




A Test Lab Techno Corp.

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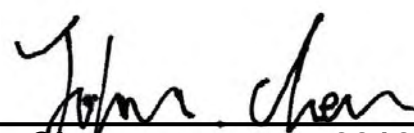
Part 15 C Measurement Report



Report No.	: 0912FR13
Applicant	: UNI LINK Technology Co., Ltd
Product Name	: 802.11 b/g/n USB Dongle
Trade Name	:  www.uni-link.com.tw
Model No.	: WLN-101
FCC ID	: X37-WLN-101
Dates of Test	: Dec. 18 ~ 21, 2009
Test Specification	: FCC CFR Title 47 Part 15 Subpart C (15.247) (2008-10) ANSI C63.4-2003 FCC Notes: KDB 558074
Location of Test Lab.	: Chang-an Lab.

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
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4. This document may be altered or revised by A Test Lab Techno. Corp. personnel only, and shall be noted in the revision section of the document.


Miller Lee 20100211
Approve Signer


John Cheng 20100211
Testing Engineer




CERTIFICATION

We hereby verify that:

The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4:2003. All test were conducted by *A Test Lab Techno Corp. No.140-1, Chang-an St., Bade City, Tao-Yuan County 334, Taiwan (R.O.C.)* Also, we attest to the accuracy of each.

We further submit that the energy emitted by the sample EUT tested as described in the report is in compliance of FCC Rules Part 15 Subpart C (15.247).

Product Name : 802.11 b/g/n USB Dongle
Applicant : UNI LINK Technology Co., Ltd
Applicant Address : 7F-5, No. 66, Sec.2, Nan-Kan Road, Lu-Chu Hsiang, Taoyuan, Taiwan.
Manufacturer : UNI LINK Technology Co., Ltd
Manufacturer Address : 7F-5, No. 66, Sec.2, Nan-Kan Road, Lu-Chu Hsiang, Taoyuan, Taiwan.
Trade Name : 
Model No. : WLN-101
FCC ID : X37-WLN-101
EUT Rated Voltage : 5Vdc, (USB Interface)
Test Voltage : 120 Vac / 60 Hz
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C (15.247) (2008-10)
ASNI C63.4-2003
FCC Notes: KDB 558074
Test Result : Complied

Approved by : 
Miller Lee 2010/02/11

Prepared by : 
John Cheng 2010/02/11

A Test Lab Techno Corp.

No.140-1, Chang-an St., Bade City, Tao-Yuan County 334, Taiwan (R.O.C.)
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1. GENERAL

1.1 Description of Equipment under Test (EUT)

Applicant	: UNI LINK Technology Co., Ltd
Applicant Address	: 7F-5, No. 66, Sec.2, Nan-Kan Road, Lu-Chu Hsiang, Taoyuan, Taiwan.
Manufacturer	: UNI LINK Technology Co., Ltd
Manufacturer Address	: 7F-5, No. 66, Sec.2, Nan-Kan Road, Lu-Chu Hsiang, Taoyuan, Taiwan.
Product Name	: 802.11 b/g/n USB Dongle
Trade Name	:  UNI LINK www.uni-link.com.tw
Model No.	: WLN-101
Frequency Range	: IEEE 802.11b / IEEE 802.11g: 2412MHz~2462MHz draft 802.11n Standard-20MHz: 2412MHz~2462MHz draft 802.11n Wide-40MHz: 2422MHz~2452MHz
Type of Modulation	: IEEE 802.11b:DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g:DSSS(CCK, DQPSK, DBPSK)+ OFDM(QPSK, BPSK, 16-QAM, 64-QAM) draft 802.11n Standard-20MHz channel mode: OFDM(6.5,7.2, 13,14.4, 14.44, 19.5,217,26,28.89,28.9,39.43.3,43.33,52,57.78, 57.8, 58.5, 65.0, 72.2, 78, 86.67,104,115.56,117,130 and 144.44 Mbps) draft 802.11n Wide-40MHz channel mode:OFDM(13.5,15,27,30,40.5,45, 54, 60,81,90,108,120,121.5,135,150,162,180,216,240,243, 270 and 300 Mbps)
Antenna Type	: Fixed Type
Antenna Gain	: 2dBi

1.2 Introduction

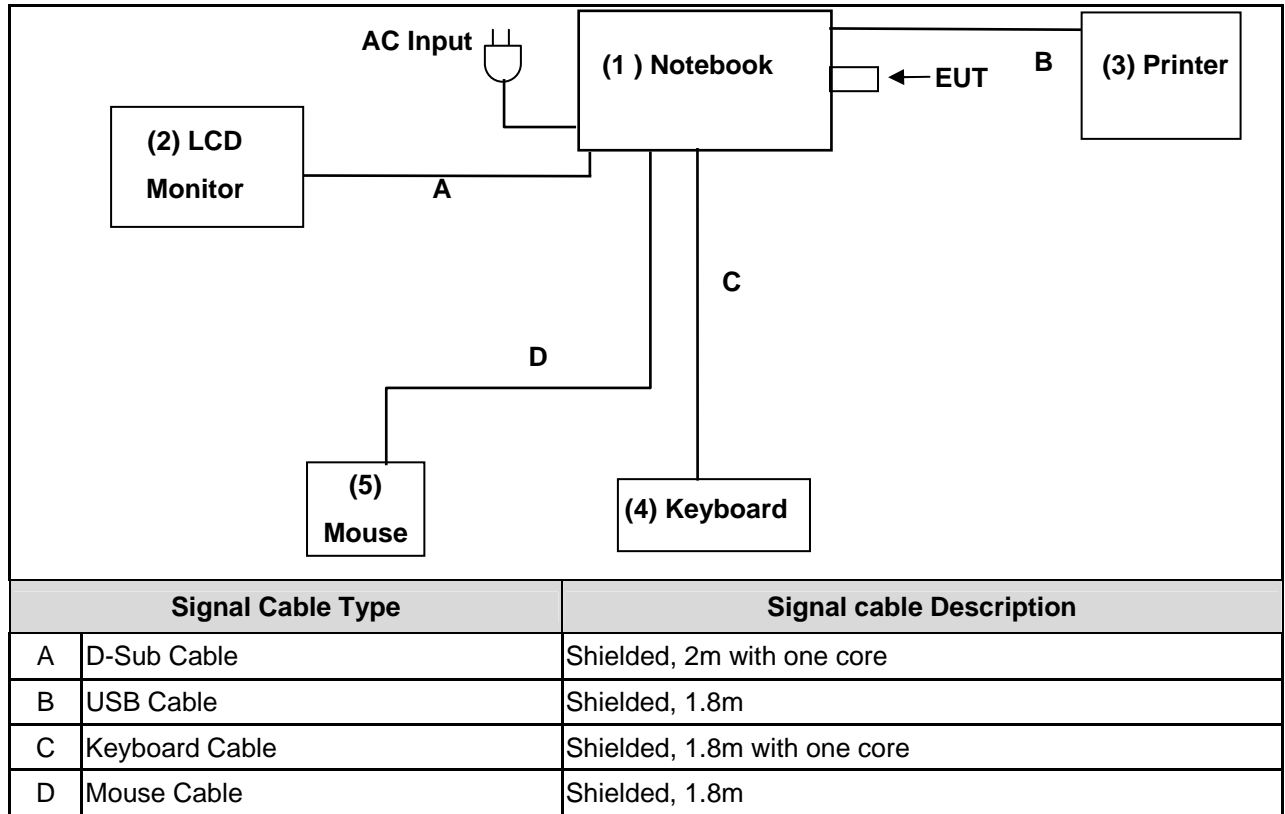
The following measurement report is submitted on behalf of **UNI LINK Technology Co., Ltd** In support of a Class B Digital Device certification in accordance with Part2 Subpart J and Part 15 Subpart A and B&C of the Commission's and Regulations.



1.3 Summary of Tests

47 CFR Part 15 Subpart C			
Reference	Test	Results	Note
15.207	AC Power Conducted Emission	PASS	-----
15.247(c)	Transmitter Radiated Emissions	PASS	-----
15.247(b)	Max. Output Power	PASS	-----
15.247(a)(2)	6dB RF Bandwidth	PASS	-----
15.247(d)	Max. Power Density	PASS	-----
15.247(c)	Out of Band Conducted Spurious Emission	PASS	-----
15.247(c)	Band Edge Measurement	PASS	-----
15.203	Antenna Requirement	PASS	-----

1.4 Configuration of System under Test



Devices Description					
	Product	Manufacturer	Model No.	Serial No.	Power Cord
(1)	Notebook	DELL	D531	GCDCD-T6HYQ-3MQ8 R-JCPD3-3G8G2	Non-Shielded, 1.8m
(2)	LCD Monitor	DELL	2408WFT	CN-0G293H-74261-95 M-1NPS	Non-Shielded, 1.8m
(3)	Printer	Epson	STY1US-C60	DR3K041323	Shielded, 1.8m
(4)	Keyboard	DELL	SK-8115	MY-ODJ325-71619-711 3-1197	N/A
(5)	Mouse	DELL	MOA8BO	64580982	N/A



2. Conducted Emissions Requirements

2.1 Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.2 Limits

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.0	56	46
5.0 to 30	60	50

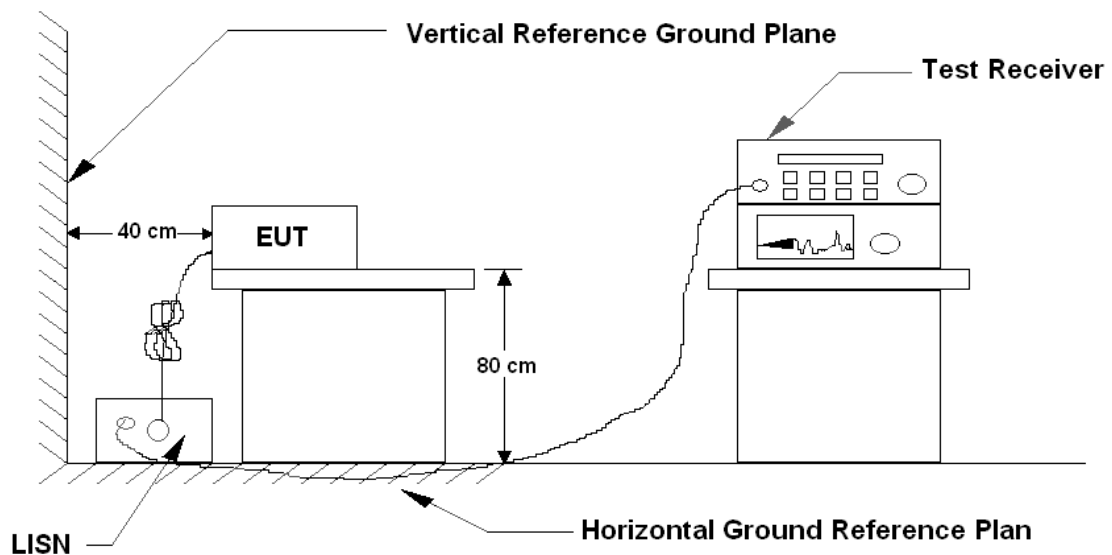
2.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Test Receiver	R&S	ESCI	100367	Jun. 05, 2009	Jun. 05, 2010
LISN	EMCO	3816/2 SH	00060110	Jun. 05, 2009	Jun. 05, 2010
LISN	EMCO	3816/2 SH	00060111	Jun. 29, 2009	Jun. 29, 2010
Transient Limiter	ELECTRO-METRICS	EM-7600	777	Sep. 22, 2009	Sep. 22, 2010

2.4 Test condition

EUT tested in accordance with the specifications given by the Manufacturer, and exercised in the most unfavorable manner.

2.5 Test Instruments Configuration



2.6 Test Results

EUT : 802.11 b/g/n USB Dongle

Model No. : WLN-101

Test Mode : Normal Link

Test Date : 12/18/2009

Please refer to next page of detail testing data.

Notes:

1. L1: One end & Ground L2: The other end & Ground
2. Height of table on which the EUT was placed: 0.8 m.
3. The Quasi-Peak Value have already met the Average Value Limit showed on above limits.
4. The above test results are obtained under the normal condition.

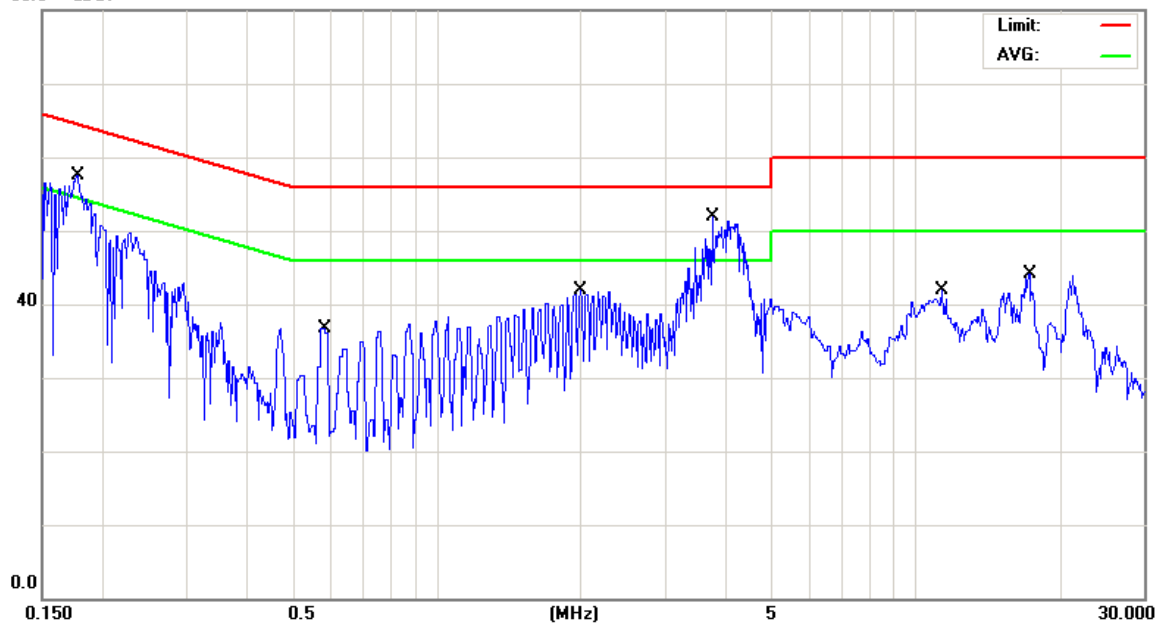


File : FCC
80.0 dBuV

Data : #1

Date: 2009/12/18

Time: 下午 02:48:57



Site : Conducted

Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: 802.11 b/g/n USB Dongle

M/N: WLN-101

Mode: Normal Link

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1773	44.55	9.74	54.29	64.61	-10.32	QP	
2		0.1773	34.60	9.74	44.34	54.61	-10.27	AVG	
3		0.5810	25.80	9.79	35.59	56.00	-20.41	QP	
4		0.5810	18.30	9.79	28.09	46.00	-17.91	AVG	
5		1.9940	30.30	9.85	40.15	56.00	-15.85	QP	
6	*	1.9940	27.80	9.85	37.65	46.00	-8.35	AVG	
7		3.7580	37.10	9.95	47.05	56.00	-8.95	QP	
8		3.7580	24.00	9.95	33.95	46.00	-12.05	AVG	
9		11.3500	21.70	10.12	31.82	60.00	-28.18	QP	
10		11.3500	15.90	10.12	26.02	50.00	-23.98	AVG	
11		17.2000	23.30	10.27	33.57	60.00	-26.43	QP	
12		17.2000	16.50	10.27	26.77	50.00	-23.23	AVG	

*:Maximum data x:Over limit !:over margin

●Reference Only

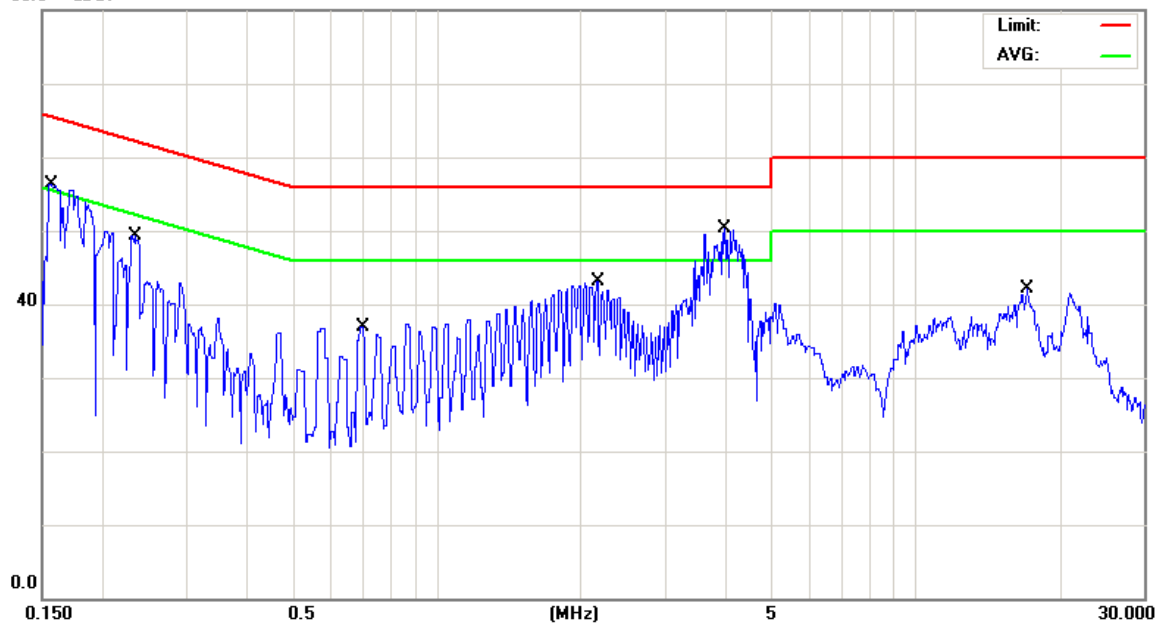


File : FCC
80.0 dBuV

Data : #2

Date: 2009/12/18

Time: 下午 02:55:17



Site : Conducted

Phase: **L2**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: 802.11 b/g/n USB Dongle

M/N: WLN-101

Mode: Normal Link

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1570	33.10	9.73	42.83	65.62	-22.79	QP	
2		0.1570	13.50	9.73	23.23	55.62	-32.39	AVG	
3		0.2340	34.50	9.75	44.25	62.30	-18.05	QP	
4		0.2340	25.20	9.75	34.95	52.30	-17.35	AVG	
5		0.6980	24.80	9.79	34.59	56.00	-21.41	QP	
6		0.6980	19.40	9.79	29.19	46.00	-16.81	AVG	
7		2.1560	30.90	9.88	40.78	56.00	-15.22	QP	
8	*	2.1560	28.40	9.88	38.28	46.00	-7.72	AVG	
9		3.9740	29.10	9.98	39.08	56.00	-16.92	QP	
10		3.9740	18.10	9.98	28.08	46.00	-17.92	AVG	
11		17.1000	23.20	10.26	33.46	60.00	-26.54	QP	
12		17.1000	15.10	10.26	25.36	50.00	-24.64	AVG	

*:Maximum data x:Over limit !:over margin

●Reference Only



3. Radiated Emissions Requirements

3.1 Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters for the frequency under 1GHz and 3 meters for the frequency above 1GHz.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCI) is 120 kHz and above 1GHz is 1MHz.

3.2 Radiated Emissions Limits

Frequency range (MHz)	Field strength (microvolts/meter)	Measure-ment dis-tance (meters)
0.009 to 0.490	2400/F(kHz)	300
0.490 to 1.705	24000/F(kHz)	30
1.705 to 30.0	30	30
30 to 88	100**	3
88 to 216	150**	3
216 to 960	200**	3
Above 960	500**	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54–72 MHz, 76– 88 MHz, 174–216 MHz or 470–806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

3.3 Test Equipment List

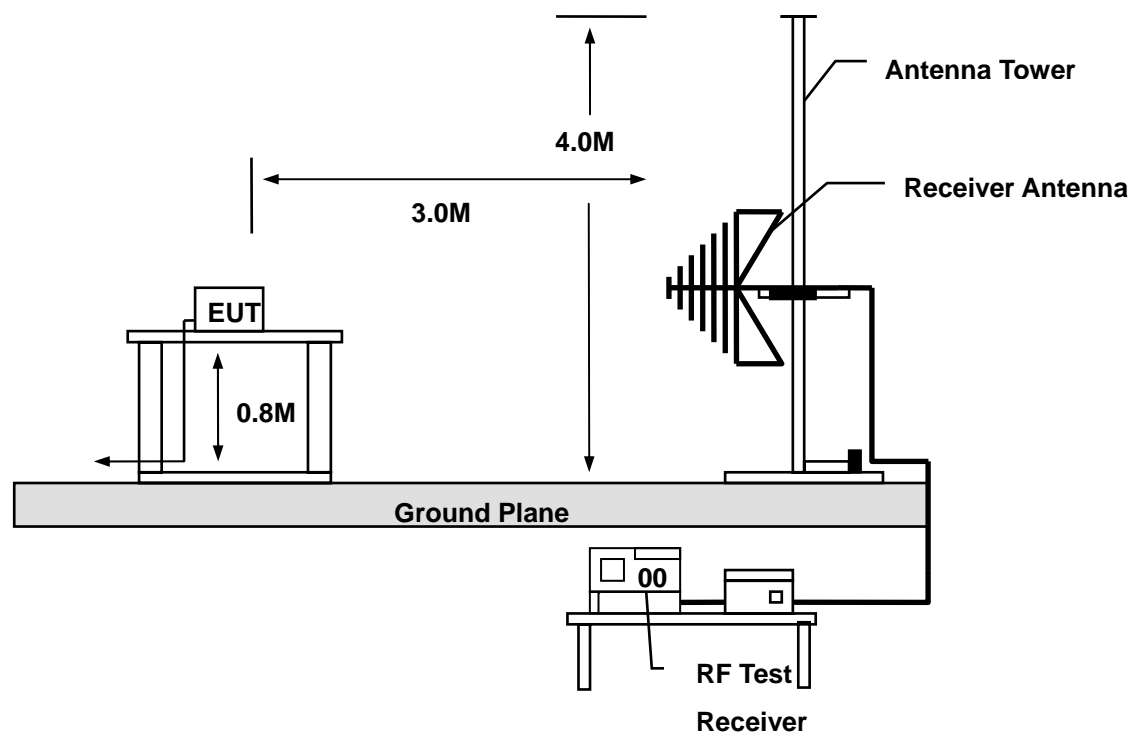
Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4408B	MY46181421	Mar. 13, 2009	Mar. 13, 2010
Pre Amplifier	Agilent	8449B	3008A02457	Mar. 04, 2009	Mar. 04, 2010
Pre Amplifier	Agilent	8447D	2944A11119	Jan. 19, 2009	Jan. 19, 2010
Test Receiver	R&S	ESCI	100367	Jun. 05, 2009	Jun. 05, 2010
Biconilog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	Jun. 23, 2009	Jun. 23, 2010
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	Jul. 01, 2009	Jul. 01, 2010
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	Jun. 30, 2009	Jun. 30, 2010
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120E	0899	Jun. 23, 2009	Jun. 23, 2010

3.4 Test condition

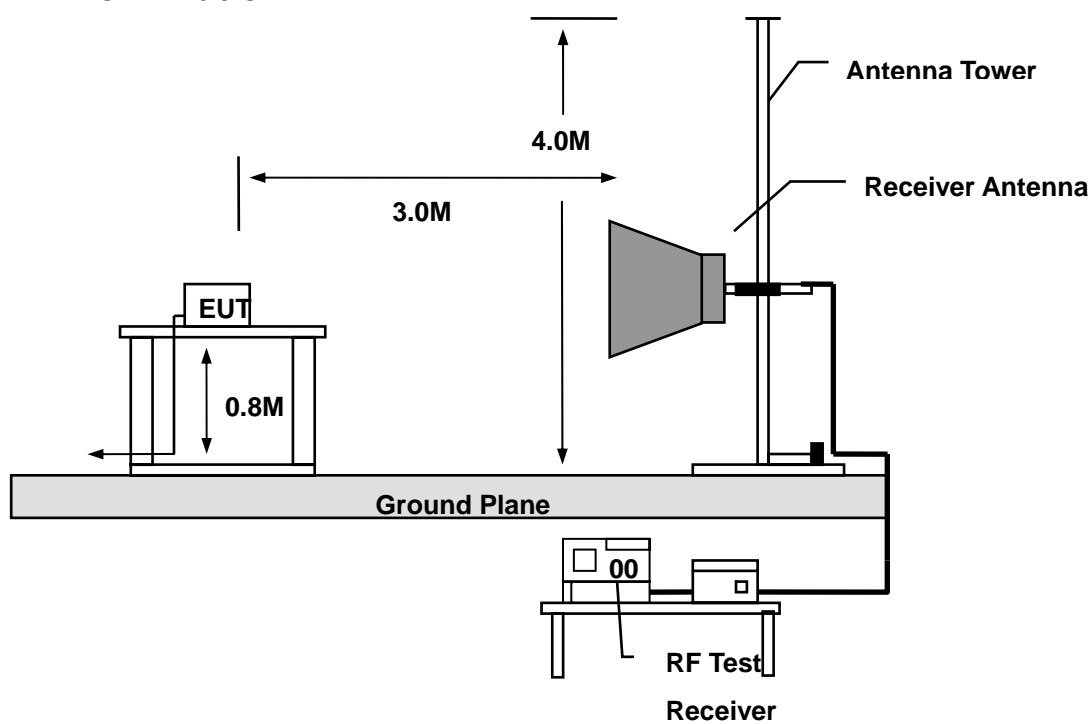
EUT tested in accordance with the specifications given by the manufacturer, and exercised in the most unfavorable manner.

3.5 Test Instruments Configuration

30 MHz ~ 1 GHz



1GHz ~ 26.5 GHz





3.6 Test Results

3.6.1 Below 1GHz

EUT : 802.11 b/g/n USB Dongle

Model No. : WLN-101

Test Mode : Normal Operation Mode

Test Date : 02/11/2010

Please refer to next page of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30MHz-40GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)
6. All frequencies from 30MHz to 40GHz have been tested



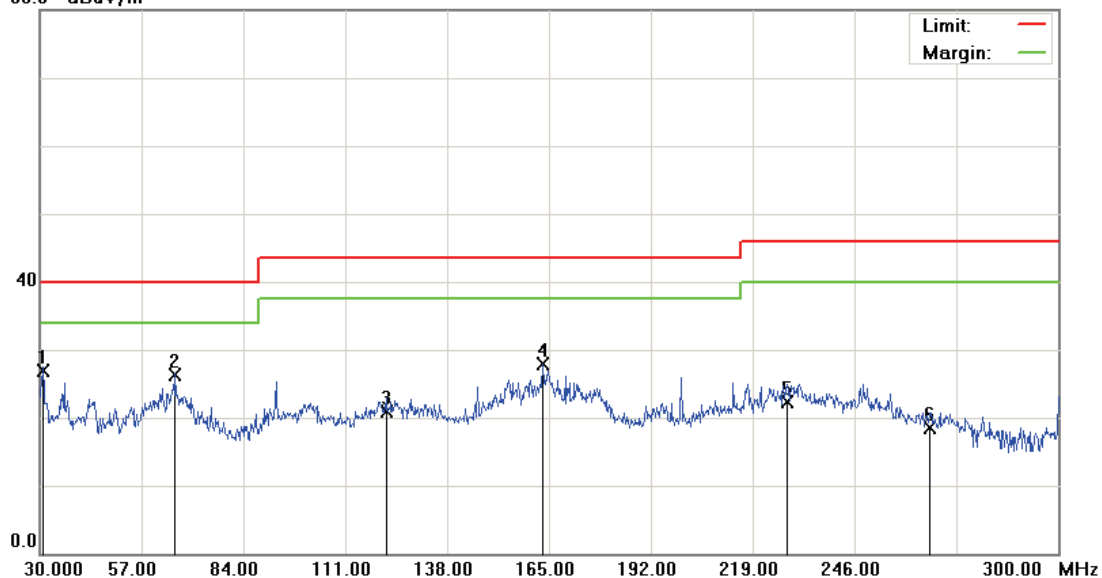
File :FCC(Normal operation)

Data :#1

Date: 2010/02/11

Time: 上午 10:45:37

80.0 dBuV/m



Site: : 966 Chamber

Limit: FCC Class B 3M Radiation

EUT: 802.11 b/g/n USB Dongle

M/N: WLN-101

Mode: Normal Operation Mode

Note:

Polarization: *Vertical*

Power:

Distance: 3m

Temperature: 22 °C

Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	30.8100	40.21	-13.30	26.91	40.00	-13.09	QP		
2		65.9100	41.02	-14.75	26.27	40.00	-13.73	QP		
3		121.8000	35.31	-14.50	20.81	43.50	-22.69	QP		
4		163.3800	43.35	-15.36	27.99	43.50	-15.51	QP		
5		228.1800	34.33	-11.97	22.36	46.00	-23.64	QP		
6		265.9800	29.52	-11.01	18.51	46.00	-27.49	QP		

*:Maximum data x:Over limit !:over margin



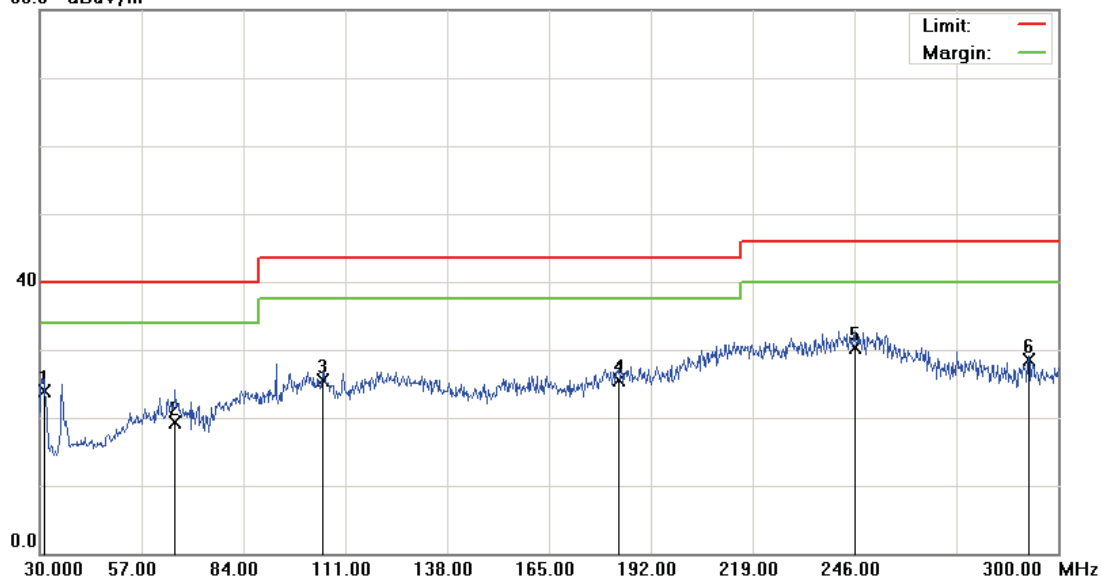
File :FCC(Normal operation)

Data :#3

Date: 2010/02/11

Time: 上午 10:54:37

80.0 dBuV/m



Site: : 966 Chamber

Polarization: *Horizontal*

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: Normal Operation Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		31.0800	37.23	-13.30	23.93	40.00	-16.07	QP		
2		65.9100	34.15	-14.75	19.40	40.00	-20.60	QP		
3		105.0600	37.63	-12.09	25.54	43.50	-17.96	QP		
4		183.6300	39.47	-13.95	25.52	43.50	-17.98	QP		
5	*	246.0000	41.52	-11.17	30.35	46.00	-15.65	QP		
6		292.1700	38.51	-10.09	28.42	46.00	-17.58	QP		

*:Maximum data x:Over limit !:over margin



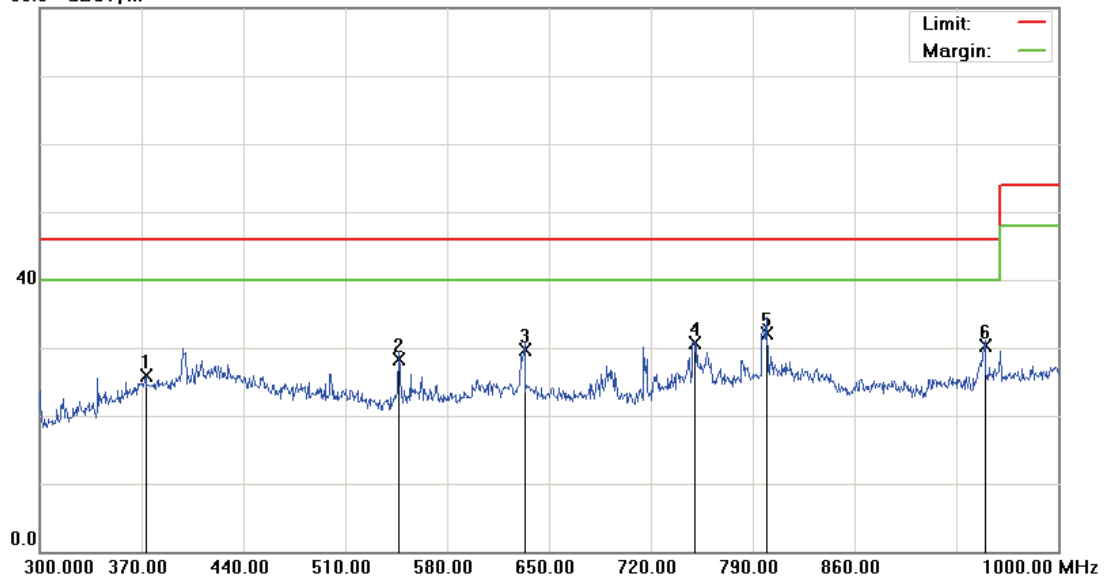
File :FCC(Normal operation)

