FCC TEST REPORT

According to

FCC CFR Title 47 Part 15 Subpart C

Applicant	:	ZyXEL Communications Corp.
Address	:	NO.6,Innovation Rd. Ⅱ Science Based Industrial Park Hsin-Chu,Taiwan
Manufacturer(1)	:	ZyXEL Communications Corp.
Address(1)	:	NO.6,Innovation Rd. Ⅱ Science Based Industrial Park Hsin-Chu,Taiwan
Manufacturer(2)	:	ZyXEL Communications(Wuxi) Co Ltd.
Address(2)	:	60 – E, Minshan RD, New District, Wuxi, Jiangsu, P.R. China
Equipment	:	802.11n Wireless ADSL2+ 4-port Gateway
Model No.	:	P-660HN-T1, P-660HN-T3
FCC ID	:	I88P660HNT1

Table of Contents

Document history

Attachment No.	Date	Description
SEFI1102025	Mar 18, 2011	First issue

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FCC ID	:	I88P660HNT1

I HEREBY CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 – 2003** and the energy emitted by this equipment was ***passed*** **CISPR PUB. 22 and FCC Part 15** in both radiated and conducted emission class B limits. Testing was carried out on Mar 17, 2011 at ***Cerpass Technology Corp.***

Documented By:

Jeson Wang/ Administration

Approved By:

Clinton Kao / Technical director

1. Report of Measurements and Examinations

FCC CFR Title 47 Part 15 Subpart C: 2007 ANSI C63.4: 2003			
Clause	Test Parameter	Test Performed	Remark
15.207	Conducted Emission	YES	PASS
15.209	Radiated Emission	YES	PASS
15.247(a) 15.215(c)	Occupied Bandwidth	YES	PASS
15.247(b)	Maximum Peak Output Power	YES	PASS
15.247(c)	Band Edges	YES	PASS
15.247(c)	RF antenna conducted	NO	Not Applicable
15.247(d)	Power Spectral Density	YES	PASS

2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

802.11n Wireless ADSL2+ 4-port Gateway	Model No：	P-660HN-T1, P-660HN-T3
Power Adapter 1#	Manufacturer:	OEM
	Model No.:	ADS0128-W 120100
	Input:	100-240V~50-60Hz, 0.5A
	Output:	12V⎓1.0A
Power supply cable	Non-Shielded, 1.5m	
Power Adapter 2#	Manufacturer:	LEI
	Model No.:	MU05-N120050-A1
	Input:	100-240V~50-60Hz, 0.3A
	Output:	12V⎓0.5A
Power supply cable	Non-Shielded, 1.5m	
Remark	1) They are identical except for the model name. This is only to satisfy the different requirements of the client. **P-660HN-T1** was selected as the test model and its data have been recorded in this report.	
	2) The EUT has two appearance. They are identical except for the antenna station. One is built-in antenna. The other is external antenna.	

WLAN	Ralink/RT5392L
Spreading	802.11b: CCK, DQPSK, DBPSK 802.11g: 64 QAM, 16 QAM, QPSK, BPSK 802.11n: BPSK, QPSK,16-QAM, 64-QAM
Frequency Range	802.11b/g/n(20MHz): 2412-2462MHz 802.11n(40MHz): 2422-2452MHz
Number of Channels	802.11b/g/n (20MHz):11 802.11n (40MHz): 7
Data Rate	802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: up to 300 Mbps
Antenna	External antenna Dipole Chain0 (2.95dBi) Built-in antenna PIFA Chain0 (0.26dBi) PIFA Chain1 (-1.23dBi)

2.2. Carrier Frequency of Channels

For 2.4G 802.11b, 802.11g, 802.11n (20MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
01	2412	07	2442
02	2417	08	2447
03	2422	09	2452
04	2427	10	2457
05	2432	11	2462
06	2437	---	---

For 2.4G 802.11n (40MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
01	---	08	2447
02	---	09	2452
03	2422	---	---
04	2427	---	---
05	2432	---	---
06	2437	---	---
07	2442	---	---

2.3. Test Manner

Test Manner	
a	During testing, the interface cables and equipment positions were varied according to 47 CFR, Part 2, Part 15
b	Adjust the EUT at the test mode and the test channel. Then test.

The test modes:

The EUT transmitting and receiving with one (chain 0) antenna working at b mode, so one antenna working configuration was used for b mode testing in this report.
The EUT transmitting and receiving with two antennas simultaneously working at g/N mode (Chain 0+Chain 1). The chip set RT5392L supports 802.11 b + MIMO 2x2 configuration was finally used in this report.
The worst-case data rates are determined to be as follows for each mode based on investigation by measuring the average power, peak power and PPSD across all data rates, bandwidths, and modulations.
EUT+Adapter #1 and EUT+Adapter #2 have been pre-tested and that the during pre-test Adapter #1 showed the worst case conducted and radiated emissions, and that therefore only Adapter #1 was used for final testing.
The worst-case data rates:
IEEE802.11b mode: Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 1Mbps data rate were chosen for full testing.
IEEE802.11g mode: Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 54Mbps data rate were chosen for full testing.
IEEE 802.11gn Standard-20 MHz Channel mode: Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with up 300 Mbps data rate were chosen for full testing.
IEEE 802.11gn Wide-40 MHz Channel mode: Channel Low (2422MHz), Channel Mid (2437MHz) and Channel High (2452MHz) with up 300 Mbps data rate were chosen for full testing.
Then, the EUT configuration and cable configuration of the above highest emission mode was recorded for all final test items.
The following test mode was scanned during the preliminary test:
Mode 1: Built-in antenna PIFA Chain0 (0.26)
Built-in antenna PIFA Chain1(-1.23)
Mode 2: External antenna Diople Chain0 (2.95)
Built-in antenna PIFA Chain1 (-1.23)
After the preliminary scan, The following test mode was found to produce the highest emission level:
Mode 2: External antenna Diople Chain0 (2.95)
Built-in antenna PIFA Chain1 (-1.23)
Then, the EUT configuration and cable configuration of the above highest emission mode was recorded for all final test items.

2.4. Description of Test System

No	Device	Manufacturer	Model No.	Description
1	Notebook	ASUS	W6A	Power by adaptor

2.5. General Information of Test

Test Site:	Cerpass Technology Corp.
Performand Location :	No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China
NVLAP LAB Code :	200814-0
FCC Registration Number :	916572, 331395
IC Registration Number :	7290A-1, 7290A-2
VCCI Registration Number :	T-343 for Telecommunication Test C-2919 for Conducted emission test R-2670 for Radiated emission test below 1GHz G-227 for Radiated emission test above 1GHz

Laboratory accreditation

2.6. Measurement Uncertainty

Measurement Item	Measurement Frequency	Polarization	Uncertainty
Conducted Emission	9 kHz ~ 30 MHz	LINE/NEUTRAL	±2.71 dB
Radiated Emission	30 MHz ~ 25GHz	Vertical	±4.11 dB
		Horizontal	±4.10 dB
Occupied Bandwidth	---	---	±7500 Hz
Maximum Peak Output Power	---	---	±1.4 dB
Band Edges	---	---	±2.2 dB
Power Spectral Density	---	---	±2.2 dB

3. Test of Conducted Emission

3.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

3.2. Test Procedures

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

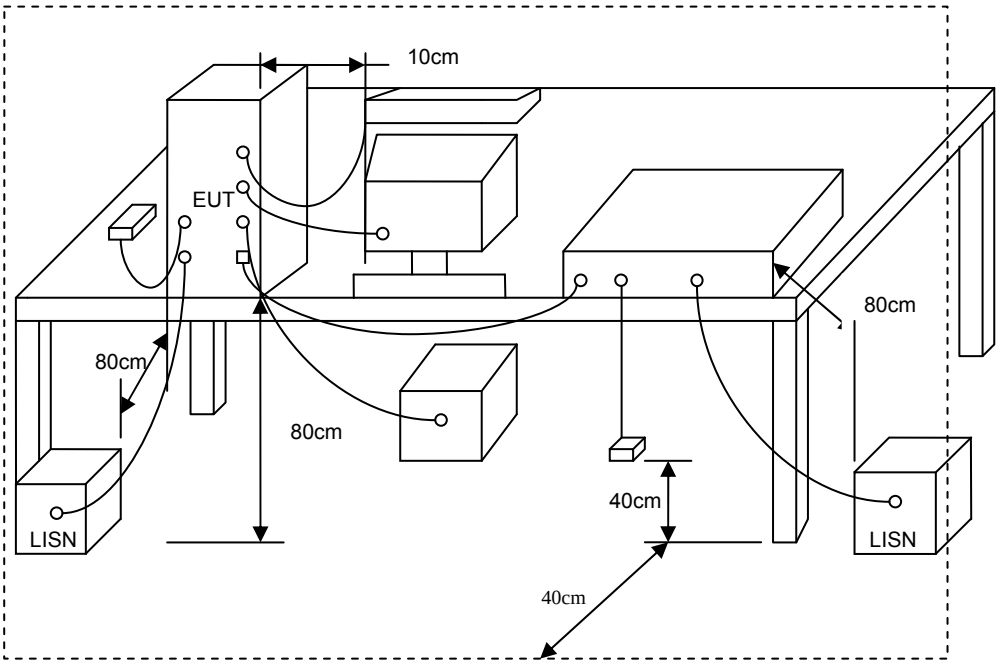
The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are 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 9kHz.

3.3. Typical Test Setup

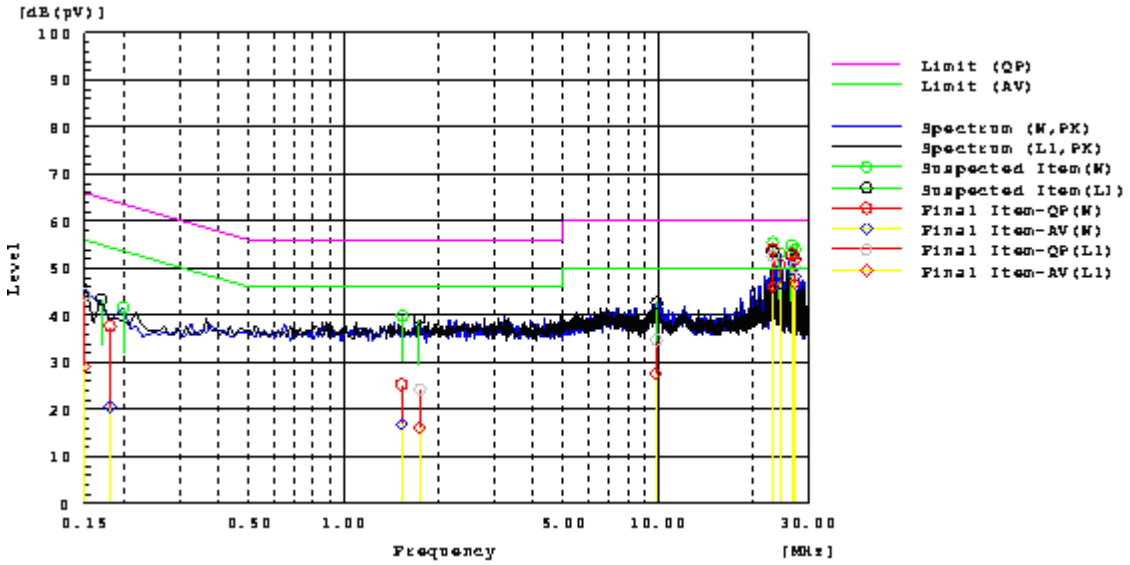


3.4. Measurement Equipment

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date
Test Receiver	R&S	ESCI	100565	2011.01.15
AMN	R&S	ESH2-Z5	100182	2010.06.23
Two-Line V-Network	R&S	ENV216	100325	2010.04.18
ISN	FCC	FCC-TLISN-T2-02	20379	2010.06.23
ISN	FCC	FCC-TLISN-T4-02	20380	2010.06.23
ISN	FCC	FCC-TLISN-T8-02	20381	2010.06.23
Attenuator	R&S	ESH3-Z2	100529	2011.01.11
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2010.08.14

3.5. Test Result and Data

Test Mode :	Mode : Normal Link		
AC Power :	AC 120V/60Hz	Phase :	L&N
Temperature :	22°C	Humidity :	51%
Pressur(mbar) :	1002	Date :	2011/03/01



Frequency MHz	Line Phase	Reading dB(uV) QP	Reading dB(uV) AV	Factor dB	Level dB(uV) QP	Level dB(uV) AV	Limit dB(uV) QP	Limit dB(uV) AV	Margin dB QP	Margin dB AV	Pass/Fail
0.15049	L1	24.5	9.3	19.9	44.4	29.2	66.0	56.0	21.6	26.8	Pass
1.74759	L1	4.6	-3.5	19.7	24.3	16.2	56.0	46.0	31.7	29.8	Pass
9.8656	L1	15.1	8.0	19.7	34.8	27.7	60.0	50.0	25.2	22.3	Pass
23.1274	L1	33.0	26.4	19.6	52.6	46.0	60.0	50.0	7.4	4.0	Pass
27.1598	L1	30.6	27.2	19.6	50.2	46.8	60.0	50.0	9.8	3.2	Pass
23.1298	L1	33.1	26.7	19.6	52.7	46.3	60.0	50.0	7.3	3.7	Pass
27.159	N	31.9	28.5	19.8	51.7	48.3	60.0	50.0	8.3	1.7	Pass
26.6084	N	33.1	30.0	19.8	52.9	49.8	60.0	50.0	7.1	0.2	Pass
24.3512	N	31.0	27.0	19.8	50.8	46.8	60.0	50.0	9.2	3.2	Pass
23.128	N	34.2	27.7	19.9	54.1	47.6	60.0	50.0	5.9	2.4	Pass
1.52536	N	5.8	-2.7	19.5	25.3	16.8	56.0	46.0	30.7	29.2	Pass
0.18065	N	18.3	1.0	19.5	37.8	20.5	64.5	54.5	26.7	34.0	Pass

Note: Measurement Level = Reading Level + Correct Factor

4. Test of Radiated Emission

4.1. Test Limit

Radiated emissions from 30 MHz to 25 GHz were measured according to the methods defines in ANSI C63.4-2003. The EUT was placed, 0.8 meter above the ground plane, as shown in section 5.6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions for unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30-88	100*	3
88-216	150*	3
216-960	200*	3
Above 960	500	3

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

4.2. Test Procedures

The EUT was setup according to ANSI C63.4, 2003 and tested according to DTS test

procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set

to transmit in a continuous mode.

For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements or 120kHz for quasi-peak detection measurements. Peak detection is used unless

otherwise noted as quasi-peak.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, then the video bandwidth is set to 1MHz for peak measurements and 10Hz for average measurements.

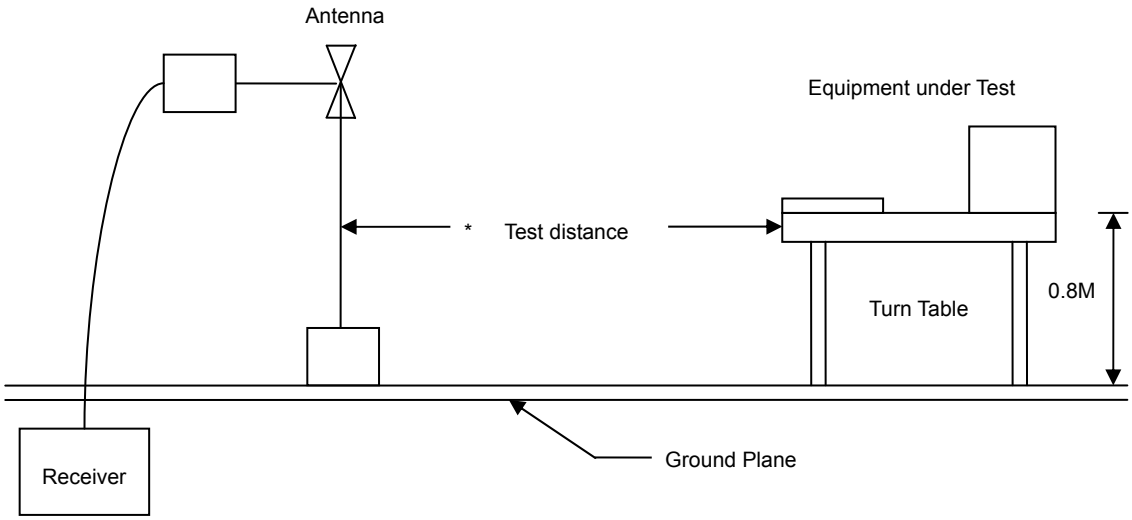
The spectrum from 30MHz to 26GHz is investigated with the transmitter set to the lowest, middle and highest channels in the 2.4GHz band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are

Made with the antenna polarized in both the vertical and the horizontal positions.

When performing radiated measurements >1 GHz, the EUT always remains within the 3dB beam-width of the measuring antenna.

4.3. Typical Test Setup



4.4. Measurement Equipment

Instrument	Model No.	Manufacturer	Serial No.	Calibration Date
EMI Test Receiver	R&S	ESCI	100563	2010.06.23
H64 Amplifier	HP	8447F	3113A05582	2010.08.14
Preamplifier	Agilent	8449B	ED-HE-EMI-077	2011.02.10
Preamplifier	Agilent	8449B	3008A02342	2011.02.10
Ultra Broadband Antenna	R&S	HL562	100362	2010.11.25
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2010.11.10
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	9170-347	2010.10.15
Spectrum Analyzer	R&S	FSP40	100324	2010.08.14
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2010.08.17

4.5. Test Result and Data

Under 1G:

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Normal Link**

Freq. (MHz)	Ant.Pol. H/V	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
75.12	V	46.80	-19.15	27.65	40.00	-12.35	Peak
165.22	V	47.58	-17.81	29.77	43.50	-13.73	Peak
412.74	V	40.47	-10.55	29.92	46.00	-16.08	Peak
590.33	V	39.83	-7.41	32.42	46.00	-13.58	Peak
775.98	V	34.48	-3.06	31.42	46.00	-14.58	Peak
905.22	V	33.87	-1.41	32.46	46.00	-13.54	Peak
140.33	H	46.91	-17.52	29.39	43.50	-14.11	Peak
168.12	H	43.43	-17.64	25.79	43.50	-17.71	Peak
365.99	H	43.50	-11.41	32.09	46.00	-13.91	Peak
400.56	H	42.43	-10.83	31.60	46.00	-14.40	Peak
775.11	H	36.85	-3.52	33.33	46.00	-12.67	Peak
905.61	H	34.90	-1.46	33.44	46.00	-12.56	Peak

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2 : Normal Link**

Freq. (MHz)	Ant.Pol. H/V	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
73.63	V	48.56	-19.12	29.44	40.00	-10.56	Peak
164.52	V	49.34	-17.78	31.56	43.50	-11.94	Peak
403.55	V	42.23	-10.69	31.54	46.00	-14.46	Peak
588.63	V	41.59	-7.43	34.16	46.00	-11.84	Peak
775.36	V	36.24	-3.06	33.18	46.00	-12.82	Peak
903.21	V	35.63	-1.42	34.21	46.00	-11.79	Peak
140.10	H	48.67	-17.52	31.15	43.50	-12.35	Peak
168.50	H	45.19	-17.64	27.55	43.50	-15.95	Peak
364.55	H	45.26	-11.41	33.85	46.00	-12.15	Peak
401.11	H	44.19	-10.82	33.37	46.00	-12.63	Peak
775.26	H	38.61	-3.52	35.09	46.00	-10.91	Peak
905.33	H	36.66	-1.46	35.20	46.00	-10.80	Peak

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Above 1G:

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1 : Transmit by 802.11b (2412MHz)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1601.22	V	57.13	46.44	-5.76	51.37	40.68	74.00	54.00	-13.32	average
4825.34	V	43.29	35.45	6.53	49.82	41.98	74.00	54.00	-12.02	average
7234.12	V	37.55	28.12	15.49	53.04	43.61	74.00	54.00	-10.39	average
1622.84	H	60.74	48.32	-5.75	54.99	42.57	74.00	54.00	-11.43	average
4825.56	H	43.27	34.22	6.53	49.80	40.75	74.00	54.00	-13.25	average
7233.12	H	36.54	27.12	15.48	52.02	42.60	74.00	54.00	-11.40	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11b (2437MHz)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1602.22	V	60.27	50.23	-5.75	54.52	44.48	74.00	54.00	-9.52	average
4875.26	V	47.55	35.26	6.85	54.40	42.11	74.00	54.00	-11.89	average
7312.52	V	39.65	27.12	15.52	55.17	42.64	74.00	54.00	-11.36	average
1600.02	H	57.47	47.63	-5.76	51.71	41.87	74.00	54.00	-12.13	average
4875.69	H	46.68	34.29	6.85	53.53	41.14	74.00	54.00	-12.86	average
7312.85	H	37.25	27.93	15.52	52.77	43.45	74.00	54.00	-10.55	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11b (2462MHz)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1602.32	V	59.16	50.12	-5.74	53.42	44.38	74.00	54.00	-9.62	average
4926.32	V	48.63	36.54	6.99	55.62	43.53	74.00	54.00	-10.47	average
7384.69	V	37.45	28.11	15.60	53.05	43.71	74.00	54.00	-10.29	average
1601.23	H	56.98	45.63	-5.76	51.22	39.87	74.00	54.00	-14.13	average
4925.74	H	44.58	34.96	6.98	51.56	41.94	74.00	54.00	-12.06	average
7385.26	H	36.55	27.19	15.60	52.15	42.79	74.00	54.00	-11.21	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11g (2412MHz) Chain0+Chain1**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1601.23	V	58.41	49.36	-5.76	52.65	43.60	74.00	54.00	-10.40	average
4825.31	V	46.31	36.55	6.52	52.83	43.07	74.00	54.00	-10.93	average
7235.16	V	38.55	27.47	15.44	53.99	42.91	74.00	54.00	-11.09	average
1601.24	H	56.74	48.32	-5.76	50.98	42.56	74.00	54.00	-11.44	average
4825.34	H	44.37	36.24	6.52	50.89	42.76	74.00	54.00	-11.24	average
7234.18	H	36.54	28.11	15.44	51.98	43.55	74.00	54.00	-10.45	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11g (2437MHz) Chain0+Chain1**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1600.58	V	58.33	49.32	-5.76	52.57	43.56	74.00	54.00	-10.44	average
4875.36	V	45.76	36.59	6.84	52.60	43.43	74.00	54.00	-10.57	average
7312.23	V	36.59	27.74	15.52	52.11	43.26	74.00	54.00	-10.74	average
1601.23	H	55.87	46.55	-5.74	50.13	40.81	74.00	54.00	-13.19	average
4875.44	H	45.17	35.29	6.85	52.02	42.14	74.00	54.00	-11.86	average
7312.58	H	37.56	27.49	15.52	53.08	43.01	74.00	54.00	-10.99	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11g (2462MHz) Chain0+Chain1**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1600.02	V	58.47	49.32	-5.75	52.72	43.57	74.00	54.00	-10.43	average
4925.36	V	46.95	36.55	6.98	53.93	43.53	74.00	54.00	-10.47	average
7384.26	V	37.48	27.43	15.60	53.08	43.03	74.00	54.00	-10.97	average
1601.28	H	56.47	47.16	-5.76	50.71	41.40	74.00	54.00	-12.60	average
4924.35	H	45.18	34.87	6.99	52.17	41.86	74.00	54.00	-12.14	average
7385.11	H	35.69	27.12	15.61	51.30	42.73	74.00	54.00	-11.27	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (20MHz) (2412MHz) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1603.25	V	60.22	48.25	-5.75	54.47	42.50	74.00	54.00	-11.50	average
4825.69	V	46.96	36.54	6.53	53.49	43.07	74.00	54.00	-10.93	average
7235.36	V	37.12	28.45	15.48	52.60	43.93	74.00	54.00	-10.07	average
1602.54	H	58.47	46.23	-5.76	52.71	40.47	74.00	54.00	-13.53	average
4825.96	H	47.85	35.96	6.54	54.39	42.50	74.00	54.00	-11.50	average
7234.12	H	36.54	28.41	15.45	51.99	43.86	74.00	54.00	-10.14	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (20MHz) (2437MHz) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1600.25	V	59.32	48.23	-5.82	53.50	42.41	74.00	54.00	-11.59	average
4875.63	V	48.12	37.55	6.85	54.97	44.40	74.00	54.00	-9.60	average
7312.25	V	37.56	28.16	15.54	53.10	43.70	74.00	54.00	-10.30	average
1601.47	H	59.32	49.23	-5.83	53.49	43.40	74.00	54.00	-10.60	average
4875.22	H	45.21	35.26	6.85	52.06	42.11	74.00	54.00	-11.89	average
7312.42	H	37.26	28.16	15.54	52.80	43.70	74.00	54.00	-10.30	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (20MHz) (2462MHz) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1602.54	V	59.32	49.21	-5.75	53.57	43.46	74.00	54.00	-10.54	average
4926.32	V	45.12	36.55	6.99	52.11	43.54	74.00	54.00	-10.46	average
7385.41	V	38.21	28.14	15.61	53.82	43.75	74.00	54.00	-10.25	average
1600.02	H	58.62	49.32	-5.76	52.86	43.56	74.00	54.00	-10.44	average
4925.36	H	45.32	35.63	6.99	52.31	42.62	74.00	54.00	-11.38	average
7385.16	H	36.33	27.11	15.61	51.94	42.72	74.00	54.00	-11.28	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (40MHz) (2422MHz) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1602.22	V	58.22	49.52	-5.73	52.49	43.79	74.00	54.00	-10.21	average
4845.23	V	45.16	36.24	6.61	51.77	42.85	74.00	54.00	-11.15	average
6865.21	V	37.12	28.44	14.24	51.36	42.68	74.00	54.00	-11.32	average
1600.23	H	55.63	45.32	-5.75	49.88	39.57	74.00	54.00	-14.43	average
4845.36	H	42.14	33.21	6.61	48.75	39.82	74.00	54.00	-14.18	average
6865.24	H	35.06	25.44	14.24	49.30	39.68	74.00	54.00	-14.32	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (40MHz) (2437MHz) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1605.22	V	60.35	50.23	-5.73	54.62	44.50	74.00	54.00	-9.50	average
4875.26	V	45.98	36.22	6.86	52.84	43.08	74.00	54.00	-10.92	average
7210.23	V	38.66	27.11	15.52	54.18	42.63	74.00	54.00	-11.37	average
1600.33	H	57.47	47.35	-5.76	51.71	41.59	74.00	54.00	-12.41	average
4875.19	H	42.69	33.69	6.86	49.55	40.55	74.00	54.00	-13.45	average
7210.22	H	34.25	25.91	15.52	49.77	41.43	74.00	54.00	-12.57	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (40MHz) (2452MH) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1603.55	V	57.26	49.14	-5.74	51.52	43.40	74.00	54.00	-10.60	average
4905.21	V	44.26	34.96	6.92	51.18	41.88	74.00	54.00	-12.12	average
7355.24	V	37.21	28.54	14.95	52.16	43.49	74.00	54.00	-10.51	average
1601.54	H	55.44	46.25	-5.76	49.68	40.49	74.00	54.00	-13.51	average
4905.22	H	44.39	34.65	6.92	51.31	41.57	74.00	54.00	-12.43	average
7355.24	H	36.54	27.15	14.95	51.49	42.10	74.00	54.00	-11.90	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2 : Transmit by 802.11b (2412MHz)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1600.21	V	59.34	48.32	-5.76	53.58	42.56	74.00	54.00	-11.44	average
4825.34	V	45.87	38.41	6.53	52.40	44.94	74.00	54.00	-9.06	average
7234.12	V	39.58	30.17	15.49	55.07	45.66	74.00	54.00	-8.34	average
1601.22	H	61.47	50.16	-5.75	55.72	44.41	74.00	54.00	-9.59	average
4825.66	H	44.68	36.47	6.53	51.21	43.00	74.00	54.00	-11.00	average
7234.62	H	37.54	28.74	15.49	53.03	44.23	74.00	54.00	-9.77	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11b (2437MHz)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1600.21	V	60.27	51.47	-5.76	54.51	45.71	74.00	54.00	-8.29	average
4875.64	V	47.55	37.56	6.85	54.40	44.41	74.00	54.00	-9.59	average
7311.21	V	39.65	29.64	15.51	55.16	45.15	74.00	54.00	-8.85	average
1600.35	H	57.47	48.65	-5.76	51.71	42.89	74.00	54.00	-11.11	average
4875.62	H	46.68	35.64	6.85	53.53	42.49	74.00	54.00	-11.51	average
7312.25	H	37.25	28.14	15.52	52.77	43.66	74.00	54.00	-10.34	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11b (2462MHz)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1600.54	V	60.25	51.33	-5.76	54.49	45.57	74.00	54.00	-8.43	average
4925.15	V	49.32	38.62	6.99	56.31	45.61	74.00	54.00	-8.39	average
7385.26	V	38.55	29.36	15.60	54.15	44.96	74.00	54.00	-9.04	average
1600.47	H	57.39	47.21	-5.76	51.63	41.45	74.00	54.00	-12.55	average
4925.36	H	45.26	36.52	6.98	52.24	43.50	74.00	54.00	-10.50	average
7385.44	H	38.55	28.17	15.60	54.15	43.77	74.00	54.00	-10.23	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11g (2412MHz) Chain0+Chain1**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1600.23	V	60.24	50.32	-5.76	54.48	44.56	74.00	54.00	-9.44	average
4824.21	V	47.29	38.09	6.52	53.81	44.61	74.00	54.00	-9.39	average
7235.41	V	39.65	30.26	15.44	55.09	45.70	74.00	54.00	-8.30	average
1600.01	H	58.74	49.38	-5.76	52.98	43.62	74.00	54.00	-10.38	average
4824.64	H	45.69	37.14	6.52	52.21	43.66	74.00	54.00	-10.34	average
7235.44	H	37.55	28.36	15.44	52.99	43.80	74.00	54.00	-10.20	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11g (2437MHz) Chain0+Chain1**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1600.32	V	60.54	51.26	-5.76	54.78	45.50	74.00	54.00	-8.50	average
4875.22	V	47.58	38.66	6.84	54.42	45.50	74.00	54.00	-8.50	average
7311.25	V	39.55	29.65	15.52	55.07	45.17	74.00	54.00	-8.83	average
1602.55	H	57.26	48.26	-5.74	51.52	42.52	74.00	54.00	-11.48	average
4875.68	H	46.25	37.19	6.85	53.10	44.04	74.00	54.00	-9.96	average
7311.84	H	39.69	29.17	15.52	55.21	44.69	74.00	54.00	-9.31	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11g (2462MHz) Chain0+Chain1**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1601.22	V	60.77	51.29	-5.75	55.02	45.54	74.00	54.00	-8.46	average
4925.32	V	47.26	38.56	6.98	54.24	45.54	74.00	54.00	-8.46	average
7385.44	V	39.17	29.34	15.60	54.77	44.94	74.00	54.00	-9.06	average
1600.21	H	58.74	49.36	-5.76	52.98	43.60	74.00	54.00	-10.40	average
4925.17	H	46.59	36.59	6.99	53.58	43.58	74.00	54.00	-10.42	average
7386.55	H	36.55	28.54	15.61	52.16	44.15	74.00	54.00	-9.85	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (20MHz) (2412MHz) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1602.22	V	61.23	50.26	-5.74	55.49	44.52	74.00	54.00	-9.48	average
4825.39	V	47.20	38.22	6.53	53.73	44.75	74.00	54.00	-9.25	average
7236.66	V	38.55	30.24	15.48	54.03	45.72	74.00	54.00	-8.28	average
1600.05	H	59.30	48.56	-5.76	53.54	42.80	74.00	54.00	-11.20	average
4826.35	H	48.51	37.49	6.54	55.05	44.03	74.00	54.00	-9.97	average
7235.22	H	37.54	29.36	15.00	52.54	44.36	74.00	54.00	-9.64	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (20MHz) (2437MHz) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1601.23	V	61.22	50.29	-5.82	55.40	44.47	74.00	54.00	-9.53	average
4875.78	V	49.37	39.64	6.85	56.22	46.49	74.00	54.00	-7.51	average
7312.25	V	39.22	30.47	15.52	54.74	45.99	74.00	54.00	-8.01	average
1602.22	H	58.26	50.36	-5.83	52.43	44.53	74.00	54.00	-9.47	average
4875.28	H	46.23	37.14	6.85	53.08	43.99	74.00	54.00	-10.01	average
7311.24	H	39.21	31.29	15.53	54.74	46.82	74.00	54.00	-7.18	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (20MHz) (2462MHz) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1603.22	V	62.32	51.26	-5.75	56.57	45.51	74.00	54.00	-8.49	average
4925.14	V	47.12	38.21	6.99	54.11	45.20	74.00	54.00	-8.80	average
7385.28	V	40.55	30.29	15.61	56.16	45.90	74.00	54.00	-8.10	average
1600.25	H	60.47	51.28	-5.76	54.71	45.52	74.00	54.00	-8.48	average
4925.31	H	46.38	37.33	6.99	53.37	44.32	74.00	54.00	-9.68	average
7386.37	H	37.55	28.41	15.62	53.17	44.03	74.00	54.00	-9.97	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (40MHz) (2422MHz) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1602.22	V	59.33	50.29	-5.75	53.58	44.54	74.00	54.00	-9.46	average
4845.33	V	48.21	38.74	6.61	54.82	45.35	74.00	54.00	-8.65	average
6865.33	V	41.26	30.57	14.24	55.50	44.81	74.00	54.00	-9.19	average
1600.23	H	57.41	48.25	-5.76	51.65	42.49	74.00	54.00	-11.51	average
4845.96	H	44.29	35.26	6.61	50.90	41.87	74.00	54.00	-12.13	average
6866.32	H	38.21	27.08	14.25	52.46	41.33	74.00	54.00	-12.67	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (40MHz) (2437MHz) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1603.33	V	59.69	51.29	-5.74	53.95	45.55	74.00	54.00	-8.45	average
4875.23	V	46.34	37.55	6.86	53.20	44.41	74.00	54.00	-9.59	average
7210.33	V	39.67	29.64	15.52	55.19	45.16	74.00	54.00	-8.84	average
1600.23	H	56.44	47.26	-5.76	50.68	41.50	74.00	54.00	-12.50	average
4875.26	H	43.58	34.06	6.85	50.43	40.91	74.00	54.00	-13.09	average
7211.35	H	35.69	26.41	15.52	51.21	41.93	74.00	54.00	-12.07	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-12**
Limit : FCC_15_03M_PK	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL/ HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (40MHz) (2452MH) (Chain 0+Chain 1)**

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Safe Margin (dB)	Detector Mode (PK/QP)
					Peak (dBuV/m)	AV (dBuV/m)				
1603.33	V	58.62	50.16	-5.74	52.88	44.42	74.00	54.00	-9.58	average
4906.33	V	45.21	36.47	6.92	52.13	43.39	74.00	54.00	-10.61	average
7355.25	V	39.33	30.55	14.94	54.27	45.49	74.00	54.00	-8.51	average
1601.22	H	56.22	48.36	-5.75	50.47	42.61	74.00	54.00	-11.39	average
4907.12	H	45.02	35.62	6.91	51.93	42.53	74.00	54.00	-11.47	average
7356.21	H	37.49	28.33	14.96	52.45	43.29	74.00	54.00	-10.71	average

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

5. Occupied Bandwidth

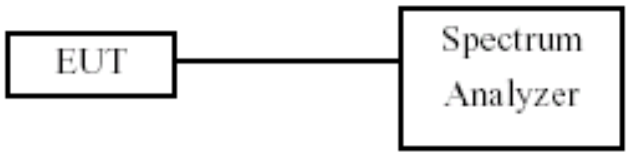
5.1. Test Limit

Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725- 5850 MHz band. The minimum 6 dB bandwidth shall be at least 500 kHz.

5.2. Test Procedures

The EUT was tested according to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW = 100 kHz, Span greater than RBW.

