FCC PART 15C TEST REPORT FOR CERTIFICATION
On Behalf of

TP-LINK TECHNOLOGIES CO., LTD.

300Mbps Wireless N PCI Express Adapter

Model No.: TL-WN881ND

FCC ID: TE7WN881ND

Prepared for : TP-LINK TECHNOLOGIES CO., LTD.
Building 24(floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China

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-F11294
Date of Test	:	Dec.15~23, 2011
Date of Report	:	Dec.28, 2011

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TEST REPORT CERTIFICATION

Applicant	:	TP-LINK TECHNOLOGIES CO., LTD.
Manufacturer	:	TP-LINK TECHNOLOGIES CO., LTD.
EUT Description	:	300Mbps Wireless N PCI Express Adapter
FCC ID	:	TE7WN881ND

(A) MODEL NO. : TL-WN881ND
(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 : Dec.15~23, 2011 Report of date: Dec.28, 2011

Prepared by : Cerry He/ Assistant

Reviewer by : Sunny Lu / Supervisor

信華科技（深圳）有 Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report
Signature:

Approved & Authorized Signer : 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	:	300Mbps Wireless N PCI Express Adapter
Model Number	:	TL-WN881ND
FCC ID	:	TE7WN881ND
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	:	MIMO 2X2 Dipole Antenna, 2dBi Gain
Applicant	:	TP-LINK TECHNOLOGIES CO., LTD. Building 24(floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Manufacturer	:	TP-LINK TECHNOLOGIES CO., LTD. Building 24(floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Date of Test	:	Dec.15~23, 2011
Date of Receipt	:	Dec.15, 2011
Sample Type	:	Prototype production

2.2.Test Information

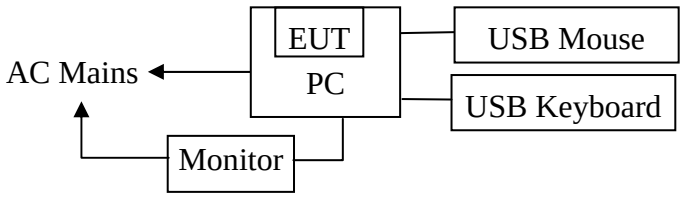
A special test software was used to control EUT work in Continuous TX mode(100% duty cycle), and select test channel, wireless mode and data rate.

Tested mode, channel, and data rate information			
Mode	data rate (Mpbs)(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. Note2: This device is MIMO2X2 device, Radiated emission and bandedge test in 11n mode with two antenna transmit simulately,in 11b/g mode, use chain0 which has worst case emission for radiated emission and bandedge test.			

2.3.Tested Supporting System Details

	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1	Personal Computer	Test PC N	DELL	Studio 540	J14XK2X	☑FCC DoC ☑BSMI ID:R33002
		Power Cord: Unshielded, Detachable, 1.8m Display Card: HD3650 (DVI+Display+HDMI)				
2	Monitor	ACS-EMC-LM01R	Viewsonic	VLCDS26064-2W	A210521A0131	☑FCC DoC ☑BSMI ID: R31374
		Power Cord: Unshielded, Detachable, 1.8m DVI Cable: Shielded, Detachable, 2.0m (with two cores)				
3	USB Keyboard	ACS-EMC- K01R	DELL	SK-8115	CN-ODJ313-71616-711-0J73	☑ FCC DoC ☑BSMI ID: T3A002
		Power Cord: shielded, Undetachable, 2.0m				
4	USB Mouse	ACS-EMC-M01R	DELL	M056UO	512022645	☑FCC DoC ☑BSMI ID: R41108
		Power Cord: shielded, Undetachable, 1.8m				

2.4.Block Diagram of Test Setup



(EUT: 300Mbps Wireless N 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)

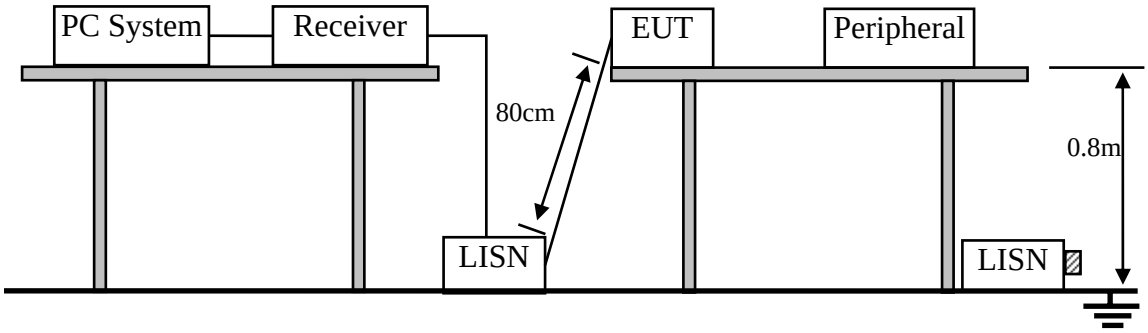
Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	3.2 dB (150KHz to 30MHz)
Uncertainty for Radiation Emission test in 3m chamber	3.6 dB(30~200MHz, Polarize: H)
	3.8 dB(30~200MHz, Polarize: V)
	4.2 dB(200M~1GHz, Polarize: H)
	3.8 dB(200M~1GHz, Polarize: V)
Uncertainty 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	$7x10^{-8}$
Uncertainty for Bandwidth test	83 kHz
Uncertainty for DC power test	0.038 %
Uncertainty for test site temperature and humidity	0.6℃
	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.	Terminator	Hubersuhner	50Ω	No. 1	May.08, 11	1 Year
4.	RF Cable	Fujikura	3D-2W	No.1	May.08, 11	1Year
5.	Coaxial Switch	Anritsu	MP59B	M50564	May.08, 11	1 Year
6.	Passive Probe	Rohde & Schwarz	ESH2-Z3	299.7810.52	May.08, 11	1 Year
7.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 11	1 Year

3.2.Block Diagram of Test Setup



:50Ω Terminator

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. 300Mbps Wireless N PCI Express Adapter (EUT)

Model Number : TL-WN881ND
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 3.2.

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

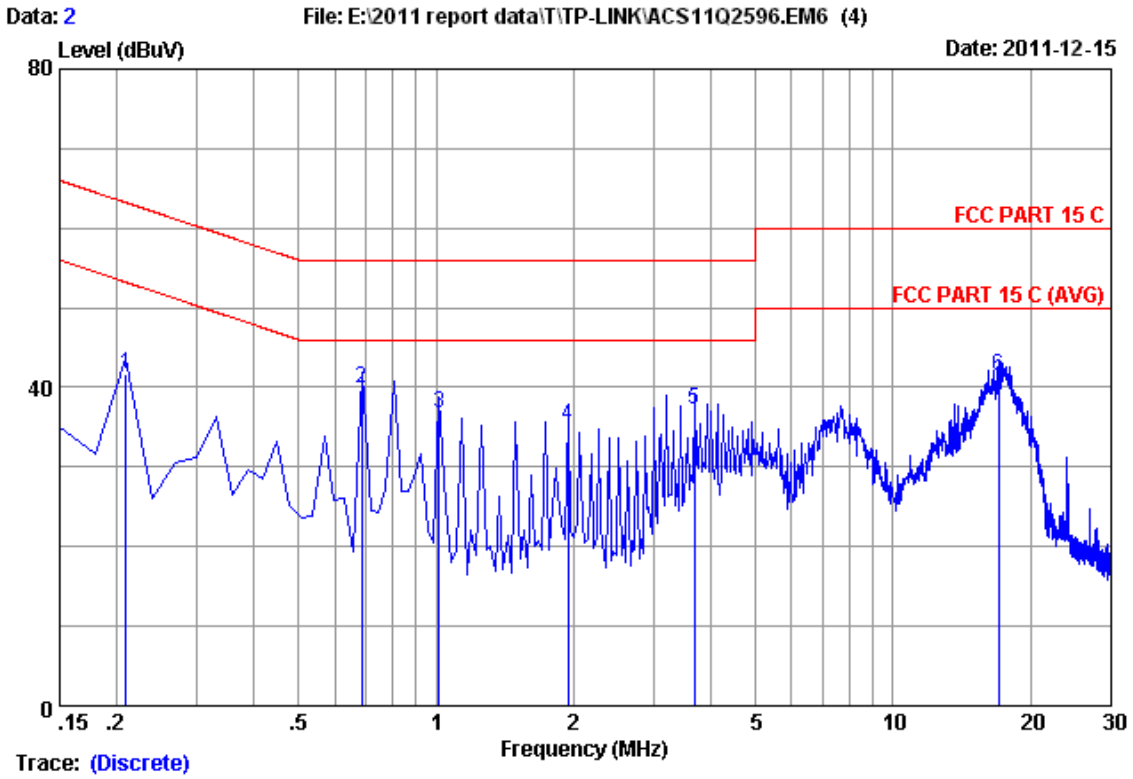
The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The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

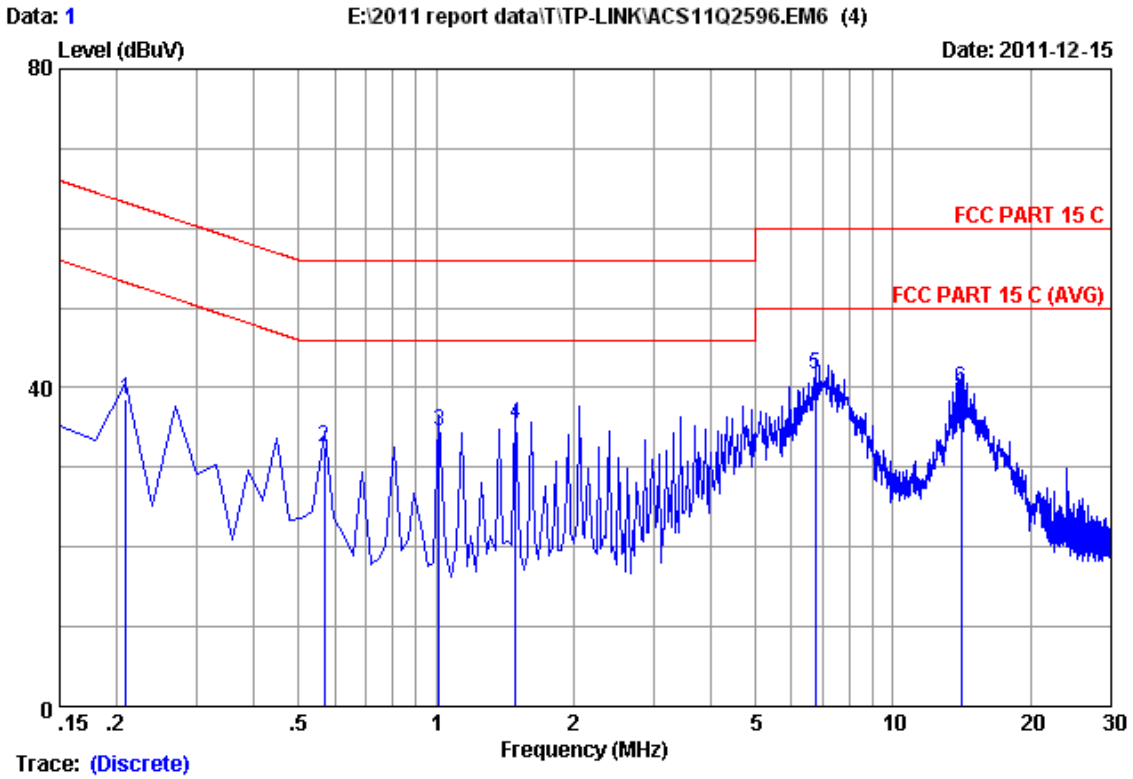


Trace: (Discrete)

Site no :1#conduction Data No :2
Dis./Ant. :** 2011 ESH2-Z5 LINE
Limit :FCC PART 15 C
Env./Ins. :29.5*C/55% Engineer :Leo-Li
EUT :300Mbps Wireless N PCI Express Adapter
Power Rating :DC 3.3V From PC Input AC 120V/60Hz
Test Mode :Tx Mode
M/N:TL-WN881ND

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.20970	0.15	9.86	31.66	41.67	63.22	21.55	QP
2	0.68730	0.16	9.87	29.91	39.94	56.00	16.06	QP
3	1.016	0.17	9.88	26.72	36.77	56.00	19.23	QP
4	1.941	0.20	9.92	25.01	35.13	56.00	20.87	QP
5	3.672	0.23	9.97	27.04	37.24	56.00	18.76	QP
6	16.985	0.47	10.11	30.97	41.55	60.00	18.45	QP

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



Site no :1#conduction Data No :1
Dis./Ant. :** 2011 ESH2-Z5 NEUTRAL
Limit :FCC PART 15 C
Env./Ins. :29.5*C/55% Engineer :Leo-Li
EUT :300Mbps Wireless N PCI Express Adapter
Power Rating :DC 3.3V From PC Input AC 120V/60Hz
Test Mode :Tx Mode
M/N:TL-WN881ND

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.20970	0.14	9.86	28.57	38.57	63.22	24.65	QP
2	0.56790	0.15	9.87	22.47	32.49	56.00	23.51	QP
3	1.016	0.17	9.88	24.49	34.54	56.00	21.46	QP
4	1.493	0.18	9.90	25.36	35.44	56.00	20.56	QP
5	6.747	0.28	10.03	31.42	41.73	60.00	18.27	QP
6	14.090	0.31	10.09	29.43	39.83	60.00	20.17	QP

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

4. RADIATED EMISSION TEST

4.1.Test Equipment

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

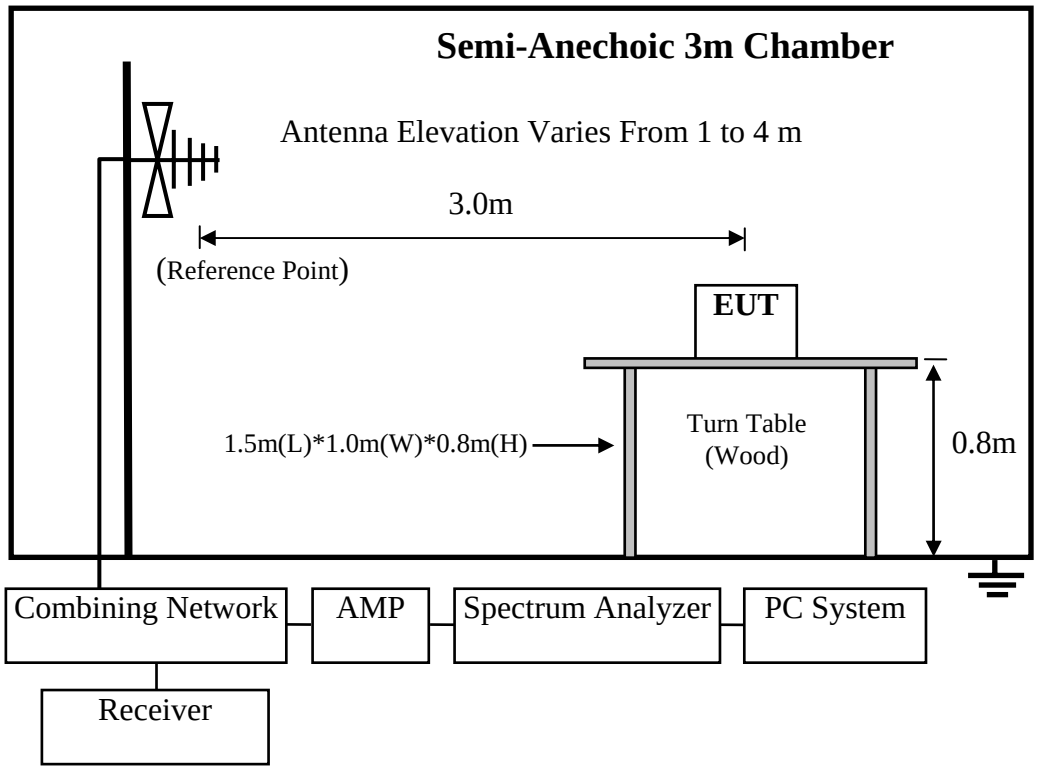
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Nov.28,11	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 11	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 11	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 11	1 Year
5	Bilog Antenna	Schaffner	25237	Aug.28, 11	25237	1 Year
6	RF Cable	MIYAZAKI	CFD400-NL	3# Chamber No.1	Dec.06, 11	1/2Year
7	Coaxial Switch	Anritsu	MP59B	M74389	May.08, 11	1 Year

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

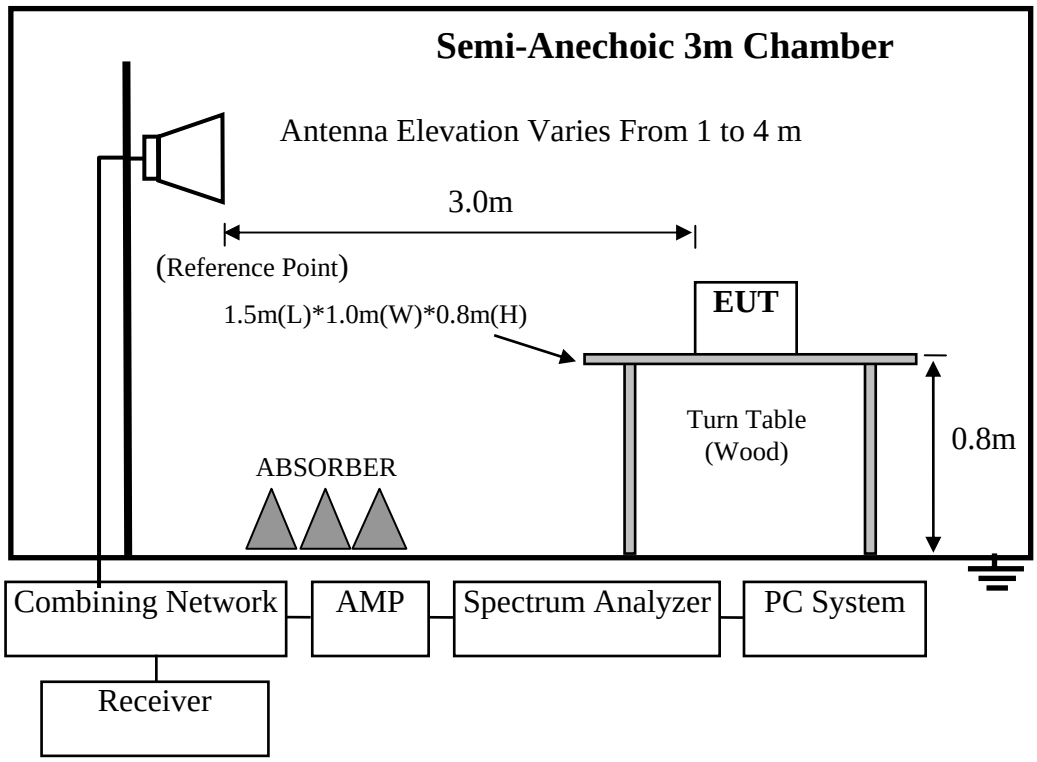
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	May.08, 11	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	July.01, 11	1 Year
3	Amplifier	Agilent	8449B	3008A00863	May.08, 11	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 11	1 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	
		μV/m	dB(μV)/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remark： (1) Emission level dBμV = 20 log Emission level μV/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
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])

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

4.4.EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

4.5.Operating Condition of EUT

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

4.6.Test Procedure

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

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

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

The frequency range from 30MHz to 10th 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.

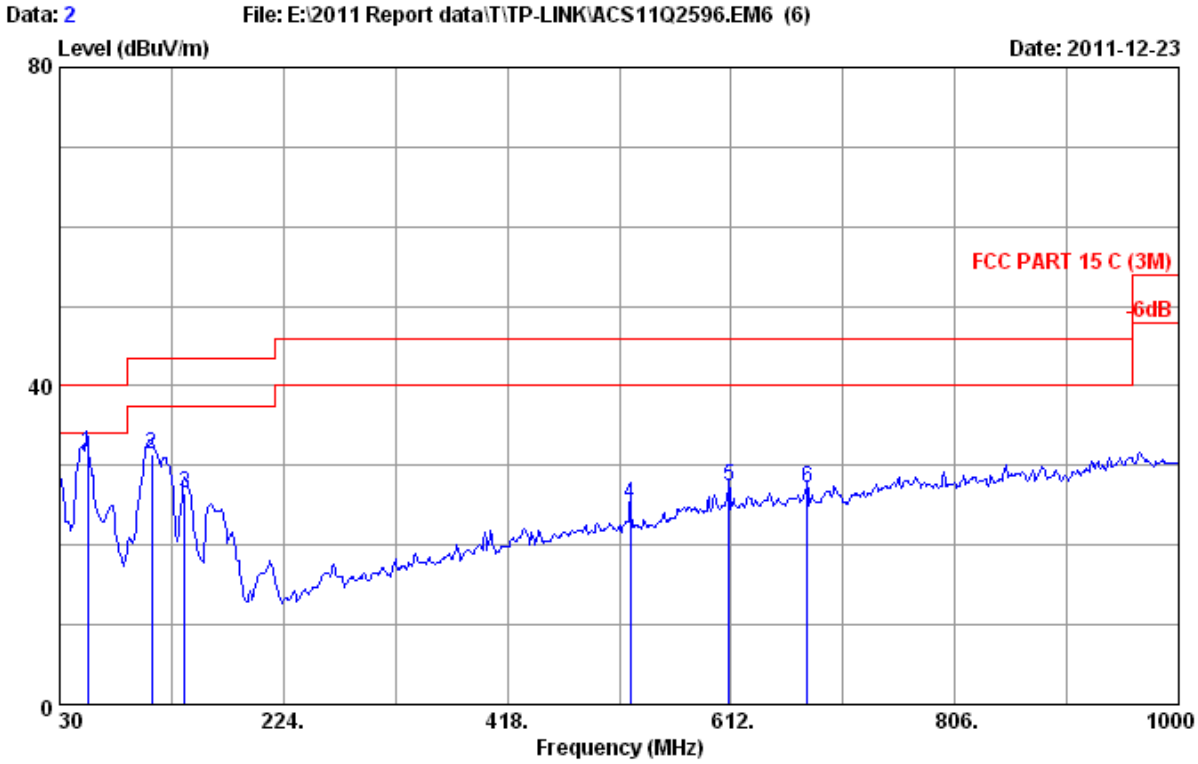
4.7.Radiated Emission Test Results

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.

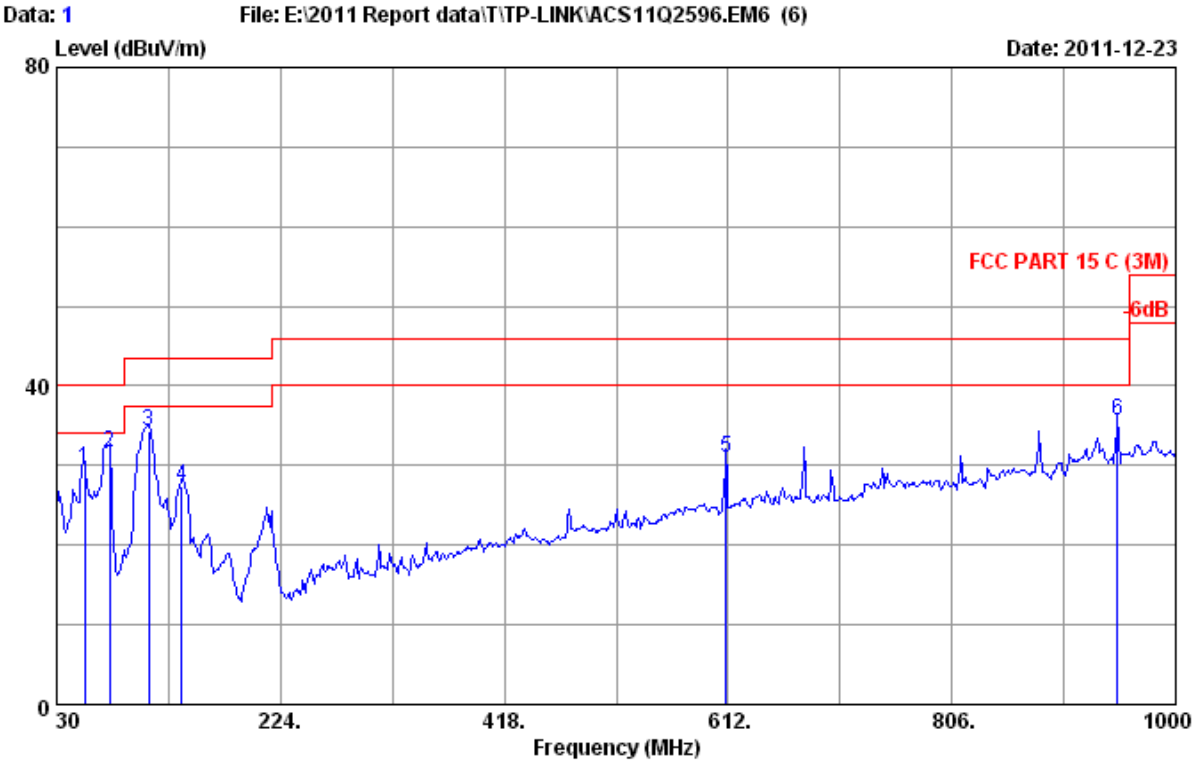
Frequency: 30MHz~1GHz




```
Site no.      : 3m Chamber                    Data no.   : 2
Dis. / Ant.   : 3m   25237 FACTOR  3M         Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15 C (3M)
Env. / Ins.   : 24*C/56%                      Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power rating  : DC 3.3V From PC Input AC 120V/60Hz
Test Mode     : Tx Mode
                M/N:TL-WN881ND
```

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	54.250	8.00	0.70	22.95	31.65	40.00	8.35	QP
2	109.540	13.40	0.79	17.21	31.40	43.50	12.10	QP
3	138.640	13.10	0.85	12.60	26.55	43.50	16.95	QP
4	524.700	17.60	1.36	6.29	25.25	46.00	20.75	QP
5	610.060	18.20	1.40	7.71	27.31	46.00	18.69	QP
6	677.960	18.86	1.43	6.79	27.08	46.00	18.92	QP

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

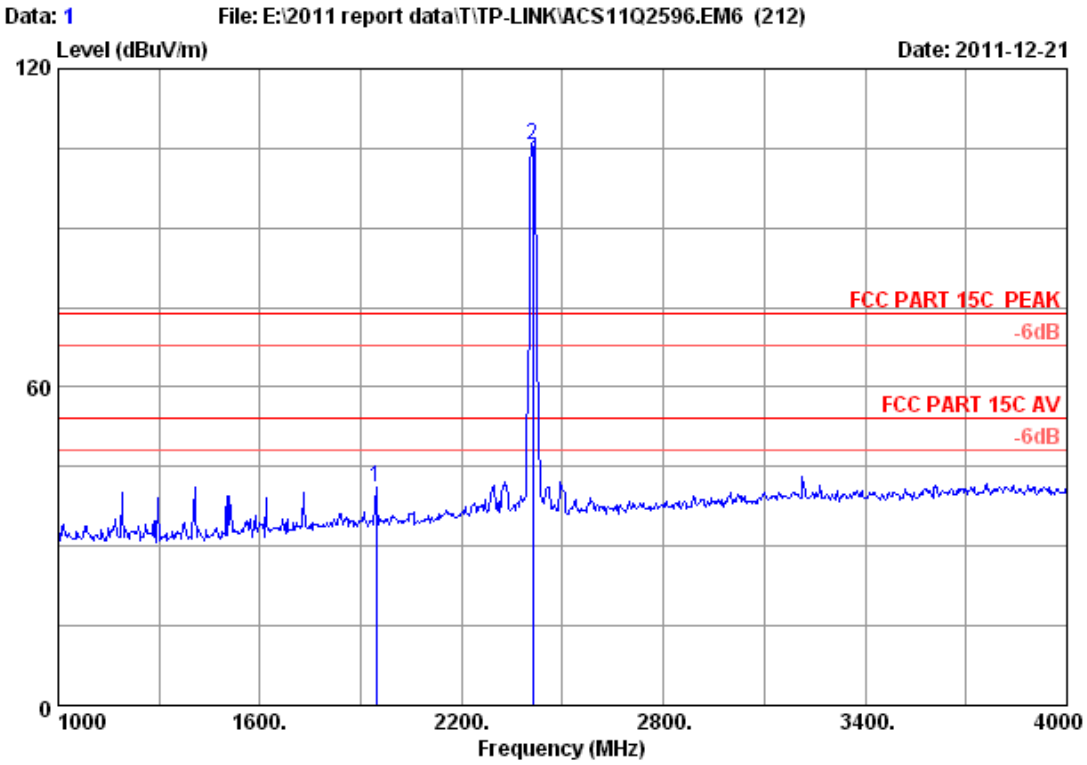


Site no. : 3m Chamber Data no. : 1
Dis. / Ant. : 3m 25237 FACTOR 3M Ant. pol. : VERTICAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 24*C/56% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power rating : DC 3.3V From PC Input AC 120V/60Hz
Test Mode : Tx Mode
M/N:TL-WN881ND

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	54.250	8.00	0.37	21.26	29.63	40.00	10.37	QP
2	75.590	8.40	0.55	22.75	31.70	40.00	8.30	QP
3	109.540	13.40	0.55	20.32	34.27	43.50	9.23	QP
4	138.640	13.10	0.79	13.41	27.30	43.50	16.20	QP
5	610.060	18.20	1.60	11.20	31.00	46.00	15.00	QP
6	949.560	21.40	2.20	11.98	35.58	46.00	10.42	QP

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

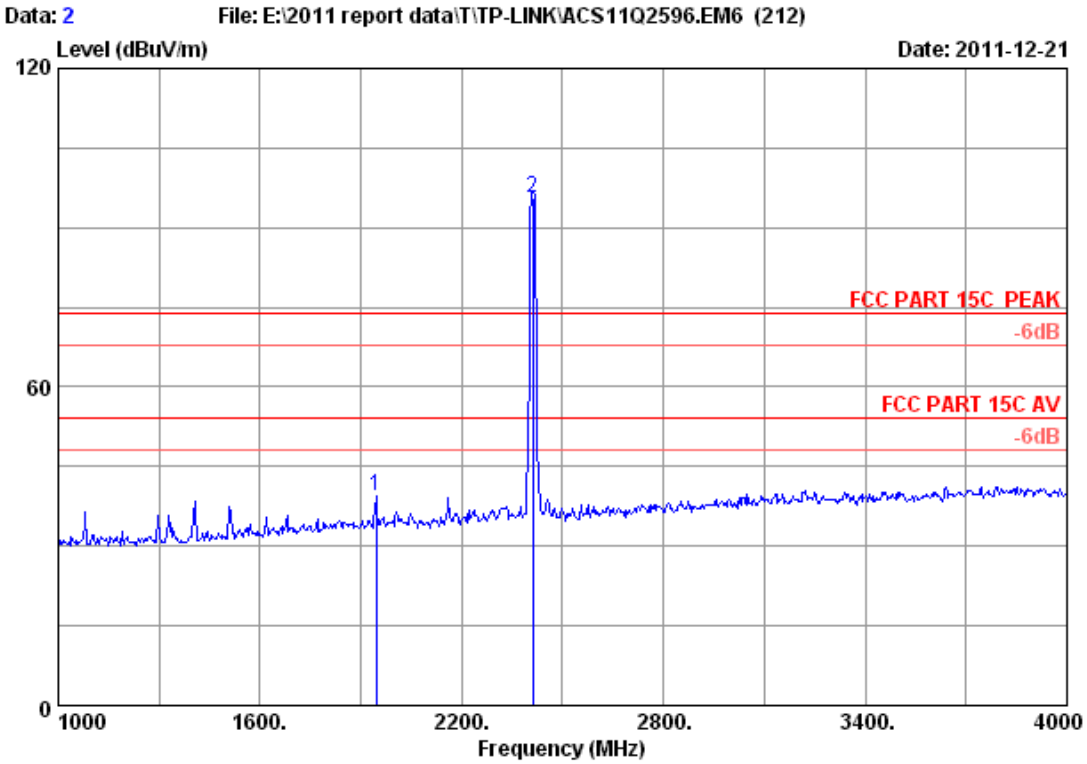
Frequency: 1GHz~18GHz



Site no. : 3m Chamber Data no. : 1
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1945.000	27.19	5.30	34.43	43.20	41.26	74.00	32.74	Peak
2	2412.000	27.98	6.03	34.44	106.13	105.70	74.00	-31.70	Peak

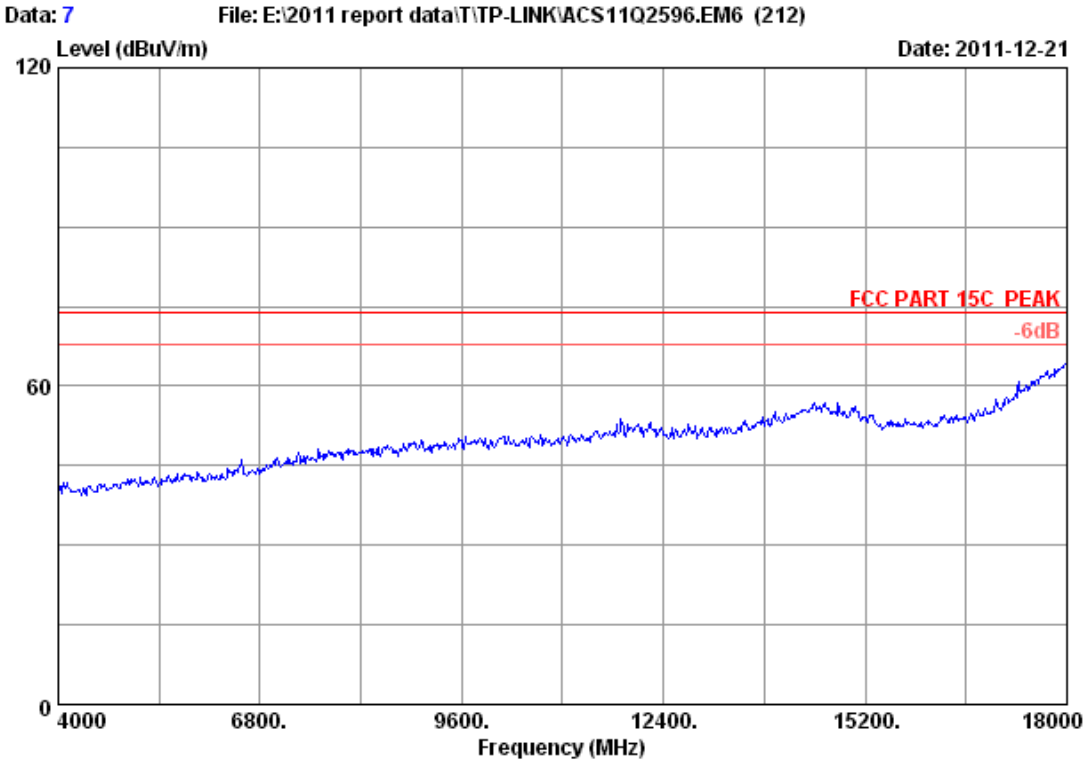
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



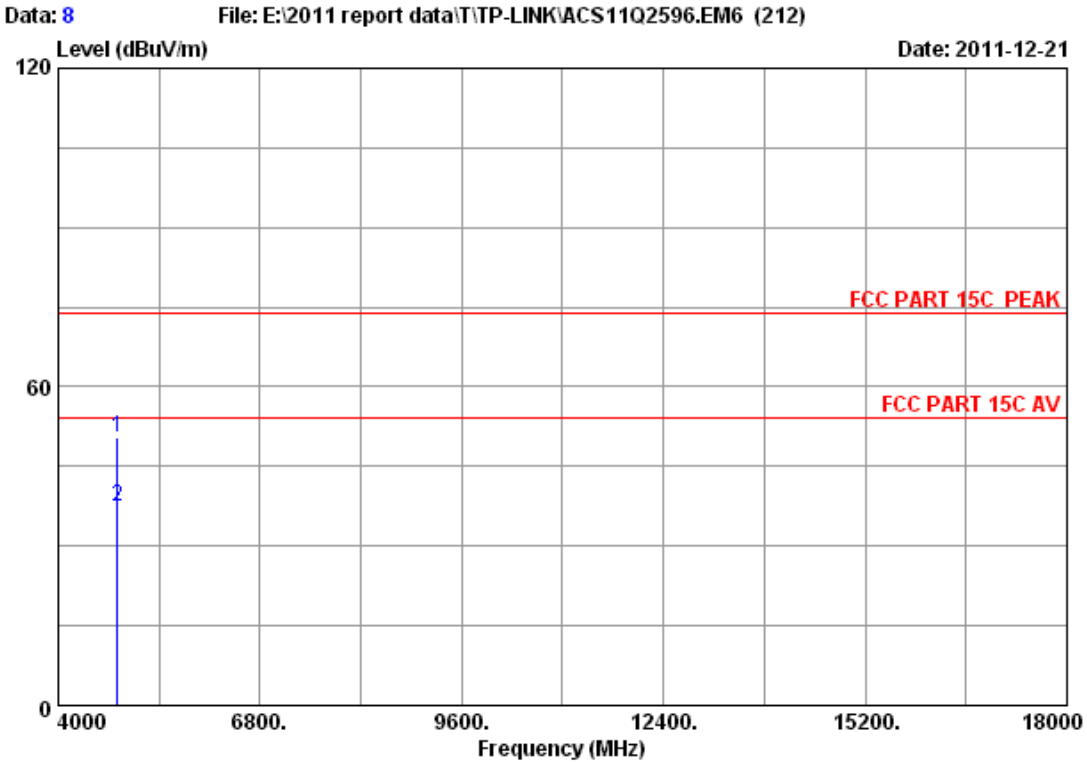
Site no. : 3m Chamber Data no. : 2
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1945.000	27.19	5.30	34.43	41.39	39.45	74.00	34.55	Peak
2	2412.000	27.98	6.03	34.44	96.18	95.75	74.00	-21.75	Peak

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



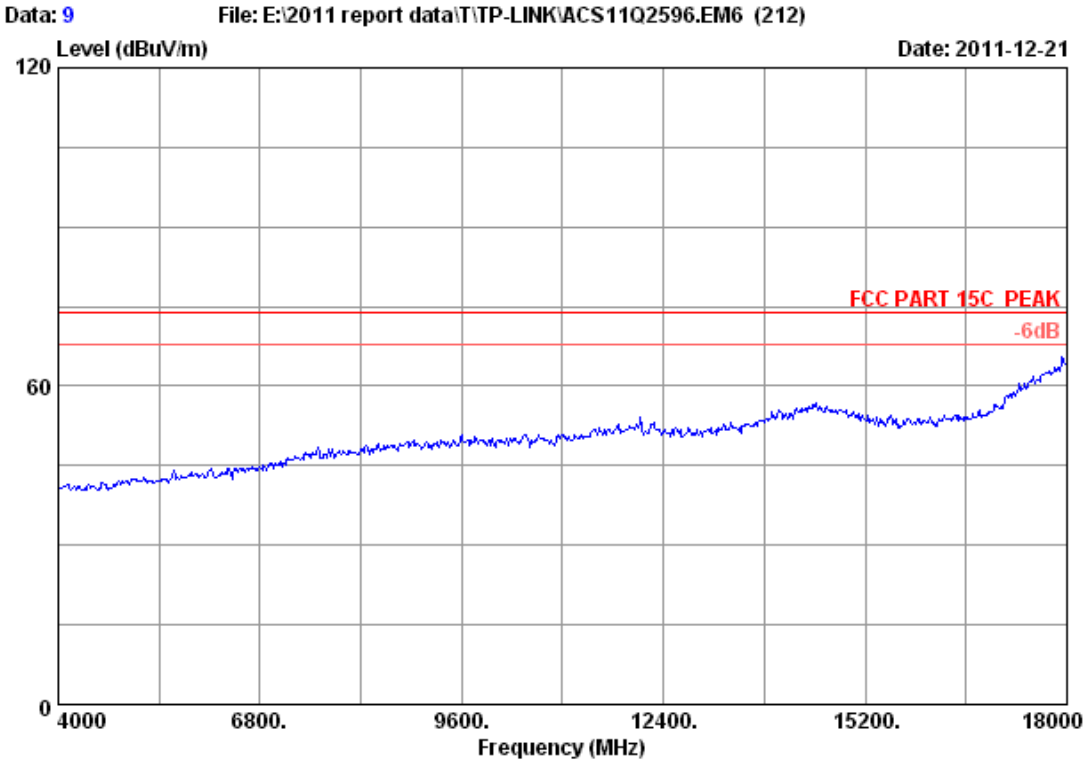

```
Site no.      : 3m Chamber                Data no.   : 7
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11b  CH1    2412MHz  Tx
M/N           : TL-WN881ND
```



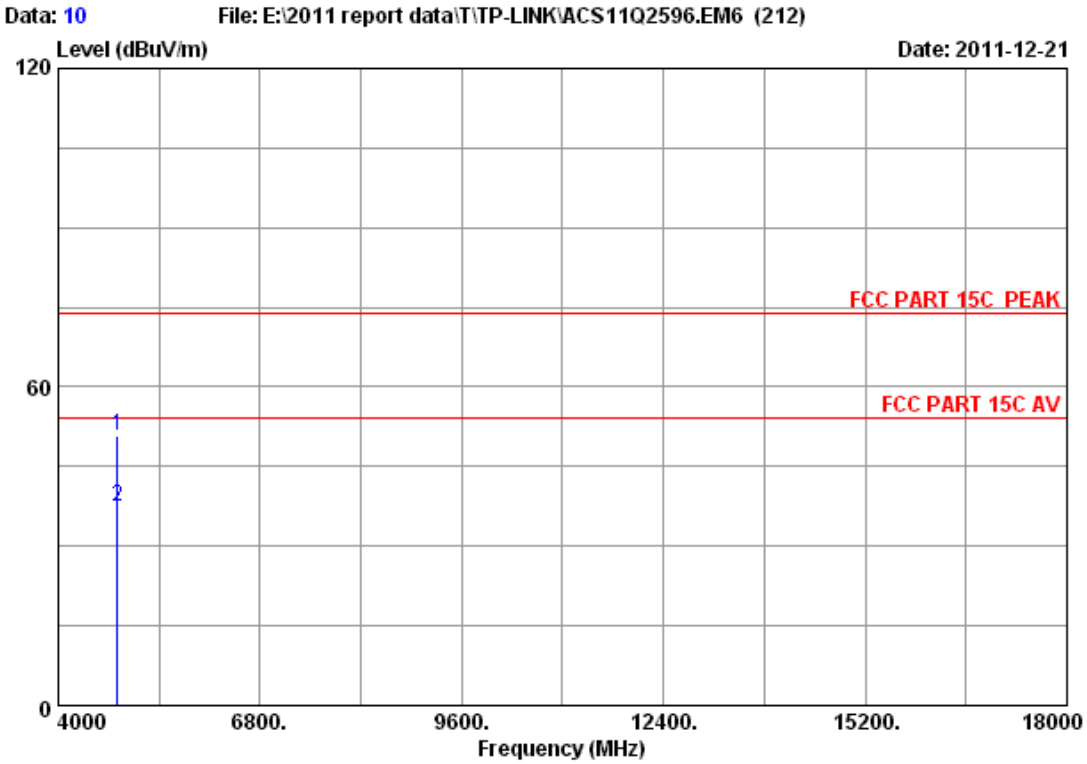
Site no. : 3m Chamber Data no. : 8
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	32.89	8.53	34.60	43.60	50.42	74.00	23.58	Peak
2	4824.000	32.89	8.53	34.60	30.54	37.36	54.00	16.64	Average

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



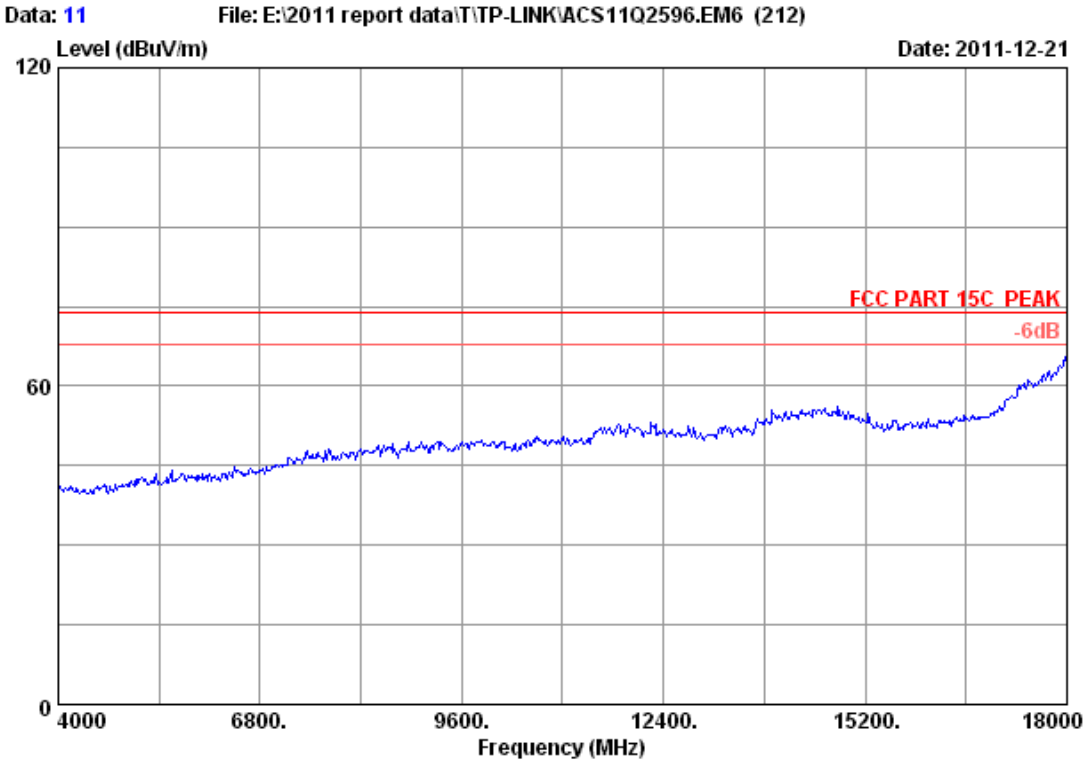

```
Site no.      : 3m Chamber                Data no.   : 9
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11b  CH1    2412MHz  Tx
M/N           : TL-WN881ND
```



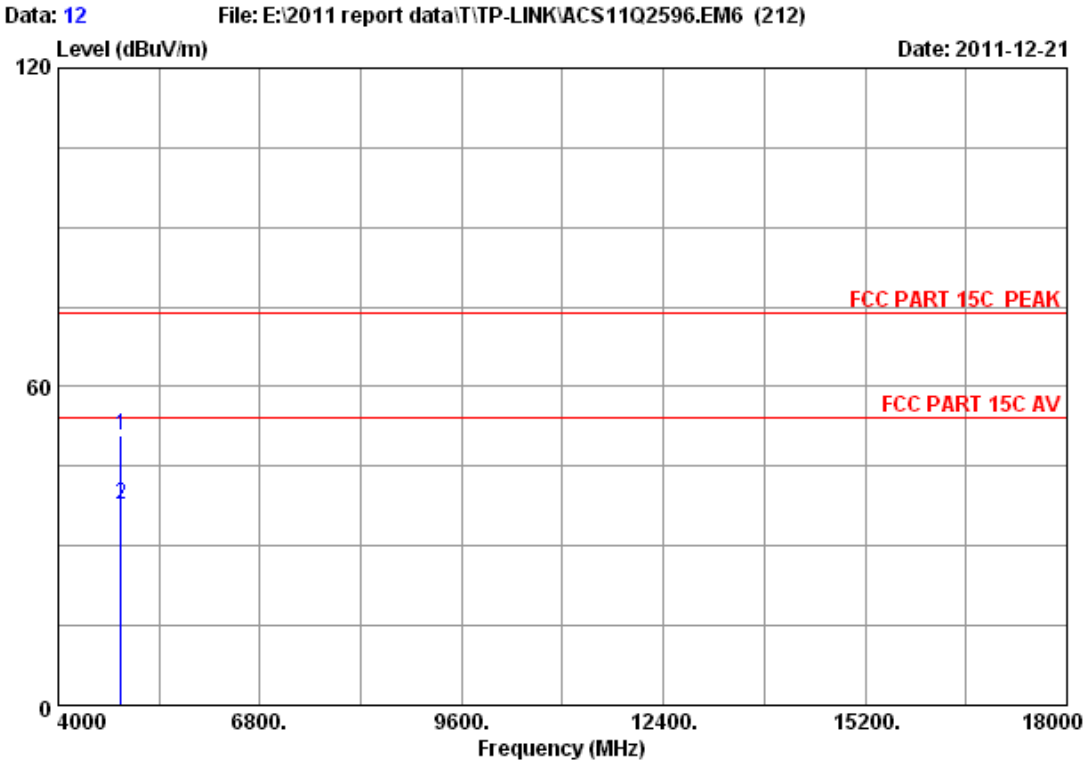
Site no. : 3m Chamber Data no. : 10
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	32.89	8.53	34.60	43.98	50.80	74.00	23.20	Peak
2	4824.000	32.89	8.53	34.60	30.65	37.47	54.00	16.53	Average

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



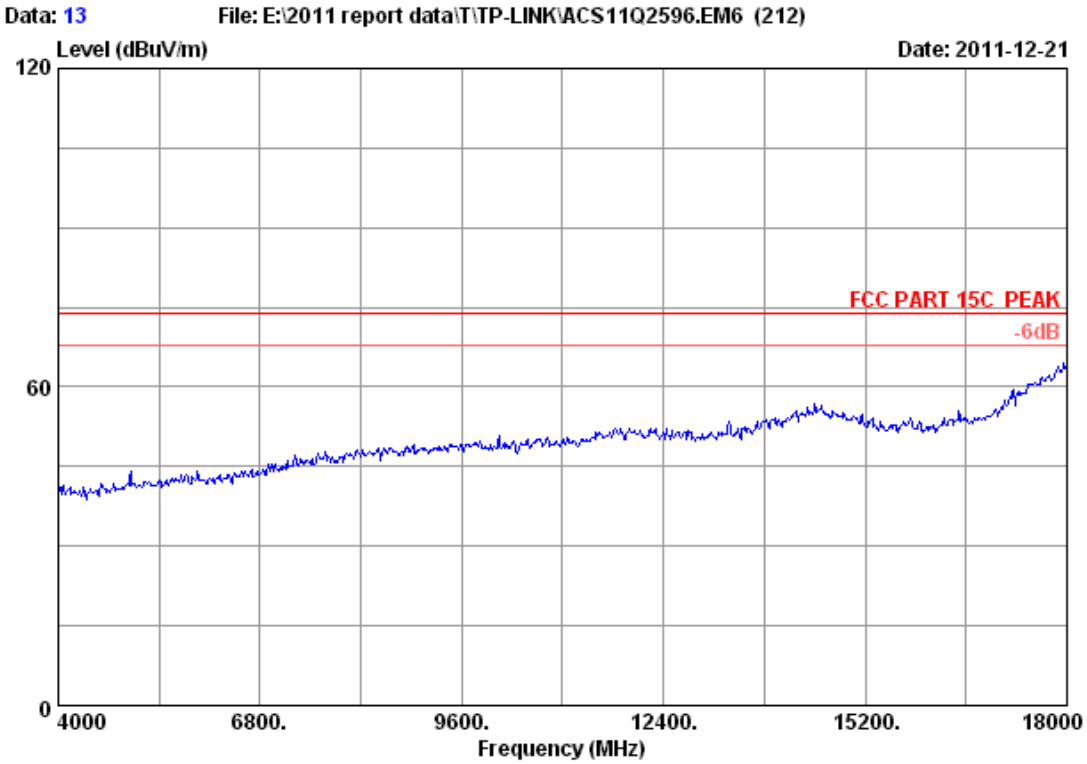

```
Site no.      : 3m Chamber                Data no.   : 11
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11b  CH6    2437MHz  Tx
M/N           : TL-WN881ND
```



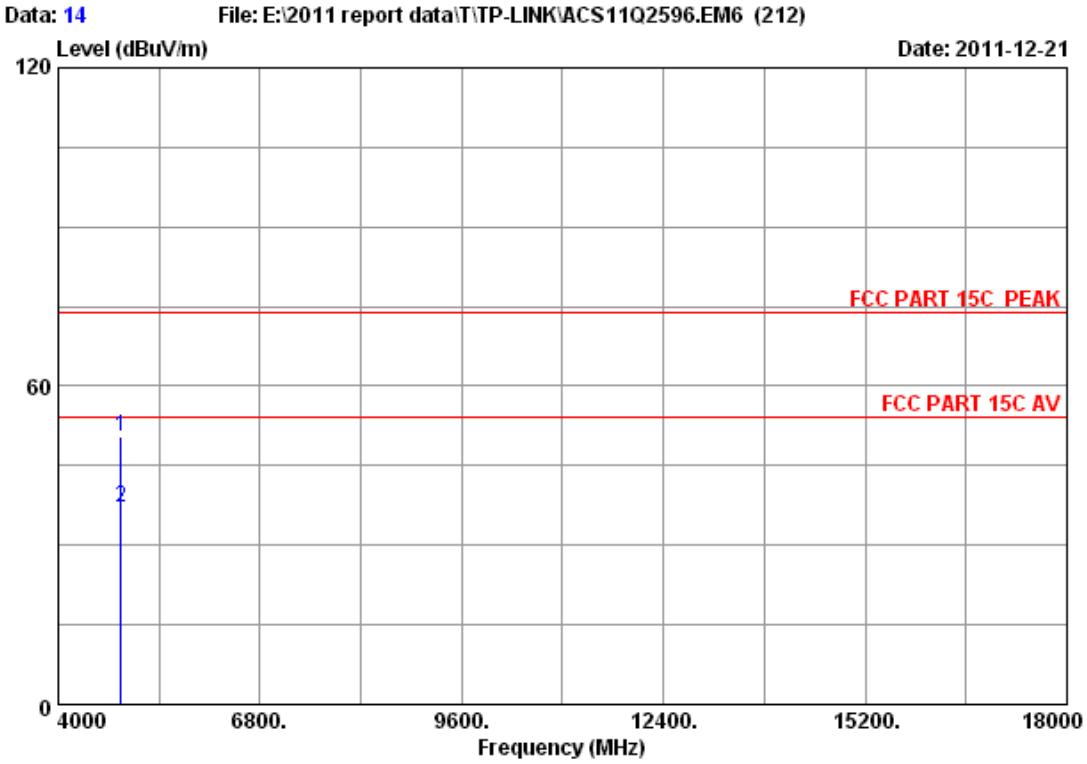
Site no. : 3m Chamber Data no. : 12
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	32.98	8.58	34.60	43.88	50.84	74.00	23.16	Peak
2	4874.000	32.98	8.58	34.60	30.74	37.70	54.00	16.30	Average

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



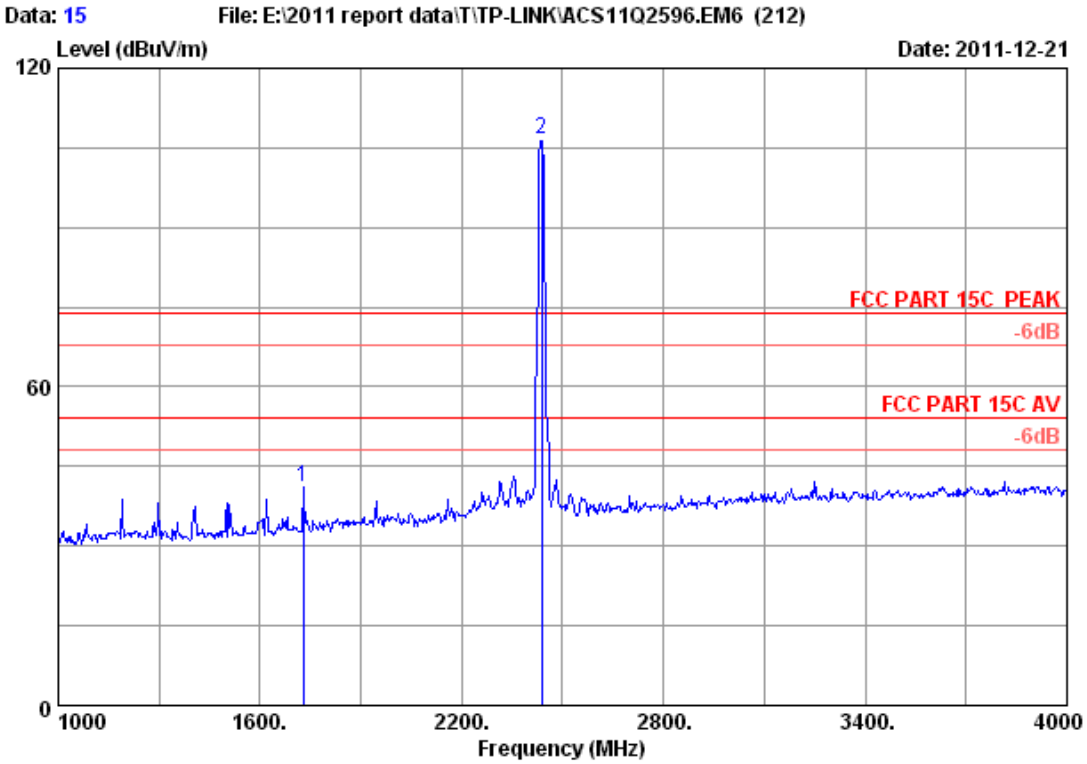

```
Site no.      : 3m Chamber                Data no.   : 13
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11b  CH6    2437MHz  Tx
M/N           : TL-WN881ND
```



Site no. : 3m Chamber Data no. : 14
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	32.98	8.58	34.60	43.44	50.40	74.00	23.60	Peak
2	4874.000	32.98	8.58	34.60	30.29	37.25	54.00	16.75	Average

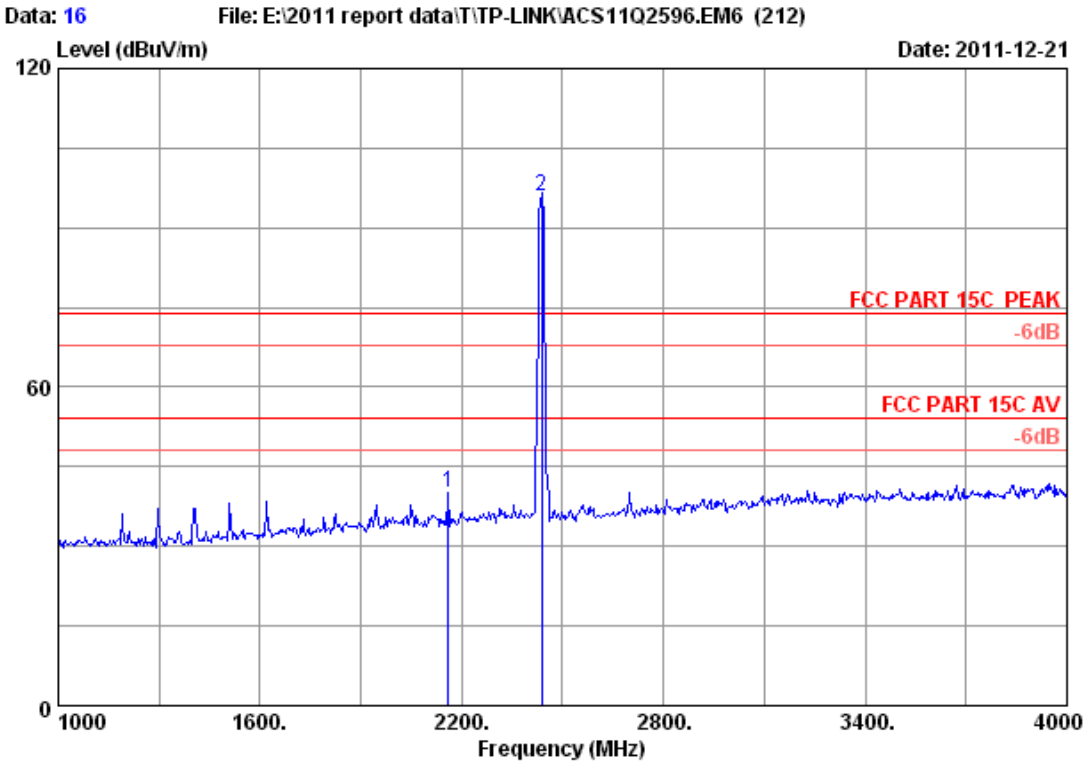
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 15
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1729.000	26.28	4.96	34.54	44.35	41.05	74.00	32.95	Peak
2	2437.000	28.03	6.06	34.44	106.85	106.50	74.00	-32.50	Peak

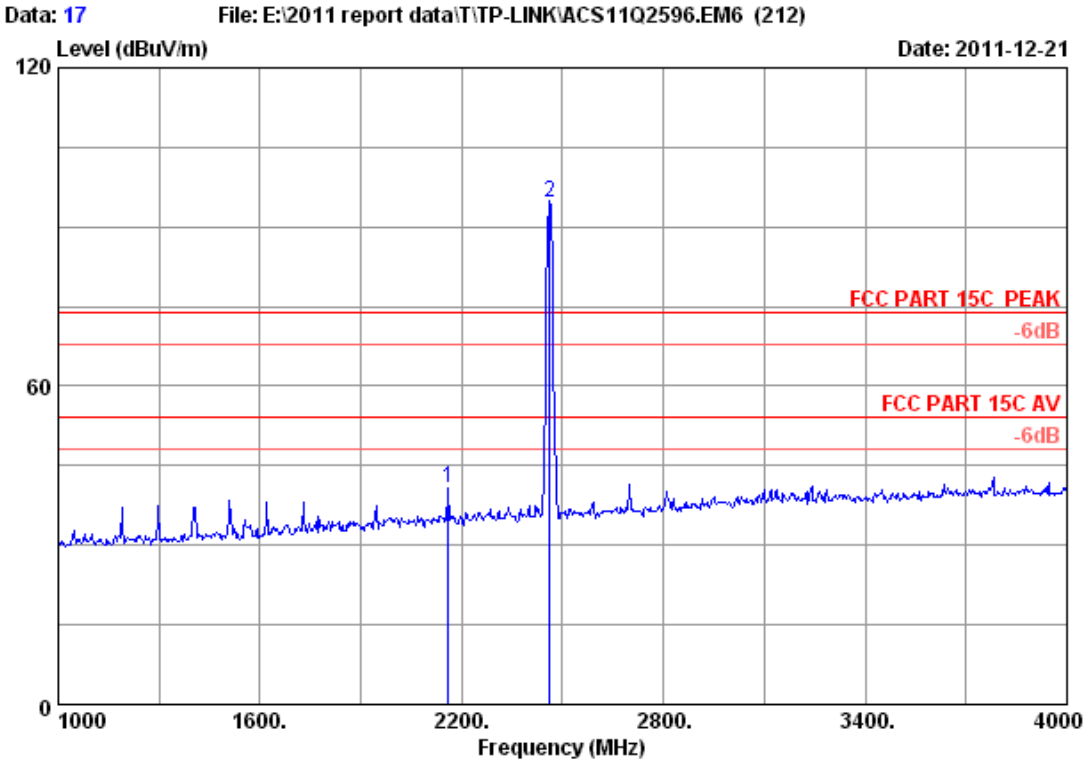
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 16
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2161.000	27.62	5.64	34.42	41.41	40.25	74.00	33.75	Peak
2	2437.000	28.03	6.06	34.44	96.44	96.09	74.00	-22.09	Peak

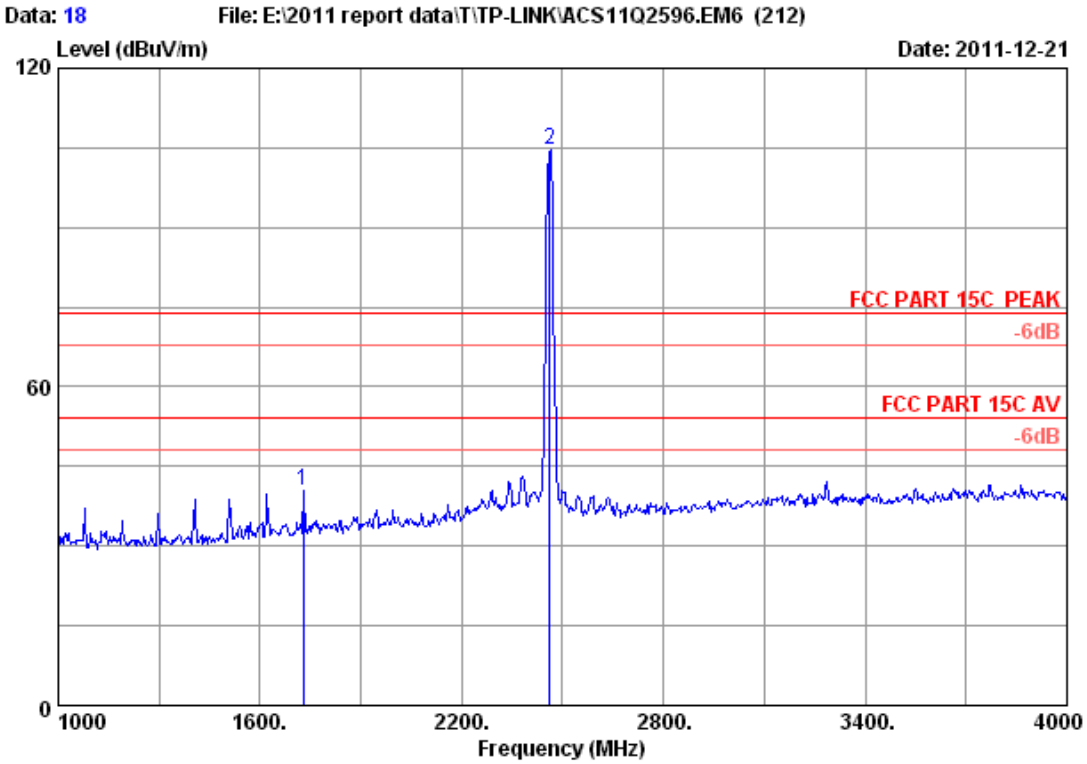
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 17
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2161.000	27.62	5.64	34.42	41.92	40.76	74.00	33.24	Peak
2	2462.000	28.05	6.12	34.44	94.72	94.45	74.00	-20.45	Peak

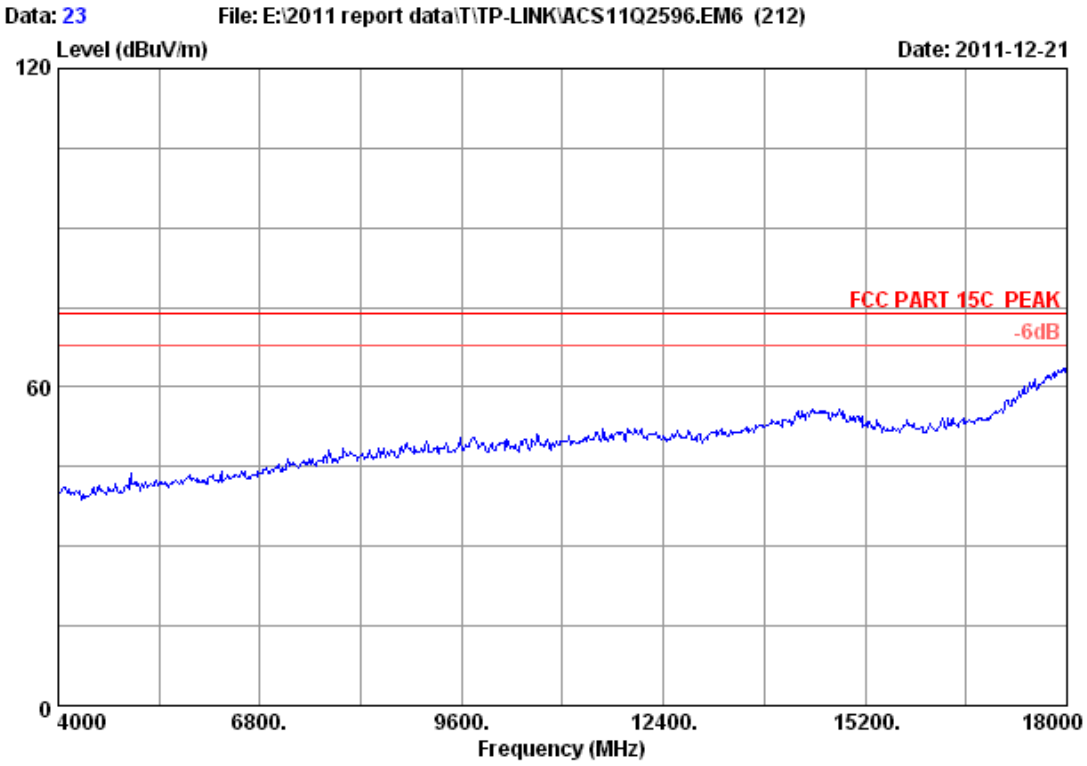
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



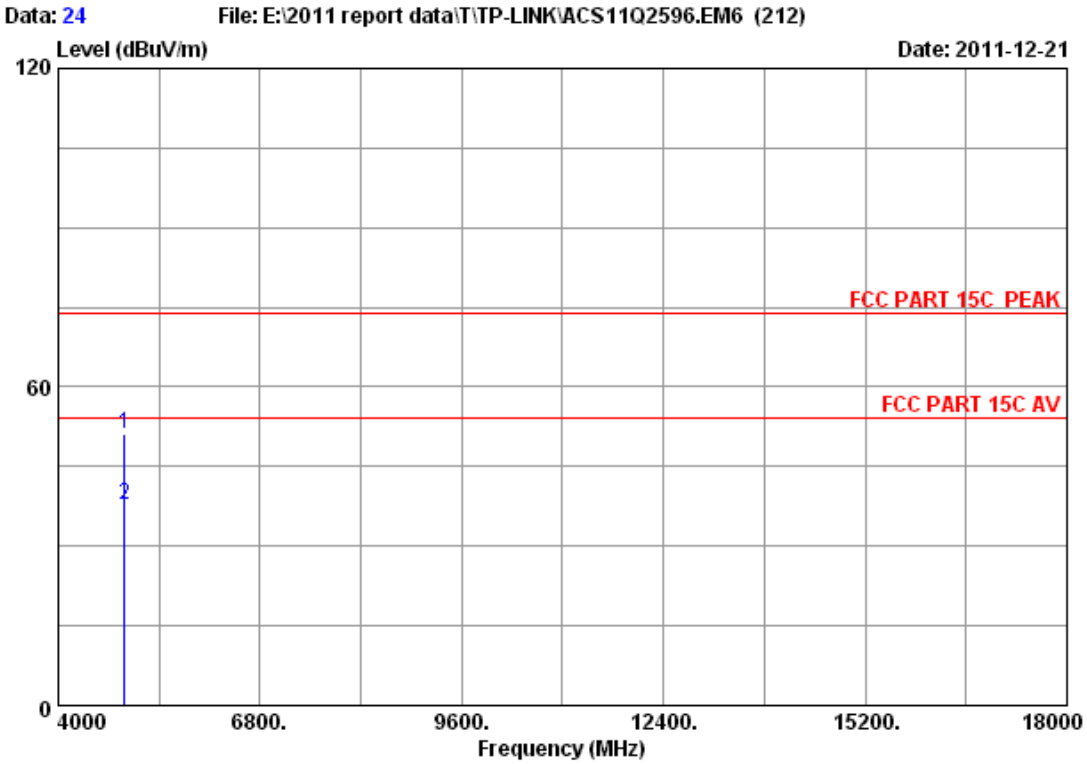
Site no. : 3m Chamber Data no. : 18
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1729.000	26.28	4.96	34.54	43.90	40.60	74.00	33.40	Peak
2	2462.000	28.05	6.12	34.44	104.79	104.52	74.00	-30.52	Peak

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



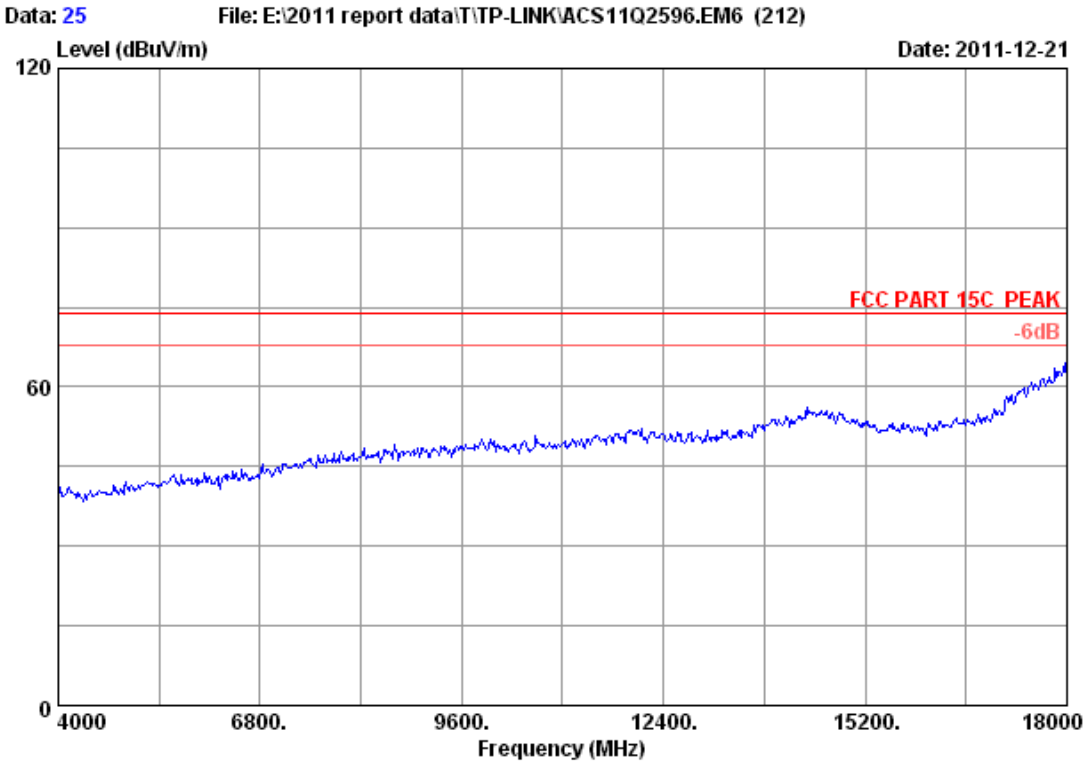

```
Site no.      : 3m Chamber                Data no.   : 23
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11b  CH11    2462MHz  Tx
M/N           : TL-WN881ND
```



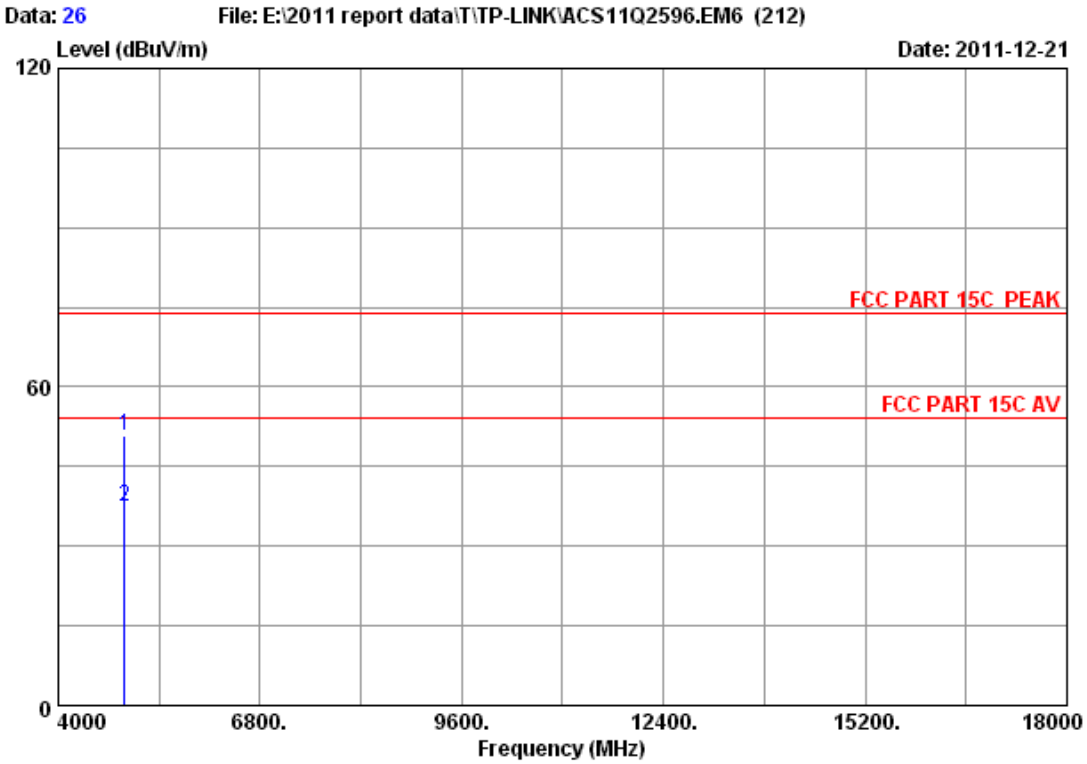
Site no. : 3m Chamber Data no. : 24
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	33.08	8.62	34.60	43.92	51.02	74.00	22.98	Peak
2	4924.000	33.08	8.62	34.60	30.67	37.77	54.00	16.23	Average

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



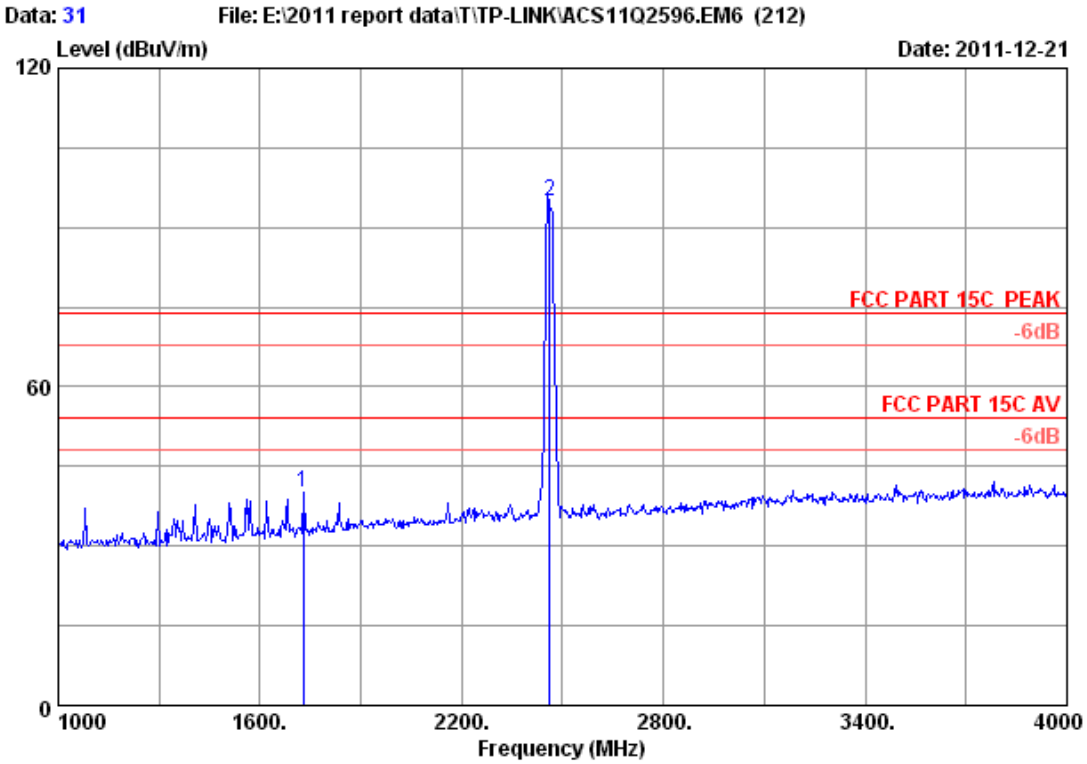

```
Site no.      : 3m Chamber                Data no.   : 25
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11b  CH11    2462MHz  Tx
M/N           : TL-WN881ND
```



Site no. : 3m Chamber Data no. : 26
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	33.08	8.62	34.60	43.68	50.78	74.00	23.22	Peak
2	4924.000	33.08	8.62	34.60	30.39	37.49	54.00	16.51	Average

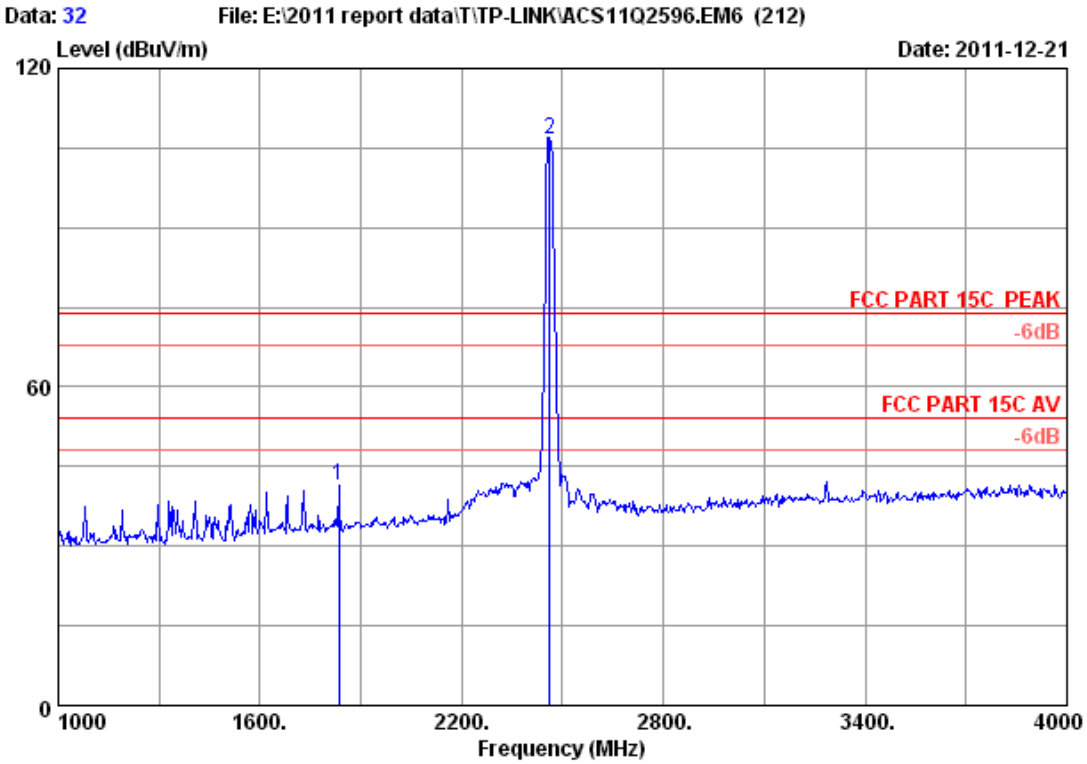
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 31
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1729.000	26.28	4.96	34.54	43.32	40.02	74.00	33.98	Peak
2	2462.000	28.05	6.12	34.44	95.12	94.85	74.00	-20.85	Peak

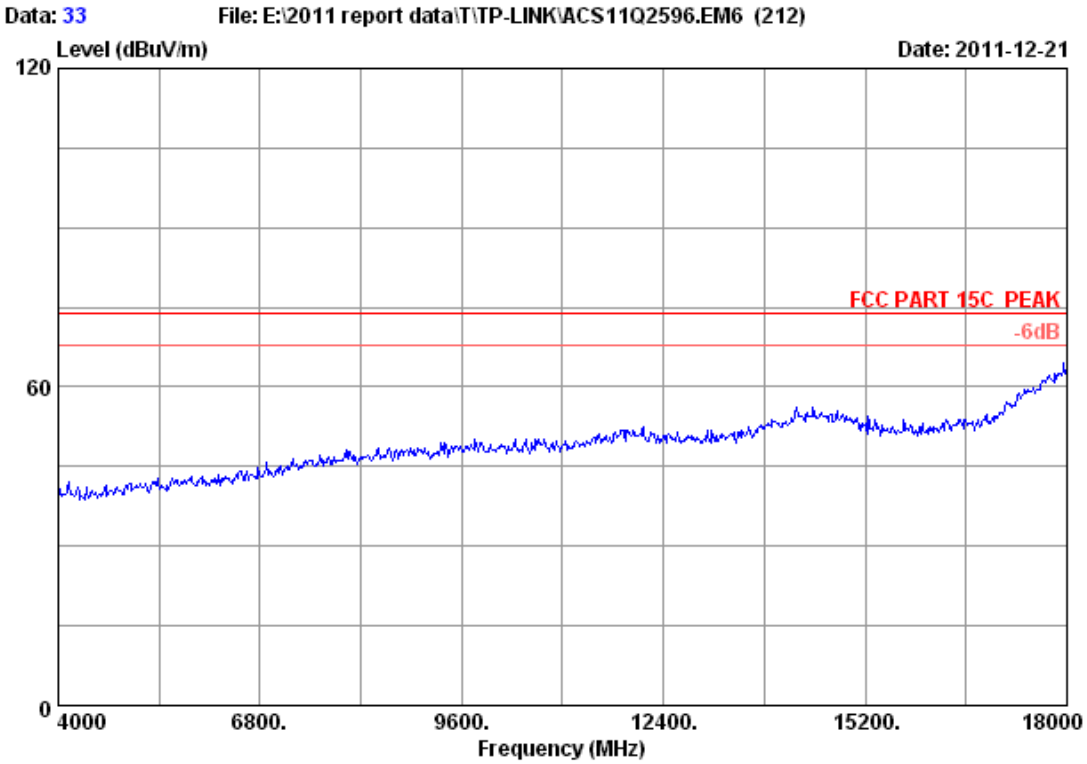
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



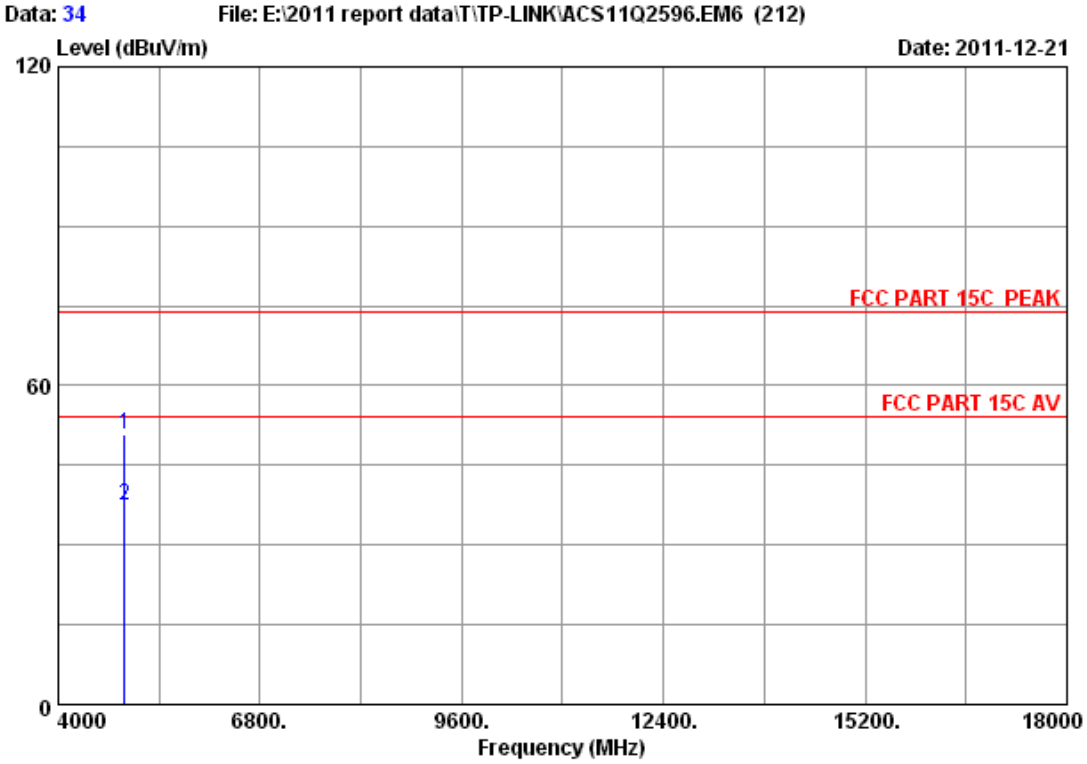
Site no. : 3m Chamber Data no. : 32
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1834.000	26.70	5.13	34.49	44.02	41.36	74.00	32.64	Peak
2	2462.000	28.05	6.12	34.44	106.98	106.71	74.00	-32.71	Peak

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



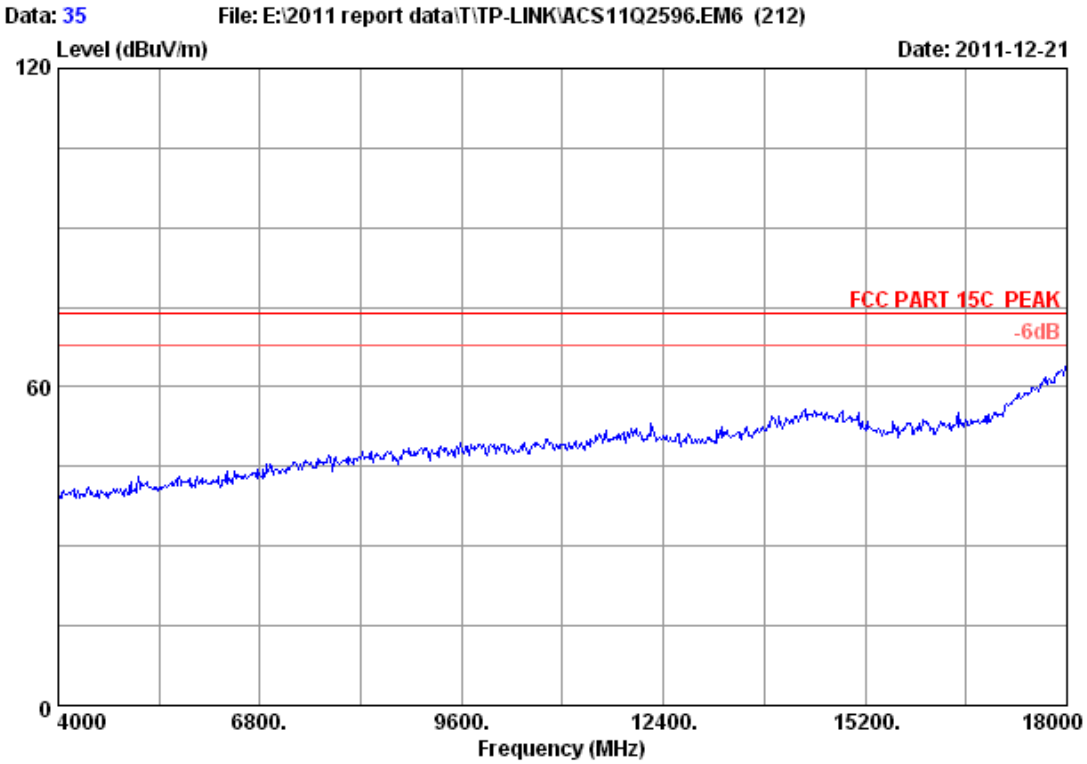

```
Site no.      : 3m Chamber                Data no.   : 33
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11g  CH11    2462MHz  Tx
M/N           : TL-WN881ND
```



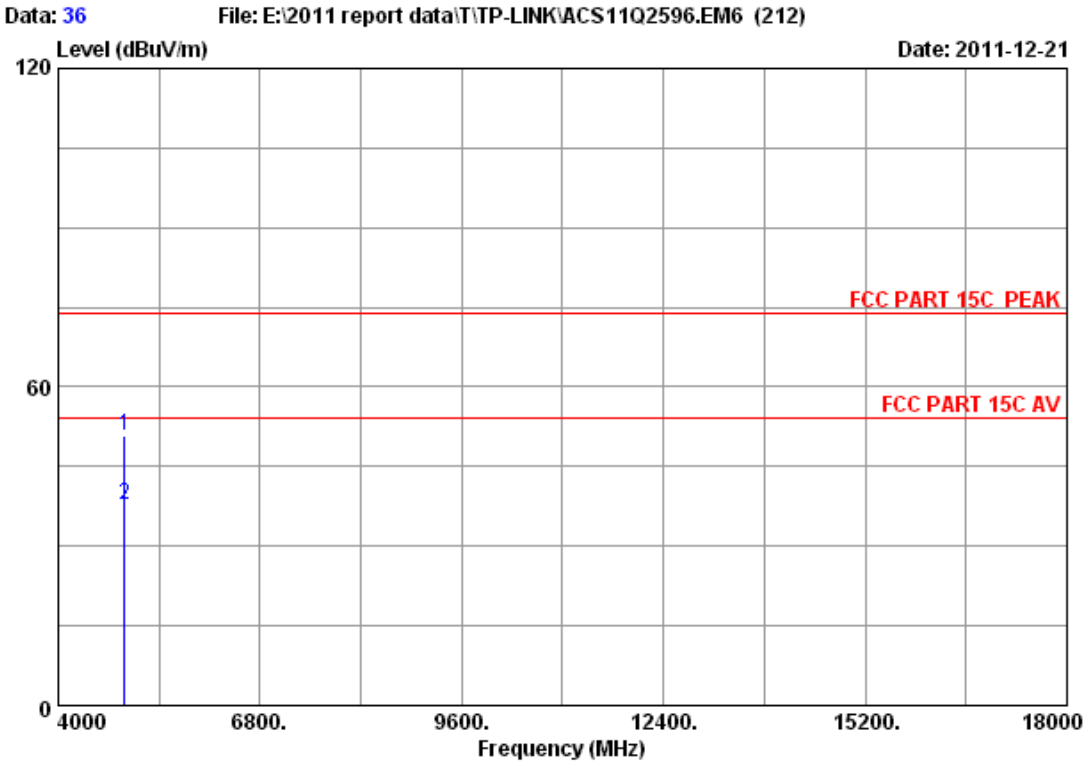
Site no. : 3m Chamber Data no. : 34
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	33.08	8.62	34.60	43.66	50.76	74.00	23.24	Peak
2	4924.000	33.08	8.62	34.60	30.48	37.58	54.00	16.42	Average

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



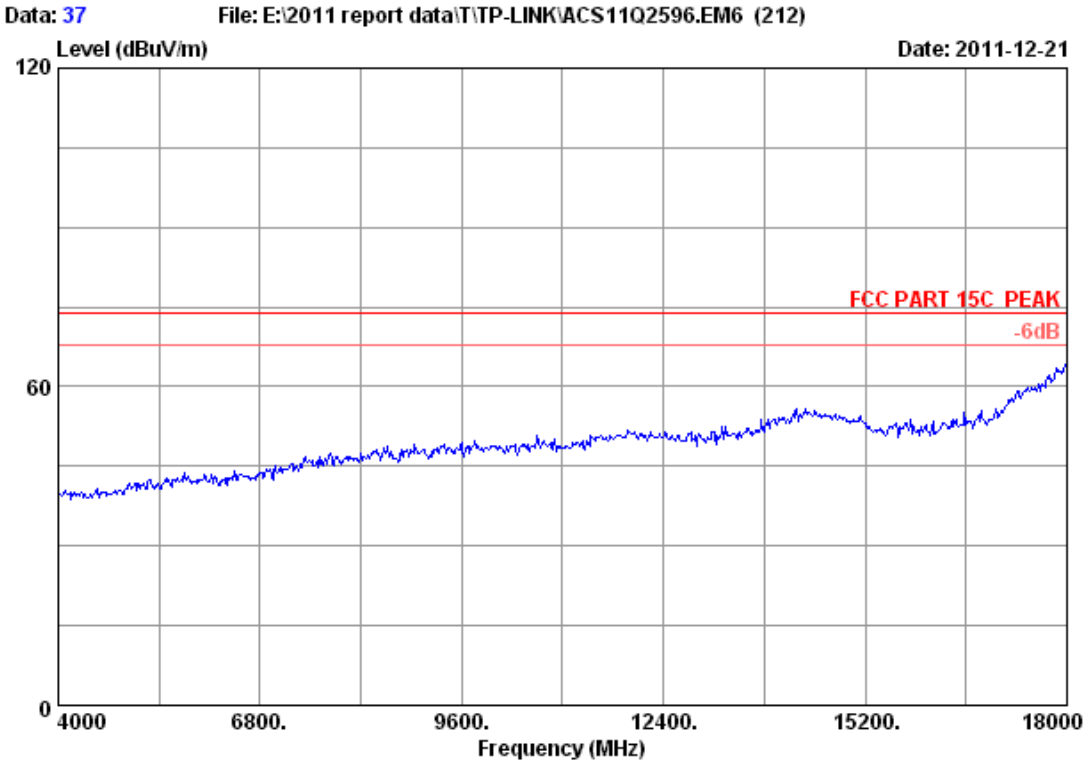

```
Site no.      : 3m Chamber                Data no.   : 35
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11g  CH11    2462MHz  Tx
M/N           : TL-WN881ND
```



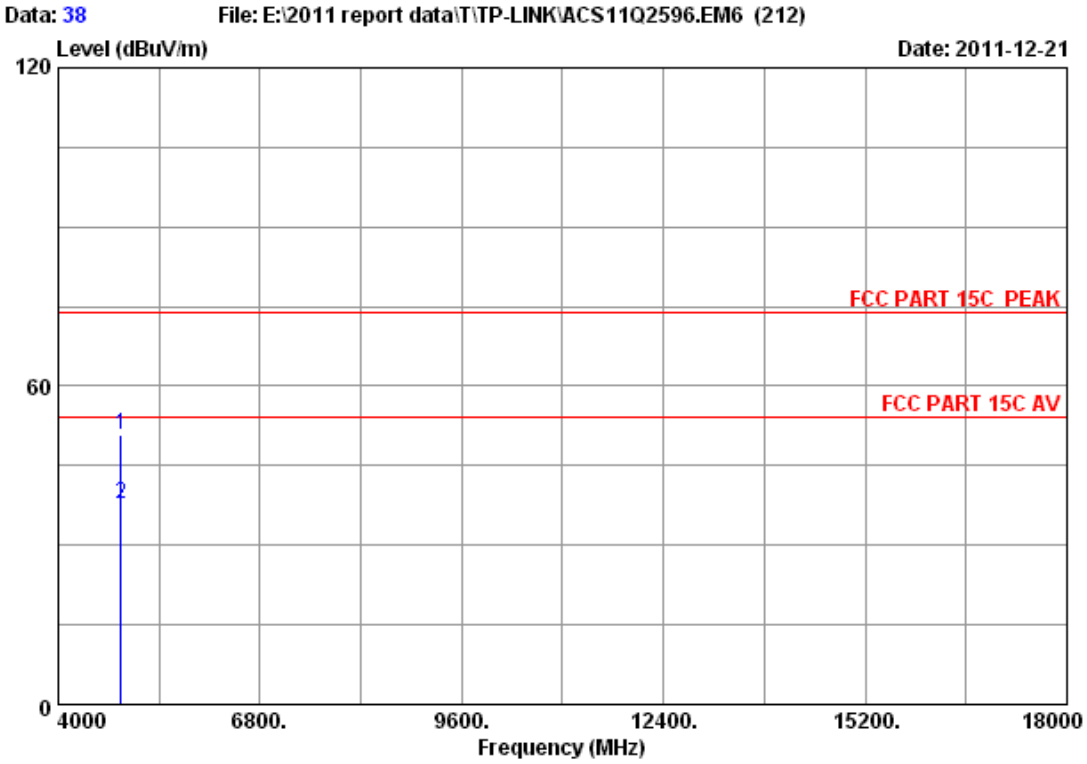
Site no. : 3m Chamber Data no. : 36
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	33.08	8.62	34.60	43.87	50.97	74.00	23.03	Peak
2	4924.000	33.08	8.62	34.60	30.59	37.69	54.00	16.31	Average

