



FCC PART 15C TEST REPORT FOR CERTIFICATION  
On Behalf of

ZyXEL Communications Corporation

Wireless N-lite PCI Express Adapter

Model No.: NWD3105

FCC ID: I88NWD3105

Prepared for : ZyXEL Communications Corporation  
No.6, Innovation RD II, Science-Based Industrial Park,  
Hsin-Chu, Taiwan R.O.C

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-F11283  
Date of Test : Nov.26~Dec.08, 2011  
Date of Report : Dec.15, 2011

**TABLE OF CONTENTS**

<u>Description</u>	<u>Page</u>
<b>1. SUMMARY OF STANDARDS AND RESULTS .....</b>	<b>1-1</b>
1.1. Description of Standards and Results.....	1-1
<b>2. GENERAL INFORMATION.....</b>	<b>2-1</b>
2.1. Description of Device (EUT) .....	2-1
2.2. Test Information.....	2-2
2.3. Tested Supporting System Details .....	2-3
2.4. Block Diagram of Test Setup .....	2-3
2.5. Test Facility.....	2-4
2.6. Measurement Uncertainty (95% confidence levels, k=2) .....	2-4
<b>3. POWER LINE CONDUCTED EMISSION TEST .....</b>	<b>3-1</b>
3.1. Test Equipments.....	3-1
3.2. Block Diagram of Test Setup .....	3-1
3.3. Power Line Conducted Emission Test Limits .....	3-1
3.4. Configuration of EUT on Test .....	3-2
3.5. Operating Condition of EUT.....	3-2
3.6. Test Procedure.....	3-2
3.7. Power Line Conducted Emission Test Results.....	3-2
<b>4. RADIATED EMISSION TEST.....</b>	<b>4-1</b>
4.1. Test Equipment .....	4-1
4.2. Block Diagram of Test Setup .....	4-1
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.....	4-3
4.7. Radiated Emission Test Results .....	4-4
<b>5. CONDUCTED SPURIOUS EMISSIONS .....</b>	<b>5-1</b>
5.1. Test Equipment .....	5-1
5.2. Limit.....	5-1
5.3. Test Procedure.....	5-1
5.4. Test result .....	5-1
<b>6. BAND EDGE COMPLIANCE TEST.....</b>	<b>6-1</b>
6.1. Test Equipment .....	6-1
6.2. Limit.....	6-1
6.3. Test Produce .....	6-1
6.4. Test Results .....	6-1
<b>7. 6dB Bandwidth Test .....</b>	<b>7-1</b>
7.1. Test Equipment .....	7-1
7.2. Limit.....	7-1
7.3. Test Procedure.....	7-1
7.4. Test Results .....	7-1
<b>8. OUTPUT POWER TEST .....</b>	<b>8-1</b>
8.1. Test Equipment .....	8-1
8.2. Limit (FCC Part 15C 15.247 b(3)) .....	8-1
8.3. Test Procedure.....	8-1
8.4. Test Results .....	8-2
<b>9. POWER SPECTRAL DENSITY TEST.....</b>	<b>9-1</b>
9.1. Test Equipment .....	9-1



FCC ID: J88NWD3105

9.2. Limit .....9-1

9.3. Test Procedure .....9-1

9.4. Test Results .....9-2

**10. ANTENNA REQUIREMENT .....10-1**

**10.1. STANDARD APPLICABLE .....10-1**

**10.2. ANTENNA CONNECTED CONSTRUCTION .....10-1**

**11. MPE ESTIMATION .....11-1**

    11.1. Limit for General Population/ Uncontrolled Exposures .....11-1

    11.2. Estimation Result .....11-1

**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**

### TEST REPORT CERTIFICATION

Applicant : ZyXEL Communications Corporation  
 Manufacturer : ZyXEL Communications Corporation  
 EUT Description : Wireless N-lite PCI Express Adapter  
 FCC ID : I88NWD3105  
 (A) MODEL NO. : NWD3105  
 (B) SERIAL NO. : N/A  
 (C) POWER SUPPLY : DC 3.3V  
 (D) TEST VOLTAGE : DC 3.3V From PC Input AC 120V/60Hz

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 contains data that are not covered by the NVLAP accreditation.

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.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Nov.26~Dec.08, 2011 Report of date: Dec.15, 2011

Prepared by : Cerry He      Reviewer by : Sunny Lu  
 Cerry He/ Assistant      Audix Technology (Shenzhen) Co., Ltd. Supervisor

EMC 部門報告專用章  
 Stamp only for EMC Dept. Report  
 Signature: Ken Lu 12/15/11

Approved & Authorized Signer : Ken Lu  
 Ken Lu / Manager



## 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 ANSI C63.10: 2009	PASS
Radiated Emission	FCC Part 15: 15.209 ANSI C63.10: 2009	PASS
Band Edge Compliance	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Conducted spurious emissions	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
6dB Bandwidth	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Peak Output Power	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Power Spectral Density	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Antenna requirement	FCC Part 15: 15.203	PASS

## 2. GENERAL INFORMATION

### 2.1. Description of Device (EUT)

Product Name	:	Wireless N-lite PCI Express Adapter
Model Number	:	NWD3105
FCC ID	:	I88NWD3105
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,2dBi Gain
Applicant	:	ZyXEL Communications Corporation No.6, Innovation RD II, Science-Based Industrial Park, Hsin-Chu, Taiwan R.O.C
Manufacturer	:	ZyXEL Communications Corporation No.6, Innovation RD II, Science-Based Industrial Park, Hsin-Chu, Taiwan R.O.C
Date of Test	:	Nov.26~Dec.08, 2011
Date of Receipt	:	Nov.25, 2011
Sample Type	:	Prototype production

## 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.

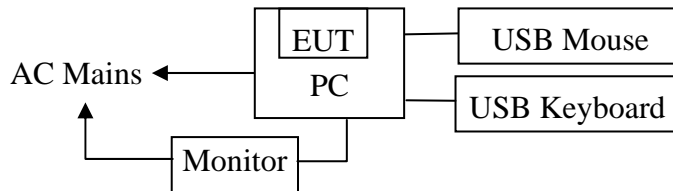
Tested mode, channel, and data rate information			
Mode	data rate (Mbps)(see Note)	Channel	Frequency (MHz)
IEEE 802.11b	11	Low :CH1	2412
	11	Middle: CH6	2437
	11	High: CH11	2462
IEEE 802.11g	54	Low :CH1	2412
	54	Middle: CH6	2437
	54	High: CH11	2462
IEEE 802.11n HT20	6.5	Low :CH1	2412
	6.5	Middle: CH6	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.

### 2.3. Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1	Personal Computer	Test PC L	Lenovo	CR6	L38N404	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R33B65
Power Cord: Unshielded, Detachable, 1.8m						
2	Monitor	ACS-EMC-LM03R	DELL	1907FPt	CN-009759-7161 8-6CG-BDWV	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R3A002
Power Cord: Unshielded, Detachable, 1.8m VGA Cable: Shielded, Detachable, 2.0m (with two cores) DVI Cable: Shielded, Detachable, 2.0m (with two cores)						
3	USB Keyboard	ACS-EMC- K03R	DELL	SK-8115	CN-ODJ313-716 16-711-04WJ	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: T3A002
Power Cord: shielded, Undetachable, 2.0m						
4	USB Mouse	ACS-EMC-M03R	DELL	M056UO	512023253	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R41108
Power Cord: shielded, Undetachable, 1.8m						

### 2.4. Block Diagram of Test Setup



( EUT: Wireless N-lite PCI Express Adapter)



## 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 : Certificated by FCC, USA  
Registration Number: 90454  
Valid Date: Mar.31, 2012

3m & 10m Anechoic Chamber : Certificated by FCC, USA  
Registration Number: 794232  
Valid Date: Dec.30, 2012

EMC Lab. : Certificated by Industry Canada  
Registration Number: IC 5183A-1  
Valid Date: Jun.13, 2014

: Certificated by DAkkS, Germany  
Registration No: D-PL-12151-01-01  
Valid Date: Feb.01, 2014

Accredited by NVLAP, USA  
NVLAP Code: 200372-0  
Valid Date: Mar.31, 2012

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

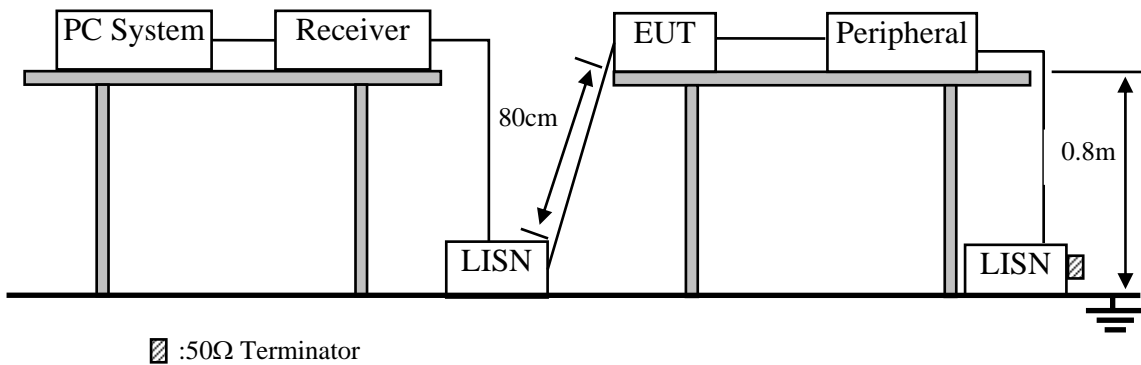
Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	3.2 dB (150KHz to 30MHz)
Uncertainty for Radiation Emission test in 3m chamber	3.6 dB(30~200MHz, Polarize: H)
	3.7 dB(30~200MHz, Polarize: V)
	4.0 dB(200M~1GHz, Polarize: H)
	3.7 dB(200M~1GHz, Polarize: V)
Uncertainty for Radiation Emission test in 3m chamber (1GHz-18GHz)	3.1dB (Distance: 3m Polarize: V)
	3.7 dB (Distance: 3m Polarize: H)
Uncertainty for Radiated Spurious Emission test in RF chamber	3.57 dB
Uncertainty for Conduction Spurious emission test	2.00 dB
Uncertainty for Output power test	0.73 dB
Uncertainty for Power density test	2.00 dB
Uncertainty for Frequency range test	$7 \times 10^{-8}$
Uncertainty for Bandwidth test	83 kHz
Uncertainty for DC power test	0.038 %
Uncertainty for test site temperature and humidity	0.6°C
	3%

### 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	Oct.31, 11	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Oct.31, 11	1 Year
3.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.08, 11	1 Year
4.	Terminator	Hubersuhner	50Ω	No. 1	May.08, 11	1 Year
5.	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.08, 11	1 Year
6.	Coaxial Switch	Anritsu	MP59B	M55367	May.08, 11	1 Year
7.	Passive Probe	Rohde & Schwarz	ESH2-Z3	299.7810.52	May.08, 11	1 Year
8.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 11	1 Year

#### 3.2. Block Diagram of Test Setup



#### 3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
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.

### 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. Wireless N-lite PCI Express Adapter (EUT)

Model Number : NWD3105

Serial Number : N/A

3.4.2. Support Equipment : As Tested Supporting System Details, in Section 2.2.

### 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

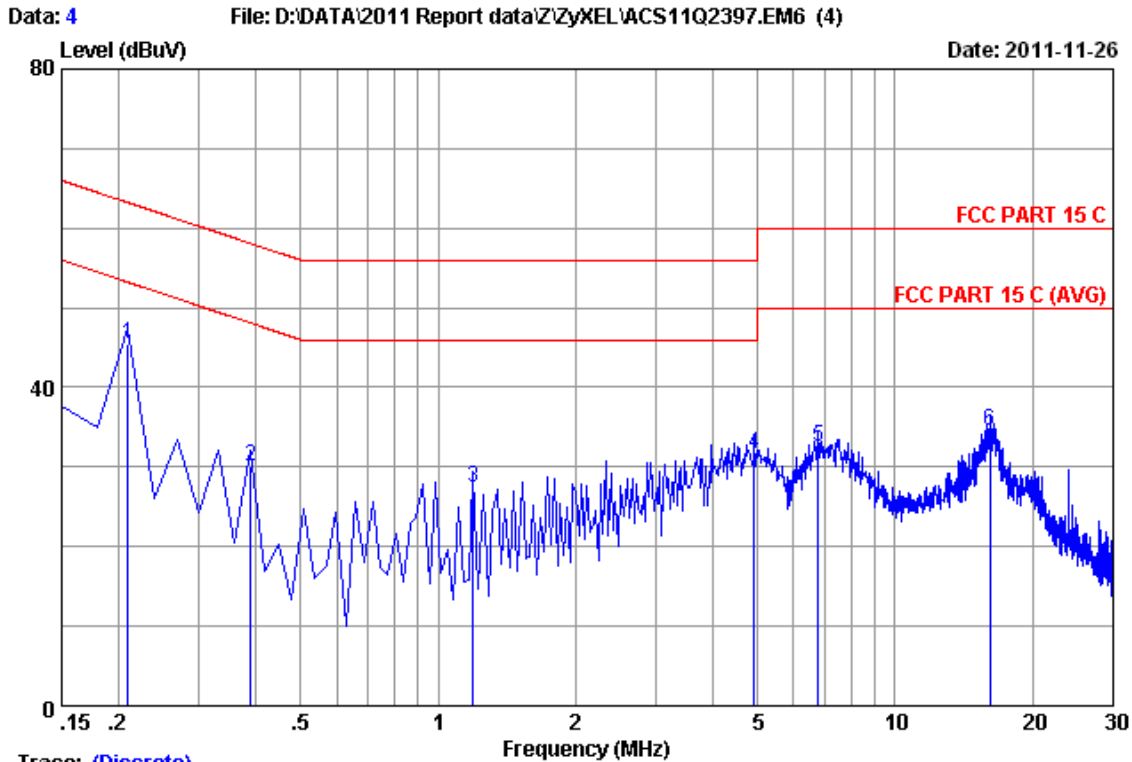
The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The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

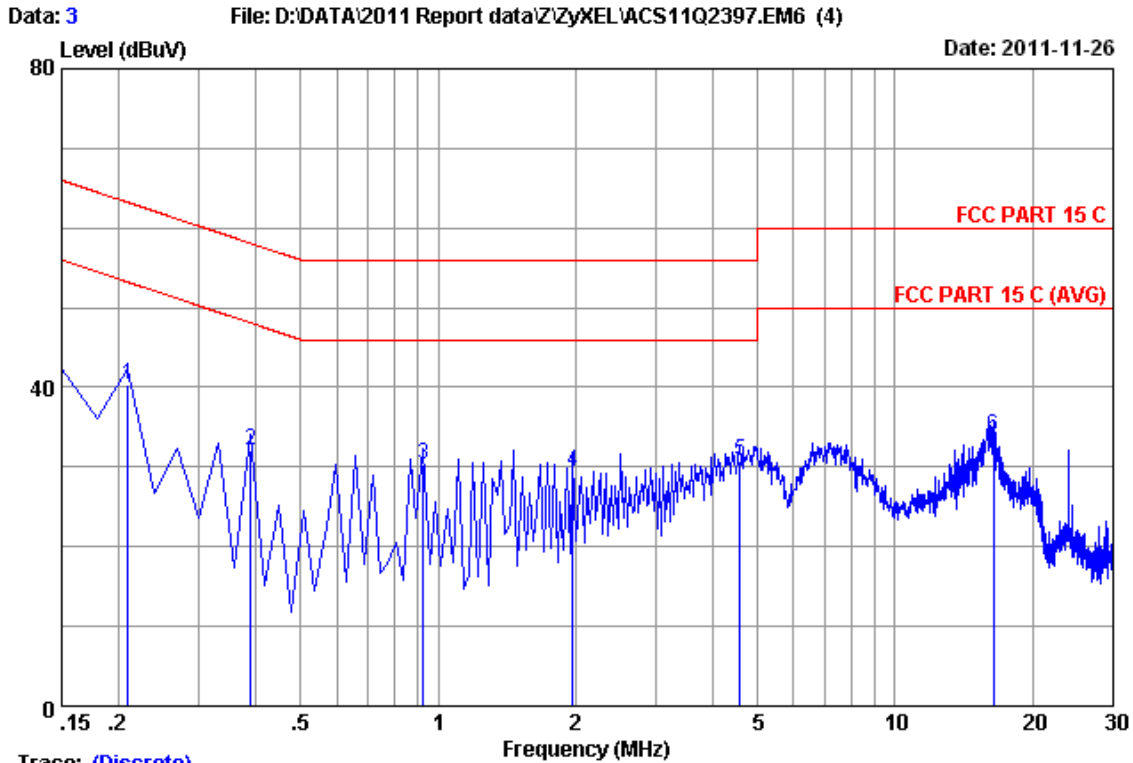


Trace: (Discrete)

Site no : Audix No.1 Conduction Data No : 4  
 Dis./Ant. : \*\* 2011 ESH2-Z5 LINE  
 Limit : FCC PART 15 C  
 Env./Ins. : 29.5°C/55% Engineer : Leo\_Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : TX Mode  
 M/N: NWD3105

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV)	Limits (dBUV)	Margin (dB)	Remark
1	0.20970	0.17	9.86	35.33	45.36	63.22	17.86	QP
2	0.38880	0.18	9.86	20.02	30.06	58.09	28.03	QP
3	1.195	0.25	9.89	17.23	27.37	56.00	28.63	QP
4	4.926	0.37	10.02	21.21	31.60	56.00	24.40	QP
5	6.777	0.46	10.03	22.05	32.54	60.00	27.46	QP
6	16.150	0.97	10.10	23.38	34.45	60.00	25.55	QP

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



Trace: (Discrete)

Site no : Audix No.1 Conduction Data No : 3  
 Dis./Ant. : \*\* 2011 ESH2-25 NEUTRAL  
 Limit : FCC PART 15 C  
 Env./Ins. : 29.5°C/55% Engineer : Leo\_Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : TX Mode  
 M/N: NWD3105

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV)	Limits (dBUV)	Margin (dB)	Remark
1	0.20970	0.21	9.86	30.17	40.24	63.22	22.98	QP
2	0.38880	0.22	9.86	22.05	32.13	58.09	25.96	QP
3	0.92610	0.24	9.88	20.24	30.36	56.00	25.64	QP
4	1.971	0.27	9.92	19.19	29.38	56.00	26.62	QP
5	4.568	0.32	10.01	20.38	30.71	56.00	25.29	QP
6	16.388	0.65	10.11	23.14	33.90	60.00	26.10	QP

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

## 4. RADIATED EMISSION TEST

### 4.1. Test Equipment

#### 4.1.1. For frequency range 30MHz~1000MHz (At Anechoic Chamber)

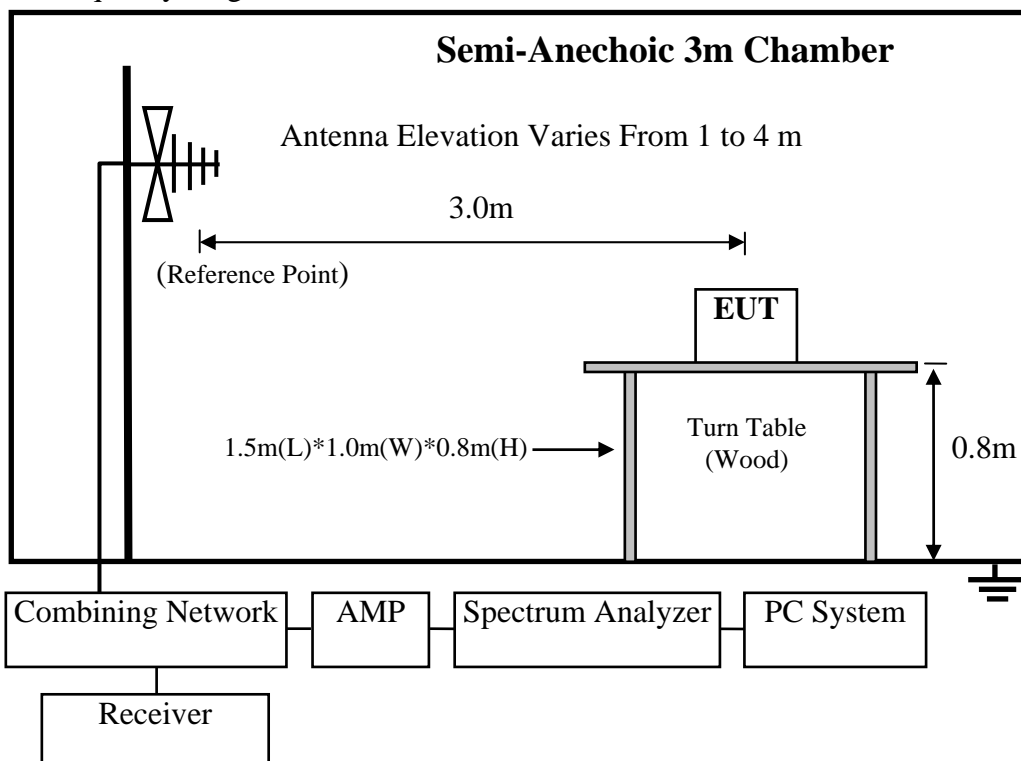
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.05,10	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 11	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 11	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 11	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2597	May.25, 11	1 Year
6	RF Cable	MIYAZAKI	JBY400	3# Chamber No.1	May.08, 11	1 Year
7	Coaxial Switch	Anritsu	MP59B	M74389	May.08, 11	1 Year

#### 4.1.2. For frequency range 1GHz~6GHz (At Anechoic Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	May.08, 11	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	July.01, 11	1 Year
3	Amplifier	Agilent	8449B	3008A00863	May.08, 11	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 11	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	29091/2	May.08, 11	1 Year

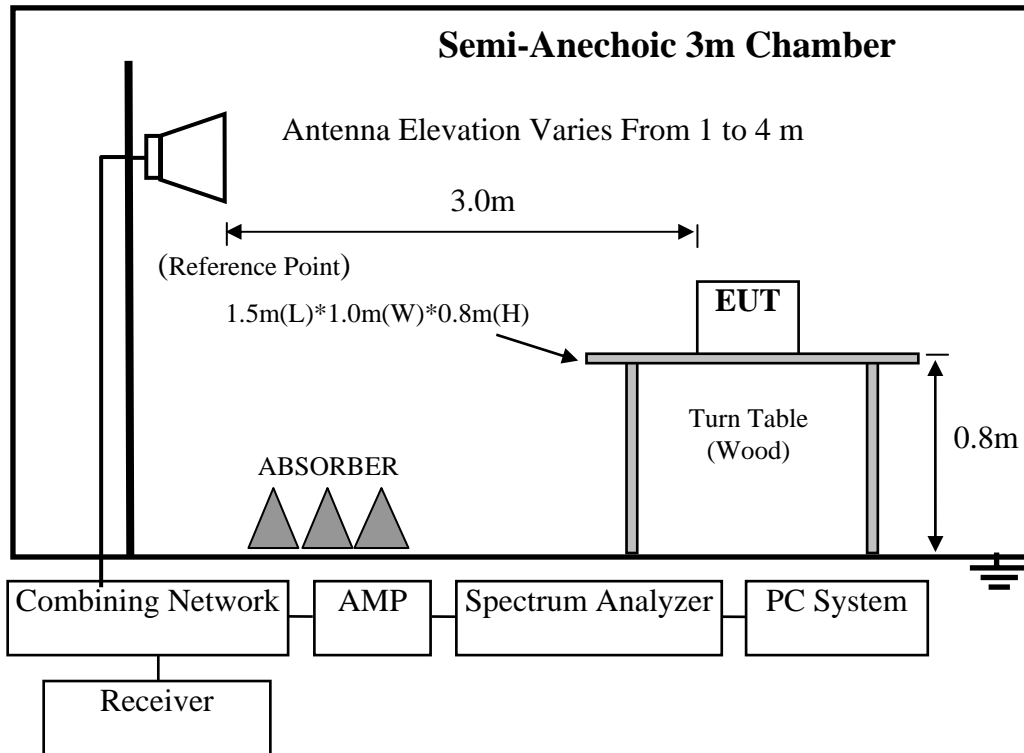
### 4.2. Block Diagram of Test Setup

For frequency range 30MHz-1000MHz





For frequency range 1GHz-25GHz



### 4.3. Radiated Emission Limit

#### 4.3.1.15.209 limits

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
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 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

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

(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.

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.

#### 4.7. Radiated Emission Test Results

**PASS.**

All the emissions from 30MHz to 25 GHz were comply with 15.209 limits.

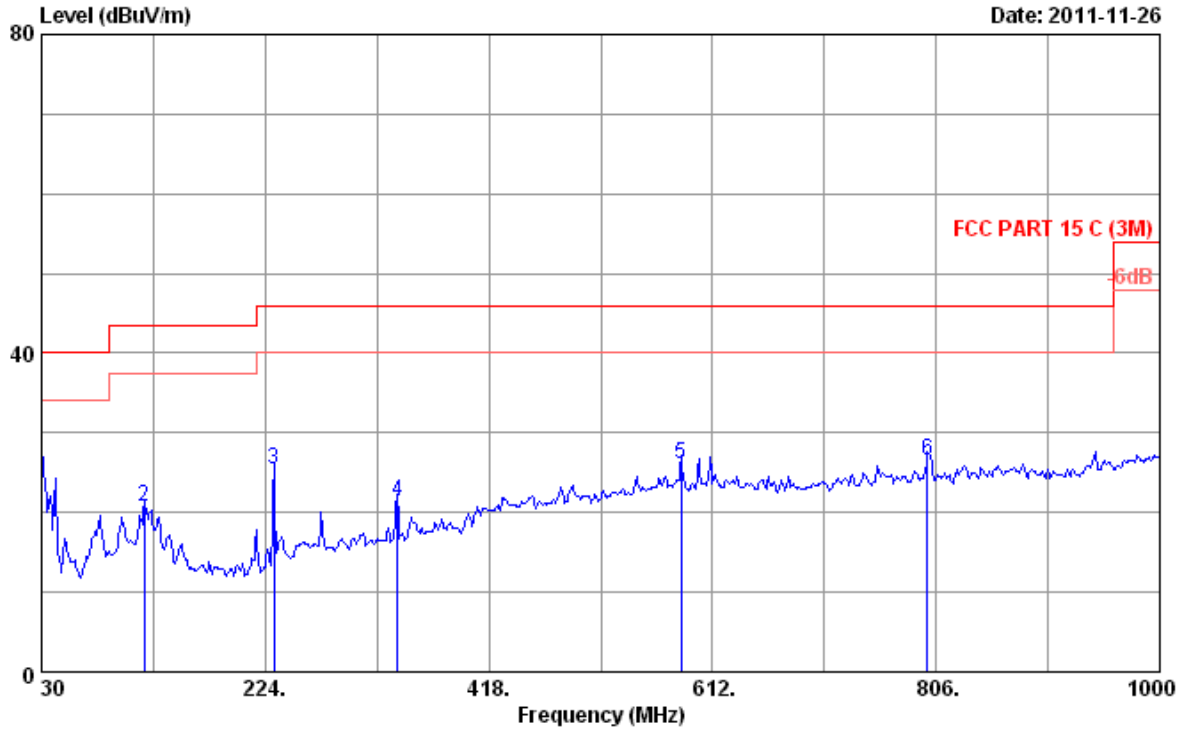
Note: For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

**Frequency: 30MHz~1GHz**

Data: 1

File: E:\2011 Report data\ZyXEL\ACS10Q2397.EM6 (2)

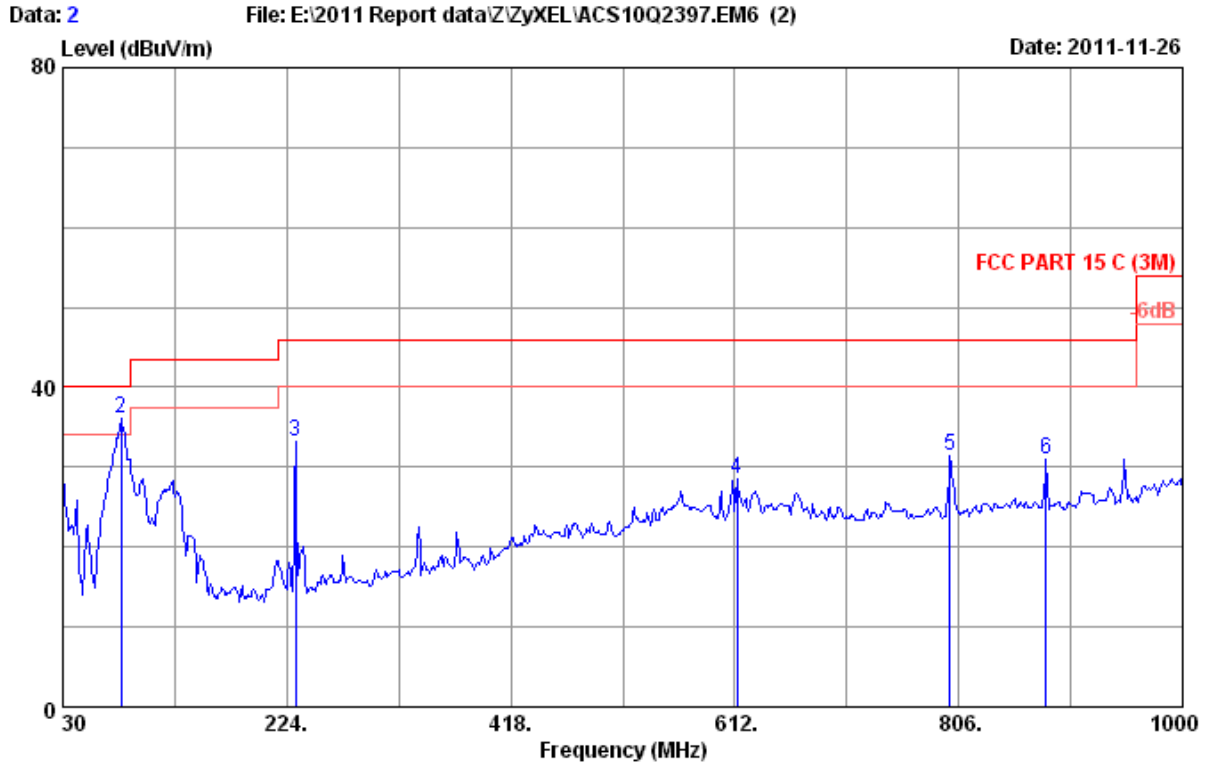
Date: 2011-11-26



Site no. : 3m Chamber Data no. : 1  
 Dis. / Ant. : 3m CBL6111C SN 2768 (11 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 C (3M)  
 Env. / Ins. : 24°C/56% Engineer : Leo\_Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power rating : DC 3.3V From PC Input AC 120V/60Hz  
 Test Mode : Tx Mode  
 M/N:NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission				Remark
				Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	30.000	18.86	0.30	7.47	26.63	40.00	13.37	QP
2	119.240	10.90	0.60	9.21	20.71	43.50	22.79	QP
3	231.760	10.85	1.10	13.42	25.37	46.00	20.63	QP
4	338.460	14.89	1.38	5.03	21.30	46.00	24.70	QP
5	584.840	20.06	1.58	4.44	26.08	46.00	19.92	QP
6	798.240	22.57	1.90	2.09	26.56	46.00	19.44	QP

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



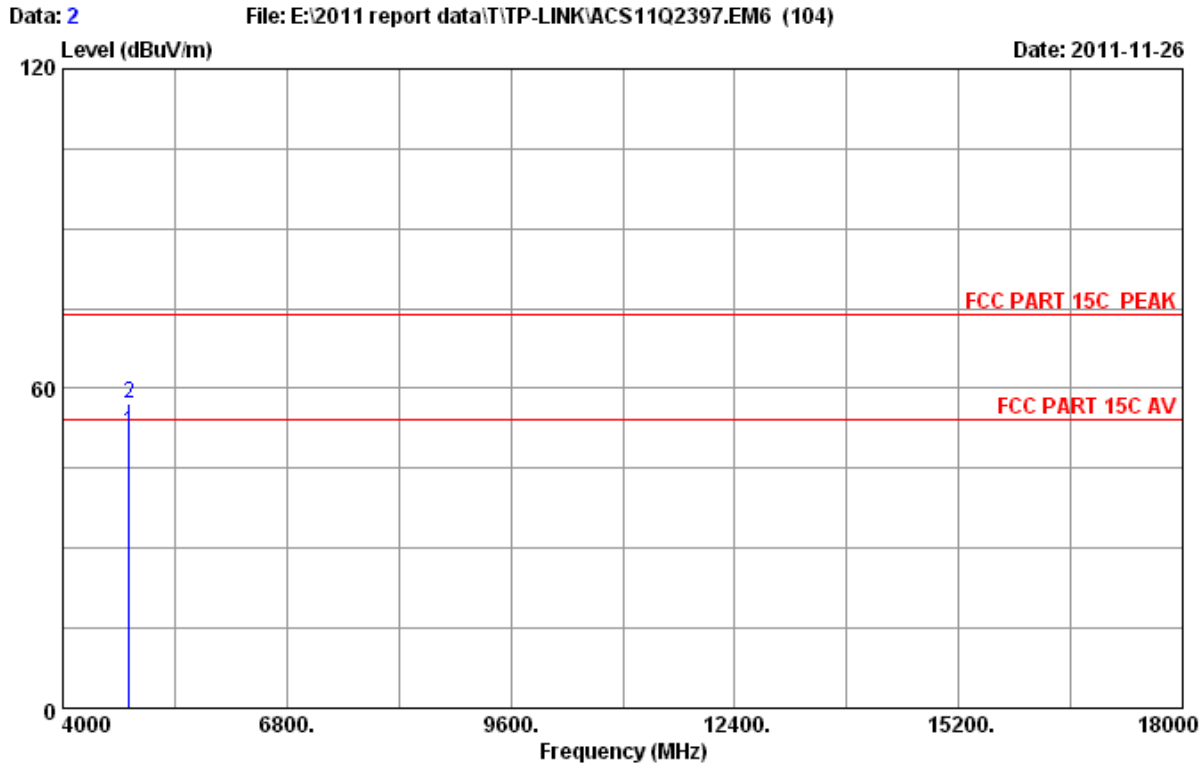
Site no. : 3m Chamber Data no. : 2  
 Dis. / Ant. : 3m CBL6111C SN 2768 (11 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 C (3M)  
 Env. / Ins. : 24°C/56% Engineer : Leo\_Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power rating : DC 3.3V From PC Input AC 120V/60Hz  
 Test Mode : Tx Mode  
 M/N:NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	18.86	0.30	9.62	28.78	40.00	11.22	QP
2	80.440	7.02	0.60	28.53	36.15	40.00	3.85	QP
3	231.760	10.85	1.10	21.32	33.27	46.00	12.73	QP
4	613.940	20.33	1.64	6.53	28.50	46.00	17.50	QP
5	798.240	22.57	1.90	6.92	31.39	46.00	14.61	QP
6	881.660	23.37	2.29	5.26	30.92	46.00	15.08	QP

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



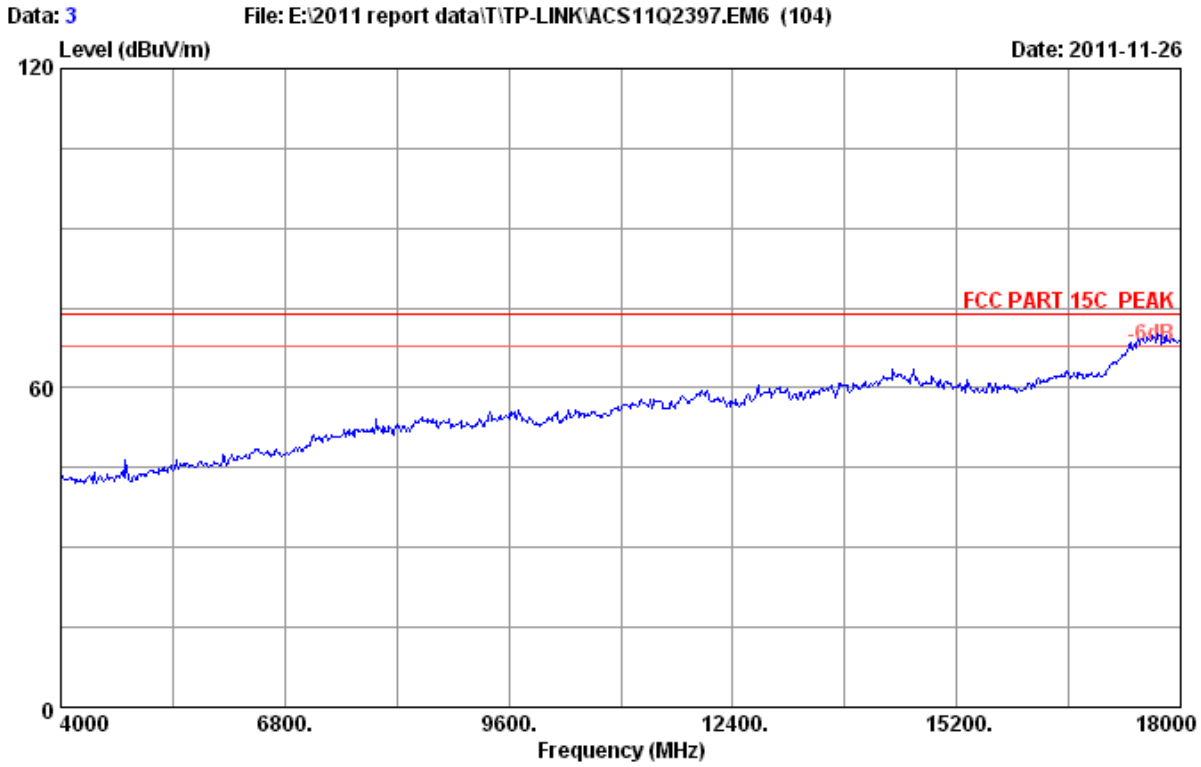




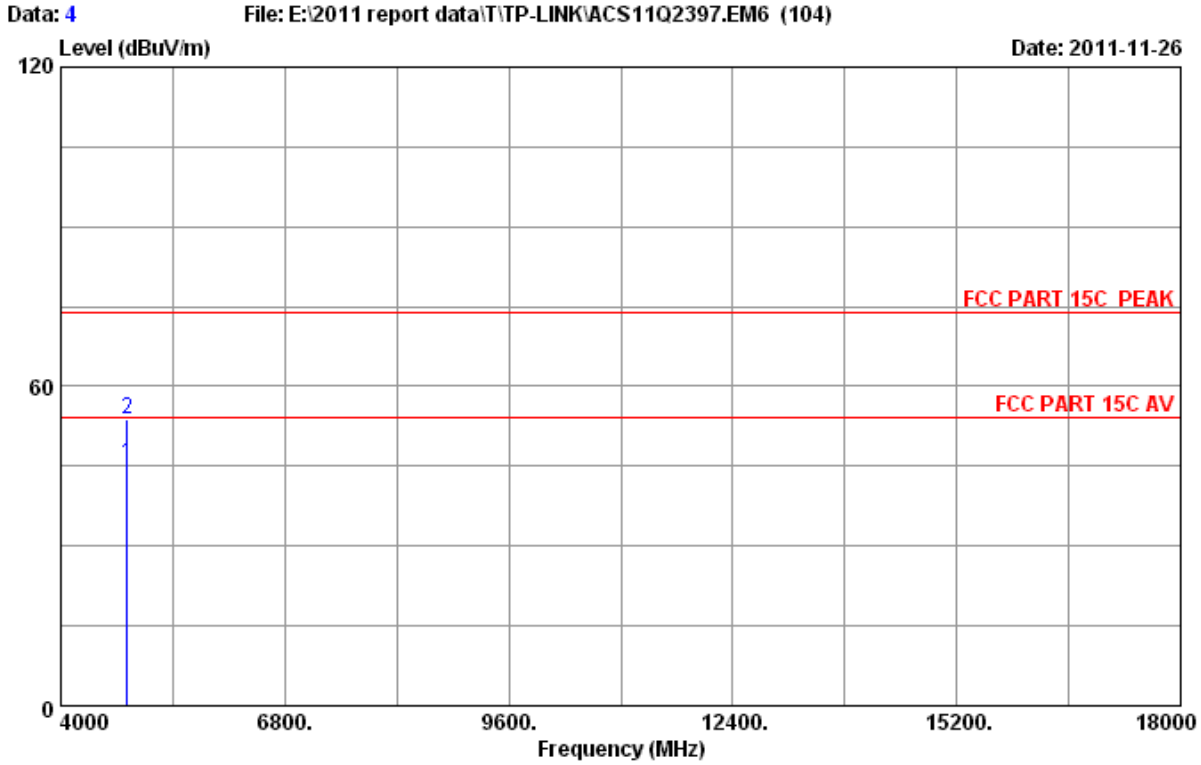
Site no. : 3# Chamber Data no. : 2  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4824.000	34.32	10.64	35.08	41.84	51.72	54.00	2.28	Average
2	4824.000	34.32	10.64	35.08	47.14	57.02	74.00	16.98	Peak

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



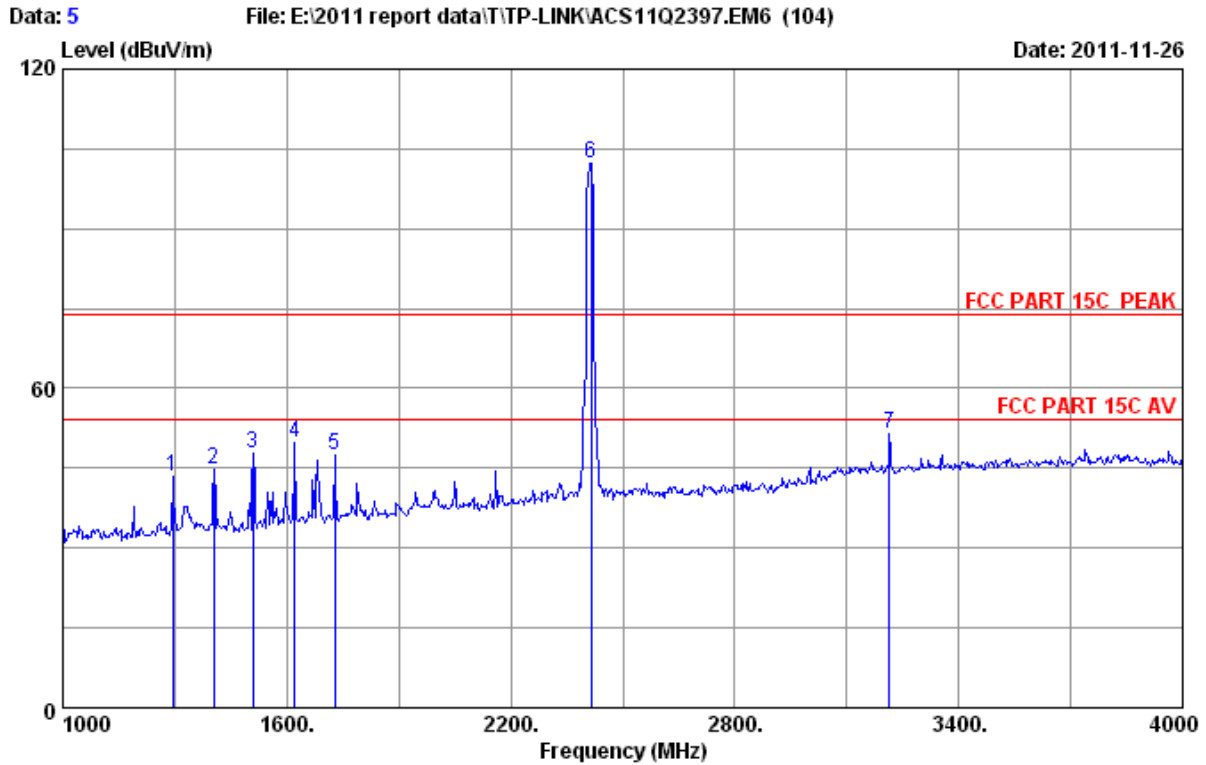
Site no. : 3# Chamber Data no. : 3  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11b CH1 2412MHz Tx  
M/N : NWD3105



Site no. : 3# Chamber Data no. : 4  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4824.000	34.32	10.64	35.08	35.51	45.39	54.00	8.61	Average
2	4824.000	34.32	10.64	35.08	44.06	53.94	74.00	20.06	Peak

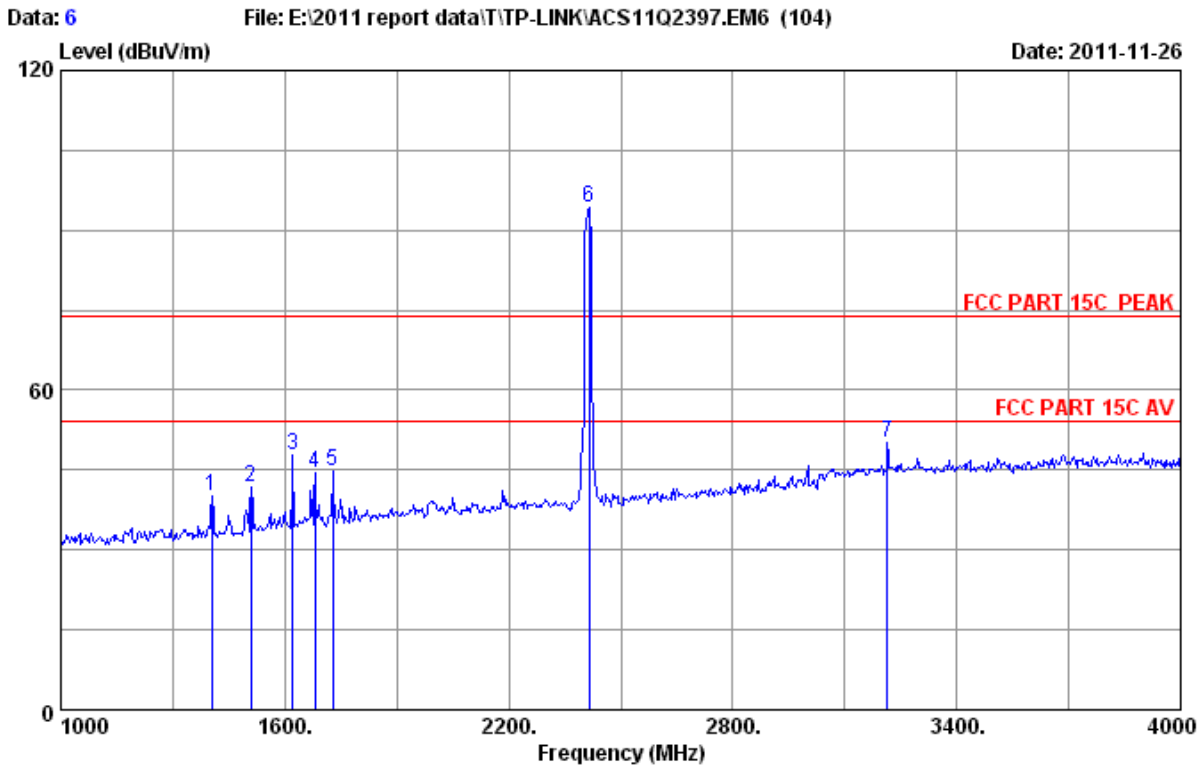
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 5  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1294.000	25.99	5.31	37.36	49.67	43.61	74.00	30.39	Peak
2	1405.000	26.23	5.54	37.18	50.16	44.75	74.00	29.25	Peak
3	1510.000	26.49	5.73	37.00	52.58	47.80	74.00	26.20	Peak
4	1621.000	27.15	5.95	36.94	53.76	49.92	74.00	24.08	Peak
5	1729.000	27.71	6.14	36.86	50.33	47.32	74.00	26.68	Peak
6	2416.000	29.45	7.43	36.61	102.09	102.36	74.00	-28.36	Peak
7	3214.000	32.54	8.79	36.28	46.58	51.63	74.00	22.37	Peak

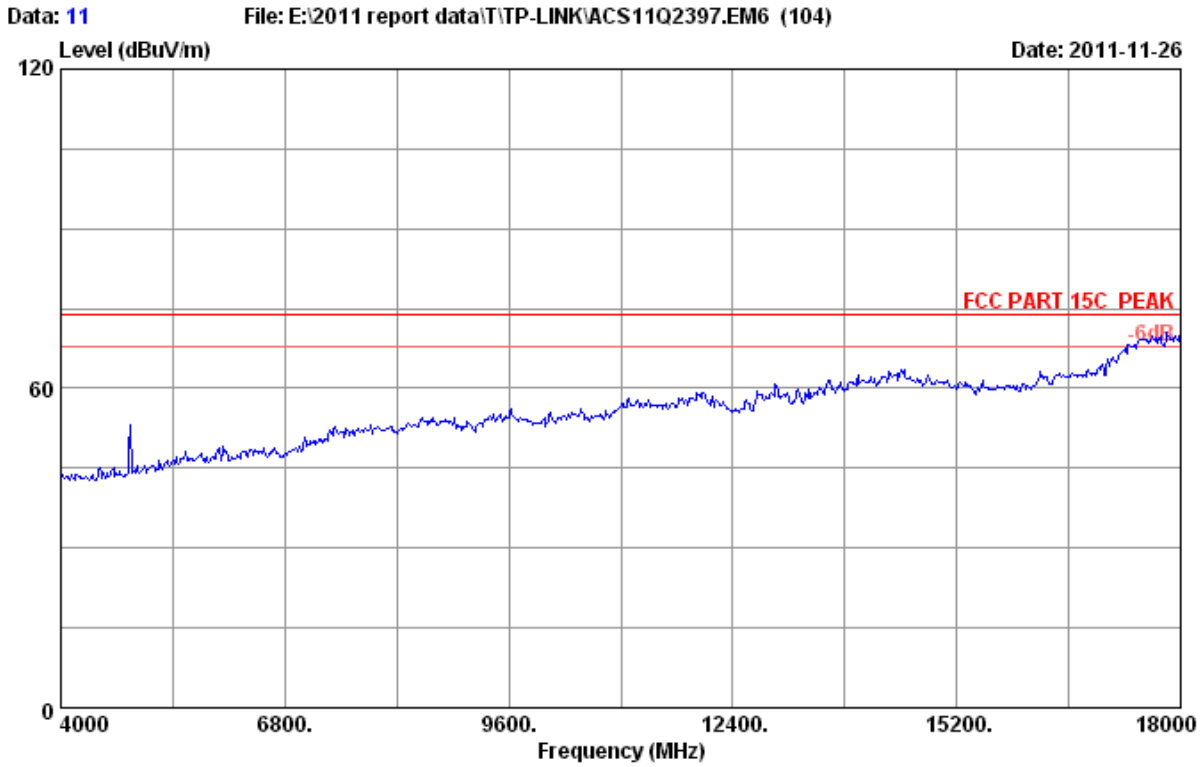
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 6  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH1 2412MHz Tx  
 M/N : NWD3105

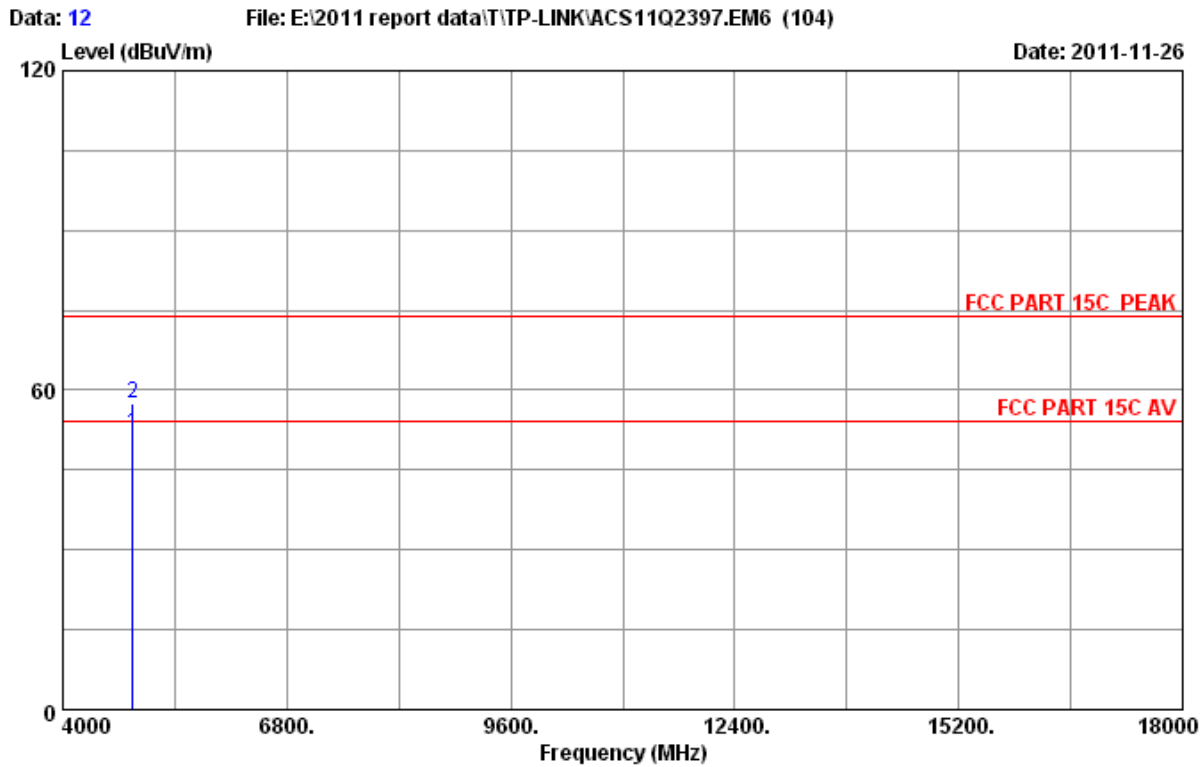
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1405.000	26.23	5.54	37.18	45.54	40.13	74.00	33.87	Peak
2	1510.000	26.49	5.73	37.00	46.61	41.83	74.00	32.17	Peak
3	1621.000	27.15	5.95	36.94	51.79	47.95	74.00	26.05	Peak
4	1681.000	27.43	6.07	36.89	47.69	44.30	74.00	29.70	Peak
5	1729.000	27.71	6.14	36.86	47.84	44.83	74.00	29.17	Peak
6	2416.000	29.45	7.43	36.61	93.84	94.11	74.00	-20.11	Peak
7	3214.000	32.54	8.79	36.28	45.00	50.05	74.00	23.95	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 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. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11b CH6 2437MHz Tx  
M/N : NWD3105

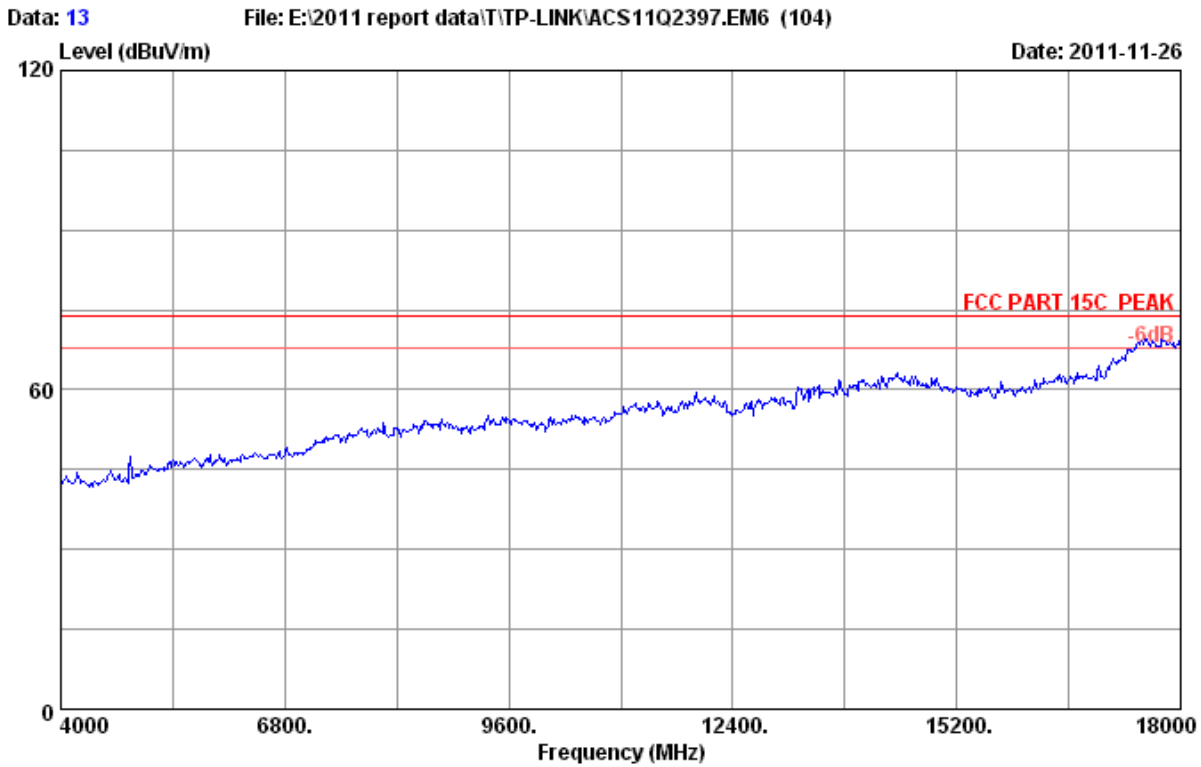




Site no. : 3# Chamber Data no. : 12  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH6 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Emission				Remark
					Reading (dBUV/m)	Level (dBUV/m)	Limits (dB)	Margin (dB)	
1	4874.000	34.41	10.69	35.03	41.83	51.90	54.00	2.10	Average
2	4874.000	34.41	10.69	35.03	47.56	57.63	74.00	16.37	Peak

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



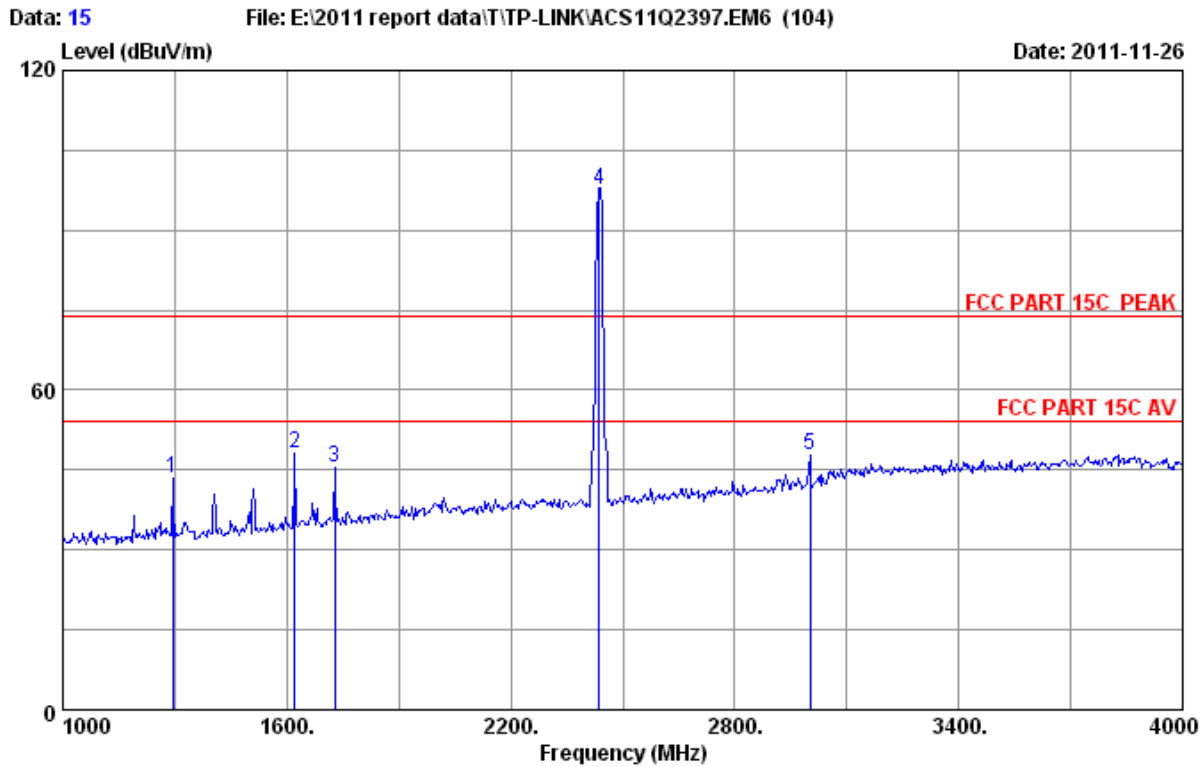
Site no.	: 3# Chamber	Data no.	: 13
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Leo-Li
EUT	: Wireless N-lite PCI Express Adapter		
Power Rating	: DC 3.3V From PC input AC 120V/60Hz		
Test Mode	: IEEE802.11b CH6 2437MHz Tx		
M/N	: NWD3105		



Site no. : 3# Chamber Data no. : 14  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH6 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Emission				Remark
					Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	
1	4874.000	34.41	10.69	35.03	36.95	47.02	54.00	6.98	Average
2	4874.000	34.41	10.69	35.03	45.21	55.28	74.00	18.72	Peak

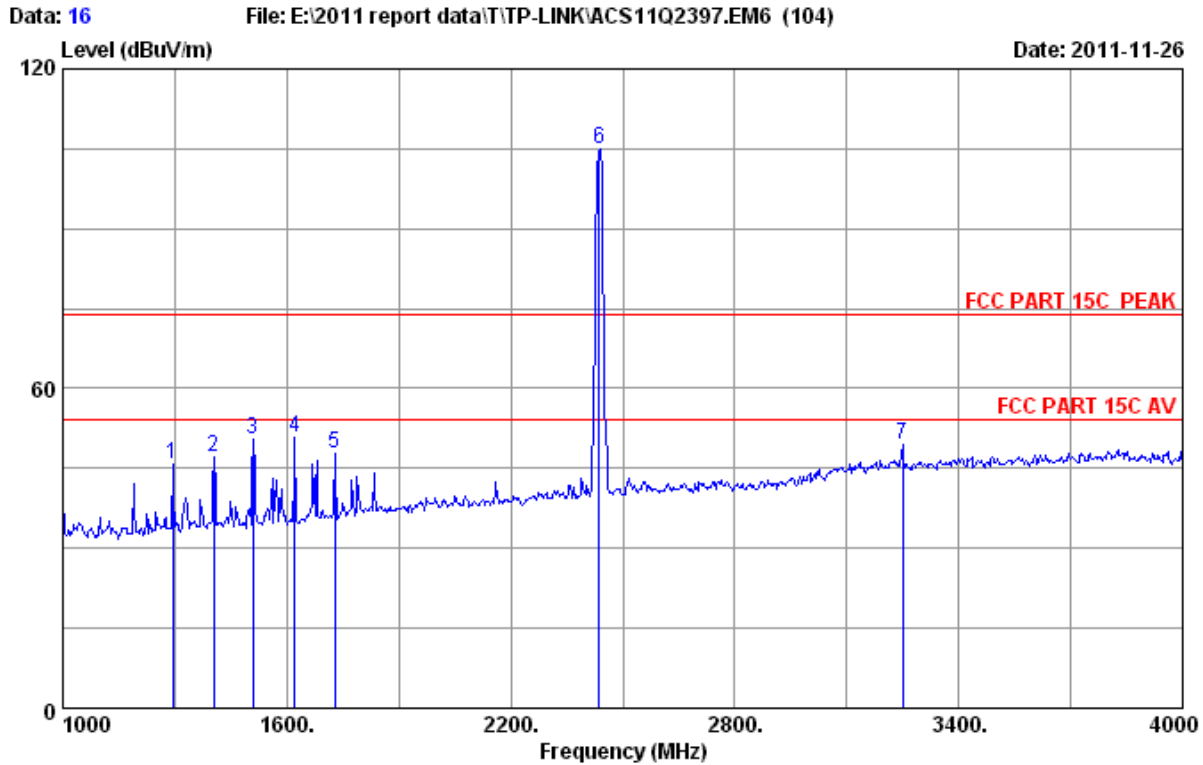
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading  
 -Amp Factor  
 2. The emission levels that are 20dB below the official  
 limit are not reported.