5.3. Test Setup Layout



5.4. Measurement Equipment

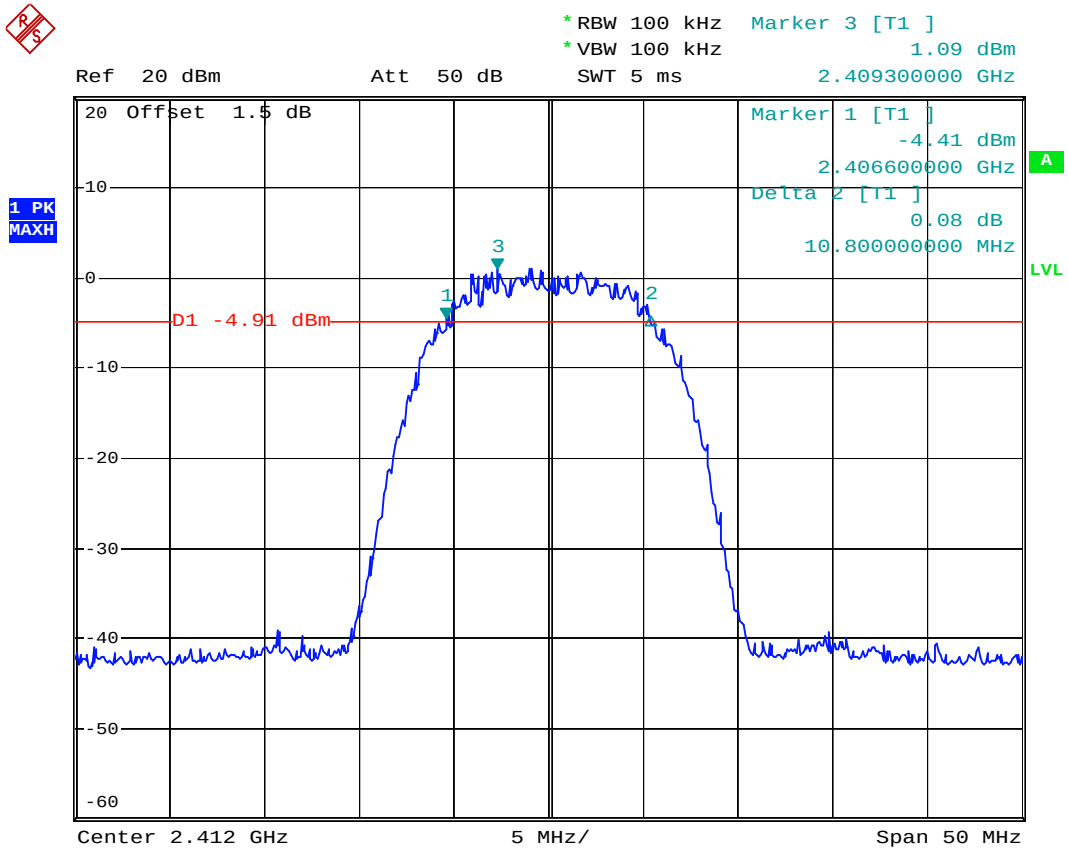
Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date
Spectrum Analyzer	R&S	FSP40	100324	2010.08.14
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2010.08.17

5.5. Test Result and Data

Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11b
Test Date	2011-03-14

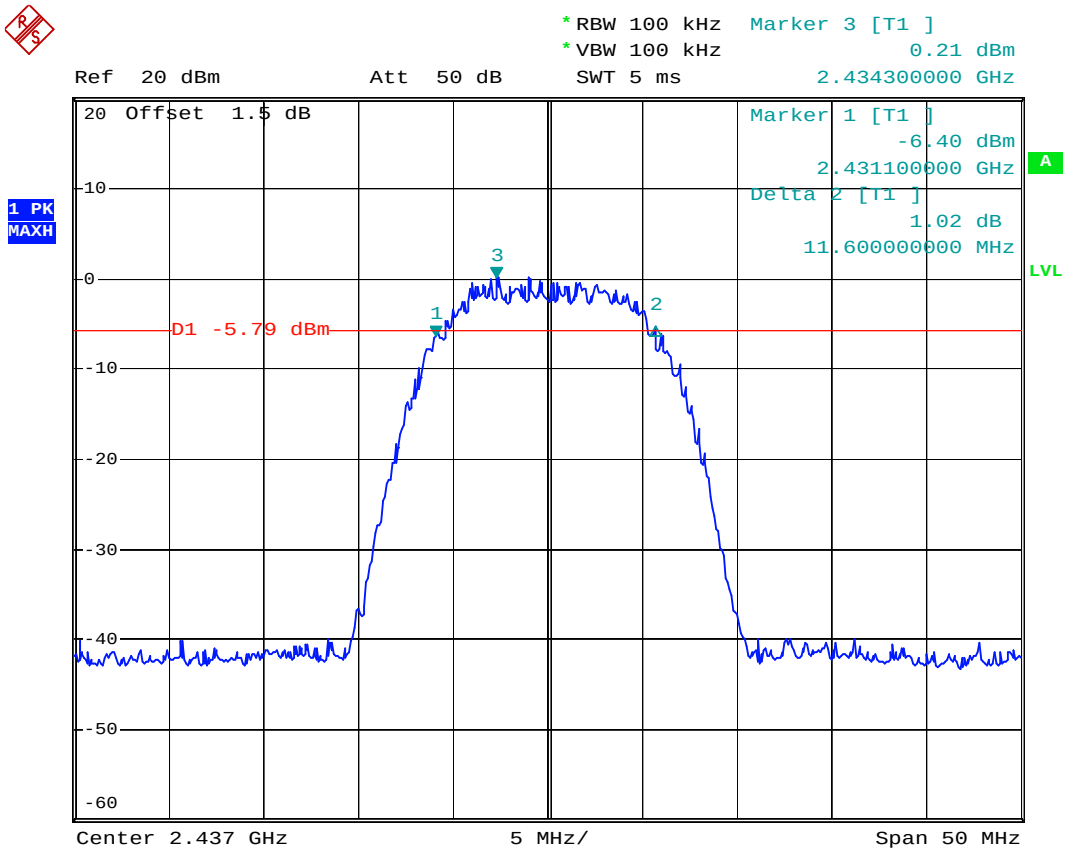
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	10800	500	Pass
06	2437	11600	500	Pass
11	2462	11600	500	Pass

Channel 01 (2412MHz)



Date: 14.MAR.2011 15:11:27

Channel 06 (2437MHz)



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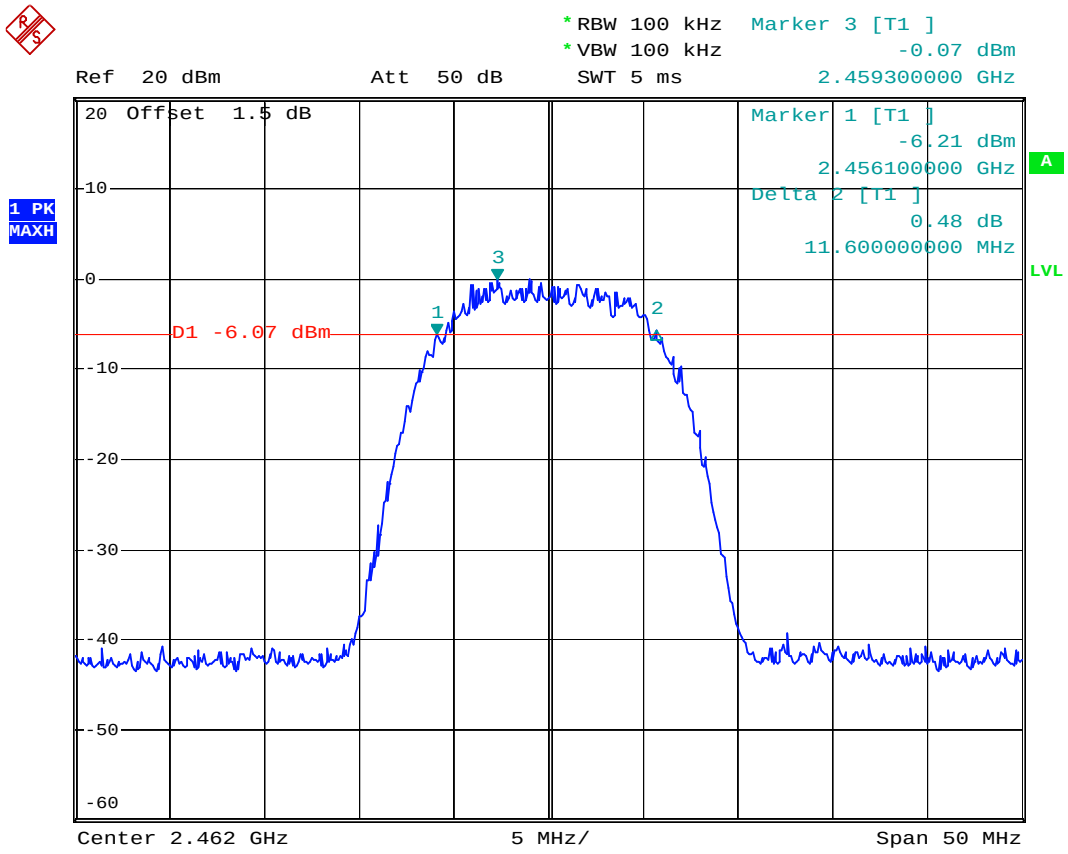
Channel11(2462MHz)



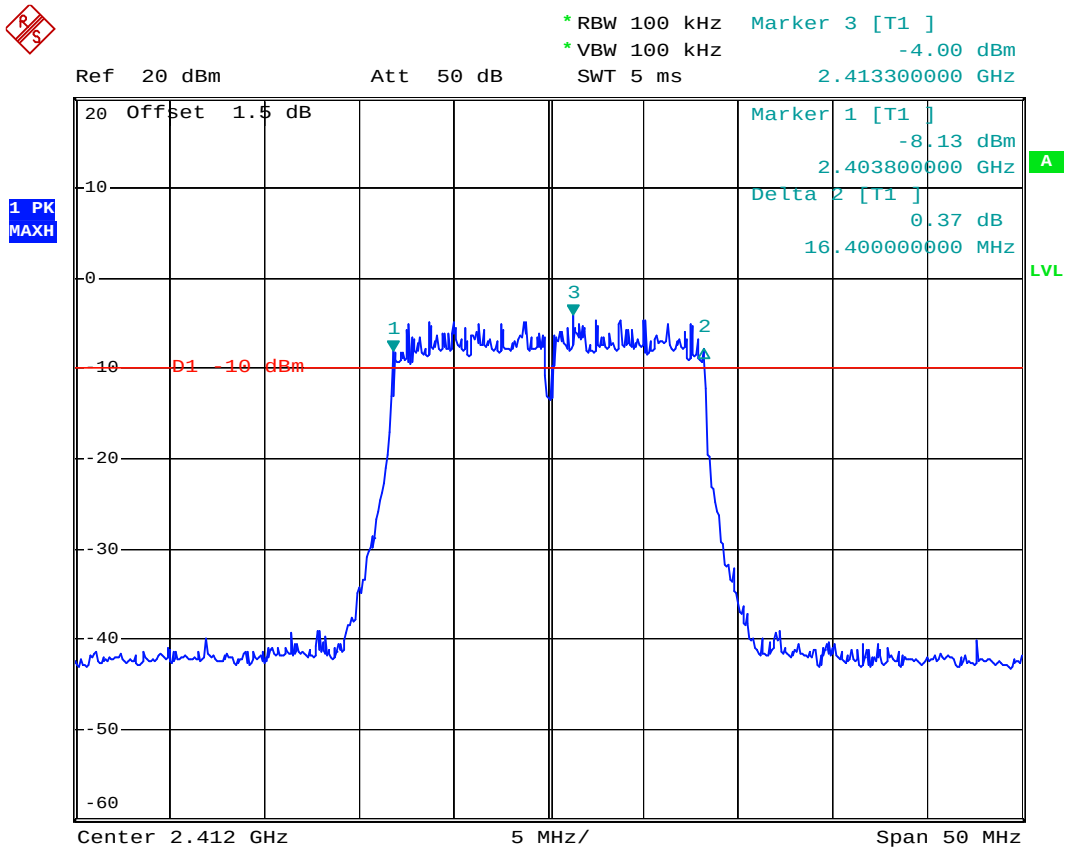
Date: 14.MAR.2011 15:14:27

Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11g
Test Date	2011-03-14

Chain 0

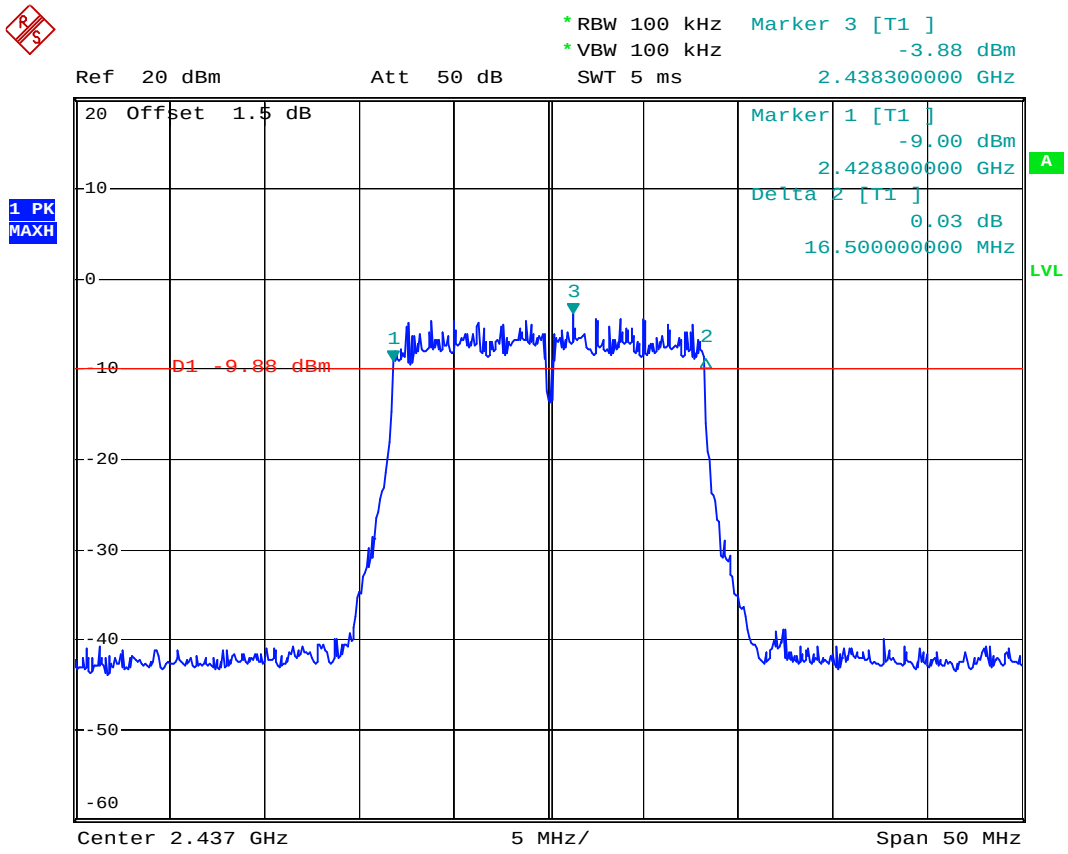
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	16400	500	Pass
06	2437	16500	500	Pass
11	2462	16500	500	Pass

Channel 01 (2412MHz)

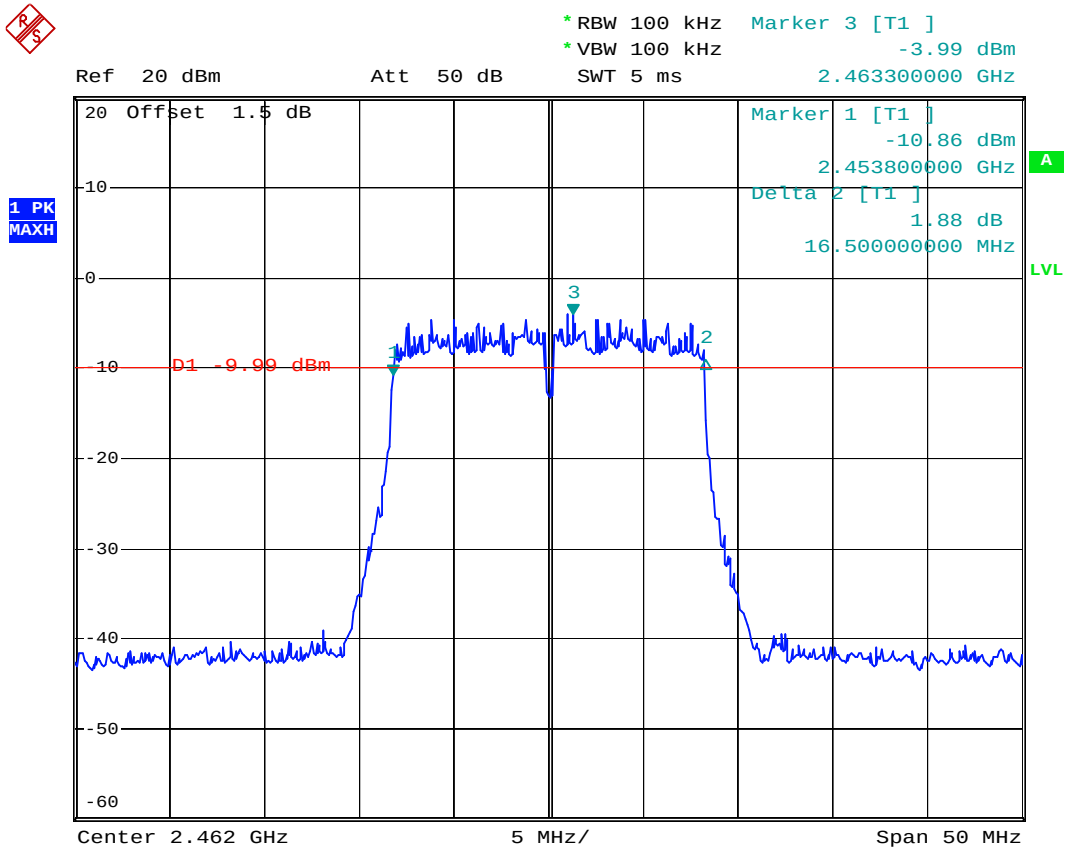


Date: 14.MAR.2011 15:16:13

Channel 06 (2437MHz)



Channel 11 (2462MHz)

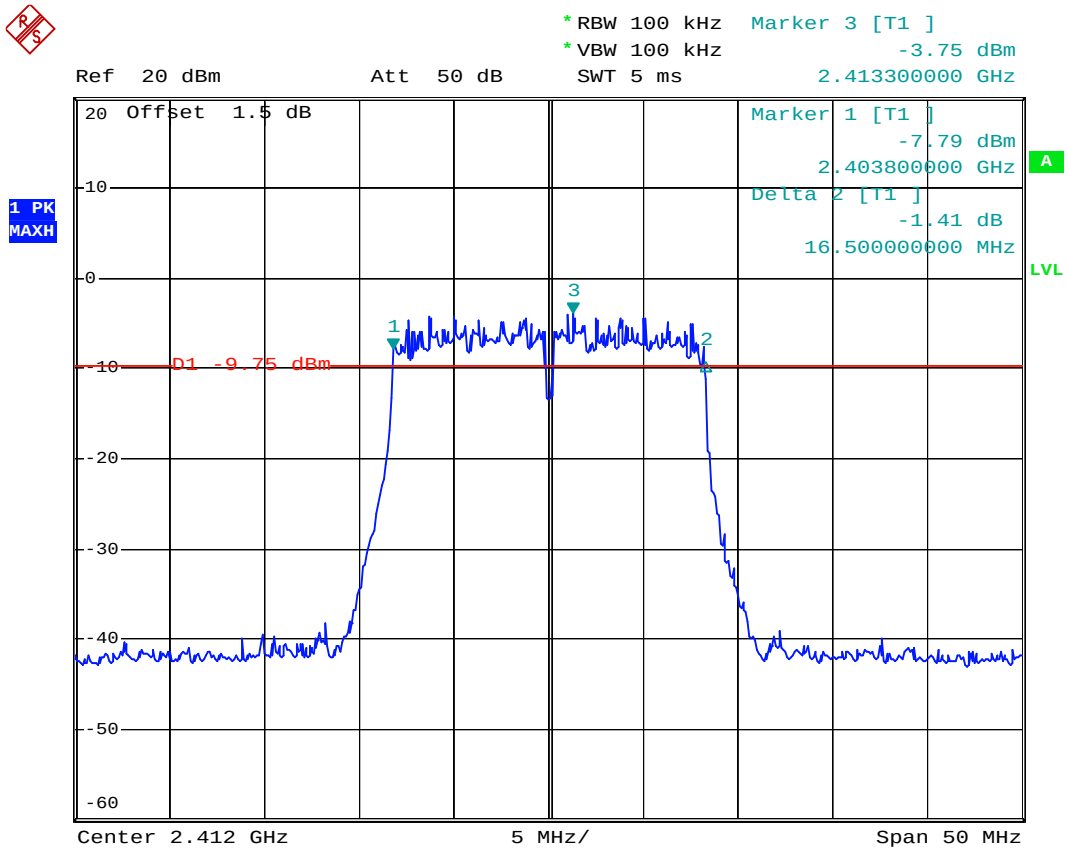


Date: 14.MAR.2011 15:19:11

Chain 1

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	16500	500	Pass
06	2437	16500	500	Pass
11	2462	16500	500	Pass

Channel 01 (2412MHz)



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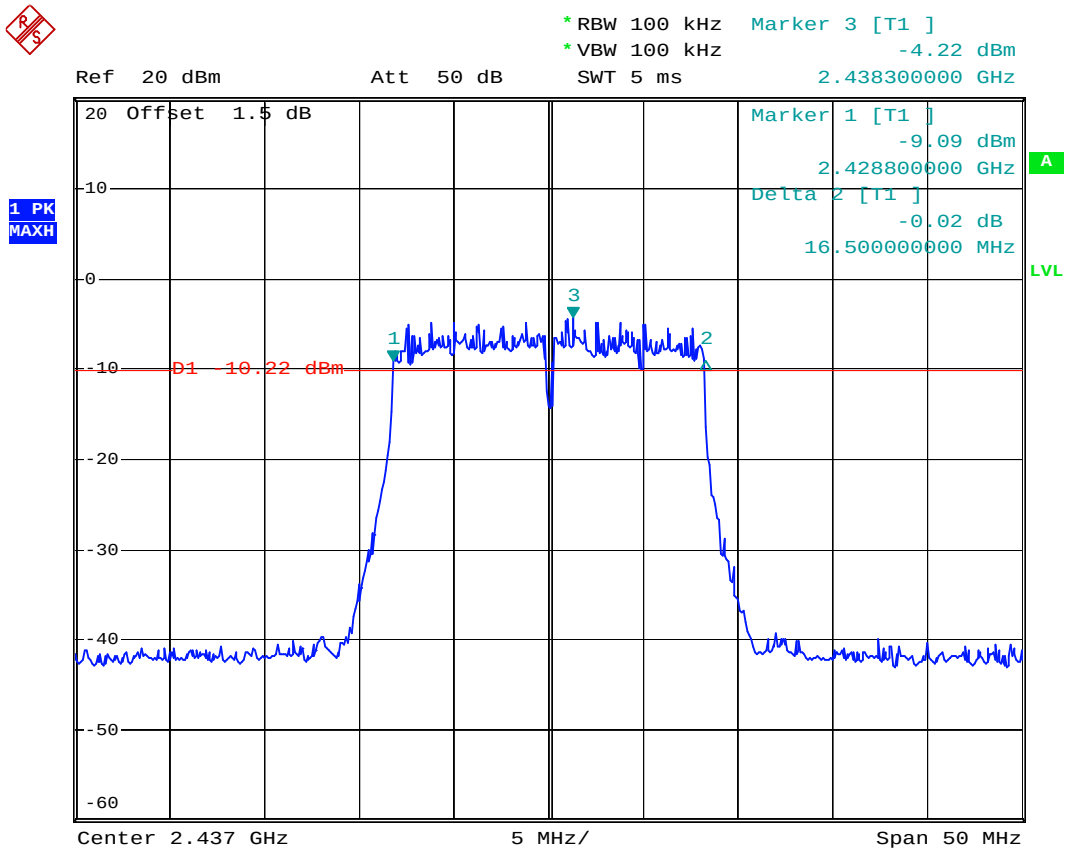
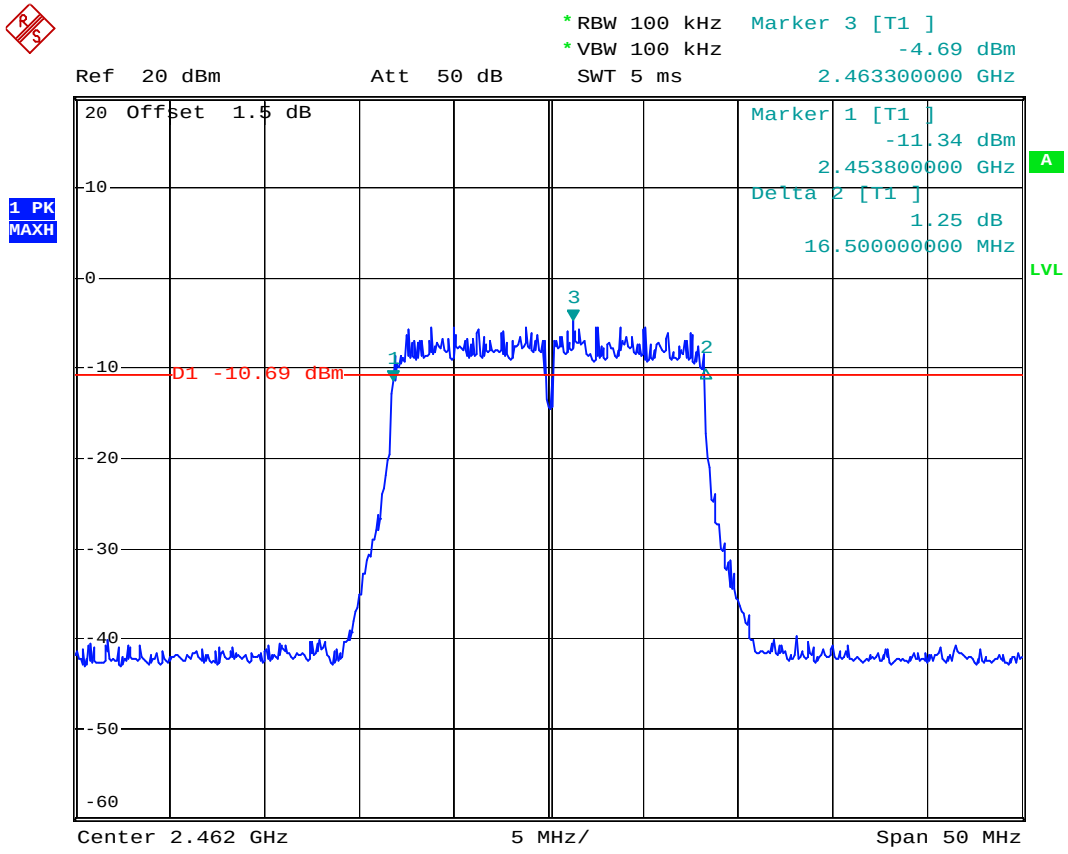
Channel 06 (2437MHz)



Date: 14.MAR.2011 14:47:08

Channel 11 (2462MHz)



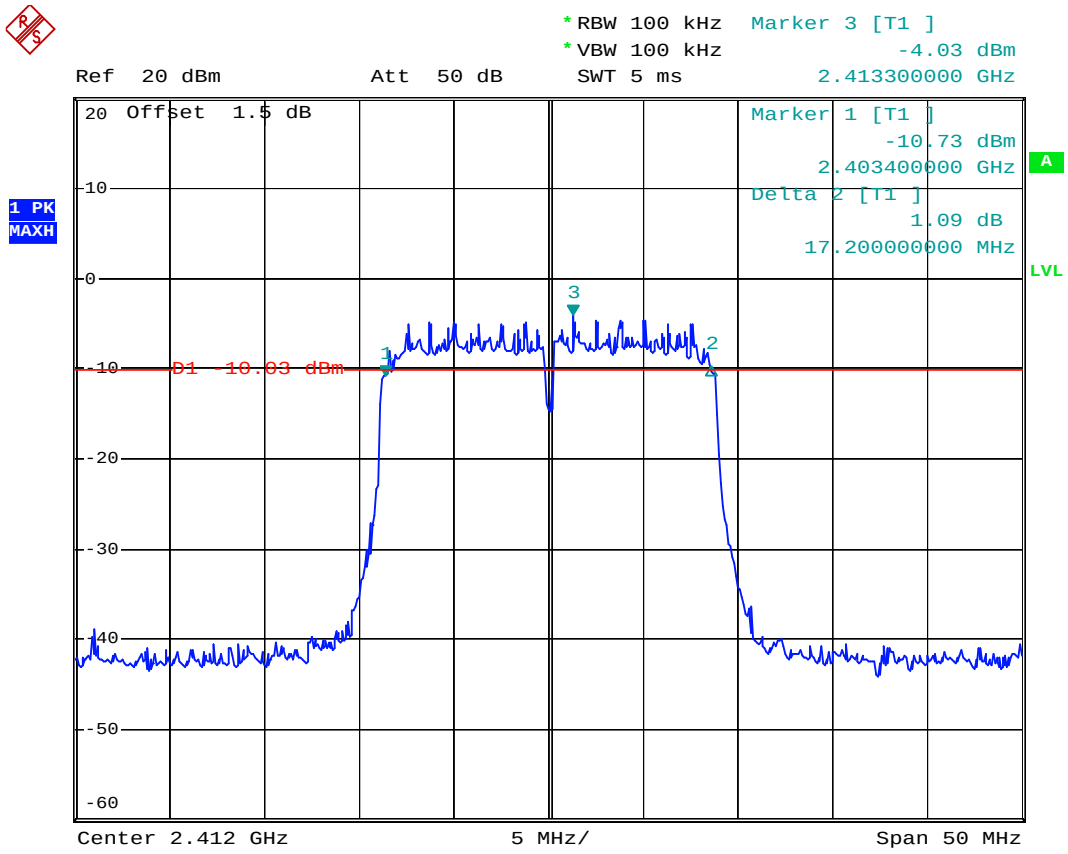
Date: 14.MAR.2011 14:49:02

Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11n (20MHz)
Test Date	2011-03-14

Chain 0

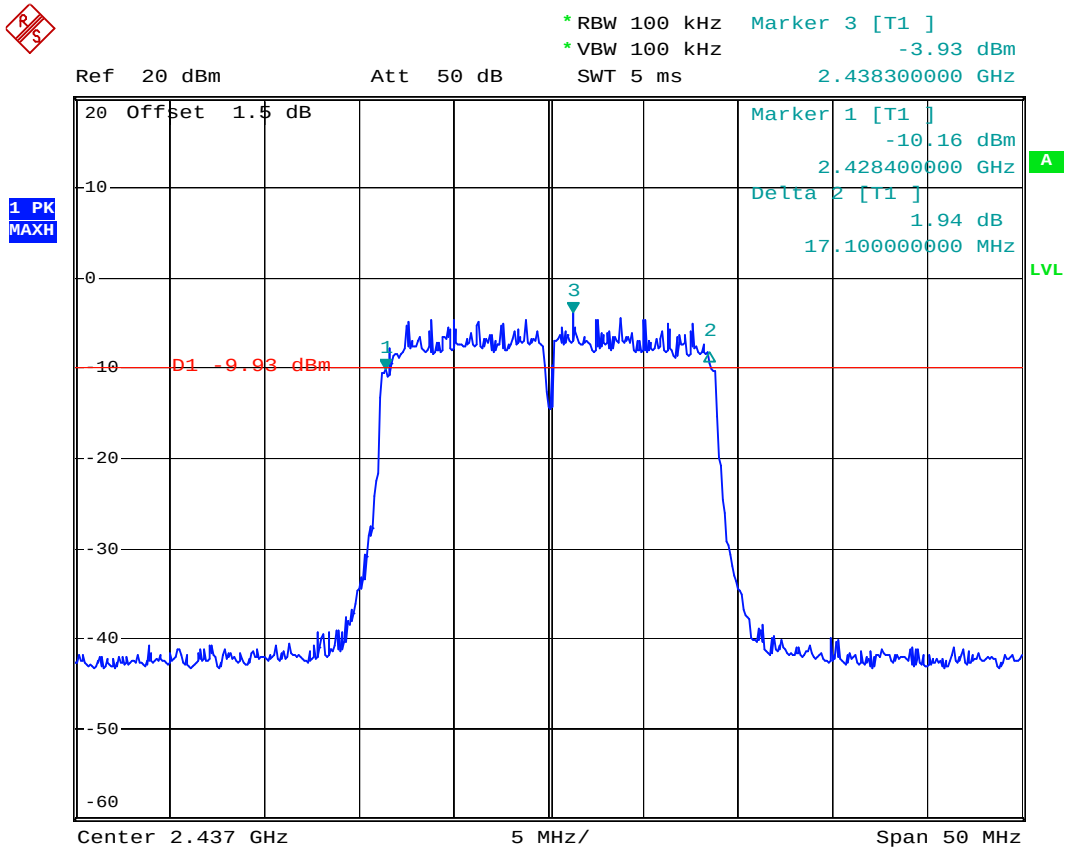
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	17200	500	Pass
06	2437	17100	500	Pass
11	2462	17100	500	Pass

Channel 01 (2412MHz)



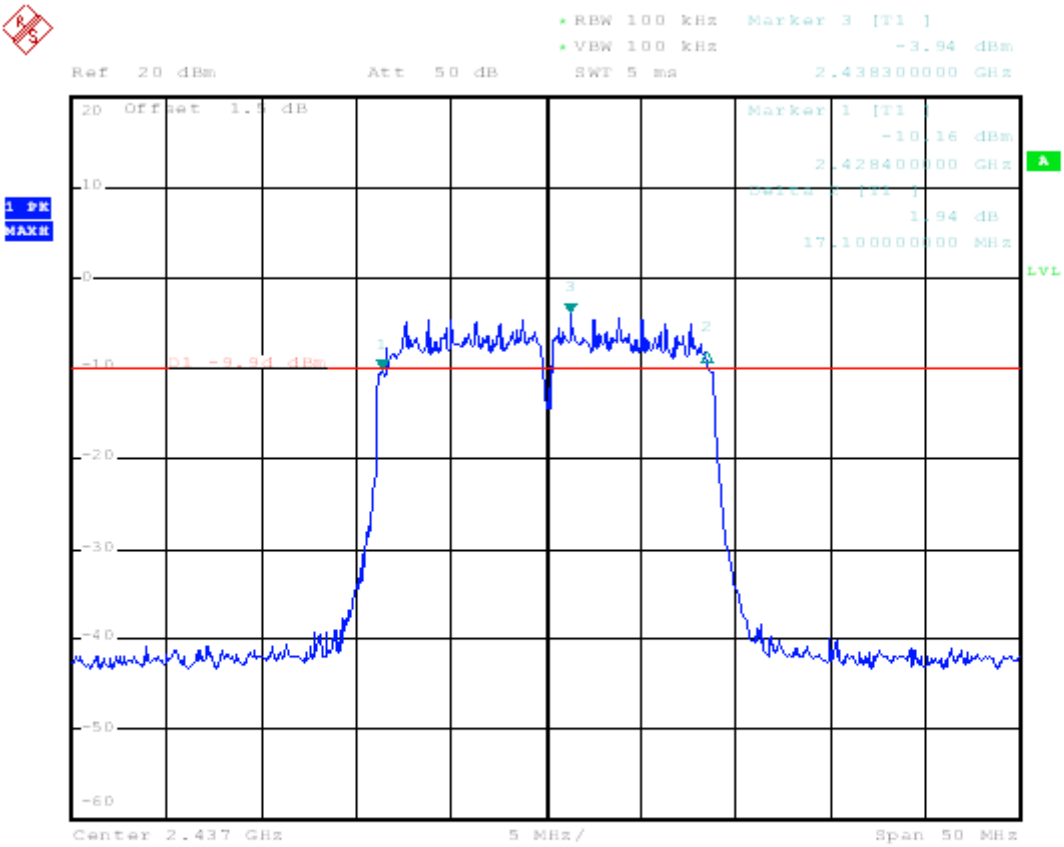
Date: 14.MAR.2011 15:21:12

Channel 06 (2437MHz)



Date: 14.MAR.2011 15:22:48

Channel 11 (2462MHz)

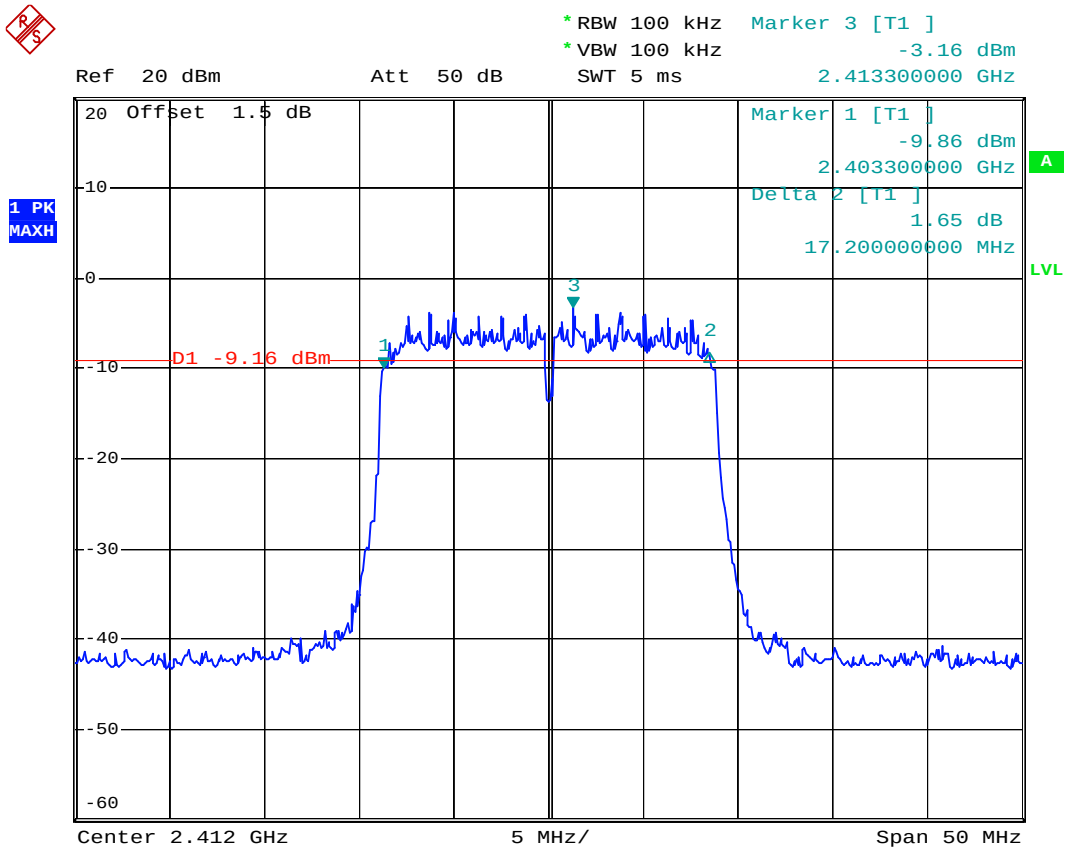


Date: 14.MAR.2011 15:24:18

Chain 1

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	17200	500	Pass
06	2437	17300	500	Pass
11	2462	17200	500	Pass

Channel 01 (2412MHz)



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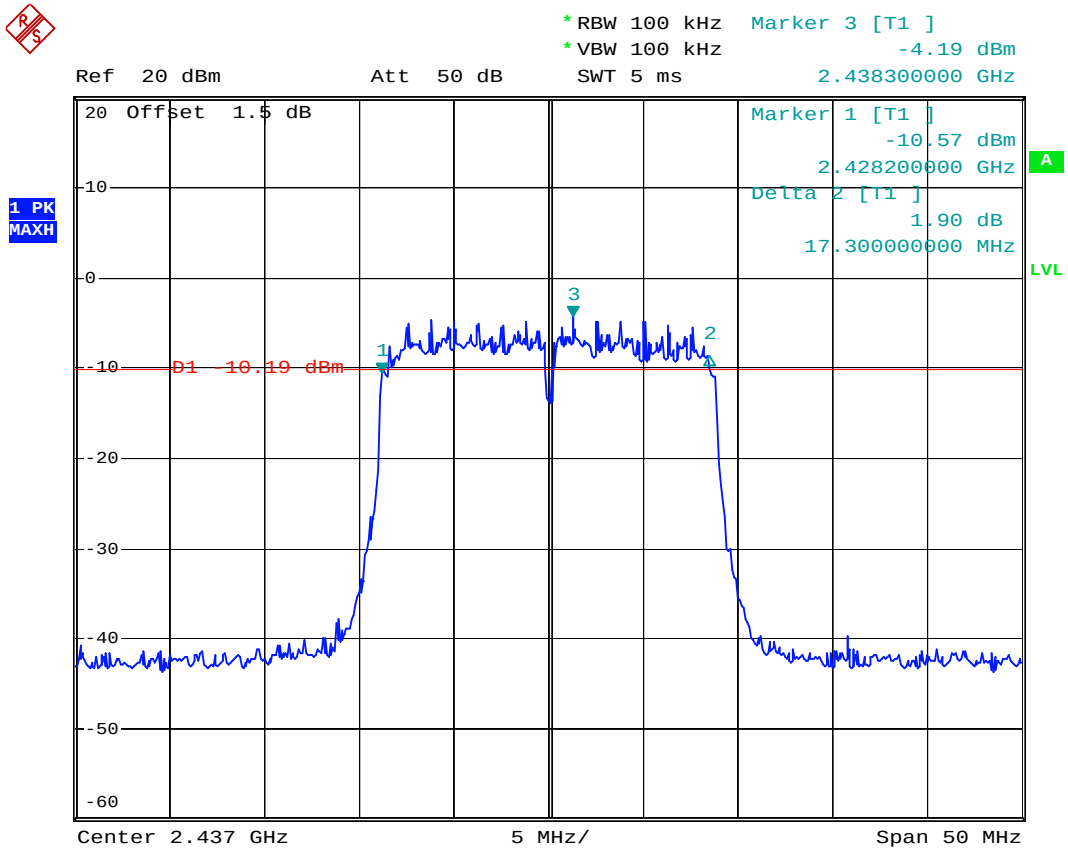
Channel 06 (2437MHz)



