.7601	19.06	4.81	23.87	43.50	-19.63	145	100	peak
3	112.9196	17.34	4.77	22.11	43.50	-21.39	125	100	peak

Test Specification: *Vertical*

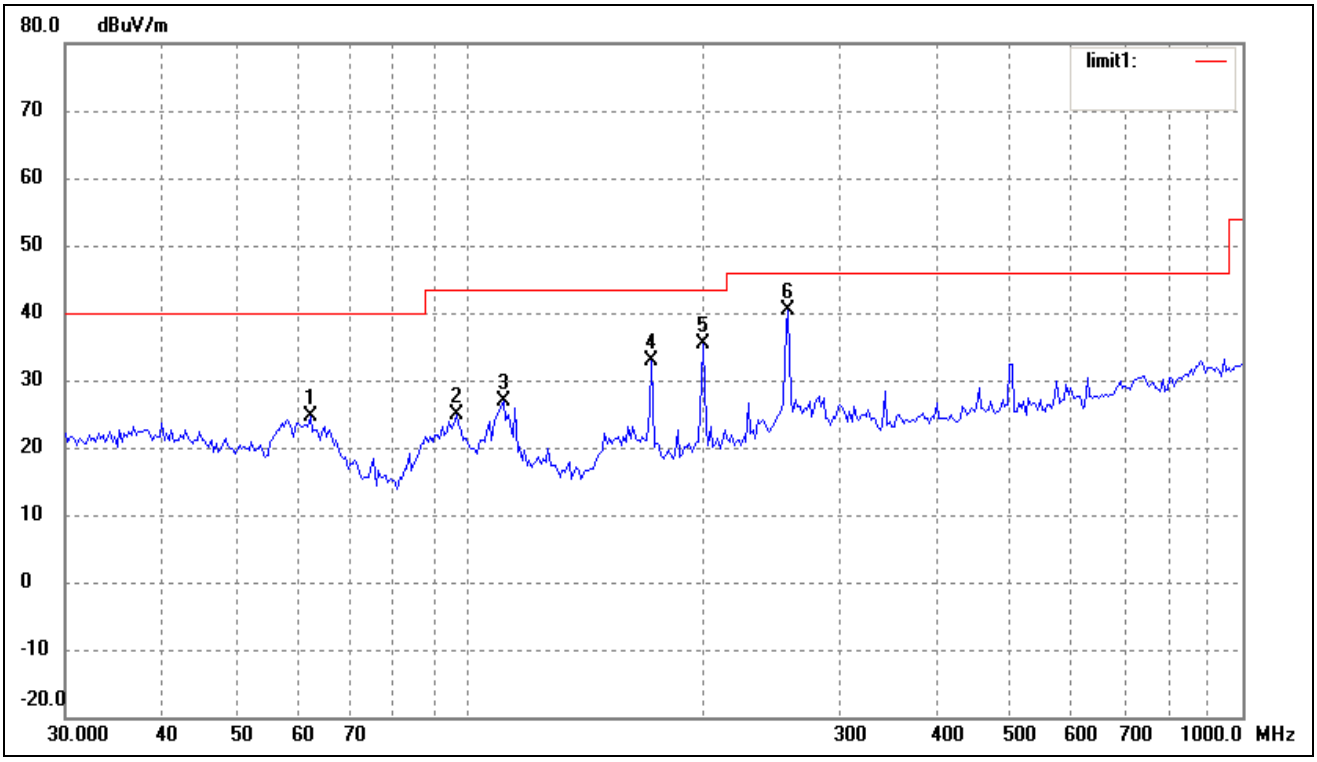


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(。)	(cm)	
1	65.3432	23.63	3.67	27.30	40.00	-12.70	168	100	peak
2	114.5146	22.20	4.60	26.80	43.50	-16.70	145	100	peak
3	171.9946	26.82	2.70	29.52	43.50	-13.98	125	100	peak
4	200.6881	30.61	3.72	34.33	43.50	-9.17	105	100	peak
5	258.3264	32.58	6.98	39.56	46.00	-6.44	120	100	peak

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

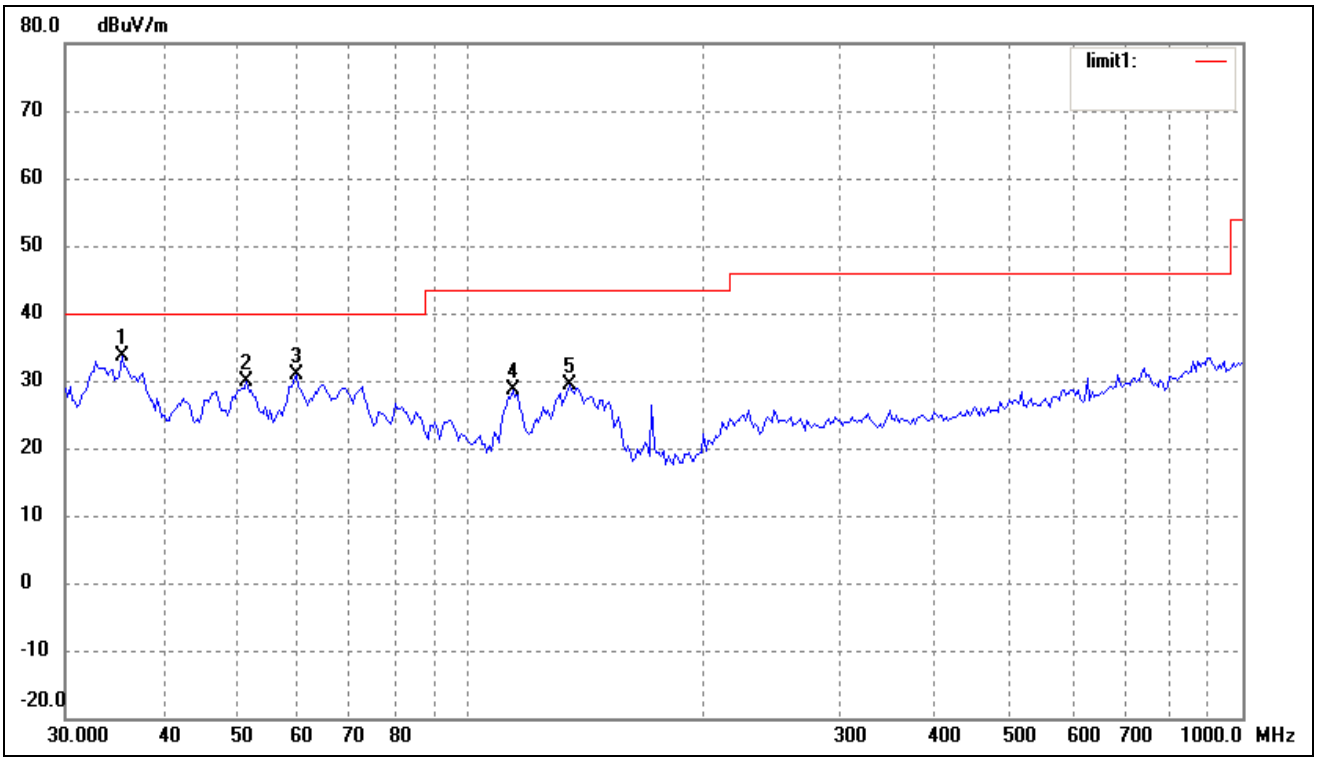
EUT: *Mobile Internet Device*
Tested Model: *S901*
Operating Condition: *802.11g Transmitting Low Channel-2412MHz*
Comment: *DC 7.4V*

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	62.2128	19.94	4.67	24.61	40.00	-15.39	250	100	peak
2	96.0986	19.69	5.14	24.83	43.50	-18.67	125	100	peak
3	110.5687	21.97	5.02	26.99	43.50	-16.51	145	100	peak
4	171.9946	30.23	2.70	32.93	43.50	-10.57	165	100	peak
5	200.6881	31.62	3.72	35.34	43.50	-8.16	185	100	peak
6	258.3264	33.31	6.98	40.29	46.00	-5.71	120	100	peak

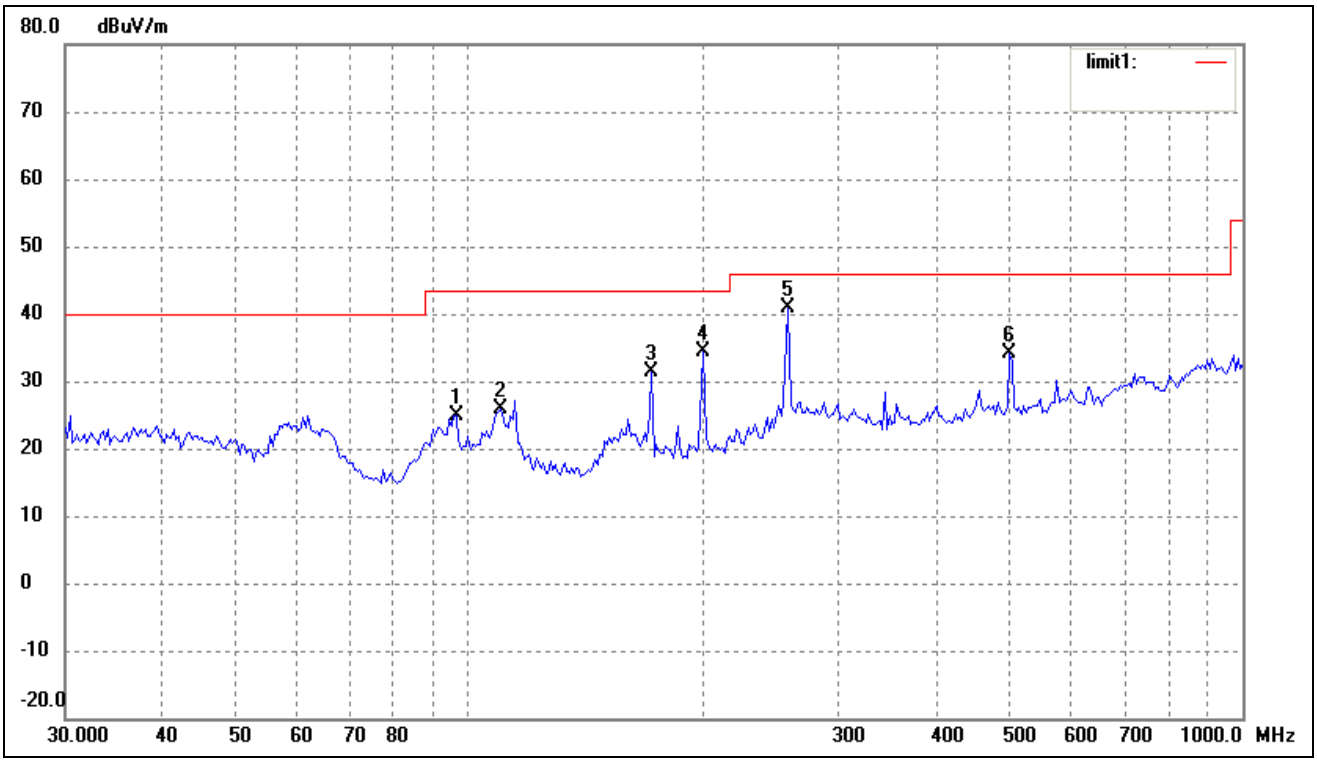
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(。)	(cm)	
1	35.4993	25.06	8.47	33.53	40.00	-6.47	220	100	peak
2	51.4807	23.64	6.14	29.78	40.00	-10.22	125	100	peak
3	59.6493	25.48	5.41	30.89	40.00	-9.11	145	100	peak
4	113.7143	23.85	4.68	28.53	43.50	-14.97	180	100	peak
5	134.5592	26.47	2.84	29.31	43.50	-14.19	135	100	peak

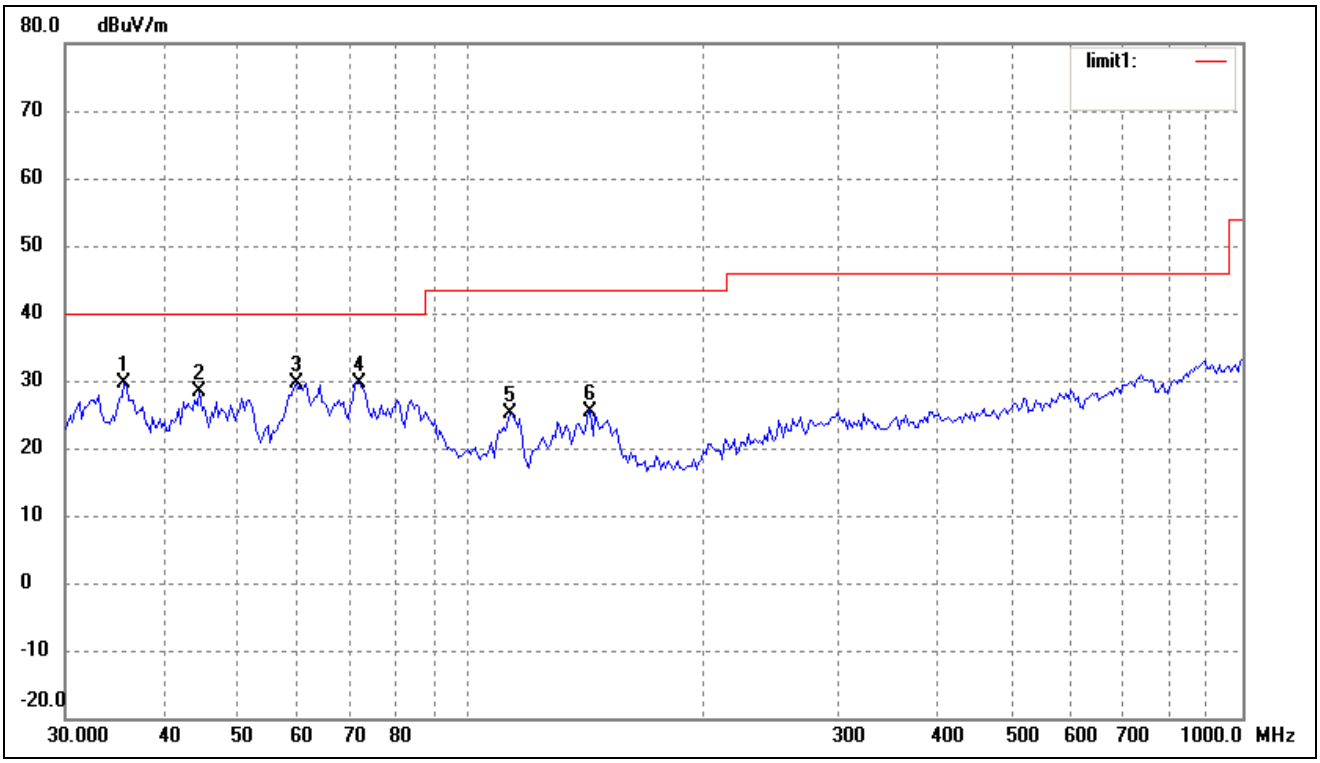
Operating Condition: *802.11g Transmitting Middle Channel-2442MHz*
Comment: *DC 7.4V*

