



**DIGITAL EMC CO., LTD.**

683-3, Yubang-Dong, Yongin-Si, Kyunggi-Do, Korea. 449-080  
 Tel: +82-31-321-2664 Fax: +82-31-321-1664  
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**CERTIFICATION OF COMPLIANCE**

**WIZNET Co., LTD.**

4F Humax Village, 11-4 Sunae-dong, Bundang-gu, Seongnam-si  
 Gyeonggi-do, 463-825, Korea

Dates of Tests: January 21 ~ February 12, 2010

Test Report S/N: DR50111002Y

Test Site : DIGITAL EMC CO., LTD.

FCC ID

**XR2WIZ6000**

APPLICANT

**WIZNET Co., LTD.**

**Purpose** : **Original Grant**  
**FCC Equipment Class** : **Digital Transmission System (DTS)**  
**Device name** : **Serial to Wireless LAN Device Server**  
**Manufacturer** : **WIZNET Co., LTD.**  
**FCC ID** : **XR2WIZ6000**  
**Model name** : **WIZ6000**  
**Test Device Serial number** : **Identical prototype**  
**FCC Rule Part(s)** : **FCC Part 15.247 Subpart C**  
**ANSI C-63.4-2003**  
**Frequency Range** : **2412 ~ 2462 MHz**  
**Max. Output power** : **802.11b – 14.54 dBm Conducted**  
**802.11g – 12.56 dBm Conducted**  
**Data of issue** : **February 18, 2010**

*The Test results relate only to the tested sample. It is not allowed to copy this report even partly without the allowance of DIGITAL EMC CO., LTD.*

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**1. General information**

This report contains the result of tests performed by:

DIGITAL EMC CO., LTD.

Address: 683-3, Yubang-Dong, Yongin-Si, Kyunggi-Do, Korea. 449-080

<http://www.digitalemc.com> E-mail: [harveysung@digitalemc.com](mailto:harveysung@digitalemc.com)

Tel: +82-31-321-2664 Fax: +82-31-321-1664

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competent of calibration and testing laboratory”.

**Tested by:** *Engineer*

February 18, 2010 D.C. Cha




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Date	Name	Signature
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**Witnessed by:** *Engineer*

February 18, 2010 S.K. RYU




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Date	Name	Signature
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**Reviewed by:** *Manager*

February 18, 2010 W.J. Lee




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Date	Name	Signature
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**Applicant:**

Company name : WIZNET Co, LTD.

Address : 4F Humax Village, 11-4 Sunae-dong, Bundang-gu, Seongnam-si Gyeonggi-do, 463-825, Korea

Date of order : August 26, 2009

## 2. Equipment information

XR2WIZ6000

### 2.1 Equipment information

Equipment model no.	WIZ6000
Equipment serial no.	Identical prototype
Type of equipment	Serial to Wireless LAN Device Server
Frequency band	2412 ~ 2462 MHz
Type of Modulation	802.11b – CCK 802.11g – OFDM
Power	AC 120V 60Hz
Type of antenna	<input type="checkbox"/> Internal Type: <input checked="" type="checkbox"/> External Type: Dipole antenna



### 2.2 Ancillary equipment

Equipment	Model No.	Serial No.	Manufacturer	Note
Adaptor	DP-05020DG	DE28001718	GREEN POWER	-
-	-	-	-	-

### 3. Information about test items

XR2WIZ6000

#### 3.1 Tested frequency

Frequency	TX	RX
Lowest frequency	2412MHz	2412MHz
Middle frequency	2437MHz	2437MHz
Highest frequency	2462MHz	2462MHz

#### 3.2 Tested environment

Temperature	: 21 ~ 23 (°C)
Relative humidity content	: 35 ~ 50 % R.H.
Details of power supply	: AC 120V 60Hz

#### 3.3 Test mode

Test Case 1	-
Test Case 2	-
Test Case 3	-

#### 3.4 Auxiliary equipment

Equipment	Model No.	Serial No.	Manufacturer	Note
Mouse	MOC5UO	IO201LWF	DELL	DoC
Keyboard	SK-8115	N/A	DELL	DoC
Monitor	6135-AB1	N/A	LENOVO	DoC
Computer	DM-V60	740W97A600253R	SAMSUNG	DoC
Printer	SRP-770	SRP77008060035	BIXOLON	DoC

#### 3.5 EMI Suppression Device(s)/Modifications

EMI suppression device(s) added and/or modifications made during testing

→ None

## 4. Test Report

### 4.1 Summary of tests

FCC Part Section(s)	Parameter	Limit (Using in 2400 ~ 2483.5MHz)	Test Condition	Status Note 1
<b>I. Test Items</b>				
15.247(a)(2)	6 dB Bandwidth	> 500 kHz	Conducted	<b>C</b>
15.247(b)(3)	Transmitter Output Power	< 1Watt		<b>C</b>
15.247(c)	Out of Band Emissions / Band Edge	20dBc in any 100kHz BW		<b>C</b>
				<b>C</b>
15.247(d)	Transmitter Power Spectral Density	< 8dBm / 3kHz		<b>C</b>
15.205 15.209	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	< FCC 15.209 limits	Radiated	<b>C</b>
15.207	AC Conducted Emissions	EN 55022	AC Line Conducted	<b>C</b>
15.203	Antenna Requirements	FCC 15.203	-	<b>C</b>
Note 1: <b>C</b> =Comply <b>NC</b> =Not Comply <b>NT</b> =Not Tested <b>NA</b> =Not Applicable				

The sample was tested according to the following specification:

FCC Parts 15.247; ANSI C-63.4-2003, DA00-705

## 4.2 Transmitter requirements

### 4.2.1 6 dB Bandwidth

**- Procedure:**

The bandwidth at 6 dB below the highest inband spectral density was measured with a spectrum analyzer connected to the antenna terminal at the highest, middle and the lowest available channels.

After the trace being stable, Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 6dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest Frequencies

Span = 50 MHz (Greater than EBW)

RBW = 100 kHz

Sweep = auto

VBW =  $\geq$  RBW

Detector function = peak

Trace = max hold

**- Measurement Data: Comply**

Test Mode	Frequency	Test Results (MHz)
802.11b	Lowest	10.90
	Middle	11.10
	Highest	11.35
802.11g	Lowest	16.50
	Middle	16.50
	Highest	16.50

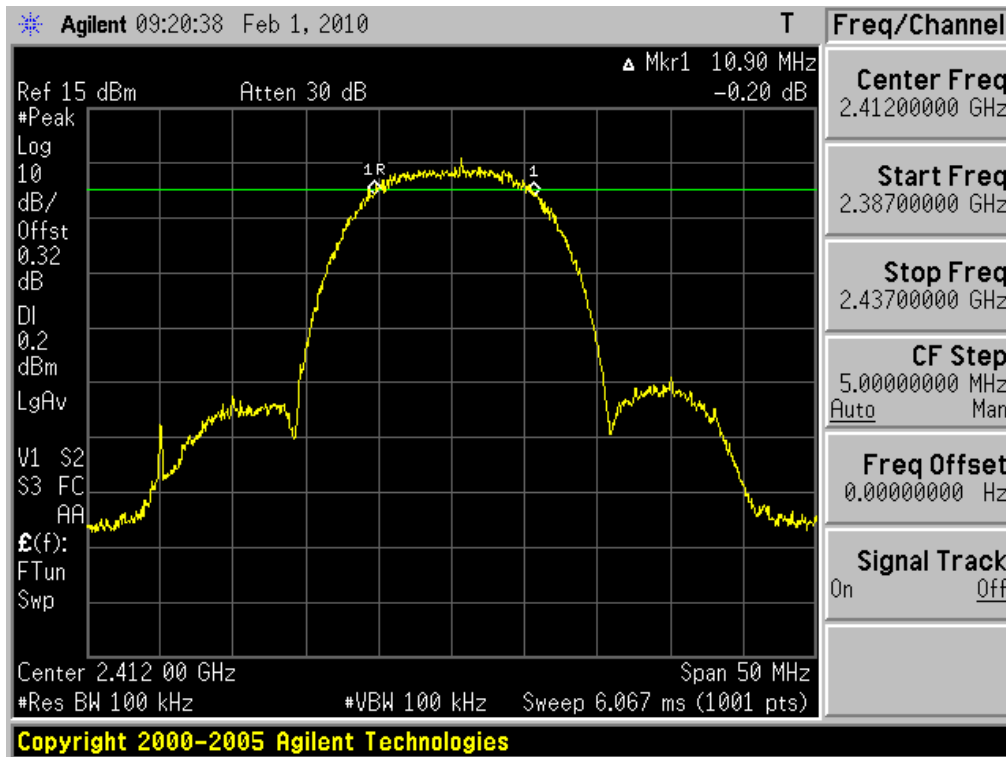
Note 1: See next pages for actual measured spectrum plots.

**- Minimum Standard:**

The minimum 6 dB bandwidth shall be at least 500 kHz
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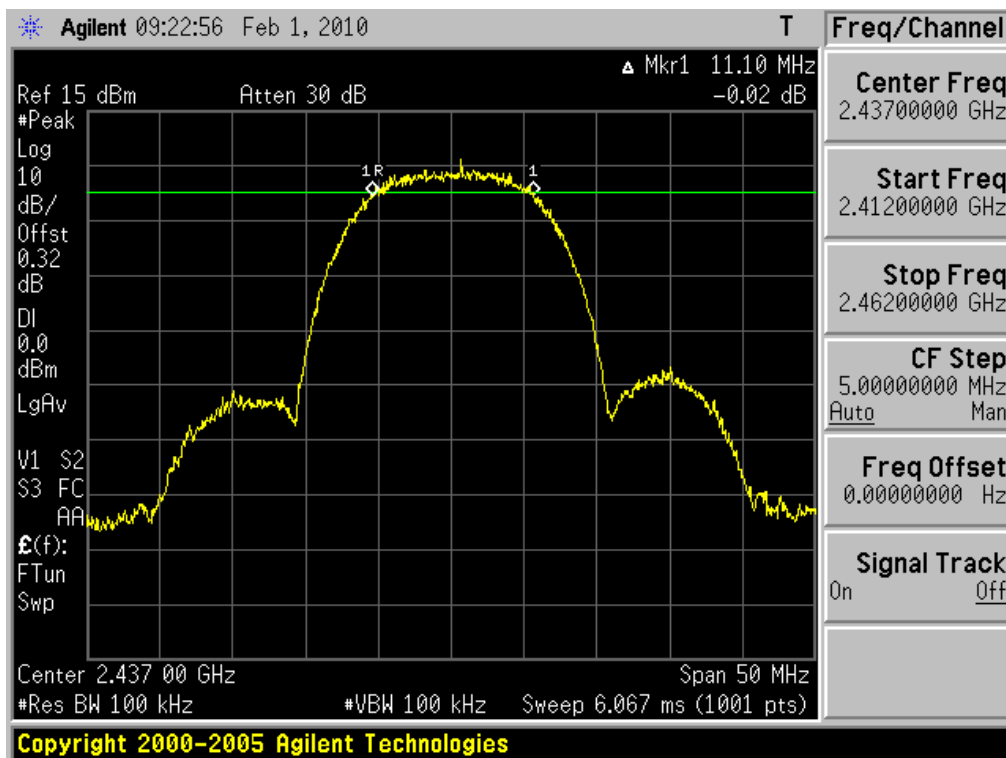
6 dB Bandwidth

Test Mode: 802.11b & Lowest Frequency



6 dB Bandwidth

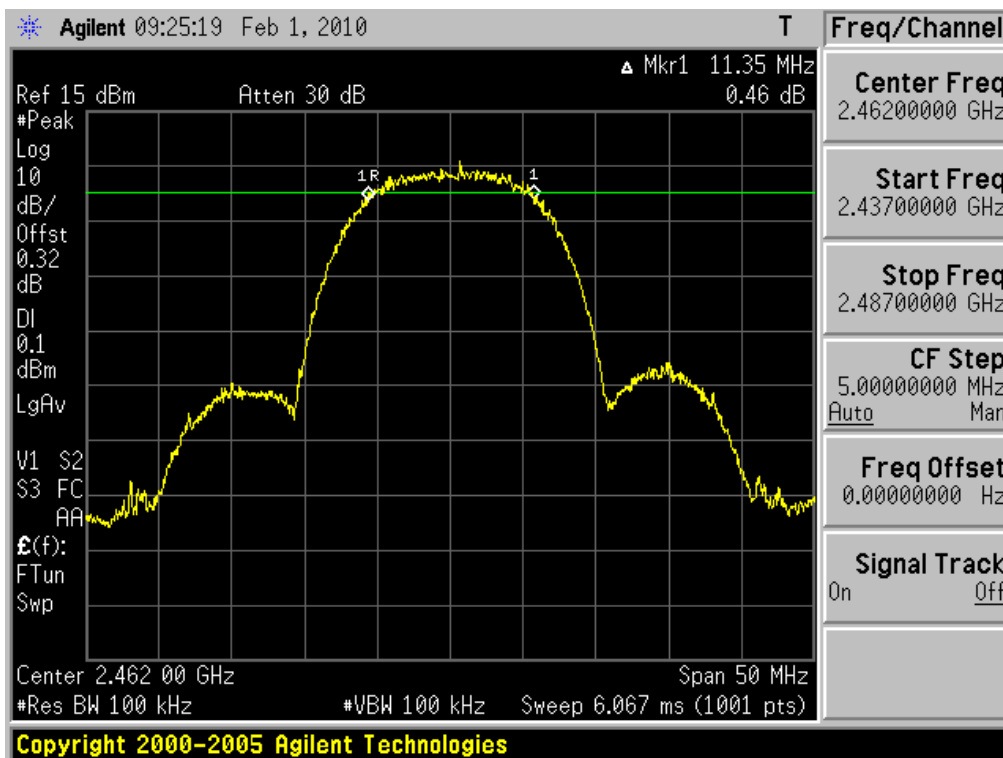
Test Mode: 802.11b & Middle Frequency





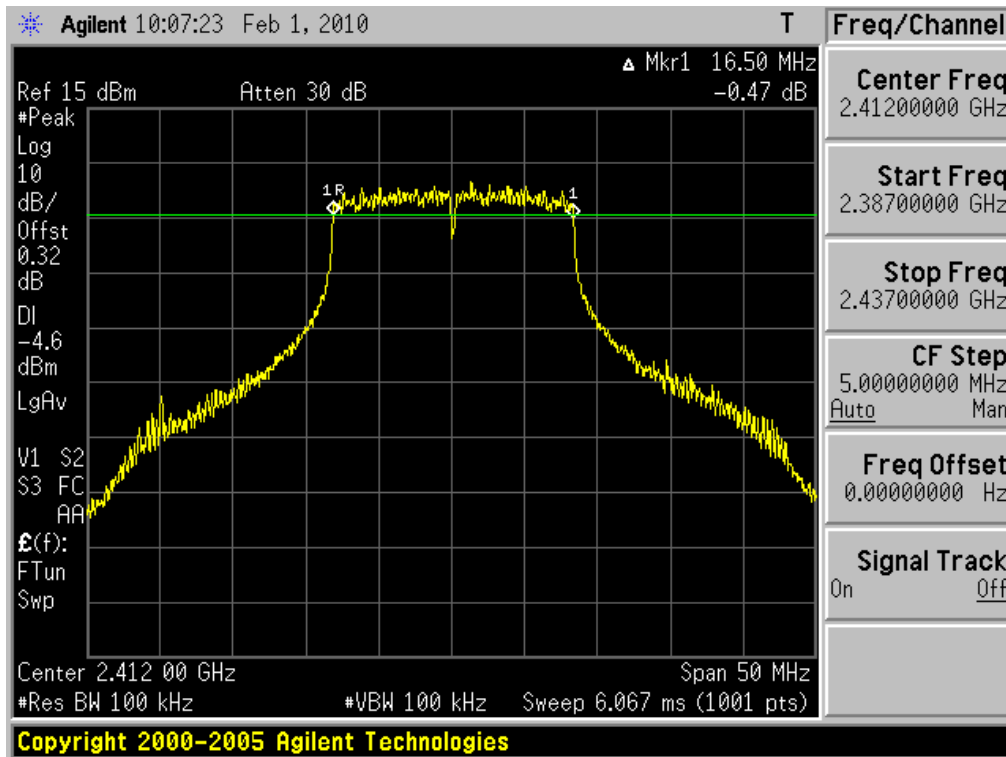
6 dB Bandwidth

Test Mode: 802.11b & Highest Frequency



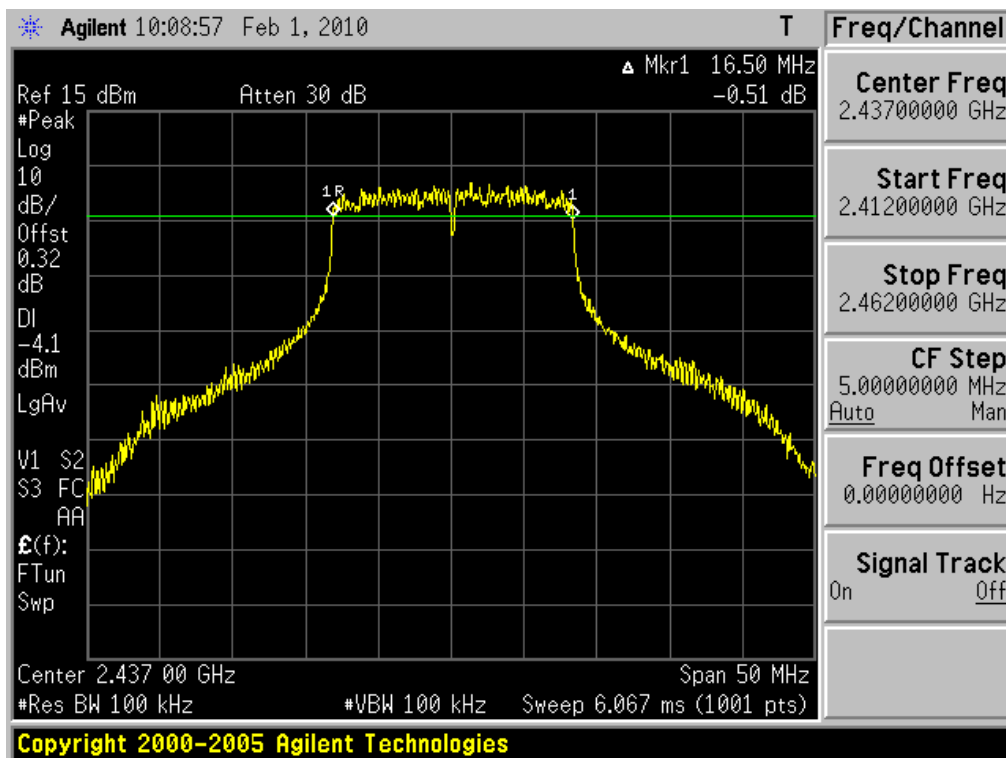
6 dB Bandwidth

Test Mode: 802.11g & Lowest Frequency



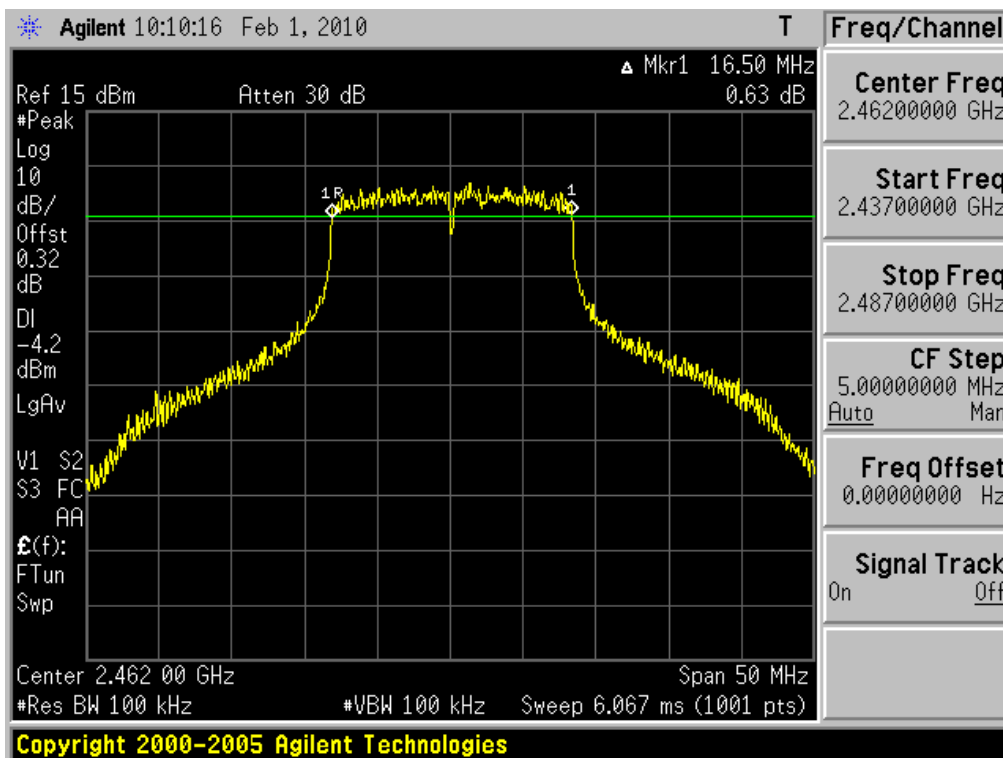
6 dB Bandwidth

Test Mode: 802.11g & Middle Frequency



6 dB Bandwidth

Test Mode: 802.11g & Highest Frequency



### 4.2.2 Peak Output Power

**- Test Procedure and Spectrum Analyzer setting:**

The peak output power was measured with a spectrum analyzer connected to the antenna terminal at the highest, middle and the lowest available channels.

The transmitter output is connected to a spectrum analyzer and the analyzer’s internal channel power integration function is used to integrate the power over a bandwidth greater than or equal to the 26dB EBW.

The test is performed in accordance with FCC document “Measurement of Digital Transmission Systems Operating under Section 15.247”, March 23, 2005. The transmitter operates continuously therefore Power Output Option 2, Method #1 is used.

**- Measurement Data: Comply**

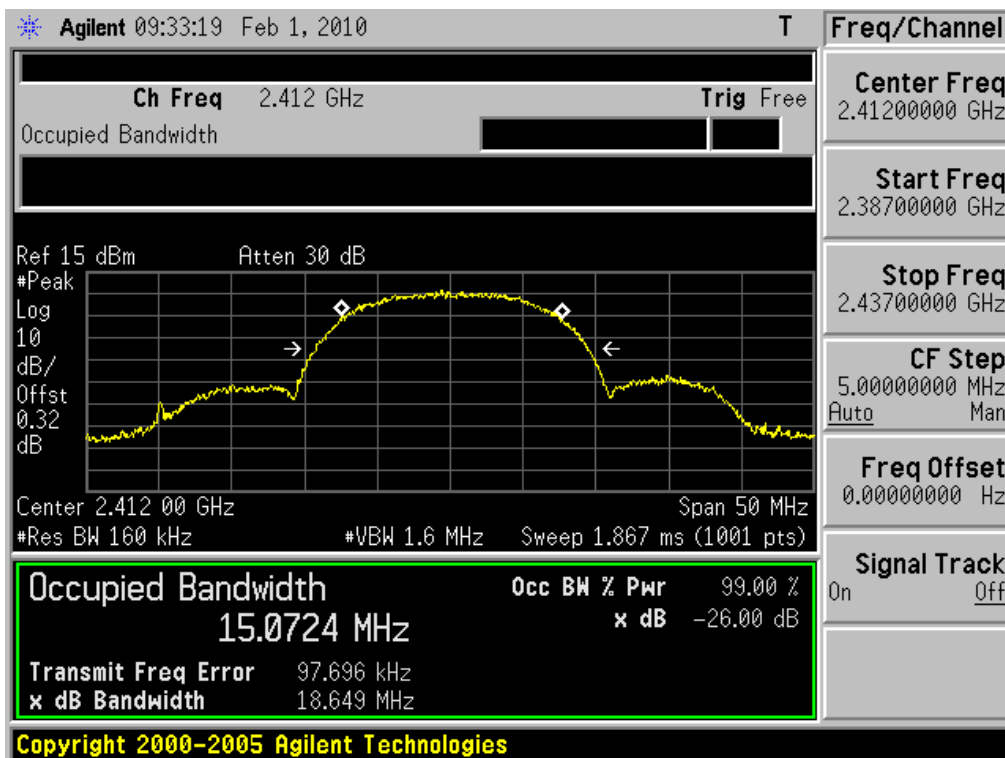
Test Mode	Frequency	Test Results	
		dBm	W
802.11b	Lowest	14.54	0.0284
	Middle	14.24	0.0265
	Highest	14.31	0.0270
802.11g	Lowest	12.37	0.0173
	Middle	12.56	0.0180
	Highest	12.47	0.0177

Note 1: See next pages for actual measured spectrum plots.

<b>Minimum Standard:</b>	< 1W
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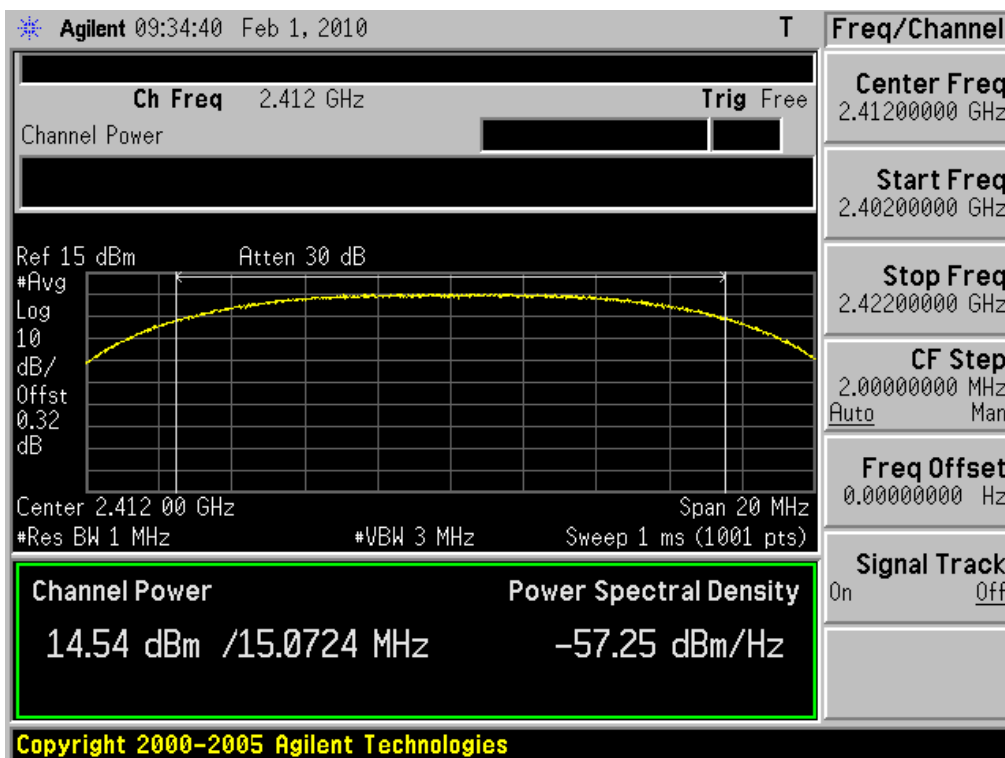
26 dB Bandwidth