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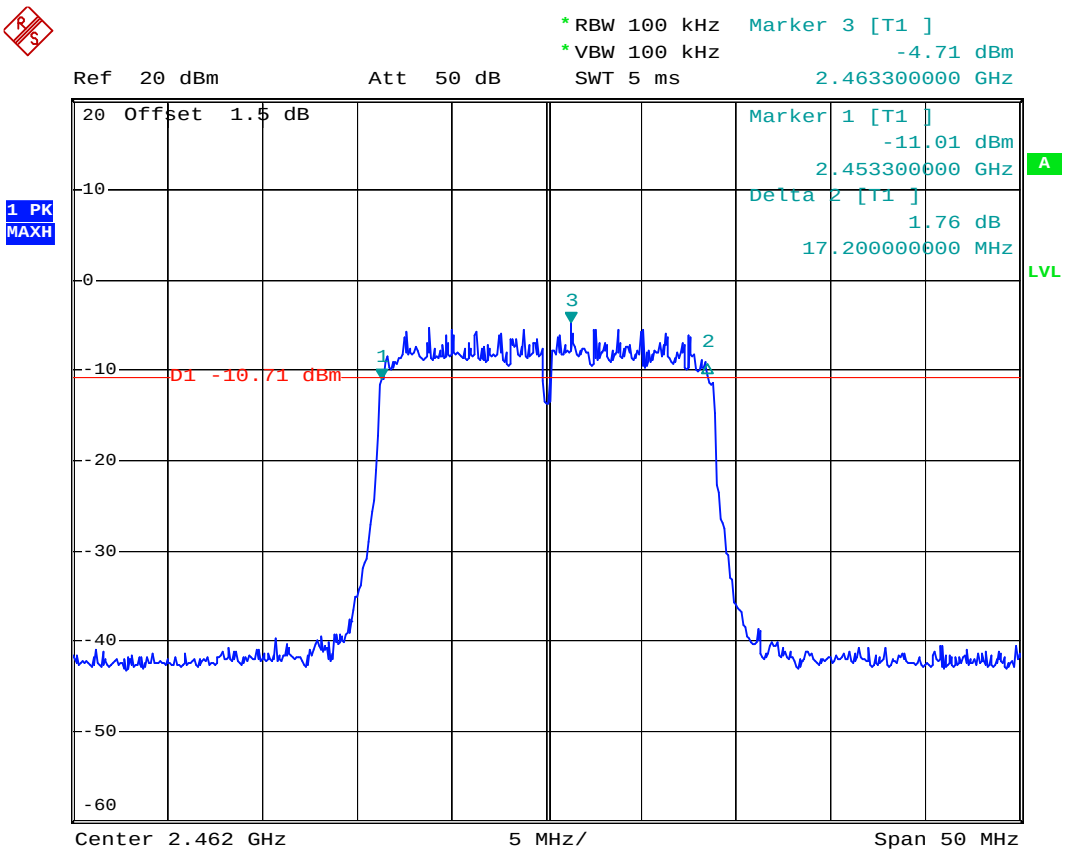
Channel 11 (2462MHz)



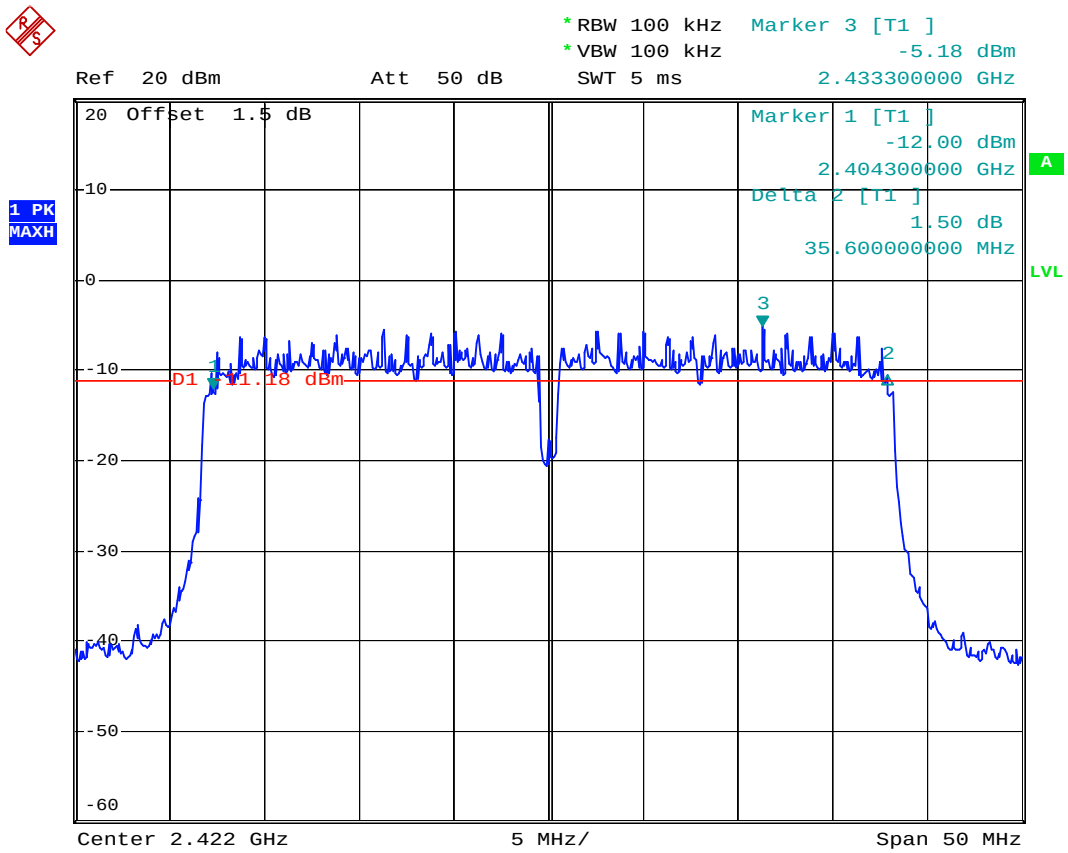
Date: 14.MAR.2011 14:54:54

Test Item	Occupied Bandwidth
Test Mode	Transmit by 802.11n (40MHz)
Test Date	2011-03-14

Chain 0

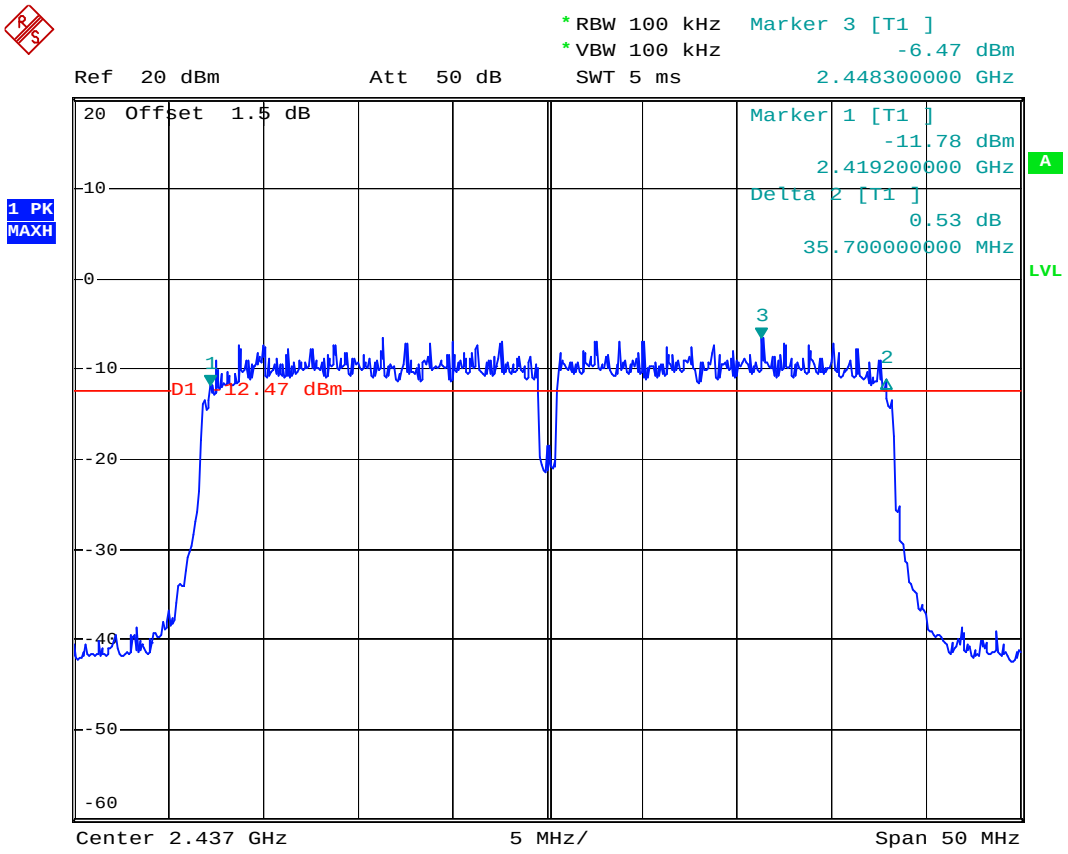
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	2422	35600	500	Pass
06	2437	35700	500	Pass
09	2452	35800	500	Pass

Channel 03 (2422MHz)



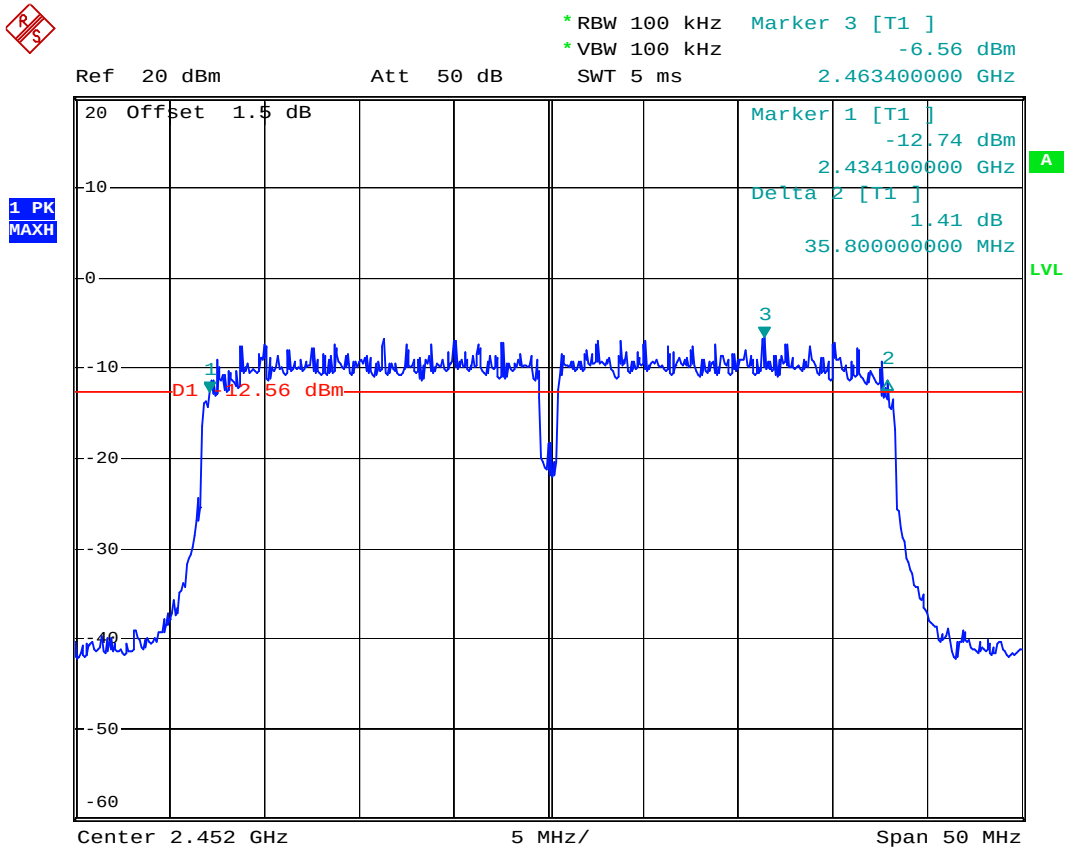
Date: 14.MAR.2011 15:05:21

Channel 06 (2437MHz)



Date: 14.MAR.2011 15:07:24

Channel 9 (2452MHz)

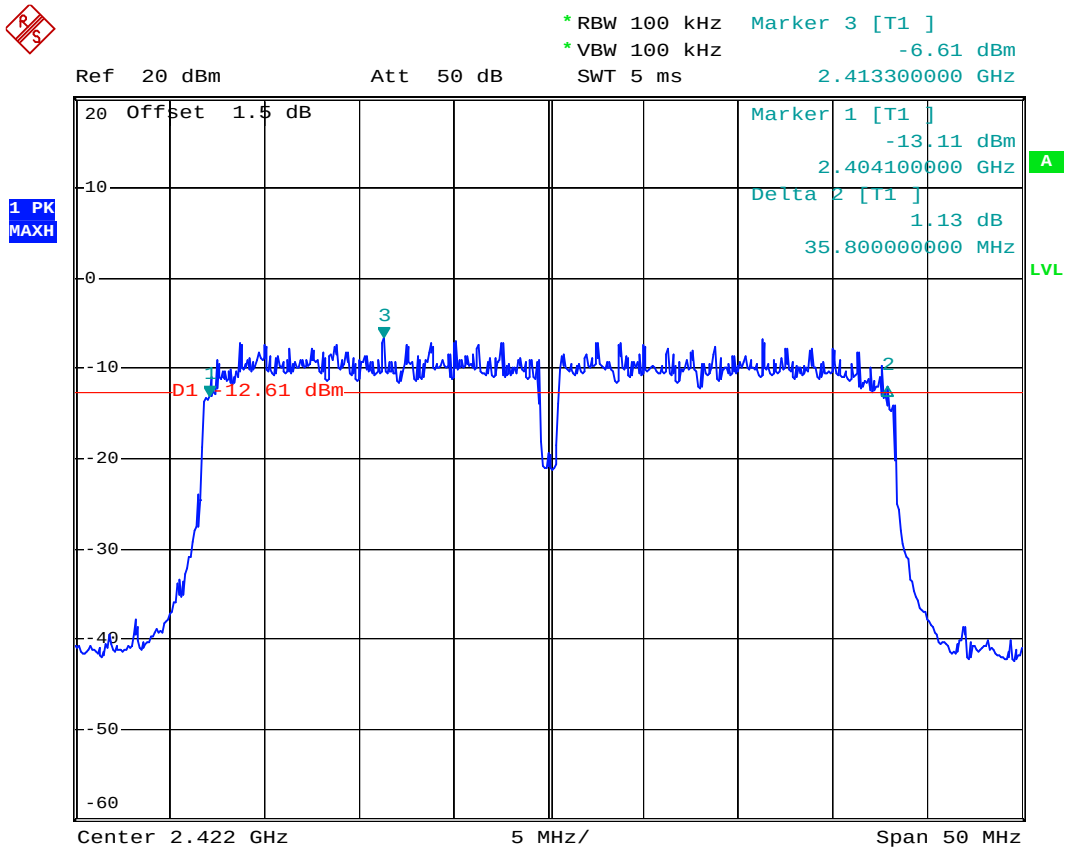


Date: 14.MAR.2011 15:09:27

Chain 1

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	2422	35800	500	Pass
06	2437	35600	500	Pass
09	2452	35800	500	Pass

Channel 03 (2422MHz)



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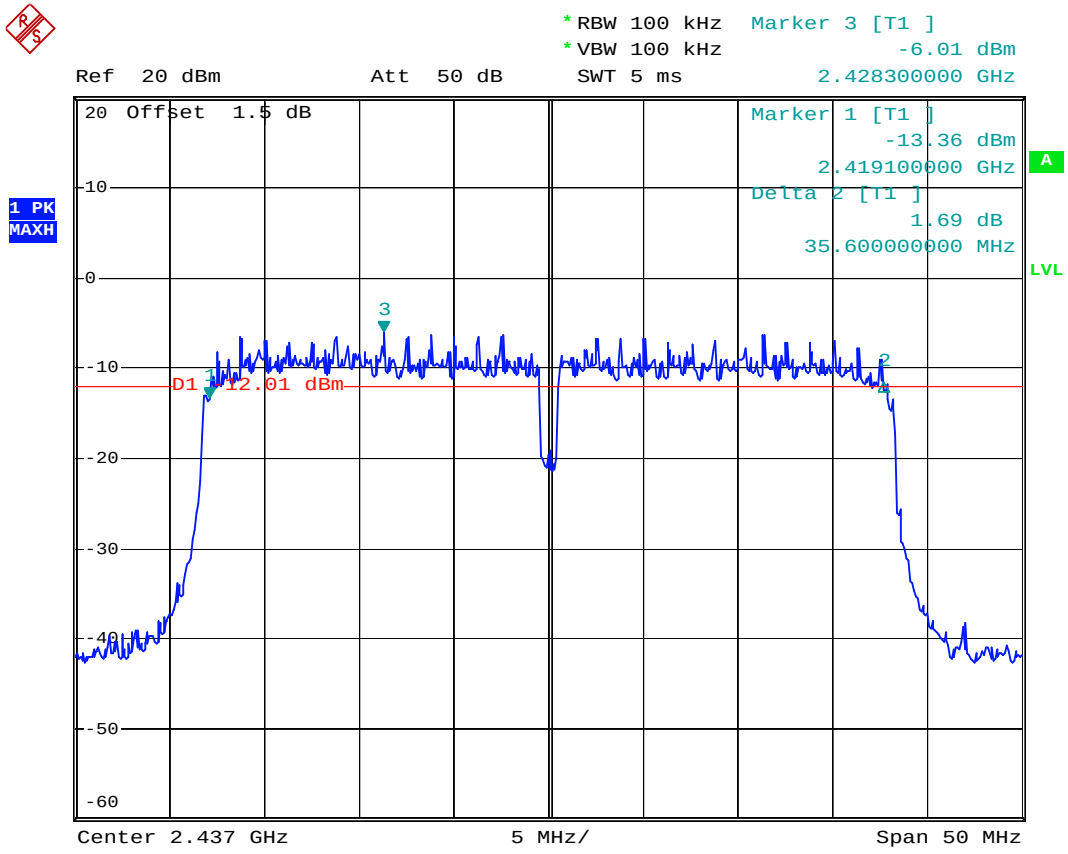
Channel 06 (2437MHz)



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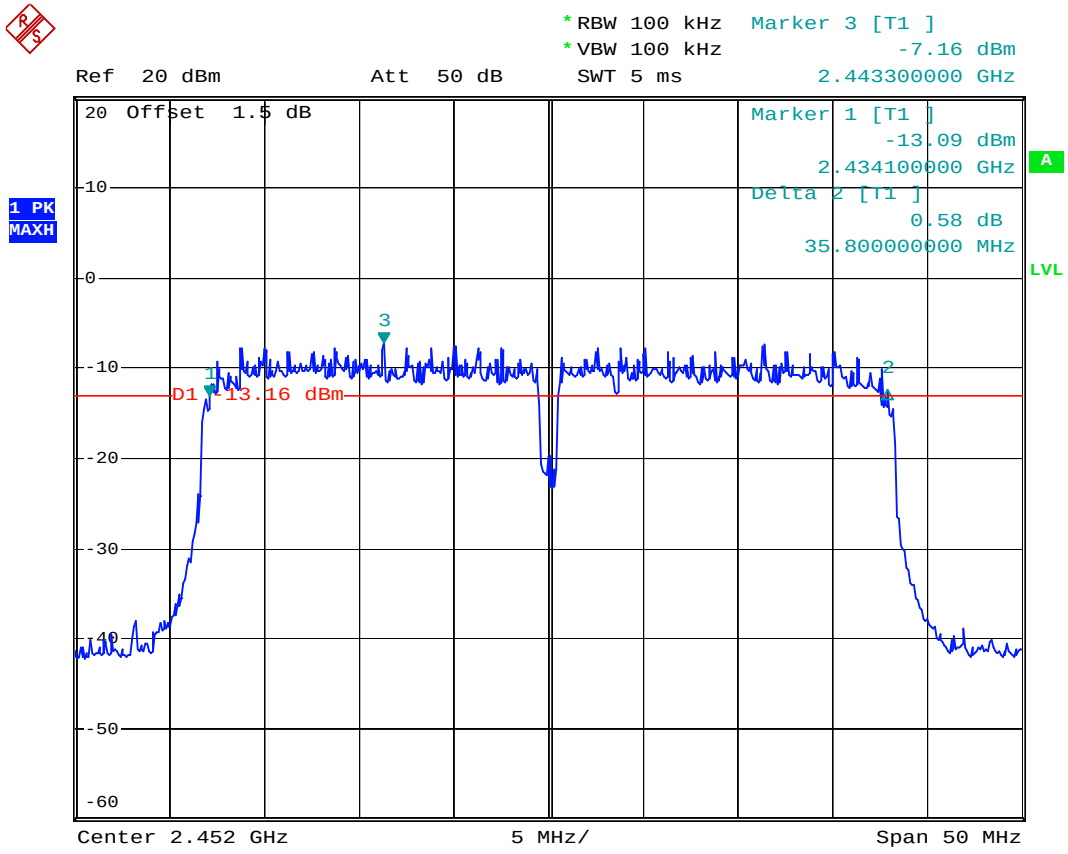
Channel 9 (2452MHz)



Date: 14.MAR.2011 15:02:12

6. Maximum Peak Output Power

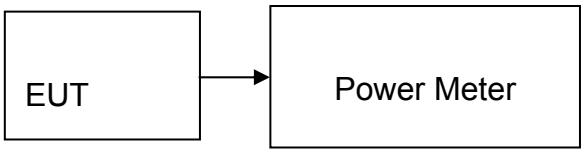
6.1. Test Limit

The maximum peak power shall be less 1Watt (30dBm).
The conducted output power limit is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of standard FCC part 15.247, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power of the intentional radiator is reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6 dBi.

6.2. Test Procedure

The transmitter output is connected to the Power Meter.

6.3. Test Setup Layout



6.4. Measurement Equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date
Power Meter	NRP	R&S	CCE013	2011.01.15
Power Sensor	NRP-Z91	R&S	100385	2011.01.15
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2010.08.17

6.5. Test Result and Data

Test Item	Maximum Peak Output Power
Test Mode	Transmit by 802.11b
Test Date	2011-03-13

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit (dBm)	Result
01	2412	**16.46**	30	Pass
06	2437	16.35	30	Pass
11	2462	16.16	30	Pass

Test Item	Maximum Peak Output Power
Test Mode	Transmit by 802.11g
Test Date	2011-03-13

Chain 0

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit (dBm)	Result
01	2412	**13.65**	30	Pass
06	2437	13.41	30	Pass
11	2462	13.22	30	Pass

Chain 1

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit (dBm)	Result
01	2412	**14.42**	30	Pass
06	2437	14.28	30	Pass
11	2462	14.12	30	Pass

Chain 0+ Chain 1

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit(dBm)	Result
01	2412	**17.06**	30	Pass
06	2437	16.88	30	Pass
11	2462	16.70	30	Pass

Note: Measurement Level=10*LOG10(10^(Chain 0/10)+10^(Chain 1/10))

Test Item	Maximum Peak Output Power
Test Mode	Transmit by 802.11n (20MHz)
Test Date	2011-03-13

Chain 0

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit(dBm)	Result
01	2412	**13.82**	30	Pass
06	2437	13.61	30	Pass
11	2462	13.43	30	Pass

Chain 1

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit(dBm)	Result
01	2412	**14.77**	30	Pass
06	2437	14.58	30	Pass
11	2462	14.25	30	Pass

Chain 0+ Chain 1

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit(dBm)	Result
01	2412	**17.33**	30	Pass
06	2437	17.13	30	Pass
11	2462	16.87	30	Pass

Note: Measurement Level=10*LOG10(10^(Chain 0/10)+10^(Chain 1/10))

Test Item	Maximum Peak Output Power
Test Mode	Transmit by 802.11n (40MHz)
Test Date	2011-03-13

Chain 0

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit(dBm)	Result
03	2422	**13.89**	30	Pass
06	2437	13.65	30	Pass
09	2452	13.38	30	Pass

Chain 1

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit(dBm)	Result
03	2422	**14.48**	30	Pass
06	2437	14.29	30	Pass
09	2452	14.07	30	Pass

Chain 0+ Chain 1

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit(dBm)	Result
03	2422	**17.21**	30	Pass
06	2437	16.99	30	Pass
09	2452	16.75	30	Pass

Note: Measurement Level=10*LOG10(10^(Chain 0/10)+10^(Chain 1/10))

7. Band Edges

7.1. Test Limit

For RF Conducted requirement:

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

For RF Radiated requirement:

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)).

7.2. Test Procedure

For RF Conducted Measurement:

The EUT was tested according to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW = 100 kHz, Span greater than RBW.

For RF Radiated Measurement:

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

The EUT is placed on a turn table which is 0.8 meter above ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

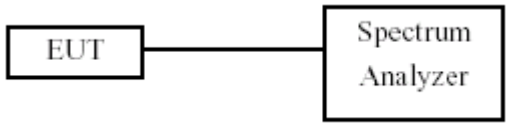
For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements or 120kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

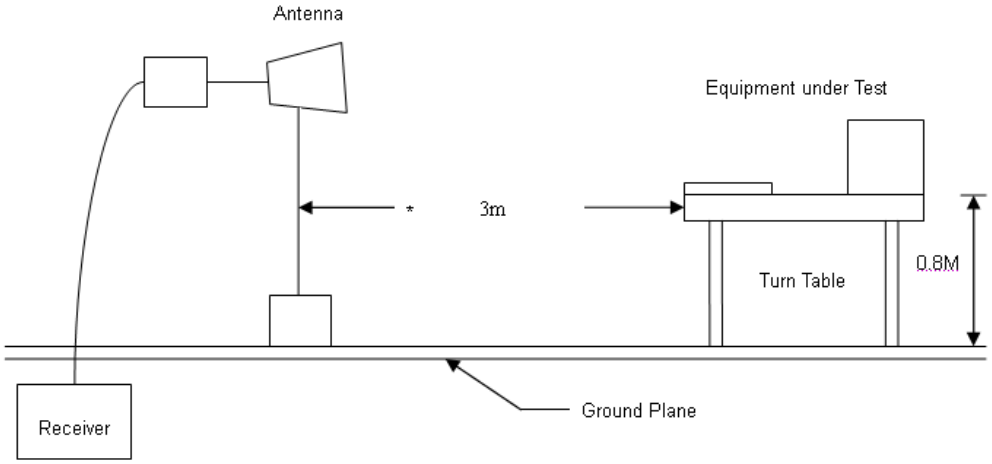
For measurements above 1GHz the resolution bandwidth is set to 1MHz, then the video bandwidth is set to 1MHz for peak measurements and 10Hz for average measurements.

The spectrum from 30MHz to 26GHz is investigated with the transmitter set to the lowest, middle and highest channels in the 2.4GHz band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are Made with the antenna polarized in both the vertical and the horizontal positions.

7.3. Test Setup Layout



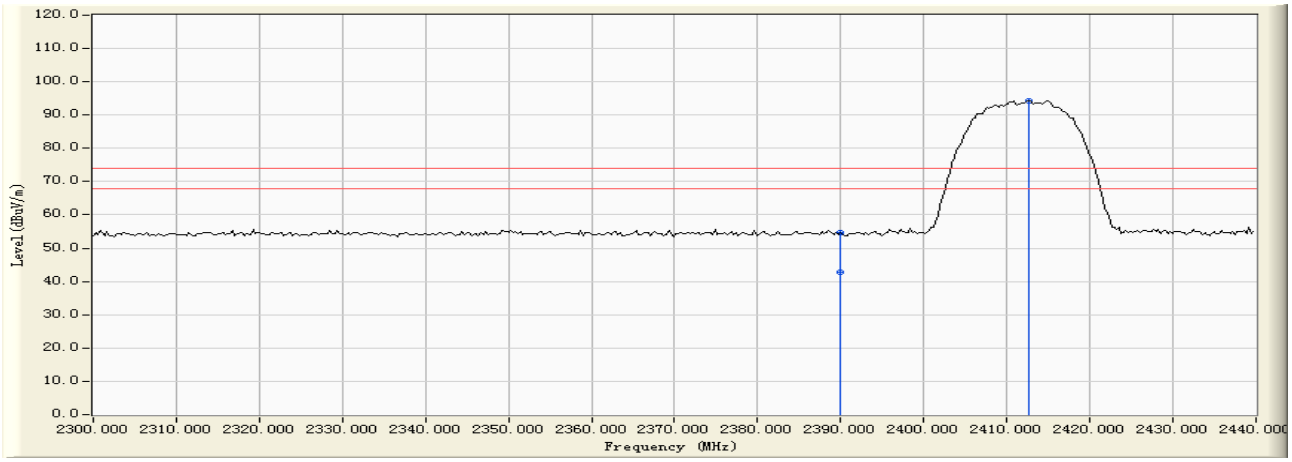


7.4. Measurement Equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date
Spectrum Analyzer	R&S	FSP40	100324	2010.08.14
H64 Amplifier	HP	8447F	3113A05582	2010.08.14
Preamplifier	Agilent	8449B	ED-HE-EMI-077	2011.02.10
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2010.11.10
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2010.08.17

7.5. Test Result and Data

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11b (2412MHz)**

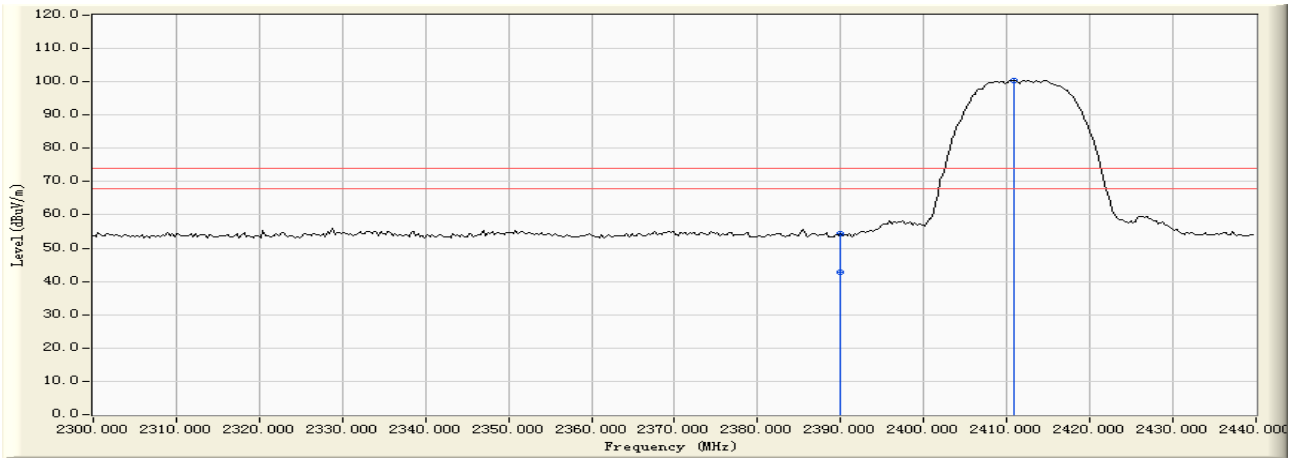


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	0.112	54.421	54.533	-19.467	74.000	PEAK
2		2390.000	0.112	42.600	42.712	-11.288	54.000	AVERAGE
3	*	2412.615	0.135	94.203	94.338	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11b (2412MHz)**

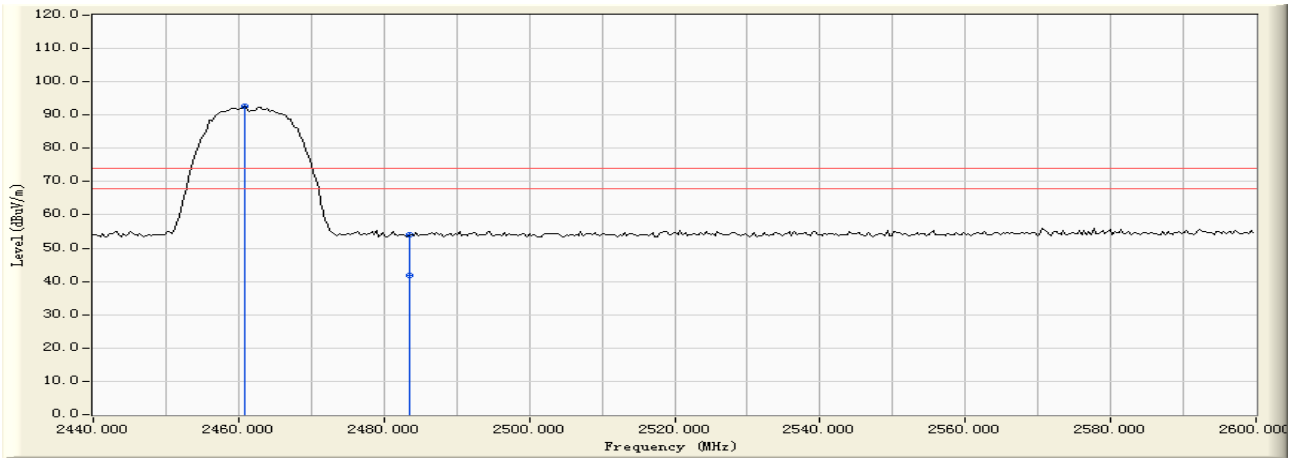


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	0.112	54.361	54.473	-19.527	74.000	PEAK
2		2390.000	0.112	42.600	42.712	-11.288	54.000	AVERAGE
3	*	2410.938	0.133	100.231	100.364	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11b (2462MHz)**

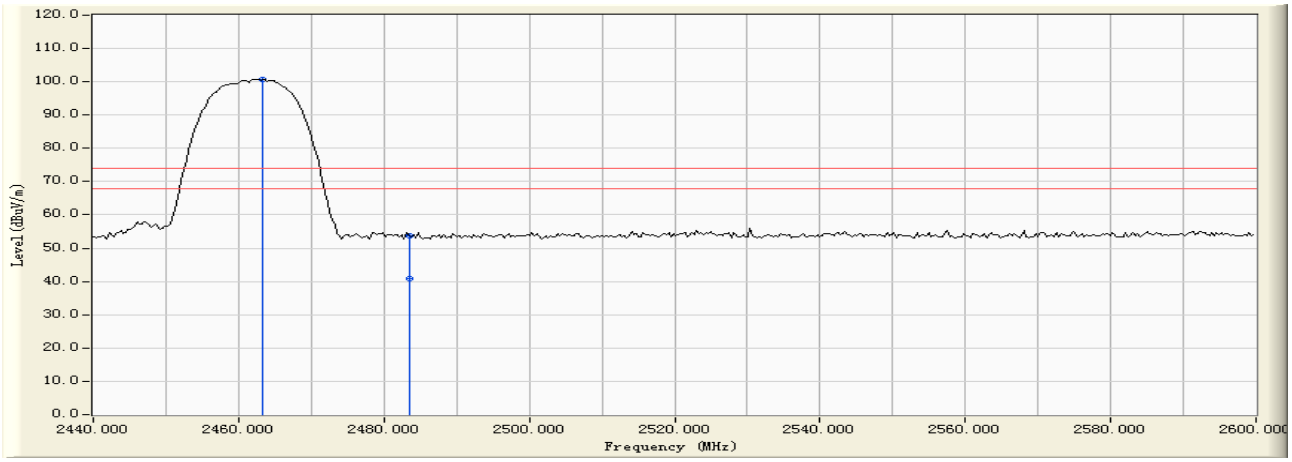


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2460.758	0.251	92.258	92.510	N/A	N/A	PEAK
2		2483.500	0.306	53.594	53.900	-20.100	74.000	PEAK
3		2483.500	0.306	41.600	41.906	-12.094	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11b (2462MHz)**

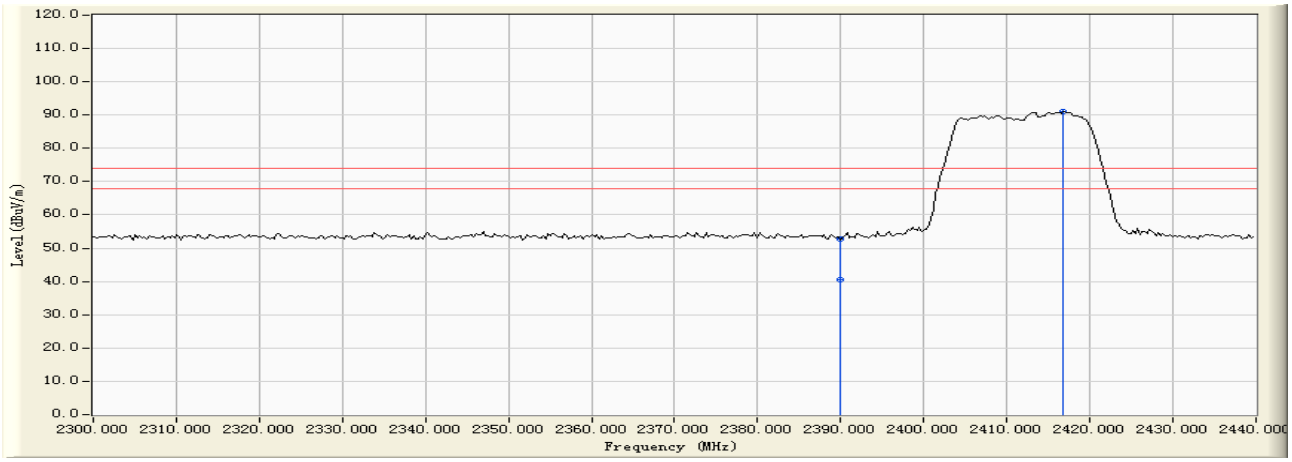


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2463.313	0.258	100.397	100.655	N/A	N/A	PEAK
2		2483.500	0.306	53.322	53.628	-20.372	74.000	PEAK
3		2483.500	0.306	40.500	40.806	-13.194	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11g (2412MHz)**

