

FCC ID:WWMRN401XV2

# FCC PART 15C TEST REPORT FOR CERTIFICATION On Behalf of

Proware Technologies Co., Ltd.

150Mbps Wireless Lite-N Router

Model No.: PW-RN401D

FCC ID: WWMRN401XV2

Prepared for: Proware Technologies Co., Ltd.

2nd F1 East Wing, South Section, Factory Building 24, Science & Technology Park, Shennan Rd, Nanshan

District, Shenzhen

Prepared By: Audix Technology (Shenzhen) Co., Ltd.

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Report Number : ACS-F11067

Date of Test : Mar.10~23, 2011

Date of Report : Mar.23, 2011



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## **TEST REPORT CERTIFICATION**

Applicant : Proware Technologies Co., Ltd.

Manufacturer : Proware Technologies Co., Ltd.

EUT Description : 150Mbps Wireless Lite-N Router

FCC ID : WWMRN401XV2

(A) MODEL NO. : PW-RN401D

(B) SERIAL NO. : N/A

(C) POWER SUPPLY: DC 9V From Adapter Input

AC 230V/50Hz

(D) TEST VOLTAGE: DC 9V from adapter input AC 230V/50Hz

Tested for comply with:

FCC Rules and Regulations Part 15 Subpart C: 2008

Test procedure used: ANSI C63.10:2009

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to confirm comply with all the FCC Part 15 Subpart C requirements.

The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC and IC requirements.

This Report is made under FCC Part 2.1075. No modifications were required during testing to bring this product into compliance.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Date of Test : _	Mar.10~23, 2011	Report of date:	Mar.23, 2011
Prepared by: _	Blove Ye / Assistant	Reviewer by :	Jamy Yay Supervisor
Approved & Au	thorized Signer :	Audix Techno	利)有限公司 plogy (Shenzhen) Co., Ltd. 複音専用章 MC Dept. Report

Ken Lu / Manager



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# 1. SUMMARY OF STANDARDS AND RESULTS

# 1.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION						
Description of Test Item	Standard	Results				
Downey Line Conducted Emission	FCC Part 15: 15.207	PASS				
Power Line Conducted Emission	ANSI C63.10: 2009	rass				
Padiated Emission	FCC Part 15: 15.209	PASS				
Radiated Emission	ANSI C63.10: 2009	PASS				
Dand Edan Canadiana	FCC Part 15: 15.247	PASS				
Band Edge Compliance	ANSI C63.10: 2009	PASS				
Conducted annuious emissions	FCC Part 15: 15.247	PASS				
Conducted spurious emissions	ANSI C63.10: 2009	PASS				
CID Don don't like	FCC Part 15: 15.247					
6dB Bandwidth	ANSI C63.10: 2009	PASS				
Deale Ordered Decrees	FCC Part 15: 15.247	PASS				
Peak Output Power	ANSI C63.10: 2009	PASS				
Decree Constant Decree	FCC Part 15: 15.247	DAGG				
Power Spectral Density	ANSI C63.10: 2009	PASS				
Antenna requirement	FCC Part 15: 15.203	PASS				



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## 2. GENERAL INFORMATION

2.1.Description of Device (EUT)

Product Name : 150Mbps Wireless Lite-N Router

Model Number : PW-RN401D

FCC ID : WWMRN401XV2

Operation Frequency : IEEE 802.11b: 2412MHz—2462MHz

IEEE 802.11g: 2412MHz—2462MHz

IEEE802.11n HT20: 2412MHz—2462MHz IEEE802.11n HT40: 2422MHz—2452MHz

Channel Number : IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels

IEEE 802.11n HT40: 7Channels

Modulation Technology: IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK)

IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM,

QPSK,BPSK)

Antenna Assembly

Gain

One Dipole Antenna, One integrated PCB antenna, SIMO

1Tx2R, 5dBi Peak gain for dipole antenna

Note: The integrated PCB antenna only used for receive.

Applicant : Proware Technologies Co., Ltd.

2nd F1 East Wing, South Section, Factory Building 24, Science & Technology Park, Shennan Rd, Nanshan

District, Shenzhen

Manufacturer : Proware Technologies Co., Ltd.

2nd F1 East Wing, South Section, Factory Building 24, Science & Technology Park, Shennan Rd, Nanshan

District, Shenzhen

Adapter : Manufacture: VASATA

M/N: P060060-2B1

Unshielded, Undetachable, 1.5m

Date of Test : Mar.10~23, 2011

Date of Receipt : Feb.27, 2011

Sample Type : Prototype production



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## 2.2.Test Information

A special test software was used to control EUT work in Continuous TX mode(100% duty cycle), and select test channel, wireless mode and data rate.

Tested mode, channel	, and data rate informa	ation	
Mode	data rate	Channel	Frequency
	(Mpbs)(see Note)		(MHz)
IEEE 802.11b	11	Low:CH1	2412
	11	Middle: CH6	2437
	11	High: CH11	2462
IEEE 802.11g	54	Low:CH1	2412
	54	Middle: CH6	2437
	54	High: CH11	2462
IEEE 802.11n HT20	6.5	Low:CH1	2412
	6.5	Middle: CH6	2437
	6.5	High: CH11	2462
IEEE 802.11n HT40	13.5	Low:CH1	2422
	13.5	Middle: CH4	2437
	13.5	High: CH7	2452

Note1: According exploratory test, EUT will have maximum PK output power in those data rate, so those data rate were used for all test.

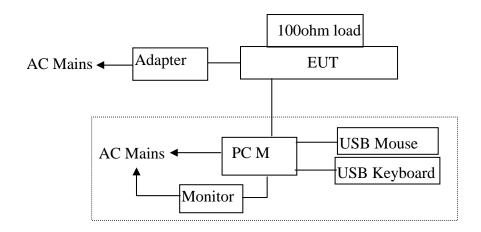


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# 2.3. Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type		
1	1 Personal	Test PC M	DELL	Studio 540	224XK2X	☑FCC DoC ☑BSMI ID:R33002		
		Power Cord: Unshielded, Detachable, 1.8m Display Card: HD3450 (DVI+VGA+HDMI)						

# 2.4. Block diagram of connection between the EUT and simulators



PC M run test software to control EUT work in Tx mode



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## 2.5. Test Facility

Site Description

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.

No. 6, Ke Feng Rd., 52 Block, Shenzhen

Science & Industrial Park, Nantou, Shenzhen, Guangdong, China

3m Anechoic Chamber : Mar.31, 2009 File on Federal

Communication Commission Registration Number: 90454

3m & 10m Anechoic Chamber : Dec. 30, 2009 File on Federal

Communication Commission Registration Number: 794232

EMC Lab. : Certificated by Industry Canada

Registration Number: IC 5183A-1

Jul. 03, 2009

: Accredited by DATech, German

Registration Number: DAT-P-091/99-01

Feb. 02, 2009

Accredited by NVLAP, USA NVLAP Code: 200372-0

Apr. 01, 2010

## 2.6. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty		
Uncertainty for Conduction emission test	3.64 dB (9kHz to 150kHz		
in No. 1 Conduction	3.22 dB(150kHz to 30MHz)		
Uncertainty for Radiation Emission test	4.20 dB (Polarize: V)		
in 3m chamber	4.66 dB (Polarize: H)		
Uncertainty for Radiated Spurious	2.70 dB(Bilog antenna 30M~1000MHz)		
Emission test in RF chamber	2.27 dB(Horn antenna 1000M~12750MHz)		
Uncertainty for Conduction Spurious emission test	2.12 dB		
Uncertainty for Output power test	0.97 dB		
Uncertainty for Power density test	2.21 dB		
Uncertainty for Frequency range test	$1x10^{-9}$		
Uncertainty for Bandwidth test	$1x10^{-9}$		
Uncertainty for DC power test	0.038 %		
Uncertainty for test site temperature and	0.3℃		
humidity	2%		



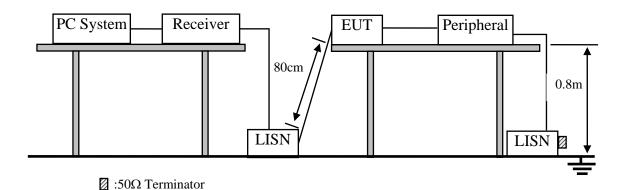
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## 3. POWER LINE CONDUCTED EMISSION TEST

## 3.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Nov.05, 10	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Nov.05, 10	1 Year
3.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.08, 10	1 Year
4.	Terminator	Hubersuhner	$50\Omega$	No. 1	May.08, 10	1 Year
5.	Terminator	Hubersuhner	$50\Omega$	No. 2	May.08, 10	1 Year
6.	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.08, 10	1Year
7.	Coaxial Switch	Anritsu	MP59B	M55367	May.08, 10	1 Year
8.	Passive Probe	Rohde & Schwarz	ESH2-Z3	299.7810.52	May.08, 10	1 Year
9.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 10	1 Year
10.	Oscilloscope	Tektronix	TDS3052B	B026036	May.08, 10	1 Year

## 3.2.Block Diagram of Test Setup



## 3.3. Power Line Conducted Emission Test Limits

	Maximum RF Line Voltage			
Frequency	Quasi-Peak Level	Average Level		
	$dB(\mu V)$	$dB(\mu V)$		
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*		
500kHz ~ 5MHz	56	46		
5MHz ~ 30MHz	60	50		

Notes: 1. \* Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.



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## 3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1.150Mbps Wireless Lite-N Router (EUT)

Model Number : PW-RN401D

Serial Number : N/A

3.4.2. Support Equipment: As Tested Supporting System Details, in Section 2.3.

## 3.5. Operating Condition of EUT

- 3.5.1. Setup the EUT and simulator as shown as Section 2.4.
- 3.5.2. Turned on the power of all equipment.
- 3.5.3.PC run test software to control EUT work in Tx mode.

## 3.6.Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2009 on Conducted Emission Test.

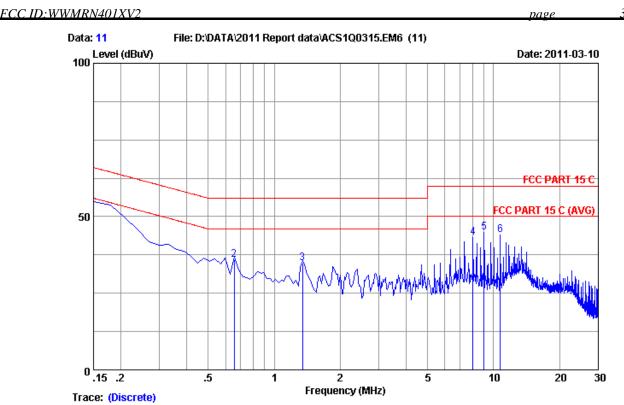
The bandwidth of test receiver (R & S ESHS10) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked.

### 3.7. Power Line Conducted Emission Test Results

**PASS.** (All emissions not reported below are too low against the prescribed limits.)





Data No

Site no :1#conduction

Dis./Ant. :\*\* 2011 ESH2-Z5 LINE

Limit :FCC PART 15 C

Env./Ins. :29.5\*C/55% Engineer :Restar

EUT :150Mbps Wireless Lite-N Router

Power Rating :DC 9V From Adapter Input AC 120V/60Hz

Test Mode :Tx Mode

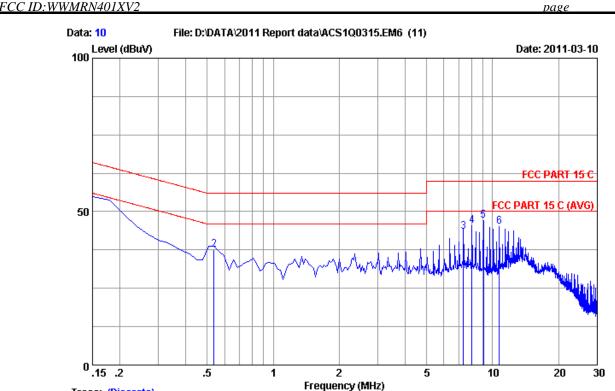
M/N:PW-RN401D

	LISN	Cable		Emissio	n		
Freq	Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)	(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
0.15000	0.21	9.88	43.75	53.84	66.00	12.16	QP
0.65745	0.23	9.89	25.70	35.82	56.00	20.18	QP
1.344	0.25	9.89	24.58	34.72	56.00	21.28	QP
8.060	0.41	9.98	32.88	43.27	60.00	16.73	QP
9.045	0.43	9.99	34.31	44.73	60.00	15.27	QP
10.717	0.47	9.99	33.65	44.11	60.00	15.89	QP
	(MHz) 0.15000 0.65745 1.344 8.060 9.045	Freq Factor (MHz) (dB) 0.15000 0.21 0.65745 0.23 1.344 0.25 8.060 0.41 9.045 0.43	Freq Factor Loss (MHz) (dB) (dB) 0.15000 0.21 9.88 0.65745 0.23 9.89 1.344 0.25 9.89 8.060 0.41 9.98 9.045 0.43 9.99	Freq Factor Loss Reading (MHz) (dB) (dB) (dBuV)  0.15000 0.21 9.88 43.75 0.65745 0.23 9.89 25.70 1.344 0.25 9.89 24.58 8.060 0.41 9.98 32.88 9.045 0.43 9.99 34.31	Freq Factor Loss Reading Level (MHz) (dB) (dB) (dBuV) (dBuV)  0.15000 0.21 9.88 43.75 53.84  0.65745 0.23 9.89 25.70 35.82  1.344 0.25 9.89 24.58 34.72  8.060 0.41 9.98 32.88 43.27  9.045 0.43 9.99 34.31 44.73	Freq Factor Loss Reading Level Limits (MHz) (dB) (dB) (dBuV) (dBuV) (dBuV)  0.15000 0.21 9.88 43.75 53.84 66.00  0.65745 0.23 9.89 25.70 35.82 56.00  1.344 0.25 9.89 24.58 34.72 56.00  8.060 0.41 9.98 32.88 43.27 60.00  9.045 0.43 9.99 34.31 44.73 60.00	Freq Factor Loss Reading Level Limits Margin (MHz) (dB) (dB) (dBuV) (dBuV) (dBuV) (dBuV) (dB)  0.15000 0.21 9.88 43.75 53.84 66.00 12.16  0.65745 0.23 9.89 25.70 35.82 56.00 20.18  1.344 0.25 9.89 24.58 34.72 56.00 21.28  8.060 0.41 9.98 32.88 43.27 60.00 16.73  9.045 0.43 9.99 34.31 44.73 60.00 15.27

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

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





Trace: (Discrete)

Site no :1#conduction Data No :10

Dis./Ant. :\*\* 2011 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 C

Env./Ins. :29.5\*C/55% Engineer :Restar

EUT :150Mbps Wireless Lite-N Router

Power Rating :DC 9V From Adapter Input AC 120V/60Hz

Test Mode :Tx Mode

M/N:PW-RN401D

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emissio Level (dBuV)	n Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.21	9.88	43.92	54.01	66.00	11.99	QP
2	0.53805	0.22	9.88	27.54	37.64	56.00	18.36	QP
3	7.374	0.40	9.97	33.03	43.40	60.00	16.60	QP
4	8.060	0.41	9.98	35.00	45.39	60.00	14.61	QP
5	9.075	0.43	9.99	36.67	47.09	60.00	12.91	QP
6	10.747	0.47	9.99	34.55	45.01	60.00	14.99	QP

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

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



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## 4. RADIATED EMISSION TEST

## 4.1.Test Equipment

Frequency rang: 30~1000MHz

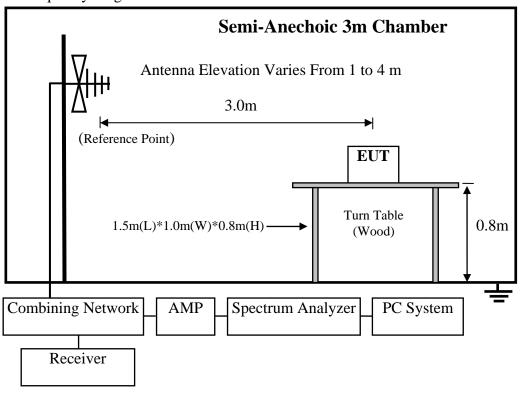
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.06,10	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 10	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 10	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 10	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Oct.26, 10	1 Year
6	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 10	1 Year
7	Coaxial Switch	Anritsu	MP59B	M73989	May.08, 10	1 Year

Frequency rang: above 1000MHz

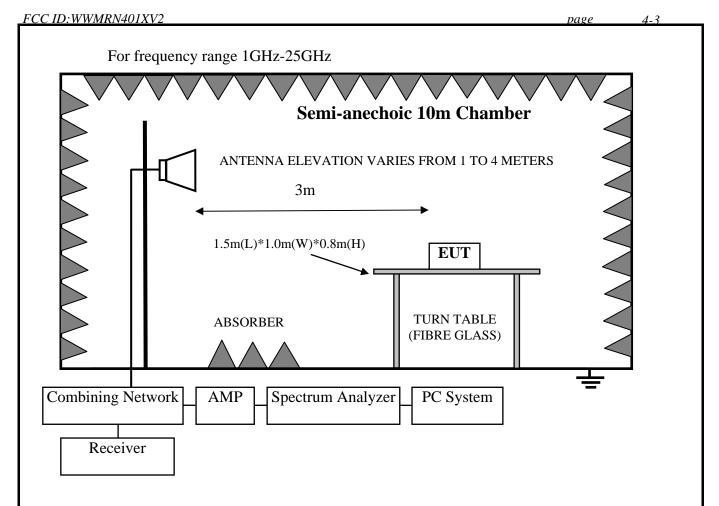
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3	Horn Antenna	EMCO	3116	00060089	Nov.25, 09	1.5 Year
4	Amplifier	Agilent	8449B	3008A00863	May.08, 10	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 10	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	29091/2	May.08, 10	1 Year

# 4.2.Block Diagram of Test Setup

For frequency range 30MHz-1000MHz







### 4.3. Radiated Emission Limit

### 4.3.1.15.209 limits

FREQUENCY	DISTANCE	FIELD STRENGTHS LIMIT			
MHz	Meters	$\mu V/m$	$dB(\mu V)/m$		
30 ~ 88	3	100	40.0		
88 ~ 216	3	150	43.5		
216 ~ 960	3	200	46.0		
960 ~ 1000	3	500	54.0		
Above 1000	3	74.0 dB(μV)/m (Peak)			
		54.0 dB(μV	V)/m (Average)		

Remark : (1) Emission level  $dB\mu V = 20 \log Emission level \mu V/m$ 

- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.



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### 4.3.2.15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(2)

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

## 4.4.EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

## 4.5. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 4.2.

### 4.6. Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

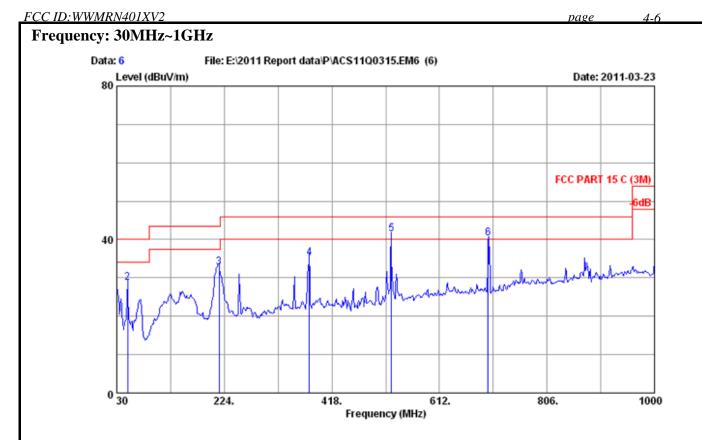
The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

The frequency range from 30MHz to 10<sup>th</sup> harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.



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4.7.Radiated Emission Test Results		
PASS.		
All the emissions from 30MHz to 25 GHz were comply with	15.209 limits.	
Note: For emissions above 1GHz, if peak level comply average level is deemed to comply with average limit.	with average limi	t, then the





Site no. : 3m Chamber Data no. : 6

Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : HORIZONTAL

Limit : FCC PART 15 C (3M) Env. / Ins. : 24\*C/56% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

Power rating : DC 9V From Adapter input AC 120V/60Hz

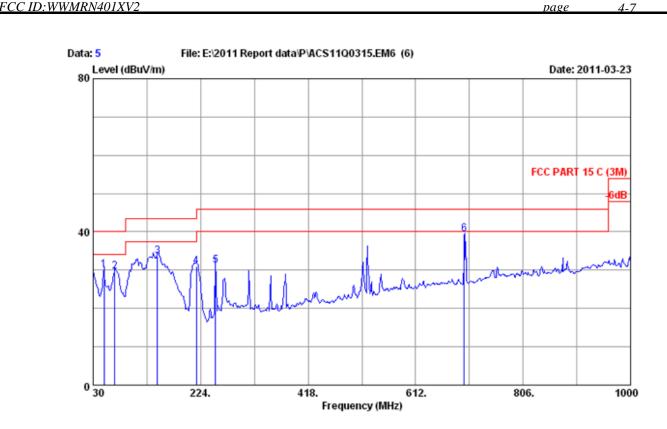
Test Mode : Tx Mode PW-RN401D

No.	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark	
1	30.000	20.00	0.61	5.74	26.35	40.00	13.65	QP	
2	49.400	9.72	0.77	18.19	28.68	40.00	11.32	QP	
3	214.300	10.02	1.85	20.92	32.79	43.50	10.71	QP	
4	377.260	15.64	2.81	16.84	35.29	46.00	10.71	QP	
5	525.030	18.35	3.69	19.30	41.34	46.00	4.66	QP	
6	700.000	20.80	4.50	15.10	40.40	46.00	5.60	QP	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 5

Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : VERTICAL

Limit : FCC PART 15 C (3M)

Env. / Ins. : 24\*C/56% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

Power rating : DC 9V From Adapter input AC 120V/60Hz

Test Mode : Tx Mode PW-RN401D

No.	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	49.400	9.72	0.77	19.58	30.07	40.00	9.93	OP
_								_
2	68.800	6.48	0.91	22.25	29.64	40.00	10.36	QP
3	146.400	11.84	1.14	20.78	33.76	43.50	9.74	QP
4	216.240	10.04	1.87	19.09	31.00	46.00	15.00	QP
5	251.160	12.90	2.18	16.05	31.13	46.00	14.87	QP
6	700.000	20.80	4.50	14.10	39.40	46.00	6.60	QP

-----

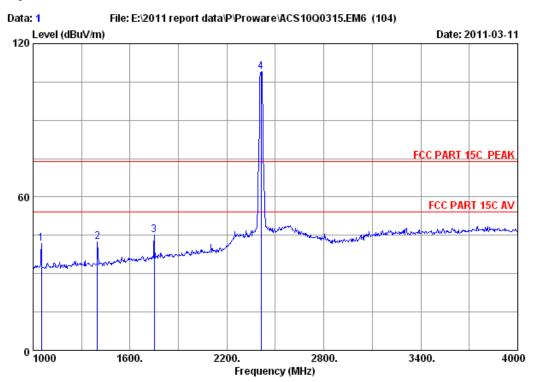
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Audix Technology (Shenzhen) Co., Ltd. Report No. ACS-F11067



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## Frequency: 1GHz~18GHz



Site no. : 3# Chamber Data no. : 1

Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11b CH1 2412MHz Tx

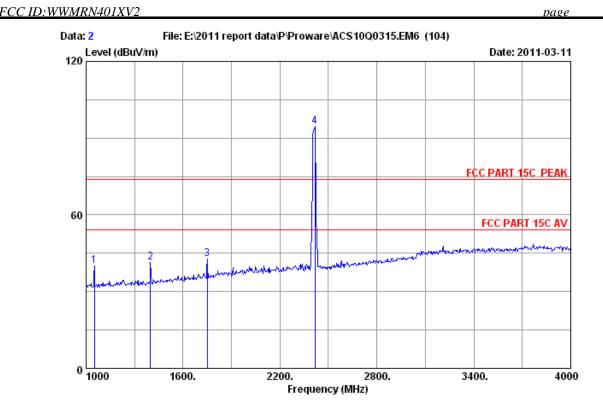
M/N : PW-RN401D

	-	Factor	loss				Limits Margin (dBuV/m) (dB)	Remark
1	1051.000	25.50	4.86	37.81	49.20	41.75	74.00 32.25	Peak
2	1399.000	26.19	5.50	37.18	47.97	42.48	74.00 31.52	Peak
3	1750.000	27.80	6.18	36.86	48.05	45.17	74.00 28.83	Peak
4	2412.000	29.45	7.43	36.62	108.79	109.05	74.00 -35.05	Peak

### Remarks:

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

\_\_\_\_\_\_



Site no. : 3# Chamber Data no. : 2

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

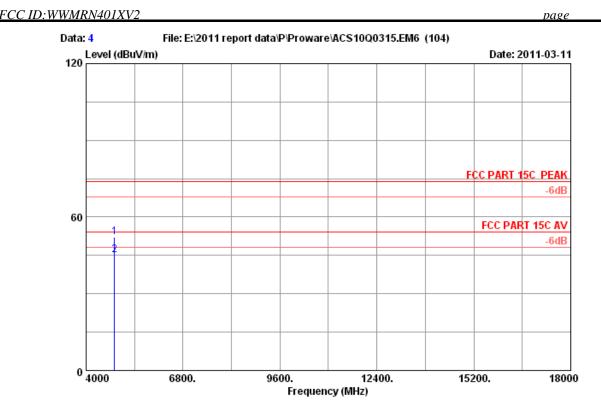
Test mode : IEEE802.11b CH1 2412MHz Tx

M/N : PW-RN401D

Freq. (MHz)			Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
1 1051.000 2 1399.000 3 1750.000 4 2416.000	26.19 27.80	5.50 6.18	37.18 36.86	47.68 46.97 45.79 94.41	40.23 41.48 42.91 94.68	74.00 33.77 74.00 32.52 74.00 31.09 74.00 -20.68	Peak Peak Peak Peak

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





Site no. : 3# Chamber Data no. : 4

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

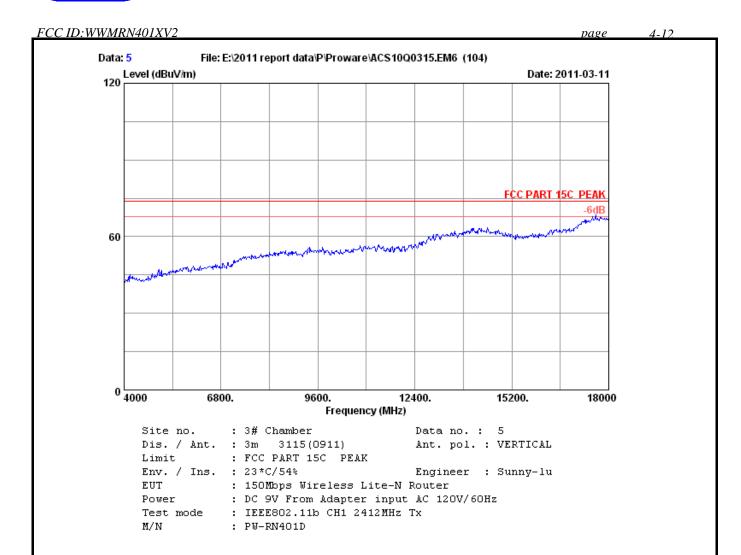
Power : DC 9V From Adapter input AC 120V/60Hz

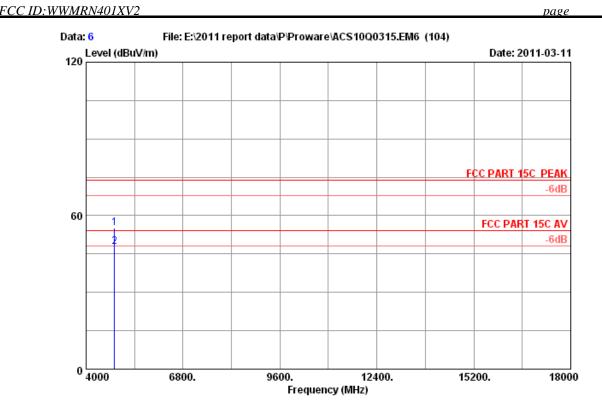
Test mode : IEEE802.11b CH1 2412MHz Tx

M/N : PW-RN401D

	-	Factor	Factor	_	Emission Level (dBuV/m)		_	Remark	
_	4824.000		 		52.25 45.15	74.00 54.00		Peak Average	

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





Site no. : 3# Chamber Dis. / Ant. : 3m 3115(0 Data no. : 6

3115 (0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

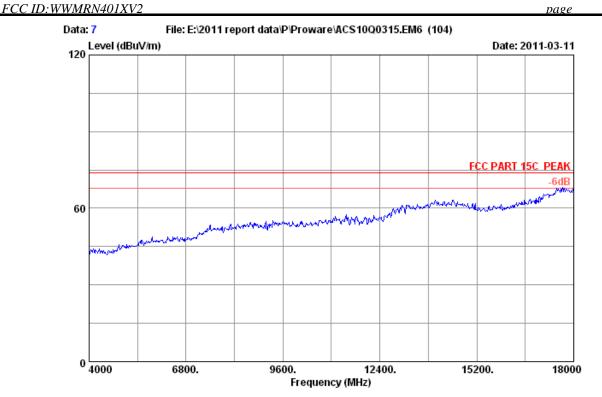
: DC 9V From Adapter input AC 120V/60Hz Power

Test mode : IEEE802.11b CH1 2412MHz Tx

M/N : PW-RN401D

		Ant.	Cable	Amp.		Emission			
	-				_	Level		_	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m	) (dB)	
1	4824.000	34.32	10.64	35.08	45.26	55.14	74.00	18.86	Peak
2	4824.000	34.32	10.64	35.08	37.85	47.73	54.00	6.27	Average