Site no. : 3# Chamber Data no. : 15  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH6 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	1294.000	25.99	5.31	37.36	49.45	43.39	74.00	30.61	Peak
2	1621.000	27.15	5.95	36.94	52.01	48.17	74.00	25.83	Peak
3	1729.000	27.71	6.14	36.86	48.45	45.44	74.00	28.56	Peak
4	2437.000	29.47	7.46	36.61	97.39	97.71	74.00	-23.71	Peak
5	3001.000	32.00	8.56	36.50	43.58	47.64	74.00	26.36	Peak

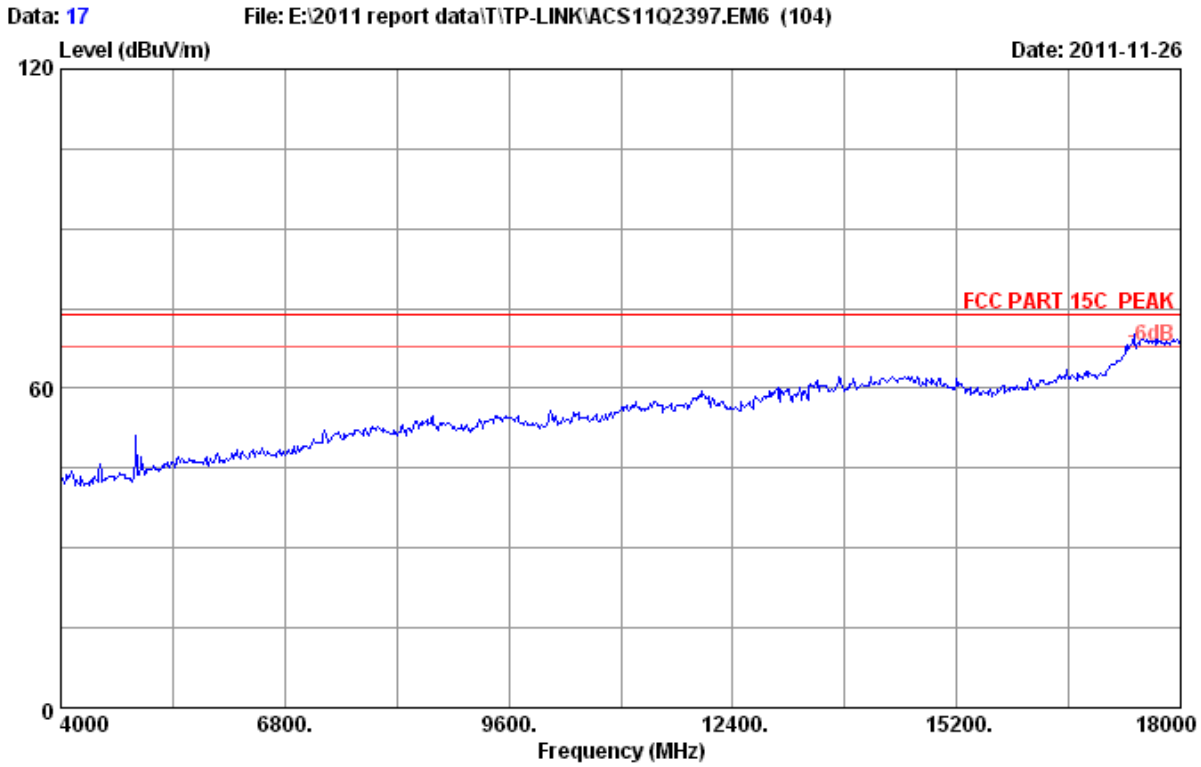
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



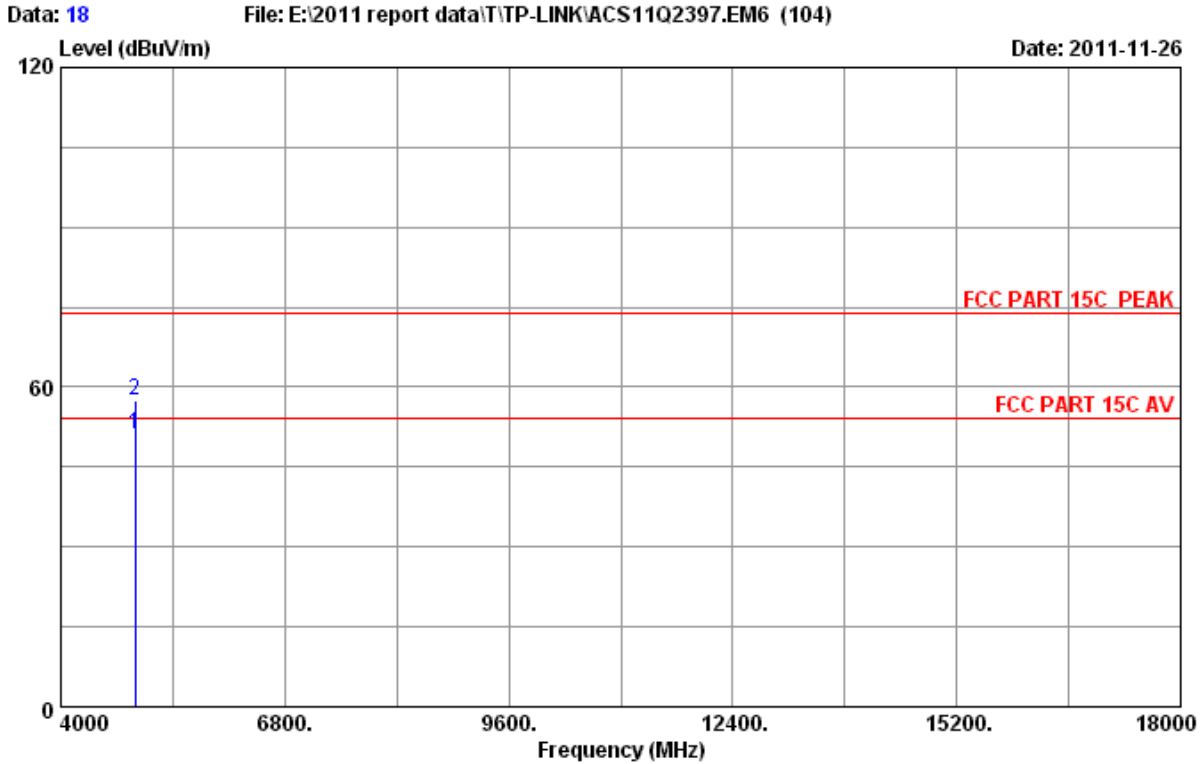
Site no. : 3# Chamber Data no. : 16  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH6 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1294.000	25.99	5.31	37.36	51.80	45.74	74.00	28.26	Peak
2	1405.000	26.23	5.54	37.18	52.38	46.97	74.00	27.03	Peak
3	1510.000	26.49	5.73	37.00	55.38	50.60	74.00	23.40	Peak
4	1621.000	27.15	5.95	36.94	54.76	50.92	74.00	23.08	Peak
5	1729.000	27.71	6.14	36.86	50.86	47.85	74.00	26.15	Peak
6	2437.000	29.47	7.46	36.61	104.57	104.89	74.00	-30.89	Peak
7	3250.000	32.63	8.83	36.25	44.27	49.48	74.00	24.52	Peak

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



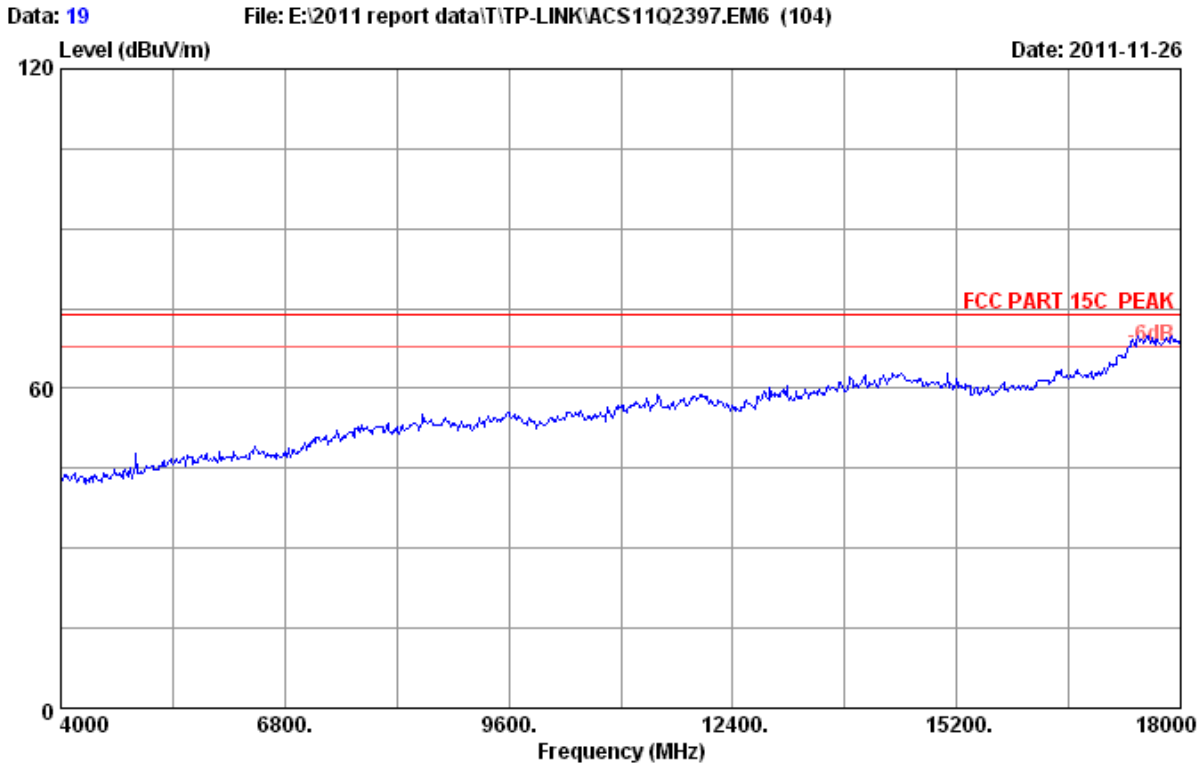
Site no. : 3# Chamber Data no. : 17  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24°C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11b CH11 2462MHz Tx  
M/N : NWD3105



Site no. : 3# Chamber Data no. : 18  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH11 2462MHz Tx  
 M/N : NWD3105

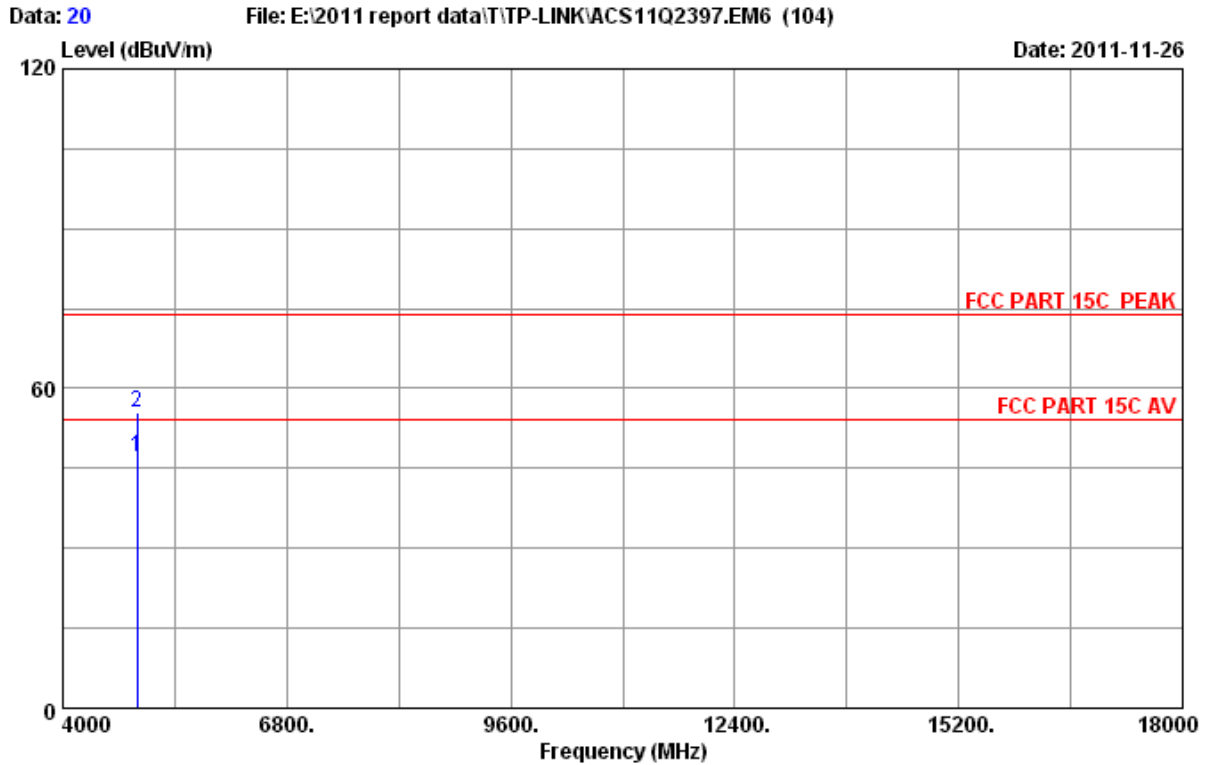
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4924.000	34.49	10.76	34.98	40.98	51.25	54.00	2.75	Average
2	4924.000	34.49	10.76	34.98	47.35	57.62	74.00	16.38	Peak

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



Site no.	: 3# Chamber	Data no.	: 19
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24*C/56%	Engineer	: Leo-Li
EUT	: Wireless N-lite PCI Express Adapter		
Power Rating	: DC 3.3V From PC input AC 120V/60Hz		
Test Mode	: IEEE802.11b CH11 2462MHz Tx		
M/N	: NWD3105		

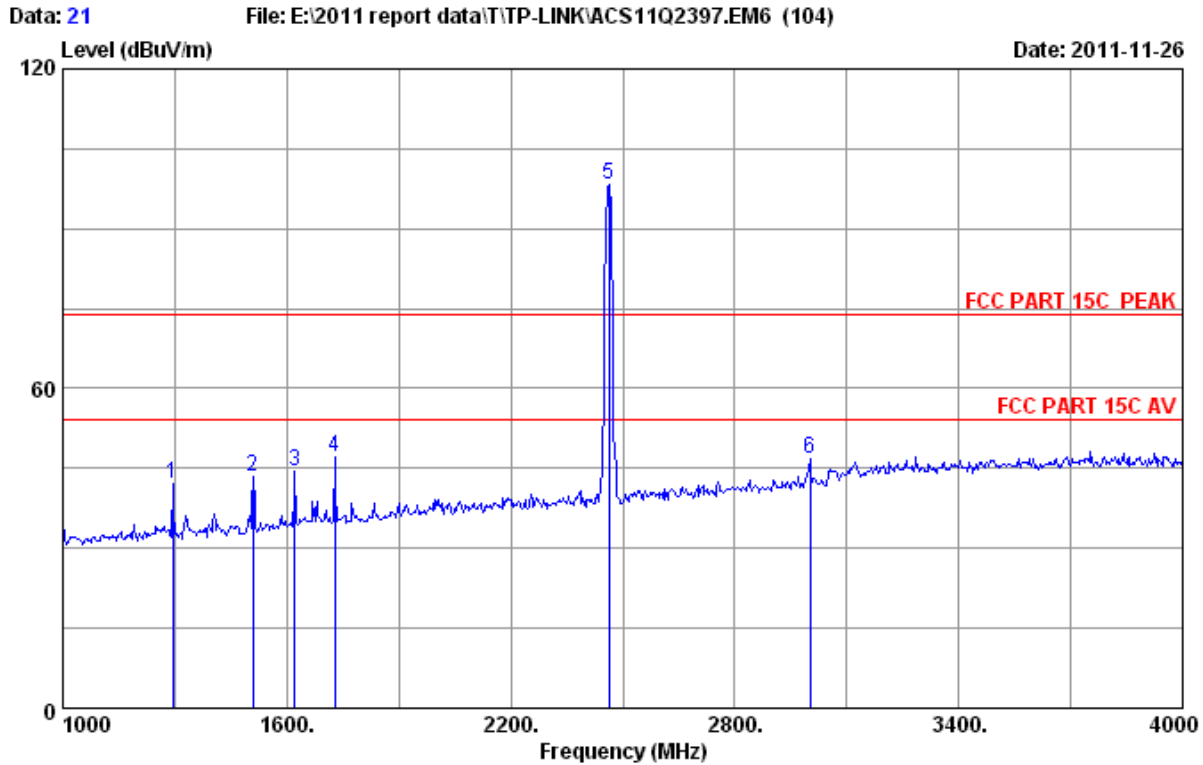




Site no. : 3# Chamber Data no. : 20  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4924.000	34.49	10.76	34.98	36.70	46.97	54.00	7.03	Average
2	4924.000	34.49	10.76	34.98	45.12	55.39	74.00	18.61	Peak

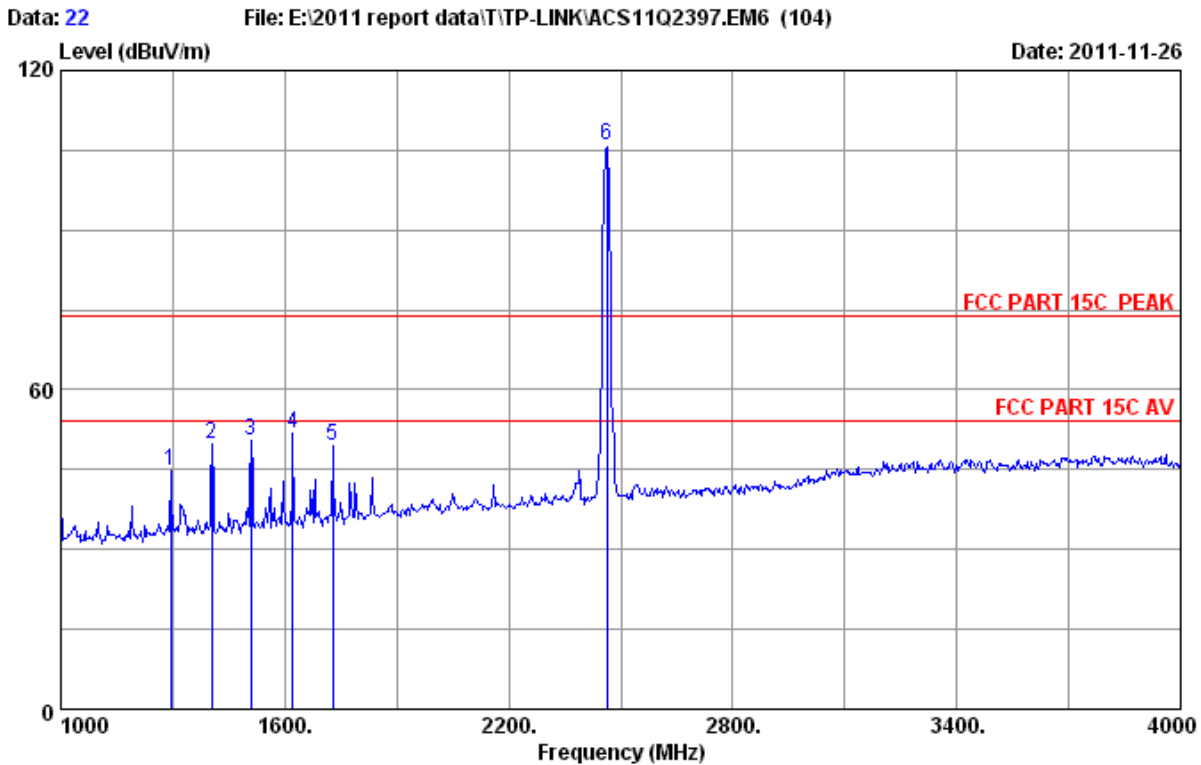
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 21  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1294.000	25.99	5.31	37.36	48.32	42.26	74.00	31.74	Peak
2	1510.000	26.49	5.73	37.00	48.13	43.35	74.00	30.65	Peak
3	1621.000	27.15	5.95	36.94	48.37	44.53	74.00	29.47	Peak
4	1729.000	27.71	6.14	36.86	50.24	47.23	74.00	26.77	Peak
5	2462.000	29.48	7.54	36.61	97.89	98.30	74.00	-24.30	Peak
6	3001.000	32.00	8.56	36.50	42.77	46.83	74.00	27.17	Peak

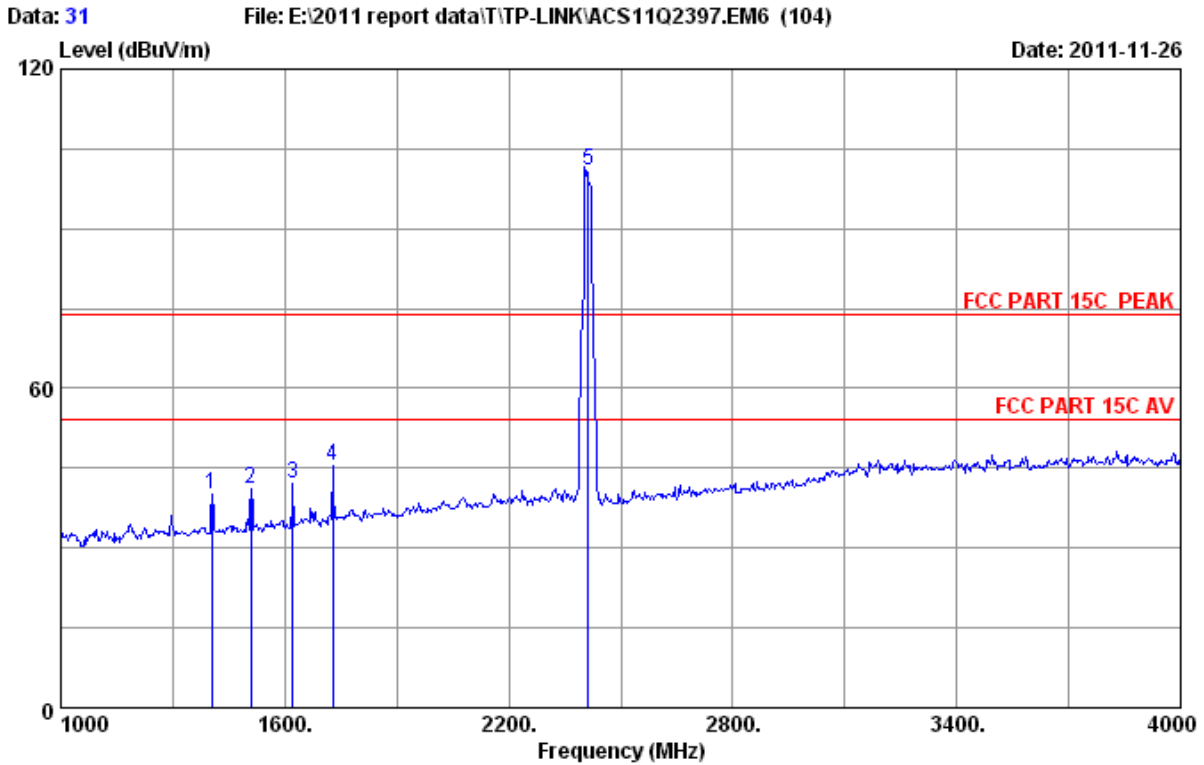
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 22  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1294.000	25.99	5.31	37.36	51.00	44.94	74.00	29.06	Peak
2	1405.000	26.23	5.54	37.18	55.08	49.67	74.00	24.33	Peak
3	1510.000	26.49	5.73	37.00	55.21	50.43	74.00	23.57	Peak
4	1621.000	27.15	5.95	36.94	55.66	51.82	74.00	22.18	Peak
5	1729.000	27.71	6.14	36.86	52.61	49.60	74.00	24.40	Peak
6	2462.000	29.48	7.54	36.61	105.62	106.03	74.00	-32.03	Peak

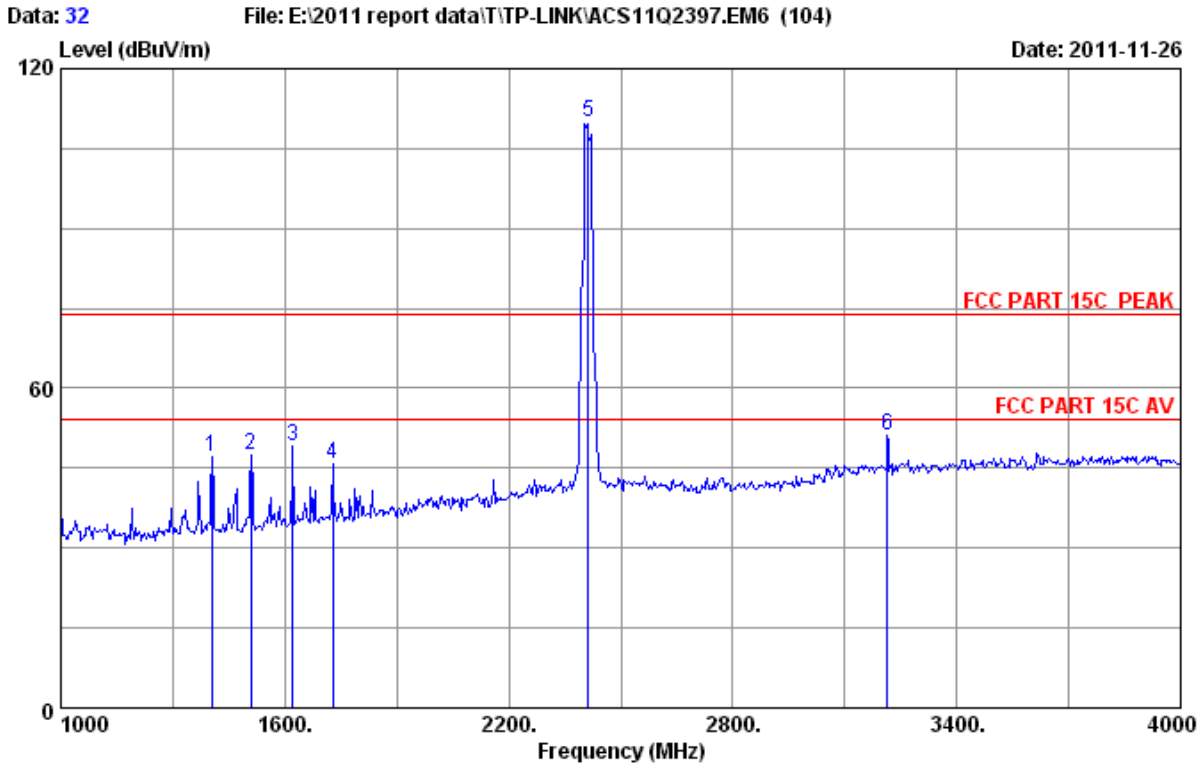
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 31  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1405.000	26.23	5.54	37.18	45.58	40.17	74.00	33.83	Peak
2	1510.000	26.49	5.73	37.00	46.01	41.23	74.00	32.77	Peak
3	1621.000	27.15	5.95	36.94	45.85	42.01	74.00	31.99	Peak
4	1729.000	27.71	6.14	36.86	48.44	45.43	74.00	28.57	Peak
5	2412.000	29.45	7.43	36.62	100.56	100.82	74.00	-26.82	Peak

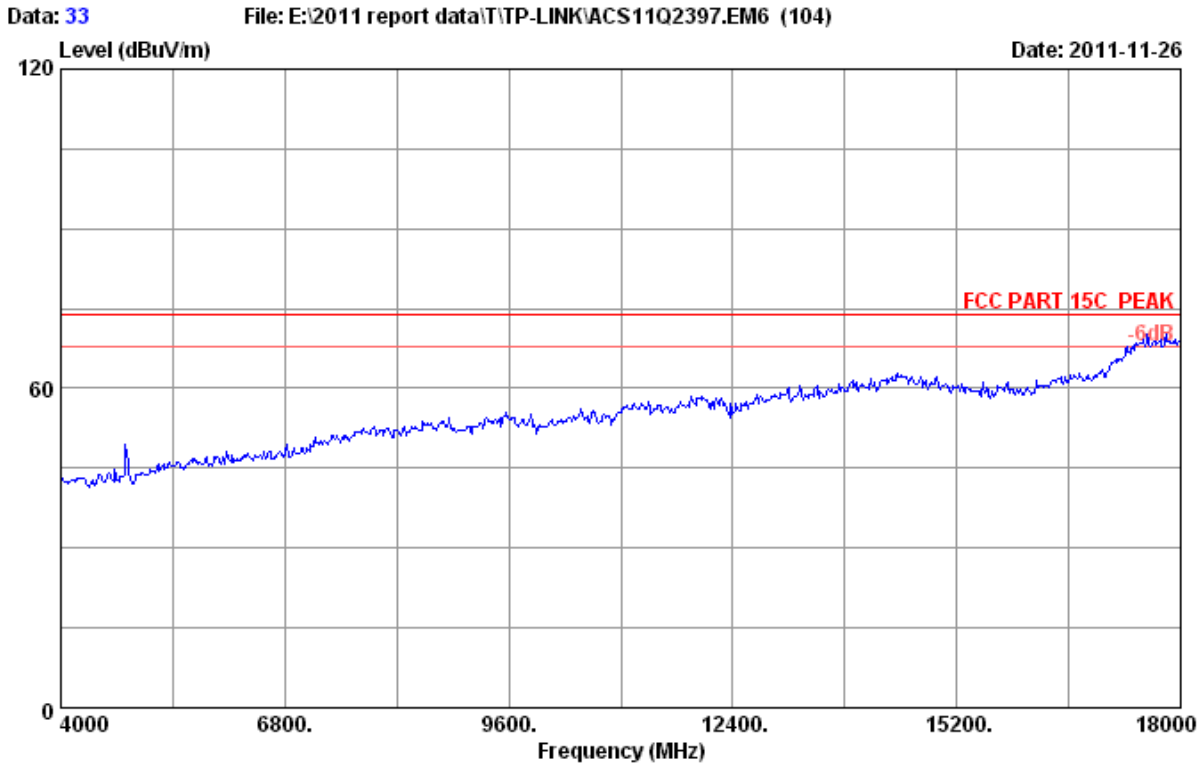
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



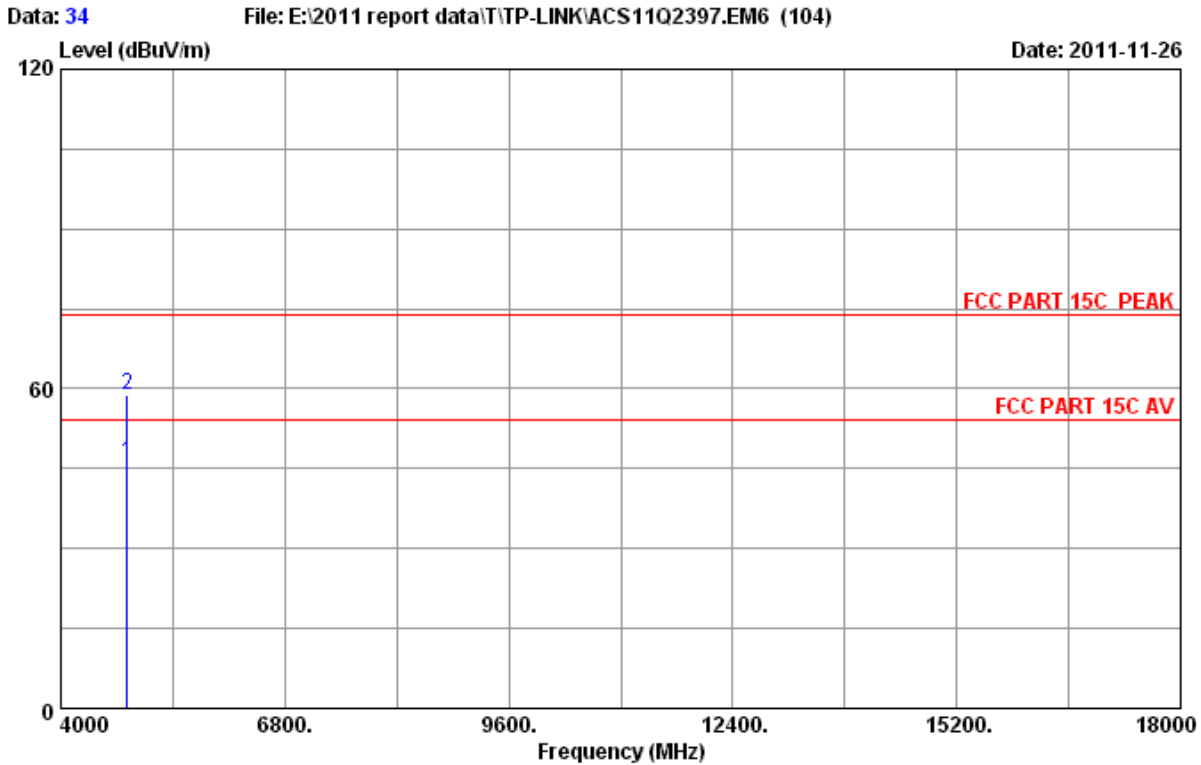
Site no. : 3# Chamber Data no. : 32  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1405.000	26.23	5.54	37.18	52.39	46.98	74.00	27.02	Peak
2	1510.000	26.49	5.73	37.00	52.31	47.53	74.00	26.47	Peak
3	1621.000	27.15	5.95	36.94	53.02	49.18	74.00	24.82	Peak
4	1729.000	27.71	6.14	36.86	48.64	45.63	74.00	28.37	Peak
5	2412.000	29.45	7.43	36.62	109.67	109.93	74.00	-35.93	Peak
6	3214.000	32.54	8.79	36.28	45.94	50.99	74.00	23.01	Peak

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



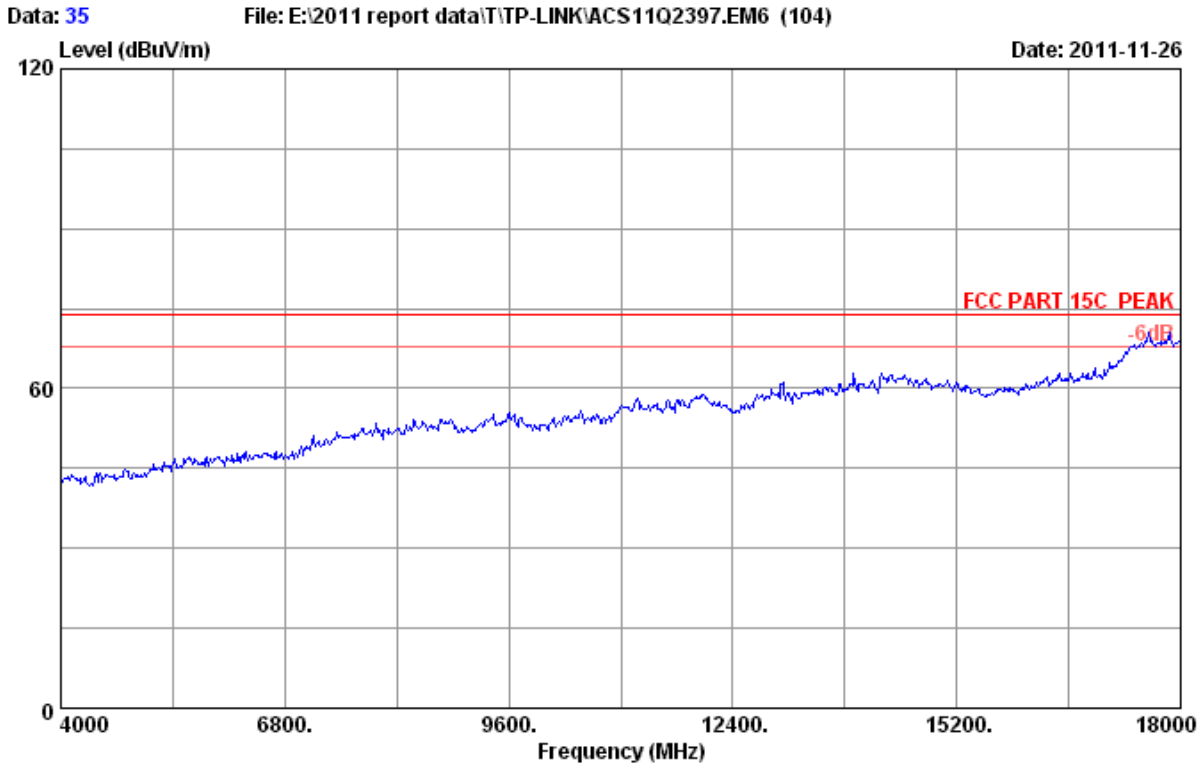
Site no. : 3# Chamber Data no. : 33  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11g CH1 2412MHz Tx  
M/N : NWD3105



Site no. : 3# Chamber Data no. : 34  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH1 2412MHz Tx  
 M/N : NWD3105

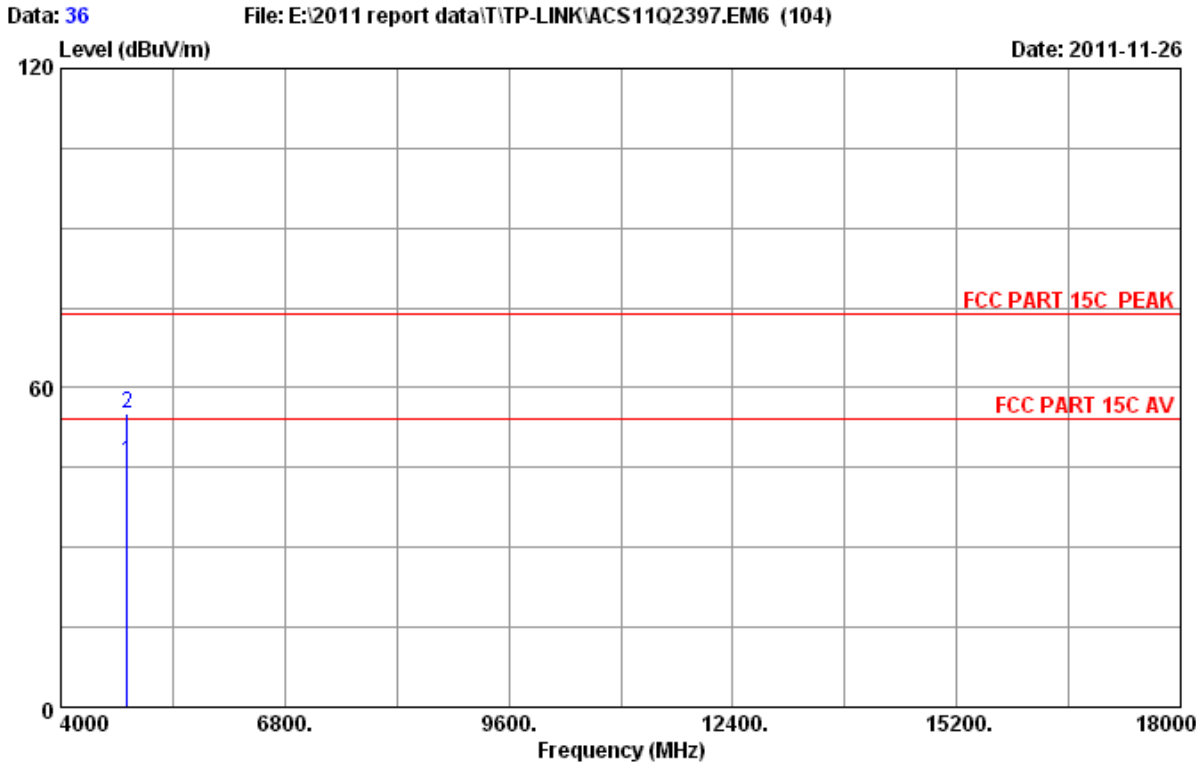
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	4824.000	34.32	10.64	35.08	36.15	46.03	54.00	7.97	Average
2	4824.000	34.32	10.64	35.08	48.79	58.67	74.00	15.33	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 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
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Leo-Li
EUT	: Wireless N-lite PCI Express Adapter		
Power Rating	: DC 3.3V From PC input AC 120V/60Hz		
Test Mode	: IEEE802.11g CH1 2412MHz Tx		
M/N	: NWD3105		

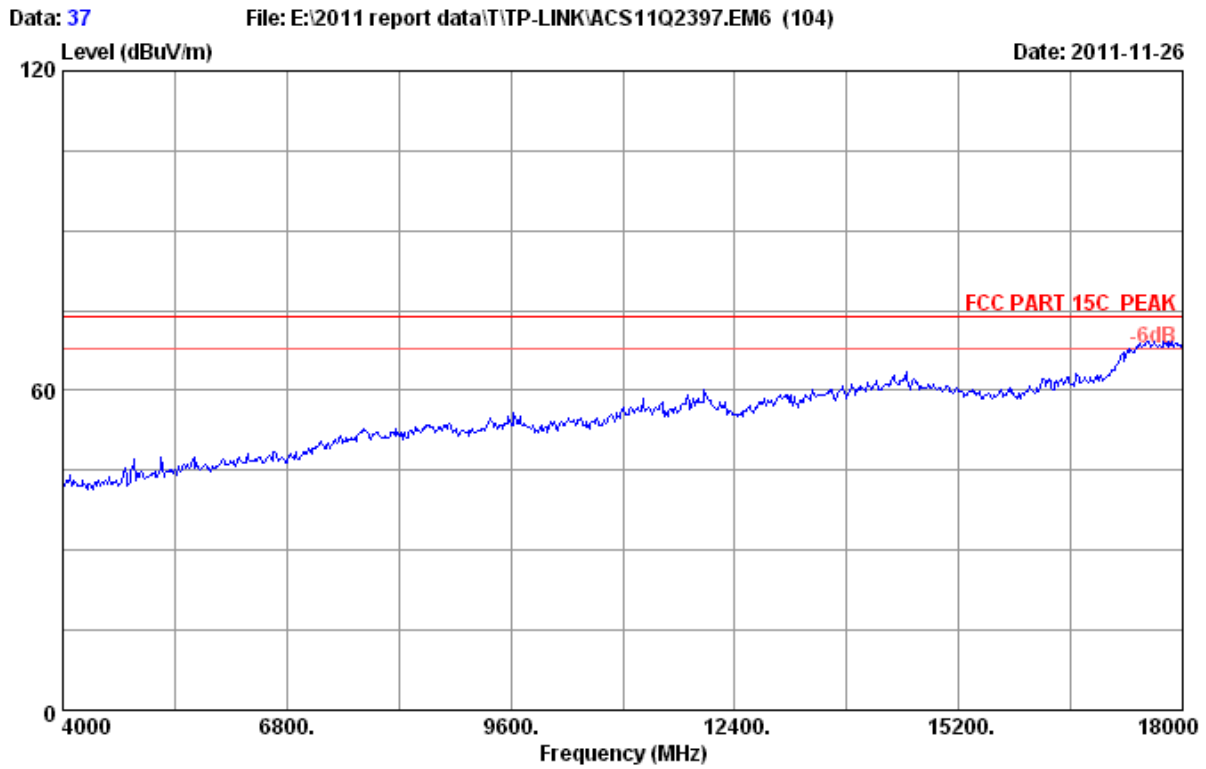




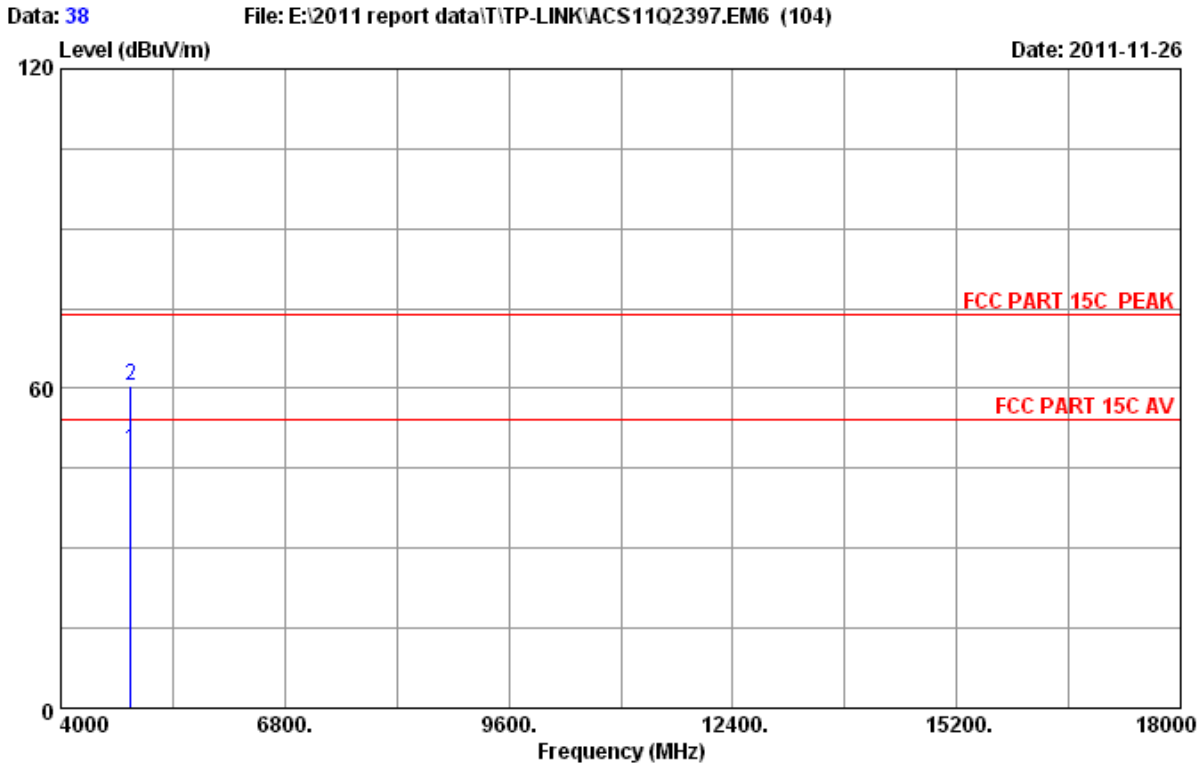
Site no. : 3# Chamber Data no. : 36  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	4824.000	34.32	10.64	35.08	36.16	46.04	54.00	7.96	Average
2	4824.000	34.32	10.64	35.08	45.11	54.99	74.00	19.01	QP

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



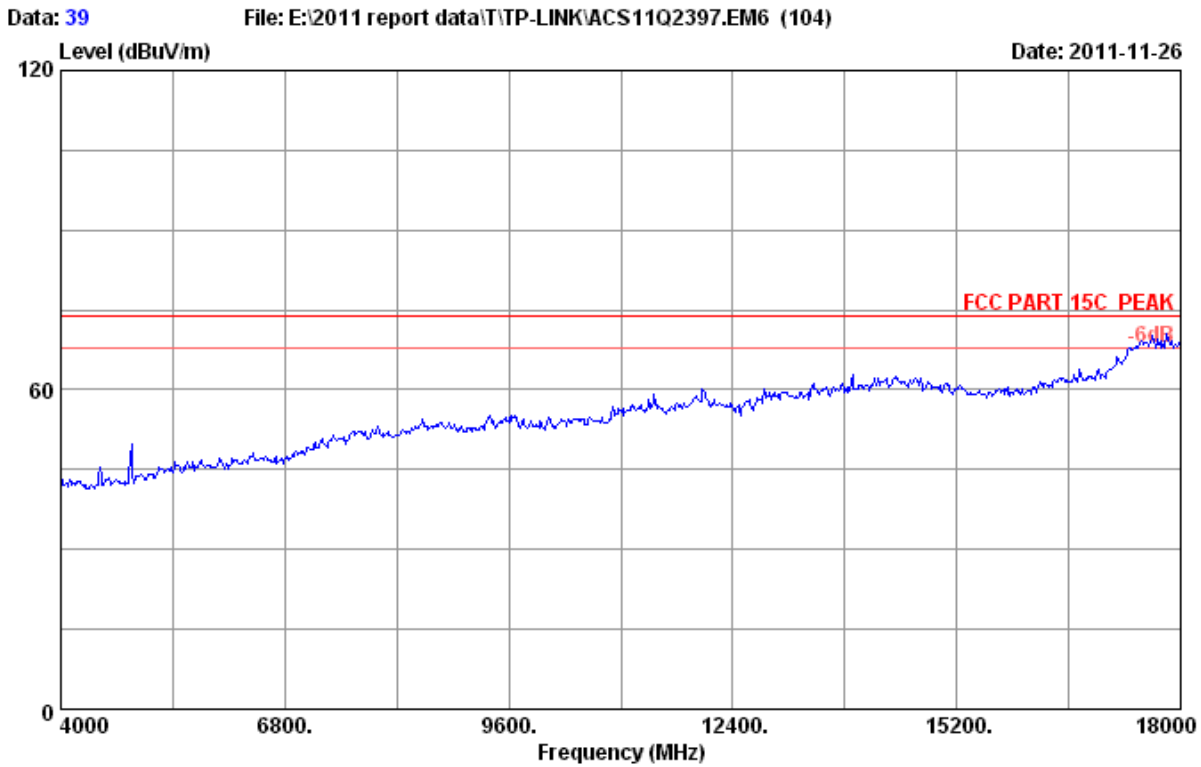
Site no.	: 3# Chamber	Data no.	: 37
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Leo-Li
EUT	: Wireless N-lite PCI Express Adapter		
Power Rating	: DC 3.3V From PC input AC 120V/60Hz		
Test Mode	: IEEE802.11g CH6 2437MHz Tx		
M/N	: NWD3105		



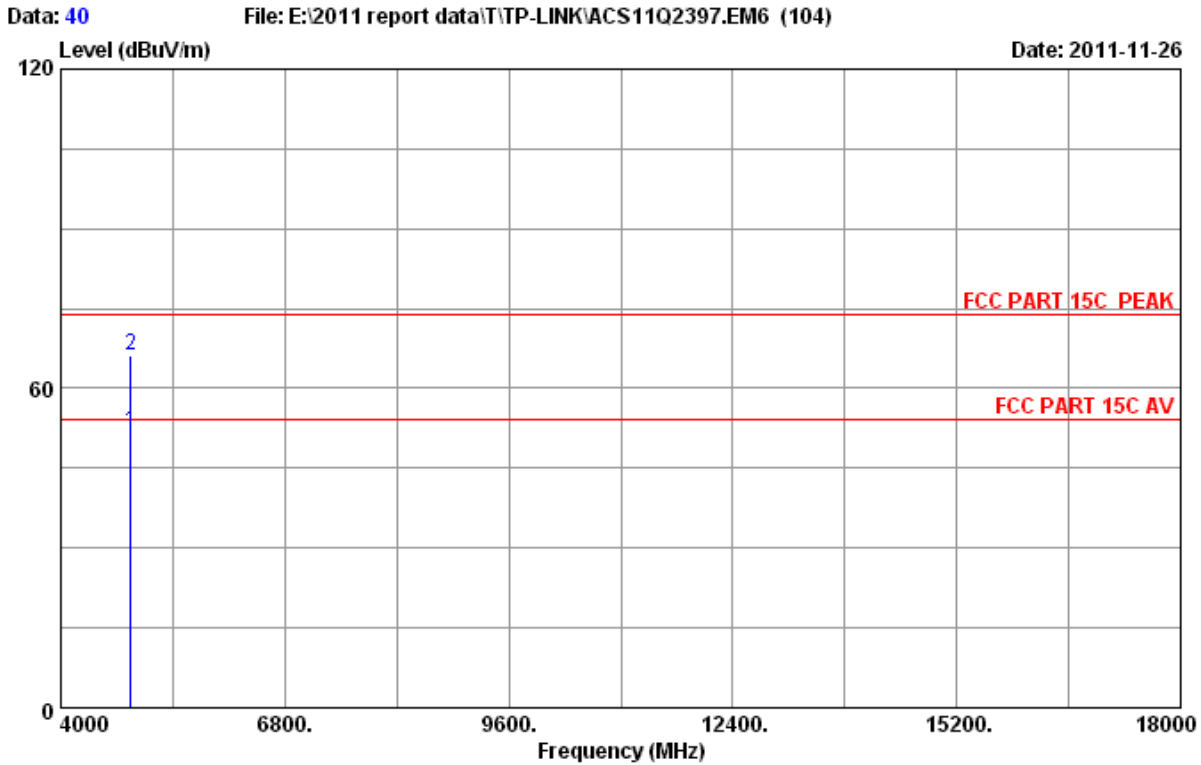
Site no. : 3# Chamber Data no. : 38  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH6 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4874.000	34.41	10.69	35.03	38.23	48.30	54.00	5.70	Average
2	4874.000	34.41	10.69	35.03	50.31	60.38	74.00	13.62	Peak

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



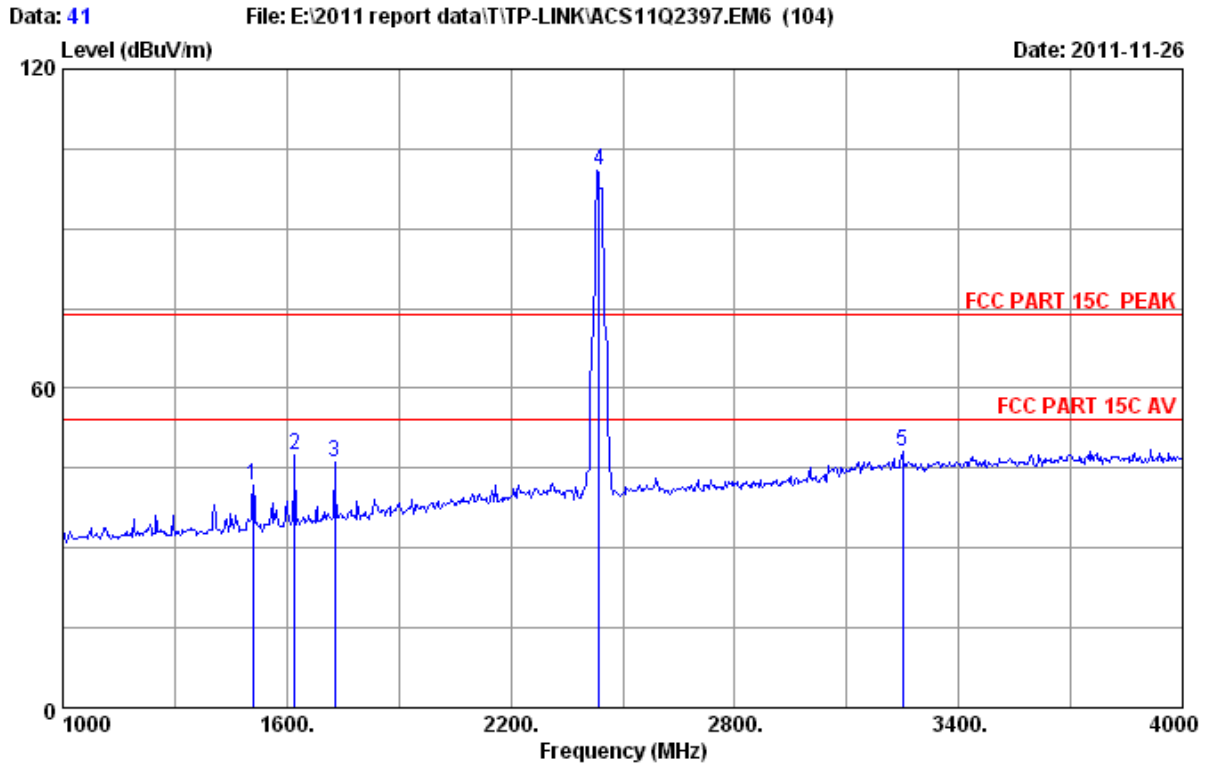
Site no.	: 3# Chamber	Data no.	: 39
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Leo-Li
EUT	: Wireless N-lite PCI Express Adapter		
Power Rating	: DC 3.3V From PC input AC 120V/60Hz		
Test Mode	: IEEE802.11g CH6 2437MHz Tx		
M/N	: NWD3105		



Site no. : 3# Chamber Data no. : 40  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH6 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4874.000	34.41	10.69	35.03	41.88	51.95	54.00	2.05	Average
2	4874.000	34.41	10.69	35.03	55.95	66.02	74.00	7.98	Peak

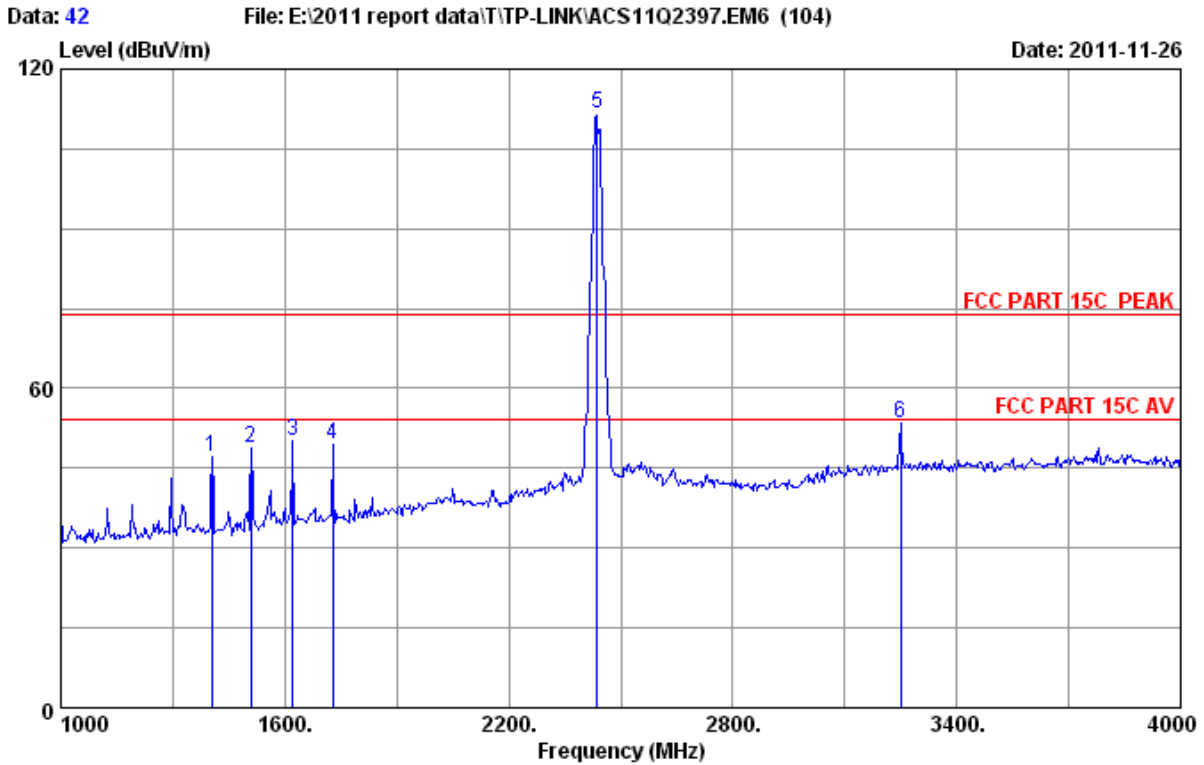
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 41  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH6 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1510.000	26.49	5.73	37.00	46.69	41.91	74.00	32.09	Peak
2	1621.000	27.15	5.95	36.94	51.41	47.57	74.00	26.43	Peak
3	1729.000	27.71	6.14	36.86	49.15	46.14	74.00	27.86	Peak
4	2437.000	29.47	7.46	36.61	100.77	101.09	74.00	-27.09	Peak
5	3250.000	32.63	8.83	36.25	42.96	48.17	74.00	25.83	Peak

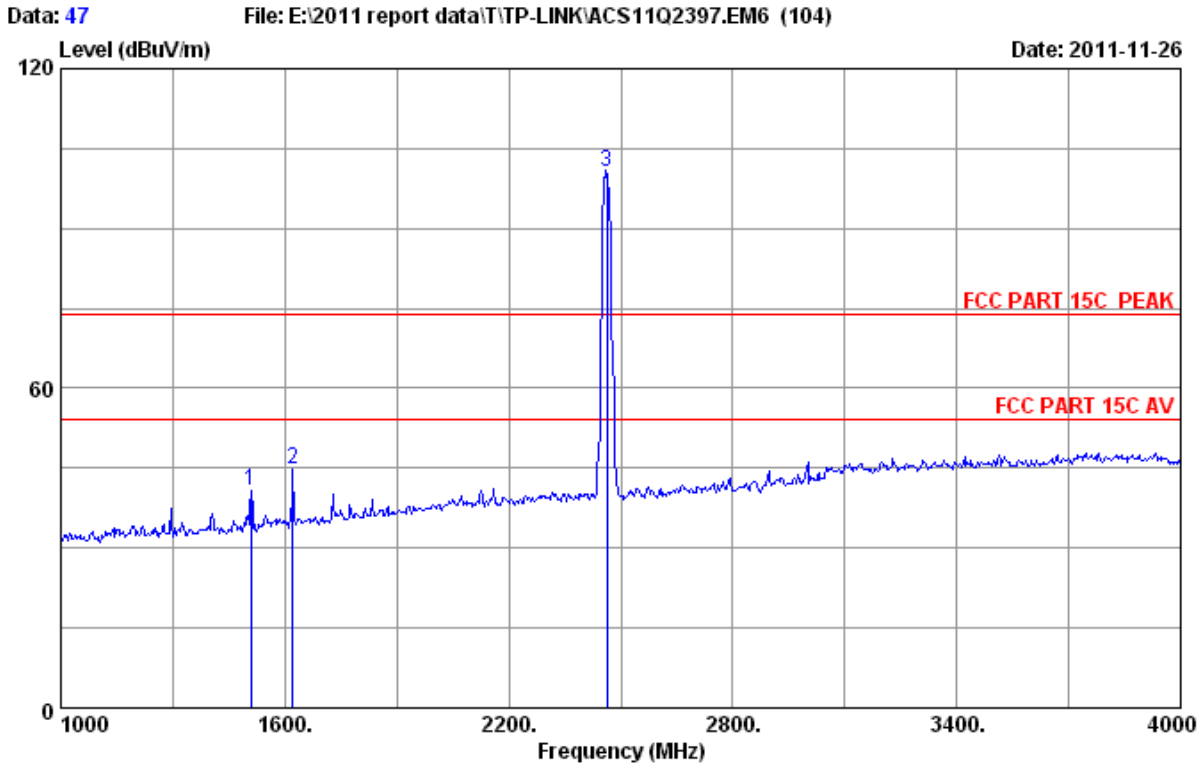
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 42  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH6 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1405.000	26.23	5.54	37.18	52.70	47.29	74.00	26.71	Peak
2	1510.000	26.49	5.73	37.00	53.74	48.96	74.00	25.04	Peak
3	1621.000	27.15	5.95	36.94	54.06	50.22	74.00	23.78	Peak
4	1729.000	27.71	6.14	36.86	52.53	49.52	74.00	24.48	Peak
5	2437.000	29.47	7.46	36.61	111.41	111.73	74.00	-37.73	Peak
6	3250.000	32.63	8.83	36.25	48.18	53.39	74.00	20.61	Peak

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

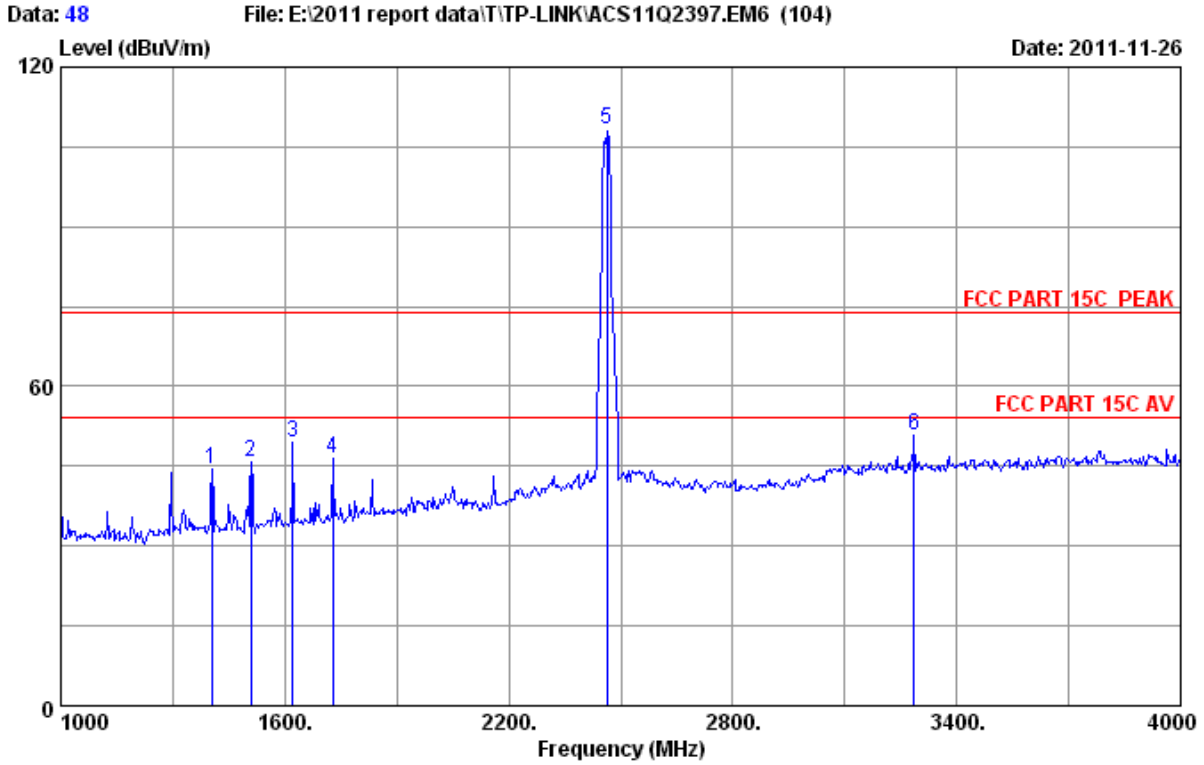


Site no. : 3# Chamber Data no. : 47  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1510.000	26.49	5.73	37.00	45.52	40.74	74.00	33.26	Peak
2	1621.000	27.15	5.95	36.94	48.49	44.65	74.00	29.35	Peak
3	2462.000	29.48	7.54	36.61	100.32	100.73	74.00	-26.73	Peak

