



2. EUT DESCRIPTION

Product	802.11a/b/g/n access point
Trade Name	Aerohive
Model Number	HiveAP 340
Frequency Range	2412 ~ 2462 MHz 5725 ~ 5825 MHz
Transmit Power	IEEE 802.11b mode: 15. 74dBm(37.2mW) IEEE 802.11g mode: 16. 12dBm(40.9mW) draft 802.11gn Standard-20 MHz Channel mode: 22.50 dBm draft 802.11gn Wide-40 MHz Channel mode: 21.88 dBm IEEE 802.11a mode: 18. 11dBm(64.7mW) draft 802.11an Standard-20 MHz Channel mode: 22.94 dBm draft 802.11an Wide-40 MHz Channel mode: 22.85 dBm (the EUT transmitting and receiving with three antennas simultaneously working at n mode)
Modulation Technique	IEEE 802.11b mode: DSSS (1, 2, 5.5 and 11 Mbps) IEEE 802.11g mode: OFDM (6, 9, 12, 18, 24, 36, 48 and 54 Mbps) IEEE 802.11a mode: OFDM (6, 9, 12, 18, 24, 36, 48 and 54 Mbps) draft 802.11n Standard-20 MHz Channel mode: OFDM (MCS 0~15) draft 802.11n Wide-40 MHz Channel mode: OFDM (MCS 0~15)
Number of Channels	IEEE 802.11b/g mode: 11 Channels IEEE 802.11a mode: 4 Channels draft 802.11n Standard-20 MHz Channel mode: 11 Channels draft 802.11n Wide-40 MHz Channel mode: 7 Channels
Antenna Specification	Three antennas for 2.4GHz Gain 3.2dBi /Total gain 7.97 dBi and Three antennas for 5 GHz Gain 2 dBi/Total gain 6.77 dBi

Remark:

1. The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.
2. This submittal(s) (test report) is intended for FCC ID: **WBV-HIVEAP340** filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.



3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4 and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057, 15.207, 15.209 and 15.247.

EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

EUT EXERCISE

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4.

**FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS**

- (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

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 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	(²)
13.36 - 13.41	322 - 335.4		

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

- (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.



DESCRIPTION OF TEST MODES

The EUT transmitting and receiving with one (chain 0) antenna working at a/b/g mode, so one antenna working configuration was used for a/b/g mode testing in this report.

The EUT transmitting and receiving with three antennas simultaneously working at n mode, so 3x3 configuration was used for all testing in this report.

The worst-case data rates are determined to be as follows for each mode based on investigation by measuring the average power, peak power and PPSD across all data rates, bandwidths, and modulations.

The worst-case data rates:

IEEE802.11b mode: Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 1Mbps data rate were chosen for full testing.

IEEE802.11g mode: Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 6Mbps data rate were chosen for full testing.

IEEE802.11a: Channel low(5745MHz), Channel middle(5785MHz) and Channel high(5805MHz) with preliminary test 54/48/36/24/18/12/9/6, After the preliminary scan , the following test mode 6Mbps data rate (the worst case) are chosen for the final testing.

draft 802.11gn Standard-20 MHz Channel mode: Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with MCS8 data rate were chosen for full testing.

draft 802.11gn Wide-40 MHz Channel mode: Channel Low (2422MHz), Channel Mid (2437MHz) and Channel High (2452MHz) with MCS8 data rate were chosen for full testing.

draft 802.11an Wide-40 MHz Channel mode: Channel Low (5755MHz), Channel High (5795MHz) with MCS8 data rate were chosen for full testing.

The following test mode was scanned during the preliminary test:

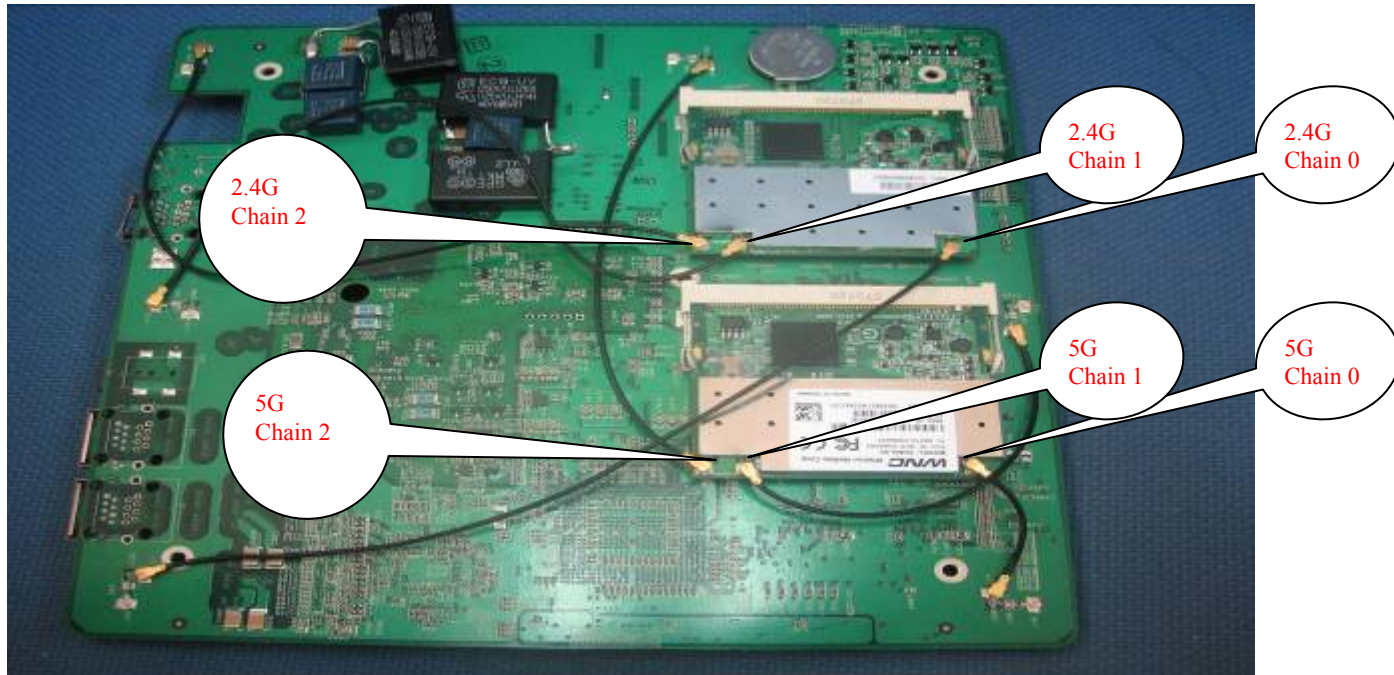
Mode 1: Wall, ceiling mounting, set the EUT vertically on the table top.

Mode 2: Table top mounting, set the EUT horizontally on the table top.

After the preliminary scan, the following test mode was found to produce the highest emission level.

Mode 2: Table top mounting, set the EUT horizontally on the table top.

Then, the EUT configuration and cable configuration of the above highest emission mode was recorded for all final test items.





4. INSTRUMENT CALIBRATION

MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

Equipment Used for Emissions Measurement

Remark: Each piece of equipment is scheduled for calibration once a year.

Conducted Emissions Test Site				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY44020154	11/12/2008
Peak and Avg Power Sensor	Agilent	E9327A	US40441788	09/11/2008
EPM-P Series Power Meter	Agilent	E4416A	QB41292714	09/11/2008

3M Semi Anechoic Chamber				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY44020154	11/12/2008
Pre-Amplifier	Miteq	NSP4000-NF	870731	01/21/2009
Horn Antenna	Austriah	BBHA9120D	D267	05/09/2009
SHF-EHF Horn Antenna	Schwarzbeck	BBHA9170	BBHA9170171	04/12/2009
Turn Table	CT	CT123	4162	N.C.R
Antenna Tower	CT	CTERG23	3253	N.C.R
Controller	CT	CT100	95635	N.C.R
Coax Switch	Anitsu	MP 598	M 80094	N/A
Site NSA	CCS Lab.	N/A	N/A	12/11/2008
ESPI3 EMI RECEIVER	R&S	ESPI3	101026	05/06/2009
Pre-Amplifier	MINI	ZFL-1000VH2	d041703	02/28/2009
Bilog Antenna	Sunol Sciences	JB1	A110204-2	11/22/2008

Remark: The measurement uncertainty is less than $\pm 2.0065\text{dB}$ (30MHz ~ 1GHz), $\pm 3.0958\text{dB}$ (Above 1GHz) which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV. The measurement uncertainty is less than $\pm 2.50\text{dB}$ (30MHz ~ 1GHz), $\pm 3.169\text{dB}$ (Above 1GHz)

Power Line Conducted Emission Test Site A				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	SCHAFFNER	SCR3501	343	04/22/2009
V (V-LISN)	Schwarzbeck	NNLK 8129	8129-143	04/11/2009
LISN (EUT)	FCC	FCC-LISN-50/250-50-2-02	SN:05012	04/11/2009
TRANSIENT LIMITER	SCHAFFNER	CFL9206	1710	04/06/2009

Remark: The measurement uncertainty is less than $\pm 2.81\text{dB}$, which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.



5. FACILITIES AND ACCREDITATIONS

FACILITIES

All measurement facilities used to collect the measurement data are located at CCS China Kunshan Lab at 10#Weiye Rd, Innovation Park Eco. & Tec. Development Zone Kunshan city JiangSu, (215300), CHINA.

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.



Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

LABORATORY ACCREDITATIONS AND LISTING

The test facilities used to perform radiated and conducted emissions tests are accredited by American Association for Laboratory Accreditation Program for the specific scope accreditation under Lab Code: 200581-0 to perform Electromagnetic Interference tests according to FCC Part 15 and CISPR 22 requirements. In addition, the test facilities are listed with Industry Canada, Certification and Engineering Bureau, IC5743 for 10m chamber 10m, IC5743 for 10m chamber 3m.

**TABLE OF ACCREDITATIONS AND LISTINGS**

Country	Agency	Scope of Accreditation	Logo
USA	A2LA	47 CFR FCC Part 15/18 (using ANSI C63.4:2003); VCCI V3; CNS 13438; CNS 13439; CNS 13803; CISPR 11; EN 55011; CISPR 13; EN 55013; CISPR 22:2005; CISPR 22:1997 +A1 :2000+A2 :2002; EN 55022:2006; EN55022 :1998 +A1 :2001+A2 :2003; EN 61000-6-3 (excluding discontinuous interference); EN 61000-6-4; AS/NZS CISPR 22; CAN/CSA-CEI/IEC CISPR 22; EN 61000-3-2; EN 61000-3-3; EN550024; EN 61000-4-2; EN 61000-4-3; EN61000-4-4; EN 61000-4-5; EN 61000-4-6; IEC 61000-4-8; EN 61000-4-11; IEC61000-3-2; IEC61000-3-3; IEC 61000-4-2; IEC 61000-4-3; IEC 61000-4-4; IEC 61000-4-5; IEC 61000-4-6; IEC 61000-4-8; IEC 61000-4-11; EN 300 220-3; EN 300 328; EN 300 330-2; EN 300 440-1; EN 300-440-2; EN 300 893; EN 301 489-01; EN 301 489-3; EN 301 489-07; EN 301 489-17; 47 CFR FCC Part 15, 22, 24	 TESTING CERT #2541.01
USA	FCC	3/10 meter Sites to perform FCC Part 15/18 measurements	 93105, 90471
Japan	VCCI	3/10 meter Sites and conducted test sites to perform radiated/conducted measurements	VCCI R-1600 C-1707

** No part of this report may be used to claim or imply product endorsement by A2LA or any agency of the US Government.*



6. SETUP OF EQUIPMENT UNDER TEST

SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	Series No.	FCC ID	Data Cable	Power Cord
1.	Notebook pc	IBM	X31	NA	NA	NA	NA
2.	Notebook pc	DELL	4150	NA	NA	NA	NA

Remark:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.*
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.*



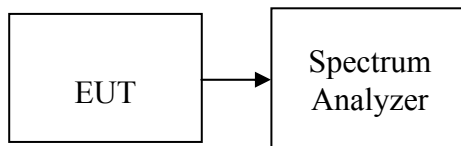
7. FCC PART 15.247 REQUIREMENTS

6DB BANDWIDTH

LIMIT

According to §15.247(a)(2), systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6dB bandwidth shall be at least 500 kHz.

Test Configuration



TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the selected span. The VBW is set to 3 times the RBW. The sweep time is occupied.

**TEST RESULTS***No non-compliance noted***Test Data****IEEE 802.11b mode**

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	11.734	>500	PASS
Mid	2437	11.384		PASS
High	2462	11.367		PASS

IEEE 802.11g mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	15.859	>500	PASS
Mid	2437	16.091		PASS
High	2462	16.383		PASS

TRANSMIT CHAIN 0**draft 802.11n Standard-20 MHz Channel mode**

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	16.332	>500	PASS
Mid	2437	17.351		PASS
High	2462	16.778		PASS

draft 802.11n Wide-40 MHz Channel mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2422	36.436	>500	PASS
Mid	2437	36.406		PASS
High	2452	36.462		PASS

**TRANSMIT CHAIN 1****draft 802.11n Standard-20 MHz Channel mode**

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	16.874	>500	PASS
Mid	2437	17.310		PASS
High	2462	17.620		PASS

draft 802.11n Wide-40 MHz Channel mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2422	36.414	>500	PASS
Mid	2437	36.406		PASS
High	2452	36.401		PASS

TRANSMIT CHAIN 2**draft 802.11n Standard-20 MHz Channel mode**

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	16.034	>500	PASS
Mid	2437	16.347		PASS
High	2462	17.275		PASS

draft 802.11n Wide-40 MHz Channel mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2422	36.408	>500	PASS
Mid	2437	36.415		PASS
High	2452	36.331		PASS

**TRANSMIT CHAIN 0****IEEE 802.11a mode**

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	5745	15.596	>500	PASS
Mid	5785	15.336		PASS
High	5805	16.324		PASS

draft 802.11n Standard-20 MHz Channel mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	5745	16.876	>500	PASS
Mid	5785	17.337		PASS
High	5805	17.318		PASS

draft 802.11n Wide-40 MHz Channel mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	5755	39.496	>500	PASS
High	5795	40.504		PASS

TRANSMIT CHAIN 1**draft 802.11n Standard-20 MHz Channel mode**

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	5745	16.931	>500	PASS
Mid	5785	16.217		PASS
High	5805	17.311		PASS

draft 802.11n Wide-40 MHz Channel mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	5755	35.787	>500	PASS
High	5795	35.868		PASS

**TRANSMIT CHAIN 2****draft 802.11n Standard-20 MHz Channel mode**

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	5745	17.338	>500	PASS
Mid	5785	16.952		PASS
High	5805	17.587		PASS

draft 802.11n Wide-40 MHz Channel mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	5755	35.809	>500	PASS
High	5795	36.373		PASS

TRANSMIT CHAIN 0+ CHAIN 1+ CHAIN 2**draft 802.11gn Standard-20 MHz Channel mode**

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	16.389	>500	PASS
Mid	2437	17.375		PASS
High	2462	16.807		PASS

draft 802.11n Wide-40 MHz Channel mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2422	36.419	>500	PASS
Mid	2437	36.420		PASS
High	2452	36.428		PASS

TRANSMIT CHAIN 0+ CHAIN 1+ CHAIN 2**draft 802.11n Standard-20 MHz Channel mode**

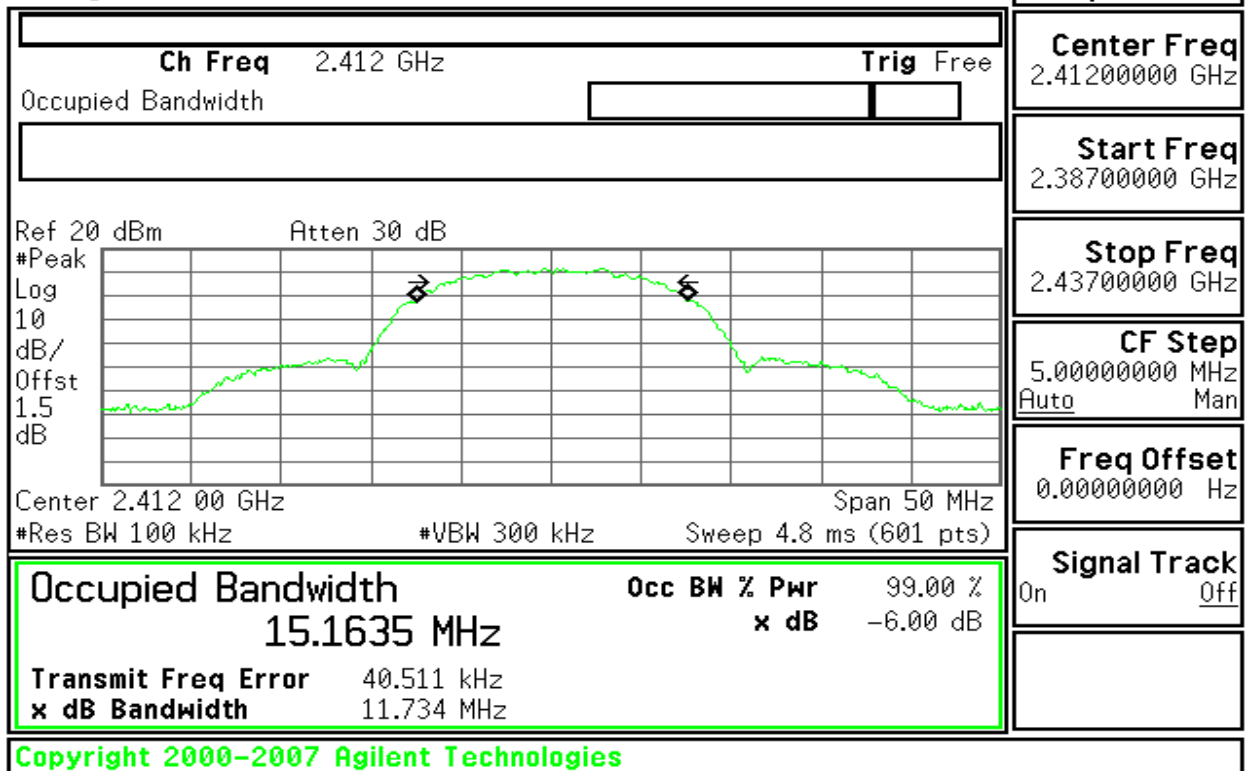
Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	5745	16.828	>500	PASS
Mid	5785	17.315		PASS
High	5805	17.189		PASS

draft 802.11n Wide-40 MHz Channel mode

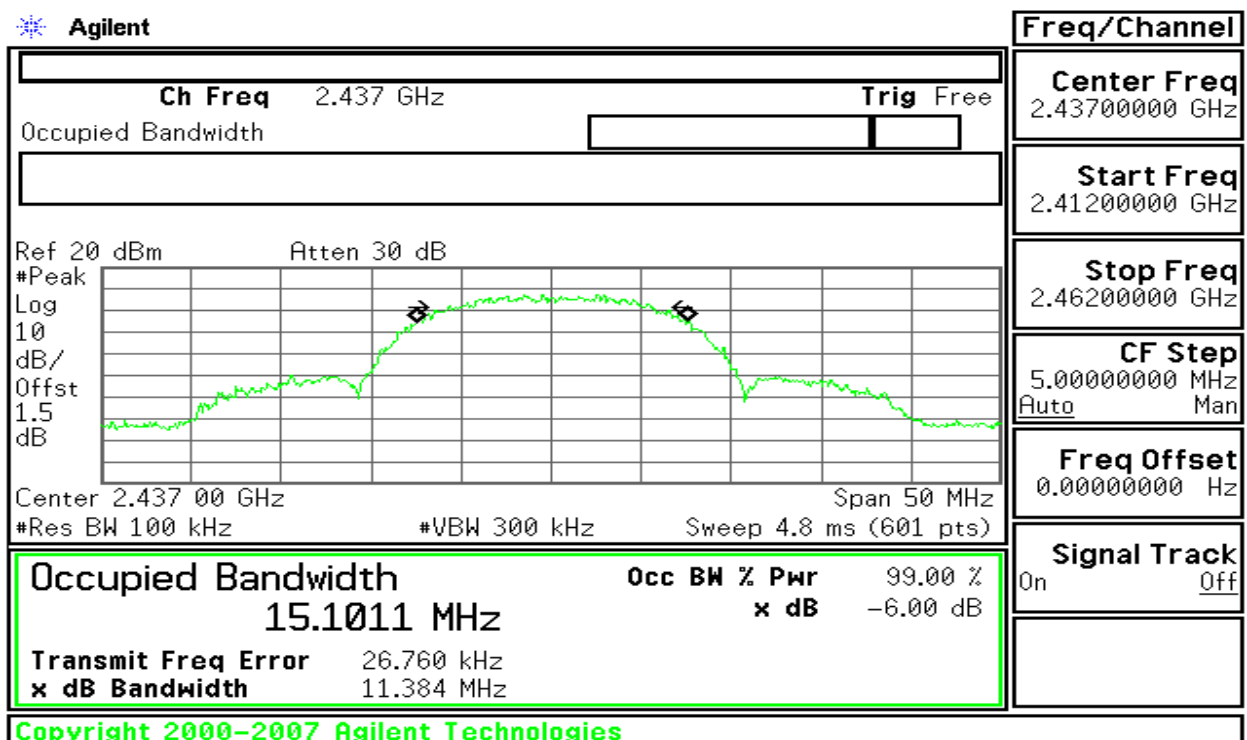
Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	5755	39.463	>500	PASS
High	5795	40.545		PASS

Test PlotIEEE 802.11b MODE**6dB Bandwidth (CH Low)**

Agilent

**6dB Bandwidth (CH Mid)**

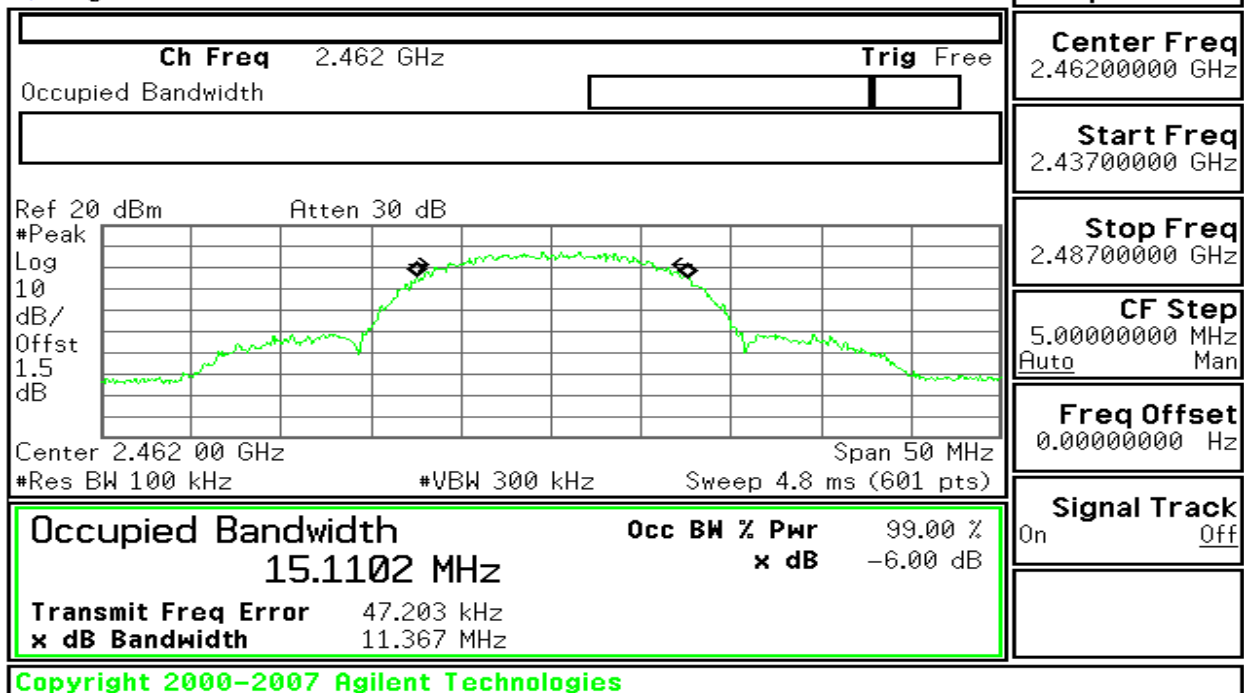
Agilent





6dB Bandwidth (CH High)

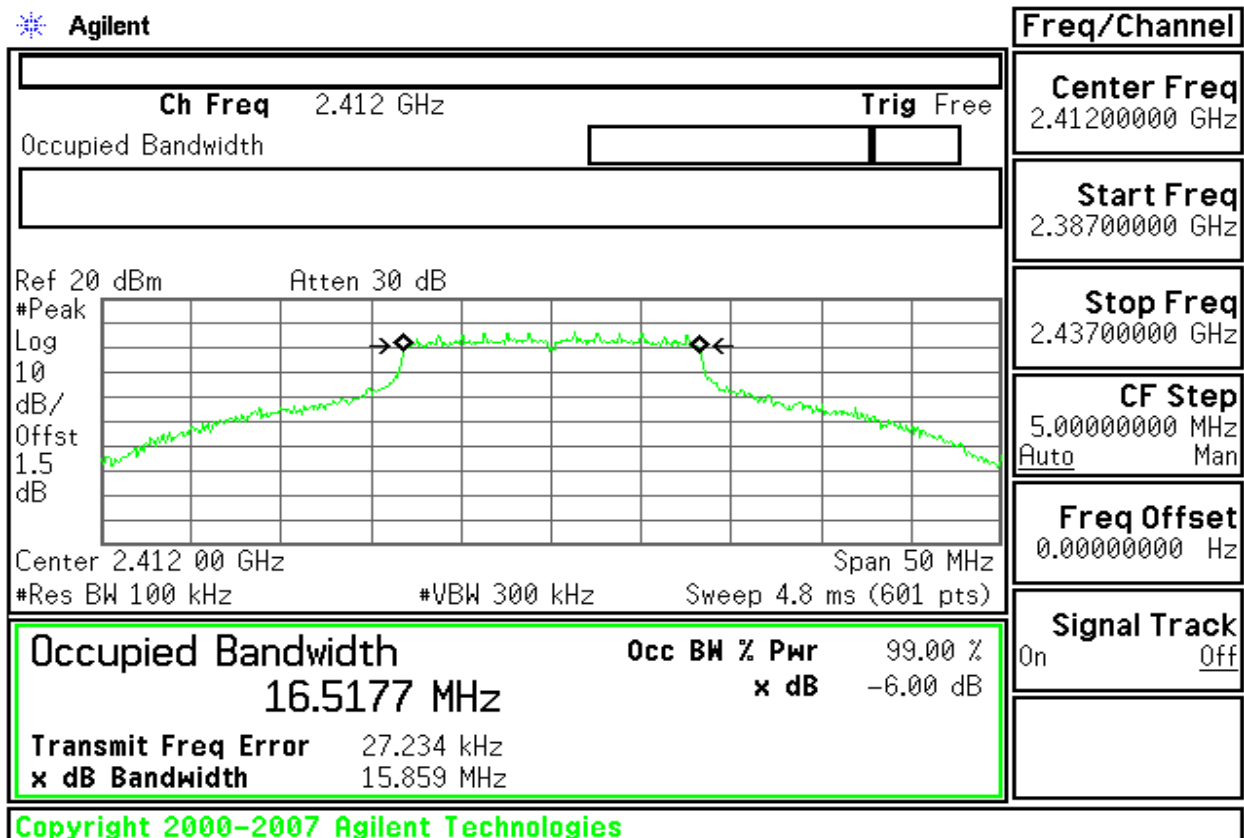
Agilent



IEEE 802.11g MODE

6dB Bandwidth (CH Low)

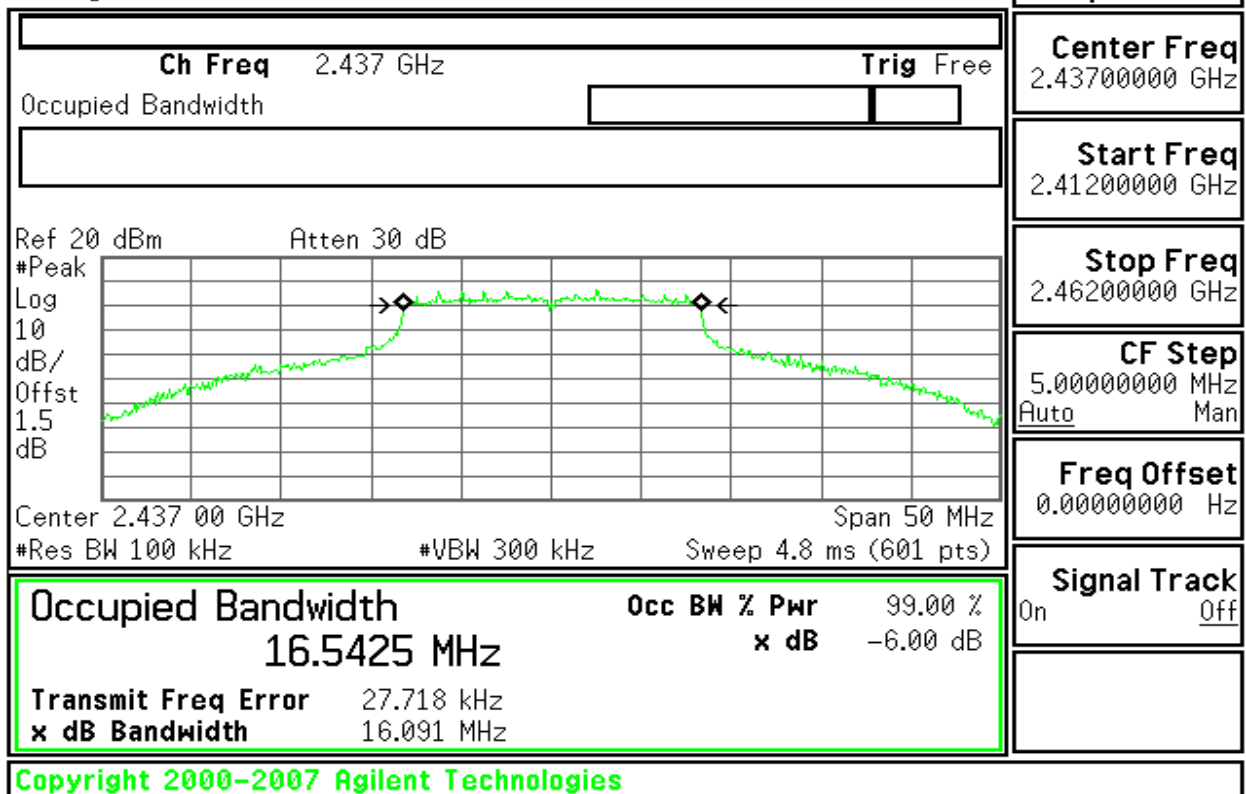
Agilent





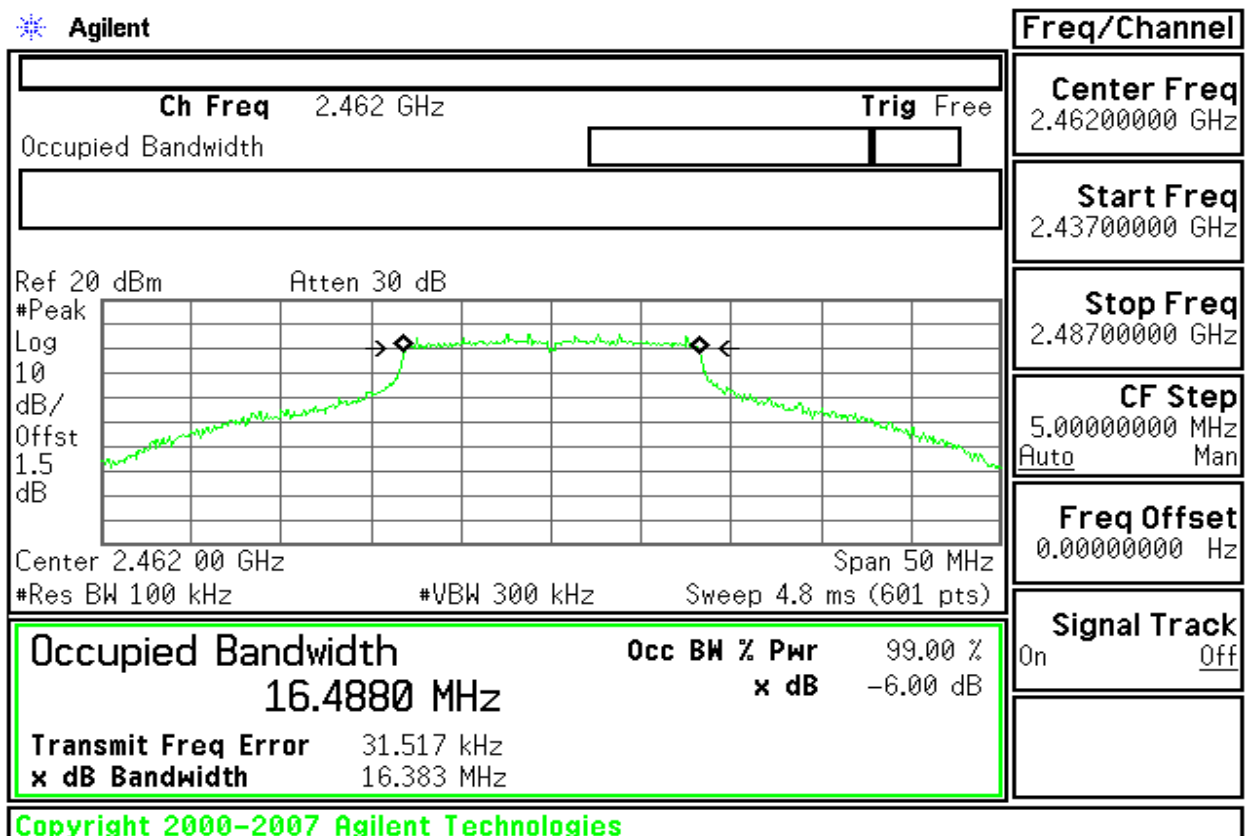
6dB Bandwidth (CH Mid)

Agilent



6dB Bandwidth (CH High)

Agilent

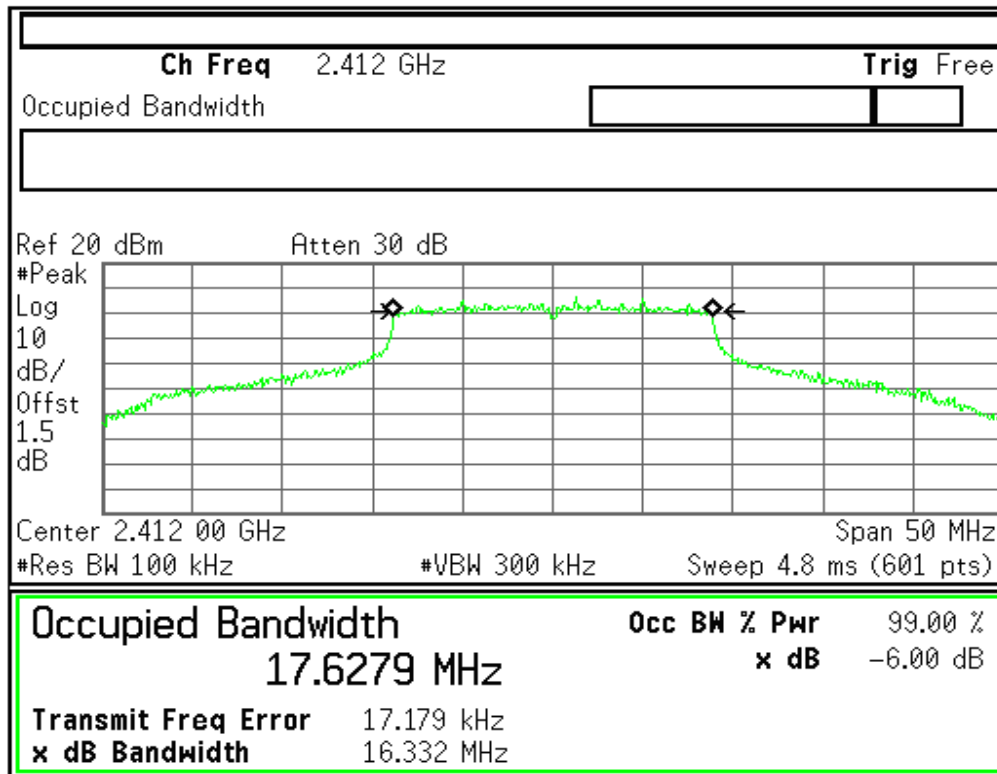




draft 802.11n Standard-20 MHz Channel mode / Chain 0

6dB Bandwidth (CH Low)

Agilent



Trace

Trace

1 2 3

Clear Write

Max Hold

Min Hold

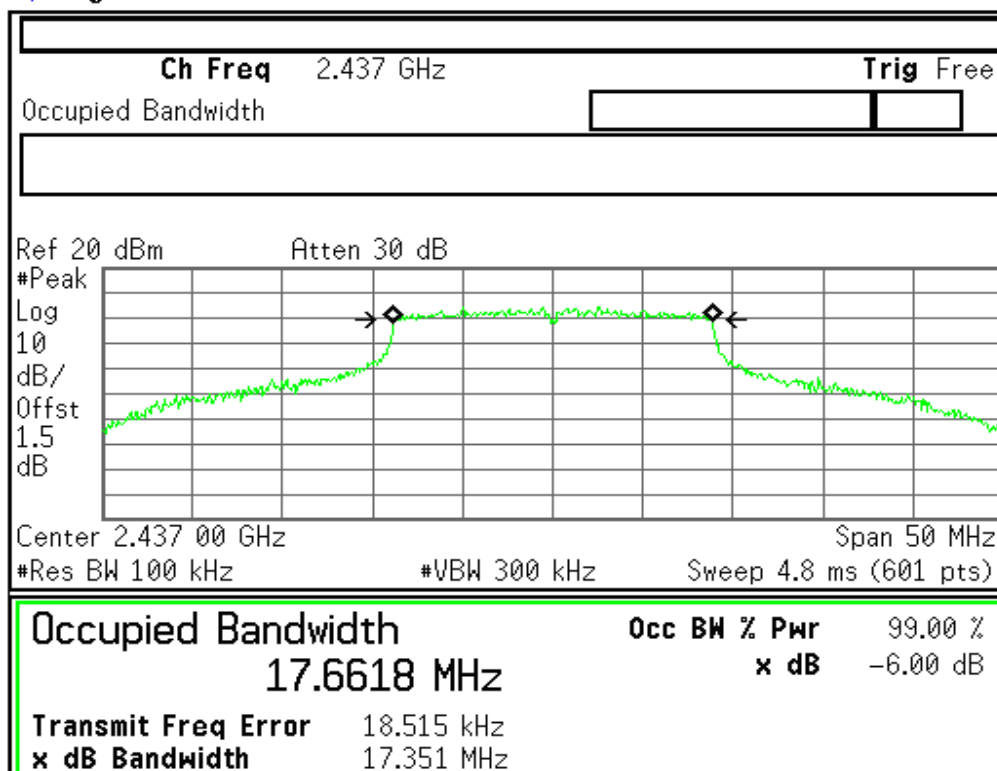
View

Blank

More
1 of 2

6dB Bandwidth (CH Mid)

Agilent



Freq/Channel

Center Freq

2.43700000 GHz

Start Freq

2.41200000 GHz

Stop Freq

2.46200000 GHz

CF Step

5.00000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

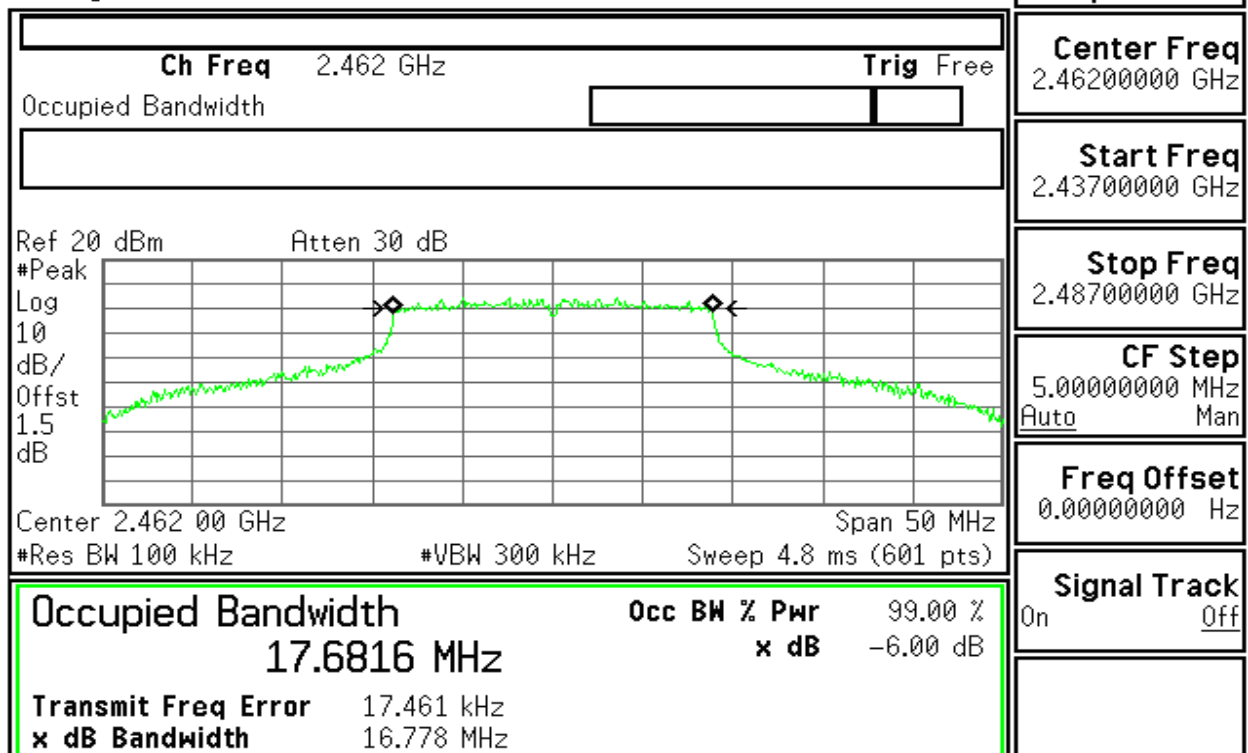
Signal Track

On Off



6dB Bandwidth (CH High)

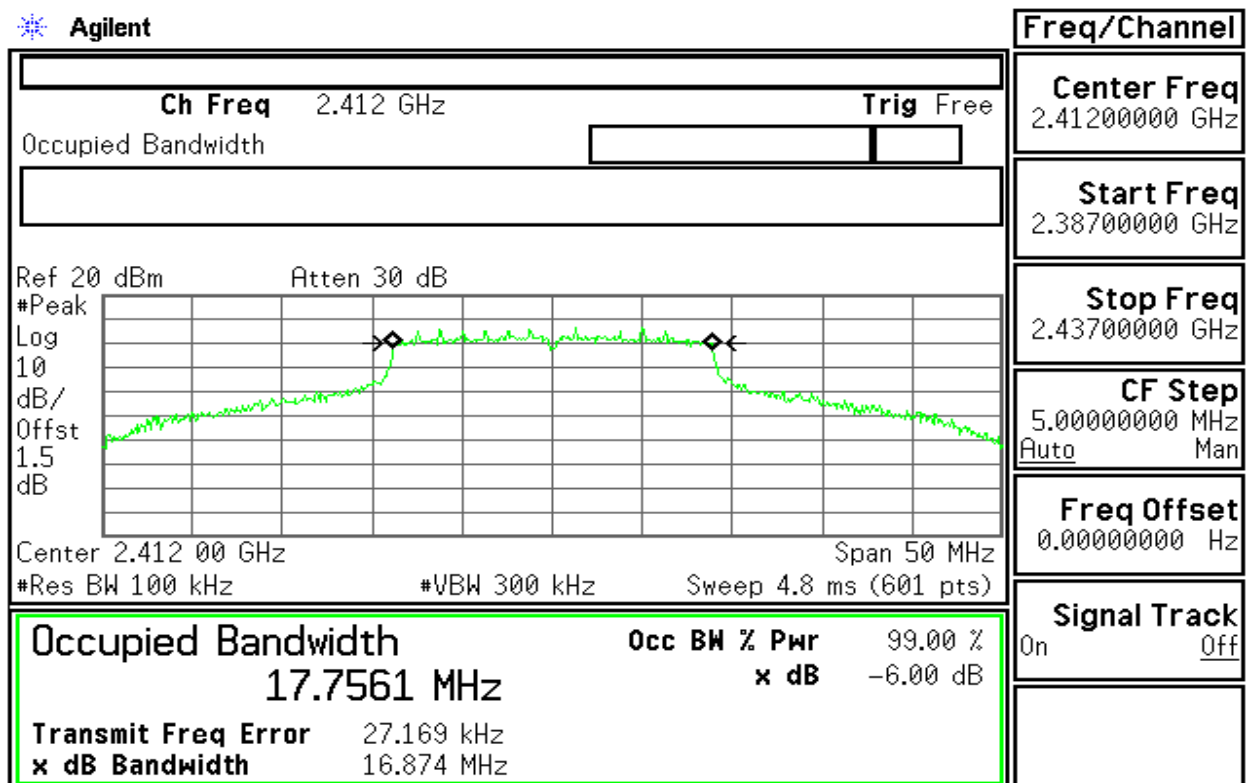
Agilent



draft 802.11n Standard-20 MHz Channel mode / Chain 1

6dB Bandwidth (CH Low)

Agilent

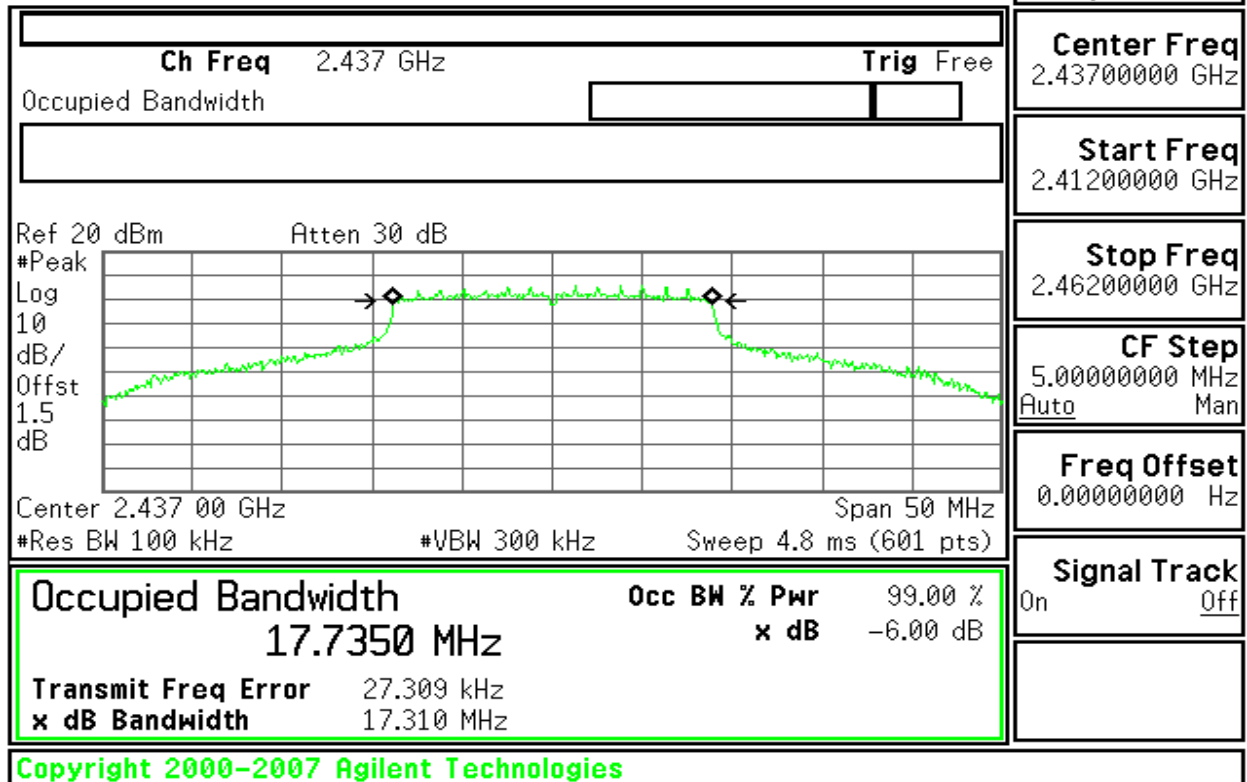


Copyright 2000-2007 Agilent Technologies



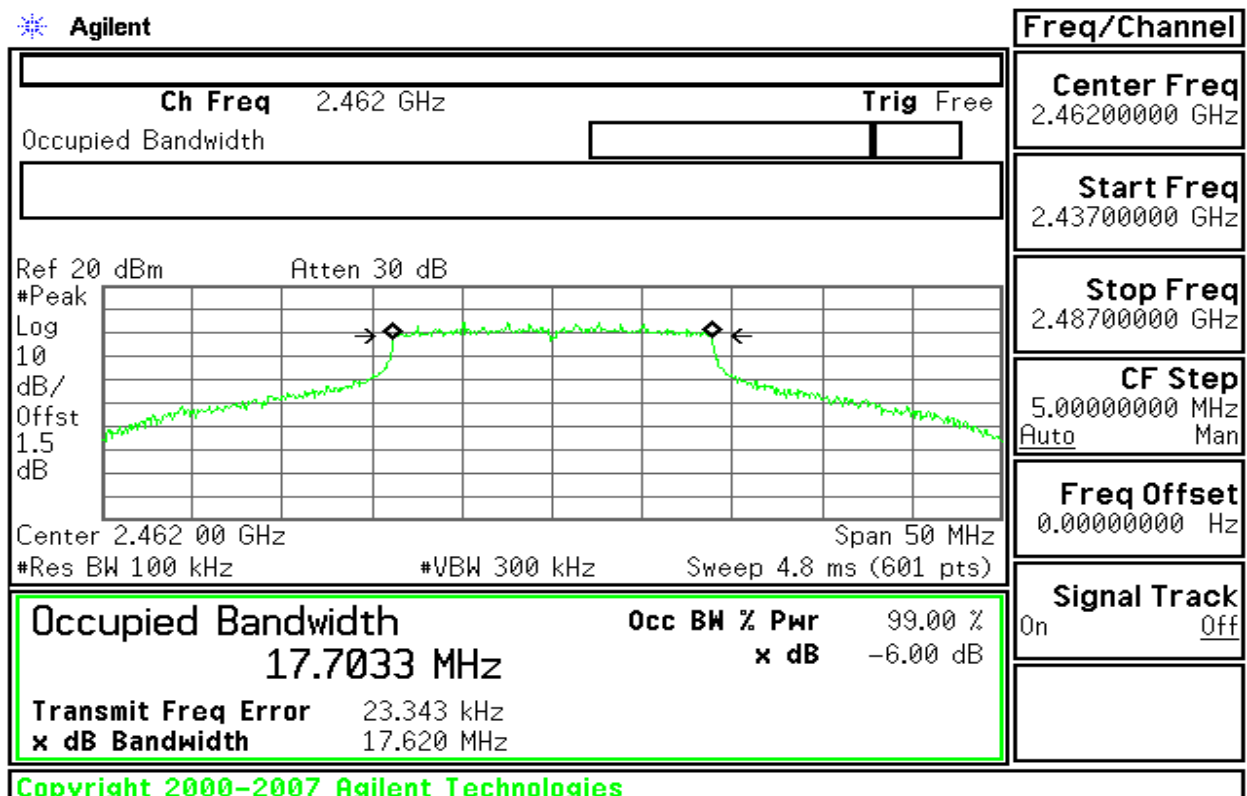
6dB Bandwidth (CH Mid)