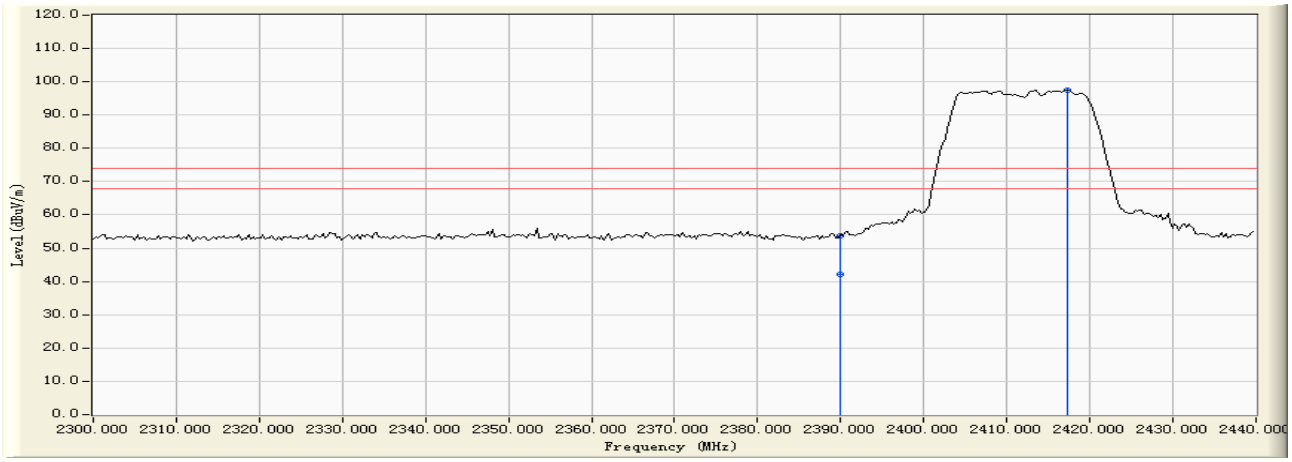


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	0.112	52.534	52.646	-21.354	74.000	PEAK
2		2390.000	0.112	40.540	40.652	-13.348	54.000	AVERAGE
3	*	2416.806	0.141	91.000	91.141	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11g (2412MHz)**

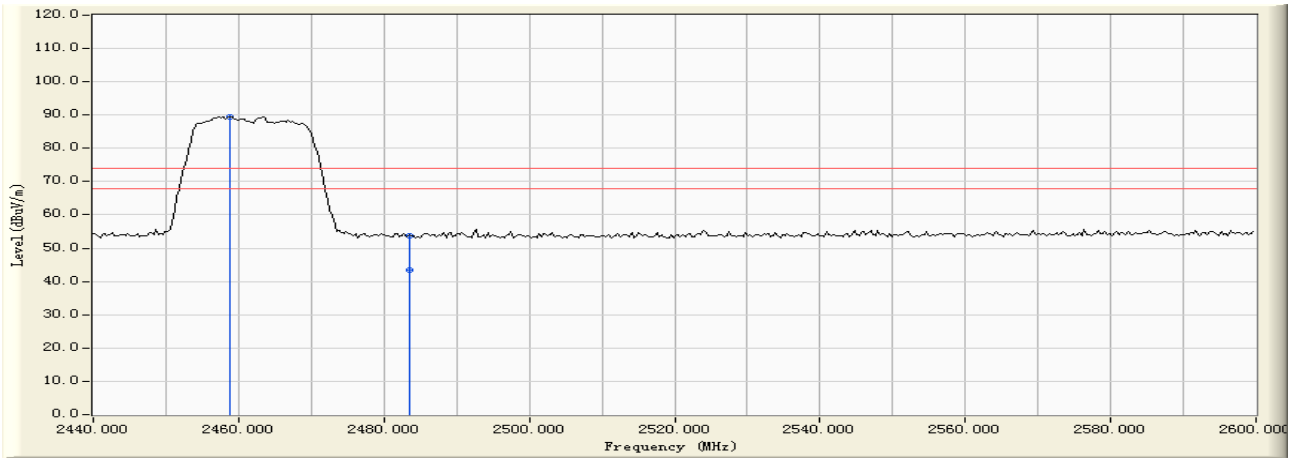


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	0.112	53.775	53.887	-20.113	74.000	PEAK
2		2390.000	0.112	41.900	42.012	-11.988	54.000	AVERAGE
3	*	2417.365	0.142	97.363	97.505	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11g (2462MHz)**

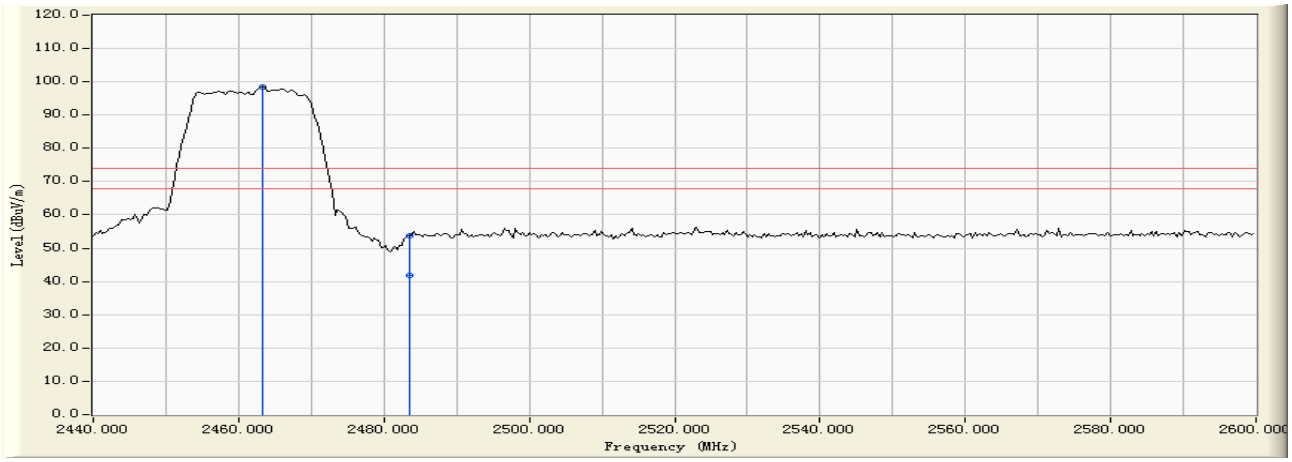


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.842	0.246	89.192	89.438	N/A	N/A	PEAK
2		2483.500	0.306	53.575	53.881	-20.119	74.000	PEAK
3		2483.500	0.306	43.210	43.516	-10.484	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11g (2462MHz)**

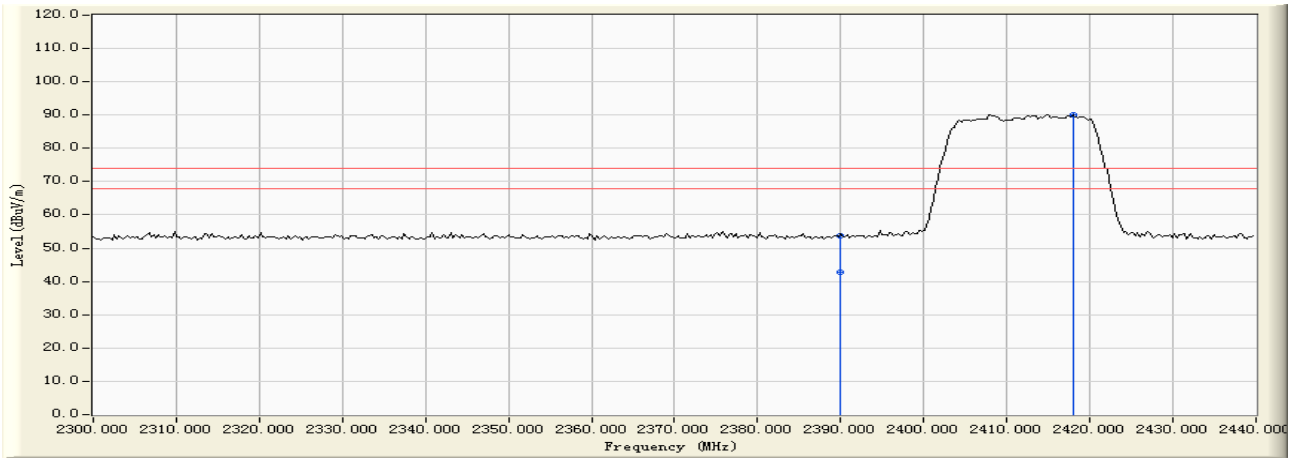


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2463.313	0.258	98.145	98.403	N/A	N/A	PEAK
2		2483.500	0.306	53.434	53.740	-20.260	74.000	PEAK
3		2483.500	0.306	41.540	41.846	-12.154	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (20MHz) (2412MHz) (Chain 0+Chain 1)**

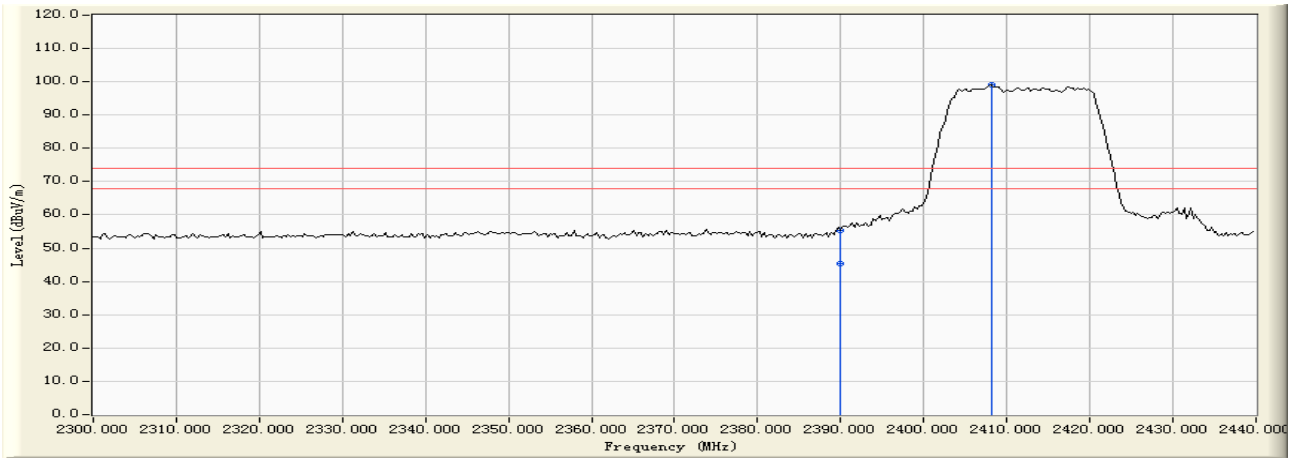


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	35.067	53.650	53.762	-20.238	74.000	PEAK
2		2390.000	35.067	42.650	42.762	-11.238	54.000	AVERAGE
3	*	2417.924	35.109	89.870	90.013	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (20MHz) (2412MHz) (Chain 0+Chain 1)**

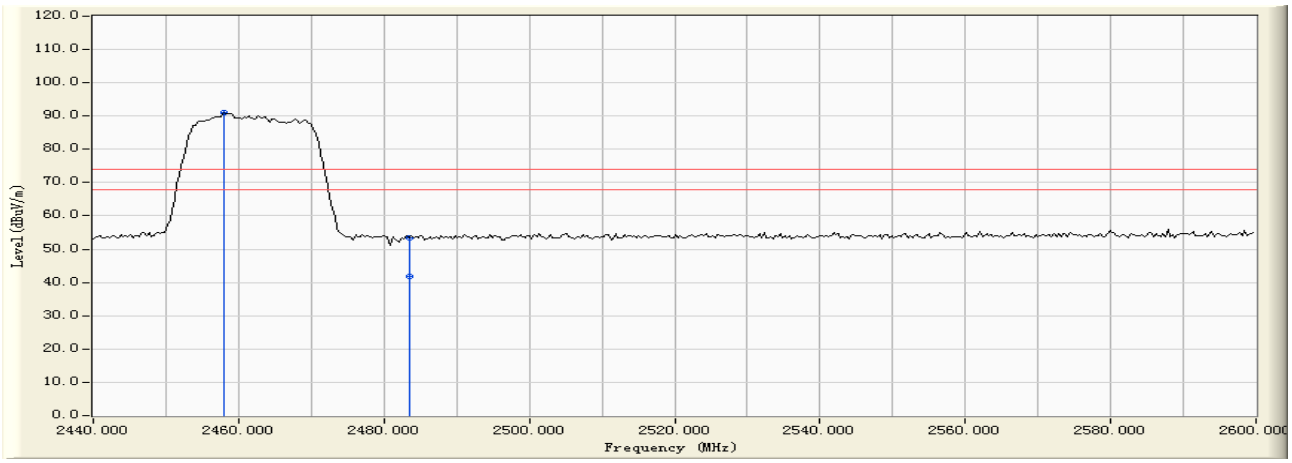


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	0.112	55.315	55.427	-18.573	74.000	PEAK
2		2390.000	0.112	45.210	45.322	-08.678	54.000	AVERAGE
3	*	2408.144	0.130	98.948	99.077	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (20MHz) (2462MHz) (Chain 0+Chain 1)**

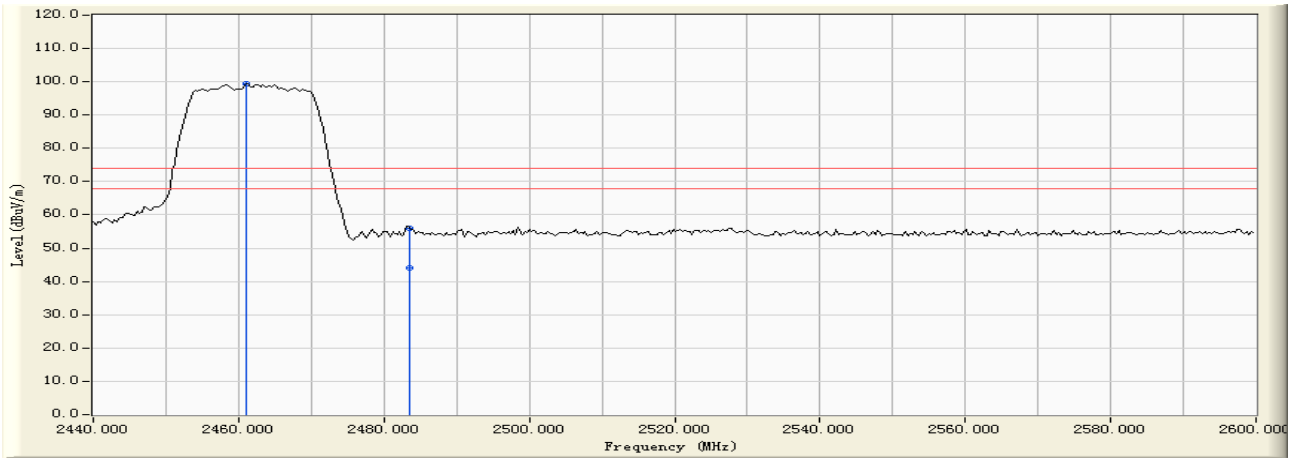


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2457.884	0.243	90.834	91.078	N/A	N/A	PEAK
2		2483.500	0.306	53.104	53.410	-20.590	74.000	PEAK
3		2483.500	0.306	41.580	41.886	-12.114	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (20MHz) (2462MHz) (Chain 0+Chain 1)**

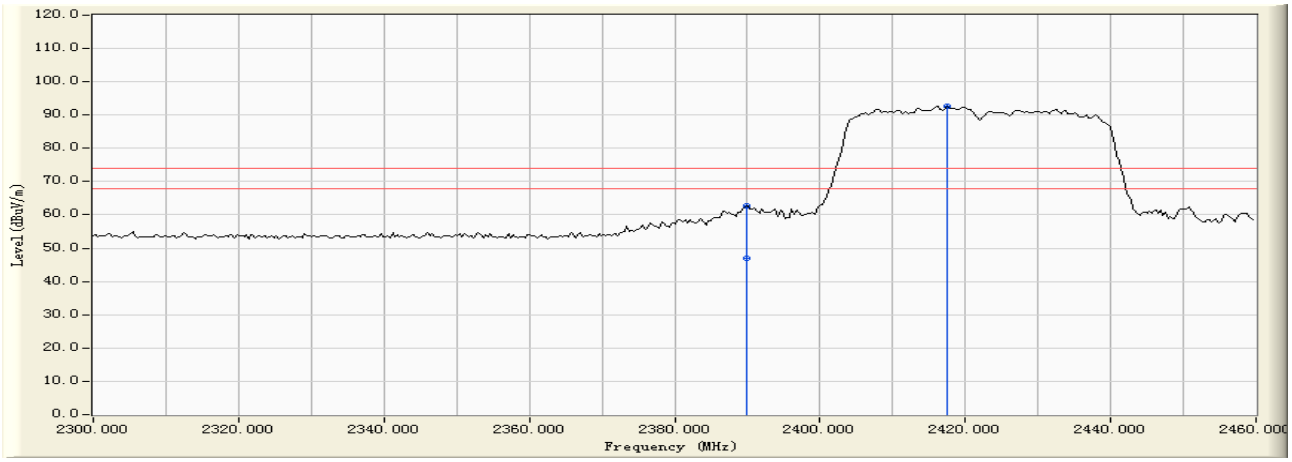


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2461.078	0.252	99.190	99.442	N/A	N/A	PEAK
2		2483.500	0.306	55.721	56.027	-17.973	74.000	PEAK
3		2483.500	0.306	43.680	43.986	-10.014	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (40MHz) (2422MHz) (Chain 0+Chain 1)**

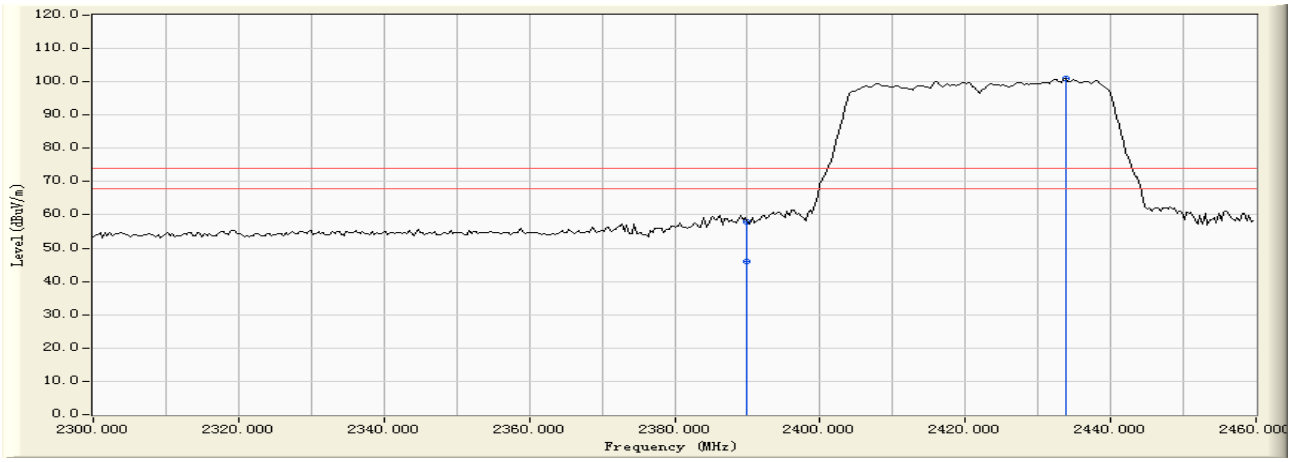


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	0.112	62.588	62.700	-11.300	74.000	PEAK
2		2390.000	0.112	46.700	46.812	-07.188	54.000	AVERAGE
3	*	2417.525	0.142	92.368	92.510	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (40MHz) (2422MHz) (Chain 0+Chain 1)**

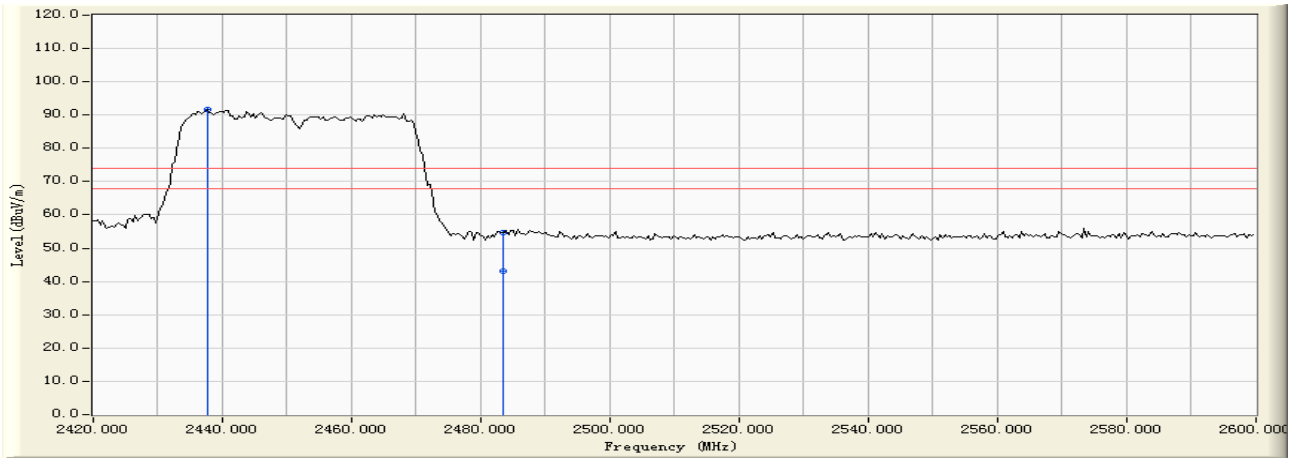


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	0.112	57.936	58.048	-15.952	74.000	PEAK
2		2390.000	0.112	45.840	45.952	-08.048	54.000	AVERAGE
3	*	2433.812	0.177	100.720	100.896	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (40MHz) (2452MHz) (Chain 0+Chain 1)**

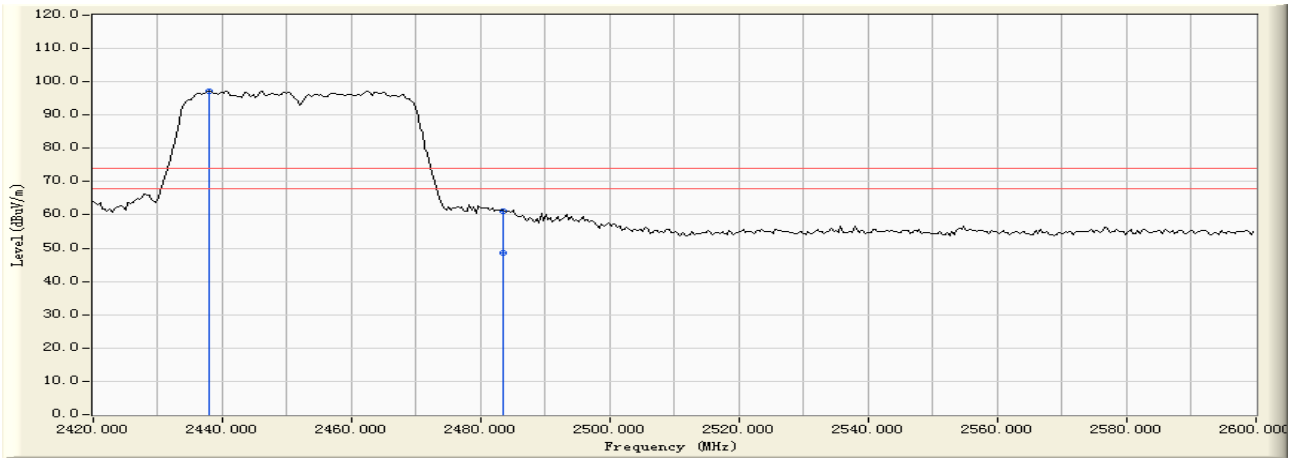


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2437.605	0.185	91.509	91.695	N/A	N/A	PEAK
2		2483.500	0.306	54.429	54.735	-19.265	74.000	PEAK
3		2483.500	0.306	42.690	42.996	-11.004	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode1: Transmit by 802.11n (40MHz) (2452MHz) (Chain 0+Chain 1)**

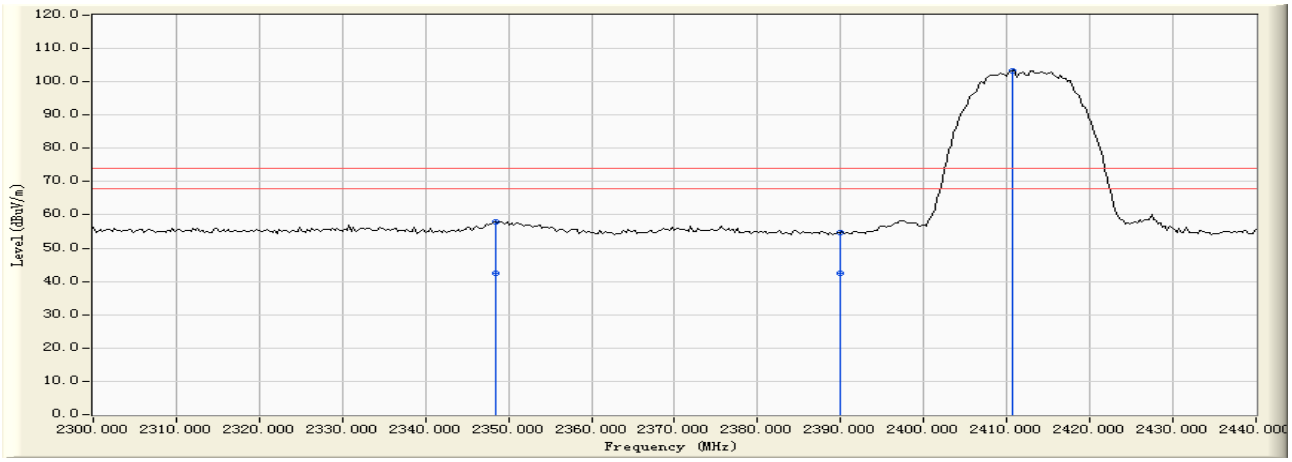


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2437.964	0.187	97.119	97.306	N/A	N/A	PEAK
2		2483.500	0.306	60.768	61.074	-12.926	74.000	PEAK
3		2483.500	0.306	48.400	48.706	-05.294	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11b (2412MHz)**

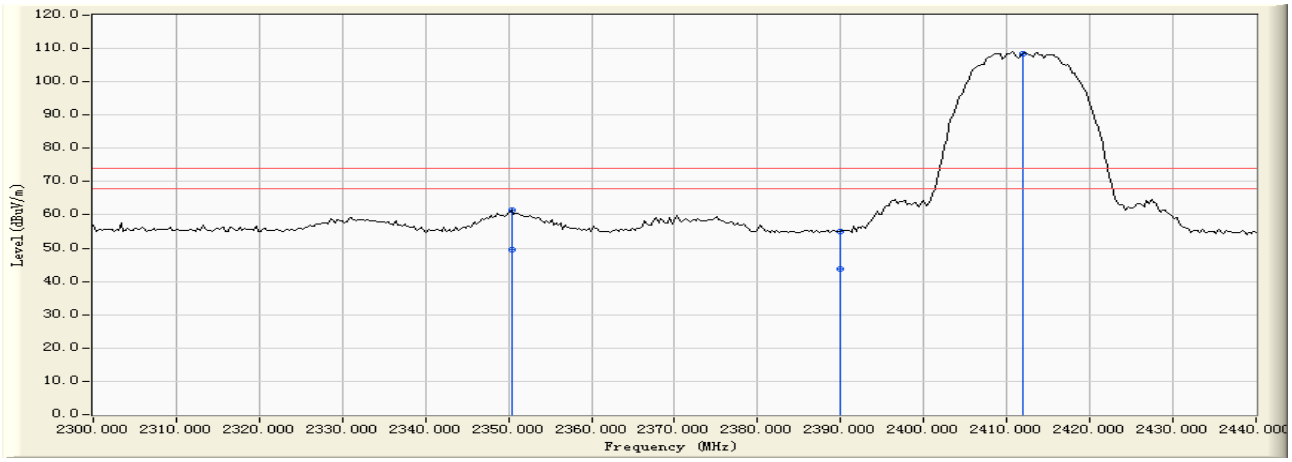


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2348.440	0.118	57.775	57.893	-16.107	74.000	PEAK
2		2348.440	0.118	42.300	42.418	-11.582	54.000	AVERAGE
3		2390.000	0.112	54.648	54.760	-19.240	74.000	PEAK
4		2390.000	0.112	42.200	42.312	-11.688	54.000	AVERAGE
5	*	2410.600	0.132	103.272	103.404	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11b (2412MHz)**

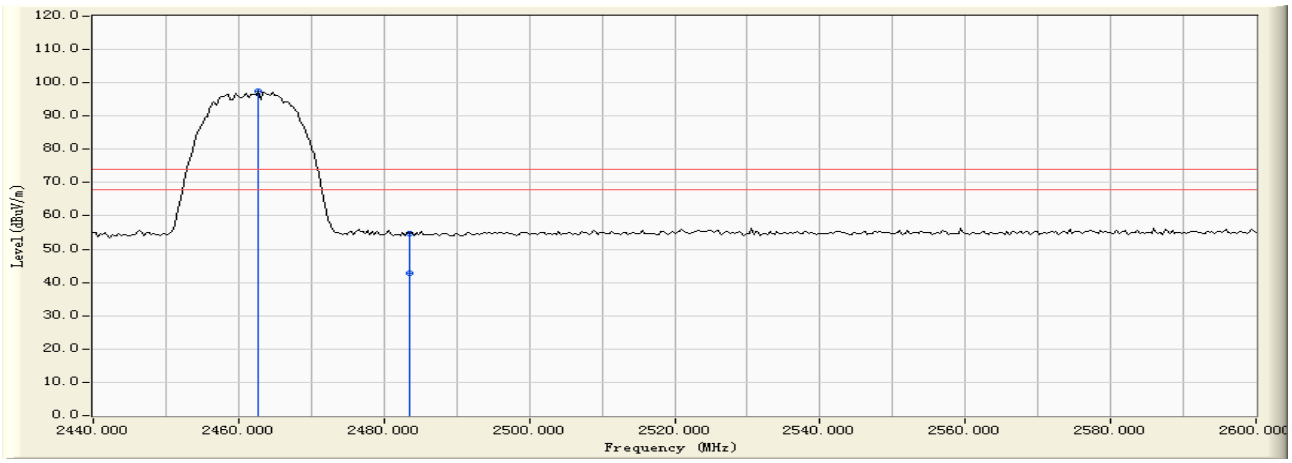


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2350.400	0.118	61.298	61.416	-12.584	74.000	PEAK
2		2350.400	0.118	49.500	49.618	-04.382	54.000	AVERAGE
3		2390.000	0.112	54.997	55.109	-18.891	74.000	PEAK
4		2390.000	0.112	43.500	43.612	-10.388	54.000	AVERAGE
5	*	2412.000	0.134	108.338	108.472	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11b (2462MHz)**

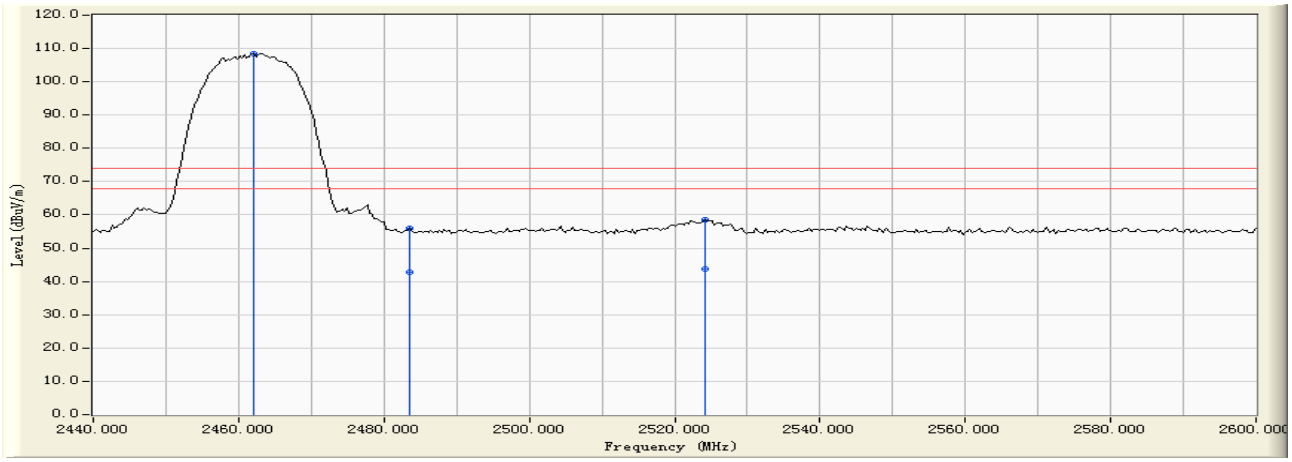


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2462.720	0.257	97.292	97.549	N/A	N/A	PEAK
2		2483.500	0.306	54.354	54.660	-19.340	74.000	PEAK
3		2483.500	0.306	42.360	42.666	-11.334	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11b (2462MHz)**



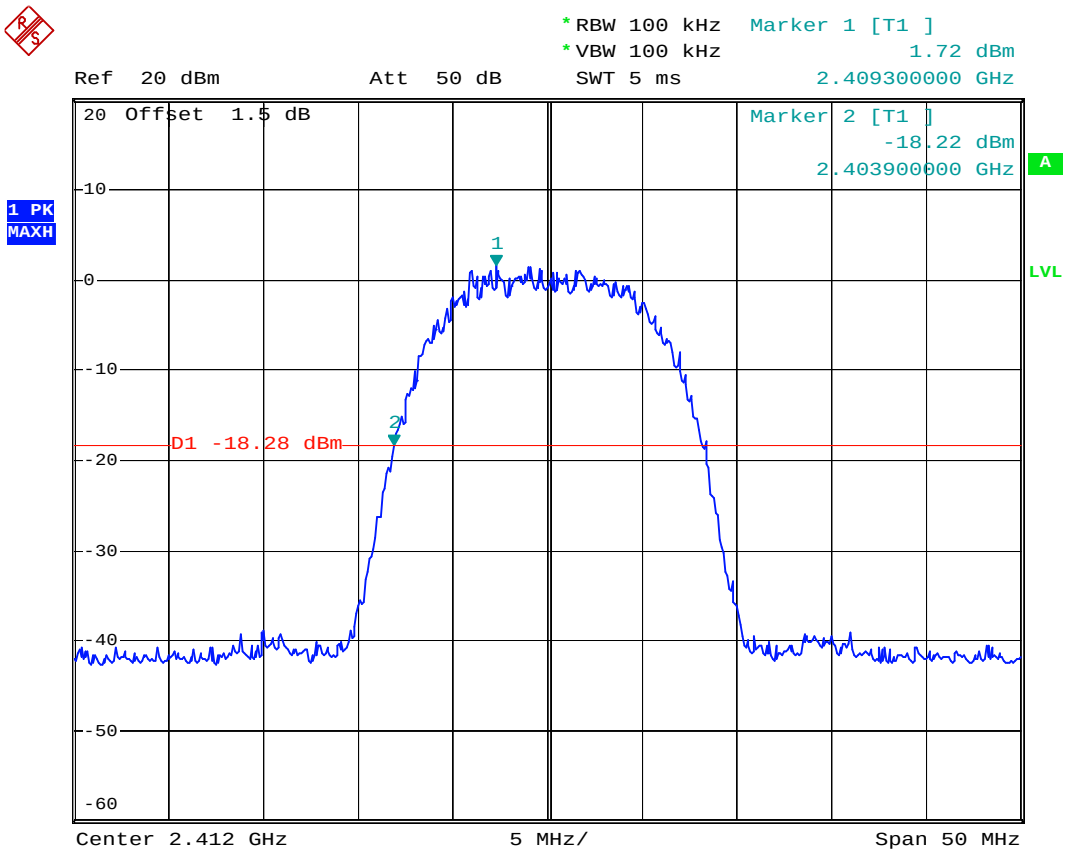
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2462.080	0.256	108.236	108.491	N/A	N/A	PEAK
2		2483.500	0.306	55.596	55.902	-18.098	74.000	PEAK
3		2483.500	0.306	42.360	42.666	-11.334	54.000	AVERAGE
4		2524.160	0.440	58.199	58.639	-15.361	74.000	PEAK
5		2524.160	0.440	43.300	43.740	-10.260	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

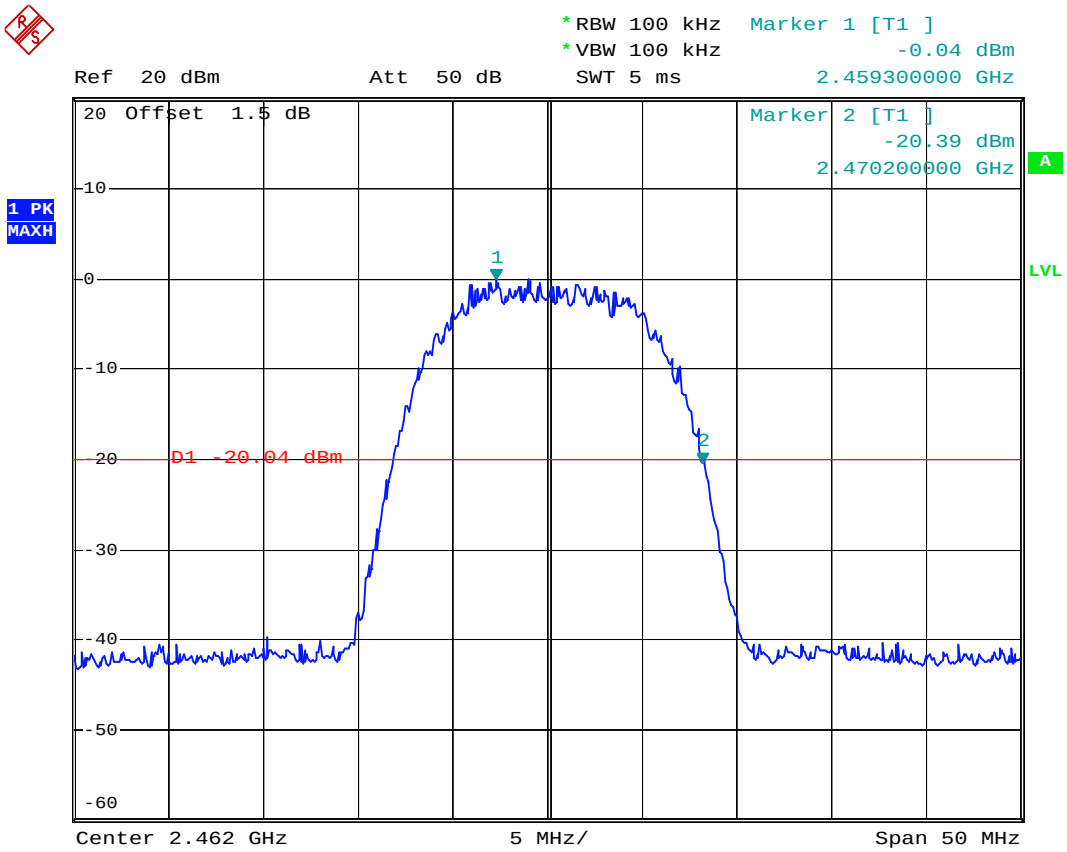
Band Edge (20dBc RF Conducted Measurement)

