

FCC ID:WWMRN501XV3

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

Proware Technologies Co., Ltd.

300Mbps Wireless N Router

Model No.: PW-RN501D

FCC ID: WWMRN501XV3

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.

No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China

Tel: (0755) 26639496

Report Number : ACS-F11012
Date of Test : Jan.06~08, 2011
Date of Report : Jan.21, 2011



FCC ID: WWMRN501XV3

# **TABLE OF CONTENTS**

<u>De</u>	scripti	on	Page
1.	SUN	MMARY OF STANDARDS AND RESULTS	1-1
	1.1.	Description of Standards and Results	1-
2.	GEN	NERAL INFORMATION	2-:
	2.1.	Description of Device (EUT)	
	2.2.	Test Information	
	2.3.	Tested Supporting System Details	
	2.4.	Block diagram of connection between the EUT and simulators	
	2.5.	Test Facility	
	2.6.	Measurement Uncertainty (95% confidence levels, k=2)	
3.	POV	WER LINE CONDUCTED EMISSION TEST	
	3.1.	Test Equipments	3-1
	3.2.	Block Diagram of Test Setup	
	3.3.	Power Line Conducted Emission Test Limits	
	3.4.	Configuration of EUT on Test	
	3.5.	Operating Condition of EUT	3-2
	3.6.	Test Procedure	
	3.7.	Power Line Conducted Emission Test Results	3-2
4.	RAI	DIATED EMISSION TEST	<b>4-</b> 1
	4.1.	Test Equipment	4-1
	4.2.	Block Diagram of Test Setup	
	4.3.	Radiated Emission Limit	4-2
	4.4.	EUT Configuration on Test	4-3
	4.5.	Operating Condition of EUT	4-3
	4.6.	Test Procedure	
	4.7.	Radiated Emission Test Results	4-4
5.	CO	NDUCTED SPURIOUS EMISSIONS	5-79
	5.1.	Test Equipment	5-79
	5.2.	Limit	5-79
	5.3.	Test Procedure	5-79
	5.4.	Test result	
6.	BAN	ND EDGE COMPLIANCE TEST	6-124
	6.1.	Test Equipment	6-124
	6.2.	Limit	
	6.3.	Test Produce	
	6.4.	Test Results	6-124
7.	6dB	Bandwidth Test	7-157
	7.1.	Test Equipment	7-157
	7.2.	Limit	
	7.3.	Test Procedure	7-15
	7.4.	Test Results	
8.	OUT	FPUT POWER TEST	8-170
	8.1.	Test Equipment	8-170
	8.2.	Limit (FCC Part 15C 15.247 b(3))	
	8.3.	Test Procedure	8-170
	8.4.	Test Results	8-171
9.	POV	WER SPECTRAL DENSITY TEST	9-175
	9.1.	Test Equipment	
		1 1	



<u>FCC ID: W</u>	WMRN501XV3	
	9.2. Limit	9-175
	9.3. Test Procedure	9-175
	9.4. Test Results	9-176
10.	ANTENNA REQUIREMENT	10-189
	10.1. STANDARD APPLICABLE	10-189
	10.2. ANTENNA CONNECTED CONSTRUCTION	10-189
11.	MPE ESTIMATION	11-190
	11.1. Limit for General Population/ Uncontrolled Exposures	11-190
	11.2. 2, Estimation Result	11-190
12.	DEVIATION TO TEST SPECIFICATIONS	12-1
13.	PHOTOGRAPH OF TEST	13-1
	13.1. Photos of Power Line Conducted Emission Test	13-1
	13.2. Photos of Radiated Emission Test	13-2
14.	PHOTOS OF THE EUT	14-1



FCC ID: WWMRN501XV3

# TEST REPORT CERTIFICATION

Applicant : Proware Technologies Co., Ltd.

Manufacturer : Proware Technologies Co., Ltd.

EUT Description : 300Mbps Wireless N Router

FCC ID : WWMRN501XV3

(A) MODEL NO. : PW-RN501D

(B) SERIAL NO. : N/A

(C) POWER SUPPLY: DC 9V From Adapter Input AC 230V/50Hz

(D) TEST VOLTAGE: 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 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:	Jan.06~08, 2011	Report of date:	Jan.21, 2011
Prepared by: _	Vicly Hueng Vicky Huang / Assistan	Reviewer by :	Jamy Yu / Supervisor
Approved & Au	nthorized Signer:	EMC 邮門報 Stamp only for EMC	gy (Shenzhen) Co., Ltd. 告専用章
The state of the s		Ken Lu / Ma	anager



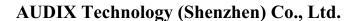
FCC ID:WWMRN501XV3 page 1-1

# 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				
Power Line Conducted Emission	FCC Part 15: 15.207	PASS				
Fower Line Conducted Emission	ANSI C63.10: 2009	r Ass				
Radiated Emission	FCC Part 15: 15.207	PASS				
Radiated Emission	ANSI C63.10: 2009	1 ASS				
Pand Edga Camplianas	FCC Part 15: 15.247	PASS				
Band Edge Compliance	ANSI C63.10: 2009	rass				
Can durated annui and amissions	FCC Part 15: 15.247	PASS				
Conducted spurious emissions	ANSI C63.10: 2009	PASS				
(dD Dog dog; dal)	FCC Part 15: 15.247	PASS				
6dB Bandwidth	ANSI C63.10: 2009	rass				
Deals Contract Decrees	FCC Part 15: 15.247	PASS				
Peak Output Power	ANSI C63.10: 2009	PASS				
Parana Caratas I Danista	FCC Part 15: 15.247	DACC				
Power Spectral Density	ANSI C63.10: 2009	PASS				
Antenna requirement	FCC Part 15: 15.203	PASS				





FCC ID: WWMRN501XV3 page 2-1

#### 2. GENERAL INFORMATION

2.1.Description of Device (EUT)

Product Name : 300Mbps Wireless N Router

Model Number : PW-RN501D

FCC ID : WWMRN501XV3

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

Dipole Antenna, MIMO 2x2, 5dBi Peak gain

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

Power Adapter : Manufacturer: LEADER ELECTRONICS INC.,

M/N: MU05-N090060-A1

DC Cable: Unshielded, Detachable, 1.7m(with one core)

Date of Test : Jan.06~08, 2011

Date of Receipt : Jan.06, 2011

Sample Type : Prototype production



FCC ID: WWMRN501XV3 page 2-2

#### 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	Tested mode, channel, and data rate information						
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 output power in those data rate, so those data rate were used for all test.

Note2: This device use MIMO 2X2 antennas, all the radiated spurious emissions and band edge test were performed with two antennas transmit synchronous.

FCC ID:WWMRN501XV3 page 2-3

# 2.3. Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type		
1.		N/A	DELL	PP09S		☑FCC DoC ☑BSMI ID:		
	Notebook					R41108		
	Notebook	Power Cord: Unshielded, Detachabled, 1.8m						
		Power Adapter: Manufacturer: DELL, M/N: LA65NS1-00						
		Cable: Unshielded, Detachabled, 4.0m(Bond one ferrite core)						

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



Notebook run test software to control EUT work in Continuous TX mode

(EUT: 300Mbps Wireless N Router)



FCC ID:WWMRN501XV3 page 2-4

#### 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%		



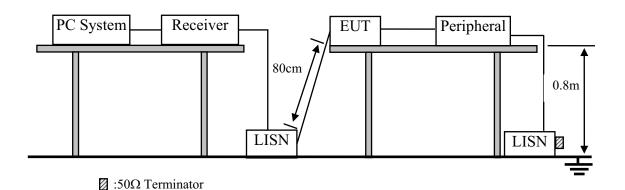
FCC ID: WWMRN501XV3 page 3-1

### 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	Mar.30, 10	1 Year
3.	Terminator	Hubersuhner	50Ω	No. 1	May.08, 10	1 Year
4.	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.08, 10	1Year
5.	Coaxial Switch	Anritsu	MP59B	M55367	May.08, 10	1 Year
6.	Passive Probe	Rohde & Schwarz	ESH2-Z3	299.7810.52	May.08, 10	1 Year
7.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	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(µV)	dB(μV)		
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*		
$500kHz \sim 5MHz$	56	46		
5MHz ~ 30MHz	60	50		

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

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



FCC ID: WWMRN501XV3 page 3-2

#### 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.

3.4.1.300Mbps Wireless N Router (EUT)

Model Number : PW-RN501D

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. Notebook run test software to control EUT work in Tx mode.

#### 3.6. Test Procedure

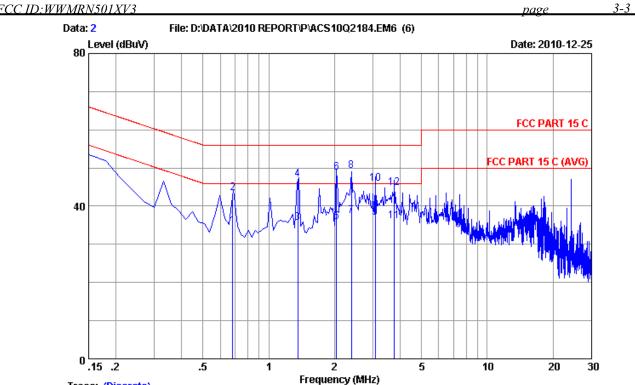
The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The 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.)



Trace: (Discrete)

:1#conduction Site no Data No

Dis./Ant. :\*\* 2010 ESH2-Z5 LINE

: FCC PART 15 C Limit

Env./Ins. :29.5\*C/55% Engineer :Sunny-lu

:300Mbps Wireless N Router

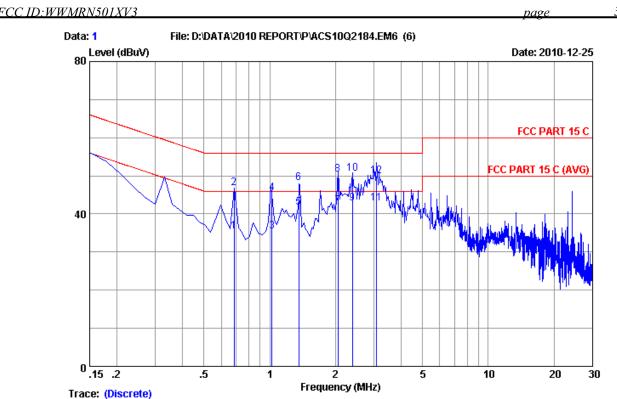
Power Rating :DC 9V From Adapter Input AC 120V/60Hz

Test Mode : Tx Mode :PW-RN501D M/N

		LISN	Cable		Emissio	n		
No	Freq	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.68500	0.25	9.89	24.59	34.73	46.00	11.27	Average
2	0.68500	0.25	9.89	33.25	43.39	56.00	12.61	QP
3	1.360	0.23	9.89	25.51	35.63	46.00	10.37	Average
4	1.360	0.23	9.89	36.91	47.03	56.00	8.97	QP
5	2.040	0.25	9.91	25.80	35.96	46.00	10.04	Average
6	2.040	0.25	9.91	38.60	48.76	56.00	7.24	QP
7	2.389	0.25	9.92	27.30	37.47	46.00	8.53	Average
8	2.389	0.25	9.92	39.02	49.19	56.00	6.81	QP
9	3.075	0.26	9.93	26.90	37.09	46.00	8.91	Average
10	3.075	0.26	9.93	35.70	45.89	56.00	10.11	QP
11	3.762	0.27	9.94	25.85	36.06	46.00	9.94	Average
12	3.762	0.27	9.94	34.58	44.79	56.00	11.21	QP

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

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.