Agilent



6dB Bandwidth (CH High)

Agilent

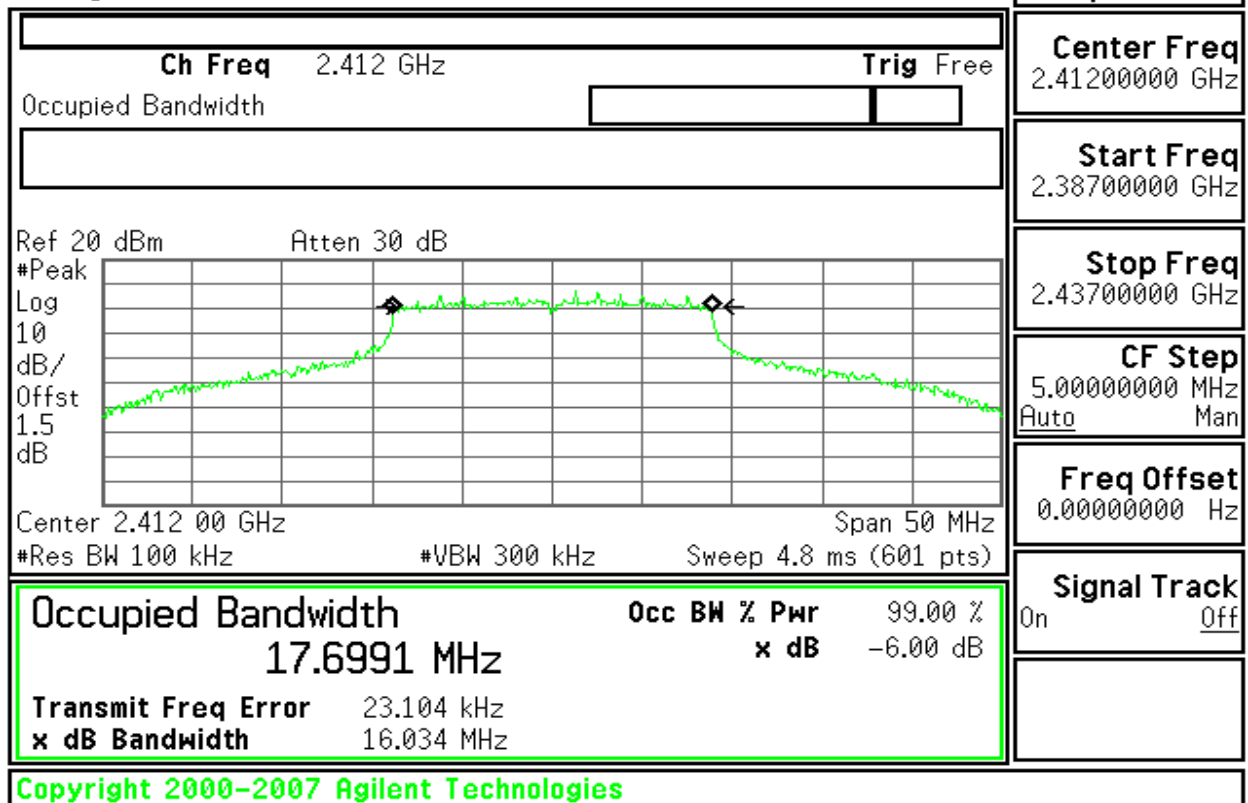




draft 802.11n Standard-20 MHz Channel mode / Chain 2

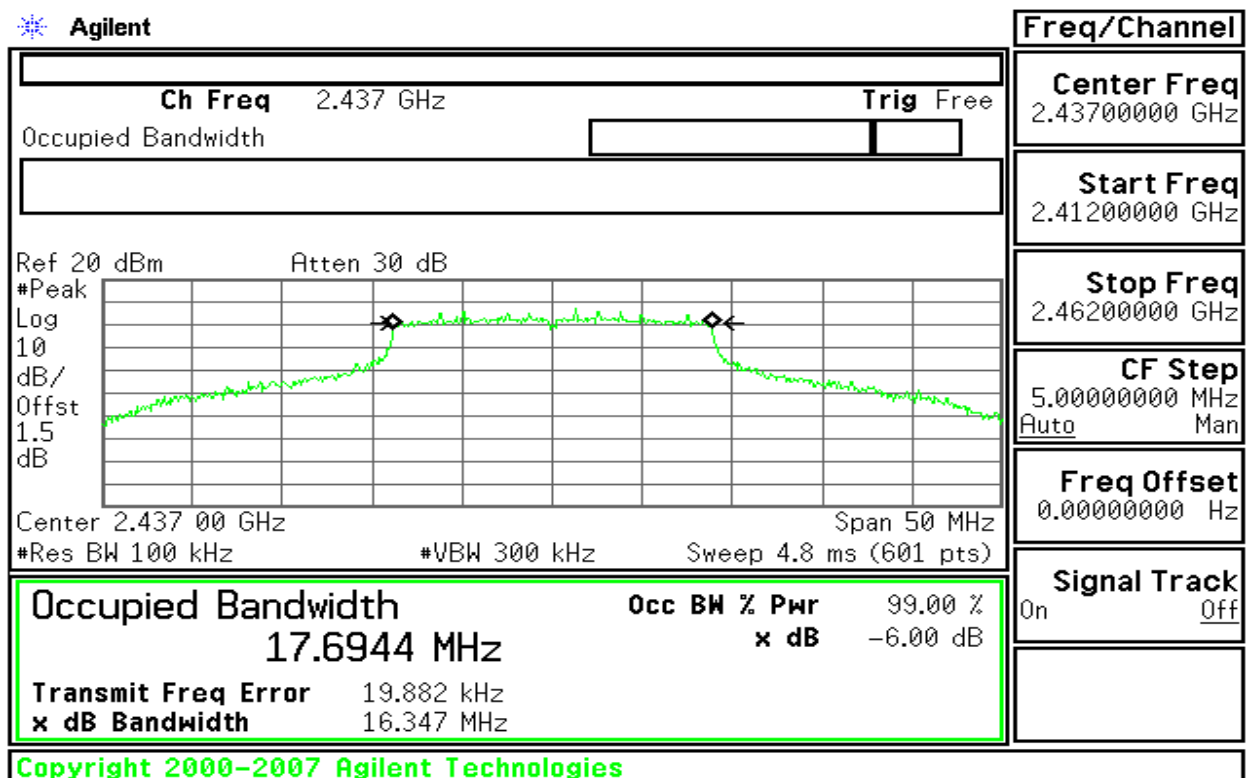
6dB Bandwidth (CH Low)

Agilent



6dB Bandwidth (CH Mid)

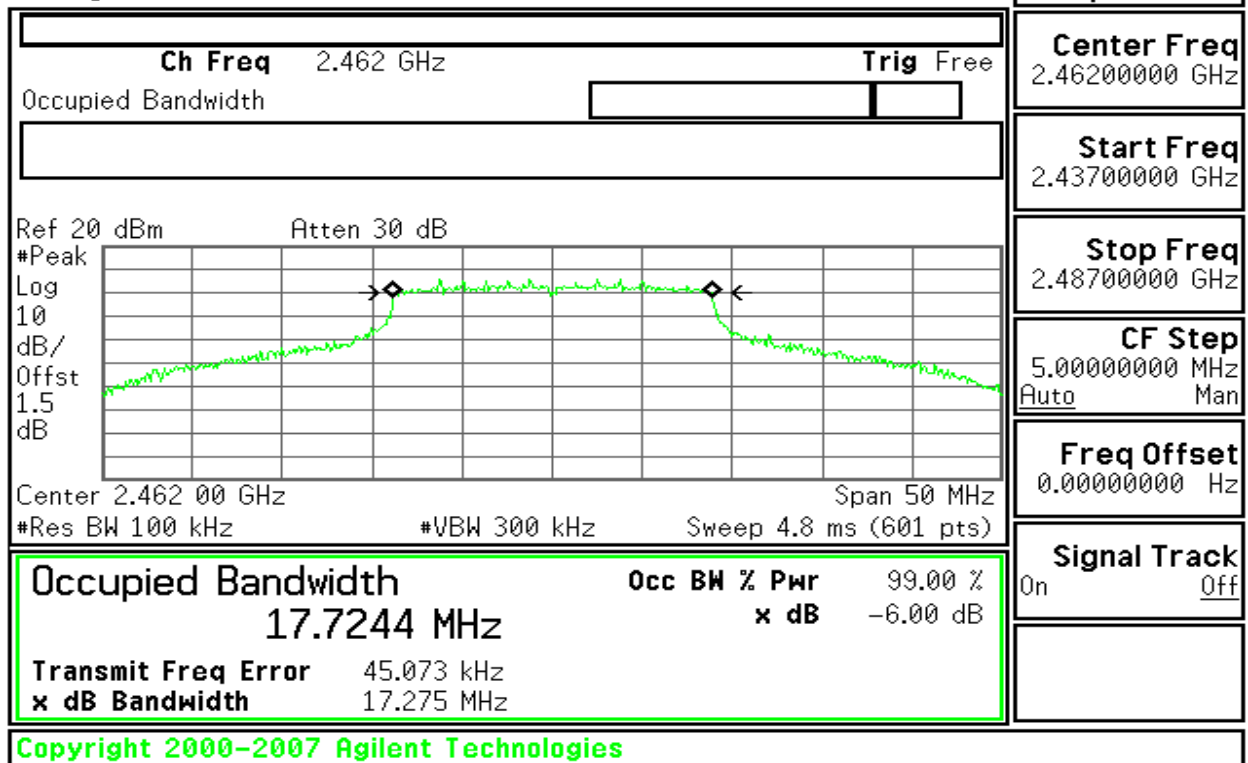
Agilent





6dB Bandwidth (CH High)

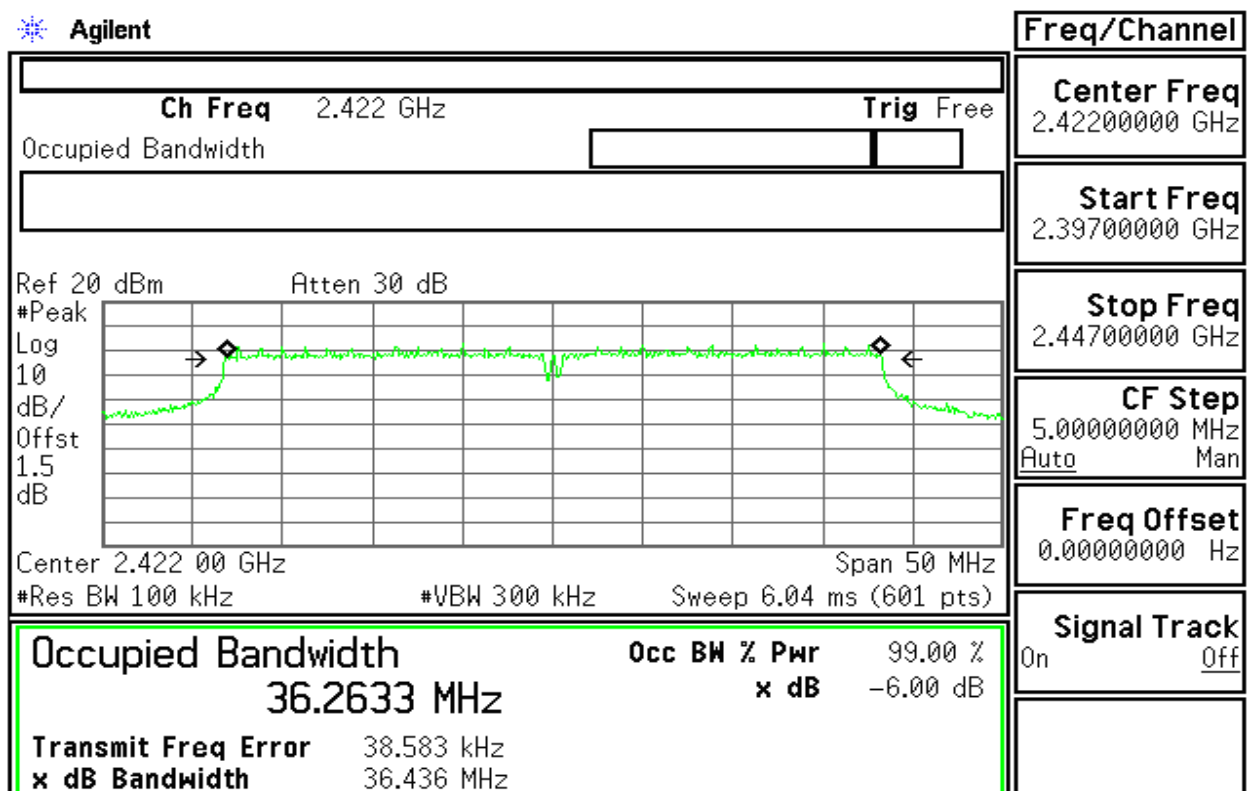
Agilent



draft 802.11n Wide-40 MHz Channel mode / Chain 0

6dB Bandwidth (CH Low)

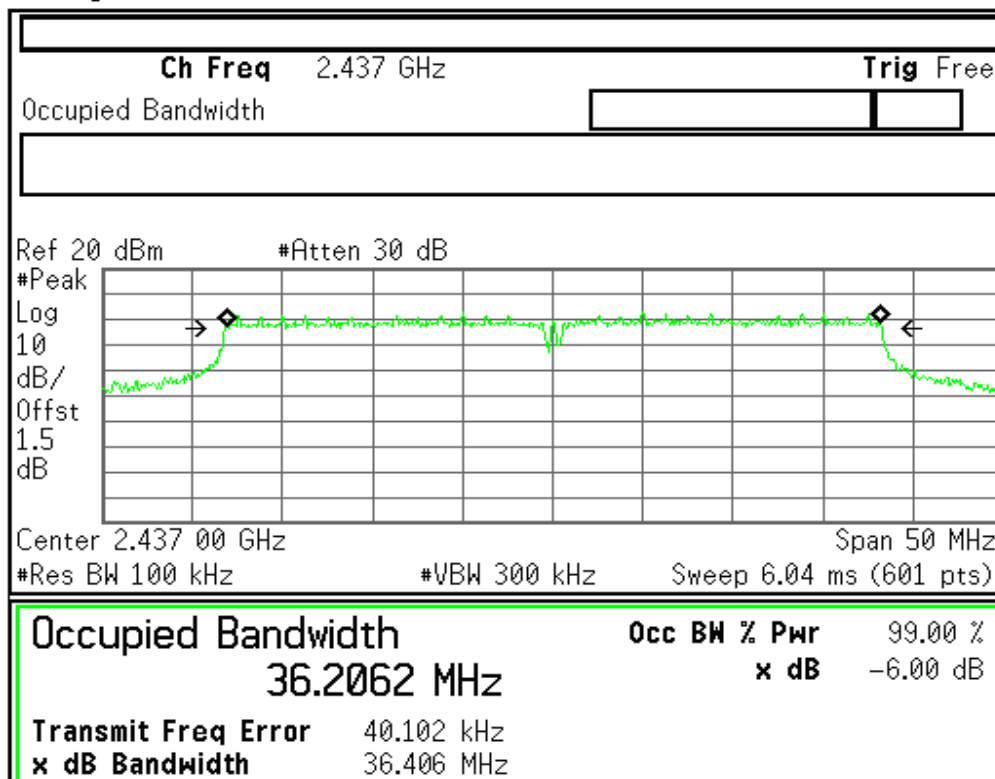
Agilent





6dB Bandwidth (CH Mid)

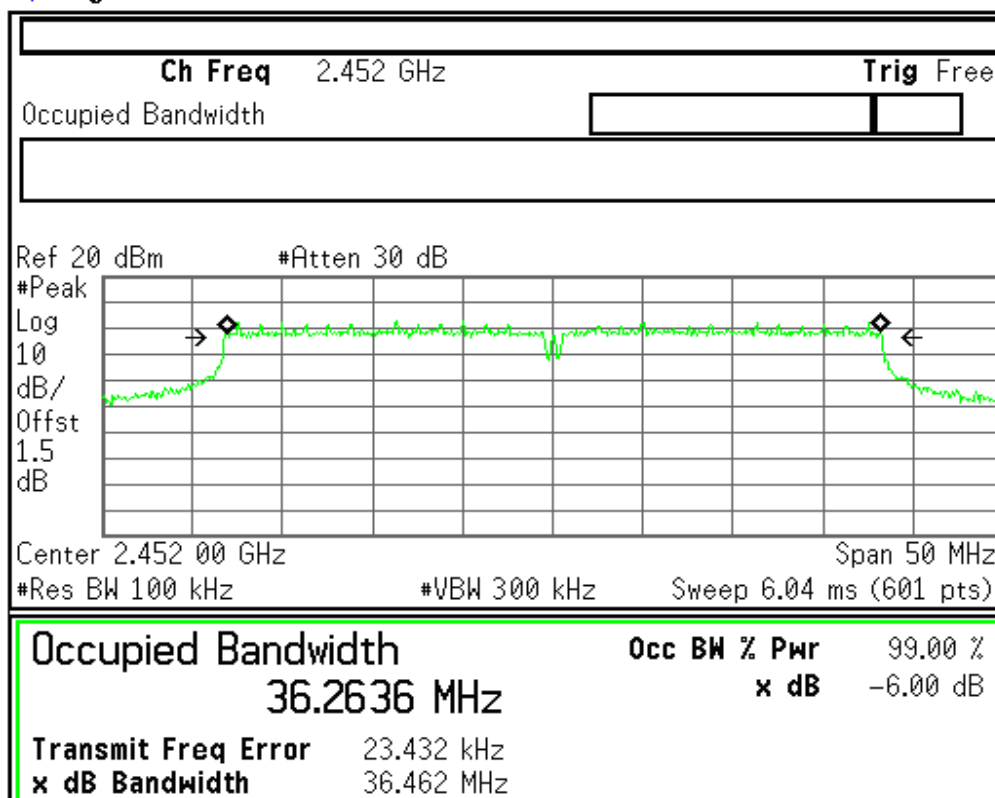
Agilent



Freq/Channel
Center Freq 2.43700000 GHz
Start Freq 2.41200000 GHz
Stop Freq 2.46200000 GHz
CF Step 5.00000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

6dB Bandwidth (CH High)

Agilent



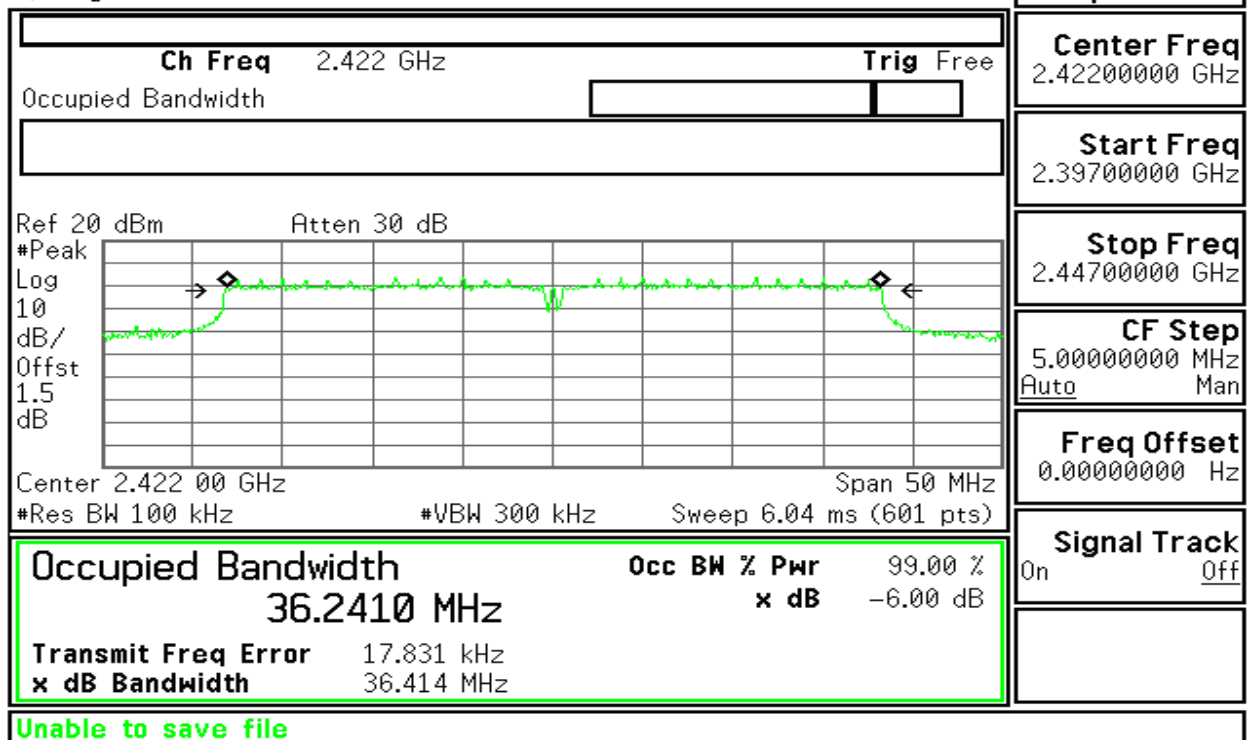
Freq/Channel
Center Freq 2.45200000 GHz
Start Freq 2.42700000 GHz
Stop Freq 2.47700000 GHz
CF Step 5.00000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off



draft 802.11n Wide-40 MHz Channel mode / Chain 1

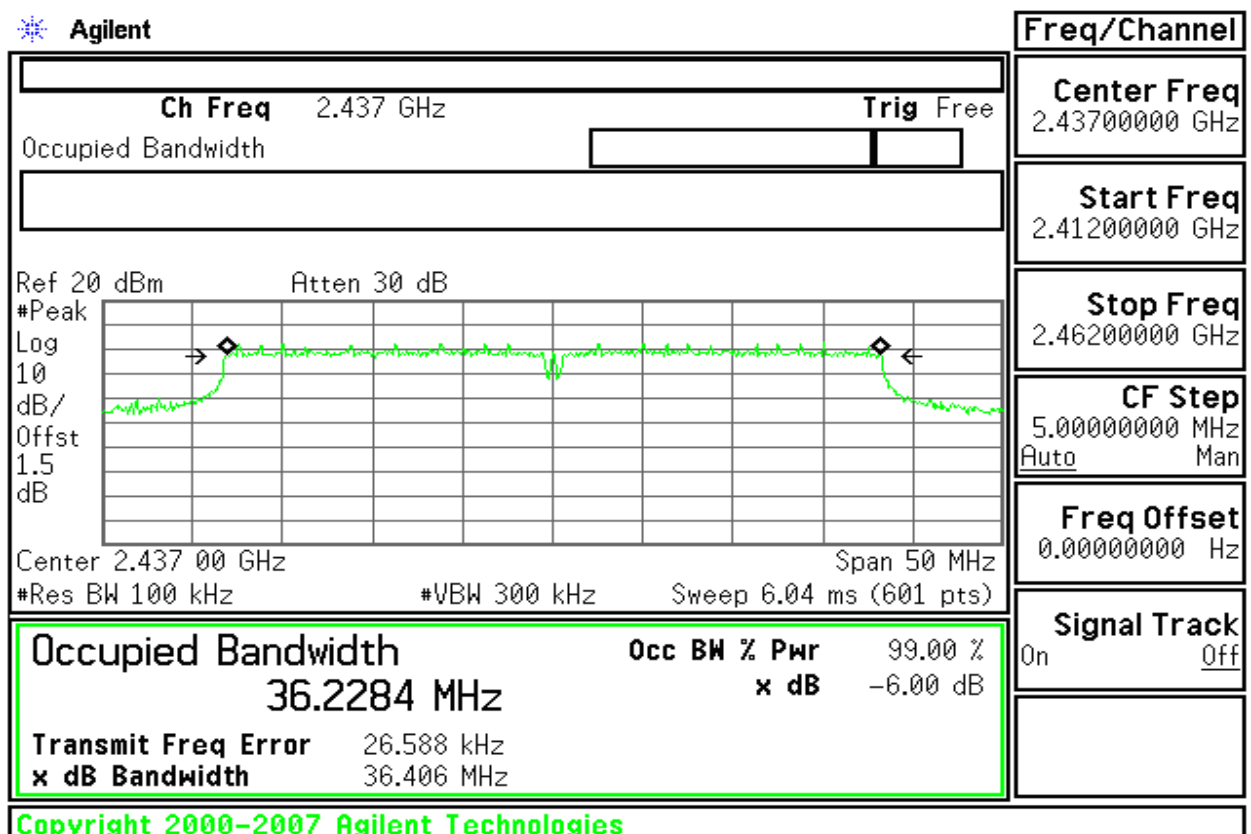
6dB Bandwidth (CH Low)

Agilent



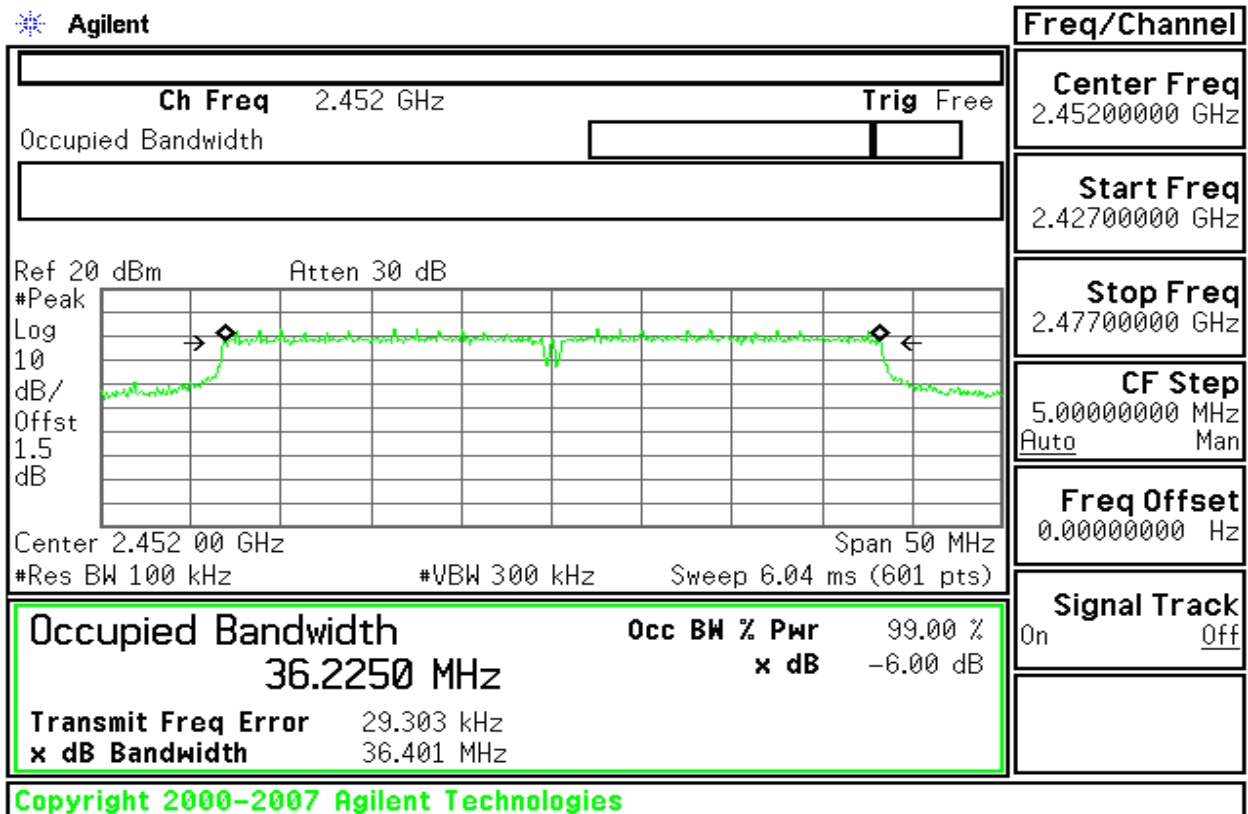
6dB Bandwidth (CH Mid)

Agilent



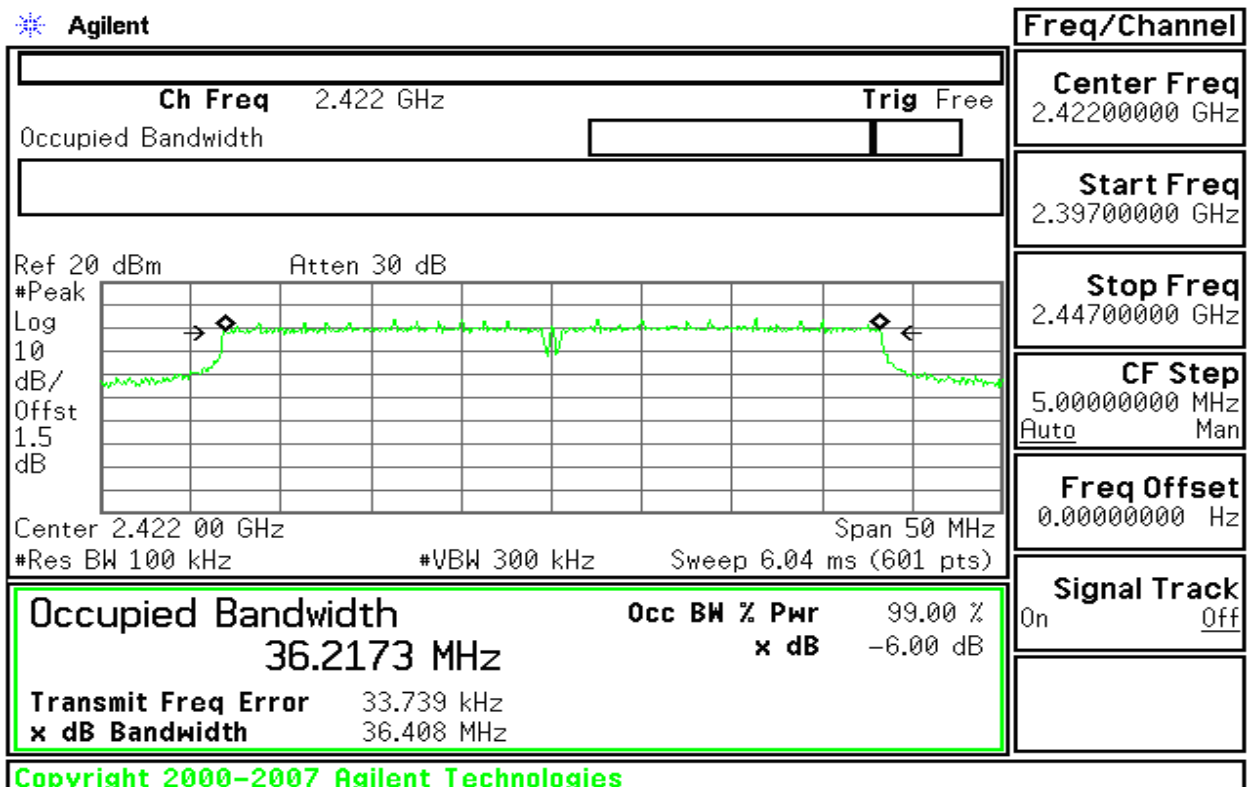


6dB Bandwidth (CH High)



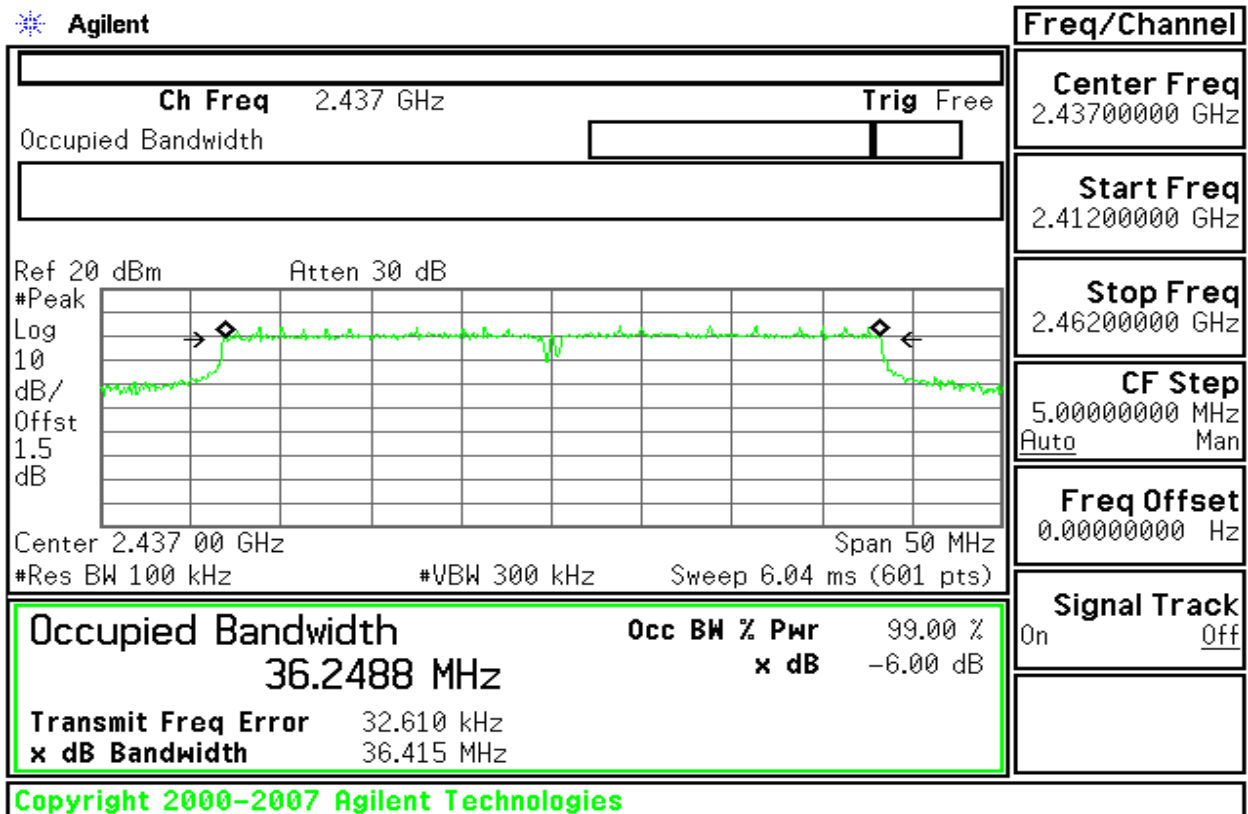
draft 802.11n Wide-40 MHz Channel mode / Chain 2

6dB Bandwidth (CH Low)

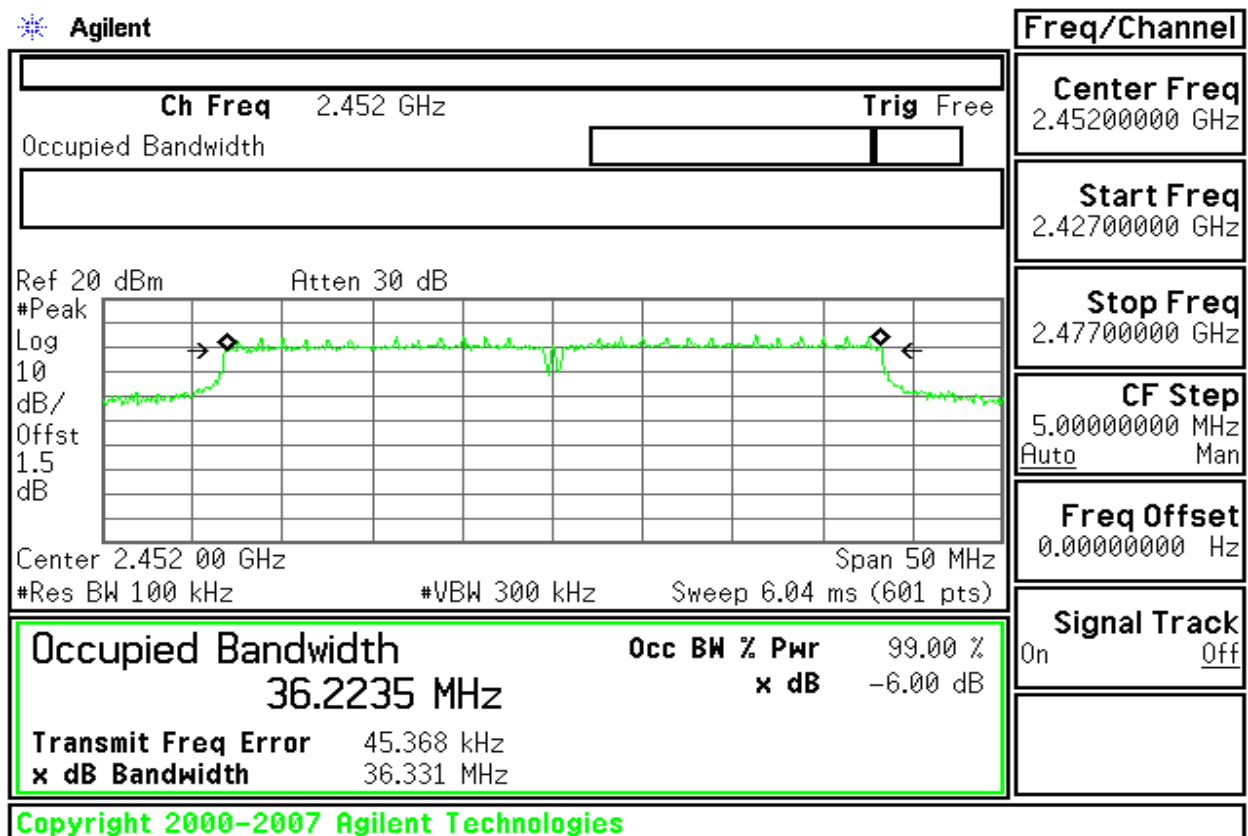




6dB Bandwidth (CH Mid)



6dB Bandwidth (CH High)



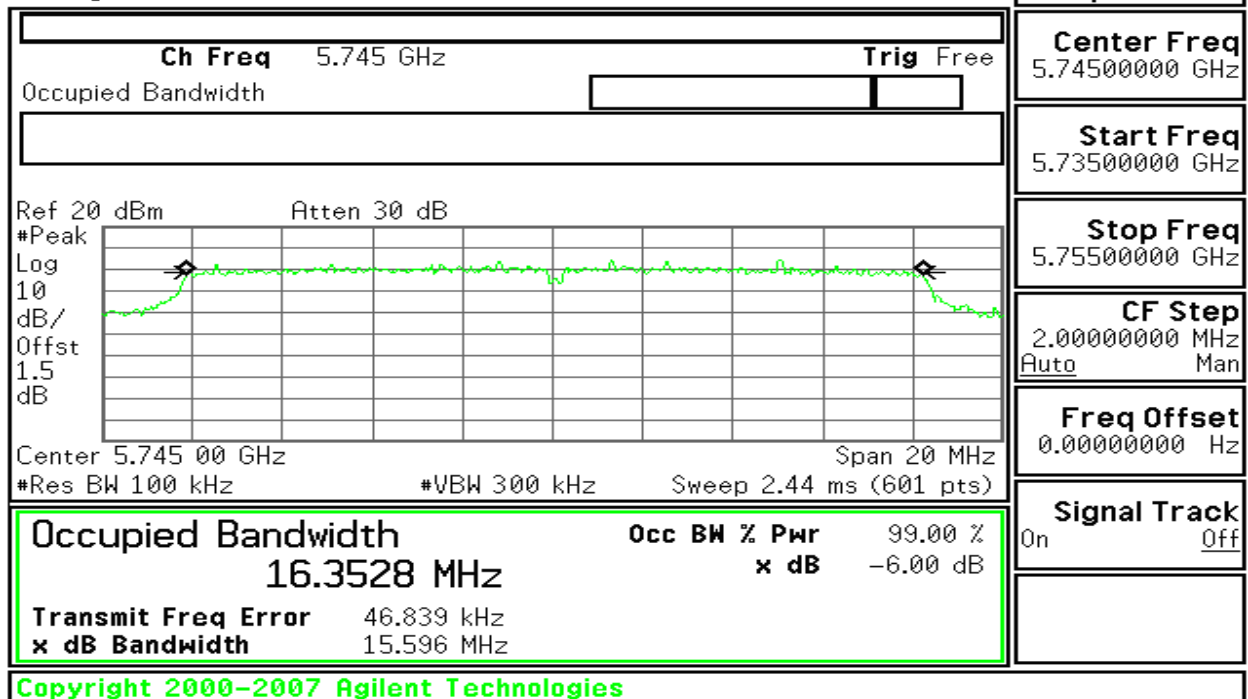


5725MHz-5825MHz

IEEE 802.11a mode

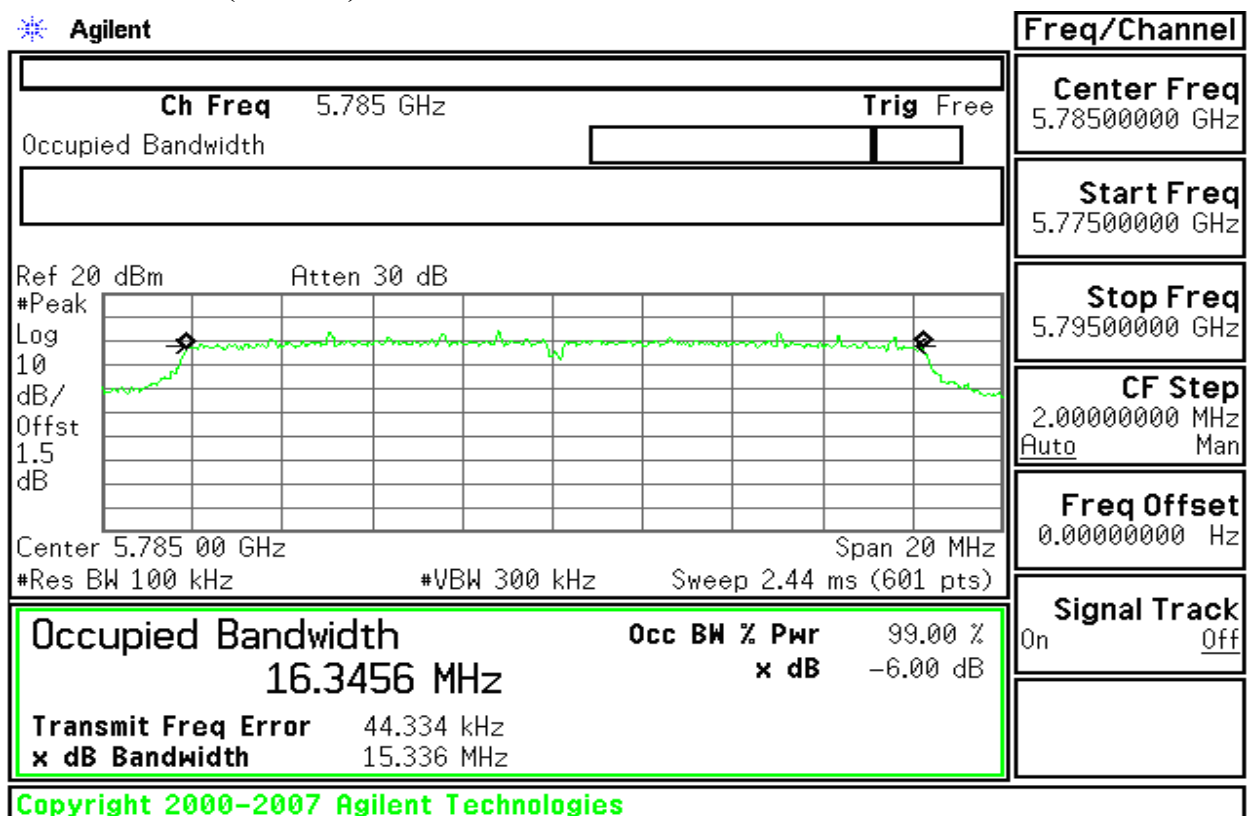
6dB Bandwidth (CH Low)

Agilent



6dB Bandwidth (CH Mid)

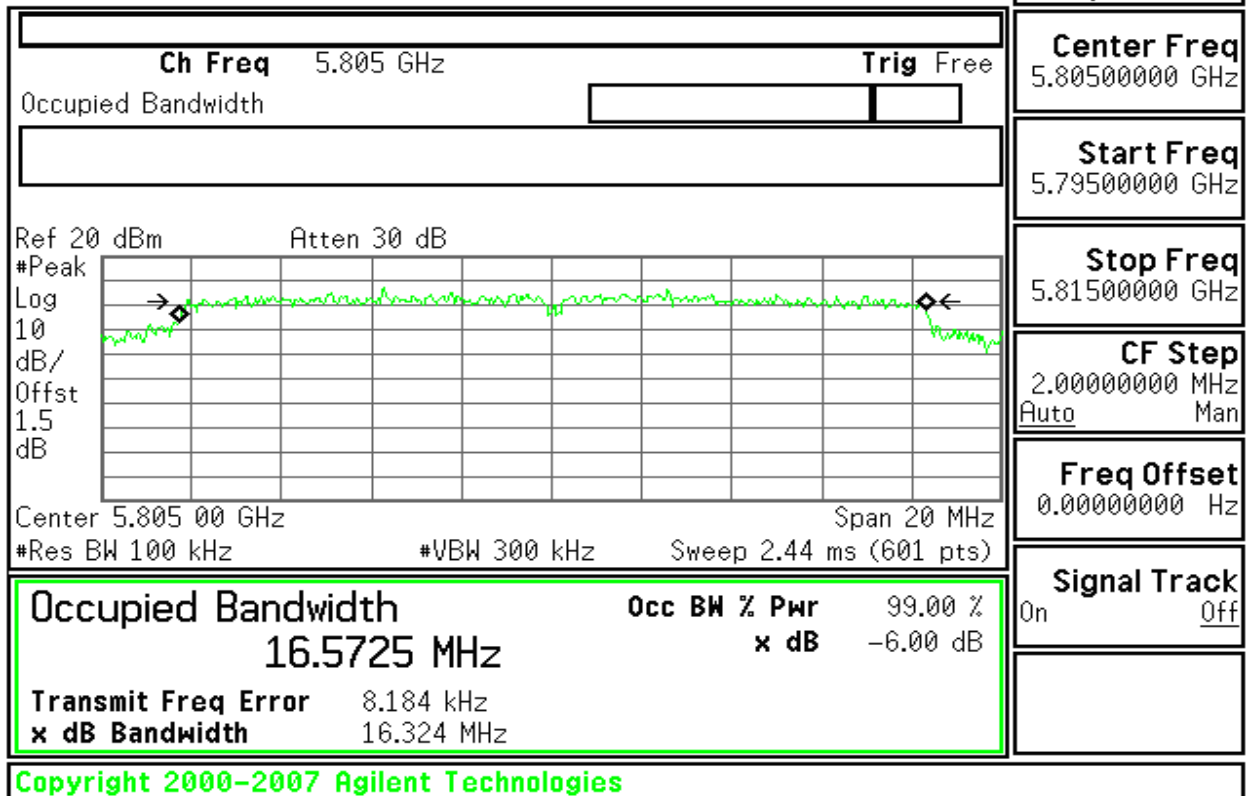
Agilent





6dB Bandwidth (CH High)