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



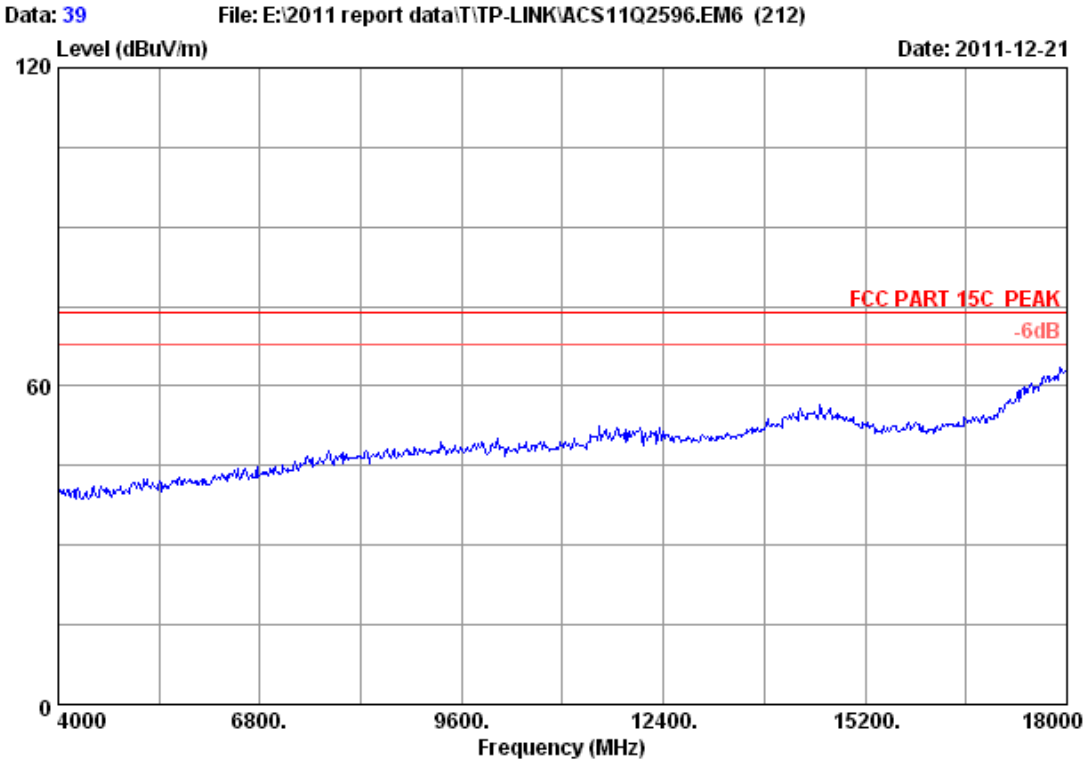

```
Site no.      : 3m Chamber                Data no.   : 37
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11g  CH6    2437MHz  Tx
M/N           : TL-WN881ND
```



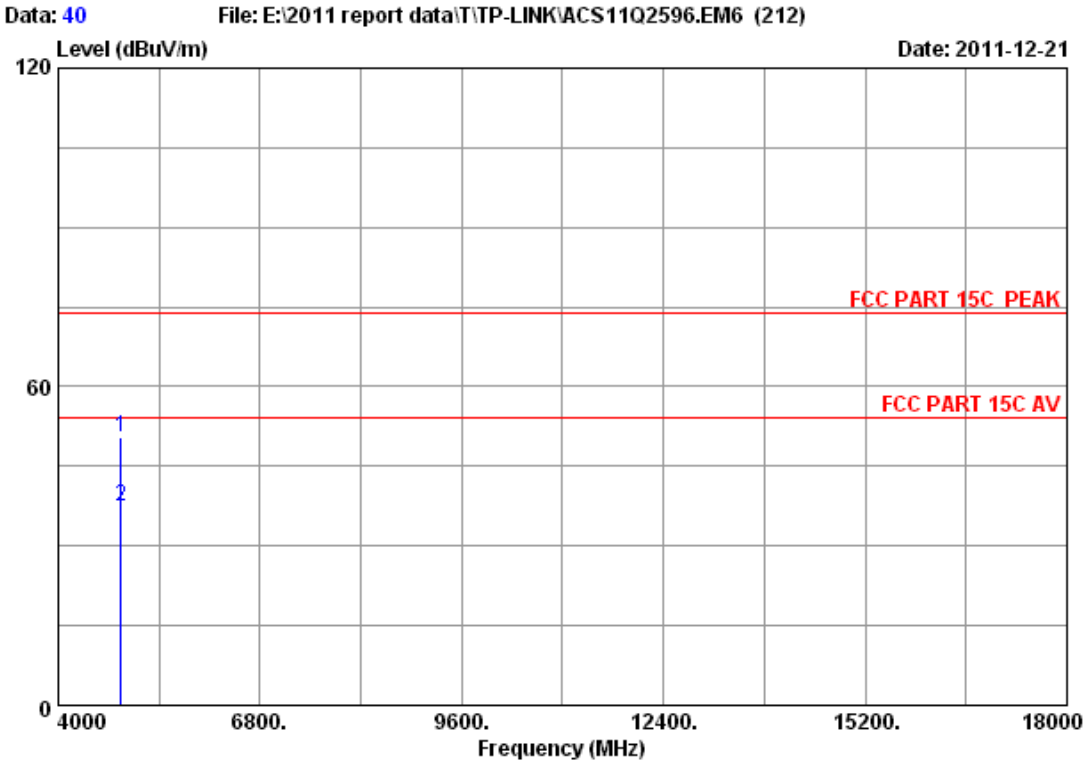
Site no. : 3m Chamber Data no. : 38
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	32.98	8.58	34.60	43.88	50.84	74.00	23.16	Peak
2	4874.000	32.98	8.58	34.60	30.72	37.68	54.00	16.32	Average

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



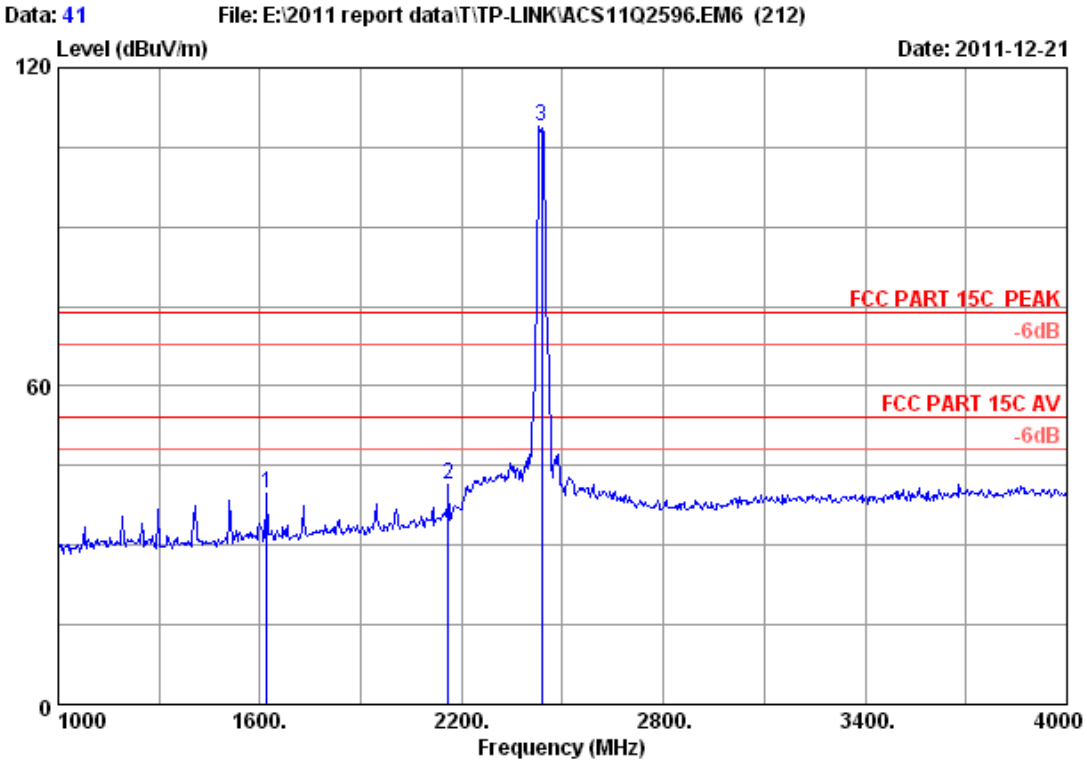

```
Site no.      : 3m Chamber                Data no.   : 39
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11g  CH6    2437MHz  Tx
M/N           : TL-WN881ND
```



Site no. : 3m Chamber Data no. : 40
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	32.98	8.58	34.60	43.55	50.51	74.00	23.49	Peak
2	4874.000	32.98	8.58	34.60	30.41	37.37	54.00	16.63	Average

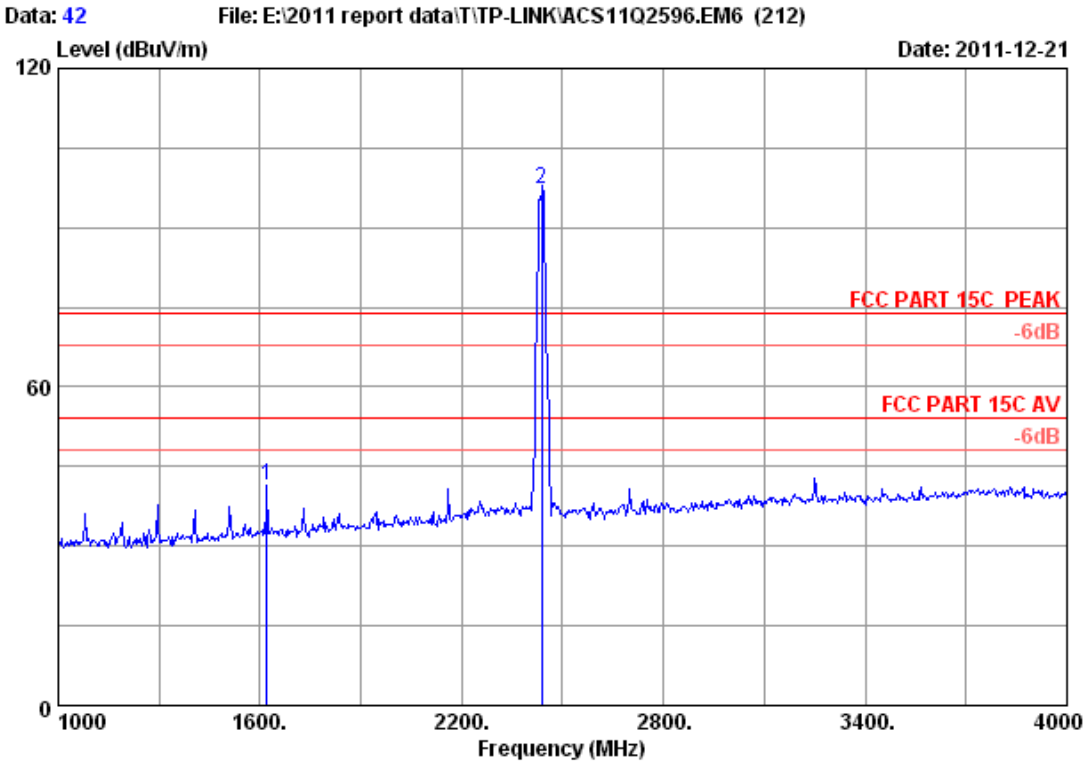
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 41
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1621.000	25.86	4.78	34.59	43.57	39.62	74.00	34.38	Peak
2	2161.000	27.62	5.64	34.42	42.61	41.45	74.00	32.55	Peak
3	2437.000	28.03	6.06	34.44	109.17	108.82	74.00	-34.82	Peak

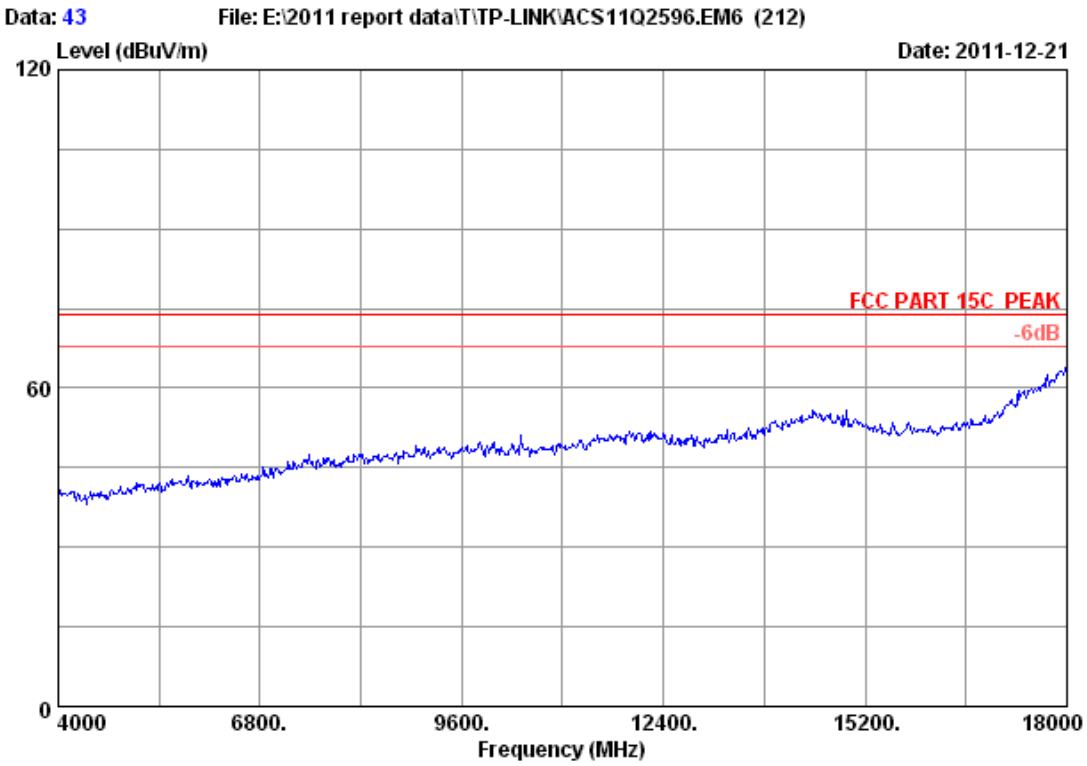
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



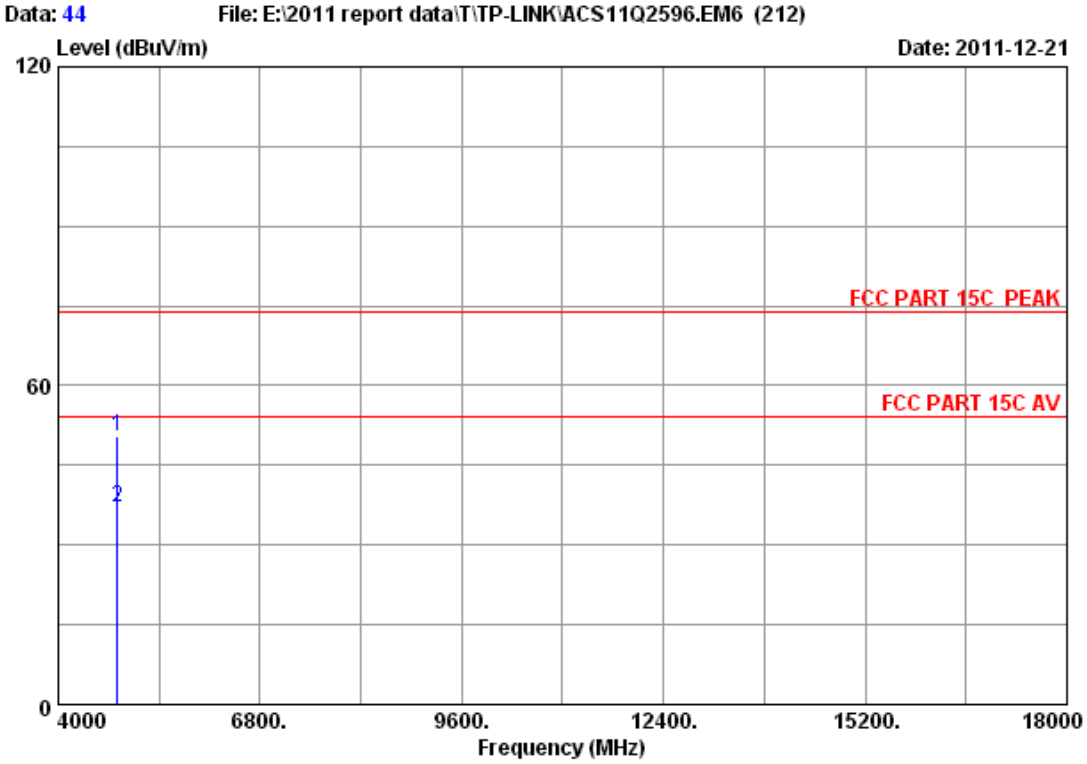
Site no. : 3m Chamber Data no. : 42
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1621.000	25.86	4.78	34.59	45.33	41.38	74.00	32.62	Peak
2	2437.000	28.03	6.06	34.44	97.68	97.33	74.00	-23.33	Peak

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



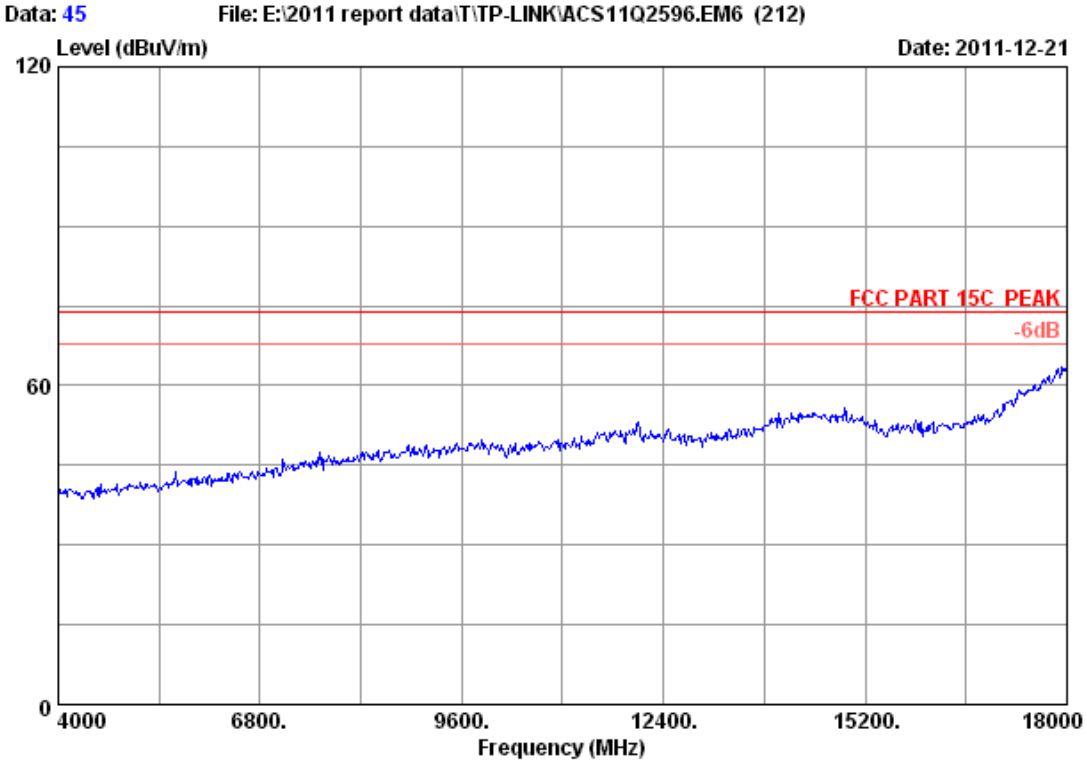

```
Site no.      : 3m Chamber                Data no.   : 43
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11g  CH1    2412MHz  Tx
M/N           : TL-WN881ND
```



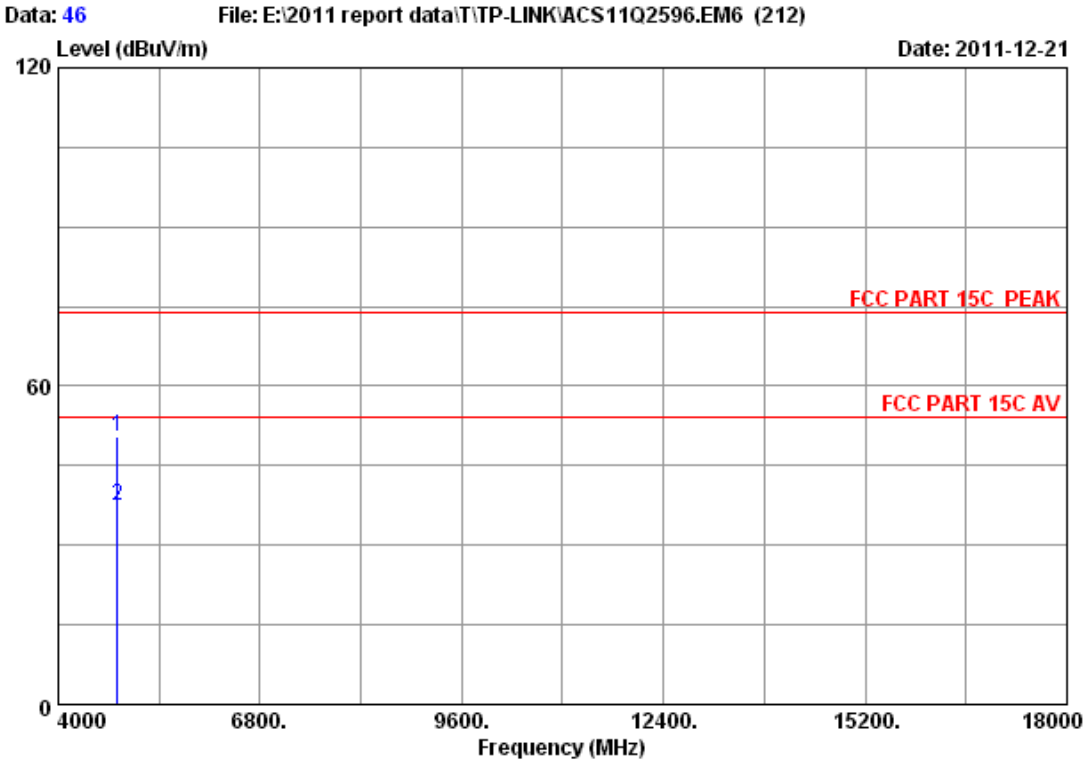
Site no. : 3m Chamber Data no. : 44
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	32.89	8.53	34.60	43.69	50.51	74.00	23.49	Peak
2	4824.000	32.89	8.53	34.60	30.35	37.17	54.00	16.83	Average

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



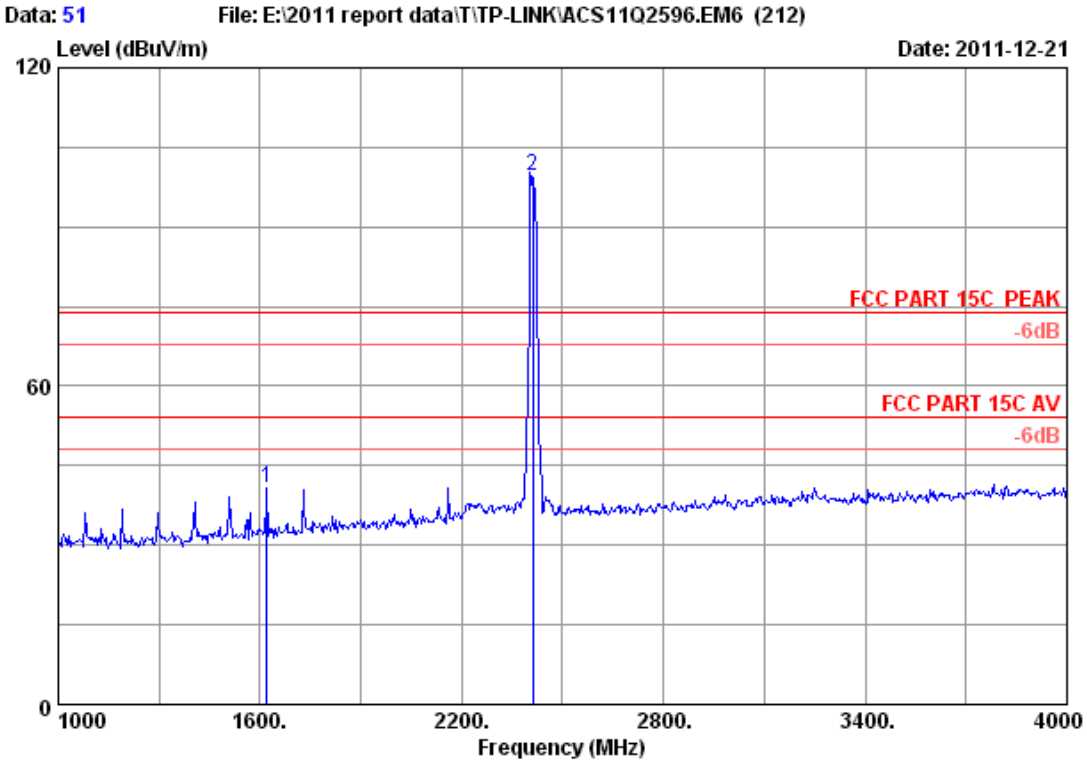

```
Site no.      : 3m Chamber                Data no.   : 45
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11g  CH1    2412MHz  Tx
M/N           : TL-WN881ND
```



Site no. : 3m Chamber Data no. : 46
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	32.89	8.53	34.60	43.78	50.60	74.00	23.40	Peak
2	4824.000	32.89	8.53	34.60	30.68	37.50	54.00	16.50	Average

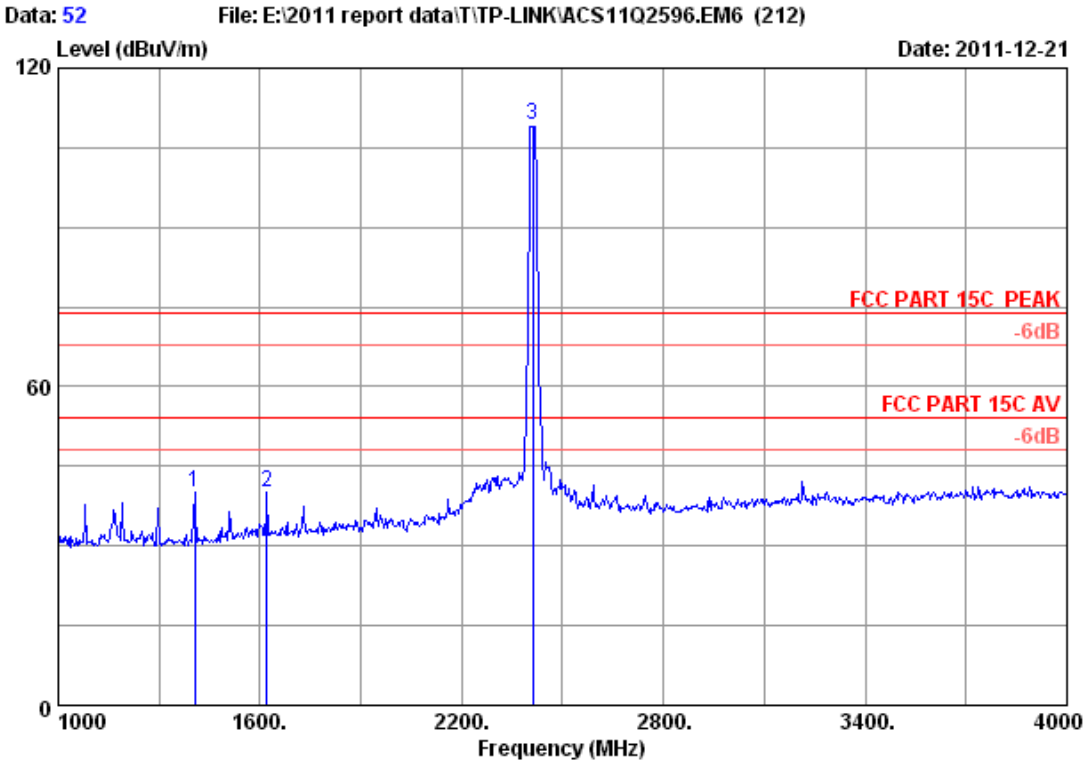
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 51
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1621.000	25.86	4.78	34.59	44.80	40.85	74.00	33.15	Peak
2	2412.000	27.98	6.03	34.44	99.89	99.46	74.00	-25.46	Peak

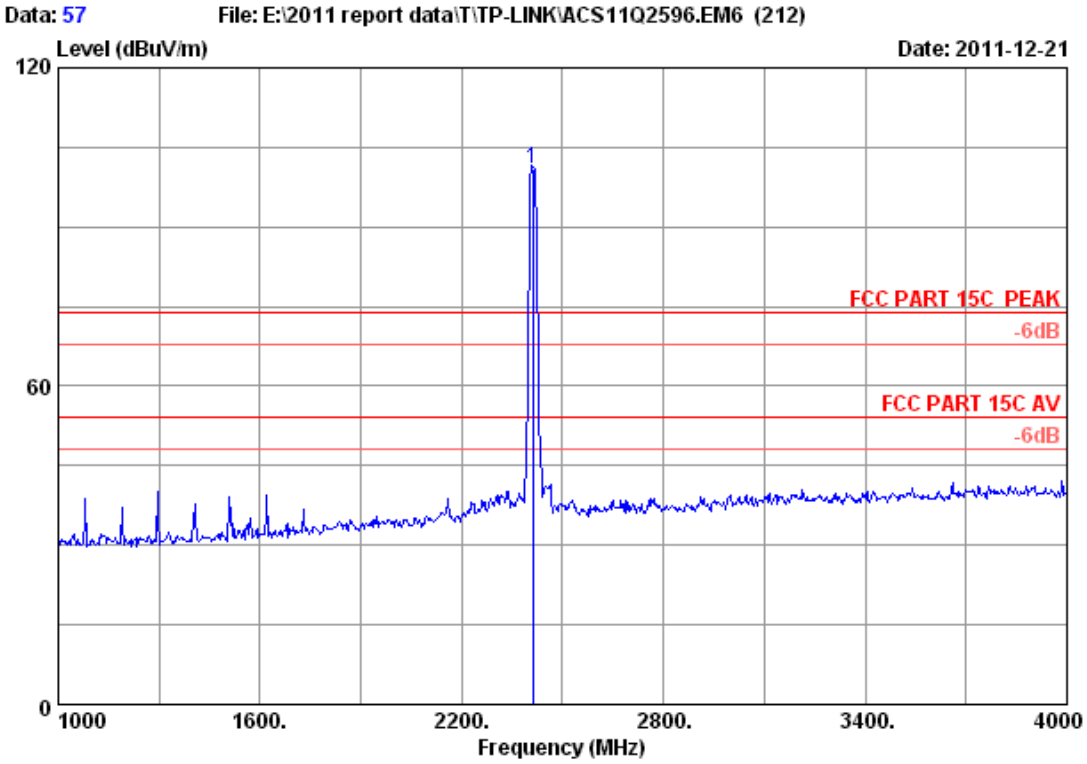
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 52
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1405.000	25.04	4.44	34.70	45.17	39.95	74.00	34.05	Peak
2	1621.000	25.86	4.78	34.59	43.99	40.04	74.00	33.96	Peak
3	2412.000	27.98	6.03	34.44	109.84	109.41	74.00	-35.41	Peak

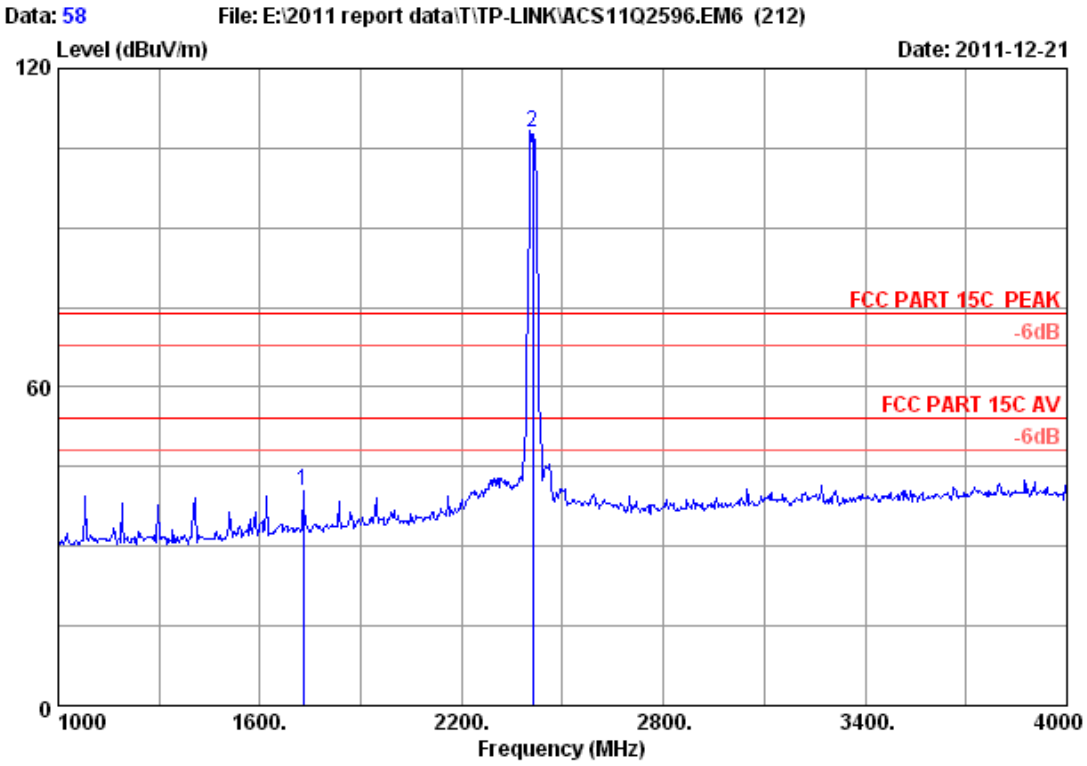
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 57
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.000	27.98	6.03	34.44	101.23	100.80	74.00	-26.80	Peak

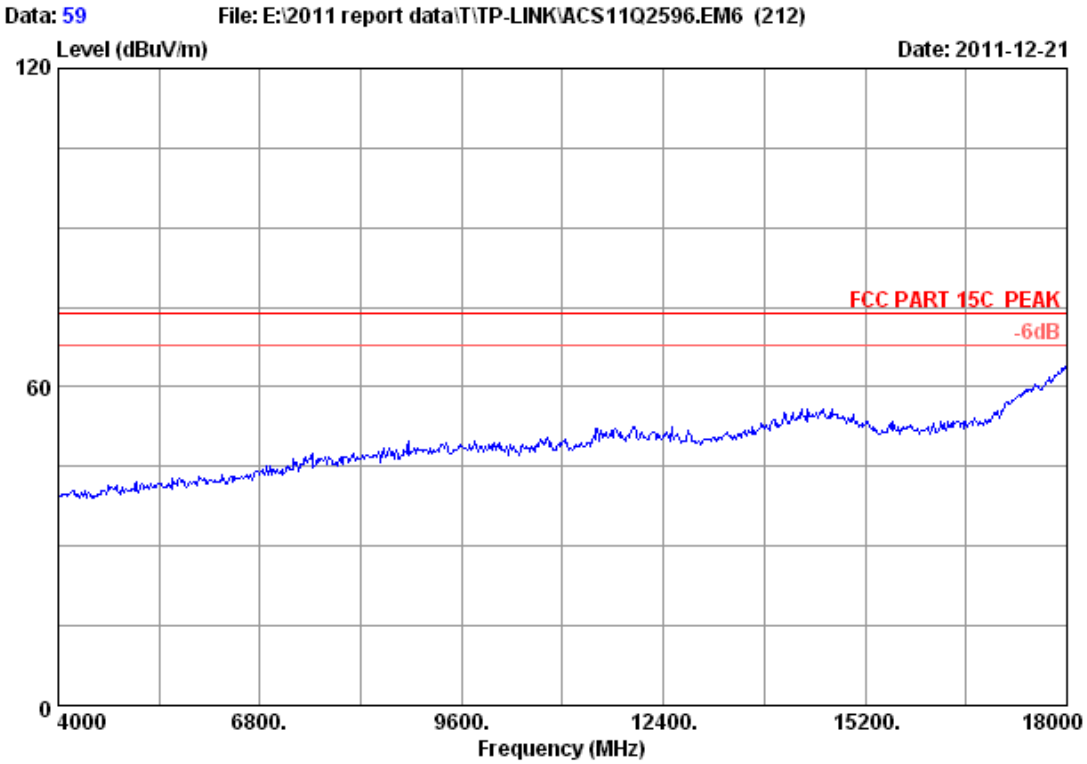
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



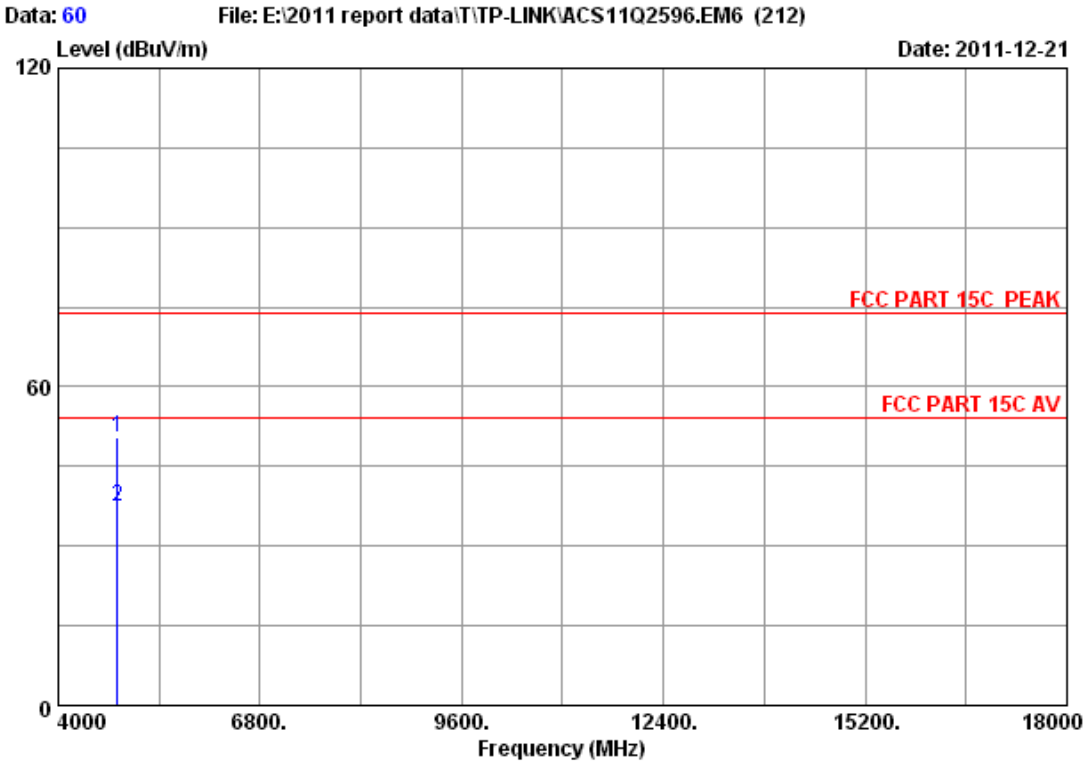
Site no. : 3m Chamber Data no. : 58
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1729.000	26.28	4.96	34.54	43.80	40.50	74.00	33.50	Peak
2	2412.000	27.98	6.03	34.44	108.29	107.86	74.00	-33.86	Peak

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



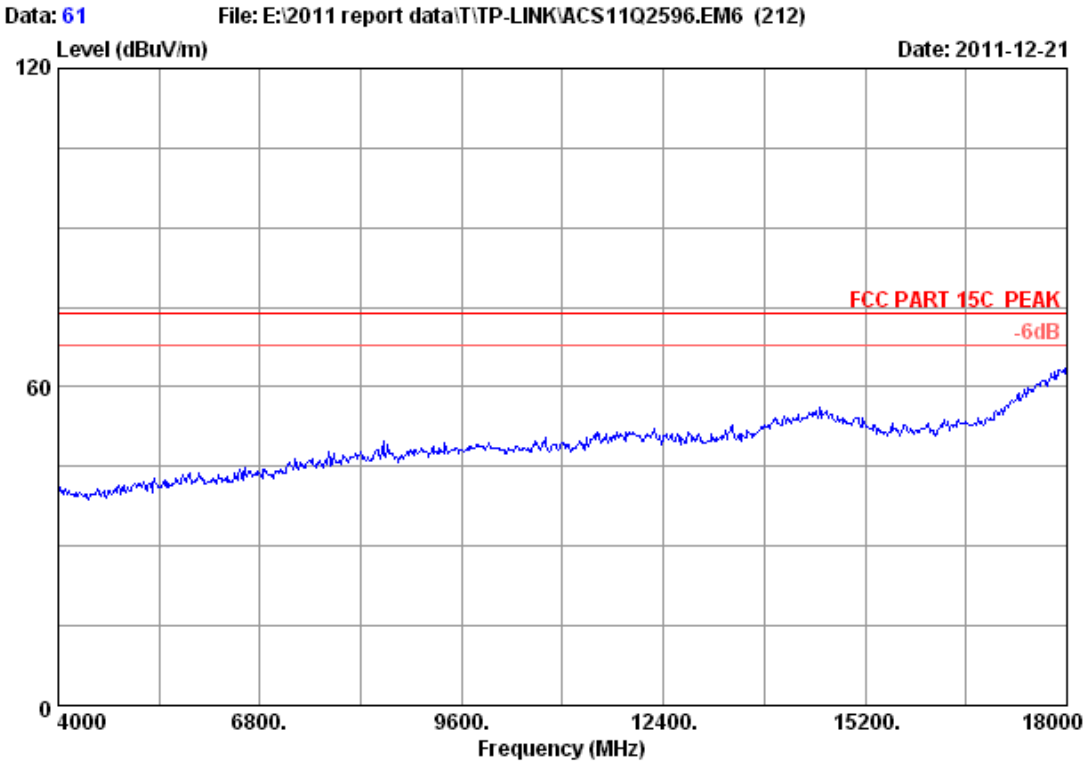

```
Site no.      : 3m Chamber                Data no.   : 59
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT20  CH1    2412MHz  Tx
M/N           : TL-WN881ND
```



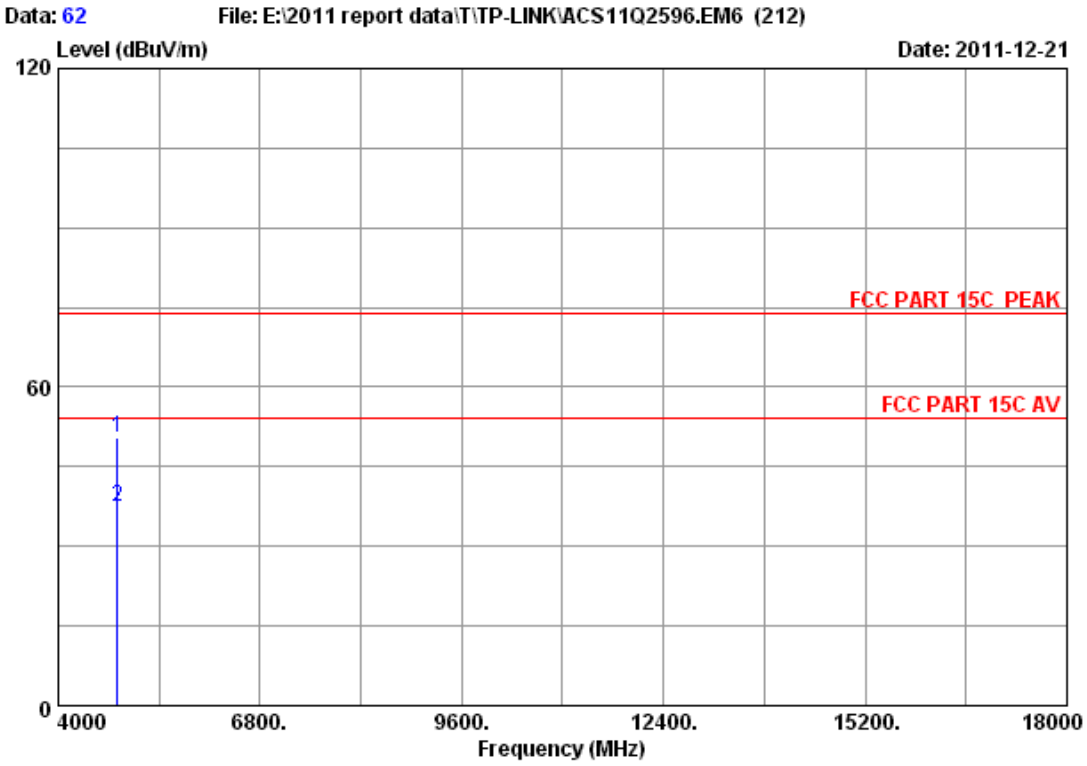
Site no. : 3m Chamber Data no. : 60
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	32.89	8.53	34.60	43.82	50.64	74.00	23.36	Peak
2	4824.000	32.89	8.53	34.60	30.71	37.53	54.00	16.47	Average

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



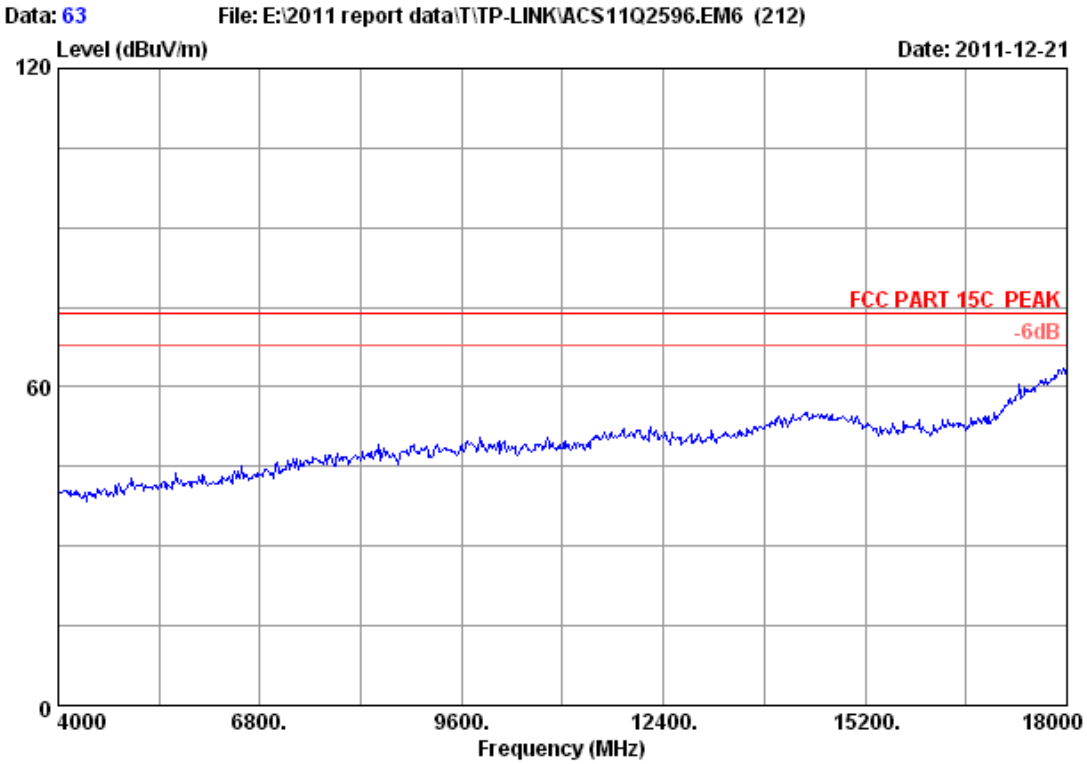

```
Site no.      : 3m Chamber                Data no.   : 61
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT20  CH1    2412MHz  Tx
M/N           : TL-WN881ND
```



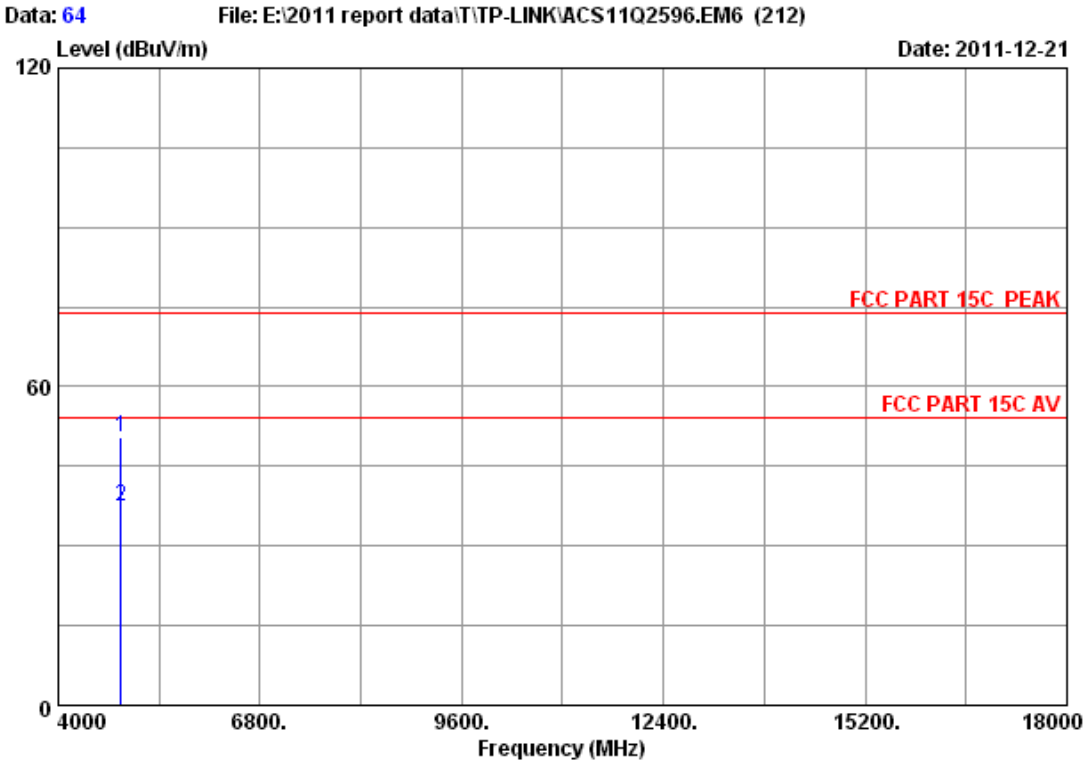
Site no. : 3m Chamber Data no. : 62
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	32.89	8.53	34.60	43.52	50.34	74.00	23.66	Peak
2	4824.000	32.89	8.53	34.60	30.49	37.31	54.00	16.69	Average

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



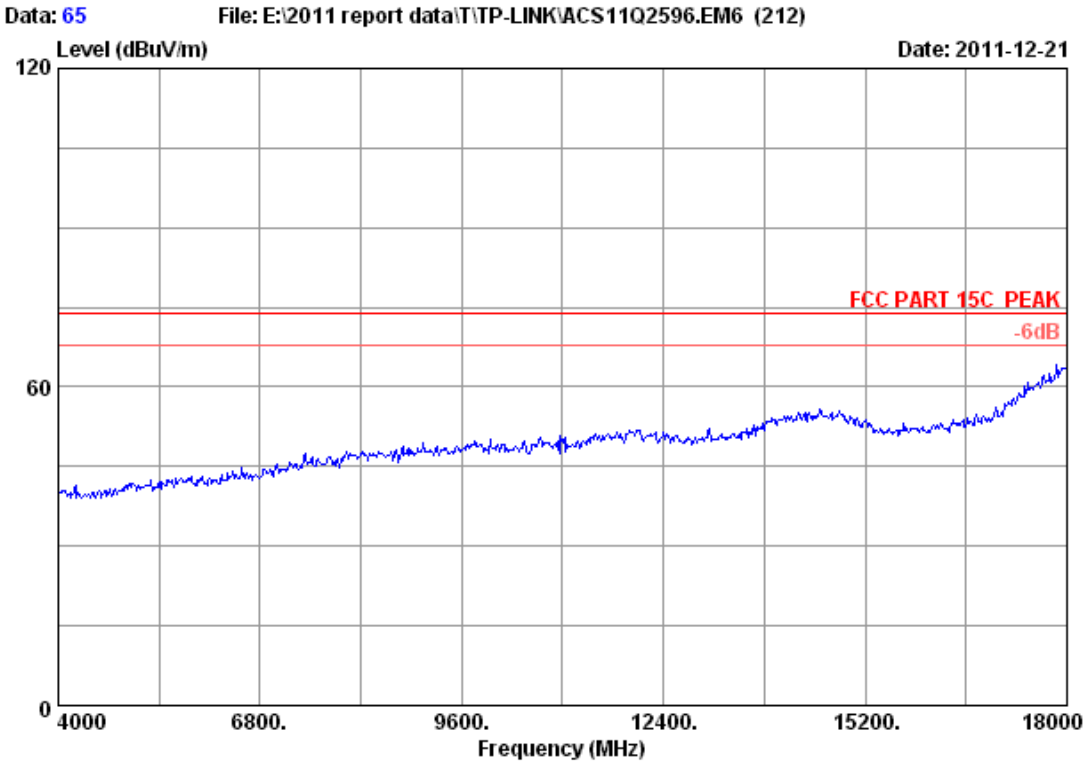

```
Site no.      : 3m Chamber                Data no.   : 63
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT20  CH6    2437MHz  Tx
M/N           : TL-WN881ND
```



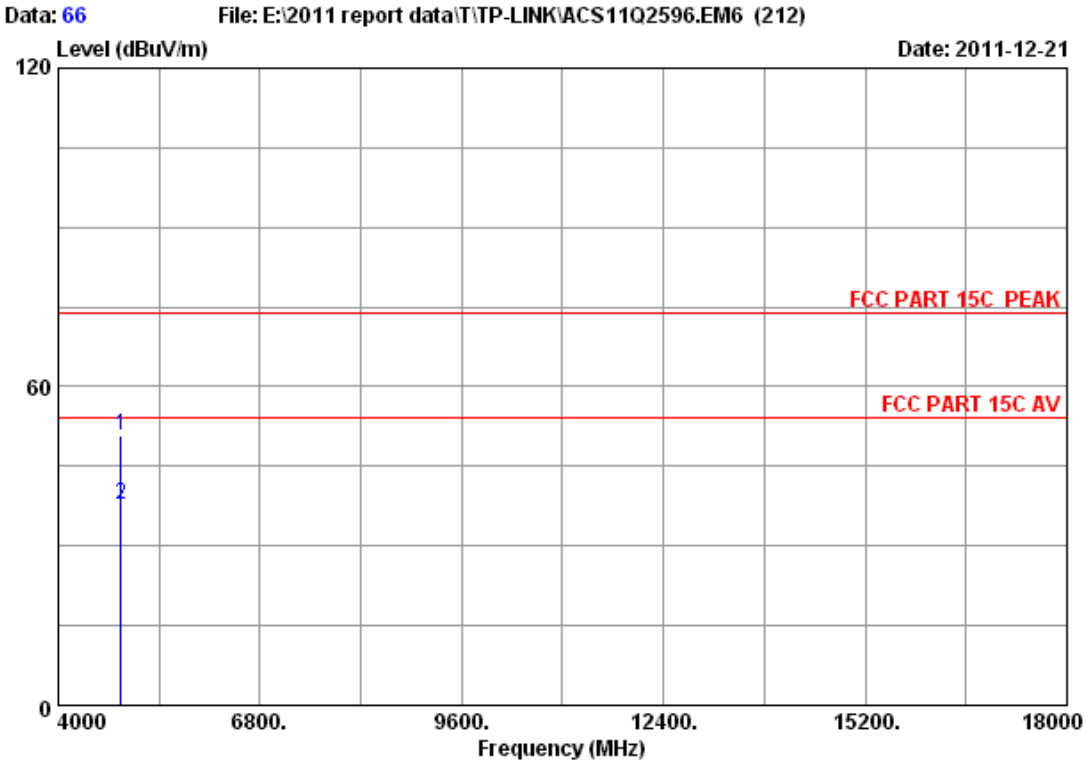
Site no. : 3m Chamber Data no. : 64
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	32.98	8.58	34.60	43.61	50.57	74.00	23.43	Peak
2	4874.000	32.98	8.58	34.60	30.48	37.44	54.00	16.56	Average

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



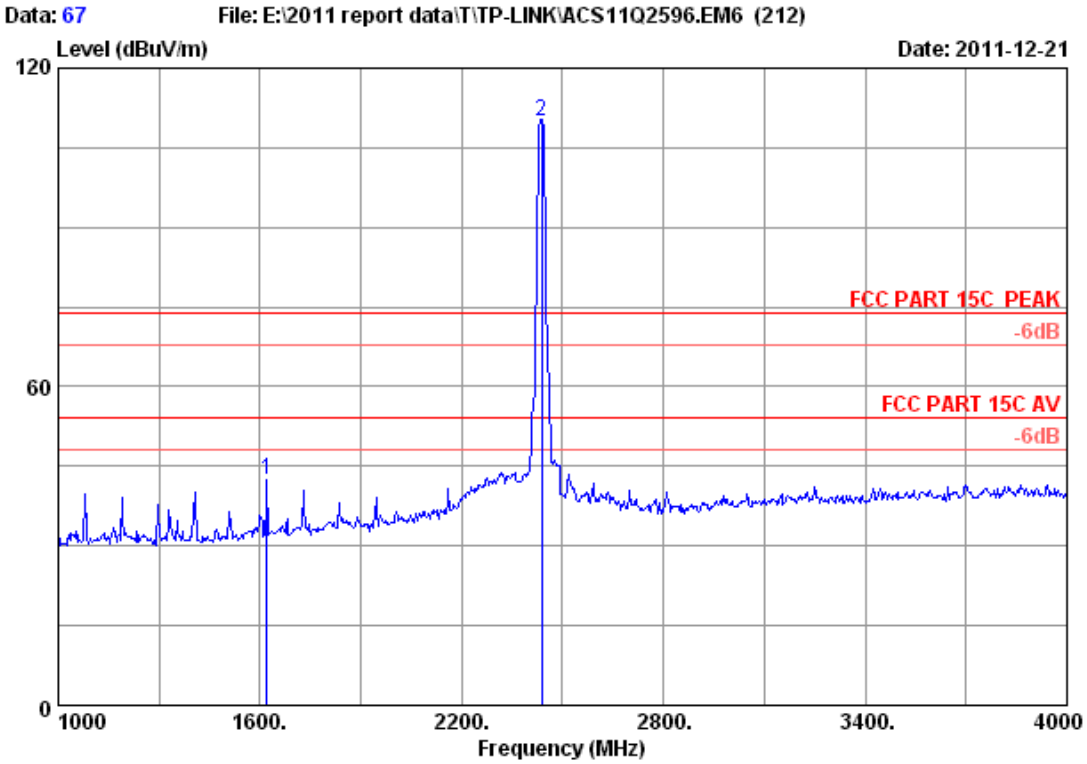

```
Site no.      : 3m Chamber                Data no.   : 65
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT20  CH6    2437MHz  Tx
M/N           : TL-WN881ND
```



Site no. : 3m Chamber Data no. : 66
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	32.98	8.58	34.60	43.85	50.81	74.00	23.19	Peak
2	4874.000	32.98	8.58	34.60	30.67	37.63	54.00	16.37	Average

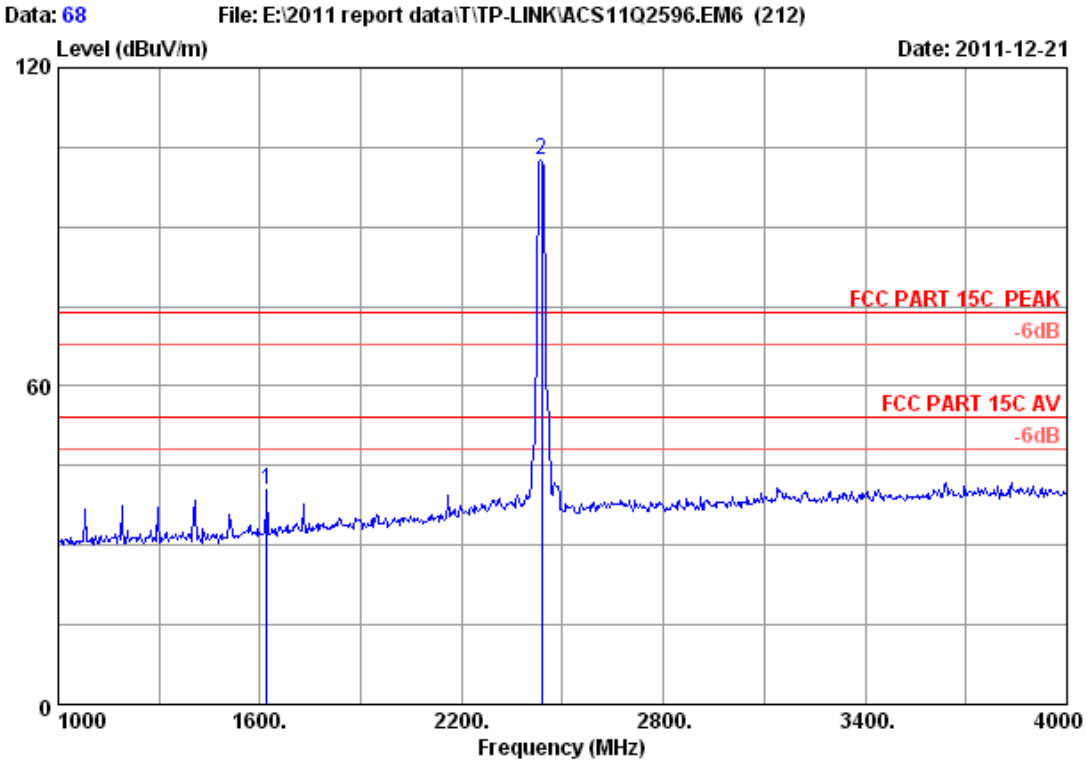
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 67
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1621.000	25.86	4.78	34.59	46.32	42.37	74.00	31.63	Peak
2	2437.000	28.03	6.06	34.44	110.18	109.83	74.00	-35.83	Peak

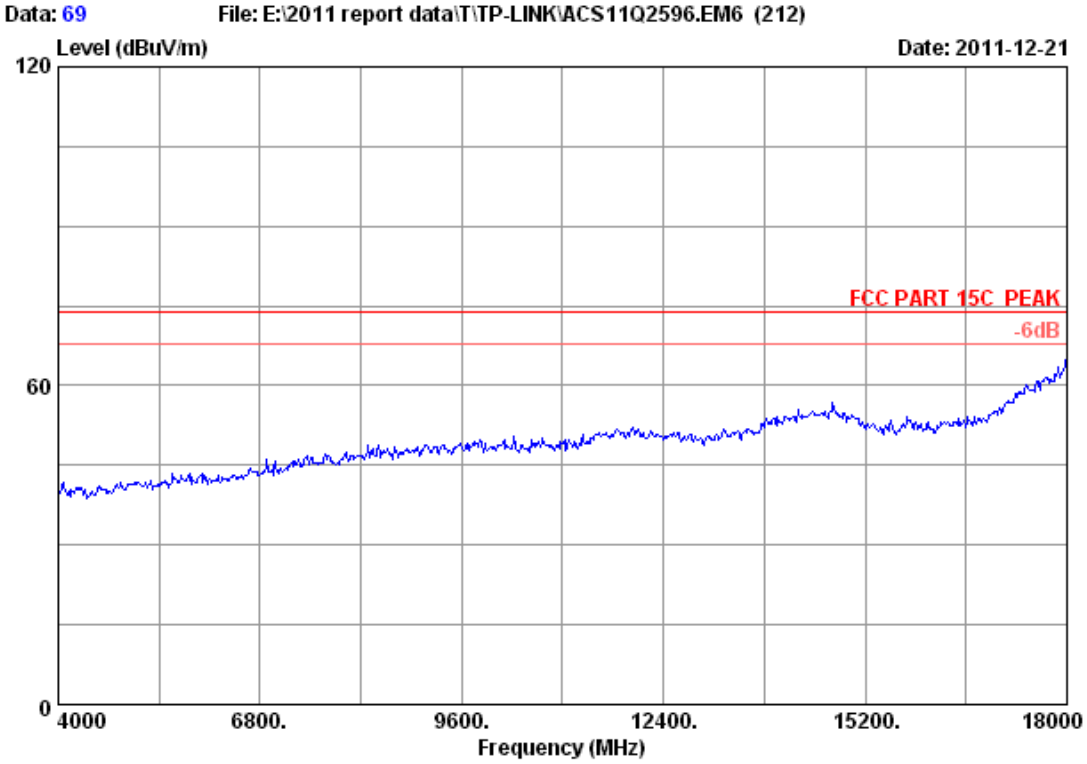
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



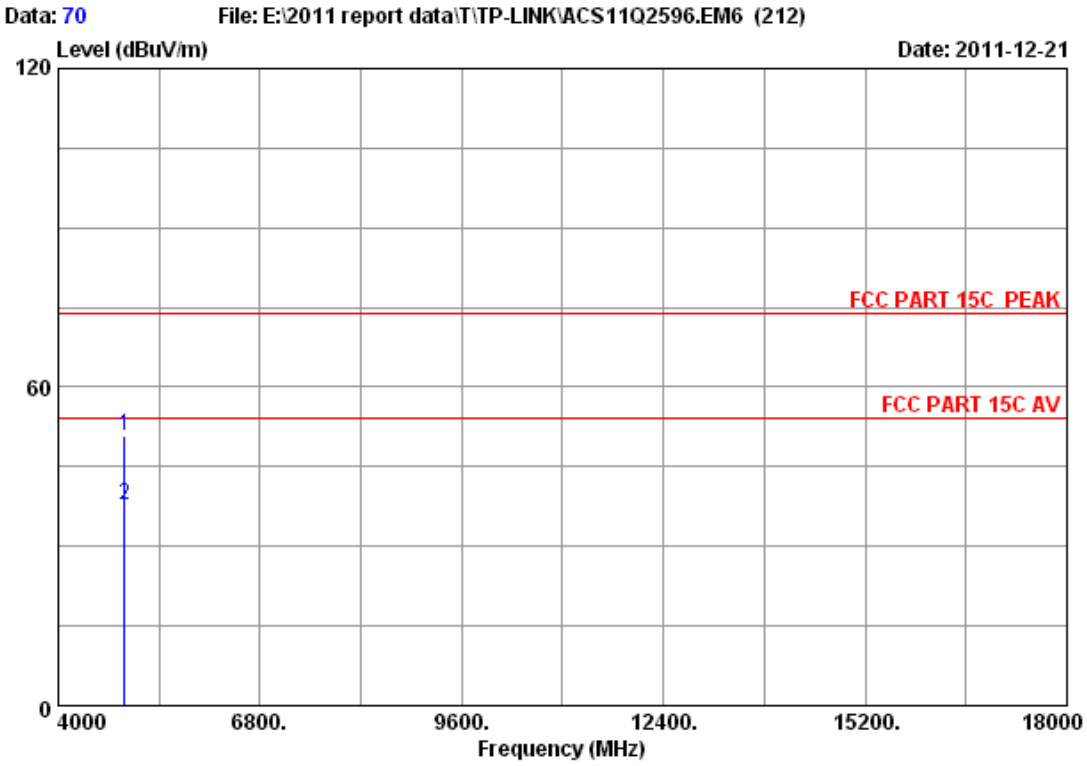
Site no. : 3m Chamber Data no. : 68
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH6 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1621.000	25.86	4.78	34.59	44.54	40.59	74.00	33.41	Peak
2	2437.000	28.03	6.06	34.44	102.89	102.54	74.00	-28.54	Peak

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



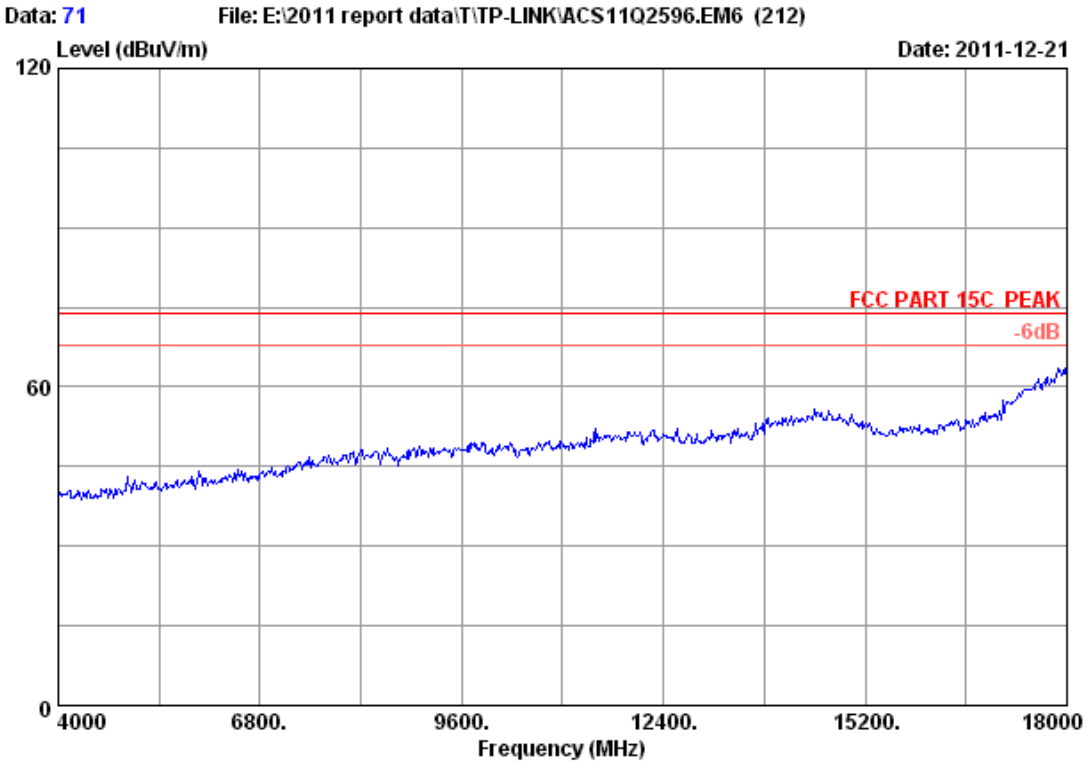

```
Site no.      : 3m Chamber                Data no.   : 69
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT20  CH11     2462MHz  Tx
M/N           : TL-WN881ND
```



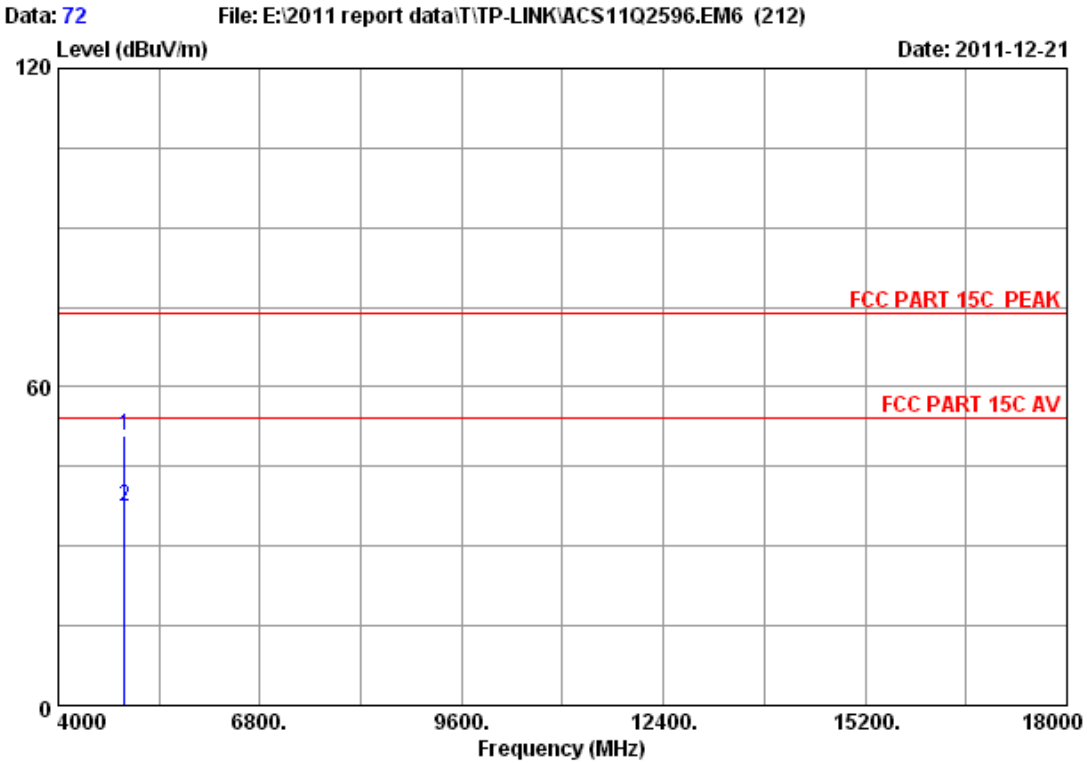
Site no. : 3m Chamber Data no. : 70
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	33.08	8.62	34.60	43.79	50.89	74.00	23.11	Peak
2	4924.000	33.08	8.62	34.60	30.66	37.76	54.00	16.24	Average

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



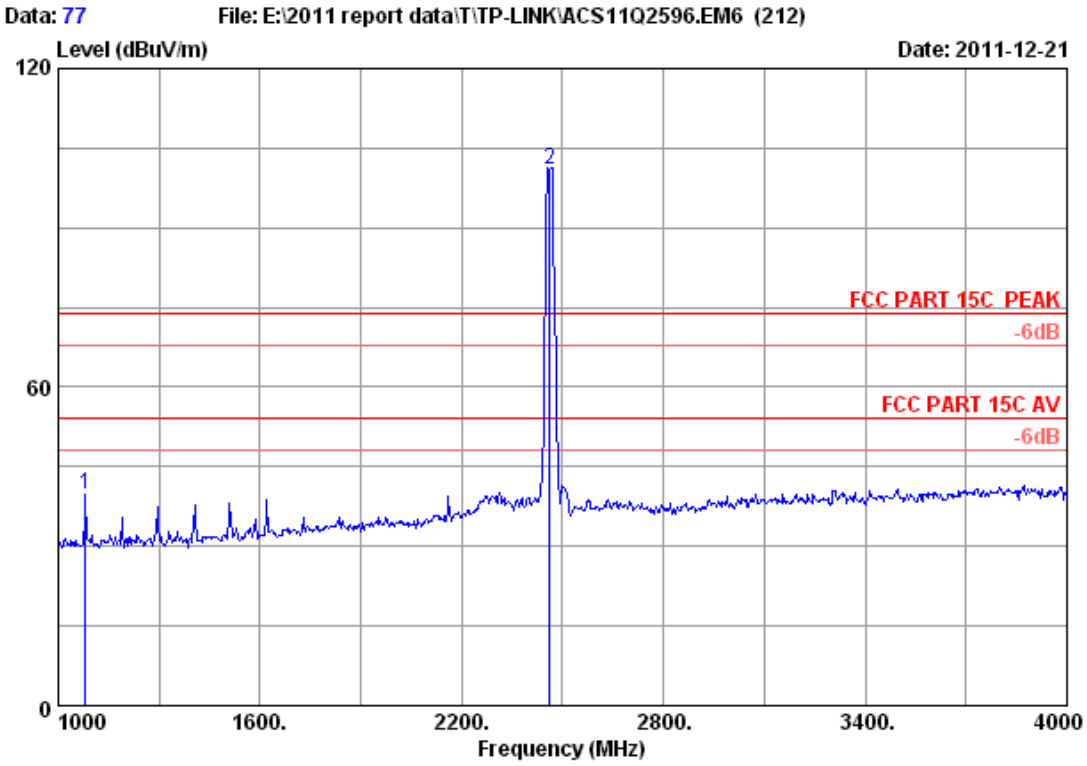

```
Site no.      : 3m Chamber                Data no.   : 71
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT20  CH11     2462MHz  Tx
M/N           : TL-WN881ND
```



Site no. : 3m Chamber Data no. : 72
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	33.08	8.62	34.60	43.59	50.69	74.00	23.31	Peak
2	4924.000	33.08	8.62	34.60	30.44	37.54	54.00	16.46	Average

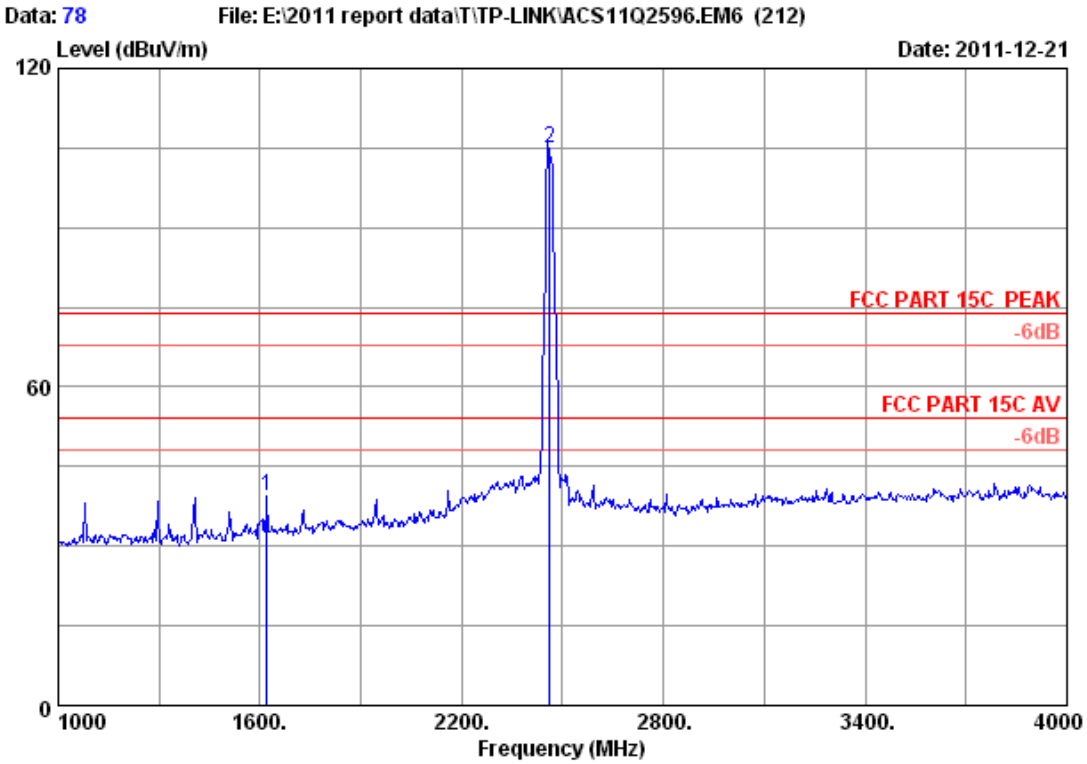
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 77
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1081.000	24.06	3.93	34.86	46.48	39.61	74.00	34.39	Peak
2	2462.000	28.05	6.12	34.44	101.38	101.11	74.00	-27.11	Peak

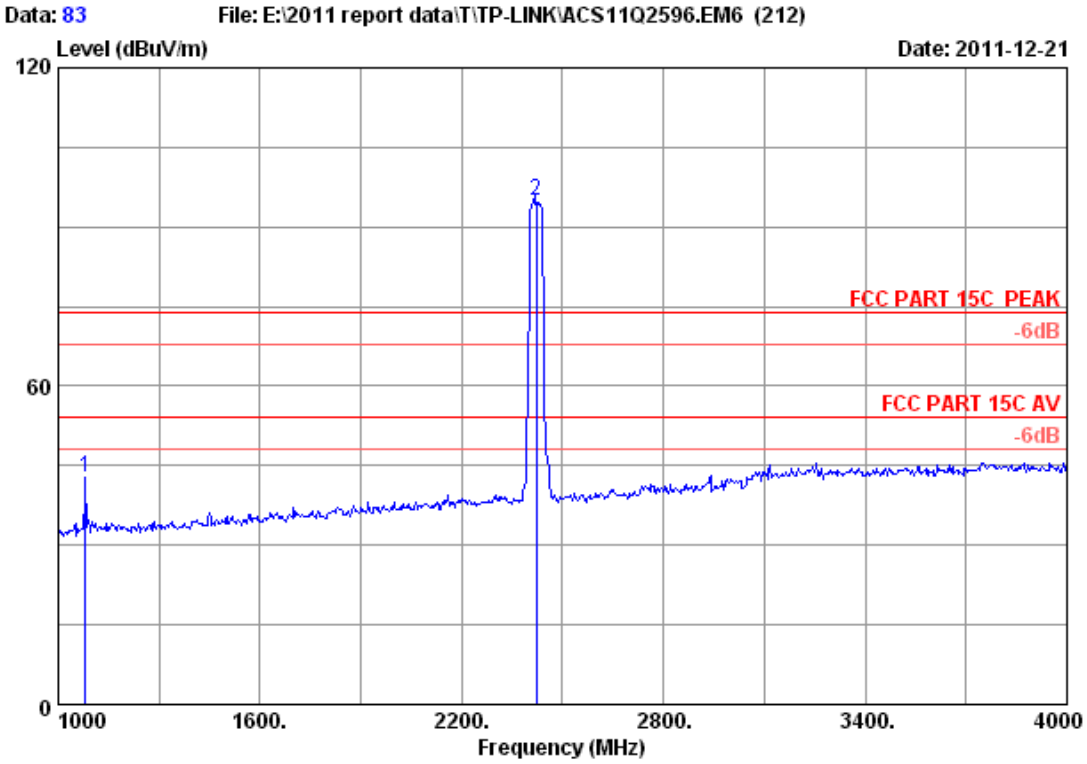
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 78
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1621.000	25.86	4.78	34.59	43.55	39.60	74.00	34.40	Peak
2	2462.000	28.05	6.12	34.44	105.29	105.02	74.00	-31.02	Peak

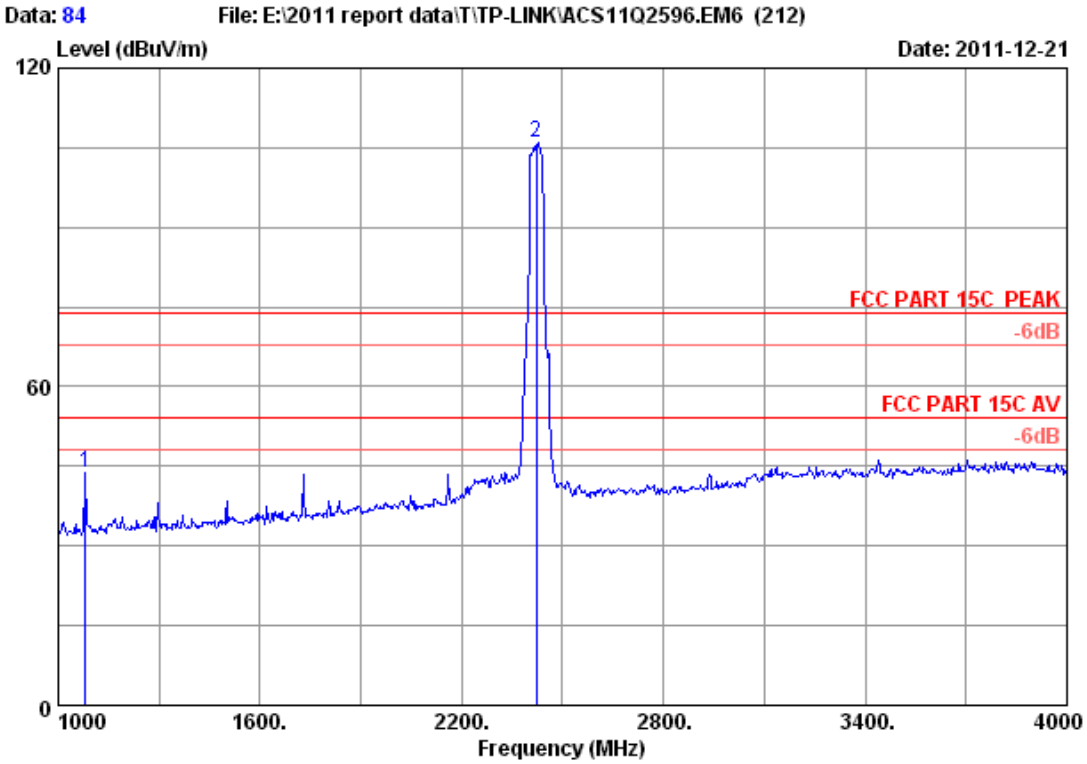
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 83
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1081.000	24.06	3.93	34.86	49.56	42.69	74.00	31.31	Peak
2	2422.000	28.00	6.06	34.44	95.26	94.88	74.00	-20.88	Peak

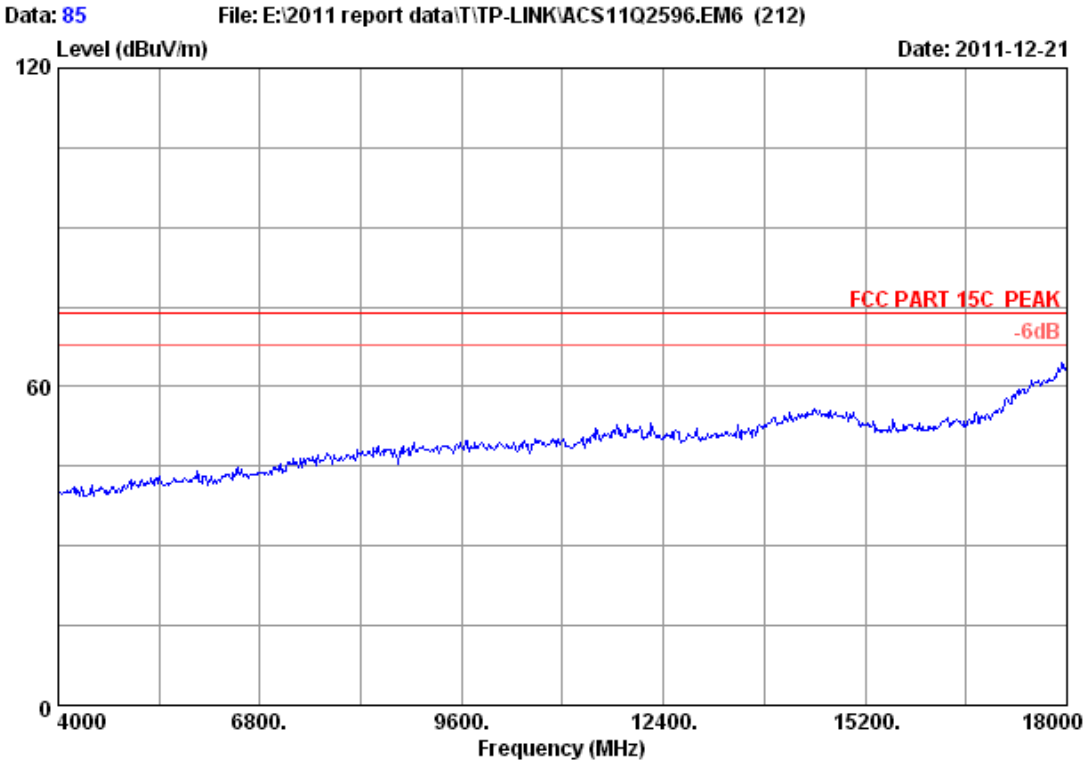
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



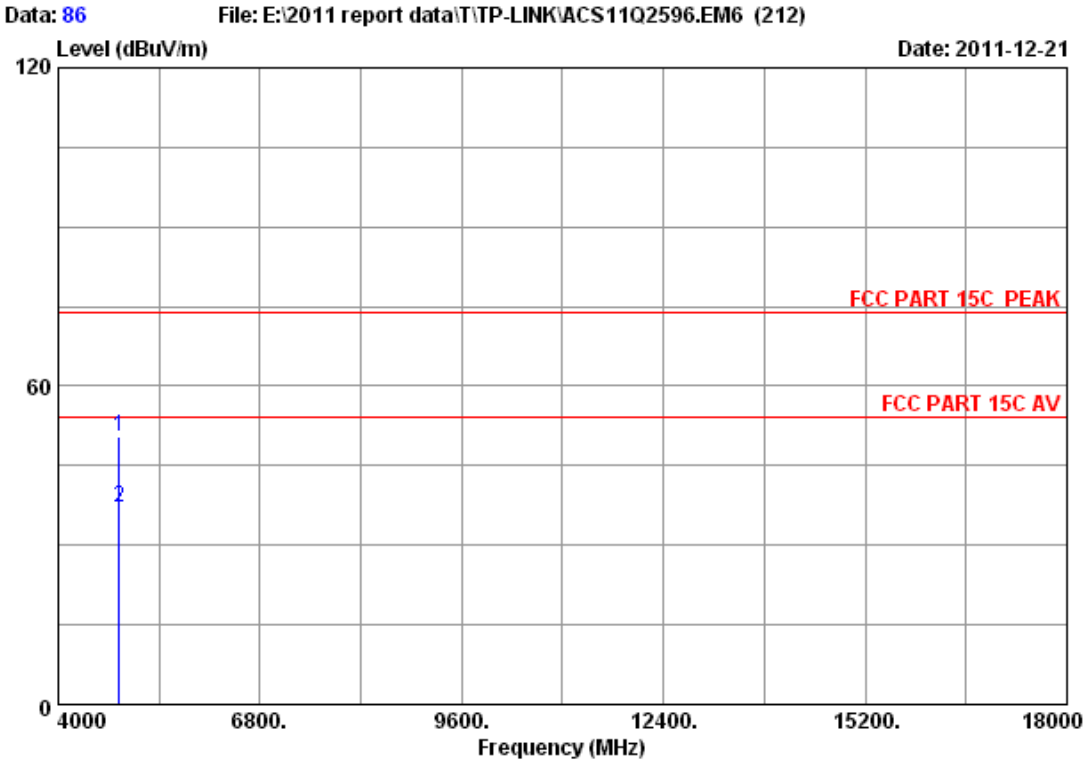
Site no. : 3m Chamber Data no. : 84
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1081.000	24.06	3.93	34.86	50.69	43.82	74.00	30.18	Peak
2	2422.000	28.00	6.06	34.44	106.36	105.98	74.00	-31.98	Peak

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



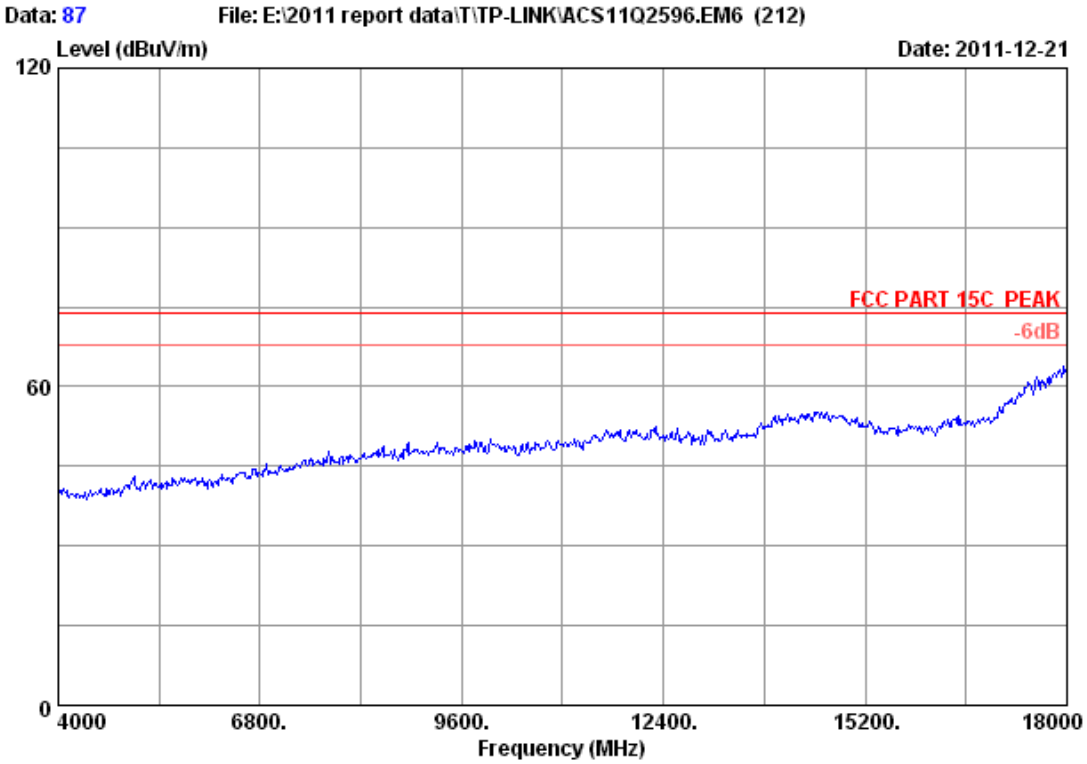

```
Site no.      : 3m Chamber                Data no.   : 85
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT40  CH1    2422MHz  Tx
M/N           : TL-WN881ND
```



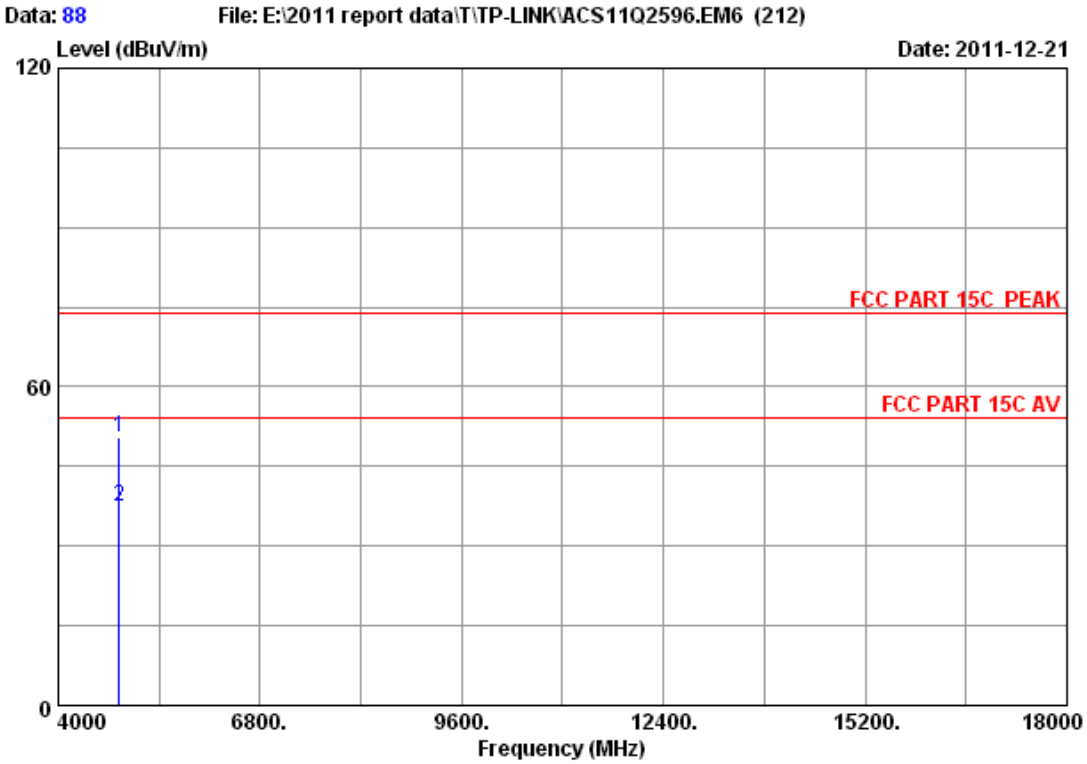
Site no. : 3m Chamber Data no. : 86
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4844.000	32.92	8.55	34.60	43.57	50.44	74.00	23.56	Peak
2	4844.000	32.92	8.55	34.60	30.38	37.25	54.00	16.75	Average

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



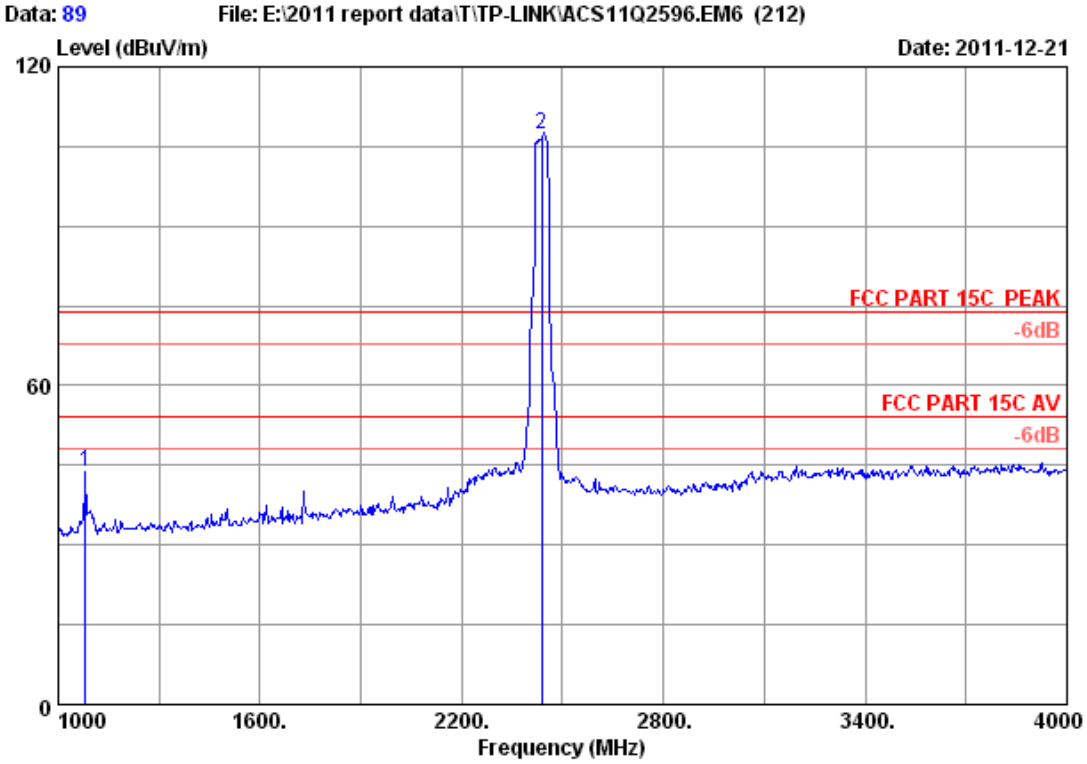

```
Site no.      : 3m Chamber                Data no.   : 87
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT40  CH1    2422MHz  Tx
M/N           : TL-WN881ND
```



Site no. : 3m Chamber Data no. : 88
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4844.000	32.92	8.55	34.60	43.63	50.50	74.00	23.50	Peak
2	4844.000	32.92	8.55	34.60	30.57	37.44	54.00	16.56	Average

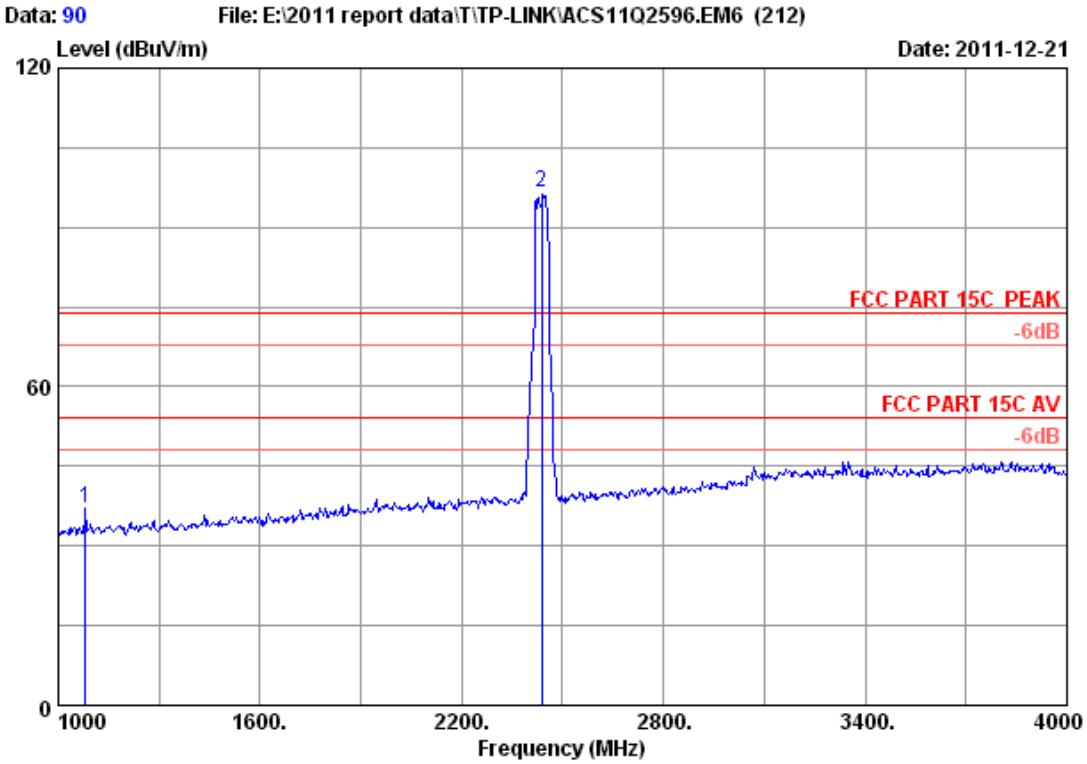
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 89
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH4 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1081.000	24.06	3.93	34.86	50.70	43.83	74.00	30.17	Peak
2	2437.000	28.03	6.06	34.44	107.57	107.22	74.00	-33.22	Peak