Mode: Transmit by 802.11b (2412MHz)



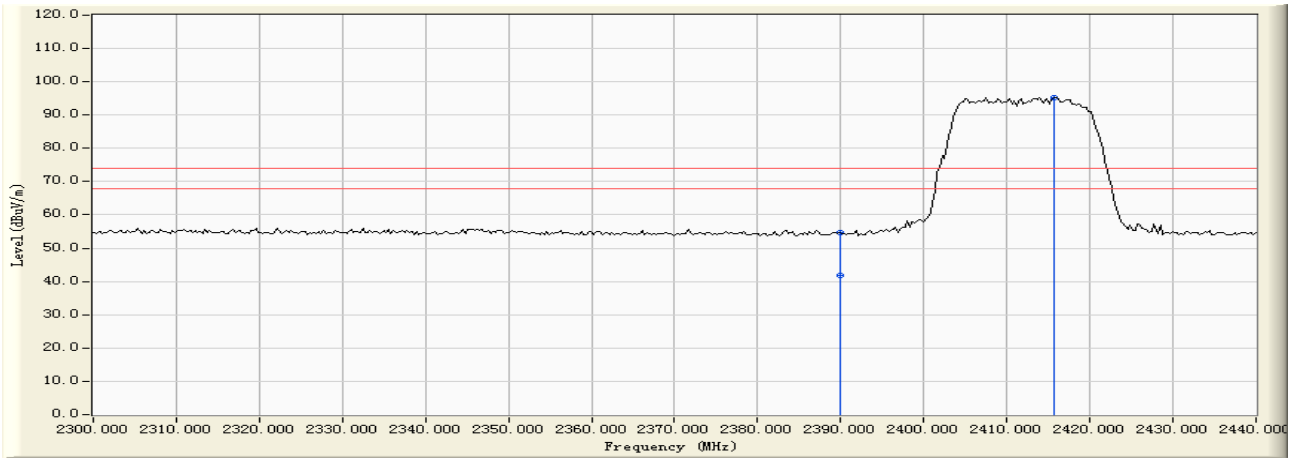
Date: 14.MAR.2011 15:30:16

Band Edge (20dBc RF Conducted Measurement)
Mode: Transmit by 802.11b (2462MHz)



Date: 14.MAR.2011 15:32:12

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11g (2412MHz)**

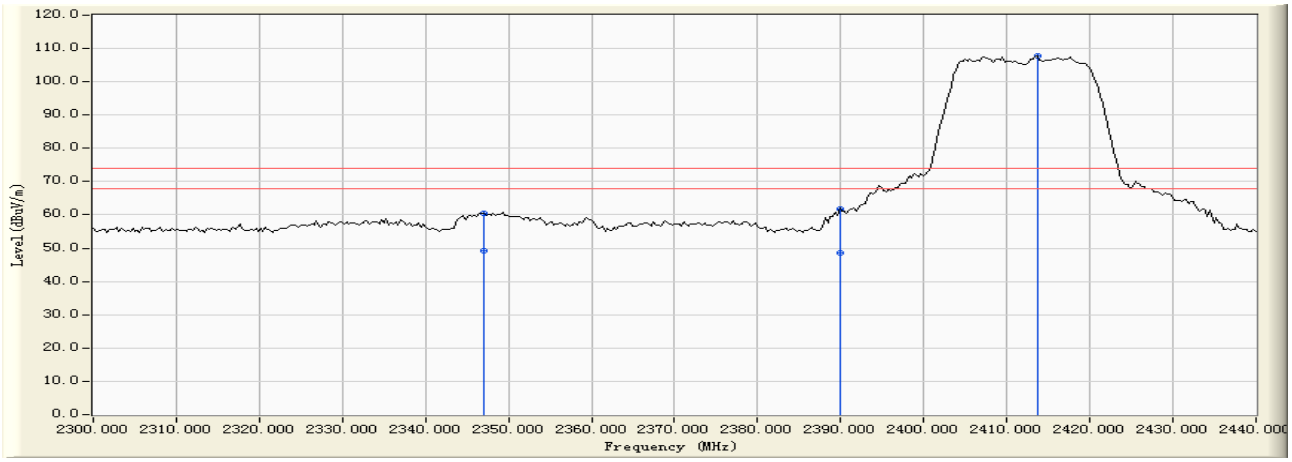


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	0.112	54.455	54.567	-19.433	74.000	PEAK
2		2390.000	0.112	41.600	41.712	-12.288	54.000	AVERAGE
3	*	2415.640	0.140	95.231	95.371	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11g (2412MHz)**

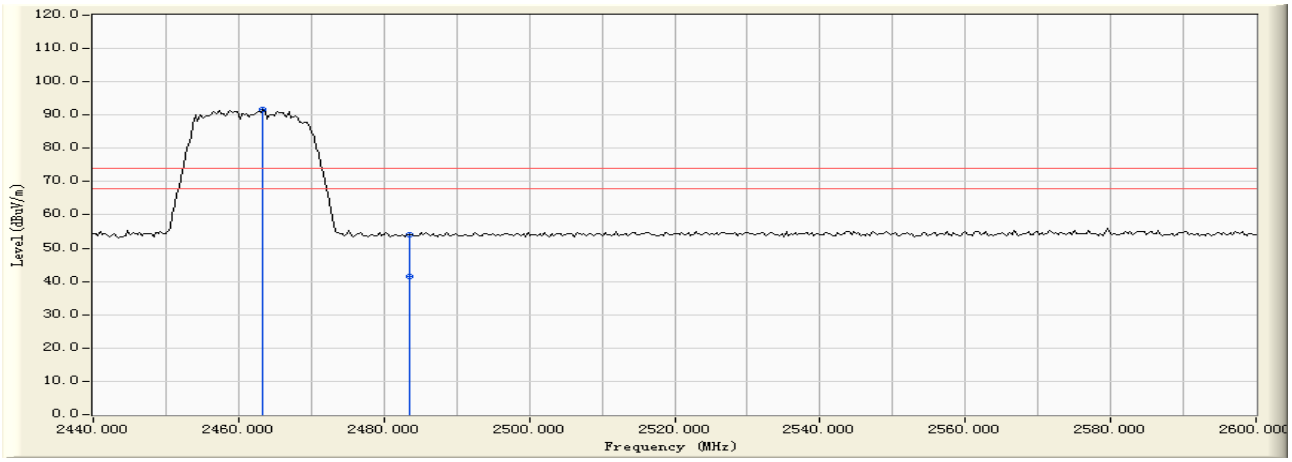


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2347.040	0.119	60.403	60.522	-13.478	74.000	PEAK
2		2347.040	0.119	49.200	49.319	-04.681	54.000	AVERAGE
3		2390.000	0.112	61.575	61.687	-12.313	74.000	PEAK
4		2390.000	0.112	48.600	48.712	-05.288	54.000	AVERAGE
5	*	2413.680	0.137	107.496	107.633	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11g (2462MHz)**

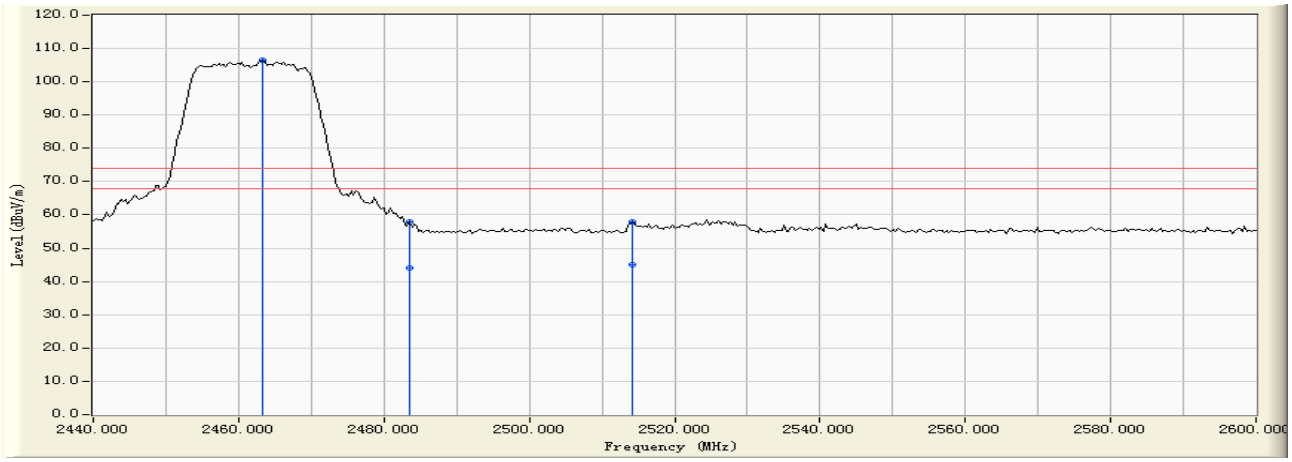


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2463.360	0.258	91.457	91.715	N/A	N/A	PEAK
2		2483.500	0.306	53.783	54.089	-19.911	74.000	PEAK
3		2483.500	0.306	41.200	41.506	-12.494	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11g (2462MHz)**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2463.360	0.258	106.333	106.591	N/A	N/A	PEAK
2		2483.500	0.306	57.538	57.844	-16.156	74.000	PEAK
3		2483.500	0.306	43.620	23.926	-30.074	54.000	AVERAGE
4		2514.240	0.402	57.386	57.789	-16.211	74.000	PEAK
5		2514.240	0.402	44.600	25.003	-28.997	54.000	AVERAGE

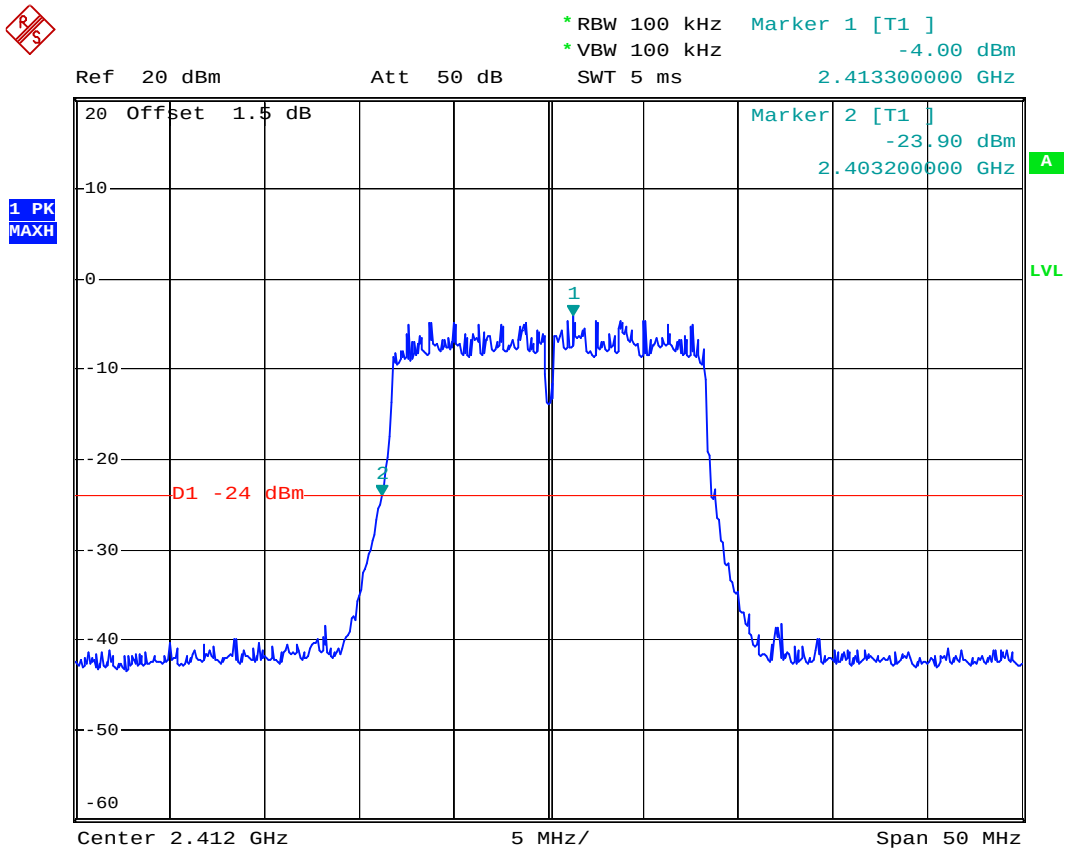
Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Band Edge (20dBc RF Conducted Measurement)

Mode: Transmit by 802.11g (2412MHz)

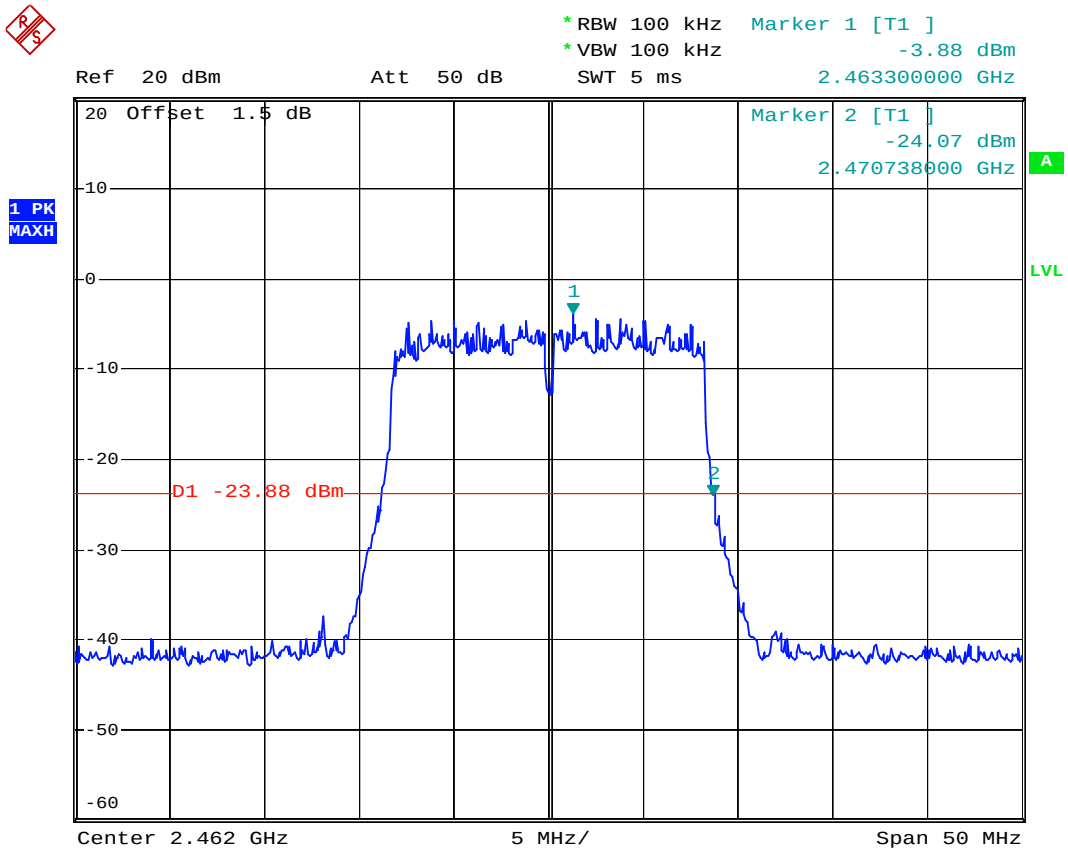
Chain0



Date: 14.MAR.2011 15:33:52

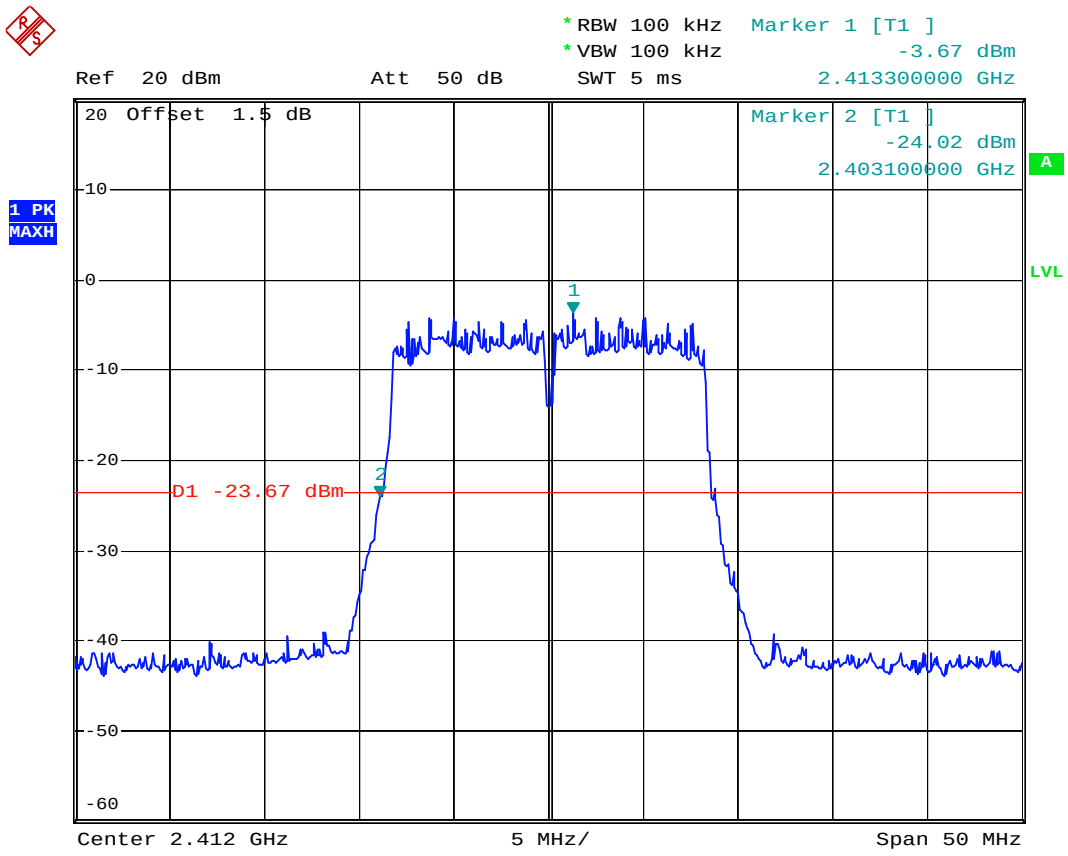
Band Edge (20dBc RF Conducted Measurement)

Mode: Transmit by 802.11g (2462MHz)



Date: 14.MAR.2011 15:38:19

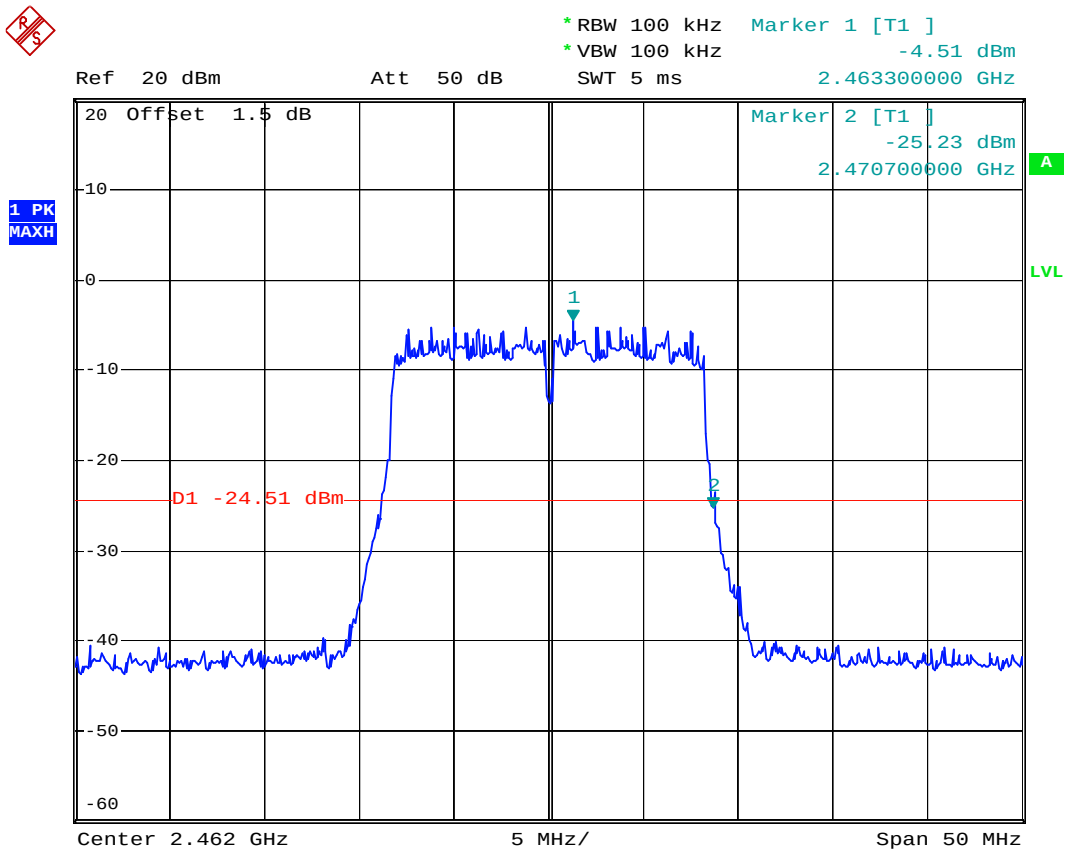
Band Edge (20dBc RF Conducted Measurement)
Mode: Transmit by 802.11g (2412MHz)
Chain1



Date: 14.MAR.2011 15:59:25

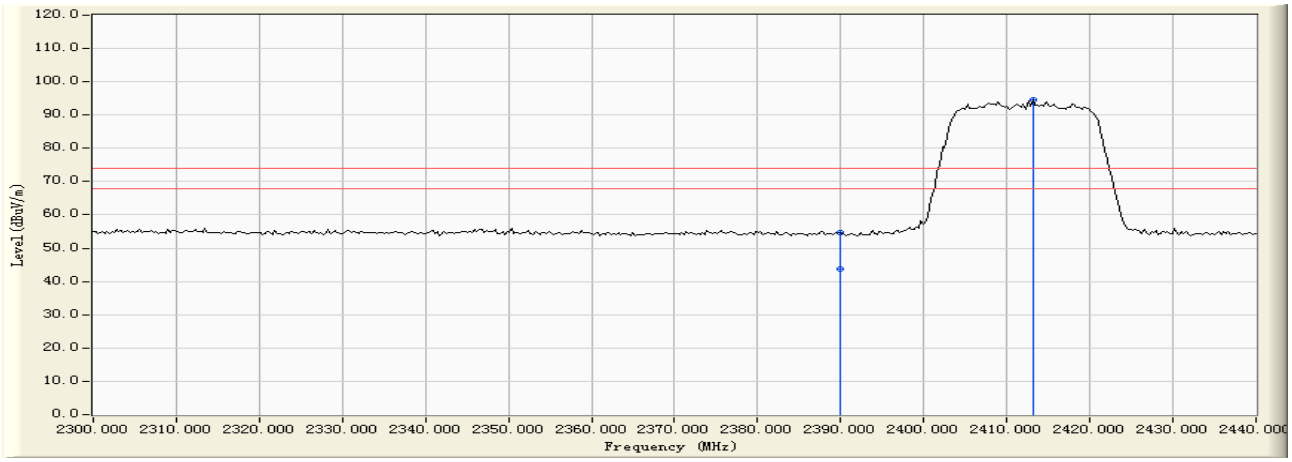
Band Edge (20dBc RF Conducted Measurement)

Mode: Transmit by 802.11g (2462MHz)



Date: 14.MAR.2011 16:00:40

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (20MHz) (2412MHz) (Chain 0+Chain 1)**

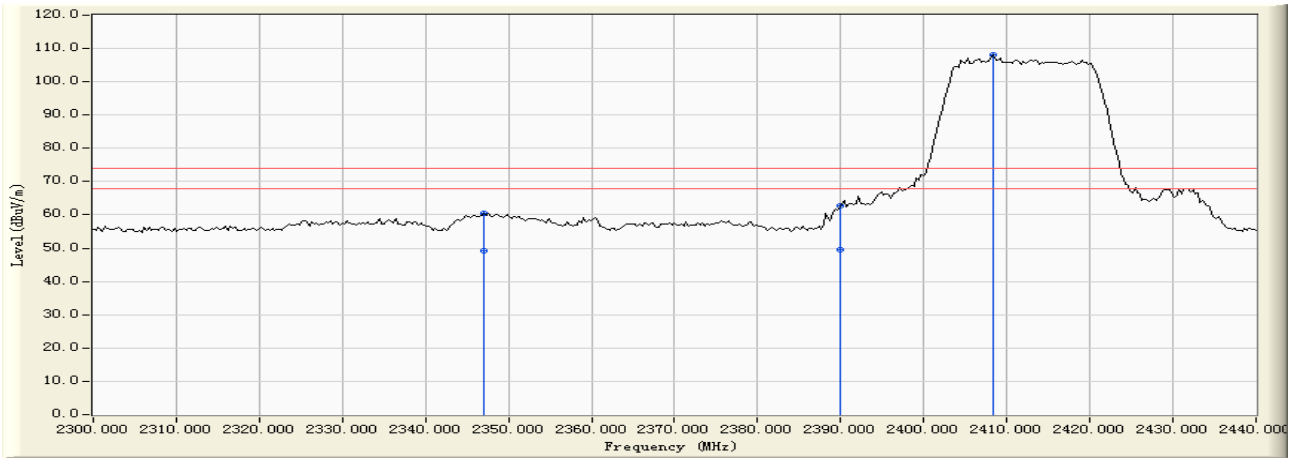


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	0.112	54.536	54.648	-19.352	74.000	PEAK
2		2390.000	0.112	43.600	43.712	-10.288	54.000	AVERAGE
3	*	2413.120	0.136	94.397	94.533	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (20MHz) (2412MHz) (Chain 0+Chain 1)**

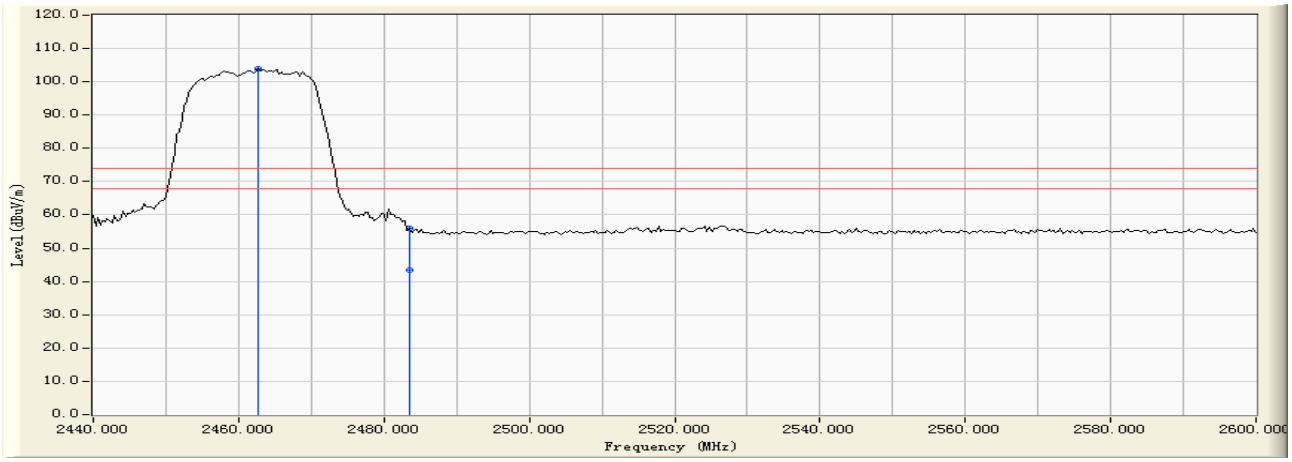


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2347.040	0.119	60.292	60.411	-13.589	74.000	PEAK
2		2347.040	0.119	49.200	49.319	-04.681	54.000	AVERAGE
3		2390.000	0.112	62.696	62.808	-11.192	74.000	PEAK
4		2390.000	0.112	49.500	49.612	-04.388	54.000	AVERAGE
5	*	2408.360	0.130	108.110	108.239	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (20MHz) (2462MHz) (Chain 0+Chain 1)**

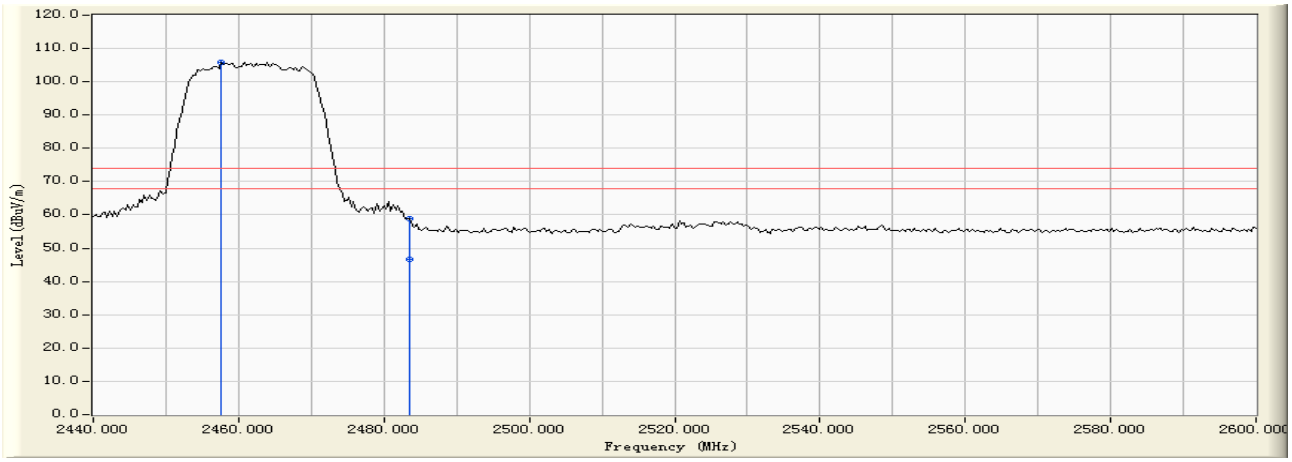


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2462.720	0.257	103.709	103.966	N/A	N/A	PEAK
2		2483.500	0.306	55.519	55.825	-18.175	74.000	PEAK
3		2483.500	0.306	43.200	43.506	-10.494	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (20MHz) (2462MHz) (Chain 0+Chain 1)**

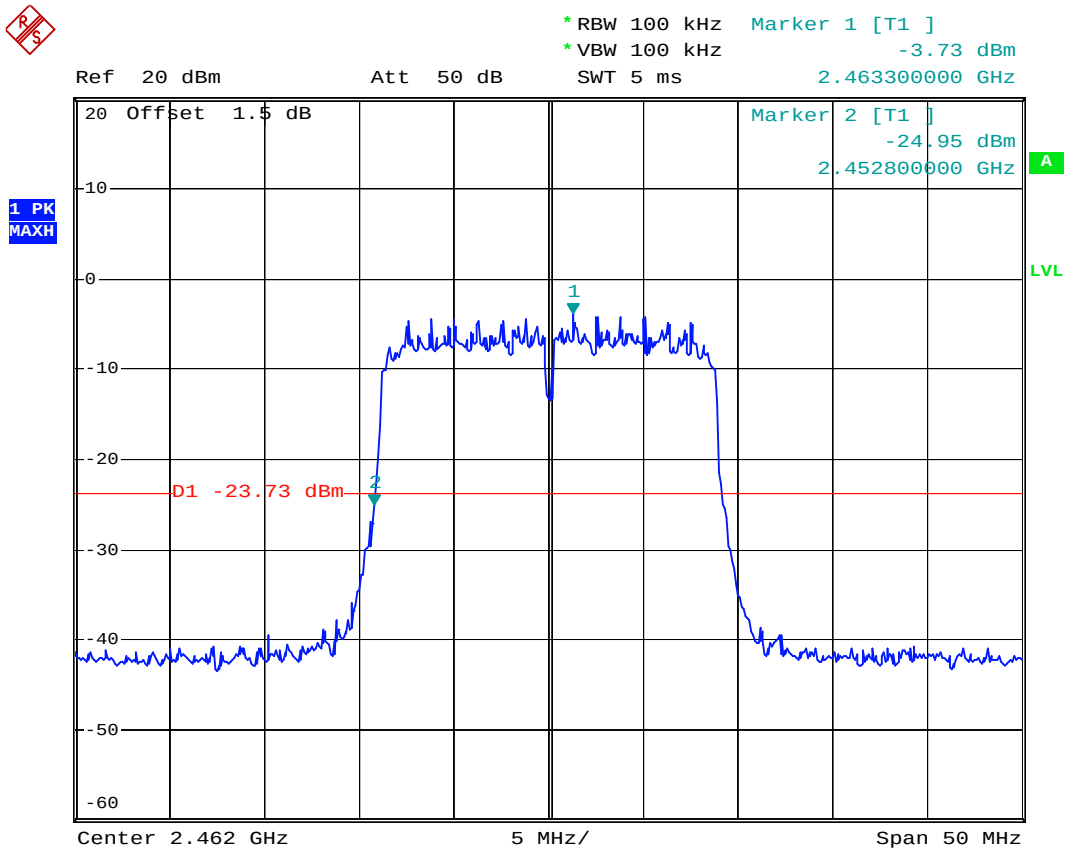


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2457.600	0.242	105.658	105.901	N/A	N/A	PEAK
2		2483.500	0.306	58.707	59.013	-14.987	74.000	PEAK
3		2483.500	0.306	46.200	46.506	-07.494	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

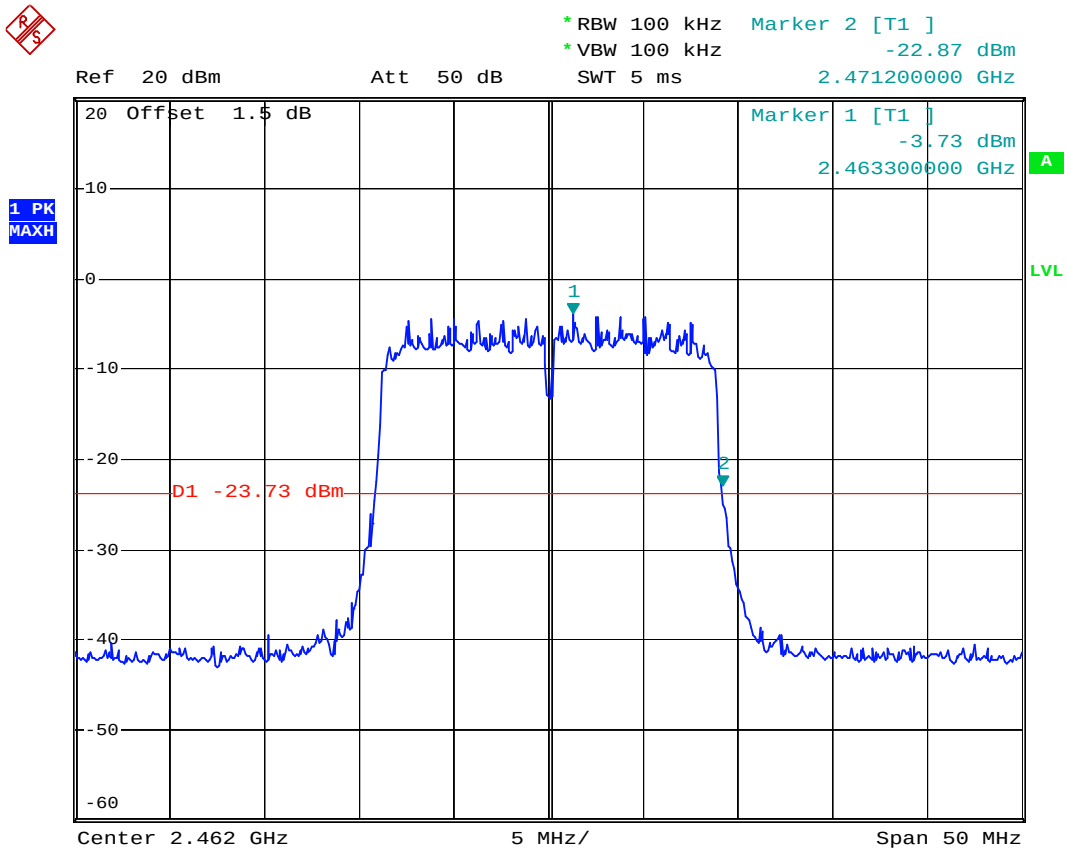
Band Edge (20dBc RF Conducted Measurement)
Mode: Transmit by 802.11n (20MHz) (2412MHz)
Chain 0



Date: 14.MAR.2011 15:43:18

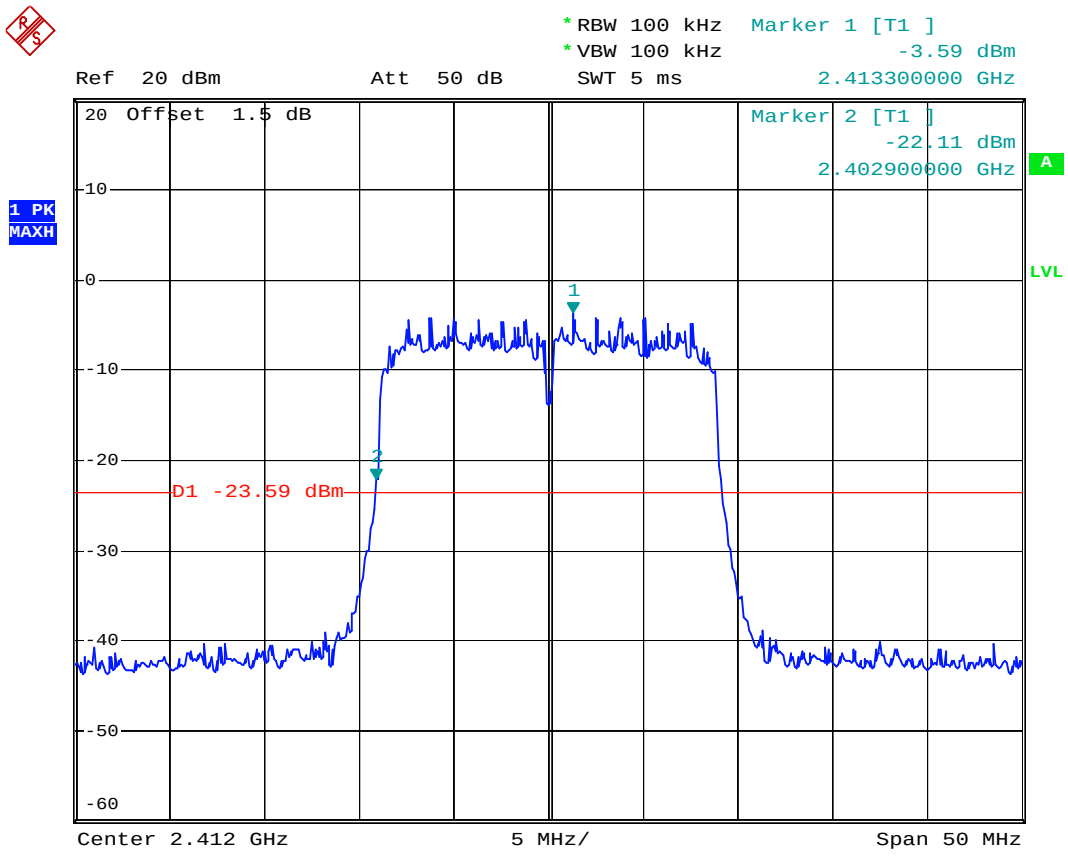
Band Edge (20dBc RF Conducted Measurement)

