

FCC & IC - TEST REPORT

Report Number : **68.950.12.010.01** Date of Issue: 17 March 2012

Model : **NPCC-1**

Product Type : Notebook Computer

Applicant : Novero Canada Inc

Address : 19 allstate parkway, suite 300, L3R 5A4 Markham
Ontario Canada

Production Facility : Wanlida Group Co., Ltd.

Address : Wanlida Industry Zone, Nanjing, Fujian, China 363601

Test Result : ☒ **Positive** ☐ **Negative**

Total pages including Appendices : 67

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2 Details about the Test Laboratory

Details about the Test Laboratory

Test site1:

Company name: Jiangsu TÜV Product Service Ltd. – Shenzhen Branch
6th Floor, H Hall,
Century Craftwork Culture Square,
No. 4001, Fuqiang Road,
Futian District 518048,
Shenzhen,P.R.C.

Telephone: 86 755 8828 6998

Fax: 86 755 8828 5299

Test site2:

Company name: Audix Technology (shenzhen) Co.,Ltd
Block Shenzhen, Science & Industry Park,
Nantou, Shenzhen,
Guangdong,
China

Telephone: 86 755 2663 9496

Fax: 86 755 2663 2877

3 Description of the Equipment Under Test

Description of the Equipment Under Test

Product: Notebook Computer

Model no.: NPCC-1

Brand Name: NOVERO

Options and accessories: NIL

Rating: DC 7.4V
Charged by external adapter MPA-631:
Adaptor Input: 100-240VAC, 50/60Hz, 1A Max
Adaptor Output: 12VDC, 2.5A

Antenna: PCB Substrate Antenna, NOT accessible by end user
Max. Gain: 3.53dBi

RF Transmission Frequency: 2412-2462MHz

Description of the EUT: NIL

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
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4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C, Intentional Radiators	PART 15 – RADIO FREQUENCY DEVICES Subpart C – Intentional Radiators
RSS-210 Issue 8	RSS-210 — Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment
RSS-Gen Issue 3	General Requirements and Information for the Certification of Radio Apparatus

5 Summary of Test Results

Technical Requirements					
FCC Part 15 Subpart C, RSS-210 Issue 8 & RSS-GEN Issue 3					
Test Condition	Pages	Test Result			Test Location
		Pass	Fail	N/A	
15.207 & RSSGEN A7.2.4 Conducted Emission AC Power Port	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.247 (b) (1) & RSS-210 A8.4 Conducted peak output power	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.247(d) & RSS-210 A8.5 Band edge compliance of RF emissions	14	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.247(d) & RSS-210 A8.5 Spurious RF conducted emissions	32	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.247(d) & 15.209 & RSS-210 2.5 & RSSGEN 7.2.5 & RSSGEN 6.1 Spurious radiated emissions for transmitter and receiver	40	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.247(a)(2) & RSS-210 A8.2(a) 6dB bandwidth	47	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
RSSGEN 4.6.1 99% Occupied Bandwidth	47	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.247(e) & RSS-210 A8.2(b) Power spectral density	57	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2

6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: XWTNPPC-1 and IC: 7847B-NPCC1 to comply with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules, RSS-210 Issue 8 and RSS-GEN Issue 3.

SUMMARY:

All tests according to the regulations cited on page 5 were

☒ - Performed

☐ - **Not** Performed

The Equipment Under Test

☒ - **Fulfills** the general approval requirements.


☐ - **Does not** fulfill the general approval requirements.

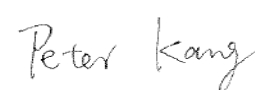
Sample Received Date: 5 December 2011


Testing Start Date: 6 December 2011

Testing End Date: 16 March 2012

- Jiangsu TÜV Product Service Ltd. – Shenzhen Branch -

Tested By Test Lab Engineer	<u>2012-03-17</u>	<u>Sunny Lu</u>	
	Date	Name	Signature

Prepared By EMC Project Engineer	<u>2012-03-17</u>	<u>Peter Kang</u>	
	Date	Name	Signature

Reviewed By EMC Project Manager	<u>2012-03-17</u>	<u>Ken Li</u>	
	Date	Name	Signature

7 Technical Requirement

7.1 Conducted Emission

Test Method

- 1 The EUT was placed on a table, which is 0.8m above ground plane
- 2 The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
- 3 Maximum procedure was performed to ensure EUT compliance
- 4 A EMI test receiver is used to test the emissions from both sides of AC line

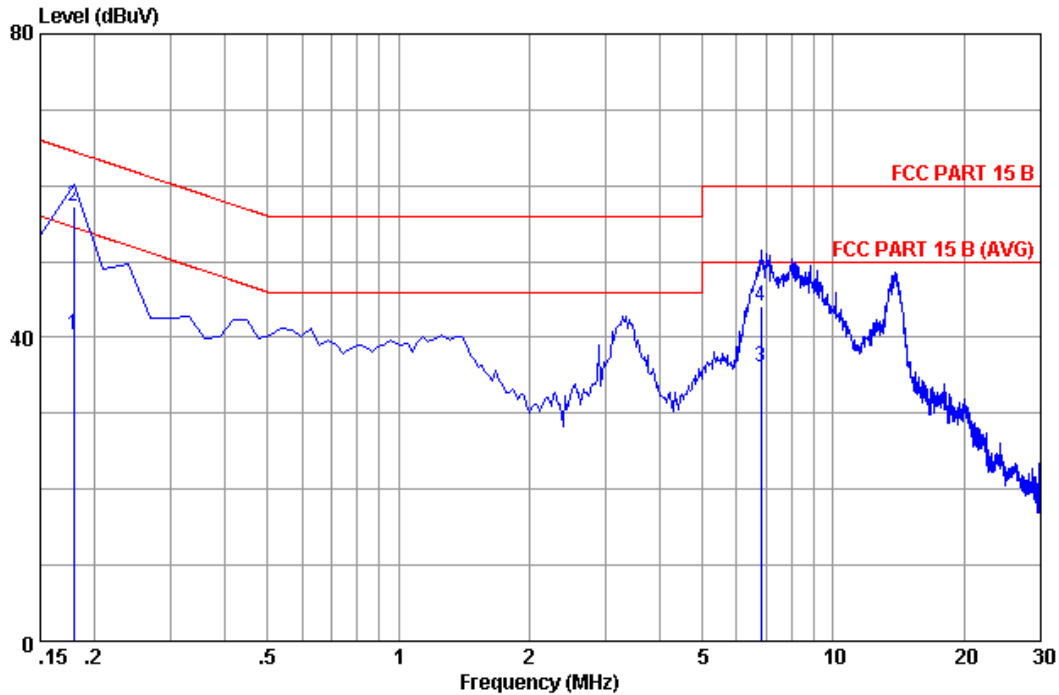
Limit

Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

“*” Decreasing linearly with logarithm of the frequency

Conducted Emission

EUT: NPPC-1
Op Cond: WIFI
Test Spec: N
Comment: AC 120V/60Hz



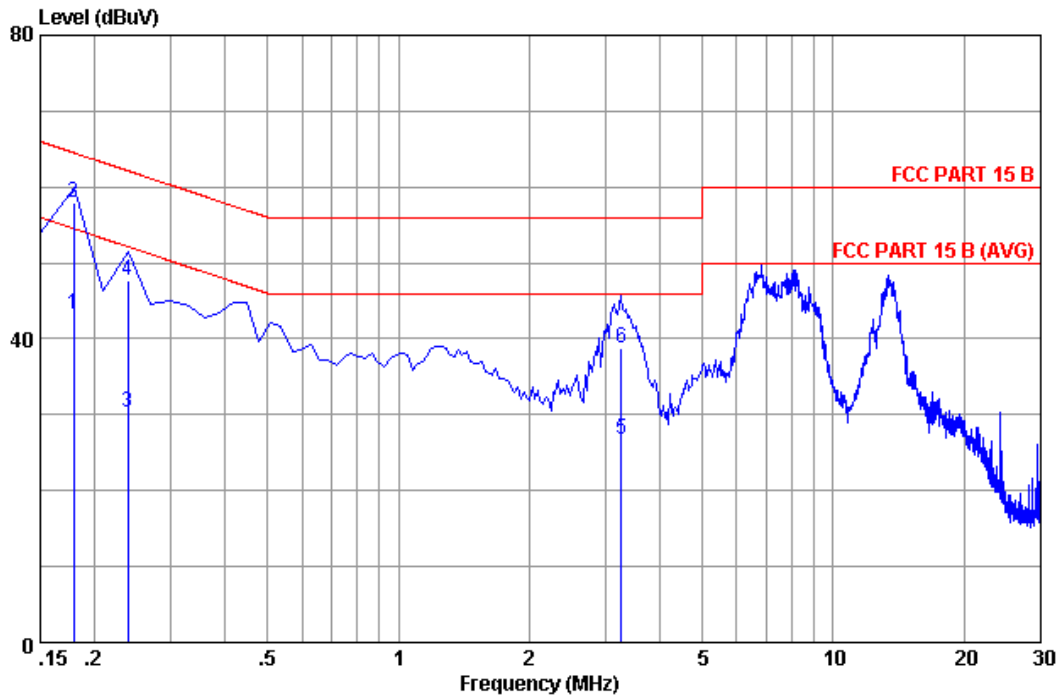
Site no :1#conduction Data No :4
Dis./Ant. :** 2011 ESH2-Z5 NEUTRAL
Limit :FCC PART 15 B
Env./Ins. :Temp:22.9' Humi:52% Engineer :Jerry
EUT :NPPC-1
Power Rating :AC 120V/60Hz
Test Mode :NI3421-A01

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17900	0.15	9.98	30.30	40.43	54.53	14.10	Average
2	0.17900	0.15	9.98	47.10	57.23	64.53	7.30	QP
3	6.830	0.30	9.92	25.90	36.12	50.00	13.88	Average
4	6.830	0.30	9.92	34.00	44.22	60.00	15.78	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)
+Reading.
2.If the average limit is met when using a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

Conducted Emission

EUT: NPPC-1
Op Cond: WIFI
Test Spec: L
Comment: AC 120V/60Hz



Site no :1#conduction Data No :3
Dis./Ant. : ** 2011 ESH2-Z5 LINE
Limit : FCC PART 15 B
Env./Ins. : Temp:22.9' Humi:52% Engineer : Jerry
EUT : NPPC-1
Power Rating : AC 120V/60Hz
Test Mode : NI3421-A01

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17900	0.15	9.98	33.10	43.23	54.53	11.30	Average
2	0.17900	0.15	9.98	47.90	58.03	64.53	6.50	QP
3	0.23900	0.15	9.98	20.10	30.23	52.13	21.90	Average
4	0.23900	0.15	9.98	37.50	47.63	62.13	14.50	QP
5	3.250	0.22	9.96	16.50	26.68	46.00	19.32	Average
6	3.250	0.22	9.96	28.50	38.68	56.00	17.32	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)
+Reading.

2.If the average limit is met when using a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

Test Equipment List

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Test Receiver	Rohde & Schwarz	ESHS10	838693/001	2012-12-18
L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	2012-05-08
L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	2012-05-08
Terminator	Hubersuhner	50Ω	No. 1	2012-05-08
Terminator	Hubersuhner	50Ω	No. 2	2012-05-08
RF Cable	Fujikura	3D-2W	LISN Cable 1#	2012-05-08
Coaxial Switch	Anritsu	MP59B	M55367	2012-05-08
Passive Probe	Rohde & Schwarz	ESH2-Z3	299.7810.52	2012-05-08
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	2012-05-08

7.2 Conducted peak output power

Test Method

The transmitter output is connected to the Spectrum analyzer. The Spectrum analyzer is set to the peak power detection.

Limits for conducted peak output power measurements

Frequency Range MHz	Limit W	Limit dBm
2400-2483	≤1	≤30

Conducted peak output power

WIFI Mode IEEE 802.11b modulation (1Mbps) Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
CH1 2412MHz	15.55	Pass
CH6 2437MHz	15.86	Pass
CH11 2462MHz	15.92	Pass

WIFI Mode IEEE 802.11g modulation (6Mbps) Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
CH1 2412MHz	16.24	Pass
CH6 2437MHz	16.13	Pass
CH11 2462MHz	16.65	Pass

WIFI Mode IEEE 802.11n HT20 modulation (6.5Mbps) Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
CH1 2412MHz	14.89	Pass
CH6 2437MHz	14.97	Pass
CH11 2462MHz	15.16	Pass

WIFI Mode IEEE 802.11n HT40 modulation (13.5Mbps) Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
CH3 2422MHz	9.34	Pass
CH6 2437MHz	10.22	Pass
CH9 2452MHz	10.71	Pass



Product Service

Test Equipment

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL DUE DATE
Spectrum Analyzer	Agilent	E4446A	US44300459	2012-05-08

7.3 Band edge compliance of RF emissions

Test Method

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.4 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW and VBW to 1MHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength.

The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW and VBW to 100kHz, to measure the conducted peak band edge.

Limits

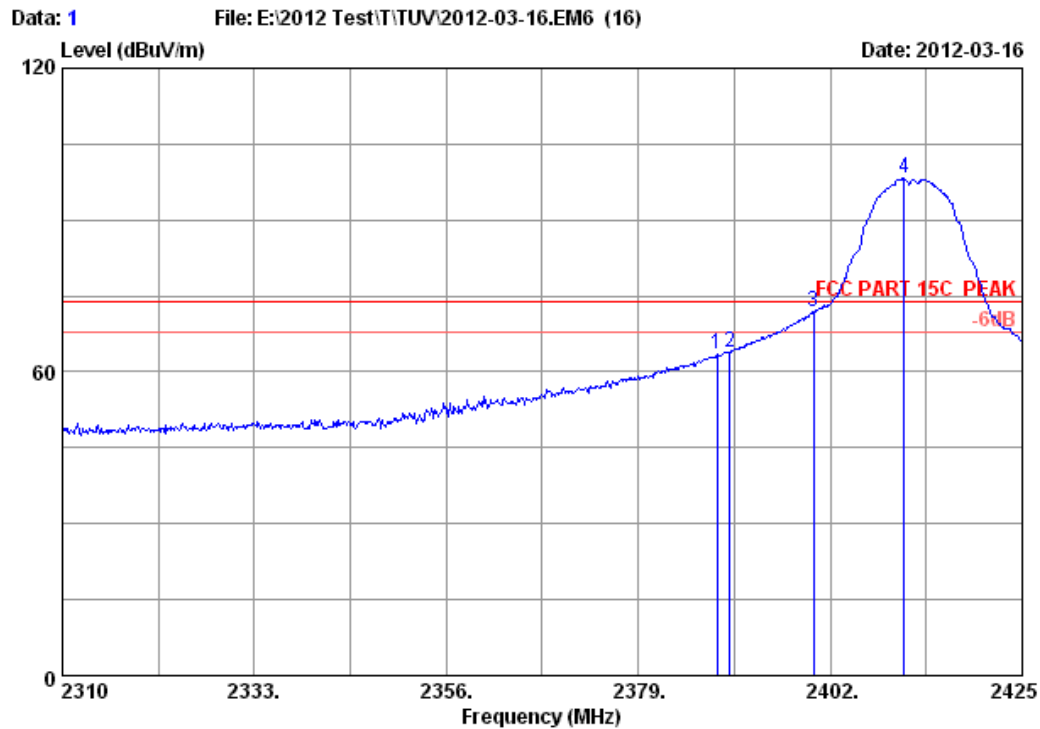
According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a) (see Section 15.205(c)).

Frequency MHz	Limit Average dBuV/m	Limit Peak dBuV/m
Below 2390 Above 2483.5	54	74

Band edge compliance of RF emissions

WIFI Mode IEEE 802.11b modulation (1 Mbps) Test Result

Peak Low Edge plot:



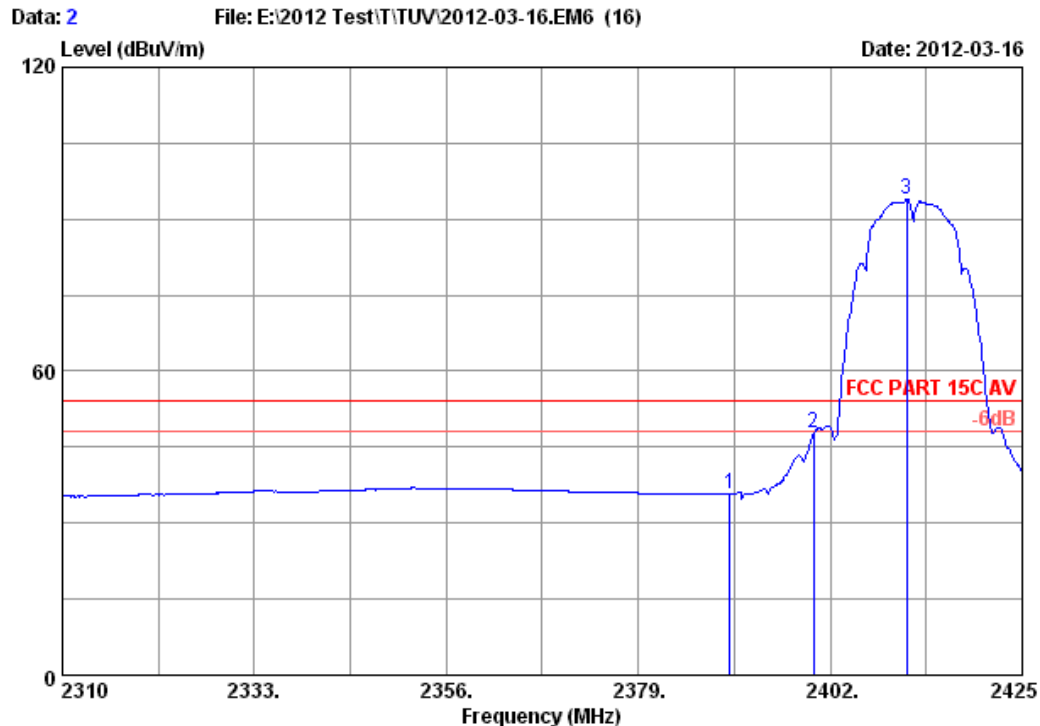
Site no. : 3m Chamber Data no. : 1
 Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : NPCC-1
 Power supply : DC 12V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11b CH 1 2412MHz Tx
 M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2388.430	27.96	6.43	34.44	63.64	63.59	74.00	10.41	Peak
2	2390.000	27.96	6.43	34.44	64.04	63.99	74.00	10.01	Peak
3	2400.000	27.96	6.43	34.44	71.91	71.86	74.00	2.14	Peak
4	2410.855	27.98	6.43	34.44	98.16	98.13	74.00	-24.13	Peak

Remarks:

- Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- The emission levels that are 20dB below the official limit are not reported.