Data :#2

Date: 2010/02/11

Time: 上午 10:49:16

80.0 dBuV/m



Site: : 966 Chamber

Polarization: *Vertical*

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: Normal Operation Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		372.8000	34.78	-8.86	25.92	46.00	-20.08	QP		
2		546.4000	34.33	-6.04	28.29	46.00	-17.71	QP		
3		633.2000	34.12	-4.36	29.76	46.00	-16.24	QP		
4		750.1000	33.89	-3.11	30.78	46.00	-15.22	QP		
5	*	799.8000	34.39	-2.32	32.07	46.00	-13.93	QP		
6		949.6000	30.08	0.21	30.29	46.00	-15.71	QP		

*:Maximum data x:Over limit !:over margin



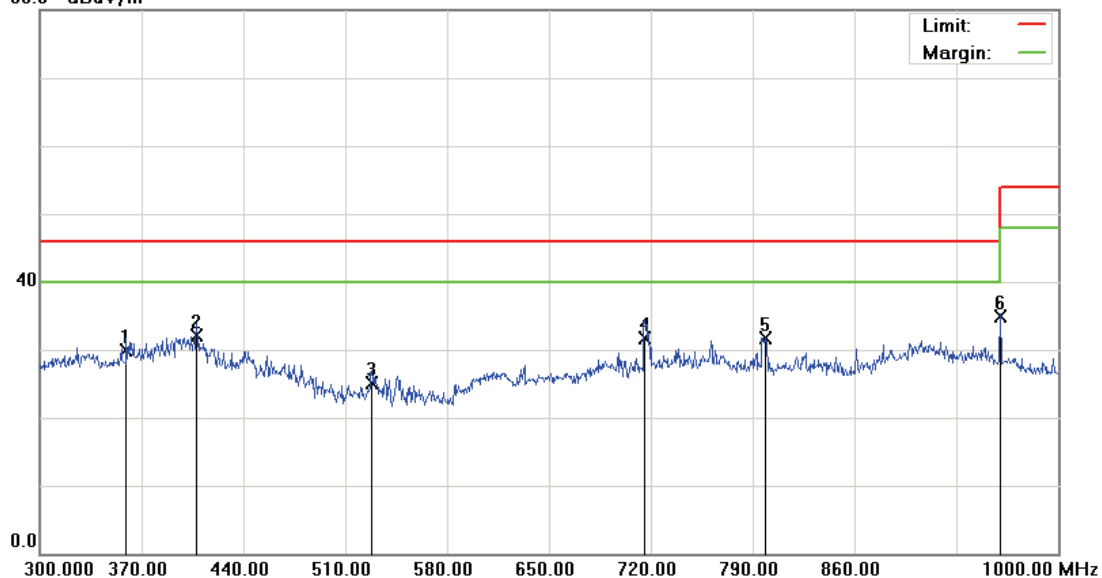
File :FCC(Normal operation)

Data :#4

Date: 2010/02/11

Time: 上午 10:58:25

80.0 dBuV/m



Site: : 966 Chamber

Limit: FCC Class B 3M Radiation

EUT: 802.11 b/g/n USB Dongle

M/N: WLN-101

Mode: Normal Operation Mode

Note:

Polarization: *Horizontal*

Power:

Distance: 3m

Temperature: 22 °C

Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		359.5000	38.94	-8.98	29.96	46.00	-16.04	QP		
2	*	407.8000	40.42	-8.25	32.17	46.00	-13.83	QP		
3		528.2000	31.48	-6.34	25.14	46.00	-20.86	QP		
4		715.8000	35.33	-3.59	31.74	46.00	-14.26	QP		
5		798.4000	34.03	-2.33	31.70	46.00	-14.30	QP		
6		960.1000	34.38	0.43	34.81	54.00	-19.19	QP		

*:Maximum data x:Over limit !:over margin



3.6.2 Above 1GHz

EUT : 802.11 b/g/n USB Dongle
Model No. : WLN-101
Test Mode : IEEE 802.11b Link Mode
IEEE 802.11g Link Mode
Draft 802.11n Standard-20MHz Link Mode
Draft 802.11n Wide-40MHz Link Mode

Test Date : 12/20/2009

Please refer to next page of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30MHz-40GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)
6. All frequencies from 30MHz to 40GHz have been tested
7. The PK detector RBW: 1MHz VBW: 1Mz, AVG detector RBW: 1MHz VBW: 10Hz



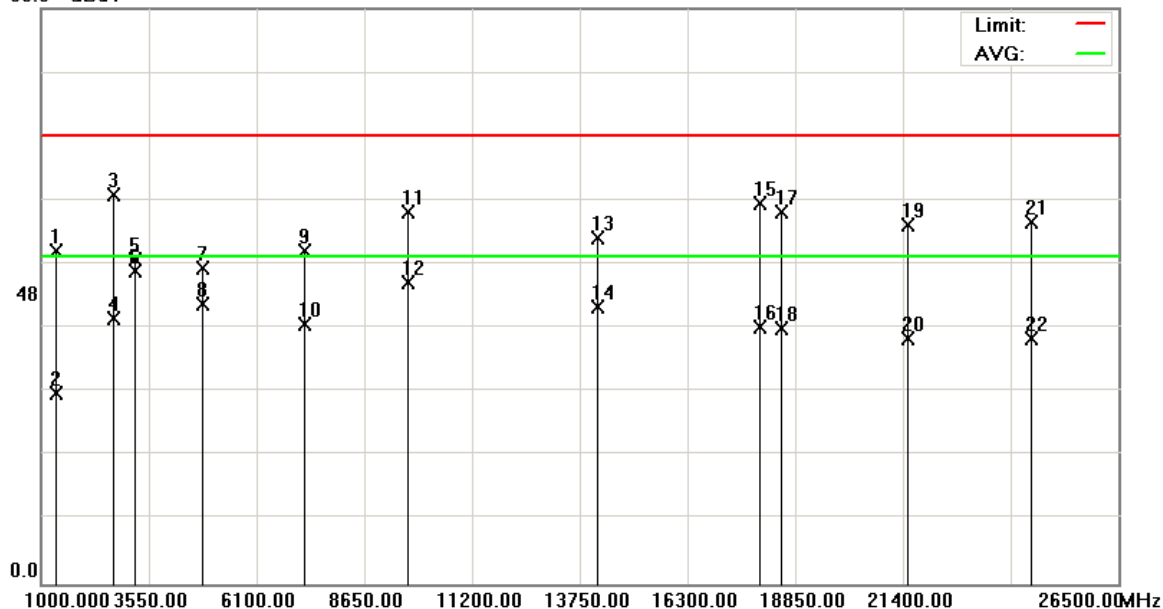
File :FCC(2412MHZ)

Data :#18

Date: 2009/12/20

Time: 上午 01:36:20

95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1348.500	58.57	-3.70	54.87	74.00	-19.13	peak		
2		1348.500	35.11	-3.70	31.41	54.00	-22.59	AVG		
3		2700.000	41.60	22.58	64.18	74.00	-9.82	peak		
4		2700.000	21.17	22.58	43.75	54.00	-10.25	AVG		
5		3211.000	50.66	2.85	53.51	74.00	-20.49	peak		
6	*	3211.000	48.78	2.85	51.63	54.00	-2.37	AVG		
7		4817.000	44.78	7.42	52.20	74.00	-21.80	peak		
8		4817.000	38.74	7.42	46.16	54.00	-7.84	AVG		
9		7244.250	41.26	13.76	55.02	74.00	-18.98	peak		
10		7244.250	29.05	13.76	42.81	54.00	-11.19	AVG		
11		9653.250	44.53	16.95	61.48	74.00	-12.52	peak		
12		9653.250	32.82	16.95	49.77	54.00	-4.23	AVG		
13		14180.000	38.18	18.85	57.03	74.00	-16.97	peak		
14		14180.000	26.90	18.85	45.75	54.00	-8.25	AVG		
15		18000.000	37.31	25.57	62.88	74.00	-11.12	peak		
16		18000.000	16.79	25.57	42.36	54.00	-11.64	AVG		
17		18510.000	38.25	23.10	61.35	74.00	-12.65	peak		
18		18510.000	18.98	23.10	42.08	54.00	-11.92	AVG		
19		21527.500	37.93	21.35	59.28	74.00	-14.72	peak		
20		21527.500	19.21	21.35	40.56	54.00	-13.44	AVG		
21		24417.500	39.93	19.71	59.64	74.00	-14.36	peak		
22		24417.500	20.72	19.71	40.43	54.00	-13.57	AVG		

*:Maximum data x:Over limit !:over margin



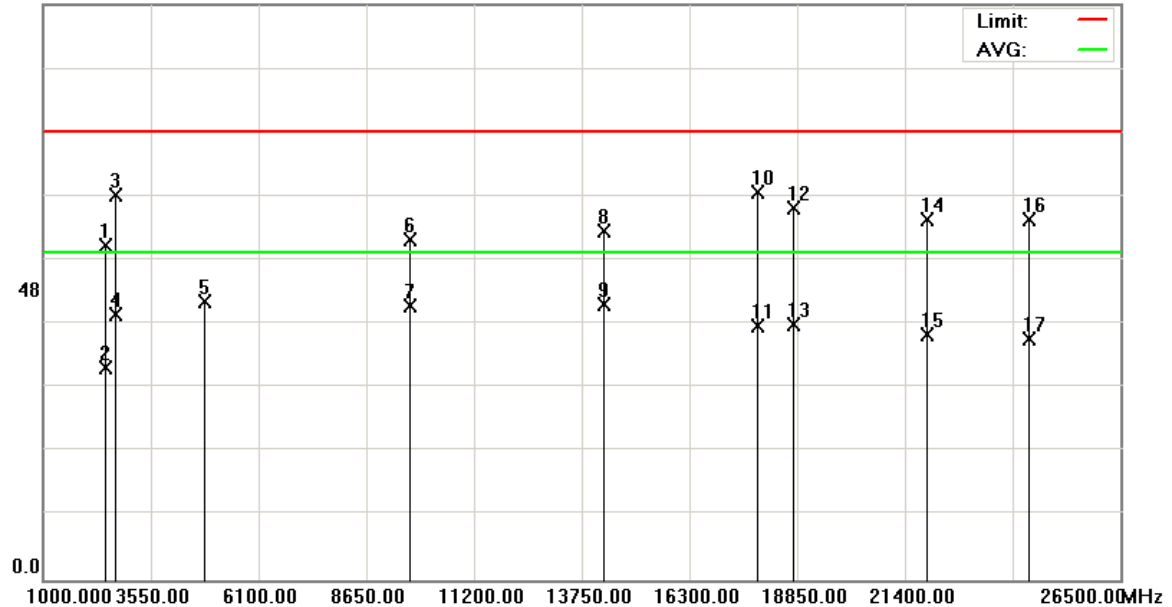
File :FCC(2412MHZ)

Data :#19

Date: 2009/12/20

Time: 上午 01:37:48

95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2477.300	54.91	0.22	55.13	74.00	-18.87	peak		
2		2477.300	34.90	0.22	35.12	54.00	-18.88	AVG		
3		2700.000	40.97	22.58	63.55	74.00	-10.45	peak		
4		2700.000	21.16	22.58	43.74	54.00	-10.26	AVG		
5		4824.000	38.53	7.48	46.01	74.00	-27.99	peak		
6		9689.750	38.88	17.35	56.23	74.00	-17.77	peak		
7		9689.750	27.96	17.35	45.31	54.00	-8.69	AVG		
8		14240.000	39.00	18.71	57.71	74.00	-16.29	peak		
9	*	14240.000	26.88	18.71	45.59	54.00	-8.41	AVG		
10		17900.000	38.98	24.96	63.94	74.00	-10.06	peak		
11		17900.000	17.00	24.96	41.96	54.00	-12.04	AVG		
12		18743.750	38.19	23.13	61.32	74.00	-12.68	peak		
13		18743.750	18.99	23.13	42.12	54.00	-11.88	AVG		
14		21888.750	38.20	21.18	59.38	74.00	-14.62	peak		
15		21888.750	19.35	21.18	40.53	54.00	-13.47	AVG		
16		24332.500	39.79	19.76	59.55	74.00	-14.45	peak		
17		24332.500	20.10	19.76	39.86	54.00	-14.14	AVG		

*:Maximum data x:Over limit !:over margin



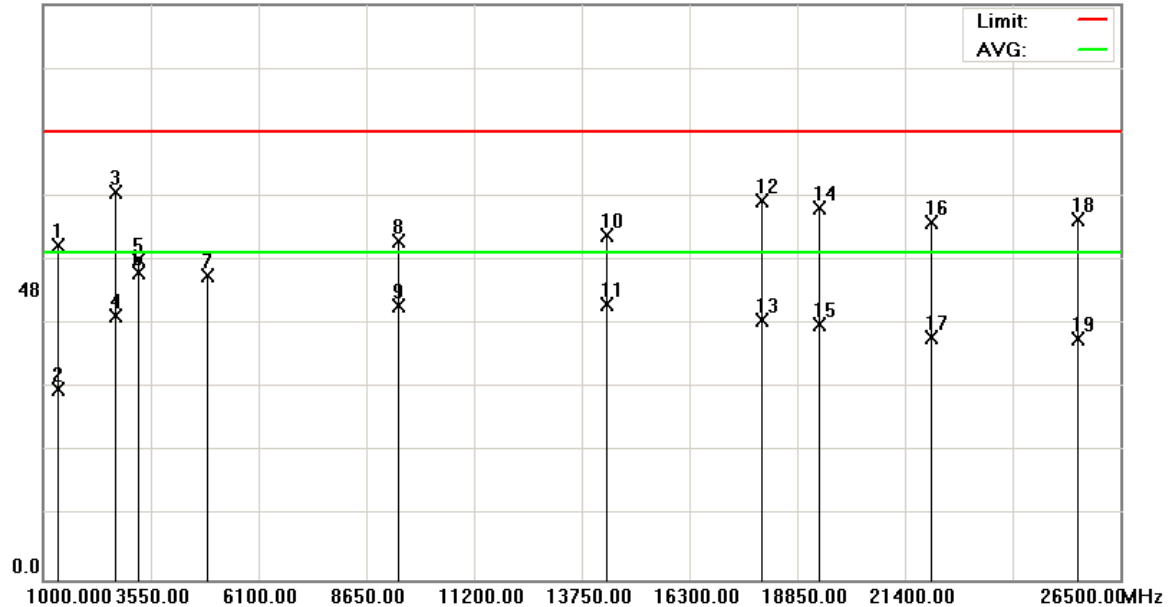
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Data :#17

Date: 2009/12/20

Time: 上午 01:41:40

95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1345.100	59.05	-3.72	55.33	74.00	-18.67	peak		
2		1345.100	35.10	-3.72	31.38	54.00	-22.62	AVG		
3		2700.000	41.36	22.58	63.94	74.00	-10.06	peak		
4		2700.000	21.07	22.58	43.65	54.00	-10.35	AVG		
5		3247.500	50.54	2.41	52.95	74.00	-21.05	peak		
6	*	3247.500	48.31	2.41	50.72	54.00	-3.28	AVG		
7		4871.750	42.55	7.72	50.27	74.00	-23.73	peak		
8		9397.750	38.98	17.07	56.05	74.00	-17.95	peak		
9		9397.750	28.19	17.07	45.26	54.00	-8.74	AVG		
10		14320.000	38.40	18.57	56.97	74.00	-17.03	peak		
11		14320.000	26.97	18.57	45.54	54.00	-8.46	AVG		
12		18000.000	37.10	25.57	62.67	74.00	-11.33	peak		
13		18000.000	17.36	25.57	42.93	54.00	-11.07	AVG		
14		19360.000	38.67	22.84	61.51	74.00	-12.49	peak		
15		19360.000	19.31	22.84	42.15	54.00	-11.85	AVG		
16		21995.000	37.86	21.12	58.98	74.00	-15.02	peak		
17		21995.000	18.83	21.12	39.95	54.00	-14.05	AVG		
18		25501.250	40.46	18.98	59.44	74.00	-14.56	peak		
19		25501.250	20.86	18.98	39.84	54.00	-14.16	AVG		

*:Maximum data x:Over limit !:over margin



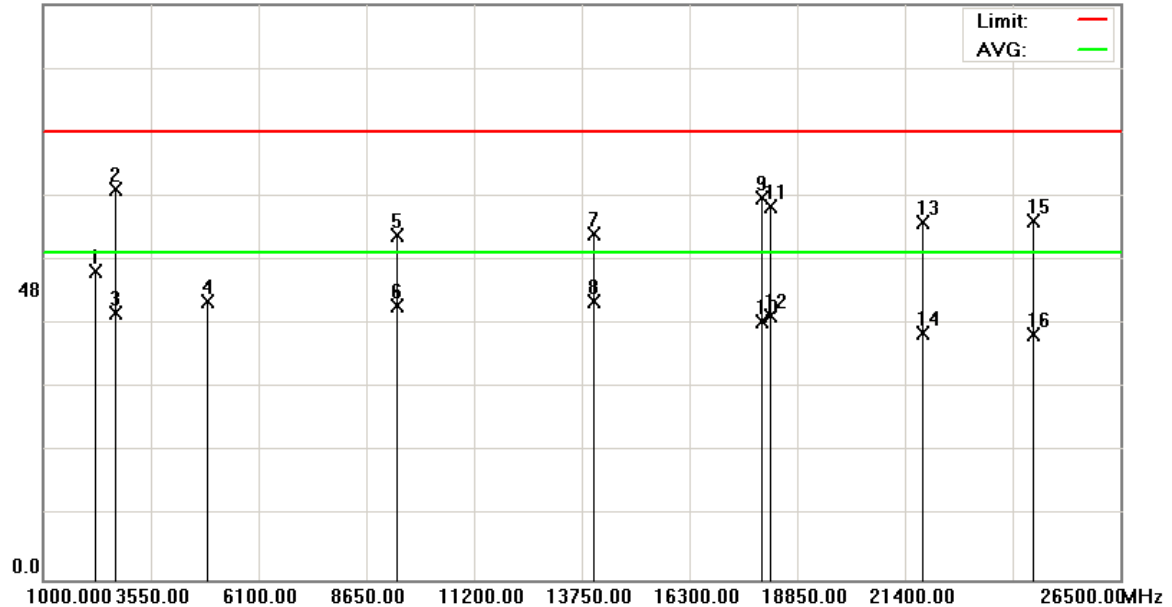
File :FCC(2437MHZ)

Data :#18

Date: 2009/12/20

Time: 上午 01:43:06

95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2207.000	50.44	0.45	50.89	74.00	-23.11	peak		
2		2700.000	41.89	22.58	64.47	74.00	-9.53	peak		
3		2700.000	21.58	22.58	44.16	54.00	-9.84	AVG		
4		4874.000	38.28	7.72	46.00	74.00	-28.00	peak		
5		9361.250	39.89	16.98	56.87	74.00	-17.13	peak		
6		9361.250	28.21	16.98	45.19	54.00	-8.81	AVG		
7		14020.000	38.38	18.67	57.05	74.00	-16.95	peak		
8	*	14020.000	27.19	18.67	45.86	54.00	-8.14	AVG		
9		18000.000	37.58	25.57	63.15	74.00	-10.85	peak		
10		18000.000	16.98	25.57	42.55	54.00	-11.45	AVG		
11		18191.250	38.51	23.22	61.73	74.00	-12.27	peak		
12		18191.250	20.31	23.22	43.53	54.00	-10.47	AVG		
13		21825.000	37.79	21.20	58.99	74.00	-15.01	peak		
14		21825.000	19.45	21.20	40.65	54.00	-13.35	AVG		
15		24417.500	39.60	19.71	59.31	74.00	-14.69	peak		
16		24417.500	20.73	19.71	40.44	54.00	-13.56	AVG		

*:Maximum data x:Over limit !:over margin



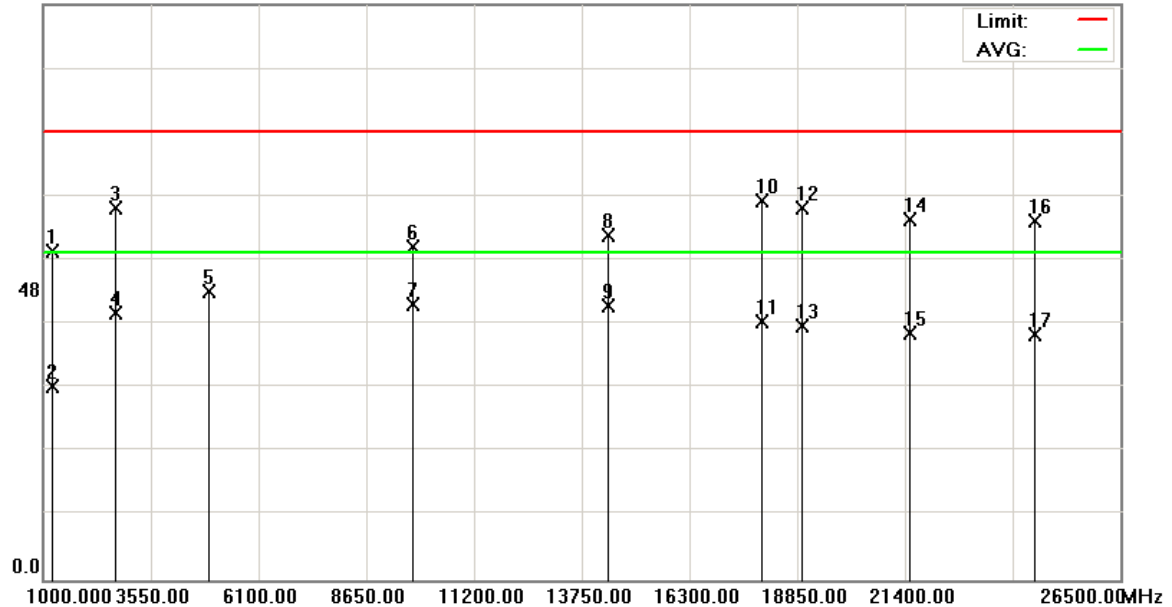
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Data :#17

Date: 2009/12/20

Time: 上午 01:45:14

95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1198.900	59.19	-4.91	54.28	74.00	-19.72	peak		
2		1198.900	36.90	-4.91	31.99	54.00	-22.01	AVG		
3		2700.000	38.81	22.58	61.39	74.00	-12.61	peak		
4		2700.000	21.45	22.58	44.03	54.00	-9.97	AVG		
5		4924.000	39.94	7.65	47.59	74.00	-26.41	peak		
6		9744.500	37.30	17.69	54.99	74.00	-19.01	peak		
7	*	9744.500	27.81	17.69	45.50	54.00	-8.50	AVG		
8		14360.000	38.56	18.41	56.97	74.00	-17.03	peak		
9		14360.000	26.85	18.41	45.26	54.00	-8.74	AVG		
10		18000.000	37.05	25.57	62.62	74.00	-11.38	peak		
11		18000.000	17.06	25.57	42.63	54.00	-11.37	AVG		
12		18935.000	38.22	23.13	61.35	74.00	-12.65	peak		
13		18935.000	18.82	23.13	41.95	54.00	-12.05	AVG		
14		21527.500	38.18	21.35	59.53	74.00	-14.47	peak		
15		21527.500	19.41	21.35	40.76	54.00	-13.24	AVG		
16		24438.750	39.68	19.69	59.37	74.00	-14.63	peak		
17		24438.750	20.88	19.69	40.57	54.00	-13.43	AVG		

*:Maximum data x:Over limit !:over margin



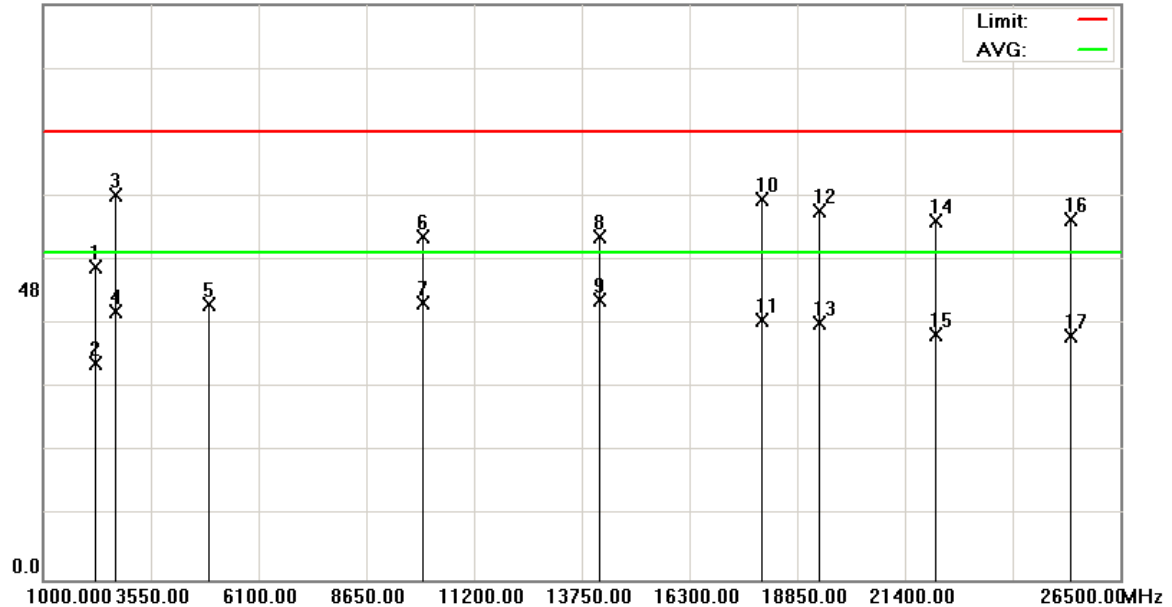
File :FCC(2462MHZ)

Data :#18

Date: 2009/12/20

Time: 上午 01:46:40

95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2210.400	51.15	0.41	51.56	74.00	-22.44	peak		
2		2210.400	35.27	0.41	35.68	54.00	-18.32	AVG		
3		2700.000	40.89	22.58	63.47	74.00	-10.53	peak		
4		2700.000	21.62	22.58	44.20	54.00	-9.80	AVG		
5		4924.000	37.87	7.65	45.52	74.00	-28.48	peak		
6		9981.750	38.86	17.88	56.74	74.00	-17.26	peak		
7		9981.750	27.81	17.88	45.69	54.00	-8.31	AVG		
8		14160.000	37.81	18.83	56.64	74.00	-17.36	peak		
9	*	14160.000	27.31	18.83	46.14	54.00	-7.86	AVG		
10		18000.000	37.20	25.57	62.77	74.00	-11.23	peak		
11		18000.000	17.24	25.57	42.81	54.00	-11.19	AVG		
12		19381.250	38.21	22.82	61.03	74.00	-12.97	peak		
13		19381.250	19.52	22.82	42.34	54.00	-11.66	AVG		
14		22122.500	38.17	21.05	59.22	74.00	-14.78	peak		
15		22122.500	19.45	21.05	40.50	54.00	-13.50	AVG		
16		25310.000	40.34	19.10	59.44	74.00	-14.56	peak		
17		25310.000	21.10	19.10	40.20	54.00	-13.80	AVG		

*:Maximum data x:Over limit !:over margin



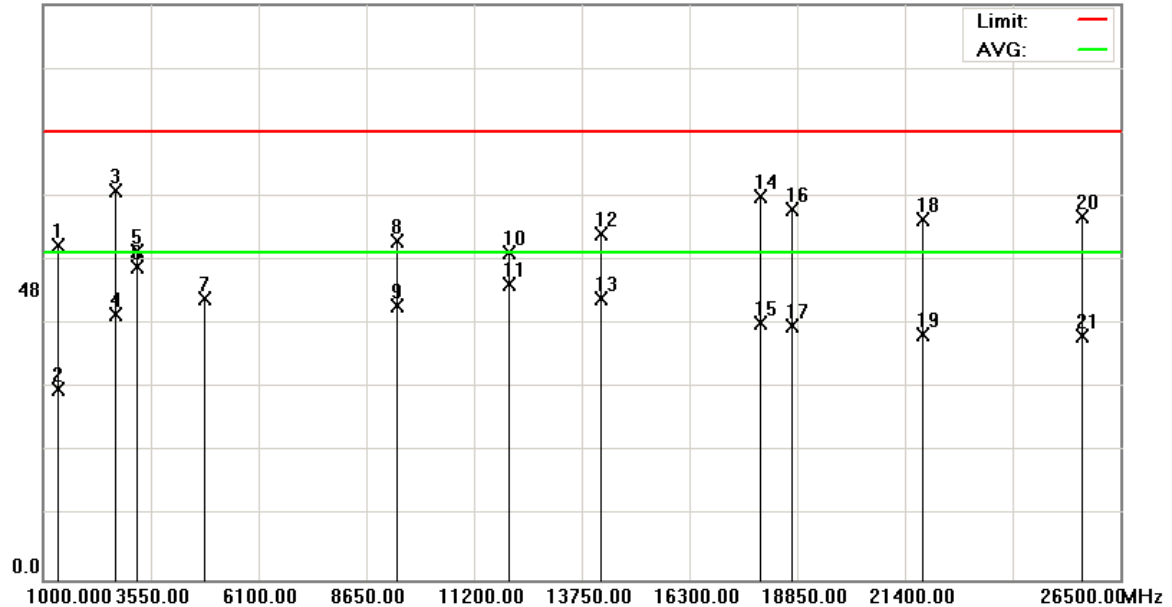
File :FCC(2412MHZ)(POWER OD)

Data :#18

Date: 2009/12/20

Time: 上午 01:51:51

95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11g Link Mode

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1350.200	58.79	-3.68	55.11	74.00	-18.89	peak		
2		1350.200	35.17	-3.68	31.49	54.00	-22.51	AVG		
3		2700.000	41.62	22.58	64.20	74.00	-9.80	peak		
4		2700.000	21.24	22.58	43.82	54.00	-10.18	AVG		
5		3211.000	51.33	2.85	54.18	74.00	-19.82	peak		
6	*	3211.000	48.69	2.85	51.54	54.00	-2.46	AVG		
7		4824.000	38.95	7.48	46.43	74.00	-27.57	peak		
8		9379.500	38.98	17.03	56.01	74.00	-17.99	peak		
9		9379.500	28.19	17.03	45.22	54.00	-8.78	AVG		
10		12020.000	41.17	12.83	54.00	74.00	-20.00	peak		
11		12020.000	36.01	12.83	48.84	54.00	-5.16	AVG		
12		14200.000	38.31	18.86	57.17	74.00	-16.83	peak		
13		14200.000	27.64	18.86	46.50	54.00	-7.50	AVG		
14		17960.000	38.46	24.84	63.30	74.00	-10.70	peak		
15		17960.000	17.64	24.84	42.48	54.00	-11.52	AVG		
16		18722.500	37.97	23.12	61.09	74.00	-12.91	peak		
17		18722.500	18.83	23.12	41.95	54.00	-12.05	AVG		
18		21825.000	38.26	21.20	59.46	74.00	-14.54	peak		
19		21825.000	19.32	21.20	40.52	54.00	-13.48	AVG		
20		25586.250	41.15	18.92	60.07	74.00	-13.93	peak		
21		25586.250	21.42	18.92	40.34	54.00	-13.66	AVG		