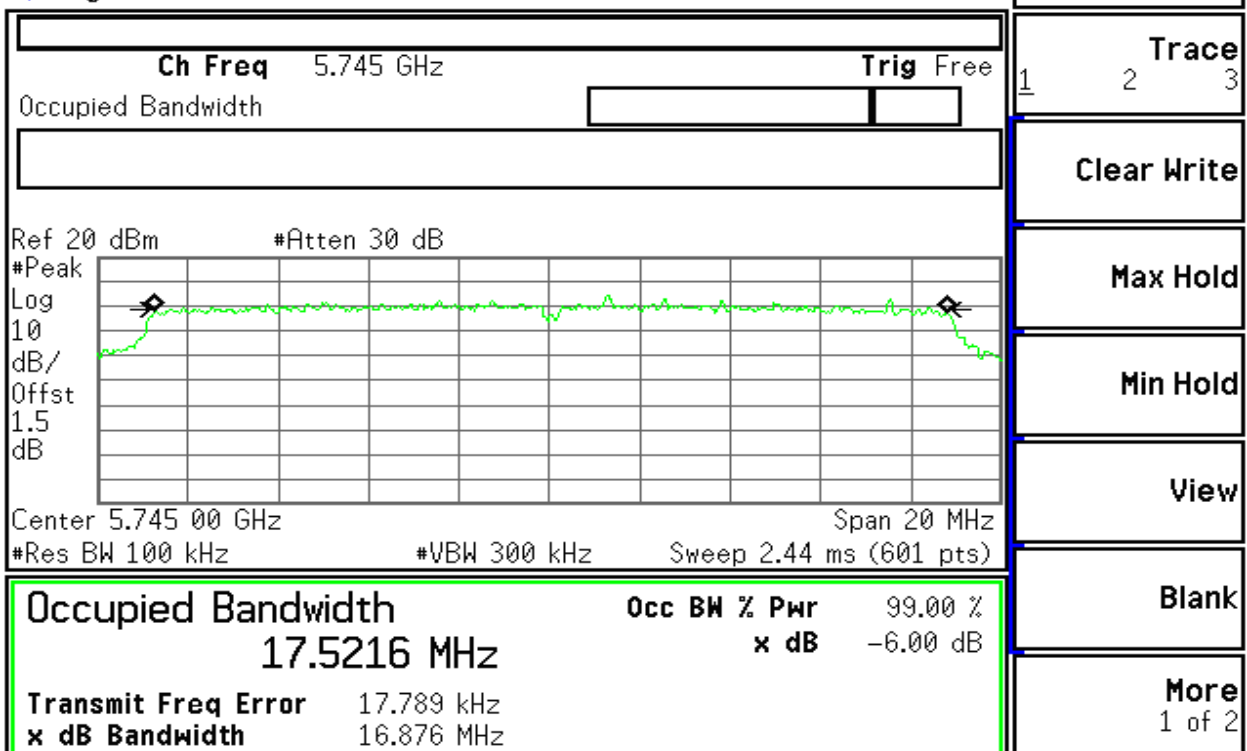
Agilent



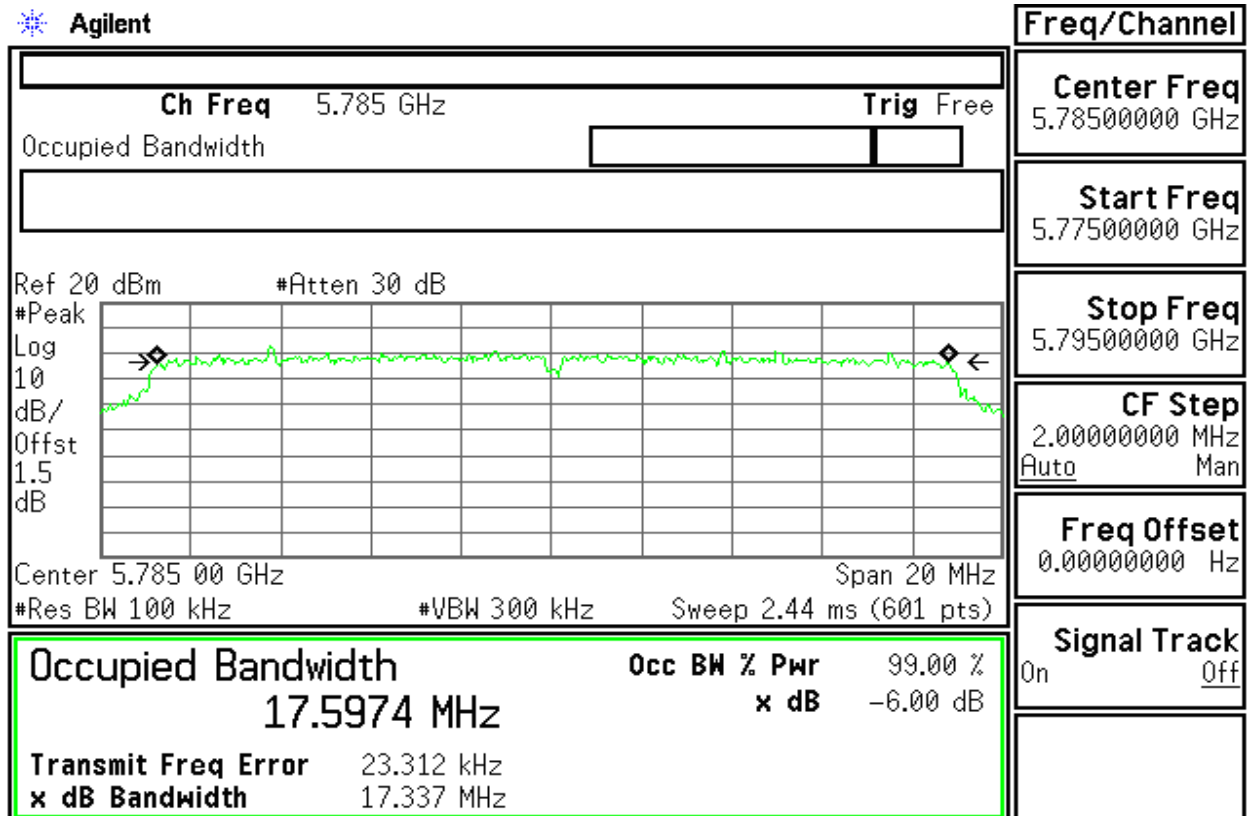
draft 802.11n Standard-20 MHz Channel mode / Chain 0

6dB Bandwidth (CH Low)

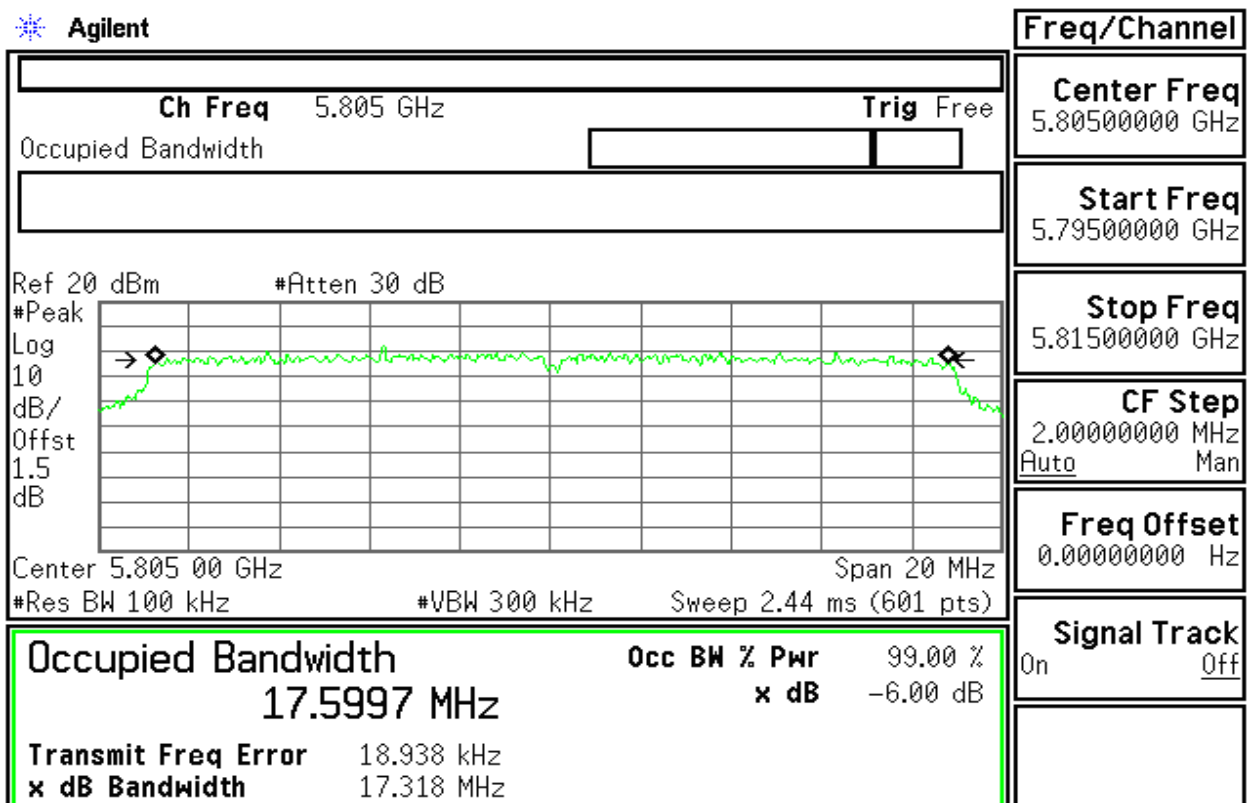
Agilent



6dB Bandwidth (CH Mid)



6dB Bandwidth (CH High)

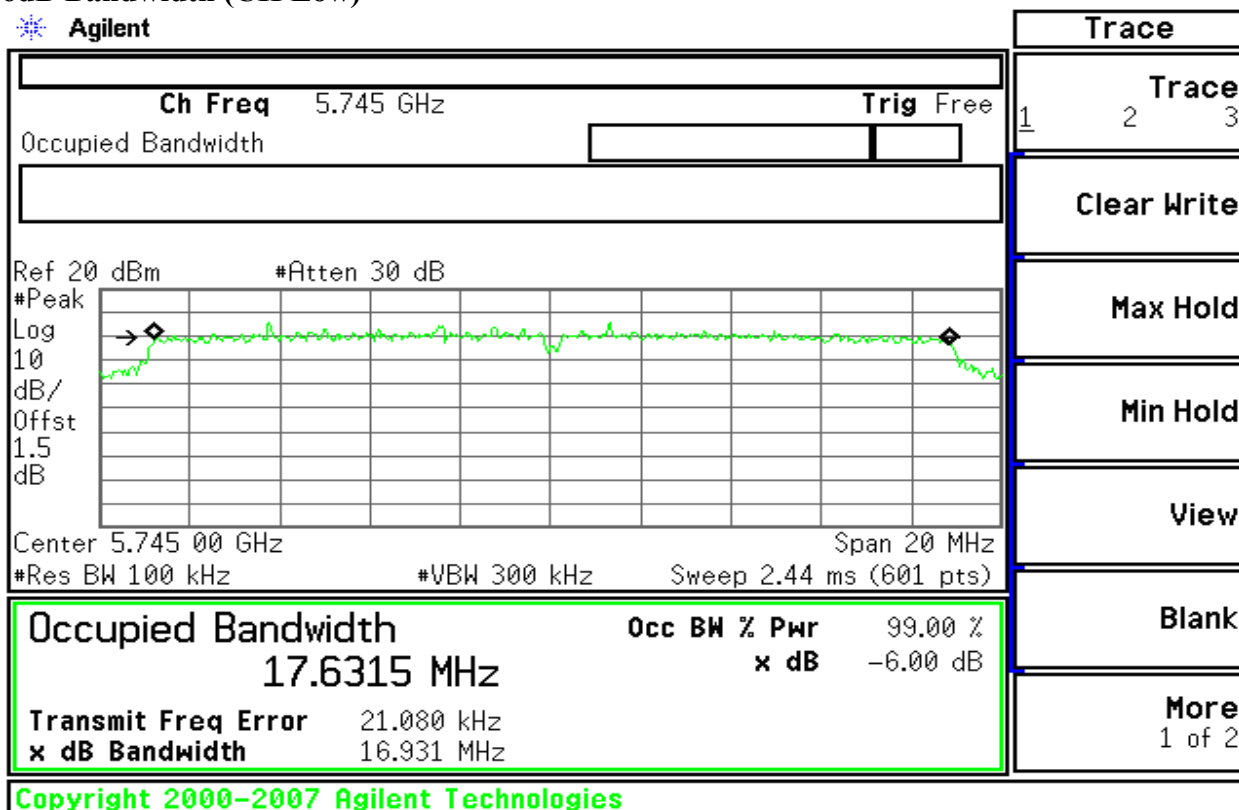




draft 802.11n Standard-20 MHz Channel mode / Chain 1

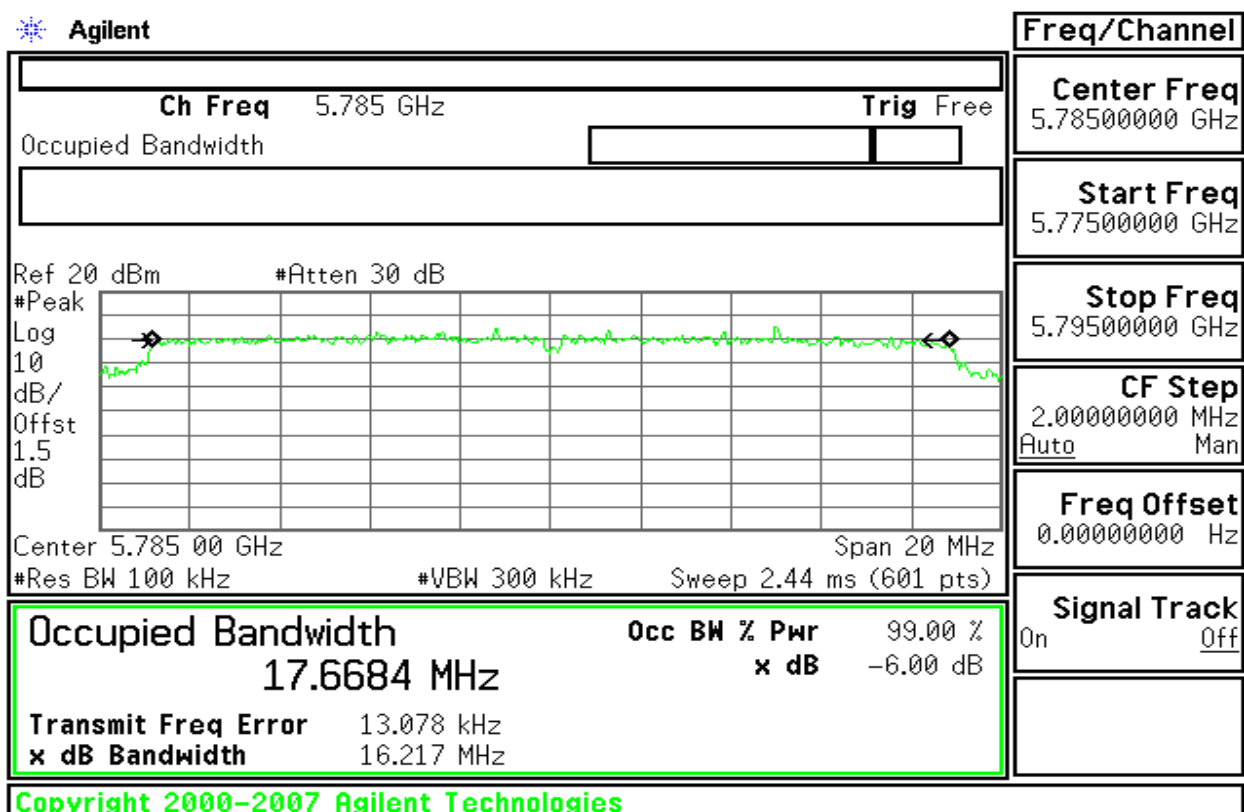
6dB Bandwidth (CH Low)

Agilent



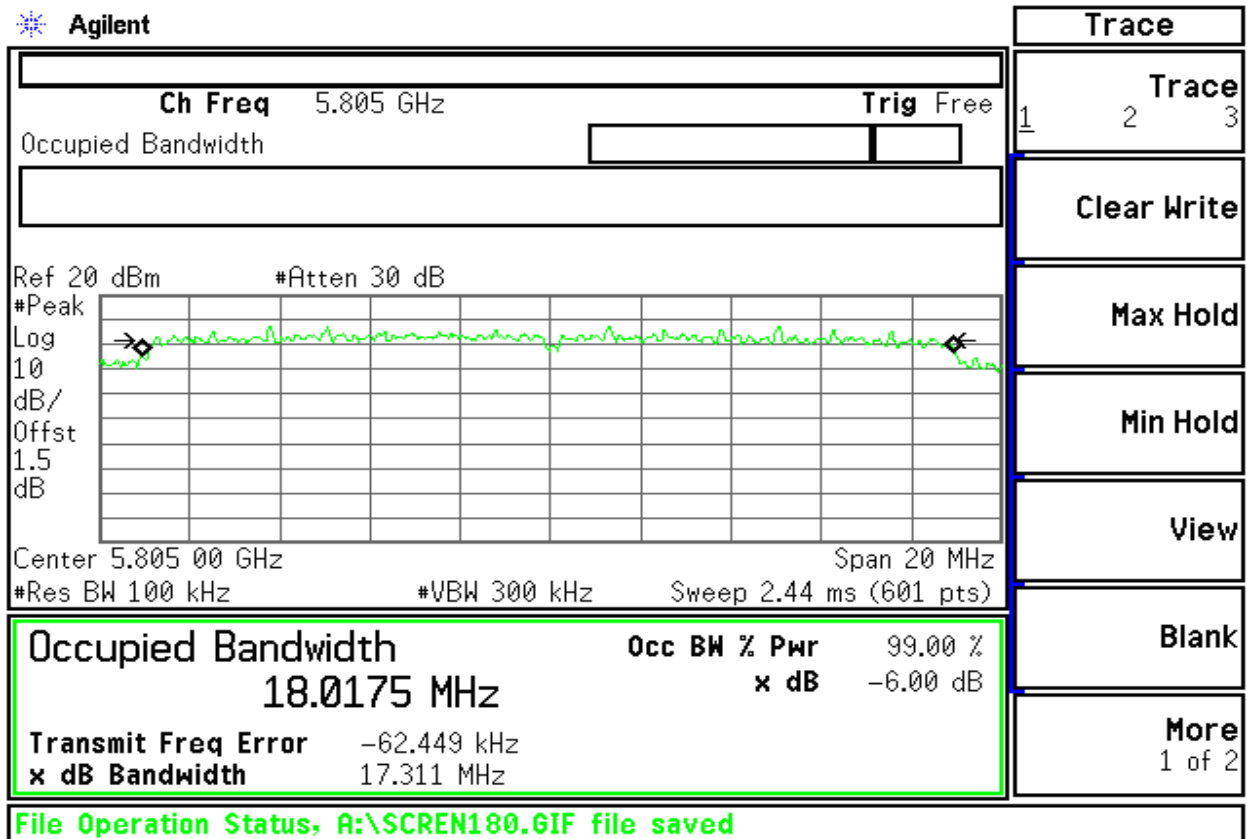
6dB Bandwidth (CH Mid)

Agilent



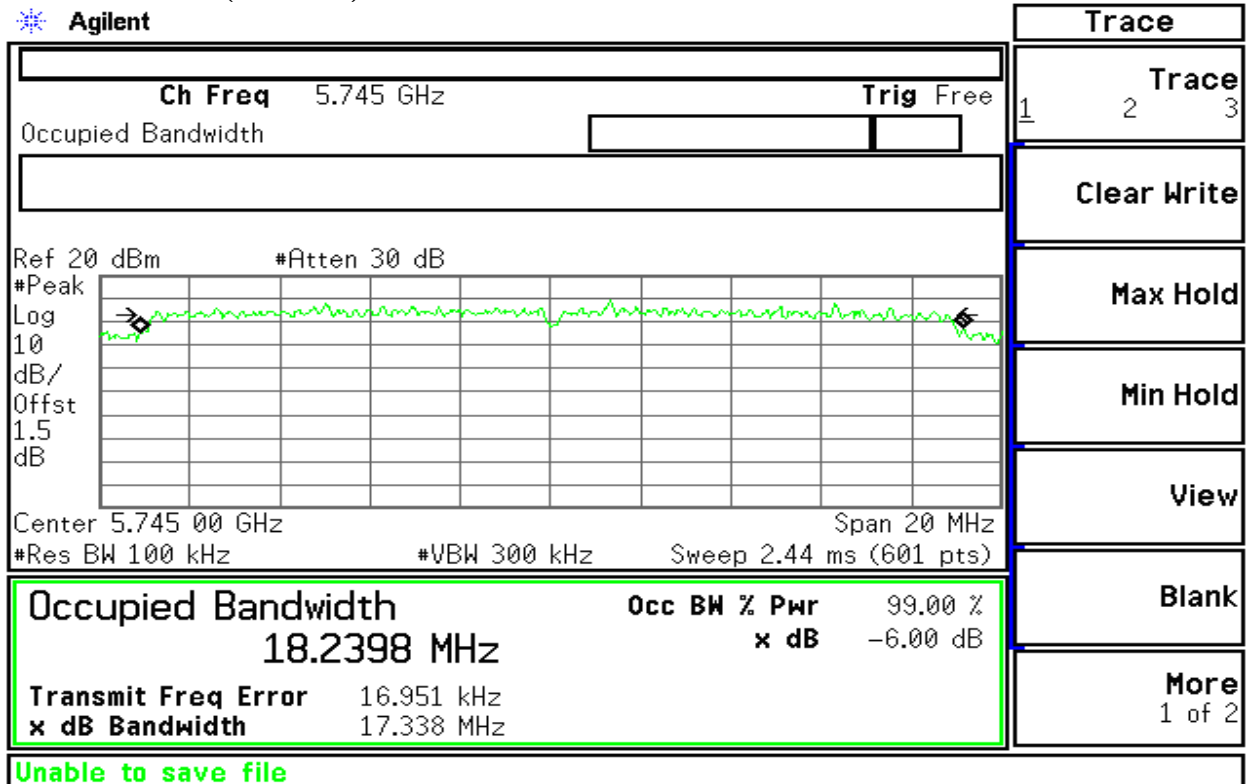


6dB Bandwidth (CH High)



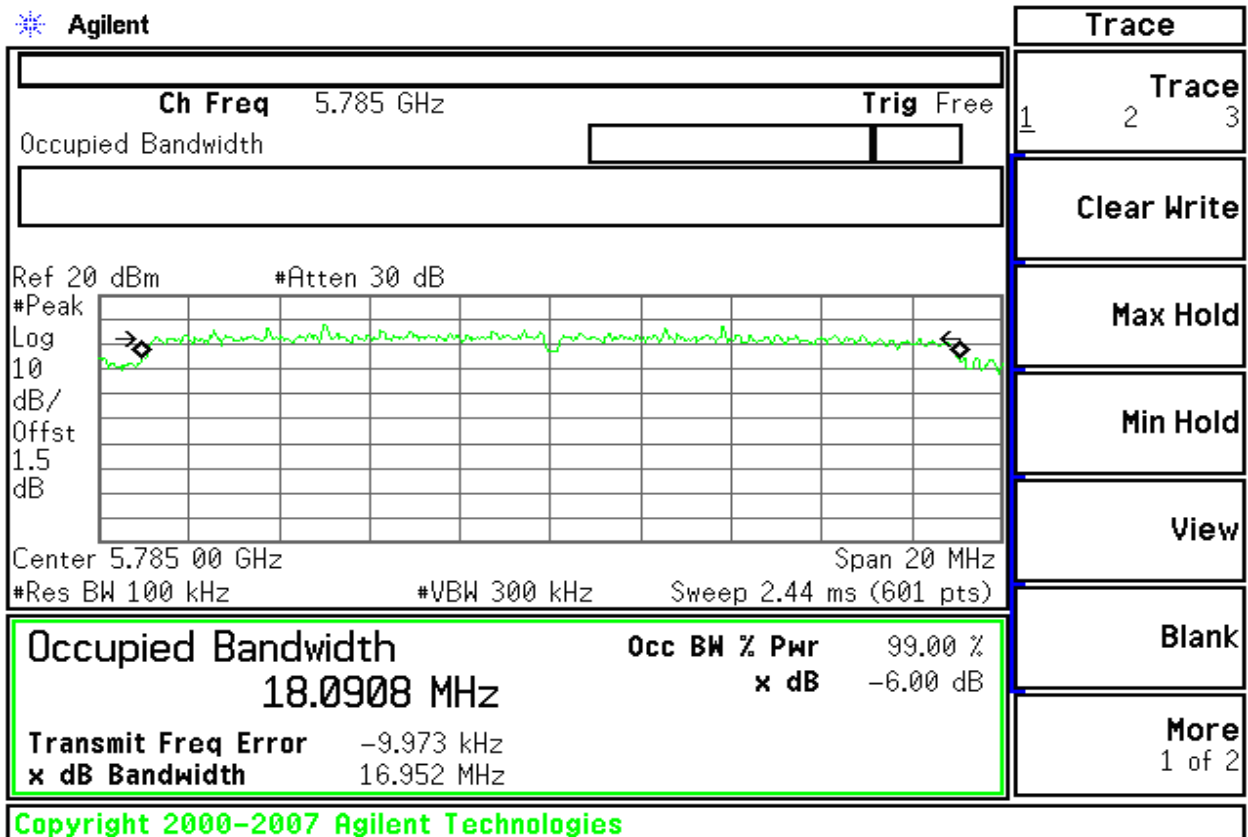
draft 802.11n Standard-20 MHz Channel mode / Chain 2

6dB Bandwidth (CH Low)

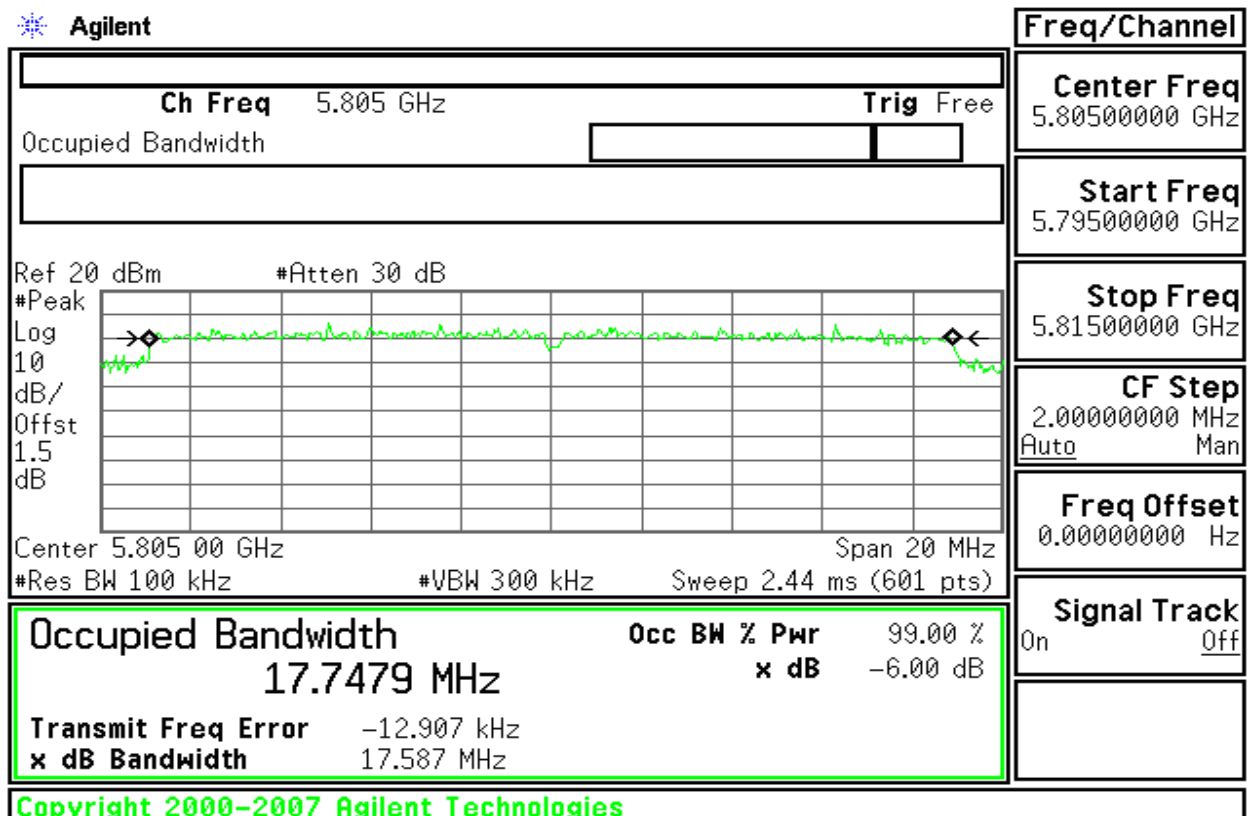




6dB Bandwidth (CH Mid)



6dB Bandwidth (CH High)

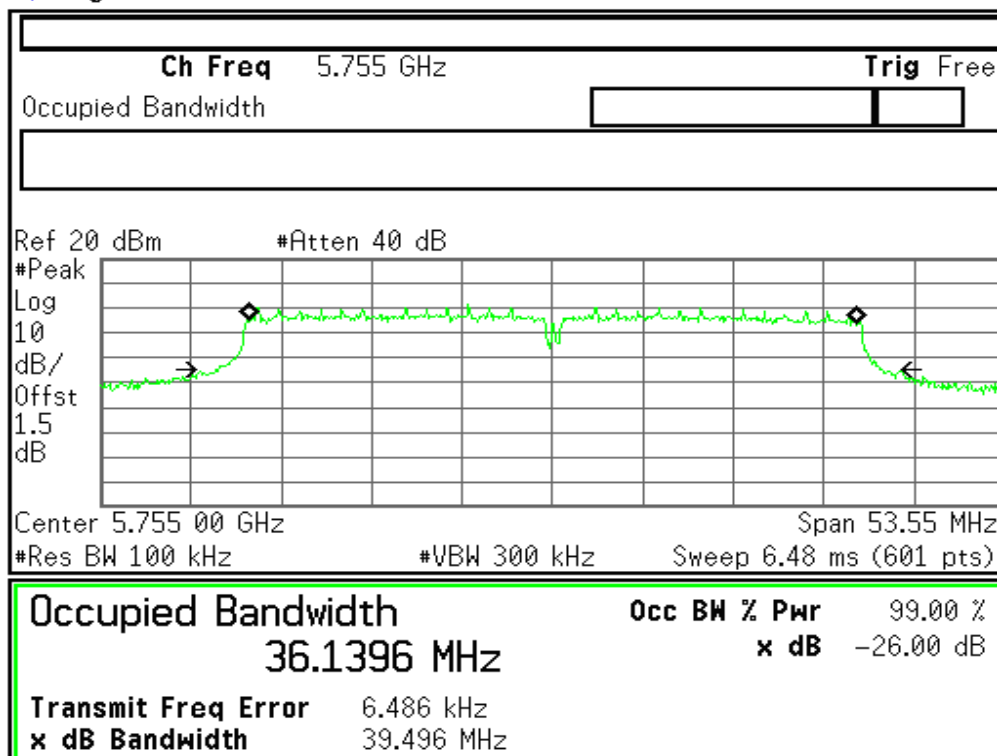




draft 802.11n Standard-40 MHz Channel mode / Chain 0

6dB Bandwidth (CH Low)

* Agilent

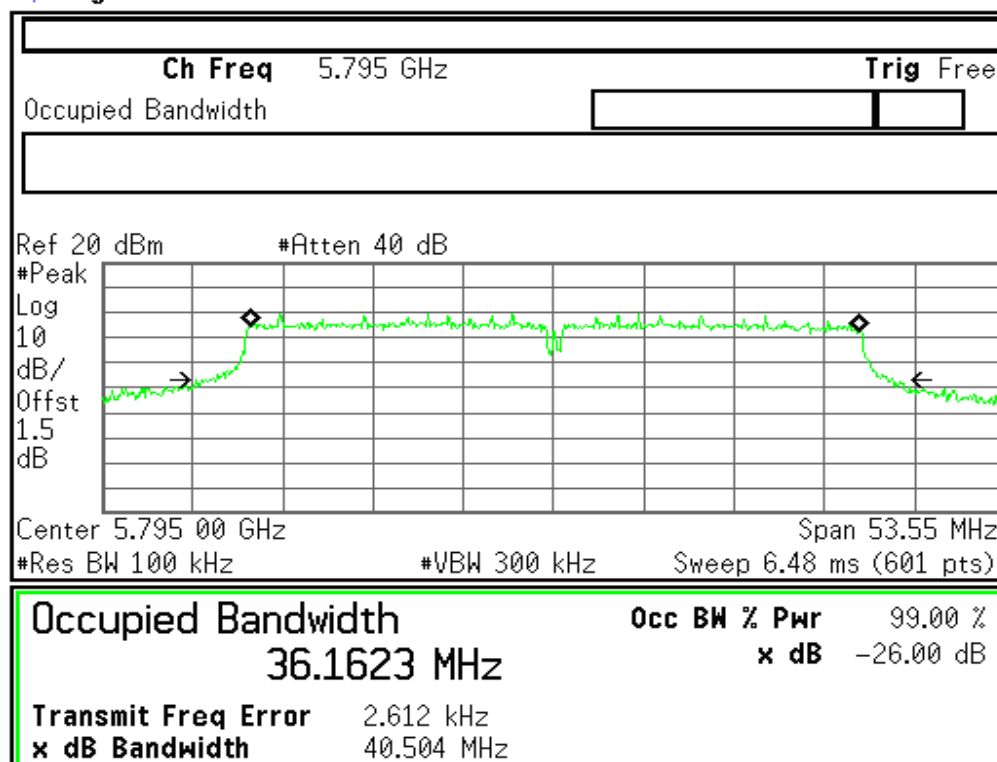


Freq/Channel

Center Freq
5.75500000 GHzStart Freq
5.72822500 GHzStop Freq
5.78177500 GHzCF Step
5.35500000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

6dB Bandwidth (CH High)

* Agilent



Freq/Channel

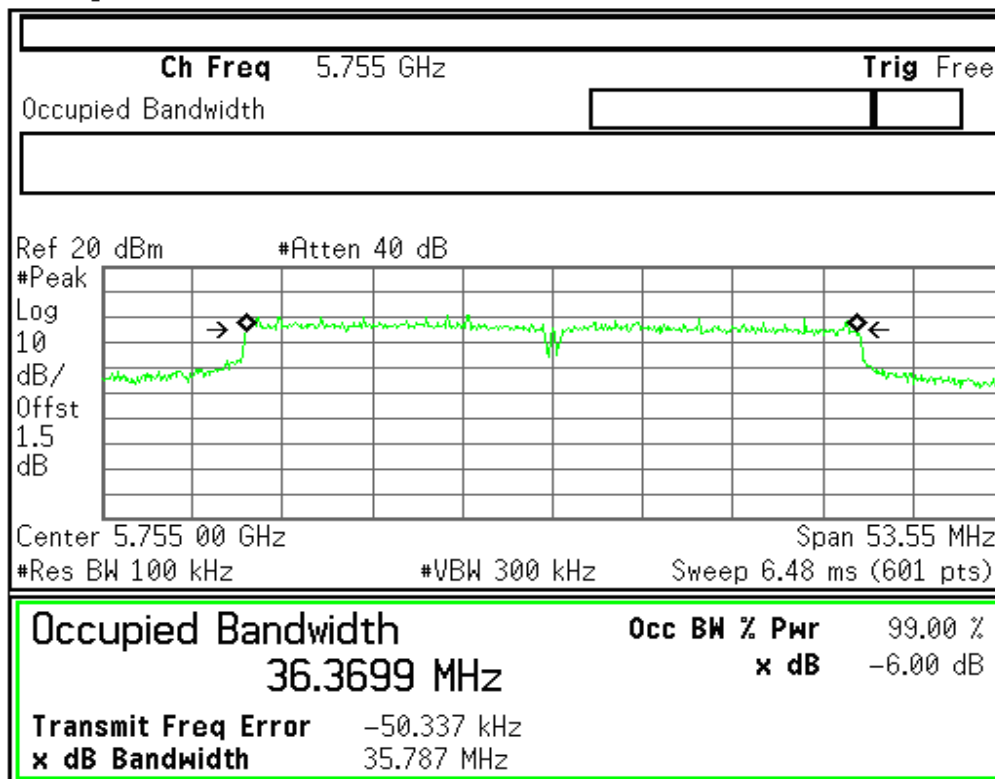
Center Freq
5.79500000 GHzStart Freq
5.76822500 GHzStop Freq
5.82177500 GHzCF Step
5.35500000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off



draft 802.11n Standard-40 MHz Channel mode / Chain 1

6dB Bandwidth (CH Low)

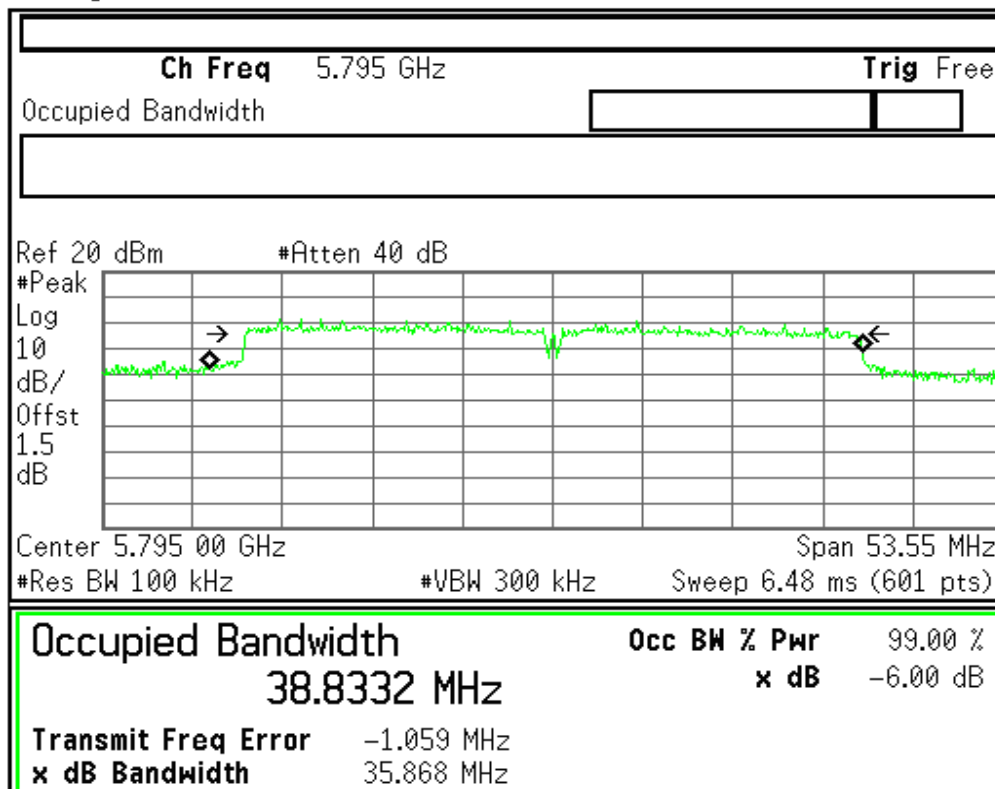
Agilent



Freq/Channel
Center Freq 5.75500000 GHz
Start Freq 5.72822500 GHz
Stop Freq 5.78177500 GHz
CF Step 5.35500000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

6dB Bandwidth (CH High)

Agilent



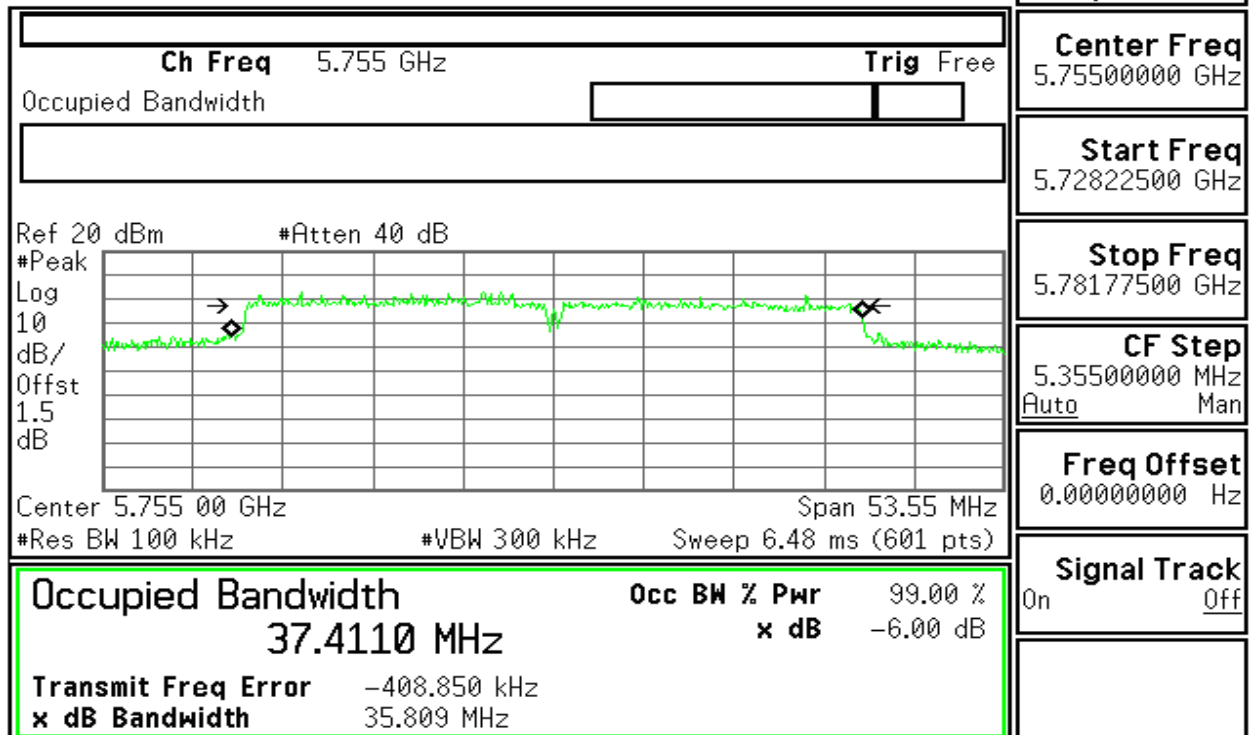
Freq/Channel
Center Freq 5.79500000 GHz
Start Freq 5.76822500 GHz
Stop Freq 5.82177500 GHz
CF Step 5.35500000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off



draft 802.11n Standard-40 MHz Channel mode / Chain 2

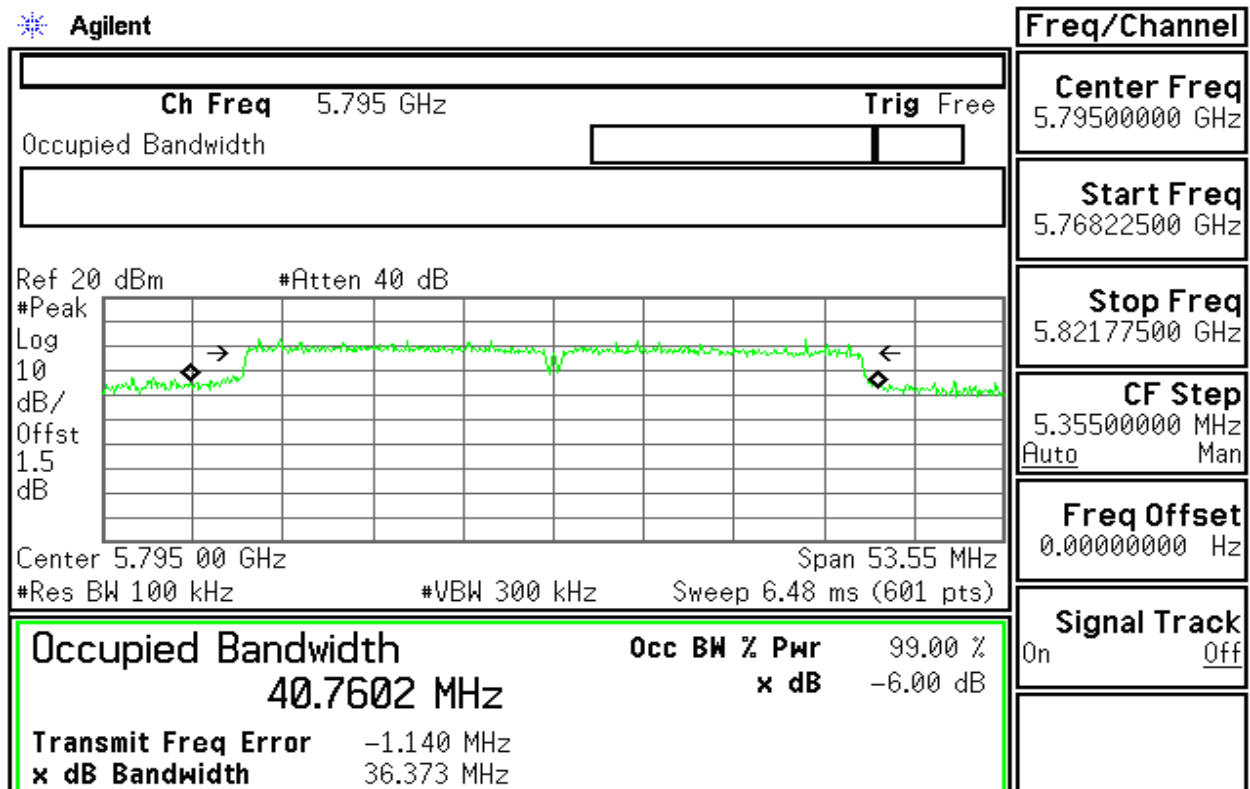
6dB Bandwidth (CH Low)

Agilent



6dB Bandwidth (CH Mid)

Agilent



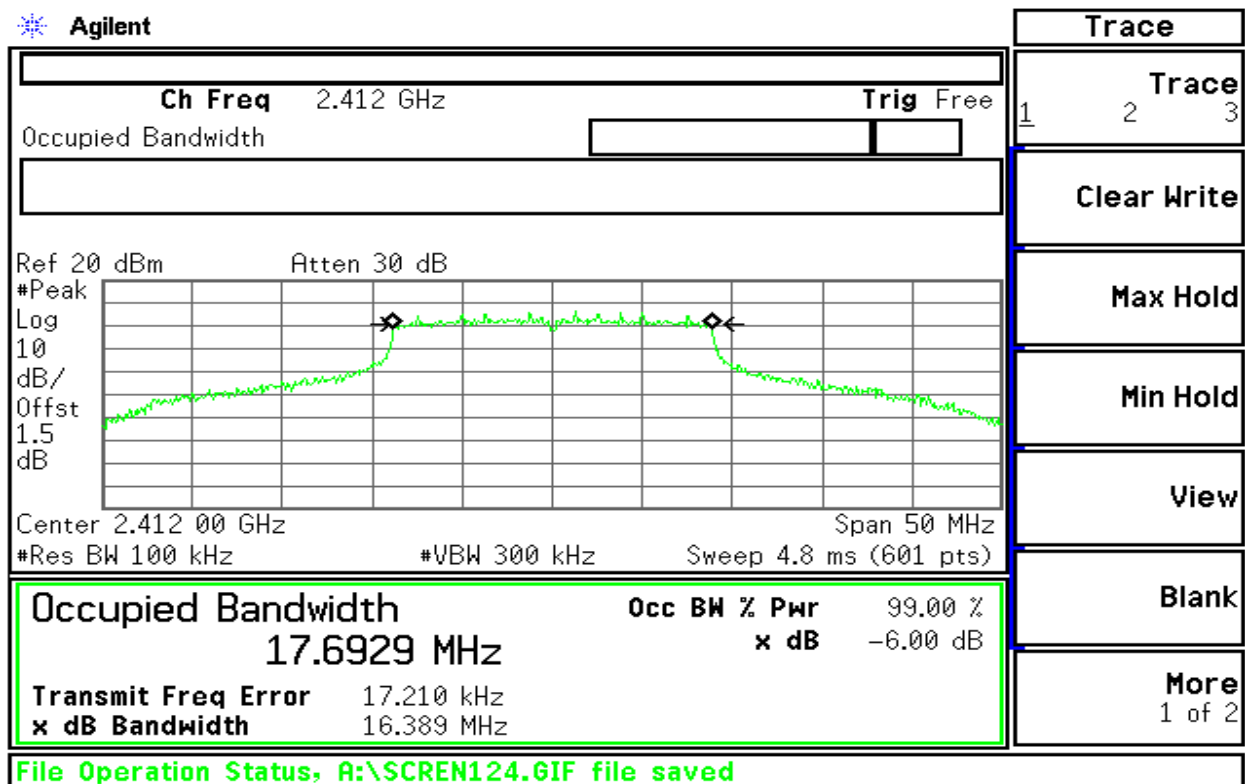
Copyright 2000-2007 Agilent Technologies



draft 802.11gn Standard-20 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

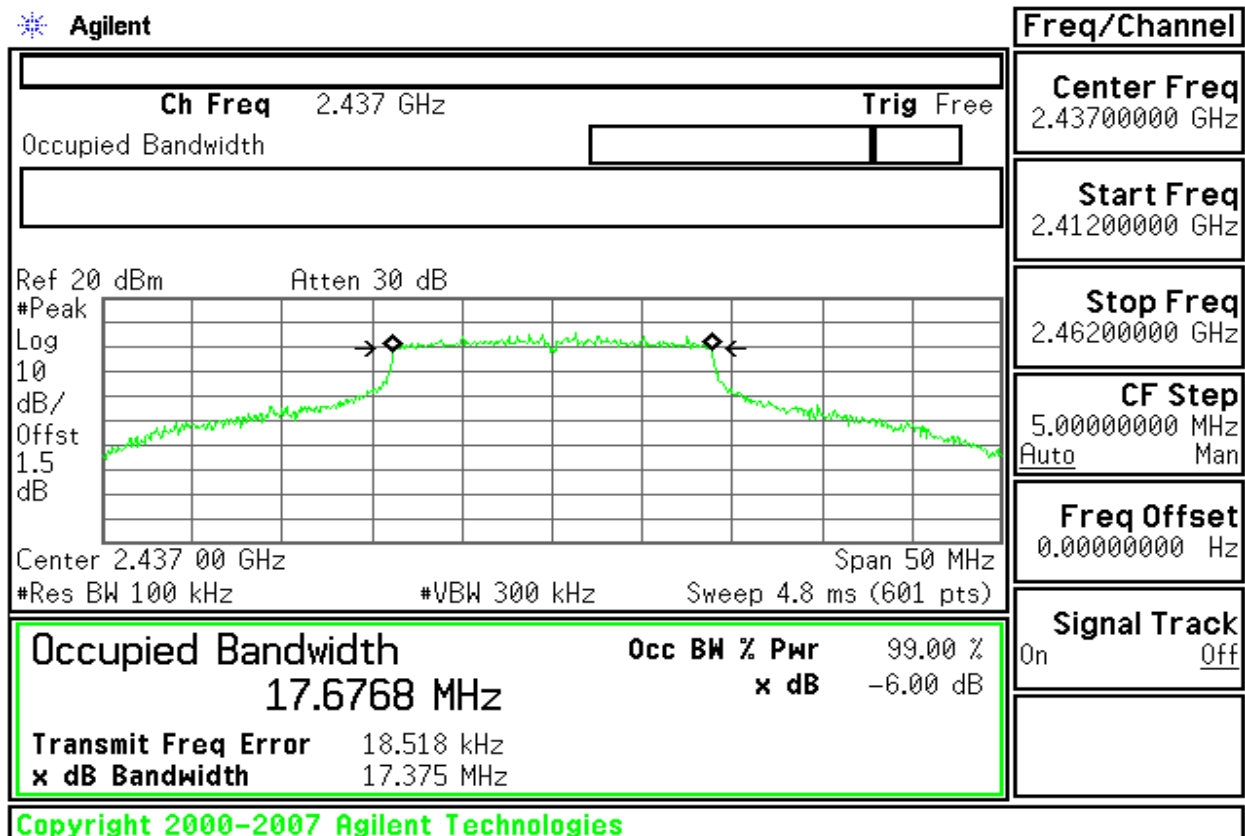
6dB Bandwidth (CH Low)