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



Site no. : 3# Chamber Data no. : 7
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

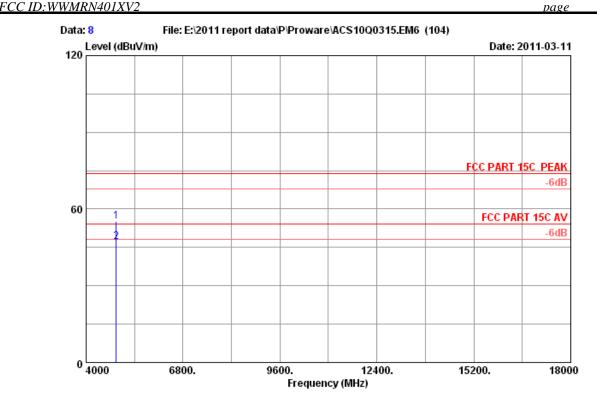
Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11b CH6 2437MHz Tx

M/N : PW-RN401D



Site no. : 3# Chamber Data no. : 8

Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

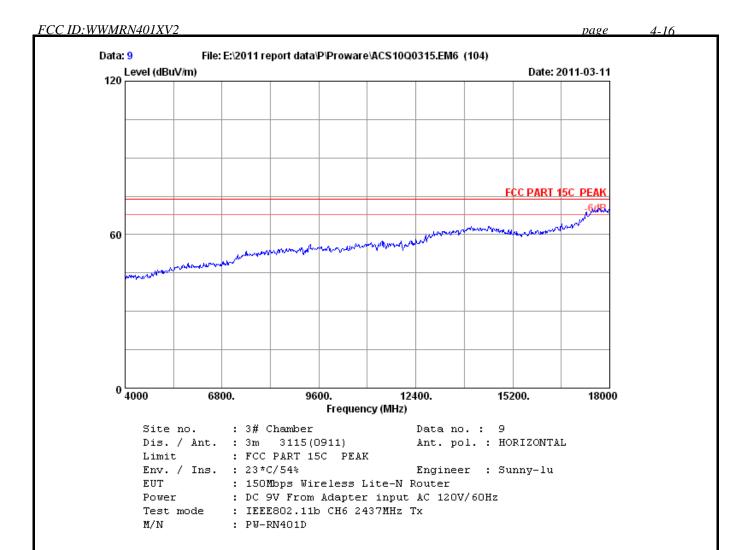
Power : DC 9V From Adapter input AC 120V/60Hz

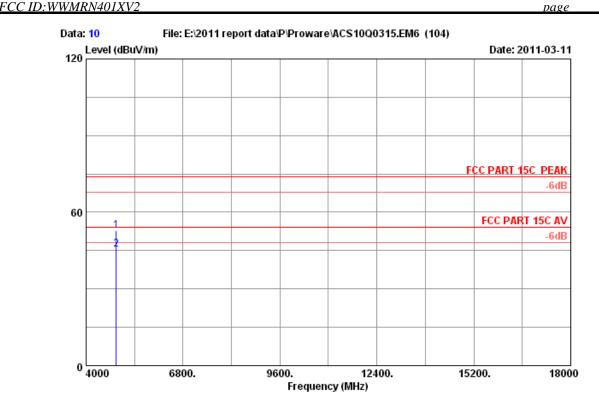
Test mode : IEEE802.11b CH6 2437MHz Tx

M/N : PW-RN401D

-	Factor	loss	_	Emission Level (dBuV/m)		_	Remark
4874.000 4874.000			 45.13 37.16	55.20 47.23	74.00 54.00		Peak Average

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





Site no. : 3# Chamber Data no. : 10

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

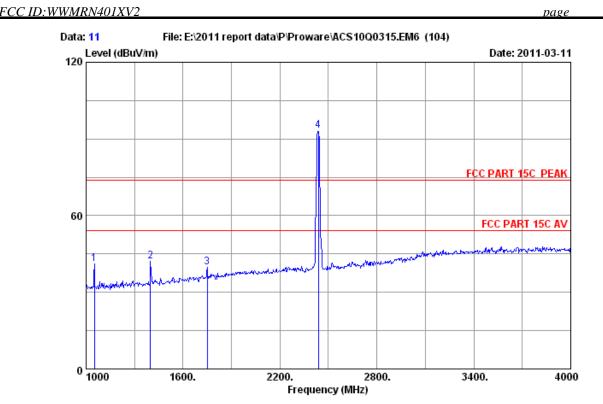
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11b CH6 2437MHz Tx

M/N : PW-RN401D

		Ant.	Cable	Amp.		Emission			
	-				_	Level		_	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m	) (dB)	
	4074 000								
1	4874.000	34.41	10.69	35.03	42.68	52.75	74.00	21.25	Peak
2	4874.000	34.41	10.69	35.03	35.42	45.49	54.00	8.51	Average

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



Site no. : 3# Chamber Data no.: 11

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

Power : DC 9V From Adapter input AC 120V/60Hz

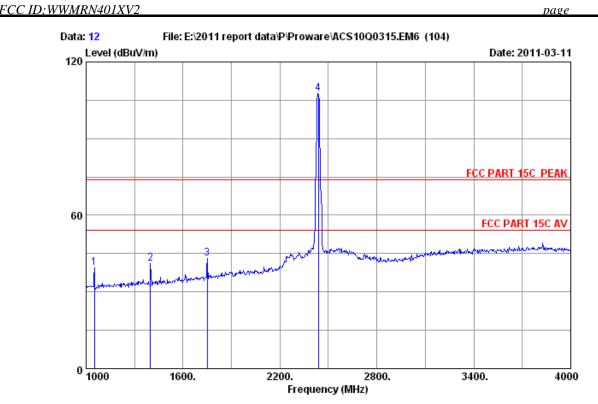
Test mode : IEEE802.11b CH6 2437MHz Tx

M/N: PW-RN401D

	-		loss			Emission Level (dBuV/m)		_	Remark
1	1051.000	25.50	4.86	37.81	48.55	41.10	74.00	32.90	Peak
2	1399.000	26.19	5.50	37.18	47.52	42.03	74.00	31.97	Peak
3	1750.000	27.80	6.18	36.86	42.53	39.65	74.00	34.35	Peak
4	2437.000	29.47	7.46	36.61	92.89	93.21	74.00 -	19.21	Peak

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





Site no. : 3# Chamber Data no. : 12
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

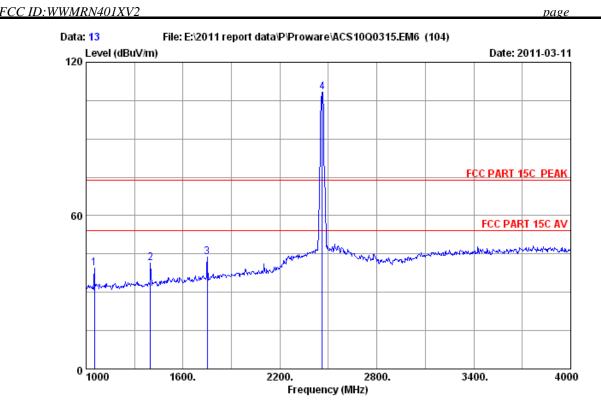
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11b CH6 2437MHz Tx

M/N : PW-RN401D

	Ant. Freq. Factor (MHz) (dB/m)			Reading (dBuV)		Limits Margin (dBuV/m) (dB)	Remark
1	1051.000 25.50	4.86	37.81	46.84	39.39	74.00 34.61	Peak
2	1399.000 26.19	5.50	37.18	46.65	41.16	74.00 32.84	Peak
3	1750.000 27.80	6.18	36.86	46.14	43.26	74.00 30.74	Peak
4	2437.000 29.47	7.46	36.61	107.22	107.54	74.00 -33.54	Peak

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



Site no. : 3# Chamber Data no. : 13
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

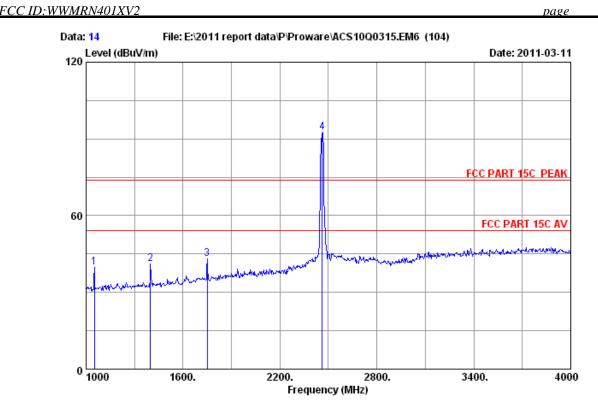
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz Tx

M/N : PW-RN401D

	-		loss		Reading (dBuV)		Limits Marq	•	
1	1051.000	25.50	4.86	37.81	46.83	39.38	74.00 34.6	52 Peak	
2	1399.000	26.19	5.50	37.18	47.05	41.56	74.00 32.4	l4 Peak	
3	1750.000	27.80	6.18	36.86	46.73	43.85	74.00 30.1	l5 Peak	
4	2462.000	29.48	7.54	36.61	107.98	108.39	74.00 -34.3	9 Peak	

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



Site no. : 3# Chamber Dis. / Ant. : 3m 3115(0 Data no. : 14

3115 (0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

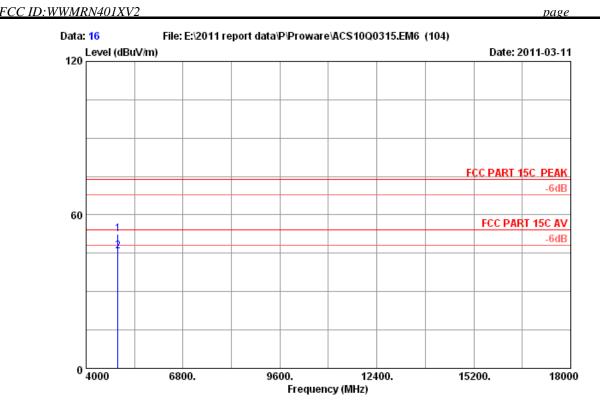
Test mode : IEEE802.11b CH11 2462MHz Tx

M/N: PW-RN401D

	-	Factor	loss		Reading	Emission Level (dBuV/m)		_	Remark
1	1051.000	25.50	4.86	37.81	47.08	39.63	74.00	34.37	Peak
2	1399.000	26.19	5.50	37.18	46.69	41.20	74.00	32.80	Peak
3	1750.000	27.80	6.18	36.86	46.05	43.17	74.00	30.83	Peak
4	2462.000	29.48	7.54	36.61	92.17	92.58	74.00 -	18.58	Peak

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





Site no. : 3# Chamber Data no. : 16

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

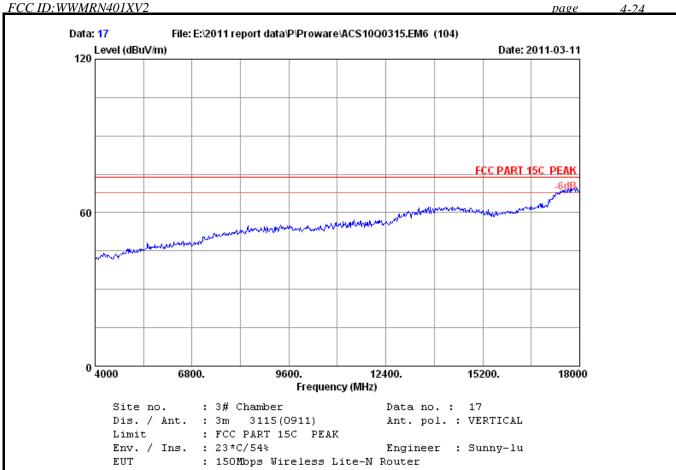
EUT : 150Mbps Wireless Lite-N Router

: DC 9V From Adapter input AC 120V/60Hz

Power
Test mode : IEEE8U4...
: PW-RN401D : IEEE802.11b CH11 2462MHz Tx

	-	Factor	Factor	Reading (dBuV)	Emission Level (dBuV/m)		_	Remark
_	4924.000		 		52.40 45.69	74.00 54.00		Peak Average

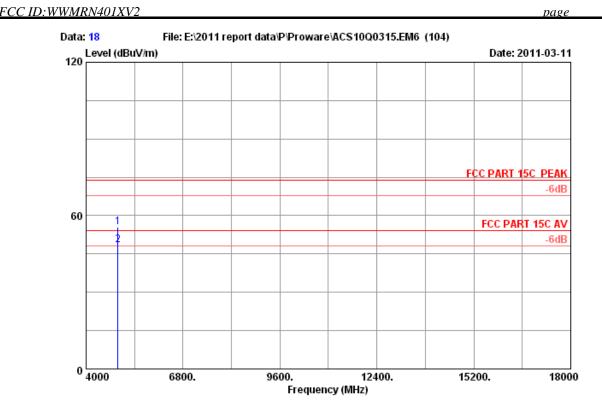
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz Tx

M/N : PW-RN401D



Site no. : 3# Chamber Data no.: 18 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

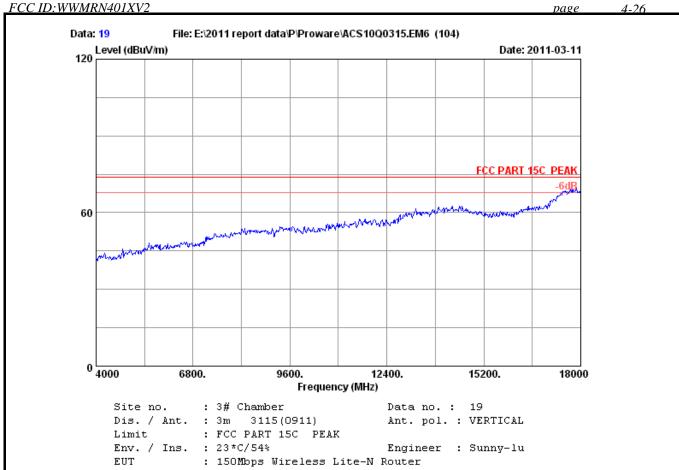
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz Tx

M/N: PW-RN401D

		Ant.	Cable	Amp.		Emission			
	Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	4924.000	34.49	10.76	34.98	45.32	55.59	74.00	18.41	Peak
2	4924.000	34.49	10.76	34.98	38.14	48.41	54.00	5.59	Average

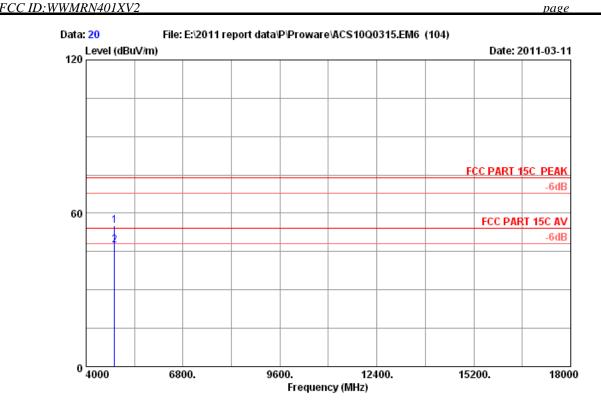
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11g CH1 2412MHz Tx

M/N : PW-RN401D



Site no. : 3# Chamber Data no. : 20
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

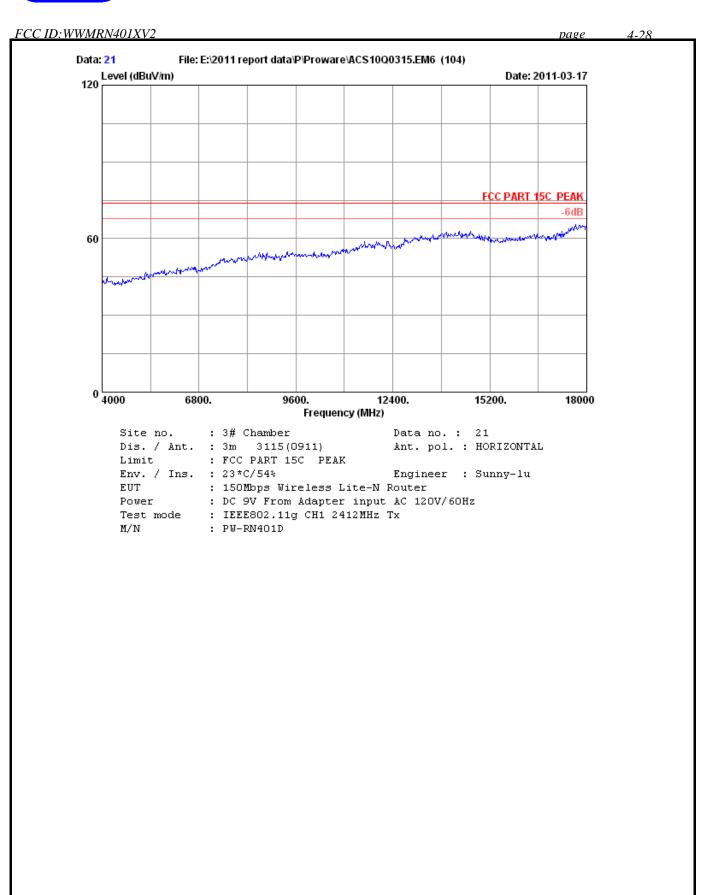
Power : DC 9V From Adapter input AC 120V/60Hz

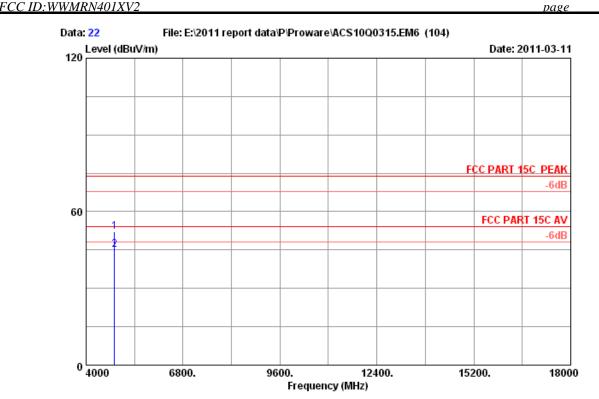
Test mode : IEEE802.11g CH1 2412MHz Tx

M/N : PW-RN401D

		Ant.	Cable	Amp.		Emission			
	Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	4824.000	34.32	10.64	35.08	45.37	55.25	74.00	18.75	Peak
2	4824.000	34.32	10.64	35.08	37.43	47.31	54.00	6.69	Average

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





Site no. : 3# Chamber Dis. / Ant. : 3m 3115(0 Data no.: 22

3115 (0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

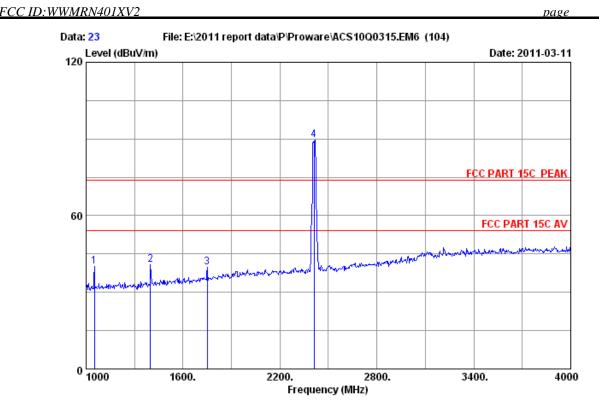
: DC 9V From Adapter input AC 120V/60Hz Power

Test mode : IEEE802.11g CH1 2412MHz Tx

M/N : PW-RN401D

	-	Factor	Factor	_	Emission Level (dBuV/m)		_	Remark	
_	4824.000 4824.000		 	42.37 35.28	52.25 45.16	74.00 54.00		Peak Average	

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



Site no. : 3# Chamber Data no.: 23

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

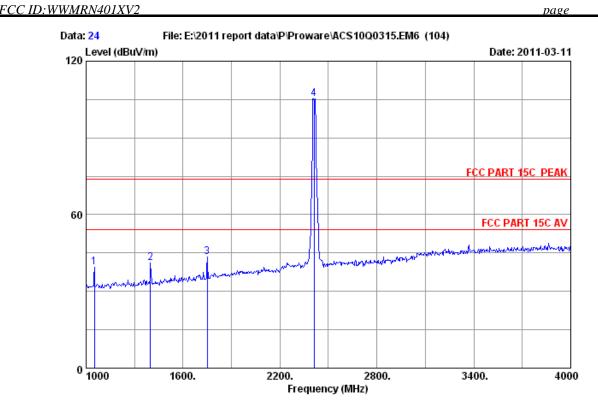
Power
Test mode : IEEE804...
: PW-RN401D Power : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11g CH1 2412MHz Tx

	-		loss		Reading (dBuV)		Limits Margin (dBuV/m) (dB)	Remark
1	1051.000	25.50	4.86	37.81	47.59	40.14	74.00 33.86	Peak
2	1399.000	26.19	5.50	37.18	46.40	40.91	74.00 33.09	Peak
3	1750.000	27.80	6.18	36.86	42.54	39.66	74.00 34.34	Peak
4	2412.000	29.45	7.43	36.62	89.33	89.59	74.00 -15.59	Peak

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





Site no. : 3# Chamber Data no. : 24
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

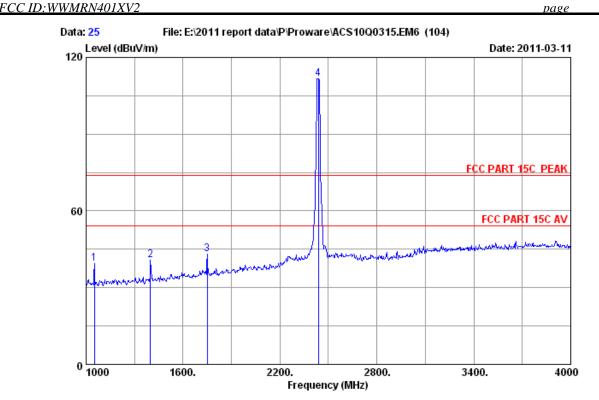
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11g CH1 2412MHz Tx

M/N : PW-RN401D

	Ant. Freq. Factor (MHz) (dB/m)	loss				Limits Margin (dBuV/m) (dB)	Remark
1	1051.000 25.50	4.86	37.81	46.80	39.35	74.00 34.65	Peak
2	1399.000 26.19	5.50	37.18	46.61	41.12	74.00 32.88	Peak
3	1750.000 27.80	6.18	36.86	46.33	43.45	74.00 30.55	Peak
4	2412.000 29.45	7.43	36.62	105.16	105.42	74.00 -31.42	Peak

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



Site no. : 3# Chamber Data no. : 25 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

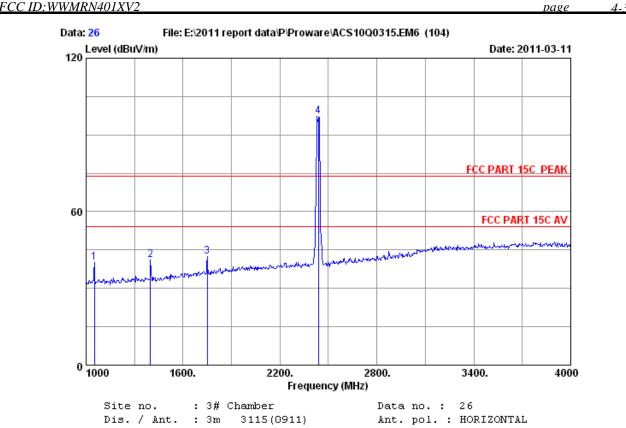
EUT : 150Mbps Wireless Lite-N Router

Power
Test mode : IEEE804...
: PW-RN401D : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11g CH6 2437MHz Tx

			Factor			Limits Mare	-	
1	1051.000 25.	50 4.86	37.81	46.81	39.36	74.00 34.	64 Peak	
2	1399.000 26.	19 5.50	37.18	46.38	40.89	74.00 33.	11 Peak	
3	1750.000 27.3	30 6.18	36.86	46.04	43.16	74.00 30.0	34 Peak	
4	2437.000 29.	47 7.46	36.61	111.35	111.67	74.00 -37.	67 Peak	

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



3115 (0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

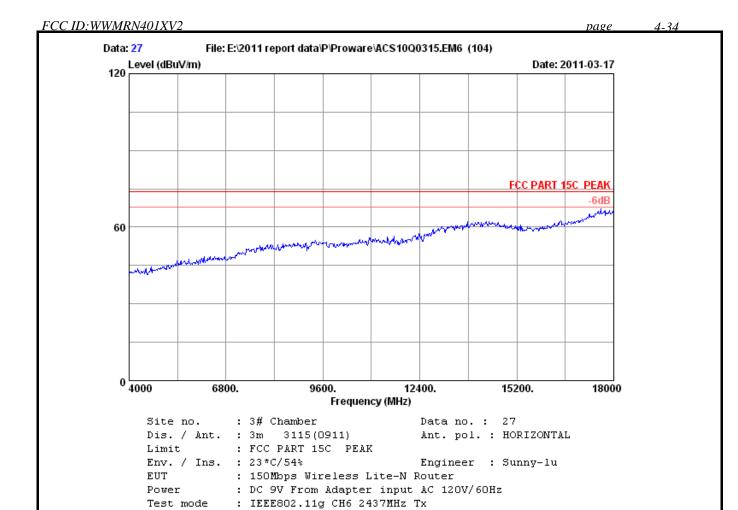
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11g CH6 2437MHz Tx

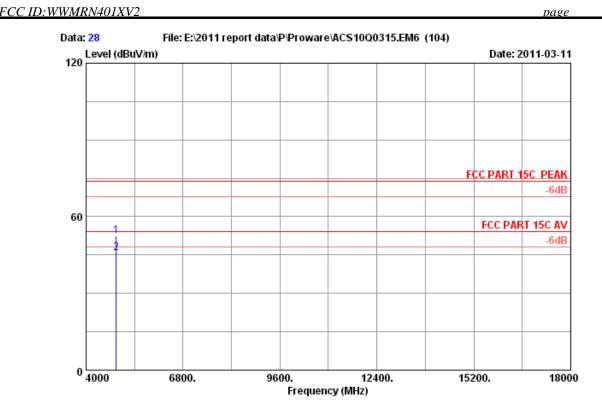
M/N: PW-RN401D

	Freq. Fa	actor	loss		Reading (dBuV)			_	Remark
1	1051.000 2	25.50	4.86	37.81	47.65	40.20	74.00	33.80	Peak
2	1399.000 2	26.19	5.50	37.18	46.69	41.20	74.00	32.80	Peak
3	1750.000 2	27.80	6.18	36.86	45.23	42.35	74.00	31.65	Peak
4	2437.000 2	29.47	7.46	36.61	96.98	97.30	74.00 -	-23.30	Peak

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



: PW-RN401D



Site no. : 3# Chamber Dis. / Ant. : 3m 3115(0 Data no.: 28

3115 (0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

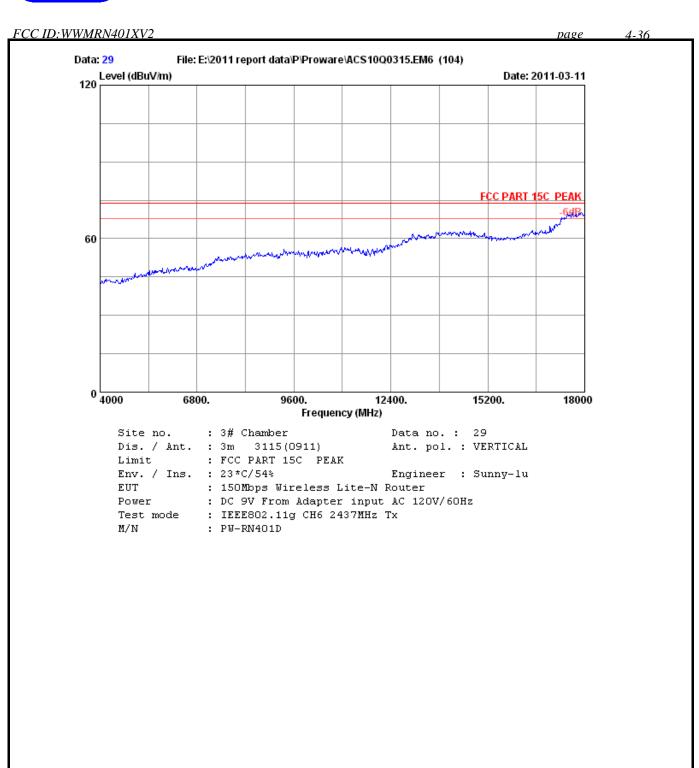
: DC 9V From Adapter input AC 120V/60Hz Power

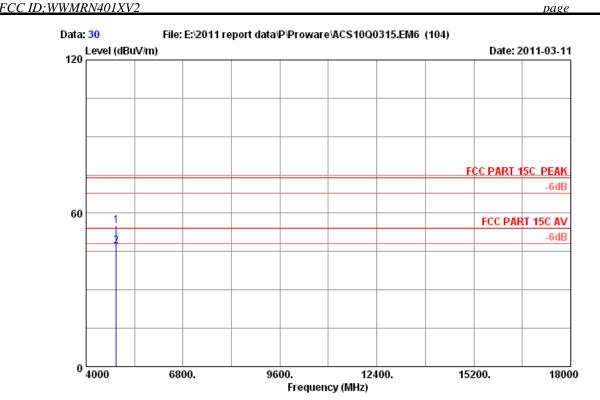
Test mode : IEEE802.11g CH6 2437MHz Tx

M/N : PW-RN401D

	-	Factor	Factor	_	Emission Level (dBuV/m)		_	Remark
_	4874.000 4874.000		 	42.56 35.84	52.63 45.91	74.00 54.00		Peak Average

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





Site no. : 3# Chamber Data no. : 30
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