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

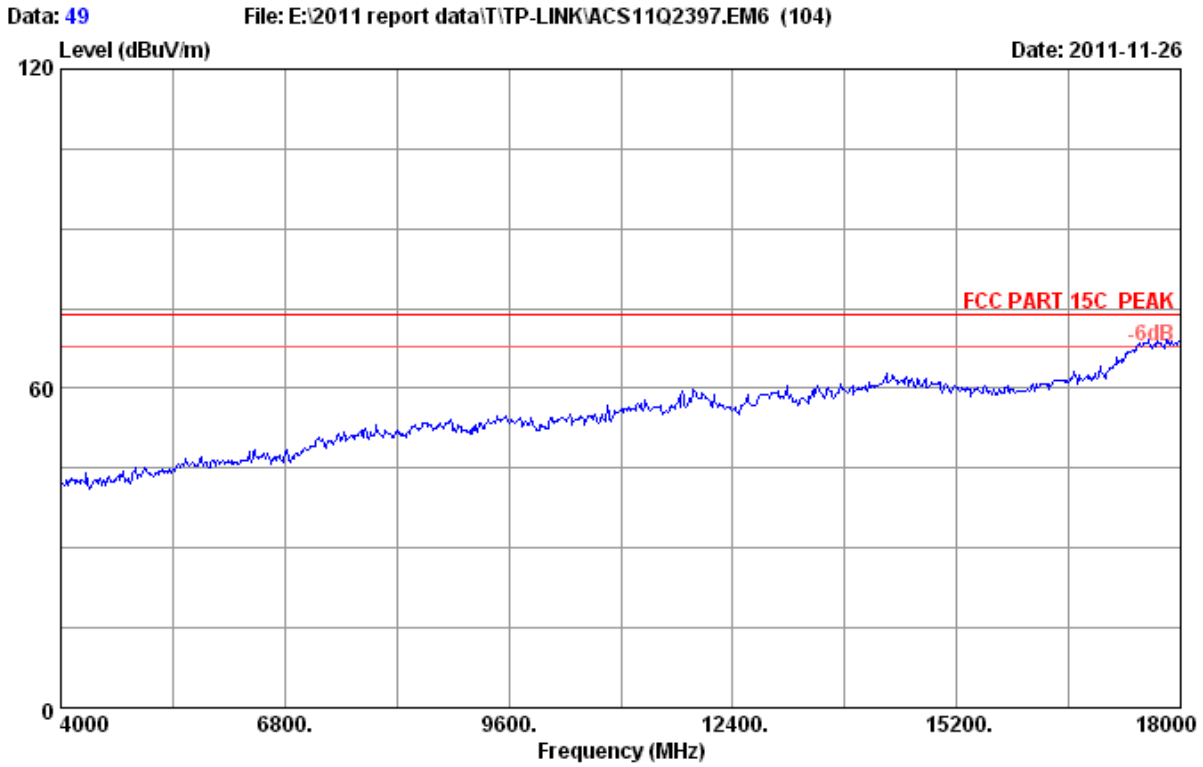




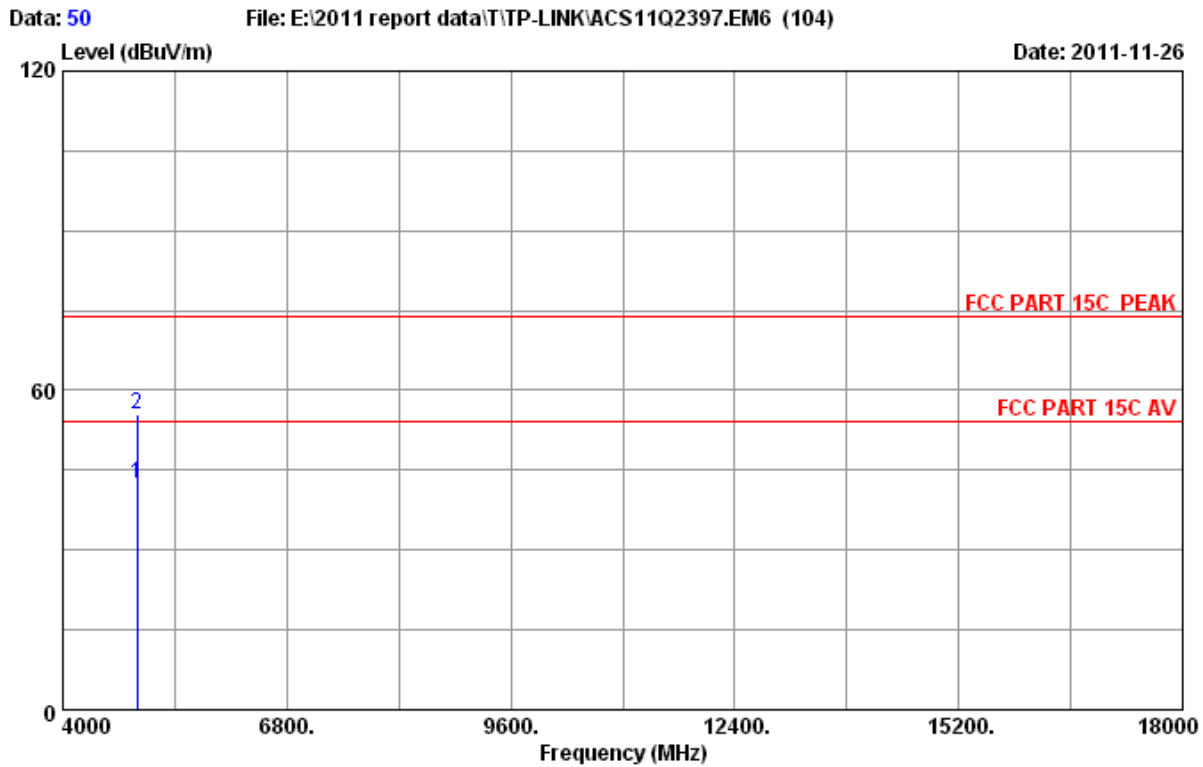
Site no. : 3# Chamber Data no. : 48  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1405.000	26.23	5.54	37.18	49.86	44.45	74.00	29.55	Peak
2	1510.000	26.49	5.73	37.00	50.64	45.86	74.00	28.14	Peak
3	1621.000	27.15	5.95	36.94	53.47	49.63	74.00	24.37	Peak
4	1729.000	27.71	6.14	36.86	49.58	46.57	74.00	27.43	Peak
5	2462.000	29.48	7.54	36.61	107.77	108.18	74.00	-34.18	Peak
6	3286.000	32.72	8.88	36.20	45.38	50.78	74.00	23.22	Peak

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



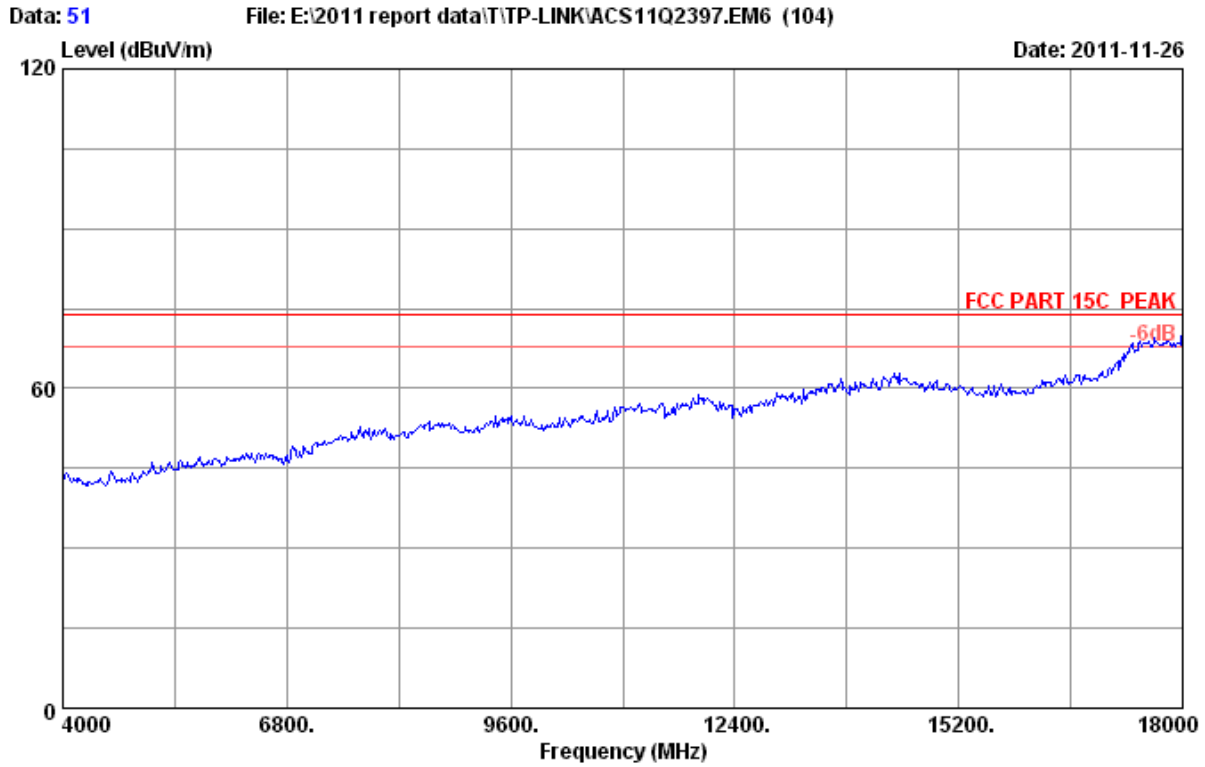
Site no.	: 3# Chamber	Data no.	: 49
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24*C/56%	Engineer	: Leo-Li
EUT	: Wireless N-lite PCI Express Adapter		
Power Rating	: DC 3.3V From PC input AC 120V/60Hz		
Test Mode	: IEEE802.11g CH11 2462MHz Tx		
M/N	: NWD3105		



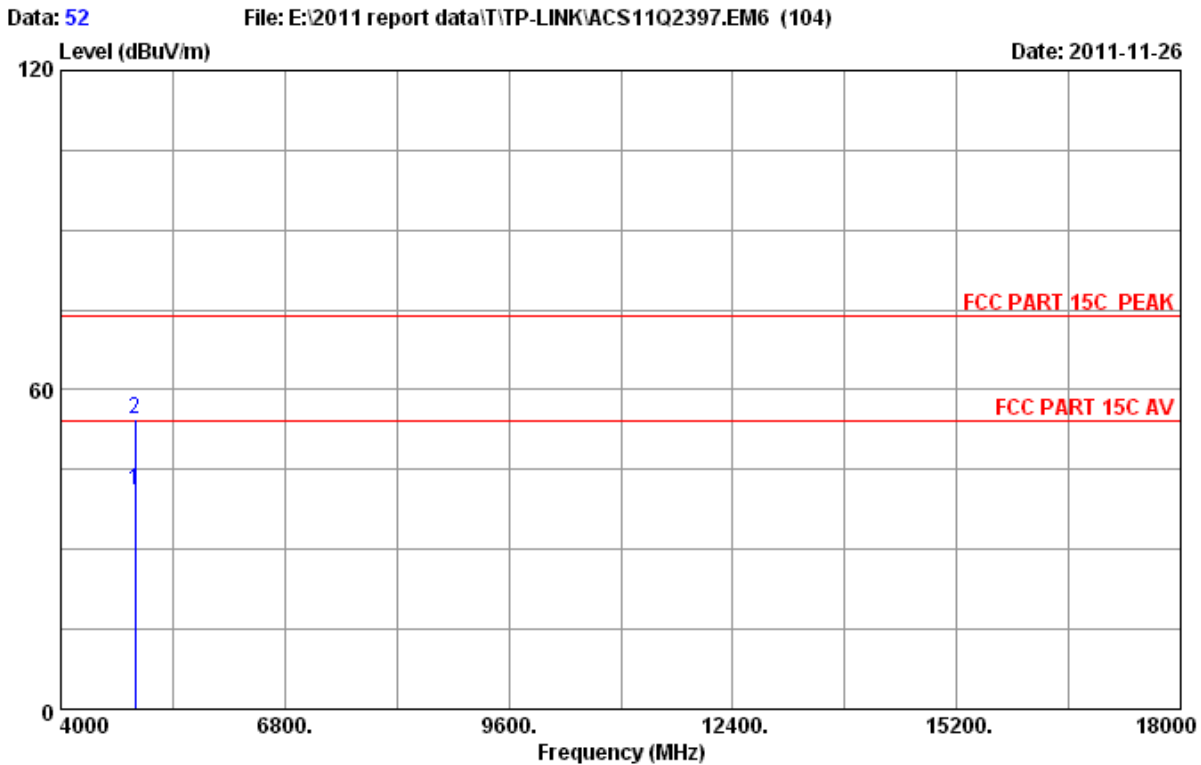
Site no. : 3# Chamber Data no. : 50  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4924.000	34.49	10.76	34.98	32.15	42.42	54.00	11.58	Average
2	4924.000	34.49	10.76	34.98	45.07	55.34	74.00	18.66	Peak

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



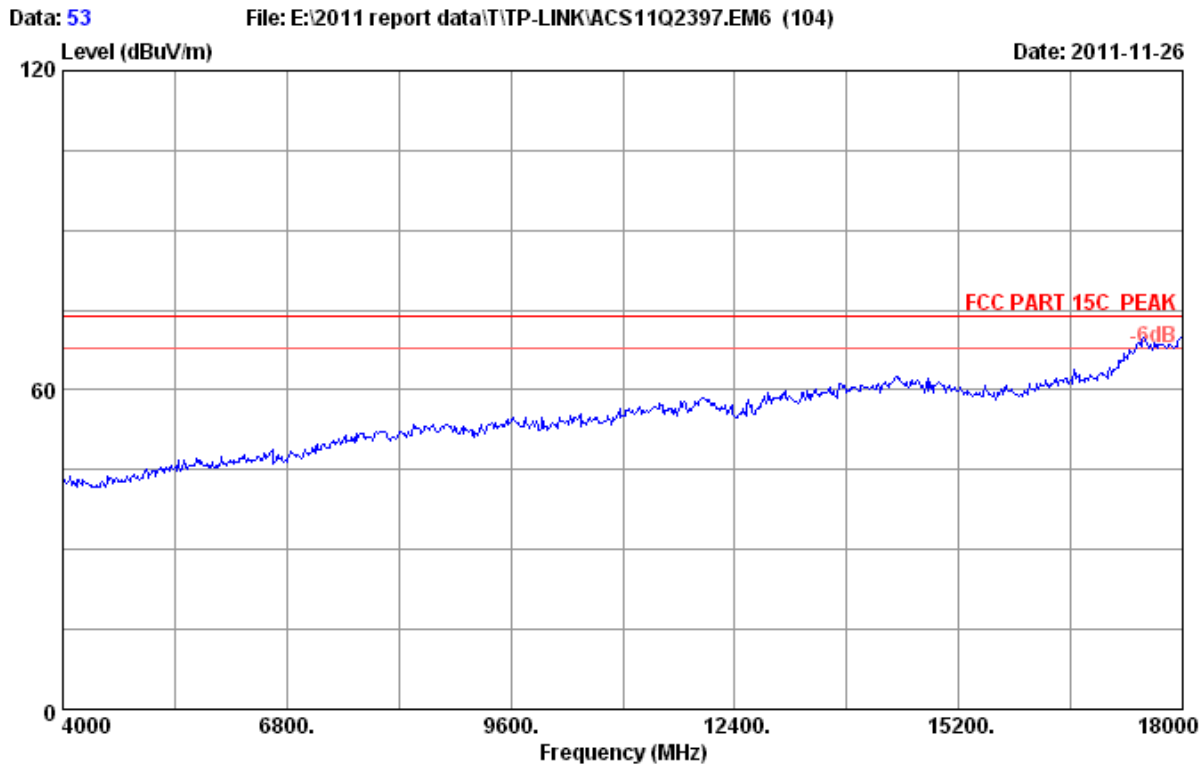
Site no. : 3# Chamber Data no. : 51  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11g CH11 2462MHz Tx  
M/N : NWD3105



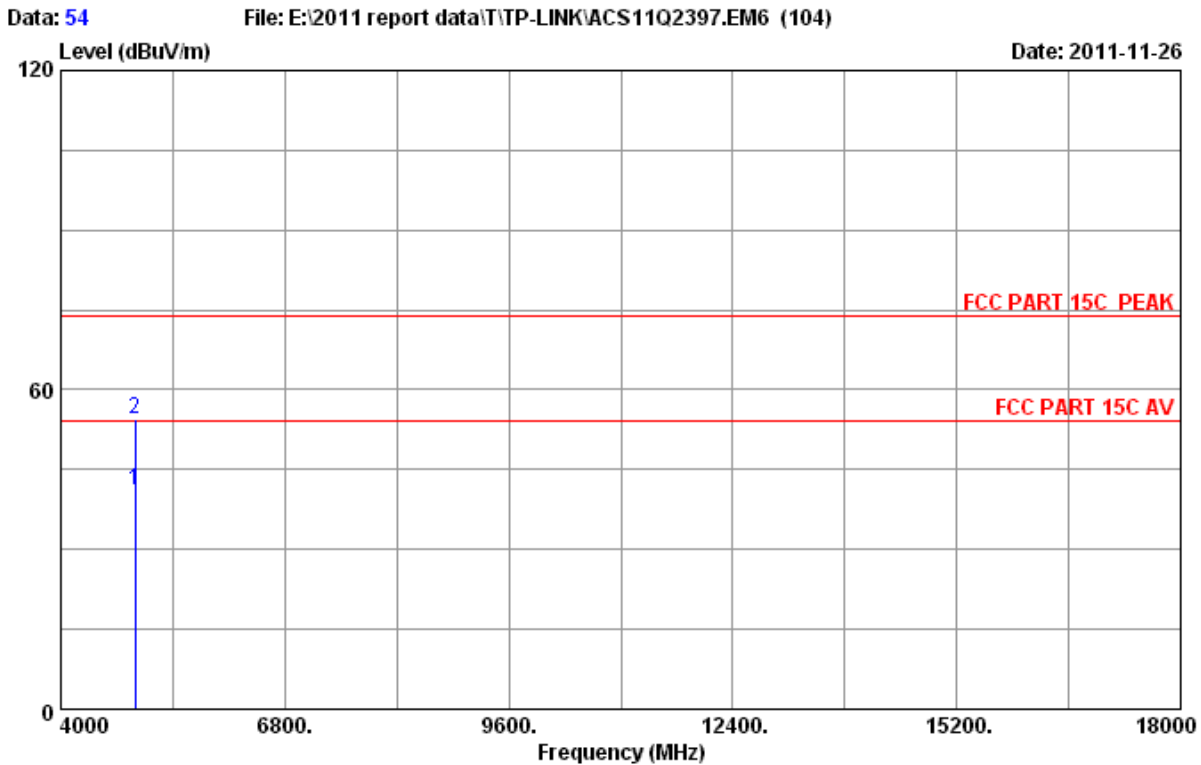
Site no. : 3# Chamber Data no. : 52  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Emission				Remark
					Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	
1	4924.000	34.49	10.76	34.98	30.74	41.01	54.00	12.99	Average
2	4924.000	34.49	10.76	34.98	44.23	54.50	74.00	19.50	Peak

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



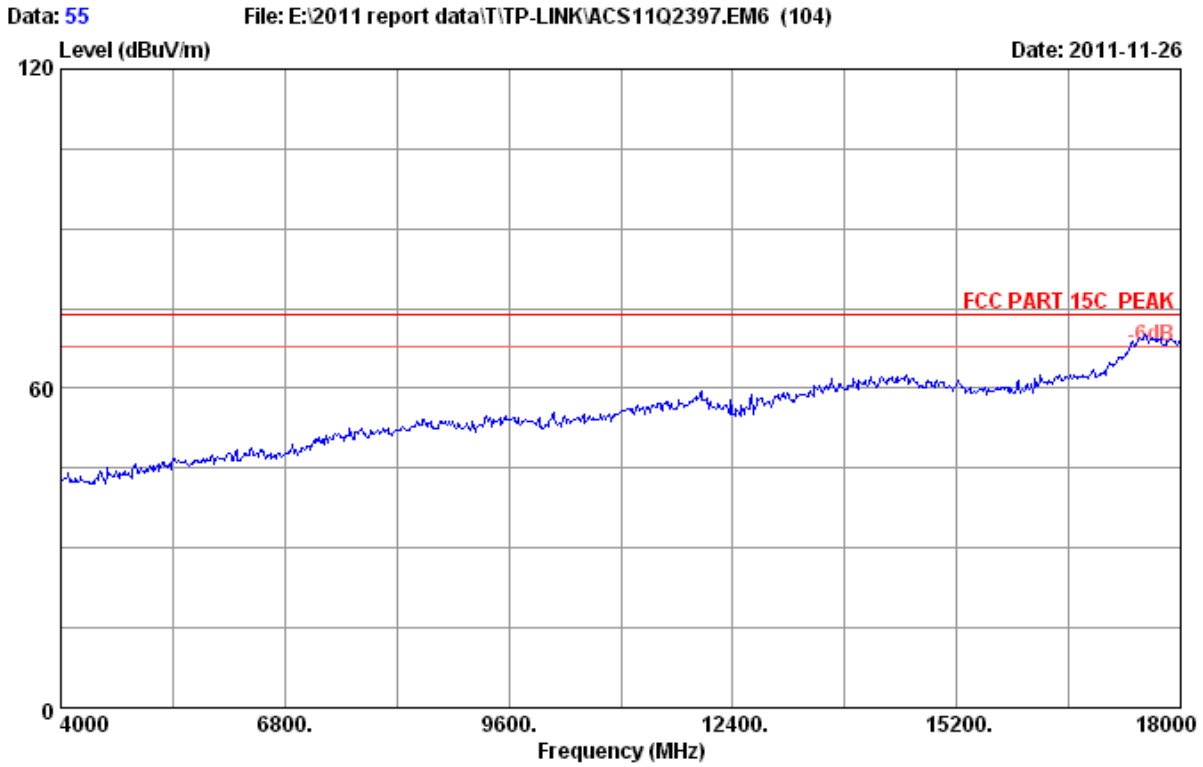
Site no.	: 3# Chamber	Data no.	: 53
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24*C/56%	Engineer	: Leo-Li
EUT	: Wireless N-lite PCI Express Adapter		
Power Rating	: DC 3.3V From PC input AC 120V/60Hz		
Test Mode	: IEEE802.11nHT20 CH11 2462MHz Tx		
M/N	: NWD3105		



Site no. : 3# Chamber Data no. : 54  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH11 2462MHz Tx  
 M/N : NWD3105

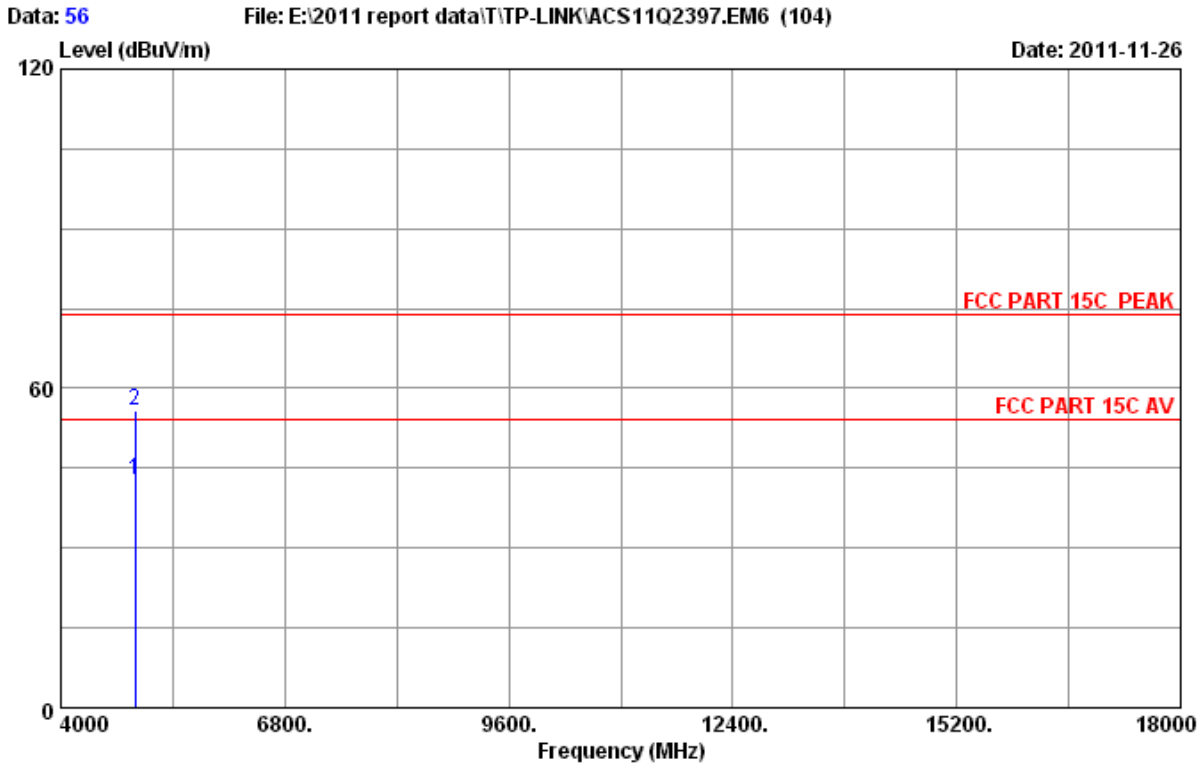
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Emission				Remark
					Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	
1	4924.000	34.49	10.76	34.98	30.84	41.11	54.00	12.89	Average
2	4924.000	34.49	10.76	34.98	44.37	54.64	74.00	19.36	Peak

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



Site no. : 3# Chamber Data no. : 55  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11nHT20 CH11 2462MHz Tx  
M/N : NWD3105

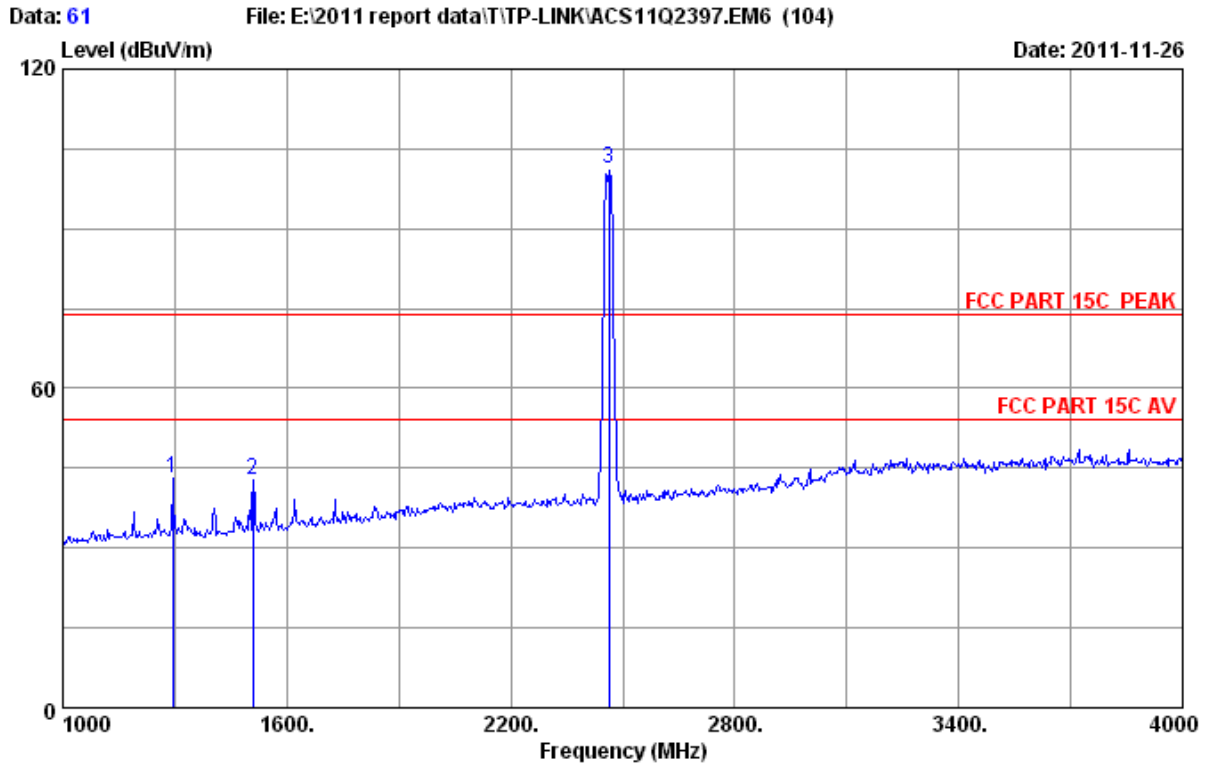




Site no. : 3# Chamber Data no. : 56  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4924.000	34.49	10.76	34.98	32.44	42.71	54.00	11.29	Average
2	4924.000	34.49	10.76	34.98	45.65	55.92	74.00	18.08	Peak

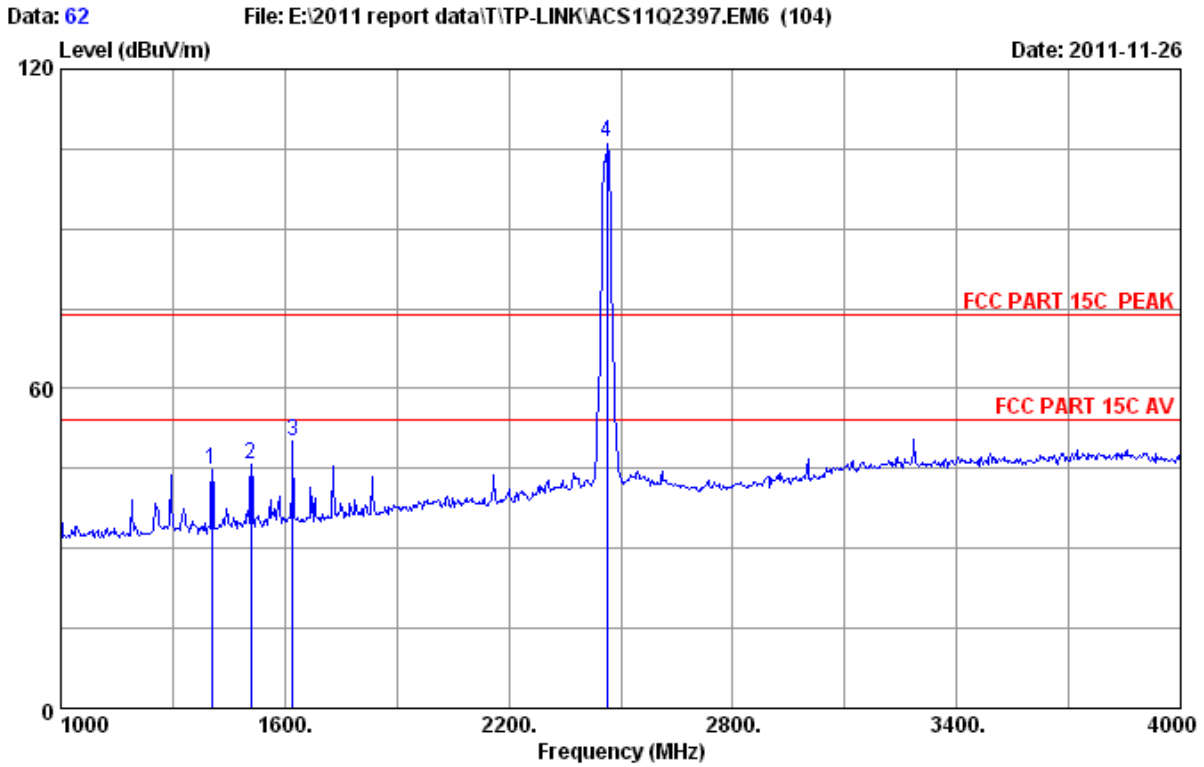
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 61  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1294.000	25.99	5.31	37.36	49.06	43.00	74.00	31.00	Peak
2	1510.000	26.49	5.73	37.00	47.50	42.72	74.00	31.28	Peak
3	2462.000	29.48	7.54	36.61	100.91	101.32	74.00	-27.32	Peak

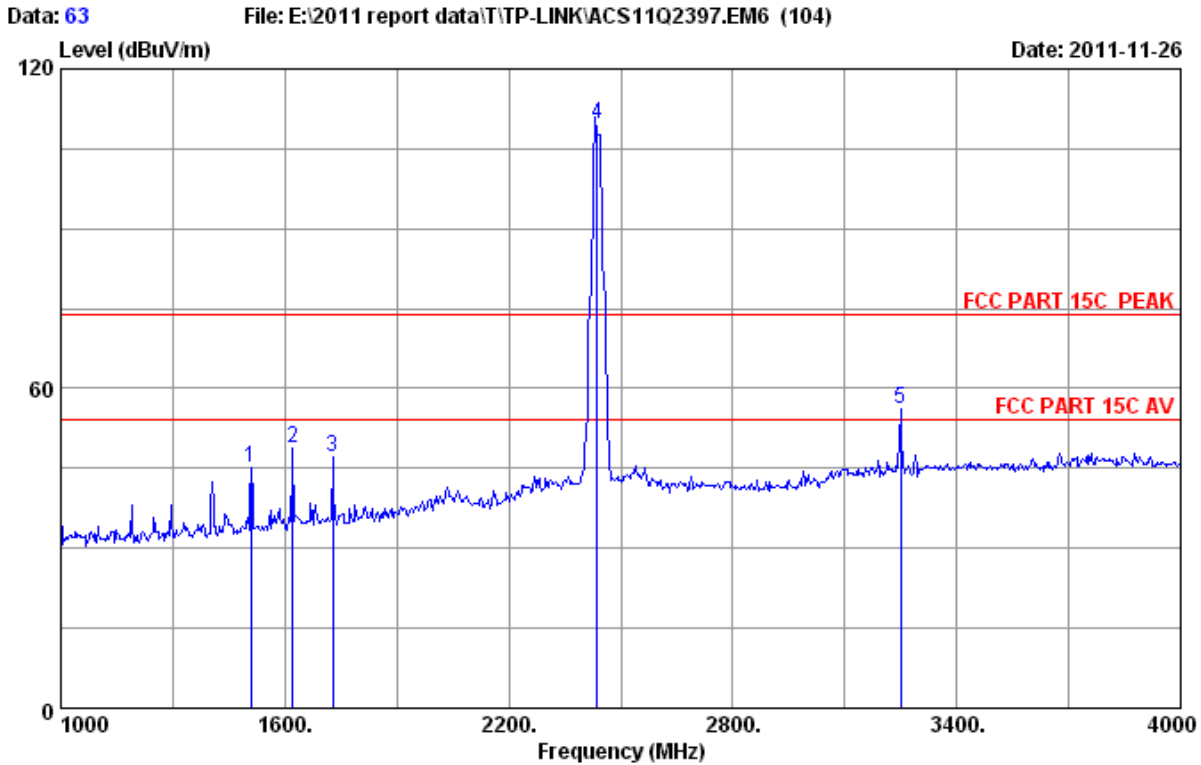
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 62  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1405.000	26.23	5.54	37.18	50.36	44.95	74.00	29.05	Peak
2	1510.000	26.49	5.73	37.00	50.74	45.96	74.00	28.04	Peak
3	1621.000	27.15	5.95	36.94	53.86	50.02	74.00	23.98	Peak
4	2462.000	29.48	7.54	36.61	105.78	106.19	74.00	-32.19	Peak

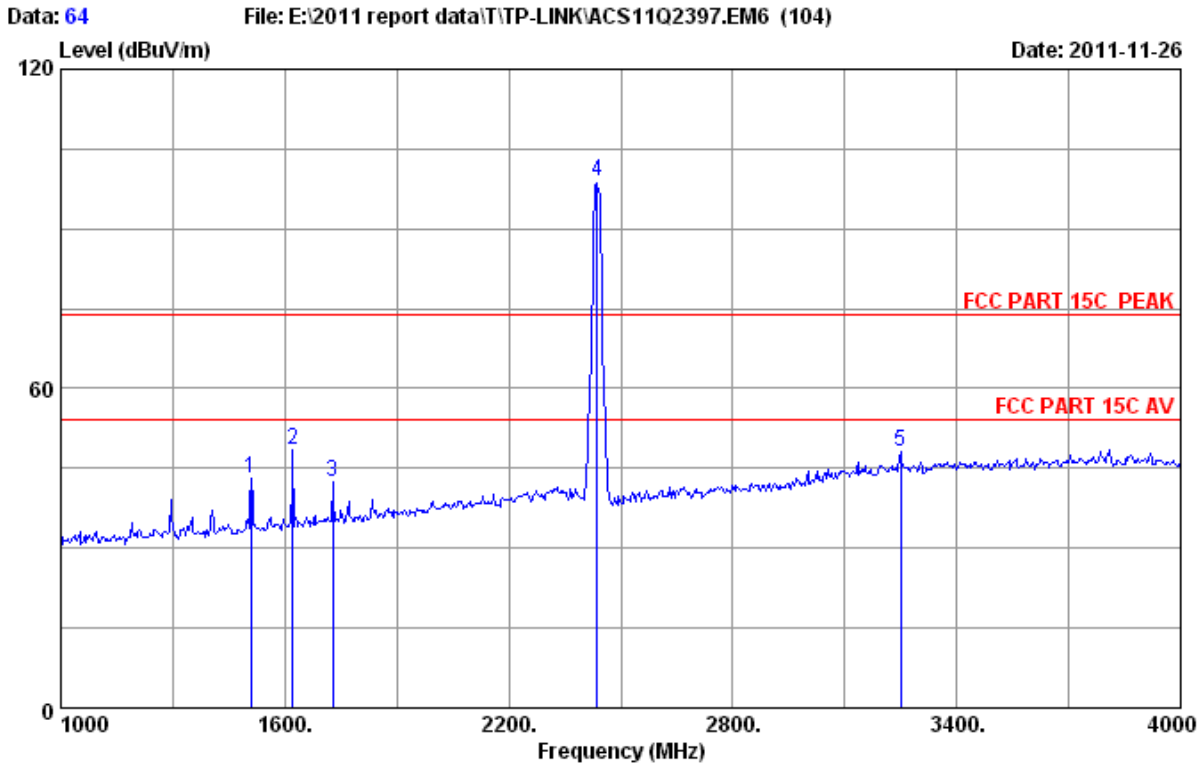
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 63  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH6 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1510.000	26.49	5.73	37.00	49.92	45.14	74.00	28.86	Peak
2	1621.000	27.15	5.95	36.94	52.58	48.74	74.00	25.26	Peak
3	1729.000	27.71	6.14	36.86	50.18	47.17	74.00	26.83	Peak
4	2437.000	29.47	7.46	36.61	109.39	109.71	74.00	-35.71	Peak
5	3250.000	32.63	8.83	36.25	50.90	56.11	74.00	17.89	Peak

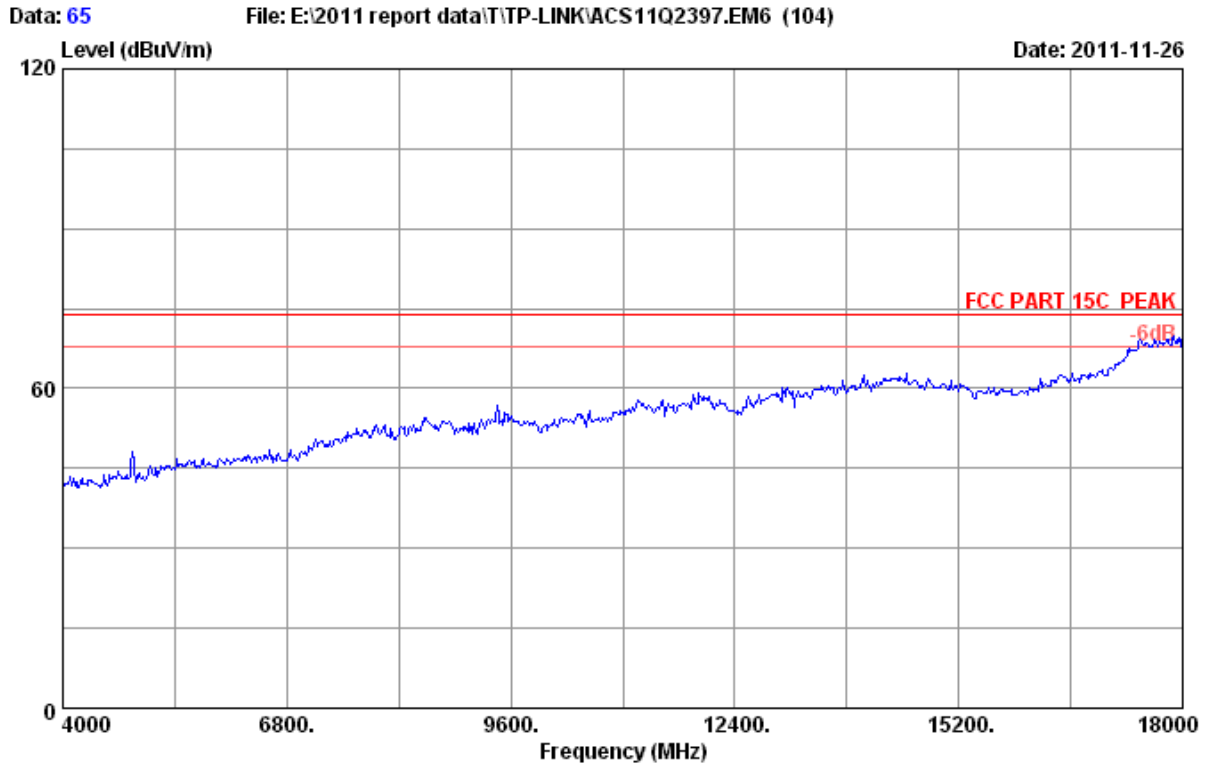
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



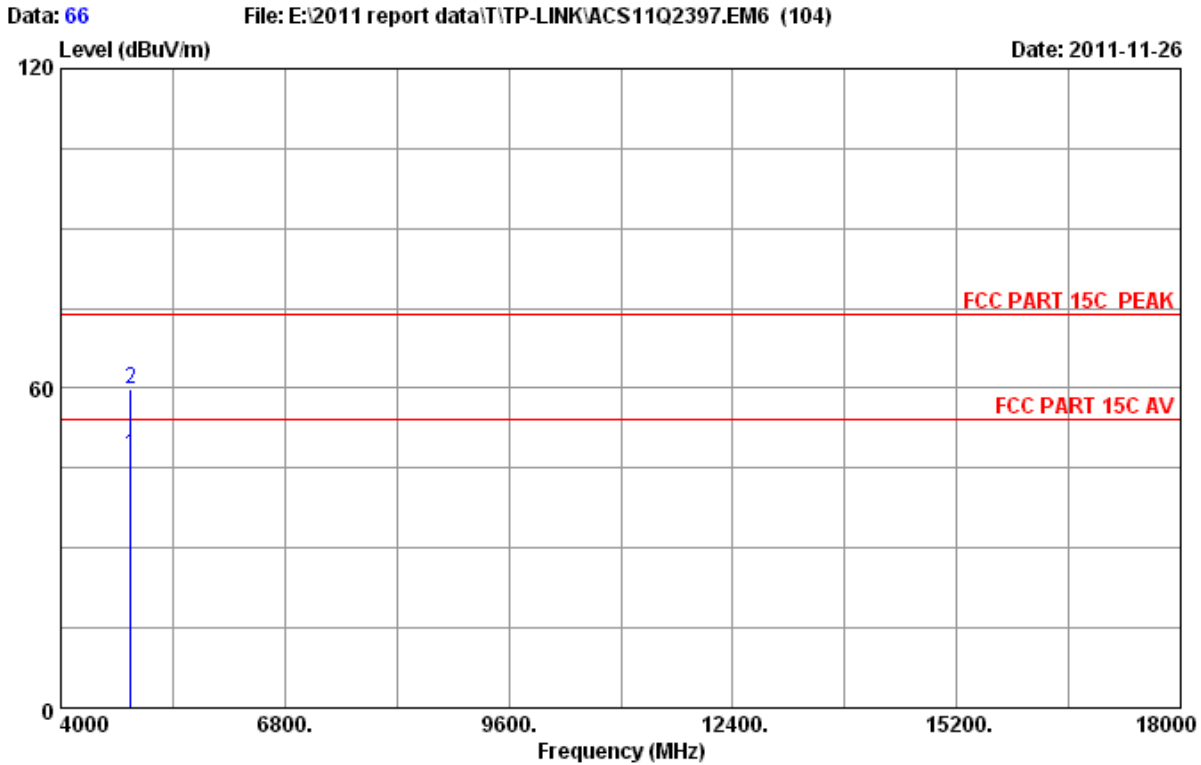
Site no. : 3# Chamber Data no. : 64  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH6 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Emission				Remark
					Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	
1	1510.000	26.49	5.73	37.00	47.84	43.06	74.00	30.94	Peak
2	1621.000	27.15	5.95	36.94	52.47	48.63	74.00	25.37	Peak
3	1729.000	27.71	6.14	36.86	45.60	42.59	74.00	31.41	Peak
4	2437.000	29.47	7.46	36.61	98.69	99.01	74.00	-25.01	Peak
5	3250.000	32.63	8.83	36.25	43.02	48.23	74.00	25.77	Peak

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



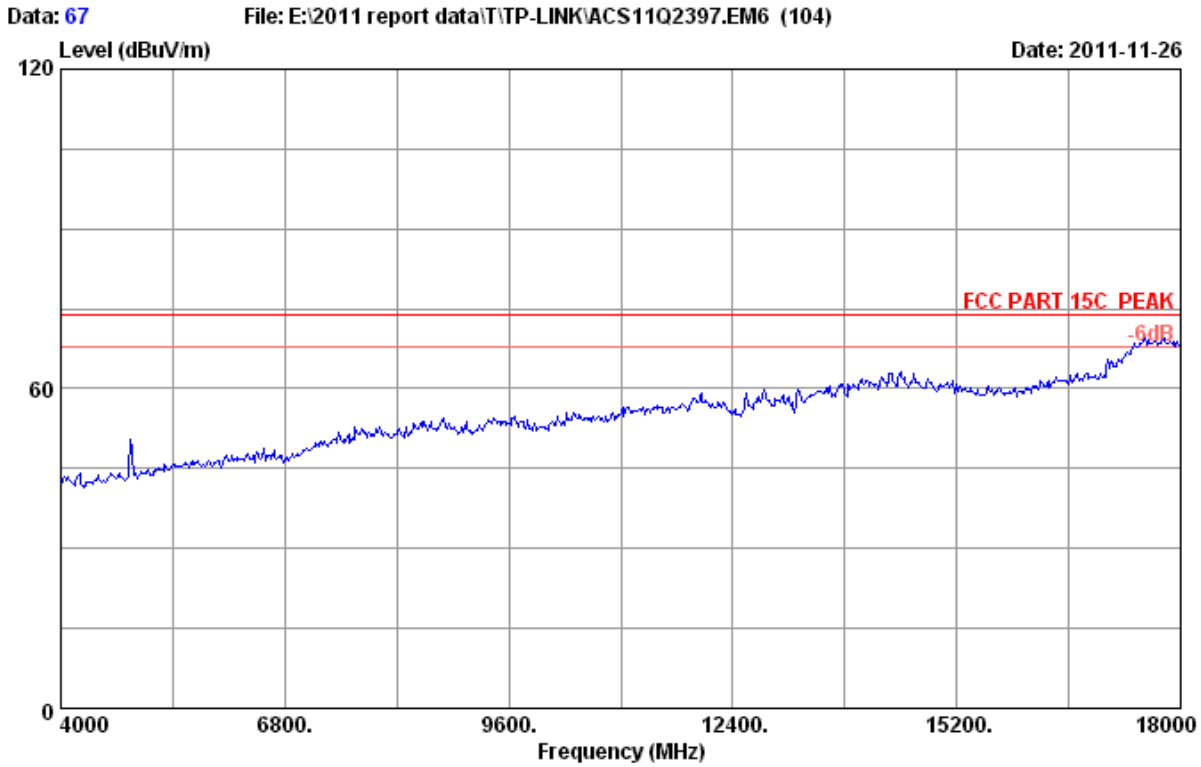
Site no. : 3# Chamber Data no. : 65  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11nHT20 CH6 2437MHz Tx  
M/N : NWD3105



Site no. : 3# Chamber Data no. : 66  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH6 2437MHz Tx  
 M/N : NWD3105

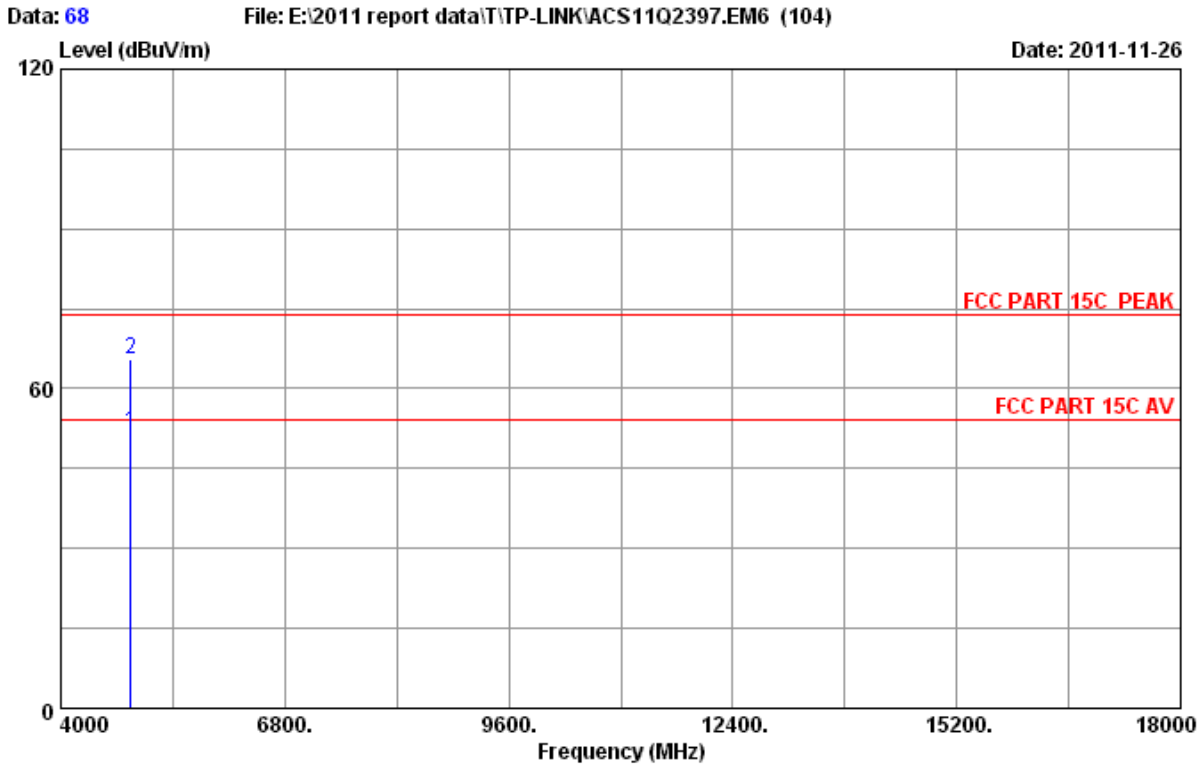
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4874.000	34.41	10.69	35.03	37.53	47.60	54.00	6.40	Average
2	4874.000	34.41	10.69	35.03	49.71	59.78	74.00	14.22	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor  
 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. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11nHT20 CH6 2437MHz Tx  
M/N : NWD3105

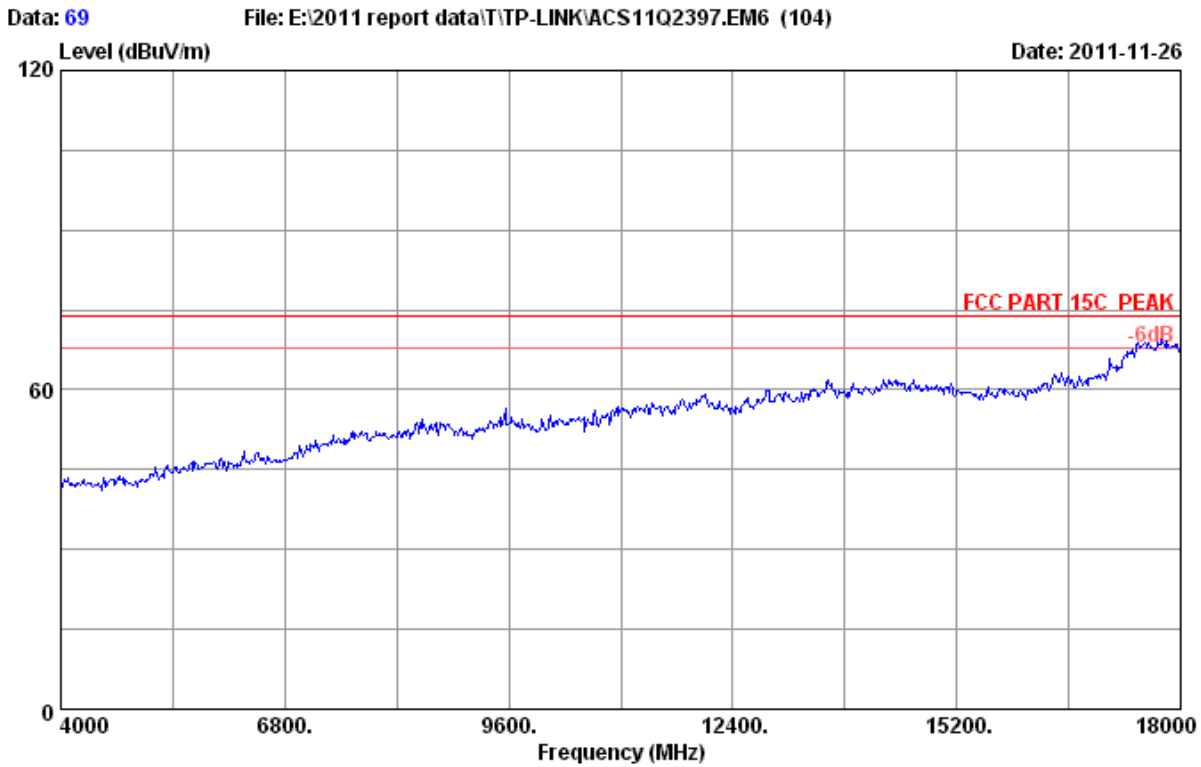




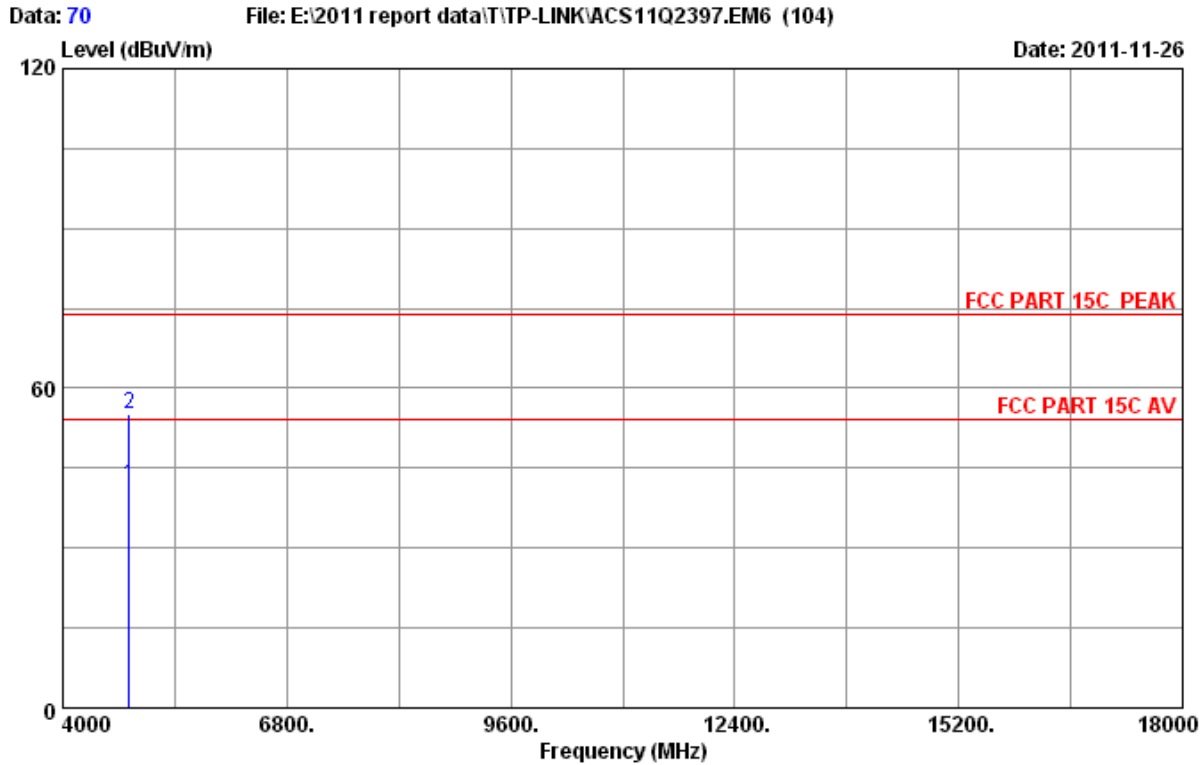
Site no. : 3# Chamber Data no. : 68  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH6 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4874.000	34.41	10.69	35.03	41.76	51.83	54.00	2.17	Average
2	4874.000	34.41	10.69	35.03	55.29	65.36	74.00	8.64	Peak

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



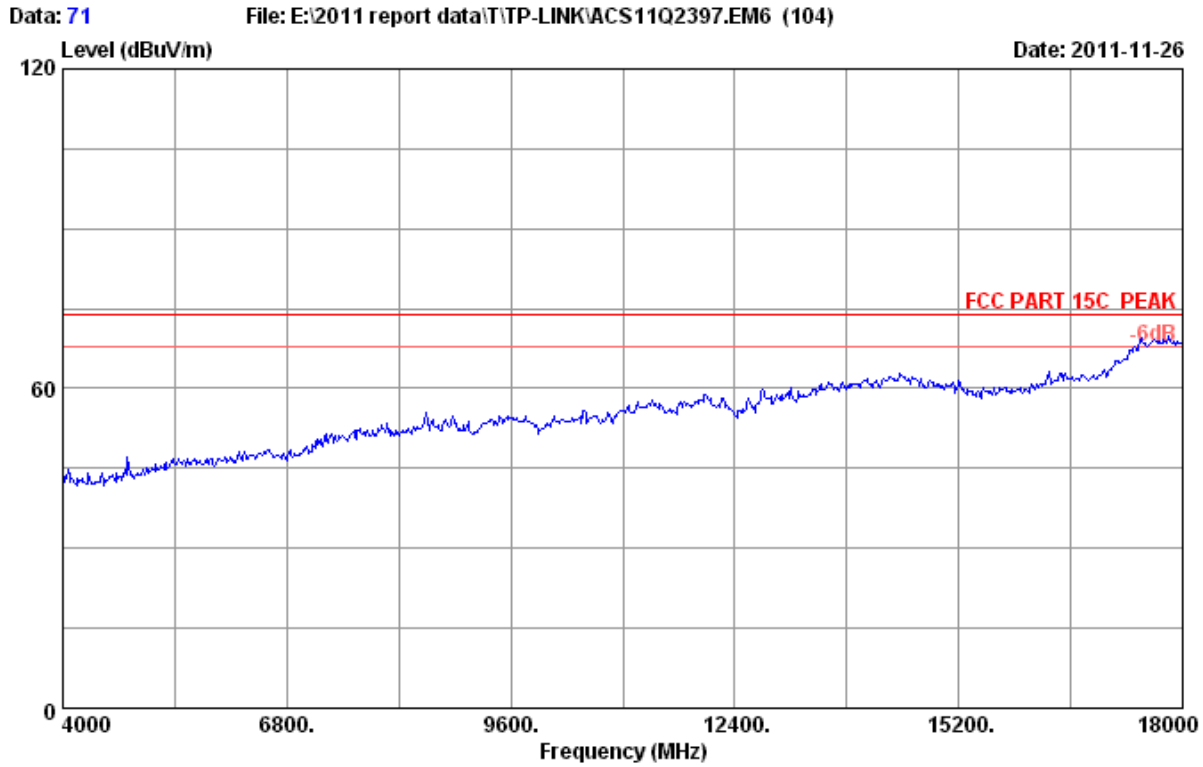
Site no.	: 3# Chamber	Data no.	: 69
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Leo-Li
EUT	: Wireless N-lite PCI Express Adapter		
Power Rating	: DC 3.3V From PC input AC 120V/60Hz		
Test Mode	: IEEE802.11nHT20 CH1 2412MHz Tx		
M/N	: NWD3105		



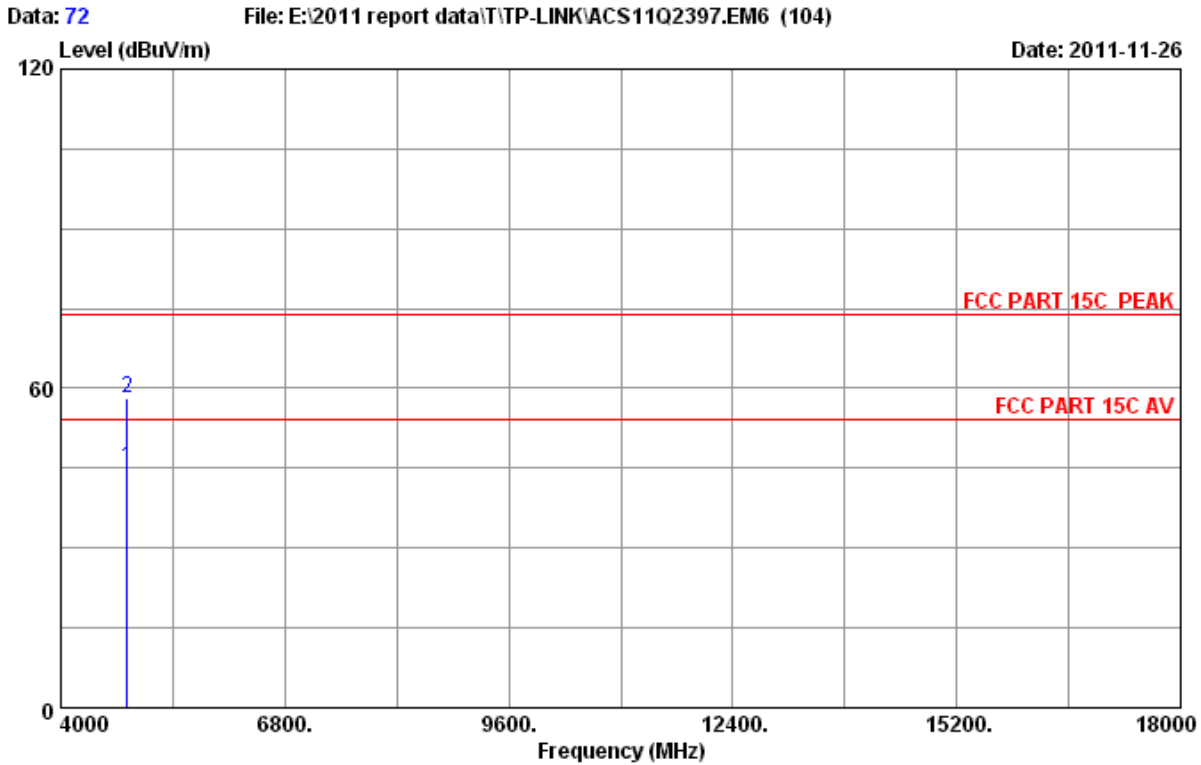
Site no. : 3# Chamber Data no. : 70  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4824.000	34.32	10.64	35.08	31.83	41.71	54.00	12.29	Average
2	4824.000	34.32	10.64	35.08	45.28	55.16	74.00	18.84	Peak