Agilent



6dB Bandwidth (CH Mid)

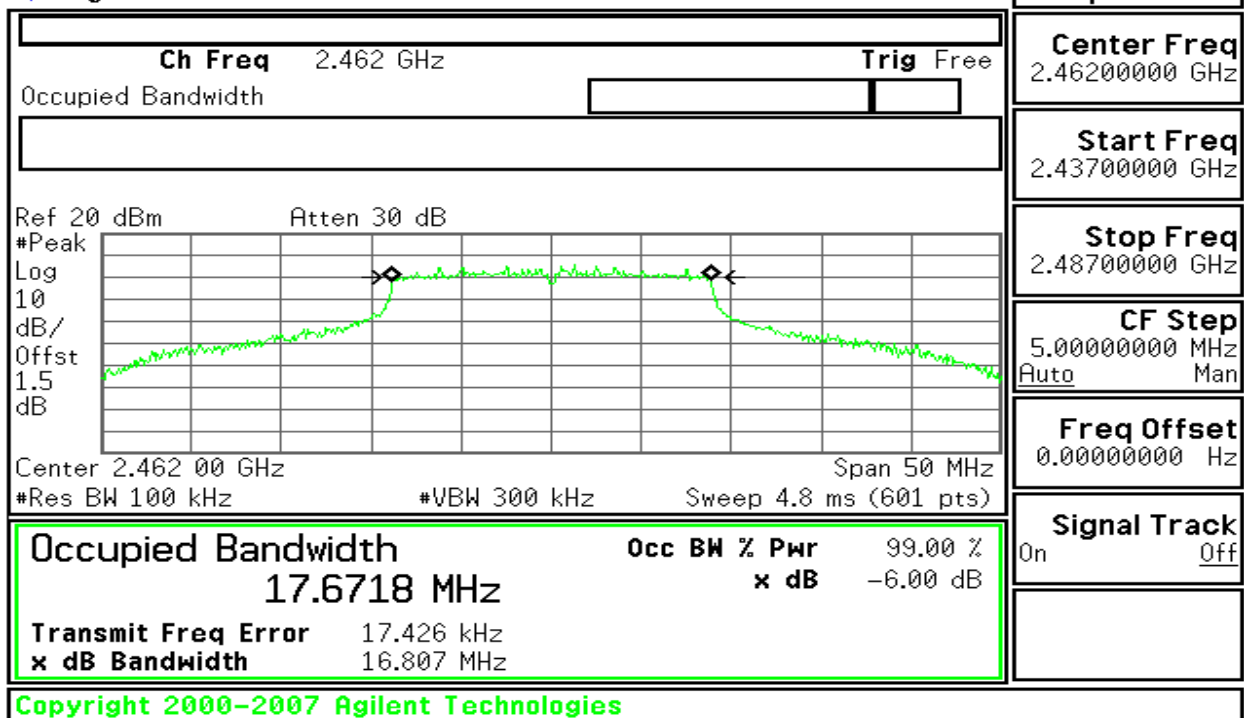
Agilent





6dB Bandwidth (CH High)

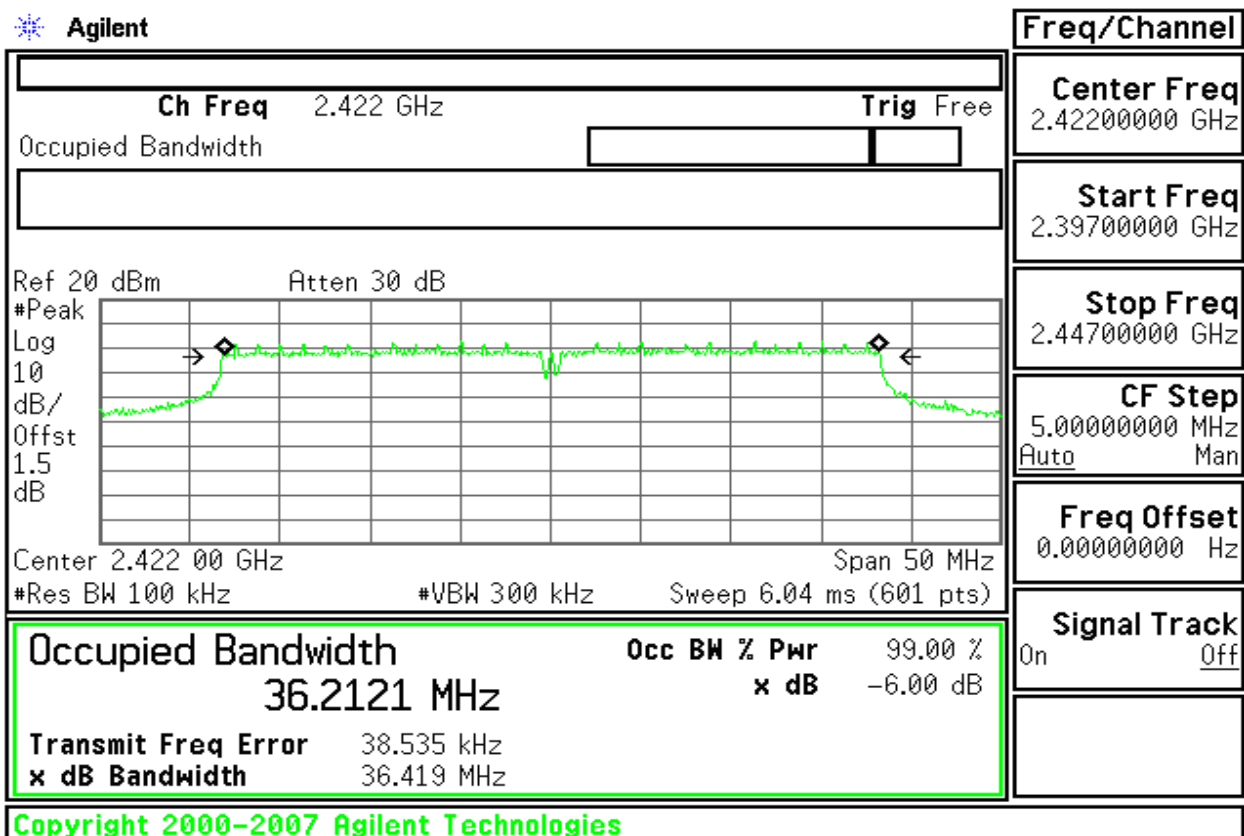
Agilent



draft 802.11n Wide-40 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

6dB Bandwidth (CH Low)

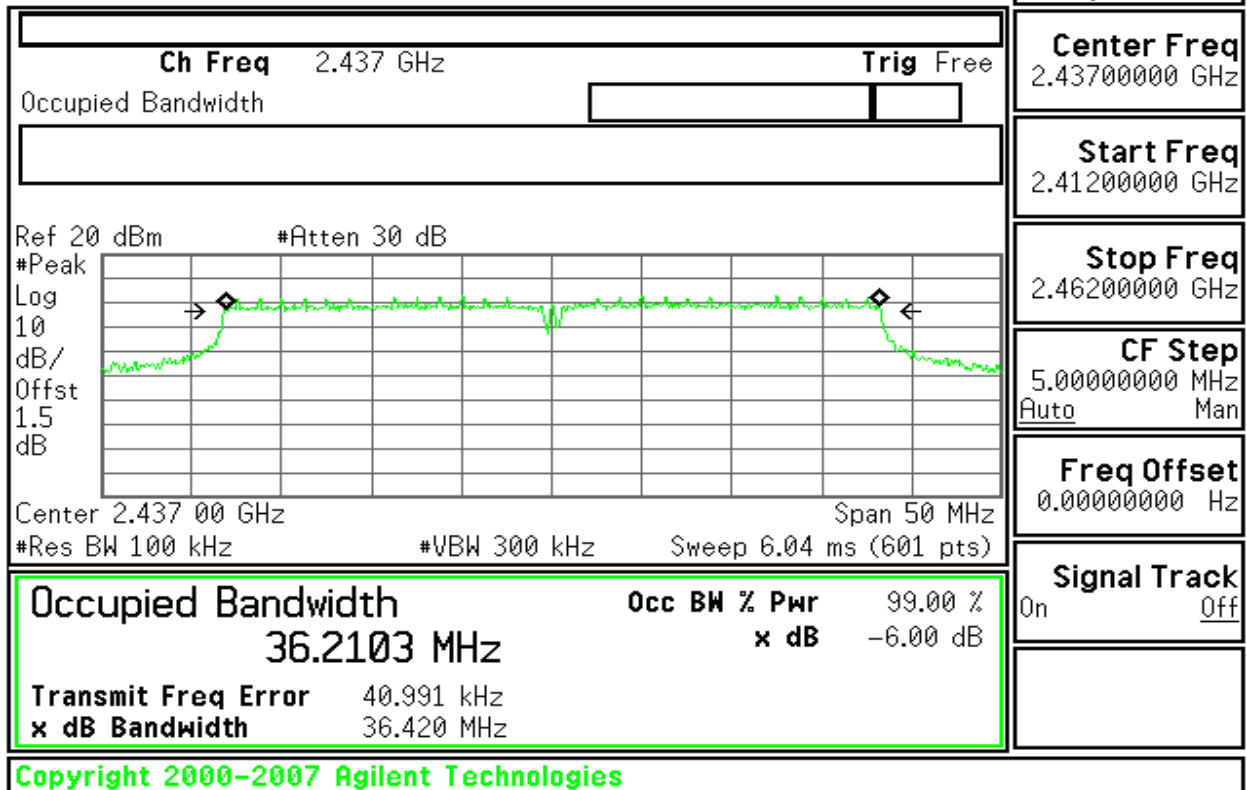
Agilent





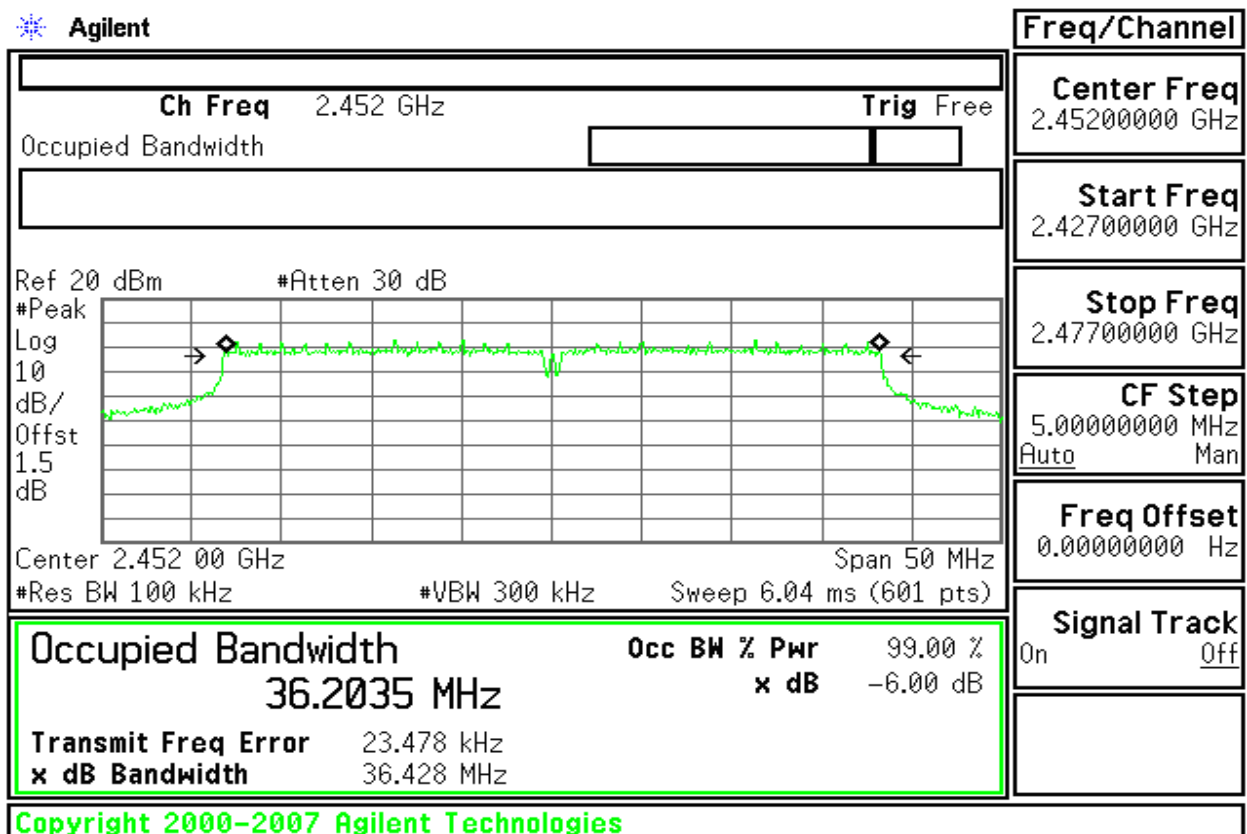
6dB Bandwidth (CH Mid)

Agilent



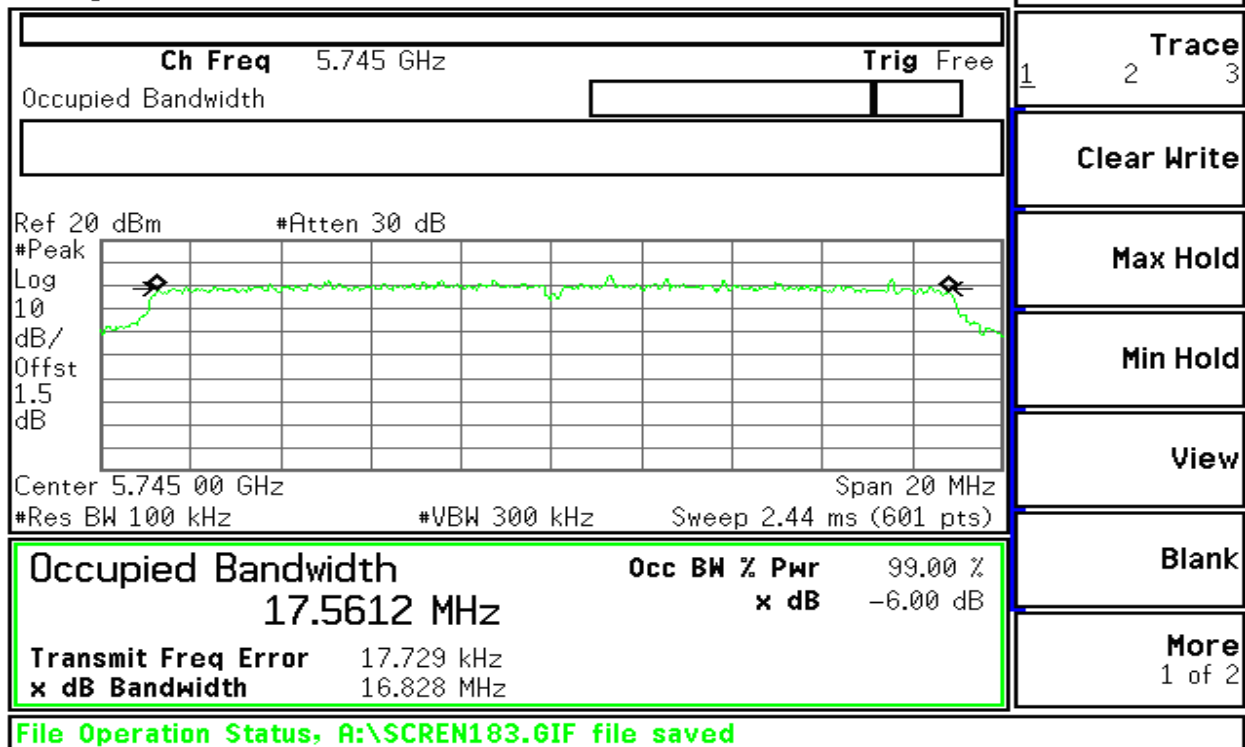
6dB Bandwidth (CH High)

Agilent



**5725MHz-5825MHz****draft 802.11an Standard-20 MHz Channel mode / Chain 0+ Chain 1+ Chain 2****6dB Bandwidth (CH Low)**

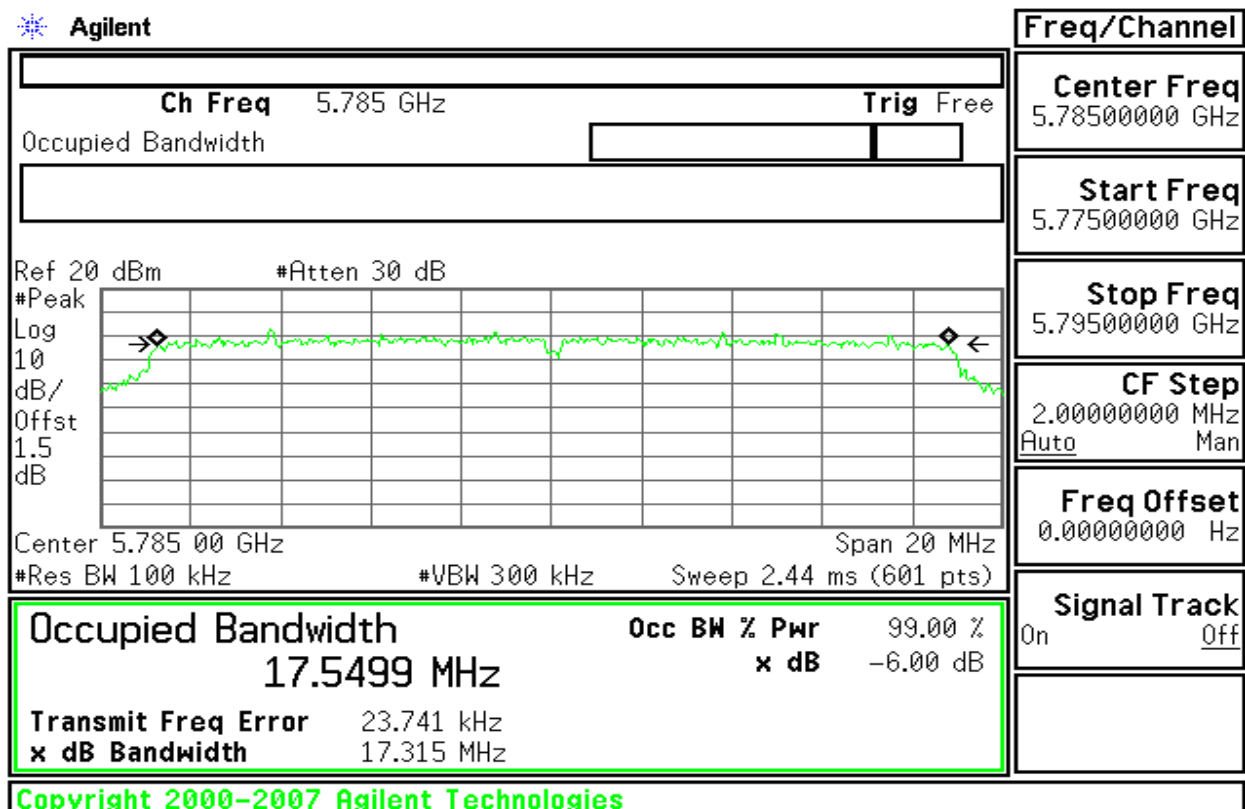
Agilent



Trace
Trace 1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More 1 of 2

6dB Bandwidth (CH Mid)

Agilent

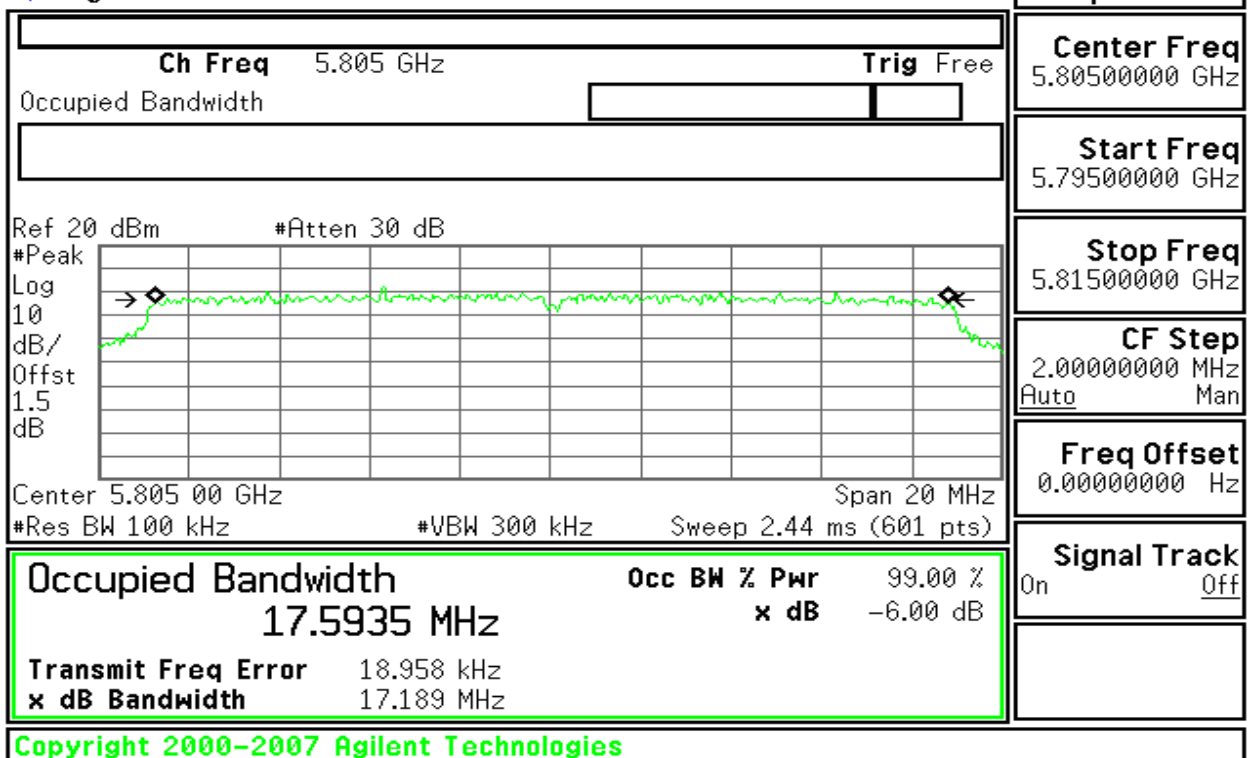


Freq/Channel
Center Freq 5.78500000 GHz
Start Freq 5.77500000 GHz
Stop Freq 5.79500000 GHz
CF Step 2.00000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off



6dB Bandwidth (CH High)

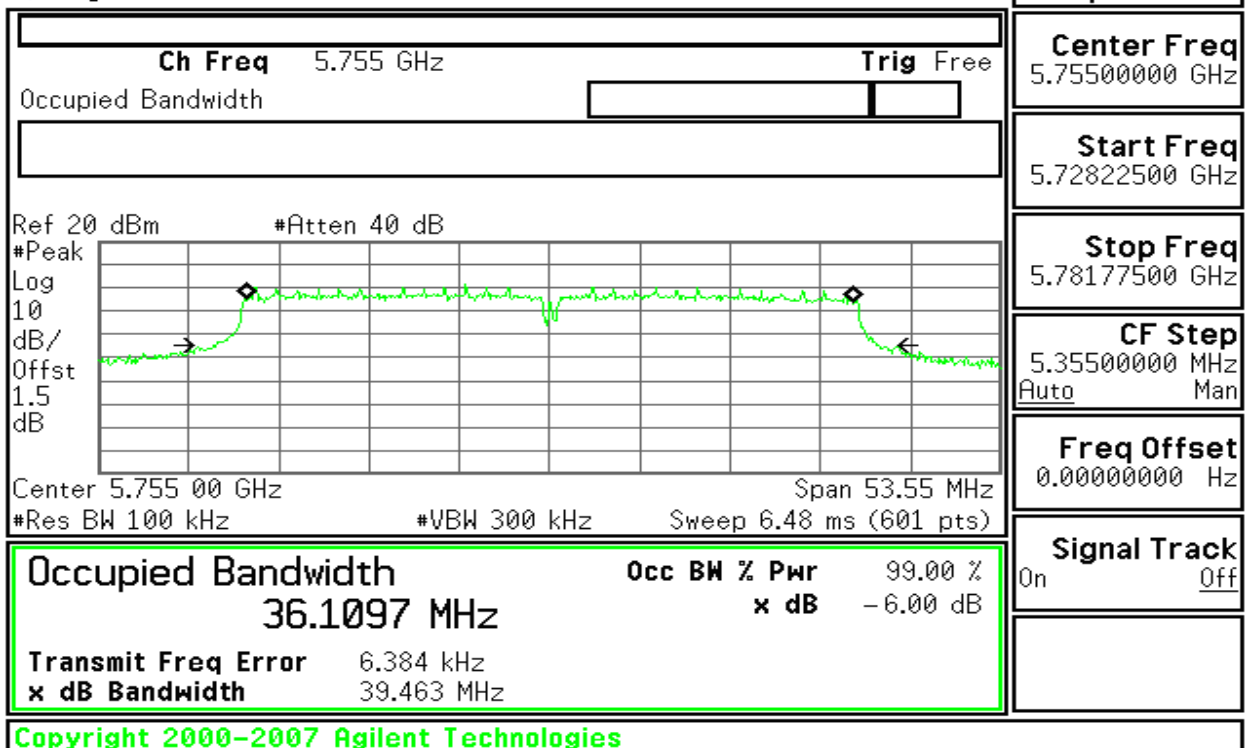
Agilent



draft 802.11n Standard-40 MHz Channel mode / Chain0 + Chain1 + Chain 2

6dB Bandwidth (CH Low)

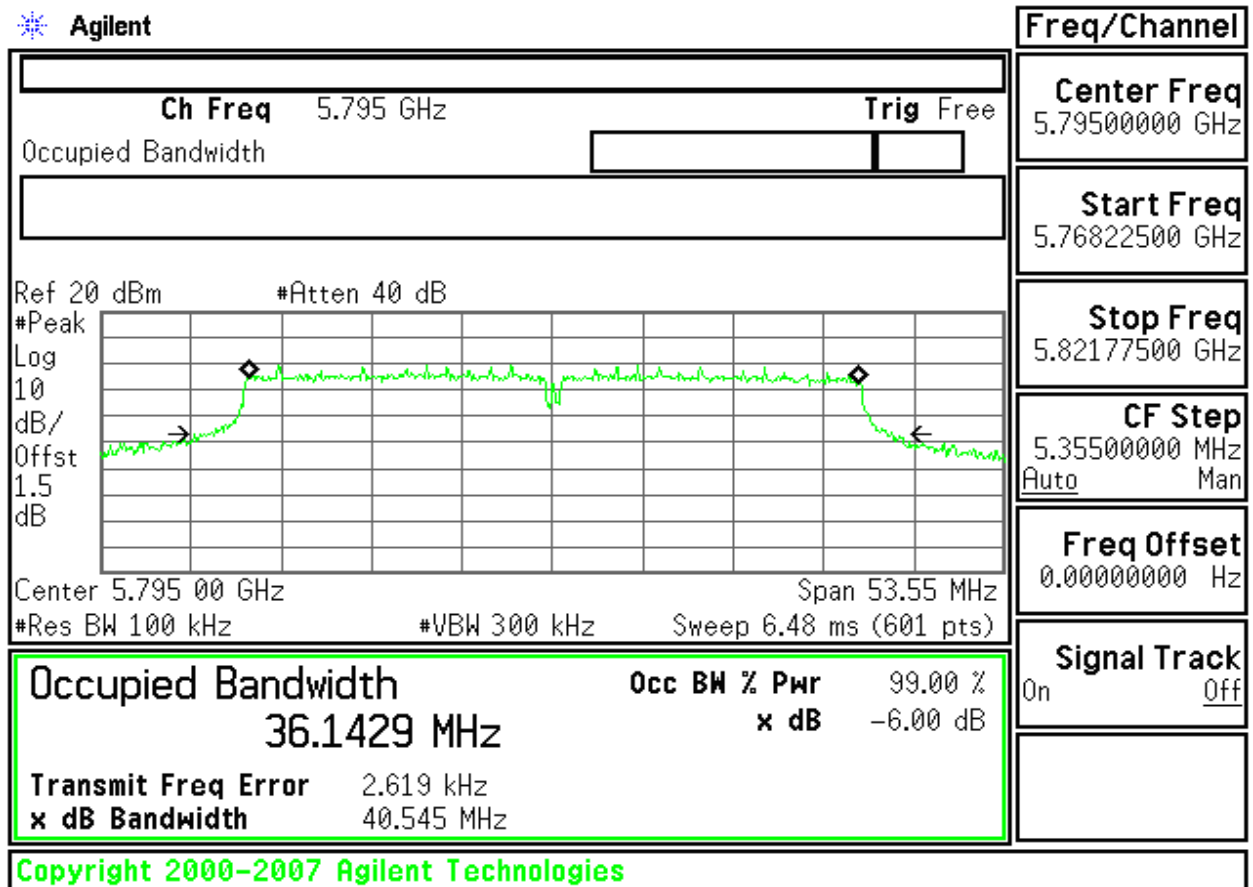
Agilent





6dB Bandwidth (CH High)

* Agilent





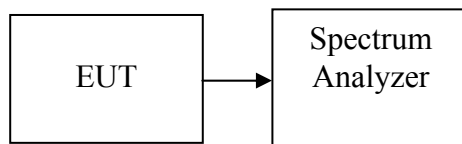
PEAK POWER

LIMIT

The maximum peak output power of the intentional radiator shall not exceed the following:

1. According to §15.247(b)(3), for systems using digital modulation in the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz: 1 Watt.
2. According to §15.247(b)(4), the conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test Configuration



TEST PROCEDURE

- 1 Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2 Set RBW = 1 MHz.
- 3 Set VBW \geq 3 MHz.
- 4 Use sample detector mode if bin width (i.e., span/number of points in spectrum display) < 0.5 RBW. Otherwise use peak detector mode.
- 5 Use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at full control power for entire sweep of every sweep. If the device transmits continuously, with no off intervals or reduced power intervals, the trigger may be set to δ hichfree run δ hich.
- 6 Trace average 100 traces in power averaging mode.
- 7 Compute power by integrating the spectrum across the 26 dB EBW of the signal. The integration can be performed using the spectrum analyzer's band power measurement function with band limits set equal to the EBW band edges or by summing power levels in each 1 MHz band in linear power terms. The 1 MHz band power levels to be summed can be obtained by averaging, in linear power terms, power levels in each frequency bin across the 1 MHz.

**TEST RESULTS***No non-compliance noted***Test Data****Test mode: IEEE 802.11b mode**

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2412	15.70	0.0372	1.00	PASS
Mid	2437	15.54	0.0358		PASS
High	2462	15.74	0.0375		PASS

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2412	15.69	0.0371	1.00	PASS
Mid	2437	15.65	0.0367		PASS
High	2462	16.12	0.0409		PASS

Test mode: draft 802.11n Standard-20 MHz Channel mode

Channel	Frequency (MHz)	Chain 0 Output Power (dBm)	Chain 1 Output Power (dBm)	Chain 2 Output Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2412	15.37	15.50	15.45	20.21	0.1050	1.00	PASS
Mid	2437	15.46	15.35	14.50	19.90	0.0977		PASS
High	2462	15.90	16.05	15.05	20.50	0.1122		PASS

Test mode: draft 802.11gn Wide-40 MHz Channel mode

Channel	Frequency (MHz)	Chain 0 Output Power (dBm)	Chain 1 Output Power (dBm)	Chain 2 Output Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2422	16.23	16.48	16.59	21.21	0.1321	1.00	PASS
Mid	2437	16.25	16.44	16.38	21.13	0.1297		PASS
High	2452	16.08	16.47	16.19	21.02	0.1265		PASS

Test mode: draft 802.11gn Standard-20 MHz Channel mode / Chain 0+ Chain 1 +Chain 2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2412	21.10	0.1288	1.00	PASS
Mid	2437	20.62	0.1153		PASS
High	2462	22.50	0.1778		PASS

**Test mode: draft 802.11gn Wide-40 MHz Channel mode / Chain 0+ Chain 1 +Chain 2**

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	2422	21.88	0.1542	1.00	PASS
Mid	2437	21.42	0.1387		PASS
High	2452	21.29	0.1346		PASS

Test mode: IEEE 802.11a mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	5745	17.98	0.0628	1.00	PASS
Mid	5785	18.05	0.0638		PASS
High	5805	18.11	0.0647		PASS

Test mode: draft 802.11an Standard-20 MHz Channel mode

Channel	Frequency (MHz)	Chain 0 Output Power (dBm)	Chain 1 Output Power (dBm)	Chain 2 Output Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	5745	16.79	17.00	16.94	21.68	0.1472	1.00	PASS
Mid	5785	17.33	17.08	17.25	21.99	0.1581		PASS
High	5805	17.45	17.45	17.29	22.17	0.1648		PASS

Test mode: draft 802.11an Wide-40 MHz Channel mode

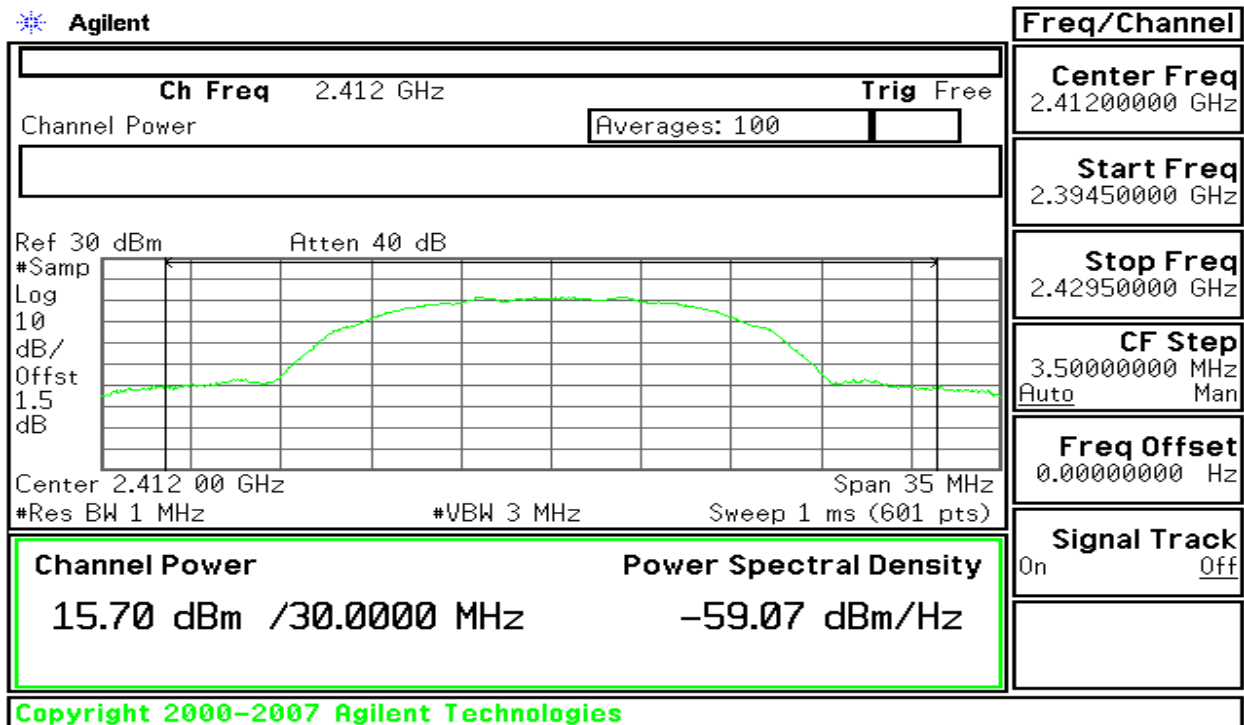
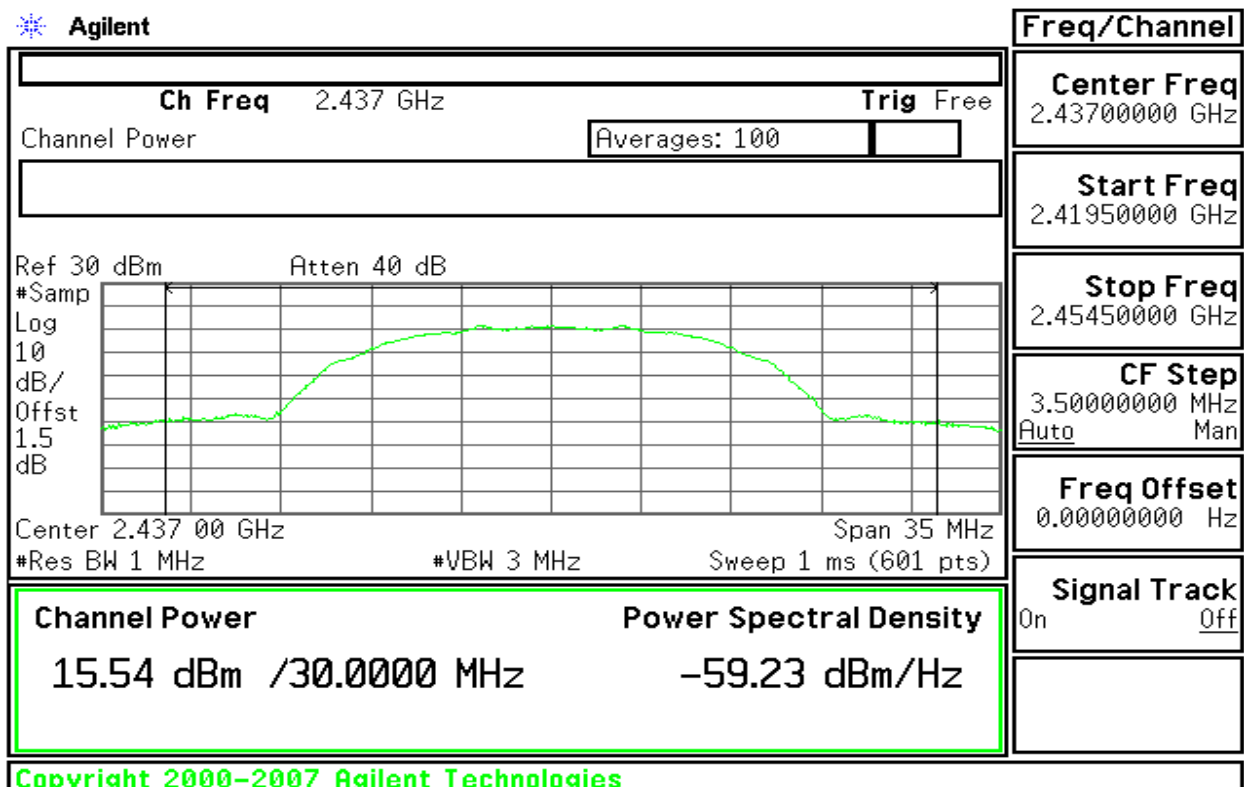
Channel	Frequency (MHz)	Chain 0 Output Power (dBm)	Chain 1 Output Power (dBm)	Chain 2 Output Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	5755	17.92	17.83	17.30	22.46	0.1762	1.00	PASS
Mid	5795	17.68	17.85	17.54	22.46	0.1762		PASS

Test mode: draft 802.11an Standard-20 MHz Channel mode / Chain 0+ Chain 1 +Chain 2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	5745	21.67	0.1469	1.00	PASS
Mid	5785	22.04	0.1600		PASS
High	5805	22.94	0.1968		PASS

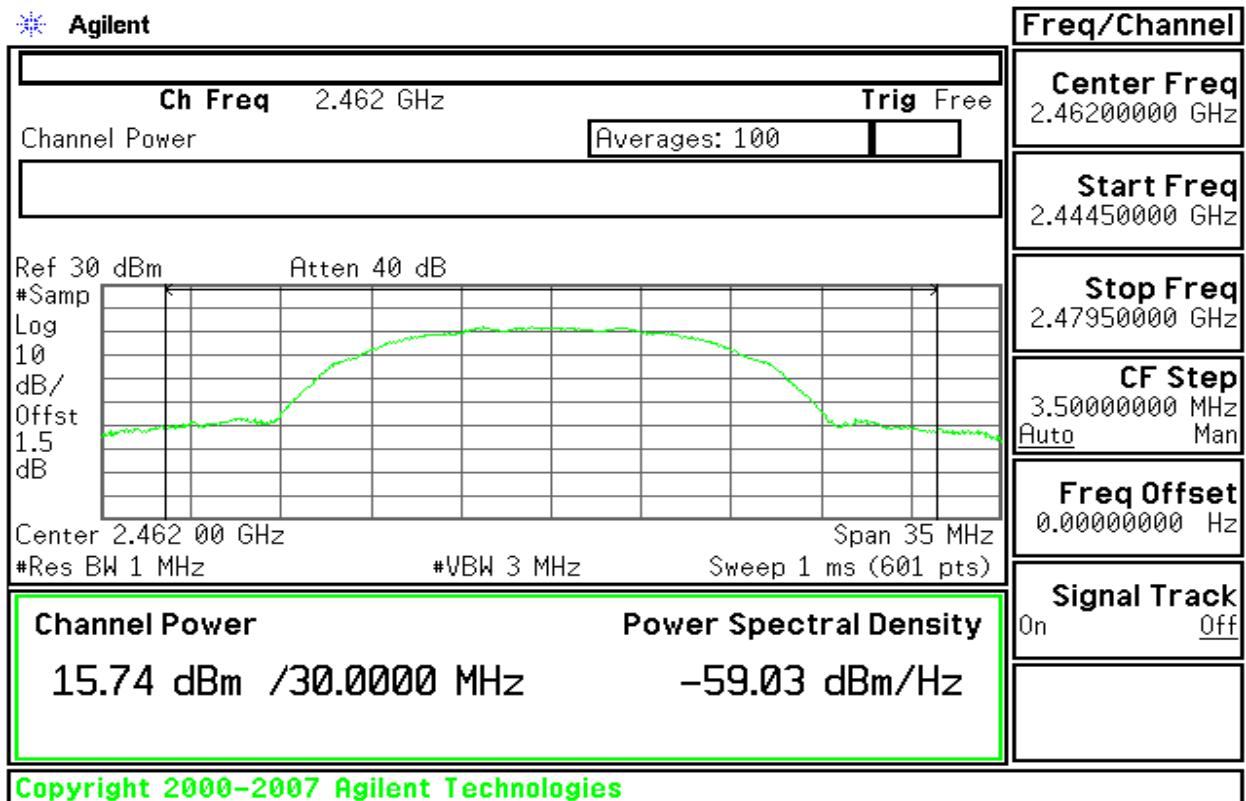
Test mode: draft 802.11an Wide-40 MHz Channel mode / Chain 0+ Chain 1 +Chain 2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Result
Low	5755	21.85	0.1531	1.00	PASS
Mid	5795	22.85	0.1928		PASS

**Test Plot****IEEE 802.11b mode****Peak Power (CH Low)****Peak Power (CH Mid)**

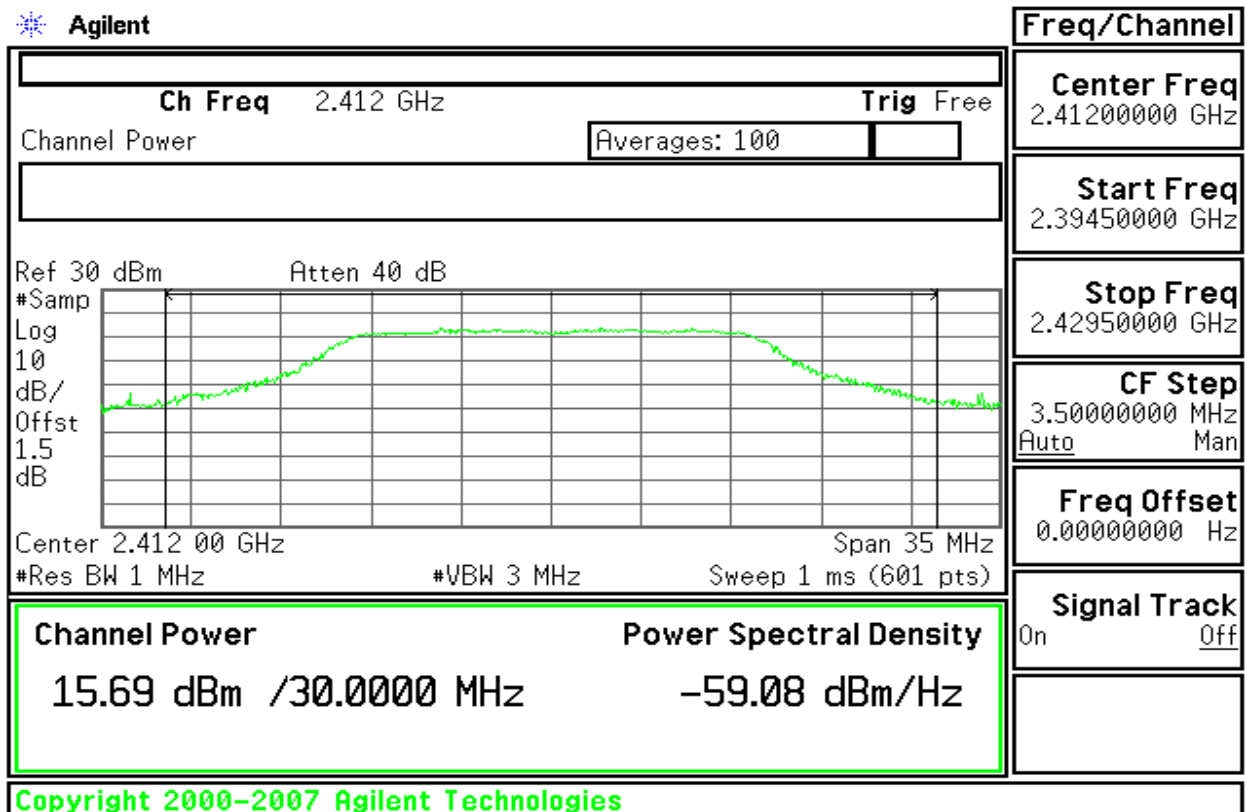


Peak Power (CH High)