Site no :1#conduction Data No ::

Dis./Ant. :\*\* 2010 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 C

Env./Ins. :29.5\*C/55% Engineer :Sunny-lu

EUT :300Mbps Wireless N Router

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

Test Mode :Tx Mode M/N :PW-RN501D

		LISN	Cable		Emissio	n		
No	Freq	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.68730	0.24	9.89	25.24	35.37	46.00	10.63	Average
2	0.68730	0.24	9.89	36.58	46.71	56.00	9.29	QP
3	1.026	0.25	9.89	25.19	35.33	46.00	10.67	Average
4	1.026	0.25	9.89	35.42	45.56	56.00	10.44	QP
5	1.360	0.25	9.89	31.61	41.75	46.00	4.25	Average
6	1.360	0.25	9.89	38.01	48.15	56.00	7.85	QP
7	2.049	0.26	9.91	31.90	42.07	46.00	3.93	Average
8	2.049	0.26	9.91	40.10	50.27	56.00	5.73	QP
9	2.389	0.26	9.92	32.57	42.75	46.00	3.25	Average
10	2.389	0.26	9.92	40.50	50.68	56.00	5.32	QP
11	3.075	0.27	9.93	32.60	42.80	46.00	3.20	Average
12	3.075	0.27	9.93	39.70	49.90	56.00	6.10	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.



FCC ID: WWMRN501XV3 page 4-1

### 4. RADIATED EMISSION TEST

# 4.1.Test Equipment

Frequency rang: 30~1000MHz

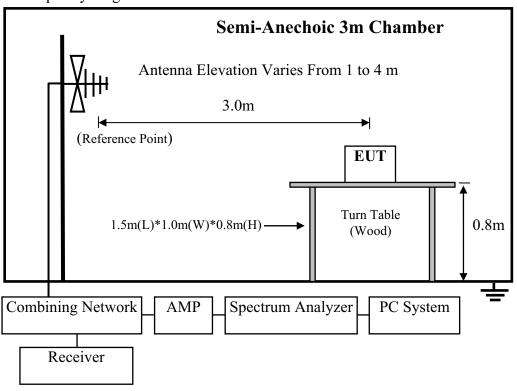
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.06,10	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 10	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 10	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 10	1 Year
5	Bilog 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





For frequency range 1GHz-25GHz

Semi-anechoic 10m Chamber

ANTENNA ELEVATION VARIES FROM 1 TO 4 METERS

3m

1.5m(L)\*1.0m(W)\*0.8m(H)

EUT

TURN TABLE
(FIBRE GLASS)

Combining Network

Receiver

Receiver

#### 4.3. Radiated Emission Limit

#### 4.3.1.15.209 limits

FREQUENCY	DISTANCE	FIELD STREN	NGTHS LIMIT	
MHz	Meters	μV/m	dB(μV)/m	
30 ~ 88	3	100	40.0	
88 ~ 216	3	150	43.5	
216 ~ 960	3	200	46.0 54.0	
960 ~ 1000	3	500		
Above 1000	3	74.0 dB(μV	/)/m (Peak)	
		54.0 dB(μV	/)/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.



FCC ID:WWMRN501XV3 page 4-3

#### 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	( <sup>2</sup> )

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.

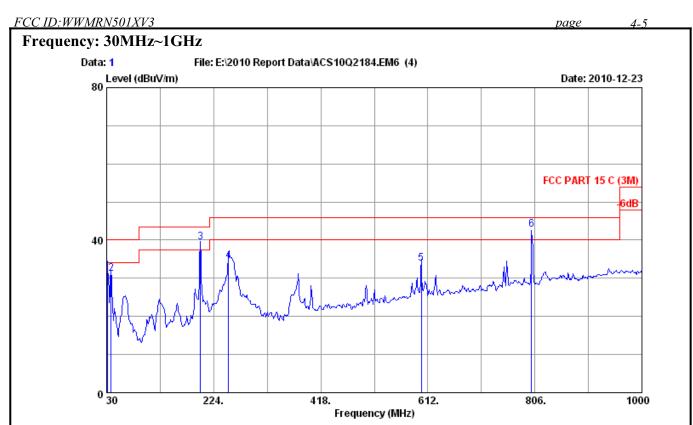
The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

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.



FCC ID:WWMRN501XV3	page		4-4	
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 wi average level is deemed to comply with average limit.	th average	limit,	then	the



Data no. : 1

Site no. : 3m Chamber
Dis. / Ant. : 3m 2011 CBL6111C Ant. pol. : HORIZONTAL

: FCC PART 15 C (3M) Limit

Env. / Ins. : 24\*C/56% Engineer : Leo-Li

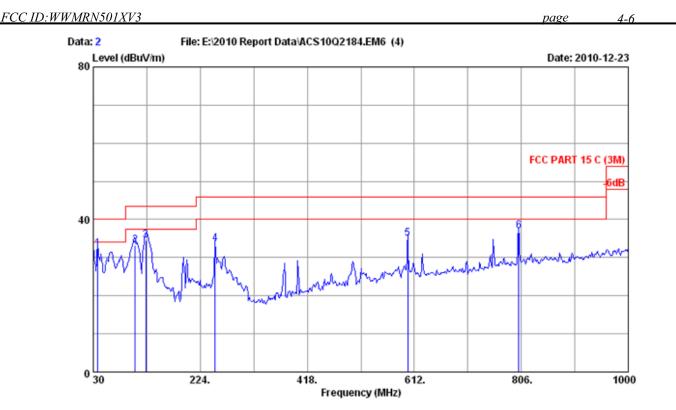
: 300Mbps Wireless N Router M/N:PW-RN501D Power rating : DC 9V From Adapter InputAC 120V/60Hz

: Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	31.940	17.65	0.63	13.57	31.85	40.00	8.15	QP
2	37.760	14.37	0.67	16.12	31.16	40.00	8.84	QP
3	200.000	9.37	1.72	28.40	39.49	43.50	4.01	QP
4	251.160	12.78	2.18	19.66	34.62	46.00	11.38	QP
5	600.360	20.20	4.12	9.59	33.91	46.00	12.09	QP
6	800.000	22.75	4.90	15.10	42.75	46.00	3.25	QP

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

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



Data no. : 2 Ant. pol. : VERTICAL : 3m Chamber Site no. Dis. / Ant. : 3m 2011 CBL6111C

: FCC PART 15 C (3M) Limit

Env. / Ins. : 24\*C/56% Engineer : Leo-Li

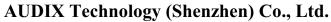
: 300Mbps Wireless N Router M/N:PW-RN501D Power rating : DC 9V From Adapter InputAC 120V/60Hz

Test Mode : Tx Mode

_	No.	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark	_
	1	37.760	14.37	0.67	17.22	32.26	40.00	7.74	QP	
	2	105.660	10.14	1.12	22.03	33.29	43.50	10.21	QP	
	3	125.060	11.23	1.13	22.07	34.43	43.50	9.07	QP	
	4	251.160	12.78	2.18	18.65	33.61	46.00	12.39	QP	
	5	600.360	20.20	4.12	10.70	35.02	46.00	10.98	QP	
	6	800.000	22.74	4.90	9.27	36.91	46.00	9.09	QP	

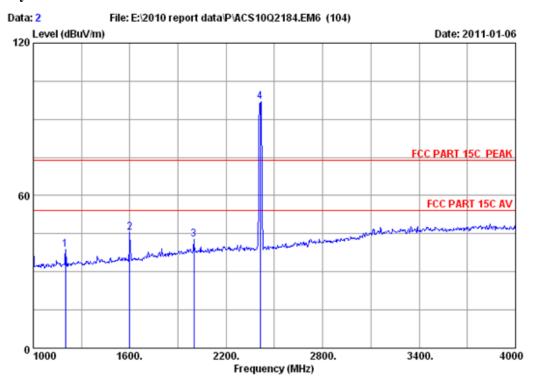
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

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



FCC ID:WWMRN501XV3 page 4-7

#### Frequency: 1GHz~18GHz



Site no. : 10m 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 : 300Mbps Wireless N Router

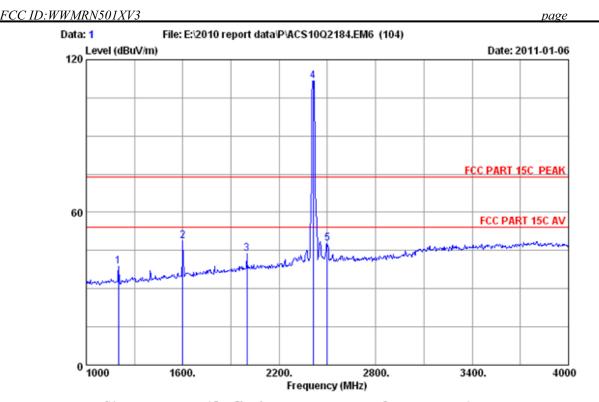
Power : DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11b CH1 2412MHz Tx

M/N : PW-RN501D

	-		loss			Emission Level (dBuV/m)		_	Remark
1	1201.000	25.81	5.16	37.54	45.30	38.73	74.00	35.27	Peak
2	1600.000	26.96	5.91	36.94	49.51	45.44	74.00	28.56	Peak
3	1999.000	29.20	6.63	36.70	43.78	42.91	74.00	31.09	Peak
4	2412.000	29.45	7.43	36.62	96.62	96.88	74.00	-22.88	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. : 10m 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 : 300Mbps Wireless N Router

