

Test Report

Industry Canada RSS-Gen Issue 3/RSS-210 Issue 8
FCC Part15 Subpart C

Product Name : Wireless N ADSL2+ 4-port USB Gateway
Model No. : P-660HUN-FI, DSL-100HNU-L1
FCC ID : I88P660HNUF1
IC : 2468C-P660HNUF1

Applicant : ZyXEL Communications Corporation
Address : NO.6, Innovation Rd II, Science-Based Industrial
Park, Hsin-Chu, Taiwan Hsin-Chu, Taiwan

Date of Receipt : 10/10/2011
Test Date : 11/10/2011~19/10/2011
Issued Date : 20/10/2011
Report No. : 11AS010R-RF-US-P06V01
Report Version : V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF, NVLAP or any agency of the Government.
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Test Report Certification

Issued Date : 20/10/2011

Report No. : 11AS010R-RF-US-P06V01



Product Name : Wireless N ADSL2+ 4-port USB Gateway
 Applicant : ZyXEL Communications Corporation
 Address : NO.6, Innovation Rd II, Science-Based Industrial Park,
 Hsin-Chu, Taiwan Hsin-Chu, Taiwan
 Manufacturer : 1. ZyXEL Communications Corporation
 2. Wuxi MitraStar Technology Co. Ltd
 Address : 1. NO.6, Innovation Rd. II Science Based Industrial Park
 Hsin-Chu, Taiwan
 2. Wuxi New District Minshan road 60#-E Jiangsu PRC
 Model No. : P-660HNU-F1, DSL-100HNU-L1
 FCC ID : I88P660HNUF1
 IC : 2468C-P660HNUF1
 EUT Voltage : 12V 1A
 Brand Name : ZyXEL
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart C: 2008
 ANSI C63.4: 2009; ANSI C63.10: 2009
 Industry Canada RSS-Gen Issue 3/RSS-210 Issue 8
 Test Result : Complied
 Performed Location : Suzhou EMC Laboratory
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 FCC Registration Number: 800392; IC Lab Code: 4075B

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Laboratory Information

We, **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

Taiwan R.O.C.	: BSMI, NCC, TAF
Germany	: TUV Rheinland
Norway	: Nemko, DNV
USA	: FCC, NVLAP
Japan	: VCCI

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : <http://www.quietek.com/tw/ctg/cts/accreditations.htm>
 The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : <http://www.quietek.com/>
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1. General Information

1.1. EUT Description

Product Name	Wireless N ADSL2+ 4-Port USB Gateway
Brand Name	ZyXEL
Model No.	P-660HUN-F1, DSL-100HNU-L1
EUT Voltage	12V 1A
Frequency Range	802.11b/g/n(20MHz): 2412~2462MHz 802.11n(40MHz): 2422~2452MHz
Channel Number	802.11b/g/n(20MHz): 11 802.11n(40MHz): 7
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM
Data Rate	802.11g: 6/9/12/18/24/36/48/54 Mbps 802.11b: 1/2/5.5/11 Mbps 802.11n: up to 300Mbps
Channel Control	Auto
Antenna Delivery	2*Tx + 2Rx
Antenna Type	PCB Antenna
Peak Antenna Gain	3dBi

Note: Models P-660HNU-F1 and DSL-100HNU-L1 are for different marketing. Model P-660HNU-F1 is the basic model, Models DSL-100HNU-L1 is same as basic mode.

For 2.4GHz Band

802.11b/g/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz	04	2427 MHz
05	2432 MHz	06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz	N/A	N/A
802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz	N/A	N/A

1.2. Mode of Operation

QuieTek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Transmit by 802.11b
Mode 2: Transmit by 802.11g
Mode 3: Transmit by 802.11n (20MHz)
Mode 4: Transmit by 802.11n (40MHz)

Note:

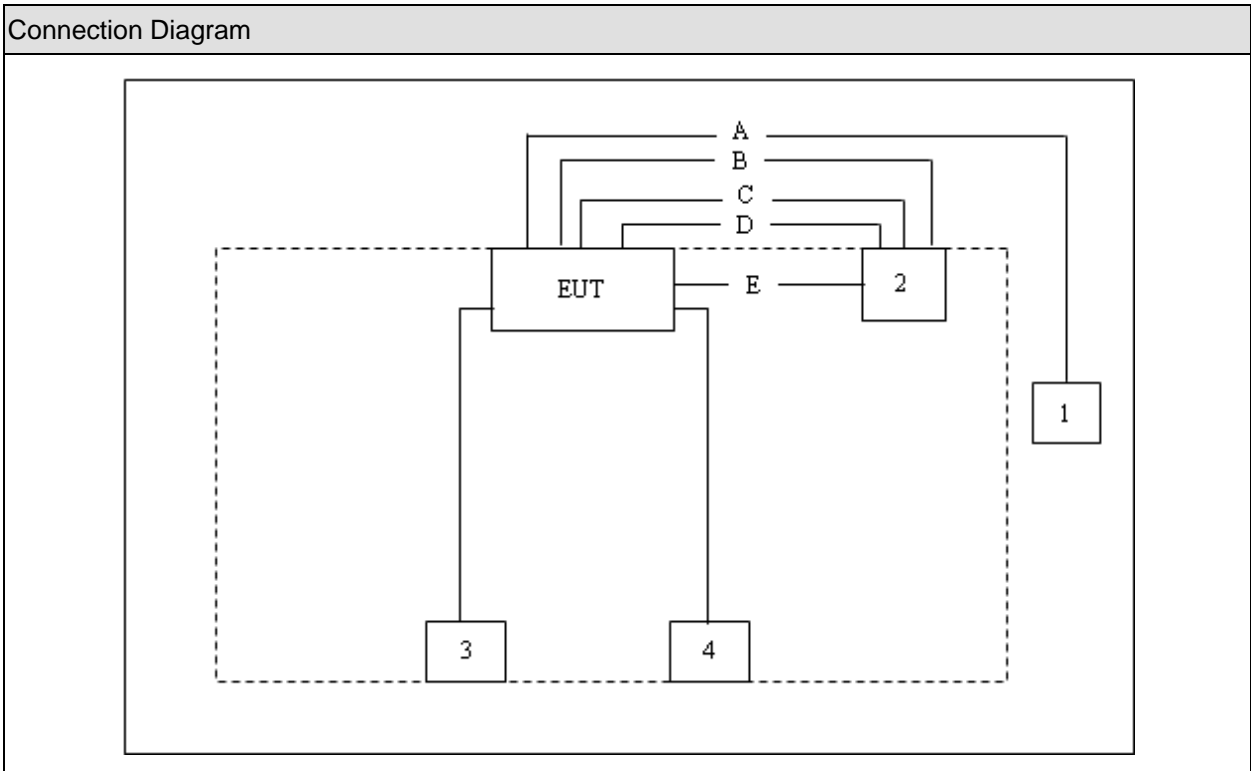
1. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.
2. This device is a composite device in accordance with Part 15 Subpart B regulations. The function for the receiver was measured and made a test report that the report number is 11AS010R-RF-US-P01V02.

1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	DELL	PP19L	JH097 A01	N/A
2	Router	D-Link	DIR-605	PK11496006143	Non-Shielded, 1.8m
3	iPod	Apple	A1199	7J71085BVQ5	Power by PC
4	iPod	Apple	A1199	7J7107WUVQ5	Power by PC

1.4. Configuration of Tested System



Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, >10m
B	LAN Cable	Non-Shielded, 1.5m
C	LAN Cable	Non-Shielded, 1.5m
D	LAN Cable	Non-Shielded, 1.5m
E	Telecom Cable	Non-Shielded, 1.8m

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of equipment.
3	Execute the RF test software "RT3x9xQA.exe" on PC.
4	Setup the test channel and the test mode press ok to start the continue transmit.

2. Technical Test

2.1. Summary of Test Result

- No deviations from the test standards
- Deviations from the test standards as below description:

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.207	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.209	Yes	No
RF Antenna Conducted Spurious	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.247(d)	Yes	No
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2008 15.247(d)	Yes	No
Operation Frequency Range of 20dB Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2008 15.215(c)	Yes	No
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.247(a)(2)	Yes	No
Power Output	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.247(b)(3)	Yes	No
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.247(e)	Yes	No

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	RSS-Gen Issue 3 December 2010 Section 7.2.2	Yes	No
Radiated Emission	RSS-210 Issue 8 December 2010 Section 2.7 Table 2 and Table 3	Yes	No
RF Antenna Conducted Spurious	RSS-210 Issue 8 December 2010 Section A8.5	Yes	No
Radiated Emission Band Edge	RSS-210 Issue 8 December 2010 Section A8.5	Yes	No
Occupied Bandwidth	RSS-Gen Issue 3 December 2010 Section 4.6.1 and 4.6.2 RSS-210 Issue 8 December 2010 Section A8.2(1)	Yes	No
Power Output	RSS-210 Issue 8 December 2010 Section A8.4(4)	Yes	No
Power Spectral Density	RSS-210 Issue 8 December 2010 Section A8.2(2)	Yes	No

2.2. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

3. Conducted Emission

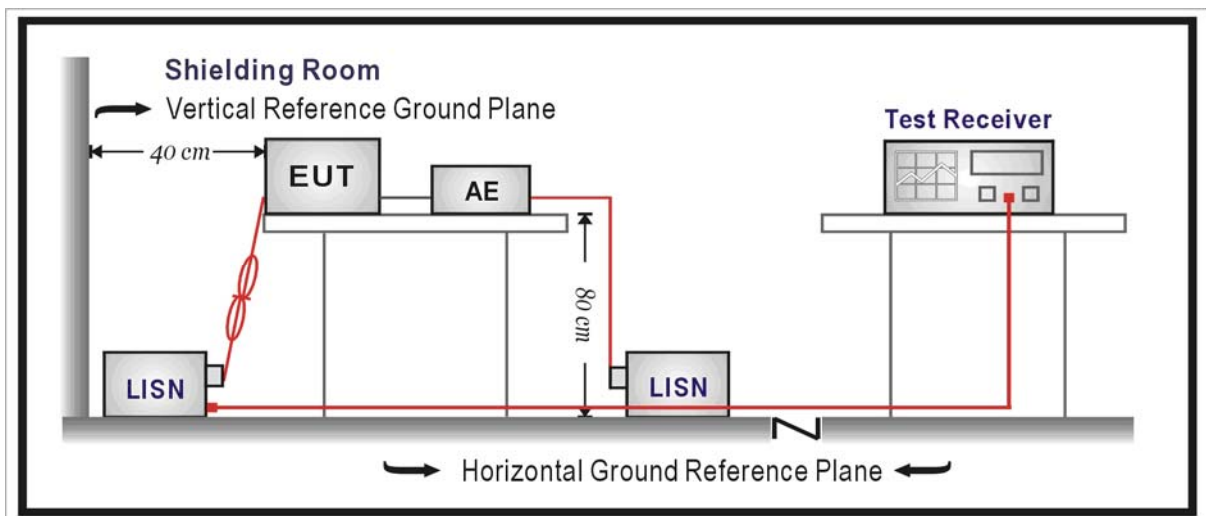
3.1. Test Equipment

Conducted Emission / TR-1

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
EMI Test Receiver	R&S	ESCI	100726	2012.04.23
Two-Line V-Network	R&S	ENV216	100043	2012.04.29
Two-Line V-Network	R&S	ENV216	100044	2012.09.07
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2012.05.05
50ohm Termination	SHX	TF2	07081401	2012.09.22
Temperature/Humidity Meter	zhicheng	ZC1-2	TR1-TH	2012.01.14

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

3.2. Test Setup



3.3. Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

3.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

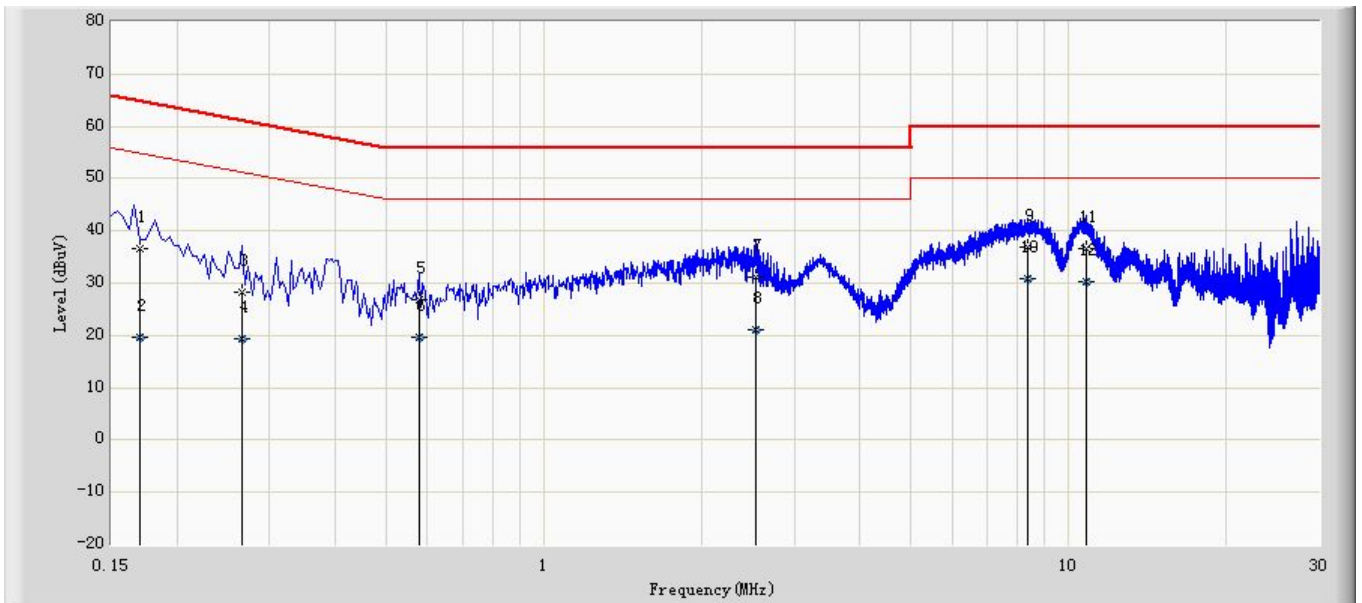
The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

3.5. Uncertainty

The measurement uncertainty is defined as ± 2.02 dB

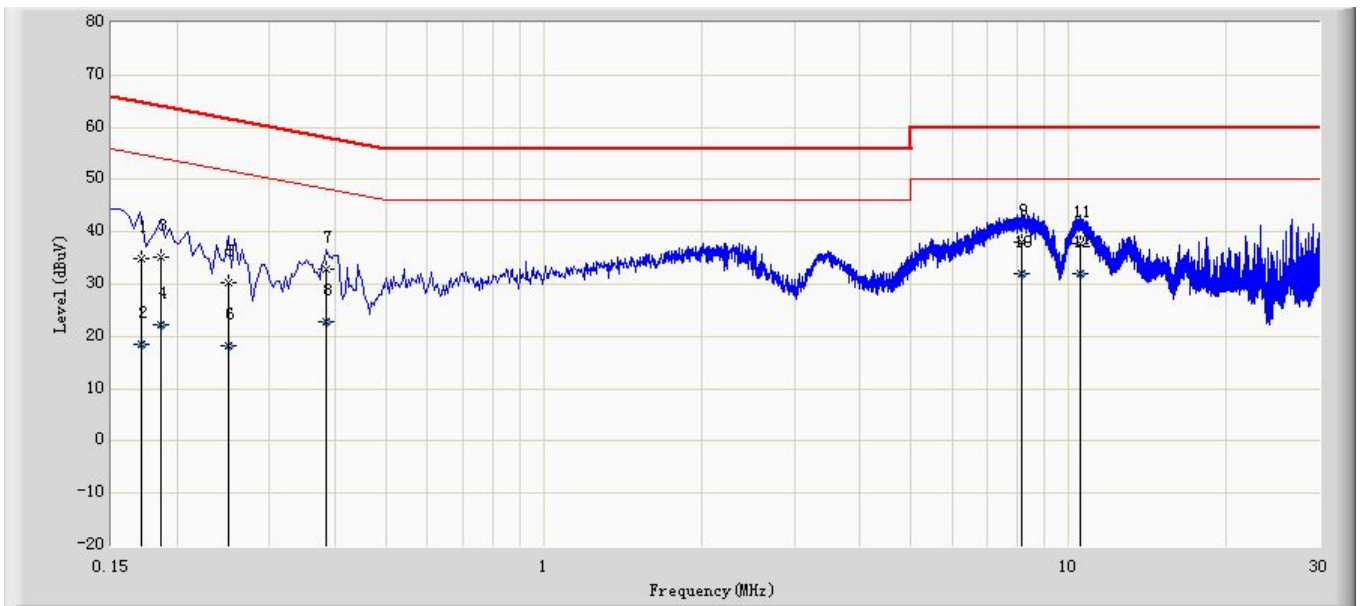
3.6. Test Result

Profile: 11AS010R	Page No.: 1
Engineer: Vilkk	
Site: TR1	Time: 2011/10/15 - 15:37
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101043(0.009-30MHz)	Polarity: Line
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.170	36.624	27.016	-28.343	64.967	9.608	QP
2		0.170	19.586	9.979	-35.381	54.967	9.608	AV
3		0.266	28.324	18.644	-32.918	61.242	9.680	QP
4		0.266	19.419	9.739	-31.823	51.242	9.680	AV
5		0.578	26.745	17.055	-29.255	56.000	9.690	QP
6		0.578	19.795	10.105	-26.205	46.000	9.690	AV
7		2.538	31.155	21.409	-24.845	56.000	9.745	QP
8		2.538	21.192	11.447	-24.808	46.000	9.745	AV
9		8.330	36.915	27.000	-23.085	60.000	9.914	QP
10	*	8.330	30.735	20.821	-19.265	50.000	9.914	AV
11		10.770	36.512	26.523	-23.488	60.000	9.989	QP
12		10.770	30.415	20.426	-19.585	50.000	9.989	AV

Profile: 11AS010R	Page No.: 2
Engineer: Vilik	
Site: TR1	Time: 2011/10/15 - 15:43
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101043(0.009-30MHz)	Polarity: Neutral
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.171	34.952	25.233	-29.946	64.898	9.719	QP
2		0.171	18.416	8.697	-36.482	54.898	9.719	AV
3		0.186	35.293	25.609	-28.920	64.213	9.684	QP
4		0.186	22.205	12.521	-32.009	54.213	9.684	AV
5		0.250	30.218	20.566	-31.540	61.757	9.652	QP
6		0.250	18.284	8.632	-33.473	51.757	9.652	AV
7		0.386	32.818	23.162	-25.331	58.149	9.656	QP
8		0.386	22.829	13.173	-25.320	48.149	9.656	AV
9		8.154	38.011	28.064	-21.989	60.000	9.948	QP
10	*	8.154	32.091	22.143	-17.909	50.000	9.948	AV
11		10.538	37.873	27.855	-22.127	60.000	10.018	QP
12		10.538	31.895	21.877	-18.105	50.000	10.018	AV

4. Radiated Emission

4.1. Test Equipment

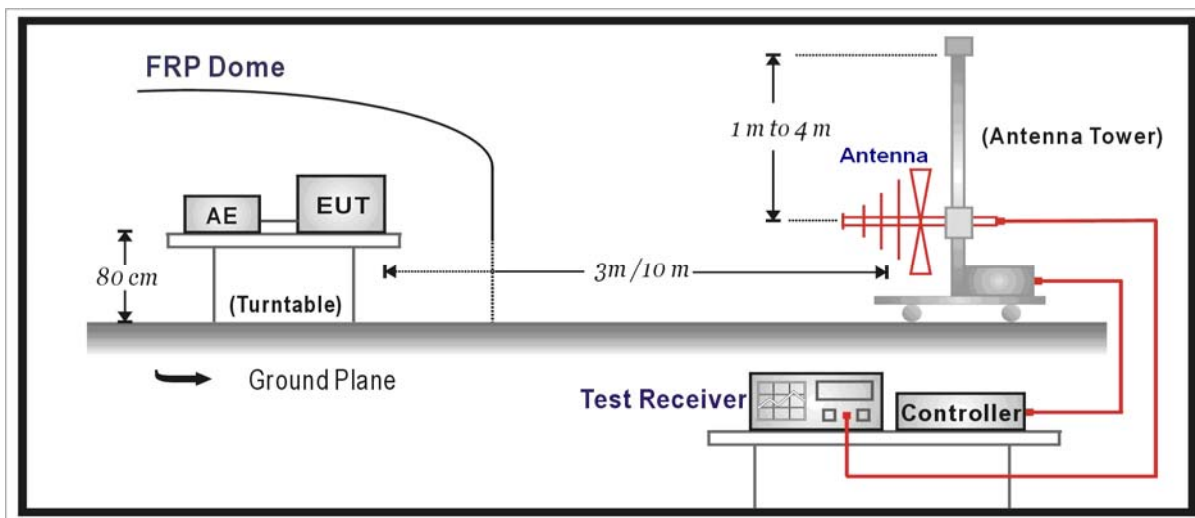
Radiated Emission / AC-5

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2012.04.23
EMI Test Receiver	R&S	ESCI	100906	2012.01.15
Preamplifier	Quietek	AP-180C	CHM-0602013	2012.03.07
Preamplifier	QuieTek	AP-040G	CHM-0906001	2012.05.05
Bilog Antenna	Teseq GmbH	CBL6112D	27612	2012.10.18
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	499	2012.06.11
High-Pass Filter	Wainwright	WHKX2.8/18G-12SS	SN1	2012.03.03
High-Pass Filter	Wainwright	WHKX7.0/18G-8SS	SN16	2012.03.03
Lowpass Filter	Wainwright	WLKS4500-9SS	SN2	2012.03.03
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC5-TH	2012.01.14

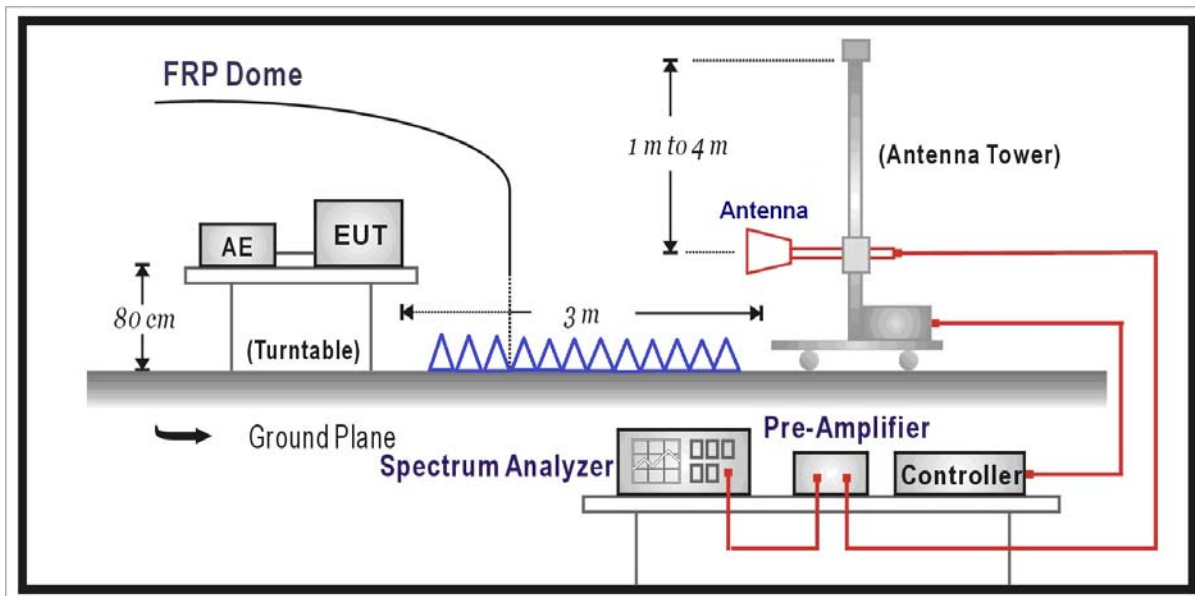
Note 1: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

4.2. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

FCC Part 15 Subpart C Paragraph 15.209		
Frequency (MHz)	Distance (m)	Level (dBuV/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Note 3: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2009 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 30MHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn antenna will be bended down a little (as horn antenna has the narrow beamwidth) in order to keeping the antenna in the “cone of radiation” of EUT. The 3dB beamwidth is 10~60 degrees for H-plane and 10~90 degrees for E-plane.

4.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB
 below 1G is defined as ± 3.8 dB

4.6. Test Result

All of the test result shown indicates the worst case, and spectrum analyzer parameters setting as shown below:

Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;

Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.

Measure Level = Reading Level + Cable Loss + Antenna Factor - Preamplifier Gain

802.11b

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain 0	1	V	2413.0	71.7	31.2	102.9	Fundamental	/	PK
		H	246.9	5.5	19.2	24.7	46	-21.3	QP
		H	456.8	7.0	24.4	31.4	46	-14.6	QP
		V	3218.5	70.5	-15.9	54.6	102.9	-48.3	PK
		V	4825.0	53.7	-12.0	41.7	54(Note1)	-12.3	PK
		V	7236.0	47.8	-3.3	44.5	54(Note1)	-9.5	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	6	V	2437.0	71.9	30.2	102.1	Fundamental	/	PK
		H	258.4	4.9	20.2	25.1	46	-20.9	QP
		H	544.0	7.2	26.4	33.6	46	-12.4	QP
		V	3252.5	70.6	-16.0	54.6	102.1	-47.5	PK
		V	4874.0	50.8	-11.8	39.0	54(Note1)	-15.0	PK
		V	7311.0	47.5	-3.0	44.5	54(Note1)	-9.5	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	11	V	2463.0	70.9	31.2	102.1	Fundamental	/	PK
		H	274.3	6.2	20.0	26.2	46	-19.8	QP
		H	600.2	7.1	26.9	34.0	46	-12.0	QP
		V	3286.5	70.0	-16.2	53.8	102.1	-48.3	PK
		V	4924.0	52.3	-11.6	40.7	54(Note1)	-13.3	PK
		V	7386.0	47.7	-2.8	44.9	54(Note1)	-9.1	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
Chain 1	1	V	2413.0	72.6	31.2	103.8	Fundamental	/	PK
		H	309.4	7.0	21.0	28.0	46	-18.0	QP
		H	644.5	8.2	27.3	35.5	46	-10.5	QP
		V	3218.5	70.4	-15.9	54.5	103.8	-49.3	PK
		V	4824.0	55.0	-11.9	43.1	54(Note1)	-10.9	PK
		V	7236.0	47.8	-3.3	44.5	54(Note1)	-9.5	PK

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	6	H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
		V	2437.0	72.7	31.6	104.3	Fundamental	/	PK
		H	348.9	6.7	22.0	28.7	46	-17.3	QP
		H	728.8	8.5	28.3	36.8	46	-9.2	QP
		V	3252.5	71.9	-16.0	55.9	104.3	-48.4	PK
		V	4874.0	51.0	-11.8	39.2	54(note1)	-14.8	PK
		V	7311.0	47.0	-3.0	44.0	54(note1)	-10.0	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	11	V	2463.0	74.5	31.2	105.7	Fundamental	/	PK
		H	416.4	6.4	24.3	30.7	46	-15.3	QP
		H	765.5	7.8	28.7	36.5	46	-9.5	QP
		V	3286.5	71.2	-16.2	55.0	105.7	-50.7	PK
		V	4924.0	49.8	-11.6	38.2	54(note1)	-15.8	PK
		V	7386.0	47.3	-2.8	44.5	54(note1)	-9.5	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK

Note 1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

802.11g

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain 0	1	V	2409.2	72.8	31.2	104.0	Fundamental	/	PK
		H	117.4	8.0	18.4	26.4	46	-19.6	QP
		H	465.0	8.4	24.5	32.9	46	-13.1	QP
		H	3218.5	70.0	-15.9	54.1	104.0	-49.9	PK
		H	4824.0	52.4	-11.9	40.5	54(Note1)	-13.5	PK
		H	7236.0	47.9	-3.3	44.6	54(Note1)	-9.4	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	6	V	2437.0	71.4	31.6	103.0	Fundamental	/	PK
		H	265.0	6.9	20.2	27.1	46	-18.9	QP
		H	465.0	8.4	24.5	32.9	46	-13.1	QP
		H	3252.5	70.6	-16.0	54.6	103.0	-48.4	PK

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain 1		H	4874.0	53.3	-11.7	41.6	54(Note1)	-12.4	PK
		H	7311.0	47.1	-3.0	44.1	54(Note1)	-9.9	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	11	V	2460.6	71.3	31.2	102.5	Fundamental	/	PK
		H	303.4	7.9	20.8	28.7	46	-17.3	QP
		H	498.8	7.3	25.4	32.7	46	-13.3	QP
		H	3286.5	70.3	-16.2	54.1	102.5	-48.4	PK
		H	4924.0	51.5	-11.5	40.0	54(Note1)	-14.0	PK
		H	7386.0	47.1	-2.8	44.3	54(Note1)	-9.7	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
		1	V	2408.9	73.3	31.2	104.5	Fundamental	/
	H		360.5	6.7	22.6	29.3	46	-16.7	QP
	H		540.2	7.9	26.2	34.1	46	-11.9	QP
	V		3218.5	70.4	-16.0	54.4	104.5	-50.1	PK
	V		4824.0	56.2	-12.0	44.2	54(note1)	-9.8	PK
V	7236.0		47.6	-3.3	44.3	54(note1)	-9.7	PK	
H	24000.0		59.1	-8.9	50.2	54(note1)	-3.8	PK	
6	V	2437.0	74.0	31.0	105.0	Fundamental	/	PK	
	H	394.7	7.9	23.7	31.6	46	-14.4	QP	
	H	630.9	8.7	27.2	35.9	46	-10.1	QP	
	V	3252.5	72.0	-16.1	55.9	105.0	-49.1	PK	
	V	4874.0	51.0	-11.7	39.3	54(note1)	-14.7	PK	
	V	7311.0	47.8	-3.0	44.8	54(note1)	-9.2	PK	
	H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK	
11	V	2460.4	75.2	31.2	106.4	Fundamental	/	PK	
	H	420.3	7.1	24.3	31.4	46	-14.6	QP	
	H	698.0	7.8	27.7	35.5	46	-10.5	QP	
	V	3286.5	71.0	-16.2	54.8	106.4	-51.6	PK	
	V	4924.0	49.8	-11.5	38.3	54(note1)	-15.7	PK	
	V	7386.0	47.0	-2.8	44.2	54(note1)	-9.8	PK	
	H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK	

Note 1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

802.11n(20MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain 0	1	V	2410.2	72.6	31.1	103.7	Fundamental	/	PK
		H	285.5	1.8	20.4	22.2	46	-23.8	QP
		H	501.2	6.4	25.5	31.9	46	-14.1	QP
		H	3218.5	69.9	-16.0	53.9	103.7	-49.8	PK
		H	4824.0	52.6	-11.9	40.7	54(Note1)	-13.3	PK
		H	7236.0	47.7	-3.3	44.4	54(Note1)	-9.6	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	6	V	2437.0	72.1	31.1	103.2	Fundamental	/	PK
		H	310.1	6.0	21.0	27.0	46	-19.0	QP
		H	544.0	6.6	26.4	33.0	46	-13.0	QP
		H	3252.5	70.7	-16.0	54.7	103.2	-48.5	PK
		H	4874.0	53.8	-11.7	42.1	54(Note1)	-11.9	PK
		H	7211.0	48.2	-3.4	44.8	54(Note1)	-9.2	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	11	V	2463.4	71.3	31.2	102.5	Fundamental	/	PK
		H	334.7	6.3	21.7	28.0	46	-18.0	QP
		H	601.7	6.7	26.9	33.6	46	-12.4	QP
		H	3286.5	69.9	-16.2	53.7	102.5	-48.8	PK
		H	4924.0	51.2	-11.5	39.7	54(Note1)	-14.3	PK
		H	7386.0	46.7	-2.8	43.9	54(Note1)	-10.1	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
Chain 1	1	V	2416.9	72.9	31.2	104.1	Fundamental	/	PK
		H	358.3	4.7	22.5	27.2	46	-18.8	QP
		H	653.0	7.2	27.4	34.6	46	-11.4	QP
		V	3218.5	70.1	-16.0	54.1	104.1	-50.0	PK
		V	4824.0	54.5	-12.0	42.5	54(note1)	-11.5	PK
		V	7236.0	47.6	-3.3	44.3	54(note1)	-9.7	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
		6	V	2437.0	73.4	31.4	104.8	Fundamental	/
	H		380.9	6.4	23.1	29.5	46	-16.5	QP
	H		684.8	7.1	27.5	34.6	46	-11.4	QP
	V		3252.5	71.8	-16.0	55.8	104.8	-49.0	PK
	V		4874.0	51.0	-11.7	39.3	54(note1)	-14.7	PK

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
		V	7311.0	47.0	-3.0	44.0	54(note1)	-10.0	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	11	V	2467.2	74.1	31.2	105.3	Fundamental	/	PK
		H	426.6	6.1	24.3	30.4	46	-15.6	QP
		H	728.0	6.8	28.3	35.1	46	-10.9	QP
		V	3286.5	70.9	-16.2	54.7	105.3	-50.6	PK
		V	4924.0	49.5	-11.6	37.9	54(note1)	-16.1	PK
		V	7386.0	47.5	-2.8	44.7	54(note1)	-9.3	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
Chain 0+1	1	V	2410.4	76.9	31.2	108.1	Fundamental	/	PK
		H	441.8	7.0	24.3	31.3	46	-14.7	QP
		H	758.6	6.8	28.8	35.6	46	-10.4	QP
		V	3218.5	74.3	-15.9	58.4	108.1	-49.7	PK
		V	4824.0	55.2	-12.0	43.2	54(note1)	-10.8	PK
		V	7236.0	47.7	-3.3	44.4	54(note1)	-9.6	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	6	V	2437.0	76.5	31.5	108.0	Fundamental	/	PK
		H	501.2	6.4	25.5	31.9	46	-14.1	QP
		H	842.9	8.7	29.2	37.9	46	-8.1	QP
		V	3252.5	75.1	-16.1	59.0	108.0	-49.0	PK
		V	4874.0	53.8	-11.8	42.0	54(note1)	-12.0	PK
		V	7311.0	47.6	-3.0	44.6	54(note1)	-9.4	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	11	V	2460.7	76.6	31.2	107.8	Fundamental	/	PK
		H	311.9	6.3	21.1	27.4	46	-18.6	QP
		H	535.7	7.2	26.0	33.2	46	-12.8	QP
		H	3286.5	75.8	-16.2	59.6	107.8	-48.2	PK
		H	4924.0	52.0	-11.6	40.4	54(note1)	-13.6	PK
		H	7386.0	47.6	-2.8	44.8	54(note1)	-9.2	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK

Note 1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

802.11n(40MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain 0	3	V	2417.2	65.4	31.2	96.6	Fundamental	/	PK
		H	360.8	5.8	22.6	28.4	46	-17.6	QP
		H	577.8	6.7	26.8	33.5	46	-12.5	QP
		H	3227.0	71.8	-16.0	55.8	96.6	-40.8	PK
		H	4844.0	52.7	-11.8	40.9	54(Note1)	-13.1	PK
		H	7266.0	48.2	-3.2	45.0	54(Note1)	-9.0	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	6	V	2437.0	65.4	31.2	96.6	Fundamental	/	PK
		H	388.2	4.4	23.4	27.8	46	-18.2	QP
		H	603.9	7.2	26.9	34.1	46	-11.9	QP
		H	3252.5	71.7	-16.1	55.6	96.4	-40.8	PK
		H	4874.0	54.3	-11.8	42.5	54(Note1)	-11.5	PK
		H	7311.0	47.8	-3.1	44.7	54(Note1)	-9.3	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	9	V	2462.2	65.4	31.2	96.6	Fundamental	/	PK
		H	428.4	7.2	24.2	31.4	46	-14.6	QP
		H	679.2	7.3	27.4	34.7	46	-11.3	QP
		H	3150.5	41.6	-5.1	36.5	96.4	-59.9	PK
		H	4904.0	39.7	-0.4	39.3	54(note1)	-14.7	PK
		H	7356.0	38.2	6.5	44.7	54(note1)	-9.3	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
Chain 1	3	V	2419.7	65.0	31.2	96.2	Fundamental	/	PK
		H	448.6	7.3	24.3	31.6	46	-14.4	QP
		H	748.2	7.0	28.7	35.7	46	-10.3	QP
		V	3269.5	71.7	-16.1	55.6	96.2	-40.6	PK
		V	4904.0	53.9	-11.6	42.3	54(Note1)	-11.7	PK
		V	7356.0	47.1	-2.9	44.2	54(Note1)	-9.8	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	6	V	2437.0	66.1	31.2	97.3	Fundamental	/	PK
		H	497.7	6.8	25.3	32.1	46	-13.9	QP
		H	778.5	7.1	28.6	35.7	46	-10.3	QP
		V	3252.5	72.8	-16.1	56.7	97.3	-40.6	PK
		V	4874.0	51.0	-11.7	39.3	54(note1)	-14.7	PK
		V	7311.0	46.8	-3.1	43.7	54(note1)	-10.3	PK

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	9	V	2449.5	66.9	31.2	98.1	Fundamental	/	PK
		H	459.2	5.4	22.7	28.1	46	-17.9	QP
		H	787.6	5.0	26.8	31.8	46	-14.2	QP
		V	3269.5	70.3	-16.1	54.2	98.1	-43.9	PK
		V	4904.0	50.2	-11.6	38.6	54(note1)	-15.4	PK
		V	7256.0	48.1	-3.3	44.8	54(note1)	-9.2	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
Chain 0+1	3	V	2418.	69.7	31.2	100.9	Fundamental	/	PK
		H	397.0	6.3	20.1	26.4	46	-19.6	QP
		H	625.0	5.4	25.5	30.9	46	-15.1	QP
		H	3227.0	75.0	-16.0	59.0	100.9	-41.9	PK
		H	4844.0	51.7	-11.8	39.9	54(note1)	-14.1	PK
		H	7266.0	47.0	-3.1	43.9	54(note1)	-10.1	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	6	V	2437.0	72.5	28.8	101.3	Fundamental	/	PK
		H	345.2	5.7	17.8	23.5	46	-22.5	QP
		H	625.9	6.8	24.9	31.7	46	-14.3	QP
		V	3252.5	75.2	-16.0	59.2	101.3	-42.1	PK
		V	4874.0	52.0	-11.8	40.2	54(note1)	-13.8	PK
		V	7311.0	47.5	-3.1	44.4	54(note1)	-9.6	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK
	9	V	2446.2	70.6	31.2	101.8	Fundamental	/	PK
		H	618.9	5.7	24.8	30.5	46	-15.5	QP
		H	791.7	5.4	26.2	31.6	46	-14.4	QP
		V	3269.5	74.6	-16.2	58.4	101.8	-43.4	PK
		V	4904.0	51.4	-11.6	39.8	54(note1)	-14.2	PK
		V	7256.0	47.8	-3.3	44.5	54(note1)	-9.5	PK
		H	24000.0	59.1	-8.9	50.2	54(note1)	-3.8	PK

Note 1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

5. RF Antenna Conducted Spurious

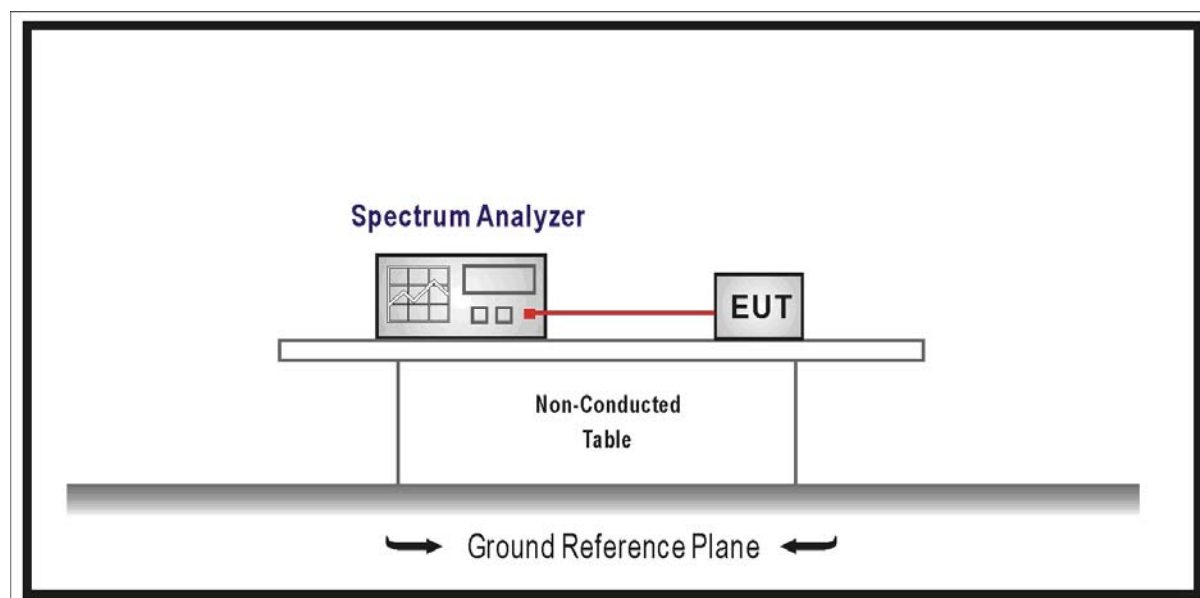
5.1. Test Equipment

RF Antenna Conducted Spurious / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2012.04.30
Temperature/Humidity Meter	Zhicheng	ZC1-2	TR8-TH	2012.05.04

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

5.2. Test Setup



5.3. Limit

In any 100 kHz bandwidth outside the frequency band 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.

5.4. Test Procedure

The EUT was tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

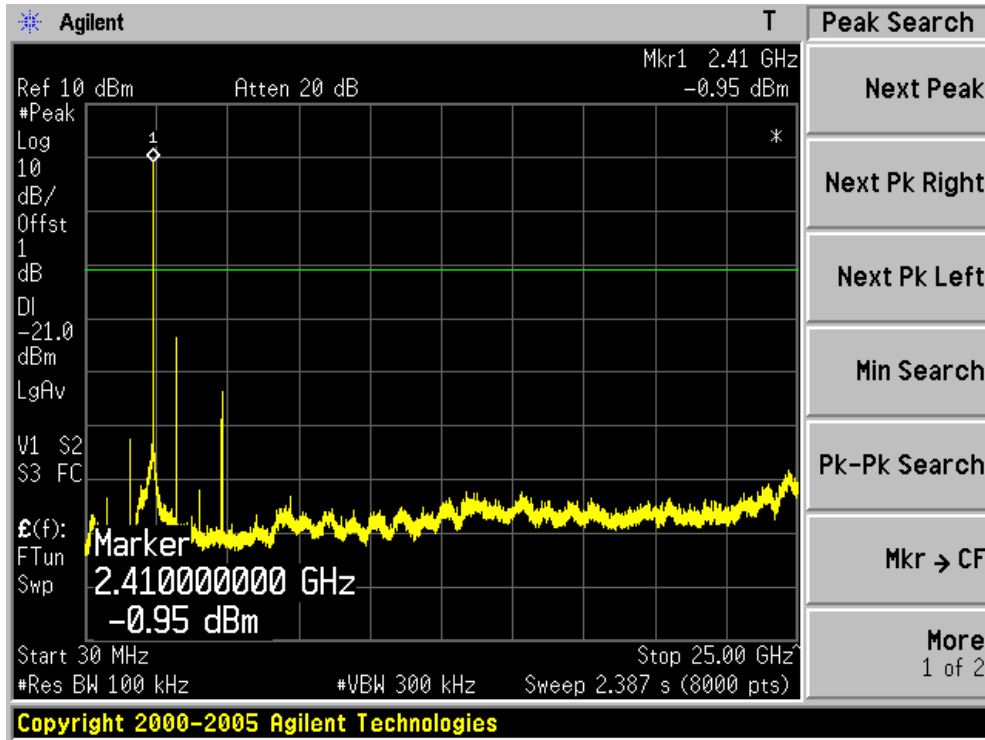
5.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

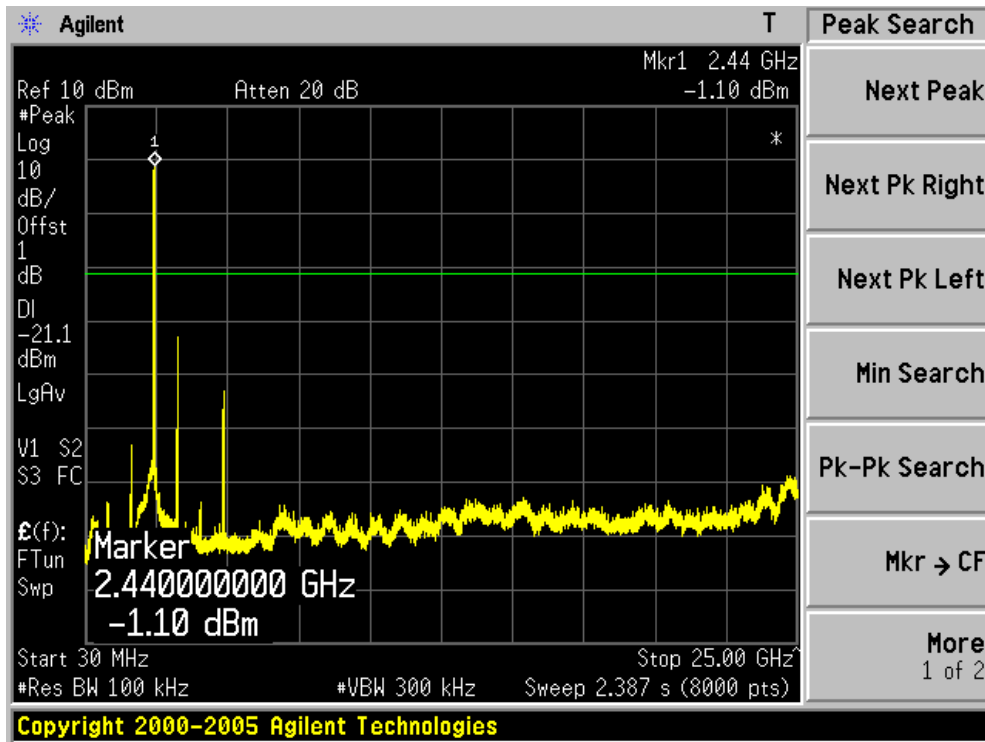
5.6. Test Result

Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11b (Chain 0)

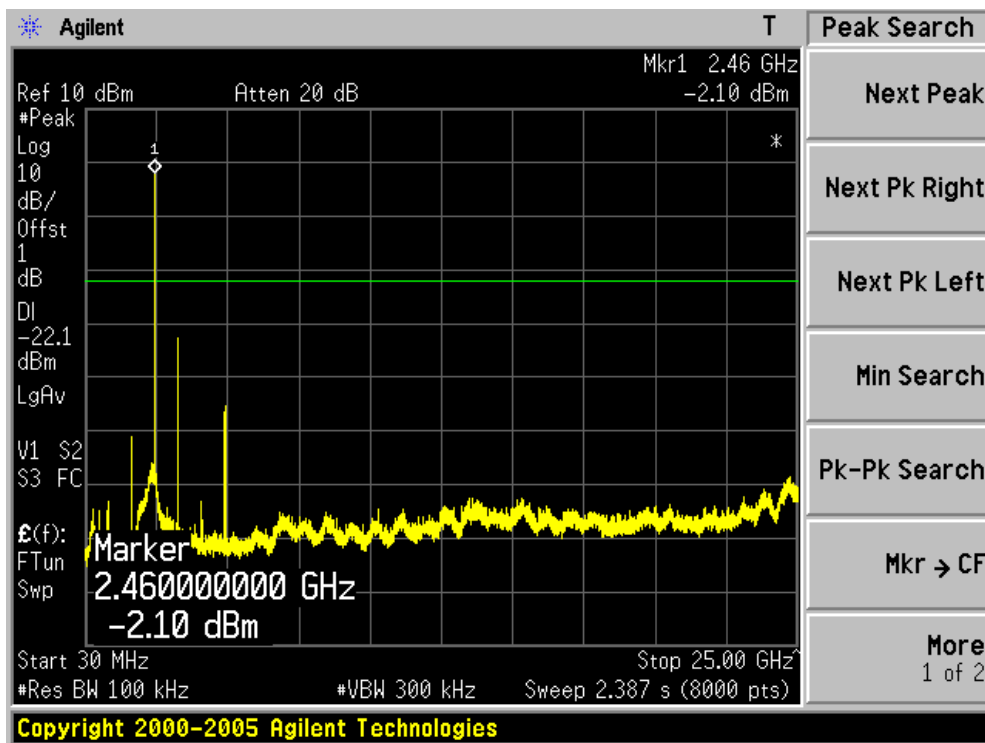
Channel 01 (2412MHz)



Channel 06 (2437MHz)

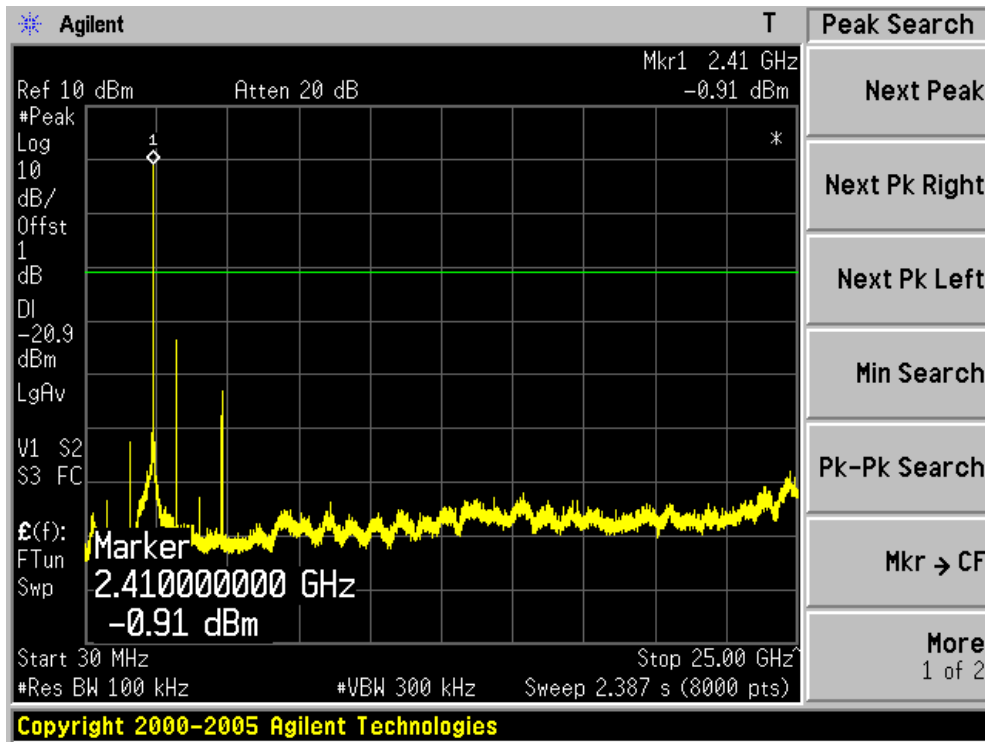


Channel 11 (2462MHz)

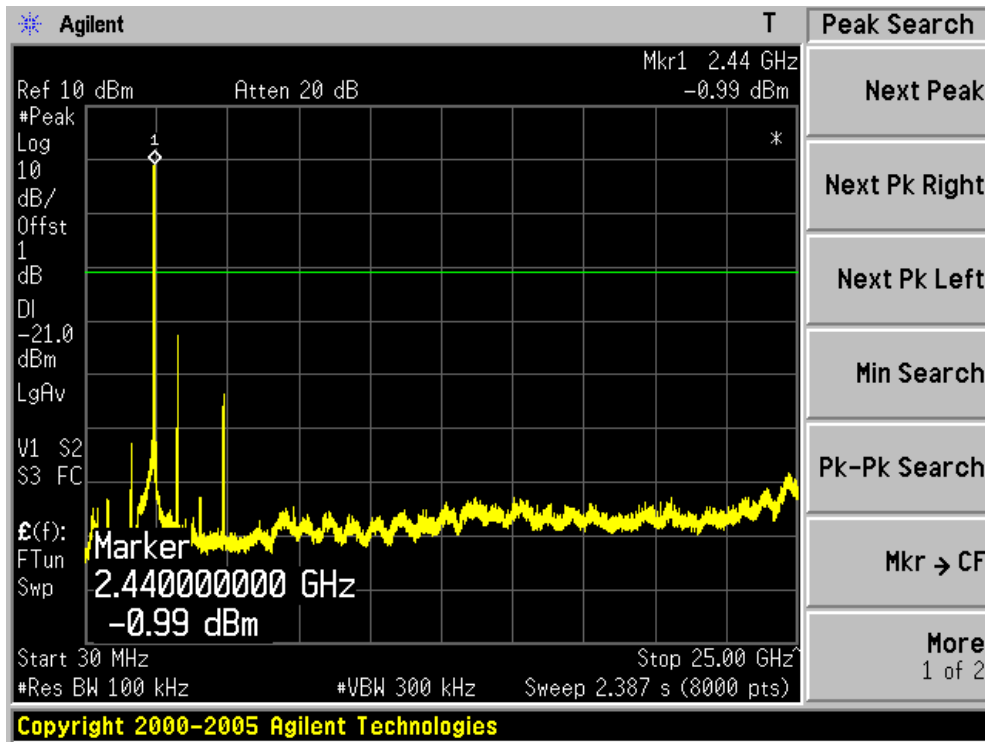


Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11g (Chain 0)

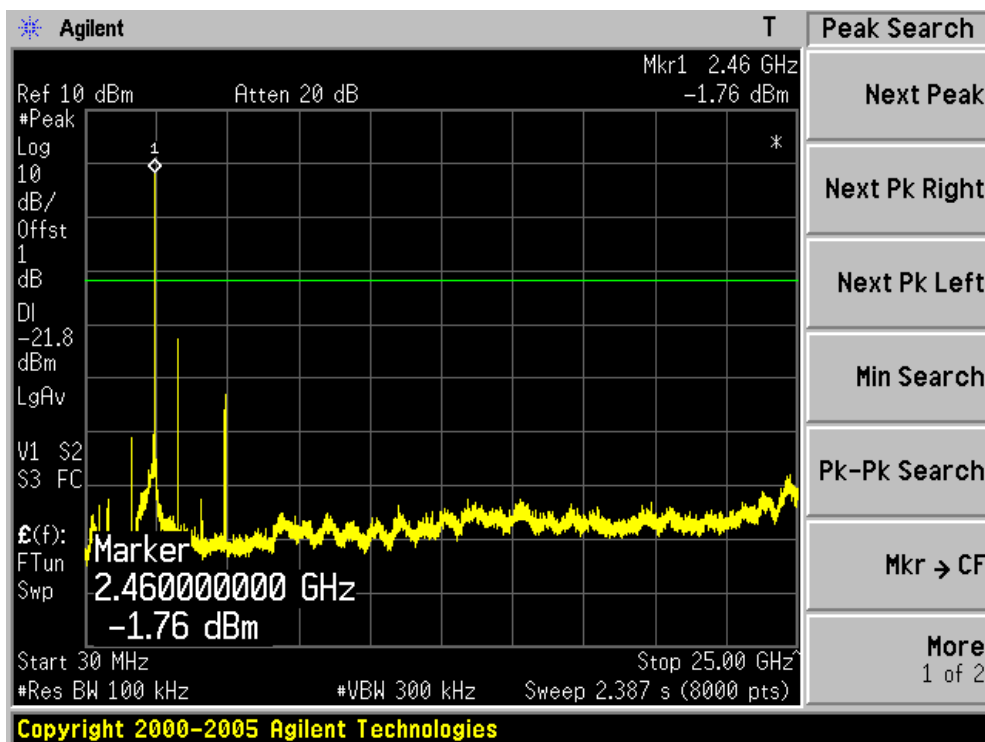
Channel 01 (2412MHz)



Channel 06 (2437MHz)

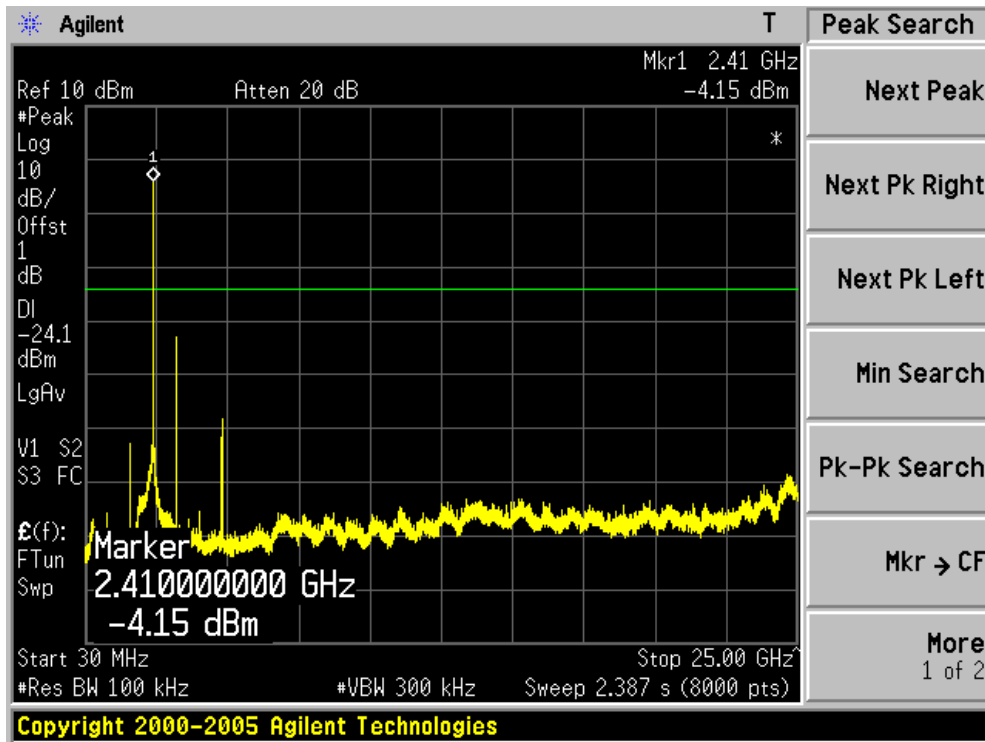


Channel 11 (2462MHz)

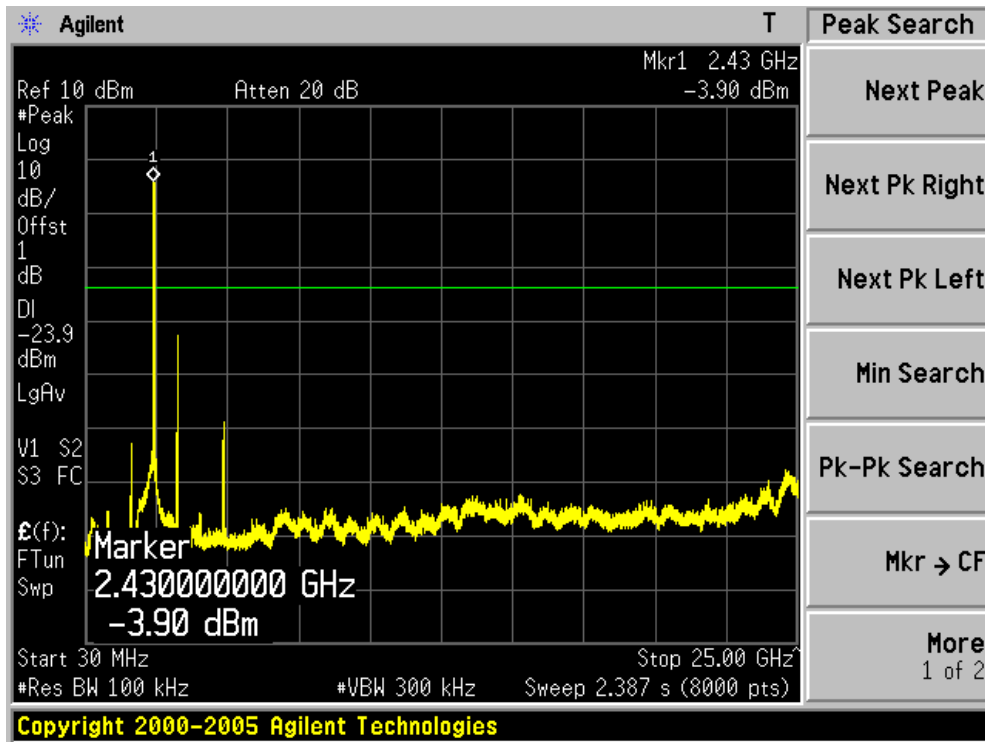


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: RF Antenna Conducted Spurious
Test Site	: TR-8
Test Mode	: Mode 3: Transmit by 802.11n (20MHz)(Chain 0)

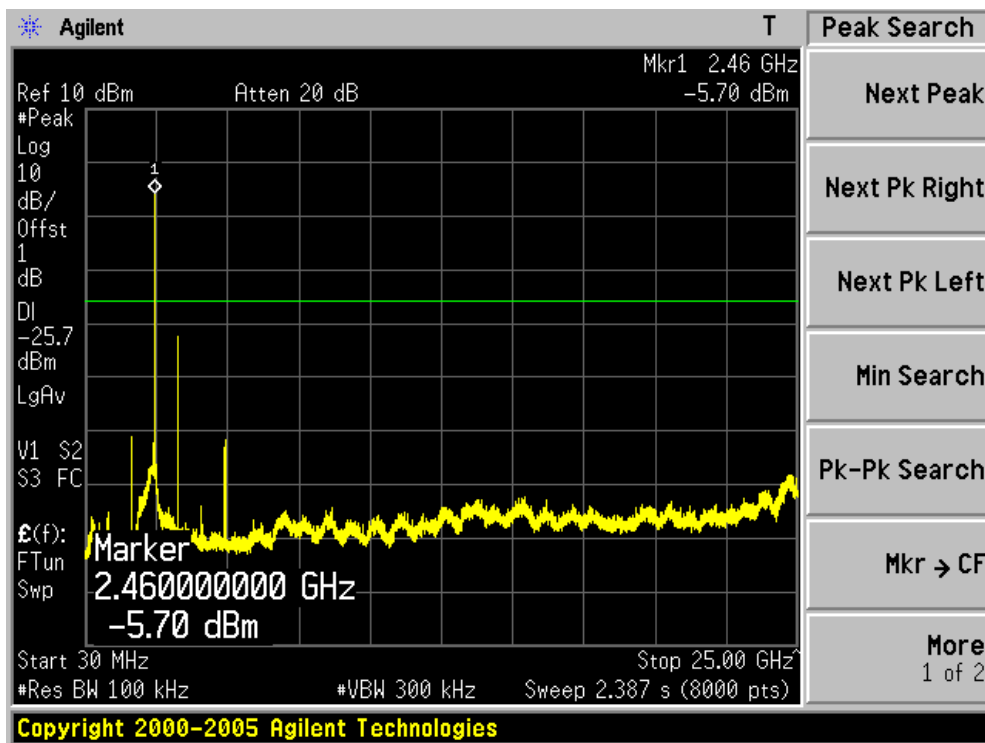
Channel 01 (2412MHz)



Channel 06 (2437MHz)

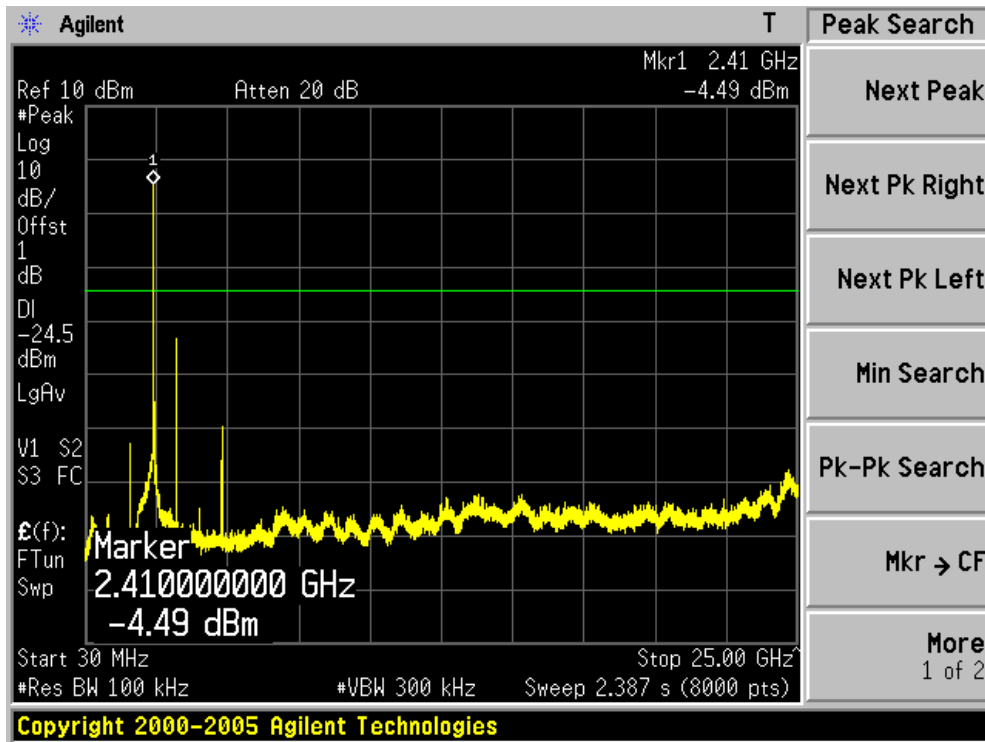


Channel 11 (2462MHz)

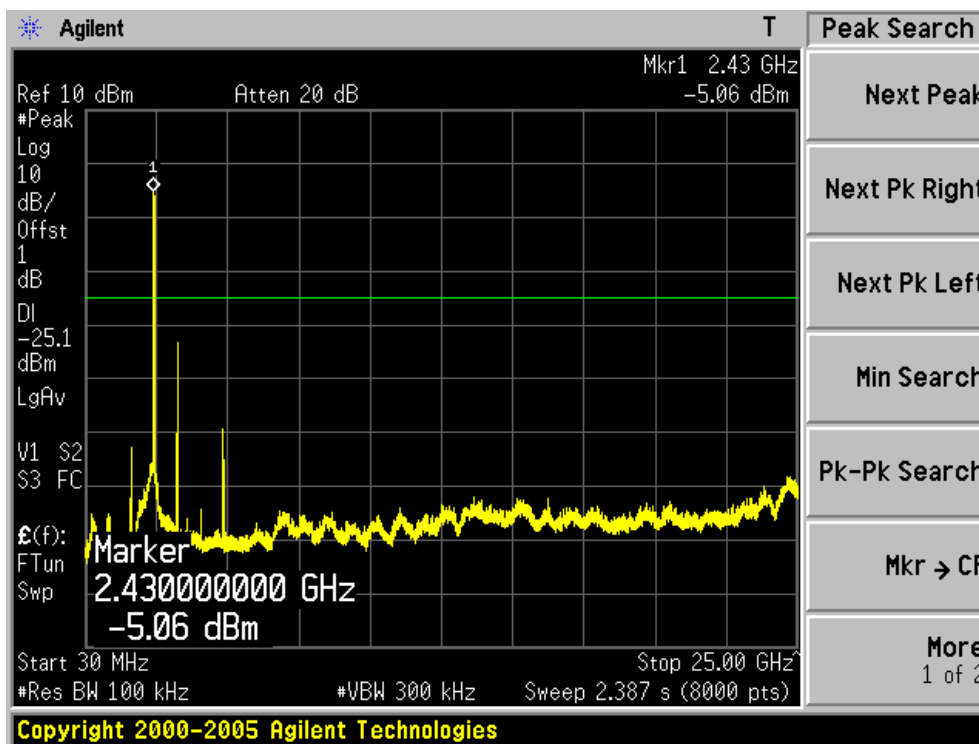


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: RF Antenna Conducted Spurious
Test Site	: TR-8
Test Mode	: Mode 4: Transmit by 802.11n (40MHz) (Chain 0)

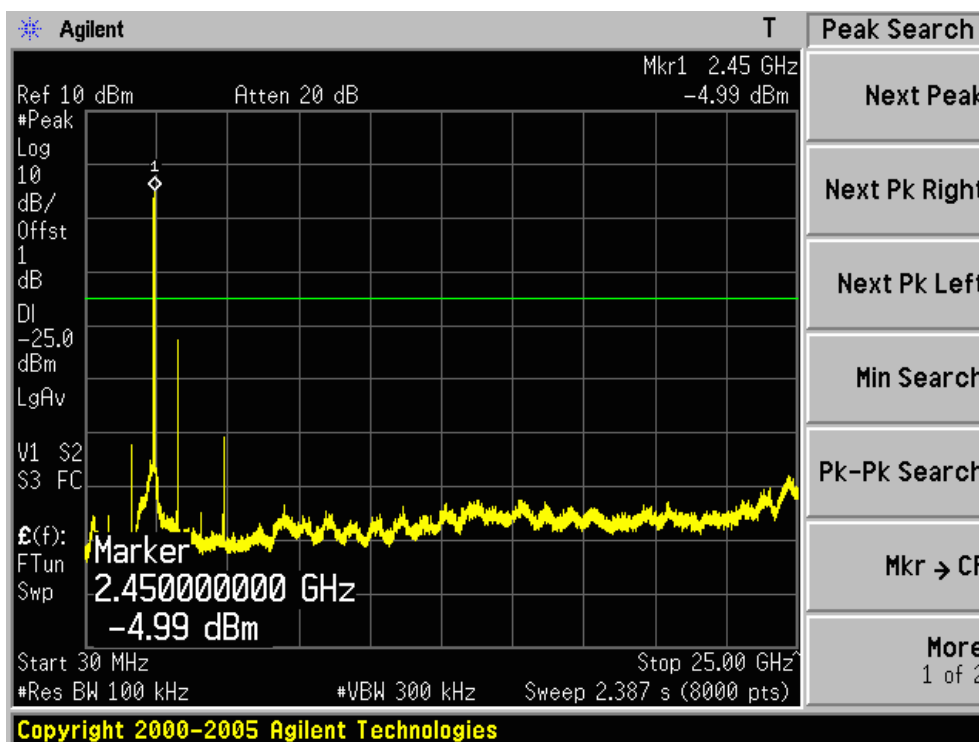
Channel 03 (2422MHz)