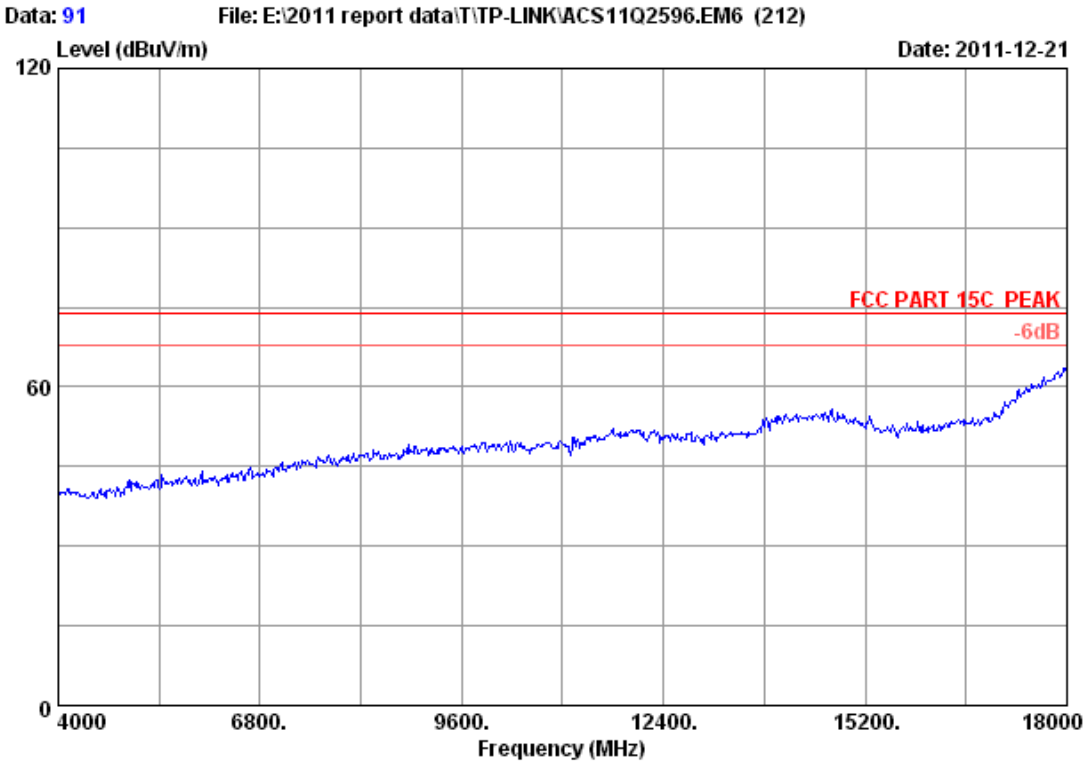
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



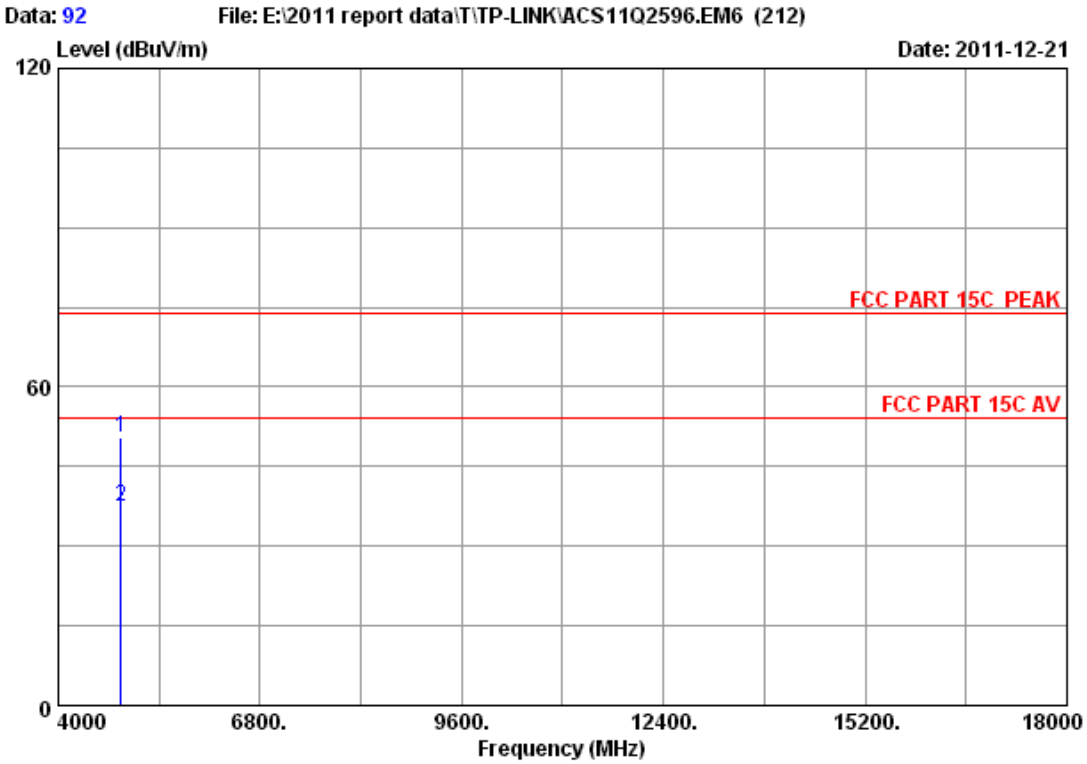
Site no. : 3m Chamber Data no. : 90
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH4 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1081.000	24.06	3.93	34.86	43.86	36.99	74.00	37.01	Peak
2	2437.000	28.03	6.06	34.44	97.12	96.77	74.00	-22.77	Peak

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



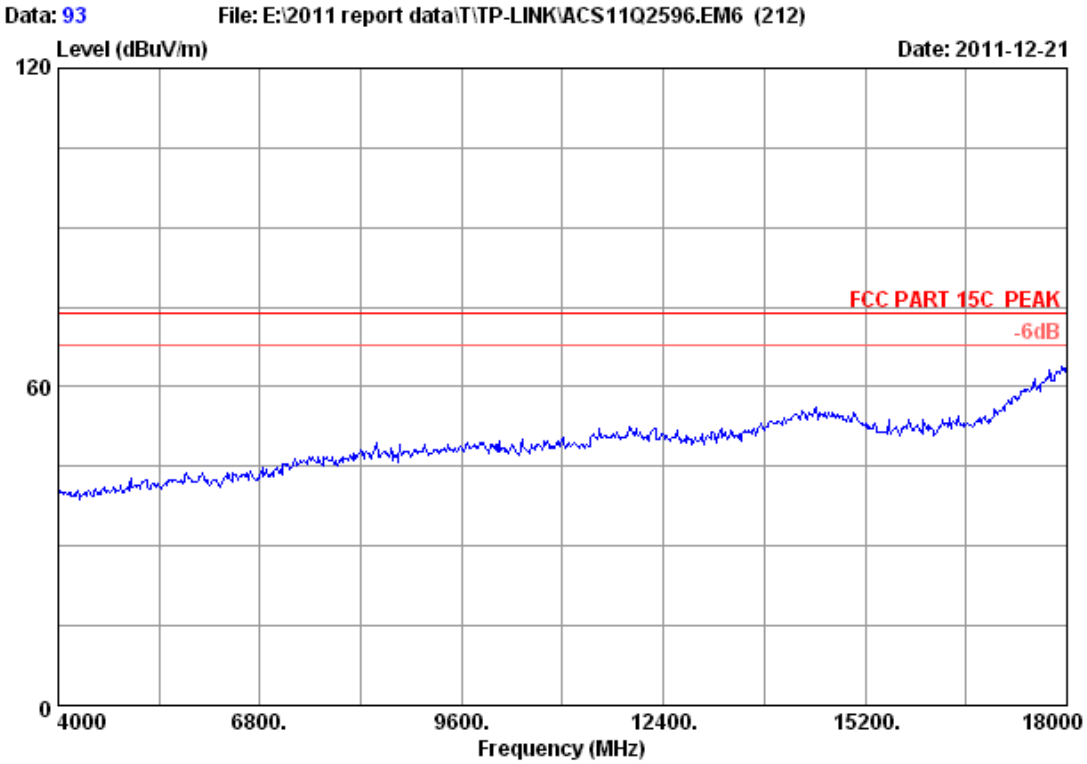

```
Site no.      : 3m Chamber                Data no.   : 91
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT40  CH4    2437MHz  Tx
M/N           : TL-WN881ND
```



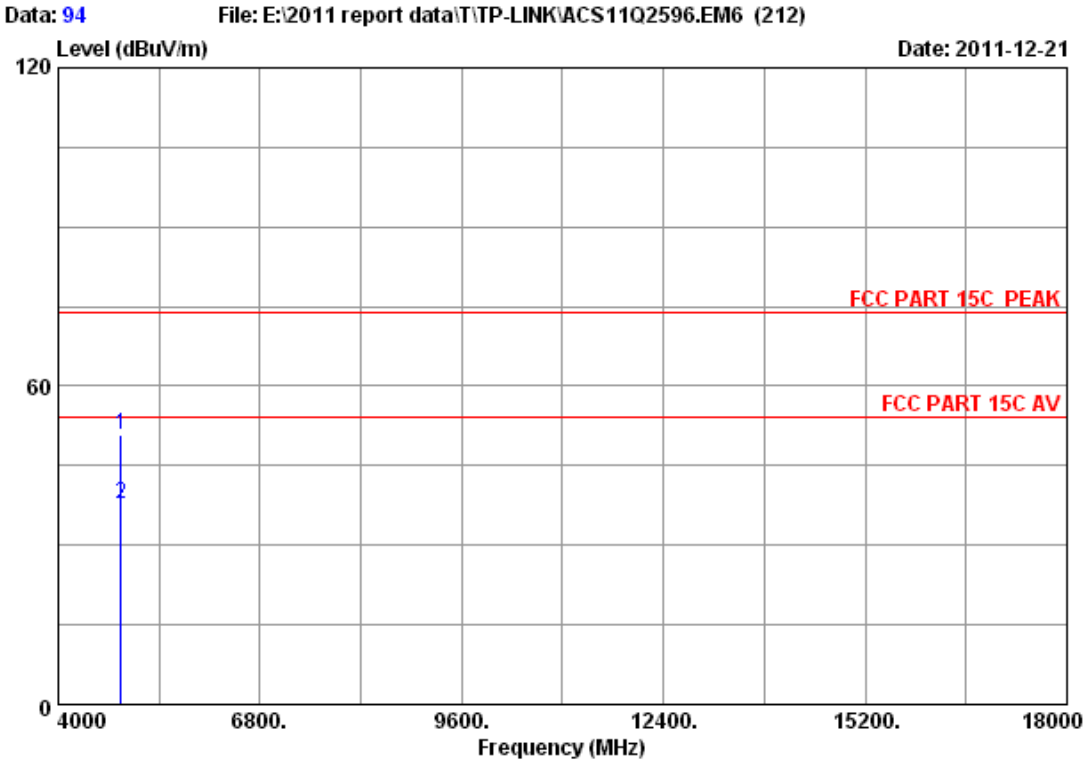
Site no. : 3m Chamber Data no. : 92
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH4 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	32.98	8.58	34.60	43.43	50.39	74.00	23.61	Peak
2	4874.000	32.98	8.58	34.60	30.34	37.30	54.00	16.70	Average

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



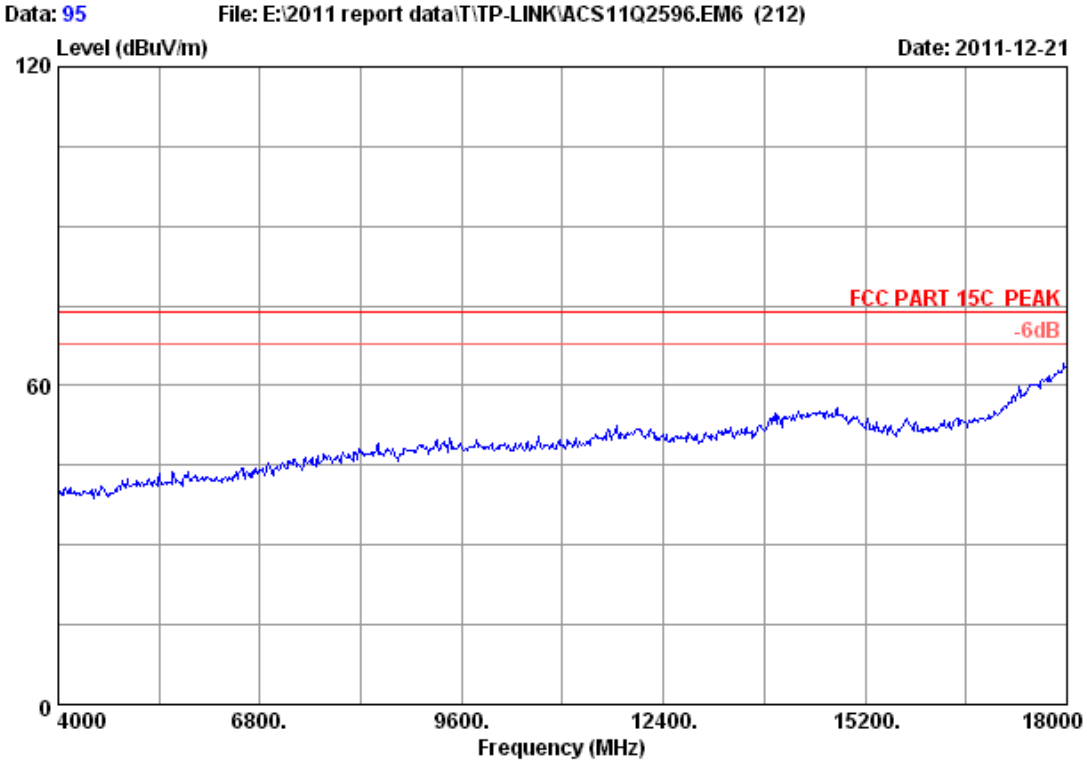

```
Site no.      : 3m Chamber                Data no.   : 93
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT40  CH4    2437MHz  Tx
M/N           : TL-WN881ND
```



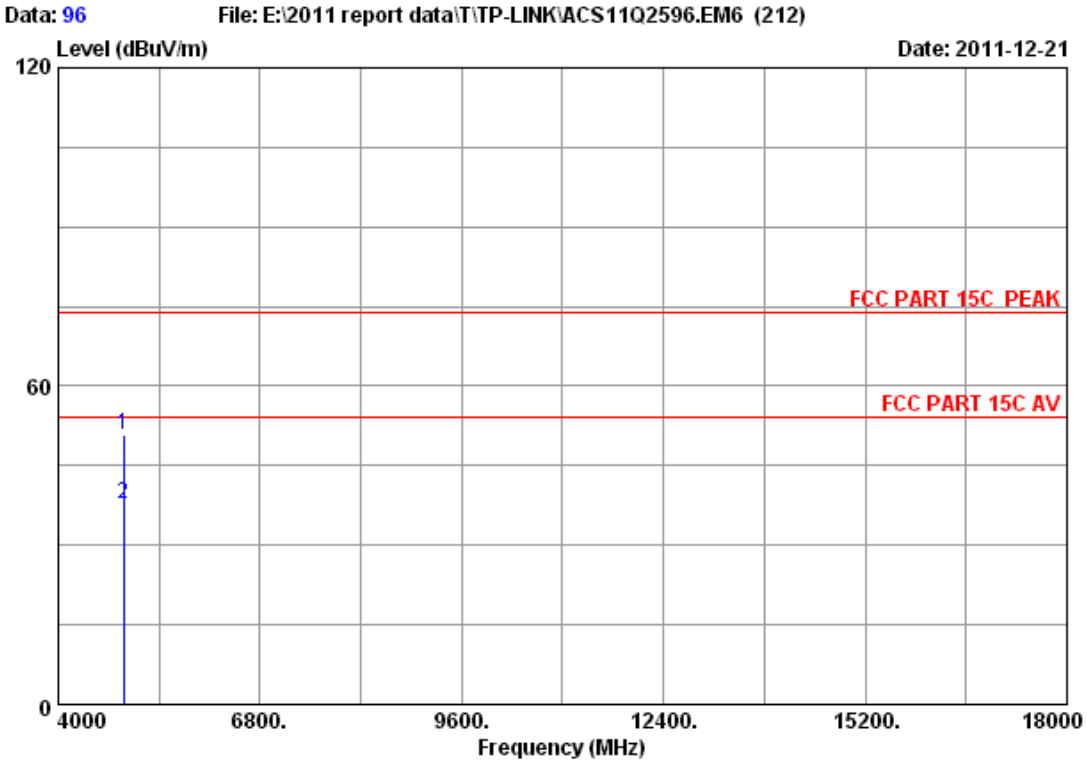
Site no. : 3m Chamber Data no. : 94
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH4 2437MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	32.98	8.58	34.60	43.78	50.74	74.00	23.26	Peak
2	4874.000	32.98	8.58	34.60	30.65	37.61	54.00	16.39	Average

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



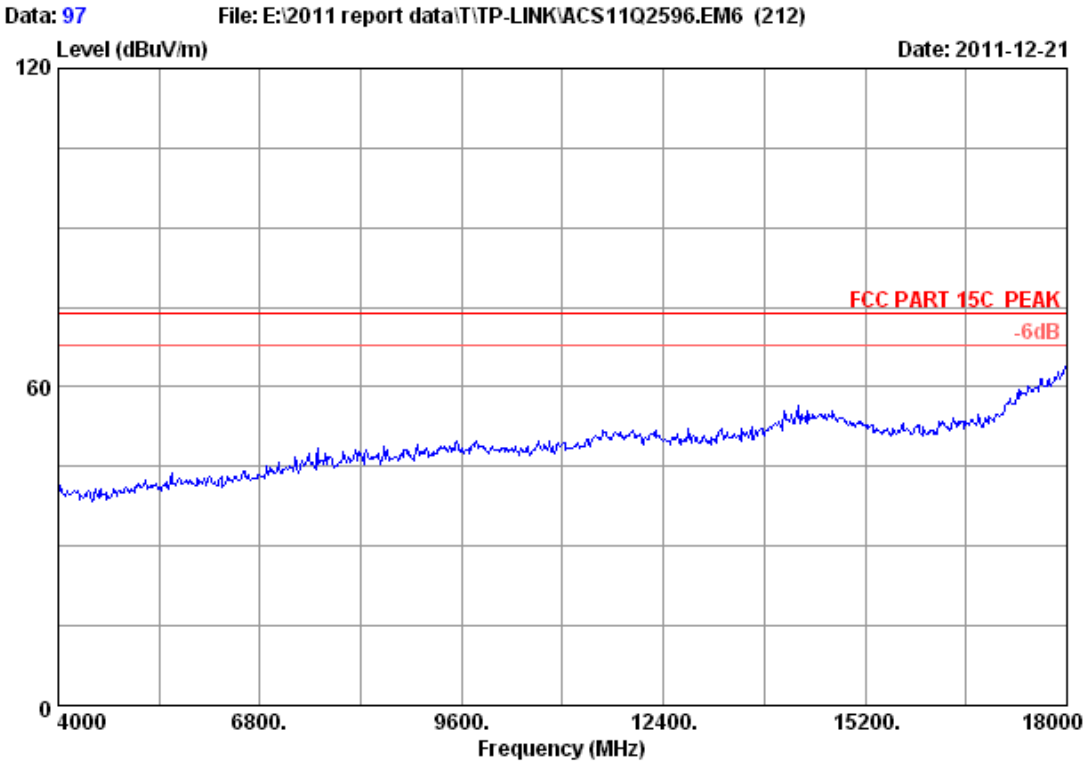

```
Site no.      : 3m Chamber                Data no.   : 95
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT40  CH7    2452MHz  Tx
M/N           : TL-WN881ND
```



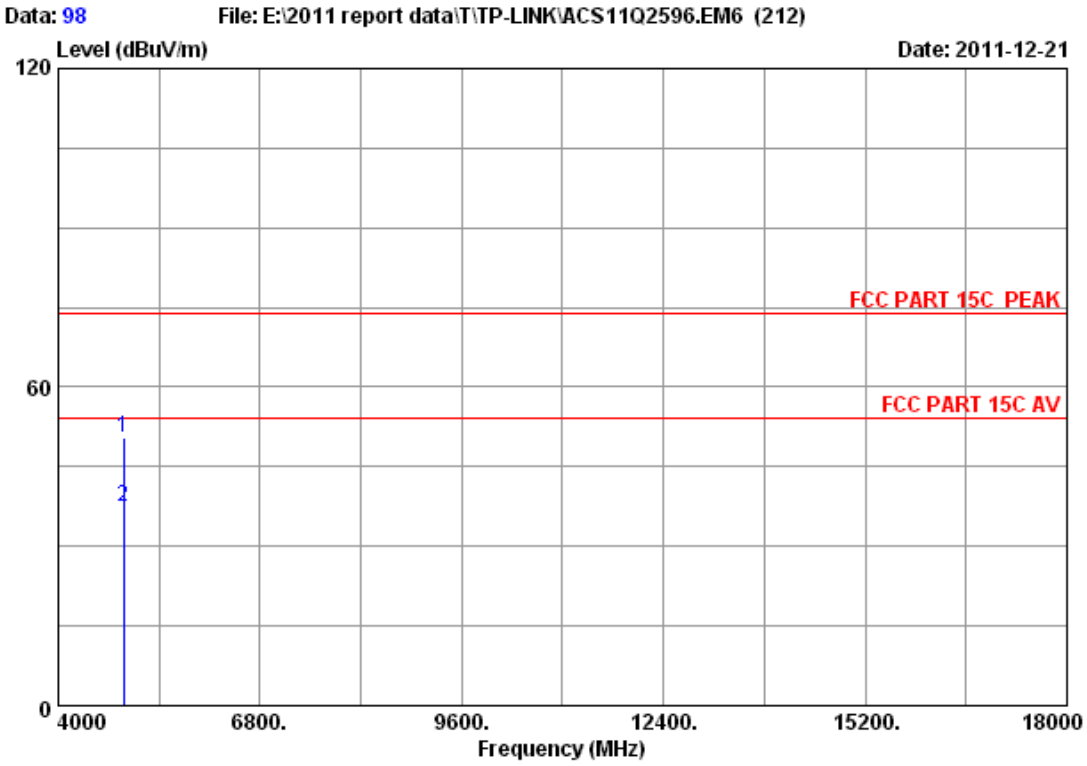
Site no. : 3m Chamber Data no. : 96
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4904.000	33.04	8.61	34.60	43.71	50.76	74.00	23.24	Peak
2	4904.000	33.04	8.61	34.60	30.68	37.73	54.00	16.27	Average

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



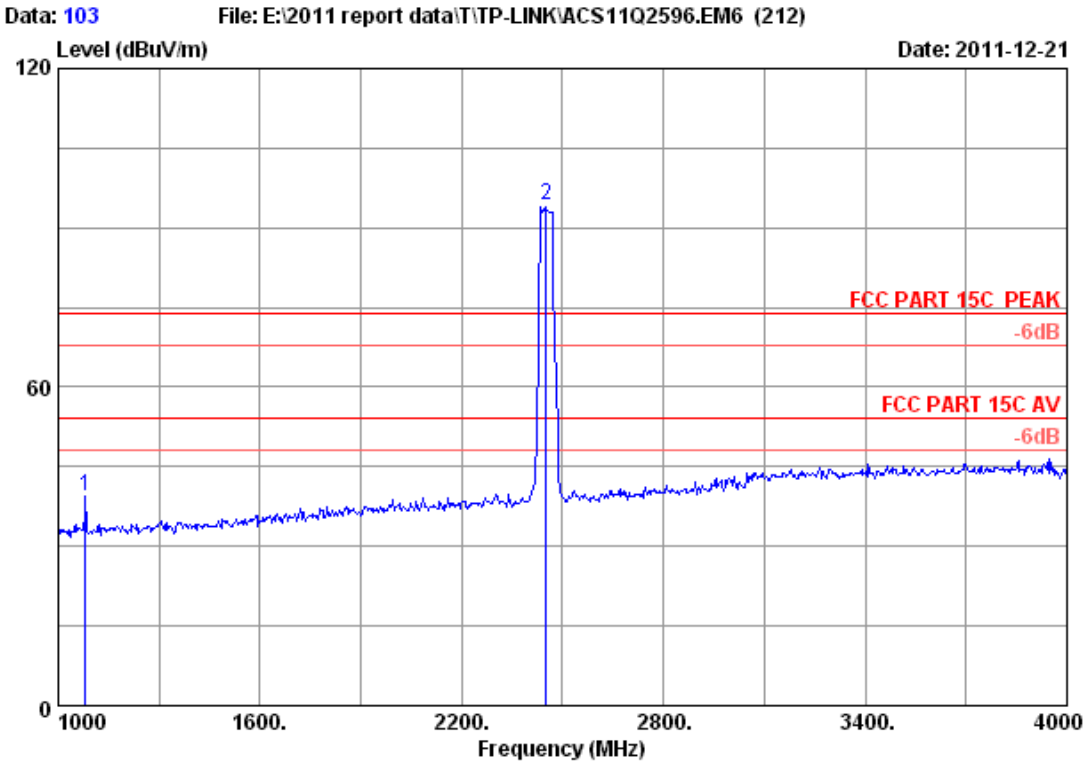

```
Site no.      : 3m Chamber                Data no.   : 97
Dis. / Ant.   : 3m   2011 3115 4580       Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Leo-Li
EUT           : 300Mbps Wireless N PCI Express Adapter
Power supply  : DC 3.3V From PC Input AC 120V/60Hz
Test mode     : IEEE802.11nHT40  CH7    2452MHz  Tx
M/N           : TL-WN881ND
```



Site no. : 3m Chamber Data no. : 98
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4904.000	33.04	8.61	34.60	43.35	50.40	74.00	23.60	Peak
2	4904.000	33.04	8.61	34.60	30.36	37.41	54.00	16.59	Average

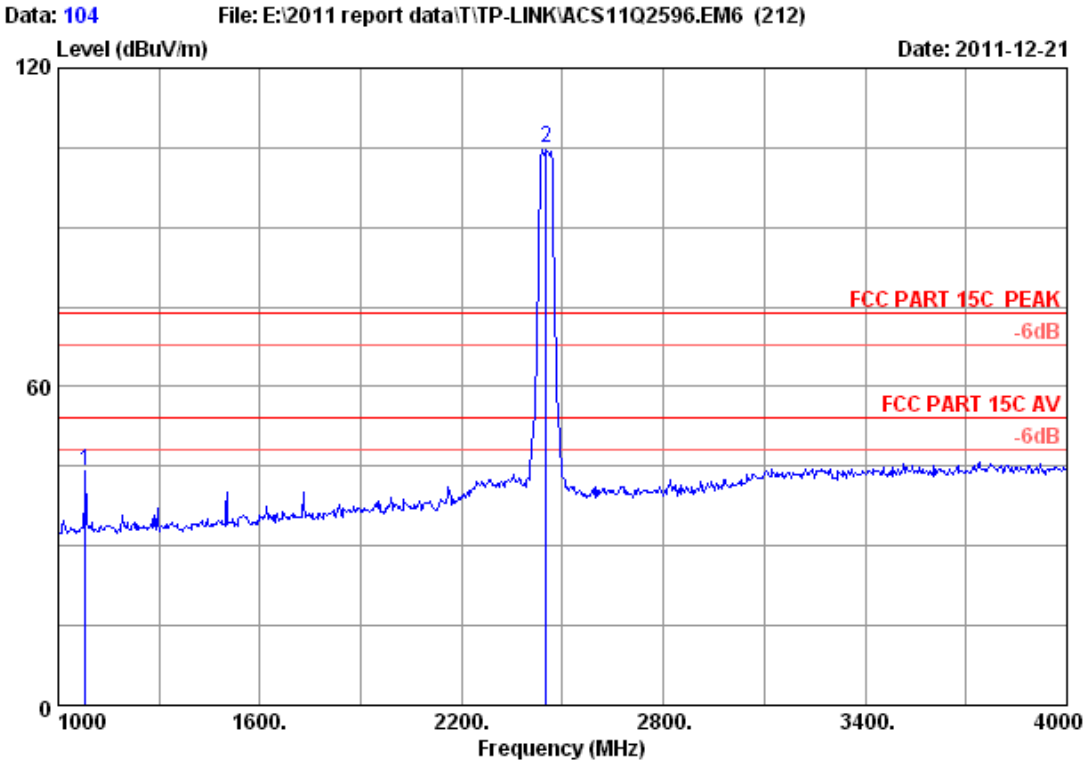
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 103
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1081.000	24.06	3.93	34.86	46.30	39.43	74.00	34.57	Peak
2	2452.000	28.03	6.09	34.44	94.55	94.23	74.00	-20.23	Peak

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



Site no. : 3m Chamber Data no. : 104
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1081.000	24.06	3.93	34.86	50.99	44.12	74.00	29.88	Peak
2	2452.000	28.03	6.09	34.44	105.16	104.84	74.00	-30.84	Peak

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

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	1Year

5.2.Limit

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

5.3.Test Procedure

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

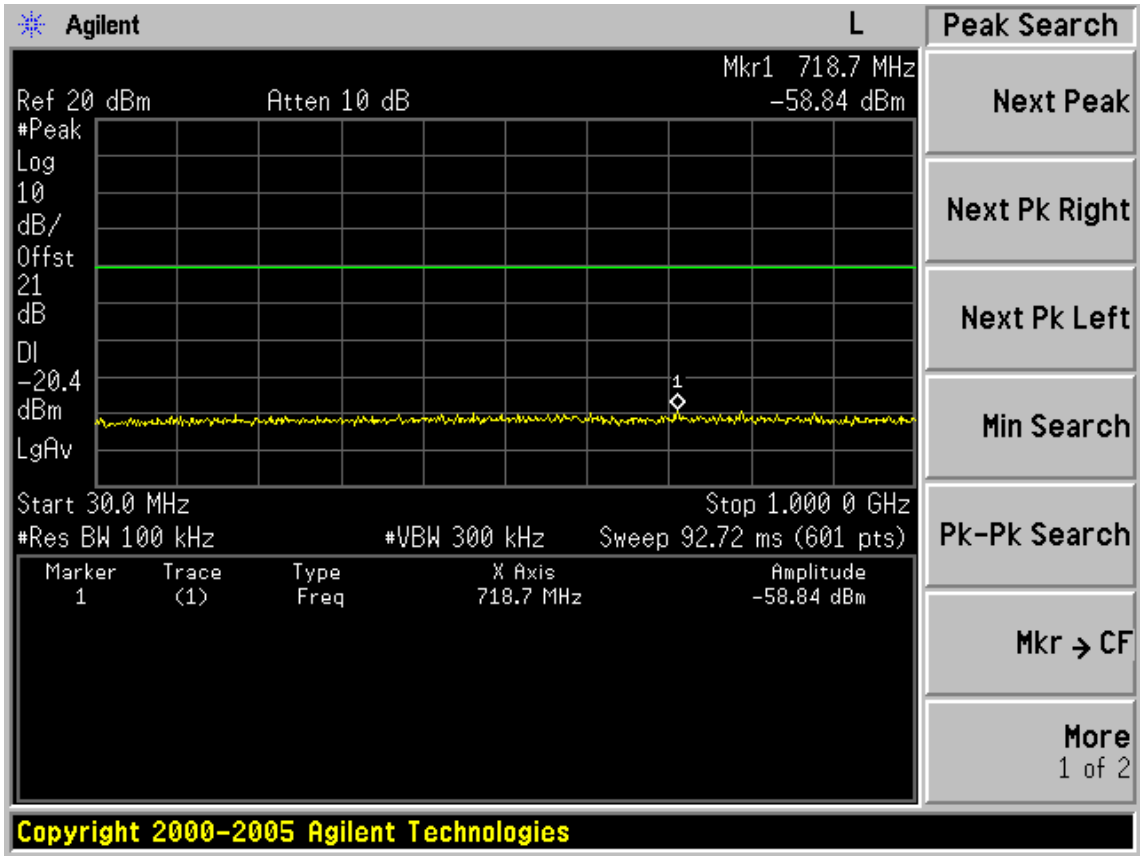
5.4.Test result

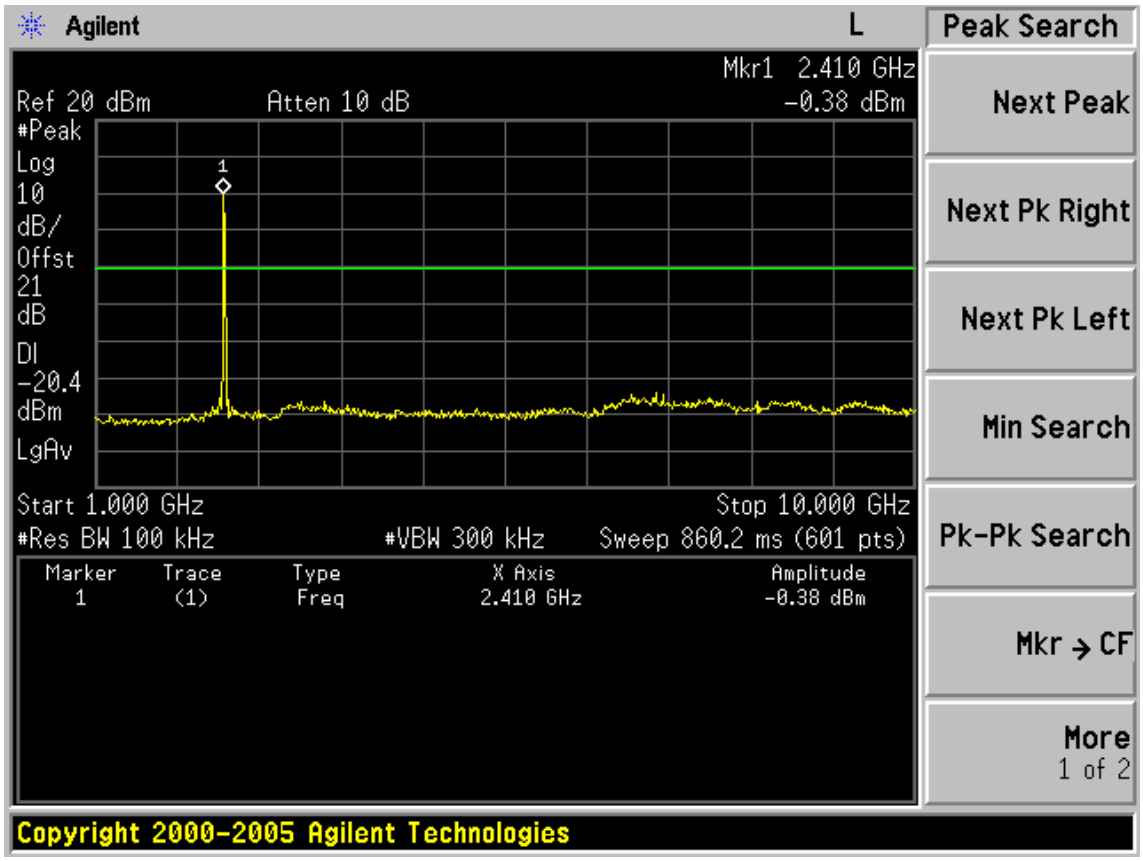
PASS (The testing data was attached in the next pages.)

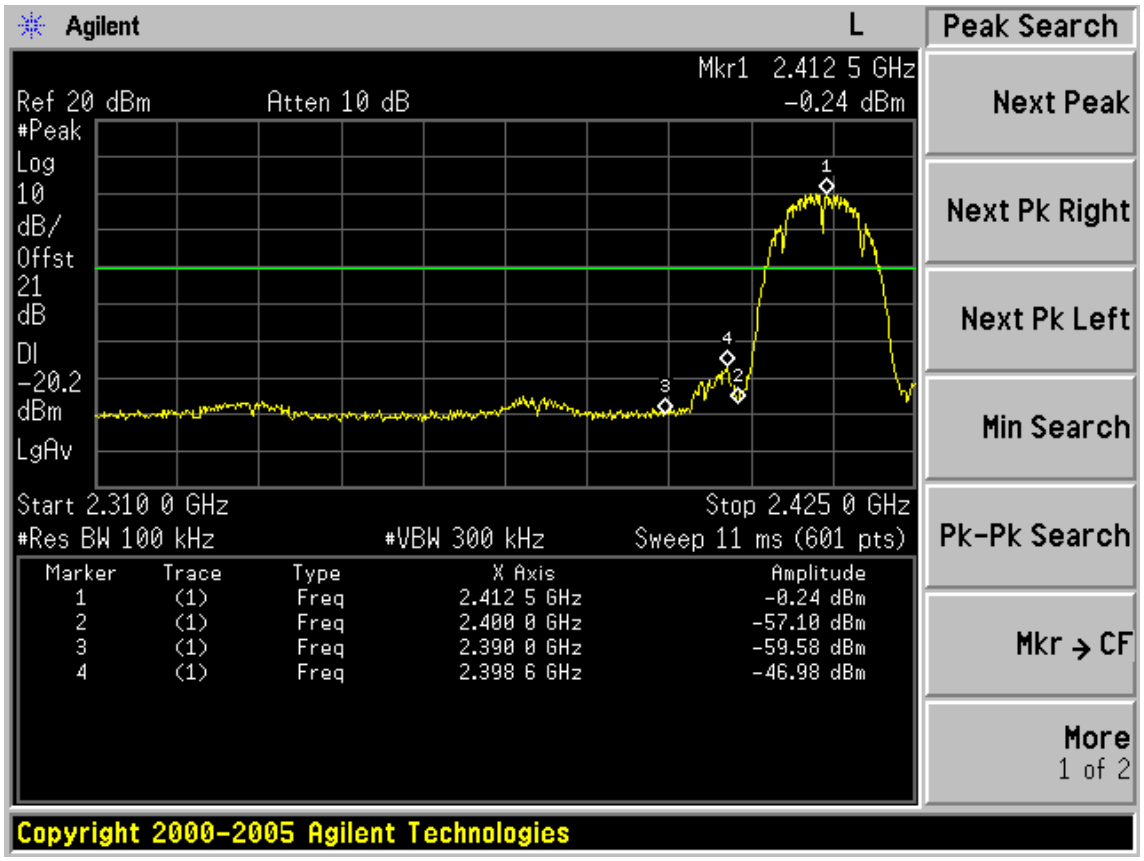
Chain 0:

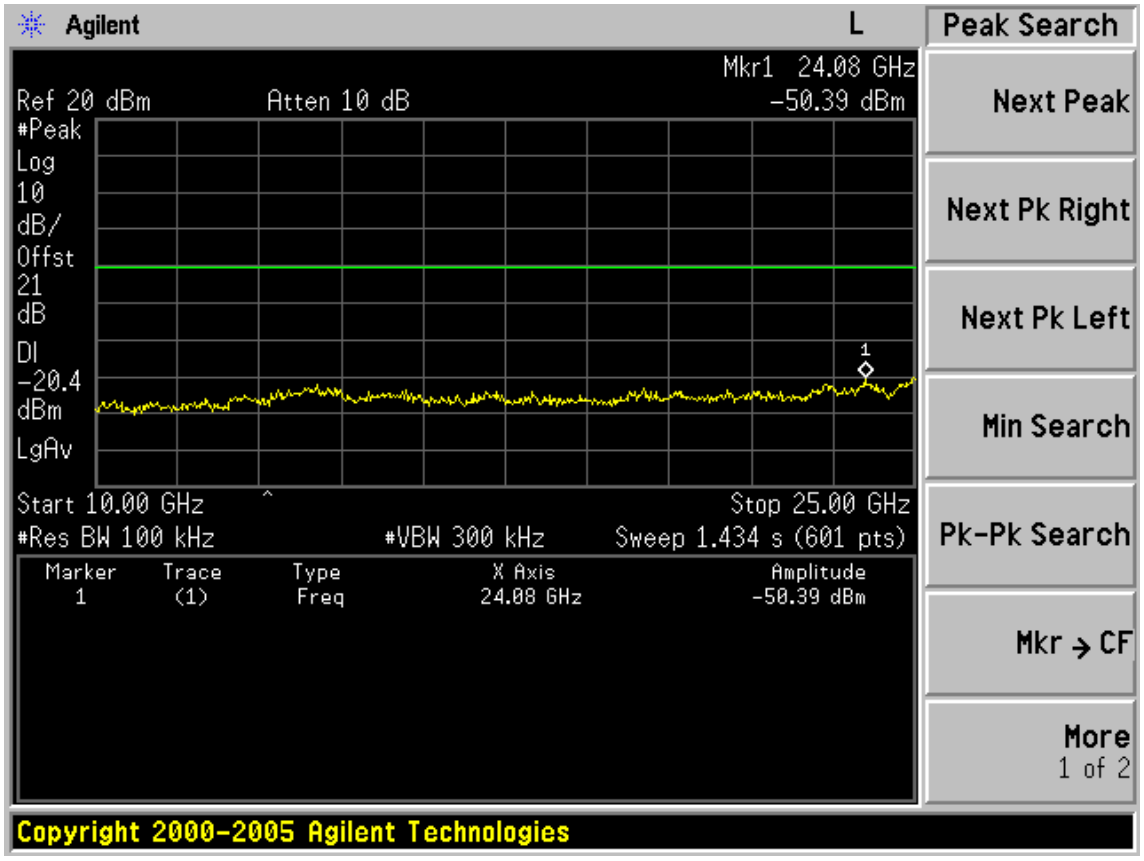
Test Mode: IEEE 802.11b TX

Test CH1: 2412MHz

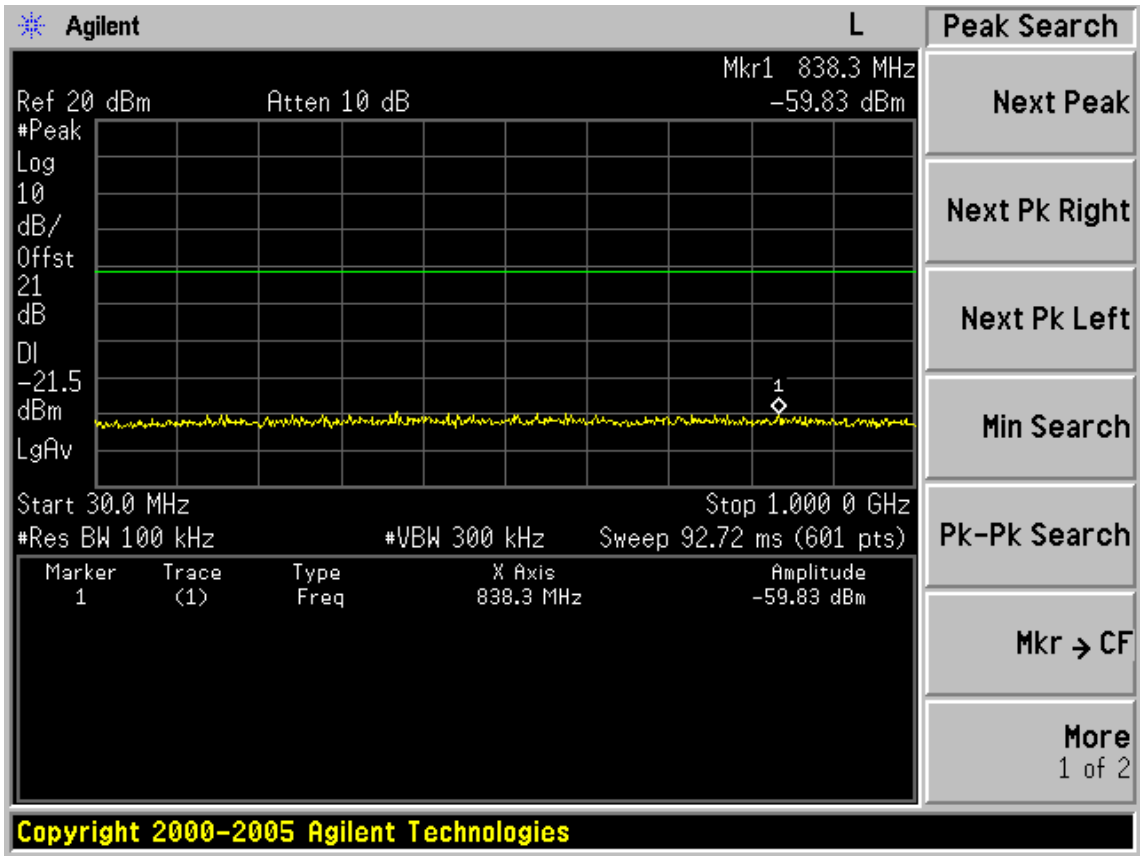


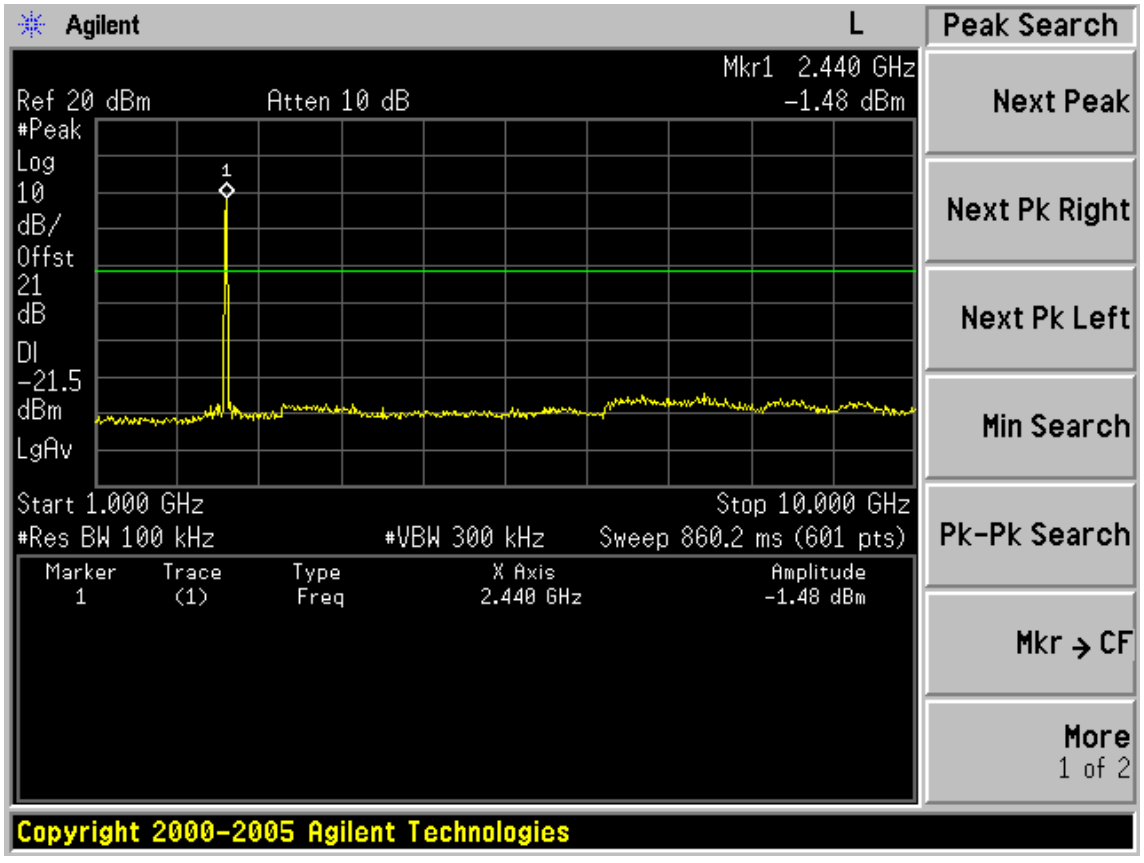


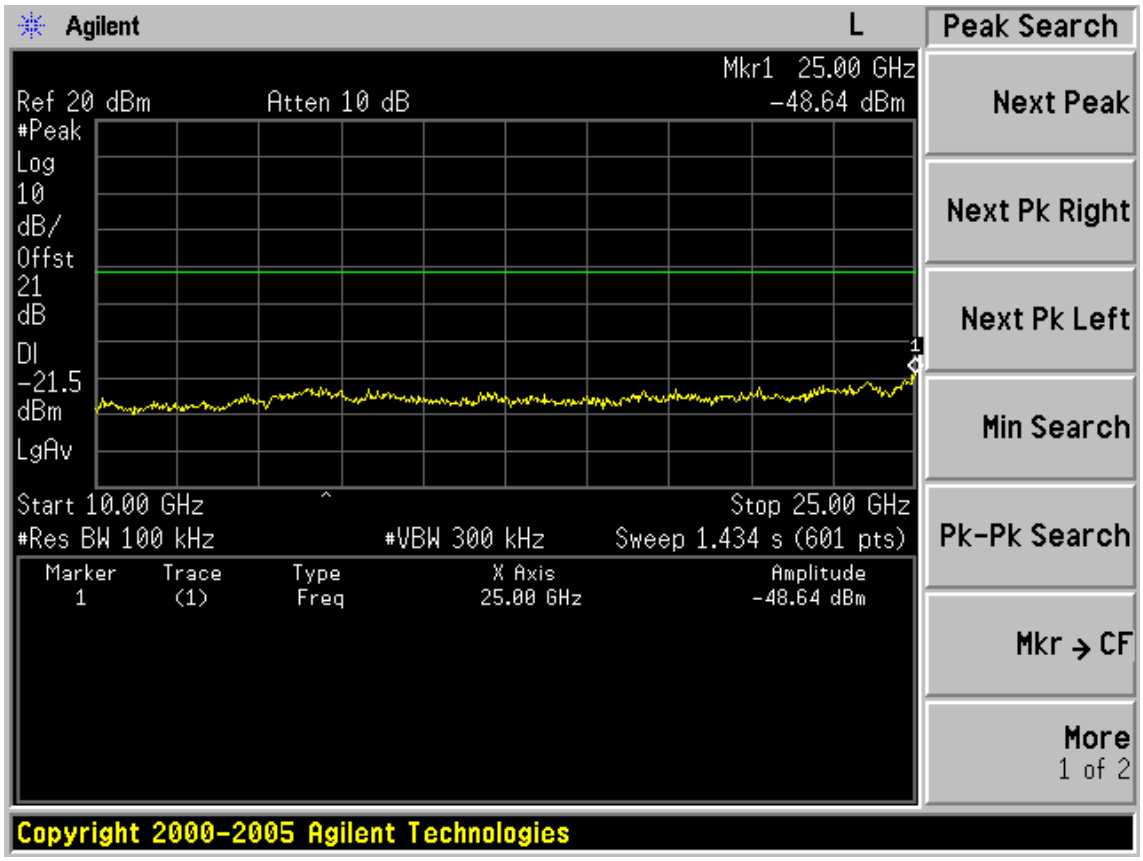

Agilent
L
Peak Search
Mkr1 2.412 5 GHz
Ref 20 dBm
Atten 10 dB
-0.24 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-20.2
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 2.310 0 GHz
Stop 2.425 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 11 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.412 5 GHz -0.24 dBm
2 (1) Freq 2.400 0 GHz -57.10 dBm
3 (1) Freq 2.390 0 GHz -59.58 dBm
4 (1) Freq 2.398 6 GHz -46.98 dBm
Copyright 2000-2005 Agilent Technologies


Agilent
L
Peak Search
Mkr1 24.08 GHz
Ref 20 dBm
Atten 10 dB
-50.39 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-20.4
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.08 GHz -50.39 dBm
Copyright 2000-2005 Agilent Technologies

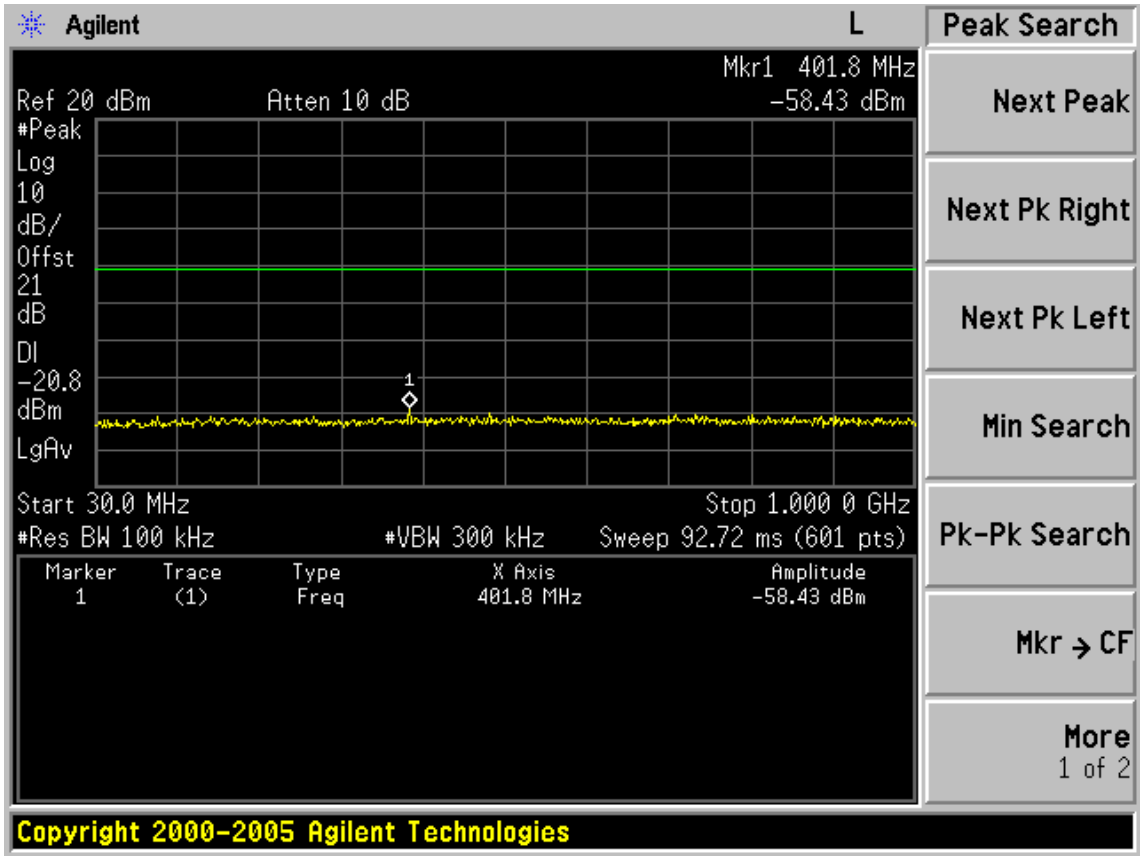
Test CH6: 2437MHz

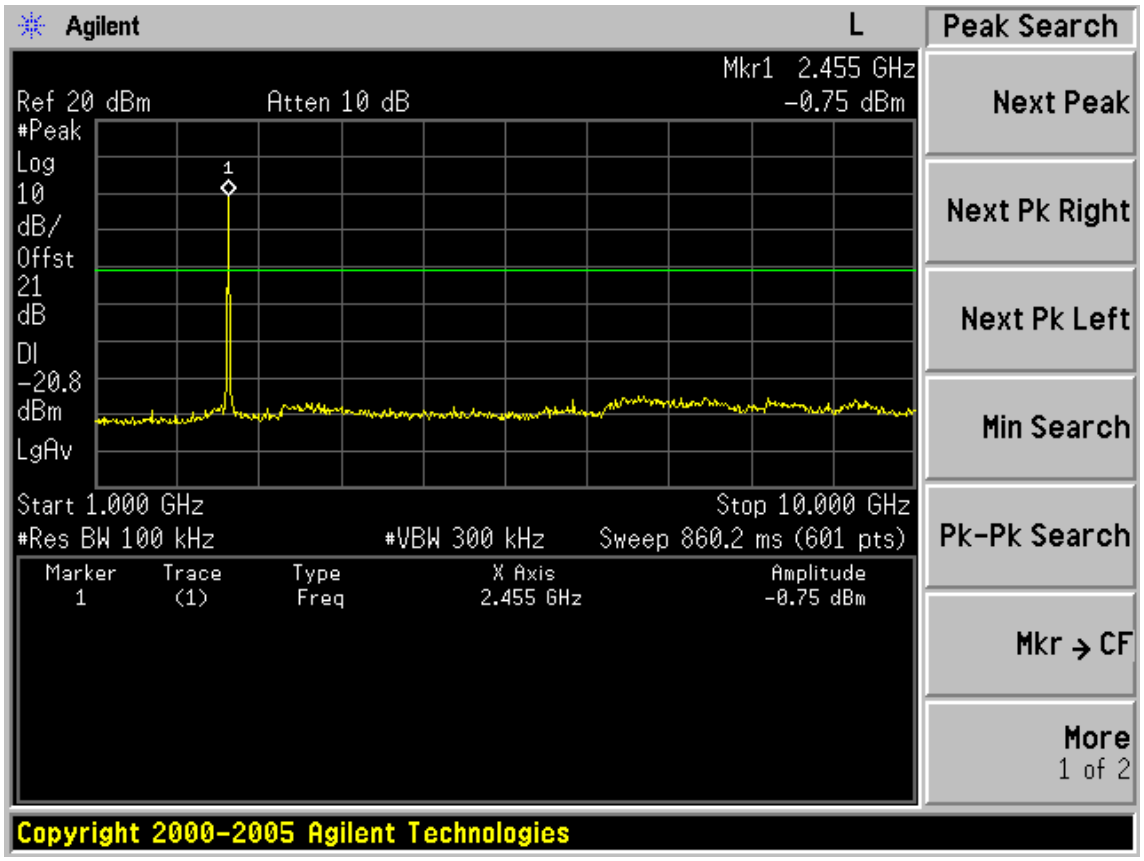


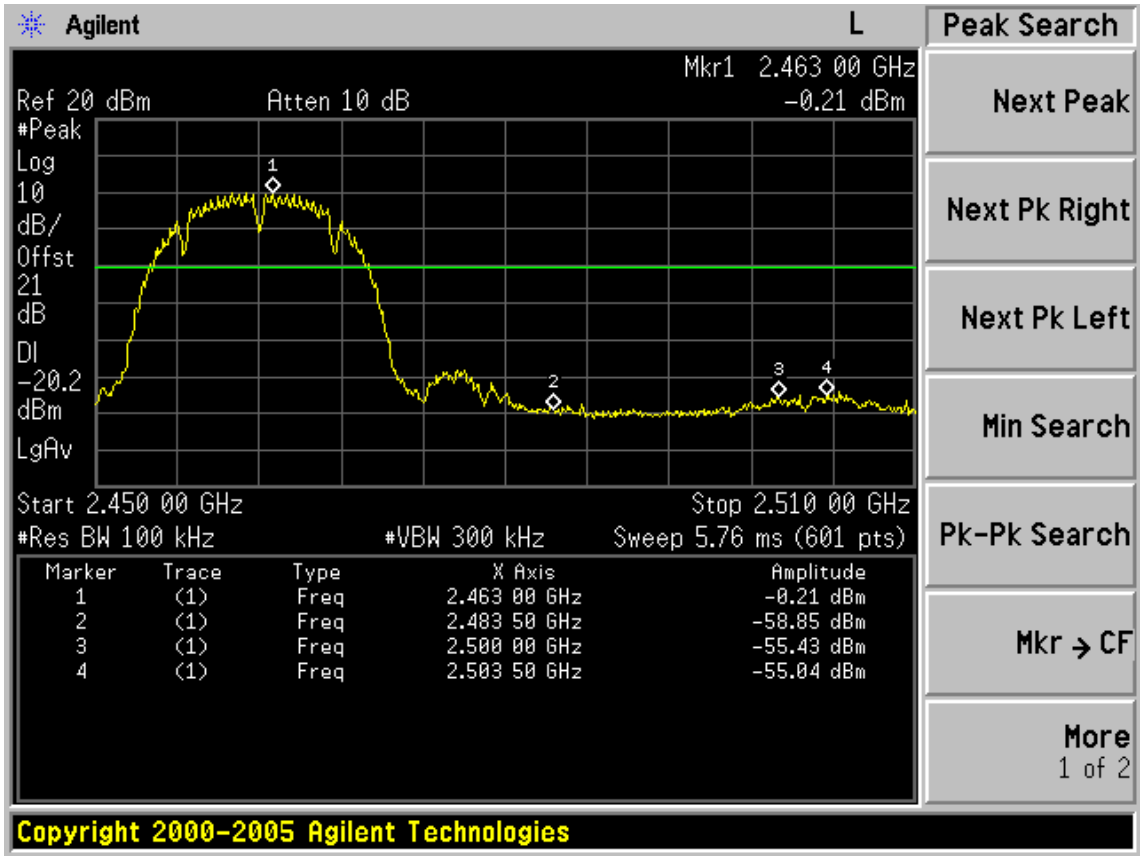


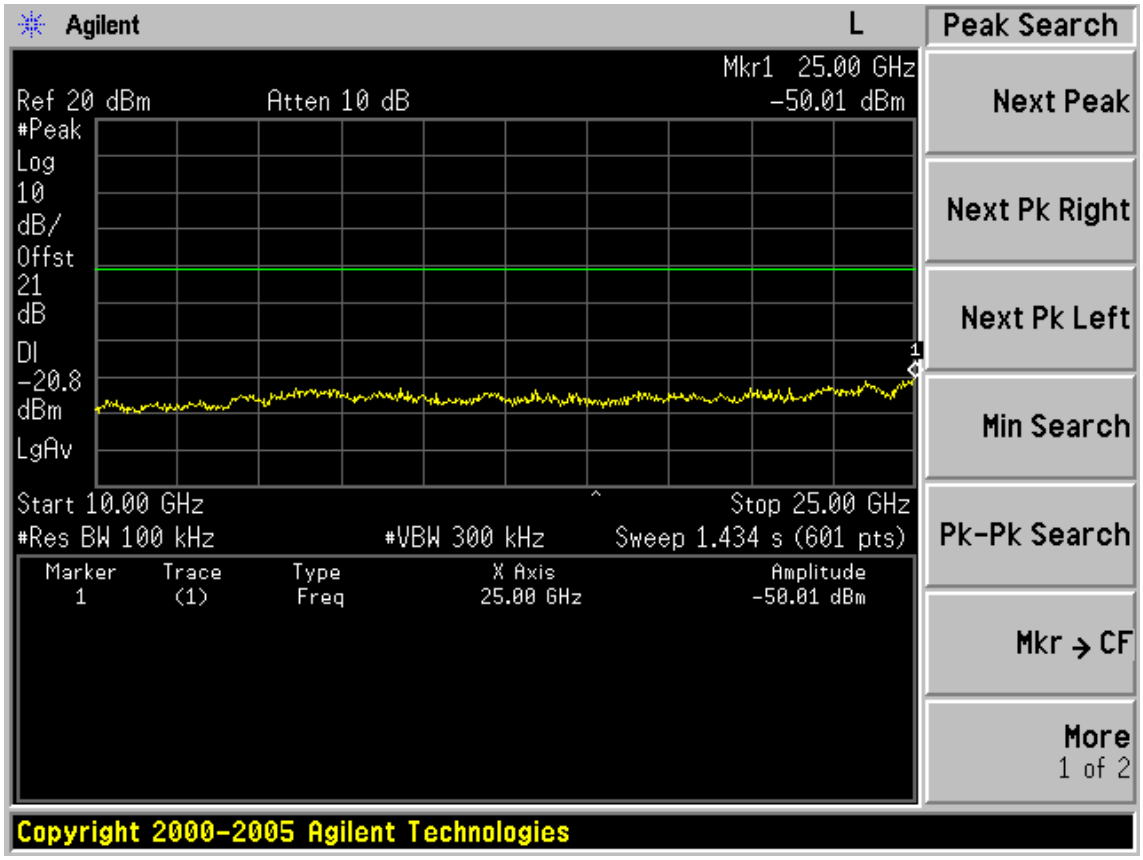


Test CH11: 2462MHz

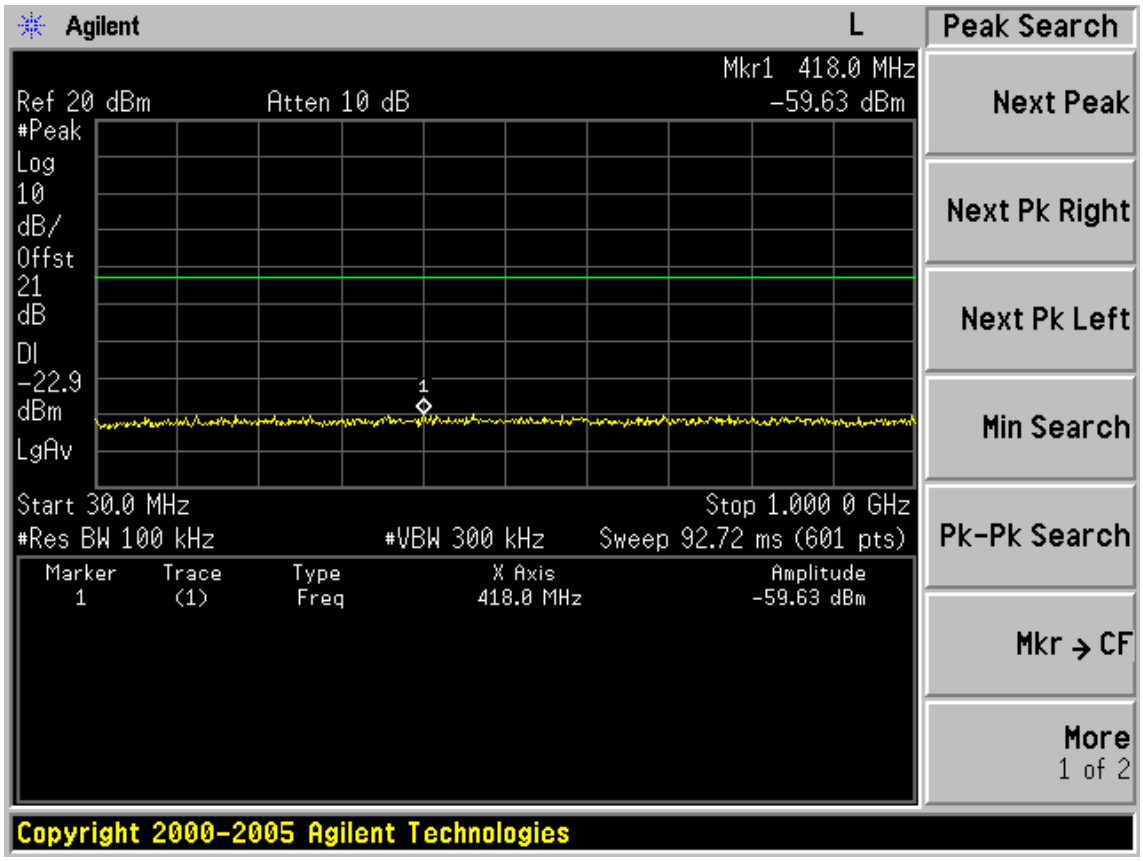


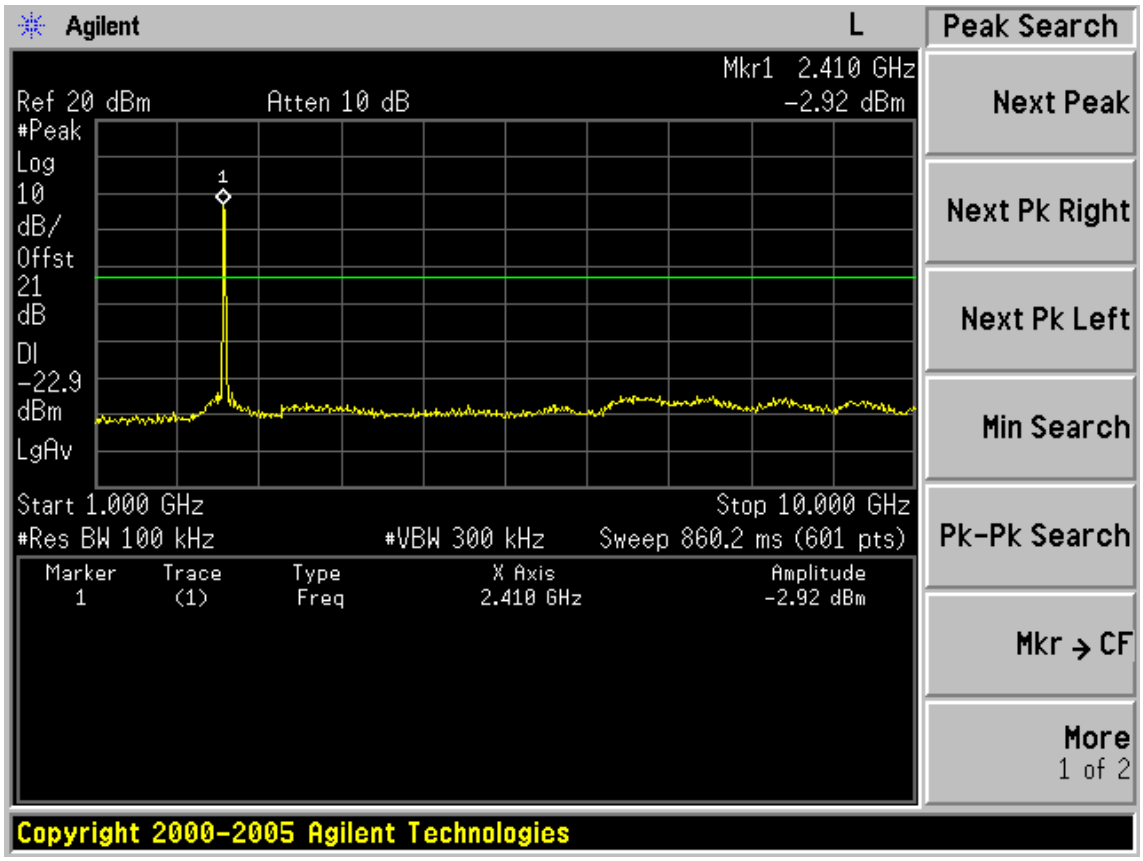

Agilent
L
Peak Search
Mkr1 2.455 GHz
Ref 20 dBm
Atten 10 dB
-0.75 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-20.8
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.455 GHz -0.75 dBm
Copyright 2000-2005 Agilent Technologies

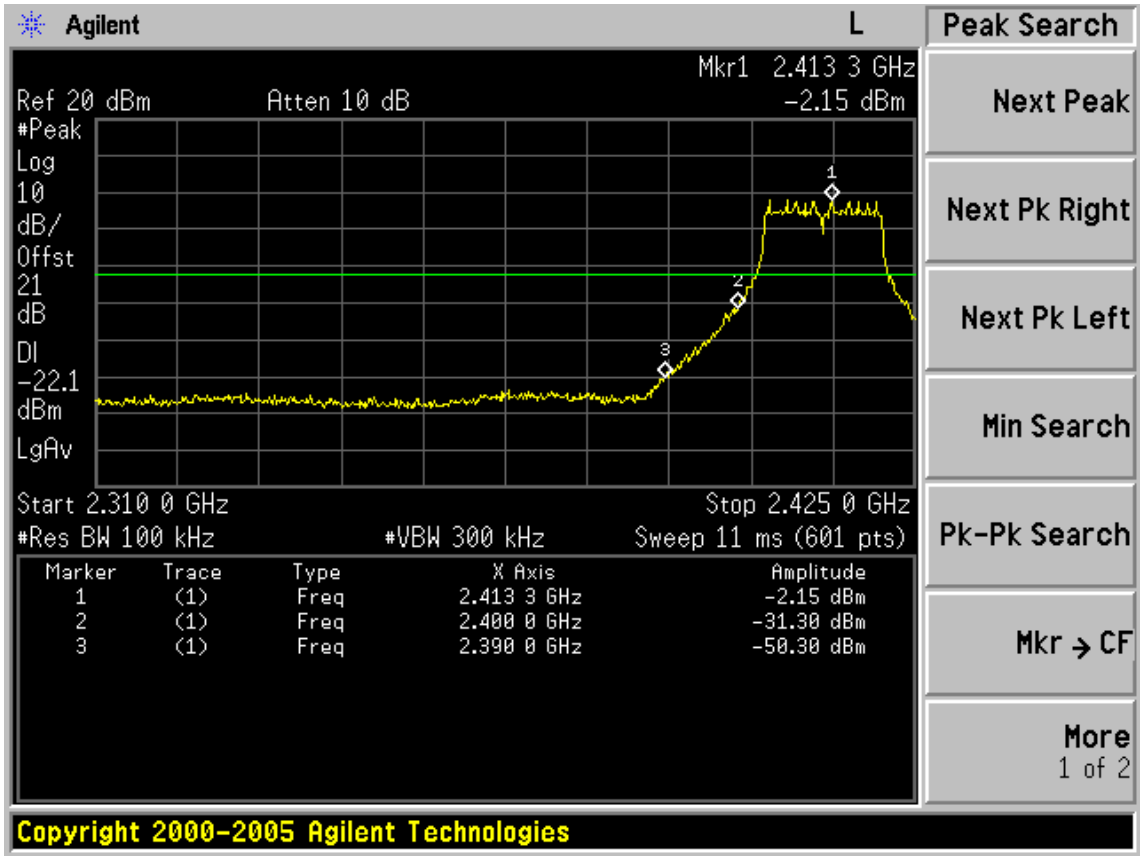

Agilent
L
Peak Search
Mkr1 2.463 00 GHz
Ref 20 dBm
Atten 10 dB
-0.21 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-20.2
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 2.450 00 GHz
Stop 2.510 00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.76 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.463 00 GHz -0.21 dBm
2 (1) Freq 2.483 50 GHz -58.85 dBm
3 (1) Freq 2.500 00 GHz -55.43 dBm
4 (1) Freq 2.503 50 GHz -55.04 dBm
Copyright 2000-2005 Agilent Technologies

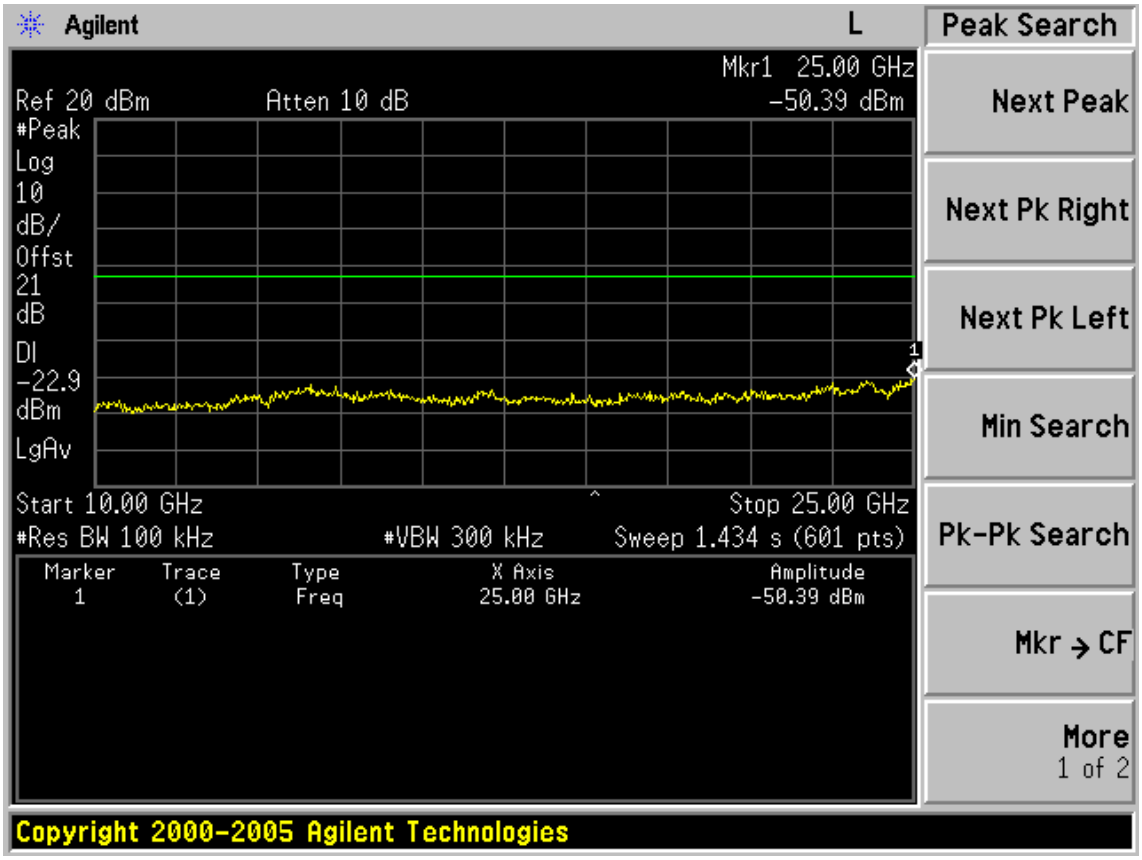


Test Mode: IEEE 802.11g TX
Test CH1: 2412MHz

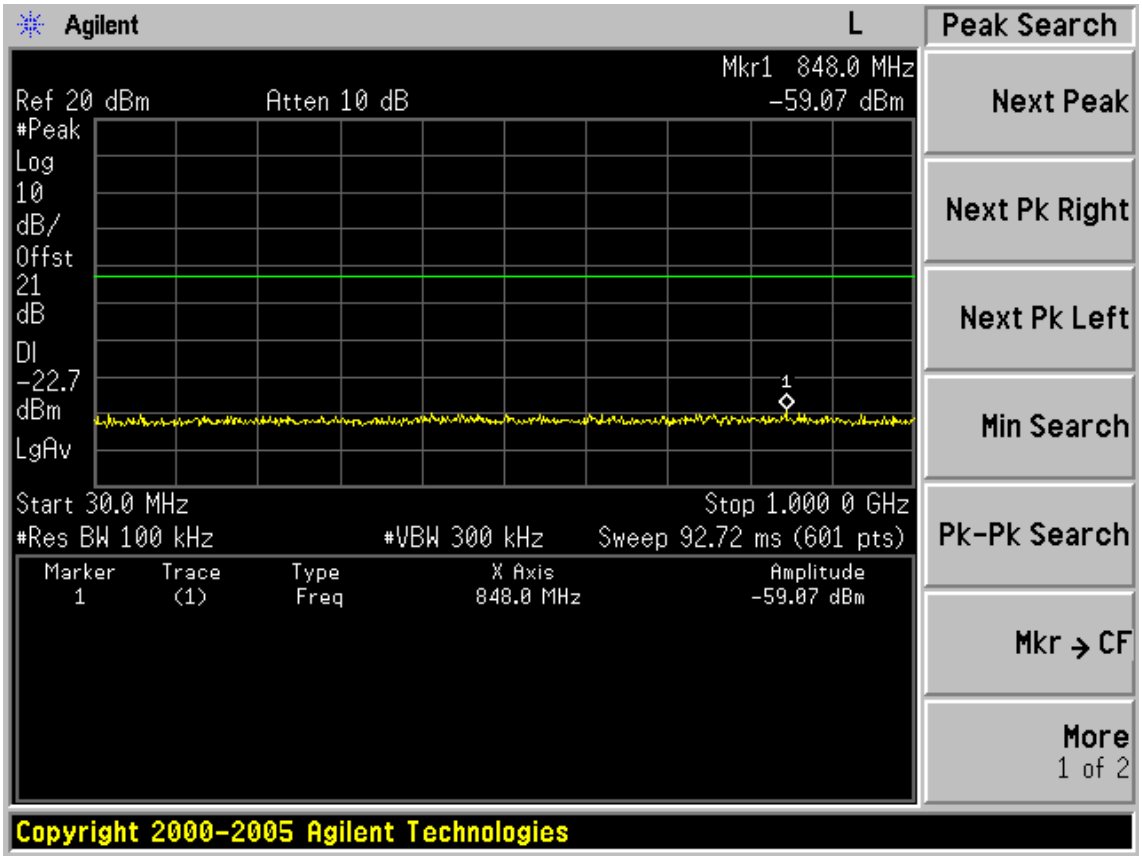


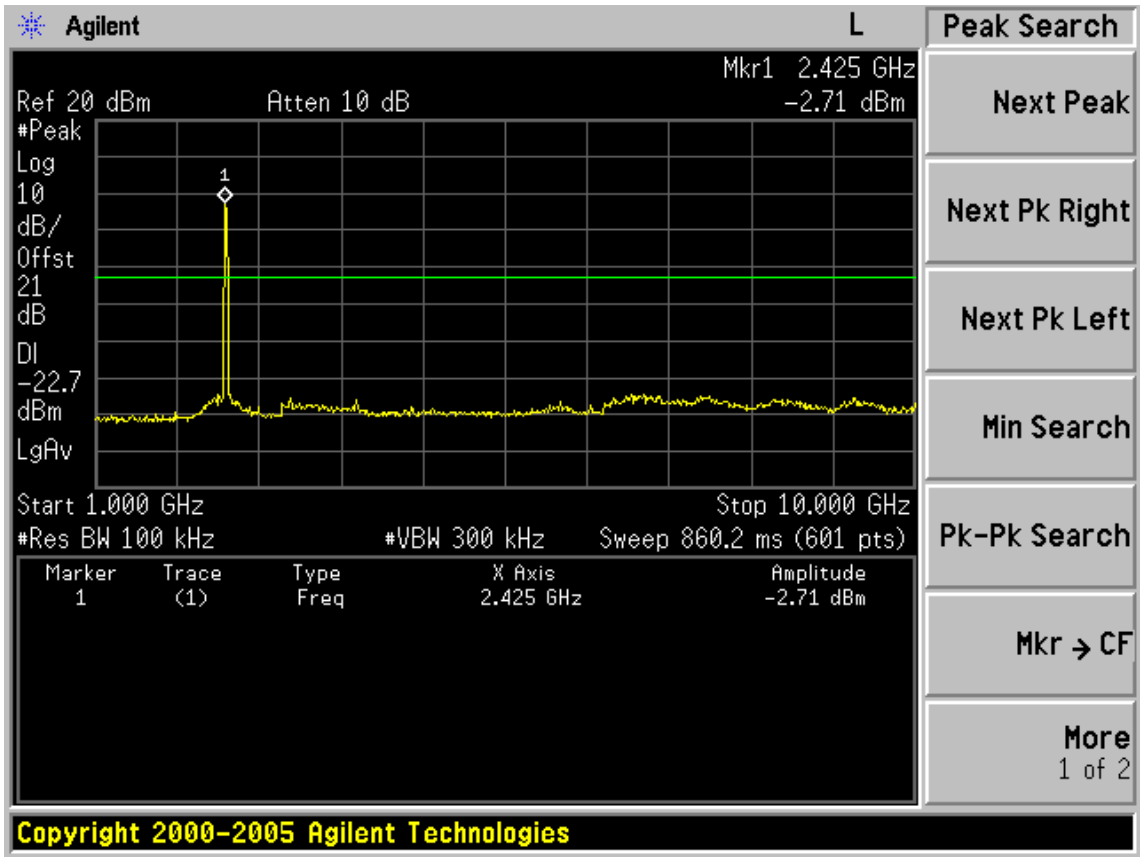

Agilent
L
Peak Search
Mkr1 2.410 GHz
Ref 20 dBm
Atten 10 dB
-2.92 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-22.9
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.410 GHz -2.92 dBm
Copyright 2000-2005 Agilent Technologies

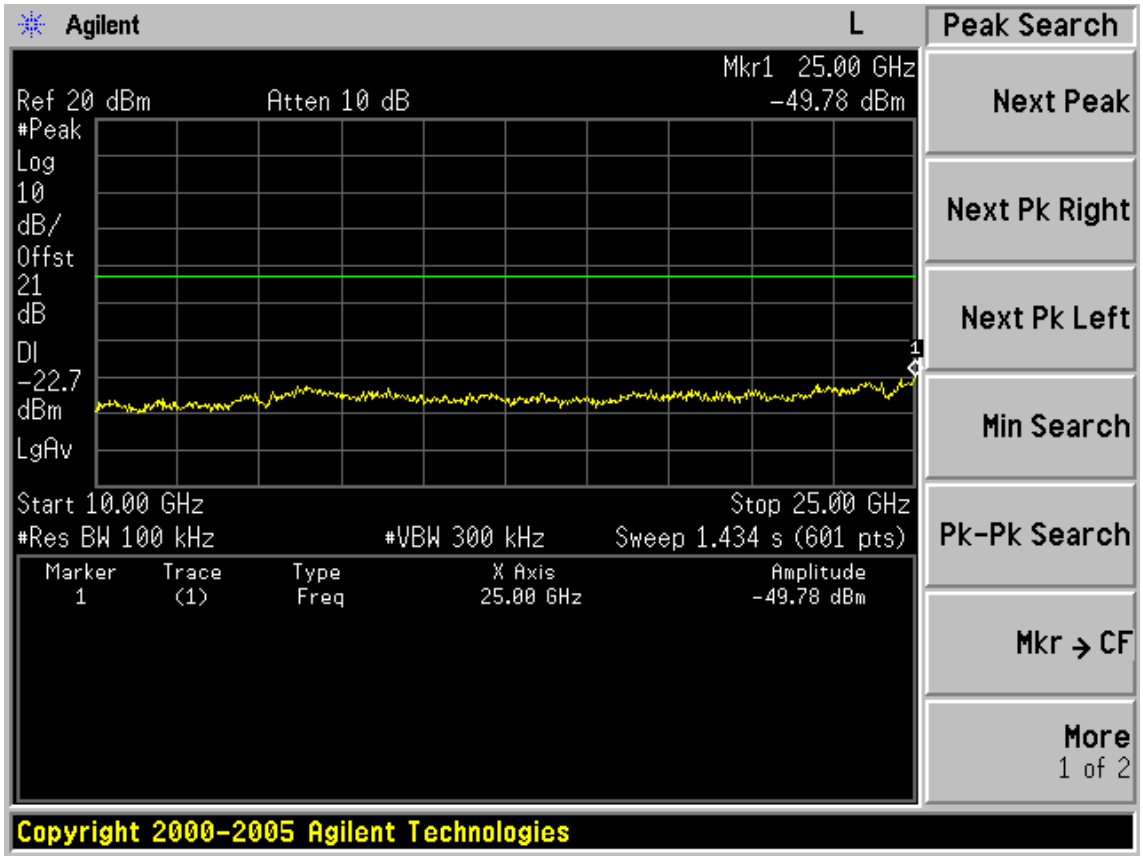

Agilent
L
Peak Search
Mkr1 2.413 3 GHz
Ref 20 dBm
Atten 10 dB
-2.15 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-22.1
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 2.310 0 GHz
Stop 2.425 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 11 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.413 3 GHz -2.15 dBm
2 (1) Freq 2.400 0 GHz -31.30 dBm
3 (1) Freq 2.390 0 GHz -50.30 dBm
Copyright 2000-2005 Agilent Technologies



Test CH6: 2437MHz




Agilent
L
Peak Search
Mkr1 2.425 GHz
Ref 20 dBm
Atten 10 dB
-2.71 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-22.7
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.425 GHz -2.71 dBm
Copyright 2000-2005 Agilent Technologies


Agilent
L
Peak Search
Mkr1 25.00 GHz
Ref 20 dBm
Atten 10 dB
-49.78 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-22.7
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 25.00 GHz -49.78 dBm
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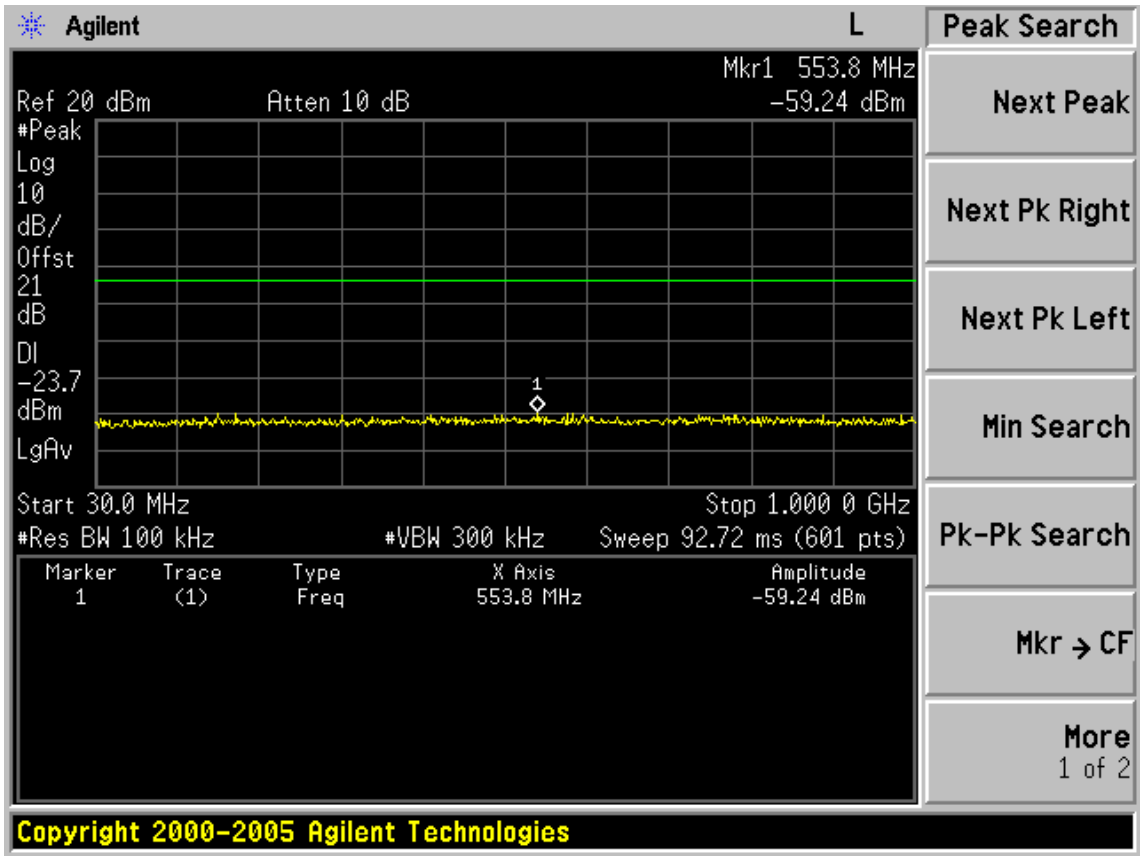
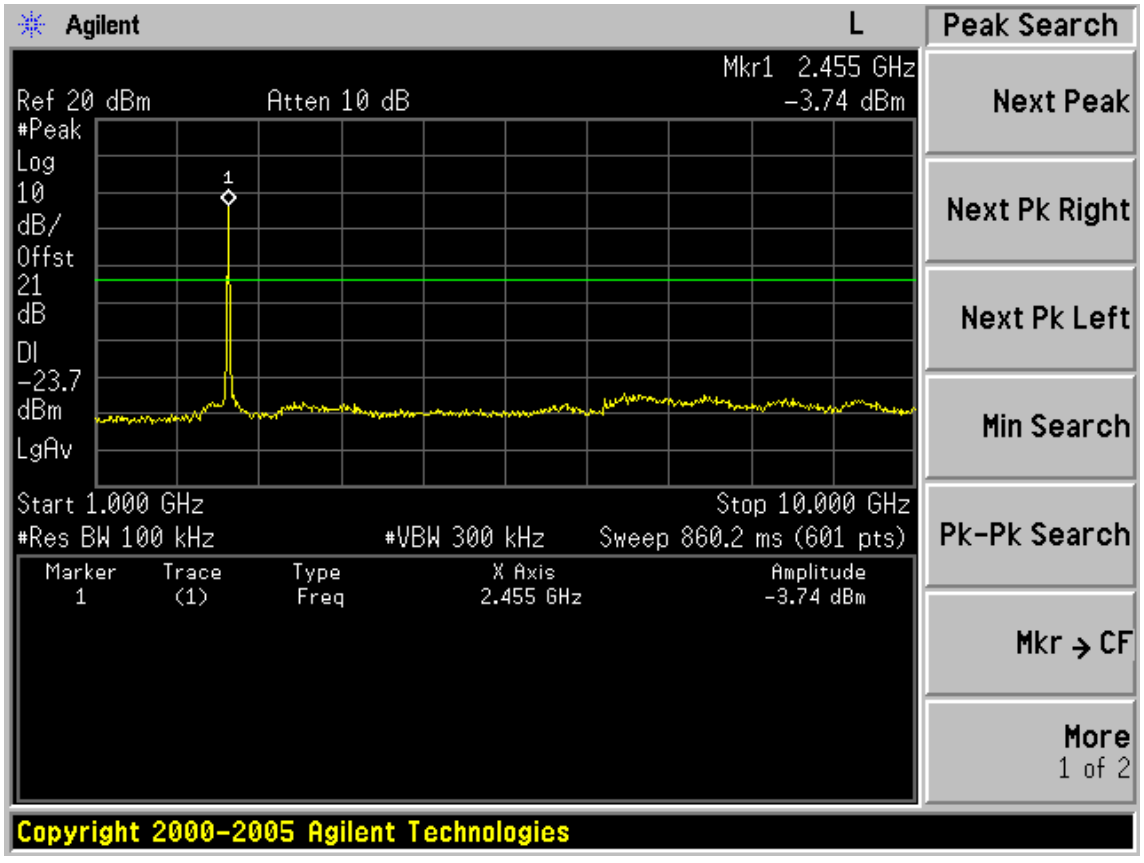
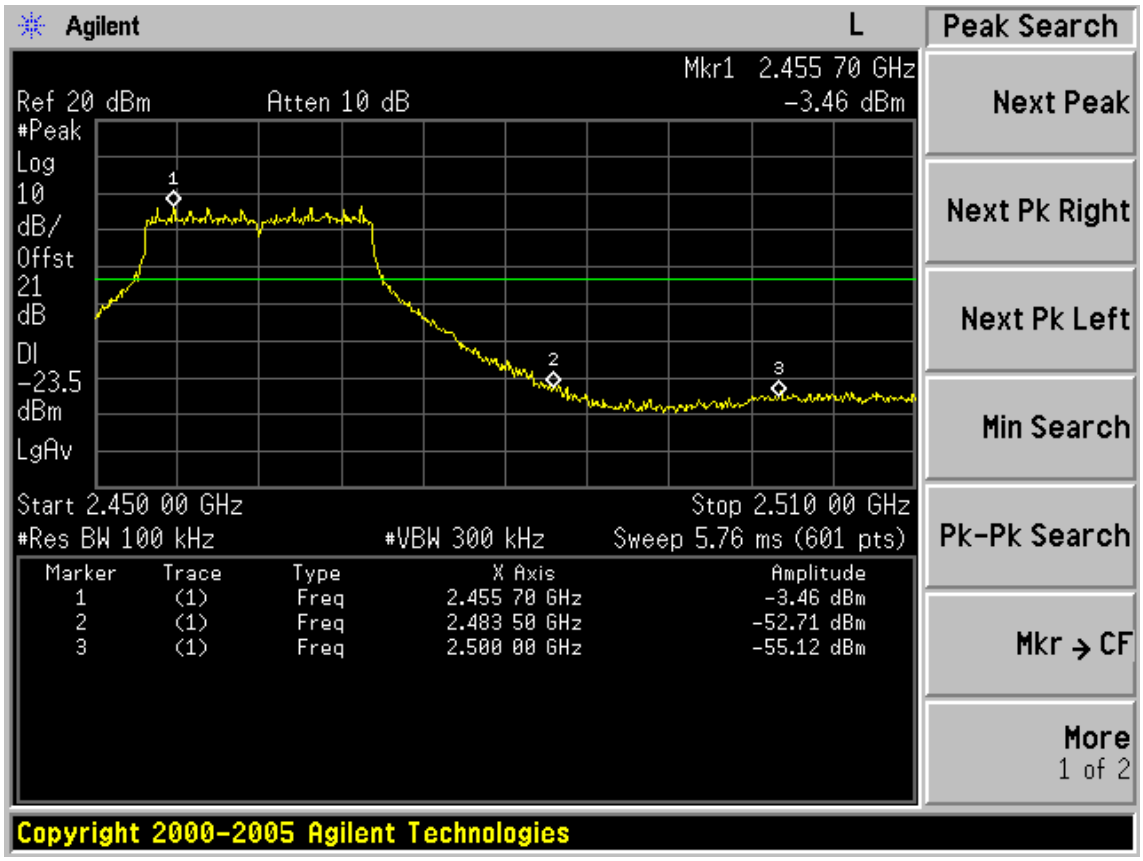
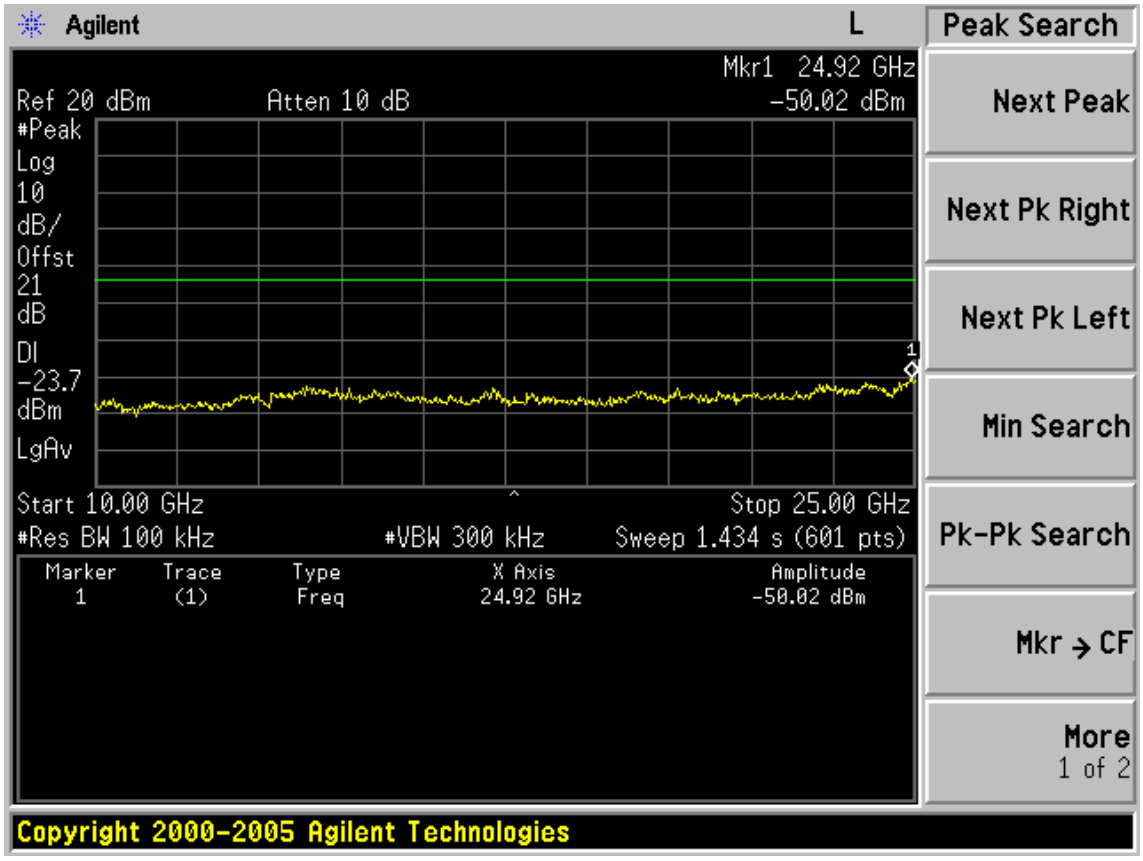
Test CH11: 2462MHz