Test Mode: 802.11b & Lowest Frequency



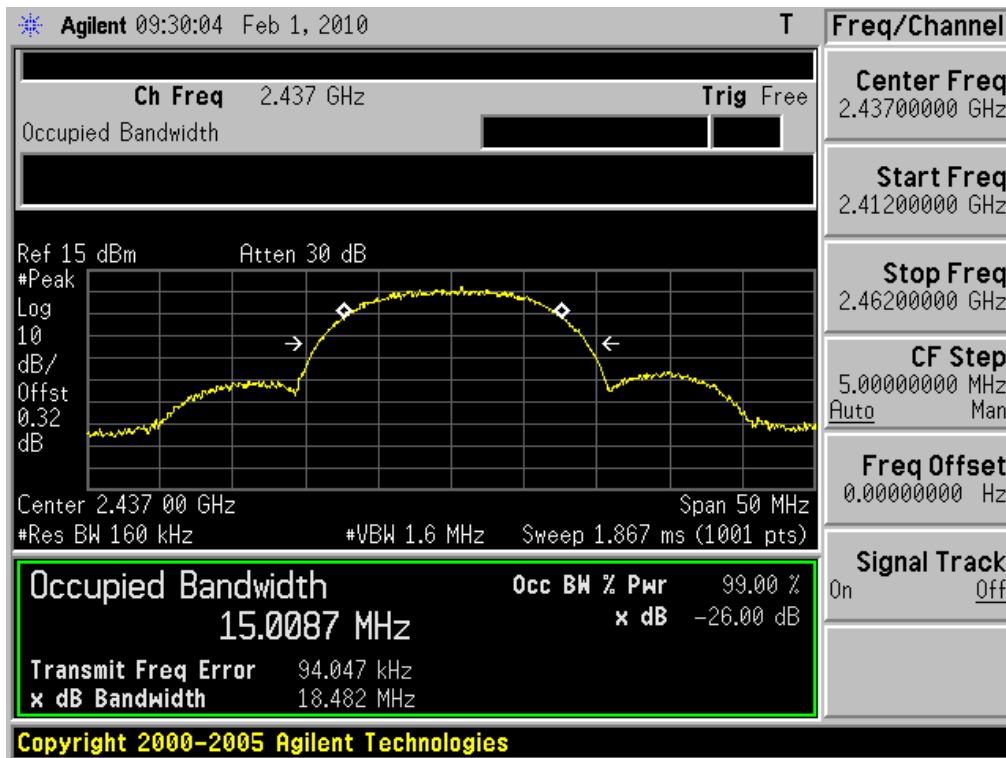
Peak Output Power

Test Mode: 802.11b & Lowest Frequency



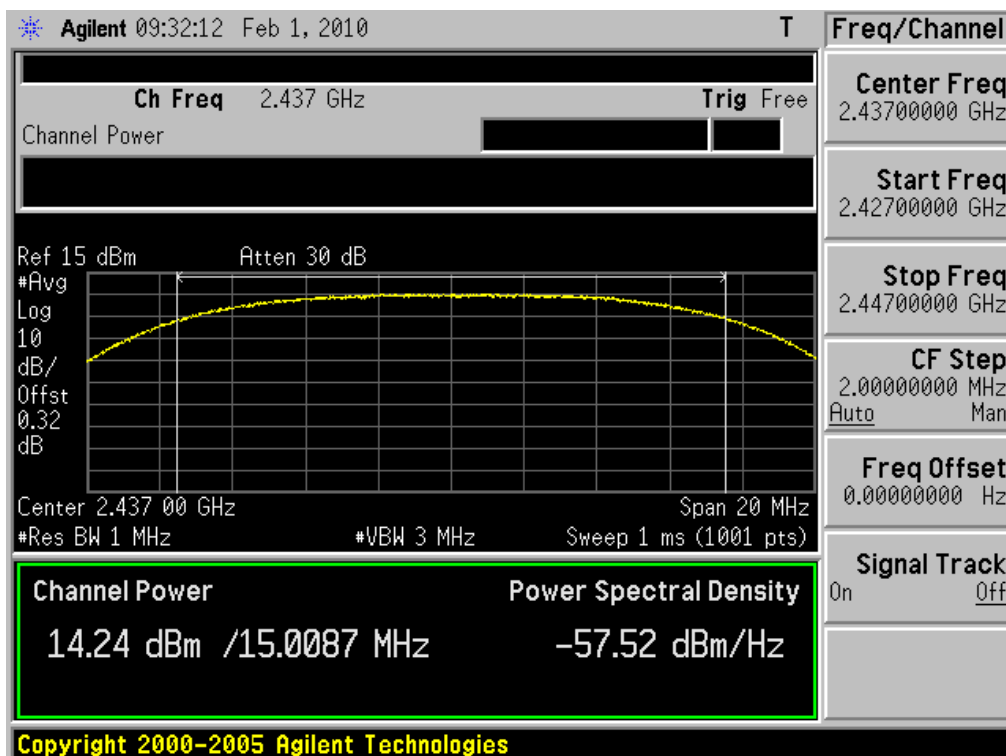
26 dB Bandwidth

Test Mode: 802.11b & Middle Frequency



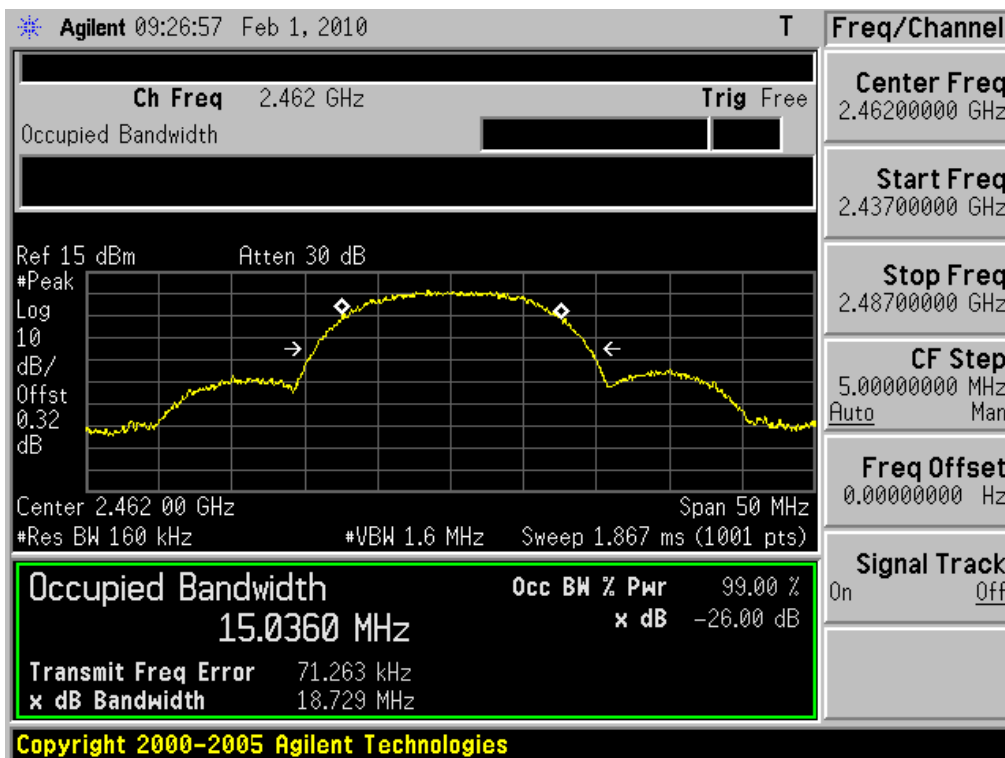
Peak Output Power

Test Mode: 802.11b & Middle Frequency



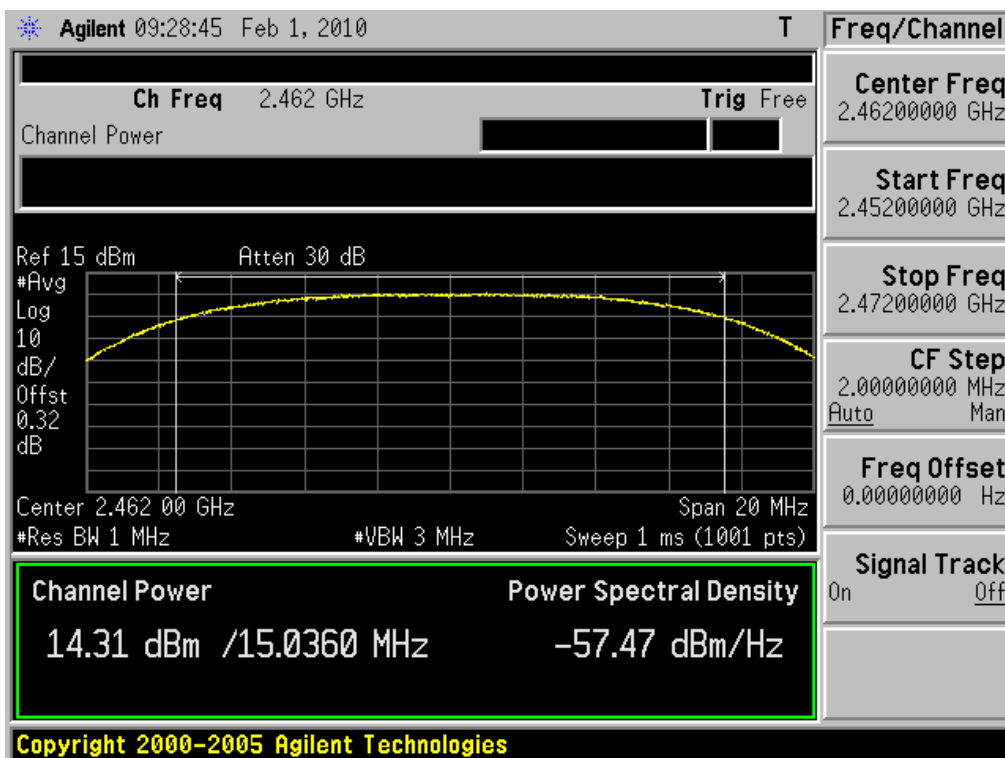
26 dB Bandwidth

Test Mode: 802.11b & Highest Frequency



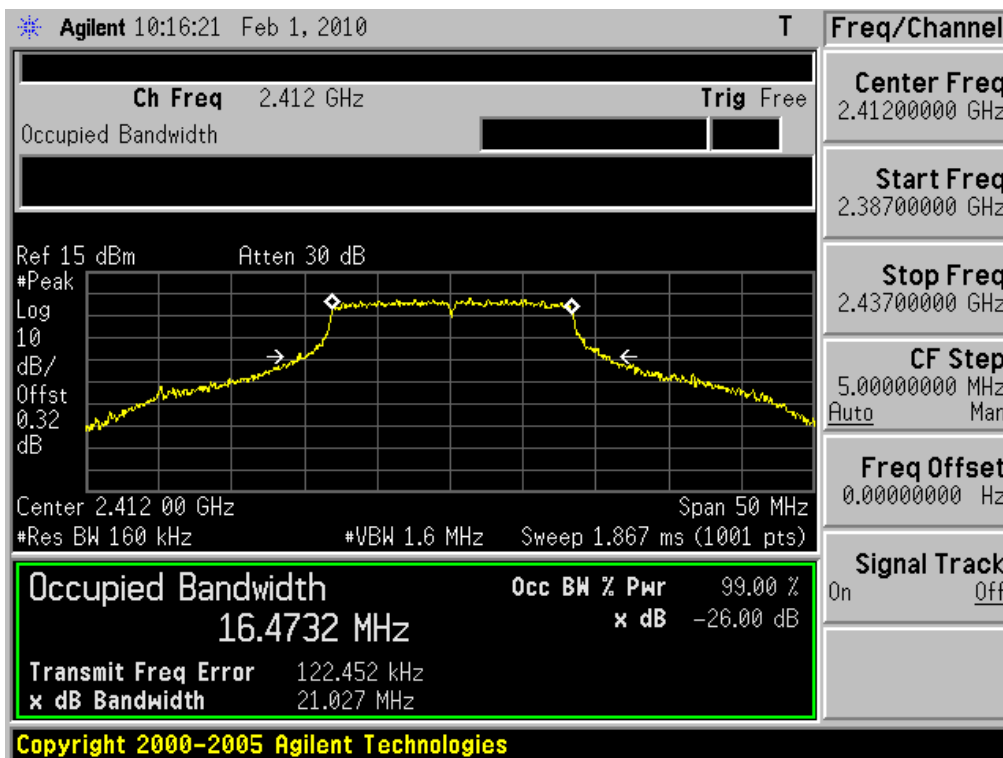
Peak Output Power

Test Mode: 802.11b & Highest Frequency



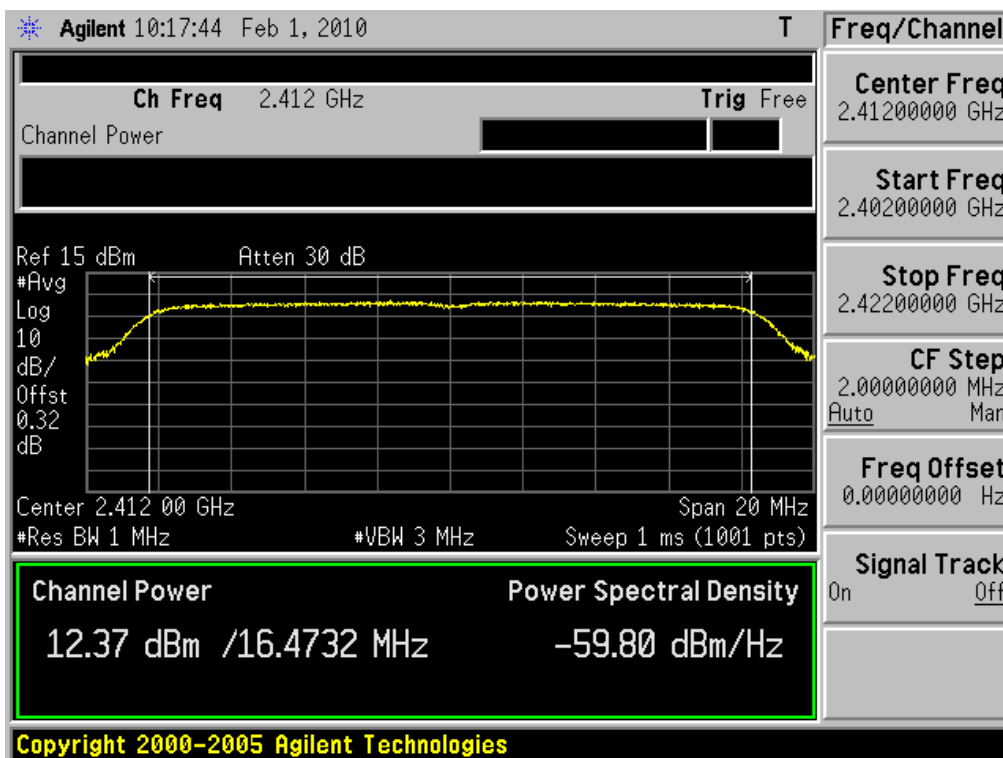
26 dB Bandwidth

Test Mode: 802.11g & Lowest Frequency



Peak Output Power

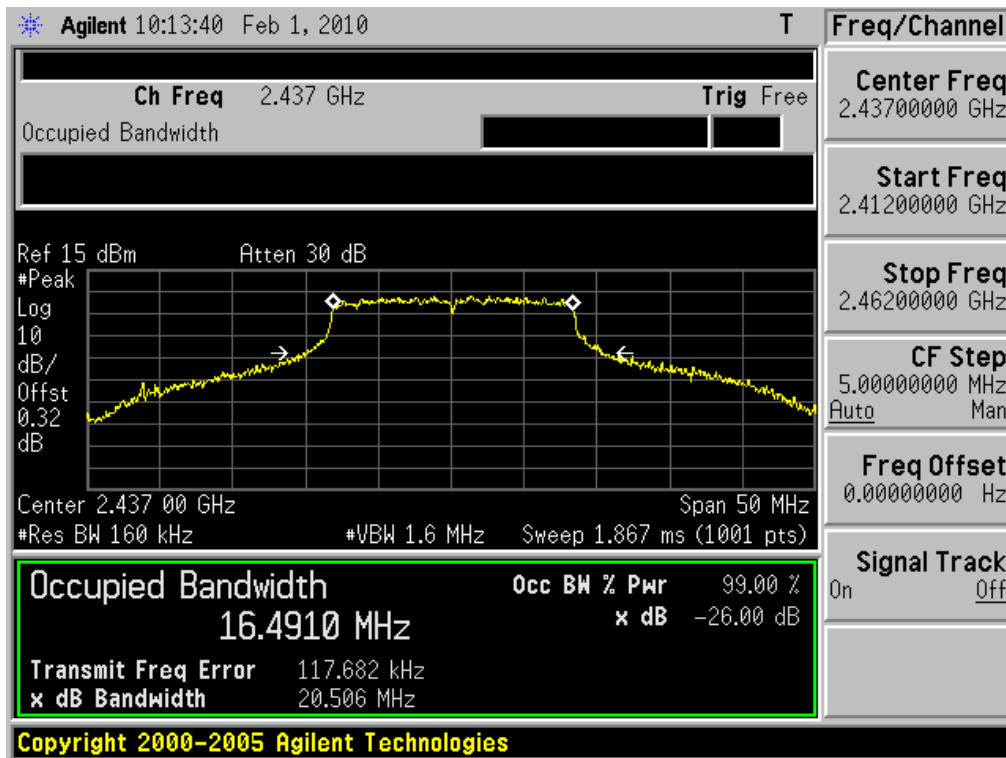
Test Mode: 802.11g & Lowest Frequency





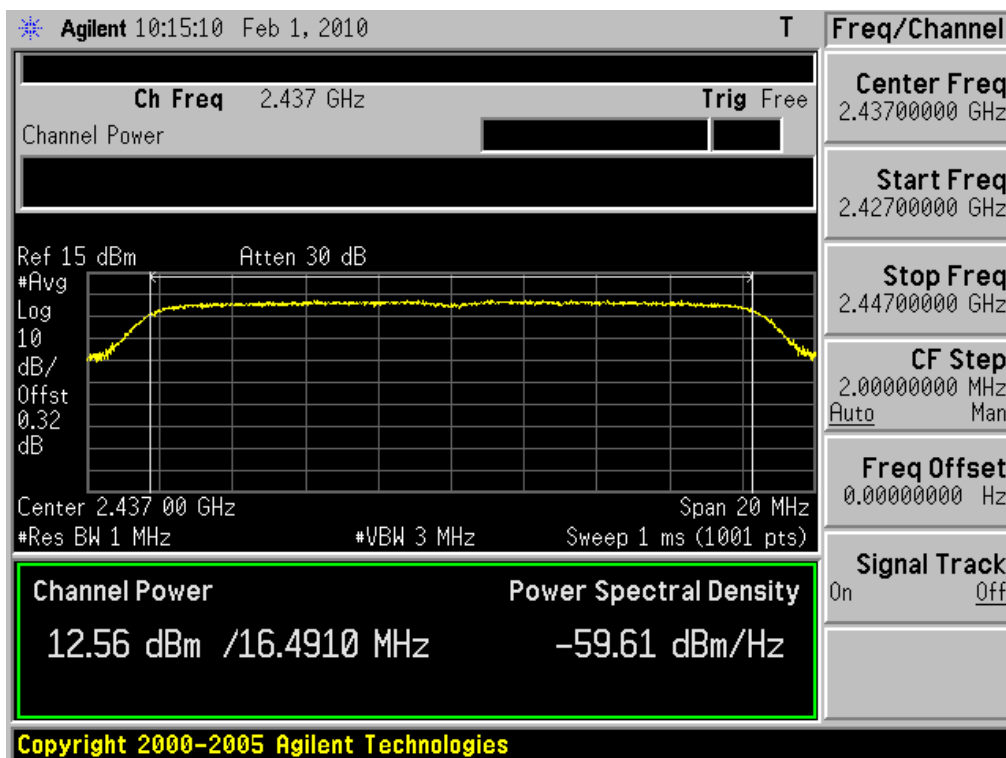
26 dB Bandwidth

Test Mode: 802.11g & Middle Frequency



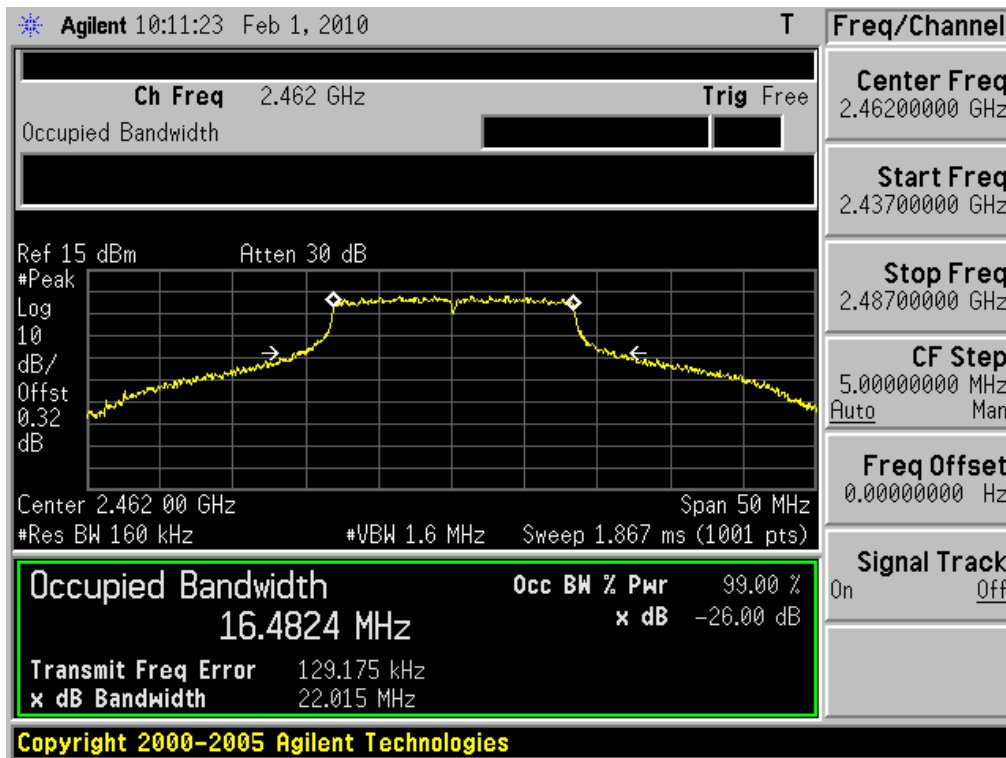
Peak Output Power

Test Mode: 802.11g & Middle Frequency



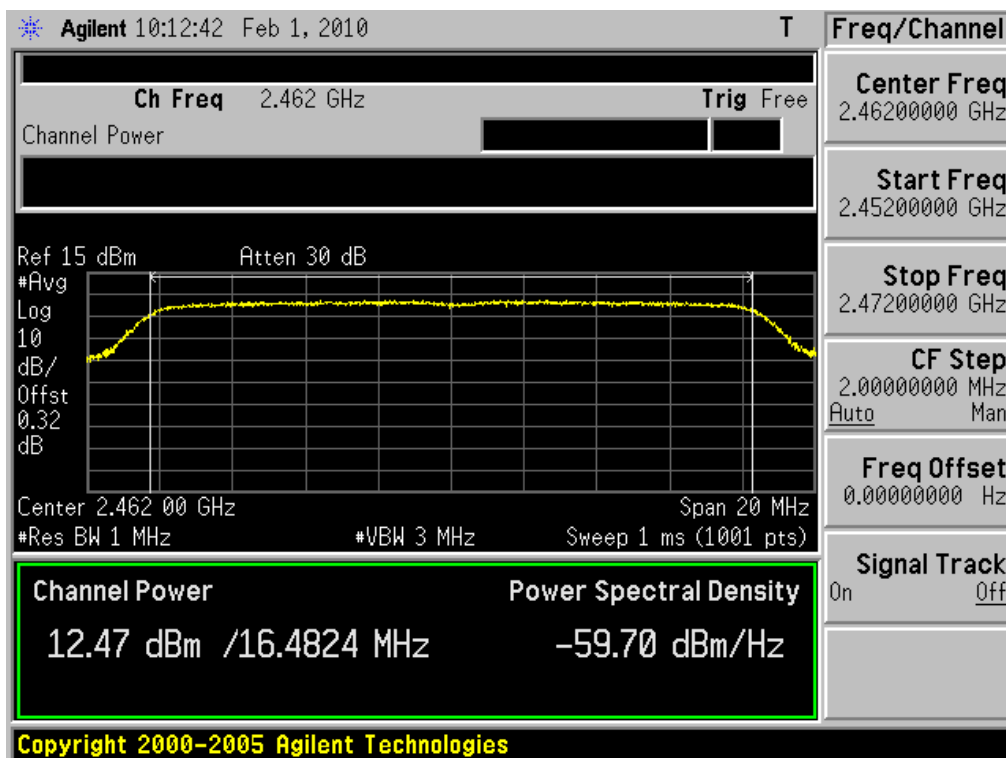
26 dB Bandwidth

Test Mode: 802.11g & Highest Frequency



Peak Output Power

Test Mode: 802.11g & Highest Frequency



### 4.2.3 Out of Band Emissions / Band Edge

**- Procedure:**

The bandwidth at 20dB down from the highest inband spectral density is measured with a spectrum analyzer connected to the antenna terminal at the highest, middle and the lowest available channels.

After the trace being stable, Use the marker-to-peak function to measure 20 dB down both sides of the intentional emission.

This device complies with use of power option 2. The attenuation under this paragraph shall be 30dB instead of 20dB.

For Band-edge testing the spectrum analyzer is set to:

Tested frequency = the highest and the lowest Frequencies  
 Center frequency = 2400MHz, 2483.5MHz  
 Span = 100MHz                                    Detector function = peak  
 RBW = 1% of the span                        VBW = 100 kHz  
 Trace = max hold                                Sweep = auto

For spurious testing the spectrum analyzer is set to:

Tested frequency = the highest, middle and the lowest Frequencies  
 RBW = 100 kHz                                VBW = 100 kHz  
 Detector function = peak                      Sweep = auto  
 Trace = max hold

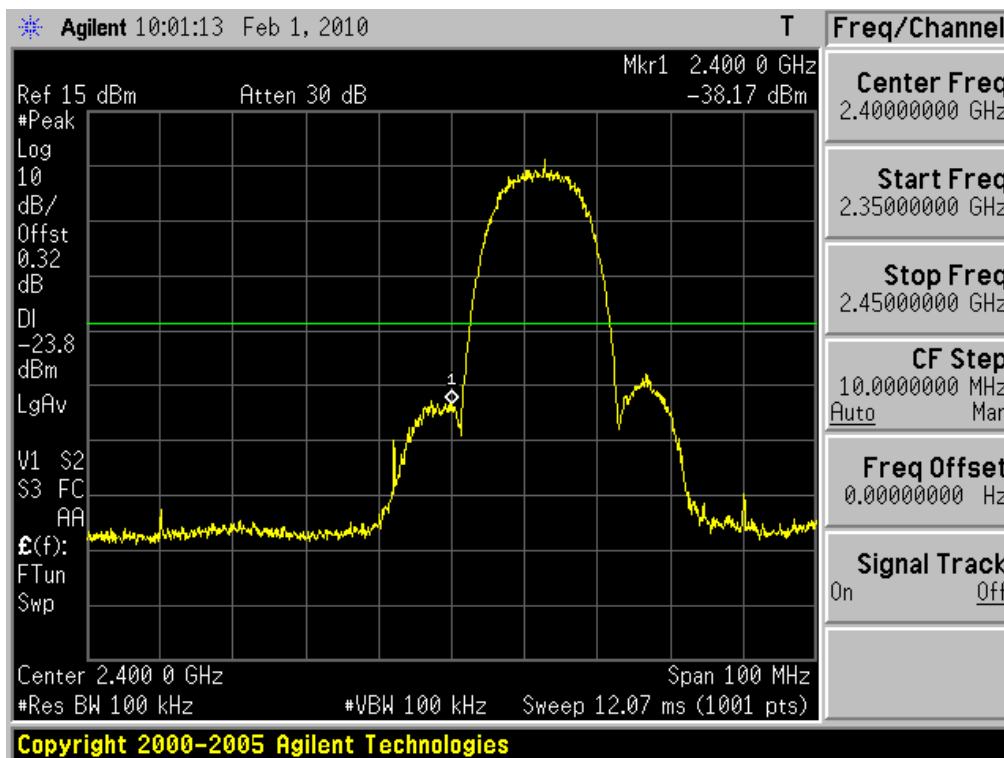
**- Measurement Data: Comply**

- All conducted emission in any 100 kHz bandwidth outside of the spread spectrum band was at least 30dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.

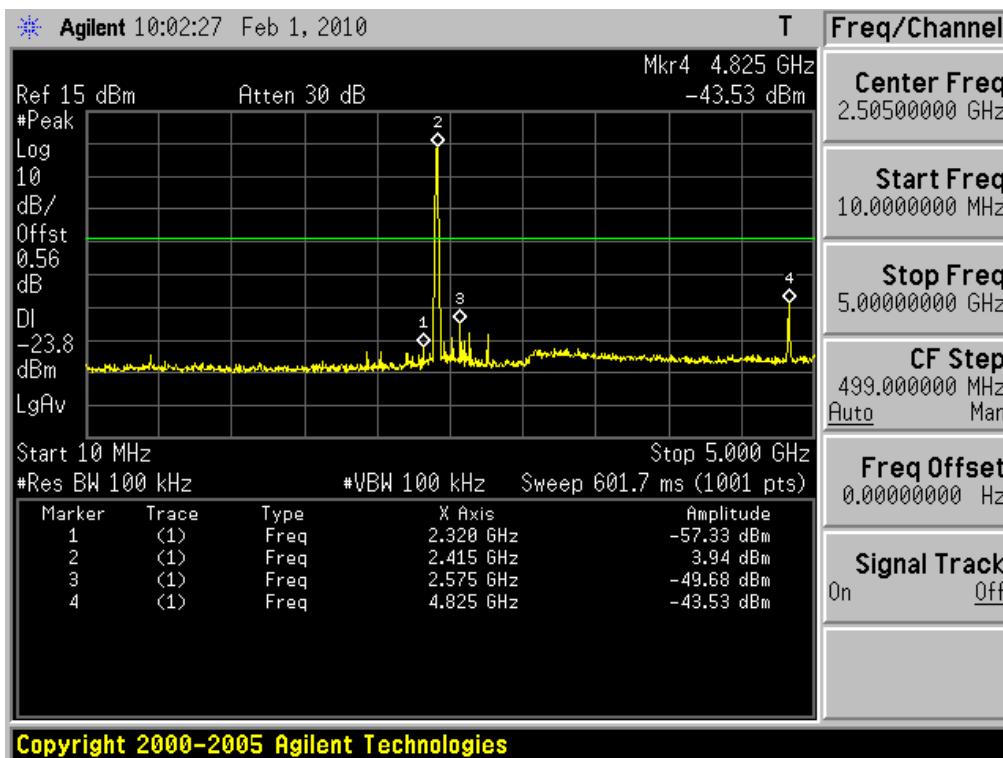
Note 1: See next pages for actual measured spectrum plots.

<b>Minimum Standard:</b>	> 30 dBc
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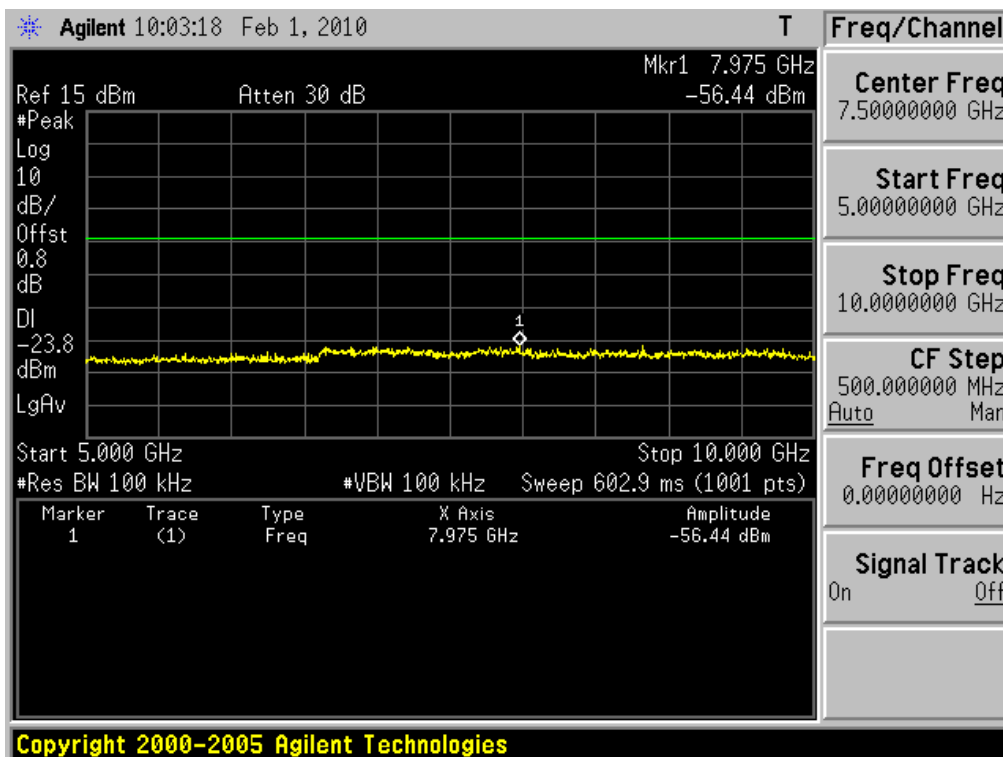
Low Band-edge at 30 dB blow Test Mode: 802.11b



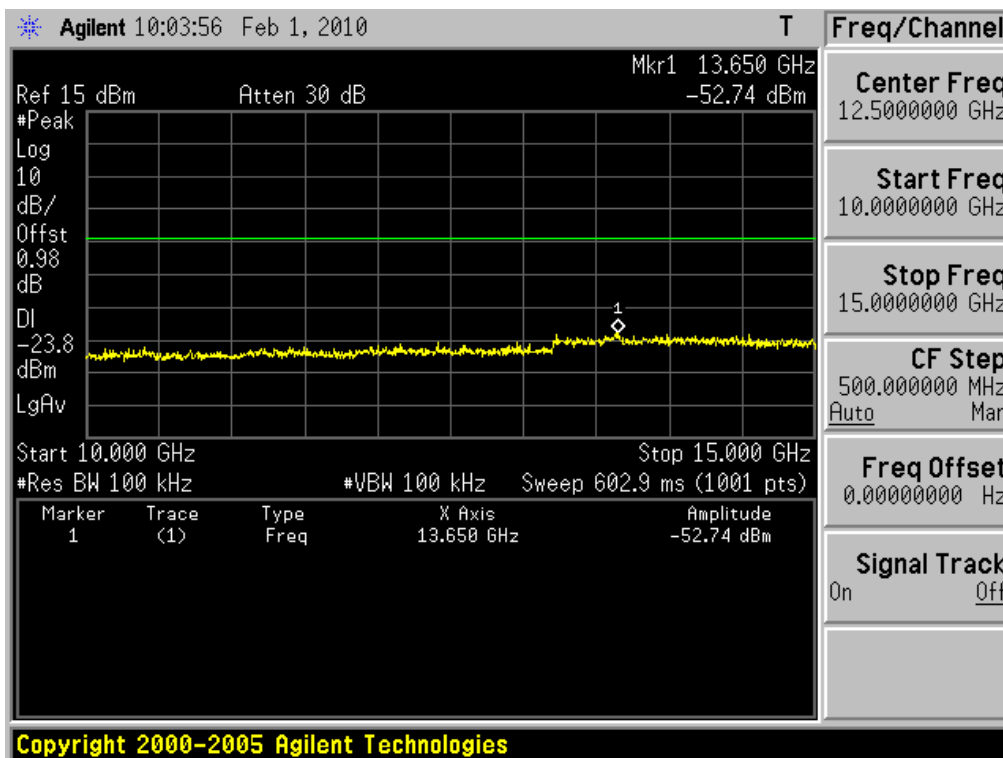
10MHz ~ 5GHz Conducted Spurious Emissions Test Mode: 802.11b & Lowest Frequency



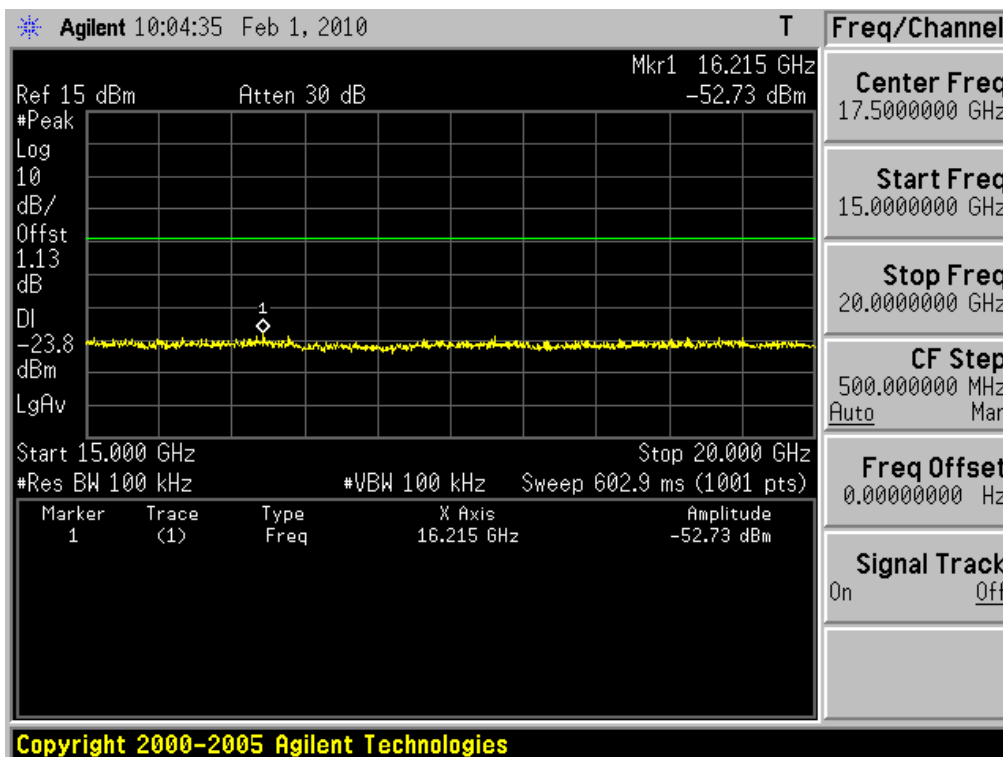
5GHz ~ 10GHz Conducted Spurious Emissions Test Mode: 802.11b & Lowest Frequency