Average Low Edge plot:



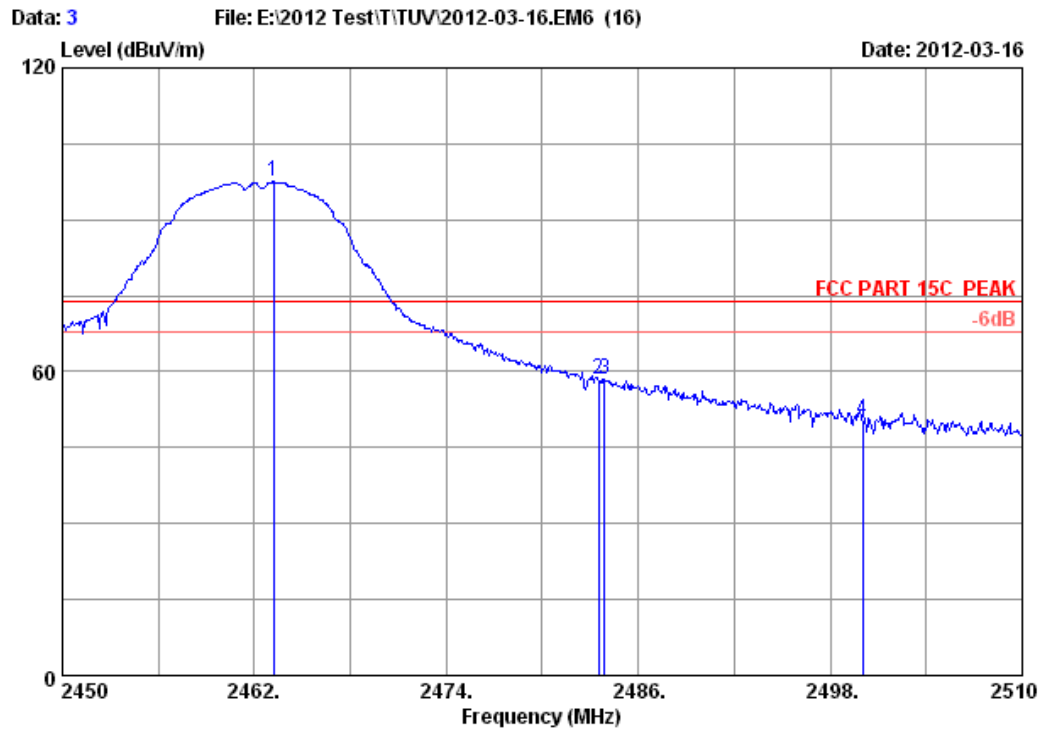
Site no. : 3m Chamber Data no. : 2
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11b CH 1 2412MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.43	34.44	35.84	35.79	54.00	18.21	Average
2	2400.000	27.96	6.43	34.44	47.97	47.92	54.00	6.08	Average
3	2411.200	27.98	6.43	34.44	93.86	93.83	54.00	-39.83	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Peak High Edge plot:



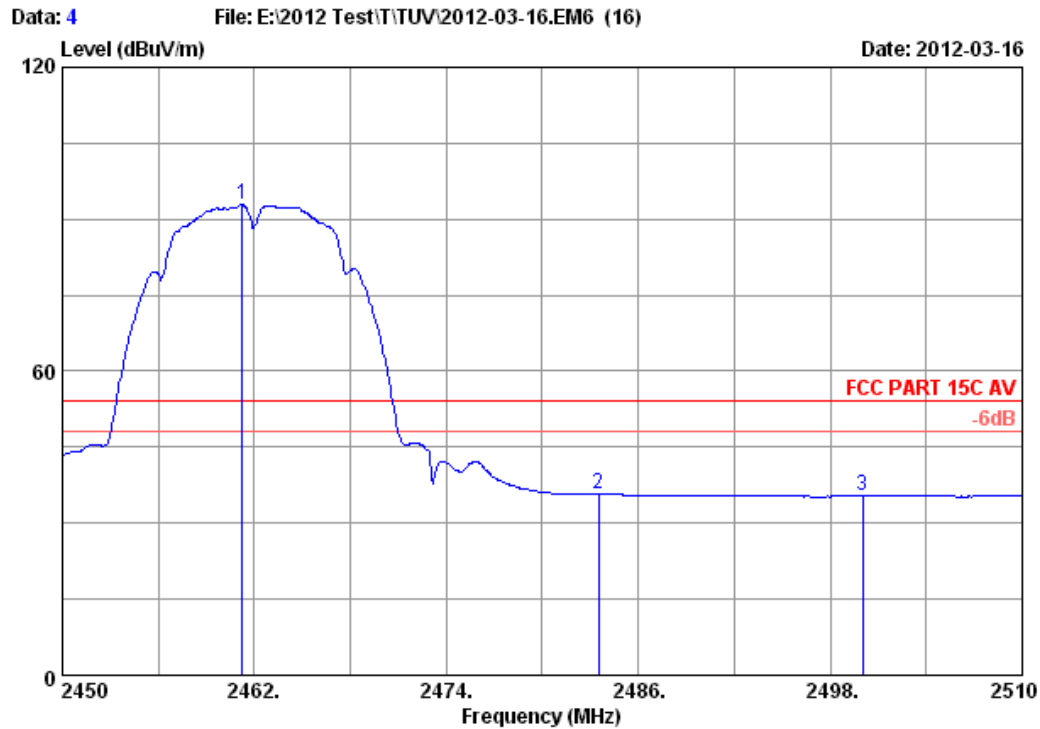
Site no. : 3m Chamber Data no. : 3
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11b CH 11 2462MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.200	28.05	6.45	34.45	97.44	97.49	74.00	-23.49	Peak
2	2483.500	28.08	6.46	34.45	58.35	58.44	74.00	15.56	Peak
3	2483.900	28.08	6.46	34.45	58.42	58.51	74.00	15.49	Peak
4	2500.000	28.10	6.46	34.45	50.23	50.34	74.00	23.66	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Average High Edge plot:



Site no. : 3m Chamber Data no. : 4
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11b CH 11 2462MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.220	28.05	6.45	34.44	92.74	92.80	54.00	-38.80	Average
2	2483.500	28.08	6.46	34.45	35.69	35.78	54.00	18.22	Average
3	2500.000	28.10	6.46	34.45	35.24	35.35	54.00	18.65	Average

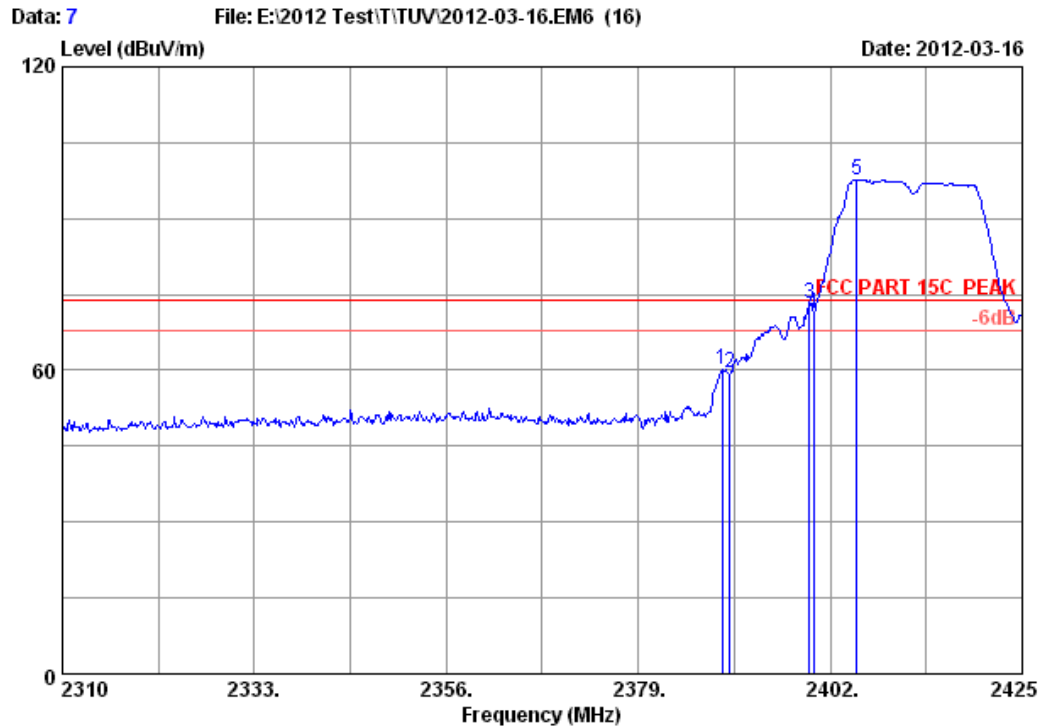
Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Band edge compliance of RF emissions

WIFI Mode IEEE 802.11g modulation (6 Mbps) Test Result

Peak Low Edge plot:



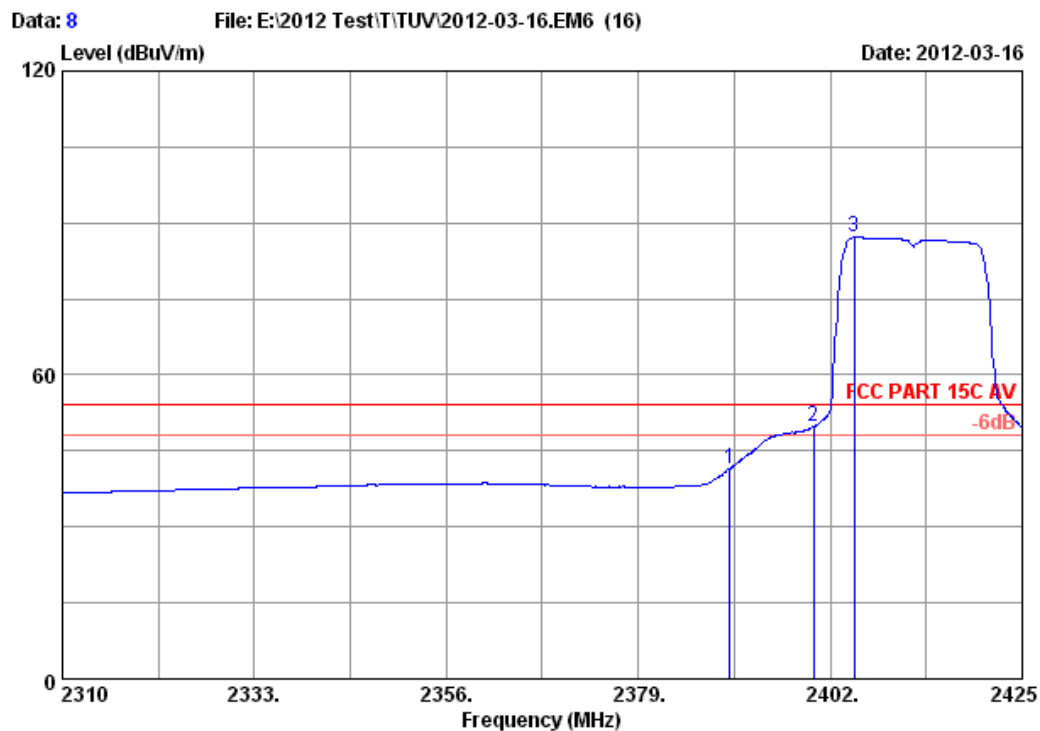
Site no. : 3m Chamber Data no. : 7
 Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : NPCC-1
 Power supply : DC 12V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11g CH 1 2412MHz Tx
 M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.005	27.96	6.43	34.44	60.29	60.24	74.00	13.76	Peak
2	2390.000	27.96	6.43	34.44	59.56	59.51	74.00	14.49	Peak
3	2399.470	27.96	6.43	34.44	73.09	73.04	74.00	0.96	Peak
4	2400.000	27.96	6.43	34.44	71.37	71.32	74.00	2.68	Peak
5	2405.220	27.98	6.43	34.44	97.65	97.62	74.00	-23.62	Peak

Remarks:

- Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- The emission levels that are 20dB below the official limit are not reported.

Average Low Edge plot:



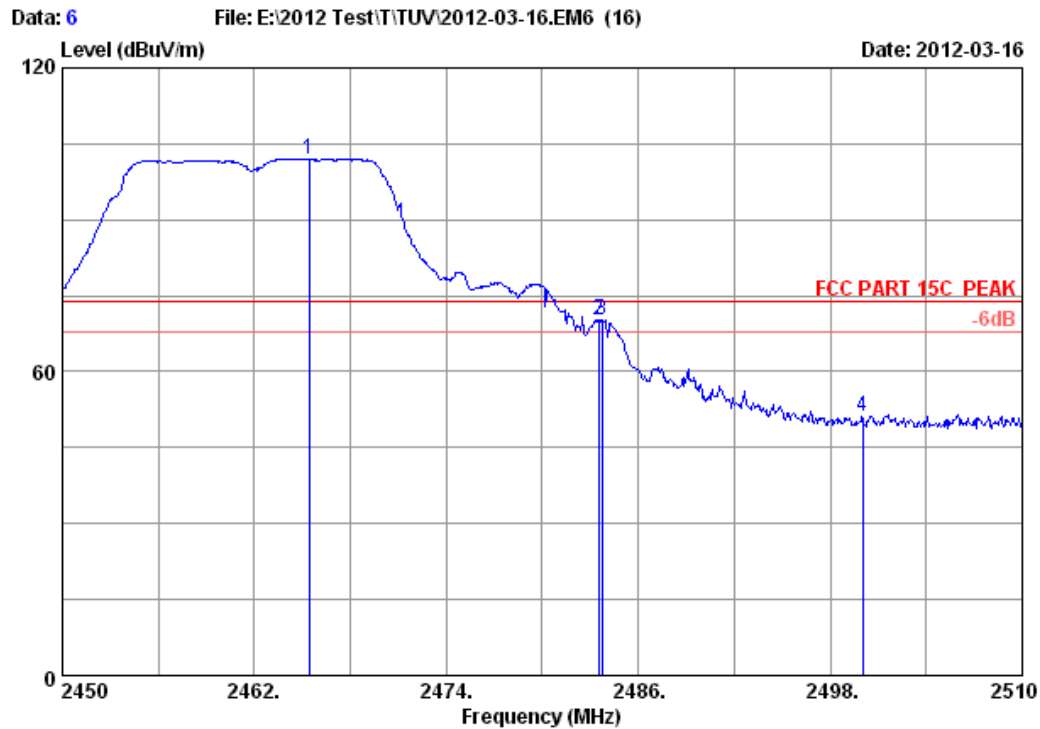
Site no. : 3m Chamber Data no. : 8
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11g CH 1 2412MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.43	34.44	41.64	41.59	54.00	12.41	Average
2	2400.000	27.96	6.43	34.44	49.91	49.86	54.00	4.14	Average
3	2404.875	27.98	6.43	34.44	87.21	87.18	54.00	-33.18	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Peak High Edge plot:



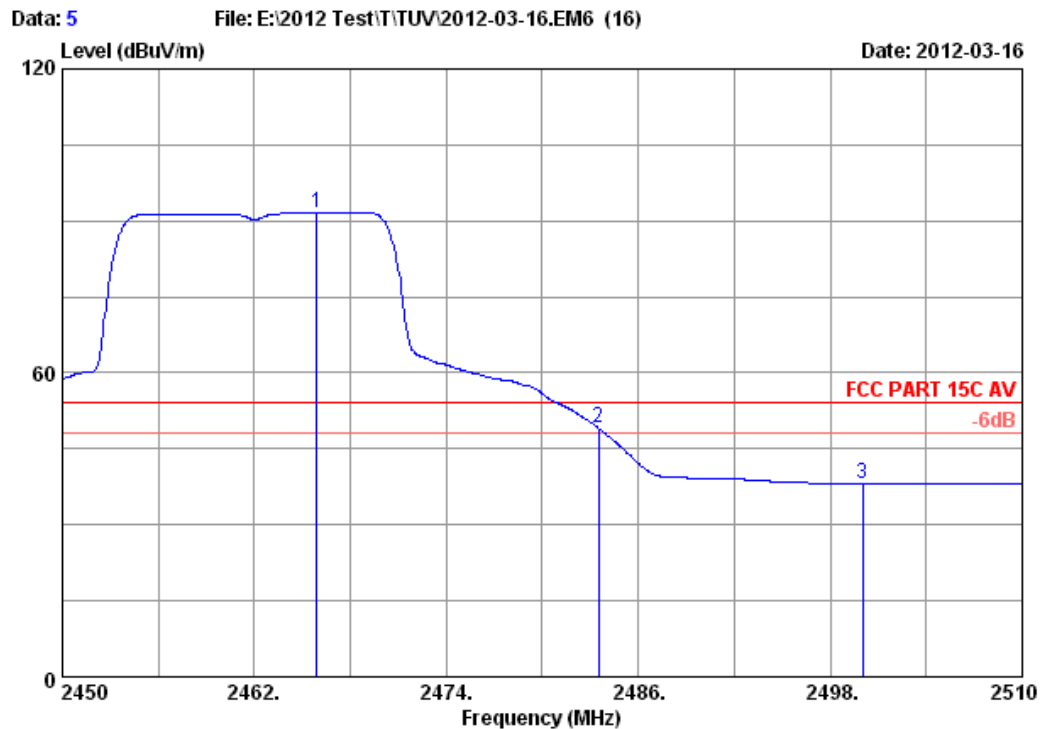
Site no. : 3m Chamber Data no. : 6
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11g CH 11 2462MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2465.420	28.05	6.45	34.45	101.93	101.98	74.00	-27.98	Peak
2	2483.500	28.08	6.46	34.45	70.21	70.30	74.00	3.70	Peak
3	2483.720	28.08	6.46	34.45	70.24	70.33	74.00	3.67	Peak
4	2500.000	28.10	6.46	34.45	50.93	51.04	74.00	22.96	Peak

Remarks:

- Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- The emission levels that are 20dB below the official limit are not reported.