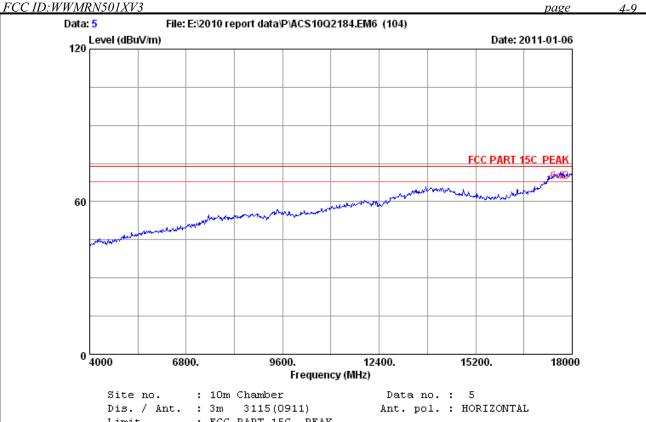
: DC 9V From Adapter Input AC 120V/60Hz Power

Test mode : IEEE802.11b CH1 2412MHz Tx

: PW-RN501D M/N

				Factor	Reading	Level (dBuV/m)	Limit	s Margin m) (dB)	Remark
1	1201.000	25.81	5.16	37.54	45.23	38.66	74.00	35.34	Peak
2	1600.000	26.96	5.91	36.94	53.00	48.93	74.00	25.07	Peak
3	1999.000	29.20	6.63	36.70	44.52	43.65	74.00	30.35	Peak
4	2412.000	29.45	7.43	36.62	111.54	111.80	74.00	-37.80	Peak
5	2500.000	29.50	7.62	36.60	47.32	47.84	74.00	26.16	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

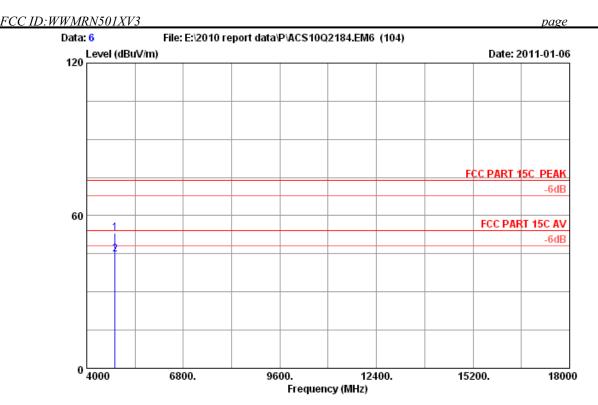
Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 300Mbps Wireless N Router

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

Test mode : IEEE802.11b CH1 2412MHz Tx M/N : PW-RN501D

4-10



Site no. : 10m Chamber Data no. : 6

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

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

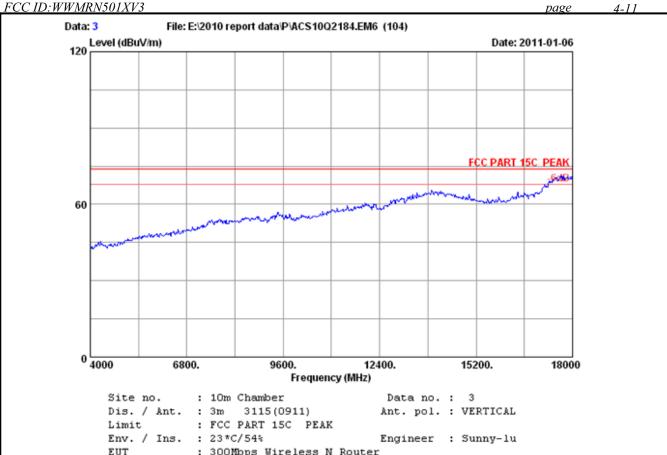
Power : DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11b CH1 2412MHz Tx

M/N : PW-RN501D

	-	Factor	loss	_	Emission Level (dBuV/m)	Limits	_	Remark
_	4824.000 4824.000			 	53.08 44.87		20.92	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.

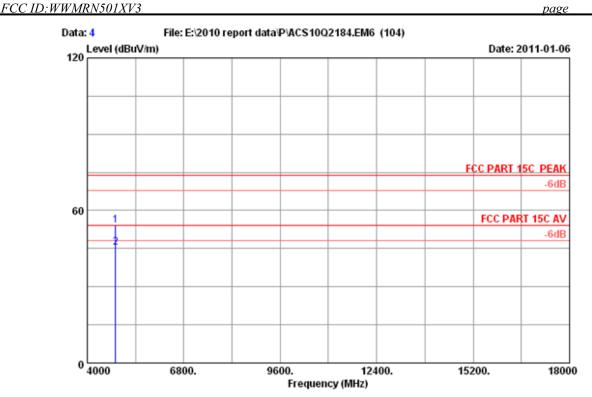


EUT : 300Mbps Wireless N Router

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

Test mode : IEEE802.11b CH1 2412MHz Tx

M/N : PW-RN501D



Site no. : 10m Chamber Data no. : 4

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

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

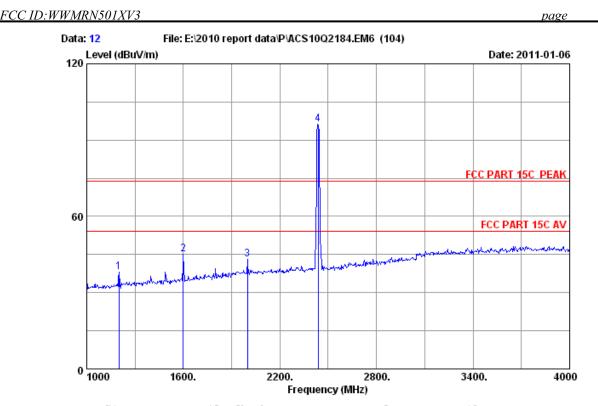
Power : DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11b CH1 2412MHz Tx

M/N : PW-RN501D

		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	44.21	54.09	74.00	19.91	Peak
2	4824.000	34.32	10.64	35.08	35.69	45.57	54.00	8.43	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. : 10m Chamber Data no. : 12
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

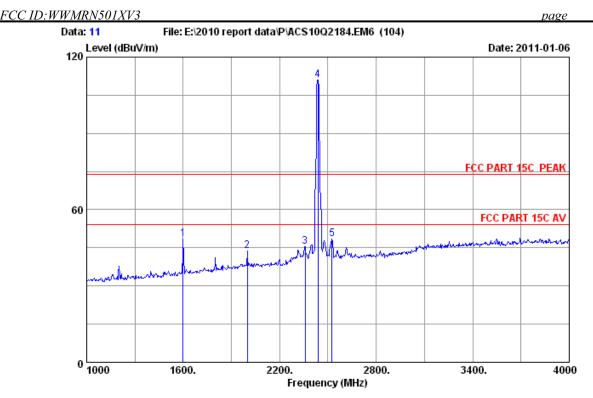
Power : DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11b CH6 2437MHz Tx

M/N : PW-RN501D

	-				Reading (dBuV)			Margin (dB)	Remark
1	1201.000	25.81	5.16	37.54	44.70	38.13	74.00	35.87	Peak
2	1600.000	26.96	5.91	36.94	49.33	45.26	74.00	28.74	Peak
3	1999.000	29.20	6.63	36.70	43.84	42.97	74.00	31.03	Peak
4	2437.000	29.47	7.46	36.61	95.95	96.27	74.00 -	-22.27	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. : 10m Chamber Data no. : 11 Dis. / Ant. : 3m 3115 (0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

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

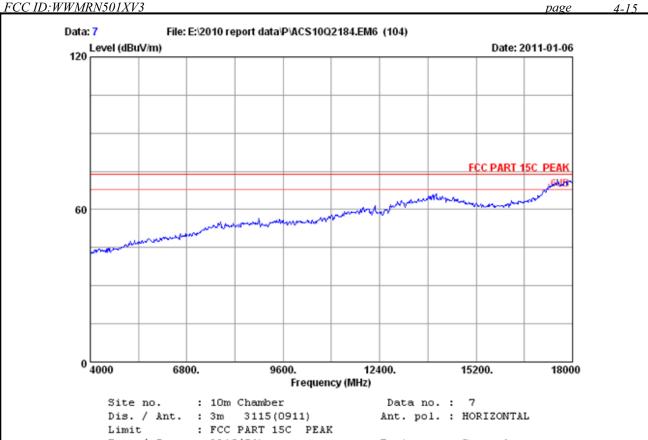
: 300Mbps Wireless N Router

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

Test mode : IEEE802.11b CH6 2437MHz Tx M/N : PW-RN501D

	Ant. Freq. Factor (MHz) (dB/m)	loss		Reading (dBuV)		Limit	s Margin m) (dB)	Remark	
1	1600.000 26.96	5.91	36.94	52.50	48.43	74.00	25.57	Peak	
2	1999.000 29.20	6.63	36.70	44.62	43.75	74.00	30.25	Peak	
3	2359.000 29.42	7.35	36.63	45.18	45.32	74.00	28.68	Peak	
4	2437.000 29.47	7.46	36.61	110.78	111.10	74.00	-37.10	Peak	
5	2524.000 29.67	7.65	36.59	47.67	48.40	74.00	25.60	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.



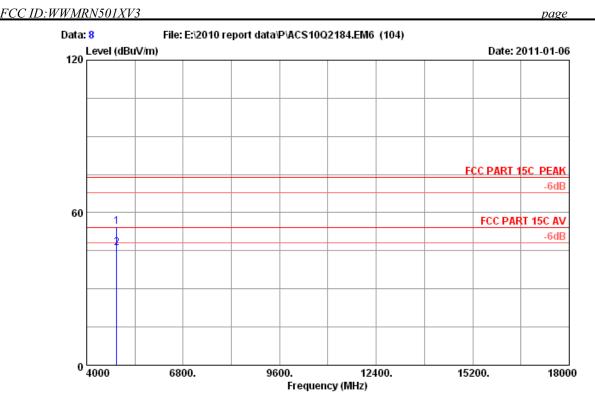
Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 300Mbps Wireless N Router

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

Test mode : IEEE802.11b CH6 2437MHz Tx

M/N : PW-RN501D



Site no. : 10m Chamber Data no. : 8

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

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

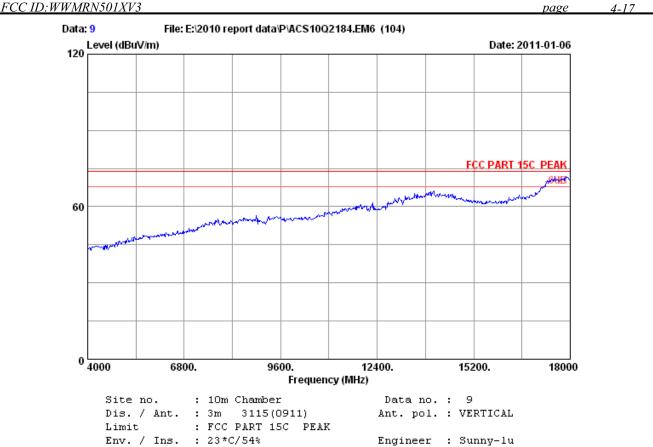
Power : DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11b CH6 2437MHz Tx

M/N : PW-RN501D

	-	Factor	loss	Reading (dBuV)		Limits	_	Remark
_	4874.000 4874.000			 	54.34 46.17	74.00 54.00	19.66 7.83	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.