IEEE 802.11g mode

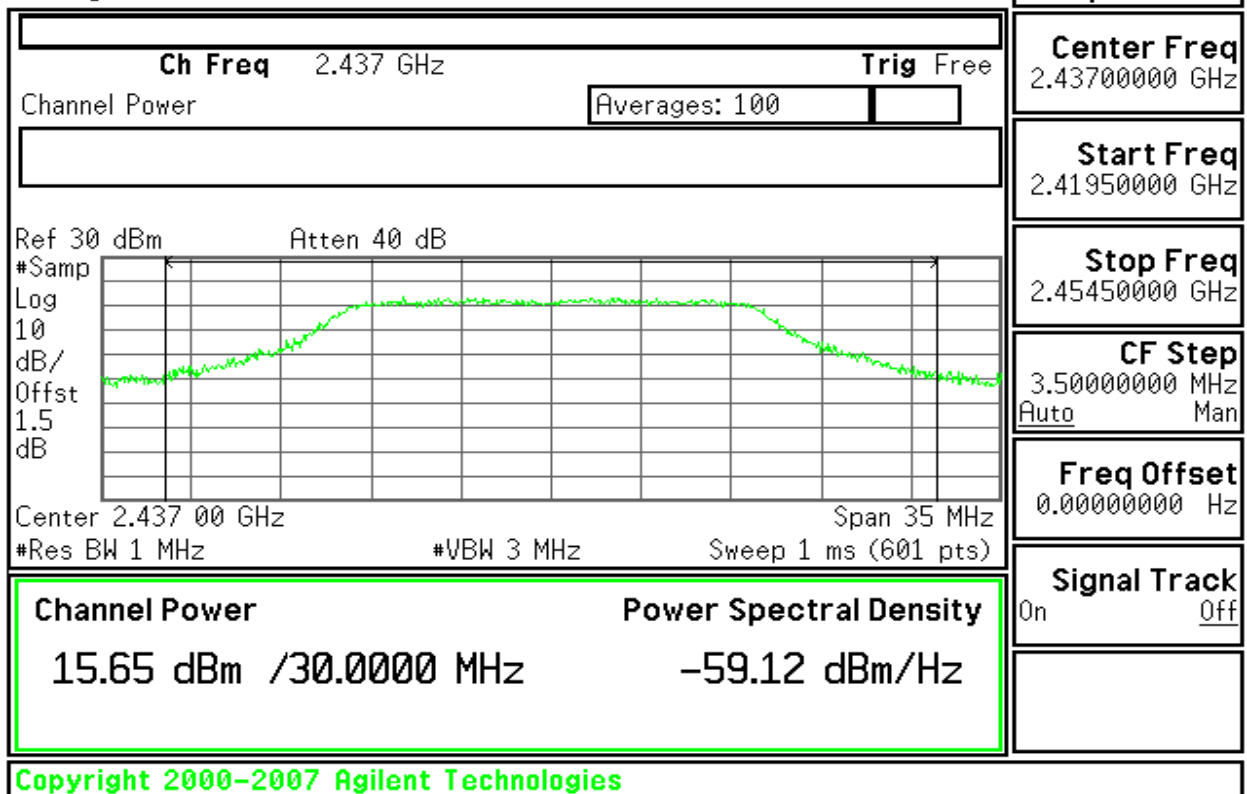
Peak Power (CH Low)





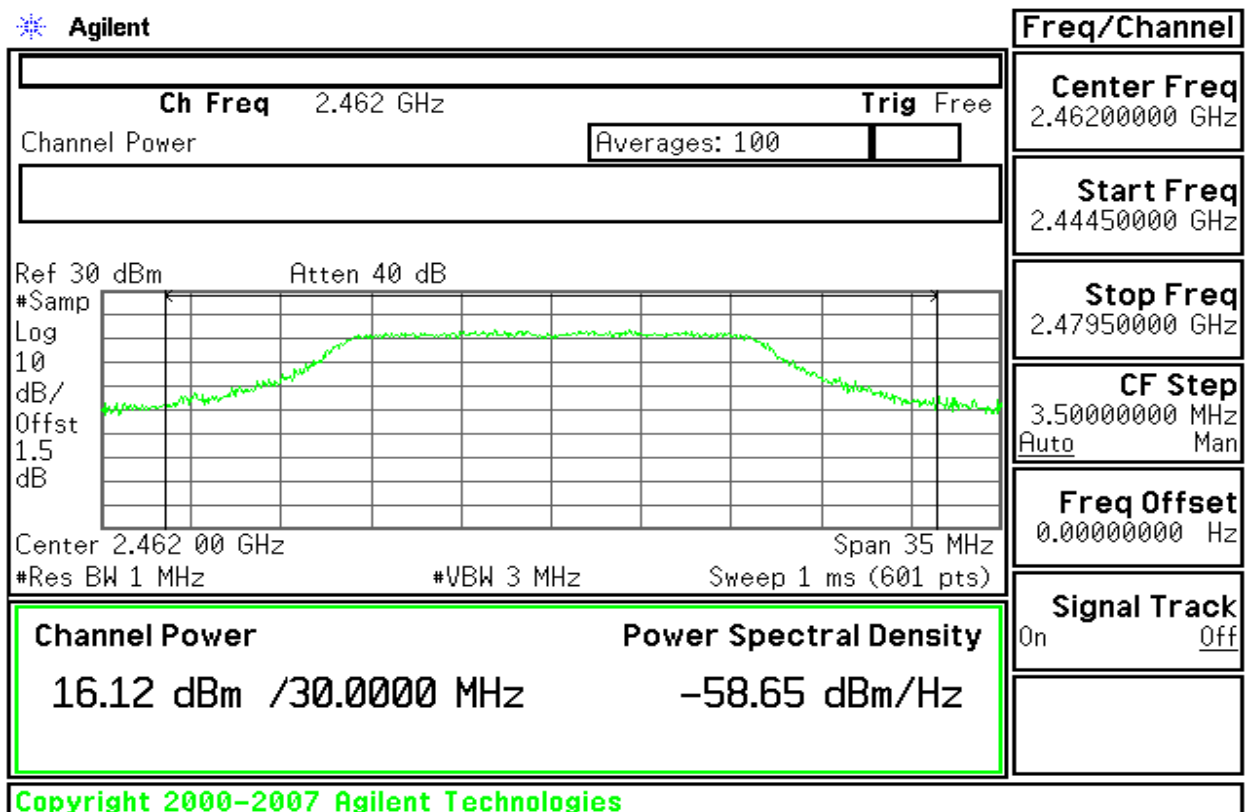
Peak Power (CH Mid)

Agilent



Peak Power (CH High)

Agilent

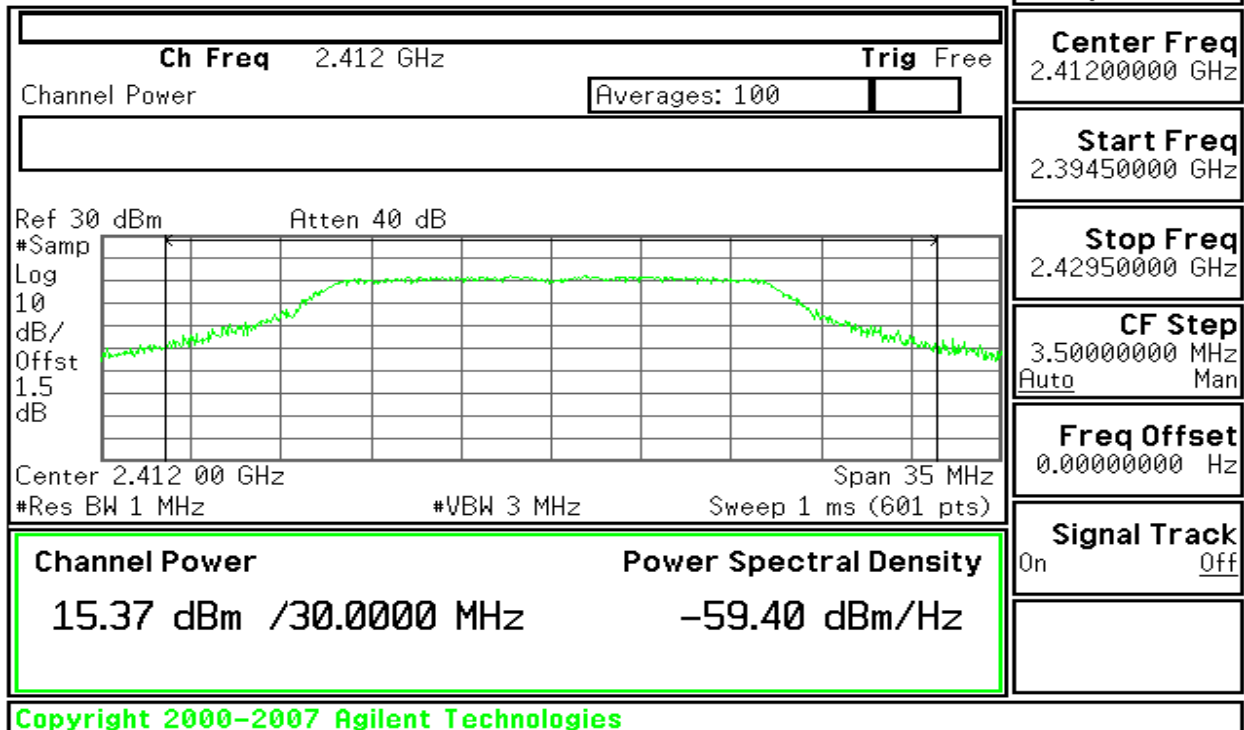




draft 802.11n Standard-20 MHz Channel mode / Chain 0

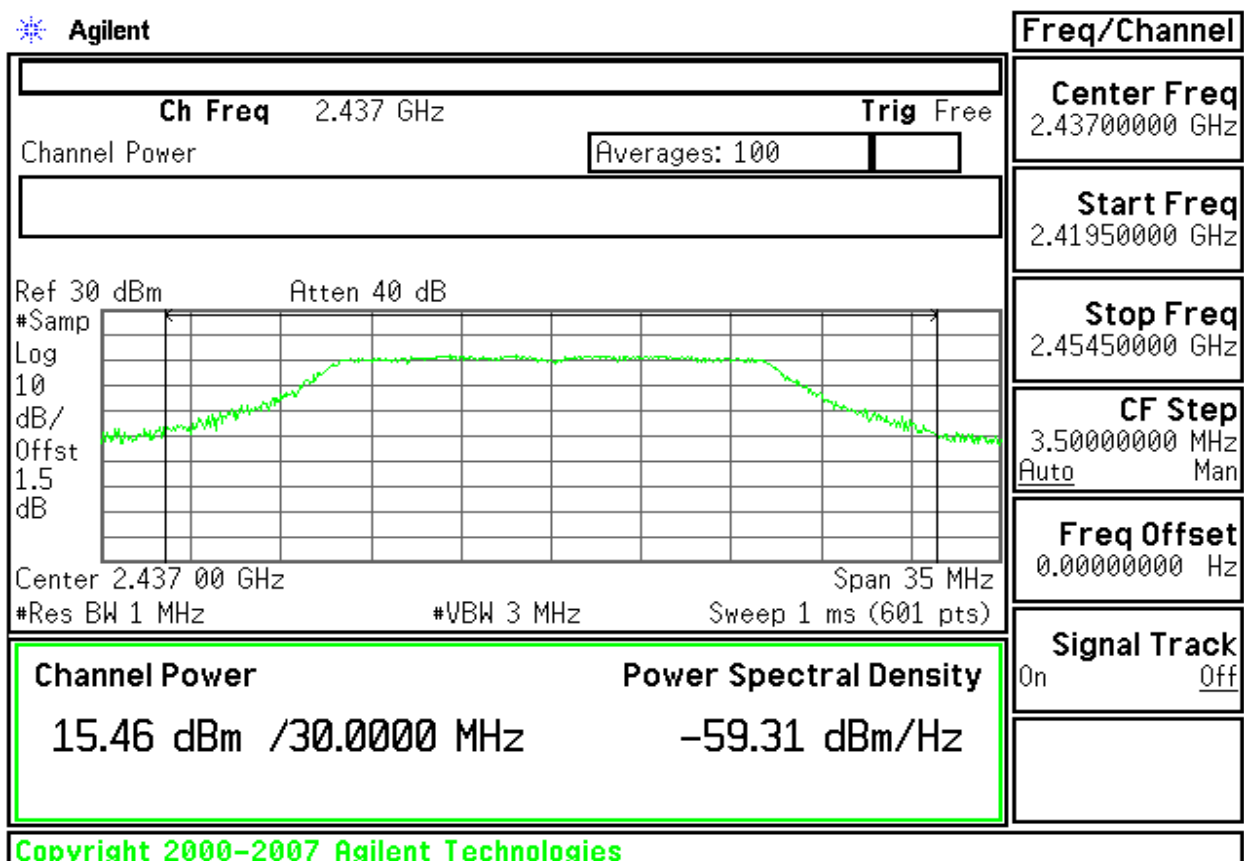
Peak Power (CH Low)

Agilent



Peak Power (CH Mid)

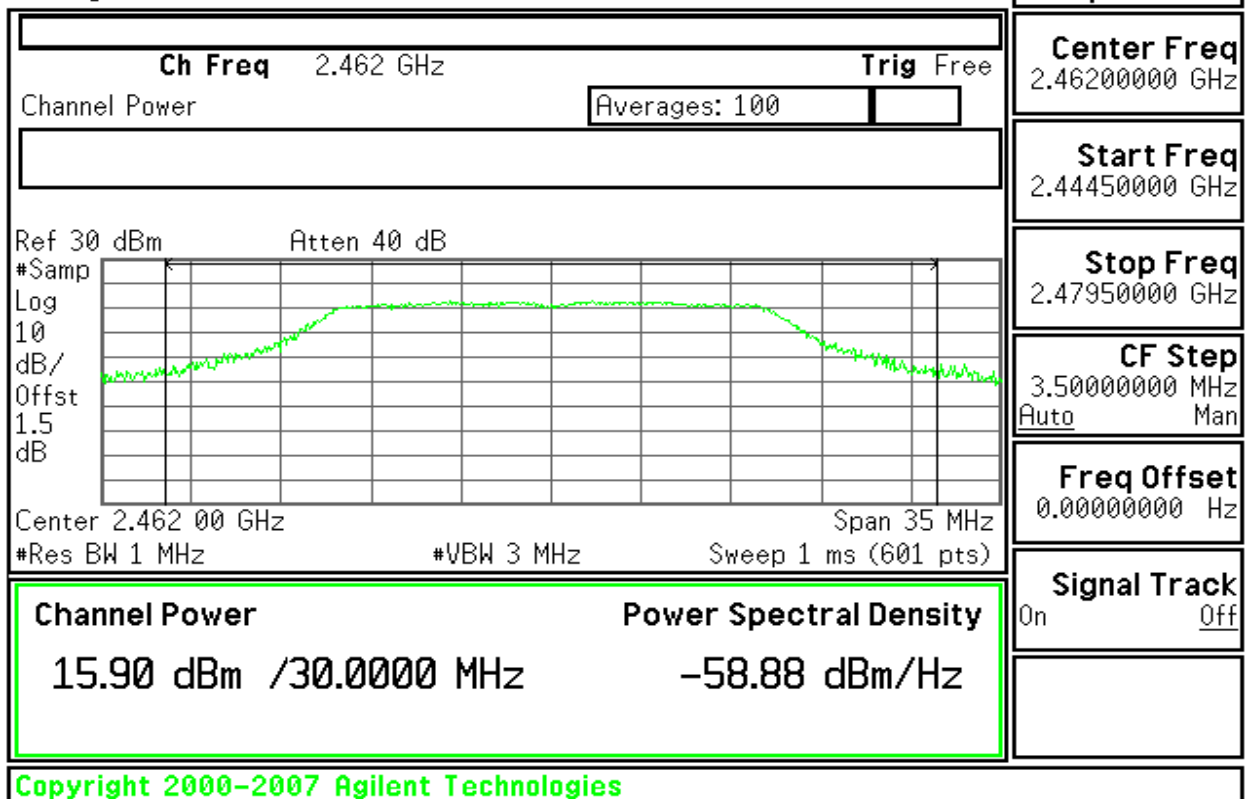
Agilent





Peak Power (CH High)

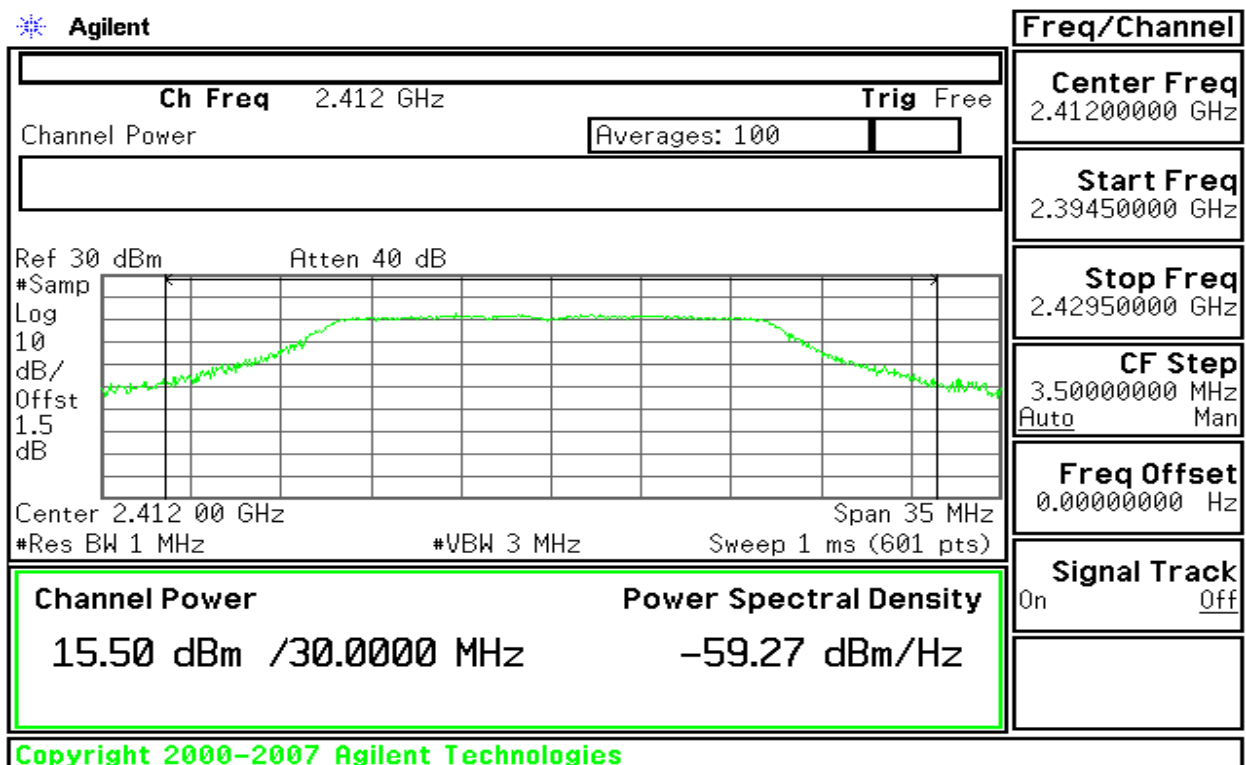
Agilent



draft 802.11n Standard-20 MHz Channel mode / Chain 1

Peak Power (CH Low)

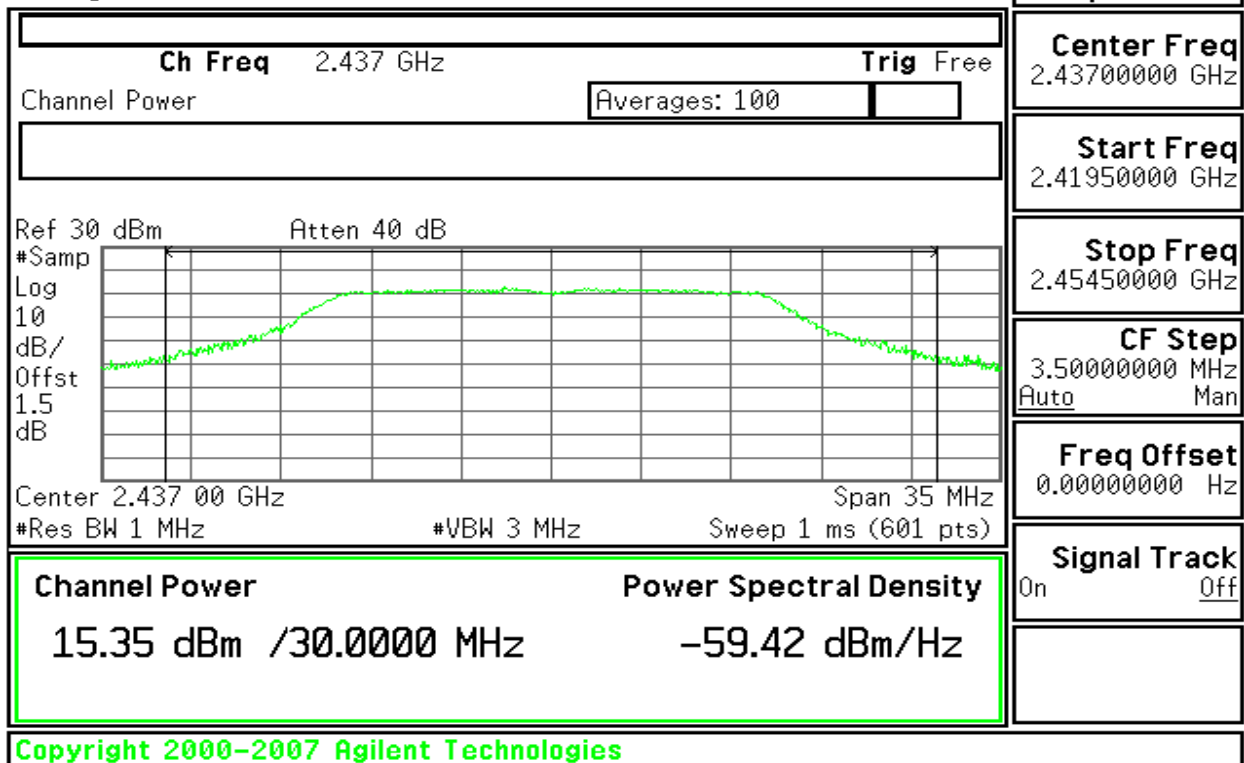
Agilent





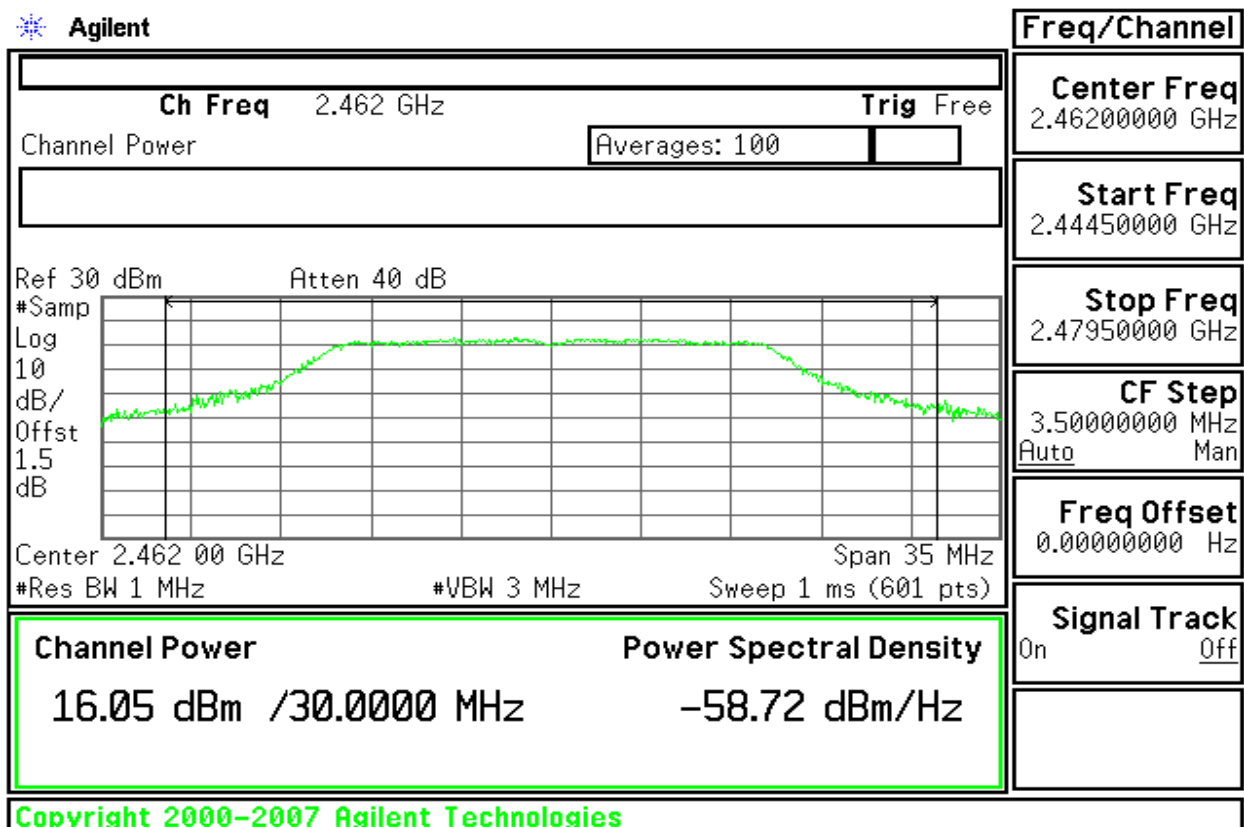
Peak Power (CH Mid)

Agilent



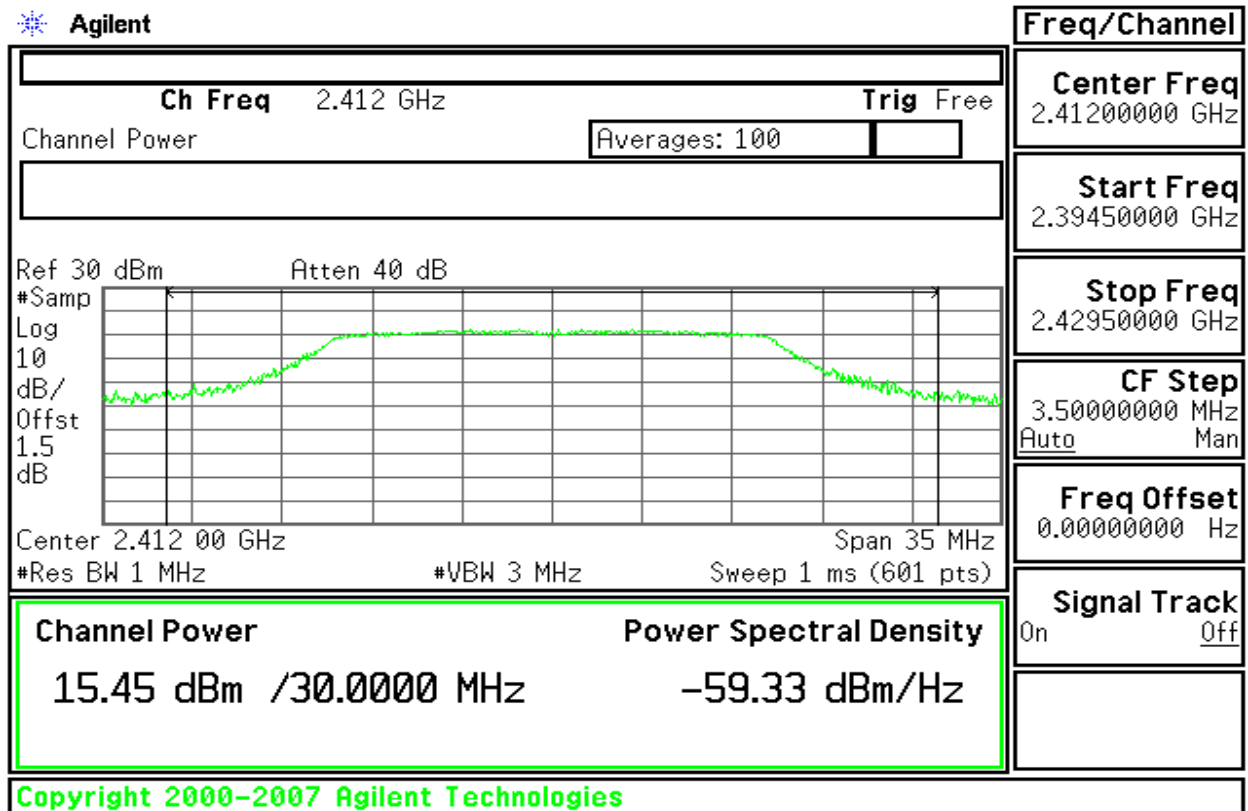
Peak Power (CH High)

Agilent

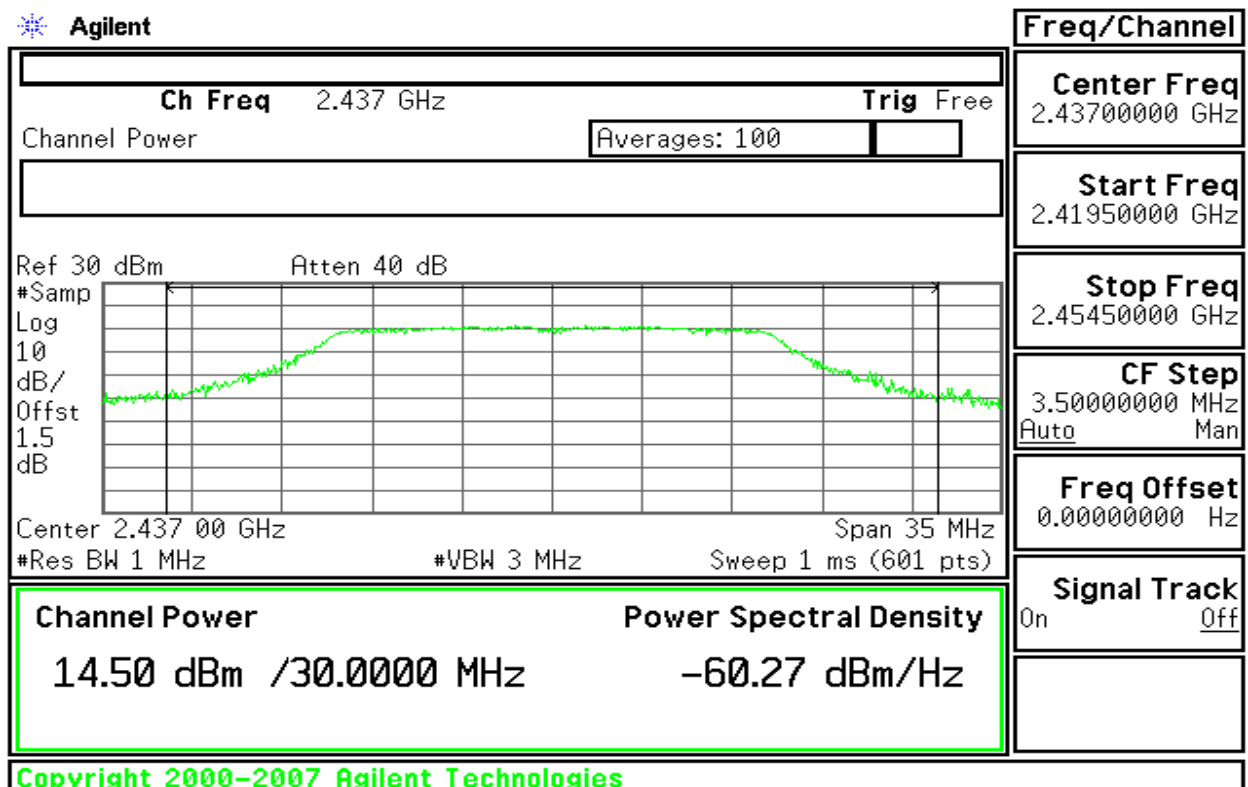


draft 802.11n Standard-20 MHz Channel mode / Chain 2

Peak Power (CH Low)

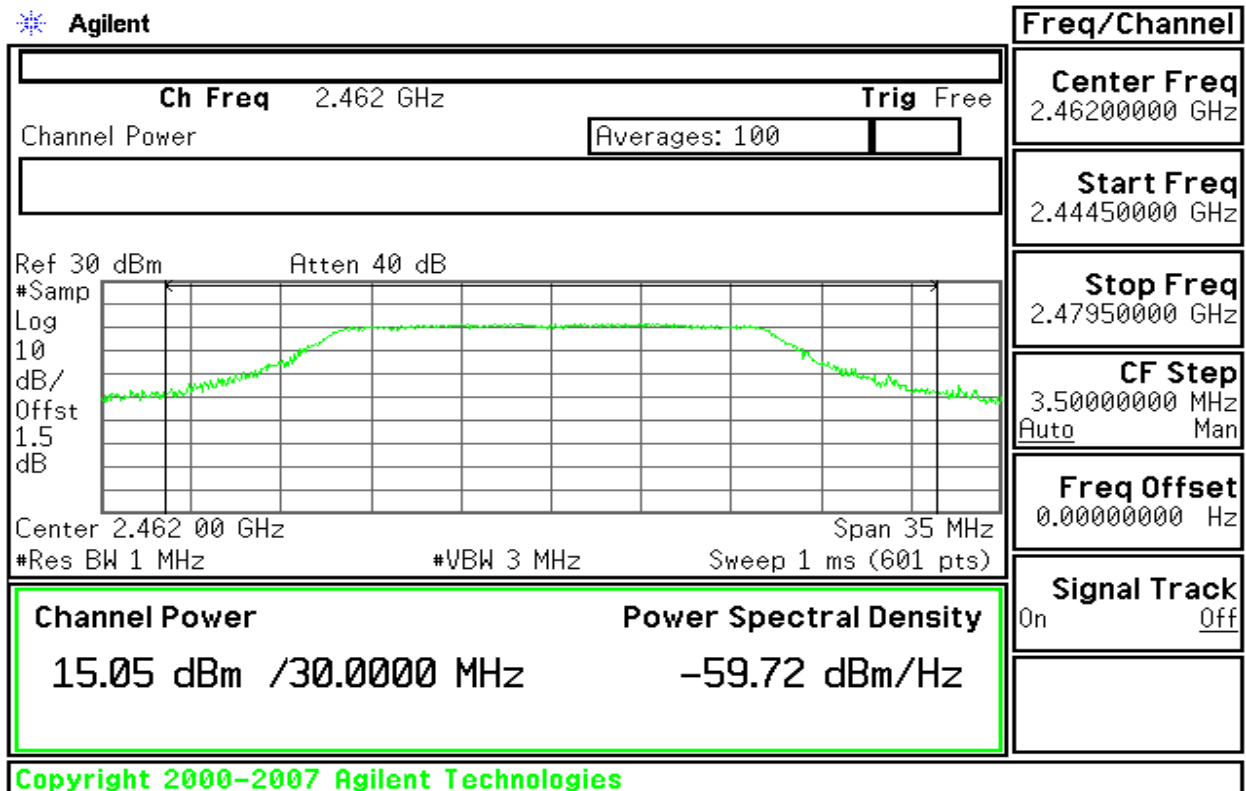


Peak Power (CH Mid)



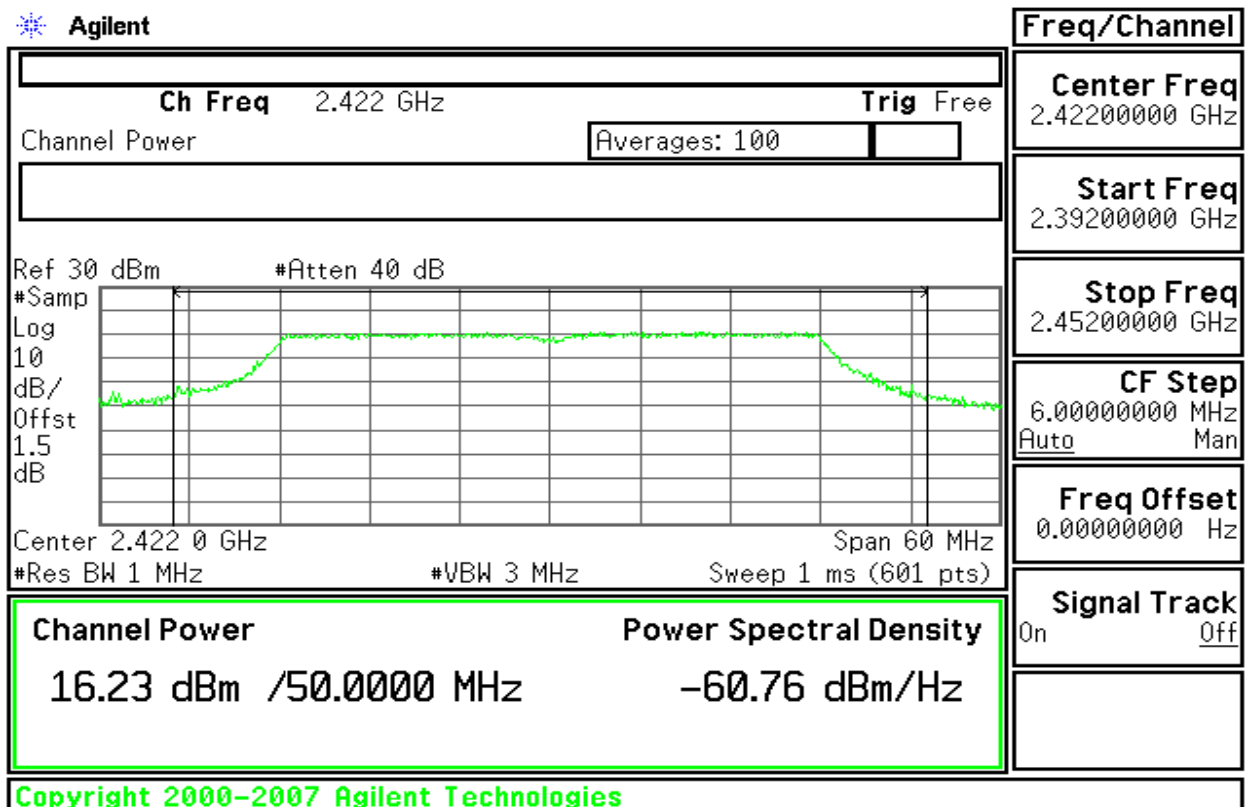


Peak Power (CH High)



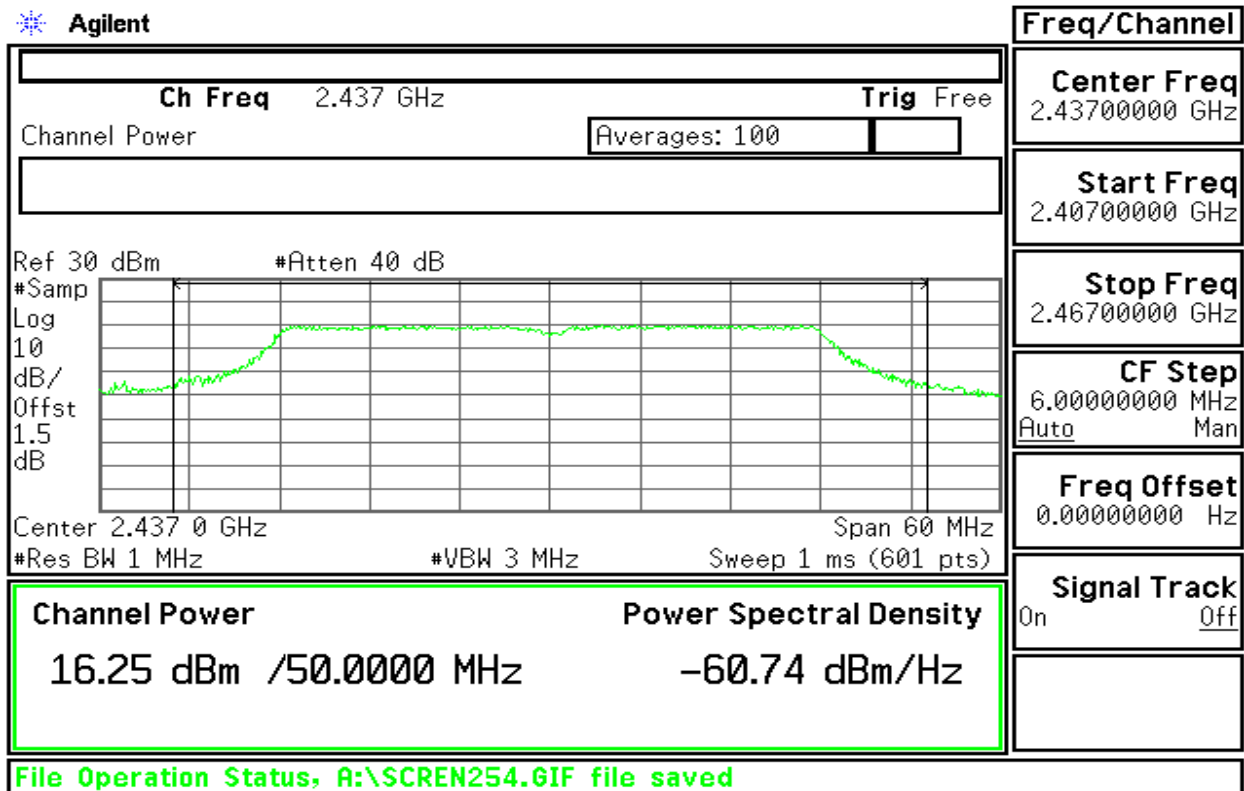
draft 802.11n Wide-40 MHz Channel mode / Chain 0

Peak Power (CH Low)

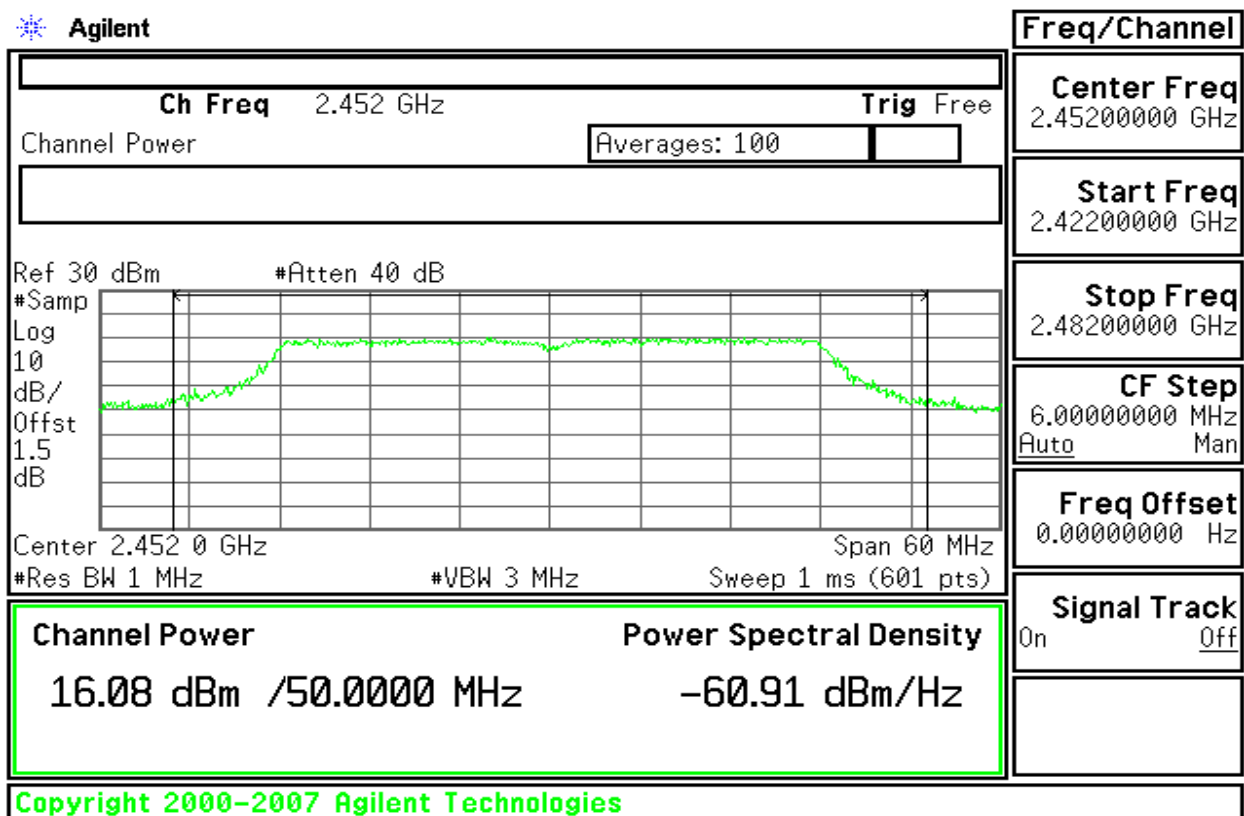




Peak Power (CH Mid)

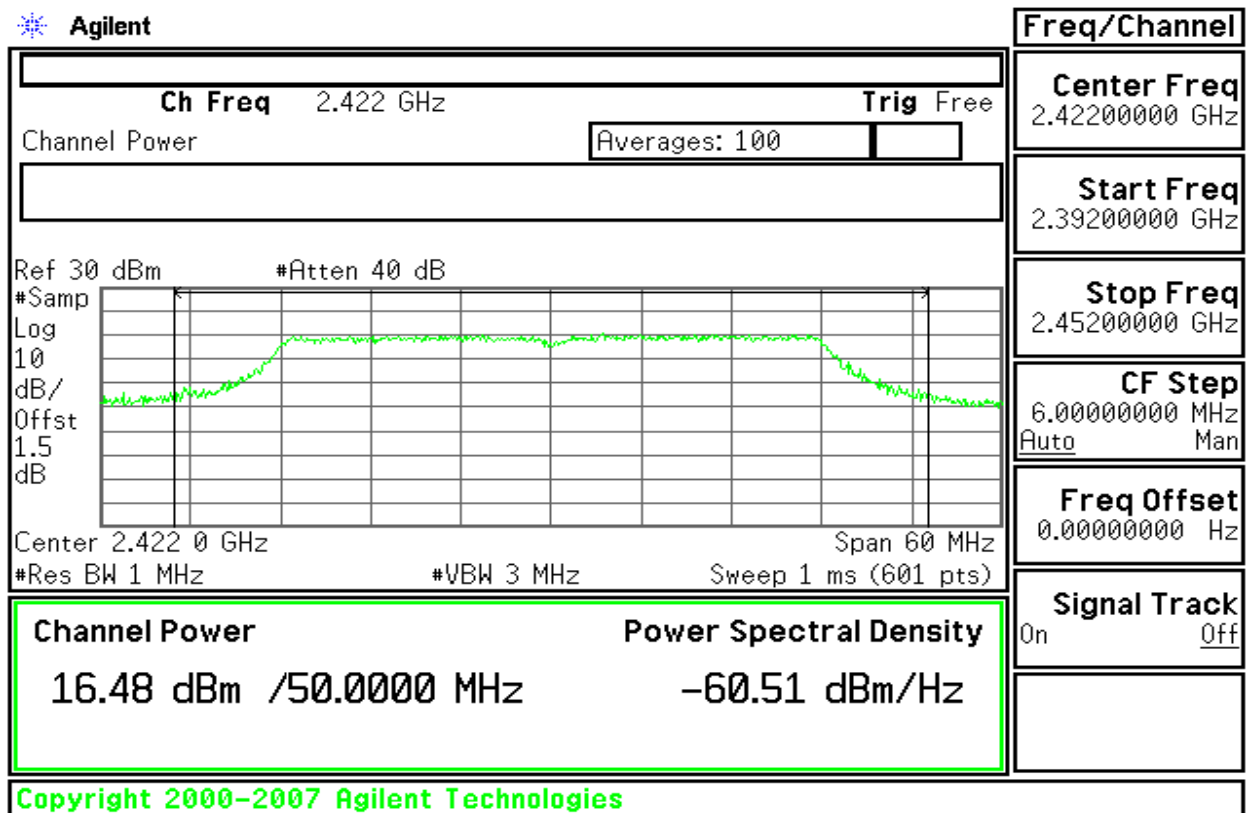


Peak Power (CH High)

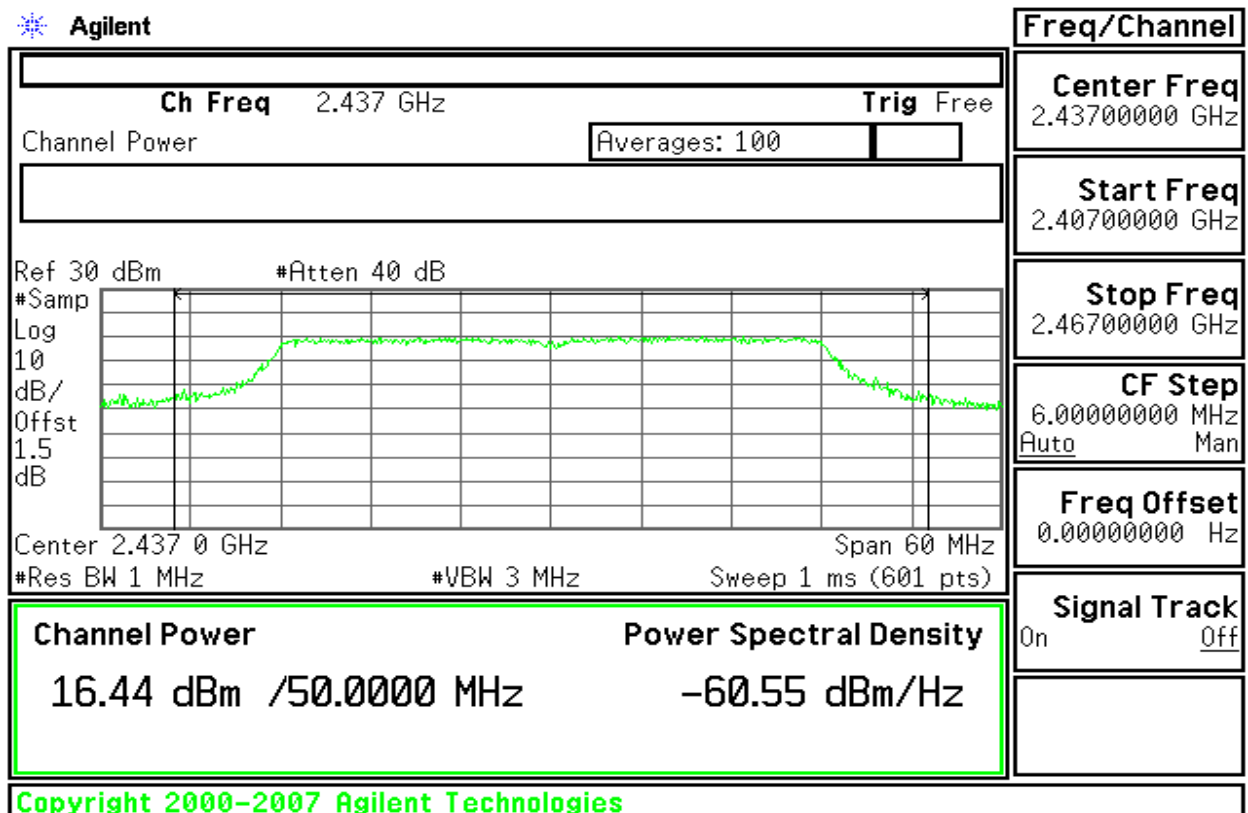


draft 802.11n Wide-40 MHz Channel mode / Chain 1

Peak Power (CH Low)