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	96.0986	19.75	5.14	24.89	43.50	-18.61	105	100	peak
2	109.7960	20.67	5.09	25.76	43.50	-17.74	120	100	peak
3	171.9946	28.58	2.70	31.28	43.50	-12.22	142	100	peak
4	200.6881	30.59	3.72	34.31	43.50	-9.19	185	100	peak
5	258.3264	33.83	6.98	40.81	46.00	-5.19	168	100	peak
6	499.4247	23.18	10.83	34.01	46.00	-11.99	255	100	peak

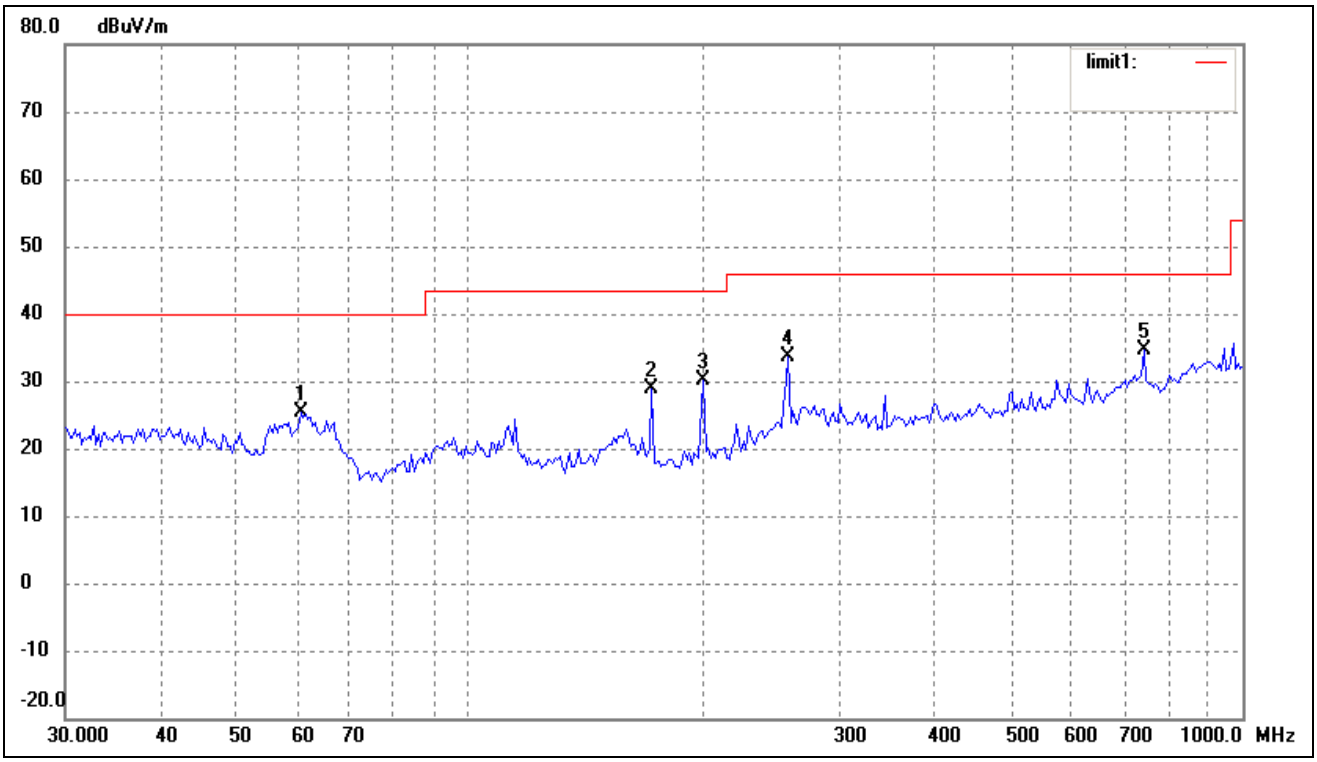
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(。)	(cm)	
1	35.7491	21.02	8.51	29.53	40.00	-10.47	125	100	peak
2	44.7434	20.44	7.84	28.28	40.00	-11.72	145	100	peak
3	59.6493	24.22	5.41	29.63	40.00	-10.37	120	100	peak
4	72.0843	27.74	1.94	29.68	40.00	-10.32	185	100	peak
5	112.9196	20.25	4.77	25.02	43.50	-18.48	140	100	peak
6	143.3261	23.03	2.45	25.48	43.50	-18.02	118	100	peak

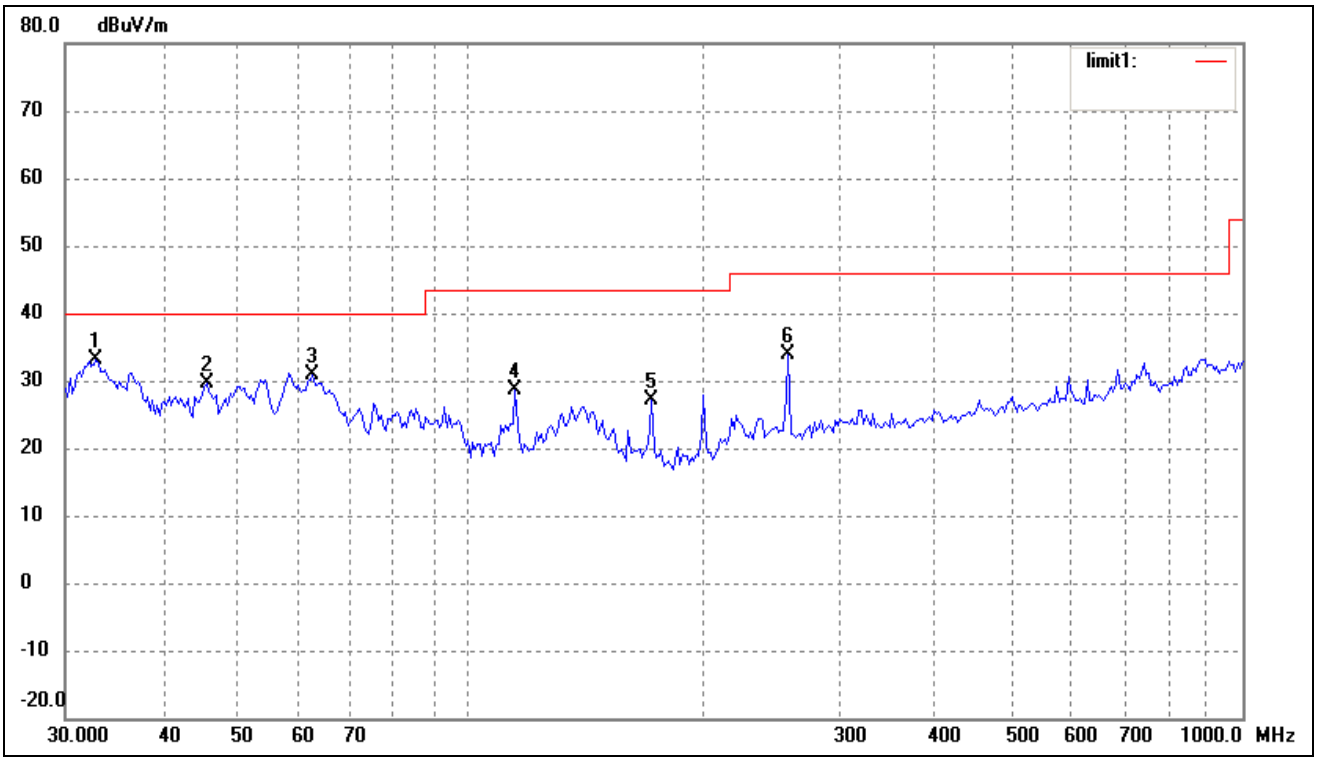
Operating Condition: *802.11g Transmitting High Channel-2472MHz*
Comment: *DC 7.4V*

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	60.4919	20.07	5.22	25.29	40.00	-14.71	165	100	peak
2	171.9946	26.06	2.70	28.76	43.50	-14.74	250	100	peak
3	200.6881	26.51	3.72	30.23	43.50	-13.27	145	100	peak
4	258.3264	26.63	6.98	33.61	46.00	-12.39	185	100	peak
5	744.8661	19.26	15.33	34.59	46.00	-11.41	120	100	peak

Test Specification: *Vertical*

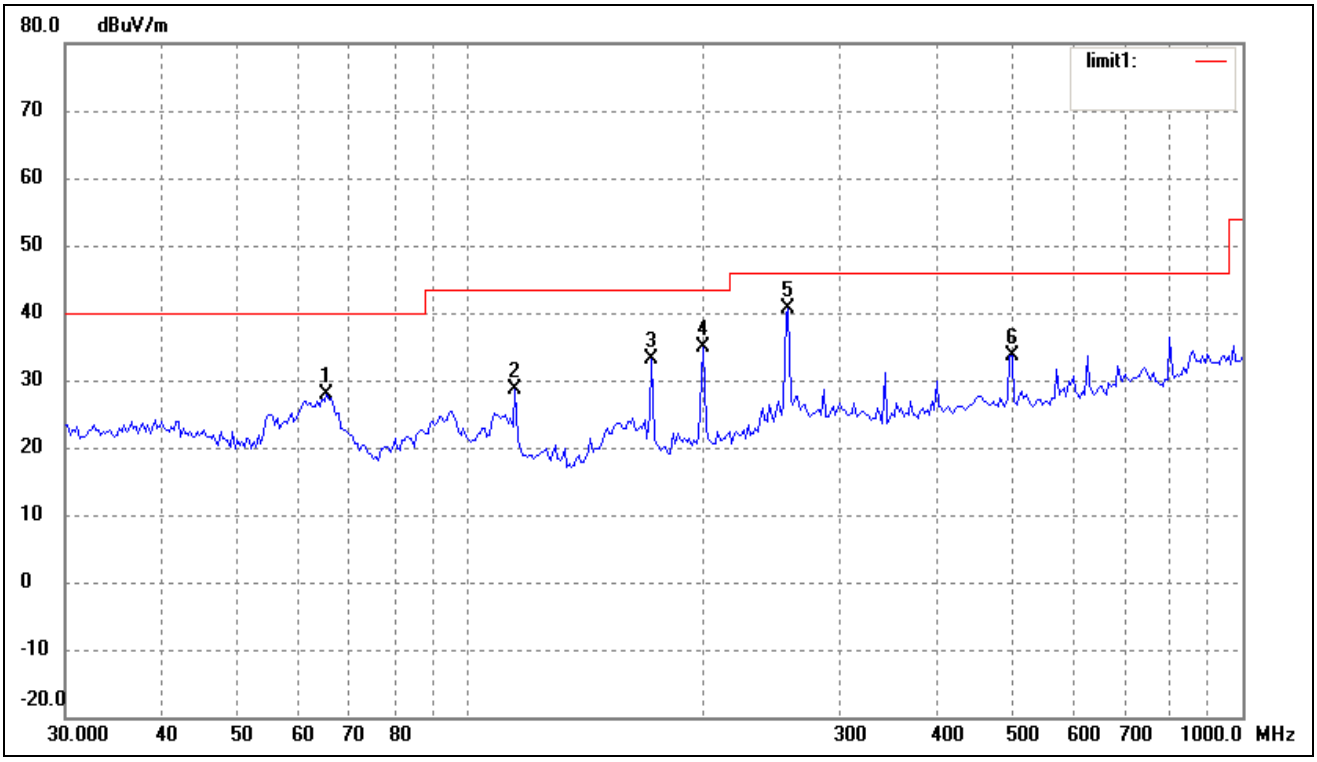


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(。)	(cm)	
1	32.8637	25.03	8.07	33.10	40.00	-6.90	125	100	peak
2	45.6948	21.98	7.55	29.53	40.00	-10.47	145	100	peak
3	62.6507	26.46	4.53	30.99	40.00	-9.01	155	100	peak
4	114.5146	24.14	4.60	28.74	43.50	-14.76	168	100	peak
5	171.9946	24.51	2.70	27.21	43.50	-16.29	120	100	peak
6	258.3264	26.98	6.98	33.96	46.00	-12.04	105	100	peak

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

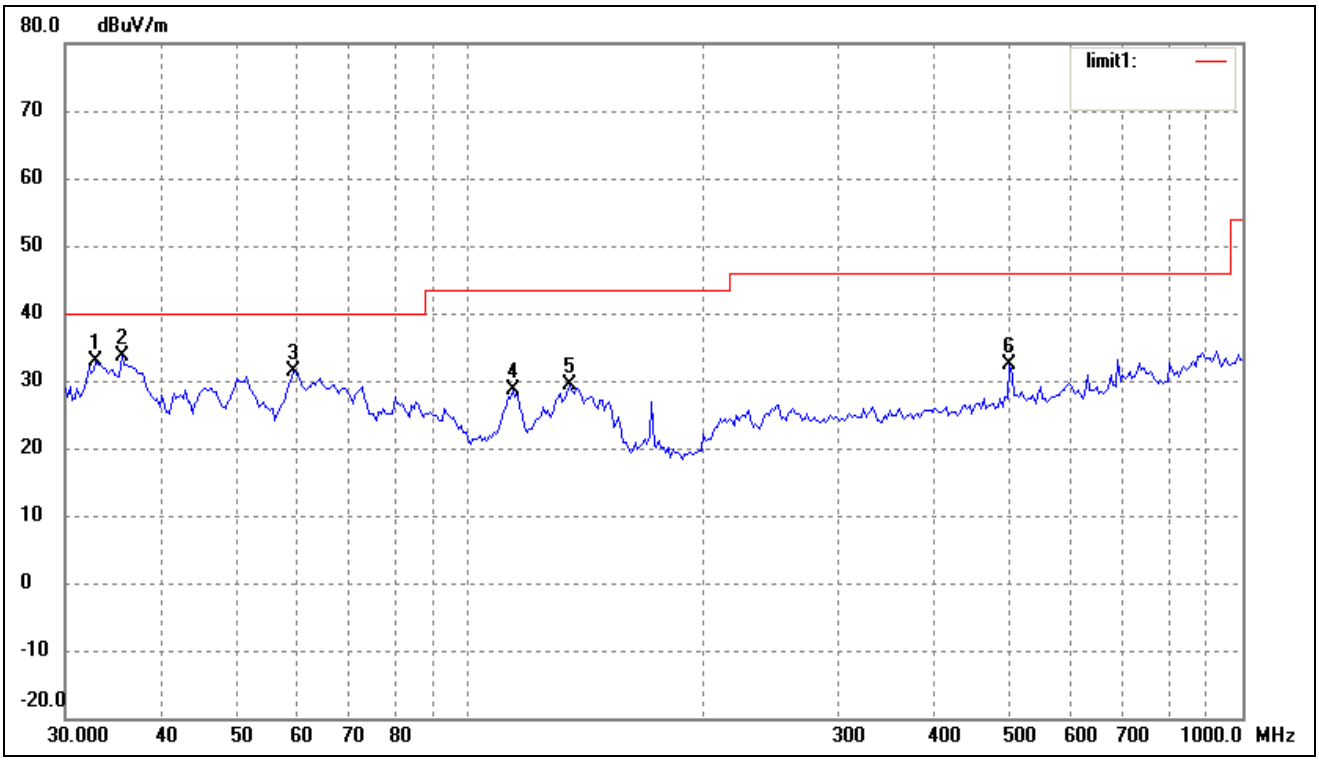
EUT: *Mobile Internet Device*
Tested Model: *S901*
Operating Condition: *802.11n-HT20 Transmitting Low Channel-2412MHz*
Comment: *DC 7.4V*