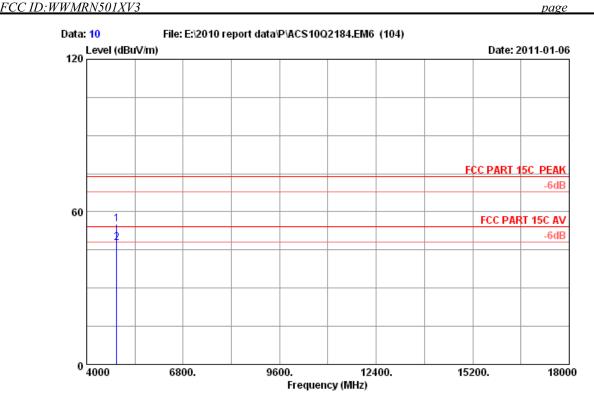


: 300Mbps Wireless N Router

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

Test mode : IEEE802.11b CH6 2437MHz Tx M/N : PW-RN501D

4-18



: 10m Chamber Data no. : 10 Site no. Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

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

EUT Power : 300Mbps Wireless N Router

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

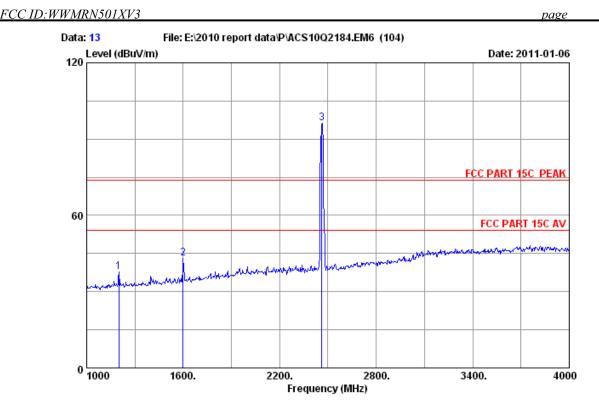
Test mode : IEEE802.11b CH6 2437MHz Tx

M/N : PW-RN501D

-	Factor	Factor	_	Emission Level (dBuV/m)	Limits	_	Remark	
4874.000 4874.000				55.28 47.65	74.00 54.00	18.72 6.35	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.

4-19



Site no. : 10m Chamber Data no. : 13 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

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

EUT : 300Mbps Wireless N Router

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

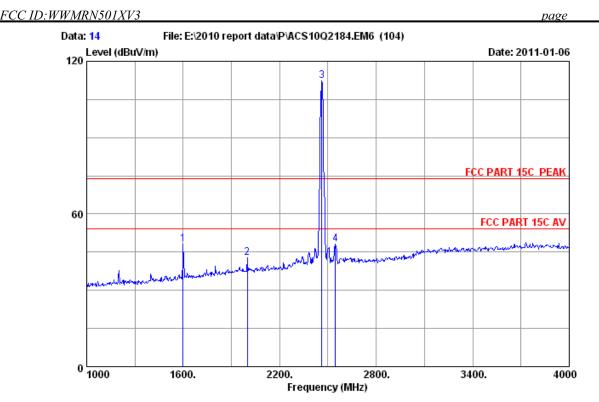
Power Test mode : IEEE802.11b CH11 2462MHz Tx

M/N: PW-RN501D

		Ant.	Cable	Amp.		Emission			
	Freq.	Factor	loss	Factor	Reading	Level	Limita	s Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/	m) (dB)	
1	1201.000	25.81	5.16	37.54	44.26	37.69	74.00	36.31	Peak
2	1600.000	26.96	5.91	36.94	47.24	43.17	74.00	30.83	Peak
3	2462.000	29.48	7.54	36.61	95.94	96.35	74.00	-22.35	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.

4-20



Site no. : 10m Chamber Data no. : 14
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

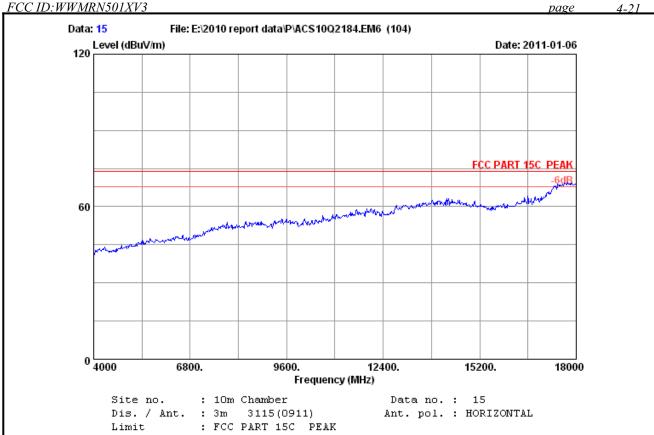
Power : DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz Tx

M/N : PW-RN501D

			loss		Reading	Emission Level (dBuV/m)		_	Remark	
_	1600.000					48.02	74.00	25.98	Peak	
2	1999.000	29.20	6.63	36.70	43.65	42.78	74.00	31.22	Peak	
3	2462.000	29.48	7.54	36.61	111.75	112.16	74.00	-38.16	Peak	
4	2545.000	29.75	7.69	36.59	47.19	48.04	74.00	25.96	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.

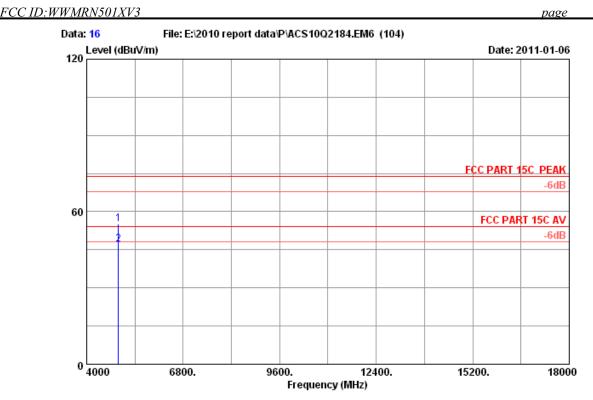


Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 300Mbps Wireless N Router

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

Test mode : IEEE802.11b CH11 2462MHz Tx M/N : PW-RN501D



 Site no.
 : 10m Chamber
 Data no.
 : 16

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

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

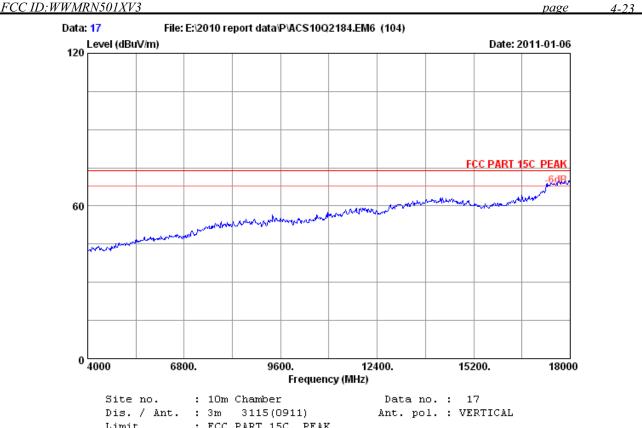
Power : DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz Tx

M/N : PW-RN501D

	-	Factor	loss	Reading (dBuV)		Limits	_	Remark
_	4924.000 4924.000			 	55.24 47.12	74.00 54.00	18.76 6.88	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.



Limit : FCC PART 15C PEAK

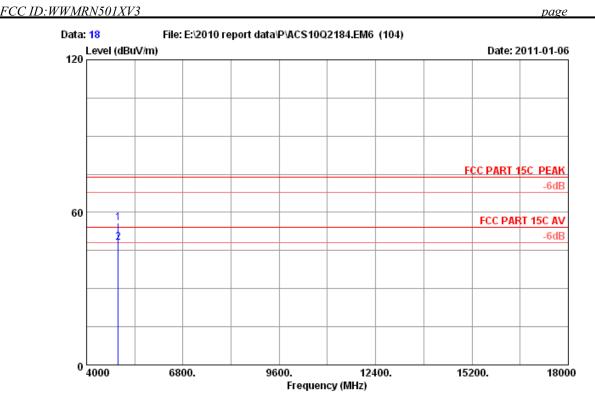
Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 300Mbps Wireless N Router

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

Test mode : IEEE802.11b CH11 2462MHz Tx

: PW-RN501D



Site no. : 10m Chamber
Dis. / Ant. : 3m 3115(0911) Data no. : 18 Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

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

EUT : 300Mbps Wireless N Router

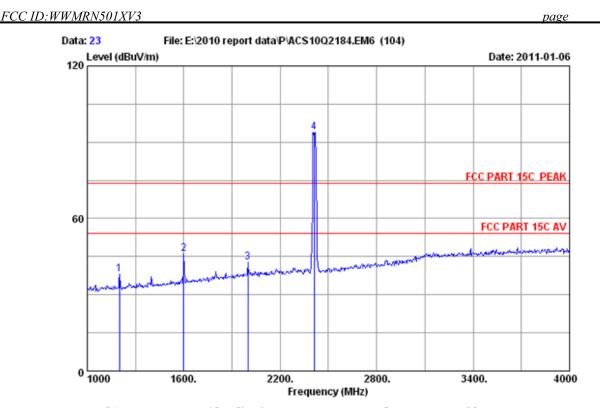
Power : DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz Tx

M/N: PW-RN501D

	-	Cable loss (dB)	•	Reading (dBuV)	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
_	4924.000 4924.000	 			55.95 48.22	74.00 54.00	18.05 5.78	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. : 10m Chamber Data no. : 23
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

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

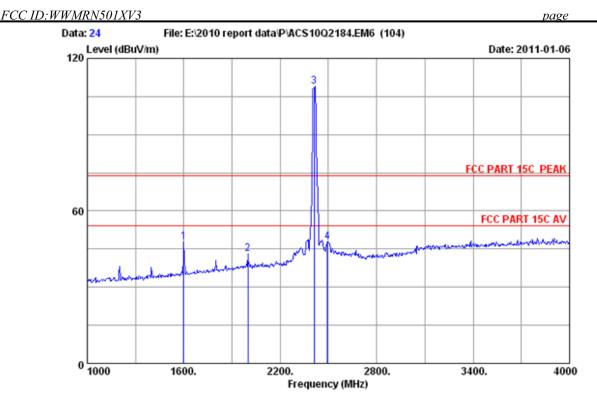
Test mode : IEEE802.11g CH1 2412MHz Tx

M/N : PW-RN501D

		loss			Emission Level (dBuV/m)		_	Remark	
1 1201.00 2 1600.00 3 1999.00	0 26.96 0 29.20	5.91 6.63	36.94 36.70	50.18 43.69	37.98 46.11 42.82	74.00 74.00 74.00	36.02 27.89 31.18	Peak Peak Peak	
3 1999.00 4 2412.00					42.82 94.02		31.18 -20.02	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.