Channel 06 (2437MHz)

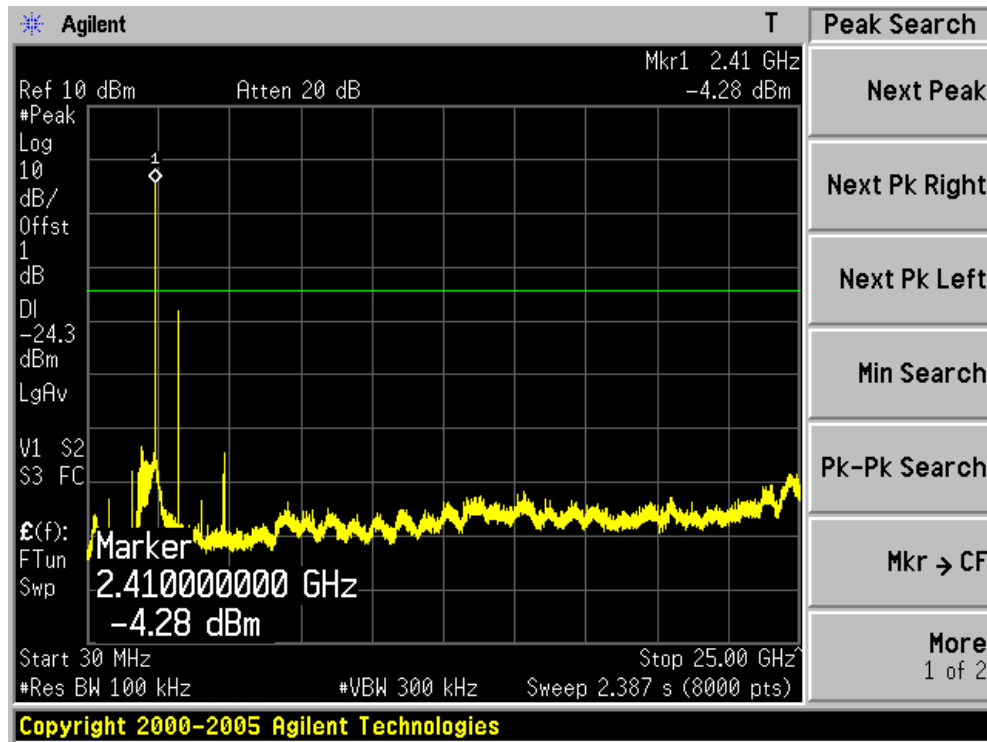


Channel 09 (2452MHz)

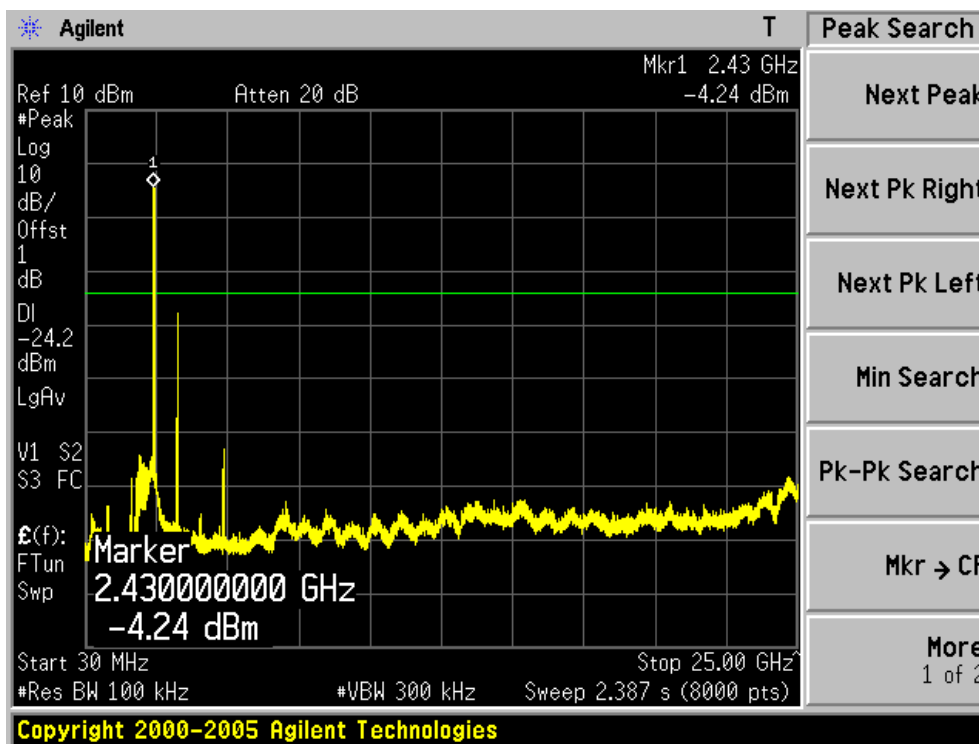


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: RF Antenna Conducted Spurious
Test Site	: TR-8
Test Mode	: Mode 1: Transmit by 802.11b (Chain 1)

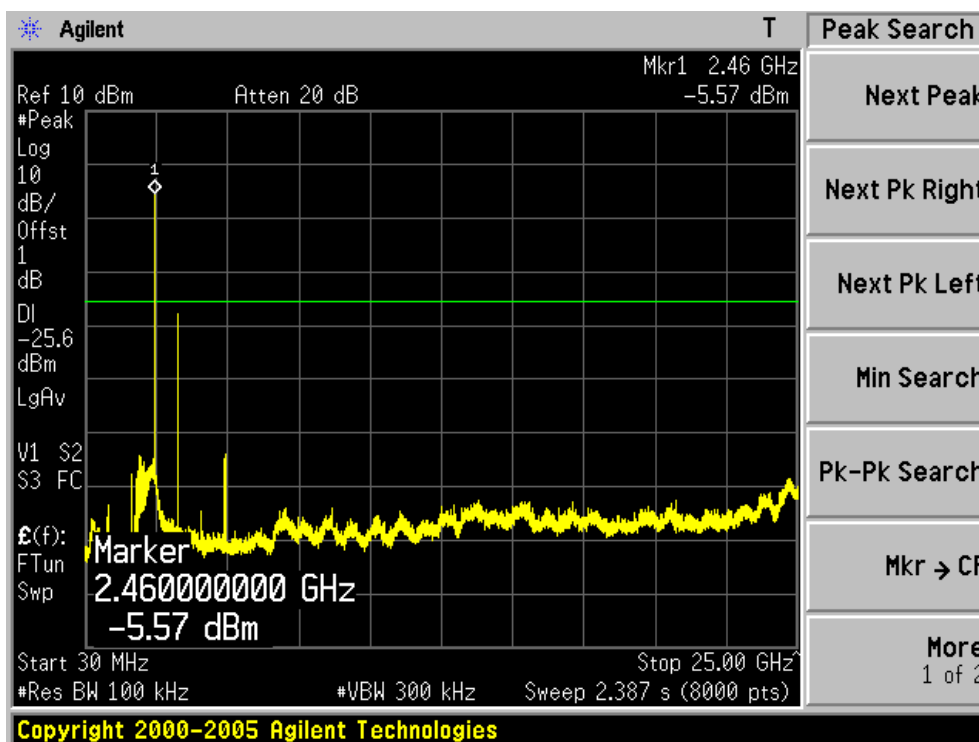
Channel 01 (2412MHz)



Channel 06 (2437MHz)

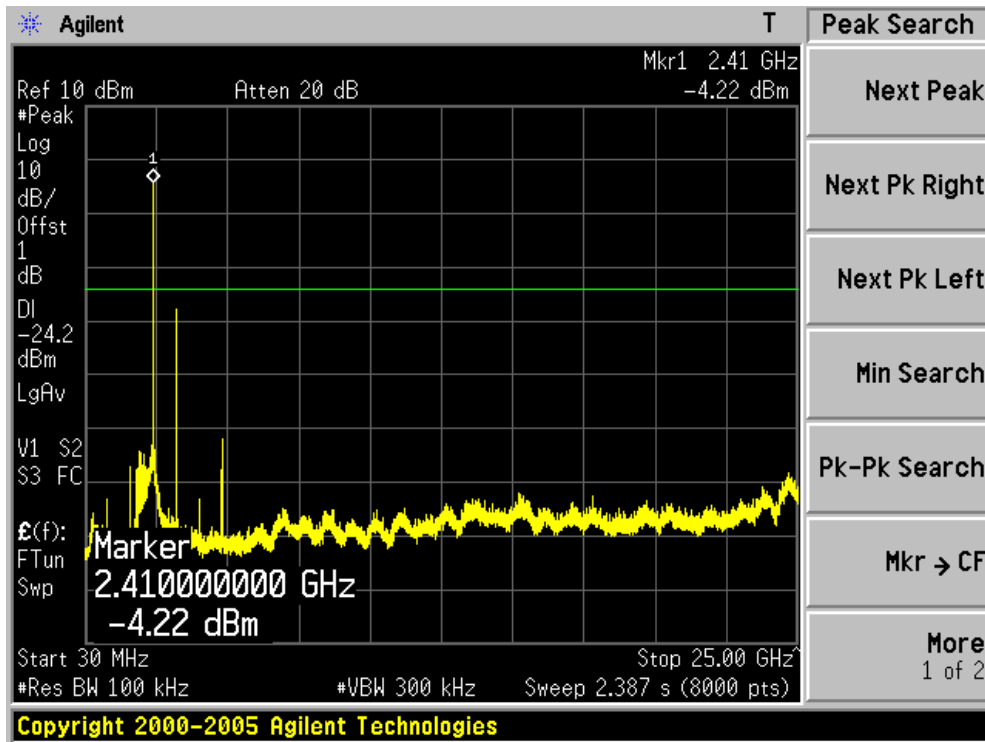


Channel 11 (2462MHz)

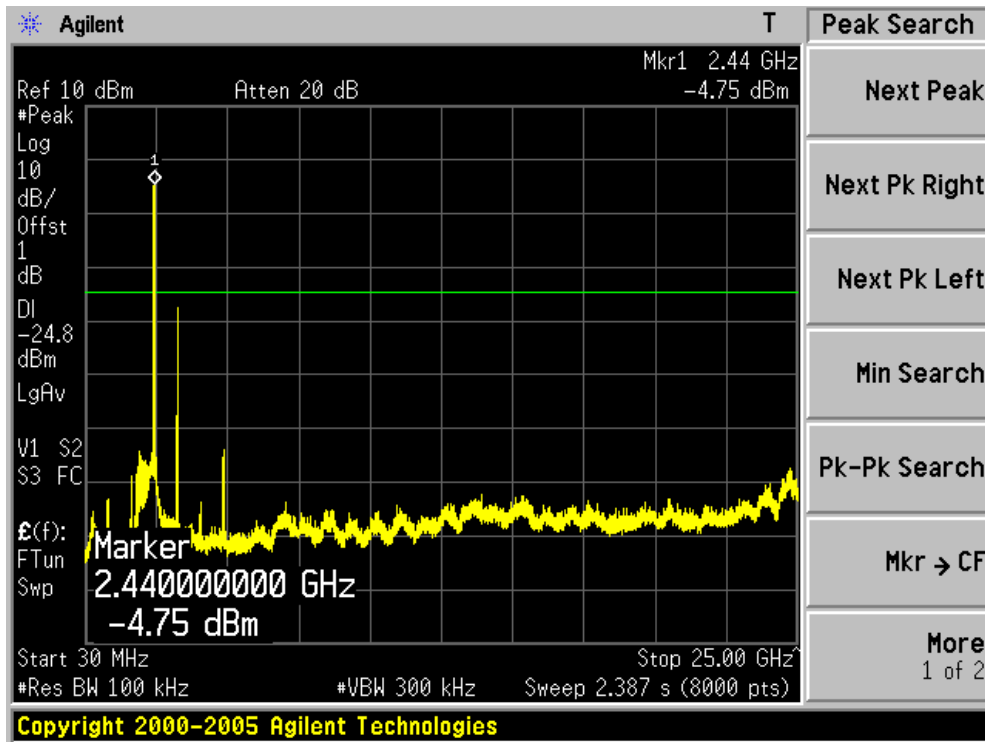


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: RF Antenna Conducted Spurious
Test Site	: TR-8
Test Mode	: Mode 2: Transmit by 802.11g (Chain 1)

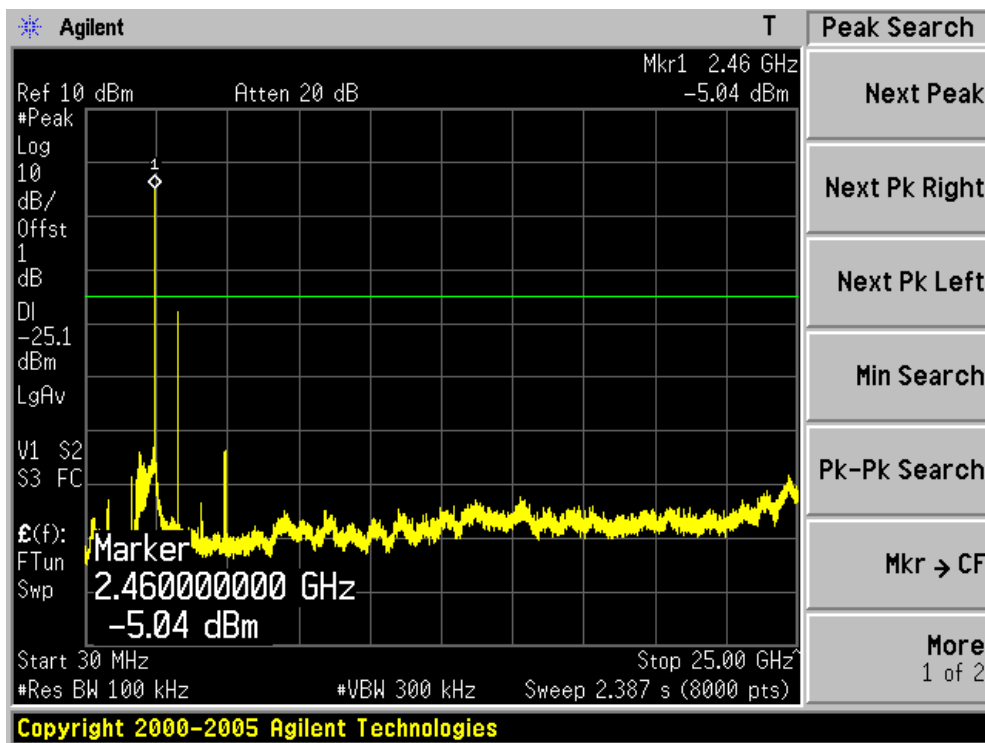
Channel 01 (2412MHz)



Channel 06 (2437MHz)

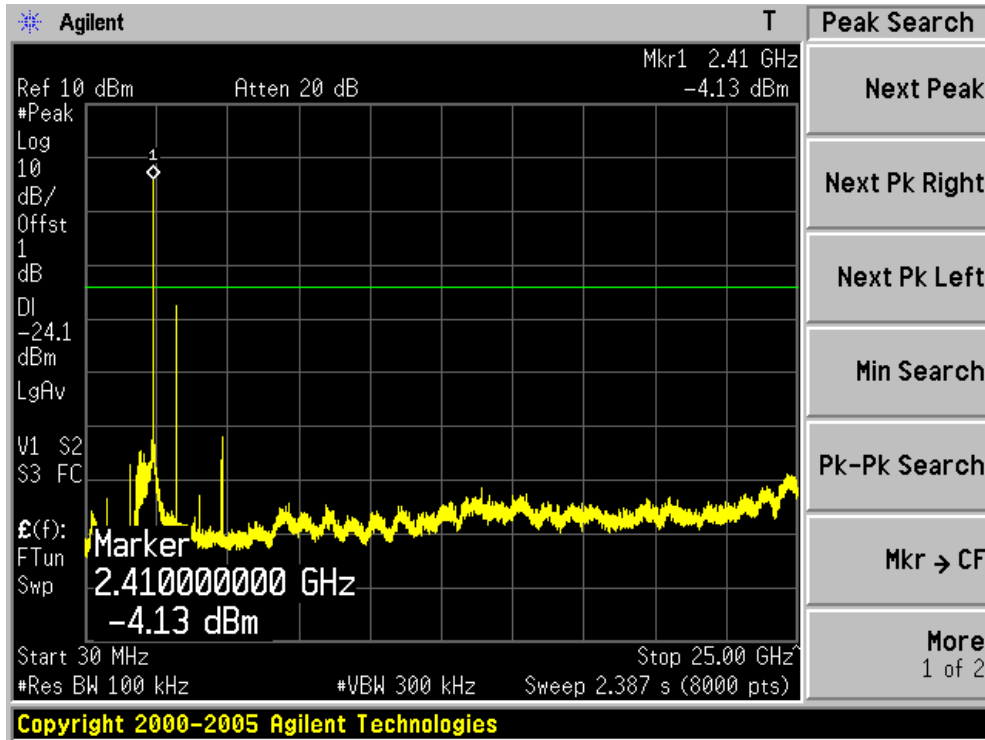


Channel 11 (2462MHz)

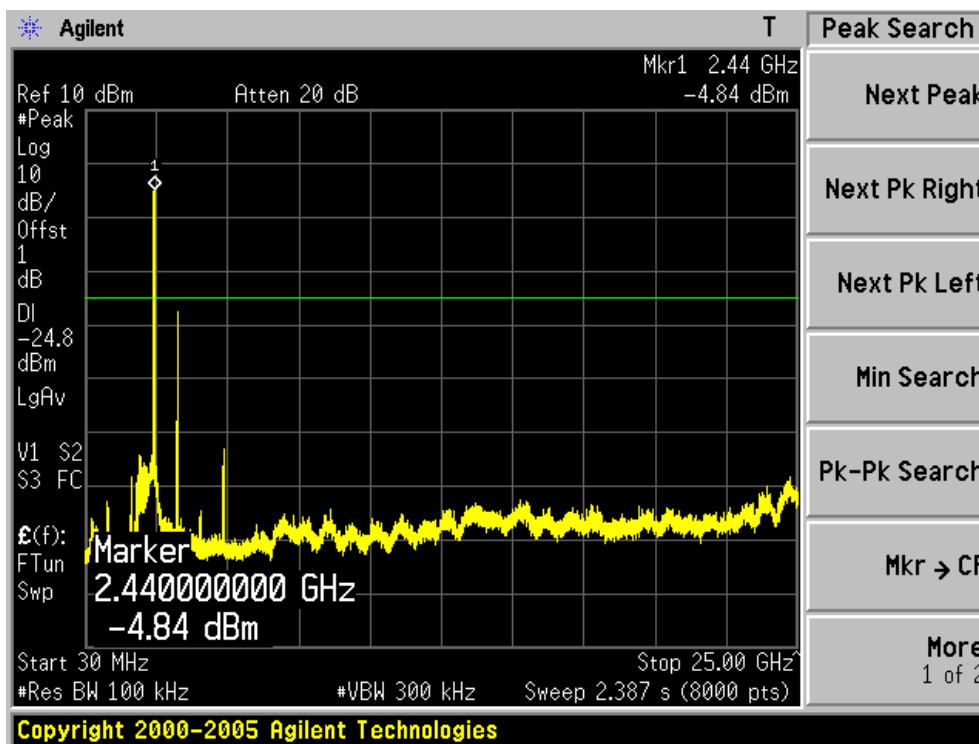


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: RF Antenna Conducted Spurious
Test Site	: TR-8
Test Mode	: Mode 3: Transmit by 802.11n (20MHz) (Chain 1)

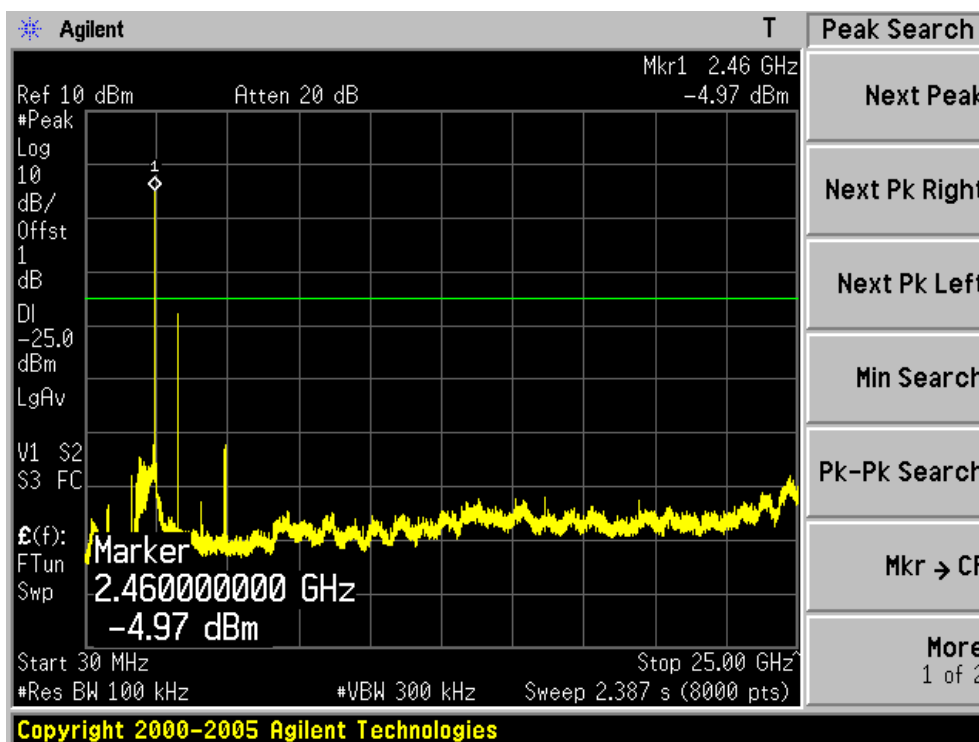
Channel 01 (2412MHz)



Channel 06 (2437MHz)

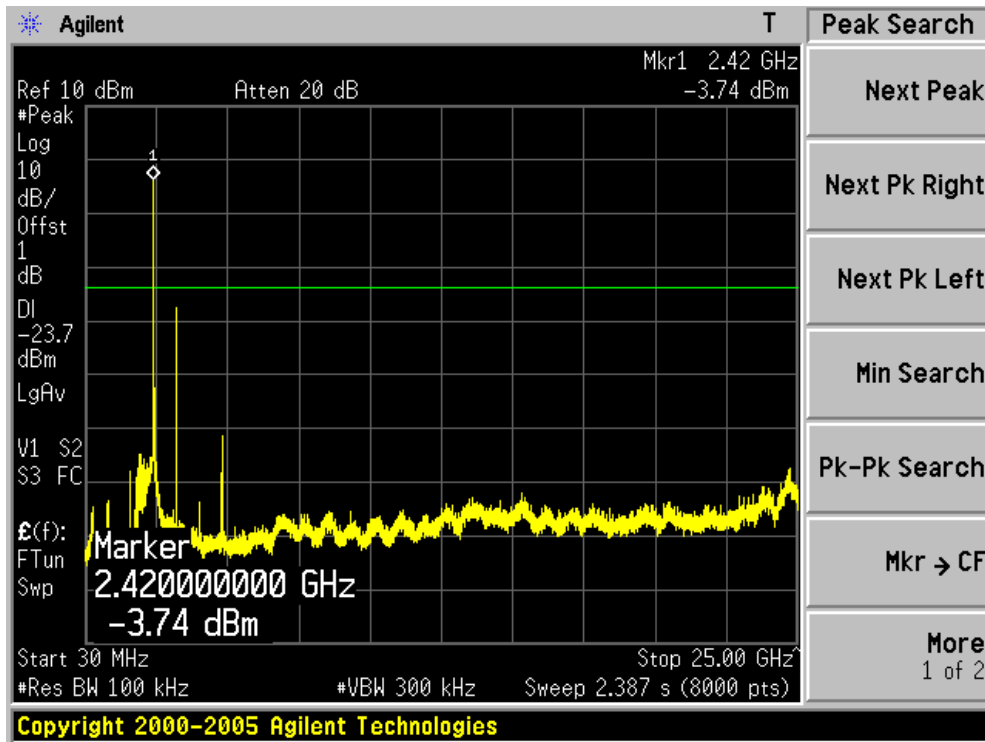


Channel 11 (2462MHz)

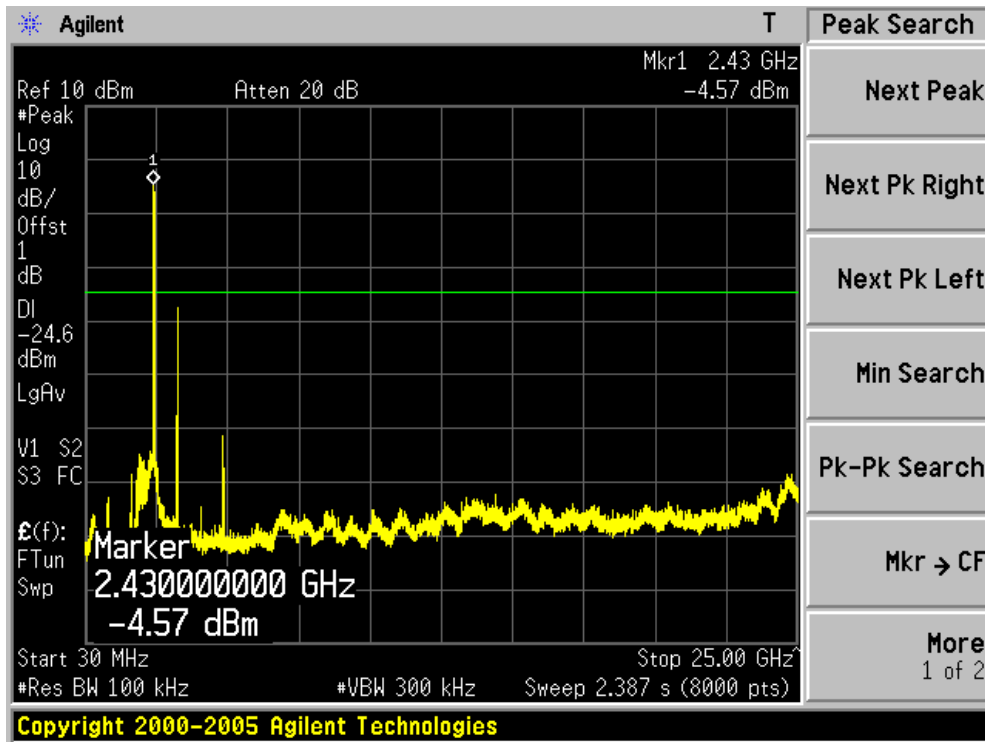


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: RF Antenna Conducted Spurious
Test Site	: TR-8
Test Mode	: Mode 4: Transmit by 802.11n (40MHz) (Chain 1)

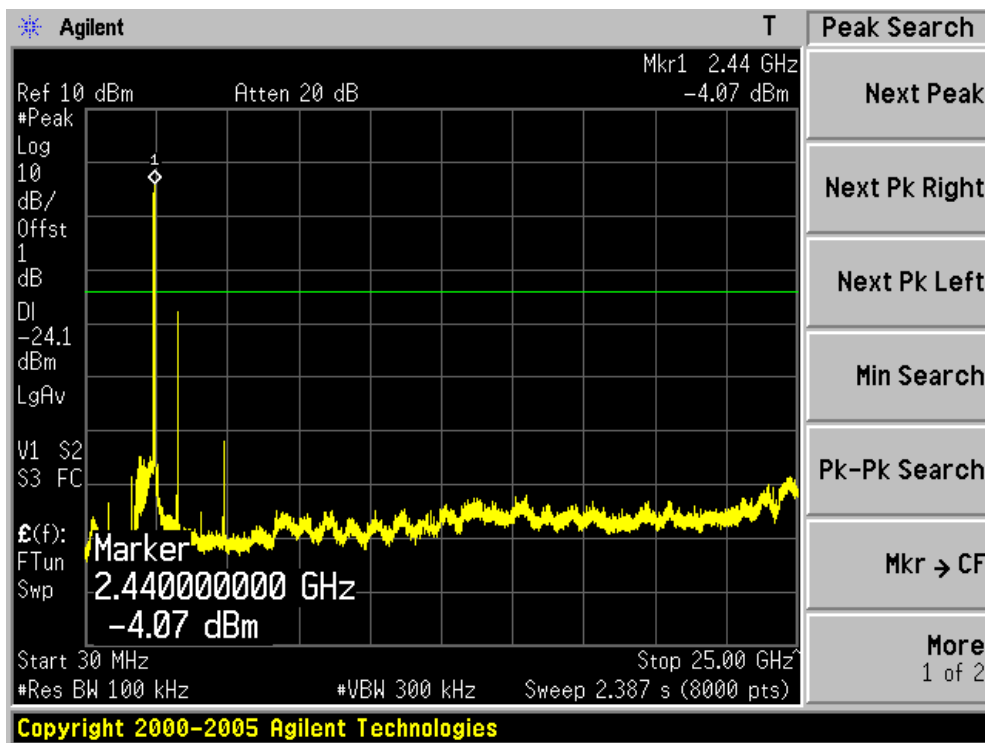
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)



6. Radiated Emission Band Edge

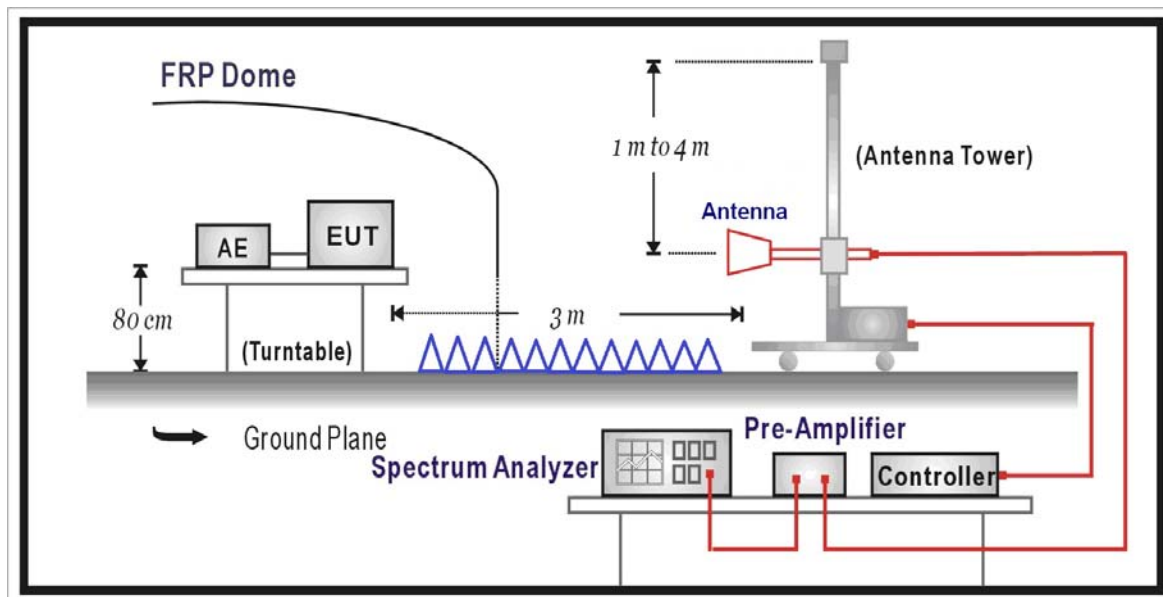
6.1. Test Equipment

Radiated Emission Band Edge / AC-5

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2012.04.23
EMI Test Receiver	R&S	ESCI	100573	2012.04.23
Preamplifier	Quietek	AP-025C	CHM-0511006	2012.04.12
Preamplifier	Quietek	AP-180C	CHM-0602013	2012.03.07
Bilog Type Antenna	Schaffner	CBL6112B	2932	2012.10.18
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	499	2012.06.11
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2012.05.05
Temperature/Humidity Meter	zhicheng	ZC1-2	AC5-TH	2012.01.14

Note 1: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

6.2. Test Setup



6.3. Limit

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

6.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to ANSI C63.10 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

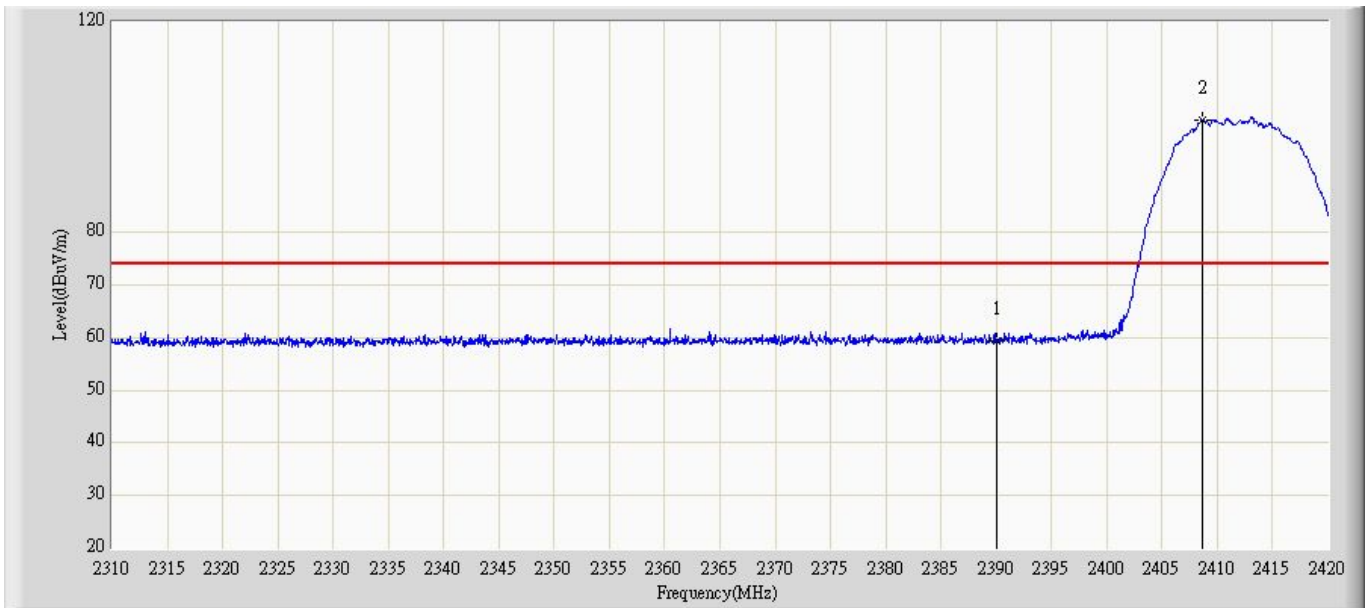
The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2009 on radiated measurement.

6.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB

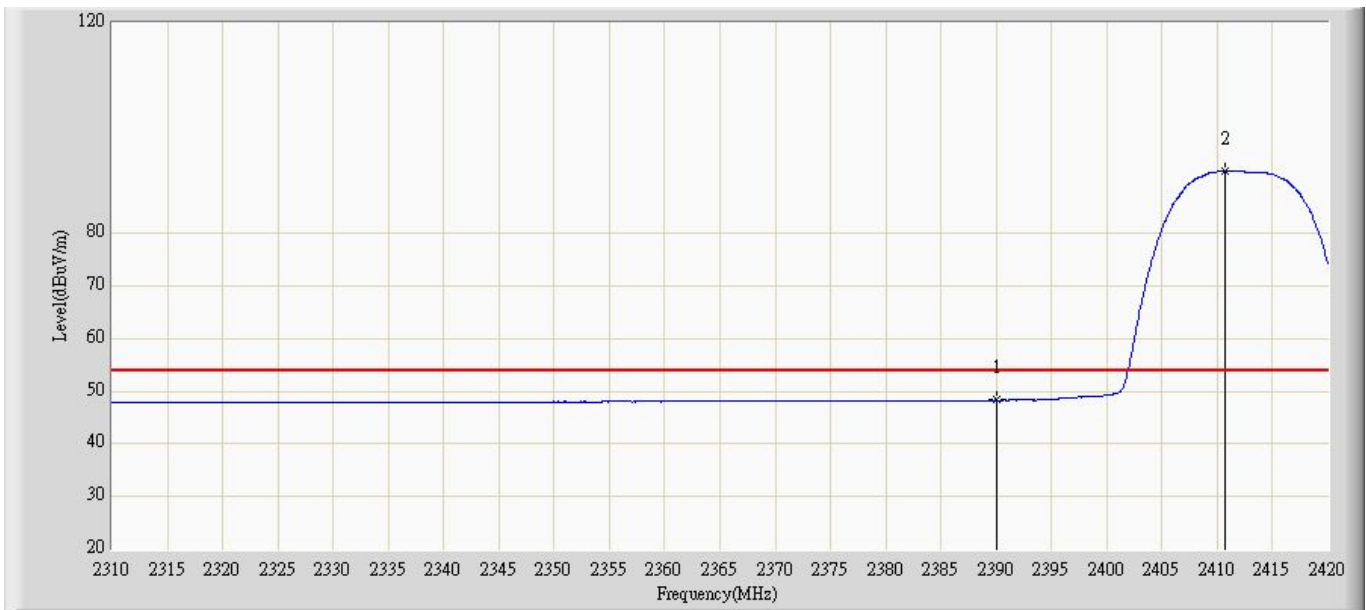
6.6. Test Result

Profile: 11AS010R	Page No.: 165
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2412MHz by 802.11b(Chain 0)	



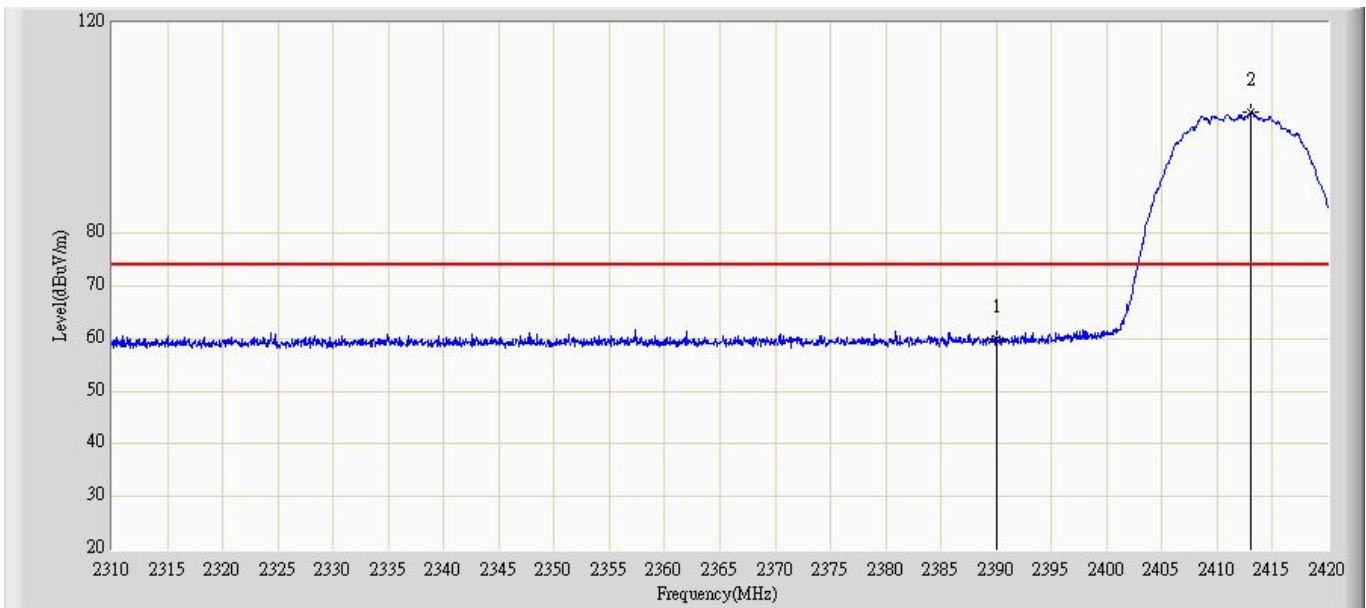
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	59.424	28.239	-14.576	74.000	31.185	PK
2		*	2408.670	101.425	70.245	N/A	N/A	31.180	PK

Profile: 11AS010R	Page No.: 166
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2412MHz by 802.11b(Chain 0)	



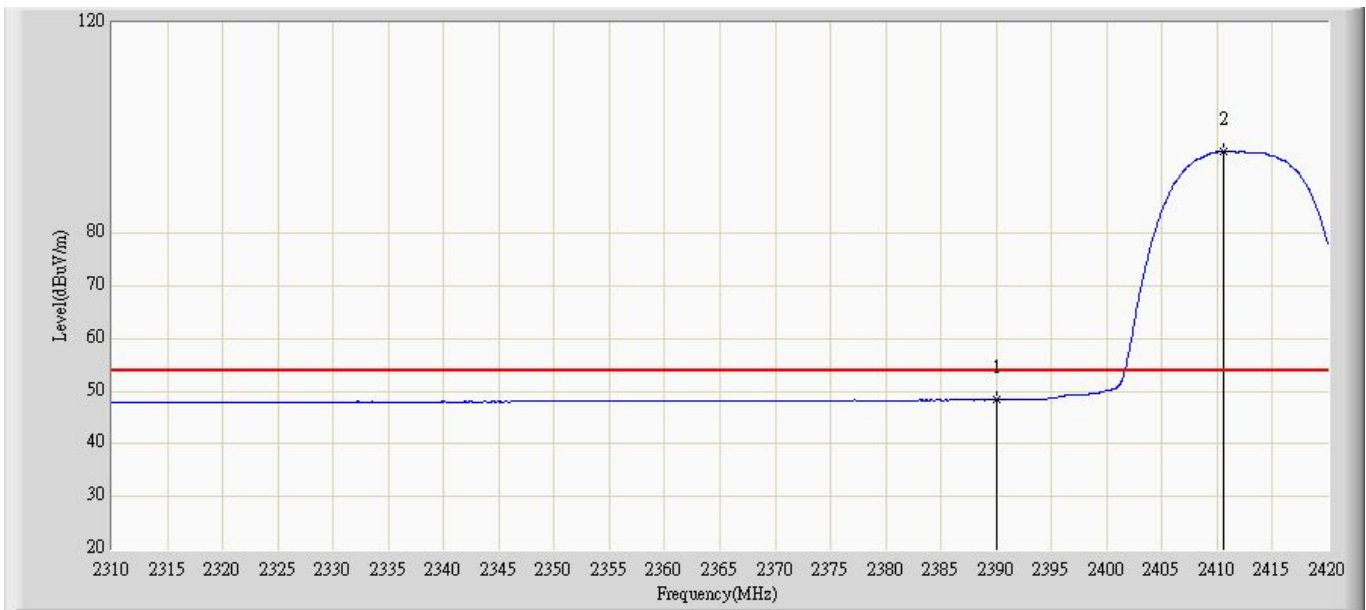
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.328	17.143	-5.672	54.000	31.185	AV
2		*	2410.705	91.724	60.544	N/A	N/A	31.180	AV

Profile: 11AS010R	Page No.: 167
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2412MHz by 802.11b(Chain 0)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	59.832	28.647	-14.168	74.000	31.185	PK
2		*	2412.960	102.915	71.734	N/A	N/A	31.181	PK

Profile: 11AS010R	Page No.: 168
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2412MHz by 802.11b(Chain 0)	



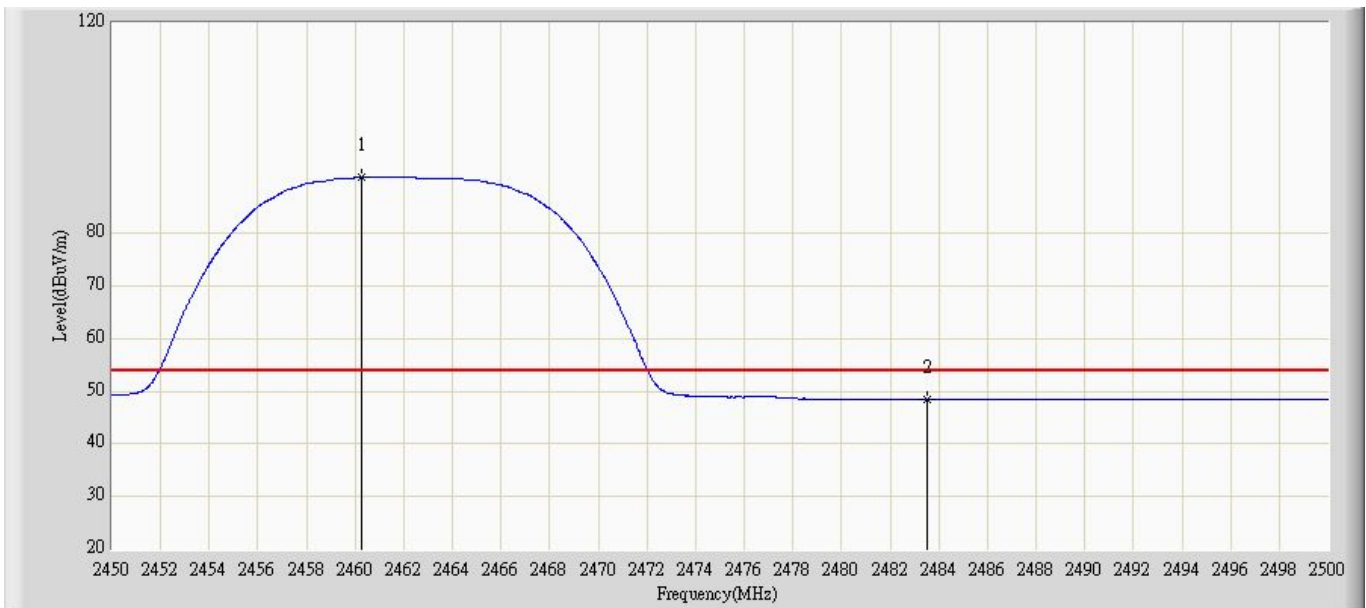
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.357	17.172	-5.643	54.000	31.185	AV
2		*	2410.540	95.480	64.300	N/A	N/A	31.180	AV

Profile: 11AS010R	Page No.: 169
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2462MHz by 802.11b(Chain 0)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.025	99.064	67.861	N/A	N/A	31.203	PK
2			2483.500	59.571	28.362	-14.429	74.000	31.209	PK

Profile: 11AS010R	Page No.: 170
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2462MHz by 802.11b(Chain 0)	



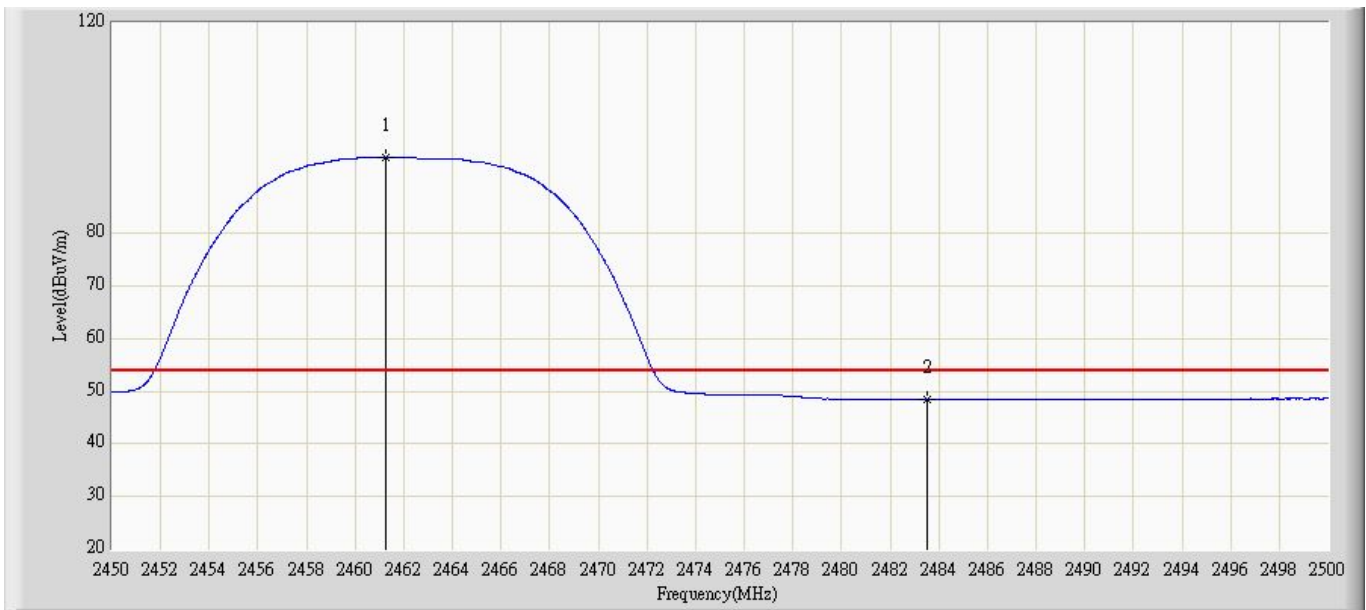
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.250	90.698	59.497	N/A	N/A	31.201	AV
2			2483.500	48.362	17.153	-5.638	54.000	31.209	AV

Profile: 11AS010R	Page No.: 171
Engineer: Vilk	
Site: AC5	Time: 2011/10/19 - 19:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2462MHz by 802.11b(Chain 0)	



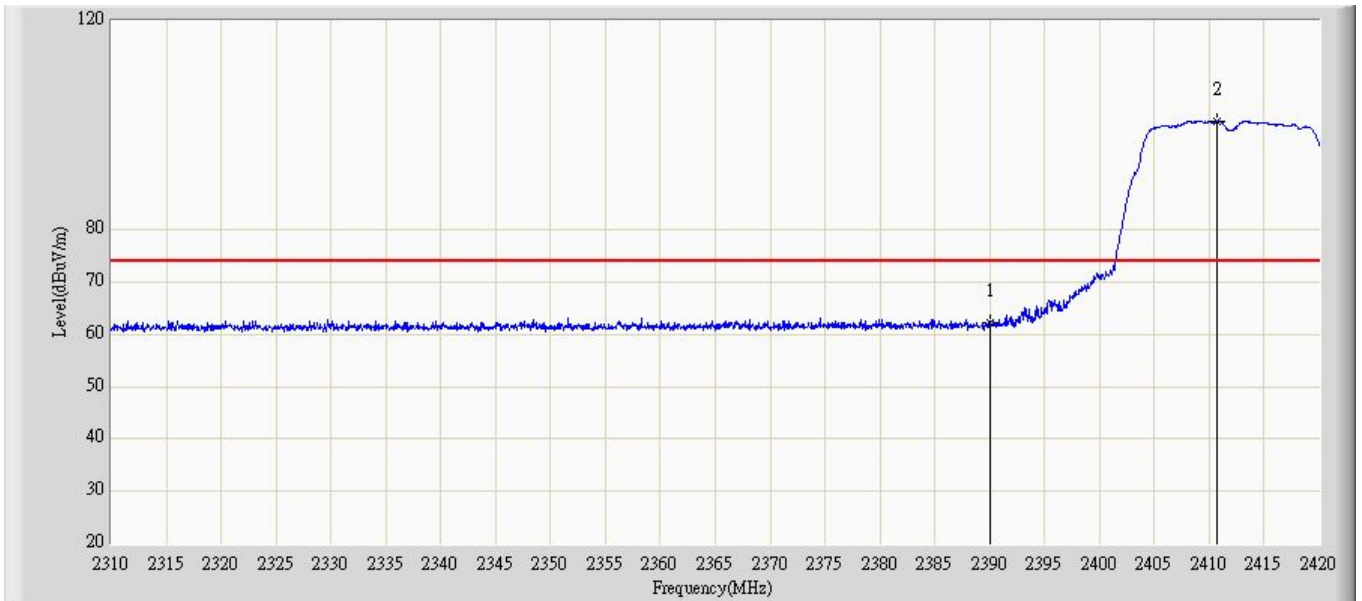
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.025	102.096	70.893	N/A	N/A	31.203	PK
2			2483.500	61.530	30.321	-12.470	74.000	31.209	PK

Profile: 11AS010R	Page No.: 172
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2462MHz by 802.11b(Chain 0)	



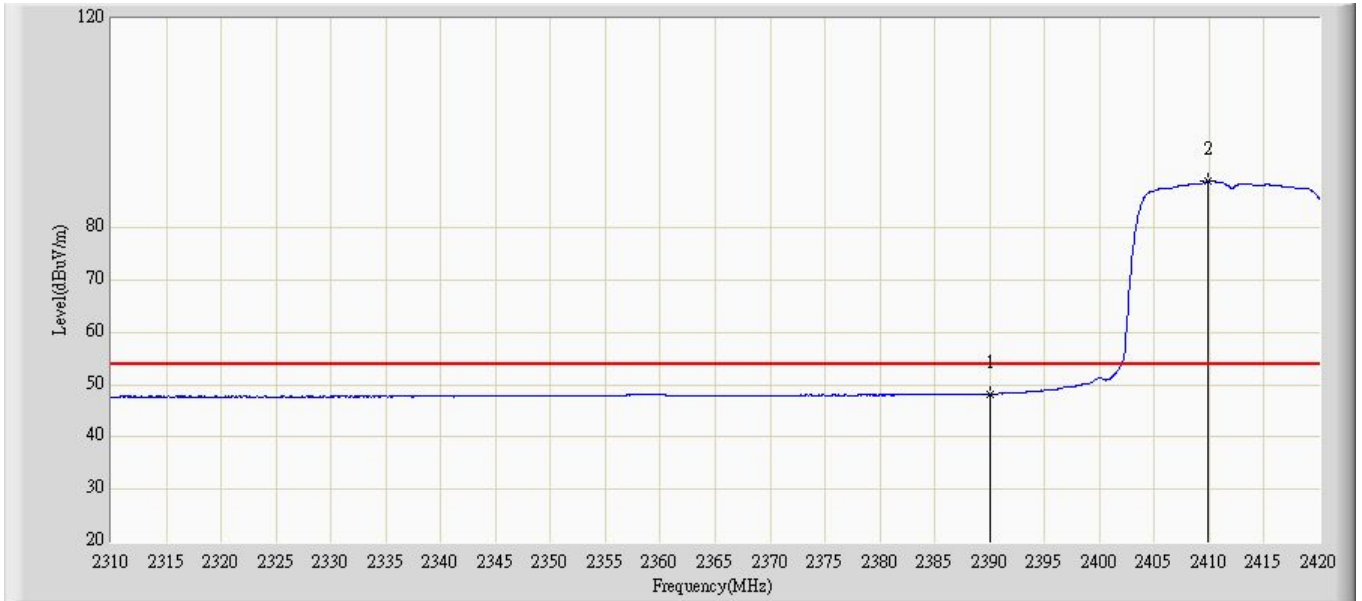
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.250	94.450	63.248	N/A	N/A	31.202	AV
2			2483.500	48.440	17.231	-5.560	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 09:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2412MHz by 802.11g(Chain 0)	



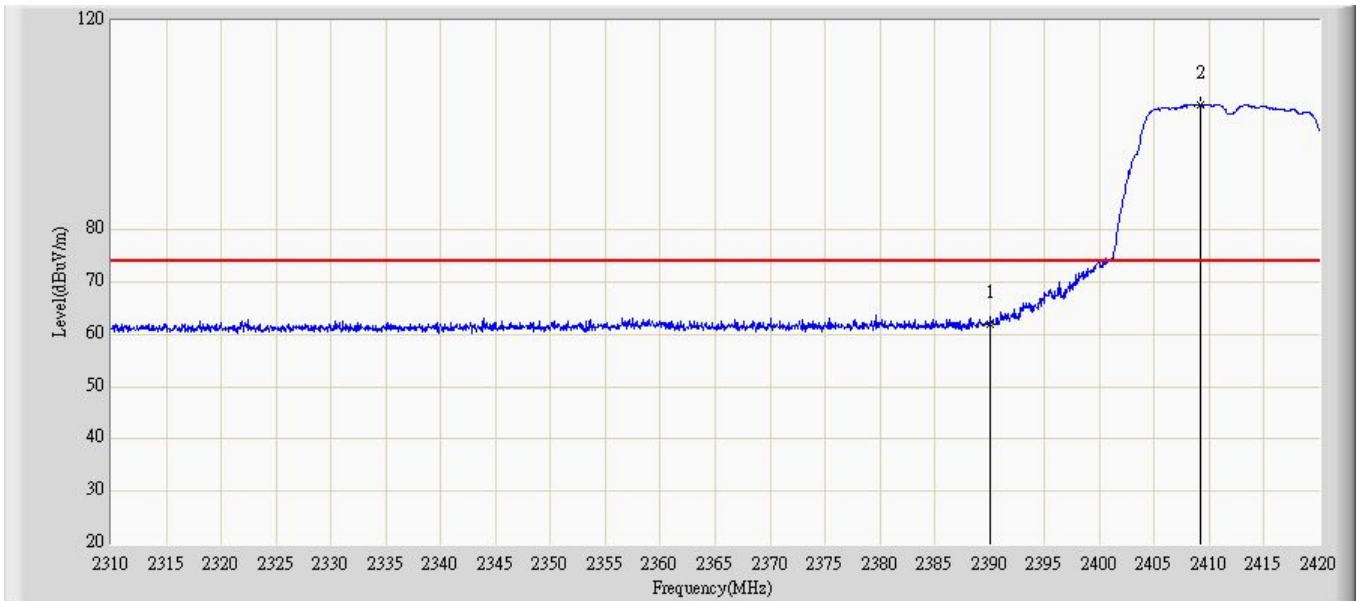
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	62.198	31.013	-11.802	74.000	31.185	PK
2		*	2410.705	100.800	69.620	N/A	N/A	31.180	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 09:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2412MHz by 802.11g(Chain 0)	



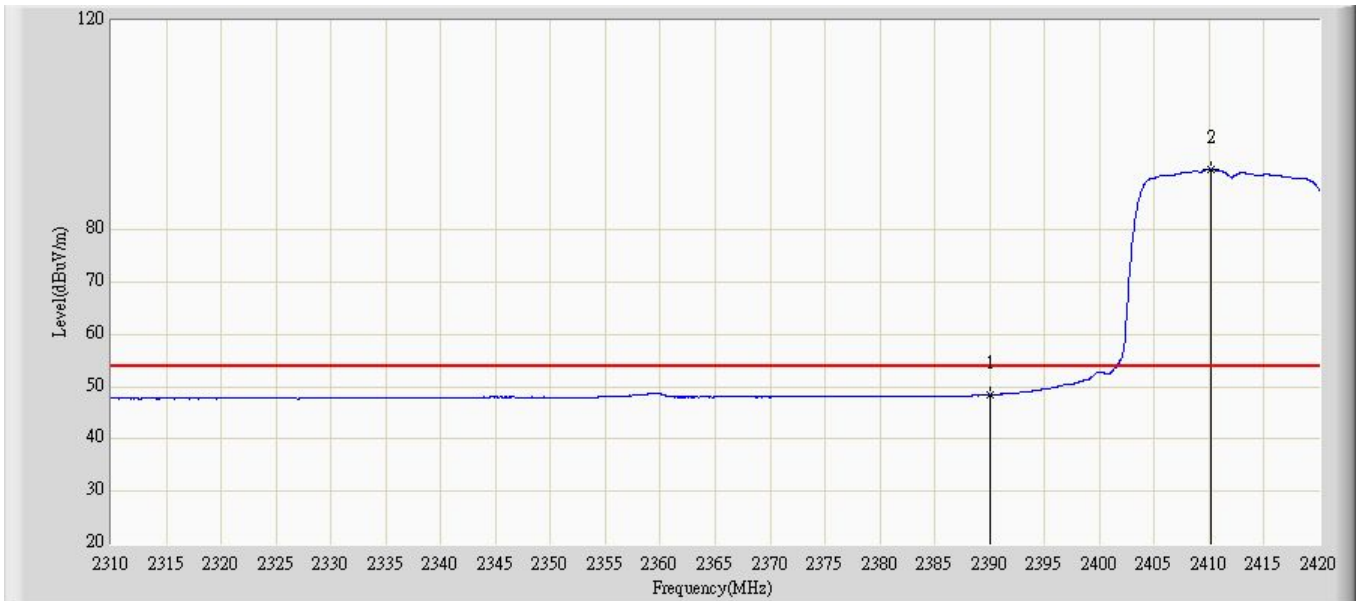
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.272	17.087	-5.728	54.000	31.185	AV
2		*	2409.825	88.926	57.746	N/A	N/A	31.181	AV

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 09:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2412MHz by 802.11g(Chain 0)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	62.037	30.852	-11.963	74.000	31.185	PK
2		*	2409.165	104.035	72.855	N/A	N/A	31.180	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 09:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2412MHz by 802.11g(Chain 0)	



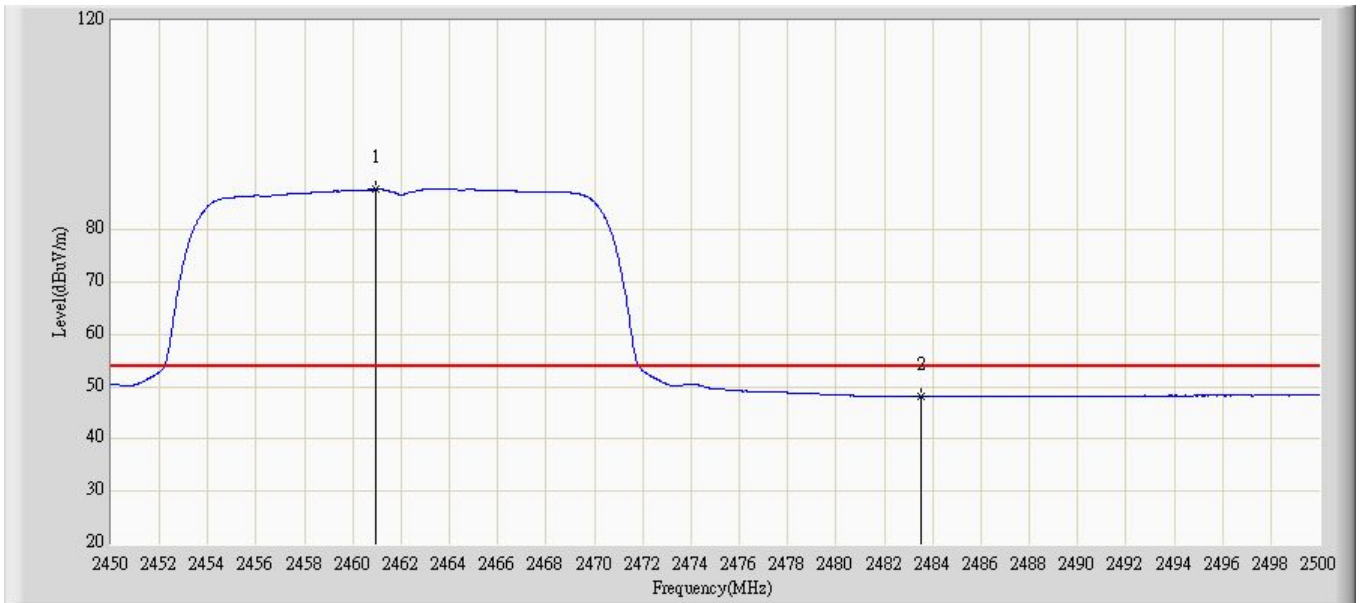
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.434	17.249	-5.566	54.000	31.185	AV
2		*	2410.210	91.617	60.437	N/A	N/A	31.180	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 10:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2462MHz by 802.11g(Chain 0)	



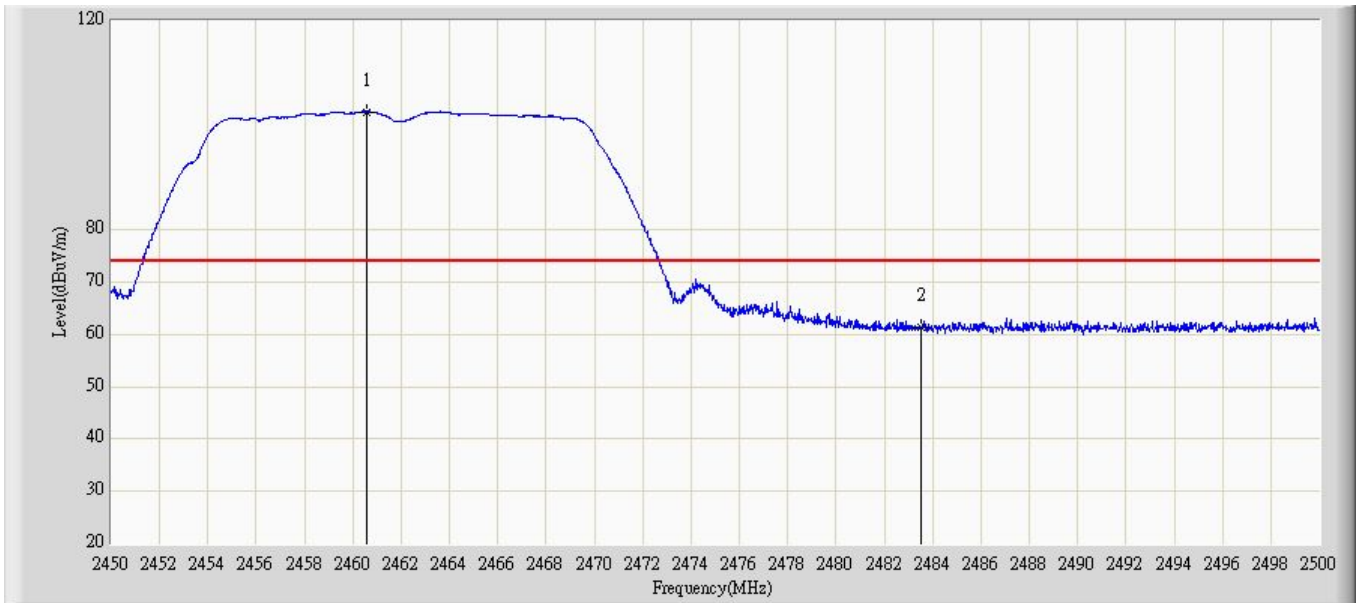
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.600	99.349	68.147	N/A	N/A	31.202	PK
2			2483.500	61.711	30.502	-12.289	74.000	31.209	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 10:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode1: Transmit at channel 2462MHz by 802.11g(Chain 0)	



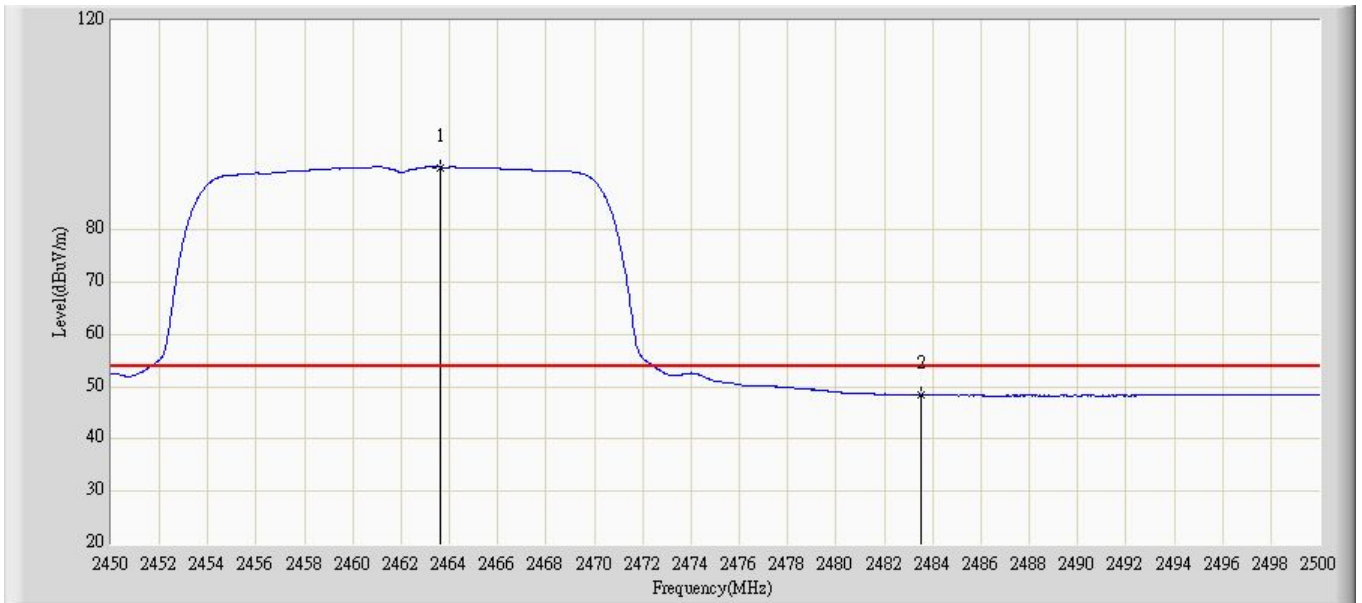
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.950	87.759	56.557	N/A	N/A	31.202	AV
2			2483.500	48.180	16.971	-5.820	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 10:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2462MHz by 802.11g(Chain 0)	