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	65.3432	24.23	3.67	27.90	40.00	-12.10	180	100	peak
2	114.5146	24.13	4.60	28.73	43.50	-14.77	165	100	peak
3	171.9946	30.47	2.70	33.17	43.50	-10.33	125	100	peak
4	200.6881	31.16	3.72	34.88	43.50	-8.62	140	100	peak
5	258.3264	33.69	6.98	40.67	46.00	-5.33	120	100	peak
6	502.9395	22.76	10.93	33.69	46.00	-12.31	105	100	peak

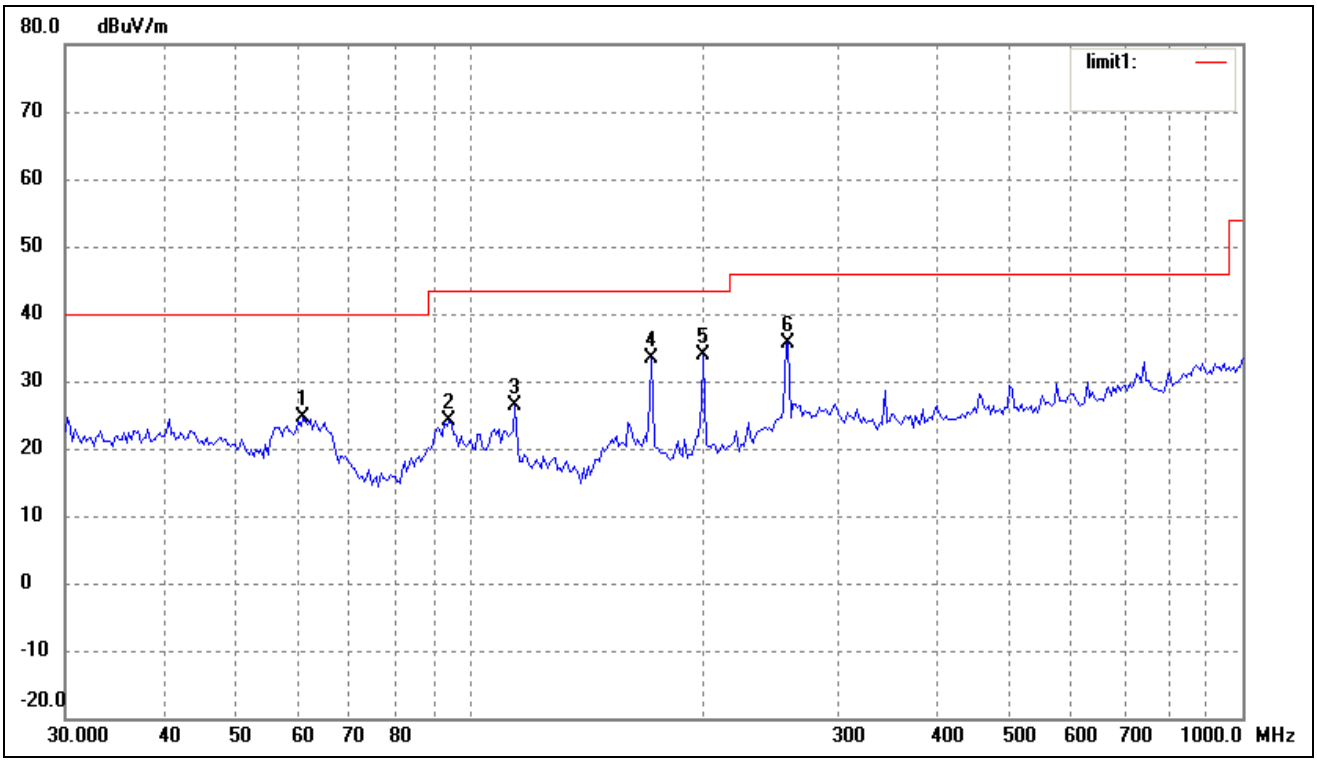
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(。)	(cm)	
1	32.8637	24.81	8.07	32.88	40.00	-7.12	145	100	peak
2	35.4993	25.06	8.47	33.53	40.00	-6.47	120	100	peak
3	59.2325	26.00	5.45	31.45	40.00	-8.55	185	100	peak
4	113.7143	23.85	4.68	28.53	43.50	-14.97	160	100	peak
5	134.5592	26.47	2.84	29.31	43.50	-14.19	135	100	peak
6	499.4247	21.48	10.83	32.31	46.00	-13.69	102	100	peak

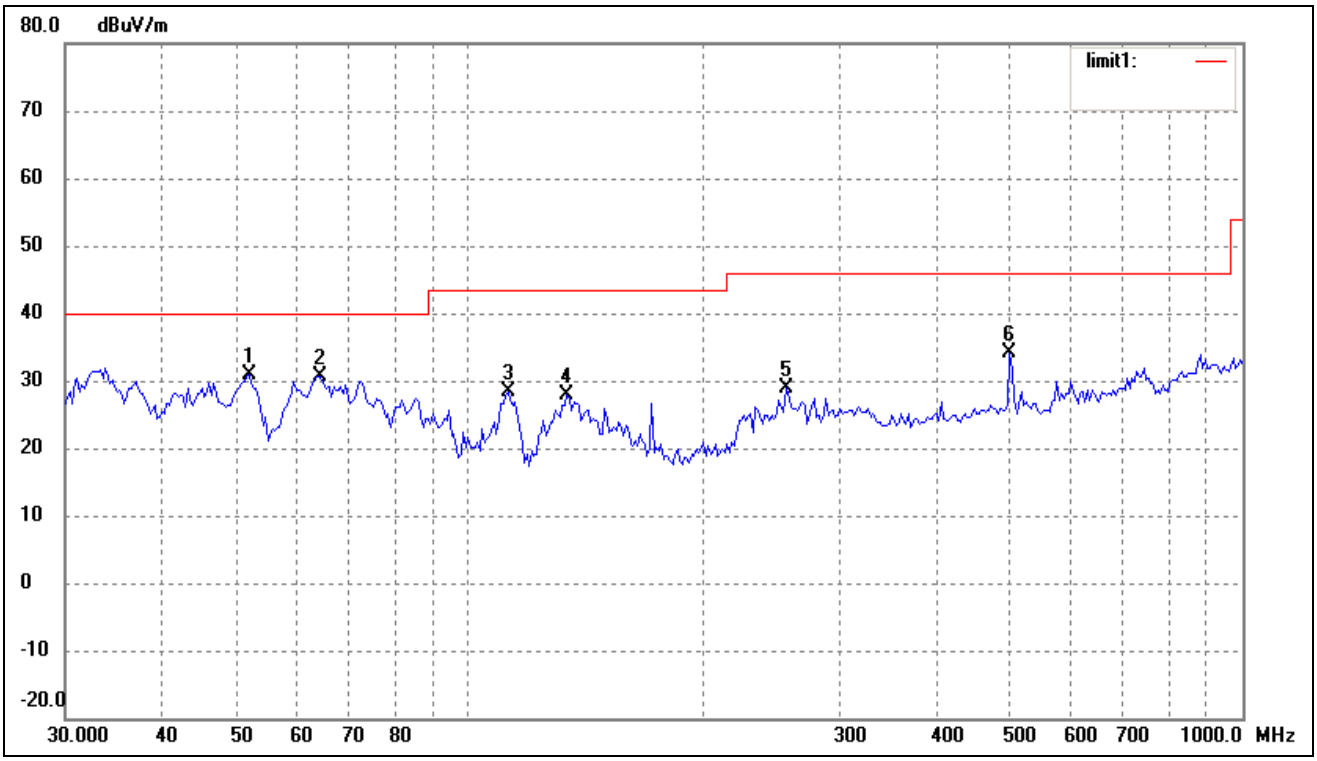
Operating Condition: *802.11n-HT20 Transmitting Middle Channel-2442MHz*
Comment: *DC 7.4V*

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	60.9176	19.60	5.09	24.69	40.00	-15.31	250	100	peak
2	94.0979	19.47	4.64	24.11	43.50	-19.39	158	100	peak
3	114.5146	21.76	4.60	26.36	43.50	-17.14	162	100	peak
4	171.9946	30.58	2.70	33.28	43.50	-10.22	145	100	peak
5	200.6881	30.04	3.72	33.76	43.50	-9.74	132	100	peak
6	258.3264	28.75	6.98	35.73	46.00	-10.27	105	100	peak

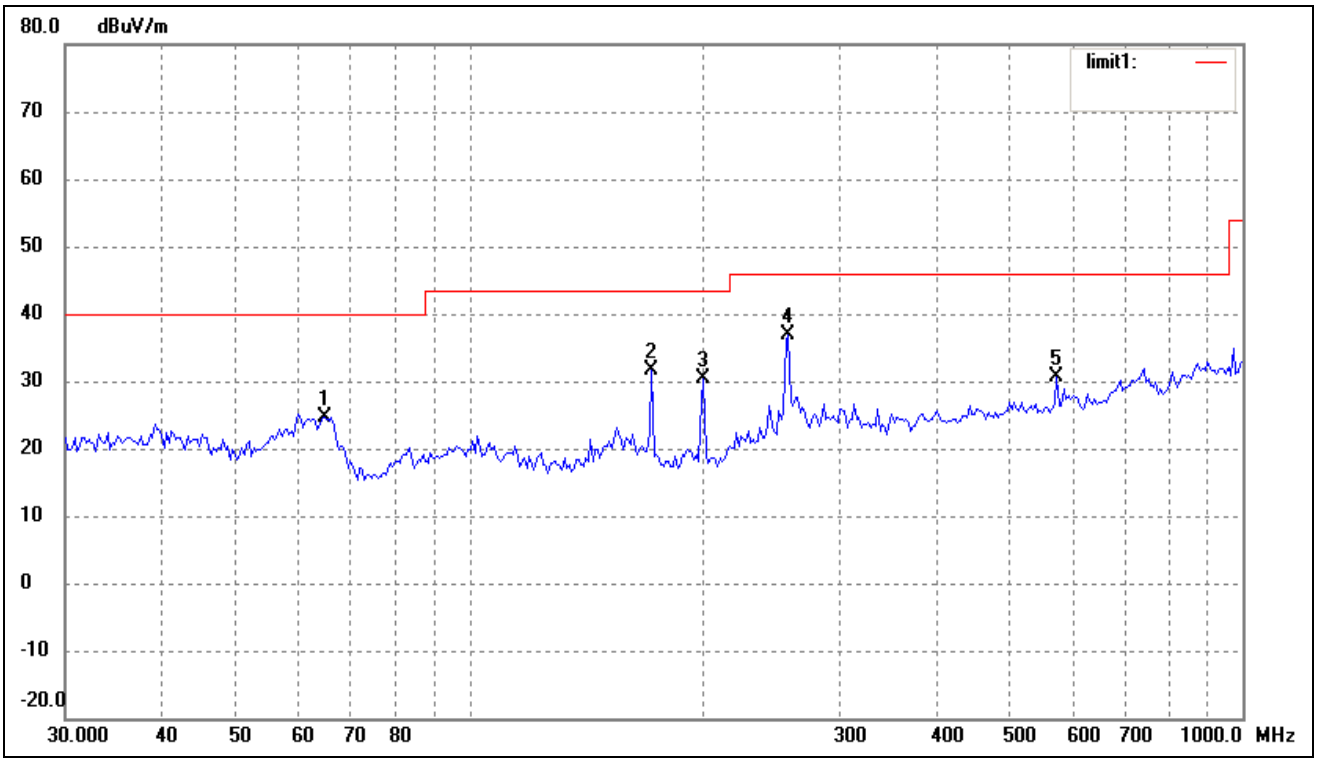
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(。)	(cm)	
1	51.8430	24.70	6.10	30.80	40.00	-9.20	168	100	peak
2	63.9828	26.54	4.11	30.65	40.00	-9.35	152	100	peak
3	112.1305	23.64	4.85	28.49	43.50	-15.01	145	100	peak
4	133.6188	24.85	2.92	27.77	43.50	-15.73	185	100	peak
5	256.5211	22.04	6.92	28.96	46.00	-17.04	130	100	peak
6	499.4247	23.37	10.83	34.20	46.00	-11.80	105	100	peak