4-26



Site no. : 10m 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 : 300Mbps Wireless N Router

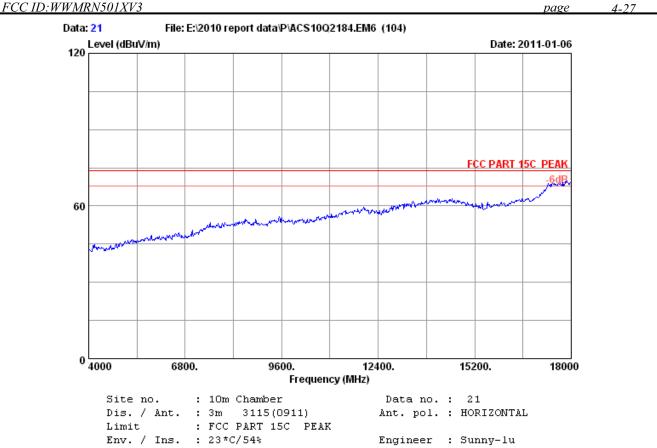
Power : DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11g CH1 2412MHz Tx

M/N : PW-RN501D

		Ant. Factor (dB/m)		Amp. Factor (dB)	Reading	Emission Level (dBuV/m)		Margin	Remark
1	1600.000	26.96	5.91	36.94	51.89	47.82	74.00	26.18	Peak
2	1999.000	29.20	6.63	36.70	44.14	43.27	74.00	30.73	Peak
3	2412.000	29.45	7.43	36.62	108.57	108.83	74.00	-34.83	Peak
4	2494.000	29.50	7.58	36.60	47.39	47.87	74.00	26.13	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.

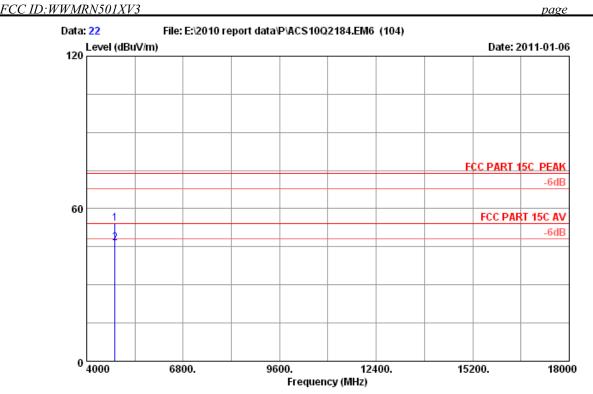


: 300Mbps Wireless N Router

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

Test mode : IEEE802.11g CH1 2412MHz Tx M/N : PW-RN501D

4-28



Site no. : 10m Chamber Data no.: 22

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

: FCC PART 15C PEAK

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

: 300Mbps Wireless N Router

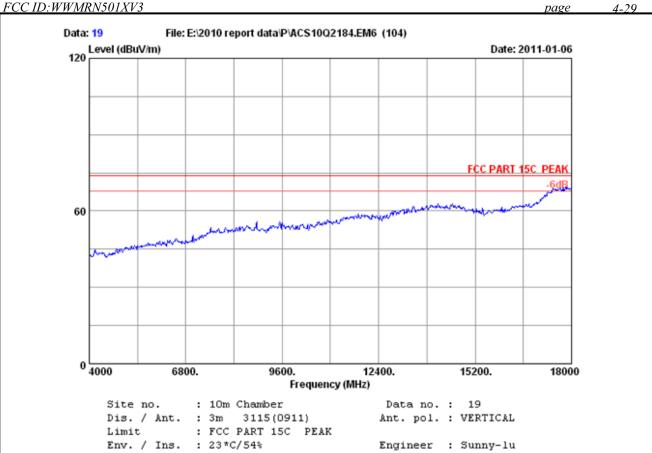
: DC 9V From Adapter Input AC 120V/60Hz

: IEEE802.11g CH1 2412MHz Tx

Power
Test mode : IEEE002.\_
: PW-RN501D

	-	Factor	loss	_	Emission Level (dBuV/m)	Limits	_	Remark
_	4824.000 4824.000			 	54.04 46.37		19.96 7.63	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.



Engineer : Sunny-lu

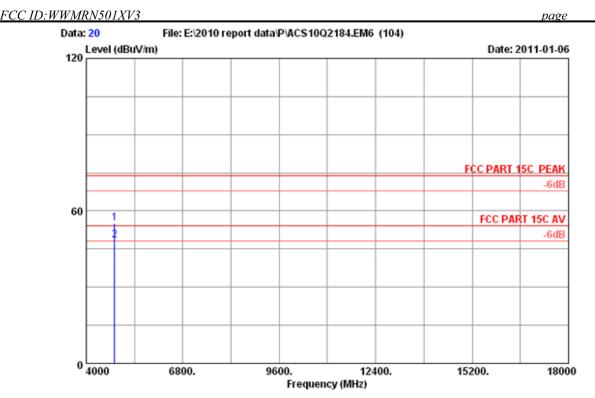
EUT : 300Mbps Wireless N Router

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

Test mode : IEEE802.11g CH1 2412MHz Tx

M/N : PW-RN501D

4-30



Site no. : 10m 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 : 300Mbps Wireless N Router

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

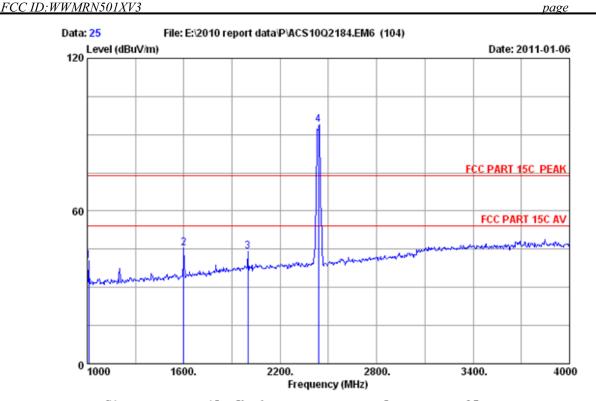
Test mode : IEEE802.11g CH1 2412MHz Tx

M/N : PW-RN501D

_		Factor	_	Emission Level (dBuV/m)	Limits	_	Remark
4824.000 4824.000				55.04 48.30	74.00 54.00	18.96 5.70	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.

4-31



: 10m Chamber Data no.: 25 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

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

: 300Mbps Wireless N Router

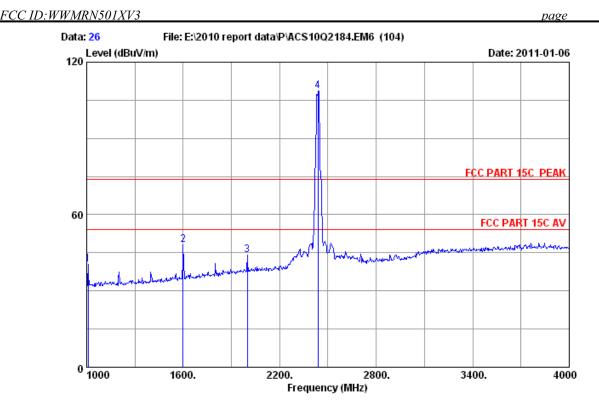
: DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11g CH6 2437MHz Tx

M/N : PW-RN501D

•	Ant. Factor (dB/m)	loss		Reading (dBuV)	Emission Level (dBuV/m)		Margin ) (dB)	Remark
1 1009.000 2 1600.000 3 1999.000 4 2437.000	26.96	5.91 6.63	36.94 36.70	49.42 44.93	40.54 45.35 44.06 93.76	74.00 74.00 74.00 74.00	33.46 28.65 29.94 -19.76	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. : 10m Chamber Data no. : 26
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

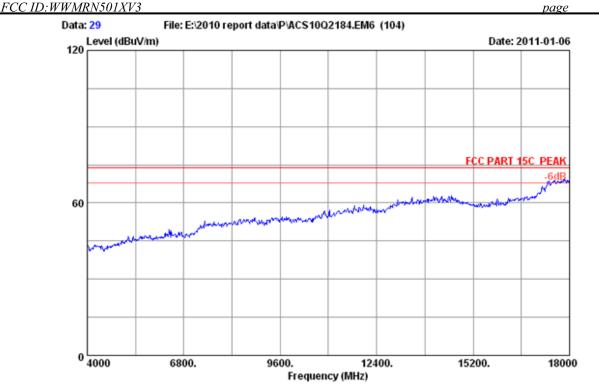
Power : DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11g CH6 2437MHz Tx

M/N : PW-RN501D

		loss		Reading	Emission Level (dBuV/m)		_	Remark	_
1	1009.000 25.43	4.78	37.90	48.23	40.54	74.00	33.46	Peak	
2	1600.000 26.96	5.91	36.94	52.06	47.99	74.00	26.01	Peak	
3	1999.000 29.20	6.63	36.70	44.93	44.06	74.00	29.94	Peak	
4	2437.000 29.47	7.46	36.61	108.26	108.58	74.00	-34.58	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. : 10m Chamber Data no. : 29

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

Limit : FCC PART 15C PEAK

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

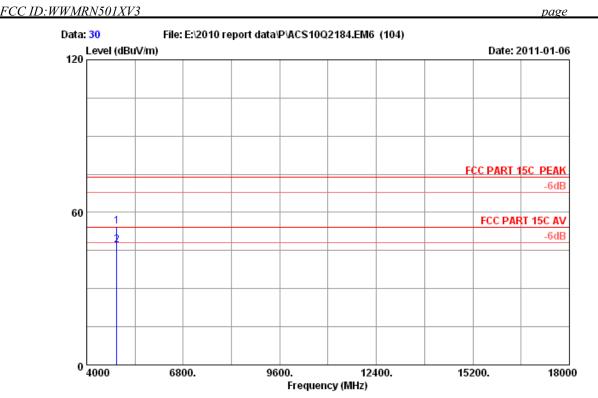
EUT : 300Mbps Wireless N Router

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

Test mode : IEEE802.11g CH6 2437MHz Tx

M/N : PW-RN501D

4-34



Site no. : 10m Chamber Dis. / Ant. : 3m 3115(0911) Data no. : 30 Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

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

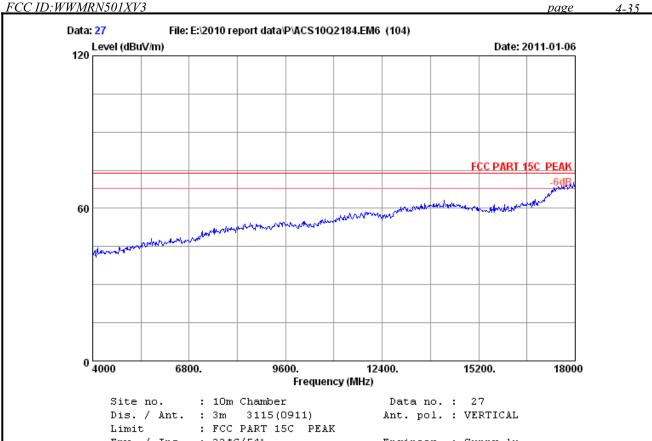
EUT : 300Mbps Wireless N Router

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

Test mode : IEEE802.11g CH6 2437MHz Tx M/N : PW-RN501D

		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	4874.000	34.41	10.69	35.03	44.50	54.57	74.00	19.43	Peak
2	4874.000	34.41	10.69	35.03	36.98	47.05	54.00	6.95	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.