*:Maximum data x:Over limit !:over margin



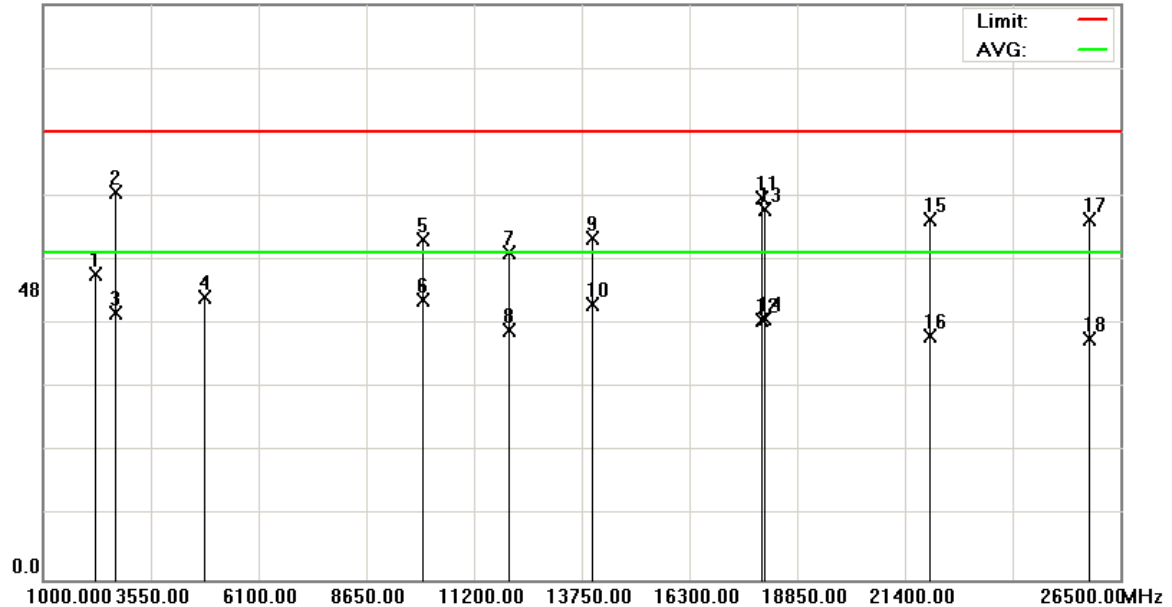
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Data :#19

Date: 2009/12/20

Time: 上午 01:53:18

95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11g Link Mode

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2208.700	50.14	0.43	50.57	74.00	-23.43	peak		
2		2700.000	41.41	22.58	63.99	74.00	-10.01	peak		
3		2700.000	21.54	22.58	44.12	54.00	-9.88	AVG		
4		4824.000	39.23	7.48	46.71	74.00	-27.29	peak		
5		10000.000	38.30	17.94	56.24	74.00	-17.76	peak		
6	*	10000.000	28.28	17.94	46.22	54.00	-7.78	AVG		
7		12020.000	41.22	12.83	54.05	74.00	-19.95	peak		
8		12020.000	28.32	12.83	41.15	54.00	-12.85	AVG		
9		13980.000	37.84	18.62	56.46	74.00	-17.54	peak		
10		13980.000	26.87	18.62	45.49	54.00	-8.51	AVG		
11		18000.000	37.47	25.57	63.04	74.00	-10.96	peak		
12		18000.000	17.21	25.57	42.78	54.00	-11.22	AVG		
13		18085.000	37.98	23.25	61.23	74.00	-12.77	peak		
14		18085.000	19.97	23.25	43.22	54.00	-10.78	AVG		
15		21973.750	38.37	21.13	59.50	74.00	-14.50	peak		
16		21973.750	19.13	21.13	40.26	54.00	-13.74	AVG		
17		25756.250	40.66	18.77	59.43	74.00	-14.57	peak		
18		25756.250	21.06	18.77	39.83	54.00	-14.17	AVG		

*:Maximum data x:Over limit !:over margin



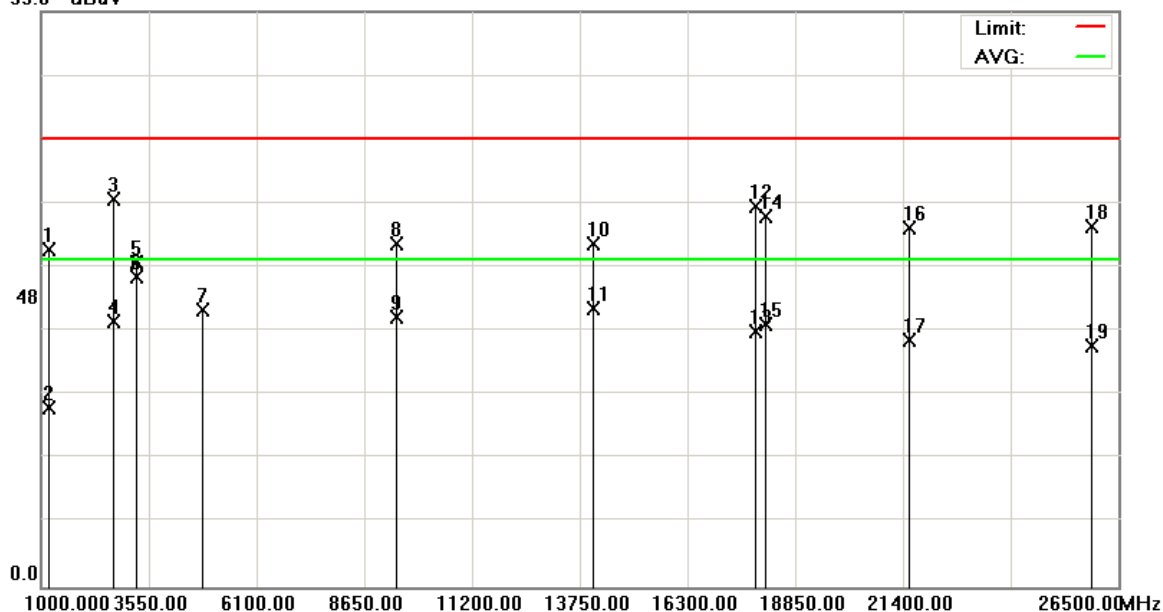
File :FCC(2437MHZ)

Data :#17

Date: 2009/12/20

Time: 上午 01:55:14

95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11g Link Mode

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1175.100	60.88	-5.24	55.64	74.00	-18.36	peak		
2		1175.100	34.90	-5.24	29.66	54.00	-24.34	AVG		
3		2700.000	41.37	22.58	63.95	74.00	-10.05	peak		
4		2700.000	21.13	22.58	43.71	54.00	-10.29	AVG		
5		3247.500	51.10	2.41	53.51	74.00	-20.49	peak		
6	*	3247.500	48.69	2.41	51.10	54.00	-2.90	AVG		
7		4824.000	38.20	7.48	45.68	74.00	-28.32	peak		
8		9397.750	39.48	17.07	56.55	74.00	-17.45	peak		
9		9397.750	27.57	17.07	44.64	54.00	-9.36	AVG		
10		14080.000	37.75	18.81	56.56	74.00	-17.44	peak		
11		14080.000	27.26	18.81	46.07	54.00	-7.93	AVG		
12		17900.000	37.80	24.96	62.76	74.00	-11.24	peak		
13		17900.000	17.20	24.96	42.16	54.00	-11.84	AVG		
14		18148.750	37.88	23.22	61.10	74.00	-12.90	peak		
15		18148.750	20.20	23.22	43.42	54.00	-10.58	AVG		
16		21548.750	37.88	21.33	59.21	74.00	-14.79	peak		
17		21548.750	19.40	21.33	40.73	54.00	-13.27	AVG		
18		25841.250	40.90	18.69	59.59	74.00	-14.41	peak		
19		25841.250	21.21	18.69	39.90	54.00	-14.10	AVG		

*:Maximum data x:Over limit !:over margin



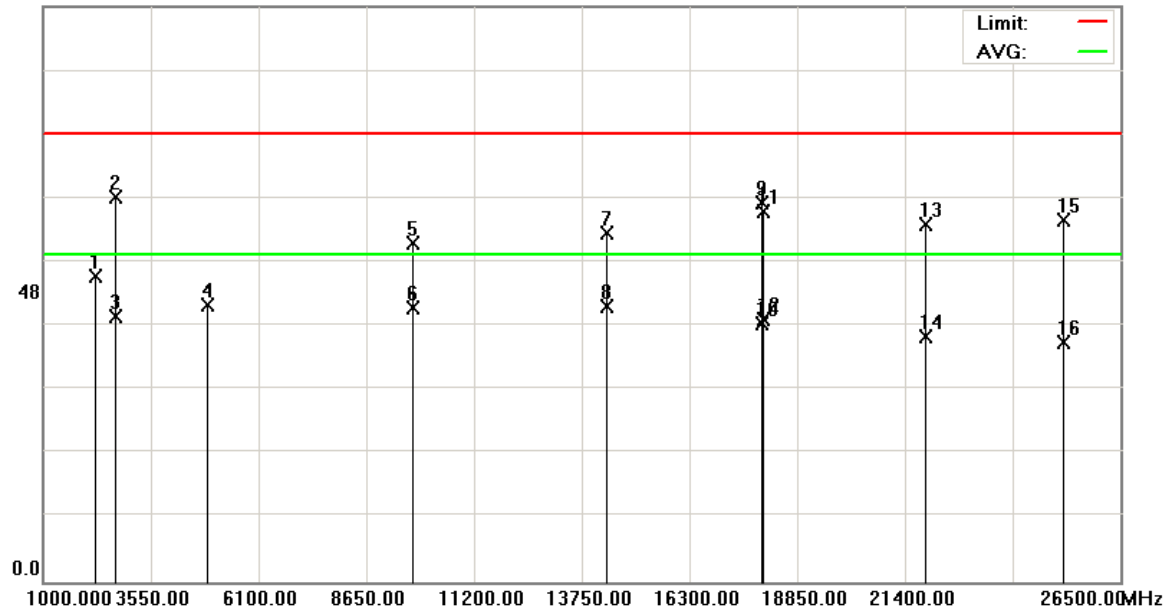
File :FCC(2437MHZ)

Data :#18

Date: 2009/12/20

Time: 上午 01:56:40

95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11g Link Mode

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2212.100	50.09	0.39	50.48	74.00	-23.52	peak		
2		2700.000	41.02	22.58	63.60	74.00	-10.40	peak		
3		2700.000	21.29	22.58	43.87	54.00	-10.13	AVG		
4		4874.000	38.11	7.72	45.83	74.00	-28.17	peak		
5		9744.500	38.31	17.69	56.00	74.00	-18.00	peak		
6		9744.500	27.46	17.69	45.15	54.00	-8.85	AVG		
7		14320.000	39.14	18.57	57.71	74.00	-16.29	peak		
8	*	14320.000	27.03	18.57	45.60	54.00	-8.40	AVG		
9		18000.000	37.13	25.57	62.70	74.00	-11.30	peak		
10		18000.000	17.18	25.57	42.75	54.00	-11.25	AVG		
11		18021.250	37.78	23.28	61.06	74.00	-12.94	peak		
12		18021.250	20.14	23.28	43.42	54.00	-10.58	AVG		
13		21867.500	37.88	21.19	59.07	74.00	-14.93	peak		
14		21867.500	19.35	21.19	40.54	54.00	-13.46	AVG		
15		25140.000	40.42	19.25	59.67	74.00	-14.33	peak		
16		25140.000	20.28	19.25	39.53	54.00	-14.47	AVG		

*:Maximum data x:Over limit !:over margin



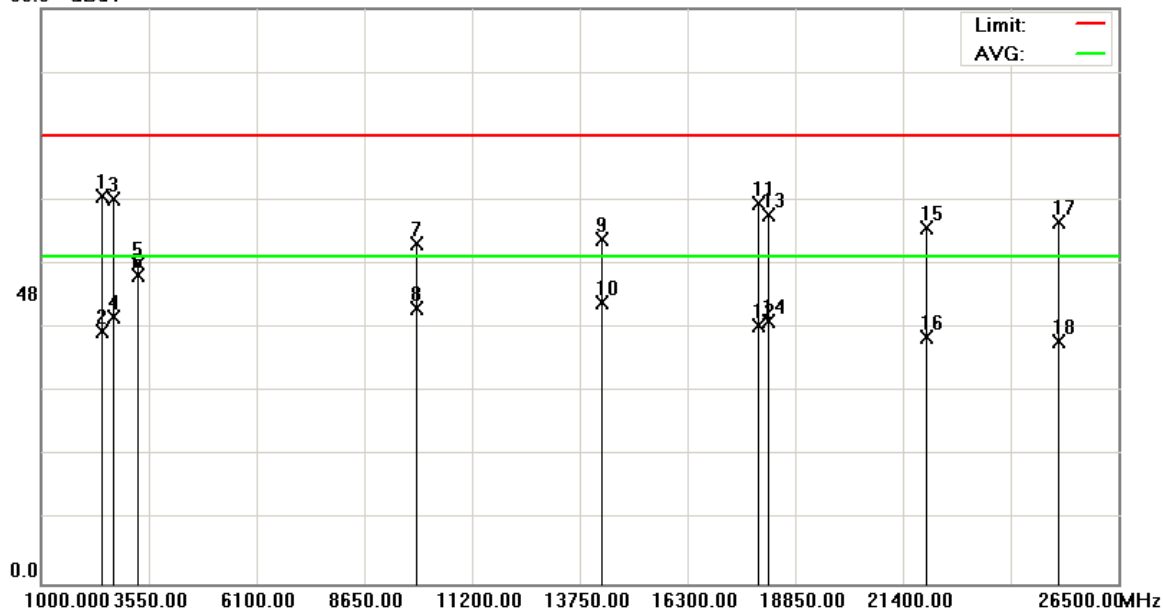
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Data :#17

Date: 2009/12/20

Time: 上午 01:58:34

95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11g Link Mode

Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2407.600	63.99	0.11	64.10	74.00	-9.90	peak		
2		2407.600	41.69	0.11	41.80	54.00	-12.20	AVG		
3		2700.000	41.00	22.58	63.58	74.00	-10.42	peak		
4		2700.000	21.58	22.58	44.16	54.00	-9.84	AVG		
5		3284.000	50.45	2.37	52.82	74.00	-21.18	peak		
6	*	3284.000	48.47	2.37	50.84	54.00	-3.16	AVG		
7		9872.250	38.42	17.84	56.26	74.00	-17.74	peak		
8		9872.250	27.67	17.84	45.51	54.00	-8.49	AVG		
9		14240.000	38.29	18.71	57.00	74.00	-17.00	peak		
10		14240.000	27.65	18.71	46.36	54.00	-7.64	AVG		
11		17980.000	37.60	25.21	62.81	74.00	-11.19	peak		
12		17980.000	17.32	25.21	42.53	54.00	-11.47	AVG		
13		18212.500	37.80	23.22	61.02	74.00	-12.98	peak		
14		18212.500	20.20	23.22	43.42	54.00	-10.58	AVG		
15		21952.500	37.71	21.15	58.86	74.00	-15.14	peak		
16		21952.500	19.54	21.15	40.69	54.00	-13.31	AVG		
17		25055.000	40.32	19.33	59.65	74.00	-14.35	peak		
18		25055.000	20.62	19.33	39.95	54.00	-14.05	AVG		

*:Maximum data x:Over limit !:over margin



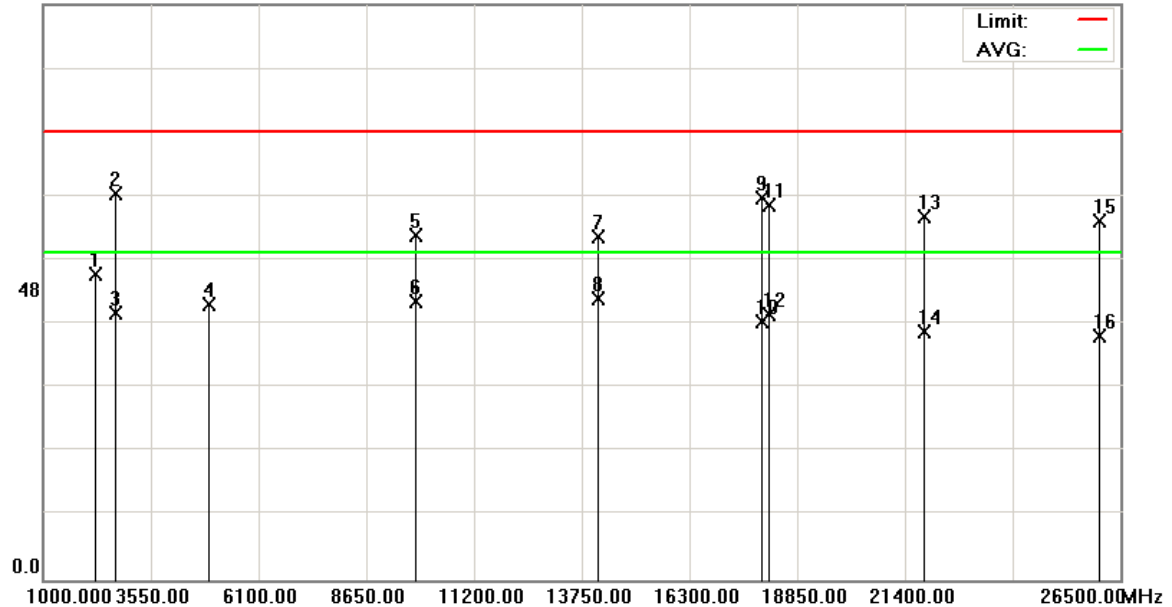
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Data :#18

Date: 2009/12/20

Time: 上午 02:00:01

95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: IEEE 802.11g Link Mode

Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2212.100	50.10	0.39	50.49	74.00	-23.51	peak		
2		2700.000	41.10	22.58	63.68	74.00	-10.32	peak		
3		2700.000	21.38	22.58	43.96	54.00	-10.04	AVG		
4		4924.000	37.74	7.65	45.39	74.00	-28.61	peak		
5		9799.250	39.11	17.67	56.78	74.00	-17.22	peak		
6		9799.250	28.33	17.67	46.00	54.00	-8.00	AVG		
7		14120.000	37.78	18.87	56.65	74.00	-17.35	peak		
8	*	14120.000	27.54	18.87	46.41	54.00	-7.59	AVG		
9		18000.000	37.40	25.57	62.97	74.00	-11.03	peak		
10		18000.000	17.15	25.57	42.72	54.00	-11.28	AVG		
11		18170.000	38.64	23.23	61.87	74.00	-12.13	peak		
12		18170.000	20.70	23.23	43.93	54.00	-10.07	AVG		
13		21846.250	38.70	21.20	59.90	74.00	-14.10	peak		
14		21846.250	19.69	21.20	40.89	54.00	-13.11	AVG		
15		25990.000	40.71	18.56	59.27	74.00	-14.73	peak		
16		25990.000	21.61	18.56	40.17	54.00	-13.83	AVG		

*:Maximum data x:Over limit !:over margin



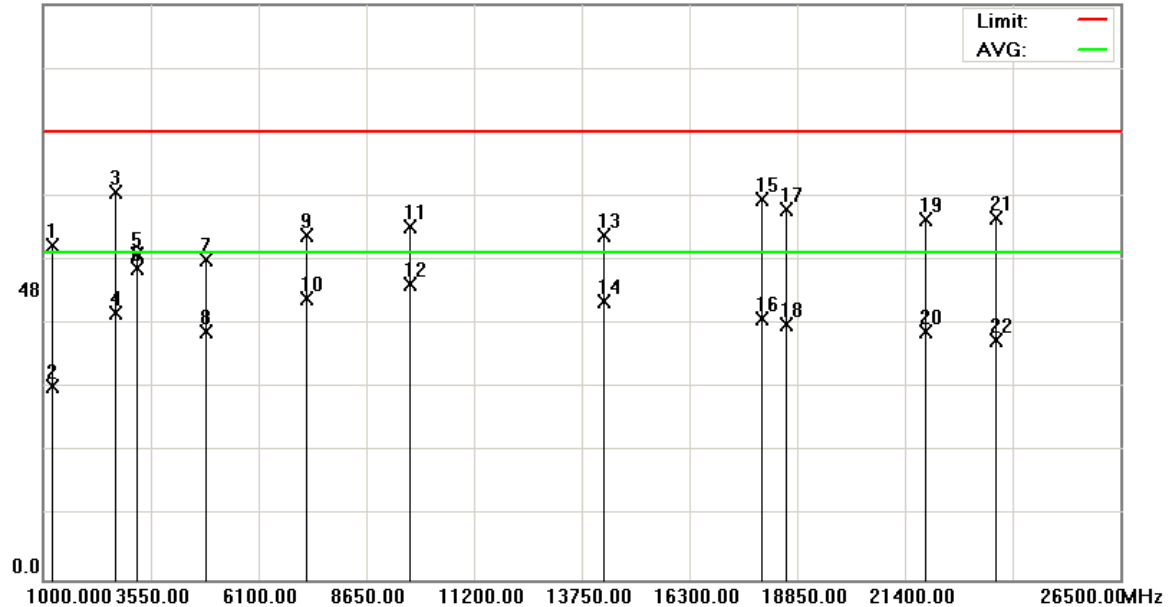
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Data :#17

Date: 2009/12/20

Time: 上午 02:02:46

95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1198.900	60.14	-4.91	55.23	74.00	-18.77	peak		
2		1198.900	36.87	-4.91	31.96	54.00	-22.04	AVG		
3		2700.000	41.31	22.58	63.89	74.00	-10.11	peak		
4		2700.000	21.39	22.58	43.97	54.00	-10.03	AVG		
5		3211.000	51.05	2.85	53.90	74.00	-20.10	peak		
6	*	3211.000	48.65	2.85	51.50	54.00	-2.50	AVG		
7		4835.250	45.13	7.61	52.74	74.00	-21.26	peak		
8		4835.250	33.45	7.61	41.06	54.00	-12.94	AVG		
9		7244.250	43.11	13.76	56.87	74.00	-17.13	peak		
10		7244.250	32.65	13.76	46.41	54.00	-7.59	AVG		
11		9653.250	41.26	16.95	58.21	74.00	-15.79	peak		
12		9653.250	31.89	16.95	48.84	54.00	-5.16	AVG		
13		14260.000	38.33	18.66	56.99	74.00	-17.01	peak		
14		14260.000	27.21	18.66	45.87	54.00	-8.13	AVG		
15		18000.000	37.35	25.57	62.92	74.00	-11.08	peak		
16		18000.000	17.56	25.57	43.13	54.00	-10.87	AVG		
17		18573.750	38.11	23.07	61.18	74.00	-12.82	peak		
18		18573.750	18.99	23.07	42.06	54.00	-11.94	AVG		
19		21867.500	38.21	21.19	59.40	74.00	-14.60	peak		
20		21867.500	19.68	21.19	40.87	54.00	-13.13	AVG		
21		23546.250	39.11	20.53	59.64	74.00	-14.36	peak		
22		23546.250	19.04	20.53	39.57	54.00	-14.43	AVG		

*:Maximum data x:Over limit !:over margin



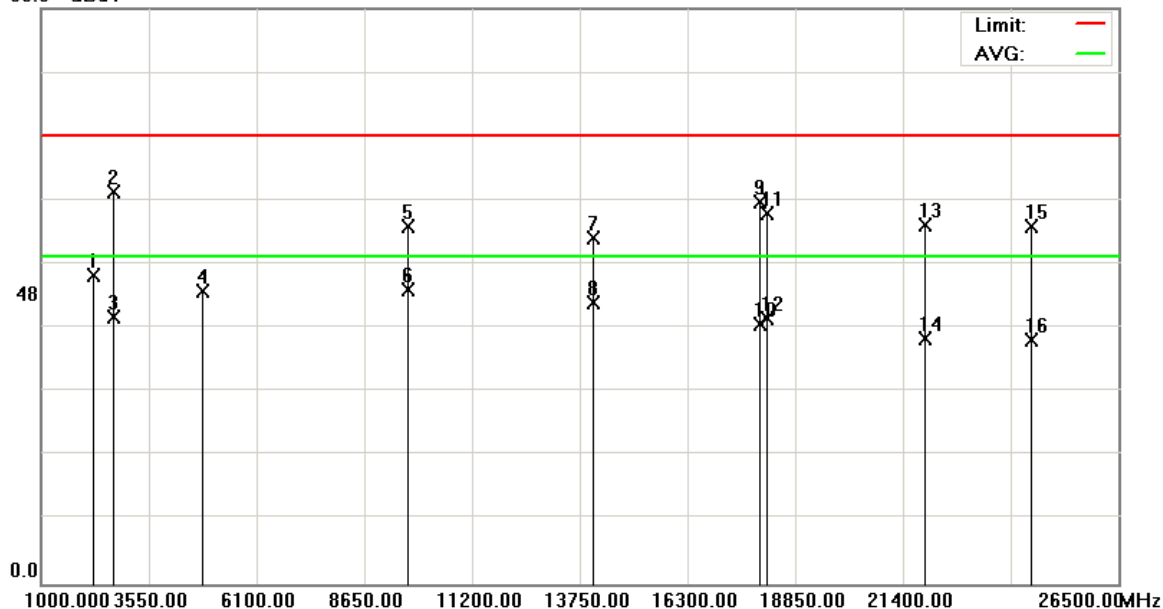
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Data :#18

Date: 2009/12/20

Time: 上午 02:04:13

95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2208.700	50.42	0.43	50.85	74.00	-23.15	peak		
2		2700.000	42.14	22.58	64.72	74.00	-9.28	peak		
3		2700.000	21.58	22.58	44.16	54.00	-9.84	AVG		
4		4824.000	40.94	7.48	48.42	74.00	-25.58	peak		
5		9671.500	41.90	17.15	59.05	74.00	-14.95	peak		
6	*	9671.500	31.34	17.15	48.49	54.00	-5.51	AVG		
7		14040.000	38.45	18.66	57.11	74.00	-16.89	peak		
8		14040.000	27.68	18.66	46.34	54.00	-7.66	AVG		
9		18000.000	37.42	25.57	62.99	74.00	-11.01	peak		
10		18000.000	17.24	25.57	42.81	54.00	-11.19	AVG		
11		18170.000	37.84	23.23	61.07	74.00	-12.93	peak		
12		18170.000	20.56	23.23	43.79	54.00	-10.21	AVG		
13		21931.250	38.18	21.15	59.33	74.00	-14.67	peak		
14		21931.250	19.43	21.15	40.58	54.00	-13.42	AVG		
15		24417.500	39.42	19.71	59.13	74.00	-14.87	peak		
16		24417.500	20.61	19.71	40.32	54.00	-13.68	AVG		

*:Maximum data x:Over limit !:over margin



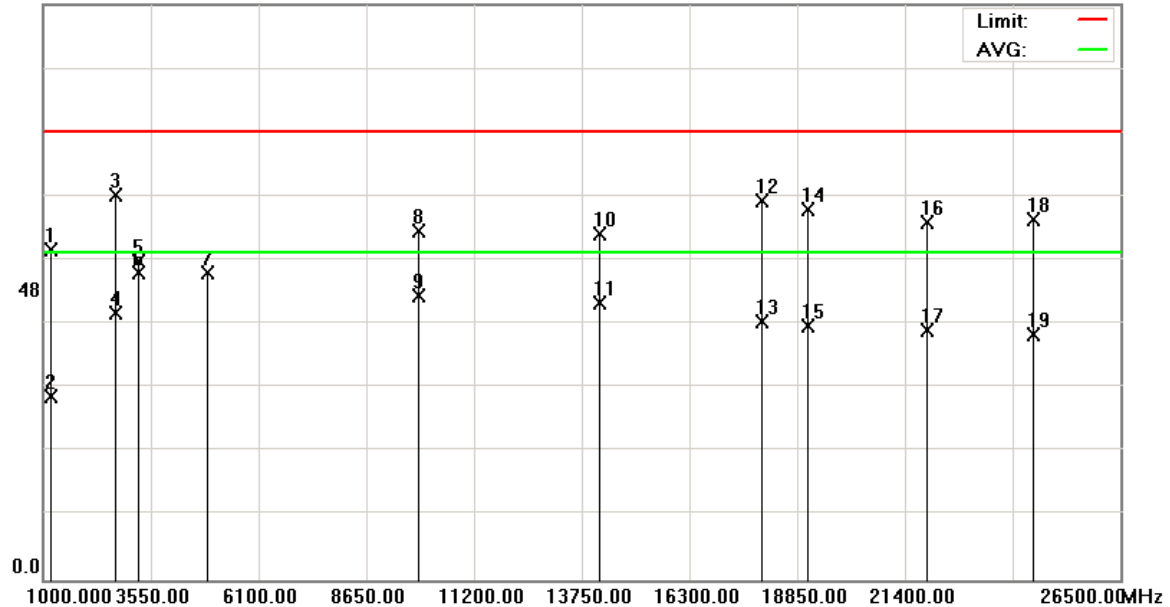
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Data :#17

Date: 2009/12/20

Time: 上午 02:06:08

95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1178.500	59.62	-5.21	54.41	74.00	-19.59	peak		
2		1178.500	35.59	-5.21	30.38	54.00	-23.62	AVG		
3		2700.000	40.91	22.58	63.49	74.00	-10.51	peak		
4		2700.000	21.58	22.58	44.16	54.00	-9.84	AVG		
5		3247.500	50.14	2.41	52.55	74.00	-21.45	peak		
6	*	3247.500	48.24	2.41	50.65	54.00	-3.35	AVG		
7		4871.750	42.91	7.72	50.63	74.00	-23.37	peak		
8		9872.250	39.73	17.84	57.57	74.00	-16.43	peak		
9		9872.250	29.04	17.84	46.88	54.00	-7.12	AVG		
10		14160.000	38.36	18.83	57.19	74.00	-16.81	peak		
11		14160.000	26.98	18.83	45.81	54.00	-8.19	AVG		
12		18000.000	36.92	25.57	62.49	74.00	-11.51	peak		
13		18000.000	16.97	25.57	42.54	54.00	-11.46	AVG		
14		19105.000	38.27	23.00	61.27	74.00	-12.73	peak		
15		19105.000	18.91	23.00	41.91	54.00	-12.09	AVG		
16		21888.750	37.82	21.18	59.00	74.00	-15.00	peak		
17		21888.750	19.93	21.18	41.11	54.00	-12.89	AVG		
18		24417.500	39.71	19.71	59.42	74.00	-14.58	peak		
19		24417.500	20.77	19.71	40.48	54.00	-13.52	AVG		

*:Maximum data x:Over limit !:over margin



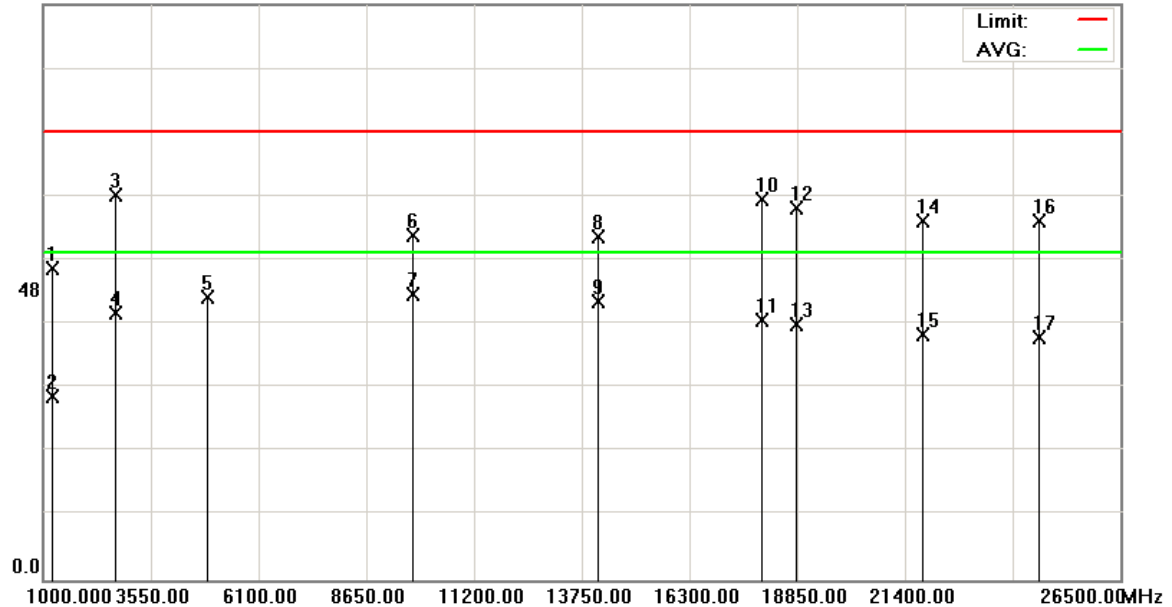
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Data :#18

Date: 2009/12/20

Time: 上午 02:07:34

95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1198.900	56.22	-4.91	51.31	74.00	-22.69	peak		
2		1198.900	35.29	-4.91	30.38	54.00	-23.62	AVG		
3		2700.000	41.02	22.58	63.60	74.00	-10.40	peak		
4		2700.000	21.58	22.58	44.16	54.00	-9.84	AVG		
5		4874.000	38.99	7.72	46.71	74.00	-27.29	peak		
6		9744.500	39.24	17.69	56.93	74.00	-17.07	peak		
7	*	9744.500	29.45	17.69	47.14	54.00	-6.86	AVG		
8		14120.000	37.69	18.87	56.56	74.00	-17.44	peak		
9		14120.000	27.15	18.87	46.02	54.00	-7.98	AVG		
10		18000.000	37.25	25.57	62.82	74.00	-11.18	peak		
11		18000.000	17.24	25.57	42.81	54.00	-11.19	AVG		
12		18807.500	38.32	23.16	61.48	74.00	-12.52	peak		
13		18807.500	18.91	23.16	42.07	54.00	-11.93	AVG		
14		21825.000	38.10	21.20	59.30	74.00	-14.70	peak		
15		21825.000	19.33	21.20	40.53	54.00	-13.47	AVG		
16		24566.250	39.65	19.63	59.28	74.00	-14.72	peak		
17		24566.250	20.40	19.63	40.03	54.00	-13.97	AVG		