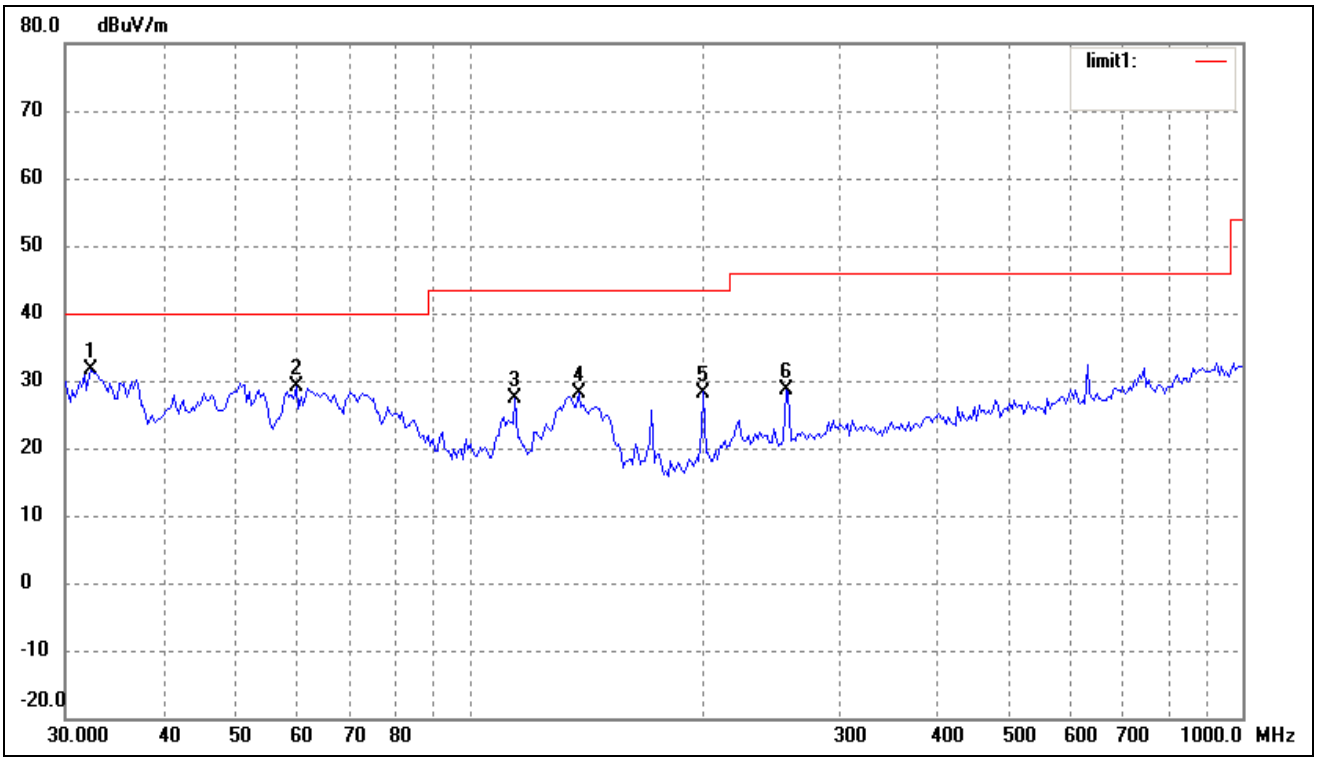
Operating Condition: *802.11n-HT20 Transmitting High Channel-2472MHz*
Comment: *DC 7.4V*

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	64.8865	20.87	3.82	24.69	40.00	-15.31	105	100	peak
2	171.9946	28.88	2.70	31.58	43.50	-11.92	185	100	peak
3	200.6881	26.73	3.72	30.45	43.50	-13.05	125	100	peak
4	258.3264	29.81	6.98	36.79	46.00	-9.21	145	100	peak
5	574.6258	18.22	12.29	30.51	46.00	-15.49	160	100	peak

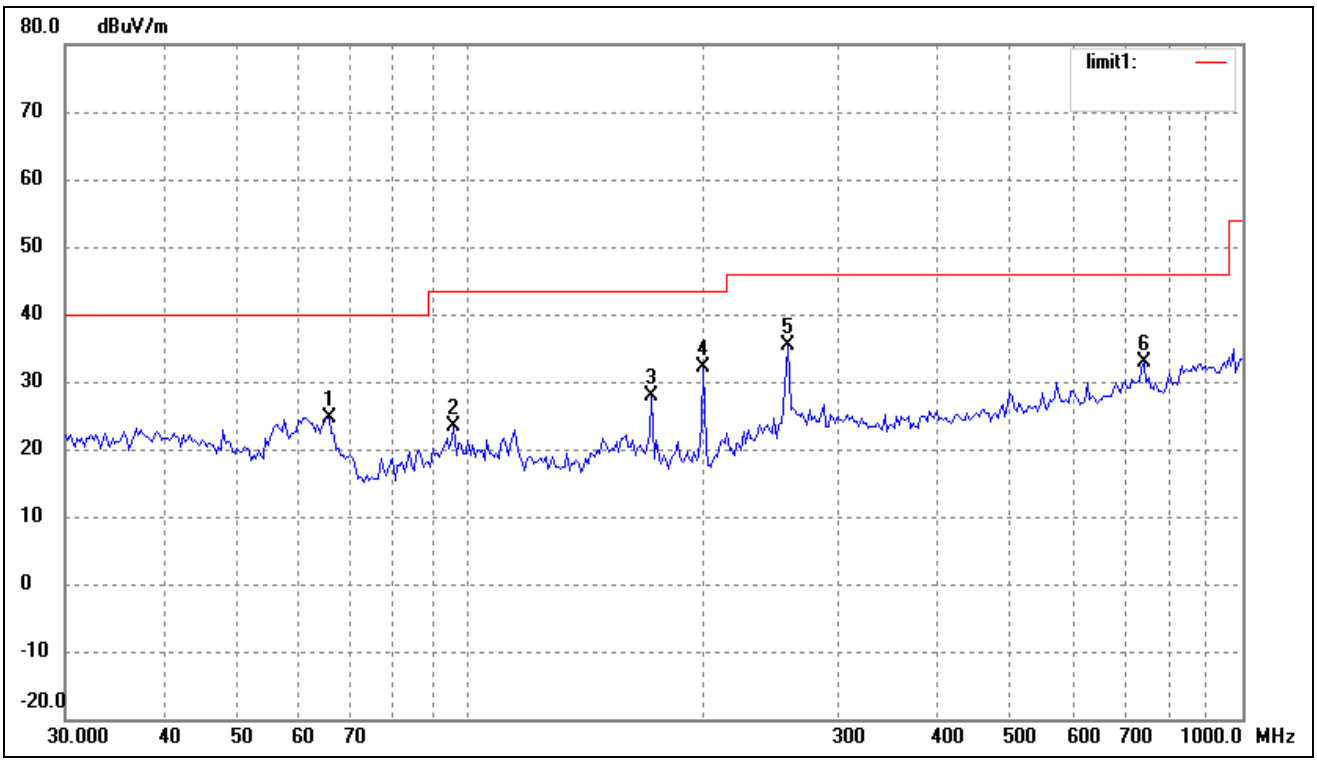
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(。)	(cm)	
1	32.4059	23.68	8.00	31.68	40.00	-8.32	120	100	peak
2	59.6493	23.68	5.41	29.09	40.00	-10.91	155	100	peak
3	114.5146	22.78	4.60	27.38	43.50	-16.12	148	100	peak
4	138.3873	25.50	2.54	28.04	43.50	-15.46	168	100	peak
5	200.6881	24.53	3.72	28.25	43.50	-15.25	175	100	peak
6	256.5211	21.82	6.92	28.74	46.00	-17.26	195	100	peak

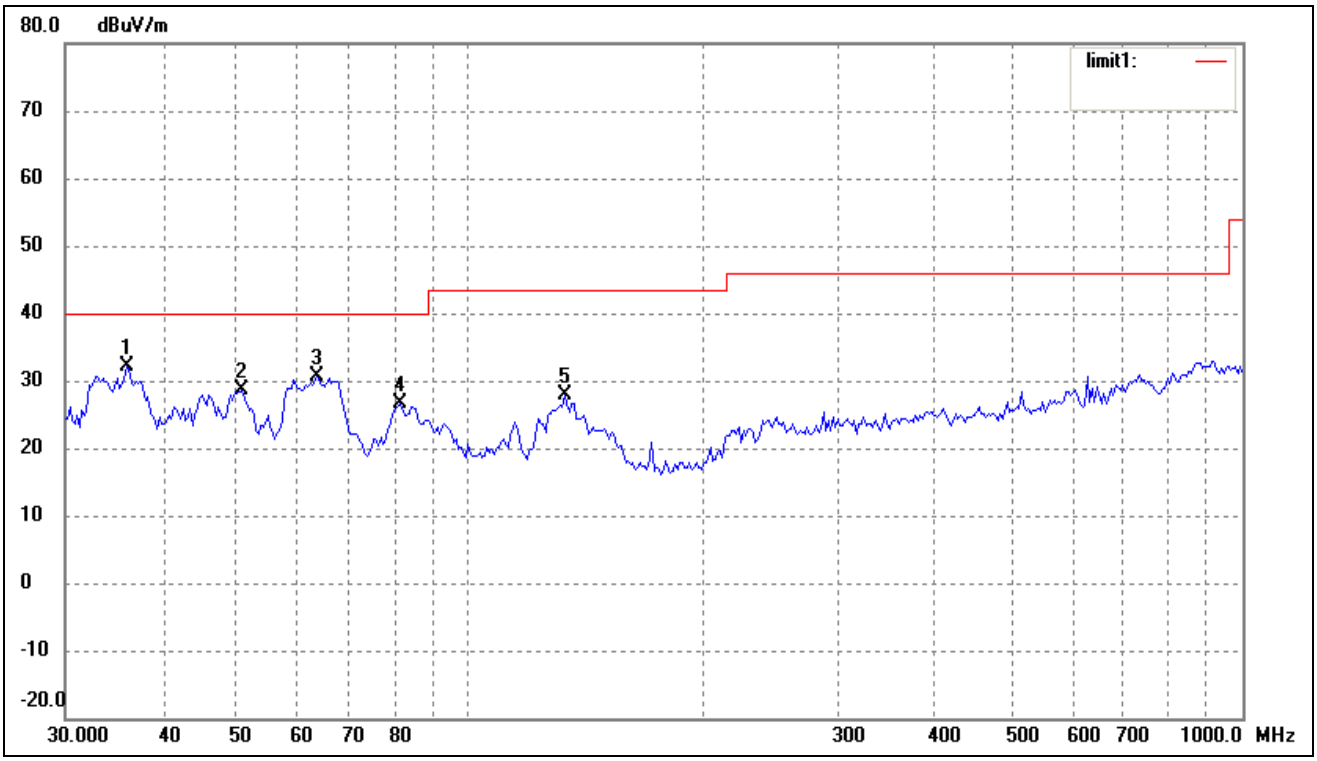
EUT: *Mobile Internet Device*
Tested Model: *S901*
Operating Condition: *802.11n-HT40 Transmitting Low Channel-2422MHz*
Comment: *DC 7.4V*

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	65.8031	21.19	3.52	24.71	40.00	-15.29	188	100	peak
2	95.4270	18.37	4.98	23.35	43.50	-20.15	156	100	peak
3	171.9946	25.26	2.70	27.96	43.50	-15.54	125	100	peak
4	200.6881	28.38	3.72	32.10	43.50	-11.40	145	100	peak
5	258.3264	28.44	6.98	35.42	46.00	-10.58	130	100	peak
6	744.8661	17.47	15.33	32.80	46.00	-13.20	102	100	peak

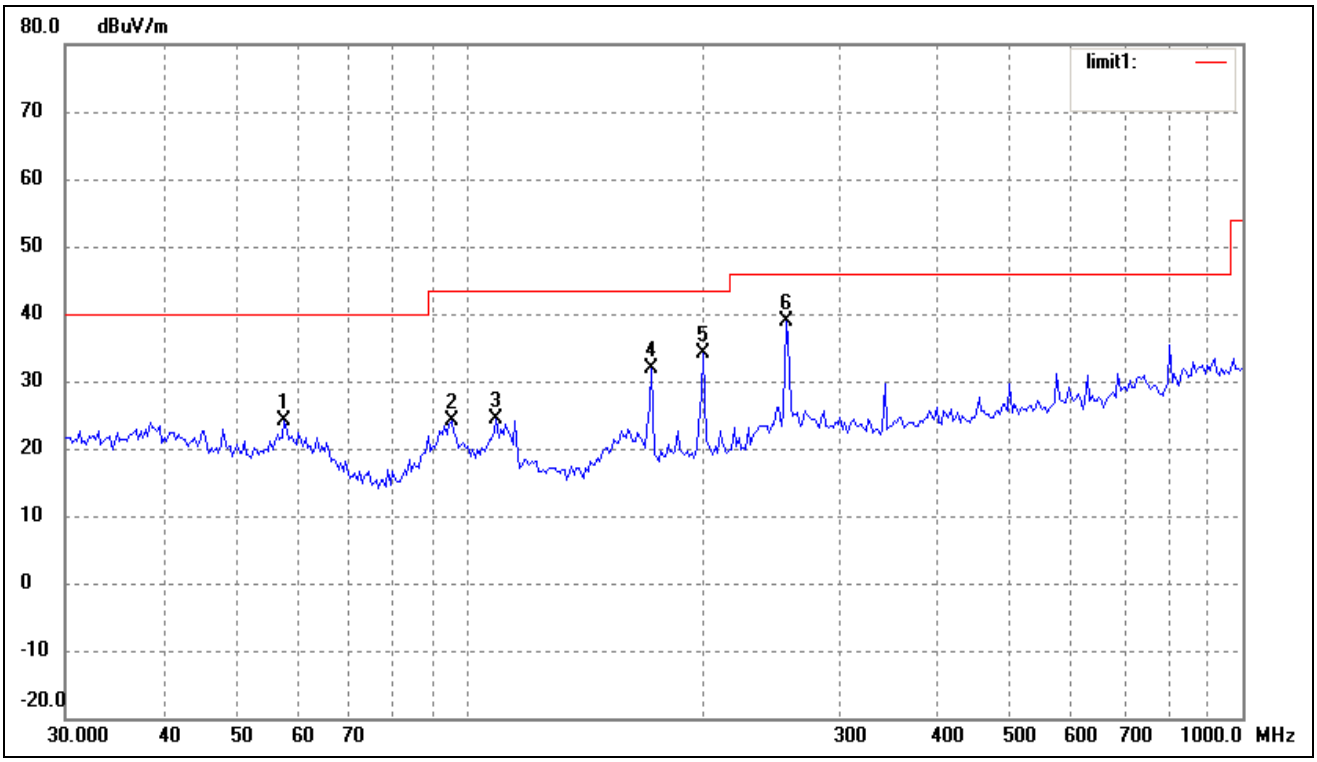
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(。)	(cm)	
1	36.0007	23.58	8.56	32.14	40.00	-7.86	145	100	peak
2	50.7637	22.37	6.19	28.56	40.00	-11.44	125	100	peak
3	63.5356	26.50	4.25	30.75	40.00	-9.25	105	100	peak
4	81.2117	25.26	1.32	26.58	40.00	-13.42	110	100	peak
5	132.6850	24.79	3.00	27.79	43.50	-15.71	185	100	peak