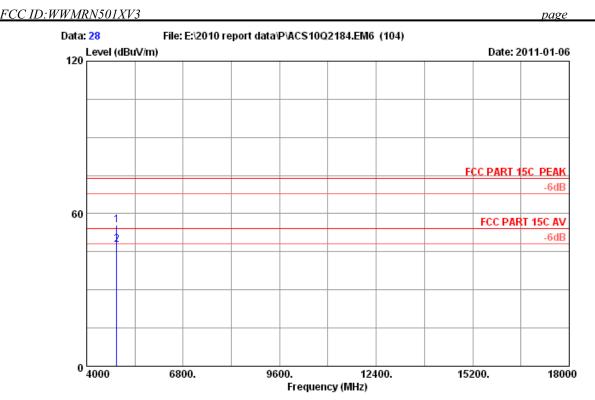
Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 300Mbps Wireless N Router

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

Test mode : IEEE802.11g CH6 2437MHz Tx M/N : PW-RN501D

4-36



Site no. : 10m Chamber Data no.: 28 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

: FCC PART 15C PEAK

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

: 300Mbps Wireless N Router

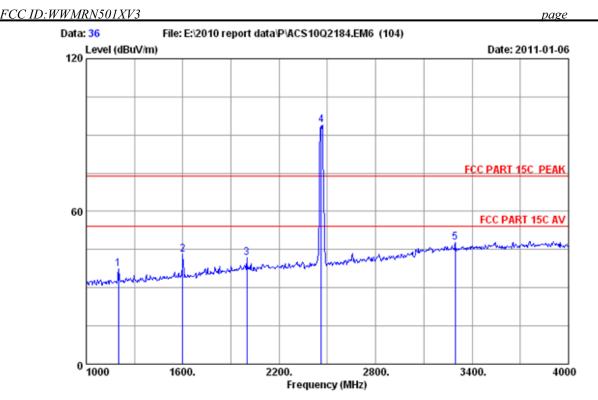
: DC 9V From Adapter Input AC 120V/60Hz

: IEEE802.11g CH6 2437MHz Tx

Power
Test mode : IEEE002.\_
: PW-RN501D

	-	Factor	loss	Reading (dBuV)		Limits	_	Remark
_	4874.000 4874.000			 	55.39 47.92		18.61 6.08	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. : 10m Chamber Data no. : 36

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

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

Engineer : Sunny-lu

EUT : 300Mbps Wireless N Router

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

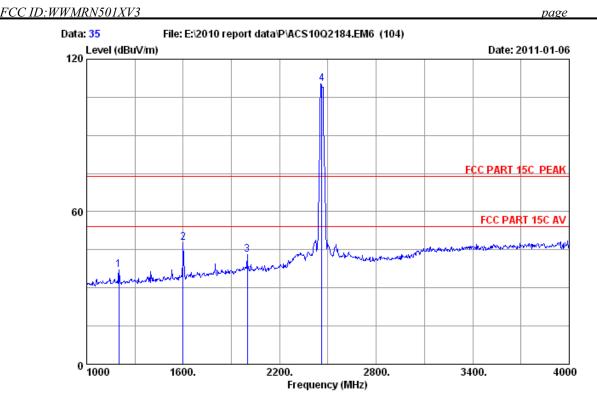
Test mode : IEEE802.11g CH11 2462MHz Tx

M/N : PW-RN501D

		Ant. Factor (dB/m)		Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m		Remark
1	1201.000	25.81	5.16	37.54	43.85	37.28	74.00	36.72	Peak
2	1600.000	26.96	5.91	36.94	47.33	43.26	74.00	30.74	Peak
3	1999.000	29.20	6.63	36.70	42.75	41.88	74.00	32.12	Peak
4	2462.000	29.48	7.54	36.61	93.46	93.87	74.00	-19.87	Peak
5	3295.000	32.76	8.88	36.20	42.45	47.89	74.00	26.11	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

4-38



Site no. : 10m Chamber Data no. : 35
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

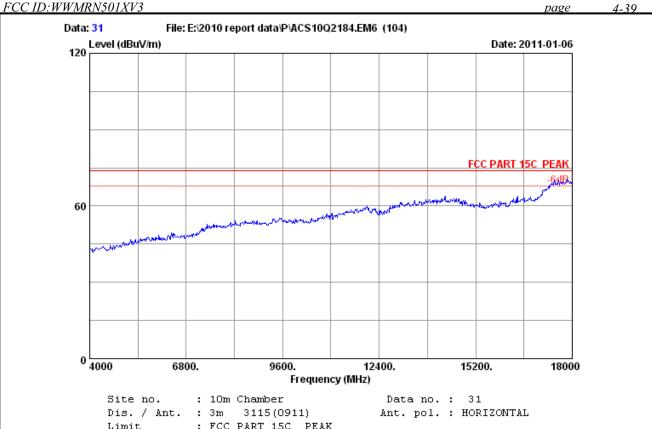
Power : DC 9V From Adapter Input AC 120V/60Hz

Test mode : IEEE802.11g CH11 2462MHz Tx

M/N : PW-RN501D

	-		loss		Reading	Emission Level (dBuV/m)		_	Remark
_	1201.000					36.99	74.00	37.01	Peak
2	1600.000	26.96	5.91	36.94	52.03	47.96	74.00	26.04	Peak
3	1999.000	29.20	6.63	36.70	43.85	42.98	74.00	31.02	Peak
4	2462.000	29.48	7.54	36.61	109.79	110.20	74.00	-36.20	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.



Limit : FCC PART 15C PEAK

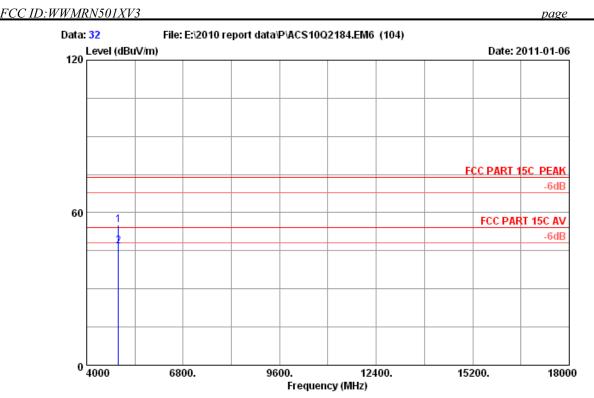
Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

: 300Mbps Wireless N Router

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

Test mode : IEEE802.11g CH11 2462MHz Tx M/N : PW-RN501D

4-40



Site no. : 10m Chamber Data no. : 32

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

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

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

Test mode : IEEE802.11g CH11 2462MHz Tx

M/N : PW-RN501D

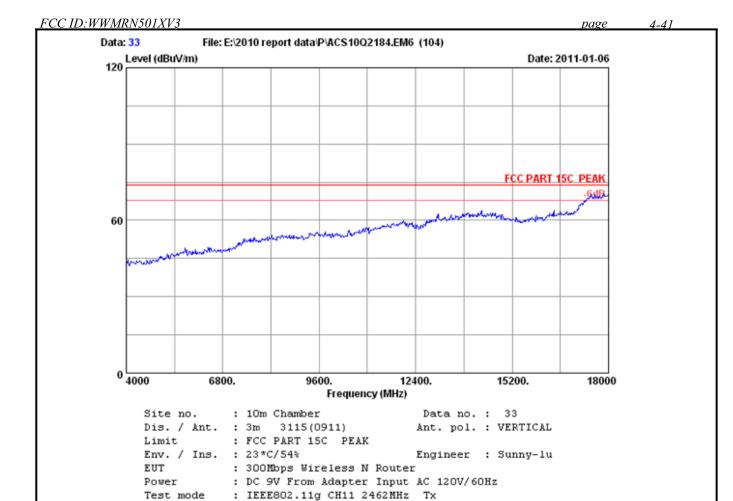
		Ant.	Cable	Amp.		Emission			
	-				_	Level (dBuV/m)		_	Remark
1	4924.000	34.49	10.76	34.98	44.95	55.22	74.00	18.78	Peak
2	4924.000	34.49	10.76	34.98	36.47	46.74	54.00	7.26	Average

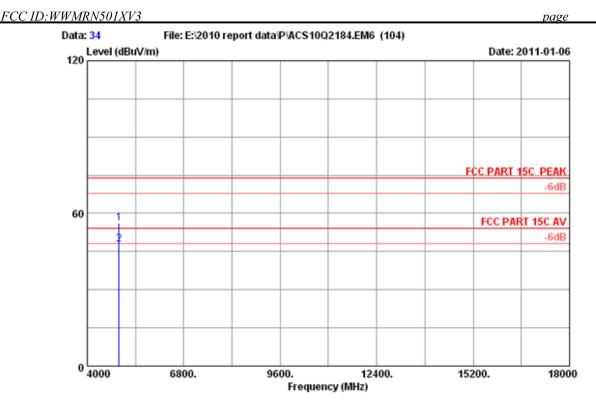
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

M/N

: PW-RN501D

# AUDIX Technology (Shenzhen) Co., Ltd.





Site no. : 10m Chamber Data no. : 34 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