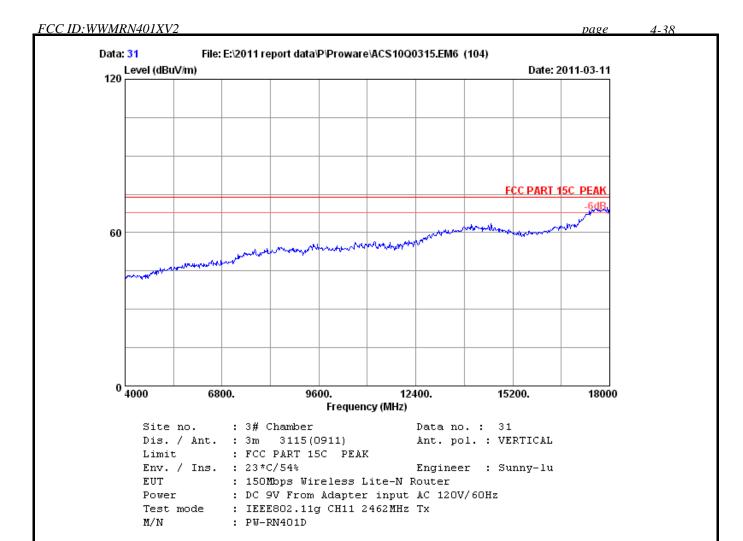
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11g CH6 2437MHz Tx

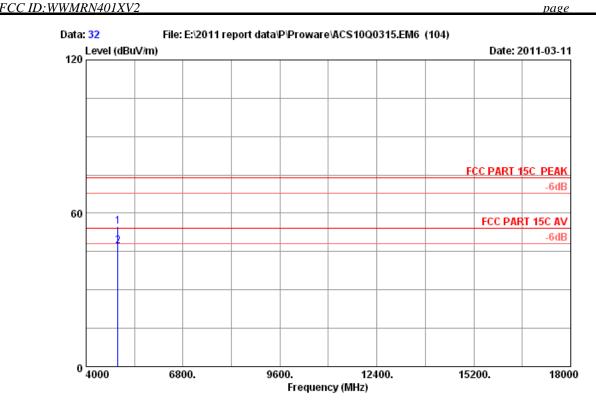
M/N : PW-RN401D

	Ant.	Cable	Amp.		Emission			
-				_	Level (dBuV/m)		_	Remark
4874.000 4874.000				45.23 36.98	55.30 47.05	74.00 54.00	18.70 6.95	Peak Average

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



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Site no. : 3# Chamber Data no. : 32
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

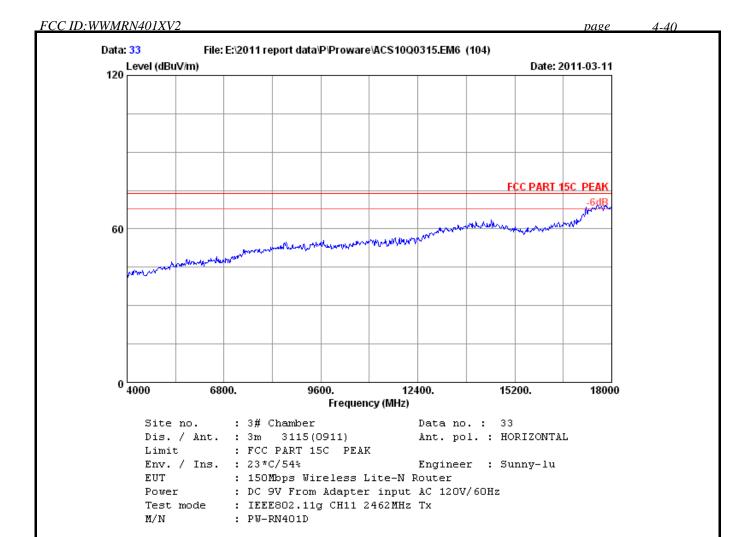
Power : DC 9V From Adapter input AC 120V/60Hz

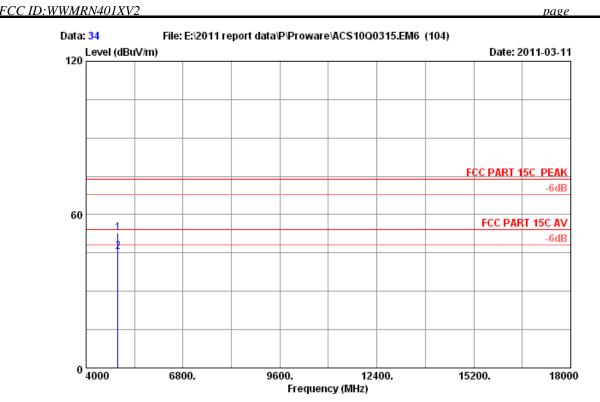
Test mode : IEEE802.11g CH11 2462MHz Tx

M/N : PW-RN401D

		Ant.	Cable	Amp.		Emission			
	-				_	Level (dBuV/m)		_	Remark
								, (az, 	
_	4924.000				44.62	54.89	74.00		Peak
2	4924.000	34.49	10.76	34.98	36.87	47.14	54.00	6.86	Average

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





Site no. : 3# Chamber Data no.: 34

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

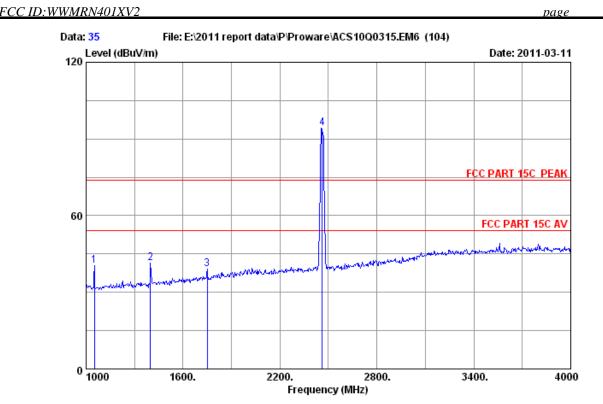
: 150Mbps Wireless Lite-N Router EUT

Power
Test mode : IEEE8U4...
: PW-RN401D : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11g CH11 2462MHz Tx

-	Factor	Cable loss (dB)	Factor	Reading (dBuV)	Emission Level (dBuV/m)		_	Remark
4924.000 4924.000				42.68 35.27	52.95 45.54	74.00 54.00	21.05 8.46	Peak Average

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



Site no. : 3# Chamber Data no.: 35

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

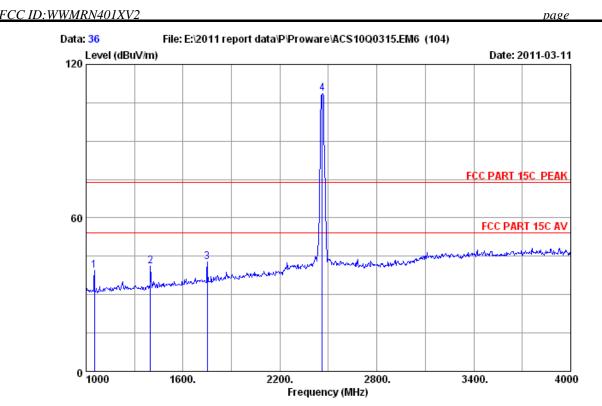
: 150Mbps Wireless Lite-N Router EUT

Power : DC 9V From Adapter input AC 120V/60Hz

Power
Test mode : IEEE804...
: PW-RN401D : IEEE802.11g CH11 2462MHz Tx

	-		loss		Reading (dBuV)		Limits Margin	n Remark
1	1051.000	25.50	4.86	37.81	48.01	40.56	74.00 33.44	Peak
2	1399.000	26.19	5.50	37.18	46.79	41.30	74.00 32.70	Peak
3	1750.000	27.80	6.18	36.86	41.90	39.02	74.00 34.98	Peak
4	2462.000	29.48	7.54	36.61	93.77	94.18	74.00 -20.18	Peak

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



Site no. : 3# Chamber Data no.: 36 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

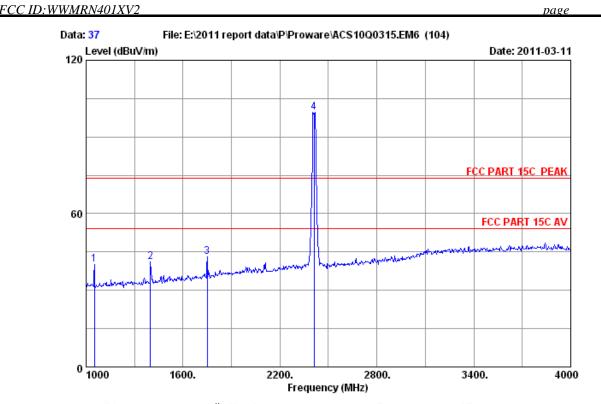
EUT : 150Mbps Wireless Lite-N Router

Power
Test mode : IEEE804...
: PW-RN401D Power : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11g CH11 2462MHz Tx

		nt. Cablo ctor loss B/m) (dB)	Factor	_	Emission Level (dBuV/m)		_	Remark
1	1051.000 2	5.50 4.86	37.81	46.87	39.42	74.00	34.58	Peak
2	1399.000 2	6.19 5.50	37.18	46.70	41.21	74.00	32.79	Peak
3	1750.000 2	7.80 6.18	36.86	45.69	42.81	74.00	31.19	Peak
4	2462.000 2	9.48 7.54	36.61	108.07	108.48	74.00 -	34.48	Peak

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



Site no. : 3# Chamber Data no.: 37 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

Power : DC 9V From Adapter input AC 120V/60Hz

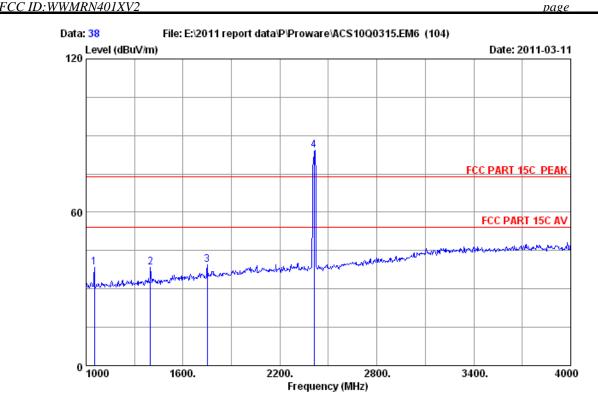
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx

M/N: PW-RN401D

	-		loss		Reading (dBuV)			_	Remark
1	1051.000	25.50	4.86	37.81	47.43	39.98	74.00	34.02	Peak
2	1399.000	26.19	5.50	37.18	46.74	41.25	74.00	32.75	Peak
3	1750.000	27.80	6.18	36.86	45.94	43.06	74.00	30.94	Peak
4	2412.000	29.45	7.43	36.62	99.39	99.65	74.00 -	25.65	Peak

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





Site no. : 3# Chamber Data no. : 38

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

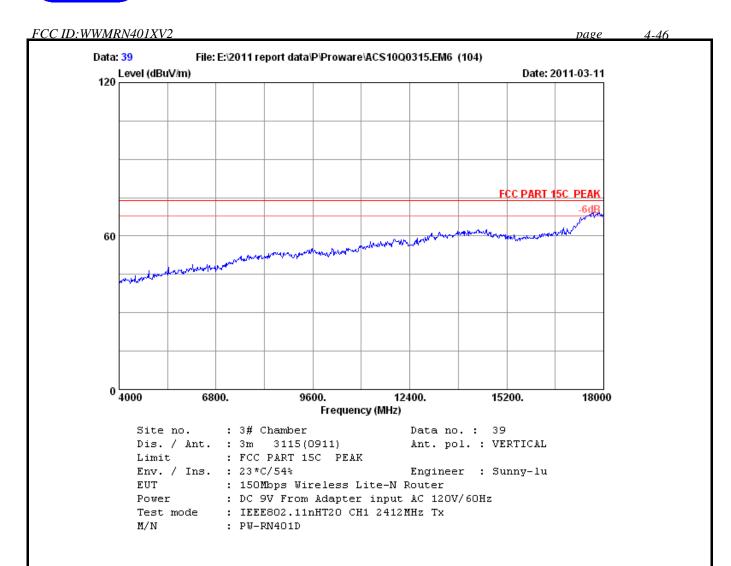
Power : DC 9V From Adapter input AC 120V/60Hz

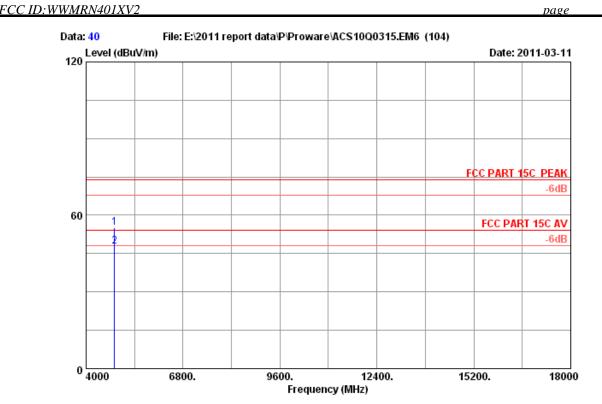
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx

M/N : PW-RN401D

	Ant. Freq. Factor (MHz) (dB/m)			Reading (dBuV)		Limits Margin (dBuV/m) (dB)	Remark
1	1051.000 25.50	4.86	37.81	45.74	38.29	74.00 35.71	Peak
2	1399.000 26.19	5.50	37.18	43.79	38.30	74.00 35.70	Peak
3	1750.000 27.80	6.18	36.86	42.48	39.60	74.00 34.40	Peak
4	2412.000 29.45	7.43	36.62	83.83	84.09	74.00 -10.09	Peak

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





Site no. : 3# Chamber Data no. : 40
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

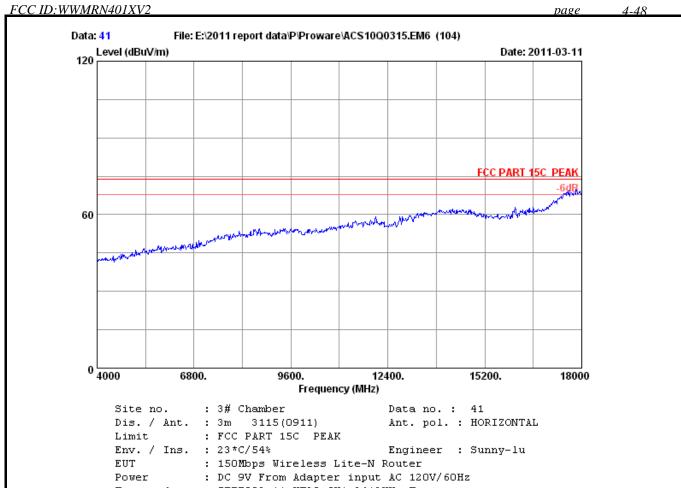
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT20 CH1 2412MHz Tx

M/N : PW-RN401D

	Ant.	Cable	Amp.		Emission			
-				_	Level (dBuV/m)		_	Remark
4824.000 4824.000				45.33 37.86	55.21 47.74	74.00 54.00	18.79 6.26	Peak Average

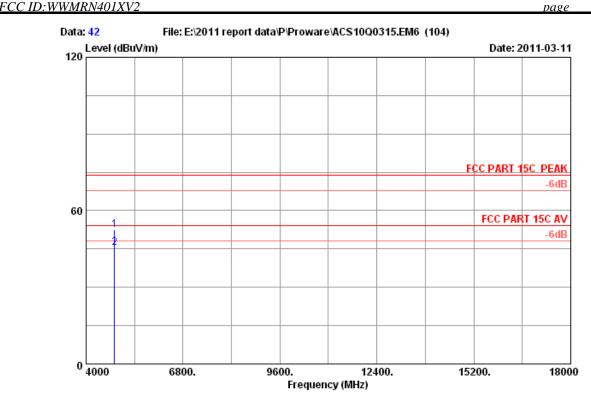
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Test mode : IEEE802.11nHT20 CH1 2412MHz Tx

M/N : PW-RN401D

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Site no. : 3# Chamber Data no.: 42

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

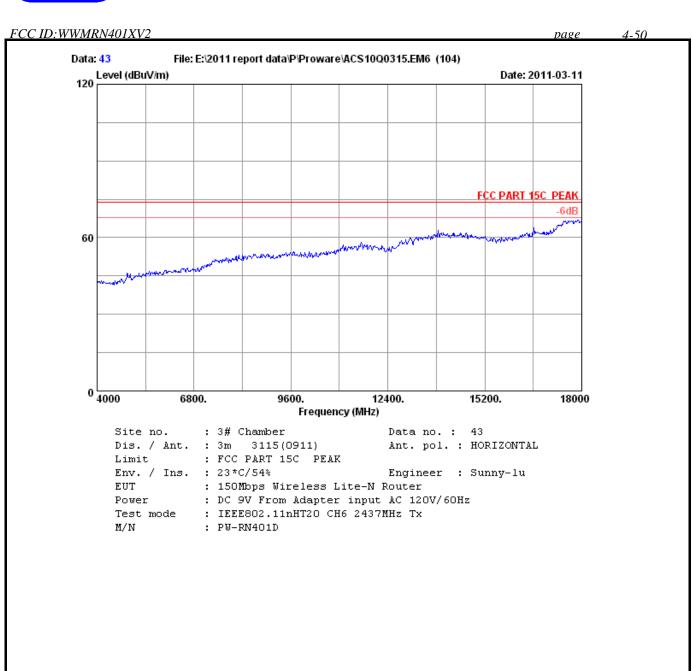
Power : DC 9V From Adapter input AC 120V/60Hz

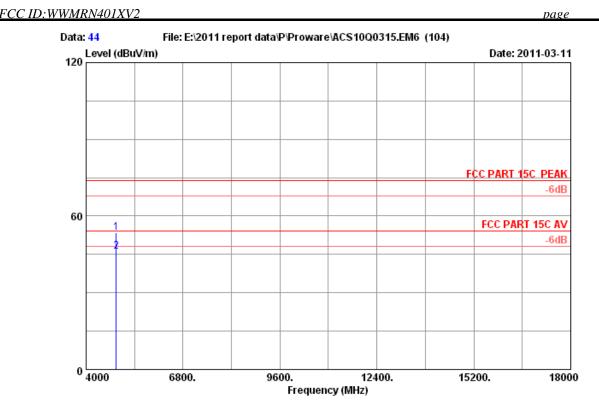
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx

M/N: PW-RN401D

	-		Factor	Reading (dBuV)	Emission Level (dBuV/m)		_	Remark
_	4824.000 4824.000	 		42.66 35.48	52.54 45.36	74.00 54.00	21.46 8.64	Peak Average

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





Site no. : 3# Chamber Data no. : 44

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

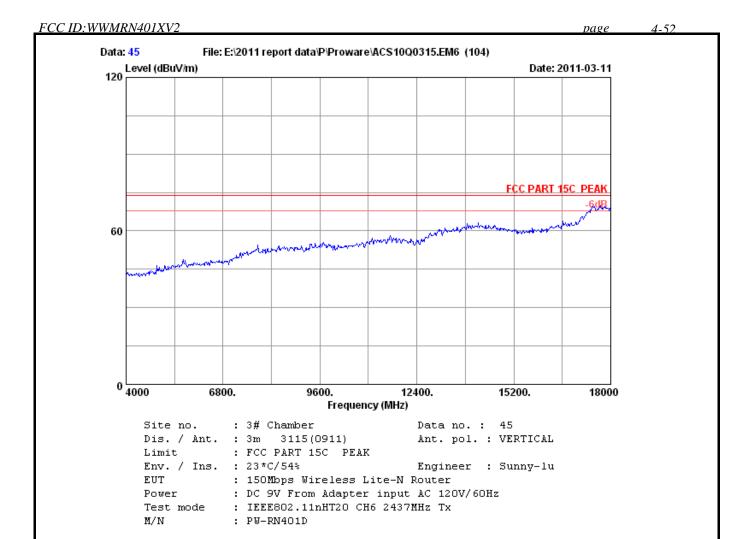
Power : DC 9V From Adapter input AC 120V/60Hz

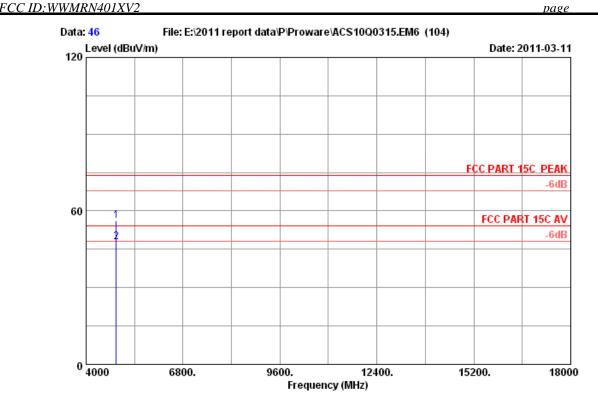
Test mode : IEEE802.11nHT20 CH6 2437MHz Tx

M/N : PW-RN401D

-	Factor	loss	_	Emission Level (dBuV/m)		_	Remark	
4874.000 4874.000			 43.26 36.14	53.33 46.21	74.00 54.00		Peak Average	

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





Site no. : 3# Chamber Data no.: 46 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

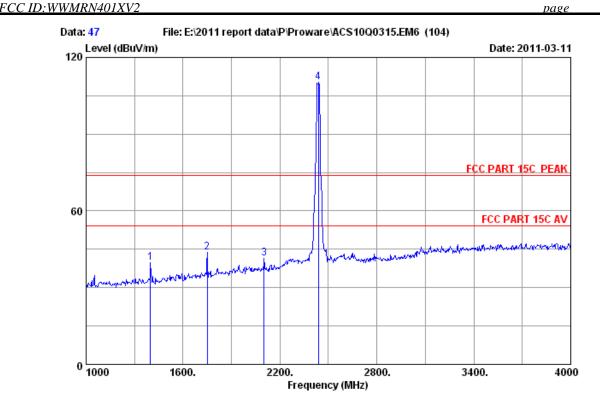
EUT : 150Mbps Wireless Lite-N Router

Power
Test mode : IEEE8U4...
: PW-RN401D : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11nHT20 CH6 2437MHz Tx

-	Cable loss (dB)	Factor	Reading (dBuV)		Limits (dBuV/m	_	Remark
4874.000 4874.000	 		46.25 37.84	56.32 47.91	74.00 54.00	17.68 6.09	Peak Average

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



Site no. : 3# Chamber Data no. : 47
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

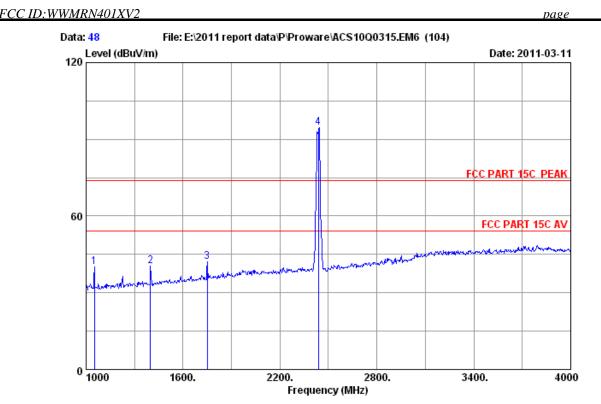
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT20 CH6 2437MHz Tx

M/N : PW-RN401D

	-	Factor (dB/m)	loss	Factor	Reading (dBuV)		Limits Margin (dBuV/m) (dB)	Remark
1	1399.000	26.19	5.50	37.18	45.26	39.77	74.00 34.23	Peak
2	1750.000	27.80	6.18	36.86	46.52	43.64	74.00 30.36	Peak
3	2101.000	29.26	6.86	36.68	41.86	41.30	74.00 32.70	Peak
4	2437.000	29.47	7.46	36.61	109.87	110.19	74.00 -36.19	Peak

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



Site no. : 3# Chamber Data no. : 48

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

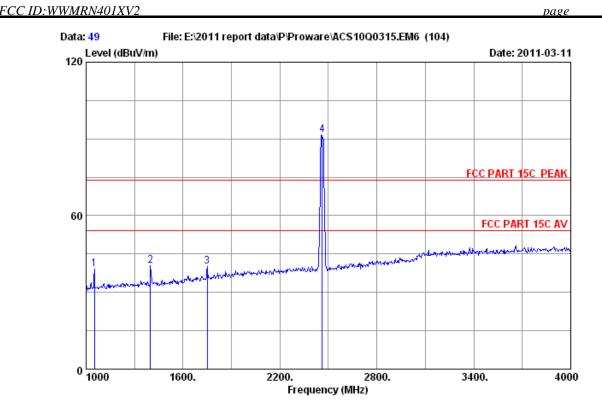
Test mode : IEEE802.11nHT20 CH6 2437MHz Tx

M/N : PW-RN401D

		loss Factor	Reading		Limits Margin (dBuV/m) (dB)	Remark
1	1051.000 25.50	4.86 37.81	47.59	40.14	74.00 33.86	Peak
2	1399.000 26.19	5.50 37.18	45.91	40.42	74.00 33.58	Peak
3	1750.000 27.80	6.18 36.86	44.95	42.07	74.00 31.93	Peak
4	2437.000 29.47	7.46 36.61	94.27	94.59	74.00 -20.59	Peak

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

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Site no. : 3# Chamber Dis. / Ant. : 3m 3115(0 Data no.: 49

3115 (0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

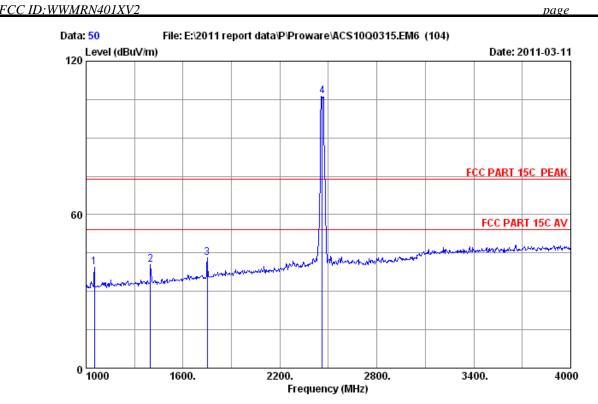
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT20 CH11 2462MHz Tx

M/N : PW-RN401D

	Freq. Fa	actor lo		o. or Reading (dBuV)			_	Remark
1	1051.000 2	5.50 4.	.86 37.8	46.62	39.17	74.00	34.83	Peak
2	1399.000 2	6.19 5.	.50 37.1	l8 45.85	40.36	74.00	33.64	Peak
3	1750.000 2	7.80 6.	.18 36.8	36 42.92	40.04	74.00	33.96	Peak
4	2462.000 2	9.48 7.	.54 36.6	91.28	91.69	74.00 -	-17.69	Peak

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



Site no. : 3# Chamber Data no. : 50
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

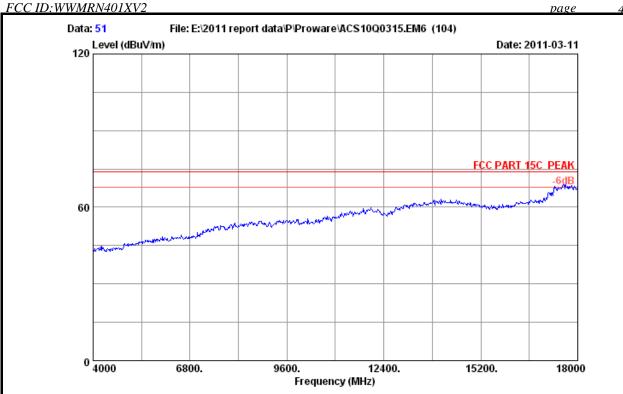
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT20 CH11 2462MHz Tx

M/N : PW-RN401D

	-	Factor	loss		Reading	Emission Level (dBuV/m)		_	Remark
1	1051.000	25.50	4.86	37.81	47.06	39.61	74.00	34.39	Peak
2	1399.000	26.19	5.50	37.18	45.85	40.36	74.00	33.64	Peak
3	1750.000	27.80	6.18	36.86	46.14	43.26	74.00	30.74	Peak
4	2462.000	29.48	7.54	36.61	105.85	106.26	74.00 -	-32.26	Peak

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



Site no. : 3# Chamber Data no. : 51

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

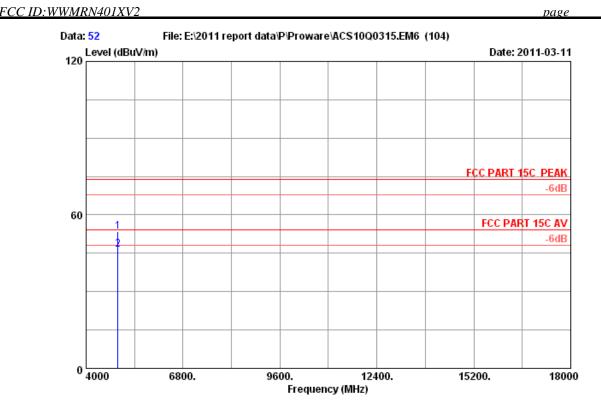
EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT20 CH11 2462MHz Tx

M/N : PW-RN401D

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Site no. : 3# Chamber Data no. : 52