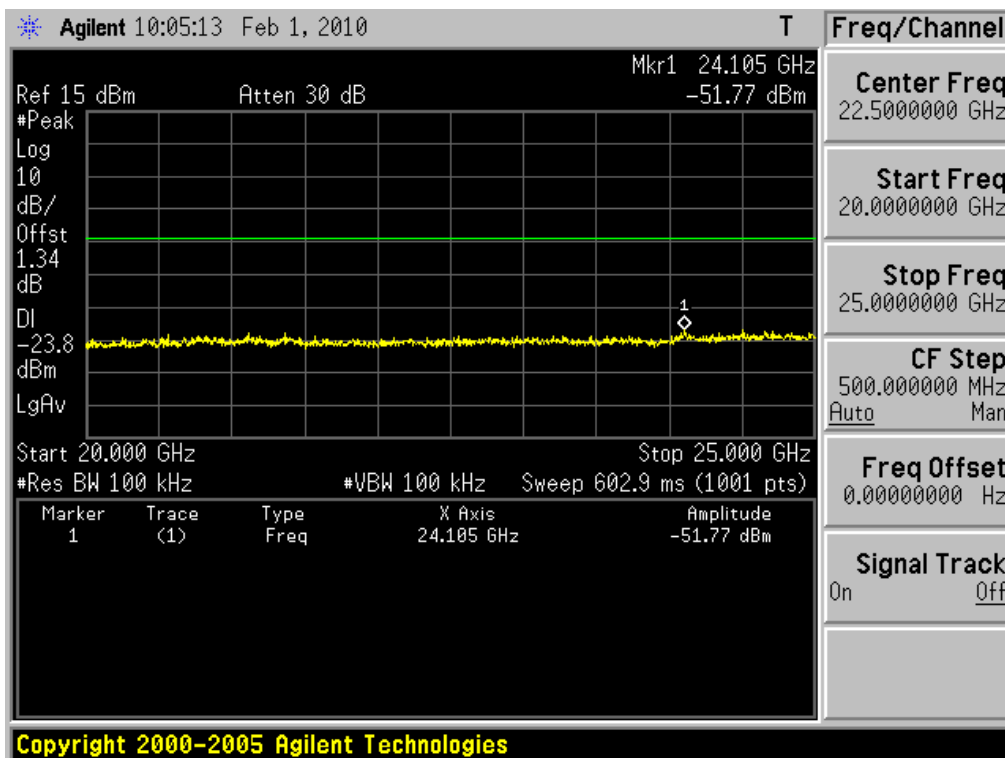
10GHz ~ 15GHz Conducted Spurious Emissions Test Mode: 802.11b & Lowest Frequency



15GHz ~ 20GHz Conducted Spurious Emissions Test Mode: 802.11b & Lowest Frequency

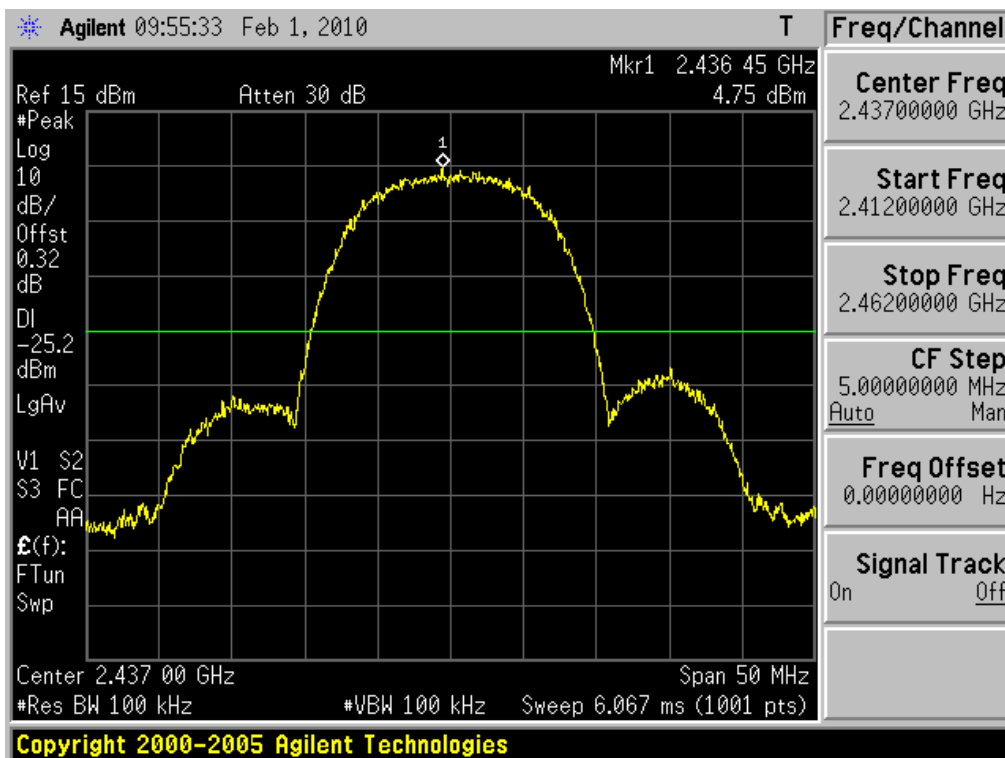


20GHz ~ 25GHz Conducted Spurious Emissions Test Mode: 802.11b & Lowest Frequency



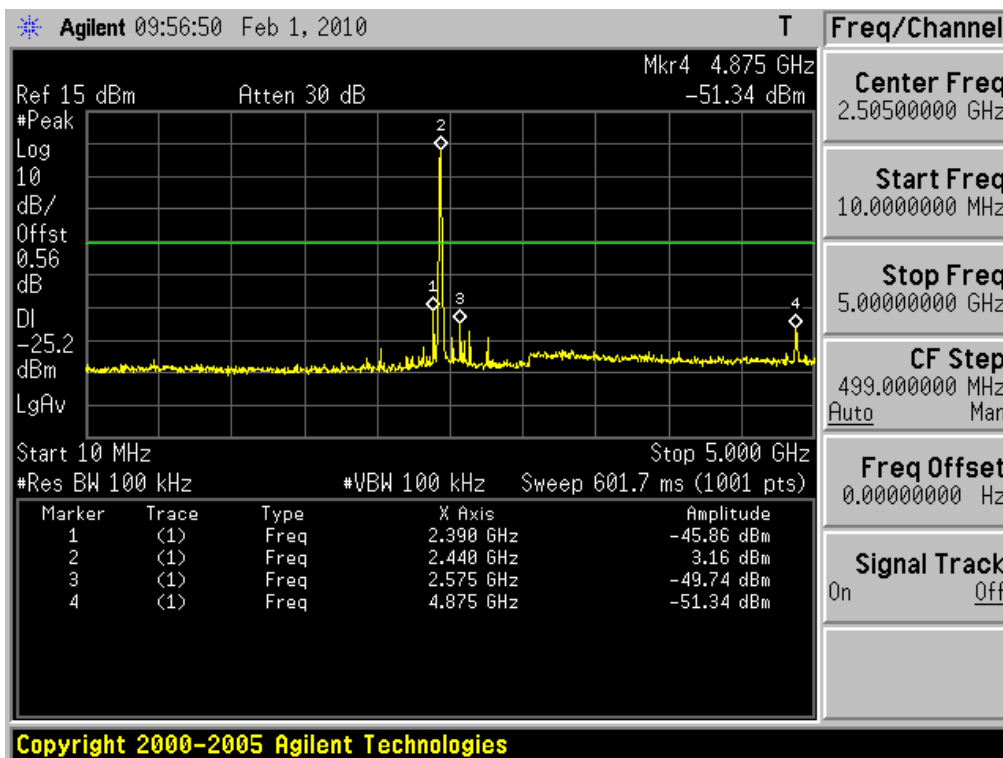
Reference for limit

Test Mode: 802.11b & Middle Frequency

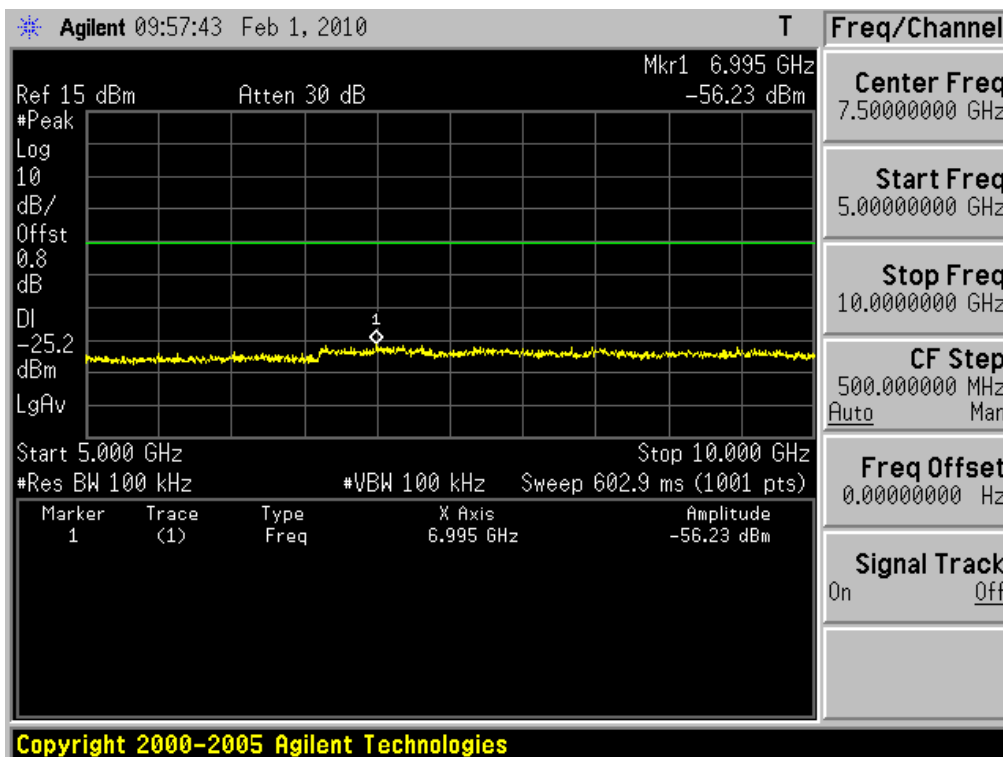




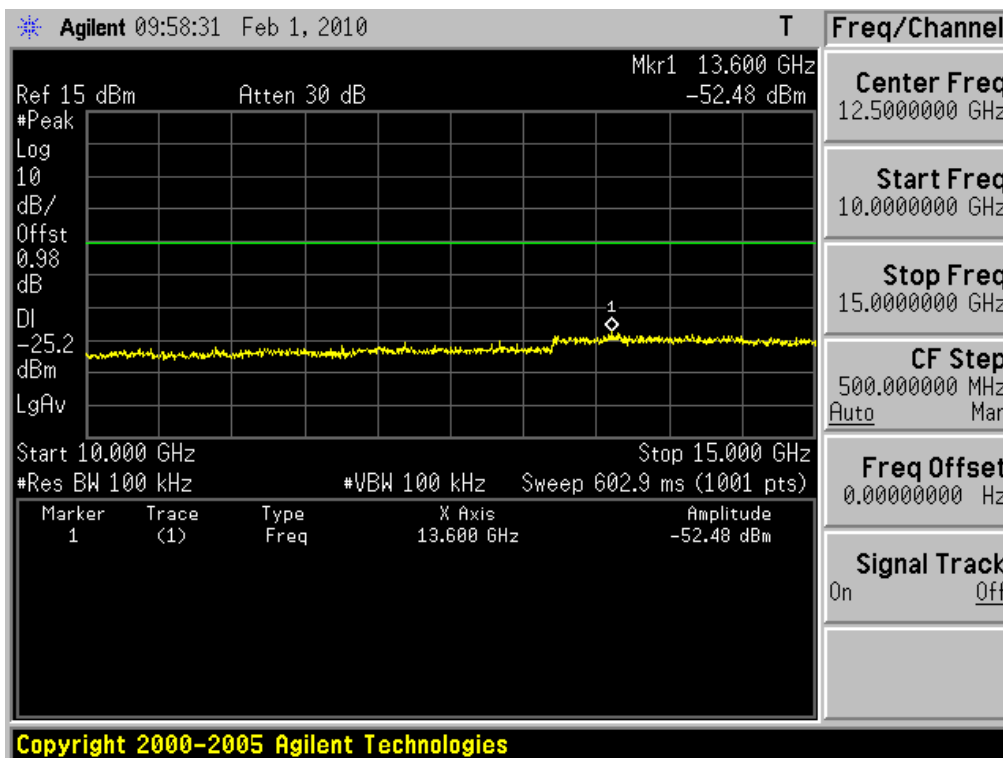
10MHz ~ 5GHz Conducted Spurious Emissions Test Mode: 802.11b & Middle Frequency



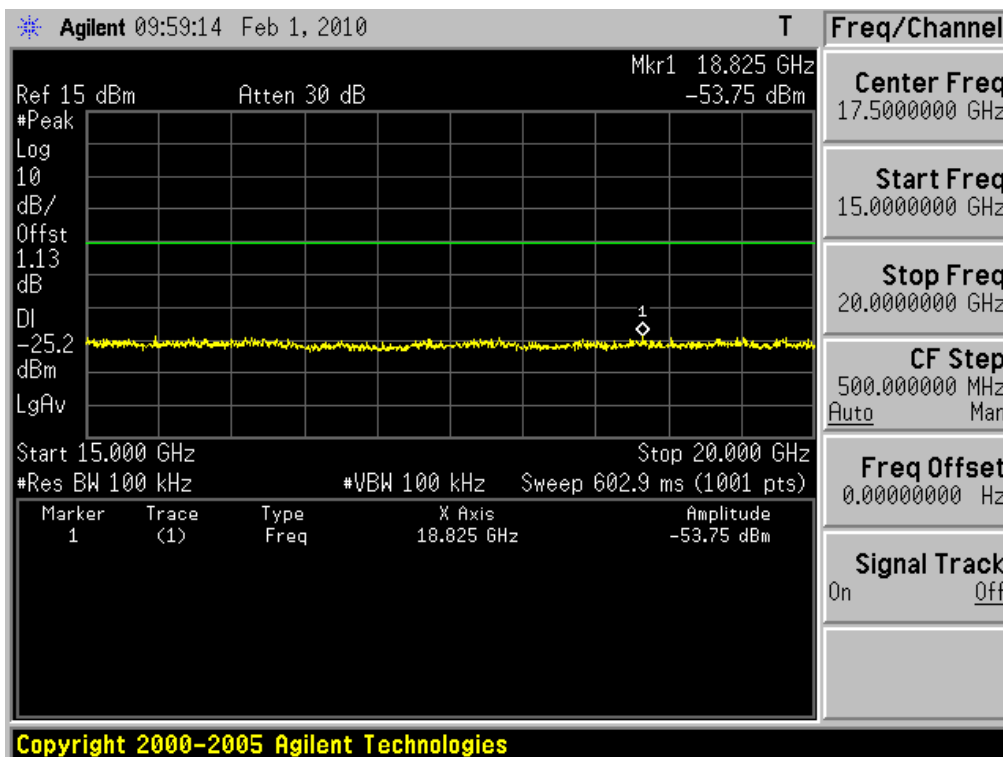
5GHz ~ 10GHz Conducted Spurious Emissions Test Mode: 802.11b & Middle Frequency



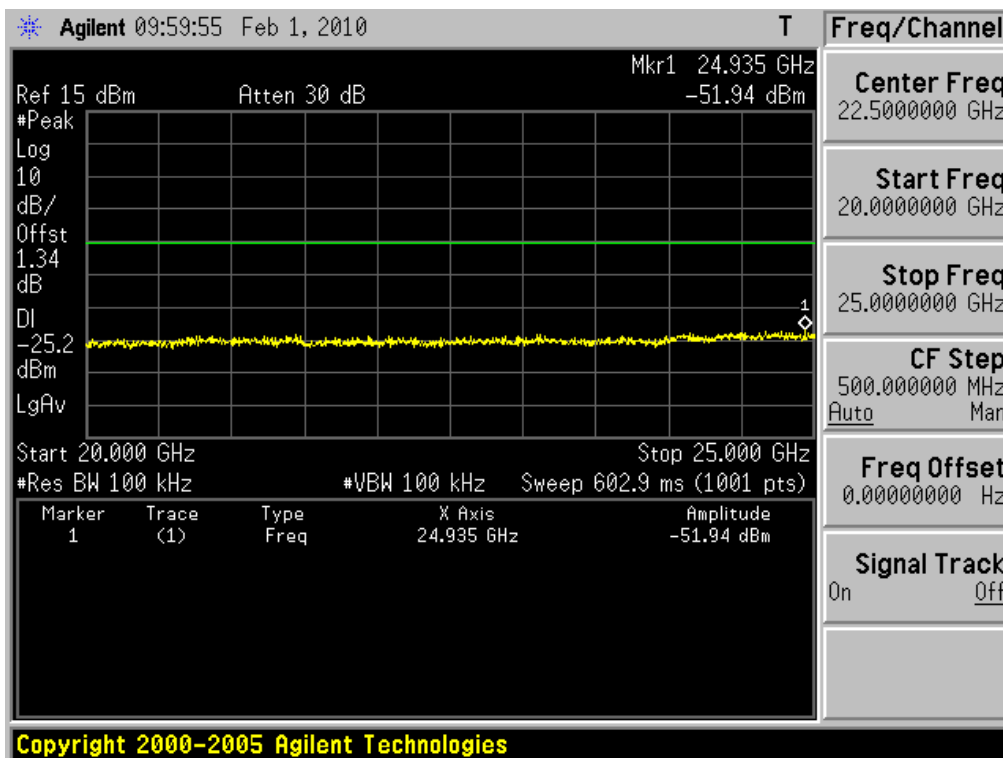
10GHz ~ 15GHz Conducted Spurious Emissions Test Mode: 802.11b & Middle Frequency



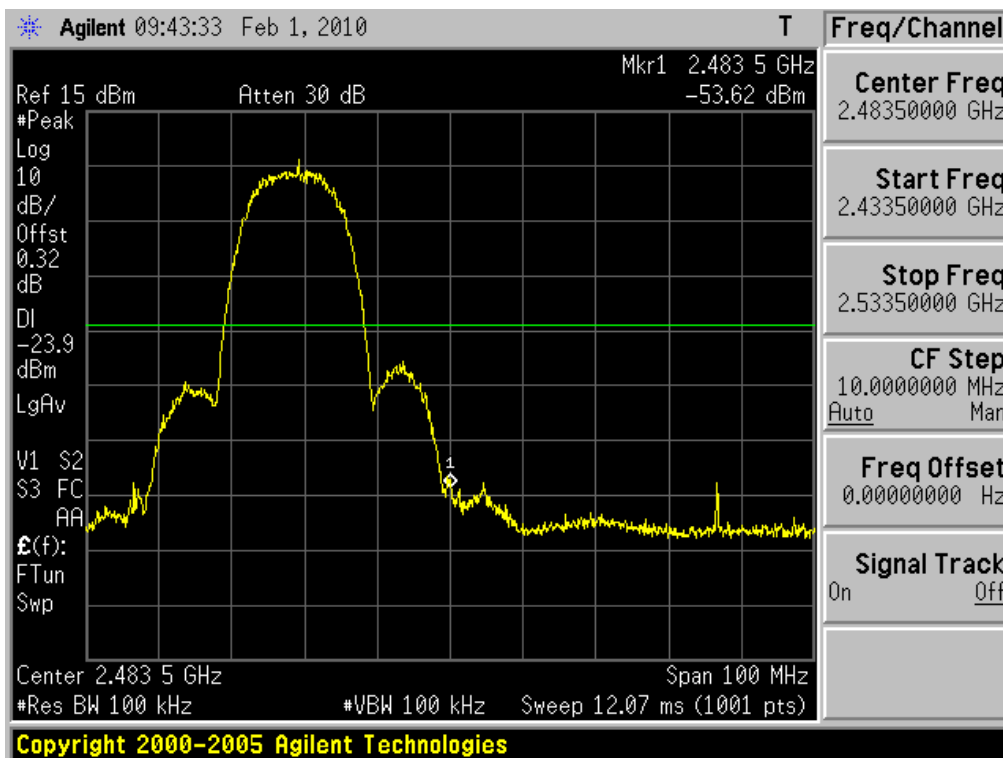
15GHz ~ 20GHz Conducted Spurious Emissions Test Mode: 802.11b & Middle Frequency



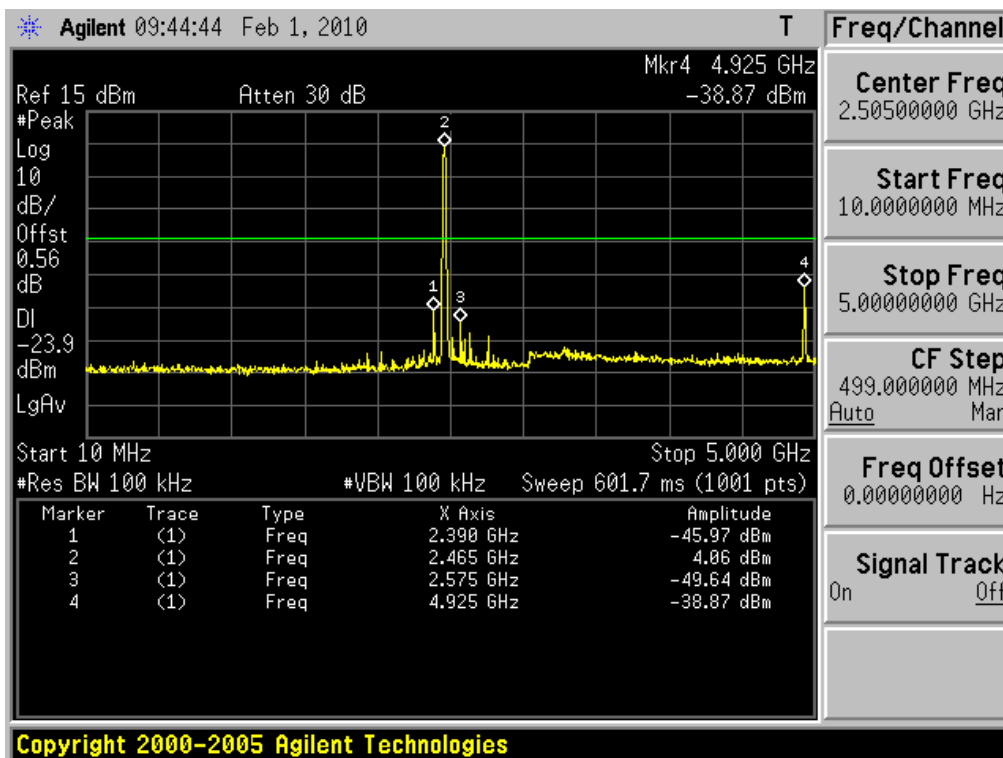
20GHz ~ 25GHz Conducted Spurious Emissions Test Mode: 802.11b & Middle Frequency



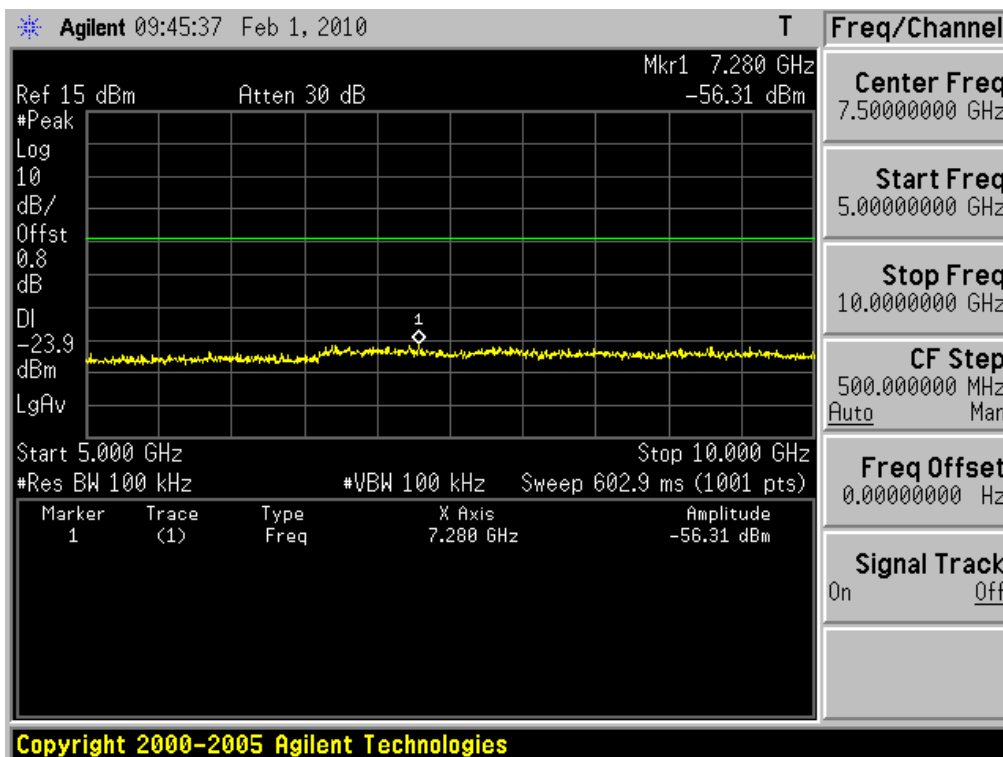
High Band-edge at 30 dB blow Test Mode: 802.11b & Highest Frequency



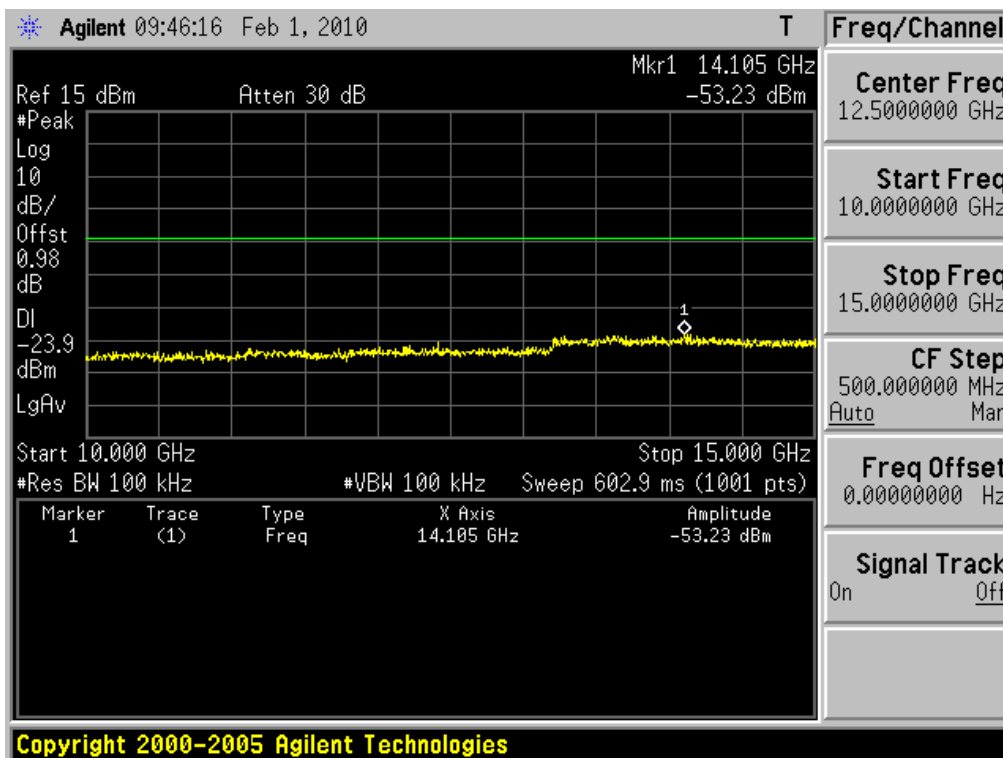
10MHz ~ 5GHz Conducted Spurious Emissions Test Mode: 802.11b & Highest Frequency



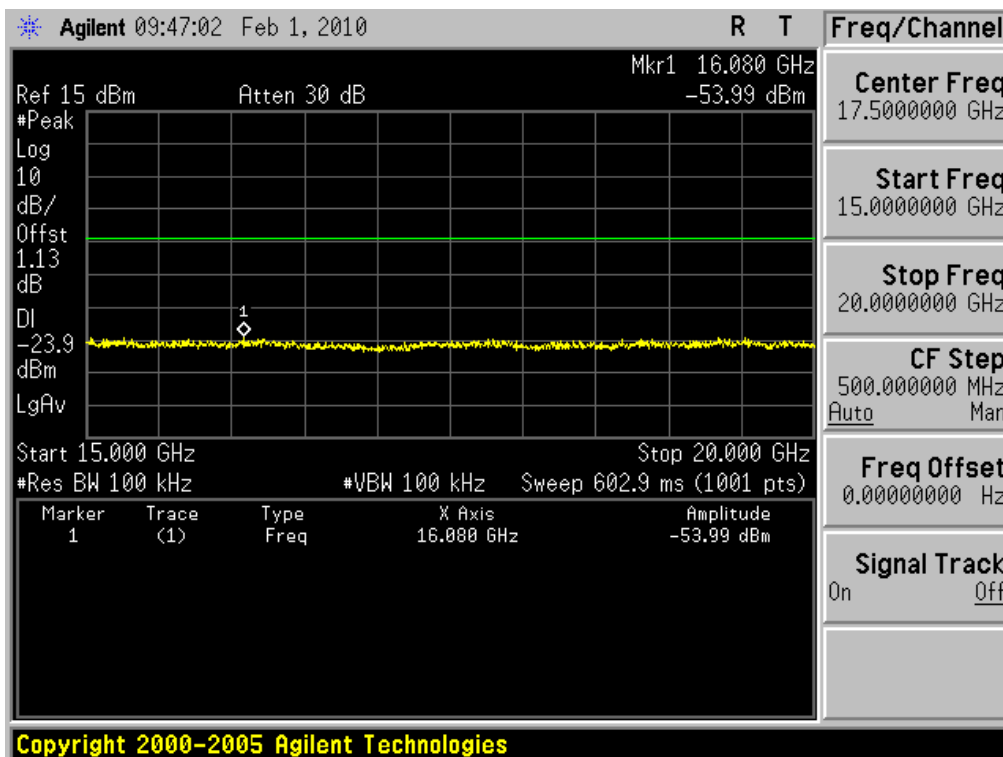
5GHz ~ 10GHz Conducted Spurious Emissions Test Mode: 802.11b & Highest Frequency



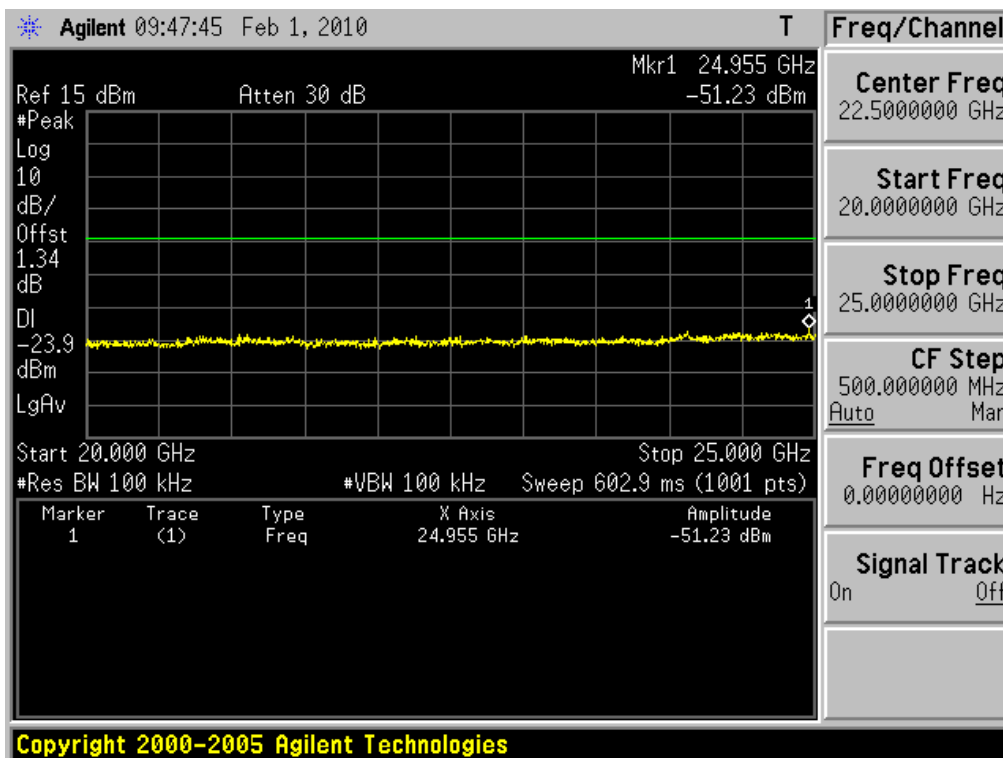
10GHz ~ 15GHz Conducted Spurious Emissions Test Mode: 802.11b & Highest Frequency