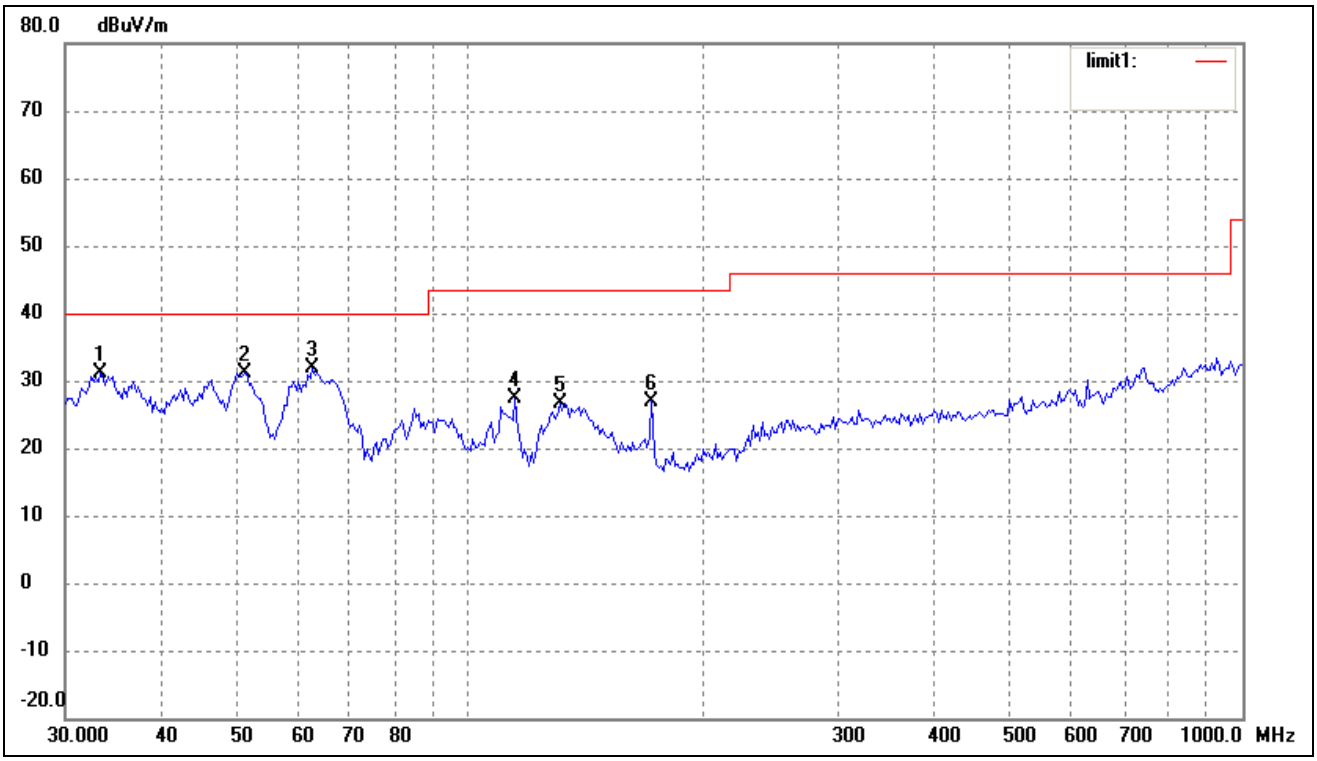
Operating Condition: *802.11n-HT40 Transmitting Middle Channel-2442MHz*
Comment: *DC 7.4V*

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	57.5939	18.55	5.59	24.14	40.00	-15.86	152	100	peak
2	94.7601	19.41	4.81	24.22	43.50	-19.28	125	100	peak
3	108.2667	19.09	5.26	24.35	43.50	-19.15	145	100	peak
4	171.9946	29.12	2.70	31.82	43.50	-11.68	160	100	peak
5	200.6881	30.33	3.72	34.05	43.50	-9.45	185	100	peak
6	256.5211	31.89	6.92	38.81	46.00	-7.19	105	100	peak

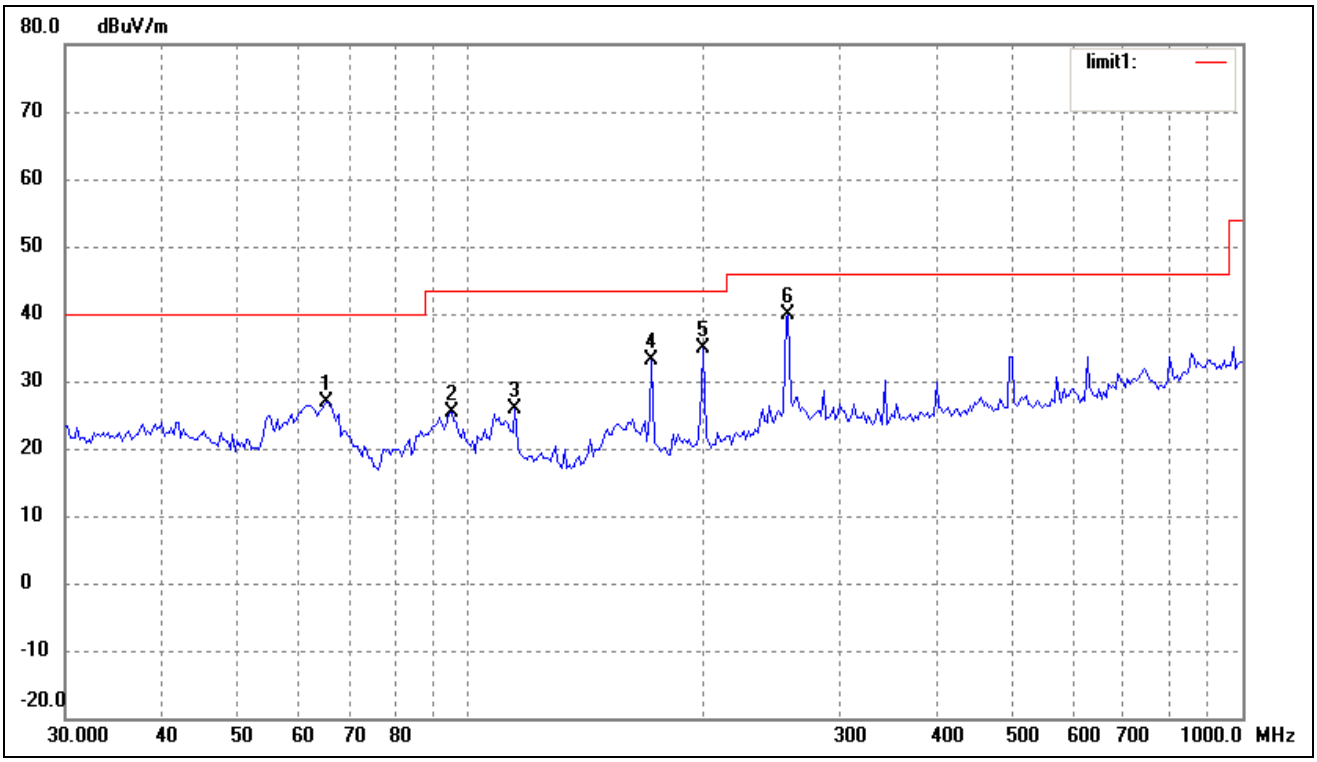
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(。)	(cm)	
1	33.3279	23.07	8.14	31.21	40.00	-8.79	185	100	peak
2	51.1209	24.98	6.16	31.14	40.00	-8.86	105	100	peak
3	62.6507	27.33	4.53	31.86	40.00	-8.14	125	100	peak
4	114.5146	22.69	4.60	27.29	43.50	-16.21	140	100	peak
5	130.8369	23.58	3.15	26.73	43.50	-16.77	165	100	peak
6	171.9946	24.30	2.70	27.00	43.50	-16.50	130	100	peak

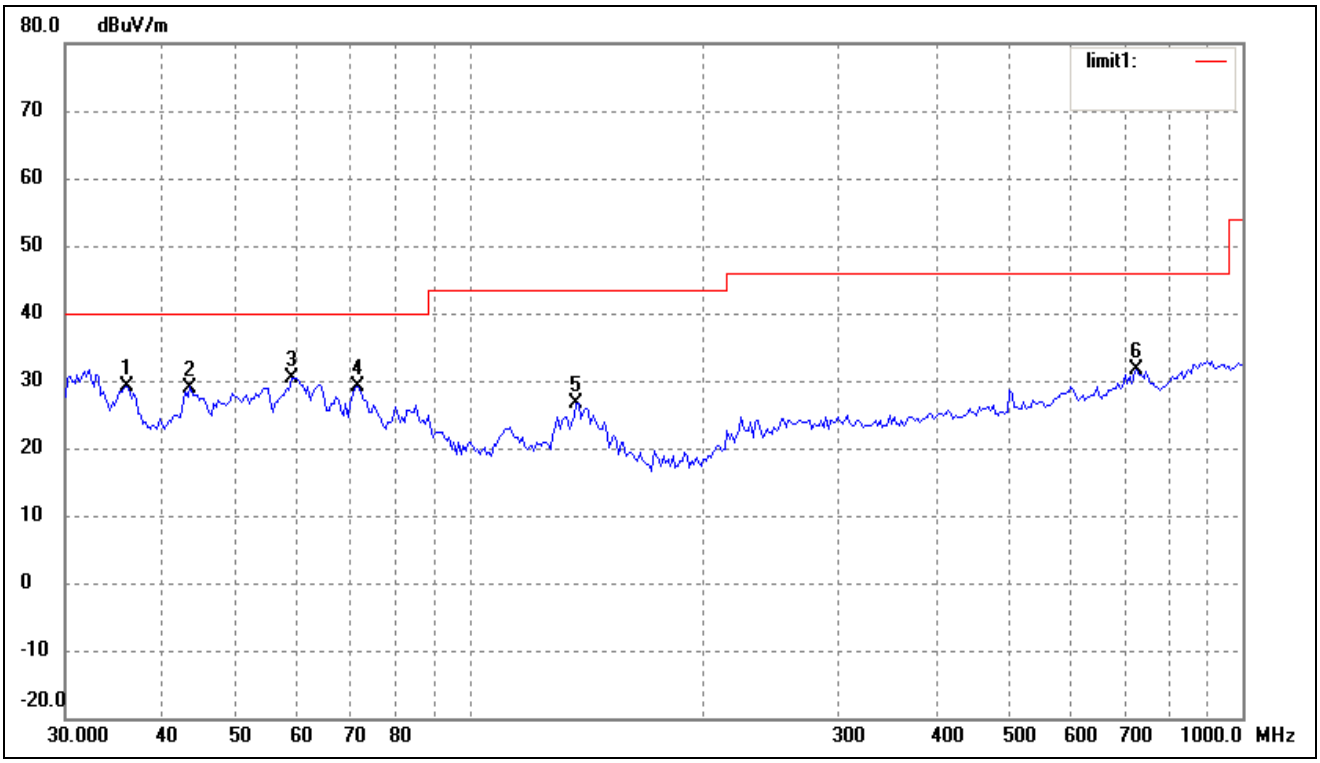
Operating Condition: *802.11n-HT40 Transmitting High Channel-2462MHz*
Comment: *DC 7.4V*

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	65.3432	23.10	3.67	26.77	40.00	-13.23	125	100	peak
2	94.7601	20.64	4.81	25.45	43.50	-18.05	145	100	peak
3	114.5146	21.23	4.60	25.83	43.50	-17.67	185	100	peak
4	171.9946	30.47	2.70	33.17	43.50	-10.33	160	100	peak
5	200.6881	31.05	3.72	34.77	43.50	-8.73	142	100	peak
6	258.3264	32.85	6.98	39.83	46.00	-6.17	105	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	36.0007	20.64	8.56	29.20	40.00	-10.80	168	100	peak
2	43.5057	20.80	8.20	29.00	40.00	-11.00	155	100	peak
3	58.8185	24.87	5.49	30.36	40.00	-9.64	125	100	peak
4	71.5806	27.07	2.00	29.07	40.00	-10.93	145	100	peak
5	137.4202	24.02	2.61	26.63	43.50	-16.87	132	100	peak
6	729.3583	16.63	14.92	31.55	46.00	-14.45	105	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	44.12	0.57	44.69	74.00	-29.31	H	PK
4824	33.52	0.57	34.09	54.00	-19.91	H	AV
7236	46.84	3.69	50.53	74.00	-23.47	H	PK
7236	38.45	3.69	42.14	54.00	-11.86	H	AV
4824	43.20	0.57	43.77	74.00	-30.23	V	PK
4824	33.63	0.57	34.20	54.00	-19.80	V	AV
7236	48.50	3.69	52.19	74.00	-21.81	V	PK
7236	37.19	3.69	40.88	54.00	-13.12	V	AV
Middle Channel-2442MHz							
4884	44.90	0.66	45.56	74.00	-28.44	H	PK
4884	32.01	0.66	32.67	54.00	-21.33	H	AV
7326	47.95	3.76	51.71	74.00	-22.29	H	PK
7326	36.41	3.76	40.17	54.00	-13.83	H	AV
4884	44.41	0.66	45.07	74.00	-28.93	V	PK
4884	31.99	0.66	32.65	54.00	-21.35	V	AV
7326	48.51	3.76	52.27	74.00	-21.73	V	PK
7326	37.4	3.76	41.16	54.00	-12.84	V	AV
High Channel-2472MHz							
4944	43.17	0.74	43.91	74.00	-30.09	H	PK
4944	32.14	0.74	32.88	54.00	-21.12	H	AV
7416	47.74	3.83	51.57	74.00	-22.43	H	PK
7416	35.71	3.83	39.54	54.00	-14.46	H	AV
4944	43.52	0.74	44.26	74.00	-29.74	V	PK
4944	32.17	0.74	32.91	54.00	-21.09	V	AV
7416	49.58	3.83	53.41	74.00	-20.59	V	PK
7416	36.97	3.83	40.80	54.00	-13.20	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	43.22	0.57	43.79	74.00	-30.21	H	PK
4824	33.44	0.57	34.01	54.00	-19.99	H	AV
7236	51.85	3.69	55.54	74.00	-18.46	H	PK
7236	38.08	3.69	41.77	54.00	-12.23	H	AV
4824	43.41	0.57	43.98	74.00	-30.02	V	PK
4824	33.42	0.57	33.99	54.00	-20.01	V	AV
7236	51.08	3.69	54.77	74.00	-19.23	V	PK
7236	37.86	3.69	41.55	54.00	-12.45	V	AV
Middle Channel-2442MHz							
4884	44.60	0.66	45.26	74.00	-28.74	H	PK
4884	32.02	0.66	32.68	54.00	-21.32	H	AV
7326	50.42	3.76	54.18	74.00	-19.82	H	PK
7326	36.66	3.76	40.42	54.00	-13.58	H	AV
4884	43.90	0.66	44.56	74.00	-29.44	V	PK
4884	31.96	0.66	32.62	54.00	-21.38	V	AV
7326	53.12	3.76	56.88	74.00	-17.12	V	PK
7326	38.75	3.76	42.51	54.00	-11.49	V	AV
High Channel-2472MHz							
4944	43.28	0.74	44.02	74.00	-29.98	H	PK
4944	31.87	0.74	32.61	54.00	-21.39	H	AV
7416	48.11	3.83	51.94	74.00	-22.06	H	PK
7416	37.07	3.83	40.90	54.00	-13.10	H	AV
4944	41.50	0.74	42.24	74.00	-31.76	V	PK
4944	32.04	0.74	32.78	54.00	-21.22	V	AV
7416	48.19	3.83	52.02	74.00	-21.98	V	PK
7416	36.98	3.83	40.81	54.00	-13.19	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	42.52	0.57	43.09	74.00	-30.91	H	PK
4824	33.62	0.57	34.19	54.00	-19.81	H	AV
7236	36.52	3.69	40.21	74.00	-33.79	H	PK
7236	34.01	3.69	37.70	54.00	-16.30	H	AV
4824	43.82	0.57	44.39	74.00	-29.61	V	PK
4824	33.65	0.57	34.22	54.00	-19.78	V	AV
7236	54.17	3.69	57.86	74.00	-16.14	V	PK
7236	37.36	3.69	41.05	54.00	-12.95	V	AV
Middle Channel-2442MHz							
4884	45.17	0.66	45.83	74.00	-28.17	H	PK
4884	31.94	0.66	32.60	54.00	-21.40	H	AV
7326	48.62	3.76	52.38	74.00	-21.62	H	PK
7326	38.35	3.76	42.11	54.00	-11.89	H	AV
4884	44.60	0.66	45.26	74.00	-28.74	V	PK
4884	32.02	0.66	32.68	54.00	-21.32	V	AV
7326	53.52	3.76	57.28	74.00	-16.72	V	PK
7326	38.46	3.76	42.22	54.00	-11.78	V	AV
High Channel-2472MHz							
4944	42.76	0.74	43.50	74.00	-30.50	H	PK
4944	31.98	0.74	32.72	54.00	-21.28	H	AV
7416	50.45	3.83	54.28	74.00	-19.72	H	PK
7416	38.35	3.83	42.18	54.00	-11.82	H	AV
4944	42.40	0.74	43.14	74.00	-30.86	V	PK
4944	32.14	0.74	32.88	54.00	-21.12	V	AV
7416	54.24	3.83	58.07	74.00	-15.93	V	PK
7416	39.20	3.83	43.03	54.00	-10.97	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	42.52	0.60	43.12	74.00	-30.88	H	PK
4844	33.30	0.60	33.9	54.00	-20.10	H	AV
7266	46.53	3.72	50.25	74.00	-23.75	H	PK
7266	34.11	3.72	37.83	54.00	-16.17	H	AV
4844	43.25	0.60	43.85	74.00	-30.15	V	PK
4844	31.56	0.60	32.16	54.00	-21.84	V	AV
7266	44.36	3.72	48.08	74.00	-25.92	V	PK
7266	43.32	3.72	47.04	54.00	-6.96	V	AV
Middle Channel-2442MHz							
4884	44.21	0.66	44.87	74.00	-29.13	H	PK
4884	32.01	0.66	32.67	54.00	-21.33	H	AV
7326	35.98	3.76	39.74	74.00	-34.26	H	PK
7326	24.30	3.76	28.06	54.00	-25.94	H	AV
4884	53.86	0.66	54.52	74.00	-19.48	V	PK
4884	41.84	0.66	42.50	54.00	-11.5	V	AV
7326	45.92	3.76	49.68	74.00	-24.32	V	PK
7326	34.31	3.76	38.07	54.00	-15.93	V	AV
High Channel-2462MHz							
4924	43.62	0.72	44.34	74.00	-29.66	H	PK
4924	32.04	0.72	32.76	54.00	-21.24	H	AV
7386	35.25	3.81	39.06	74.00	-34.94	H	PK
7386	24.11	3.81	27.92	54.00	-26.08	H	AV
4924	52.63	0.72	53.35	74.00	-20.65	V	PK
4924	43.24	0.72	43.96	54.00	-10.04	V	AV
7386	45.03	3.81	48.84	74.00	-25.16	V	PK
7386	43.31	3.81	47.12	54.00	-6.88	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 ≥ 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