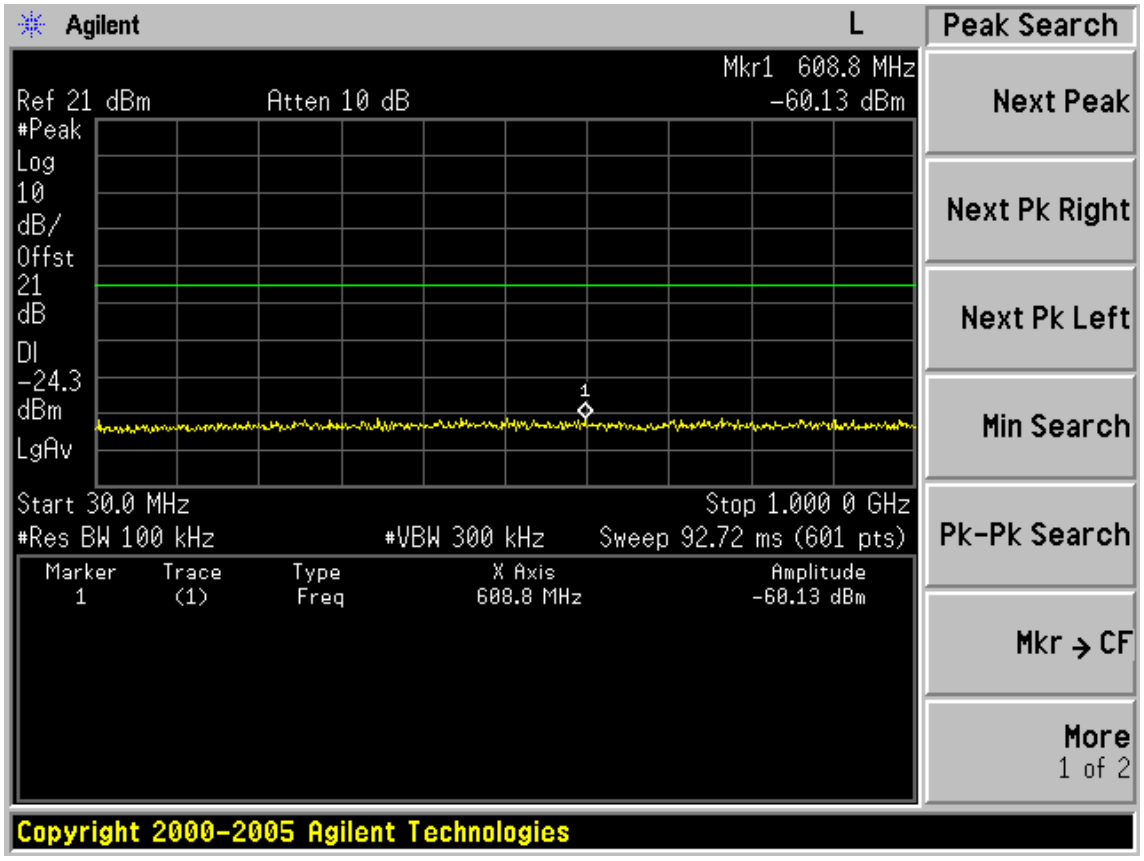


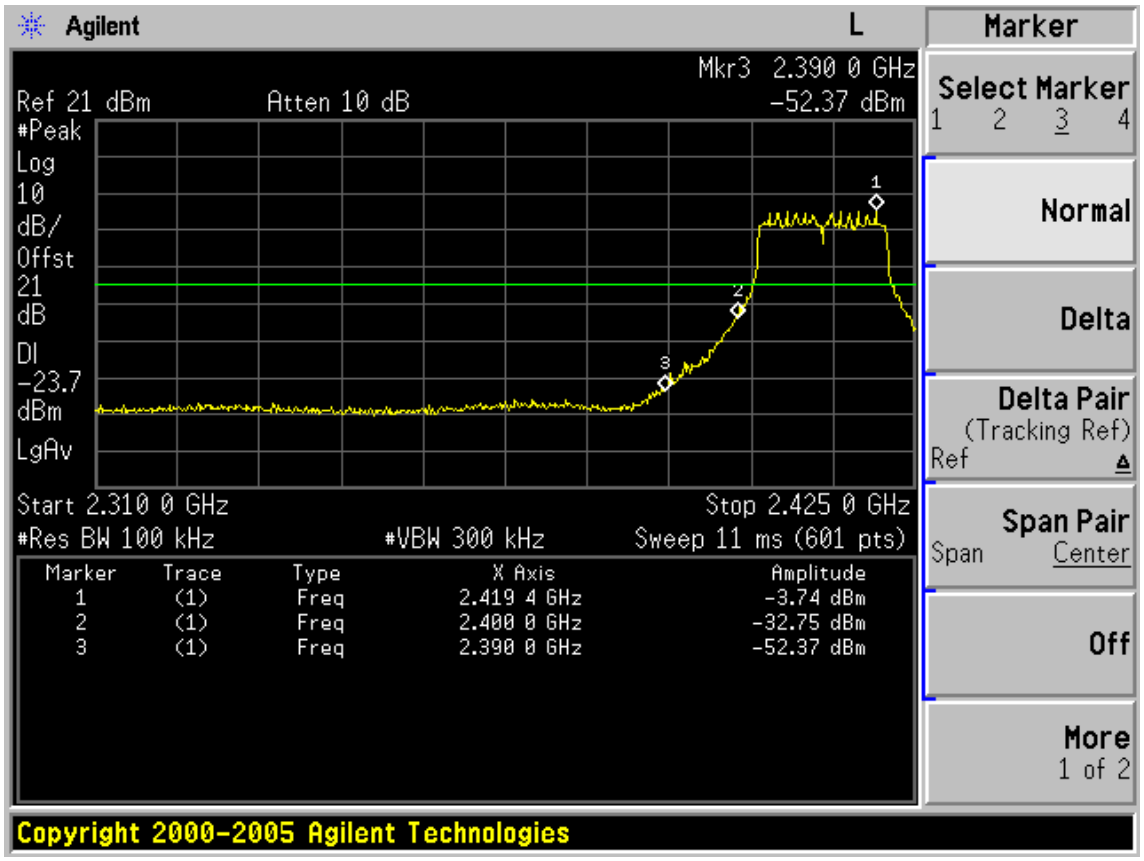


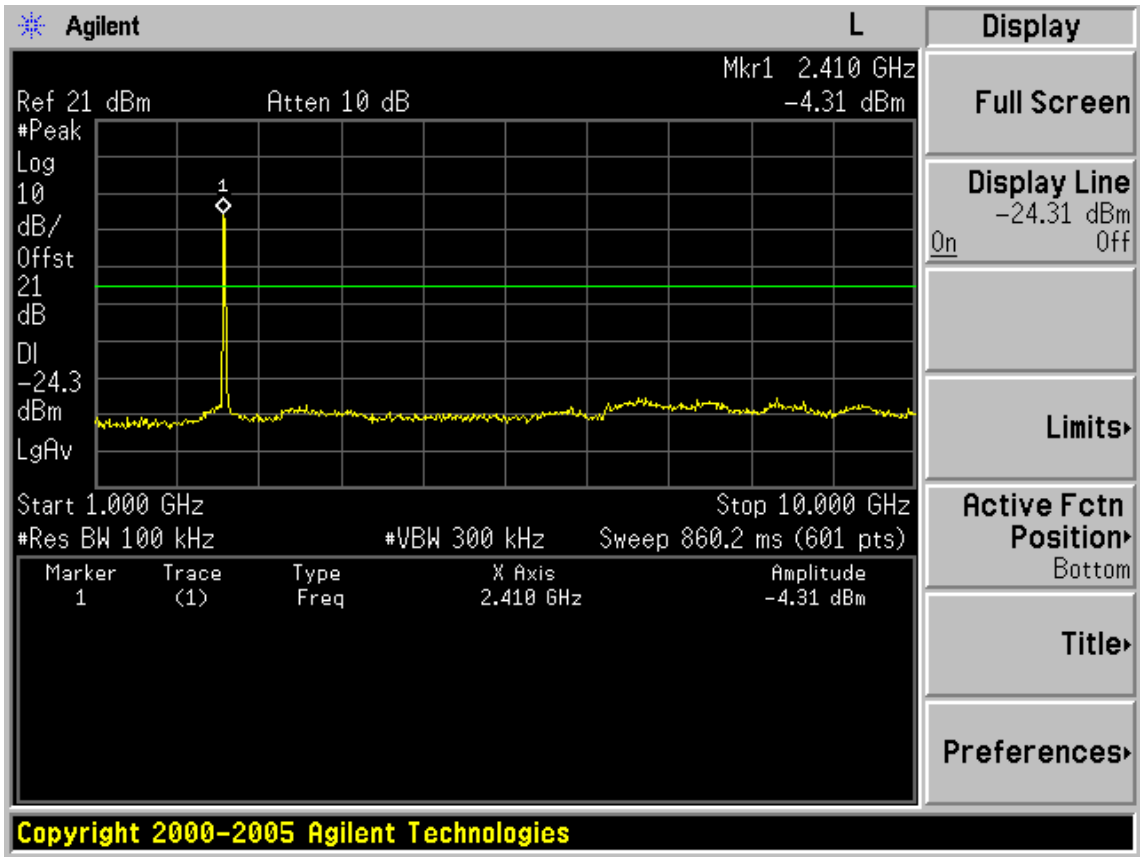

Agilent
L
Peak Search
Mkr1 2.455 70 GHz
Ref 20 dBm
Atten 10 dB
-3.46 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-23.5
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 2.450 00 GHz
Stop 2.510 00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.76 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.455 70 GHz -3.46 dBm
2 (1) Freq 2.483 50 GHz -52.71 dBm
3 (1) Freq 2.500 00 GHz -55.12 dBm
Copyright 2000-2005 Agilent Technologies

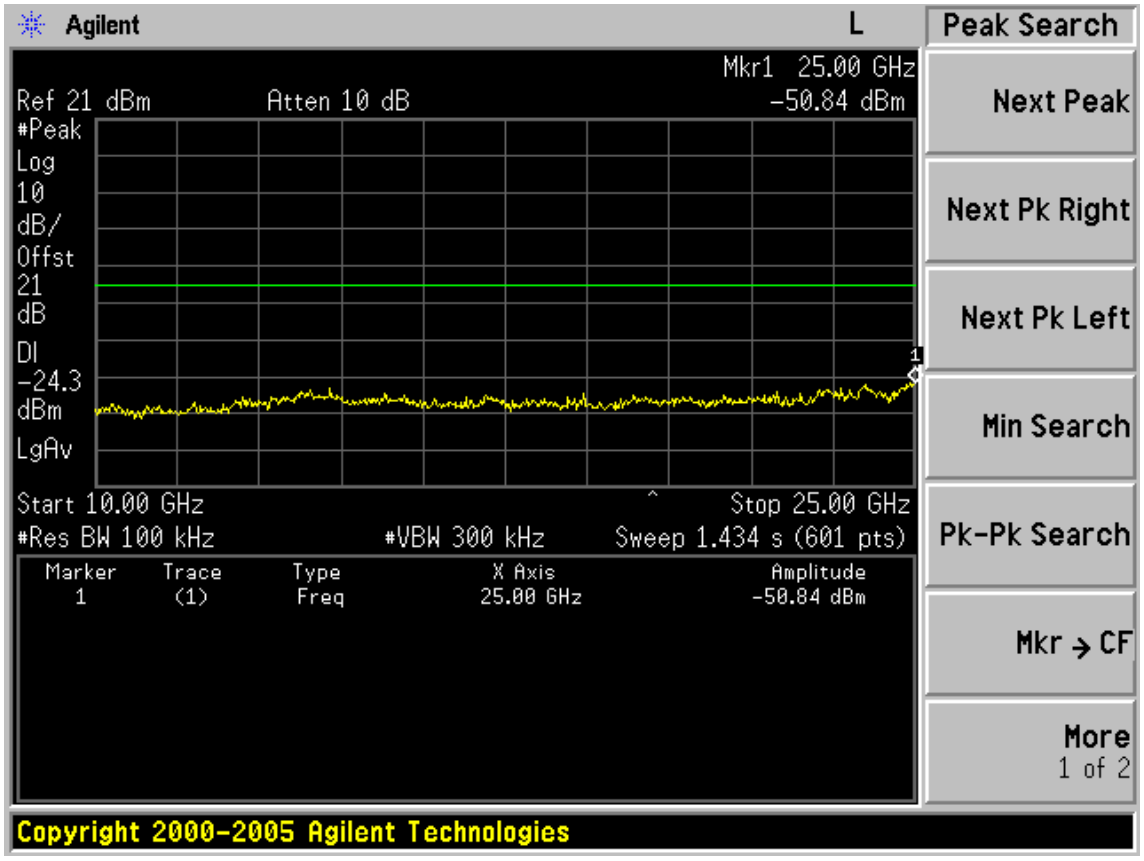

Agilent
L
Peak Search
Mkr1 24.92 GHz
Ref 20 dBm
Atten 10 dB
-50.02 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-23.7
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.92 GHz -50.02 dBm
Copyright 2000-2005 Agilent Technologies

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

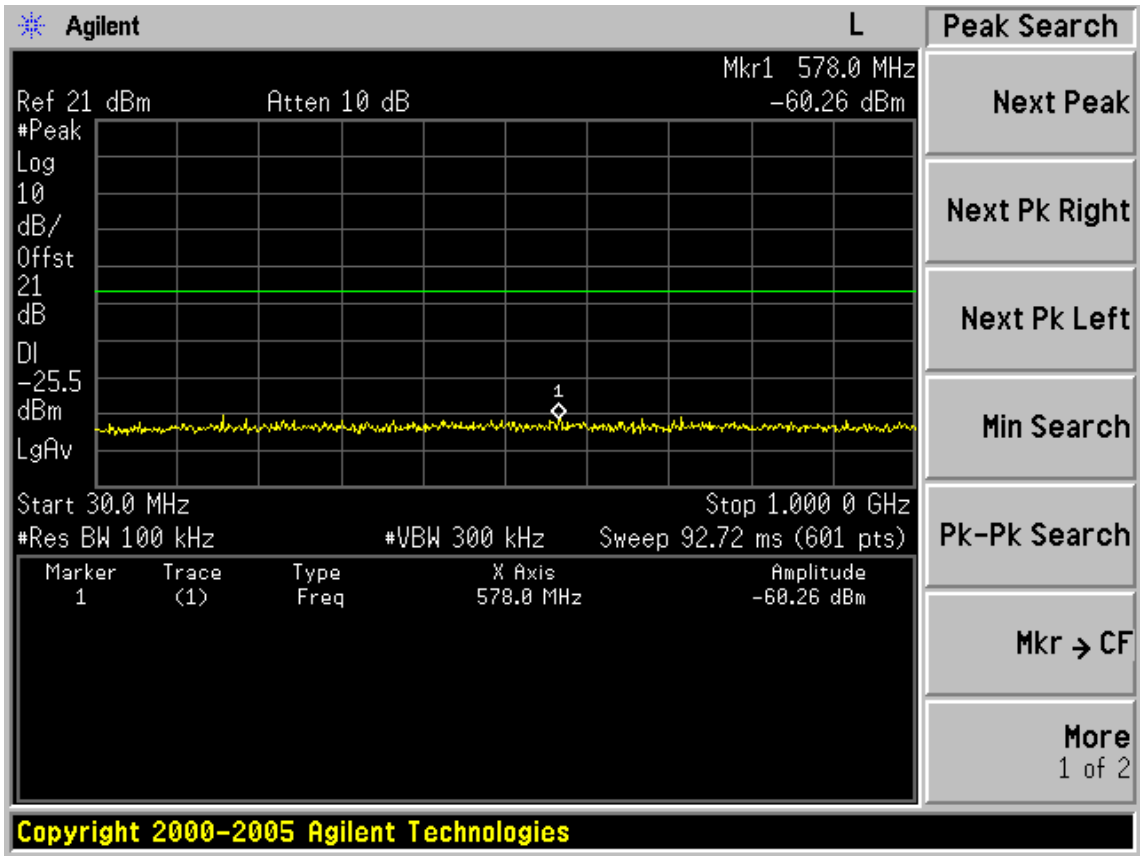


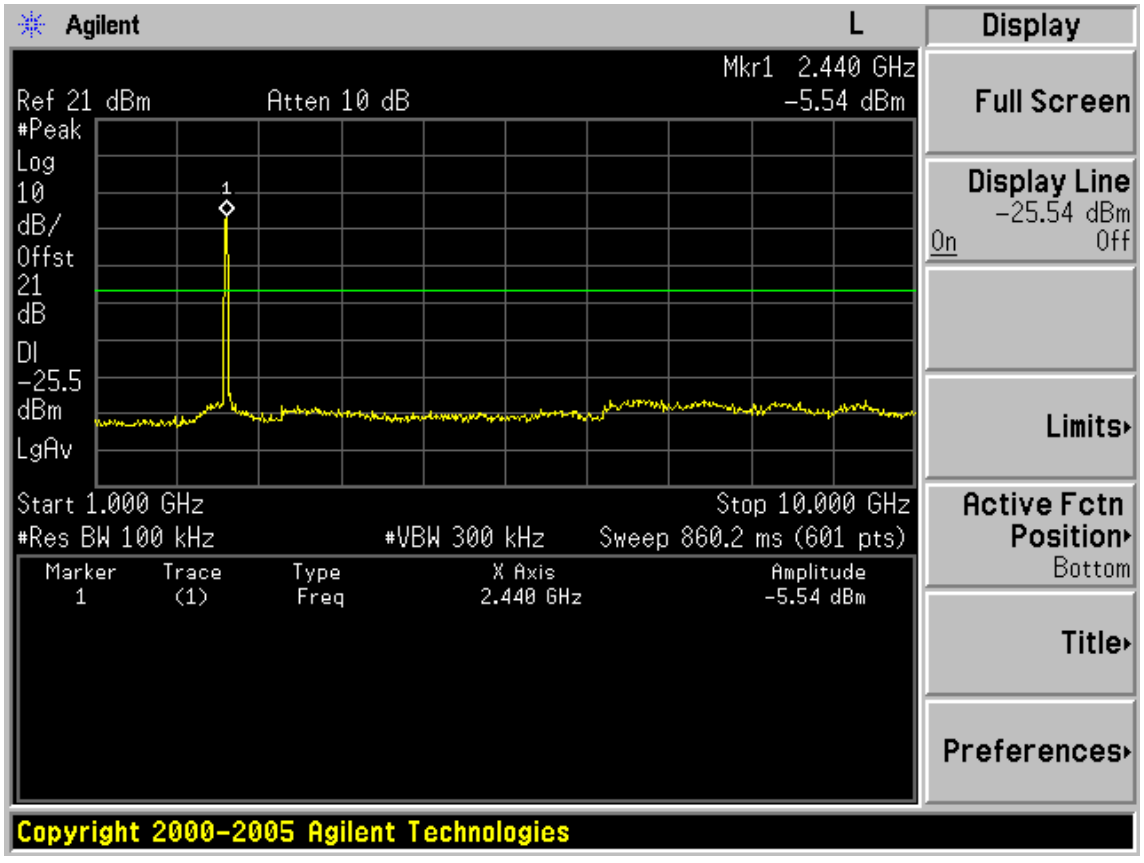


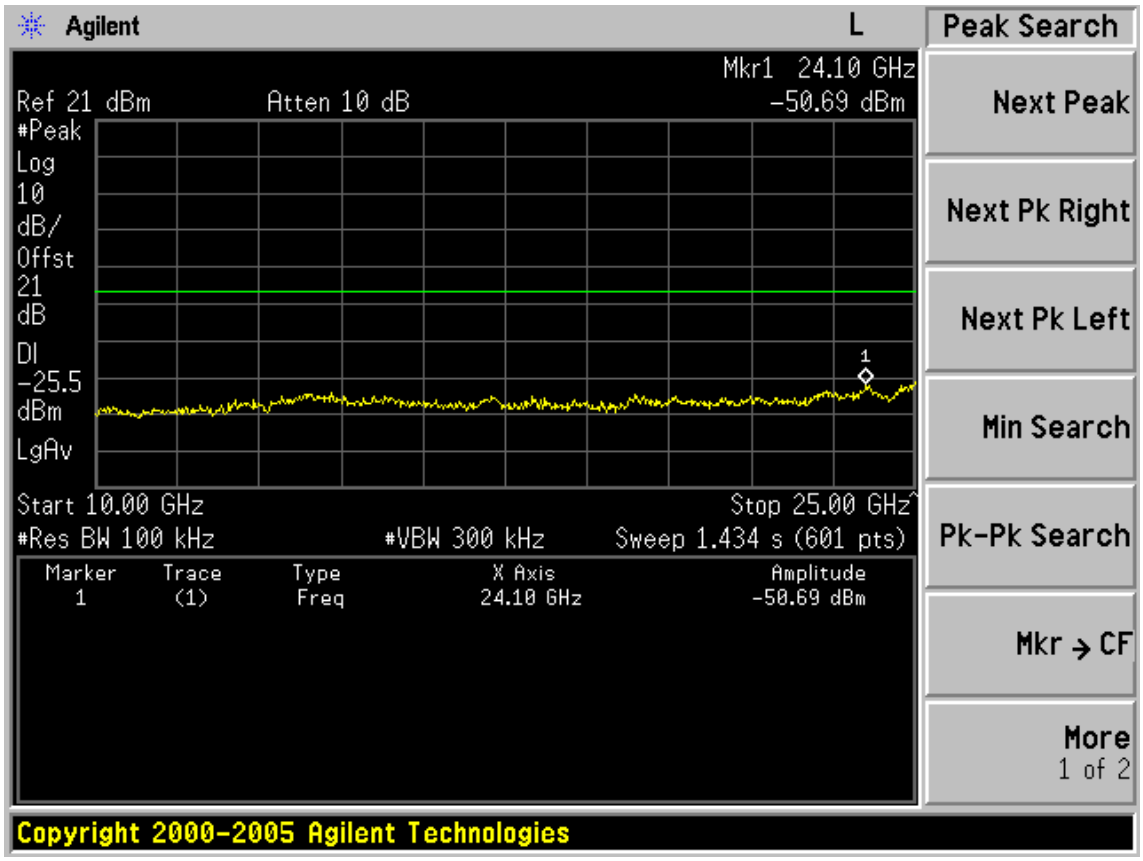

Agilent
L
Mkr1 2.410 GHz
Ref 21 dBm
Atten 10 dB
-4.31 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-24.3
dBm
LgAv
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.410 GHz -4.31 dBm
Display
Full Screen
Display Line
-24.31 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences
Copyright 2000-2005 Agilent Technologies


Agilent
L
Mkr1 25.00 GHz
Ref 21 dBm
Atten 10 dB
-50.84 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-24.3
dBm
LgAv
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 25.00 GHz -50.84 dBm
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

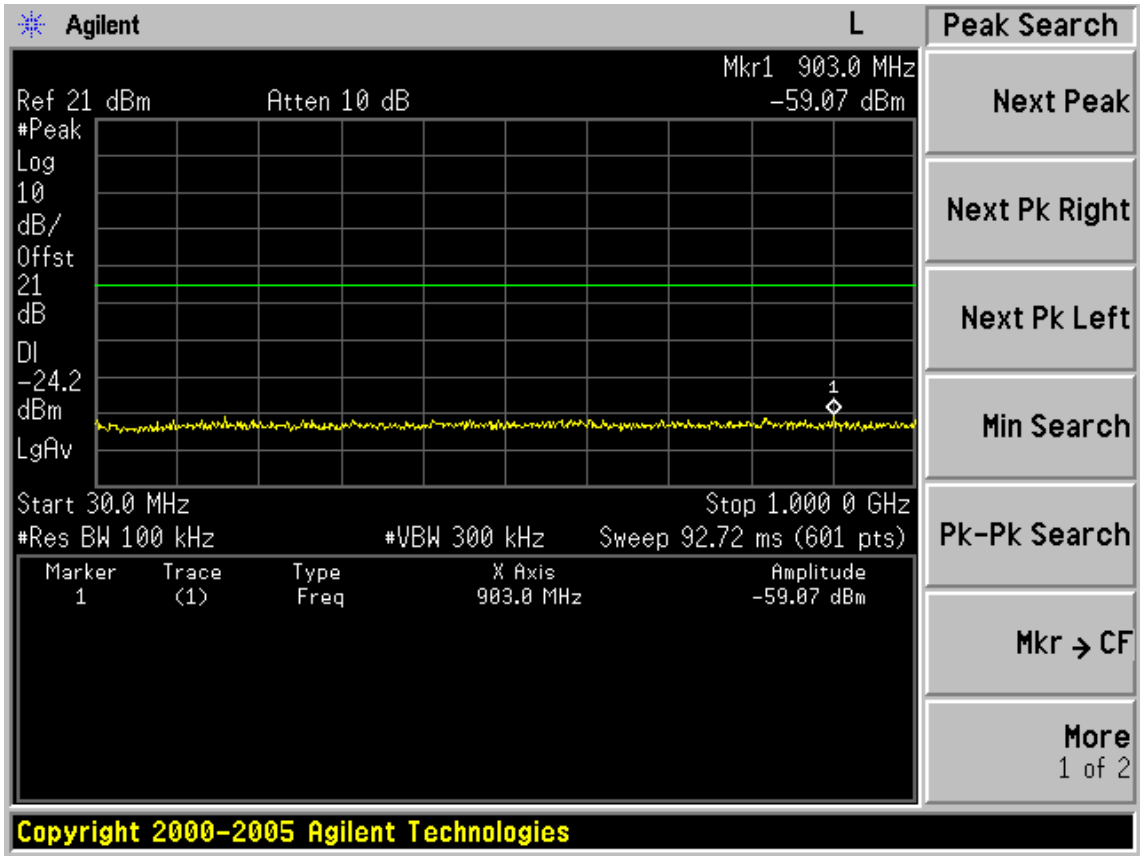
Test CH6: 2437MHz

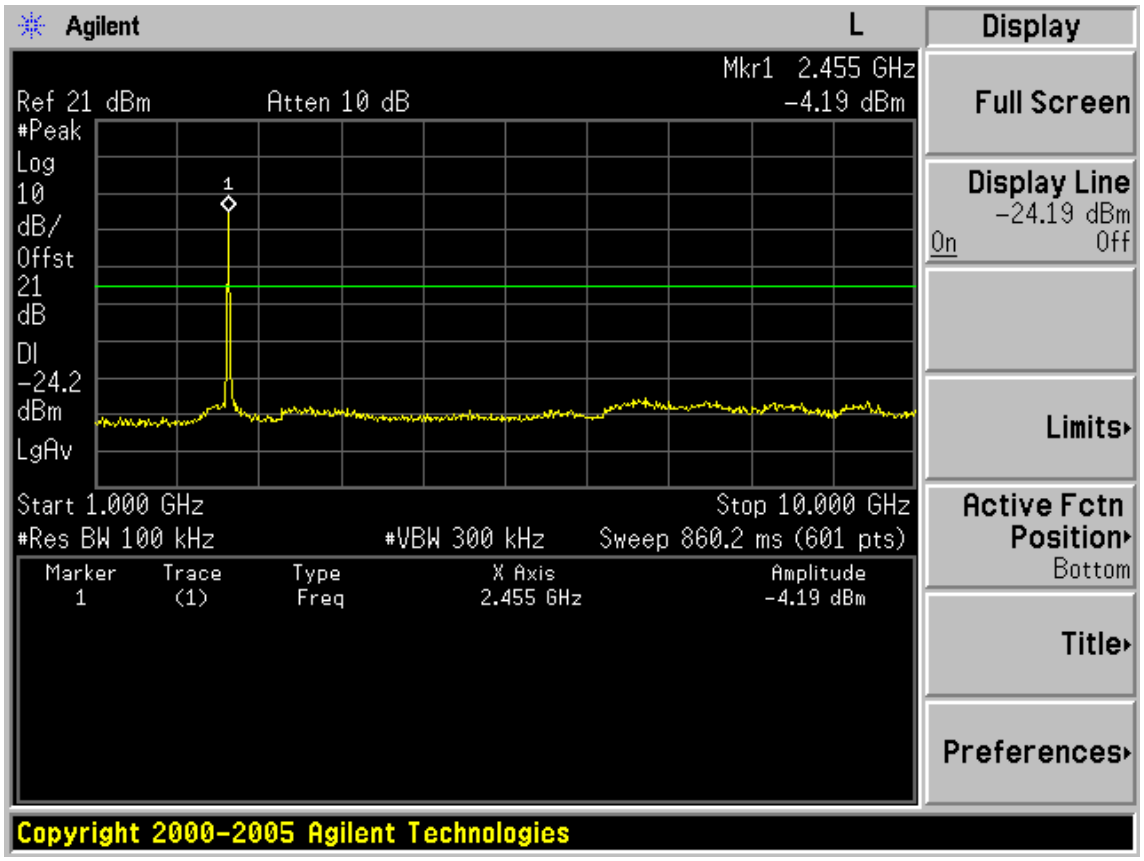


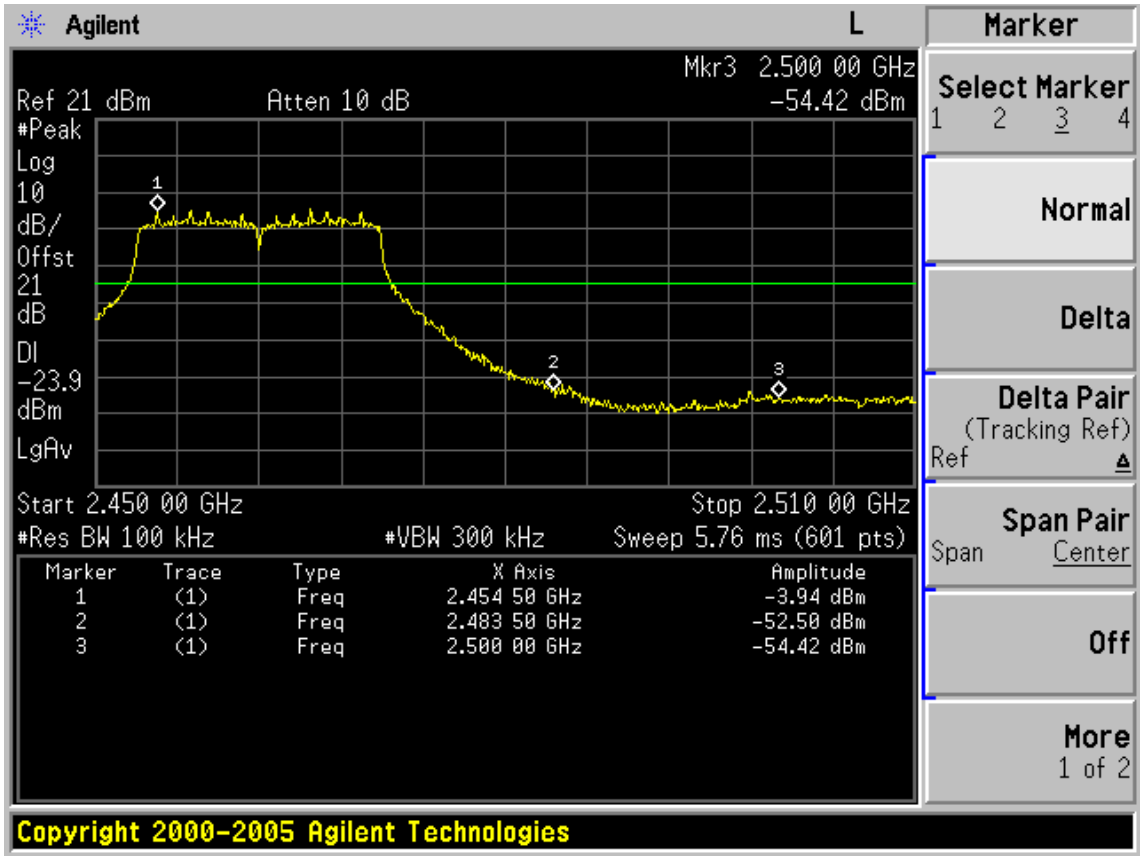


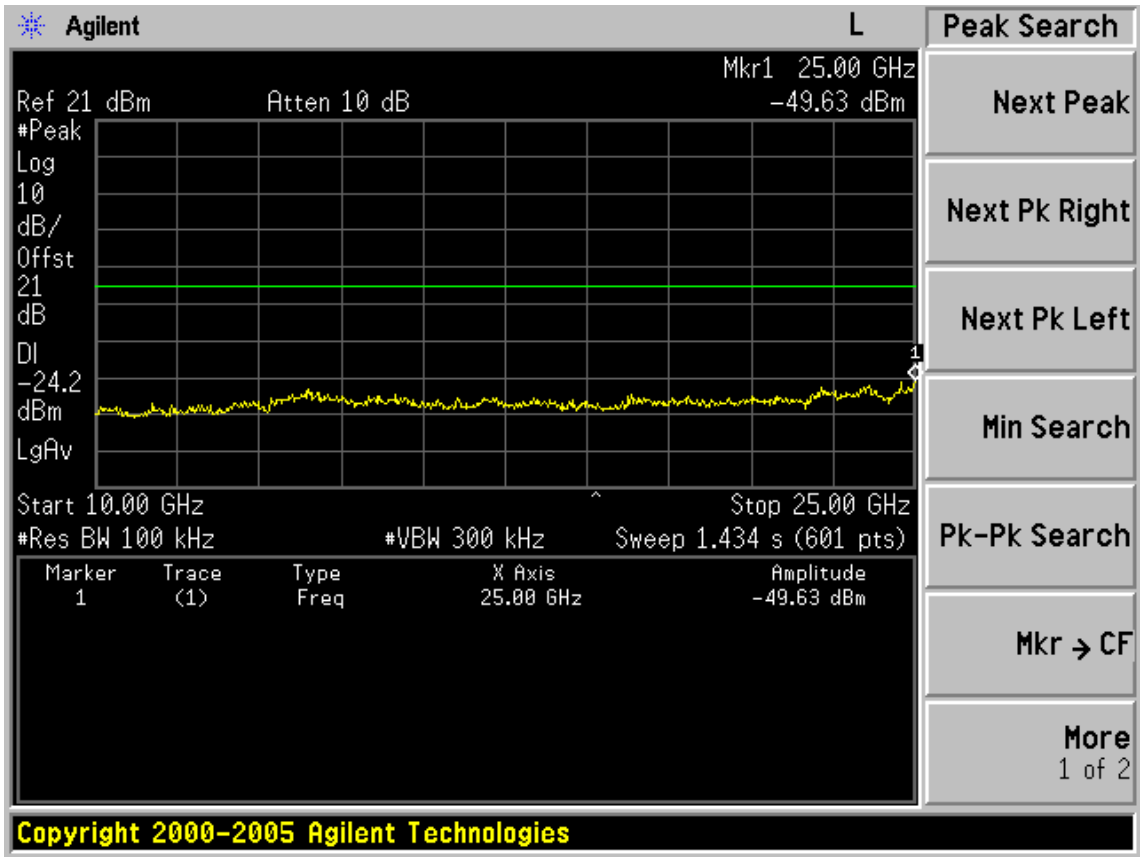


Test CH11: 2462MHz

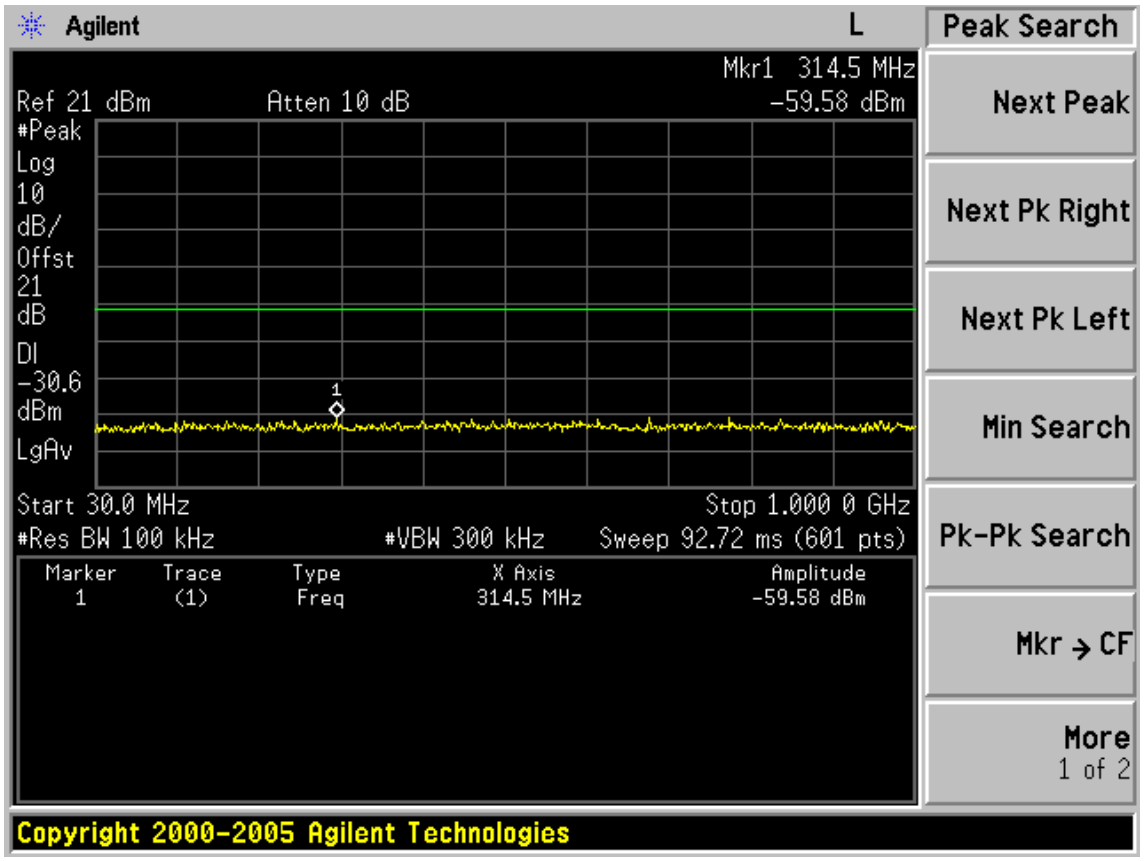


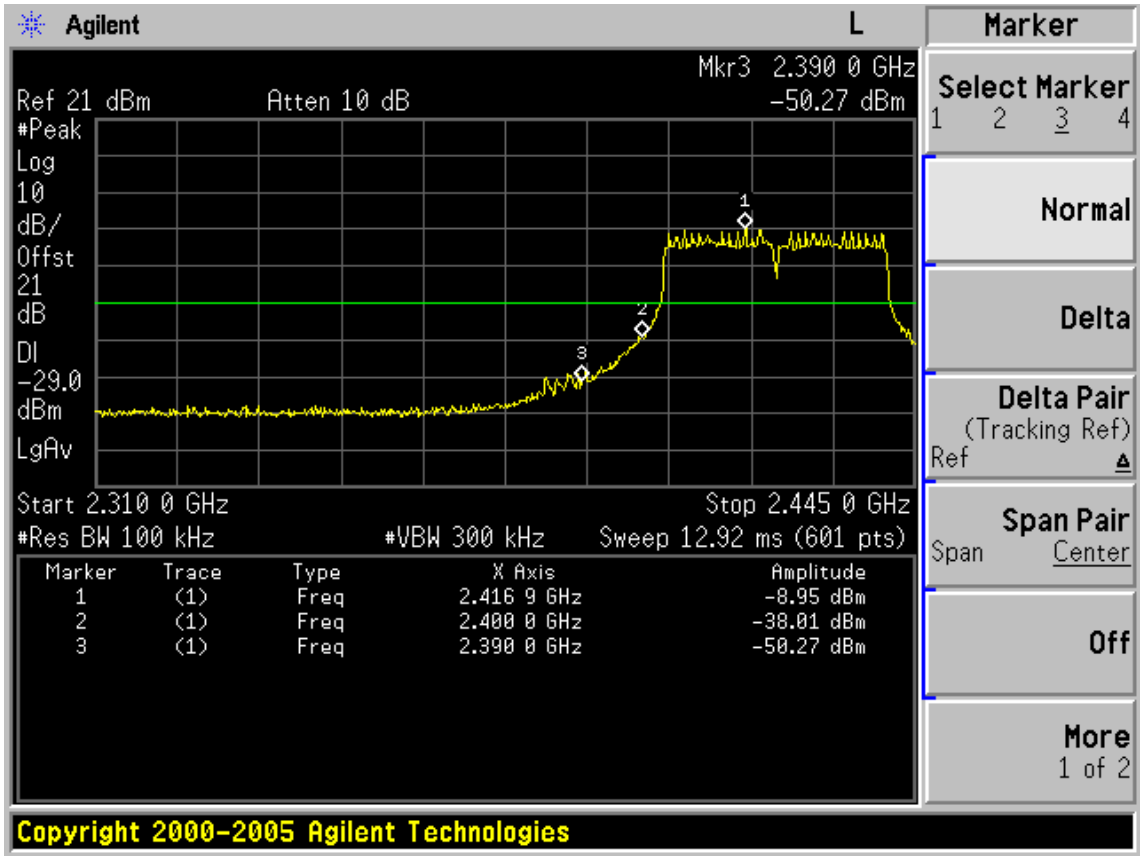

Agilent
L
Mkr1 2.455 GHz
Ref 21 dBm
Atten 10 dB
-4.19 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-24.2
dBm
LgAv
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.455 GHz -4.19 dBm
Display
Full Screen
Display Line
-24.19 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences
Copyright 2000-2005 Agilent Technologies


Agilent
L
Mkr3 2.500 00 GHz
Ref 21 dBm
Atten 10 dB
-54.42 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-23.9
dBm
LgAv
Start 2.450 00 GHz
Stop 2.510 00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.76 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.454 50 GHz -3.94 dBm
2 (1) Freq 2.483 50 GHz -52.50 dBm
3 (1) Freq 2.500 00 GHz -54.42 dBm
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Copyright 2000-2005 Agilent Technologies



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




Agilent
L
Marker
Mkr3 2.390 0 GHz
Ref 21 dBm
Atten 10 dB
-50.27 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-29.0
dBm
LgAv
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Start 2.310 0 GHz
Stop 2.445 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 12.92 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.416 9 GHz -8.95 dBm
2 (1) Freq 2.400 0 GHz -38.01 dBm
3 (1) Freq 2.390 0 GHz -50.27 dBm
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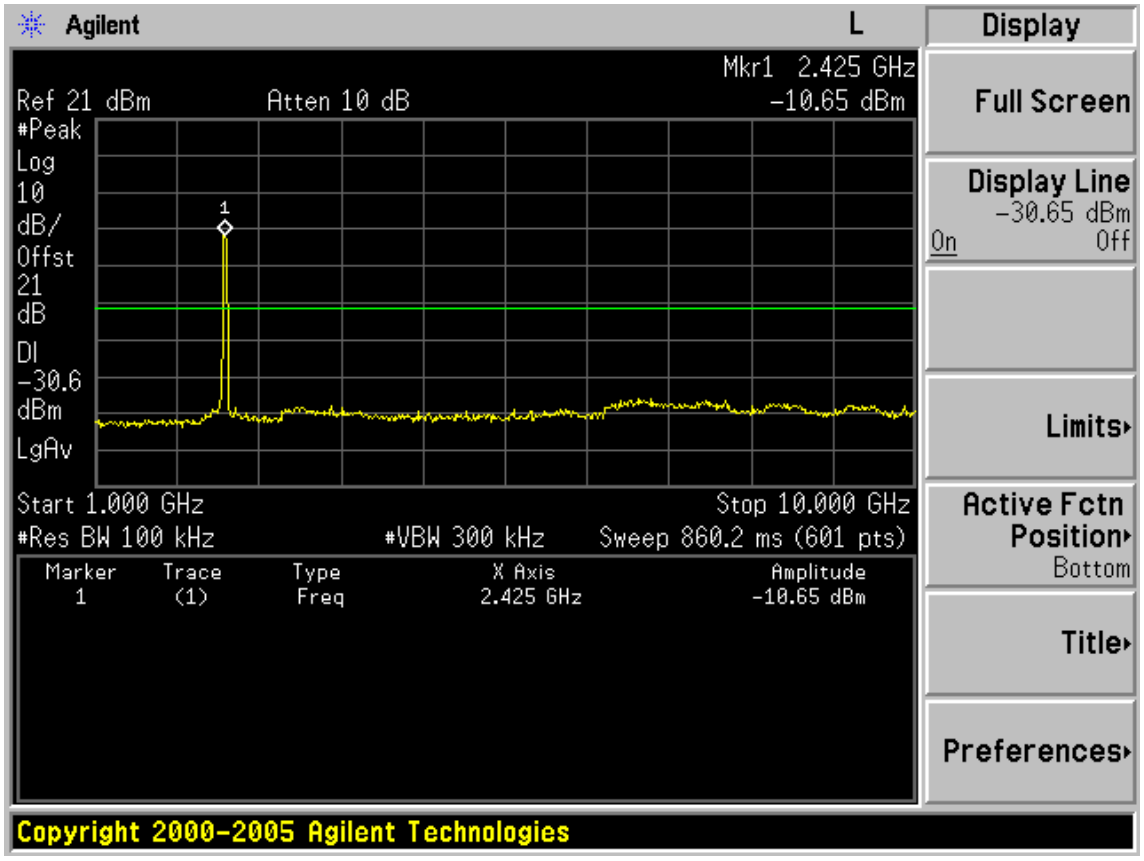
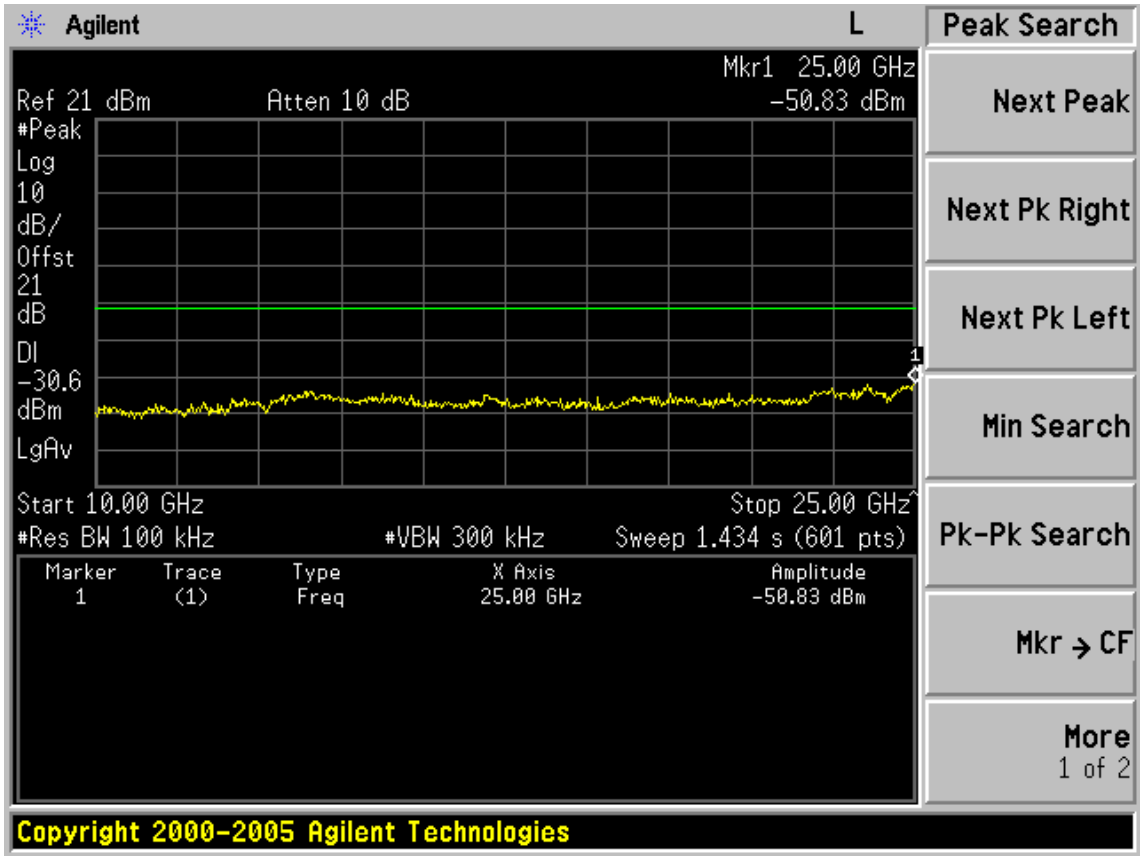
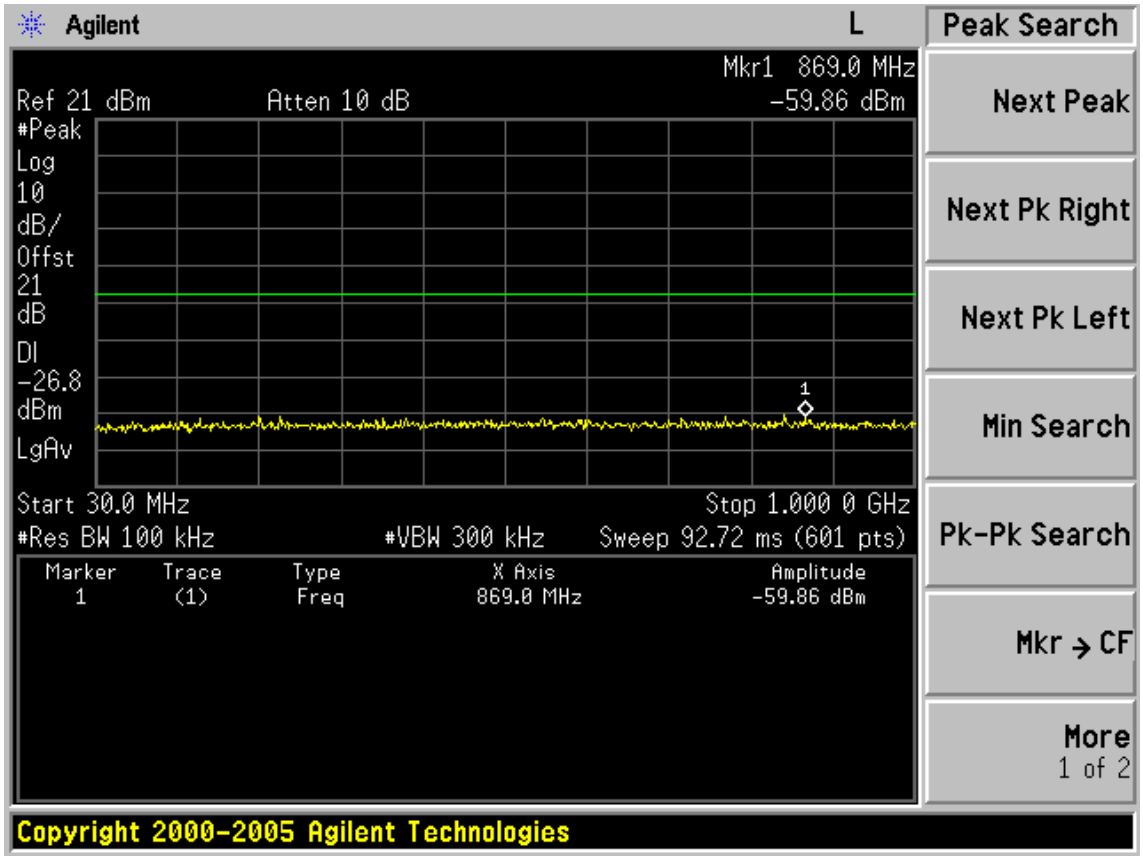
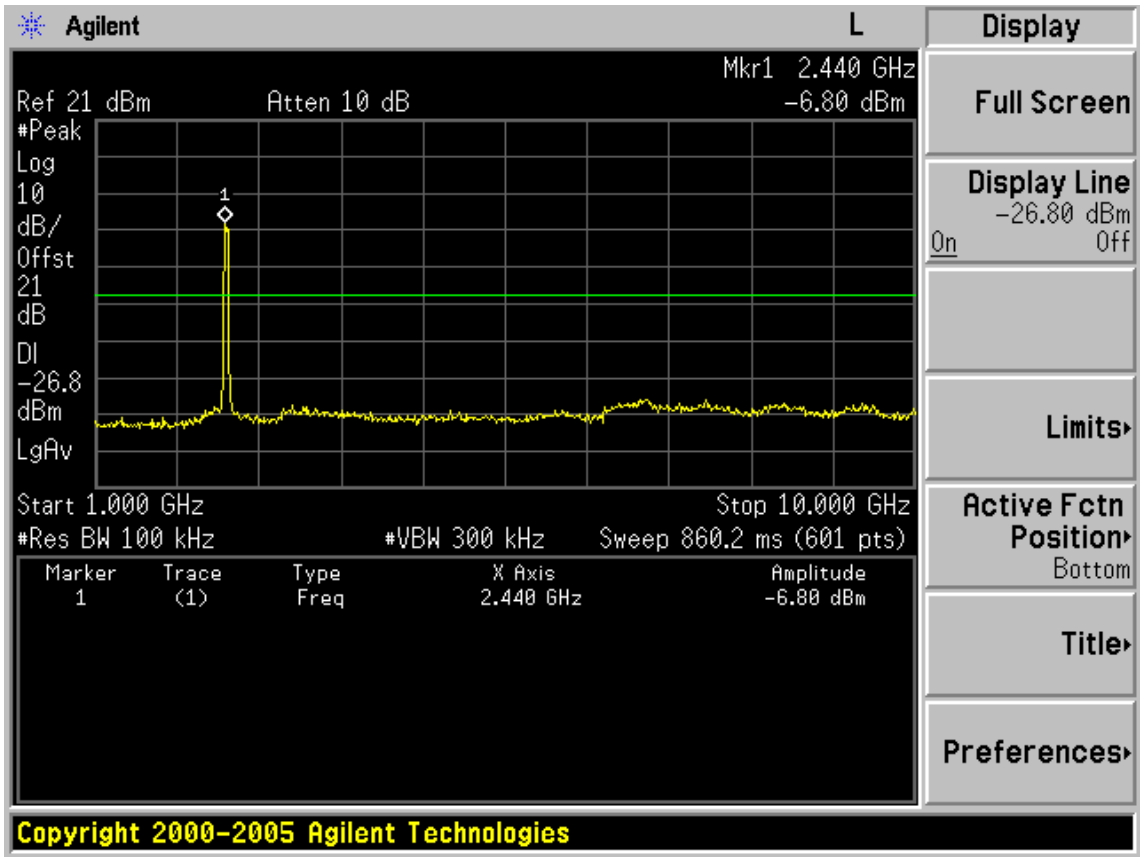
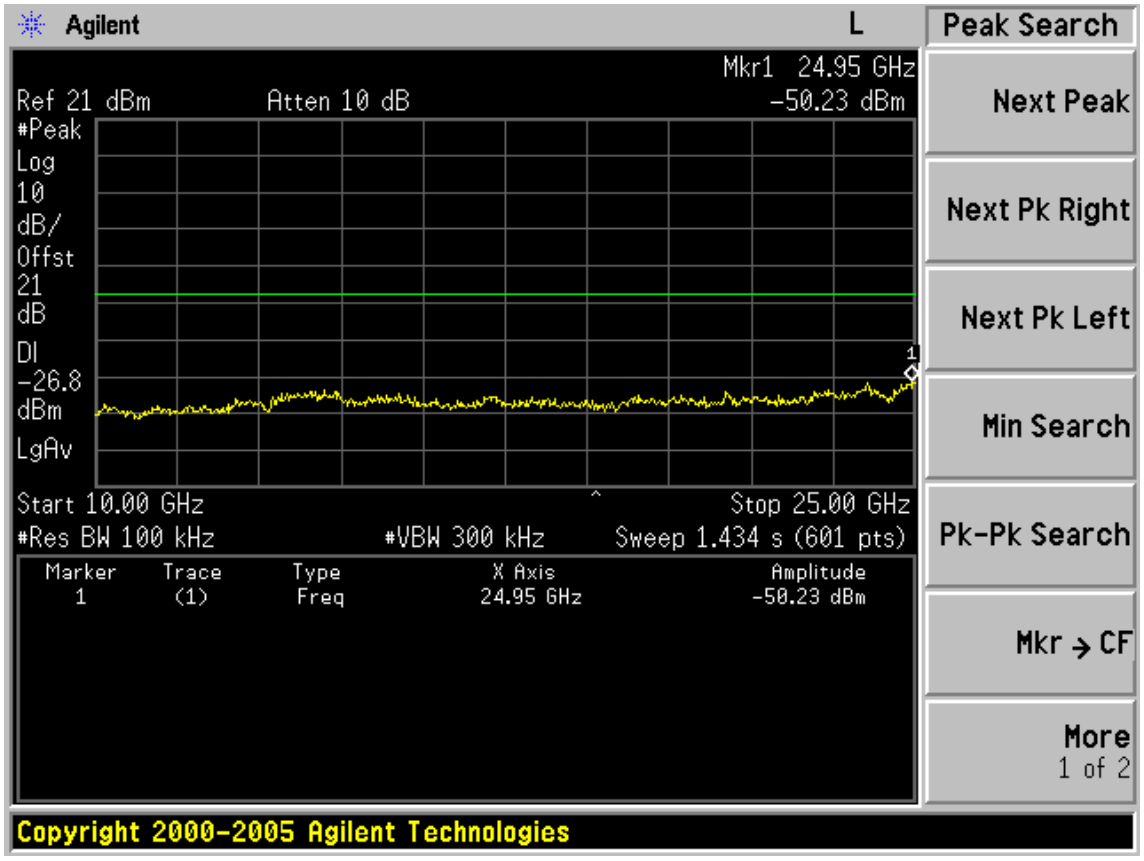

Agilent
L
Display
Mkr1 2.425 GHz
Ref 21 dBm
Atten 10 dB
-10.65 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-30.6
dBm
LgAv
Full Screen
Display Line
-30.65 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.425 GHz -10.65 dBm
Copyright 2000-2005 Agilent Technologies



Test CH4: 2437MHz




Agilent
L
Display
Mkr1 2.440 GHz
Ref 21 dBm
Atten 10 dB
-6.80 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-26.8
dBm
LgAv
Full Screen
Display Line
-26.80 dBm
On
Off
Limits
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Active Fctn
Position
Bottom
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.440 GHz -6.80 dBm
Title
Preferences
Copyright 2000-2005 Agilent Technologies


Agilent
L
Peak Search
Mkr1 24.95 GHz
Ref 21 dBm
Atten 10 dB
-50.23 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-26.8
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.95 GHz -50.23 dBm
Mkr → CF
More
1 of 2
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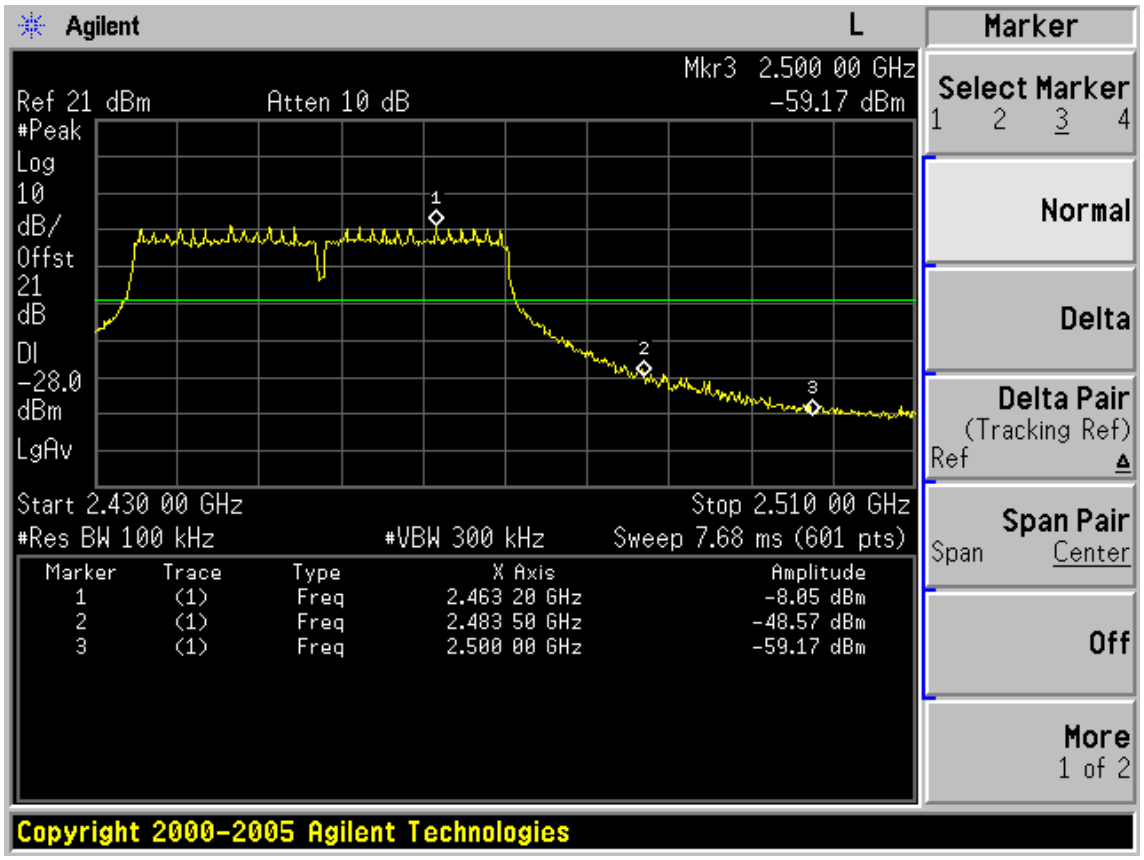
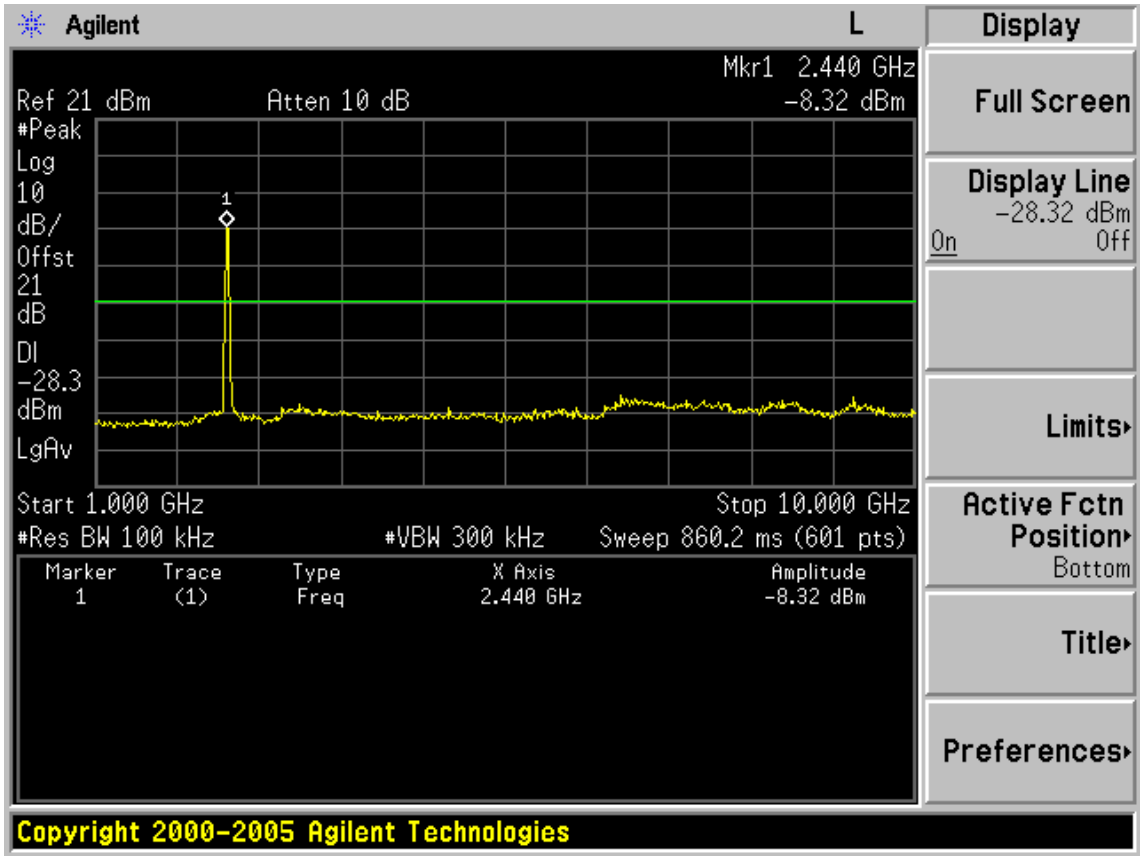
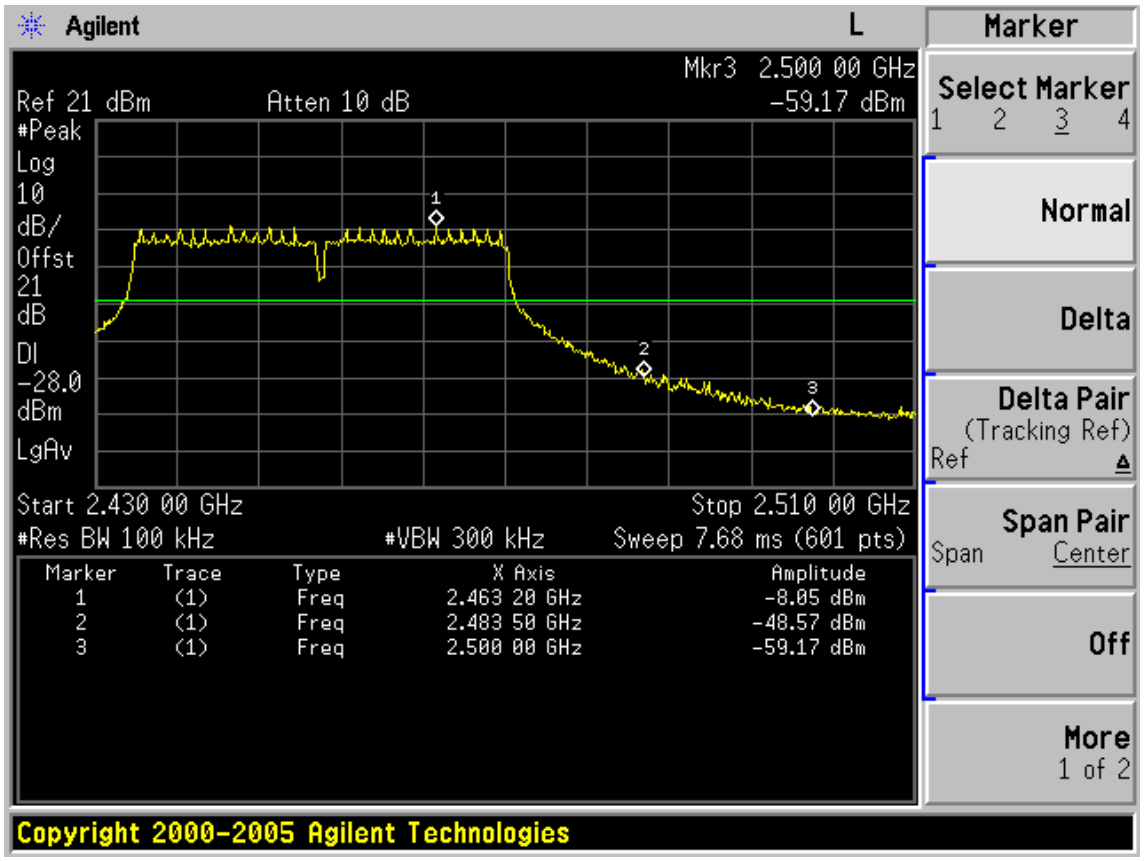
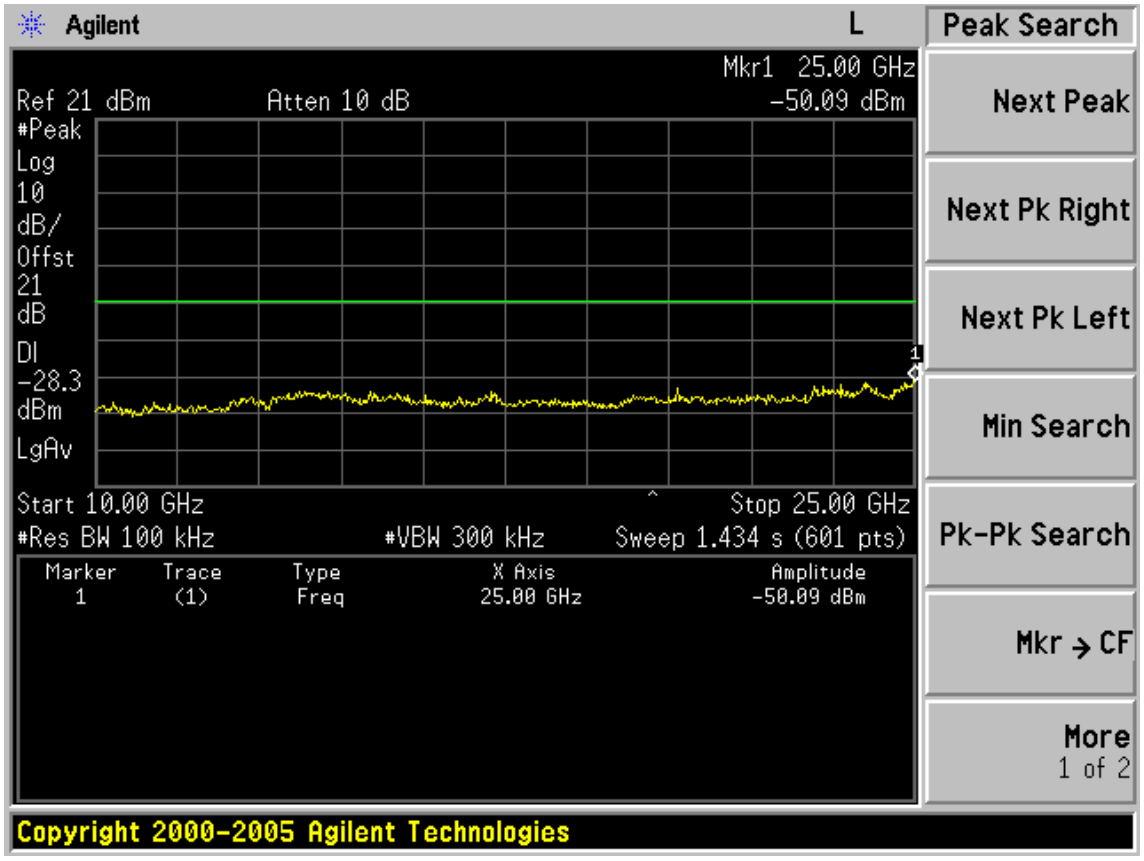
Test CH7: 2452MHz

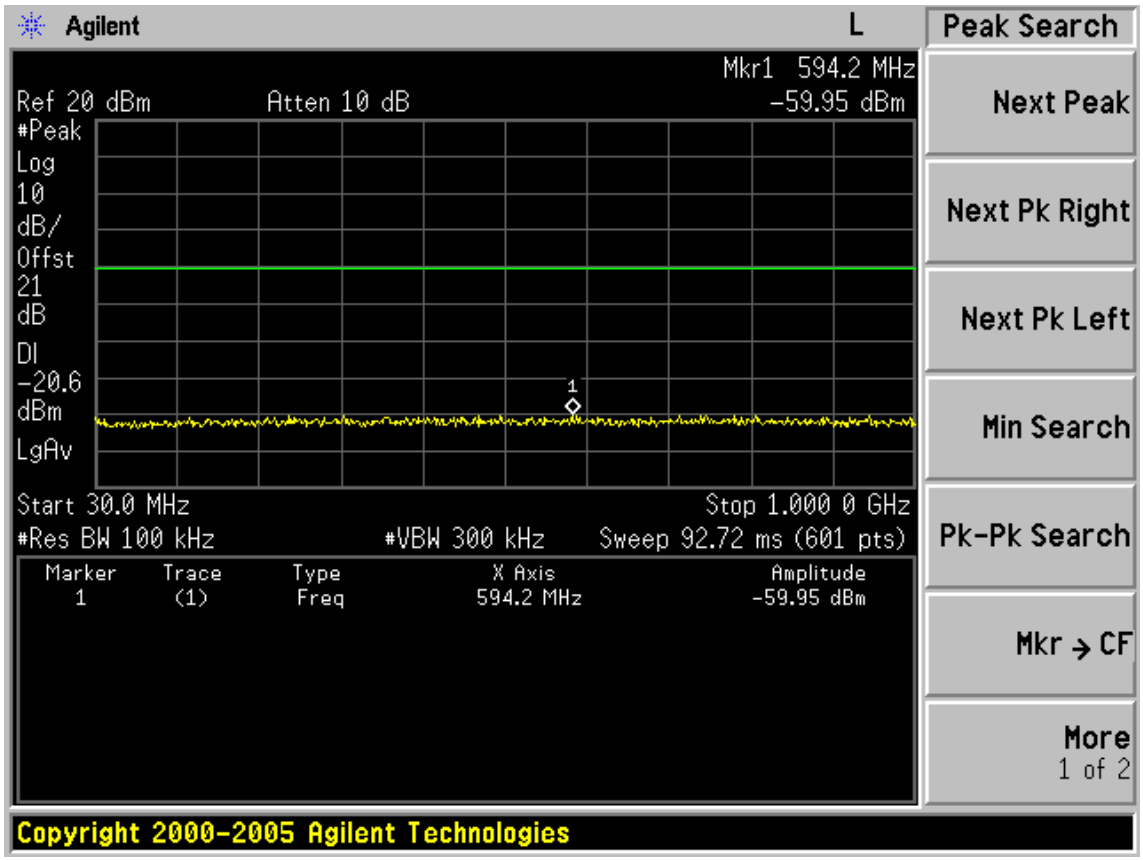


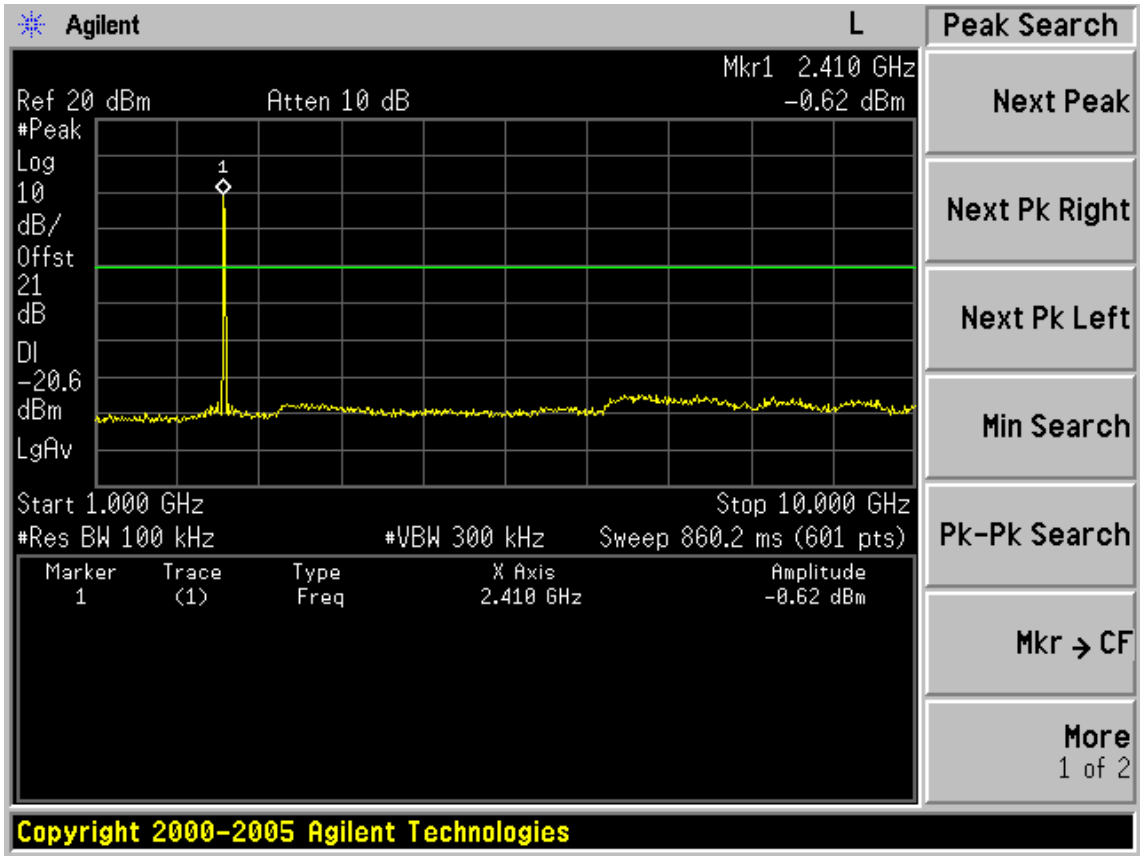


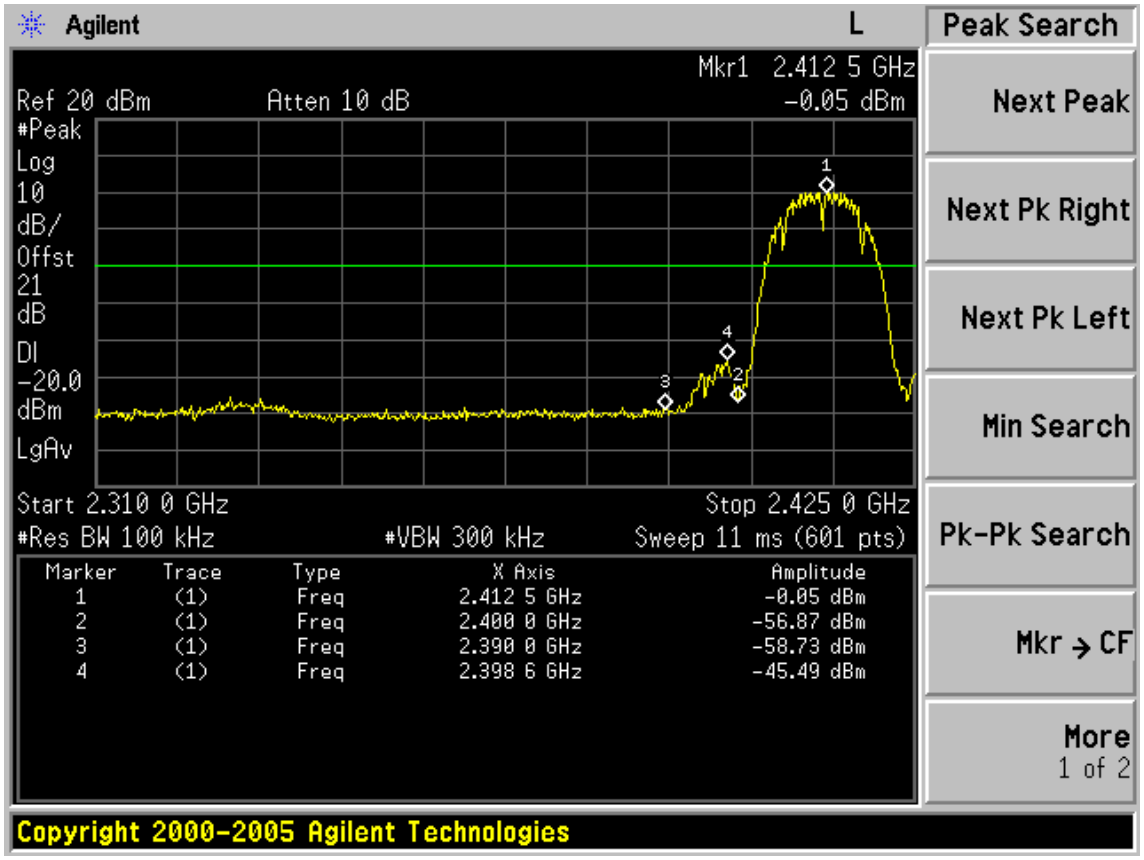

Agilent
L
Marker
Mkr3 2.500 00 GHz
Ref 21 dBm
Atten 10 dB
-59.17 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-28.0
dBm
LgAv
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span
Center
Off
More
1 of 2
Start 2.430 00 GHz
Stop 2.510 00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 7.68 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.463 20 GHz -8.05 dBm
2 (1) Freq 2.483 50 GHz -48.57 dBm
3 (1) Freq 2.500 00 GHz -59.17 dBm
Copyright 2000-2005 Agilent Technologies

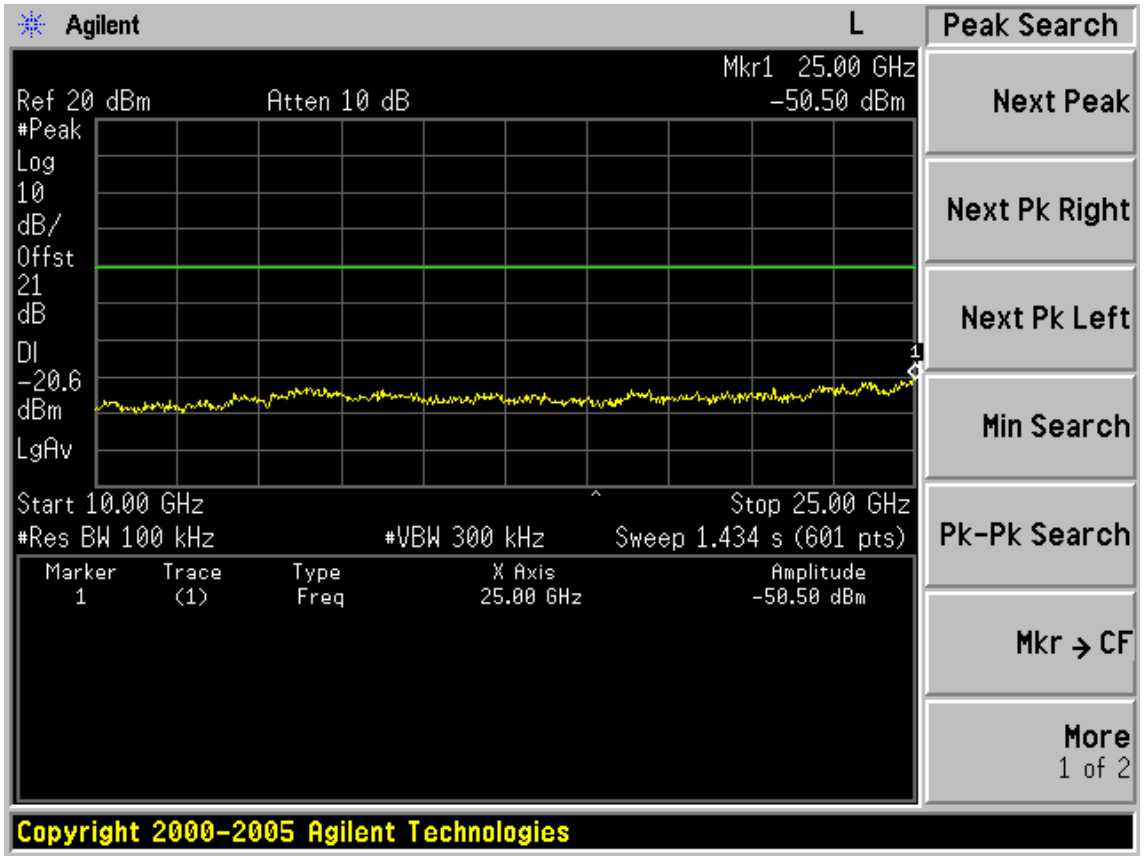

Agilent
L
Peak Search
Mkr1 25.00 GHz
Ref 21 dBm
Atten 10 dB
-50.09 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-28.3
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 25.00 GHz -50.09 dBm
Copyright 2000-2005 Agilent Technologies

Chain 1:
Test Mode: IEEE 802.11b TX
Test CH1: 2412MHz

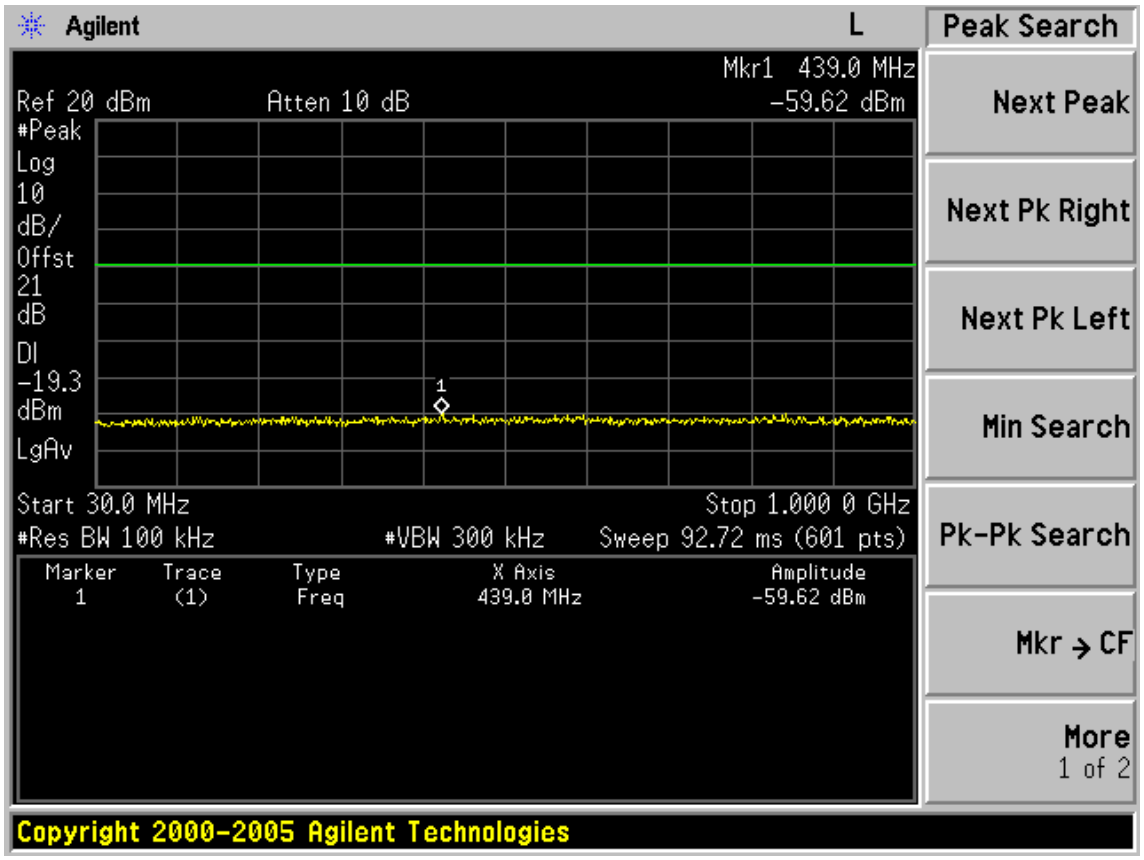


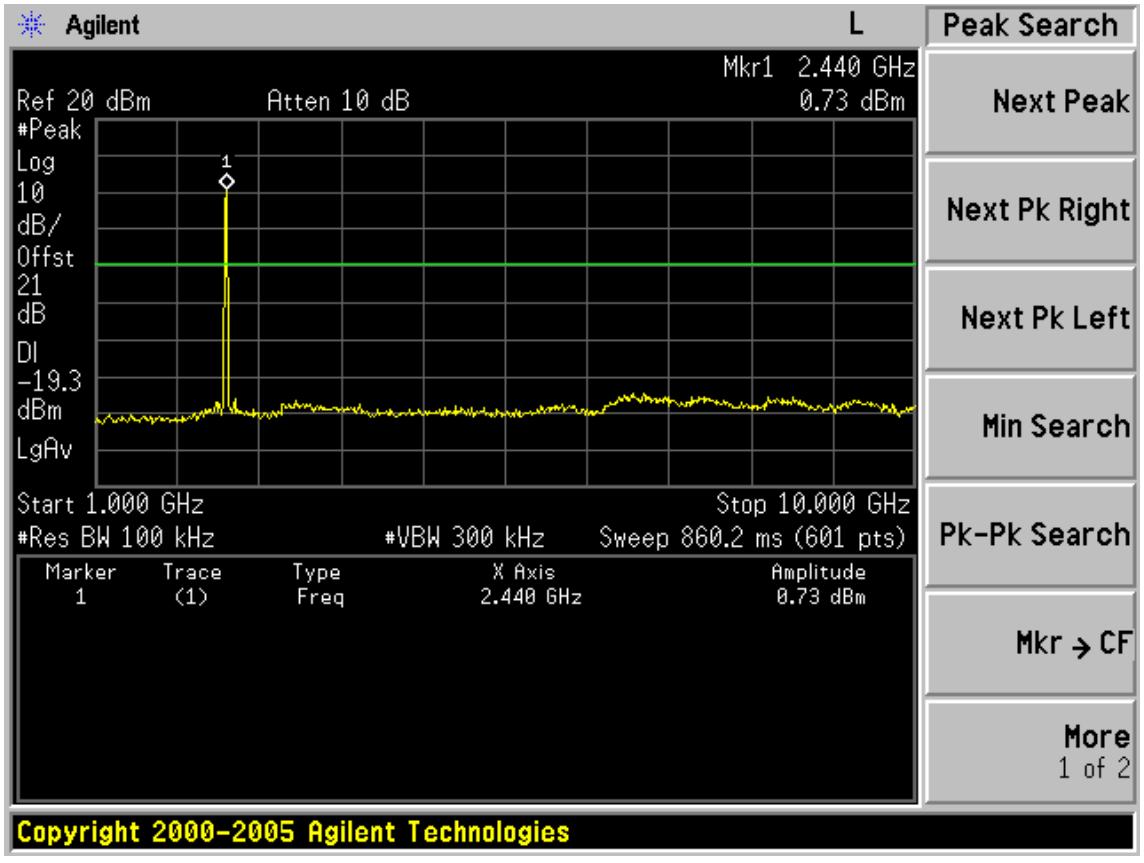


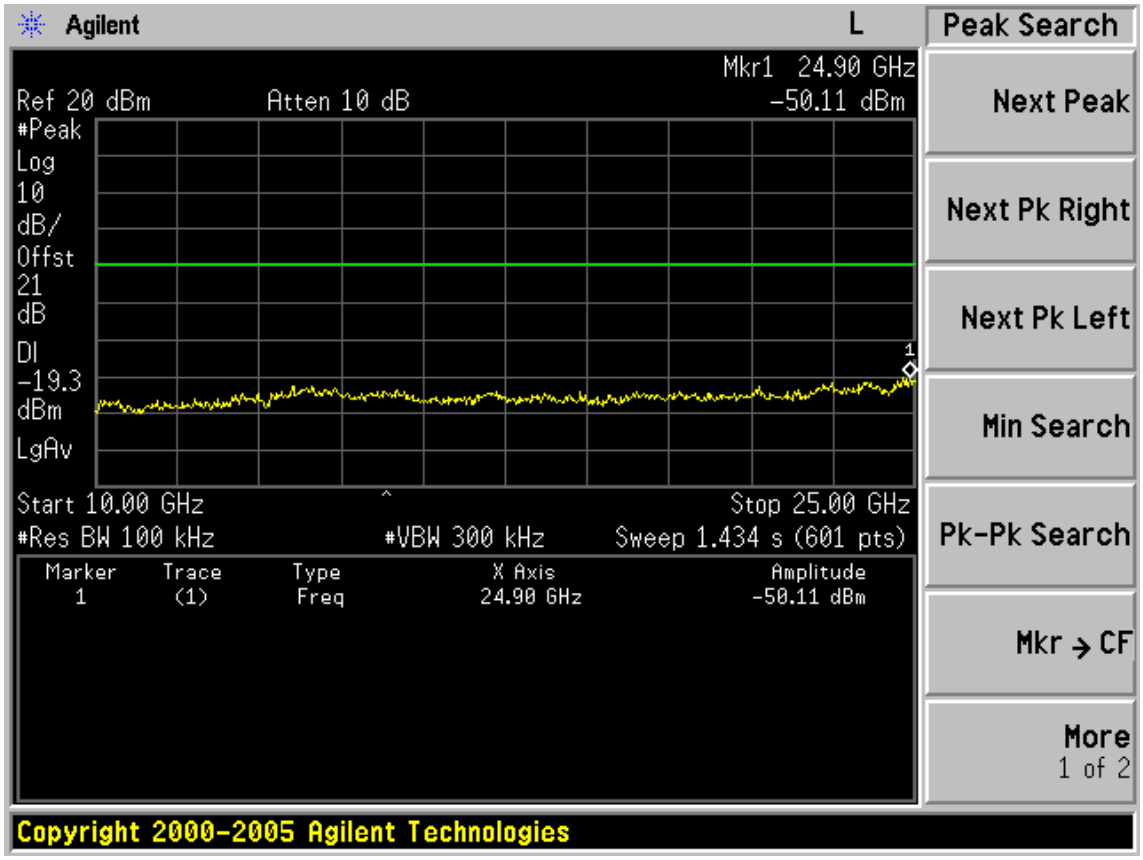

Agilent
L
Peak Search
Mkr1 2.412 5 GHz
Ref 20 dBm
Atten 10 dB
-0.05 dBm
Next Peak
#Peak
Log
10
dB/
Offst
21
dB
Dl
-20.0
dBm
LgAv
Next Pk Right
Next Pk Left
Min Search
Start 2.310 0 GHz
Stop 2.425 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 11 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.412 5 GHz -0.05 dBm
2 (1) Freq 2.400 0 GHz -56.87 dBm
3 (1) Freq 2.390 0 GHz -58.73 dBm
4 (1) Freq 2.398 6 GHz -45.49 dBm
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies


Agilent
L
Peak Search
Mkr1 25.00 GHz
Ref 20 dBm
Atten 10 dB
-50.50 dBm
Next Peak
#Peak
Log
10
dB/
Offst
21
dB
Dl
-20.6
dBm
LgAv
Next Pk Right
Next Pk Left
Min Search
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 25.00 GHz -50.50 dBm
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