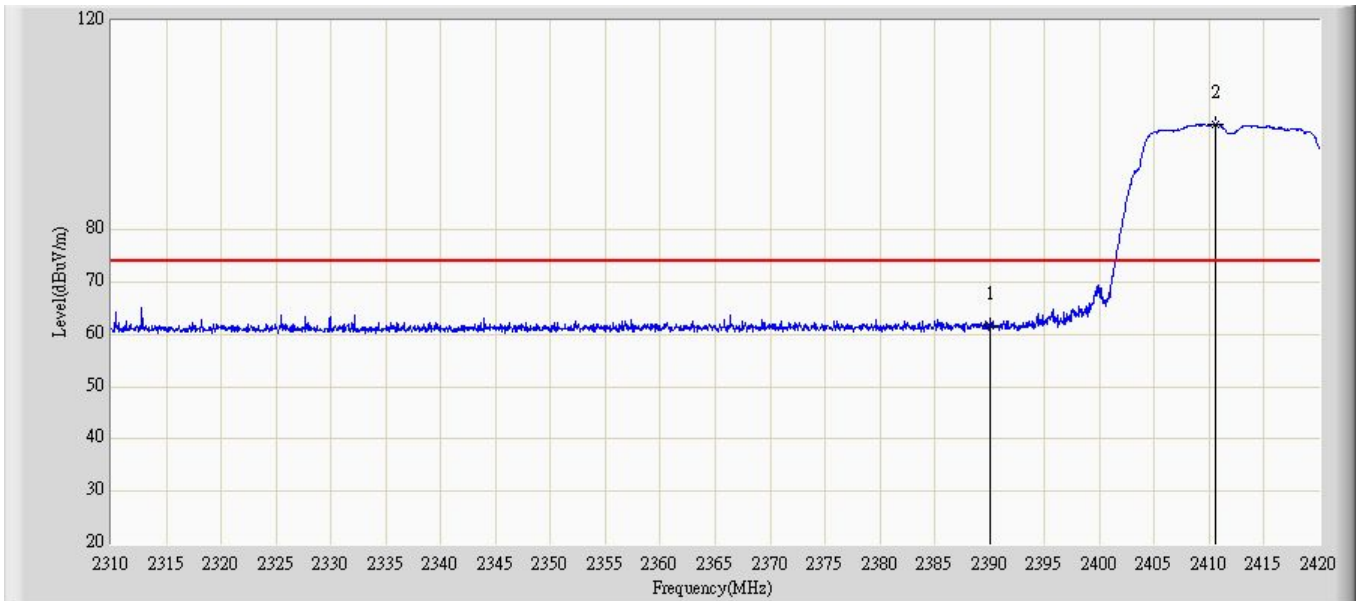
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.550	102.496	71.295	N/A	N/A	31.201	PK
2			2483.500	61.294	30.085	-12.706	74.000	31.209	PK

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 10:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2462MHz by 802.11g(Chain 0)	



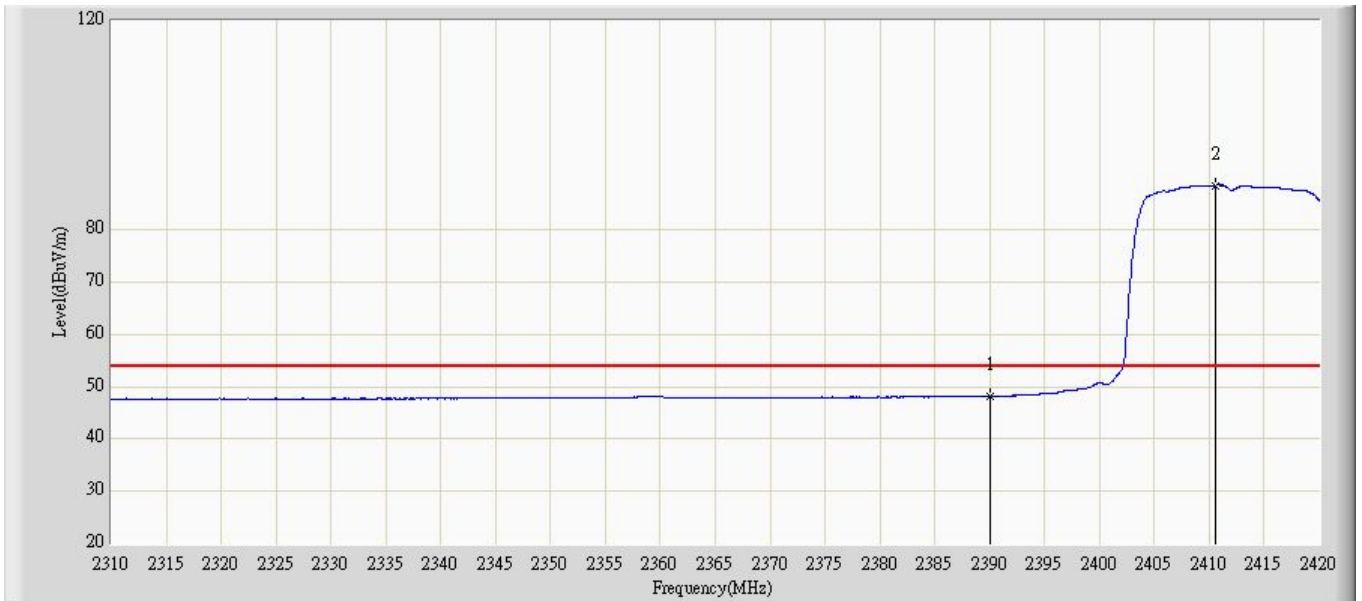
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.650	91.967	60.764	N/A	N/A	31.203	AV
2			2483.500	48.335	17.126	-5.665	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 10:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2412MHz by 802.11n(20)(Chain 0)	



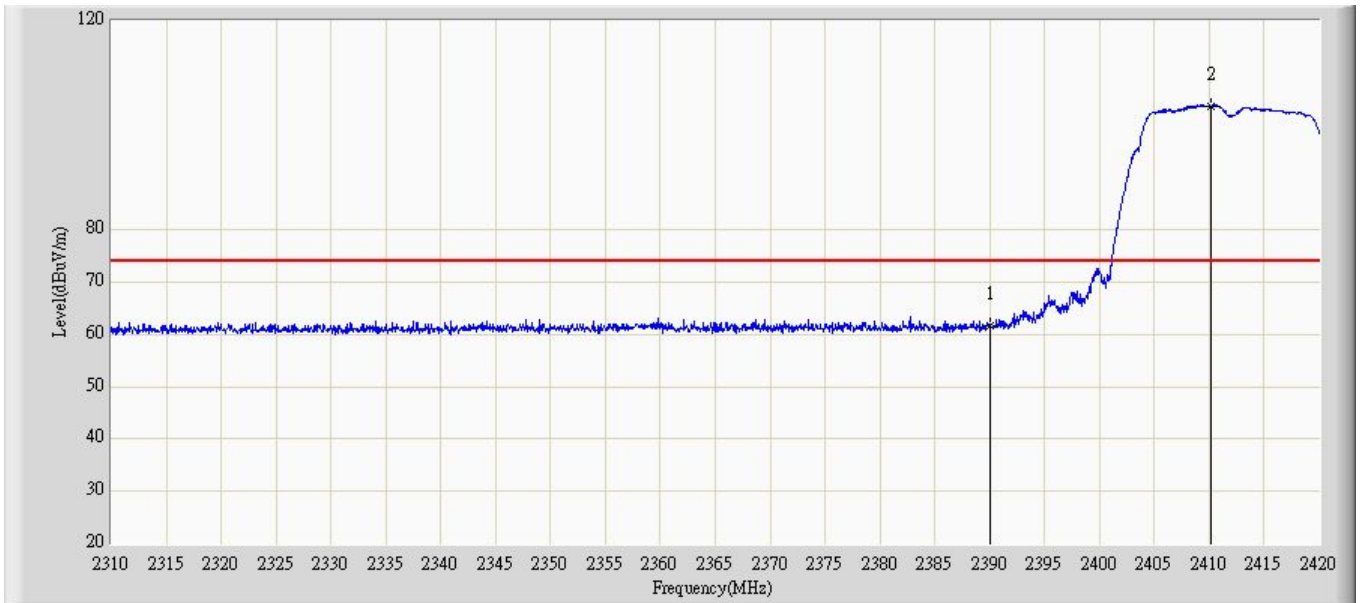
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.650	30.465	-12.350	74.000	31.185	PK
2		*	2410.540	100.282	69.102	N/A	N/A	31.180	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 10:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2412MHz by 802.11n(20)(Chain 0)	



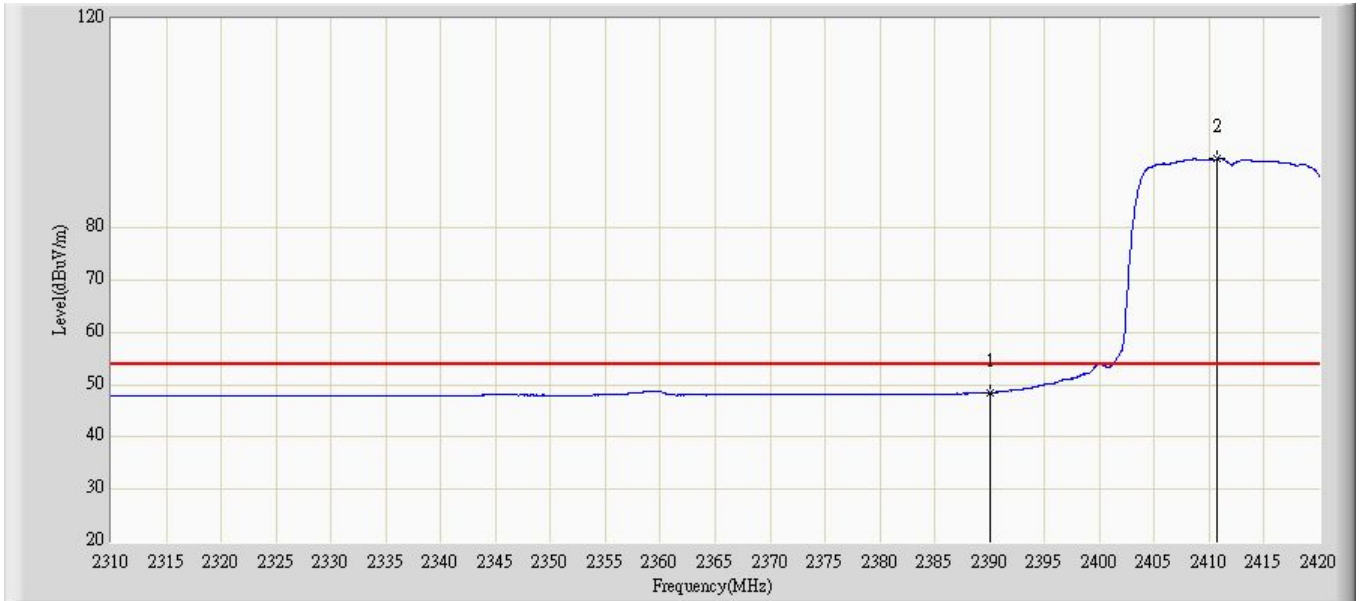
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.165	16.980	-5.835	54.000	31.185	AV
2		*	2410.595	88.502	57.322	N/A	N/A	31.180	AV

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 10:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2412MHz by 802.11n(20)(Chain 0)	



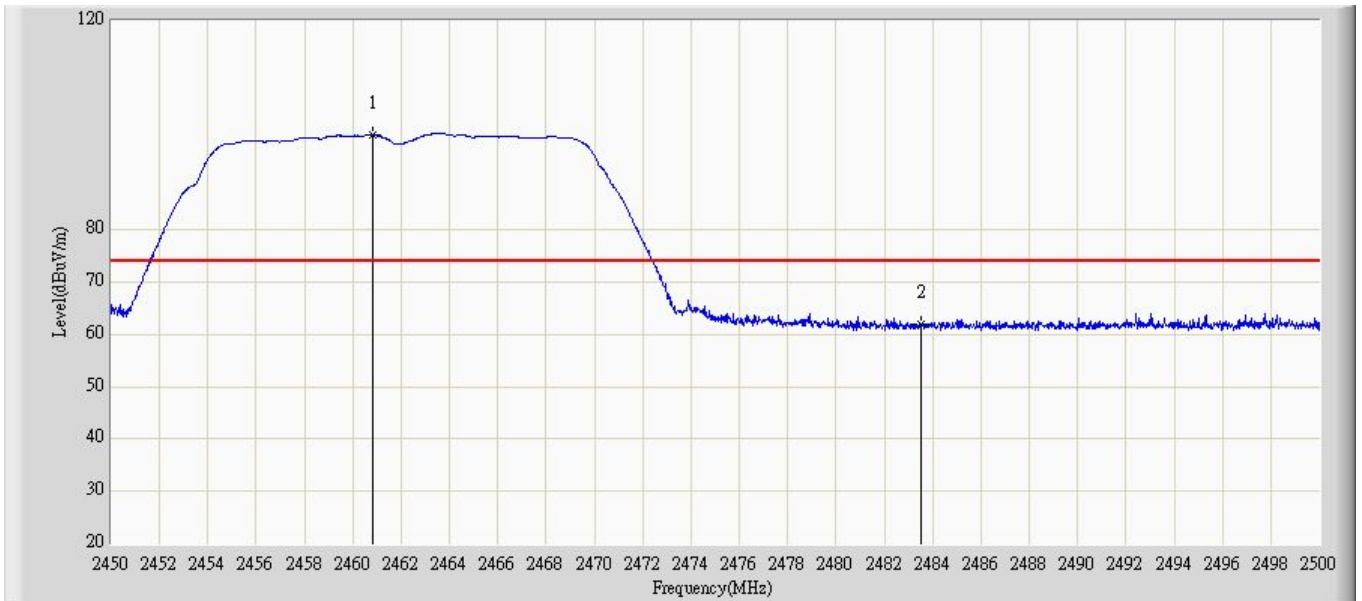
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.623	30.438	-12.377	74.000	31.185	PK
2		*	2410.210	103.747	72.567	N/A	N/A	31.180	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 10:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2412MHz by 802.11n(20)(Chain 0)	



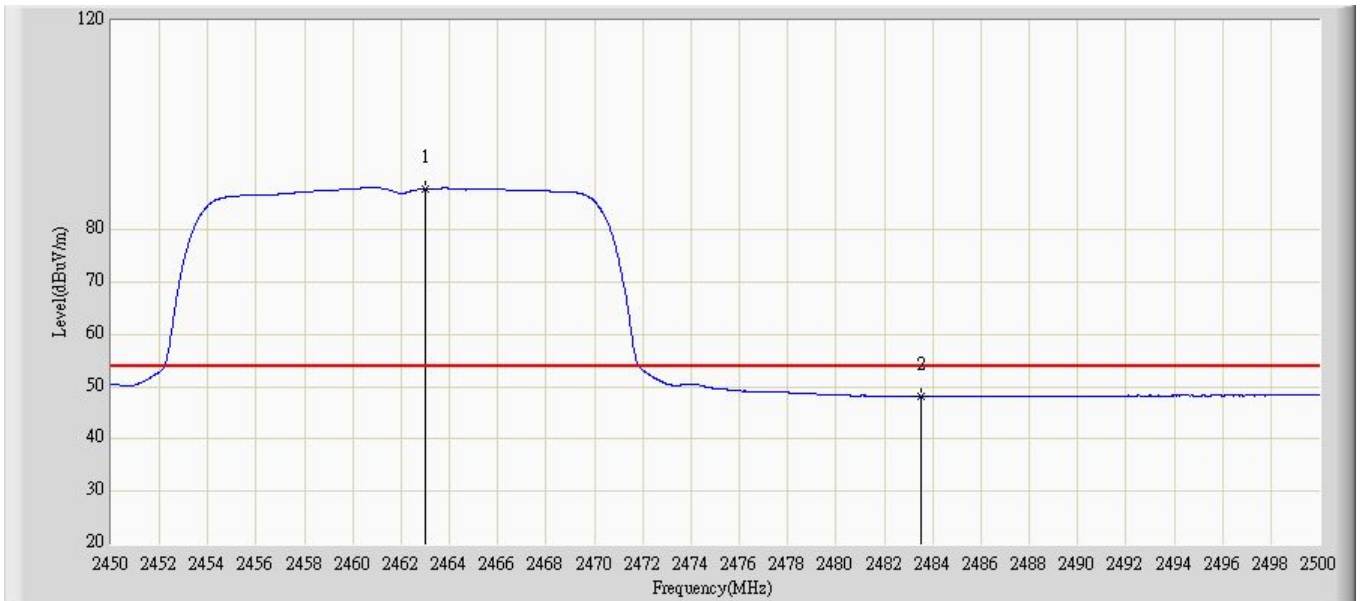
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.532	17.347	-5.468	54.000	31.185	AV
2		*	2410.650	93.155	61.975	N/A	N/A	31.180	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 10:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2462MHz by 802.11n(20)(Chain 0)	



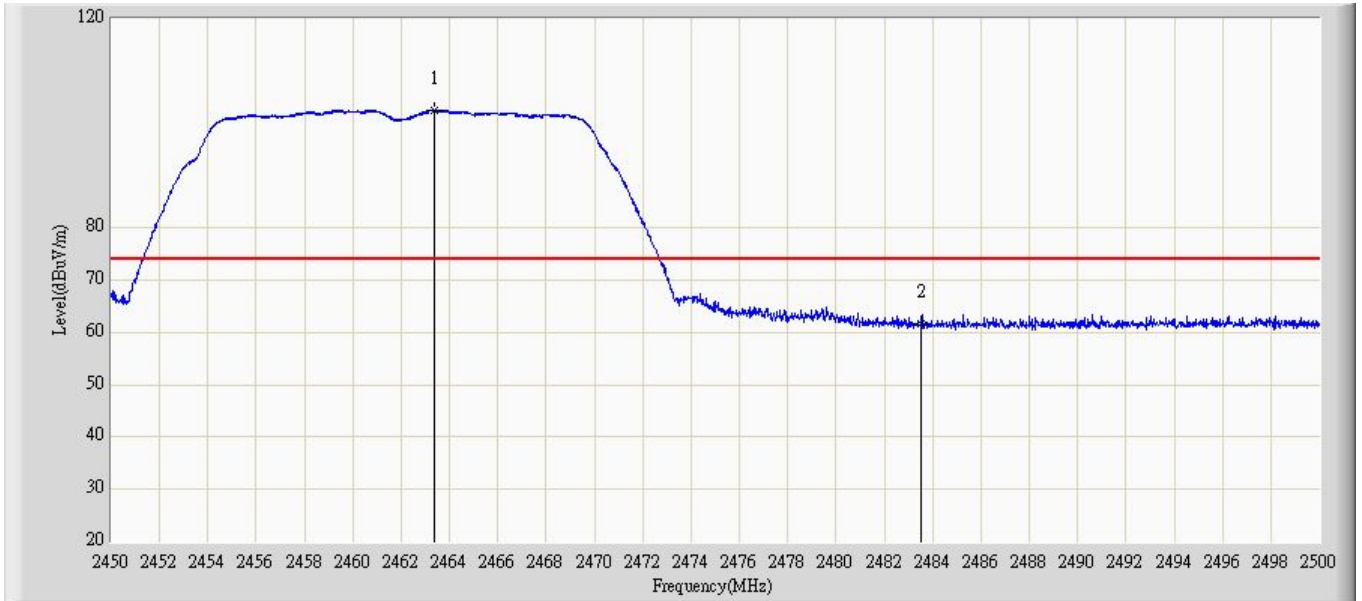
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.850	98.150	66.948	N/A	N/A	31.202	PK
2			2483.500	61.856	30.647	-12.144	74.000	31.209	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 10:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2462MHz by 802.11n(20)(Chain 0)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.025	87.915	56.712	N/A	N/A	31.203	AV
2			2483.500	48.163	16.954	-5.837	54.000	31.209	AV

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 10:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2462MHz by 802.11n(20)(Chain 0)	



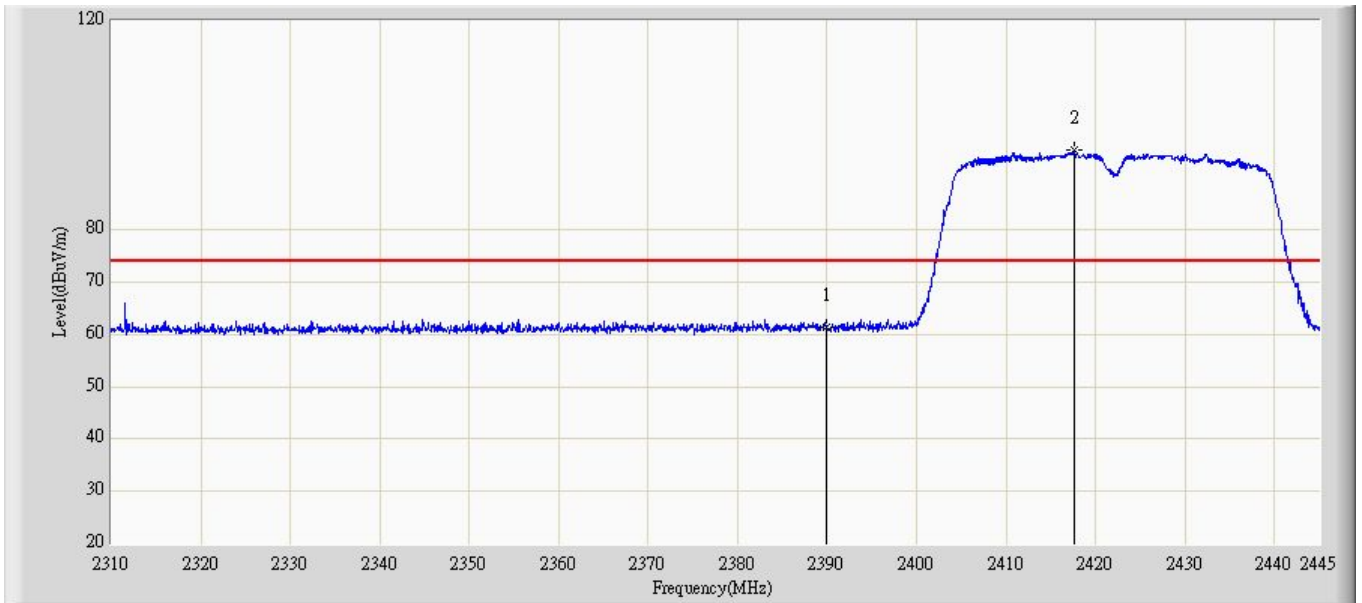
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.350	102.504	71.301	N/A	N/A	31.203	PK
2			2483.500	61.711	30.502	-12.289	74.000	31.209	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 10:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2462MHz by 802.11n(20)(Chain 0)	



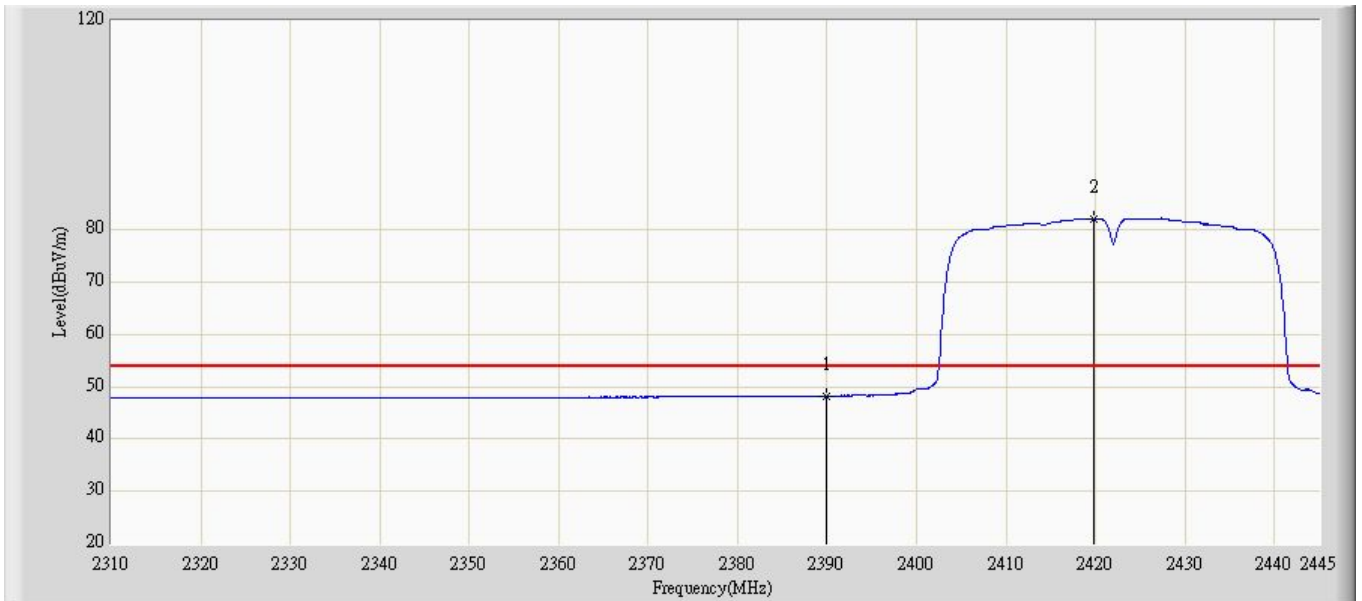
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.550	91.416	60.215	N/A	N/A	31.201	AV
2			2483.500	48.378	17.169	-5.622	54.000	31.209	AV

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 10:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2422MHz by 802.11n(40)(Chain 0)	



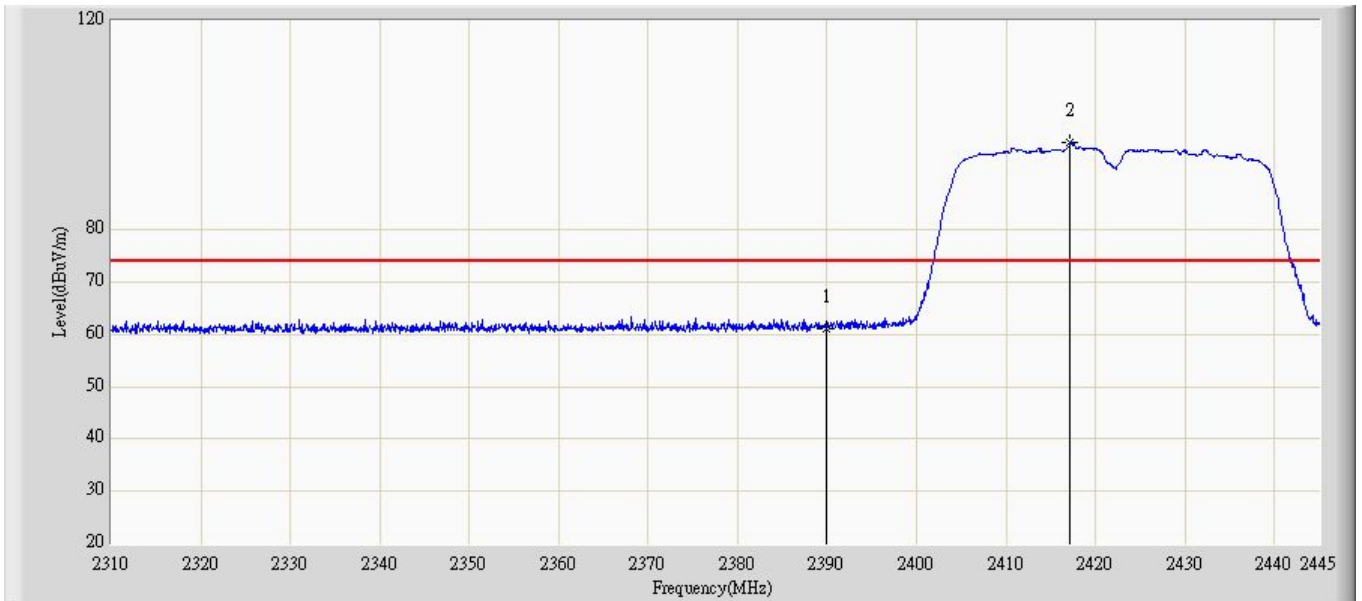
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.517	30.332	-12.483	74.000	31.185	PK
2		*	2417.663	95.298	64.116	N/A	N/A	31.182	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 11:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2422MHz by 802.11n(40)(Chain 0)	



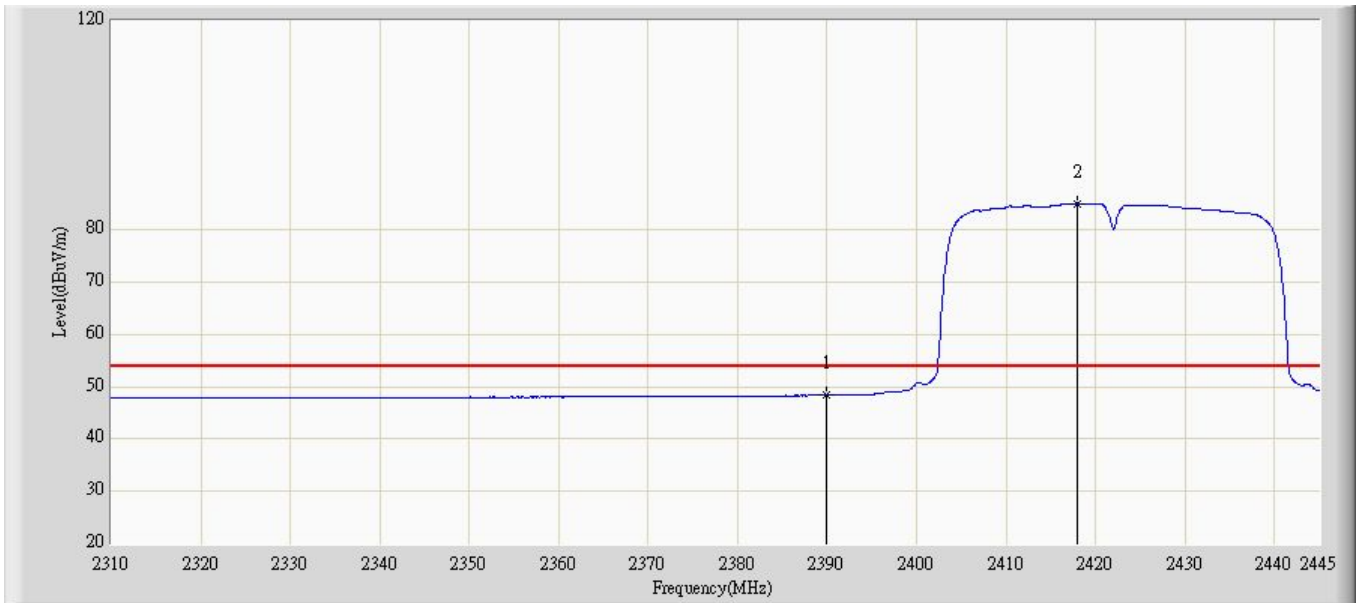
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.233	17.048	-5.767	54.000	31.185	AV
2		*	2419.755	82.046	50.863	N/A	N/A	31.183	AV

Engineer: VilK	
Site: AC5	Time: 2011/10/13 - 11:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2422MHz by 802.11n(40)(Chain 0)	



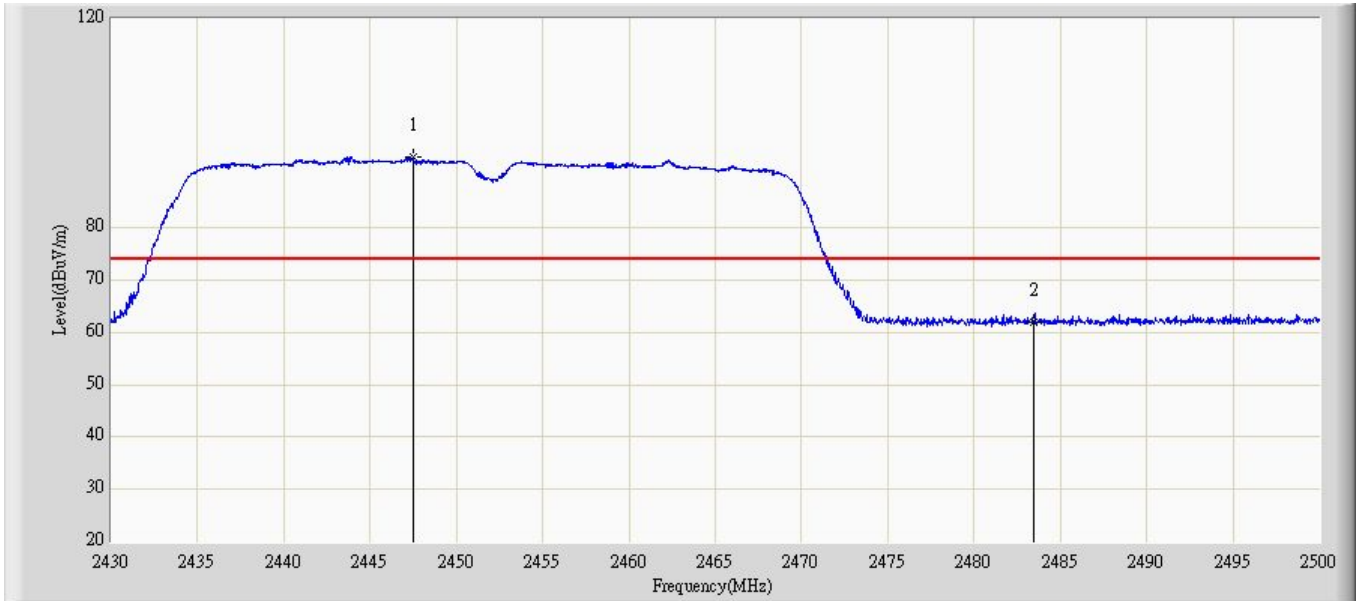
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.160	29.975	-12.840	74.000	31.185	PK
2		*	2417.190	96.627	65.445	N/A	N/A	31.182	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 11:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2422MHz by 802.11n(40)(Chain 0)	



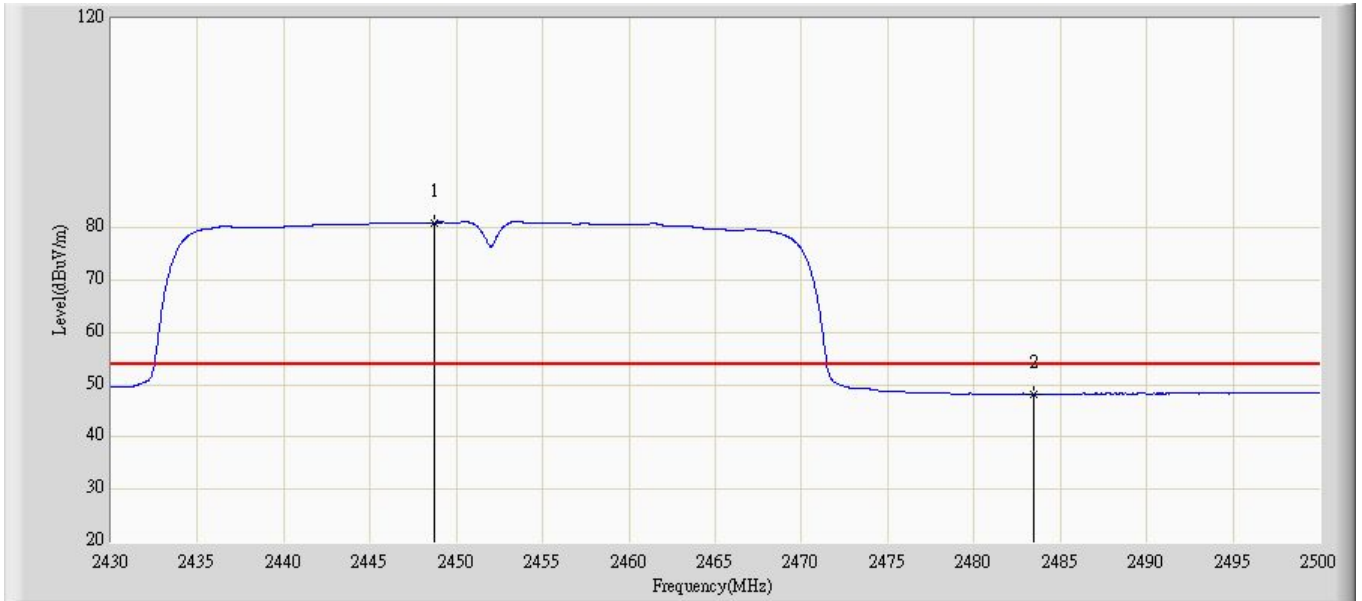
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.371	17.186	-5.629	54.000	31.185	AV
2		*	2417.933	85.072	53.890	N/A	N/A	31.183	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 11:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2452MHz by 802.11n(40)(Chain 0)	



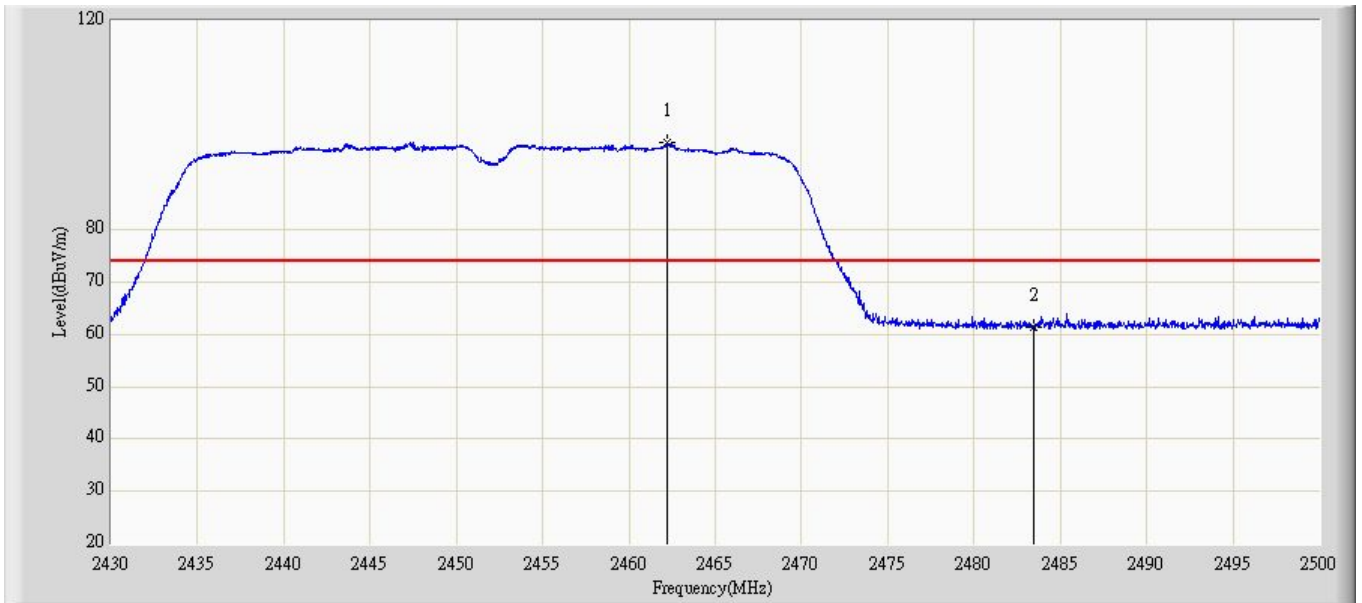
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2447.465	93.499	62.311	N/A	N/A	31.188	PK
2			2483.500	61.941	30.732	-12.059	74.000	31.209	PK

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 11:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2452MHz by 802.11n(40)(Chain 0)	



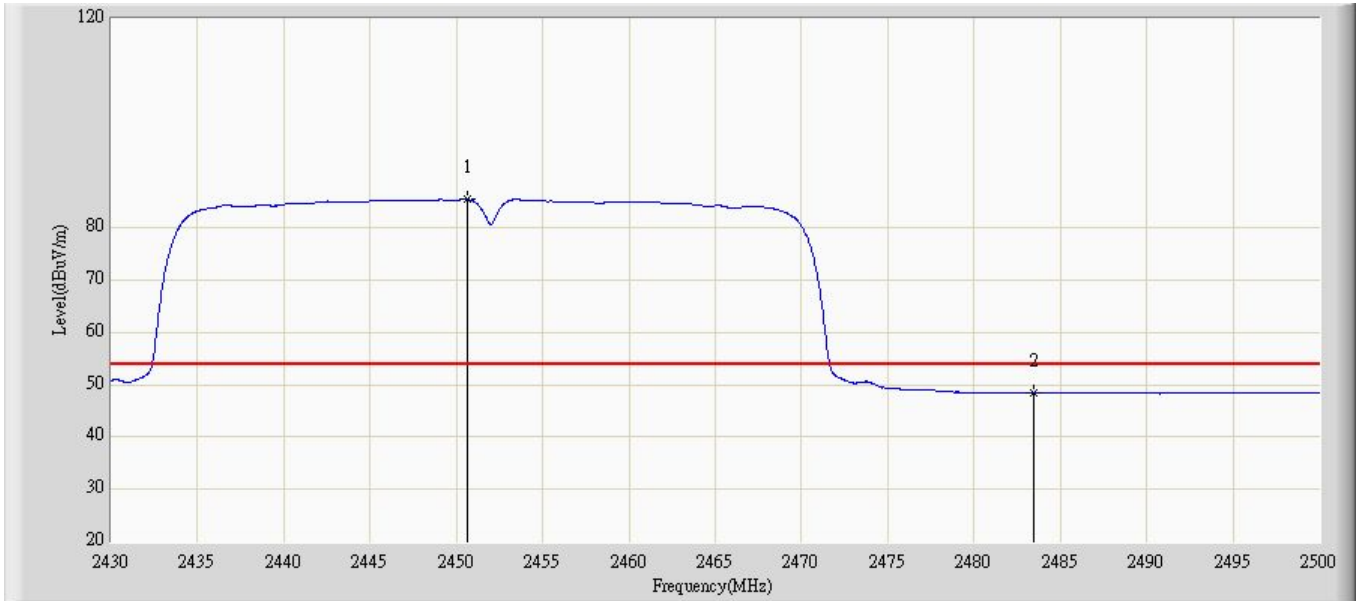
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2448.760	81.027	49.838	N/A	N/A	31.189	AV
2			2483.500	48.273	17.064	-5.727	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 11:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2452MHz by 802.11n(40)(Chain 0)	



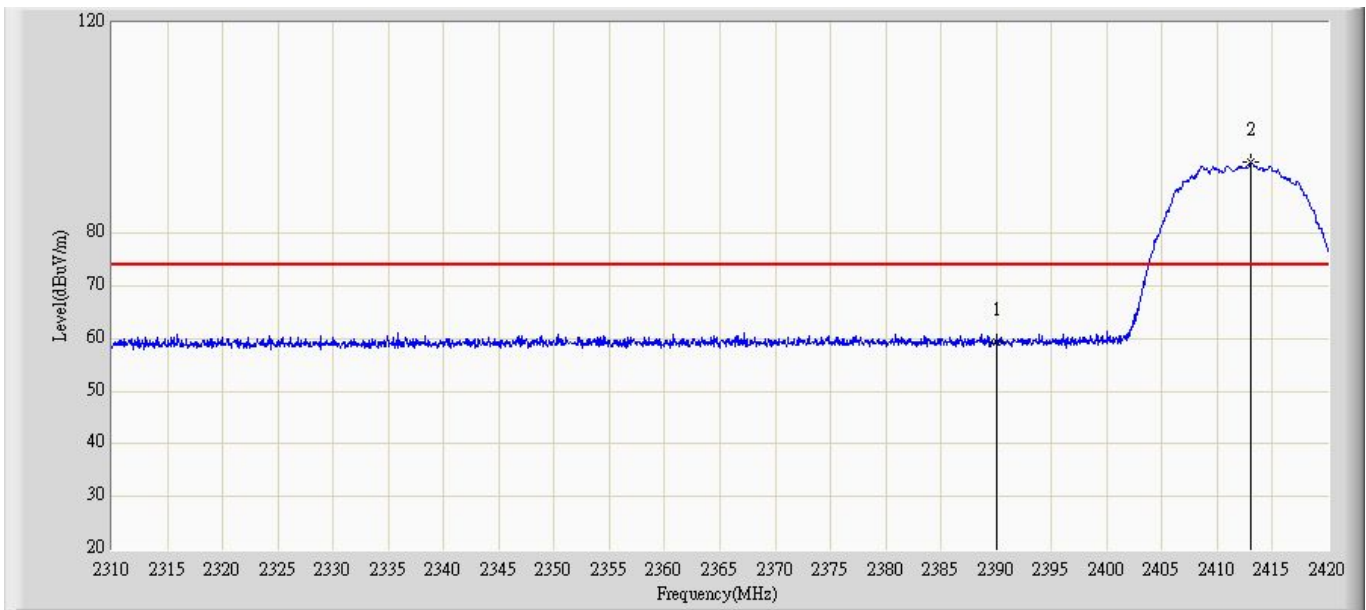
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.235	96.641	65.438	N/A	N/A	31.203	PK
2			2483.500	61.375	30.166	-12.625	74.000	31.209	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 11:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2452MHz by 802.11n(40)(Chain 0)	



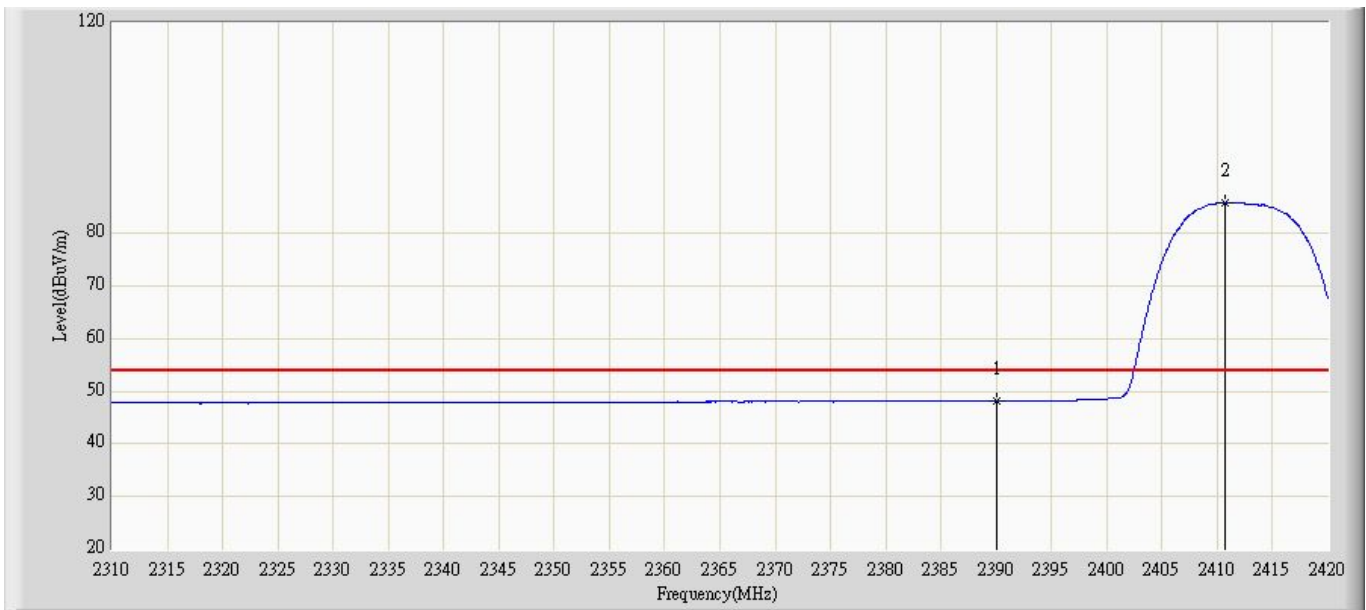
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2450.650	85.405	54.214	N/A	N/A	31.191	AV
2			2483.500	48.430	17.221	-5.570	54.000	31.209	AV

Profile: 11AS010R	Page No.: 177
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2412MHz by 802.11b(Chain 1)	



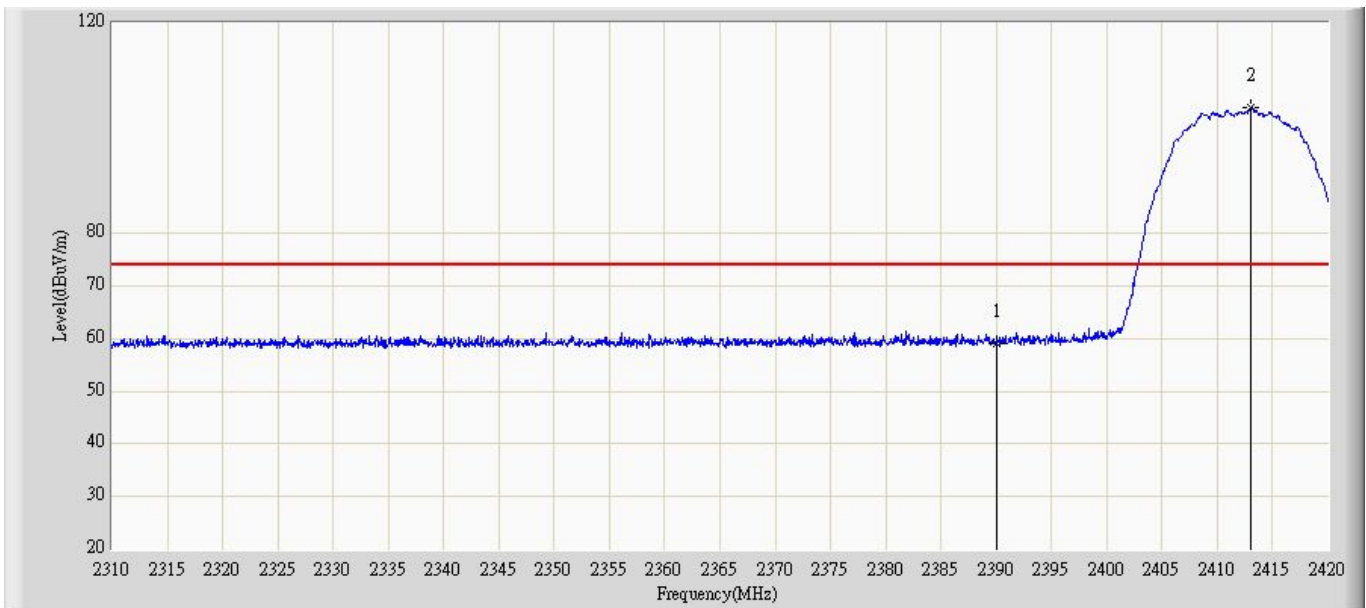
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	59.511	28.326	-14.489	74.000	31.185	PK
2		*	2413.070	93.455	62.274	N/A	N/A	31.181	PK

Profile: 11AS010R	Page No.: 178
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2412MHz by 802.11b(Chain 1)	



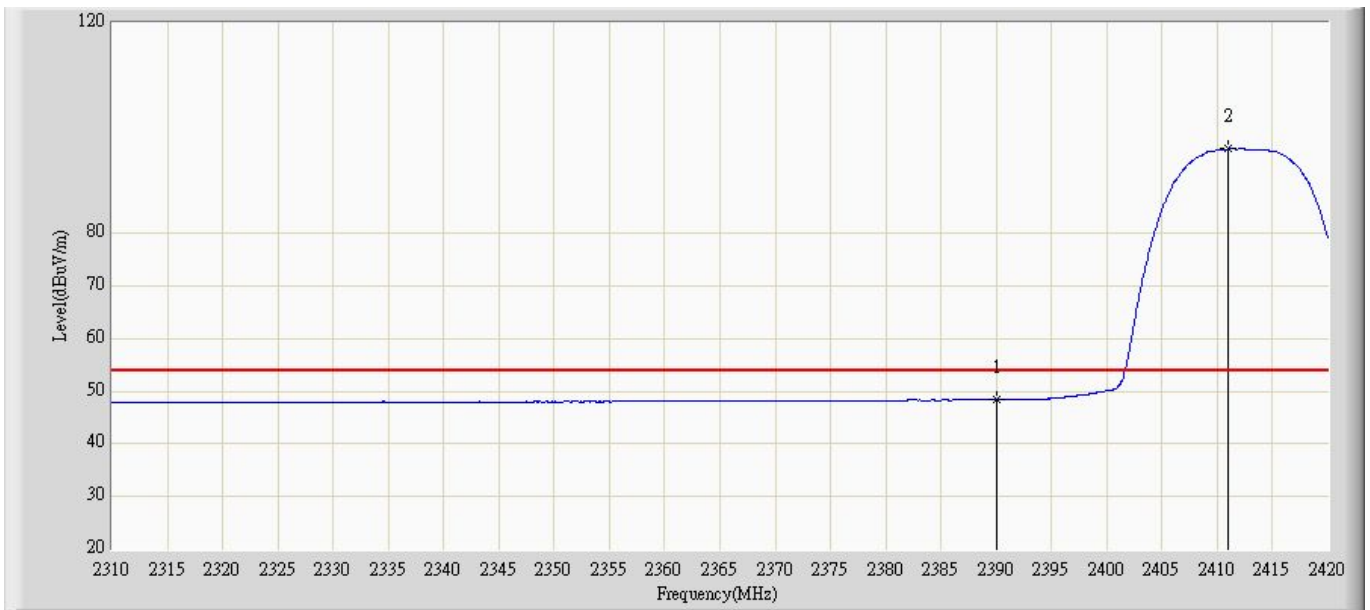
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.152	16.967	-5.848	54.000	31.185	AV
2		*	2410.705	85.695	54.515	N/A	N/A	31.180	AV

Profile: 11AS010R	Page No.: 179
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2412MHz by 802.11b(Chain 1)	



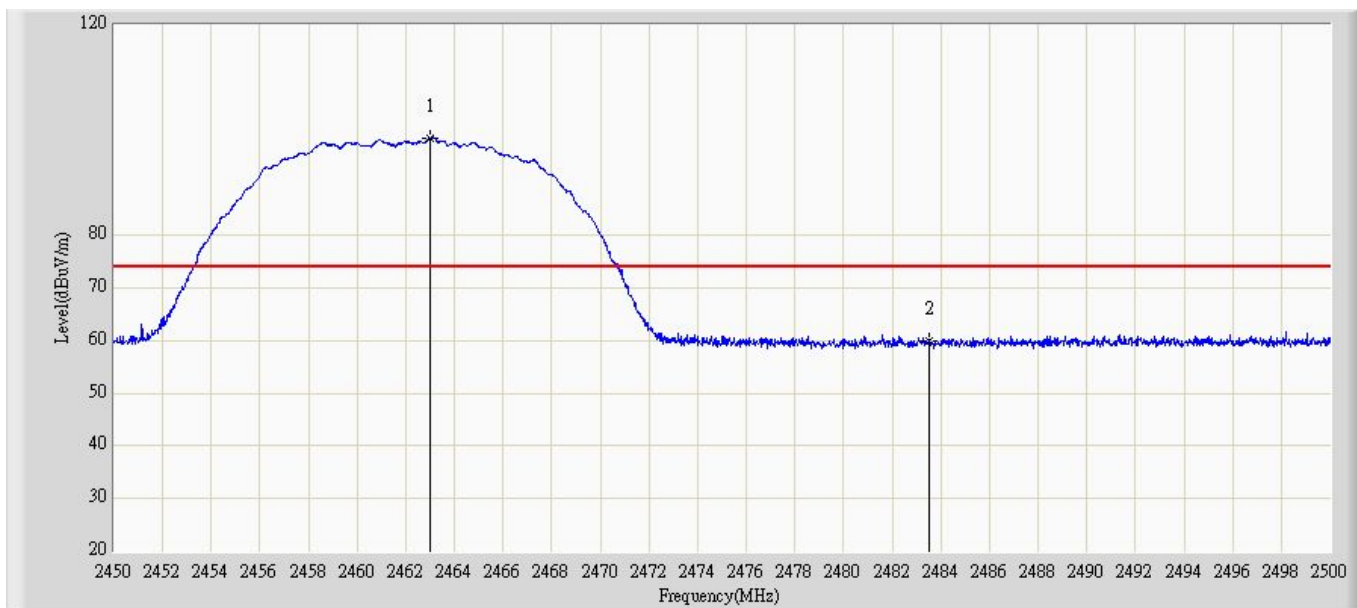
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	59.082	27.897	-14.918	74.000	31.185	PK
2		*	2412.960	103.771	72.590	N/A	N/A	31.181	PK

Profile: 11AS010R	Page No.: 180
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2412MHz by 802.11b(Chain 1)	



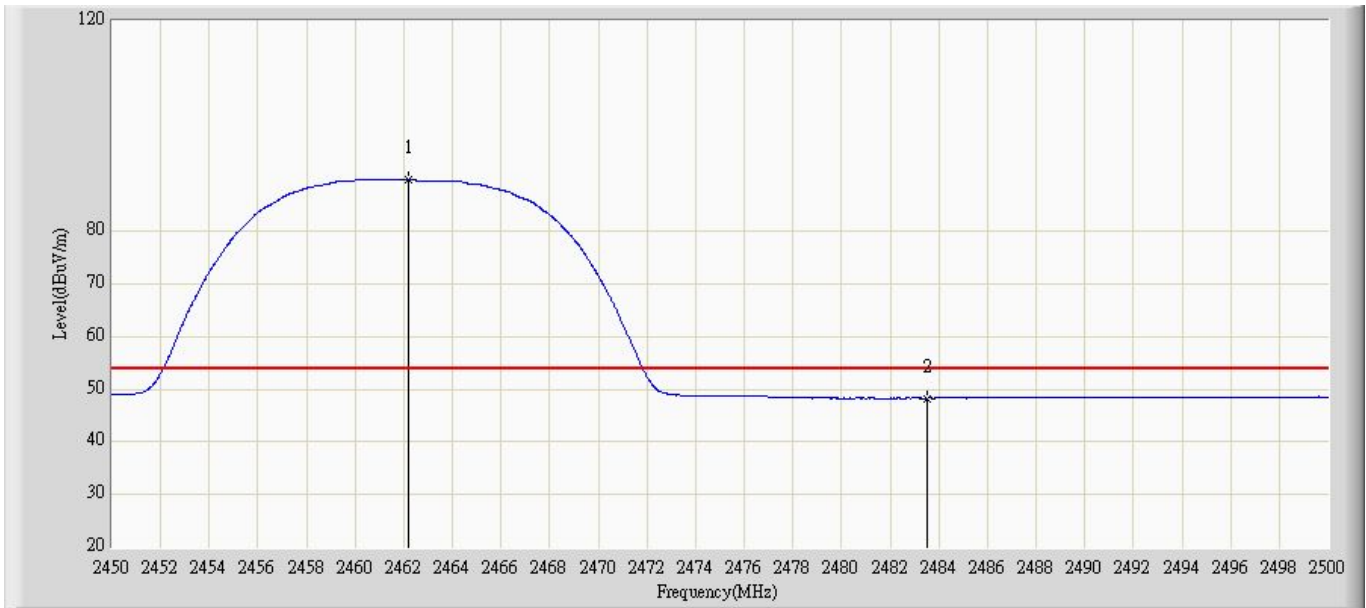
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.467	17.282	-5.533	54.000	31.185	AV
2		*	2411.035	96.006	64.826	N/A	N/A	31.180	AV

Profile: 11AS010R	Page No.: 173
Engineer: Vilks	
Site: AC5	Time: 2011/10/19 - 19:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2462MHz by 802.11b(Chain 1)	



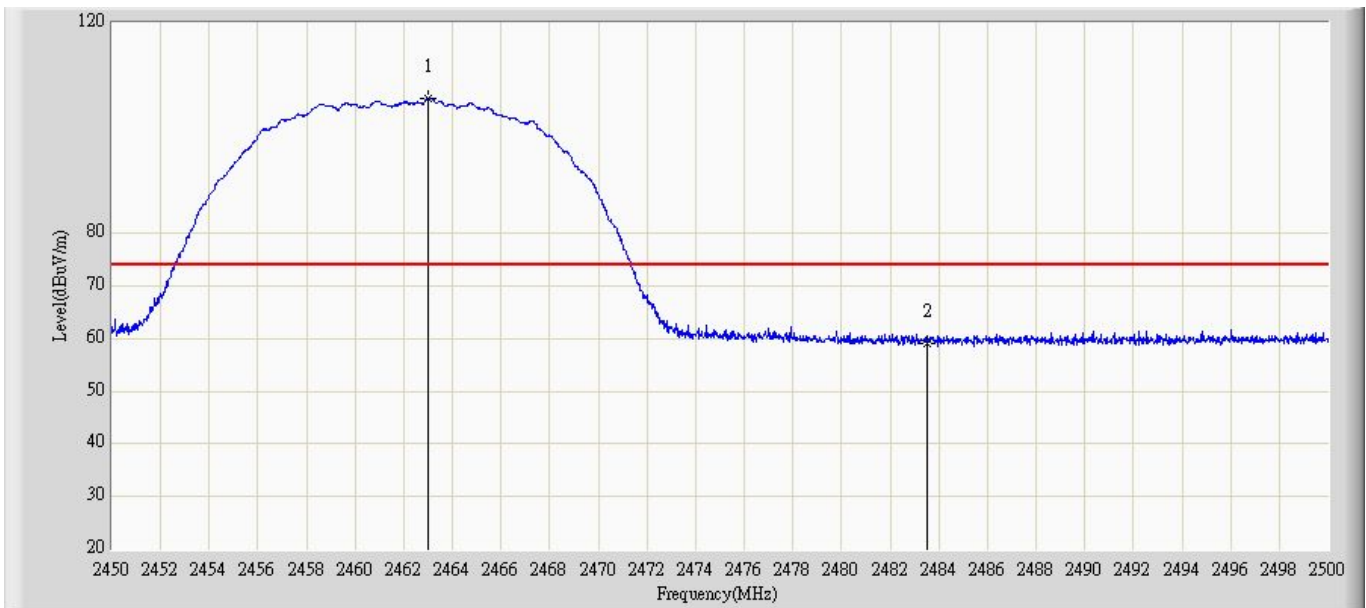
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.025	98.591	67.388	N/A	N/A	31.203	PK
2			2483.500	60.086	28.877	-13.914	74.000	31.209	PK

Profile: 11AS010R	Page No.: 174
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2462MHz by 802.11b(Chain 1)	



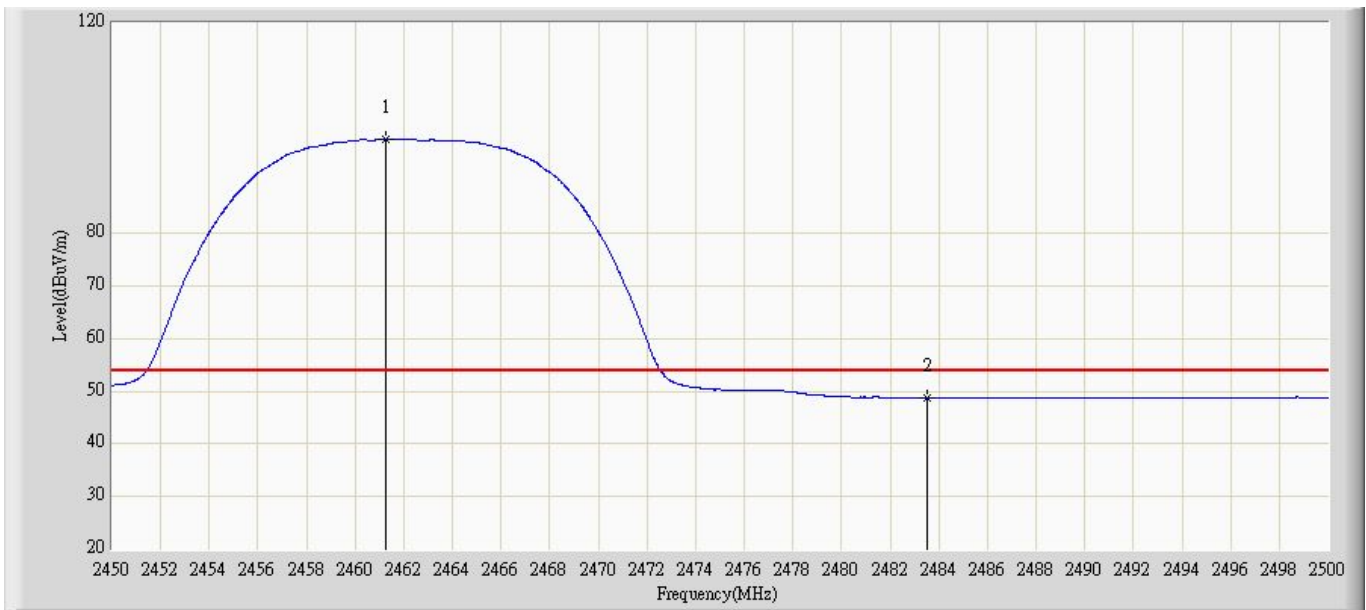
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.175	89.895	58.692	N/A	N/A	31.203	AV
2			2483.500	48.286	17.077	-5.714	54.000	31.209	AV

Profile: 11AS010R	Page No.: 175
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2462MHz by 802.11b(Chain 1)	



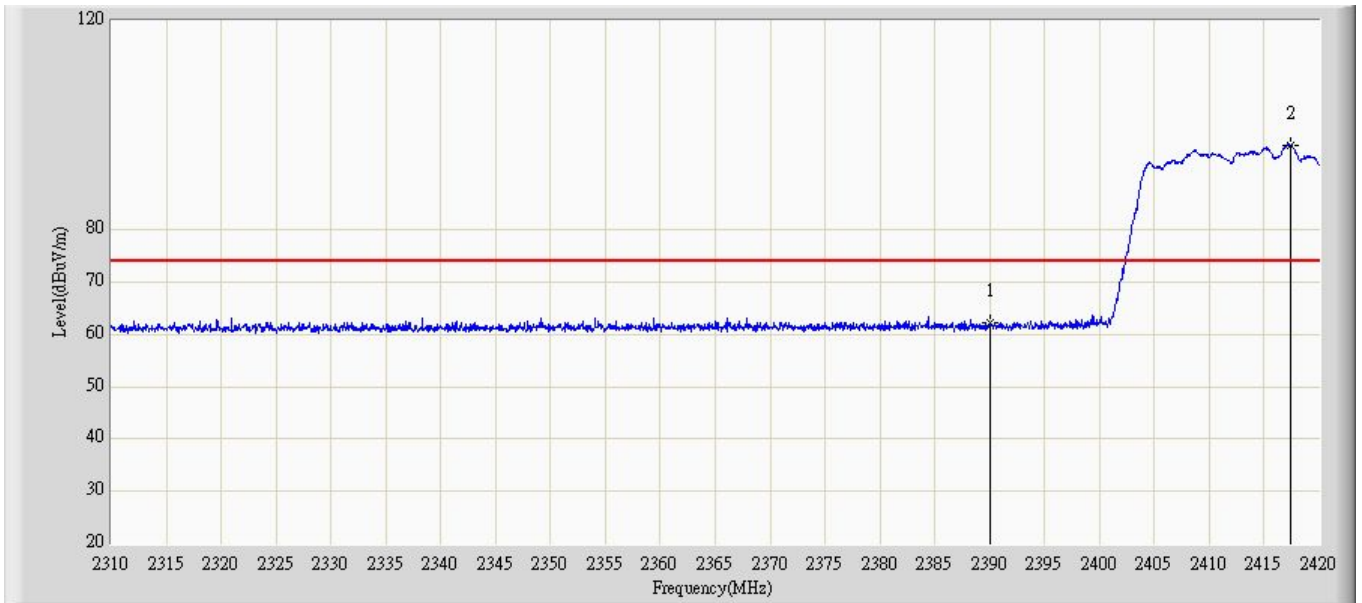
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.025	105.654	74.451	N/A	N/A	31.203	PK
2			2483.500	59.029	27.820	-14.971	74.000	31.209	PK

Profile: 11AS010R	Page No.: 176
Engineer: Vilkk	
Site: AC5	Time: 2011/10/19 - 19:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2462MHz by 802.11b(Chain 1)	