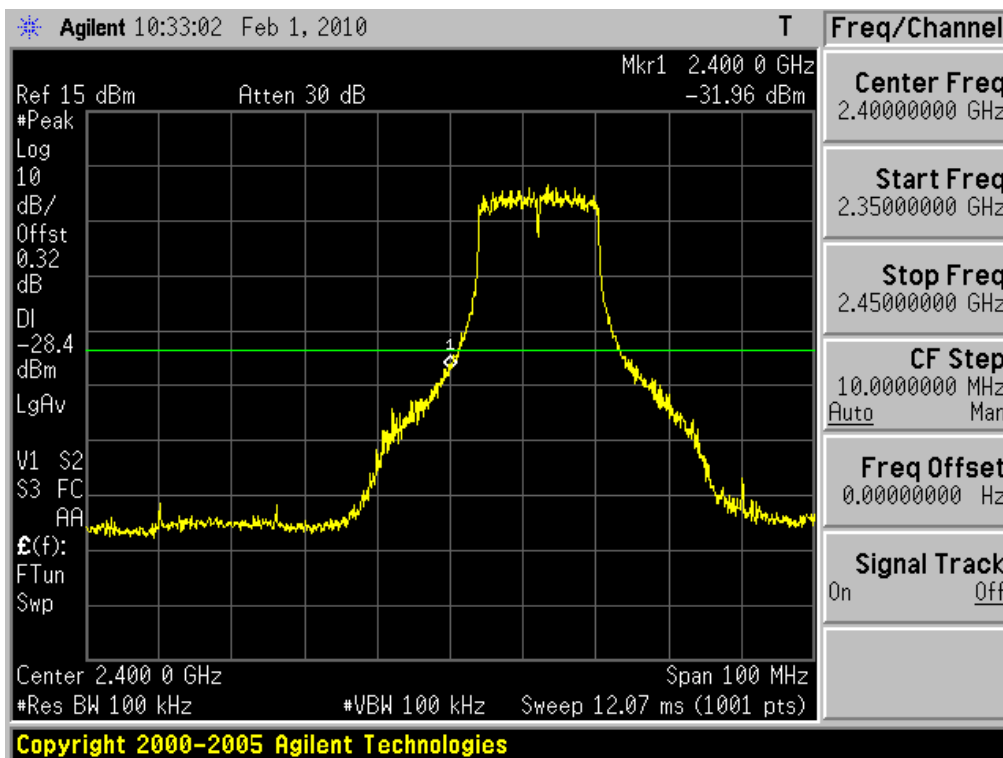
15GHz ~ 20GHz Conducted Spurious Emissions Test Mode: 802.11b & Highest Frequency



20GHz ~ 25GHz Conducted Spurious Emissions Test Mode: 802.11b & Highest Frequency

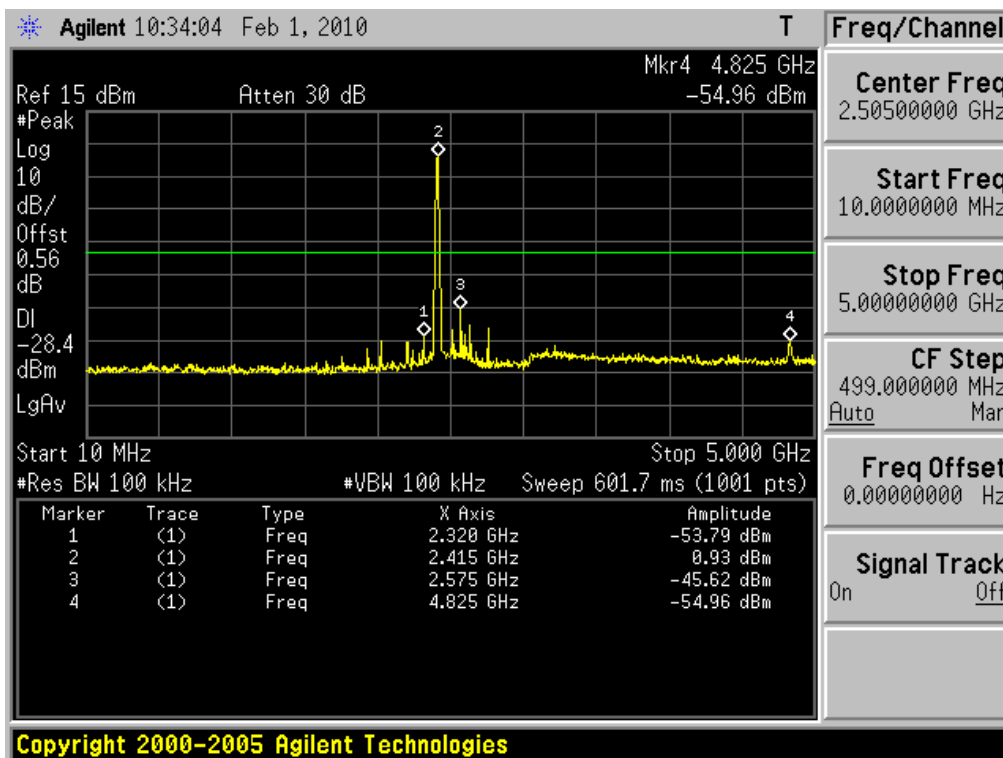


Low Band-edge at 30 dB blow      Test Mode: 802.11g

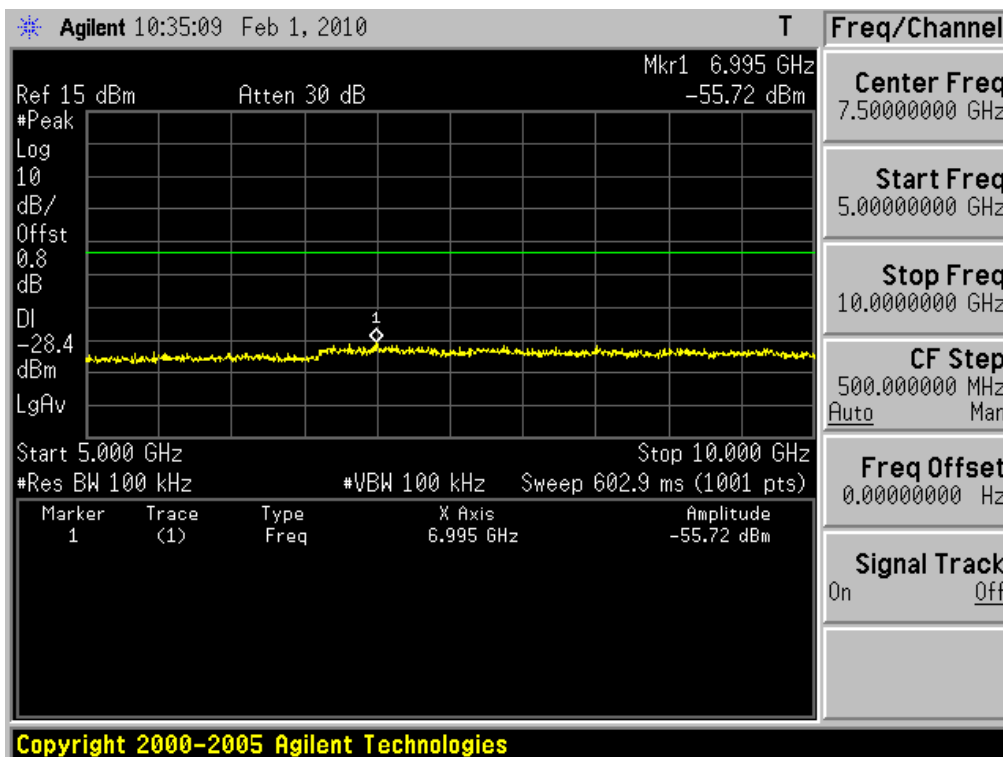




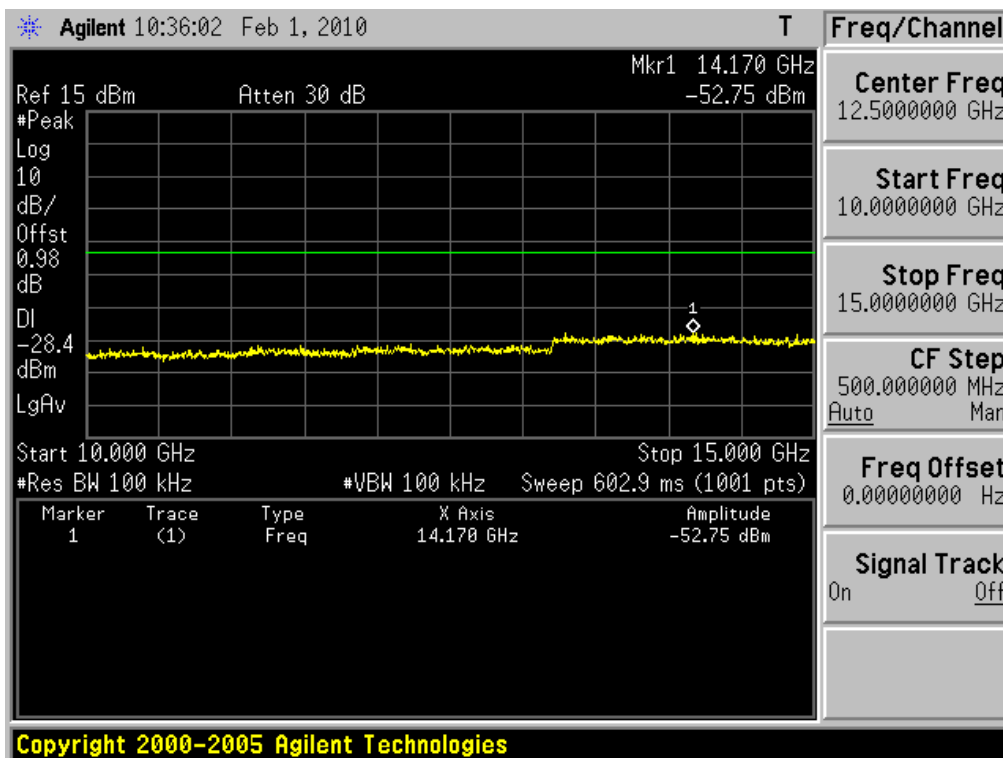
10MHz ~ 5GHz Conducted Spurious Emissions Test Mode: 802.11g & Lowest Frequency



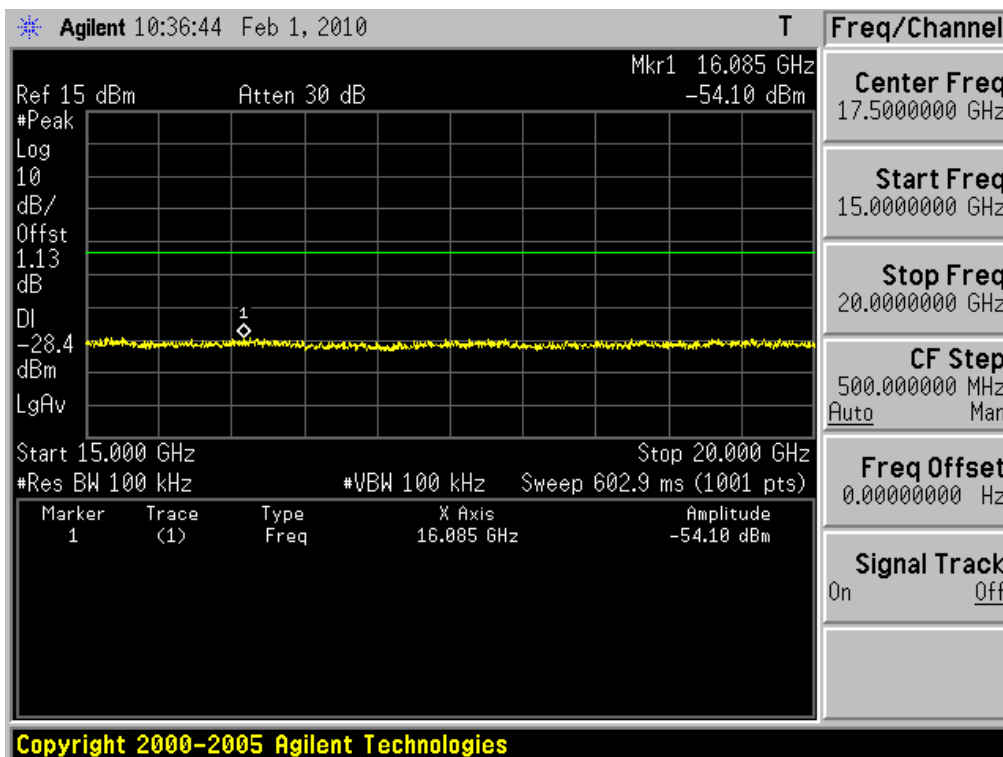
5GHz ~ 10GHz Conducted Spurious Emissions Test Mode: 802.11g & Lowest Frequency



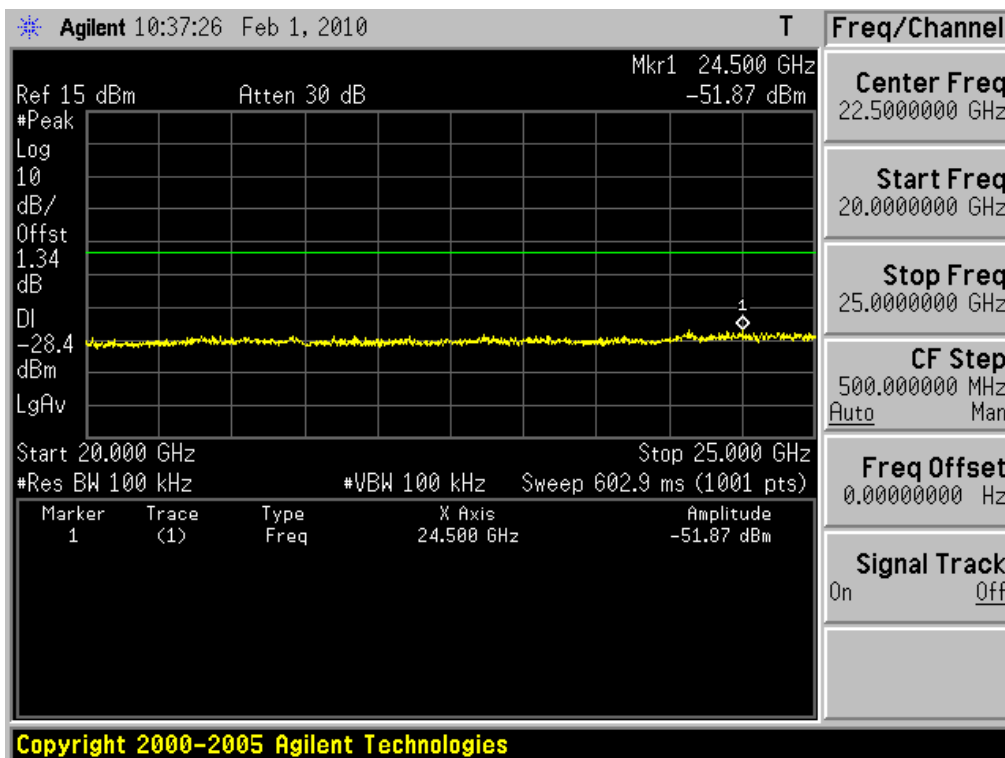
10GHz ~ 15GHz Conducted Spurious Emissions Test Mode: 802.11g & Lowest Frequency



15GHz ~ 20GHz Conducted Spurious Emissions Test Mode: 802.11g & Lowest Frequency

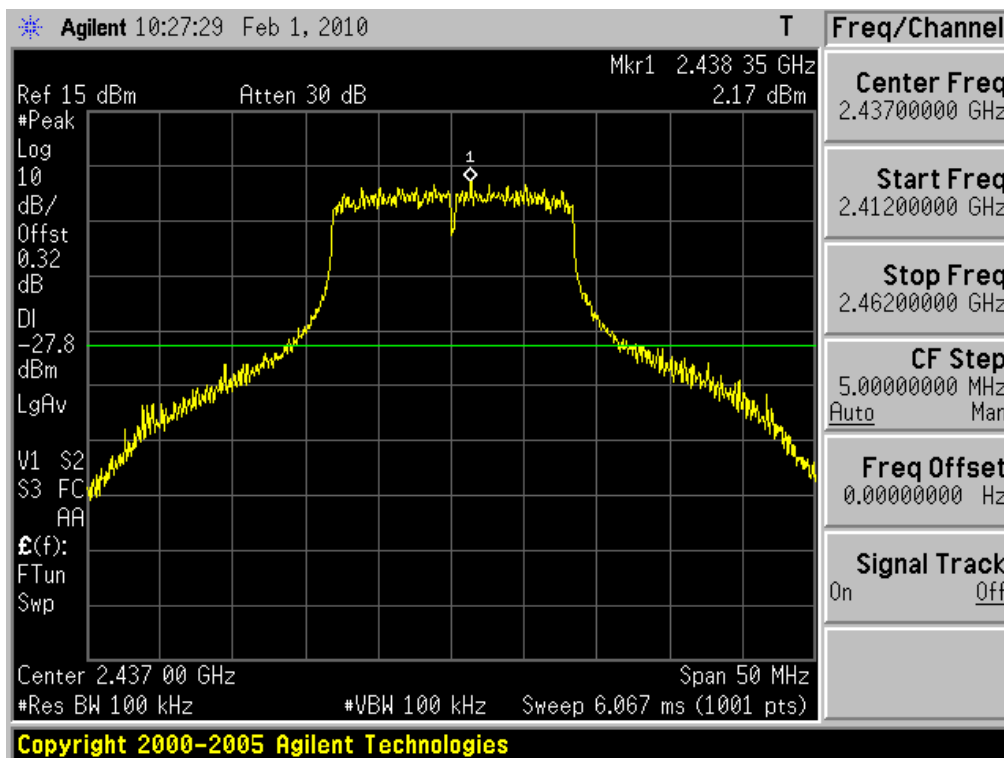


20GHz ~ 25GHz Conducted Spurious Emissions Test Mode: 802.11g & Lowest Frequency

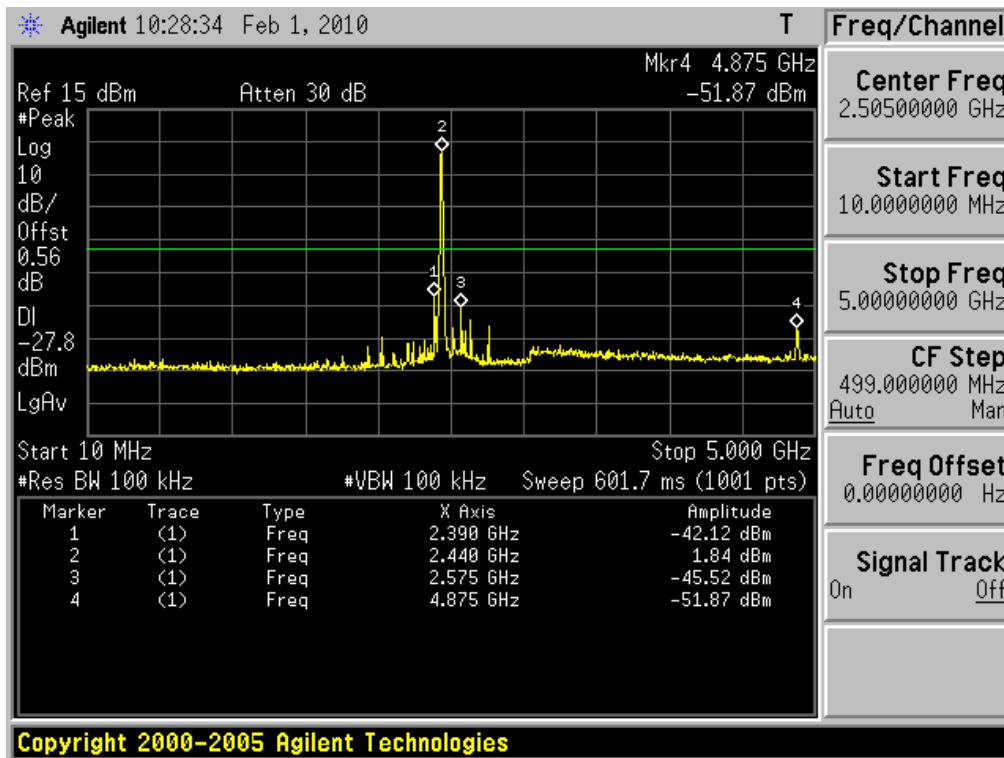


Reference for limit

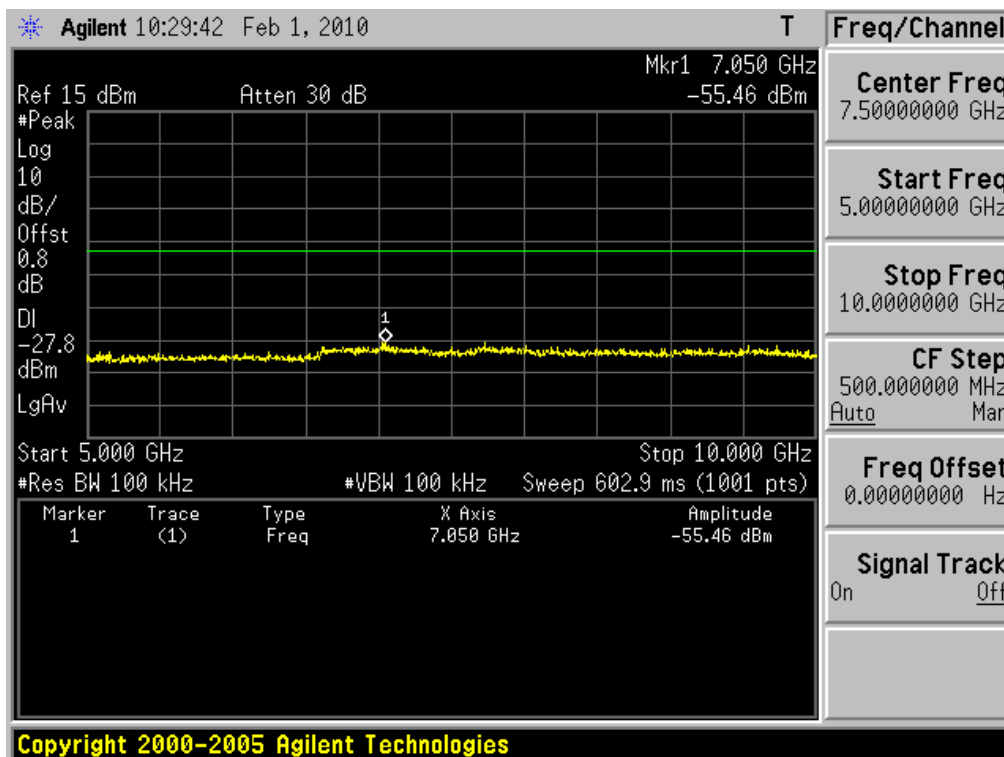
Test Mode: 802.11g & Middle Frequency



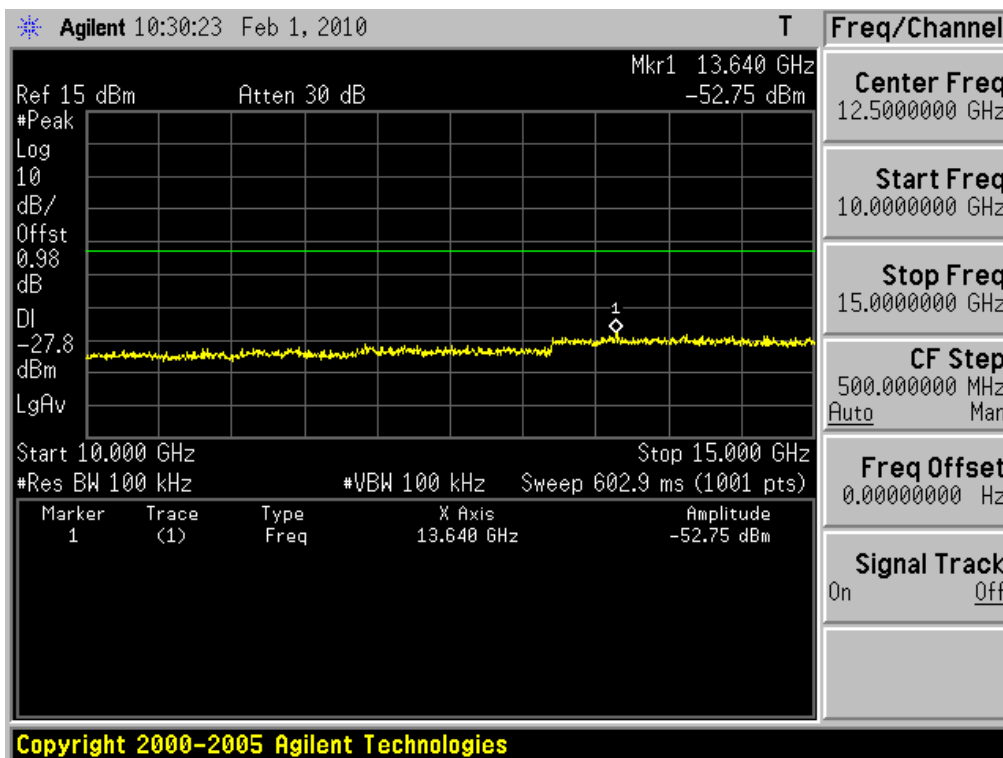
10MHz ~ 5GHz Conducted Spurious Emissions Test Mode: 802.11g & Middle Frequency



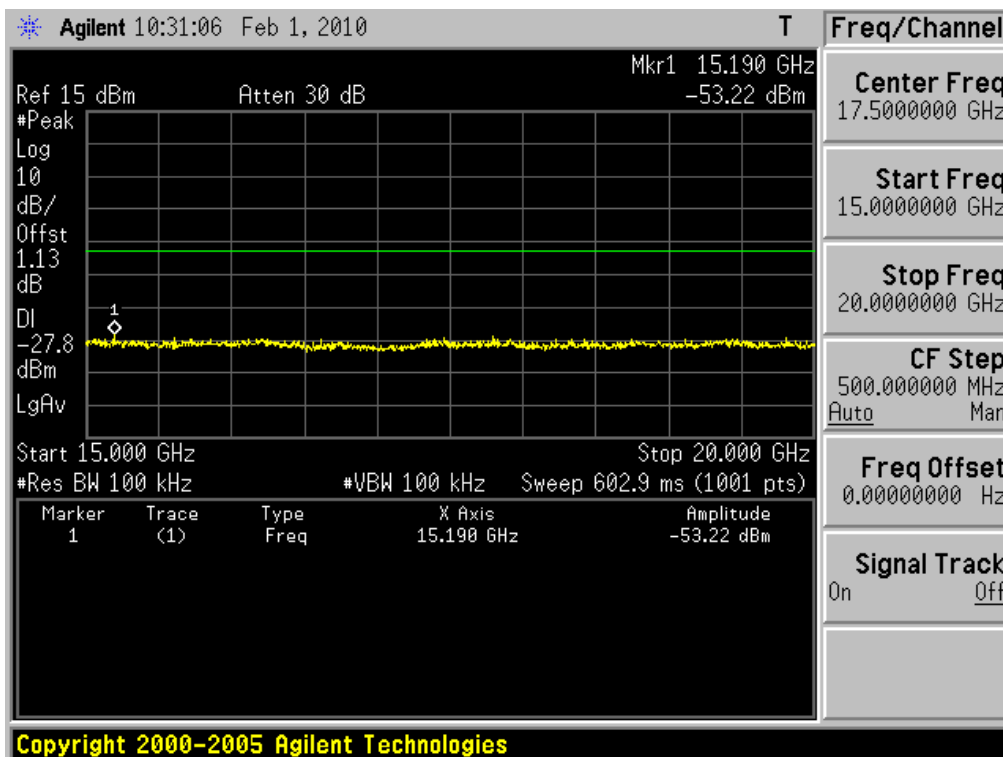
5GHz ~ 10GHz Conducted Spurious Emissions Test Mode: 802.11g & Middle Frequency



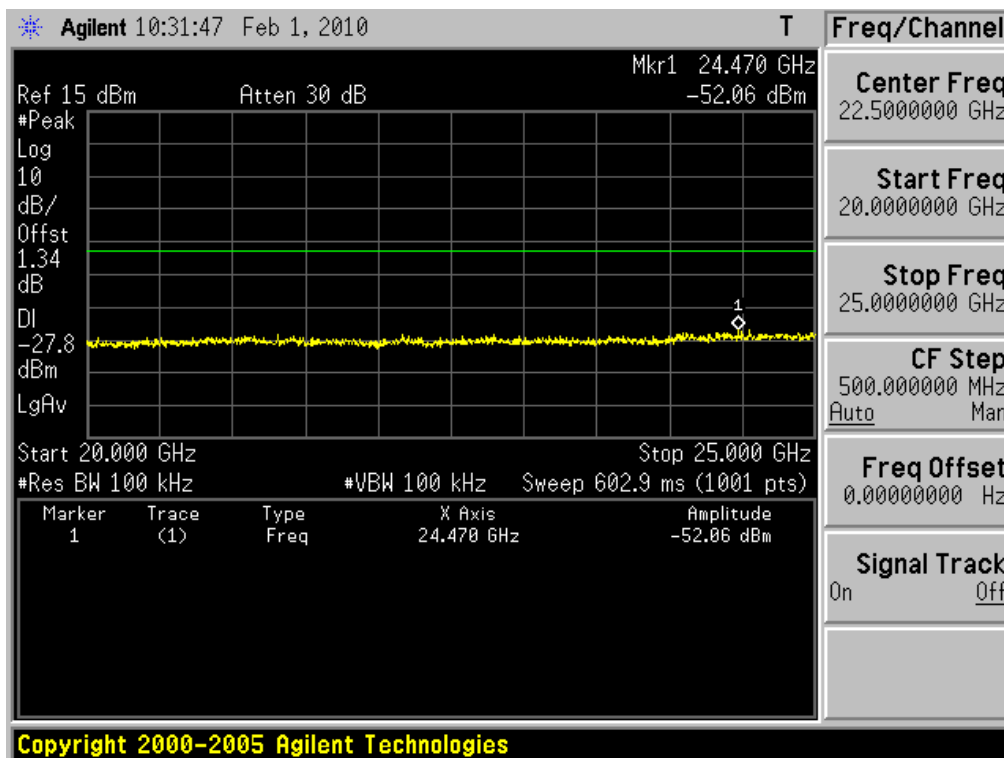
10GHz ~ 15GHz Conducted Spurious Emissions Test Mode: 802.11g & Middle Frequency



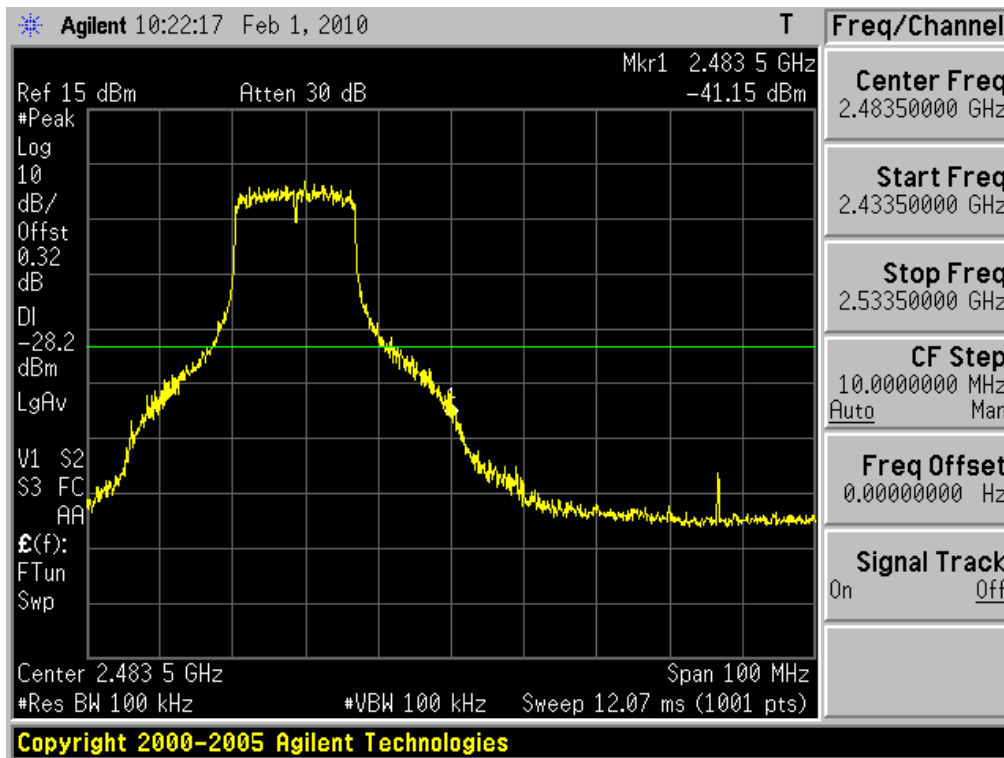
15GHz ~ 20GHz Conducted Spurious Emissions Test Mode: 802.11g & Middle Frequency