Average High Edge plot:



Site no. : 3m Chamber Data no. : 5
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11g CH 11 2462MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2465.900	28.05	6.45	34.45	91.68	91.73	54.00	-37.73	Average
2	2483.500	28.08	6.46	34.45	48.94	49.03	54.00	4.97	Average
3	2500.000	28.10	6.46	34.45	38.12	38.23	54.00	15.77	Average

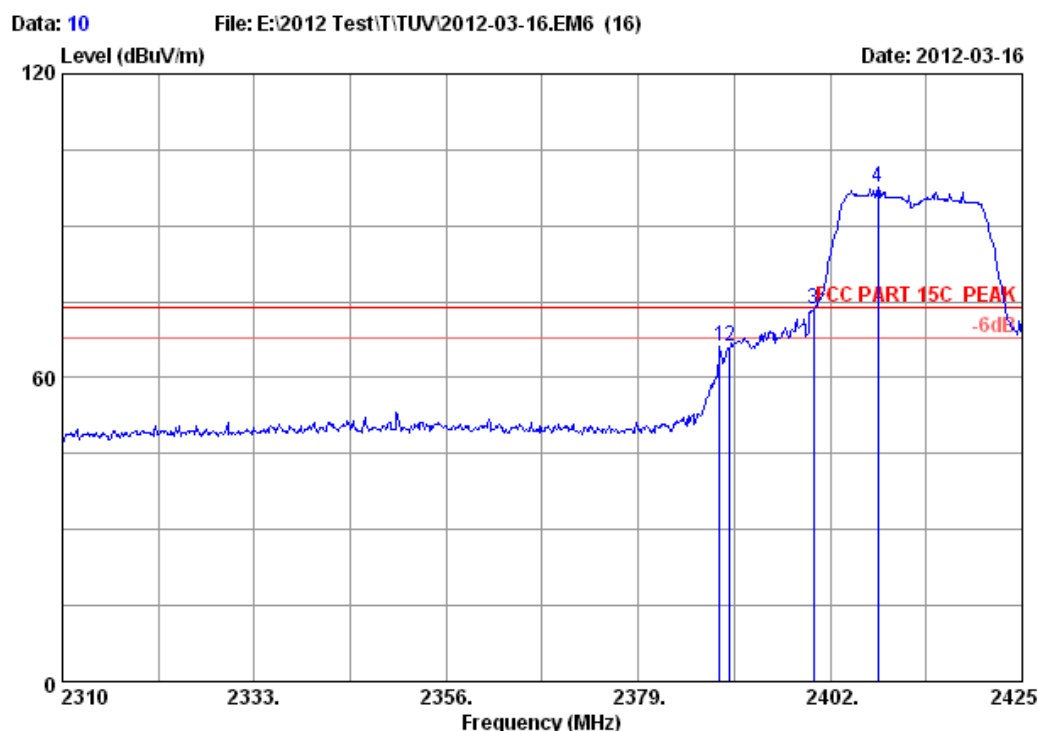
Remarks:

- Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- The emission levels that are 20dB below the official limit are not reported.

Band edge compliance of RF emissions

WIFI Mode IEEE 802.11n HT20 modulation (6.5Mbps) Test Result

Peak Low Edge plot:



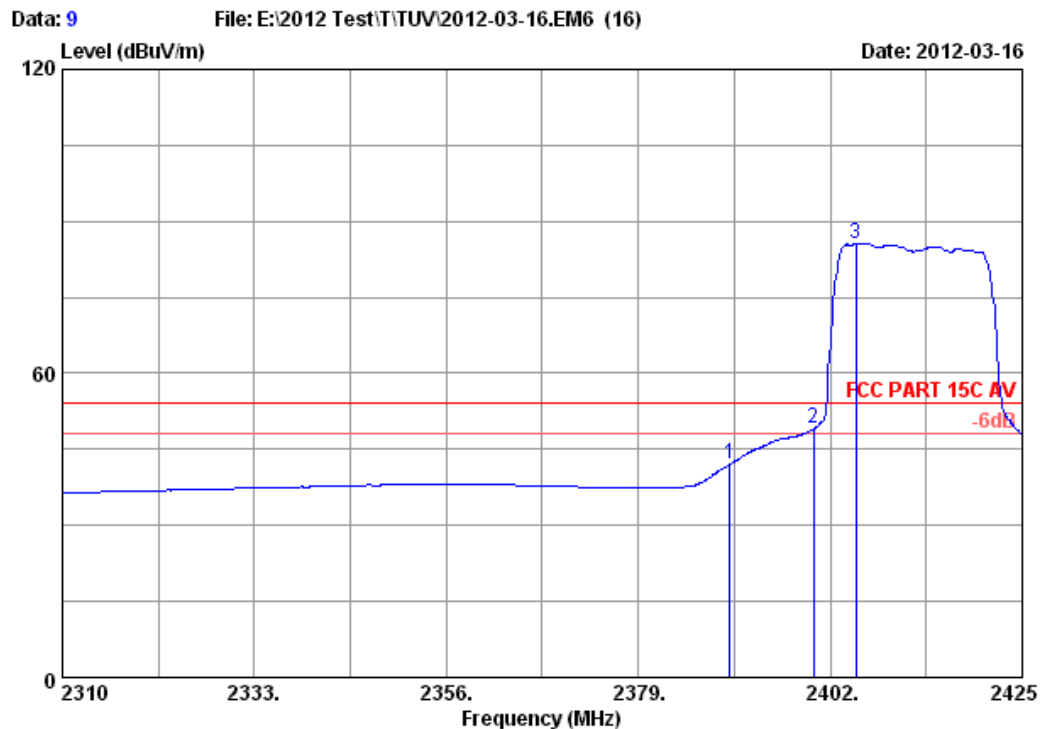
Site no. : 3m Chamber Data no. : 10
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH 1 2412MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2388.775	27.96	6.43	34.44	66.20	66.15	74.00	7.85	Peak
2	2390.000	27.96	6.43	34.44	66.37	66.32	74.00	7.68	Peak
3	2400.000	27.96	6.43	34.44	73.75	73.70	74.00	0.30	Peak
4	2407.750	27.98	6.43	34.44	97.53	97.50	74.00	-23.50	Peak

Remarks:

- Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- The emission levels that are 20dB below the official limit are not reported.

Average Low Edge plot:



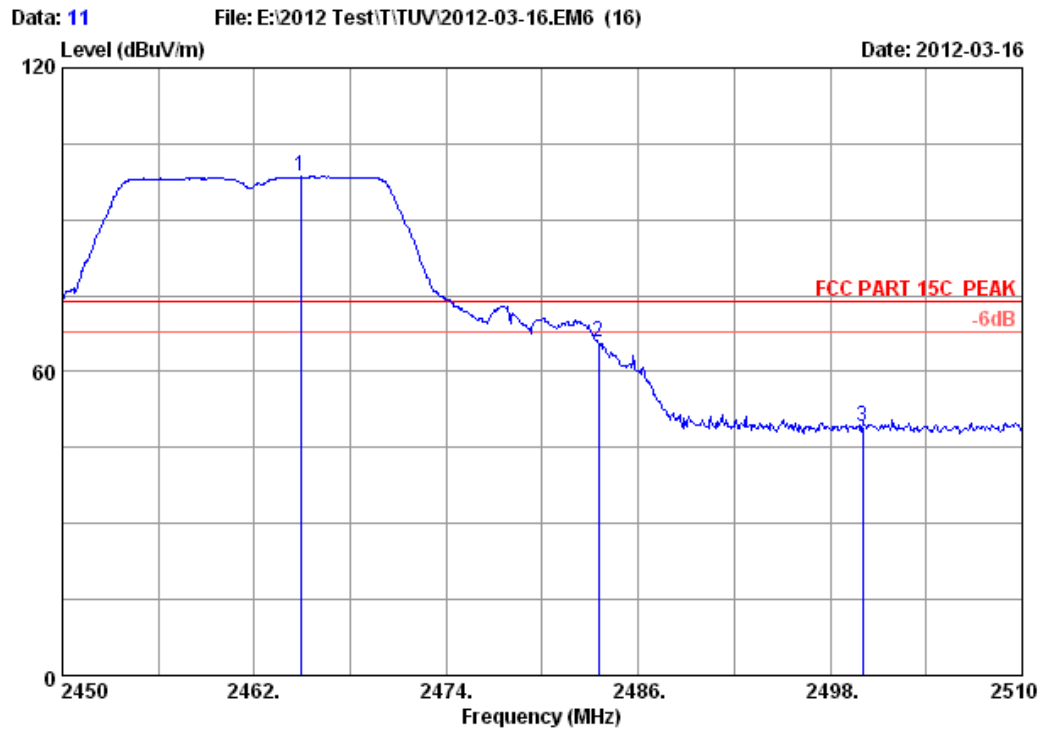
Site no. : 3m Chamber Data no. : 9
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH 1 2412MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.43	34.44	42.19	42.14	54.00	11.86	Average
2	2400.000	27.96	6.43	34.44	49.19	49.14	54.00	4.86	Average
3	2405.105	27.98	6.43	34.44	85.58	85.55	54.00	-31.55	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Peak High Edge plot:



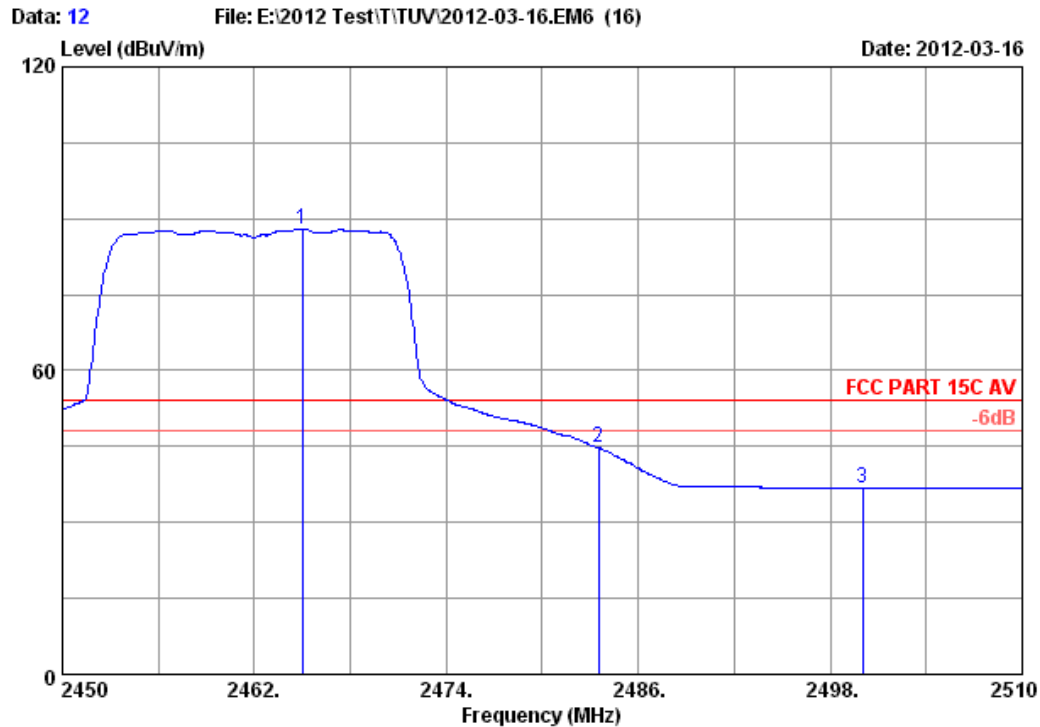
Site no. : 3m Chamber Data no. : 11
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH 11 2462MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2464.880	28.05	6.45	34.45	98.61	98.66	74.00	-24.66	Peak
2	2483.500	28.08	6.46	34.45	65.91	66.00	74.00	8.00	Peak
3	2500.000	28.10	6.46	34.45	49.04	49.15	74.00	24.85	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Average High Edge plot:



Site no. : 3m Chamber Data no. : 12
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH 11 2462MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2465.000	28.05	6.45	34.45	87.81	87.86	54.00	-33.86	Average
2	2483.500	28.08	6.46	34.45	44.67	44.76	54.00	9.24	Average
3	2500.000	28.10	6.46	34.45	36.72	36.83	54.00	17.17	Average

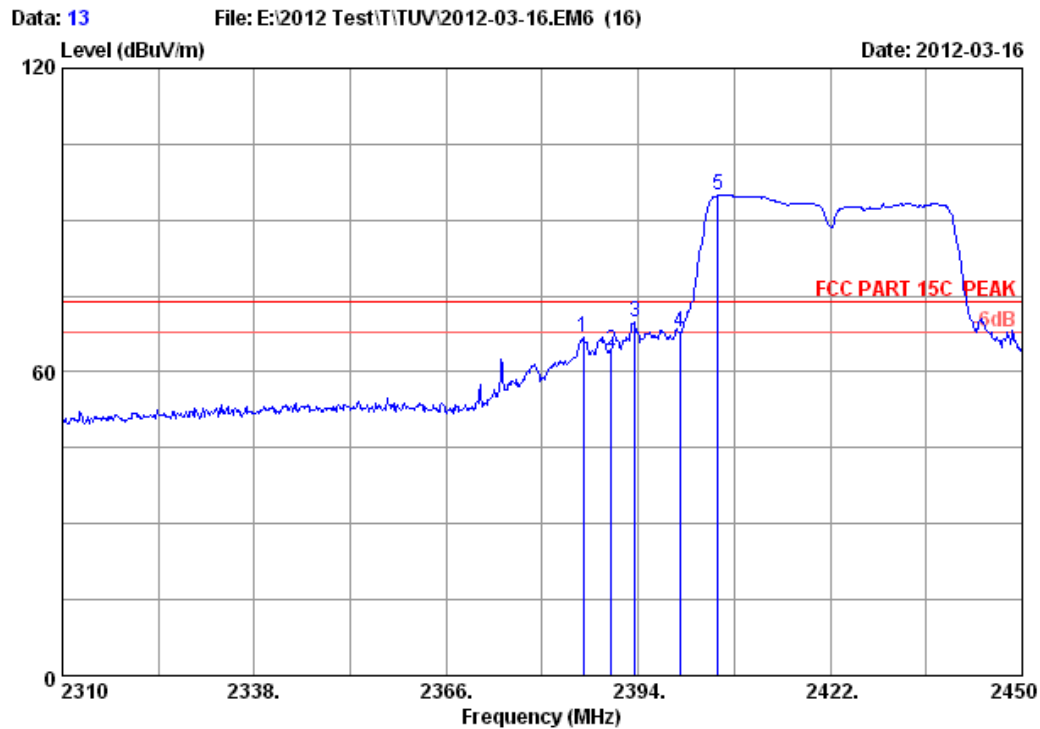
Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Band edge compliance of RF emissions

WIFI Mode IEEE 802.11n HT40 modulation (6.5Mbps) Test Result

Peak Low Edge plot:



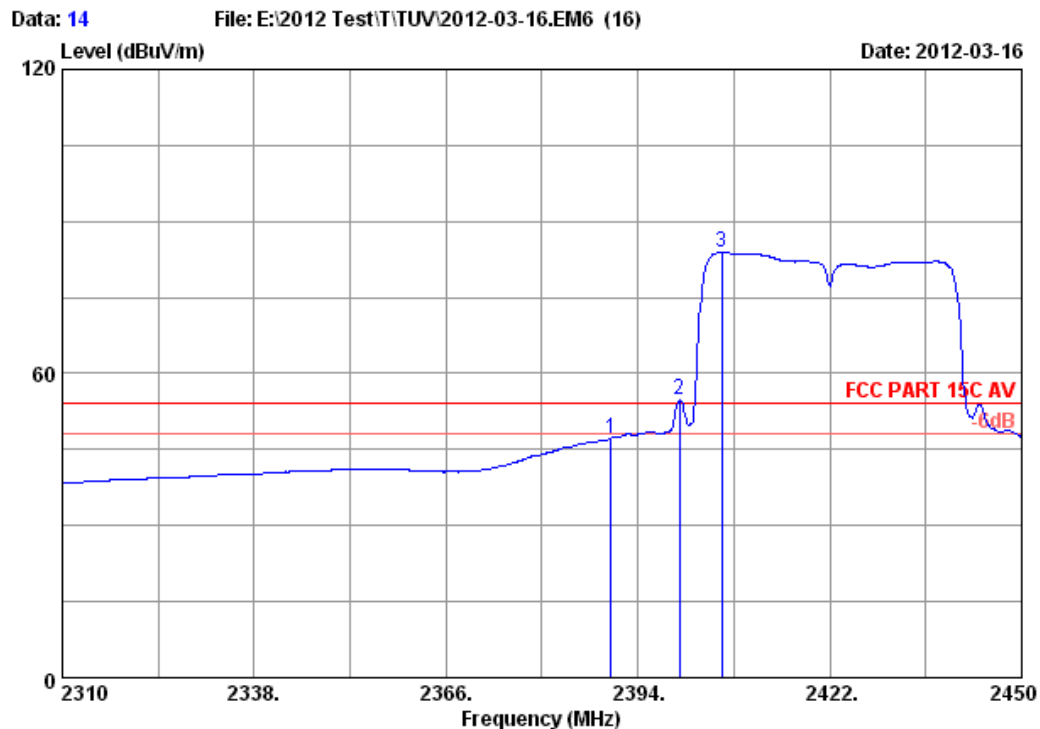
Site no. : 3m Chamber Data no. : 13
 Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : NPCC-1
 Power supply : DC 12V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11nHT40 CH 1 2422MHz Tx
 M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2386.020	27.96	6.43	34.44	67.02	66.97	74.00	7.03	Peak
2	2390.000	27.96	6.43	34.44	64.37	64.32	74.00	9.68	Peak
3	2393.580	27.96	6.43	34.44	69.75	69.70	74.00	4.30	Peak
4	2400.000	27.96	6.43	34.44	67.80	67.75	74.00	6.25	Peak
5	2405.620	27.98	6.43	34.44	95.11	95.08	74.00	-21.08	Peak

Remarks:

- Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- The emission levels that are 20dB below the official limit are not reported.