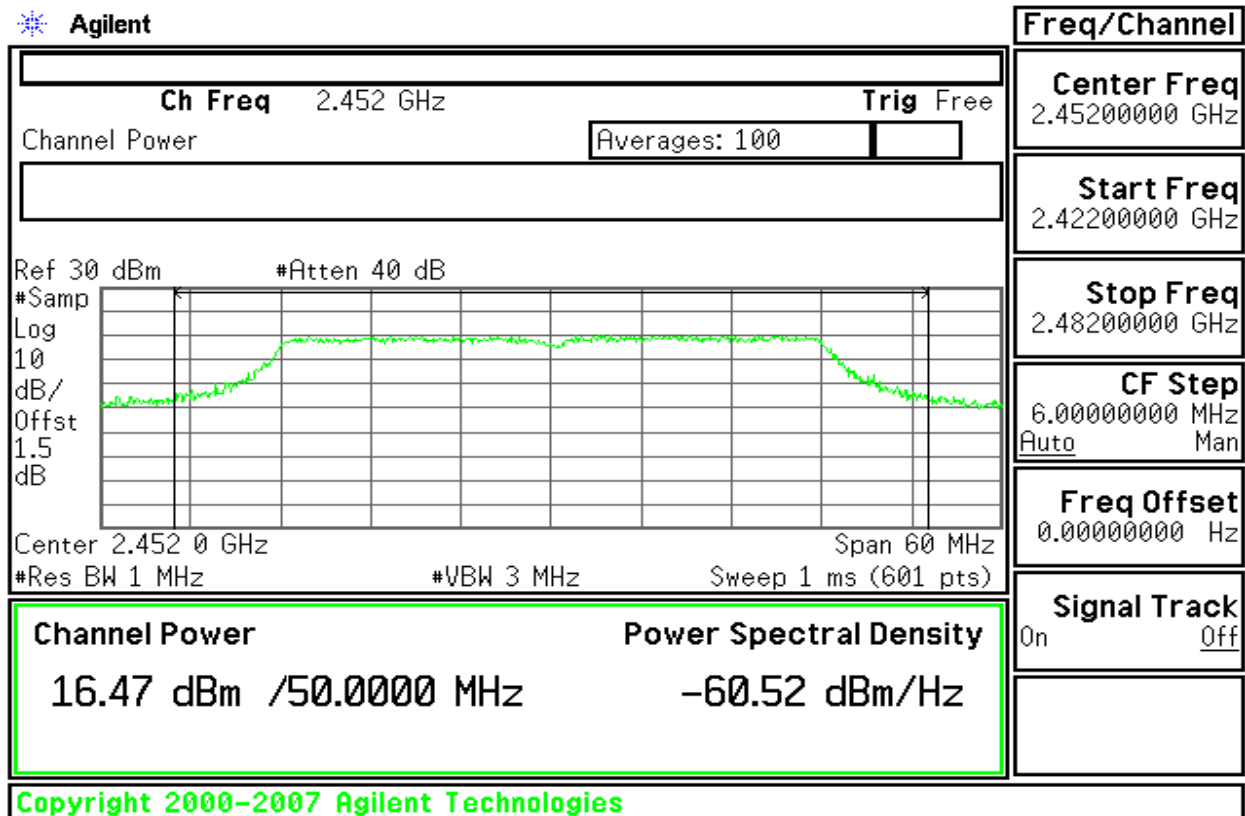


Peak Power (CH Mid)



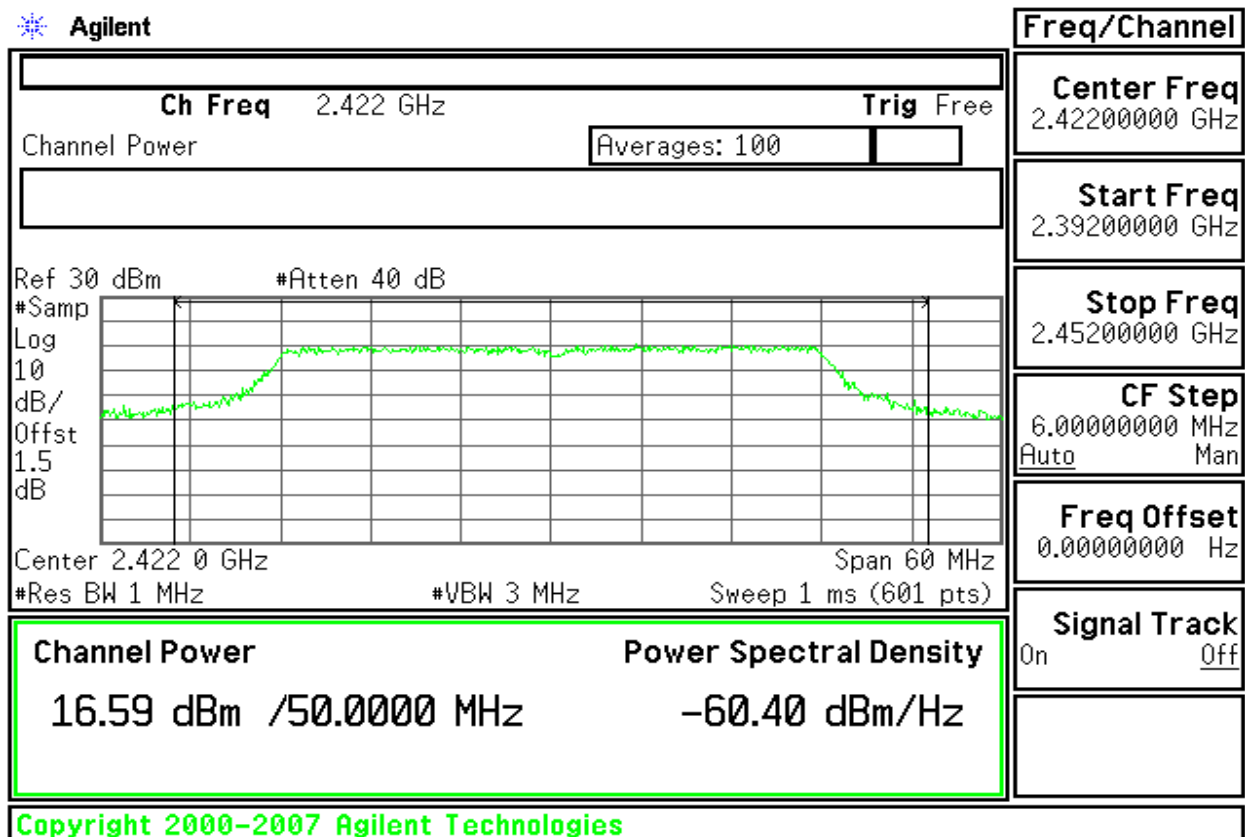


Peak Power (CH High)



draft 802.11n Wide-40 MHz Channel mode / Chain 2

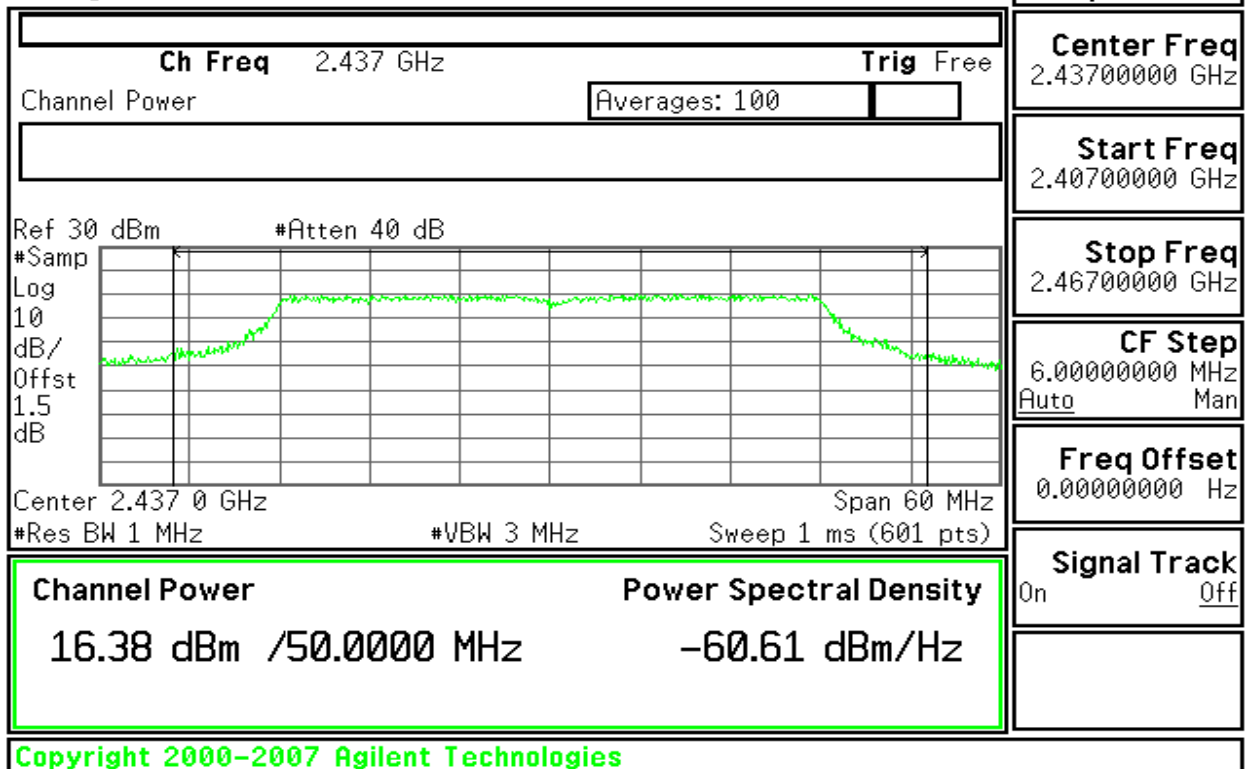
Peak Power (CH Low)





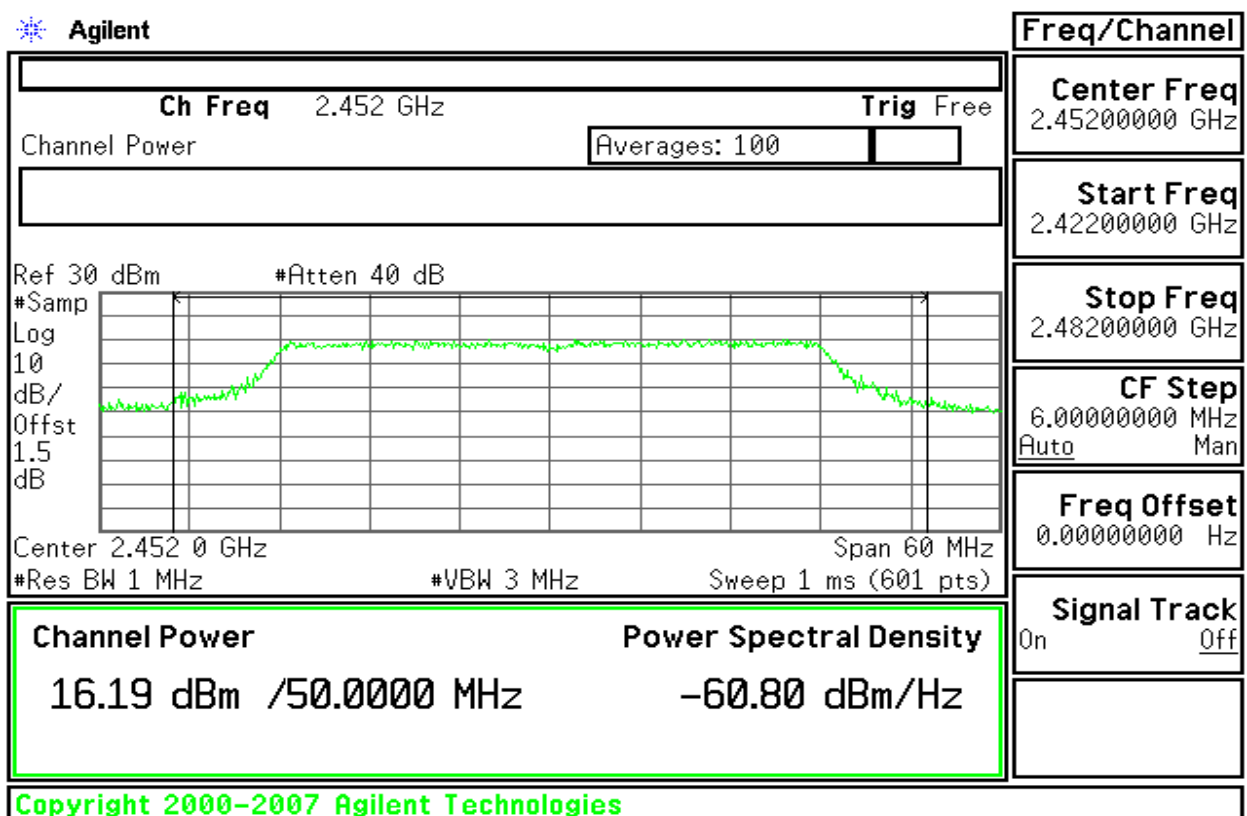
Peak Power (CH Mid)

Agilent



Peak Power (CH High)

Agilent

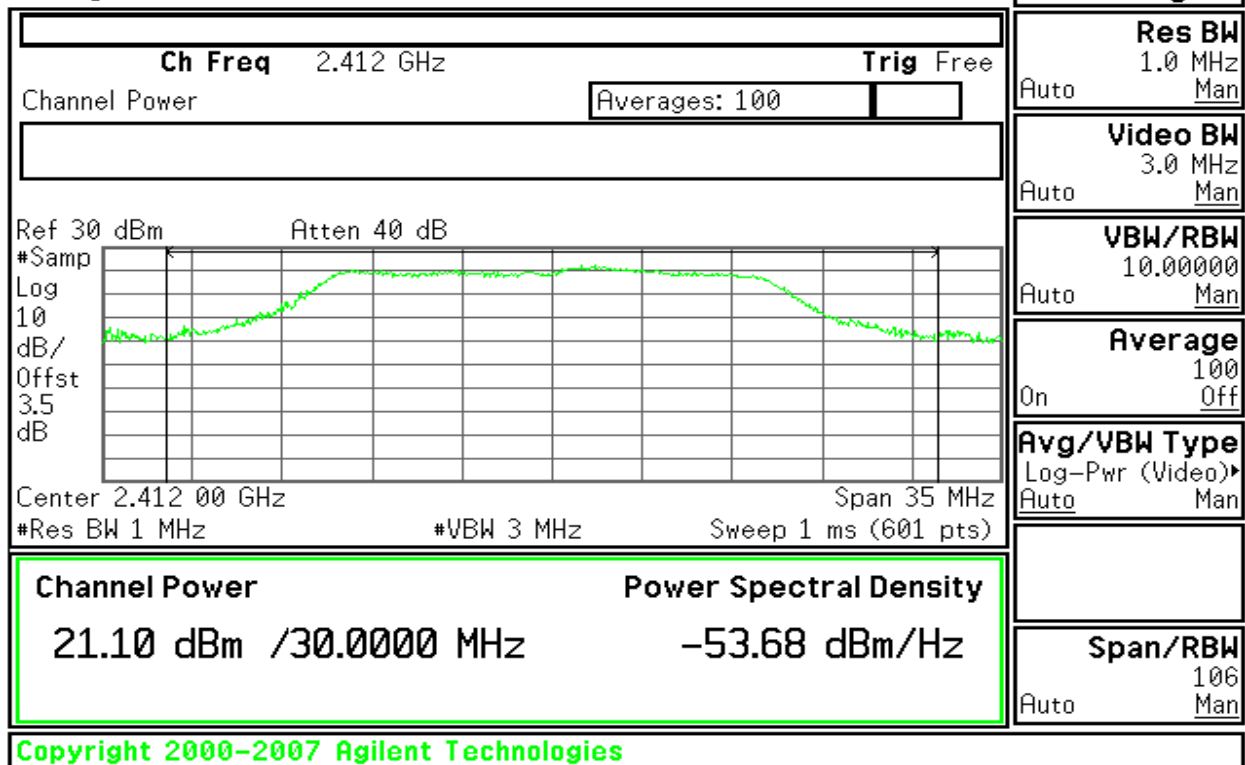




draft 802.11n Standard-20 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

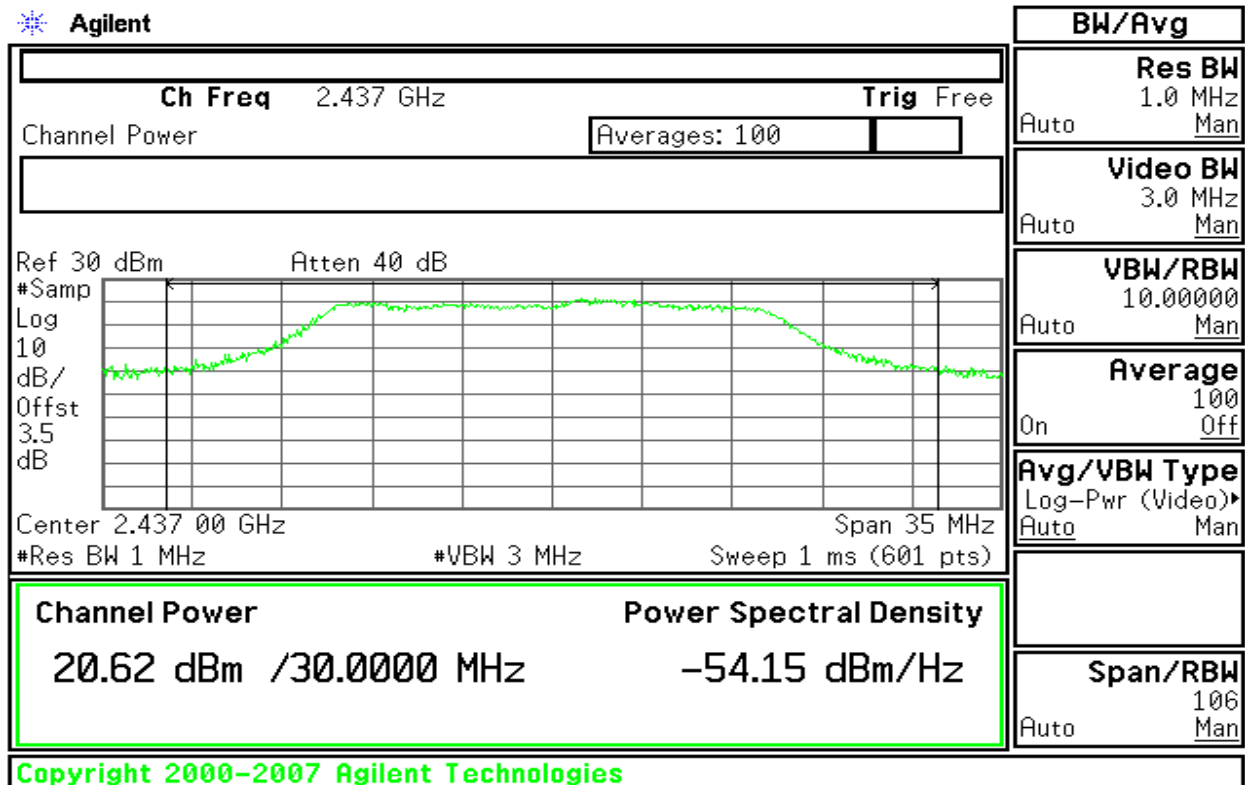
Peak Power (CH Low)

Agilent



Peak Power (CH Mid)

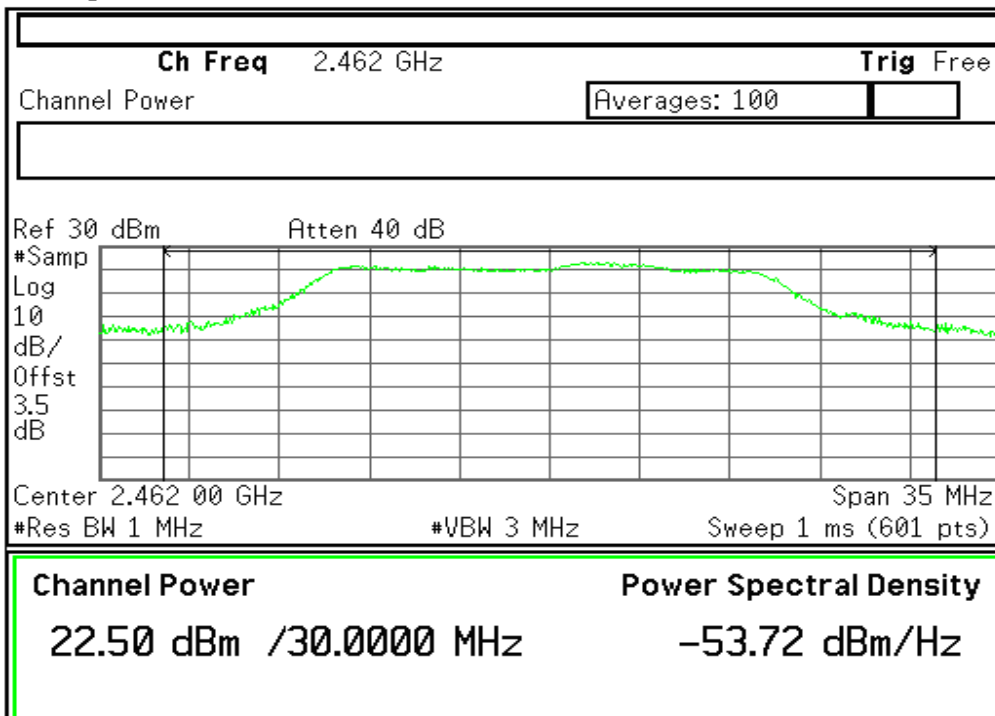
Agilent





Peak Power (CH High)

Agilent



BW/Avg

Res BW

1.0 MHz

Auto

Man

Video BW

3.0 MHz

Auto

Man

VBW/RBW

10.00000

Auto

Man

Average

100

On

Off

Avg/VBW Type

Log-Pwr (Video)

Auto

Man

Span/RBW

106

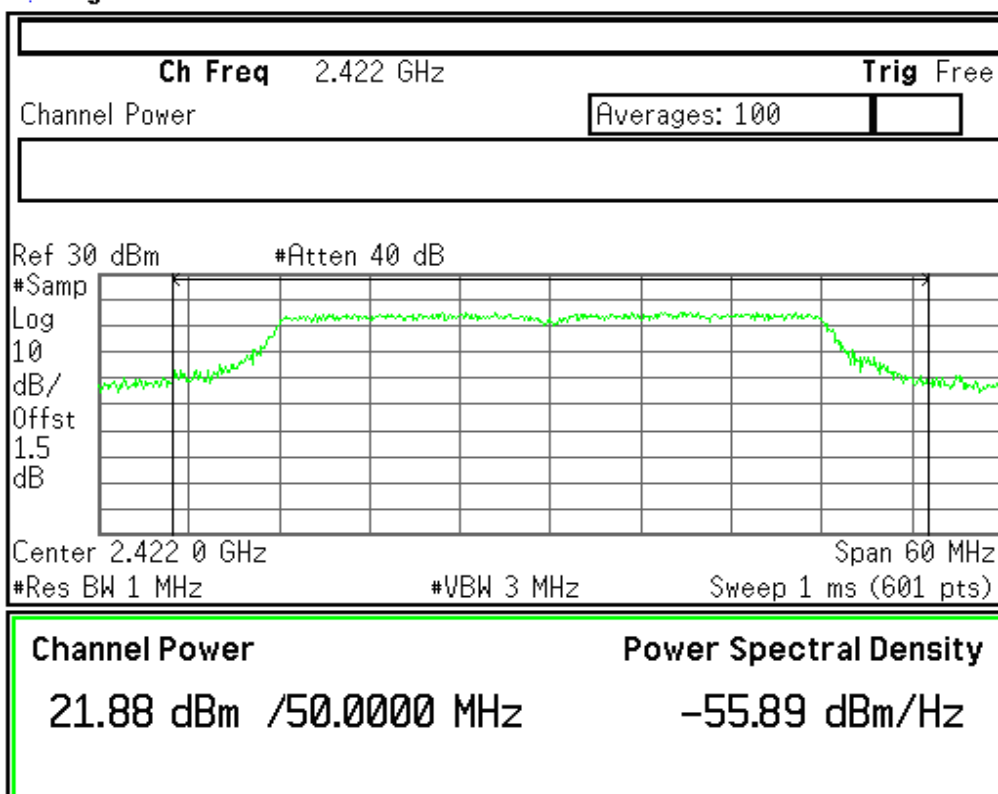
Auto

Man

draft 802.11n Wide-40 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

Peak Power (CH Low)

Agilent



Freq/Channel

Center Freq

2.42200000 GHz

Start Freq

2.39200000 GHz

Stop Freq

2.45200000 GHz

CF Step

6.00000000 MHz

Auto

Man

Freq Offset

0.00000000 Hz

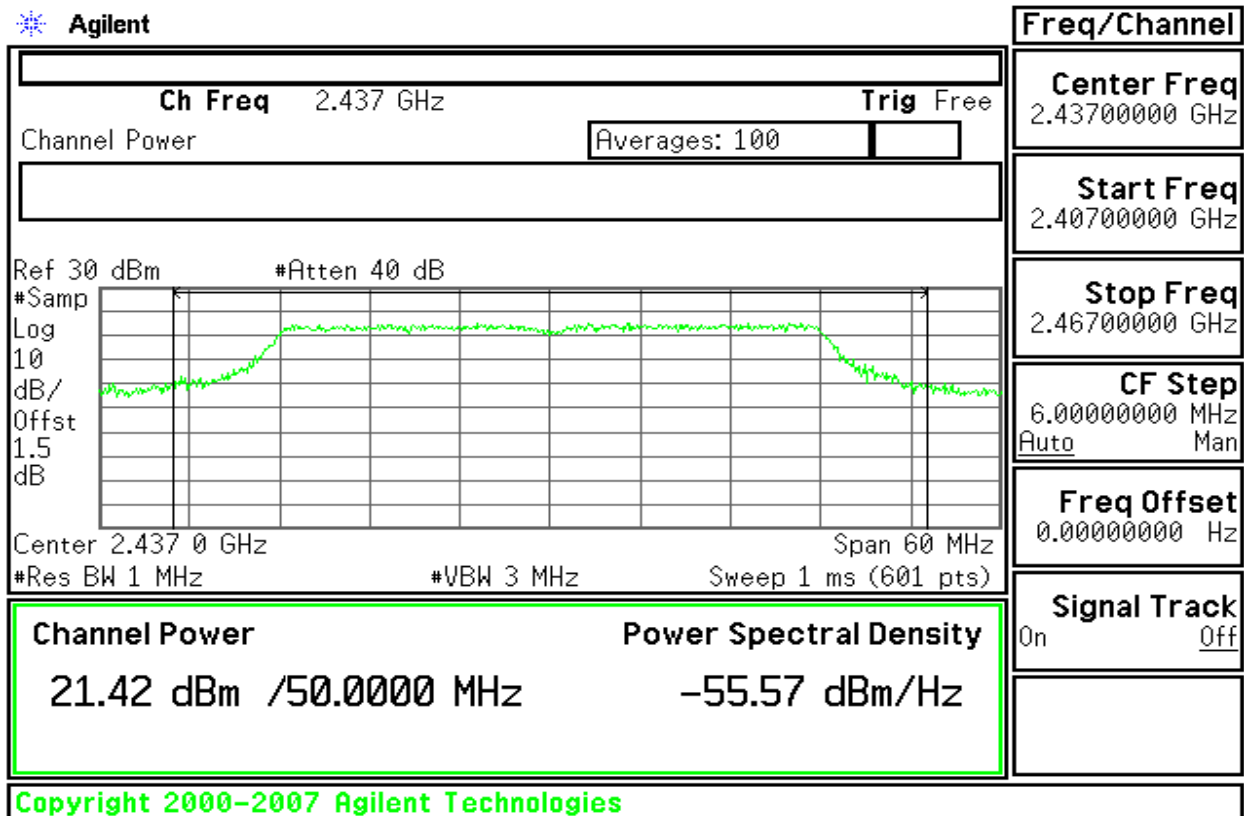
Signal Track

On

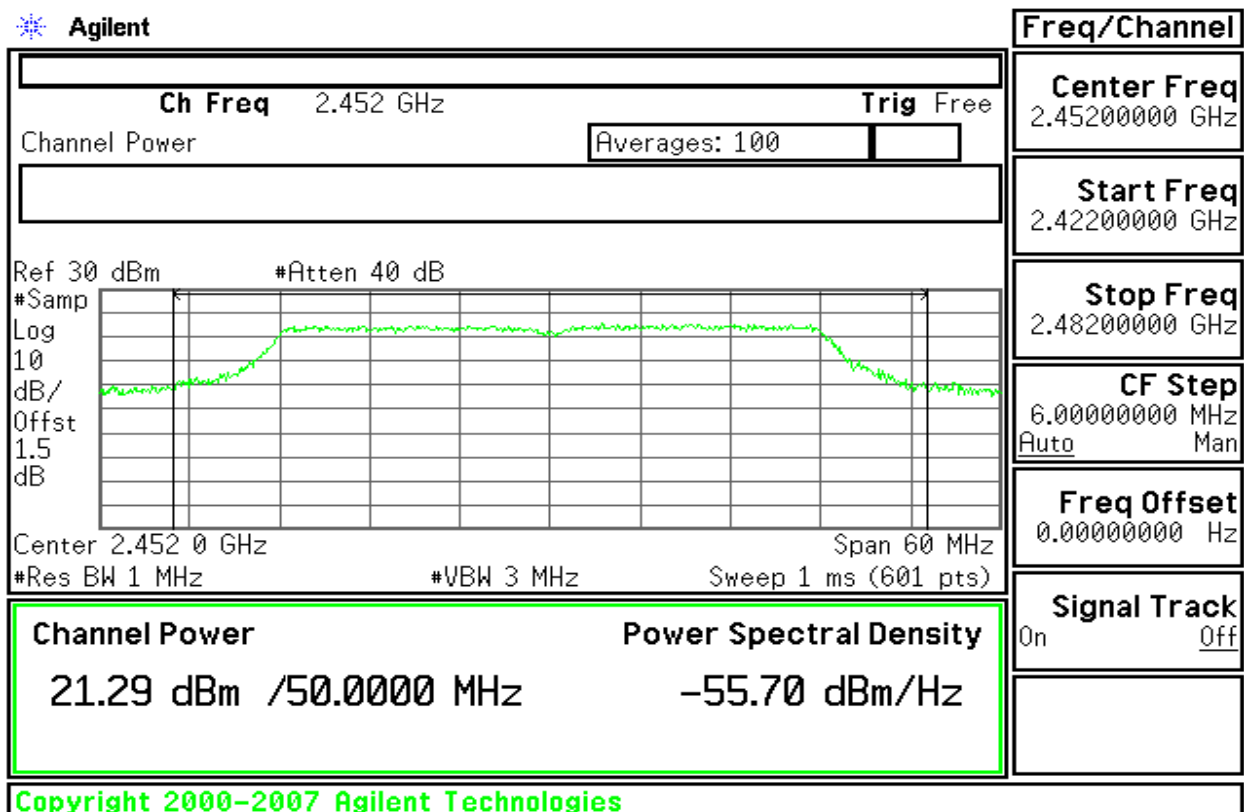
Off



Peak Power (CH Mid)



Peak Power (CH High)

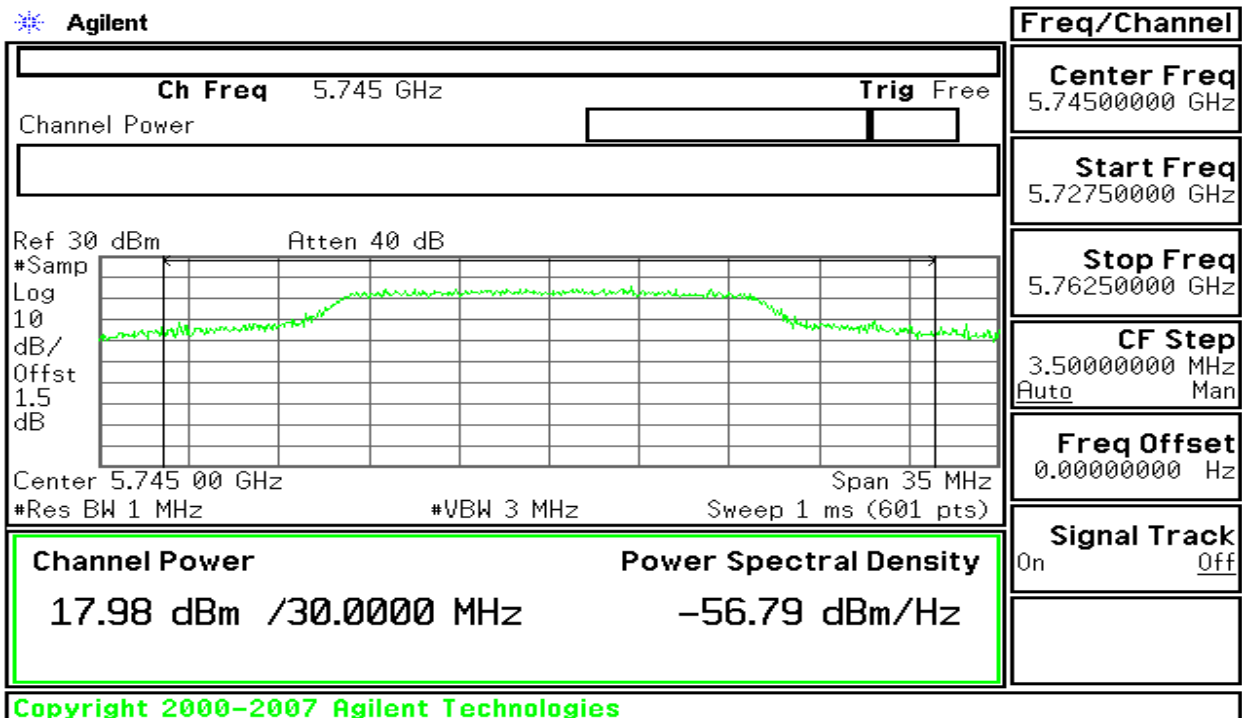




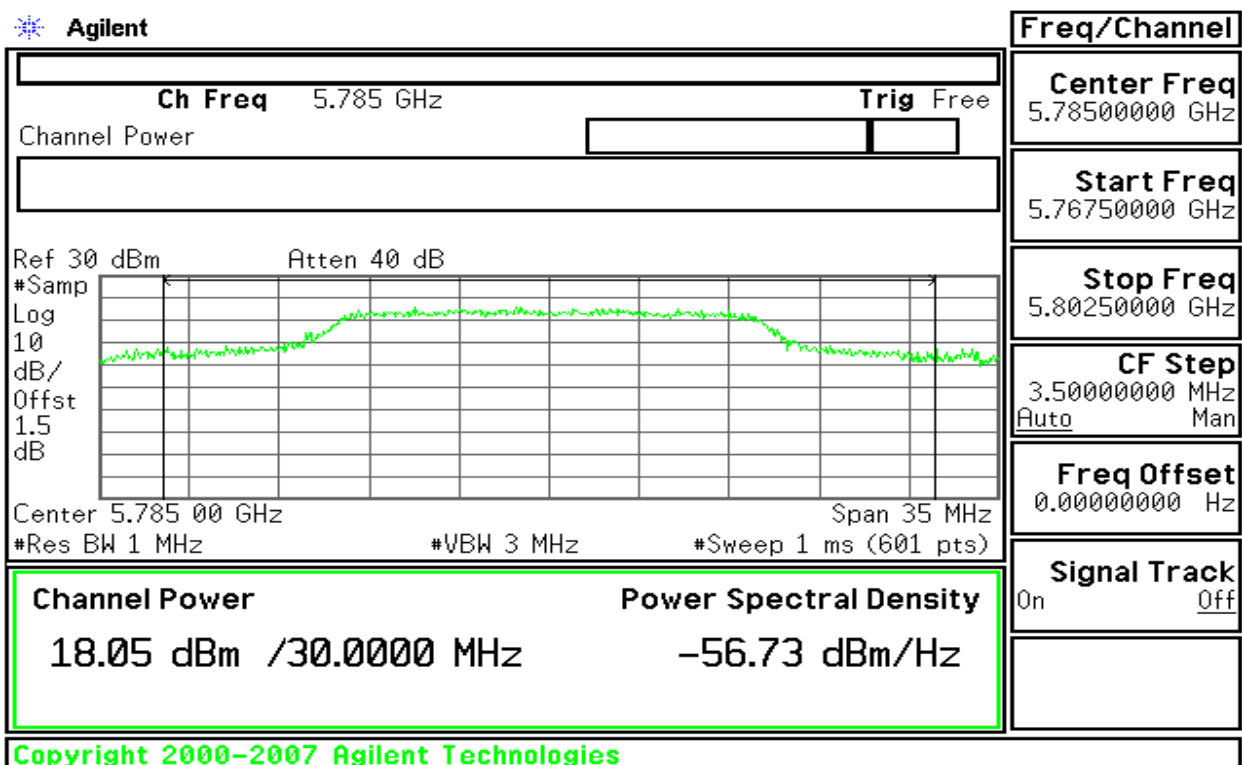
5725-5825

IEEE 802.11a mode

Peak Power (CH Low)

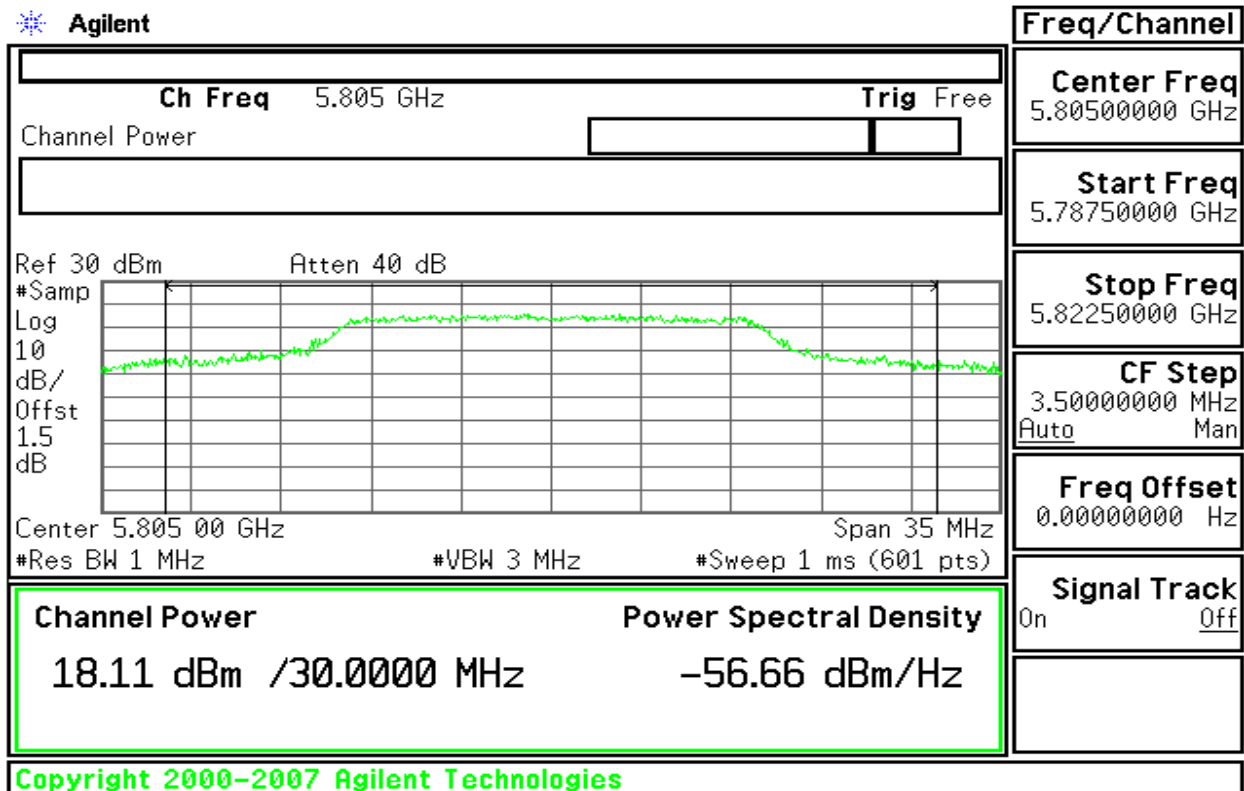


Peak Power (CH Mid)



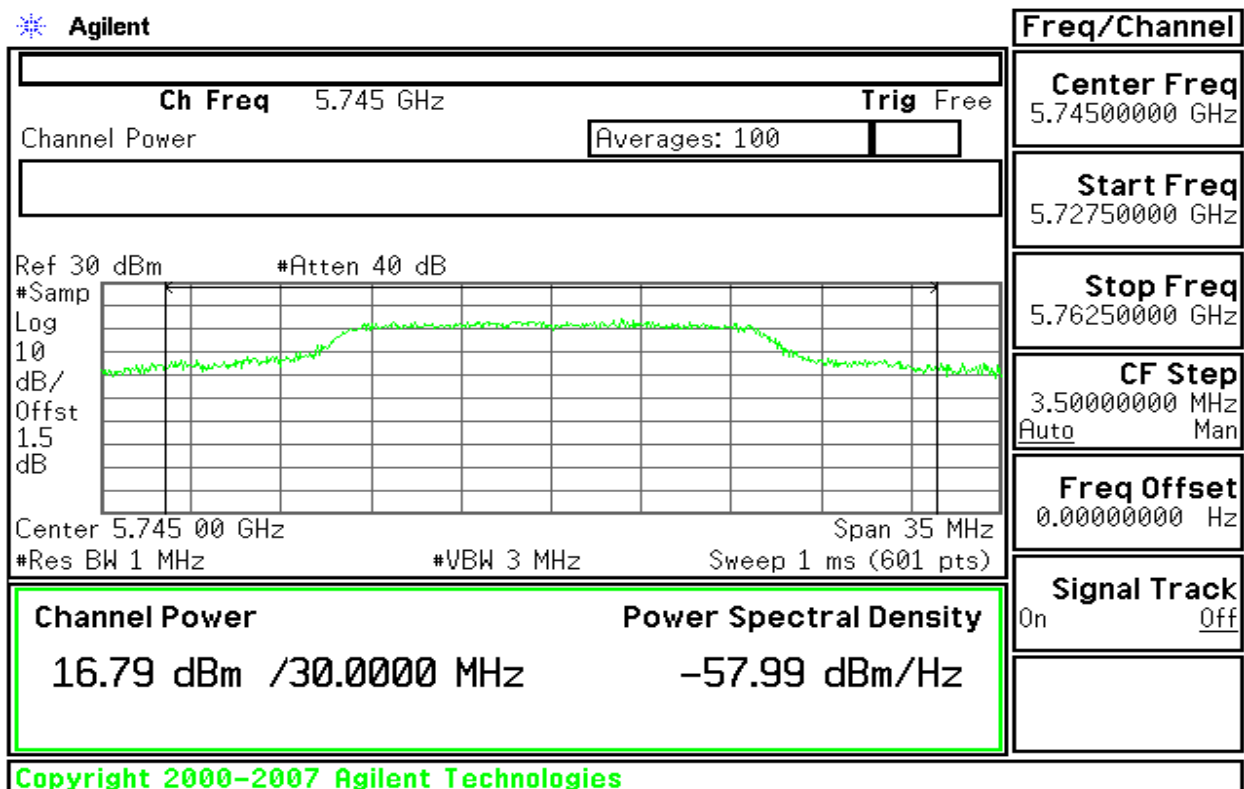


Peak Power (CH Hgih)



draft 802.11n Standard-20 MHz Channel mode / Chain 0

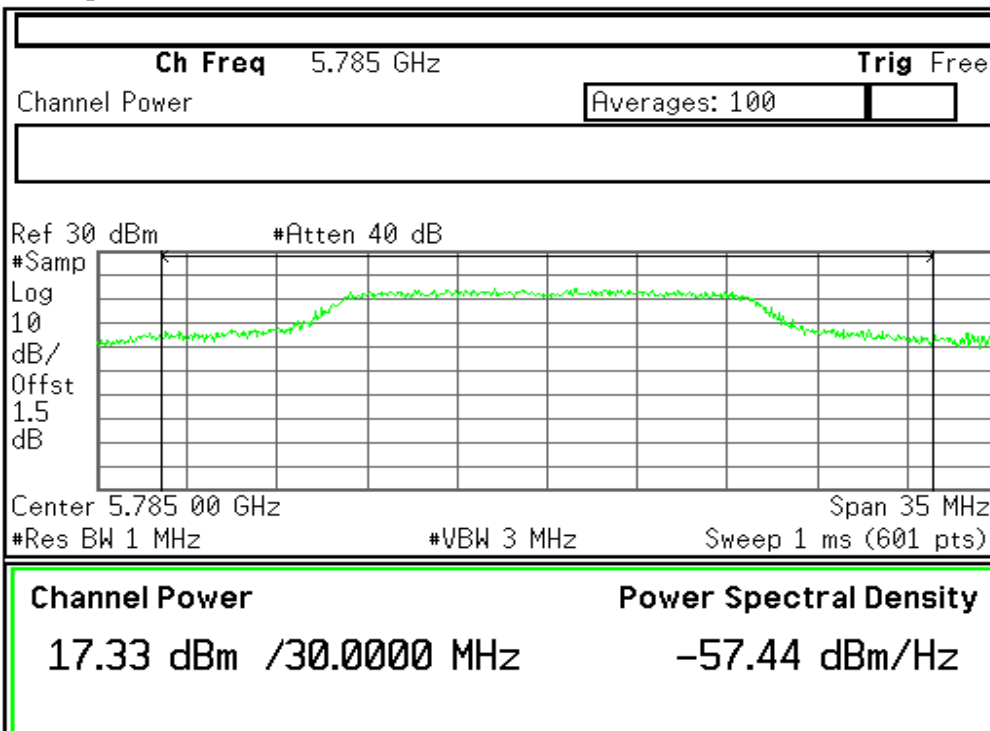
Peak Power (CH Low)





Peak Power (CH Mid)

Agilent



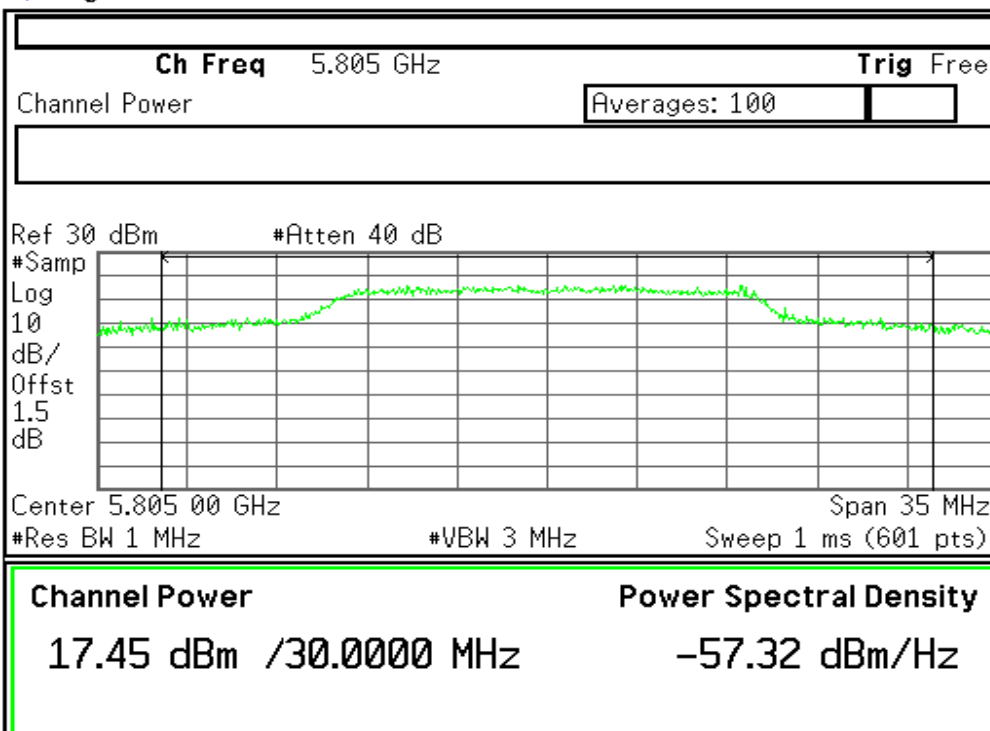
Freq/Channel

Center Freq
5.78500000 GHzStart Freq
5.76750000 GHzStop Freq
5.80250000 GHzCF Step
3.50000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Peak Power (CH High)