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



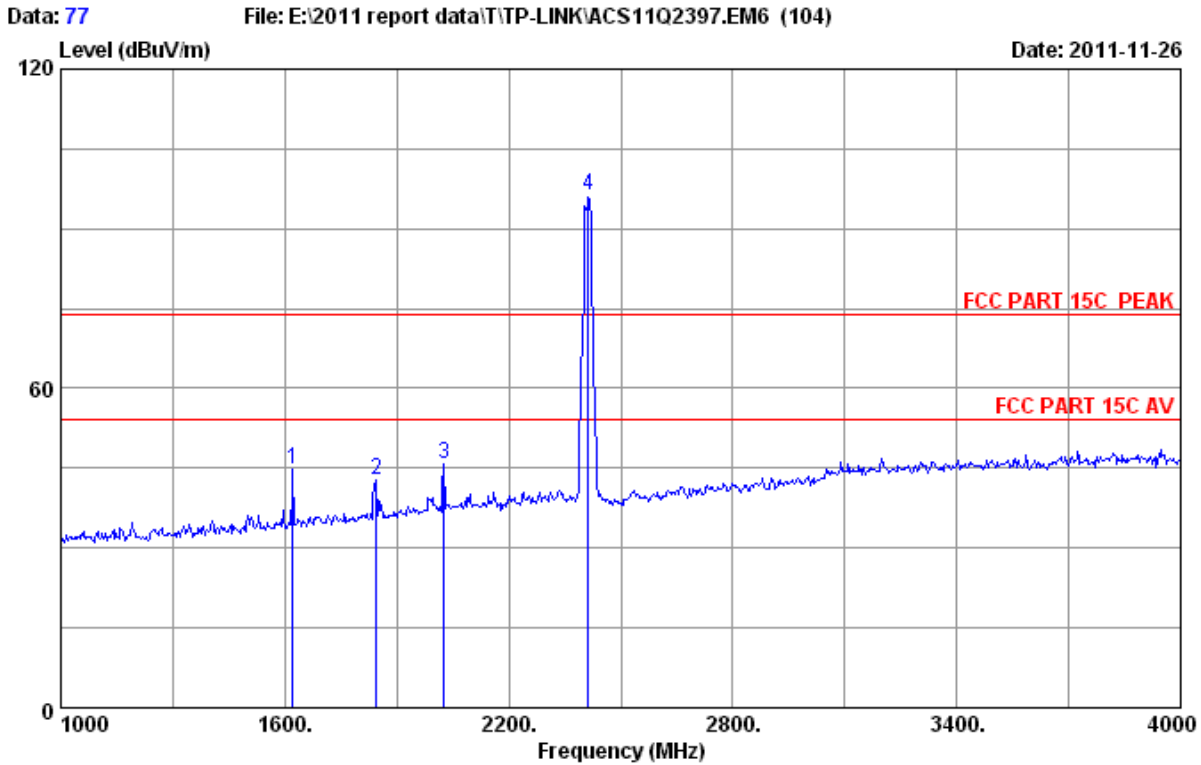
Site no. : 3# Chamber Data no. : 71  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11nHT20 CH1 2412MHz Tx  
M/N : NWD3105



Site no. : 3# Chamber Data no. : 72  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4824.000	34.32	10.64	35.08	35.39	45.27	54.00	8.73	Average
2	4824.000	34.32	10.64	35.08	48.31	58.19	74.00	15.81	Peak

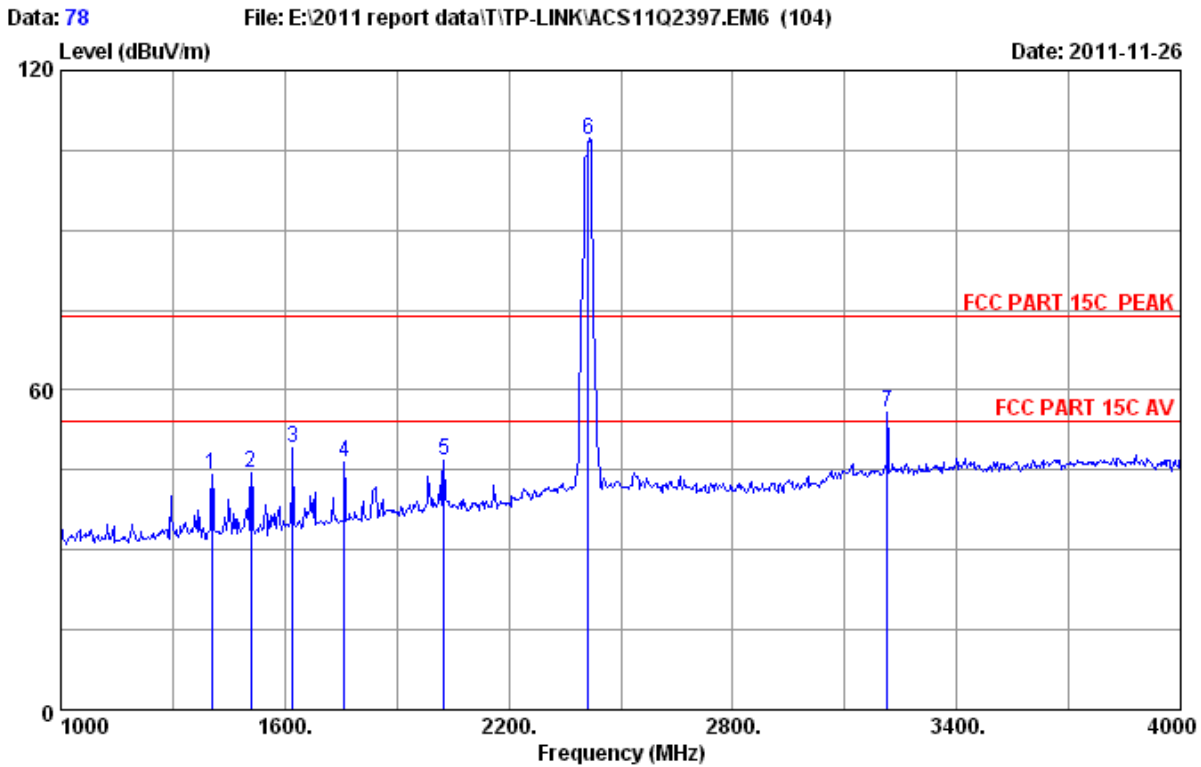
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 77  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1621.000	27.15	5.95	36.94	48.60	44.76	74.00	29.24	Peak
2	1846.000	28.36	6.37	36.79	44.70	42.64	74.00	31.36	Peak
3	2026.000	29.21	6.71	36.69	46.48	45.71	74.00	28.29	Peak
4	2412.000	29.45	7.43	36.62	95.93	96.19	74.00	-22.19	Peak

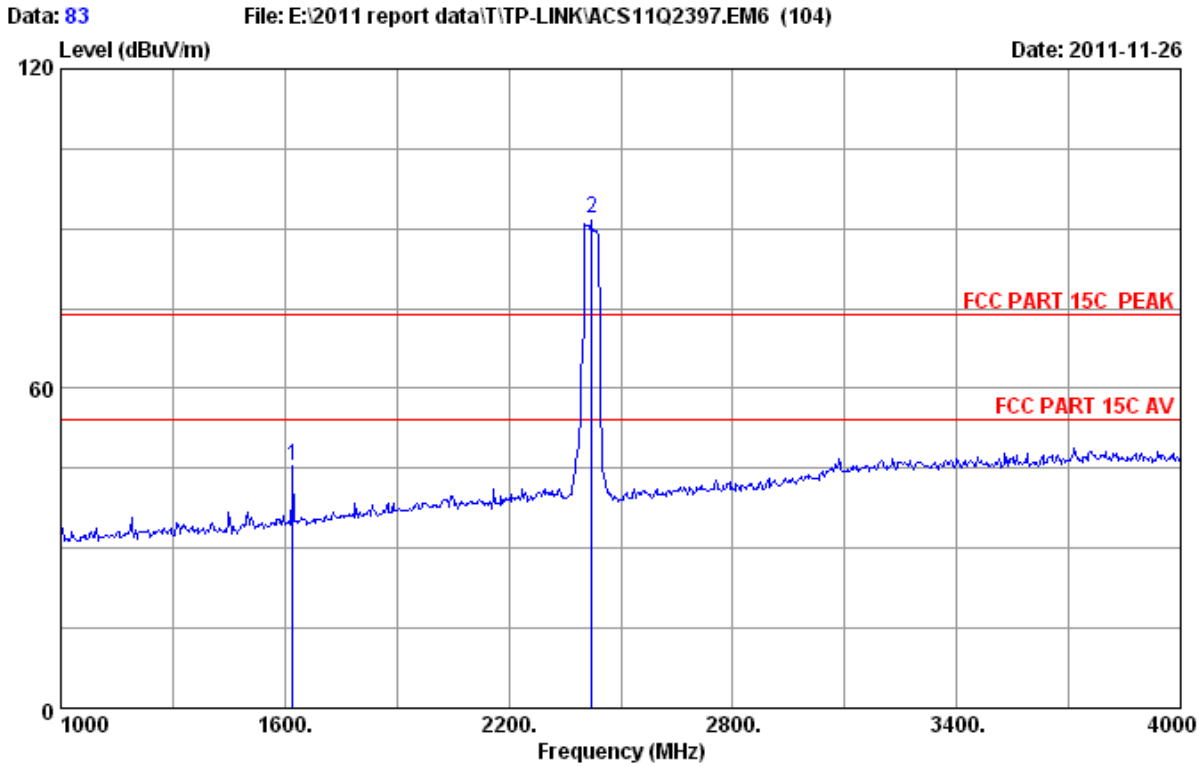
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 78  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	1405.000	26.23	5.54	37.18	49.69	44.28	74.00	29.72	Peak
2	1510.000	26.49	5.73	37.00	49.26	44.48	74.00	29.52	Peak
3	1621.000	27.15	5.95	36.94	52.96	49.12	74.00	24.88	Peak
4	1759.000	27.89	6.18	36.84	49.14	46.37	74.00	27.63	Peak
5	2026.000	29.21	6.71	36.69	47.69	46.92	74.00	27.08	Peak
6	2412.000	29.45	7.43	36.62	106.59	106.85	74.00	-32.85	Peak
7	3214.000	32.54	8.79	36.28	50.63	55.68	74.00	18.32	Peak

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

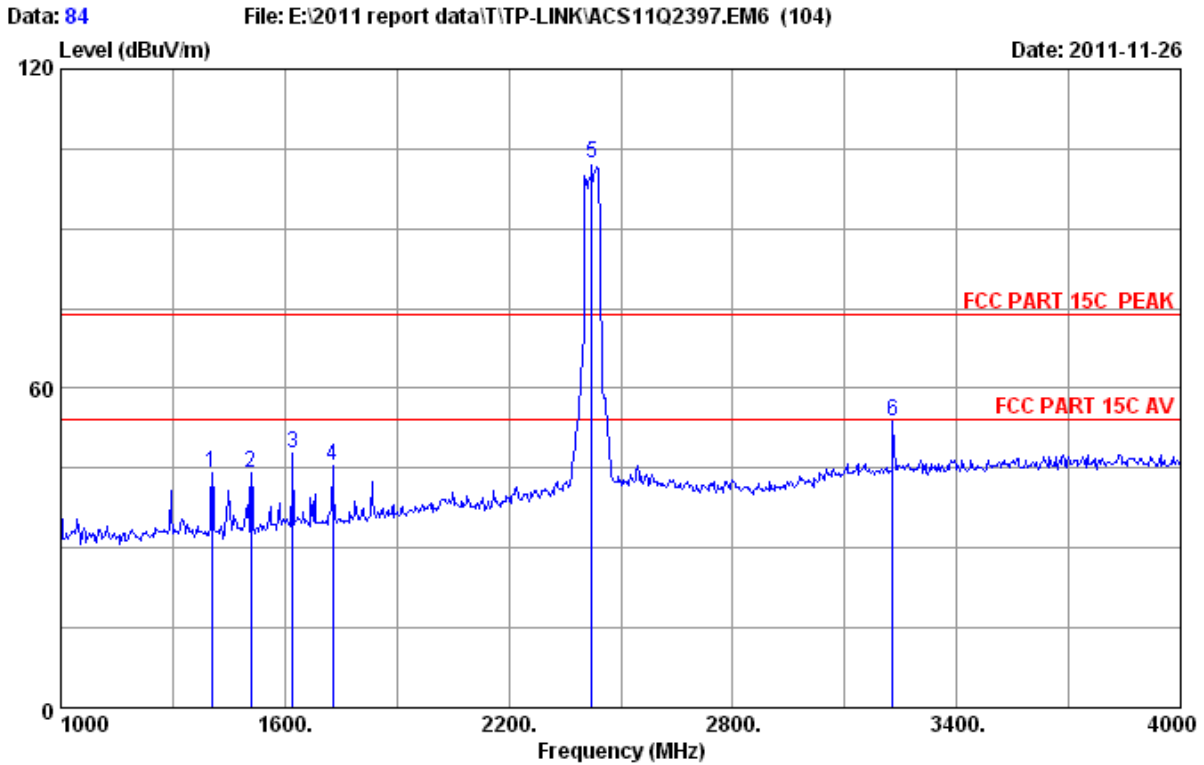


Site no. : 3# Chamber Data no. : 83  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH1 2422MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1621.000	27.15	5.95	36.94	49.42	45.58	74.00	28.42	Peak
2	2422.000	29.46	7.46	36.61	91.46	91.77	74.00	-17.77	Peak

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

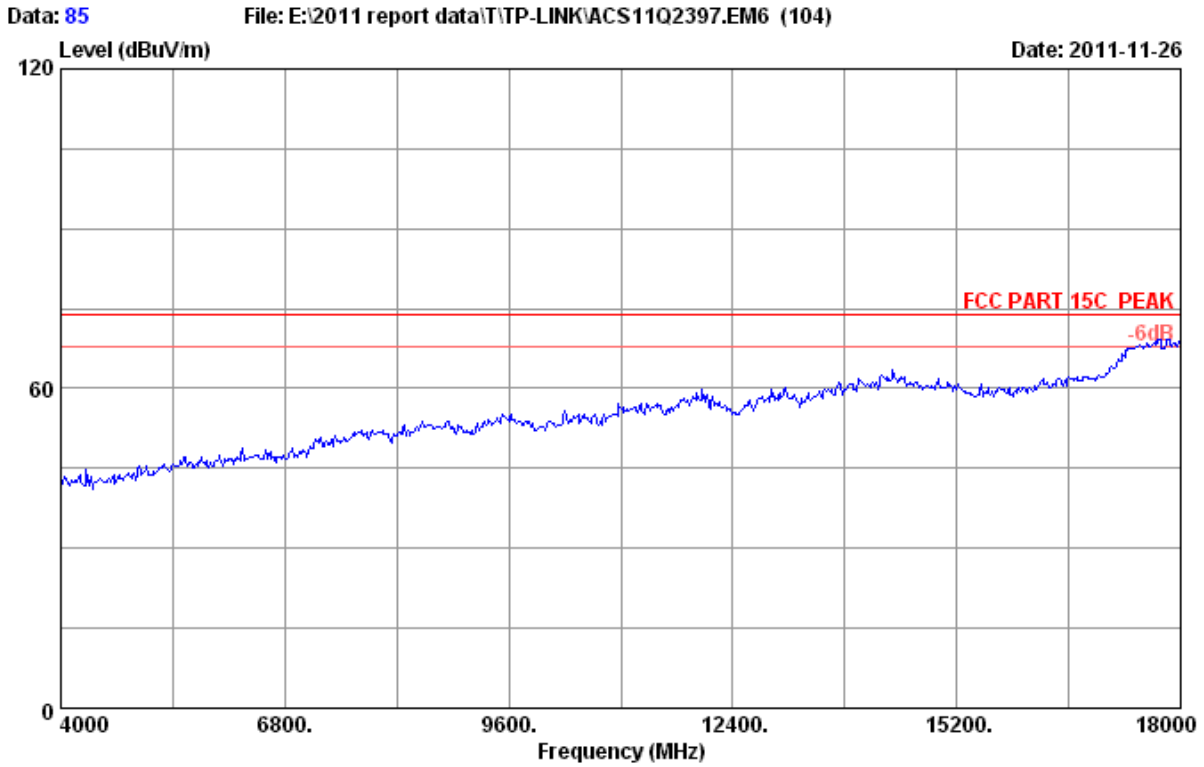




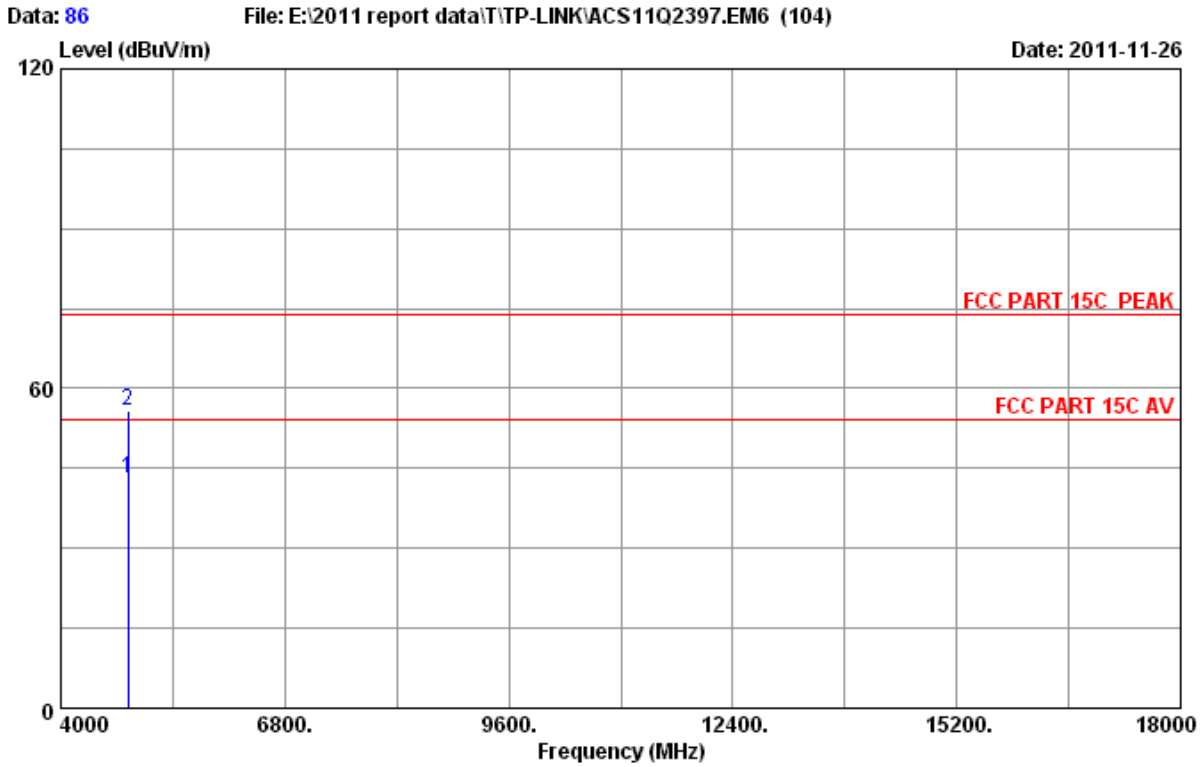
Site no. : 3# Chamber Data no. : 84  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH1 2422MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1405.000	26.23	5.54	37.18	49.63	44.22	74.00	29.78	Peak
2	1510.000	26.49	5.73	37.00	48.90	44.12	74.00	29.88	Peak
3	1621.000	27.15	5.95	36.94	51.50	47.66	74.00	26.34	Peak
4	1729.000	27.71	6.14	36.86	48.62	45.61	74.00	28.39	Peak
5	2422.000	29.46	7.46	36.61	101.91	102.22	74.00	-28.22	Peak
6	3229.000	32.58	8.81	36.28	48.78	53.89	74.00	20.11	Peak

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



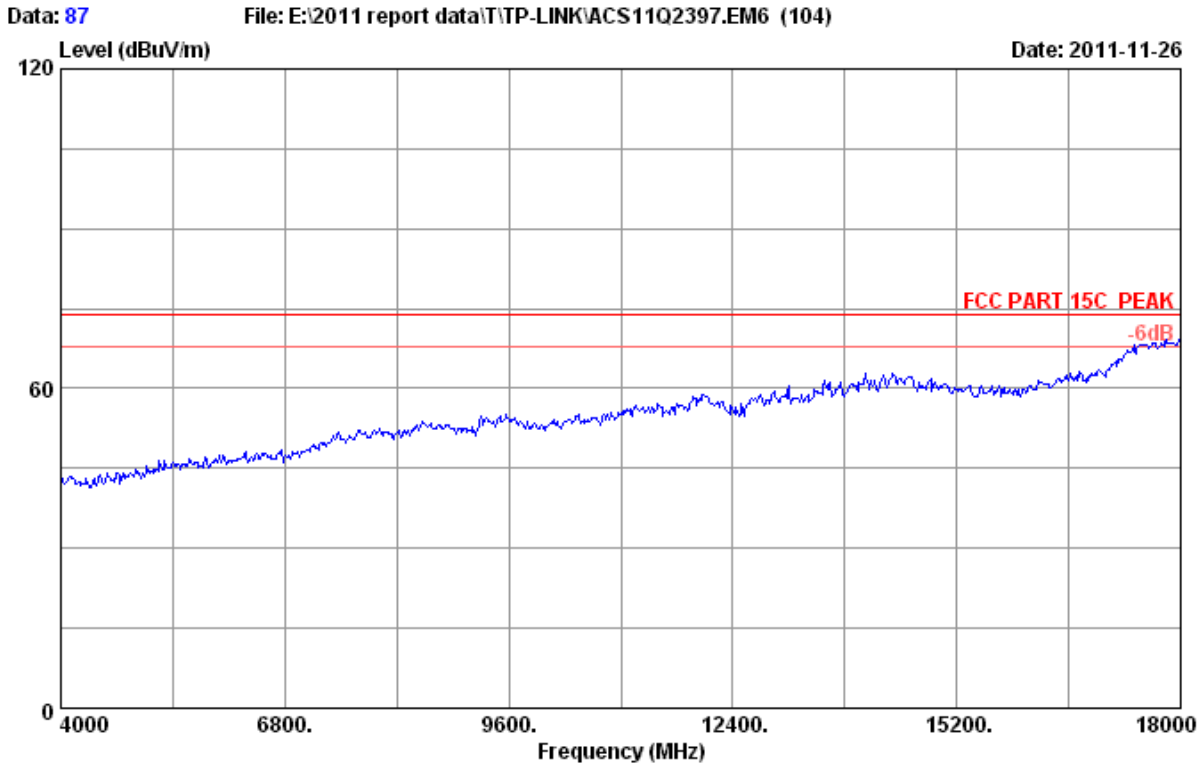
Site no. : 3# Chamber Data no. : 85  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11nHT40 CH1 2422MHz Tx  
M/N : NWD3105



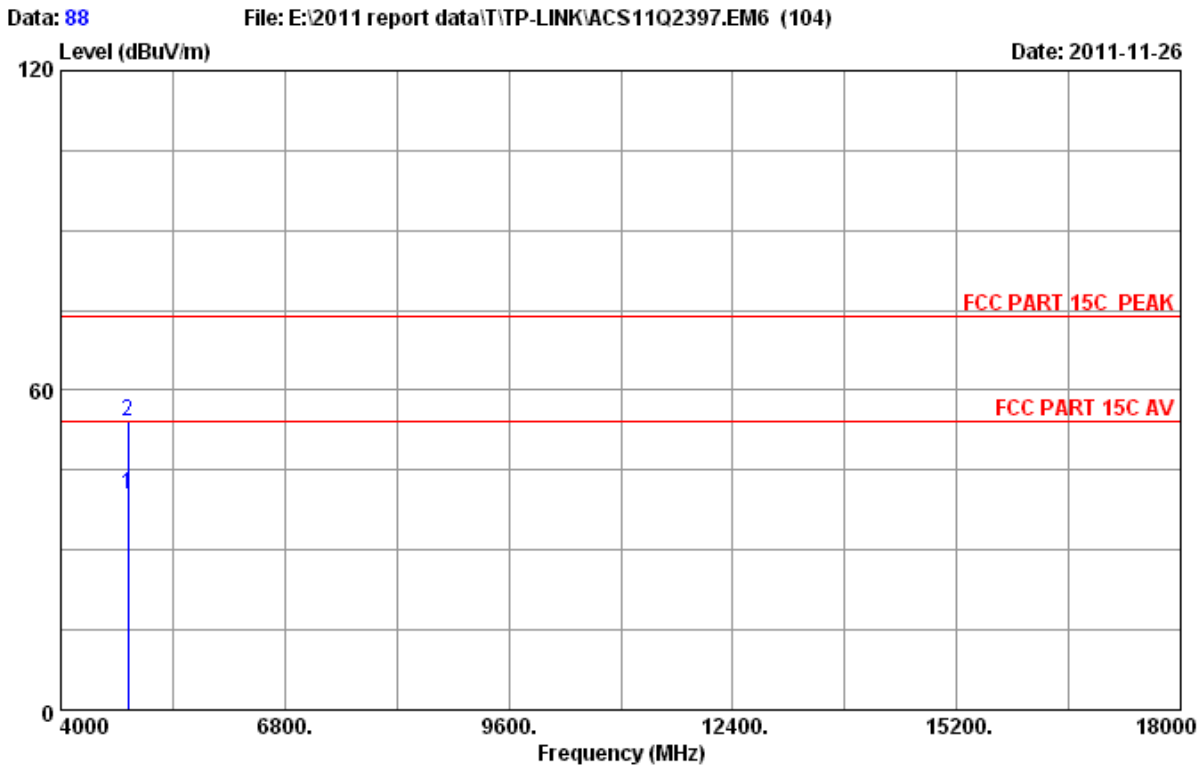
Site no. : 3# Chamber Data no. : 86  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH1 2422MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4844.000	34.35	10.67	35.05	33.07	43.04	54.00	10.96	Average
2	4844.000	34.35	10.67	35.05	45.92	55.89	74.00	18.11	Peak

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



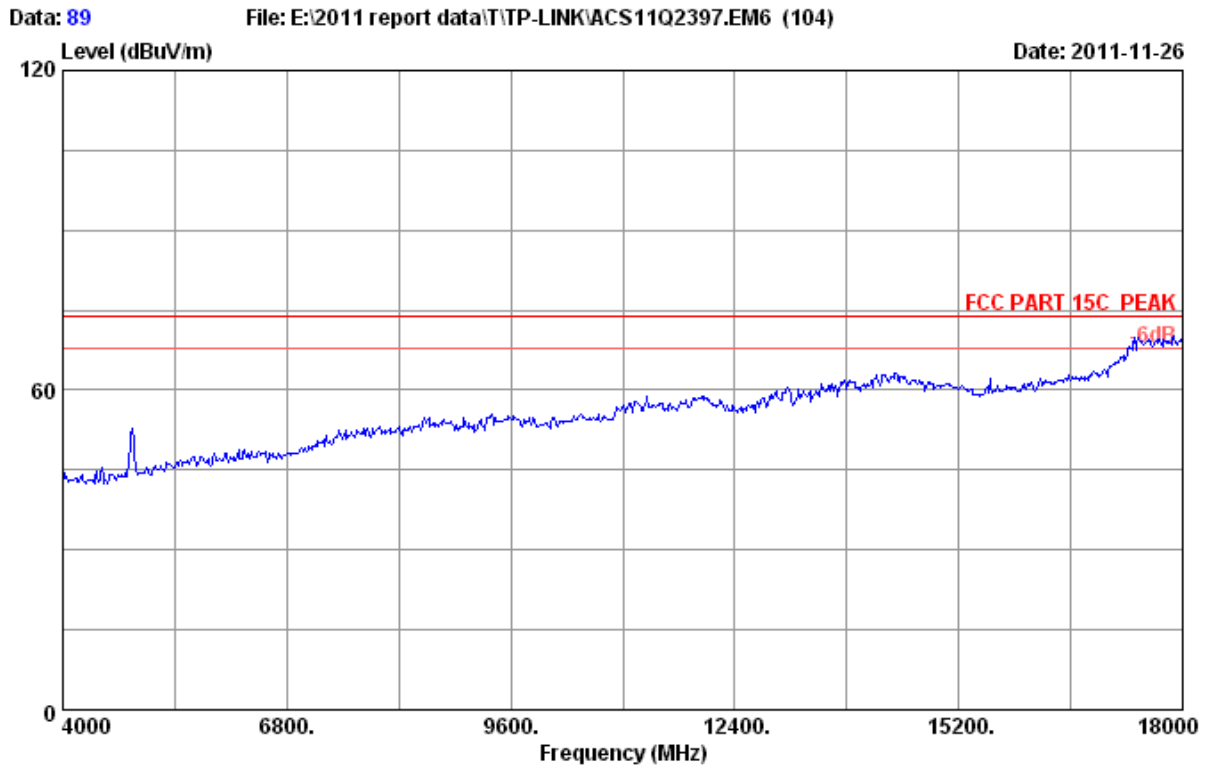
Site no. : 3# Chamber Data no. : 87  
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11nHT40 CH1 2422MHz Tx  
M/N : NWD3105



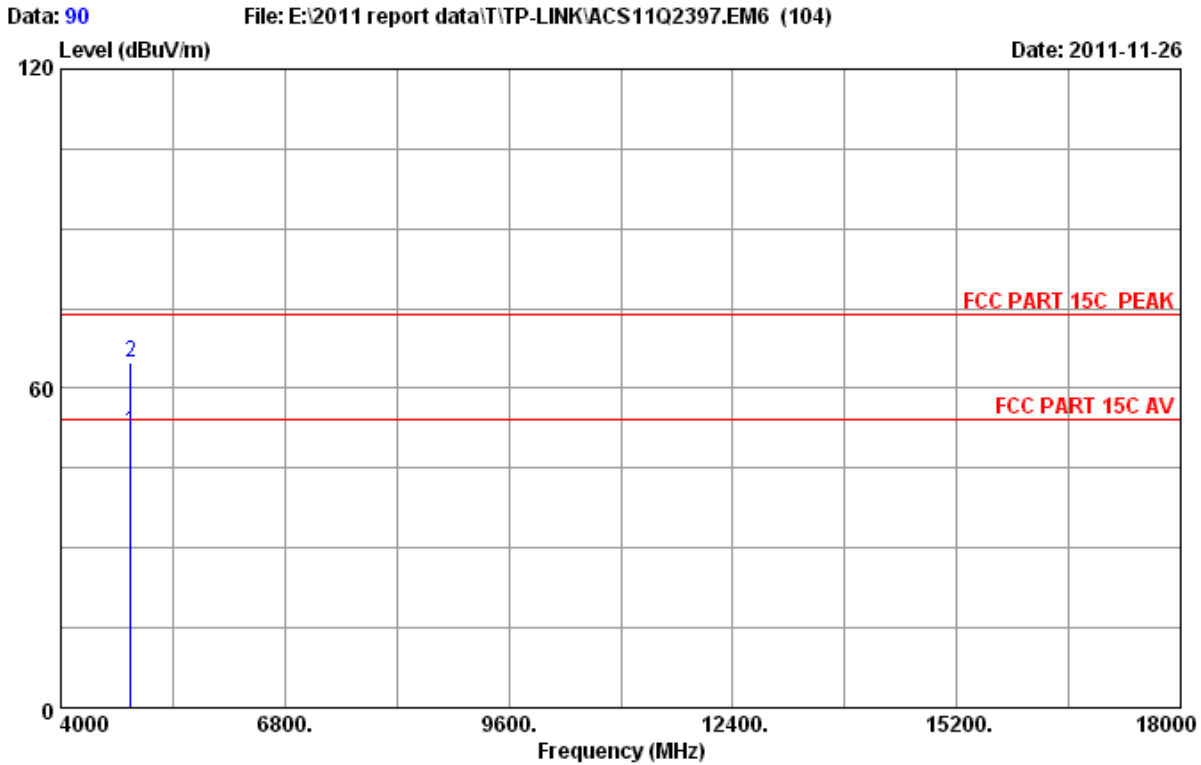
Site no. : 3# Chamber Data no. : 88  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH1 2422MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4844.000	34.35	10.67	35.05	30.58	40.55	54.00	13.45	Average
2	4844.000	34.35	10.67	35.05	44.11	54.08	74.00	19.92	Peak

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



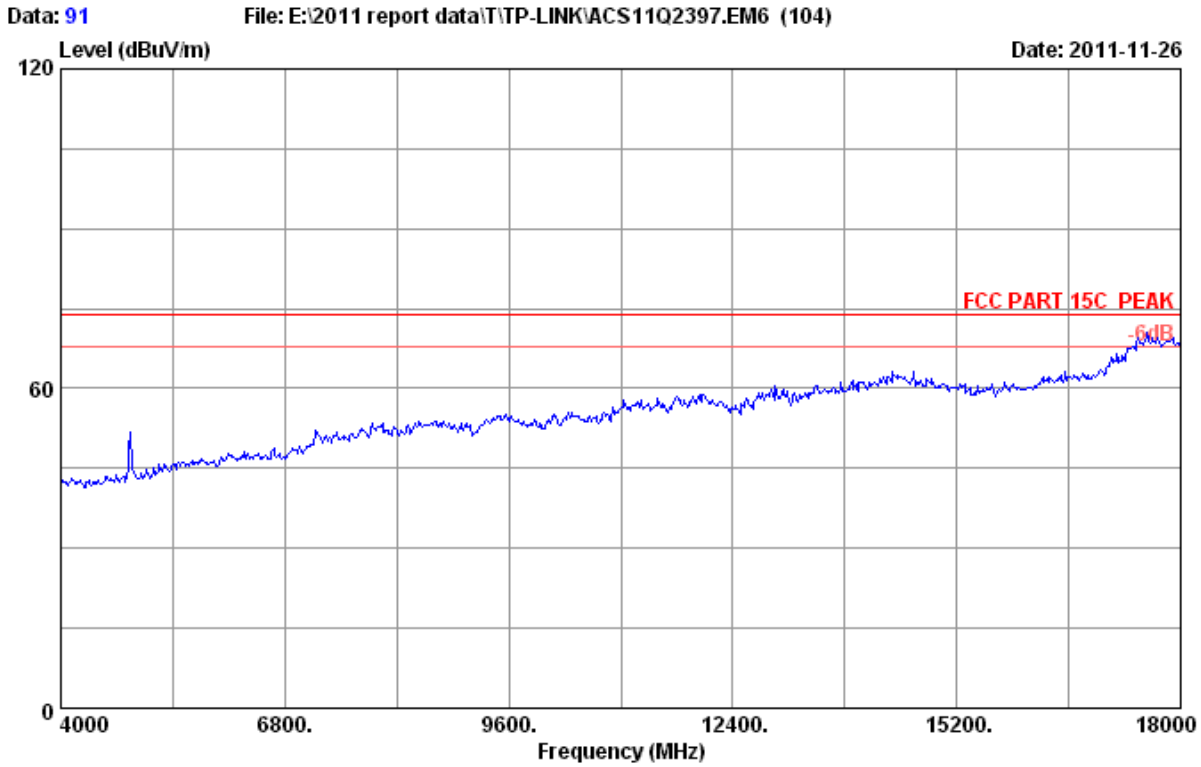
Site no.	: 3# Chamber	Data no.	: 89
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24*C/56%	Engineer	: Leo-Li
EUT	: Wireless N-lite PCI Express Adapter		
Power Rating	: DC 3.3V From PC input AC 120V/60Hz		
Test Mode	: IEEE802.11nHT40 CH4 2437MHz Tx		
M/N	: NWD3105		



Site no. : 3# Chamber Data no. : 90  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH4 2437MHz Tx  
 M/N : NWD3105

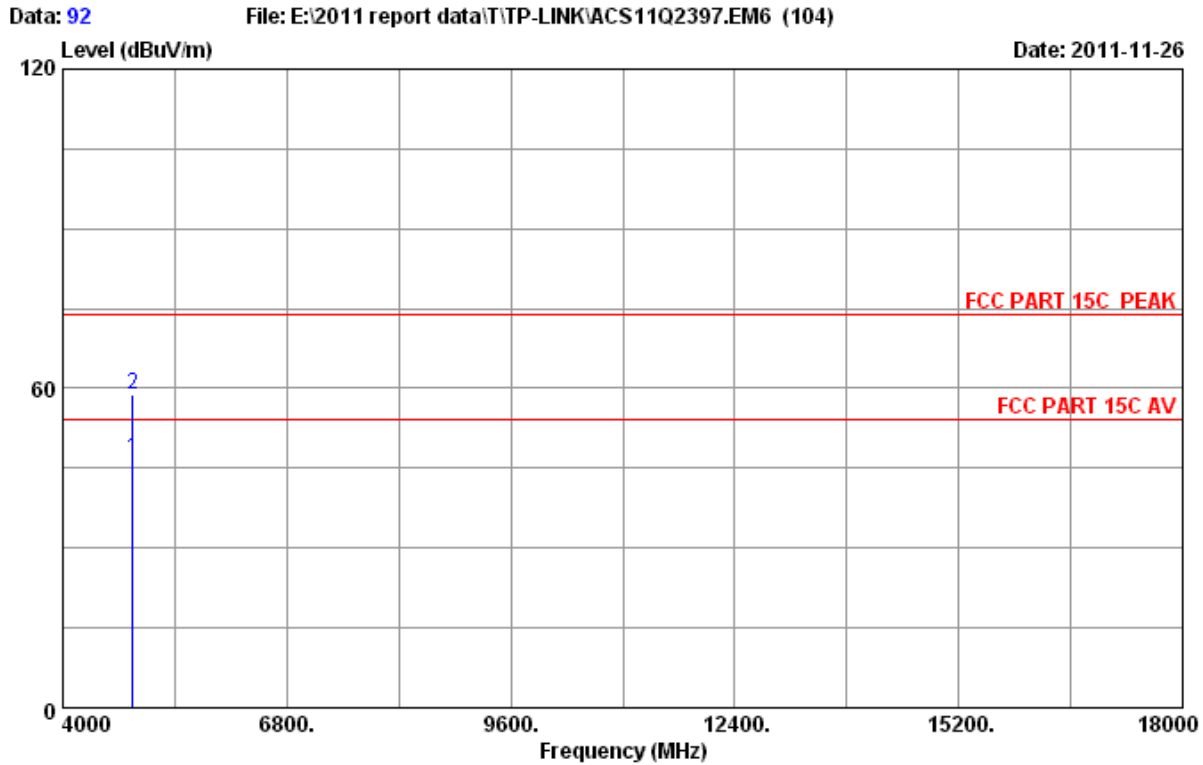
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4874.000	34.41	10.69	35.03	41.85	51.92	54.00	2.08	Average
2	4874.000	34.41	10.69	35.03	54.90	64.97	74.00	9.03	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 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. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
EUT : Wireless N-lite PCI Express Adapter  
Power Rating : DC 3.3V From PC input AC 120V/60Hz  
Test Mode : IEEE802.11nHT40 CH4 2437MHz Tx  
M/N : NWD3105

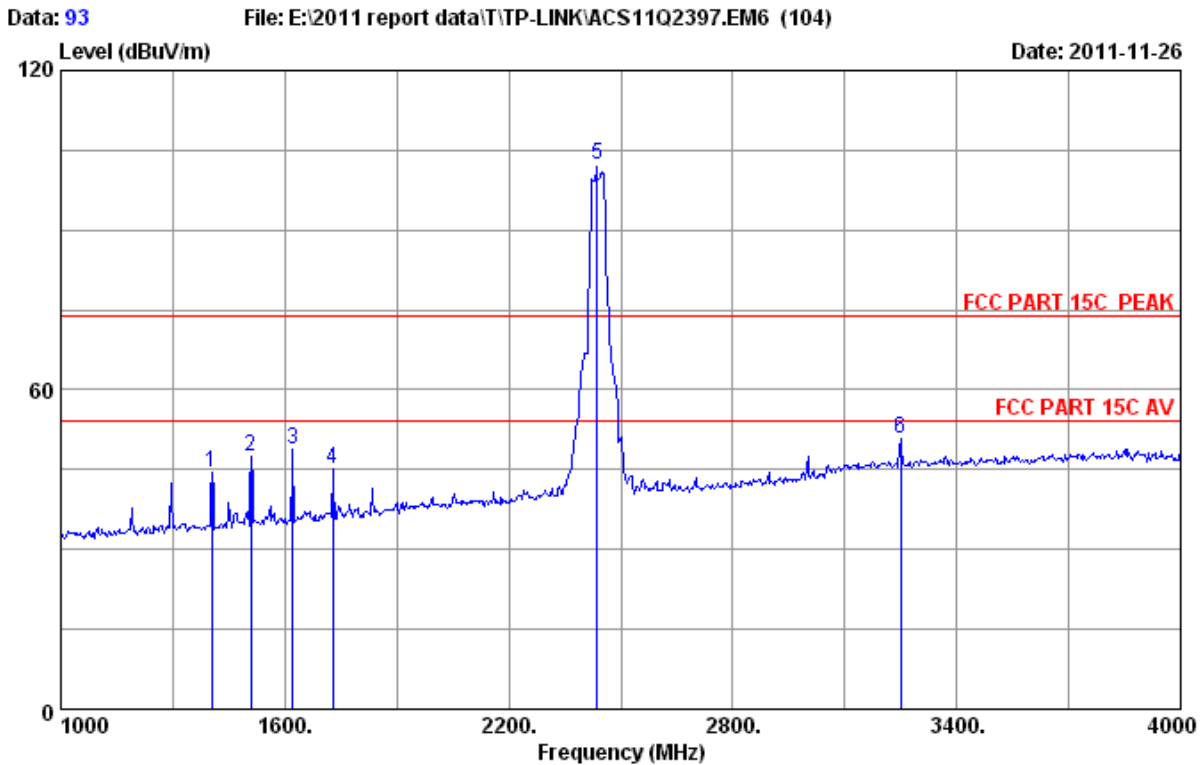




Site no. : 3# Chamber Data no. : 92  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH4 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4874.000	34.41	10.69	35.03	36.66	46.73	54.00	7.27	Average
2	4874.000	34.41	10.69	35.03	48.67	58.74	74.00	15.26	Peak

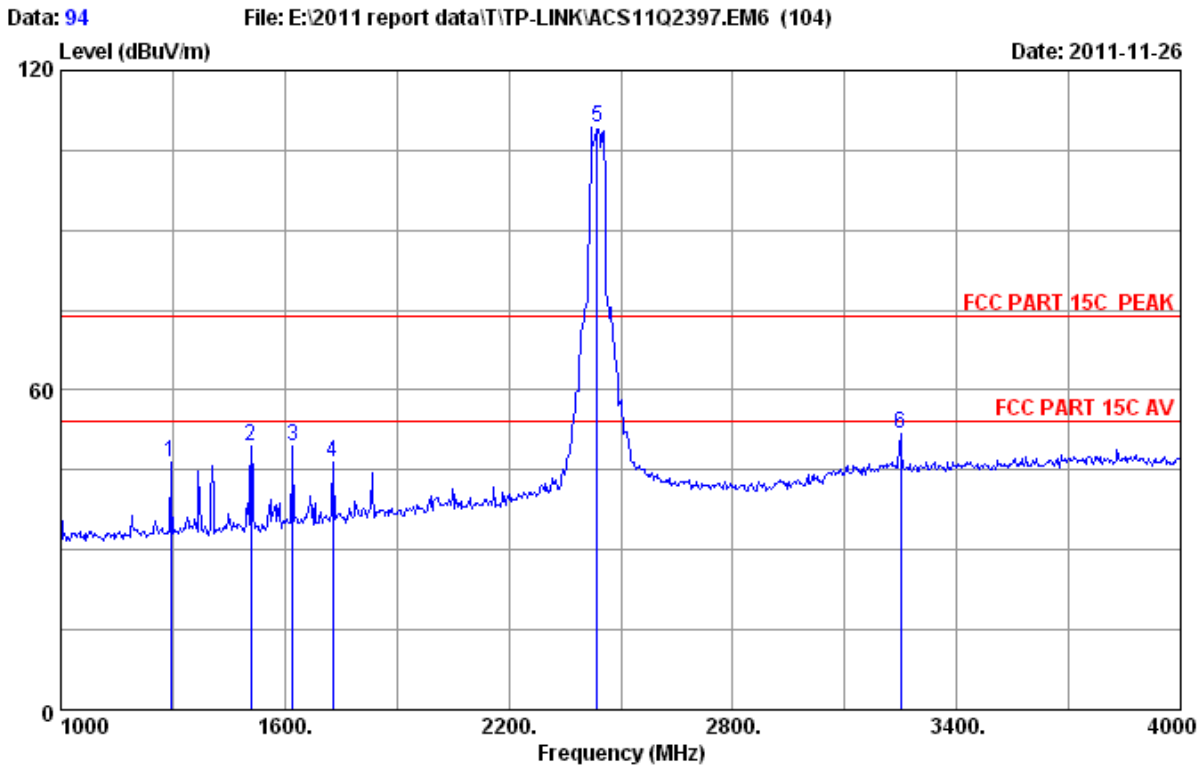
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 93  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH4 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1405.000	26.23	5.54	37.18	49.78	44.37	74.00	29.63	Peak
2	1510.000	26.49	5.73	37.00	52.27	47.49	74.00	26.51	Peak
3	1621.000	27.15	5.95	36.94	52.50	48.66	74.00	25.34	Peak
4	1729.000	27.71	6.14	36.86	48.19	45.18	74.00	28.82	Peak
5	2437.000	29.47	7.46	36.61	101.80	102.12	74.00	-28.12	Peak
6	3250.000	32.63	8.83	36.25	45.44	50.65	74.00	23.35	Peak

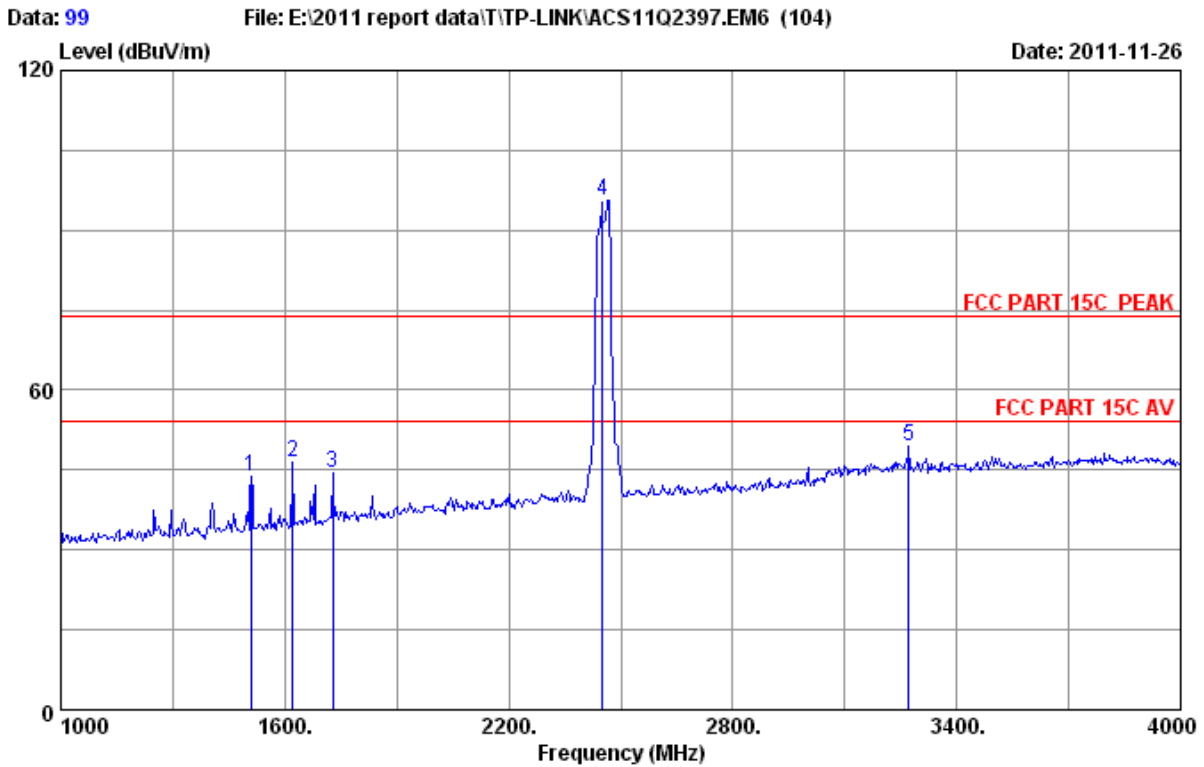
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 94  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH4 2437MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	1294.000	25.99	5.31	37.36	52.57	46.51	74.00	27.49	Peak
2	1510.000	26.49	5.73	37.00	54.38	49.60	74.00	24.40	Peak
3	1621.000	27.15	5.95	36.94	53.27	49.43	74.00	24.57	Peak
4	1729.000	27.71	6.14	36.86	49.62	46.61	74.00	27.39	Peak
5	2437.000	29.47	7.46	36.61	108.89	109.21	74.00	-35.21	Peak
6	3250.000	32.63	8.83	36.25	46.64	51.85	74.00	22.15	Peak

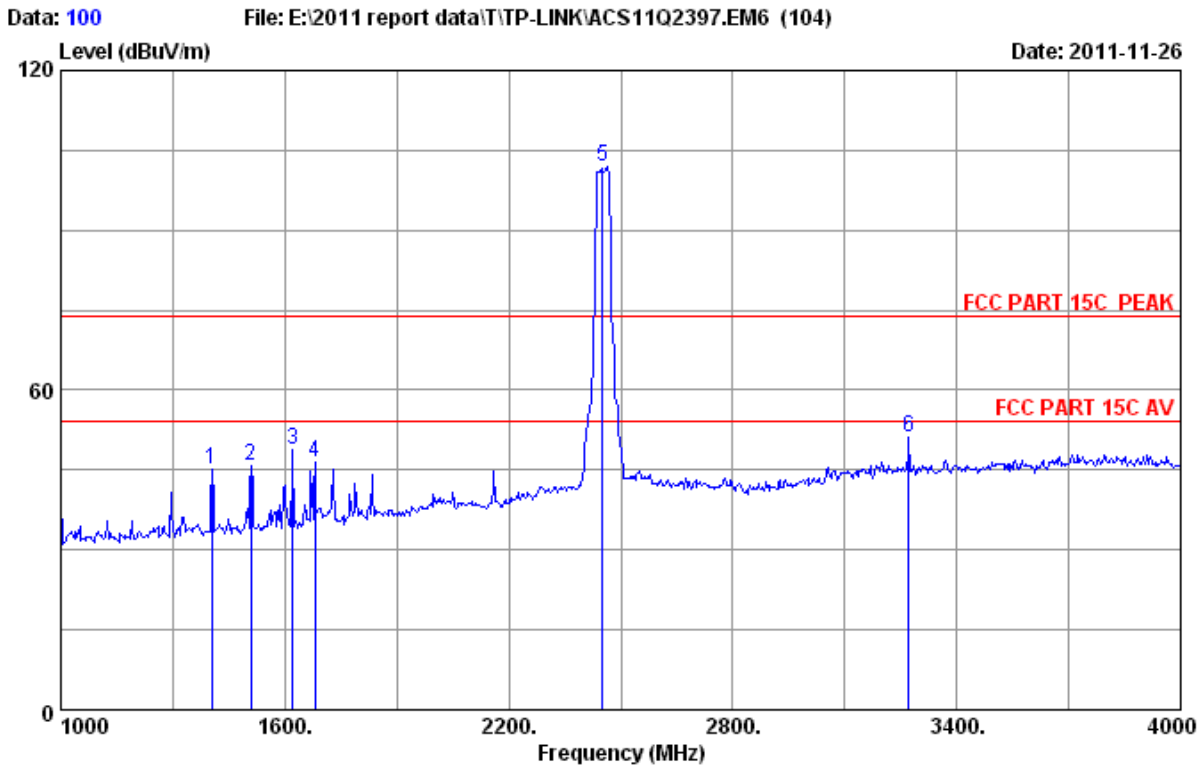
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 99  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH7 2452MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1510.000	26.49	5.73	37.00	48.72	43.94	74.00	30.06	Peak
2	1621.000	27.15	5.95	36.94	50.34	46.50	74.00	27.50	Peak
3	1729.000	27.71	6.14	36.86	47.63	44.62	74.00	29.38	Peak
4	2452.000	29.47	7.50	36.61	95.38	95.74	74.00	-21.74	Peak
5	3271.000	32.72	8.86	36.22	44.13	49.49	74.00	24.51	Peak

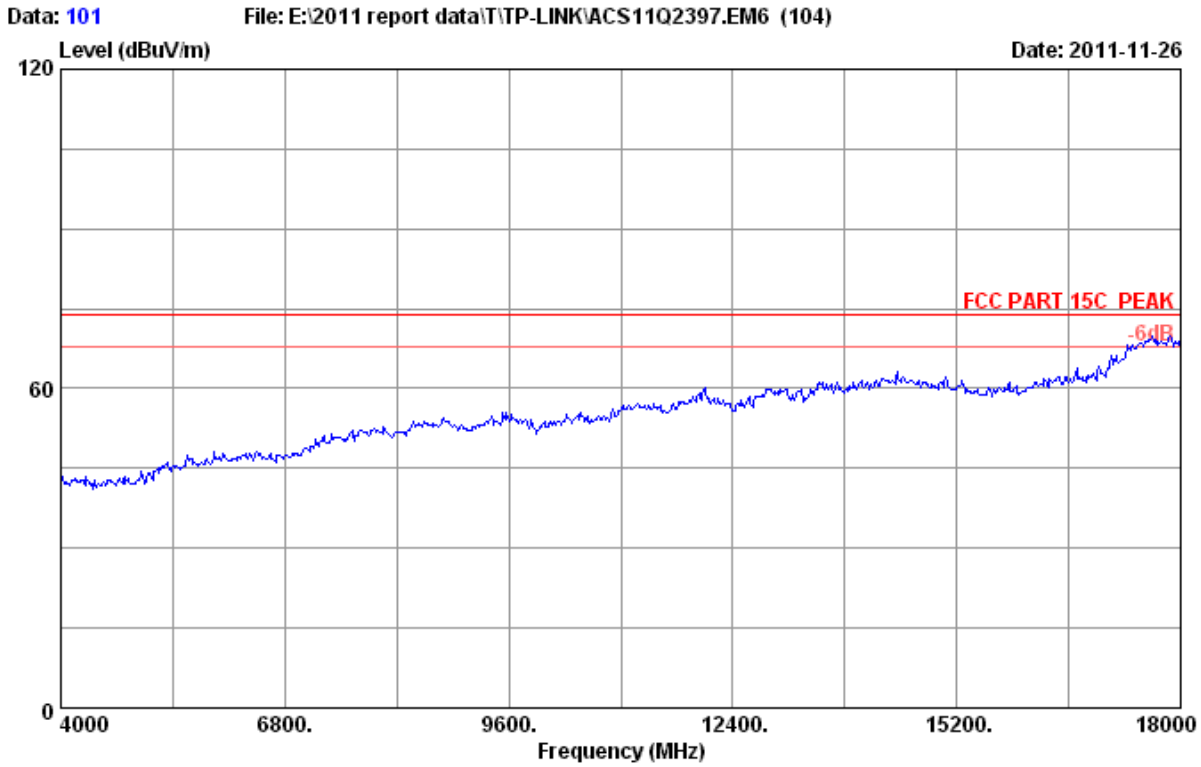
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 100  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH7 2452MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	1405.000	26.23	5.54	37.18	50.59	45.18	74.00	28.82	Peak
2	1510.000	26.49	5.73	37.00	50.54	45.76	74.00	28.24	Peak
3	1621.000	27.15	5.95	36.94	52.72	48.88	74.00	25.12	Peak
4	1681.000	27.43	6.07	36.89	49.89	46.50	74.00	27.50	Peak
5	2452.000	29.47	7.50	36.61	101.67	102.03	74.00	-28.03	Peak
6	3271.000	32.72	8.86	36.22	45.86	51.22	74.00	22.78	Peak

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



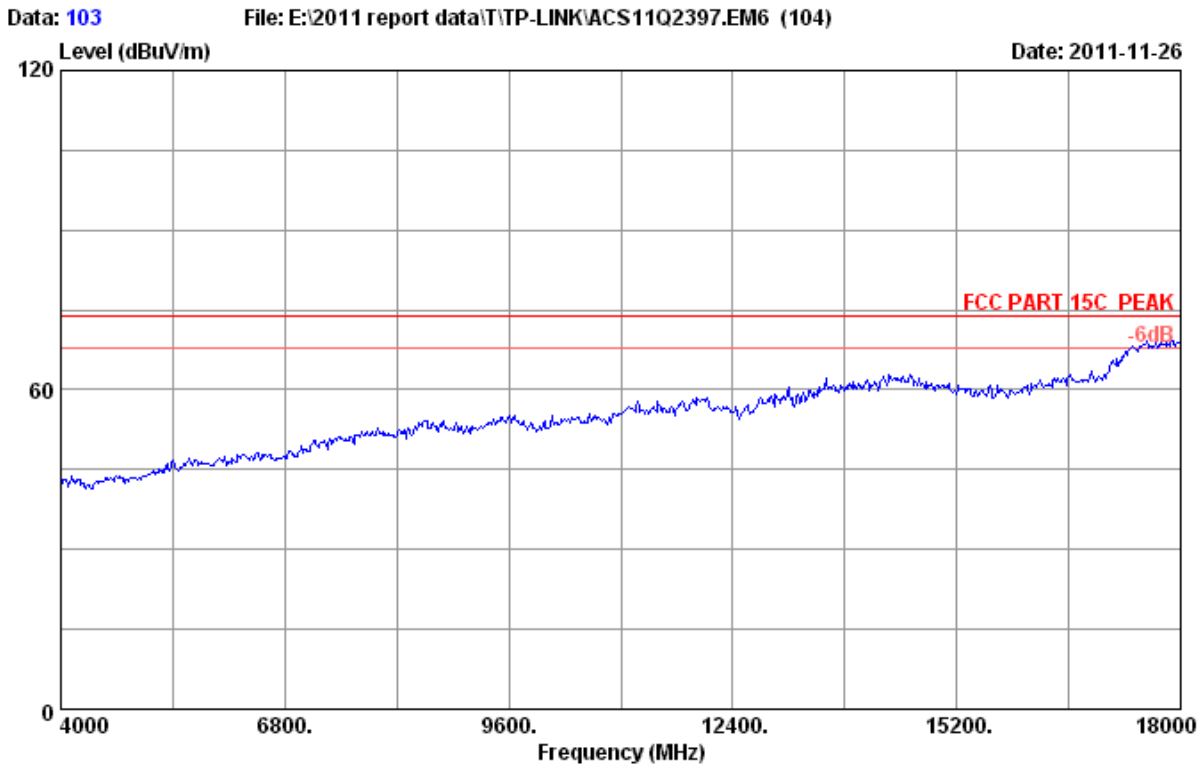
Site no.	: 3# Chamber	Data no.	: 101
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24*C/56%	Engineer	: Leo-Li
EUT	: Wireless N-lite PCI Express Adapter		
Power Rating	: DC 3.3V From PC input AC 120V/60Hz		
Test Mode	: IEEE802.11nHT40 CH7 2452MHz Tx		
M/N	: NWD3105		



Site no. : 3# Chamber Data no. : 102  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH7 2452MHz Tx  
 M/N : NWD3105

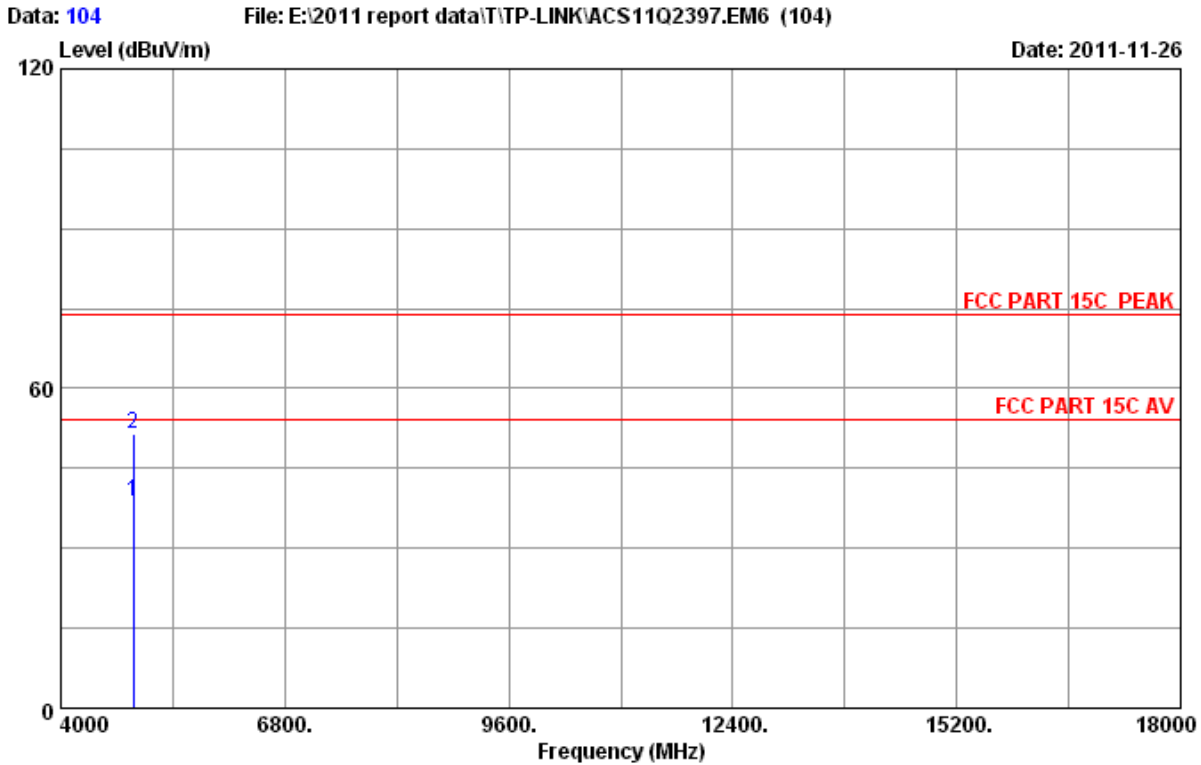
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Emission				
					Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4904.000	34.46	10.74	35.00	30.62	40.82	54.00	13.18	Average
2	4904.000	34.46	10.74	35.00	42.30	52.50	74.00	21.50	Peak

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



Site no.	: 3# Chamber	Data no.	: 103
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Leo-Li
EUT	: Wireless N-lite PCI Express Adapter		
Power Rating	: DC 3.3V From PC input AC 120V/60Hz		
Test Mode	: IEEE802.11nHT40 CH7 2452MHz Tx		
M/N	: NWD3105		





Site no. : 3# Chamber Data no. : 104  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH7 2452MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	4904.000	34.46	10.74	35.00	28.68	38.88	54.00	15.12	Average
2	4904.000	34.46	10.74	35.00	41.30	51.50	74.00	22.50	Peak

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

## 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.08,11	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08,11	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,11	1 Year