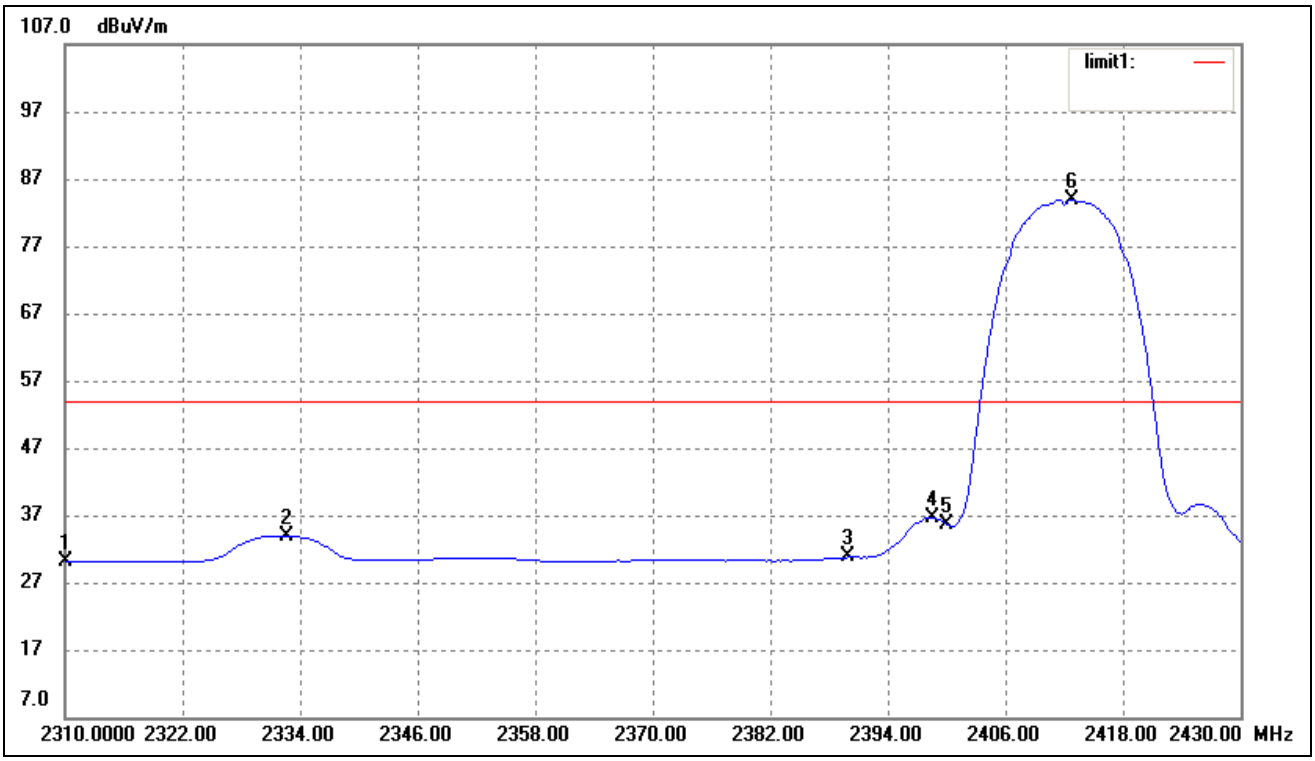
Temperature:	23°C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

9.5 Summary of Test Results/Plots

Please refer to the test plots as below.

802.11b-Lowest Bandedge

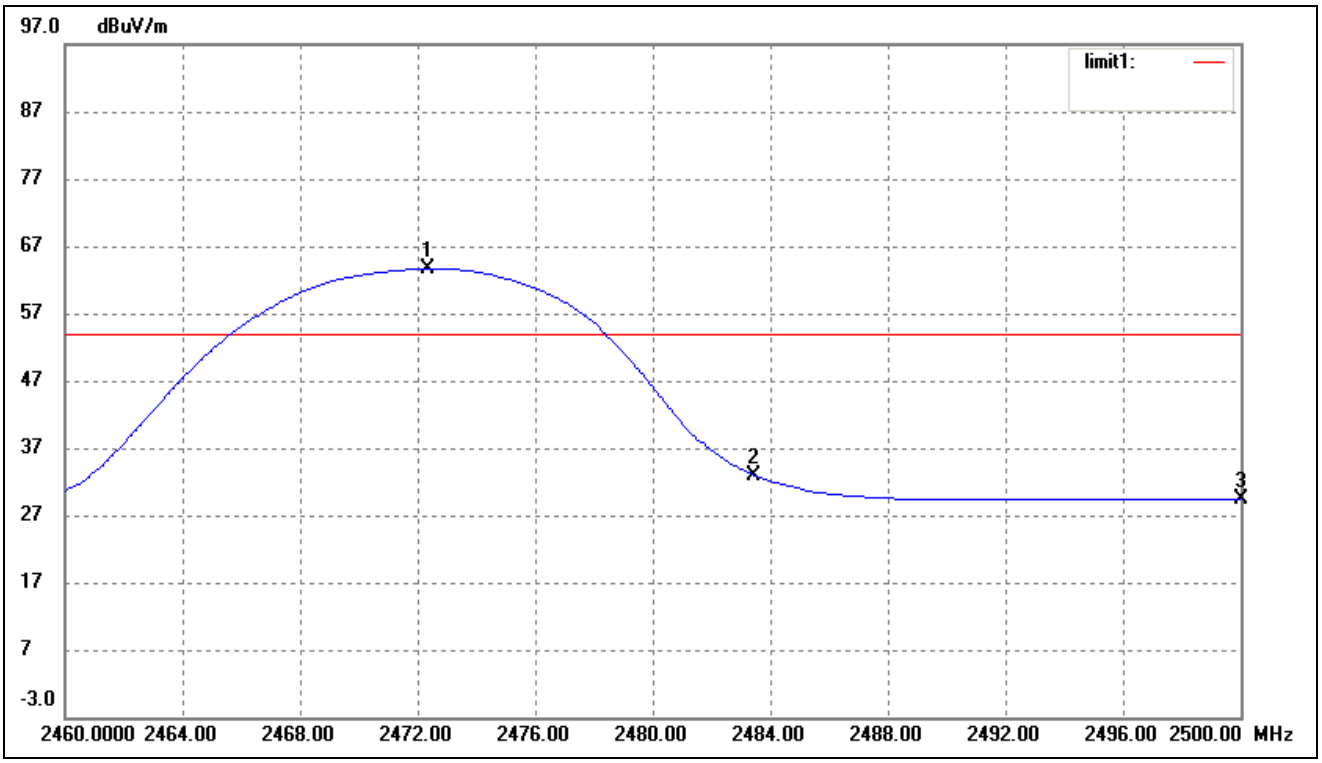
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	33.80	-3.69	30.11	54.00	-23.89	Average Detector
	2310.000	46.47	-3.69	42.78	74.00	-31.22	Peak Detector
2	2332.560	37.59	-3.64	33.95	54.00	-20.05	Average Detector
	2332.560	46.95	-3.64	43.31	74.00	30.69	Peak Detector
3	2390.000	34.26	-3.49	30.77	54.00	-23.23	Average Detector
	2390.000	46.55	-3.49	43.06	74.00	-30.94	Peak Detector
4	2398.560	40.17	-3.46	36.71	54.00	-17.29	Average Detector
	2398.560	51.62	-3.46	48.16	74.00	-25.84	Peak Detector
5	2400.000	39.01	-3.46	35.55	Delta=48.37dBc		Average Detector
6	2412.720	87.34	-3.42	83.92			Average Detector

802.11b-Highest Bandedge

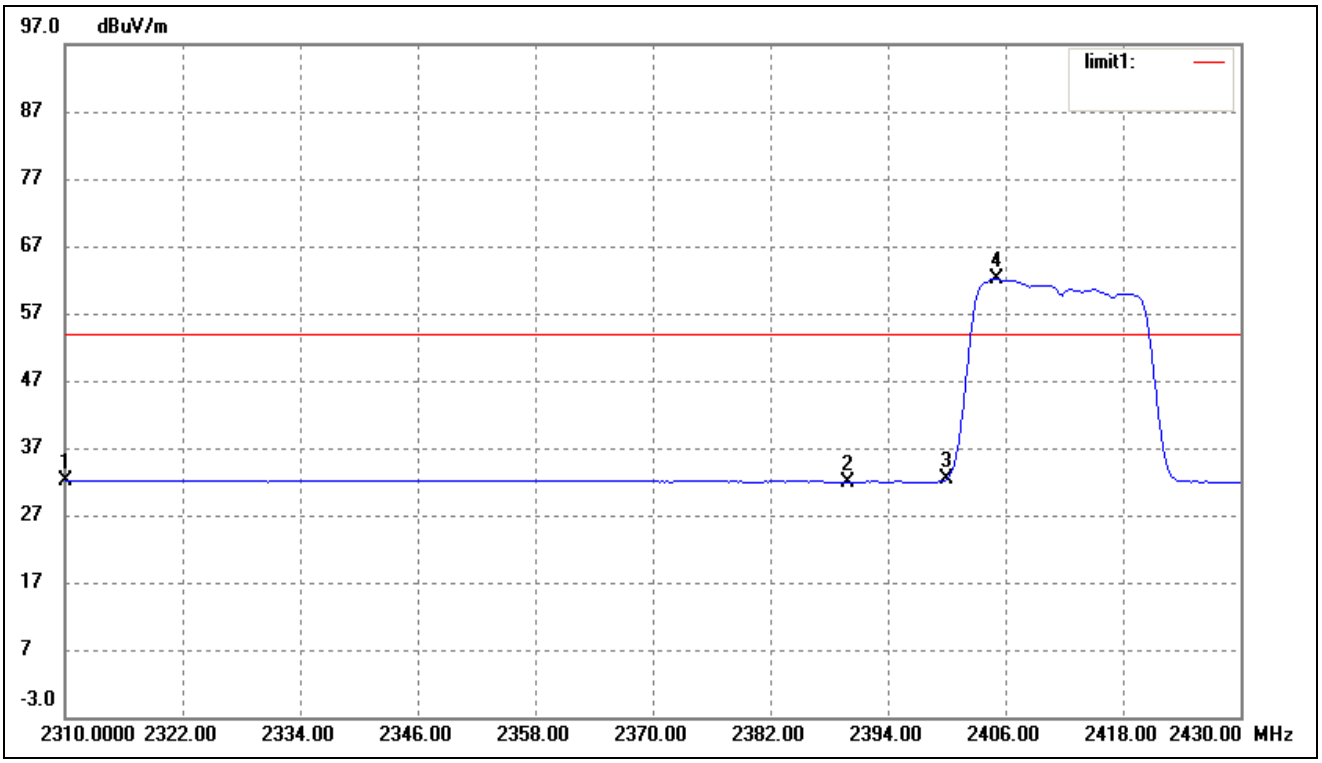
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2472.331	67.04	-3.34	63.70	/	/	Average Detector
	2473.331	78.23	-3.34	74.89	/	/	Peak Detector
2	2483.500	Delta=32.31dBc		31.39	54.00	-22.61	Average Detector
	2483.500			42.58	74.00	-31.42	Peak Detector
3	2500.000	32.65	-3.28	29.37	54.00	-24.63	Average Detector
	2500.000	48.95	-3.28	45.67	74.00	-28.33	Peak Detector