20GHz ~ 25GHz Conducted Spurious Emissions Test Mode: 802.11g & Middle Frequency

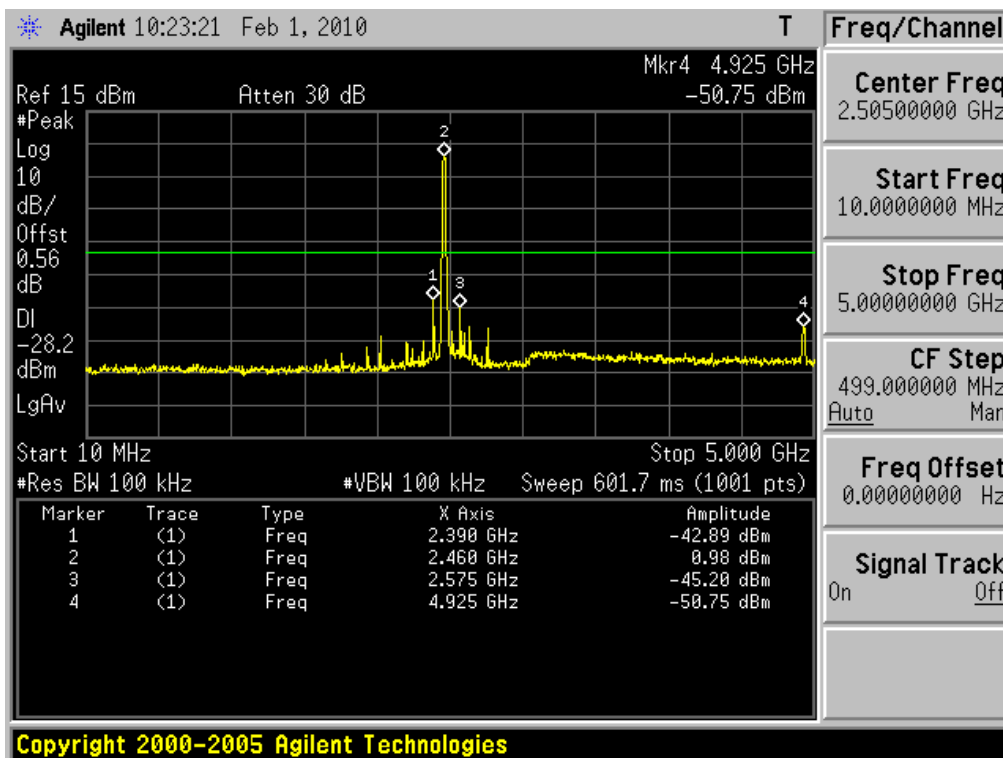


High Band-edge at 30 dB blow Test Mode: 802.11g & Highest Frequency

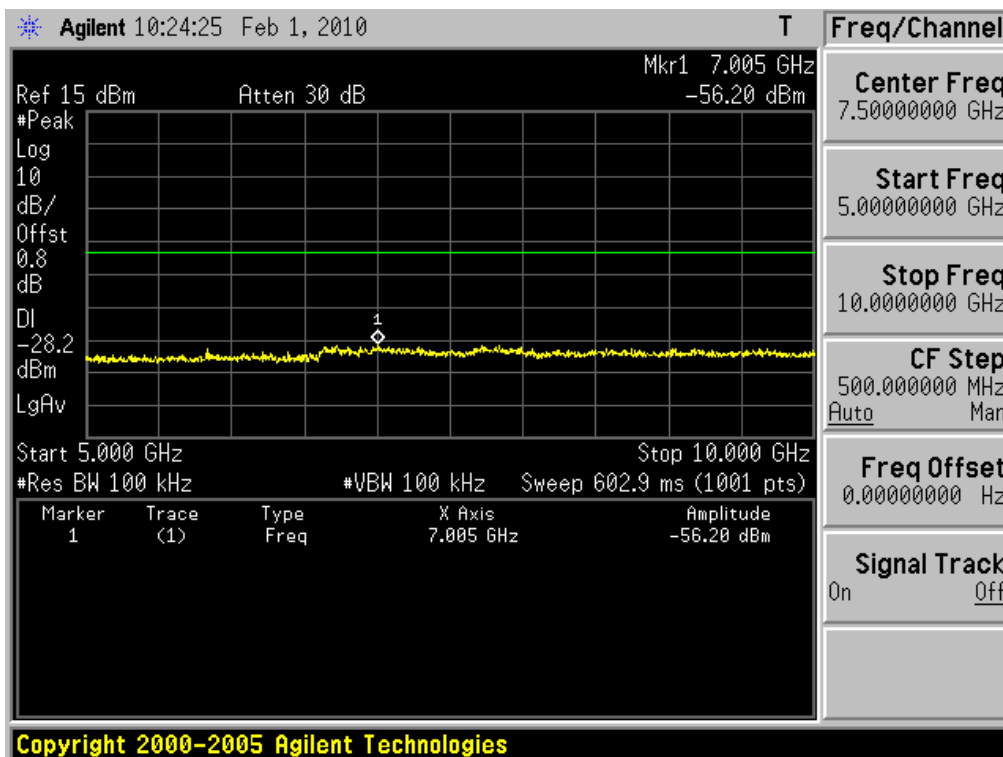




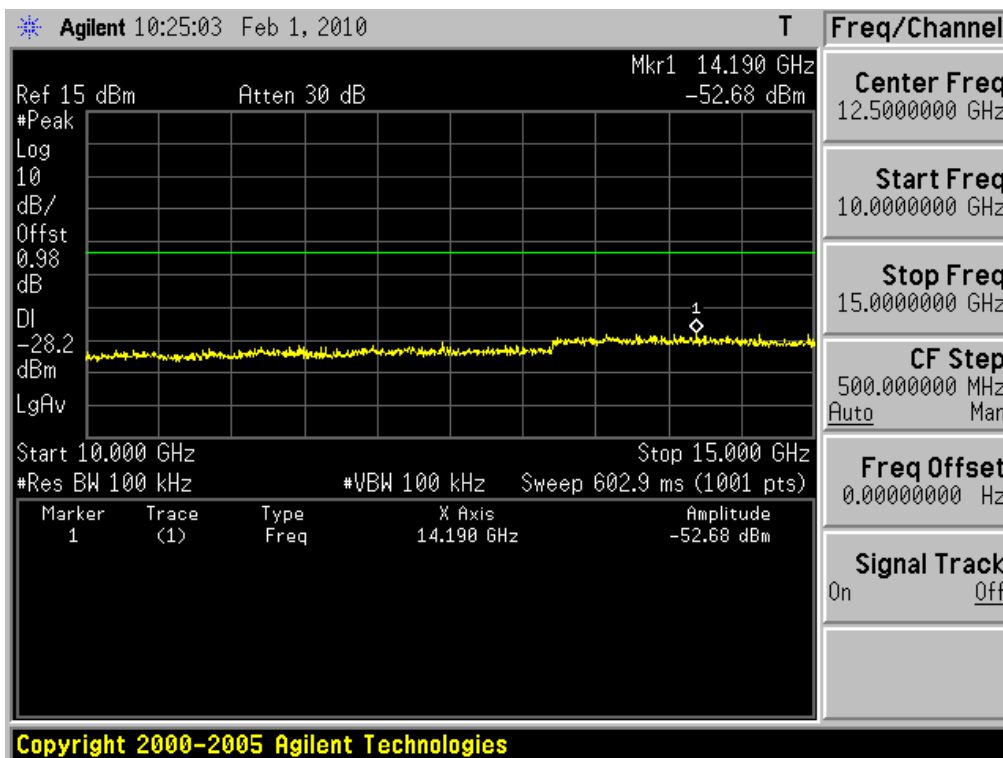
10MHz ~ 5GHz Conducted Spurious Emissions Test Mode: 802.11g & Highest Frequency



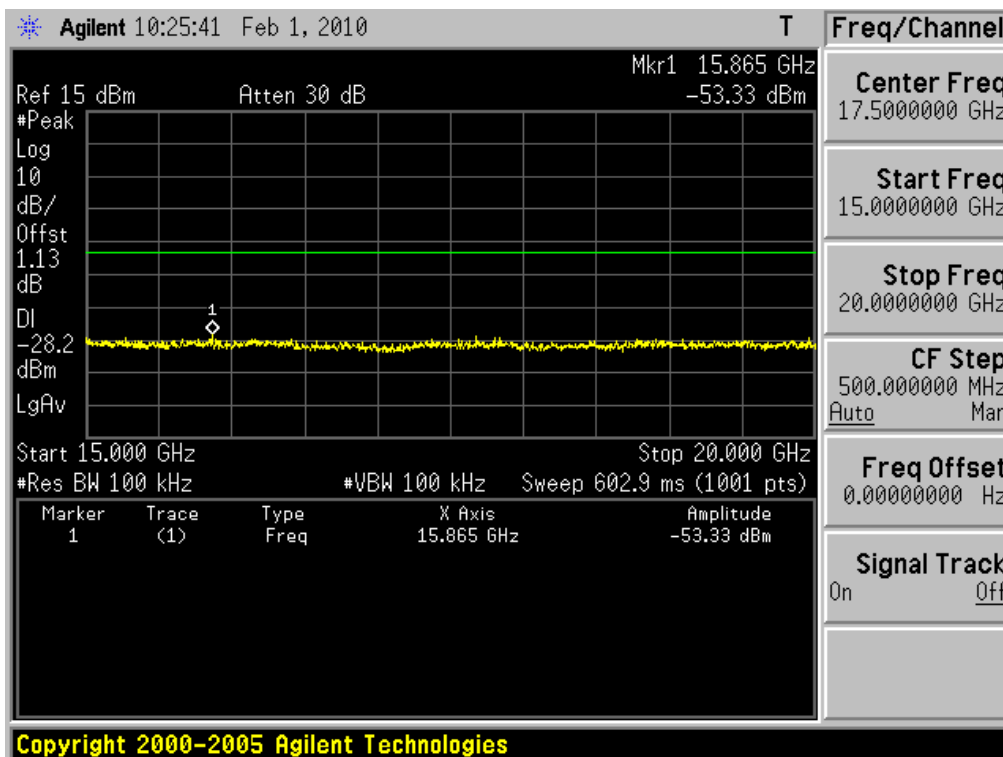
5GHz ~ 10GHz Conducted Spurious Emissions Test Mode: 802.11g & Highest Frequency



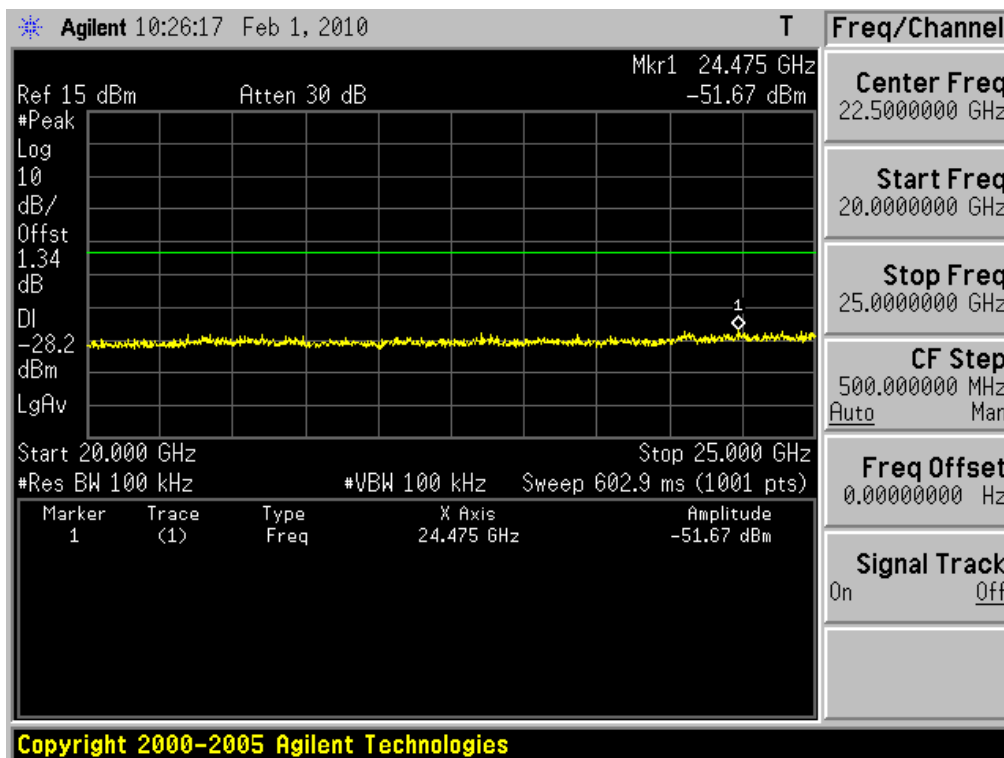
10GHz ~ 15GHz Conducted Spurious Emissions Test Mode: 802.11g & Highest Frequency



15GHz ~ 20GHz Conducted Spurious Emissions Test Mode: 802.11g & Highest Frequency



20GHz ~ 25GHz Conducted Spurious Emissions Test Mode: 802.11g & Highest Frequency



### 4.2.4 Out of band Emission – Radiated

**- Procedure:**

The EUT was placed on a 0.8m high wooden table inside a shielded enclosure. An antenna was placed near the EUT and measurements of frequencies and amplitudes of field strengths were recorded for reference during final measurements. For final radiated testing, measurements were performed in OATS. Measurements were performed with the EUT oriented in 3 orthogonal axis and rotated 360 degrees to determine worst-case orientation for maximum emissions.

The spectrum analyzer is set to:

- Tested frequency = Low, Middle, High Frequencies
- Frequency Range = 30 MHz ~ 10th harmonic.
- RBW and VBW =
  - 1. Frequency range: 30MHz ~ 1GHz  
RBW = 120KHz / VBW = ≥ RBW
  - 2. Frequency range: 1GHz ~ 10<sup>th</sup> harmonics  
Peak mode: RBW = 1MHz / VBW = ≥ RBW  
Average mode: RBW = 1MHz / VBW = 10Hz
- Detector function = Peak Sweep = auto
- Trace = max hold

**- Measurement Data: Comply**

Note 1: See next pages for actual measured spectrum plots and data.

**- Minimum Standard:**

▪ **FCC Part 15.209(a) and (b)**

Frequency (MHz)	Limit (uV/m) @ 3m
30 ~ 88	100 **
88 ~ 216	150 **
216 ~ 960	200 **
Above 960	500

\*\* Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88MHz, 174-216MHz or 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

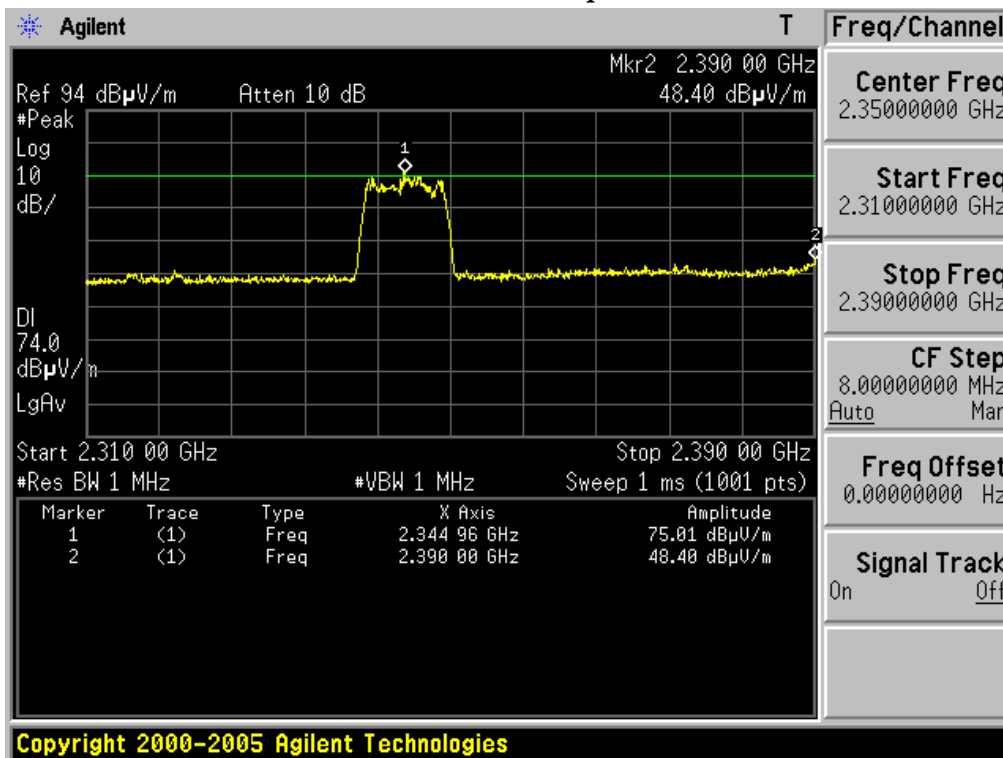
▪ **FCC Part 15.205 (a):** Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.41425 ~ 8.41475	108 ~ 121.94	1300 ~ 1427	3600 ~ 4400	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1435 ~ 1626.5	4.5 ~ 5.15	15.35 ~ 16.2
2.1735 ~ 2.1905	12.51975 ~ 12.52025	149.9 ~ 150.05	1645.5 ~ 1646.5	5.35 ~ 5.46	17.7 ~ 21.4
4.125 ~ 4.128	12.57675 ~ 12.57725	156.52475 ~ 156.52525	1660 ~ 1710	7.25 ~ 7.75	22.01 ~ 23.12
4.17725 ~ 4.17775	13.36 ~ 13.41	156.7 ~ 156.9	1718.8 ~ 1722.2	8.025 ~ 8.5	23.6 ~ 24.0
4.20725 ~ 4.20775	16.42 ~ 16.423	162.0125 ~ 167.17	2200 ~ 2300	9.0 ~ 9.2	31.2 ~ 31.8
6.215 ~ 6.218	16.69475 ~ 16.69525	167.72 ~ 173.2	2310 ~ 2390	9.3 ~ 9.5	36.43 ~ 36.5
6.26775 ~ 6.26825	16.80425 ~ 16.80475	240 ~ 285	2483.5 ~ 2500	10.6 ~ 12.7	Above 38.6
6.31175 ~ 6.31225	25.5 ~ 25.67	322 ~ 335.4	2655 ~ 2900	13.25 ~ 13.4	
8.291 ~ 8.294	37.5 ~ 38.25	399.90 ~ 410	3260 ~ 3267		
8.362 ~ 8.366	73 ~ 74.6	608 ~ 614	3332 ~ 3339		
8.37625 ~ 8.38675	74.8 ~ 75.2	960 ~ 1240	3345.8 ~ 3358		

▪ **FCC Part 15.205(b):** The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

**Restricted Band Edge** Test Mode: 802.11b & Lowest Frequency

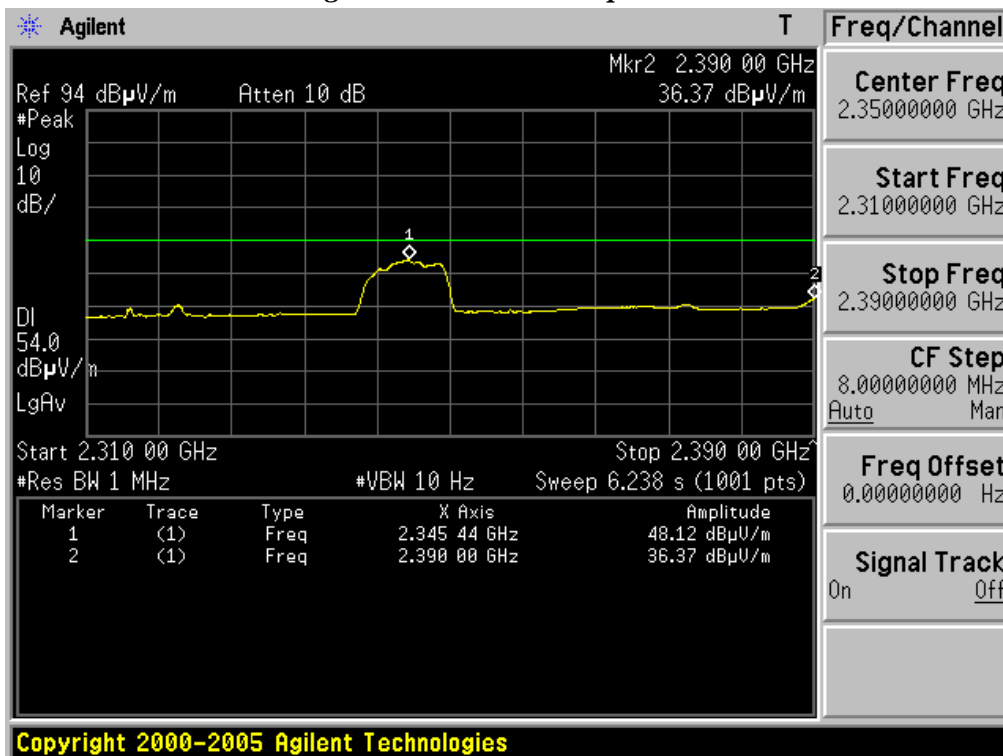
*Peak mode / Horizontal polarization*



Marker 1's emissions of the low band edge test plots are emissions from WIMAX downlink signal in Korea.

**Restricted Band Edge** Test Mode: 802.11b & Lowest Frequency

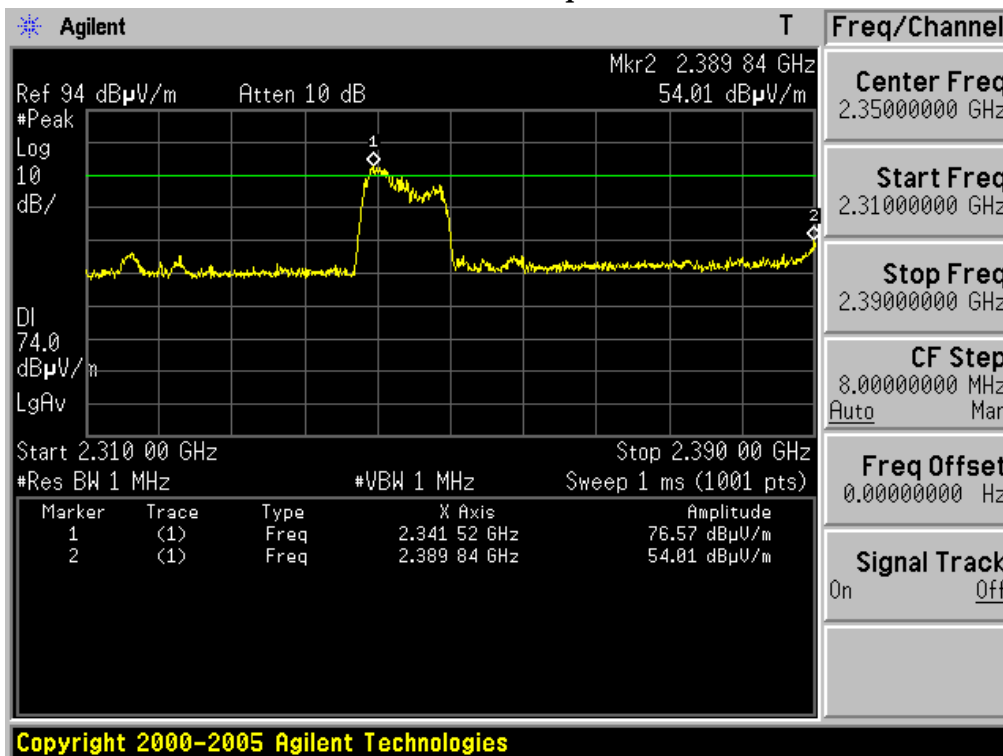
*Average mode / Horizontal polarization*



Marker 1's emissions of the low band edge test plots are emissions from WIMAX downlink signal in Korea.

**Restricted Band Edge** Test Mode: 802.11b & Lowest Frequency

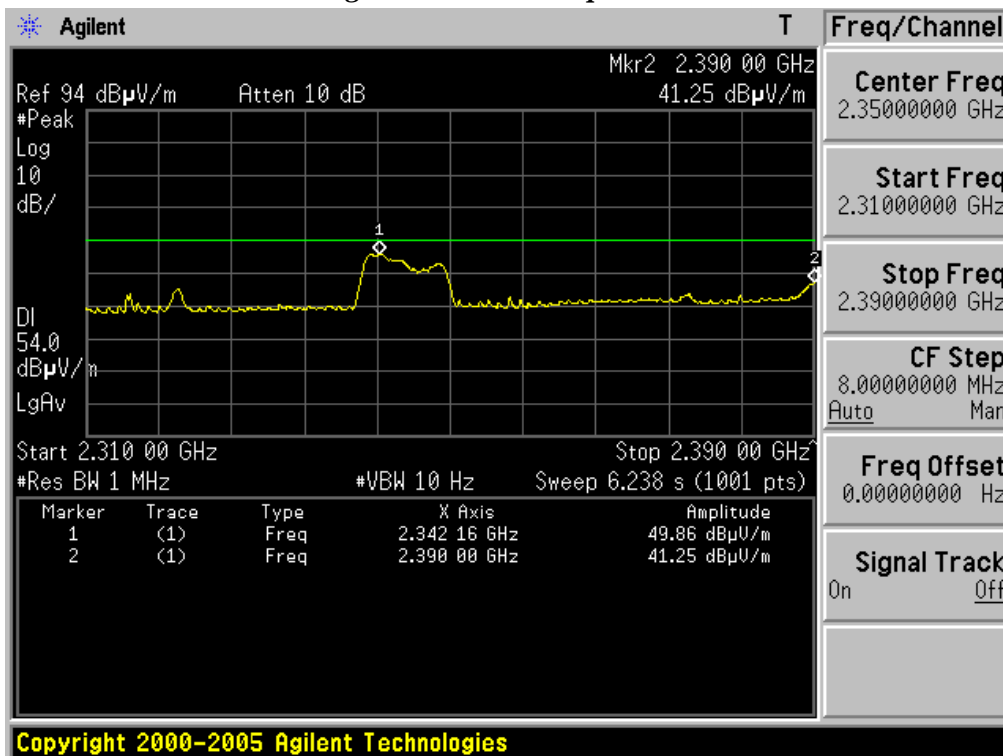
*Peak mode / Vertical polarization*



Marker 1's emissions of the low band edge test plots are emissions from WIMAX downlink signal in Korea.

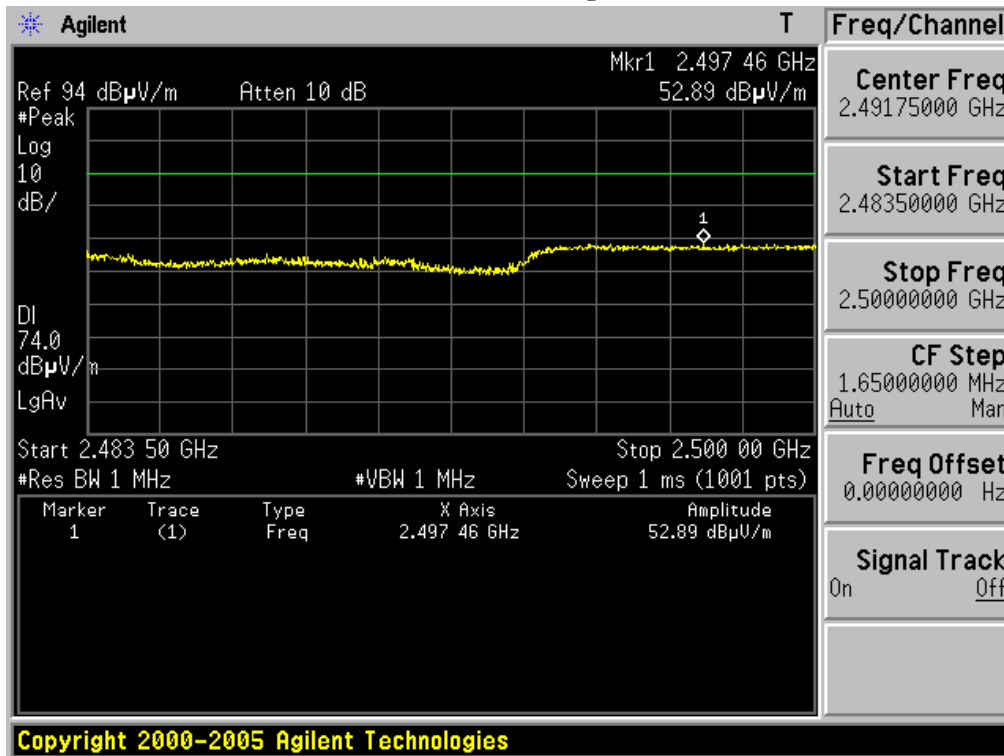
**Restricted Band Edge** Test Mode: 802.11b & Lowest Frequency

*Average mode / Vertical polarization*

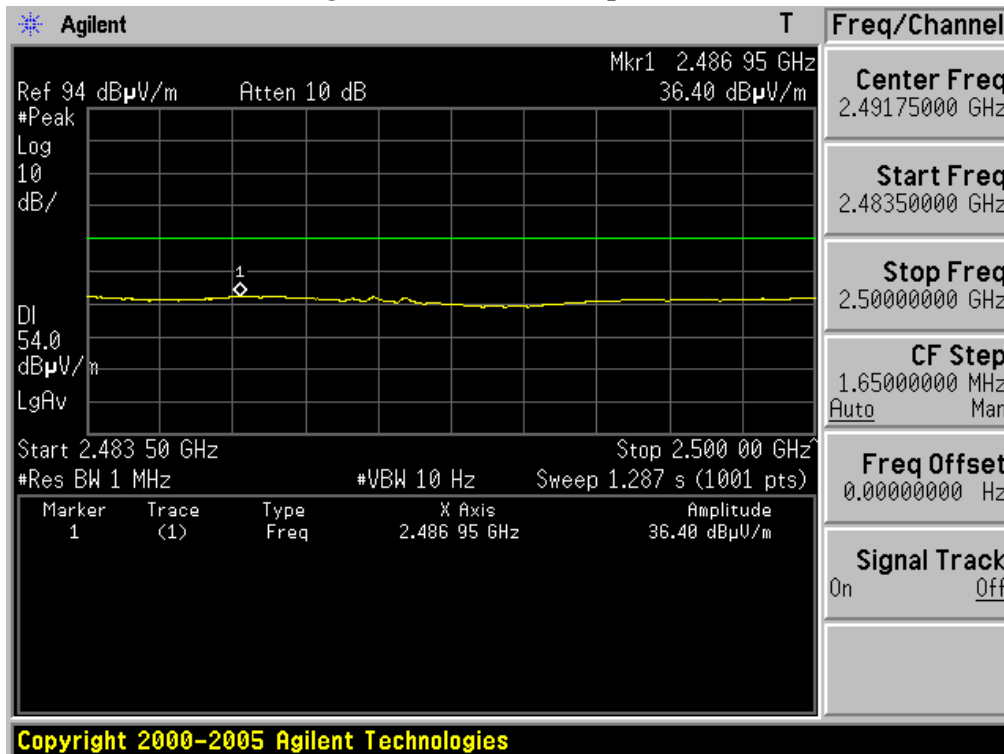


Marker 1's emissions of the low band edge test plots are emissions from WIMAX downlink signal in Korea.