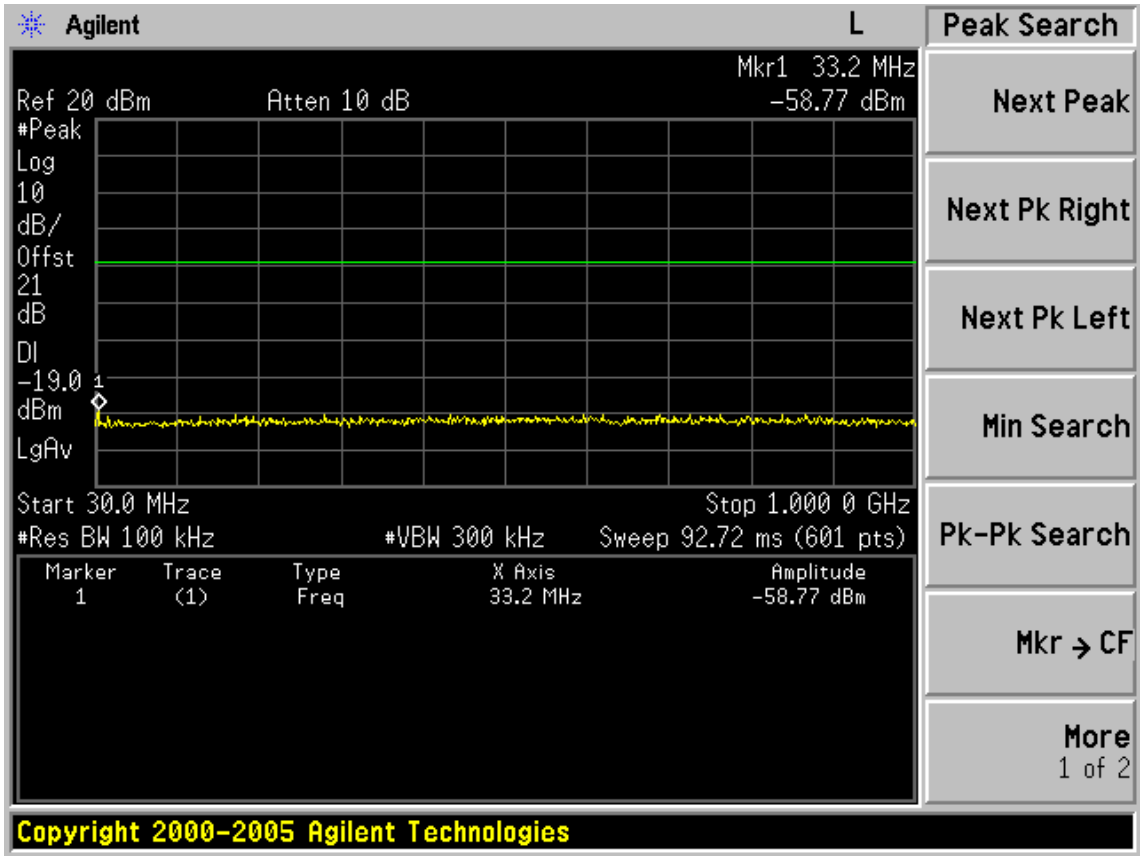
Test CH6: 2437MHz

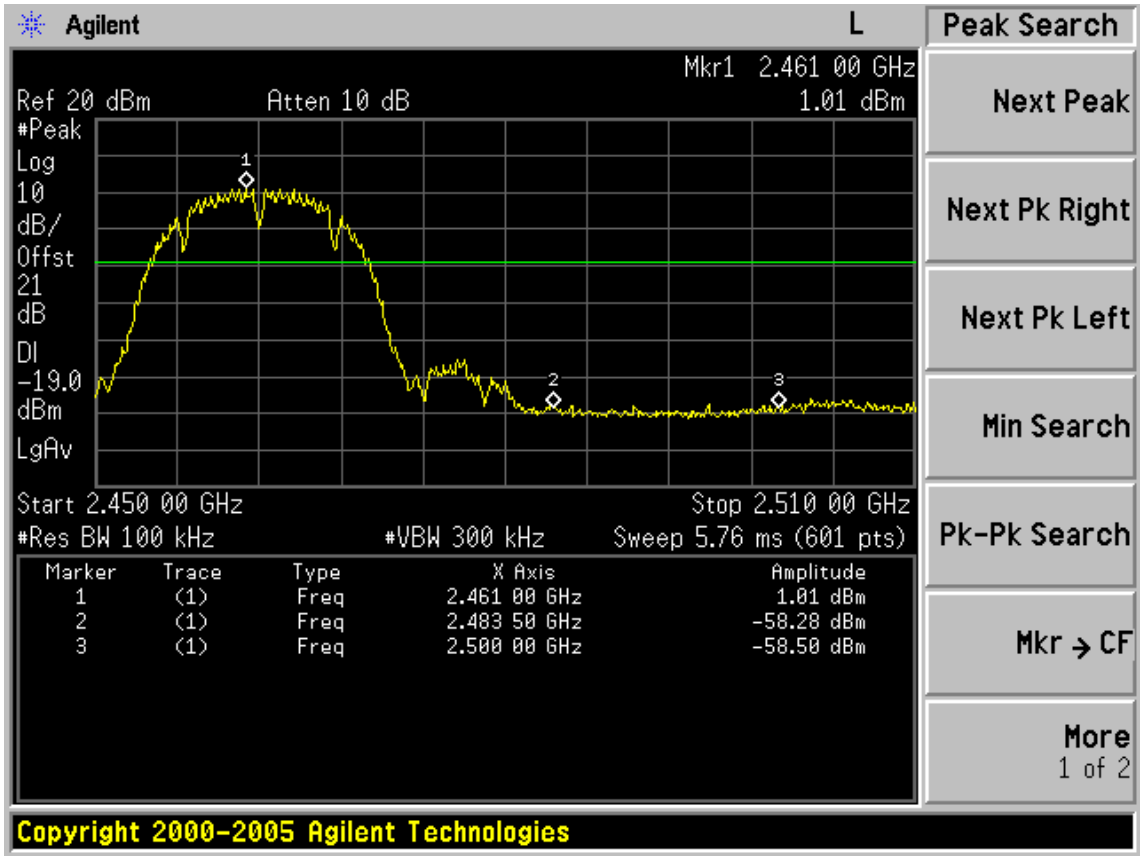


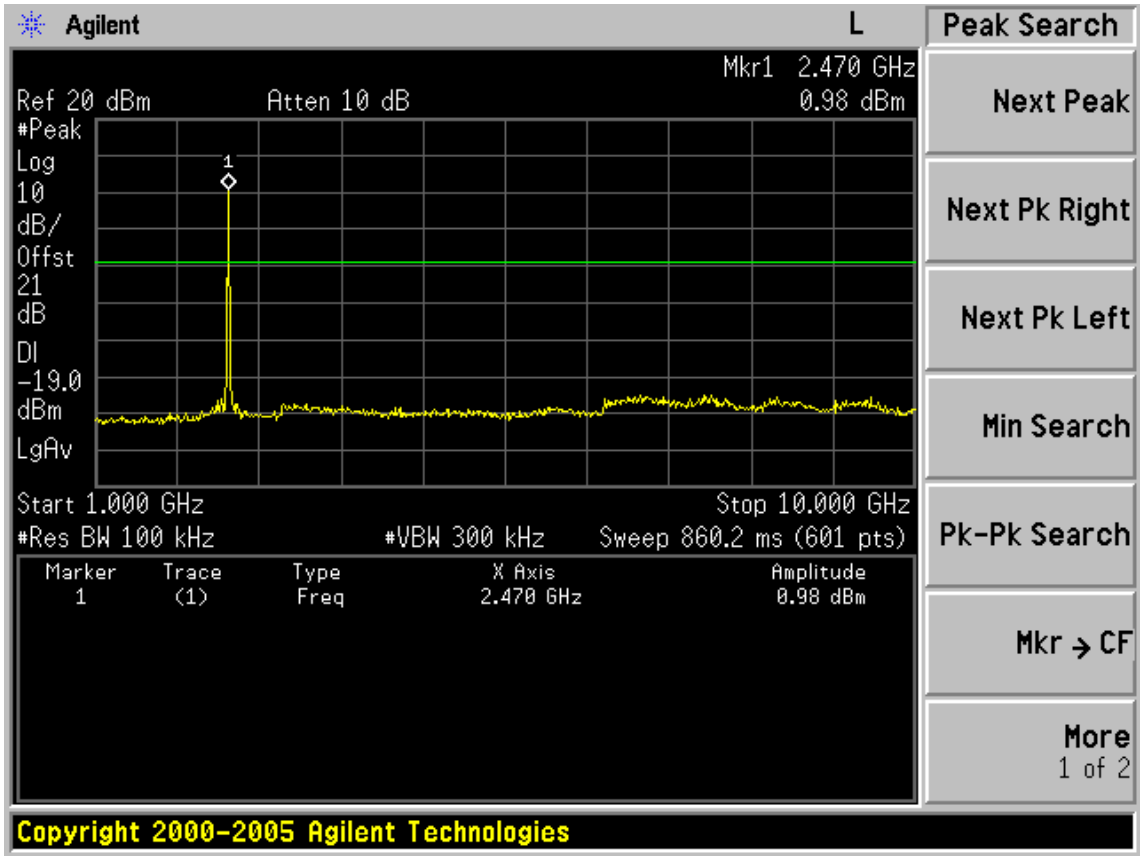


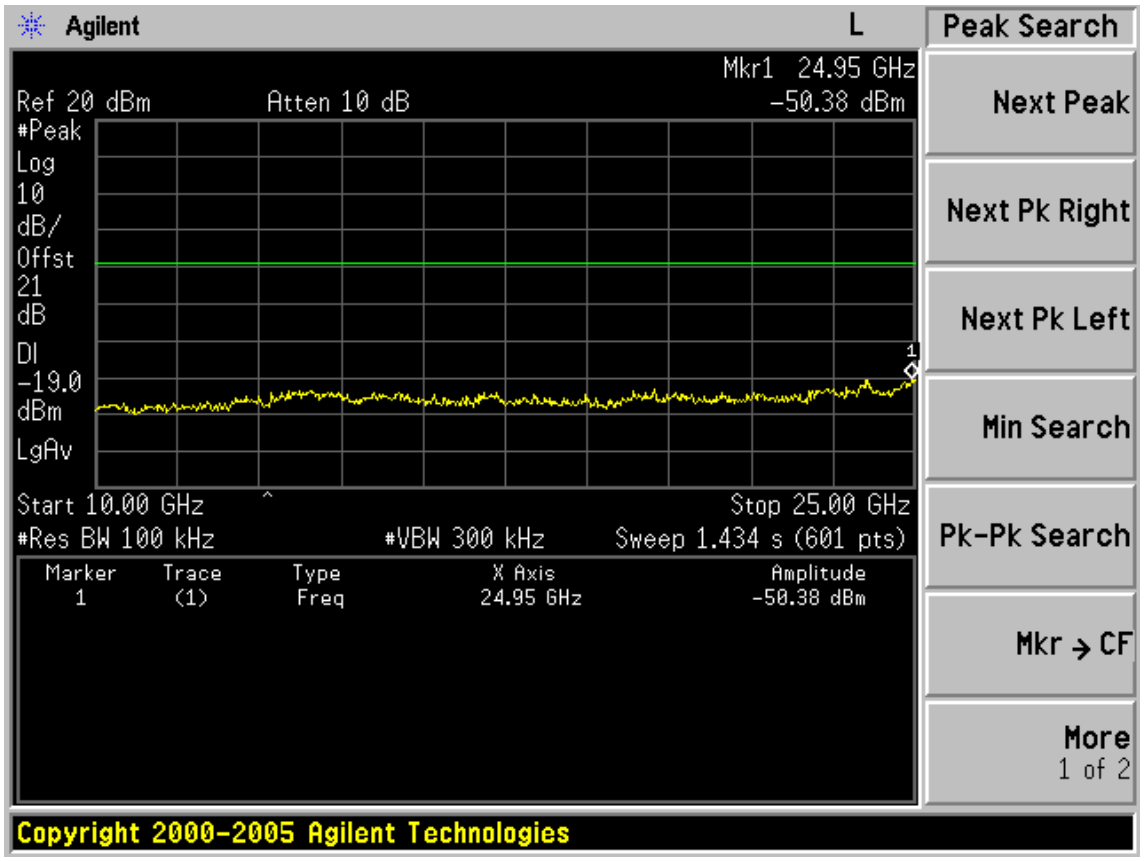


Test CH11: 2462MHz

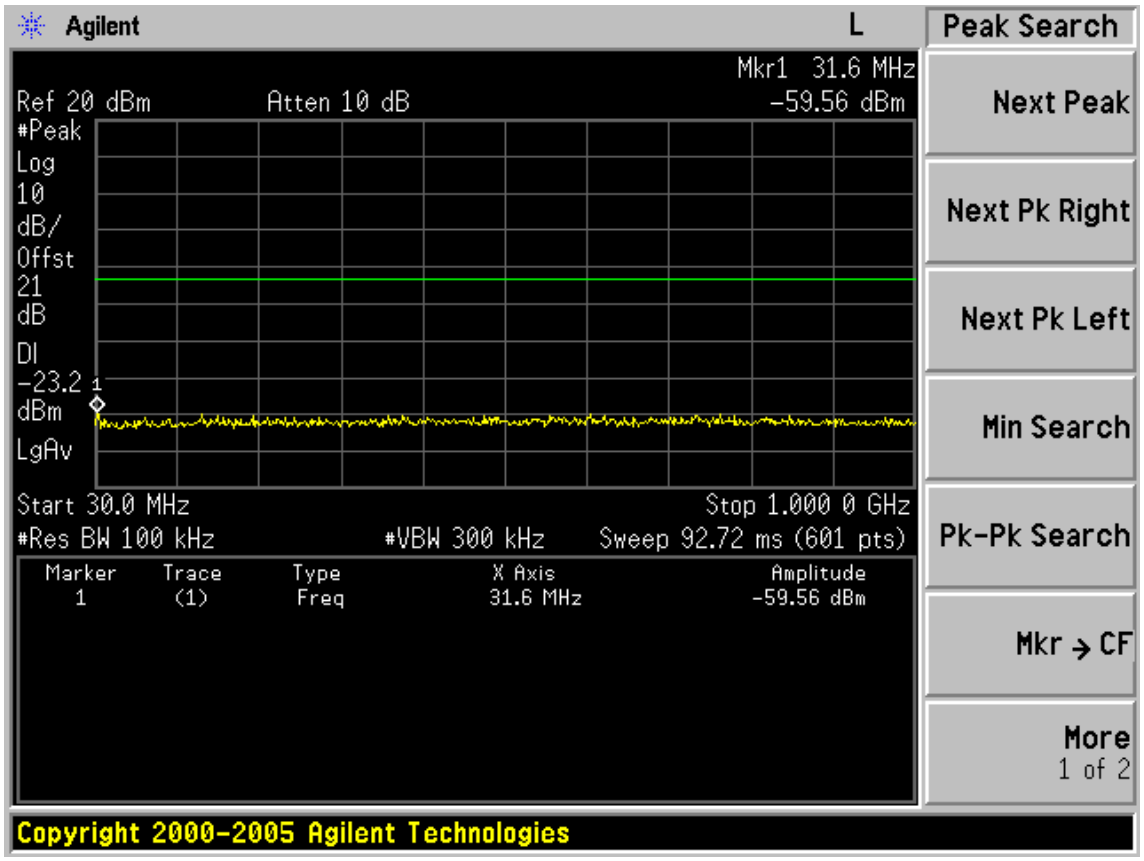


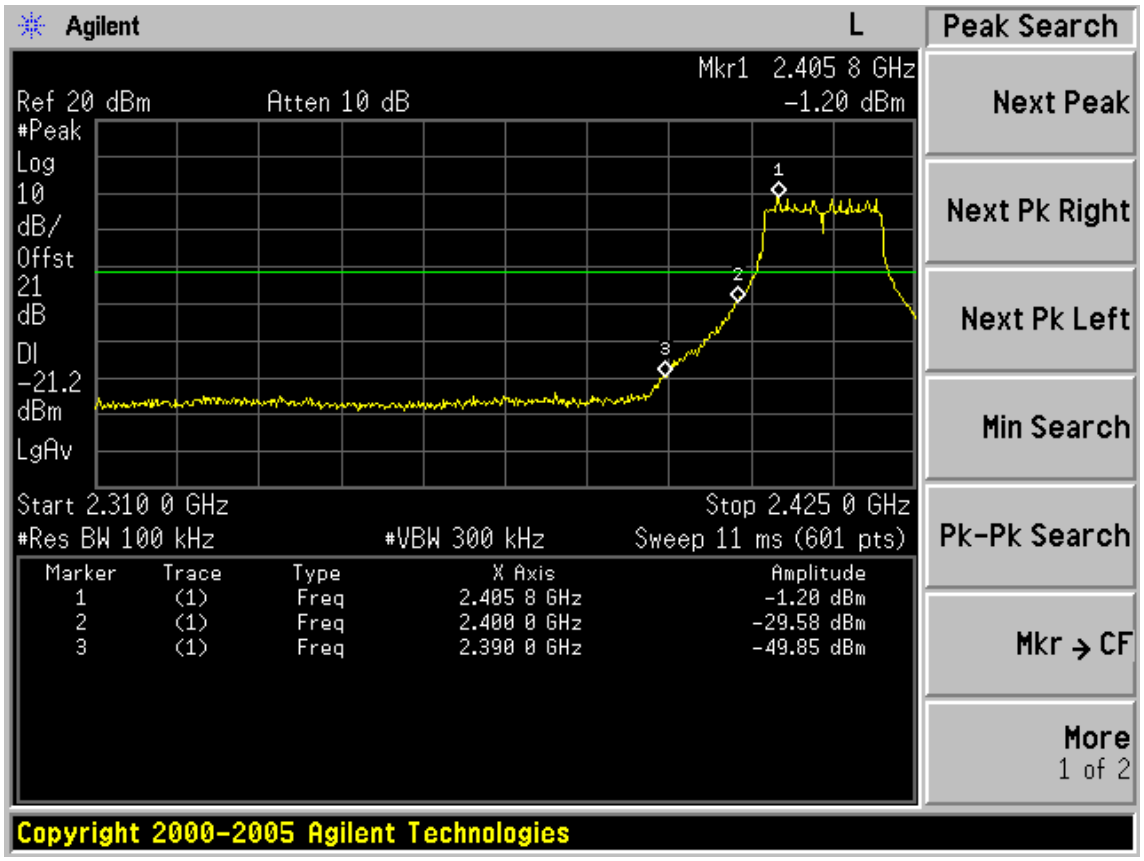

Agilent
L
Peak Search
Mkr1 2.461 00 GHz
Ref 20 dBm
Atten 10 dB
1.01 dBm
Next Peak
#Peak
Log
10
dB/
Offst
21
dB
Dl
-19.0
dBm
LgAv
Next Pk Right
Next Pk Left
Min Search
Start 2.450 00 GHz
Stop 2.510 00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.76 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.461 00 GHz 1.01 dBm
2 (1) Freq 2.483 50 GHz -58.28 dBm
3 (1) Freq 2.500 00 GHz -58.50 dBm
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

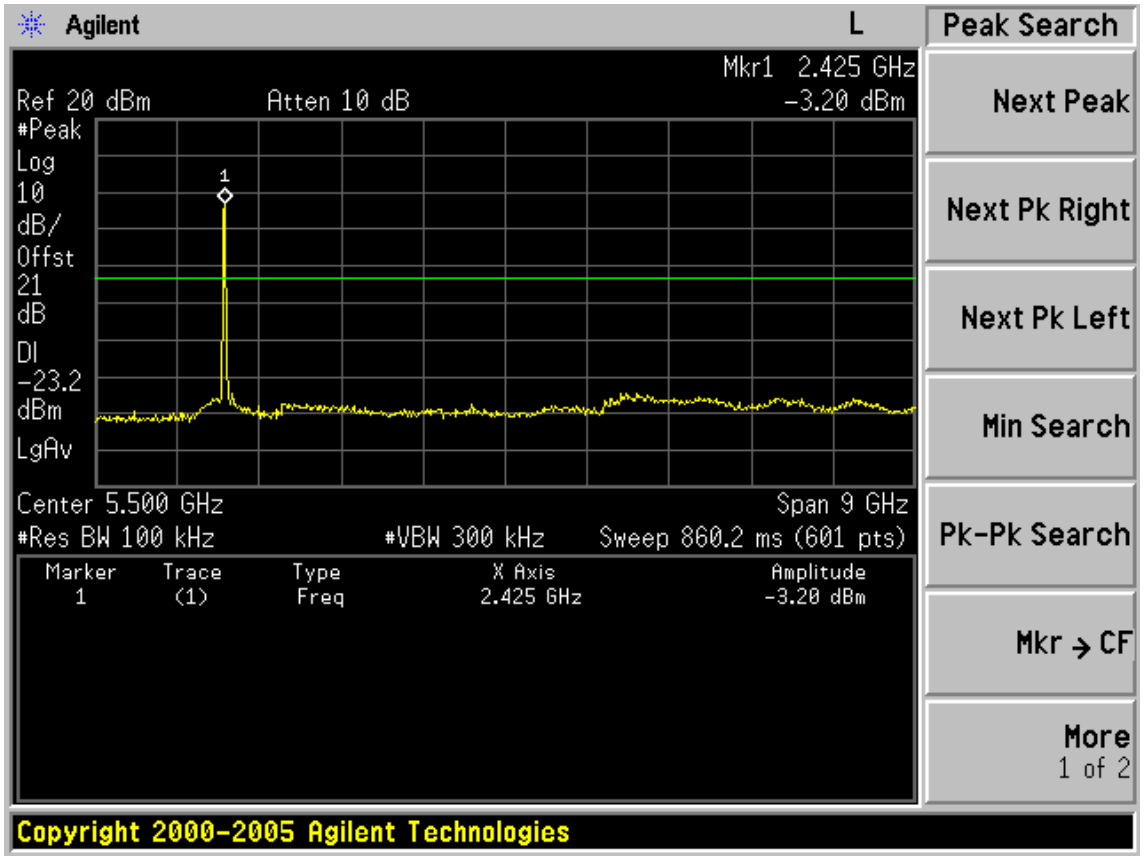

Agilent
L
Peak Search
Mkr1 2.470 GHz
Ref 20 dBm
Atten 10 dB
0.98 dBm
Next Peak
#Peak
Log
10
dB/
Offst
21
dB
Dl
-19.0
dBm
LgAv
Next Pk Right
Next Pk Left
Min Search
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.470 GHz 0.98 dBm
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

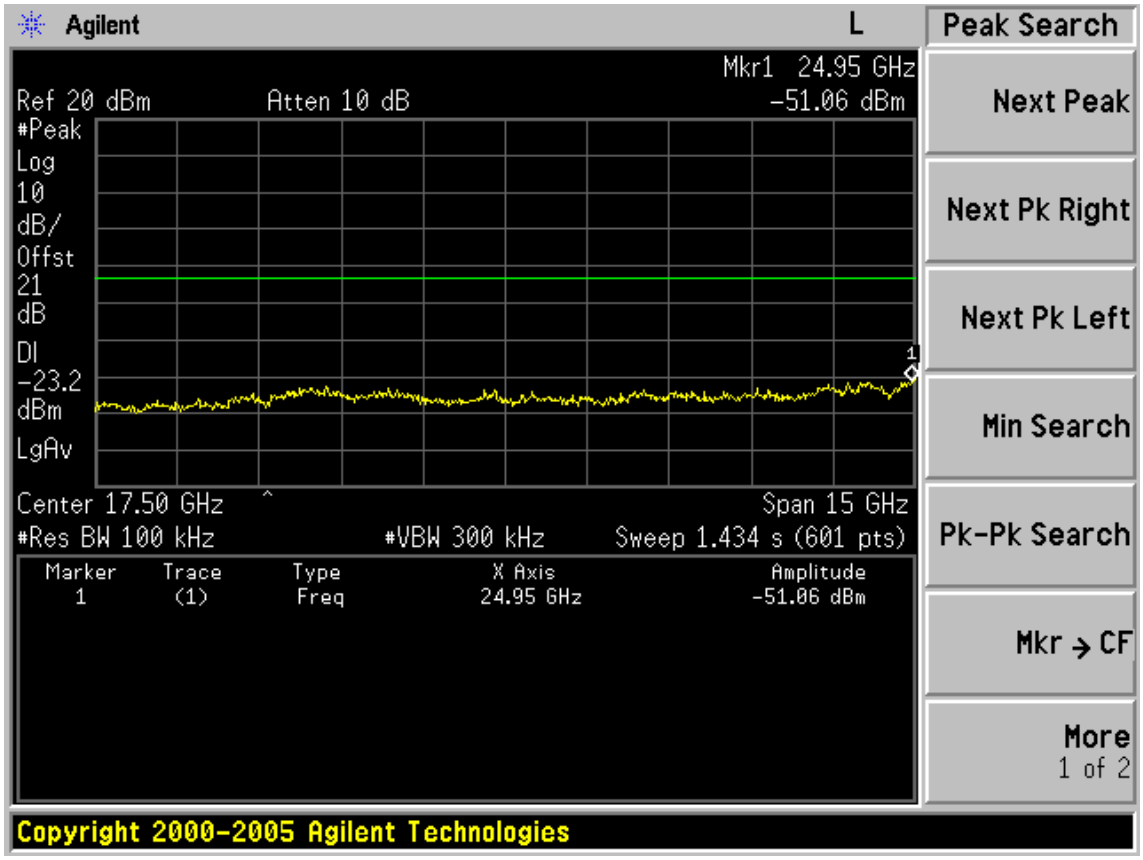


Test Mode: IEEE 802.11g TX
Test CH1: 2412MHz

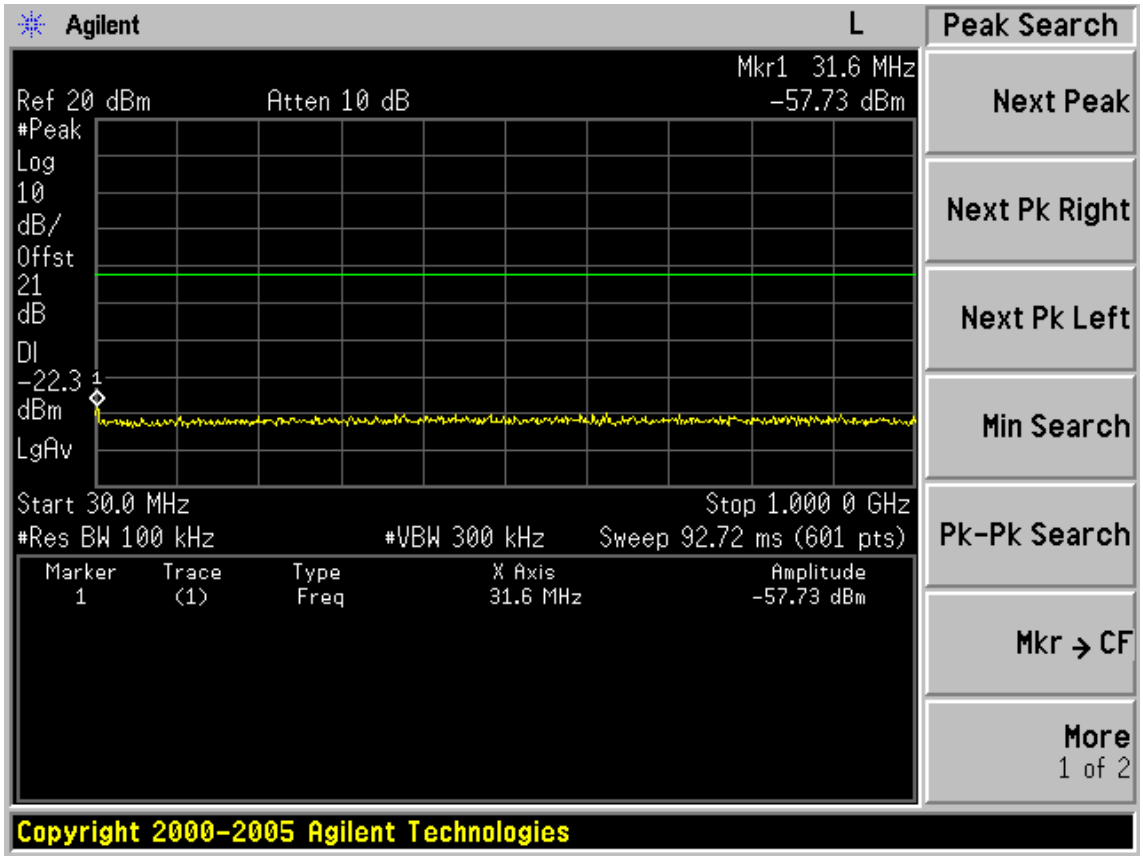


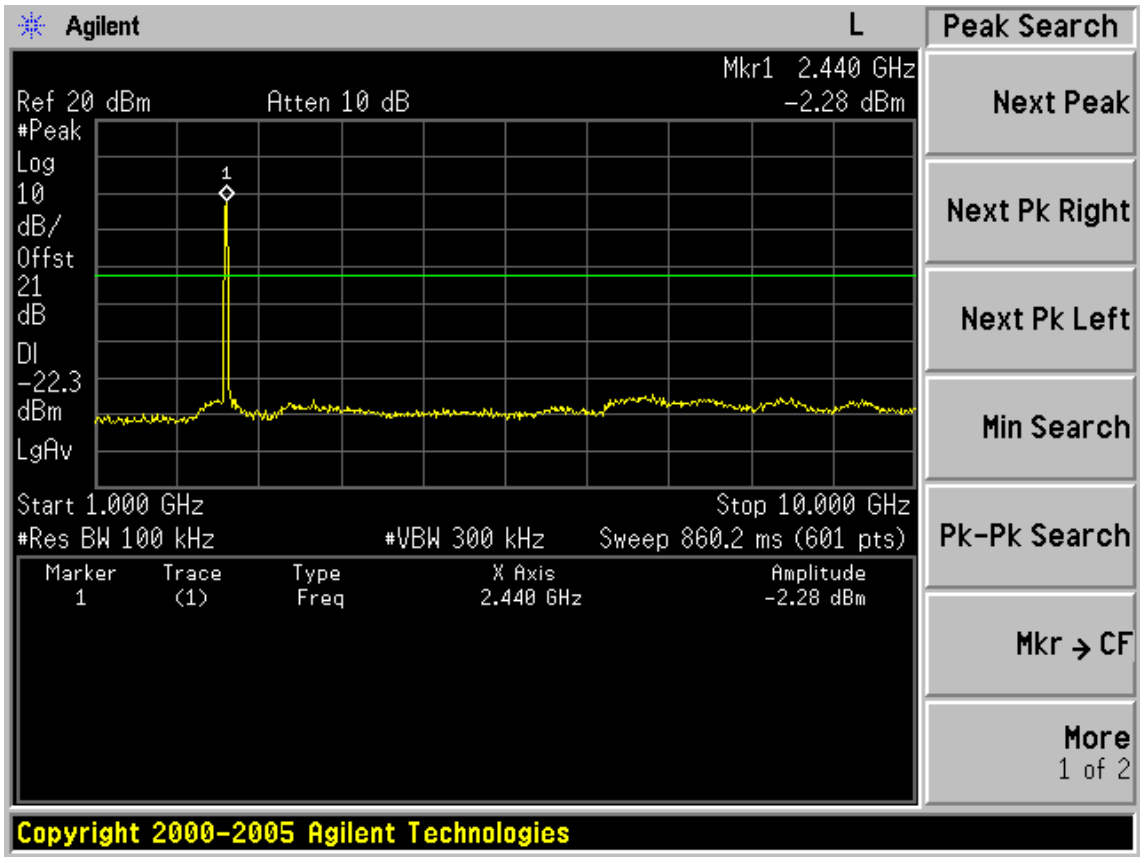

Agilent
L
Peak Search
Mkr1 2.405 8 GHz
Ref 20 dBm
Atten 10 dB
-1.20 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-21.2
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 2.310 0 GHz
Stop 2.425 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 11 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.405 8 GHz -1.20 dBm
2 (1) Freq 2.400 0 GHz -29.58 dBm
3 (1) Freq 2.390 0 GHz -49.85 dBm
Copyright 2000-2005 Agilent Technologies

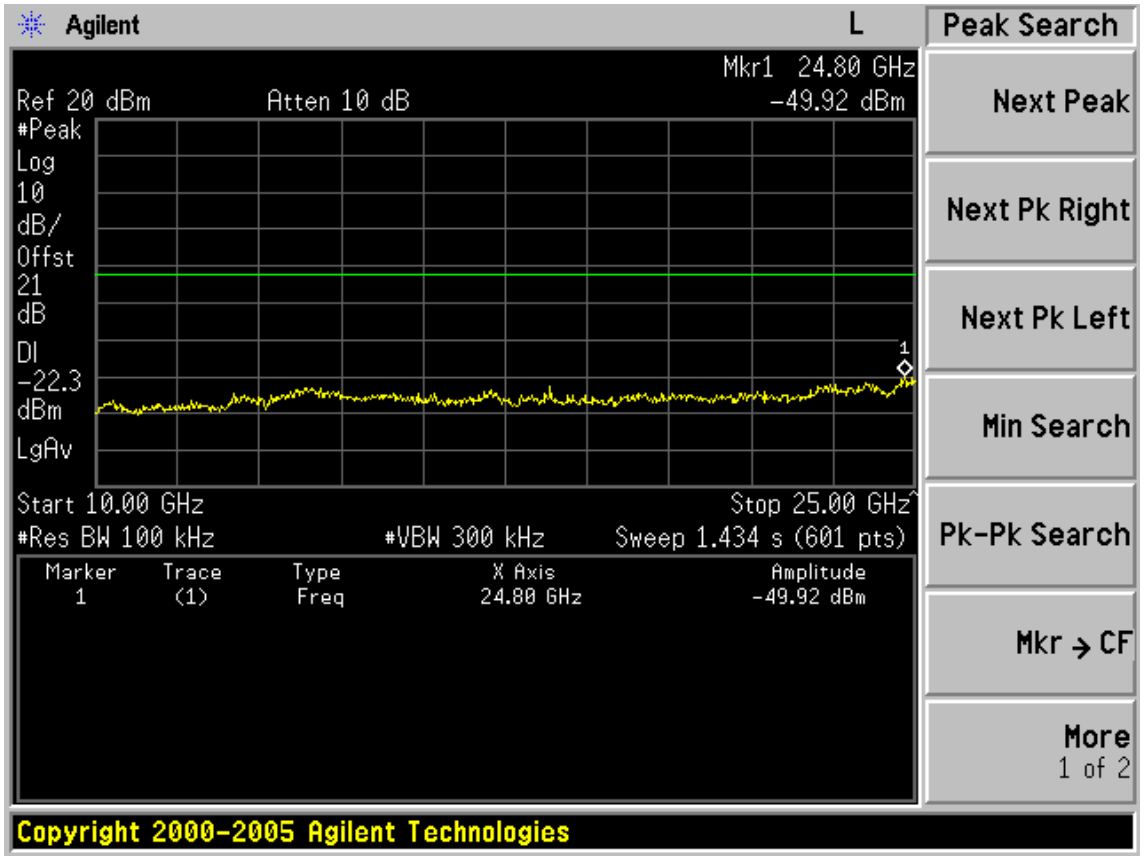

Agilent
L
Peak Search
Mkr1 2.425 GHz
Ref 20 dBm
Atten 10 dB
-3.20 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-23.2
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 5.500 GHz
Span 9 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.425 GHz -3.20 dBm
Copyright 2000-2005 Agilent Technologies



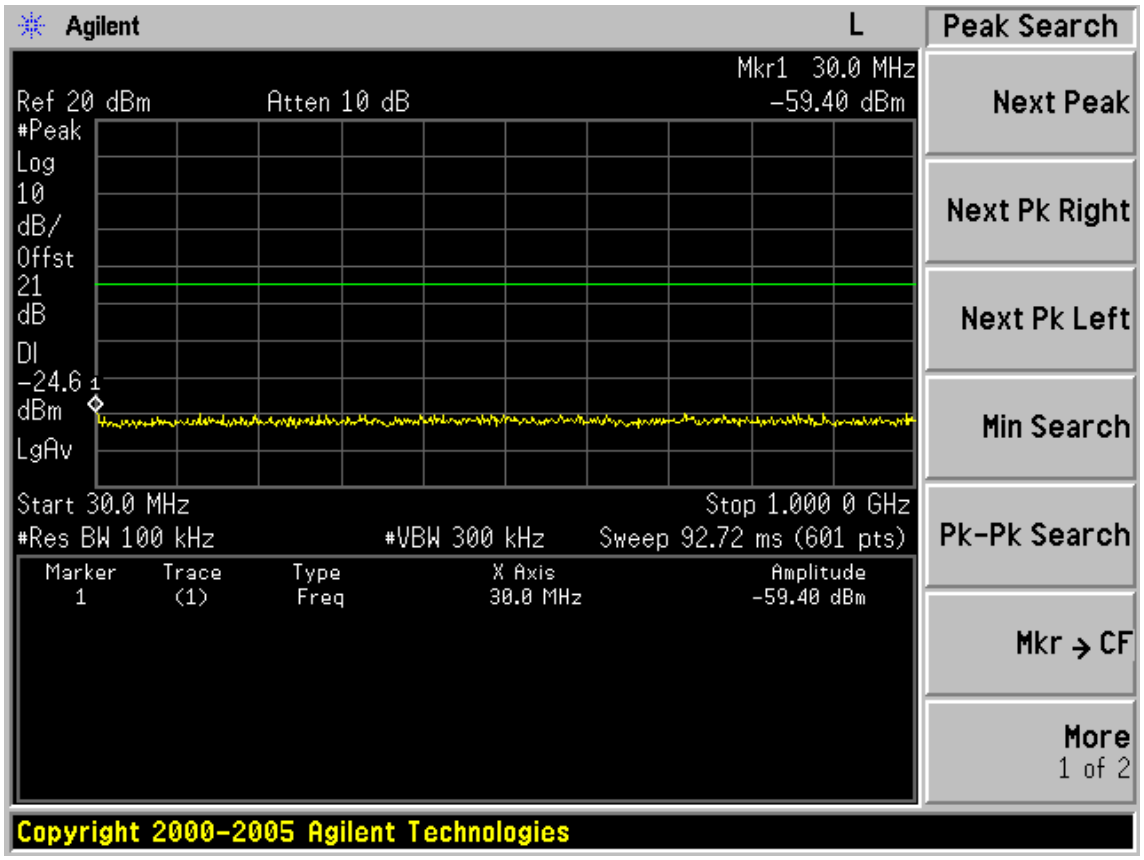
Test CH6: 2437MHz

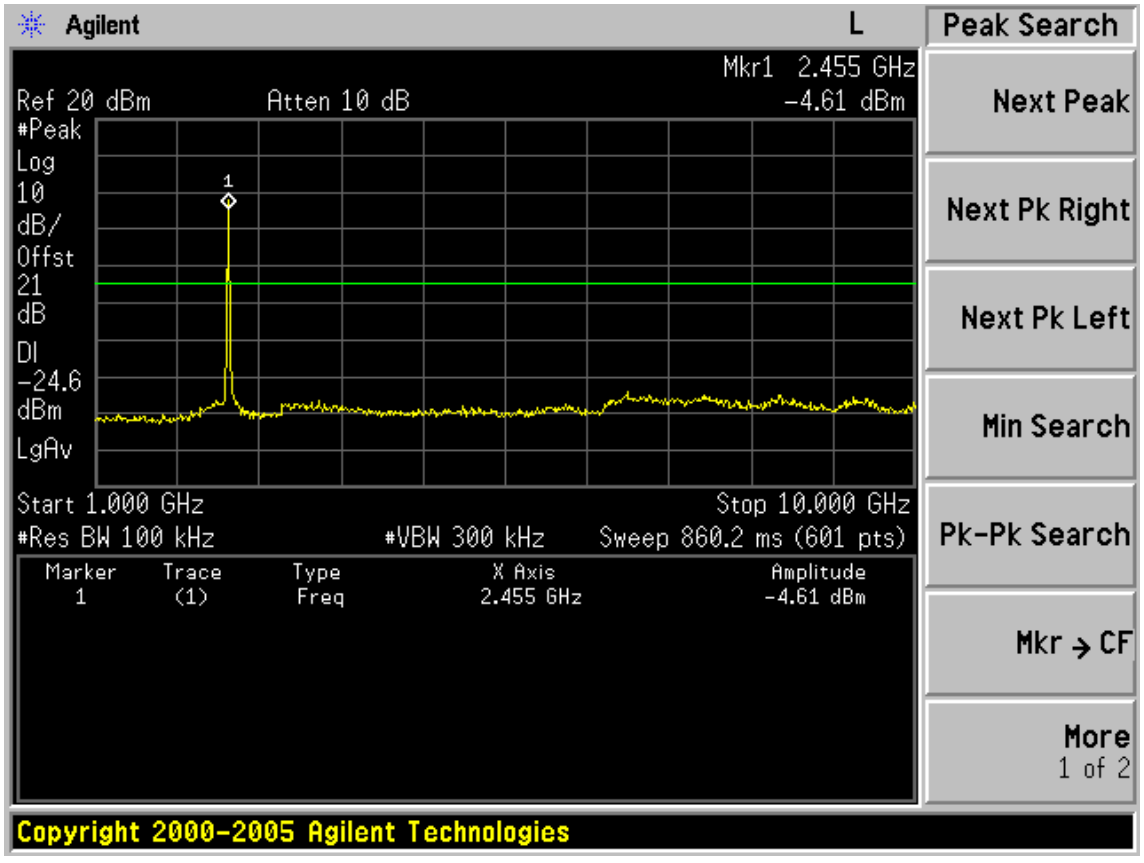


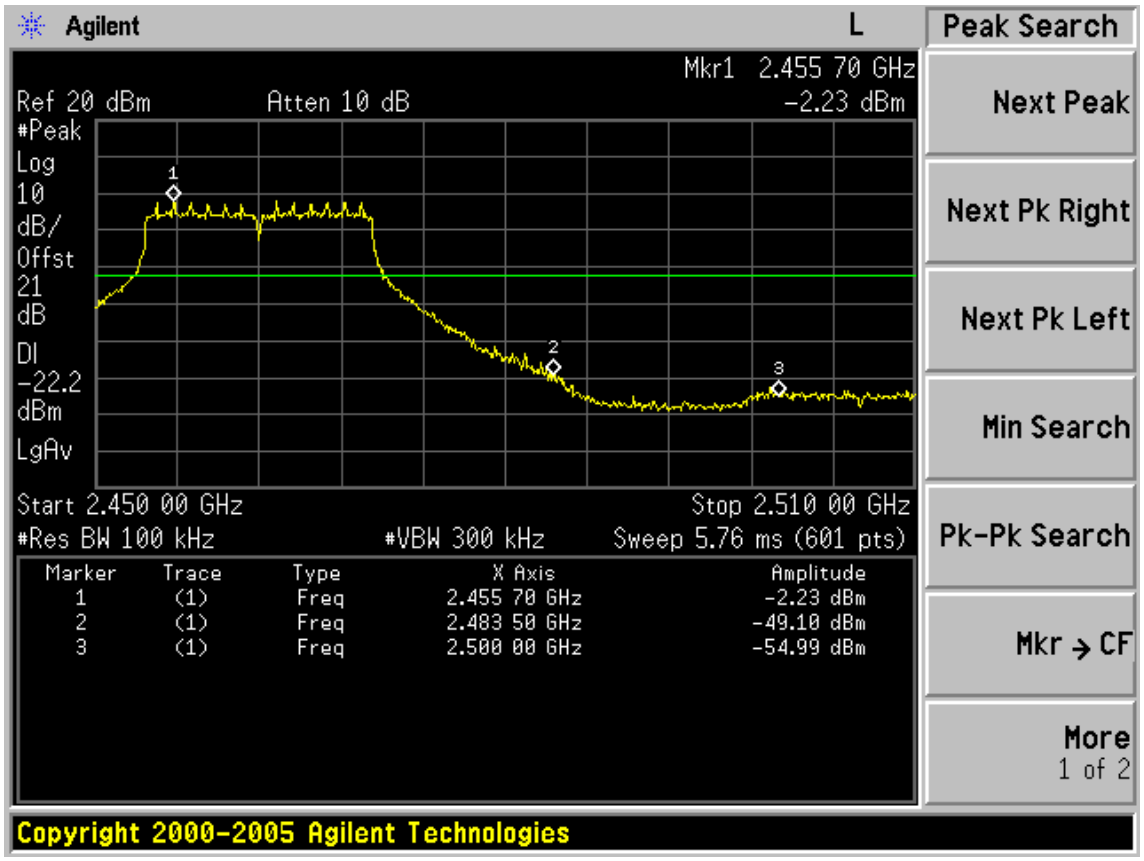

Agilent
L
Peak Search
Mkr1 2.440 GHz
Ref 20 dBm
Atten 10 dB
-2.28 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-22.3
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.440 GHz -2.28 dBm
Copyright 2000-2005 Agilent Technologies

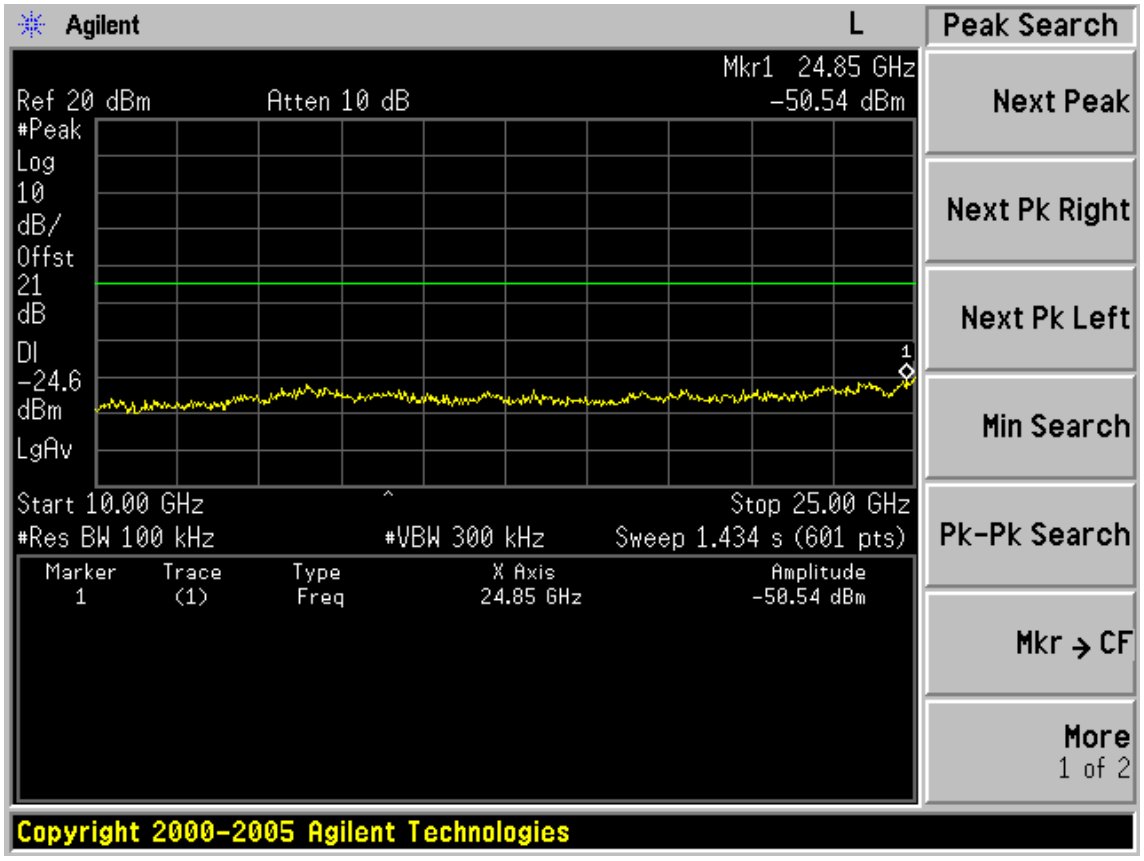

Agilent
L
Peak Search
Mkr1 24.80 GHz
Ref 20 dBm
Atten 10 dB
-49.92 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-22.3
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.80 GHz -49.92 dBm
Copyright 2000-2005 Agilent Technologies

Test CH11: 2462MHz

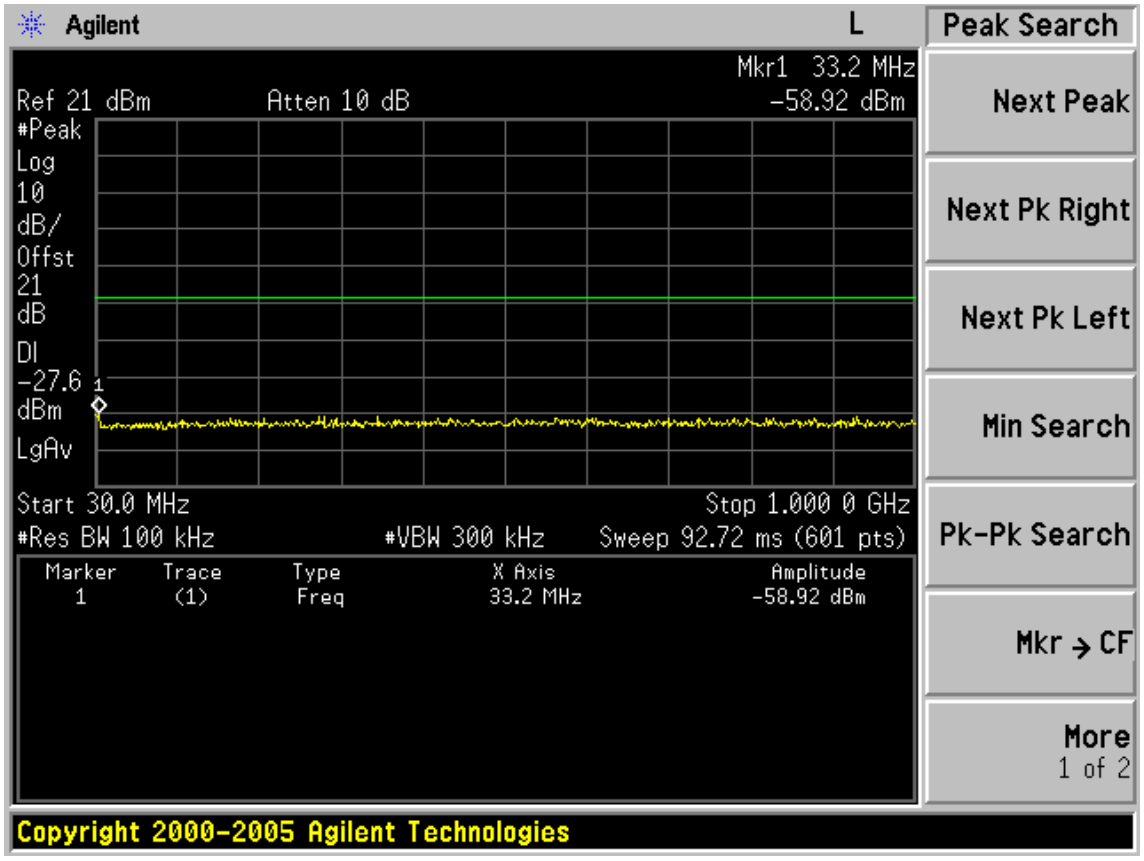


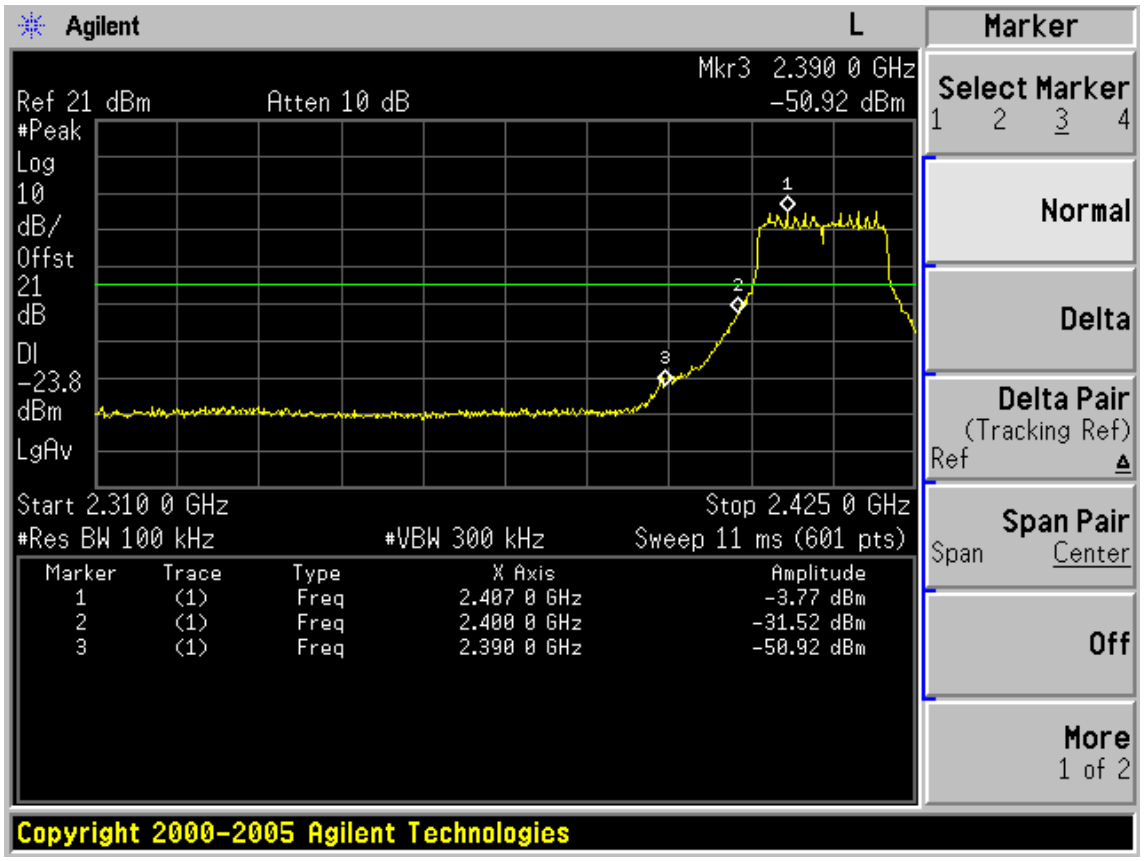


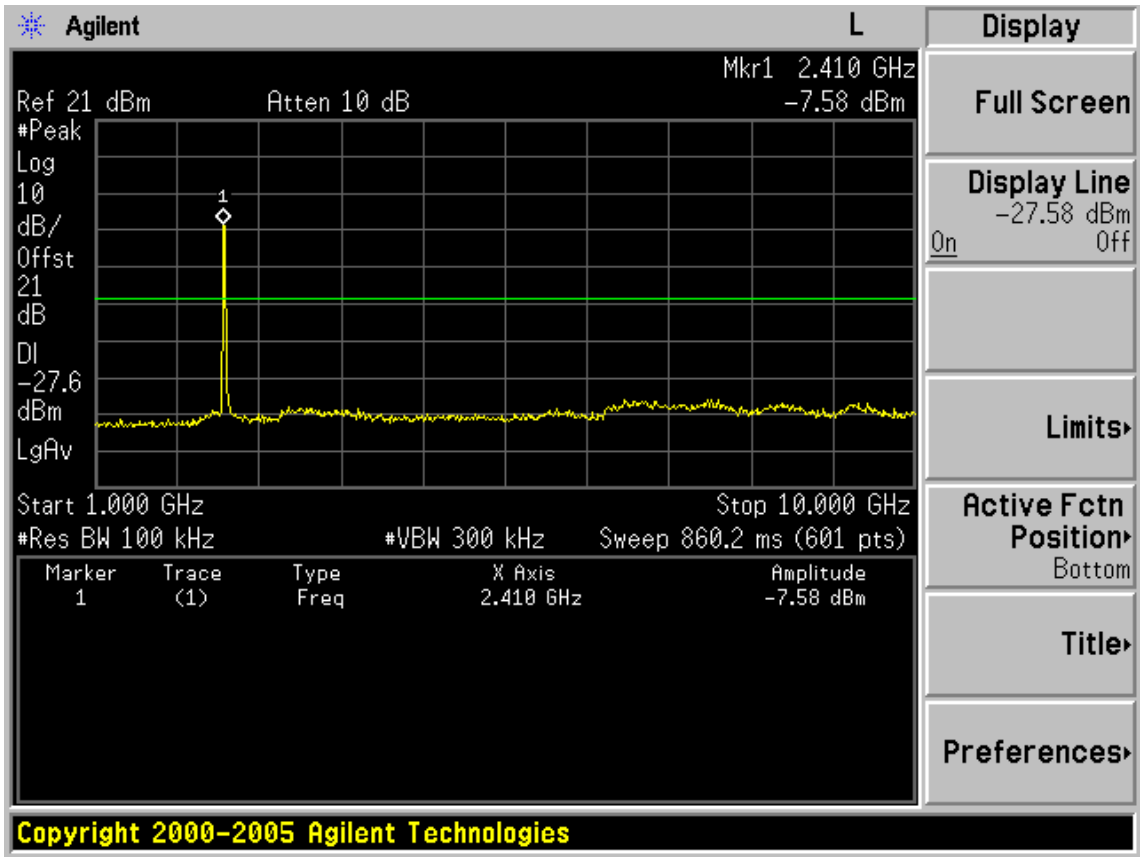

Agilent
L
Peak Search
Mkr1 2.455 70 GHz
Ref 20 dBm
Atten 10 dB
-2.23 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-22.2
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 2.450 00 GHz
Stop 2.510 00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.76 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.455 70 GHz -2.23 dBm
2 (1) Freq 2.483 50 GHz -49.10 dBm
3 (1) Freq 2.500 00 GHz -54.99 dBm
Copyright 2000-2005 Agilent Technologies

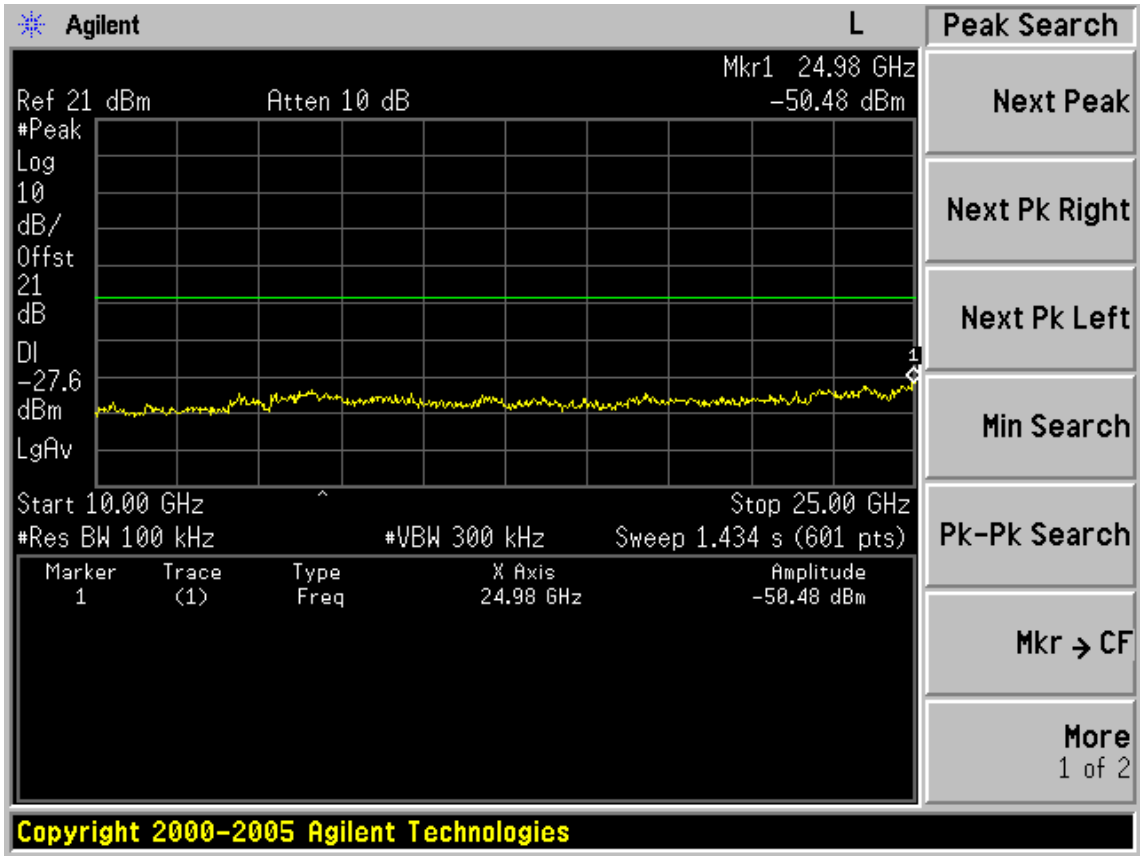

Agilent
L
Peak Search
Mkr1 24.85 GHz
Ref 20 dBm
Atten 10 dB
-50.54 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-24.6
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.85 GHz -50.54 dBm
Copyright 2000-2005 Agilent Technologies

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

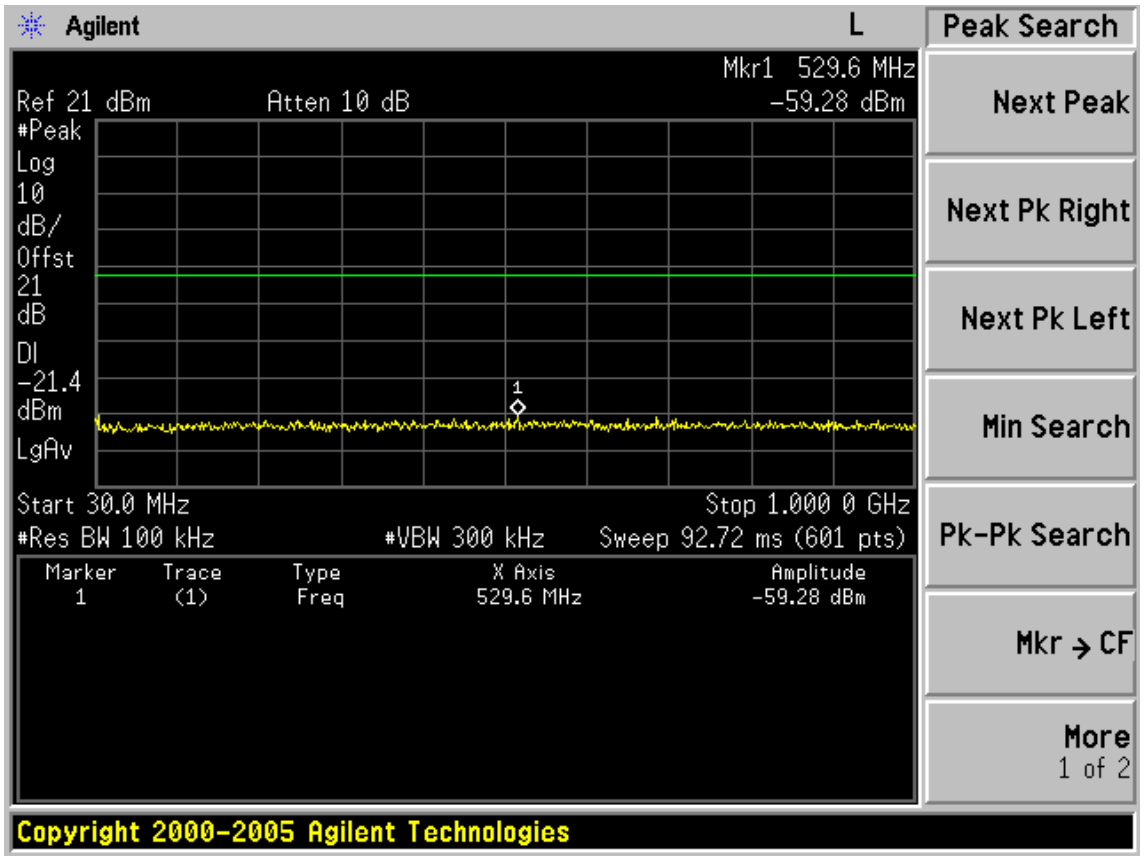


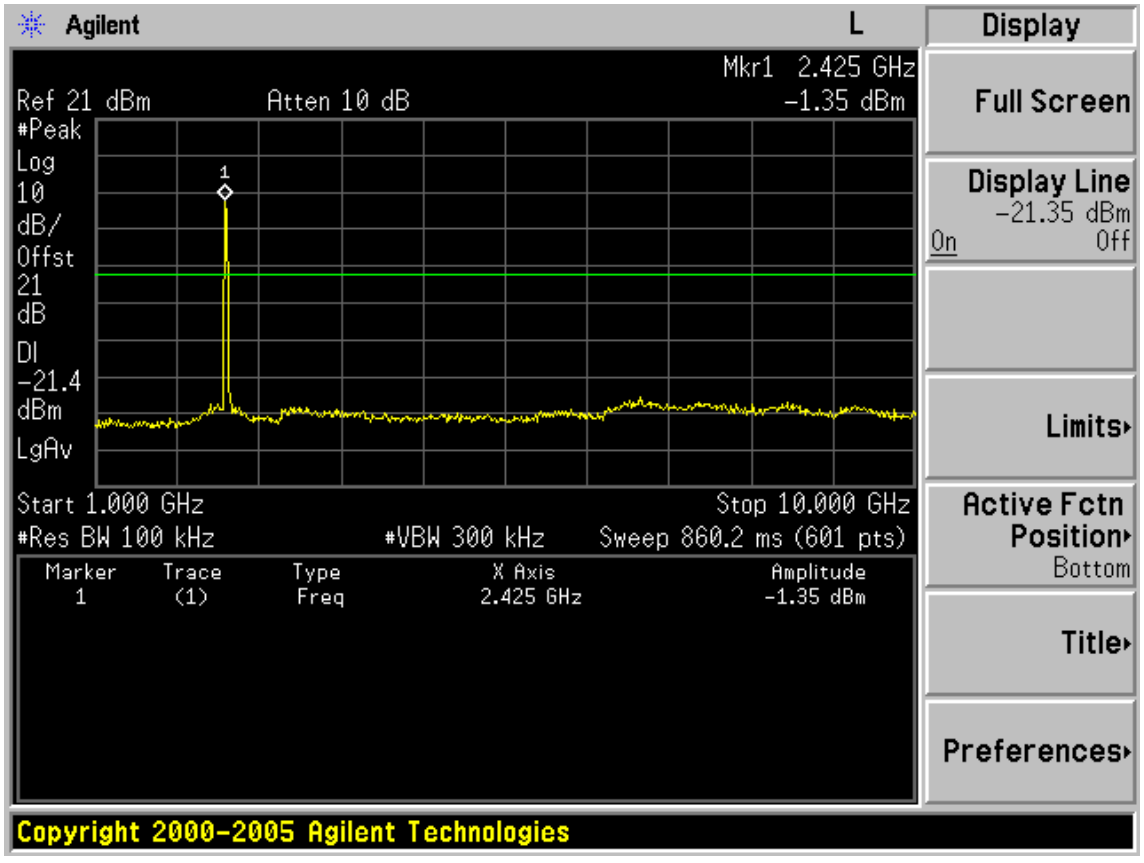


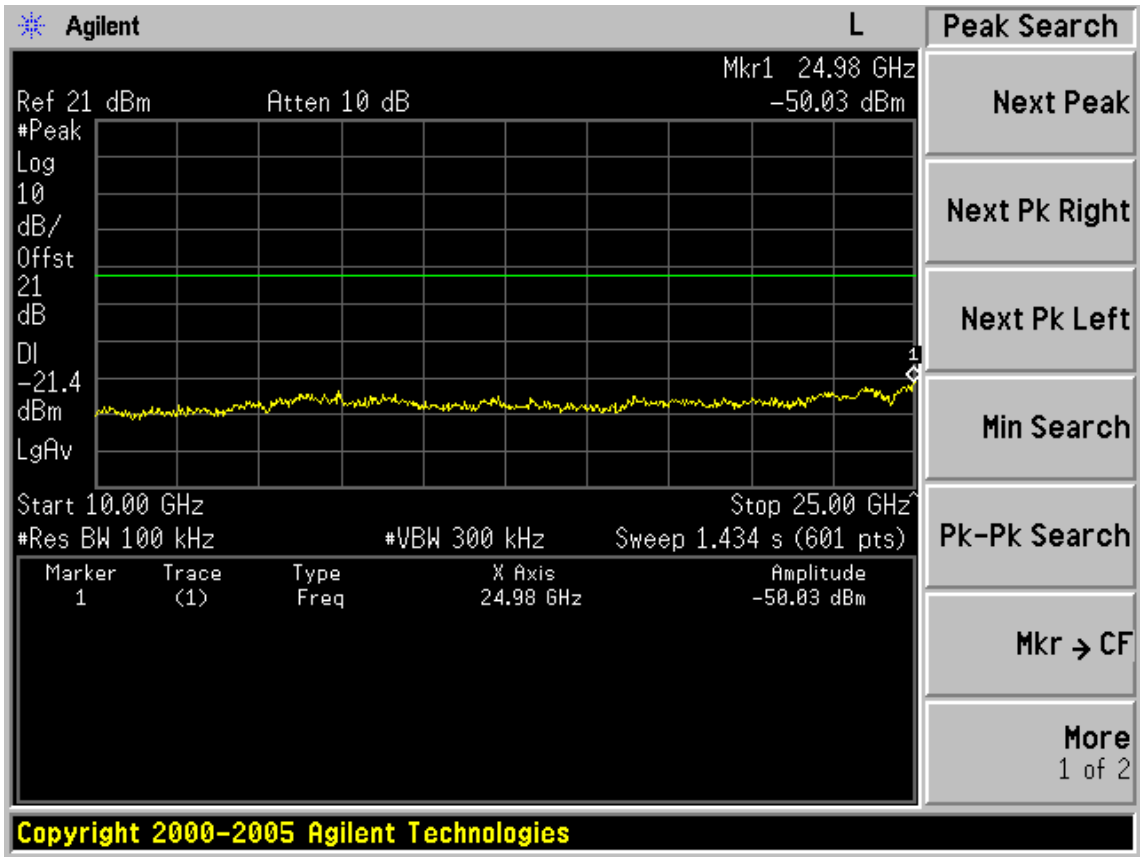

Agilent
L
Display
Mkr1 2.410 GHz
Ref 21 dBm
Atten 10 dB
-7.58 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-27.6
dBm
LgAv
Full Screen
Display Line
-27.58 dBm
On
Off
Limits
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Active Fctn
Position
Bottom
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.410 GHz -7.58 dBm
Title
Preferences
Copyright 2000-2005 Agilent Technologies


Agilent
L
Peak Search
Mkr1 24.98 GHz
Ref 21 dBm
Atten 10 dB
-50.48 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-27.6
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.98 GHz -50.48 dBm
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

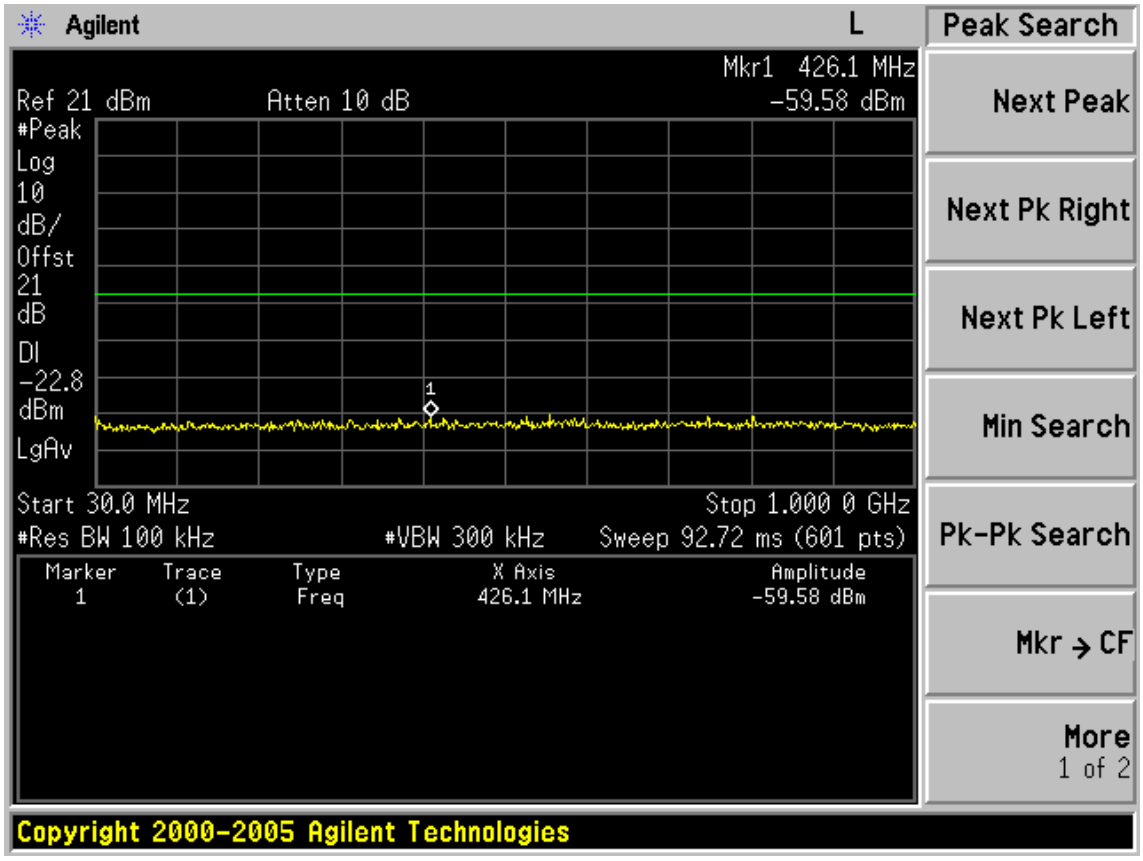
Test CH6: 2437MHz

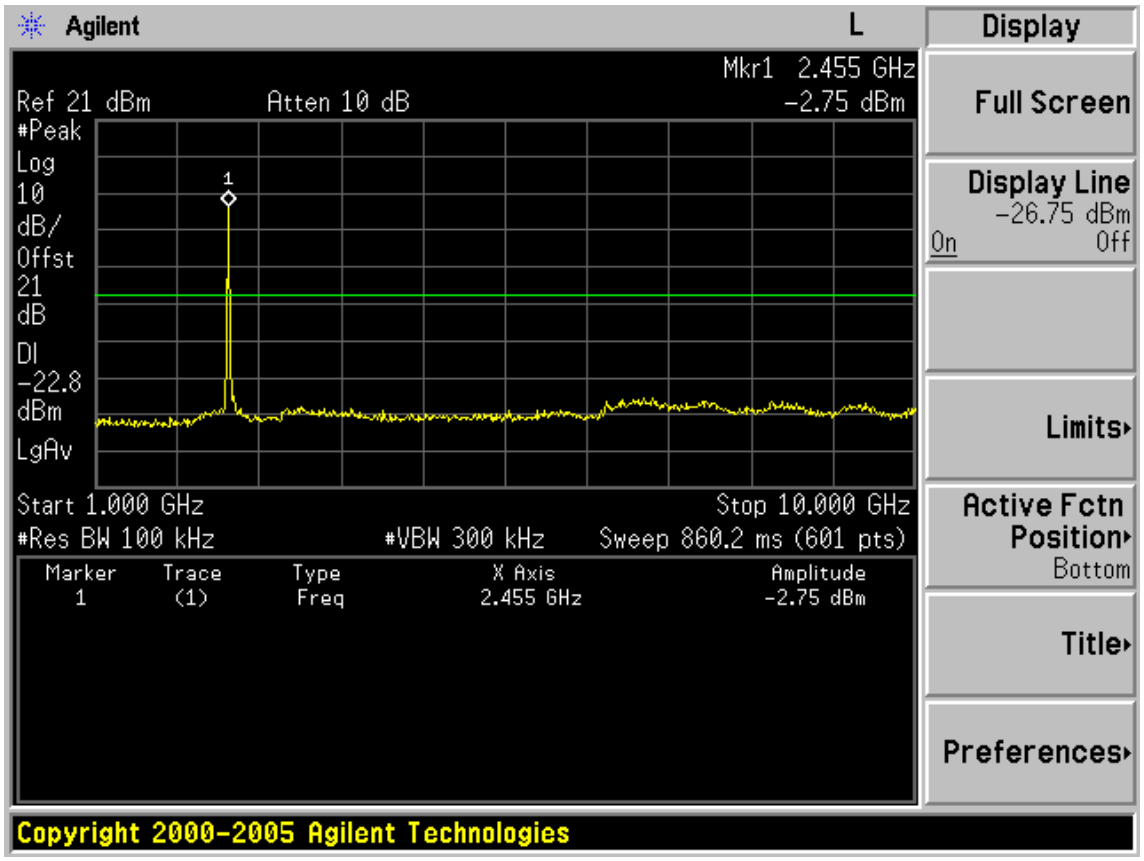


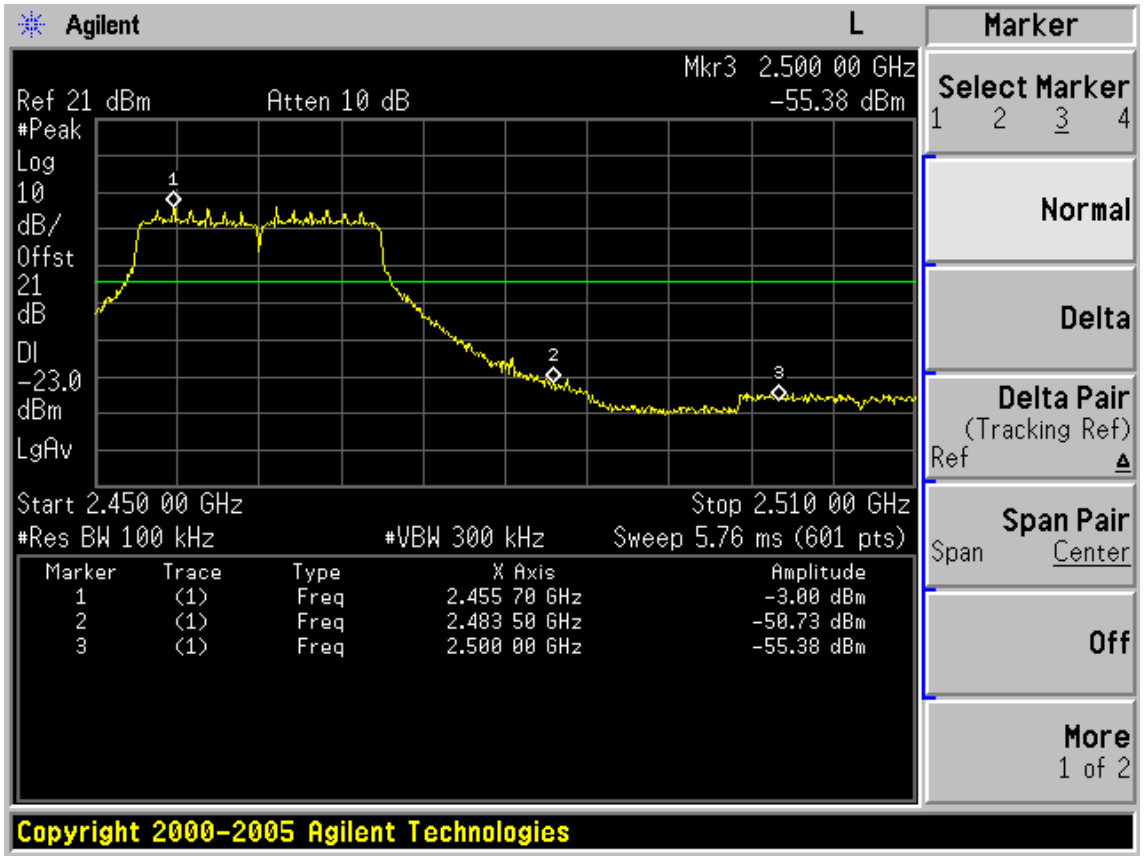


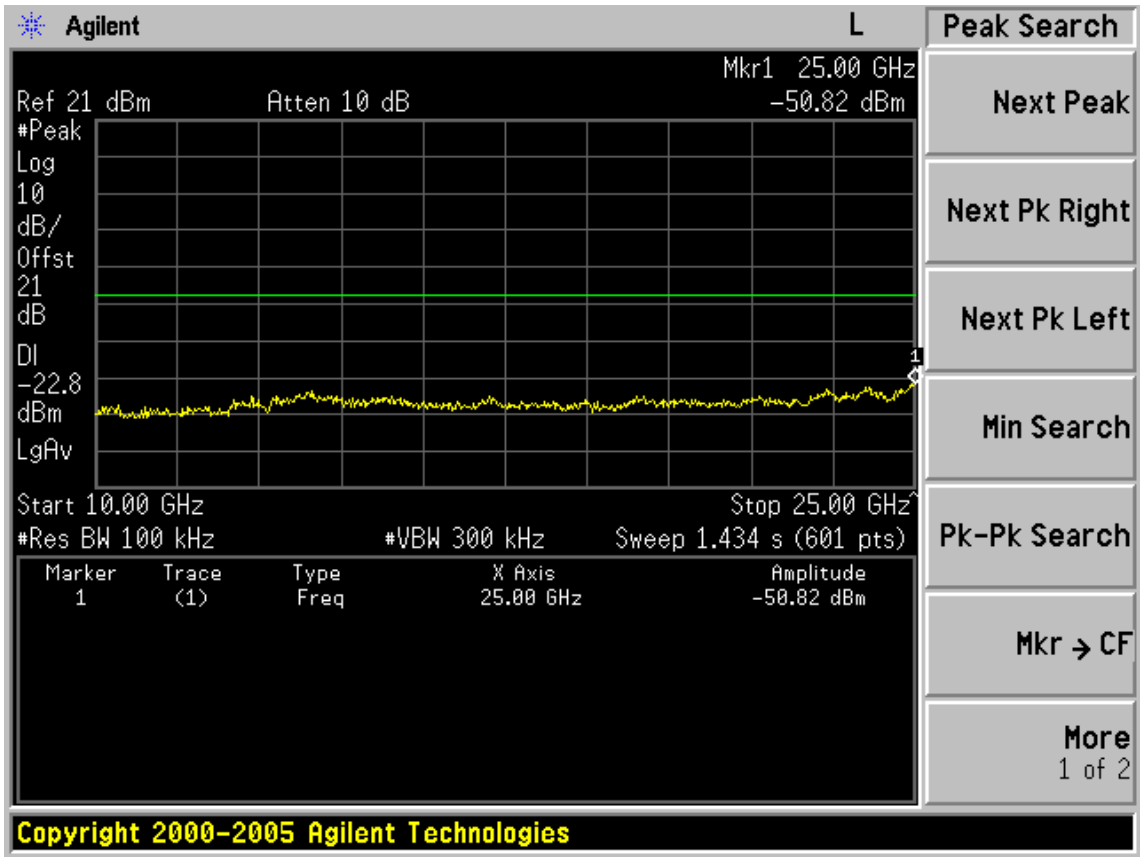


Test CH11: 2462MHz

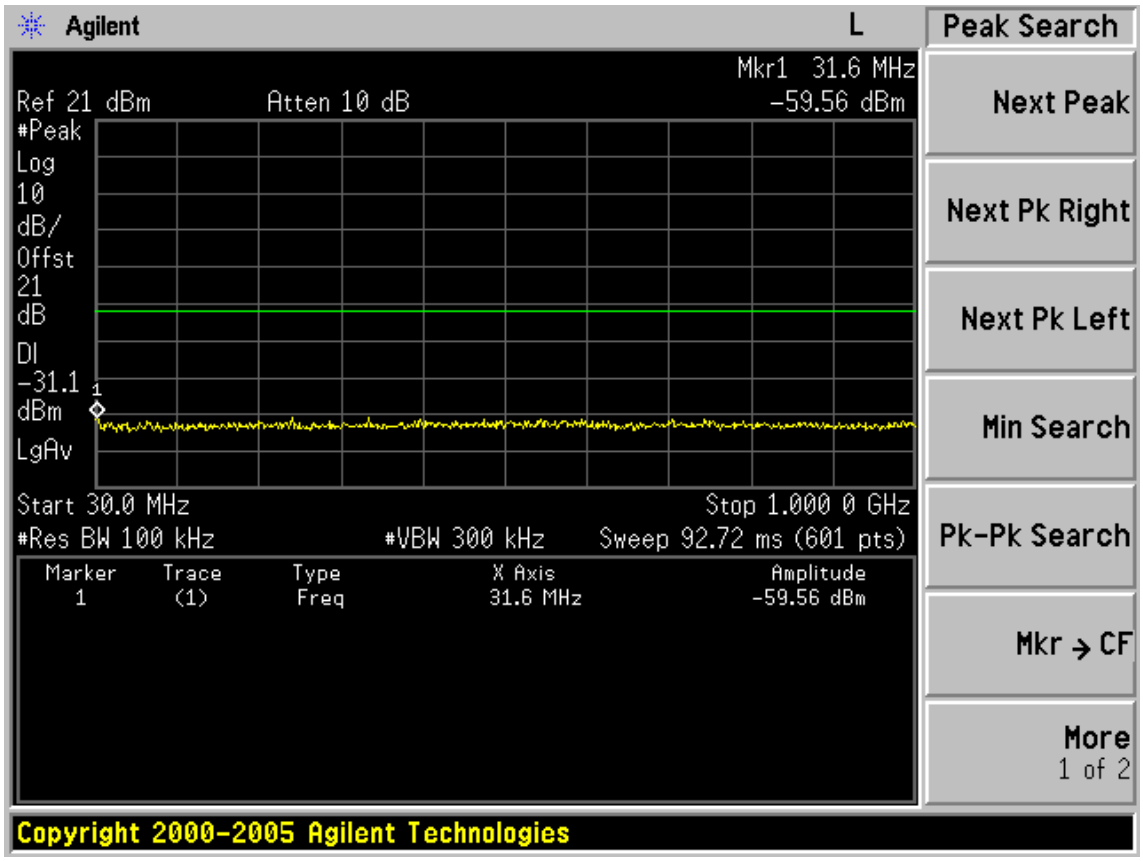


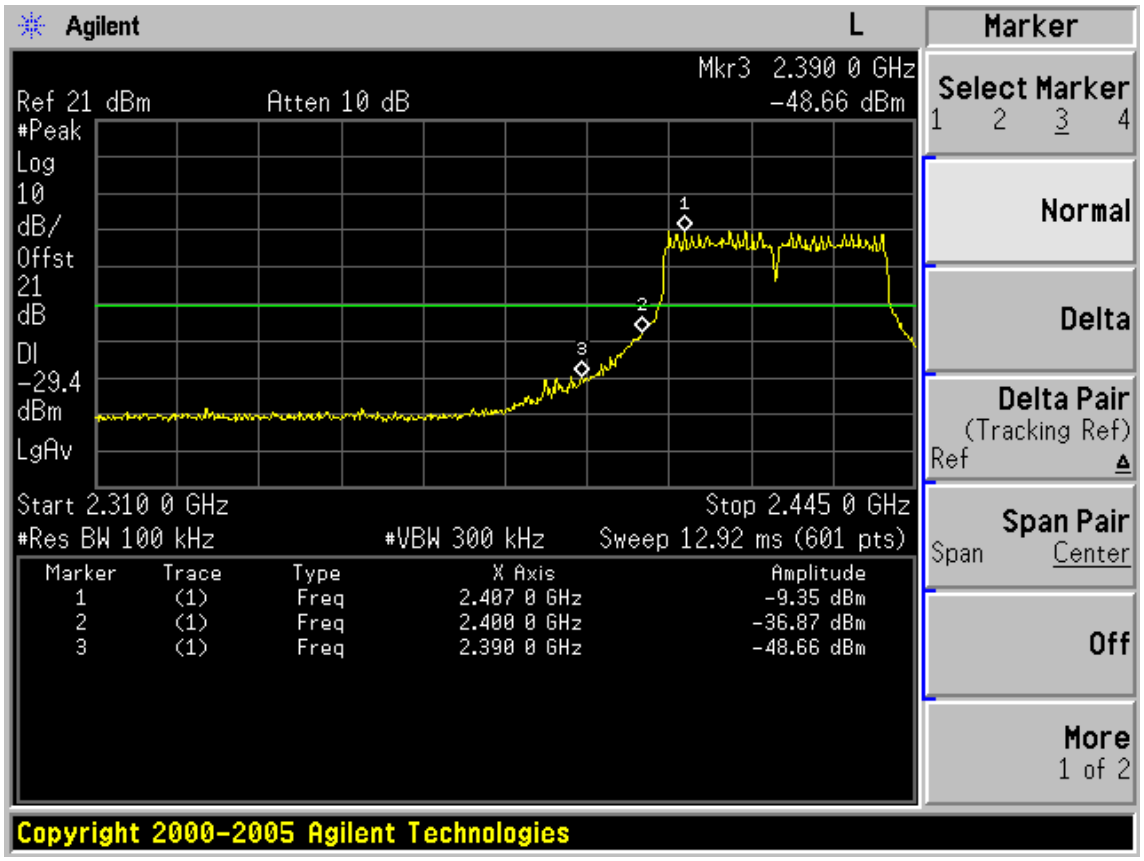

Agilent
L
Mkr1 2.455 GHz
Ref 21 dBm
Atten 10 dB
-2.75 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-22.8
dBm
LgAv
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.455 GHz -2.75 dBm
Display
Full Screen
Display Line
-26.75 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences
Copyright 2000-2005 Agilent Technologies

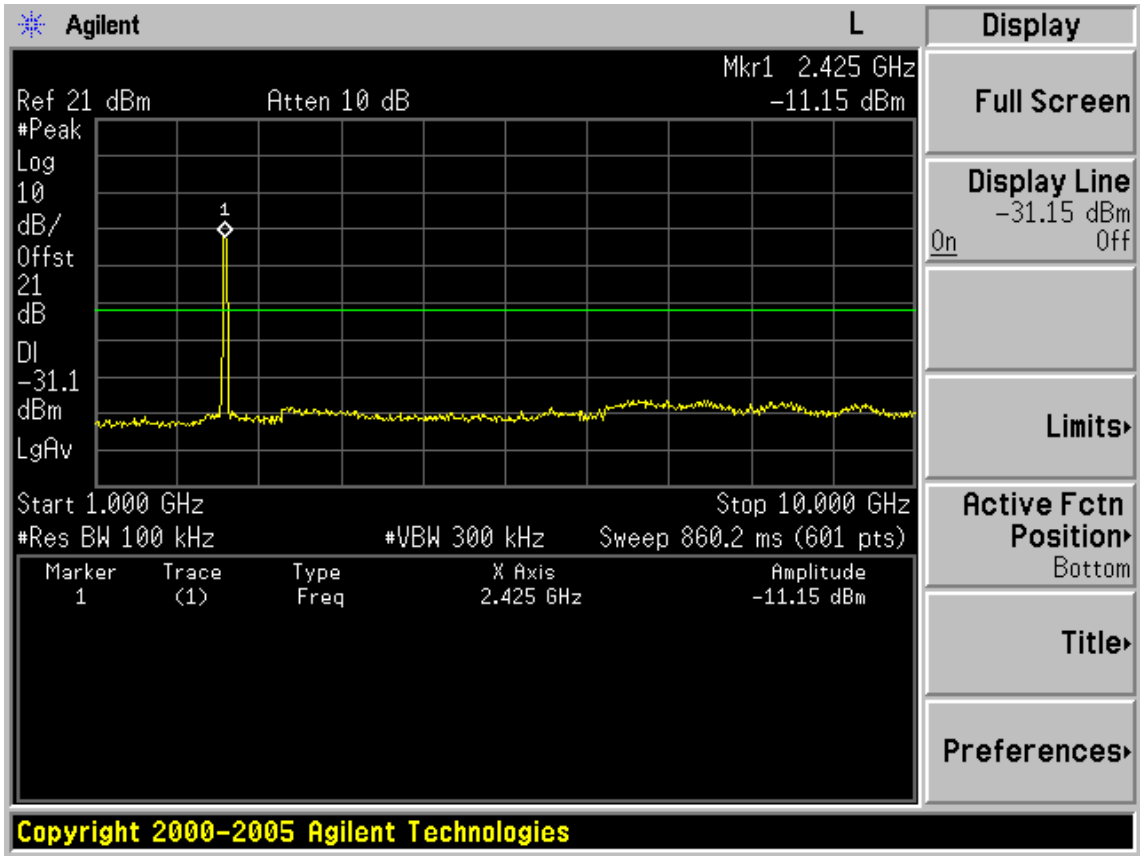

Agilent
L
Mkr3 2.500 00 GHz
Ref 21 dBm
Atten 10 dB
-55.38 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-23.0
dBm
LgAv
Start 2.450 00 GHz
Stop 2.510 00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.76 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.455 70 GHz -3.00 dBm
2 (1) Freq 2.483 50 GHz -50.73 dBm
3 (1) Freq 2.500 00 GHz -55.38 dBm
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Copyright 2000-2005 Agilent Technologies

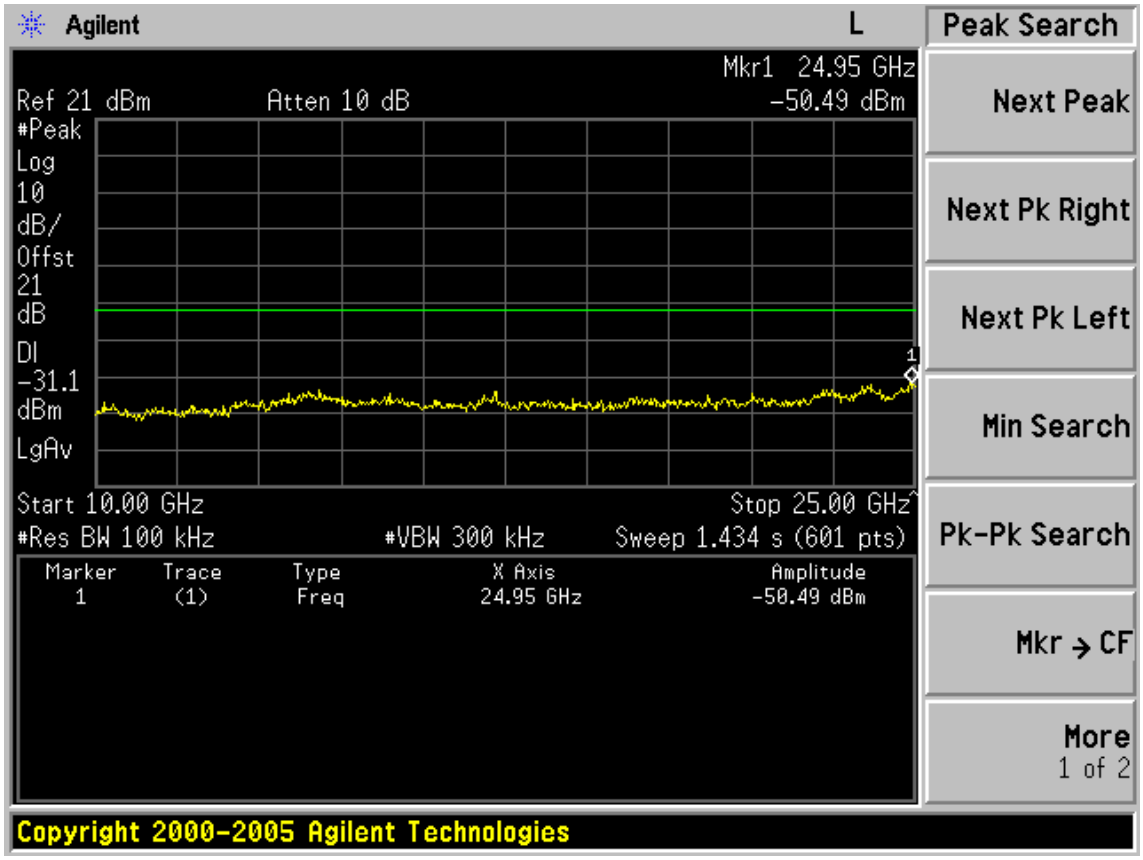


Test Mode: IEEE 802.11n HT40 TX
Test CH1: 2422MHz

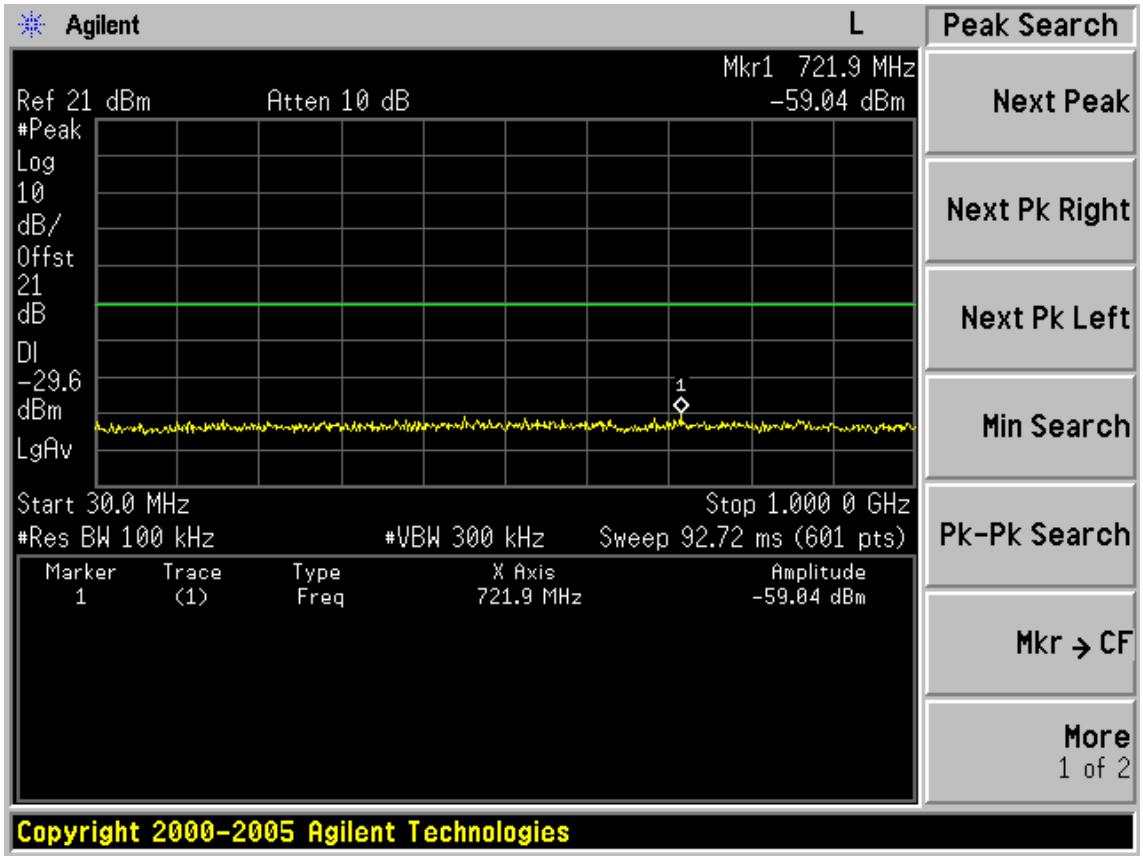


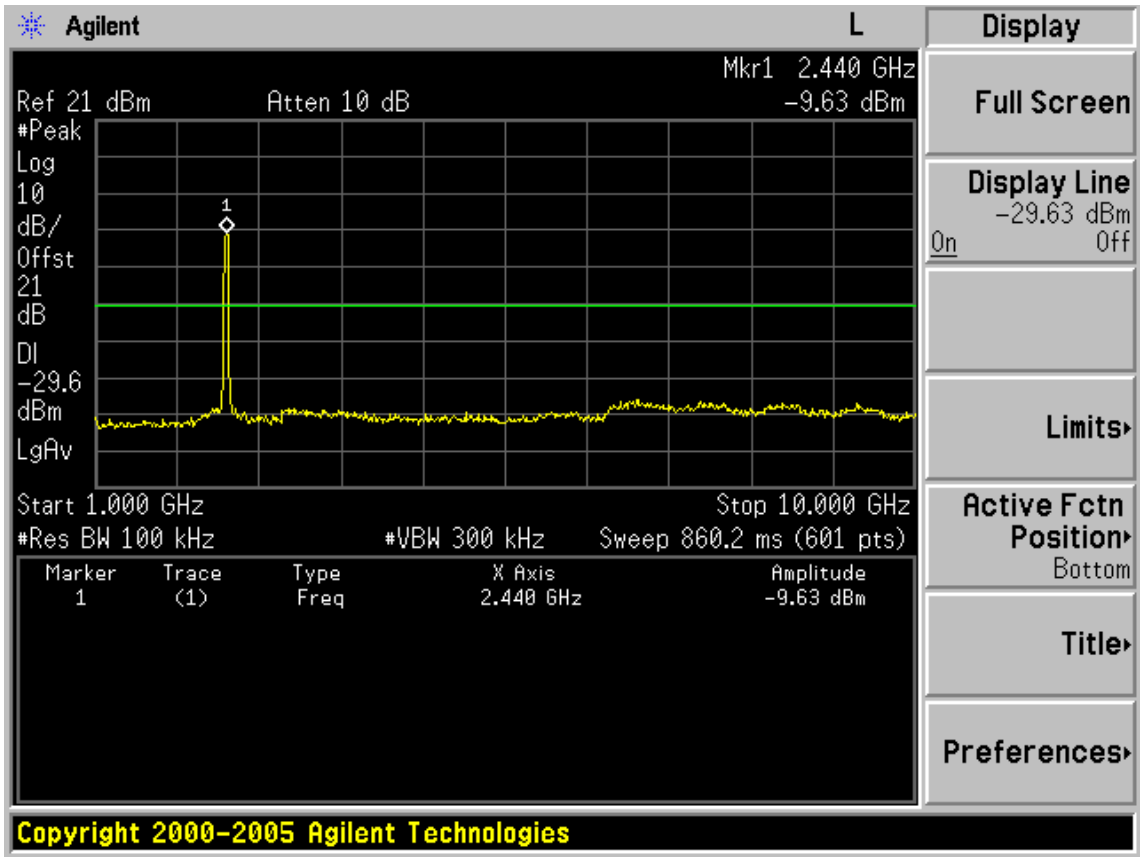

Agilent
L
Marker
Mkr3 2.390 0 GHz
Ref 21 dBm
Atten 10 dB
-48.66 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-29.4
dBm
LgAv
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Start 2.310 0 GHz
Stop 2.445 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 12.92 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.407 0 GHz -9.35 dBm
2 (1) Freq 2.400 0 GHz -36.87 dBm
3 (1) Freq 2.390 0 GHz -48.66 dBm
Copyright 2000-2005 Agilent Technologies

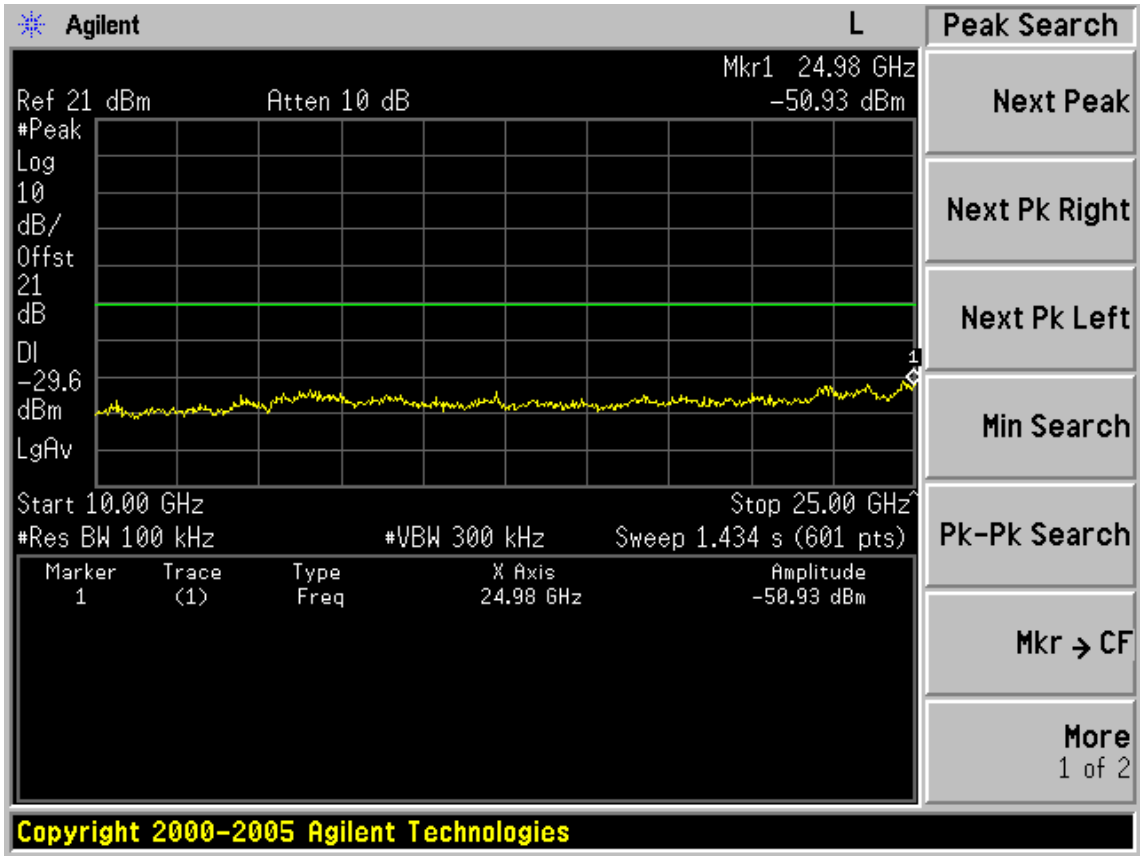

Agilent
L
Display
Mkr1 2.425 GHz
Ref 21 dBm
Atten 10 dB
-11.15 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-31.1
dBm
LgAv
Full Screen
Display Line
-31.15 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.425 GHz -11.15 dBm
Copyright 2000-2005 Agilent Technologies



Test CH4: 2437MHz




Agilent
L
Display
Mkr1 2.440 GHz
Ref 21 dBm
Atten 10 dB
-9.63 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-29.6
dBm
LgAv
Full Screen
Display Line
-29.63 dBm
On
Off
Limits
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Active Fctn
Position
Bottom
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.440 GHz -9.63 dBm
Title
Preferences
Copyright 2000-2005 Agilent Technologies


Agilent
L
Peak Search
Mkr1 24.98 GHz
Ref 21 dBm
Atten 10 dB
-50.93 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-29.6
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.98 GHz -50.93 dBm
Mkr → CF
More
1 of 2
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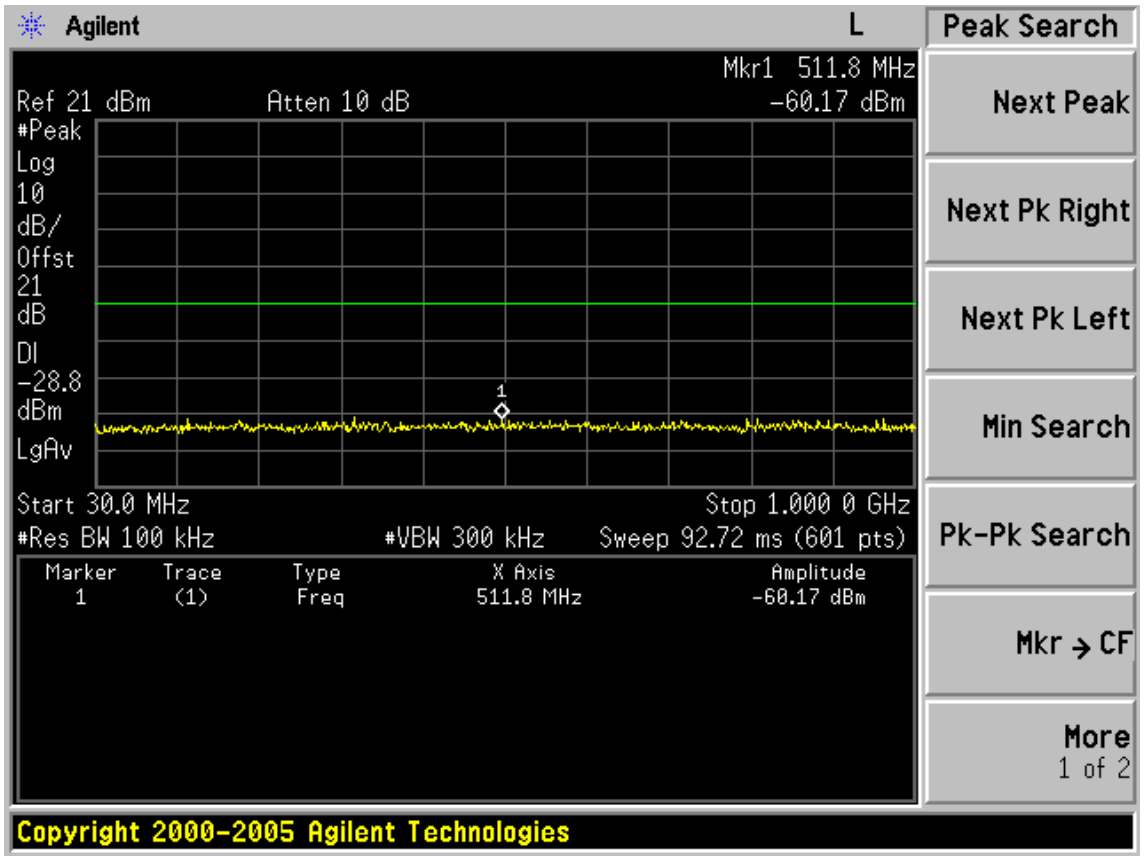
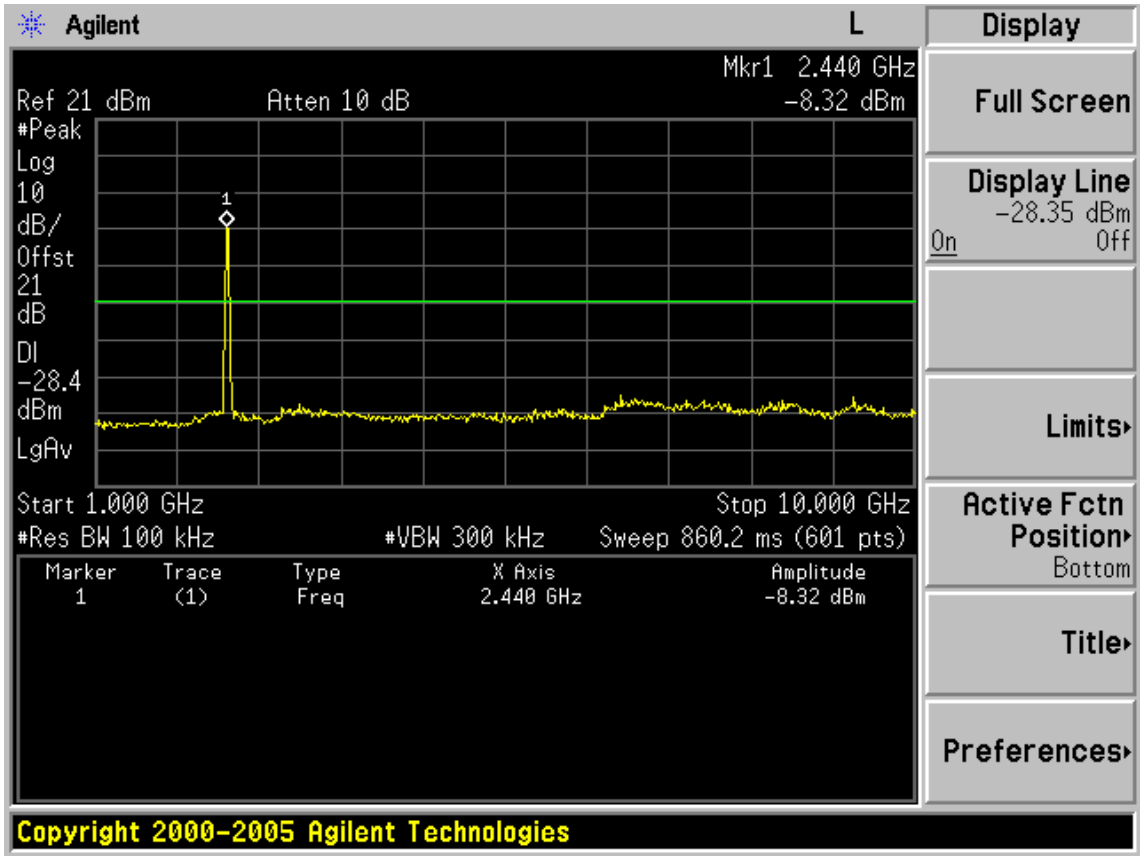
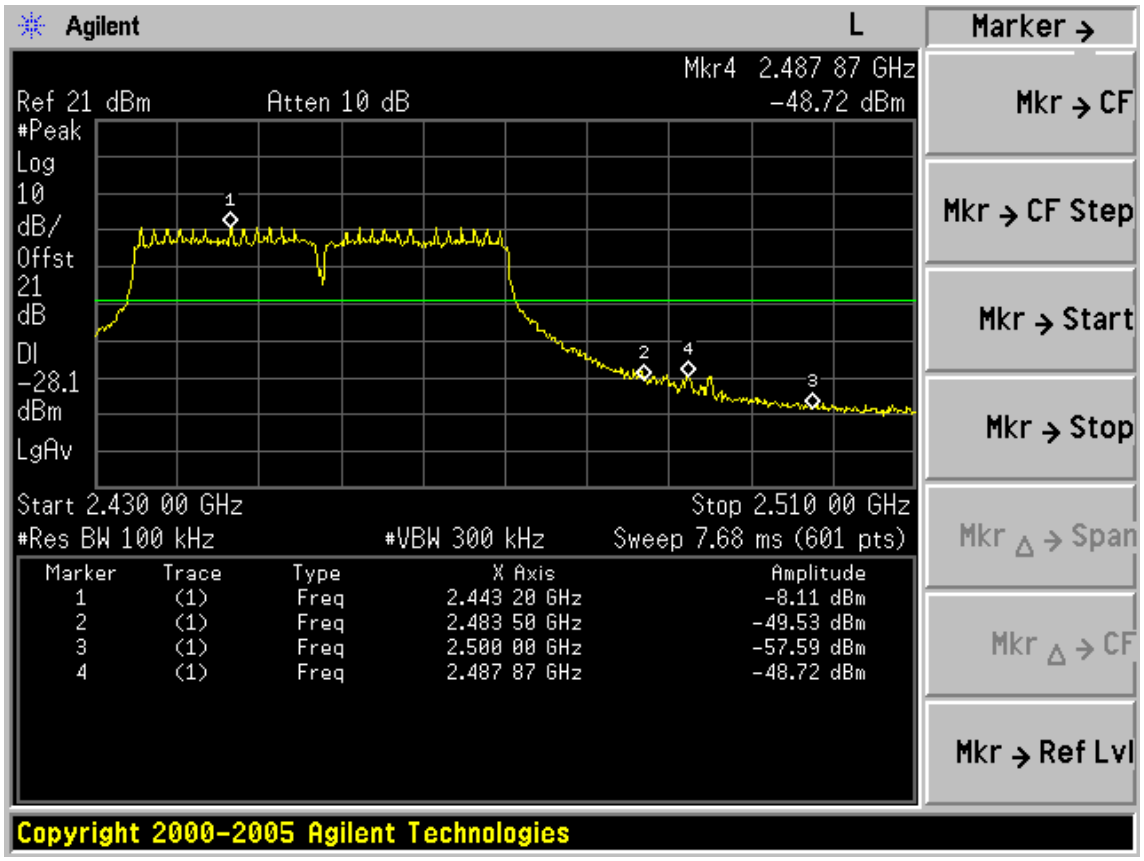
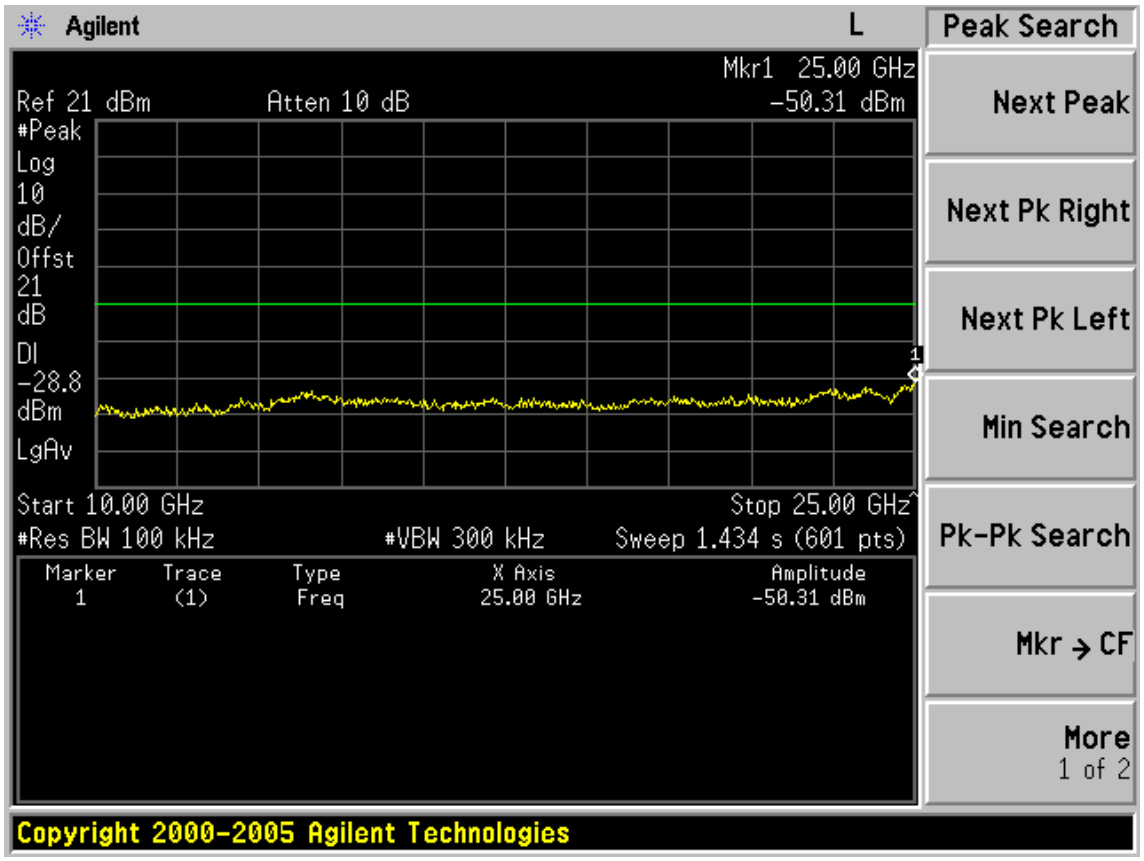
Test CH7: 2452MHz






Agilent
L
Marker →
Mkr4 2.487 87 GHz
Ref 21 dBm
Atten 10 dB
-48.72 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-28.1
dBm
LgAv
Mkr → CF
Mkr → CF Step
Mkr → Start
Mkr → Stop
Mkr Δ → Span
Mkr Δ → CF
Mkr → Ref Lvl
Start 2.430 00 GHz
Stop 2.510 00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 7.68 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.443 20 GHz -8.11 dBm
2 (1) Freq 2.483 50 GHz -49.53 dBm
3 (1) Freq 2.500 00 GHz -57.59 dBm
4 (1) Freq 2.487 87 GHz -48.72 dBm
Copyright 2000-2005 Agilent Technologies


Agilent
L
Peak Search
Mkr1 25.00 GHz
Ref 21 dBm
Atten 10 dB
-50.31 dBm
#Peak
Log
10
dB/
Offst
21
dB
Dl
-28.8
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 25.00 GHz -50.31 dBm
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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.