Average Low Edge plot:



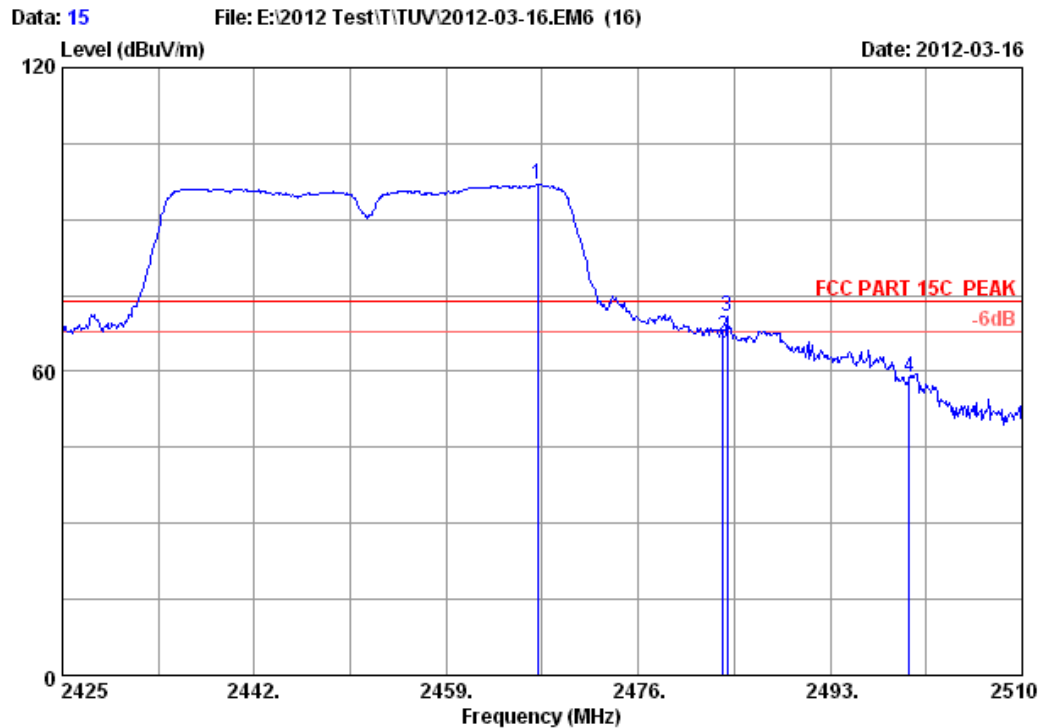
Site no. : 3m Chamber Data no. : 14
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH 1 2422MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.43	34.44	47.19	47.14	54.00	6.86	Average
2	2400.000	27.96	6.43	34.44	53.70	53.65	54.00	0.35	Average
3	2406.180	27.98	6.43	34.44	83.97	83.94	54.00	-29.94	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Peak High Edge plot:



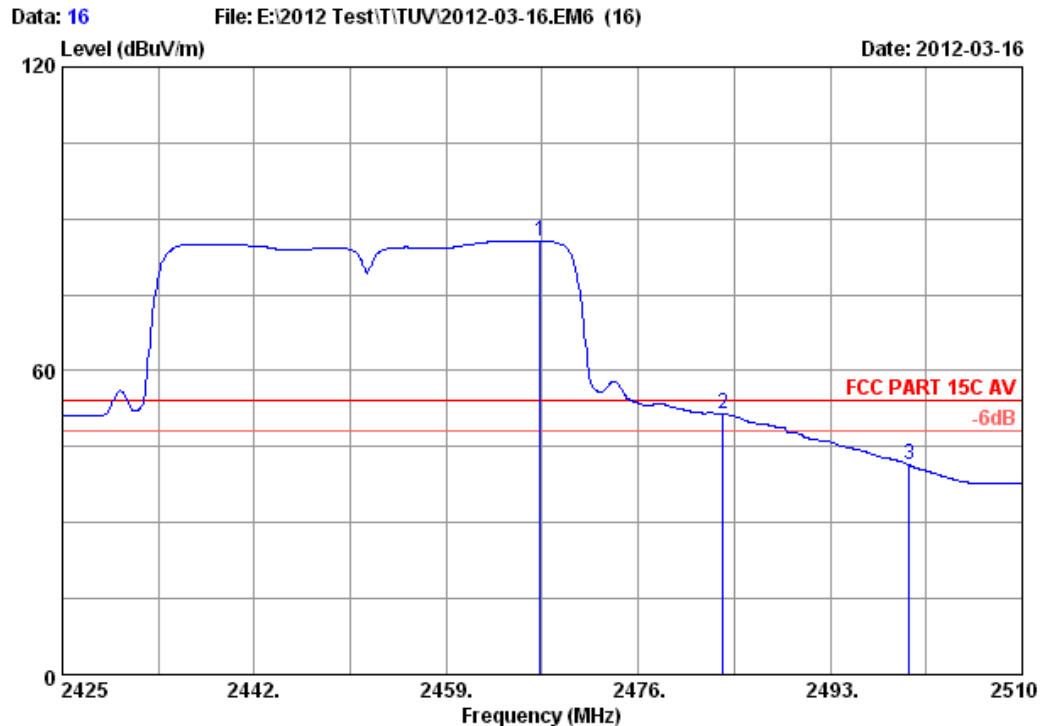
Site no. : 3m Chamber Data no. : 15
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH 7 2452MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2467.075	28.05	6.46	34.45	96.82	96.88	74.00	-22.88	Peak
2	2483.500	28.08	6.46	34.45	66.87	66.96	74.00	7.04	Peak
3	2483.905	28.08	6.46	34.45	70.90	70.99	74.00	3.01	Peak
4	2500.000	28.10	6.46	34.45	58.68	58.79	74.00	15.21	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Average High Edge plot:



Site no. : 3m Chamber Data no. : 16
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : NPCC-1
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH 7 2452MHz Tx
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2467.330	28.05	6.46	34.45	85.66	85.72	54.00	-31.72	Average
2	2483.500	28.08	6.46	34.45	51.28	51.37	54.00	2.63	Average
3	2500.000	28.10	6.46	34.45	41.33	41.44	54.00	12.56	Average

Remarks:

- Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- The emission levels that are 20dB below the official limit are not reported.



Product Service

Test Equipment List

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL DUE DATE
Spectrum	Agilent	E4446A	US44300459	2012-05-08
Amp	HP	8449B	3008A02495	2012-05-08
Antenna	EMCO	3115	9607-4877	2012-05-17
Bilog Antenna	Schaffner	CBL6111C	2598	2012-12-14
HF Cable	Hubersuhne	Sucoflex104	---	2012-05-08

7.4 Spurious RF conducted emissions

Test Method

The transmitter output is connected to the Spectrum analyzer. The Spectrum analyzer is set to the peak power detection.

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyzer were respectively set to 100 kHz and 100 kHz.

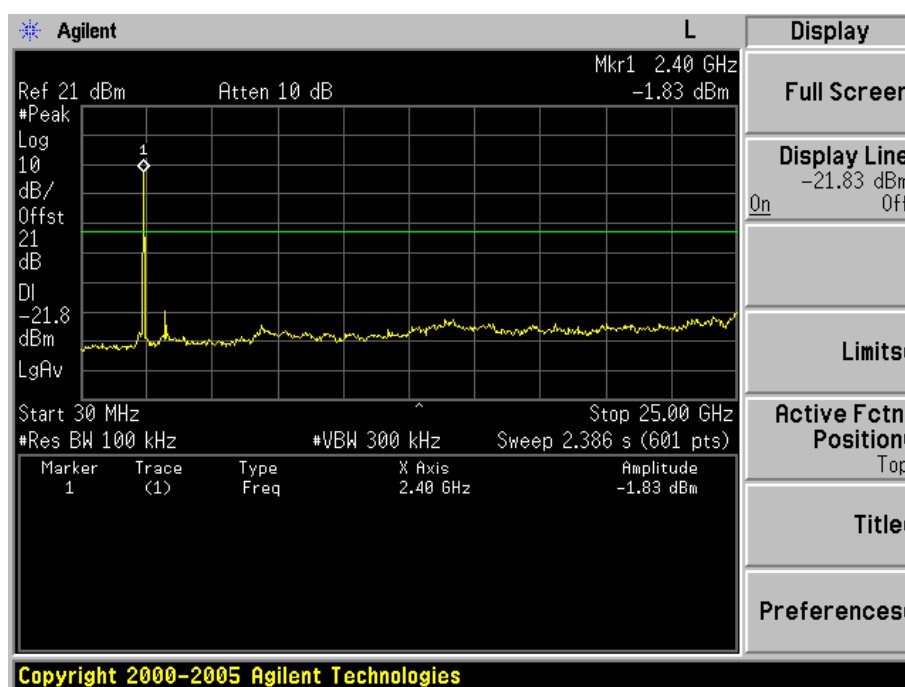
Limit

Frequency Range MHz	Limit (dBc)
1000-25000	-20

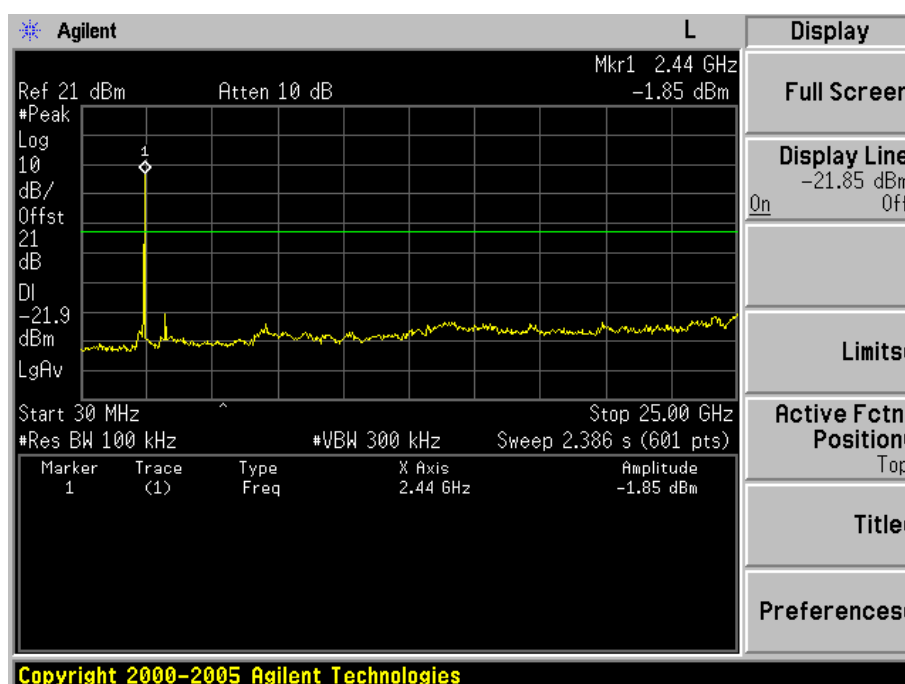
Spurious RF conducted emissions

WIFI Mode IEEE 802.11b modulation (1 Mbps) Test Result

2412MHz

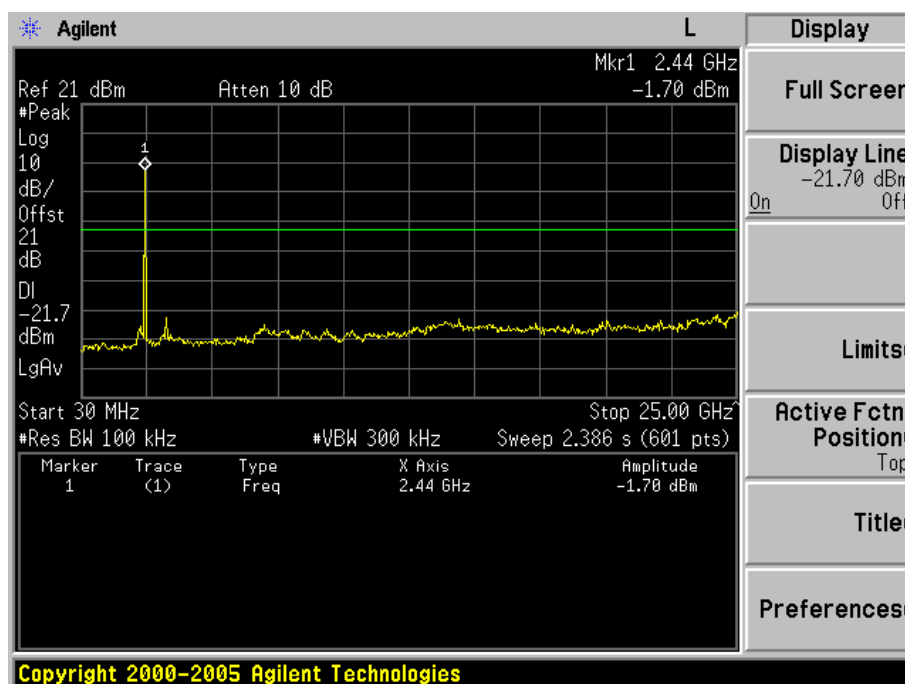


2437MHz



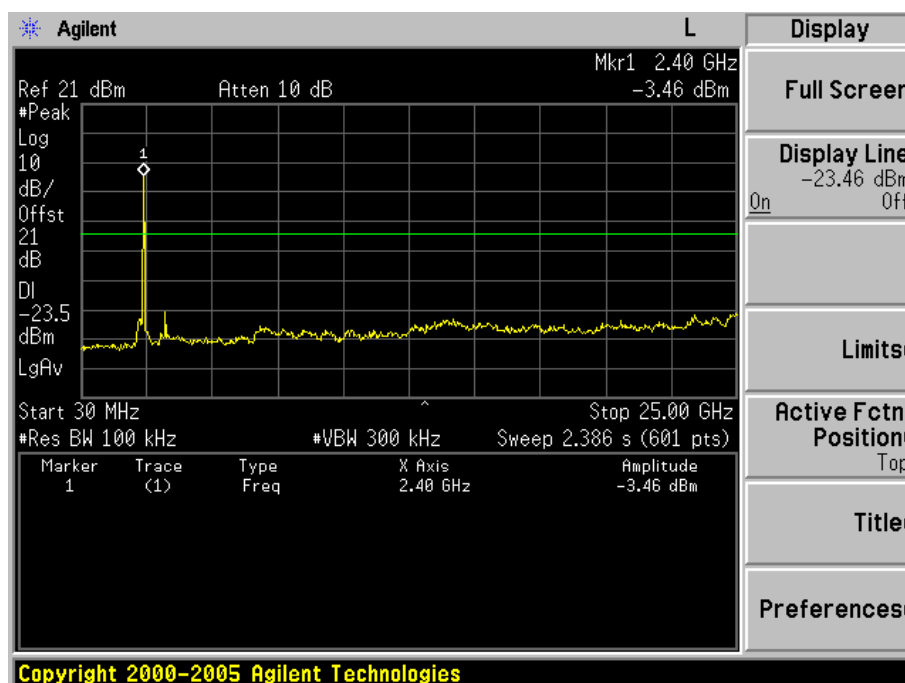
Spurious RF conducted emissions

2462MHz



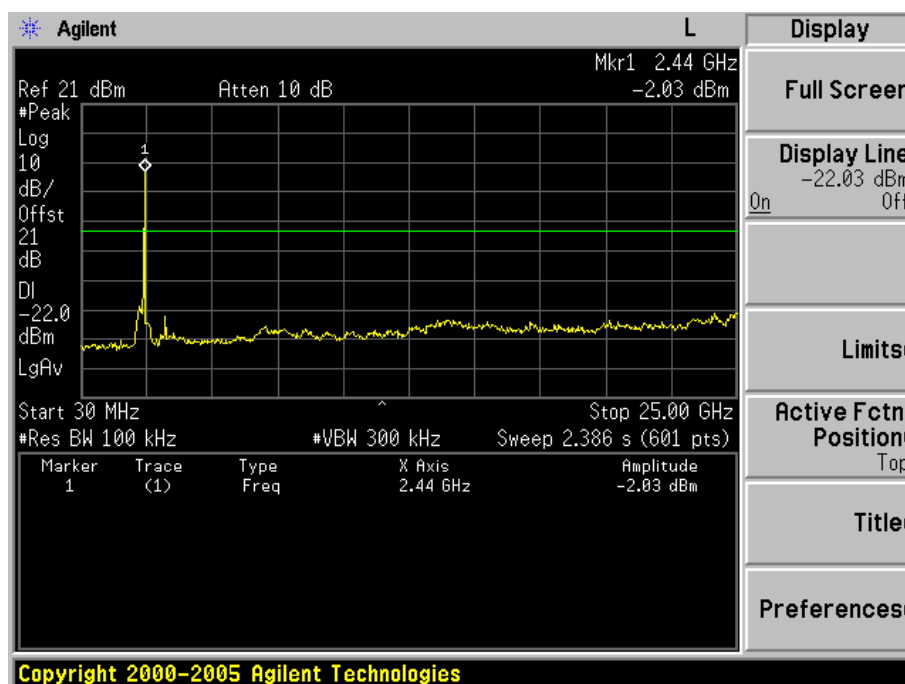
WIFI Mode IEEE 802.11g modulation (6 Mbps) Test Result