**Restricted Band Edge**    Test Mode: 802.11b & Highest Frequency  
*Peak mode / Horizontal polarization*

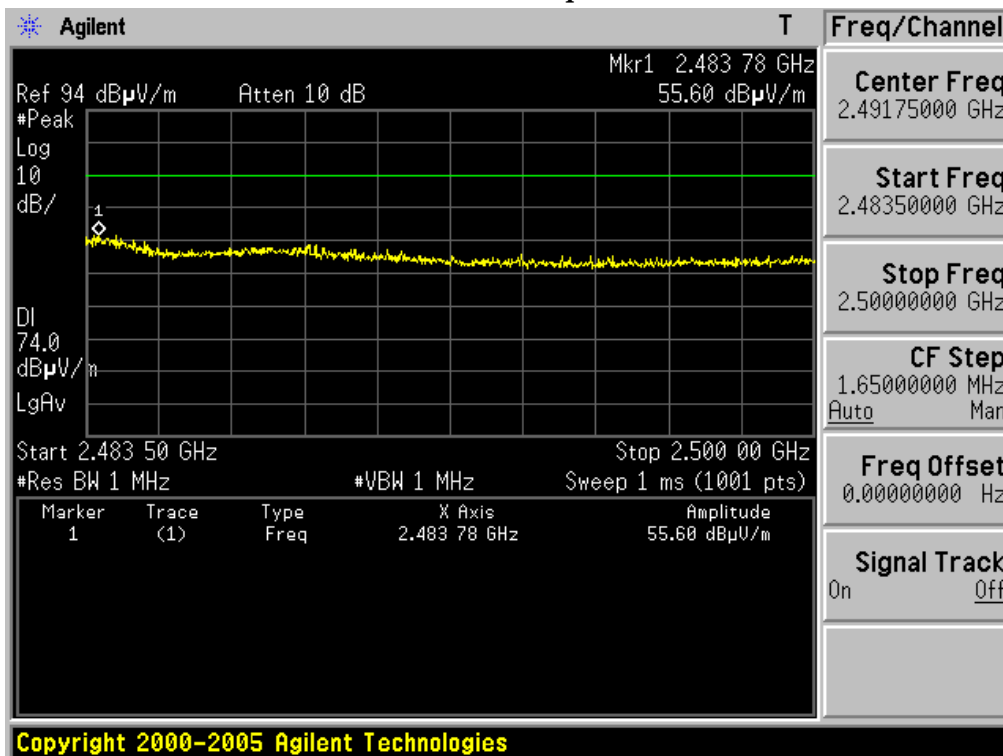


**Restricted Band Edge**    Test Mode: 802.11b & Highest Frequency  
*Average mode / Horizontal polarization*



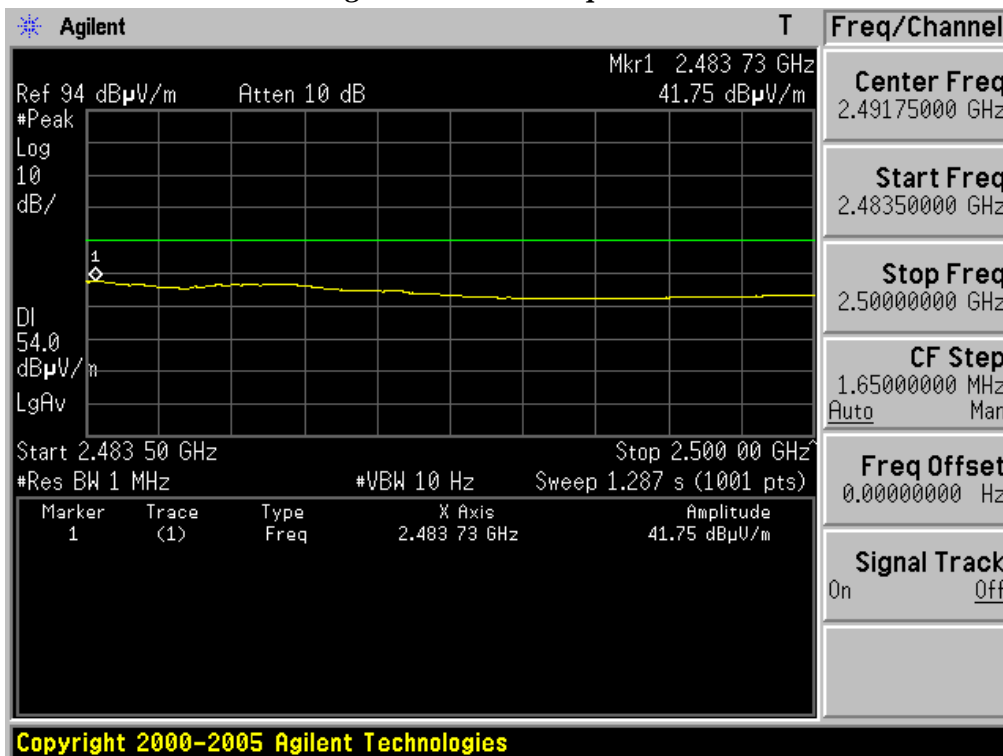
Restricted Band Edge Test Mode: 802.11b & Highest Frequency

*Peak mode / Vertical polarization*



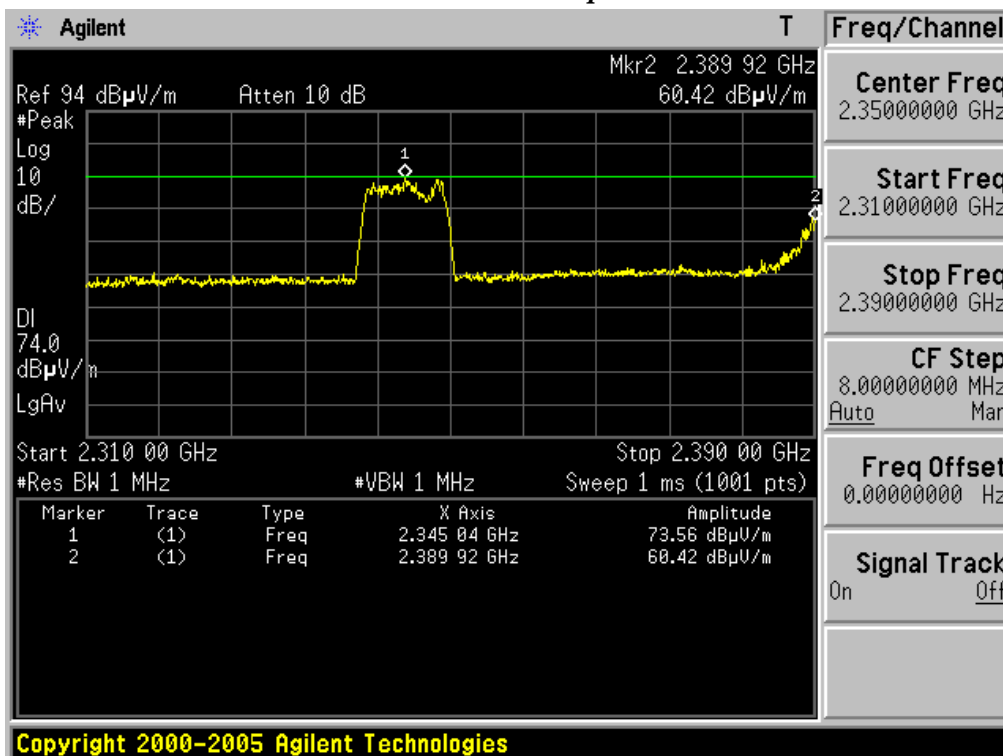
Restricted Band Edge Test Mode: 802.11b & Highest Frequency

*Average mode / Vertical polarization*



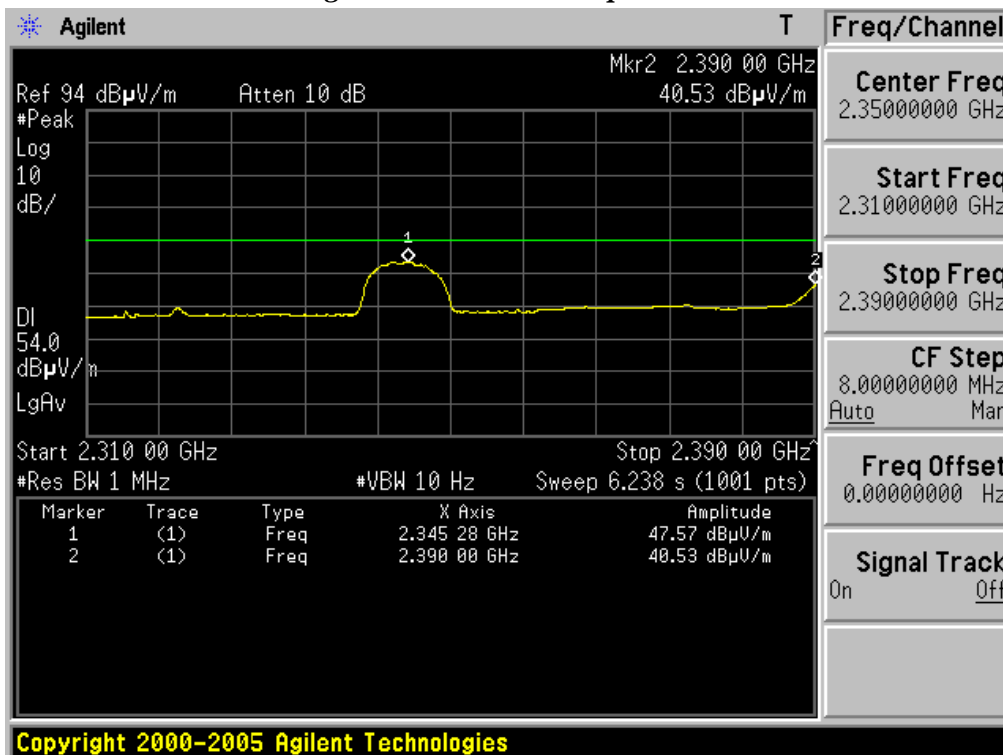


**Restricted Band Edge**    Test Mode: 802.11g & Lowest Frequency  
*Peak mode / Horizontal polarization*



Marker 1's emissions of the low band edge test plots are emissions from WIMAX downlink signal in Korea.

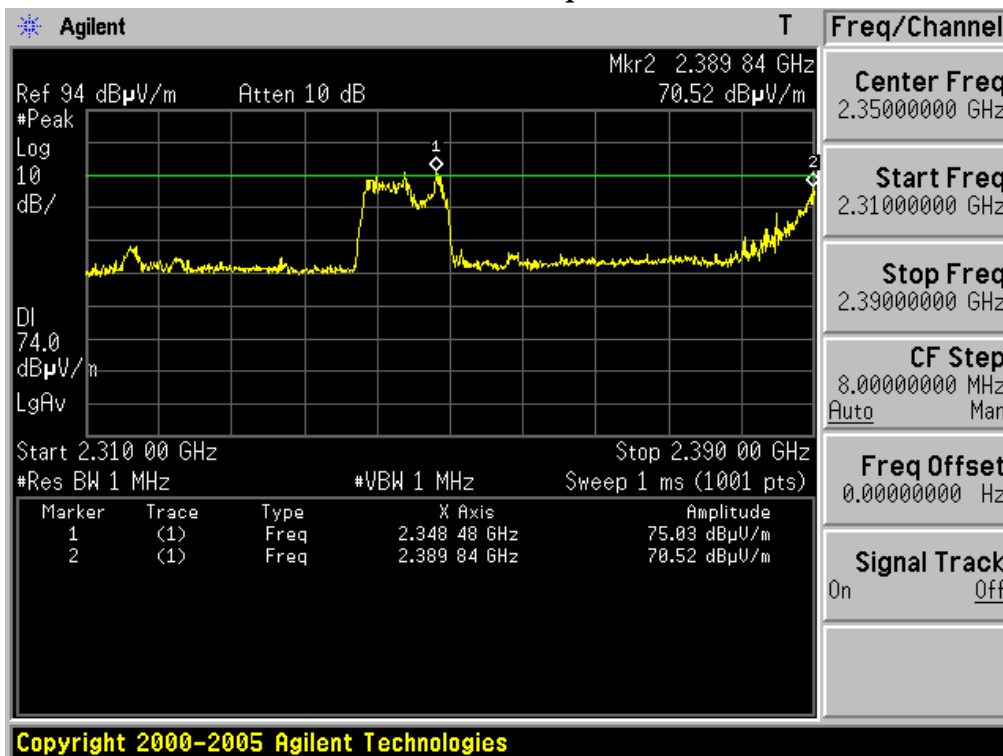
**Restricted Band Edge**    Test Mode: 802.11g & Lowest Frequency  
*Average mode / Horizontal polarization*



Marker 1's emissions of the low band edge test plots are emissions from WIMAX downlink signal in Korea.

**Restricted Band Edge** Test Mode: 802.11g & Lowest Frequency

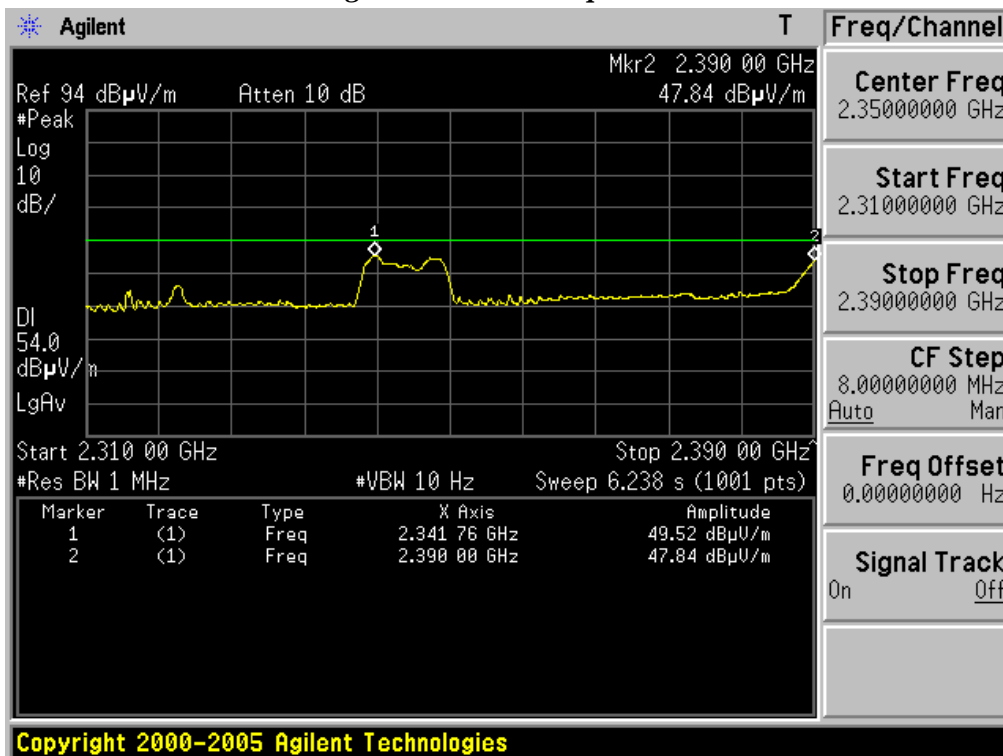
*Peak mode / Vertical polarization*



Marker 1's emissions of the low band edge test plots are emissions from WIMAX downlink signal in Korea.

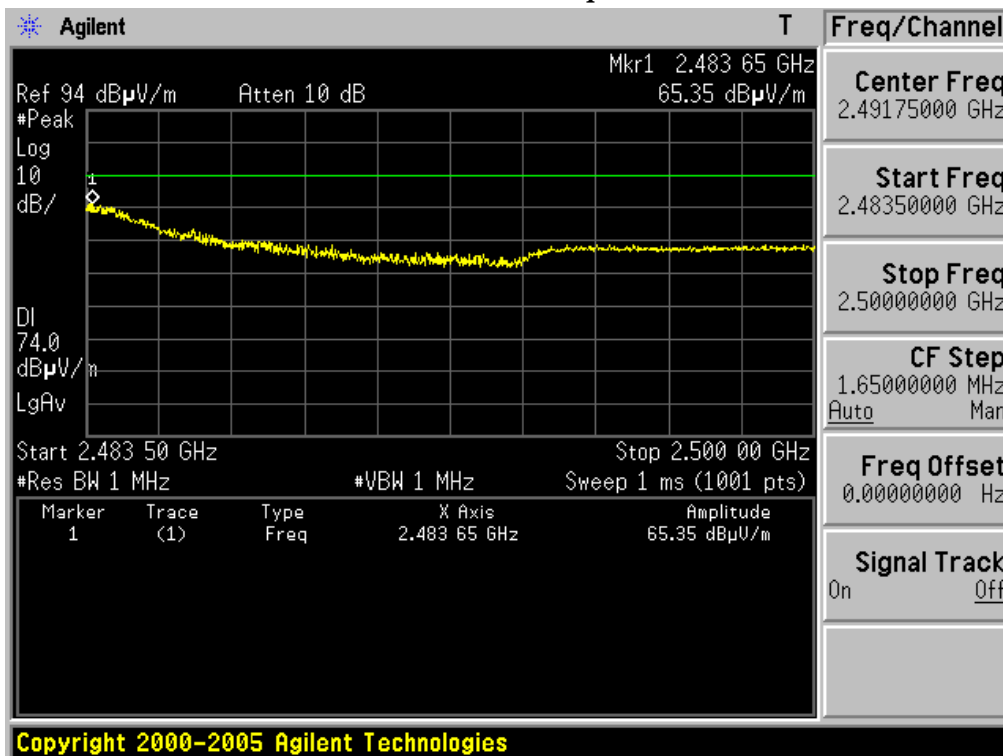
**Restricted Band Edge** Test Mode: 802.11g & Lowest Frequency

*Average mode / Vertical polarization*

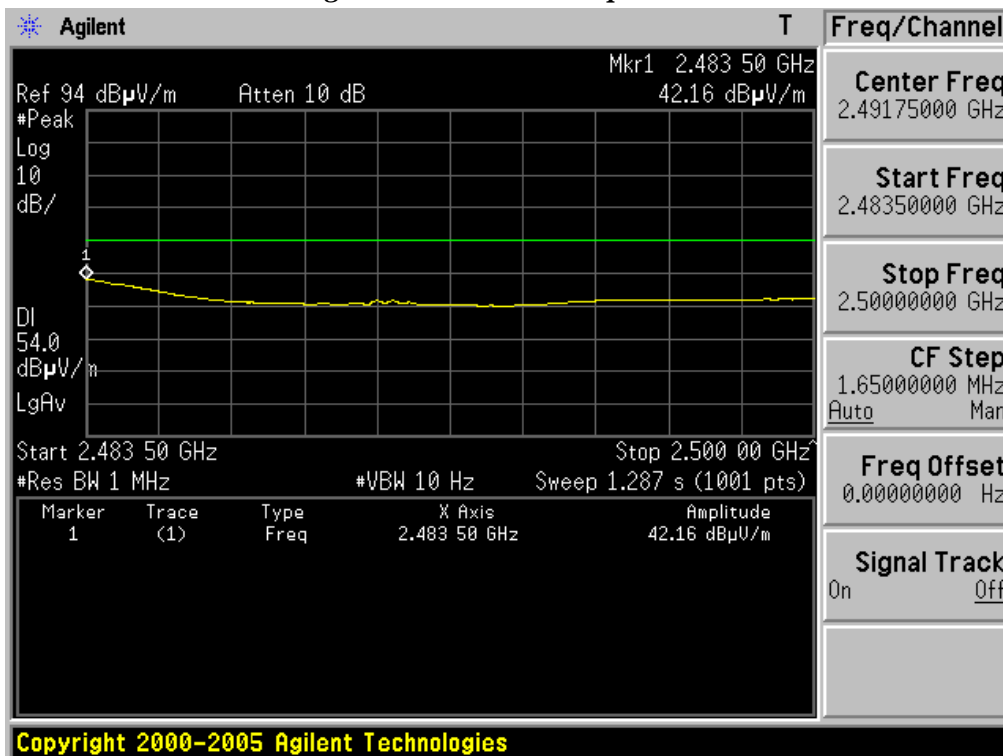


Marker 1's emissions of the low band edge test plots are emissions from WIMAX downlink signal in Korea.

**Restricted Band Edge**    Test Mode: 802.11g & Highest Frequency  
*Peak mode / Horizontal polarization*

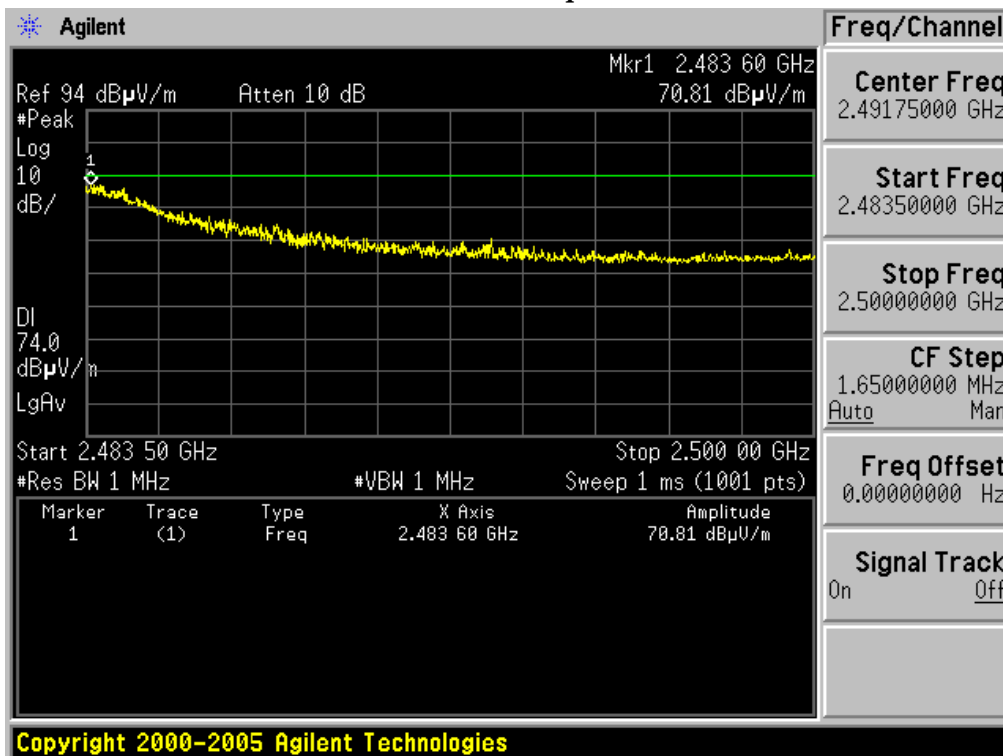


**Restricted Band Edge**    Test Mode: 802.11g & Highest Frequency  
*Average mode / Horizontal polarization*



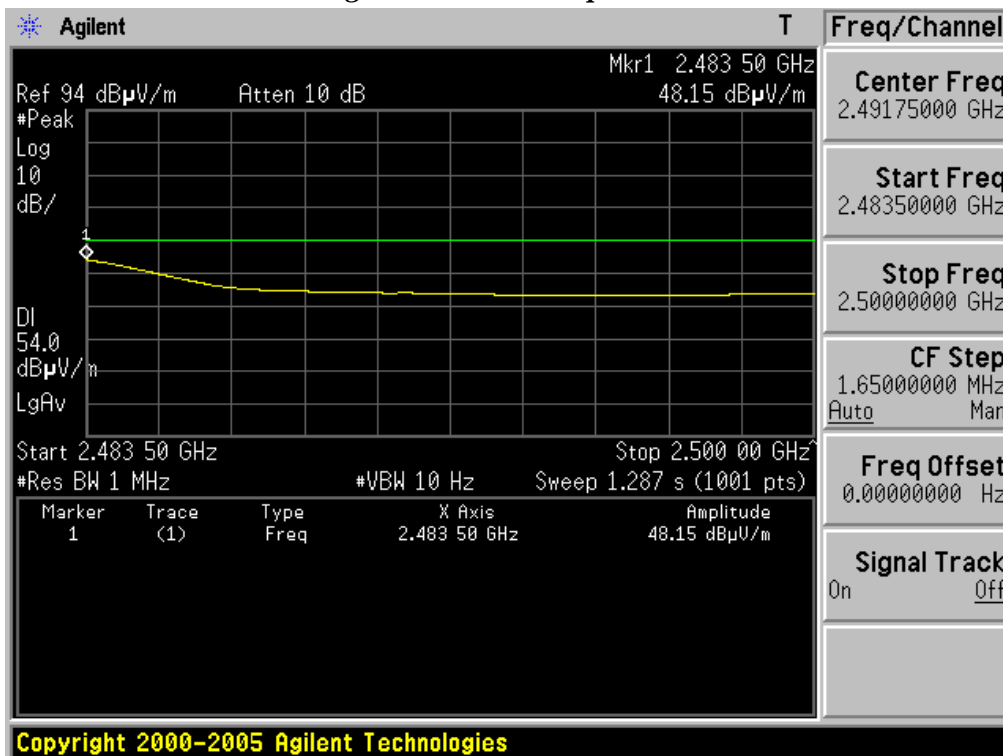
**Restricted Band Edge**    Test Mode: 802.11g & Highest Frequency

*Peak mode / Vertical polarization*



**Restricted Band Edge**    Test Mode: 802.11g & Highest Frequency

*Average mode / Vertical polarization*



30MHz ~ 1GHz Radiated Spurious Emissions

Test Mode: 802.11b & Lowest Frequency



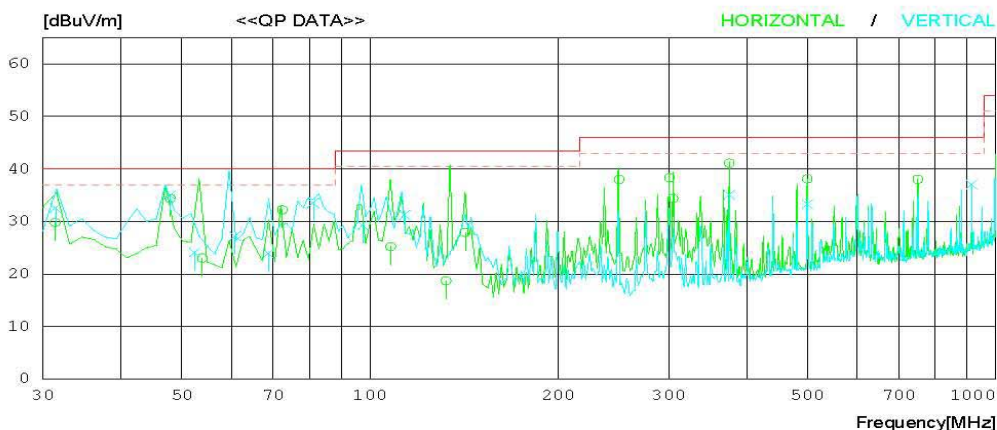
RADIATED EMISSION

Date : 2010-02-12

Model Name : WIZ6000 Reference No. :  
 Model No. : Serial No. : Identical prototype Power Supply : 120 60Hz  
 Test Condition : TX: 2412 MHz(802.11b) Temp/Humi : 23°C 50%  
 Operator : D.C.Cha

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)  
 MARGIN: 3 dB



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	31.384	34.3	17.3	0.8	22.6	29.8	40.0	10.2	201	161
2	47.939	46.2	9.9	1.0	22.7	34.4	40.0	5.6	400	327
3	53.925	37.5	7.2	1.0	22.7	23.0	40.0	17.0	301	257
4	72.388	47.0	6.7	1.2	22.7	32.2	40.0	7.8	301	1
5	107.913	35.3	11.1	1.5	22.7	25.2	43.5	18.3	100	275
6	132.284	28.5	11.5	1.6	22.9	18.7	43.5	24.8	100	275
7	141.974	38.0	11.1	1.7	22.9	27.9	43.5	15.6	201	71
8	250.013	46.0	13.2	2.3	23.5	38.0	46.0	8.0	100	182
9	300.674	45.0	14.4	2.6	23.7	38.3	46.0	7.7	100	263
10	304.928	41.2	14.4	2.6	23.8	34.4	46.0	11.6	100	215
11	375.014	46.4	16.0	2.9	24.2	41.1	46.0	4.9	100	239
12	500.003	41.1	18.0	3.5	24.5	38.1	46.0	7.9	201	248
13	750.023	38.2	19.2	4.5	23.9	38.0	46.0	8.0	201	0
----- Vertical -----										
14	31.448	37.1	17.3	0.8	22.6	32.6	40.0	7.4	199	1
15	47.956	46.8	9.9	1.0	22.7	35.0	40.0	5.0	100	358
16	52.428	38.2	7.6	1.0	22.7	24.1	40.0	15.9	199	1
17	60.841	43.0	5.8	1.1	22.7	27.2	40.0	12.8	299	358
18	68.902	38.9	6.5	1.2	22.7	23.9	40.0	16.1	400	256
19	81.165	47.3	7.6	1.3	22.7	33.5	40.0	6.5	100	358
20	97.387	40.3	10.3	1.4	22.7	29.3	43.5	14.2	100	258
21	113.597	41.2	11.3	1.5	22.8	31.2	43.5	12.3	100	358
22	375.018	40.4	16.0	2.9	24.2	35.1	46.0	10.9	100	358
23	500.029	36.3	18.0	3.5	24.5	33.3	46.0	12.7	100	358
24	914.733	35.2	20.0	5.0	23.2	37.0	46.0	9.0	100	358

30MHz ~ 1GHz Radiated Spurious Emissions

Test Mode: 802.11b & Middle Frequency



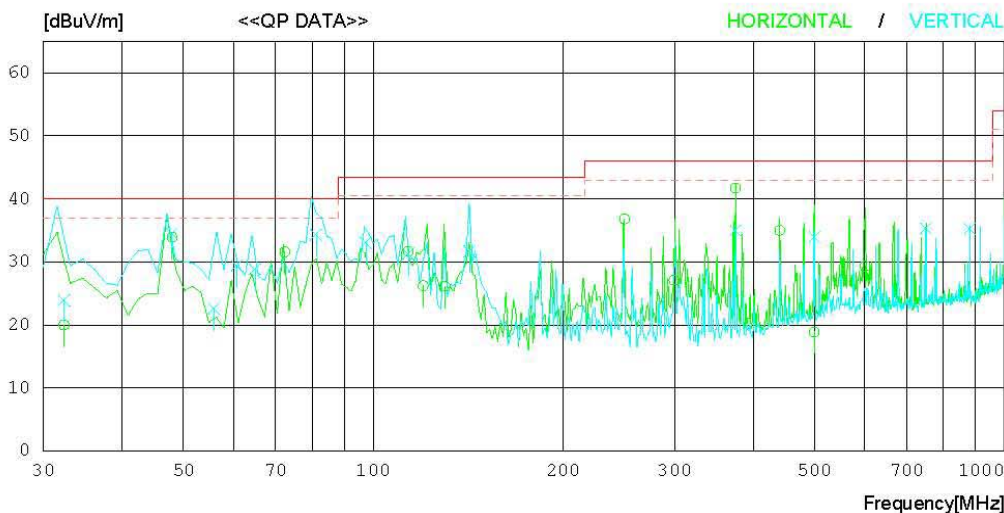
**RADIATED EMISSION**

Date : 2010-02-12

Model Name : WIZ6000  
 Model No. :  
 Serial No. : Identical prototype  
 Test Condition : TX: 2437 MHz(802.11b)  
 Reference No. :  
 Power Supply : 120 60Hz  
 Temp/Humi : 23°C 50%  
 Operator : D.C.Cha

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)  
 MARGIN: 3 dB



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	32.339	25.0	16.8	0.8	22.6	20.0	40.0	20.0	201	358
2	47.945	45.7	9.9	1.0	22.7	33.9	40.0	6.1	400	298
3	72.389	46.4	6.7	1.2	22.7	31.6	40.0	8.4	400	358
4	113.573	41.7	11.3	1.5	22.8	31.7	43.5	11.8	301	183
5	119.928	35.9	11.6	1.5	22.8	26.2	43.5	17.3	400	159
6	129.863	35.7	11.7	1.6	22.9	26.1	43.5	17.4	301	1
7	250.009	44.8	13.2	2.3	23.5	36.8	46.0	9.2	100	1
8	299.586	33.9	14.3	2.6	23.7	27.1	46.0	18.9	100	247
9	374.999	47.0	16.0	2.9	24.2	41.7	46.0	4.3	100	217
10	440.459	39.1	17.1	3.2	24.4	35.0	46.0	11.0	201	340
11	499.453	21.9	18.0	3.5	24.5	18.9	46.0	27.1	100	1
12	600.992	30.5	19.2	4.0	24.4	29.3	46.0	16.7	201	0
----- Vertical -----										
13	32.387	28.9	16.8	0.8	22.6	23.9	40.0	16.1	199	345
14	47.960	46.3	9.9	1.0	22.7	34.5	40.0	5.5	100	284
15	55.961	37.6	6.7	1.0	22.7	22.6	40.0	17.4	199	10
16	60.857	45.2	5.8	1.1	22.7	29.4	40.0	10.6	199	232
17	64.952	44.2	6.2	1.1	22.7	28.8	40.0	11.2	100	358
18	81.162	48.1	7.6	1.3	22.7	34.3	40.0	5.7	100	358
19	97.299	44.1	10.2	1.4	22.7	33.0	43.5	10.5	199	290
20	113.605	41.3	11.3	1.5	22.8	31.3	43.5	12.2	100	284
21	142.051	41.8	11.1	1.7	22.9	31.7	43.5	11.8	100	334
22	374.998	40.3	16.0	2.9	24.2	35.0	46.0	11.0	100	358
23	500.013	36.9	18.0	3.5	24.5	33.9	46.0	12.1	100	61
24	750.003	35.5	19.2	4.5	23.9	35.3	46.0	10.7	100	312
25	880.905	33.9	19.7	4.9	23.3	35.2	46.0	10.8	100	0