Mode: Transmit by 802.11n (20MHz) 2462MHz)



Date: 14.MAR.2011 15:43:56

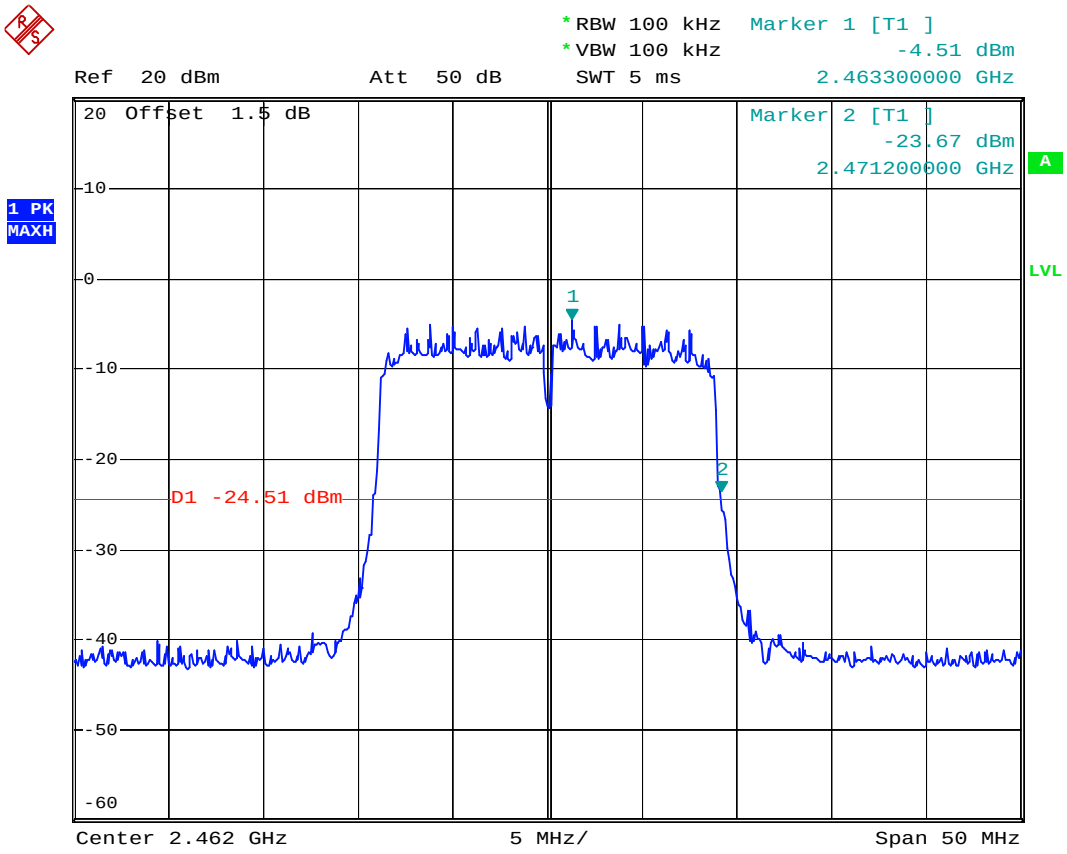
Band Edge (20dBc RF Conducted Measurement)
Mode: Transmit by 802.11n (20MHz) (2412MHz)
Chain 1



Date: 14.MAR.2011 15:56:49

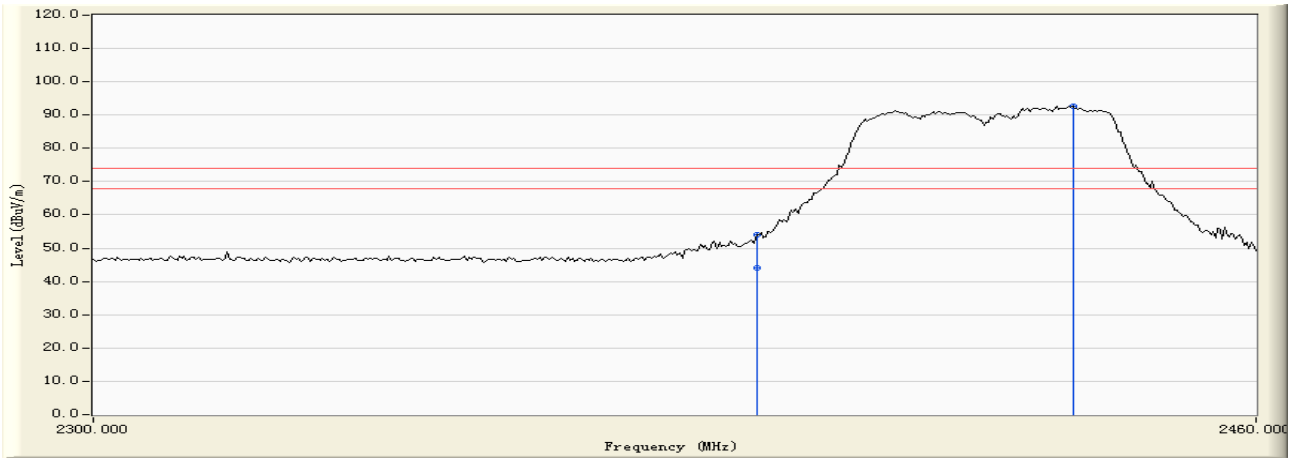
Band Edge (20dBc RF Conducted Measurement)

Mode: Transmit by 802.11n (20MHz) 2462MHz)



Date: 14.MAR.2011 15:58:18

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (40MHz) (2422MHz) (Chain 0+Chain 1)**

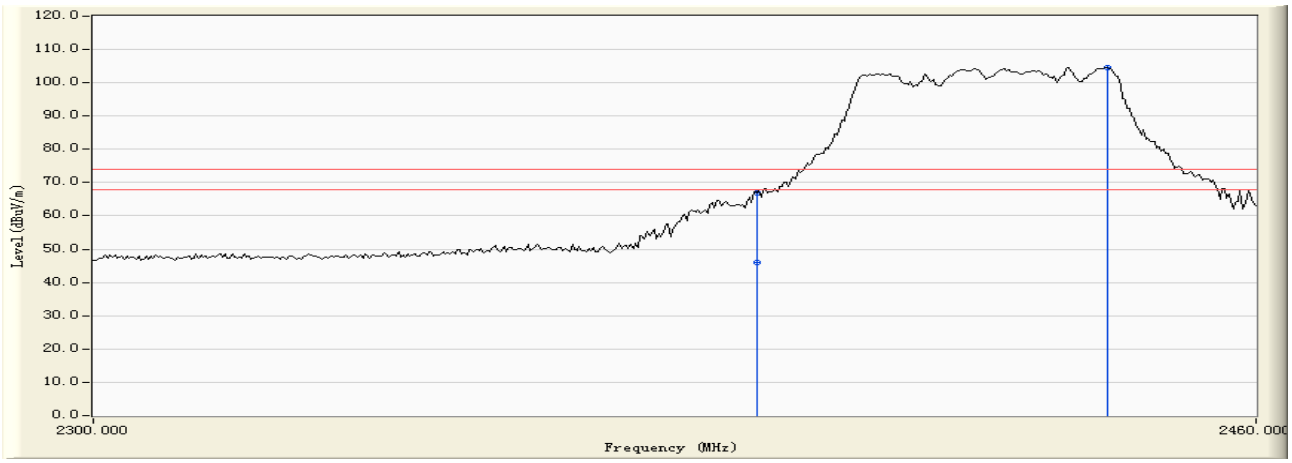


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	0.112	53.835	53.947	-20.053	74.000	PEAK
2		2390.000	0.112	44.000	44.112	-9.888	54.000	AVERAGE
3	*	2434.080	0.177	92.427	92.604	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (40MHz) (2422MHz) (Chain 0+Chain 1)**

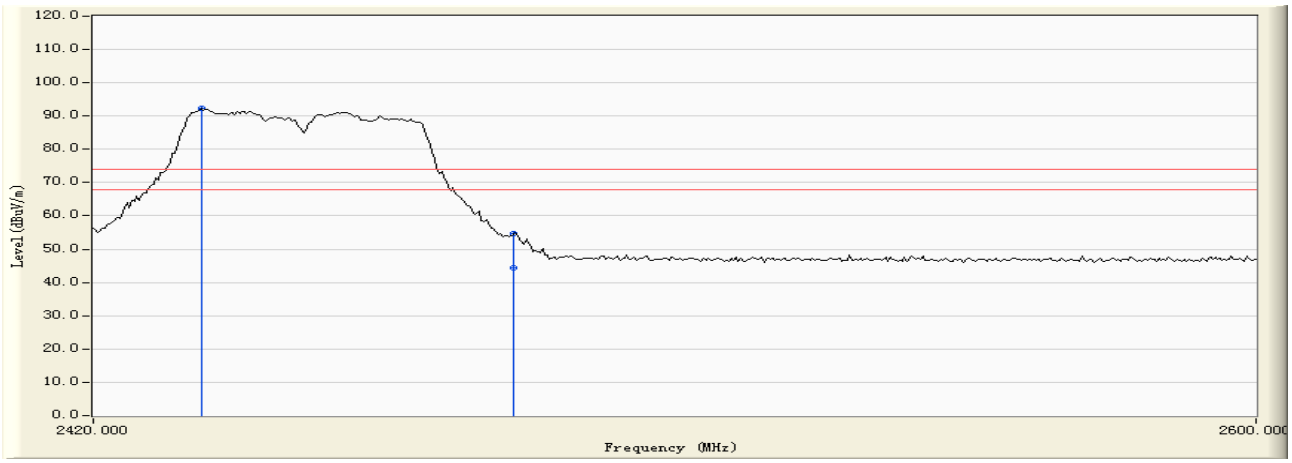


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	0.112	66.953	67.065	-6.935	74.000	PEAK
2		2390.000	0.112	45.920	46.032	-7.968	54.000	AVERAGE
3	*	2438.880	0.190	104.509	104.698	N/A	N/A	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (40MHz) (2452MHz) (Chain 0+Chain 1)**

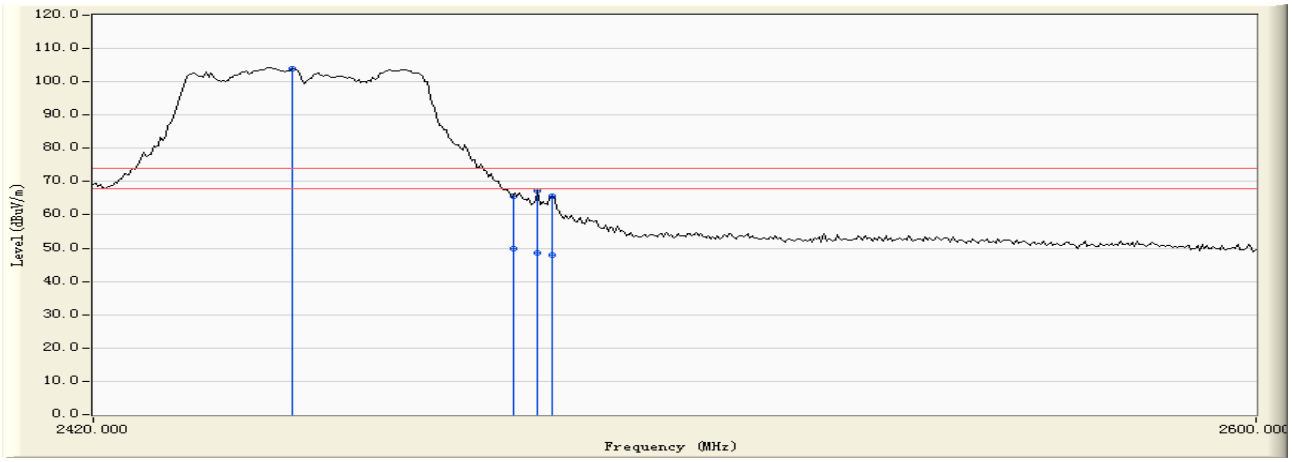


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2436.200	0.182	92.085	92.267	N/A	N/A	PEAK
2		2483.500	0.306	54.226	54.532	-19.468	74.000	PEAK
3		2483.500	0.306	44.200	44.506	-9.494	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Jeson	
Site : EMC Lab AC 102	**Time : 2011-03-14**
Limit : FCC_15_03M	**Margin : 6**
EUT : 802.11n Wireless ADSL2+ 4-port Gateway	**Probe : VERTICAL**
Power : AC 120V/60Hz	**Note : Mode2: Transmit by 802.11n (40MHz) (2452MHz) (Chain 0+Chain 1)**

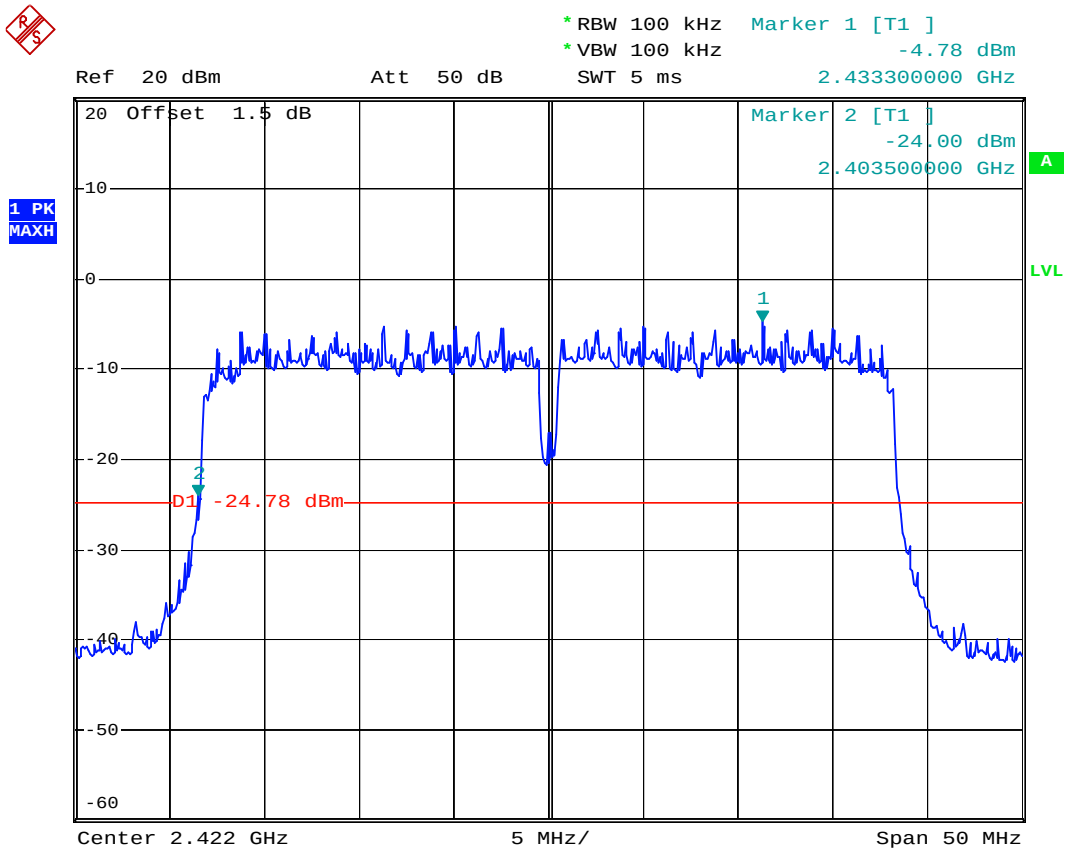


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2449.880	0.221	103.539	103.760	N/A	N/A	PEAK
2		2483.500	0.306	65.483	65.789	-8.211	74.000	PEAK
3		2483.500	0.306	49.500	49.806	-4.194	54.000	AVERAGE
4		2487.320	0.316	66.893	67.209	-6.791	74.000	PEAK
5		2487.320	0.316	48.290	48.606	-5.394	54.000	AVERAGE
6		2489.480	0.322	65.231	65.553	-8.447	74.000	PEAK
7		2489.480	0.322	47.480	47.802	-6.198	54.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

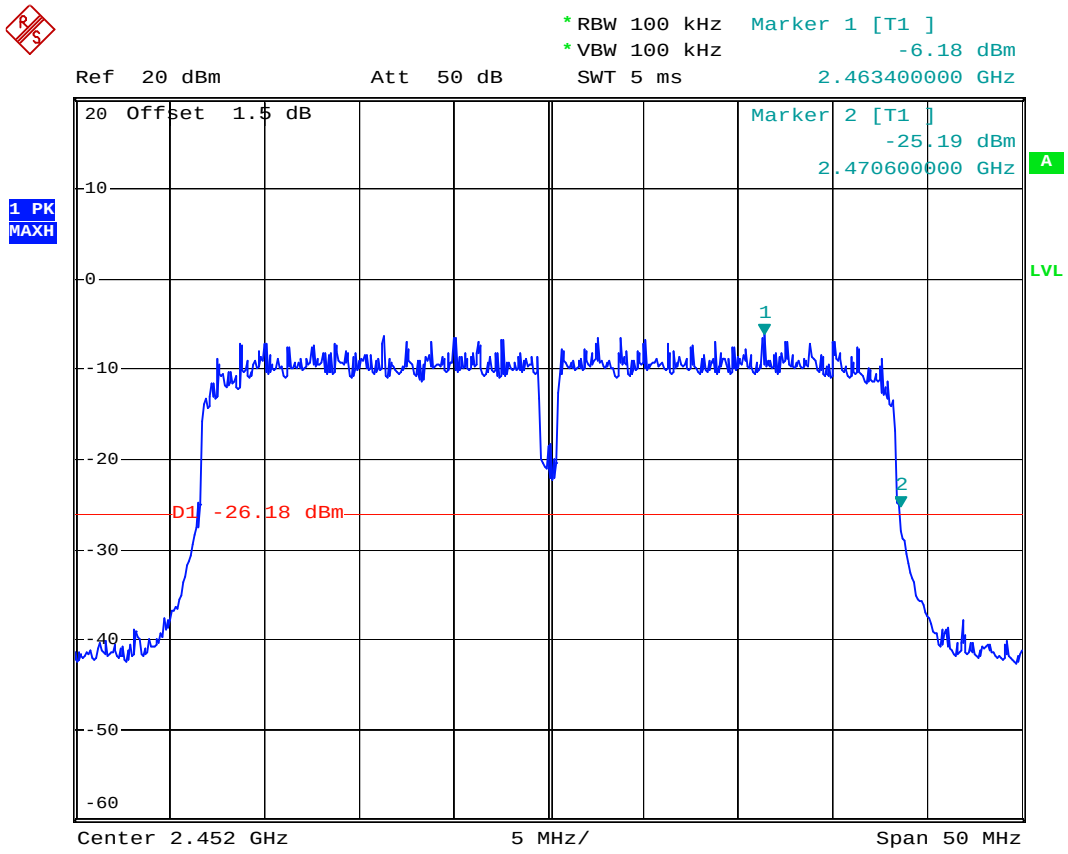
Band Edge (20dBc RF Conducted Measurement)
Mode: Transmit by 802.11n (40MHz) (2422MHz)
Chain 0



Date: 14.MAR.2011 15:50:56

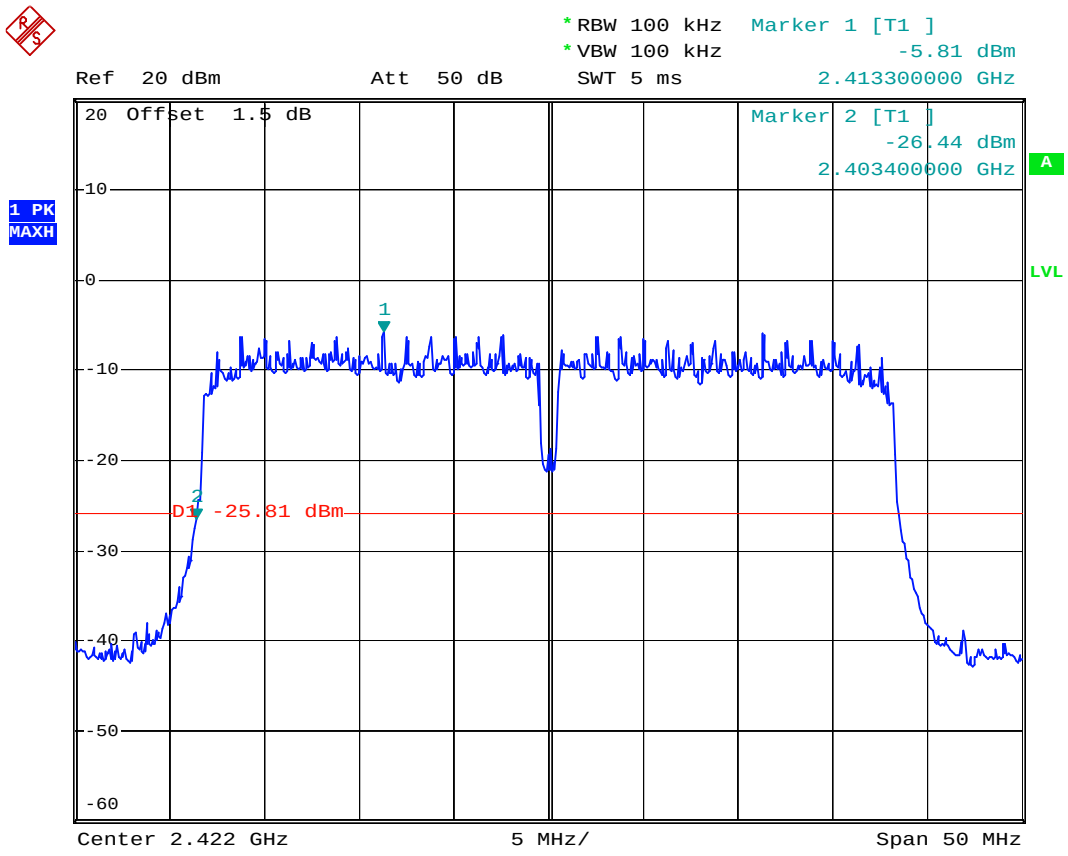
Band Edge (20dBc RF Conducted Measurement)

Mode: Transmit by 802.11n (40MHz) 2452MHz)



Date: 14.MAR.2011 15:52:03

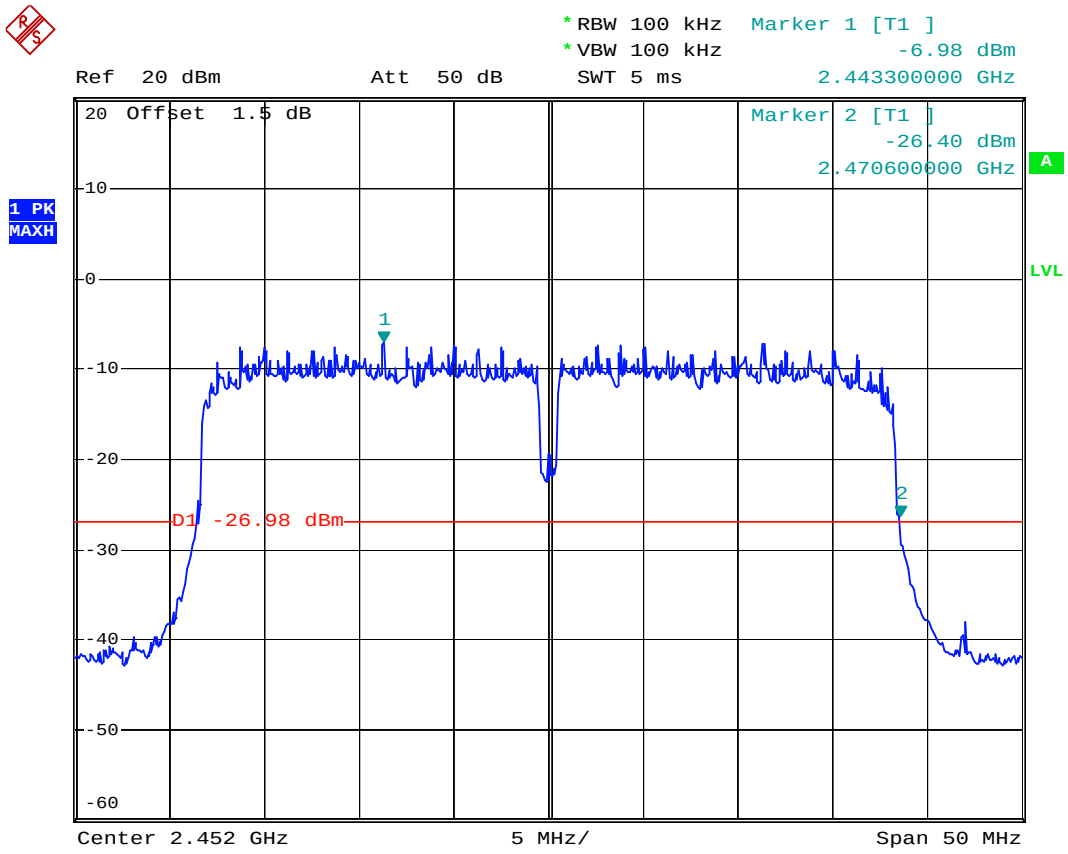
Band Edge (20dBc RF Conducted Measurement)
Mode: Transmit by 802.11n (40MHz) (2422MHz)
Chain 1



Date: 14.MAR.2011 15:54:25

Band Edge (20dBc RF Conducted Measurement)

Mode: Transmit by 802.11n (40MHz) 2452MHz)



Date: 14.MAR.2011 15:55:31

8. Power Spectral Density

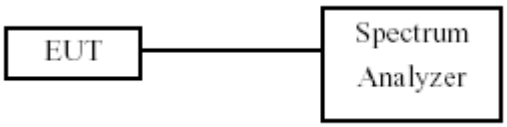
8.1. Test Limit

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.

8.2. Test Procedure

The EUT was tested according to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW= 3 kHz, Set VBW≧ RBW, Sweep time=SPAN/3kHz, Set detector=Peak detector.

8.3. Test Setup Layout



8.4. Measurement Equipment

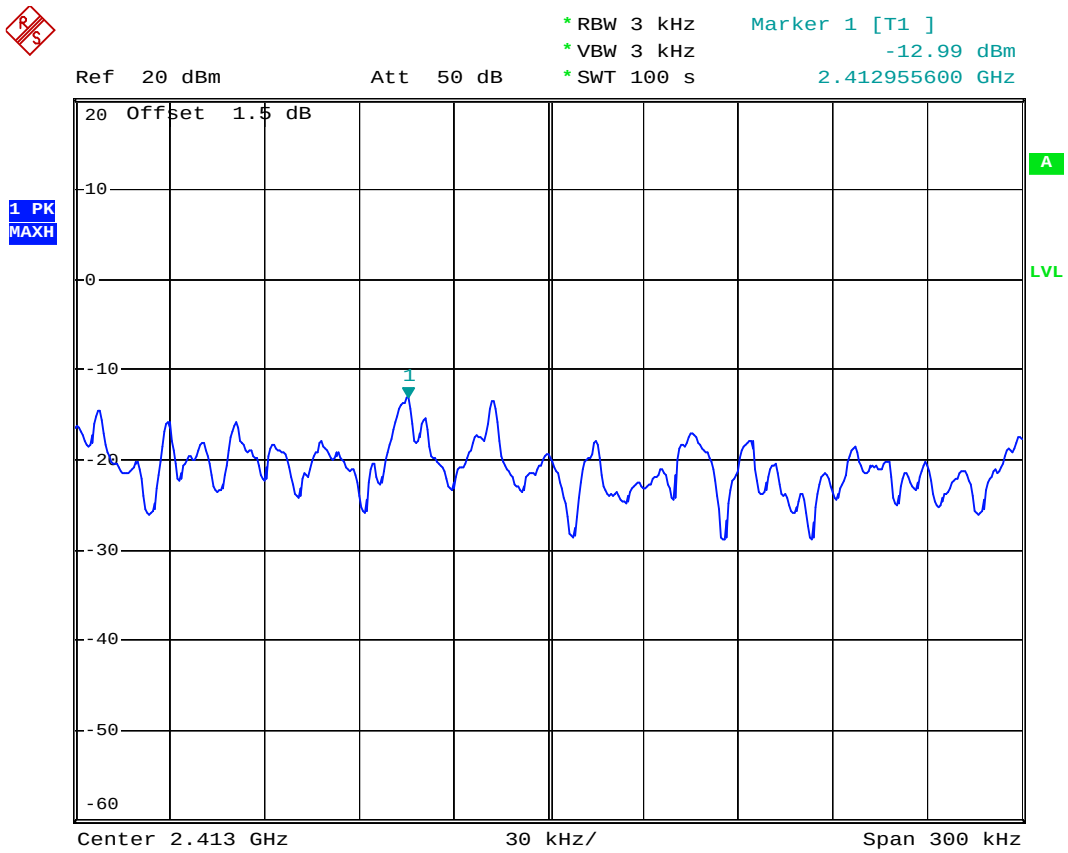
Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date
Spectrum Analyzer	R&S	FSP40	100324	2010.08.14
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2010.08.17

8.5. Test Result and Data

Test Item	Power Spectral Density
Test Mode	Transmit by 802.11b
Test Date	2011-03-14

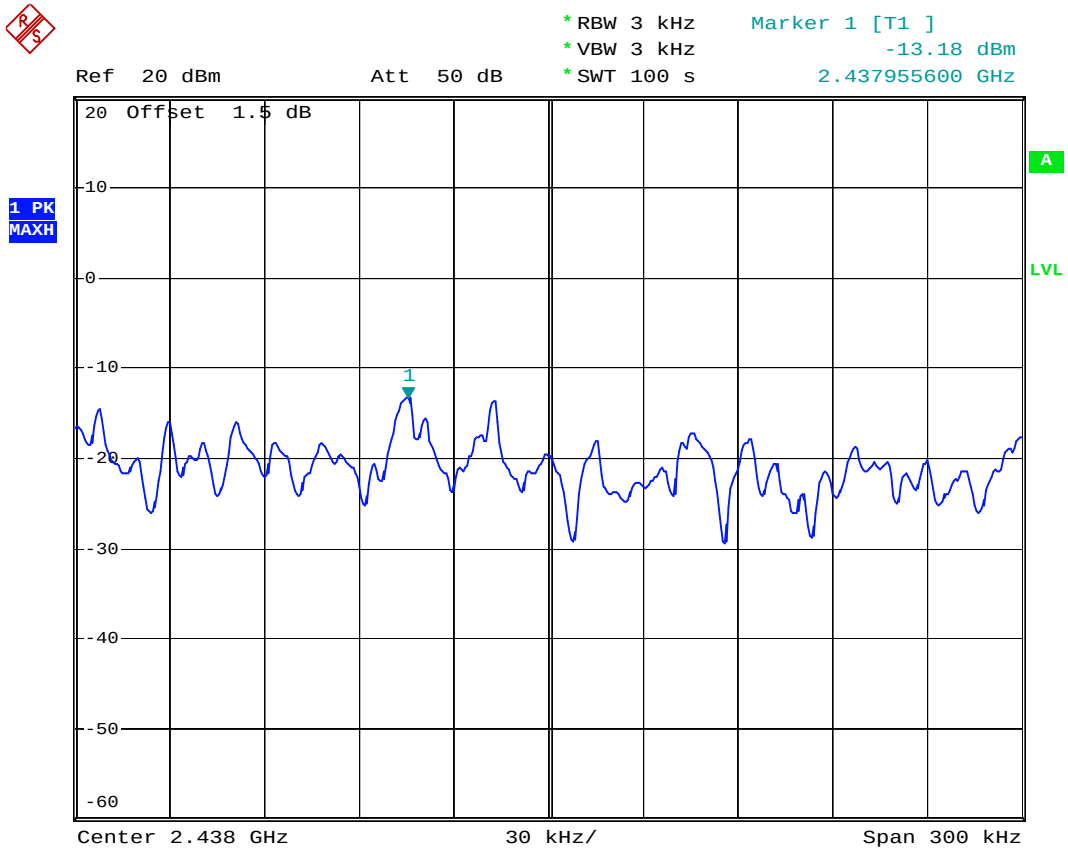
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
01	2412	-12.99	8	Pass
06	2437	-13.18	8	Pass
11	2462	-13.60	8	Pass

Channel 01 (2412MHz)



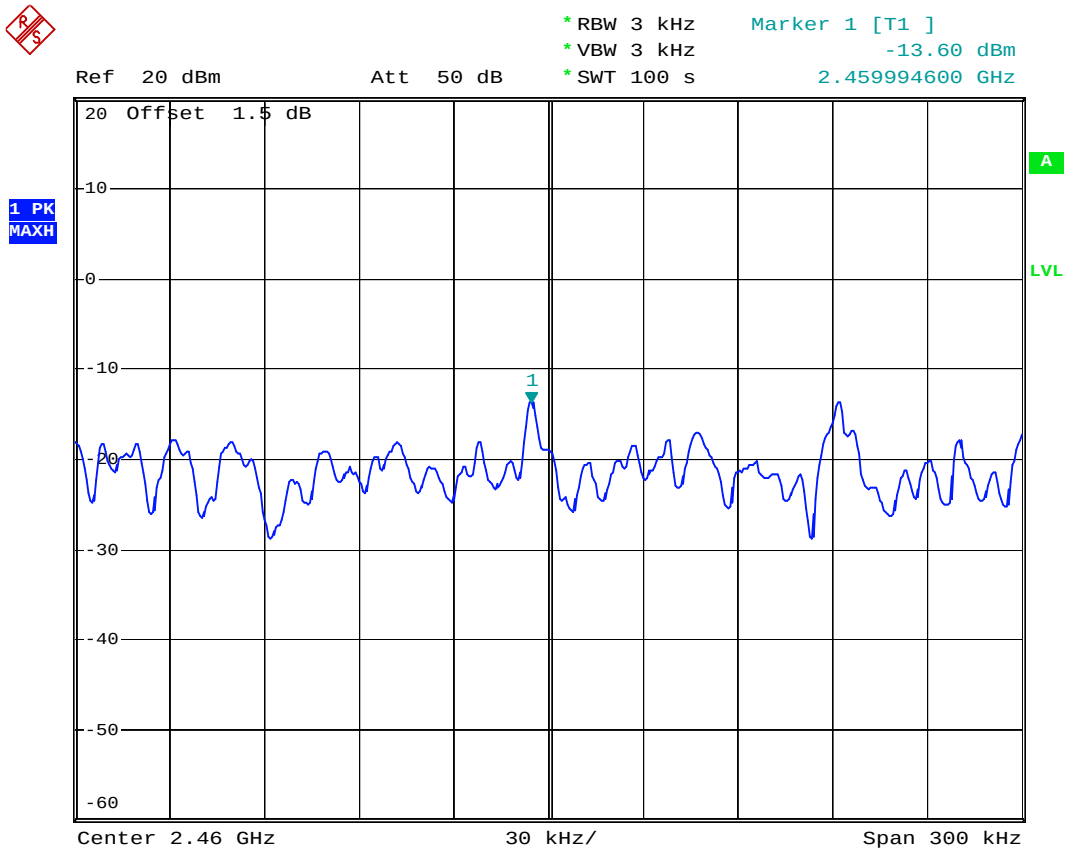
Date: 14.MAR.2011 13:27:59

Channel 06 (2437MHz)



Date: 14.MAR.2011 13:29:58

Channel 11 (2462MHz)



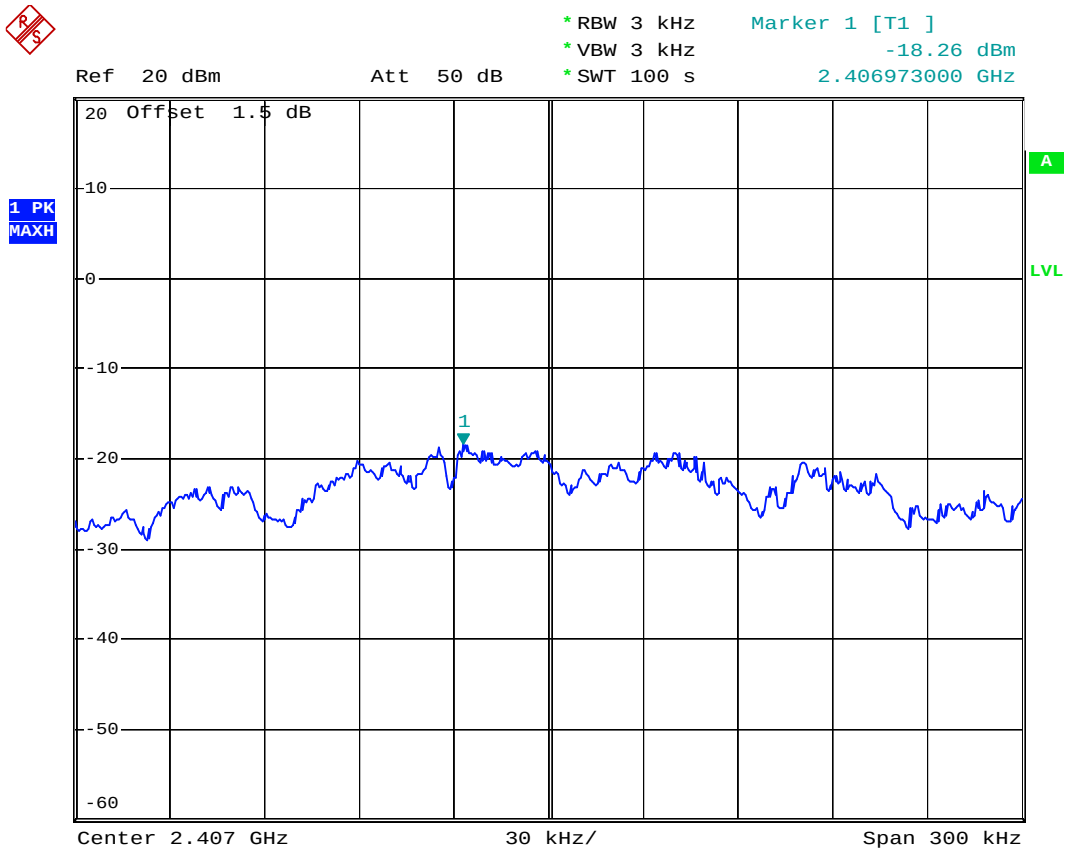
Date: 14.MAR.2011 13:31:03

Test Item	Power Spectral Density
Test Mode	Transmit by 802.11g
Test Date	2011-03-14