### 5.2. Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 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.

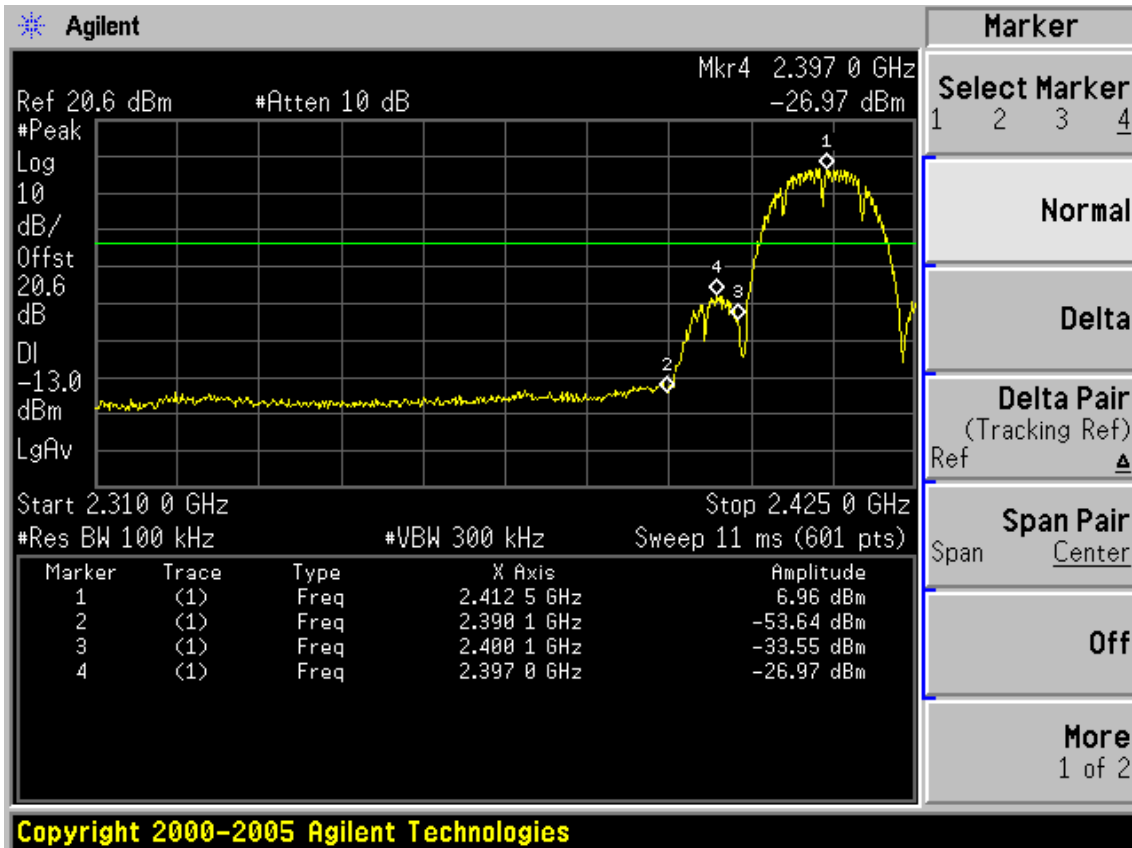
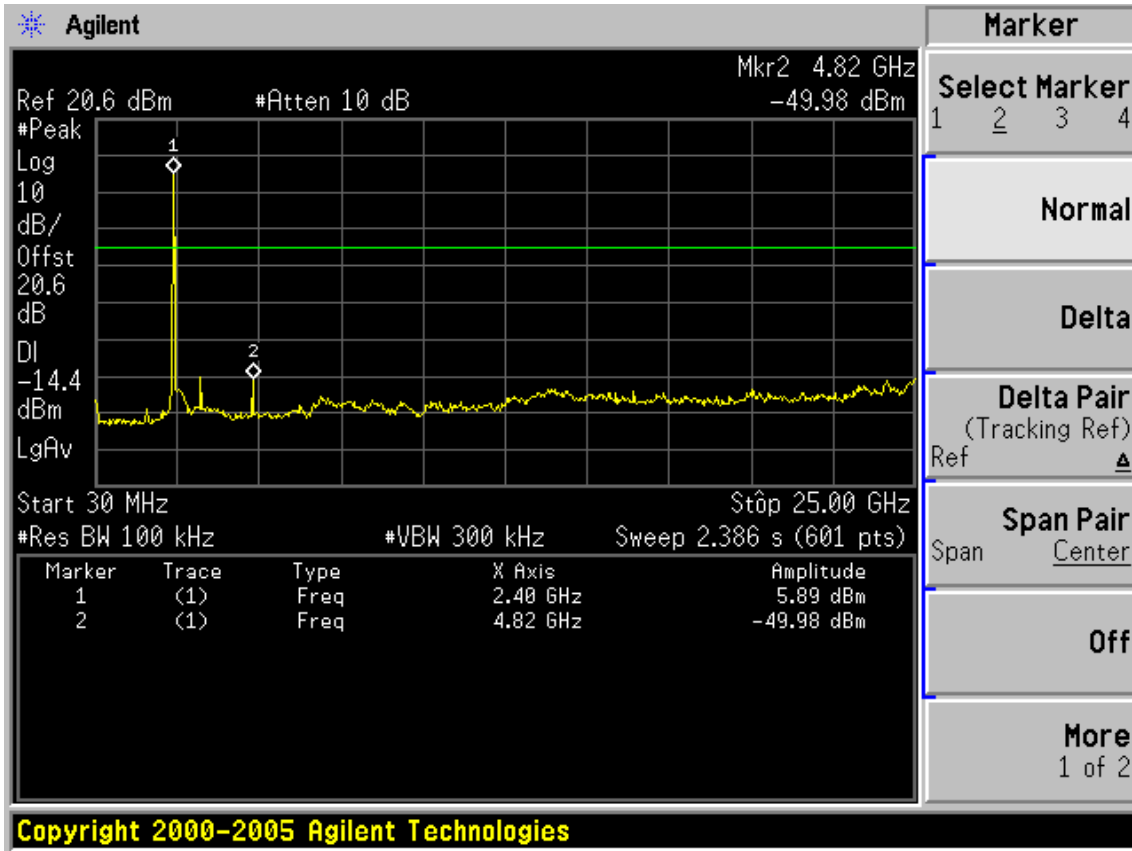
### 5.4. Test result

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

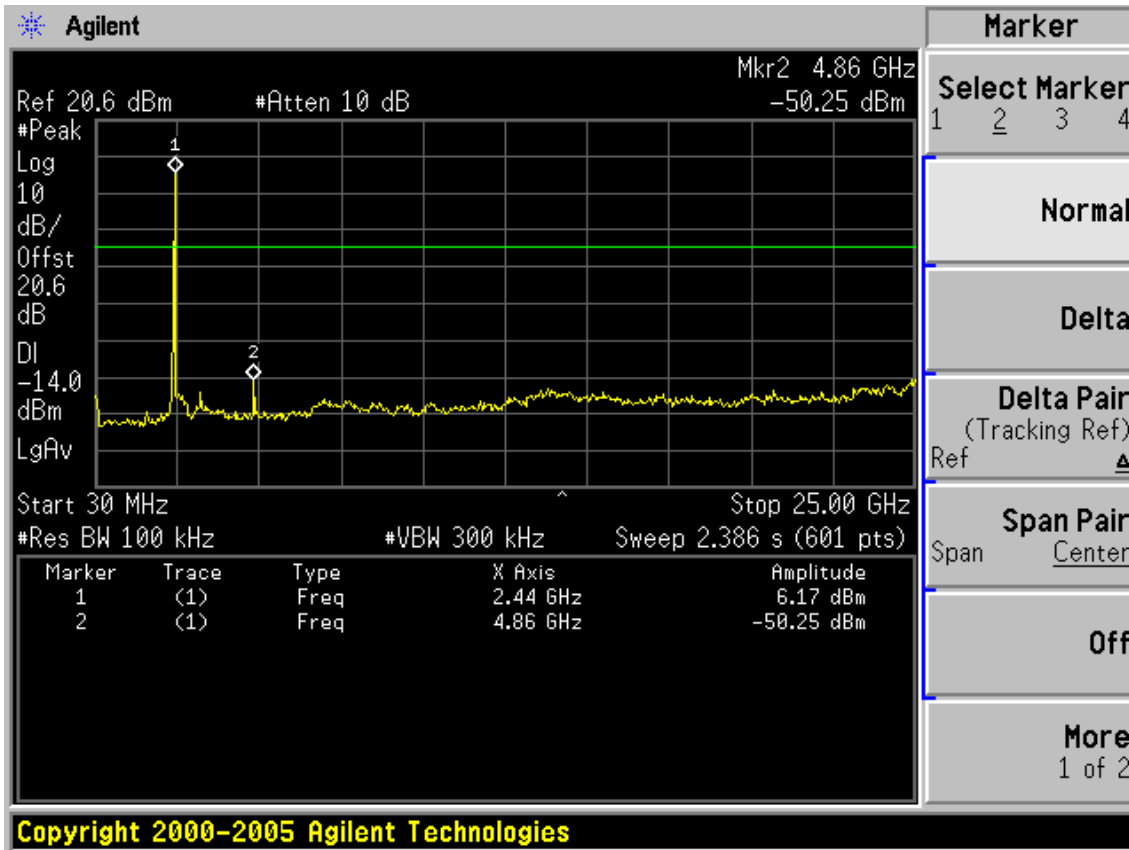
**Conducted emission test data:**

Test Mode: IEEE 802.11b TX

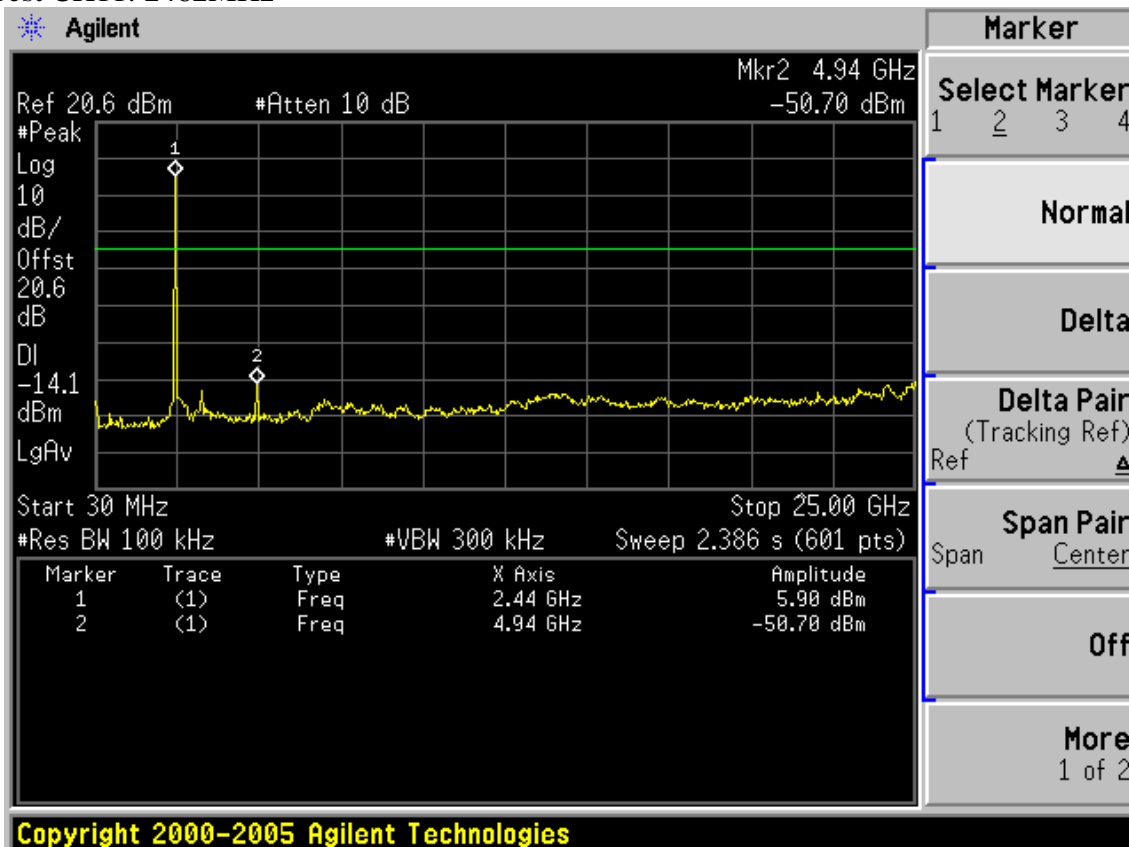
Test CH1: 2412MHz

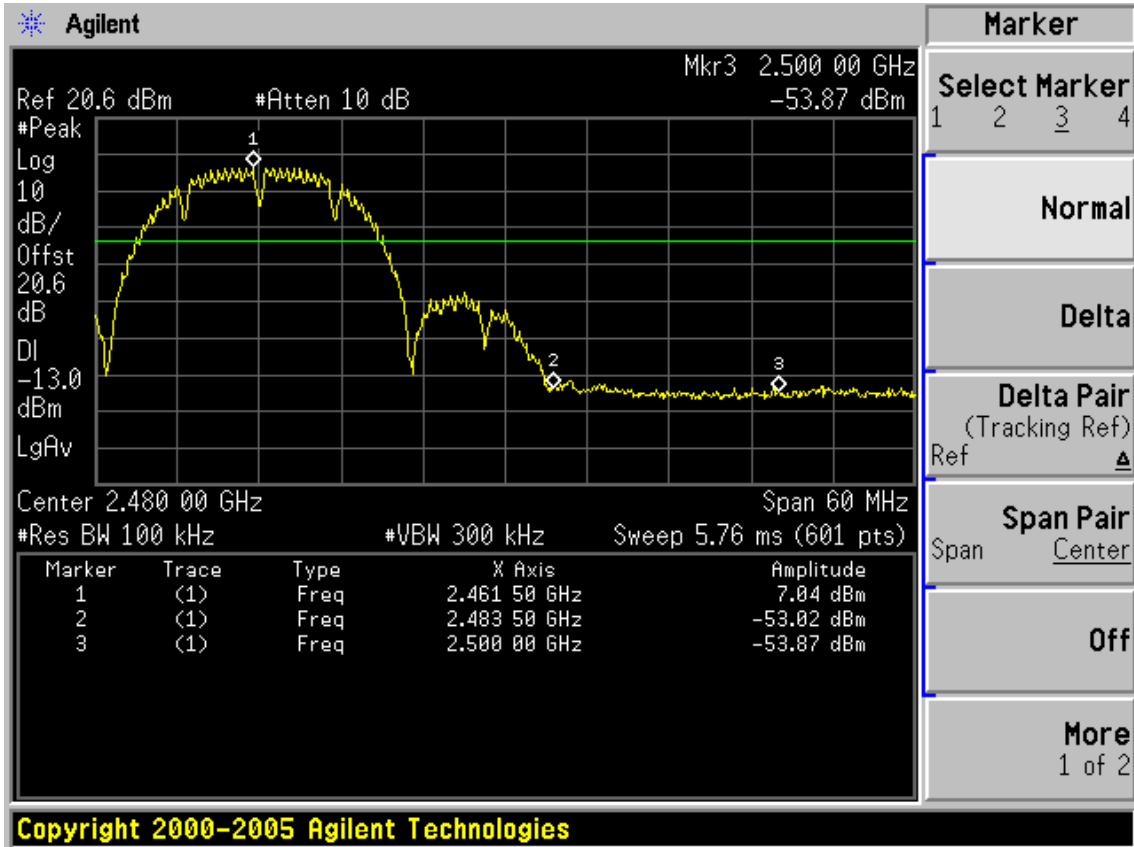


Test CH6: 2437MHz



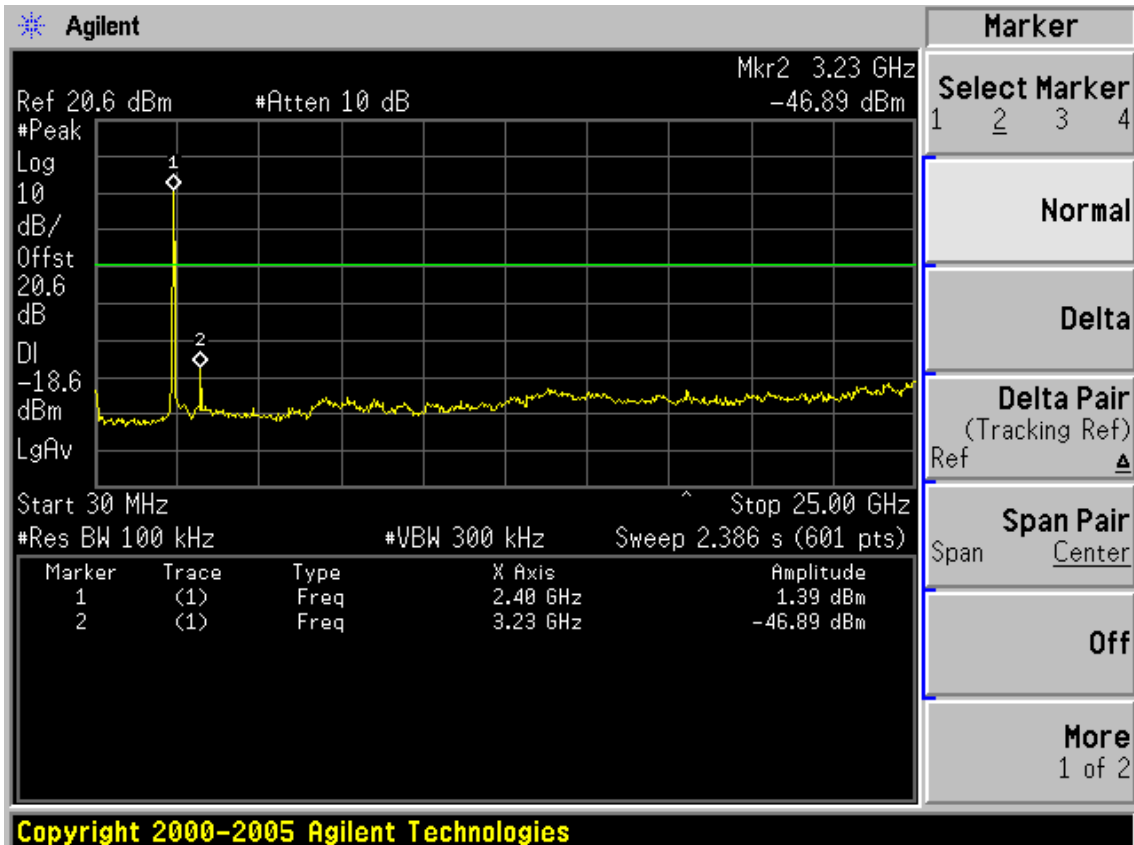
Test CH11: 2462MHz

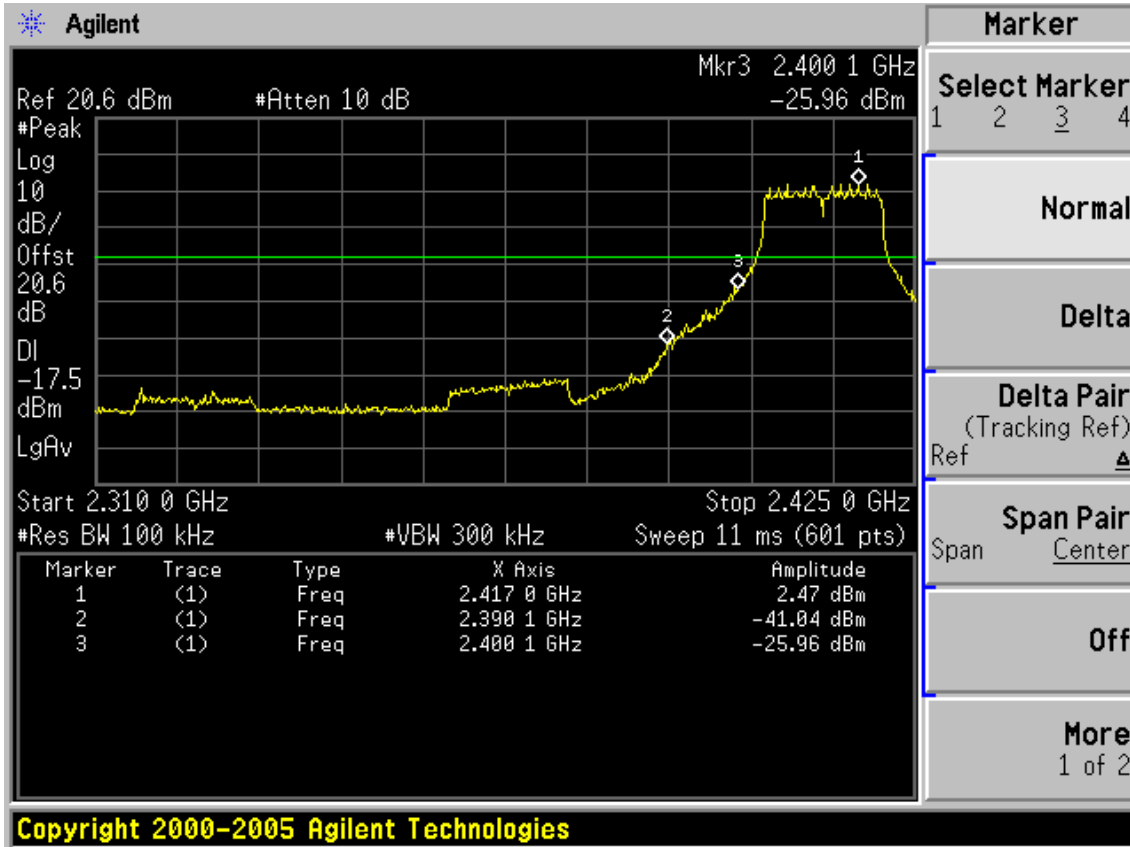




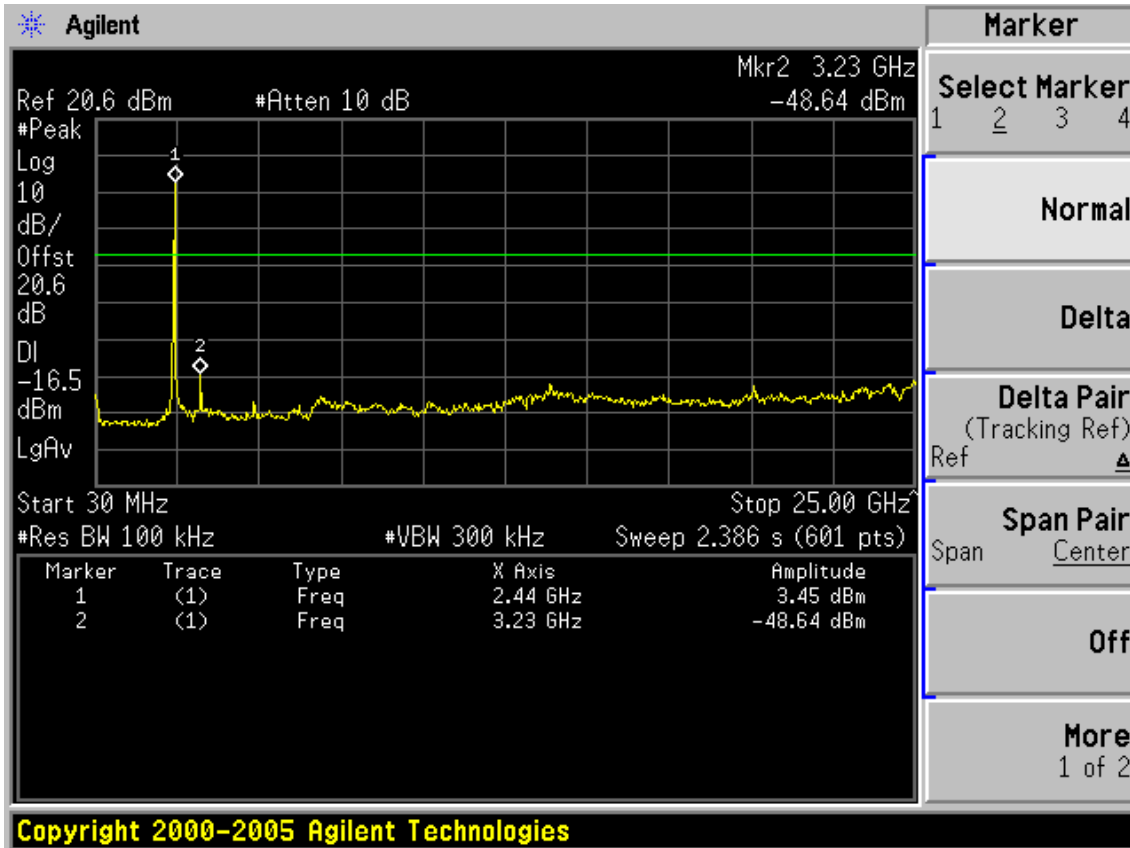
Test Mode: IEEE 802.11g TX

Test CH1: 2412MHz

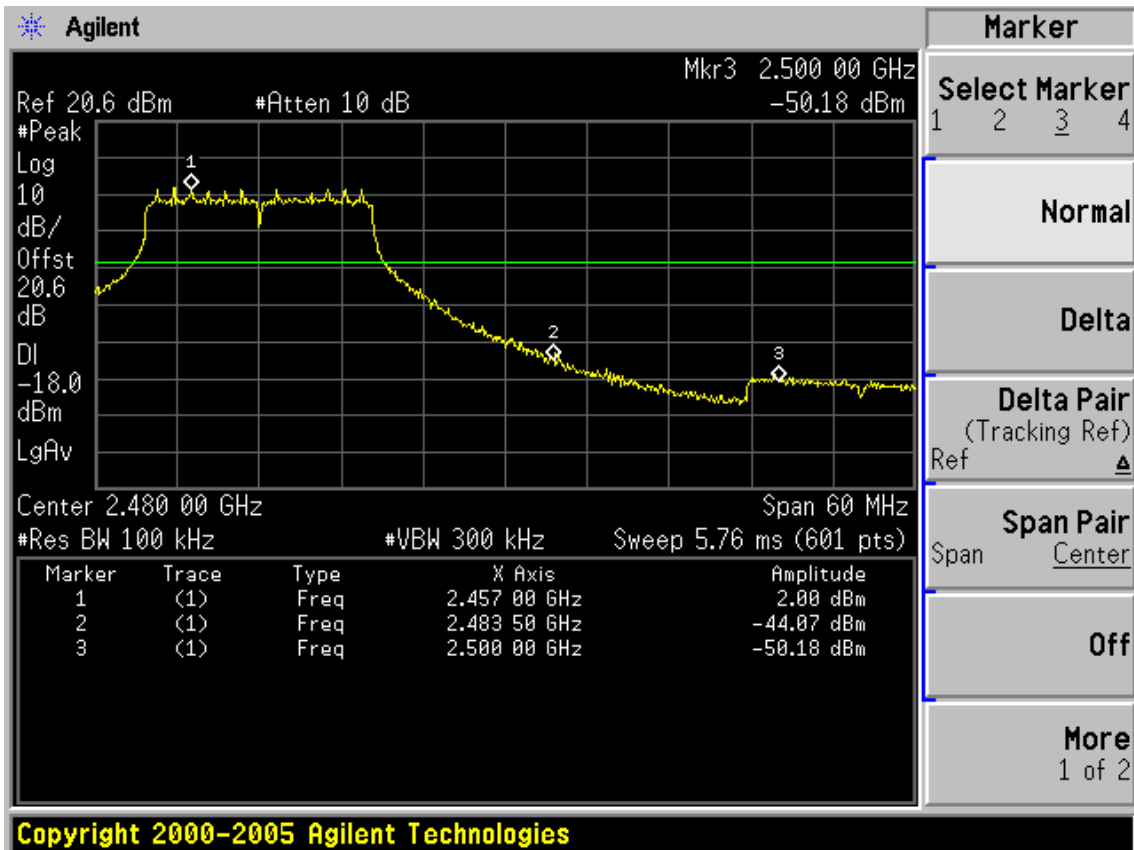
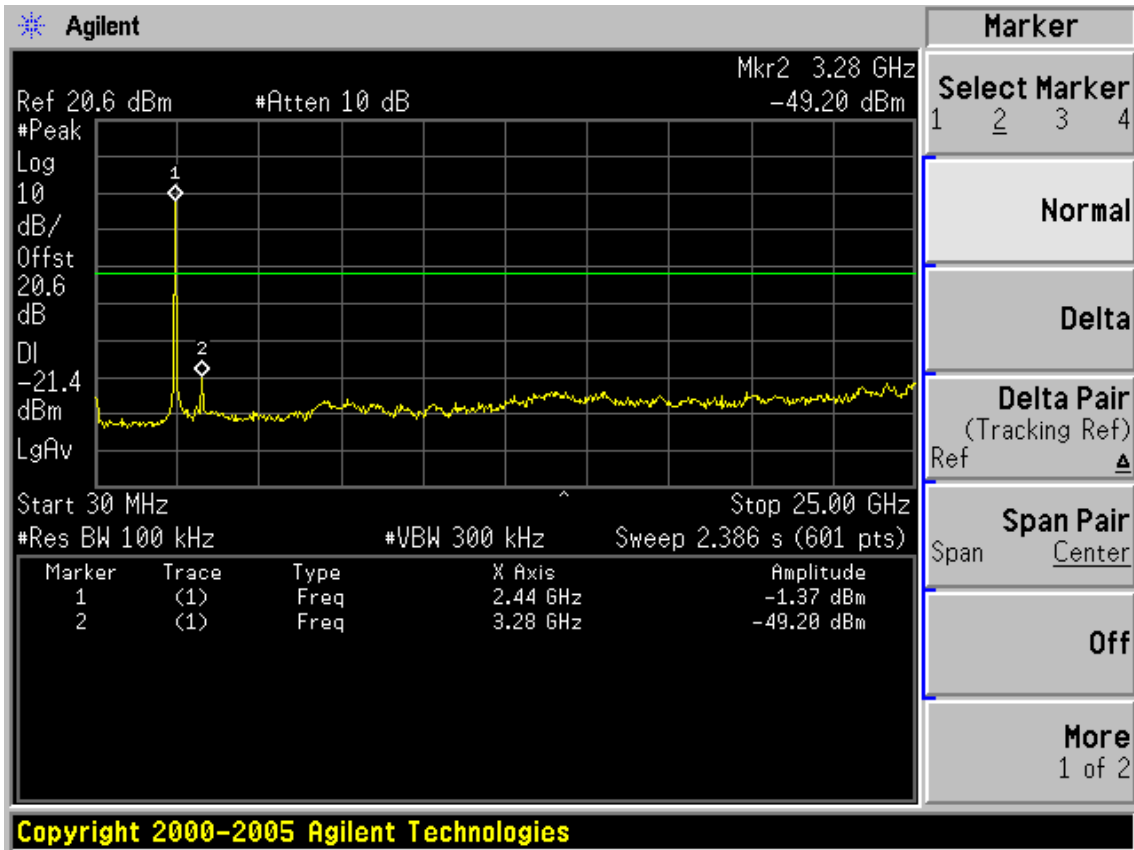




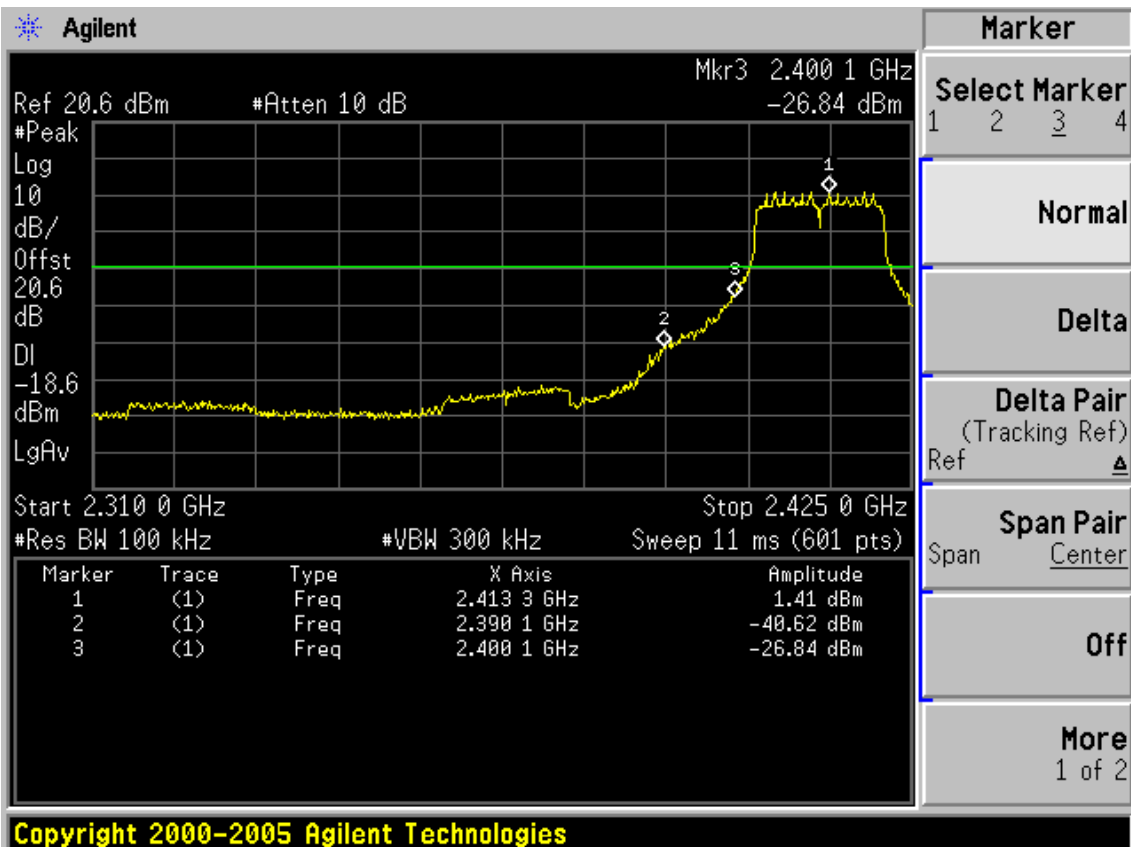
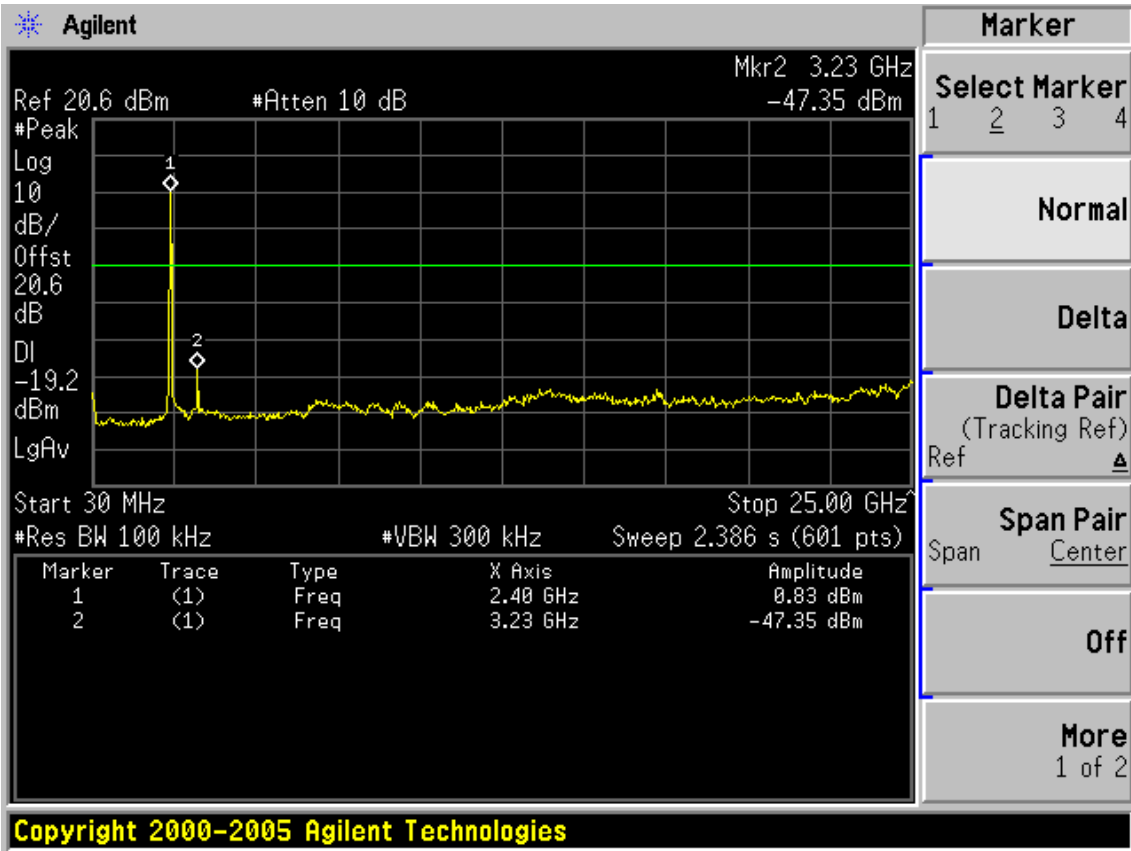
Test CH6: 2437MHz



Test CH11: 2462MHz

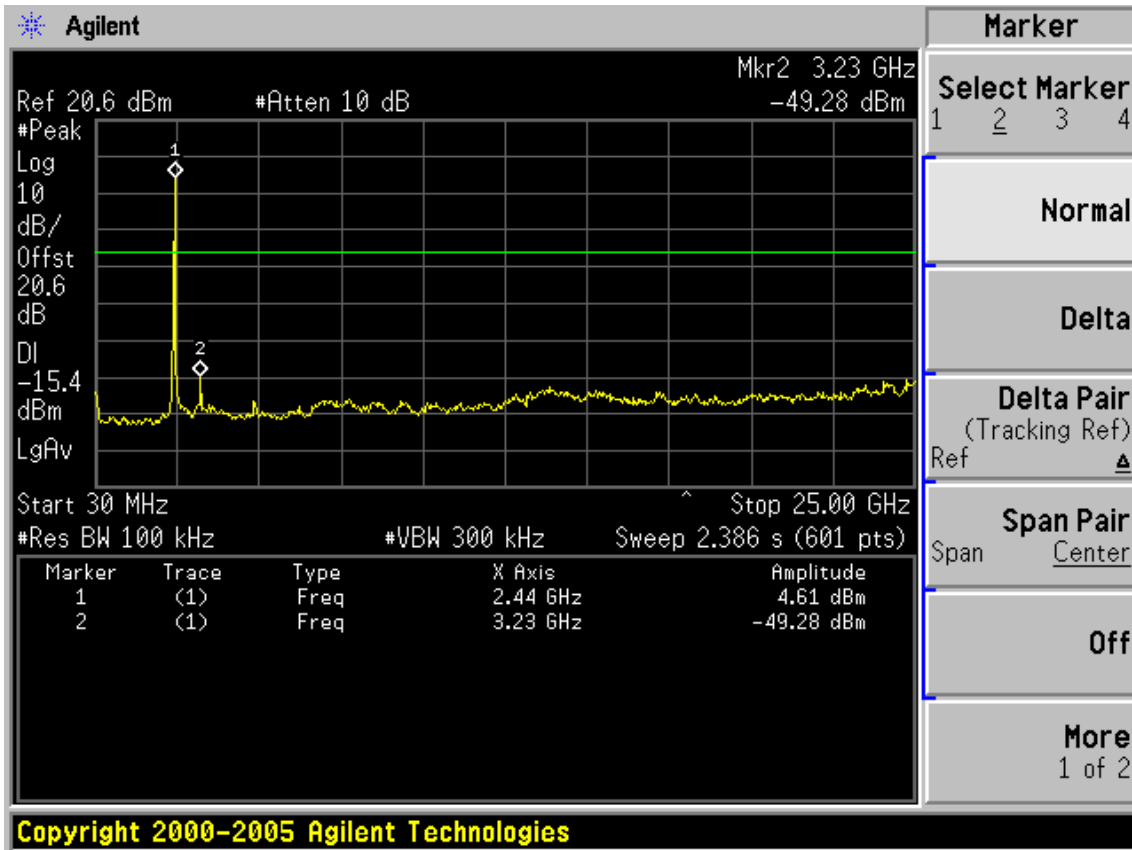


Test Mode: IEEE 802.11n HT20 TX  
 Test CH1: 2412MHz

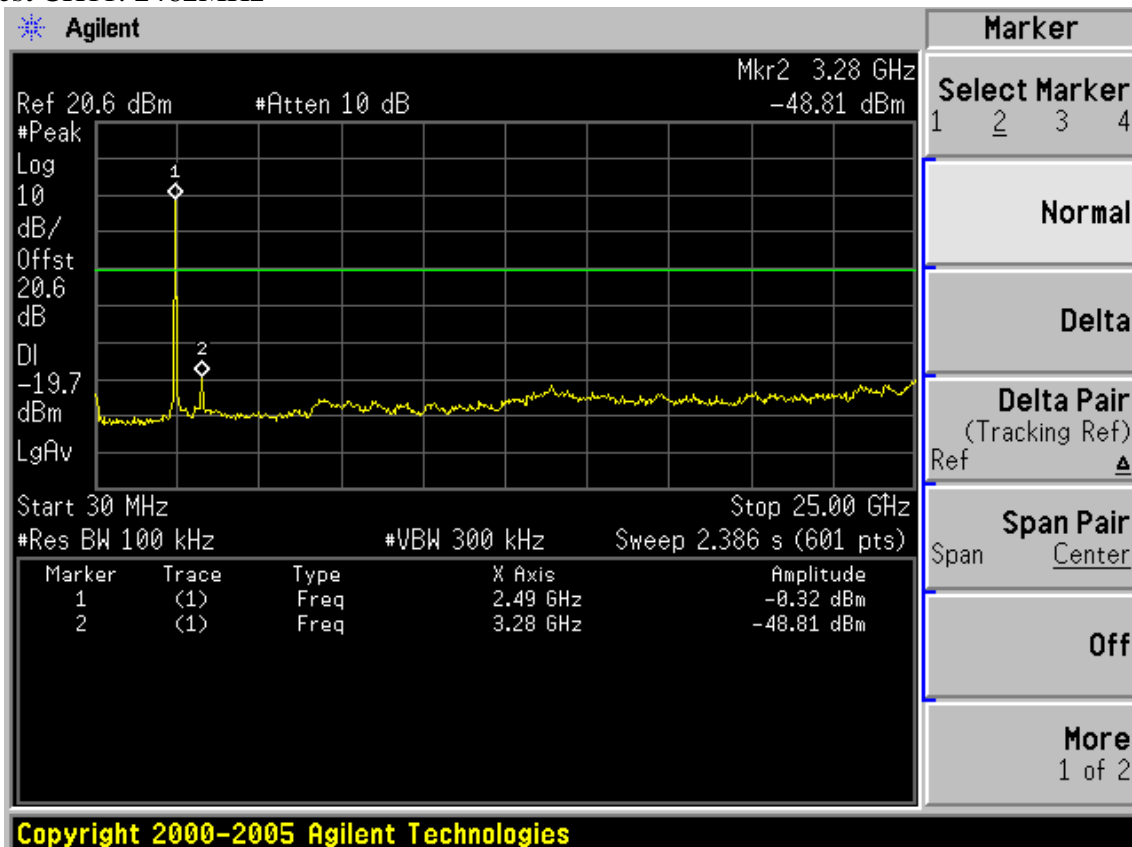


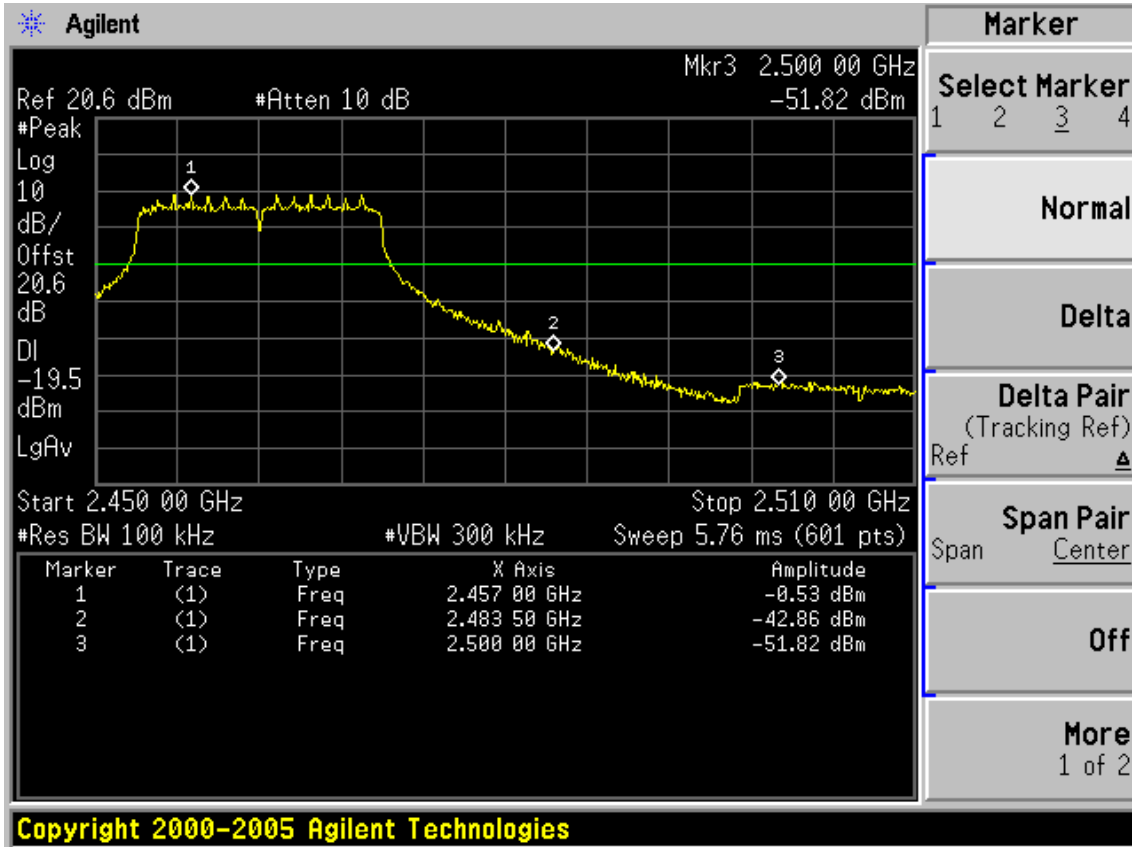


Test CH6: 2437MHz



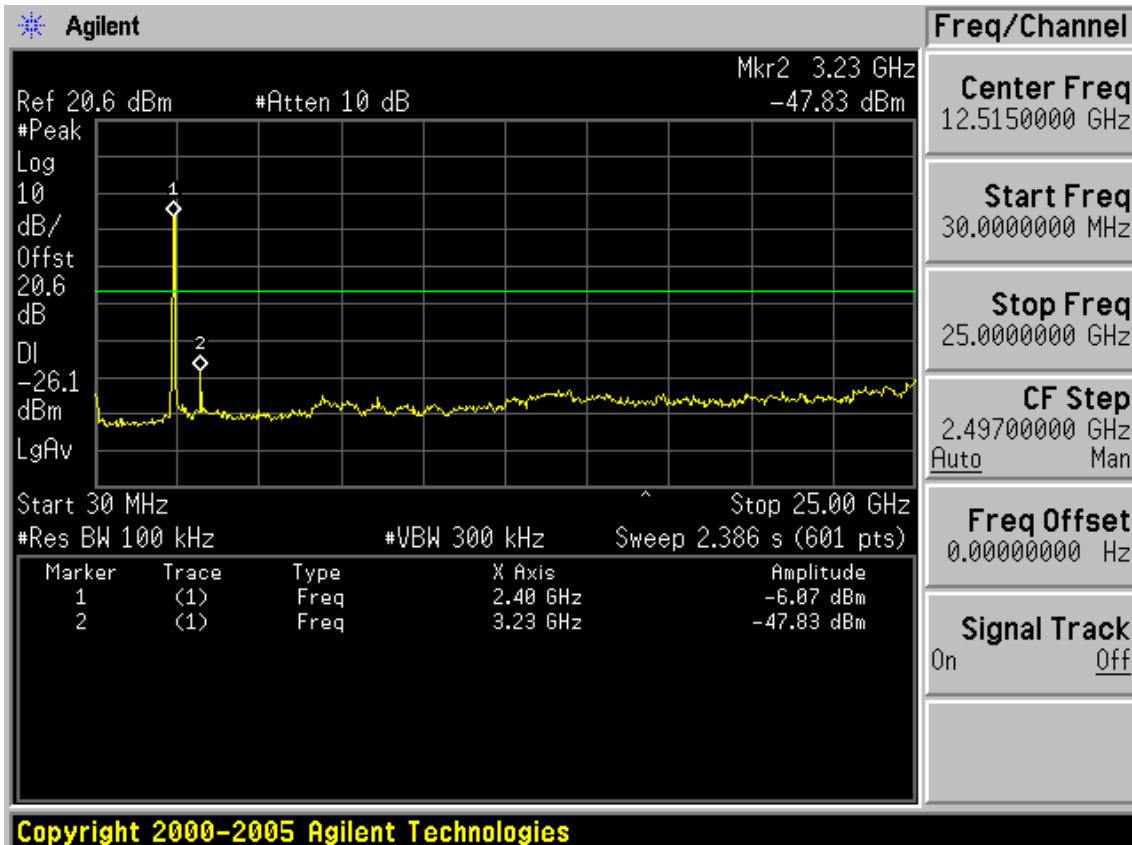
Test CH11: 2462MHz

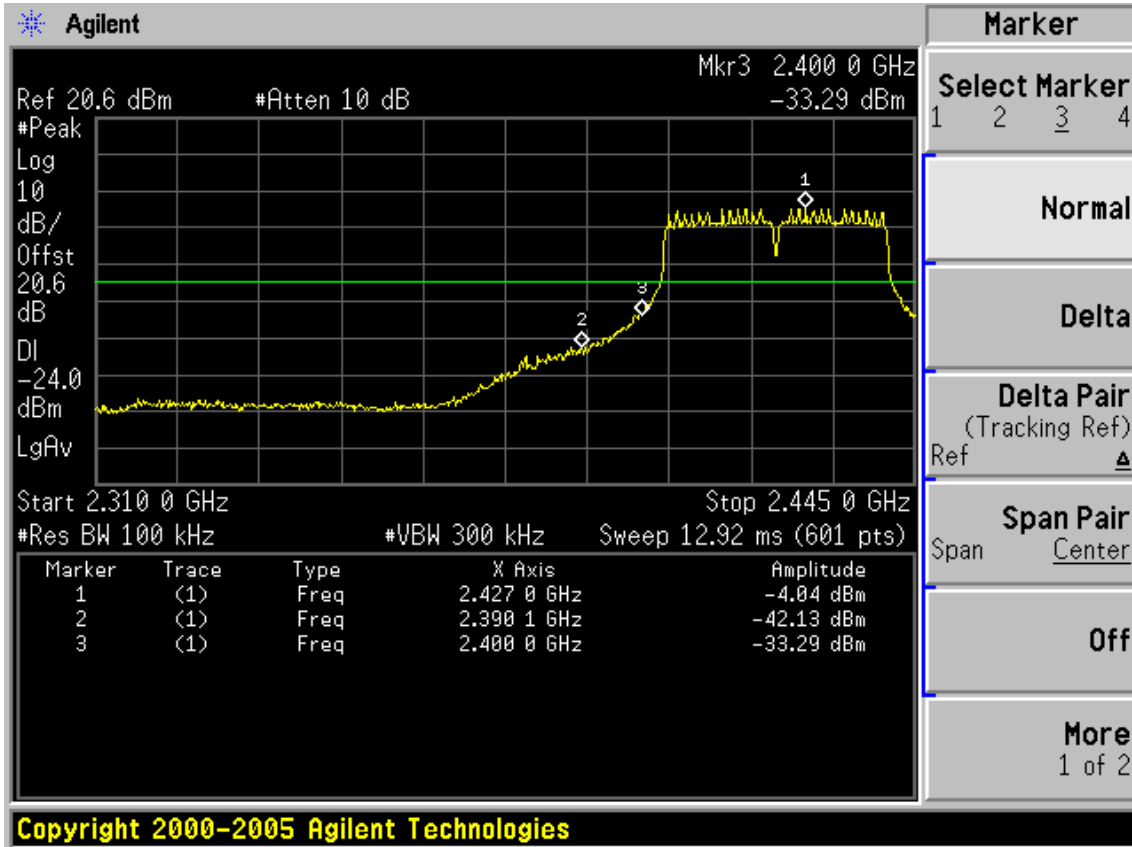




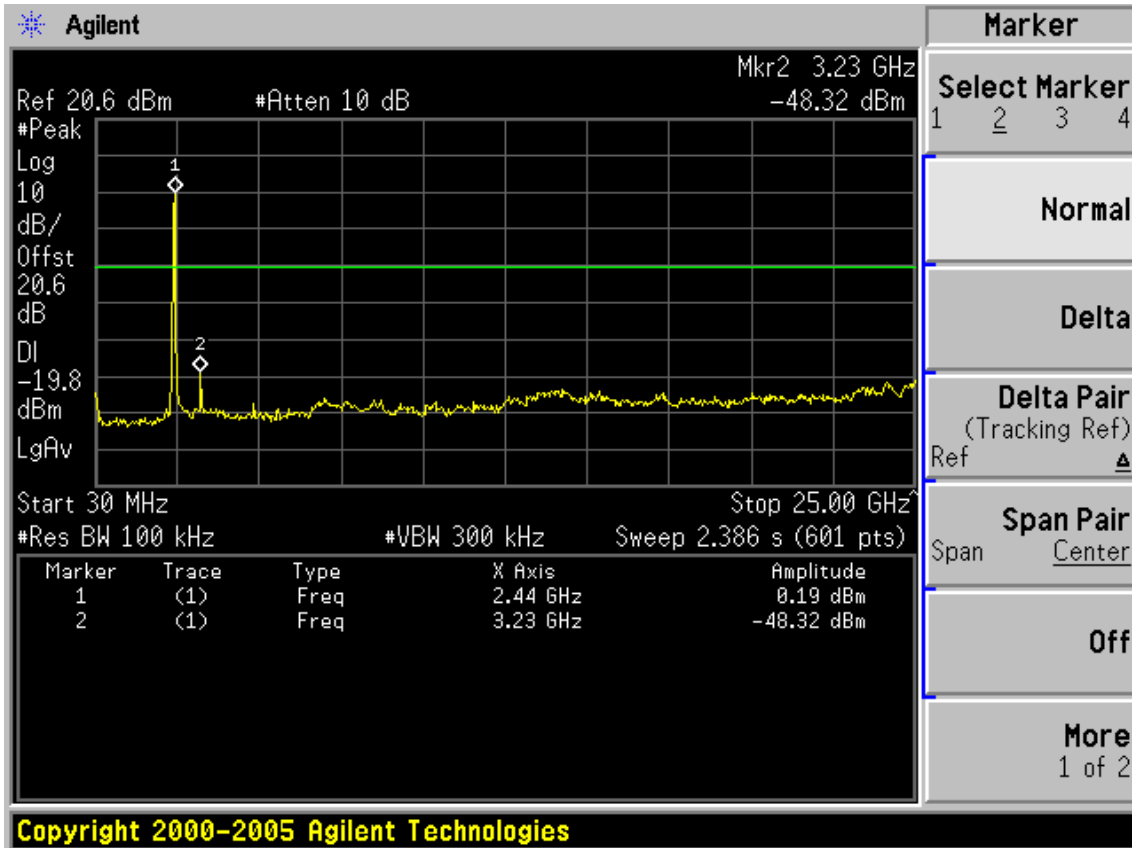
Test Mode: IEEE 802.11n HT40 TX

Test CH1: 2422MHz

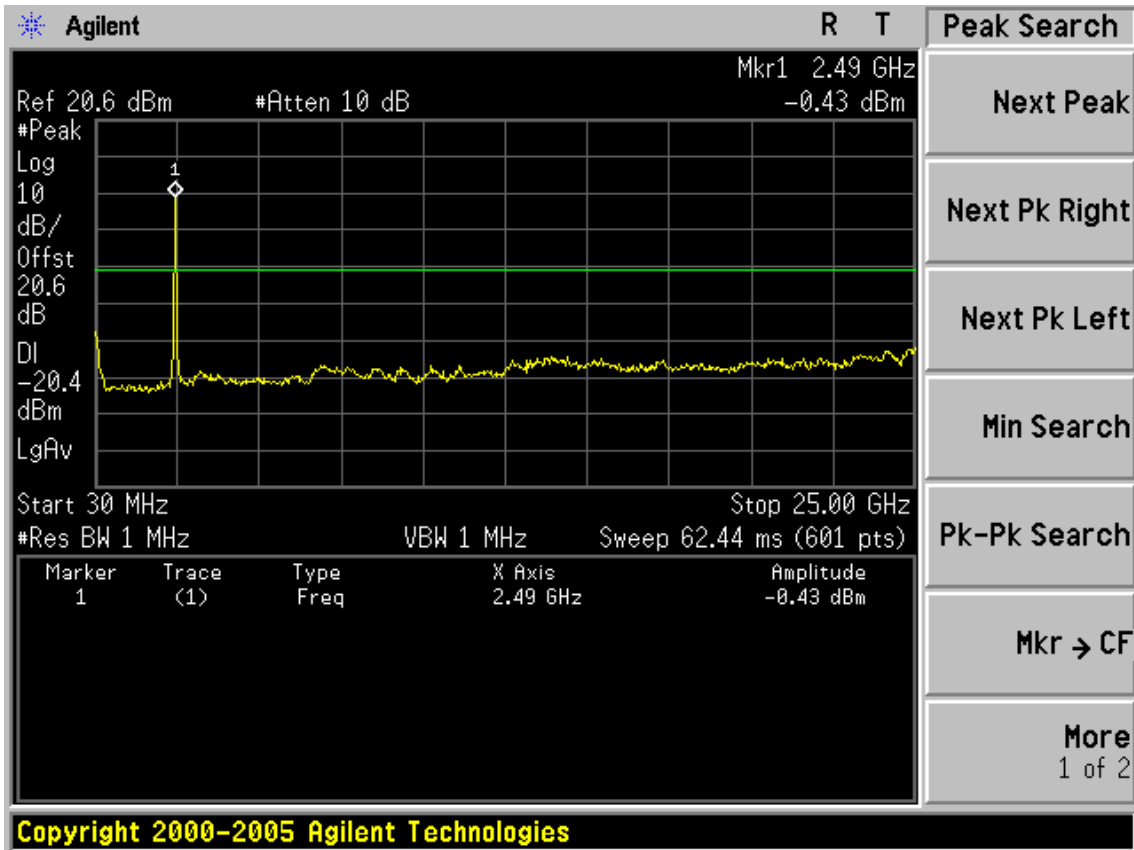




Test CH4: 2437MHz



Test CH7: 2452MHz



## 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.08,11	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	May.25, 11	1.5 Year
3.	Amplifier	Agilent	8449B	3008A02495	May.08, 11	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08,11	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,11	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	May.08,11	1 Year

### 6.2. Limit

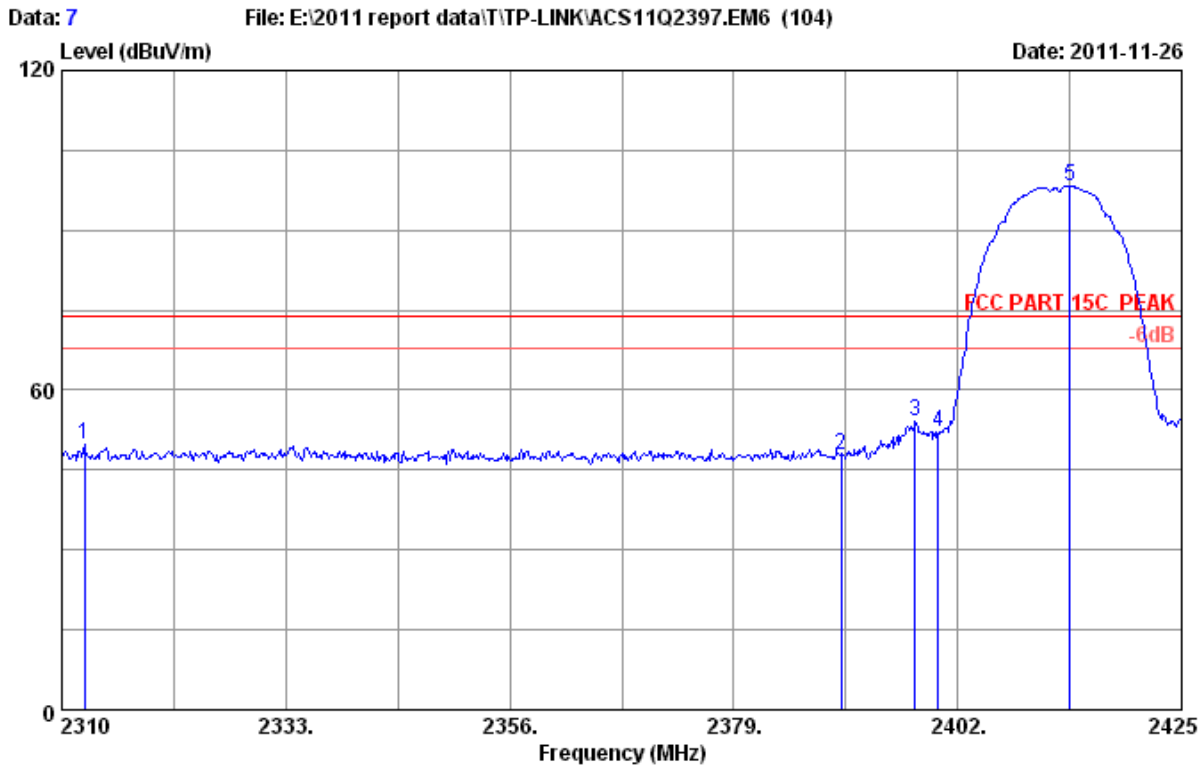
All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental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

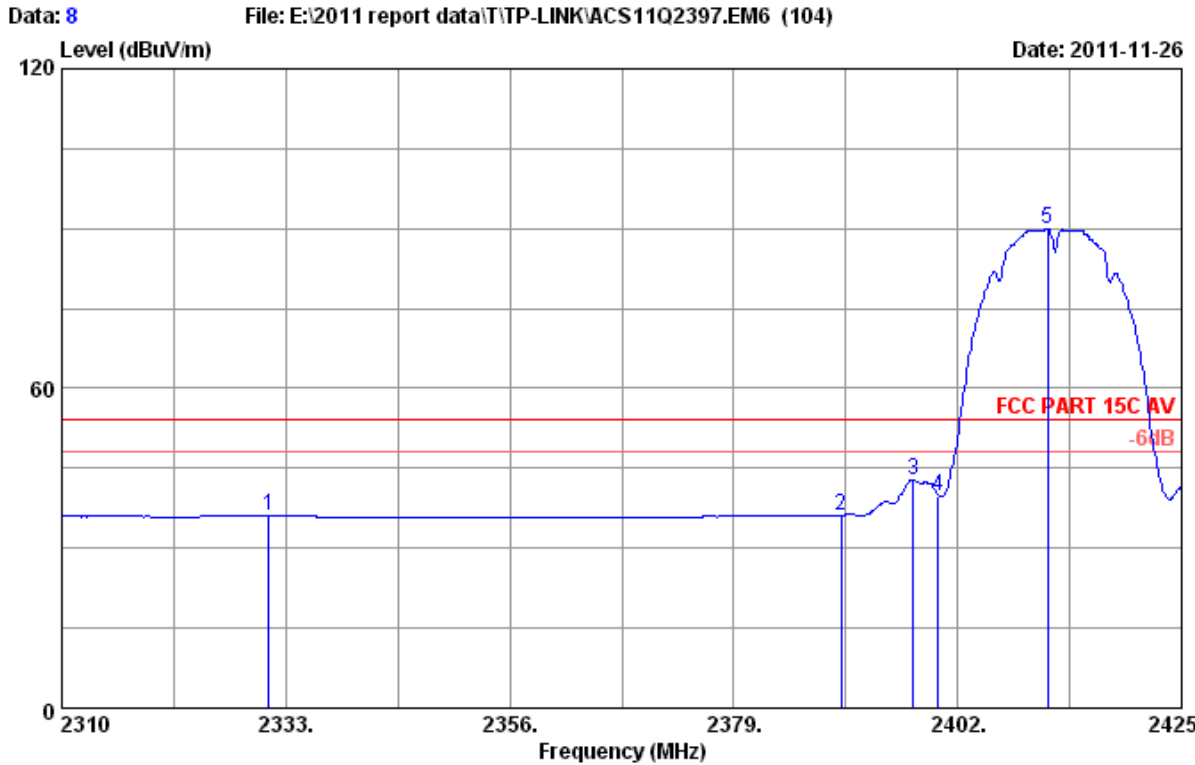
Pass (The testing data was attached in the next pages.)