30MHz ~ 1GHz Radiated Spurious Emissions

Test Mode: 802.11b & Highest Frequency



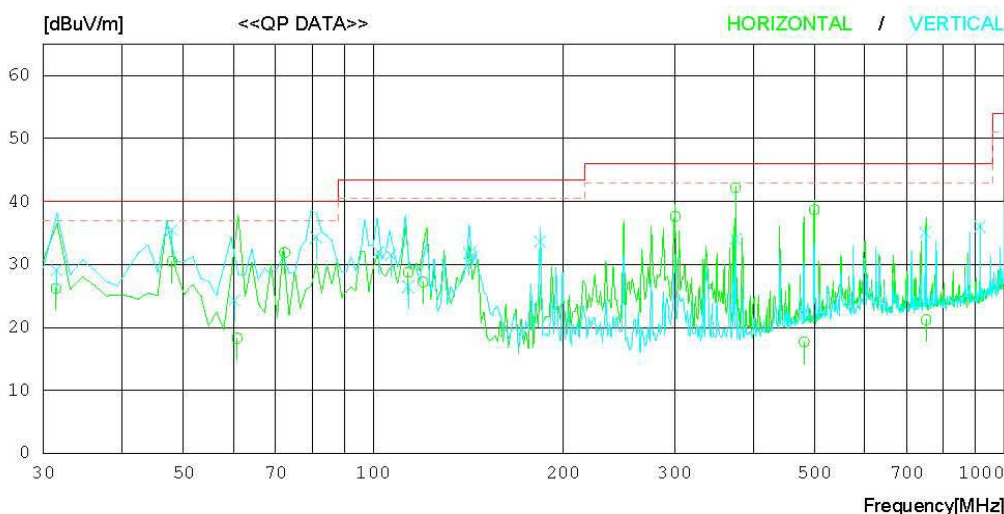
**RADIATED EMISSION**

Date : 2010-02-12

Model Name : WIZ6000 Reference No. :  
 Model No. : Power Supply : 120 60Hz  
 Serial No. : Identical prototype Temp/Humi : 23°C 50%  
 Test Condition : TX: 2462 MHz(802.11b) Operator : D.C.Cha

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)  
 MARGIN: 3 dB



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	31.422	30.7	17.3	0.8	22.6	26.2	40.0	13.8	200	358
2	47.948	42.3	9.9	1.0	22.7	30.5	40.0	9.5	301	309
3	60.862	34.1	5.8	1.1	22.7	18.3	40.0	21.7	100	249
4	72.378	46.7	6.7	1.2	22.7	31.9	40.0	8.1	301	1
5	113.524	38.7	11.3	1.5	22.8	28.7	43.5	14.8	400	358
6	119.921	36.9	11.6	1.5	22.8	27.2	43.5	16.3	400	358
7	300.684	44.3	14.4	2.6	23.7	37.6	46.0	8.4	100	1
8	375.011	47.5	16.0	2.9	24.2	42.2	46.0	3.8	100	223
9	481.729	21.1	17.7	3.4	24.5	17.7	46.0	28.3	100	1
10	500.016	41.7	18.0	3.5	24.5	38.7	46.0	7.3	200	243
11	751.584	21.4	19.2	4.5	23.9	21.2	46.0	24.8	200	229
----- Vertical -----										
12	31.467	33.6	17.3	0.8	22.6	29.1	40.0	10.9	201	358
13	47.949	47.3	9.9	1.0	22.7	35.5	40.0	4.5	100	1
14	60.294	40.1	5.8	1.1	22.7	24.3	40.0	15.7	100	1
15	81.178	48.1	7.6	1.3	22.7	34.3	40.0	5.7	100	1
16	101.907	42.5	10.8	1.4	22.7	32.0	43.5	11.5	100	245
17	106.682	41.7	11.0	1.5	22.7	31.5	43.5	12.0	100	1
18	113.573	36.5	11.3	1.5	22.8	26.5	43.5	17.0	100	285
19	141.923	41.9	11.1	1.7	22.9	31.8	43.5	11.7	201	358
20	183.993	44.4	10.5	1.9	23.2	33.6	43.5	9.9	100	1
21	375.009	39.3	16.0	2.9	24.2	34.0	46.0	12.0	100	216
22	750.007	35.3	19.2	4.5	23.9	35.1	46.0	10.9	201	0
23	914.758	34.2	20.0	5.0	23.2	36.0	46.0	10.0	201	0

30MHz ~ 1GHz Radiated Spurious Emissions Test Mode: 802.11g & Lowest Frequency



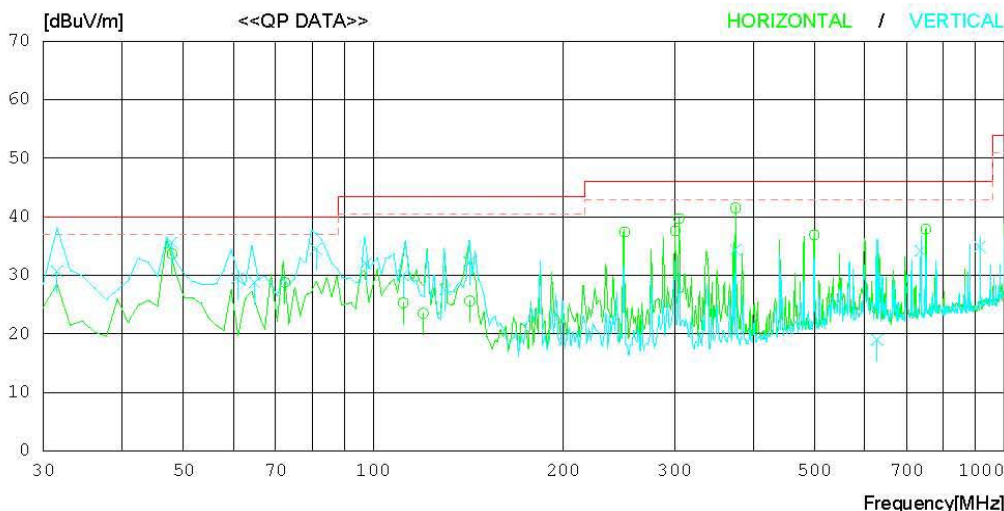
**RADIATED EMISSION**

Date : 2010-02-12

Model Name : WIZ6000 Reference No. :  
 Model No. : Power Supply : 120 60Hz  
 Serial No. : Identical prototype Temp/Humi : 23°C 50%  
 Test Condition : TX: 2412 MHz(802.11g) Operator : D.C.Cha

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)  
 MARGIN: 3 dB



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	47.967	45.5	9.9	1.0	22.7	33.7	40.0	6.3	301	305
2	72.384	43.6	6.7	1.2	22.7	28.8	40.0	11.2	301	1
3	111.577	35.4	11.2	1.5	22.8	25.3	43.5	18.2	400	153
4	119.946	33.2	11.6	1.5	22.8	23.5	43.5	20.0	201	358
5	142.131	35.7	11.1	1.7	22.9	25.6	43.5	17.9	201	358
6	250.016	45.4	13.2	2.3	23.5	37.4	46.0	8.6	100	1
7	300.683	44.3	14.4	2.6	23.7	37.6	46.0	8.4	100	277
8	304.934	46.5	14.4	2.6	23.8	39.7	46.0	6.3	100	223
9	374.996	46.8	16.0	2.9	24.2	41.5	46.0	4.5	100	1
10	500.004	39.9	18.0	3.5	24.5	36.9	46.0	9.1	100	1
11	750.016	38.1	19.2	4.5	23.9	37.9	46.0	8.1	100	207
----- Vertical -----										
12	31.528	35.2	17.3	0.8	22.6	30.7	40.0	9.3	199	4
13	47.941	47.4	9.9	1.0	22.7	35.6	40.0	4.4	100	2
14	60.910	45.2	5.9	1.1	22.7	29.5	40.0	10.5	100	167
15	64.849	44.2	6.2	1.1	22.7	28.8	40.0	11.2	100	235
16	81.162	48.3	7.6	1.3	22.7	34.5	40.0	5.5	100	358
17	97.371	43.0	10.3	1.4	22.7	32.0	43.5	11.5	100	231
18	111.602	40.1	11.2	1.5	22.8	30.0	43.5	13.5	100	304
19	129.967	37.2	11.7	1.6	22.9	27.6	43.5	15.9	100	318
20	141.987	42.3	11.1	1.7	22.9	32.2	43.5	11.3	100	358
21	375.006	39.7	16.0	2.9	24.2	34.4	46.0	11.6	100	358
22	628.316	20.1	19.1	4.1	24.3	19.0	46.0	27.0	400	86
23	737.042	34.7	19.1	4.4	24.0	34.2	46.0	11.8	100	181
24	914.767	33.1	20.0	5.0	23.2	34.9	46.0	11.1	100	358



30MHz ~ 1GHz Radiated Spurious Emissions

Test Mode: 802.11g & Middle Frequency



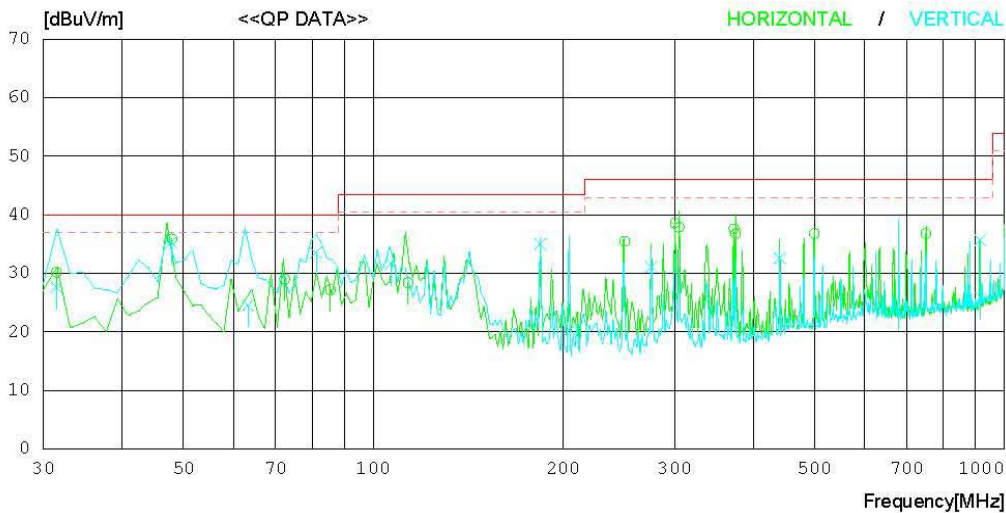
**RADIATED EMISSION**

Date : 2010-02-12

Model Name : WIZ6000 Reference No. :  
 Model No. : Power Supply : 120 60Hz  
 Serial No. : Identical prototype Temp/Humi : 23°C 50%  
 Test Condition : TX: 2437 MHz(802.11g) Operator : D.C.Cha

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)  
 MARGIN: 3 dB



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	31.459	34.7	17.3	0.8	22.6	30.2	40.0	9.8	201	358
2	47.943	47.7	9.9	1.0	22.7	35.9	40.0	4.1	400	358
3	72.382	43.8	6.7	1.2	22.7	29.0	40.0	11.0	301	1
4	85.488	40.3	8.3	1.3	22.7	27.2	40.0	12.8	201	358
5	113.485	38.4	11.3	1.5	22.8	28.4	43.5	15.1	201	358
6	250.009	43.5	13.2	2.3	23.5	35.5	46.0	10.5	100	1
7	300.688	45.3	14.4	2.6	23.7	38.6	46.0	7.4	100	267
8	304.937	44.7	14.4	2.6	23.8	37.9	46.0	8.1	100	227
9	372.698	43.0	15.9	2.9	24.2	37.6	46.0	8.4	100	1
10	375.020	42.1	16.0	2.9	24.2	36.8	46.0	9.2	100	233
11	500.007	39.8	18.0	3.5	24.5	36.8	46.0	9.2	100	169
12	750.019	37.0	19.2	4.5	23.9	36.8	46.0	9.2	201	219
----- Vertical -----										
13	31.499	32.1	17.3	0.8	22.6	27.6	40.0	12.4	200	330
14	47.935	47.1	9.9	1.0	22.7	35.3	40.0	4.7	200	1
15	63.339	40.2	6.0	1.1	22.7	24.6	40.0	15.4	200	250
16	81.166	47.3	7.6	1.3	22.7	33.5	40.0	6.5	100	103
17	106.722	41.8	11.0	1.5	22.7	31.6	43.5	11.9	100	358
18	183.999	45.8	10.5	1.9	23.2	35.0	43.5	8.5	100	105
19	205.072	30.5	11.1	2.1	23.3	20.4	43.5	23.1	299	4
20	276.006	38.5	13.8	2.4	23.6	31.1	46.0	14.9	200	1
21	440.451	36.7	17.1	3.2	24.4	32.6	46.0	13.4	100	252
22	678.934	25.0	18.9	4.2	24.2	23.9	46.0	22.1	100	0
23	914.775	33.9	20.0	5.0	23.2	35.7	46.0	10.3	100	0
24	916.219	24.0	20.0	5.0	23.2	25.8	46.0	20.2	299	0

30MHz ~ 1GHz Radiated Spurious Emissions

Test Mode: 802.11g & Highest Frequency



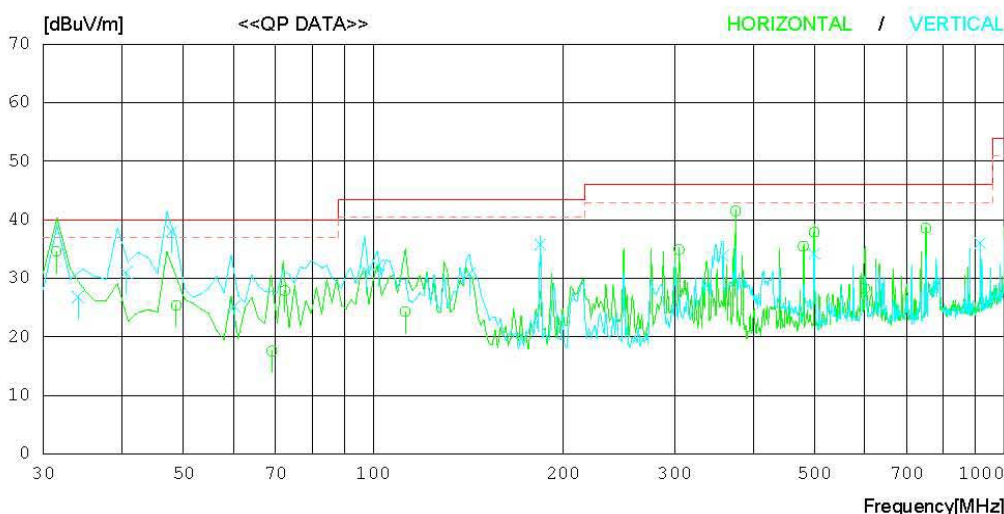
**RADIATED EMISSION**

Date : 2010-02-12

Model Name : WIZ6000 Reference No. :  
 Model No. : Power Supply : 120 60Hz  
 Serial No. : Identical prototype Temp/Humi : 23°C 50%  
 Test Condition : TX: 2462 MHz(802.11g) Operator : D.C.Cha

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)  
 MARGIN: 3 dB



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	31.461	39.1	17.3	0.8	22.6	34.6	40.0	5.4	199	1
2	48.693	37.8	9.3	1.0	22.7	25.4	40.0	14.6	400	1
3	69.095	32.6	6.5	1.2	22.7	17.6	40.0	22.4	299	358
4	72.385	42.7	6.7	1.2	22.7	27.9	40.0	12.1	299	358
5	112.328	34.3	11.3	1.5	22.8	24.3	43.5	19.2	199	1
6	304.932	41.7	14.4	2.6	23.8	34.9	46.0	11.1	100	236
7	375.016	46.8	16.0	2.9	24.2	41.5	46.0	4.5	100	358
8	480.022	38.9	17.7	3.4	24.5	35.5	46.0	10.5	100	198
9	500.010	40.9	18.0	3.5	24.5	37.9	46.0	8.1	199	1
10	600.543	29.5	19.2	4.0	24.4	28.3	46.0	17.7	199	1
11	750.000	38.8	19.2	4.5	23.9	38.6	46.0	7.4	100	358
----- Vertical -----										
12	34.045	32.6	15.9	0.9	22.6	26.8	40.0	13.2	200	345
13	40.615	39.0	13.7	0.9	22.6	31.0	40.0	9.0	100	258
14	47.941	49.8	9.9	1.0	22.7	38.0	40.0	2.0	100	0
15	60.326	41.0	5.8	1.1	22.7	25.2	40.0	14.8	100	244
16	97.403	42.3	10.3	1.4	22.7	31.3	43.5	12.2	100	358
17	101.875	42.8	10.8	1.4	22.7	32.3	43.5	11.2	100	307
18	142.091	40.9	11.1	1.7	22.9	30.8	43.5	12.7	100	358
19	183.995	46.6	10.5	1.9	23.2	35.8	43.5	7.7	100	358
20	357.899	39.6	15.6	2.8	24.1	33.9	46.0	12.1	100	358
21	500.005	37.2	18.0	3.5	24.5	34.2	46.0	11.8	100	358
22	914.782	34.2	20.0	5.0	23.2	36.0	46.0	10.0	100	0

### 1GHz ~ 25GHz Radiated Spurious Emissions

▪ Test Mode: 802.11b & Lowest Frequency

Frequency (MHz)	ANT Pol	Reading(dBuV)		T.F (dB)	Result(dBuV/m)		Limit(dBuV/m)		Margin(dB)	
		PK	AV		PK	AV	PK	AV	PK	AV
4824	H	49.90	36.76	7.27	57.17	44.03	74.00	54.00	16.83	9.97
4824	V	53.11	39.47	7.27	60.38	46.74	74.00	54.00	13.62	7.26
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

▪ Test Mode: 802.11b & Middle Frequency

Frequency (MHz)	ANT Pol	Reading(dBuV)		T.F (dB)	Result(dBuV/m)		Limit(dBuV/m)		Margin(dB)	
		PK	AV		PK	AV	PK	AV	PK	AV
4874	H	54.49	41.58	7.65	62.14	49.23	74.00	54.00	11.86	4.77
4874	V	59.10	45.74	7.65	66.75	53.39	74.00	54.00	7.25	0.61
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

▪ Test Mode: 802.11b & Highest Frequency

Frequency (MHz)	ANT Pol	Reading(dBuV)		T.F (dB)	Result(dBuV/m)		Limit(dBuV/m)		Margin(dB)	
		PK	AV		PK	AV	PK	AV	PK	AV
4924	H	51.39	37.82	7.96	59.35	45.78	74.00	54.00	14.65	8.22
4924	V	58.07	44.64	7.96	66.03	52.60	74.00	54.00	7.97	1.40
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

**Note.**

1. No other spurious and harmonic emissions were detected at a level greater than 20dB below limit.
2. Sample Calculation.

$$\text{Margin} = \text{Limit} - \text{Result} \quad / \quad \text{Result} = \text{Reading} + \text{T.F} \quad / \quad \text{T.F} = \text{AF} + \text{CL} - \text{AG}$$

Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain

**1GHz ~ 25GHz Radiated Spurious Emissions**

▪ Test Mode: 802.11g & Lowest Frequency

Frequency (MHz)	ANT Pol	Reading(dBuV)		T.F (dB)	Result(dBuV/m)		Limit(dBuV/m)		Margin(dB)	
		PK	AV		PK	AV	PK	AV	PK	AV
4824	H	46.79	33.00	7.27	54.06	40.27	74.00	54.00	19.94	13.73
4824	V	49.24	35.33	7.27	56.51	42.60	74.00	54.00	17.49	11.40
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

▪ Test Mode: 802.11g & Middle Frequency

Frequency (MHz)	ANT Pol	Reading(dBuV)		T.F (dB)	Result(dBuV/m)		Limit(dBuV/m)		Margin(dB)	
		PK	AV		PK	AV	PK	AV	PK	AV
4874	H	52.55	38.89	7.65	60.20	46.54	74.00	54.00	13.80	7.46
4874	V	54.83	41.02	7.65	62.48	48.67	74.00	54.00	11.52	5.33
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

▪ Test Mode: 802.11g & Highest Frequency

Frequency (MHz)	ANT Pol	Reading(dBuV)		T.F (dB)	Result(dBuV/m)		Limit(dBuV/m)		Margin(dB)	
		PK	AV		PK	AV	PK	AV	PK	AV
4924	H	52.05	38.18	7.96	60.01	46.14	74.00	54.00	13.99	7.86
4924	V	52.56	39.51	7.96	60.52	47.47	74.00	54.00	13.48	6.53
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

**Note.**

1. No other spurious and harmonic emissions were detected at a level greater than 20dB below limit.
2. Sample Calculation.

$$\text{Margin} = \text{Limit} - \text{Result} \quad / \quad \text{Result} = \text{Reading} + \text{T.F} \quad / \quad \text{T.F} = \text{AF} + \text{CL} - \text{AG}$$

Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain

### 4.2.5 Transmitter Power Spectral Density

**- Procedure:**

The transmitter output is connected to a spectrum analyzer. Locate and zoom in on emission peak within the passband. The maximum level in a 3 kHz bandwidth is measured with the spectrum analyzer using RBW = 3kHz and VBW > 9kHz, sweep time= auto, video averaging is turned off. Trace average 100 traces in power averaging mode. The PPSD is the highest level found across the emission in any 3kHz band. The test is performed in accordance with FCC document “Measurement of Digital Transmission Systems Operating under Section 15.247”, March 23, 2005. The transmitter output power was measured with power output option #2. Therefore, PSD was measured with PSD option #2.

**- Measurement Data: Comply**

Test Mode	Frequency	Test Results (dBm)
802.11b	Lowest	-15.967
	Middle	-16.198
	Highest	-15.773
802.11g	Lowest	-19.880
	Middle	-17.702
	Highest	-15.358

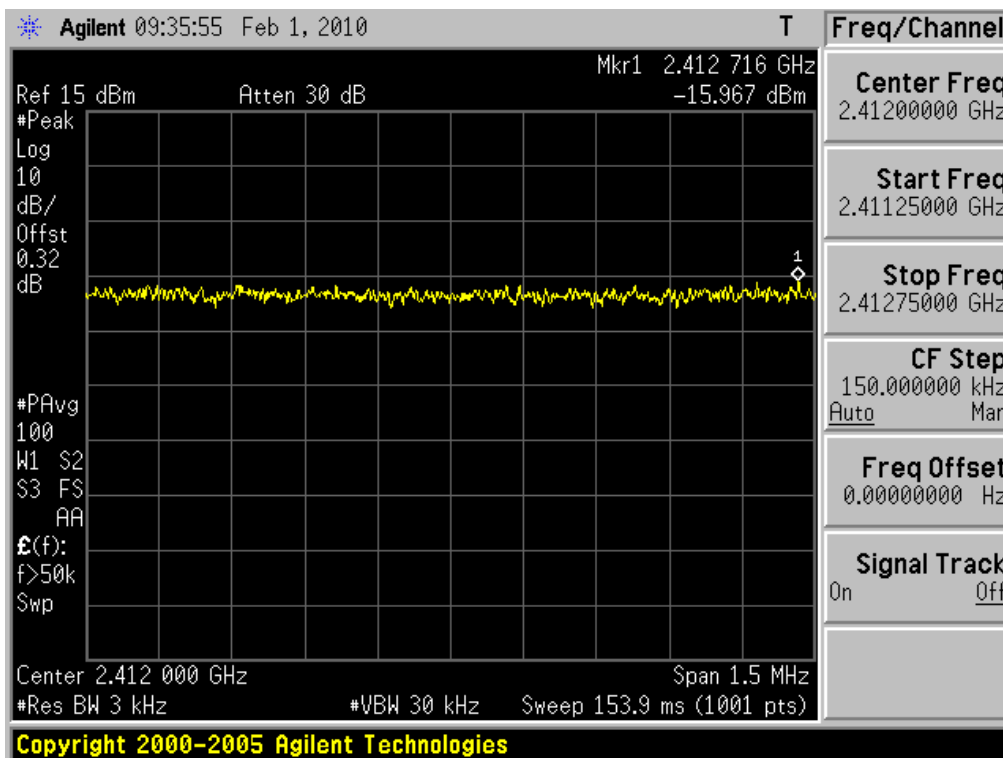
Note 1: See next pages for actual measured spectrum plots.

**- Minimum Standard:**

The transmitter power density average over 1-second interval shall not be greater than 8 dBm in any 3kHz BW.

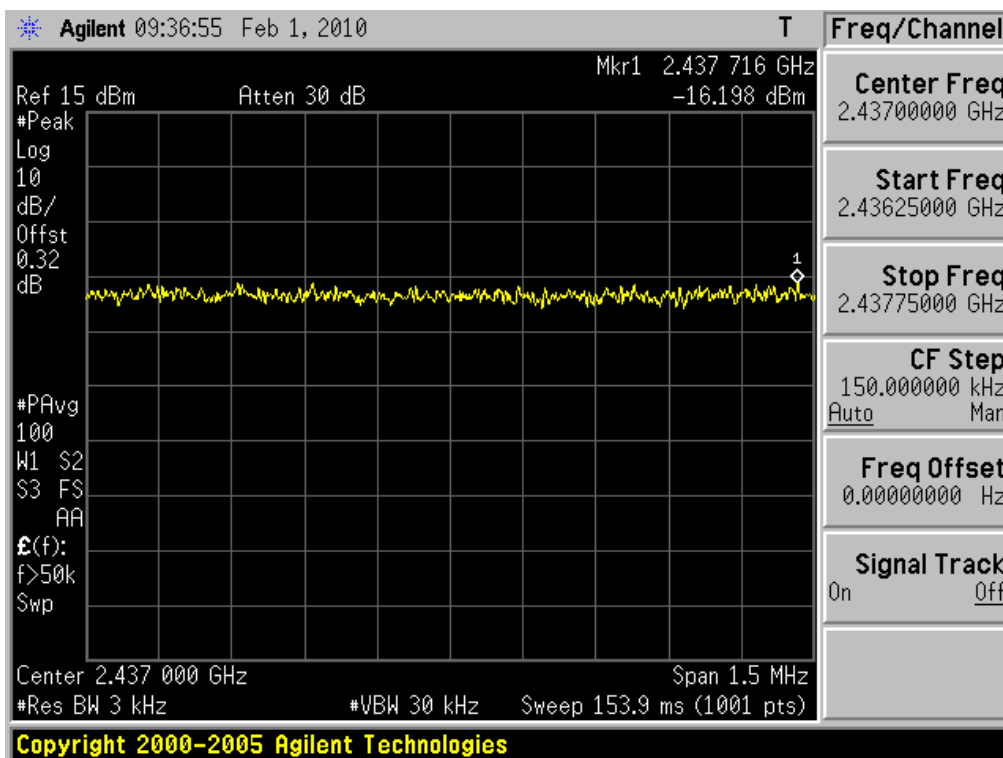
Transmitter Power Spectral Density

Test Mode: 802.11b & Lowest Frequency



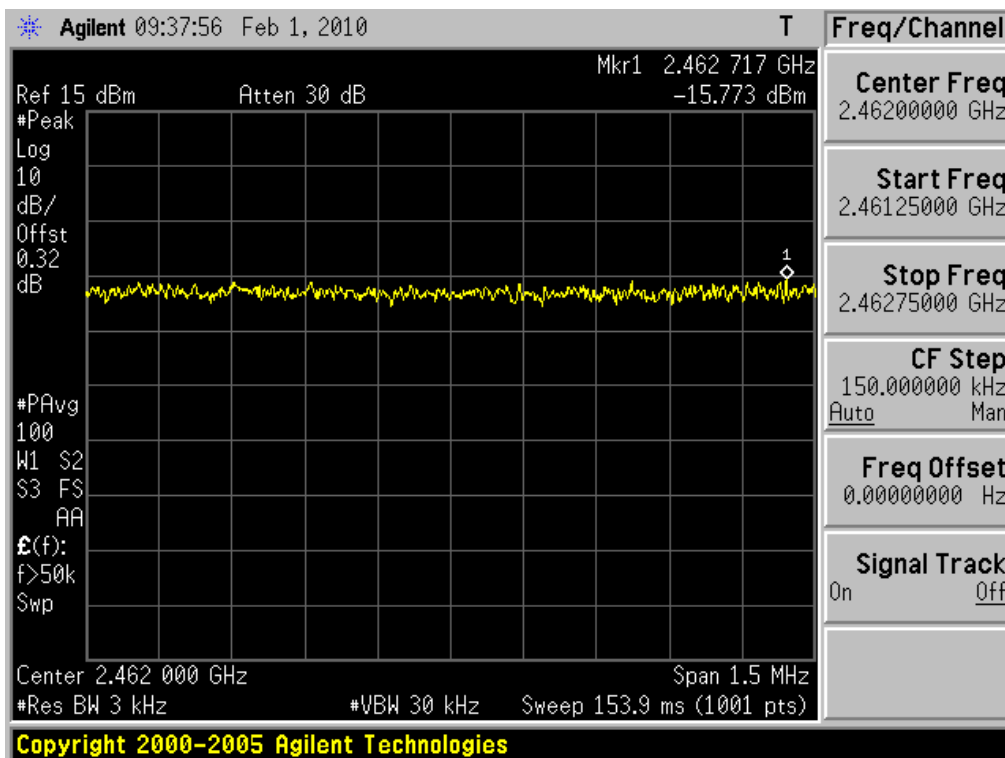
Transmitter Power Spectral Density

Test Mode: 802.11b & Middle Frequency



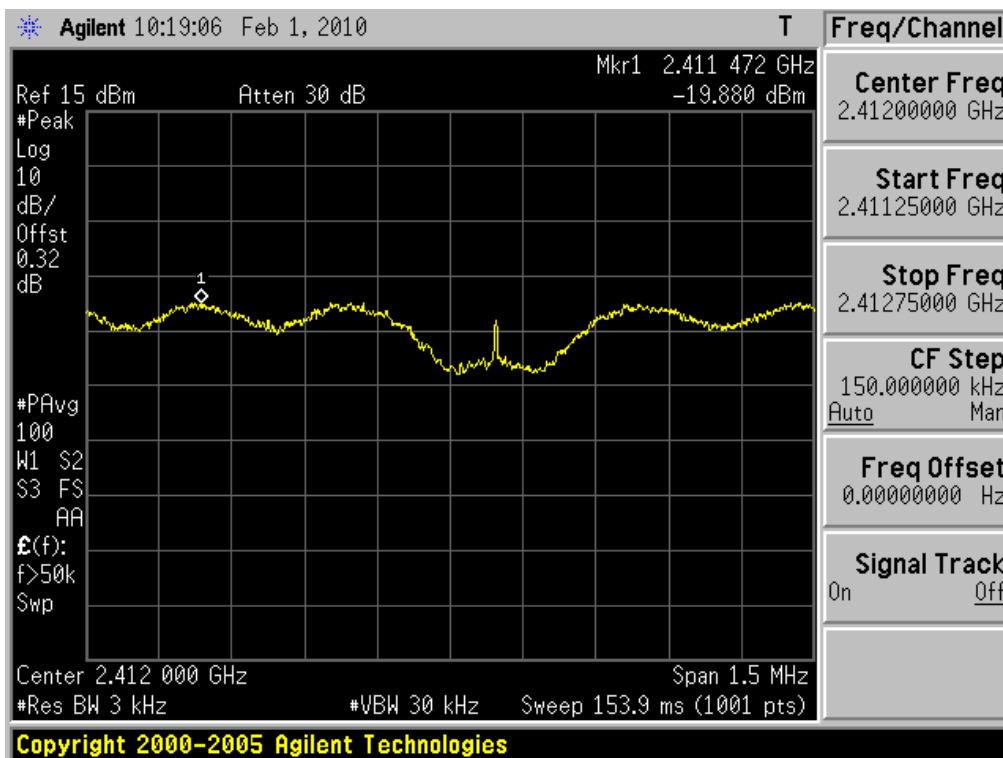
Transmitter Power Spectral Density

Test Mode: 802.11b & Highest Frequency



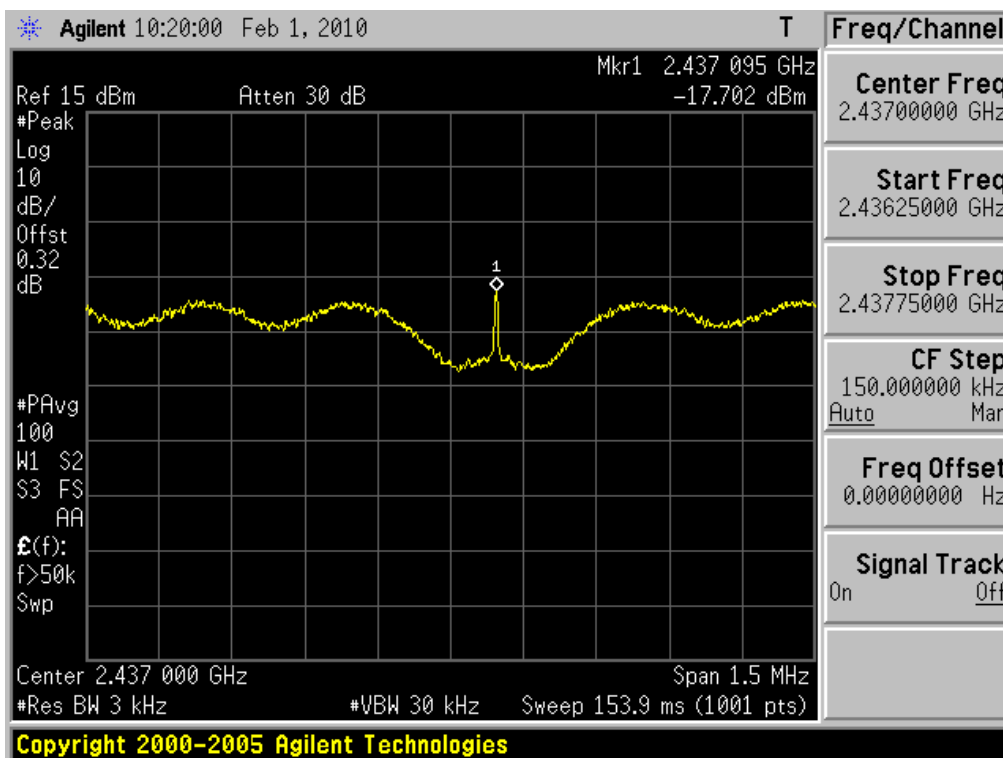
Transmitter Power Spectral Density

Test Mode: 802.11g & Lowest Frequency



Transmitter Power Spectral Density

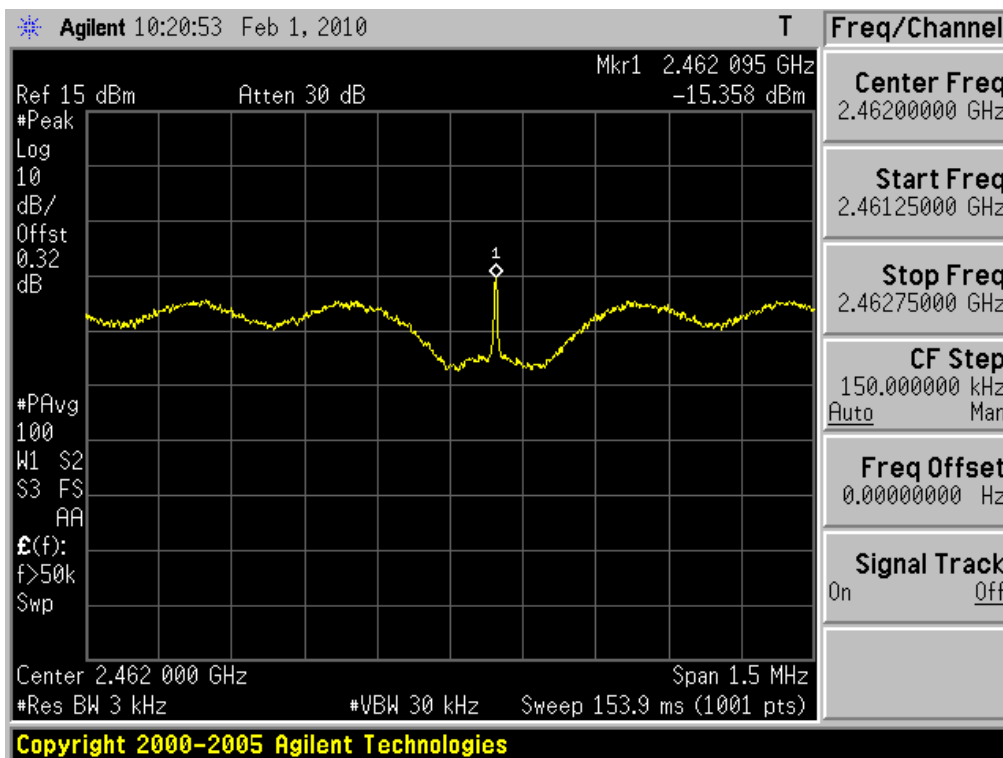
Test Mode: 802.11g & Middle Frequency





Transmitter Power Spectral Density

Test Mode: 802.11g & Highest Frequency



### 4.2.6 AC Conducted Emissions

**- Procedure:**

The conducted emissions are measured in the shielded room with a spectrum analyzer in peak hold. Emissions closest to the limit are measured in the quasi-peak mode (QP) and average mode (AV) with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation and Exerciser operation. The highest emissions relative to the limit are listed.