Chain 0

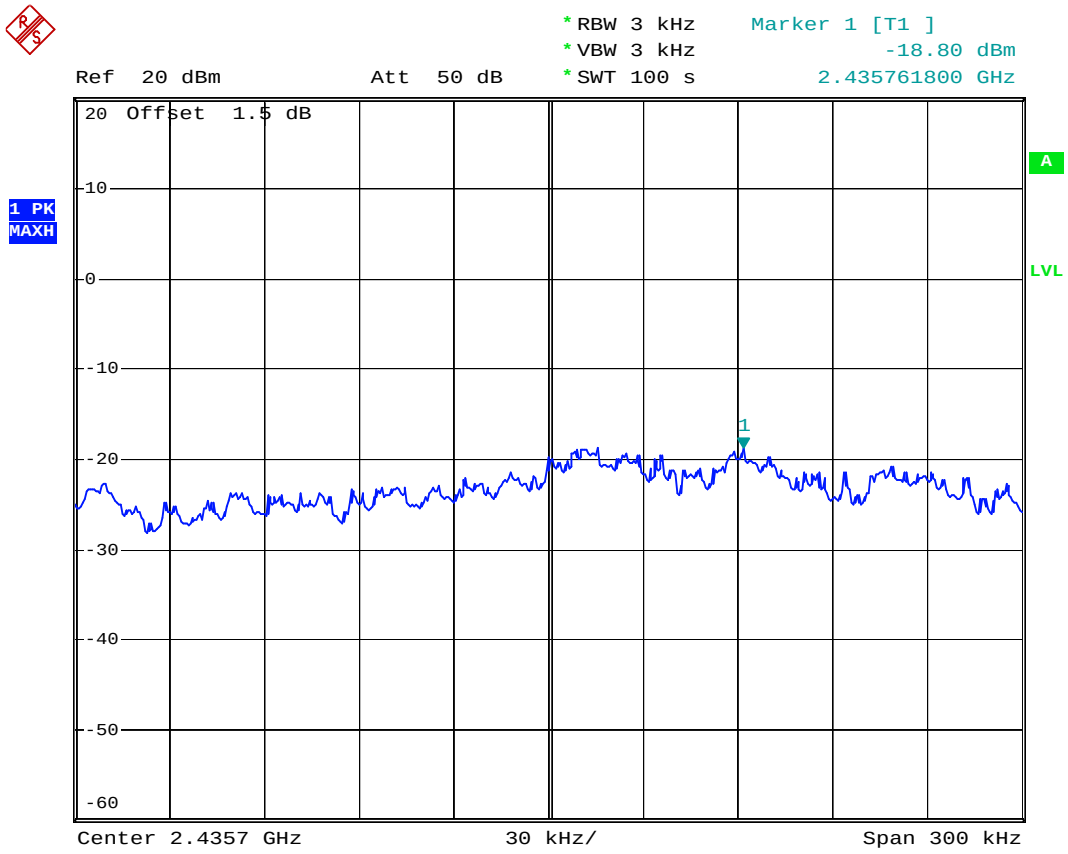
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
01	2412	-18.26	8	Pass
06	2437	-18.80	8	Pass
11	2462	-19.43	8	Pass

Channel 01 (2412MHz)



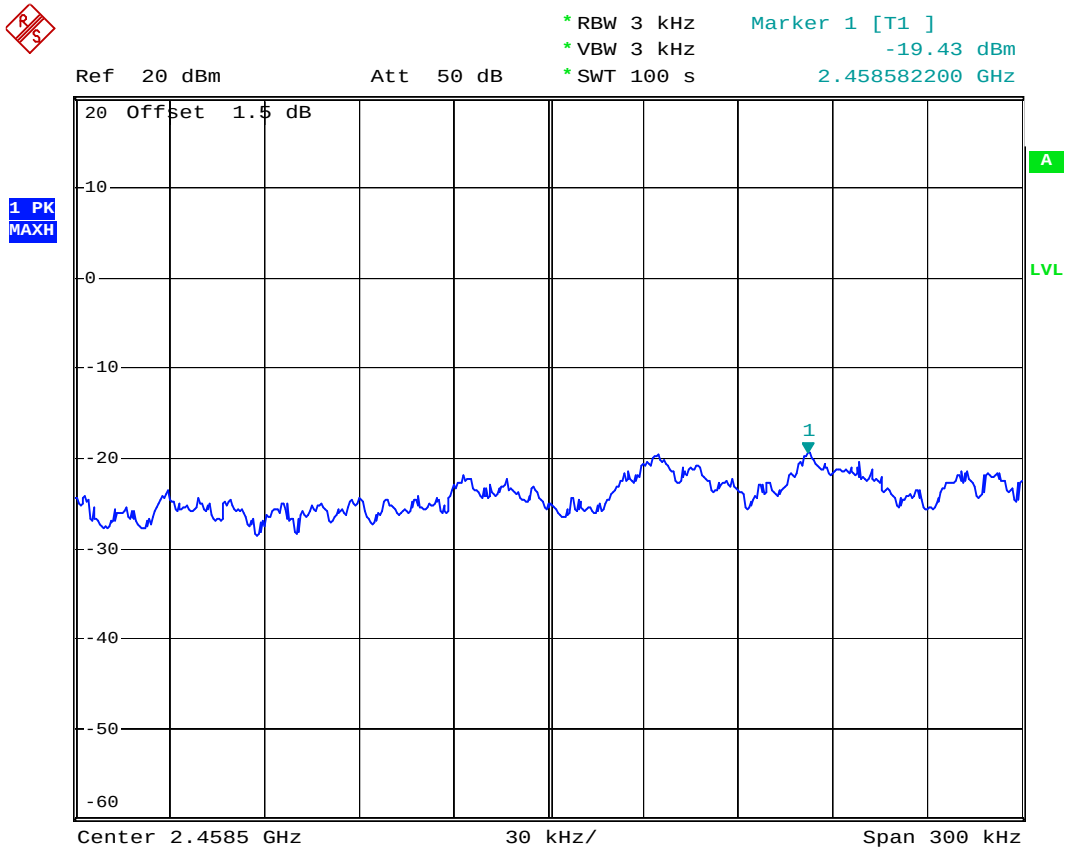
Date: 14.MAR.2011 14:02:50

Channel 06 (2437MHz)



Date: 14.MAR.2011 14:04:17

Channel 11 (2462MHz)

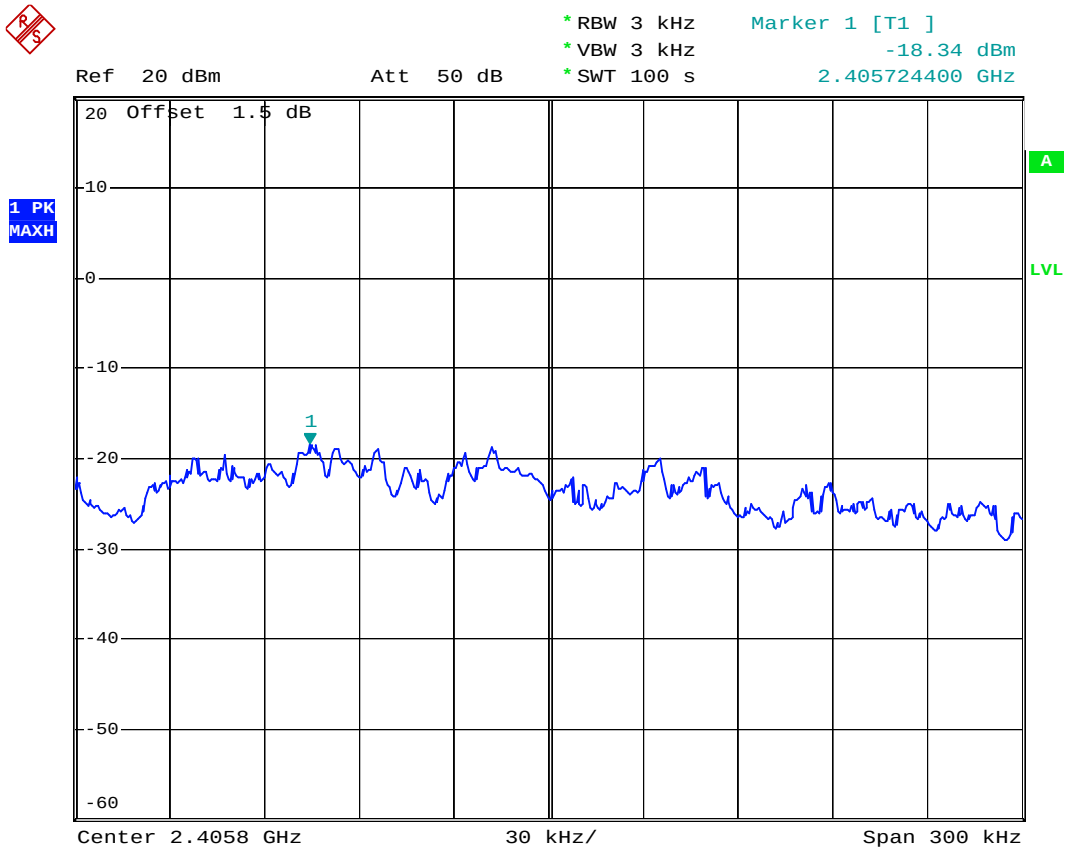


Date: 14.MAR.2011 14:05:33

Chain 1

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
01	2412	-18.34	8	Pass
06	2437	-18.69	8	Pass
11	2462	-19.10	8	Pass

Channel 01 (2412MHz)

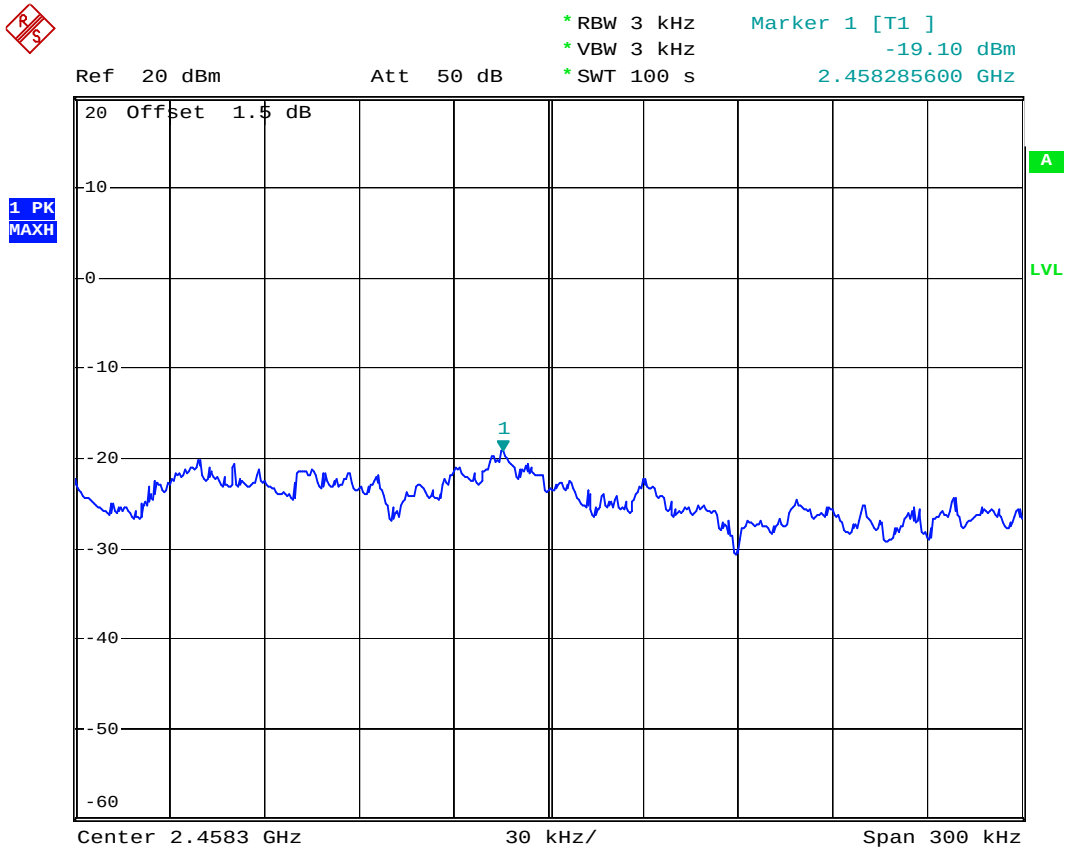


Date: 14.MAR.2011 14:26:36

Channel 06 (2437MHz)

Date: 14.MAR.2011 14:27:48

Channel 11 (2462MHz)

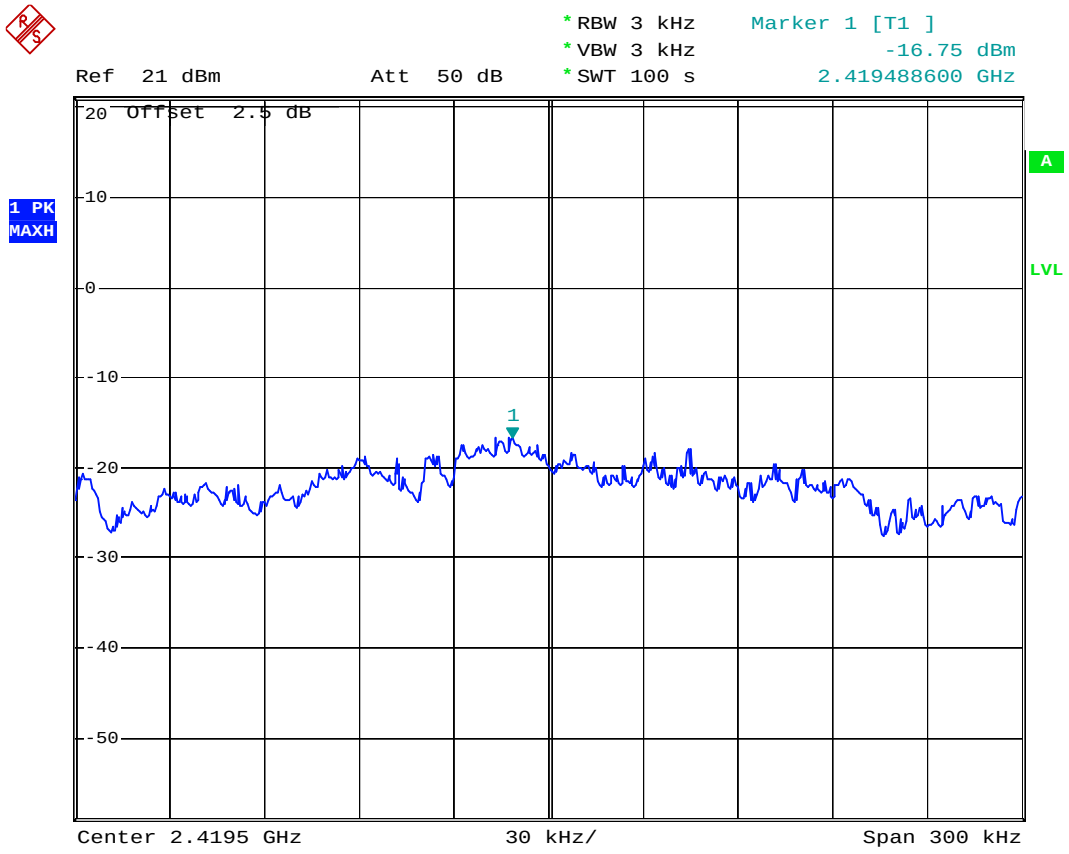


Date: 14.MAR.2011 14:28:51

Chain 0+ Chain 1

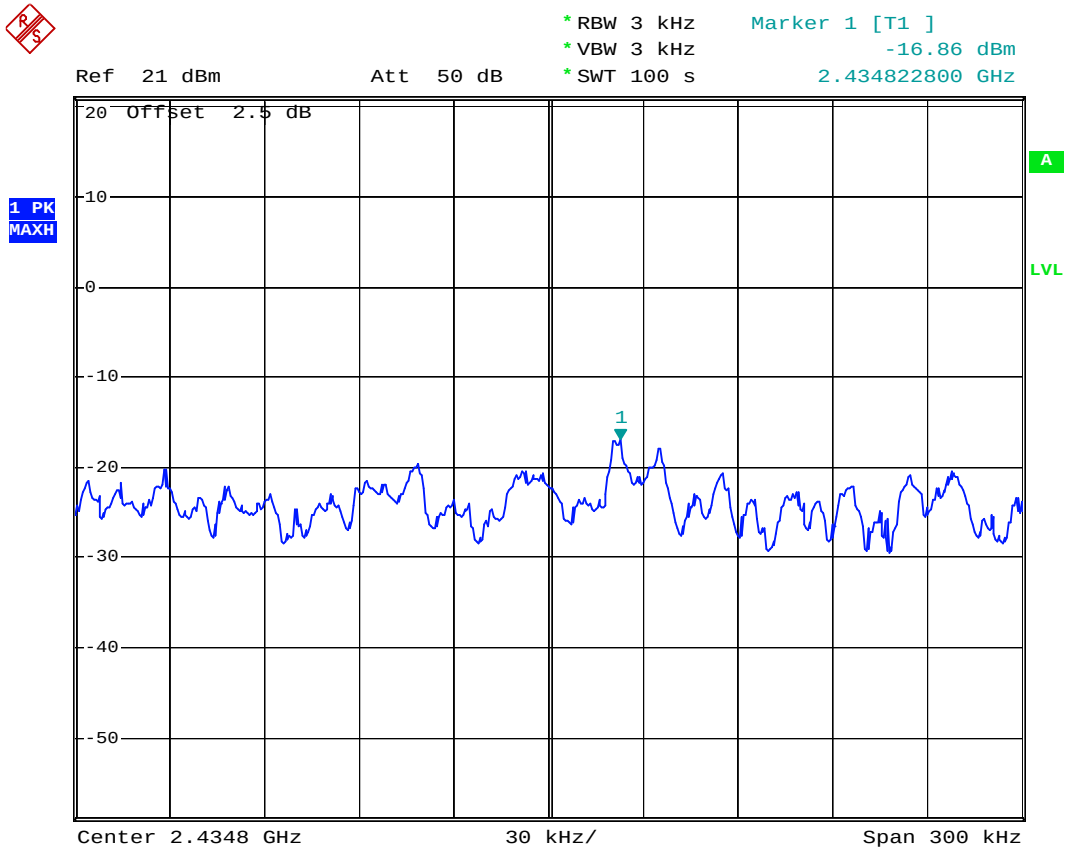
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
01	2412	-16.75	8	Pass
06	2437	-16.86	8	Pass
11	2462	-17.15	8	Pass

Channel 01 (2412MHz)



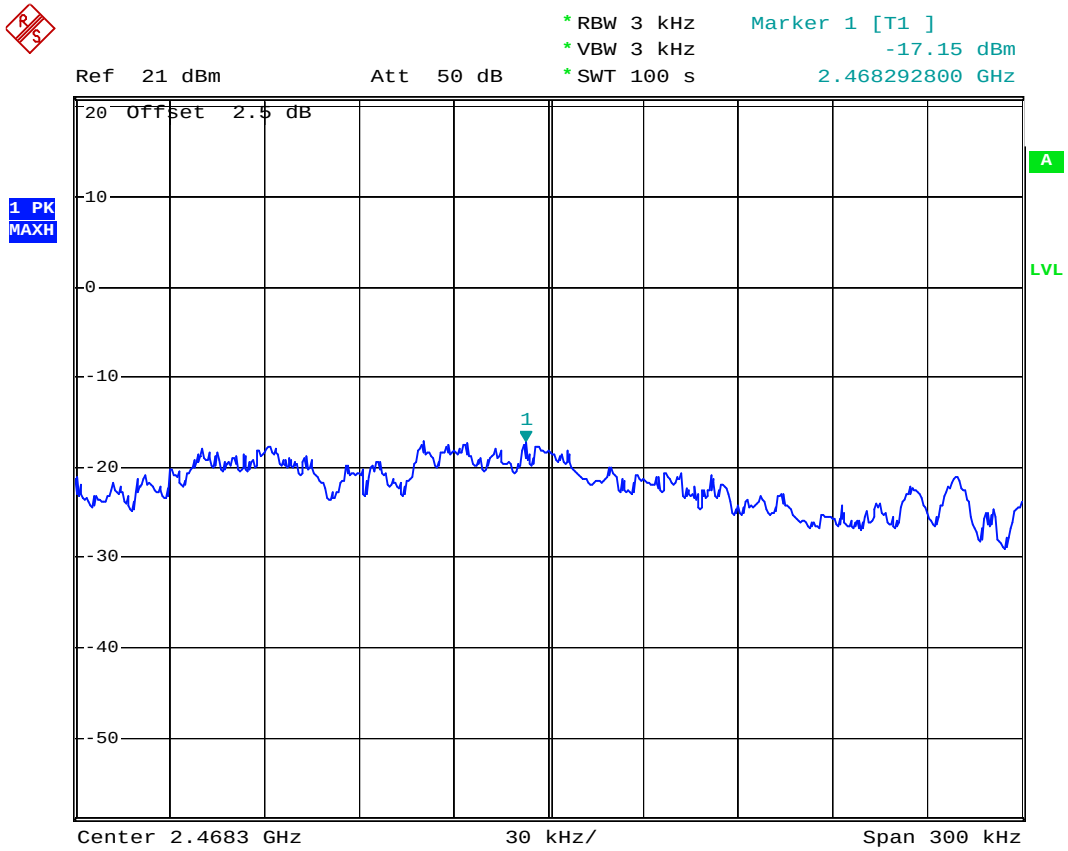
Date: 14.MAR.2011 16:47:09

Channel 06 (2437MHz)



Date: 14.MAR.2011 16:48:42

Channel 11 (2462MHz)



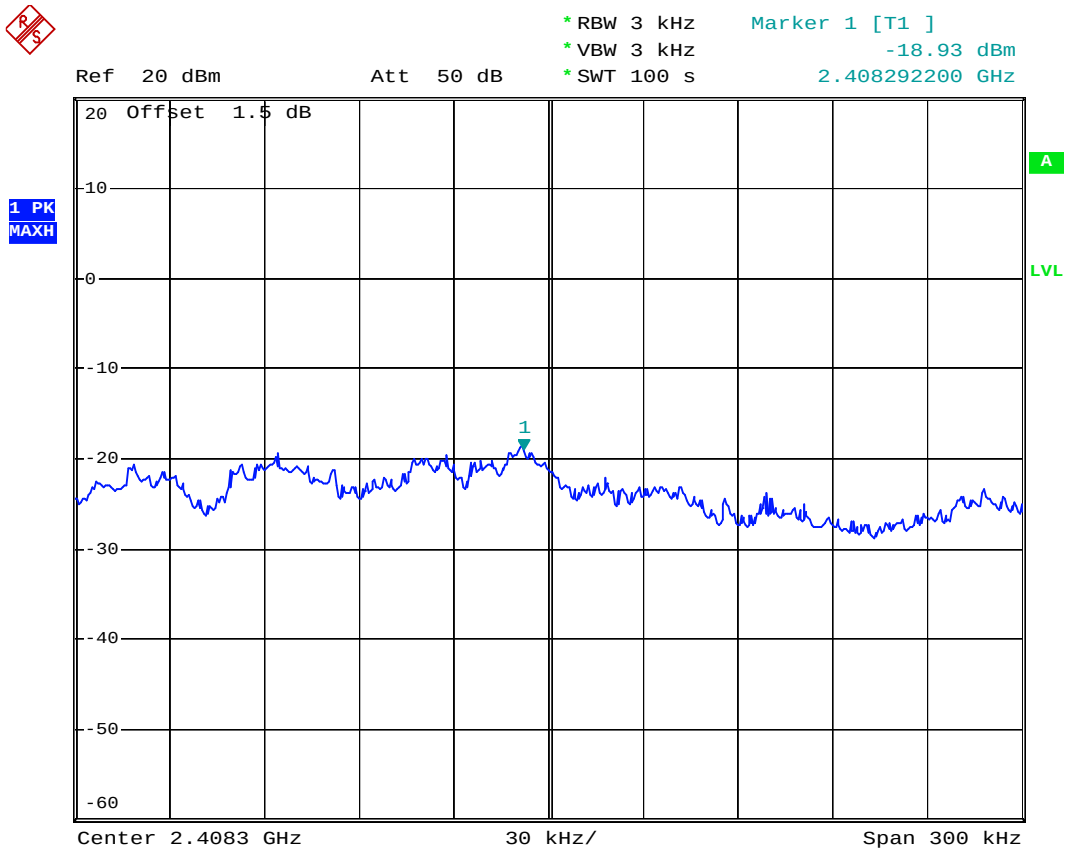
Date: 14.MAR.2011 16:50:12

Test Item	Power Spectral Density
Test Mode	Transmit by 802.11n (20MHz)
Test Date	2011-03-14

Chain 0

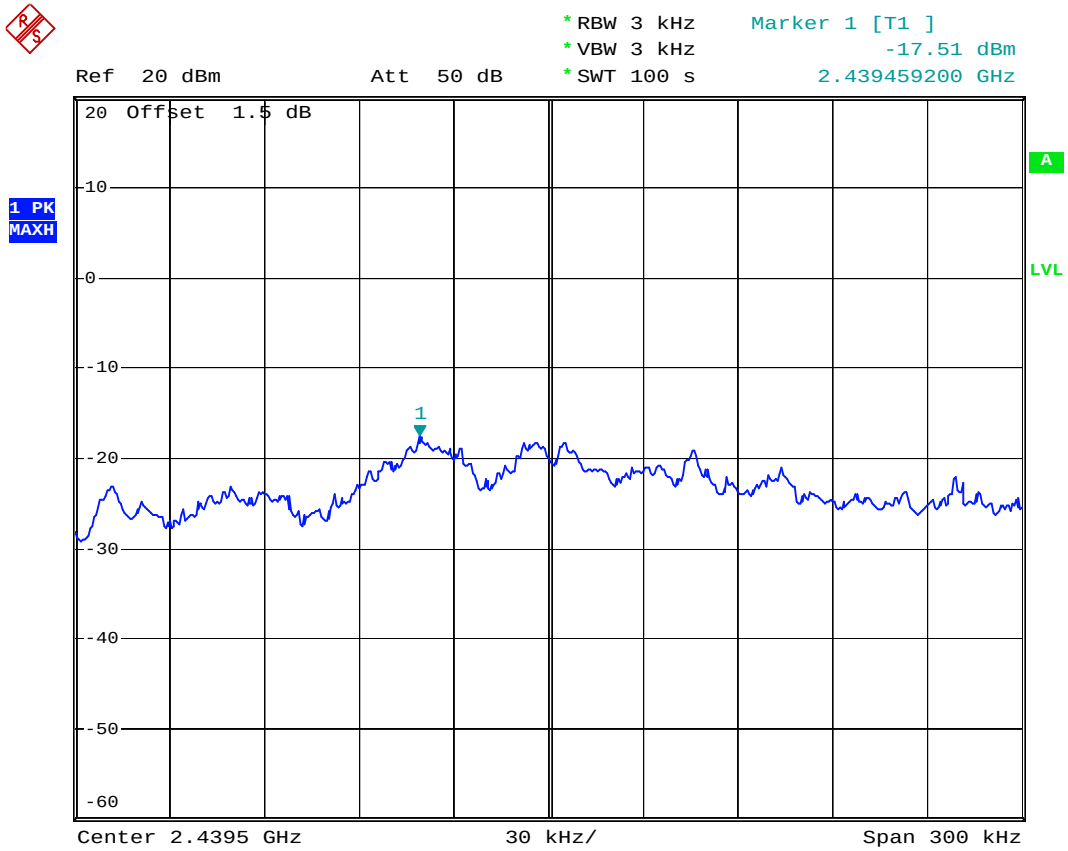
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
01	2412	-18.93	8	Pass
06	2437	-17.51	8	Pass
11	2462	-17.83	8	Pass

Channel 01 (2412MHz)



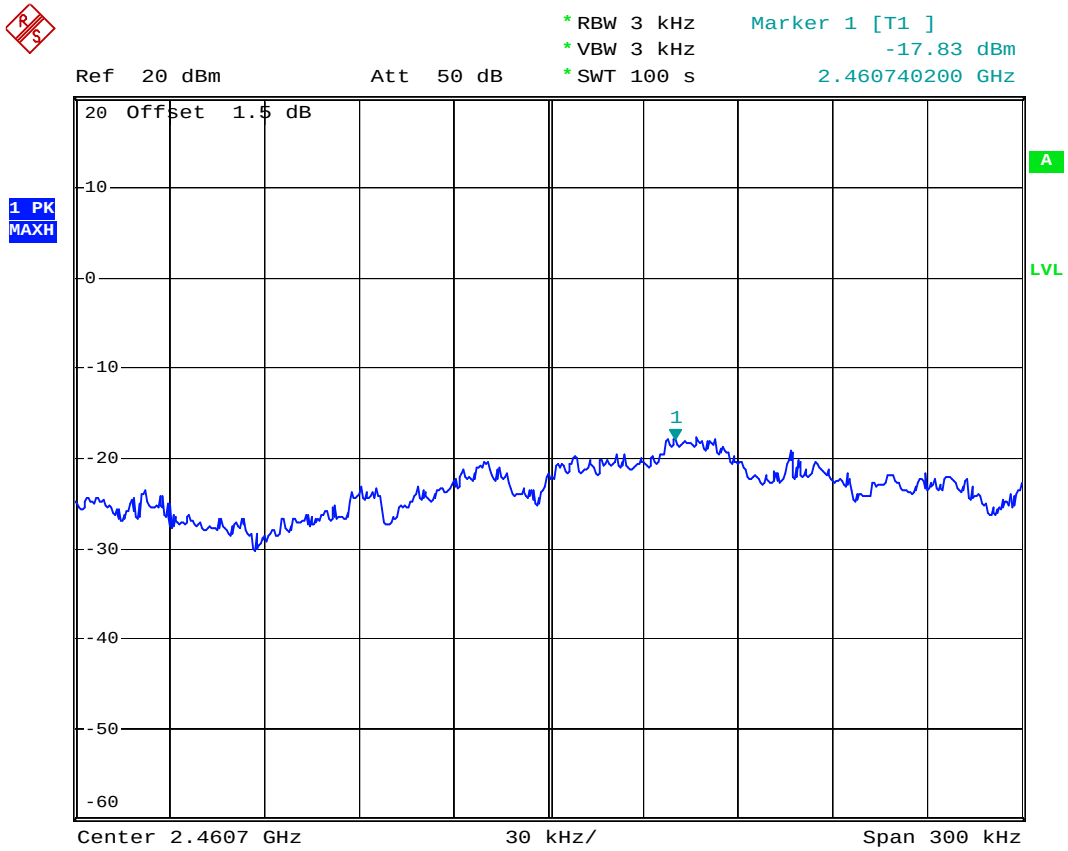
Date: 14.MAR.2011 14:11:08

Channel 06 (2437MHz)



Date: 14.MAR.2011 14:12:29

Channel 11 (2462MHz)

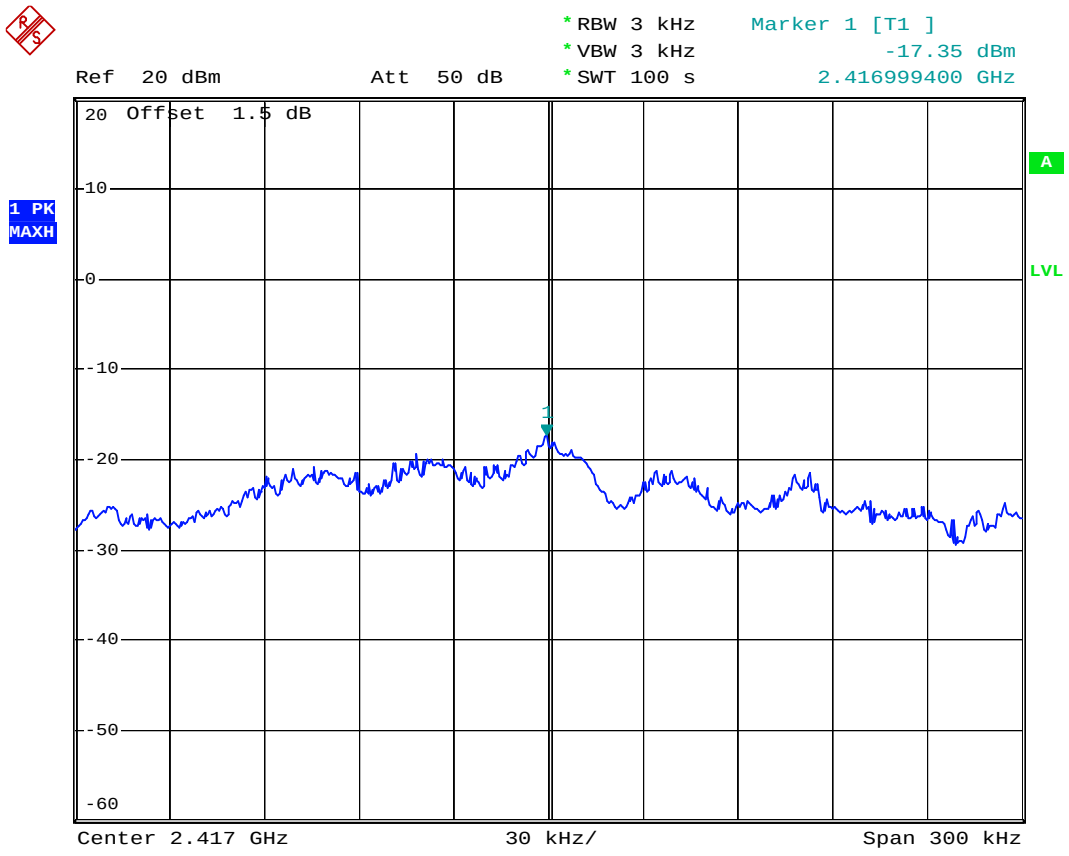


Date: 14.MAR.2011 14:14:02

Chain 1

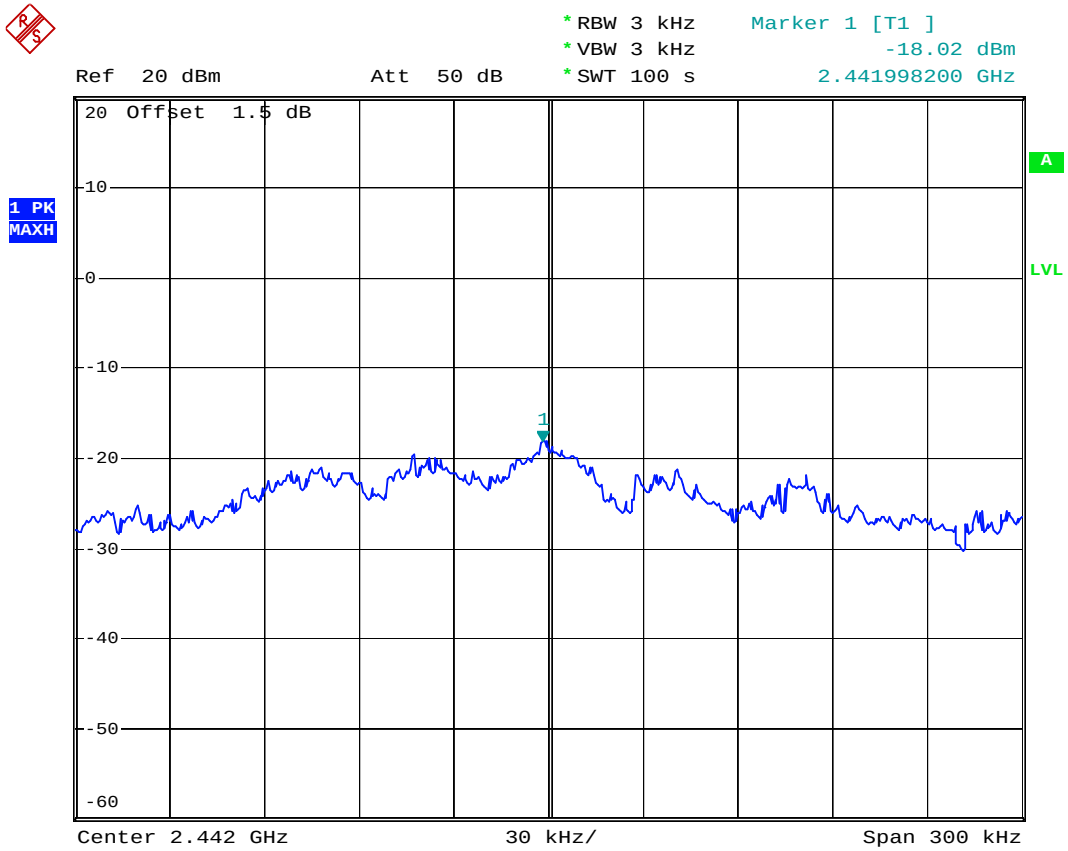
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
01	2412	-17.35	8	Pass
06	2437	-18.02	8	Pass
11	2462	-19.19	8	Pass

Channel 01 (2412MHz)