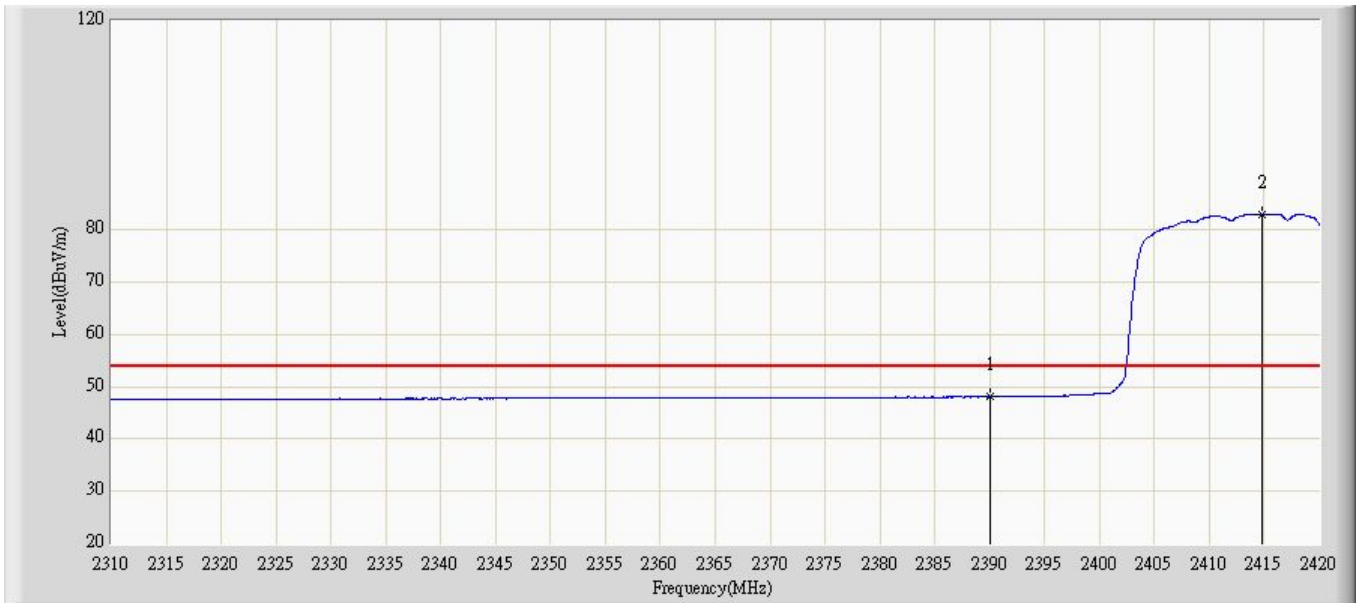
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.250	97.834	66.632	N/A	N/A	31.202	AV
2			2483.500	48.764	17.555	-5.236	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2412MHz by 802.11g(Chain 1)	



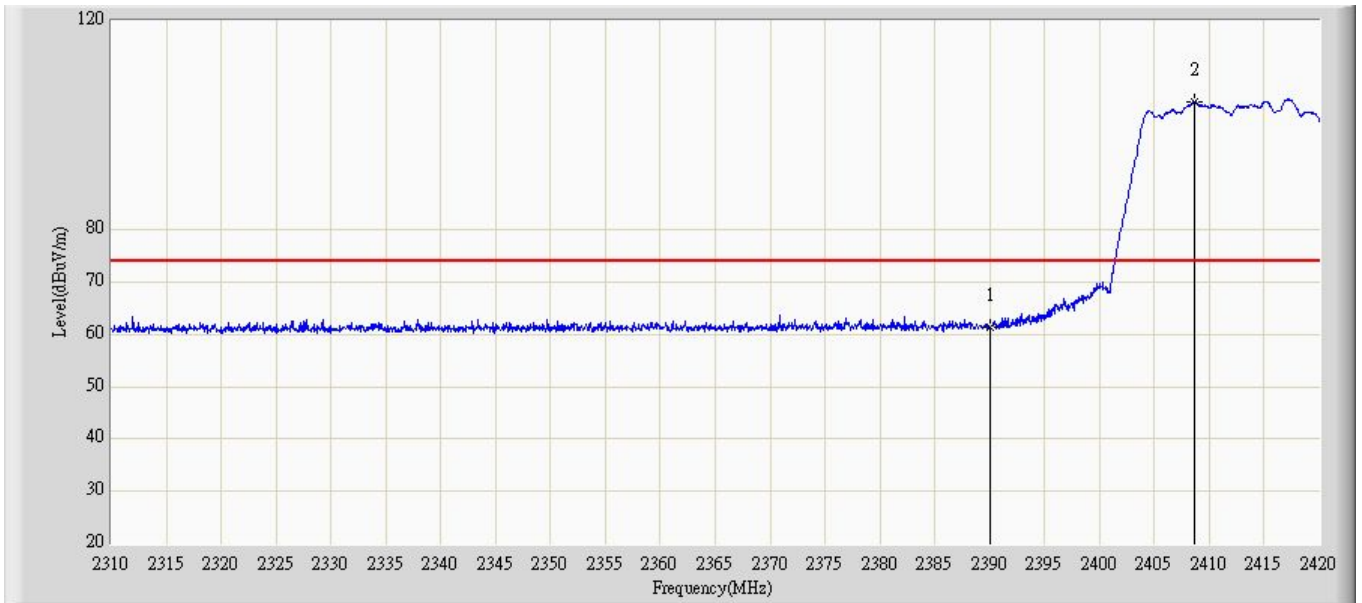
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	62.176	30.991	-11.824	74.000	31.185	PK
2		*	2417.360	96.263	65.081	N/A	N/A	31.182	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2412MHz by 802.11g(Chain 1)	



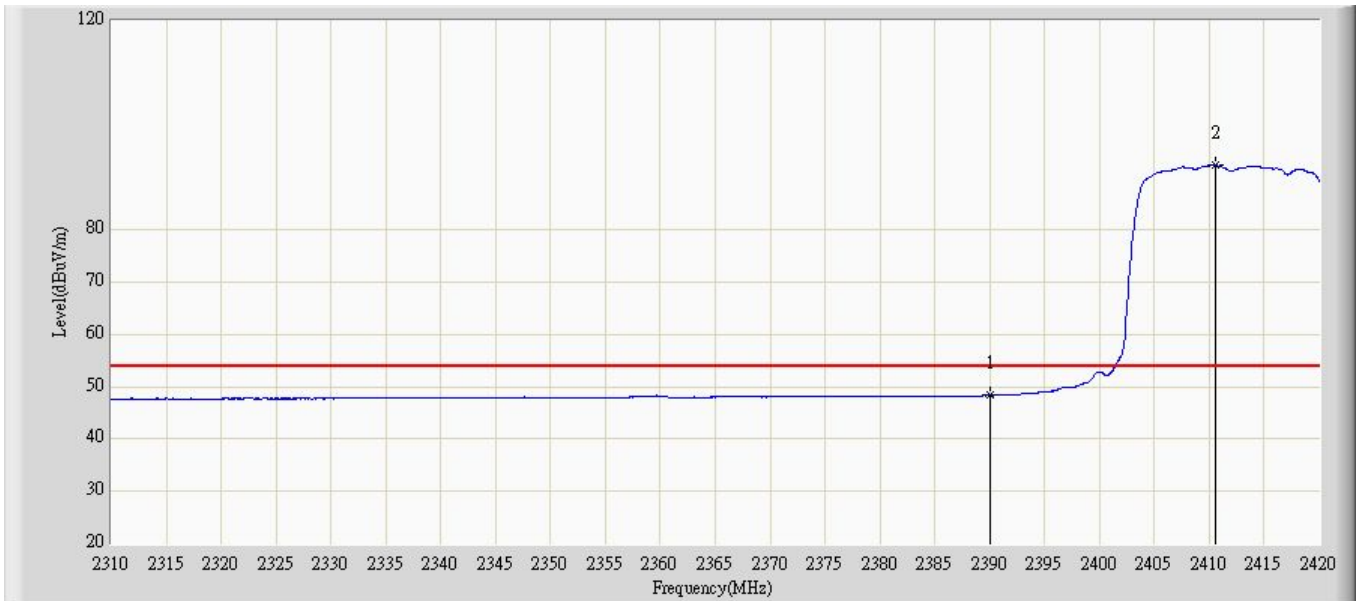
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.079	16.894	-5.921	54.000	31.185	AV
2		*	2414.830	83.023	51.842	N/A	N/A	31.182	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2412MHz by 802.11g(Chain 1)	



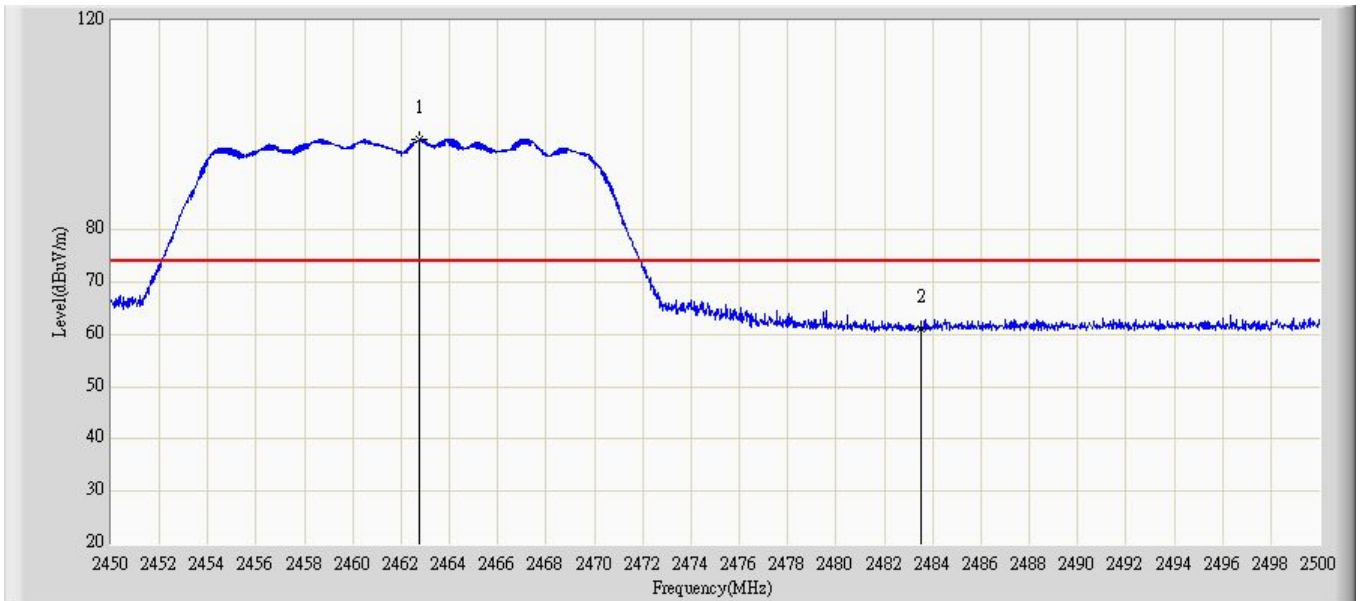
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.293	30.108	-12.707	74.000	31.185	PK
2		*	2408.670	104.529	73.349	N/A	N/A	31.180	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2412MHz by 802.11g(Chain 1)	



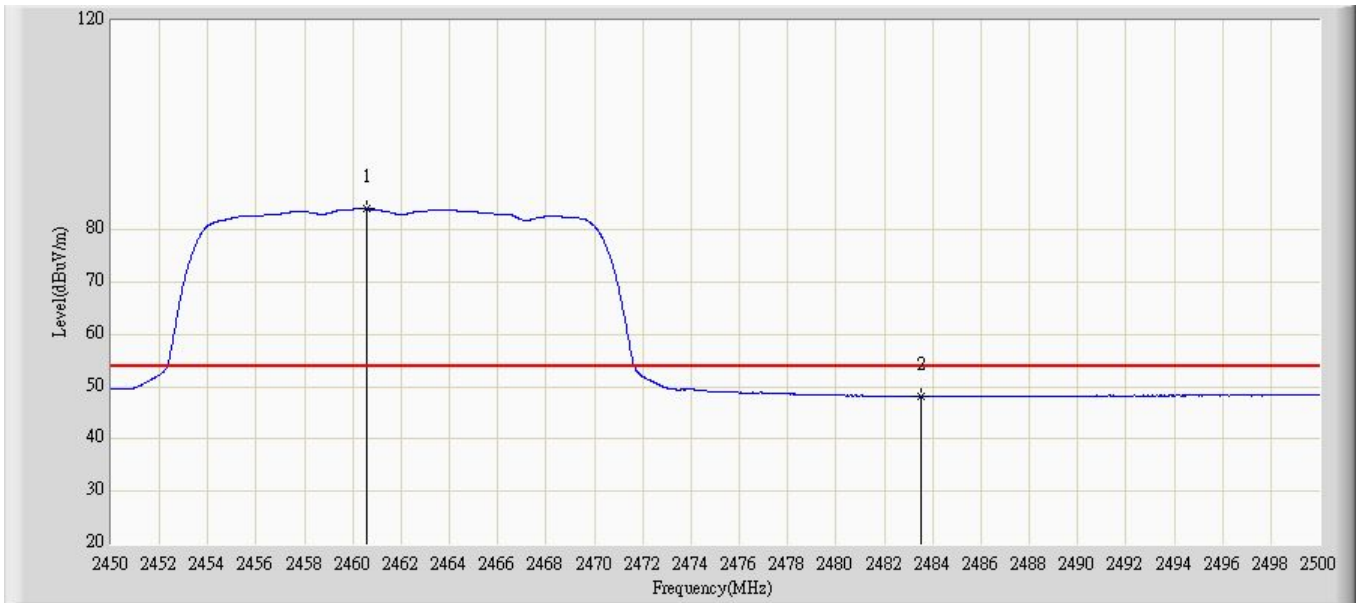
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.356	17.171	-5.644	54.000	31.185	AV
2		*	2410.540	92.333	61.153	N/A	N/A	31.180	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2462MHz by 802.11g(Chain 1)	



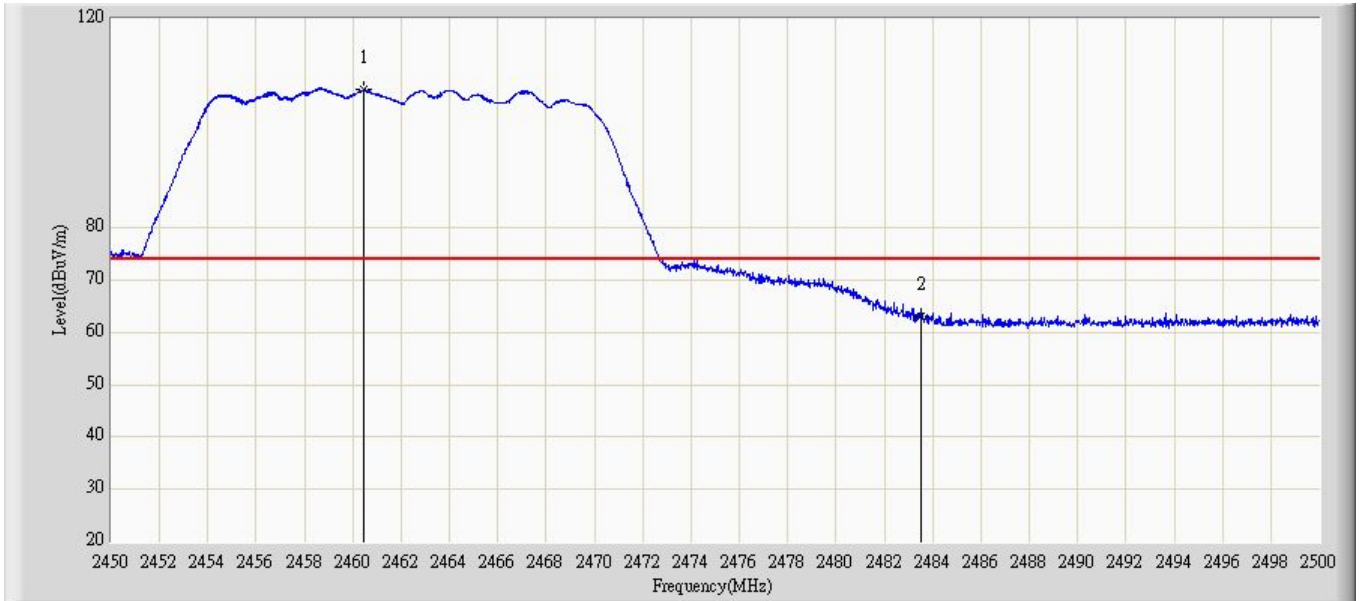
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.725	97.217	66.014	N/A	N/A	31.204	PK
2			2483.500	61.169	29.960	-12.831	74.000	31.209	PK

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 15:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2462MHz by 802.11g(Chain 1)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.550	83.990	52.789	N/A	N/A	31.201	AV
2			2483.500	48.224	17.015	-5.776	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2462MHz by 802.11g(Chain 1)	



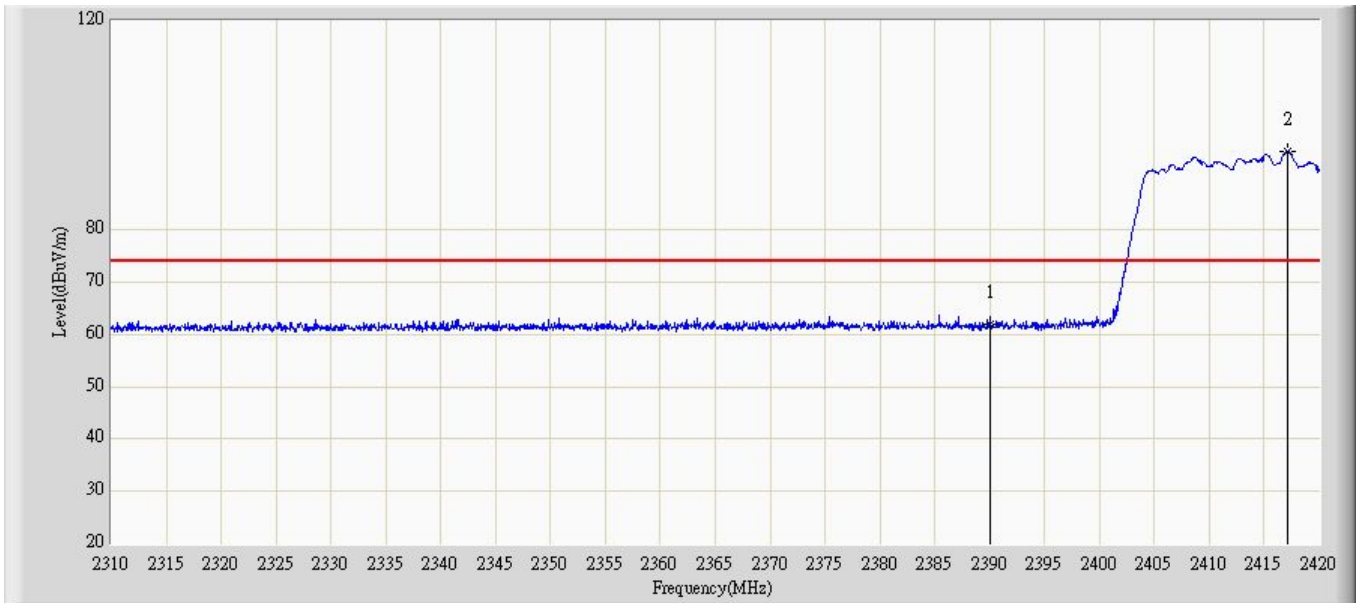
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.425	106.379	75.178	N/A	N/A	31.201	PK
2			2483.500	63.038	31.829	-10.962	74.000	31.209	PK

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 15:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode2: Transmit at channel 2462MHz by 802.11g(Chain 1)	



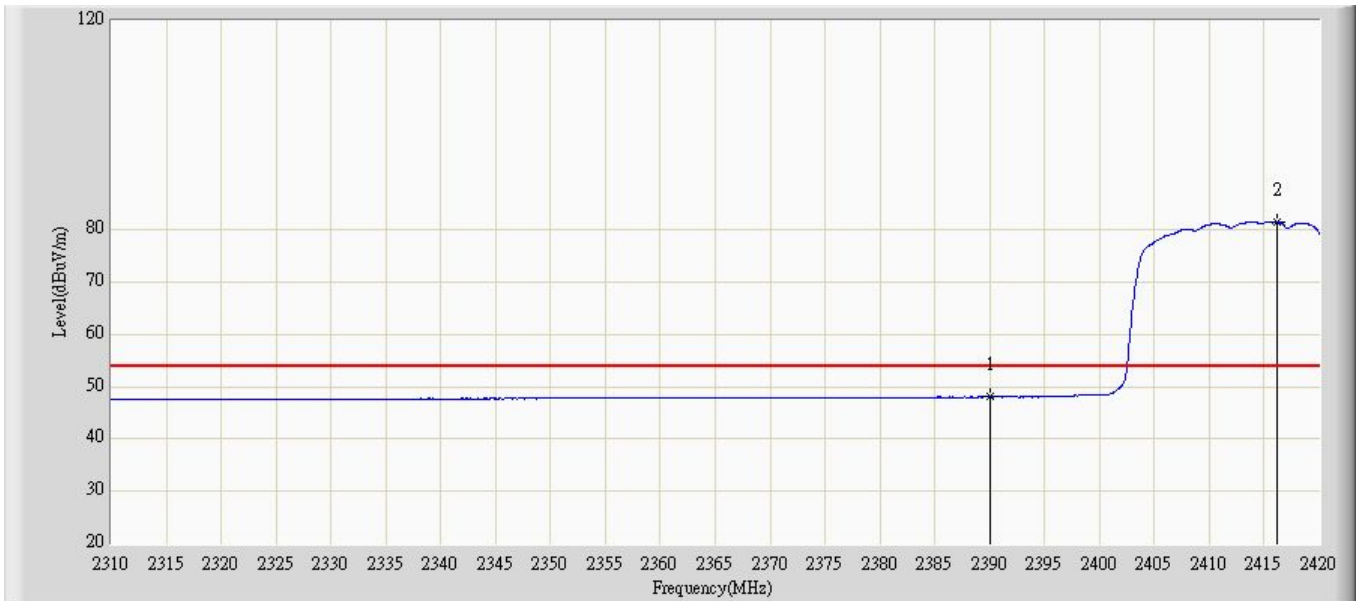
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.400	92.423	61.222	N/A	N/A	31.201	AV
2			2483.500	48.540	17.331	-5.460	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2412MHz by 802.11n(20)(Chain 1)	



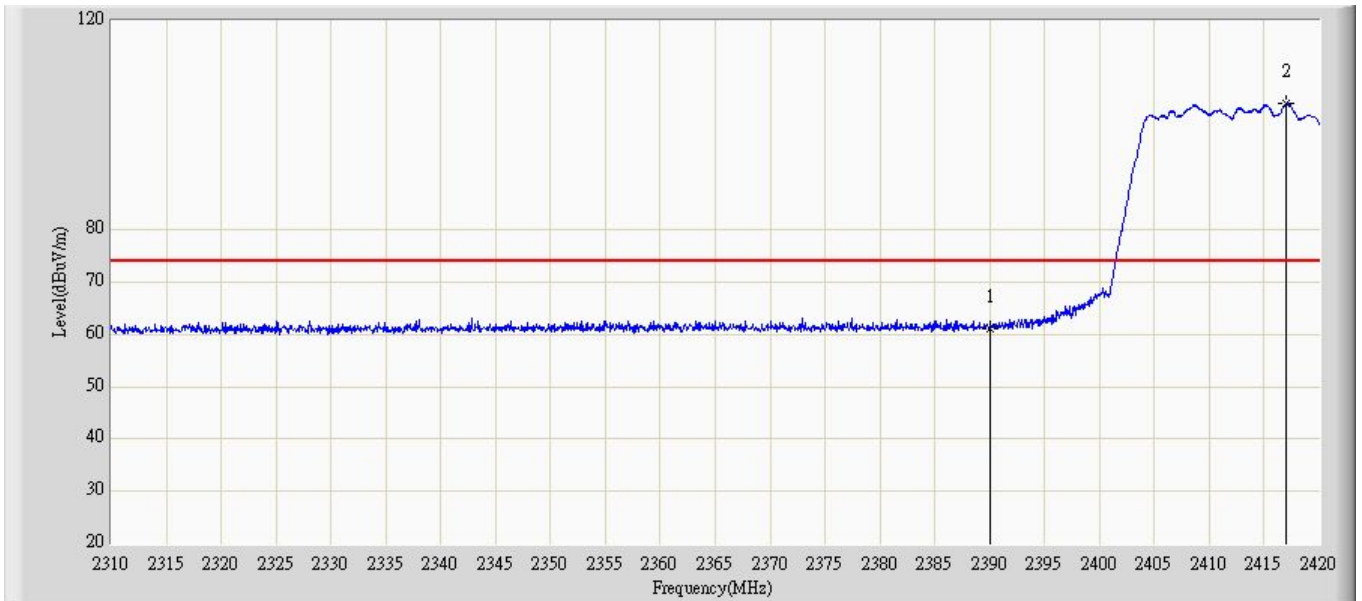
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	62.075	30.890	-11.925	74.000	31.185	PK
2		*	2417.140	95.019	63.837	N/A	N/A	31.182	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2412MHz by 802.11n(20)(Chain 1)	



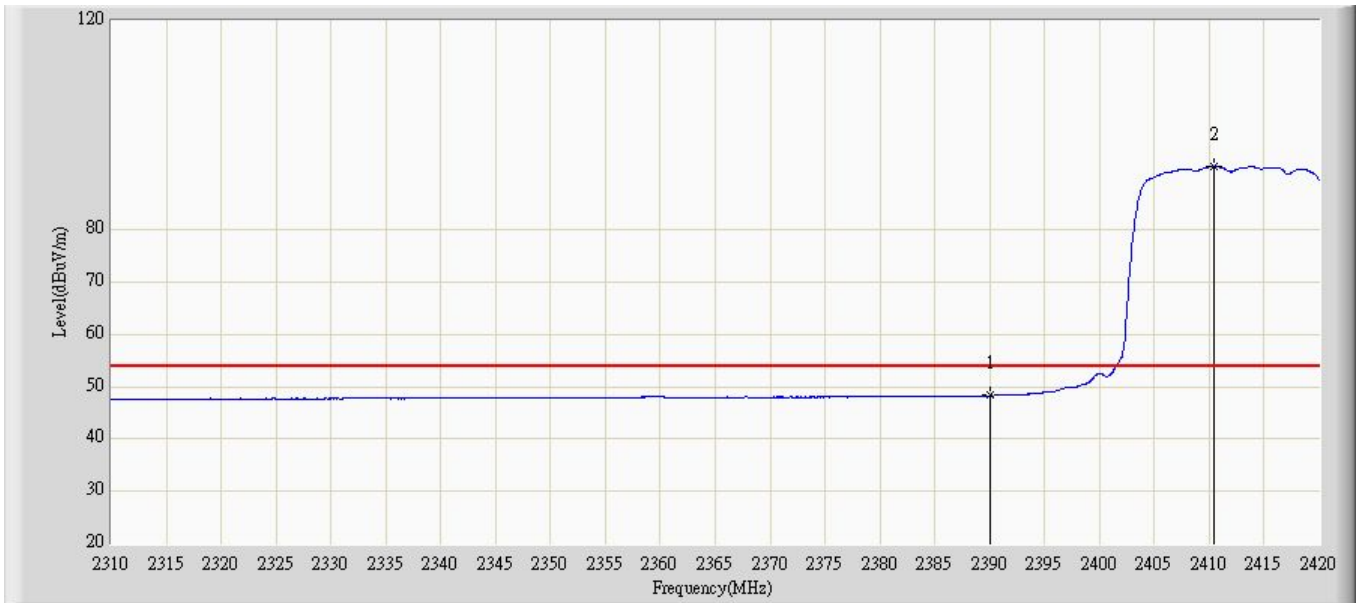
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.037	16.852	-5.963	54.000	31.185	AV
2		*	2416.205	81.407	50.225	N/A	N/A	31.182	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2412MHz by 802.11n(20)(Chain 1)	



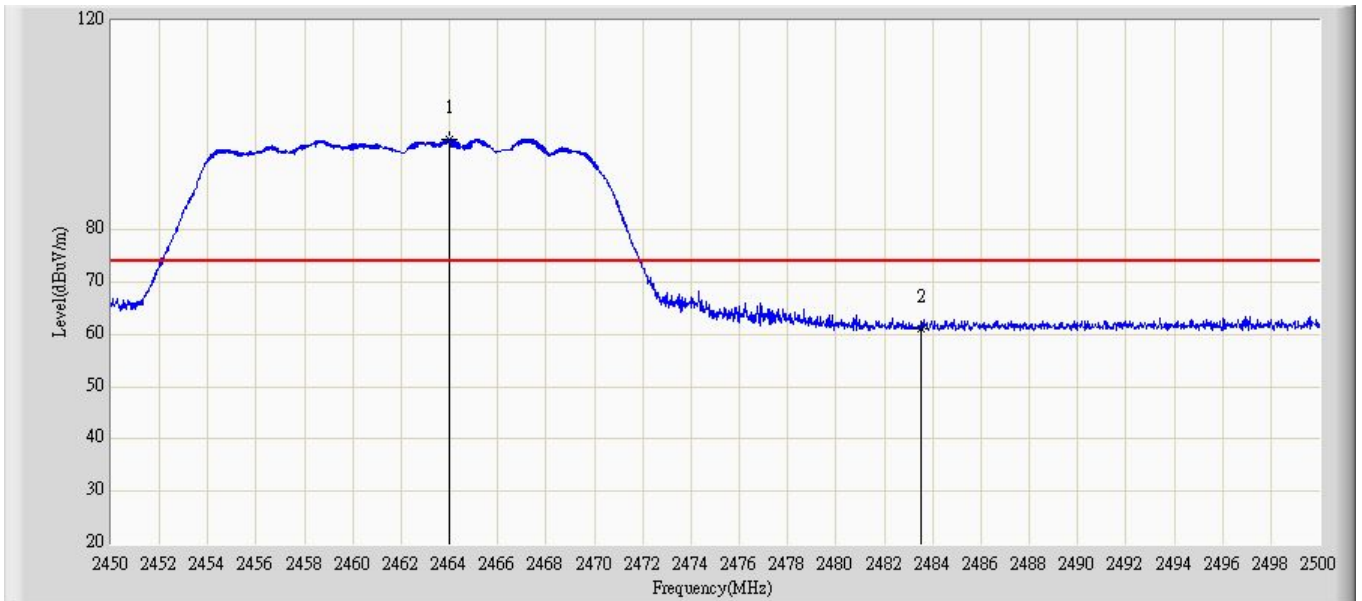
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.219	30.034	-12.781	74.000	31.185	PK
2		*	2416.975	104.144	72.962	N/A	N/A	31.182	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2412MHz by 802.11n(20)(Chain 1)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.320	17.135	-5.680	54.000	31.185	AV
2		*	2410.430	92.215	61.035	N/A	N/A	31.180	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2462MHz by 802.11n(20)(Chain 1)	



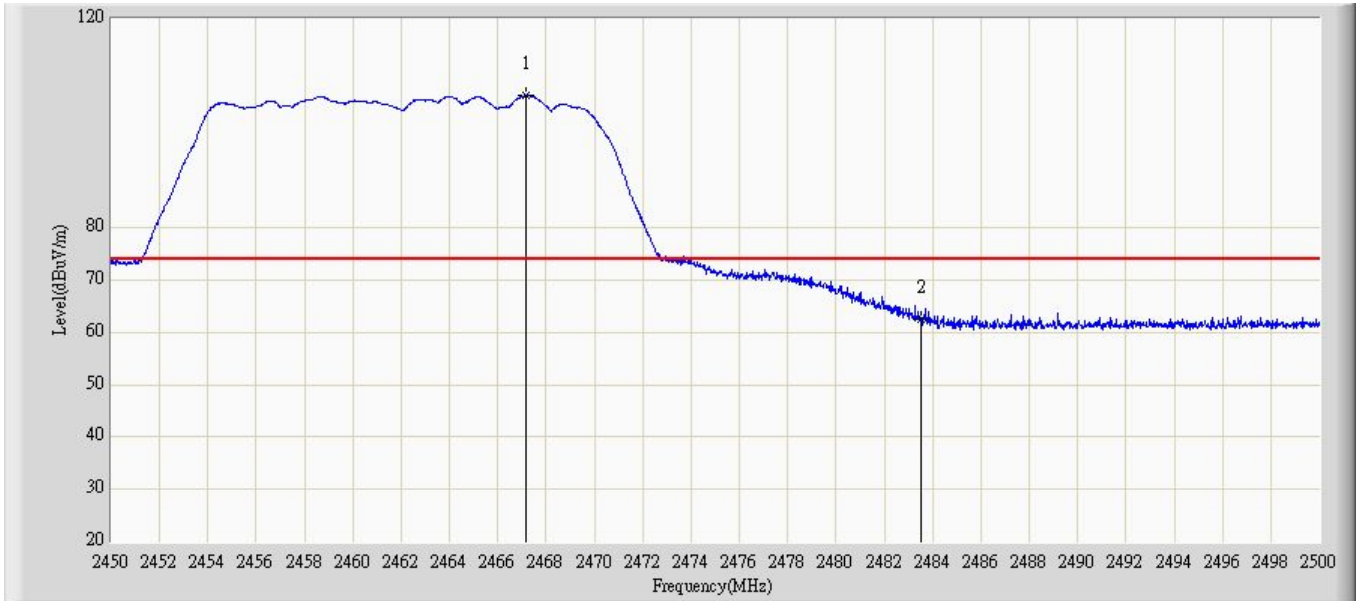
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2464.000	97.320	66.117	N/A	N/A	31.204	PK
2			2483.500	61.111	29.902	-12.889	74.000	31.209	PK

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 15:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2462MHz by 802.11n(20)(Chain 1)	



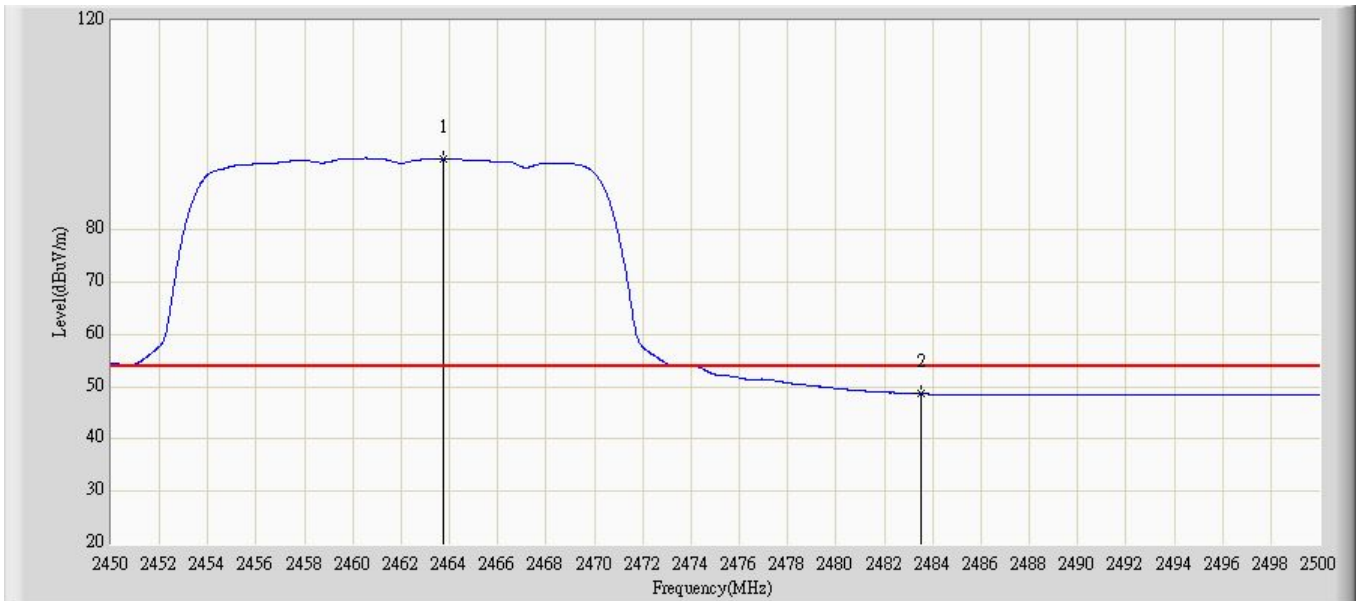
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.700	84.309	53.107	N/A	N/A	31.202	AV
2			2483.500	48.151	16.942	-5.849	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2462MHz by 802.11n(20)(Chain 1)	



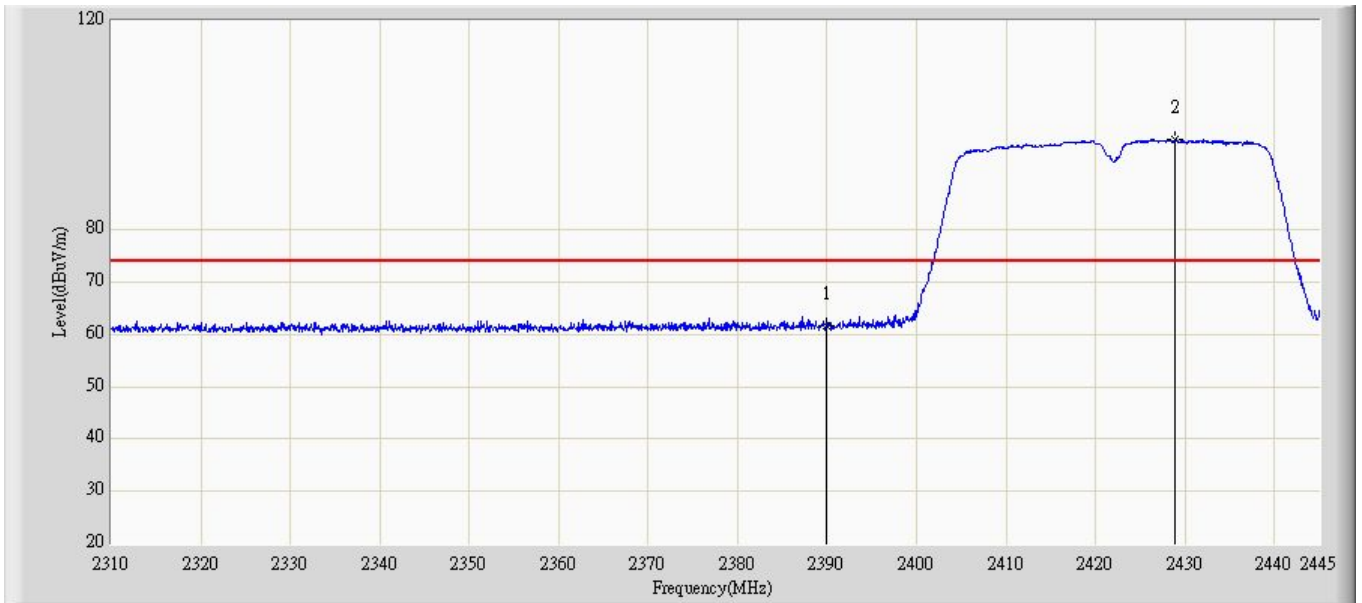
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2467.175	105.279	74.075	N/A	N/A	31.204	PK
2			2483.500	62.603	31.394	-11.397	74.000	31.209	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode3: Transmit at channel 2462MHz by 802.11n(20)(Chain 1)	



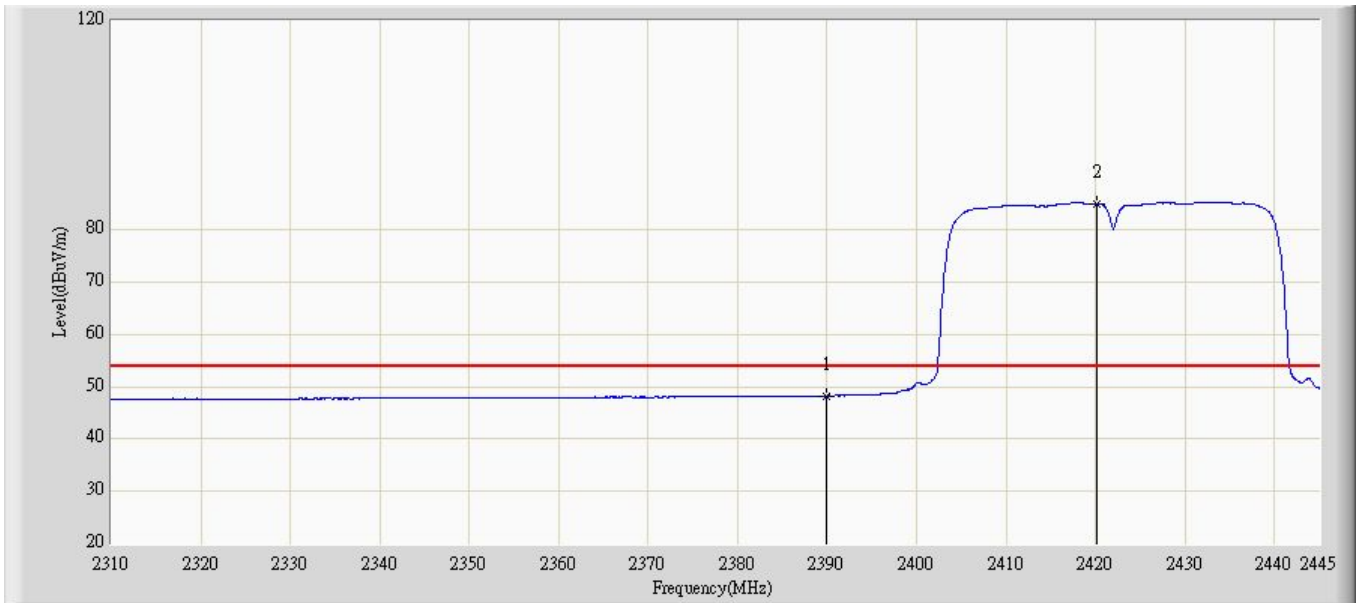
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.725	93.588	62.385	N/A	N/A	31.203	AV
2			2483.500	48.639	17.430	-5.361	54.000	31.209	AV

Engineer: VilK	
Site: AC5	Time: 2011/10/13 - 15:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2422MHz by 802.11n(40)(Chain 1)	



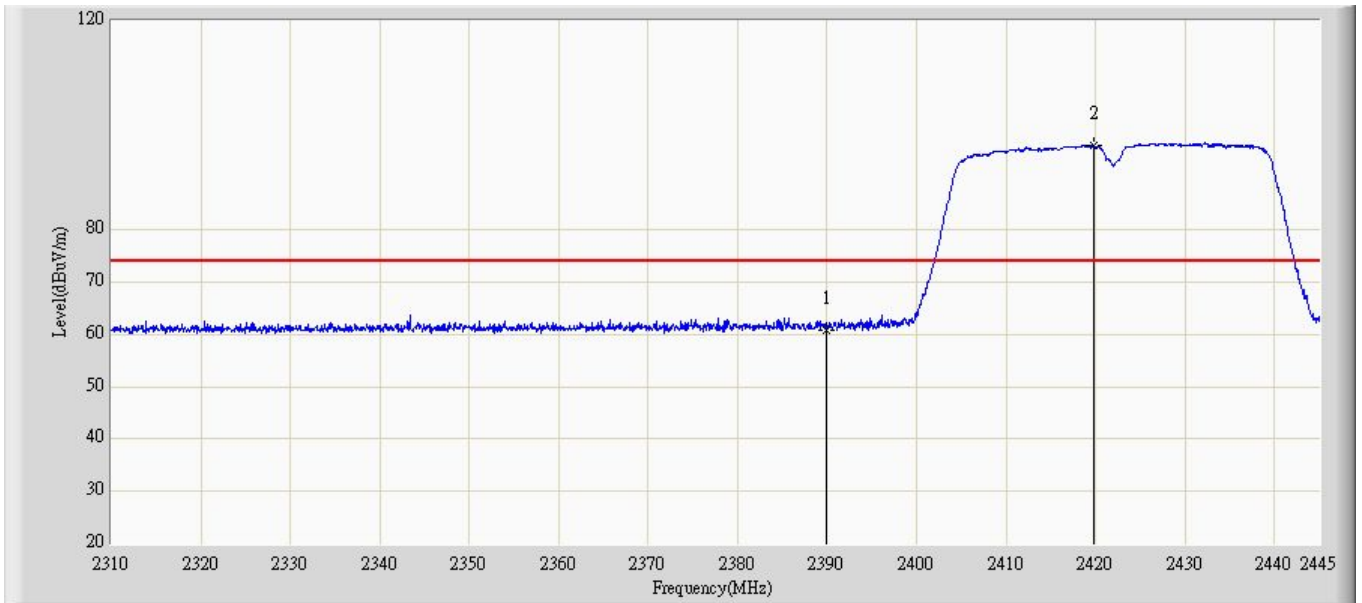
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.651	30.466	-12.349	74.000	31.185	PK
2		*	2428.867	97.181	65.995	N/A	N/A	31.185	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2422MHz by 802.11n(40)(Chain 1)	



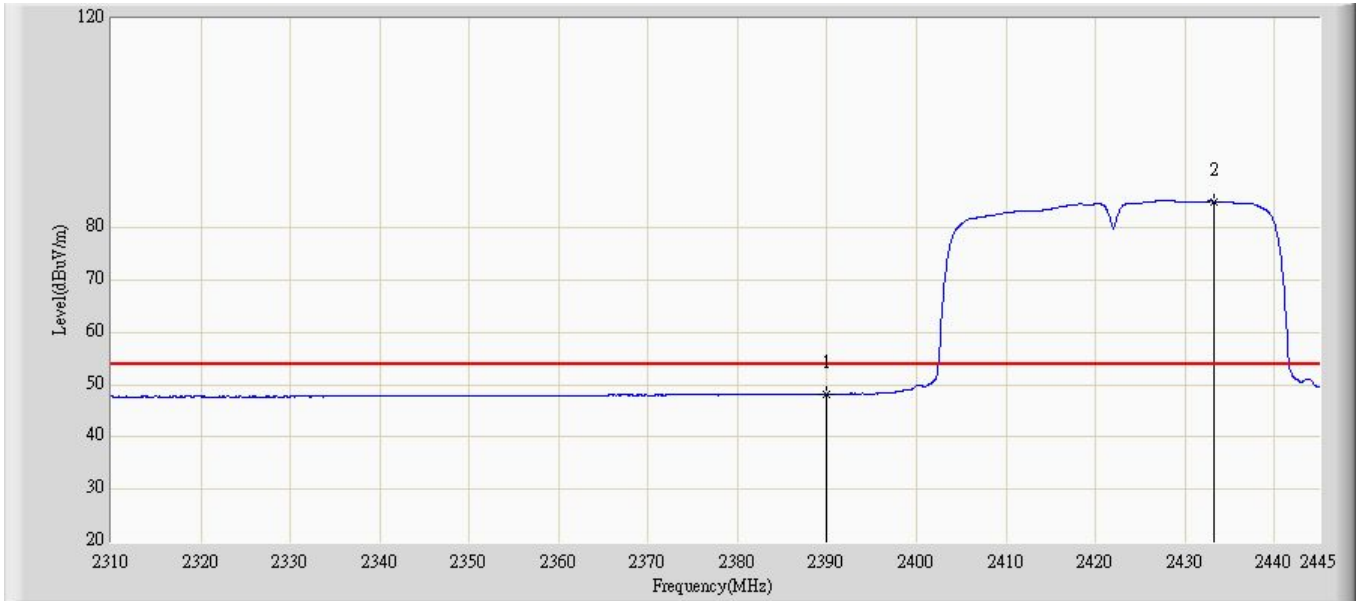
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.248	17.063	-5.752	54.000	31.185	AV
2		*	2420.160	85.063	53.880	N/A	N/A	31.184	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2422MHz by 802.11n(40)(Chain 1)	



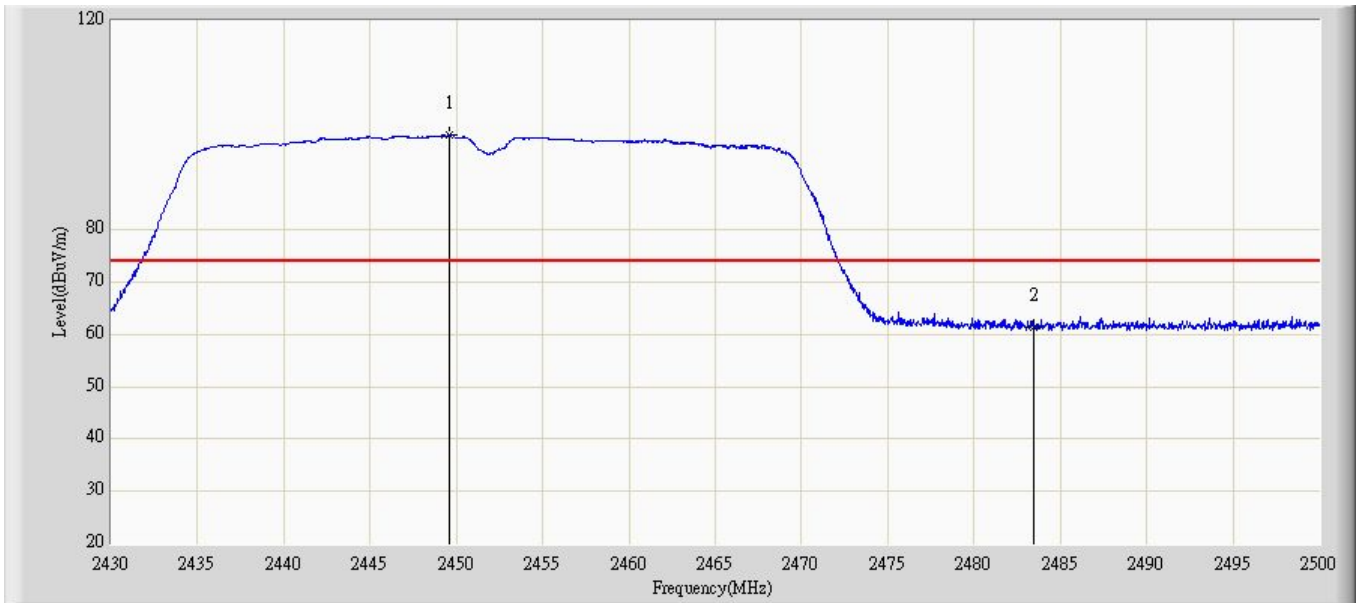
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	60.901	29.716	-13.099	74.000	31.185	PK
2		*	2419.755	96.243	65.060	N/A	N/A	31.183	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2422MHz by 802.11n(40)(Chain 1)	



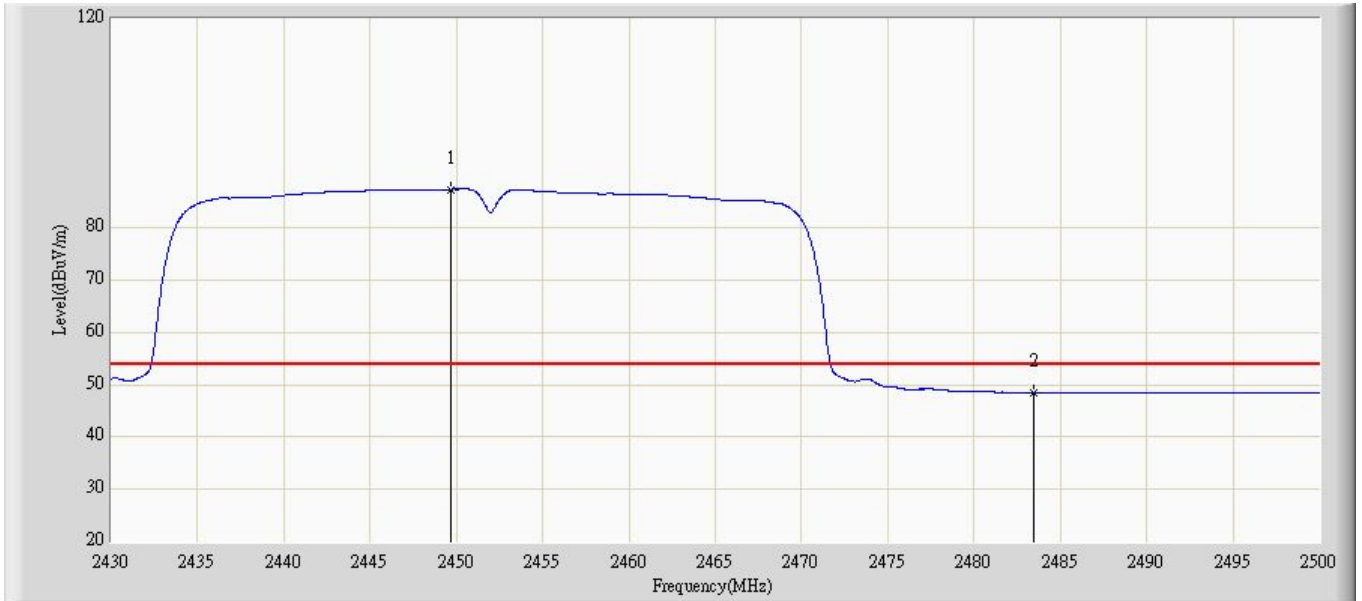
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.214	17.029	-5.786	54.000	31.185	AV
2		*	2433.187	85.075	53.889	N/A	N/A	31.186	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2452MHz by 802.11n(40)(Chain 1)	



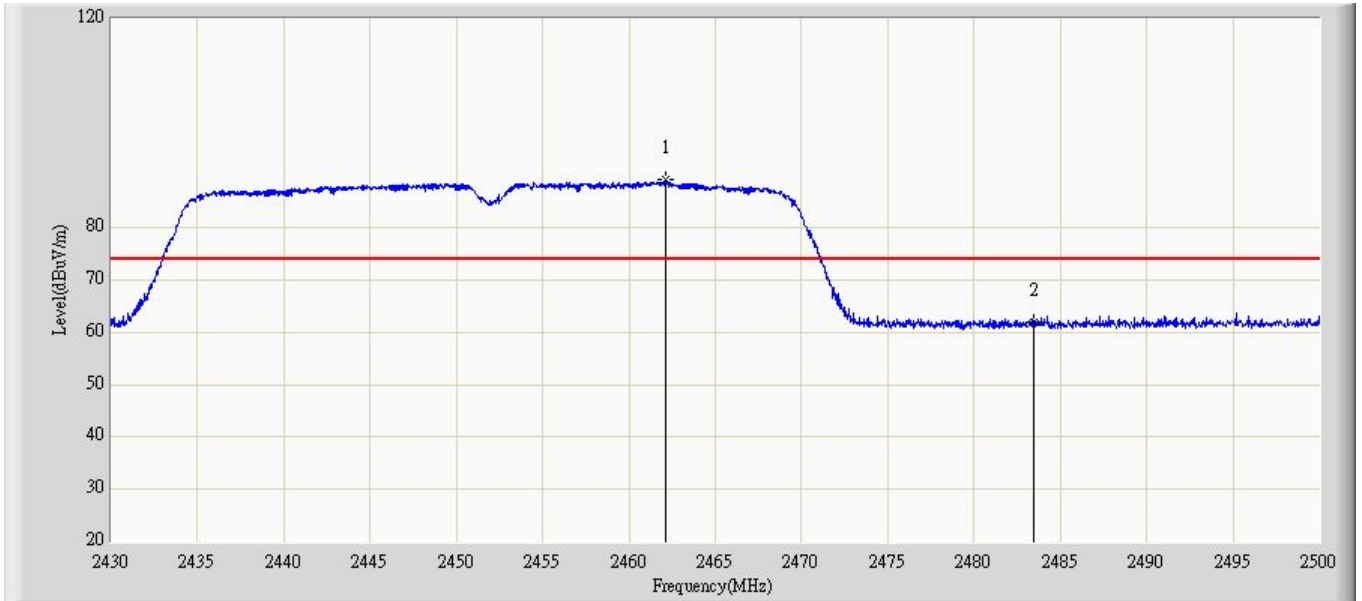
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2449.565	98.114	66.924	N/A	N/A	31.190	PK
2			2483.500	61.305	30.096	-12.695	74.000	31.209	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2452MHz by 802.11n(40)(Chain 1)	



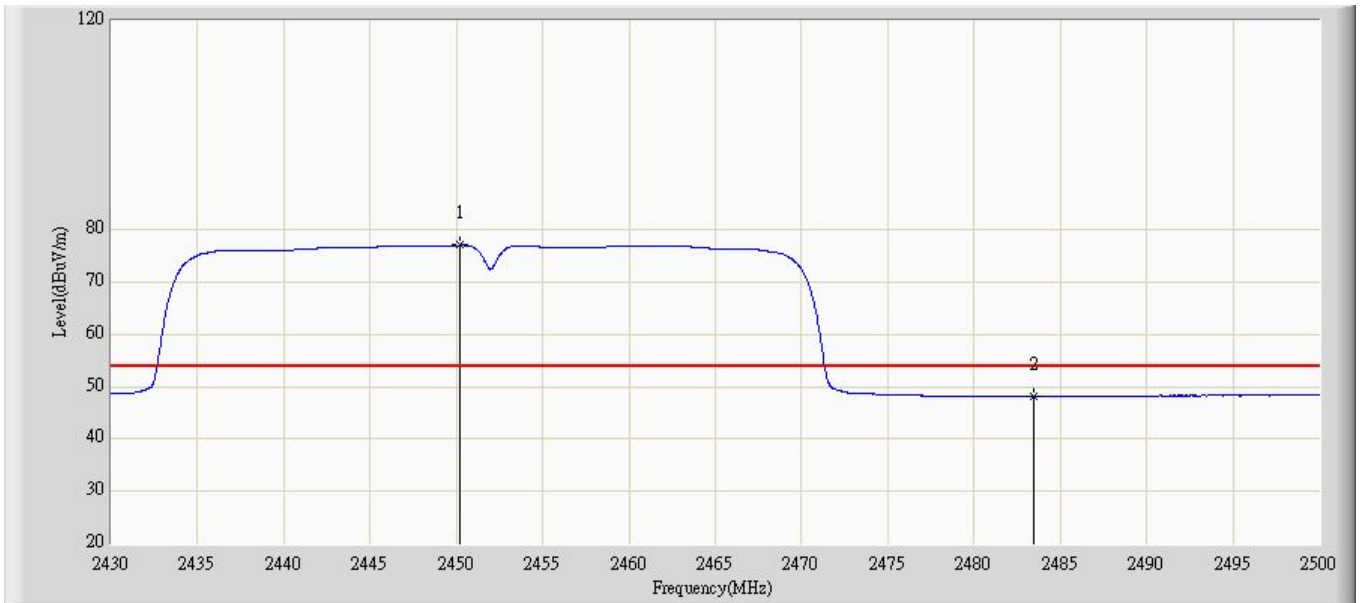
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2449.670	87.350	56.160	N/A	N/A	31.190	AV
2			2483.500	48.531	17.322	-5.469	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2452MHz by 802.11n(40)(Chain 1)	



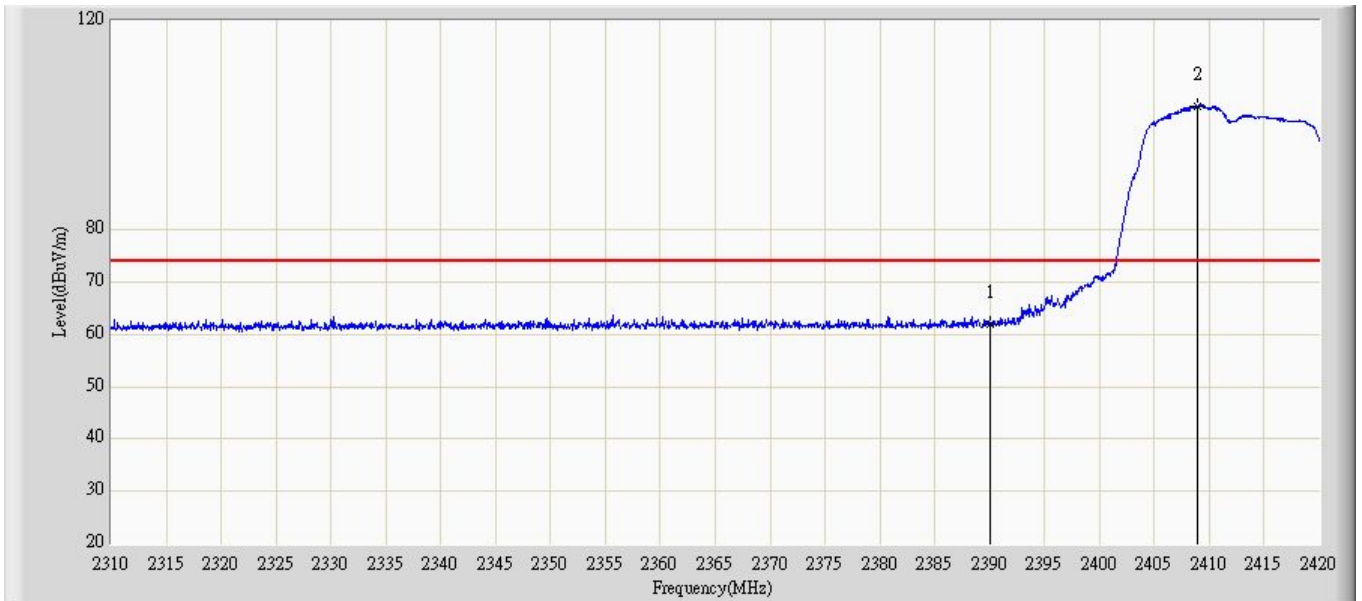
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.165	89.134	57.931	N/A	N/A	31.203	PK
2			2483.500	62.045	30.836	-11.955	74.000	31.209	PK

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 15:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode4: Transmit at channel 2452MHz by 802.11n(40)(Chain 1)	



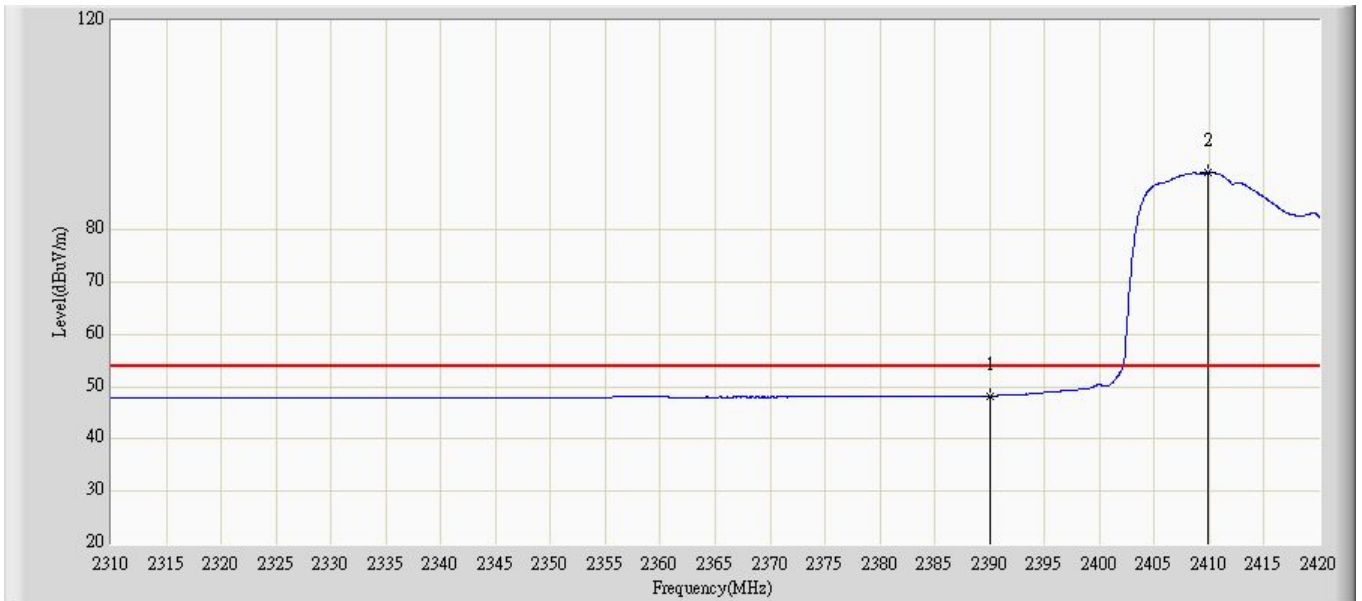
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2450.195	77.042	45.851	N/A	N/A	31.191	AV
2			2483.500	48.191	16.982	-5.809	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 15:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode5: Transmit at channel 2412MHz by 802.11n(20)(Chain 0+1)	



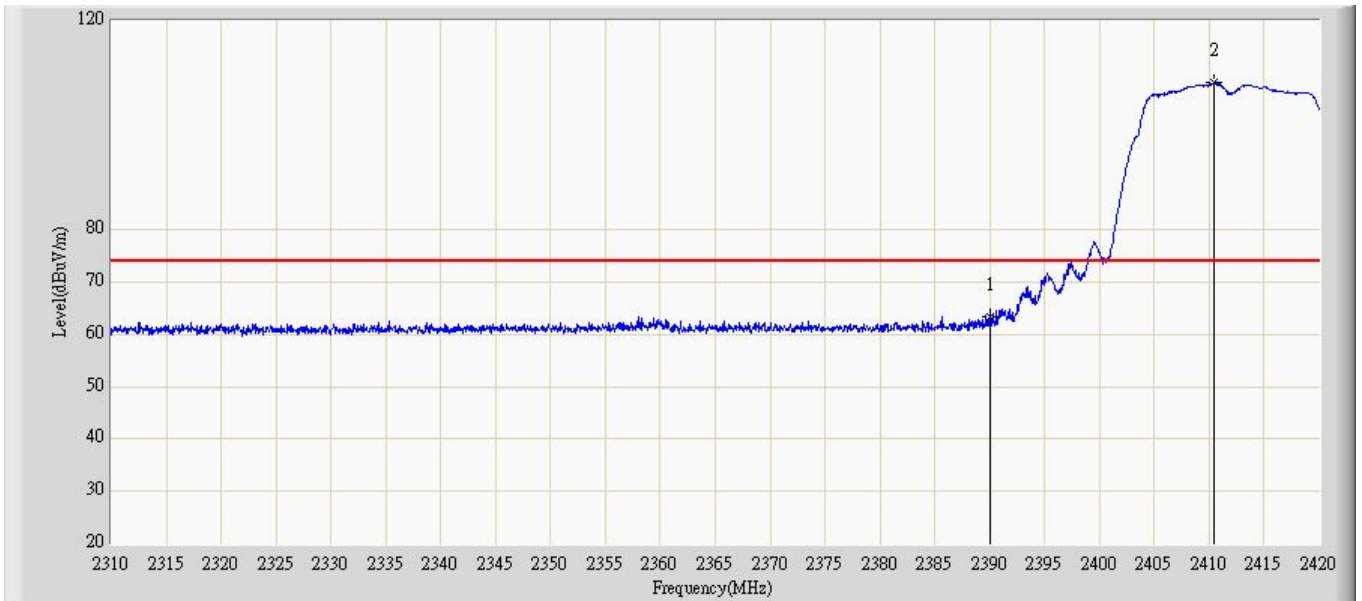
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.908	30.723	-12.092	74.000	31.185	PK
2		*	2408.890	103.730	72.550	N/A	N/A	31.180	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 16:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode5: Transmit at channel 2412MHz by 802.11n(20)(Chain 0+1)	



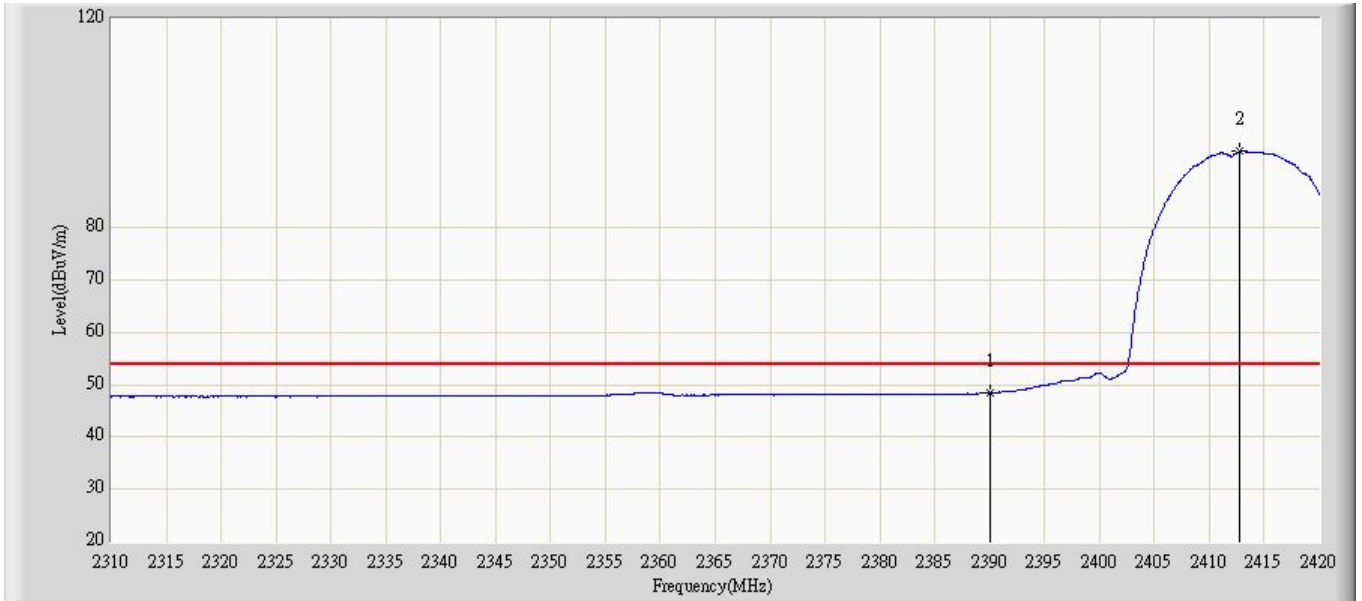
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.272	17.087	-5.728	54.000	31.185	AV
2		*	2409.935	90.972	59.792	N/A	N/A	31.181	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 16:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode5: Transmit at channel 2412MHz by 802.11n(20)(Chain 0+1)	