**- Measurement Data: Comply**

Note 1: See next pages for actual measured spectrum plots and data.

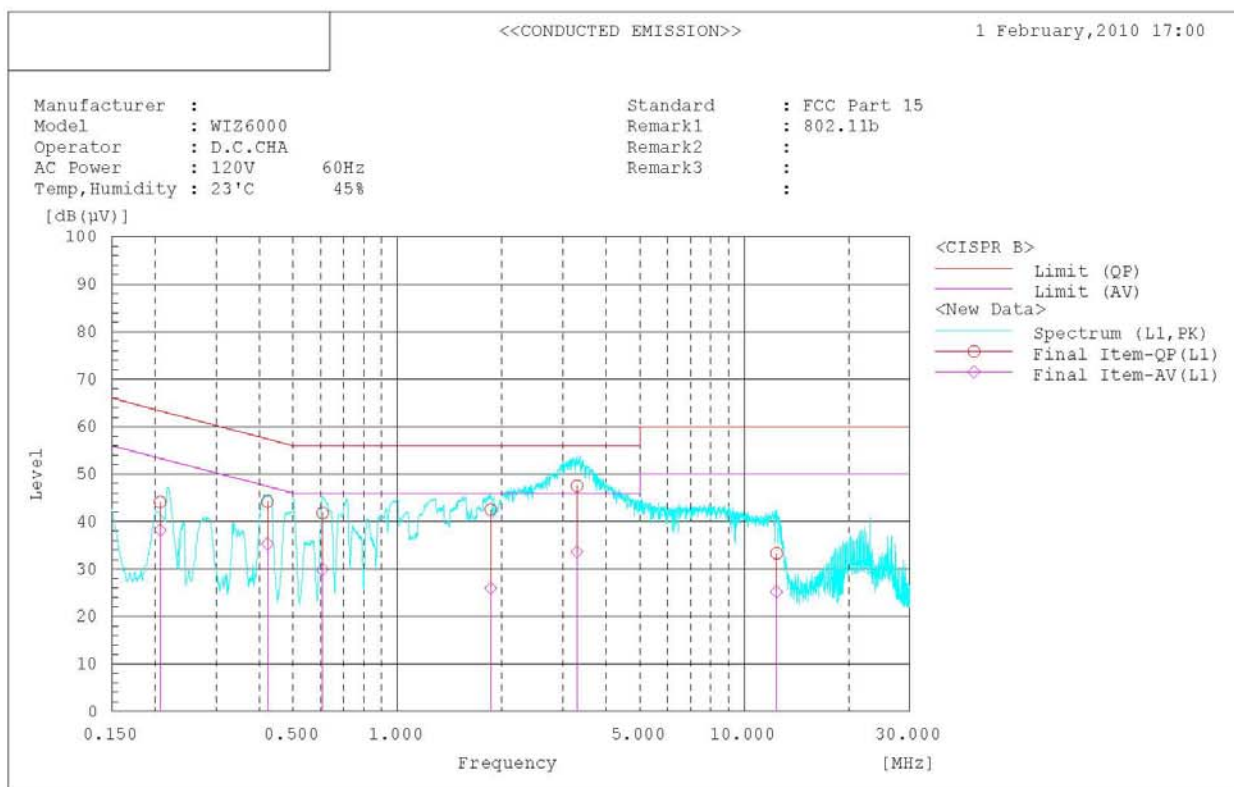
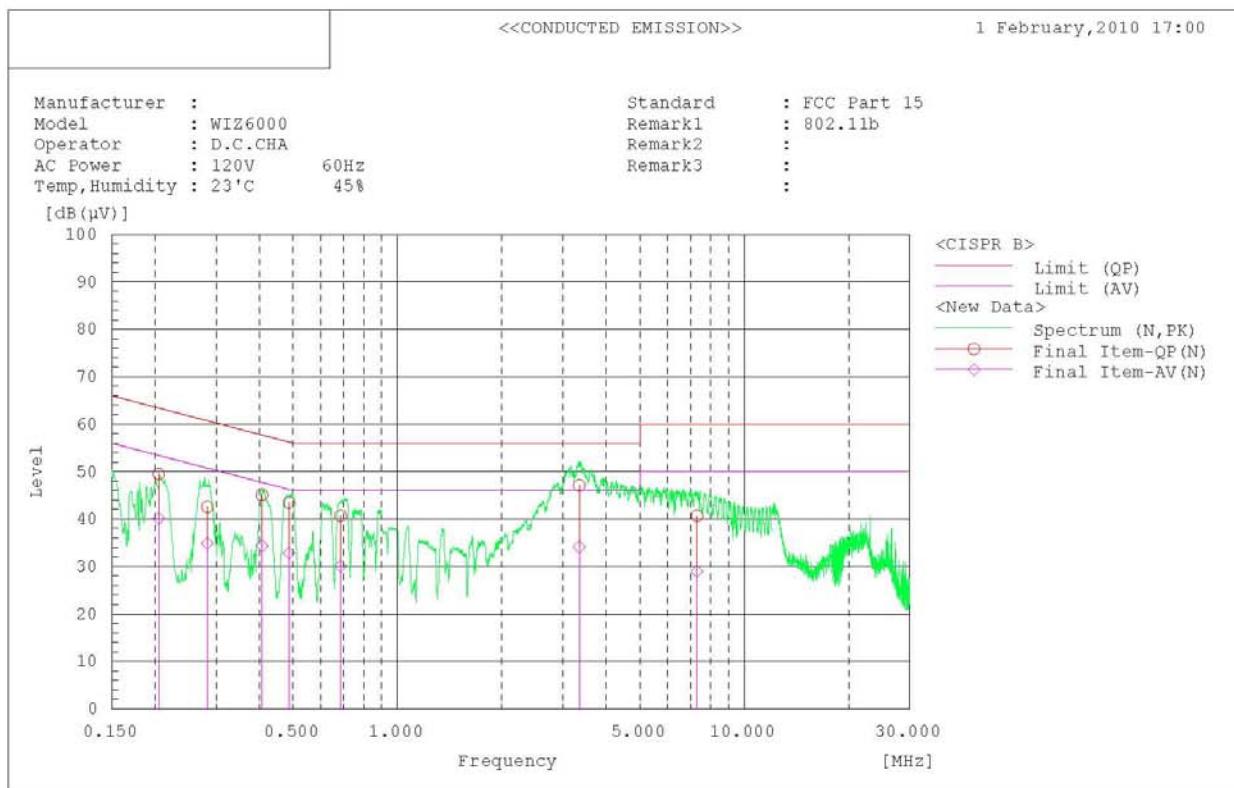
**- Minimum Standard: FCC Part 15.207(a)/EN 55022**

Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 ~ 0.5	66 to 56 *	56 to 46 *
0.5 ~ 5	56	46
5 ~ 30	60	50

\* Decreases with the logarithm of the frequency

### AC Line Conducted Emissions (Graph)

Test Mode: 802.11b



# AC Line Conducted Emissions (Data List)

Test Mode: 802.11b

```

.....
                                  <<CONDUCTED EMISSION>>
                                  1 February, 2010 17:00

Standard       : FCC Part 15
Manufacturer   :
Model          : WIZ6000
Operator       : D.C.CHA
AC Power       : 120V      60Hz
Temp, Humidity : 23°C     45%
Remark1        : 802.11b
Remark2        :
Remark3        :
.....

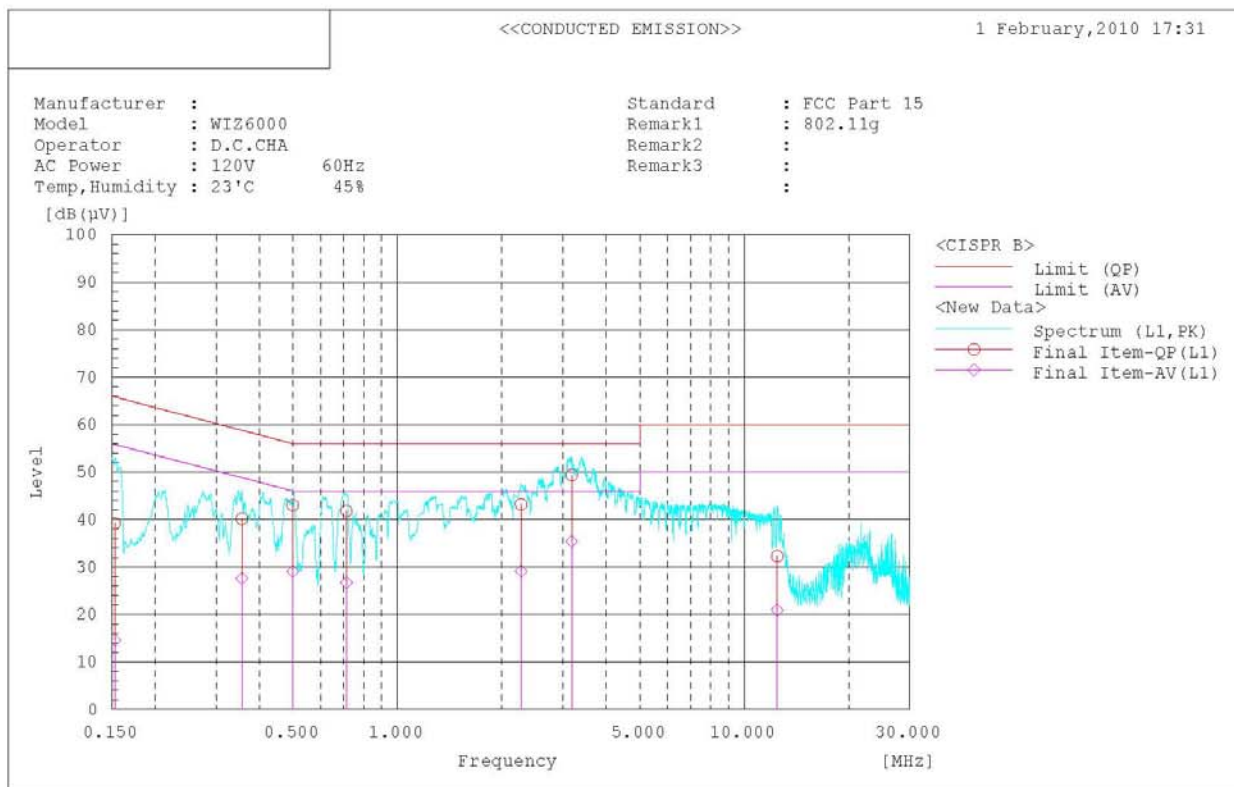
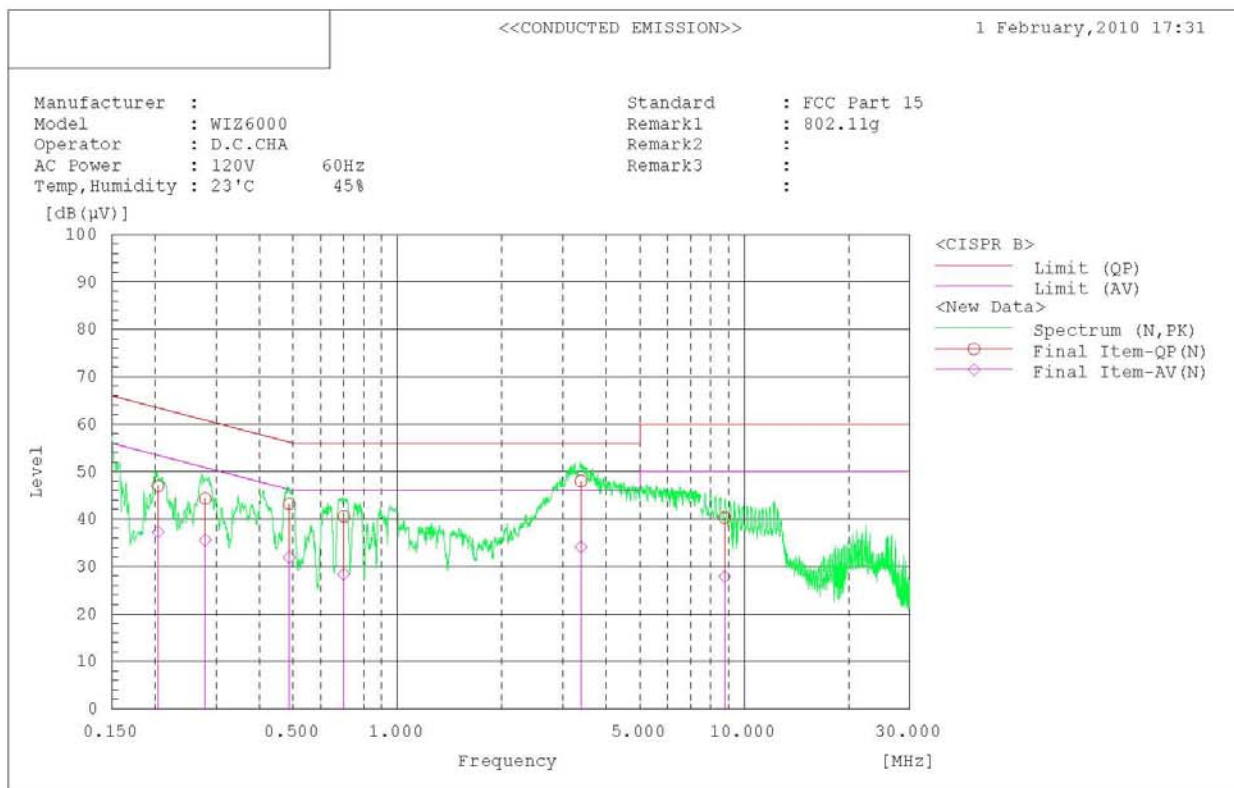
Final Result

--- N Phase ---
No.  Frequency  Reading  Reading  c.f.  Result  Result  Limit  Limit  Margin  Margin  Remark
      [MHz]     [dB (µV)] [dB (µV)] [dB]  [dB (µV)] [dB (µV)] [dB (µV)] [dB (µV)] [dB] [dB]
1    0.205      49.4      40.0    0.1   49.5    40.1    63.4    53.4    13.9    13.3
2    0.407      44.9      34.2    0.2   45.1    34.4    57.7    47.7    12.6    13.3
3    0.283      42.5      34.8    0.1   42.6    34.9    60.7    50.7    18.1    15.8
4    0.487      43.4      32.7    0.1   43.5    32.8    56.2    46.2    12.7    13.4
5    0.686      40.6      30.0    0.1   40.7    30.1    56.0    46.0    15.3    15.9
6    3.347      46.8      33.8    0.3   47.1    34.1    56.0    46.0     8.9    11.9
7    7.314      40.2      28.5    0.5   40.7    29.0    60.0    50.0    19.3    21.0

--- Ll Phase ---
No.  Frequency  Reading  Reading  c.f.  Result  Result  Limit  Limit  Margin  Margin  Remark
      [MHz]     [dB (µV)] [dB (µV)] [dB]  [dB (µV)] [dB (µV)] [dB (µV)] [dB (µV)] [dB] [dB]
1    0.207      43.8      37.9    0.3   44.1    38.2    63.3    53.3    19.2    15.1
2    0.422      43.8      34.9    0.4   44.2    35.3    57.4    47.4    13.2    12.1
3    0.609      41.3      29.4    0.5   41.8    29.9    56.0    46.0    14.2    16.1
4    1.859      41.9      25.4    0.6   42.5    26.0    56.0    46.0    13.5    20.0
5    3.295      46.9      33.0    0.6   47.5    33.6    56.0    46.0     8.5    12.4
6    12.398     32.2      24.1    1.1   33.3    25.2    60.0    50.0    26.7    24.8
    
```

### AC Line Conducted Emissions (Graph)

Test Mode: 802.11g



# AC Line Conducted Emissions (Data List)

Test Mode: 802.11g

```

.....
                                  <<CONDUCTED EMISSION>>
                                  1 February, 2010 17:31
.....
Standard      : FCC Part 15
Manufacturer   :
Model          : WIZ6000
Operator       : D.C.CHA
AC Power       : 120V      60Hz
Temp, Humidity : 23°C     45%
Remark1        : 802.11g
Remark2        :
Remark3        :
.....
Final Result
--- N Phase ---
No.  Frequency  Reading  Reading  c.f  Result  Result  Limit  Limit  Margin  Margin  Remark
      [MHz]     QP       AV      [dB] [dB(µV)] [dB(µV)] [dB(µV)] [dB(µV)] [dB]    [dB]
1    0.279      44.2     35.5    0.1  44.3    35.6    60.8    50.8    16.5    15.2
2    0.488      43.1     31.8    0.1  43.2    31.9    56.2    46.2    13.0    14.3
3    0.701      40.5     28.3    0.1  40.6    28.4    56.0    46.0    15.4    17.6
4    1.382      47.7     33.8    0.3  48.0    34.1    56.0    46.0     8.0    11.9
5    8.793      39.8     27.4    0.5  40.3    27.9    60.0    50.0    19.7    22.1
6    0.204      46.9     37.2    0.1  47.0    37.3    63.4    53.4    16.4    16.1
.....
--- Ll Phase ---
No.  Frequency  Reading  Reading  c.f  Result  Result  Limit  Limit  Margin  Margin  Remark
      [MHz]     QP       AV      [dB] [dB(µV)] [dB(µV)] [dB(µV)] [dB(µV)] [dB]    [dB]
1    0.153      39.0     14.4    0.2  39.2    14.6    65.8    55.8    26.6    41.2
2    0.356      39.8     27.2    0.4  40.2    27.6    58.8    48.8    18.6    21.2
3    0.499      42.6     29.7    0.4  43.0    29.1    56.0    46.0    13.0    16.9
4    0.713      41.3     26.2    0.5  41.8    26.7    56.0    46.0    14.2    19.3
5    3.181      48.8     34.8    0.6  49.4    35.4    56.0    46.0     6.6    10.6
6    2.274      42.6     28.5    0.6  43.2    29.1    56.0    46.0    12.8    16.9
7   12.458      31.2     19.8    1.1  32.3    20.9    60.0    50.0    27.7    29.1
.....

```

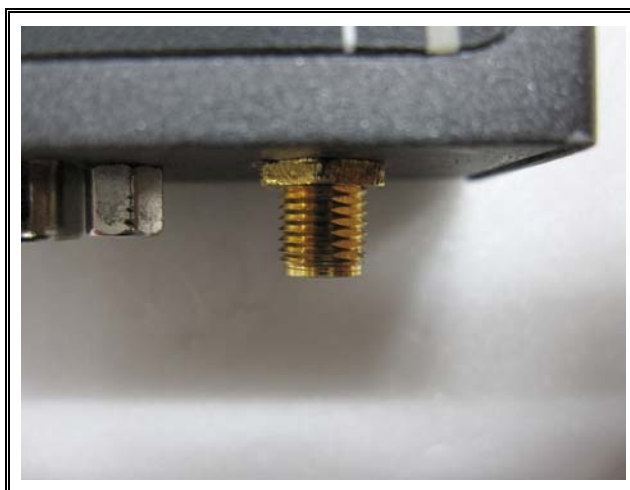
## 4.2.7 Antenna Requirements

### - Procedure:

Describe how the EUT complies with the requirement that either its antenna is permanently attached, or that it employs a unique antenna connector, for every antenna proposed for use with the EUT.

### - Conclusion: **Comply**

This device employs a SMA plug reverse type(left-hand thread) for the unique connector.



### - Minimum Standard:

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions.

**APPENDIX**

**TEST EQUIPMENT FOR TESTS**



To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment.

	Type	Manufacturer	Model	Cal.Due.Date (dd/mm/yy)	Next.Due.Date (dd/mm/yy)	S/N
<input checked="" type="checkbox"/>	Spectrum Analyzer	Agilent	E4440A	25/09/09	25/09/10	MY45304199
<input type="checkbox"/>	Spectrum Analyzer	Rohde Schwarz	FSQ26	25/02/10	25/02/11	200445
<input type="checkbox"/>	Spectrum Analyzer(RE)	H.P	8563E	13/10/09	13/10/10	3551A04634
<input type="checkbox"/>	Power Meter	H.P	EMP-442A	02/07/09	02/07/10	GB37170413
<input type="checkbox"/>	Power Sensor	H.P	8481A	02/07/09	02/07/10	3318A96332
<input type="checkbox"/>	Power Divider	Agilent	11636B	13/10/09	13/10/10	56471
<input type="checkbox"/>	Power Splitter	Anritsu	K241B	13/10/09	13/10/10	20611
<input type="checkbox"/>	Power Splitter	Anritsu	K241B	02/07/09	02/07/10	017060
<input type="checkbox"/>	Frequency Counter	H.P	5342A	13/07/09	13/07/10	2119A04450
<input type="checkbox"/>	TEMP & HUMIDITY Chamber	JISCO	KR-100/J-RHC2	10/10/09	10/10/10	30604493/021031
<input checked="" type="checkbox"/>	Digital Multimeter	H.P	34401A	13/03/09	13/03/10	3146A13475, US36122178
<input type="checkbox"/>	Multifunction Synthesizer	HP	8904A	06/10/09	06/10/10	3633A08404
<input checked="" type="checkbox"/>	Signal Generator	Rohde Schwarz	SMR20	13/03/09	13/03/10	101251
<input checked="" type="checkbox"/>	Signal Generator	H.P	ESG-3000A	02/07/09	02/07/10	US37230529
<input type="checkbox"/>	Vector Signal Generator	Rohde Schwarz	SMJ100A	11/01/10	11/01/11	100148
<input type="checkbox"/>	Audio Analyzer	H.P	8903B	02/07/09	02/07/10	3011A09448
<input type="checkbox"/>	Modulation Analyzer	H.P	8901B	02/07/09	02/07/10	3028A03029
<input type="checkbox"/>	8960 Series 10 Wireless Comms. Test Set	Agilent	E5515C	02/07/09	02/07/10	GB43461134
<input type="checkbox"/>	Universal Radio communication Tester	Rohde Schwarz	CMU 200	19/05/09	19/05/10	106760
<input type="checkbox"/>	Bluetooth Tester	TESCOM	TC-3000B	02/07/09	02/07/10	3000B000268
<input type="checkbox"/>	Thermo hygrometer	BODYCOM	BJ5478	28/01/10	28/01/11	090205-3
<input checked="" type="checkbox"/>	Thermo hygrometer	BODYCOM	BJ5478	28/01/10	28/01/11	090205-2
<input type="checkbox"/>	Thermo hygrometer	BODYCOM	BJ5478	28/01/10	28/01/11	090205-4
<input checked="" type="checkbox"/>	AC Power supply	DAEKWANG	5KVA	13/03/09	13/03/10	20060321-1
<input type="checkbox"/>	DC Power Supply	HP	6622A	13/03/09	13/03/10	3448A03760
<input type="checkbox"/>	DC Power Supply	HP	6633A	13/03/09	13/03/10	3524A06634
<input type="checkbox"/>	BAND Reject Filter	Microwave Circuits	N0308372	06/10/09	06/10/10	3125-01DC0352
<input type="checkbox"/>	BAND Reject Filter	Wainwright	WRCG1750	06/10/09	06/10/10	2
<input type="checkbox"/>	High-Pass Filter	ANRITSU	MP526D	06/10/09	06/10/10	M27756
<input type="checkbox"/>	High-pass filter	Wainwright	WHNX8.5	N/A	N/A	1
<input checked="" type="checkbox"/>	High-Pass Filter	Wainwright	WHKX3.0	N/A	N/A	9
<input type="checkbox"/>	Tunable Notch Filter	Wainwright	WRCT800.0/960.0-0.2/40-8SSK	N/A	N/A	32
<input type="checkbox"/>	Tunable Notch Filter	Wainwright	WRCD1700.0/2000.0-0.2/40-10SSK	N/A	N/A	53
<input type="checkbox"/>	Tunable Notch Filter	Wainwright	WRCT1900.0/2200.0-5/40-10SSK	N/A	N/A	30
<input checked="" type="checkbox"/>	HORN ANT	ETS	3115	17/06/09	17/06/10	6419
<input type="checkbox"/>	HORN ANT	ETS	3115	23/09/09	23/09/10	21097
<input type="checkbox"/>	HORN ANT	A.H.Systems	SAS-574	10/06/09	10/06/10	154
<input type="checkbox"/>	HORN ANT	A.H.Systems	SAS-574	10/06/09	10/06/10	155

	Type	Manufacturer	Model	Cal.Due.Date (dd/mm/yy)	Next.Due.Date (dd/mm/yy)	S/N
<input type="checkbox"/>	Dipole Antenna	Schwarzbeck	VHA9103	06/10/09	06/10/10	2116
<input type="checkbox"/>	Dipole Antenna	Schwarzbeck	VHA9103	06/10/09	06/10/10	2117
<input type="checkbox"/>	Dipole Antenna	Schwarzbeck	UHA9105	05/10/09	05/10/10	2261
<input type="checkbox"/>	Dipole Antenna	Schwarzbeck	UHA9105	05/10/09	05/10/10	2262
<input type="checkbox"/>	LOOP Antenna	ETS	6502	14/09/09	14/09/10	3471
<input type="checkbox"/>	Coaxial Fixed Attenuators	Agilent	8491B	02/07/09	02/07/10	MY39260700
<input type="checkbox"/>	Attenuator (3dB)	WEINSCHHEL	56-3	16/12/09	16/12/10	Y2342
<input type="checkbox"/>	Attenuator (3dB)	WEINSCHHEL	56-3	16/12/09	16/12/10	Y2370
<input type="checkbox"/>	Attenuator (10dB)	WEINSCHHEL	23-10-34	01/10/09	01/10/10	BP4386
<input type="checkbox"/>	Attenuator (10dB)	WEINSCHHEL	23-10-34	11/01/10	11/01/11	BP4387
<input type="checkbox"/>	Attenuator (20dB)	WEINSCHHEL	86-20-11	06/10/09	06/10/10	432
<input type="checkbox"/>	Attenuator (10dB)	WEINSCHHEL	31696	06/10/09	06/10/10	446
<input type="checkbox"/>	Attenuator (10dB)	WEINSCHHEL	31696	06/10/09	06/10/10	408
<input type="checkbox"/>	Attenuator (40dB)	WEINSCHHEL	57-40-33	01/10/09	01/10/10	NN837
<input type="checkbox"/>	Attenuator (30dB)	JFW	50FH-030-300	13/03/09	13/03/10	060320-1
<input type="checkbox"/>	Type N Coaxial CIRCULATOR	NOVA MICROWAVE	0088CAN	02/07/09	02/07/10	788
<input type="checkbox"/>	Type N Coaxial CIRCULATOR	NOVA MICROWAVE	0185CAN	02/07/09	02/07/10	790
<input type="checkbox"/>	Type N Coaxial CIRCULATOR	NOVA MICROWAVE	0215CAN	02/07/09	02/07/10	112
<input checked="" type="checkbox"/>	Amplifier (30dB)	Agilent	8449B	10/10/09	10/10/10	3008A01590
<input type="checkbox"/>	Amplifier	EMPOWER	BBS3Q7ELU	02/11/09	02/11/10	1020
<input type="checkbox"/>	RF Power Amplifier	OPHIRRF	5069F	02/07/09	02/07/10	1006
<input checked="" type="checkbox"/>	EMI TEST RECEIVER	R&S	ESU	29/01/10	29/01/11	100014
<input checked="" type="checkbox"/>	BILOG ANTENNA	SCHAFFNER	CBL6112B	02/06/09	02/06/10	2737
<input checked="" type="checkbox"/>	Amplifier (22dB)	H.P	8447E	29/01/10	29/01/11	2945A02865
<input type="checkbox"/>	EMI TEST RECEIVER	R&S	ESCI	12/05/09	12/05/10	100364
<input type="checkbox"/>	LOG-PERIODIC ANT.	Schwarzbeck	UHALP9108A	30/05/09	30/05/10	590
<input type="checkbox"/>	BICONICAL ANT.	Schwarzbeck	VHA 9103	02/06/09	02/06/10	2233
<input type="checkbox"/>	LOG-PERIODIC ANT.	Schwarzbeck	UHALP 9108 A-1	07/10/09	07/10/10	1098
<input type="checkbox"/>	BICONICAL ANT.	Schwarzbeck	VHA 9103	06/10/09	06/10/10	91031946
<input type="checkbox"/>	Low Noise Pre Amplifier	TSJ	MLA-100K01-B01-2	13/03/09	13/03/10	1252741
<input type="checkbox"/>	Amplifier (25dB)	Agilent	8447D	12/05/09	12/05/10	2944A10144
<input type="checkbox"/>	Amplifier (25dB)	Agilent	8447D	03/07/09	03/07/10	2648A04922
<input checked="" type="checkbox"/>	Spectrum Analyzer(CE)	H.P	8591E	26/04/09	26/04/10	3649A05889
<input checked="" type="checkbox"/>	LISN	Kyoritsu	KNW-407	29/01/10	29/01/11	8-317-8
<input checked="" type="checkbox"/>	LISN	Kyoritsu	KNW-242	29/01/10	29/01/11	8-654-15
<input checked="" type="checkbox"/>	CVCF	NF Electronic	4420	13/03/09	13/03/10	304935/337980
<input checked="" type="checkbox"/>	50 ohm Terminator	HME	CT-01	12/01/10	12/01/11	N/A
<input checked="" type="checkbox"/>	RFI/FIELD Intensity Meter	Kyoritsu	KNM-2402	03/07/09	03/07/10	4N-170-3