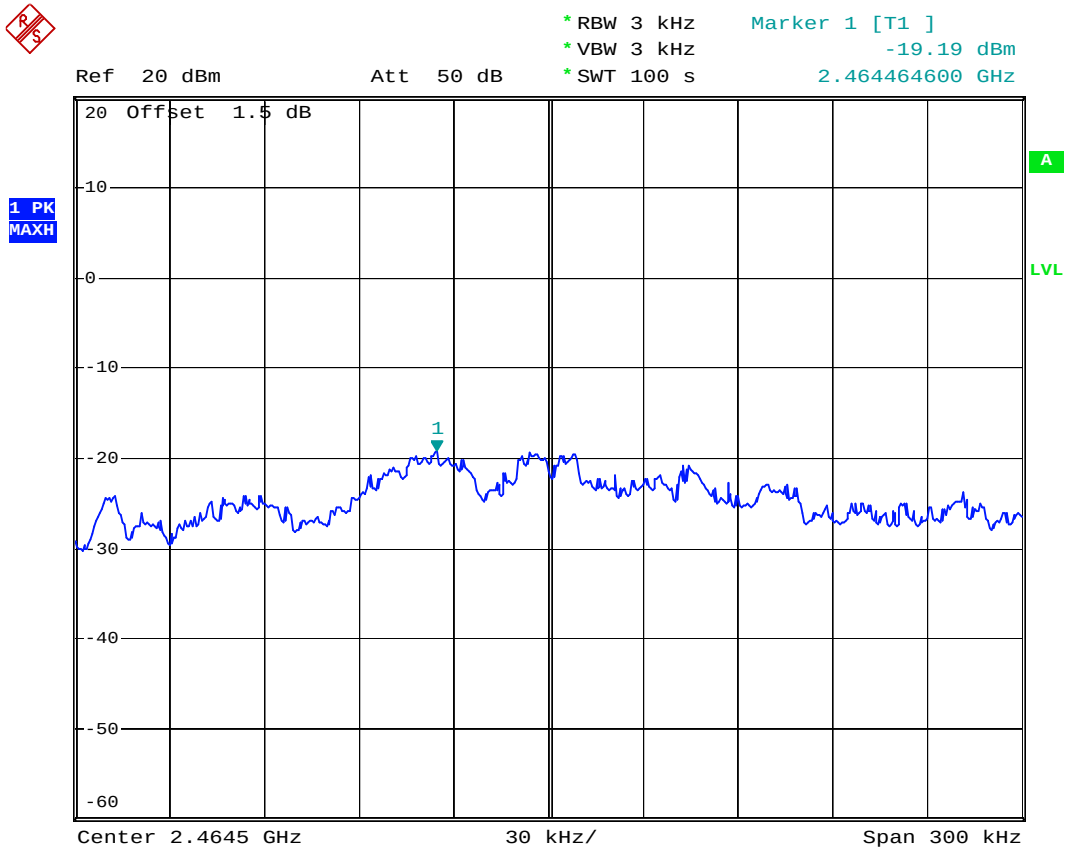
Date: 14.MAR.2011 14:30:06

Channel 06 (2437MHz)



Date: 14.MAR.2011 14:31:18

Channel 11 (2462MHz)

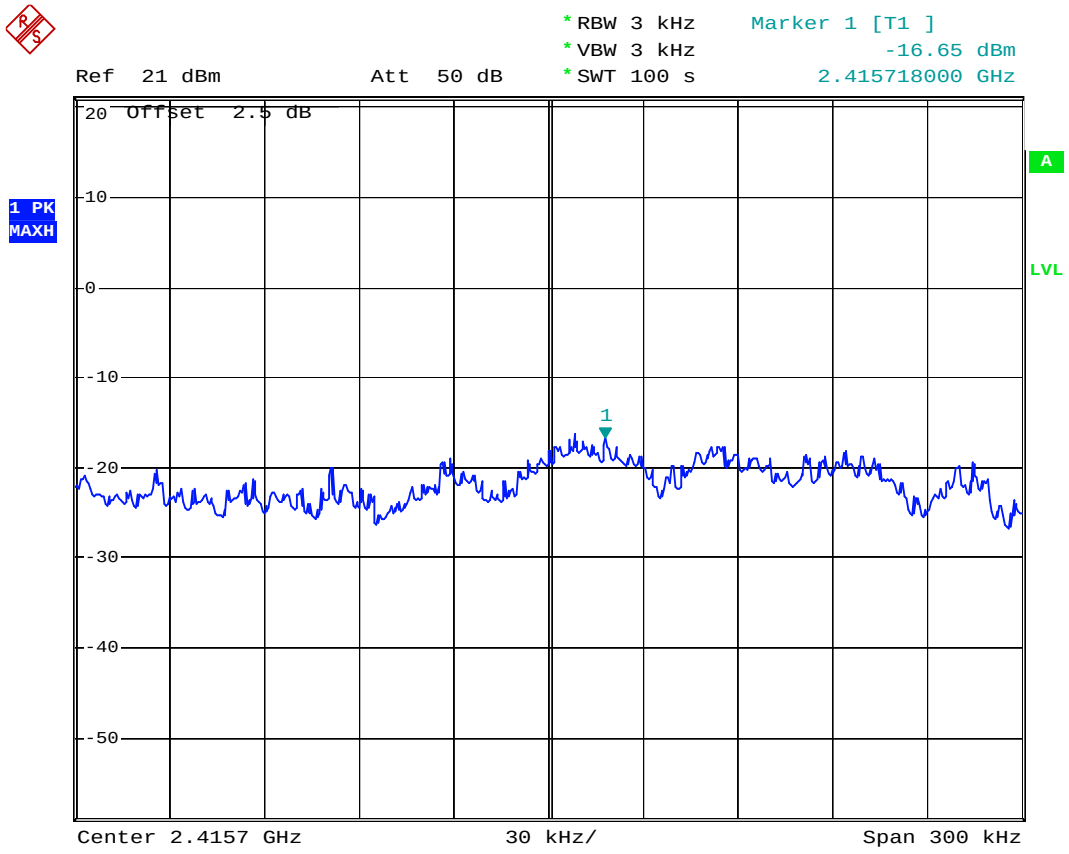


Date: 14.MAR.2011 14:32:18

Chain 0+Chain 1

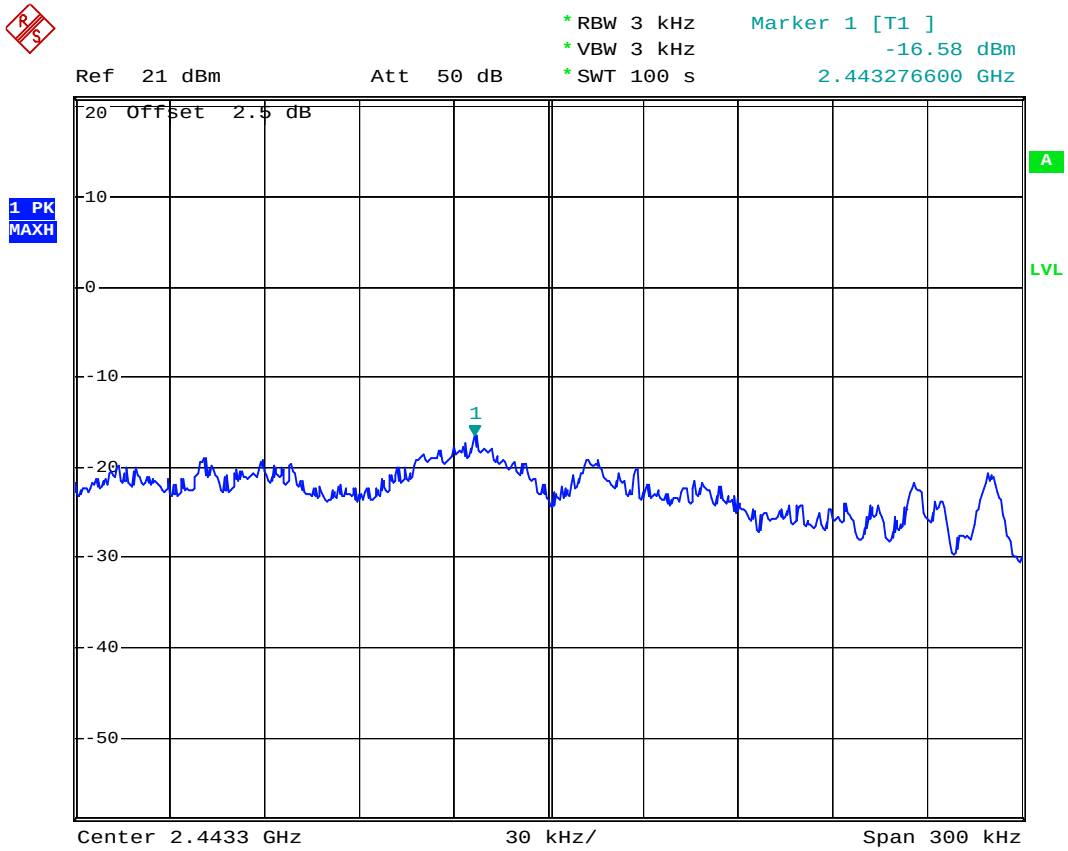
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
03	2412	-16.65	8	Pass
06	2437	-16.58	8	Pass
09	2462	-15.49	8	Pass

Channel 01 (2412MHz)



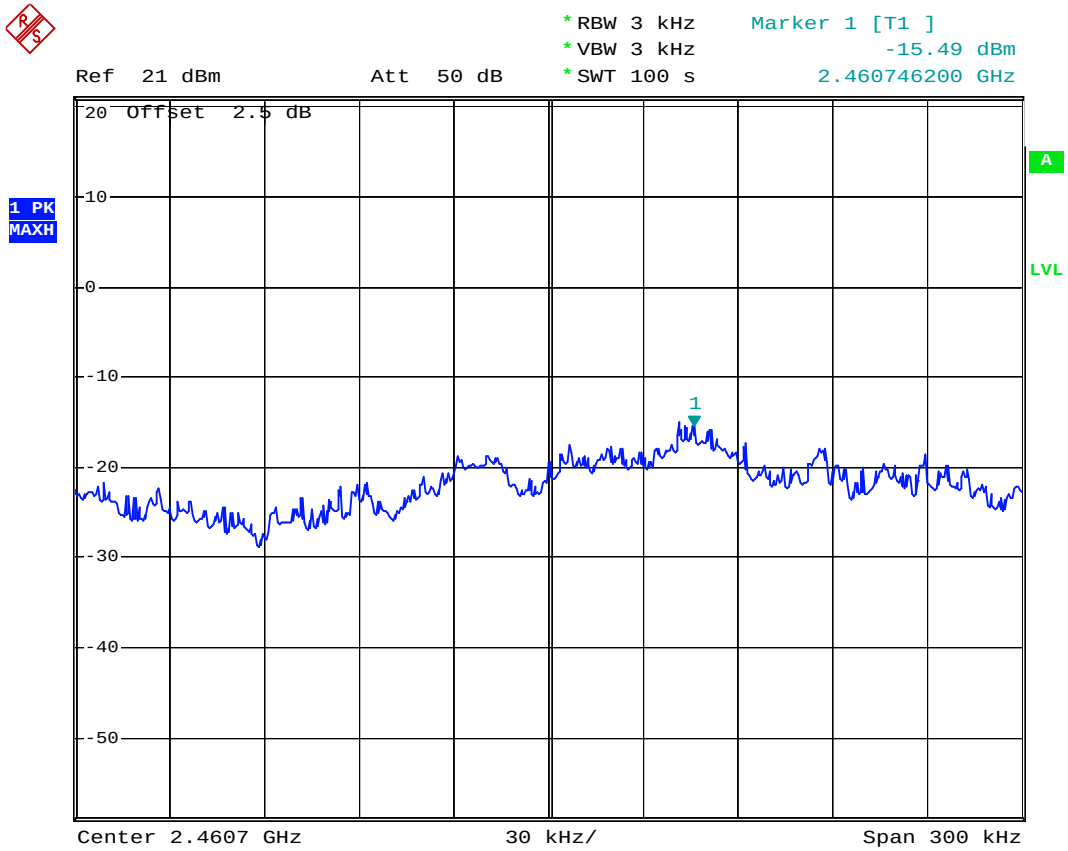
Date: 14.MAR.2011 16:53:24

Channel 06 (2437MHz)



Date: 14.MAR.2011 16:54:43

Channel 11 (2462MHz)



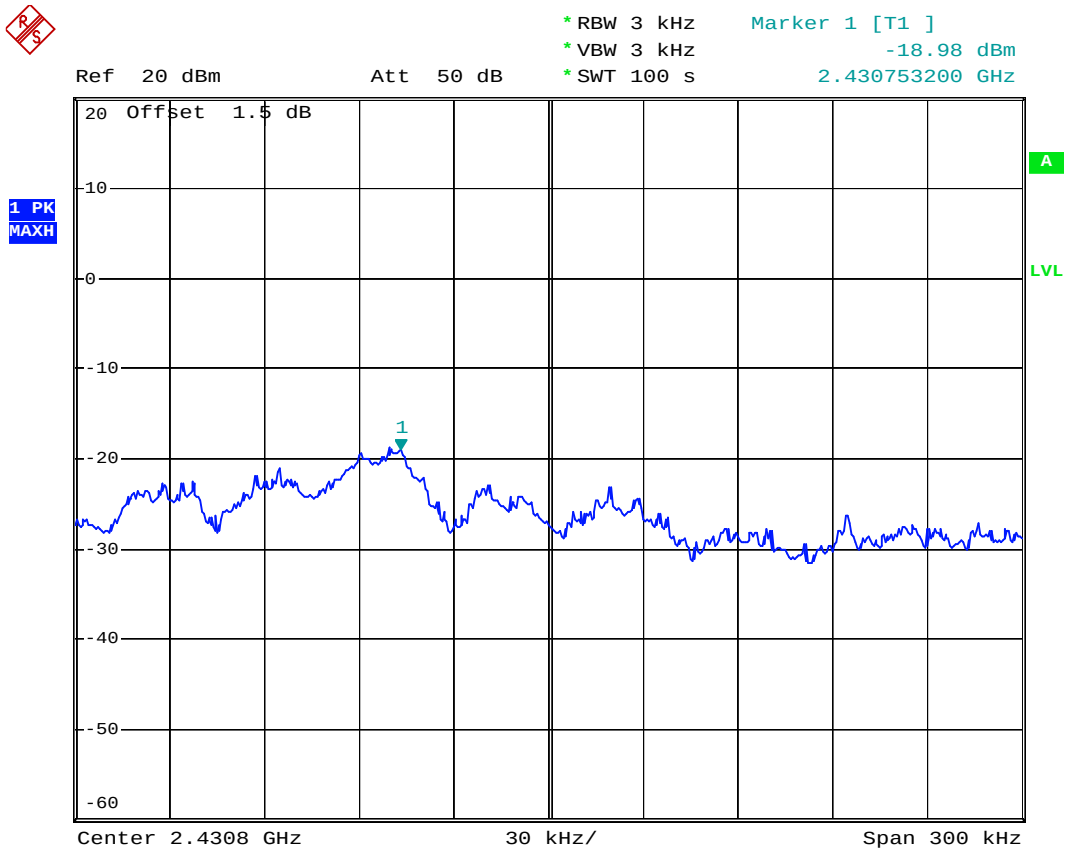
Date: 14.MAR.2011 16:55:56

Test Item	Power Spectral Density
Test Mode	Transmit by 802.11n (40MHz)
Test Date	2011-03-14

Chain 0

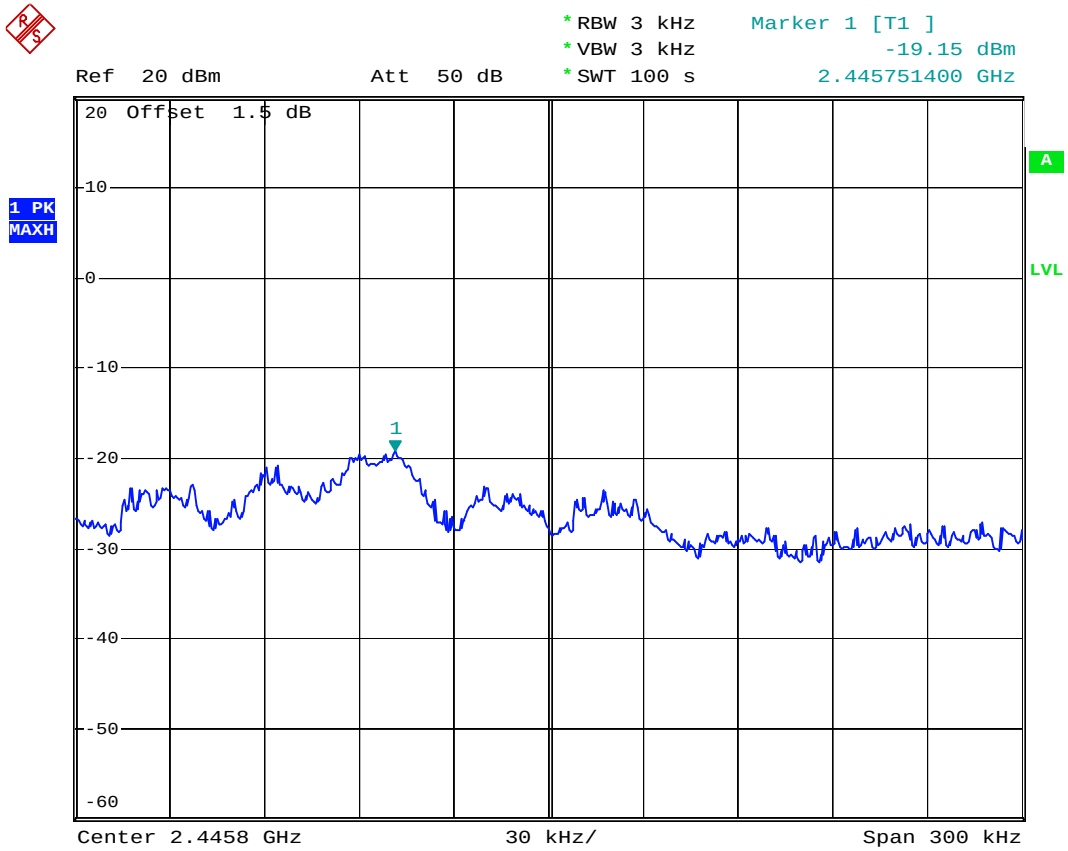
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
03	2422	-18.98	8	Pass
06	2437	-19.15	8	Pass
09	2452	-19.37	8	Pass

Channel 03 (2422MHz)



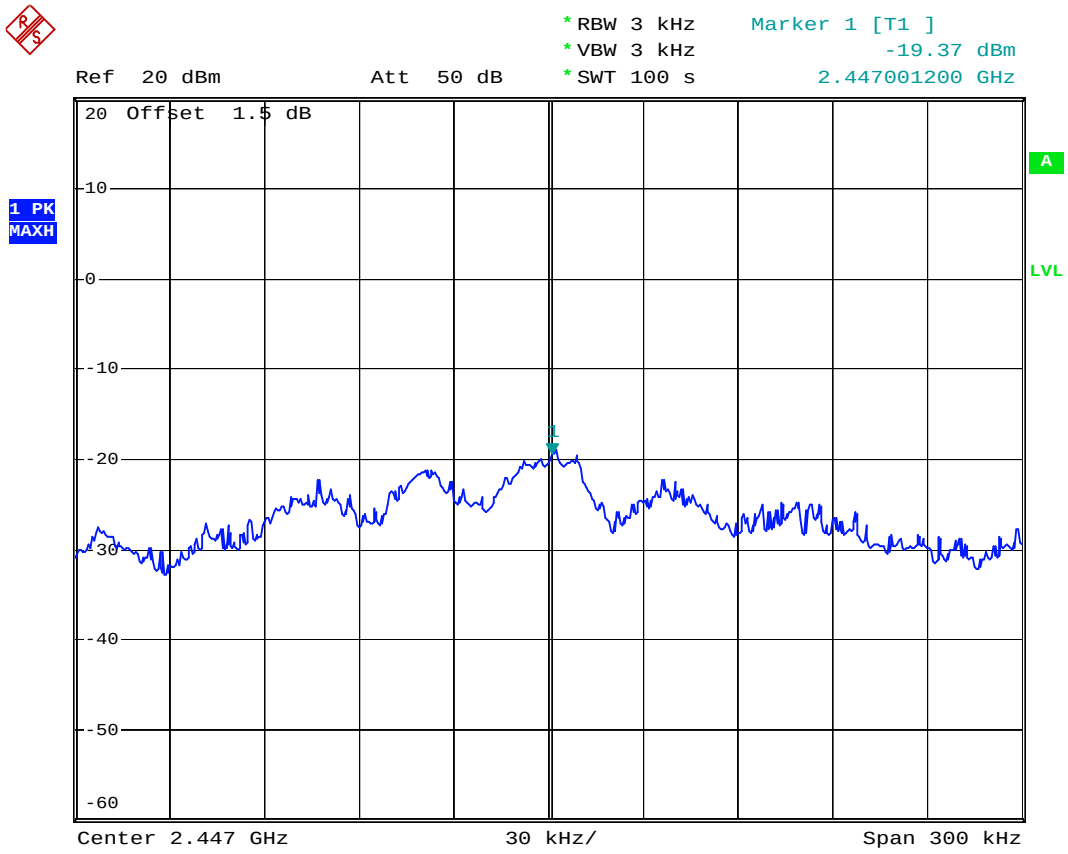
Date: 14.MAR.2011 14:15:33

Channel 06 (2437MHz)



Date: 14.MAR.2011 14:18:11

Channel 09 (2452MHz)

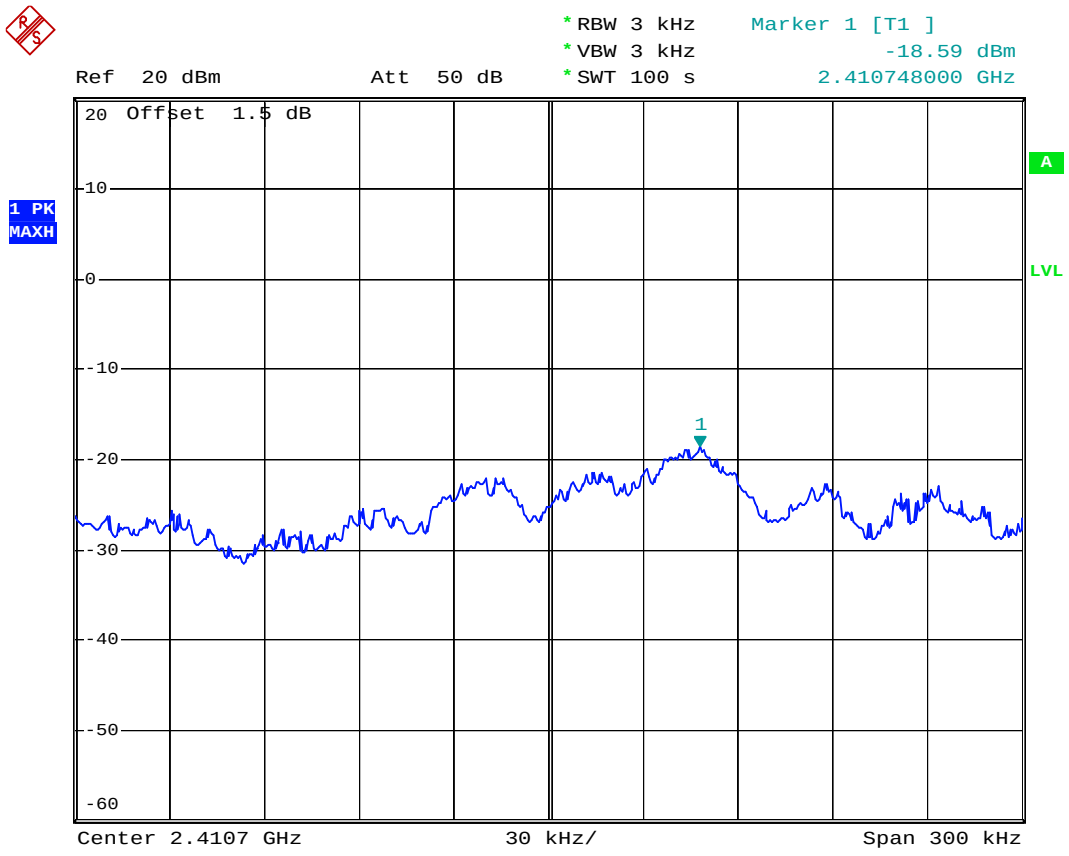


Date: 14.MAR.2011 14:19:16

Chain 1

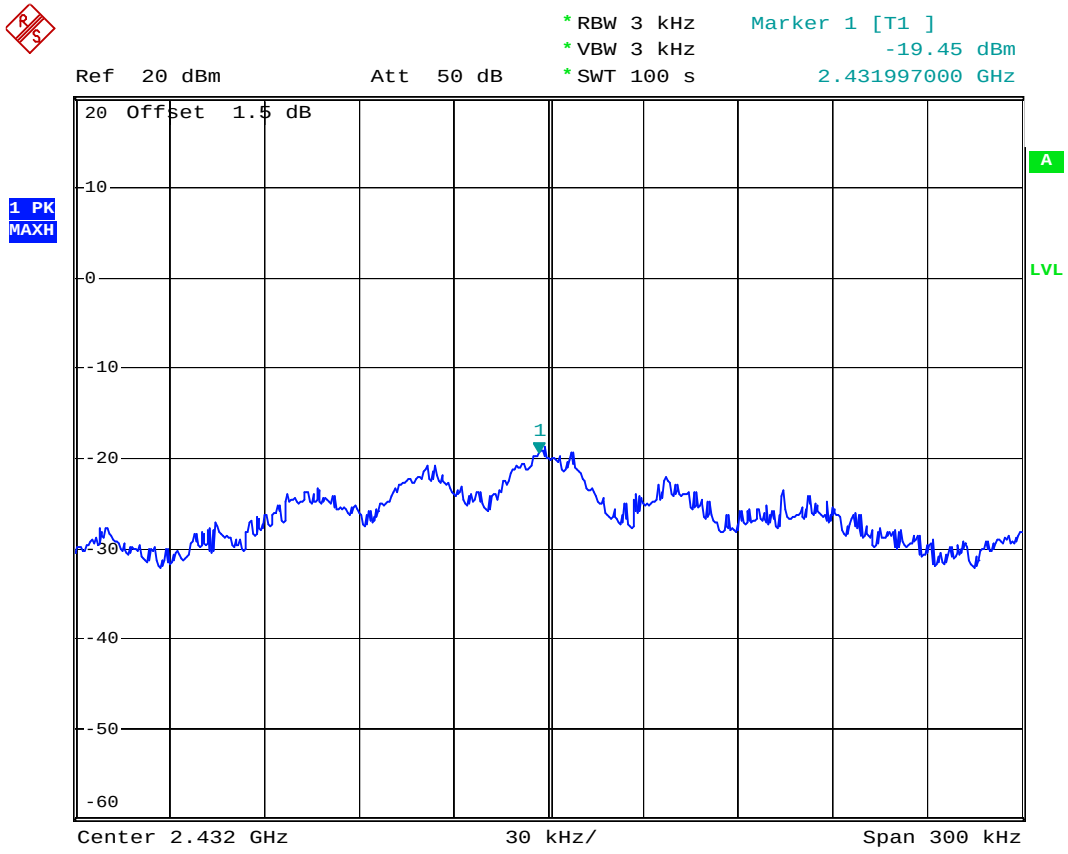
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
03	2422	-18.59	8	Pass
06	2437	-19.45	8	Pass
09	2452	-20.22	8	Pass

Channel 03 (2422MHz)



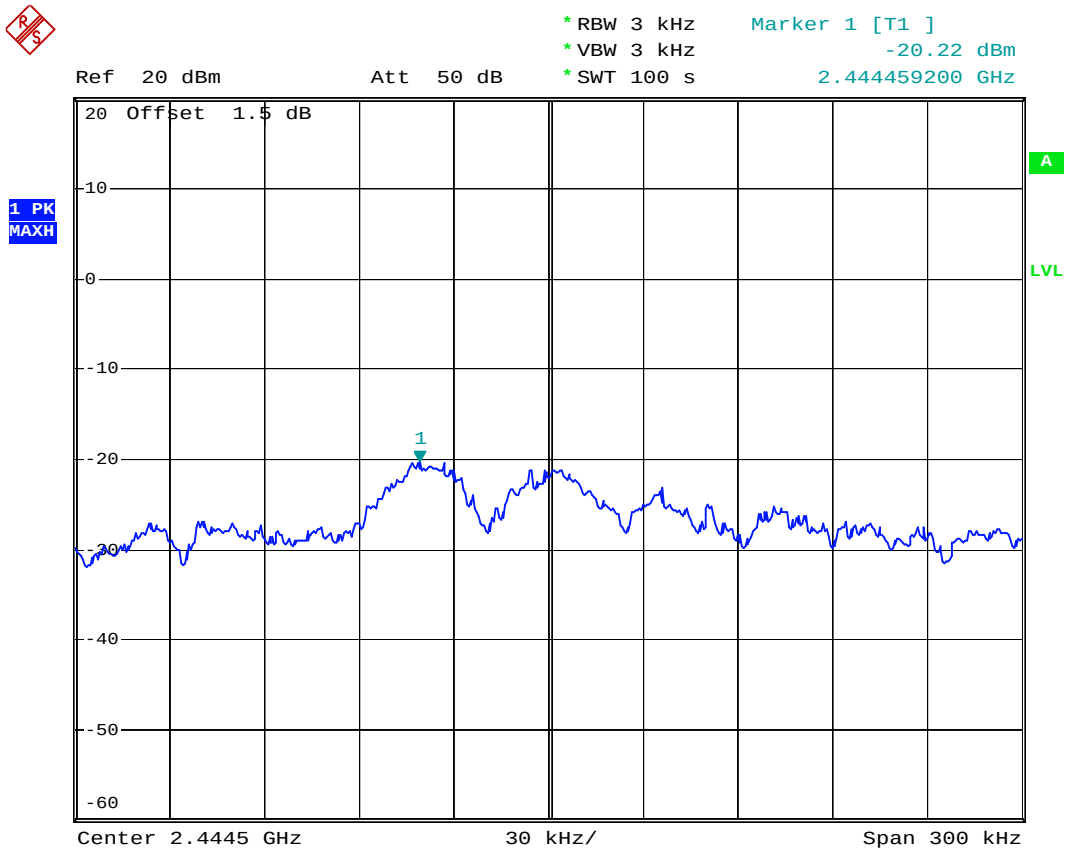
Date: 14.MAR.2011 14:22:45

Channel 06 (2437MHz)



Date: 14.MAR.2011 14:23:44

Channel 09 (2452MHz)

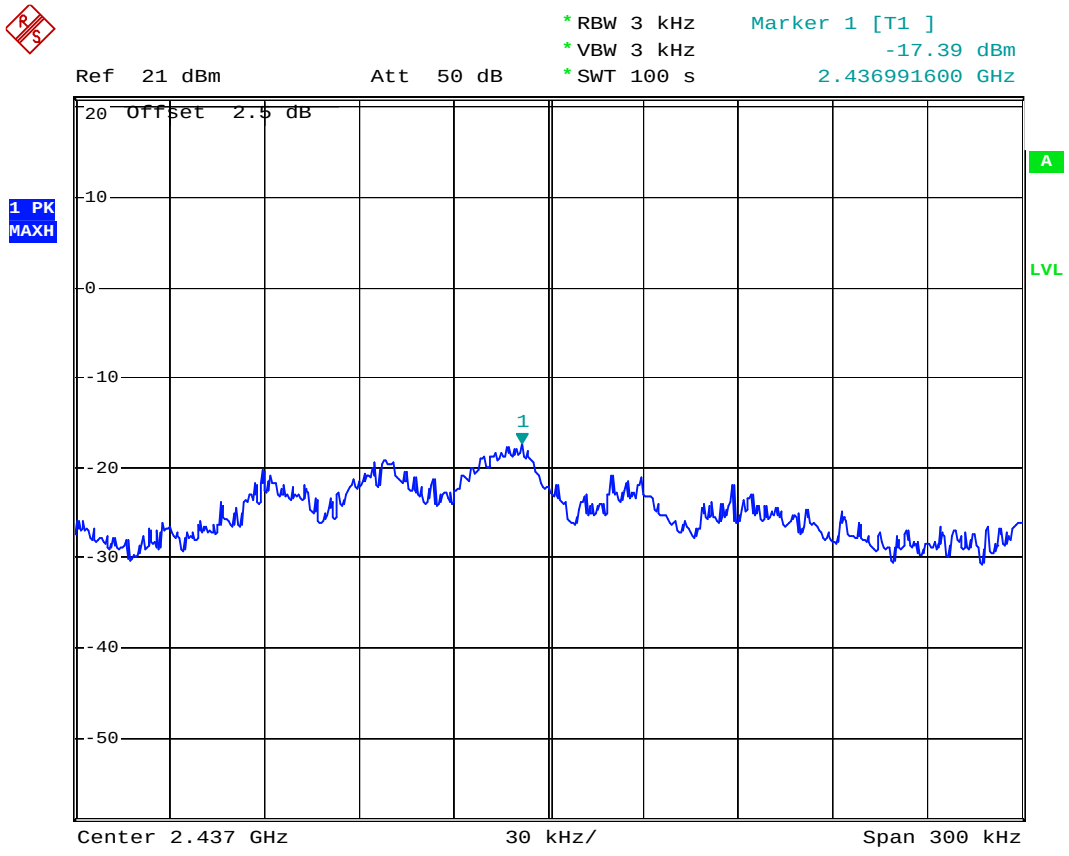


Date: 14.MAR.2011 14:24:54

Chain 0+Chain 1

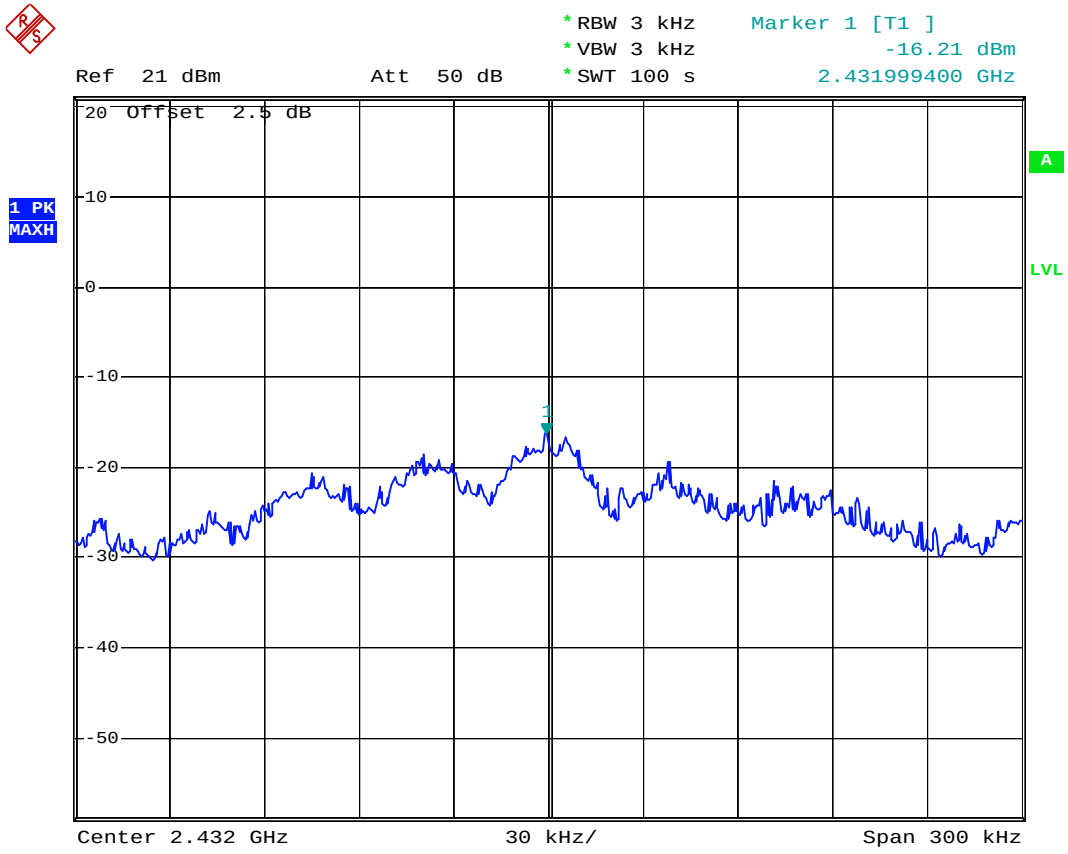
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
03	2422	-17.39	8	Pass
06	2437	-16.21	8	Pass
09	2452	-17.82	8	Pass

Channel 01 (2412MHz)



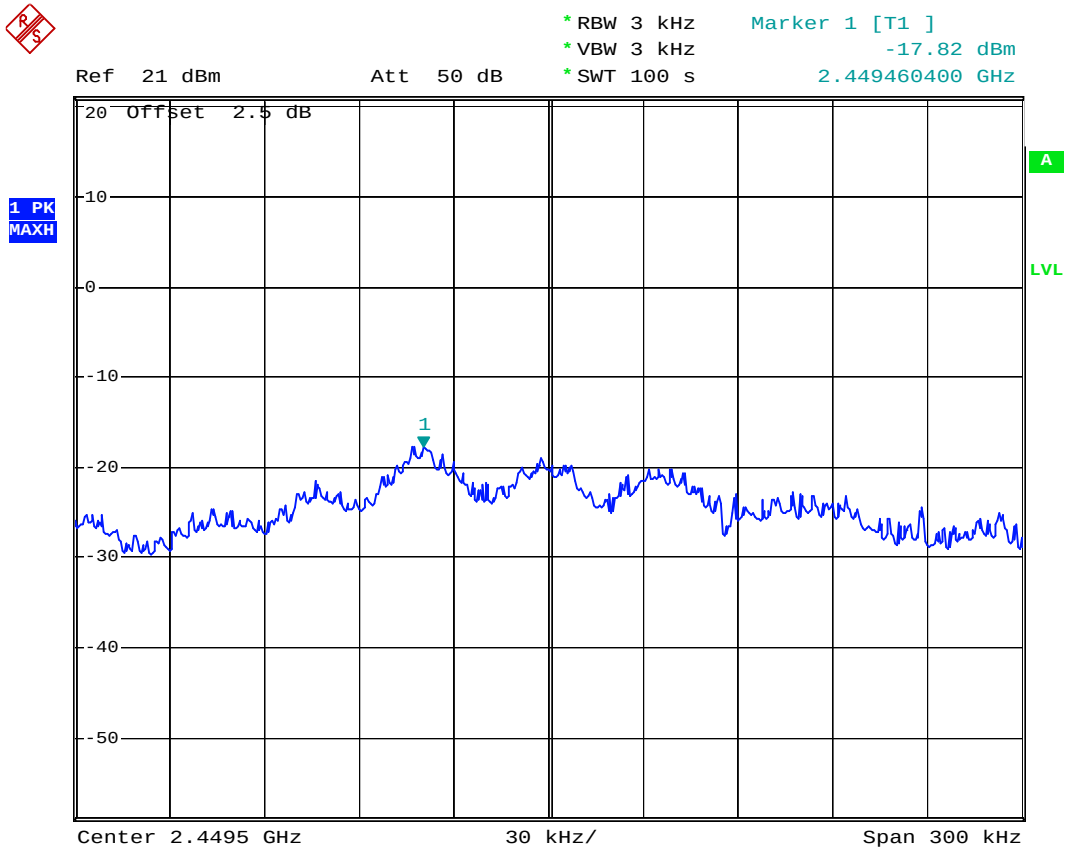
Date: 14.MAR.2011 17:00:25

Channel 06 (2437MHz)



Date: 14.MAR.2011 17:01:50

Channel 11 (2462MHz)



Date: 14.MAR.2011 17:03:00