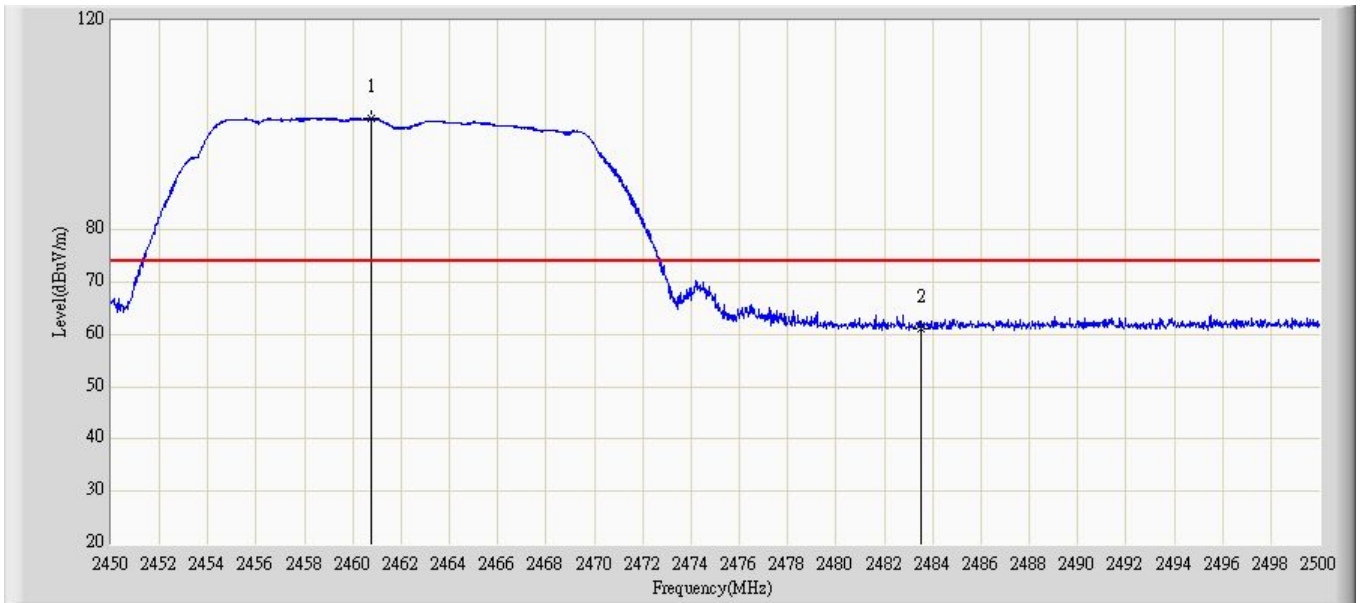
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	63.384	32.199	-10.616	74.000	31.185	PK
2		*	2410.430	108.116	76.936	N/A	N/A	31.180	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 16:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode5: Transmit at channel 2412MHz by 802.11n(20)(Chain 0+1)	



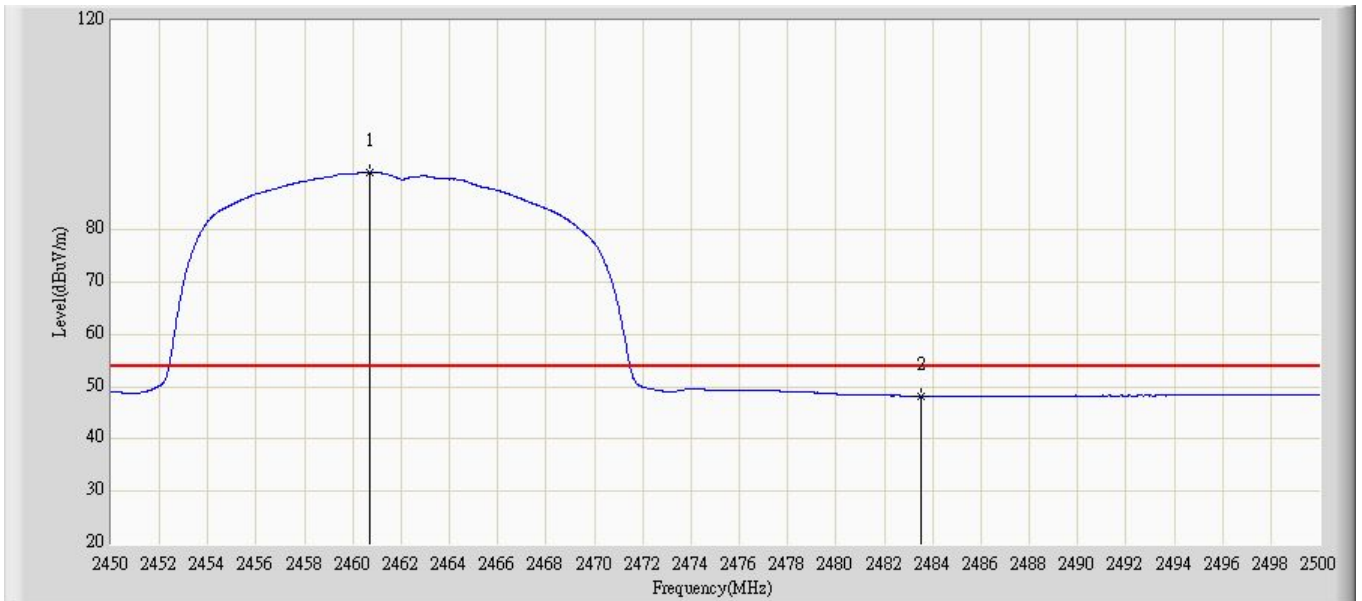
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.405	17.220	-5.595	54.000	31.185	AV
2		*	2412.795	94.726	63.545	N/A	N/A	31.181	AV

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 16:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode5: Transmit at channel 2462MHz by 802.11n(20)(Chain 0+1)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.775	101.315	70.113	N/A	N/A	31.202	PK
2			2483.500	61.028	29.819	-12.972	74.000	31.209	PK

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 16:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode5: Transmit at channel 2462MHz by 802.11n(20)(Chain 0+1)	



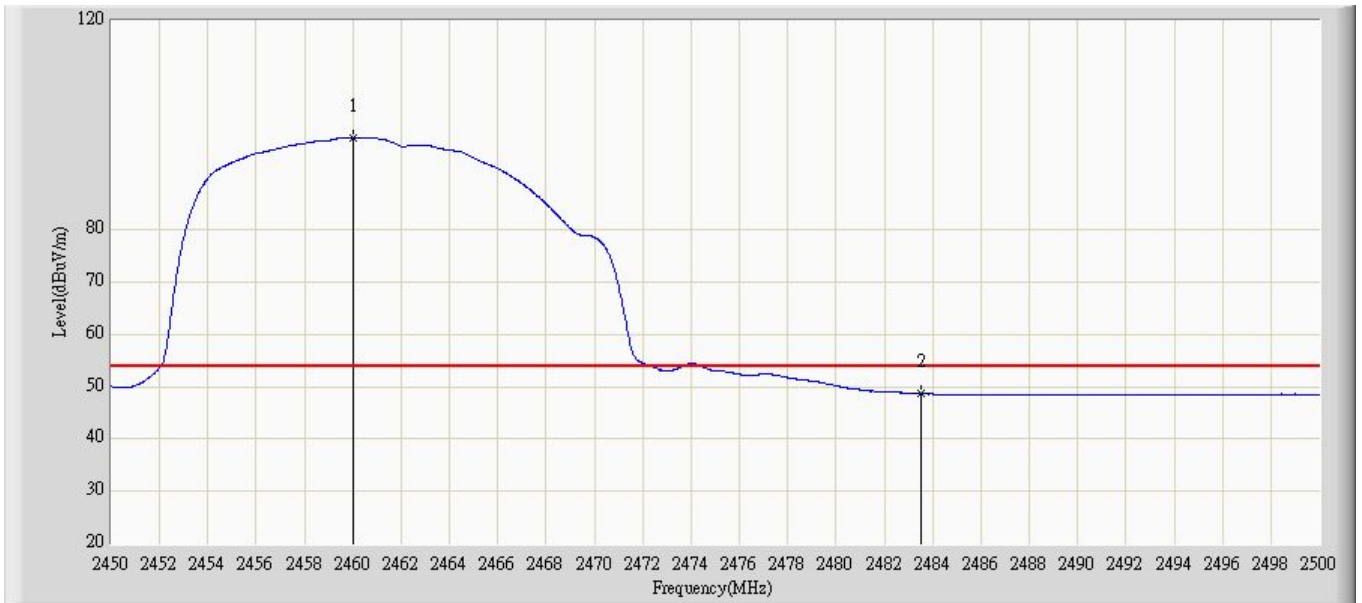
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.700	90.845	59.643	N/A	N/A	31.202	AV
2			2483.500	48.231	17.022	-5.769	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 16:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode5: Transmit at channel 2462MHz by 802.11n(20)(Chain 0+1)	



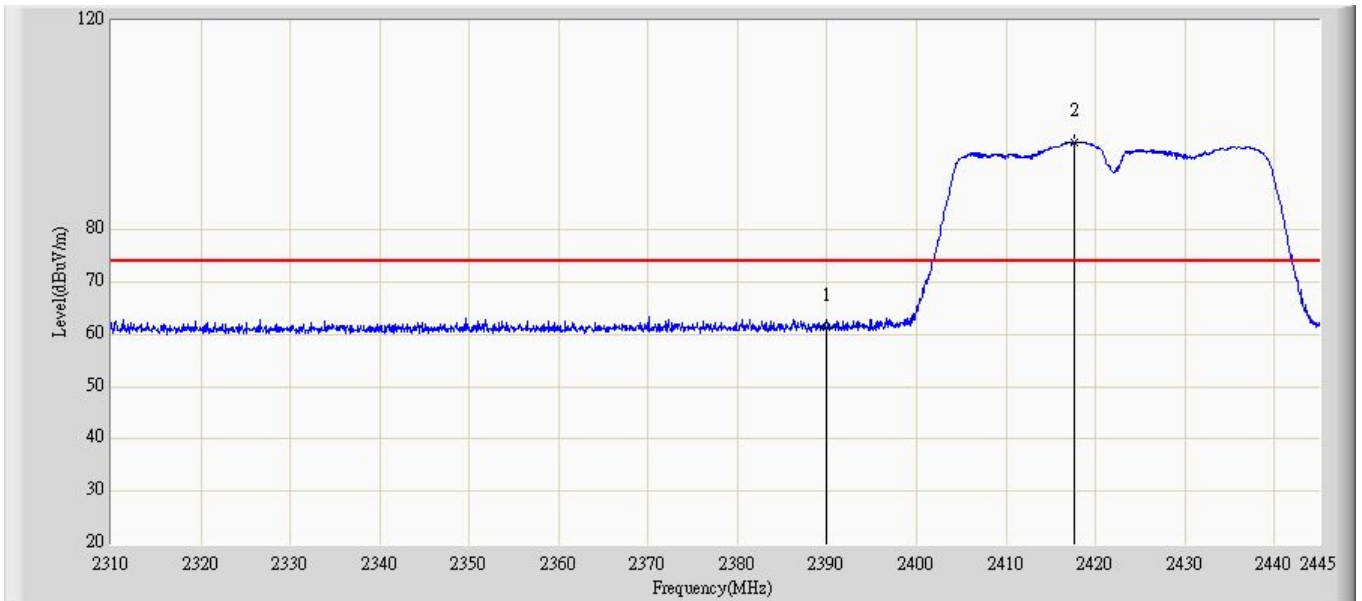
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.775	107.777	76.575	N/A	N/A	31.202	PK
2			2483.500	62.199	30.990	-11.801	74.000	31.209	PK

Engineer: VilK	
Site: AC5	Time: 2011/10/13 - 16:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode5: Transmit at channel 2462MHz by 802.11n(20)(Chain 0+1)	



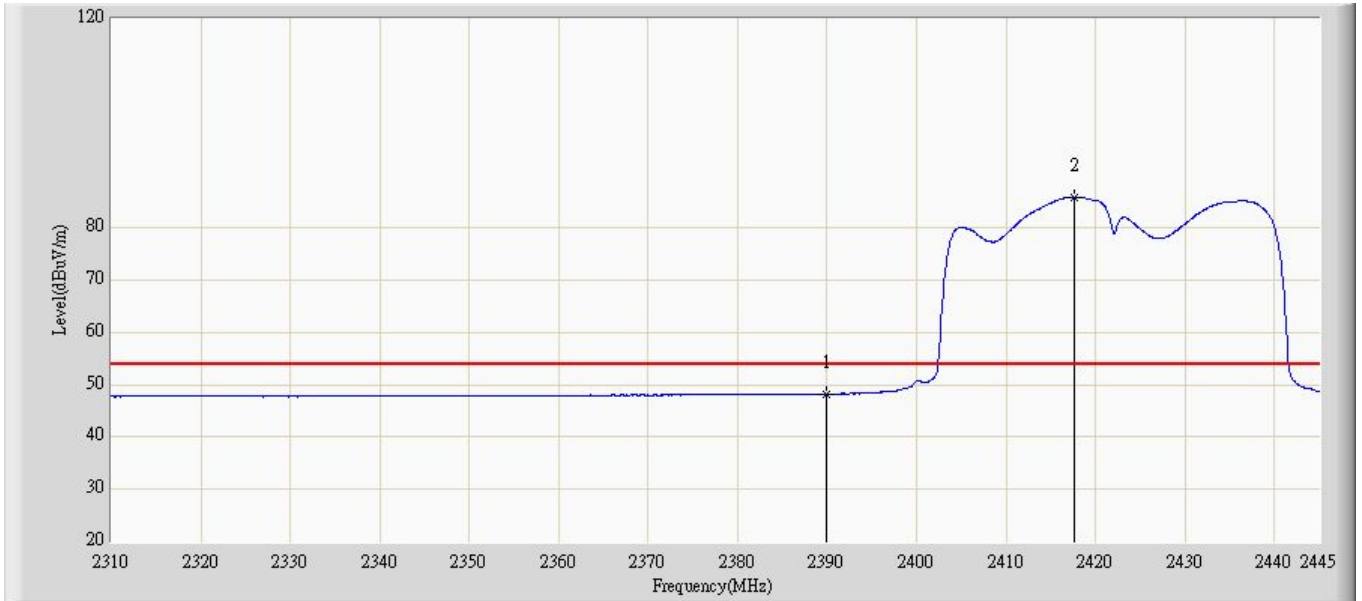
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.000	97.576	66.375	N/A	N/A	31.201	AV
2			2483.500	48.644	17.435	-5.356	54.000	31.209	AV

Engineer: Vilks	
Site: AC5	Time: 2011/10/13 - 16:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode6: Transmit at channel 2422MHz by 802.11n(40)(Chain 0+1)	



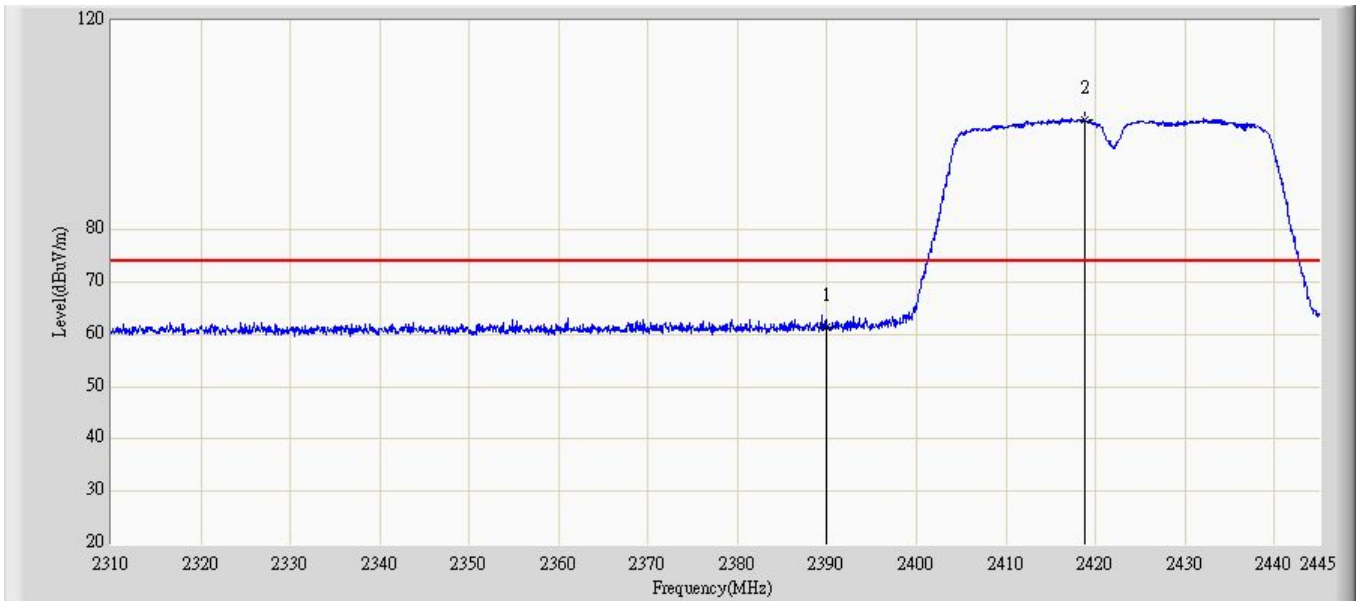
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.367	30.182	-12.633	74.000	31.185	PK
2		*	2417.663	96.621	65.439	N/A	N/A	31.182	PK

Engineer: VilK	
Site: AC5	Time: 2011/10/13 - 16:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode6: Transmit at channel 2422MHz by 802.11n(40)(Chain 0+1)	



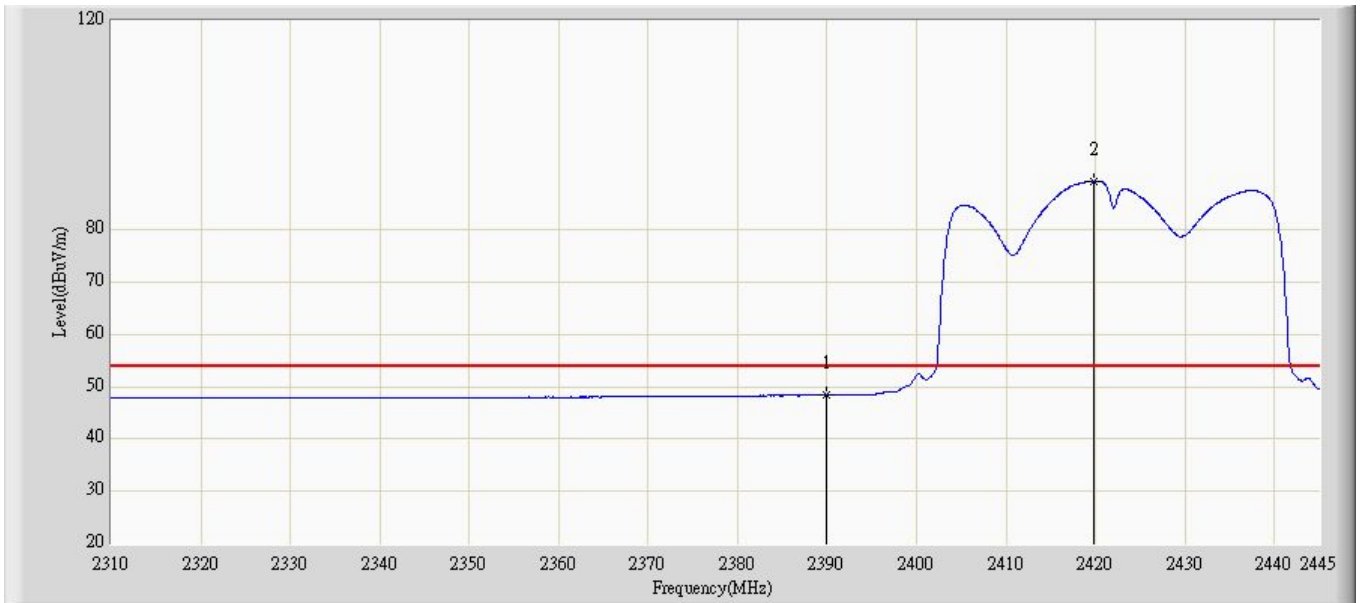
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.185	17.000	-5.815	54.000	31.185	AV
2		*	2417.663	85.895	54.713	N/A	N/A	31.182	AV

Engineer: VilK	
Site: AC5	Time: 2011/10/13 - 16:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode6: Transmit at channel 2422MHz by 802.11n(40)(Chain 0+1)	



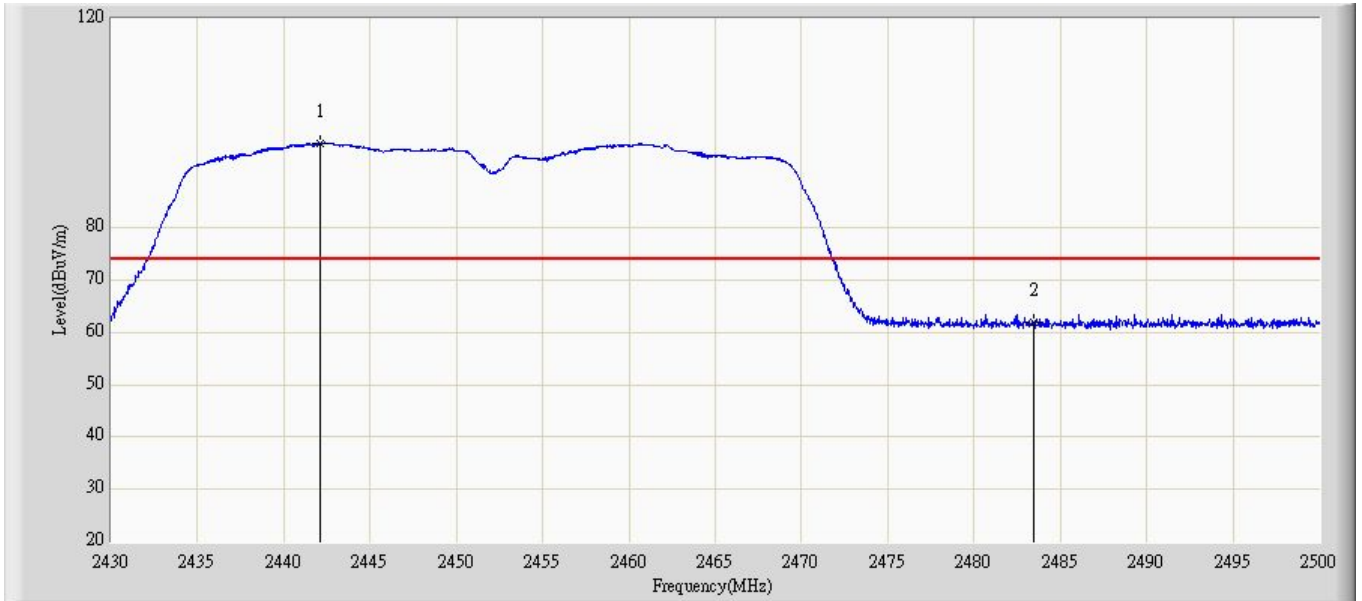
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.412	30.227	-12.588	74.000	31.185	PK
2		*	2418.742	100.968	69.785	N/A	N/A	31.182	PK

Engineer: Vilkk	
Site: AC5	Time: 2011/10/13 - 16:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode6: Transmit at channel 2422MHz by 802.11n(40)(Chain 0+1)	



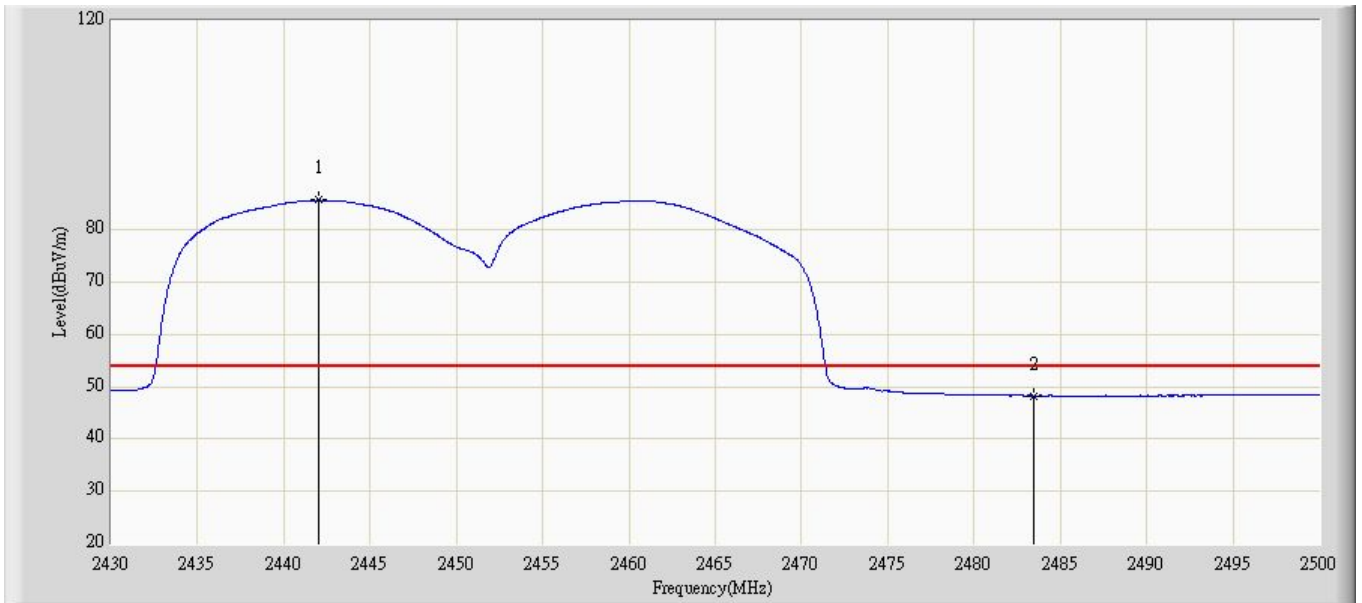
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.389	17.204	-5.611	54.000	31.185	AV
2		*	2419.755	89.265	58.082	N/A	N/A	31.183	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 16:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode6: Transmit at channel 2452MHz by 802.11n(40)(Chain 0+1)	



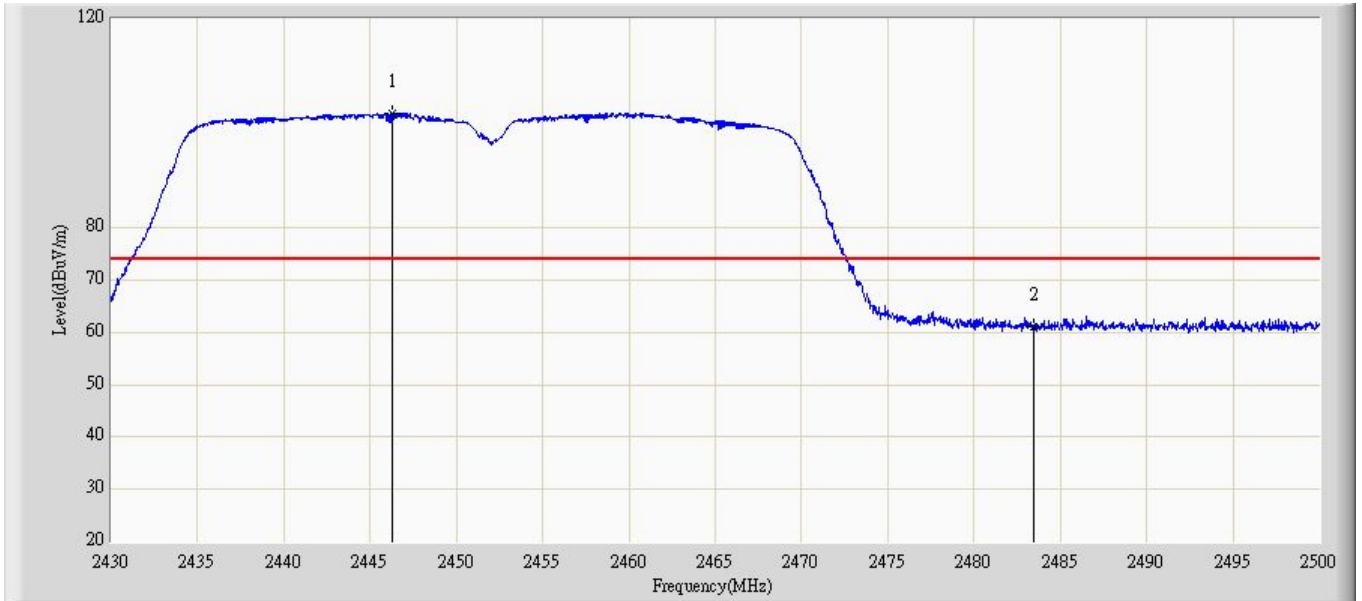
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2442.075	96.244	65.059	N/A	N/A	31.185	PK
2			2483.500	61.928	30.719	-12.072	74.000	31.209	PK

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 16:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Horizontal
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode6: Transmit at channel 2452MHz by 802.11n(40)(Chain 0+1)	



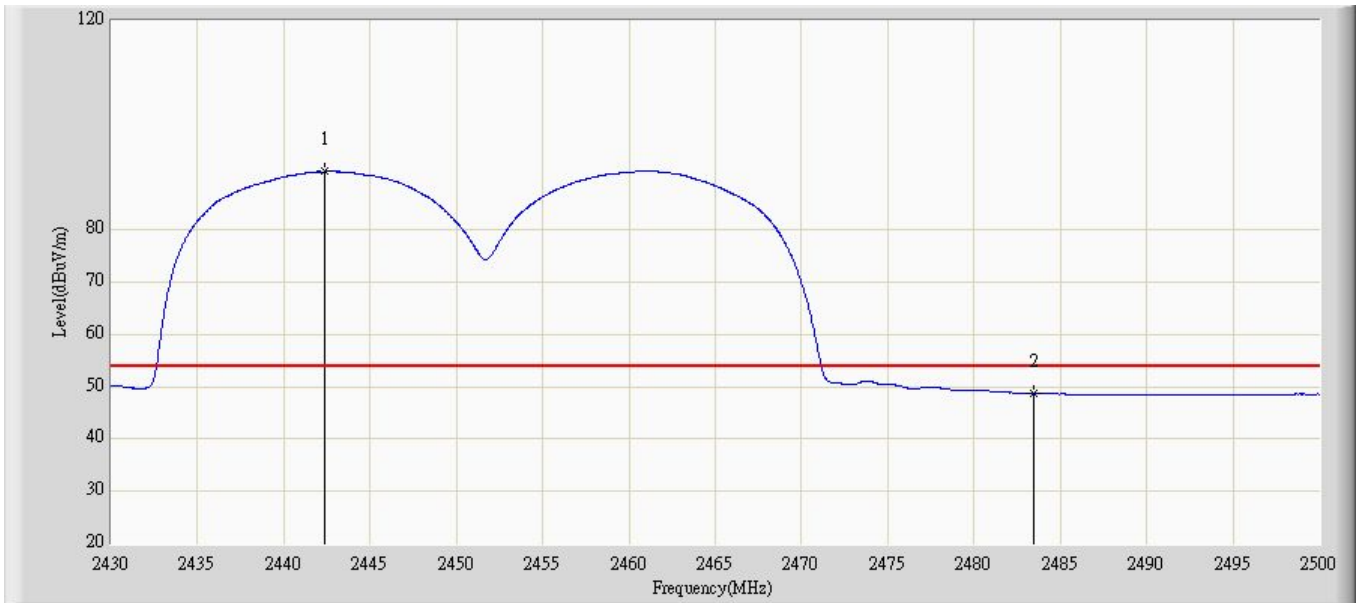
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2442.040	85.679	54.494	N/A	N/A	31.185	AV
2			2483.500	48.268	17.059	-5.732	54.000	31.209	AV

Engineer: Vilk	
Site: AC5	Time: 2011/10/13 - 16:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode6: Transmit at channel 2452MHz by 802.11n(40)(Chain 0+1)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2446.275	101.871	70.685	N/A	N/A	31.186	PK
2			2483.500	61.006	29.797	-12.994	74.000	31.209	PK

Engineer: VilK	
Site: AC5	Time: 2011/10/13 - 16:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_499(1-18GHz)	Polarity: Vertical
EUT: Wireless N ADSL2+ 4-port USB Gateway	Power: AC 120V/60Hz
Note: Mode6: Transmit at channel 2452MHz by 802.11n(40)(Chain 0+1)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2442.390	91.123	59.938	N/A	N/A	31.186	AV
2			2483.500	48.707	17.498	-5.293	54.000	31.209	AV

7. Operation Frequency Range of 20dB Bandwidth

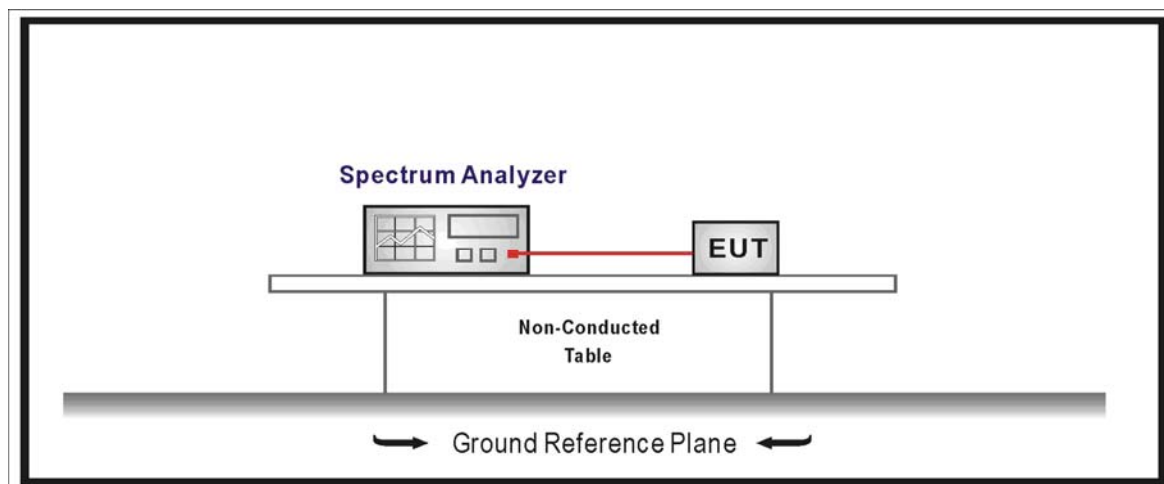
7.1. Test Equipment

Operation Frequency Range of 20dB Bandwidth / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2012.04.30
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2012.05.04

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

7.2. Test Setup



7.3. Limit

20 dB bandwidth of the emission is contained within the operation frequency band.

7.4. Test Procedure

The EUT was tested according to ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Span greater than RBW.

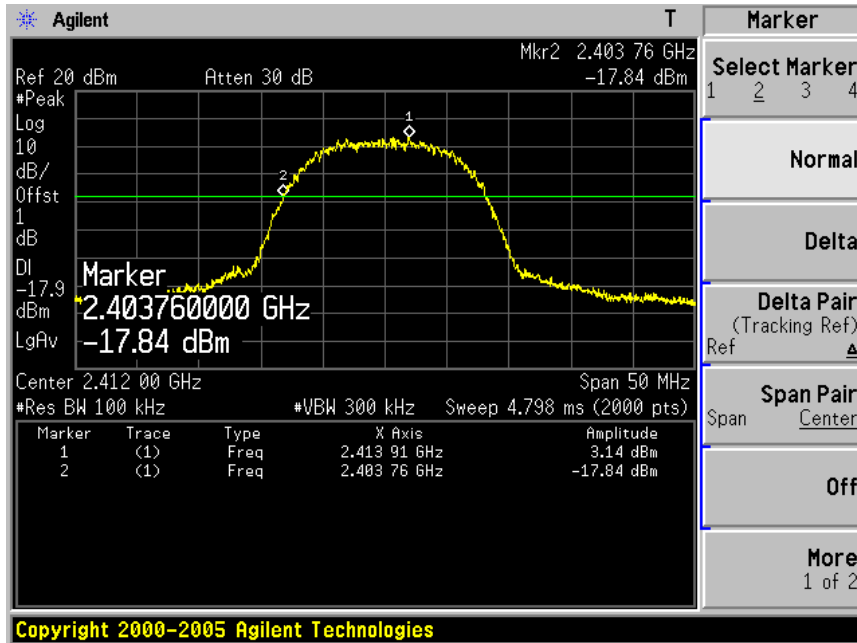
7.5. Uncertainty

The measurement uncertainty is defined as ± 1 kHz

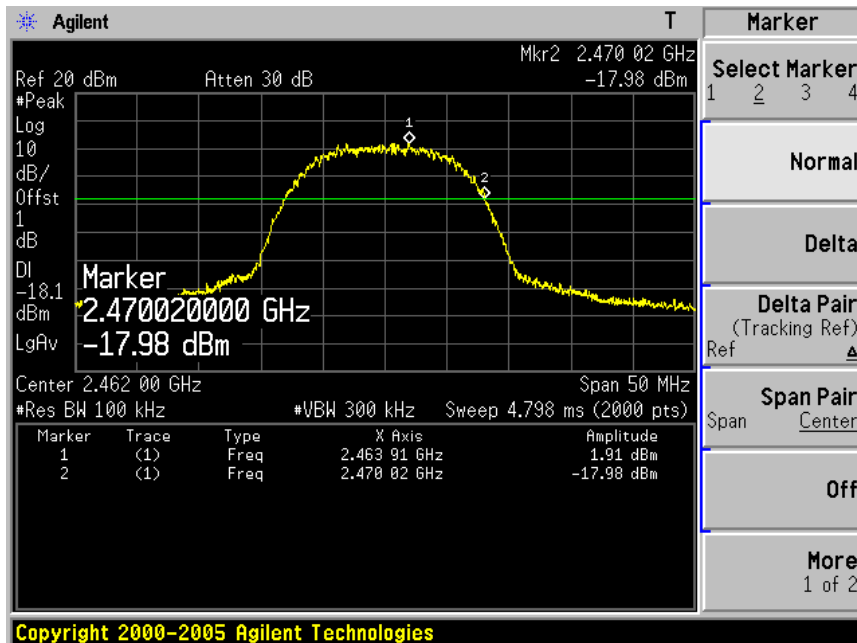
7.6. Test Result

Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR-8
Test Mode	: Mode 1: Transmit by 802.11b (Chain 0)

Channel 01 (2412MHz)

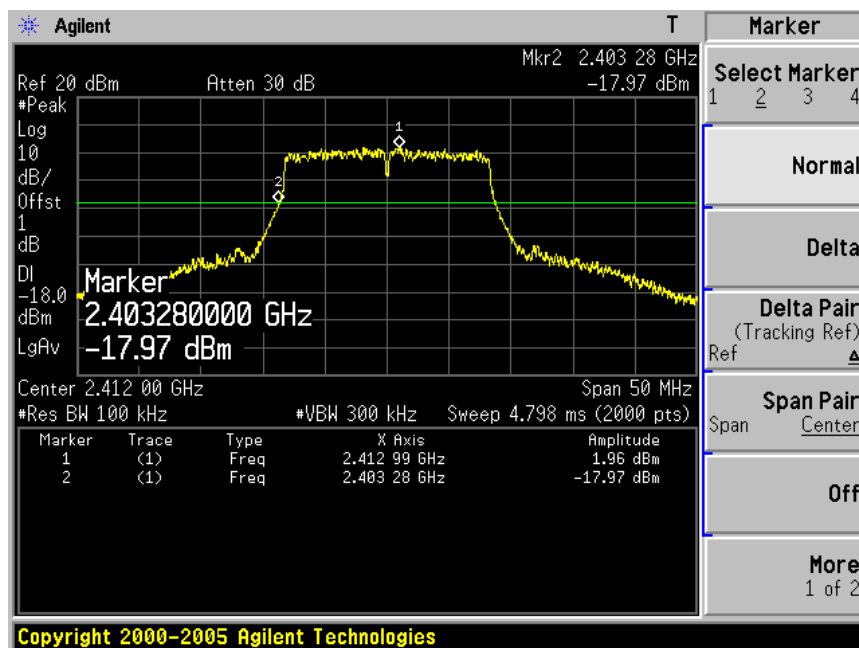


Channel 11 (2462MHz)

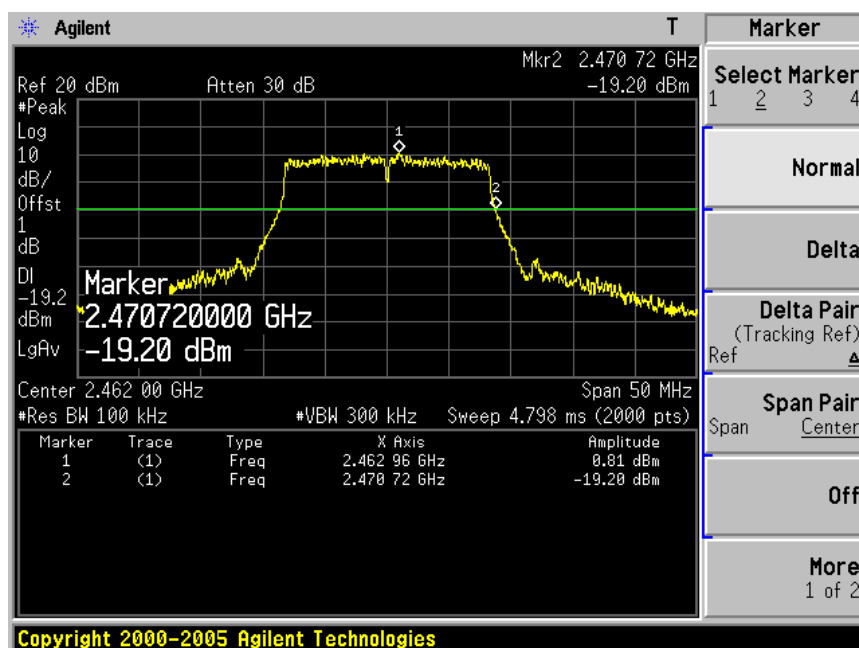


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR-8
Test Mode	: Mode 2: Transmit by 802.11g (Chain 0)

Channel 01 (2412MHz)

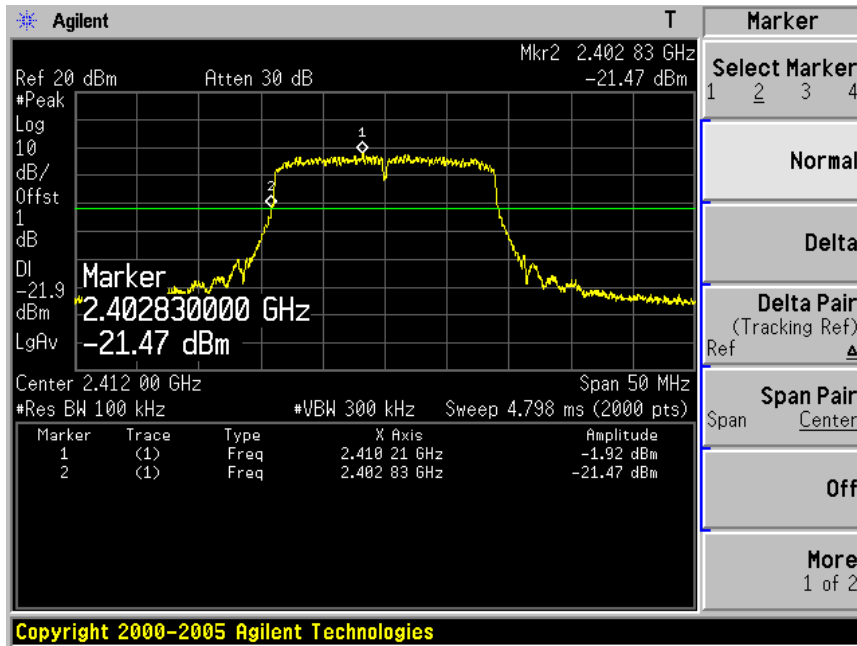


Channel 11 (2462MHz)

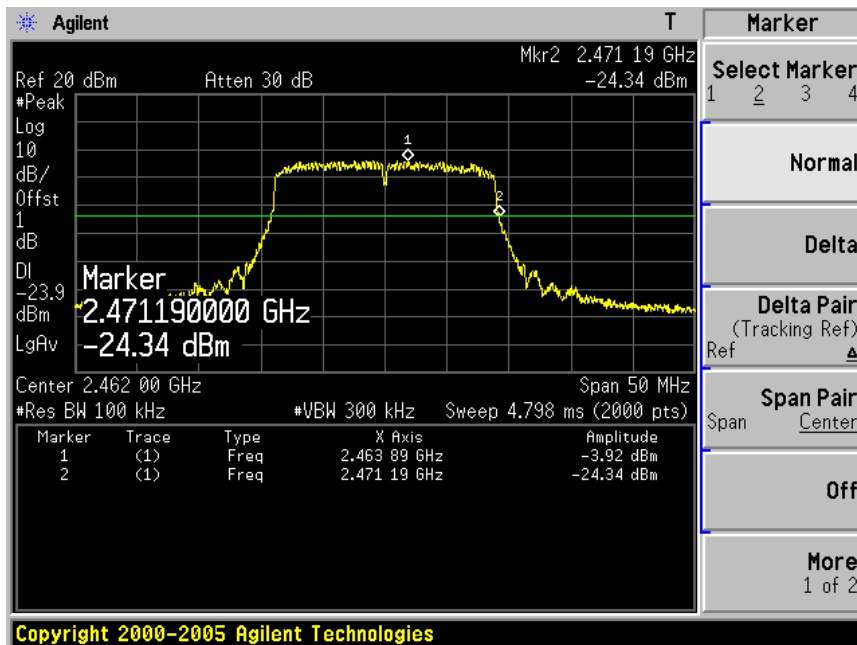


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR-8
Test Mode	: Mode 2: Transmit by 802.11n (20MHz) (Chain 0)

Channel 01 (2412MHz)

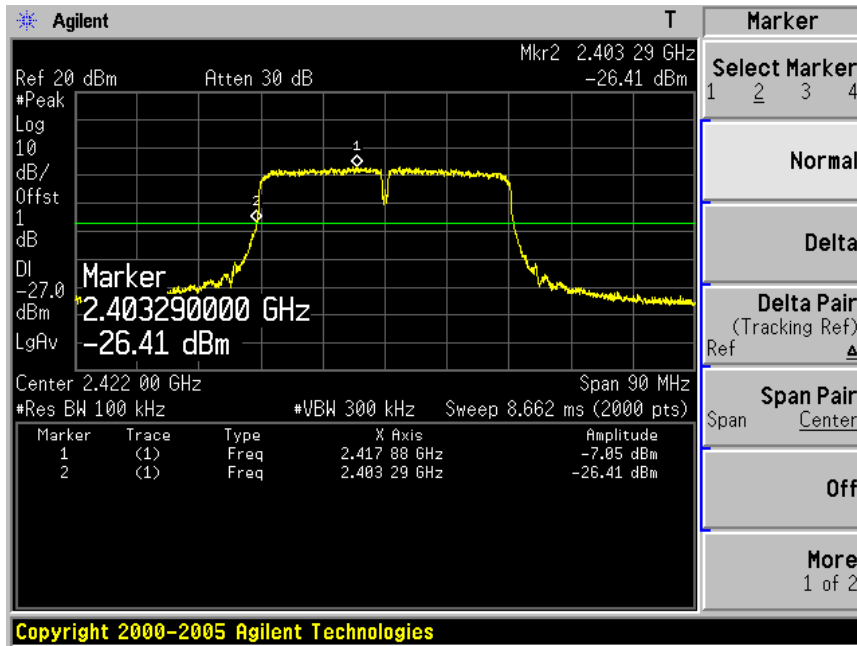


Channel 11 (2462MHz)

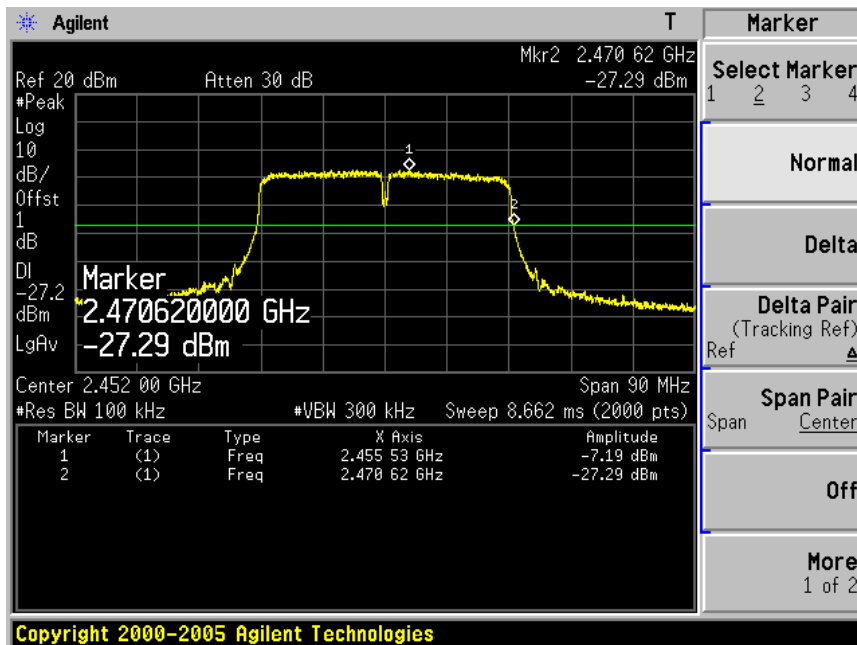


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR-8
Test Mode	: Mode 4: Transmit by 802.11n (40MHz) (Chain 0)

Channel 03 (2422MHz)

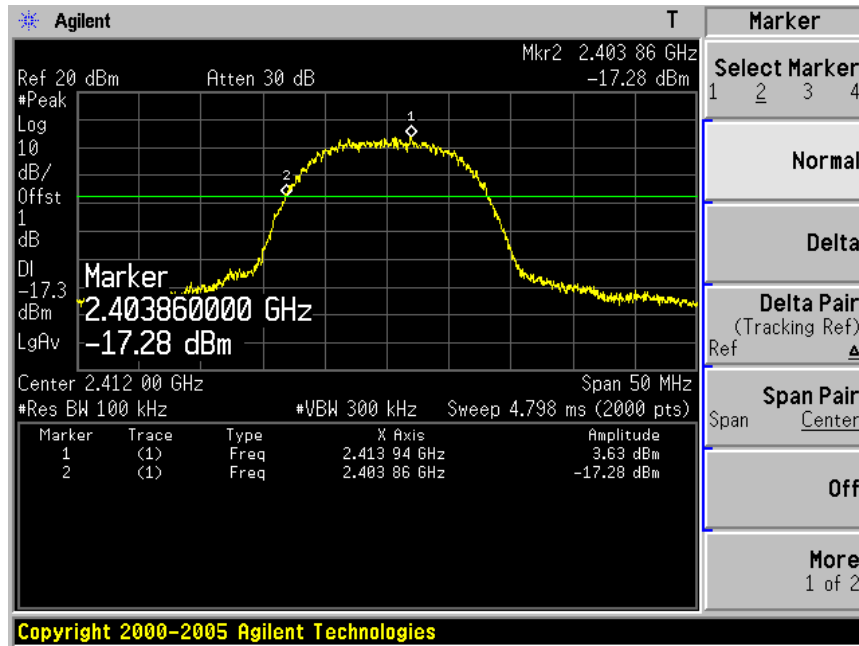


Channel 09 (2452MHz)

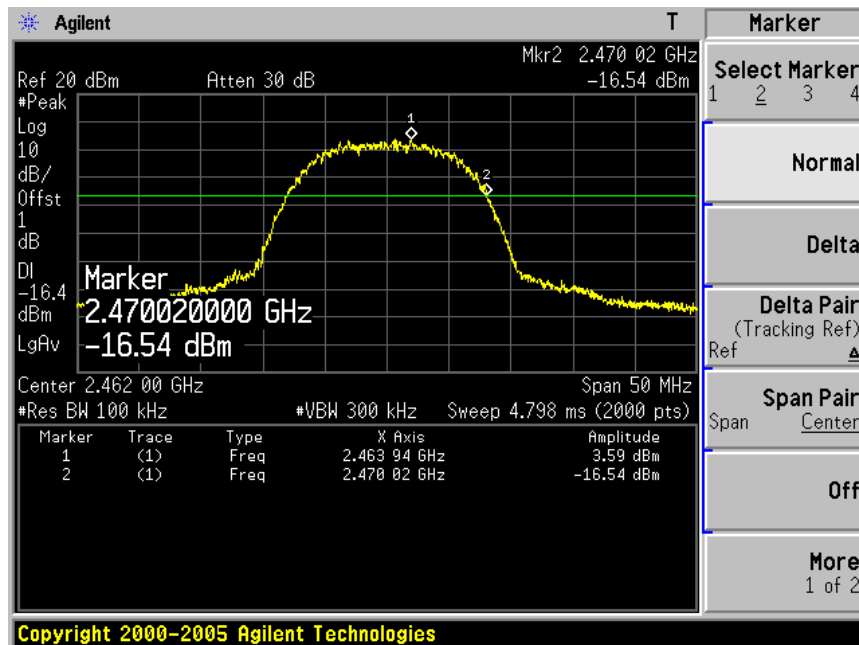


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR-8
Test Mode	: Mode 1: Transmit by 802.11b (Chain 1)

Channel 01 (2412MHz)

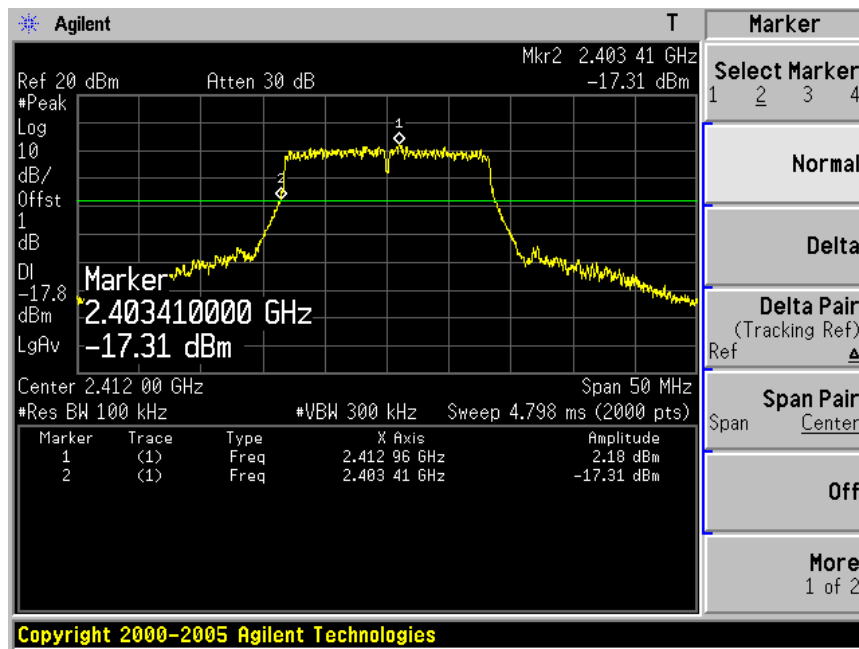


Channel 11 (2462MHz)

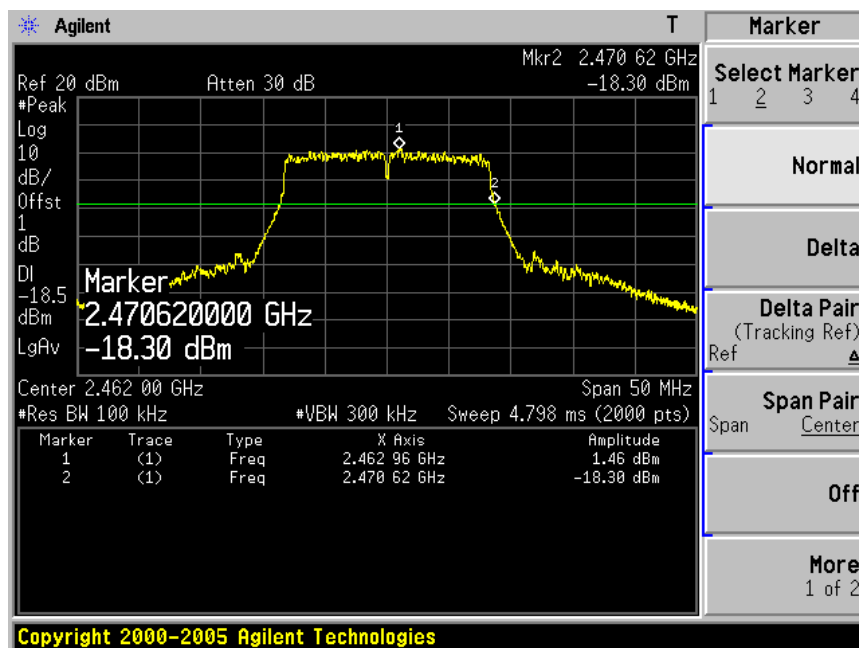


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR-8
Test Mode	: Mode 2: Transmit by 802.11g (Chain 1)

Channel 01 (2412MHz)

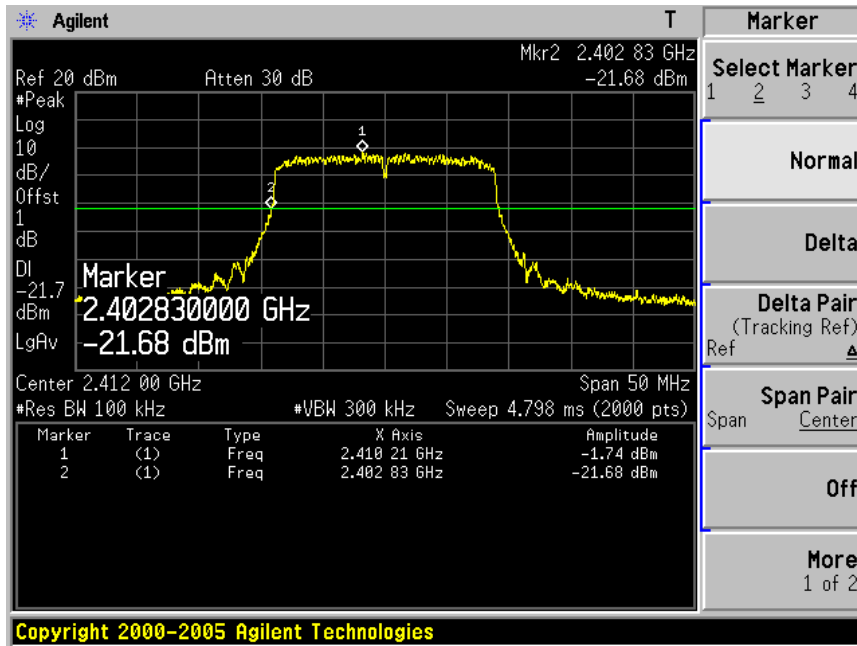


Channel 11 (2462MHz)

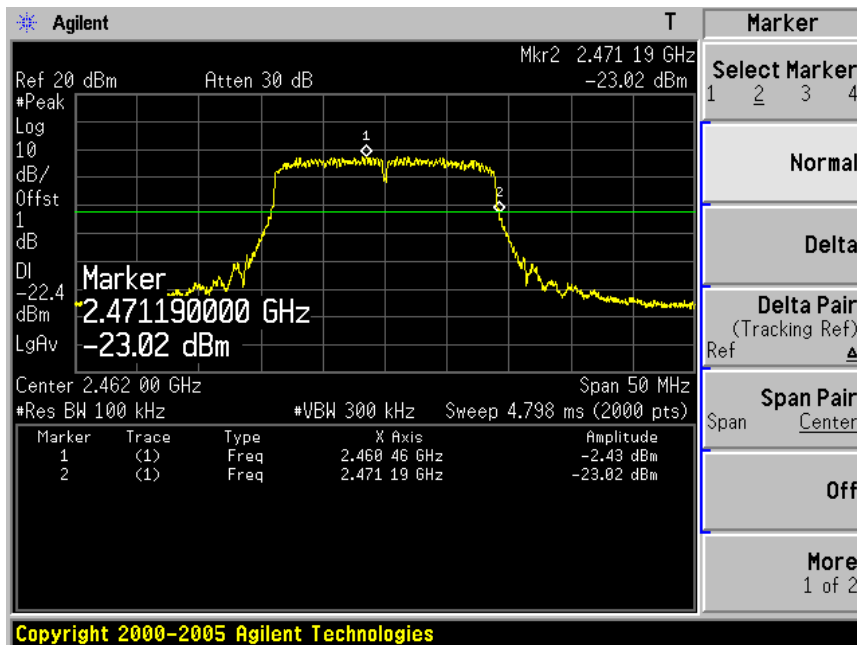


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR-8
Test Mode	: Mode 3: Transmit by 802.11n (20MHz) (Chain 1)

Channel 01 (2412MHz)

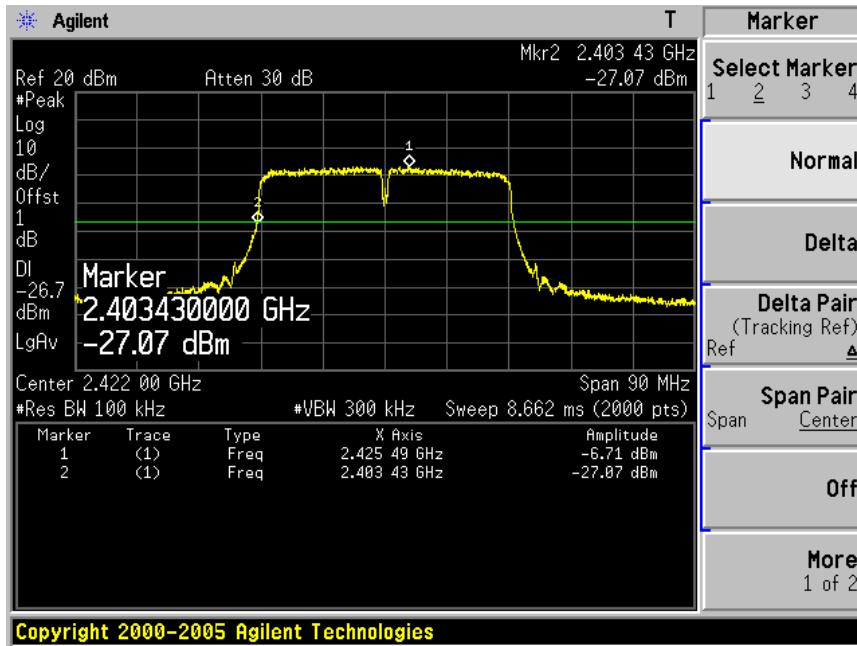


Channel 11 (2462MHz)

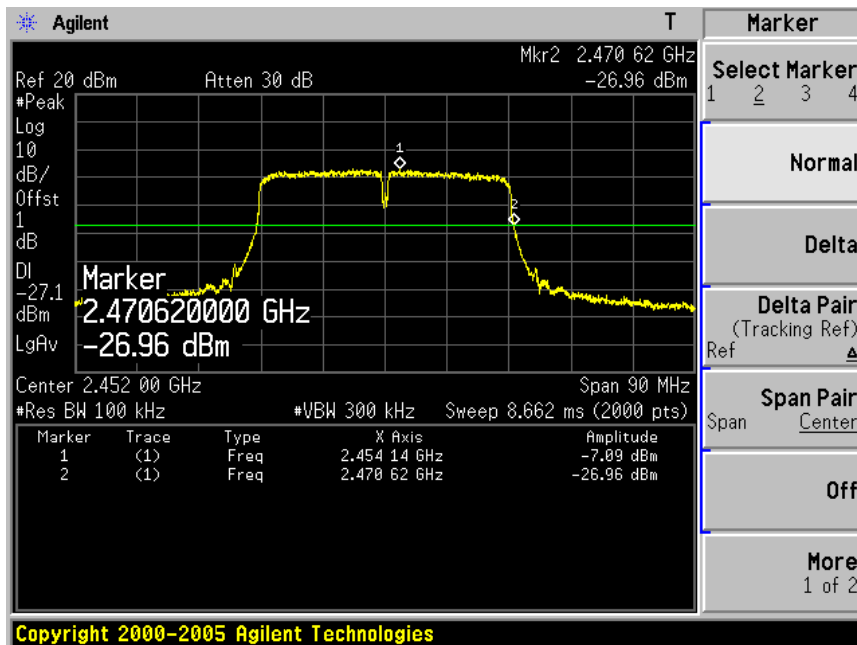


Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR-8
Test Mode	: Mode 4: Transmit by 802.11n (40MHz) (Chain 1)

Channel 03 (2422MHz)



Channel 09 (2452MHz)



8. Occupied Bandwidth

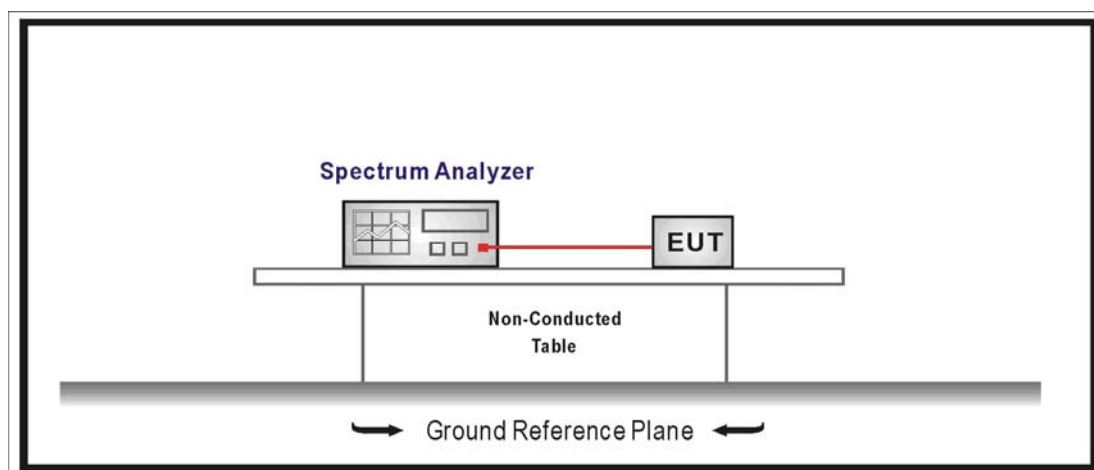
8.1. Test Equipment

Occupied Bandwidth / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2012.04.30
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2012.05.04

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

8.2. Test Setup



8.3. Limit

The minimum 6 dB bandwidth shall be at least 500 kHz.

8.4. Test Procedure

The EUT was tested according to ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Span greater than RBW.