Site no. : 3# Chamber Data no. : 7  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2312.300	29.39	7.24	36.64	49.78	49.77	74.00	24.23	Peak
2	2390.000	29.44	7.39	36.62	47.75	47.96	74.00	26.04	Peak
3	2397.630	29.44	7.39	36.62	54.05	54.26	74.00	19.74	Peak
4	2400.000	29.44	7.43	36.62	51.98	52.23	74.00	21.77	Peak
5	2413.500	29.45	7.43	36.62	98.13	98.39	74.00	-24.39	Peak

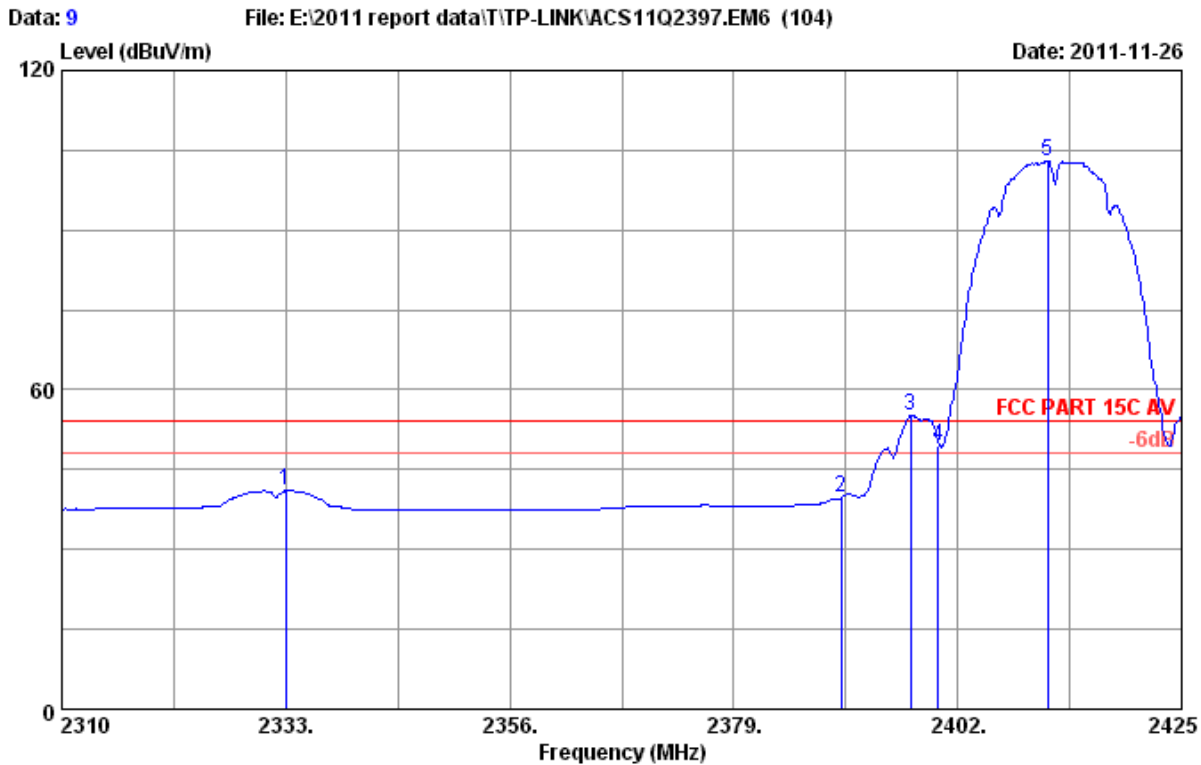
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 8  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Emission				
					Reading (dBUV/m)	Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2331.275	29.40	7.27	36.63	36.08	36.12	54.00	17.88	Average
2	2390.000	29.44	7.39	36.62	35.98	36.19	54.00	17.81	Average
3	2397.400	29.44	7.39	36.62	42.64	42.85	54.00	11.15	Average
4	2400.000	29.44	7.43	36.62	39.48	39.73	54.00	14.27	Average
5	2411.200	29.45	7.43	36.62	89.79	90.05	54.00	-36.05	Average

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

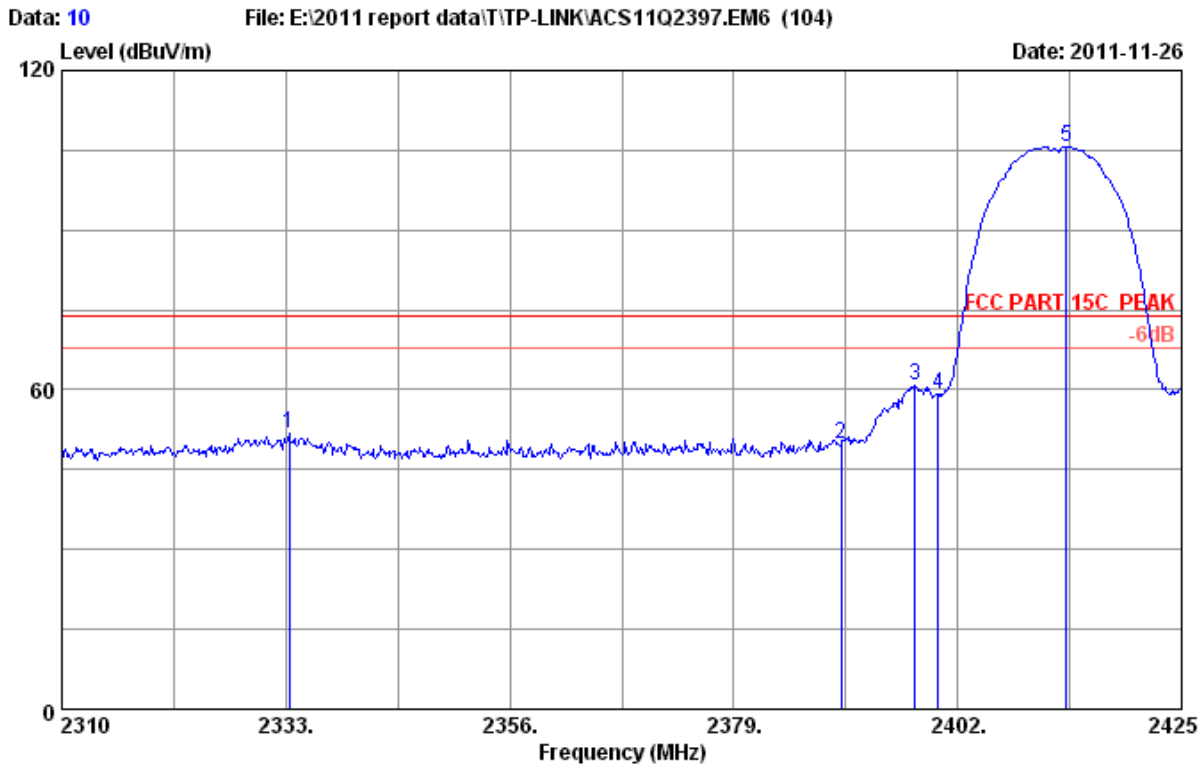


Site no. : 3# Chamber Data no. : 9  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Emission				
					Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	2333.000	29.40	7.27	36.63	40.98	41.02	54.00	12.98	Average
2	2390.000	29.44	7.39	36.62	39.45	39.66	54.00	14.34	Average
3	2397.170	29.44	7.39	36.62	54.98	55.19	54.00	-1.19	Average
4	2400.000	29.44	7.43	36.62	49.29	49.54	54.00	4.46	Average
5	2411.200	29.45	7.43	36.62	102.71	102.97	54.00	-48.97	Average

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

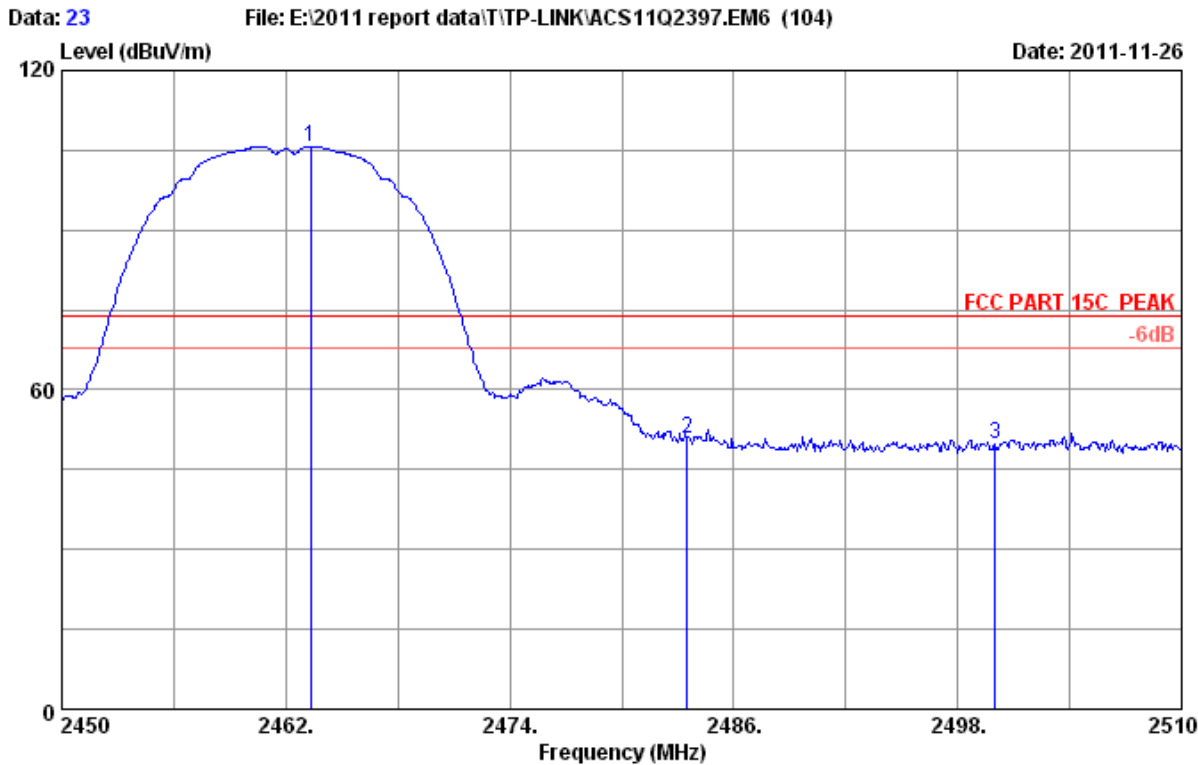




Site no. : 3# Chamber Data no. : 10  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Emission				
					Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	2333.345	29.40	7.27	36.63	51.62	51.66	74.00	22.34	Peak
2	2390.000	29.44	7.39	36.62	49.66	49.87	74.00	24.13	Peak
3	2397.630	29.44	7.39	36.62	60.47	60.68	74.00	13.32	Peak
4	2400.000	29.44	7.43	36.62	58.75	59.00	74.00	15.00	Peak
5	2413.155	29.45	7.43	36.62	105.43	105.69	74.00	-31.69	Peak

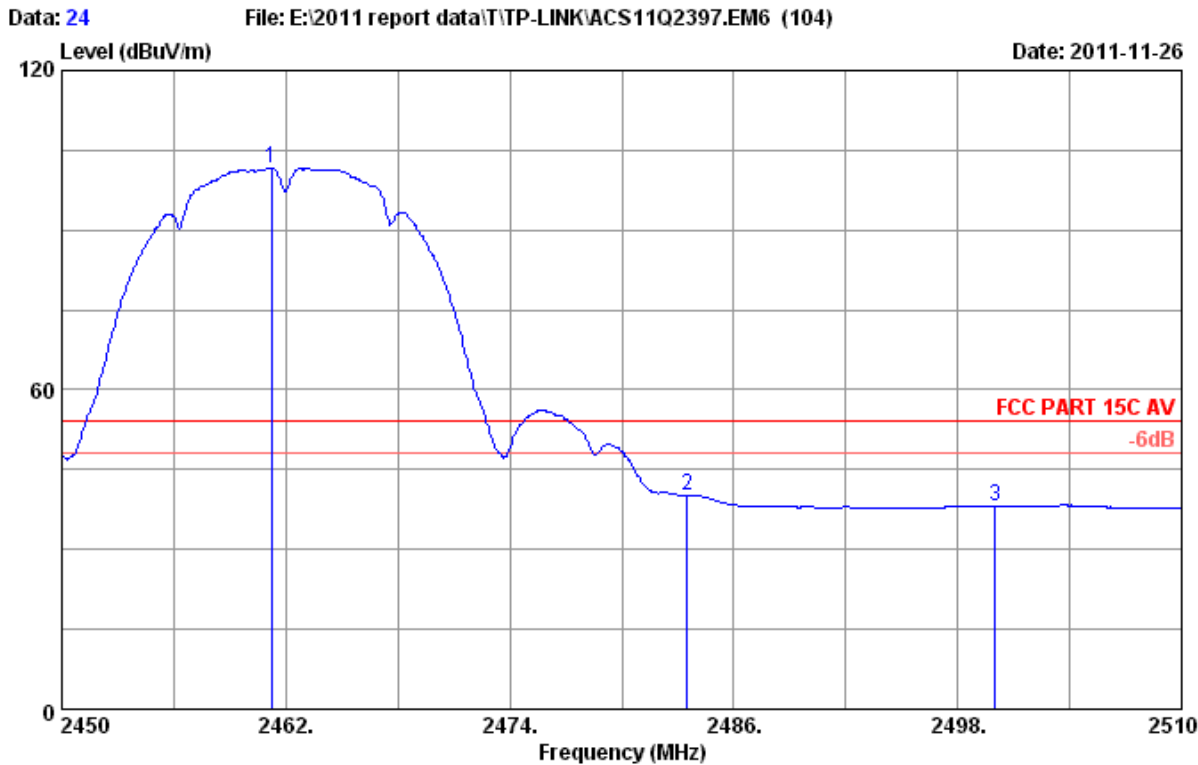
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading  
 -Amp Factor  
 2. The emission levels that are 20dB below the official  
 limit are not reported.



Site no. : 3# Chamber Data no. : 23  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Emission				Remark
					Reading (dBUV/m)	Level (dBUV/m)	Limits (dB)	Margin (dB)	
1	2463.320	29.48	7.54	36.61	105.31	105.72	74.00	-31.72	Peak
2	2483.500	29.49	7.58	36.60	50.44	50.91	74.00	23.09	Peak
3	2500.000	29.50	7.62	36.60	49.17	49.69	74.00	24.31	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading  
 -Amp Factor  
 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 AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH11 2462MHz Tx  
 M/N : NWD3105

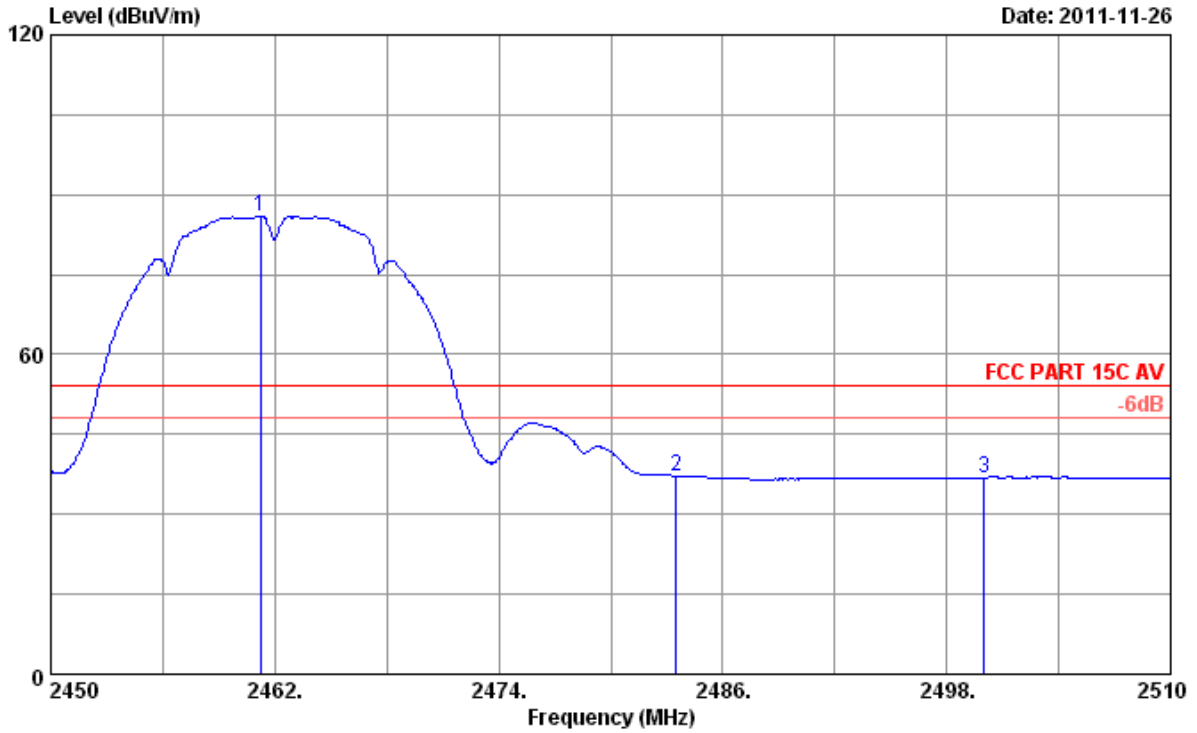
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Emission				
					Reading (dBUV/m)	Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2461.220	29.48	7.54	36.61	101.24	101.65	54.00	-47.65	Average
2	2483.500	29.49	7.58	36.60	39.59	40.06	54.00	13.94	Average
3	2500.000	29.50	7.62	36.60	37.66	38.18	54.00	15.82	Average

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

Data: 25

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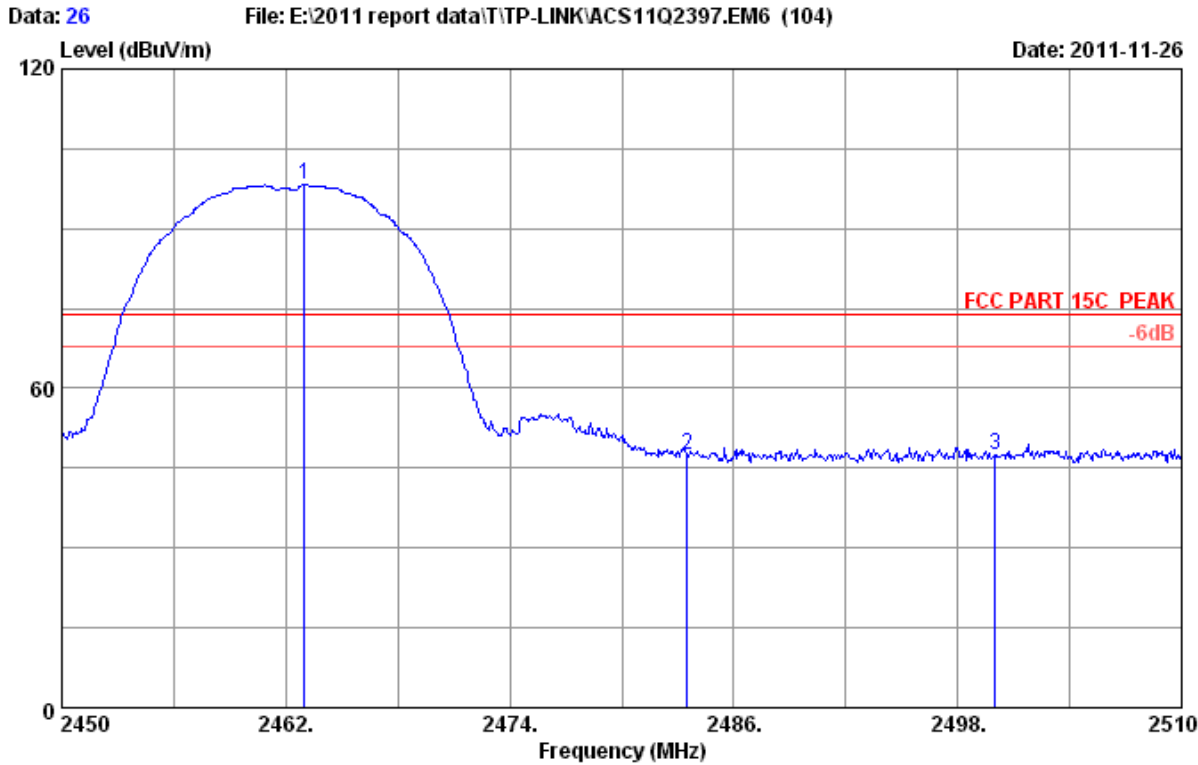
Date: 2011-11-26



Site no. : 3# Chamber Data no. : 25  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	2461.220	29.48	7.54	36.61	85.65	86.06	54.00	-32.06	Average
2	2483.500	29.49	7.58	36.60	36.70	37.17	54.00	16.83	Average
3	2500.000	29.50	7.62	36.60	36.38	36.90	54.00	17.10	Average

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



Site no. : 3# Chamber Data no. : 26  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11b CH11 2462MHz Tx  
 M/N : NWD3105

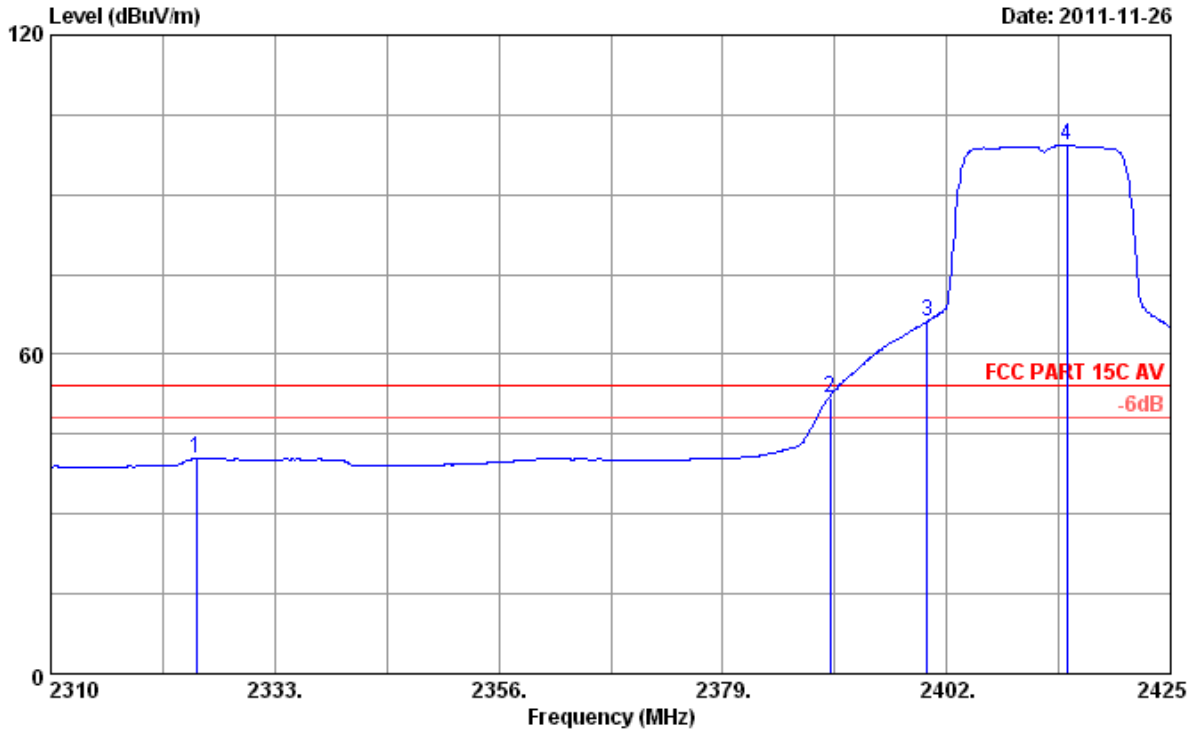
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	2463.020	29.48	7.54	36.61	97.85	98.26	74.00	-24.26	Peak
2	2483.500	29.49	7.58	36.60	46.92	47.39	74.00	26.61	Peak
3	2500.000	29.50	7.62	36.60	47.00	47.52	74.00	26.48	Peak

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

Data: 27

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Date: 2011-11-26



Site no. : 3# Chamber Data no. : 27  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH1 2412MHz Tx  
 M/N : NWD3105

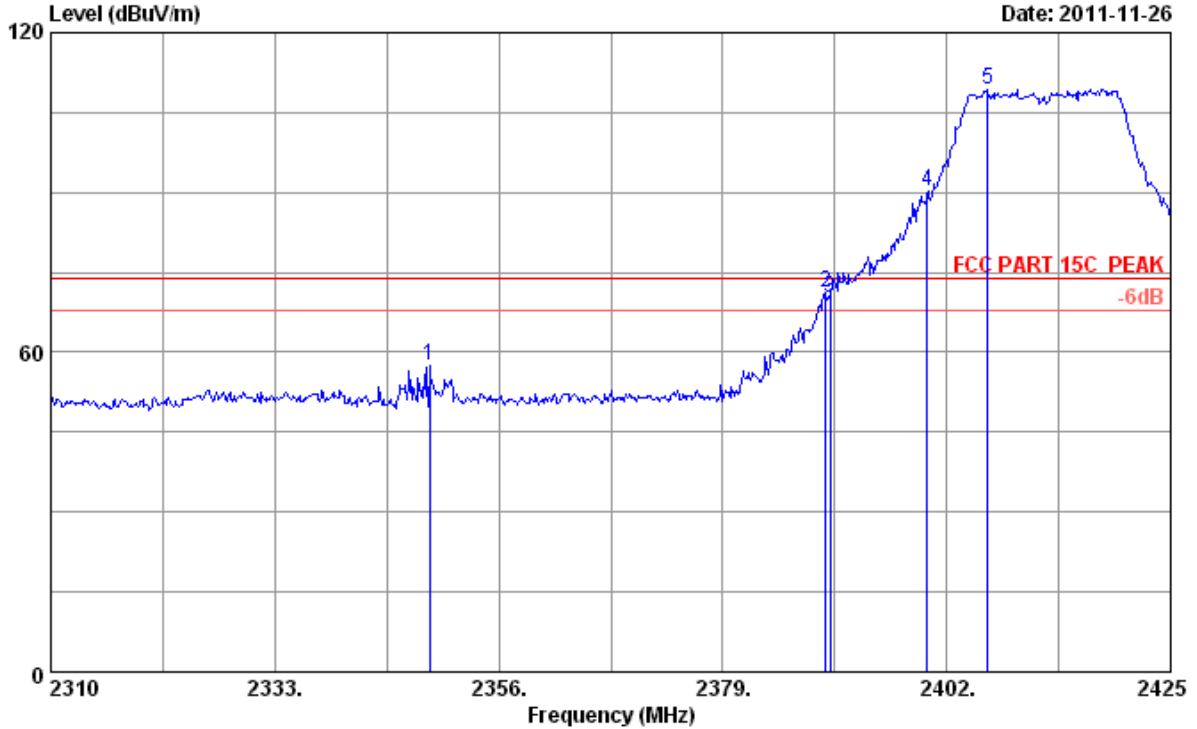
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2324.950	29.40	7.27	36.63	40.33	40.37	54.00	13.63	Average
2	2390.000	29.44	7.39	36.62	51.73	51.94	54.00	2.06	Average
3	2400.000	29.44	7.43	36.62	66.08	66.33	54.00	-12.33	Average
4	2414.305	29.45	7.43	36.62	98.93	99.19	54.00	-45.19	Average

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

Data: 28

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Date: 2011-11-26



Site no. : 3# Chamber Data no. : 28  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH1 2412MHz Tx  
 M/N : NWD3105

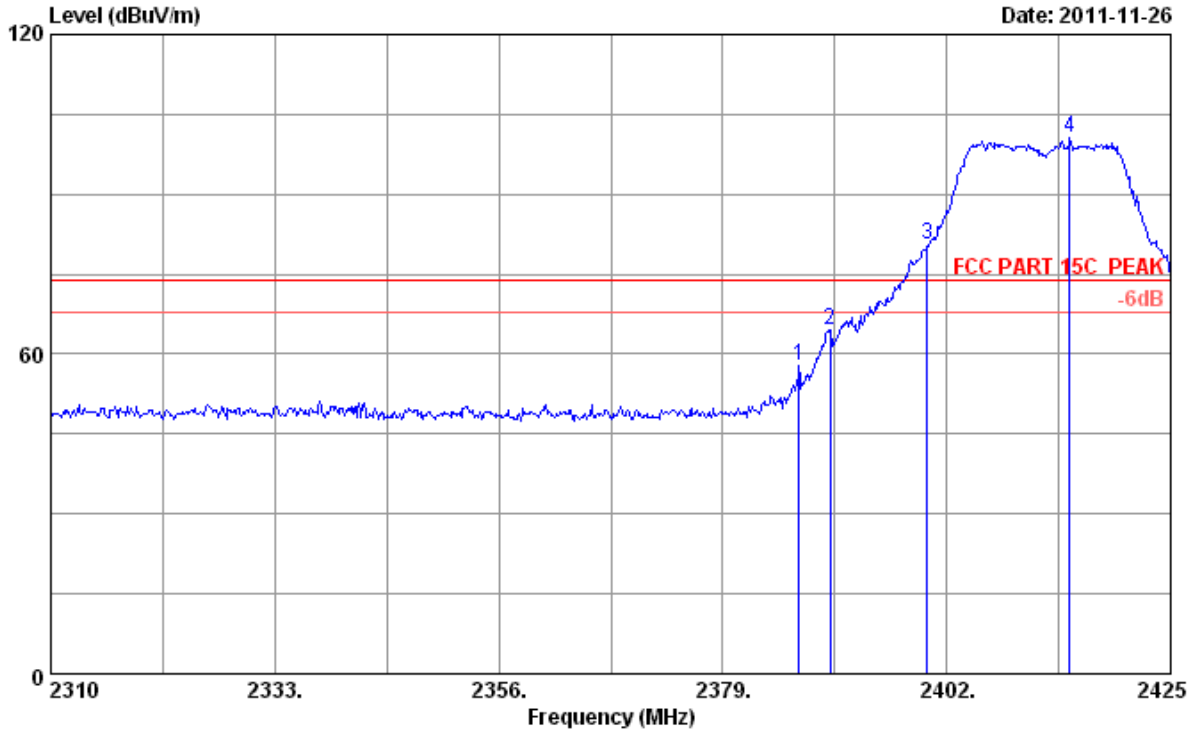
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2348.870	29.41	7.31	36.63	57.33	57.42	74.00	16.58	Peak
2	2389.580	29.44	7.39	36.62	70.88	71.09	74.00	2.91	Peak
3	2390.000	29.44	7.39	36.62	70.07	70.28	74.00	3.72	Peak
4	2400.000	29.44	7.43	36.62	89.87	90.12	74.00	-16.12	Peak
5	2406.255	29.45	7.43	36.62	109.17	109.43	74.00	-35.43	Peak

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

Data: 29

File: E:\2011 report data\T\TP-LINK\ACS11Q2397.EM6 (104)

Date: 2011-11-26

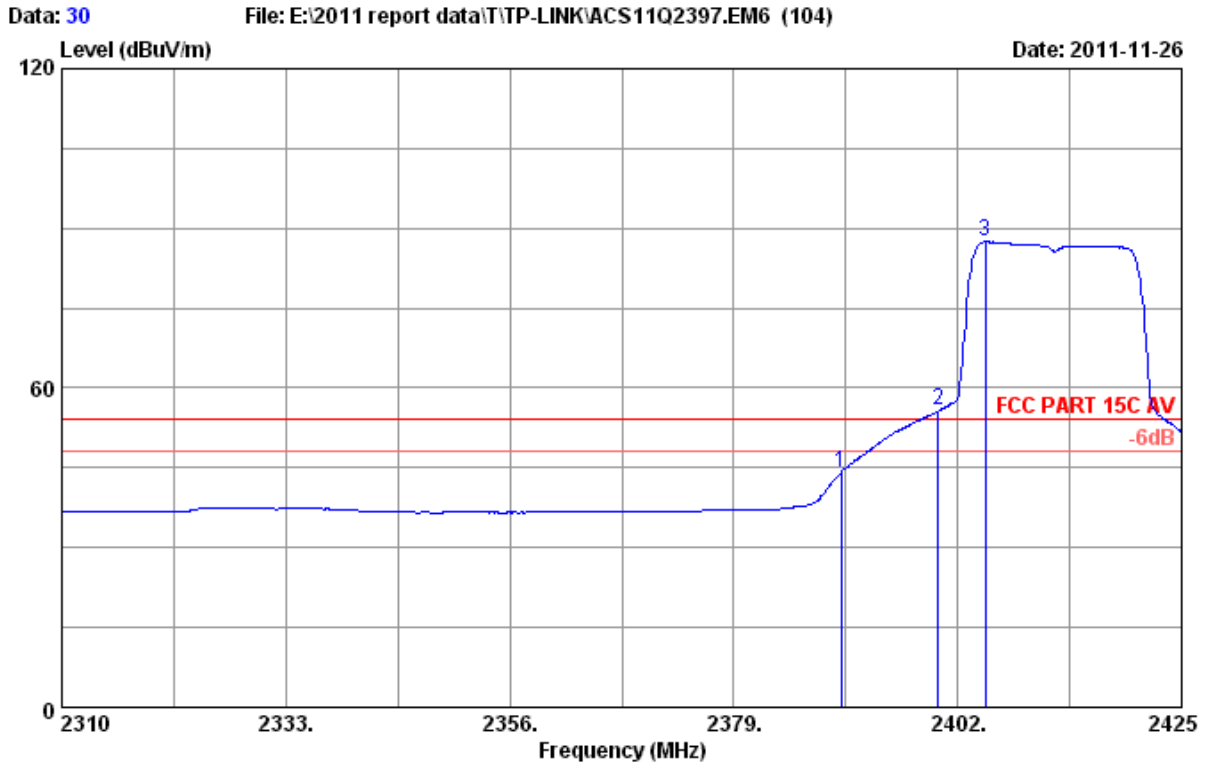


Site no. : 3# Chamber Data no. : 29  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2386.820	29.44	7.39	36.62	57.56	57.77	74.00	16.23	Peak
2	2390.000	29.44	7.39	36.62	64.28	64.49	74.00	9.51	Peak
3	2400.000	29.44	7.43	36.62	80.31	80.56	74.00	-6.56	Peak
4	2414.650	29.45	7.43	36.62	100.46	100.72	74.00	-26.72	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor  
 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. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Emission				
					Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	43.91	44.12	54.00	9.88	Average
2	2400.000	29.44	7.43	36.62	55.55	55.80	54.00	-1.80	Average
3	2404.875	29.45	7.43	36.62	87.21	87.47	54.00	-33.47	Average

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

Data: 43

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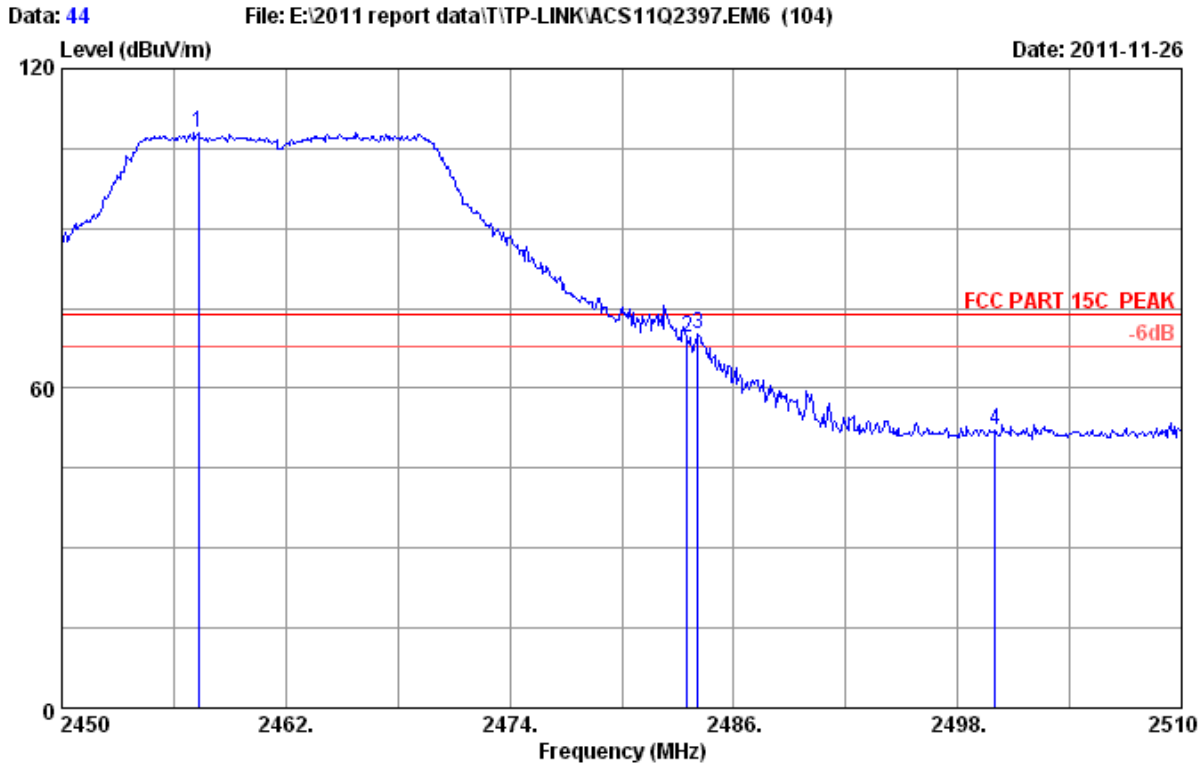
Date: 2011-11-26



Site no. : 3# Chamber Data no. : 43  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2455.220	29.48	7.50	36.61	97.06	97.43	54.00	-43.43	Average
2	2483.500	29.49	7.58	36.60	51.05	51.52	54.00	2.48	Average
3	2500.000	29.50	7.62	36.60	40.26	40.78	54.00	13.22	Average

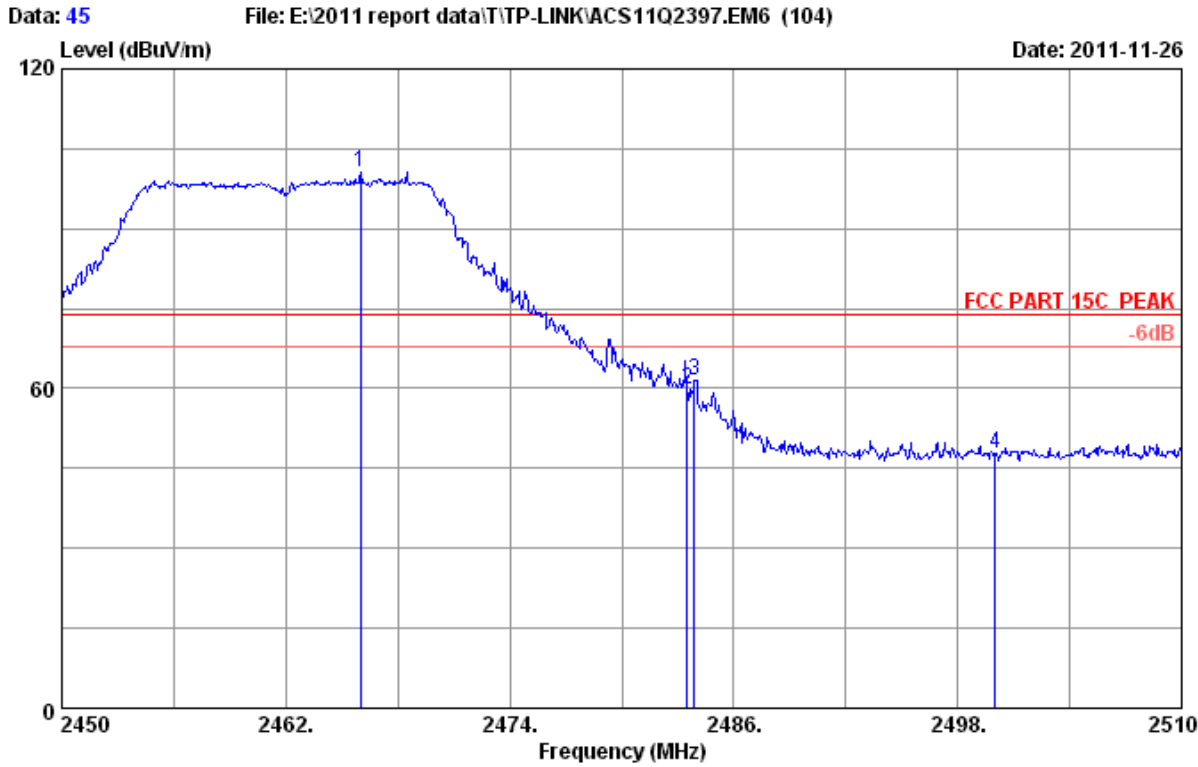
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 44  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2457.320	29.48	7.50	36.61	107.69	108.06	74.00	-34.06	Peak
2	2483.500	29.49	7.58	36.60	68.97	69.44	74.00	4.56	Peak
3	2484.080	29.49	7.58	36.60	69.86	70.33	74.00	3.67	Peak
4	2500.000	29.50	7.62	36.60	51.73	52.25	74.00	21.75	Peak

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



Site no. : 3# Chamber Data no. : 45  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH11 2462MHz Tx  
 M/N : NWD3105

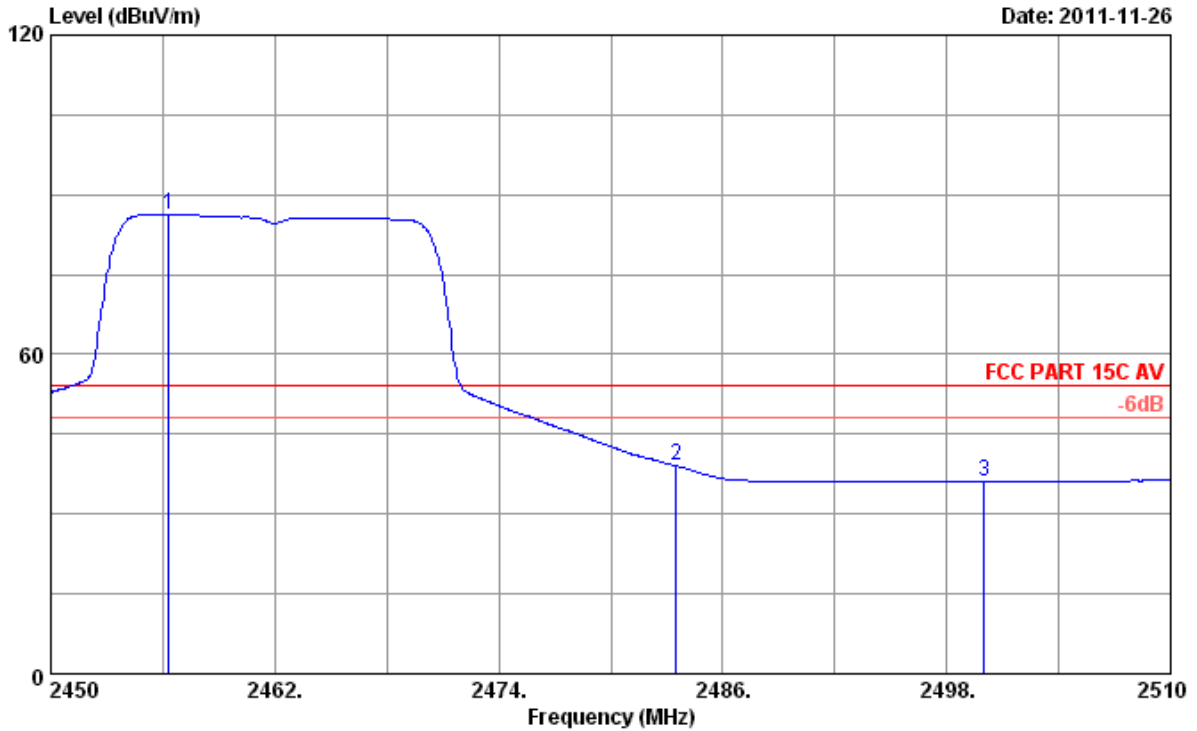
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2466.020	29.48	7.54	36.61	100.18	100.59	74.00	-26.59	Peak
2	2483.500	29.49	7.58	36.60	59.20	59.67	74.00	14.33	Peak
3	2483.900	29.49	7.58	36.60	60.99	61.46	74.00	12.54	Peak
4	2500.000	29.50	7.62	36.60	47.12	47.64	74.00	26.36	Peak

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

Data: 46

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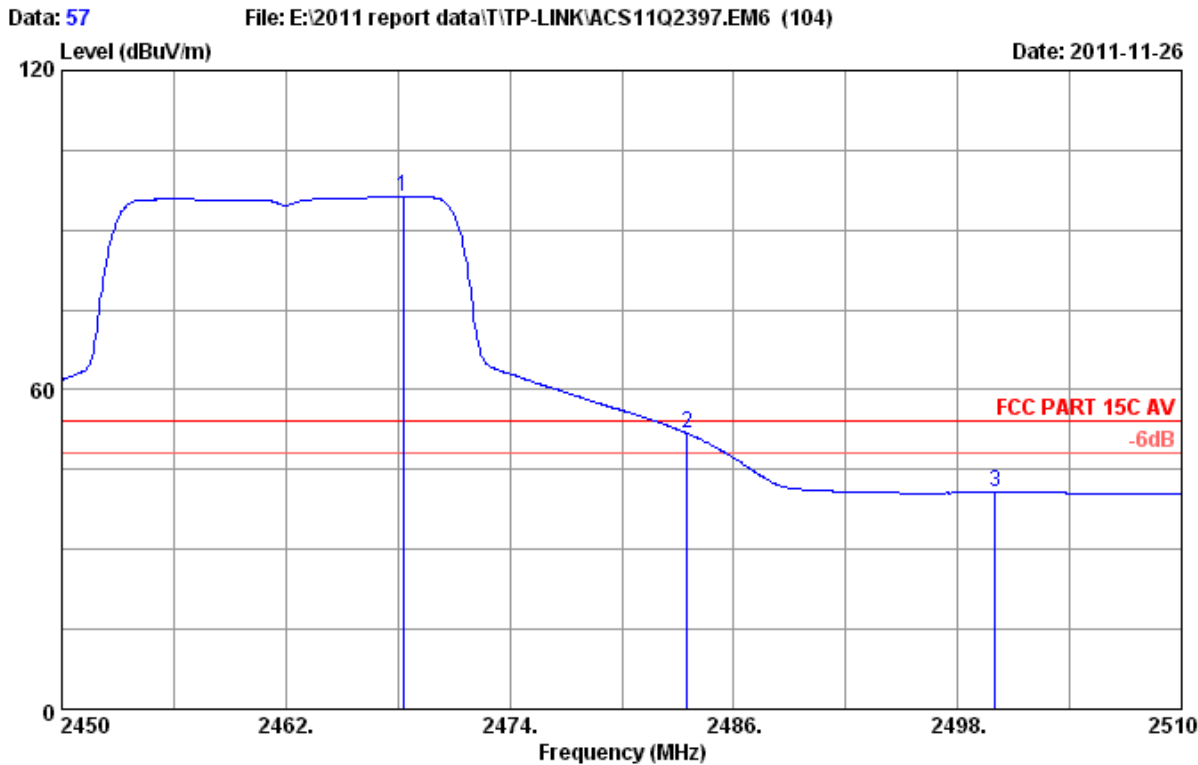
Date: 2011-11-26



Site no. : 3# Chamber Data no. : 46  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11g CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2456.300	29.48	7.50	36.61	85.88	86.25	54.00	-32.25	Average
2	2483.500	29.49	7.58	36.60	38.60	39.07	54.00	14.93	Average
3	2500.000	29.50	7.62	36.60	35.68	36.20	54.00	17.80	Average

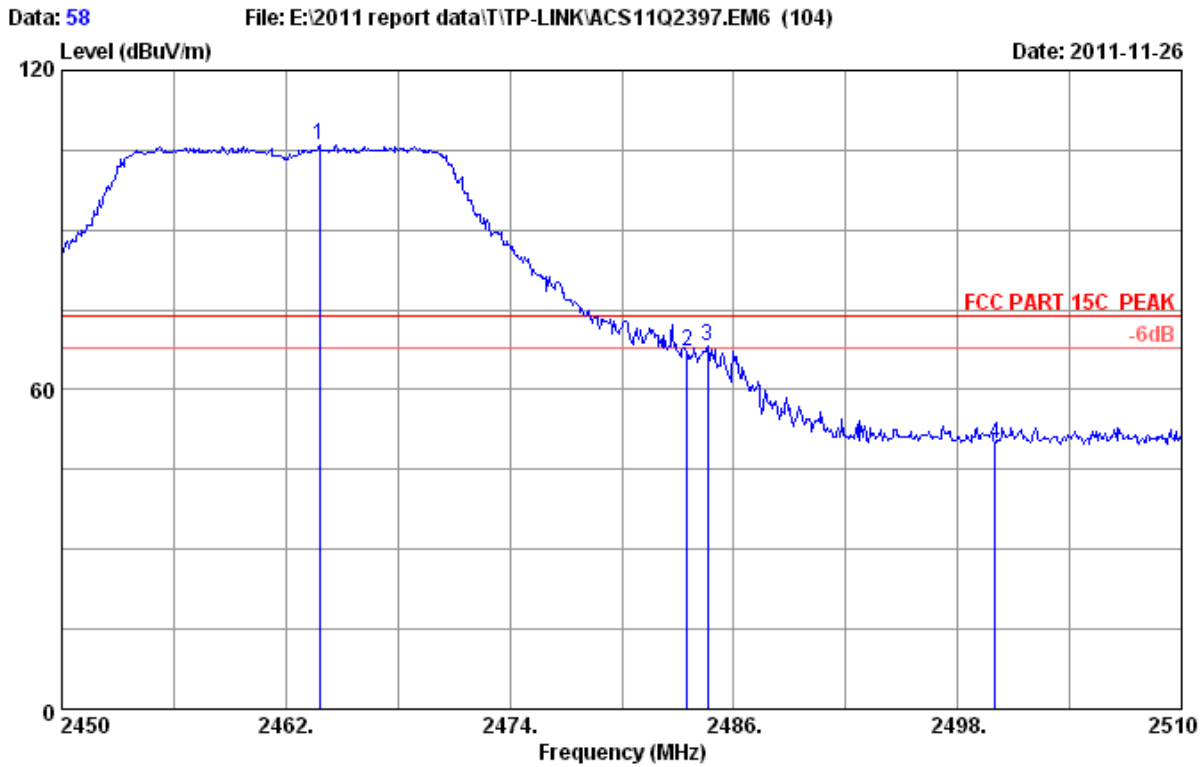
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 57  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Emission				
					Reading (dBUV/m)	Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2468.300	29.48	7.54	36.60	95.79	96.21	54.00	-42.21	Average
2	2483.500	29.49	7.58	36.60	51.34	51.81	54.00	2.19	Average
3	2500.000	29.50	7.62	36.60	40.23	40.75	54.00	13.25	Average

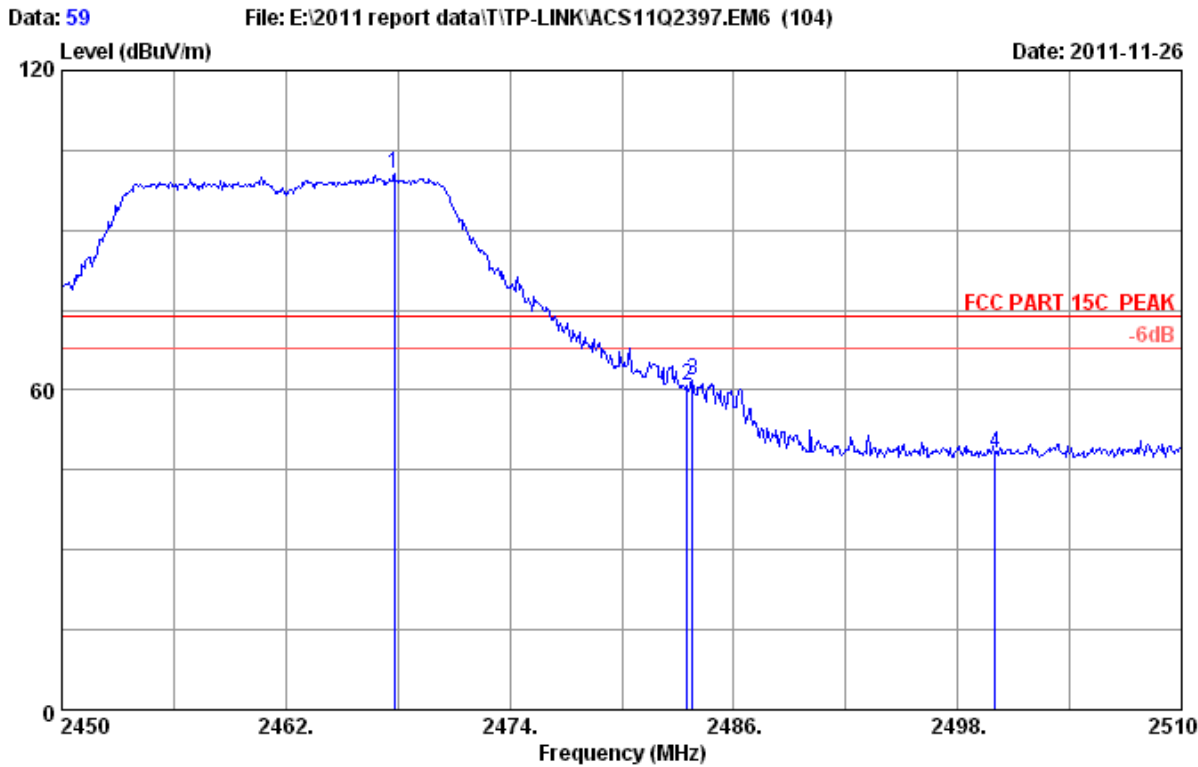
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 58  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	2463.800	29.48	7.54	36.61	105.55	105.96	74.00	-31.96	Peak
2	2483.500	29.49	7.58	36.60	66.67	67.14	74.00	6.86	Peak
3	2484.620	29.49	7.58	36.60	67.71	68.18	74.00	5.82	Peak
4	2500.000	29.50	7.62	36.60	49.43	49.95	74.00	24.05	Peak

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



Site no. : 3# Chamber Data no. : 59  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH11 2462MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	2467.820	29.48	7.54	36.60	100.32	100.74	74.00	-26.74	Peak
2	2483.500	29.49	7.58	36.60	60.20	60.67	74.00	13.33	Peak
3	2483.780	29.49	7.58	36.60	61.25	61.72	74.00	12.28	Peak
4	2500.000	29.50	7.62	36.60	47.61	48.13	74.00	25.87	Peak

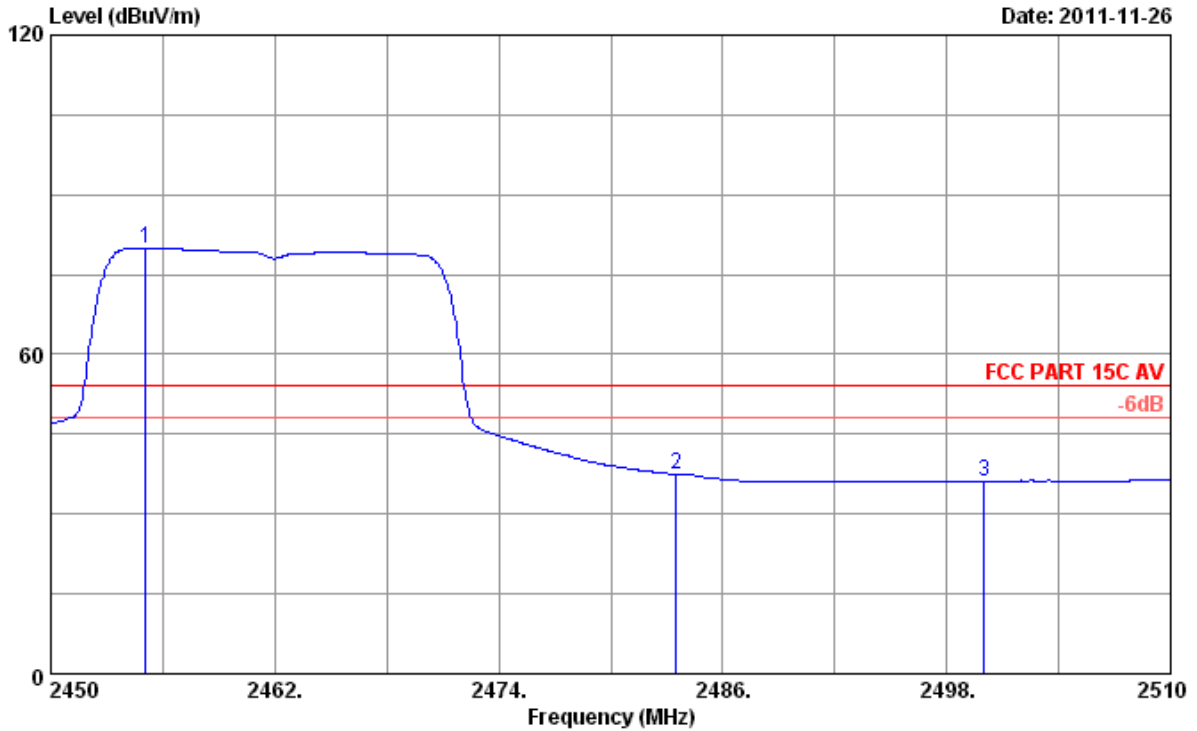
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Data: 60

File: E:\2011 report data\T\TP-LINK\ACS11Q2397.EM6 (104)

Date: 2011-11-26



Site no. : 3# Chamber Data no. : 60  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH11 2462MHz Tx  
 M/N : NWD3105

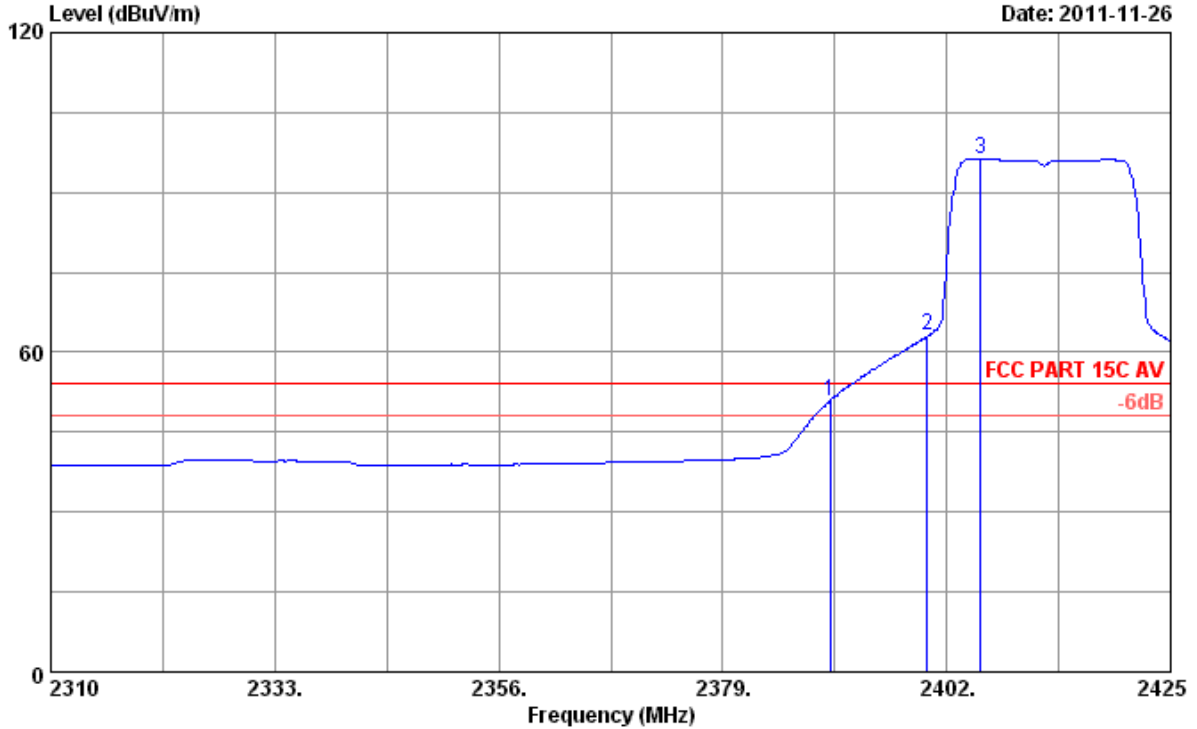
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2455.100	29.48	7.50	36.61	79.64	80.01	54.00	-26.01	Average
2	2483.500	29.49	7.58	36.60	37.07	37.54	54.00	16.46	Average
3	2500.000	29.50	7.62	36.60	35.67	36.19	54.00	17.81	Average

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

Data: 73

File: E:\2011 report data\T\TP-LINK\ACS11Q2397.EM6 (104)

Date: 2011-11-26



Site no. : 3# Chamber Data no. : 73  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH1 2412MHz Tx  
 M/N : NWD3105

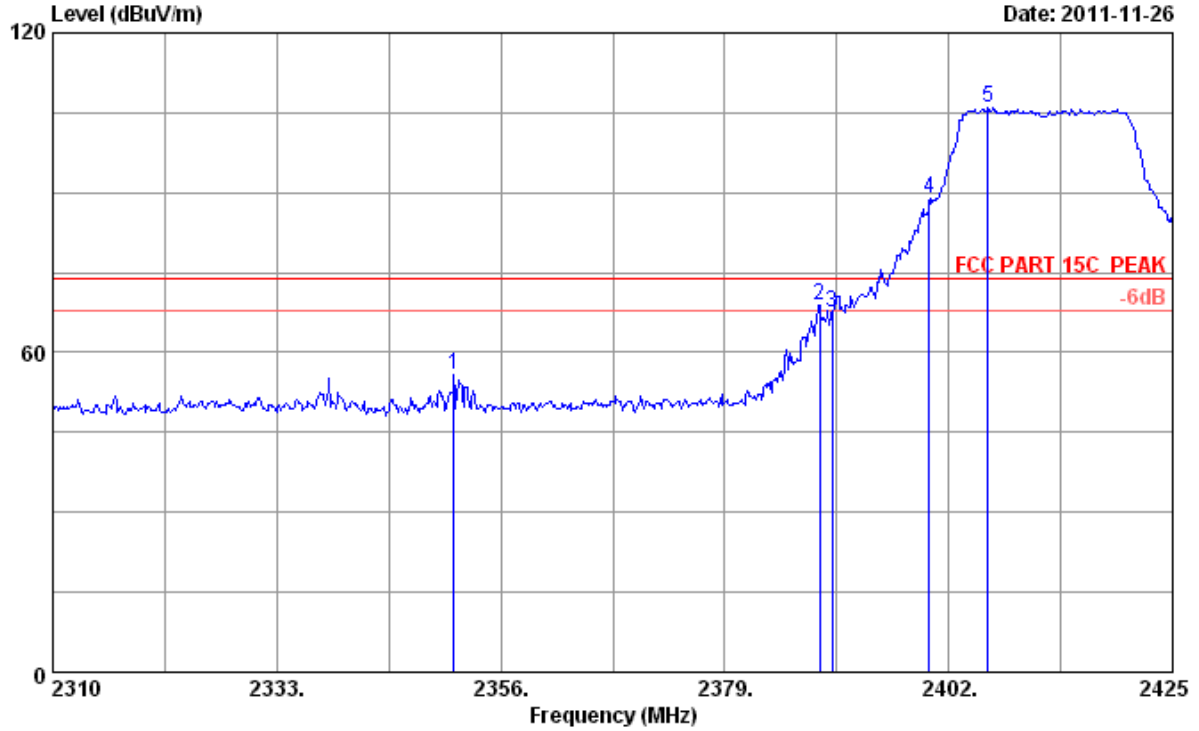
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	50.70	50.91	54.00	3.09	Average
2	2400.000	29.44	7.43	36.62	62.81	63.06	54.00	-9.06	Average
3	2405.450	29.45	7.43	36.62	96.10	96.36	54.00	-42.36	Average

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

Data: 74

File: E:\2011 report data\TP-LINK\ACS11Q2397.EM6 (104)

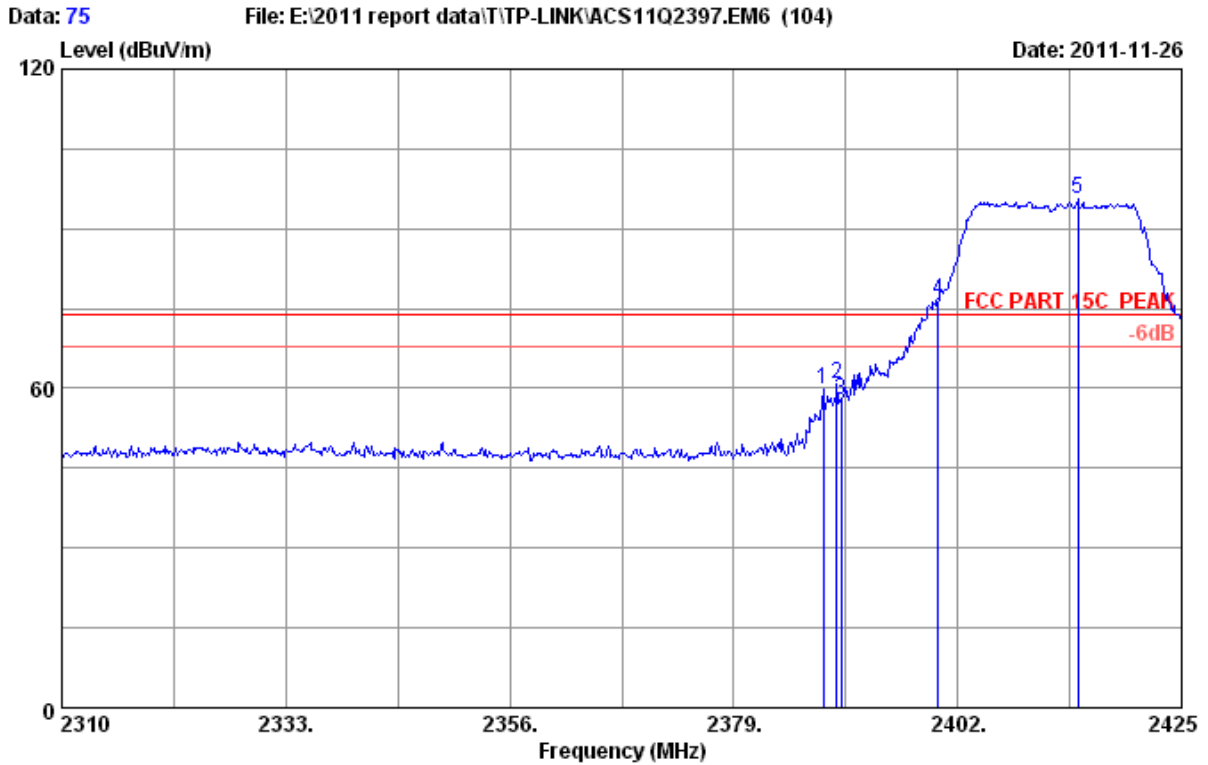
Date: 2011-11-26



Site no. : 3# Chamber Data no. : 74  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2351.170	29.41	7.31	36.63	55.66	55.75	74.00	18.25	Peak
2	2388.775	29.44	7.39	36.62	68.62	68.83	74.00	5.17	Peak
3	2390.000	29.44	7.39	36.62	67.25	67.46	74.00	6.54	Peak
4	2400.000	29.44	7.43	36.62	88.81	89.06	74.00	-15.06	Peak
5	2406.025	29.45	7.43	36.62	105.67	105.93	74.00	-31.93	Peak

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



Site no. : 3# Chamber Data no. : 75  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH1 2412MHz Tx  
 M/N : NWD3105