*:Maximum data x:Over limit !:over margin



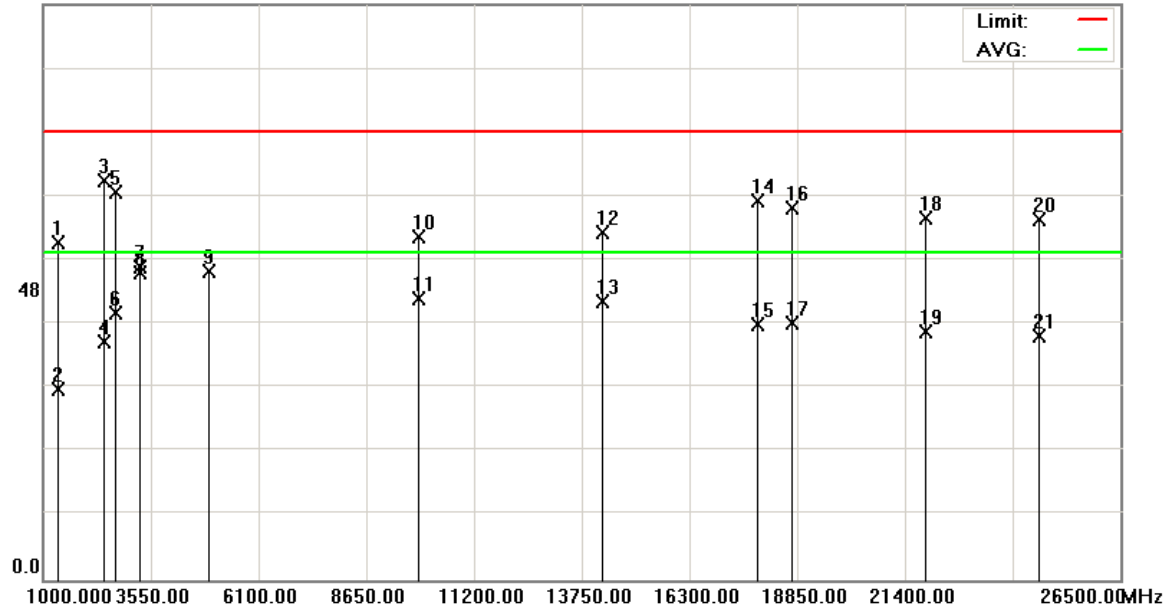
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Data :#17

Date: 2009/12/20

Time: 上午 02:09:22

95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1346.800	59.32	-3.71	55.61	74.00	-18.39	peak		
2		1346.800	35.26	-3.71	31.55	54.00	-22.45	AVG		
3		2428.000	65.94	0.08	66.02	74.00	-7.98	peak		
4		2428.000	39.14	0.08	39.22	54.00	-14.78	AVG		
5		2700.000	41.45	22.58	64.03	74.00	-9.97	peak		
6		2700.000	21.59	22.58	44.17	54.00	-9.83	AVG		
7		3284.000	49.27	2.37	51.64	74.00	-22.36	peak		
8	*	3284.000	48.24	2.37	50.61	54.00	-3.39	AVG		
9		4926.500	43.31	7.66	50.97	74.00	-23.03	peak		
10		9872.250	38.81	17.84	56.65	74.00	-17.35	peak		
11		9872.250	28.53	17.84	46.37	54.00	-7.63	AVG		
12		14220.000	38.47	18.78	57.25	74.00	-16.75	peak		
13		14220.000	27.25	18.78	46.03	54.00	-7.97	AVG		
14		17900.000	37.58	24.96	62.54	74.00	-11.46	peak		
15		17900.000	17.29	24.96	42.25	54.00	-11.75	AVG		
16		18722.500	38.23	23.12	61.35	74.00	-12.65	peak		
17		18722.500	19.34	23.12	42.46	54.00	-11.54	AVG		
18		21867.500	38.45	21.19	59.64	74.00	-14.36	peak		
19		21867.500	19.85	21.19	41.04	54.00	-12.96	AVG		
20		24545.000	39.89	19.63	59.52	74.00	-14.48	peak		
21		24545.000	20.60	19.63	40.23	54.00	-13.77	AVG		

*:Maximum data x:Over limit !:over margin



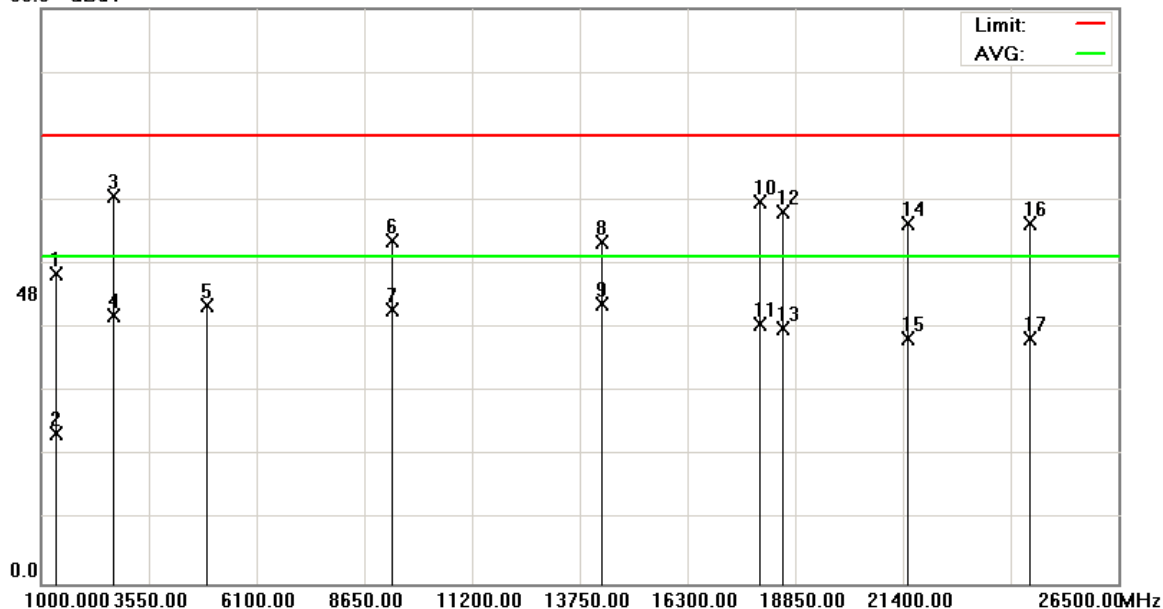
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Data :#18

Date: 2009/12/20

Time: 上午 02:10:49

95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1350.200	54.81	-3.68	51.13	74.00	-22.87	peak		
2		1350.200	28.46	-3.68	24.78	54.00	-29.22	AVG		
3		2700.000	41.41	22.58	63.99	74.00	-10.01	peak		
4		2700.000	21.69	22.58	44.27	54.00	-9.73	AVG		
5		4924.000	38.24	7.65	45.89	74.00	-28.11	peak		
6		9288.250	39.94	16.78	56.72	74.00	-17.28	peak		
7		9288.250	28.42	16.78	45.20	54.00	-8.80	AVG		
8		14240.000	37.75	18.71	56.46	74.00	-17.54	peak		
9	*	14240.000	27.48	18.71	46.19	54.00	-7.81	AVG		
10		18000.000	37.39	25.57	62.96	74.00	-11.04	peak		
11		18000.000	17.39	25.57	42.96	54.00	-11.04	AVG		
12		18552.500	38.41	23.08	61.49	74.00	-12.51	peak		
13		18552.500	19.12	23.08	42.20	54.00	-11.80	AVG		
14		21527.500	38.09	21.35	59.44	74.00	-14.56	peak		
15		21527.500	19.26	21.35	40.61	54.00	-13.39	AVG		
16		24396.250	39.87	19.72	59.59	74.00	-14.41	peak		
17		24396.250	20.73	19.72	40.45	54.00	-13.55	AVG		

*:Maximum data x:Over limit !:over margin



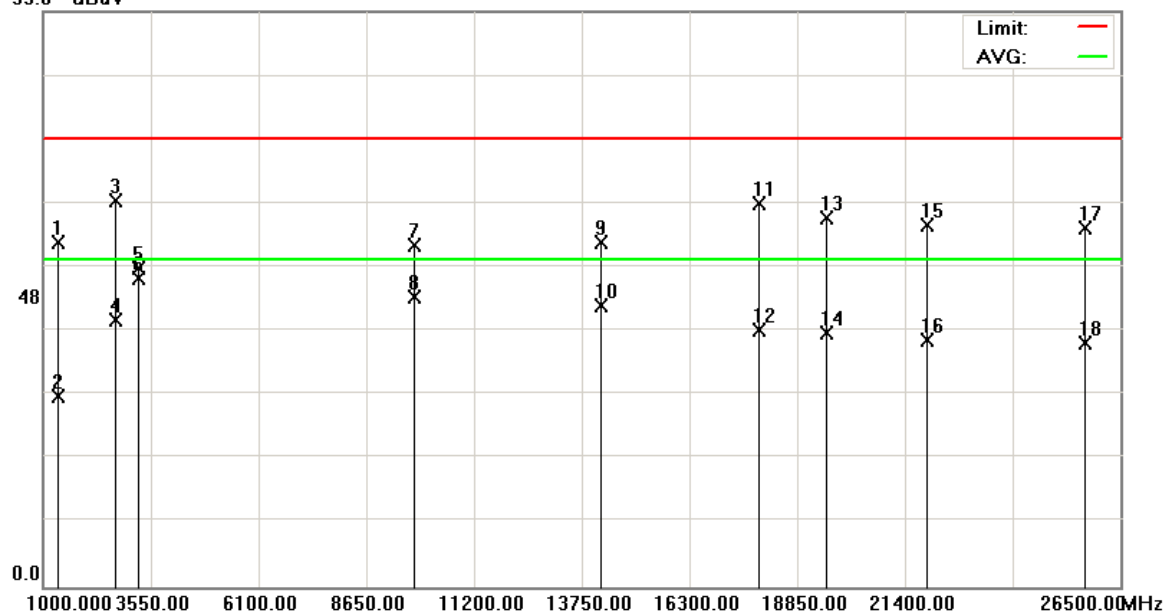
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Data :#17

Date: 2009/12/20

Time: 上午 02:14:25

95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note: CH03(2422MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1350.200	60.60	-3.68	56.92	74.00	-17.08	peak		
2		1350.200	35.19	-3.68	31.51	54.00	-22.49	AVG		
3		2700.000	41.13	22.58	63.71	74.00	-10.29	peak		
4		2700.000	21.57	22.58	44.15	54.00	-9.85	AVG		
5		3229.250	49.84	2.72	52.56	74.00	-21.44	peak		
6	*	3229.250	48.21	2.72	50.93	54.00	-3.07	AVG		
7		9781.000	38.81	17.69	56.50	74.00	-17.50	peak		
8		9781.000	30.18	17.69	47.87	54.00	-6.13	AVG		
9		14200.000	38.00	18.86	56.86	74.00	-17.14	peak		
10		14200.000	27.50	18.86	46.36	54.00	-7.64	AVG		
11		17940.000	38.51	24.71	63.22	74.00	-10.78	peak		
12		17940.000	17.67	24.71	42.38	54.00	-11.62	AVG		
13		19530.000	38.33	22.67	61.00	74.00	-13.00	peak		
14		19530.000	19.35	22.67	42.02	54.00	-11.98	AVG		
15		21888.750	38.58	21.18	59.76	74.00	-14.24	peak		
16		21888.750	19.44	21.18	40.62	54.00	-13.38	AVG		
17		25650.000	40.37	18.87	59.24	74.00	-14.76	peak		
18		25650.000	21.47	18.87	40.34	54.00	-13.66	AVG		

*:Maximum data x:Over limit !:over margin



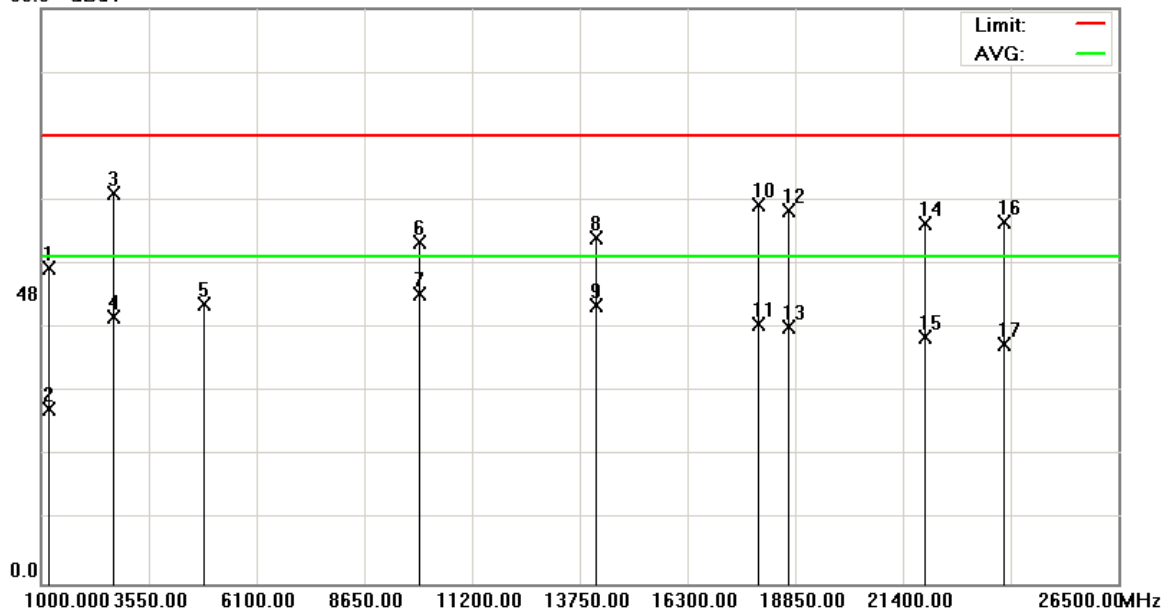
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Data :#18

Date: 2009/12/20

Time: 上午 02:15:53

95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note: CH03(2422MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1178.500	57.40	-5.21	52.19	74.00	-21.81	peak		
2		1178.500	34.13	-5.21	28.92	54.00	-25.08	AVG		
3		2700.000	42.01	22.58	64.59	74.00	-9.41	peak		
4		2700.000	21.57	22.58	44.15	54.00	-9.85	AVG		
5		4844.000	38.61	7.67	46.28	74.00	-27.72	peak		
6		9945.250	38.74	17.78	56.52	74.00	-17.48	peak		
7	*	9945.250	29.96	17.78	47.74	54.00	-6.26	AVG		
8		14120.000	38.16	18.87	57.03	74.00	-16.97	peak		
9		14120.000	27.01	18.87	45.88	54.00	-8.12	AVG		
10		17980.000	37.46	25.21	62.67	74.00	-11.33	peak		
11		17980.000	17.64	25.21	42.85	54.00	-11.15	AVG		
12		18680.000	38.44	23.09	61.53	74.00	-12.47	peak		
13		18680.000	19.32	23.09	42.41	54.00	-11.59	AVG		
14		21888.750	38.20	21.18	59.38	74.00	-14.62	peak		
15		21888.750	19.60	21.18	40.78	54.00	-13.22	AVG		
16		23780.000	39.44	20.27	59.71	74.00	-14.29	peak		
17		23780.000	19.35	20.27	39.62	54.00	-14.38	AVG		

*:Maximum data x:Over limit !:over margin



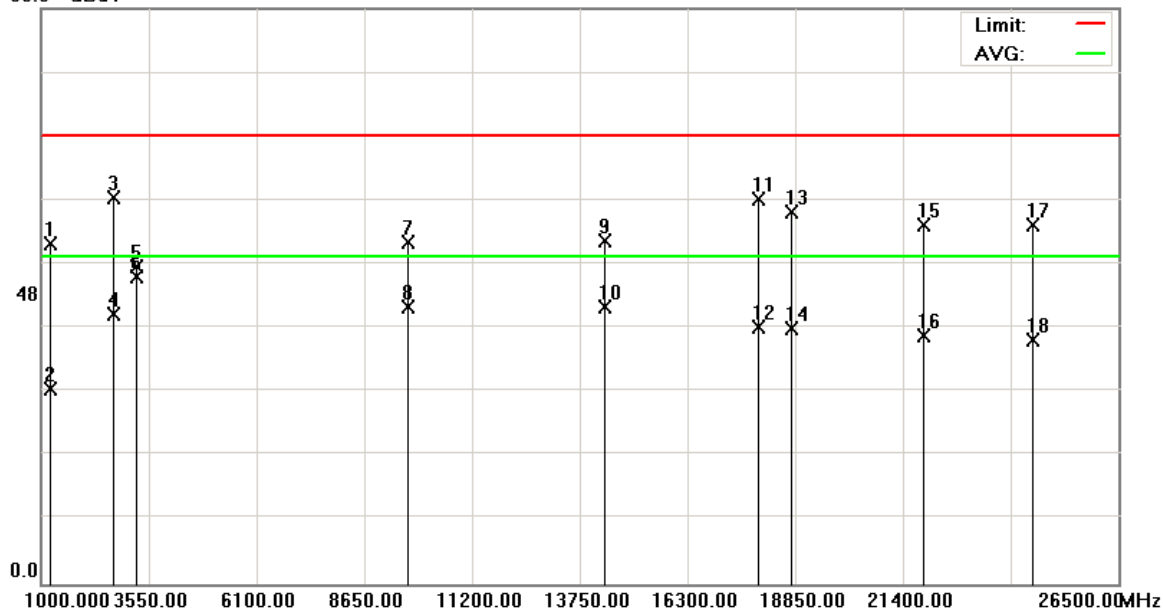
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Data :#17

Date: 2009/12/20

Time: 上午 02:17:48

95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1197.200	61.16	-4.95	56.21	74.00	-17.79	peak		
2		1197.200	37.12	-4.95	32.17	54.00	-21.83	AVG		
3		2700.000	41.10	22.58	63.68	74.00	-10.32	peak		
4		2700.000	21.85	22.58	44.43	54.00	-9.57	AVG		
5		3229.250	49.64	2.72	52.36	74.00	-21.64	peak		
6	*	3229.250	48.02	2.72	50.74	54.00	-3.26	AVG		
7		9689.750	39.01	17.35	56.36	74.00	-17.64	peak		
8		9689.750	28.33	17.35	45.68	54.00	-8.32	AVG		
9		14320.000	38.19	18.57	56.76	74.00	-17.24	peak		
10		14320.000	27.25	18.57	45.82	54.00	-8.18	AVG		
11		17980.000	38.27	25.21	63.48	74.00	-10.52	peak		
12		17980.000	17.24	25.21	42.45	54.00	-11.55	AVG		
13		18765.000	38.17	23.13	61.30	74.00	-12.70	peak		
14		18765.000	18.96	23.13	42.09	54.00	-11.91	AVG		
15		21867.500	38.05	21.19	59.24	74.00	-14.76	peak		
16		21867.500	19.70	21.19	40.89	54.00	-13.11	AVG		
17		24460.000	39.66	19.69	59.35	74.00	-14.65	peak		
18		24460.000	20.65	19.69	40.34	54.00	-13.66	AVG		

*:Maximum data x:Over limit !:over margin



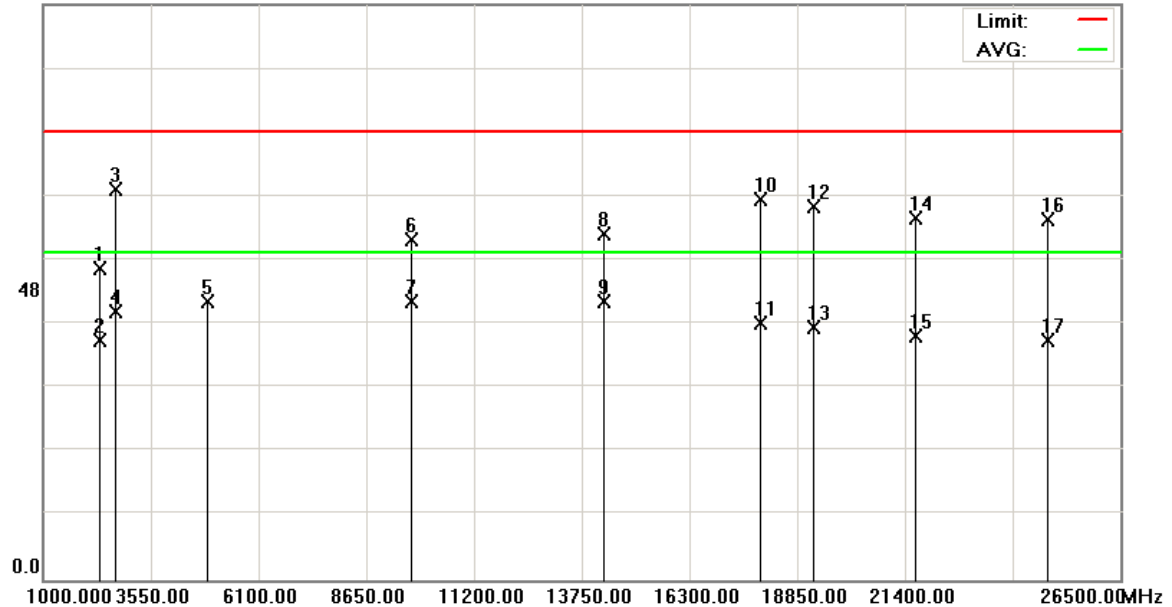
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Date: 2009/12/20

Time: 上午 02:19:14

95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2332.800	51.21	0.28	51.49	74.00	-22.51	peak		
2		2332.800	39.21	0.28	39.49	54.00	-14.51	AVG		
3		2700.000	41.85	22.58	64.43	74.00	-9.57	peak		
4		2700.000	21.69	22.58	44.27	54.00	-9.73	AVG		
5		4874.000	38.28	7.72	46.00	74.00	-28.00	peak		
6		9708.000	38.68	17.49	56.17	74.00	-17.83	peak		
7		9708.000	28.44	17.49	45.93	54.00	-8.07	AVG		
8		14240.000	38.32	18.71	57.03	74.00	-16.97	peak		
9	*	14240.000	27.29	18.71	46.00	54.00	-8.00	AVG		
10		17960.000	38.00	24.84	62.84	74.00	-11.16	peak		
11		17960.000	17.61	24.84	42.45	54.00	-11.55	AVG		
12		19211.250	38.63	22.94	61.57	74.00	-12.43	peak		
13		19211.250	18.75	22.94	41.69	54.00	-12.31	AVG		
14		21655.000	38.46	21.27	59.73	74.00	-14.27	peak		
15		21655.000	18.95	21.27	40.22	54.00	-13.78	AVG		
16		24757.500	40.00	19.55	59.55	74.00	-14.45	peak		
17		24757.500	20.03	19.55	39.58	54.00	-14.42	AVG		

*:Maximum data x:Over limit !:over margin



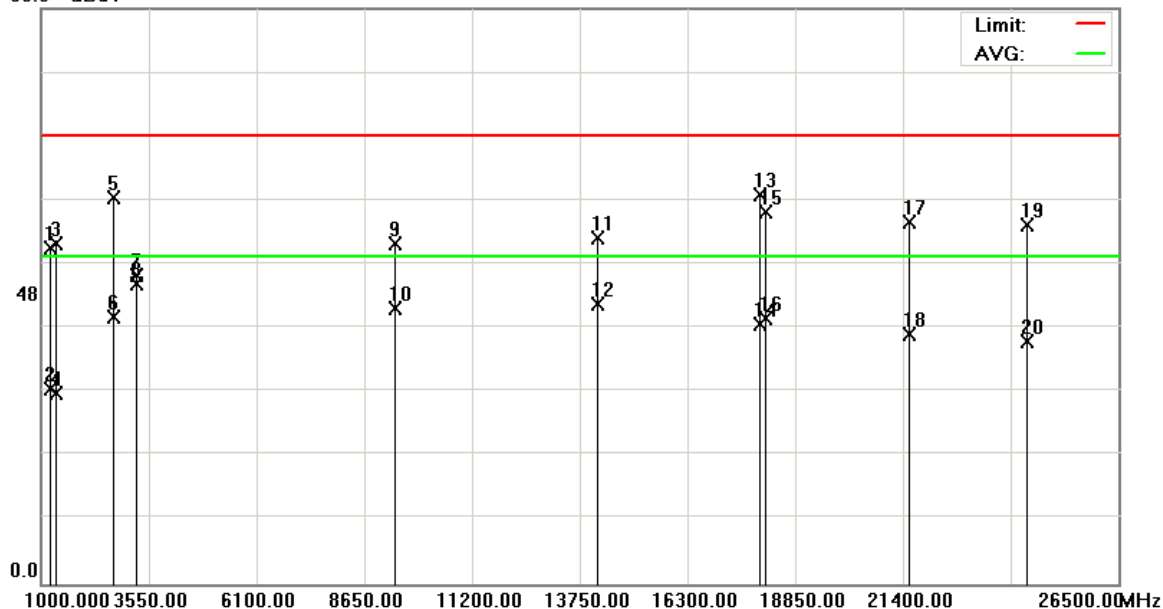
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Date: 2009/12/20

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95.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note: CH09(2452MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		1198.900	60.33	-4.91	55.42	74.00	-18.58	peak		
2		1198.900	37.05	-4.91	32.14	54.00	-21.86	AVG		
3		1346.800	59.79	-3.71	56.08	74.00	-17.92	peak		
4		1346.800	35.16	-3.71	31.45	54.00	-22.55	AVG		
5		2700.000	41.26	22.58	63.84	74.00	-10.16	peak		
6		2700.000	21.50	22.58	44.08	54.00	-9.92	AVG		
7		3265.750	48.68	2.29	50.97	74.00	-23.03	peak		
8	*	3265.750	47.24	2.29	49.53	54.00	-4.47	AVG		
9		9379.500	39.05	17.03	56.08	74.00	-17.92	peak		
10		9379.500	28.44	17.03	45.47	54.00	-8.53	AVG		
11		14160.000	38.20	18.83	57.03	74.00	-16.97	peak		
12		14160.000	27.34	18.83	46.17	54.00	-7.83	AVG		
13		18000.000	38.60	25.57	64.17	74.00	-9.83	peak		
14		18000.000	17.22	25.57	42.79	54.00	-11.21	AVG		
15		18127.500	38.05	23.23	61.28	74.00	-12.72	peak		
16		18127.500	20.61	23.23	43.84	54.00	-10.16	AVG		
17		21548.750	38.52	21.33	59.85	74.00	-14.15	peak		
18		21548.750	19.91	21.33	41.24	54.00	-12.76	AVG		
19		24332.500	39.40	19.76	59.16	74.00	-14.84	peak		
20		24332.500	20.37	19.76	40.13	54.00	-13.87	AVG		

*:Maximum data x:Over limit !:over margin



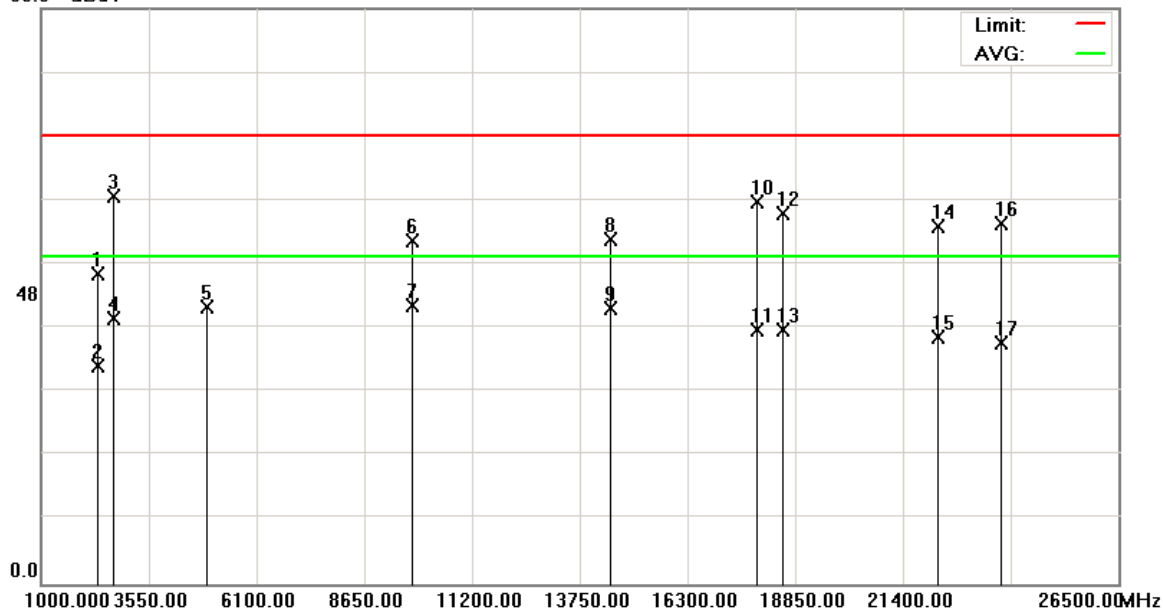
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Date: 2009/12/20

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95.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note: CH09(2452MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2312.400	50.92	0.35	51.27	74.00	-22.73	peak		
2		2312.400	35.64	0.35	35.99	54.00	-18.01	AVG		
3		2700.000	41.36	22.58	63.94	74.00	-10.06	peak		
4		2700.000	21.24	22.58	43.82	54.00	-10.18	AVG		
5		4904.000	37.96	7.71	45.67	74.00	-28.33	peak		
6		9781.000	38.87	17.69	56.56	74.00	-17.44	peak		
7	*	9781.000	28.37	17.69	46.06	54.00	-7.94	AVG		
8		14480.000	38.95	17.89	56.84	74.00	-17.16	peak		
9		14480.000	27.57	17.89	45.46	54.00	-8.54	AVG		
10		17920.000	38.29	24.84	63.13	74.00	-10.87	peak		
11		17920.000	17.11	24.84	41.95	54.00	-12.05	AVG		
12		18552.500	38.10	23.08	61.18	74.00	-12.82	peak		
13		18552.500	18.95	23.08	42.03	54.00	-11.97	AVG		
14		22207.500	37.96	21.02	58.98	74.00	-15.02	peak		
15		22207.500	19.72	21.02	40.74	54.00	-13.26	AVG		
16		23716.250	39.18	20.31	59.49	74.00	-14.51	peak		
17		23716.250	19.53	20.31	39.84	54.00	-14.16	AVG		

*:Maximum data x:Over limit !:over margin



4. Maximum Conducted Output Power Requirements

4.1 Test Procedure

The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to spectrum analyzer. The maximum peak output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the spectrum Analyzer, for prevent the spectrum analyzer input attenuation 40-50 dB. Set the RBW Bandwidth of the emission or use a channel power meter mode.

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt (+30 dBm). For antennas with gains greater than 6 dBi, transmitter output level must be decreased by an amount equal to $(\text{GAIN} - 6)/3$ dBm.

The antenna port of the EUT was connected to the input of a power meter. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.

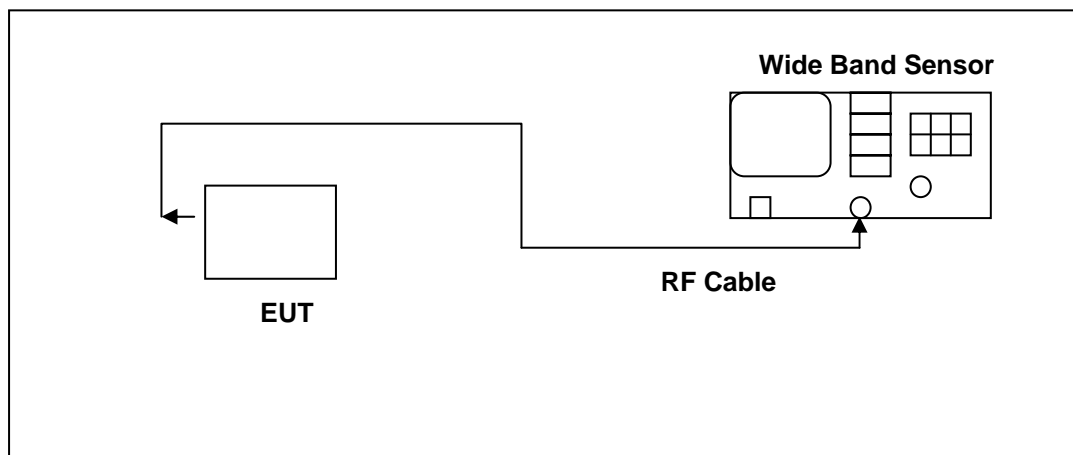
4.2 Limits

For systems using digital modulation in the 2400 - 2483.5 MHz bands: 1 Watt.