8.5. Uncertainty

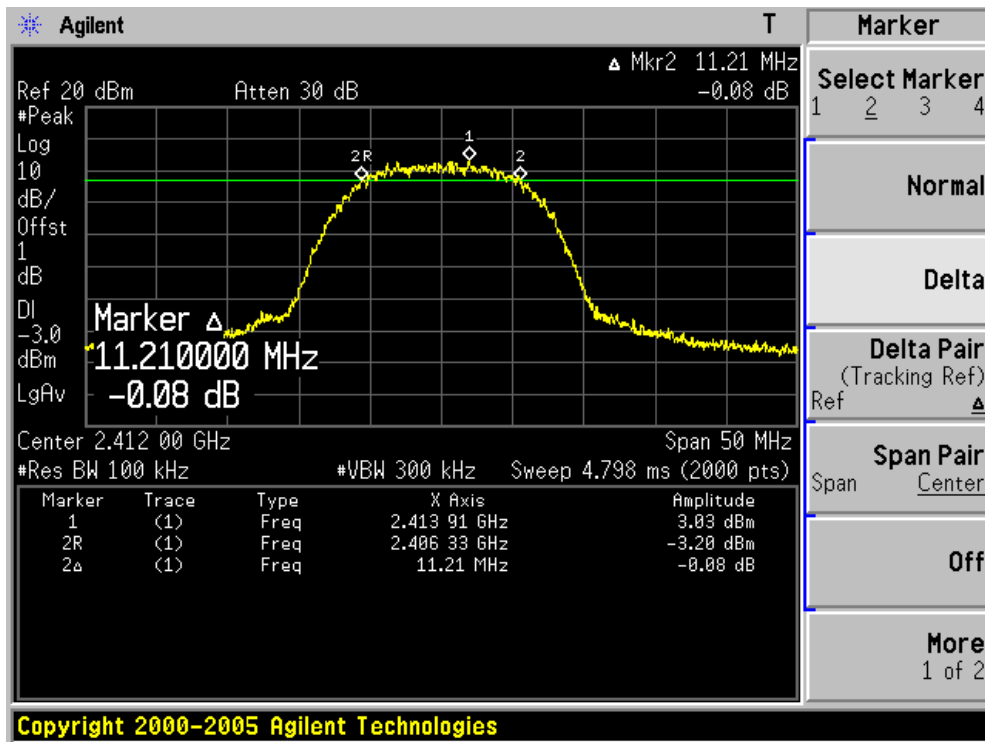
The measurement uncertainty is defined as ± 1 kHz

8.6. Test Result

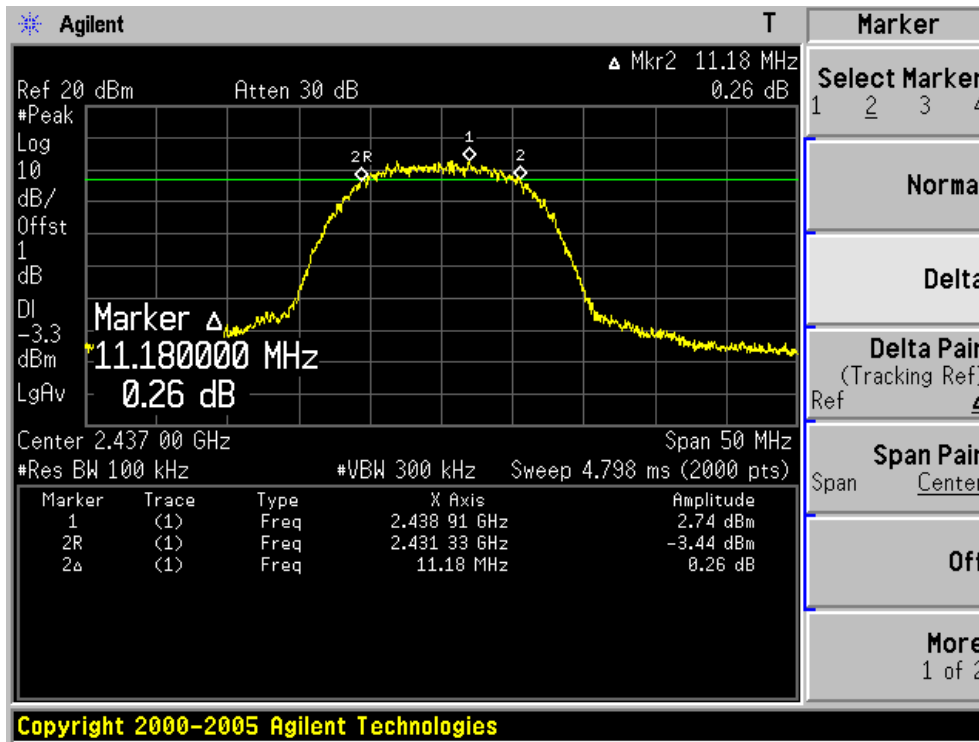
Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	6dB Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11b (Chain 0)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	11210	500	Pass
06	2437	11180	500	Pass
11	2462	11180	500	Pass

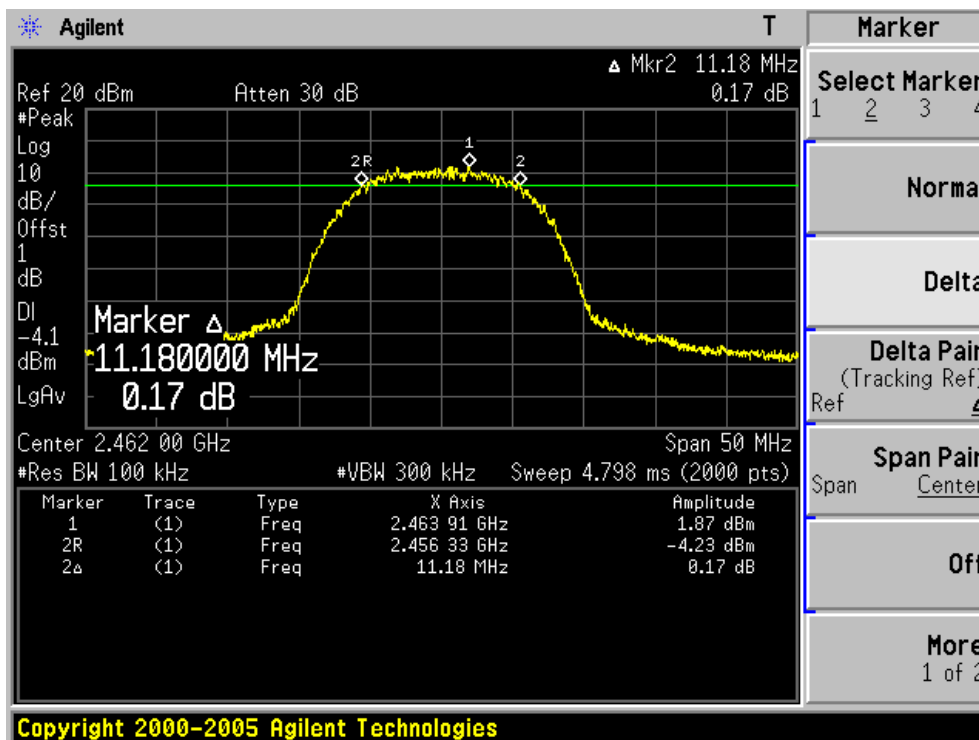
Channel 01 (2412MHz)



Channel 06 (2437MHz)



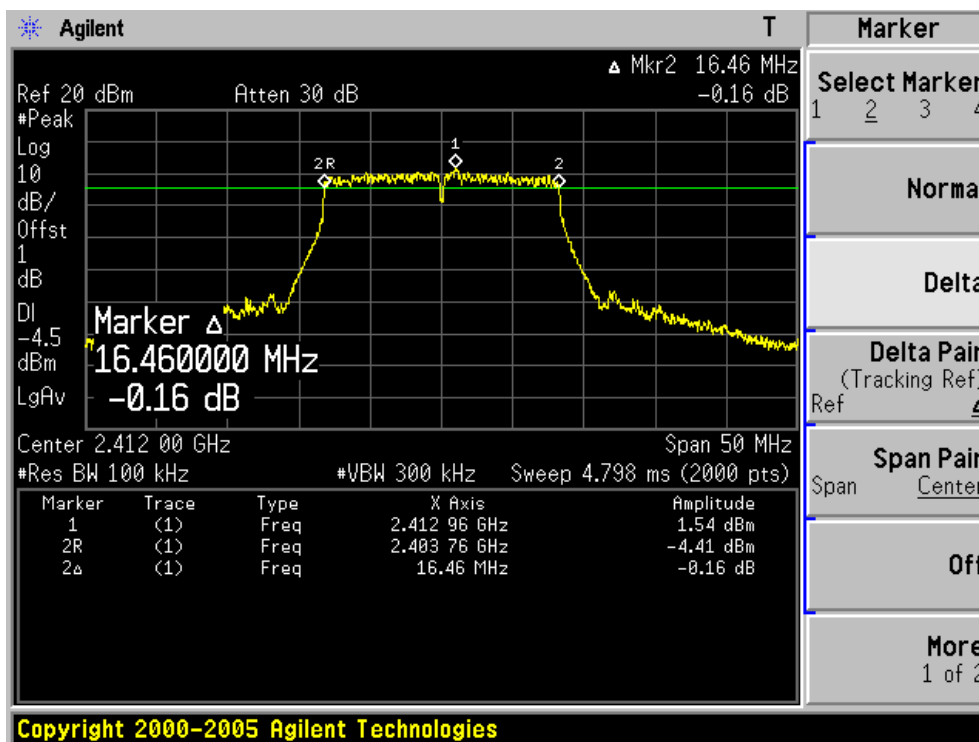
Channel 11 (2462MHz)



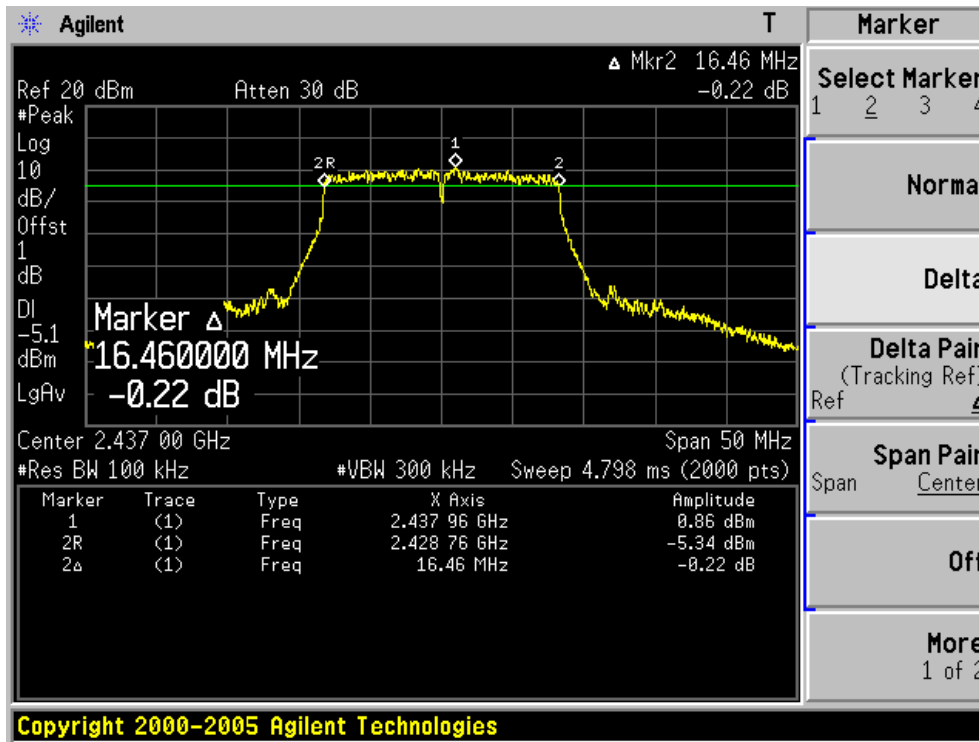
Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: 6dB Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 2: Transmit by 802.11g (Chain 0)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	16460	500	Pass
06	2437	16460	500	Pass
11	2462	16510	500	Pass

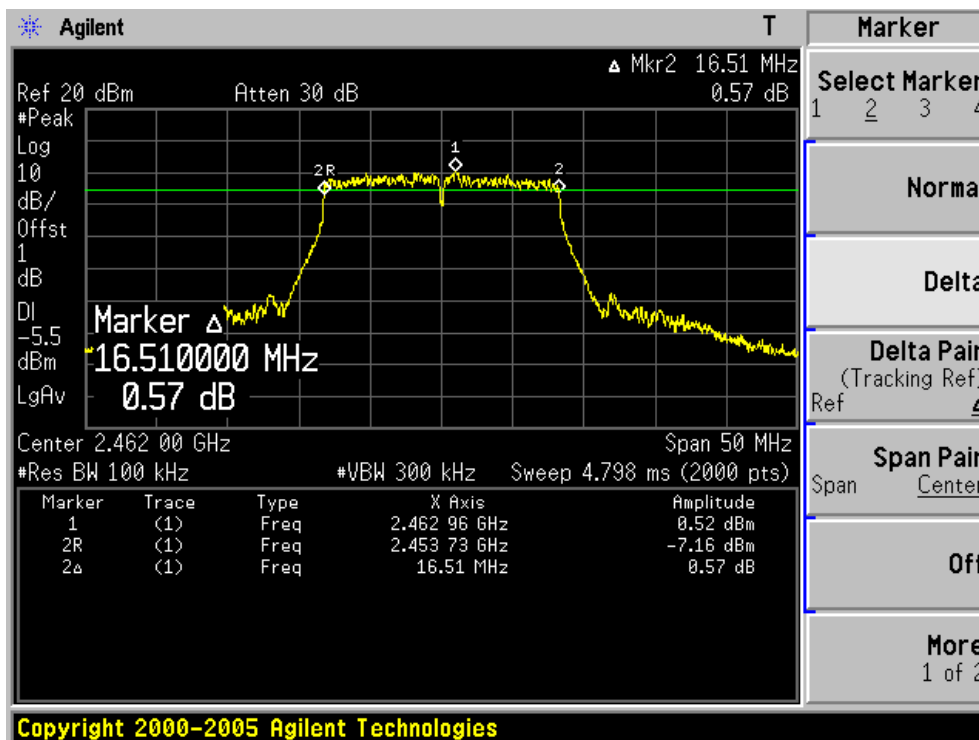
Channel 01 (2412MHz)



Channel 06 (2437MHz)



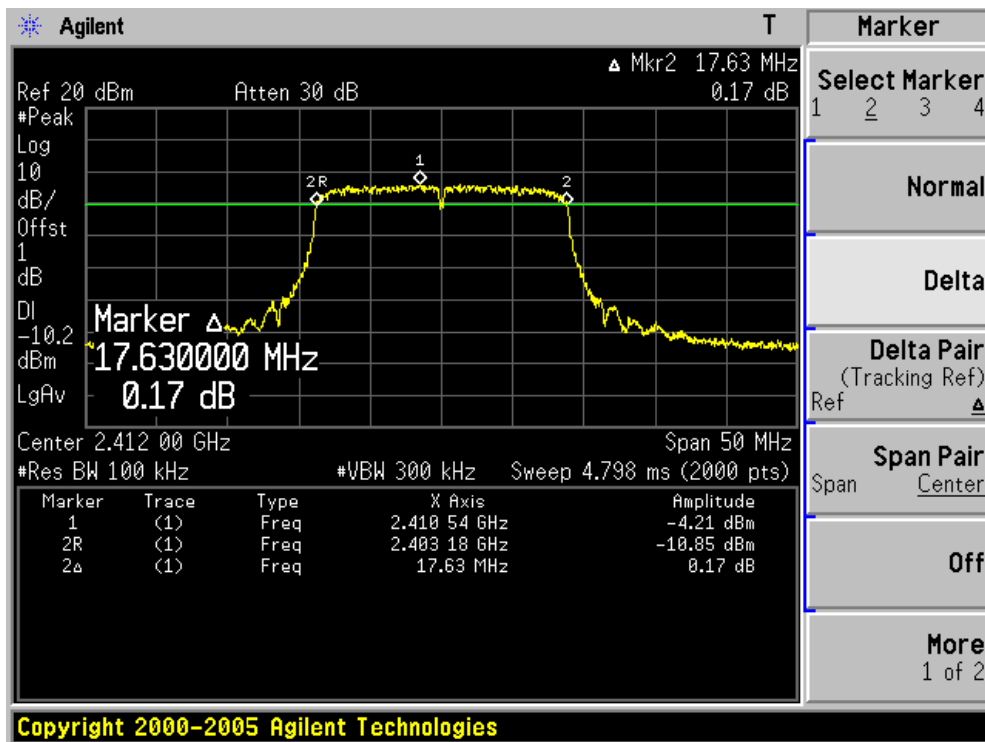
Channel 11 (2462MHz)



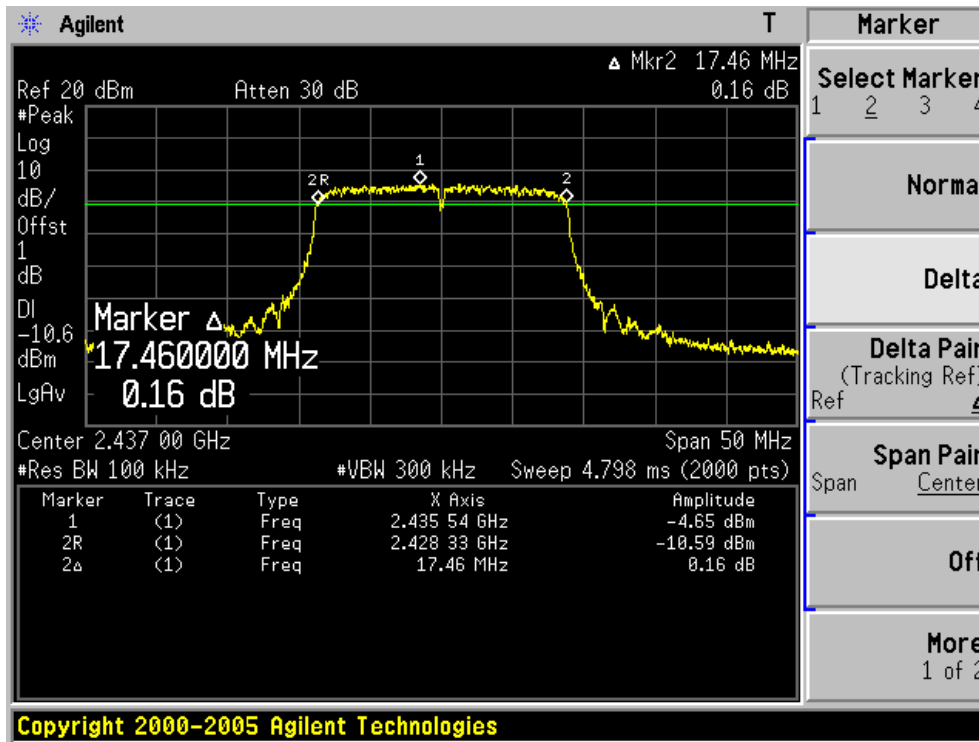
Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: 6dB Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 4: Transmit by 802.11n (20MHz) (Chain 0)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	17630	500	Pass
06	2437	17460	500	Pass
11	2462	17630	500	Pass

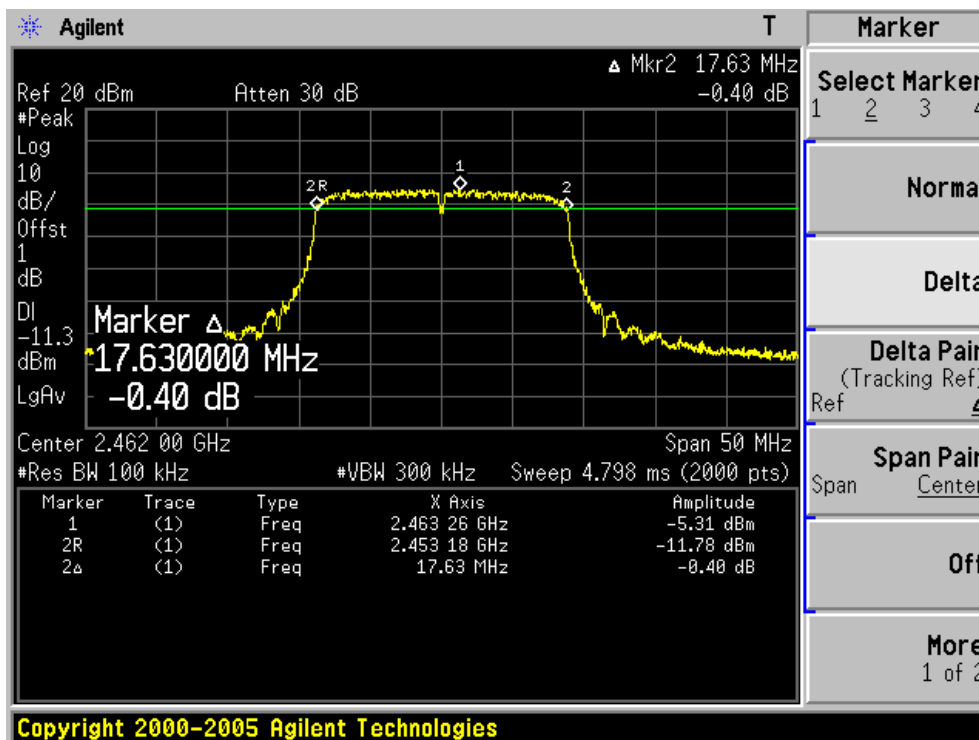
Channel 01 (2412MHz)



Channel 06 (2437MHz)



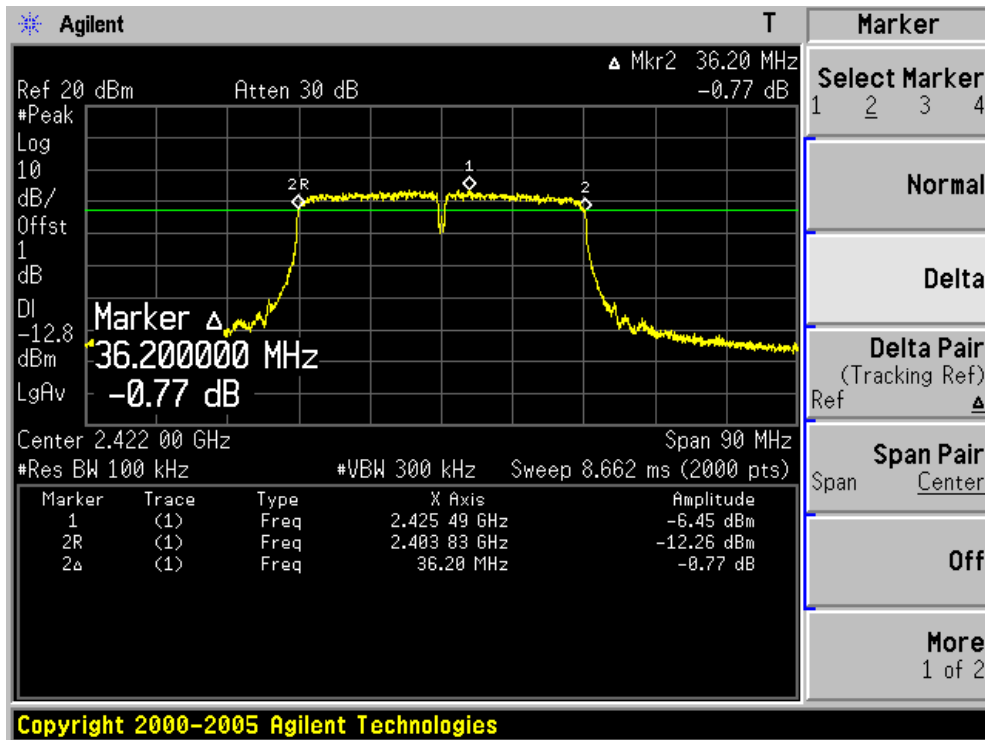
Channel 11 (2462MHz)



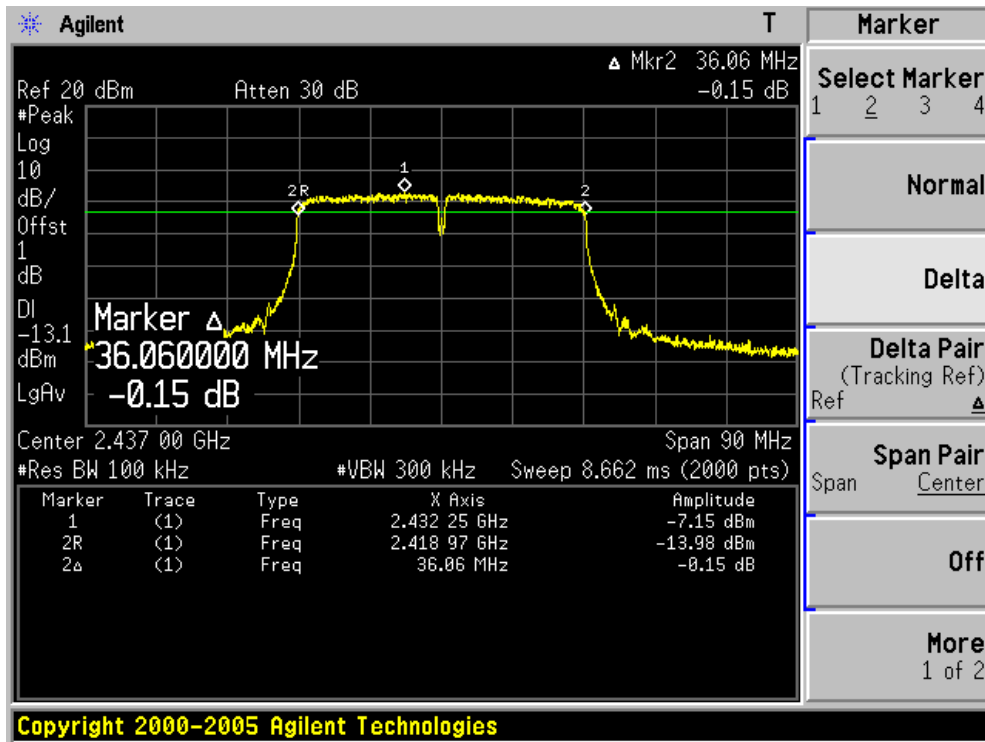
Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: 6dB Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 5: Transmit by 802.11n (40MHz) (Chain 0)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
03	2422	36200	500	Pass
06	2437	36060	500	Pass
09	2452	36380	500	Pass

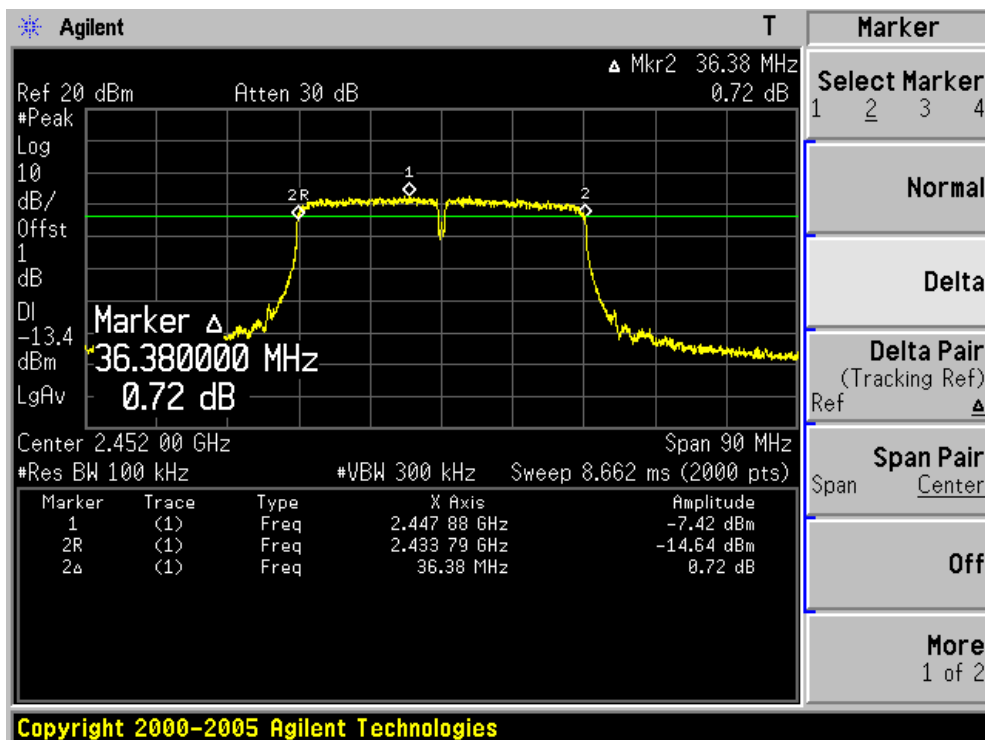
Channel 03 (2422MHz)



Channel 06 (2437MHz)



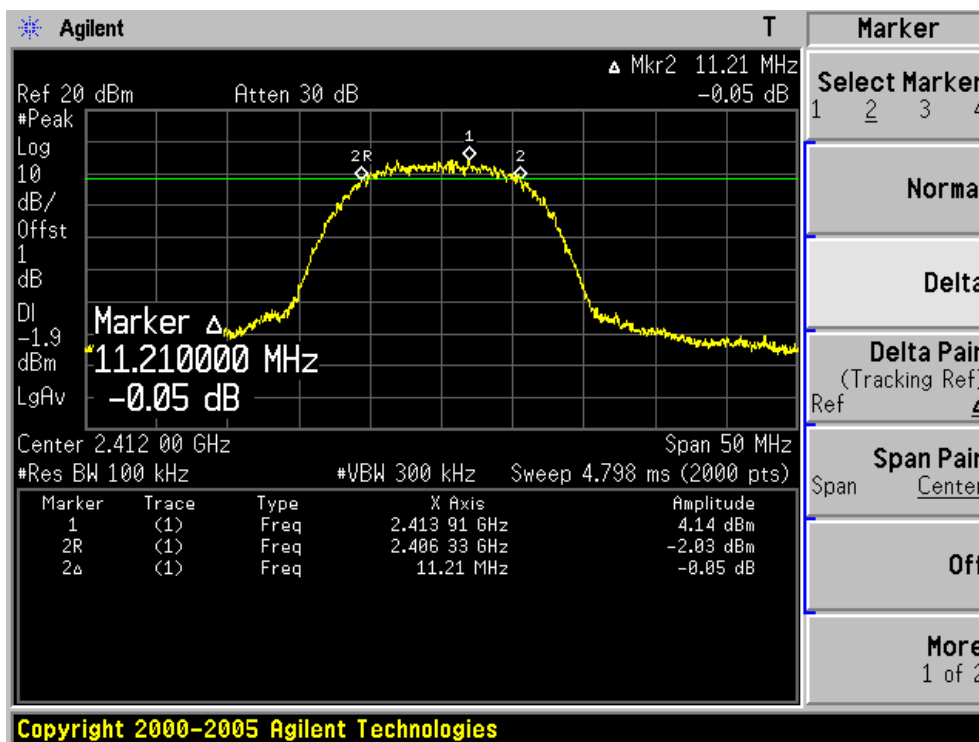
Channel 09 (2452MHz)



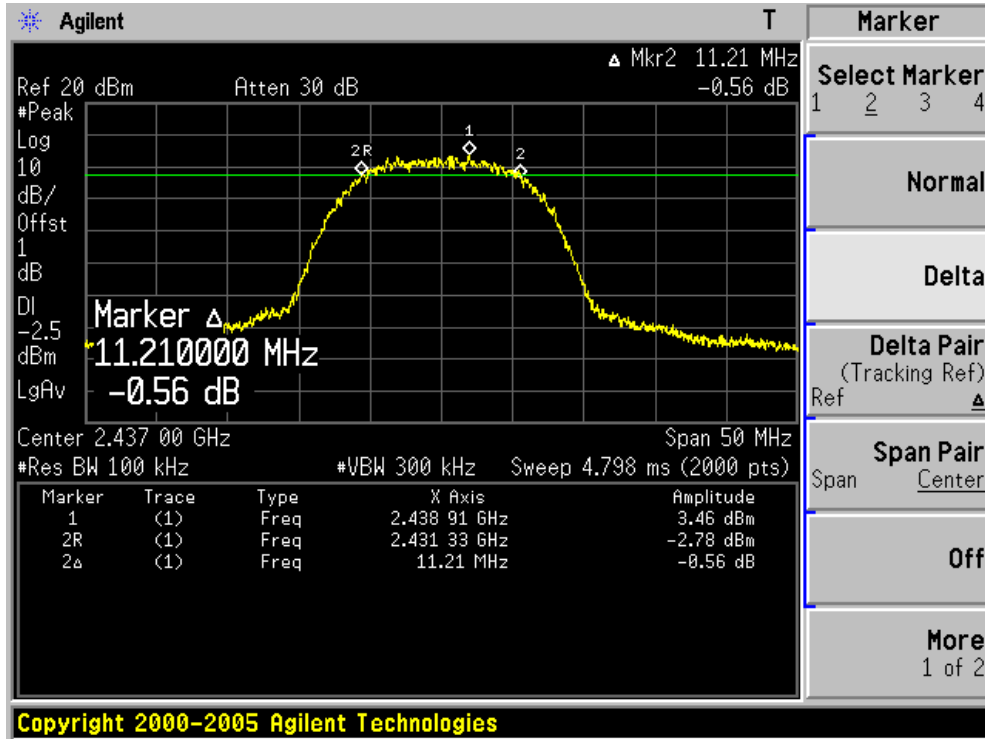
Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: 6dB Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 1: Transmit by 802.11b (Chain 1)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	11210	500	Pass
06	2437	11210	500	Pass
11	2462	11210	500	Pass

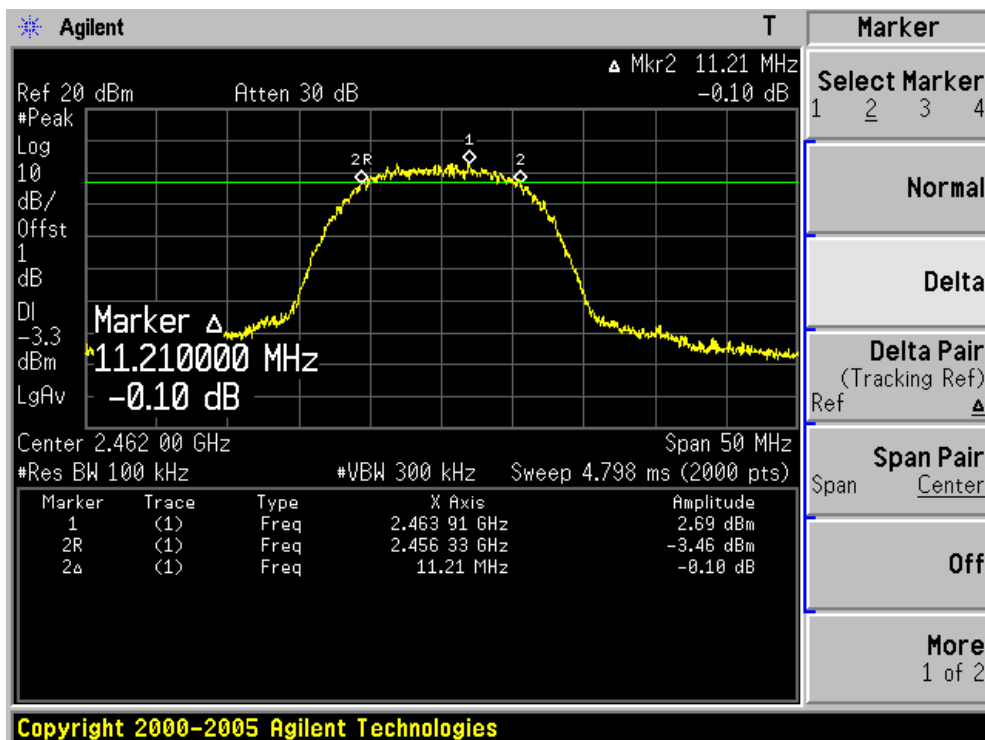
Channel 01 (2412MHz)



Channel 06 (2437MHz)



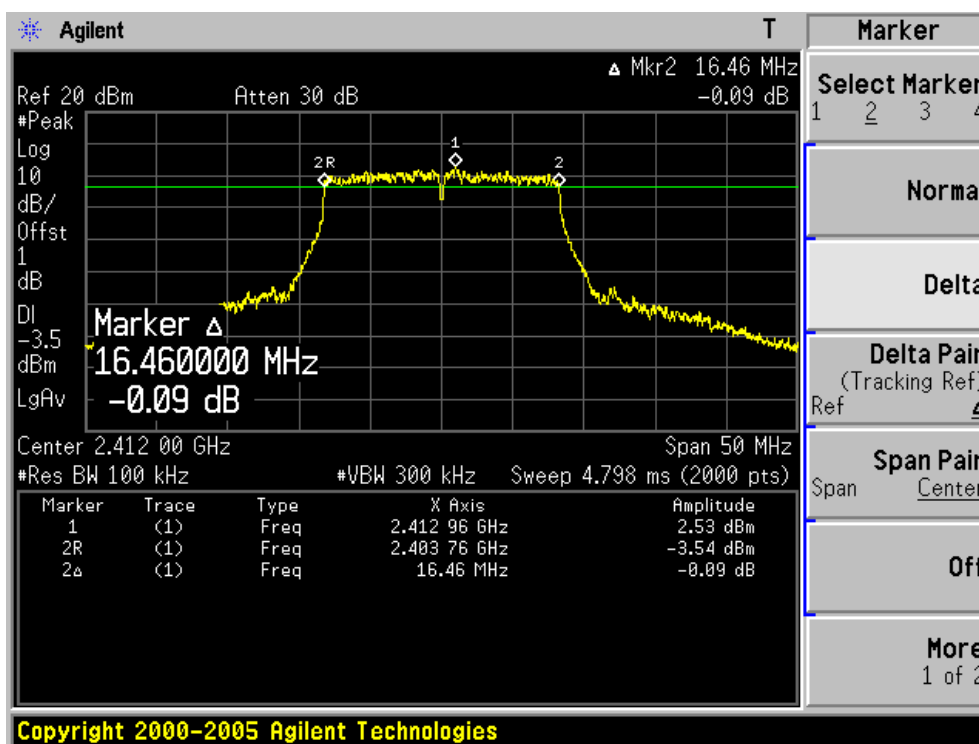
Channel 11 (2462MHz)



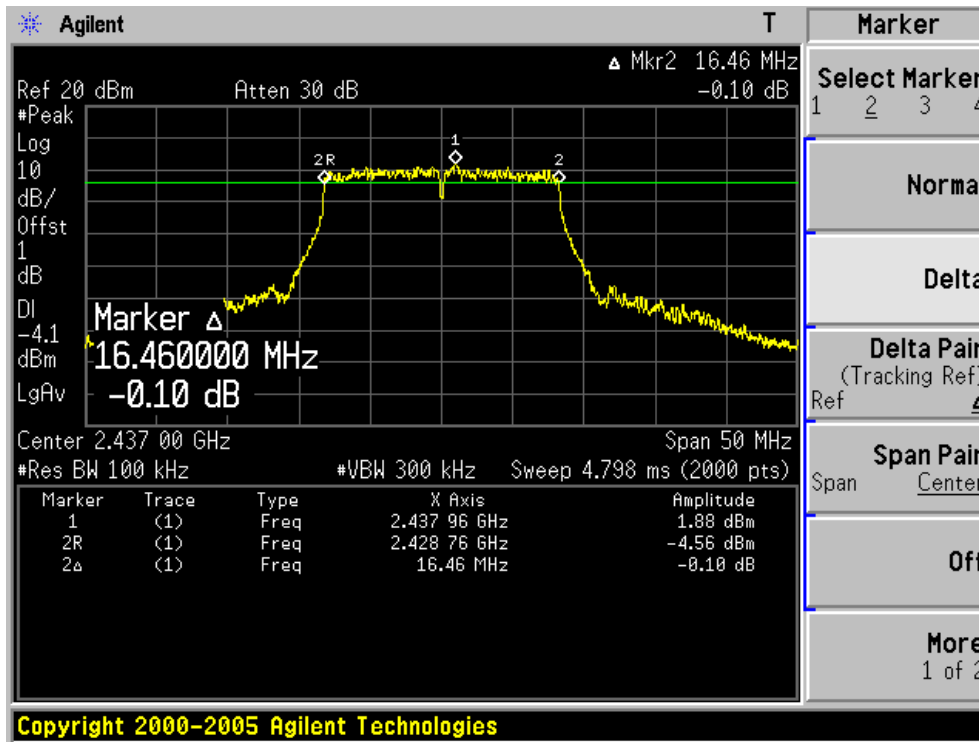
Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: 6dB Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 2: Transmit by 802.11g (Chain 1)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	16460	500	Pass
06	2437	16460	500	Pass
11	2462	16460	500	Pass

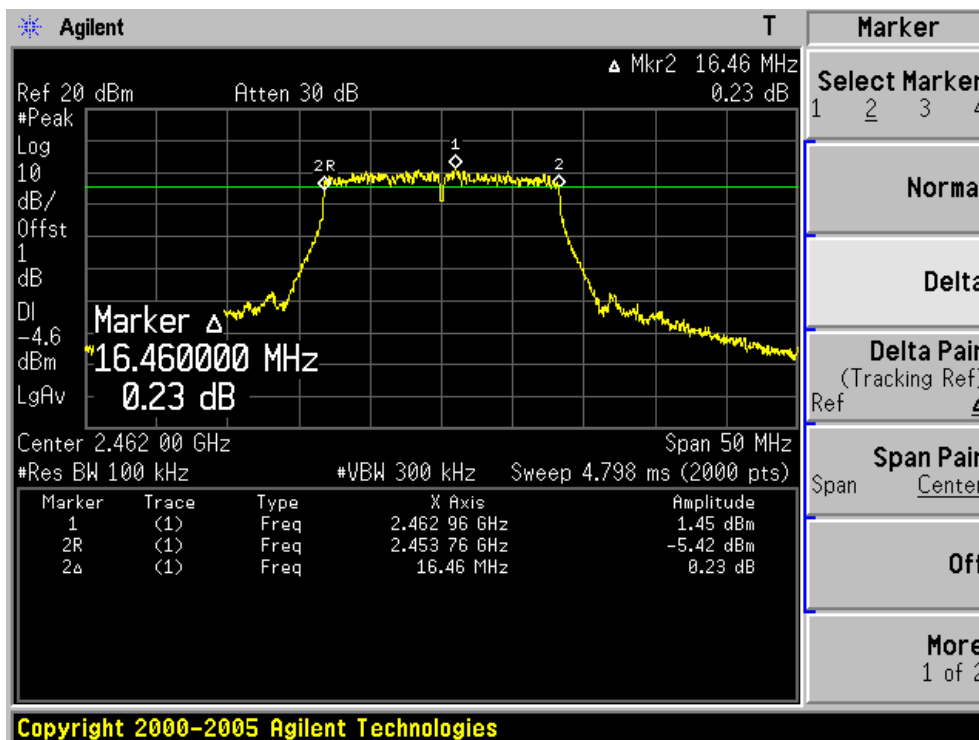
Channel 01 (2412MHz)



Channel 06 (2437MHz)



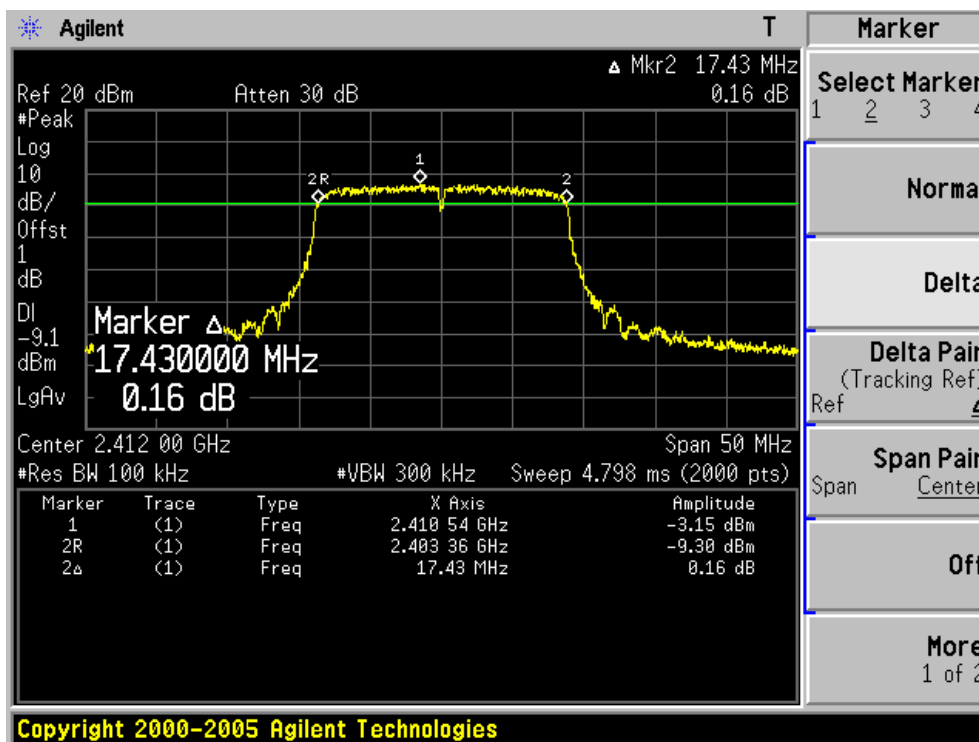
Channel 11 (2462MHz)



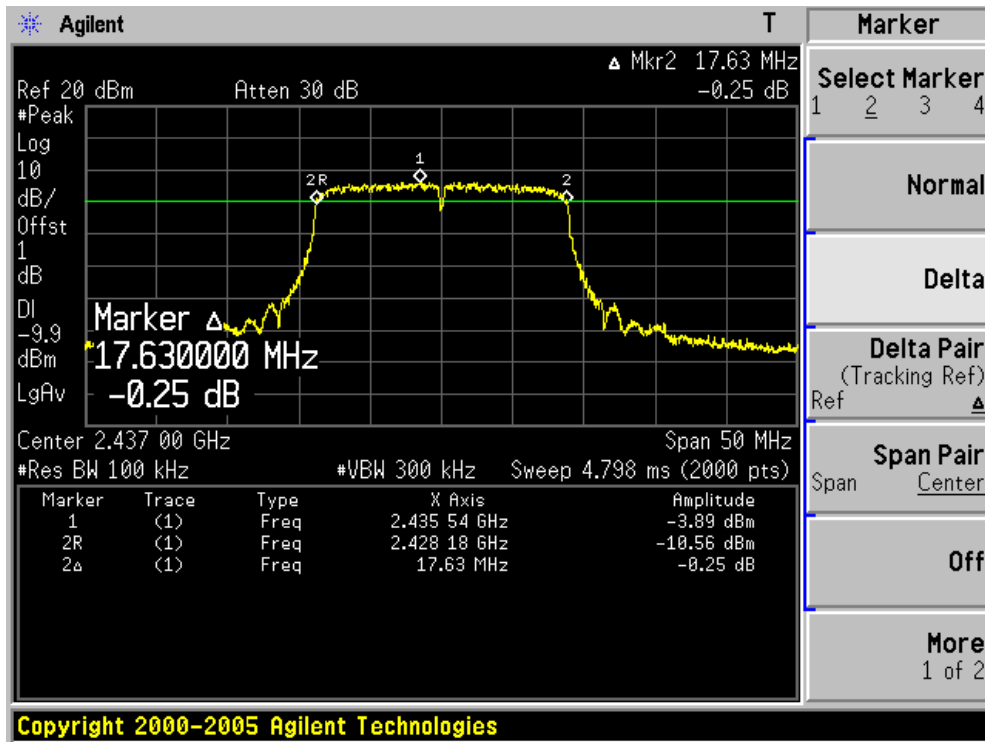
Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: 6dB Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 4: Transmit by 802.11n (20MHz) (Chain 1)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	17430	500	Pass
06	2437	17630	500	Pass
11	2462	17530	500	Pass

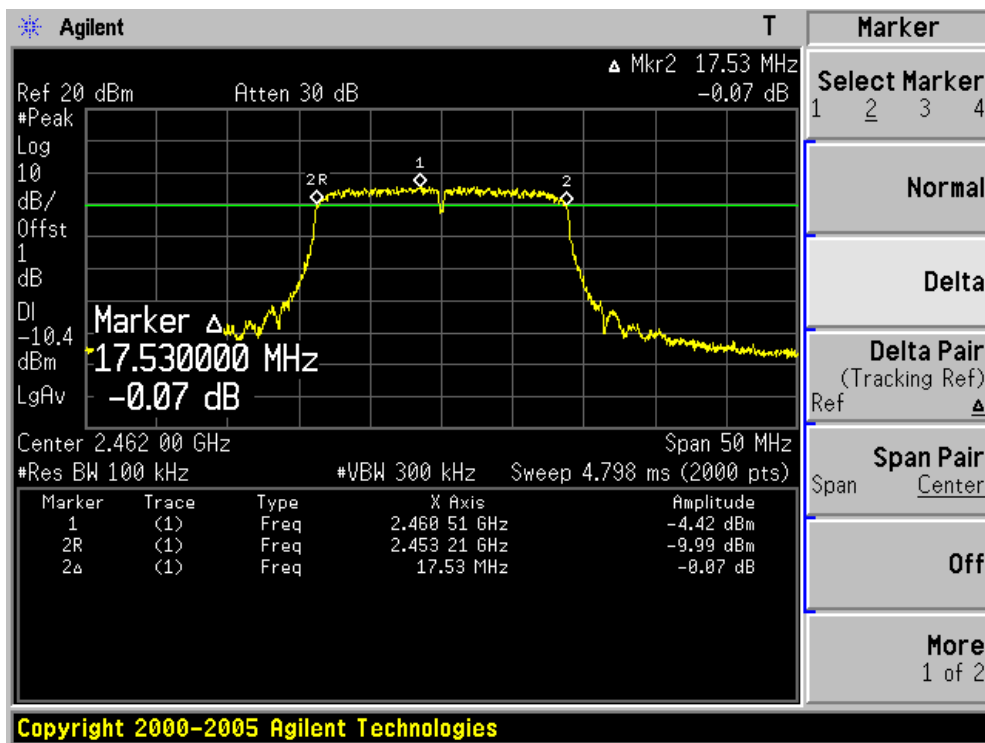
Channel 01 (2412MHz)



Channel 06 (2437MHz)



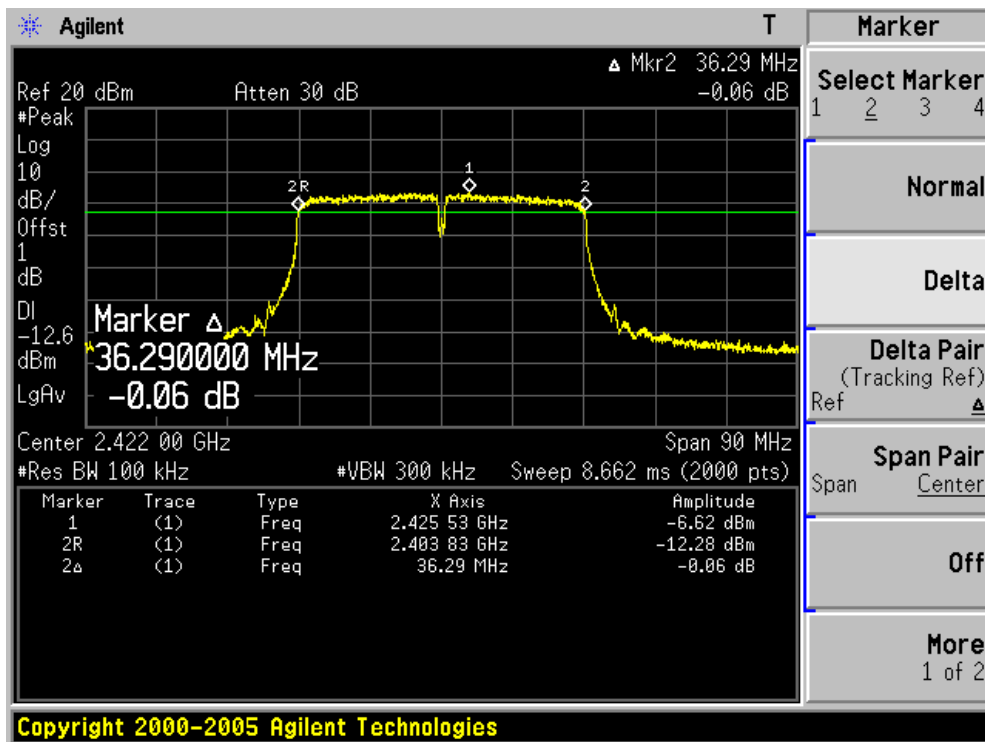
Channel 11 (2462MHz)



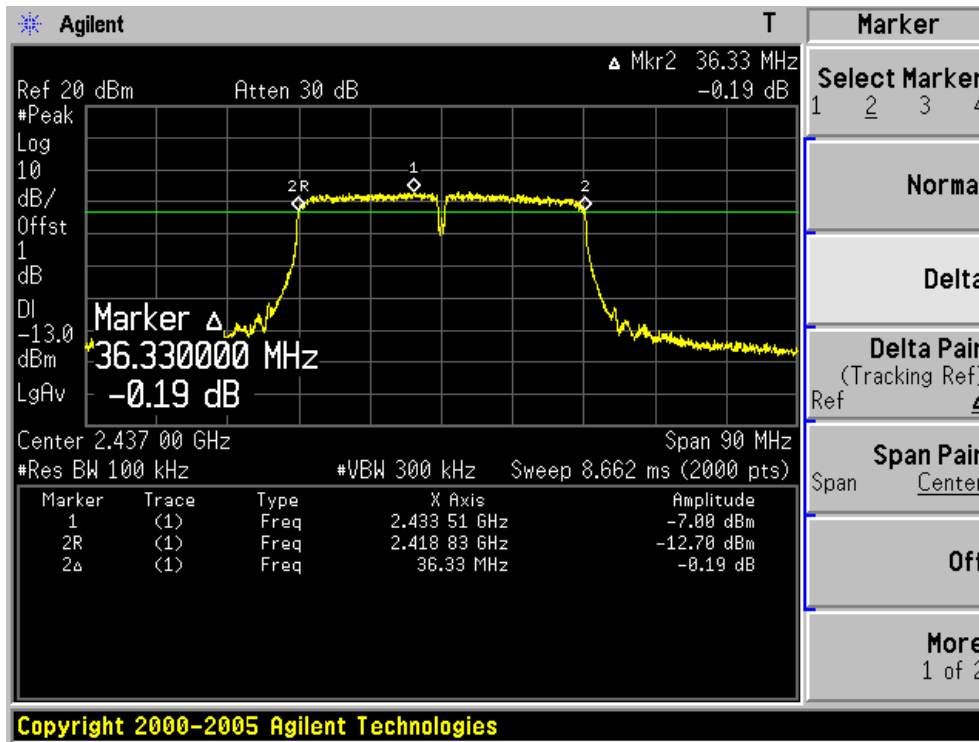
Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: 6dB Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 5: Transmit by 802.11n (40MHz) (Chain 1)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
03	2422	36290	500	Pass
06	2437	36330	500	Pass
09	2452	36060	500	Pass

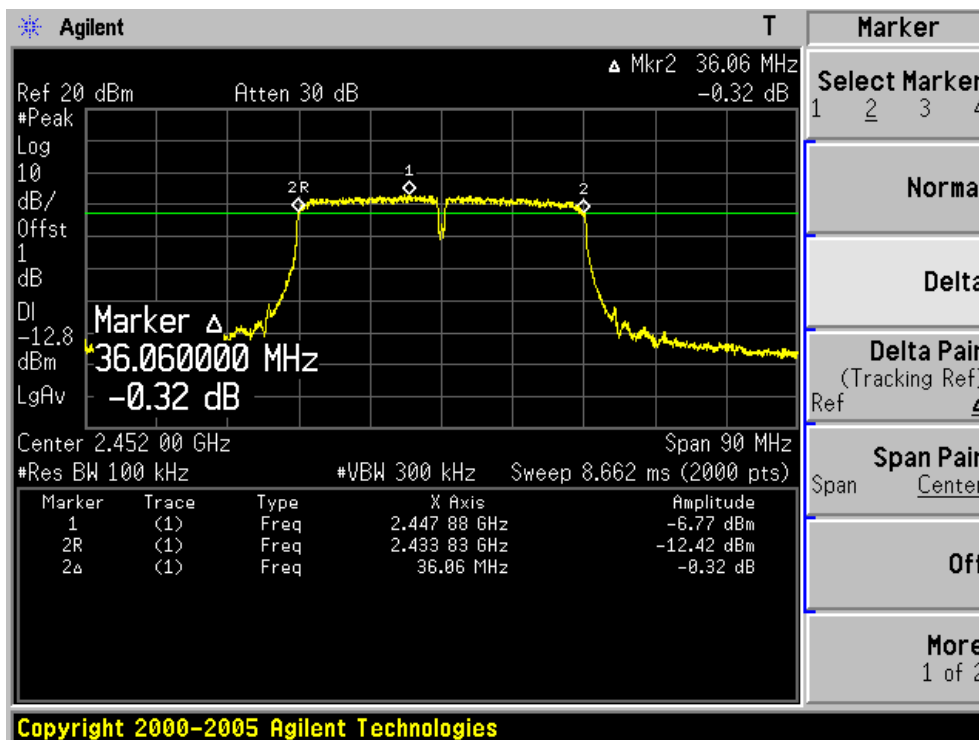
Channel 03 (2422MHz)



Channel 06 (2437MHz)



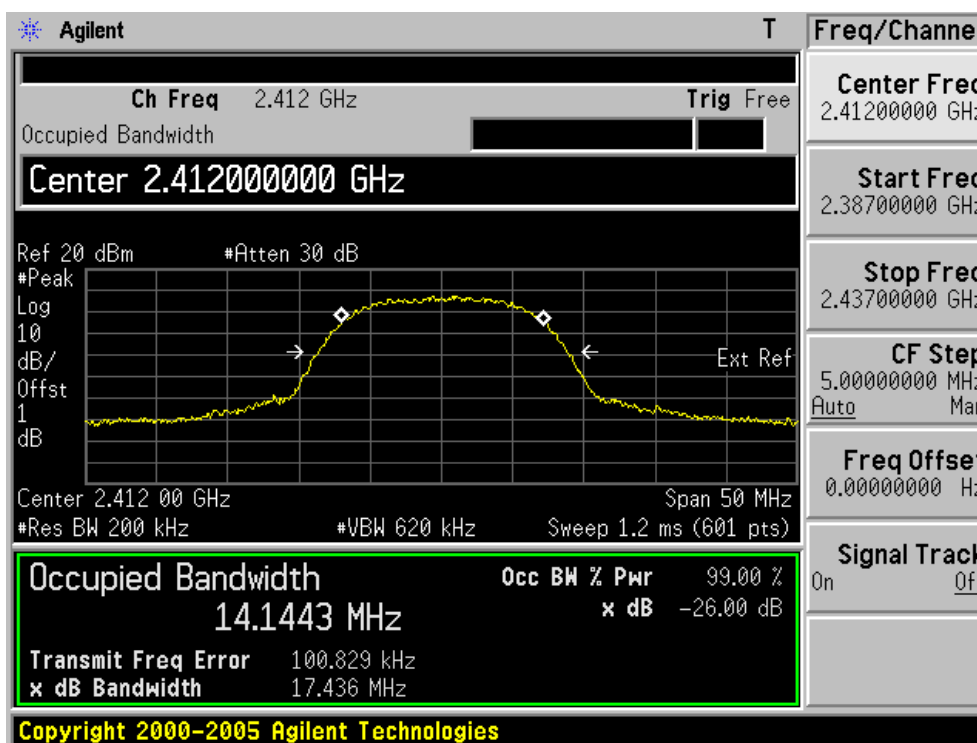
Channel 09 (2452MHz)



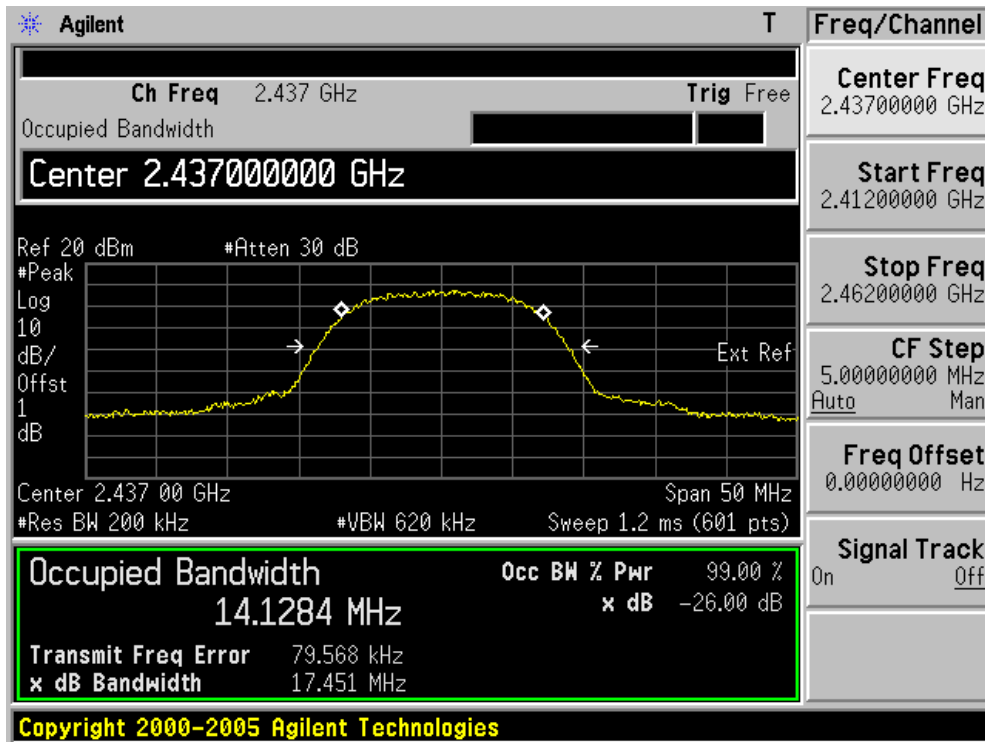
Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: 99% Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 1: Transmit by 802.11b (Chain 0)

Channel No.	Frequency (MHz)	99% Occupied Bandwidth (kHz)
01	2412	14144.3
06	2437	14128.4
11	2462	14135.9

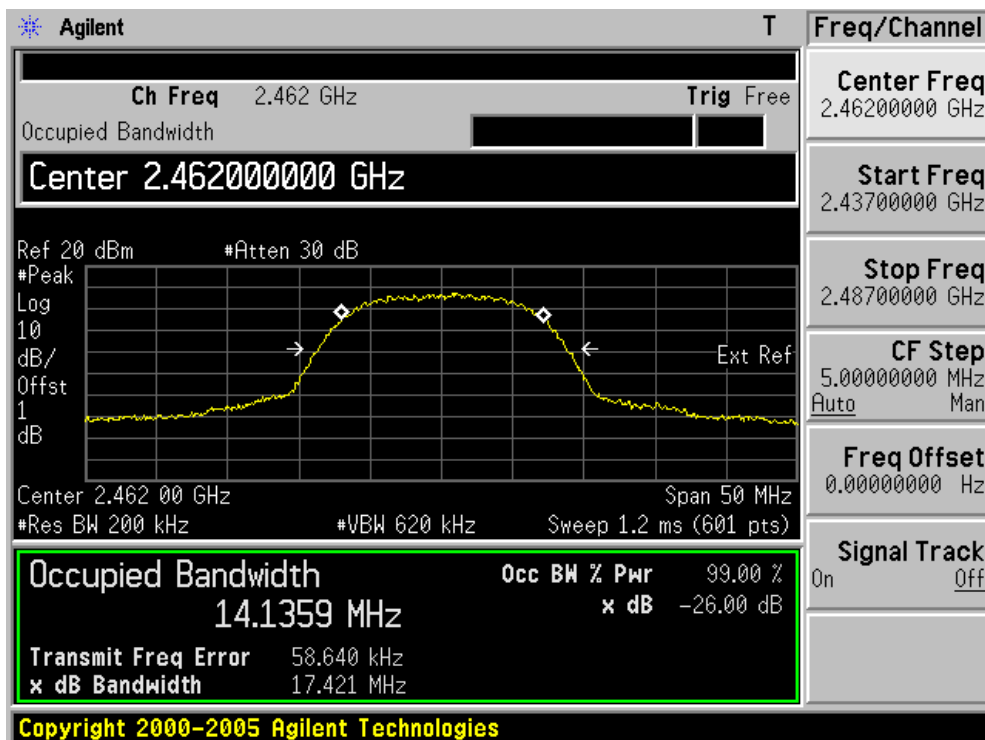
Channel 01 (2412MHz)



Channel 06 (2437MHz)



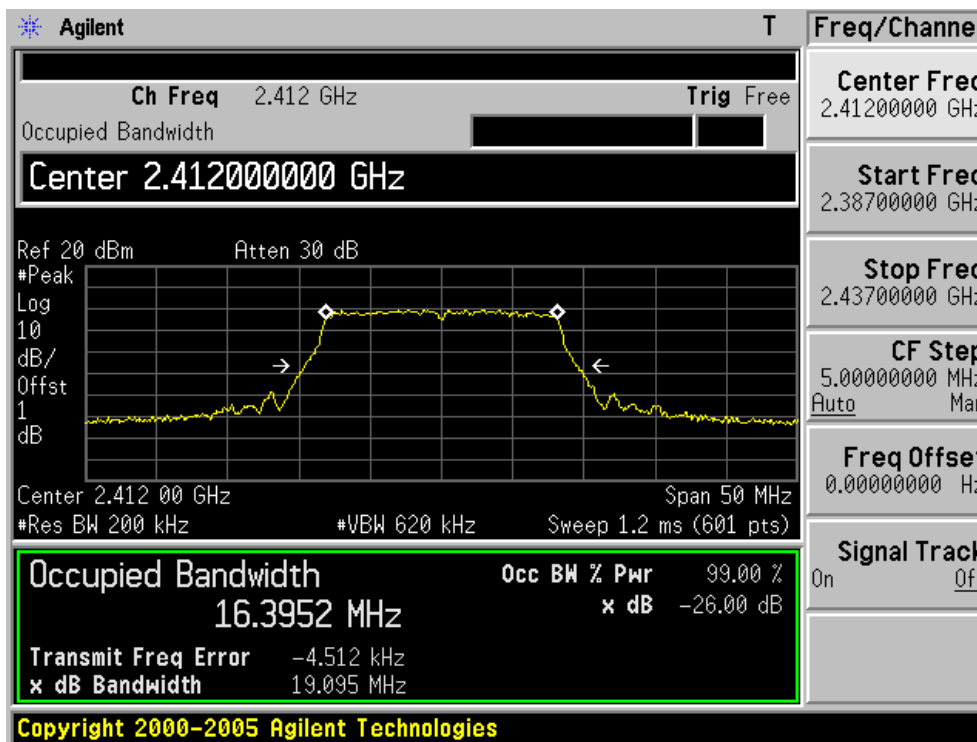
Channel 11 (2462MHz)



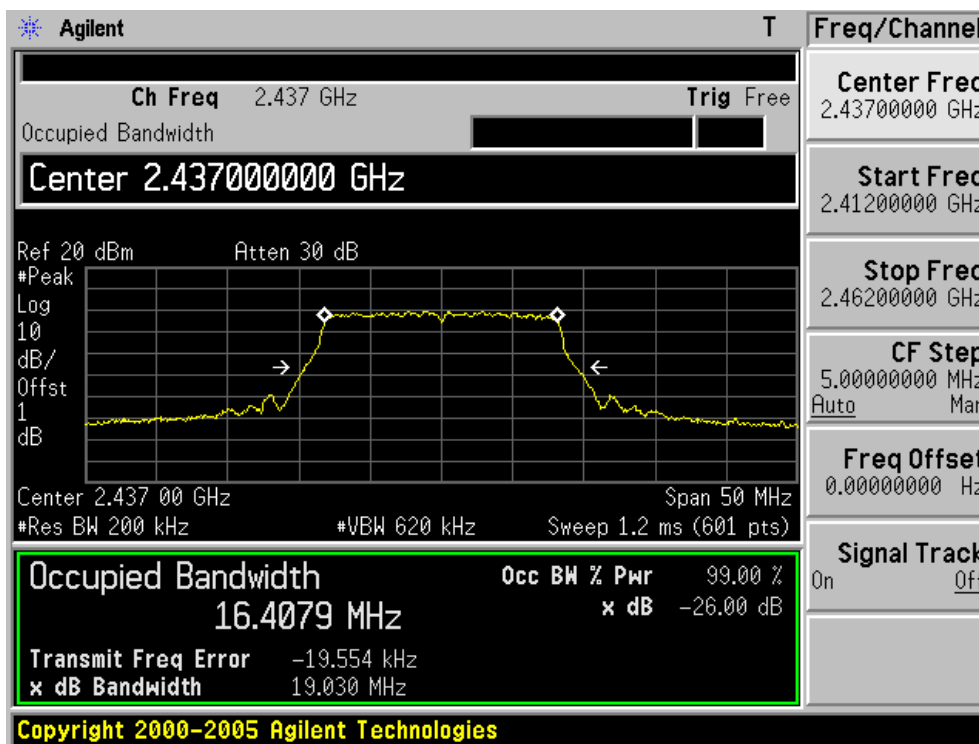
Product	: Wireless N ADSL2 +4-port USB Gateway
Test Item	: 99% Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 2: Transmit by 802.11g (Chain 0)

Channel No.	Frequency (MHz)	99% Occupied Bandwidth (kHz)
01	2412	16395.2
06	2437	16407.9
11	2462	16385.4

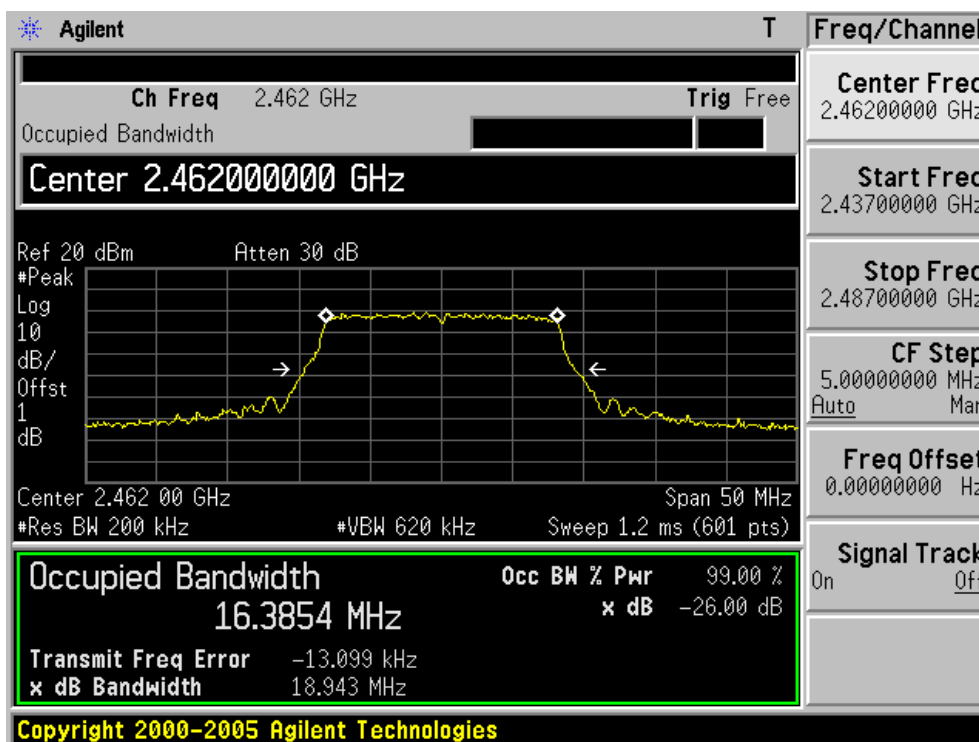
Channel 01 (2412MHz)