2412MHz

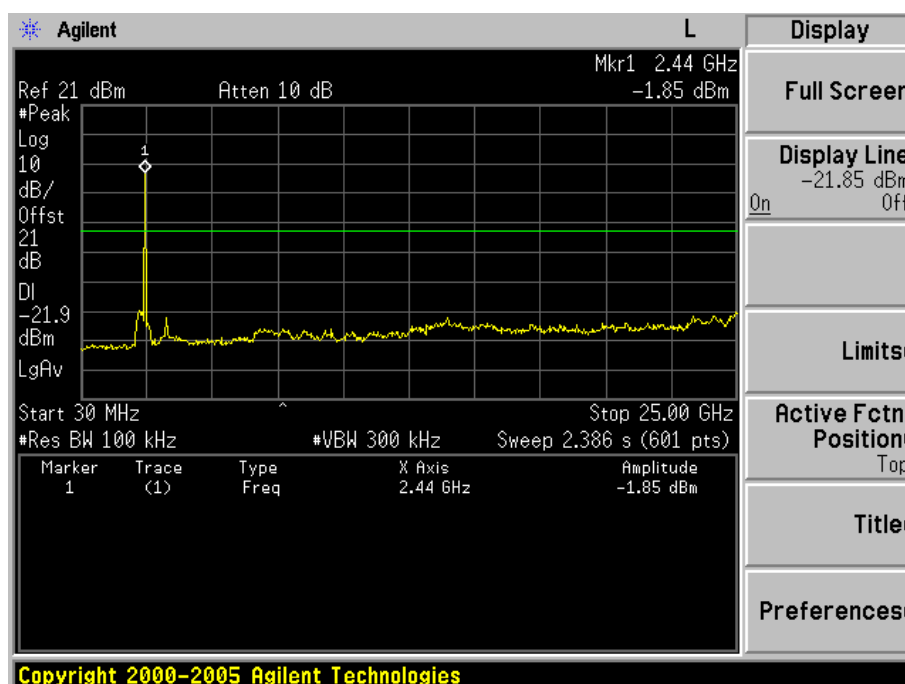


Spurious RF conducted emissions

2437MHz

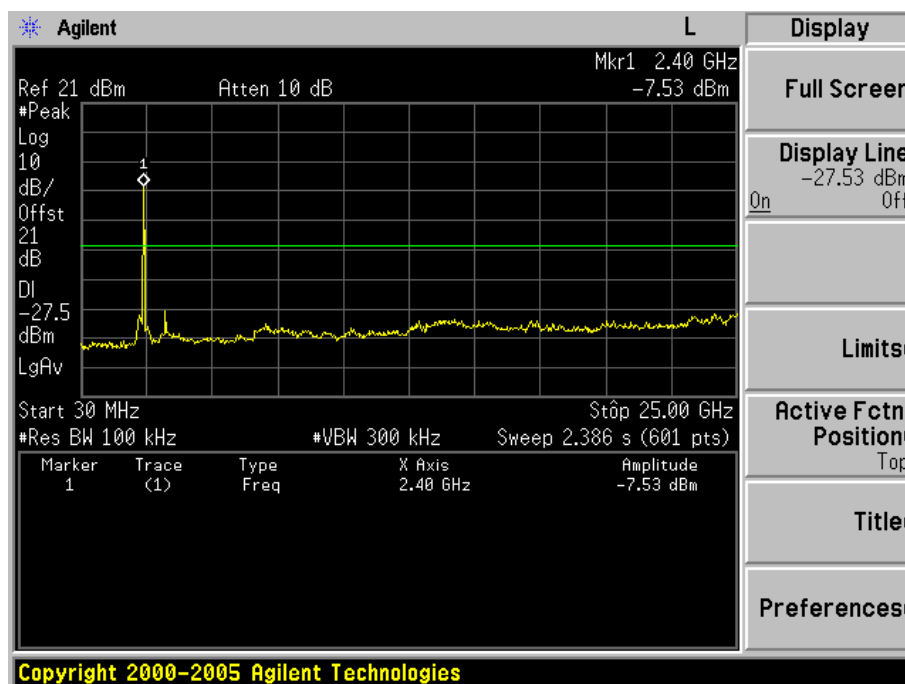


2462MHz

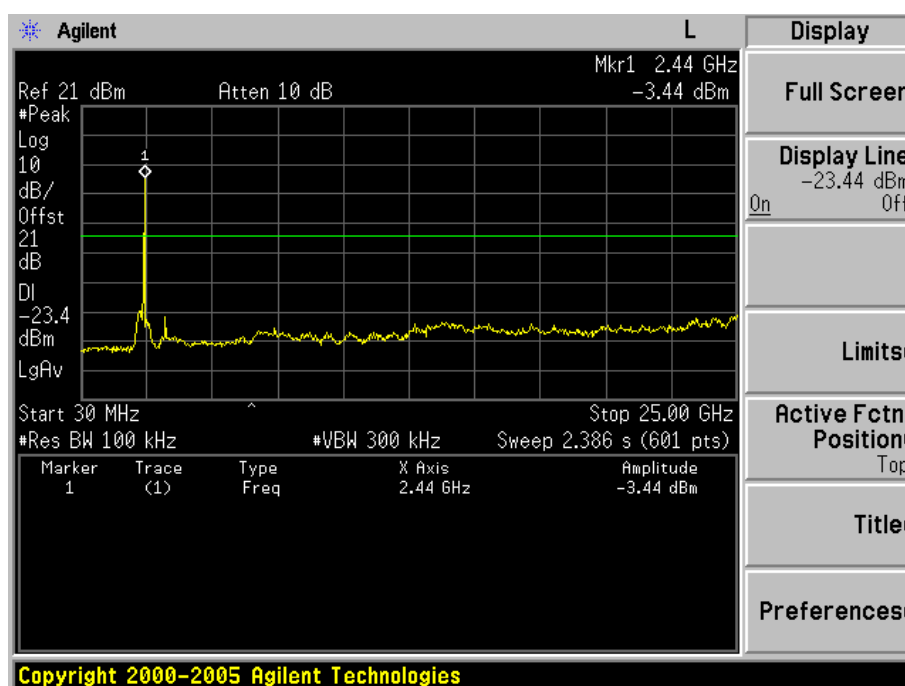


Spurious RF conducted emissions

WIFI Mode IEEE 802.11n HT20 modulation (6.5 Mbps) Test Result
2412MHz

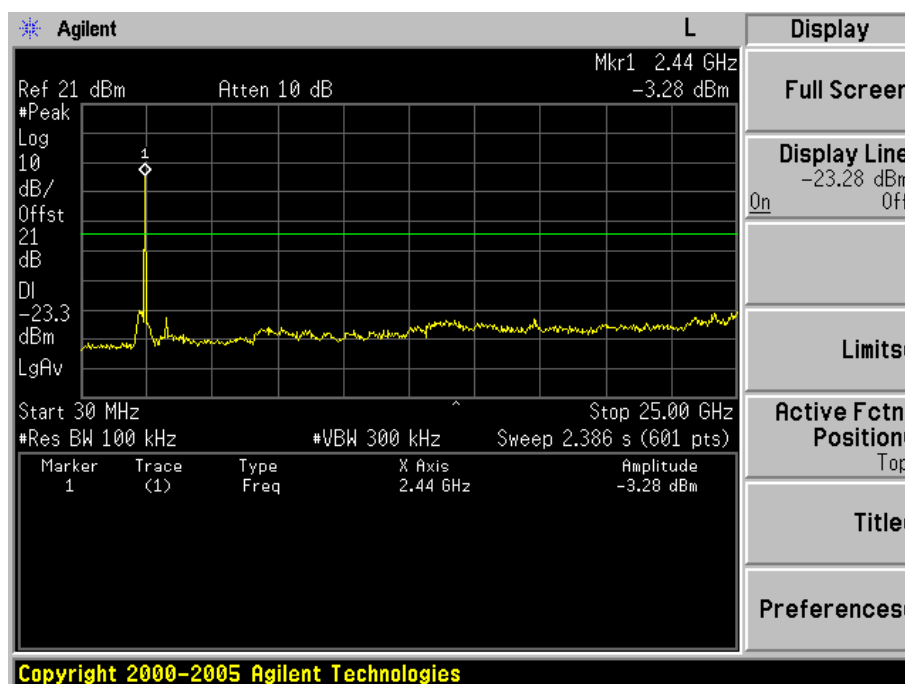


2437MHz



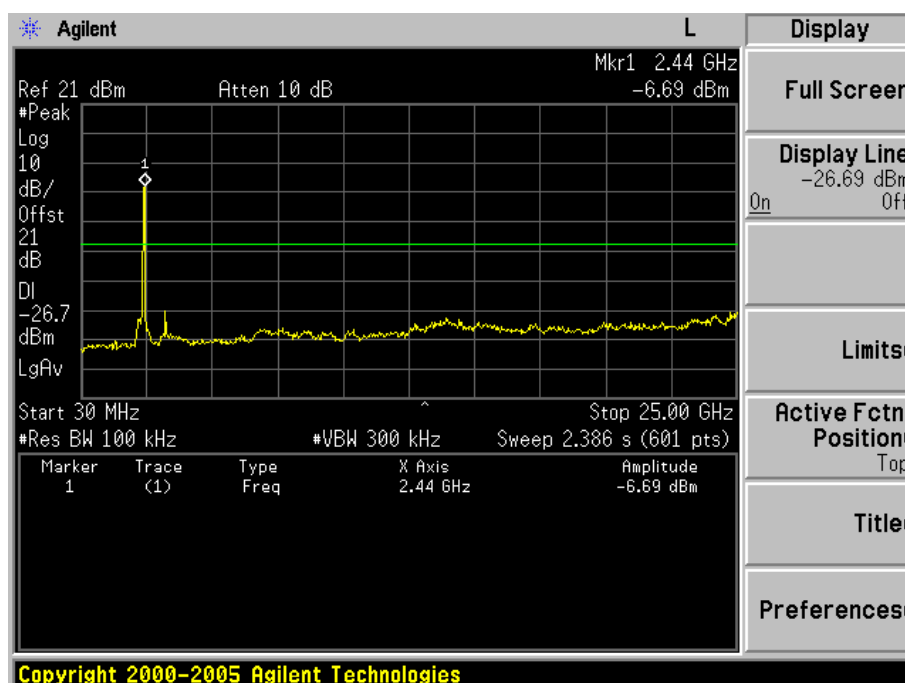
Spurious RF conducted emissions

2462MHz



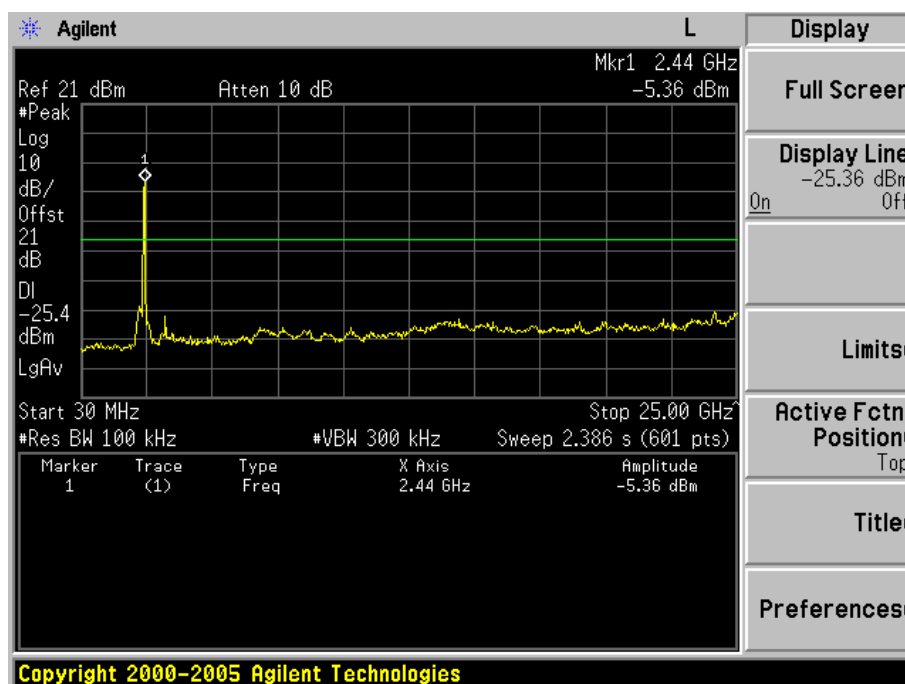
WIFI Mode IEEE 802.11n HT40 modulation (6.5 Mbps) Test Result

2422MHz

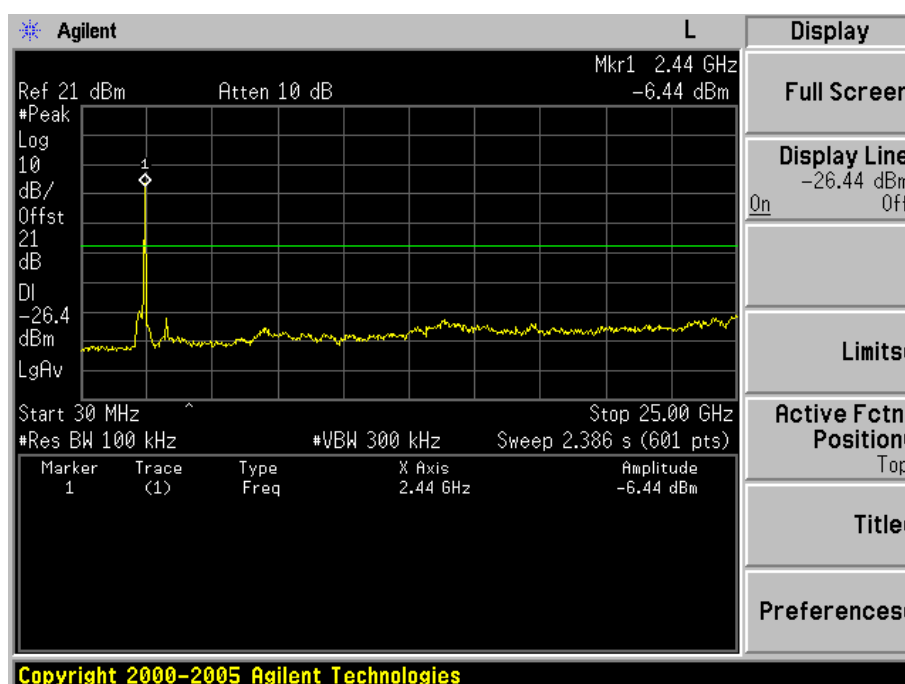


Spurious RF conducted emissions

2437MHz



2452MHz





Product Service

Test Equipment List

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL.DUE.DATE
Spectrum Analyzer	Agilent	E4446A	US44300459	2012-05-08

7.5 Spurious radiated emissions for transmitter and receiver

Test Method

- 1 The EUT is placed on a turntable, which is 0.8m above ground plane.
- 2 The turntable shall be rotated for 360 degrees to determine the position of maximum emission level
- 3 EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4 Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5 Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

Limit

Frequency MHz	Field Strength uV/m	Field Strength dB μ V/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

Transmitter Spurious radiated emissions

WIFI Mode IEEE 802.11b modulation (1 Mbps) CH1 2412MHz Test Result

Frequency	Antenna Factor	Cable Loss	Amp. Factor	Reading	Emission Level	Polarization	Limit	Detector	Result
MHz	dB/m	dB	dB	dBμV	dBμV/m		dBμV/m		
298.250	14.69	2.58	26.38	42.78	33.67	Horizontal	46.00	QP	Pass
501.210	18.71	3.27	28.03	35.70	29.38	Horizontal	46.00	QP	Pass
4824.000	34.32	10.64	35.08	30.40	40.28	Horizontal	74	PK	Pass
4824.000	34.32	10.64	35.08	25.02	34.90	Horizontal	54	AV	Pass
7236.000	-	-	-	-	-	-	-	-	-
7236.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11b modulation (1 Mbps) CH6 2437MHz Test Result

Frequency	Antenna Factor	Cable Loss	Amp. Factor	Reading	Emission Level	Polarization	Limit	Detector	Result
MHz	dB/m	dB	dB	dBμV	dBμV/m		dBμV/m		
4874.000	34.41	10.69	35.03	30.84	40.91	Horizontal	74	PK	Pass
4874.000	34.41	10.69	35.03	25.14	35.21	Horizontal	54	AV	Pass
7311.000	-	-	-	-	-	-	-	-	-
7311.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11b modulation (1 Mbps) CH11 2462MHz Test Result

Frequency	Antenna Factor	Cable Loss	Amp. Factor	Reading	Emission Level	Polarization	Limit	Detector	Result
MHz	dB/m	dB	dB	dBμV	dBμV/m		dBμV/m		
4924.000	34.49	10.76	34.98	30.44	40.71	Horizontal	74	PK	Pass
4924.000	34.49	10.76	34.98	26.06	36.33	Horizontal	54	AV	Pass
7386.000	-	-	-	-	-	-	-	-	-
7386.000	-	-	-	-	-	-	-	-	-

Remark:

- (1) Emission Level= Antenna Factor +Cable Loss - Amp. factor + Reading
- (2) Data of measurement within this frequency range shown “-” in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.

Transmitter Spurious radiated emissions

WIFI Mode IEEE 802.11g modulation (6 Mbps) CH1 2412MHz Test Result

Frequency	Antenna Factor	Cable Loss	Amp. Factor	Reading	Emission Level	Polarization	Limit	Detector	Result
MHz	dB/m	dB	dB	dBμV	dBμV/m		dBμV/m		
298.250	14.69	2.58	26.38	42.33	33.12	Horizontal	46.00	QP	Pass
501.210	18.71	3.27	28.03	34.90	28.58	Horizontal	46.00	QP	Pass
4824.000	34.32	10.64	35.08	30.77	40.65	Horizontal	74	PK	Pass
4824.000	34.32	10.64	35.08	25.20	35.08	Horizontal	54	AV	Pass
7236.000	-	-	-	-	-	-	-	-	-
7236.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11g modulation (6 Mbps) CH6 2437MHz Test Result

Frequency	Antenna Factor	Cable Loss	Amp. Factor	Reading	Emission Level	Polarization	Limit	Detector	Result
MHz	dB/m	dB	dB	dBμV	dBμV/m		dBμV/m		
4874.000	34.41	10.69	35.03	30.55	40.53	Horizontal	74	PK	Pass
4874.000	34.41	10.69	35.03	25.42	35.49	Horizontal	54	AV	Pass
7311.000	-	-	-	-	-	-	-	-	-
7311.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11g modulation (6 Mbps) CH11 2462MHz Test Result

Frequency	Antenna Factor	Cable Loss	Amp. Factor	Reading	Emission Level	Polarization	Limit	Detector	Result
MHz	dB/m	dB	dB	dBμV	dBμV/m		dBμV/m		
4924.000	34.49	10.76	34.98	30.44	40.71	Horizontal	74	PK	Pass
4924.000	34.49	10.76	34.98	26.42	36.69	Horizontal	54	AV	Pass
7386.000	-	-	-	-	-	-	-	-	-
7386.000	-	-	-	-	-	-	-	-	-

Remark:

- (1) Emission Level= Antenna Factor +Cable Loss - Amp. factor + Reading
- (2) Data of measurement within this frequency range shown “-” in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.

Transmitter Spurious radiated emissions

WIFI Mode IEEE 802.11n HT20 modulation (6.5 Mbps) CH1 2412MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBμV	Emission Level dBμV/m	Polarization	Limit dBμV/m	Detector	Result
298.250	14.69	2.58	26.38	41.33	32.22	Horizontal	46.00	QP	Pass
501.210	18.71	3.27	28.03	34.71	28.39	Horizontal	46.00	QP	Pass
4824.000	34.32	10.64	35.08	29.75	39.63	Horizontal	74	PK	Pass
4824.000	34.32	10.64	35.08	25.46	35.34	Horizontal	54	AV	Pass
7236.000	-	-	-	-	-	-	-	-	-
7236.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11n HT20 modulation (6.5 Mbps) CH6 2437MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBμV	Emission Level dBμV/m	Polarization	Limit dBμV/m	Detector	Result
4874.000	34.41	10.69	35.03	30.82	40.89	Horizontal	74	PK	Pass
4874.000	34.41	10.69	35.03	26.20	36.27	Horizontal	54	AV	Pass
7311.000	-	-	-	-	-	-	-	-	-
7311.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11n HT20 modulation (6.5 Mbps) CH11 2462MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBμV	Emission Level dBμV/m	Polarization	Limit dBμV/m	Detector	Result
4924.000	34.49	10.76	34.98	31.42	41.69	Horizontal	74	PK	Pass
4924.000	34.49	10.76	34.98	26.11	36.38	Horizontal	54	AV	Pass
7386.000	-	-	-	-	-	-	-	-	-
7386.000	-	-	-	-	-	-	-	-	-

Remark:

- (1) Emission Level= Antenna Factor +Cable Loss - Amp. factor + Reading
- (2) Data of measurement within this frequency range shown “-” in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.