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

EUT : 300Mbps Wireless N Router

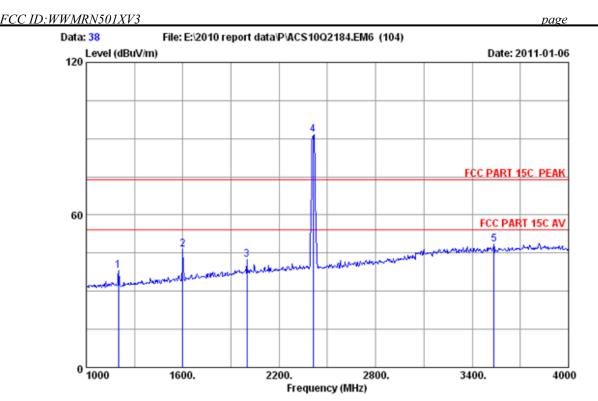
: DC 9V From Adapter Input AC 120V/60Hz Power

Test mode : IEEE802.11g CH11 2462MHz Tx

: PW-RN501D M/N

	Cable loss (dB)	 Reading (dBuV)	Emission Level (dBuV/m)		Margin (dB)	Remark
4924.000			56.24 47.69	74.00 54.00	17.76 6.31	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. : 10m 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

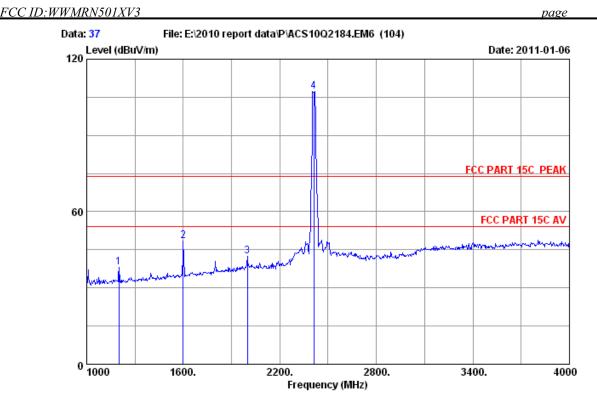
EUT : 300Mbps Wireless N Router

Power : DC 9V From Adapter Input AC 120V/60Hz Test mode : IEEE802.11n HT20 CH1 2412MHz Tx

M/N : PW-RN501D

	-		loss		_	Emission Level (dBuV/m)		Margin ) (dB)	Remark
1	1201.000	25.81	5.16	37.54	44.69	38.12	74.00	35.88	Peak
2	1600.000	26.96	5.91	36.94	50.68	46.61	74.00	27.39	Peak
3	1999.000	29.20	6.63	36.70	43.24	42.37	74.00	31.63	Peak
4	2412.000	29.45	7.43	36.62	91.37	91.63	74.00	-17.63	Peak
5	3535.000	33.35	9.16	35.98	41.88	48.41	74.00	25.59	Peak

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



Site no. : 10m Chamber Data no. : 37
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

Power : DC 9V From Adapter Input AC 120V/60Hz Test mode : IEEE802.11n HT20 CH1 2412MHz Tx

M/N : PW-RN501D

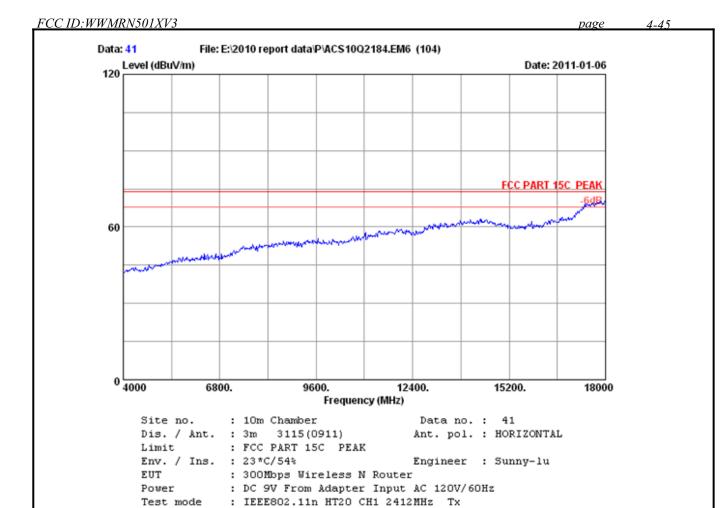
	-		loss		Reading	Emission Level (dBuV/m)		_	Remark
2	1201.000 1600.000 1999.000	26.96 29.20	5.91 6.63	36.94 36.70	52.53 43.19	38.02 48.46 42.32	74.00 74.00 74.00	35.98 25.54 31.68	Peak Peak Peak
4	2412.000	29.45	7.43	36.62	107.05	107.31	74.00	-33.31	Peak

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

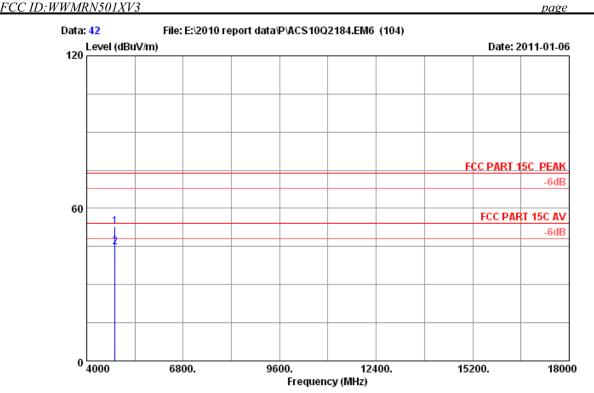
M/N

: PW-RN501D

# AUDIX Technology (Shenzhen) Co., Ltd.



4-46



Site no. : 10m Chamber Dis. / Ant. : 3m 3115(0911) Data no.: 42

Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

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

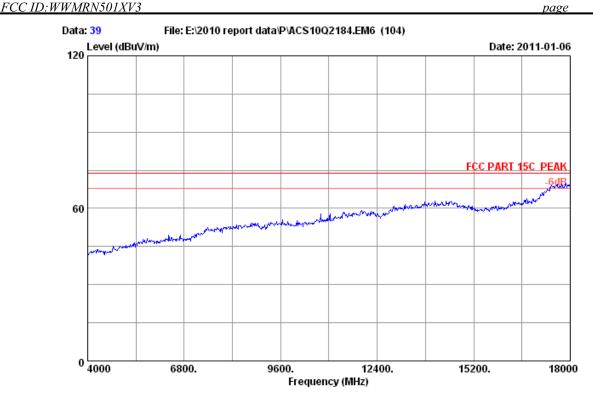
EUT : 300Mbps Wireless N Router

Power : DC 9V From Adapter Input AC 120V/60Hz Test mode : IEEE802.11n HT20 CH1 2412MHz Tx

M/N: PW-RN501D

	-	Factor	Factor	_	Emission Level (dBuV/m)	Limits	_	Remark
_	4824.000 4824.000		 		52.79 44.87	74.00 54.00	21.21 9.13	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. : 10m Chamber Dis. / Ant. : 3m 3115(0911) Data no. : 39 Ant. pol. : VERTICAL

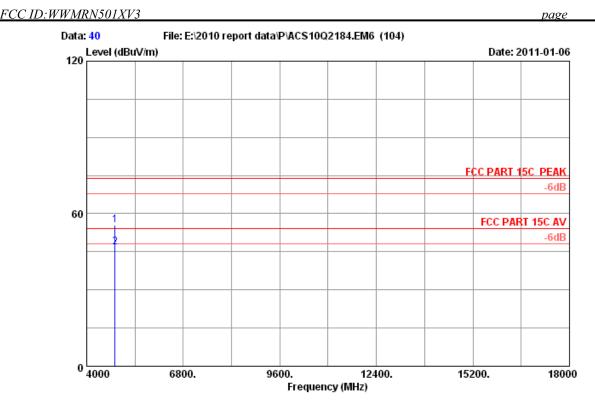
: FCC PART 15C PEAK Limit

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

EUT : 300Mbps Wireless N Router

Power : DC 9V From Adapter Input AC 120V/60Hz Test mode : IEEE802.11n HT20 CH1 2412MHz Tx M/N : PW-RN501D

4-48



Site no. : 10m 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 : 300Mbps Wireless N Router

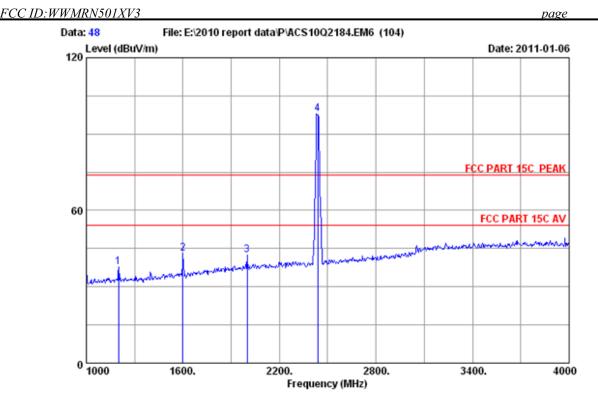
Power : DC 9V From Adapter Input AC 120V/60Hz Test mode : IEEE802.11n HT20 CH1 2412MHz Tx

M/N : PW-RN501D

	-	Factor	Factor	_	Emission Level (dBuV/m)	Limits	_	Remark
_	4824.000 4824.000		 		55.64 46.73	74.00 54.00	18.36 7.27	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 report

4-49



Site no. : 10m 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 : 300Mbps Wireless N Router

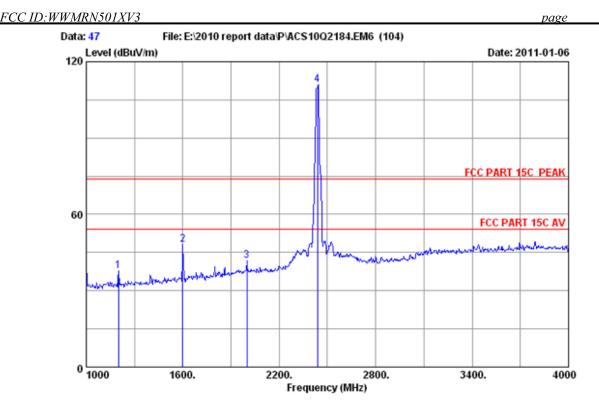
: DC 9V From Adapter Input AC 120V/60Hz Power Test mode : IEEE802.11n HT20 CH6 2437MHz Tx

M/N : PW-RN501D

	Factor	loss			Emission Level (dBuV/m)		_	Remark
1 1201.000 2 1600.000 3 1999.000 4 2437.000	26.96	5.91 6.63	36.94 36.70	47.25 43.37	37.93 43.18 42.50 97.81	74.00 74.00 74.00 74.00	36.07 30.82 31.50 -23.81	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.