Channel 06 (2437MHz)



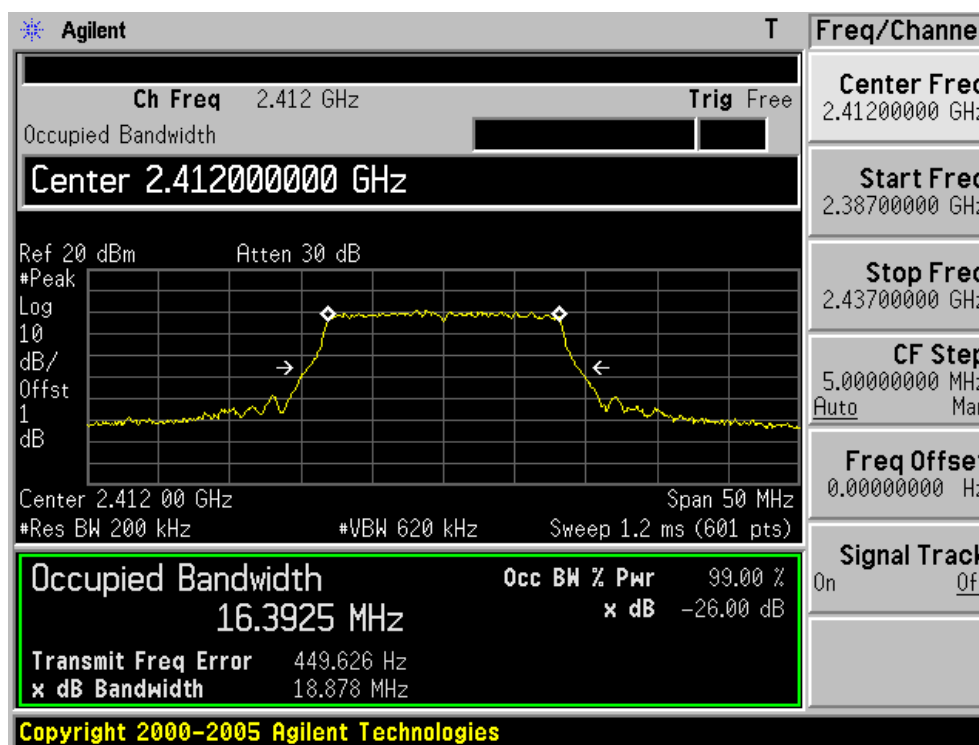
Channel 11 (2462MHz)



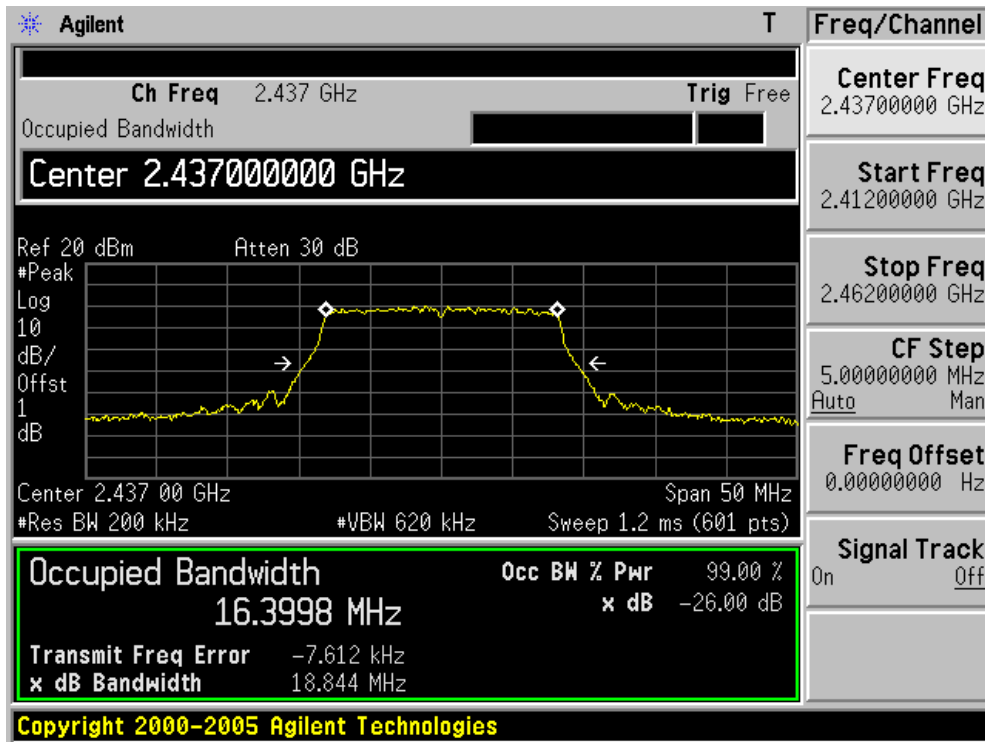
Product	: Wireless N ADSL2 +4-port USB Gateway
Test Item	: 99% Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 3: Transmit by 802.11 n (20MHz) (Chain 0)

Channel No.	Frequency (MHz)	99% Occupied Bandwidth (kHz)
01	2412	16392.5
06	2437	16399.8
11	2462	16409.5

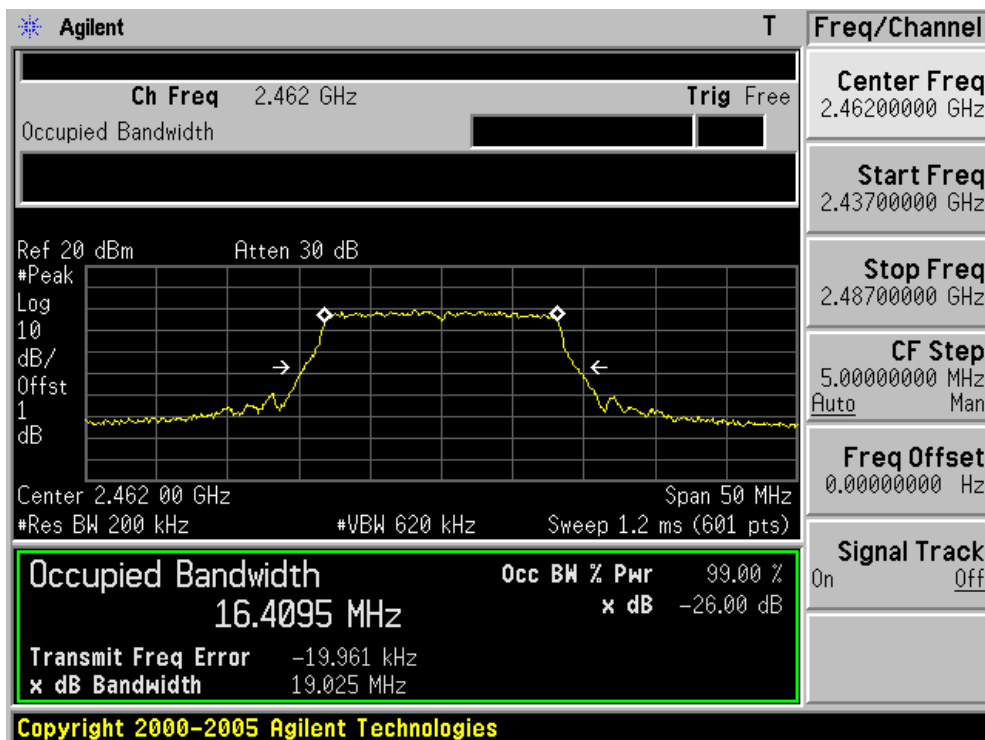
Channel 01 (2412MHz)



Channel 06 (2437MHz)



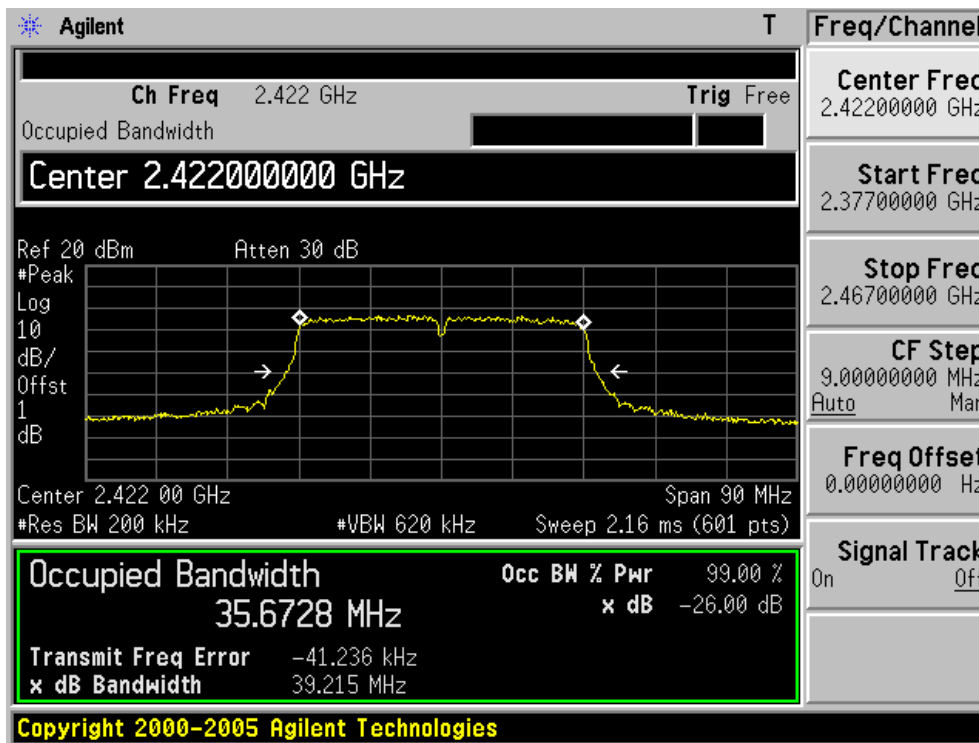
Channel 11 (2462MHz)



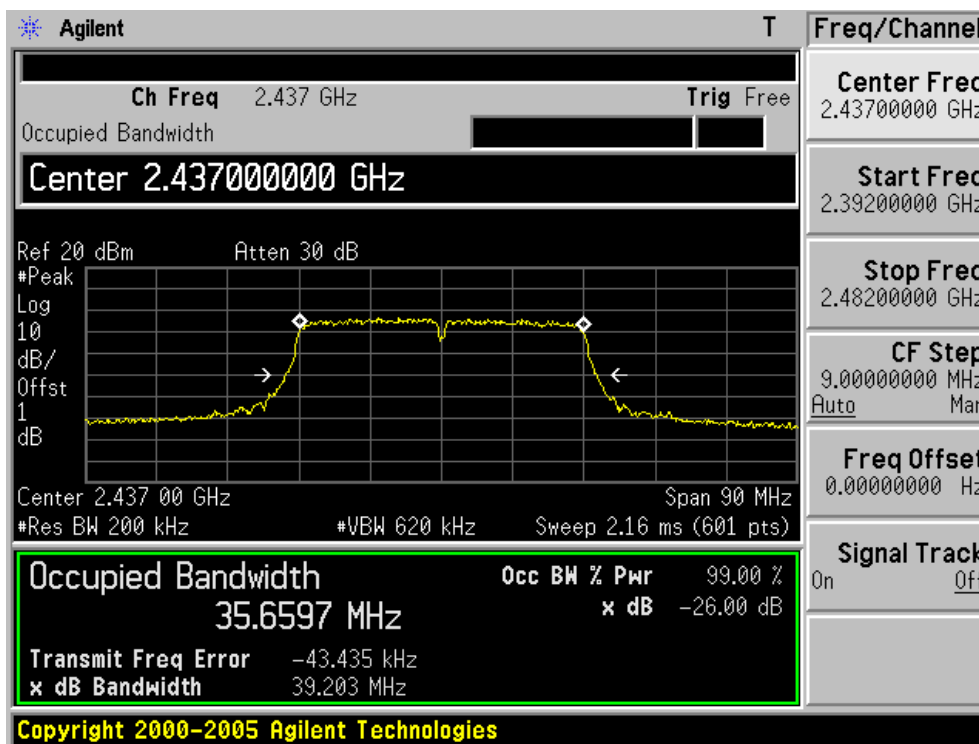
Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: 99% Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 4: Transmit by 802.11 n (40MHz) (Chain 0)

Channel No.	Frequency (MHz)	99% Occupied Bandwidth (kHz)
03	2422	36672.8
06	2437	35659.7
09	2452	35671.1

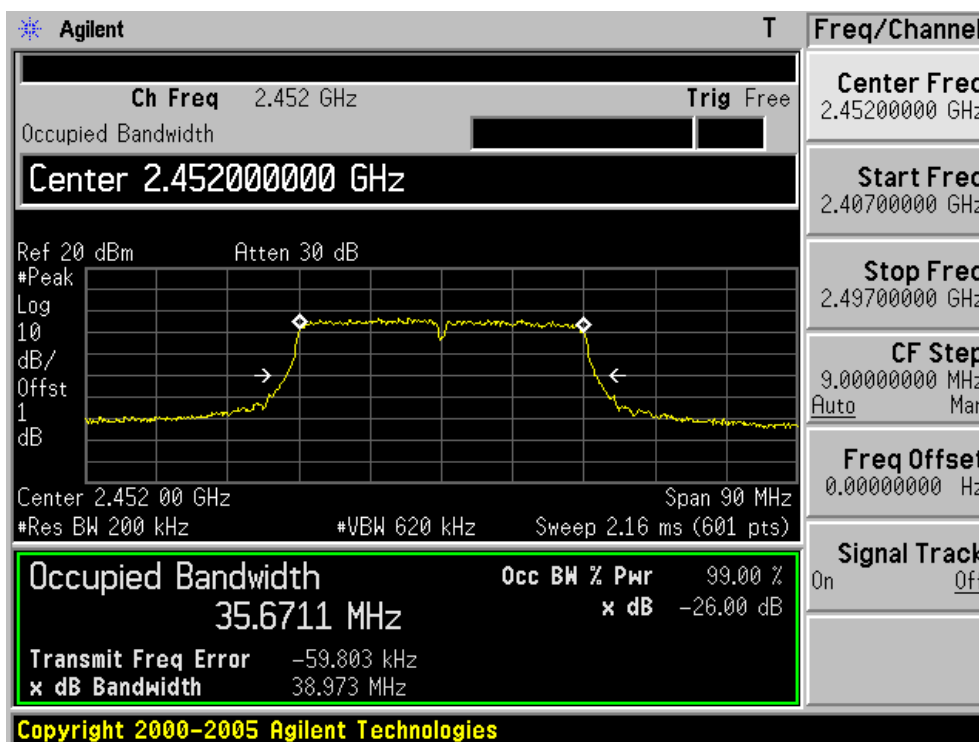
Channel 03 (2422MHz)



Channel 06 (2437MHz)



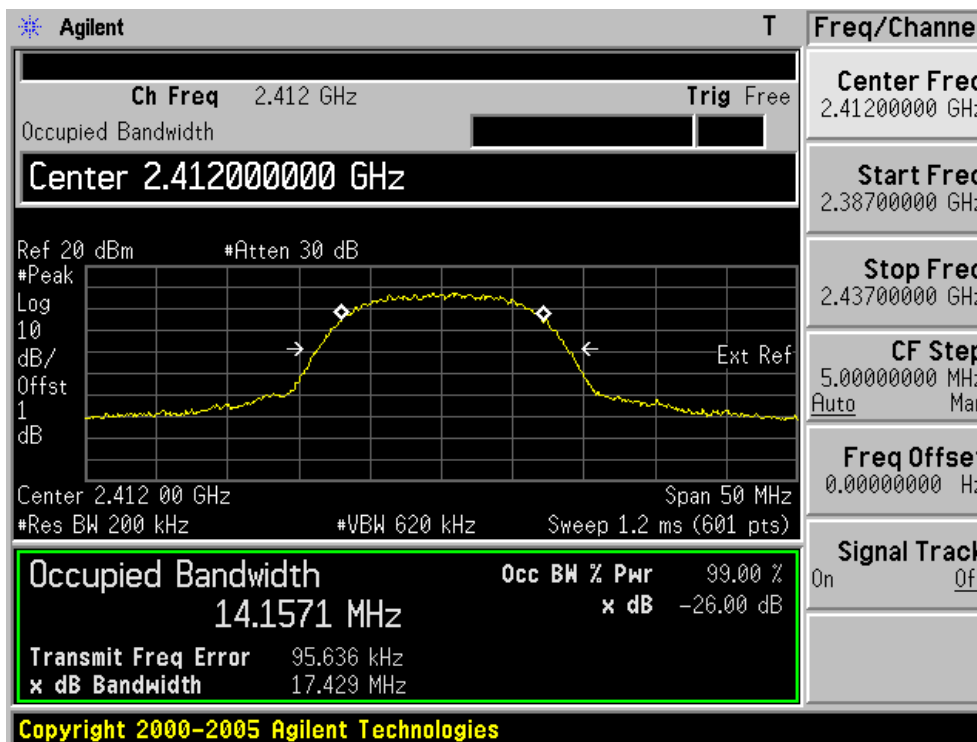
Channel 09 (2452MHz)



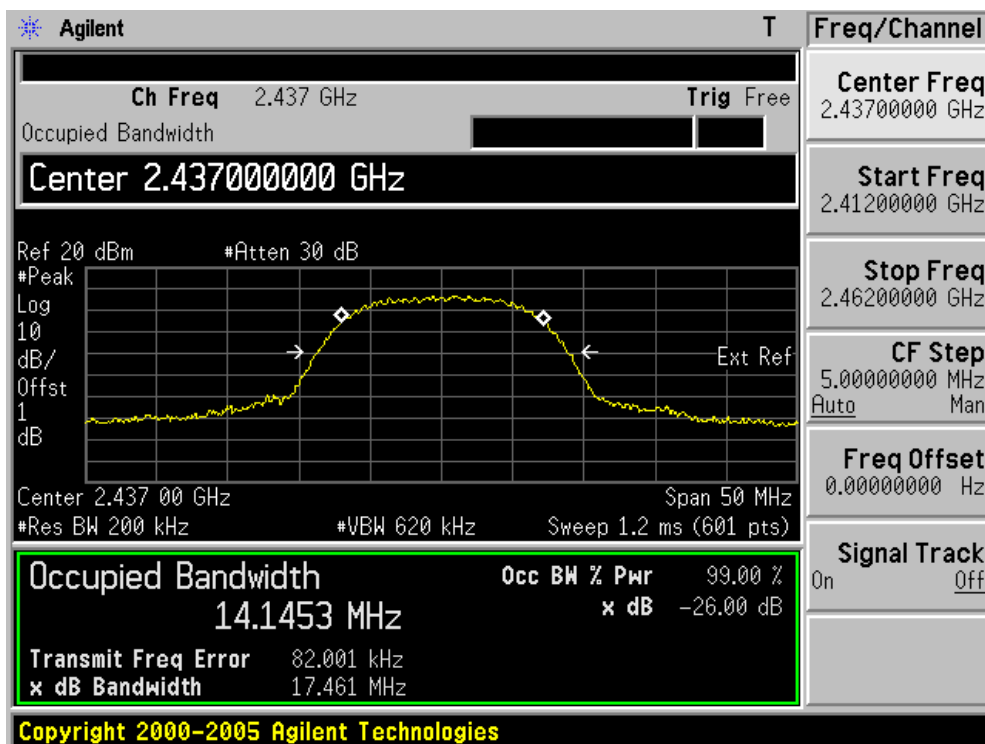
Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: 99% Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 1: Transmit by 802.11b (Chain 1)

Channel No.	Frequency (MHz)	99% Occupied Bandwidth (kHz)
01	2412	14157.1
06	2437	14145.3
11	2462	14146.8

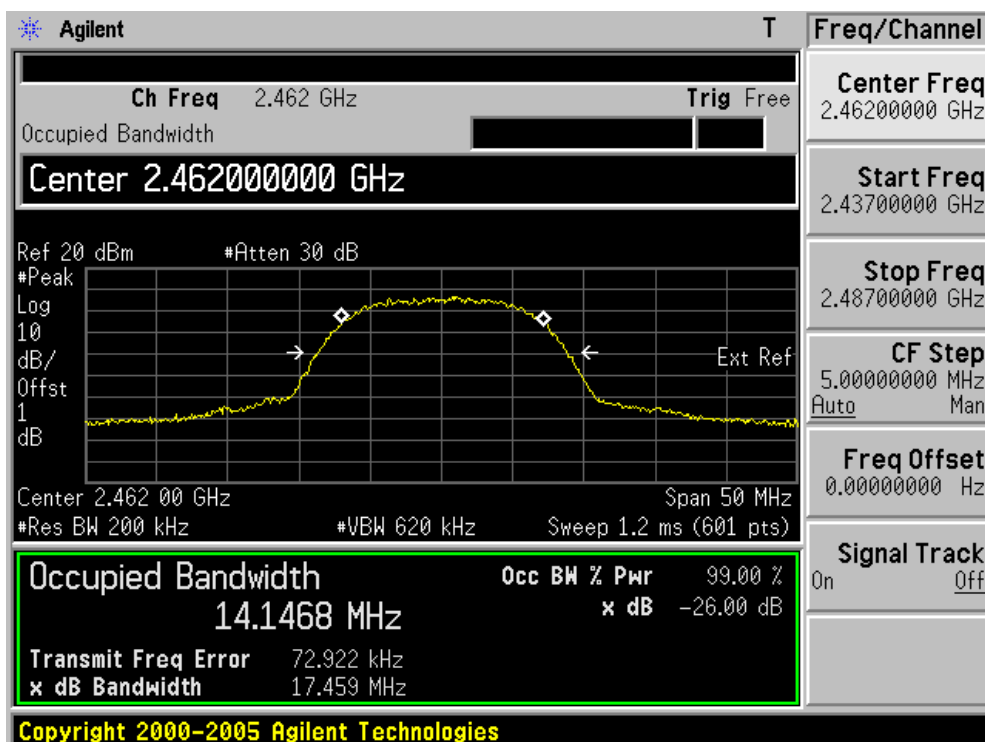
Channel 01 (2412MHz)



Channel 06 (2437MHz)



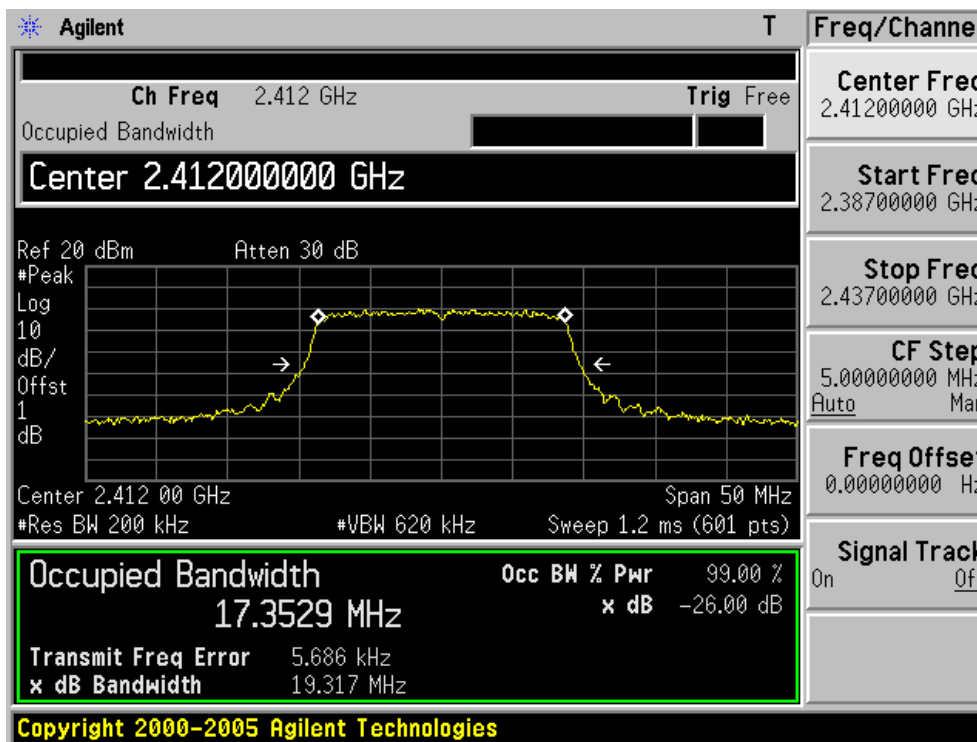
Channel 11 (2462MHz)



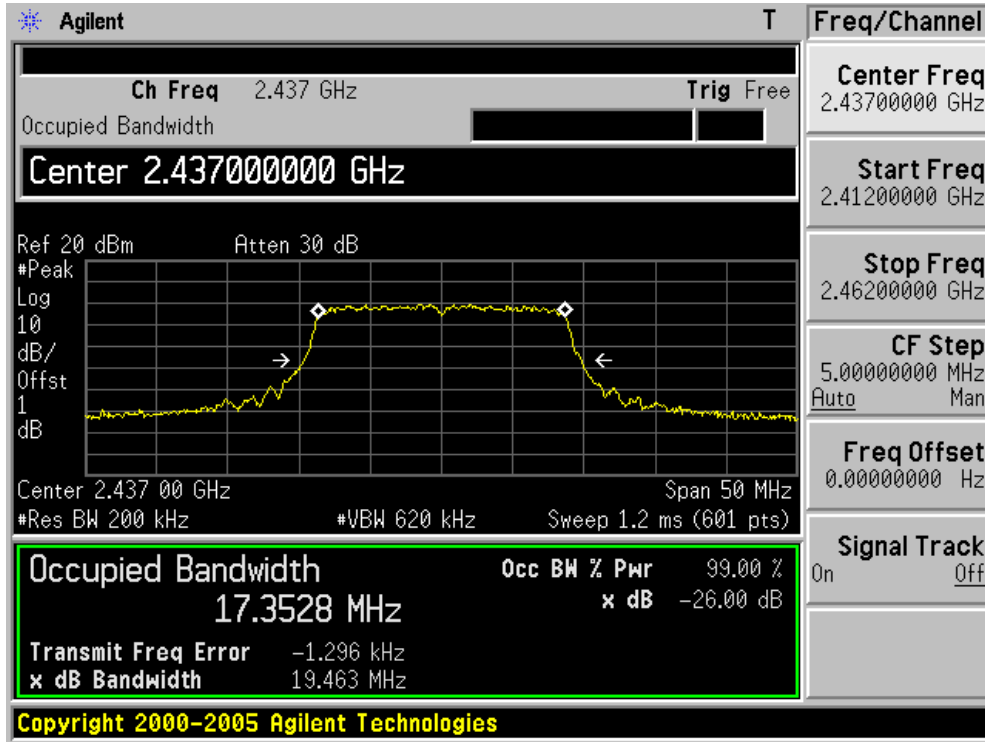
Product	: Wireless N ADSL2+ 4-port USB Gateway
Test Item	: 99% Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 2: Transmit by 802.11g (Chain 1)

Channel No.	Frequency (MHz)	99% Occupied Bandwidth (kHz)
01	2412	17352.9
06	2437	17352.8
11	2462	17373.9

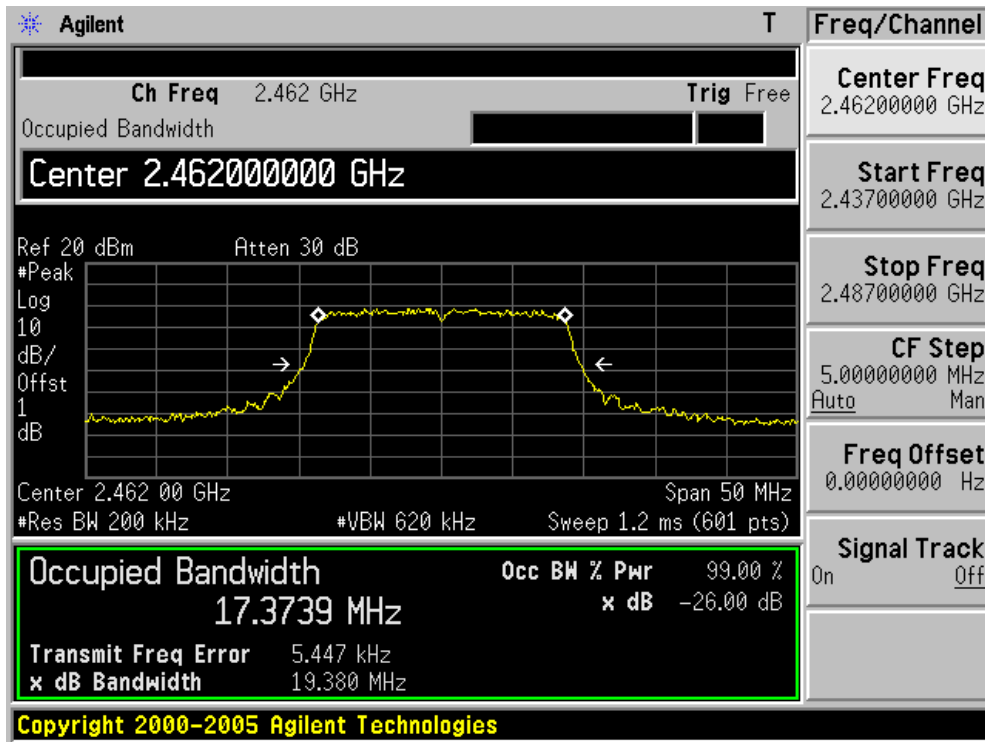
Channel 01 (2412MHz)



Channel 06 (2437MHz)



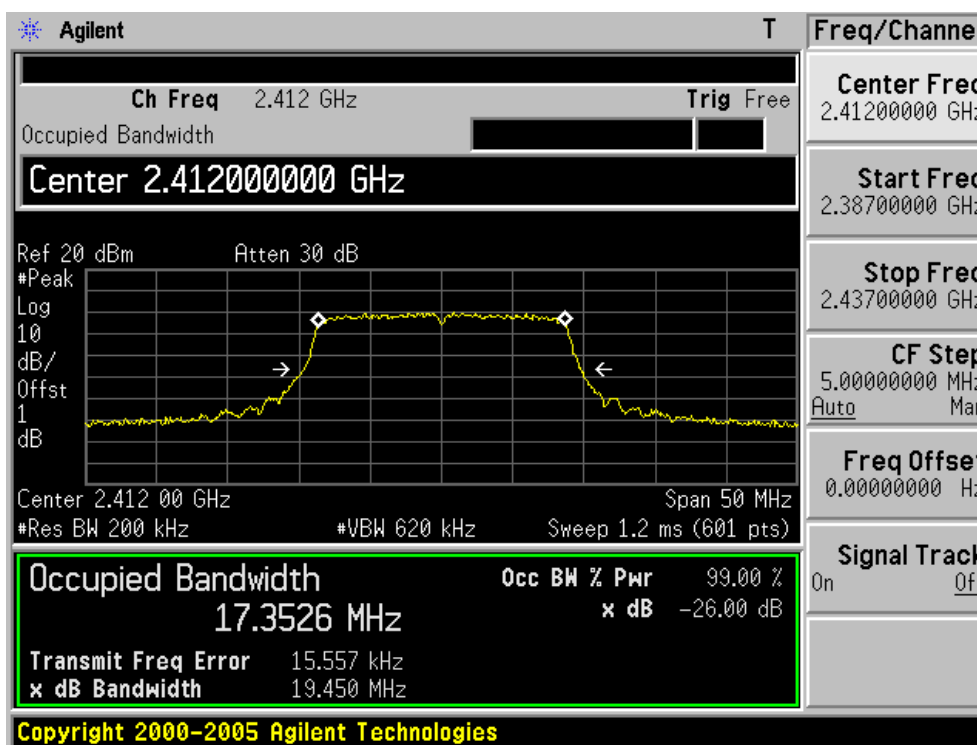
Channel 11 (2462MHz)



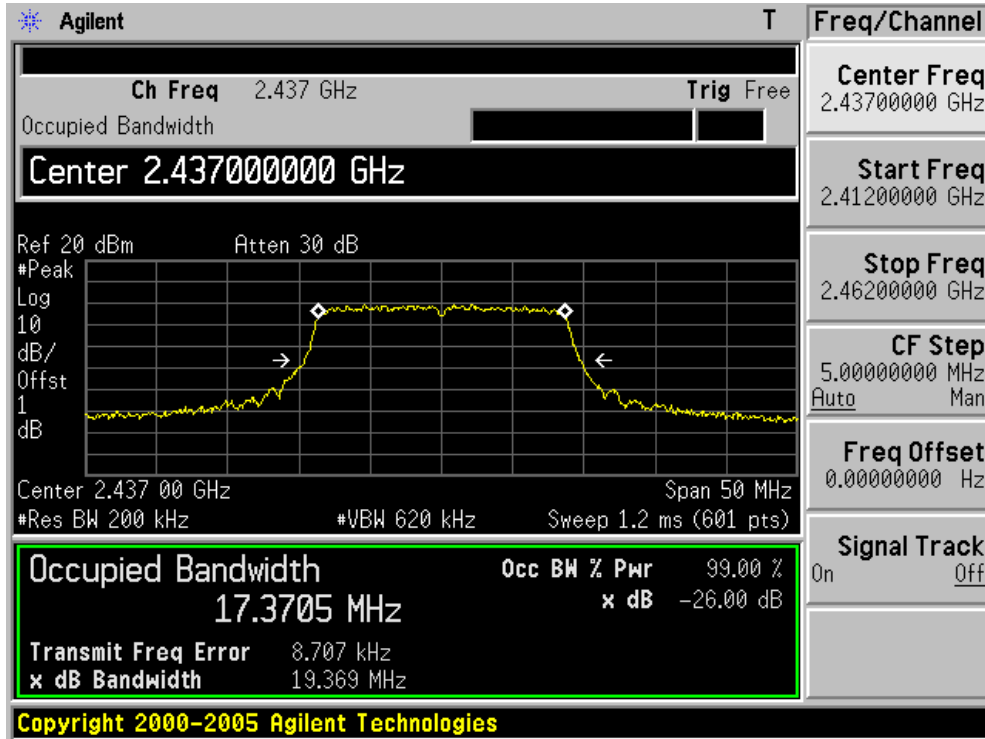
Product	: Wireless N ADSL2+4-port USB Gateway
Test Item	: 99% Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 3: Transmit by 802.11 n (20MHz) (Chain 1)

Channel No.	Frequency (MHz)	99% Occupied Bandwidth (kHz)
01	2412	17352.6
06	2437	17370.5
11	2462	17369.1

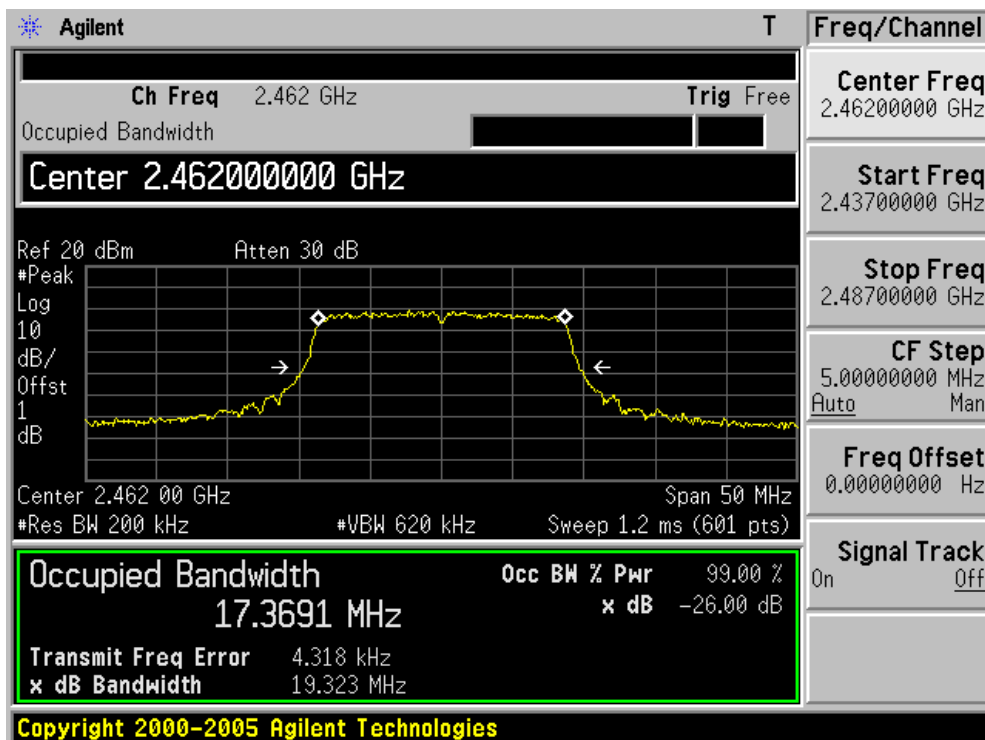
Channel 01 (2412MHz)



Channel 06 (2437MHz)



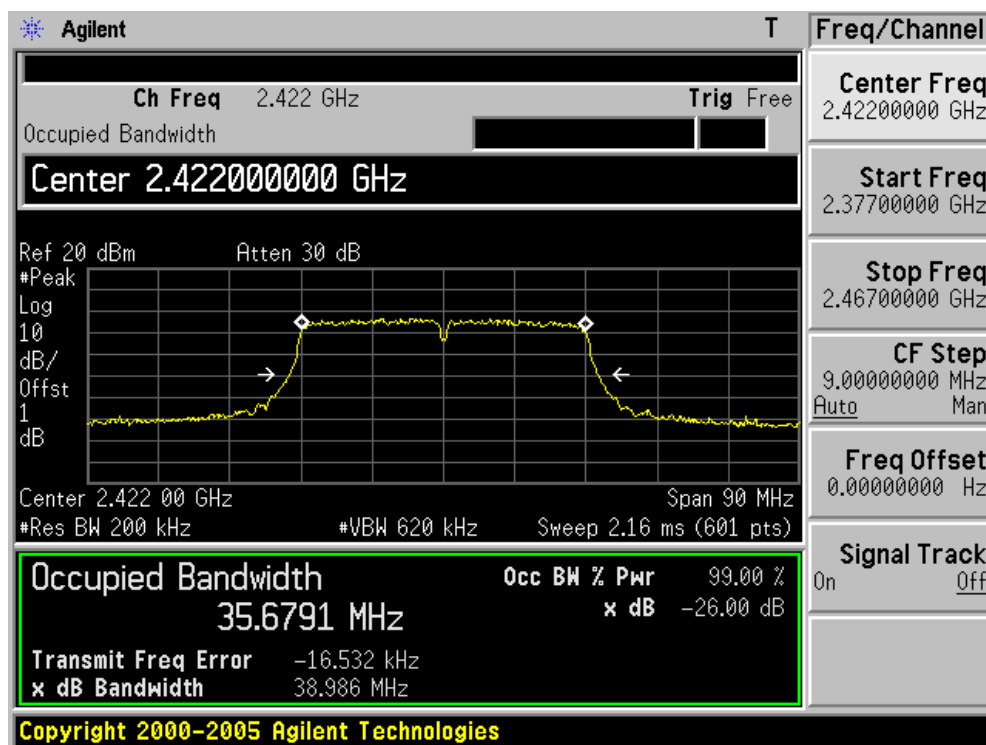
Channel 11 (2462MHz)



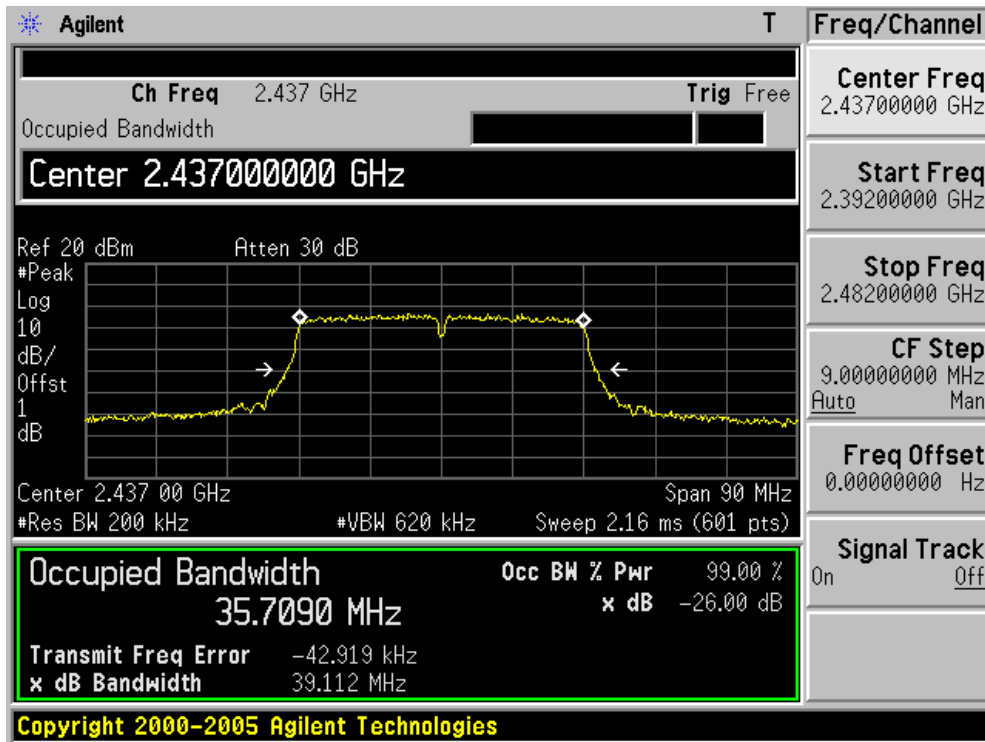
Product	: Wireless N ADSL2+4-port USB Gateway
Test Item	: 99% Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 4: Transmit by 802.11 n (40MHz) (Chain 1)

Channel No.	Frequency (MHz)	99% Occupied Bandwidth (kHz)
03	2422	35679.1
06	2437	35709.0
09	2452	35683.9

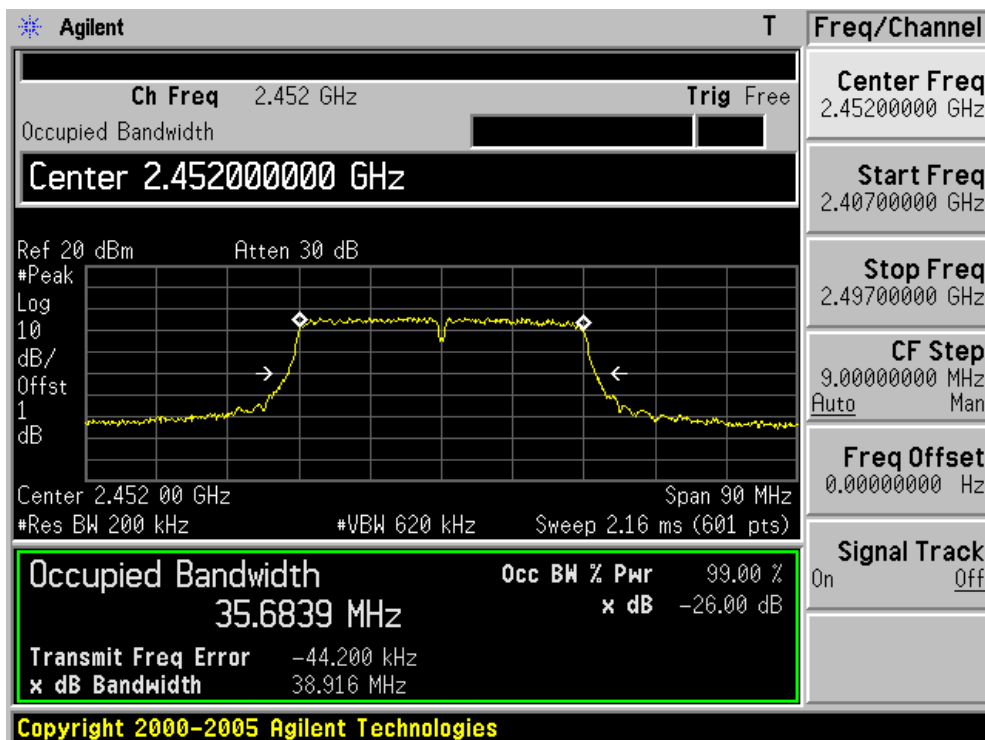
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)



9. Power Output

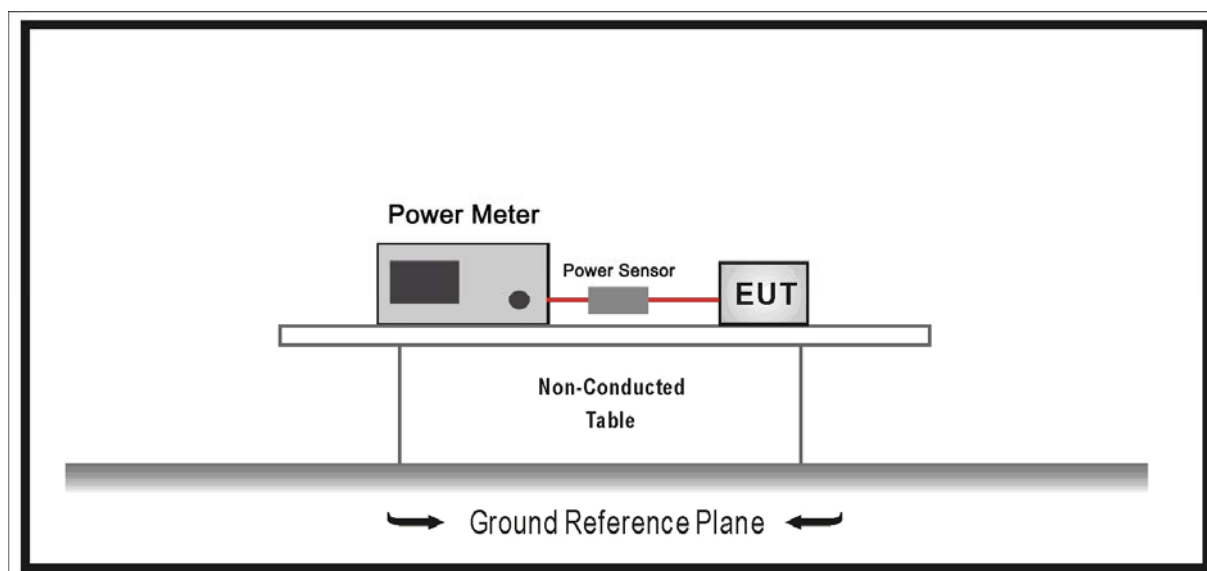
9.1. Test Equipment

Power Output / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2012.01.12
Power Sensor	Anritsu	MA2411B	0846014	2012.01.12
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2012.05.04

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

9.2. Test Setup



9.3. Limit

The maximum peak power shall be less 1 Watt (30dBm).

Note: the conducted output power limit specified above is based on the use the antennas with directional gains that do not exceed 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values above, as appropriate, by the amount in dB that the directional gain of antenna exceeds 6 dBi.

9.4. Test Procedure

The EUT was tested according to ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

Use the wideband power meter to test peak power and record the result.

9.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

9.6. Test Result

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (blue marker) for final test of each channel.

MCS Index for 802.11n	Spatial Streams	Data Rate (Mbps)					
		802.11b	802.11g	20MHz Bandwidth		40MHz Bandwidth	
				800ns GI	400ns GI	800ns GI	400ns GI
0	1	1	6	6.5	7.2	13.5	15.0
1	1	2	9	13.0	14.4	27.0	30.0
0	1	5.5	12	19.5	21.7	40.5	45.0
1	1	11	18	26.0	28.9	54.0	60.0
4	1	---	24	39.0	43.3	81.0	90.0
5	1	---	36	52.0	57.8	108.0	120.0
6	1	---	48	58.5	65.0	121.5	135.0
7	1	---	54	65.0	72.2	135.0	150.0
8	2	---	---	13.0	14.4	27.0	30.0
9	2	---	---	26.0	28.9	54.0	60.0
10	2	---	---	39.0	43.3	81.0	90.0
11	2	---	---	52.0	57.8	108.0	120.0
12	2	---	---	78.0	86.7	162.0	180.0
13	2	---	---	104.0	115.6	216.0	240.0
14	2	---	---	117.0	130.0	243.0	270.0
15	2	---	---	130.0	144.0	270.0	300.0

Power output at various data rates:

Test Mode	Bandwidth	Frequency (MHz)	Channel	Data Rate	Peak Power (dBm)
802.11b(Chain 0)	20	2437	6	1	18.50
				5.5	19.76
				11	20.94
802.11g(Chain 0)	20	2437	6	6	17.62
				24	17.75
				54	18.94
802.11n(20MHz) (Chain 0)	20	2437	6	HT0	18.26
				HT4	18.35
				HT7	18.42
802.11n(40MHz) (Chain 0)	40	2437	6	HT0	18.01
				HT4	18.04
				HT7	18.13

Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 1: Transmit by 802.11b (Chain 0)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
1	2412	20.81	N/A	20.81	30.00	Pass
6	2437	20.94	N/A	20.94	30.00	Pass
11	2462	20.74	N/A	20.74	30.00	Pass

Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 1: Transmit by 802.11b (Chain 1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
1	2412	N/A	20.42	20.42	30.00	Pass
6	2437	N/A	20.20	20.20	30.00	Pass
11	2462	N/A	19.48	19.48	30.00	Pass

Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 2: Transmit by 802.11g (Chain 0)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
1	2412	18.80	N/A	18.80	30.00	Pass
6	2437	18.94	N/A	18.94	30.00	Pass
11	2462	18.72	N/A	18.72	30.00	Pass

Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 2: Transmit by 802.11g (Chain 1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
1	2412	N/A	18.40	18.40	30.00	Pass
6	2437	N/A	18.24	18.24	30.00	Pass
11	2462	N/A	17.72	17.72	30.00	Pass

Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 3: Transmit by 802.11n(20MHz) (Chain 0)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
1	2412	18.43	N/A	18.43	30.00	Pass
6	2437	18.42	N/A	18.42	30.00	Pass
11	2462	17.84	N/A	17.84	30.00	Pass

Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 3: Transmit by 802.11n(20MHz) (Chain 1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
1	2412	N/A	17.85	17.85	30.00	Pass
6	2437	N/A	17.54	17.54	30.00	Pass
11	2462	N/A	17.12	17.12	30.00	Pass

Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 3: Transmit by 802.11n(20MHz) (Chain 0+1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
1	2412	17.98	17.51	20.76	30.00	Pass
6	2437	18.01	17.20	20.63	30.00	Pass
11	2462	17.75	16.76	20.29	30.00	Pass

Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 4: Transmit by 802.11n(40MHz) (Chain 0)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
3	2422	18.11	N/A	18.11	30.00	Pass
6	2437	18.13	N/A	18.13	30.00	Pass
9	2452	18.12	N/A	18.12	30.00	Pass

Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 4: Transmit by 802.11n(40MHz) (Chain 1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
3	2422	N/A	17.30	17.30	30.00	Pass
6	2437	N/A	17.29	17.29	30.00	Pass
9	2452	N/A	17.32	17.32	30.00	Pass

Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 4: Transmit by 802.11n(40MHz) (Chain 0+1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
3	2422	17.70	17.14	20.44	30.00	Pass
6	2437	17.91	17.05	20.51	30.00	Pass
9	2452	18.00	17.00	20.54	30.00	Pass

10. Power Spectral Density

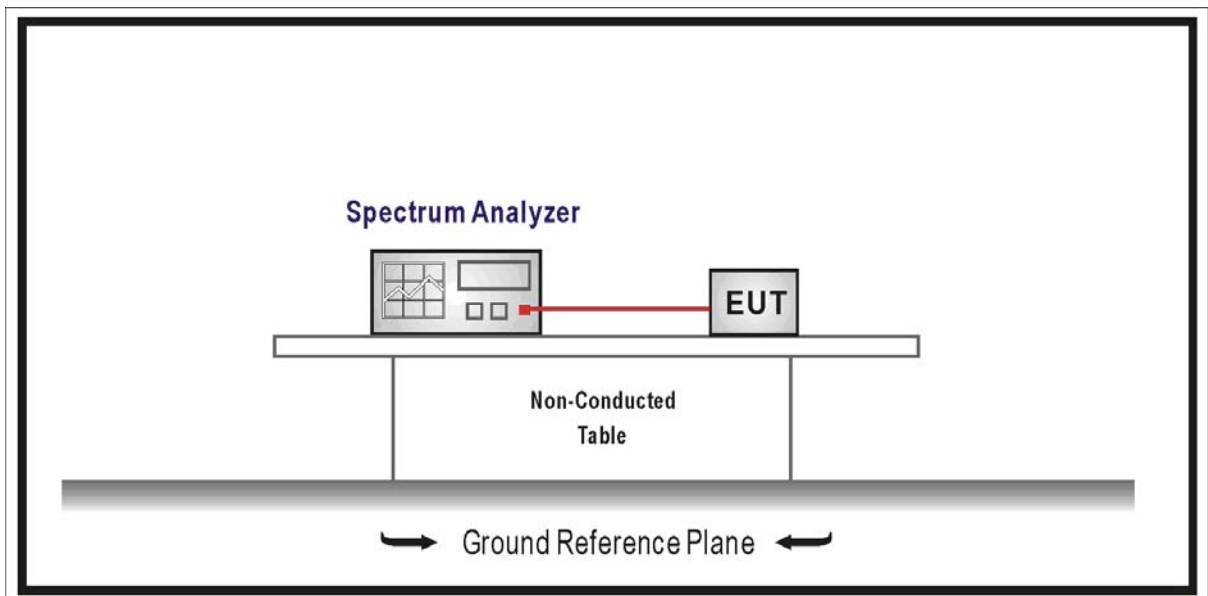
10.1. Test Equipment

Power Spectral Density / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2012.04.30
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2012.05.04

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

10.2. Test Setup



10.3. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiated to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

10.4. Test Procedure

The EUT was tested according to ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

Set RBW= 3 kHz, Set VBW \cong 10 kHz, Sweep time=100s, Set detector=Peak detector.

10.5. Uncertainty

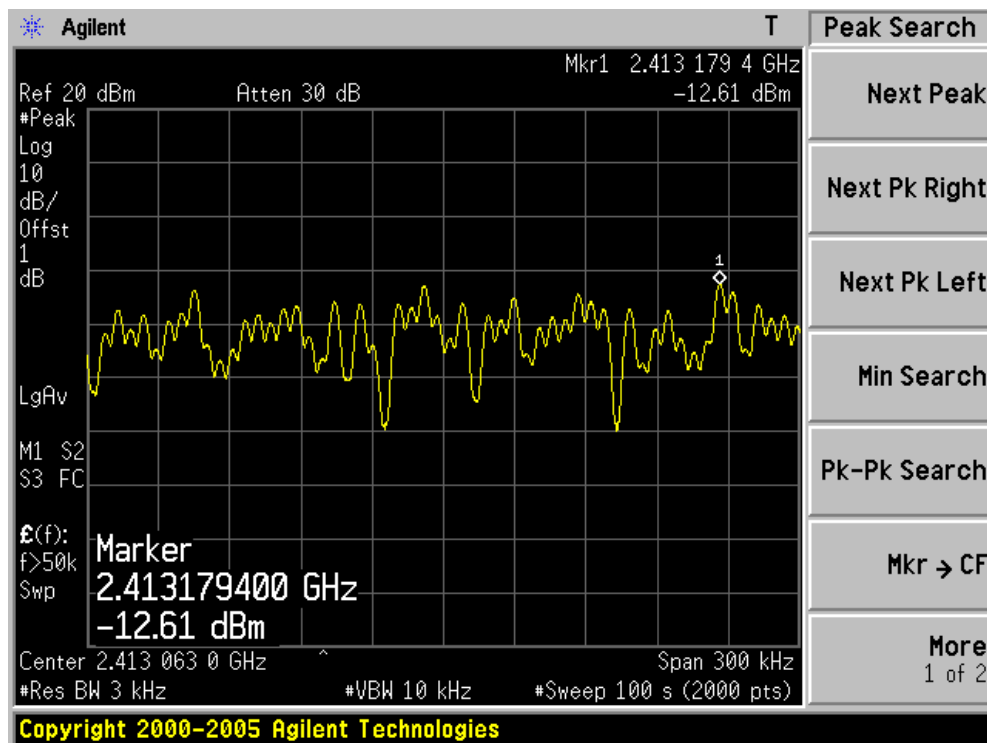
The measurement uncertainty is defined as ± 1.27 dB

10.6. Test Result

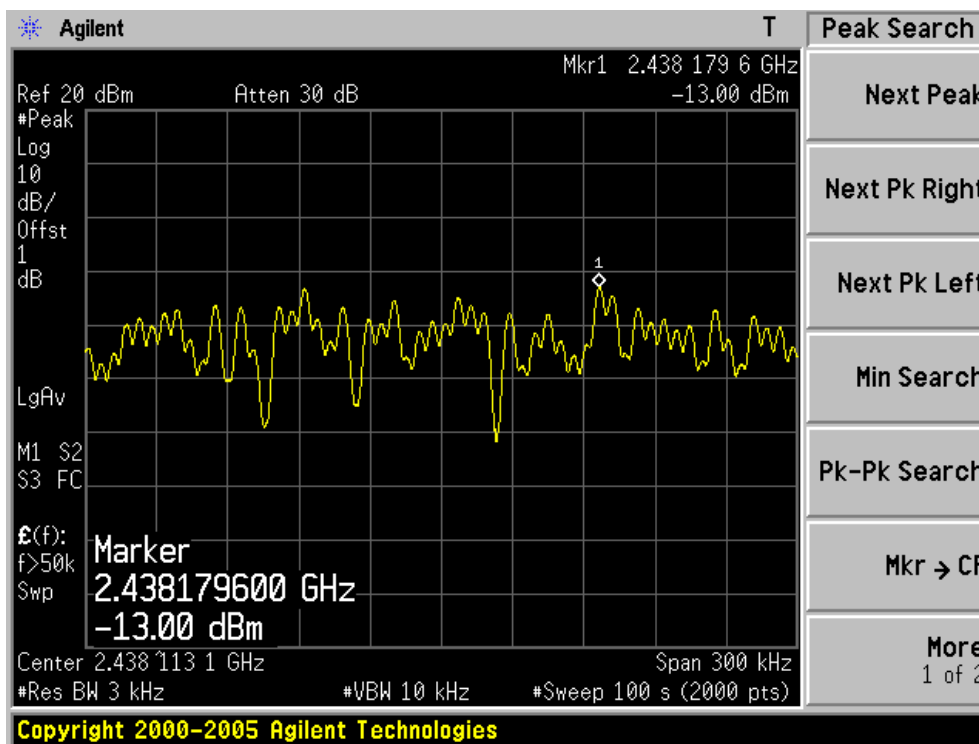
Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11b (Chain 0)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
01	2412	-12.61	N/A	-12.61	8	Pass
06	2437	-13.00	N/A	-13.00	8	Pass
11	2462	-13.73	N/A	-13.73	8	Pass

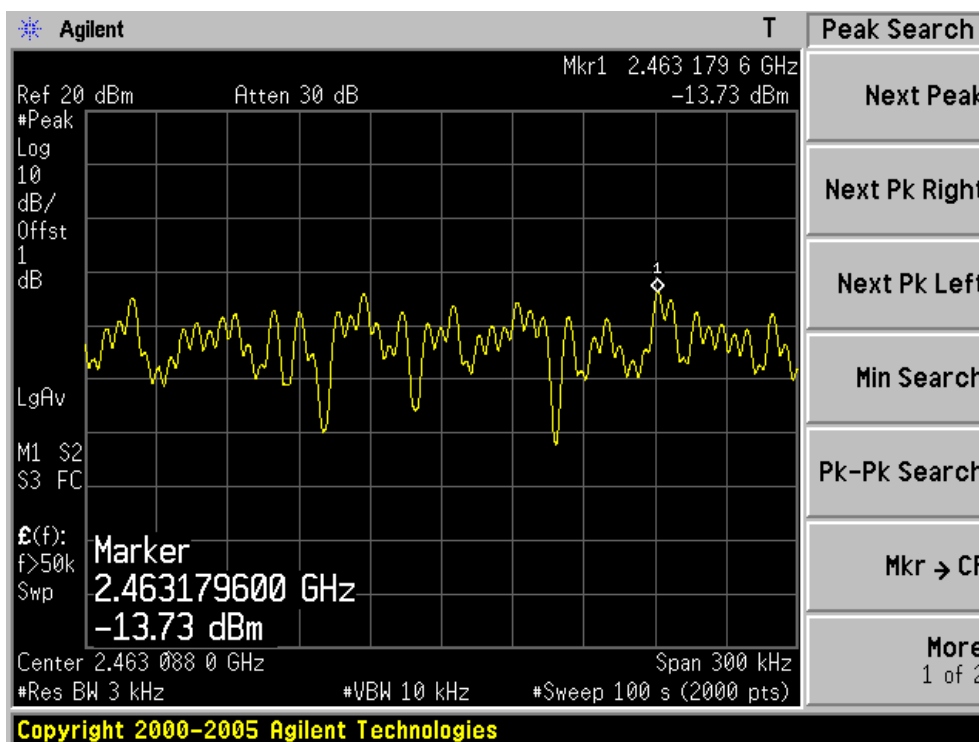
Channel 01 (2412MHz)



Channel 06 (2437MHz)



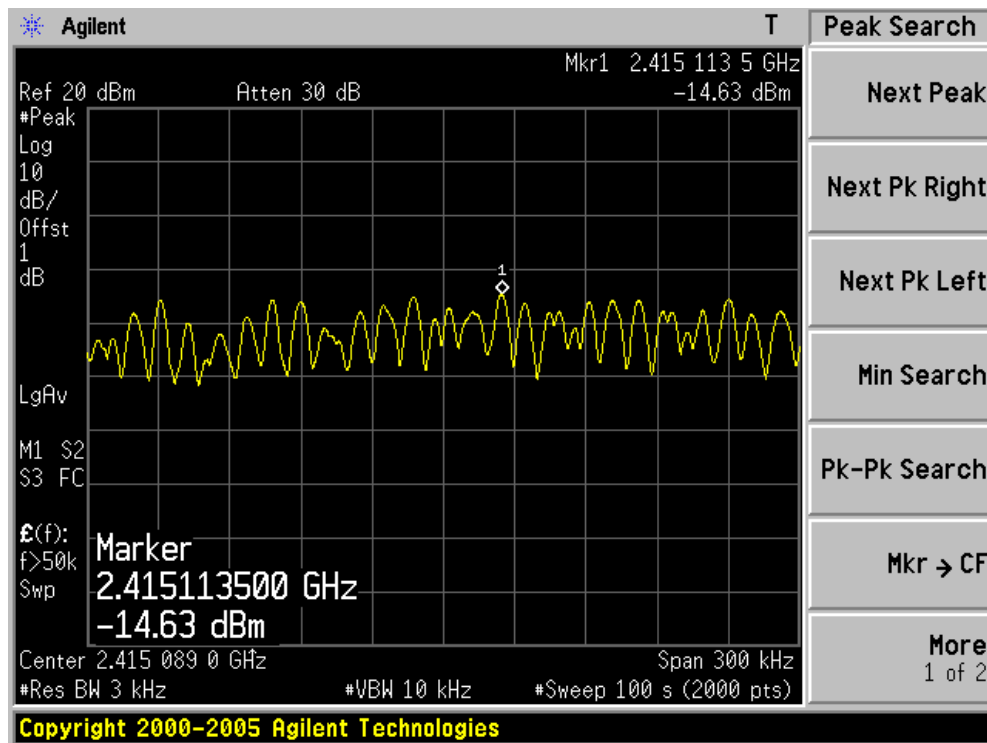
Channel 11 (2462MHz)



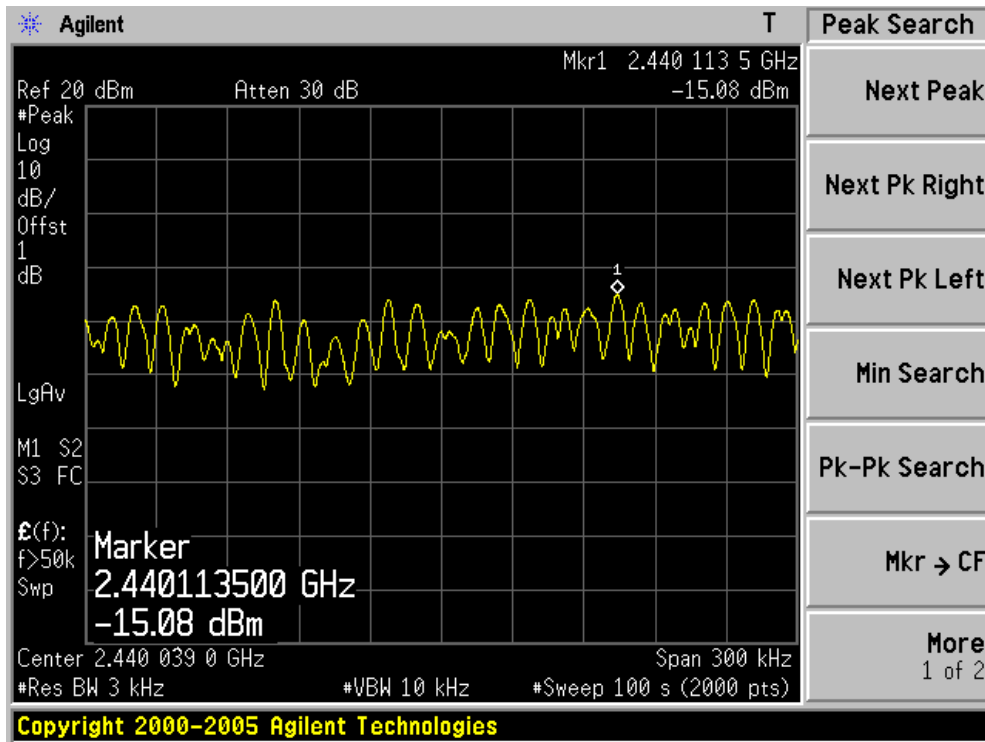
Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11g (Chain 0)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
01	2412	-14.63	N/A	-14.63	8	Pass
06	2437	-15.08	N/A	-15.08	8	Pass
11	2462	-15.57	N/A	-15.57	8	Pass

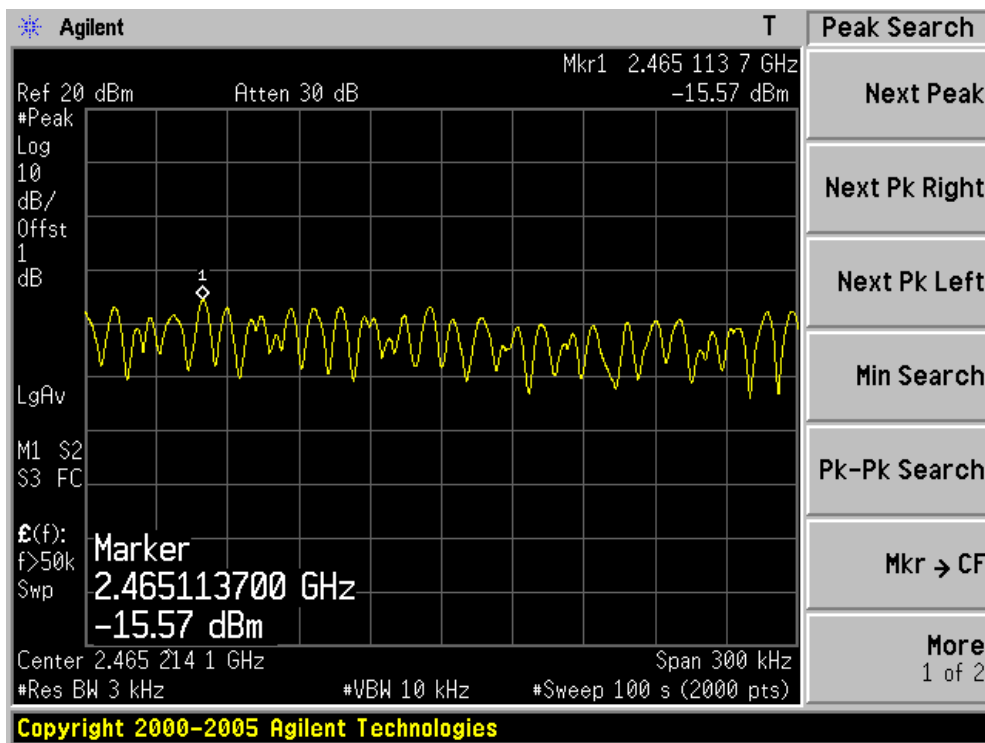
Channel 01 (2412MHz)



Channel 06 (2437MHz)