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

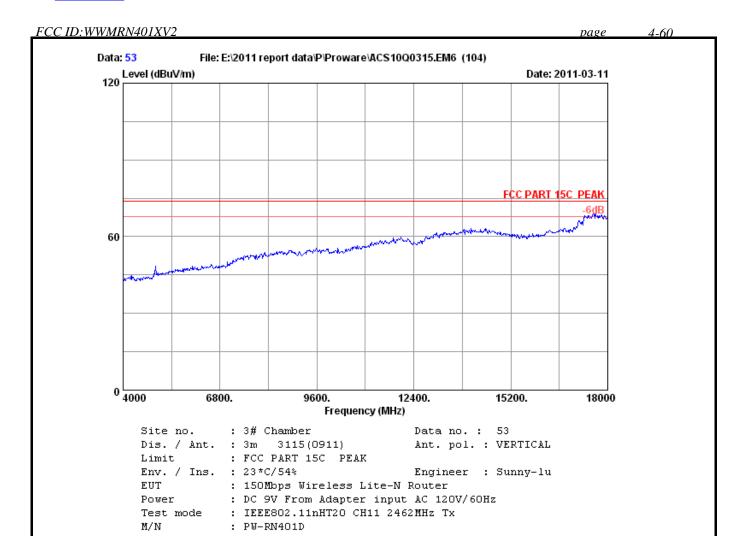
EUT : 150Mbps Wireless Lite-N Router

Power
Test mode : IEEE8U4...
: PW-RN401D : DC 9V From Adapter input AC 120V/60Hz

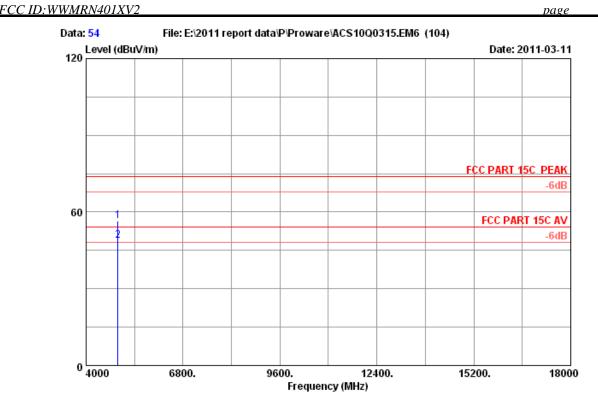
: IEEE802.11nHT20 CH11 2462MHz Tx

	-	Factor	Cable loss (dB)	Factor	Reading (dBuV)	Emission Level (dBuV/m)		_	Remark
_	4924.000				43.26 36.14	53.53 46.41	74.00 54.00	20.47 7.59	Peak Average

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



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Site no. : 3# Chamber Data no. : 54
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz Test mode : IEEE802.11nHT20 CH11 2462MHz Tx

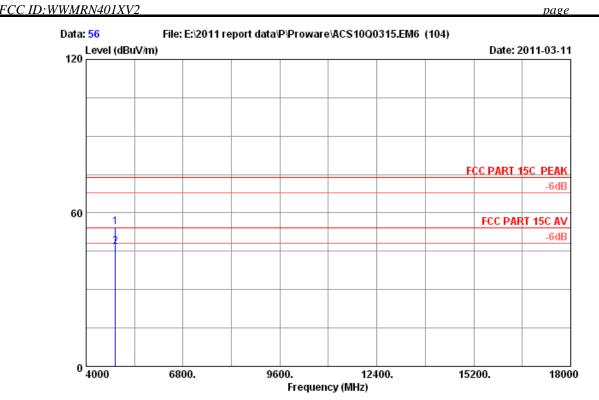
M/N : PW-RN401D

	-	Factor	loss		_	Emission Level		_	Remark	
	(MHz)	(dB/m) 	(dB)	(dB) 	(dBuV)	(dBuV/m) 	(dBuV/m) 	(dB)		
1	4924.000	34.49	10.76	34.98	46.25	56.52	74.00	17.48	Peak	
2	4924.000	34.49	10.76	34.98	38.47	48.74	54.00	5.26	Average	

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



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Site no. : 3# Chamber Data no. : 56 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

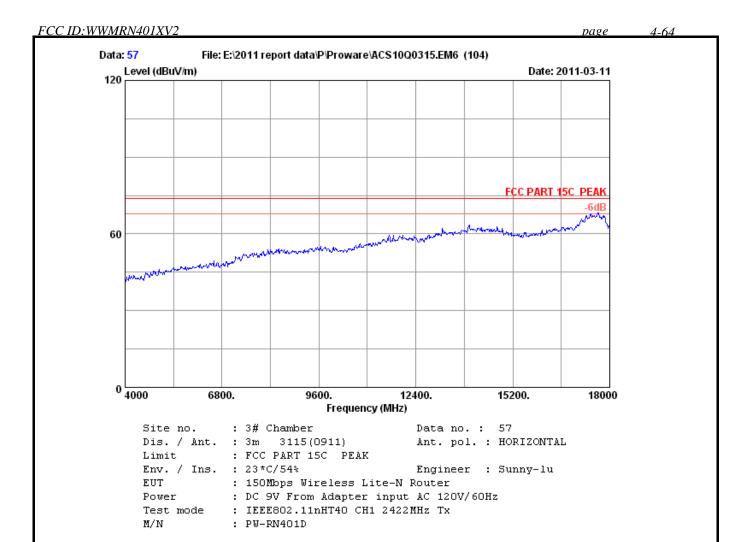
EUT : 150Mbps Wireless Lite-N Router

Power
Test mode : IEEE8U4...
: PW-RN401D : DC 9V From Adapter input AC 120V/60Hz

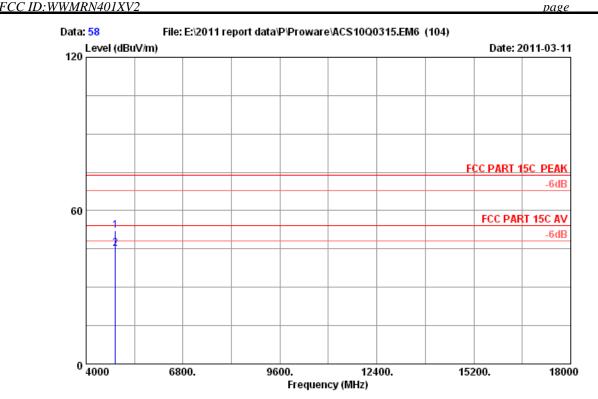
: IEEE802.11nHT40 CH1 2422MHz Tx

	-		Factor	_	Emission Level (dBuV/m)		_	Remark
_	4844.000 4844.000	 		44.63 36.98	54.60 46.95	74.00 54.00	19.40 7.05	Peak Average

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



4-65



Site no. : 3# Chamber Data no.: 58

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

Power : DC 9V From Adapter input AC 120V/60Hz

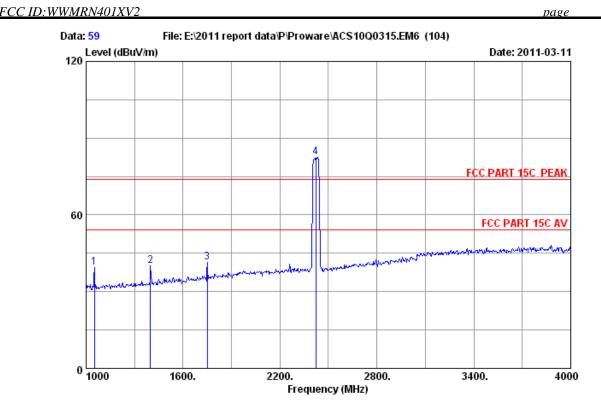
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx

M/N: PW-RN401D

	-	Factor	Cable loss (dB)	Factor	Reading (dBuV)	Emission Level (dBuV/m)		_	Remark
_	4844.000 4844.000				42.32 35.17	52.29 45.14	74.00 54.00	21.71 8.86	Peak Average

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

4-66



Site no. : 3# Chamber Data no. : 59

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

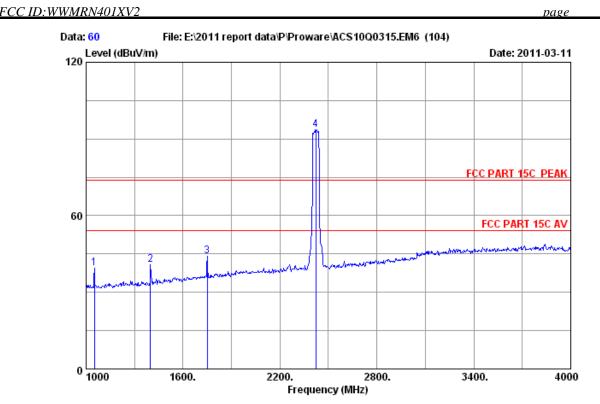
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx

M/N : PW-RN401D

-	Factor	loss	Factor	_	Level		_	Remark
1051.000	25.50	4.86	37.81	46.77	39.32	74.00	34.68	Peak
1399.000	26.19	5.50	37.18	45.71	40.22	74.00	33.78	Peak
1750.000	27.80	6.18	36.86	44.41	41.53	74.00	32.47	Peak
2422.000	29.46	7.46	36.61	82.37	82.68	74.00	-8.68	Peak
	(MHz) 1051.000 1399.000	Freq. Factor (MHz) (dB/m) 	Freq. Factor loss (MHz) (dB/m) (dB) 	-	Freq. Factor loss Factor Reading (MHz) (dB/m) (dB) (dB) (dBuV)  1051.000 25.50 4.86 37.81 46.77 1399.000 26.19 5.50 37.18 45.71 1750.000 27.80 6.18 36.86 44.41	Freq. Factor loss Factor Reading Level (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m)  1051.000 25.50 4.86 37.81 46.77 39.32 1399.000 26.19 5.50 37.18 45.71 40.22 1750.000 27.80 6.18 36.86 44.41 41.53	Freq. Factor loss Factor Reading Level Limits (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m)  1051.000 25.50 4.86 37.81 46.77 39.32 74.00 1399.000 26.19 5.50 37.18 45.71 40.22 74.00 1750.000 27.80 6.18 36.86 44.41 41.53 74.00	Freq. Factor loss Factor Reading Level Limits Margin (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)  1051.000 25.50 4.86 37.81 46.77 39.32 74.00 34.68 1399.000 26.19 5.50 37.18 45.71 40.22 74.00 33.78 1750.000 27.80 6.18 36.86 44.41 41.53 74.00 32.47

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

4-67



Site no. : 3# Chamber Data no.: 60 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

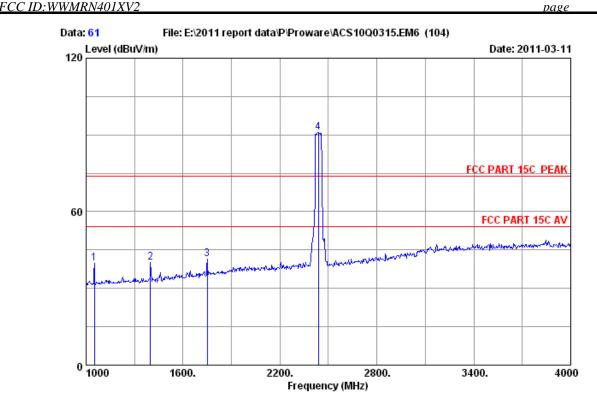
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT40 CH1 2422MHz Tx

	-		loss		Reading (dBuV)		Limits Margin (dBuV/m) (dB)	Remark	
1	1051.000	25.50	4.86	37.81	46.77	39.32	74.00 34.68	Peak	
2	1399.000	26.19	5.50	37.18	46.38	40.89	74.00 33.11	Peak	
3	1750.000	27.80	6.18	36.86	46.88	44.00	74.00 30.00	Peak	
4	2422.000	29.46	7.46	36.61	93.20	93.51	74.00 -19.51	Peak	
_									

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





Site no. : 3# Chamber Dis. / Ant. : 3m 3115(0 Data no. : 61

3115 (0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT40 CH4 2437MHz Tx

M/N: PW-RN401D

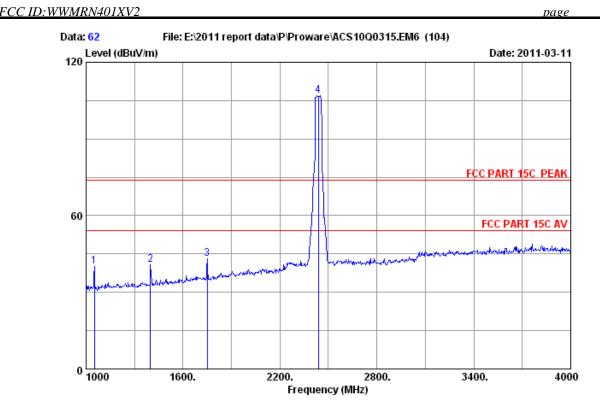
	Ant Freq. Fact (MHz) (dB/	or loss			Emission Level (dBuV/m)		_	Remark	
1	1051.000 25.	50 4.86	37.81	47.14	39.69	74.00	34.31	Peak	
2	1399.000 26.	19 5.50	37.18	45.65	40.16	74.00	33.84	Peak	
3	1750.000 27.	80 6.18	36.86	44.36	41.48	74.00	32.52	Peak	
4	2437.000 29.	47 7.46	36.61	90.52	90.84	74.00 -	-16.84	Peak	

#### Remarks:

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

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4-69



Site no. : 3# Chamber Data no.: 62 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

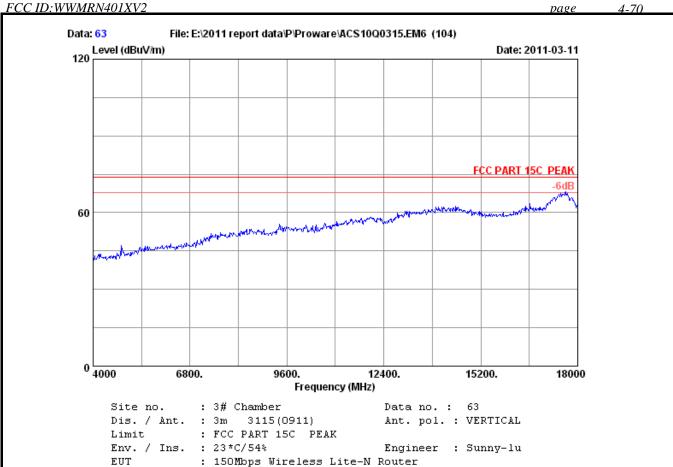
: 150Mbps Wireless Lite-N Router EUT

Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT40 CH4 2437MHz Tx

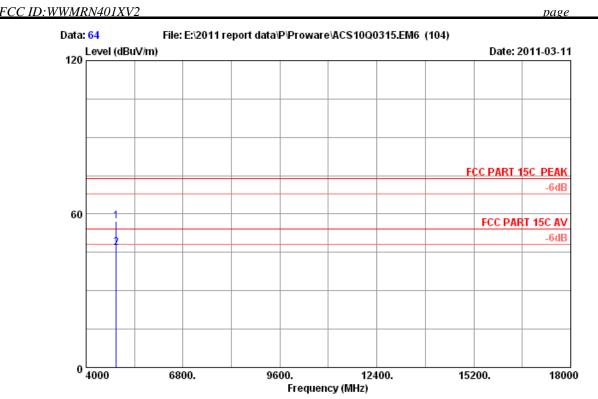
	-		loss		Reading (dBuV)		Limits Margin (dBuV/m) (dB)	Remark
1	1051.000	25.50	4.86	37.81	47.56	40.11	74.00 33.89	Peak
2	1399.000	26.19	5.50	37.18	46.23	40.74	74.00 33.26	Peak
3	1750.000	27.80	6.18	36.86	45.98	43.10	74.00 30.90	Peak
4	2437.000	29.47	7.46	36.61	106.68	107.00	74.00 -33.00	Peak

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



Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT40 CH4 2437MHz Tx



Site no. : 3# Chamber Data no. : 64
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

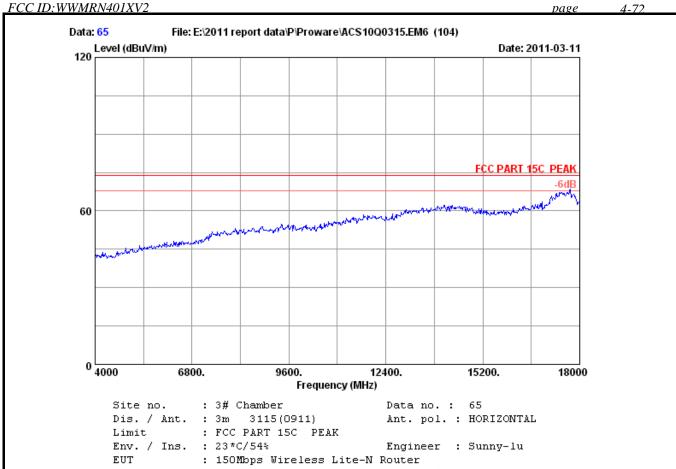
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT40 CH4 2437MHz Tx

M/N : PW-RN401D

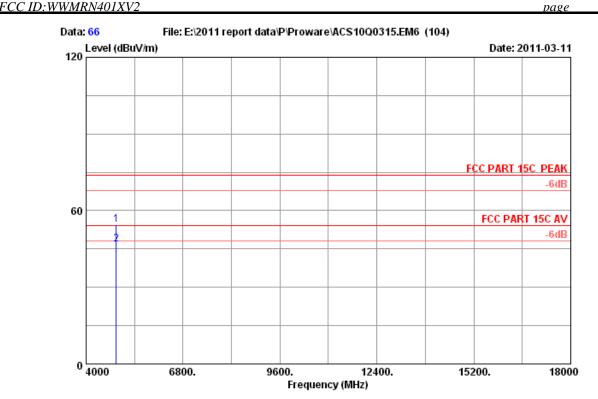
-	Factor	Factor	_	Emission Level (dBuV/m)		_	Remark	
4874.000 4874.000		 	46.98 36.78	57.05 46.85	74.00 54.00		Peak Average	

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



Power
Test mode : IEEE8U4...
: PW-RN401D Power : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11nHT40 CH4 2437MHz Tx



Site no. : 3# Chamber Data no.: 66

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

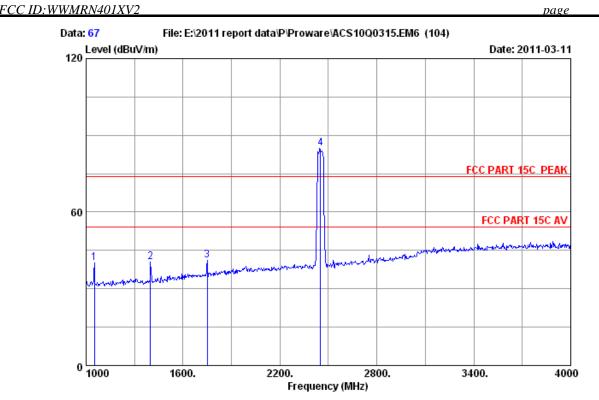
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT40 CH4 2437MHz Tx

M/N: PW-RN401D

	-	Cable loss (dB)	Factor	Reading (dBuV)	Emission Level (dBuV/m)		_	Remark
_	4874.000 4874.000	 		44.36 36.84	54.43 46.91	74.00 54.00	19.57 7.09	Peak Average

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



Site no. : 3# Chamber Data no. : 67

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

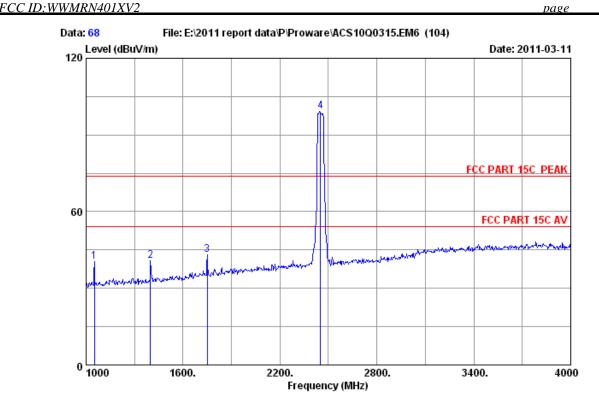
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT40 CH7 2452MHz Tx

M/N : PW-RN401D

	Freq. Factor (MHz) (dB/m)				Limits Mar (dBuV/m) (d	_	
1	1051.000 25.50	4.86 37.8	1 47.50	40.05	74.00 33.	95 Peak	
2	1399.000 26.19	5.50 37.1	8 45.92	40.43	74.00 33.	57 Peak	
3	1750.000 27.80	6.18 36.8	6 44.15	41.27	74.00 32.	73 Peak	
4	2452.000 29.47	7.50 36.6	1 84.62	84.98	74.00 -10.	98 Peak	

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



Site no. : 3# Chamber Data no.: 68 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

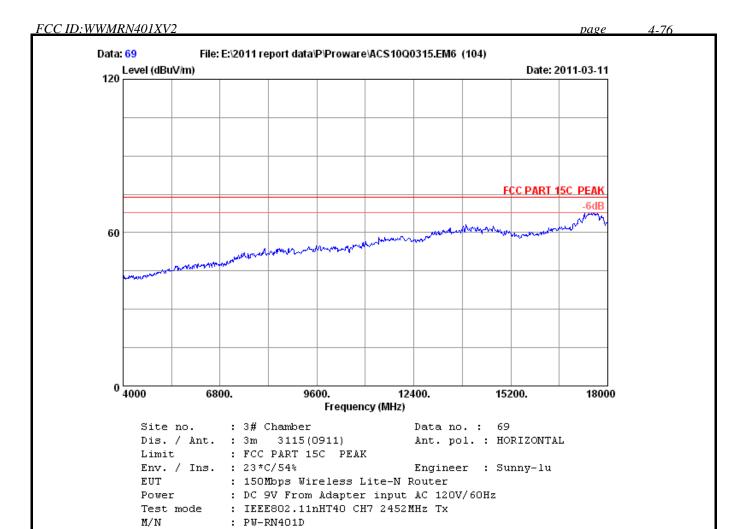
: 150Mbps Wireless Lite-N Router EUT

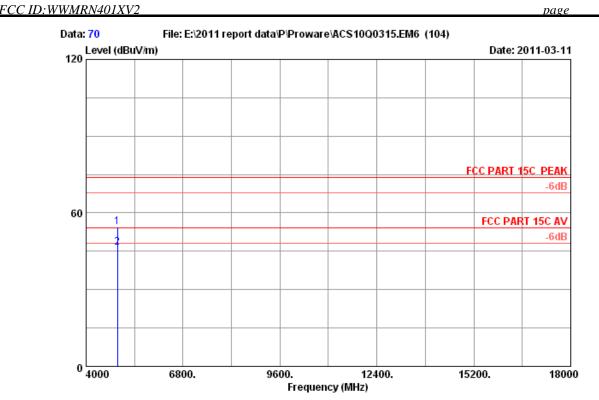
Power : DC 9V From Adapter input AC 120V/60Hz

Power Test mode : IEEE802.11nHT40 CH7 2452MHz Tx

Freq. (MHz)	Ant. Factor (dB/m)		Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark	_
2 1399.00	0 26.19 0 27.80	6.18	37.81 37.18 36.86	47.75 46.34 46.06 98.80	40.30 40.85 43.18 99.16	74.00 33.70 74.00 33.15 74.00 30.82 74.00 -25.16	Peak Peak Peak Peak	

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





Site no. : 3# Chamber Data no. : 70

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

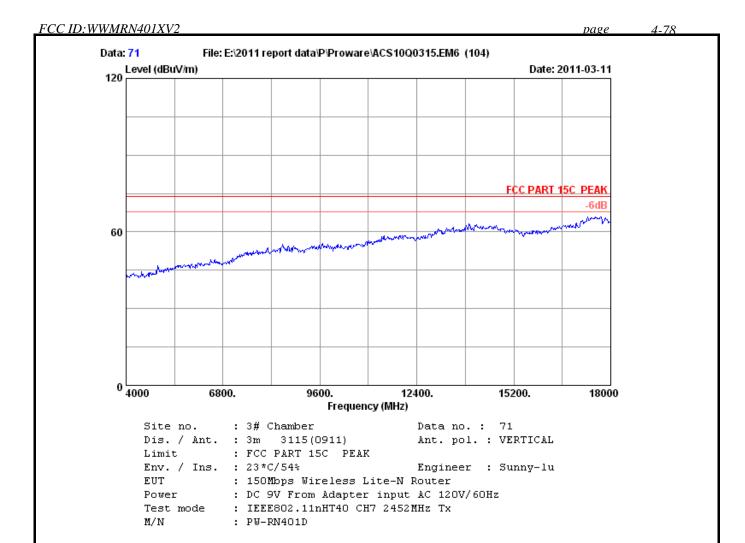
EUT : 150Mbps Wireless Lite-N Router

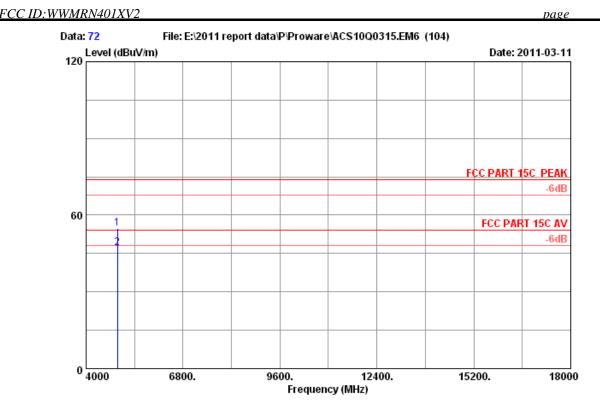
Power
Test mode : IEEE8U4...
: PW-RN401D : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11nHT40 CH7 2452MHz Tx

	-		Factor	Reading (dBuV)		Limits (dBuV/m)	_	Remark
_	4904.000	 		44.26 36.24	54.46 46.44	74.00 54.00	19.54 7.56	Peak Average

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





Site no. : 3# Chamber Data no. : 72
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23  $^{*}$ C/54 $^{*}$  Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT40 CH7 2452MHz Tx

M/N : PW-RN401D

-	Factor	loss	_	Emission Level (dBuV/m)		_	Remark	
4904.000			 44.58 37.10	54.78 47.30	74.00 54.00		Peak Average	

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



FCC 1D: WWMRN401XV2 page 5-80

#### 5. CONDUCTED SPURIOUS EMISSIONS

#### 5.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval	
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year	
2.	Attenuator	Agilent	8491B	MY39262165	May.08,10	1 Year	
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1Year	

#### 5.2.Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.

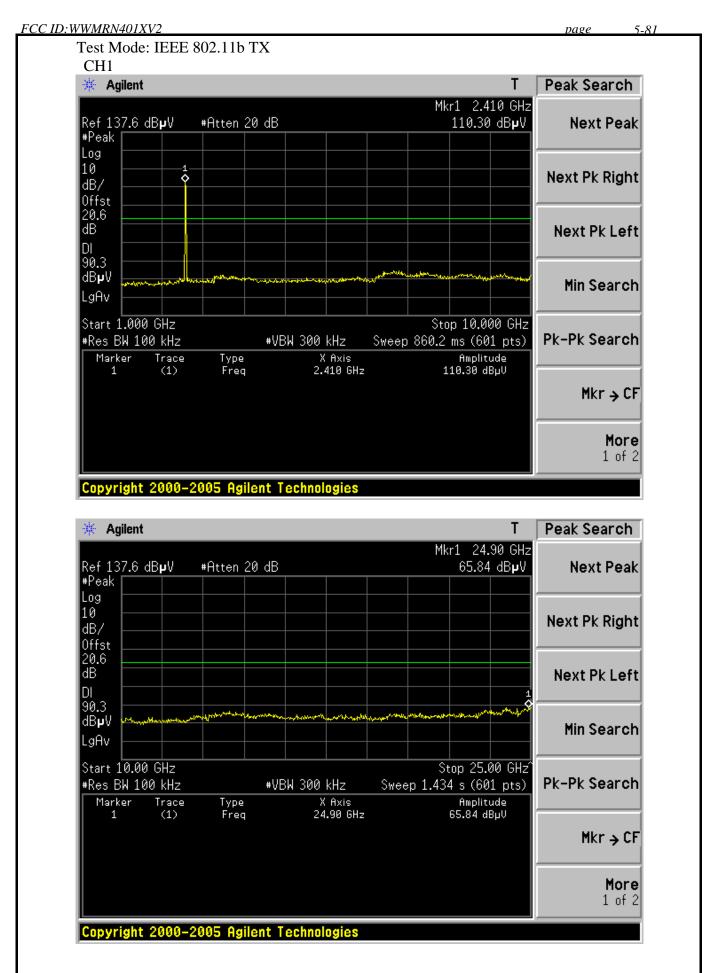
#### 5.3.Test Procedure

The transmitter output was connected to a spectrum analyzer, The resolution bandwidth is set to 100 kHz, The video bandwidth is set to 300 kHz and measure all the emissions detected.