Agilent



Freq/Channel

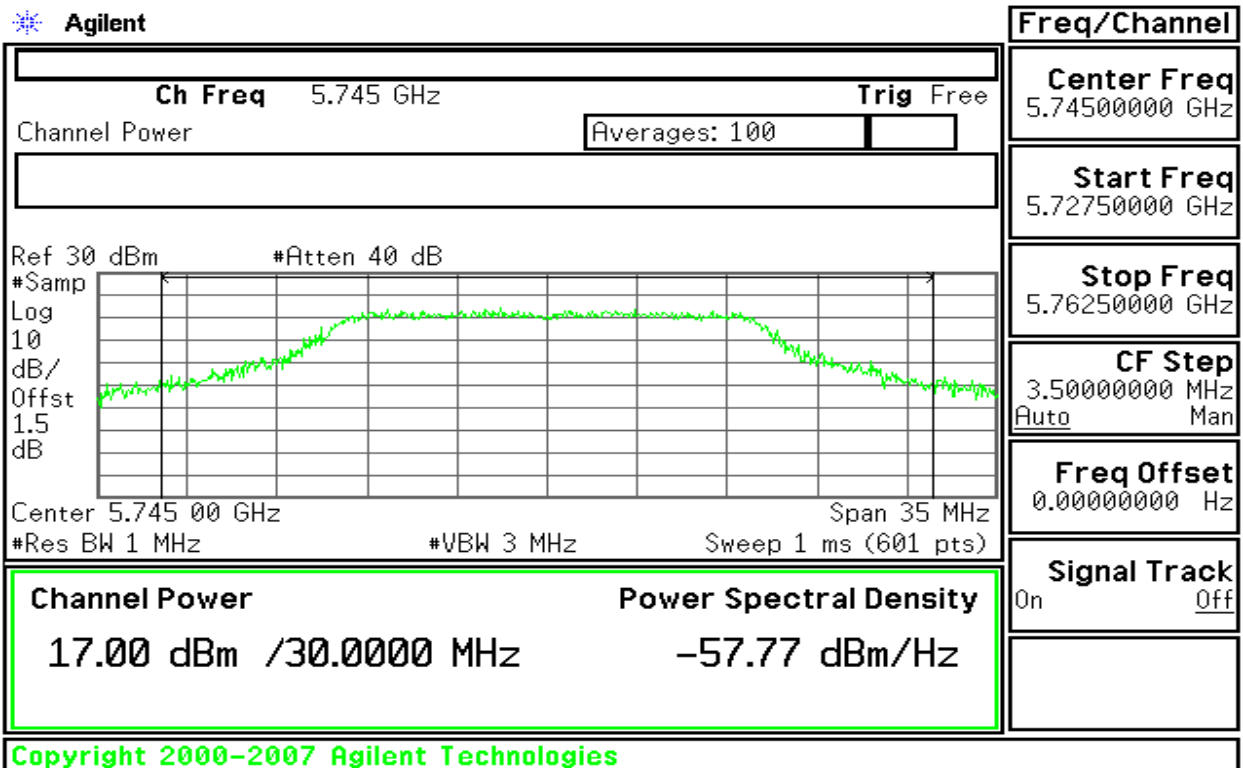
Center Freq
5.80500000 GHzStart Freq
5.78750000 GHzStop Freq
5.82250000 GHzCF Step
3.50000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

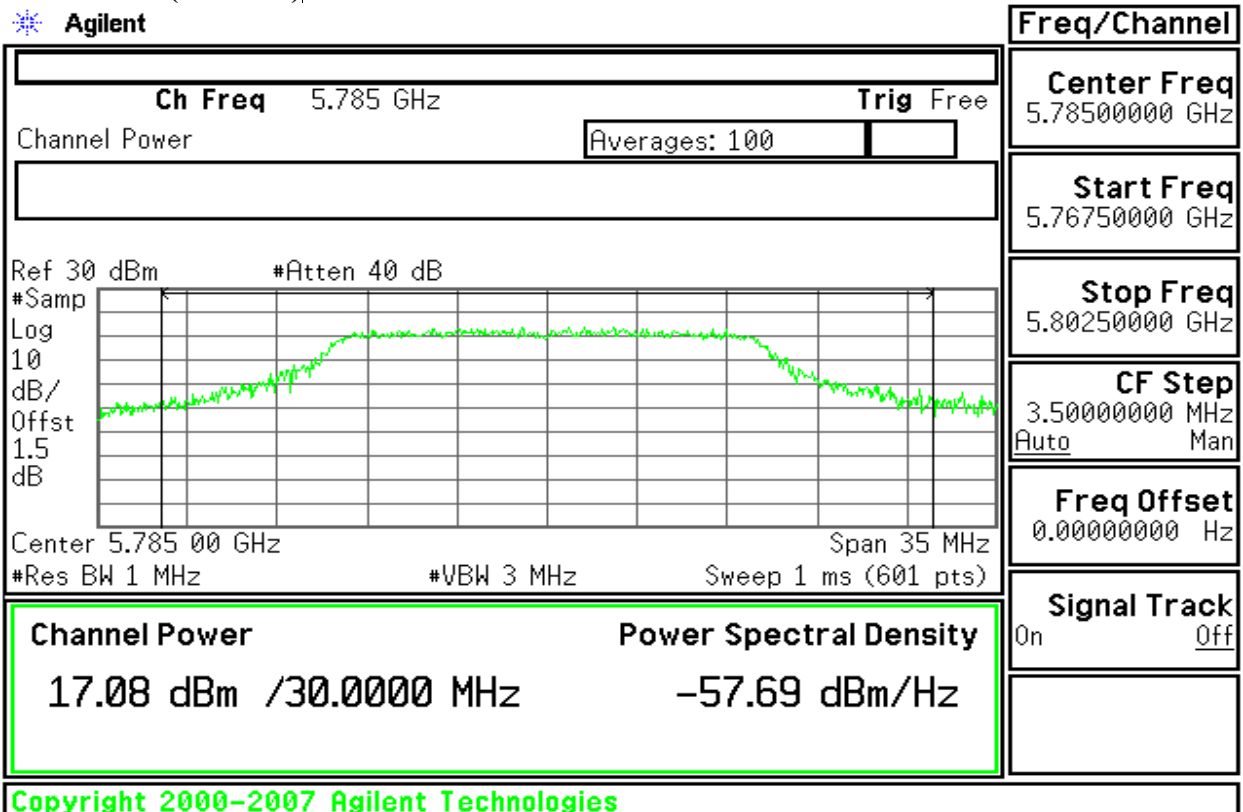


draft 802.11n Standard-20 MHz Channel mode / Chain 1

Peak Power (CH Low)



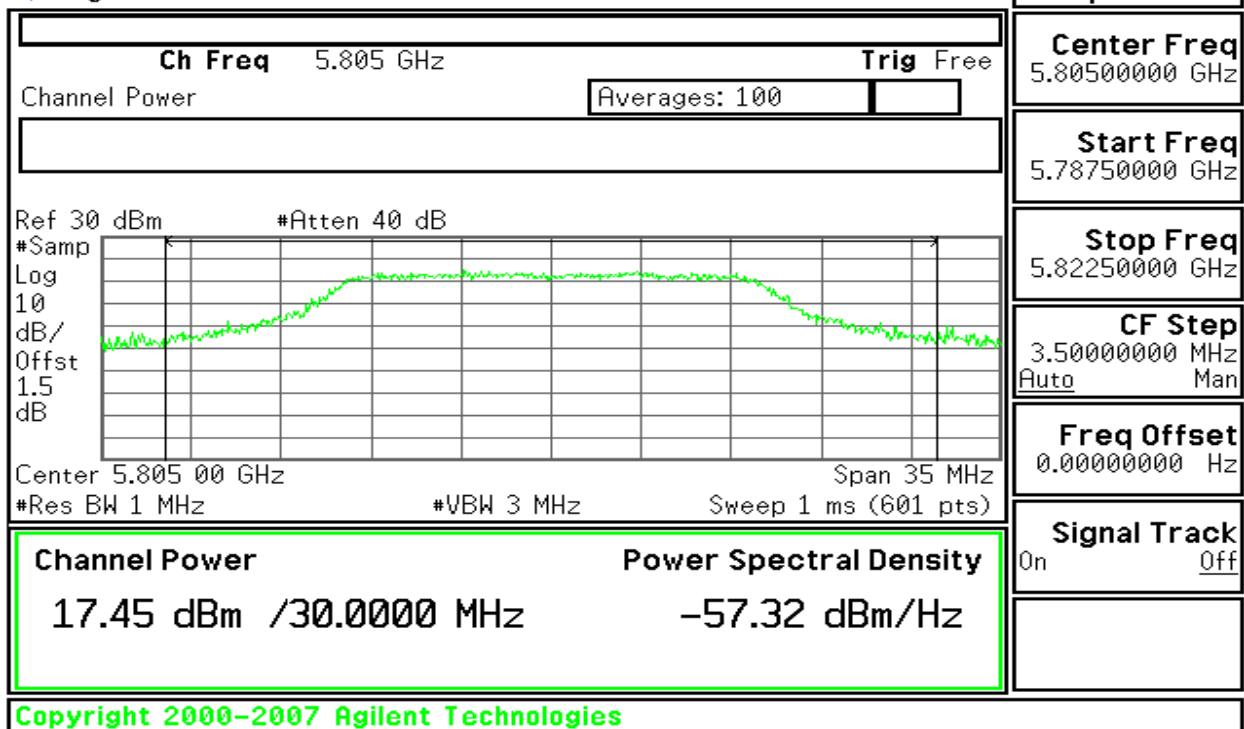
Peak Power (CH Mid)





Peak Power (CH High)

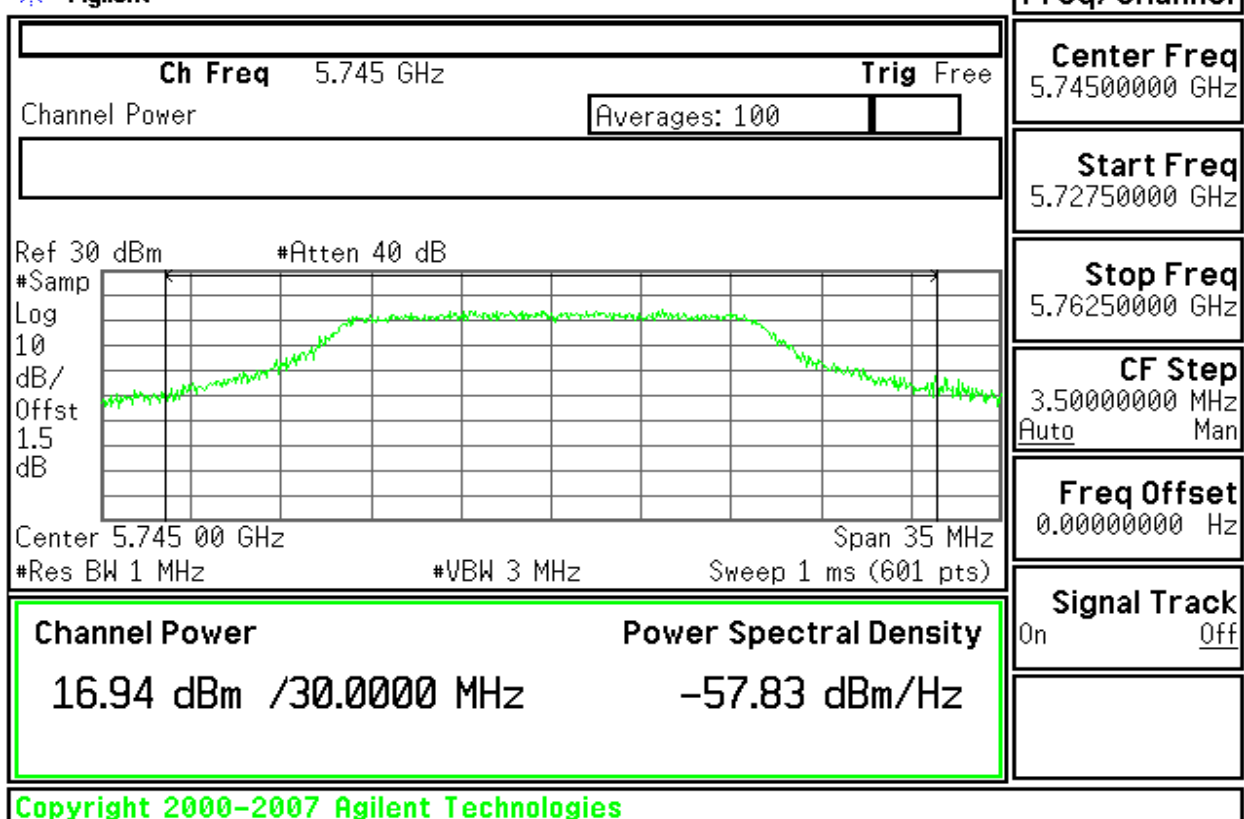
Agilent



draft 802.11n Standard-20 MHz Channel mode / Chain 2

Peak Power (CH Low)

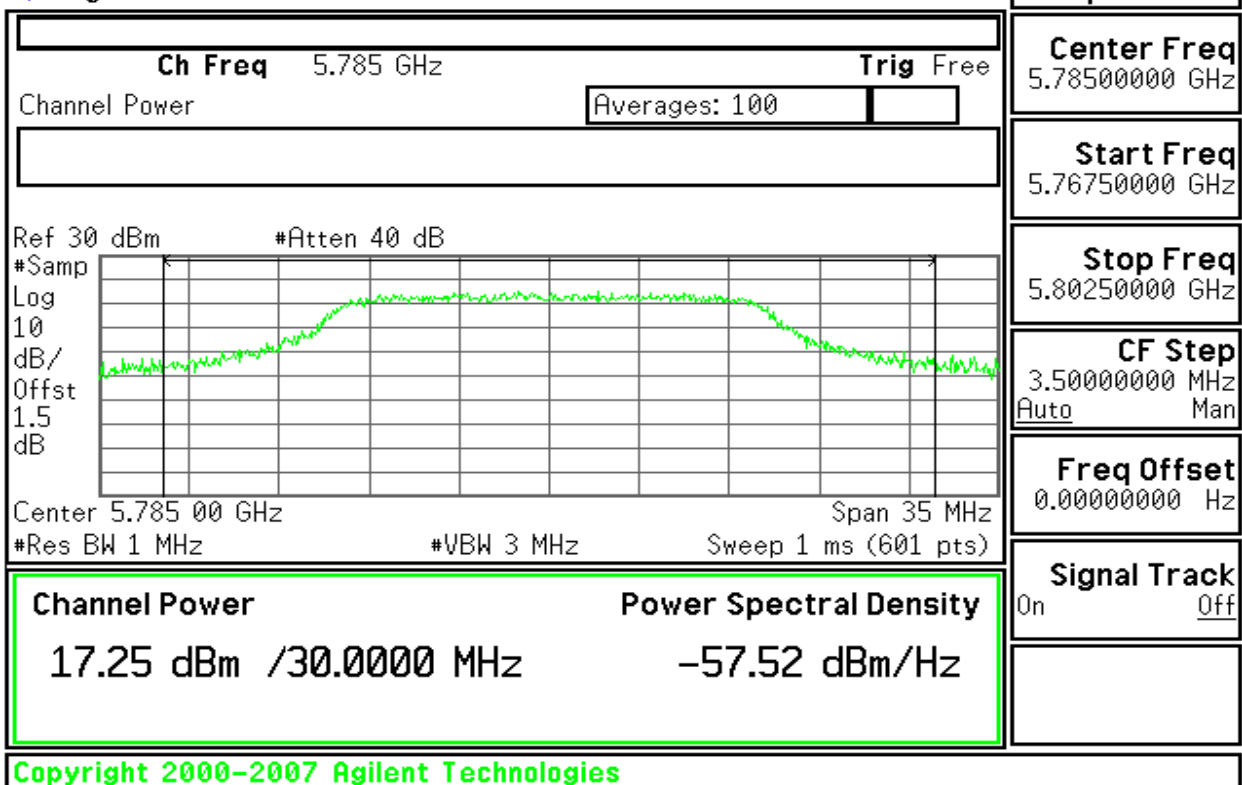
Agilent





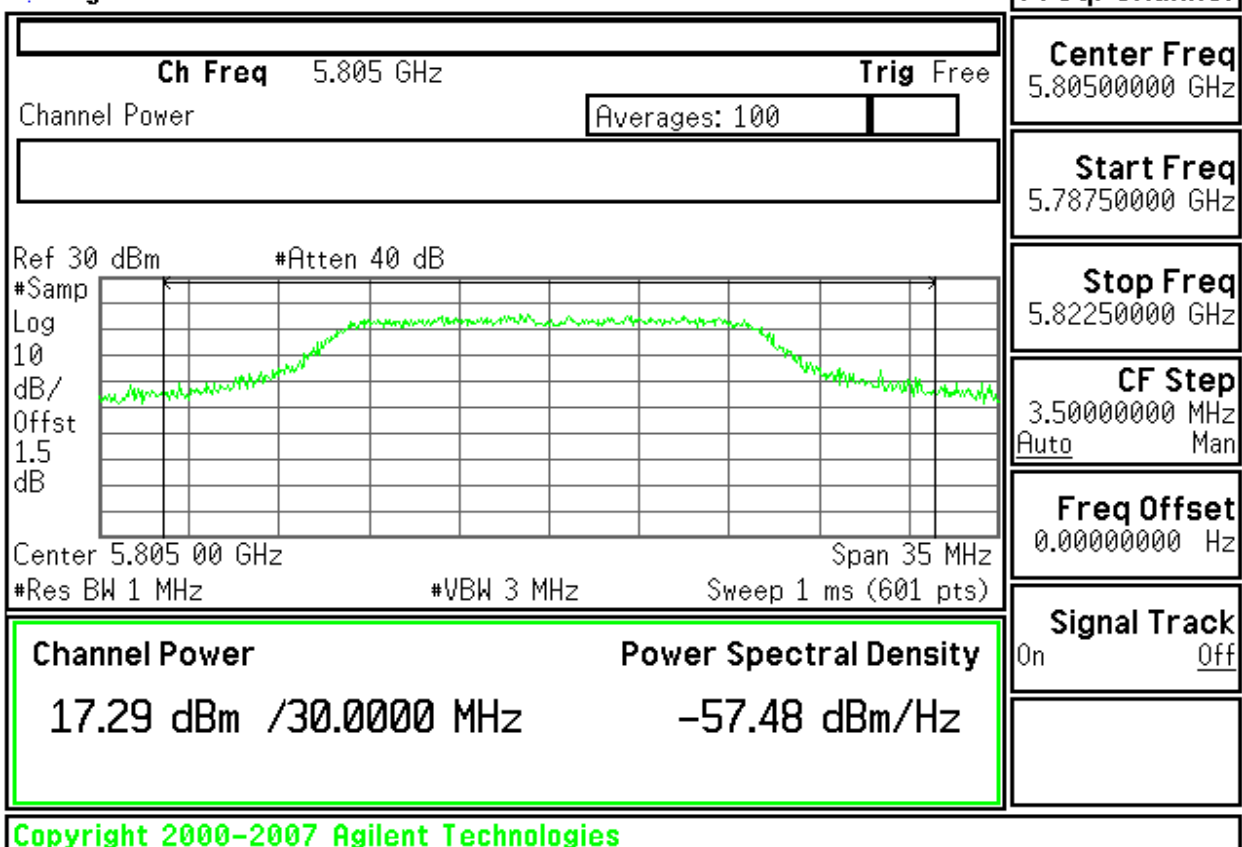
Peak Power (CH Mid)

Agilent



Peak Power (CH High)

Agilent

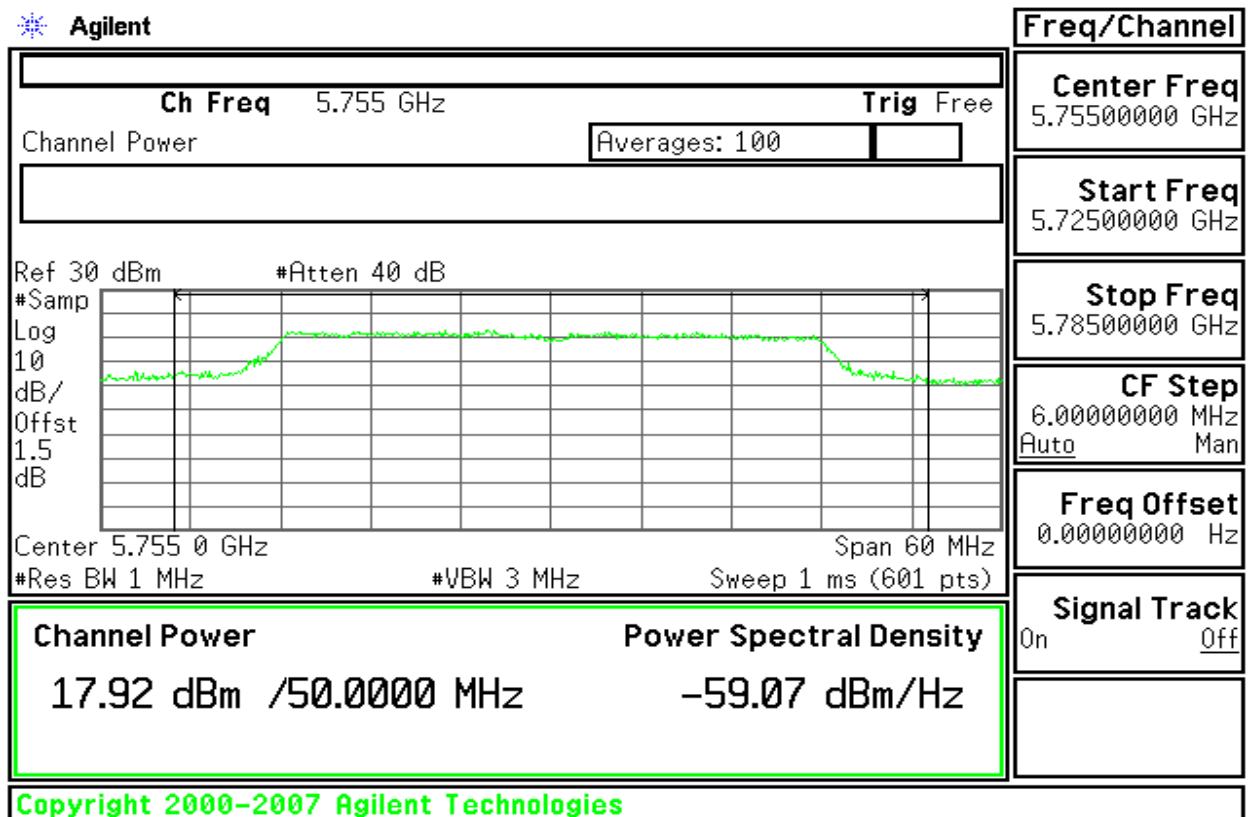




draft 802.11n Standard-40 MHz Channel mode / Chain 0

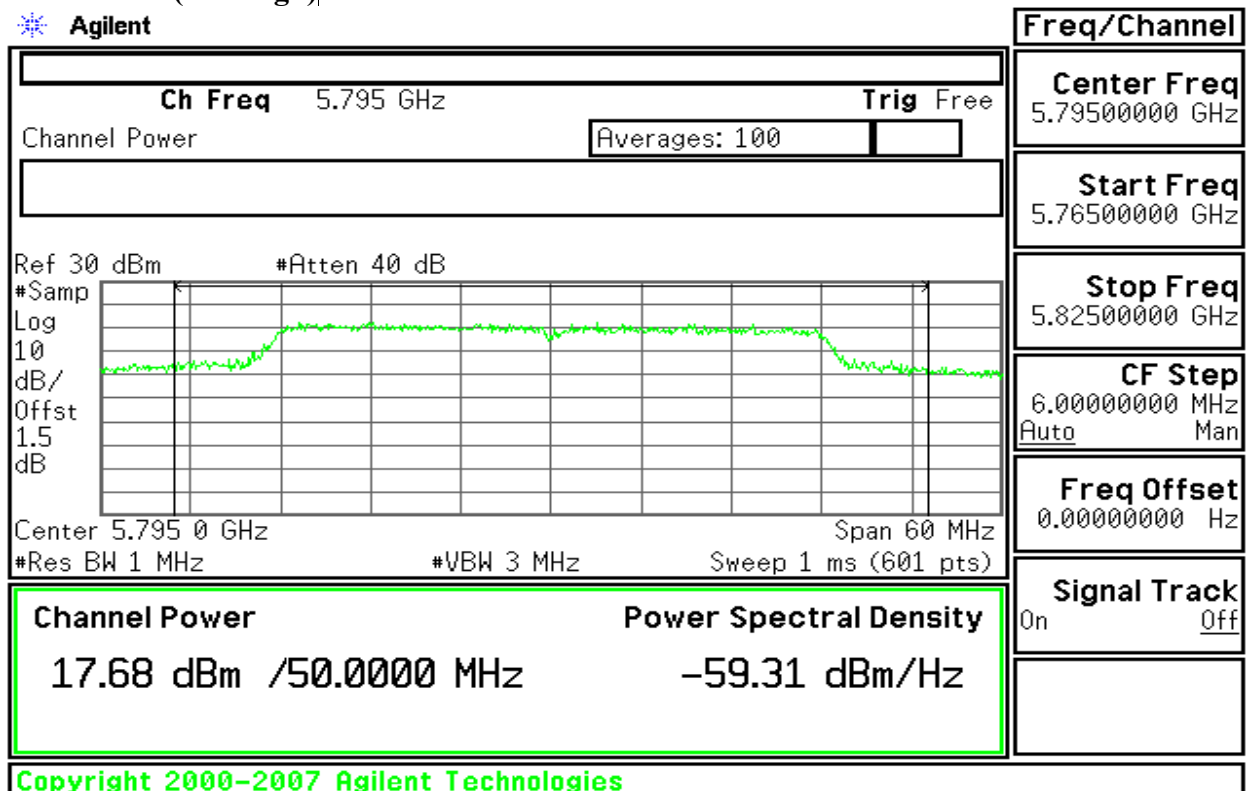
Peak Power (CH Low)

Agilent



Peak Power (CH High)

Agilent

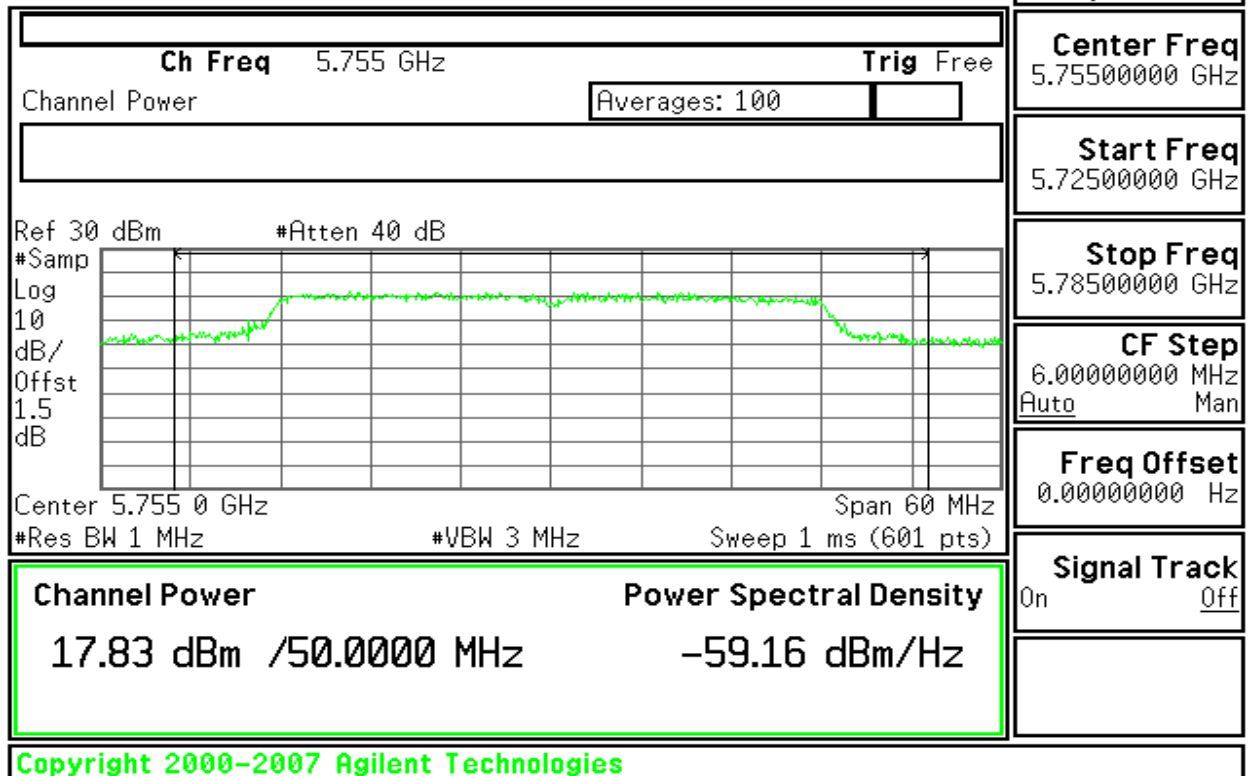




draft 802.11n Standard-40 MHz Channel mode / Chain 1

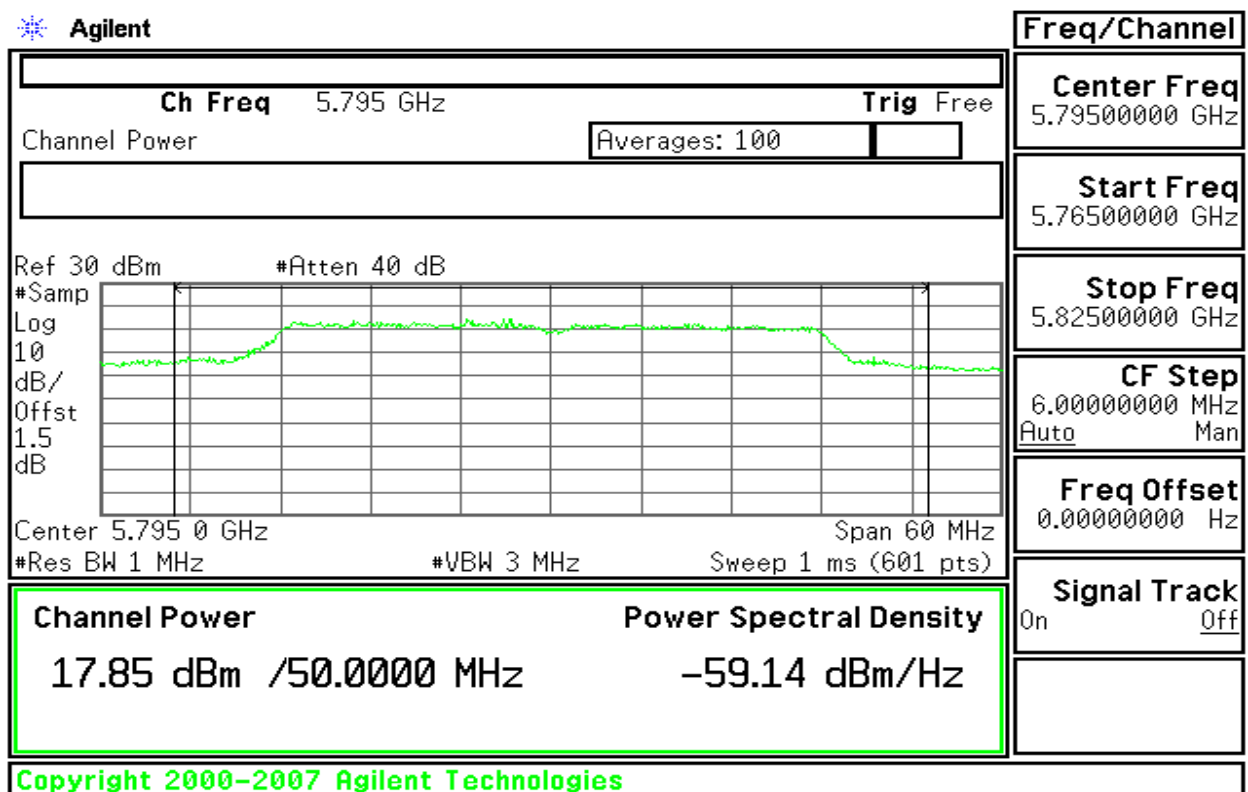
Peak Power (CH Low)

Agilent



Peak Power (CH High)

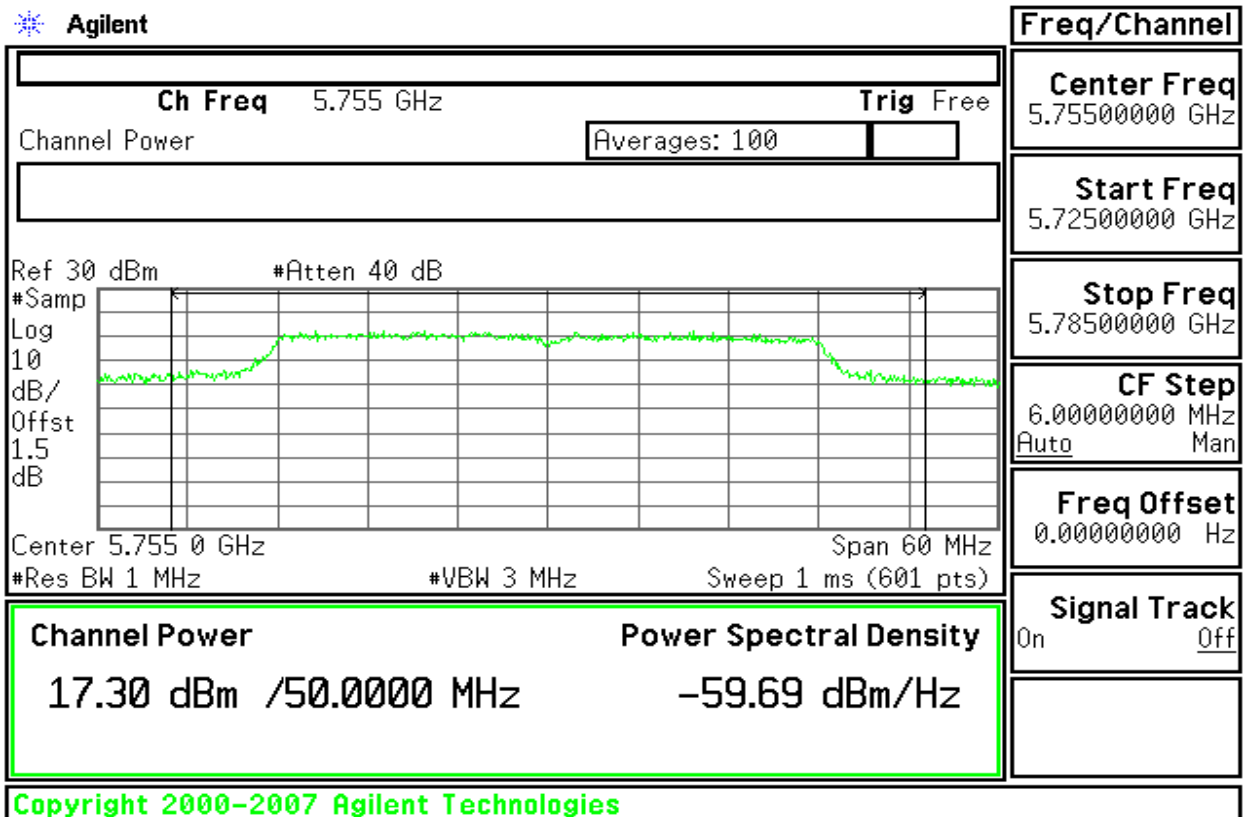
Agilent



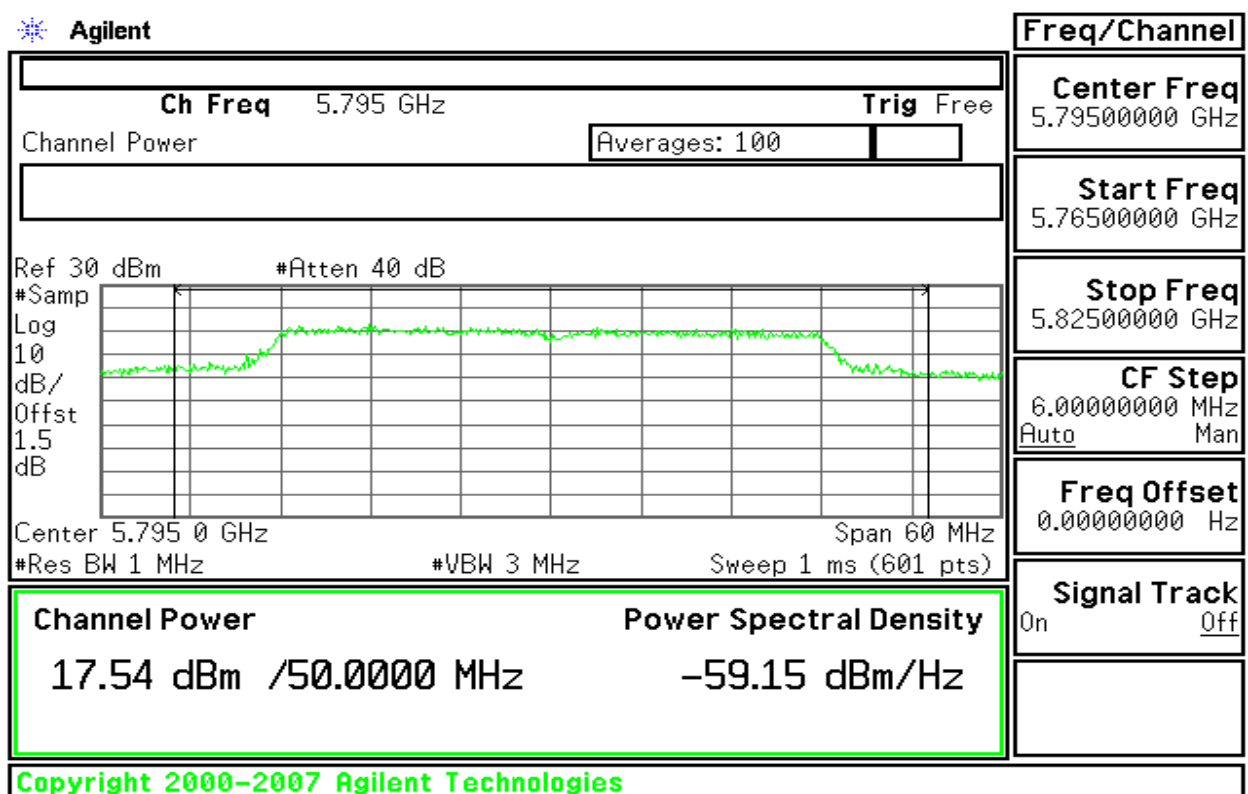


draft 802.11n Standard-40 MHz Channel mode / Chain 2

Peak Power (CH Low)



Peak Power (CH High)

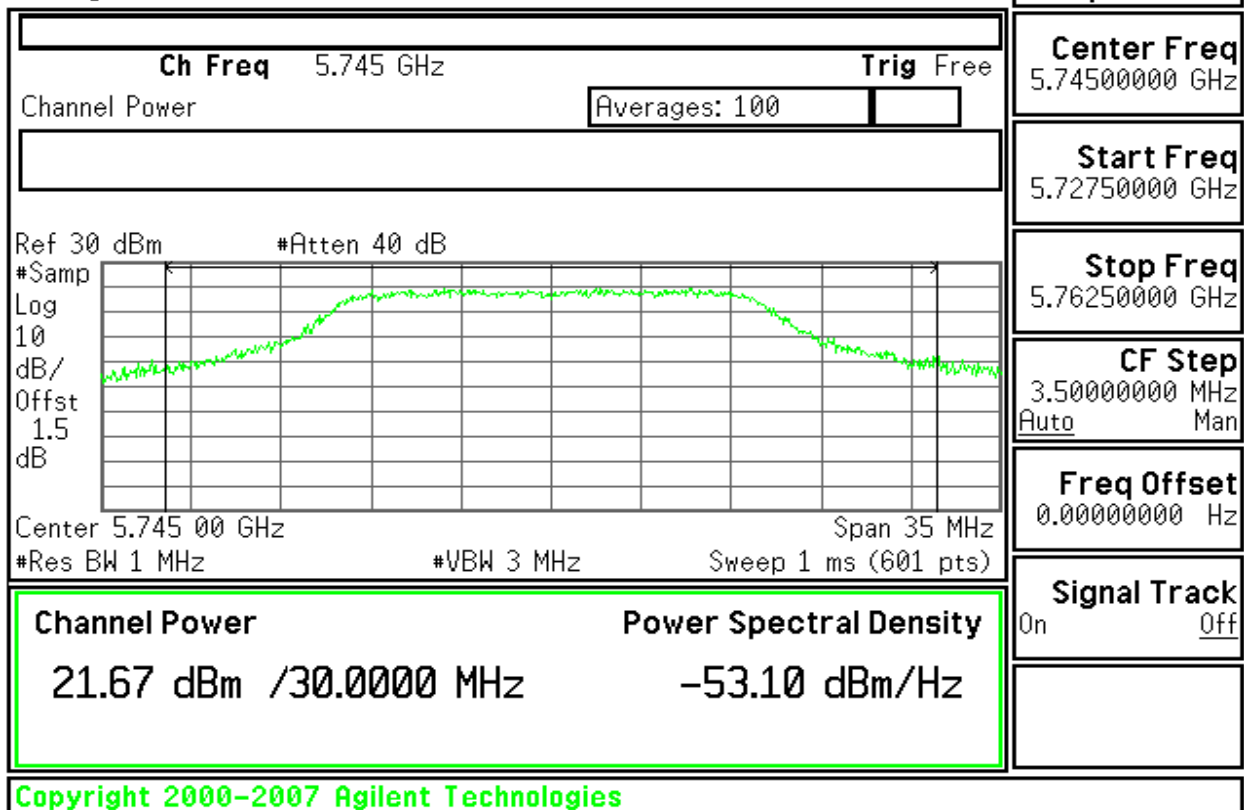




draft 802.11n Standard-20 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

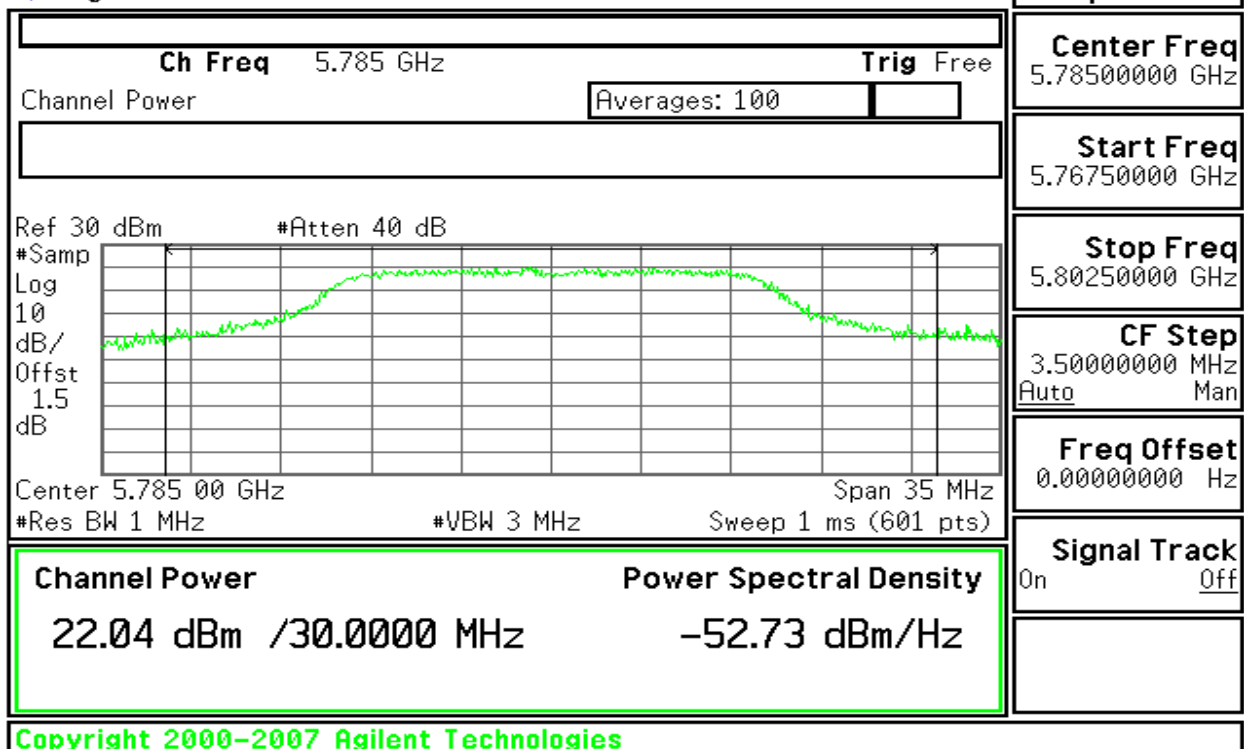
Peak Power (CH Low)

* Agilent



Peak Power (CH Mid)

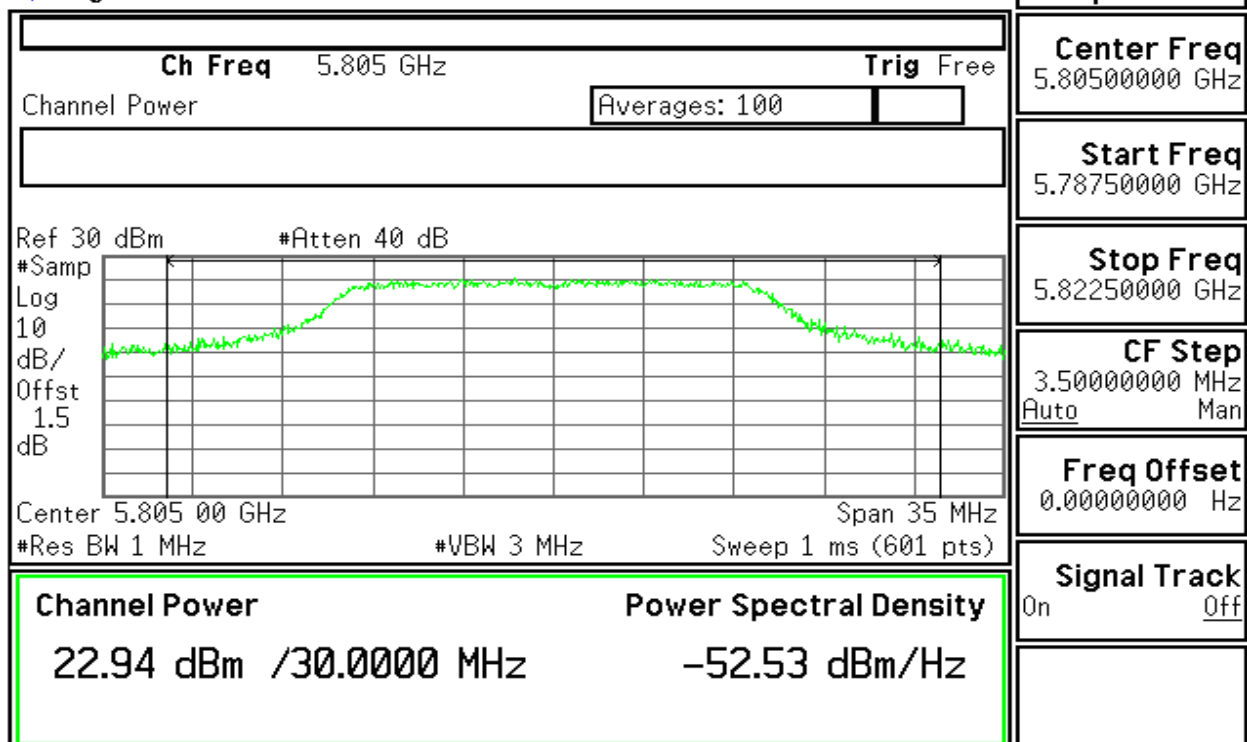
* Agilent





Peak Power (CH High)

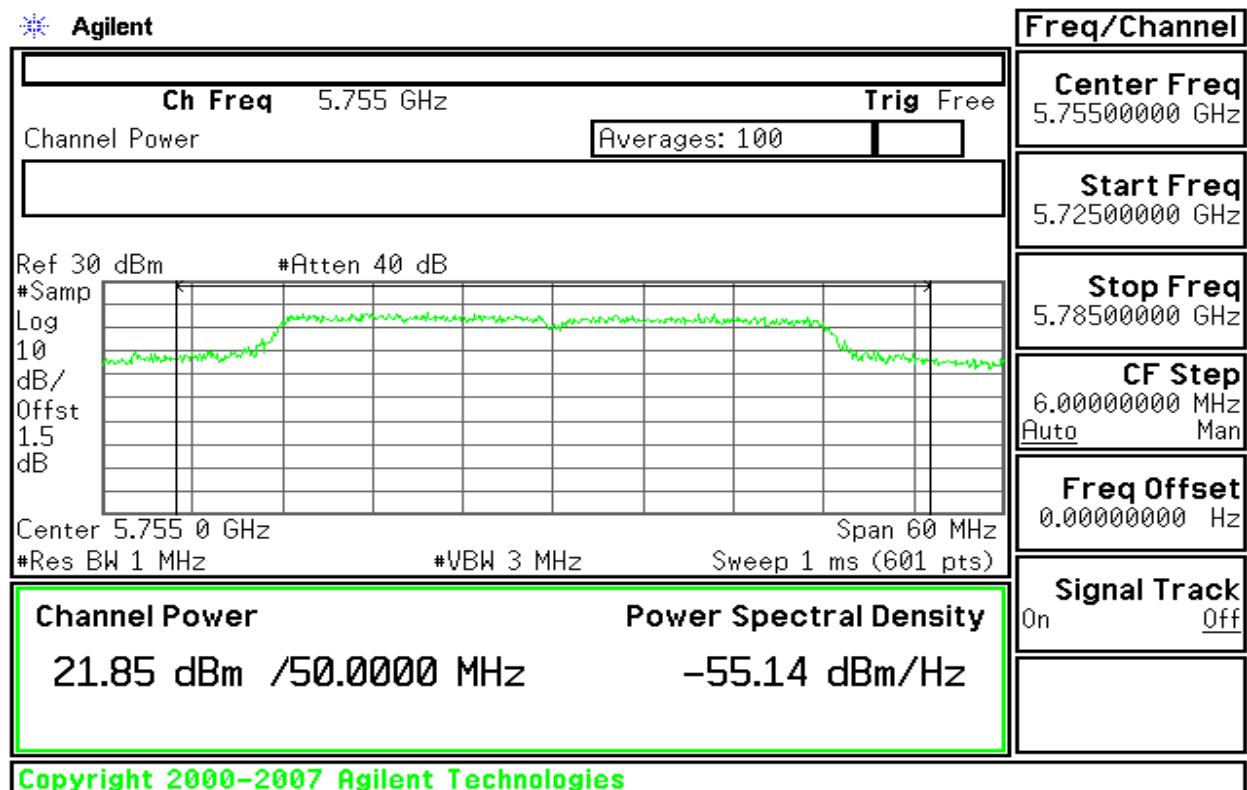
Agilent



draft 802.11n Standard-40 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

Peak Power (CH Low)

Agilent

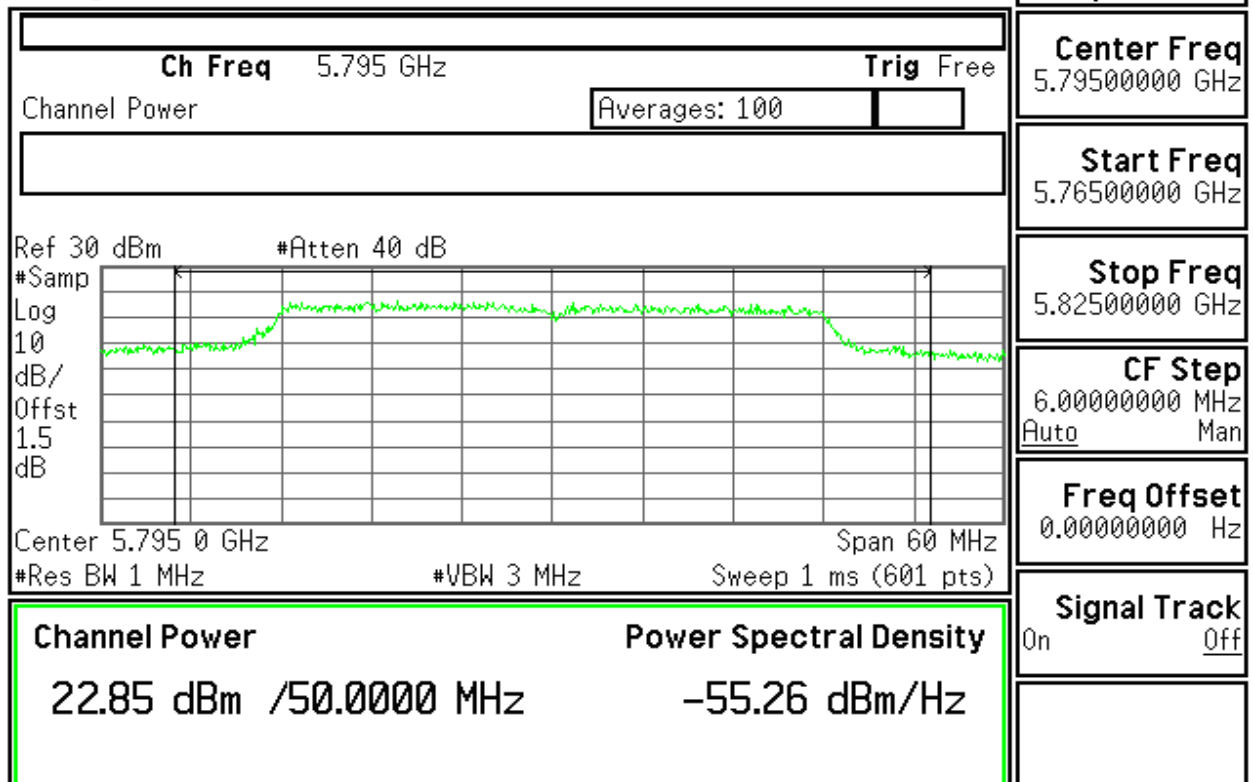


Copyright 2000-2007 Agilent Technologies



Peak Power (CH High)

Agilent



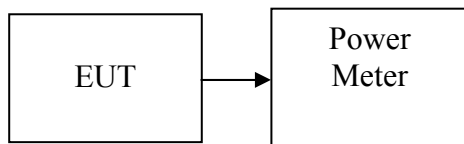


AVERAGE POWER

LIMIT

None; for reporting purposes only.