4.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Wide Band Sensor	R&S	NRP-Z81	100017	May 17, 2009	May 17, 2010

4.4 Test Instruments Configuration



4.5 Test Result

IEEE 802.11b

Data Rate	Frequency (MHz)	Peak Power		Peak Power with USB Cable		Worst Case	Required Limit
		dBm	W	dBm	W		
1M	2412	15.67	0.037	15.65	0.037	<input type="checkbox"/>	< 1W
	2437	15.37	0.034	15.36	0.034	<input type="checkbox"/>	< 1W
	2462	15.77	0.038	15.76	0.038	<input checked="" type="checkbox"/>	< 1W
2M	2412	14.77	0.030	14.75	0.030	<input type="checkbox"/>	< 1W
	2437	14.88	0.031	14.87	0.031	<input type="checkbox"/>	< 1W
	2462	15.00	0.032	14.98	0.031	<input type="checkbox"/>	< 1W
5.5M	2412	14.72	0.030	14.71	0.030	<input type="checkbox"/>	< 1W
	2437	14.77	0.030	14.75	0.030	<input type="checkbox"/>	< 1W
	2462	14.67	0.029	14.66	0.029	<input type="checkbox"/>	< 1W
11M	2412	14.51	0.028	14.5	0.028	<input type="checkbox"/>	< 1W
	2437	14.84	0.030	14.82	0.030	<input type="checkbox"/>	< 1W
	2462	15.10	0.032	15.09	0.032	<input type="checkbox"/>	< 1W

IEEE 802.11g

Data Rate	Frequency (MHz)	Peak Power		Peak Power with USB Cable		Worst Case	Required Limit
		dBm	W	dBm	W		
6M	2412	17.28	0.053	17.27	0.053	<input type="checkbox"/>	< 1W
	2437	18.81	0.076	18.80	0.076	<input type="checkbox"/>	< 1W
	2462	17.77	0.060	17.76	0.060	<input type="checkbox"/>	< 1W
9M	2412	17.75	0.060	17.74	0.059	<input type="checkbox"/>	< 1W
	2437	18.05	0.064	18.04	0.064	<input type="checkbox"/>	< 1W
	2462	17.77	0.060	17.76	0.060	<input type="checkbox"/>	< 1W
12M	2412	18.40	0.069	18.39	0.069	<input type="checkbox"/>	< 1W
	2437	18.30	0.068	18.29	0.067	<input type="checkbox"/>	< 1W
	2462	18.39	0.069	18.38	0.069	<input type="checkbox"/>	< 1W
18M	2412	17.50	0.056	17.49	0.056	<input type="checkbox"/>	< 1W
	2437	17.21	0.053	17.20	0.052	<input type="checkbox"/>	< 1W
	2462	18.39	0.069	18.38	0.069	<input type="checkbox"/>	< 1W
24M	2412	18.29	0.067	18.27	0.067	<input type="checkbox"/>	< 1W
	2437	18.40	0.069	18.39	0.069	<input type="checkbox"/>	< 1W
	2462	18.08	0.064	18.07	0.064	<input type="checkbox"/>	< 1W
36M	2412	17.13	0.052	17.12	0.052	<input type="checkbox"/>	< 1W
	2437	17.66	0.058	17.65	0.058	<input type="checkbox"/>	< 1W
	2462	17.47	0.056	17.46	0.056	<input type="checkbox"/>	< 1W
48M	2412	17.24	0.053	17.23	0.053	<input type="checkbox"/>	< 1W
	2437	17.39	0.055	17.38	0.055	<input type="checkbox"/>	< 1W
	2462	17.61	0.058	17.59	0.057	<input type="checkbox"/>	< 1W
54M	2412	19.26	0.084	19.25	0.084	<input type="checkbox"/>	< 1W
	2437	19.07	0.081	19.05	0.080	<input type="checkbox"/>	< 1W
	2462	19.28	0.085	19.27	0.085	<input checked="" type="checkbox"/>	< 1W

draft 802.11n Standard-20MHz

Data Rate	Frequency (MHz)	Peak Power		Peak Power with USB Cable		Worst Case	Required Limit
		dBm	W	dBm	W		
6.5M	2412	21.80	0.151	21.79	0.151	<input type="checkbox"/>	< 1W
	2437	21.49	0.141	21.48	0.141	<input type="checkbox"/>	< 1W
	2462	21.68	0.147	21.67	0.147	<input type="checkbox"/>	< 1W
13M	2412	21.20	0.132	21.19	0.132	<input type="checkbox"/>	< 1W
	2437	22.30	0.170	22.29	0.169	<input type="checkbox"/>	< 1W
	2462	22.30	0.170	22.29	0.169	<input type="checkbox"/>	< 1W
19.5M	2412	21.98	0.158	21.97	0.157	<input type="checkbox"/>	< 1W
	2437	21.68	0.147	21.67	0.147	<input type="checkbox"/>	< 1W
	2462	22.26	0.168	22.25	0.168	<input type="checkbox"/>	< 1W
26M	2412	22.35	0.172	22.34	0.171	<input type="checkbox"/>	< 1W
	2437	21.92	0.156	21.91	0.155	<input type="checkbox"/>	< 1W
	2462	22.30	0.170	22.29	0.169	<input type="checkbox"/>	< 1W
39M	2412	21.82	0.152	21.81	0.152	<input type="checkbox"/>	< 1W
	2437	21.38	0.137	21.37	0.137	<input type="checkbox"/>	< 1W
	2462	22.10	0.162	22.09	0.162	<input type="checkbox"/>	< 1W
52M	2412	20.97	0.125	20.96	0.125	<input type="checkbox"/>	< 1W
	2437	22.59	0.182	22.58	0.181	<input type="checkbox"/>	< 1W
	2462	22.49	0.177	22.48	0.177	<input type="checkbox"/>	< 1W
58.5M	2412	21.80	0.151	21.79	0.151	<input type="checkbox"/>	< 1W
	2437	22.61	0.182	22.60	0.182	<input checked="" type="checkbox"/>	< 1W
	2462	22.29	0.169	22.28	0.169	<input type="checkbox"/>	< 1W
65M	2412	21.23	0.133	21.22	0.132	<input type="checkbox"/>	< 1W
	2437	21.30	0.135	21.29	0.135	<input type="checkbox"/>	< 1W
	2462	21.17	0.131	21.16	0.131	<input type="checkbox"/>	< 1W

draft 802.11n Wide-40MHz

Data Rate	Frequency (MHz)	Peak Power		Peak Power with USB Cable		Worst Case	Required Limit
		dBm	W	dBm	W		
13M	2412	20.85	0.122	20.84	0.121	<input type="checkbox"/>	< 1W
	2437	21.06	0.128	21.05	0.127	<input type="checkbox"/>	< 1W
	2462	20.74	0.119	20.73	0.118	<input type="checkbox"/>	< 1W
26M	2412	21.83	0.152	21.82	0.152	<input type="checkbox"/>	< 1W
	2437	21.29	0.135	21.28	0.134	<input type="checkbox"/>	< 1W
	2462	21.54	0.143	21.53	0.142	<input type="checkbox"/>	< 1W
39M	2412	21.60	0.145	21.59	0.144	<input type="checkbox"/>	< 1W
	2437	21.72	0.149	21.71	0.148	<input type="checkbox"/>	< 1W
	2462	22.30	0.170	22.29	0.169	<input type="checkbox"/>	< 1W
52M	2412	22.42	0.175	22.41	0.174	<input type="checkbox"/>	< 1W
	2437	21.89	0.155	21.88	0.154	<input type="checkbox"/>	< 1W
	2462	21.88	0.154	21.87	0.154	<input type="checkbox"/>	< 1W
78M	2412	21.83	0.152	21.82	0.152	<input type="checkbox"/>	< 1W
	2437	21.08	0.128	21.07	0.128	<input type="checkbox"/>	< 1W
	2462	22.37	0.173	22.36	0.172	<input type="checkbox"/>	< 1W
104M	2412	20.66	0.116	20.65	0.116	<input type="checkbox"/>	< 1W
	2437	21.78	0.151	21.77	0.150	<input type="checkbox"/>	< 1W
	2462	21.90	0.155	21.89	0.155	<input type="checkbox"/>	< 1W
117M	2412	20.70	0.117	20.69	0.117	<input type="checkbox"/>	< 1W
	2437	20.48	0.112	20.47	0.111	<input type="checkbox"/>	< 1W
	2462	20.53	0.113	20.52	0.113	<input type="checkbox"/>	< 1W
130M	2412	21.49	0.141	21.48	0.141	<input type="checkbox"/>	< 1W
	2437	22.44	0.175	22.43	0.175	<input checked="" type="checkbox"/>	< 1W
	2462	22.14	0.164	22.13	0.163	<input type="checkbox"/>	< 1W

5. Minimum 6dB RF Bandwidth Requirements

5.1 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A peak output reading was taken, a DISPLAY line was drawn 6 dB lower than peak level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

The test was performed at 3 channels (Channel 1, 6, 11)

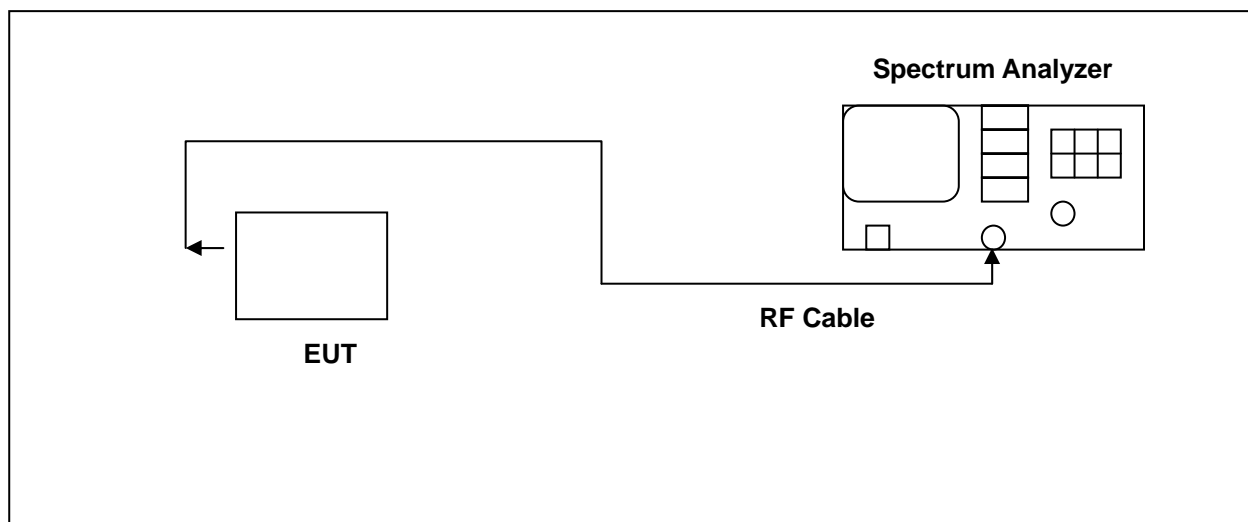
5.2 Limits

Systems using digital modulation techniques may operate in the 2400–2483.5 MHz bands. The minimum 6 dB band-width shall be at least 500 kHz.

5.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY46181986	May 15, 2009	May 15, 2010

5.4 Test Instruments Configuration



5.5 Test Result

IEEE 802.11b

Frequency (MHz)	Min. 6dB Bandwidth (MHz)	Required Limit
2412	10.375	> 500 KHz
2437	10.375	> 500 KHz
2462	10.375	> 500 KHz

IEEE 802.11g

Frequency (MHz)	Min. 6dB Bandwidth (MHz)	Required Limit
2412	16.625	> 500 KHz
2437	16.625	> 500 KHz
2462	16.625	> 500 KHz

draft 802.11n Standard-20MHz

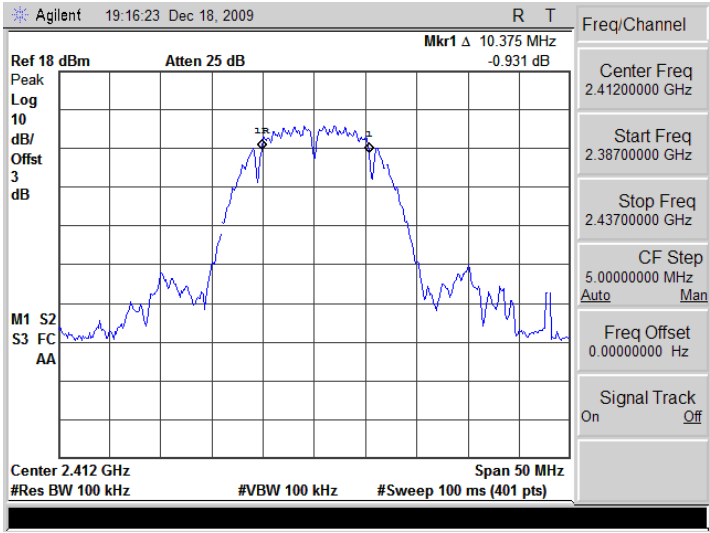
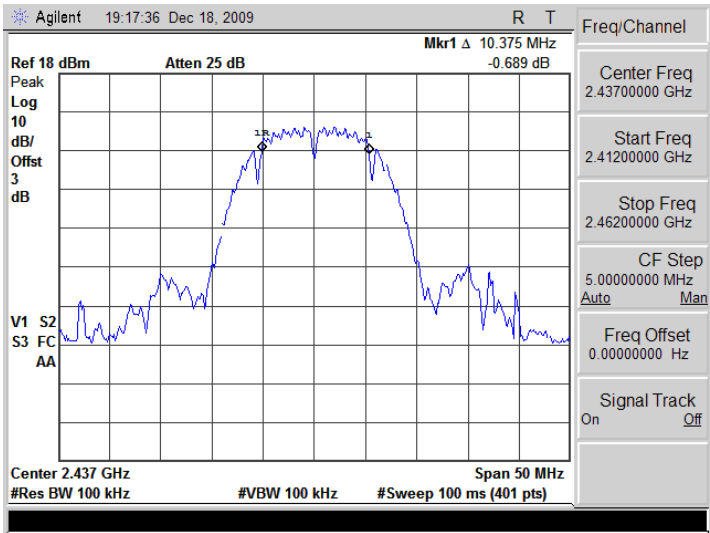
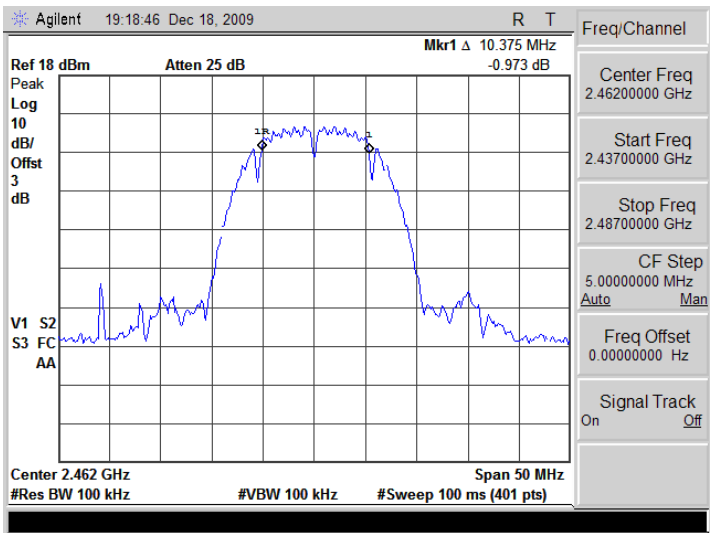
Frequency (MHz)	Min. 6dB Bandwidth (MHz)	Required Limit
2412	17.500	> 500 KHz
2437	17.500	> 500 KHz
2462	17.750	> 500 KHz

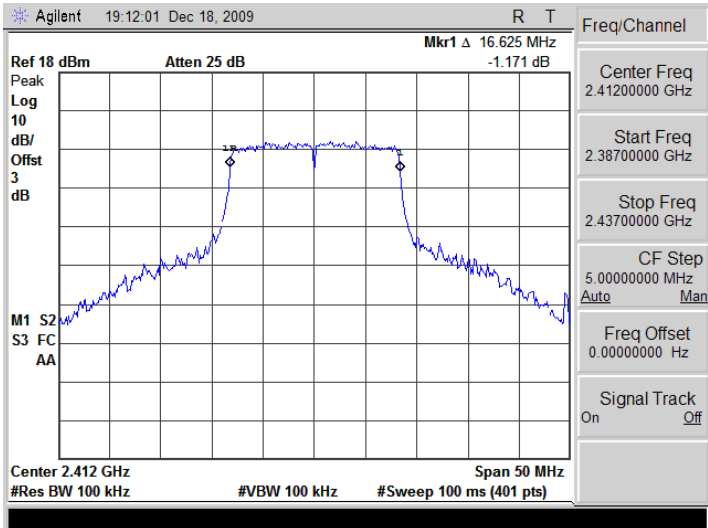
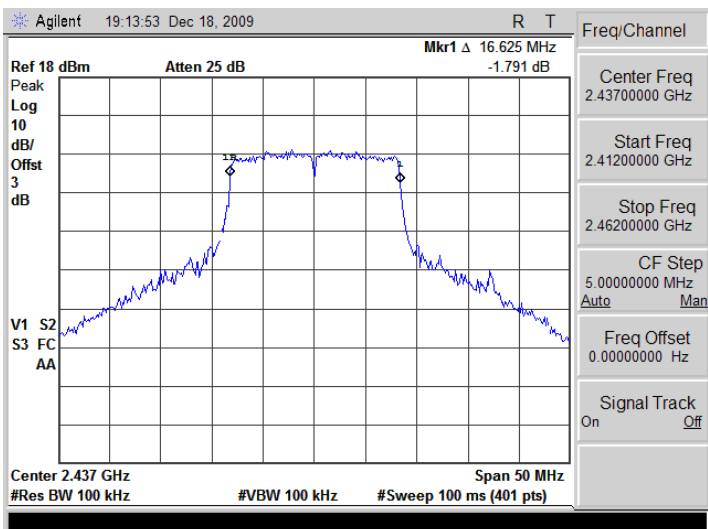
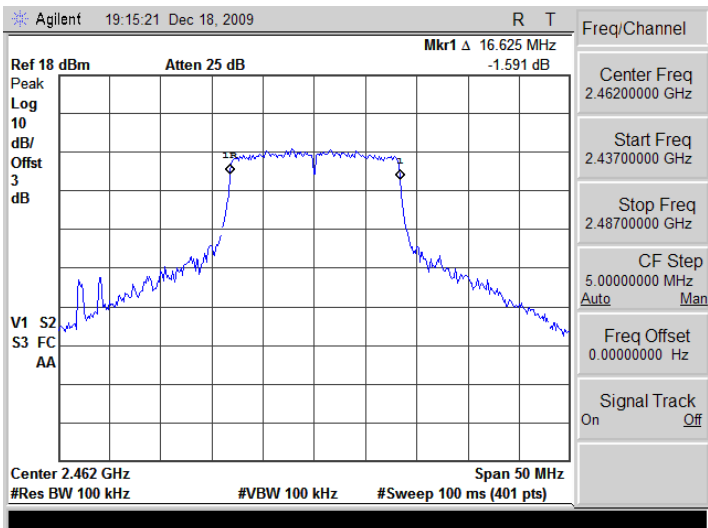
draft 802.11n Wide-40MHz

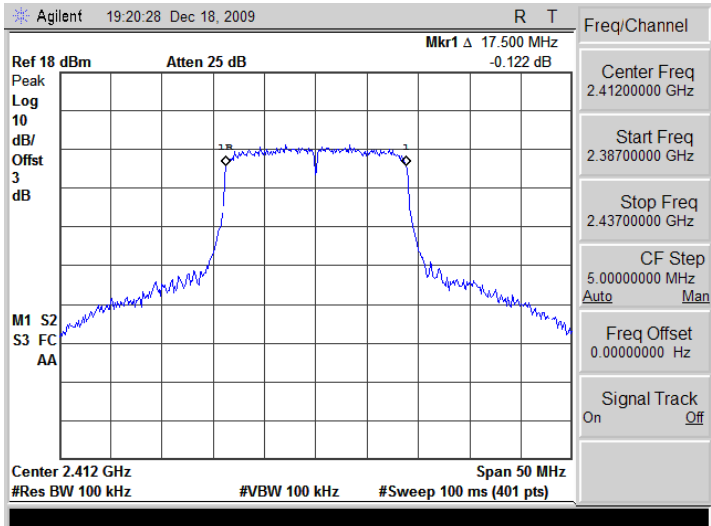
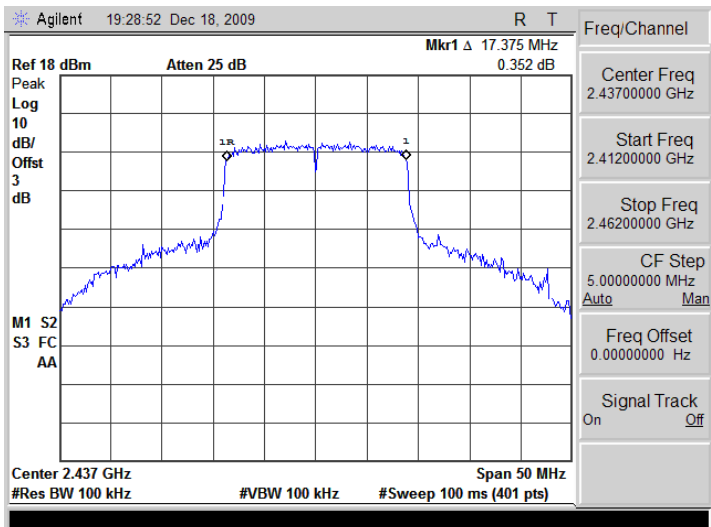
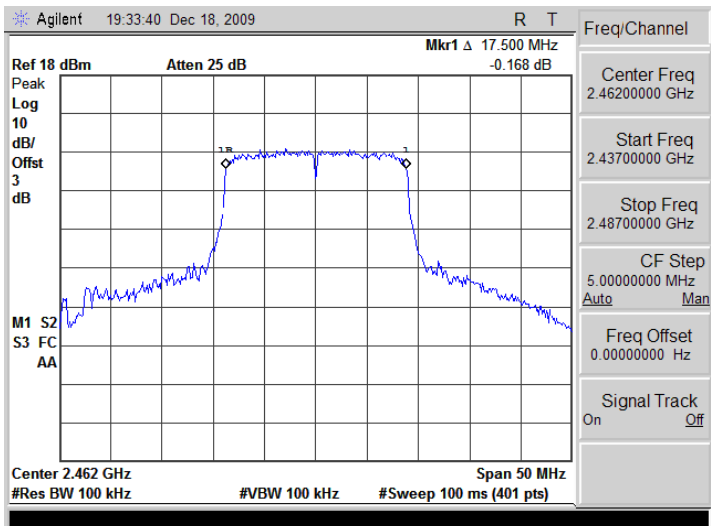
Frequency (MHz)	Min. 6dB Bandwidth (MHz)	Required Limit
2422	36.375	> 500 KHz
2437	36.375	> 500 KHz
2452	36.375	> 500 KHz

Note: Test Graphs See next page.

5.6 Test Graphs

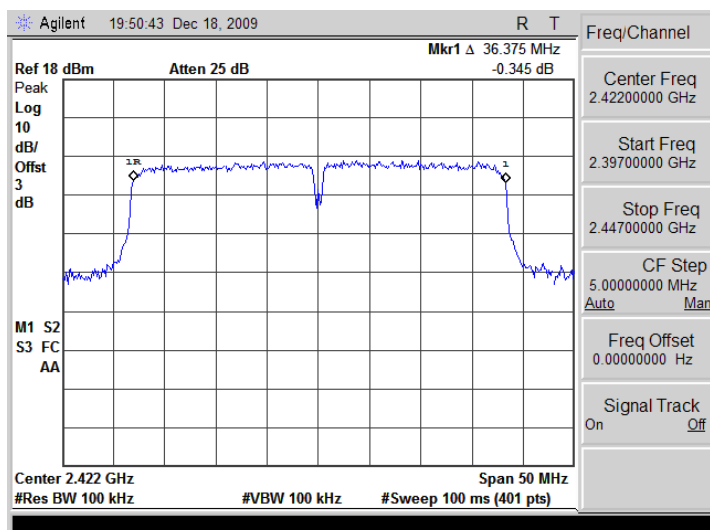
<p>IEEE 802.11b</p> <p>2412 MHz</p>	
<p>IEEE 802.11b</p> <p>2437 MHz</p>	
<p>IEEE 802.11b</p> <p>2462 MHz</p>	

<p>IEEE 802.11g</p> <p>2412 MHz</p>	
<p>IEEE 802.11g</p> <p>2437 MHz</p>	
<p>IEEE 802.11g</p> <p>2462 MHz</p>	

<p>draft 802.11n Standard-20 MHz</p> <p>2412 MHz</p>	
<p>draft 802.11n Standard-20 MHz</p> <p>2437 MHz</p>	
<p>draft 802.11n Standard-20 MHz</p> <p>2462 MHz</p>	

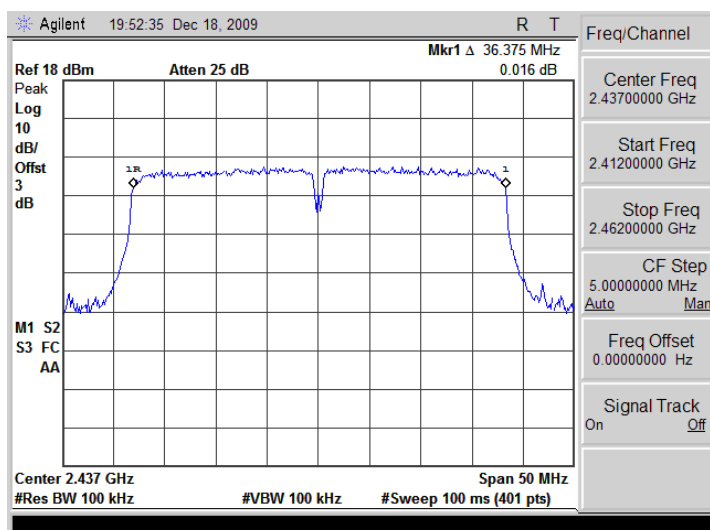
draft 802.11n
Wide-40 MHz

2422 MHz



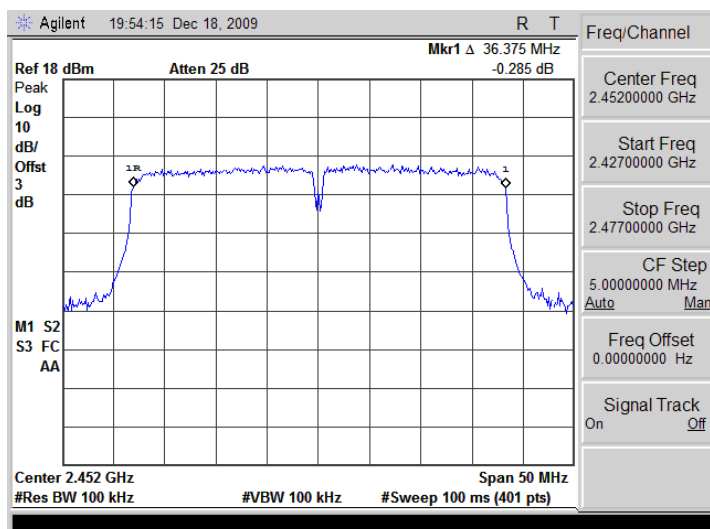
draft 802.11n
Wide-40 MHz

2437 MHz



draft 802.11n
Wide-40 MHz

2452 MHz





6. Maximum Power Density Requirements

6.1 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The spectrum analyzer RES BW was set to 3 kHz. The START and STOP frequencies were set to the band edges of the maximum output pass band. If there is no clear maximum amplitude in any given portion of the band, it may be necessary to make measurements at a number of bands defined by several START and STOP frequency pairs. The specification calls for a 1 second interval at each 3 kHz bandwidth; total SWEEP TIME is calculated as follows:

$$\text{SWEEP TIME (SEC)} = (\text{Fstop, kHz} - \text{Fstart, kHz}) / 3 \text{ kHz}$$

Antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

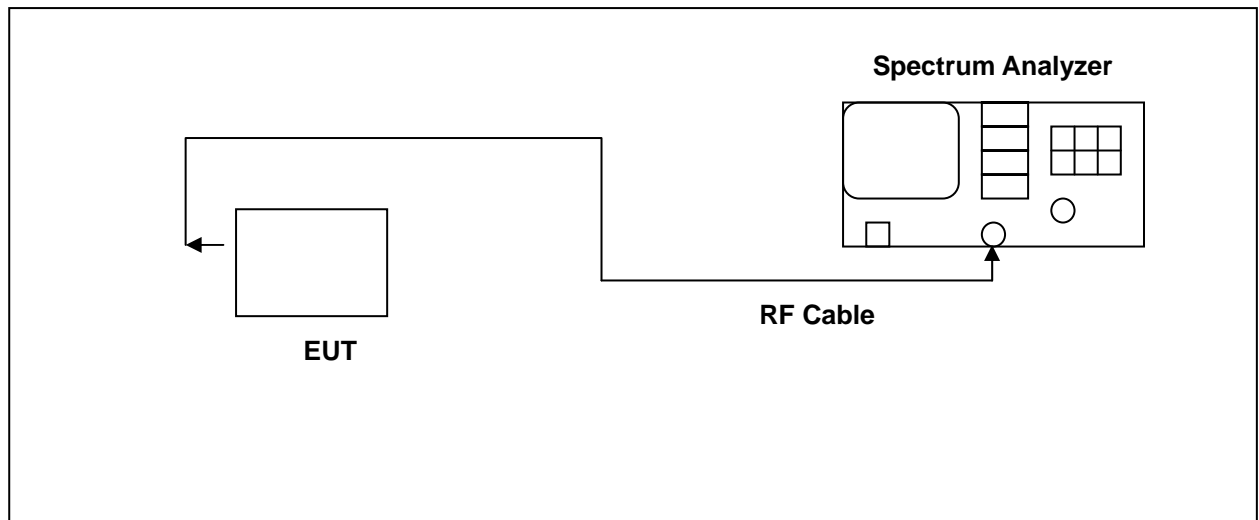
6.2 Limits

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.