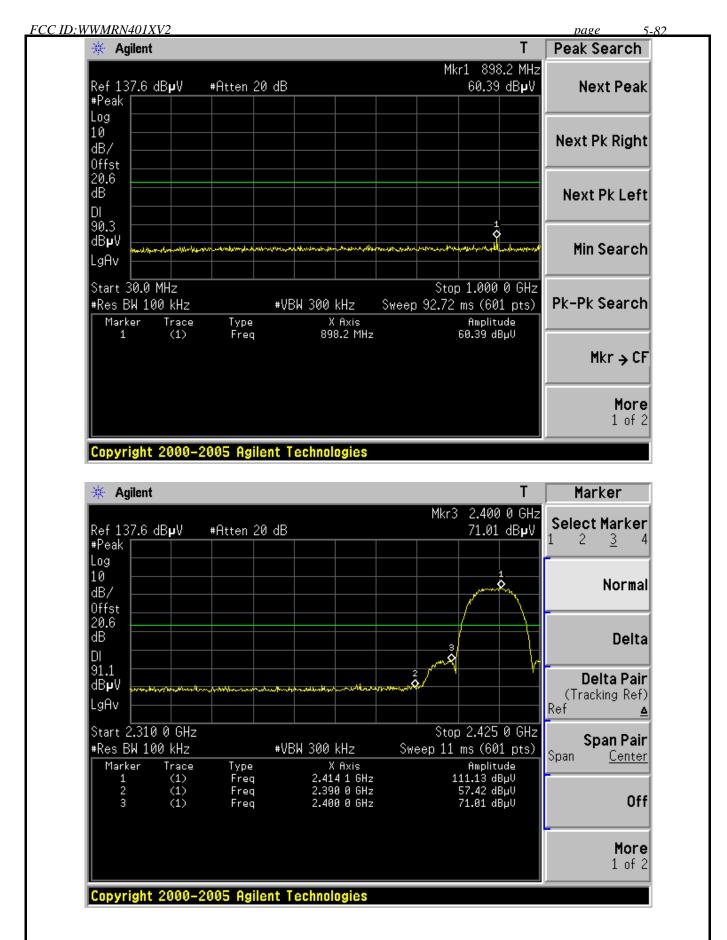
#### 5.4. Test result

**PASS** (The testing data was attached in the next pages.)

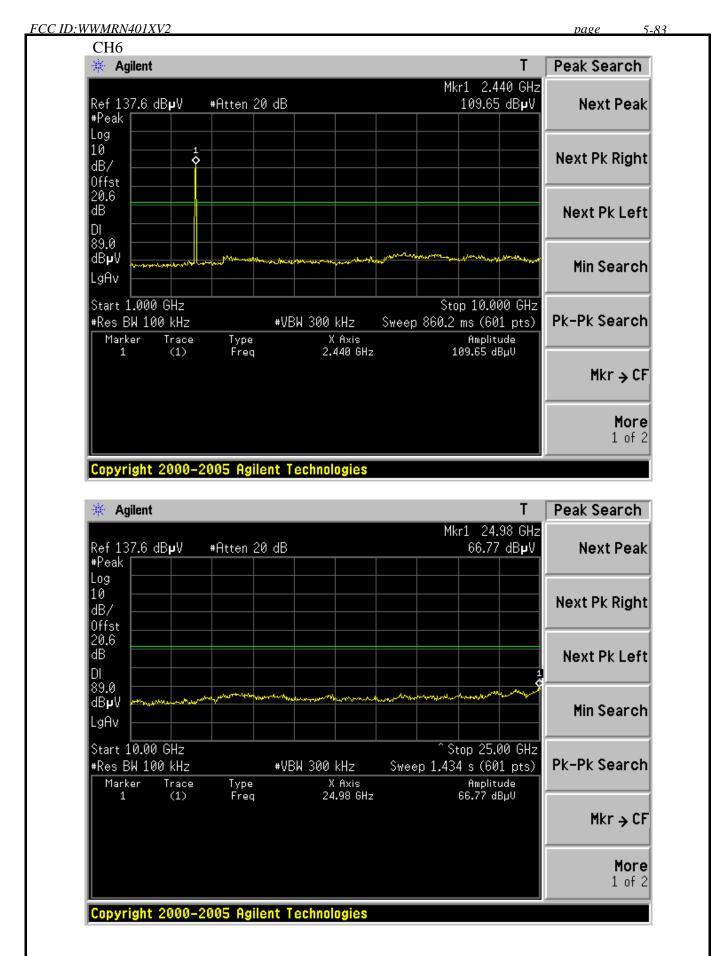




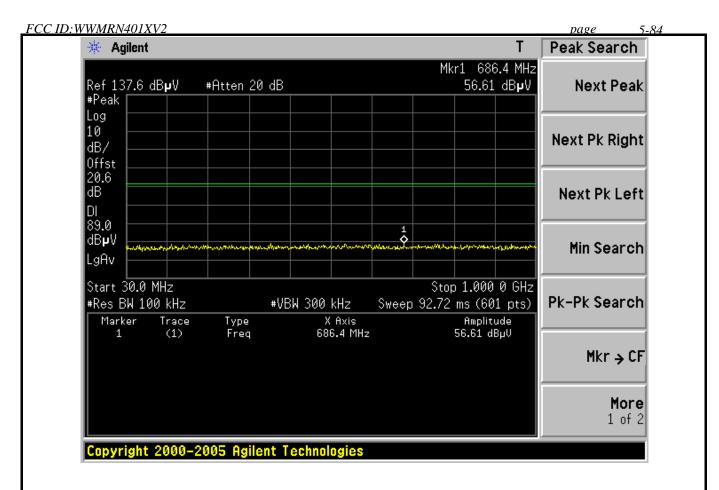


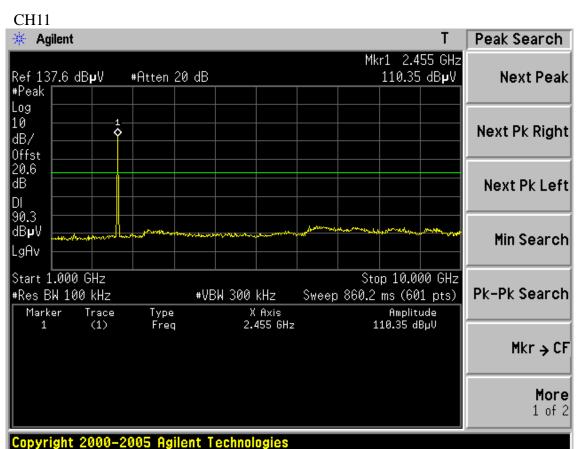




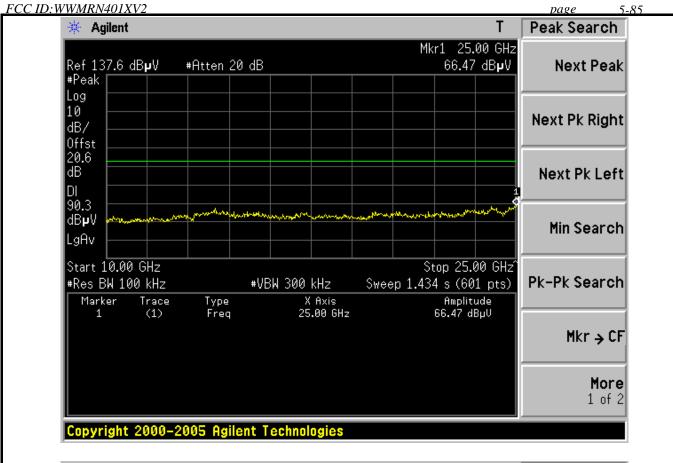


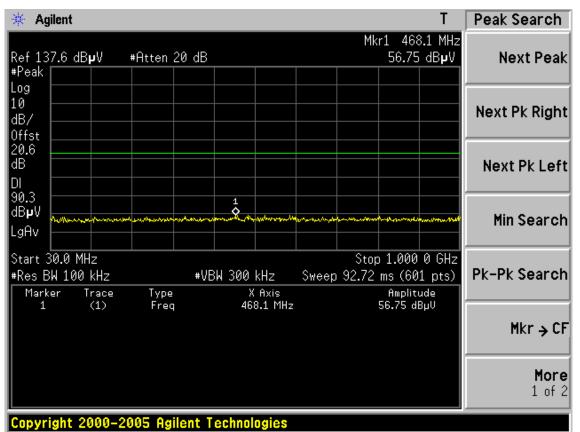




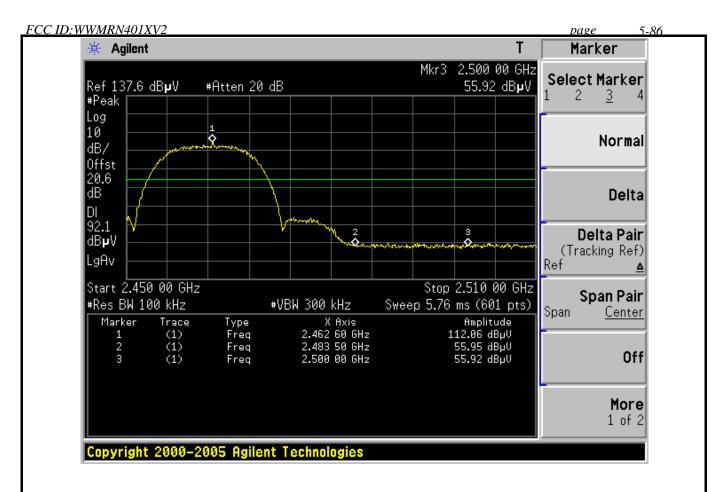


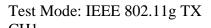


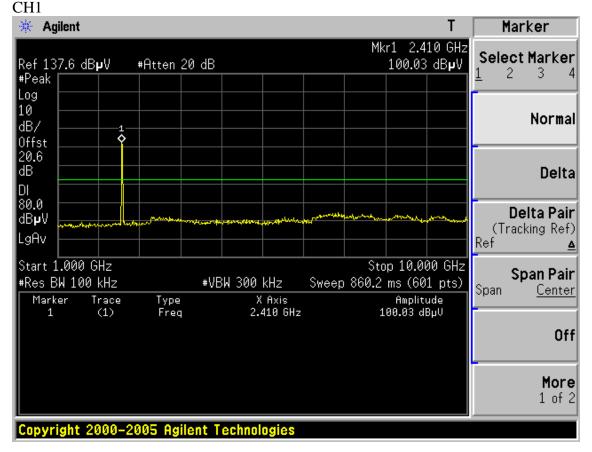




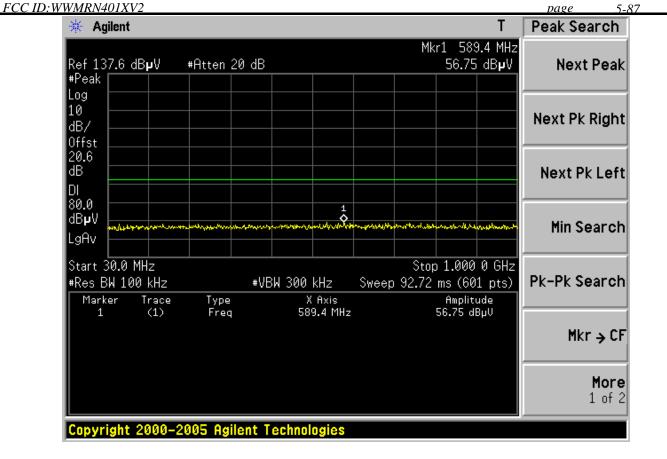


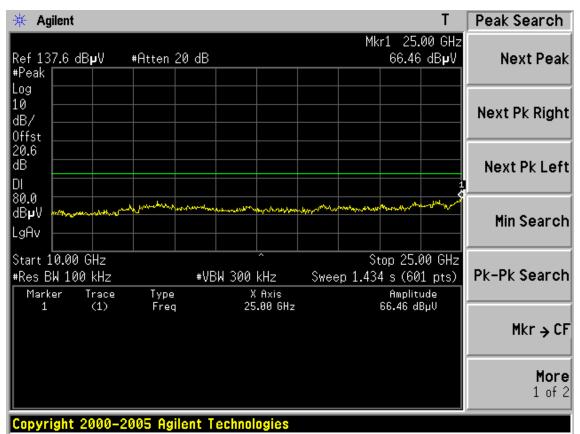




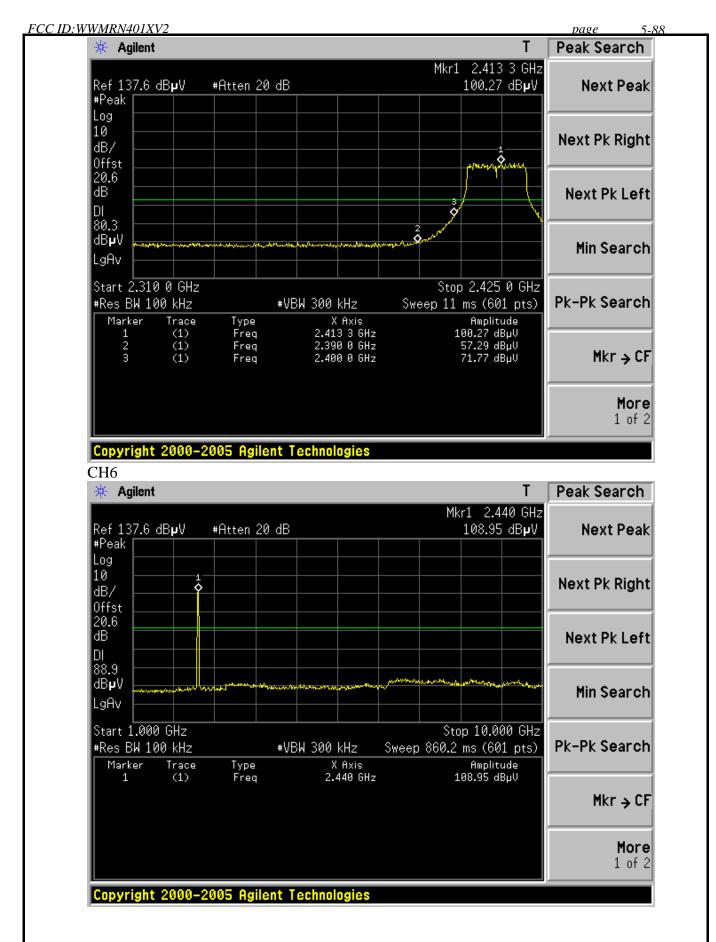




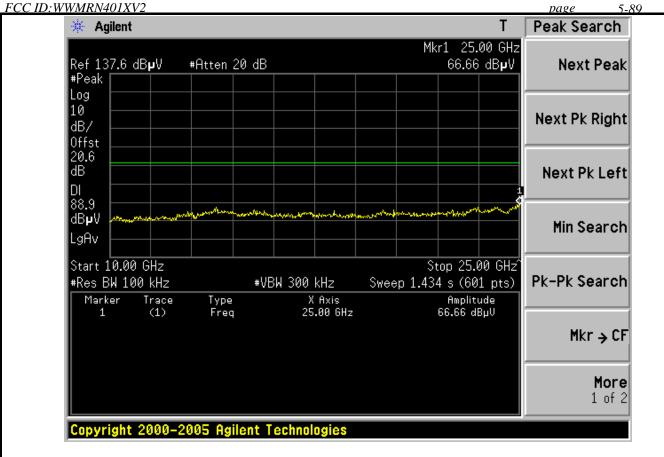


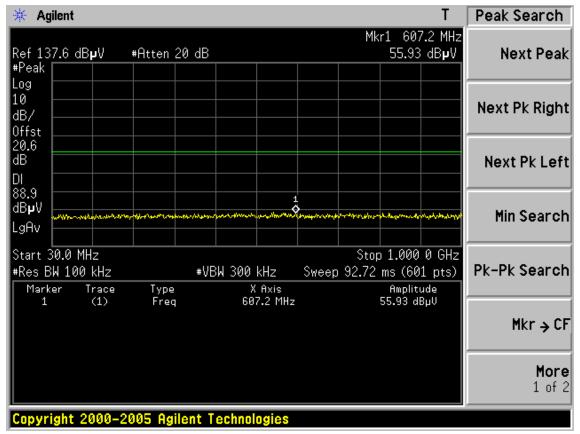




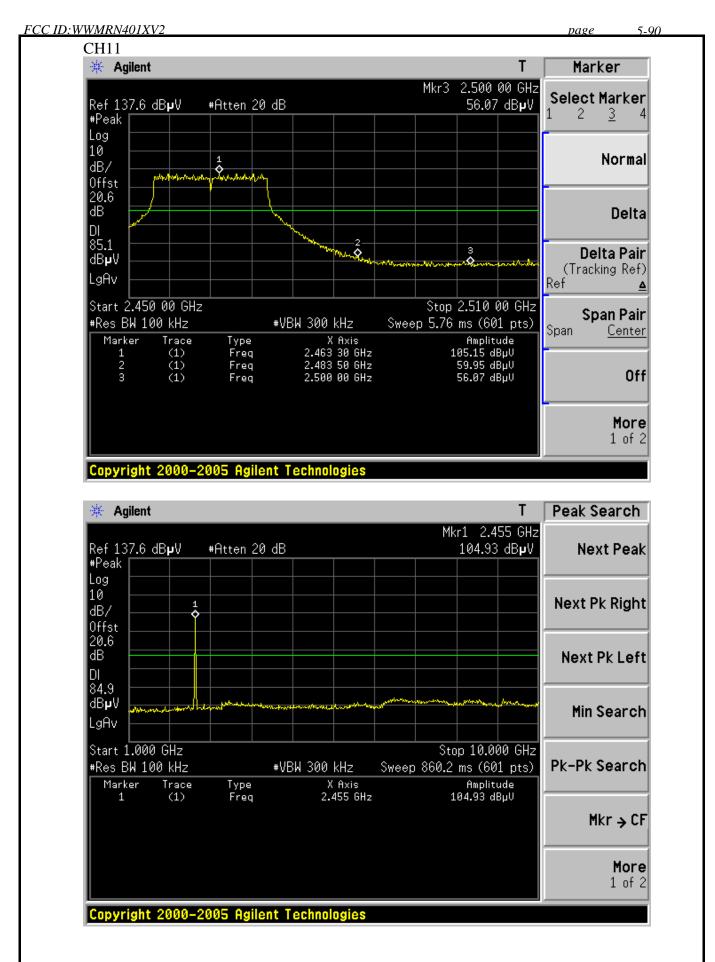




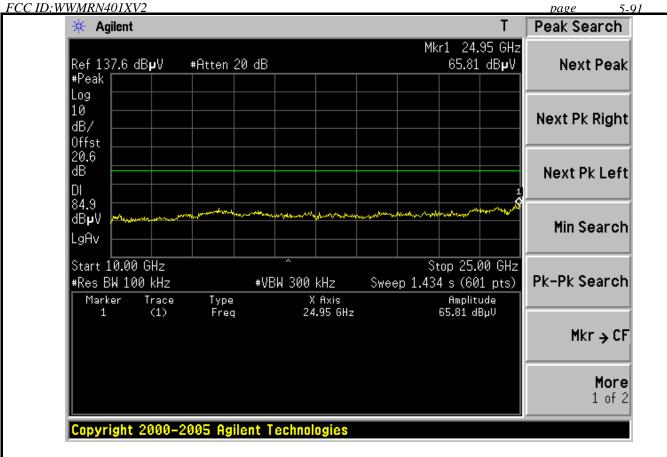


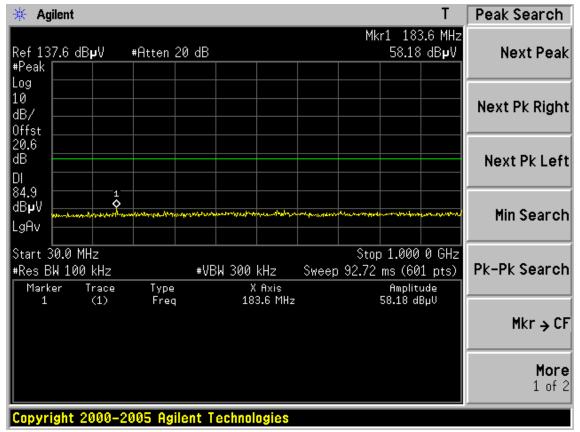




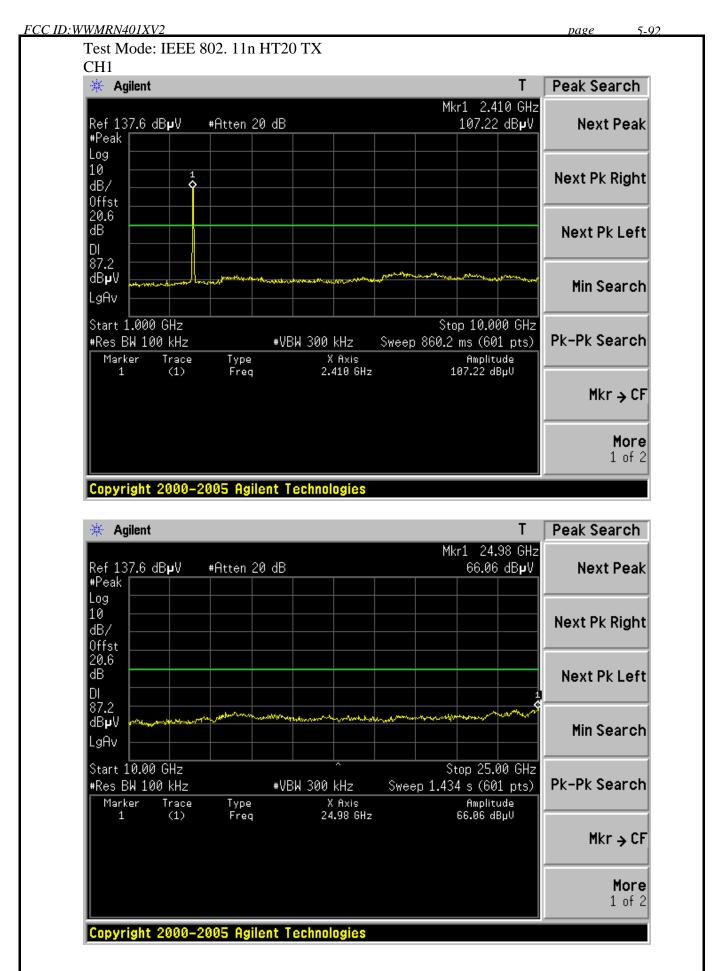




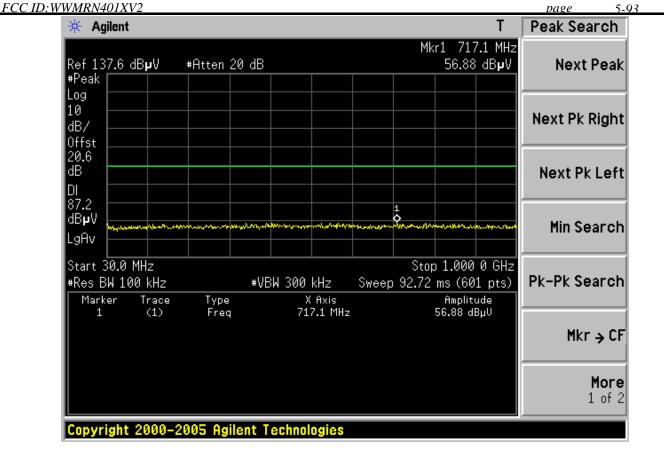


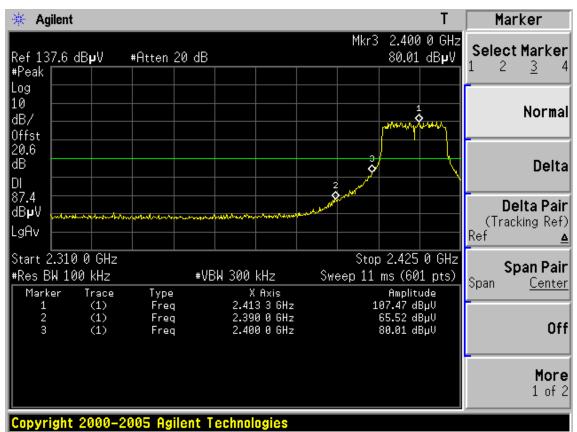




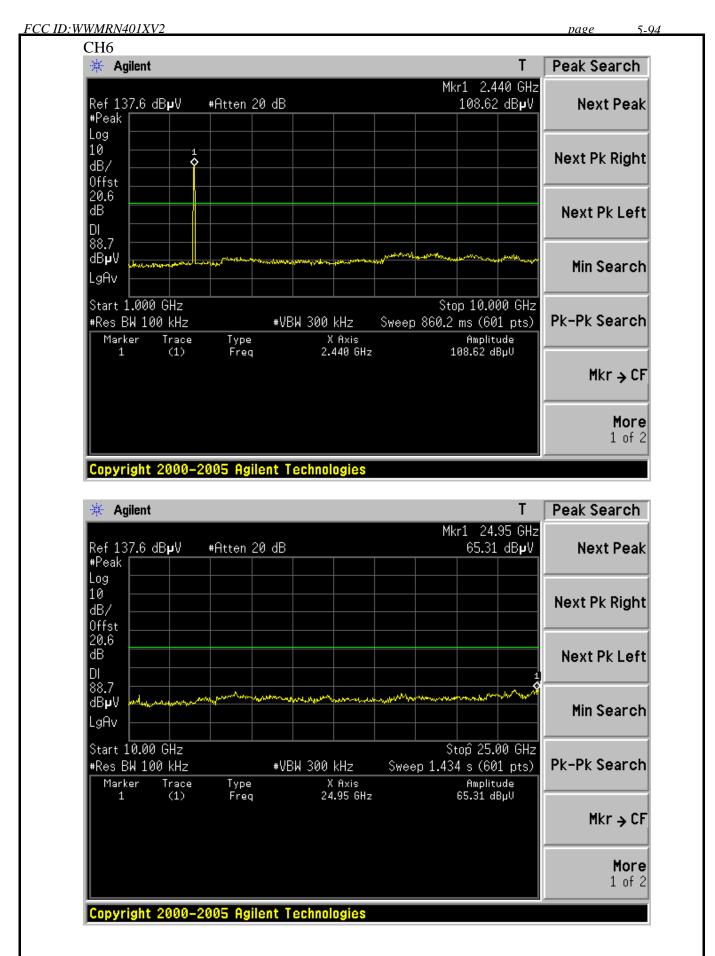




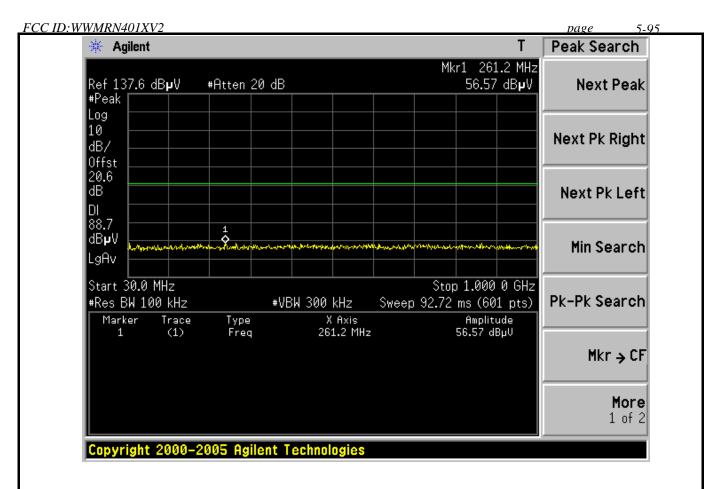




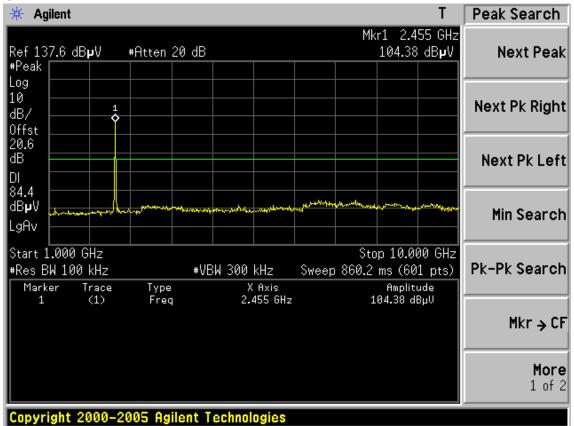




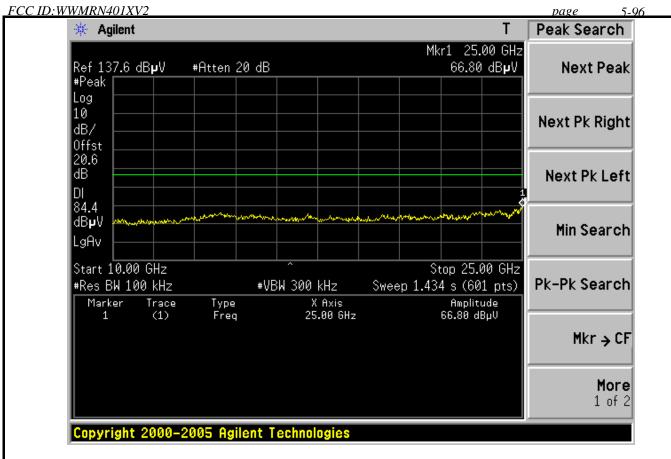


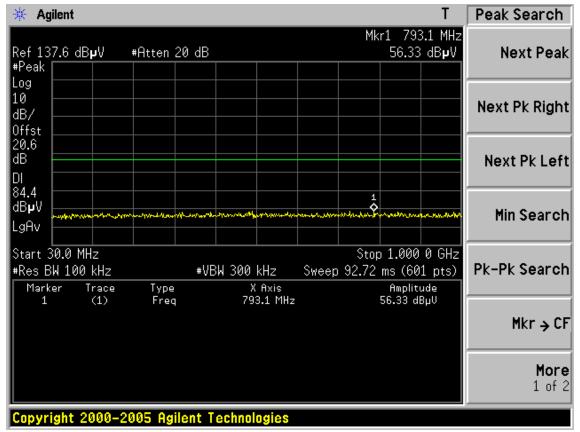




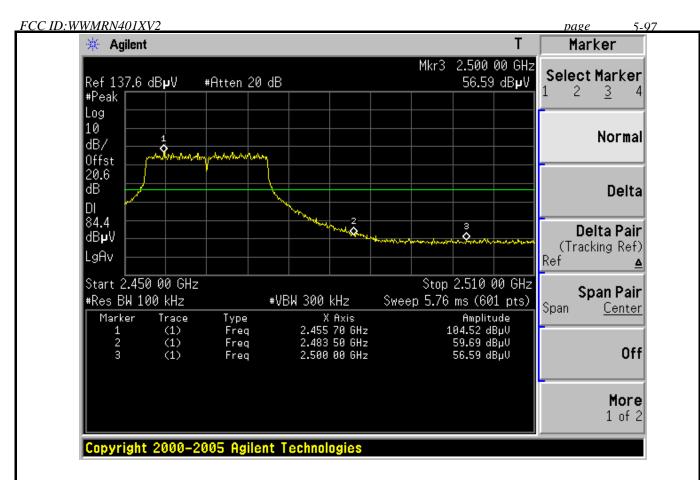






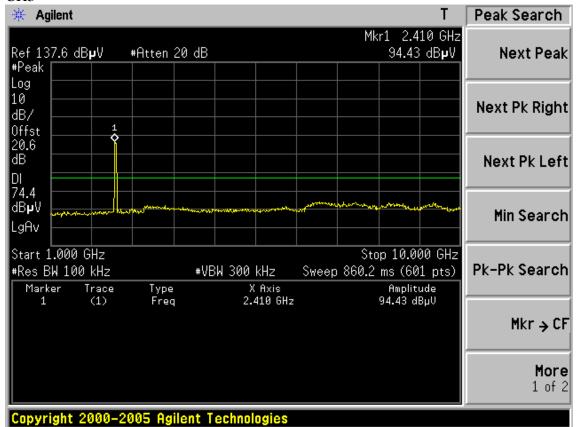




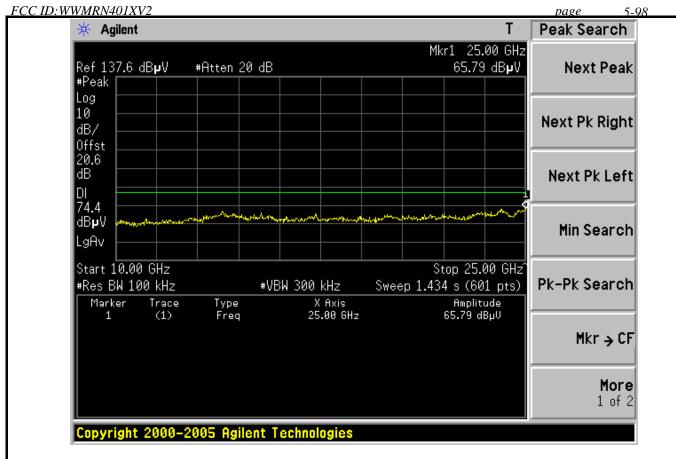


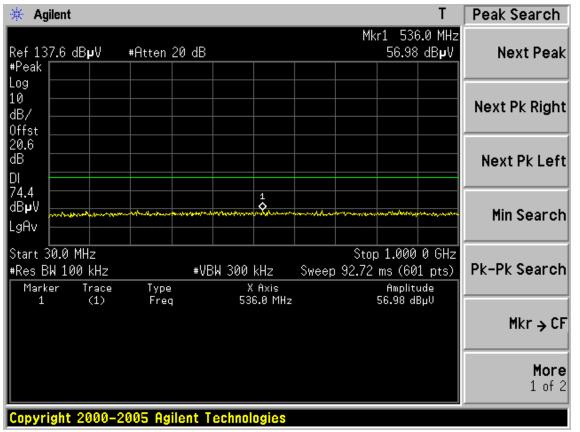
Test Mode: IEEE 802. 11n HT40TX

CH3

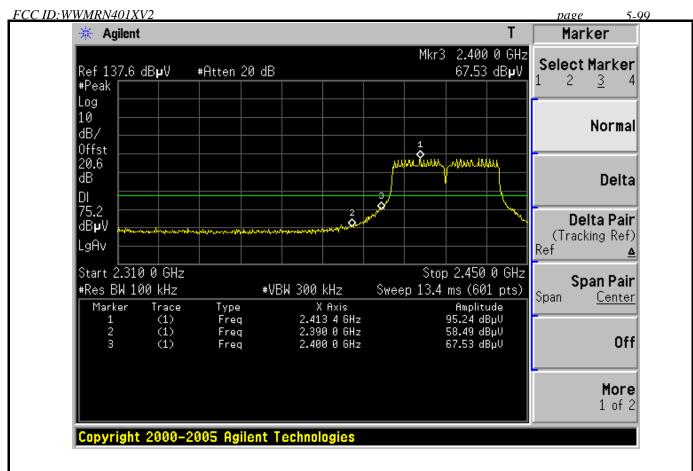




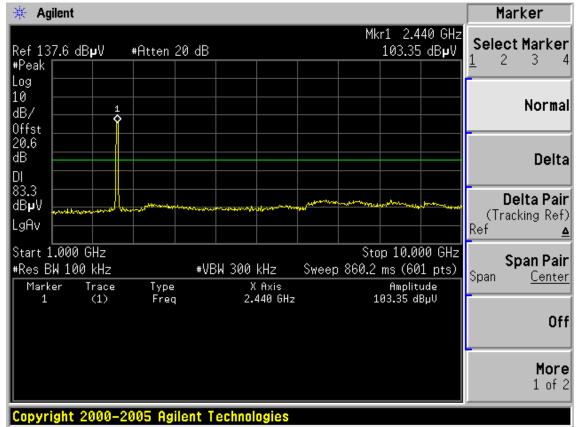




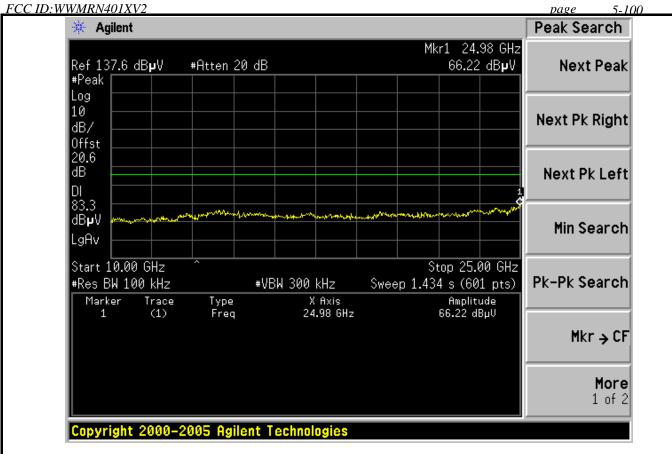


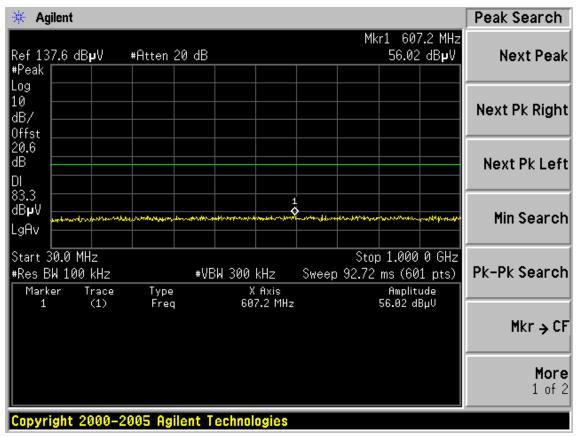




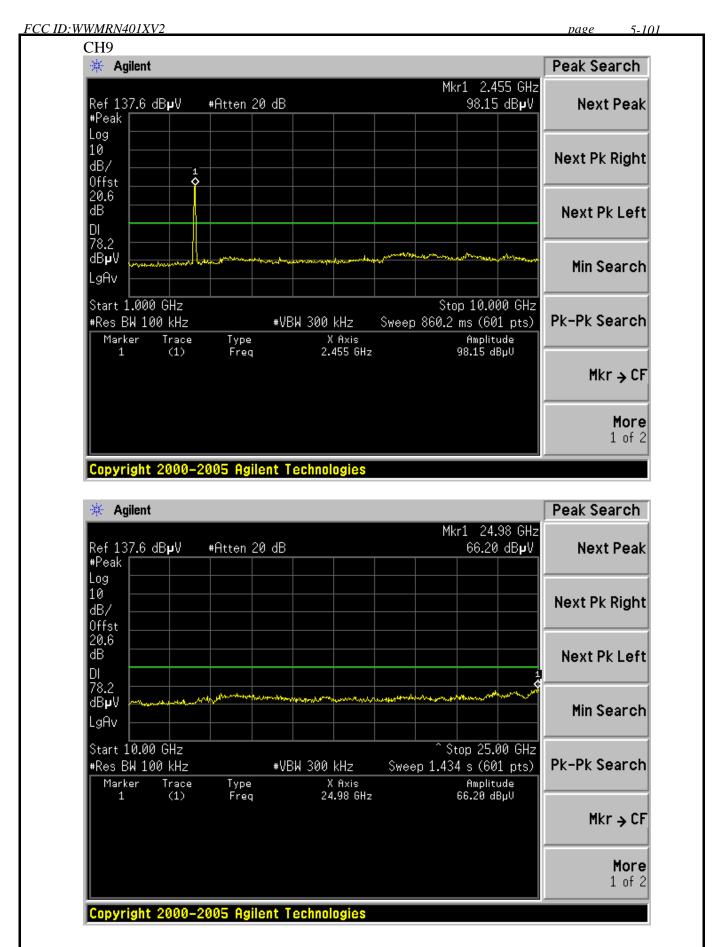




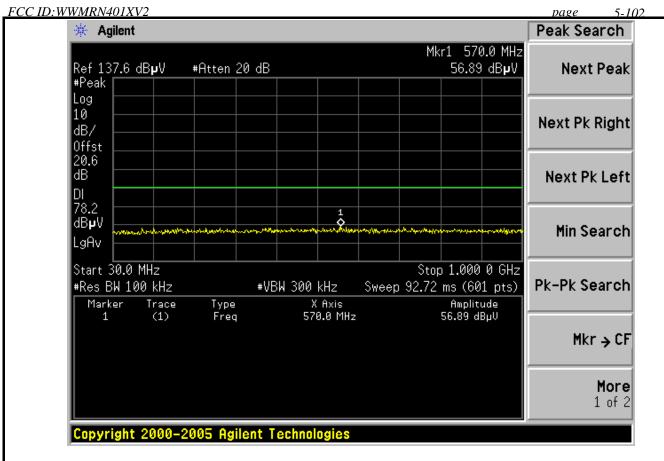


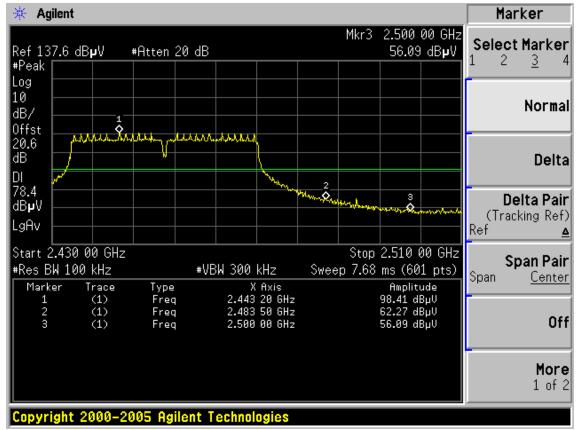














FCC ID: WWMRN401XV2 page 6-103

## 6. BAND EDGE COMPLIANCE TEST

## 6.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3.	Amplifier	Agilent	8449B	3008A02495	May.08, 10	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08,10	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	May.08,10	1 Year

## 6.2.Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

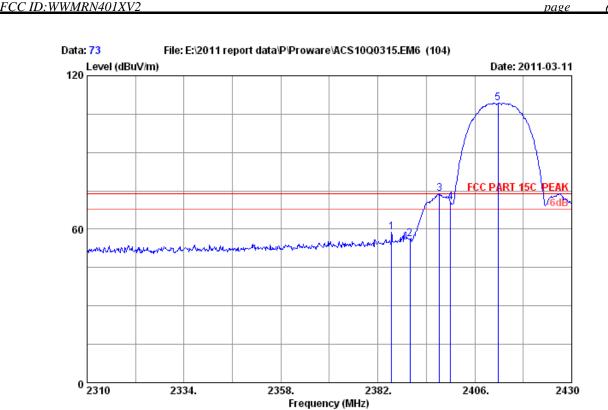
## 6.3. Test Produce

- 1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
- 2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
- (a) PEAK: RBW=1MHz; VBW=3MHz; Sweep=AUTO
- (b) AVERAGE: RBW=1MHz; VBW=10Hz; Sweep=AUTO

## 6.4. Test Results

Pass (The testing data was attached in the next pages.)





Site no. : 3# Chamber Data no.: 73

Dis. / Ant. : 3m 3115 (0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

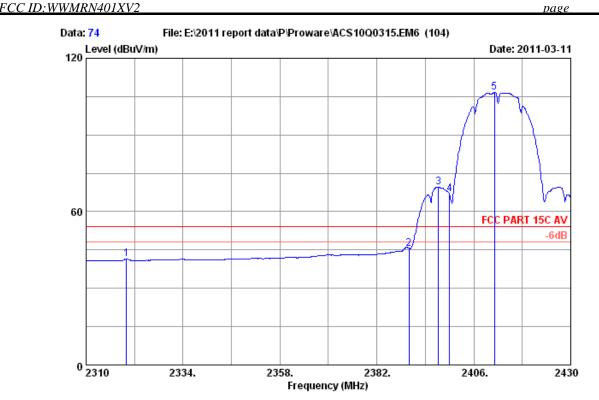
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11b CH1 2412MHz Tx

M/N: PW-RN401D

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	•	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m	Margin ) (dB)	Remark	
1	2385.360	29.43	7.39	36.62	58.76	58.96	74.00	15.04	Peak	
2	2390.000	29.44	7.39	36.62	55.98	56.19	74.00	17.81	Peak	
3	2397.240	29.44	7.39	36.62	73.52	73.73	74.00	0.27	Peak	
4	2400.000	29.44	7.43	36.62	70.31	70.56	74.00	3.44	Peak	
5	2411.760	29.45	7.43	36.62	109.10	109.36	74.00	-35.36	Peak	

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



Site no. : 3# Chamber Data no. : 74 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

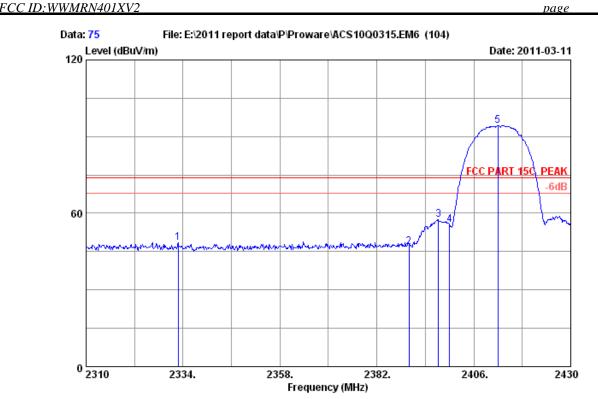
Power
Test mode : IEEE8U4...
: PW-RN401D : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11b CH1 2412MHz Tx

	Ant. Freq. Factor (MHz) (dB/m)	loss F	Amp. 'actor Readi (dB) (dBu\ 	-	Limits (dBuV/m)	Margin ) (dB)	Remark
1	2319.960 29.40		6.63 41.4		54.00	12.51	Average
2	2390.000 29.44	7.39 3	6.62 45.3	0 45.51	54.00	8.49	Average
3	2397.240 29.44	7.39 3	6.62 69.3	9 69.60	54.00 -	-15.60	Average
4	2400.000 29.44	7.43 3	66.62 66.6	66.88	54.00 -	-12.88	Average
5	2411.160 29.45	7.43 3	6.62 106.3	6 106.62	54.00 -	-52.62	Average

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





: 3# Chamber Site no. Data no.: 75

Dis. / Ant. : 3m 3115 (0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

: DC 9V From Adapter input AC 120V/60Hz Power

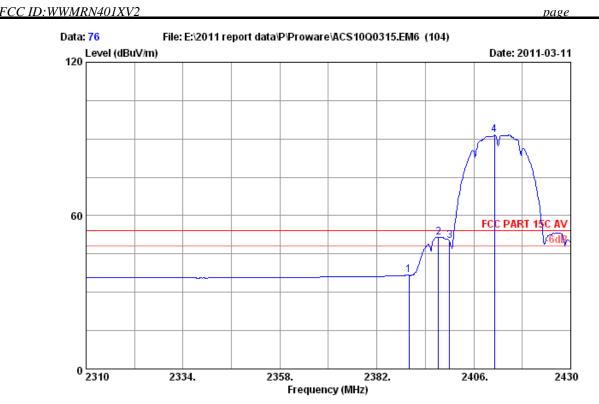
Test mode : IEEE802.11b CH1 2412MHz Tx

: PW-RN401D

	Ant. Freq. Factor (MHz) (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
1	2332.800 29.40	7.27	36.63	48.55	48.59	74.00 25.41	Peak
2	2390.000 29.44	7.39	36.62	46.55	46.76	74.00 27.24	Peak
3	2397.240 29.44	7.39	36.62	57.44	57.65	74.00 16.35	Peak
4	2400.000 29.44	7.43	36.62	55.13	55.38	74.00 18.62	Peak
5	2412.000 29.45	7.43	36.62	94.02	94.28	74.00 -20.28	Peak

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

6-106



Site no. : 3# Chamber Data no. : 76

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C AV Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

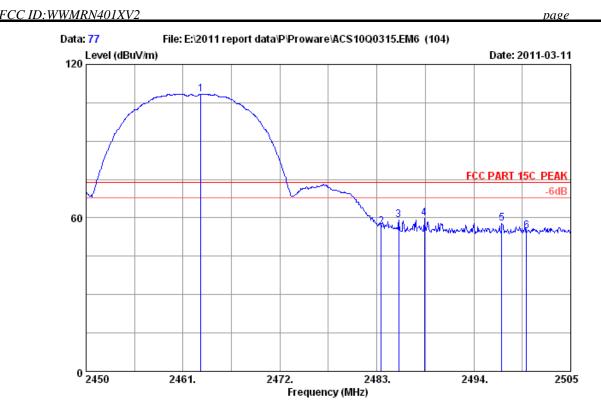
: DC 9V From Adapter input AC 120V/60Hz Power

Power
Test mode : IEEE804...
: PW-RN401D : IEEE802.11b CH1 2412MHz Tx

Freq. (MHz)	Ant. Factor (dB/m)		Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