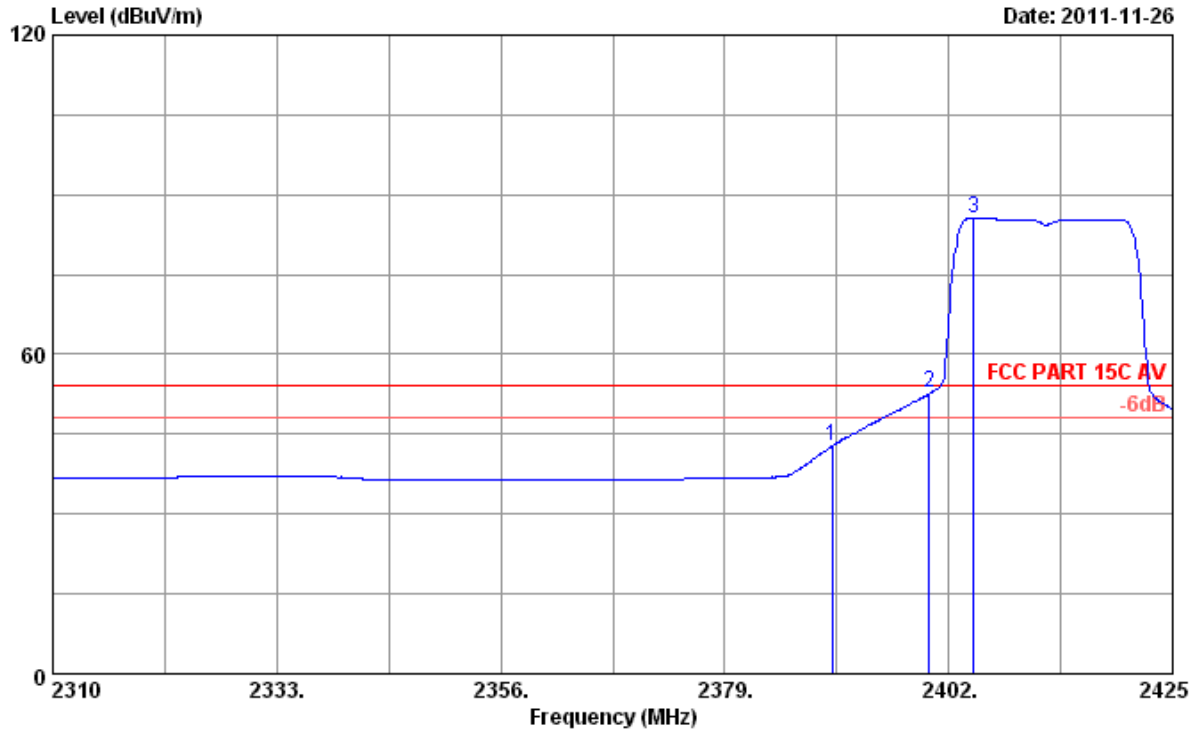
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2388.200	29.44	7.39	36.62	59.60	59.81	74.00	14.19	Peak
2	2389.580	29.44	7.39	36.62	60.62	60.83	74.00	13.17	Peak
3	2390.000	29.44	7.39	36.62	57.66	57.87	74.00	16.13	Peak
4	2400.000	29.44	7.43	36.62	76.38	76.63	74.00	-2.63	Peak
5	2414.305	29.45	7.43	36.62	95.24	95.50	74.00	-21.50	Peak

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

Data: 76

File: E:\2011 report data\T\TP-LINK\ACS11Q2397.EM6 (104)

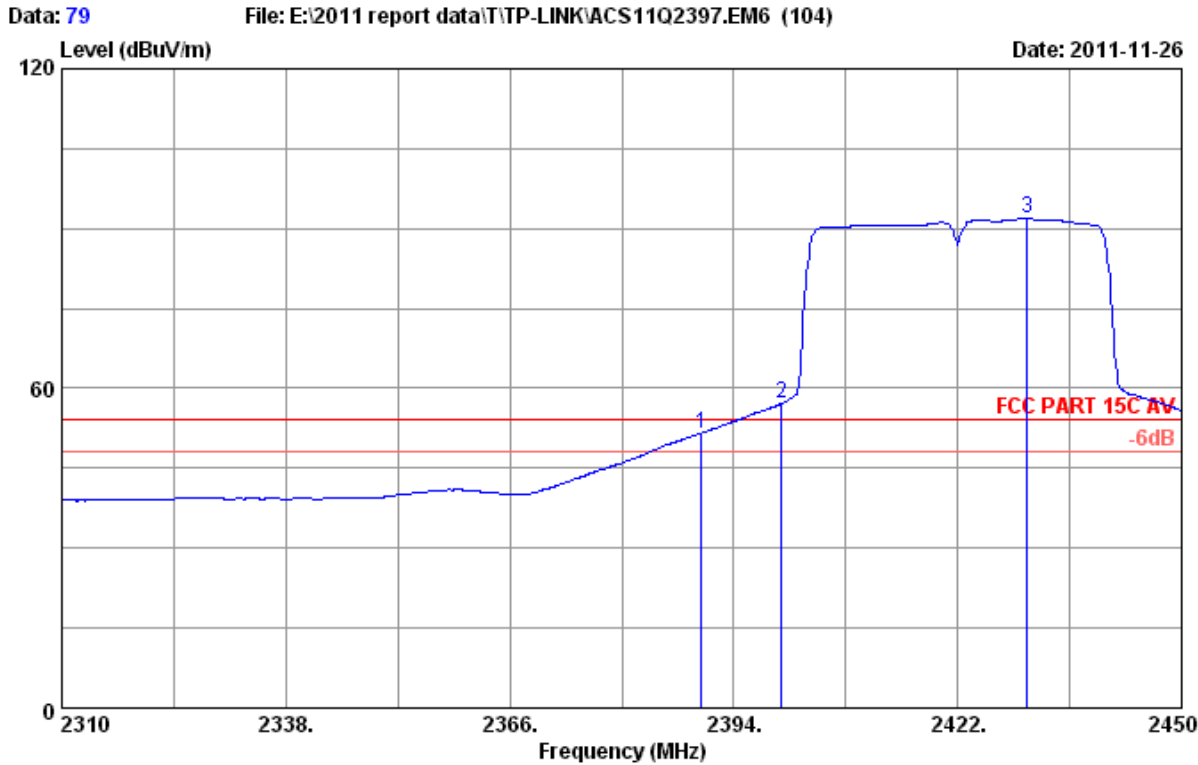
Date: 2011-11-26



Site no. : 3# Chamber Data no. : 76  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT20 CH1 2412MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	42.58	42.79	54.00	11.21	Average
2	2400.000	29.44	7.43	36.62	52.45	52.70	54.00	1.30	Average
3	2404.530	29.45	7.43	36.62	85.40	85.66	54.00	-31.66	Average

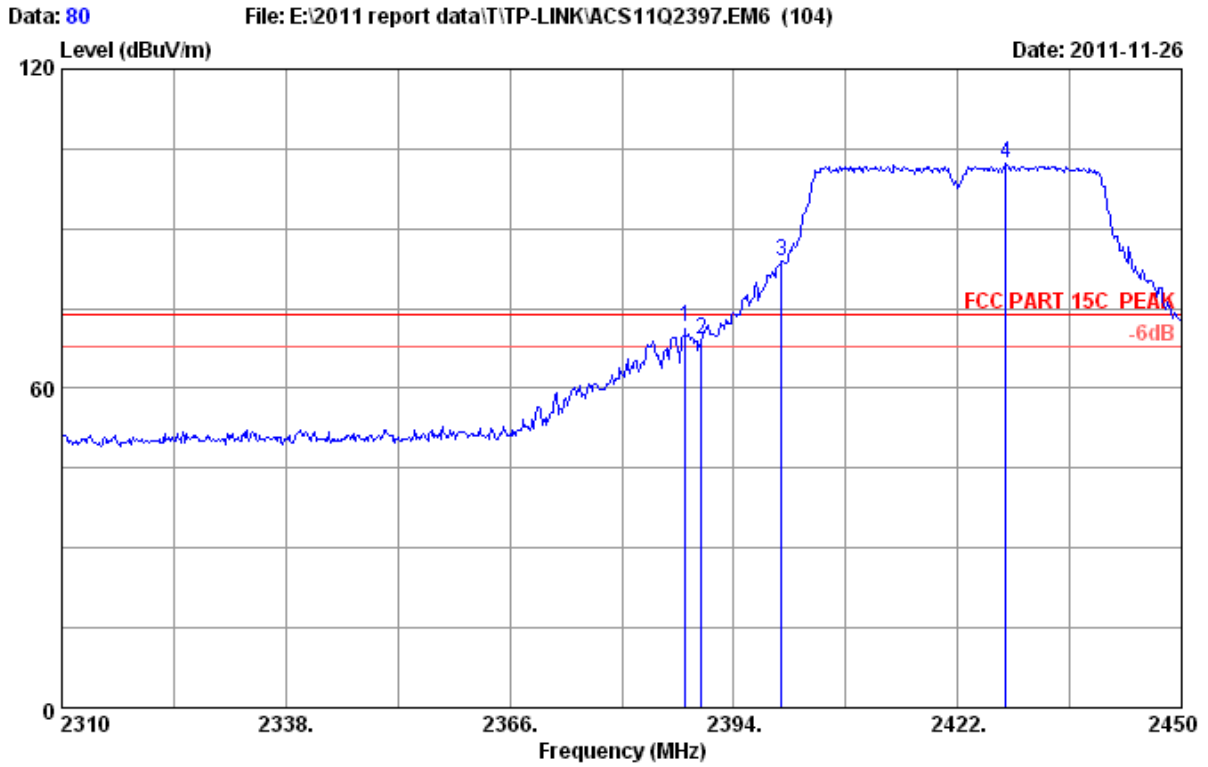
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 79  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH1 2422MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Emission				
					Reading (dBUV/m)	Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	51.40	51.61	54.00	2.39	Average
2	2400.000	29.44	7.43	36.62	56.99	57.24	54.00	-3.24	Average
3	2430.680	29.46	7.46	36.61	91.54	91.85	54.00	-37.85	Average

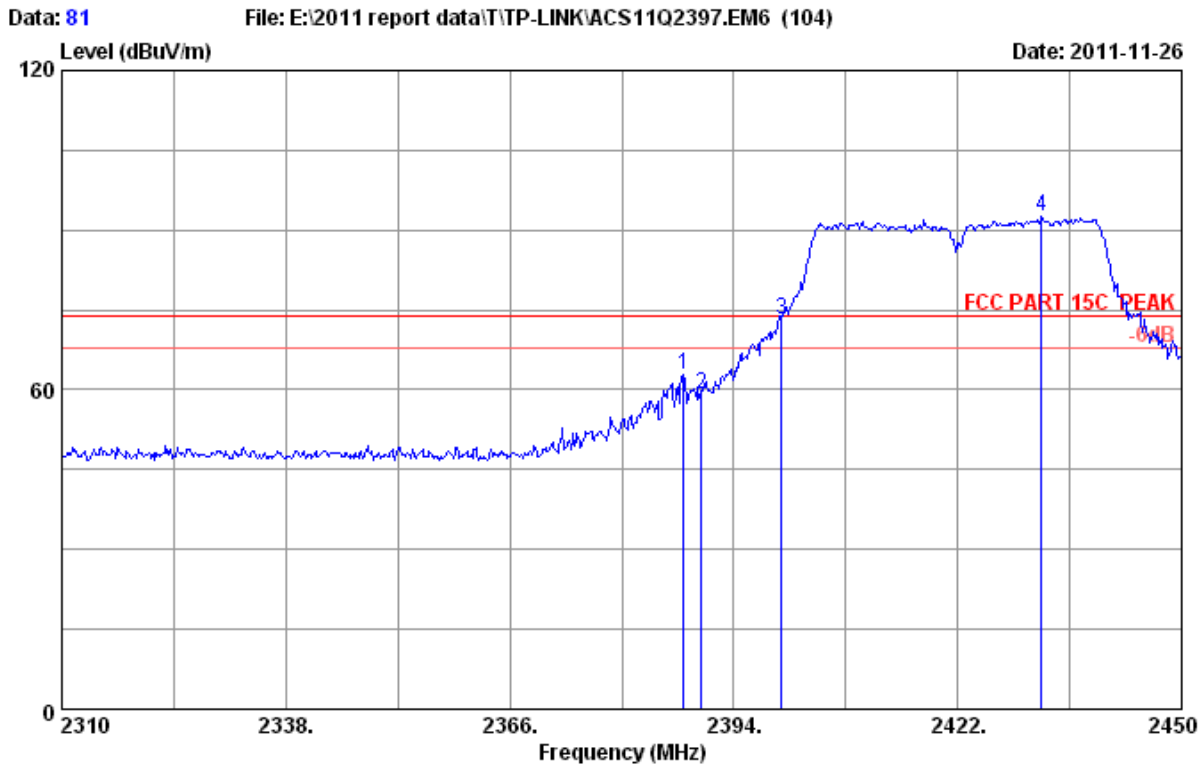
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 80  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH1 2422MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2387.980	29.44	7.39	36.62	71.21	71.42	74.00	2.58	Peak
2	2390.000	29.44	7.39	36.62	68.89	69.10	74.00	4.90	Peak
3	2400.000	29.44	7.43	36.62	83.61	83.86	74.00	-9.86	Peak
4	2428.020	29.46	7.46	36.61	101.85	102.16	74.00	-28.16	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading  
 -Amp Factor  
 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. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH1 2422MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Emission				
					Reading (dBUV/m)	Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2387.700	29.44	7.39	36.62	62.51	62.72	74.00	11.28	Peak
2	2390.000	29.44	7.39	36.62	58.93	59.14	74.00	14.86	Peak
3	2400.000	29.44	7.43	36.62	73.02	73.27	74.00	0.73	Peak
4	2432.500	29.46	7.46	36.61	92.41	92.72	74.00	-18.72	Peak

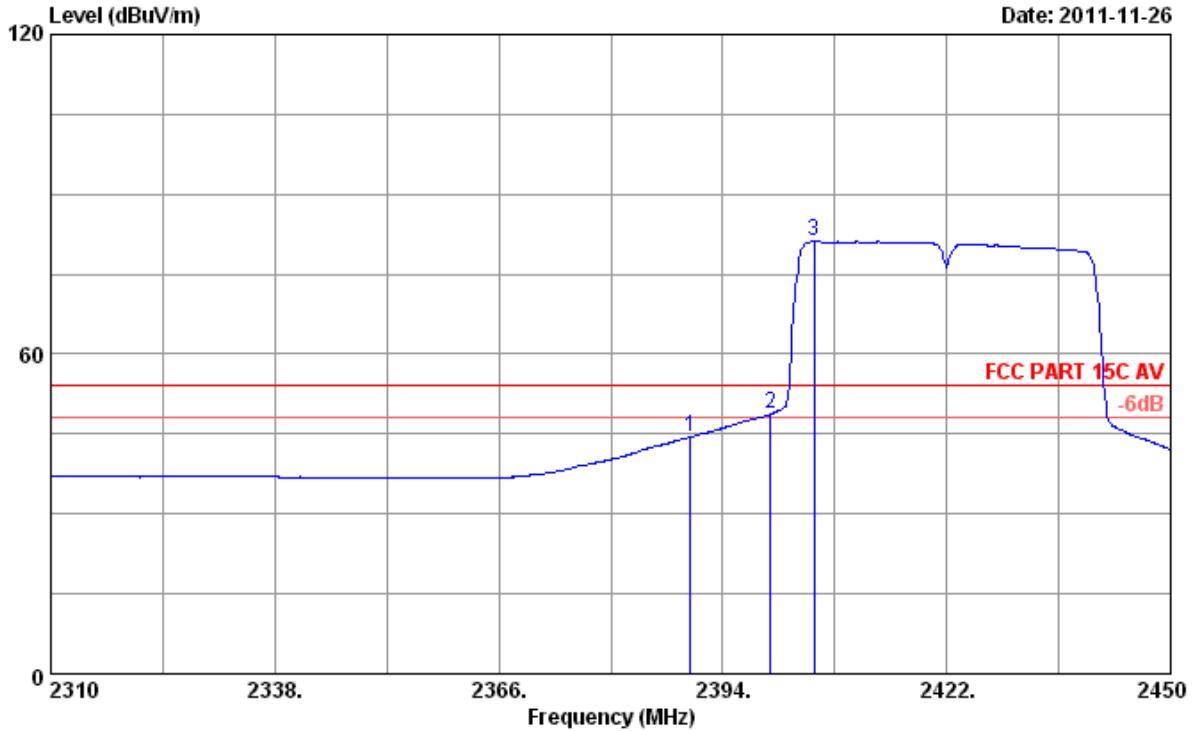
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Data: 82

File: E:\2011 report data\T\TP-LINK\ACS11Q2397.EM6 (104)

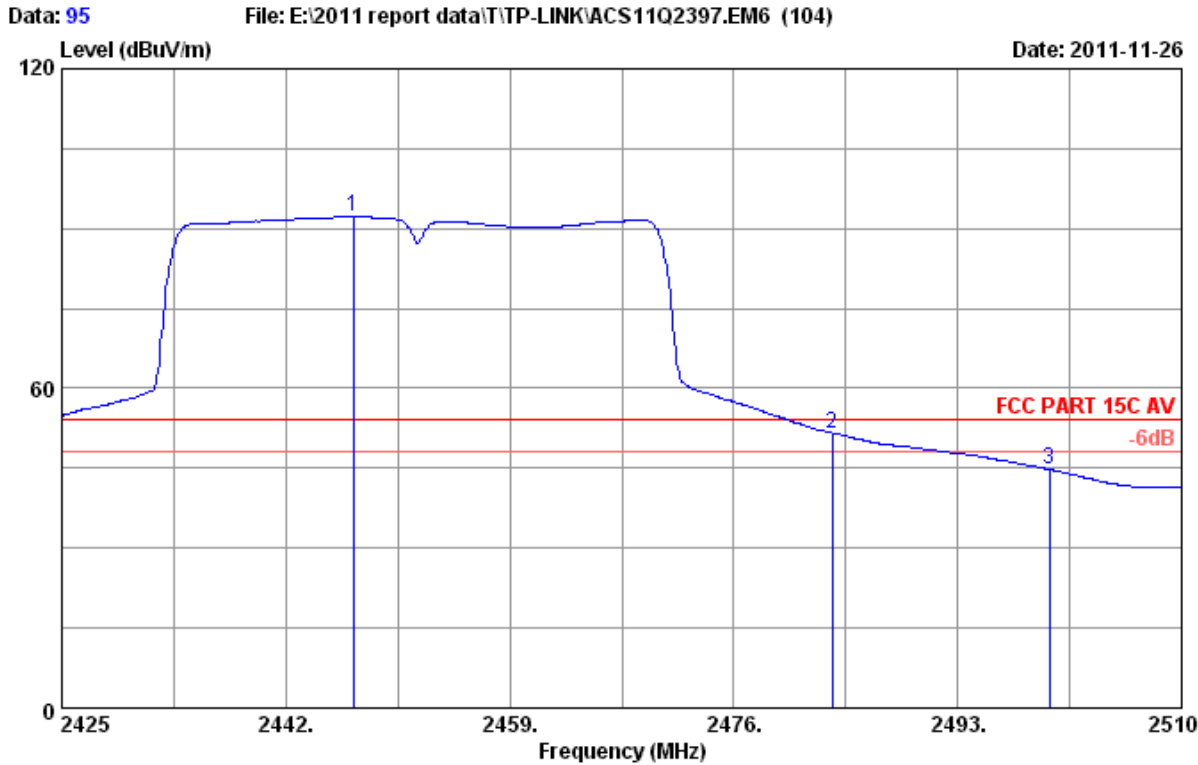
Date: 2011-11-26



Site no. : 3# Chamber Data no. : 82  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH1 2422MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	44.22	44.43	54.00	9.57	Average
2	2400.000	29.44	7.43	36.62	48.54	48.79	54.00	5.21	Average
3	2405.480	29.45	7.43	36.62	80.86	81.12	54.00	-27.12	Average

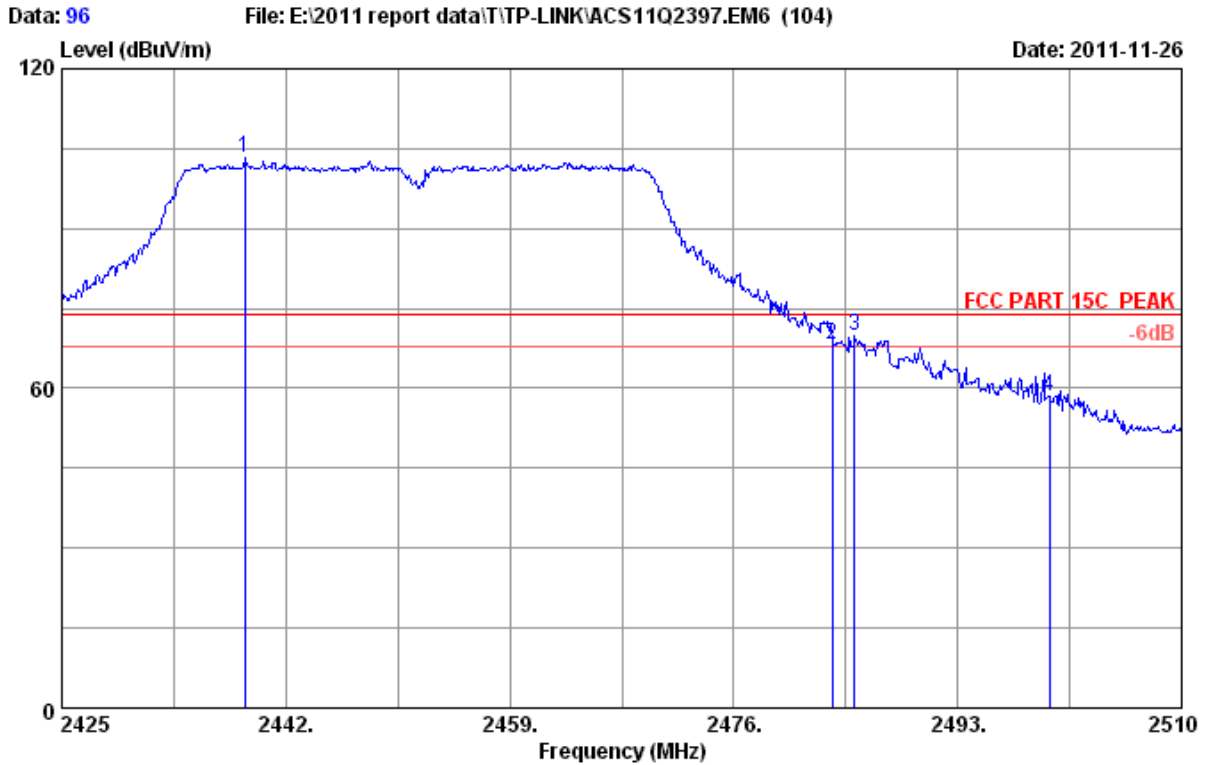
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 95  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH7 2452MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Emission				
					Reading (dBUV/m)	Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2447.100	29.47	7.50	36.61	91.90	92.26	54.00	-38.26	Average
2	2483.500	29.49	7.58	36.60	51.17	51.64	54.00	2.36	Average
3	2500.000	29.50	7.62	36.60	44.34	44.86	54.00	9.14	Average

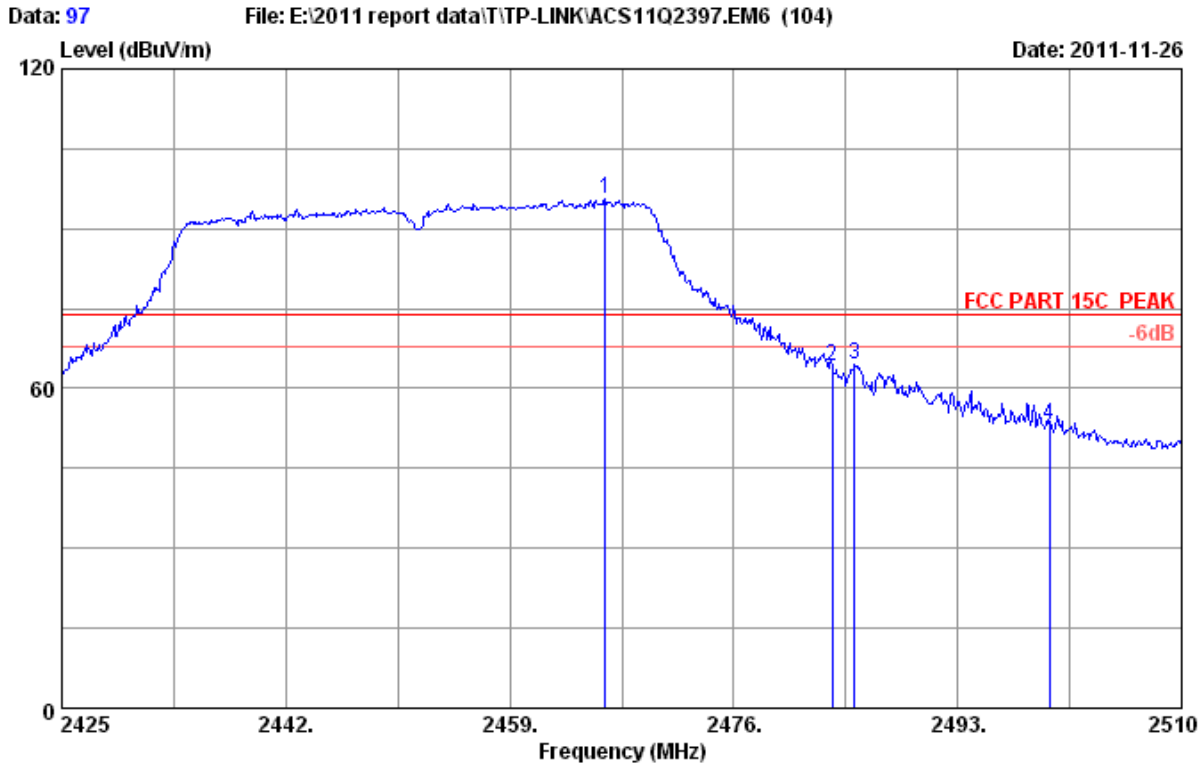
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3# Chamber Data no. : 96  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24\*C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH7 2452MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Emission				
					Reading (dBUV/m)	Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2438.855	29.47	7.50	36.61	102.87	103.23	74.00	-29.23	Peak
2	2483.500	29.49	7.58	36.60	67.64	68.11	74.00	5.89	Peak
3	2485.180	29.49	7.58	36.60	69.55	70.02	74.00	3.98	Peak
4	2500.000	29.50	7.62	36.60	57.87	58.39	74.00	15.61	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 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. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH7 2452MHz Tx  
 M/N : NWD3105

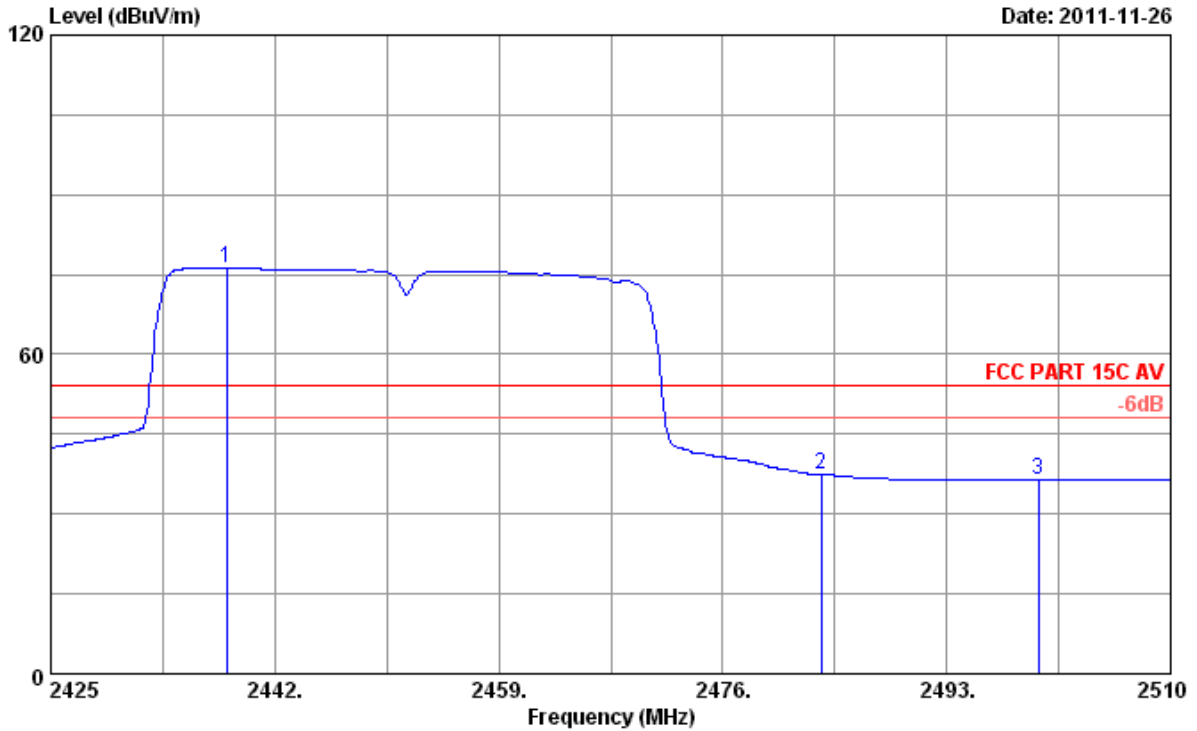
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2466.225	29.48	7.54	36.61	95.04	95.45	74.00	-21.45	Peak
2	2483.500	29.49	7.58	36.60	63.61	64.08	74.00	9.92	Peak
3	2485.180	29.49	7.58	36.60	63.92	64.39	74.00	9.61	Peak
4	2500.000	29.50	7.62	36.60	52.53	53.05	74.00	20.95	Peak

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

Data: 98

File: E:\2011 report data\T\TP-LINK\ACS11Q2397.EM6 (104)

Date: 2011-11-26



Site no. : 3# Chamber Data no. : 98  
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C AV  
 Env. / Ins. : 24°C/56% Engineer : Leo-Li  
 EUT : Wireless N-lite PCI Express Adapter  
 Power Rating : DC 3.3V From PC input AC 120V/60Hz  
 Test Mode : IEEE802.11nHT40 CH7 2452MHz Tx  
 M/N : NWD3105

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBUV)	Reading (dBUV/m)	Emission Level (dBUV/m)	Limits (dB)	Margin (dB)	Remark
1	2438.345	29.47	7.46	36.61	75.95	76.27	54.00	-22.27	Average
2	2483.500	29.49	7.58	36.60	37.00	37.47	54.00	16.53	Average
3	2500.000	29.50	7.62	36.60	35.90	36.42	54.00	17.58	Average

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

## 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.08,11	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08,11	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,11	1Year

### 7.2. Limit

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

### 7.3. Test Procedure

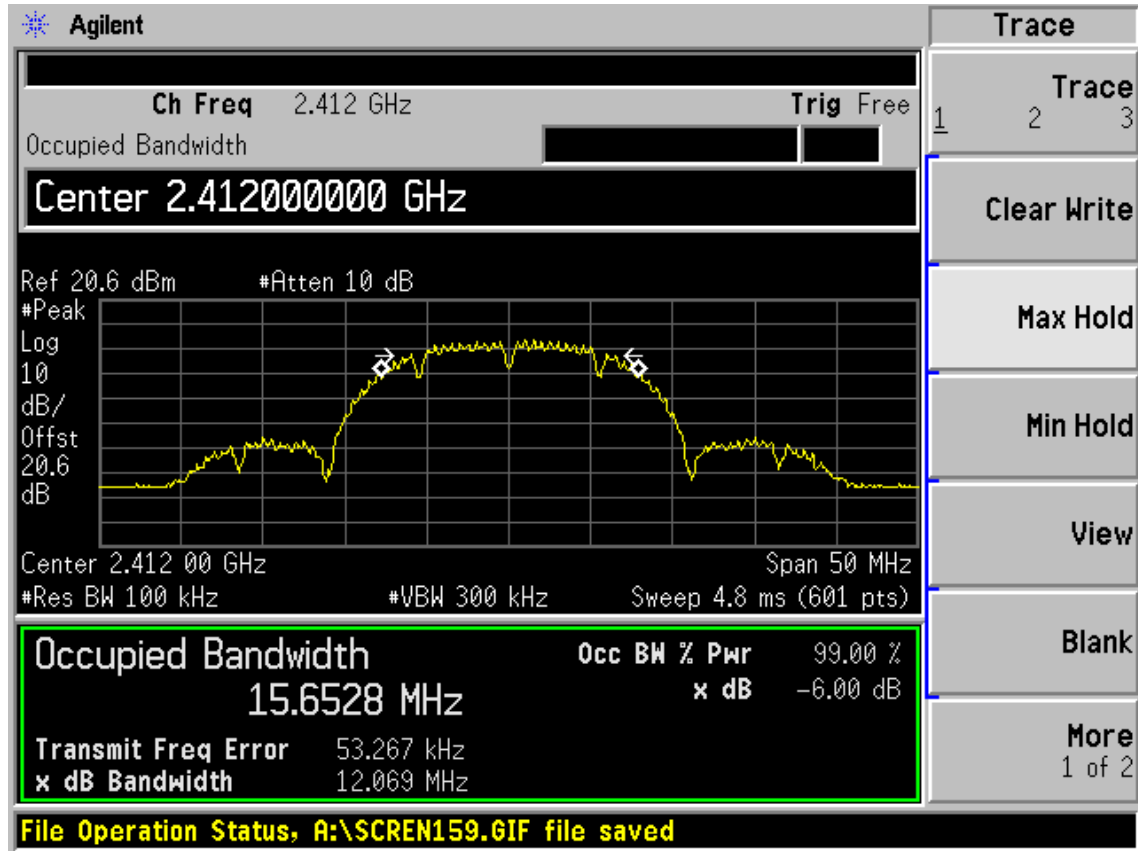
The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300 kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

### 7.4. Test Results

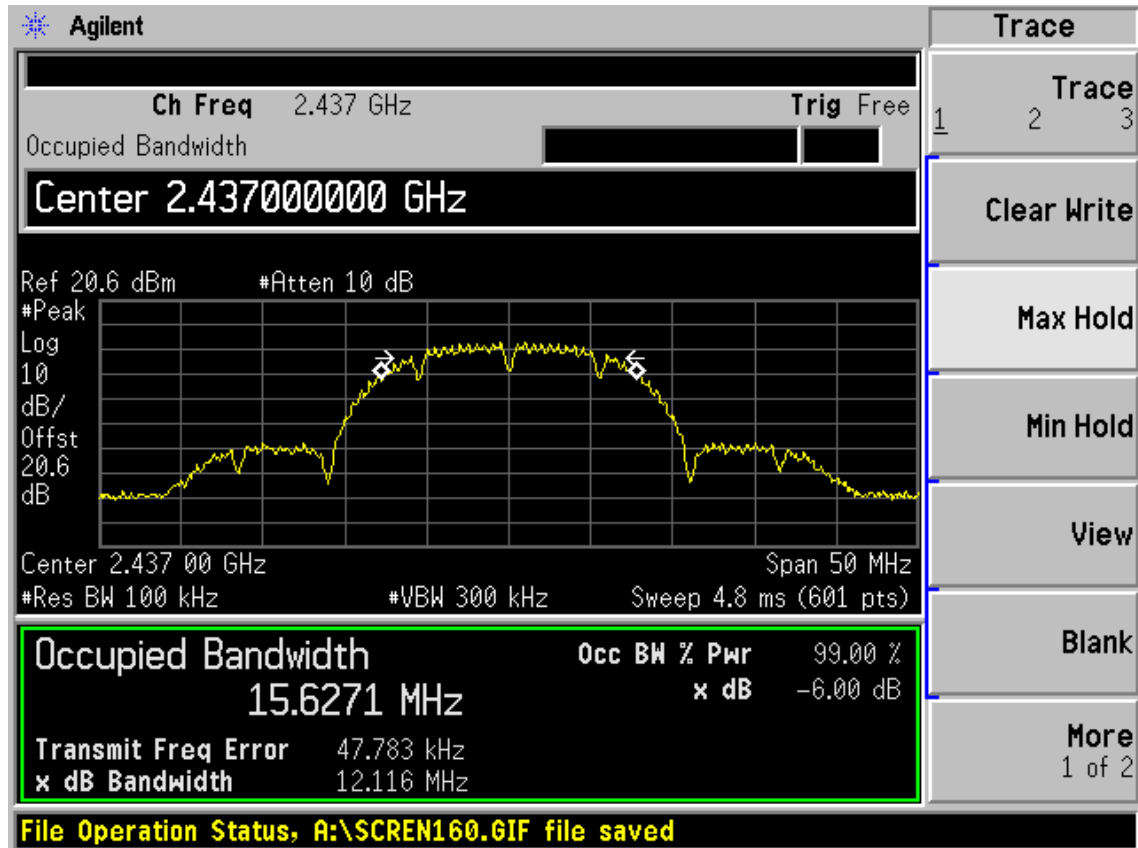
EUT: Wireless N-lite PCI Express Adapter		
M/N: NWD3105		
Test date: 2011-12-08	Pressure: 101.4 kpa	Humidity: 52.6%
Tested by: Leo-Li	Test site: RF Site	Temperature : 25.7 °C

Cable loss: 1.0 dB		Attenuator loss: 20 dB	
Test Mode	CH	6dB bandwidth ( MHz )	Limit (KHz)
11b	CH1	12.069	>500
	CH6	12.116	>500
	CH11	12.518	>500
11g	CH1	16.442	>500
	CH6	16.448	>500
	CH11	16.433	>500
11n HT20	CH1	17.640	>500
	CH6	17.656	>500
	CH11	17.686	>500
11n HT40	CH1	36.367	>500
	CH4	36.156	>500
	CH7	36.146	>500
Conclusion : PASS			

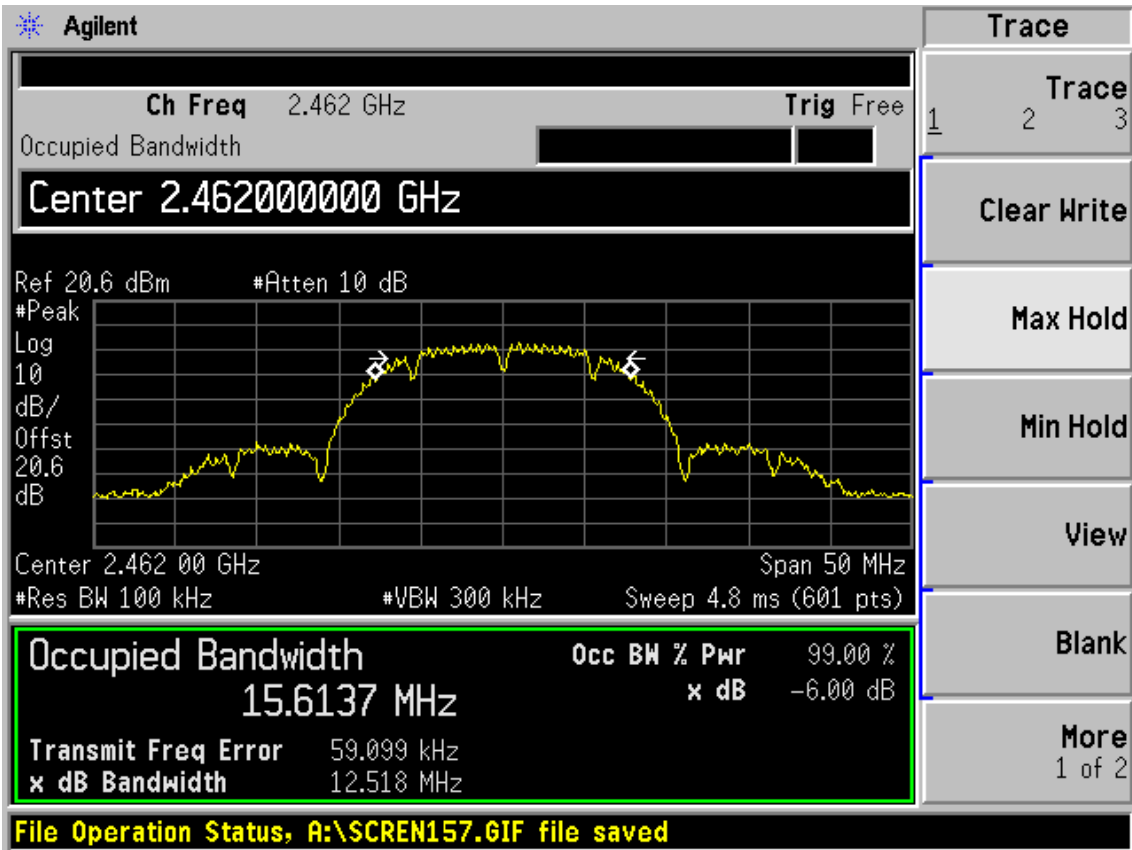
Test Mode: IEEE 802.11b TX  
 Test CH1: 2412MHz



Test CH6: 2437MHz

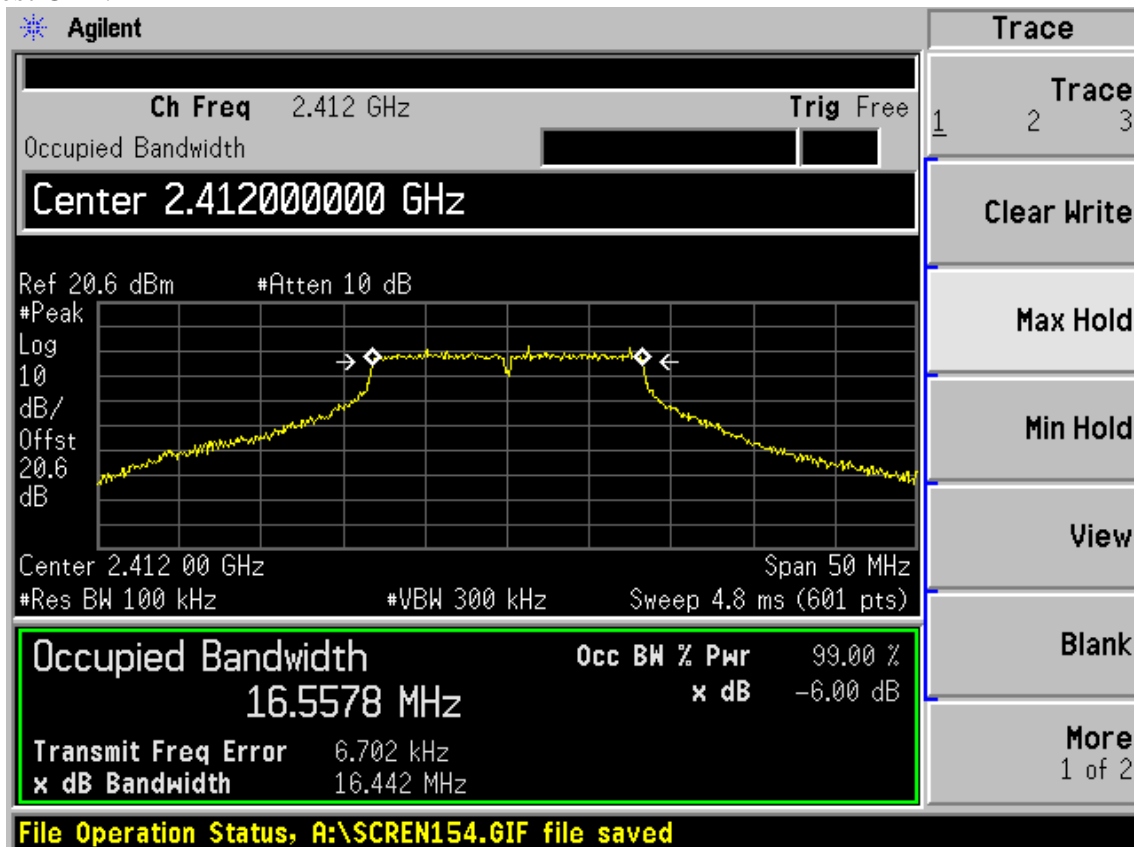


Test CH11: 2462MHz



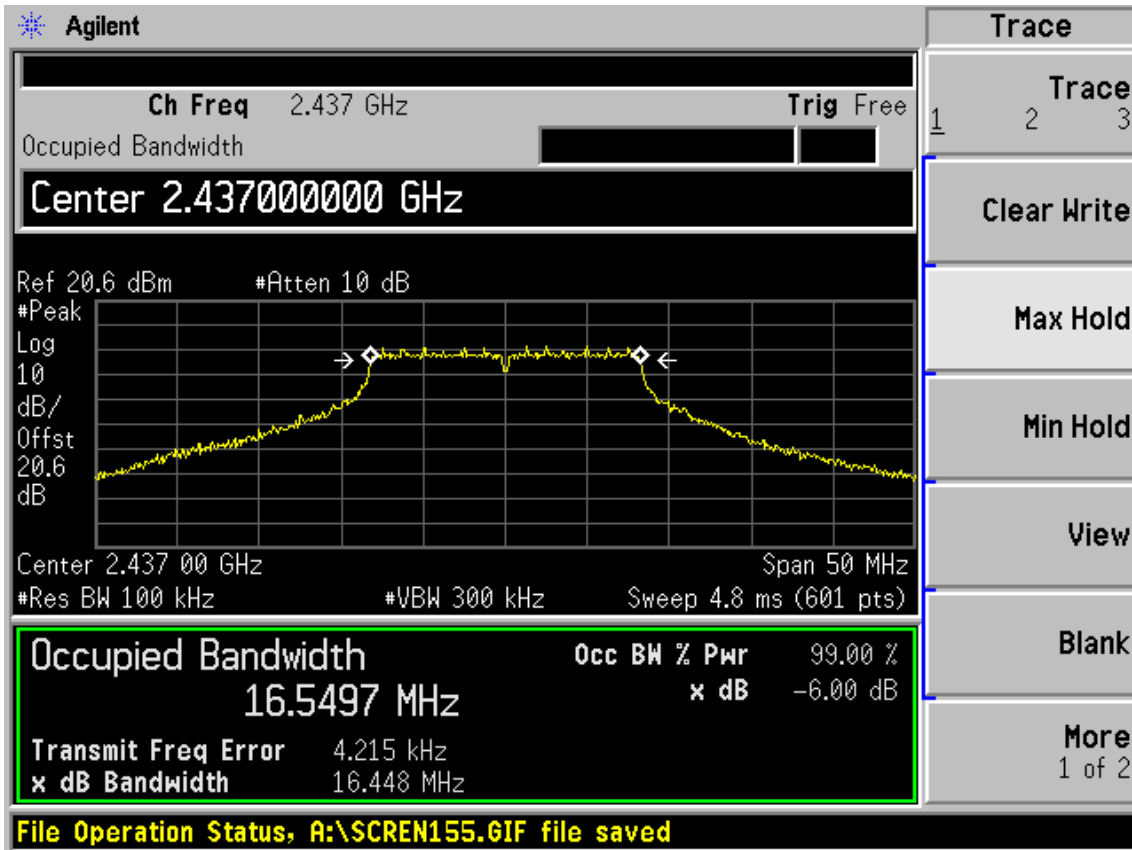
Test Mode: IEEE 802.11g TX

Test CH1: 2412MHz

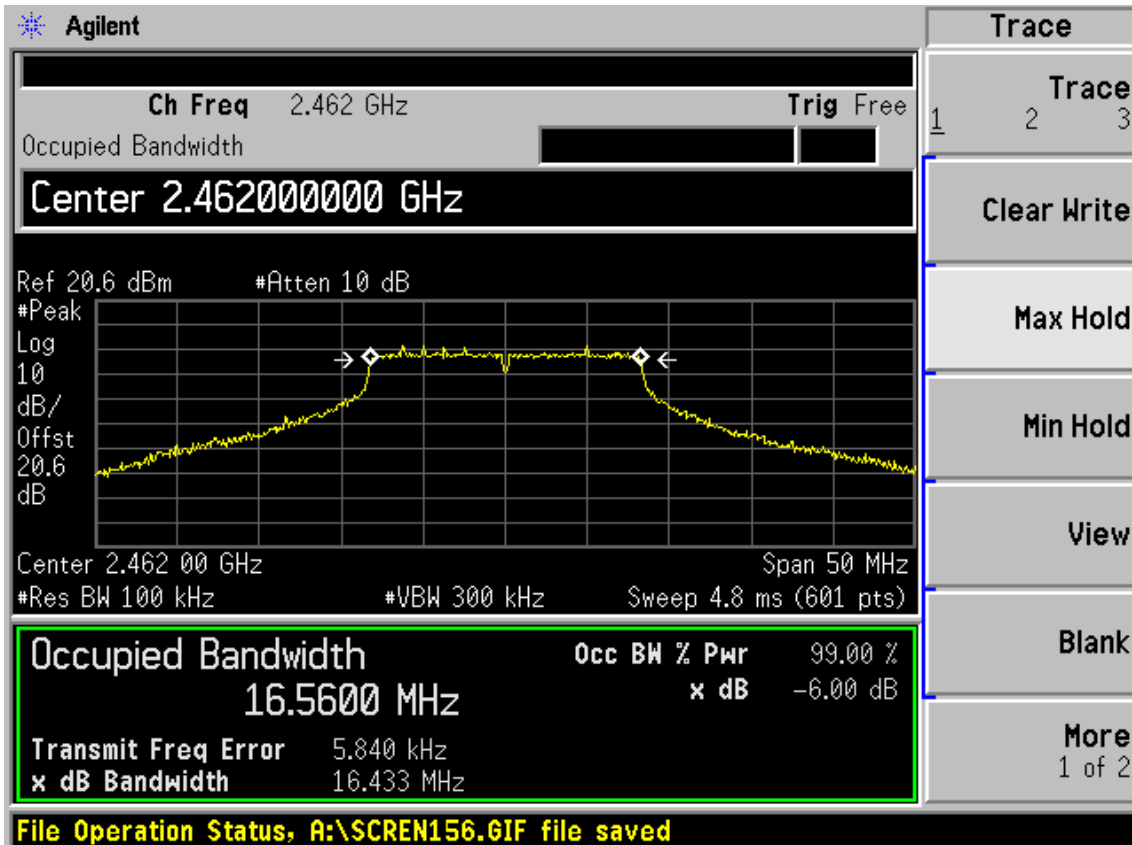




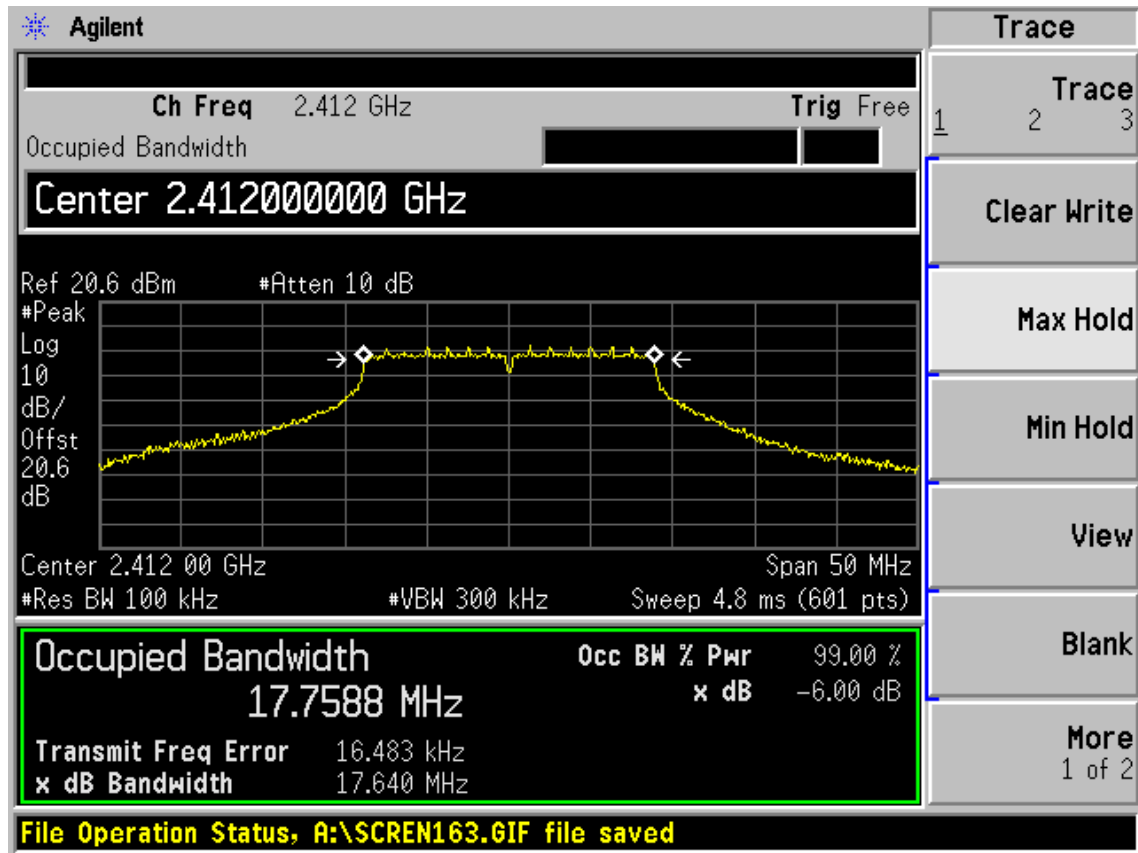
Test CH6: 2437MHz



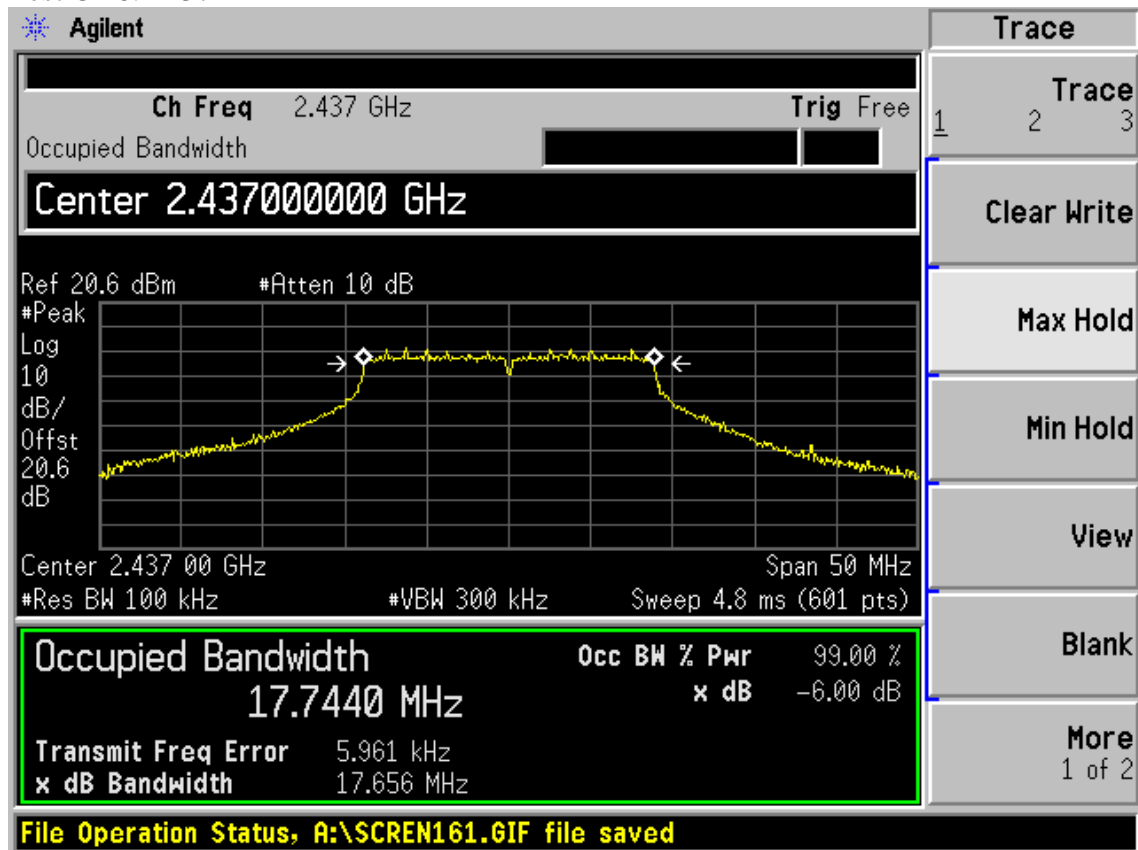
Test CH11: 2462MHz



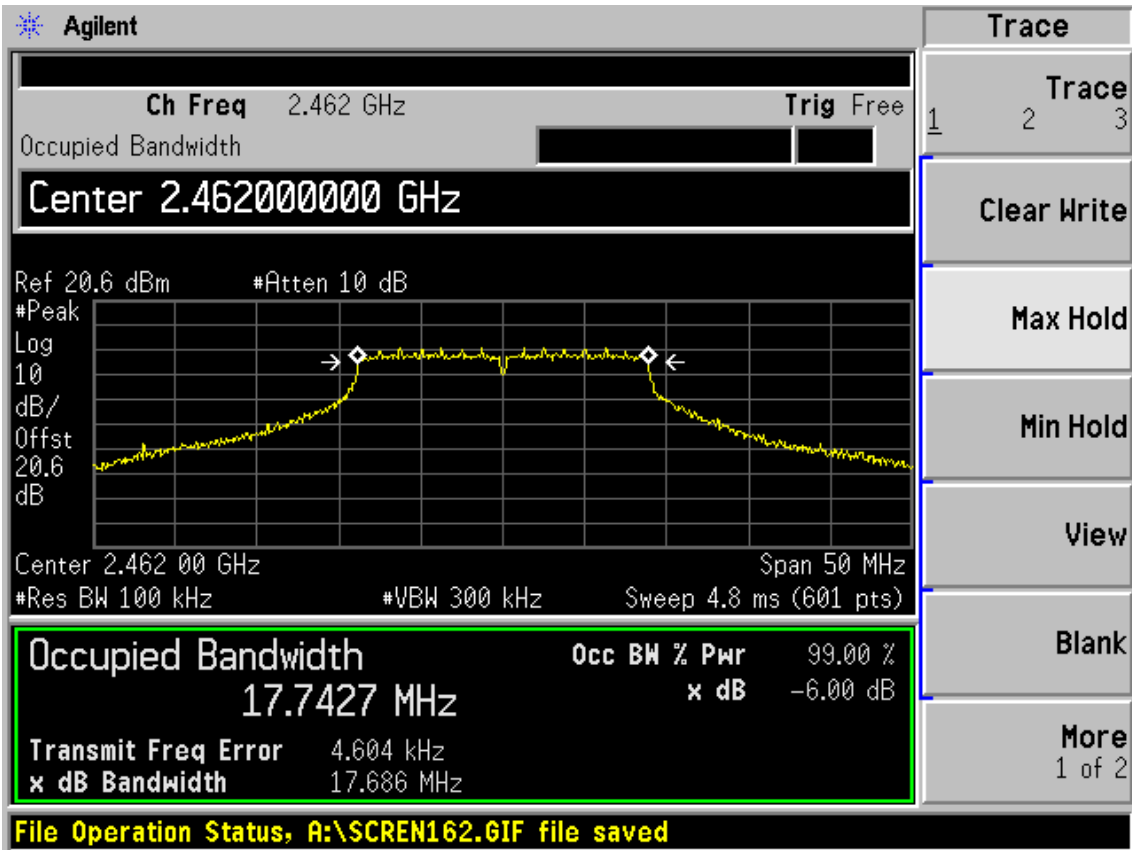
Test Mode: IEEE 802.11n HT20 TX  
 Test CH1: 2412MHz



Test CH6: 2437MHz

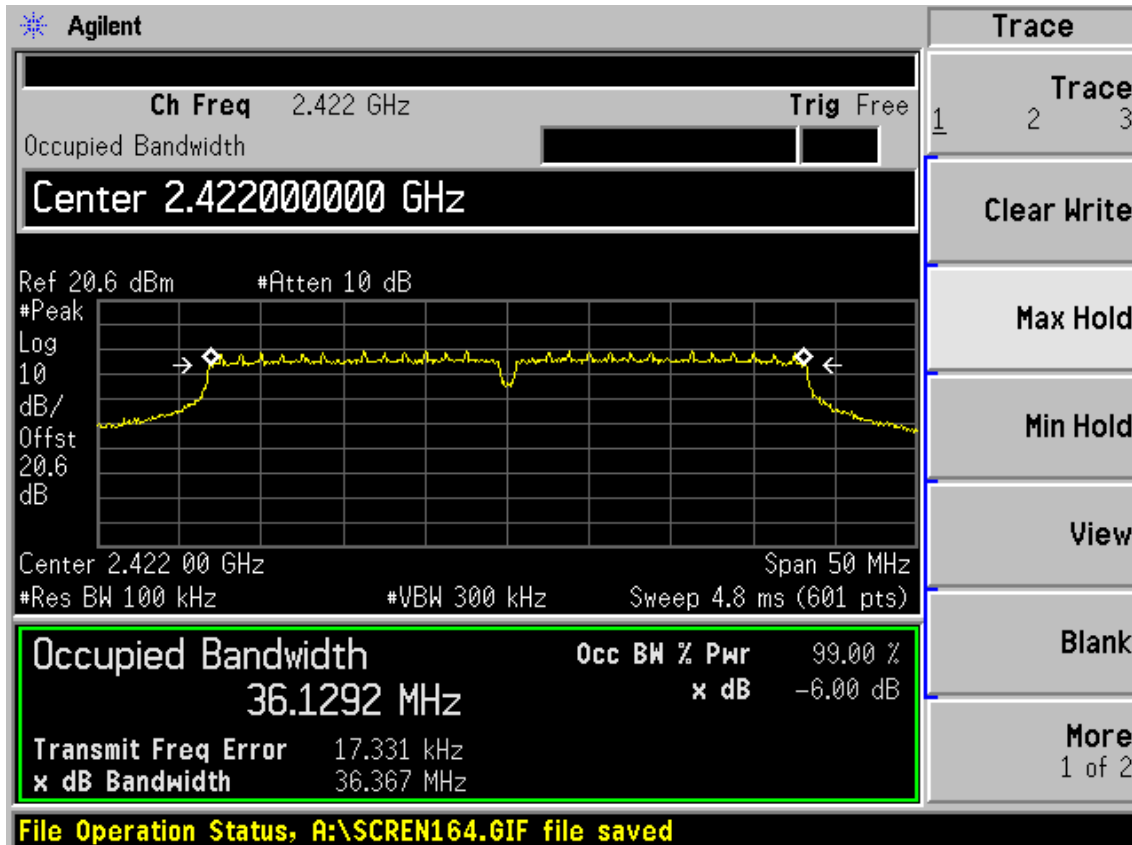


Test CH11: 2462MHz

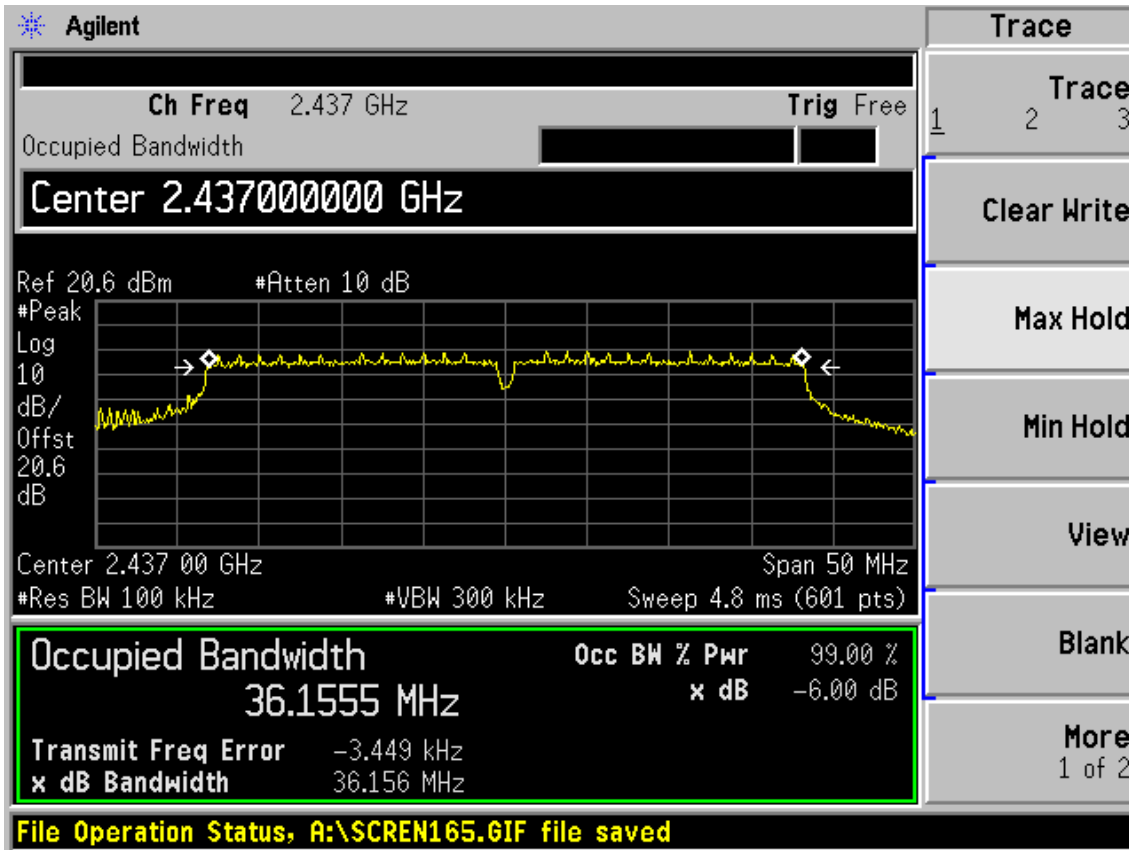


Test Mode: IEEE 802.11n HT40 TX

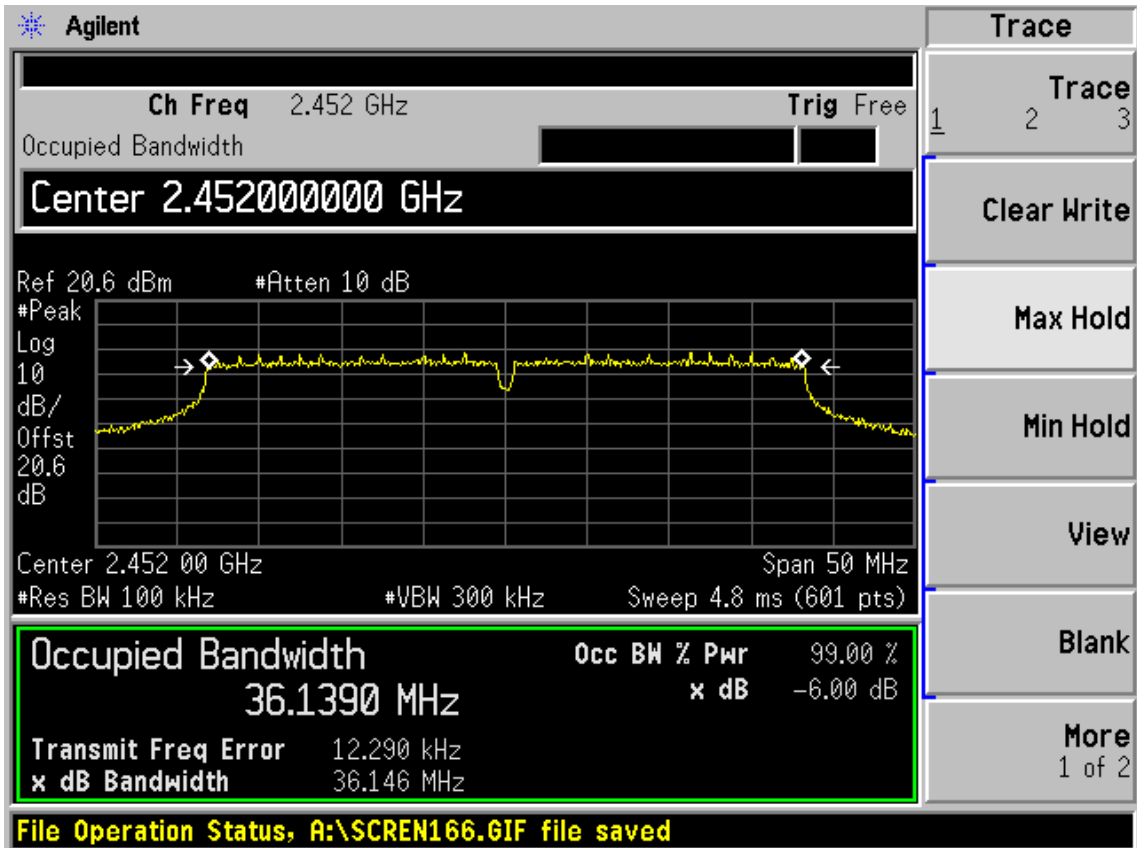
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