6.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4408A	MY45107753	Jun. 23, 2009	Jun. 23, 2010

6.4 Test Instruments Configuration



6.5 Test Result

IEEE 802.11b

Frequency (MHz)	Power Density (dBm)	Required Limit
2412	-15.73	<8dBm
2437	-15.30	<8dBm
2462	-15.24	<8dBm

IEEE 802.11g

Frequency (MHz)	Power Density (dBm)	Required Limit
2412	-16.30	<8dBm
2437	-16.08	<8dBm
2462	-15.28	<8dBm

draft 802.11n Standard-20MHz

Frequency (MHz)	Power Density (dBm)	Required Limit
2412	-17.87	<8dBm
2437	-16.07	<8dBm
2462	-16.04	<8dBm



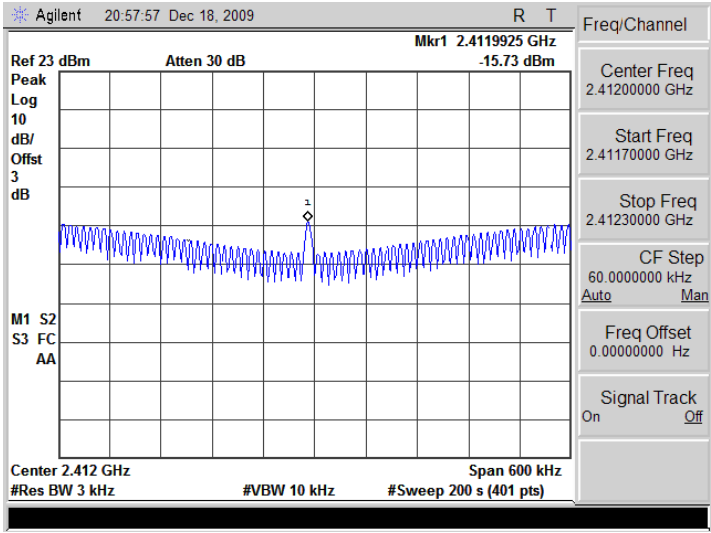
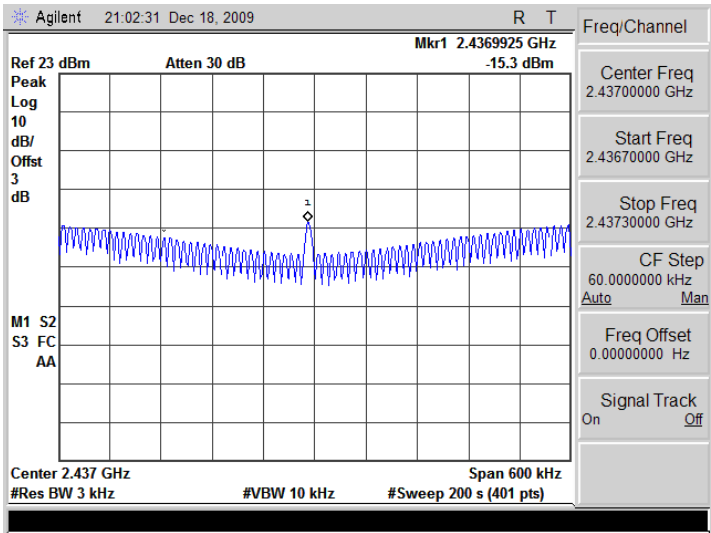
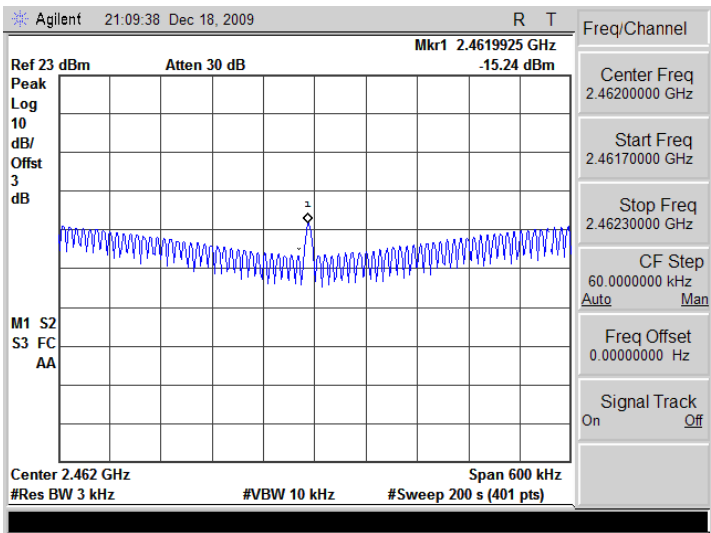
draft 802.11n Wide-40MHz

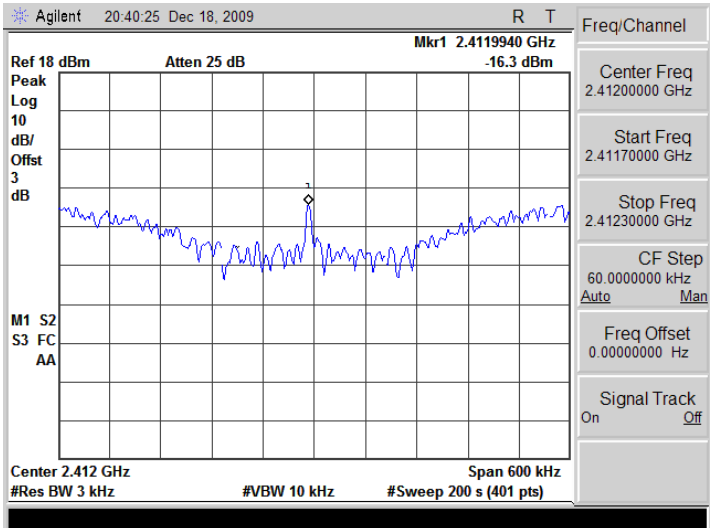
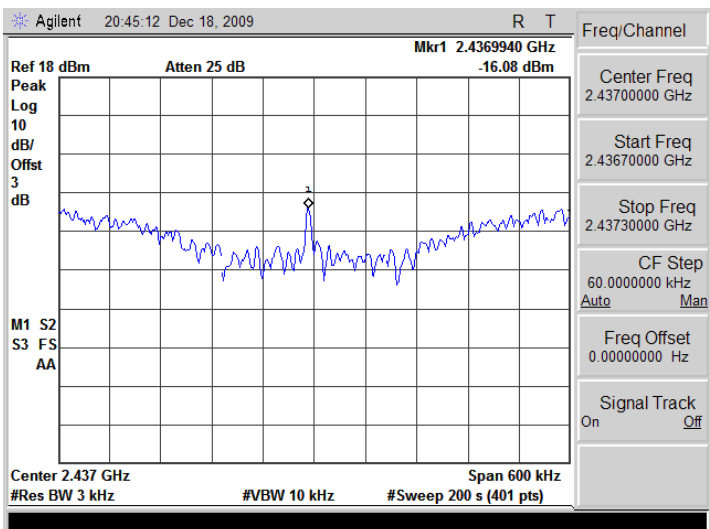
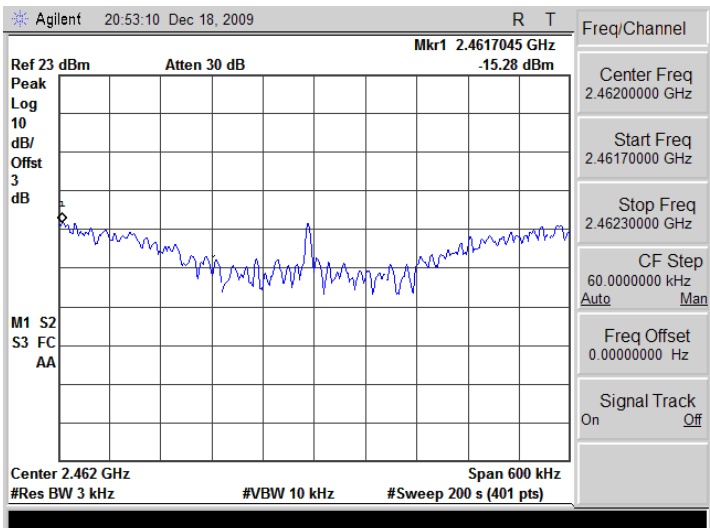
Frequency (MHz)	Power Density (dBm)	Required Limit
2422	-17.27	<8dBm
2437	-17.12	<8dBm
2452	-17.18	<8dBm

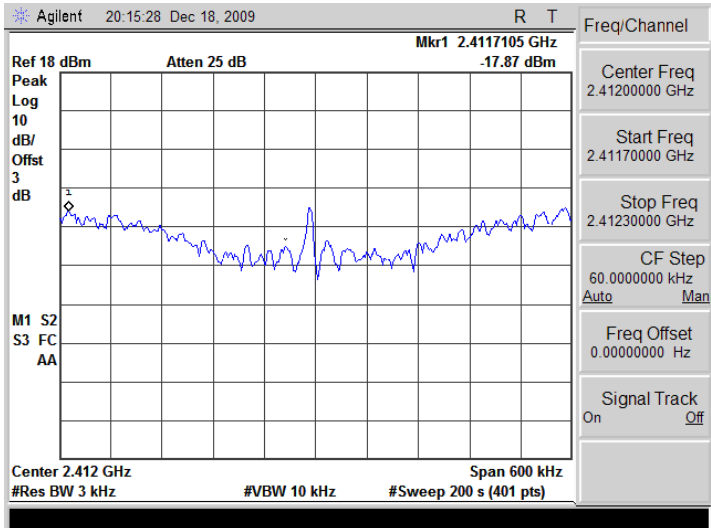
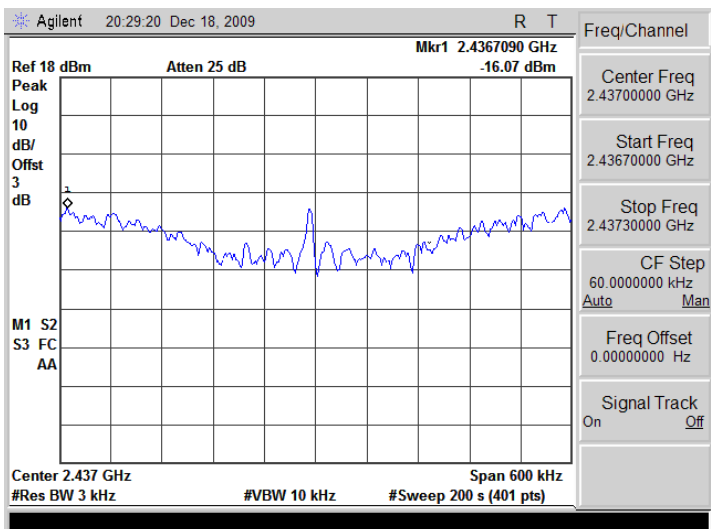
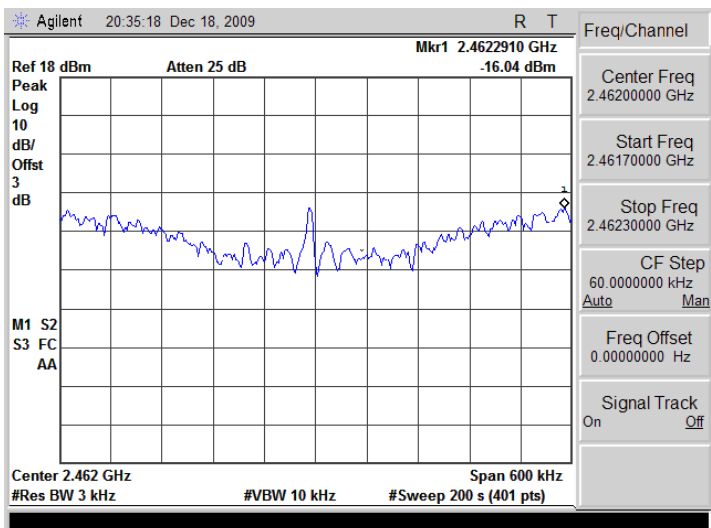
Note:

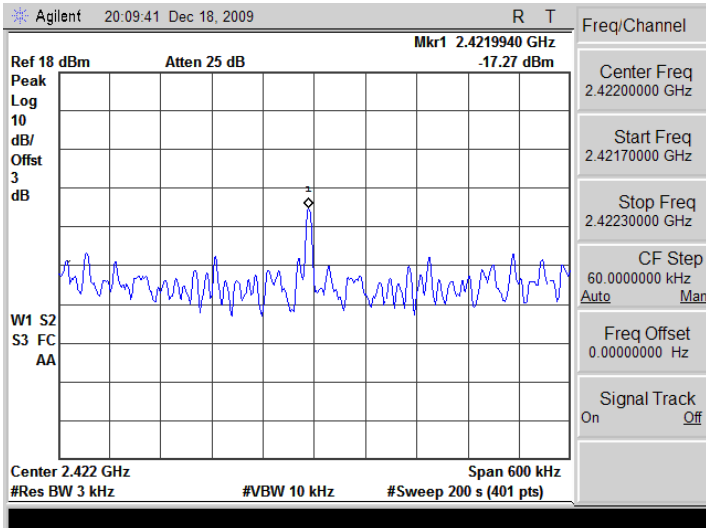
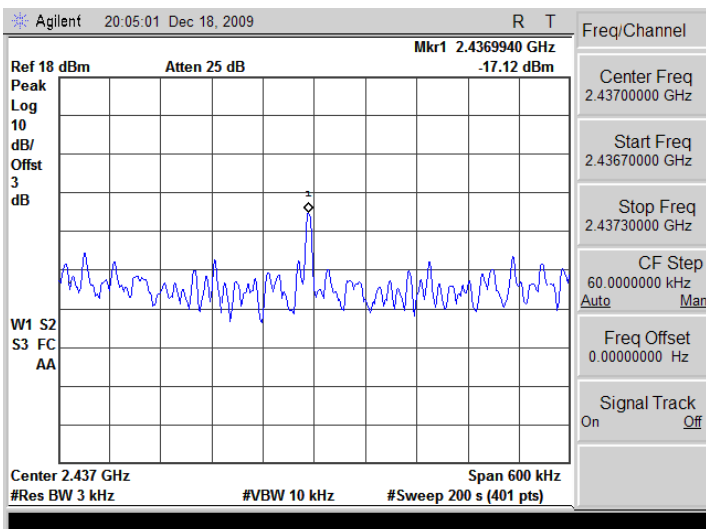
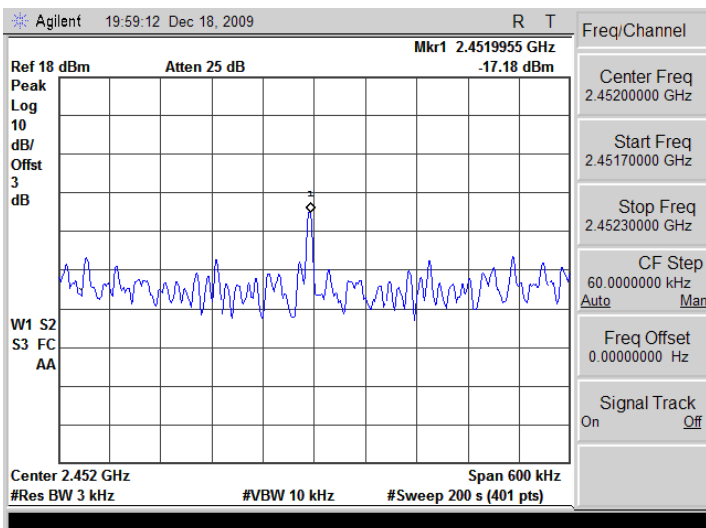
1. Frequency Span= 600 kHz
2. Sweep Time = Frequency Span/3 kHz=200secs
3. Test Graphs See next page.

6.6 Test Graphs

<p>IEEE 802.11b</p> <p>2412 MHz</p>	 <p>Agilent 20:57:57 Dec 18, 2009 R T</p> <p>Ref 23 dBm Atten 30 dB Mkr1 2.4119925 GHz -15.73 dBm</p> <p>Peak Log 10 dB/Offst 3 dB</p> <p>M1 S2 S3 FC AA</p> <p>Center 2.412 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (401 pts)</p> <p>Freq/Channel</p> <p>Center Freq 2.41200000 GHz</p> <p>Start Freq 2.41170000 GHz</p> <p>Stop Freq 2.41230000 GHz</p> <p>CF Step 60.0000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p>IEEE 802.11b</p> <p>2437 MHz</p>	 <p>Agilent 21:02:31 Dec 18, 2009 R T</p> <p>Ref 23 dBm Atten 30 dB Mkr1 2.4369925 GHz -15.3 dBm</p> <p>Peak Log 10 dB/Offst 3 dB</p> <p>M1 S2 S3 FC AA</p> <p>Center 2.437 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (401 pts)</p> <p>Freq/Channel</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.43670000 GHz</p> <p>Stop Freq 2.43730000 GHz</p> <p>CF Step 60.0000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p>IEEE 802.11b</p> <p>2462 MHz</p>	 <p>Agilent 21:09:38 Dec 18, 2009 R T</p> <p>Ref 23 dBm Atten 30 dB Mkr1 2.4619925 GHz -15.24 dBm</p> <p>Peak Log 10 dB/Offst 3 dB</p> <p>M1 S2 S3 FC AA</p> <p>Center 2.462 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (401 pts)</p> <p>Freq/Channel</p> <p>Center Freq 2.46200000 GHz</p> <p>Start Freq 2.46170000 GHz</p> <p>Stop Freq 2.46230000 GHz</p> <p>CF Step 60.0000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>

<p>IEEE 802.11g</p> <p>2412 MHz</p>	
<p>IEEE 802.11g</p> <p>2437 MHz</p>	
<p>IEEE 802.11g</p> <p>2462 MHz</p>	

<p>draft 802.11n Standard-20 MHz</p> <p>2412 MHz</p>	 <p>Agilent 20:15:28 Dec 18, 2009 R T</p> <p>Ref 18 dBm Atten 25 dB Mkr1 2.4117105 GHz -17.87 dBm</p> <p>Peak Log 10 dB/Offst 3 dB</p> <p>M1 S2 S3 FC AA</p> <p>Center 2.412 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (401 pts)</p> <p>Freq/Channel</p> <p>Center Freq 2.41200000 GHz</p> <p>Start Freq 2.41170000 GHz</p> <p>Stop Freq 2.41230000 GHz</p> <p>CF Step 60.0000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p>draft 802.11n Standard-20 MHz</p> <p>2437 MHz</p>	 <p>Agilent 20:29:20 Dec 18, 2009 R T</p> <p>Ref 18 dBm Atten 25 dB Mkr1 2.4367090 GHz -16.07 dBm</p> <p>Peak Log 10 dB/Offst 3 dB</p> <p>M1 S2 S3 FC AA</p> <p>Center 2.437 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (401 pts)</p> <p>Freq/Channel</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.43670000 GHz</p> <p>Stop Freq 2.43730000 GHz</p> <p>CF Step 60.0000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p>draft 802.11n Standard-20 MHz</p> <p>2462 MHz</p>	 <p>Agilent 20:35:18 Dec 18, 2009 R T</p> <p>Ref 18 dBm Atten 25 dB Mkr1 2.4622910 GHz -16.04 dBm</p> <p>Peak Log 10 dB/Offst 3 dB</p> <p>M1 S2 S3 FC AA</p> <p>Center 2.462 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (401 pts)</p> <p>Freq/Channel</p> <p>Center Freq 2.46200000 GHz</p> <p>Start Freq 2.46170000 GHz</p> <p>Stop Freq 2.46230000 GHz</p> <p>CF Step 60.0000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>

<p>draft 802.11n Wide-40 MHz</p> <p>2422 MHz</p>	
<p>draft 802.11n Wide-40 MHz</p> <p>2437 MHz</p>	
<p>draft 802.11n Wide-40 MHz</p> <p>2452 MHz</p>	

7. Out of Band Conducted Emissions Requirements

7.1 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

In any 100 kHz bandwidth outside the EUT pass band, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission, antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band. The test was performed at 3 channels (Channel 1, 6, 11)

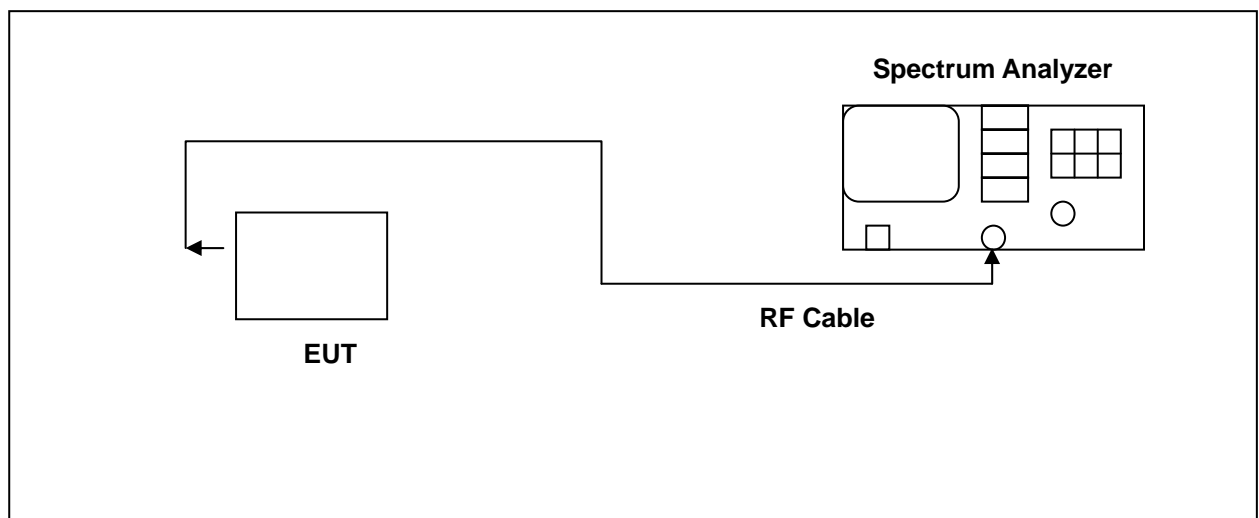
7.2 Limits

Refer to attached data sheets. Data shows out of band emissions are suppressed well below the -20 dBc minimum required by the Rules.

7.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY46181986	May 15, 2009	May 15, 2010

7.4 Test Instruments Configuration





7.5 Test Result

EUT : 802.11 b/g/n USB Dongle
Model No. : WLN-101
Test Mode : IEEE 802.11b Link Mode
IEEE 802.11g Link Mode
draft 802.11n Standard-20MHz Link Mode
draft 802.11n Wide-40MHz Link Mode

Test Date : 12/21/2009

Please refer to next page of detail testing data.



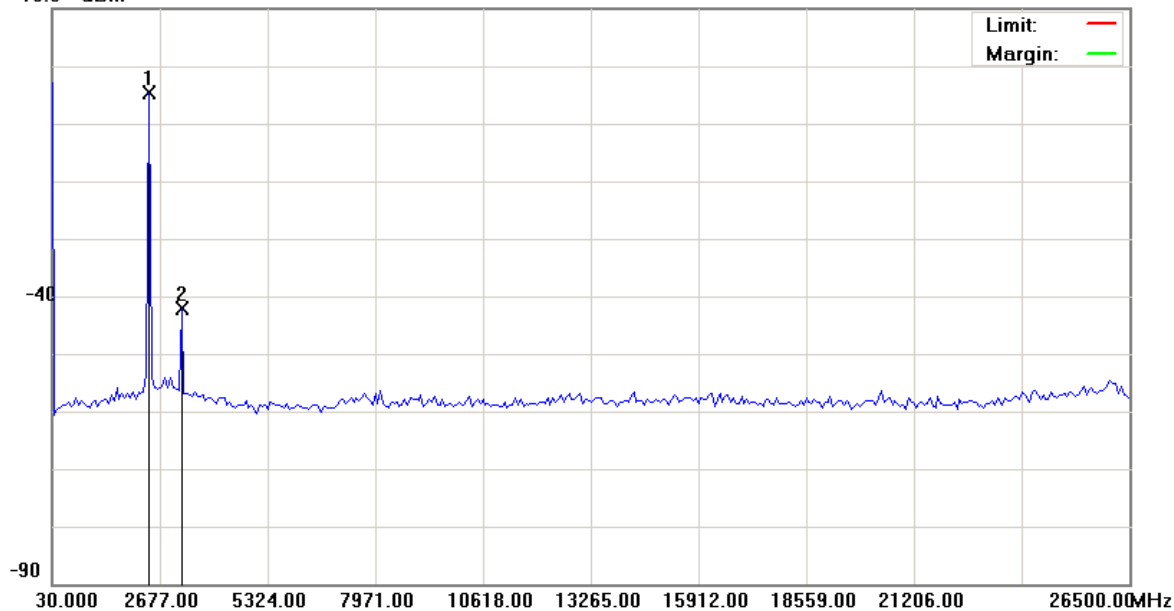
File :11g

Data :#1

Date: 2009/12/21

Time: 下午 10:57:15

10.0 dBm



Site: : 966 Chamber

Polarization:

Temperature: 22 °C

Limit:

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 100 KHz VBW: 100 KHz

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2412.000	-4.60	0.00	-4.60			peak		Tx
2		3206.400	-42.18	0.00	-42.18			peak		

*:Maximum data x:Over limit !:over margin



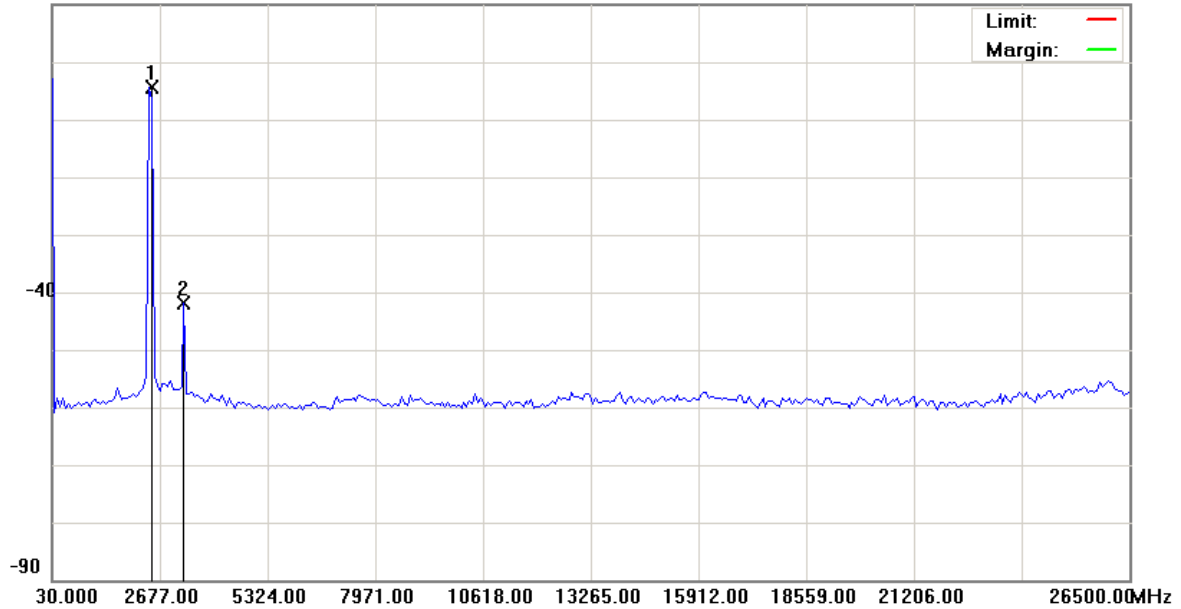
File :11g

Data :#2

Date: 2009/12/21

Time: 下午 10:58:09

10.0 dBm



Site: : 966 Chamber

Polarization:

Temperature: 22 °C

Limit:

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 100 KHz VBW: 100 KHz

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2437.000	-4.48	0.00	-4.48			peak		Tx
2		3272.575	-41.76	0.00	-41.76			peak		

*:Maximum data x:Over limit !:over margin



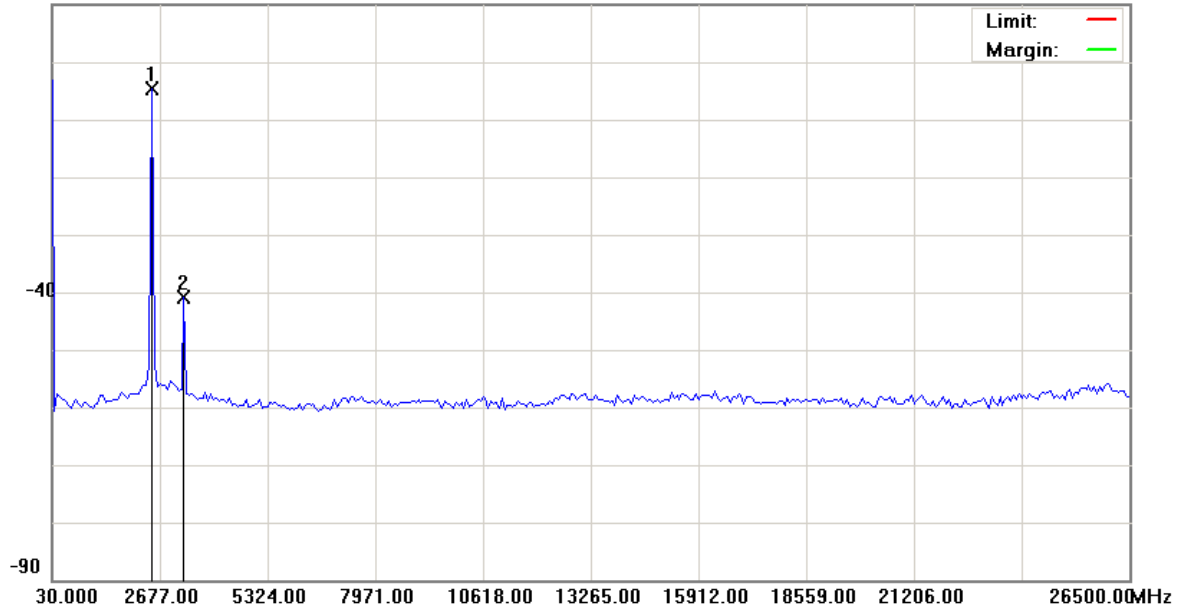
File :11g

Data :#3

Date: 2009/12/21

Time: 下午 10:58:35

10.0 dBm



Site: : 966 Chamber

Polarization:

Temperature: 22 °C

Limit:

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 100 KHz VBW: 100 KHz

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

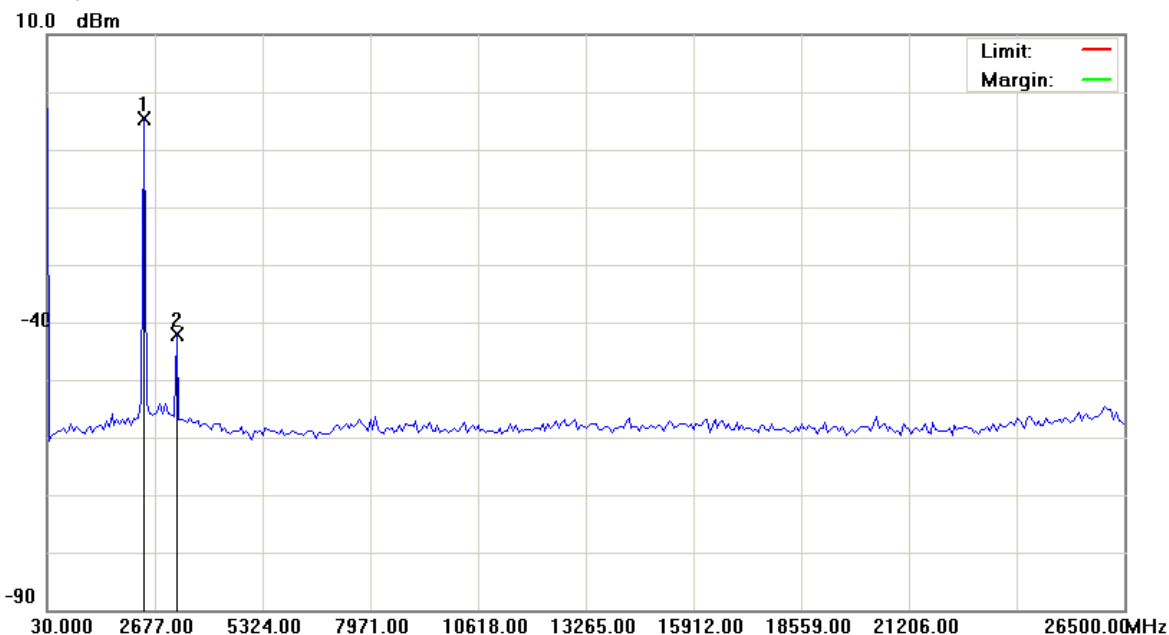
Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2462.000	-4.73	0.00	-4.73			peak		Tx
2		3272.575	-40.84	0.00	-40.84			peak		

*:Maximum data x:Over limit !:over margin



File :11g Data :#1 Date: 2009/12/21 Time: 下午 10:57:15



Site: : 966 Chamber	Polarization:	Temperature: 22 °C
Limit:	Power:	Humidity: 60 %
EUT: 802.11 b/g/n USB Dongle	Distance: 3m	RBW: 100 KHz VBW: 100 KHz
M/N: WLN-101		
Mode: IEEE 802.11g Link Mode		
Note:		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2412.000	-4.60	0.00	-4.60			peak		Tx
2		3206.400	-42.18	0.00	-42.18			peak		

*:Maximum data x:Over limit !:over margin



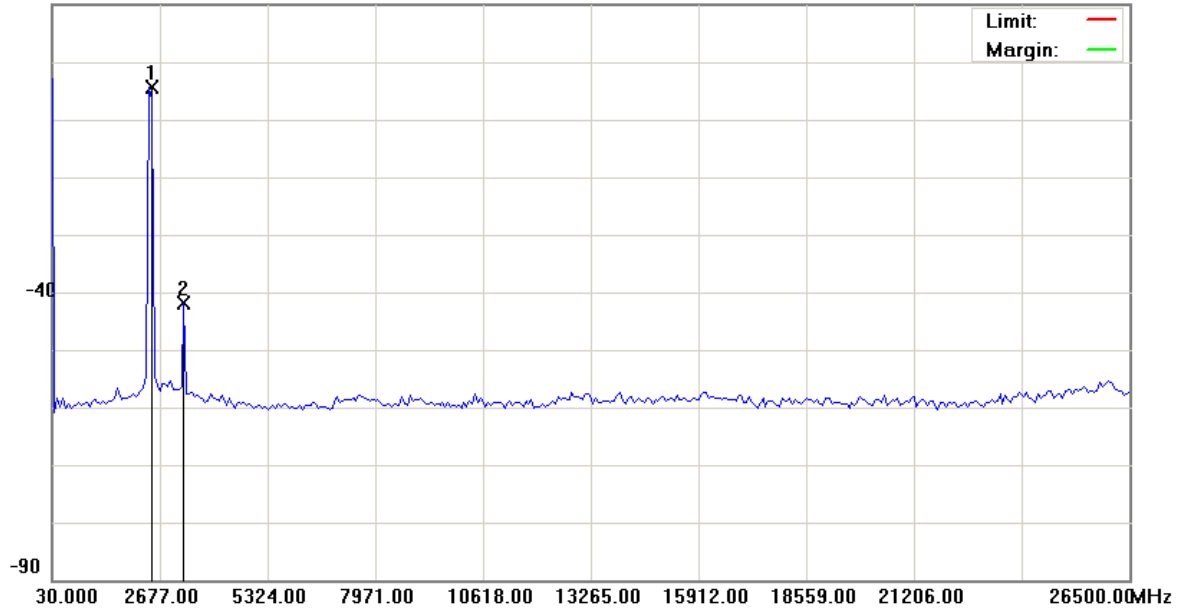
File :11g

Data :#2

Date: 2009/12/21

Time: 下午 10:58:09

10.0 dBm



Site: : 966 Chamber

Polarization:

Temperature: 22 °C

Limit:

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 100 KHz VBW: 100 KHz

M/N: WLN-101

Mode: IEEE 802.11g Link Mode

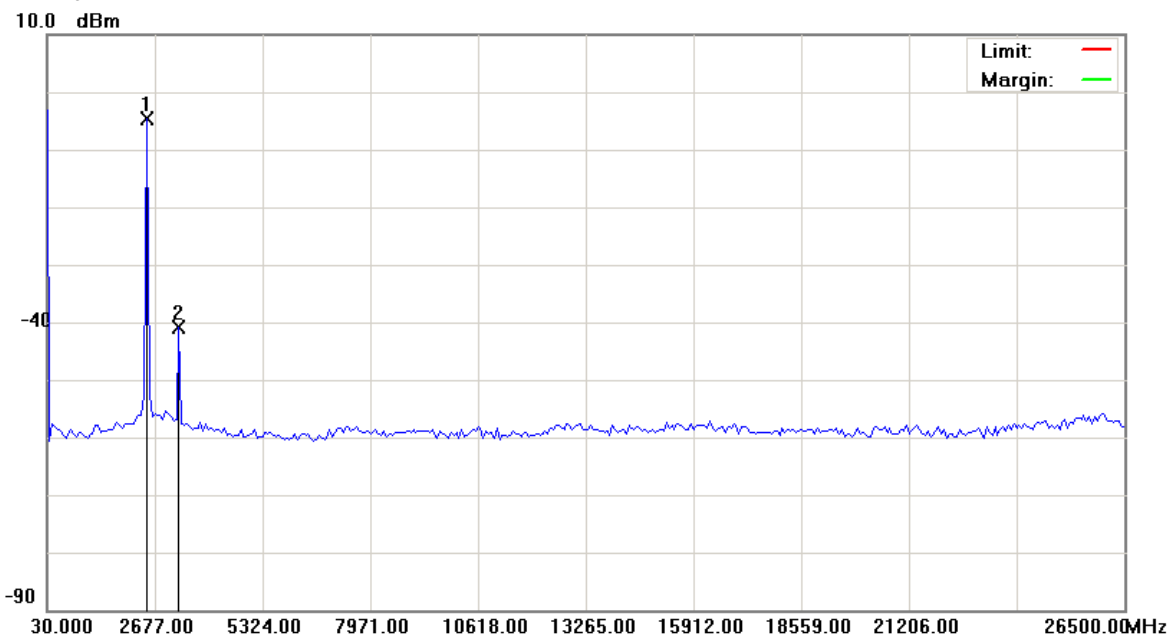
Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2437.000	-4.48	0.00	-4.48			peak		Tx
2		3272.575	-41.76	0.00	-41.76			peak		

*:Maximum data x:Over limit !:over margin



File :11g Data :#3 Date: 2009/12/21 Time: 下午 10:58:35



Site: : 966 Chamber	Polarization:	Temperature: 22 °C
Limit:	Power:	Humidity: 60 %
EUT: 802.11 b/g/n USB Dongle	Distance: 3m	RBW: 100 KHz VBW: 100 KHz
M/N: WLN-101		
Mode: IEEE 802.11g Link Mode		
Note:		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2462.000	-4.73	0.00	-4.73			peak		Tx
2		3272.575	-40.84	0.00	-40.84			peak		

*:Maximum data x:Over limit !:over margin



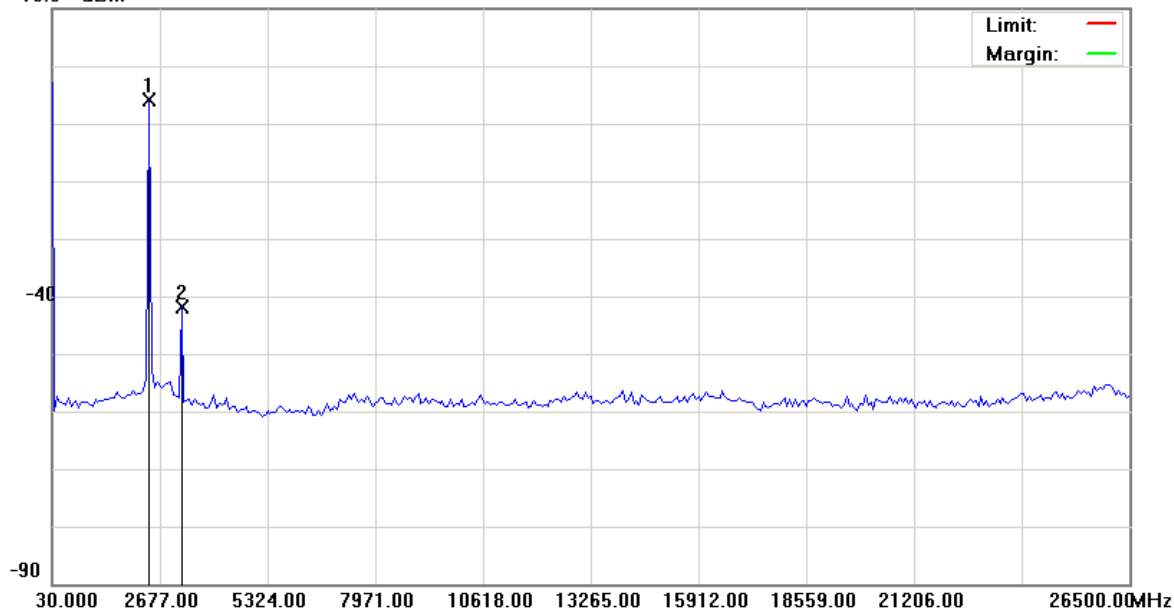
File :11n(20M)

Data :#1

Date: 2009/12/21

Time: 下午 11:01:45

10.0 dBm



Site: : 966 Chamber

Polarization:

Temperature: 22 °C

Limit:

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 100 KHz VBW: 100 KHz

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2412.000	-5.98	0.00	-5.98			peak		Tx
2		3206.400	-41.89	0.00	-41.89			peak		

*:Maximum data x:Over limit !:over margin



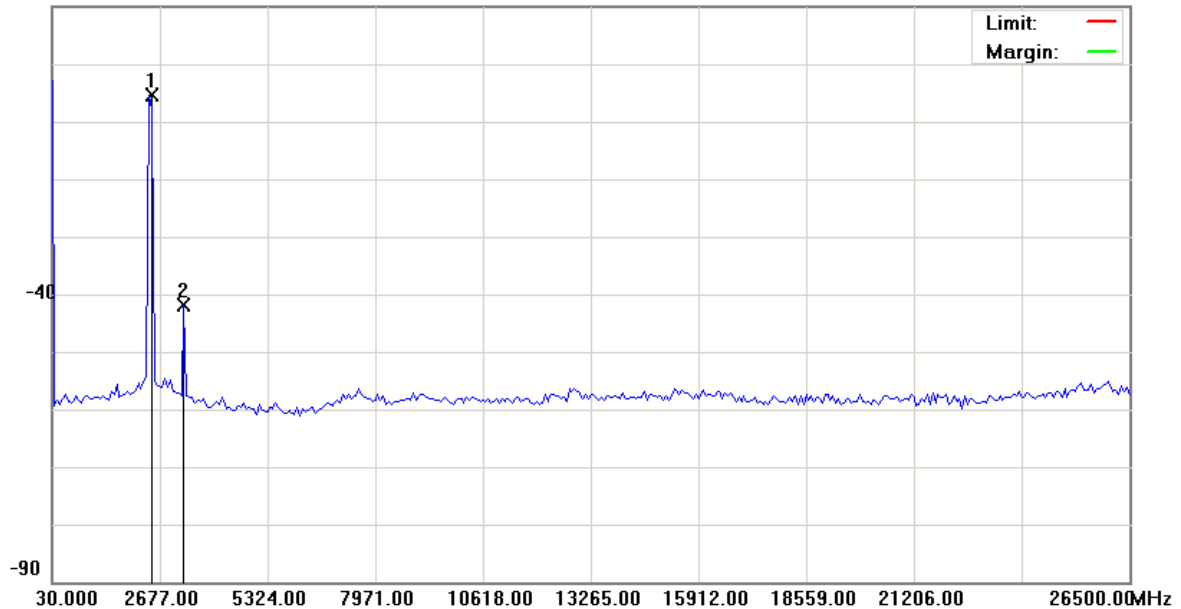
File :11n(20M)

Data :#2

Date: 2009/12/21

Time: 下午 11:02:08

10.0 dBm



Site: : 966 Chamber

Polarization:

Temperature: 22 °C

Limit:

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 100 KHz VBW: 100 KHz

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2437.000	-5.29	0.00	-5.29			peak		Tx
2		3272.575	-41.90	0.00	-41.90			peak		

*:Maximum data x:Over limit !:over margin



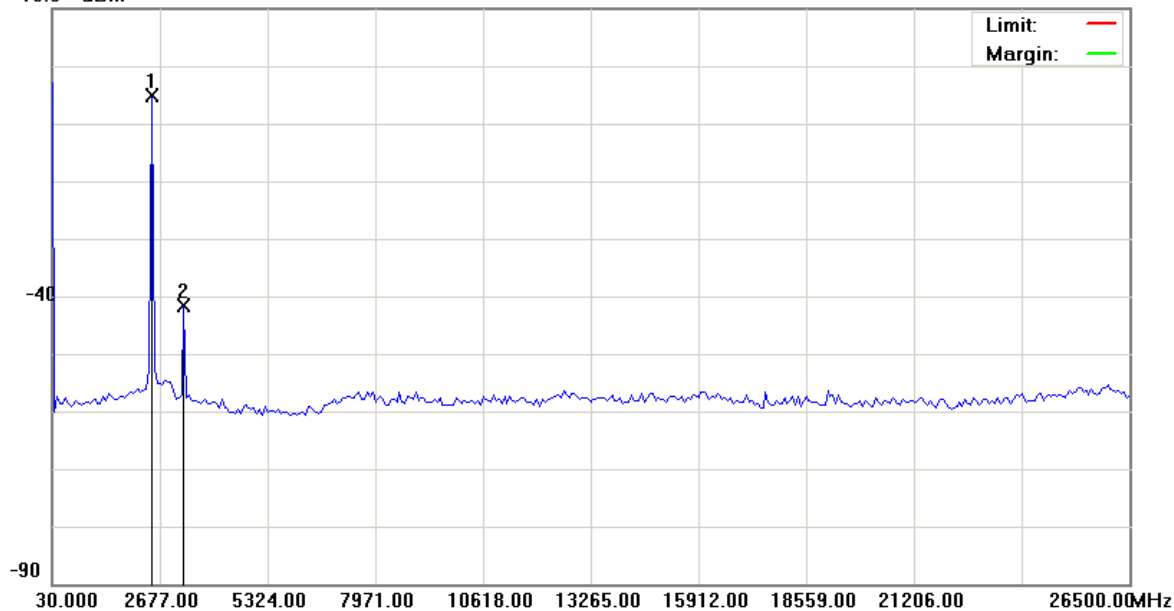
File :11n(20M)

Data :#3

Date: 2009/12/21

Time: 下午 11:02:34

10.0 dBm



Site: : 966 Chamber

Polarization:

Temperature: 22 °C

Limit:

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 100 KHz VBW: 100 KHz

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2462.000	-5.18	0.00	-5.18			peak		Tx
2		3272.575	-41.53	0.00	-41.53			peak		

*:Maximum data x:Over limit !:over margin



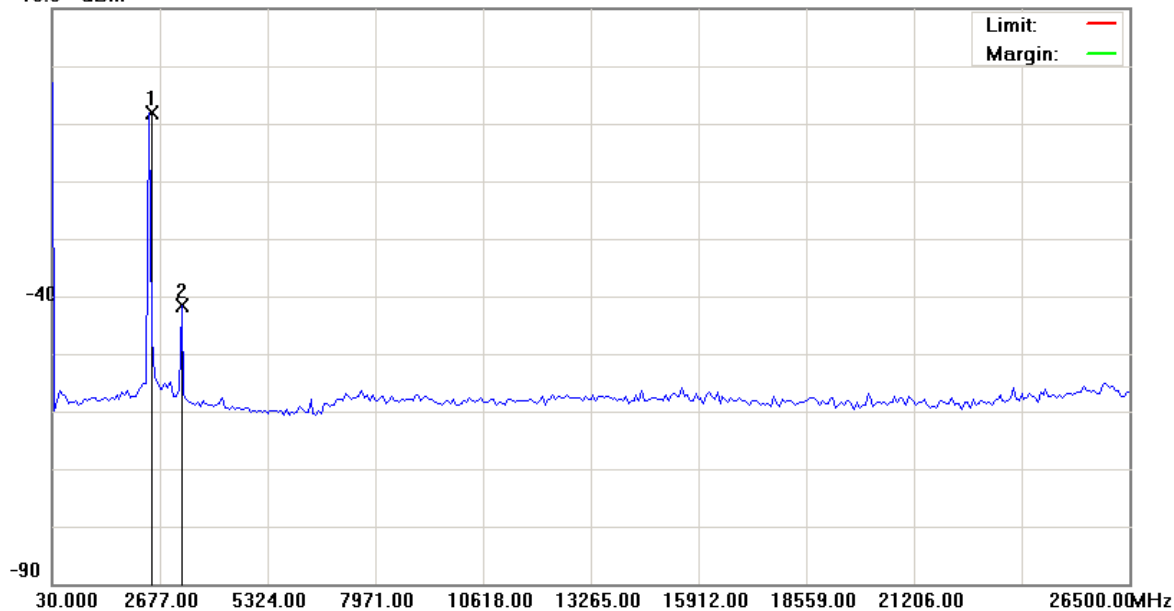
File :11n(40M)

Data :#1

Date: 2009/12/21

Time: 下午 11:03:05

10.0 dBm



Site: : 966 Chamber

Polarization:

Temperature: 22 °C

Limit:

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 100 KHz VBW: 100 KHz

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2422.000	-8.15	0.00	-8.15			peak		Tx
2		3206.400	-41.74	0.00	-41.74			peak		

*:Maximum data x:Over limit !:over margin



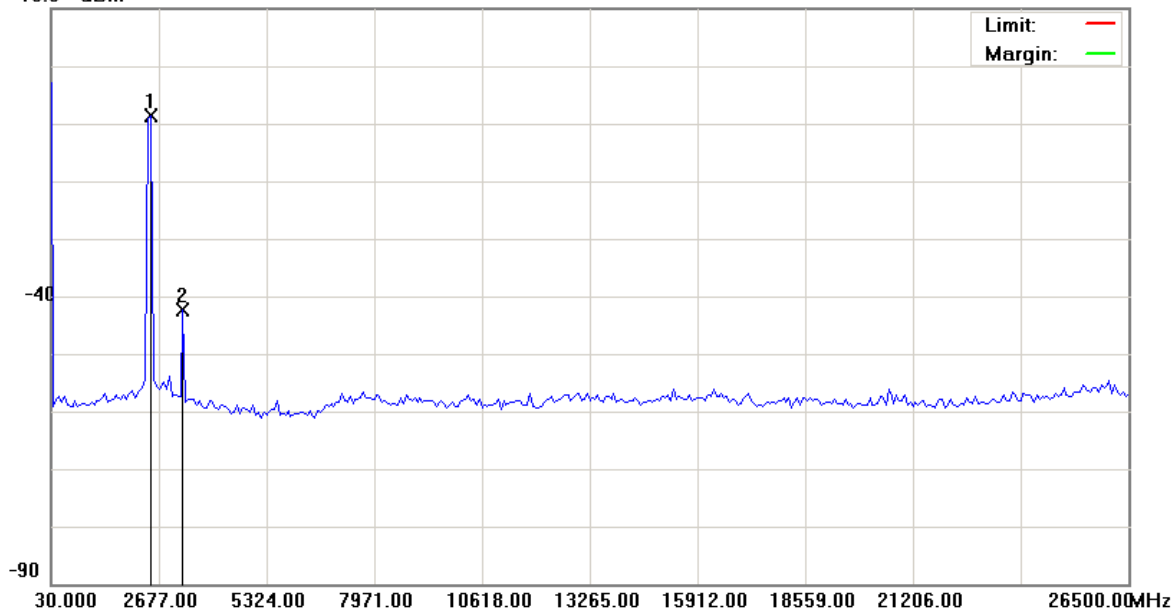
File :11n(40M)

Data :#2

Date: 2009/12/21

Time: 下午 11:03:27

10.0 dBm



Site: : 966 Chamber

Polarization:

Temperature: 22 °C

Limit:

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 100 KHz VBW: 100 KHz

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2437.000	-8.69	0.00	-8.69			peak		Tx
2		3272.575	-42.35	0.00	-42.35			peak		

*:Maximum data x:Over limit !:over margin



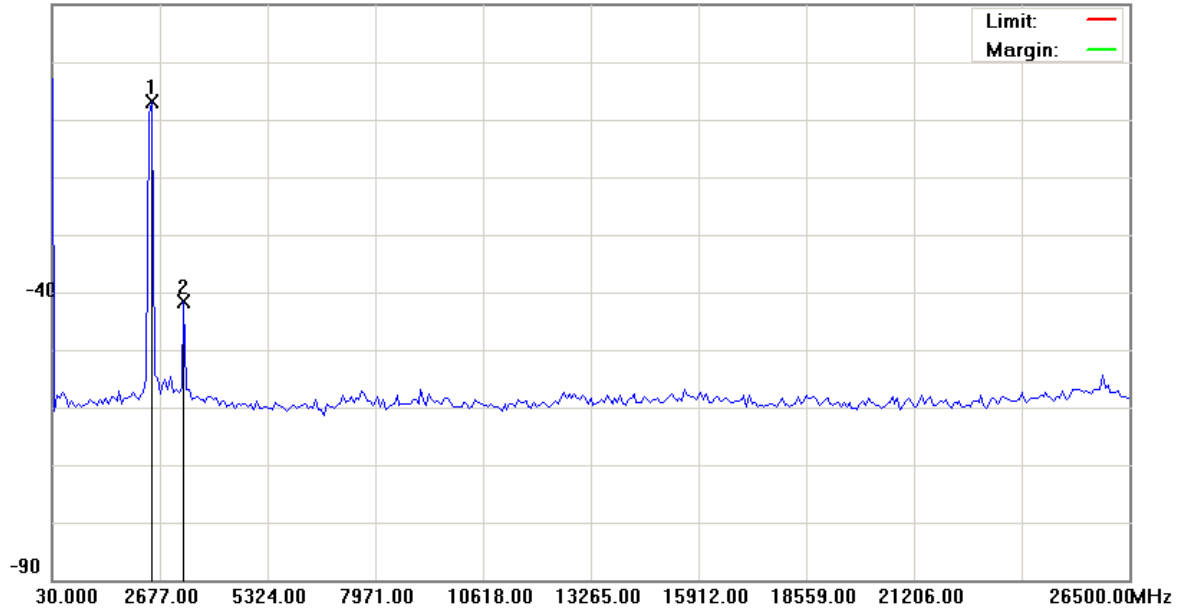
File :11n(40M)

Data :#3

Date: 2009/12/21

Time: 下午 11:03:48

10.0 dBm



Site: : 966 Chamber

Polarization:

Temperature: 22 °C

Limit:

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 100 KHz VBW: 100 KHz

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2452.000	-6.95	0.00	-6.95			peak		Tx
2		3272.575	-41.62	0.00	-41.62			peak		

*:Maximum data x:Over limit !:over margin



8. Band Edges Requirements

8.1 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The emissions on the harmonics frequencies, the limits, and the margin of compliance are presented. These tests were made when the transmitter was in full radiated power. The additional test was performed to show compliance with the requirement at the band-edge frequency 2483.5 MHz and up to 2500 MHz and at 2390.0 MHz.

The transmitter was configured with the worst case antenna and setup to transmit at the highest channel. Then the field strength was measured at 2483.5 MHz.

The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel. Then the field strength was measured at 2390.0 MHz. These tests were performed at 4 different bit rates.

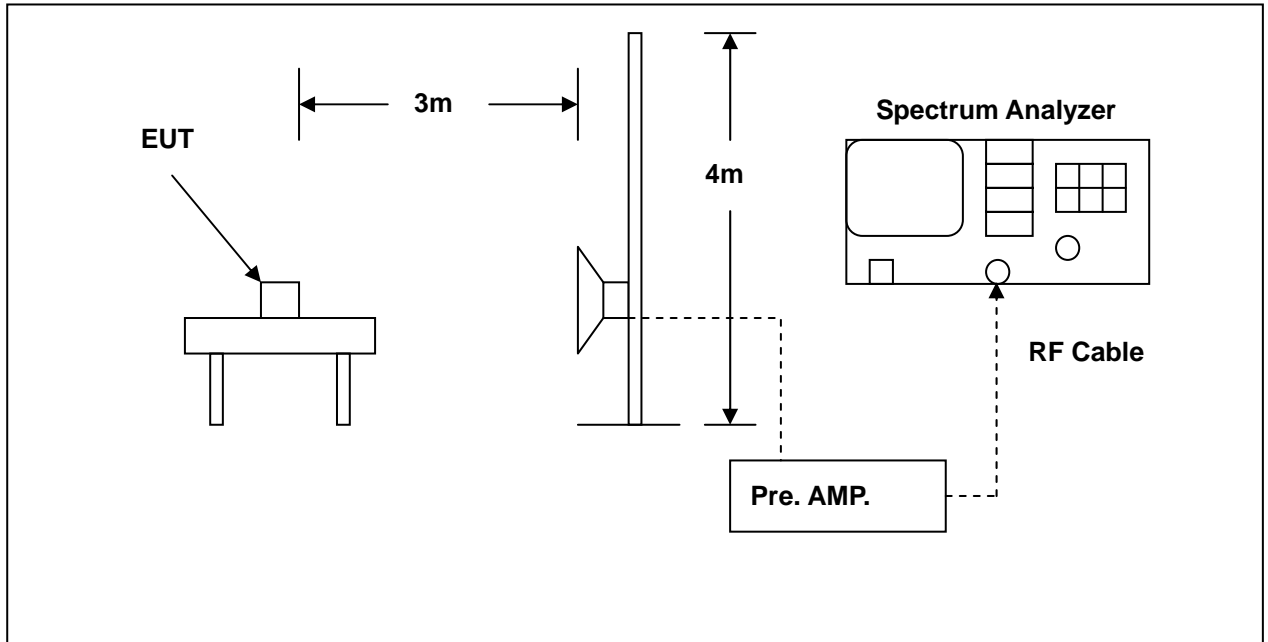
8.2 Limits

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

8.3 Test Equipment List

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4408B	MY45107753	Jun. 08, 2009	Jun. 08, 2010
Pre Amplifier	Agilent	8449B	3008A02237	Jun. 08, 2009	Jun. 08, 2010
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	Jul. 01, 2009	Jul. 01, 2010

8.4 Test Instruments Configuration



8.5 Test Result

EUT : 802.11 b/g/n USB Dongle
 Model No. : WLN-101
 Test Mode : IEEE 802.11b Link Mode Low CH & High CH
 IEEE 802.11g Link Mode Low CH & High CH
 draft 802.11n Standard-20MHz Link Mode Low CH & High CH
 draft 802.11n Wide-40MHz Link Mode Low CH & High CH

Test Date : 12/20/2009

Please refer to next page of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Height of table for EUT placed: 0.8 Meter.
3. ANT= Antenna height.
4. Duty= Duty cycle correction factor.
5. Dis= Distance extrapolation factor.
6. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
 (Auto calculate in spectrum analyzer)
7. Actual Amp= Amplitude – Duty – Dis.



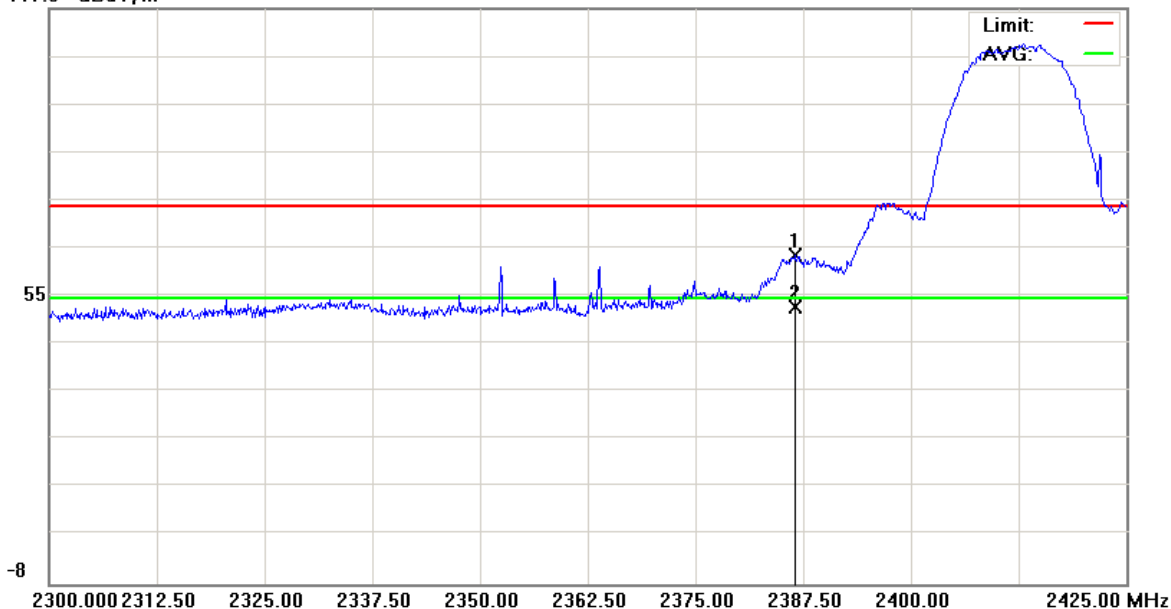
File :FCC(Band Edge)

Data :#1

Date: 2009/12/18

Time: 下午 10:46:13

117.0 dBuV/m



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note: (2412MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2386.625	63.10	0.16	63.26	74.00	-10.74	peak		
2	*	2386.625	52.08	0.16	52.24	54.00	-1.76	AVG		

*:Maximum data x:Over limit !:over margin



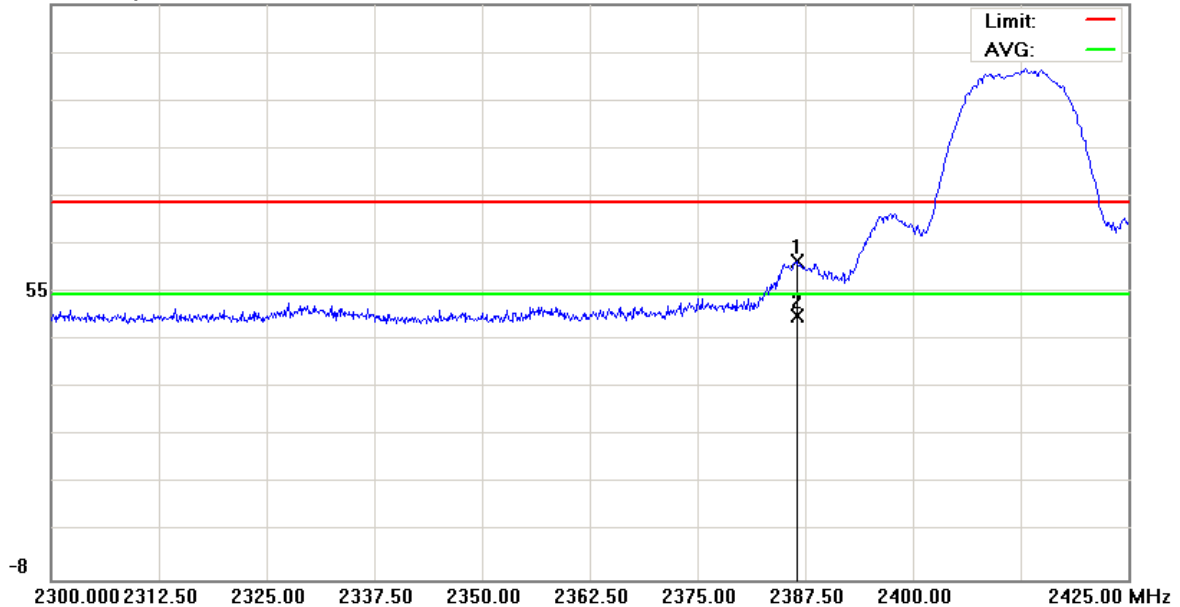
File :FCC(Band Edge)

Data :#5

Date: 2009/12/18

Time: 下午 10:53:56

117.0 dBuV/m



Site: : 966 Chamber

Polarization: *Horizontal*

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note: (2412MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2386.500	61.10	0.16	61.26	74.00	-12.74	peak		
2	*	2386.500	49.16	0.16	49.32	54.00	-4.68	AVG		

*:Maximum data x:Over limit !:over margin



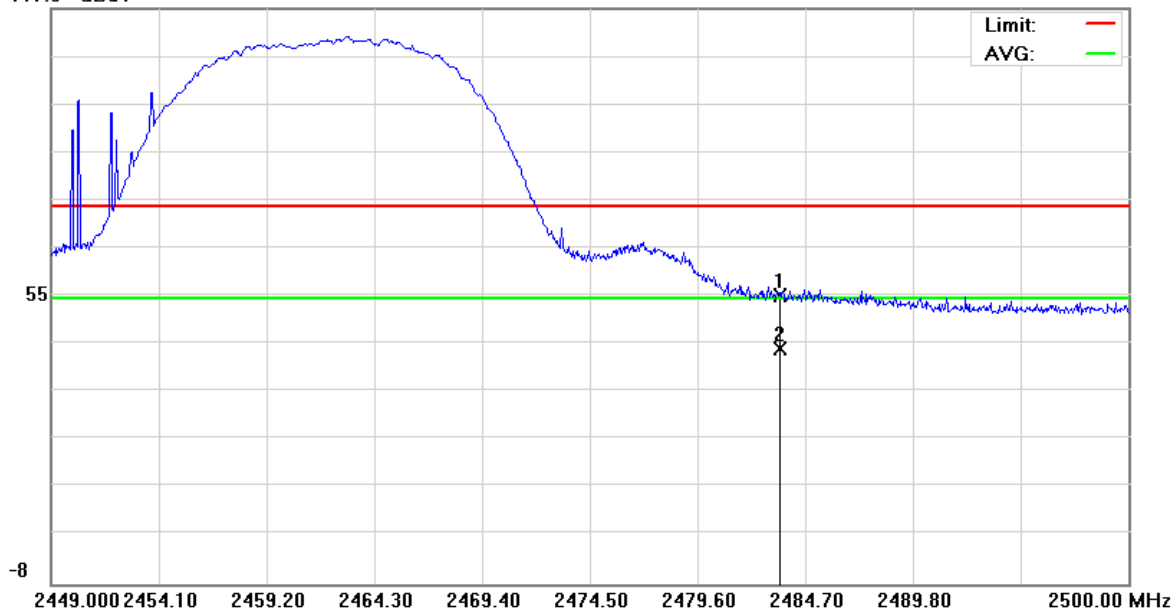
File :FCC(Band Edge)

Data :#3

Date: 2009/12/18

Time: 下午 11:03:27

117.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note: (2462MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.510	54.32	0.25	54.57	74.00	-19.43	peak		
2	*	2483.510	42.69	0.25	42.94	54.00	-11.06	AVG		

*:Maximum data x:Over limit !:over margin



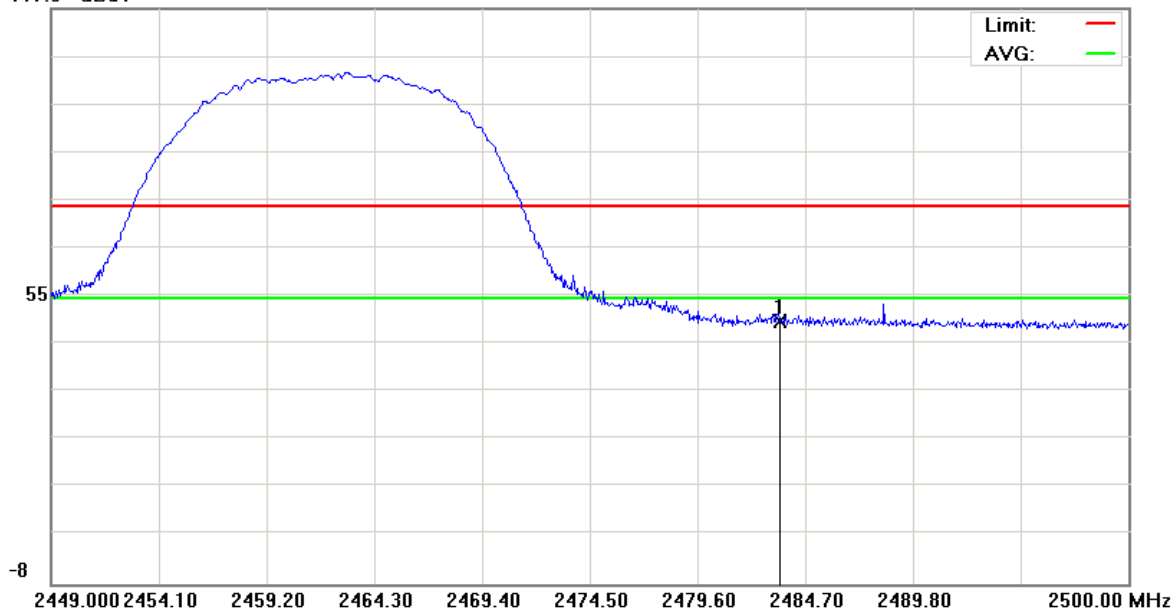
File :FCC(Band Edge)