Transmitter Spurious radiated emissions

WIFI Mode IEEE 802.11n HT40 modulation (13.5 Mbps) CH1 2422MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBμV	Emission Level dBμV/m	Polarization	Limit dBμV/m	Detector	Result
298.250	14.69	2.58	26.38	41.75	32.64	Horizontal	43.50	QP	Pass
501.210	18.71	3.27	28.03	35.23	28.91	Horizontal	46.00	QP	Pass
4844.000	34.35	10.67	35.05	32.61	42.58	Horizontal	74	PK	Pass
4844.000	34.35	10.67	35.05	26.58	36.55	Horizontal	54	AV	Pass
7266.000	-	-	-	-	-	-	-	-	-
7266.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11n HT40 modulation (13.5 Mbps) CH6 2437MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBμV	Emission Level dBμV/m	Polarization	Limit dBμV/m	Detector	Result
4874.000	34.41	10.69	35.03	31.80	41.87	Horizontal	74	PK	Pass
4874.000	34.41	10.69	35.03	26.20	36.27	Horizontal	54	AV	Pass
7311.000	-	-	-	-	-	-	-	-	-
7311.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11n HT40 modulation (13.5 Mbps) CH11 2452MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBμV	Emission Level dBμV/m	Polarization	Limit dBμV/m	Detector	Result
4904.000	34.46	10.74	35.00	31.92	42.12	Horizontal	74	PK	Pass
4904.000	34.46	10.74	35.00	26.04	36.24	Horizontal	54	AV	Pass
7356.000	-	-	-	-	-	-	-	-	-
7356.000	-	-	-	-	-	-	-	-	-

Remark:

- (1) Emission Level= Antenna Factor +Cable Loss - Amp. factor + Reading
- (2) Data of measurement within this frequency range shown “-” in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.

Receiver Spurious radiated emissions

WIFI Receiver Mode IEEE 802.11b/g/n modulation Test Result (Worst case)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBμV	Emission Level dBμV/m	Polarization	Limit dBμV/m	Detector	Result
298.250	14.69	2.58	26.38	41.34	32.23	Horizontal	43.50	QP	Pass
501.210	18.71	3.27	28.03	35.11	28.79	Horizontal	46.00	QP	Pass
Above 1GHz	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

Remark:

- (1) Emission Level= Antenna Factor +Cable Loss - Amp. factor + Reading
- (2) Data of measurement within this frequency range shown “-” in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.

Test Equipment List

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL DUE DATE
Spectrum	Agilent	E4446A	US44300459	2012-05-08
Amp	HP	8449B	3008A02495	2012-05-08
Antenna	EMCO	3115	9607-4877	2012-05-17
Bilog Antenna	Schaffner	CBL6111C	2598	2012-12-14
HF Cable	Hubersuhne	Sucoflex104	---	2012-05-08

7.6 6 dB bandwidth & 99% bandwidth

Test Method

- 1 Place the EUT on the table and set it in the transmitting mode.
- 2 Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 3 Mark the peak frequency and –6dB (upper and lower) frequency.

Limit

Limit [kHz]

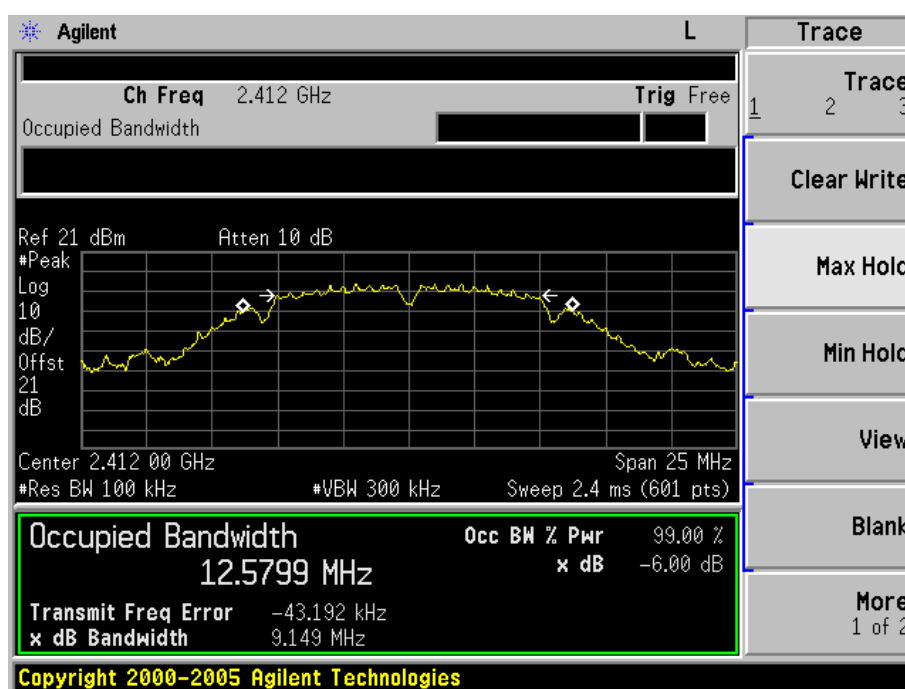
≥ 500

6 dB bandwidth & 99% bandwidth

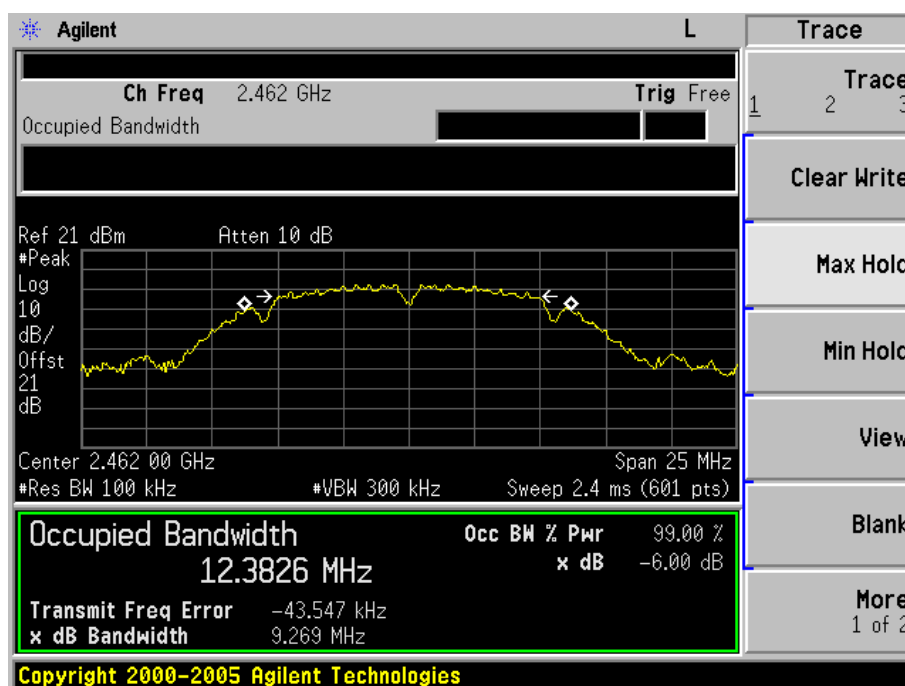
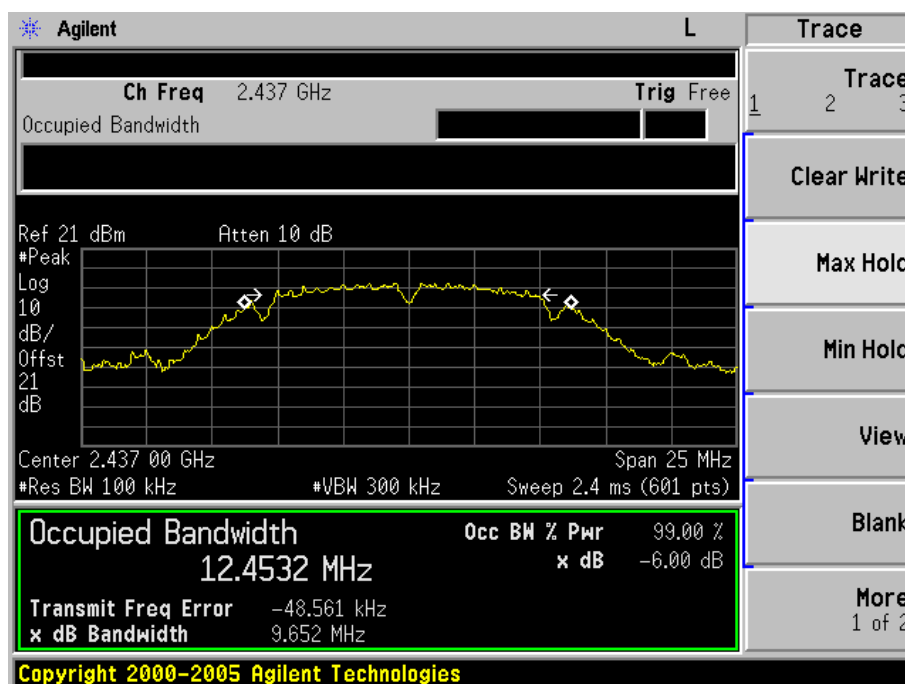
WIFI Mode IEEE 802.11b modulation (1Mbps) Test Result

Frequency MHz	6 dB Bandwidth kHz	Limit kHz	Result
2412	9149	≥ 500	Pass
2437	8149	≥ 500	Pass
2462	8148	≥ 500	Pass

Frequency MHz	%99 Bandwidth MHz	Limit kHz	Result
2412	12.5799	--	Pass
2437	12.4532	--	Pass
2462	12.3826	--	Pass



6 dB bandwidth & 99% bandwidth

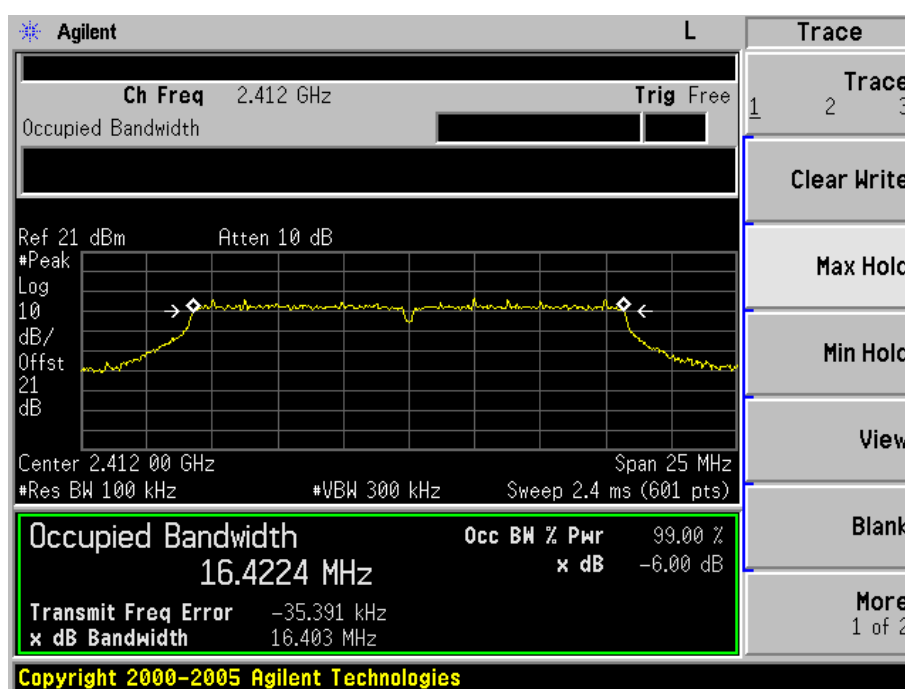


6 dB bandwidth & 99% bandwidth

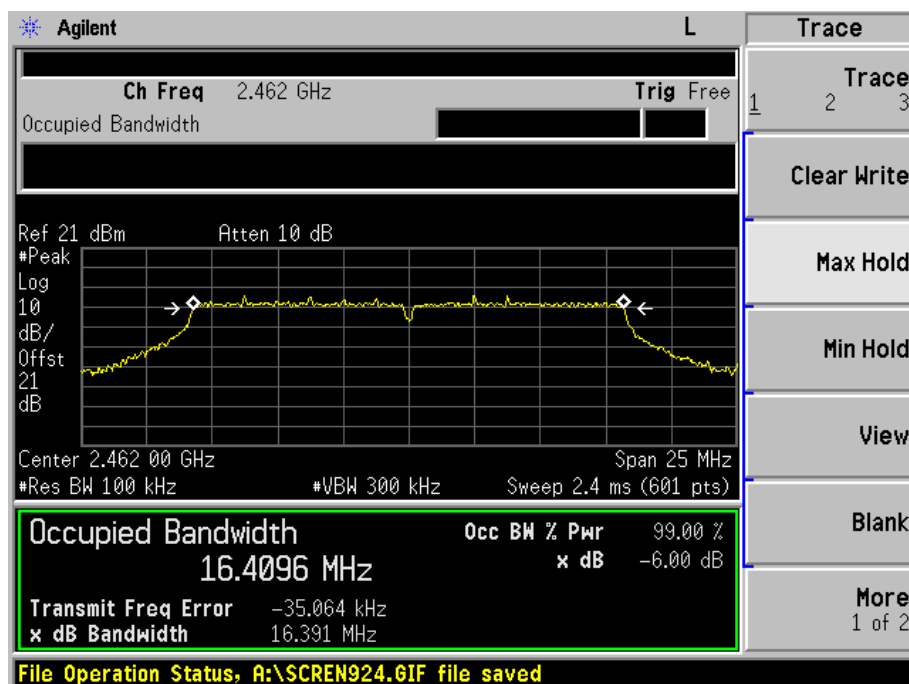
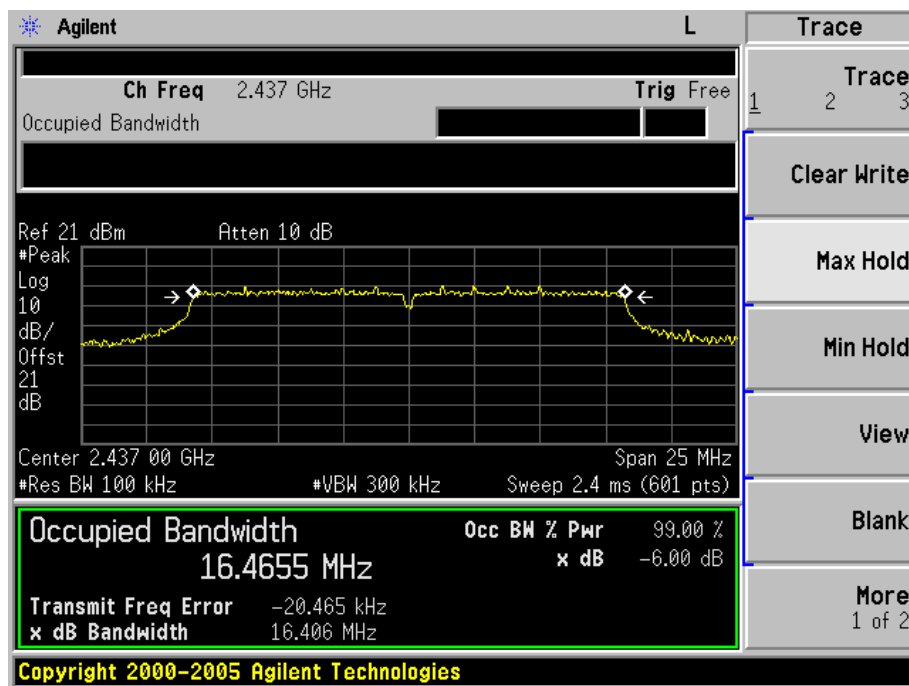
WIFI Mode IEEE 802.11g modulation (6Mbps) Test Result

Frequency MHz	Bandwidth kHz	Limit kHz	Result
2412	16403	≥ 500	Pass
2437	16406	≥ 500	Pass
2462	16391	≥ 500	Pass

Frequency MHz	%99 Bandwidth MHz	Limit kHz	Result
2412	16.4224	--	Pass
2437	16.4655	--	Pass
2462	16.4096	--	Pass