4-50



Site no. : 10m 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 : 300Mbps Wireless N Router

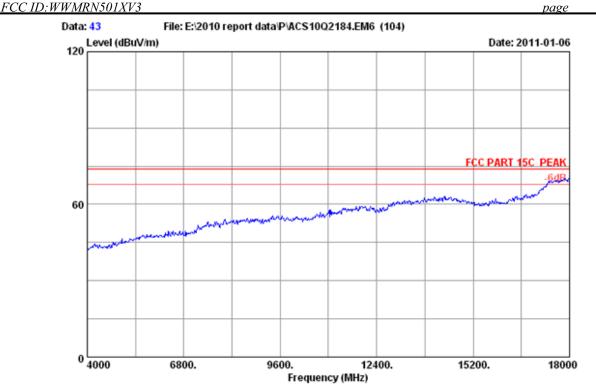
: DC 9V From Adapter Input AC 120V/60Hz Power Test mode : IEEE802.11n HT20 CH6 2437MHz Tx

M/N : PW-RN501D

		Ant. Factor (dB/m)	loss	Factor	Reading (dBuV)	Emission Level (dBuV/m)		Margin ) (dB)	Remark
1	1201.000	25.81	5.16	37.54	44.46	37.89	74.00	36.11	Peak
2	1600.000	26.96	5.91	36.94	52.13	48.06	74.00	25.94	Peak
3	1999.000	29.20	6.63	36.70	42.80	41.93	74.00	32.07	Peak
4	2437.000	29.47	7.46	36.61	110.55	110.87	74.00	-36.87	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.

4-51



Site no. : 10m Chamber Data no.: 43

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

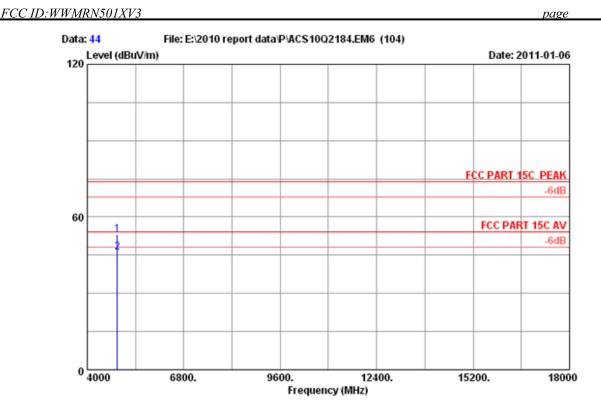
Limit : FCC PART 15C PEAK Env. / Ins. : 23\*C/54% Engineer : Sunny-lu

EUT : 300Mbps Wireless N Router

: DC 9V From Adapter Input AC 120V/60Hz Power Test mode : IEEE802.11n HT20 CH6 2437MHz Tx

M/N : PW-RN501D

4-52



: 10m Chamber Data no.: 44 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m 3115(0911) Limit : FCC PART 15C PEAK Env. / Ins. : 23\*C/54%

Engineer : Sunny-lu

: 300Mbps Wireless N Router : DC 9V From Adapter Input AC 120V/60Hz Test mode : IEEE802.11n HT20 CH6 2437MHz Tx

M/N : PW-RN501D

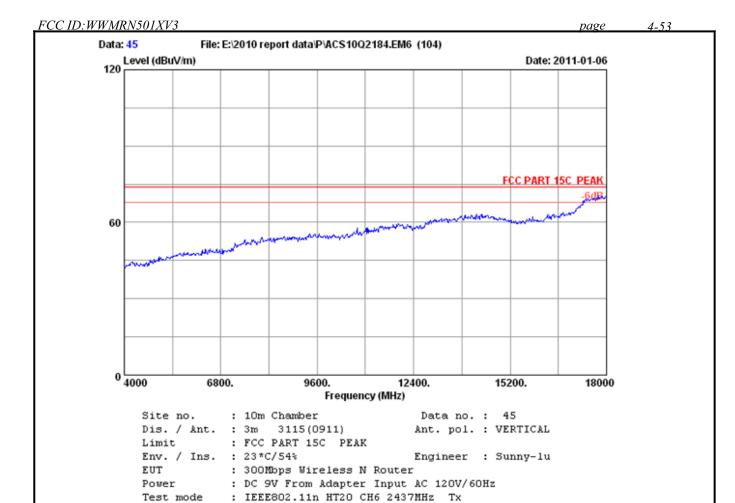
-	Cable loss (dB)	Factor	Reading (dBuV)	Emission Level (dBuV/m)		Margin (dB)	Remark
4874.000 4874.000	 			53.11 46.17	74.00 54.00	20.89 7.83	Peak Average

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

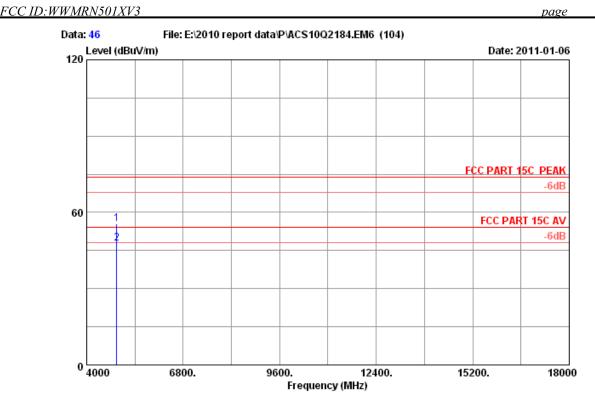
M/N

: PW-RN501D

# AUDIX Technology (Shenzhen) Co., Ltd.



4-54



Site no. : 10m Chamber
Dis. / Ant. : 3m 3115(0911) Data no.: 46 Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

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

EUT : 300Mbps Wireless N Router

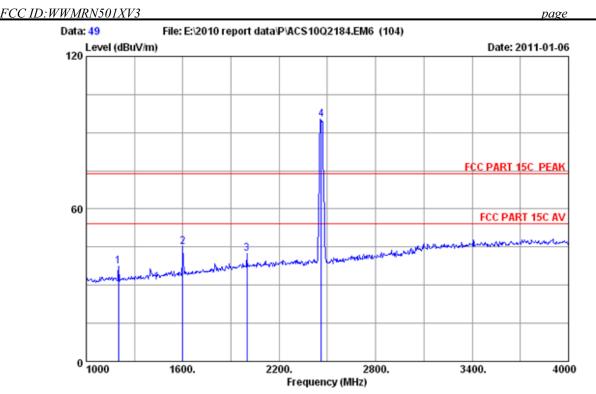
Power : DC 9V From Adapter Input AC 120V/60Hz Test mode : IEEE802.11n HT20 CH6 2437MHz Tx

M/N: PW-RN501D

			Factor	Reading (dBuV)	Emission Level (dBuV/m)		5	Remark
1 2	4874.000 4874.000	 			55.48 47.93	74.00 54.00	18.52 6.07	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.

4-55



Site no. : 10m Chamber Data no. : 49

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

Limit : FCC PART 15C PEAK

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

EUT : 300Mbps Wireless N Router

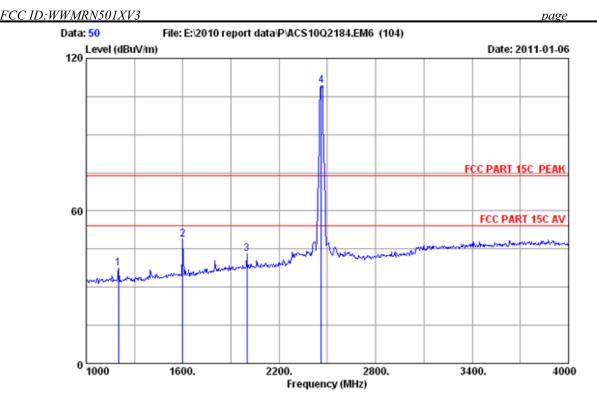
Power : DC 9V From Adapter Input AC 120V/60Hz Test mode : IEEE802.11n HT20 CH11 2462MHz Tx

M/N : PW-RN501D

	-		loss		Reading (dBuV)	Emission Level (dBuV/m)	Limit	s Margin m) (dB)	Remark
1	1201.000	25.81	5.16	37.54	44.02	37.45	74.00	36.55	Peak
2	1600.000	26.96	5.91	36.94	49.21	45.14	74.00	28.86	Peak
3	1999.000	29.20	6.63	36.70	43.38	42.51	74.00	31.49	Peak
4	2462.000	29.48	7.54	36.61	94.84	95.25	74.00	-21.25	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.

4-56



Site no. : 10m 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

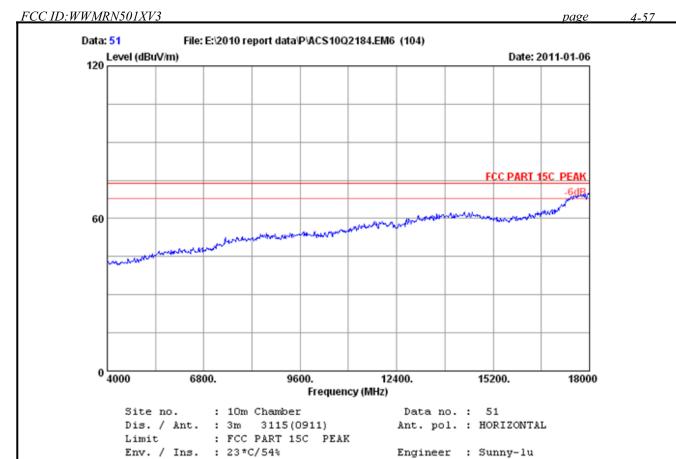
EUT : 300Mbps Wireless N Router

Power : DC 9V From Adapter Input AC 120V/60Hz Test mode : IEEE802.11n HT20 CH11 2462MHz Tx

M/N : PW-RN501D

	_		loss			Level (dBuV/m)		_	Remark	
1	1201.000	25.81	5.16	37.54	44.02	37.45	74.00	36.55	Peak	
2	1600.000	26.96	5.91	36.94	52.91	48.84	74.00	25.16	Peak	
3	1999.000	0 29.20	6.63	36.70	43.90	43.03	74.00	30.97	Peak	
4	2462.000	0 29.48	7.54	36.61	108.89	109.30	74.00	-35.30	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.



EUT : 300Mbps Wireless N Router

Power : DC 9V From Adapter Input AC 120V/60Hz Test mode : IEEE802.11n HT20 CH11 2462MHz Tx

M/N : PW-RN501D