Data :#7

Date: 2009/12/18

Time: 下午 11:10:34

117.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: IEEE 802.11b Link Mode

Note: (2462MHZ)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	*	2483.510	48.82	0.25	49.07	74.00	-24.93	peak		Comment

*:Maximum data x:Over limit !:over margin



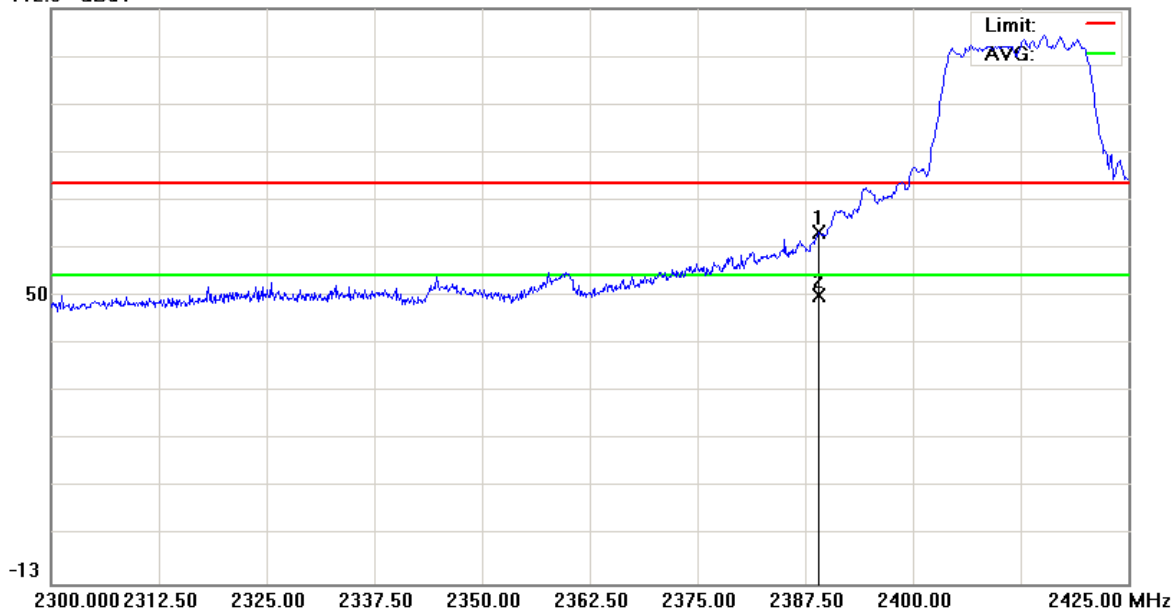
File :FCC(Band Edge)

Data :#1

Date: 2009/12/18

Time: 下午 11:16:36

112.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: IEEE 802.11g Link Mode

Note: (2412MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2389.125	63.34	0.19	63.53	74.00	-10.47	peak		
2	*	2389.125	49.33	0.19	49.52	54.00	-4.48	AVG		

*:Maximum data x:Over limit !:over margin



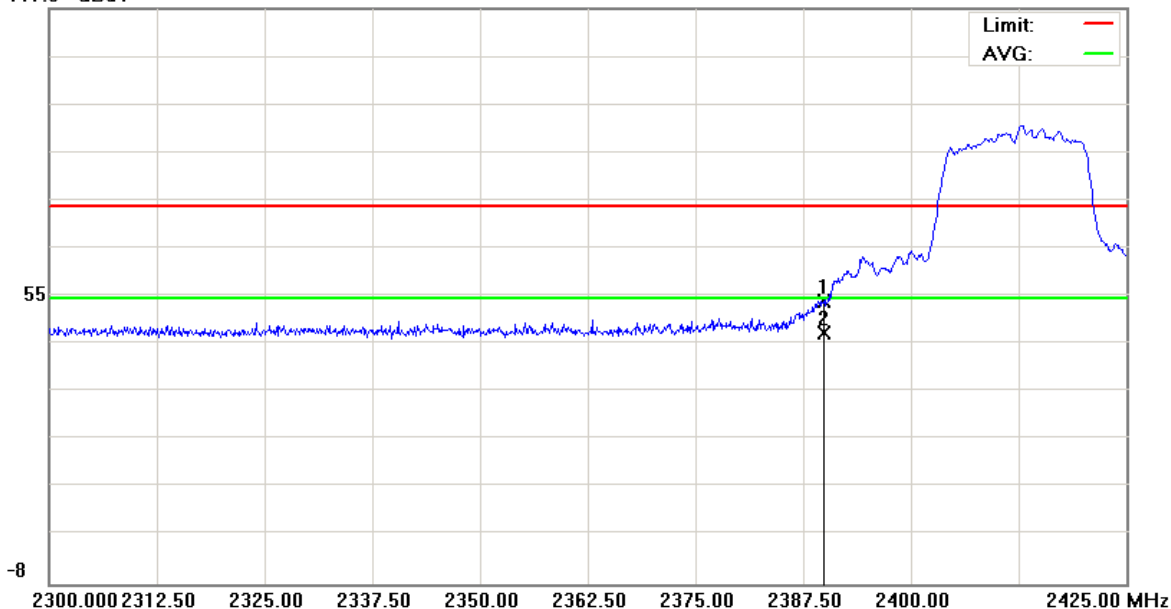
File :FCC(Band Edge)

Data :#5

Date: 2009/12/18

Time: 下午 11:43:31

117.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: IEEE 802.11g Link Mode

Note: (2412MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2389.800	53.14	0.16	53.30	74.00	-20.70	peak		
2	*	2389.800	46.47	0.16	46.63	54.00	-7.37	AVG		

*:Maximum data x:Over limit !:over margin



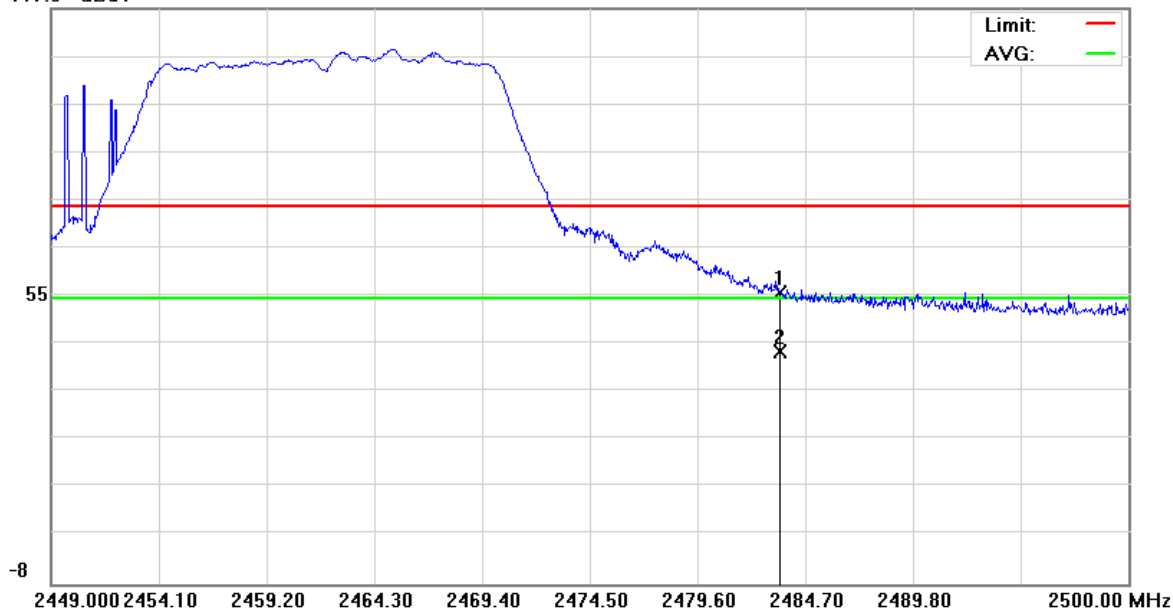
File :FCC(Band Edge)

Data :#3

Date: 2009/12/18

Time: 下午 11:27:29

117.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: IEEE 802.11g Link Mode

Note: (2462MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.510	55.00	0.25	55.25	74.00	-18.75	peak		
2	*	2483.510	42.13	0.25	42.38	54.00	-11.62	AVG		

*:Maximum data x:Over limit !:over margin



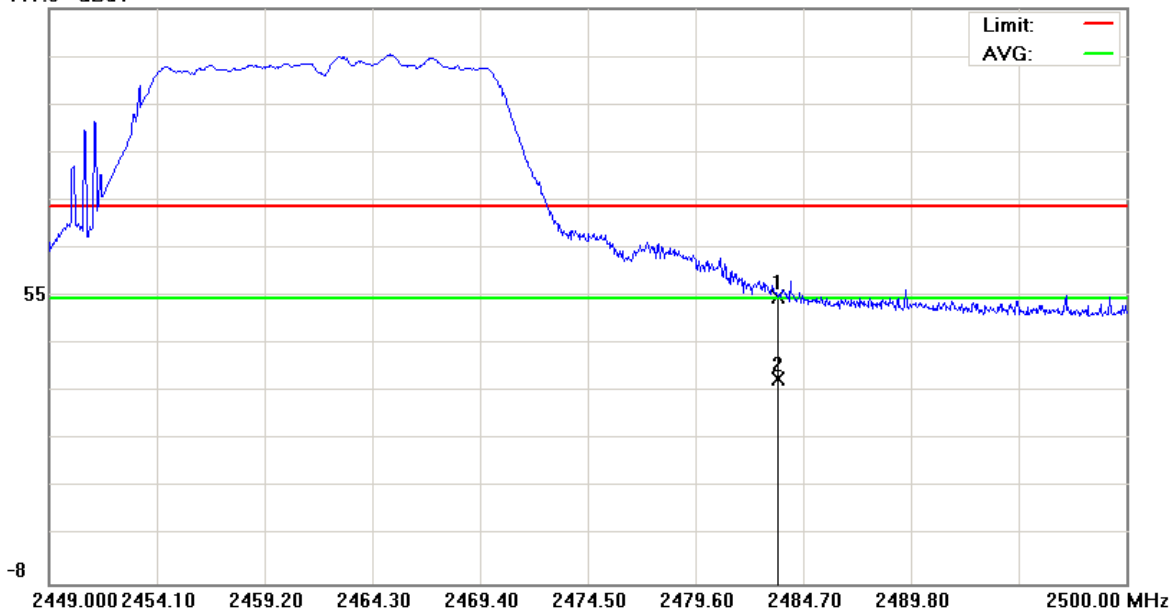
File :FCC(Band Edge)

Data :#7

Date: 2009/12/18

Time: 下午 11:35:40

117.0 dBuV



Site: : 966 Chamber

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: IEEE 802.11g Link Mode

Note: (2462MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.510	54.10	0.25	54.35	74.00	-19.65	peak		
2	*	2483.510	36.31	0.25	36.56	54.00	-17.44	AVG		

*:Maximum data x:Over limit !:over margin



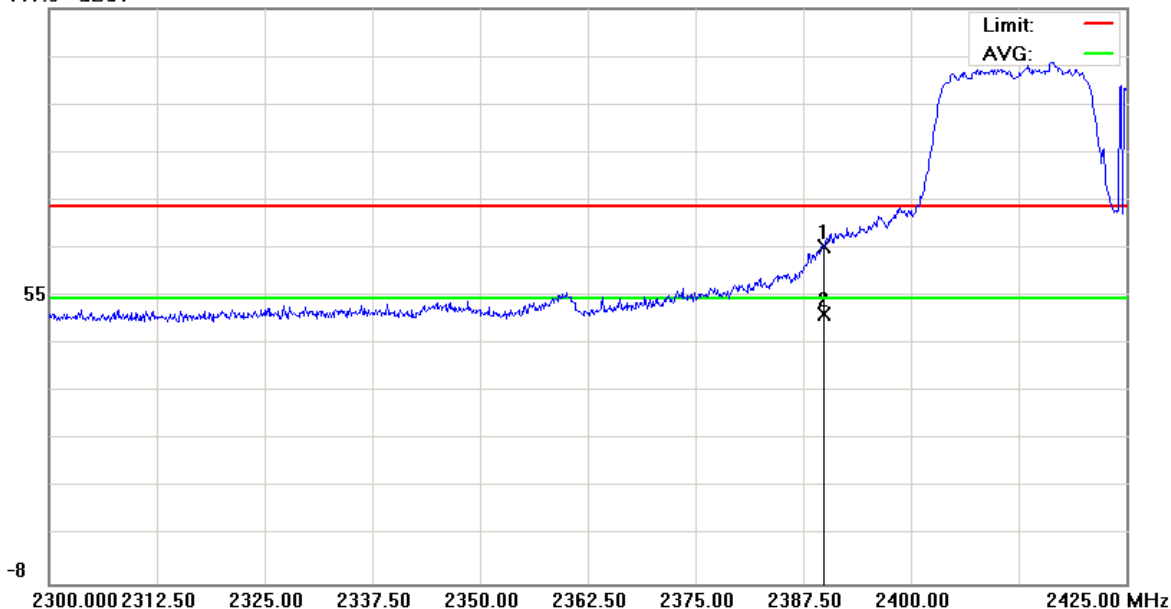
File :FCC(Band Edge)

Data :#1

Date: 2009/12/19

Time: 上午 12:00:28

117.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note: (2412MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2389.800	65.09	0.16	65.25	74.00	-8.75	peak		
2	*	2389.800	50.50	0.16	50.66	54.00	-3.34	AVG		

*:Maximum data x:Over limit !:over margin



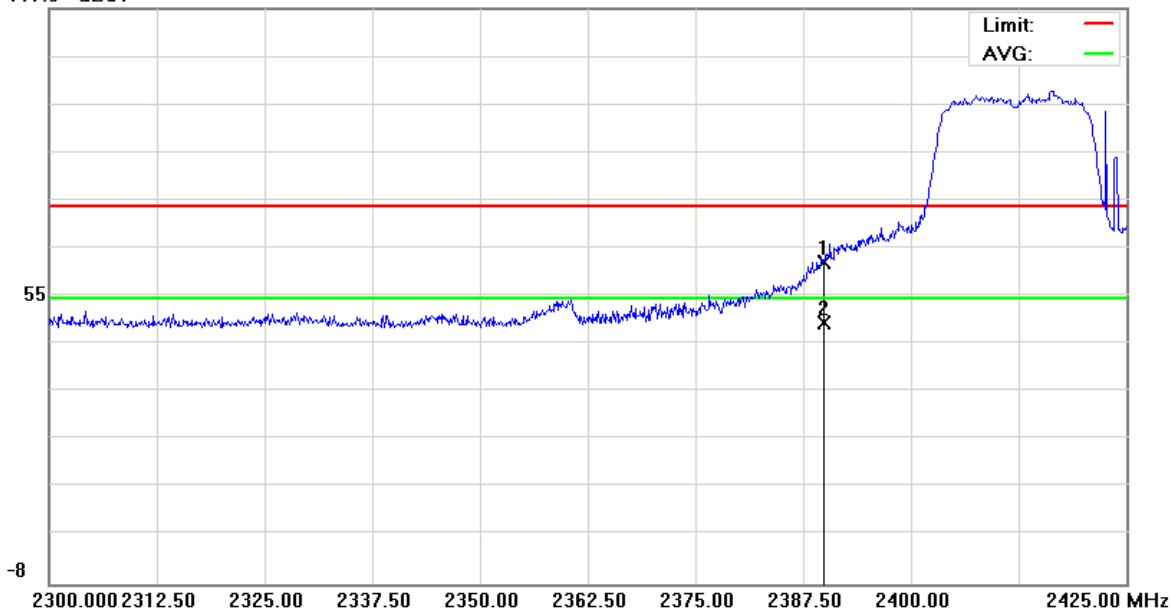
File :FCC(Band Edge)

Data :#5

Date: 2009/12/19

Time: 上午 12:07:34

117.0 dBuV



Site: : 966 Chamber

Polarization: *Horizontal*

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note: (2412MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2389.800	61.65	0.16	61.81	74.00	-12.19	peak		
2	*	2389.800	48.55	0.16	48.71	54.00	-5.29	AVG		

*:Maximum data x:Over limit !:over margin



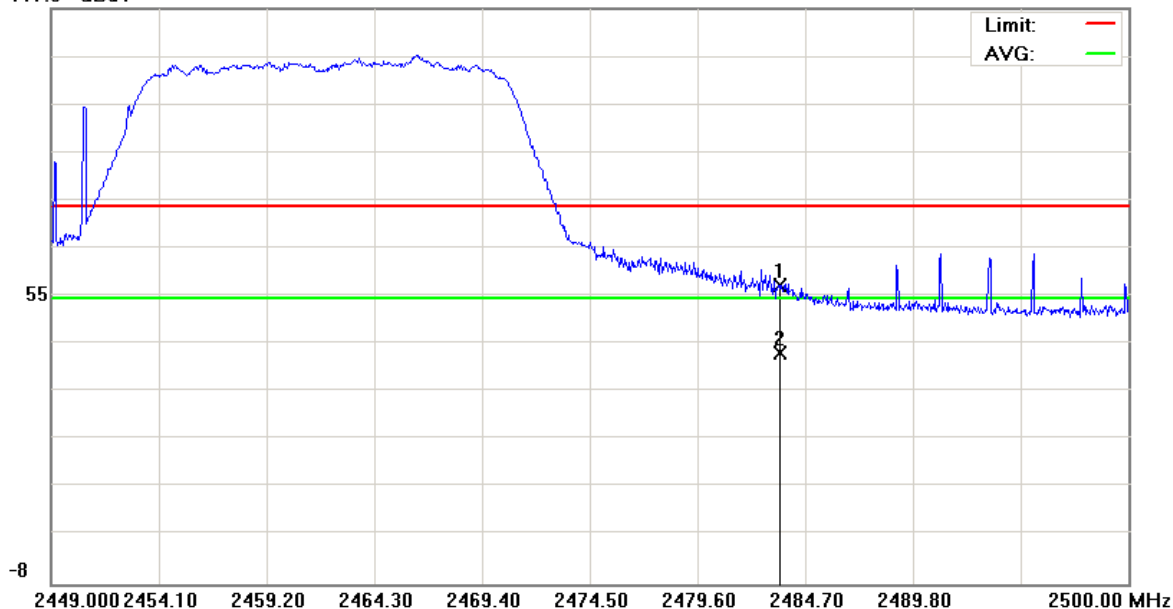
File :FCC(Band Edge)

Data :#3

Date: 2009/12/19

Time: 上午 12:14:26

117.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note: (2462MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.510	56.75	0.25	57.00	74.00	-17.00	peak		
2	*	2483.510	41.81	0.25	42.06	54.00	-11.94	AVG		

*:Maximum data x:Over limit !:over margin



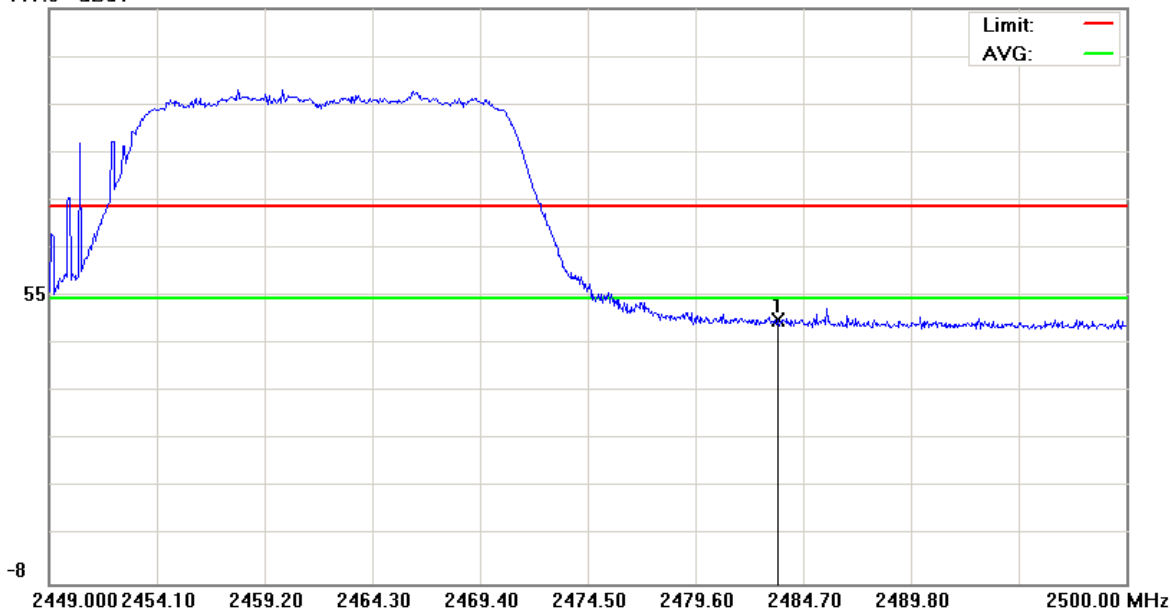
File :FCC(Band Edge)

Data :#7

Date: 2009/12/19

Time: 上午 12:25:48

117.0 dBuV



Site: : 966 Chamber

Polarization: Horizontal

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: draft 802.11n Standard-20MHz Link Mode

Note: (2462MHZ)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	2483.510	49.13	0.25	49.38	74.00	-24.62	peak		

*:Maximum data x:Over limit !:over margin



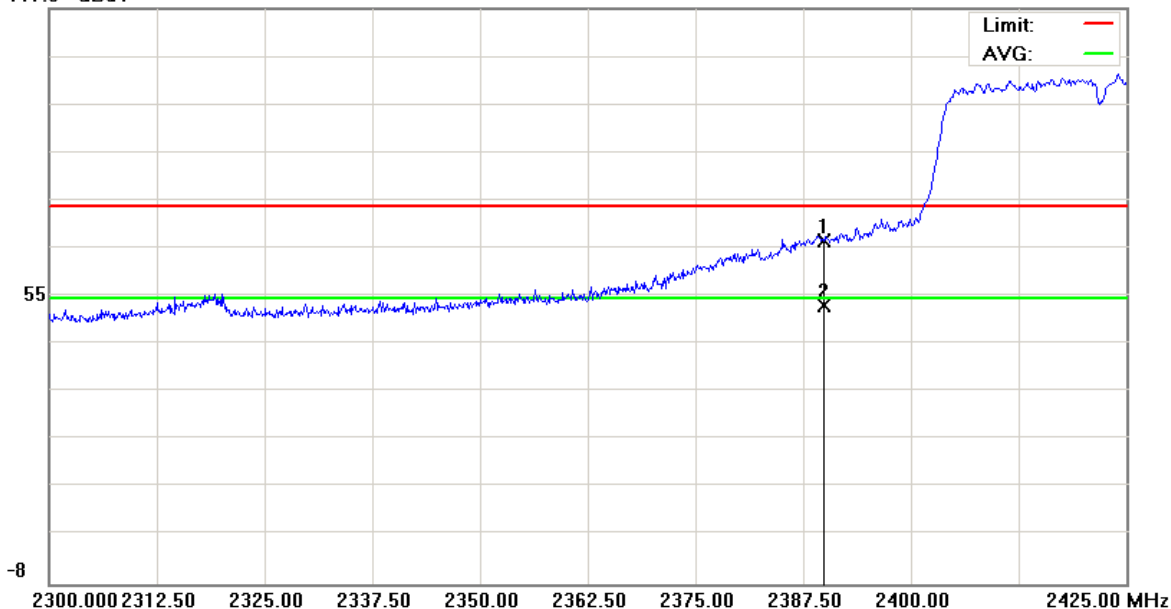
File :FCC(Band Edge)

Data :#1

Date: 2009/12/19

Time: 上午 12:29:59

117.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note: (2422MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2389.800	66.35	0.16	66.51	74.00	-7.49	peak		
2	*	2389.800	52.39	0.16	52.55	54.00	-1.45	AVG		

*:Maximum data x:Over limit !:over margin



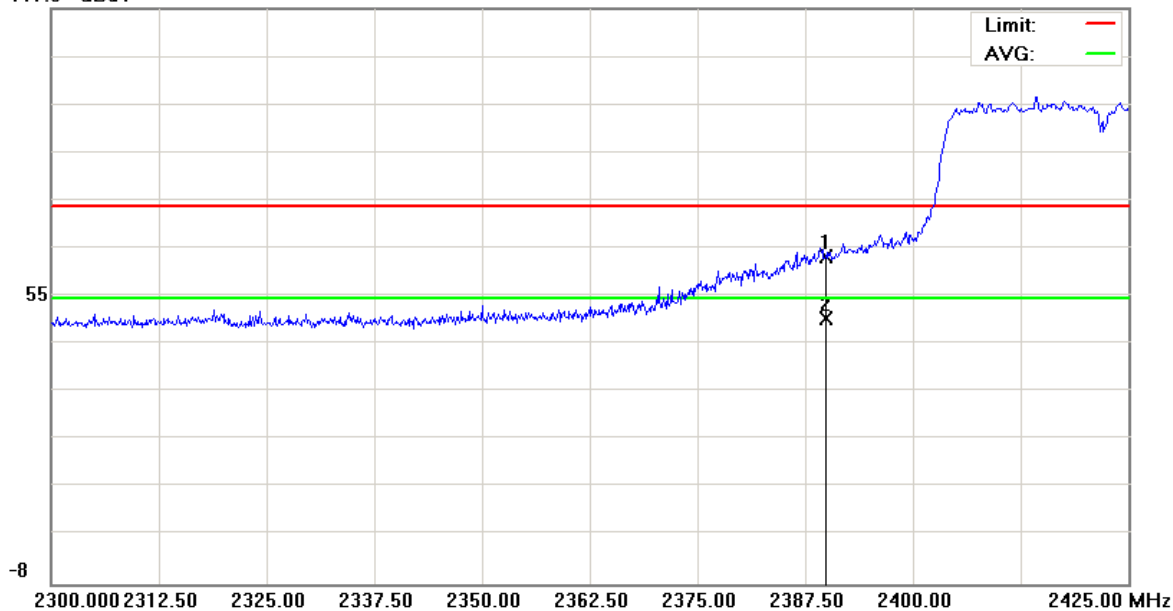
File :FCC(Band Edge)

Data :#5

Date: 2009/12/19

Time: 上午 12:38:29

117.0 dBuV



Site: : 966 Chamber

Polarization: *Horizontal*

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note: (2422MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2389.800	62.82	0.16	62.98	74.00	-11.02	peak		
2	*	2389.800	49.54	0.16	49.70	54.00	-4.30	AVG		

*:Maximum data x:Over limit !:over margin



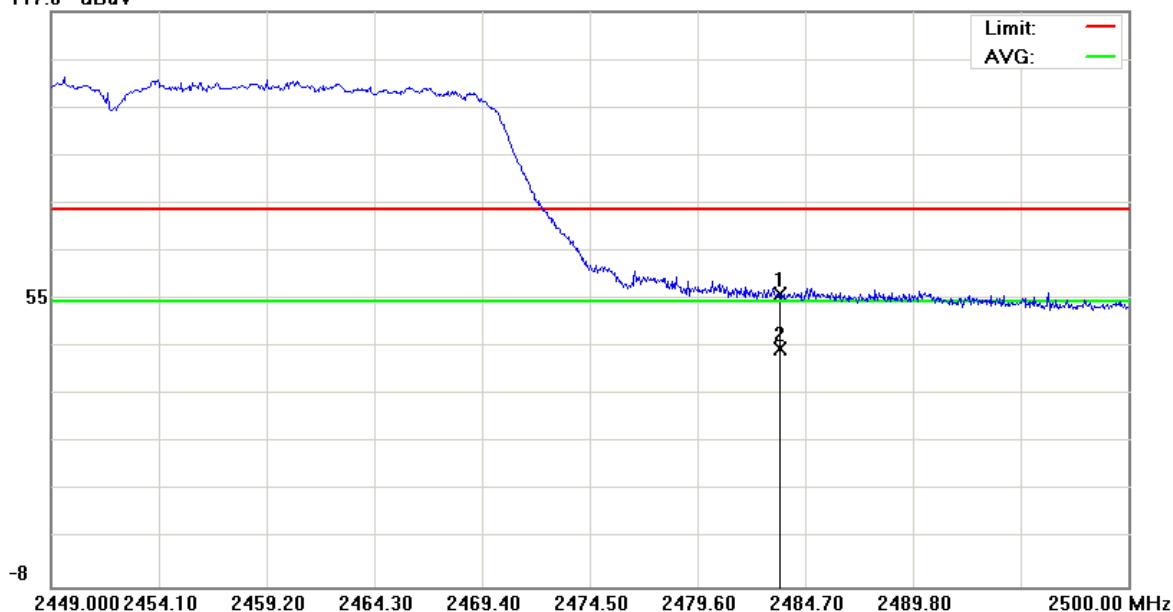
File :FCC(Band Edge)

Data :#3

Date: 2009/12/19

Time: 上午 12:44:36

117.0 dBuV



Site: : 966 Chamber

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note: (2452MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.510	55.32	0.25	55.57	74.00	-18.43	peak		
2	*	2483.510	43.51	0.25	43.76	54.00	-10.24	AVG		

*:Maximum data x:Over limit !:over margin



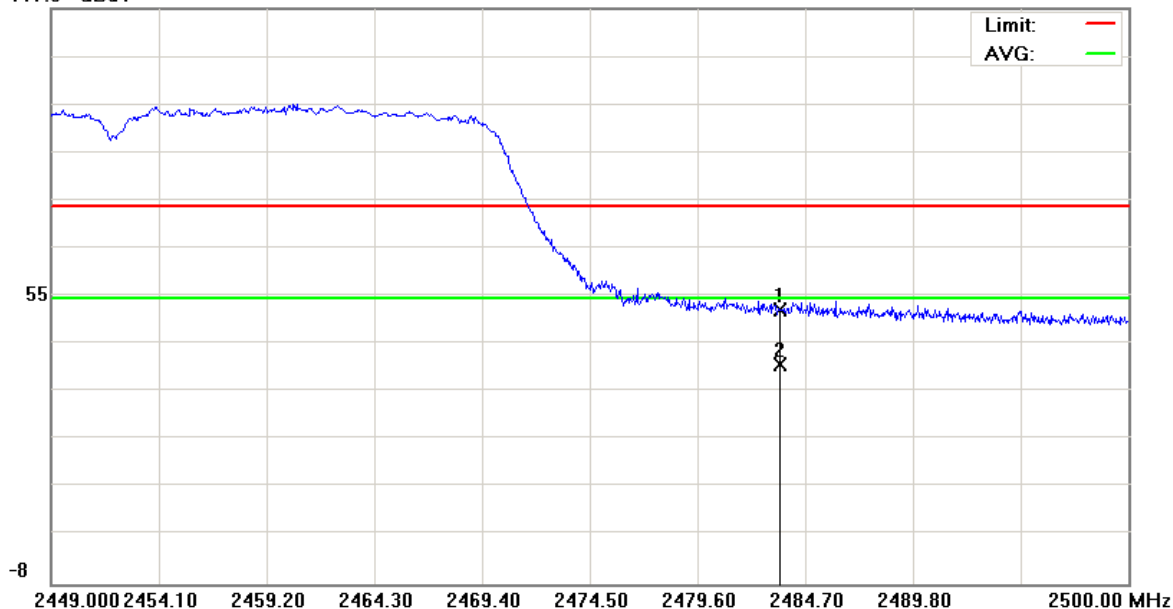
File :FCC(Band Edge)

Data :#7

Date: 2009/12/19

Time: 上午 12:49:57

117.0 dBuV



Site: : 966 Chamber

Polarization: *Horizontal*

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: 802.11 b/g/n USB Dongle

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: WLN-101

Mode: draft 802.11n Wide-40MHz Link Mode

Note: (2452MHZ)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.510	51.32	0.25	51.57	74.00	-22.43	peak		
2	*	2483.510	39.54	0.25	39.79	54.00	-14.21	AVG		

*:Maximum data x:Over limit !:over margin



9. Antenna Requirements

9.1 Standard Applicable

For intentional device, according to 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.

And According to 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

9.2 Antenna Connector Construction

The antenna used in this product is **Fixed Antenna**. And the maximum Gain of this antenna is only **2** dBi.