802.11g-Lowest Bandedge

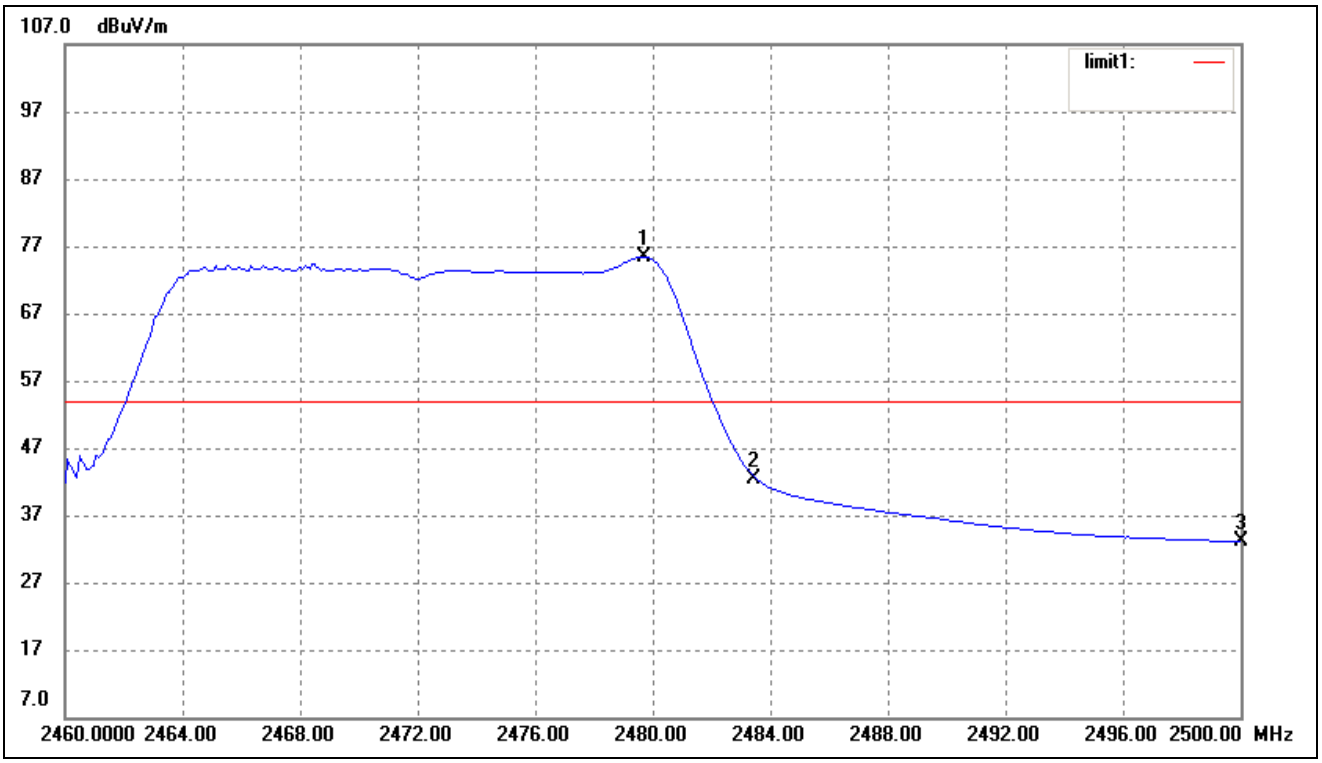
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	35.54	-3.69	31.85	54.00	-22.15	Average Detector
	2310.000	48.58	-3.69	44.89	74.00	-29.11	Peak Detector
2	2390.000	36.33	-3.49	32.84	54.00	-21.16	Average Detector
	2390.000	48.97	-3.49	45.48	74.00	-28.52	Peak Detector
3	2400.000	42.00	-3.46	38.54	Delta=33.2dBc		Average Detector
4	2417.040	75.15	-3.41	71.74			Average Detector

802.11g-Highest Bandedge

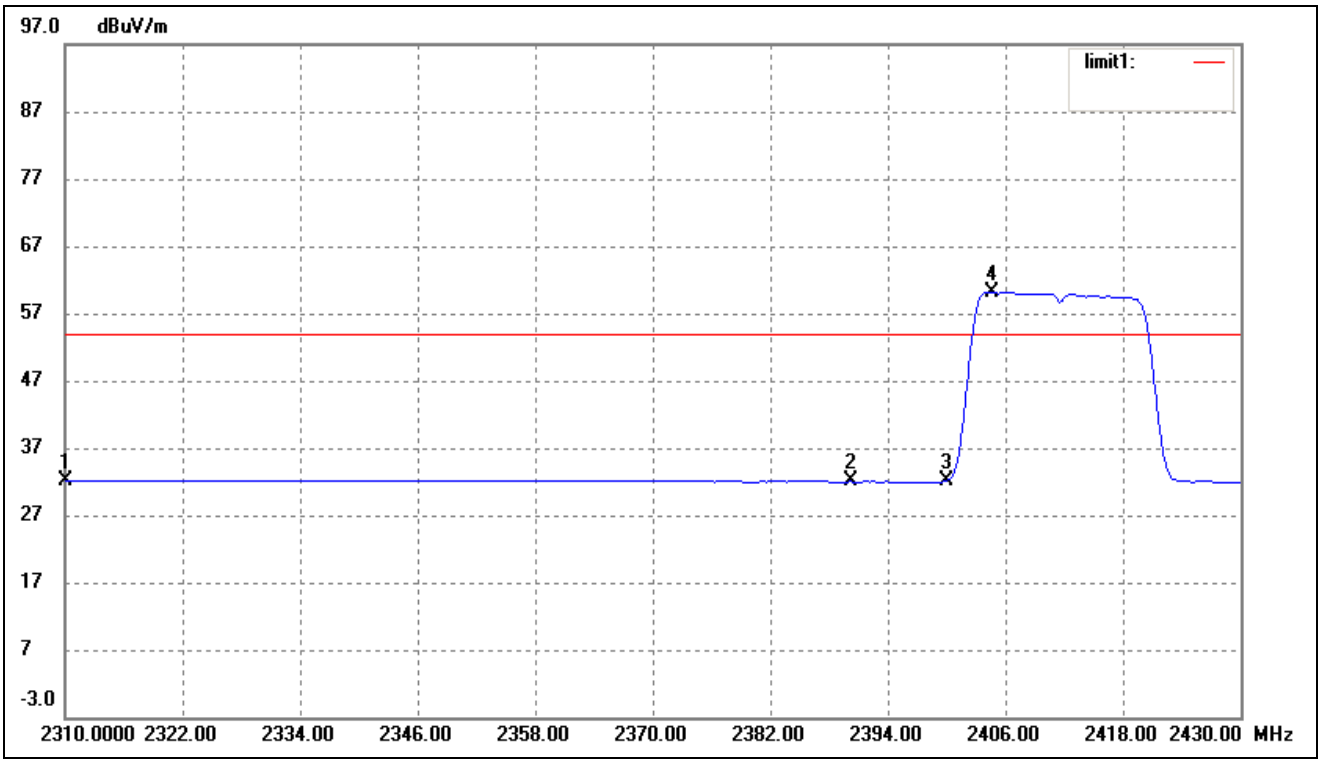
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2479.680	78.66	-3.25	75.41	/	/	Average Detector
	2468.080	99.79	-3.28	96.51	/	/	Peak Detector
2	2483.500	Delta=39.57dBc		35.84	54.00	-18.16	Average Detector
	2483.500			56.94	74.00	-17.06	Peak Detector
3	2500.000	36.22	-3.20	33.02	54.00	-20.98	Average Detector
	2500.000	50.38	-3.20	47.18	74.00	-26.82	Peak Detector

802.11n-HT20-Lowest Bandedge

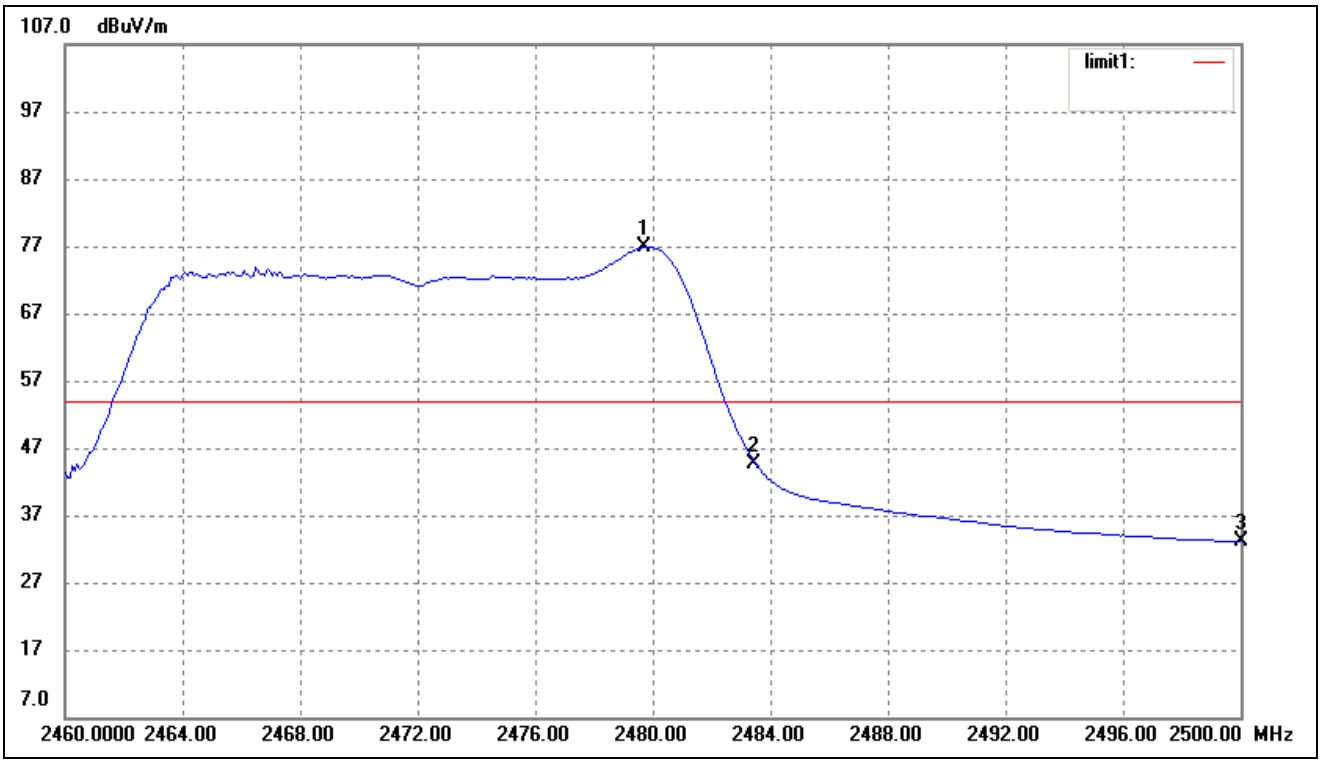
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	35.56	-3.69	31.87	54.00	-22.13	Average Detector
	2310.000	50.85	-3.71	47.14	74.00	-26.86	Peak Detector
2	2390.000	36.44	-3.49	32.95	54.00	-21.05	Average Detector
	2390.000	51.39	-3.49	47.90	74.00	-26.10	Peak Detector
3	2400.000	42.58	-3.46	39.12	Delta=31.39dBc		Average Detector
4	2419.440	73.92	-3.41	70.51			Average Detector

802.11n-HT20-Highest Bandedge

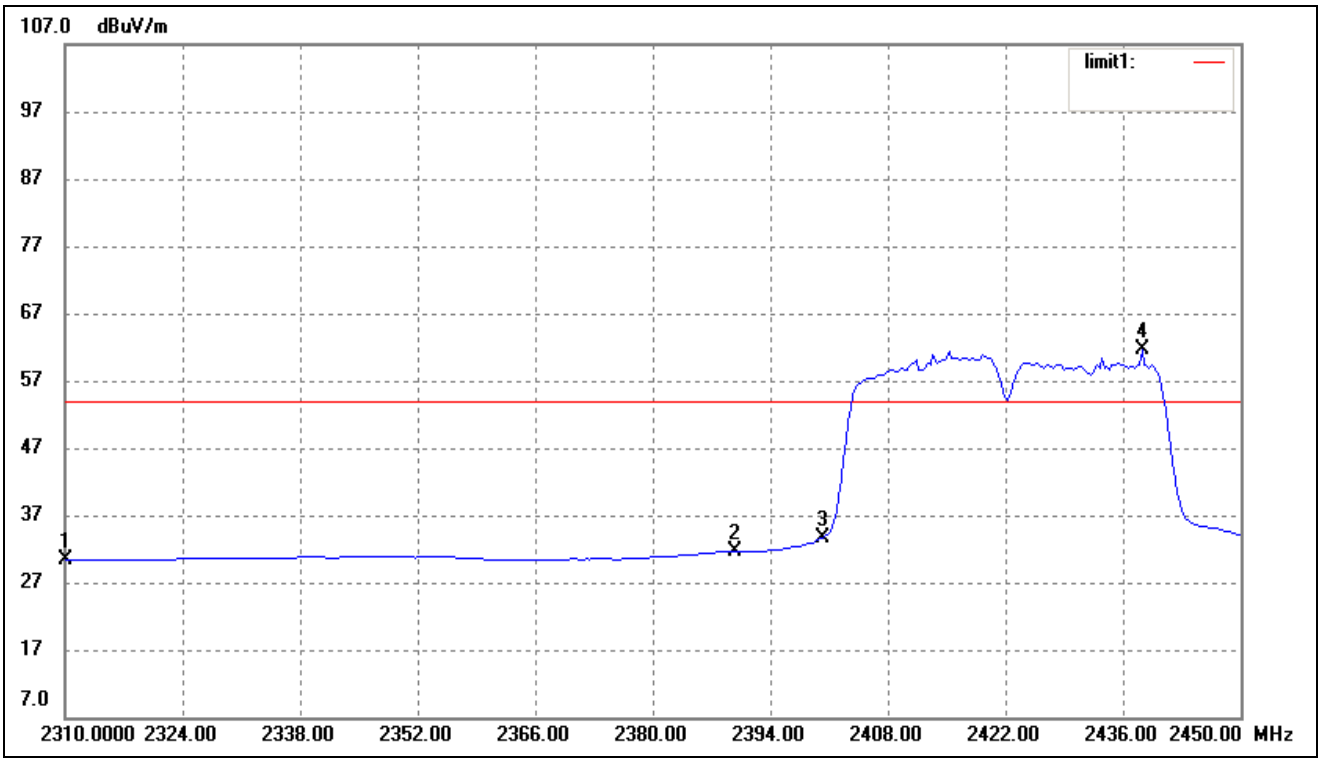
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2479.680	80.07	-3.25	76.82	/	/	Average Detector
	2464.960	100.20	-3.29	96.91	/	/	Peak Detector
2	2483.500	Delta=43.18dBc		33.64	54.00	-20.36	Average Detector
	2483.500			53.73	74.00	-20.27	Peak Detector
3	2500.000	36.25	-3.20	33.05	54.00	-20.95	Average Detector
	2500.000	50.42	-3.20	47.22	74.00	-26.78	Peak Detector