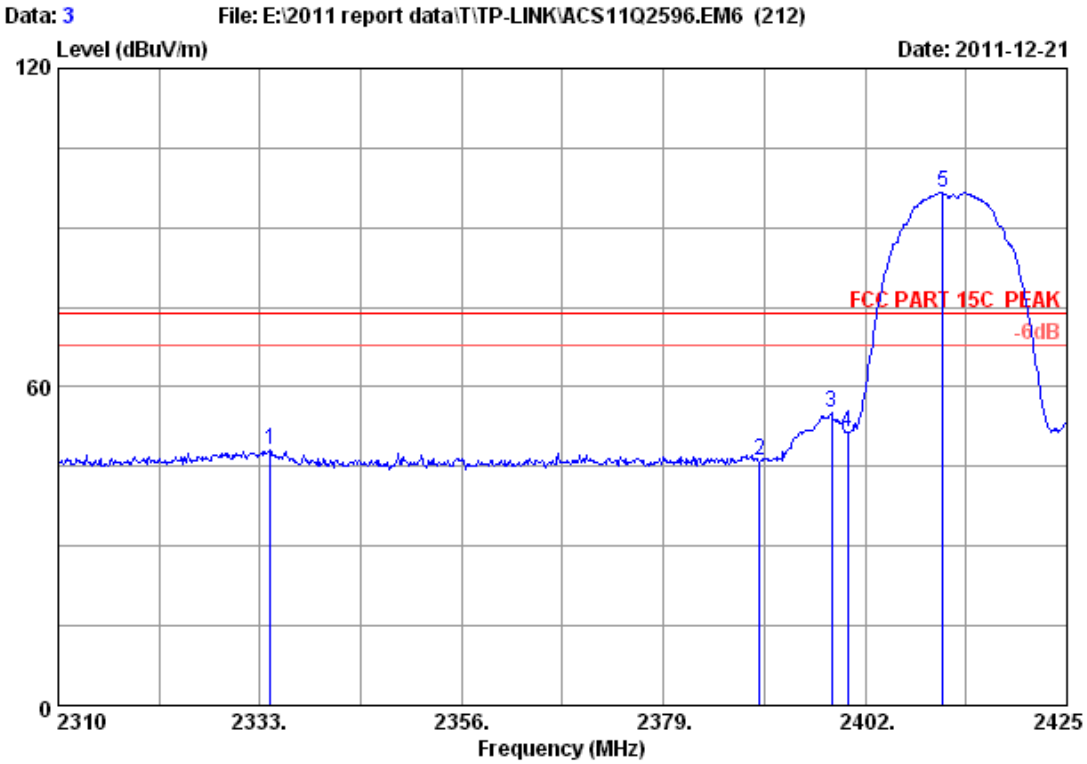
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

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

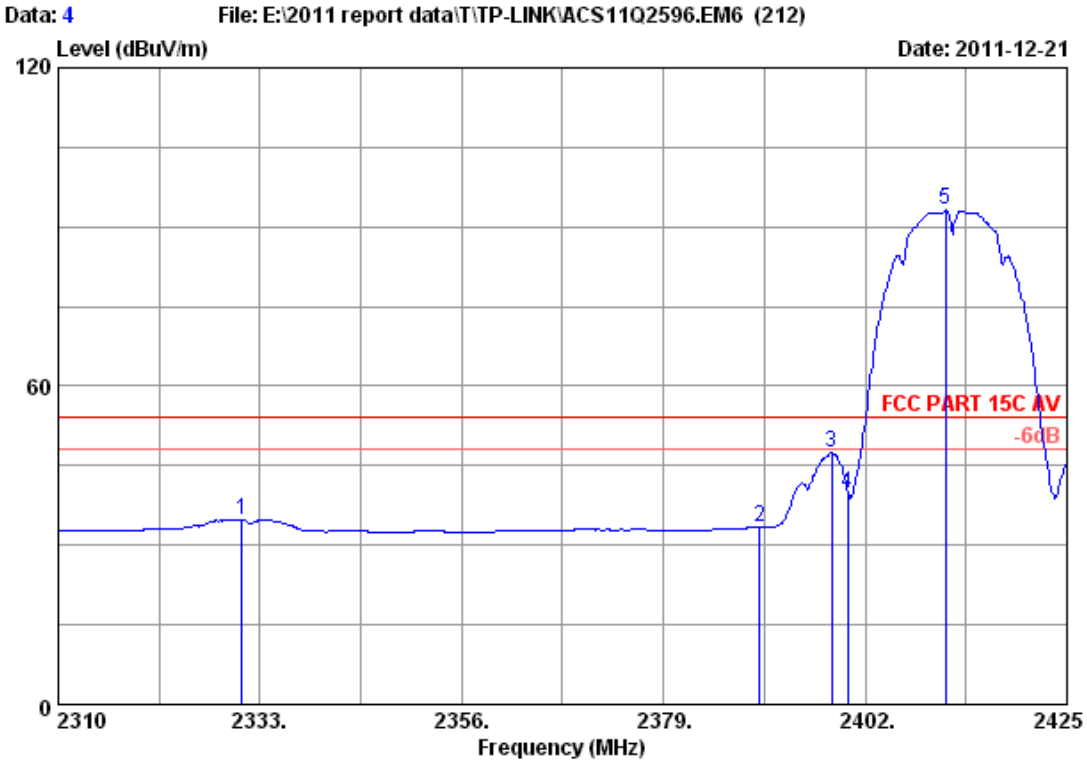
Pass (The testing data was attached in the next pages.)



Site no. : 3m Chamber Data no. : 3
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2334.150	27.86	5.92	34.43	48.87	48.22	74.00	25.78	Peak
2	2390.000	27.96	6.01	34.44	46.47	46.00	74.00	28.00	Peak
3	2398.205	27.96	6.01	34.44	55.48	55.01	74.00	18.99	Peak
4	2400.000	27.96	6.01	34.44	51.90	51.43	74.00	22.57	Peak
5	2410.855	27.98	6.03	34.44	96.91	96.48	74.00	-22.48	Peak

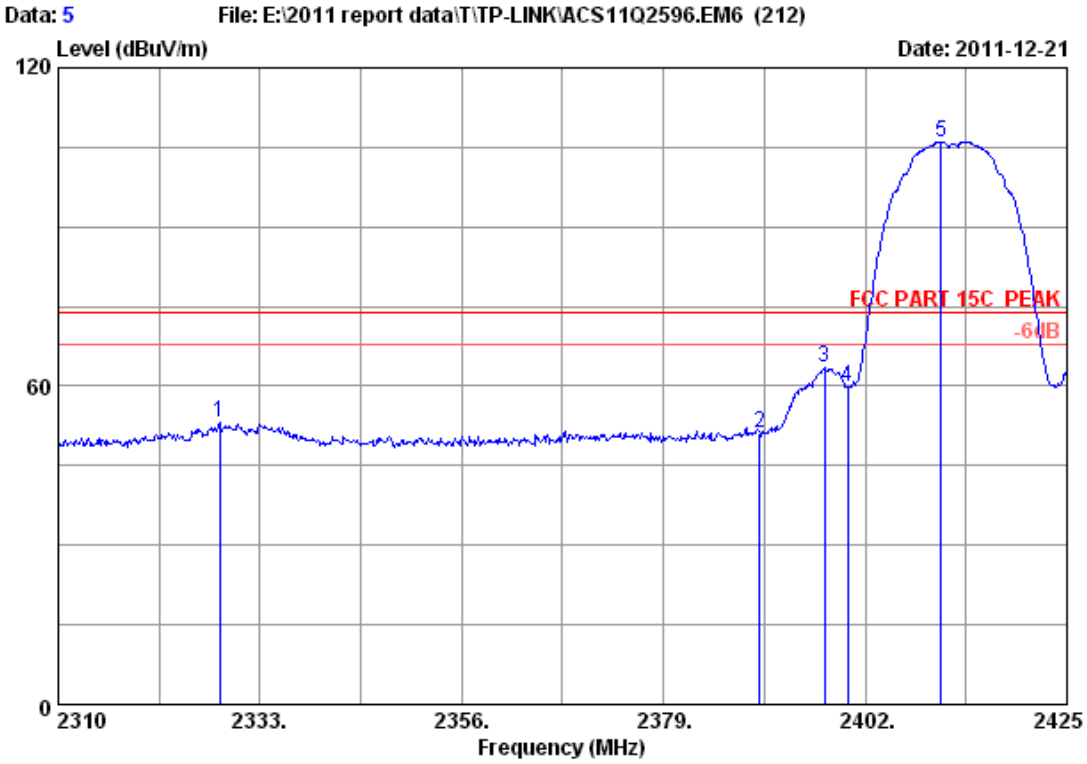
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 4
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2330.930	27.86	5.92	34.43	35.51	34.86	54.00	19.14	Average
2	2390.000	27.96	6.01	34.44	33.80	33.33	54.00	20.67	Average
3	2398.205	27.96	6.01	34.44	47.96	47.49	54.00	6.51	Average
4	2400.000	27.96	6.01	34.44	40.20	39.73	54.00	14.27	Average
5	2411.200	27.98	6.03	34.44	93.53	93.10	54.00	-39.10	Average

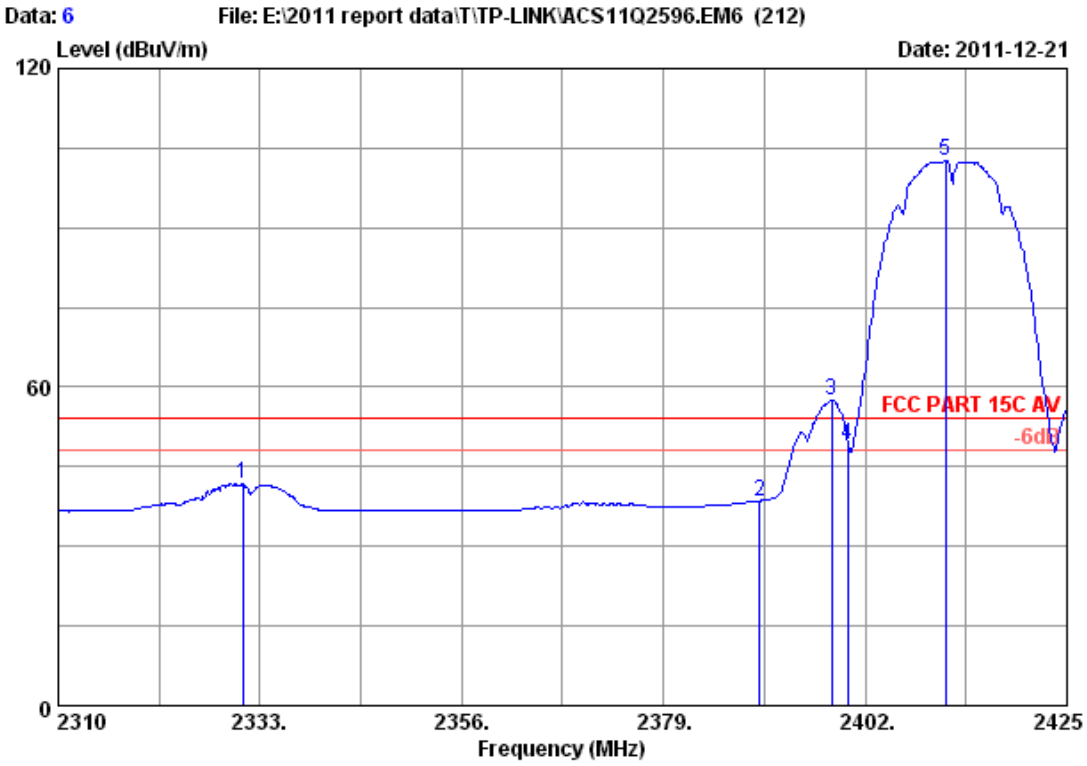
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 5
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2328.400	27.86	5.89	34.43	53.97	53.29	74.00	20.71	Peak
2	2390.000	27.96	6.01	34.44	51.51	51.04	74.00	22.96	Peak
3	2397.400	27.96	6.01	34.44	64.03	63.56	74.00	10.44	Peak
4	2400.000	27.96	6.01	34.44	60.16	59.69	74.00	14.31	Peak
5	2410.625	27.98	6.03	34.44	106.56	106.13	74.00	-32.13	Peak

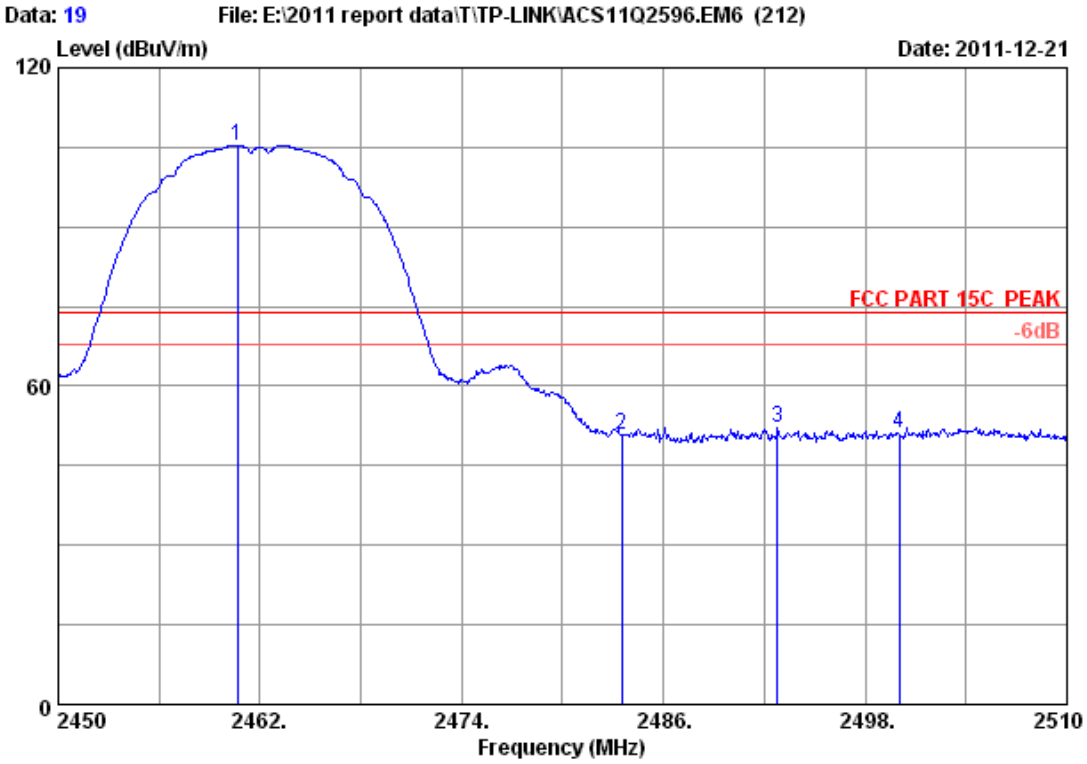
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 6
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2331.045	27.86	5.92	34.43	42.46	41.81	54.00	12.19	Average
2	2390.000	27.96	6.01	34.44	39.04	38.57	54.00	15.43	Average
3	2398.205	27.96	6.01	34.44	58.12	57.65	54.00	-3.65	Average
4	2400.000	27.96	6.01	34.44	49.46	48.99	54.00	5.01	Average
5	2411.200	27.98	6.03	34.44	103.13	102.70	54.00	-48.70	Average

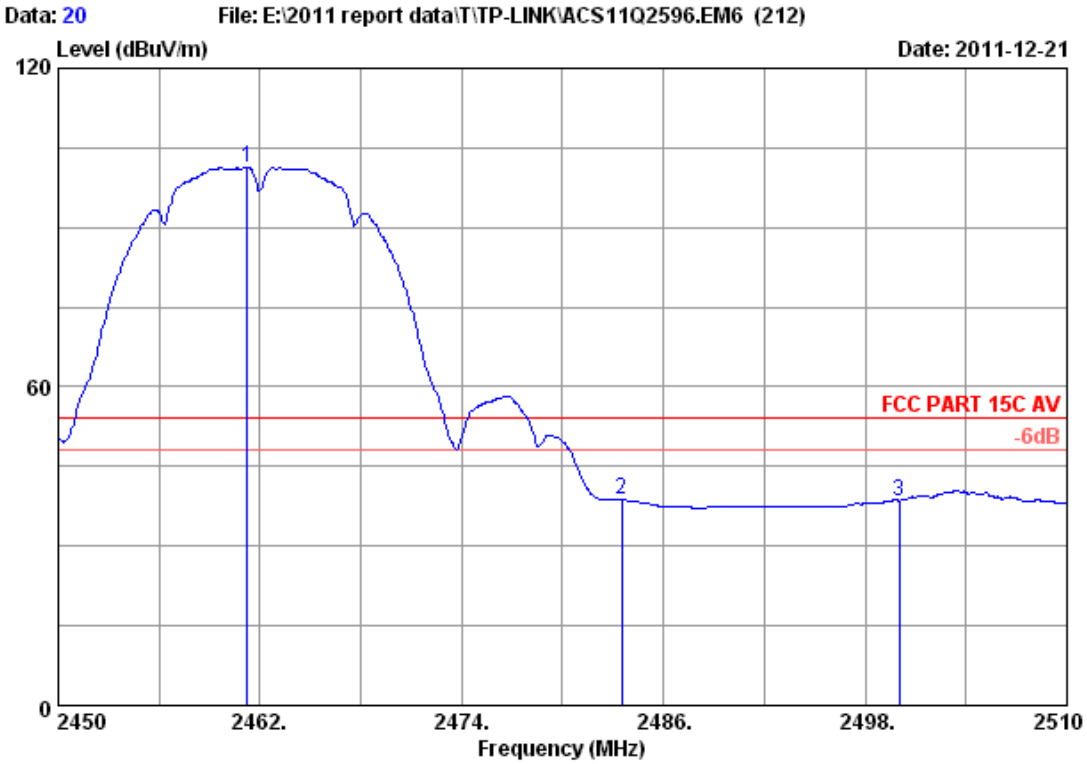
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 19
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.680	28.05	6.12	34.44	105.59	105.32	74.00	-31.32	Peak
2	2483.500	28.08	6.15	34.45	51.04	50.82	74.00	23.18	Peak
3	2492.780	28.10	6.18	34.45	52.38	52.21	74.00	21.79	Peak
4	2500.000	28.10	6.18	34.45	51.27	51.10	74.00	22.90	Peak

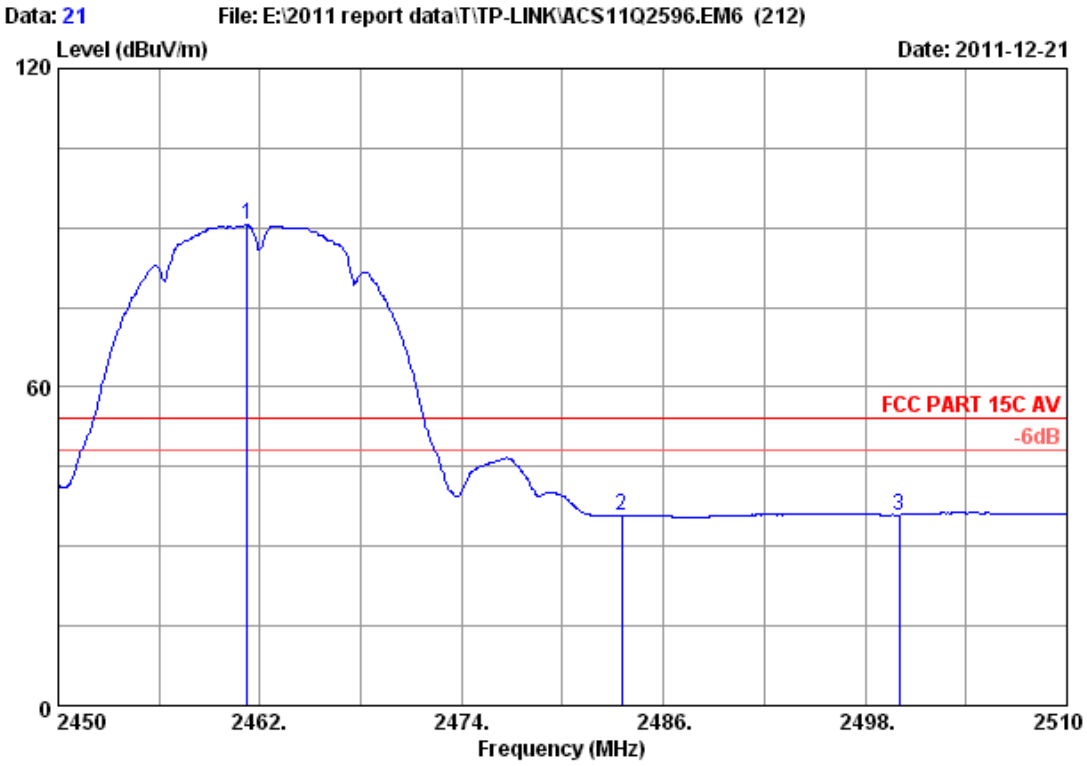
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 20
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.220	28.05	6.12	34.44	101.72	101.45	54.00	-47.45	Average
2	2483.500	28.08	6.15	34.45	38.98	38.76	54.00	15.24	Average
3	2500.000	28.10	6.18	34.45	38.63	38.46	54.00	15.54	Average

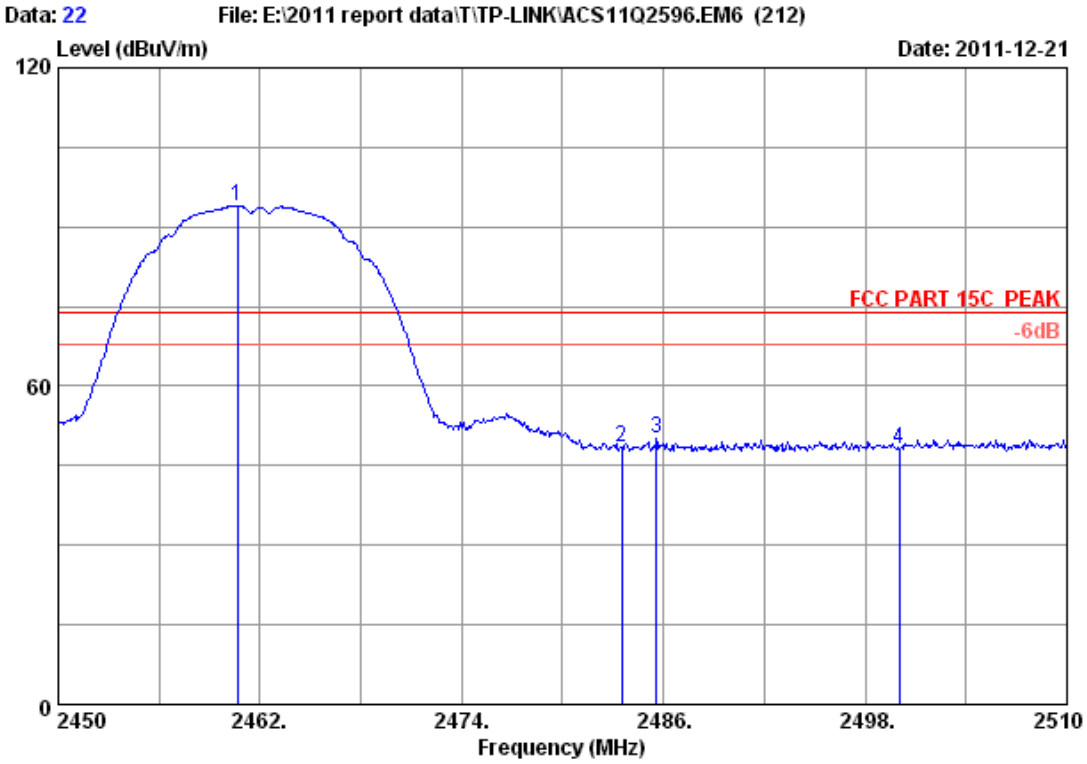
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 21
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.220	28.05	6.12	34.44	90.75	90.48	54.00	-36.48	Average
2	2483.500	28.08	6.15	34.45	36.03	35.81	54.00	18.19	Average
3	2500.000	28.10	6.18	34.45	36.07	35.90	54.00	18.10	Average

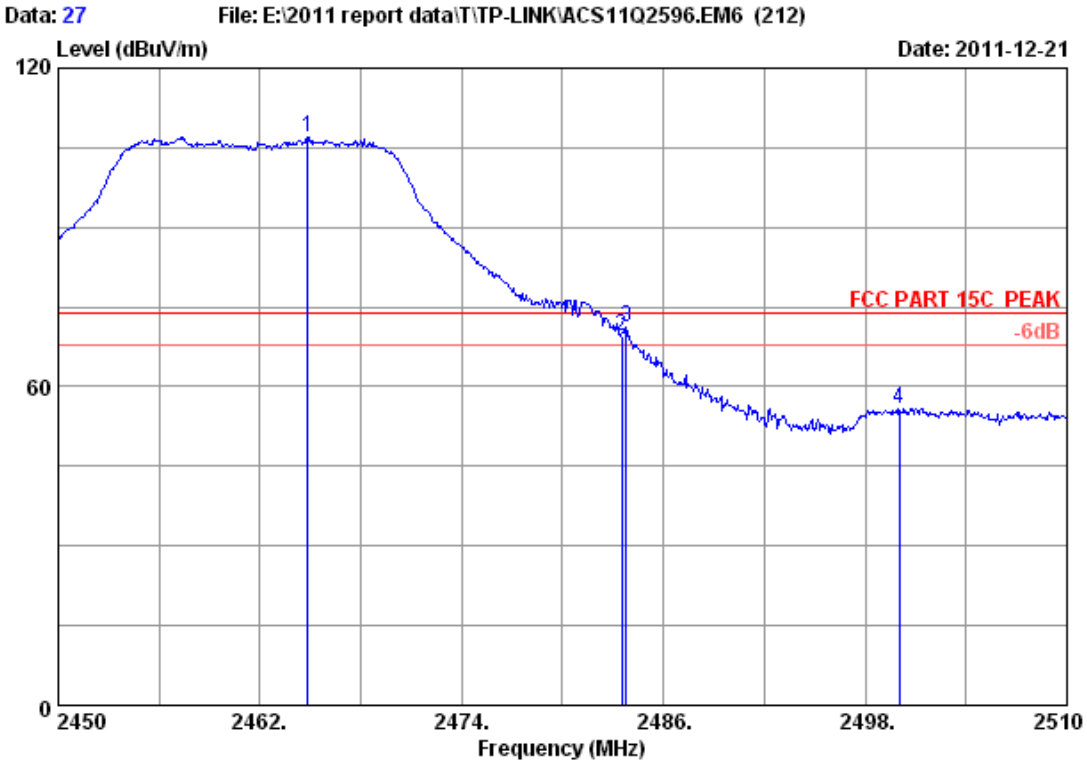
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 22
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.680	28.05	6.12	34.44	94.19	93.92	74.00	-19.92	Peak
2	2483.500	28.08	6.15	34.45	48.61	48.39	74.00	25.61	Peak
3	2485.580	28.08	6.15	34.45	50.40	50.18	74.00	23.82	Peak
4	2500.000	28.10	6.18	34.45	48.44	48.27	74.00	25.73	Peak

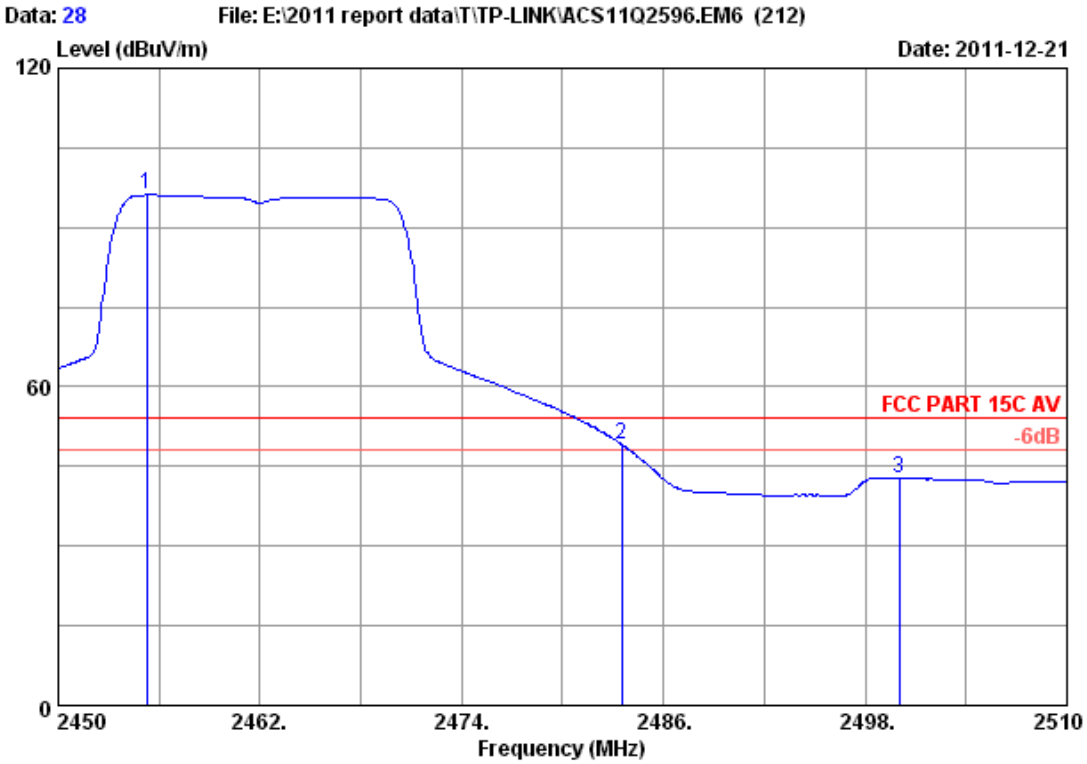
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 27
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2464.820	28.05	6.12	34.45	107.21	106.93	74.00	-32.93	Peak
2	2483.500	28.08	6.15	34.45	69.89	69.67	74.00	4.33	Peak
3	2483.780	28.08	6.15	34.45	71.32	71.10	74.00	2.90	Peak
4	2500.000	28.10	6.18	34.45	55.92	55.75	74.00	18.25	Peak

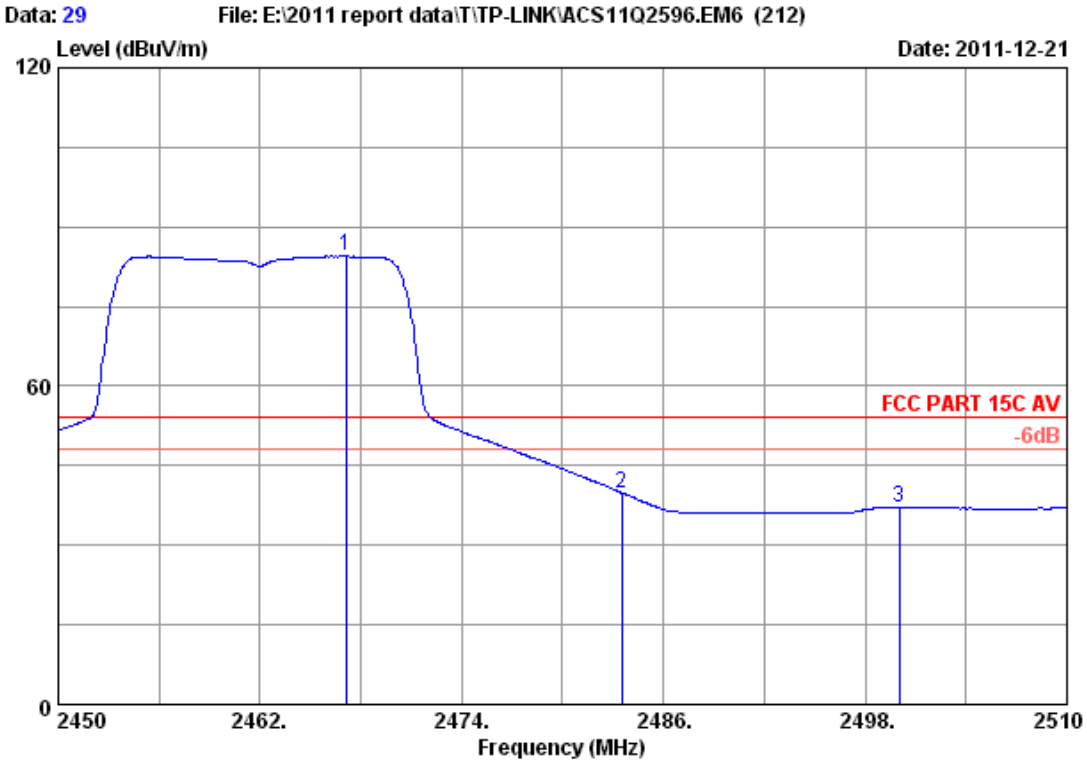
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 28
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2455.280	28.05	6.09	34.44	96.46	96.16	54.00	-42.16	Average
2	2483.500	28.08	6.15	34.45	49.37	49.15	54.00	4.85	Average
3	2500.000	28.10	6.18	34.45	43.04	42.87	54.00	11.13	Average

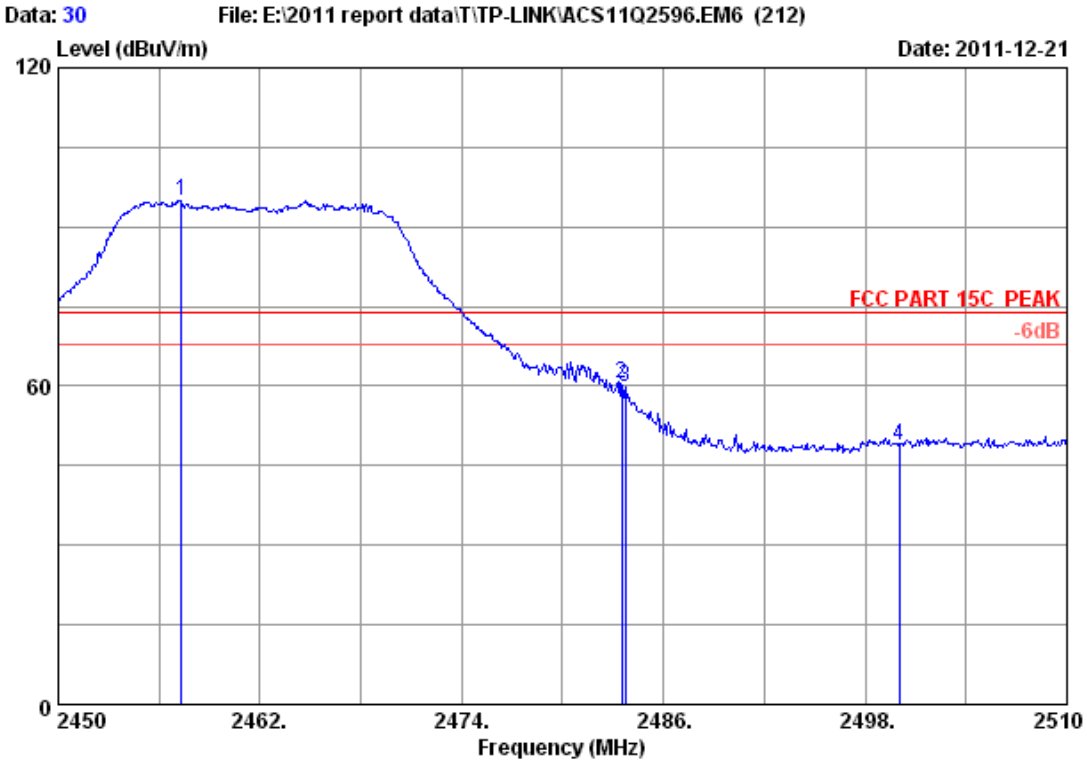
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 29
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2467.100	28.05	6.12	34.45	84.70	84.42	54.00	-30.42	Average
2	2483.500	28.08	6.15	34.45	40.14	39.92	54.00	14.08	Average
3	2500.000	28.10	6.18	34.45	37.21	37.04	54.00	16.96	Average

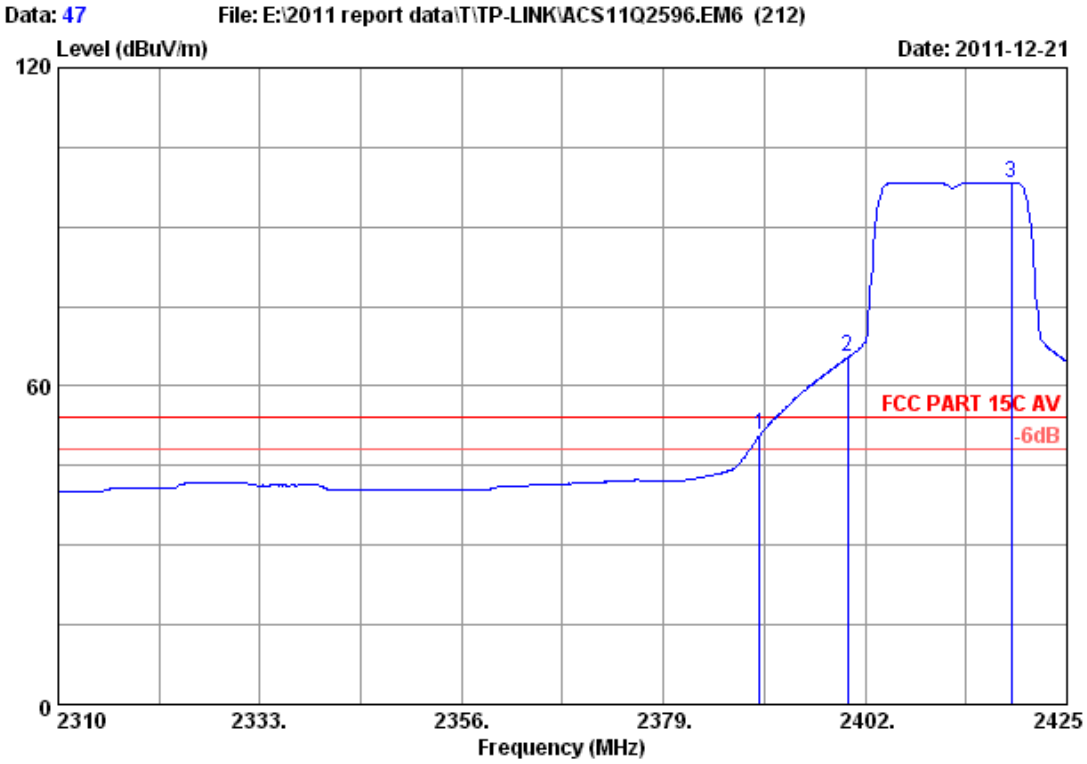
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 30
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2457.320	28.05	6.12	34.44	95.30	95.03	74.00	-21.03	Peak
2	2483.500	28.08	6.15	34.45	60.59	60.37	74.00	13.63	Peak
3	2483.720	28.08	6.15	34.45	59.96	59.74	74.00	14.26	Peak
4	2500.000	28.10	6.18	34.45	49.02	48.85	74.00	25.15	Peak

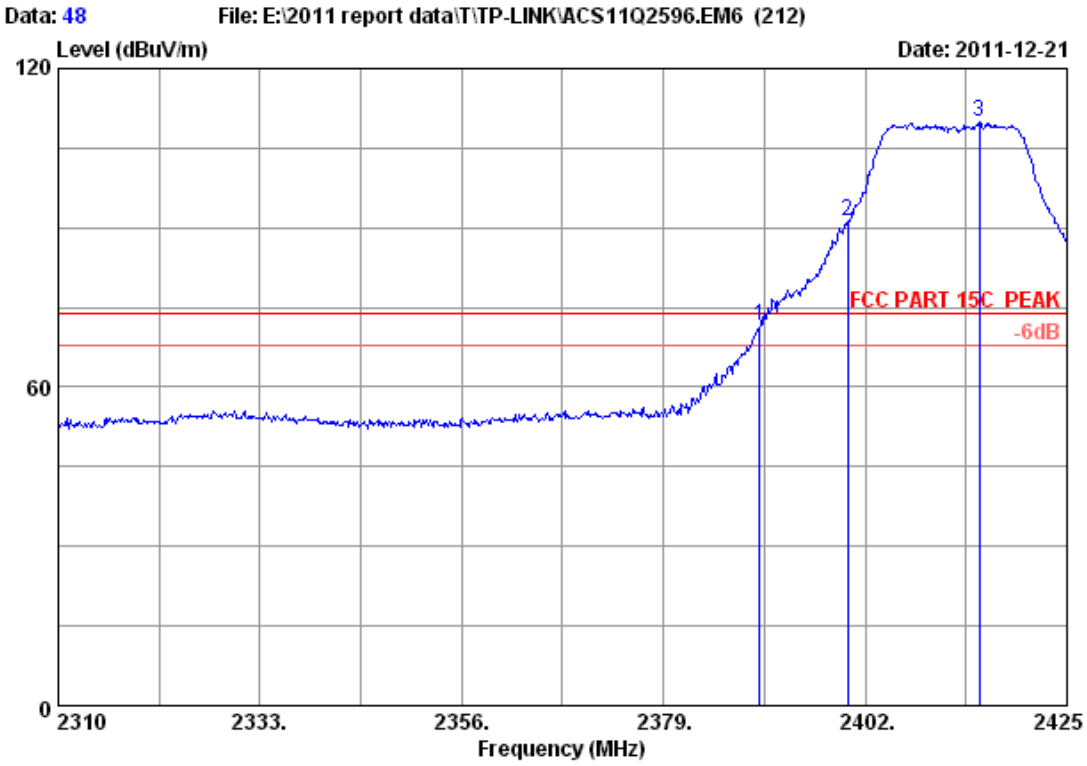
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 47
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.01	34.44	51.27	50.80	54.00	3.20	Average
2	2400.000	27.96	6.01	34.44	65.99	65.52	54.00	-11.52	Average
3	2418.675	27.98	6.03	34.44	98.80	98.37	54.00	-44.37	Average

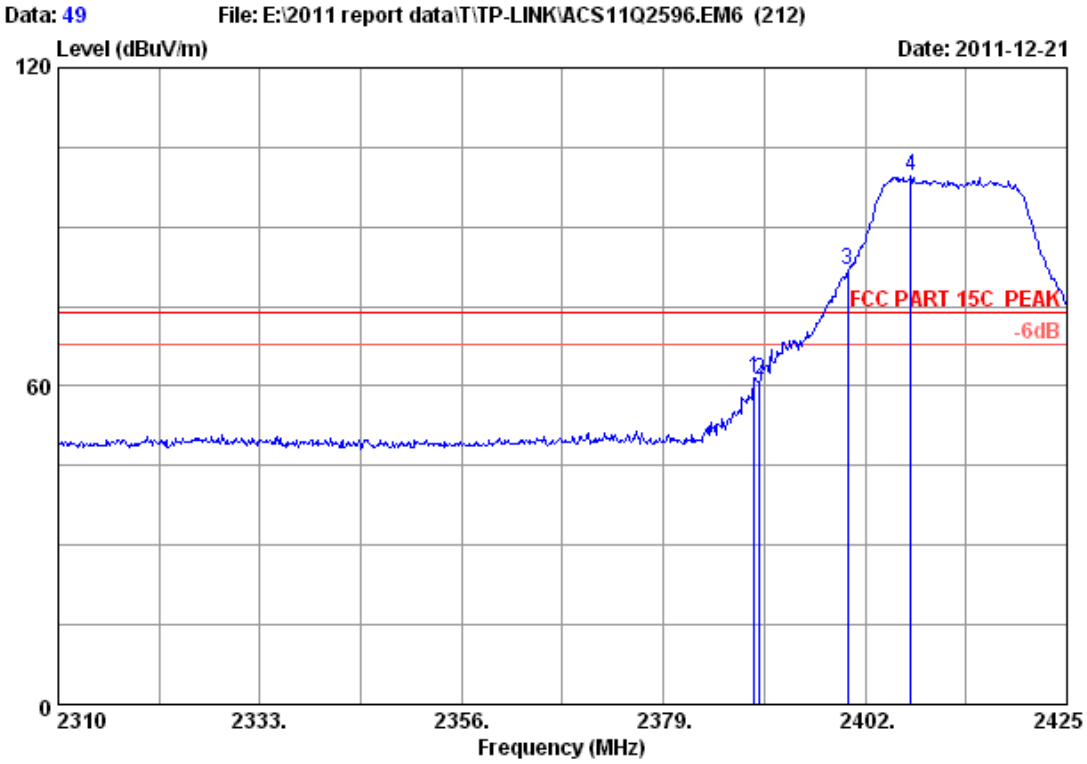
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 48
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.01	34.44	72.05	71.58	74.00	2.42	Peak
2	2400.000	27.96	6.01	34.44	91.68	91.21	74.00	-17.21	Peak
3	2414.995	27.98	6.03	34.44	110.33	109.90	74.00	-35.90	Peak

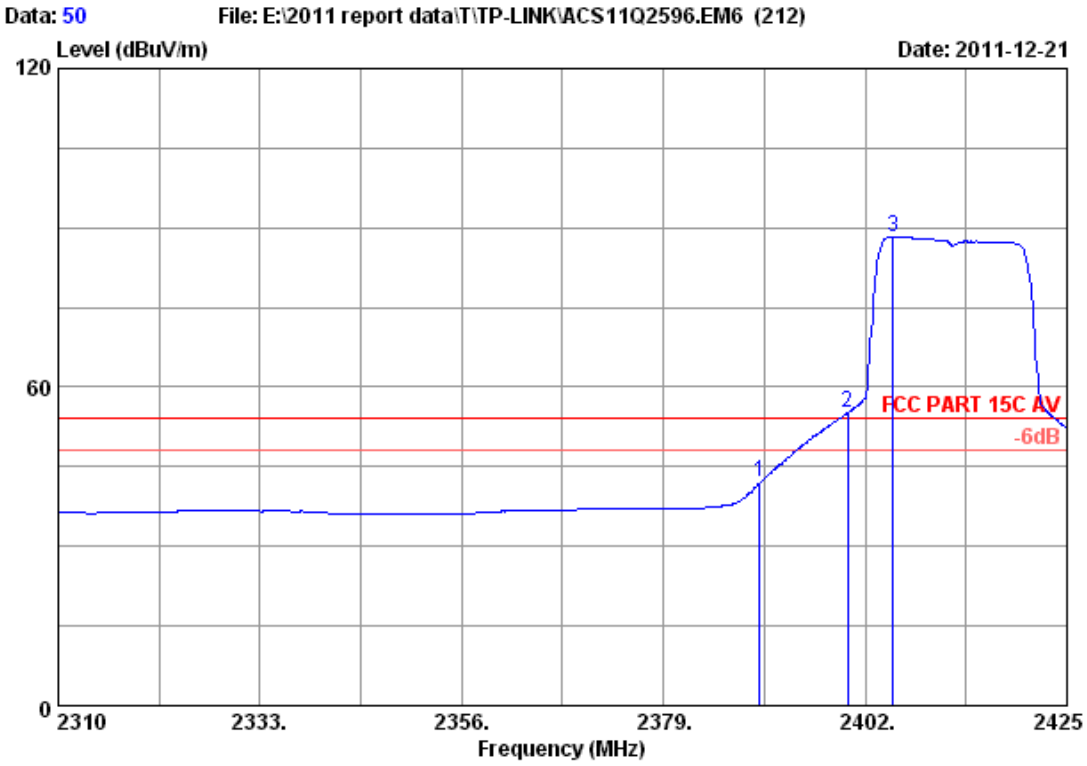
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 49
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.350	27.96	6.01	34.44	62.01	61.54	74.00	12.46	Peak
2	2390.000	27.96	6.01	34.44	61.63	61.16	74.00	12.84	Peak
3	2400.000	27.96	6.01	34.44	82.40	81.93	74.00	-7.93	Peak
4	2407.175	27.98	6.03	34.44	100.15	99.72	74.00	-25.72	Peak

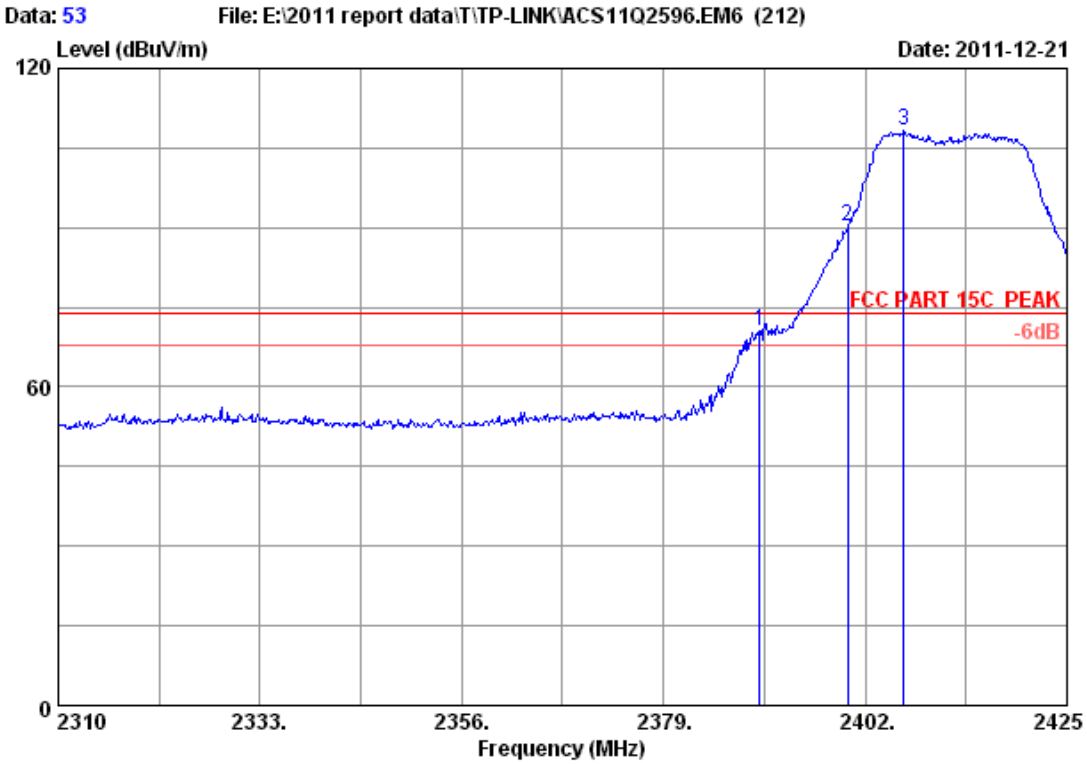
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 50
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.01	34.44	42.46	41.99	54.00	12.01	Average
2	2400.000	27.96	6.01	34.44	55.71	55.24	54.00	-1.24	Average
3	2405.220	27.98	6.03	34.44	88.84	88.41	54.00	-34.41	Average

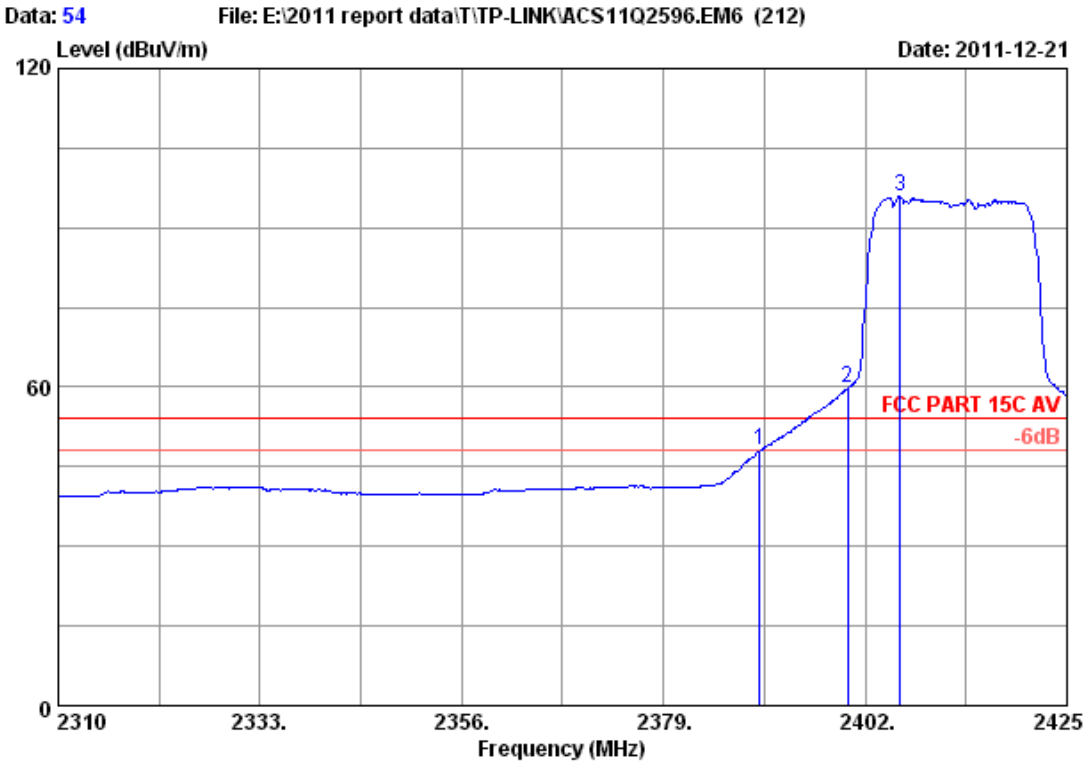
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 53
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.01	34.44	70.97	70.50	74.00	3.50	Peak
2	2400.000	27.96	6.01	34.44	90.70	90.23	74.00	-16.23	Peak
3	2406.370	27.98	6.03	34.44	108.59	108.16	74.00	-34.16	Peak

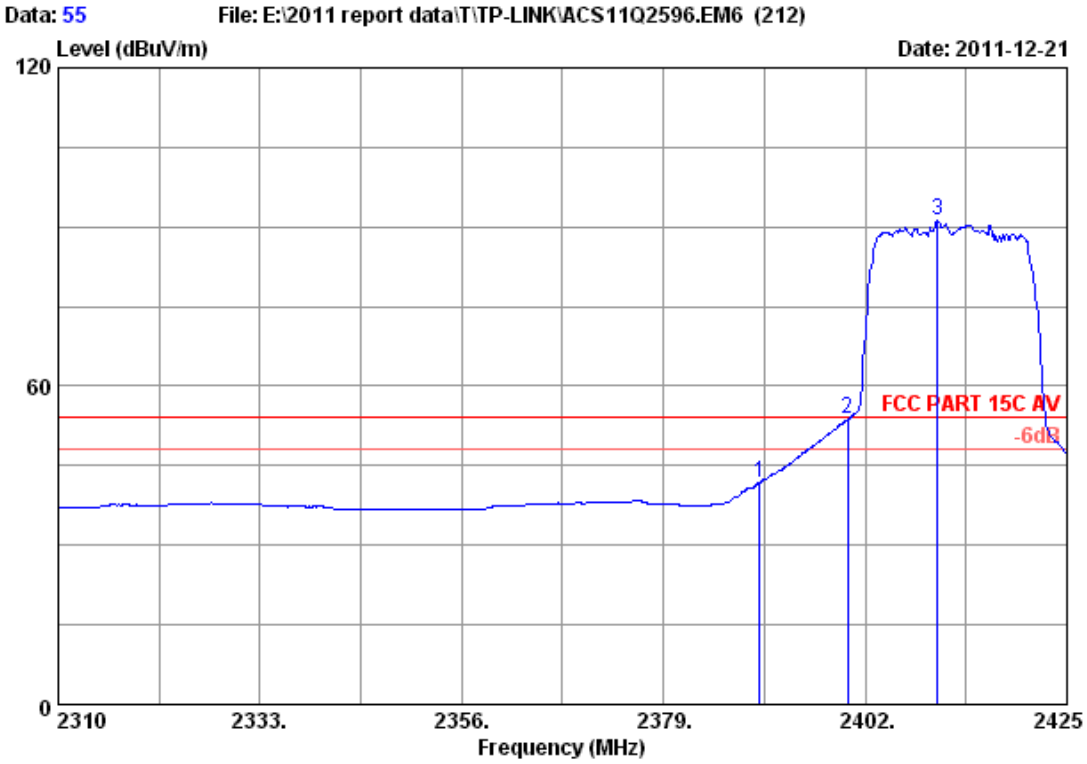
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 54
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.01	34.44	48.54	48.07	54.00	5.93	Average
2	2400.000	27.96	6.01	34.44	60.37	59.90	54.00	-5.90	Average
3	2406.025	27.98	6.03	34.44	96.41	95.98	54.00	-41.98	Average

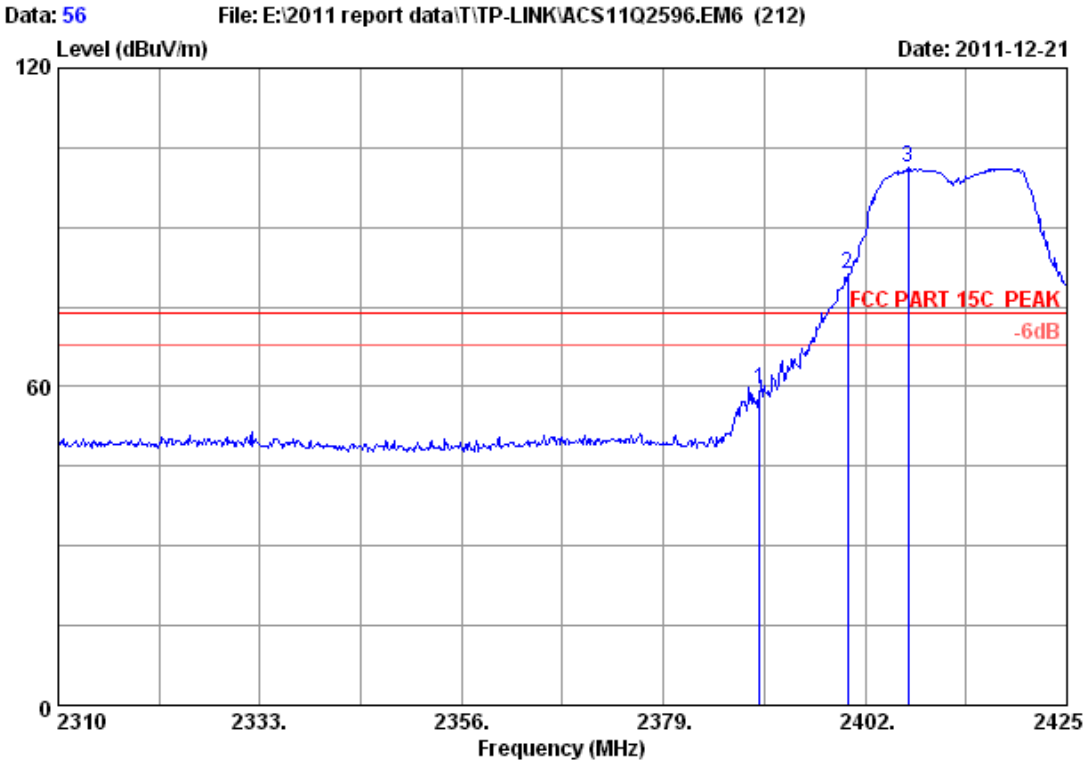
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 55
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.01	34.44	42.40	41.93	54.00	12.07	Average
2	2400.000	27.96	6.01	34.44	54.25	53.78	54.00	0.22	Average
3	2410.280	27.98	6.03	34.44	91.52	91.09	54.00	-37.09	Average

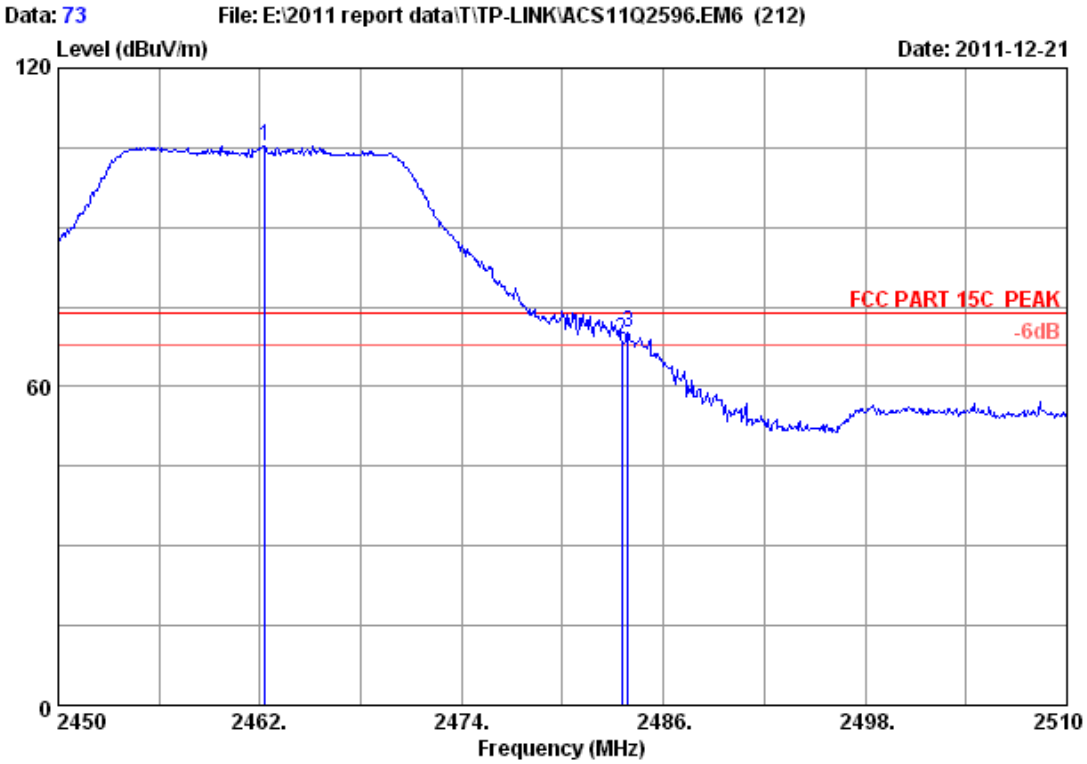
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 56
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.01	34.44	60.09	59.62	74.00	14.38	Peak
2	2400.000	27.96	6.01	34.44	81.65	81.18	74.00	-7.18	Peak
3	2406.945	27.98	6.03	34.44	101.55	101.12	74.00	-27.12	Peak

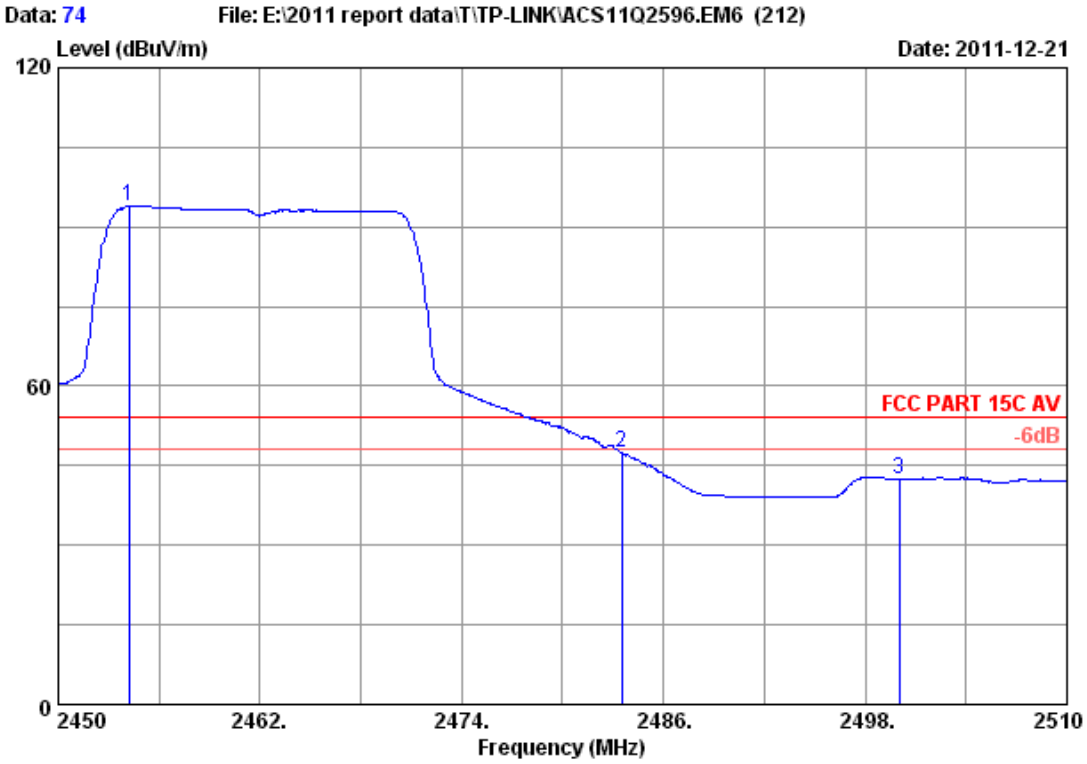
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 73
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.300	28.05	6.12	34.44	105.65	105.38	74.00	-31.38	Peak
2	2483.500	28.08	6.15	34.45	68.97	68.75	74.00	5.25	Peak
3	2483.900	28.08	6.15	34.45	70.55	70.33	74.00	3.67	Peak

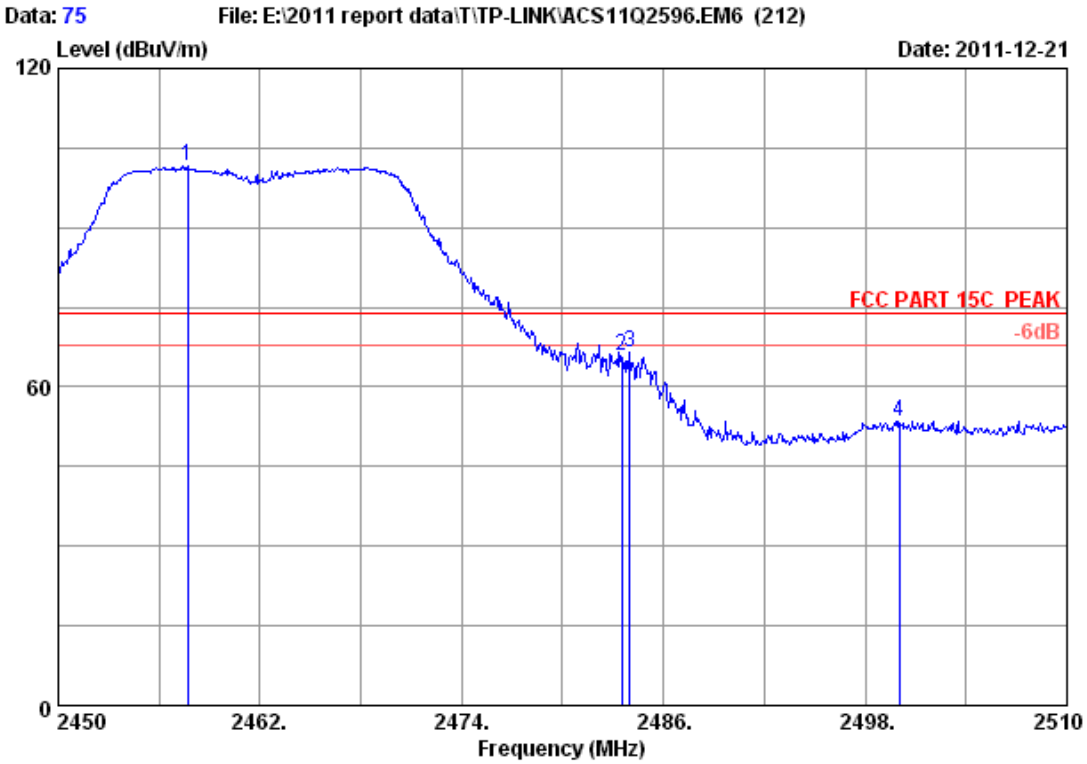
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 74
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2454.200	28.05	6.09	34.44	94.23	93.93	54.00	-39.93	Average
2	2483.500	28.08	6.15	34.45	47.69	47.47	54.00	6.53	Average
3	2500.000	28.10	6.18	34.45	42.72	42.55	54.00	11.45	Average

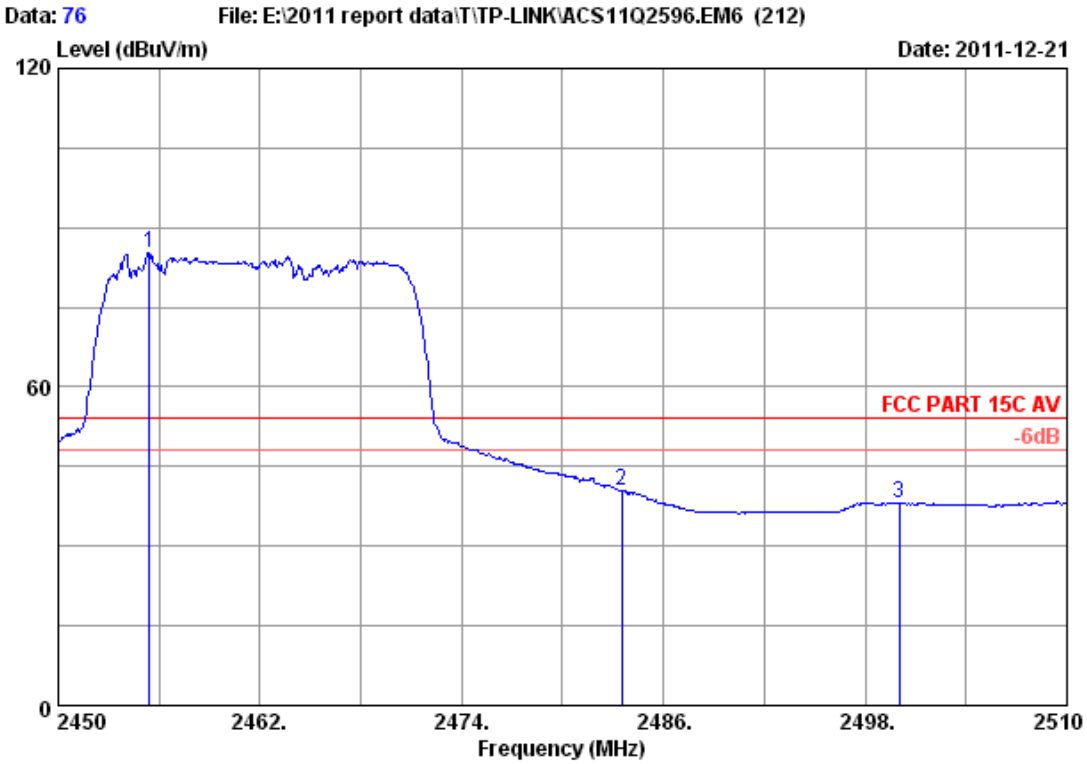
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 75
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2457.680	28.05	6.12	34.44	101.79	101.52	74.00	-27.52	Peak
2	2483.500	28.08	6.15	34.45	66.00	65.78	74.00	8.22	Peak
3	2484.020	28.08	6.15	34.45	66.63	66.41	74.00	7.59	Peak
4	2500.000	28.10	6.18	34.45	53.53	53.36	74.00	20.64	Peak

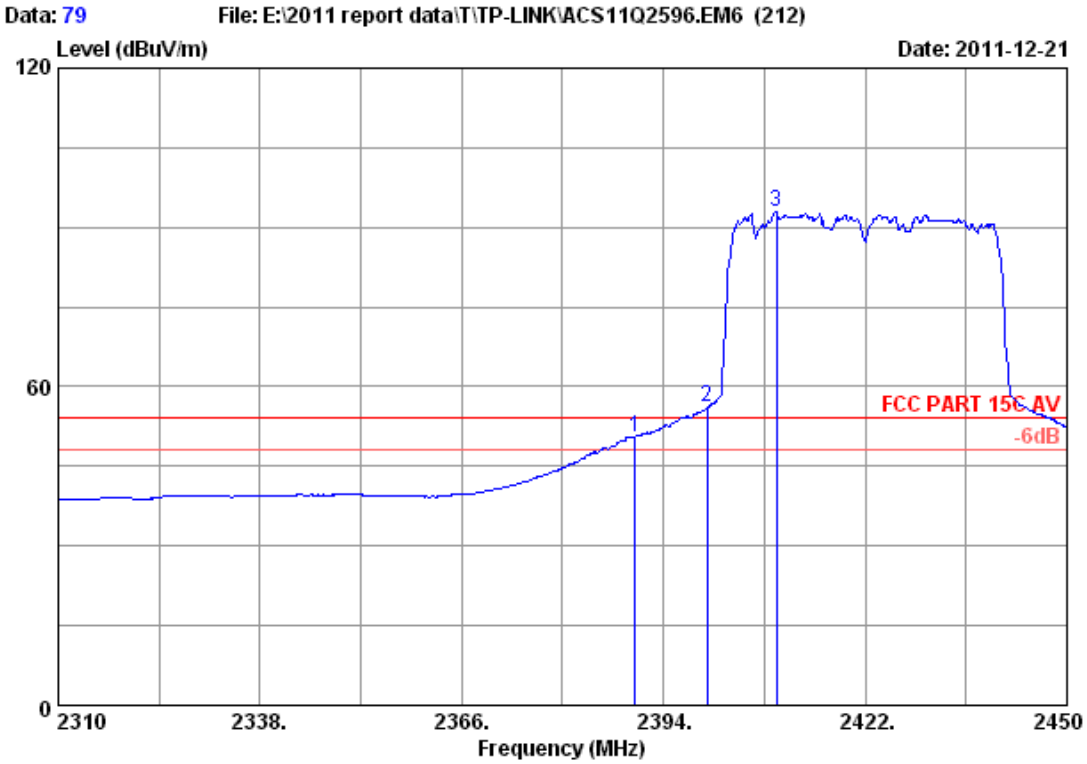
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 76
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2455.400	28.05	6.09	34.44	85.68	85.38	54.00	-31.38	Average
2	2483.500	28.08	6.15	34.45	40.76	40.54	54.00	13.46	Average
3	2500.000	28.10	6.18	34.45	38.24	38.07	54.00	15.93	Average

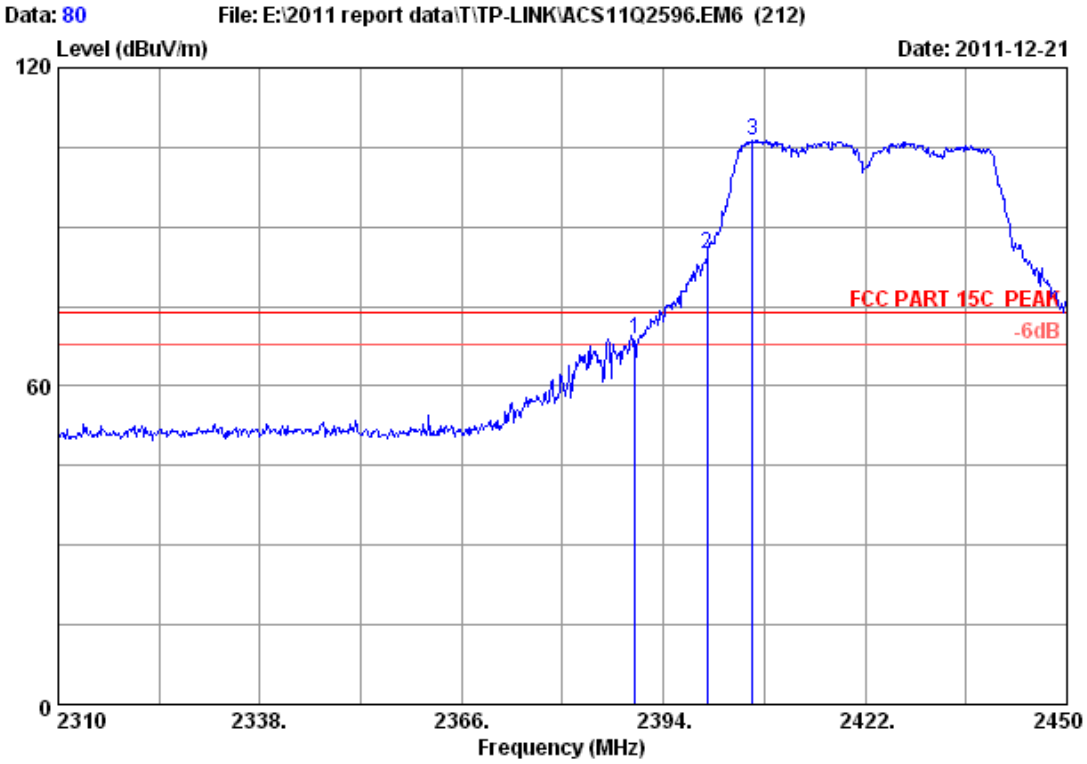
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 79
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.01	34.44	50.88	50.41	54.00	3.59	Average
2	2400.000	27.96	6.01	34.44	56.48	56.01	54.00	-2.01	Average
3	2409.680	27.98	6.03	34.44	93.37	92.94	54.00	-38.94	Average

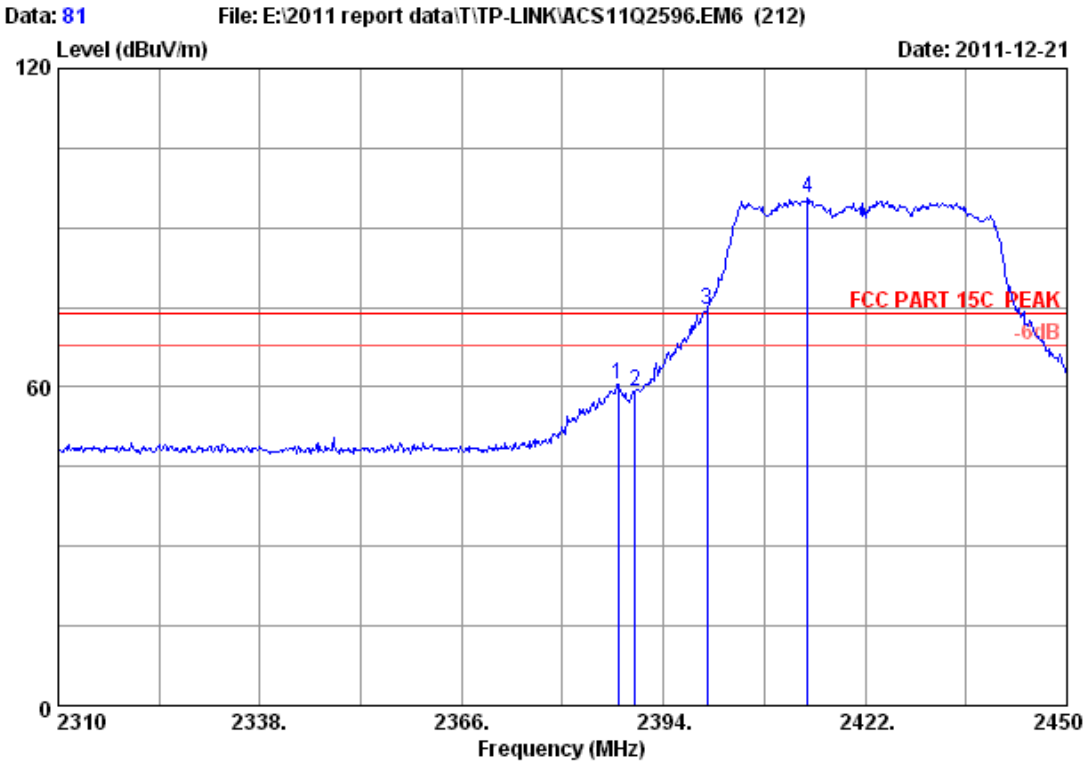
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 80
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.01	34.44	69.37	68.90	74.00	5.10	Peak
2	2400.000	27.96	6.01	34.44	85.47	85.00	74.00	-11.00	Peak
3	2406.320	27.98	6.03	34.44	106.77	106.34	74.00	-32.34	Peak

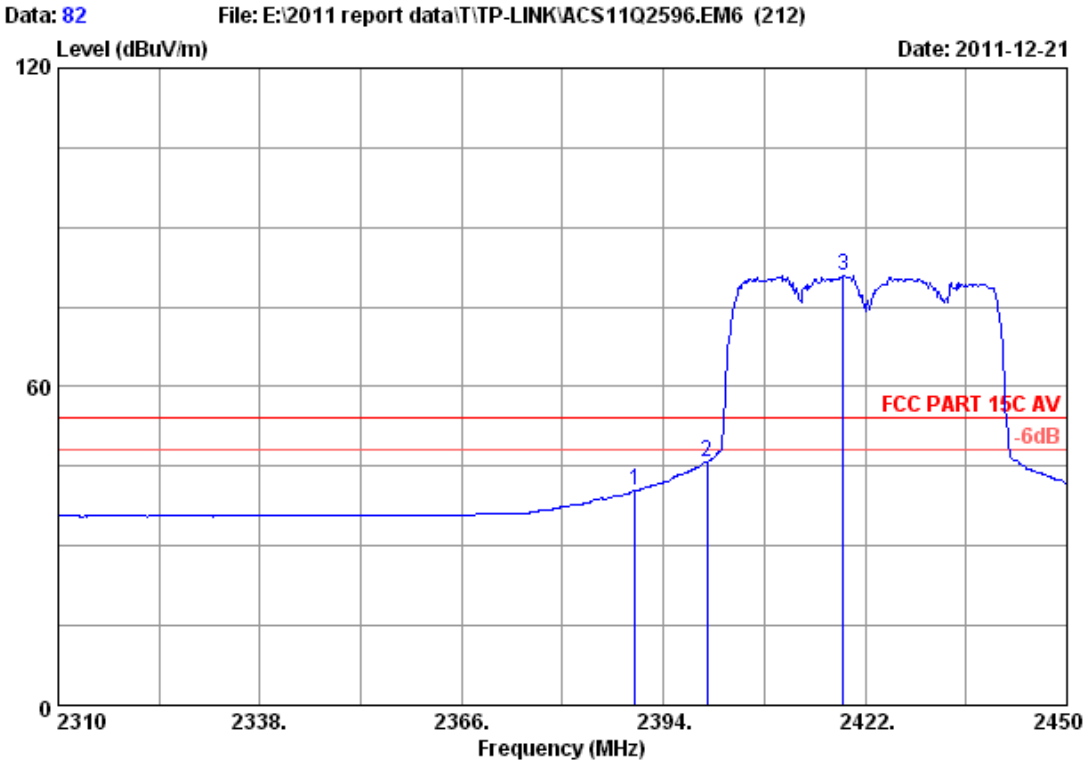
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 81
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2387.700	27.96	6.01	34.44	61.07	60.60	74.00	13.40	Peak
2	2390.000	27.96	6.01	34.44	59.55	59.08	74.00	14.92	Peak
3	2400.000	27.96	6.01	34.44	74.87	74.40	74.00	-0.40	Peak
4	2414.020	27.98	6.03	34.44	95.96	95.53	74.00	-21.53	Peak

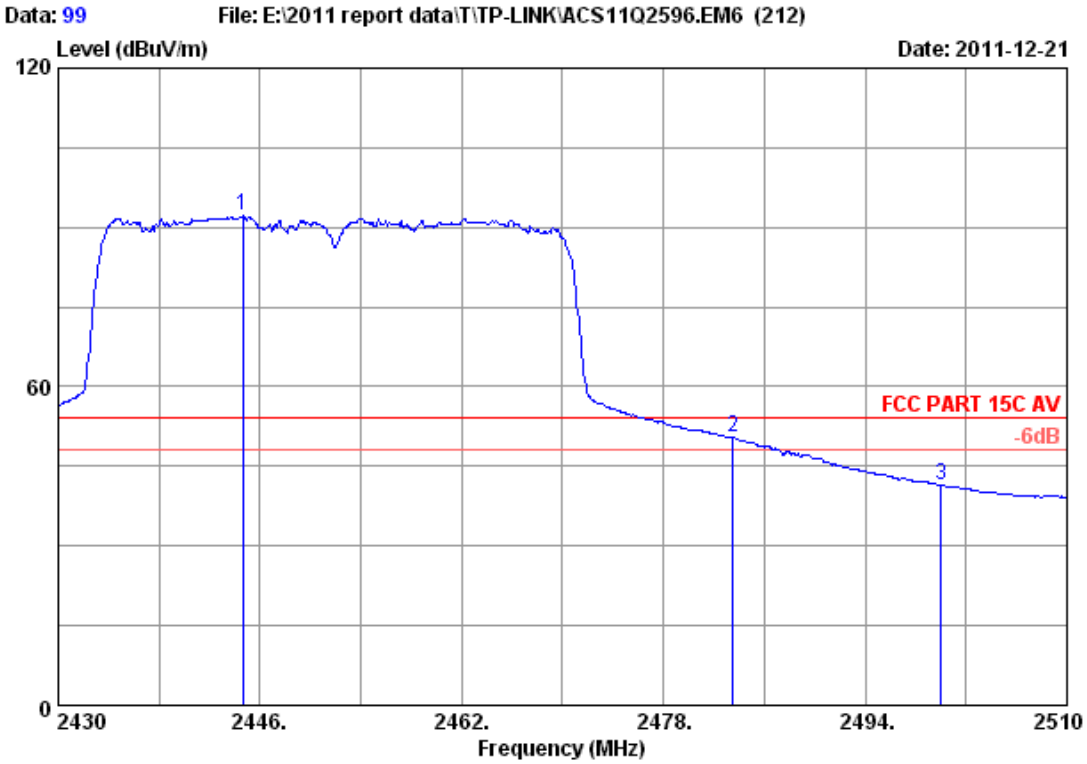
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 82
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	27.96	6.01	34.44	40.94	40.47	54.00	13.53	Average
2	2400.000	27.96	6.01	34.44	46.18	45.71	54.00	8.29	Average
3	2418.920	27.98	6.03	34.44	81.43	81.00	54.00	-27.00	Average

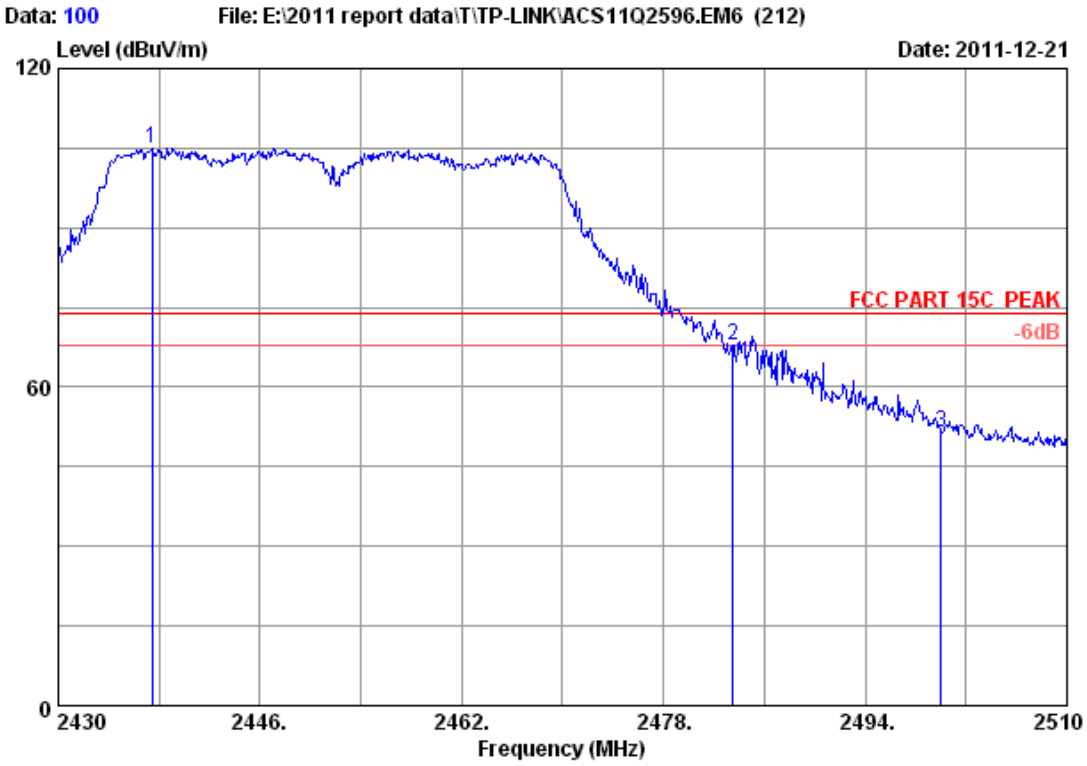
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 99
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2444.640	28.03	6.09	34.44	92.57	92.25	54.00	-38.25	Average
2	2483.500	28.08	6.15	34.45	50.57	50.35	54.00	3.65	Average
3	2500.000	28.10	6.18	34.45	41.57	41.40	54.00	12.60	Average