## 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.08,11	1 Year
2.	Power sensor	Anritsu	MA2491A	0033005	May.08,11	1 Year
3	Attenuator	Agilent	8491B	MY39262165	May.08,11	1 Year
4	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 11	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,11	1 Year

### 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 26dB attenuator.
- 2, For IEEE 802.11b/g and IEEE802.11n HT20 mode, use a PK power meter which's bandwidth is 20MHz and above 26dB 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[(26dB bandwidth of emission)/(analyzer RBW)]

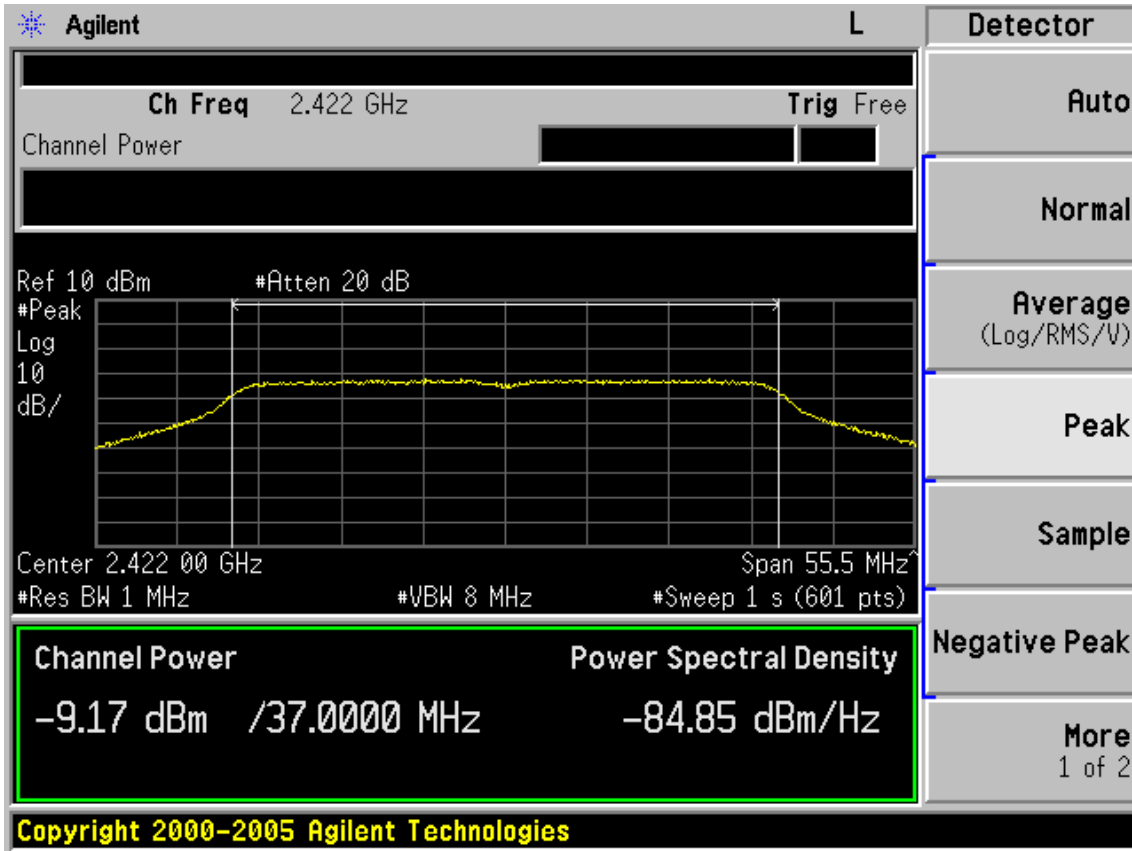
Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

8.4. Test Results

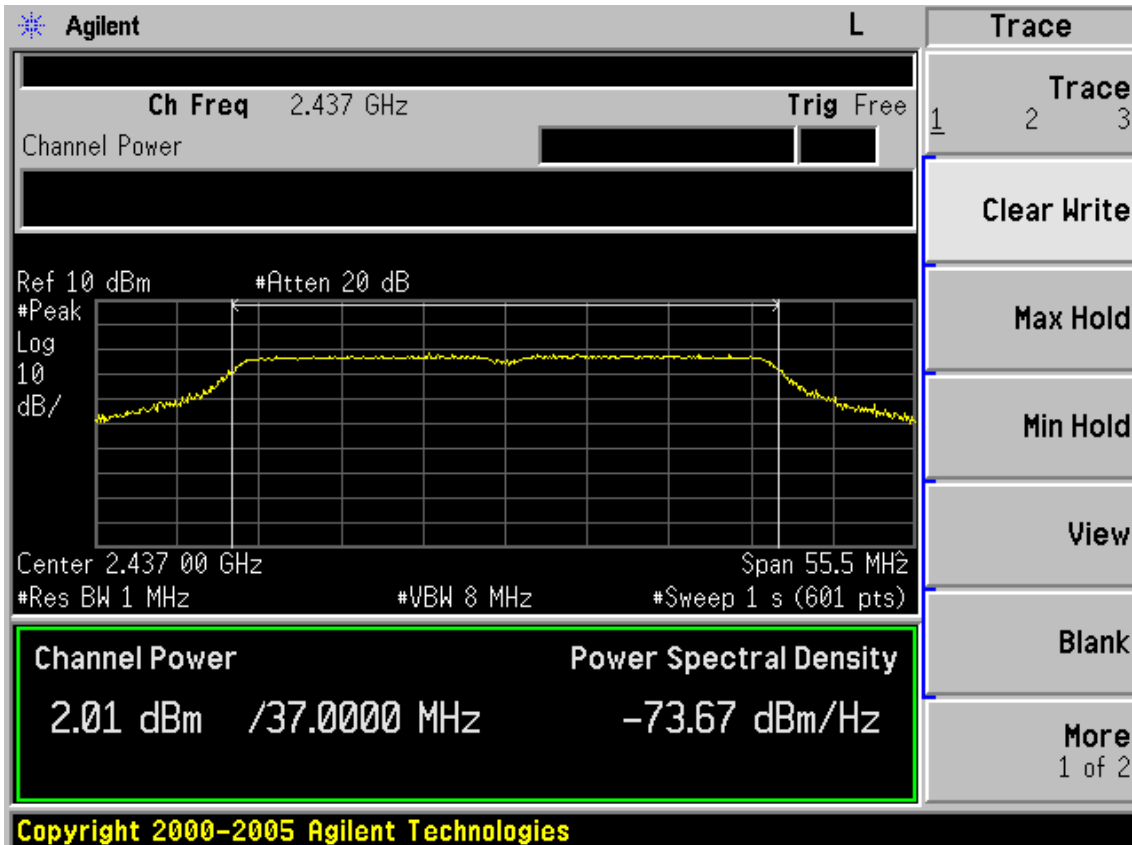
EUT: Wireless N-lite PCI Express Adapter			
M/N: NWD3105			
Test date: 2011-12-11	Pressure: 101.7 kpa	Humidity: 55.6 %	
Tested by: Leo-Li	Test site: RF site	Temperature: 25.8 °C	
Cable loss: 1 dB		Attenuator loss: 20 dB	
Test Mode	CH (MHz)	Peak output Power (dBm)	Limit (dBm)
11b	CH1	17.61	30
	CH6	20.12	30
	CH11	20.15	30
11g	CH1	16.93	30
	CH6	24.14	30
	CH11	16.89	30
11n HT20	CH1	16.06	30
	CH6	25.32	30
	CH11	15.66	30

Test Mode	CH	Result		Limit (dBm)
		Measured power(dBm)/3MHz	PK Output power (dBm)	
11n HT40	CH1	1.17	12.41	30
	CH4	11.80	23.04	30
	CH7	1.56	12.80	30
26dB Bandwidth for 11n HT40: 39.906MHz				
BW correction factor = $10\log[(39.906\text{MHz})/(3\text{MHz})] = 11.24\text{dB}$				
Conclusion: PASS				

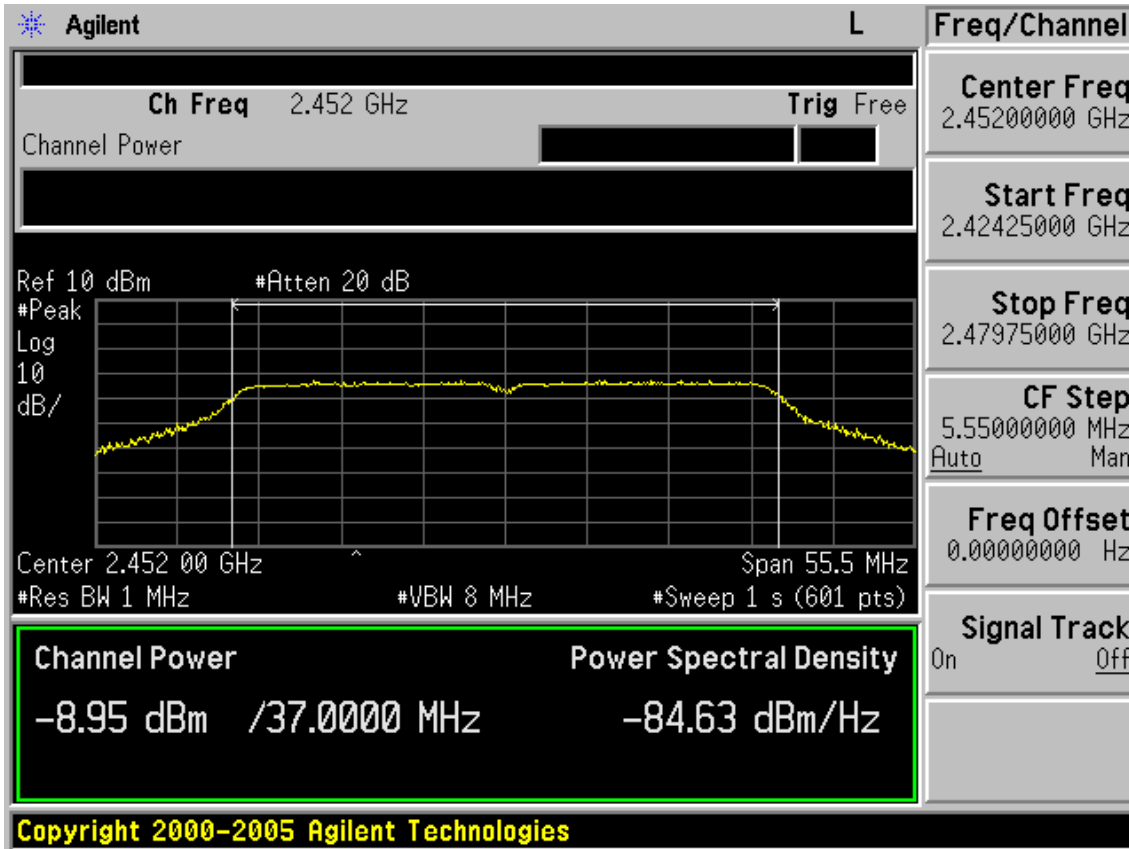
Test Mode: IEEE 802.11n HT40 TX  
 Test CH1: 2422MHz



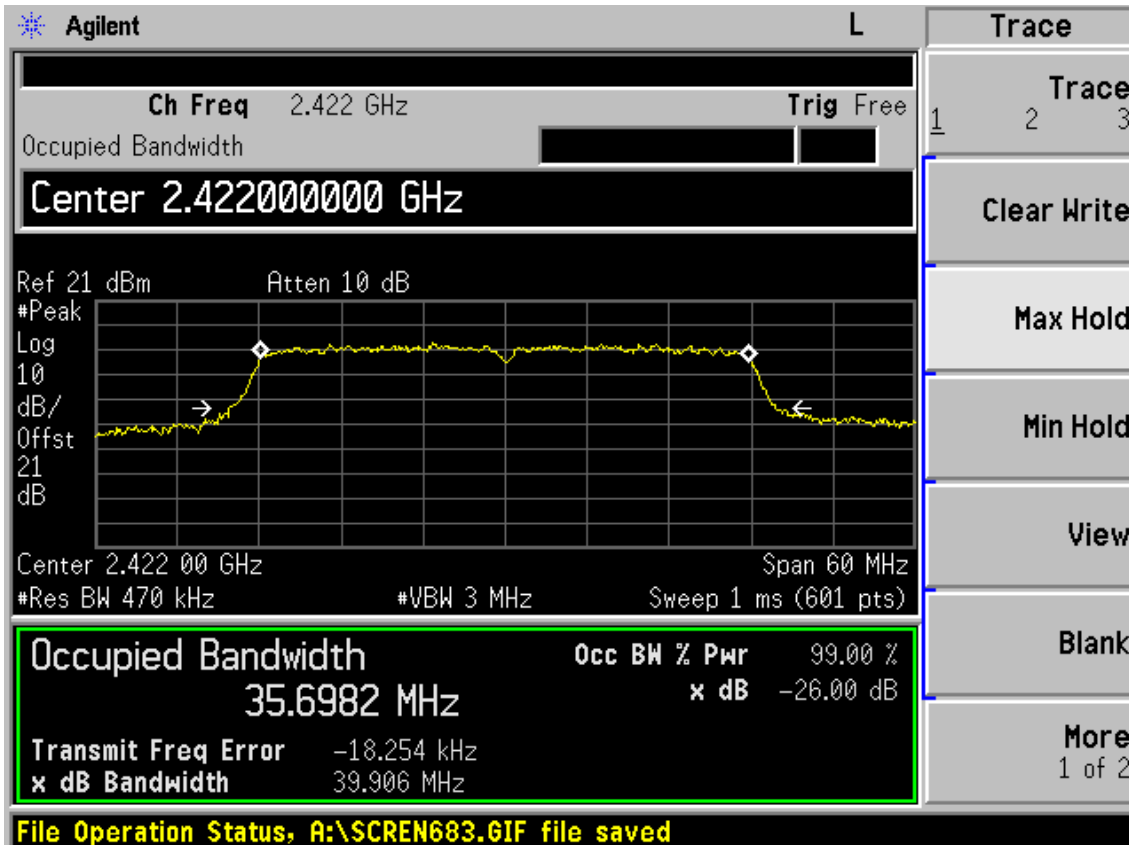
Test CH4: 2437MHz



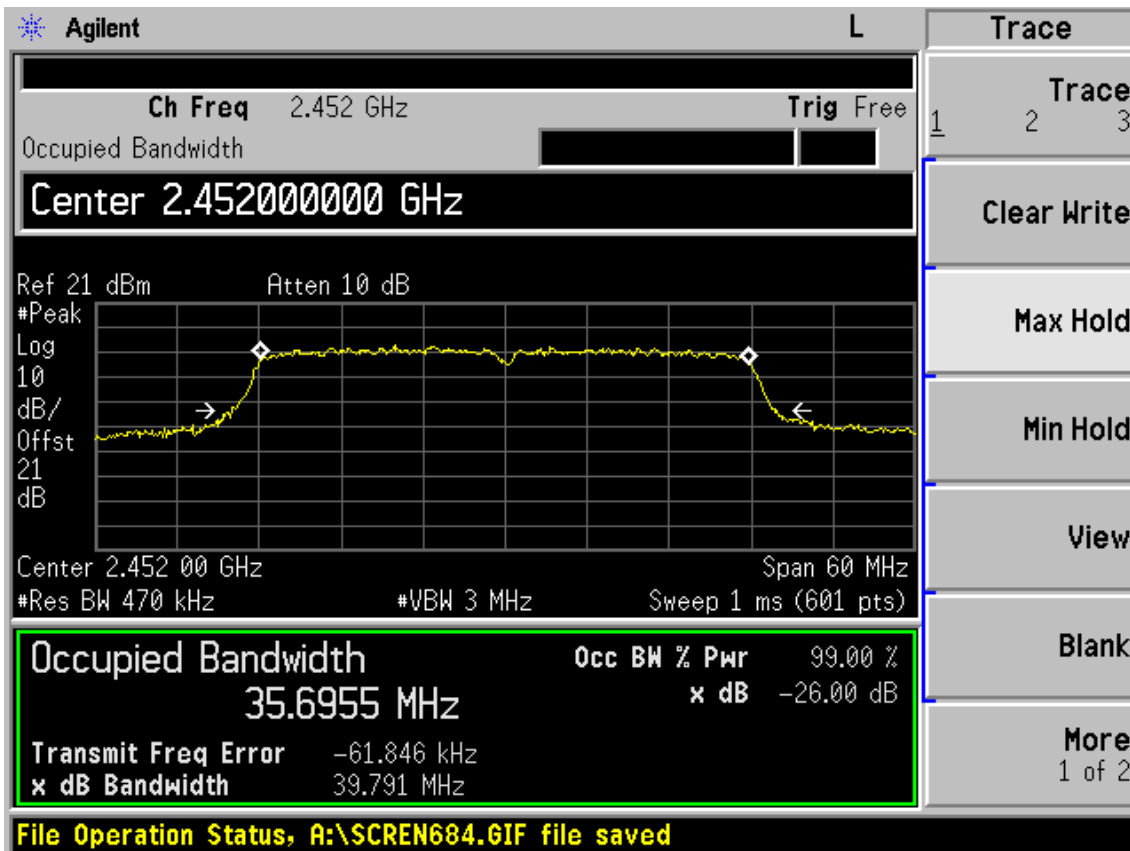
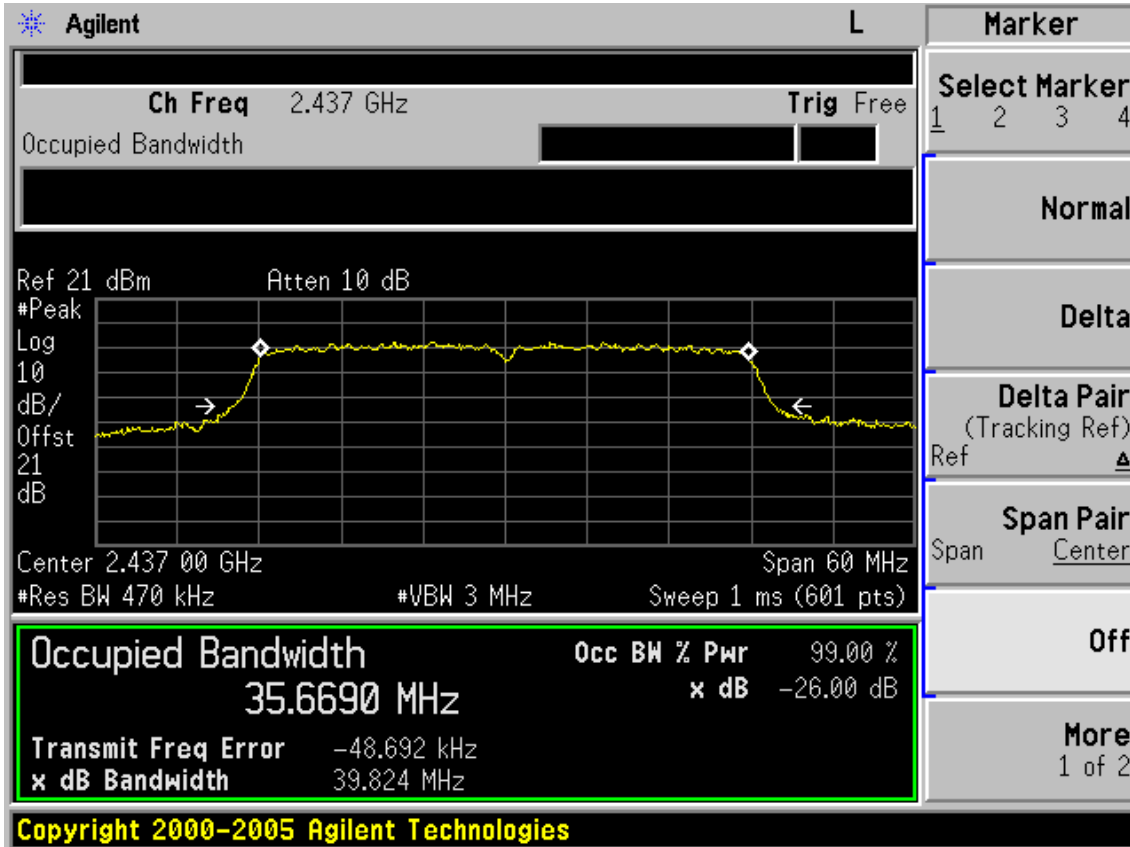
Test CH7: 2452MHz



26dB Bandwidth







## 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, 11	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08, 11	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08, 11	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

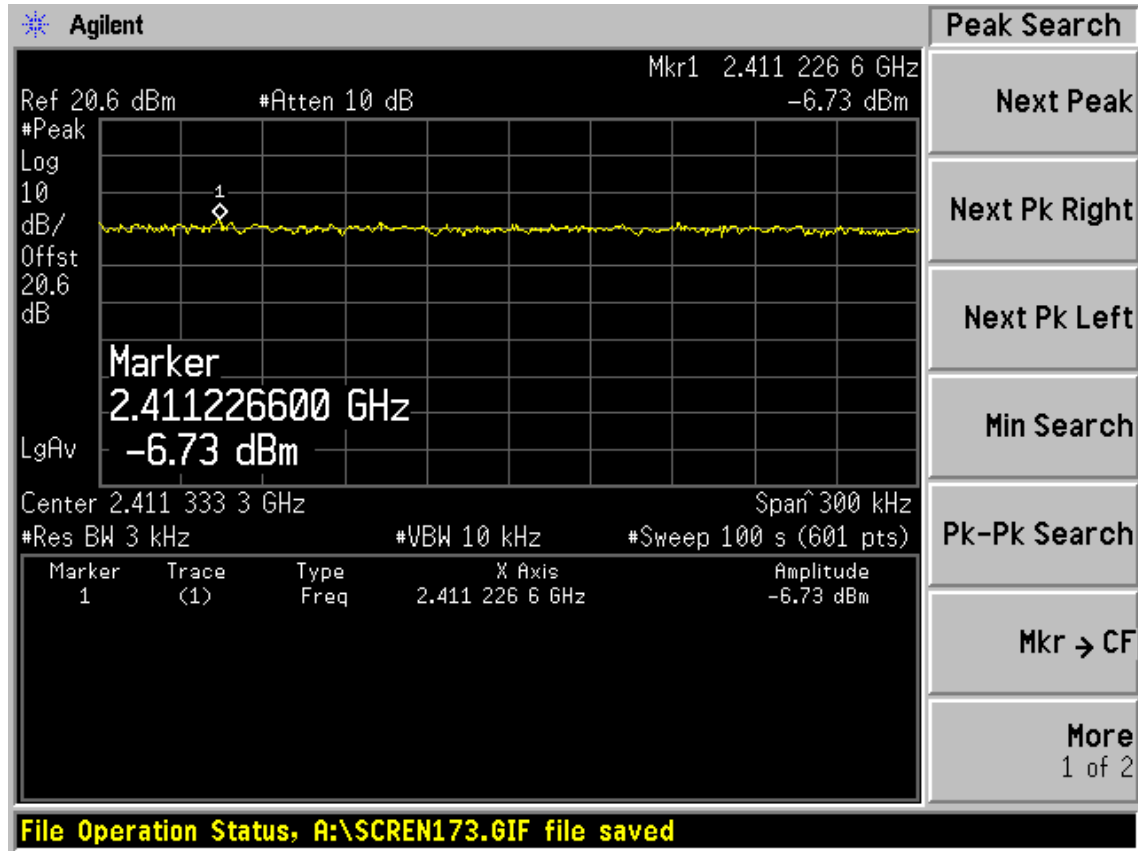
1. Connected the EUT's antenna port to spectrum analyzer device by 20dB attenuator.
- 2, Set the test frequency as center frequency, Set RBW=3KHz, VBW=10KHz, Span large enough capture the entire frequency, Read out maximum peak level frequency
- 3, Set the frequency read from produce 2 as center frequency, then set the span=300KHz, Sweep time=Span/RBW, Then Max hold, read out each mode and each chain's Power density.

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

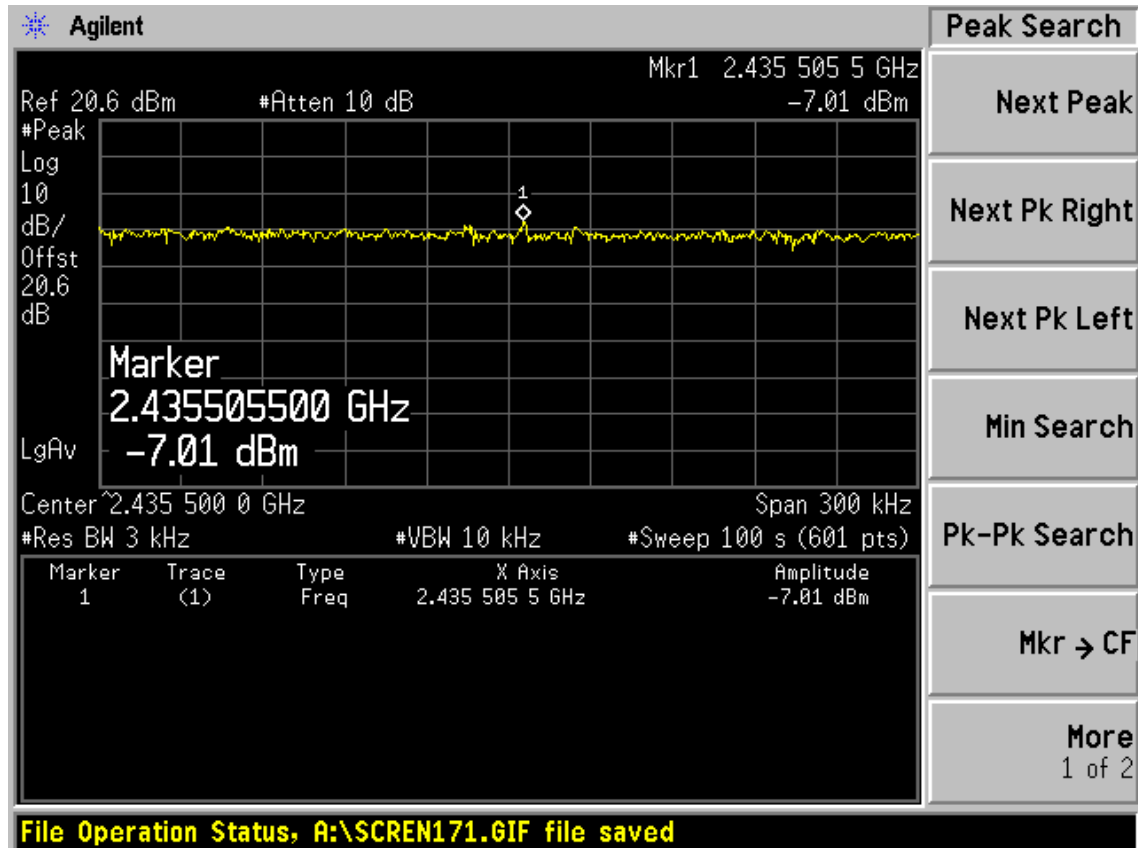
### 9.4. Test Results

EUT: Wireless N-lite PCI Express Adapter M/N: NWD3105				
Power: DC 3.3V From PC input AC 120V/60Hz				
Data Rate: 11b: 1Mbps ; 11g : 6Mbps 11n HT20: 6.5Mbps 11n HT40: 13.5Mbps (Note 1)				
Ambient Temperature: 23 °C		Relative Humidity: 60%		
Test date: 2011/12/08		Test site: RF site		Tested By: Leo-Li
Test CH	11b 11g 11n HT20	CH1: 2412MHz	CH6: 2437MHz	CH11: 2462MHz
Test CH	11n HT40	CH1: 2422MHz	CH4: 2437MHz	CH7: 2452MHz
Mode	CH	Result (dBm)	Limit (dBm)	Conclusion
11b	CH1	-6.73	8.00	Pass
	CH6	-7.01	8.00	Pass
	CH11	-6.93	8.00	Pass
11g	CH1	-11.24	8.00	Pass
	CH6	-7.94	8.00	Pass
	CH11	-8.17	8.00	Pass
11n HT20	CH1	-11.04	8.00	Pass
	CH6	-9.04	8.00	Pass
	CH11	-14.12	8.00	Pass
11n HT40	CH1	-18.09	8.00	Pass
	CH4	-12.10	8.00	Pass
	CH7	-18.02	8.00	Pass
Note1: According Exploratory test, These data rate have the maximum output power				
Note2: Cable loss and Attenuator were input to the Spectrum Analyzer as amplitude offset				

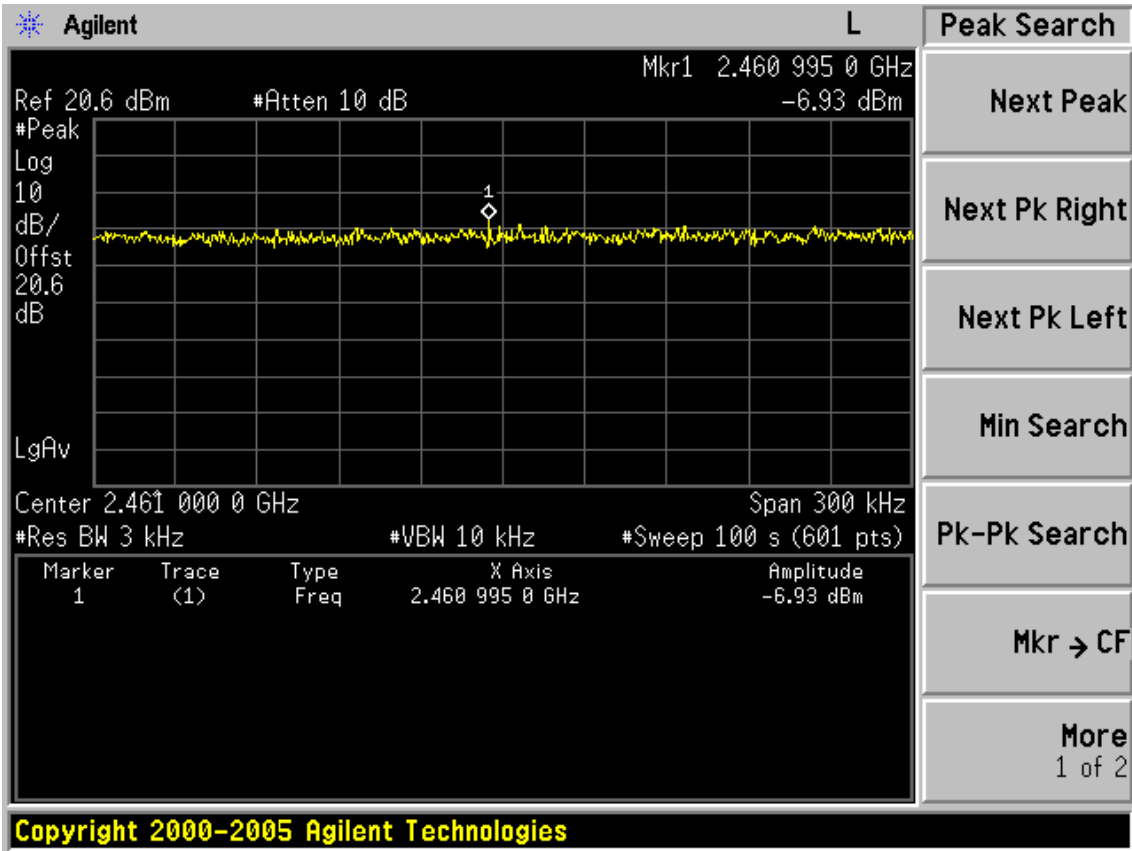
Test Mode: IEEE 802.11b TX  
 Test CH1: 2412MHz



Test CH6: 2437MHz

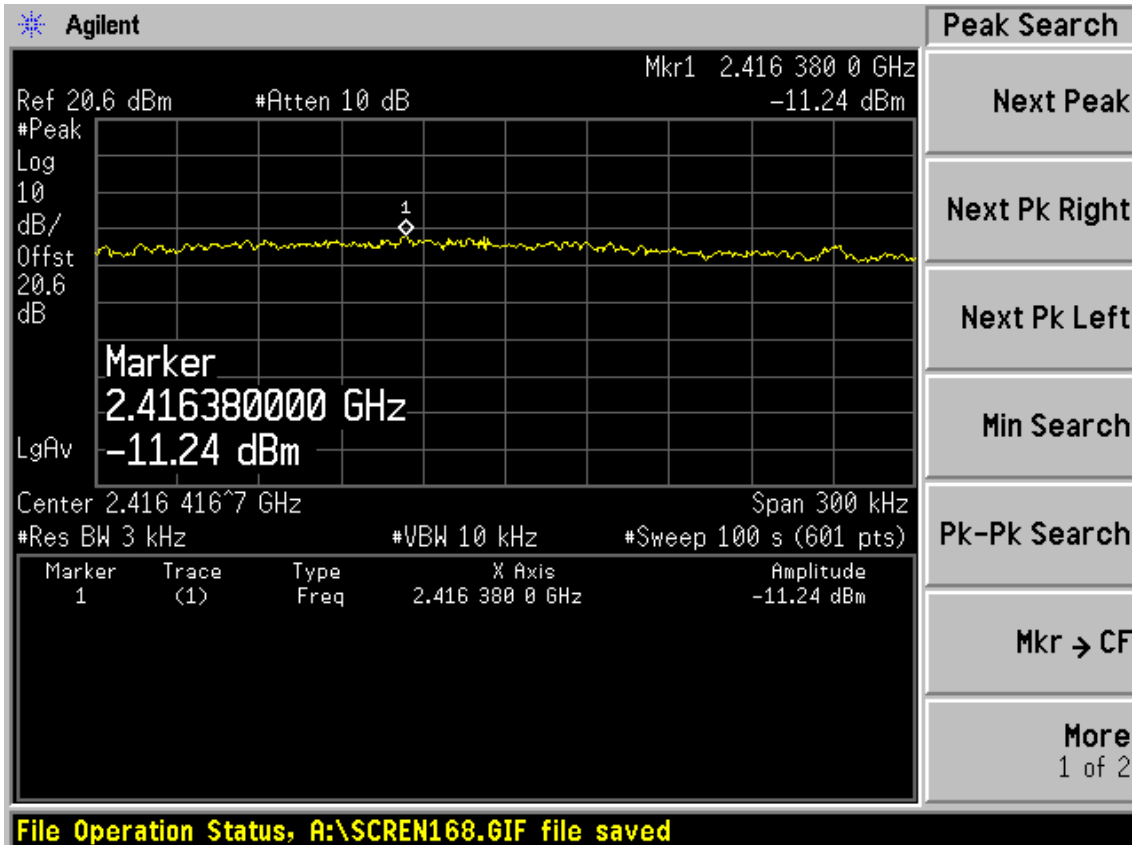


Test CH1: 2462MHz

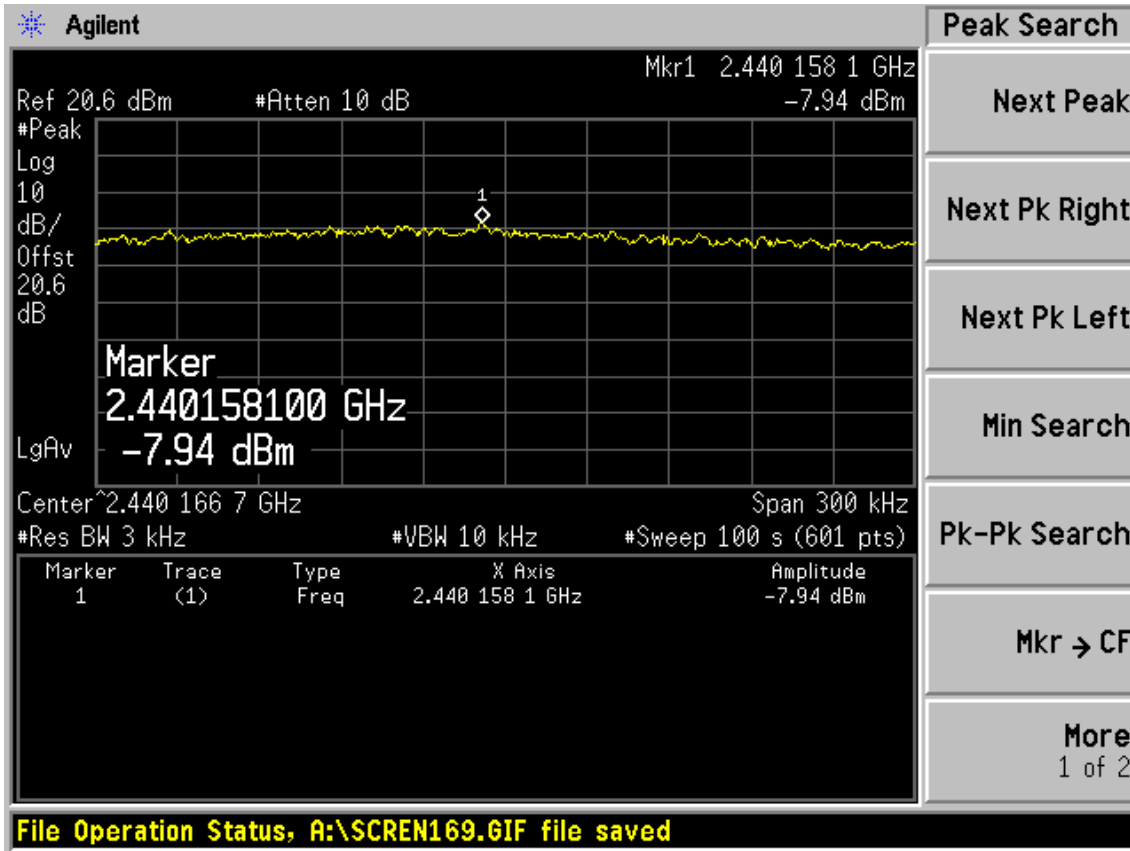


Test Mode: IEEE 802.11g TX

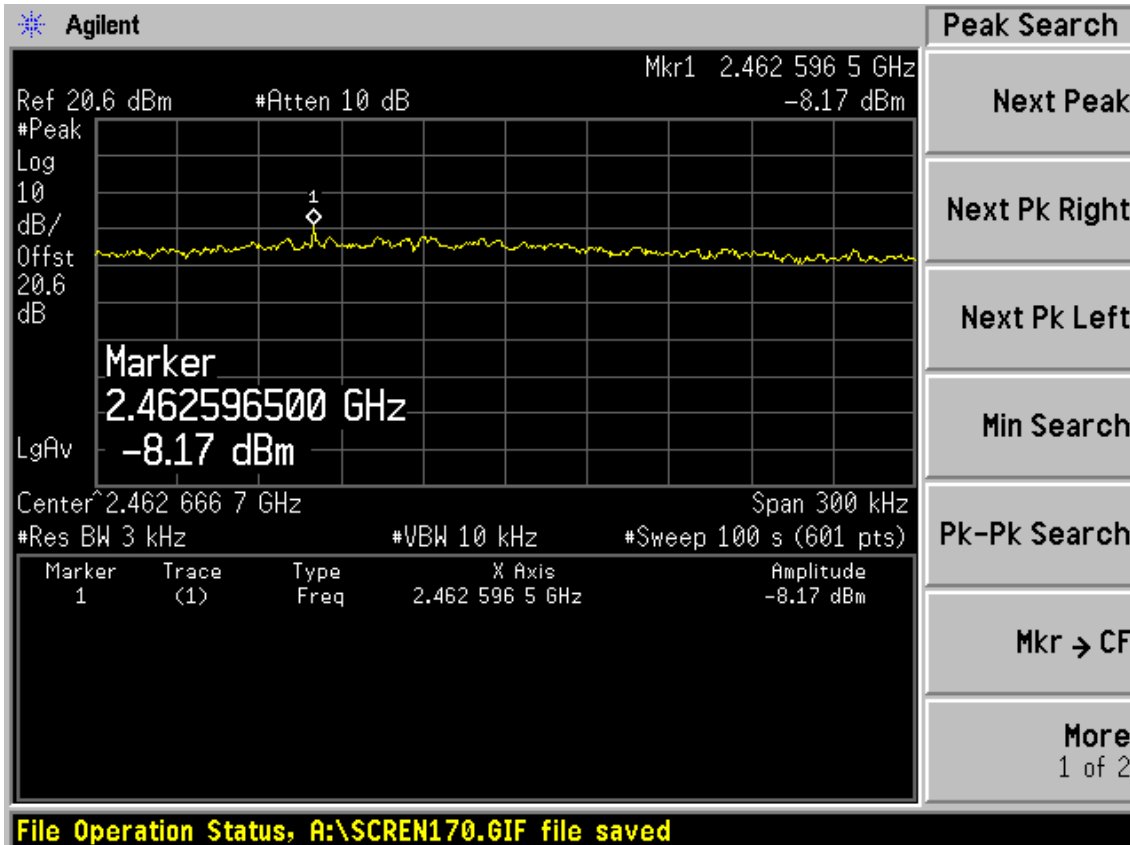
Test CH1: 2412MHz



Test CH6: 2437MHz

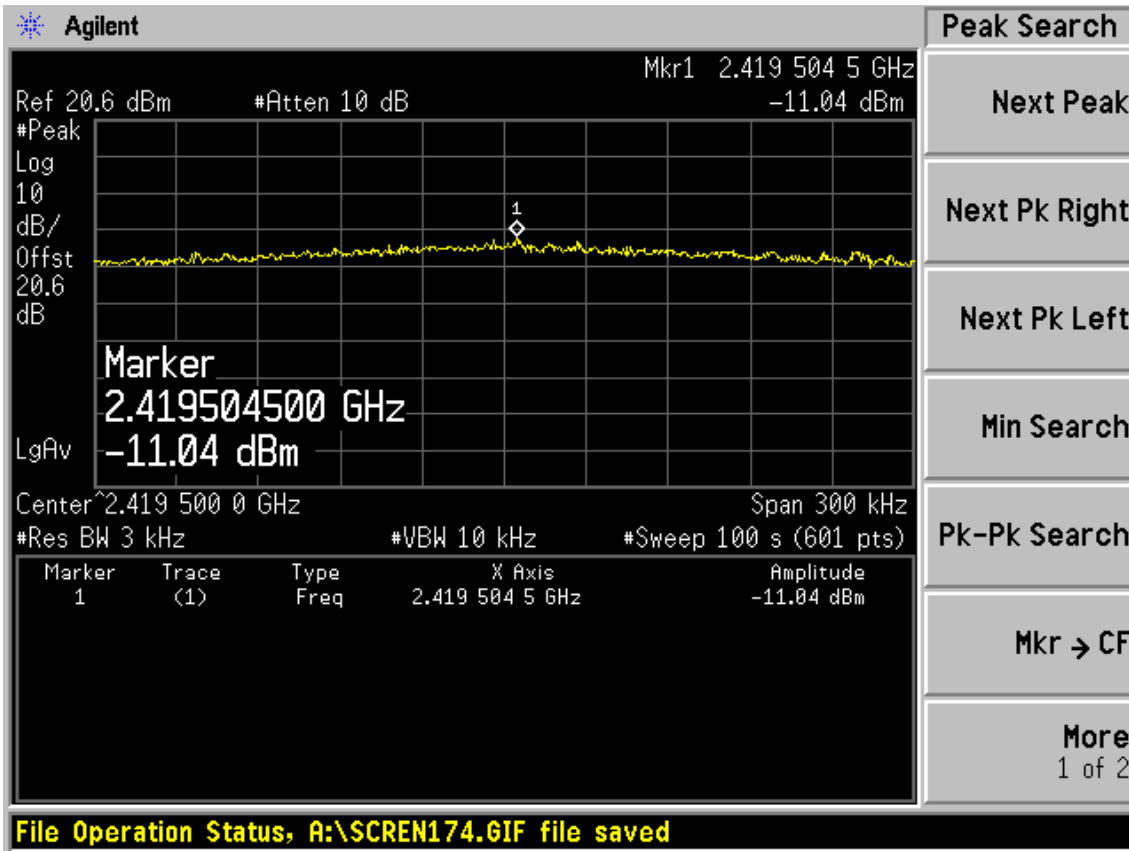


Test CH11: 2462MHz

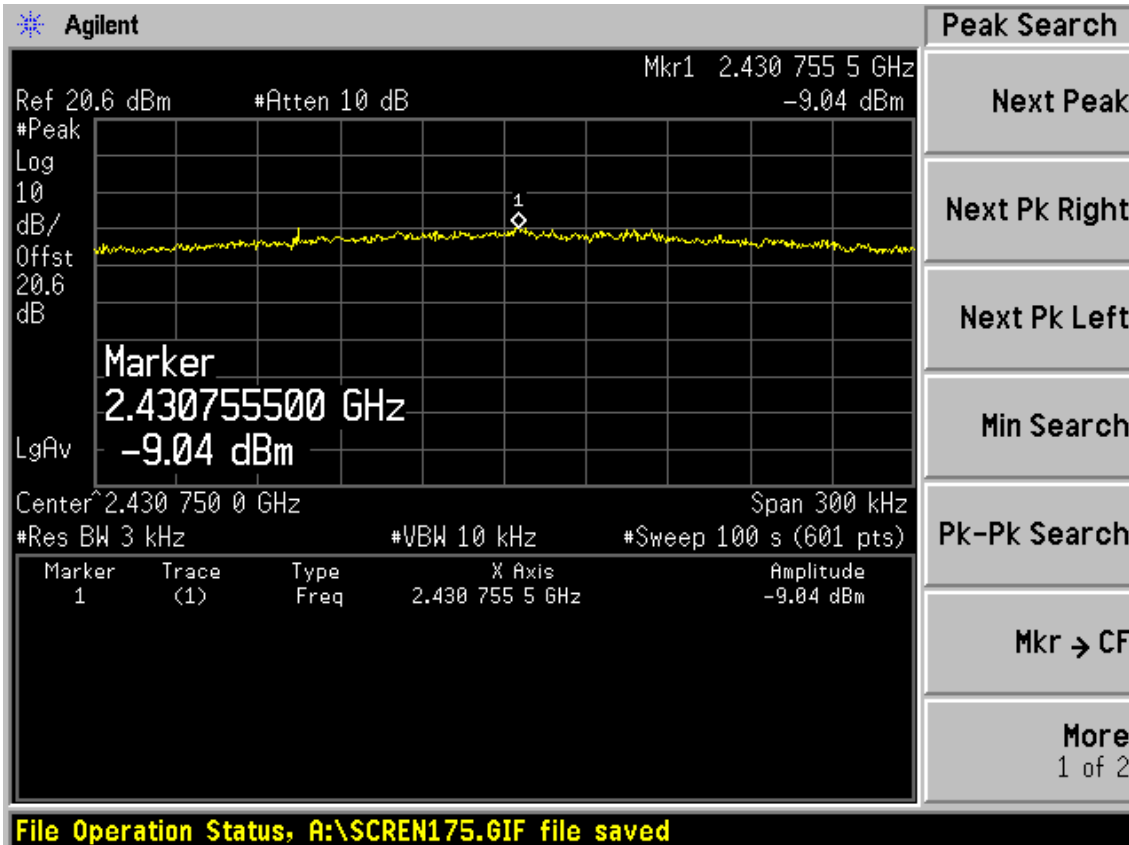


Test Mode: IEEE 802.11n HT20 TX

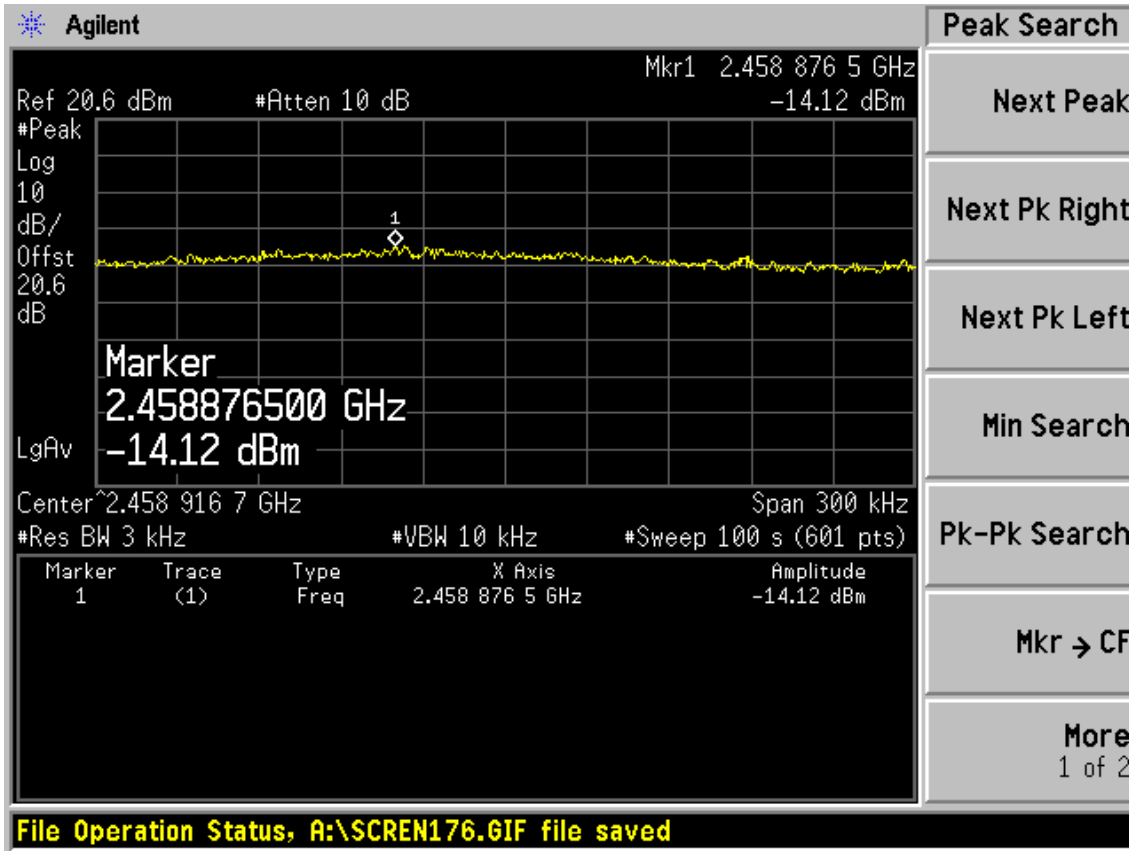
Test CH1: 2412MHz



Test CH6: 2437MHz

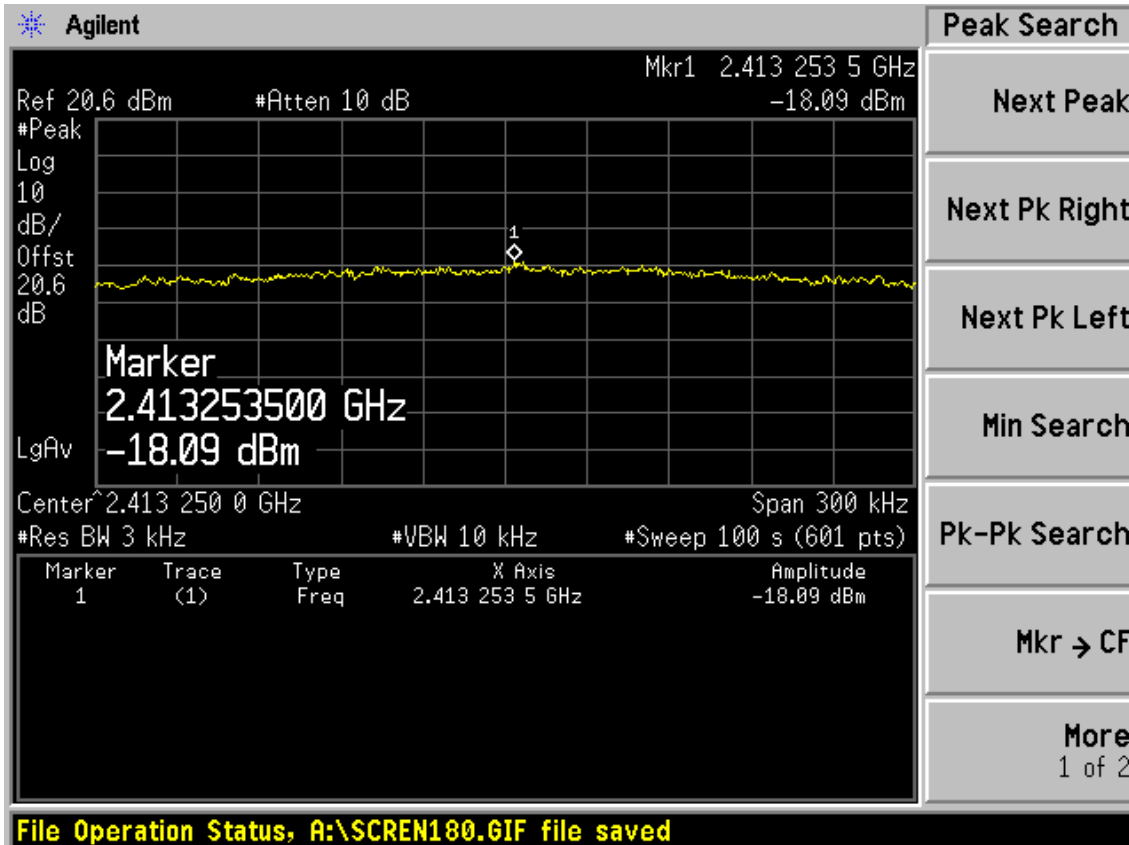


Test CH1: 2462MHz



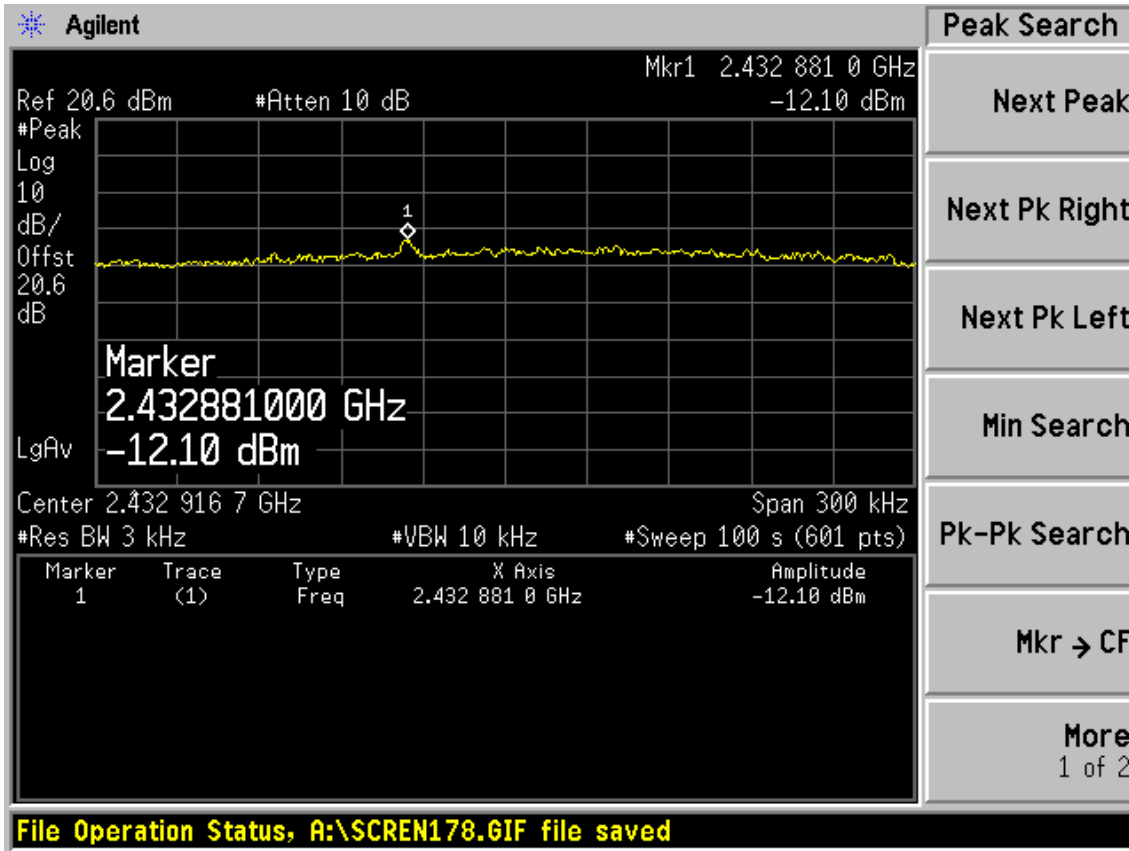
Test Mode: IEEE 802.11n HT40 TX

Test CH1: 2422MHz

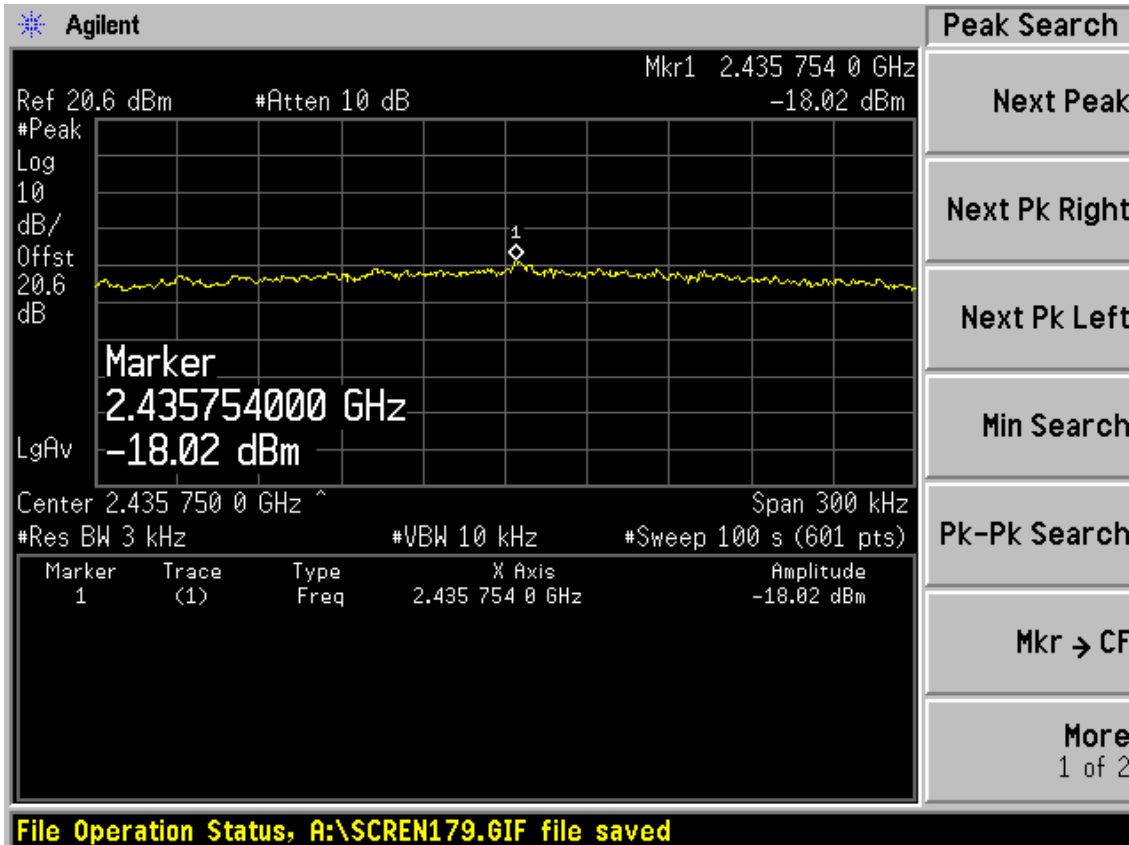




Test CH4: 2437MHz



Test CH7: 2452MHz



## **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 Patch dipole antenna 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 2dBi.

## 11. MPE ESTIMATION

### 11.1. Limit for General Population/ Uncontrolled Exposures

Frequency	Power density (mW/ cm <sup>2</sup> )	Averaging time(minutes)
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	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. Estimation Result

EUT: Wireless N-lite PCI Express Adapter		
M/N: NWD3105		
Test date: 2011-12-08	Pressure: 100.6 kpa	Humidity: 47%
Tested by: Leo-Li	Test site: RF Site	Temperature : 25°C

Mode	CH	Frequency (MHz)	PK Output power (dBm)	Output power (mW)	Antenna Gain (dBi)	Antenna Gain(linear)	MPE (mW/ cm <sup>2</sup> )
11b	1	2412	17.61	57.68	2	1.58	0.0182
	6	2437	20.12	102.80	2	1.58	0.0324
	11	2462	20.15	103.51	2	1.58	0.0327
11g	1	2412	16.93	49.32	2	1.58	0.0156
	6	2437	24.14	259.42	2	1.58	0.0818
	11	2462	16.89	48.87	2	1.58	0.0154
11n HT20	1	2412	16.06	40.36	2	1.58	0.0127
	6	2437	25.32	340.41	2	1.58	0.1074
	11	2462	15.66	36.81	2	1.58	0.0116
11n HT40	1	2422	11.43	13.90	2	1.58	0.0044
	4	2437	22.61	182.39	2	1.58	0.0575
	7	2452	11.65	14.62	2	1.58	0.0046

Note: The estimation distance is 20cm

## 12. DEVIATION TO TEST SPECIFICATIONS

[ NONE ]