802.11n-HT40-Lowest Bandedge

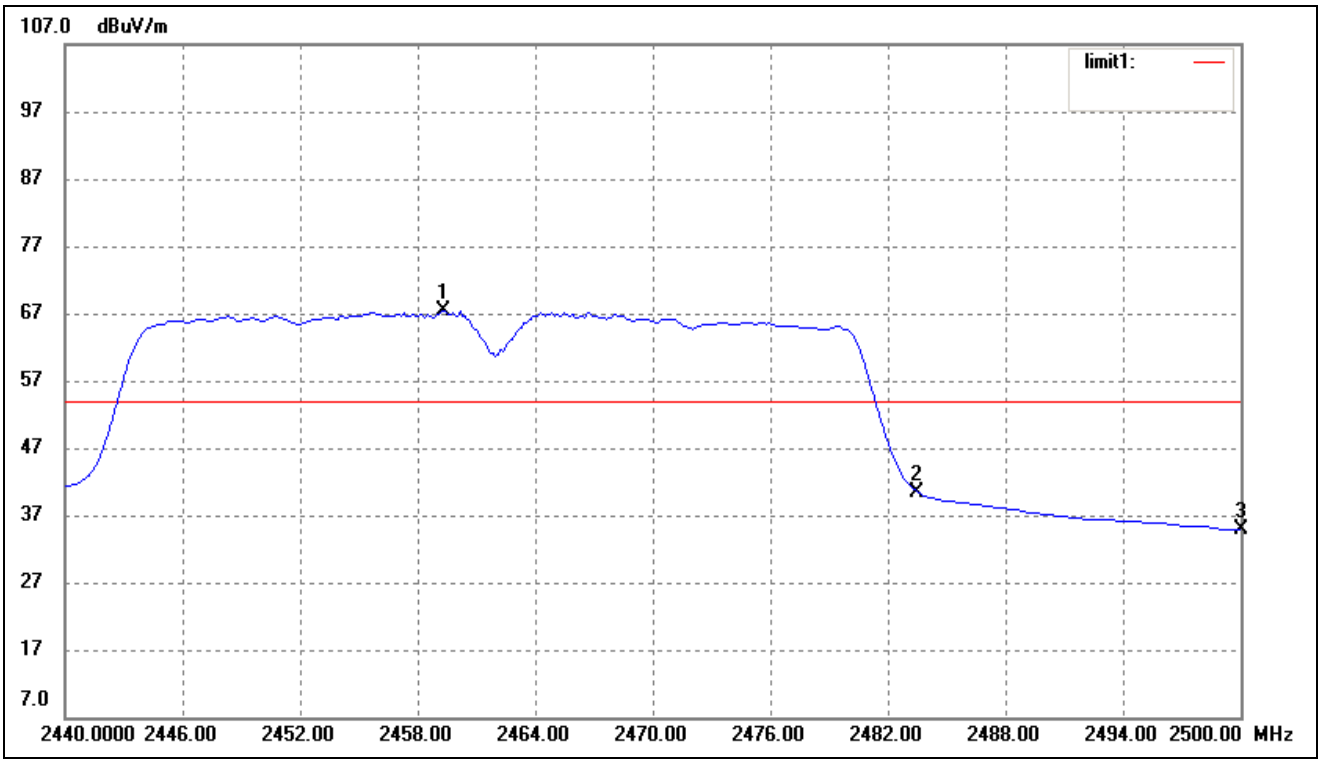
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	34.01	-3.69	30.32	54.00	-23.68	Average Detector
	2310.000	53.90	-3.69	50.21	74.00	-23.79	Peak Detector
2	2390.000	35.07	-3.49	31.58	54.00	-22.42	Average Detector
	2390.000	58.42	-3.49	54.93	74.00	-19.07	Peak Detector
3	2400.000	37.16	-3.46	33.70	Delta=27.85dBc		Average Detector
4	2438.240	64.91	-3.36	61.55			Average Detector

802.11n-HT40-Highest Bandedge

Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2459.320	70.73	-3.31	67.42	/	/	Average Detector
	2459.680	98.73	-3.30	95.43	/	/	Peak Detector
2	2483.500	Delta=40.40dBc		27.02	54.00	-26.98	Average Detector
	2483.500			55.03	74.00	-18.97	Peak Detector
3	2500.000	37.98	-3.20	34.78	54.00	-19.22	Average Detector
	2500.000	53.36	-3.20	50.16	74.00	-23.84	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.

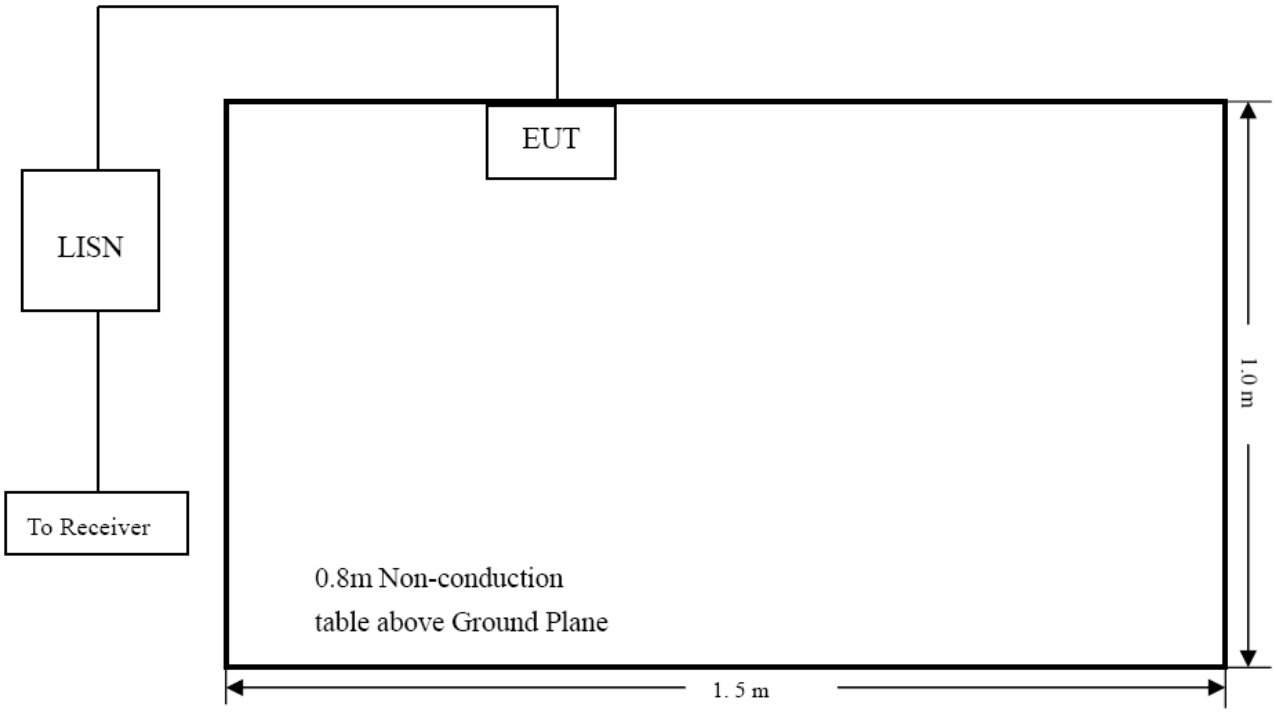
10.2 Test Equipment List and Details

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:

-10.06 dB at 23.982 MHz in the **Line** mode**, Average** detector, **0.15-30MHz**

10.8 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

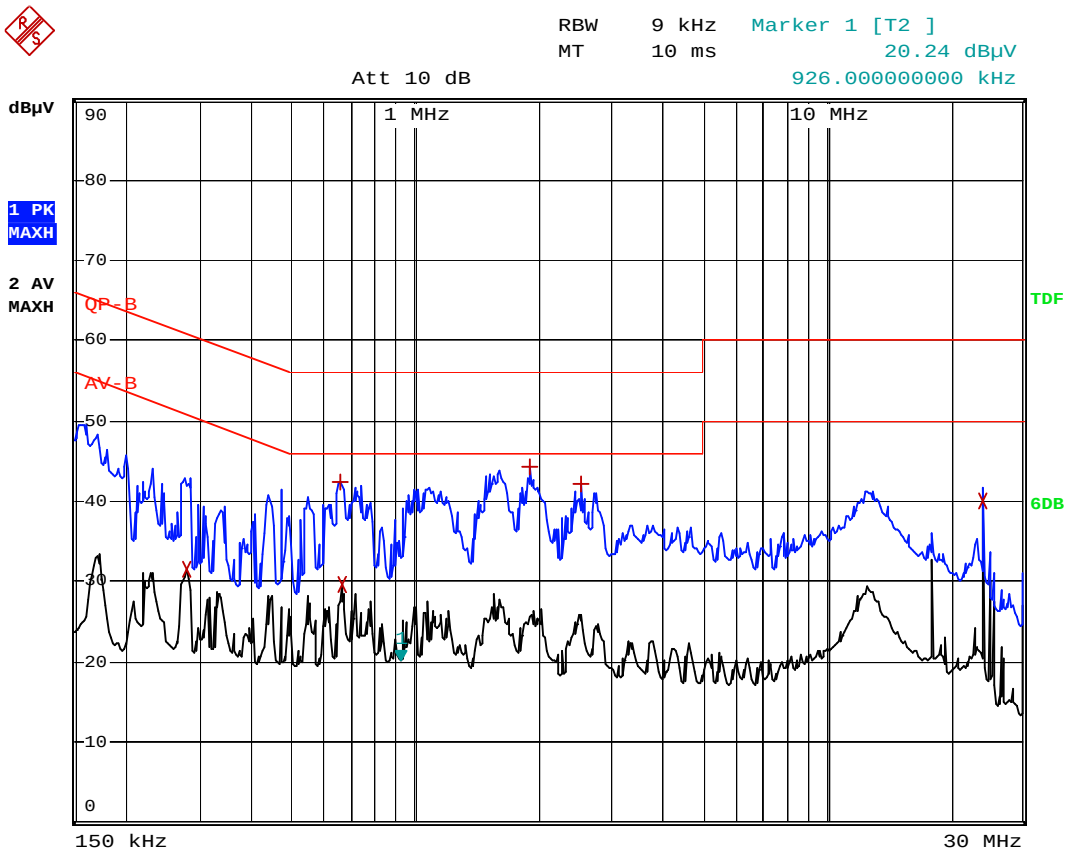
EUT: *Mobile Internet Device*

Tested Model: *S901*

Operating Condition: *Transmitting(Wi-Fi)*

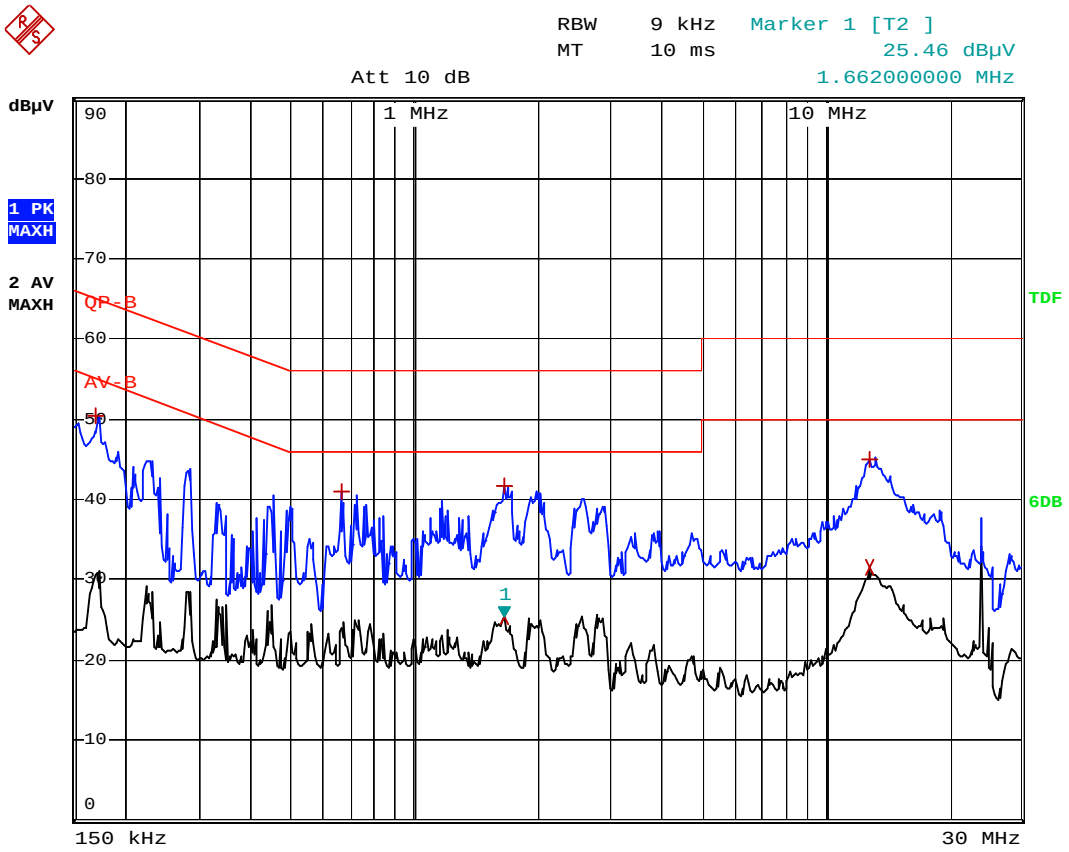
Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Line*



EDIT PEAK LIST (Prescan Results)			
Trace1:	QP-B		
Trace2:	AV-B		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	278 kHz	31.56	-19.31
1 Max Peak	658 kHz	42.50	-13.49
2 Average	662 kHz	29.54	-16.45
1 Max Peak	1.898 MHz	44.21	-11.78
1 Max Peak	2.542 MHz	42.08	-13.91
2 Average	23.982 MHz	39.93	-10.06

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	170 kHz	50.40	-14.55
1 Max Peak	662 kHz	40.98	-15.01
1 Max Peak	1.65 MHz	41.63	-14.36
2 Average	1.662 MHz	25.46	-20.53
2 Average	12.902 MHz	31.46	-18.53
1 Max Peak	12.914 MHz	44.97	-15.02

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