6 dB dB bandwidth & 99% bandwidth

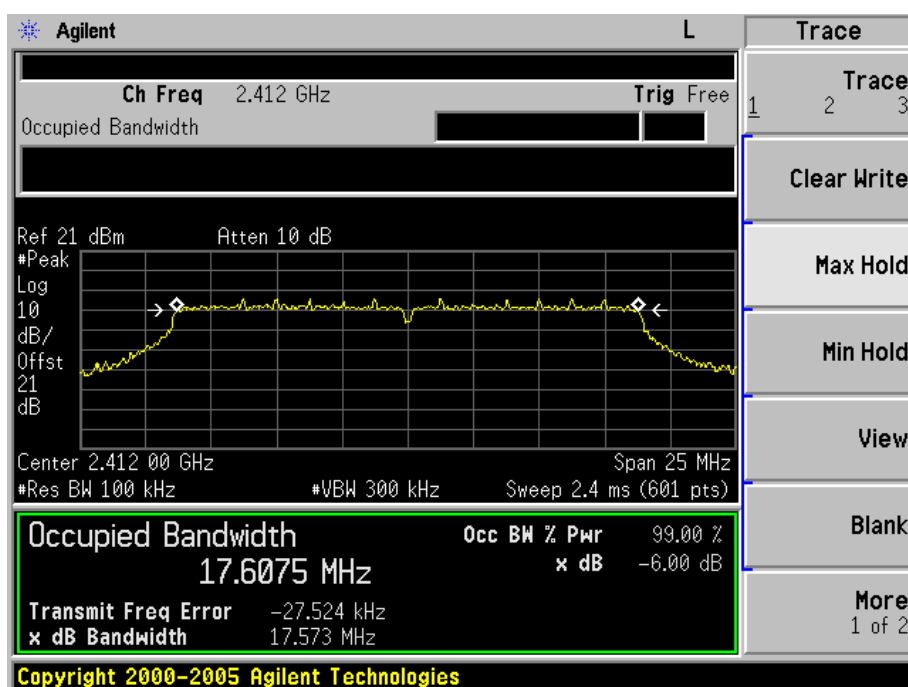


6 dB bandwidth & 99% bandwidth

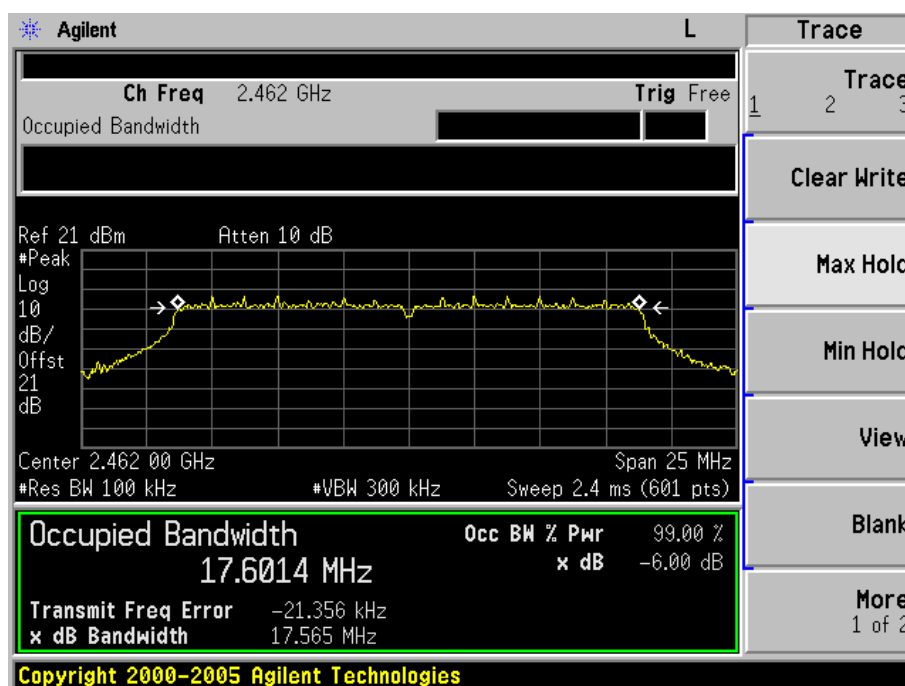
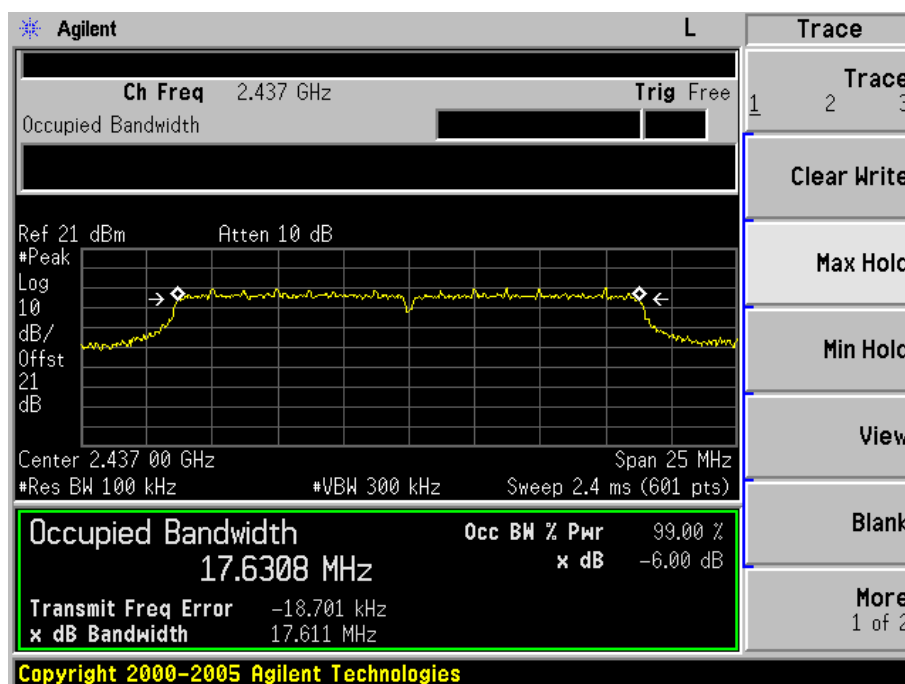
WIFI Mode IEEE 802.11n HT20 modulation (6.5Mbps) Test Result

Frequency MHz	Bandwidth kHz	Limit kHz	Result
2412	17573	≥ 500	Pass
2437	17611	≥ 500	Pass
2462	17565	≥ 500	Pass

Frequency MHz	%99 Bandwidth MHz	Limit kHz	Result
2412	17.6075	--	Pass
2437	17.6038	--	Pass
2462	17.6014	--	Pass



6 dB bandwidth & 99% bandwidth

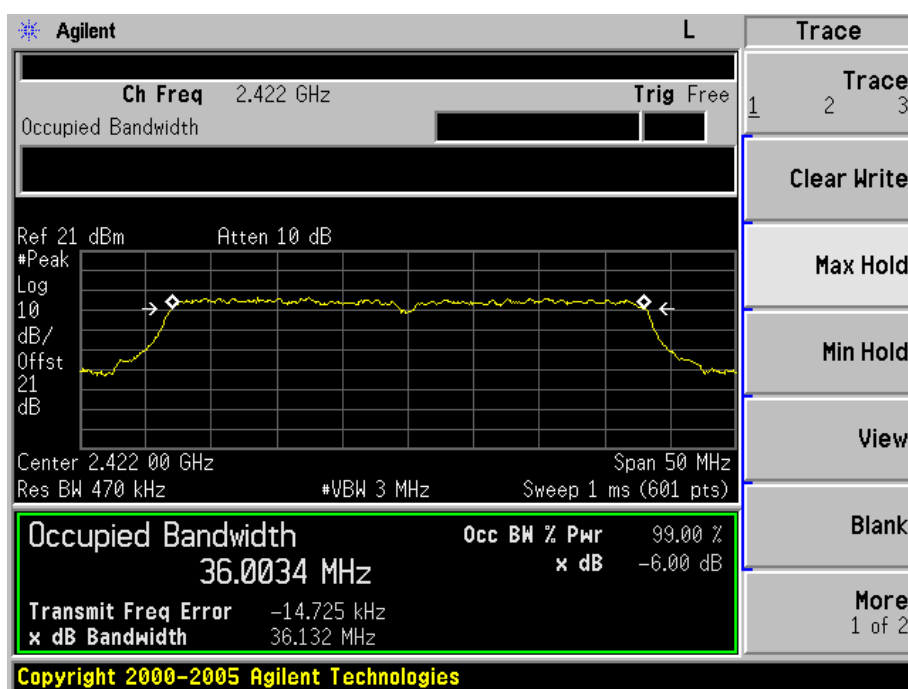


6 dB bandwidth & 99% bandwidth

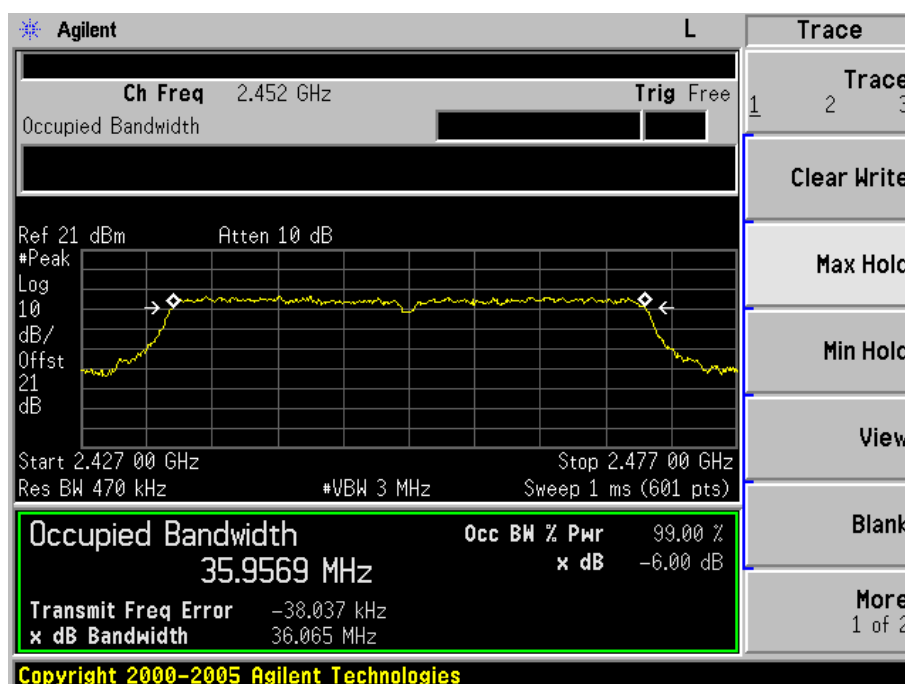
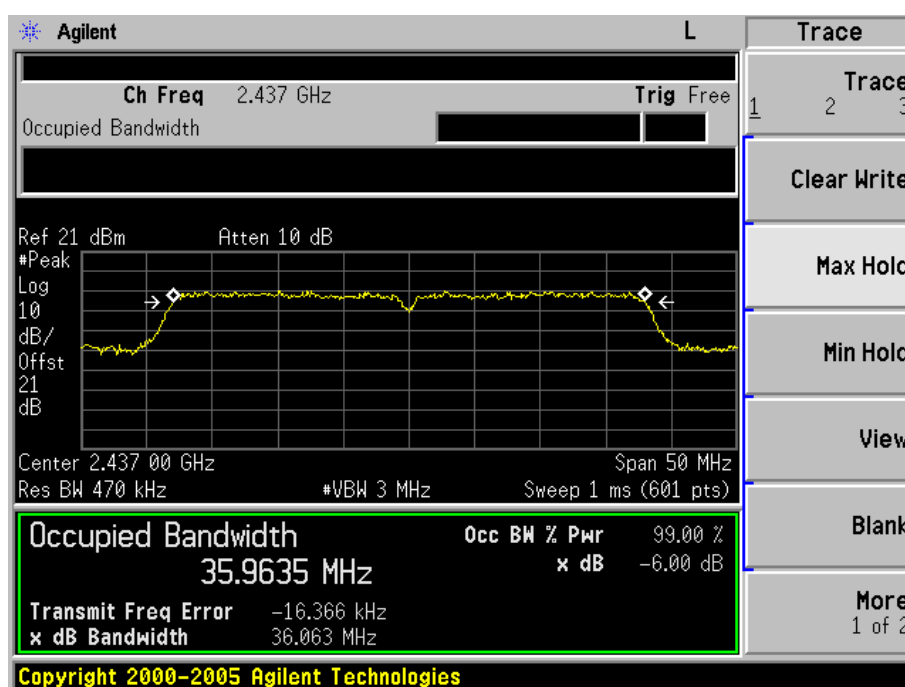
WIFI Mode IEEE 802.11n HT40 modulation (6.5Mbps) Test Result

Frequency MHz	Bandwidth kHz	Limit kHz	Result
2422	36132	≥ 500	Pass
2437	36063	≥ 500	Pass
2452	36065	≥ 500	Pass

Frequency MHz	%99 Bandwidth MHz	Limit kHz	Result
2422	36.0034	--	Pass
2437	35.9635	--	Pass
2452	35.9569	--	Pass



6 dB bandwidth & 99% bandwidth





Product Service

Test Equipment

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL.DUE.DATE
Spectrum Analyzer	Agilent	E4446A	MY41440292	2012-05-08

7.7 Power spectral density

Test Method

- 1 Place the EUT on the table and set it in transmitting mode. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 2 Set the spectrum analyzer as RBW = 3 kHz, VBW = 10 kHz, Span = 300kHz, Sweep = 100 s
- 3 Record the max reading.

Limit

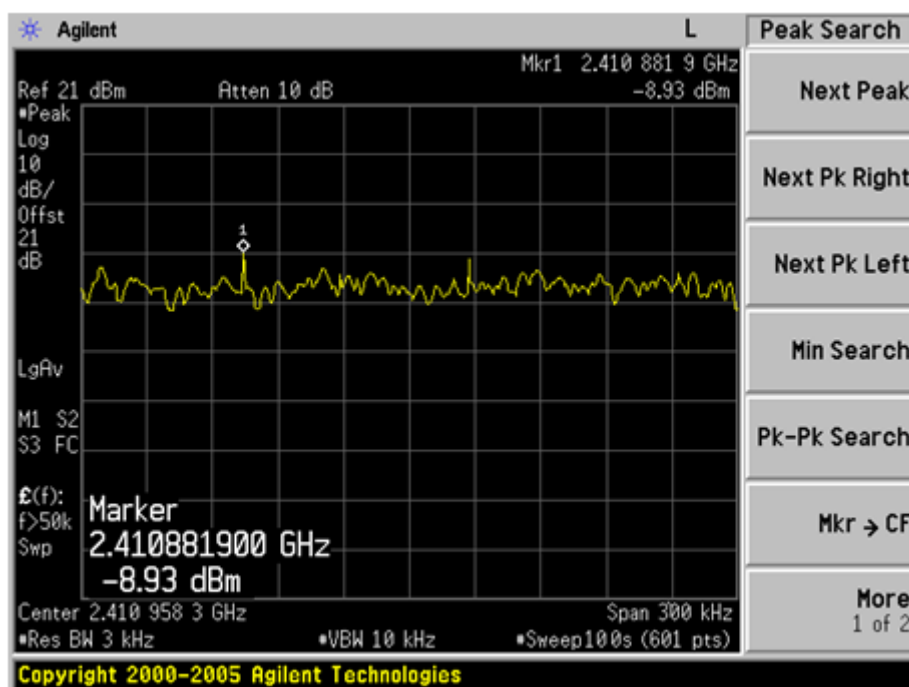
Limit
dBm / 3 kHz

8

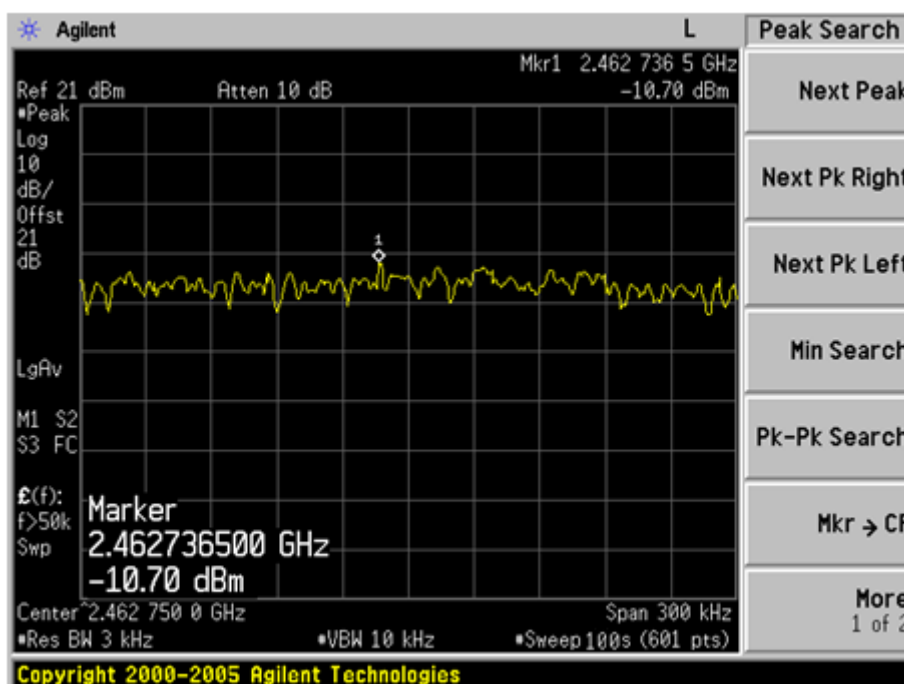
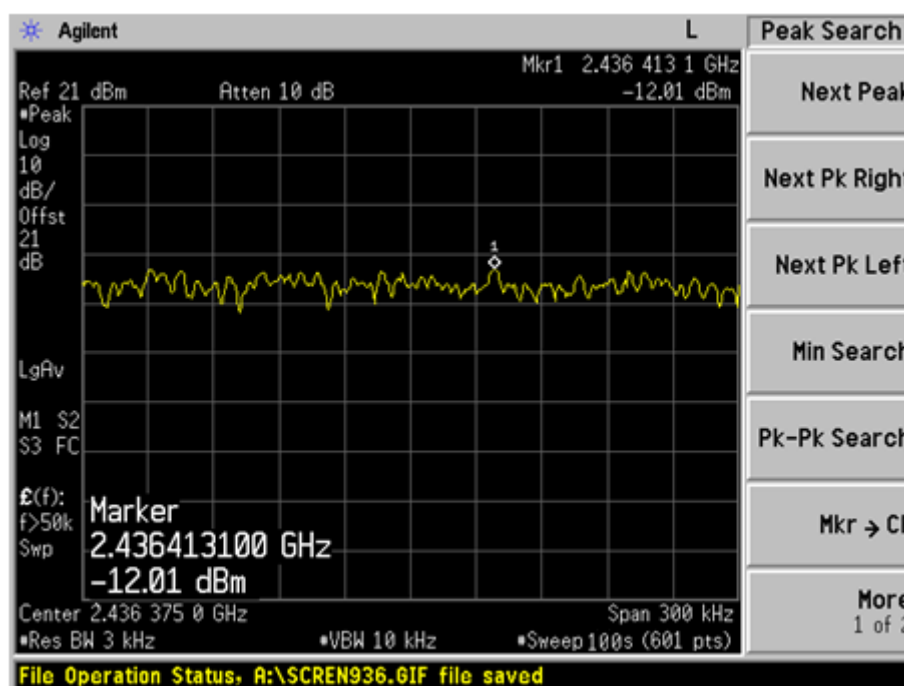
Power spectral density