1 2390.00 2 2397.24 3 2400.00 4 2411.16	29.44	7.39 7.43	36.62 36.62 36.62 36.62	36.40 51.41 49.72 91.19	36.61 51.62 49.97 91.45	54.00 17.39 54.00 2.38 54.00 4.03 54.00 -37.45	Average Average Average Average

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

6-108



Site no. : 3# Chamber Data no. : 77
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

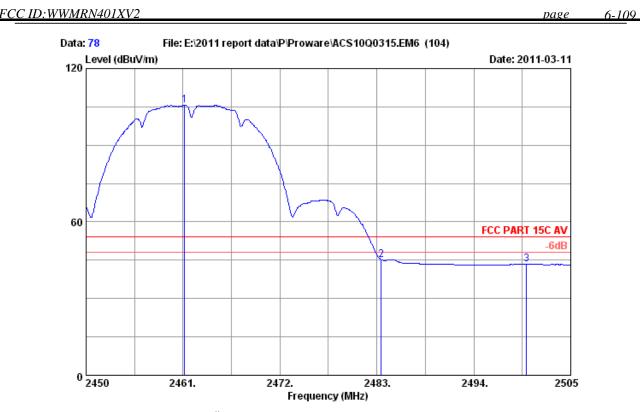
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz Tx

M/N : PW-RN401D

	Ant. Freq. Factor (MHz) (dB/m)	Cable Amp. loss Factor (dB) (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
1	2463.035 29.48	7.54 36.61	108.06	108.47	74.00 -34.47	Peak
2	2483.500 29.49	7.58 36.60	56.03	56.50	74.00 17.50	Peak
3	2485.475 29.49	7.58 36.60	58.85	59.32	74.00 14.68	Peak
4	2488.390 29.50	7.58 36.60	59.52	60.00	74.00 14.00	Peak
5	2497.190 29.50	7.58 36.60	57.36	57.84	74.00 16.16	Peak
6	2500.000 29.50	7.62 36.60	54.44	54.96	74.00 19.04	Peak

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



Site no. : 3# Chamber Data no. : 78
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

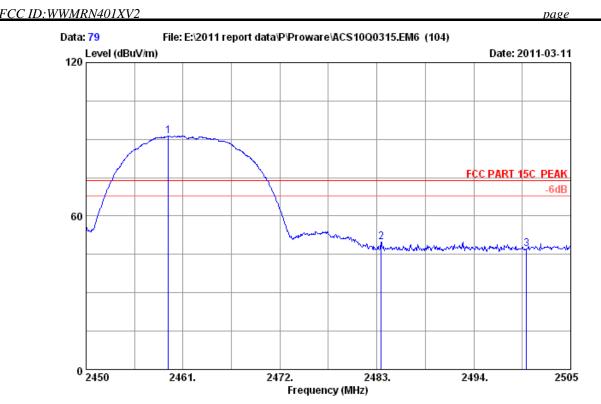
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz Tx

M/N : PW-RN401D

	-	Factor	loss		Reading (dBuV)		Limits Margin (dBuV/m) (dB)	Remark
2	2461.165 2483.500 2500.000	29.49	7.58	36.60	44.73	105.68 45.20 43.34	54.00 -51.68 54.00 8.80 54.00 10.66	Average Average Average

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



Site no. : 3# Chamber Data no. : 79

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

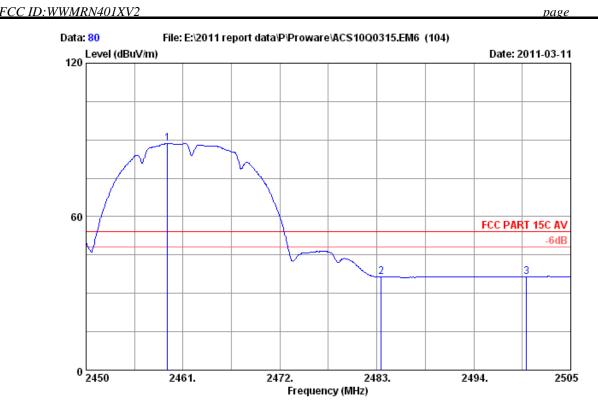
Test mode : IEEE802.11b CH11 2462MHz Tx

M/N : PW-RN401D

-	Factor	loss		_		Limits Margin (dBuV/m) (dB)	Remark
1 2459.350 2 2483.500 3 2500.000	29.49	7.58	36.60	49.23	91.23 49.70 47.24	74.00 -17.23 74.00 24.30 74.00 26.76	Peak Peak Peak

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





Site no. : 3# Chamber Dis. / Ant. : 3m 3115(0 Data no. : 80

3115 (0911) Ant. pol. : HORIZONTAL

: FCC PART 15C AV Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

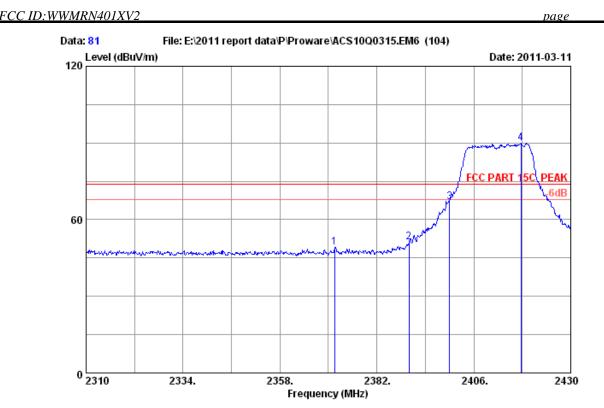
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz Tx

M/N: PW-RN401D

	Freq. :			Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
_	2459.240				88.27	88.68	54.00 -34.68	Average
2	2483.500	29.49	7.58	36.60	35.88	36.35	54.00 17.65	Average
3	2500.000	29.50	7.62	36.60	36.01	36.53	54.00 17.47	Average

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



Site no. : 3# Chamber Data no.: 81

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

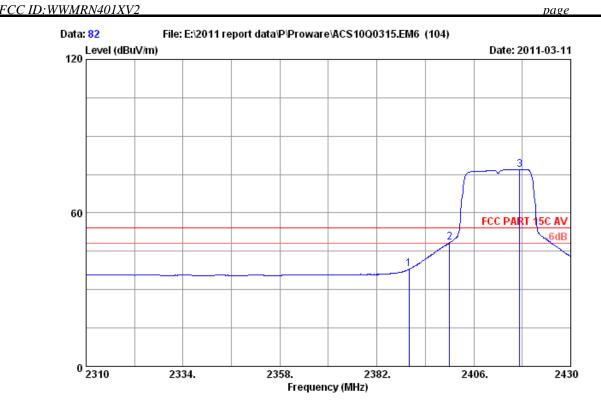
: 150Mbps Wireless Lite-N Router EUT

: DC 9V From Adapter input AC 120V/60Hz Power
Test mode : IEEE804...
: PW-RN401D Power

: IEEE802.11g CH1 2412MHz Tx

	Freq. Fact (MHz) (dB/		Factor				_	Remark	
1	2371.560 29.	43 7.35	36.62	49.07	49.23	74.00	24.77	Peak	
2	2390.000 29.	44 7.39	36.62	50.99	51.20	74.00	22.80	Peak	
3	2400.000 29.	44 7.43	36.62	66.45	66.70	74.00	7.30	Peak	
4	2417.640 29.	45 7.43	36.61	89.62	89.89	74.00 -	-15.89	Peak	

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



Site no. : 3# Chamber Data no. : 82

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C AV Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

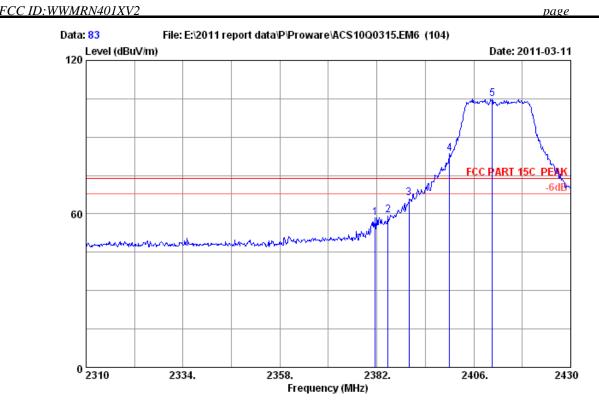
EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

Power
Test mode : IEEE8U4...
: PW-RN401D : IEEE802.11g CH1 2412MHz Tx

	Ant. Freq. Facto (MHz) (dB/m	loss	e Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
2	2390.000 29.4 2400.000 29.4 2417.400 29.4	7.43	36.62	37.77 48.14 76.64	37.98 48.39 76.91	54.00 16.02 54.00 5.61 54.00 -22.91	Average Average Average

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



Site no. : 3# Chamber Data no. : 83 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

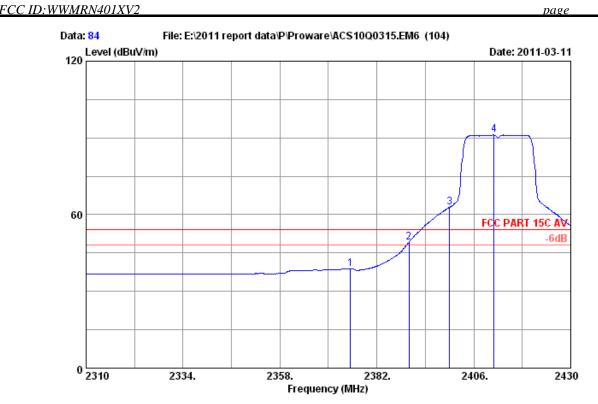
Power : DC 9V From Adapter input AC 120V/60Hz

Power
Test mode : IEEE8U4...
: PW-RN401D : IEEE802.11g CH1 2412MHz Tx

	Freq. F			Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)		Margin (dB)	Remark
1	2381.640	29.43	7.39	36.62	58.24	58.44	74.00	15.56	Peak
2	2384.760	29.43	7.39	36.62	59.22	59.42	74.00	14.58	Peak
3	2390.000	29.44	7.39	36.62	66.05	66.26	74.00	7.74	Peak
4	2400.000	29.44	7.43	36.62	83.29	83.54	74.00	-9.54	Peak
5	2410.560	29.45	7.43	36.62	104.76	105.02	74.00	-31.02	Peak

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





Site no. : 3# Chamber Data no. : 84
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

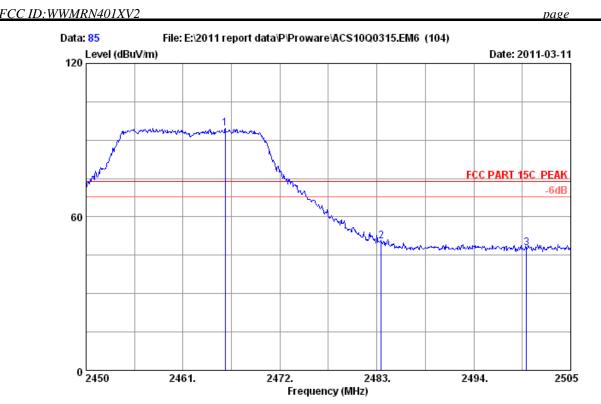
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11g CH1 2412MHz Tx

M/N : PW-RN401D

Freq (MHz			Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)		Margin ) (dB)	Remark	
1 2375.4 2 2390.0 3 2400.0 4 2411.0	00 29.44 00 29.44	7.39 7.43	36.62 36.62	38.71 49.06 62.66 90.87	38.87 49.27 62.91 91.13	54.00 54.00 54.00 54.00		lverage lverage lverage lverage	