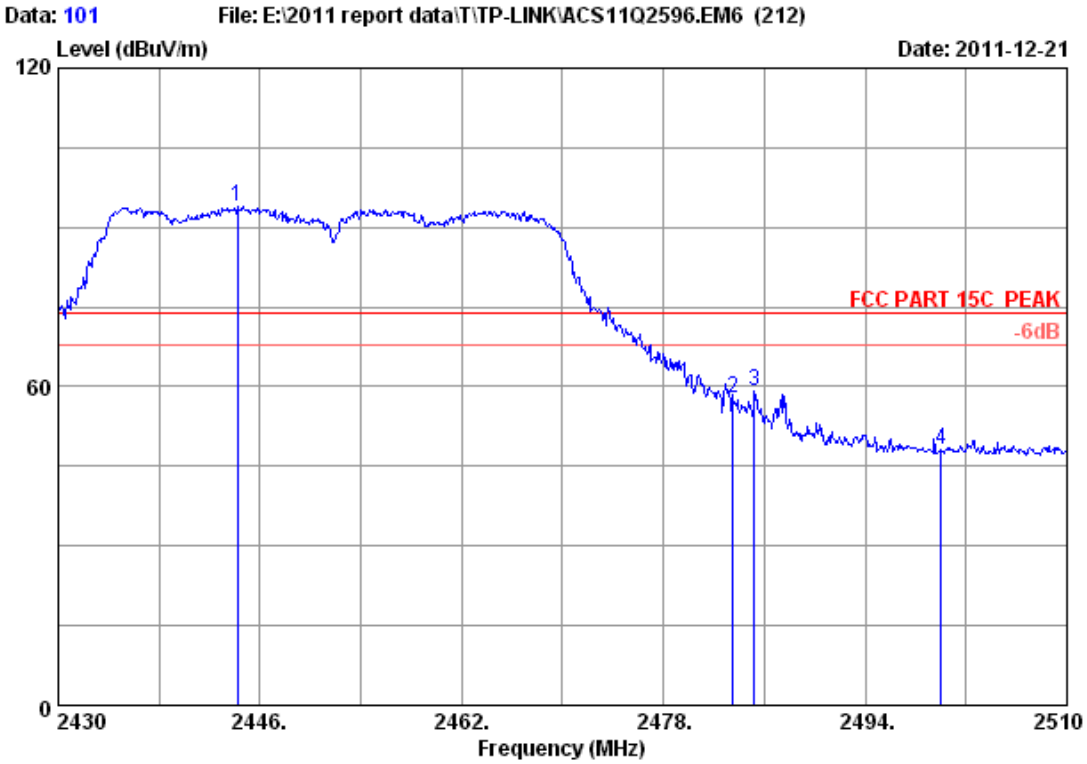
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 100
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.440	28.03	6.06	34.44	105.47	105.12	74.00	-31.12	Peak
2	2483.500	28.08	6.15	34.45	67.98	67.76	74.00	6.24	Peak
3	2500.000	28.10	6.18	34.45	51.50	51.33	74.00	22.67	Peak

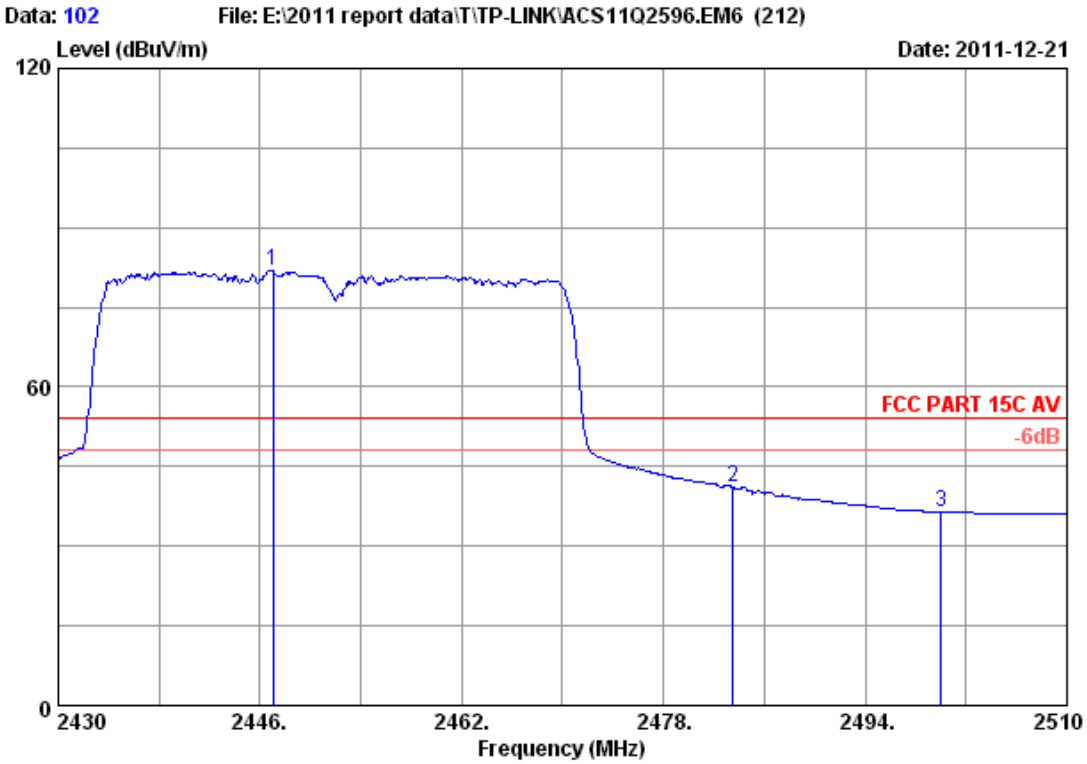
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 101
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2444.240	28.03	6.09	34.44	94.22	93.90	74.00	-19.90	Peak
2	2483.500	28.08	6.15	34.45	58.07	57.85	74.00	16.15	Peak
3	2485.200	28.08	6.15	34.45	59.47	59.25	74.00	14.75	Peak
4	2500.000	28.10	6.18	34.45	48.15	47.98	74.00	26.02	Peak

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



Site no. : 3m Chamber Data no. : 102
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N PCI Express Adapter
Power supply : DC 3.3V From PC Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-WN881ND

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2447.040	28.03	6.09	34.44	82.36	82.04	54.00	-28.04	Average
2	2483.500	28.08	6.15	34.45	41.30	41.08	54.00	12.92	Average
3	2500.000	28.10	6.18	34.45	36.62	36.45	54.00	17.55	Average

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

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

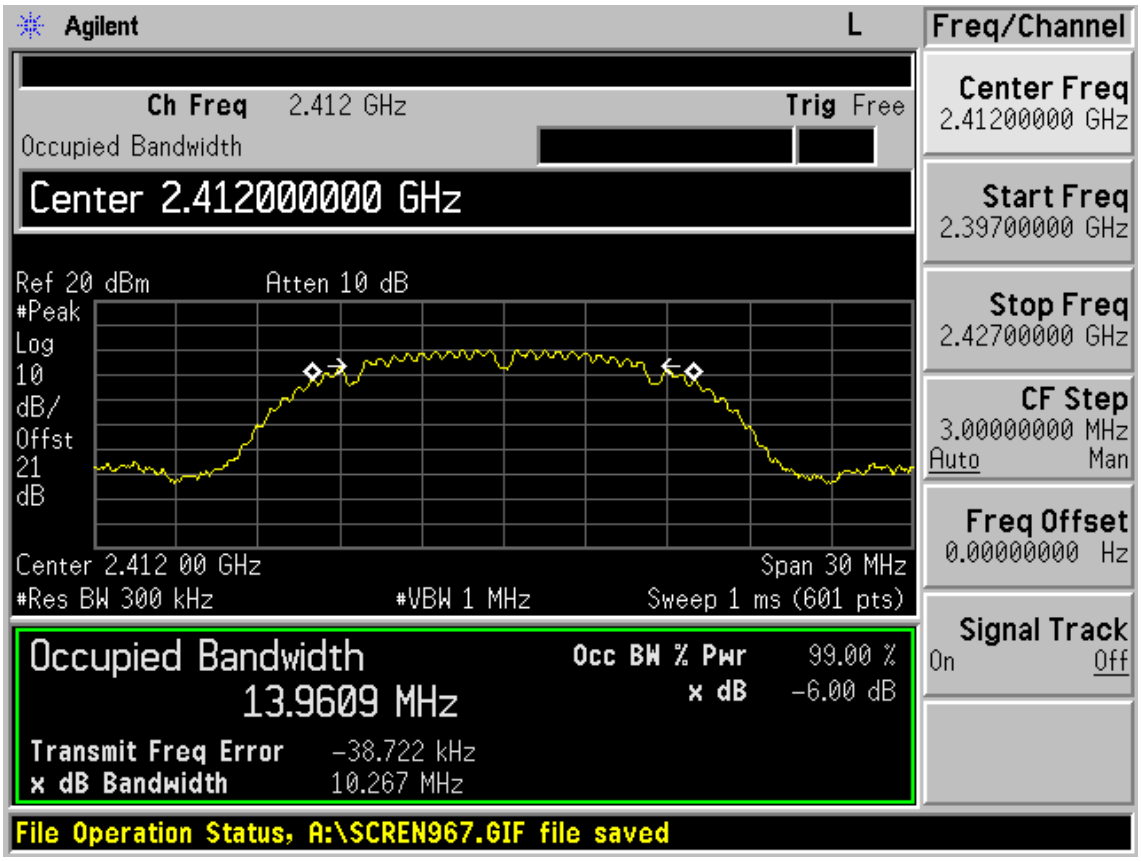
EUT: 300Mbps Wireless N PCI Express Adapter		
M/N: TL-WN881ND		
Test date:2011-12-22	Pressure: 101.7 kpa	Humidity: 51.9%
Tested by: Leo-Li	Test site: RF Site	Temperature：23.8 ℃

Cable loss: 1 dB		Attenuator loss: 20 dB		
Test Mode	CH	6dB bandwidth（MHz）		Limit (KHz)
		Chain0	Chain1	
11b	CH1	10.267	10.274	>500
	CH6	10.276	10.276	>500
	CH11	10.273	10.275	>500
11g	CH1	16.514	16.544	>500
	CH6	16.483	16.539	>500
	CH11	16.521	16.511	>500
11n HT20	CH1	17.773	17.790	>500
	CH6	17.756	17.802	>500
	CH11	17.856	17.759	>500
11n HT40	CH1	36.669	36.468	>500
	CH4	36.576	36.461	>500
	CH7	36.548	36.555	>500
Conclusion：PASS				

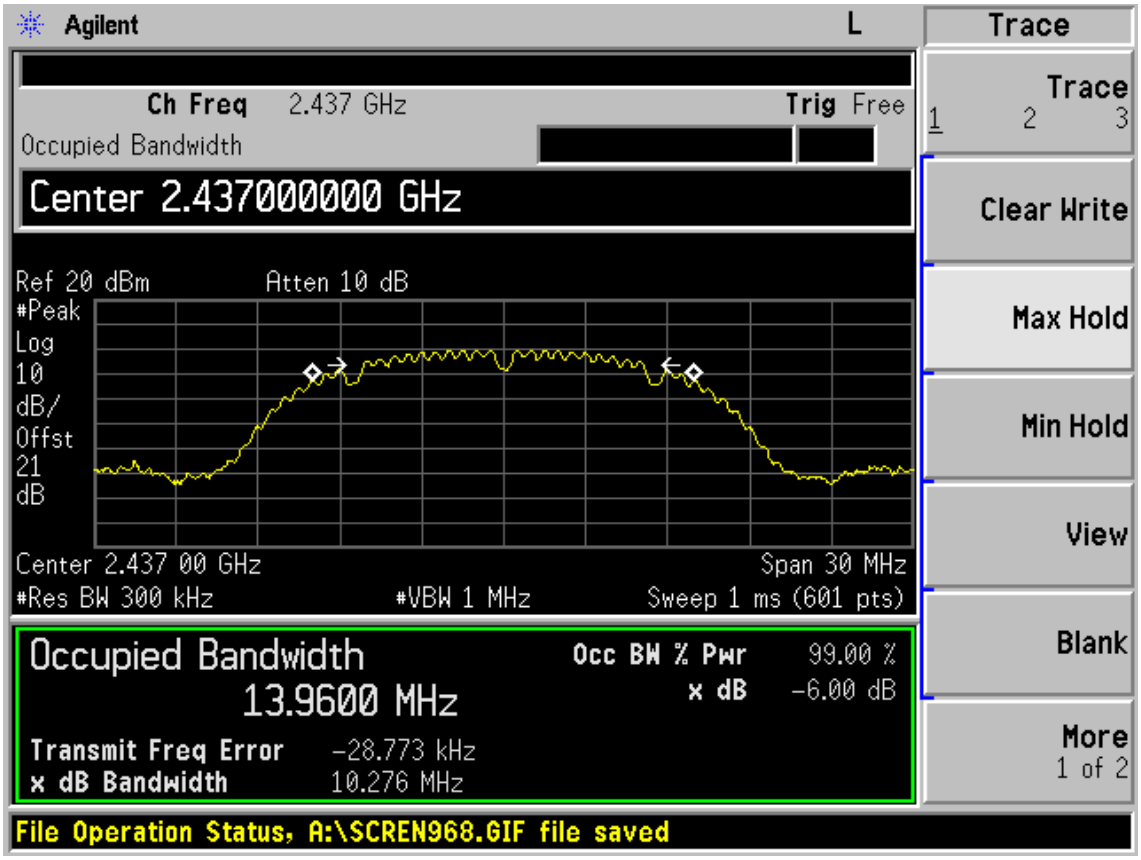
Chain 0:

Test Mode: IEEE 802.11b TX

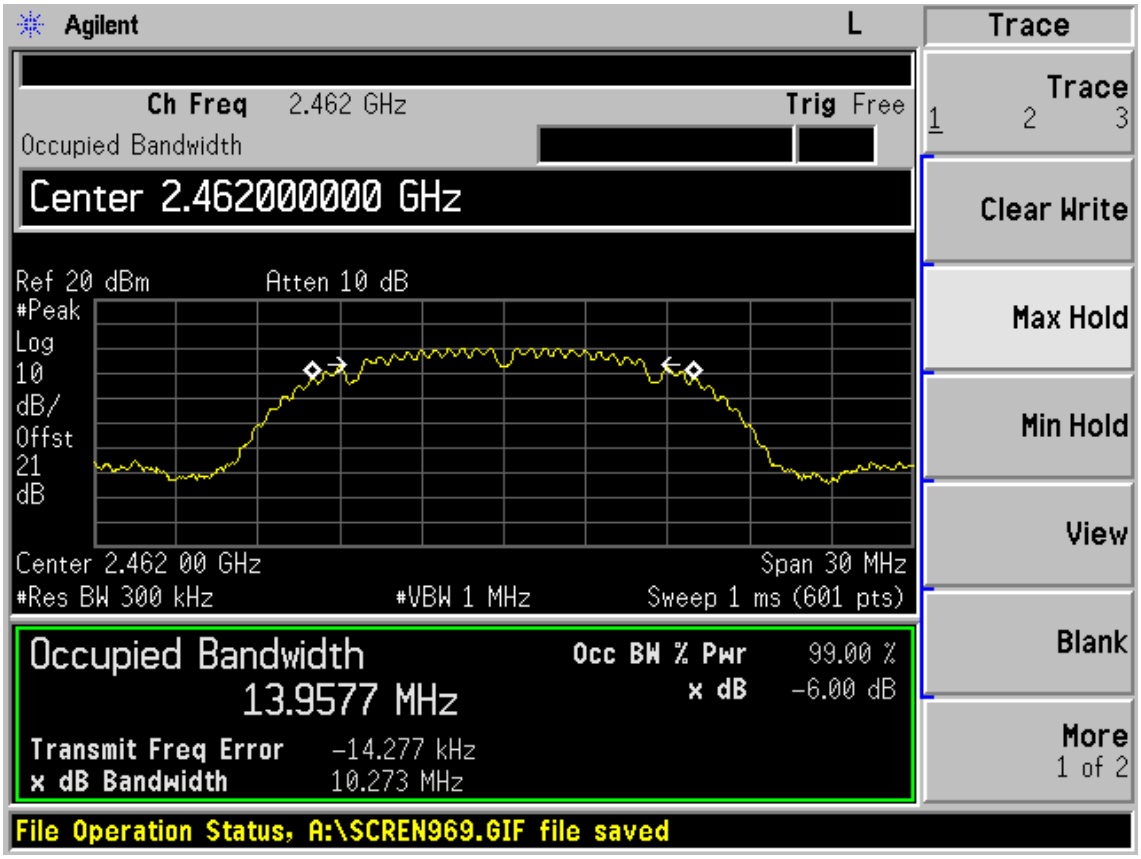
Test CH1: 2412MHz



Test CH6: 2437MHz

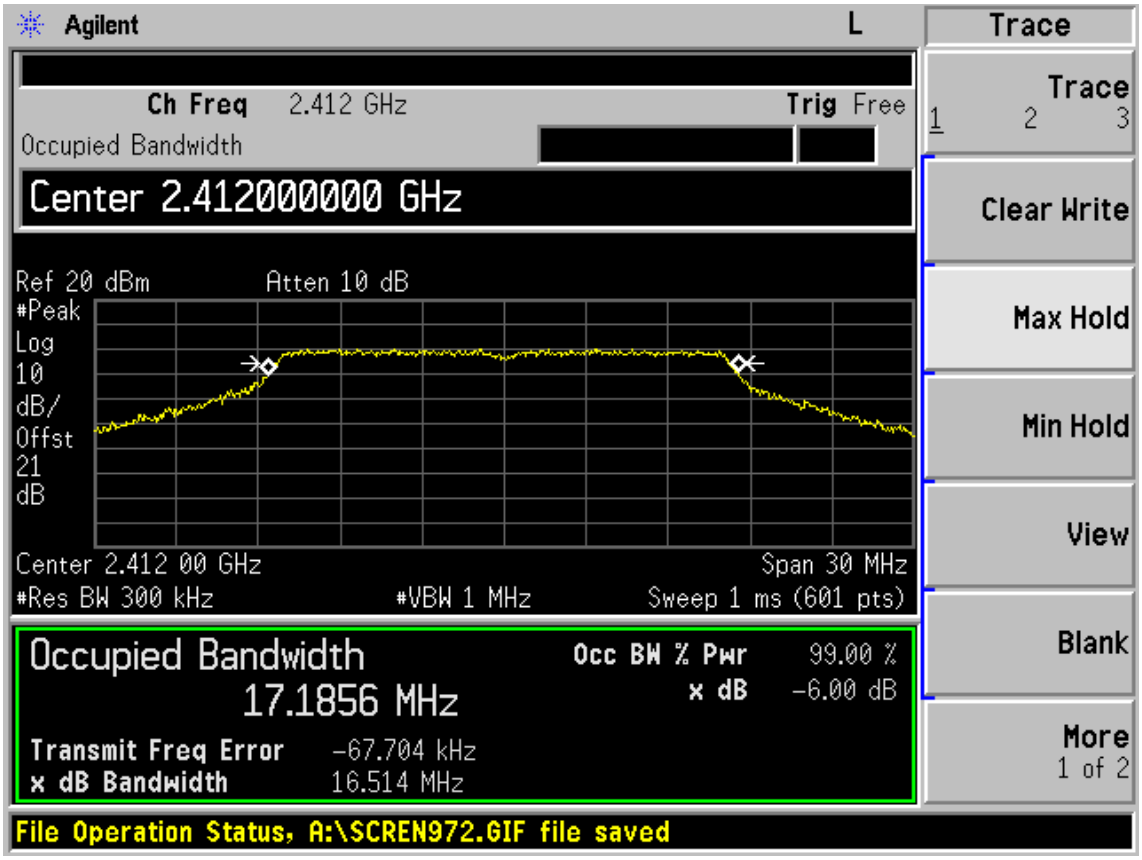


Test CH11: 2462MHz

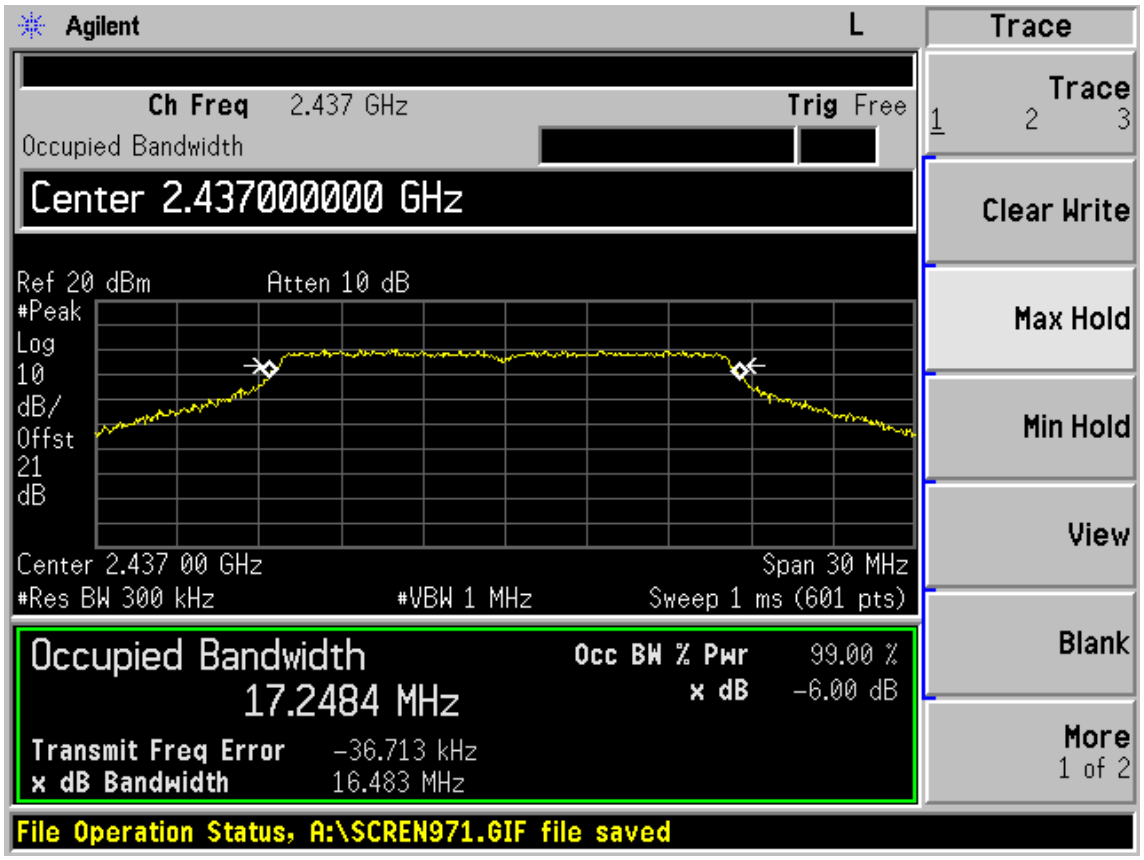


Test Mode: IEEE 802.11g TX

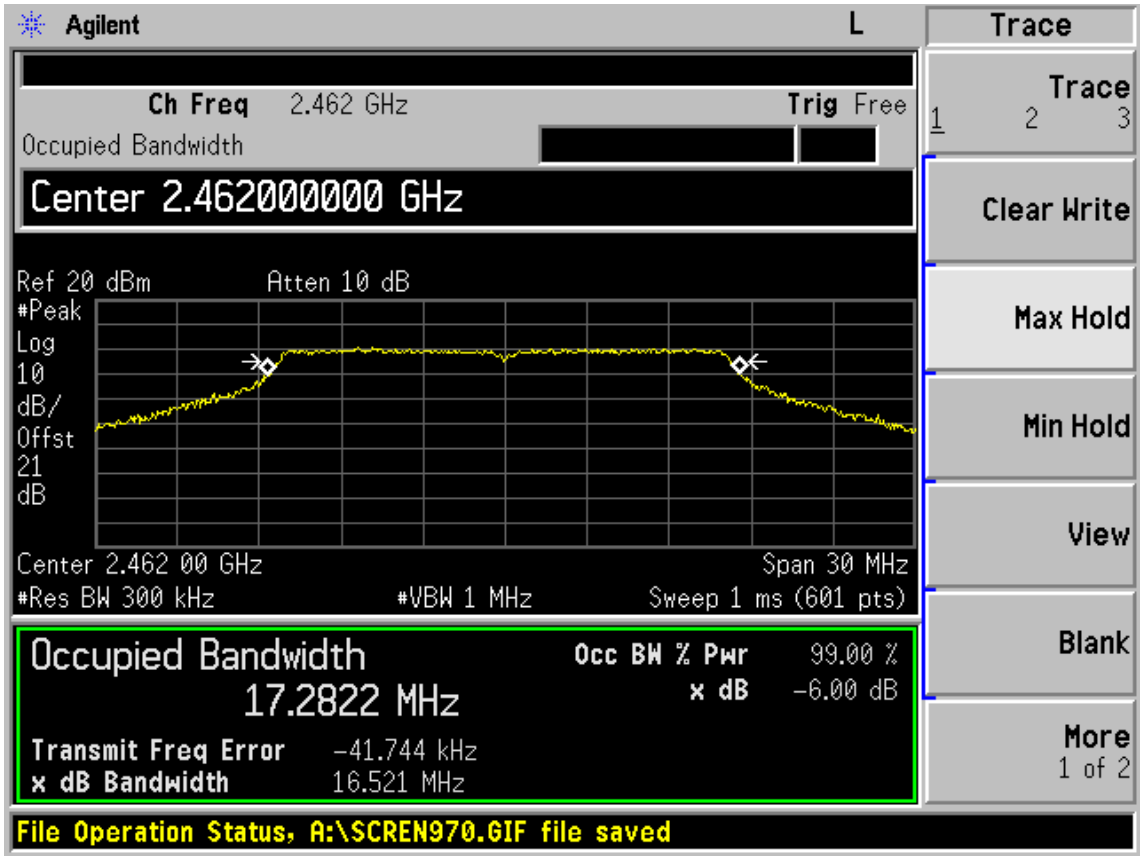
Test CH1: 2412MHz



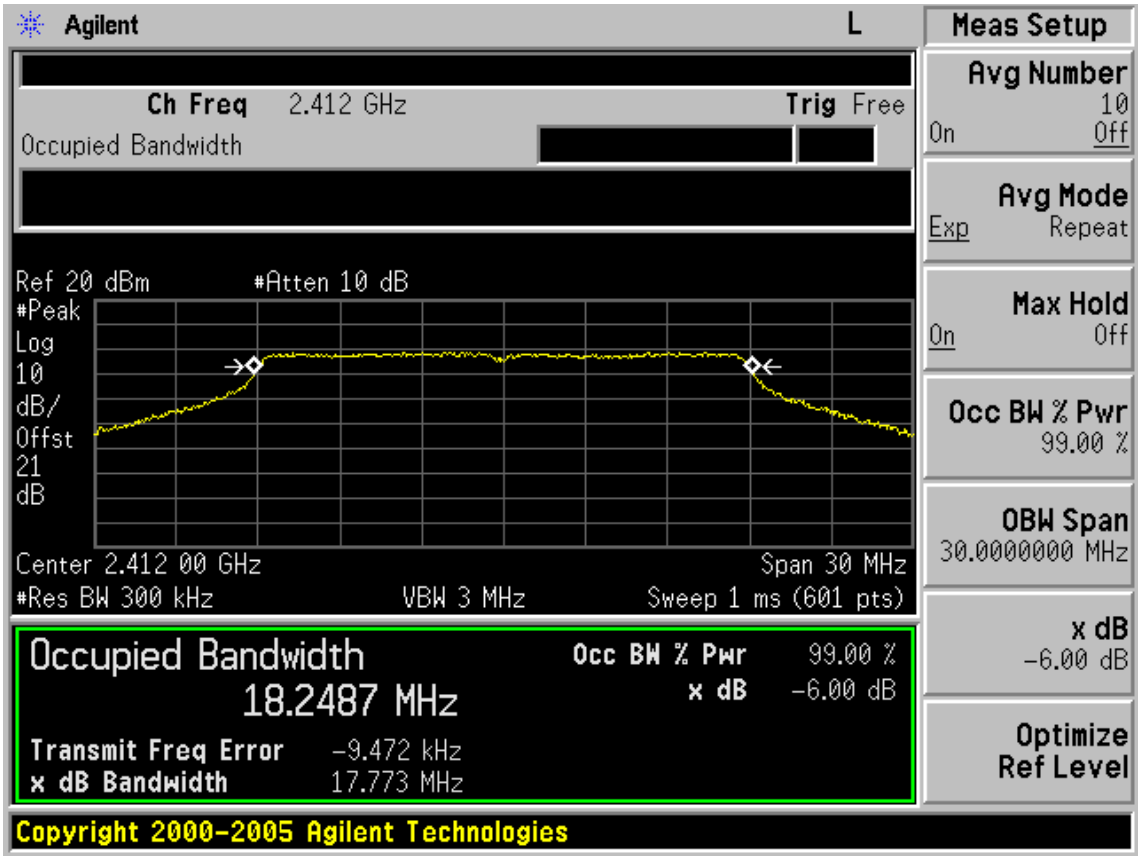
Test CH6: 2437MHz



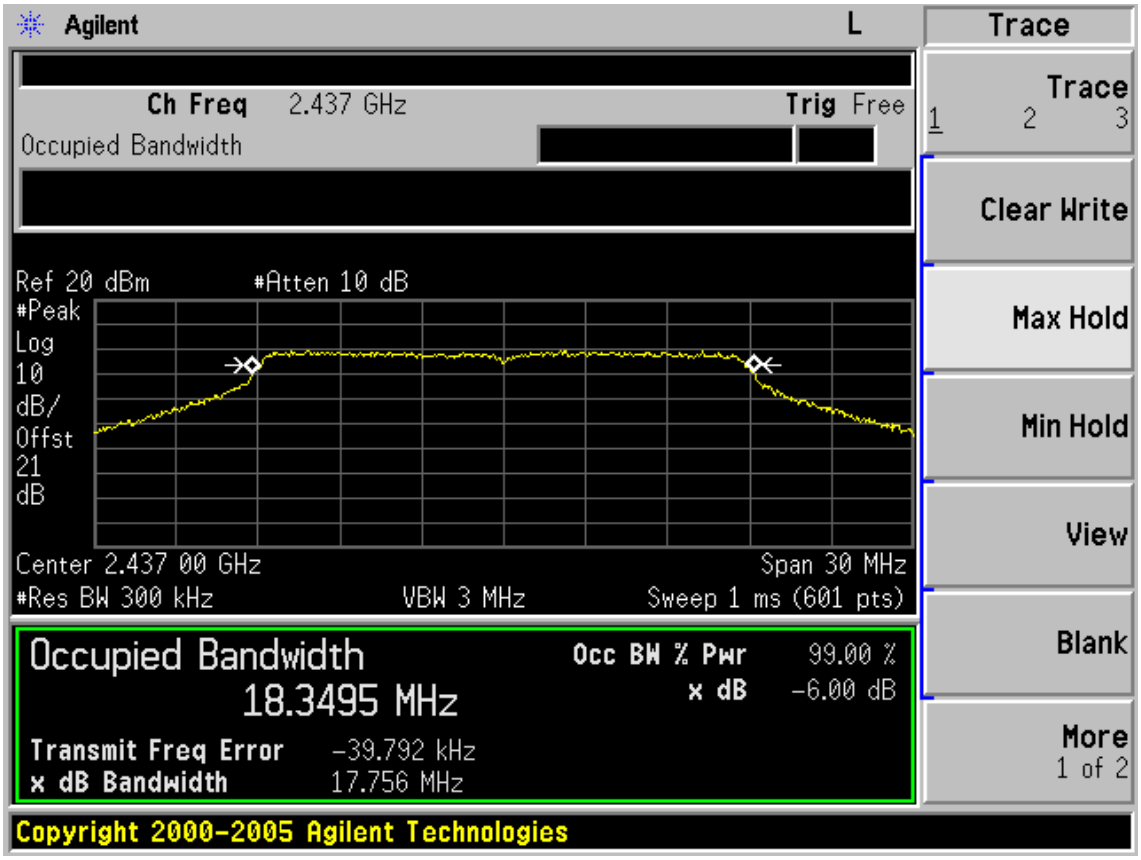
Test CH11: 2462MHz



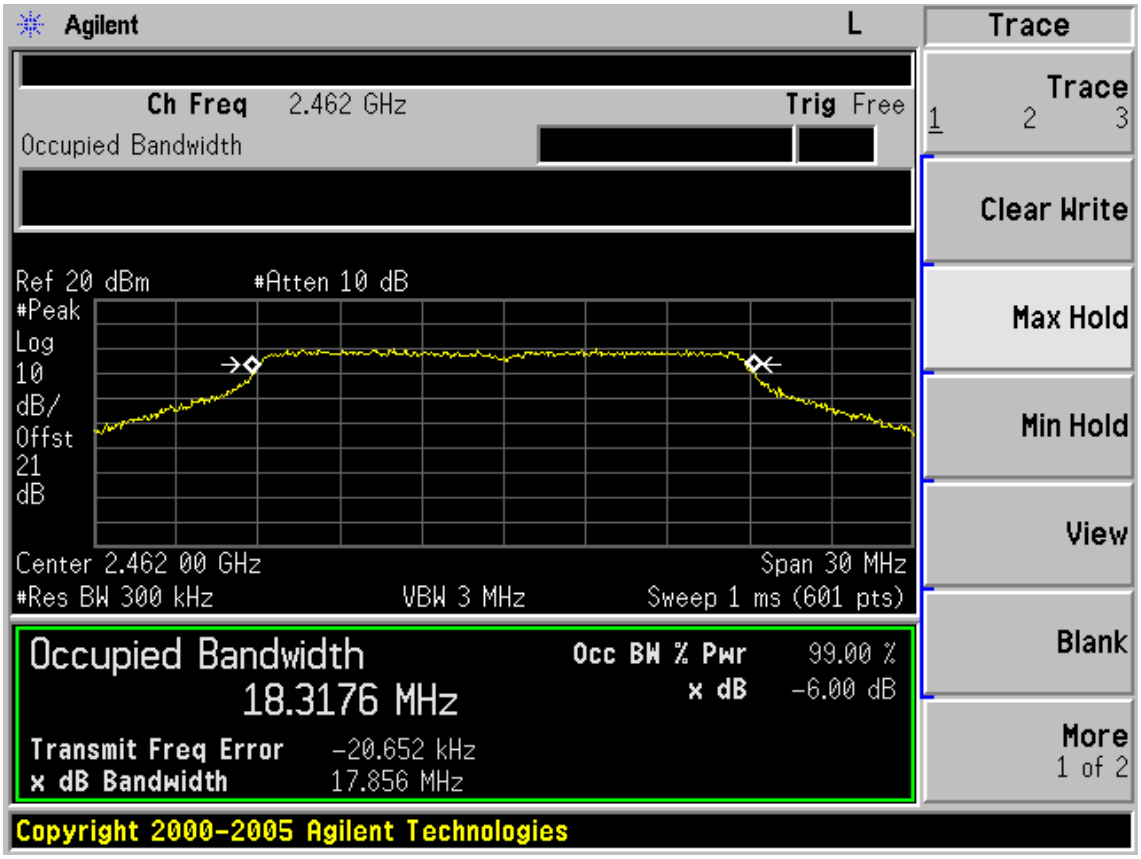
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz



Test CH6: 2437MHz

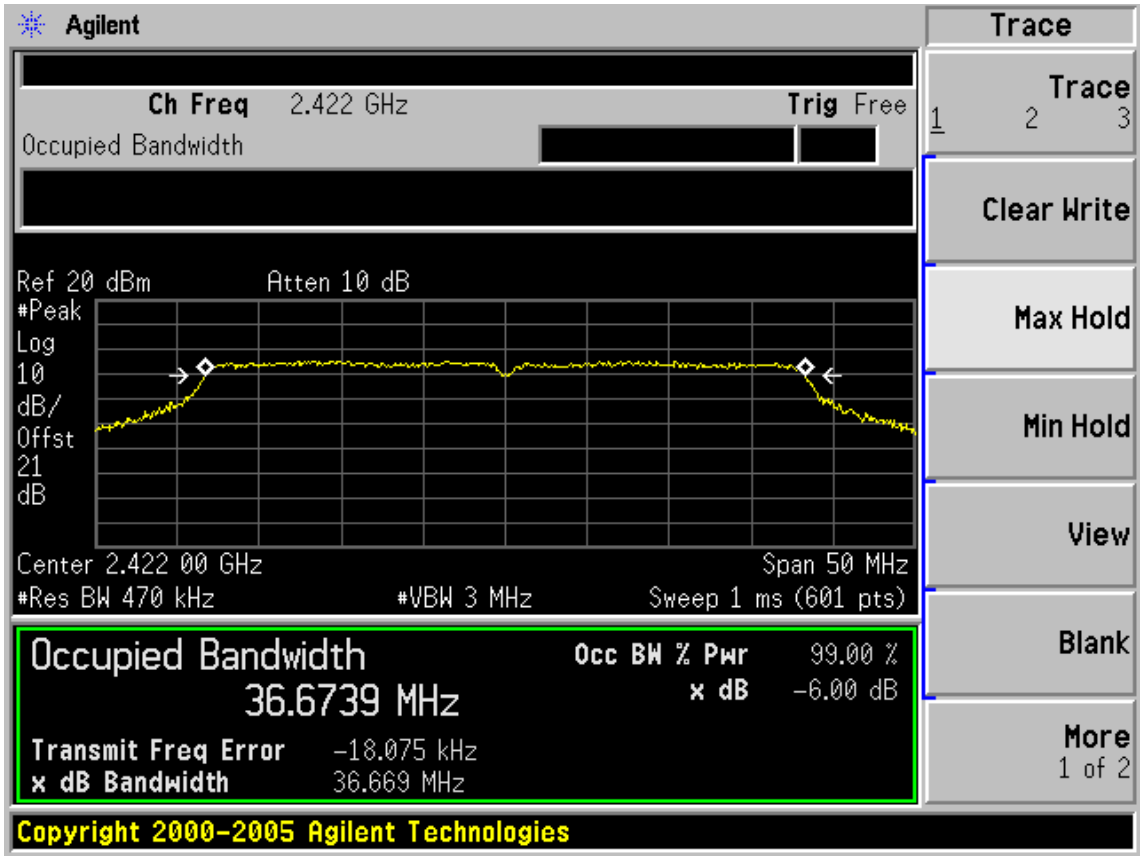


Test CH11: 2462MHz

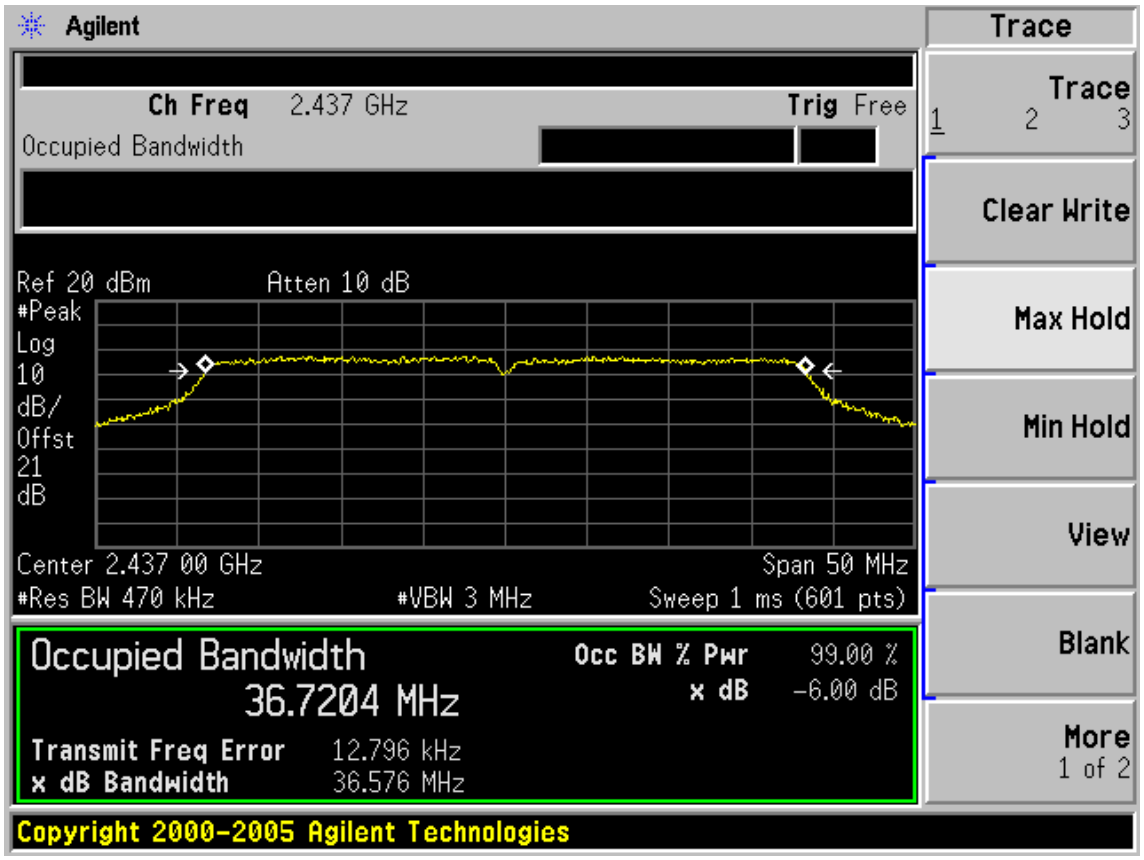


Test Mode: IEEE 802.11n HT40 TX

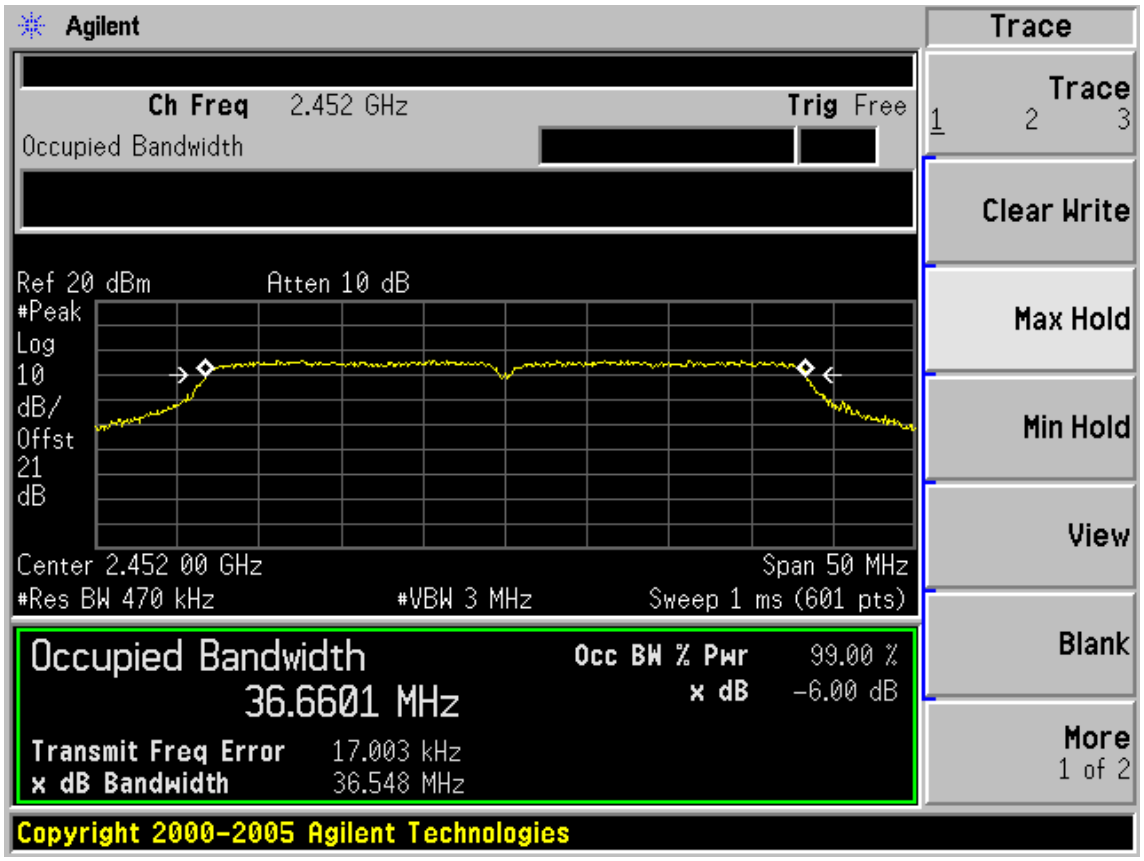
Test CH1: 2422MHz



Test CH4: 2437MHz



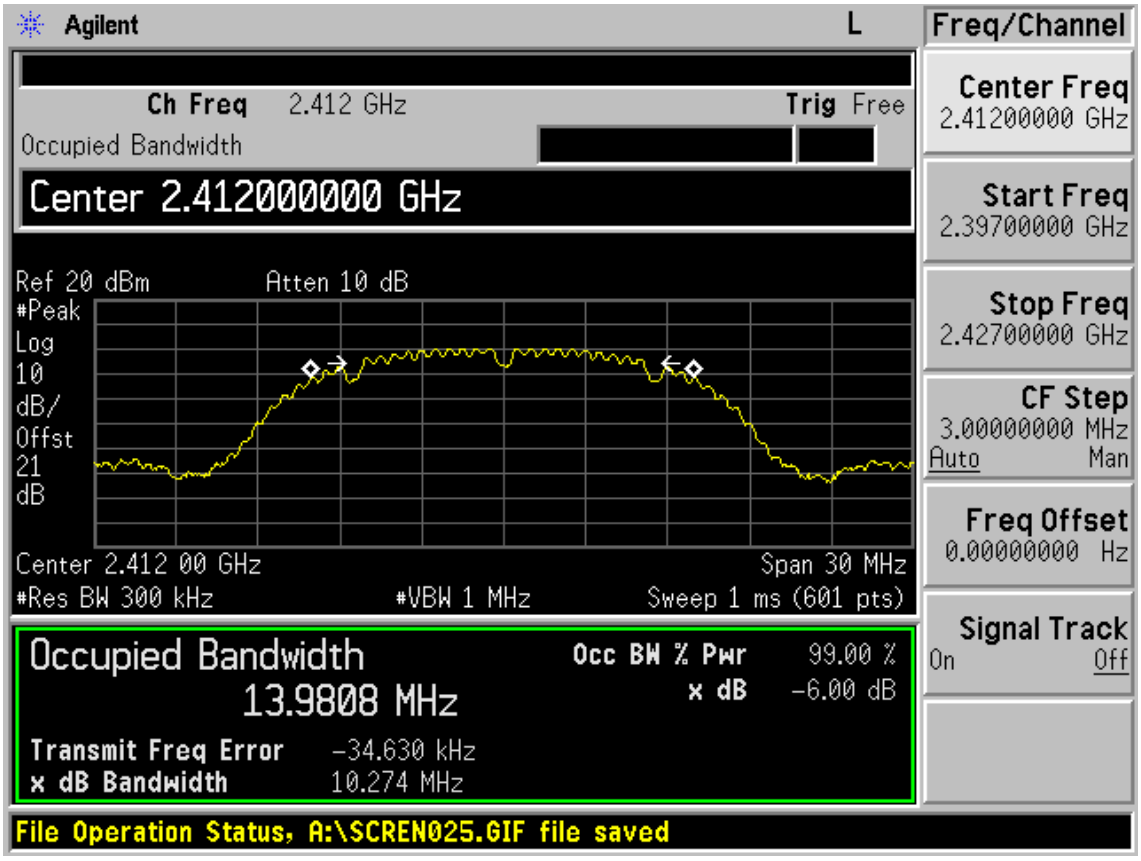
Test CH7: 2452MHz



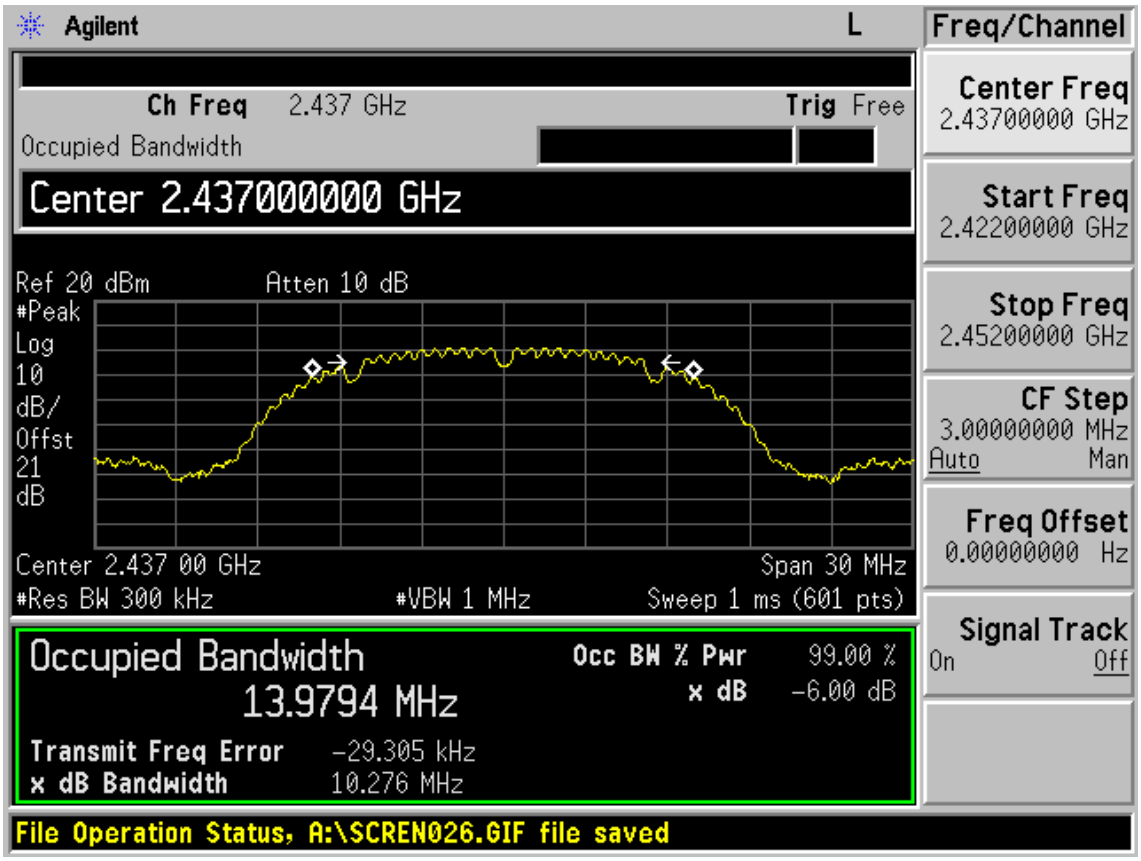
Chain 1:

Test Mode: IEEE 802.11b TX

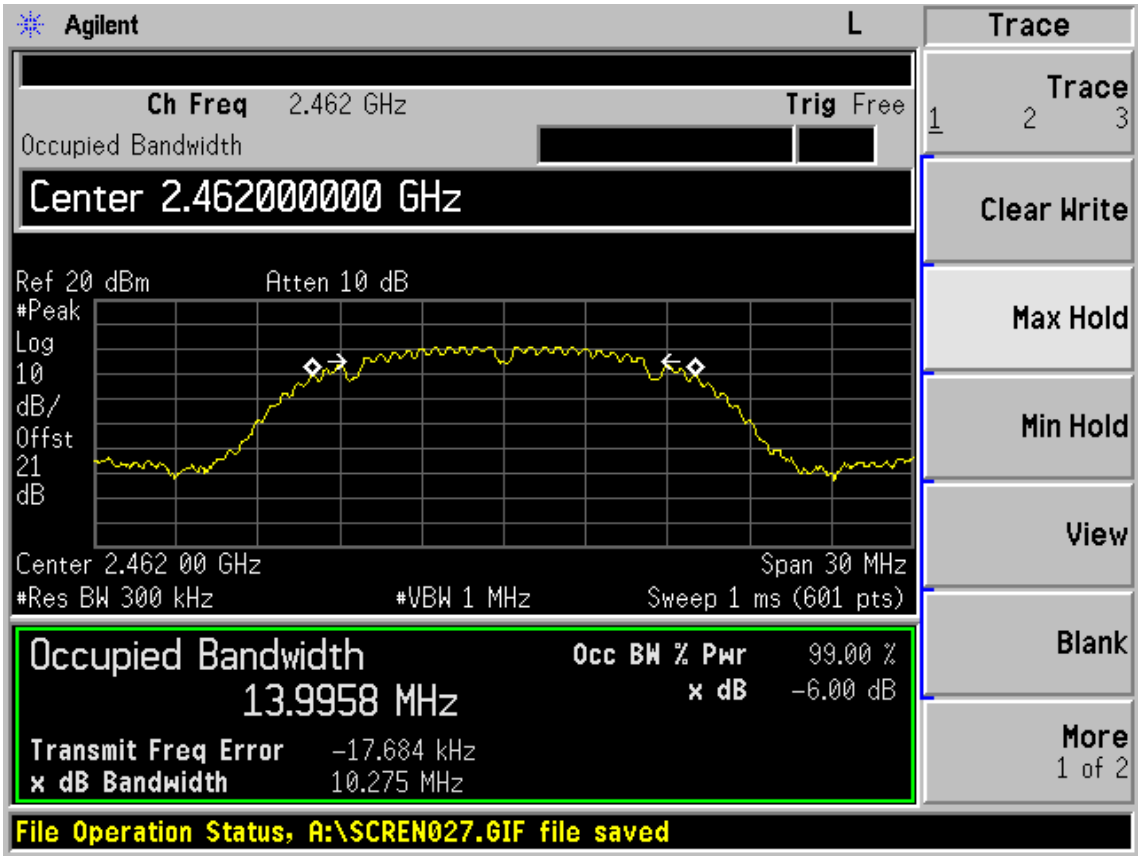
Test CH1: 2412MHz



Test CH6: 2437MHz

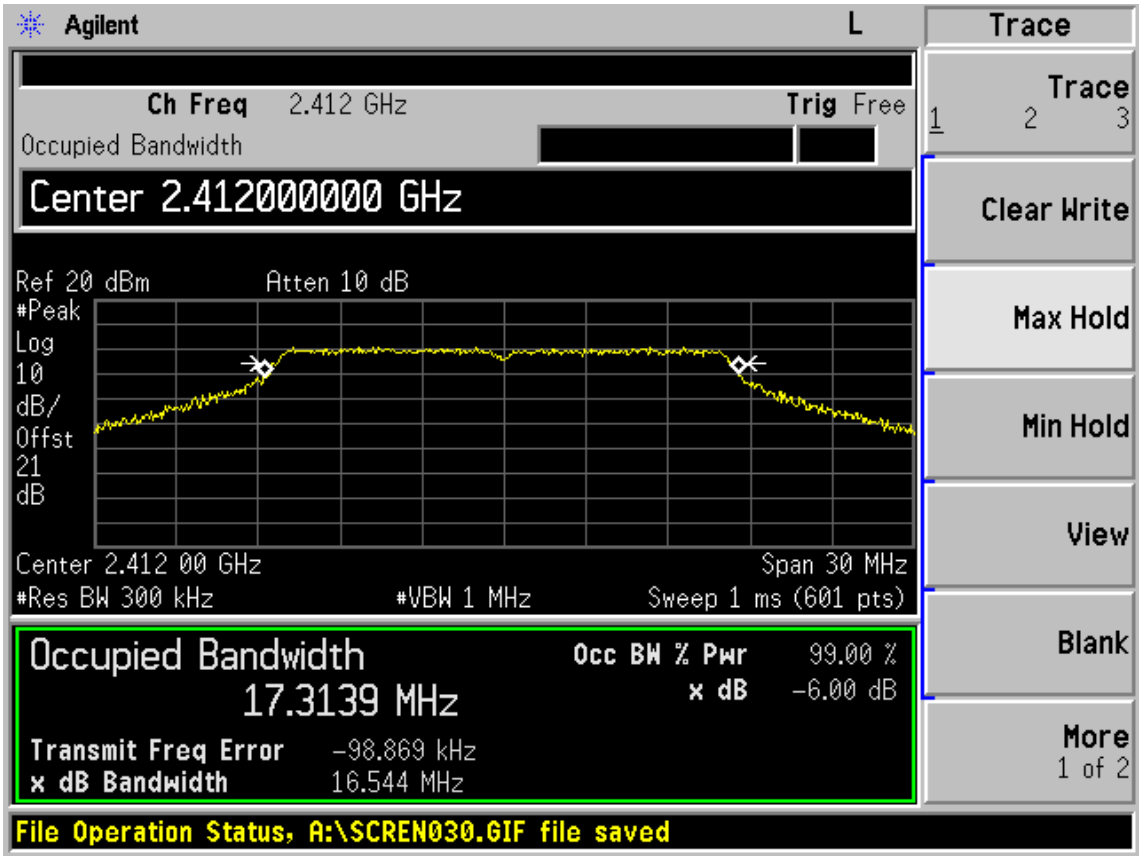


Test CH11: 2462MHz

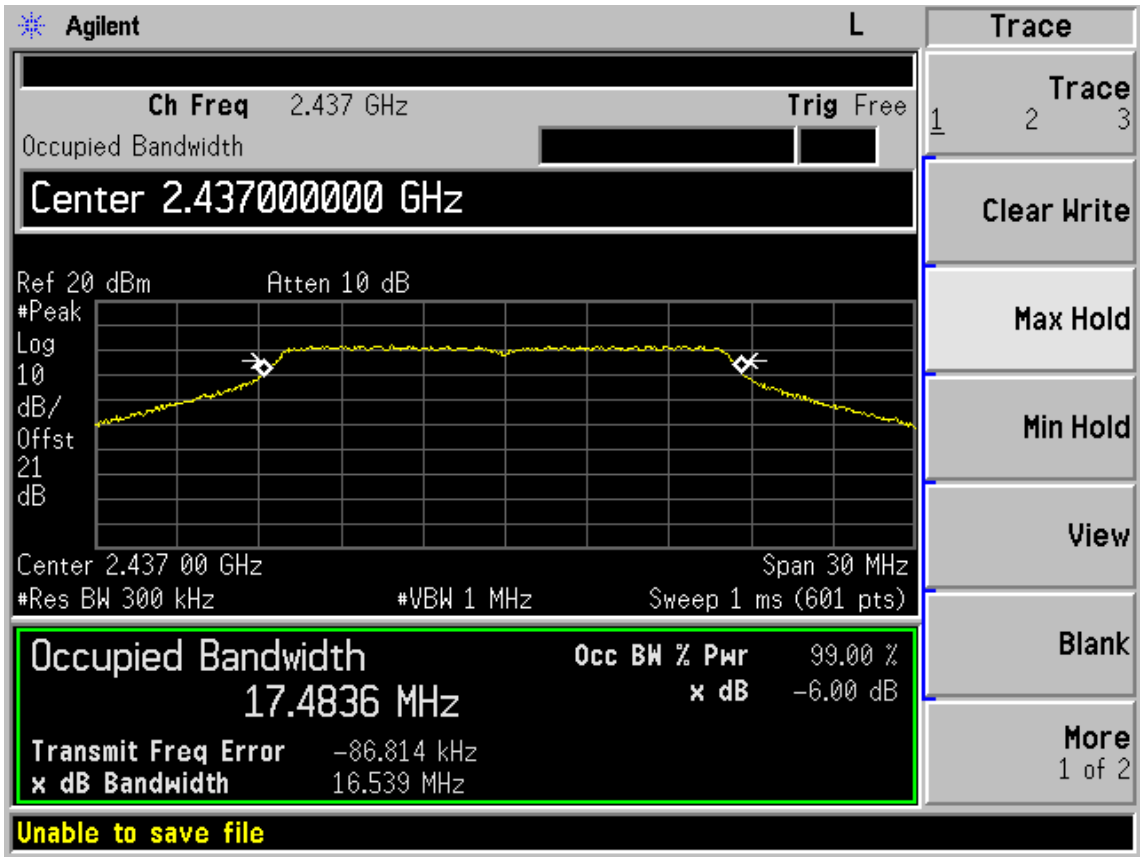


Test Mode: IEEE 802.11g TX

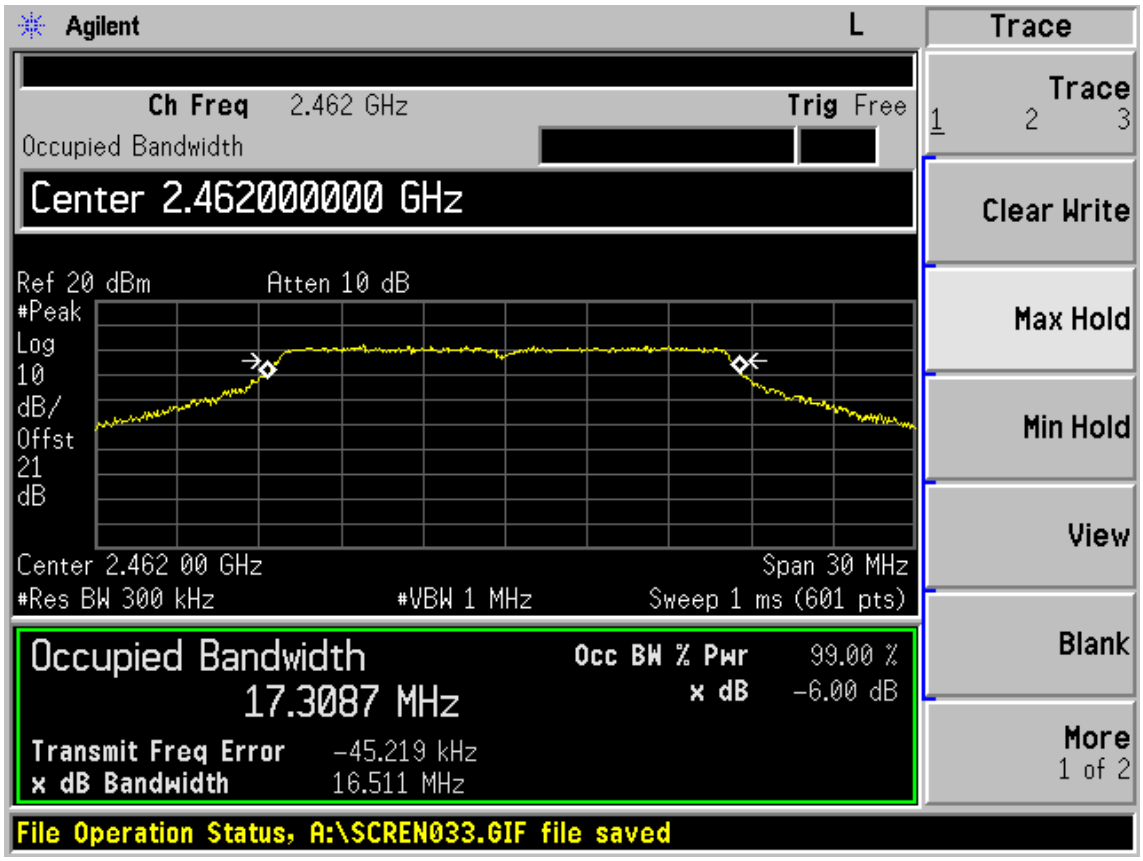
Test CH1: 2412MHz



Test CH6: 2437MHz

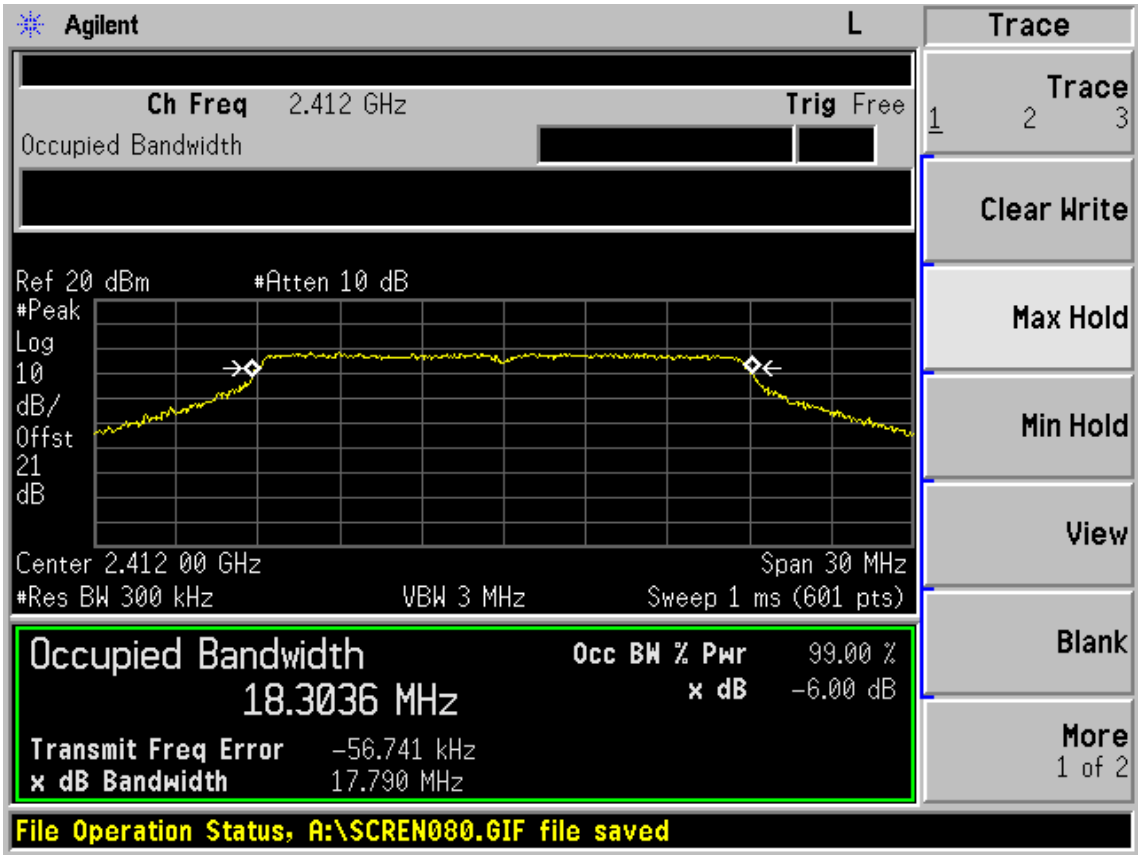


Test CH11: 2462MHz

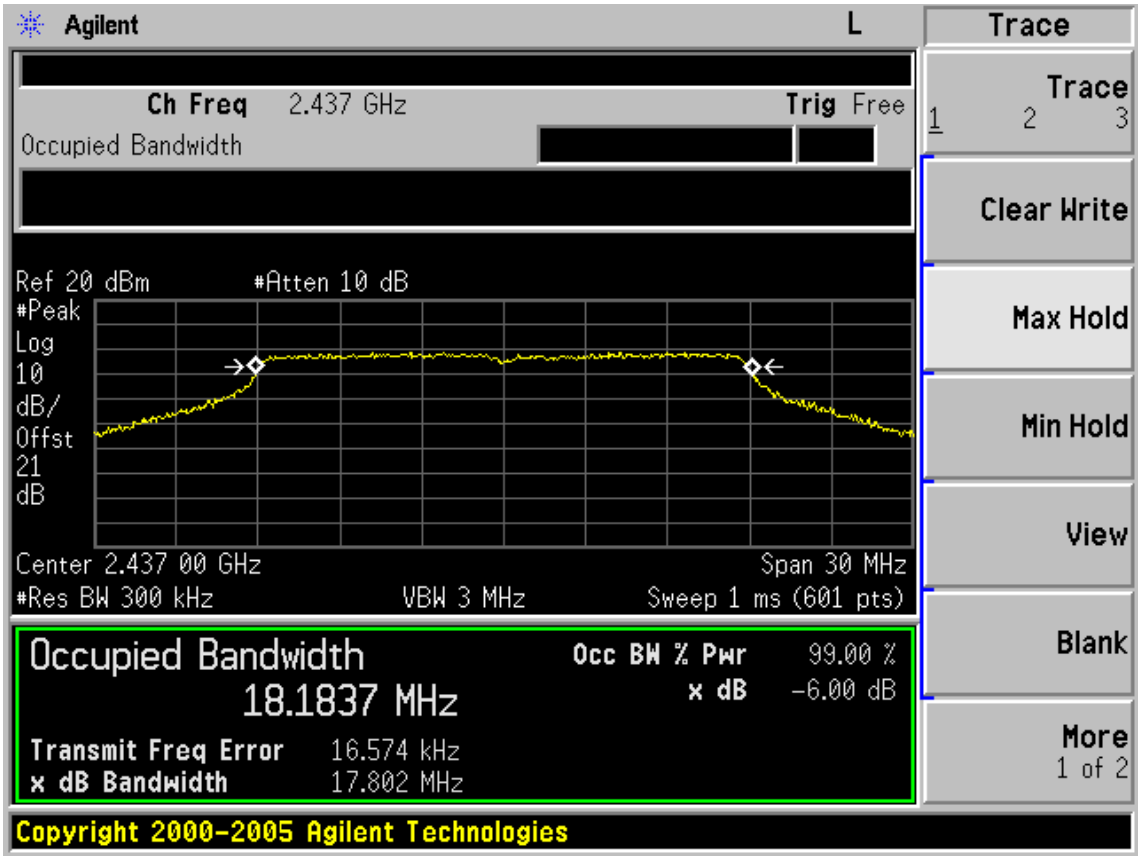


Test Mode: IEEE 802.11n HT20 TX

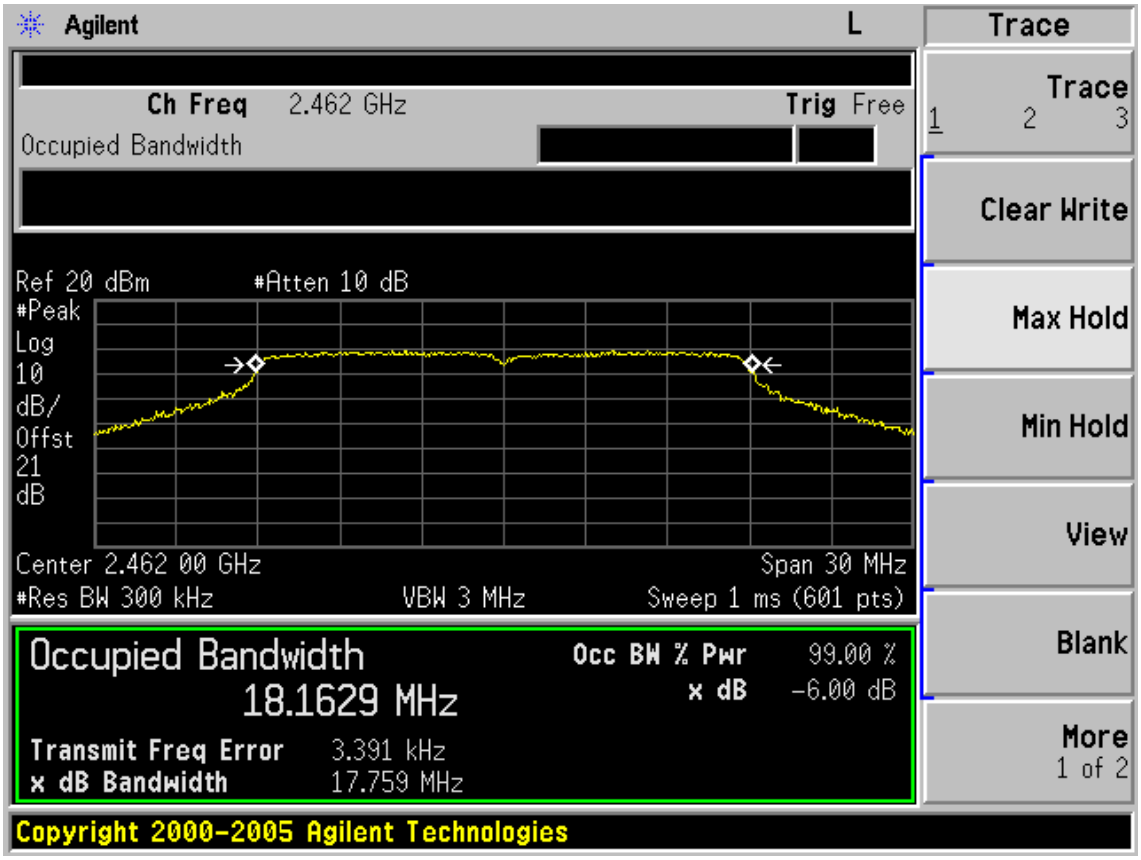
Test CH1: 2412MHz



Test CH6: 2437MHz

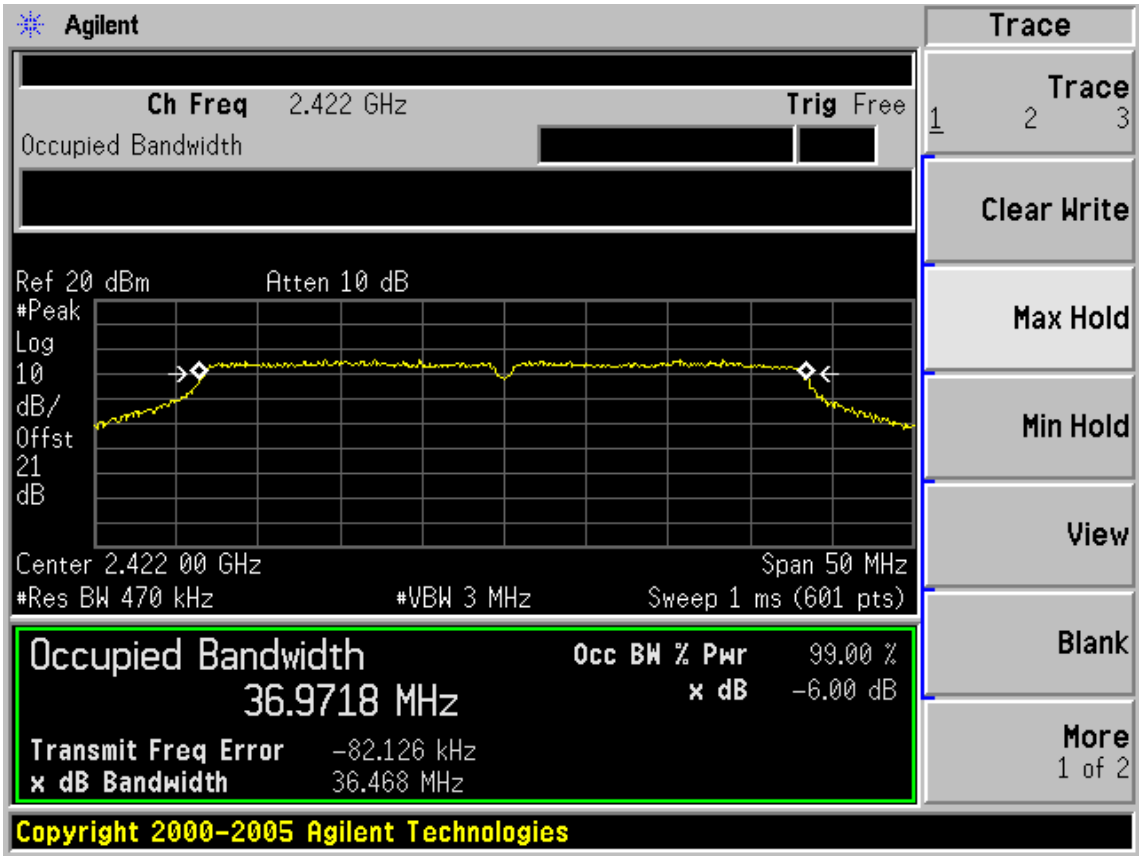


Test CH11: 2462MHz

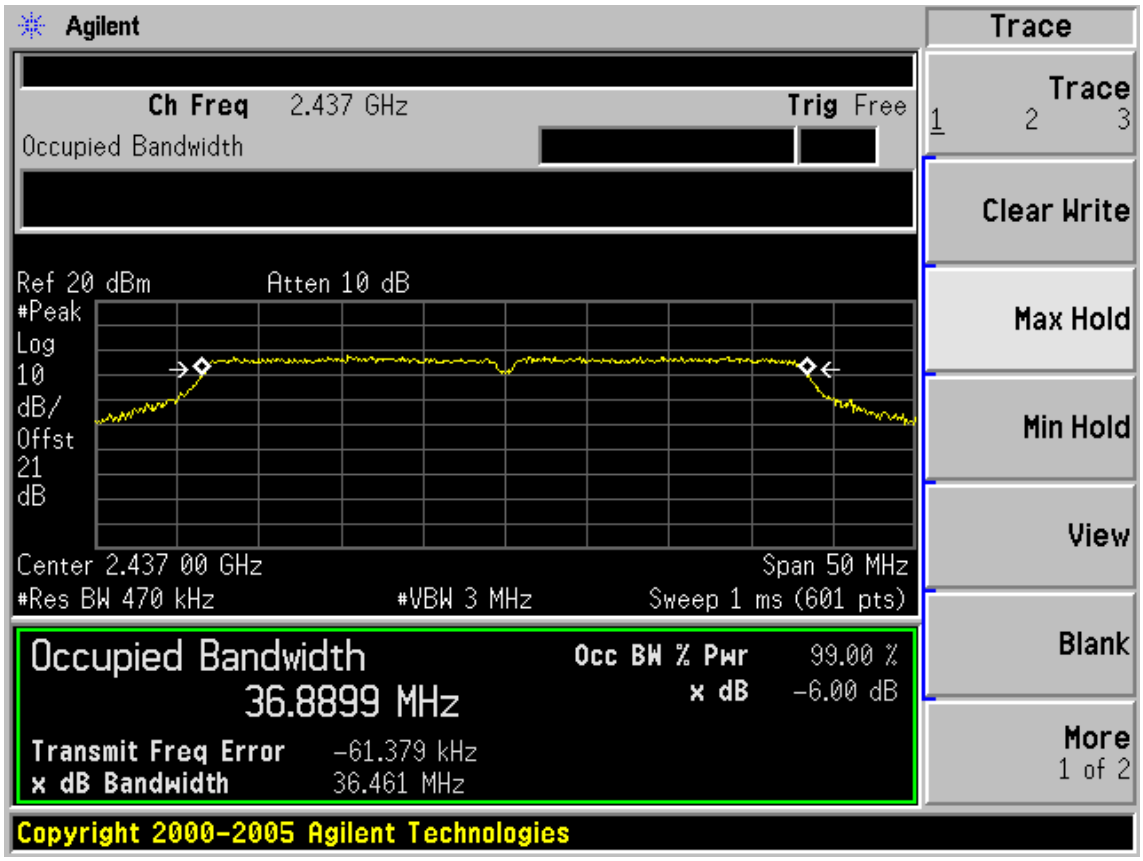


Test Mode: IEEE 802.11n HT40 TX

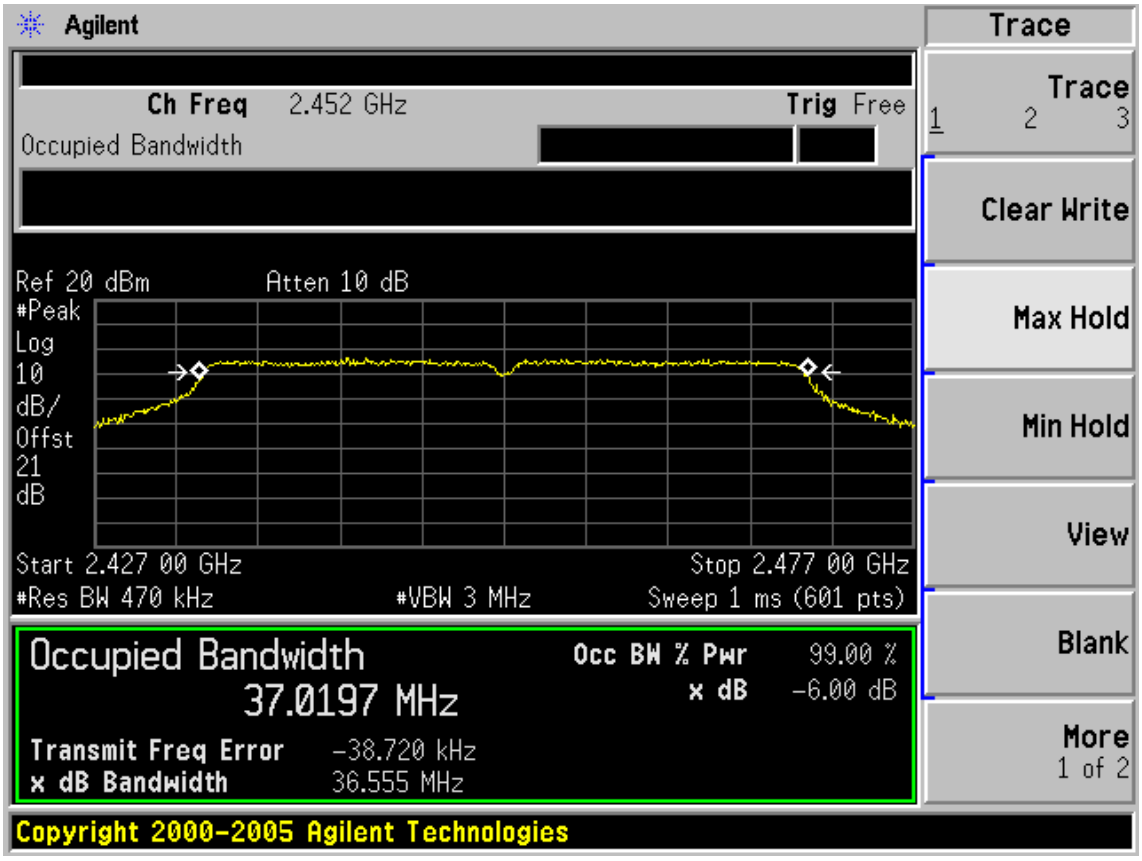
Test CH1: 2422MHz



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	1Year
2.	Power sensor	Anritsu	MA2491A	0033005	May.08,11	1Year
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	1Year

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

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

8.3.Test Procedure

1, Connected the EUT's antenna port to measure device by 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

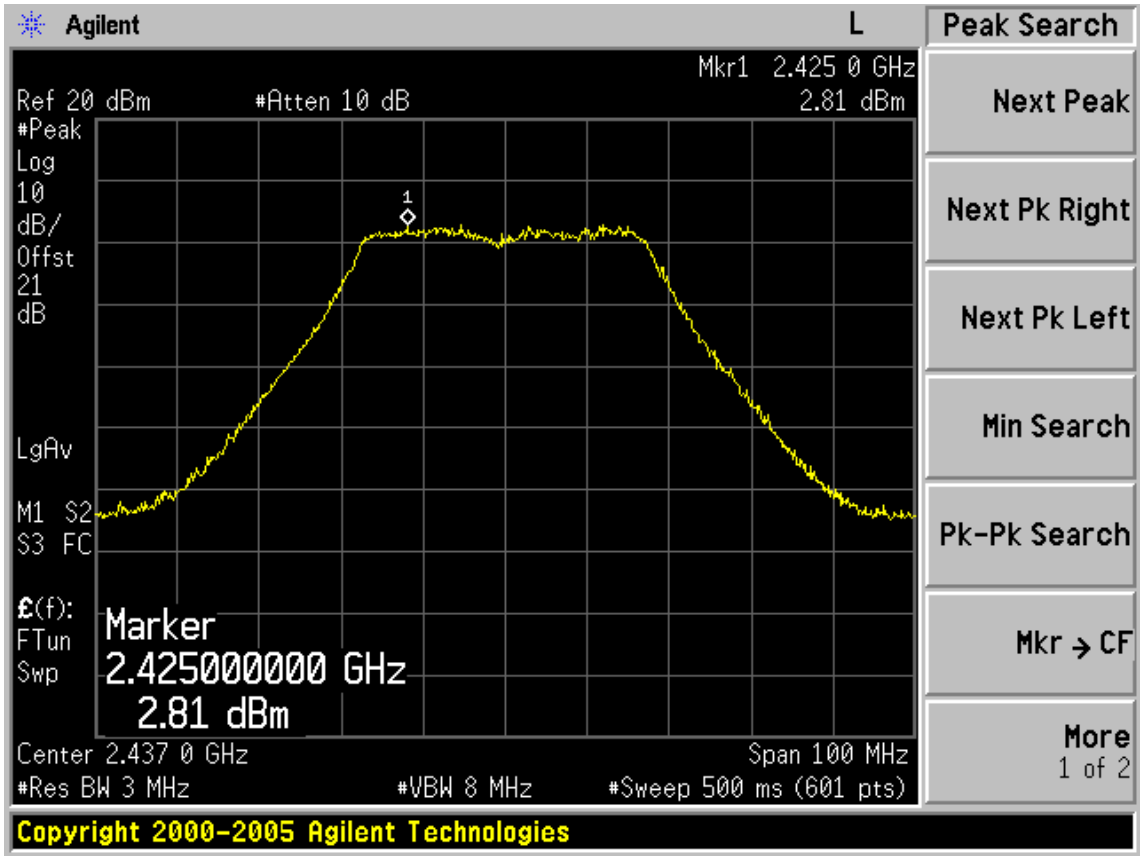
EUT: 300Mbps Wireless N PCI Express Adapter		
M/N: TL-WN881ND		
Test date: 2011-12-22	Pressure: 101.2 kpa	Humidity: 53.6 %
Tested by: Leo-Li	Test site: RF site	Temperature: 24.8 ℃

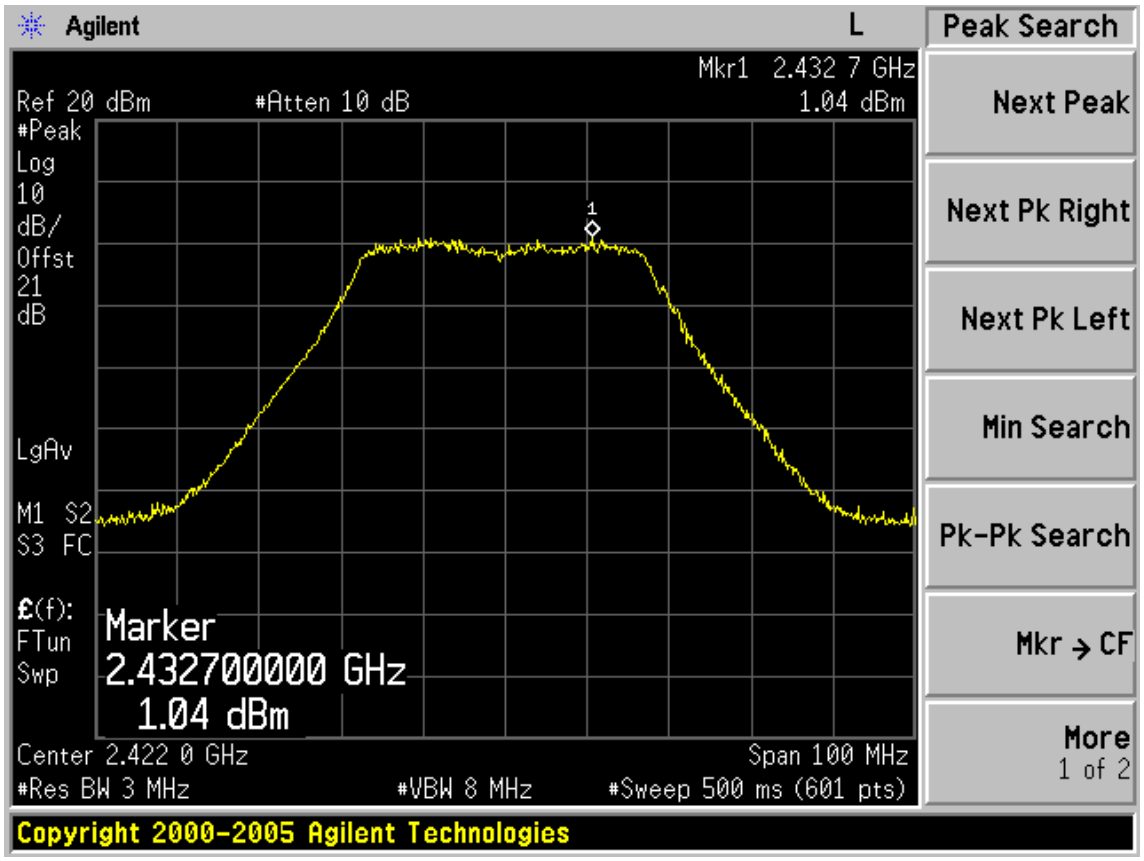
Cable loss: 1 dB		Attenuator loss: 20 dB			
Test Mode	CH (MHz)	Peak output Power （dBm）			Limit (dBm)
		Chain0	Chain1	Total	
11b	CH1	17.50	17.74	N/A	30
	CH6	17.07	17.30	N/A	30
	CH11	17.28	17.58	N/A	30
11g	CH1	16.96	17.71	N/A	30
	CH6	16.38	18.19	N/A	30
	CH11	15.65	16.84	N/A	30
11n HT20	CH1	15.09	15.28	18.20	30
	CH6	16.16	16.95	19.58	30
	CH11	15.51	15.98	18.76	30

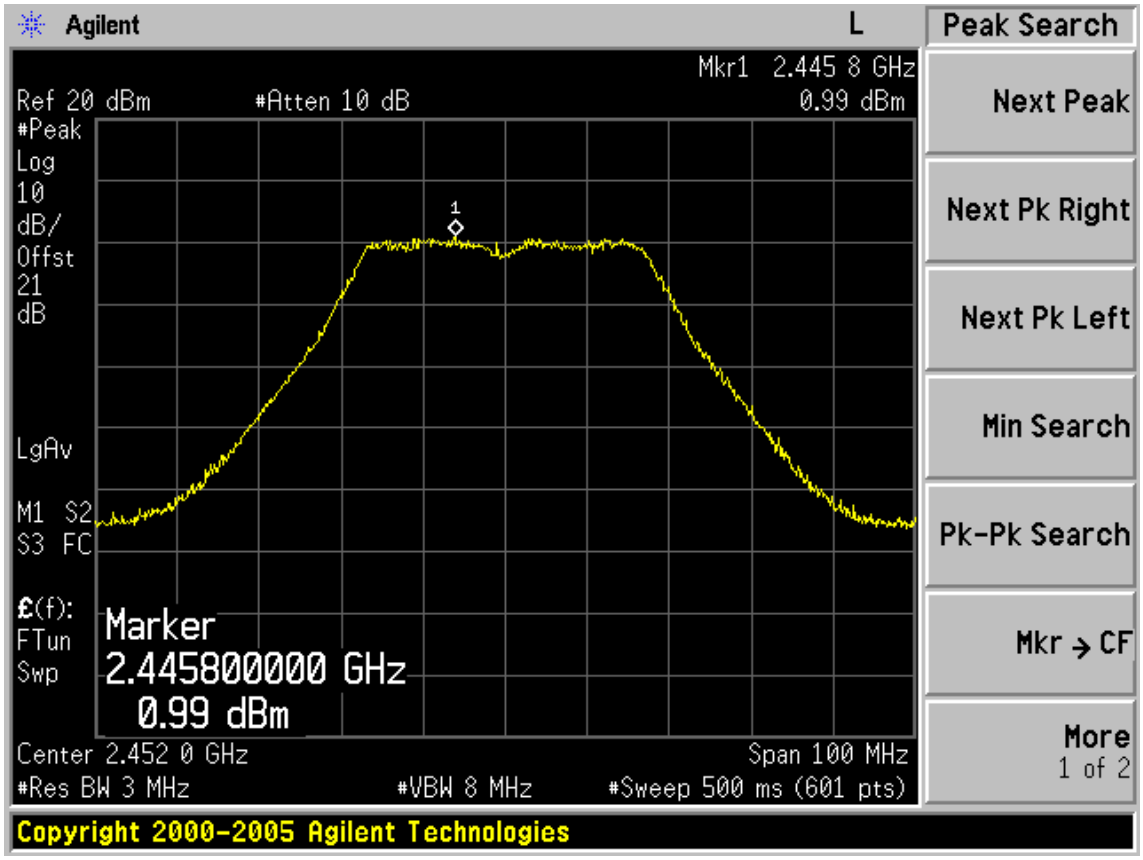
Test Mode	CH	Result					Limit
		Measured power(dBm)/3MHz		PK Output power (dBm)			(dBm)
		Chain0	Chain1	Chain0	Chain1	Total	
11n HT40	CH1	1.04	1.06	13.29	13.33	16.32	30
	CH4	2.81	2.95	15.06	15.22	18.15	30
	CH7	0.99	1.20	13.24	13.47	16.37	30
Chain 0 26dB Bandwidth for 11n HT40: 50.352MHz Chain 1 26dB Bandwidth for 11n HT40: 50.587MHz							
Chain 0 BW correction factor = 10log[(50.352MHz)/(3MHz)] = 12.25dB Chain 1 BW correction factor = 10log[(50.587MHz)/(3MHz)] = 12.27dB							
Conclusion: PASS							

Test Mode: IEEE 802.11n HT40

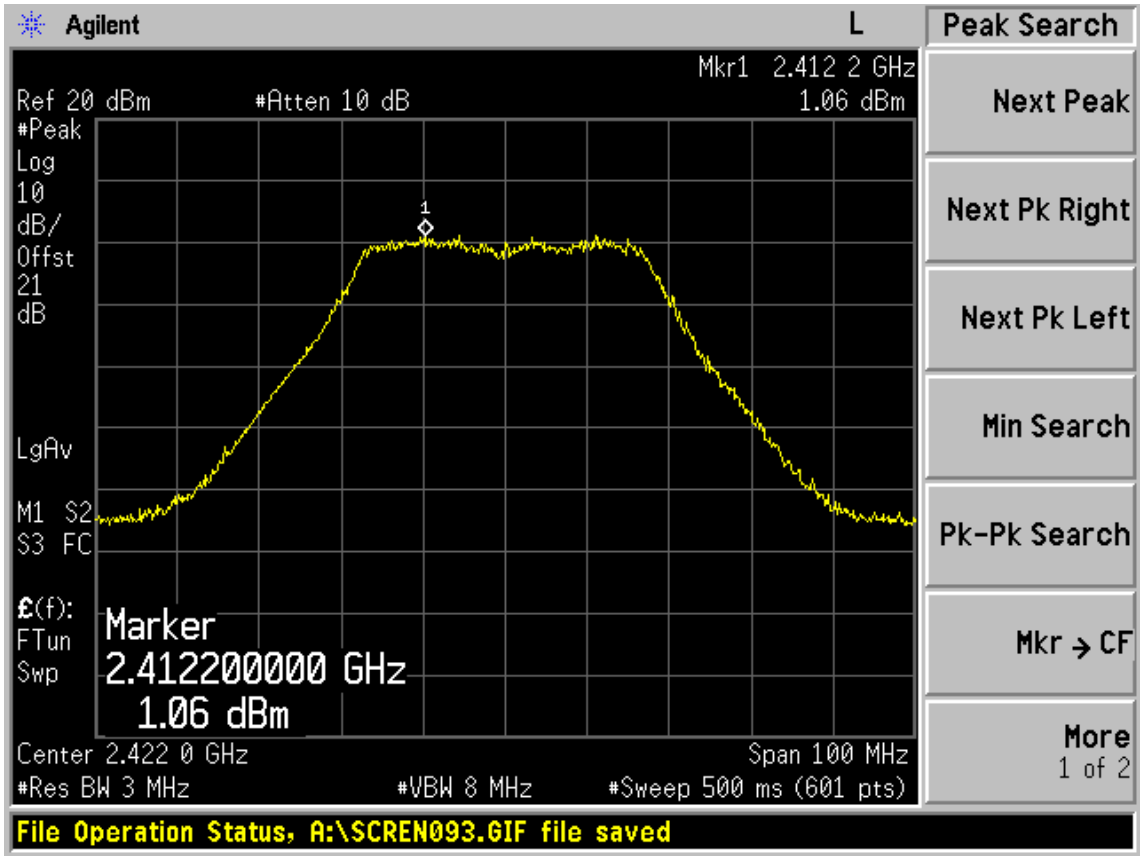
Chain0

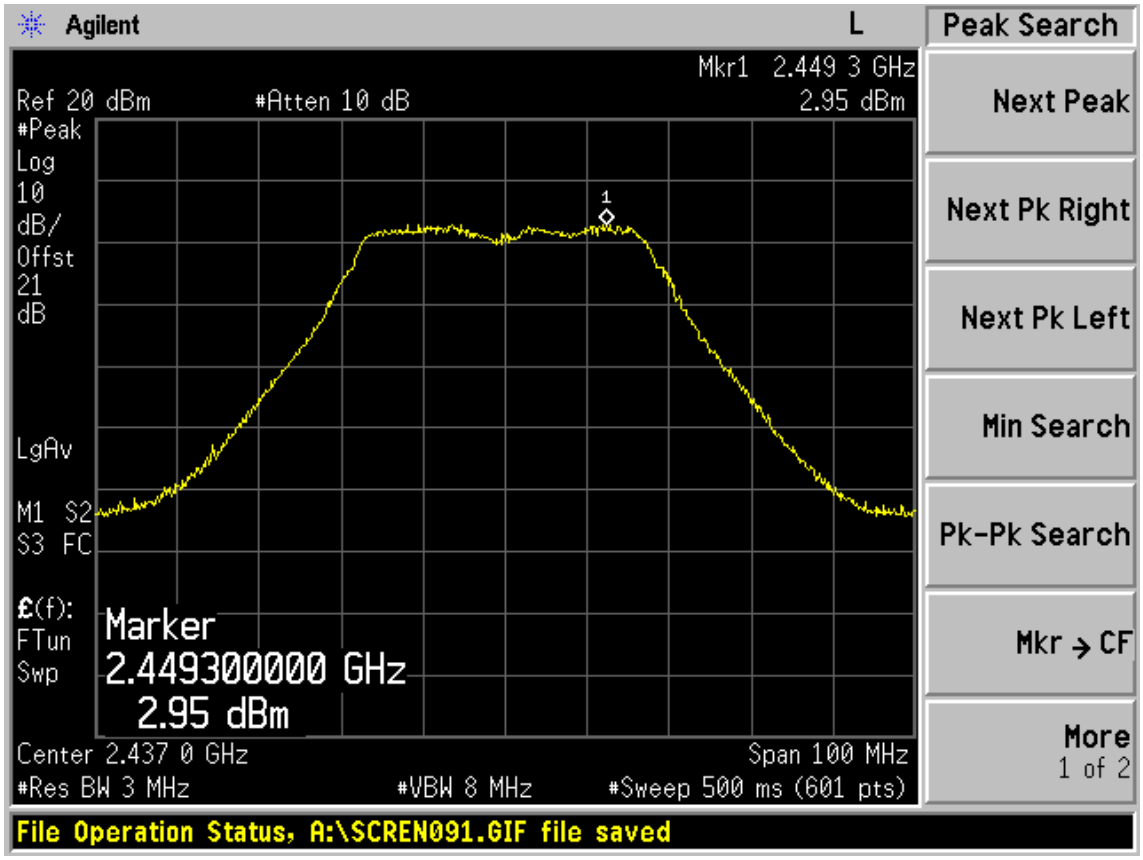


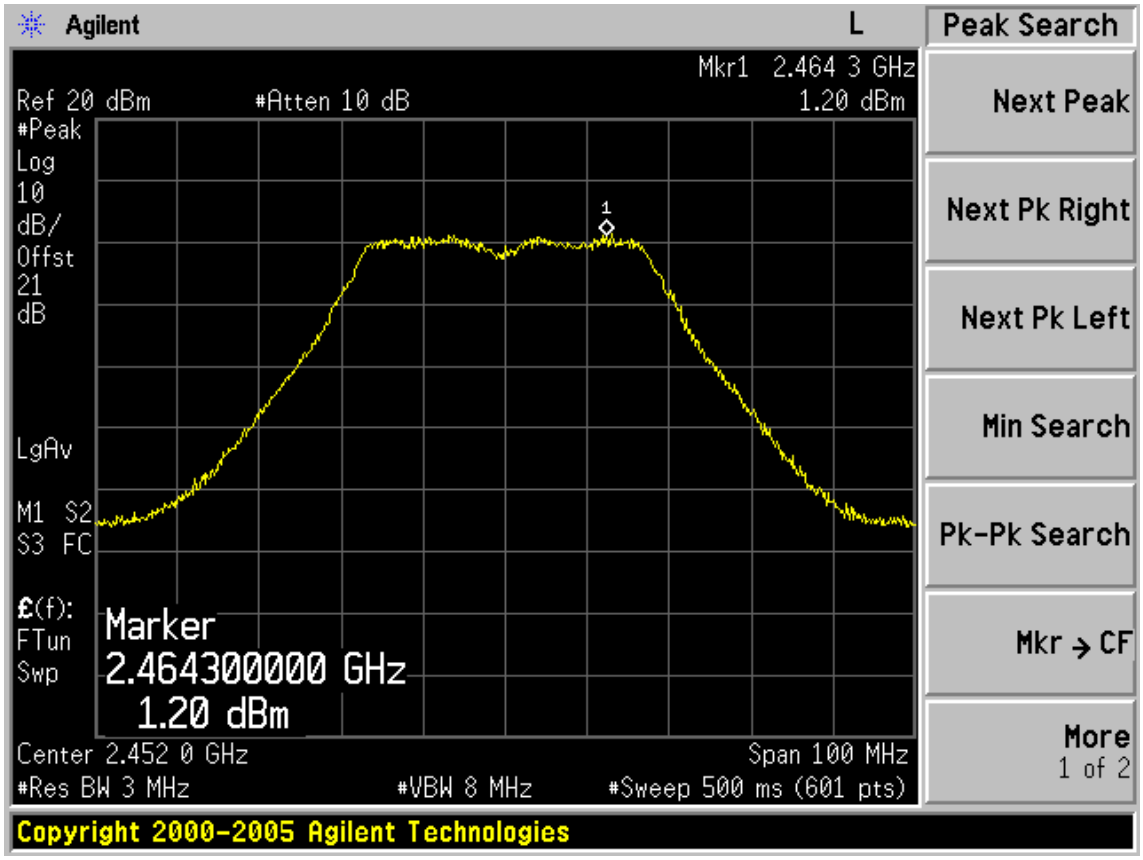



Agilent
L
Peak Search
Mkr1 2.445 8 GHz
0.99 dBm
Ref 20 dBm
#Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Marker
2.445800000 GHz
0.99 dBm
Center 2.452 0 GHz
Span 100 MHz
#Res BW 3 MHz
#VBW 8 MHz
#Sweep 500 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