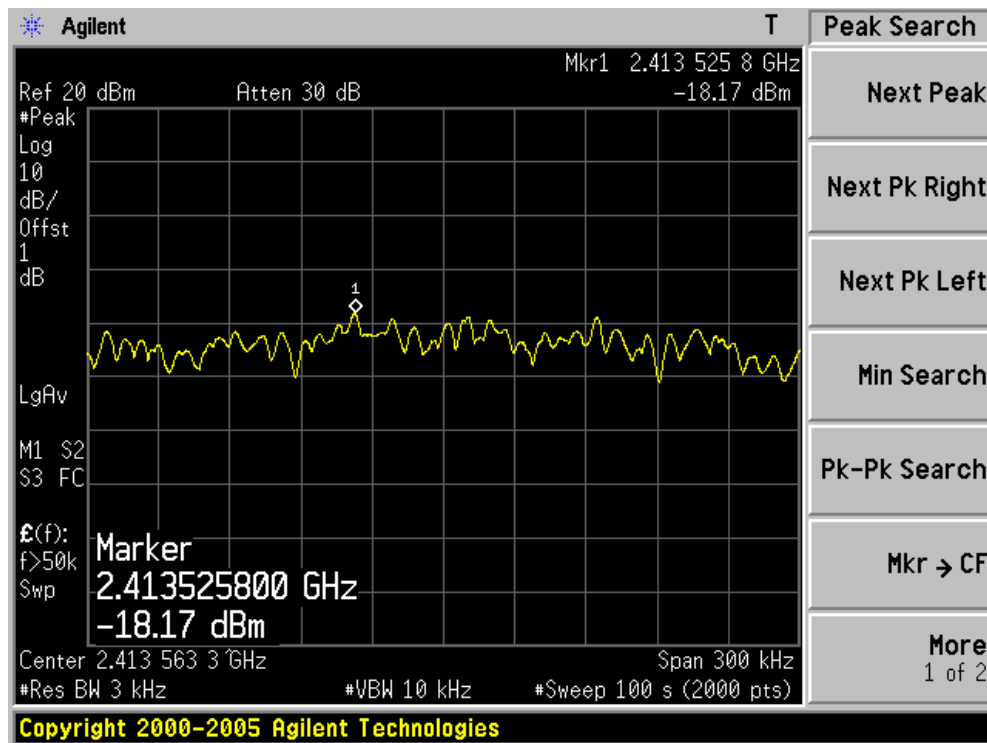
Channel 11 (2462MHz)



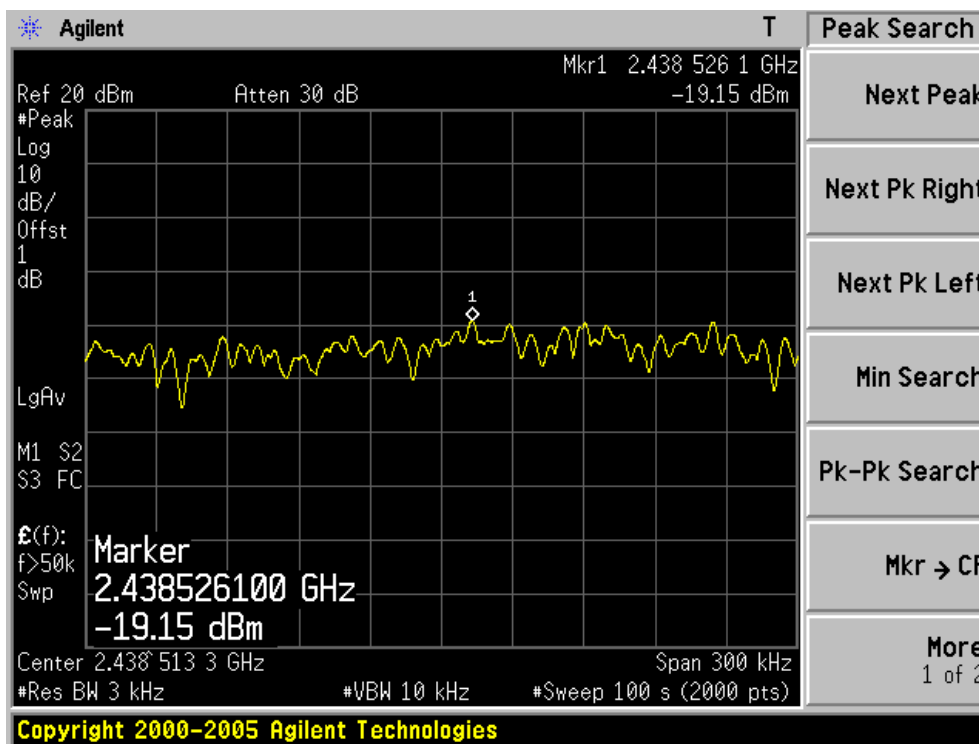
Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (20MHz) (Chain 0)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
01	2412	-18.17	N/A	-18.17	8	Pass
06	2437	-19.15	N/A	-19.15	8	Pass
11	2462	-20.25	N/A	-20.25	8	Pass

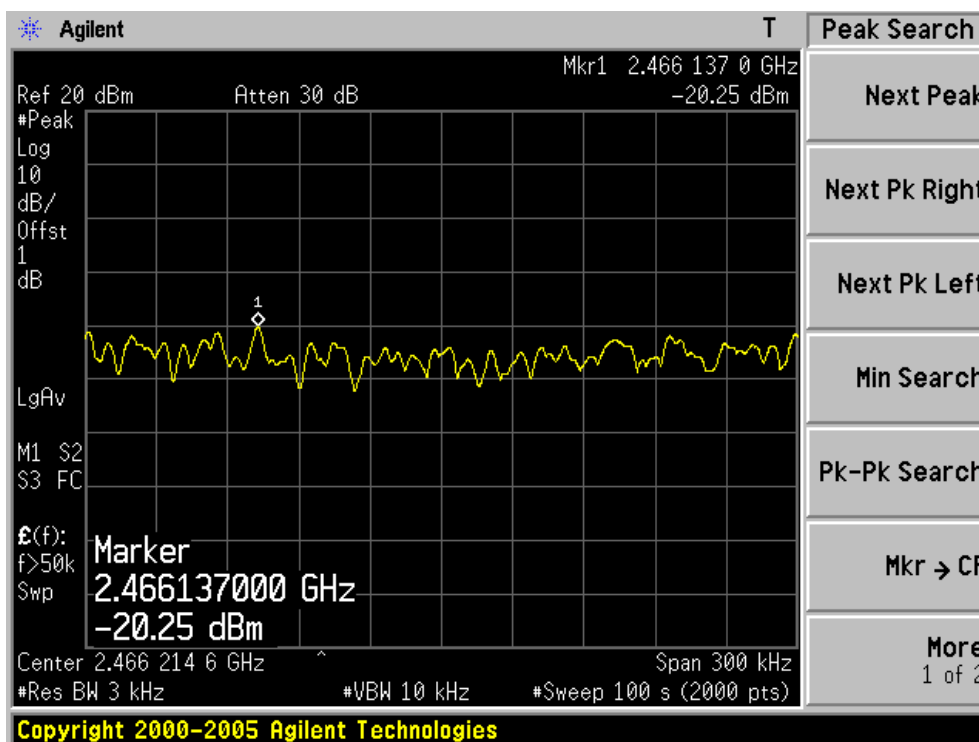
Channel 01 (2412MHz)



Channel 06 (2437MHz)



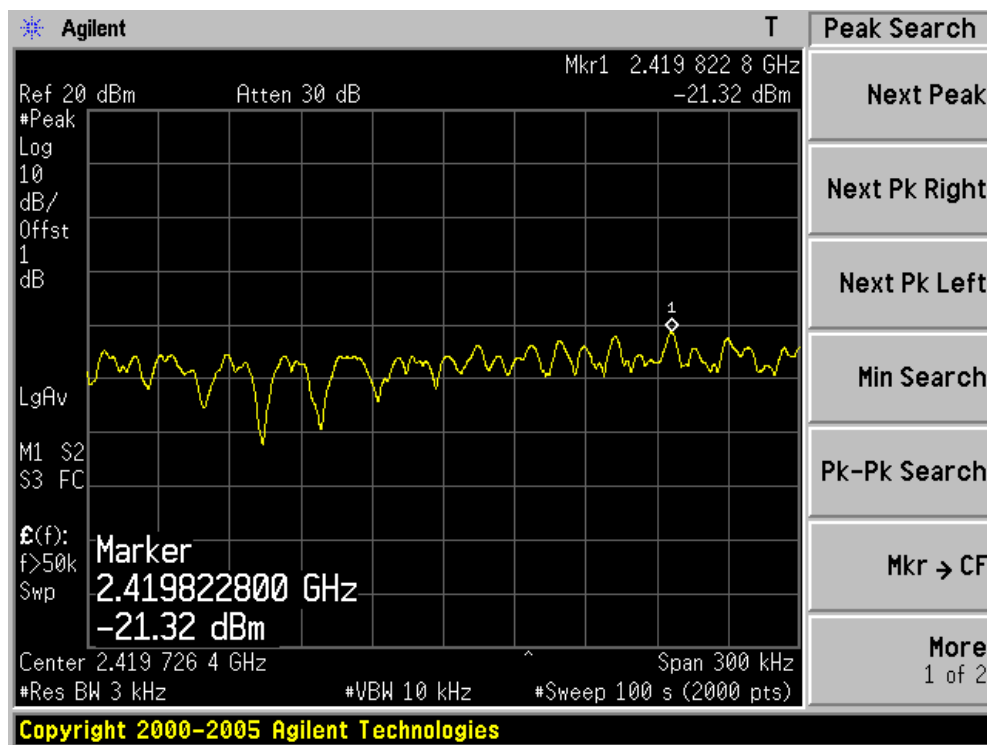
Channel 11 (2462MHz)



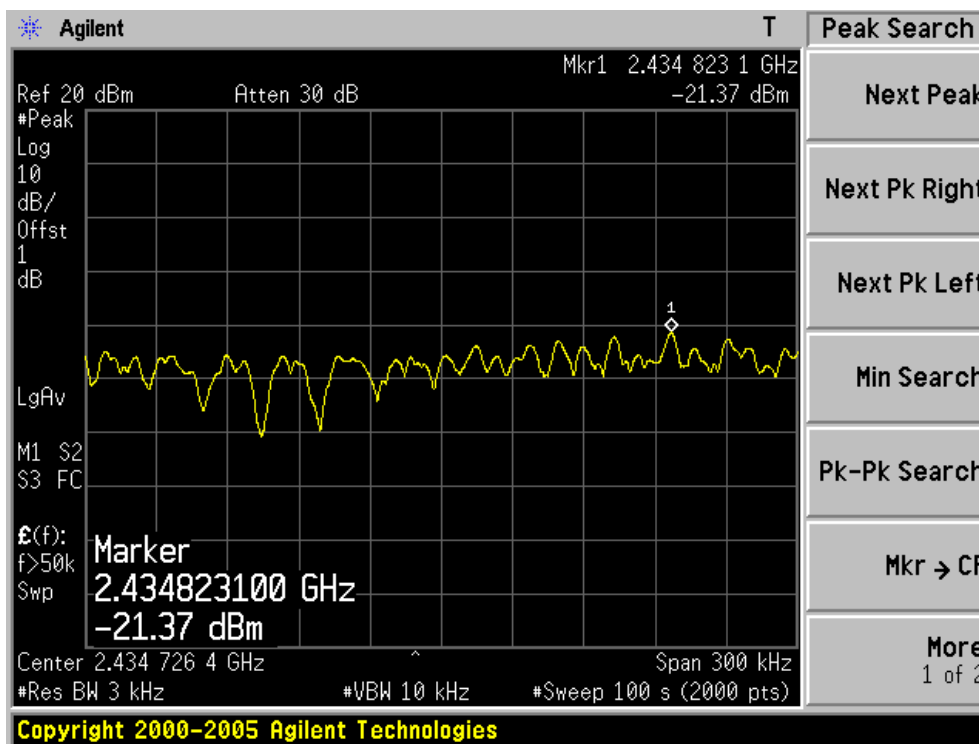
Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 4: Transmit by 802.11n (40MHz) (Chain 0)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
03	2422	-21.32	N/A	-21.32	8	Pass
06	2437	-21.37	N/A	-21.37	8	Pass
09	2452	-21.52	N/A	-21.52	8	Pass

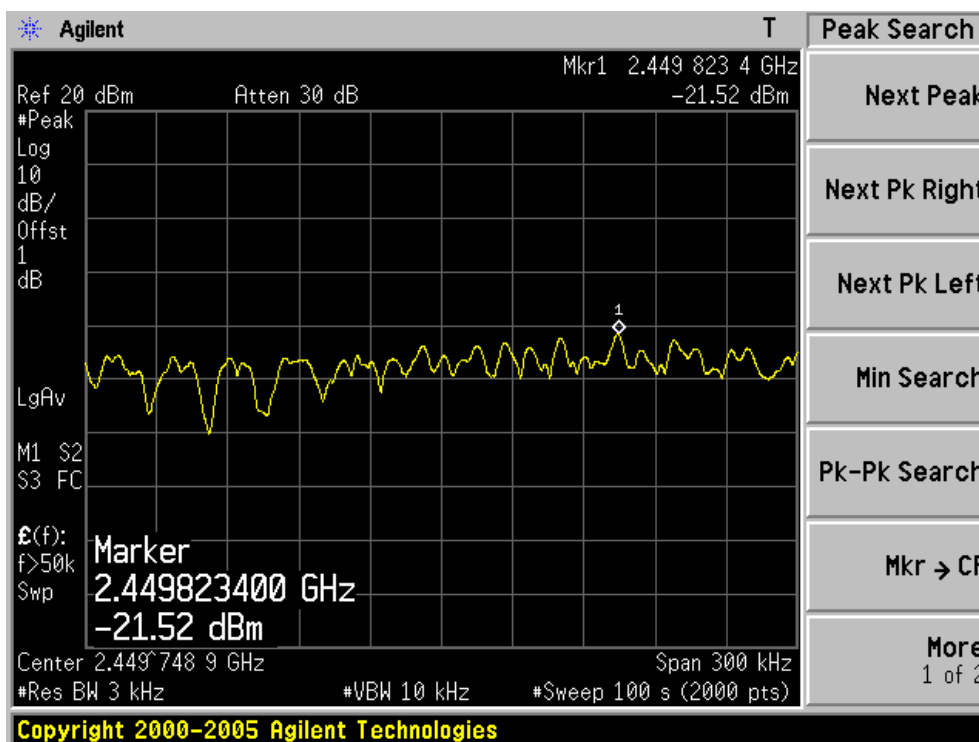
Channel 03 (2422MHz)



Channel 06 (2437MHz)



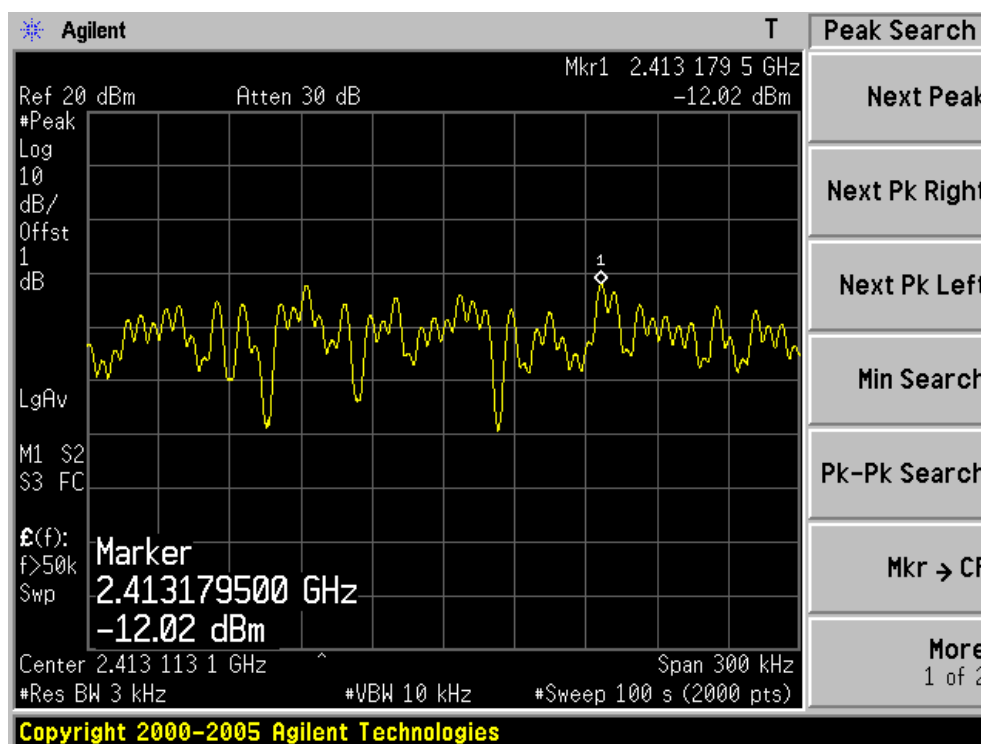
Channel 09 (2452MHz)



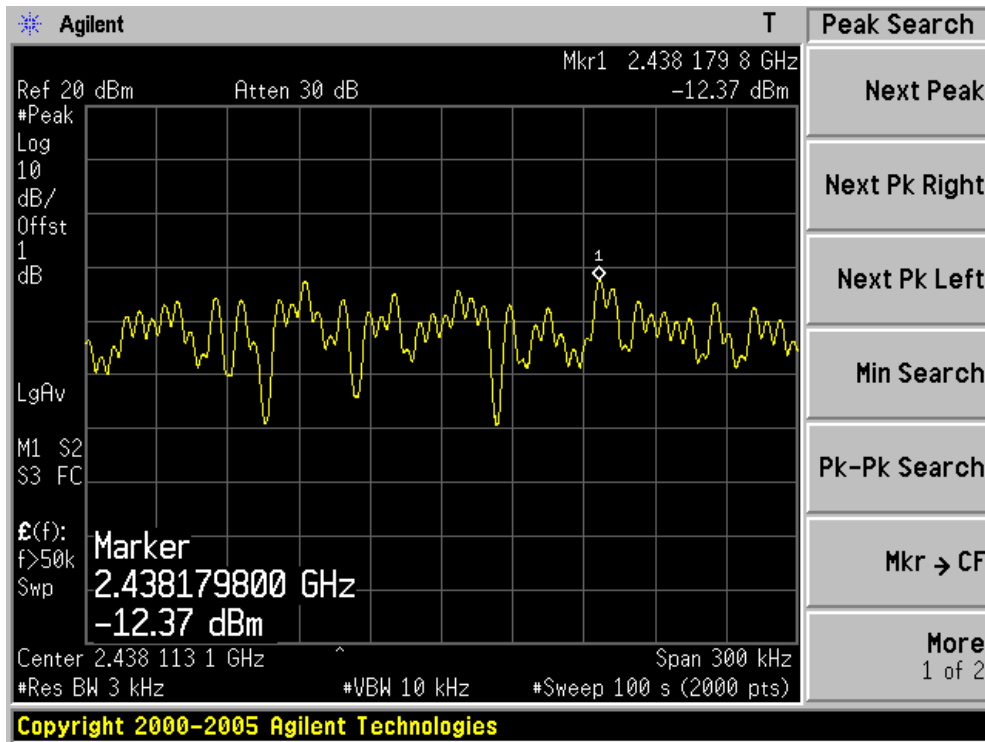
Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11b (Chain 1)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
01	2412	N/A	-12.02	-12.02	8	Pass
06	2437	N/A	-12.37	-12.37	8	Pass
11	2462	N/A	-12.93	-12.93	8	Pass

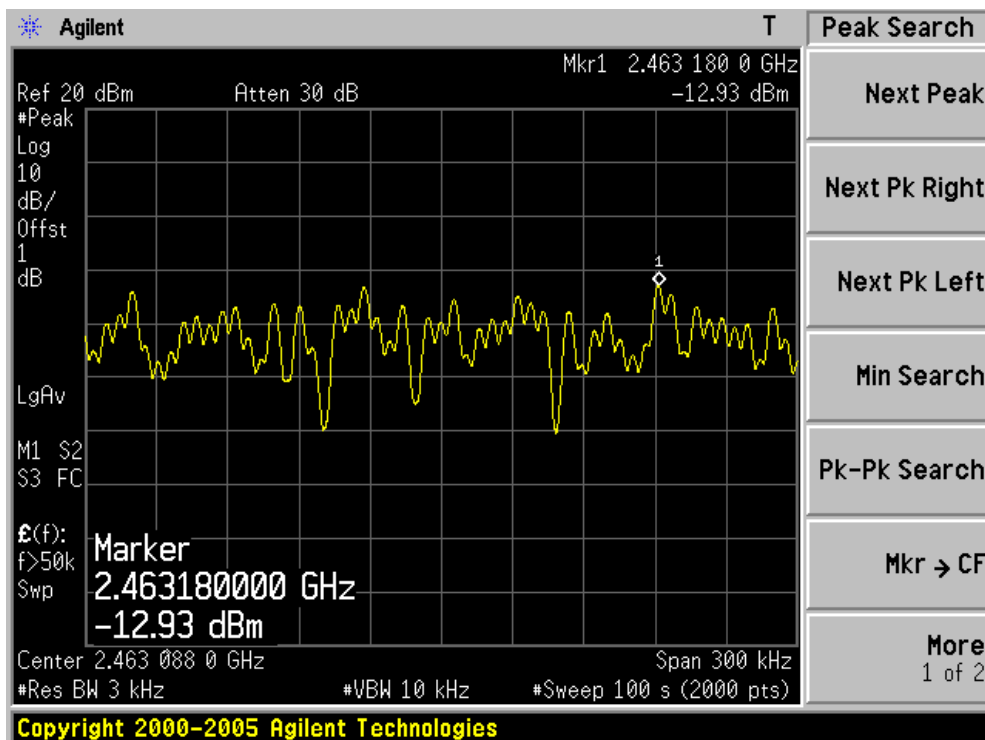
Channel 01 (2412MHz)



Channel 06 (2437MHz)



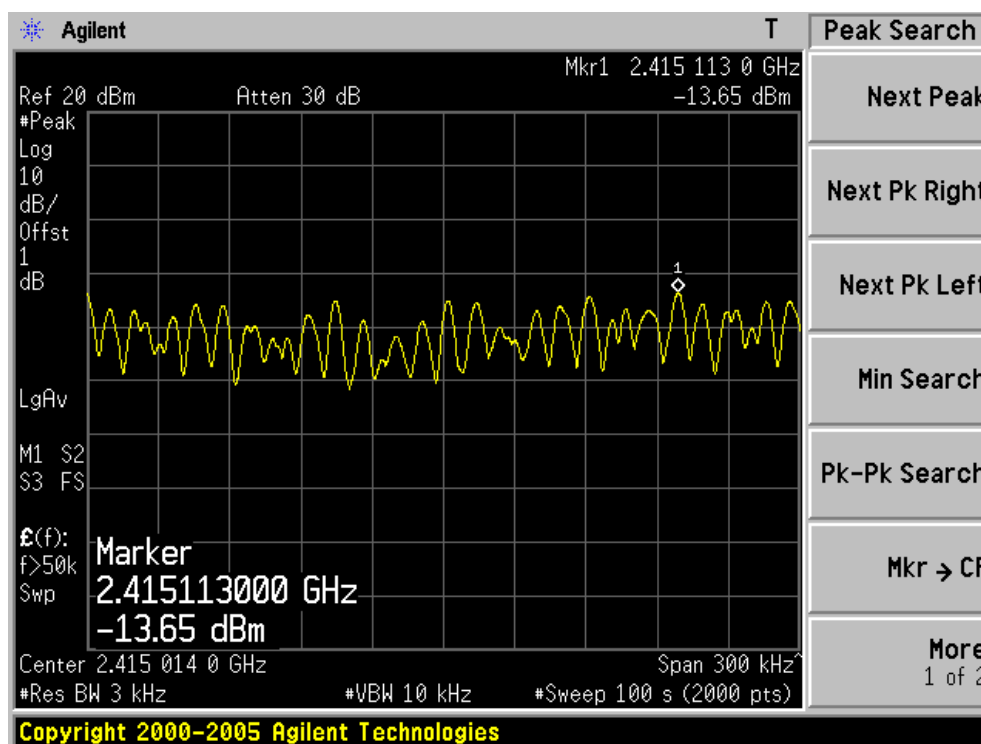
Channel 11 (2462MHz)



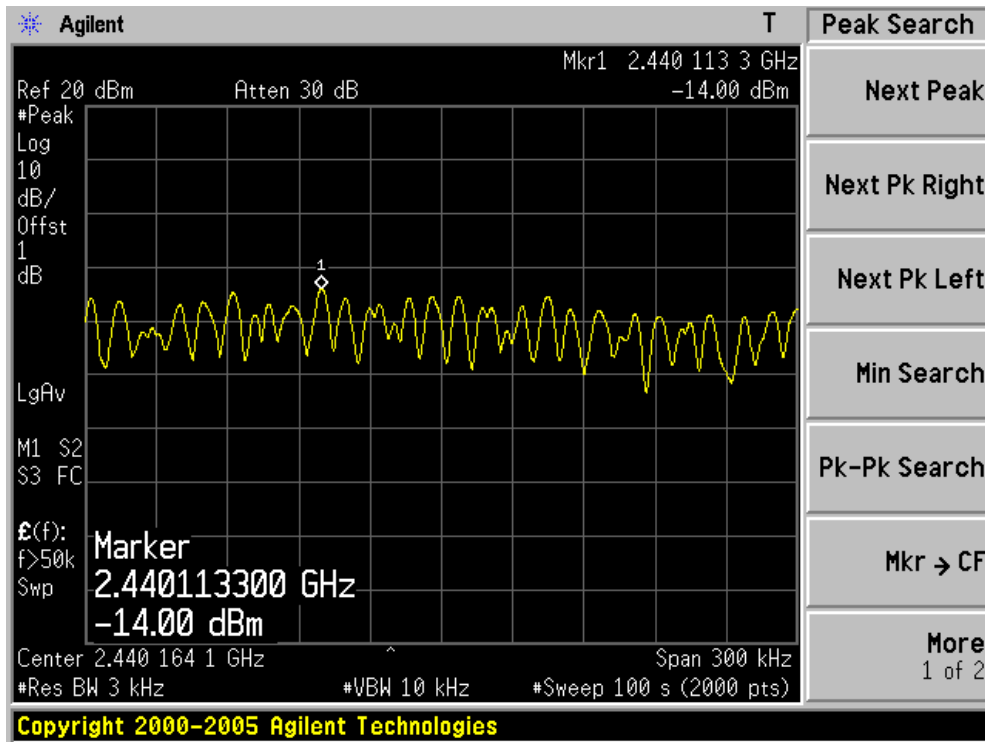
Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11g (Chain 1)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
01	2412	N/A	-13.65	-13.65	8	Pass
06	2437	N/A	-14.00	-14.00	8	Pass
11	2462	N/A	-14.60	-14.60	8	Pass

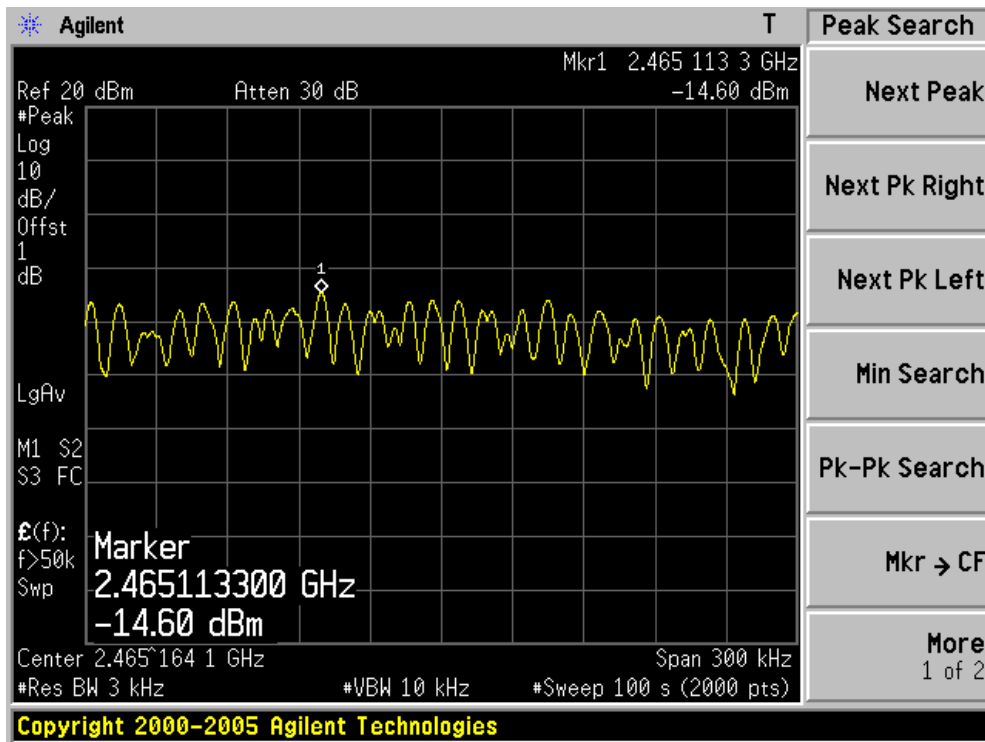
Channel 01 (2412MHz)



Channel 06 (2437MHz)



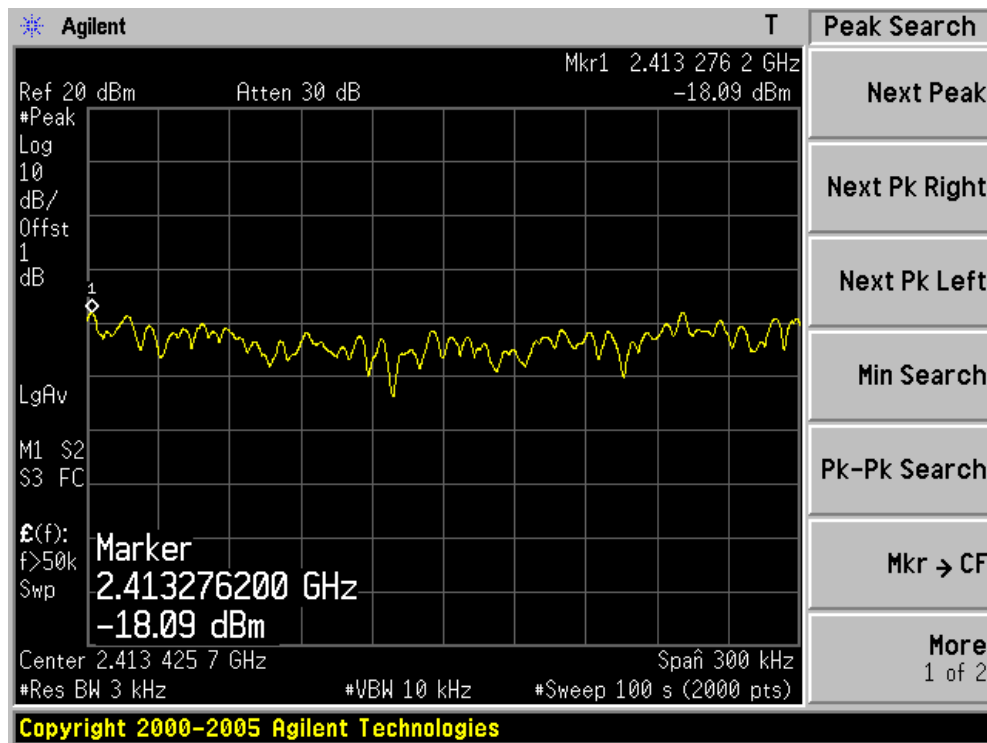
Channel 11 (2462MHz)



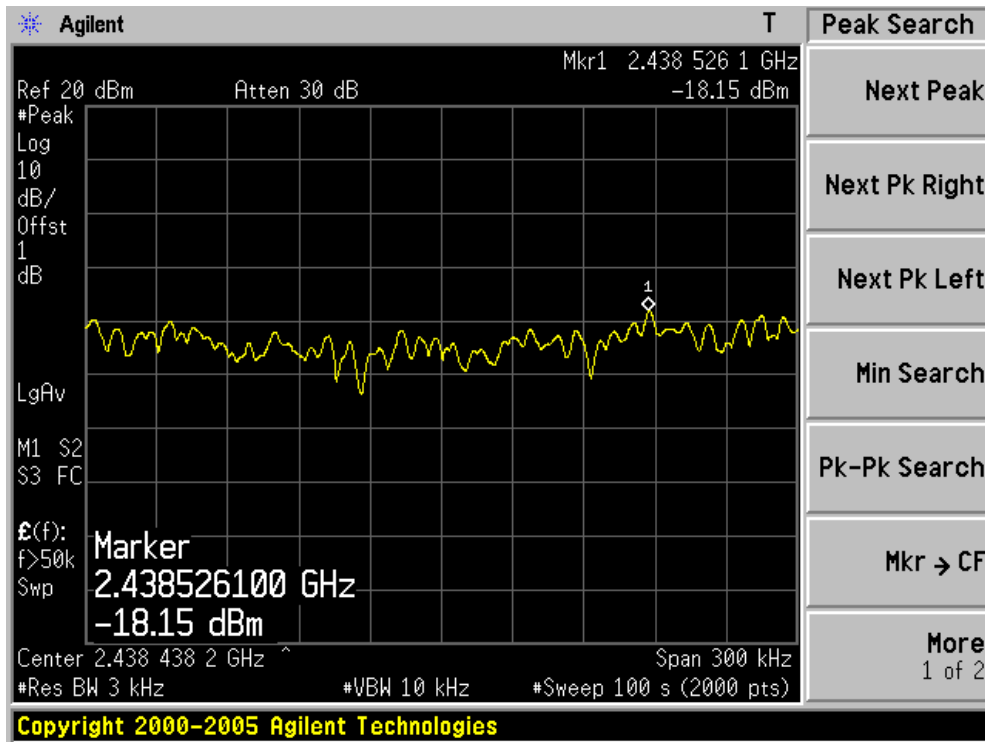
Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (20MHz) (Chain 1)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
01	2412	N/A	-18.09	-18.09	8	Pass
06	2437	N/A	-18.15	-18.15	8	Pass
11	2462	N/A	-19.11	-19.11	8	Pass

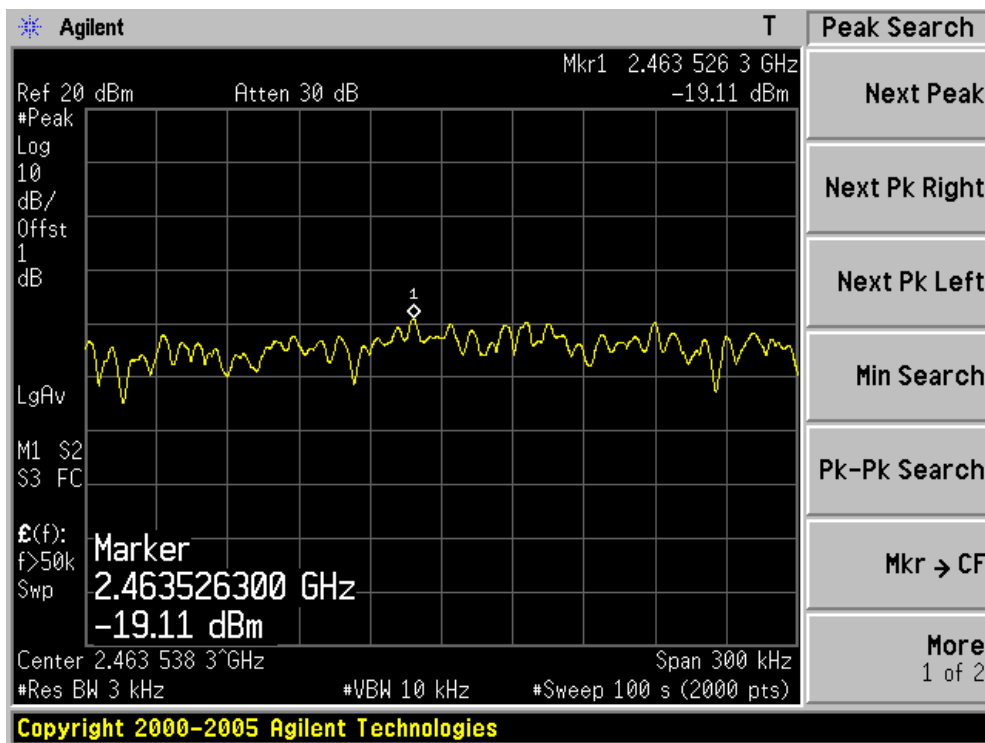
Channel 01 (2412MHz)



Channel 06 (2437MHz)



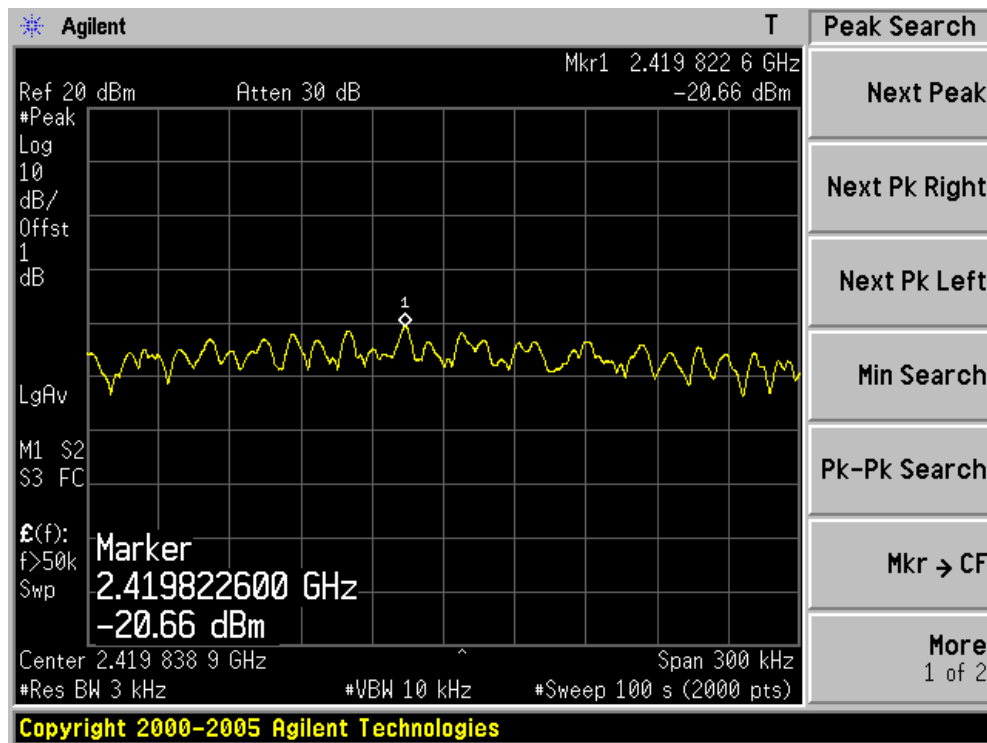
Channel 11 (2462MHz)



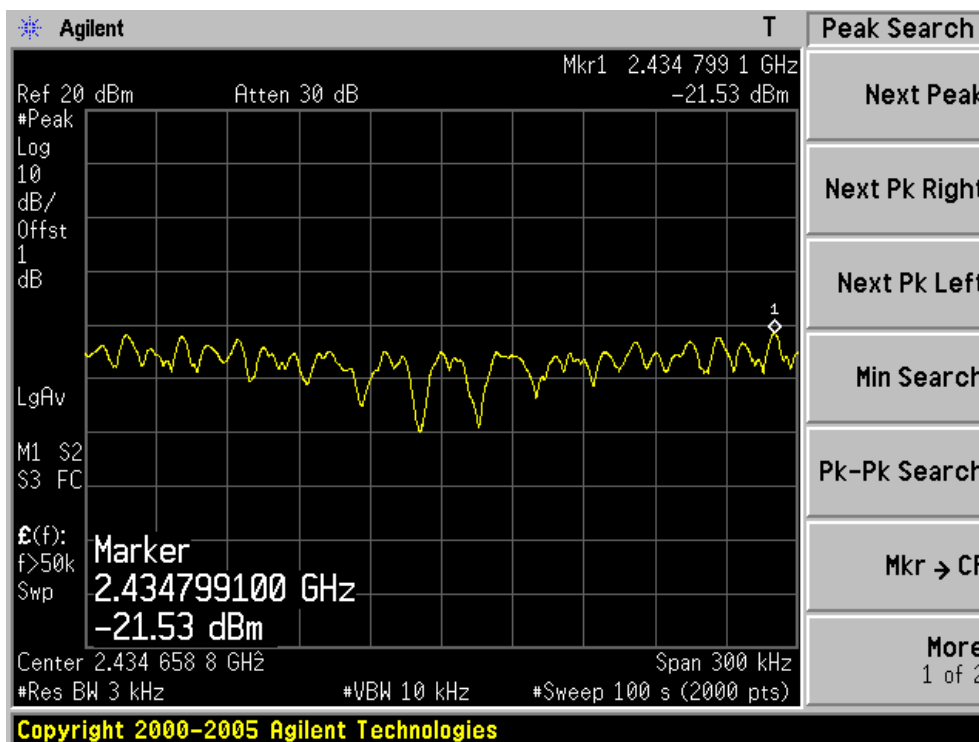
Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 4: Transmit by 802.11n (40MHz) (Chain 1)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
03	2422	N/A	-20.66	-20.66	8	Pass
06	2437	N/A	-21.53	-21.53	8	Pass
09	2452	N/A	-20.82	-20.82	8	Pass

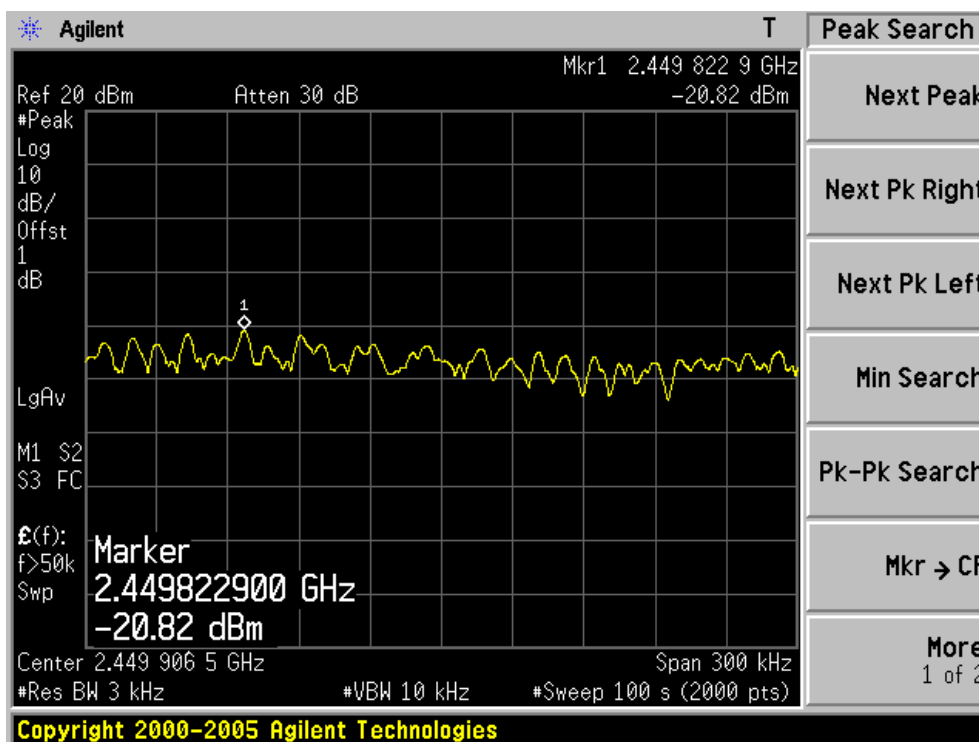
Channel 03 (2422MHz)



Channel 06 (2437MHz)



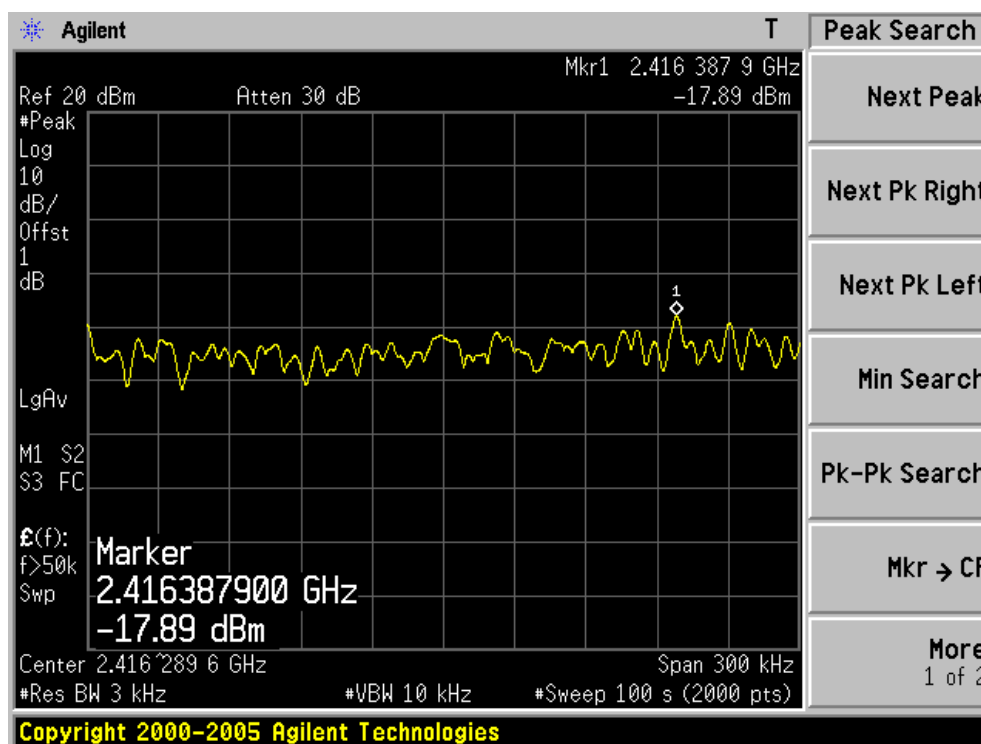
Channel 09 (2452MHz)



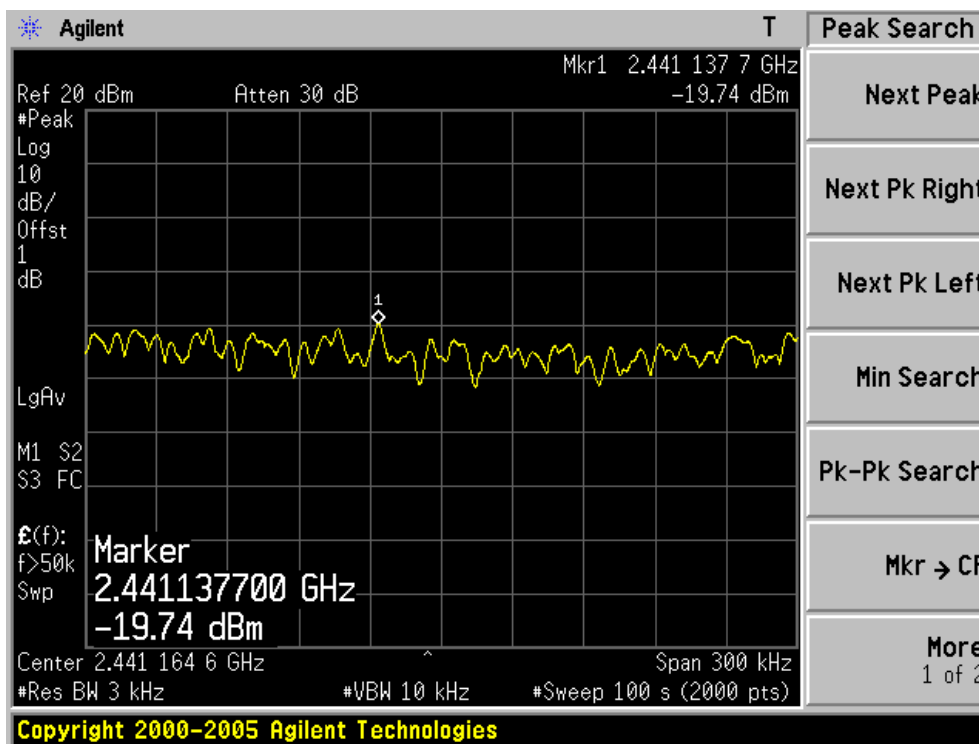
Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (20MHz) (Chain 0+1)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
01	2412	-17.89	-18.61	-15.22	8	Pass
06	2437	-19.74	-17.53	-15.49	8	Pass
11	2462	-18.91	-18.18	-15.52	8	Pass

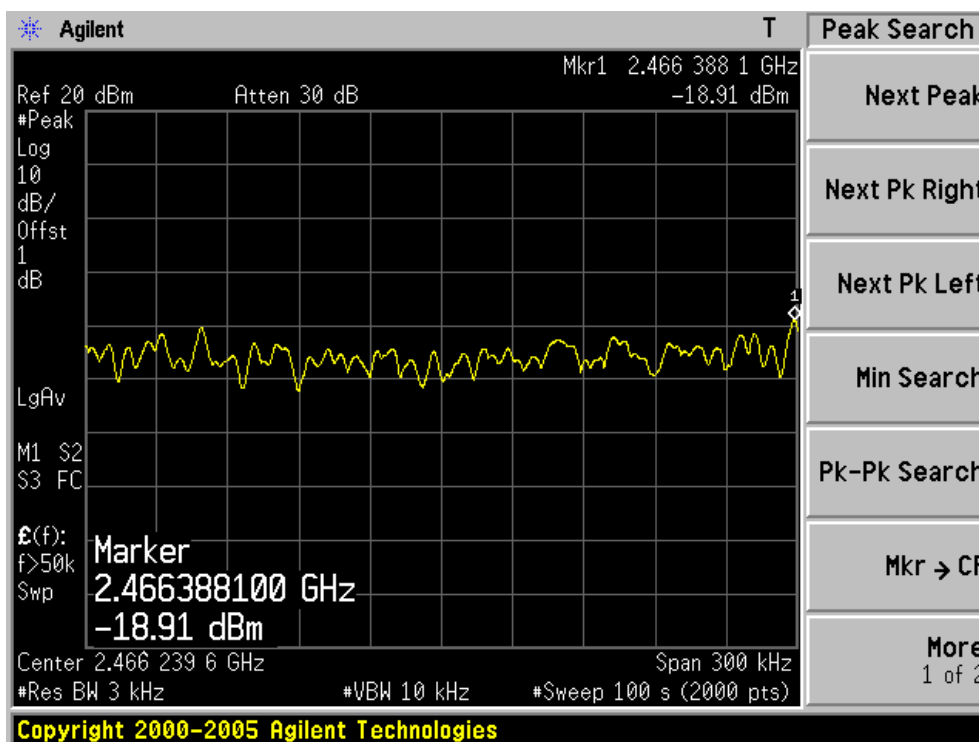
Channel 01 (2412MHz) – Chain 0



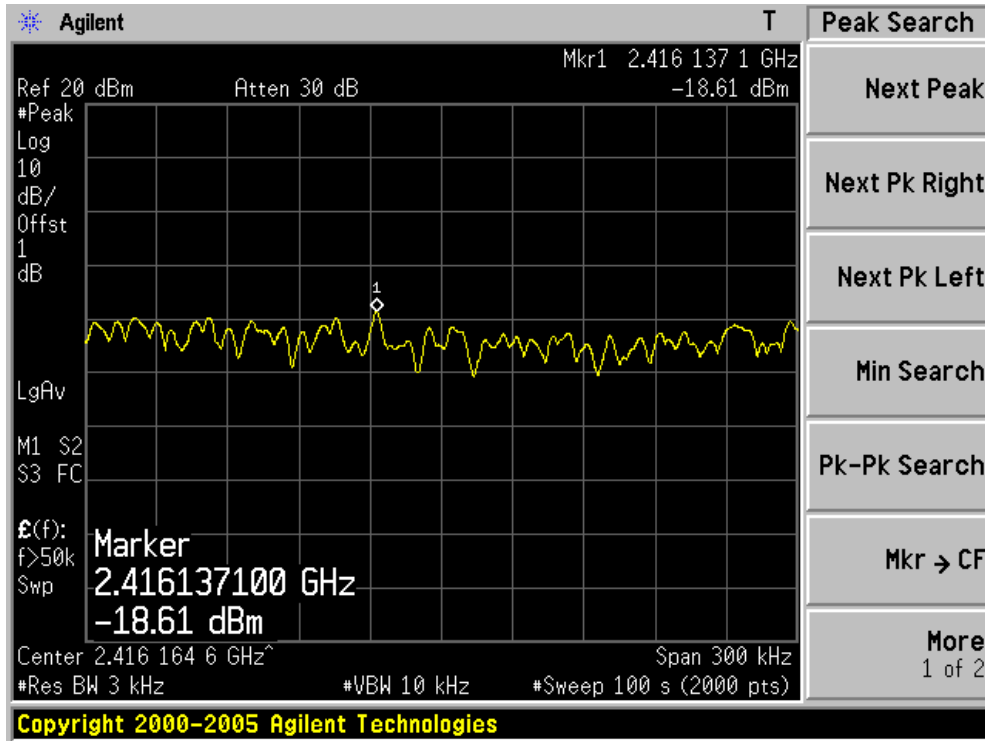
Channel 06 (2437MHz) – Chain 0



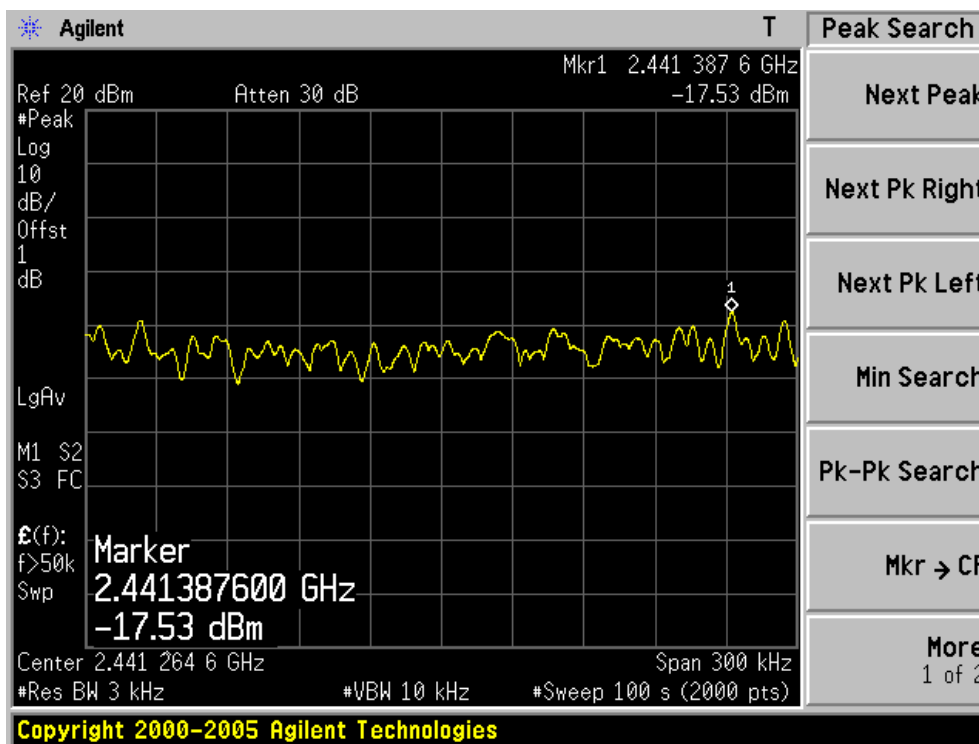
Channel 11 (2462MHz) – Chain 0



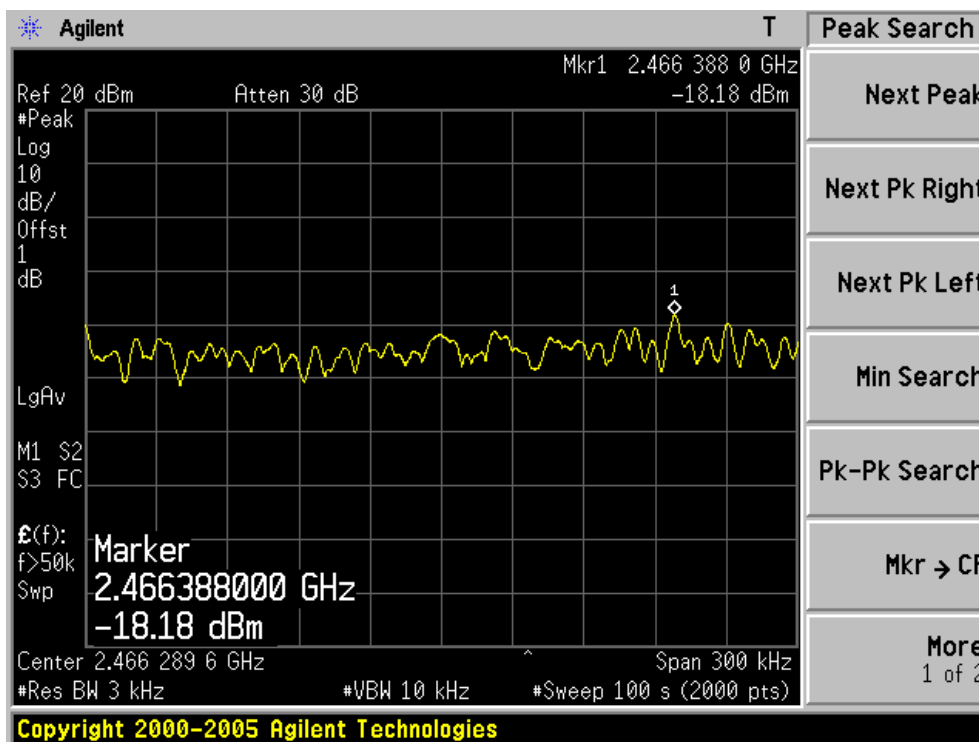
Channel 01 (2412MHz) – Chain 1



Channel 06 (2437MHz) – Chain 1



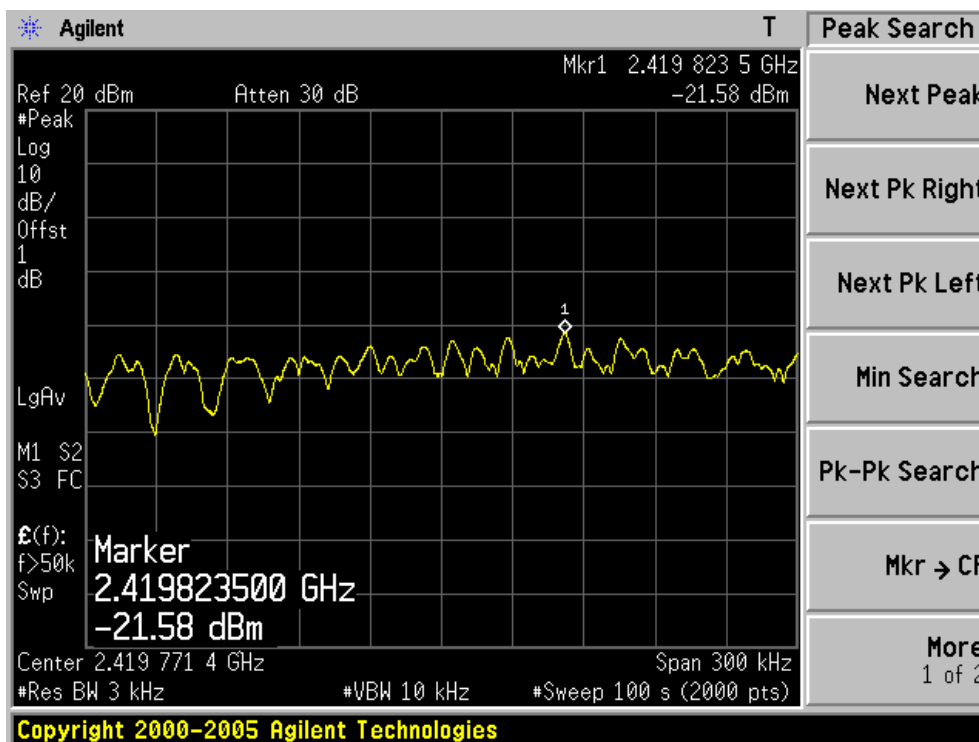
Channel 11 (2462MHz) – Chain 1



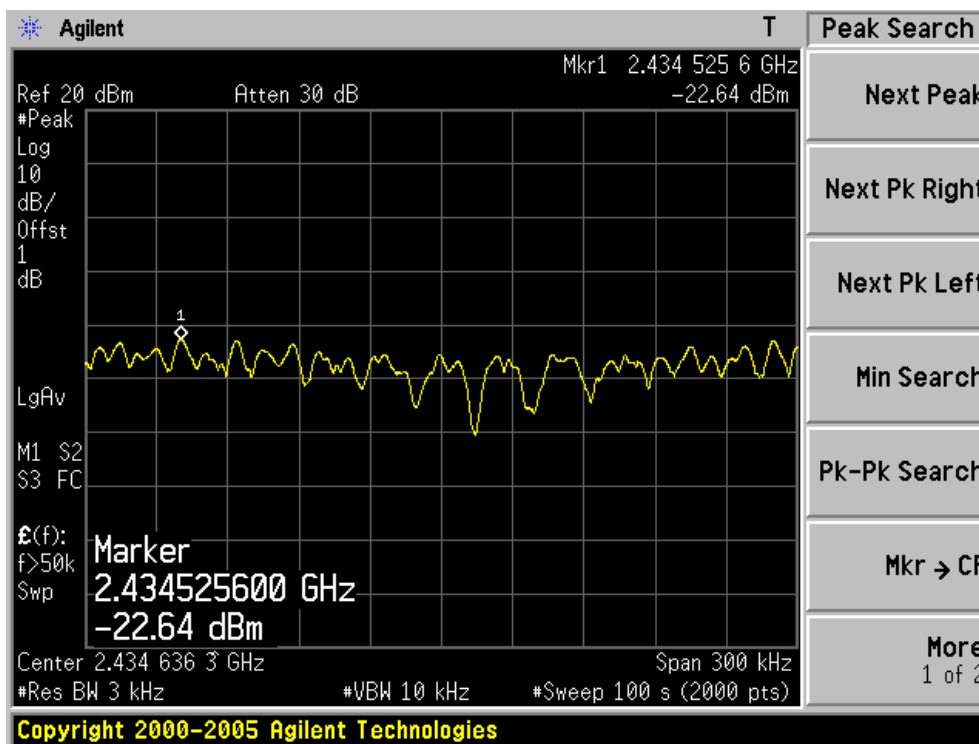
Product	:	Wireless N ADSL2+ 4-port USB Gateway
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 4: Transmit by 802.11n (40MHz) (Chain 0+1)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
03	2422	-21.58	-21.19	-18.37	8	Pass
06	2437	-22.64	-21.15	-18.82	8	Pass
09	2452	-21.58	-21.18	-18.37	8	Pass

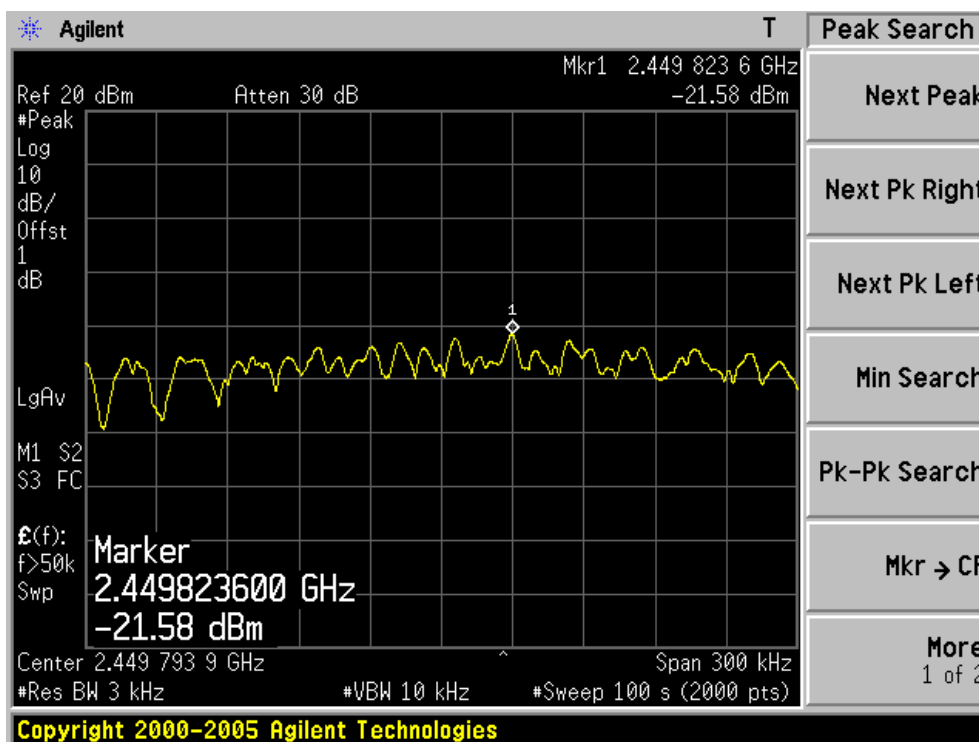
Channel 03 (2422MHz) – Chain 0



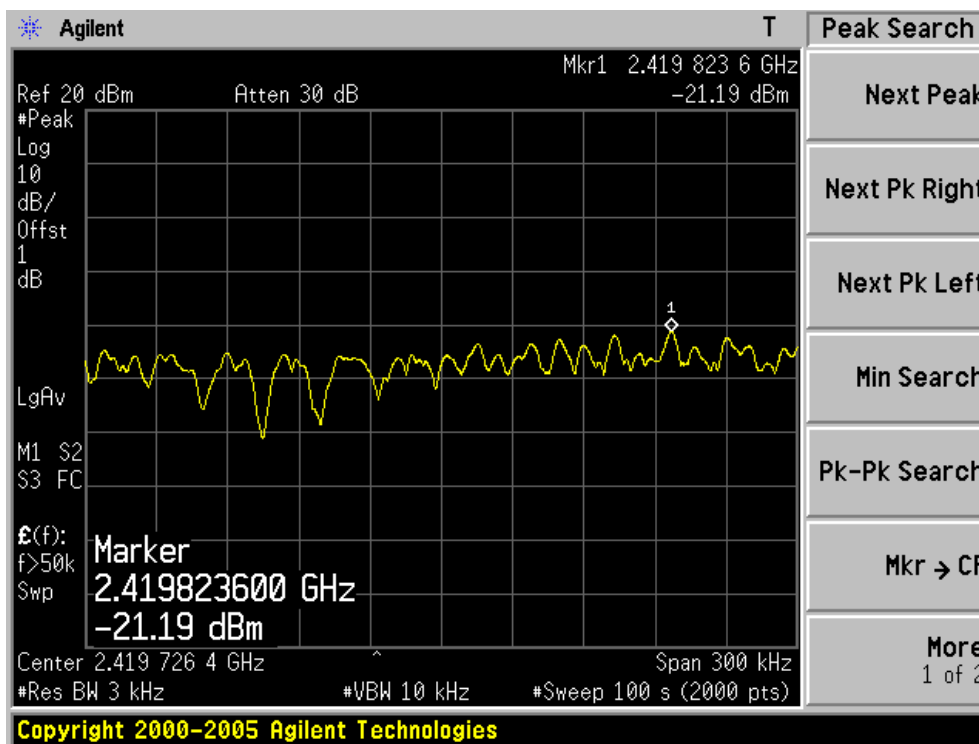
Channel 06 (2437MHz) – Chain 0



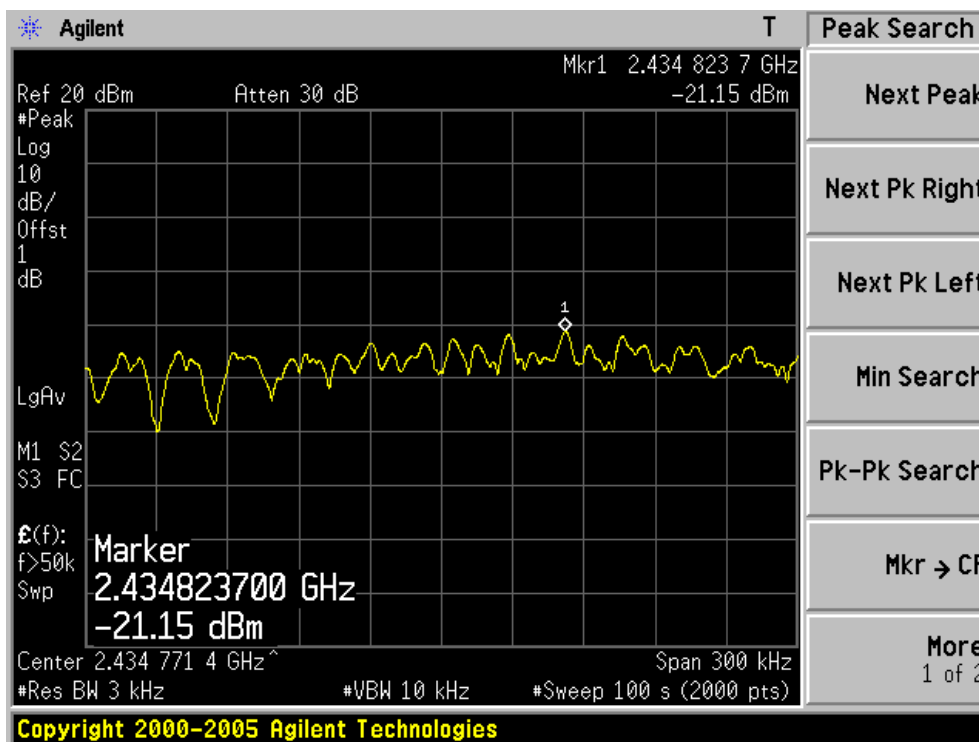
Channel 09 (2452MHz) – Chain 0



Channel 03 (2422MHz) – Chain 1



Channel 06 (2437MHz) – Chain 1



Channel 09 (2452MHz) – Chain 1