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



Site no. : 3# Chamber Data no. : 85

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

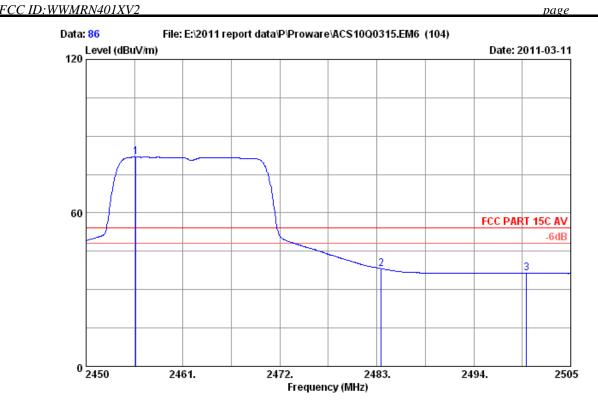
Power : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11g CH11 2462MHz Tx

Power
Test mode : IEEE8U4...
: PW-RN401D

		Ant.	Cable	Amp.		Emission		
	Freq.	Factor	loss	Factor	Reading	Level	Limits Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m) (dB)	
1	2465.785	29.48	7.54	36.61	94.30	94.71	74.00 -20.71	Peak
2	2483.500	29.49	7.58	36.60	50.03	50.50	74.00 23.50	Peak
3	2500.000	29.50	7.62	36.60	47.29	47.81	74.00 26.19	Peak

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



Site no. : 3# Chamber Data no. : 86

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C AV Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

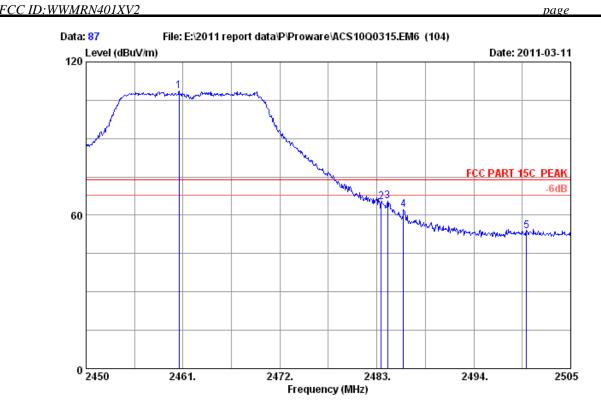
Power
Test mode : IEEE8U4...
: PW-RN401D Power : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11g CH11 2462MHz Tx

		Ant.	Cable	Amp.		Emission		
	Freq.	Factor	loss	Factor	Reading	Level	Limits Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m) (dB)	
1	2455.665	5 29.48	7.50	36.61	81.47	81.84	54.00 -27.84	Average
2	2483.500	29.49	7.58	36.60	37.75	38.22	54.00 15.78	Average
3	2500.000	29.50	7.62	36.60	35.95	36.47	54.00 17.53	Average

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





Site no. : 3# Chamber Data no. : 87
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

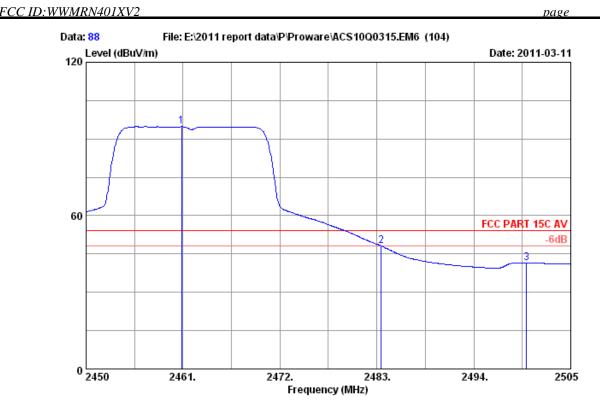
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11g CH11 2462MHz Tx

M/N : PW-RN401D

Freq. Factor loss Factor Reading Level Limits Margin Remark (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)	
1 2460.560 29.48 7.54 36.61 108.38 108.79 74.00 -34.79 Peak	
2 2483.500 29.49 7.58 36.60 64.73 65.20 74.00 8.80 Peak	
3 2484.210 29.49 7.58 36.60 64.88 65.35 74.00 8.65 Peak	
4 2486.025 29.49 7.58 36.60 61.68 62.15 74.00 11.85 Peak	
5 2500.000 29.50 7.62 36.60 53.38 53.90 74.00 20.10 Peak	

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



Site no. : 3# Chamber Data no.: 88 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

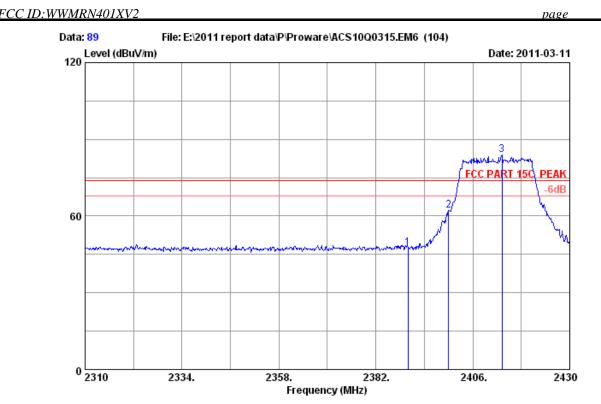
: DC 9V From Adapter input AC 120V/60Hz Power

Test mode : IEEE802.11g CH11 2462MHz Tx M/N : PW-RN401D

Ant. Freq. Factor (MHz) (dB/m)	Cable Amp. loss Factor (dB) (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
2460.835 29.48 2483.500 29.49 2500.000 29.50		94.38 47.65 40.97	94.79 48.12 41.49	54.00 -40.79 54.00 5.88 54.00 12.51	Average Average Average

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

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Site no. : 3# Chamber Data no. : 89

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

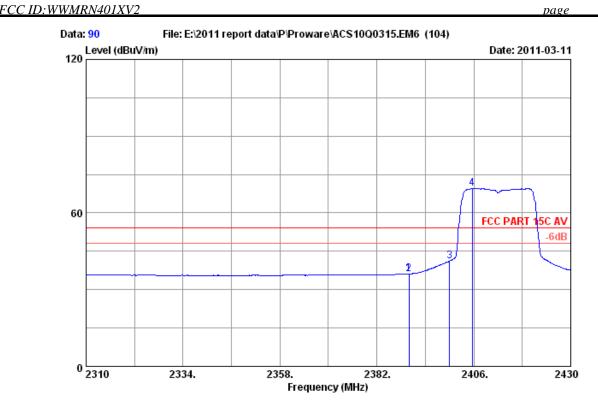
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT20 CH1 2412MHz Tx

M/N : PW-RN401D

	-	Factor	loss		Reading	Emission Level (dBuV/m)		_	Remark	
2	2390.000 2400.000 2413.200	29.44	7.43	36.62	47.14 62.03 83.52	47.35 62.28 83.78	74.00 74.00 74.00	11.72	Peak Peak Peak	-

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



Site no. : 3# Chamber Data no. : 90

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C AV Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

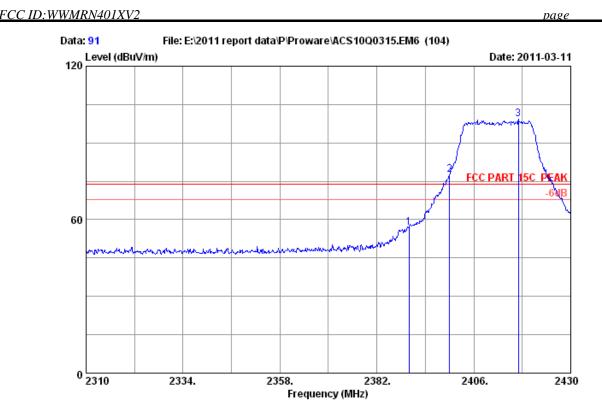
EUT : 150Mbps Wireless Lite-N Router

Power
Test mode : IEEE8U4...
: PW-RN401D Power : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11nHT20 CH1 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)		Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
2	2390.000 2390.000 2400.000 2405.640	29.44	7.39 7.43	36.62 36.62 36.62 36.62	35.92 35.92 40.98 69.27	36.13 36.13 41.23 69.53	54.00 17.87 54.00 17.87 54.00 12.77 54.00 -15.53	Average Average Average Average

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



Site no. : 3# Chamber Data no. : 91
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

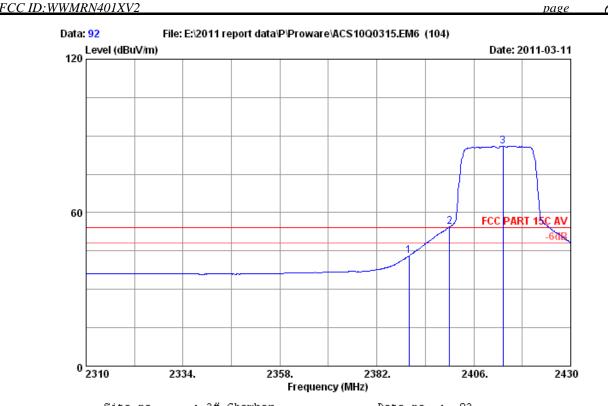
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT20 CH1 2412MHz Tx

M/N : PW-RN401D

	Ant Freq. Facto (MHz) (dB/1	or loss		Reading (dBuV)		Limits Margin (dBuV/m) (dB)	Remark
2	2390.000 29.4 2400.000 29.4 2417.040 29.4	44 7.43	36.62	56.47 77.14 99.08	56.68 77.39 99.35	74.00 17.32 74.00 -3.39 74.00 -25.35	Peak Peak Peak

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



Site no. : 3# Chamber Data no. : 92
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

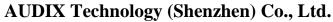
Power : DC 9V From Adapter input AC 120V/60Hz

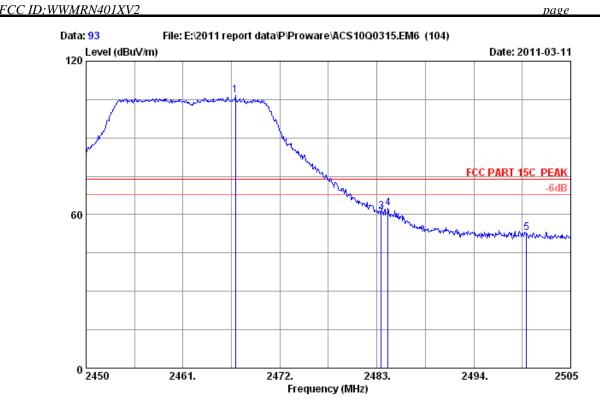
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx

M/N : PW-RN401D

	Ant. Freq. Facto (MHz) (dB/m		or Reading		Limits Margin	Remark
1 2 3	2390.000 29.4 2400.000 29.4 2413.200 29.4	4 7.43 36.	52 54.15	43.15 54.40 86.00	54.00 10.85 54.00 -0.40 54.00 -32.00	Average Average Average

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





Site no. : 3# Chamber Data no. : 93
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

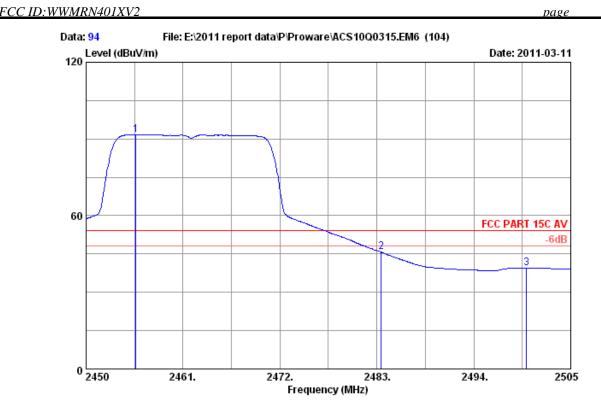
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT20 CH11 2462MHz Tx

M/N : PW-RN401D

	Ant. Freq. Factor (MHz) (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
1	2466.940 29.48	7.54	36.60	106.25	106.67	74.00 -32.67	Peak
2	2483.500 29.49	7.58	36.60	60.58	61.05	74.00 12.95	Peak
3	2483.500 29.49	7.58	36.60	60.58	61.05	74.00 12.95	Peak
4	2484.265 29.49	7.58	36.60	62.19	62.66	74.00 11.34	Peak
5	2500.000 29.50	7.62	36.60	52.13	52.65	74.00 21.35	Peak

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



Site no. : 3# Chamber Data no.: 94 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

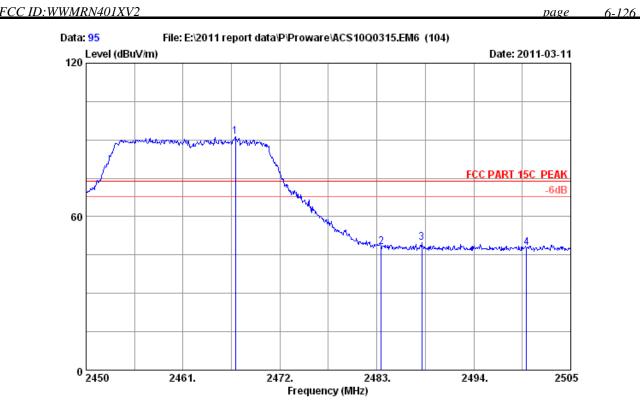
Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

Power
Test mode : IEEE8U4...
: PW-RN401D : DC 9V From Adapter input AC 120V/60Hz : IEEE802.11nHT20 CH11 2462MHz Tx

	Ant. Freq. Factor (MHz) (dB/m)	Cable Amp. loss Factor (dB) (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
_	2455.665 29.48 2483.500 29.49 2500.000 29.50		91.34 45.24 38.93	91.71 45.71 39.45	54.00 -37.71 54.00 8.29 54.00 14.55	Average Average Average

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



Site no. : 3# Chamber Dis. / Ant. : 3m 3115(0 Data no.: 95

3115 (0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

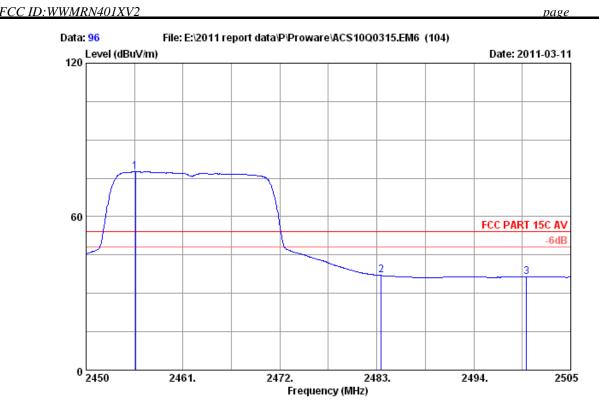
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx

M/N: PW-RN401D

	•		loss				Limits Margin (dBuV/m) (dB)	Remark
1	2466.940	29.48	7.54	36.60	90.67	91.09	74.00 -17.09	Peak
2	2483.500	29.49	7.58	36.60	47.51	47.98	74.00 26.02	Peak
3	2488.115	29.50	7.58	36.60	49.20	49.68	74.00 24.32	Peak
4	2500.000	29.50	7.62	36.60	47.19	47.71	74.00 26.29	Peak

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

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Site no. : 3# Chamber Dis. / Ant. : 3m 3115(0 Data no.: 96

3115 (0911) Ant. pol. : HORIZONTAL

: FCC PART 15C AV Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

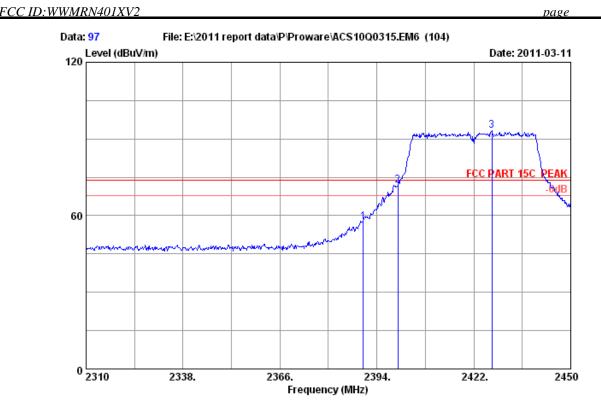
Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT20 CH11 2462MHz Tx

M/N: PW-RN401D

	Ant. Freq. Factor (MHz) (dB/m)	Cable Amp. loss Factor (dB) (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
1	2455.610 29.48		77.16	77.53	54.00 -23.53	Average
2	2483.500 29.49		36.50	36.97	54.00 17.03	Average
3	2500.000 29.50		35.76	36.28	54.00 17.72	Average

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



Site no. : 3# Chamber Data no.: 97 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

Power : DC 9V From Adapter input AC 120V/60Hz

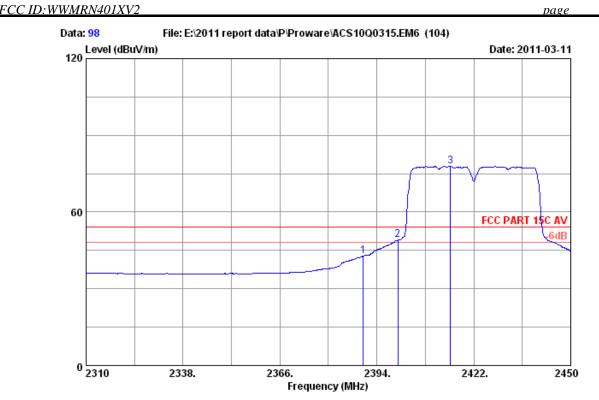
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx

M/N: PW-RN401D

		Cable Amp. loss Factor (dB) (dB)	_		Limits Margin (dBuV/m) (dB)	Remark
2	2390.000 29.44 2400.000 29.44 2427.180 29.46	7.43 36.62	57.29 71.46 92.96	57.50 71.71 93.27	74.00 16.50 74.00 2.29 74.00 -19.27	Peak Peak Peak

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

6-129



Site no. : 3# Chamber Data no. : 98
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

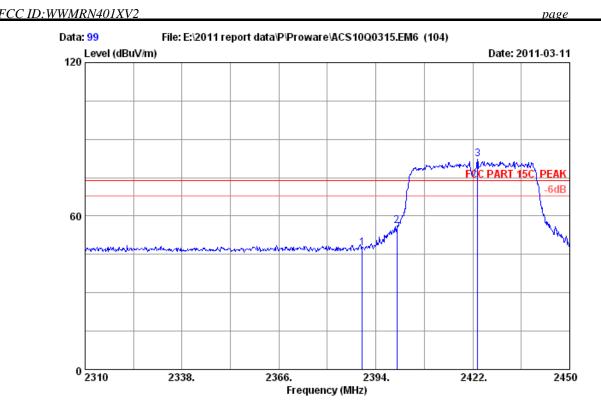
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx

M/N : PW-RN401D

	-	Ant. Factor (dB/m)		Factor	Reading (dBuV)		Limits Margin (dBuV/m) (dB)	Remark
2	2390.000 2400.000 2415.280	29.44	7.43	36.62	42.48 48.73 77.59	42.69 48.98 77.86	54.00 11.31 54.00 5.02 54.00 -23.86	Average Average Average

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

6-130



Site no. : 3# Chamber Data no. : 99

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

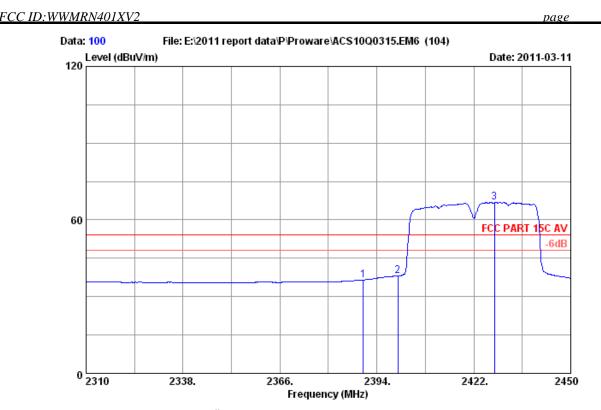
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx

M/N : PW-RN401D

	-	Factor	loss		Reading		Limits Margin (dBuV/m) (dB)	Remark
2	2390.000 2400.000 2423.400	29.44	7.43	36.62	47.29 55.88 81.77	47.50 56.13 82.08	74.00 26.50 74.00 17.87 74.00 -8.08	Peak Peak Peak

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

6-131



Site no. : 3# Chamber Data no. : 100 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C AV Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

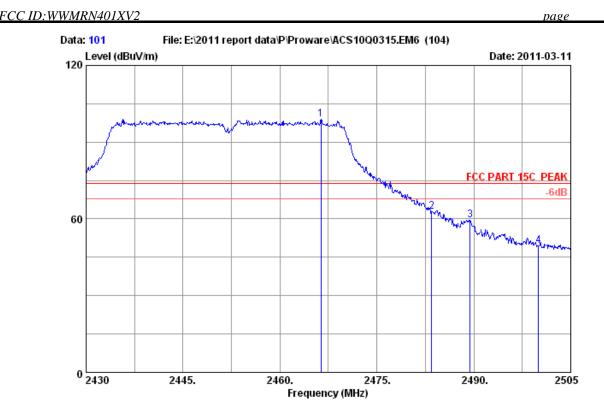
EUT : 150Mbps Wireless Lite-N Router

Power
Test mode : IEEE8U4...
: PW-RN401D Power : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11nHT40 CH1 2422MHz Tx

		Ant.	Cable	Amp.		Emission		
	Freq.	Factor	loss	Factor	Reading	Level	Limits Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m) (dB)	
1	2390.000	29.44	7.39	36.62	36.34	36.55	54.00 17.45	Average
2	2400.000	29.44	7.43	36.62	37.90	38.15	54.00 15.85	Average
3	2428.020	29.46	7.46	36.61	66.60	66.91	54.00 -12.91	Average

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



Site no. : 3# Chamber Data no. : 101 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 150Mbps Wireless Lite-N Router

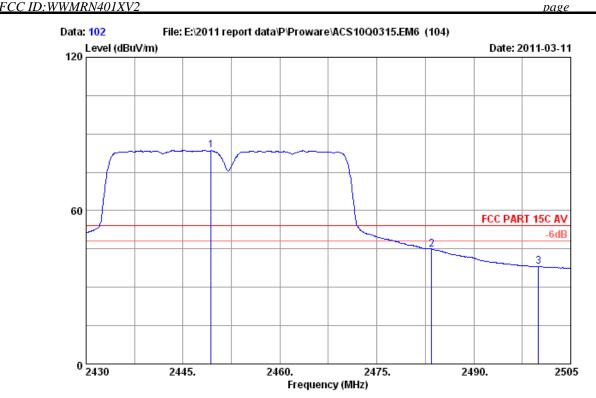
Power
Test mode : IEEE8U4...
: PW-RN401D : DC 9V From Adapter input AC 120V/60Hz

: IEEE802.11nHT40 CH7 2452MHz Tx

			Reading Level		Remark
1	2466.375 29.48	7.54 36.60	98.68 99.10	74.00 -25.10	Peak
2	2483.500 29.49	7.58 36.60	62.47 62.94	74.00 11.06	Peak
3	2489.400 29.50	7.58 36.60	59.18 59.66	74.00 14.34	Peak
4	2500.000 29.50	7.62 36.60	49.05 49.57	74.00 24.43	Peak

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

# AUDIX Technology (Shenzhen) Co., Ltd.



Site no. : 3# Chamber Data no. : 102 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C AV Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router EUT

Power
Test mode : IEEE8U4...
: PW-RN401D : DC 9V From Adapter input AC 120V/60Hz

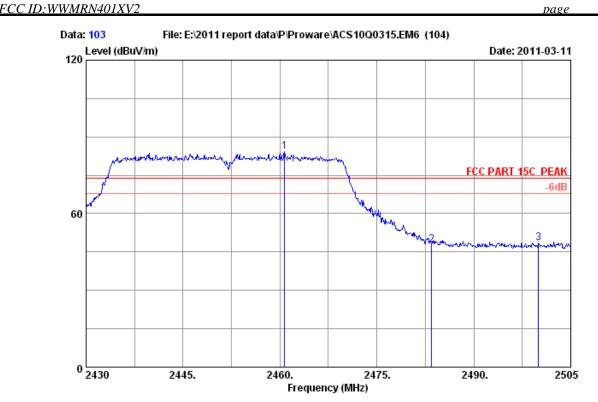
: IEEE802.11nHT40 CH7 2452MHz Tx

	Freq. F			Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)		Margin ) (dB)	Remark
2	2449.350 2483.500 2500.000	29.49	7.58	36.60	83.12 44.46 37.50	83.48 44.93 38.02	54.00 54.00 54.00	-29.48 9.07 15.98	Average Average Average

#### Remarks:

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





Site no. : 3# Chamber Dis. / Ant. : 3m 3115(0 Data no. : 103

3115 (0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Engineer : Sunny-lu Env. / Ins. : 23\*C/54%

: 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT40 CH7 2452MHz Tx

M/N: PW-RN401D

	Ant. Freq. Facto (MHz) (dB/n	r loss		_		Limits Margin (dBuV/m) (dB)	Remark
2	2460.750 29.4 2483.500 29.4 2500.000 29.5	9 7.58	36.60	83.75 47.26 47.89	84.16 47.73 48.41	74.00 -10.16 74.00 26.27 74.00 25.59	Peak Peak Peak

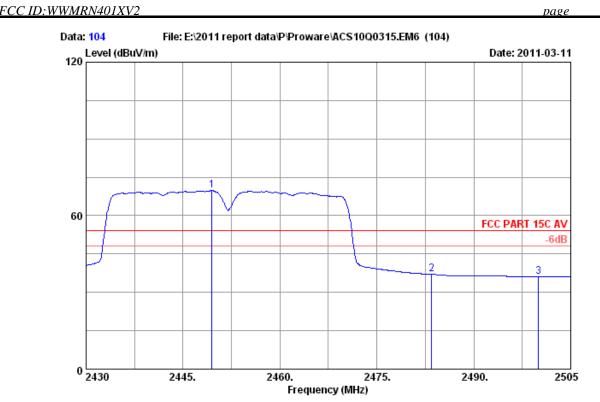
#### Remarks:

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

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# AUDIX Technology (Shenzhen) Co., Ltd.