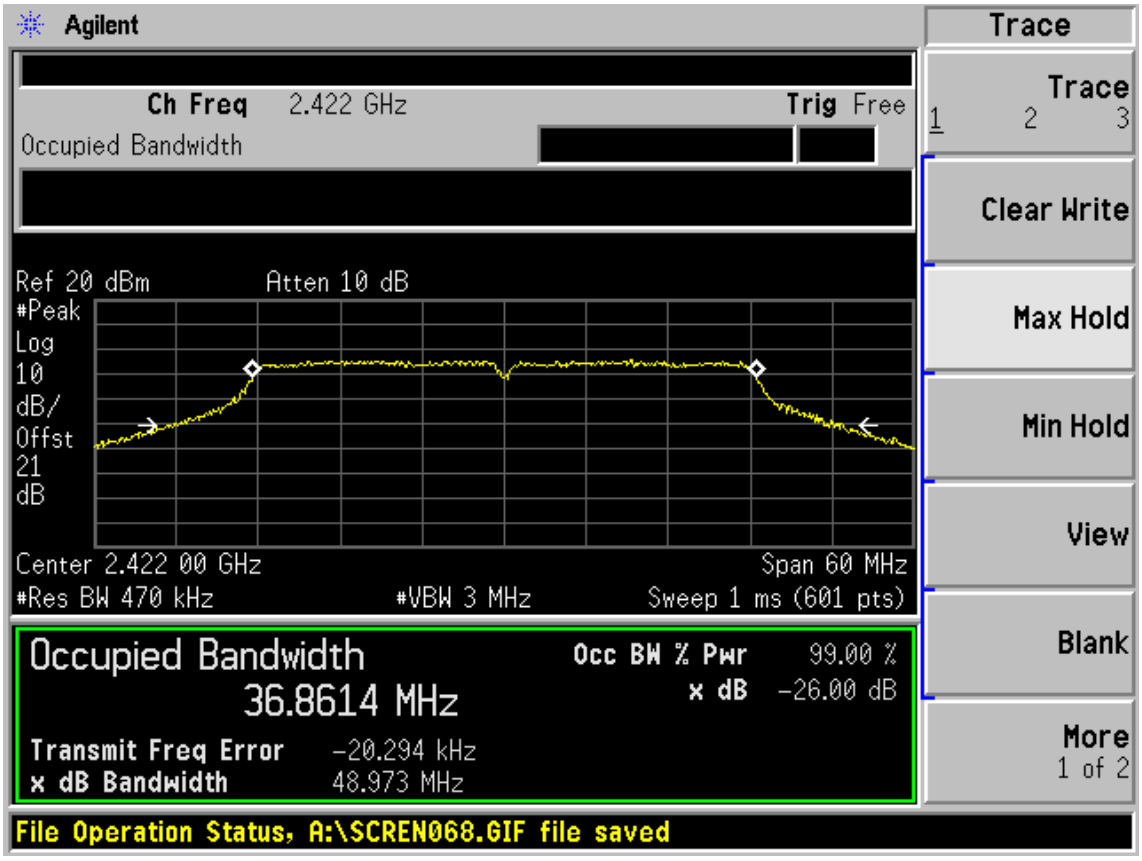
Chain1

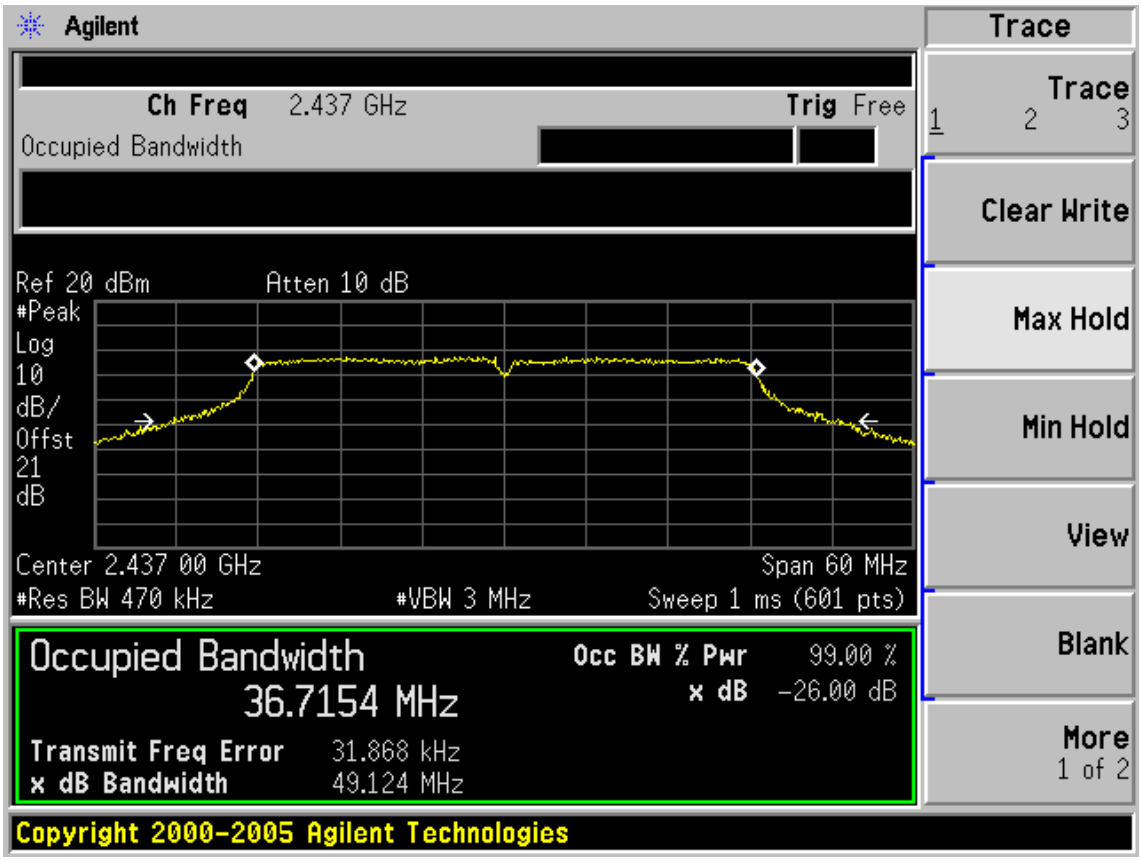

Agilent
L
Peak Search
Mkr1 2.412 2 GHz
1.06 dBm
Ref 20 dBm
#Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Marker
2.412200000 GHz
1.06 dBm
Center 2.422 0 GHz
Span 100 MHz
#Res BW 3 MHz
#VBW 8 MHz
#Sweep 500 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN093.GIF file saved

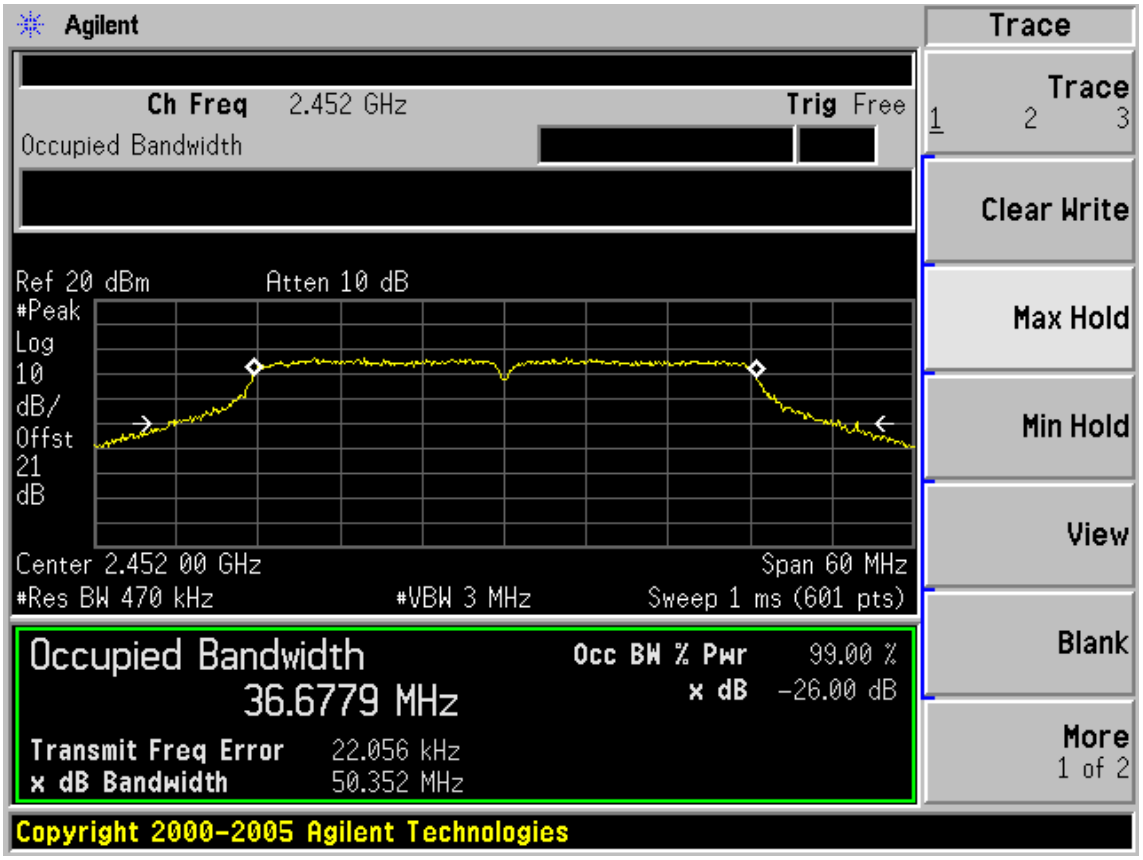

Agilent
L
Peak Search
Mkr1 2.449 3 GHz
2.95 dBm
Ref 20 dBm
#Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Marker
2.449300000 GHz
2.95 dBm
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 2.437 0 GHz
Span 100 MHz
#Res BW 3 MHz
#VBW 8 MHz
#Sweep 500 ms (601 pts)
File Operation Status, A:\SCREN091.GIF file saved


Agilent
L
Peak Search
Mkr1 2.464 3 GHz
1.20 dBm
Ref 20 dBm
#Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Marker
2.464300000 GHz
1.20 dBm
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 2.452 0 GHz
Span 100 MHz
#Res BW 3 MHz
#VBW 8 MHz
#Sweep 500 ms (601 pts)
Copyright 2000-2005 Agilent Technologies

26dB Bandwidth
Chain 0






Agilent
Trace
Ch Freq 2.452 GHz
Trig Free
Occupied Bandwidth
Trace
1 2 3
Clear Write
Ref 20 dBm
Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
Max Hold
Min Hold
View
Center 2.452 00 GHz
Span 60 MHz
#Res BW 470 kHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Occupied Bandwidth
36.6779 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Blank
Transmit Freq Error 22.056 kHz
x dB Bandwidth 50.352 MHz
More
1 of 2
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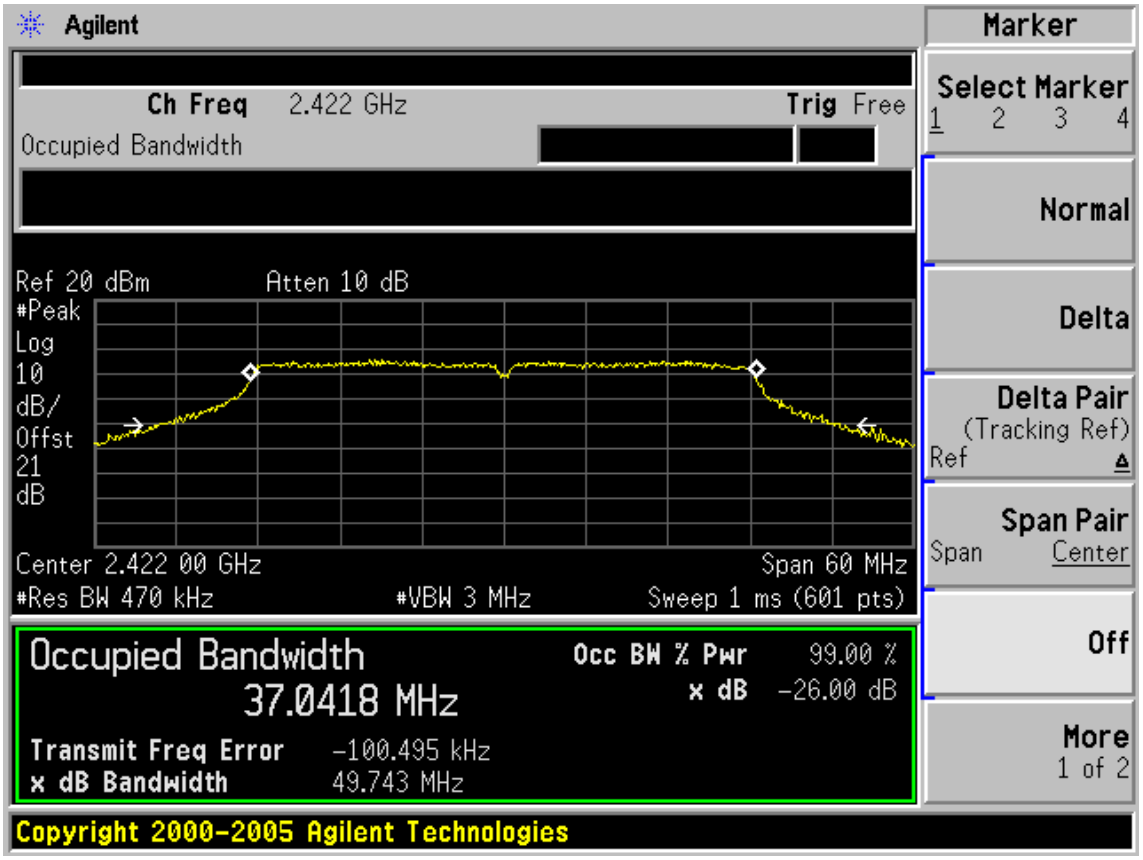
Chain 1


Agilent
Marker
Ch Freq 2.422 GHz
Trig Free
Occupied Bandwidth
Select Marker
1 2 3 4
Normal
Ref 20 dBm
Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Center 2.422 00 GHz
Span 60 MHz
#Res BW 470 kHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Off
Occupied Bandwidth
37.0418 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -100.495 kHz
x dB Bandwidth 49.743 MHz
More
1 of 2
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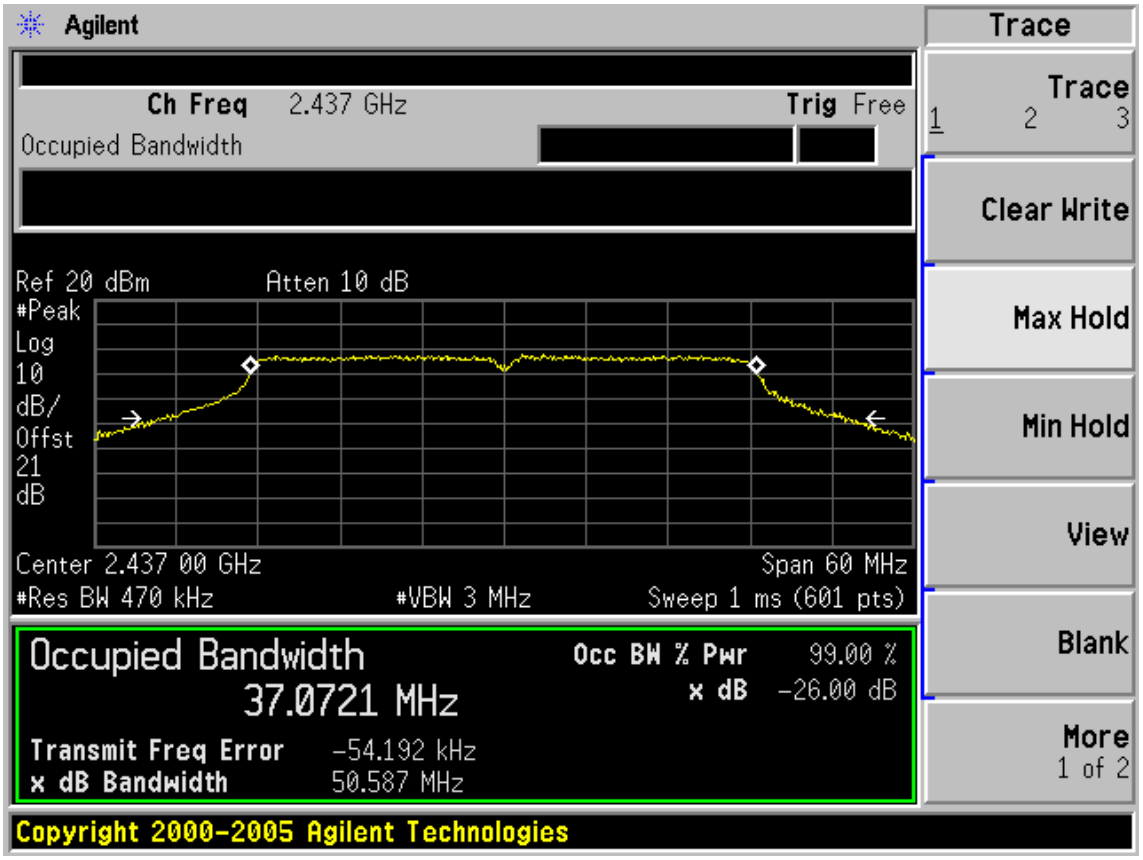
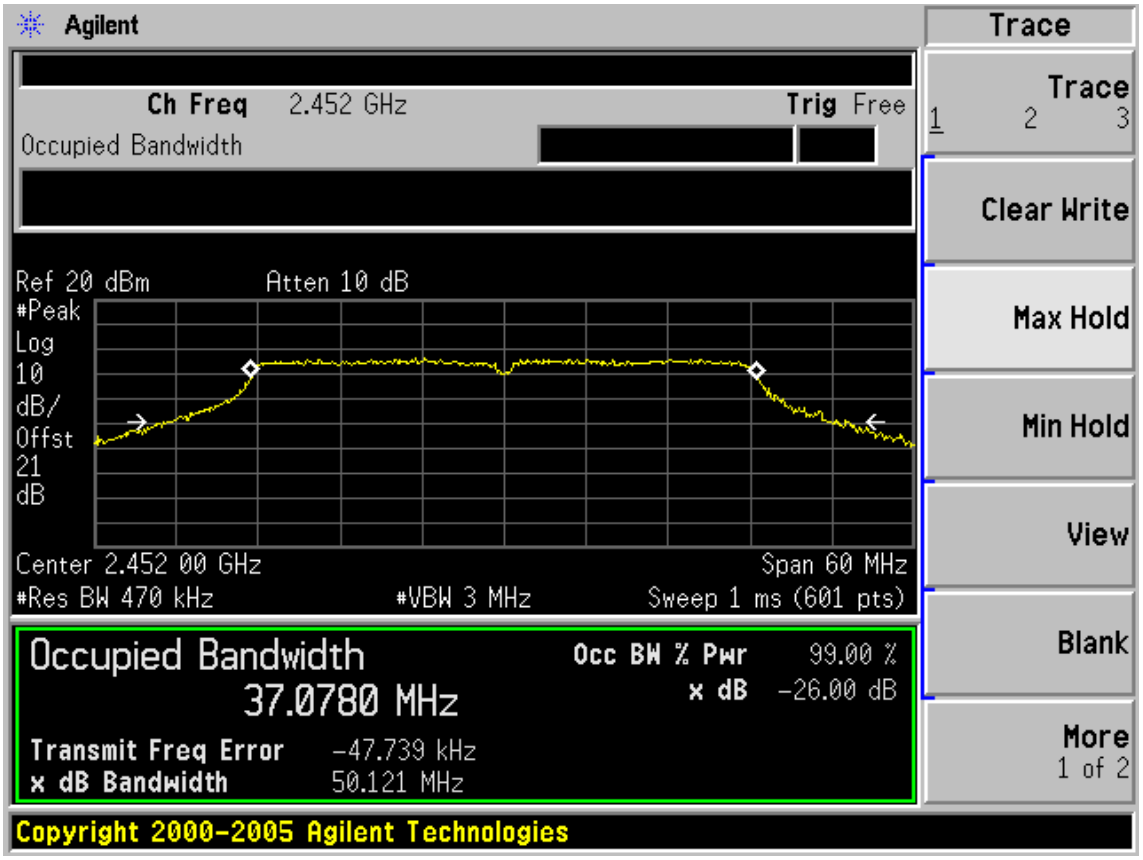

Agilent
Trace
Ch Freq 2.437 GHz
Trig Free
Occupied Bandwidth
Trace 1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More 1 of 2
Ref 20 dBm
Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
Center 2.437 00 GHz
Span 60 MHz
#Res BW 470 kHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Occupied Bandwidth
37.0721 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -54.192 kHz
x dB Bandwidth 50.587 MHz
Copyright 2000-2005 Agilent Technologies


Agilent
Trace
Ch Freq 2.452 GHz
Trig Free
Occupied Bandwidth
Trace 1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More 1 of 2
Ref 20 dBm
Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
Center 2.452 00 GHz
Span 60 MHz
#Res BW 470 kHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Occupied Bandwidth
37.0780 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -47.739 kHz
x dB Bandwidth 50.121 MHz
Copyright 2000-2005 Agilent Technologies

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 leval 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

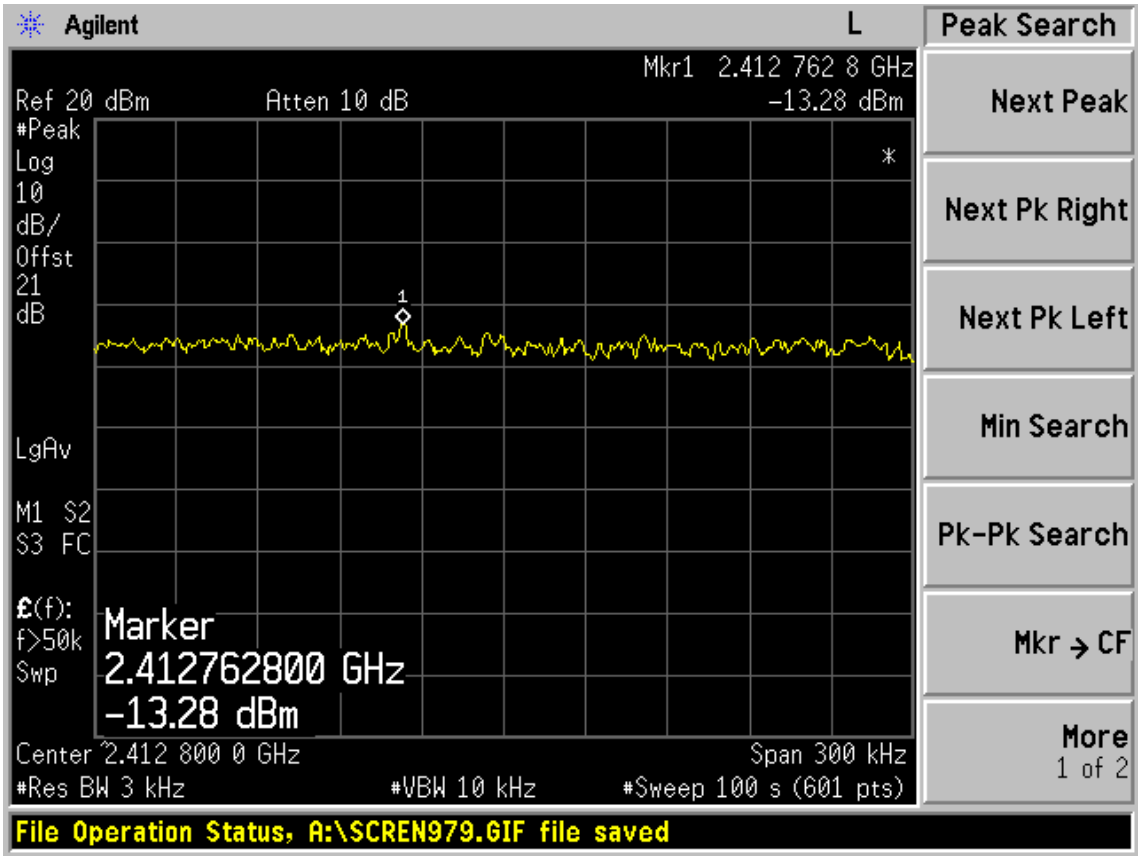
EUT: 300Mbps Wireless N PCI Express Adapter		
M/N: TL-WN881ND		
Test date:2011-12-22	Pressure: 101.5 kpa	Humidity: 52.4 %
Tested by: Leo-Li	Test site: RF Site	Temperature：25.4℃

Cable loss: 1 dB		Attenuator loss: 20 dB			
Test Mode	CH	Power density（dBm/3KHz）			Limit (dBm/3KHz)
		Chain0	Chain1	Total	
11b	CH1	-13.28	-13.00	N/A	8
	CH6	-13.85	-12.61	N/A	8
	CH11	-13.29	-13.35	N/A	8
11g	CH1	-16.86	-15.37	N/A	8
	CH6	-16.99	-14.86	N/A	8
	CH11	-17.05	-16.23	N/A	8
11n HT20	CH1	-18.07	-18.39	-15.22	8
	CH6	-16.08	-15.79	-12.92	8
	CH11	-18.00	-17.46	-14.71	8
11n HT40	CH1	-23.99	-24.35	-21.16	8
	CH4	-22.25	-22.26	-19.24	8
	CH7	-21.79	-21.58	-18.67	8
Conclusion：PASS					

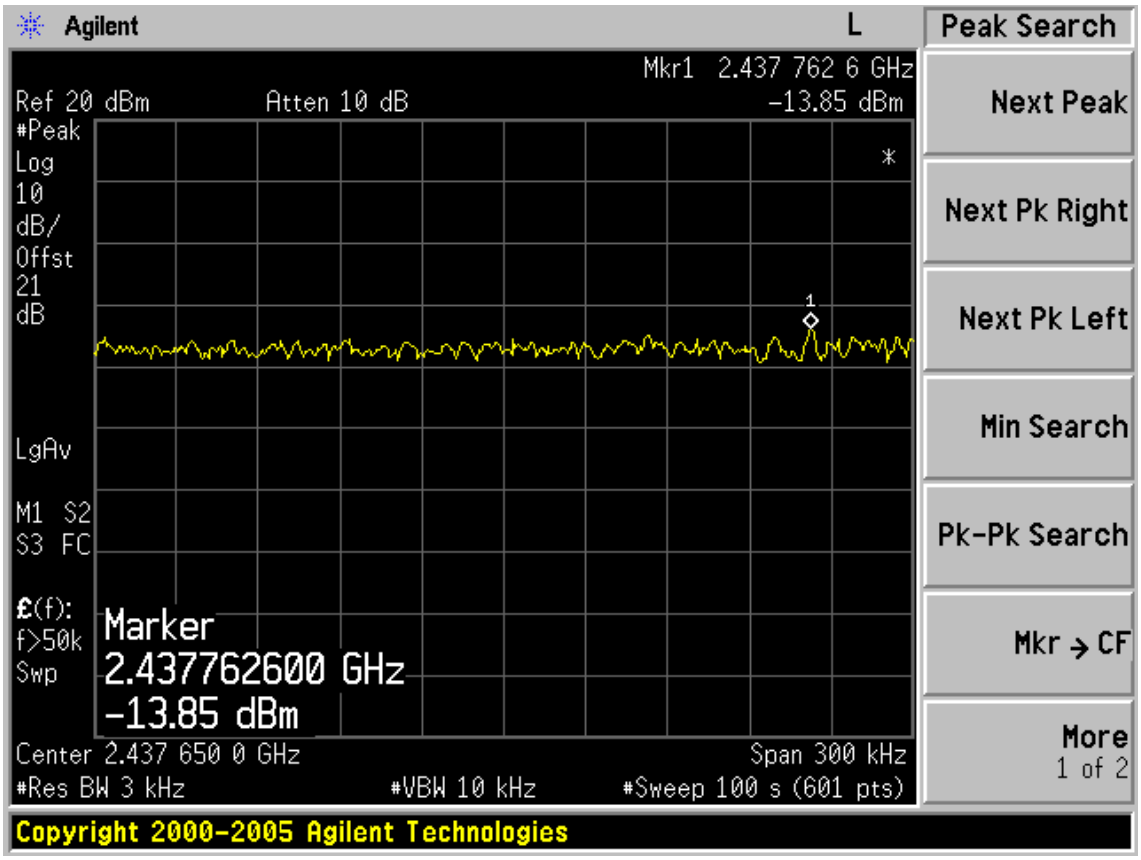
Chain 0:

Test Mode: IEEE 802.11b TX

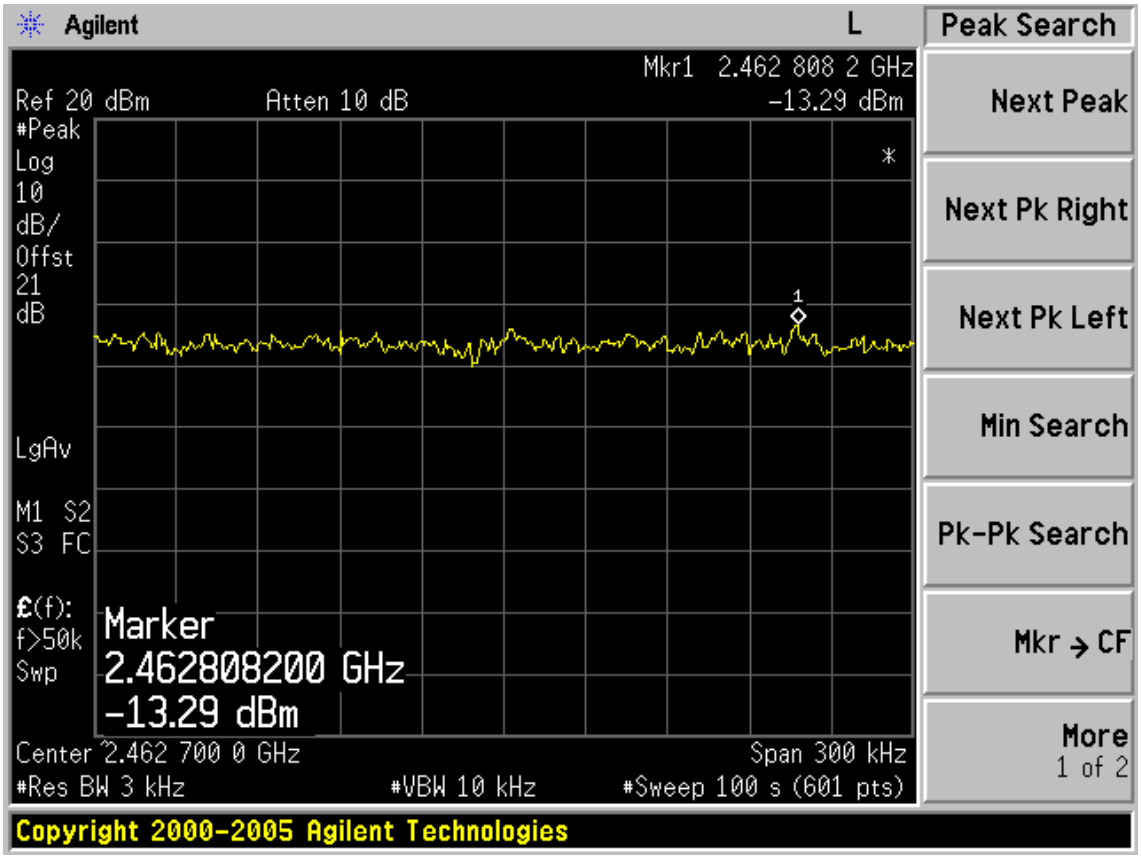
Test CH1: 2412MHz



Test CH6: 2437MHz

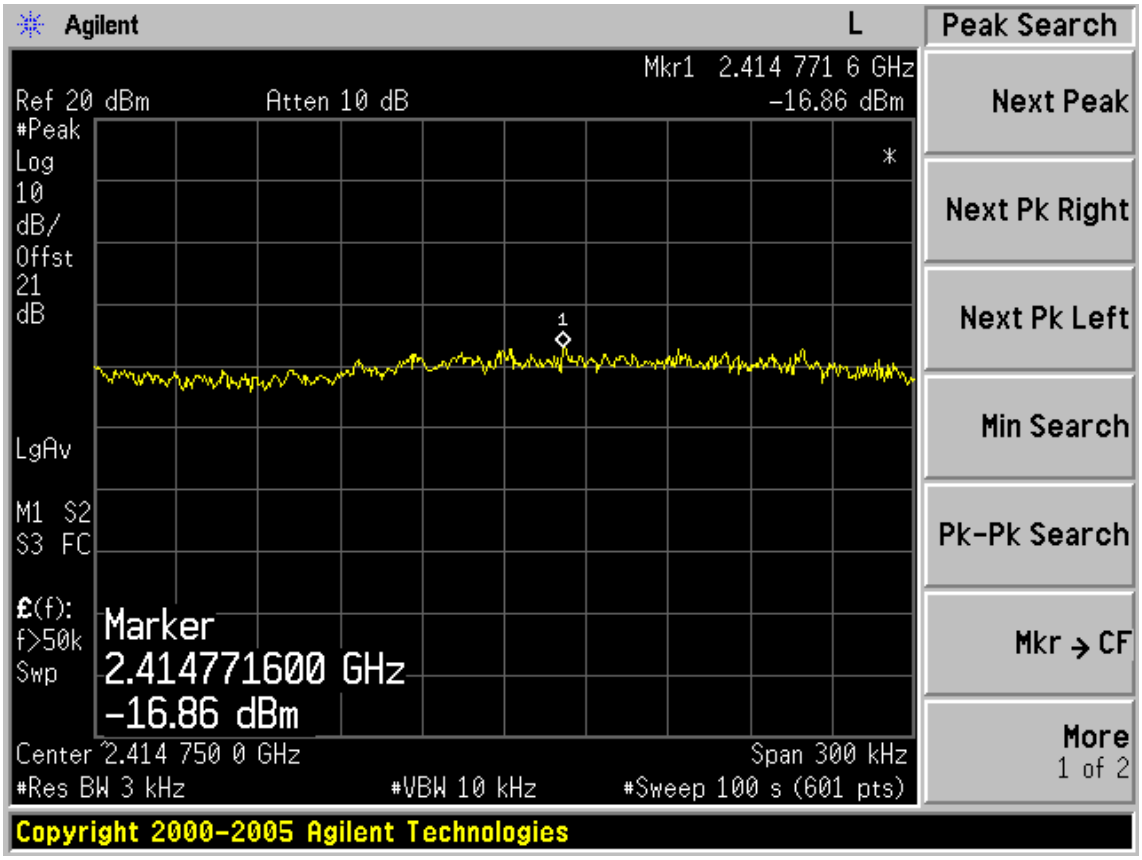


Test CH11: 2462MHz

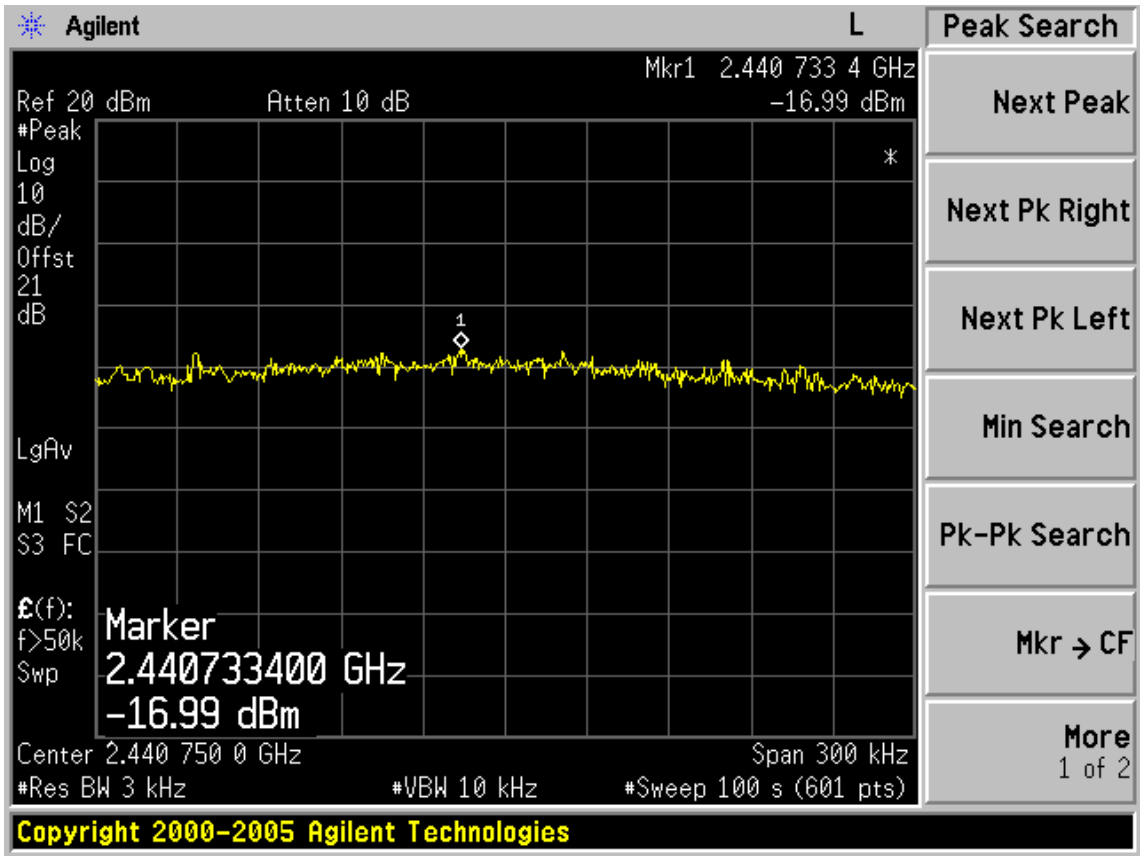


Test Mode: IEEE 802.11g TX

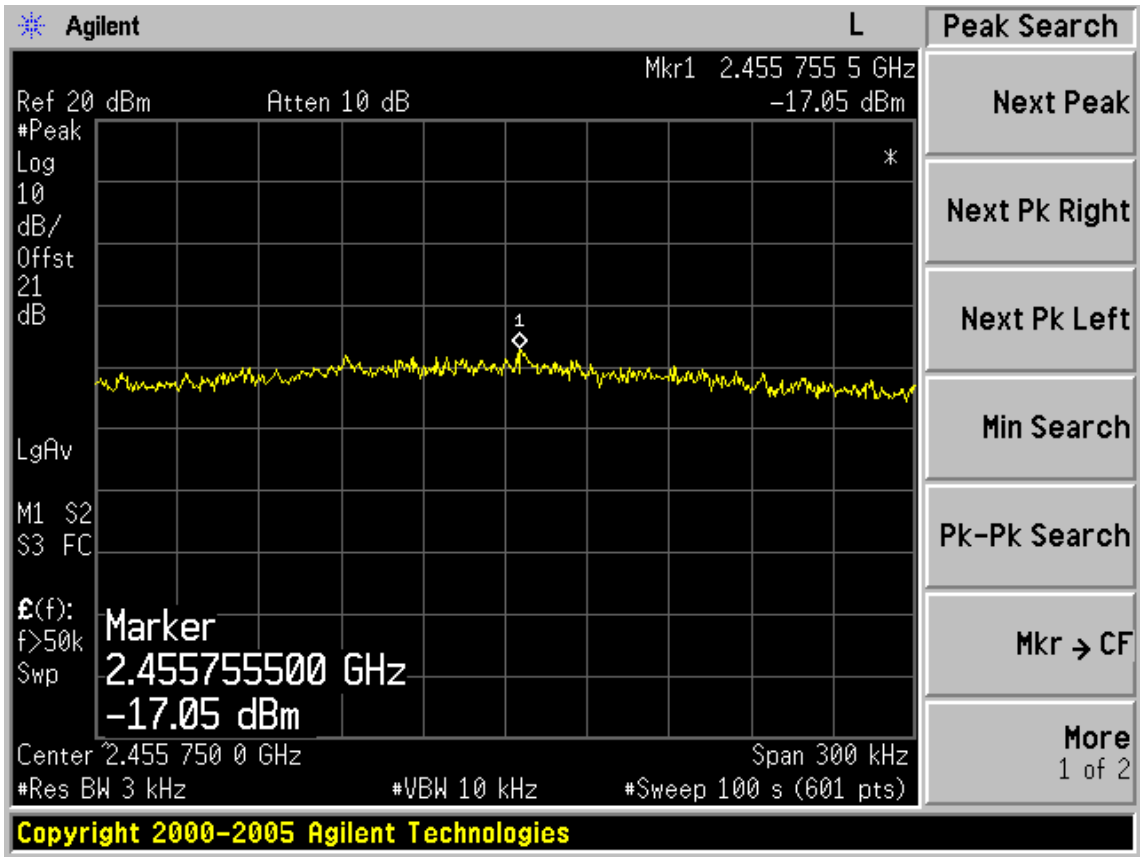
Test CH1: 2412MHz



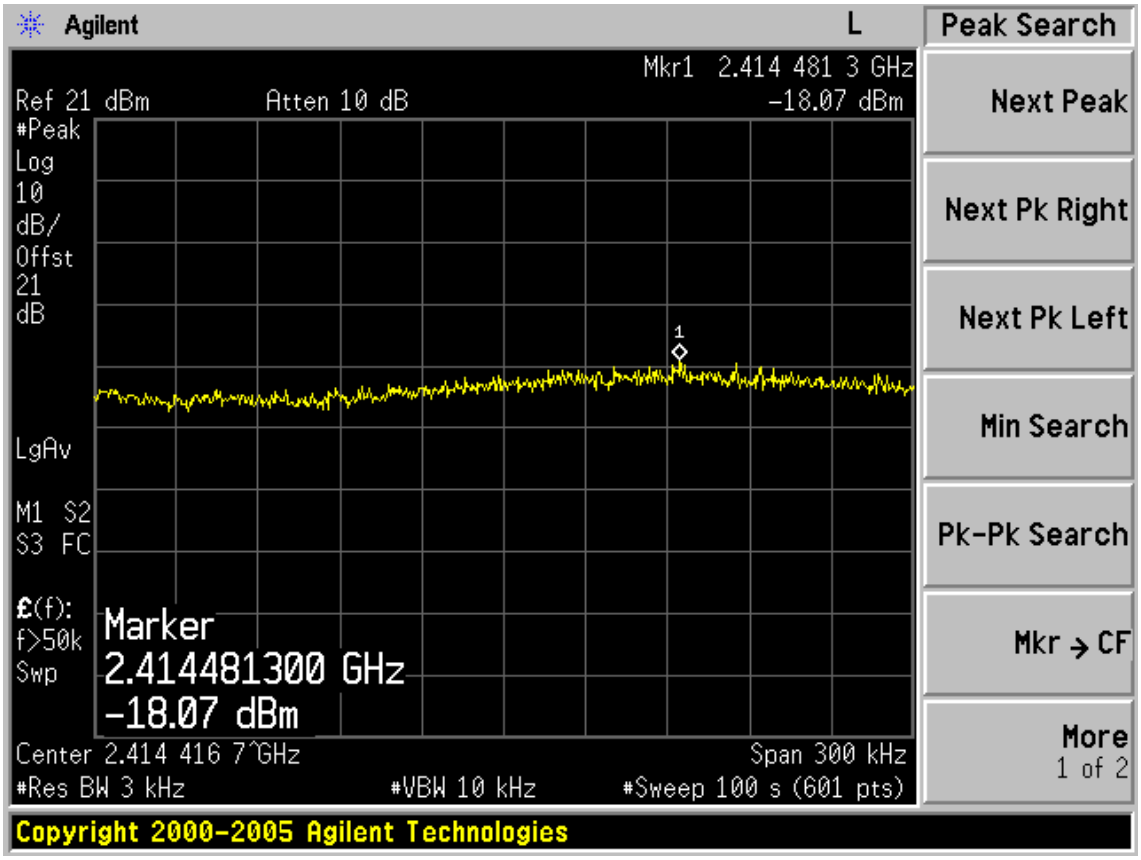
Test CH6: 2437MHz



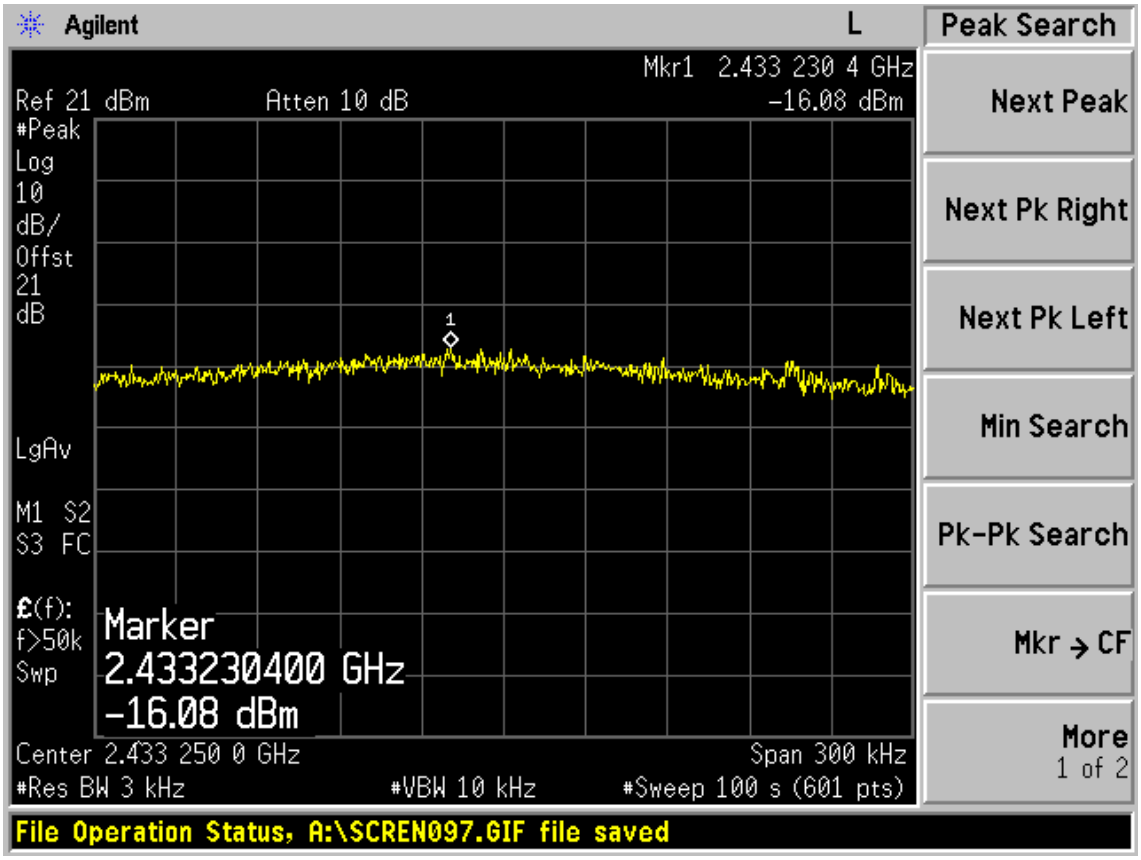
Test CH11: 2462MHz



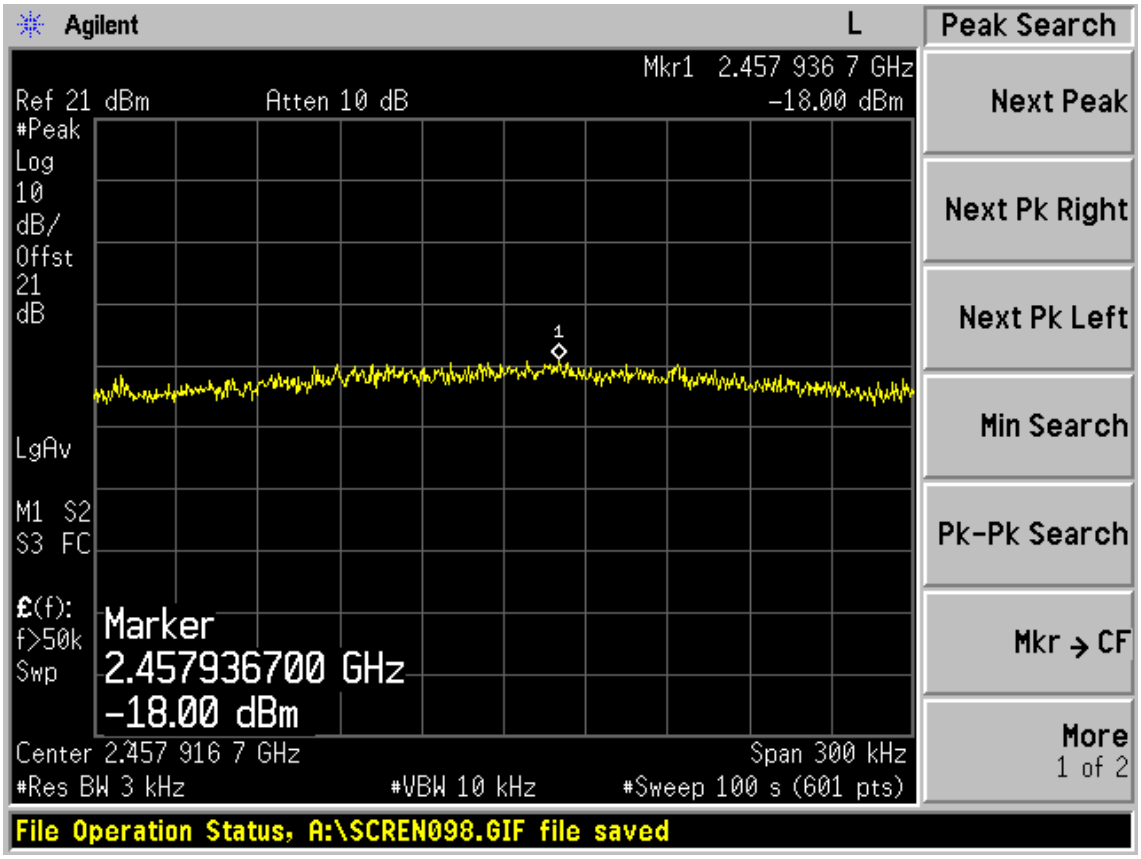
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz



Test CH6: 2437MHz

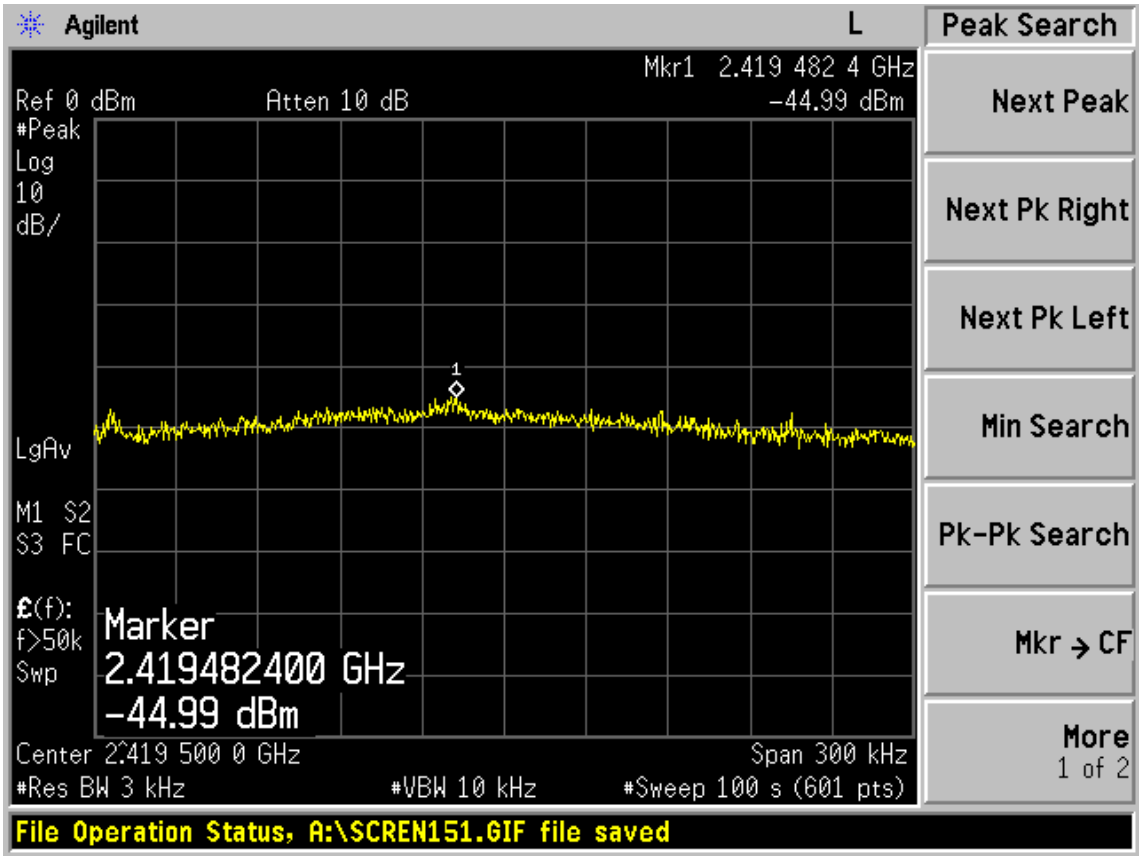


Test CH11: 2462MHz

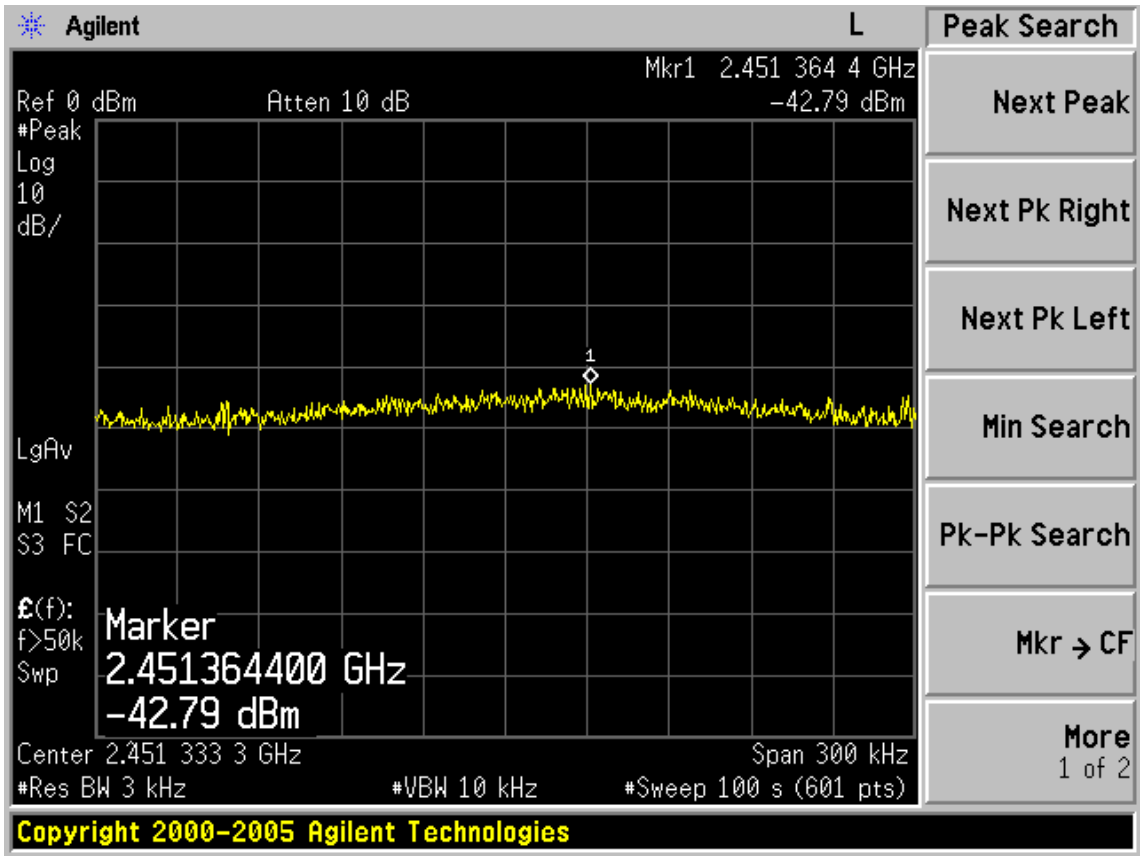


Test Mode: IEEE 802.11n HT40 TX

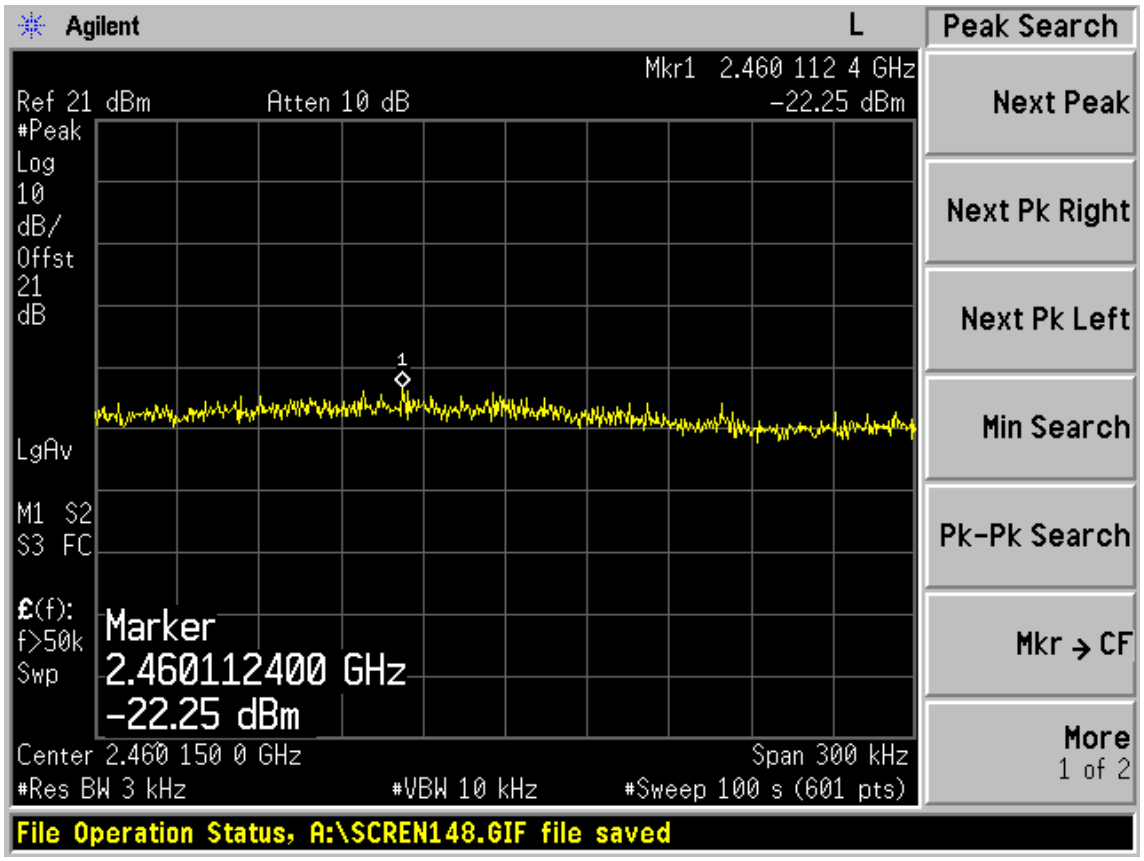
Test CH1: 2422MHz



Test CH4: 2437MHz



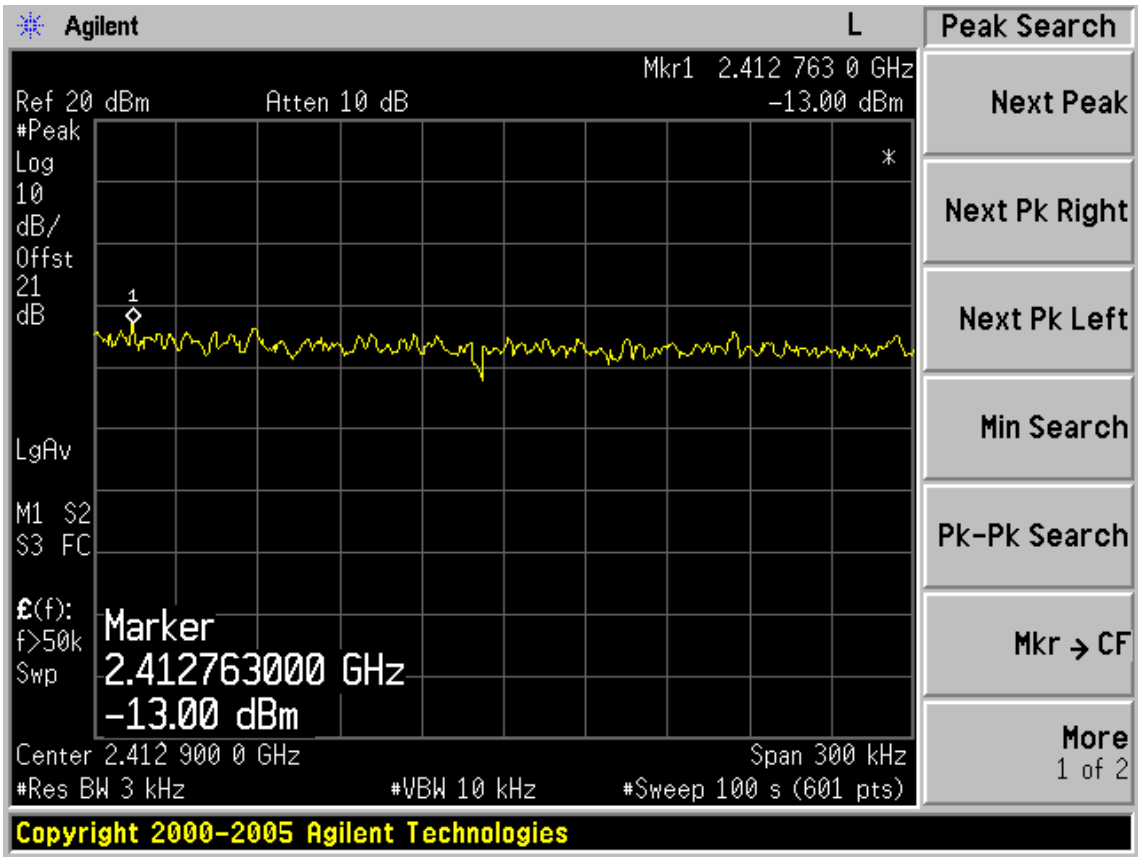
Test CH7: 2452MHz



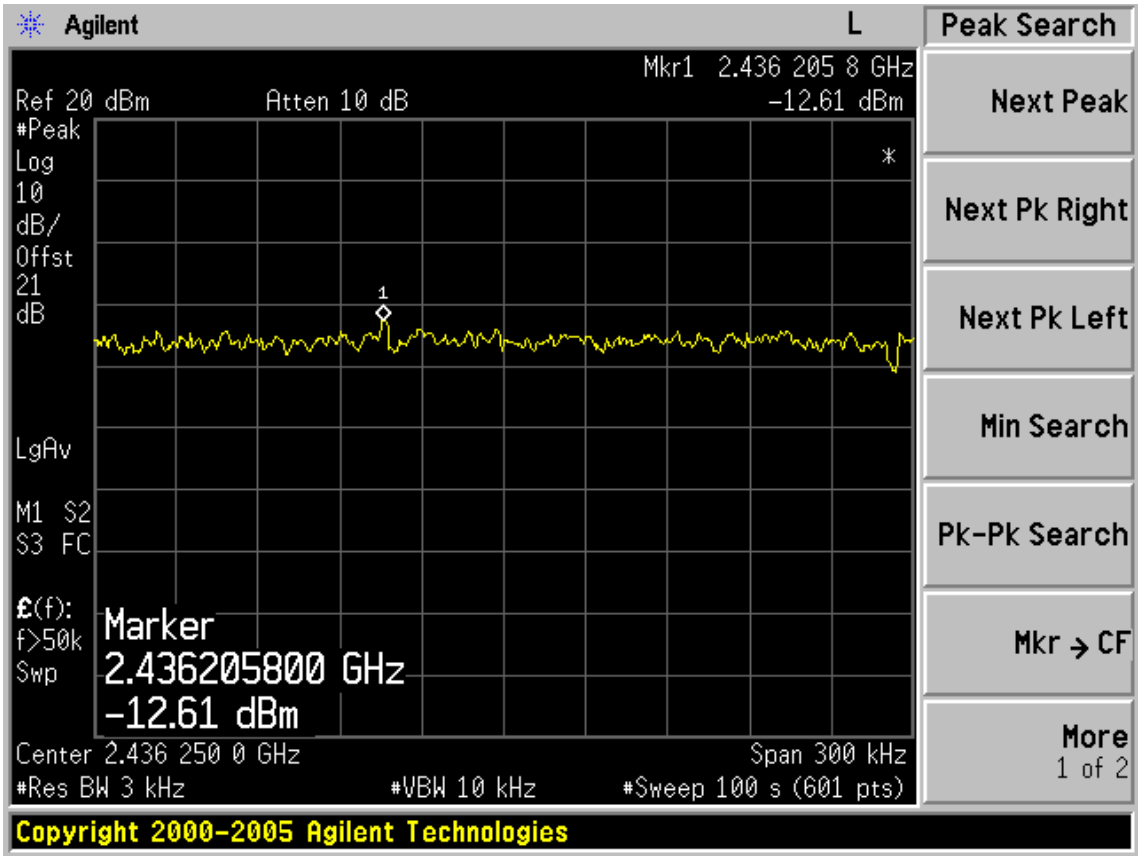
Chain 1:

Test Mode: IEEE 802.11b TX

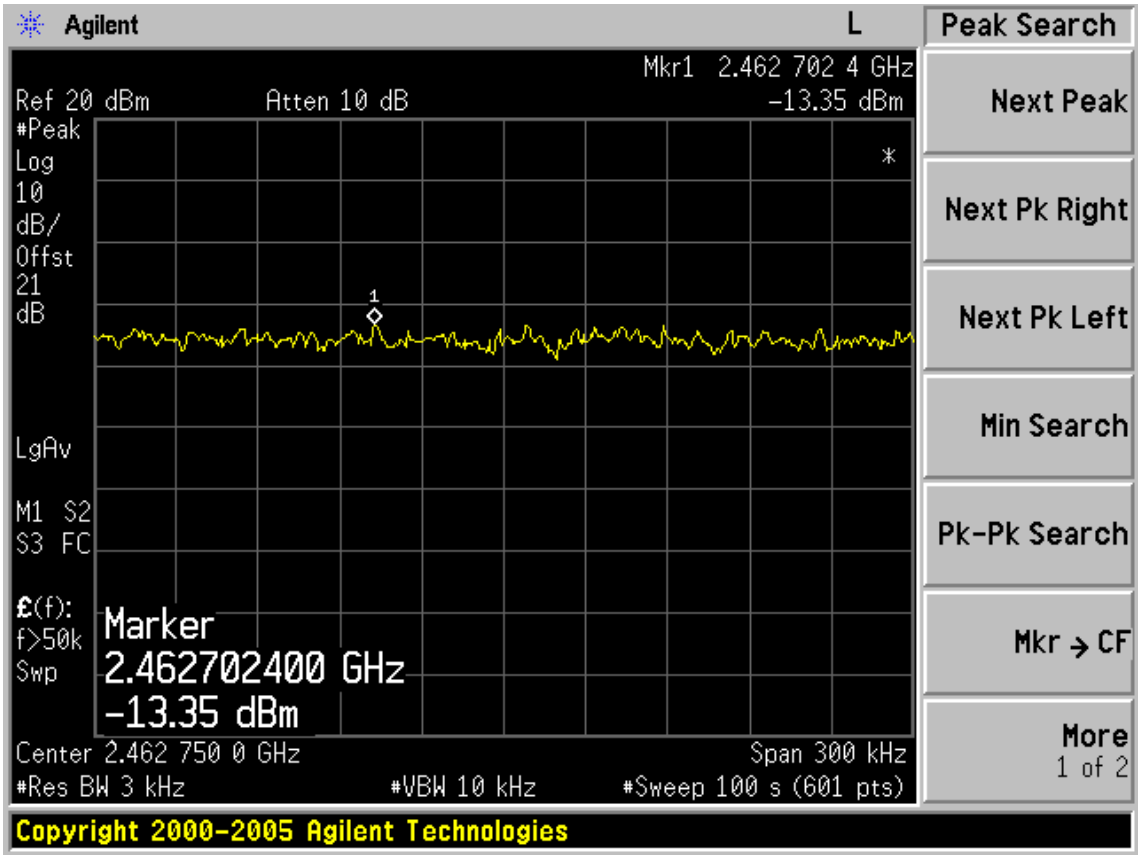
Test CH1: 2412MHz



Test CH6: 2437MHz

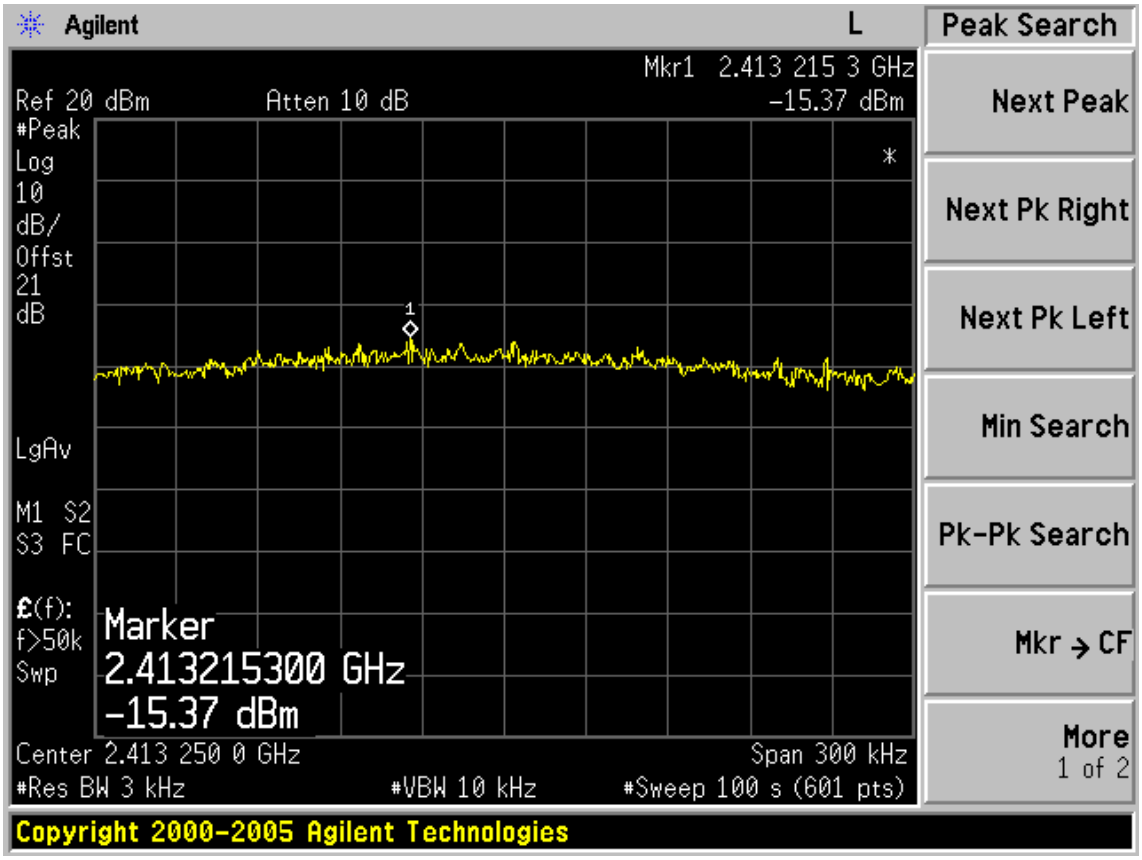


Test CH11: 2462MHz

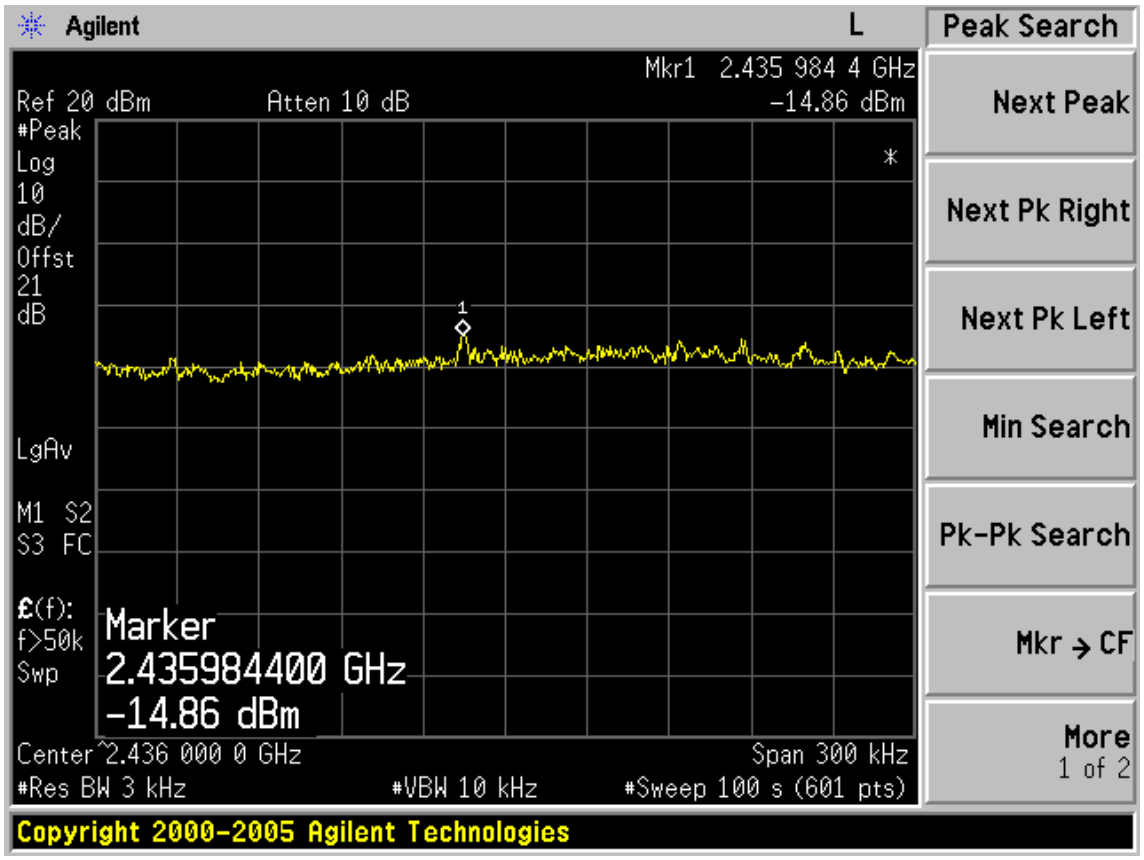


Test Mode: IEEE 802.11g TX

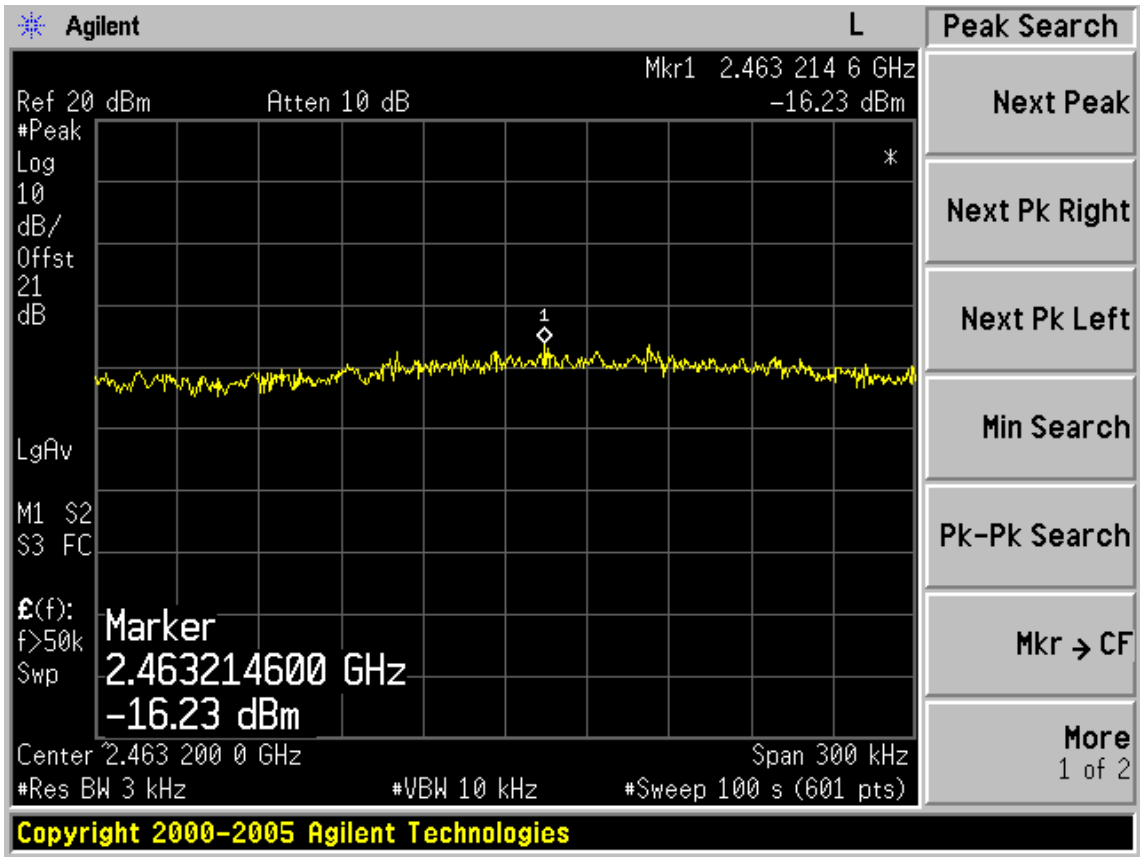
Test CH1: 2412MHz



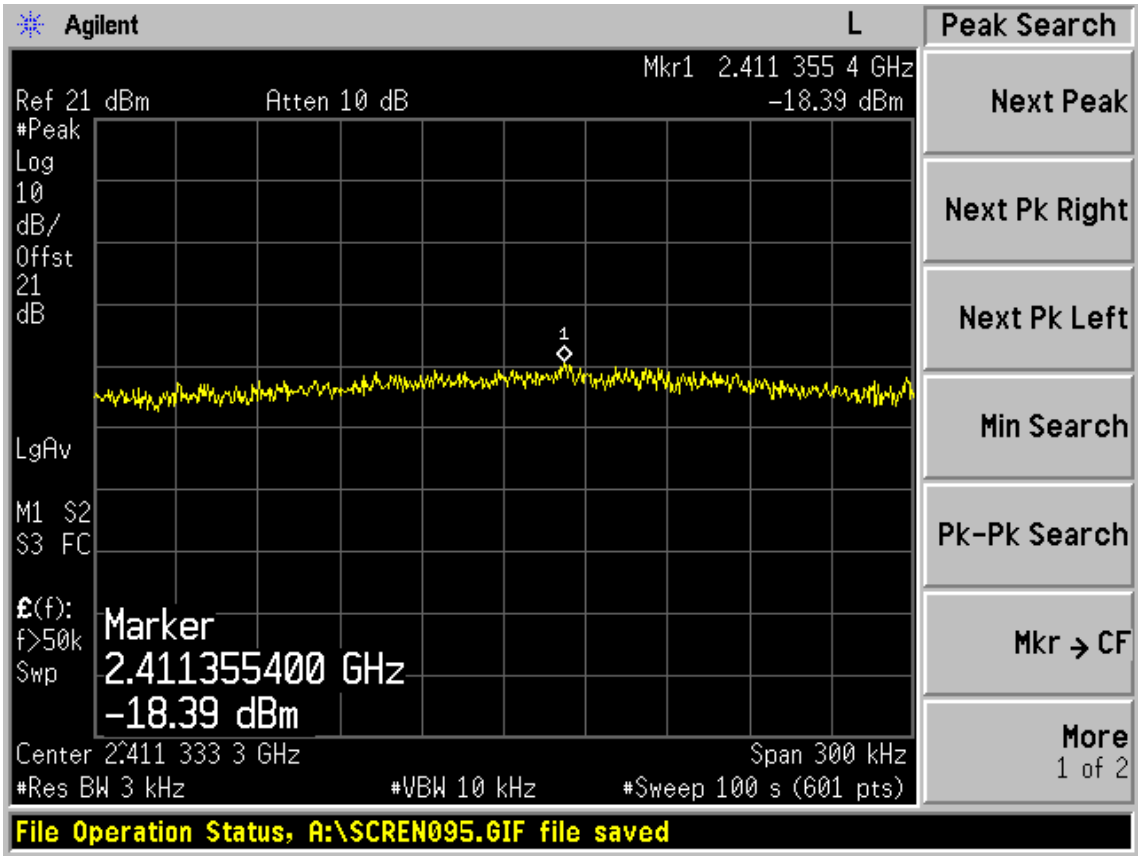
Test CH6: 2437MHz



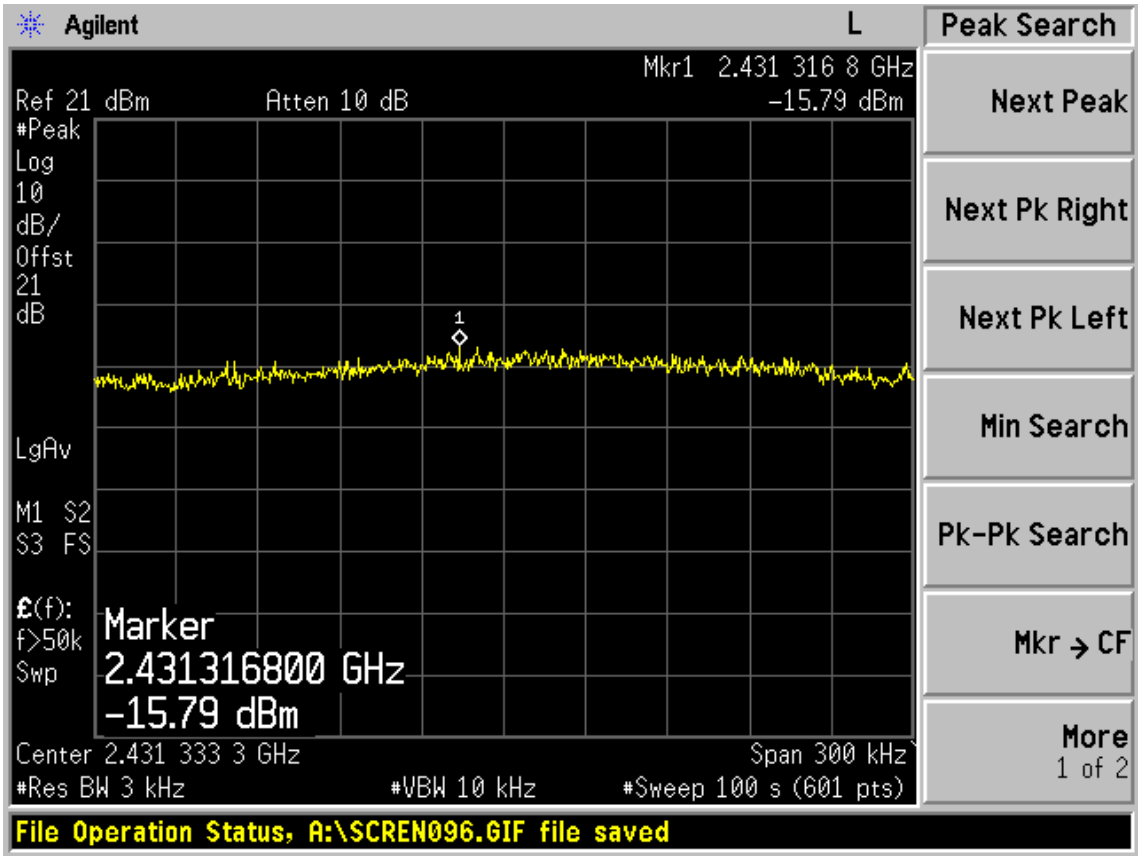
Test CH11: 2462MHz



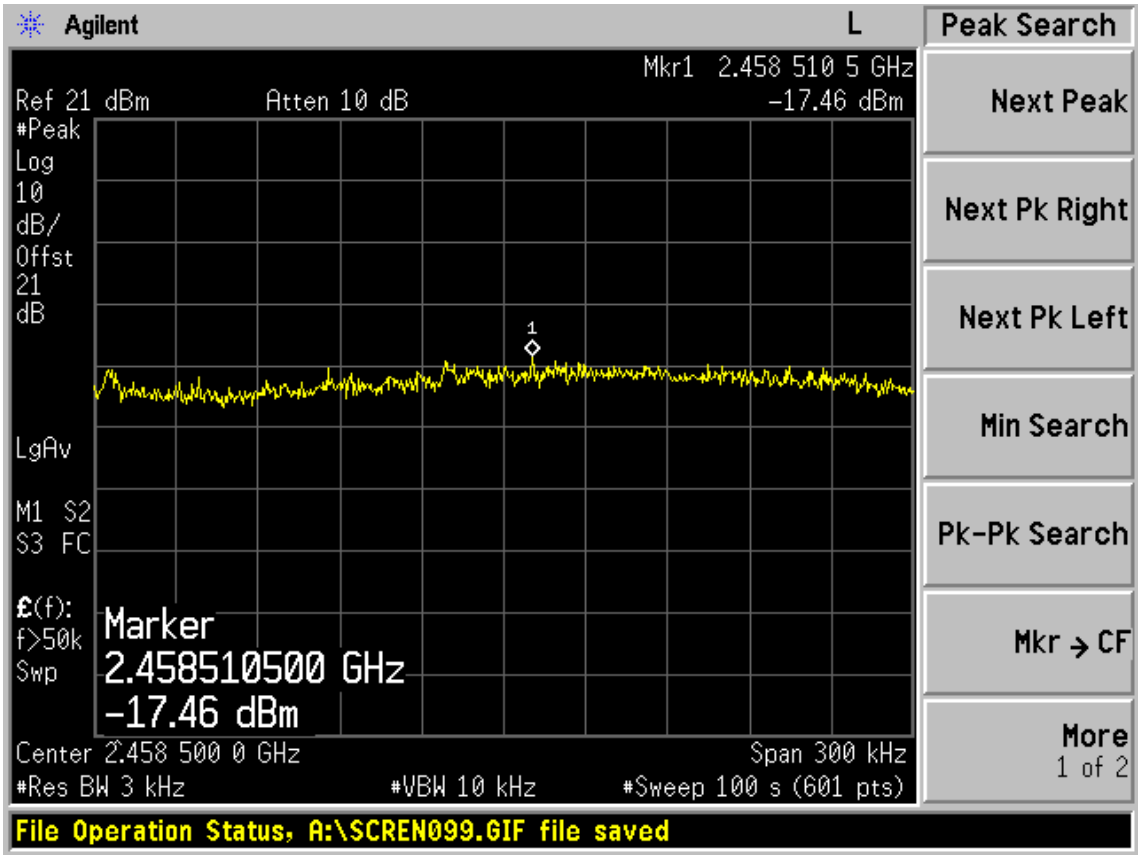
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz



Test CH6: 2437MHz

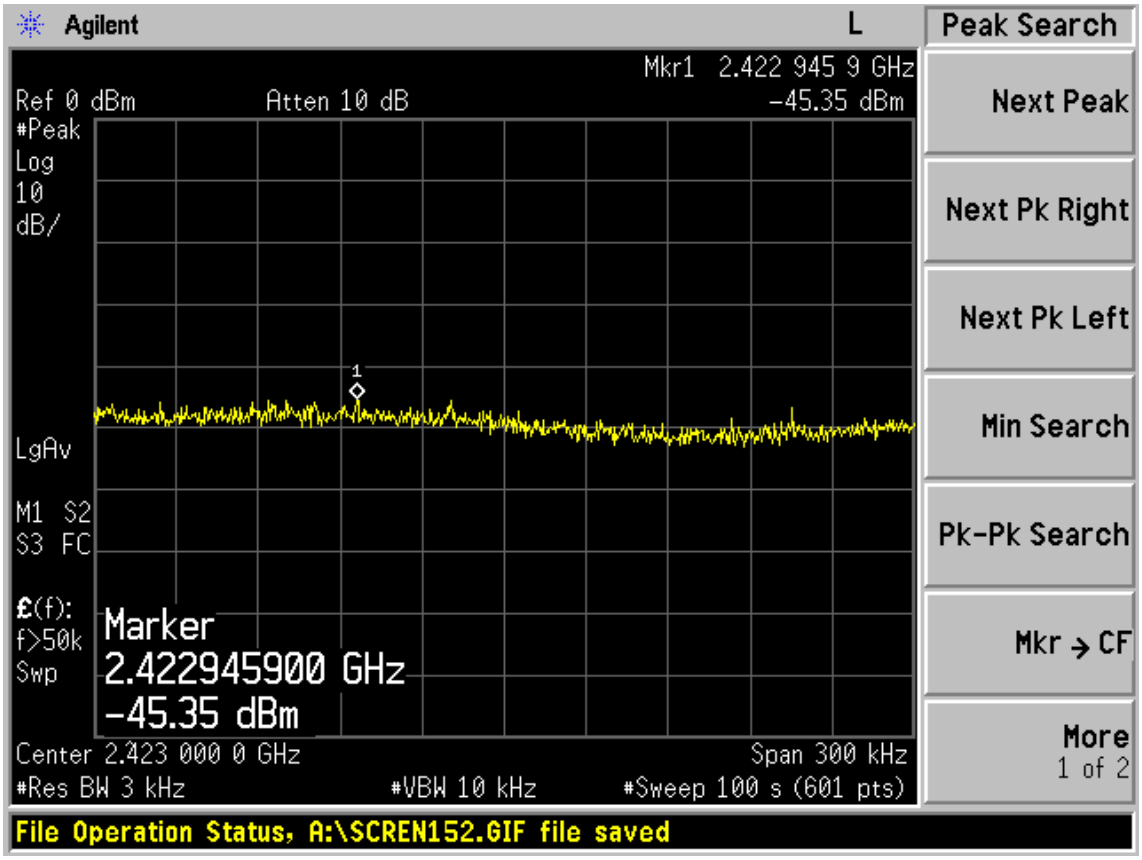


Test CH11: 2462MHz

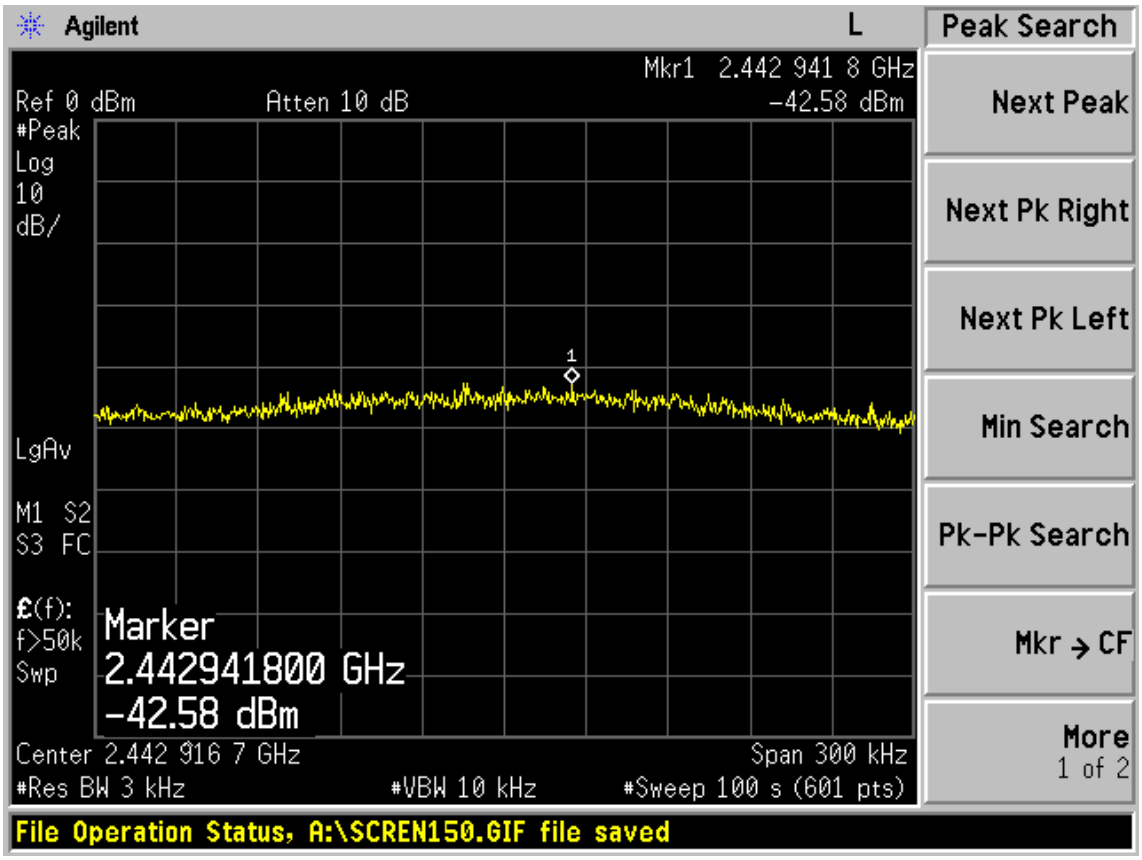


Test Mode: IEEE 802.11n HT40 TX

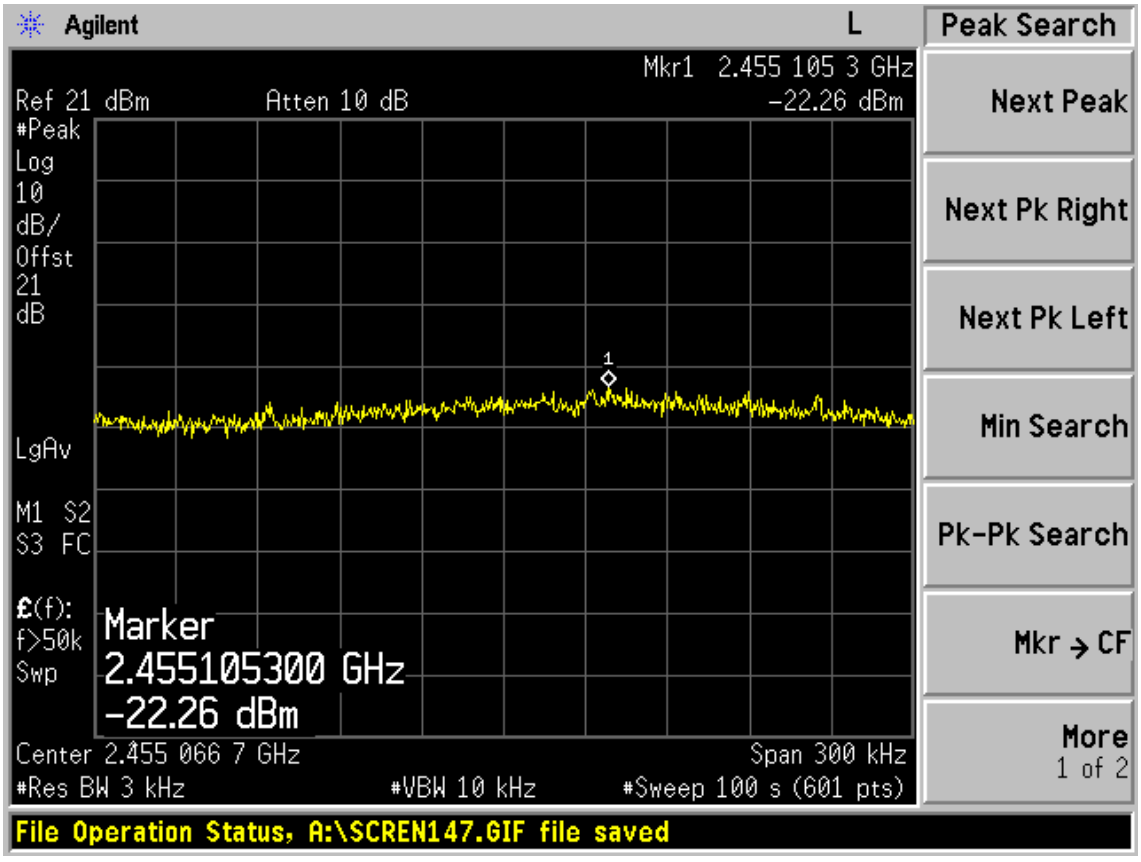
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



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 MIMO 2X2 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^2)**	**Averaging time(minutes)**
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	1.0	30

Frequency(MHz)	**Power density (mW/ cm^2)**	**Averaging time(minutes)**
2412	1	30
2437	1	30
2462	1	30

Note: F= Frequency in MHz

11.2. Estimation Result

EUT: 300Mbps Wireless N PCI Express Adapter		
M/N: TL-WN881ND		
Test date:2011-12-22	Pressure: 101.6 kpa	Humidity: 47.8%
Tested by: Leo-Li	Test site: RF Site	Temperature：24.8℃

Cable loss: 1 dB		Attenuator loss: 20 dB				Antenna Gain: 2 dBi	
Test Mode	CH	Frequency（MHz）	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11b	CH1	2412	17.74	59.43	2	1.58	0.0187
	CH6	2437	17.30	53.70	2	1.58	0.0169
	CH11	2462	17.58	57.28	2	1.58	0.0181
11g	CH1	2412	17.71	59.02	2	1.58	0.0186
	CH6	2437	18.19	65.92	2	1.58	0.0208
	CH11	2462	16.84	48.31	2	1.58	0.0152
11n HT20	CH1	2412	18.20	66.07	2	1.58	0.0208
	CH6	2437	19.58	90.78	2	1.58	0.0286
	CH11	2462	18.76	75.16	2	1.58	0.0237
11n HT40	CH1	2422	16.32	42.85	2	1.58	0.0135
	CH4	2437	18.15	65.31	2	1.58	0.0206
	CH7	2452	16.37	43.35	2	1.58	0.0137

Note: The estimation distance is 20cm

12. DEVIATION TO TEST SPECIFICATIONS

[NONE]