WIFI Mode IEEE 802.11b modulation (1Mbps) Test Result

Frequency MHz	P dBm	Result
2412	-8.93	Pass
2437	-12.01	Pass
2462	-10.70	Pass



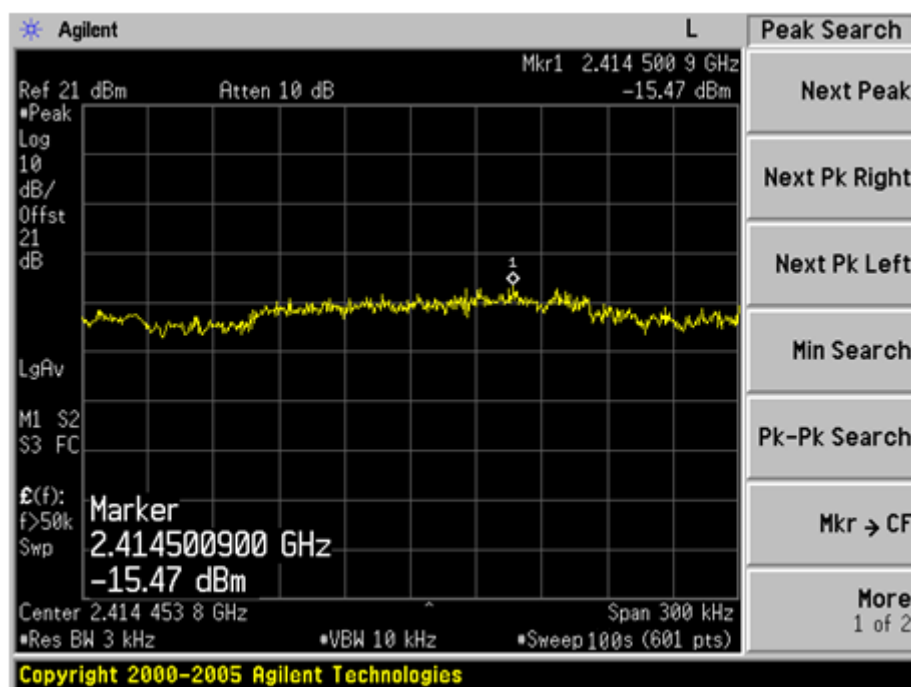
Power spectral density



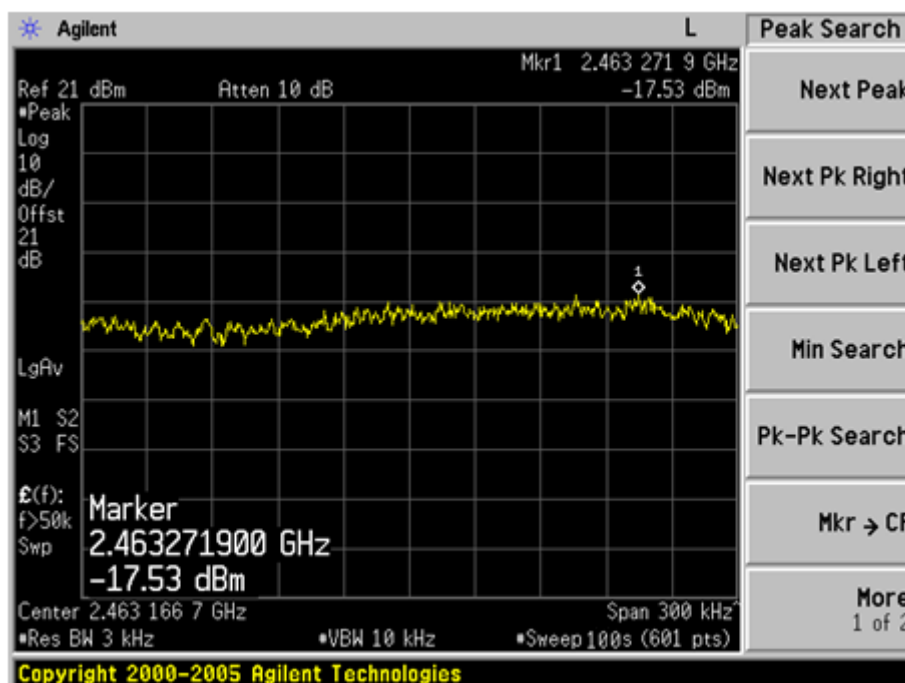
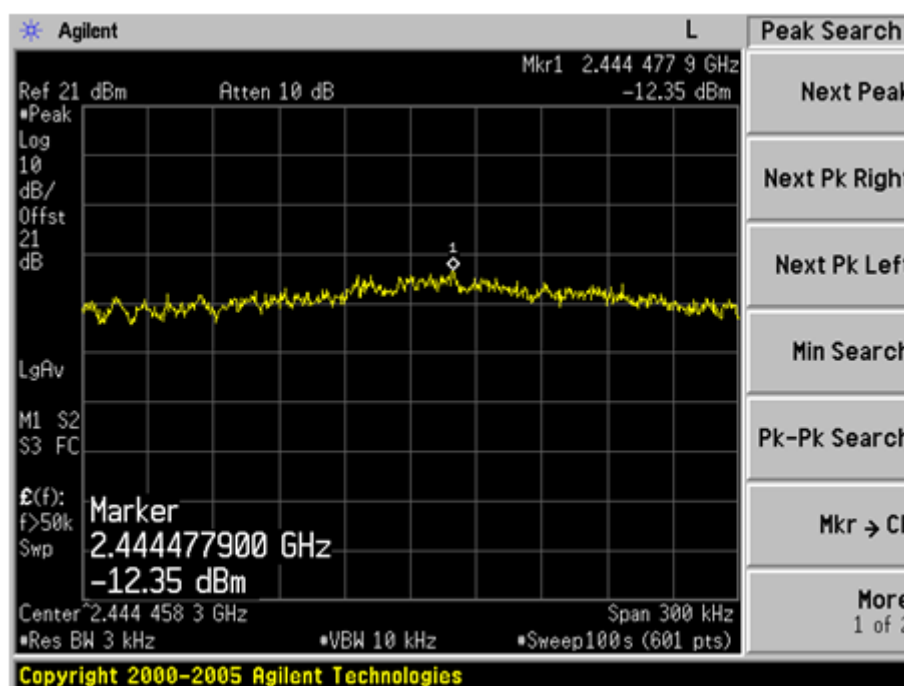
Power spectral density

WIFI Mode IEEE 802.11g modulation (6Mbps) Test Result

Frequency	P	Result
MHz	dBm	
2412	-15.47	Pass
2437	-12.35	Pass
2462	-17.53	Pass



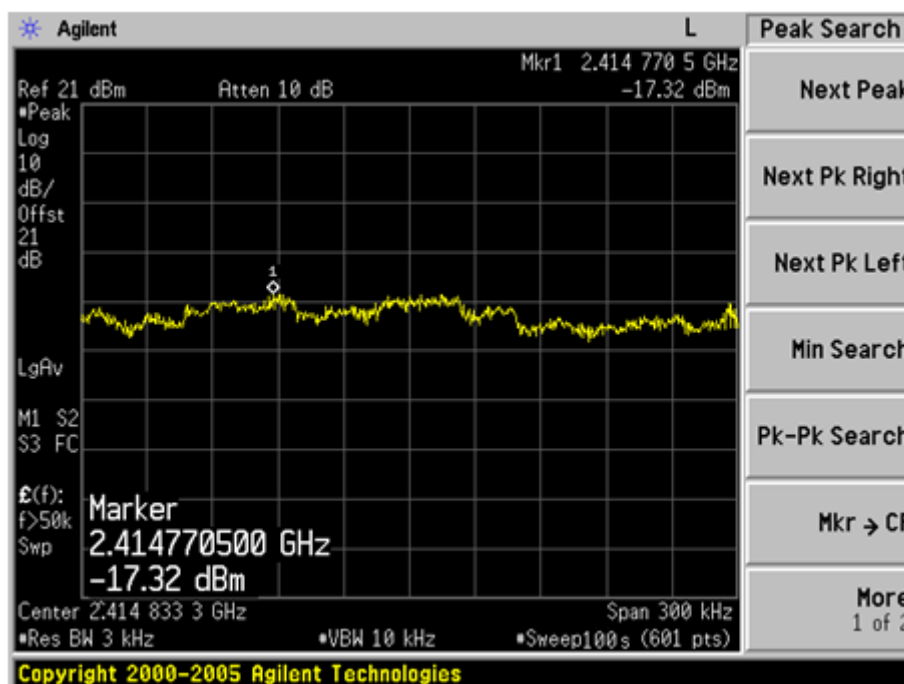
Power spectral density



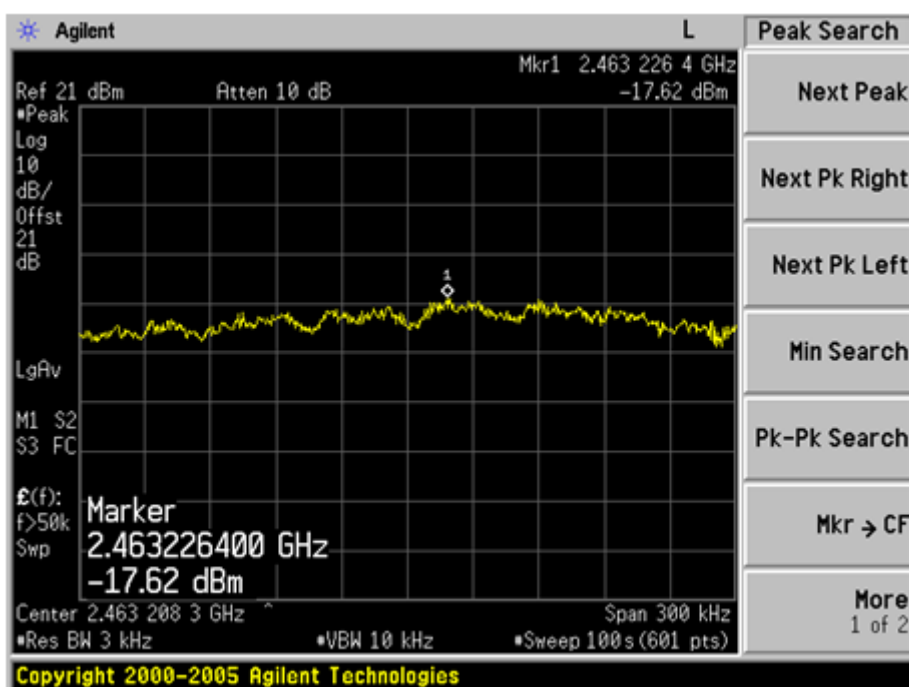
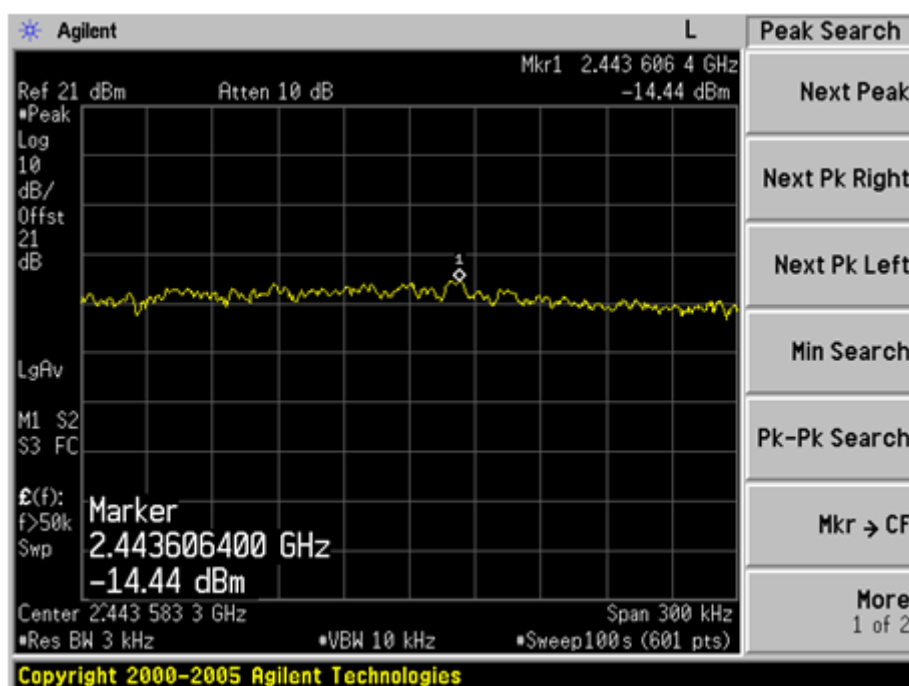
Power spectral density

WIFI Mode IEEE 802.11n HT20 modulation (6.5Mbps) Test Result

Frequency	P	Result
MHz	dBm	
2412	-17.32	Pass
2437	-14.44	Pass
2462	-17.62	Pass



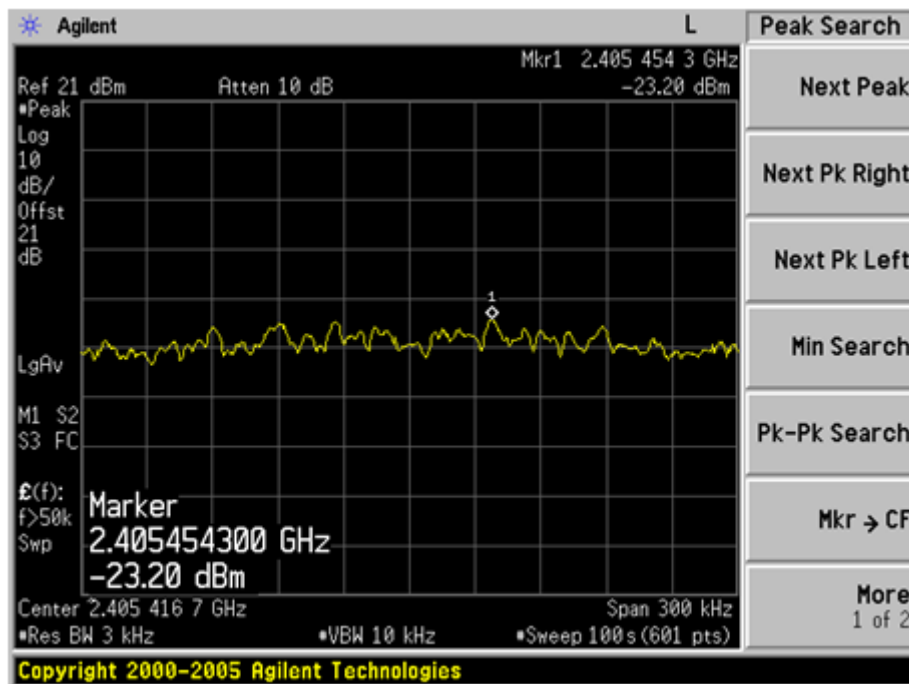
Power spectral density



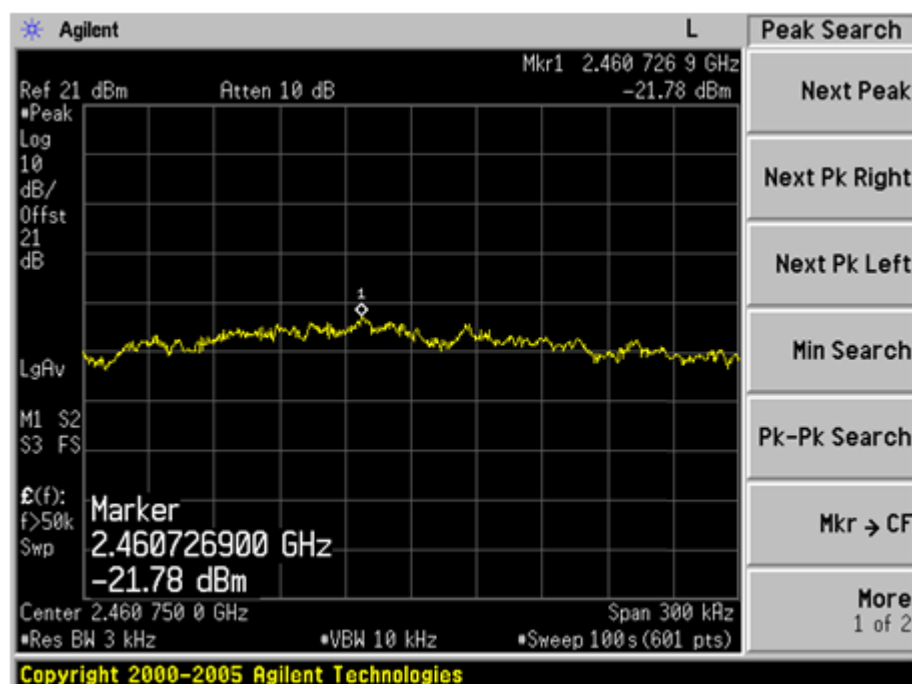
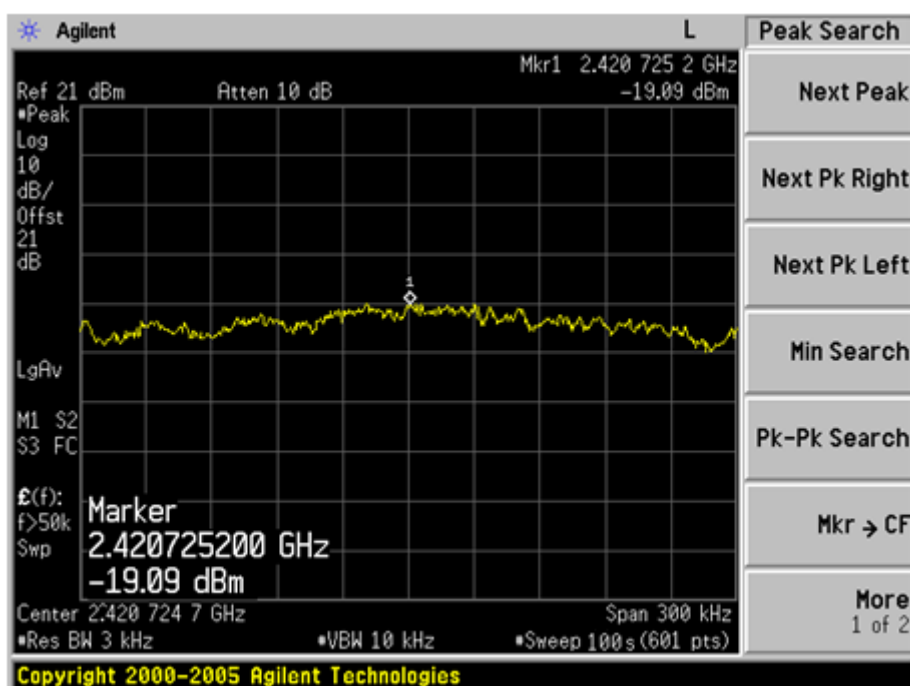
Power spectral density

WIFI Mode IEEE 802.11n HT40 modulation (6.5Mbps) Test Result

Frequency MHz	P dBm	Result
2422	-23.20	Pass
2437	-19.09	Pass
2452	-21.78	Pass



Power spectral density





Product Service

Test Equipment

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL.DUE.DATE
Spectrum Analyzer	Agilent	E4446A	MY41440292	2012-05-08

8 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty

Items		Extended Uncertainty
RE	Field strength (dB μ V/m)	U=4.32dB (30MHz-25GHz)
CE	Disturbance Voltage (dB μ V)	U=2.40dB(150KHz-30MHz)