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Site no. : 3# Chamber Dis. / Ant. : 3m 3115(0 Data no. : 104

3115 (0911) Ant. pol. : HORIZONTAL

: FCC PART 15C AV Limit

Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 150Mbps Wireless Lite-N Router

Power : DC 9V From Adapter input AC 120V/60Hz

Test mode : IEEE802.11nHT40 CH7 2452MHz Tx

M/N : PW-RN401D

	Ant. Freq. Factor (MHz) (dB/m)			Reading (dBuV)	Emission Level (dBuV/m)	Limits Margin (dBuV/m) (dB)	Remark
_	2449.500 29.49 2483.500 29.49 2500.000 29.50	7.58	36.61 36.60 36.60	69.44 36.56 35.70	69.80 37.03 36.22	54.00 -15.80 54.00 16.97 54.00 17.78	Average Average Average

#### Remarks:

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



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## 7. 6dB Bandwidth Test

## 7.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08,10	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1Year

#### 7.2.Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

### 7.3.Test Procedure

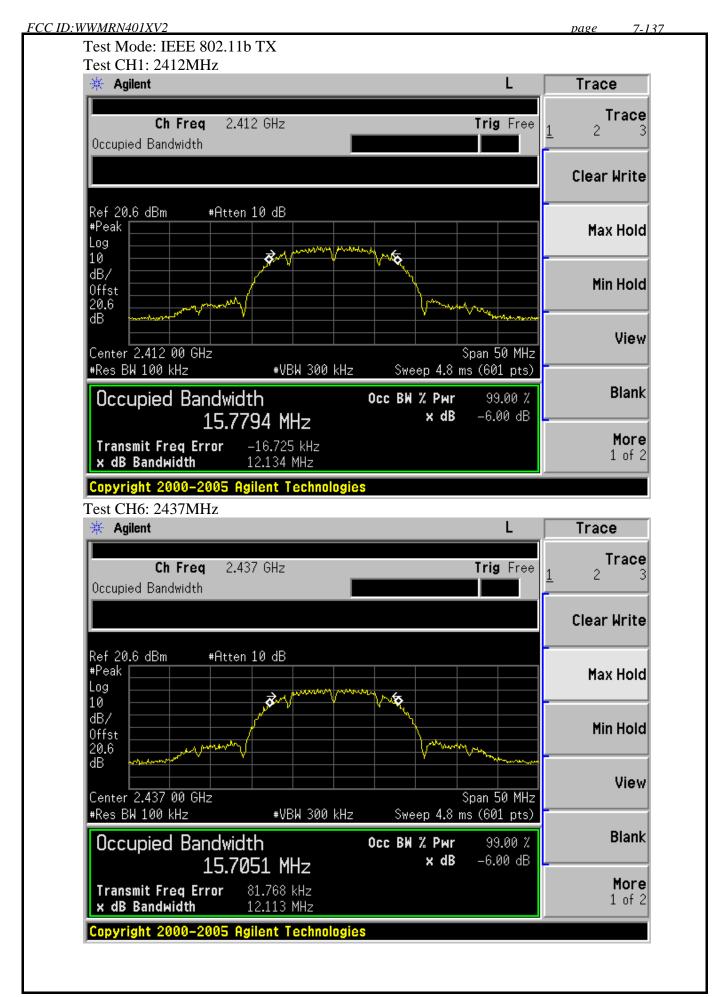
The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300 kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

### 7.4.Test Results

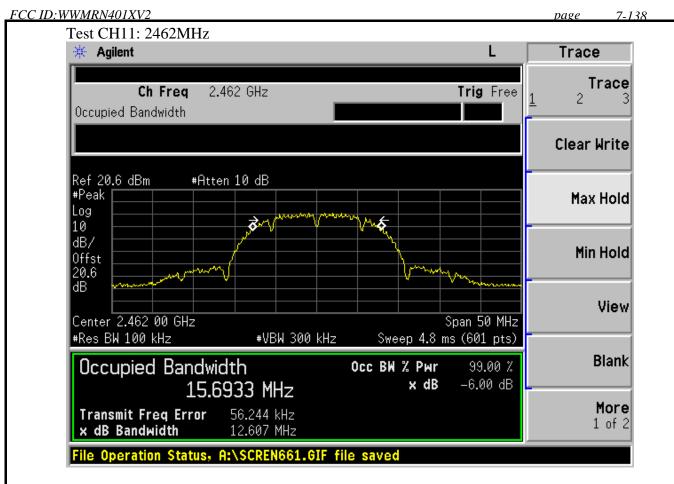
EUT:150Mbps Wireless Lite-N Router					
M/N:PW-RN401D					
Test date:2011-03-17	Pressure: 100.6 kpa	Humidity: 60 %			
Tested by:Sunny-lu	Test site: RF Site	Temperature : 25 ℃			

Cable loss: 0.0	6 dB	Attenuator loss: 20 dB	Antenna Gain: 5 dBi			
Test Mode	СН	6dB bandwidth ( MHz )	Limit (KHz)			
	CH1	12.134	>500			
11b	CH6	12.113	>500			
	CH11	12.607	>500			
	CH1	16.605	>500			
11g	CH6	16.550	>500			
	CH11	16.601	>500			
11	CH1	17.780	>500			
11n HT20	CH6	17.751	>500			
11120	CH11	17.752	>500			
11	CH1	36.403	>500			
11n HT40	CH4	36.125	>500			
11140	CH7	36.184	>500			
Conclusion: PASS						

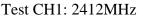


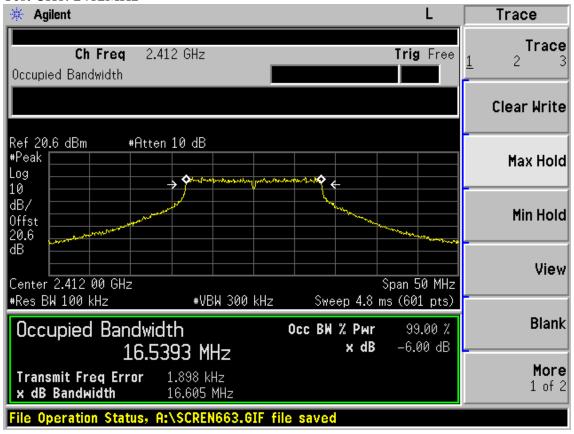






Test Mode: IEEE 802.11g TX

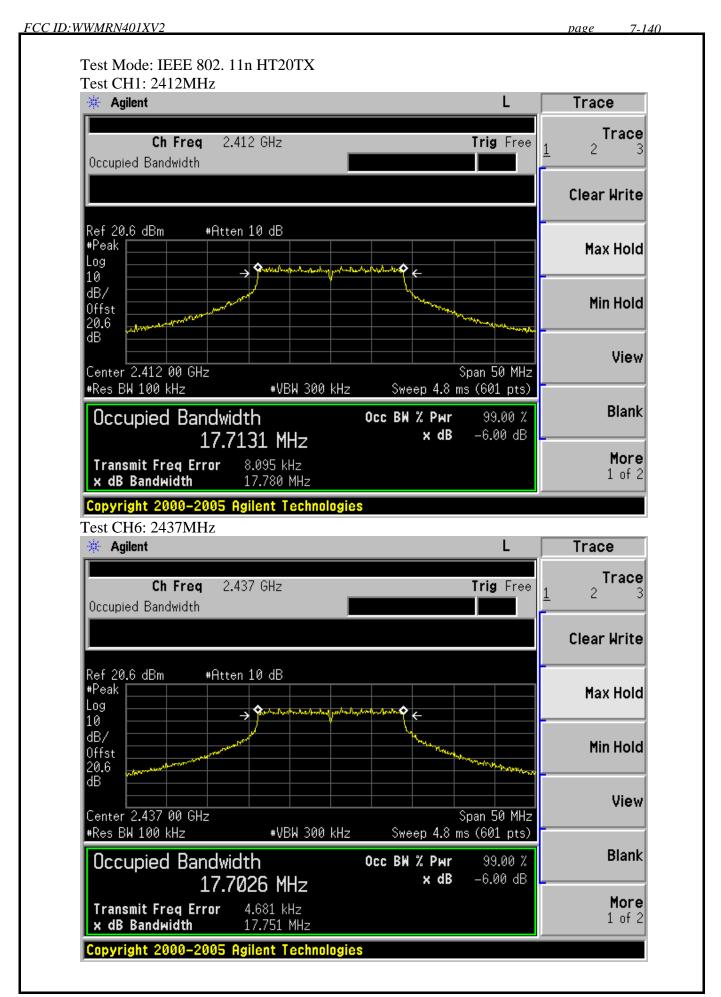




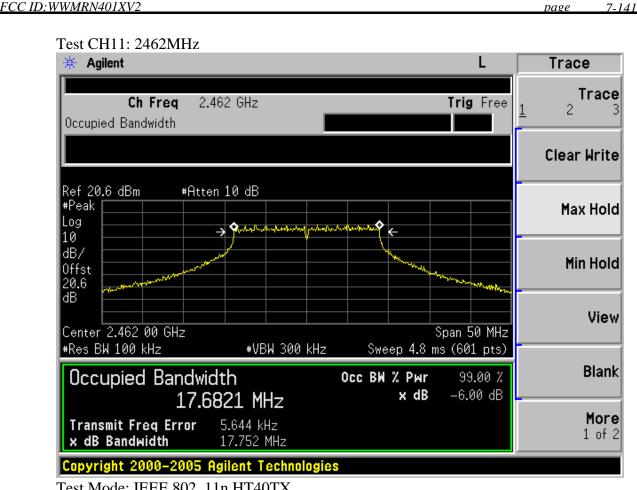






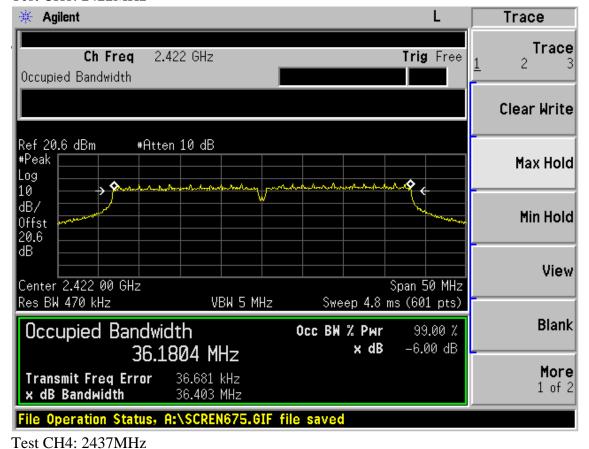




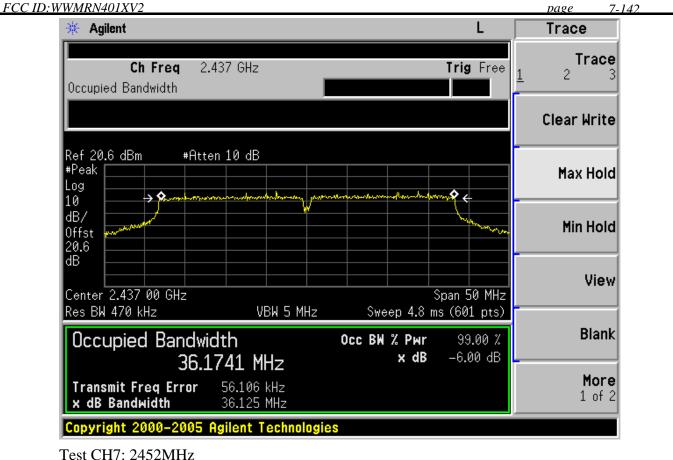


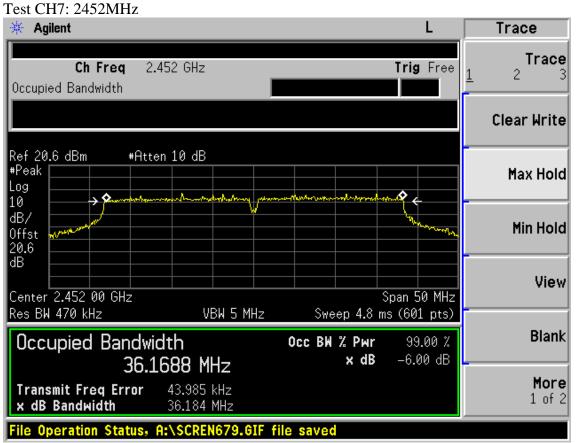
Test Mode: IEEE 802. 11n HT40TX

Test CH1: 2422MHz











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### 8. OUTPUT POWER TEST

### 8.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Power meter	Anritsu	ML2487A	6K00002472	May.08,10	1Year
2.	Power sensor	Anritsu	MA2491A	0033005	May.08,10	1Year
3	Attenuator	Agilent	8491B	MY39262165	May.08,10	1 Year
4	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1Year

### 8.2.Limit (FCC Part 15C 15.247 b(3))

For systems using digital modulation in the 2400—2483.5MHz, The Peak out put Power shall not exceed 1W(30dBm)

#### 8.3.Test Procedure

- 1, Connected the EUT's antenna port to measure device by 20dB attenuator.
- 2, For IEEE 802.11b/g and IEEE802.11n HT20 mode, use a PK power meter which's bandwidth is 20MHz and above 6dB bandwidth of signal to measure out each test modes' PK output power.
- 3, For IEEE802.11n HT40 mode, because the signal's bandwidth is about 40MHz and above 20MHz bandwidth of power sensor ML2491A. So Bandwidth correction method according to ANSI C63.10 clause 6.10.2.1 part (c) was used:
  - 1) Set the RBW=3MHz and VBW =8MHz
  - 2) Turn averaging off
  - 3) Set sweep to automatic
  - 4) Set the span just large enough to capture the emission
  - 5) Use a peak detector on max hold
  - 6) Record the measured power
  - 7) Calculate Output power of EUT use the formula:

Peak output power = measured power+ 10log[(6dB bandwidth of emission)/(analyzer RBW)]

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.



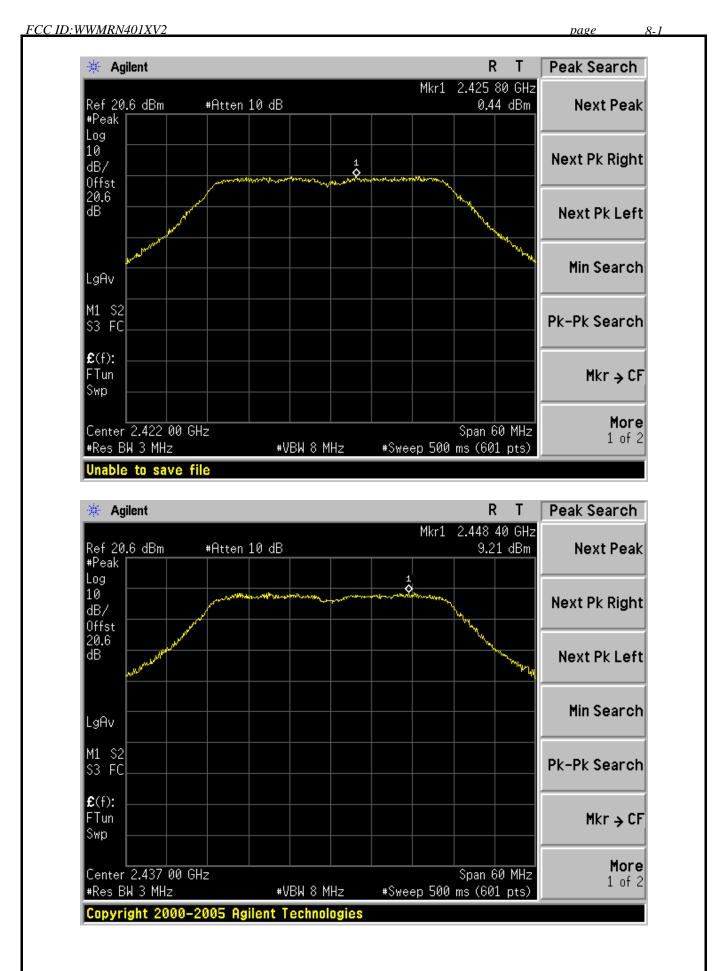
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# 8.4.Test Results

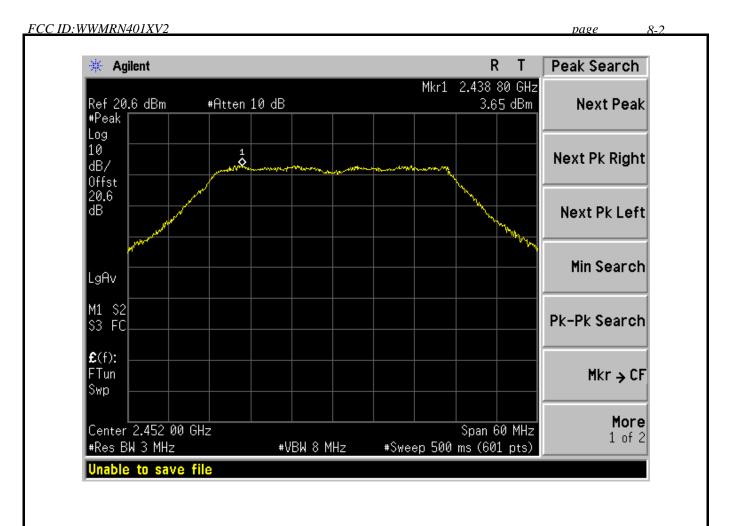
EUT: 150Mbps Wireless Lite-N Router					
M/N: PW-RN401D					
Test date: 2011-03-17	Pressure: 100.2 kpa	Humidity: 58%			
Tested by: Sunny-lu	Test site: RF Site	Temperature : 24°℃			

Cable loss: 0.6	dB	Attenuator loss:	Attenuator loss: 20 dB		
Test Mode	СН		tput Power (dBm)	Limit (dBm)	
	CH1	19	0.27	30	
11b	СН6	22	2.65	30	
	CH11	20	0.60	30	
	CH1	21	.52	30	
11g	СН6	20	20.81		
	CH11	20	30		
11	CH1	20	20.34		
11n HT20	СН6	21	21.97		
H120	CH11	17	17.72		
Mode	СН	Peak power (dBm/3MHz)	Peak output power (dBm)	Limit (dBm)	
11n	CH1	0.44	11.24	30	
11n HT40	CH4	9.21	20.01	30	
11140	CH7	3.65	14.45	30	
5dB Bandwidth	for 11n HT40=3	36.18MHz			
11n HT40 Mode	e, BW Correction	on Factor=10log(36	5.18 /3)=10.8		
Conclusion: PA	ASS		_		











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## 9. POWER SPECTRAL DENSITY TEST

## 9.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08, 10	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08, 10	1Year

### 9.2.Limit

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

### 9.3.Test Procedure

- 1, Connected the EUT's antenna port to spectrum analyzer device by 20dB attenuator.
- 2, Follow the test procedure as described in ANSI C.10: 2009 Clause 6.11.2.3 to measure out each test modes and chain's power density with 3KHz.



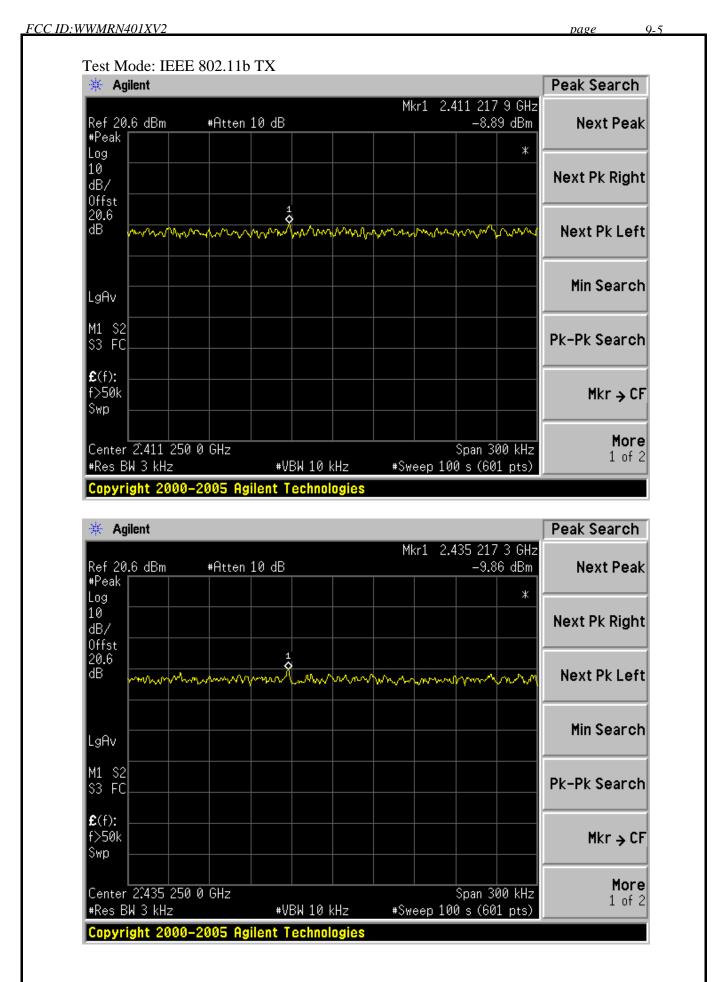
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# 9.4.Test Results

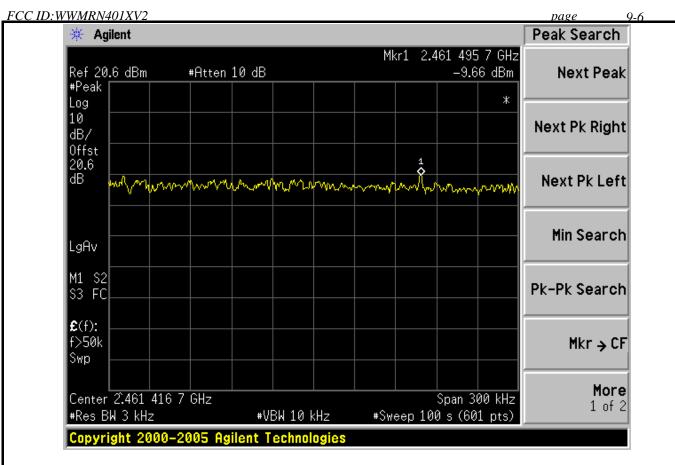
EUT:150Mbps Wireless Lite-N Router					
M/N:PW-RN401D					
Test date:2011-03-22	Pressure: 100.6 kpa	Humidity: 60 %			
Tested by:Sunny-lu	Test site: RF Site	Temperature : 25 °C			

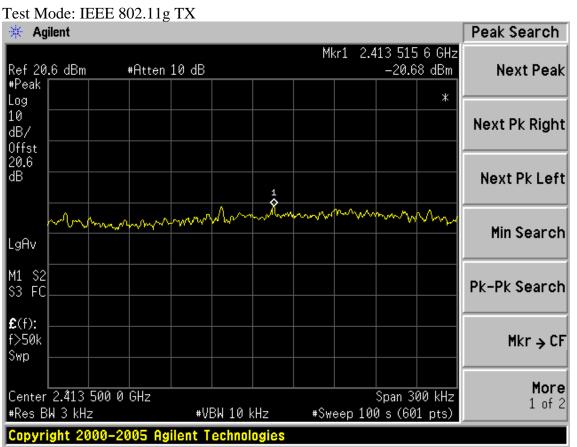
Cable loss: 0.0	6 dB	Attenuator loss: 20 dB	Antenna Gain: 5dBi
Test Mode	СН	Power density (dBm/3KHz)	Limit (dBm/3KHz)
	CH1	-8.89	8
11b	CH6	-9.86	8
	CH11	-9.66	8
	CH1	-20.68	8
11g	CH6	-11.80	8
	CH11	-15.33	8
11n	CH1	-13.95	8
HT20	CH6	-12.78	8
11120	CH11	-16.17	8
11	CH1	-22.16	8
11n HT40	CH4	-15.32	8
11140	CH7	-25.31	8
Conclusion: PA	ASS		



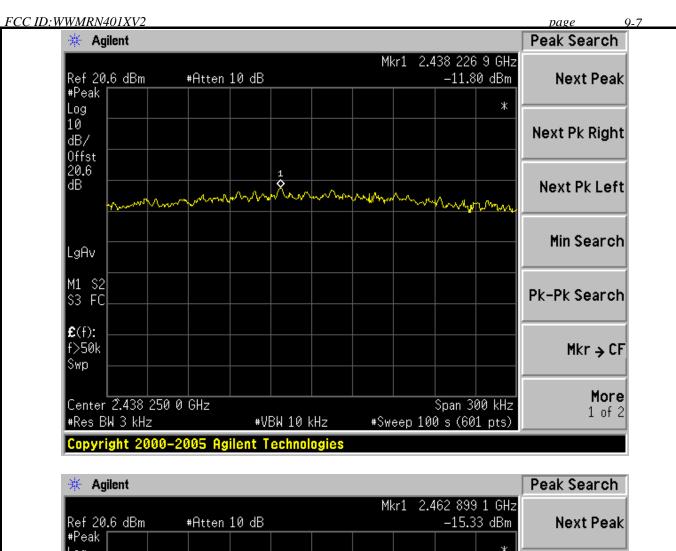


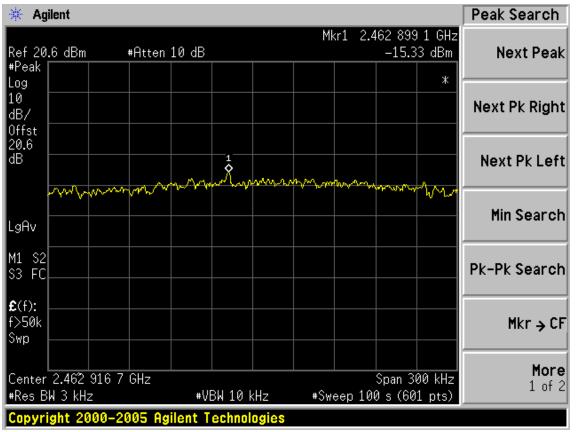














M1 S2 S3 FC

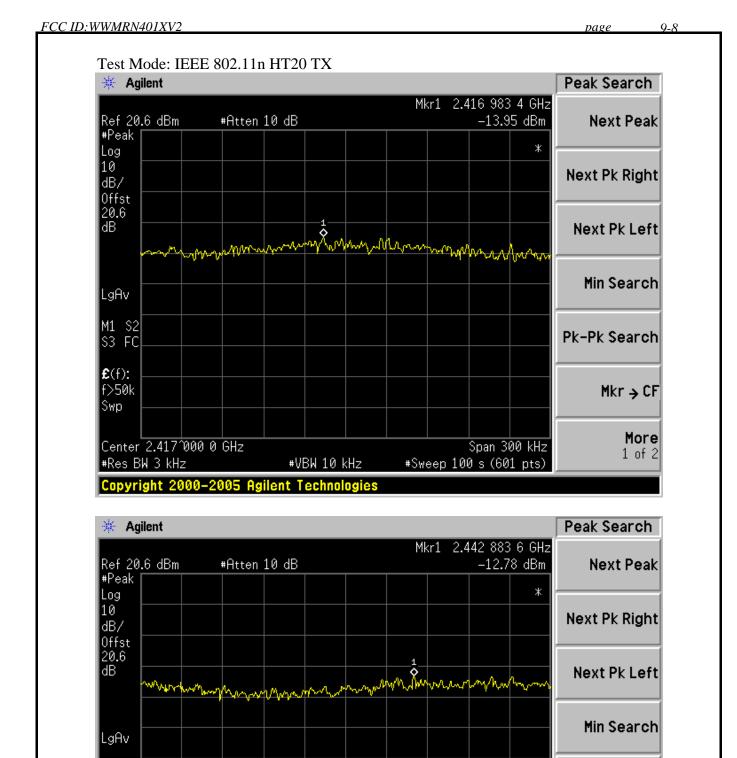
**£**(f): f>50k

Swp

Center 2.442 833 3 GHz

Copyright 2000-2005 Agilent Technologies

#Res BW 3 kHz



#VBW 10 kHz

Span 300 kHz

#Sweep 100 s (601 pts)

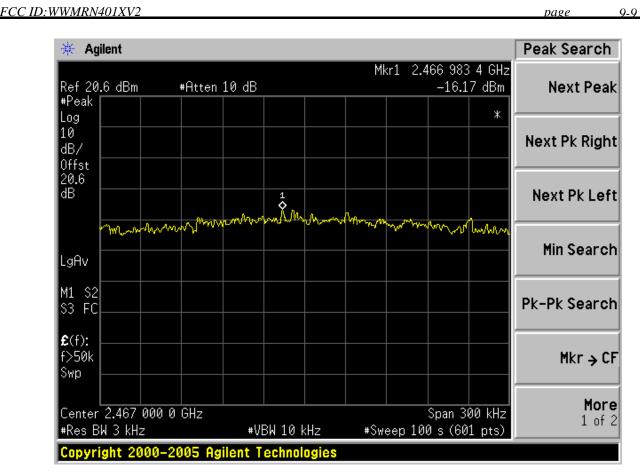
Pk-Pk Search

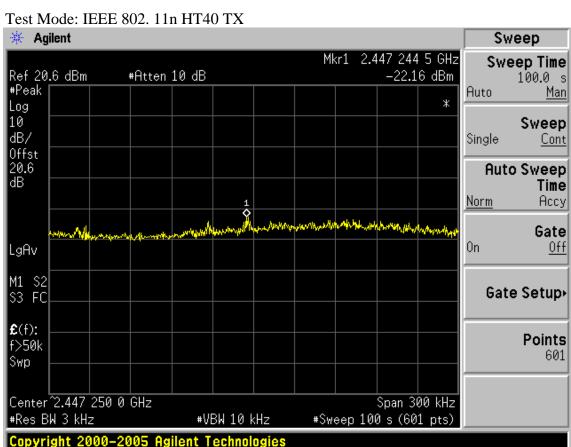
Mkr → CF

More

1 of 2









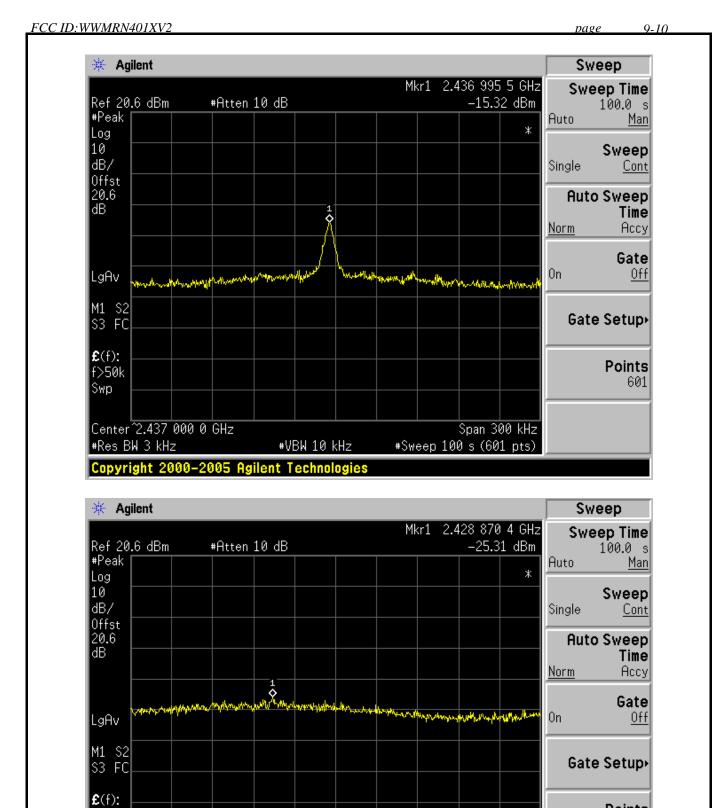
f>50k

Center^2.428 916 7 GHz

Copyright 2000-2005 Agilent Technologies

#Res BW 3 kHz

Swp



#VBW 10 kHz

Span 300 kHz

#Sweep 100 s (601 pts)

**Points** 

601



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## 10. ANTENNA REQUIREMENT

### 10.1. STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 10.2. ANTENNA CONNECTED CONSTRUCTION

The antennas used for this product are one integrated PCB antenna and one dipole antenna with SMA-B connector that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 5dBi.



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## 11.MPE ESTIMATION

# 11.1.Limit for General Population/ Uncontrolled Exposures

Frequency	Power density (mW/ cm <sup>2</sup> )	Averaging time(minutes)		
300MHz1.5GHz	F/1500	30		
1.5GHz100GHz	1.0	30		

Frequency(MHz)	Power density (mW/ cm <sup>2</sup> )	Averaging time(minutes)
2412	1	30
2437	1	30
2462	1	30

Note: F= Frequency in MHz

## 11.2.2, Estimation Result

Mode	СН	Frequency (MHz)	PK Output power (dBm)	Output power (mW)	antenna Gain (dBi)	antenna Gain(linear)	MPE
11b	1	2412	19.27	84.53	5	3.16	0.0532
	6	2437	22.65	184.08	5	3.16	0.1159
	11	2462	20.60	114.82	5	3.16	0.0723
11g	1	2412	21.52	141.91	5	3.16	0.0893
	6	2437	20.81	120.50	5	3.16	0.0758
	11	2462	20.88	122.46	5	3.16	0.0771
11n HT20	1	2412	20.34	108.14	5	3.16	0.0681
	6	2437	21.97	157.40	5	3.16	0.0991
	11	2462	17.72	59.16	5	3.16	0.0372
11n HT40	1	2422	11.24	13.30	5	3.16	0.0084
	4	2437	20.01	100.23	5	3.16	0.0631
	7	2452	14.45	27.86	5	3.16	0.0175

Note: The estimation distance is 20cm



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12.DEVIATION TO TEST SPECIFICATIONS		
[ NONE]		