Test Configuration



TEST PROCEDURE

The transmitter output is connected to the Power meter.

**TEST RESULTS***No non-compliance noted***Test Data****Test mode: IEEE 802.11b mode**

Channel	Frequency (MHz)	Output Power (dBm)
Low	2412	13.22
Mid	2437	14.84
High	2462	13.32

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	Output Power (dBm)
Low	2412	14.21
Mid	2437	14.19
High	2462	14.81

Test mode: draft 802.11gn Standard-20 MHz Channel mode

Channel	Frequency (MHz)	Chain 0 Output Power (dBm)	Chain 1 Output Power (dBm)	Chain 2 Output Power (dBm)	Output Power (dBm)
Low	2412	14.32	14.29	14.78	19.24
Mid	2437	14.37	14.42	13.62	18.92
High	2462	14.55	14.63	14.21	19.23

Test mode: draft 802.11gn Wide-40 MHz Channel mode

Channel	Frequency (MHz)	Chain 0 Output Power (dBm)	Chain 1 Output Power (dBm)	Chain 2 Output Power (dBm)	Output Power (dBm)
Low	2422	14.89	14.91	15.03	19.71
Mid	2437	14.93	14.89	14.98	19.70
High	2452	14.78	14.94	14.99	19.68

Test mode: draft 802.11n Standard-20 MHz Channel mode / Chain 0+ Chain 1 +Chain 2

Channel	Frequency (MHz)	Output Power (dBm)
Low	2412	19.40
Mid	2437	18.78
High	2462	20.11

**Test mode: draft 802.11n Wide-40 MHz Channel mode / Chain 0+ Chain 1 +Chain 2**

Channel	Frequency (MHz)	Output Power (dBm)
Low	2422	19.89
Mid	2437	19.68
High	2452	19.56

Test mode: IEEE 802.11a mode

Channel	Frequency (MHz)	Output Power (dBm)
Low	5745	16.89
Mid	5785	17.49
High	5805	17.58

Test mode: draft 802.11an Standard-20 MHz Channel mode

Channel	Frequency (MHz)	Chain 0 Output Power (dBm)	Chain 1 Output Power (dBm)	Chain 2 Output Power (dBm)	Output Power (dBm)
Low	5745	15.11	15.23	15.06	19.91
Mid	5785	15.43	15.19	15.26	20.07
High	5805	15.34	15.33	15.21	20.06

Test mode: draft 802.11an Wide-40 MHz Channel mode

Channel	Frequency (MHz)	Chain 0 Output Power (dBm)	Chain 1 Output Power (dBm)	Chain 2 Output Power (dBm)	Output Power (dBm)
Low	5755	15.67	15.59	15.36	20.31
Mid	5795	15.49	15.56	15.46	20.27



Test mode: draft 802.11n Standard-20 MHz Channel mode / Chain 0+ Chain 1 +Chain 2

Channel	Frequency (MHz)	Output Power (dBm)
Low	5745	19.98
Mid	5785	20.17
High	5805	20.78

Test mode: draft 802.11n Wide-40 MHz Channel mode / Chain 0+ Chain 1 +Chain 2

Channel	Frequency (MHz)	Output Power (dBm)
Low	5755	19.67
Mid	5795	19.76

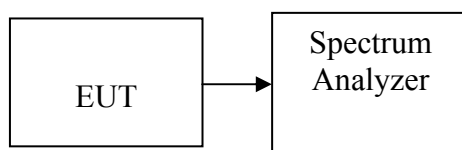


PEAK POWER SPECTRAL DENSITY

LIMIT

1. According to §15.247(e), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.
2. According to §15.247(f), the digital modulation operation of the hybrid system, with the frequency hopping turned off, shall comply with the power density requirements of paragraph (d) of this section.

Test Configuration



TEST PROCEDURE

1. Place the EUT on the table and set it in transmitting mode.
Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set the spectrum analyzer as RBW = 3 kHz, VBW = 10 kHz, Span = 300 kHz, Sweep = 100 s
3. Record the max reading.
4. Repeat the above procedure until the measurements for all frequencies are completed.



TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b mode

Channel	Frequency (MHz)	PPSD Total (dBm)	Limit (dBm)	Result
Low	2412	-9.66	8.00	PASS
Mid	2437	-10.79	8.00	PASS
High	2462	-9.93	8.00	PASS

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	PPSD Total (dBm)	Limit (dBm)	Result
Low	2412	-13.59	8.00	PASS
Mid	2437	-12.16	8.00	PASS
High	2462	-12.27	8.00	PASS

Test mode: draft 802.11n Standard-20 MHz Channel mode

Channel	Frequency (MHz)	PPSD Chain 0 (dBm)	PPSD Chain 1 (dBm)	PPSD Chain 2 (dBm)	PPSD Total (dBm)	Limit (dBm)	Result
Low	2412	-13.20	-13.75	-11.75	-8.04	8.00	PASS
Mid	2437	-11.48	-13.11	-9.54	-6.32	8.00	PASS
High	2462	-11.94	-13.12	-11.03	-7.18	8.00	PASS

Test mode: draft 802.11n Wide-40 MHz Channel mode

Channel	Frequency (MHz)	PPSD Chain 0 (dBm)	PPSD Chain 1 (dBm)	PPSD Chain 2 (dBm)	PPSD Total (dBm)	Limit (dBm)	Result
Low	2422	-4.84	-3.48	-4.01	0.67	8.00	PASS
Mid	2437	-4.32	-3.67	-3.49	0.96	8.00	PASS
High	2452	-3.86	-3.61	-3.37	1.62	8.00	PASS

**Test mode: draft 802.11gn Standard-20 MHz Channel mode / Chain 0+ Chain 1 +Chain 2**

Channel	Frequency (MHz)	PPSD Total (dBm)	Limit (dBm)	Result
Low	2412	-5.75	8.00	PASS
Mid	2437	-5.93	8.00	PASS
High	2462	-5.43	8.00	PASS

Test mode: draft 802.11gn Wide-40 MHz Channel mode / Chain 0+ Chain 1 +Chain 2

Channel	Frequency (MHz)	PPSD Total (dBm)	Limit (dBm)	Result
Low	2422	1.54	8.00	PASS
Mid	2437	1.49	8.00	PASS
High	2452	1.48	8.00	PASS

Test mode: IEEE 802.11a mode

Channel	Frequency (MHz)	PPSD Total (dBm)	Limit (dBm)	Result
Low	5745	-10.17	8.00	PASS
Mid	5785	-9.13	8.00	PASS
High	5805	-9.77	8.00	PASS

**Test mode: draft 802.11n Standard-20 MHz Channel mode**

Channel	Frequency (MHz)	PPSD Chain 0 (dBm)	PPSD Chain 1 (dBm)	PPSD Chain 2 (dBm)	PPSD Total (dBm)	Limit (dBm)	Result
Low	5745	-11.37	-11.18	-11.05	-6.43	8.00	PASS
Mid	5785	-11.02	-11.07	-10.94	-6.24	8.00	PASS
High	5805	-10.94	-10.54	-10.37	-5.84	8.00	PASS

Test mode: draft 802.11n Wide-40 MHz Channel mode

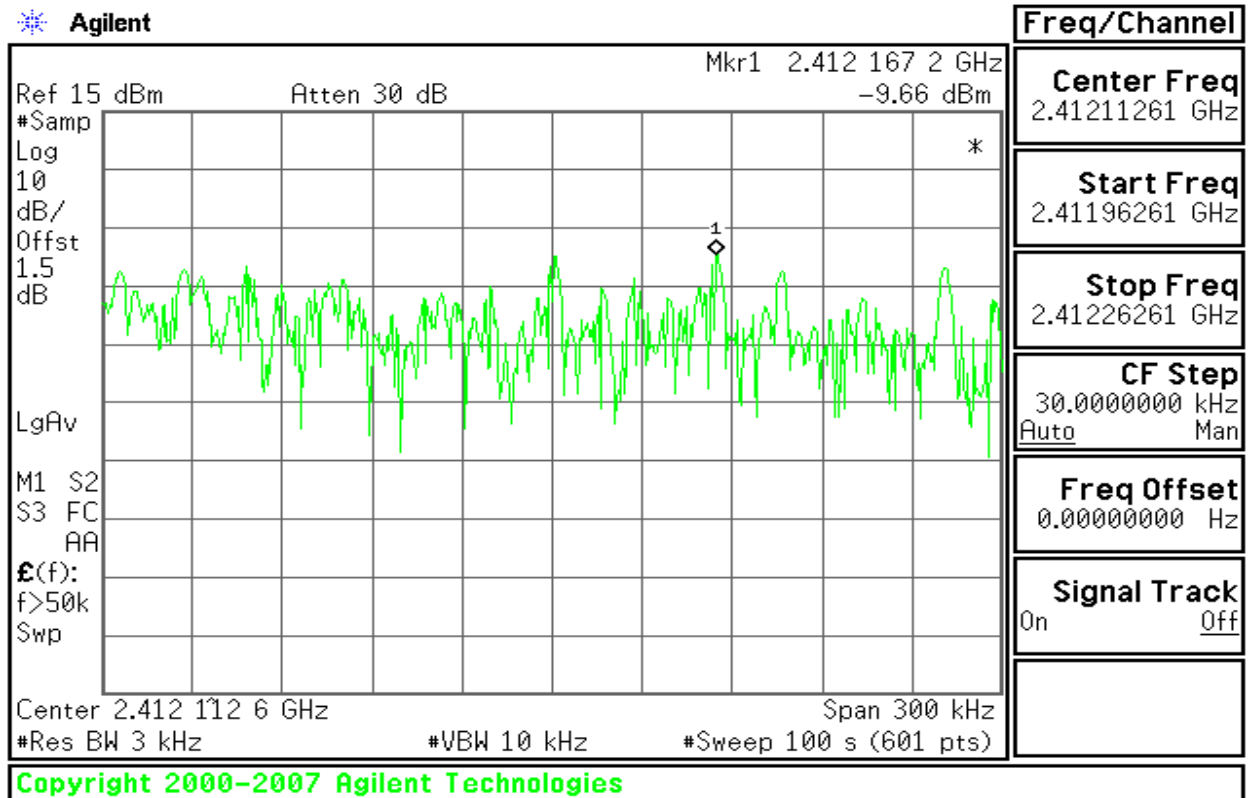
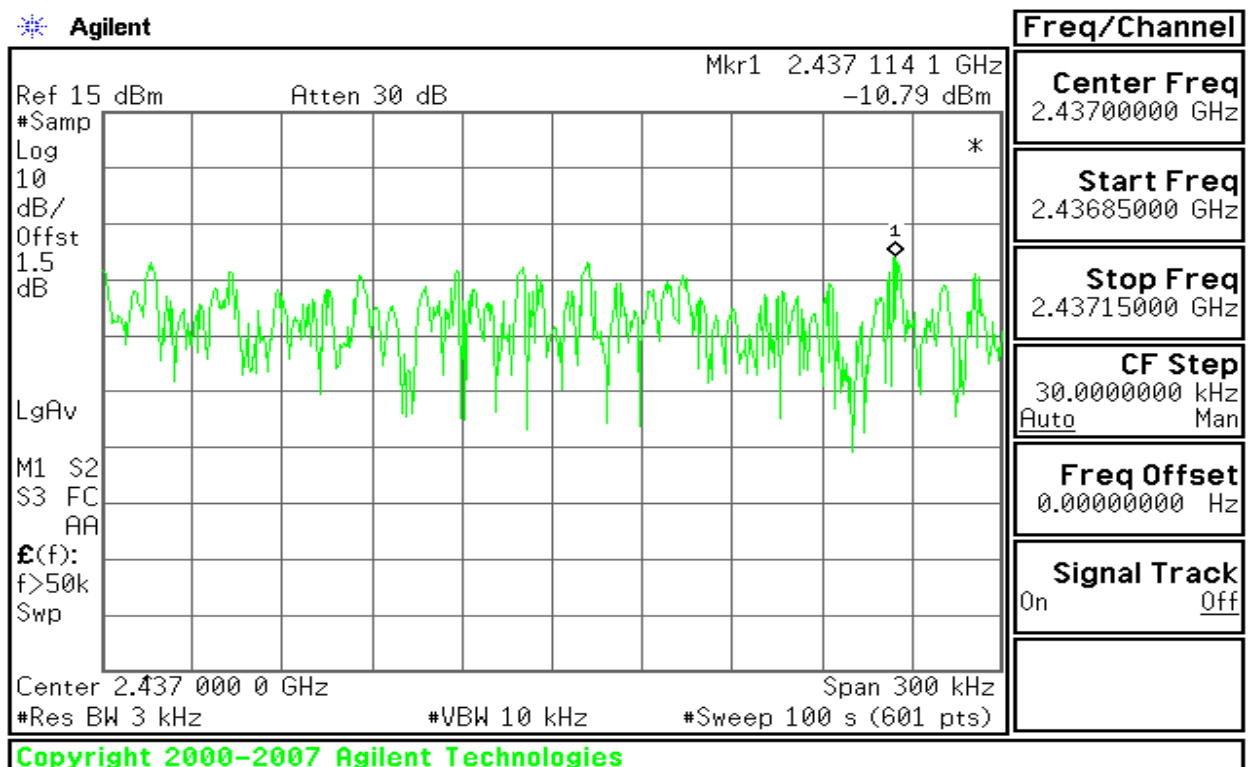
Channel	Frequency (MHz)	PPSD Chain 0 (dBm)	PPSD Chain 1 (dBm)	PPSD Chain 2 (dBm)	PPSD Total (dBm)	Limit (dBm)	Result
Low	5755	-7.13	-4.97	-6.97	-1.46	8.00	PASS
Mid	5795	-6.08	-5.55	-7.99	-1.65	8.00	PASS

Test mode: draft 802.11n Standard-20 MHz Channel mode / Chain 0+ Chain 1 +Chain 2

Channel	Frequency (MHz)	PPSD Total (dBm)	Limit (dBm)	Result
Low	5745	-5.18	8.00	PASS
Mid	5785	-5.15	8.00	PASS
High	5805	-4.89	8.00	PASS

Test mode: draft 802.11n Wide-40 MHz Channel mode / Chain 0+ Chain 1 +Chain 2

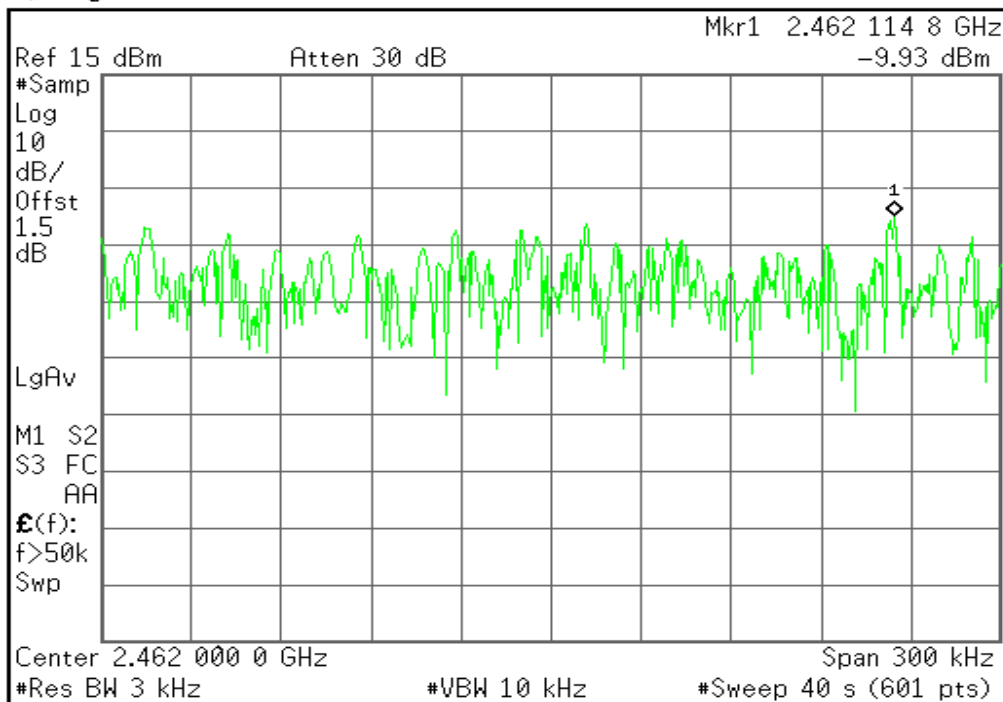
Channel	Frequency (MHz)	PPSD Total (dBm)	Limit (dBm)	Result
Low	5755	0.11	8.00	PASS
Mid	5795	0.21	8.00	PASS

**Test Plot****IEEE 802.11b mode****PPSD (CH Low)****PPSD (CH Mid)**



PPSD (CH High)

Agilent



Freq/Channel

Center Freq

2.46200000 GHz

Start Freq

2.46185000 GHz

Stop Freq

2.46215000 GHz

CF Step

30.0000000 kHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

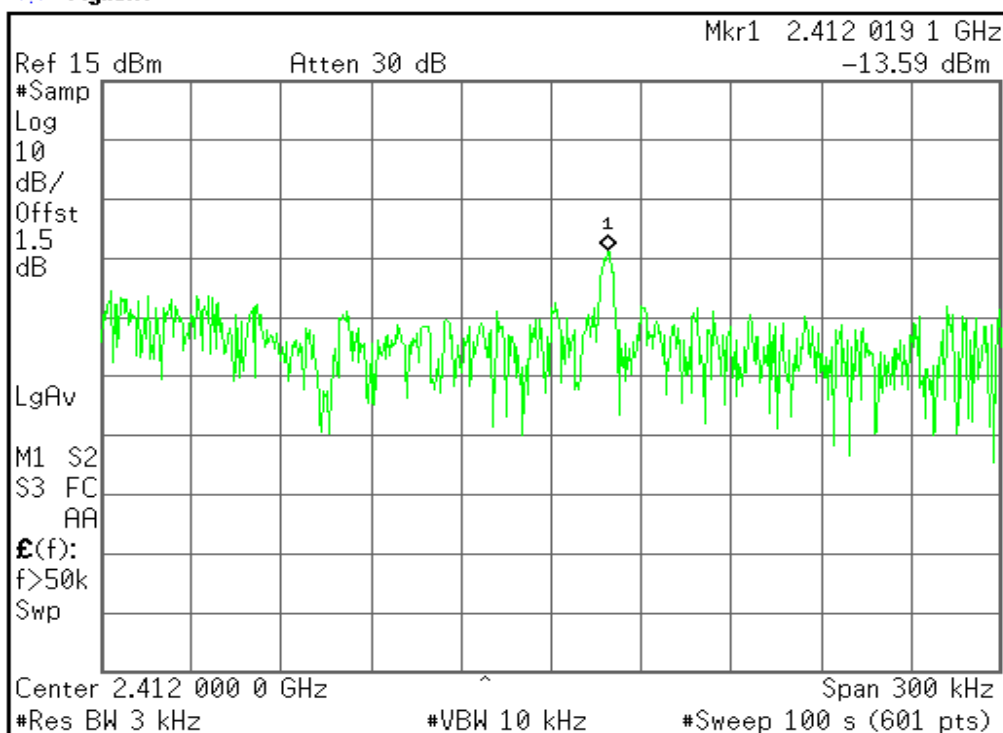
On Off

Copyright 2000-2007 Agilent Technologies

IEEE 802.11g mode

PPSD (CH Low)

Agilent



Freq/Channel

Center Freq

2.41200000 GHz

Start Freq

2.41185000 GHz

Stop Freq

2.41215000 GHz

CF Step

30.0000000 kHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

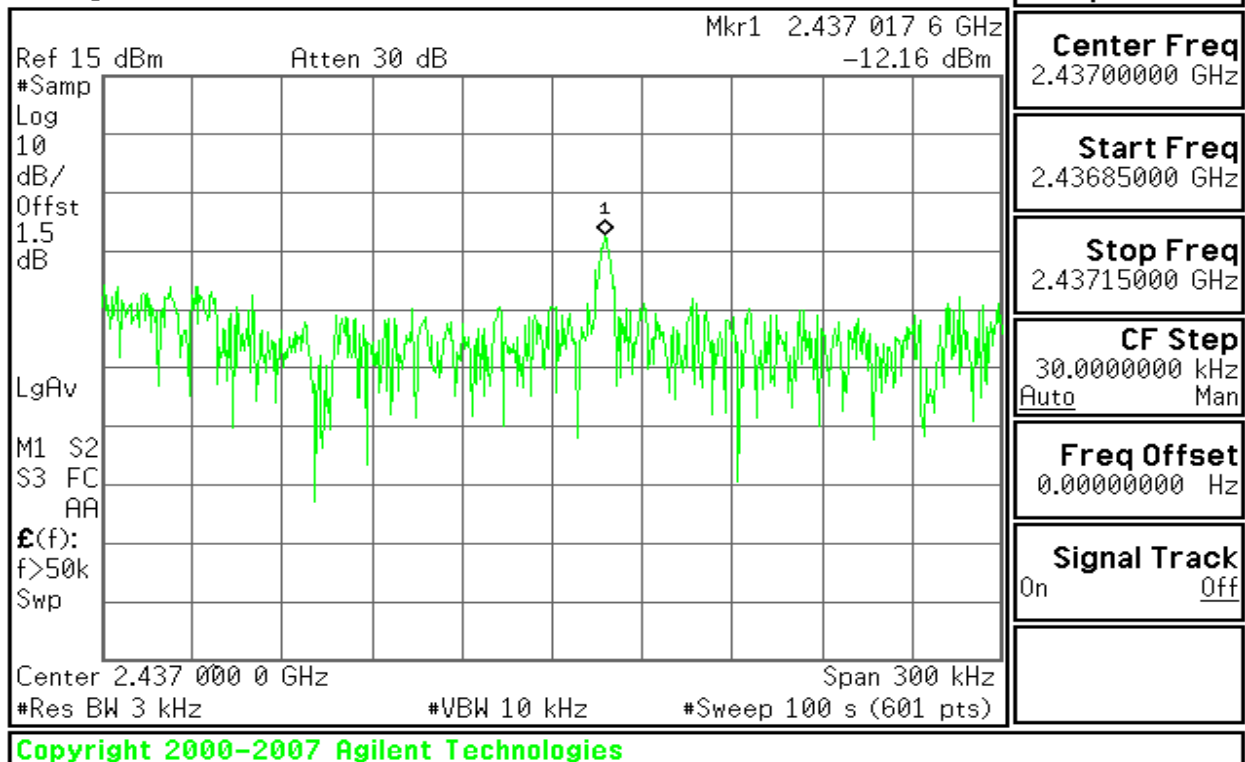
On Off

Copyright 2000-2007 Agilent Technologies



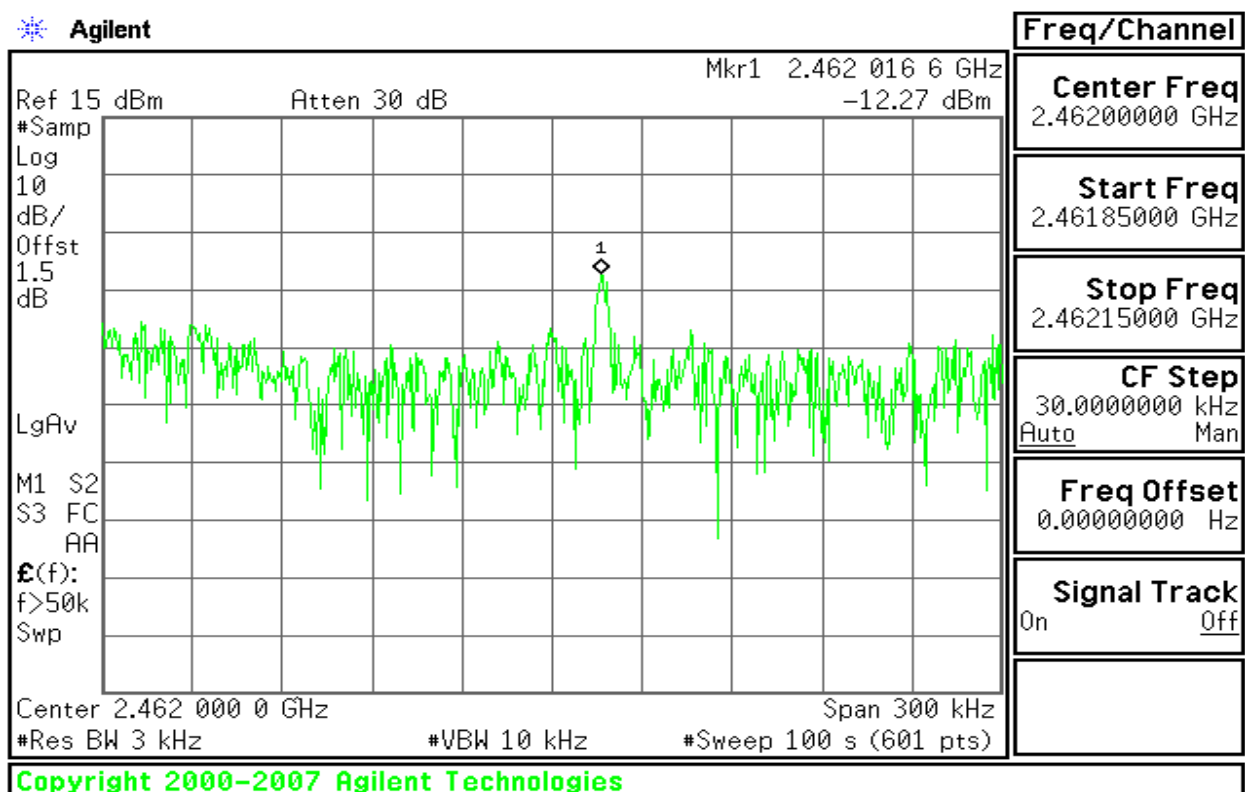
PPSD (CH Mid)

Agilent



PPSD (CH High)

Agilent

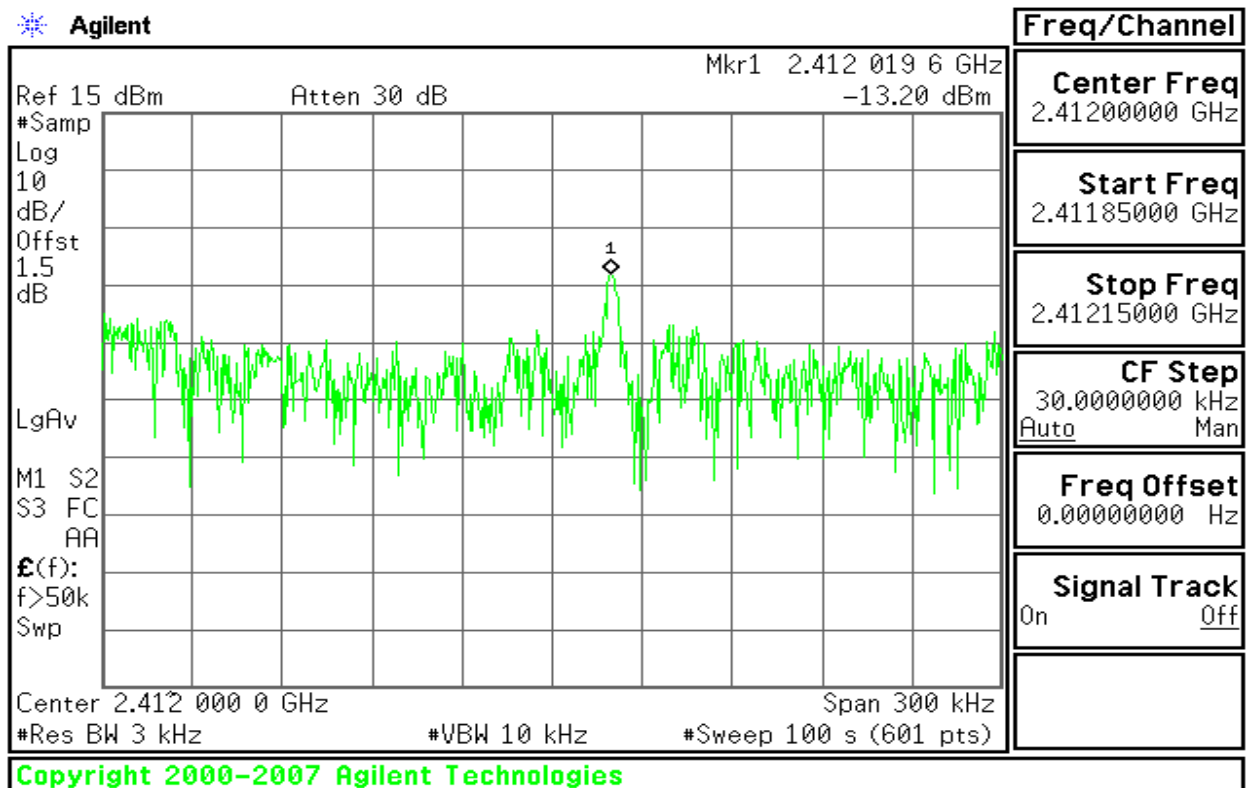




draft 802.11n Standard-20 MHz Channel mode / Chain 0

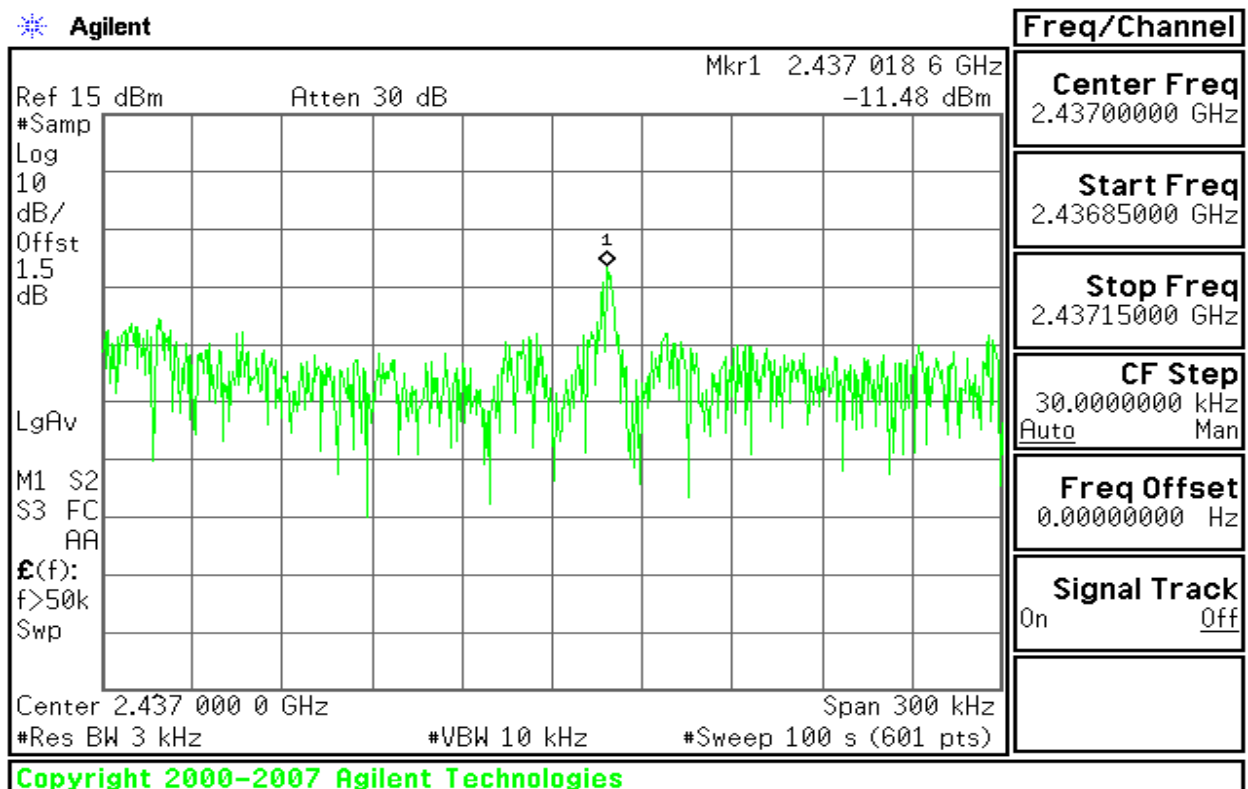
PPSD (CH Low)

Agilent



PPSD (CH Mid)

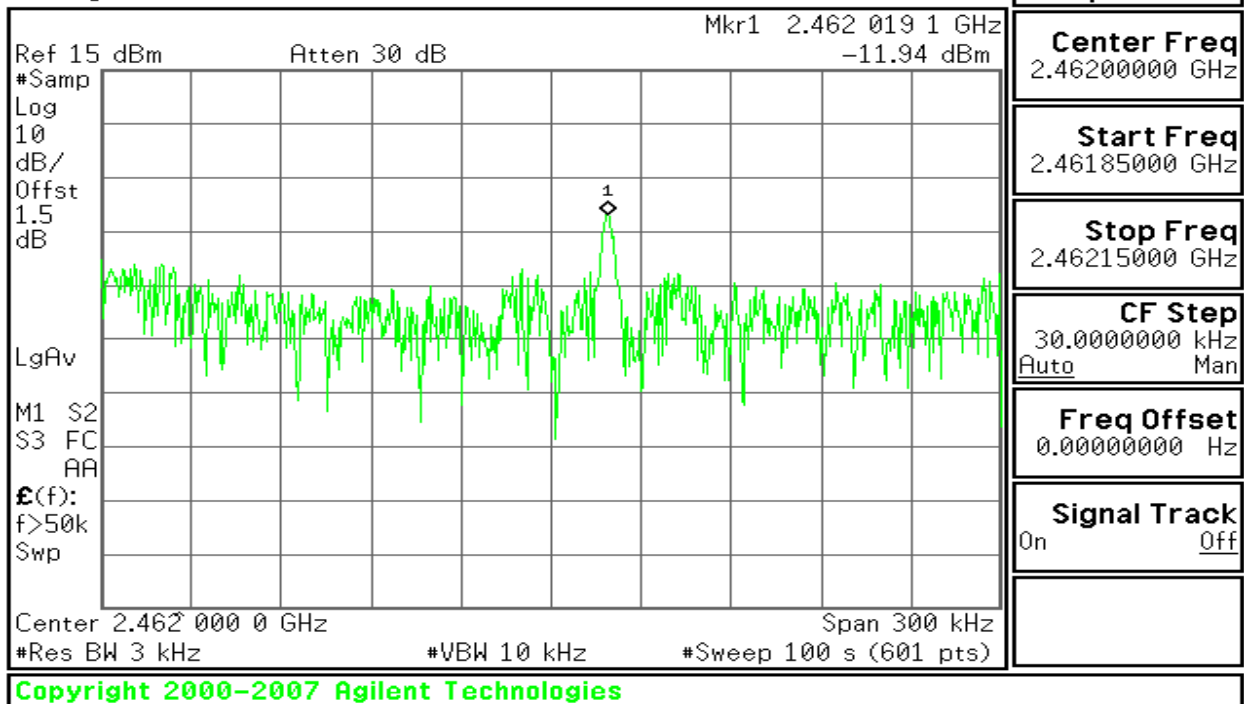
Agilent





PPSD (CH High)

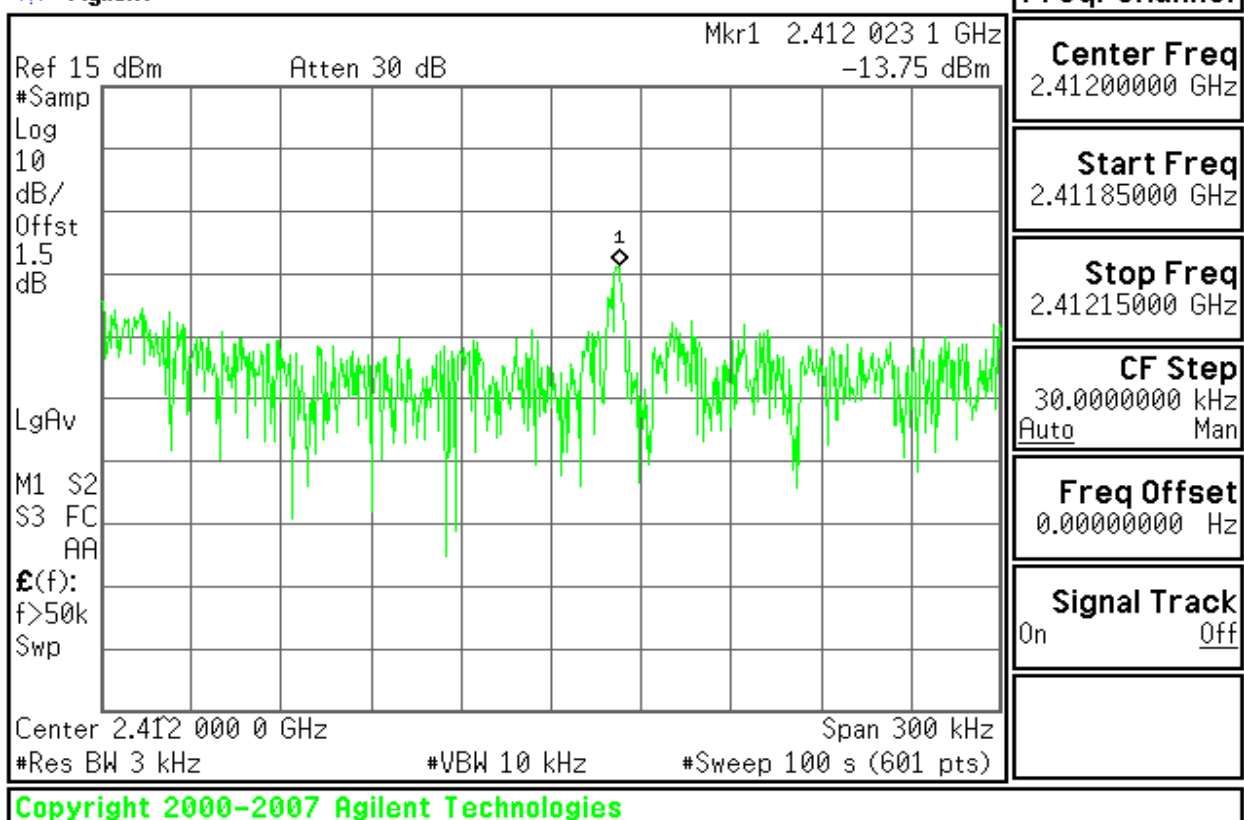
Agilent



draft 802.11n Standard-20 MHz Channel mode / Chain 1

PPSD (CH Low)

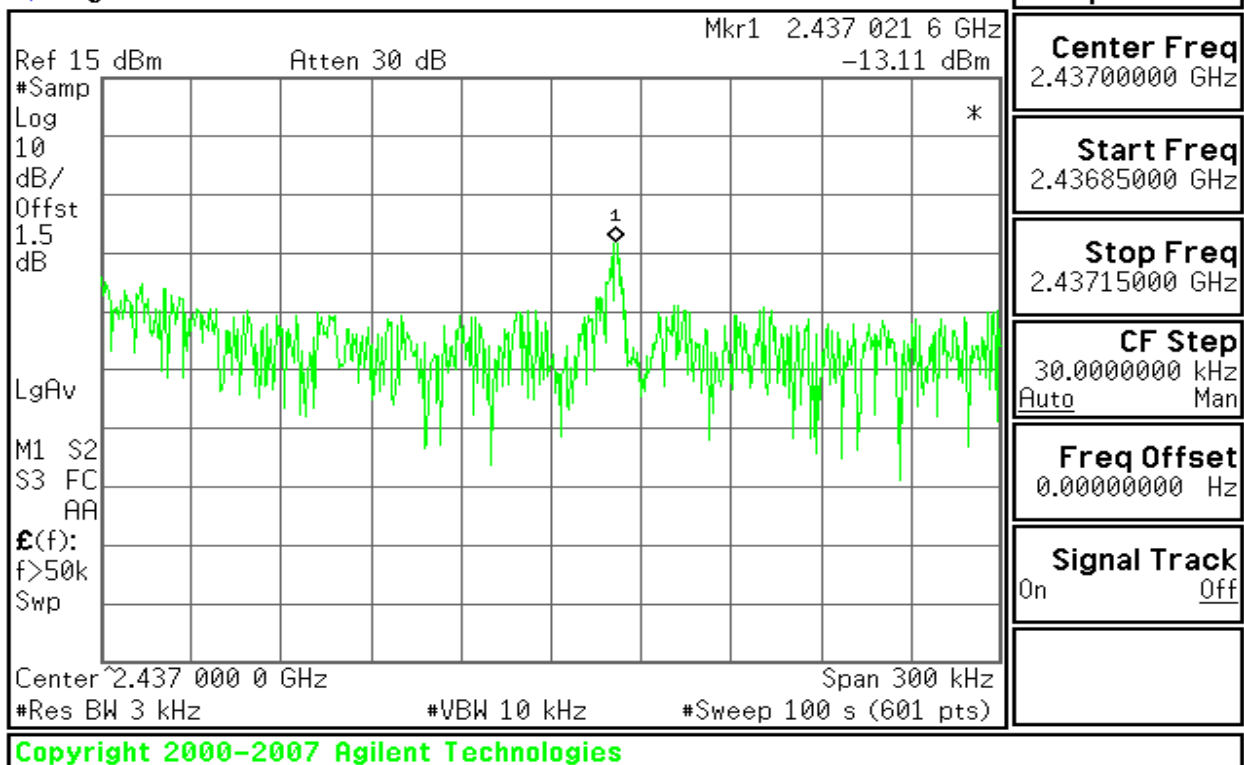
Agilent





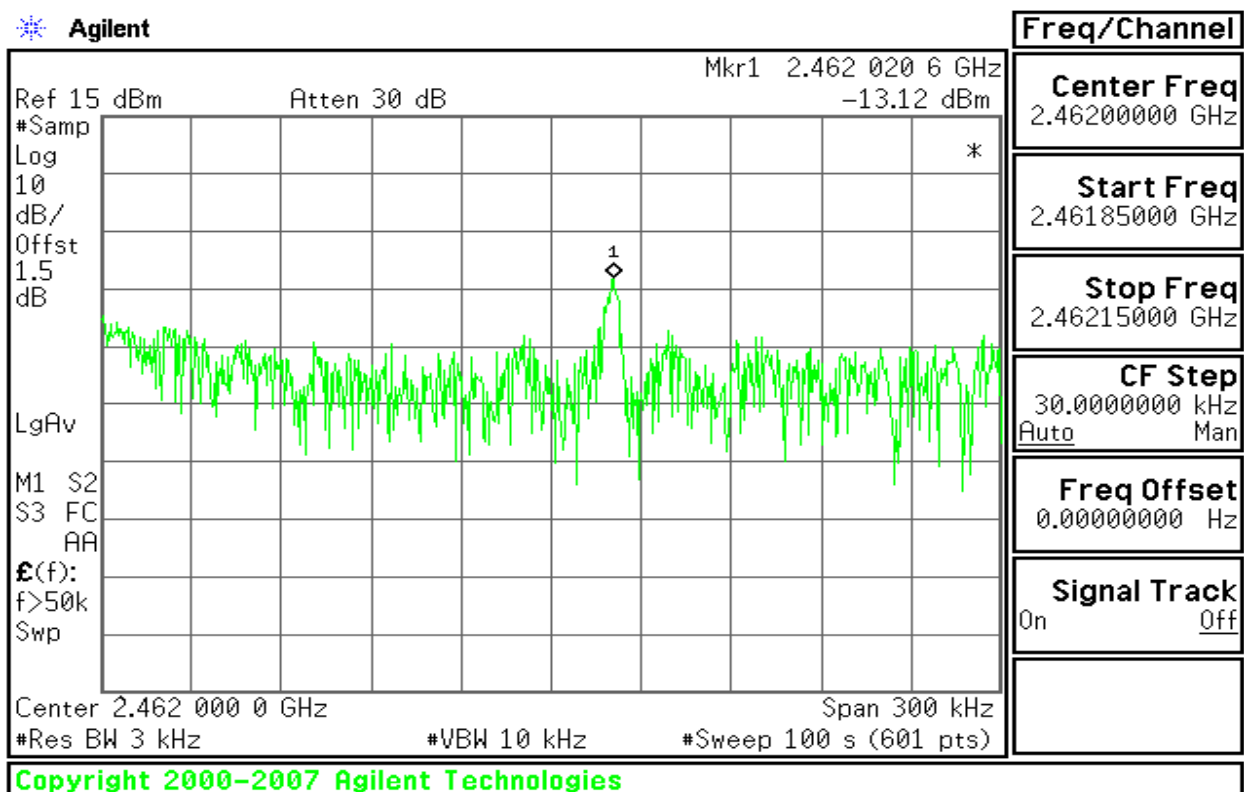
PPSD (CH Mid)

Agilent



PPSD (CH High)

Agilent

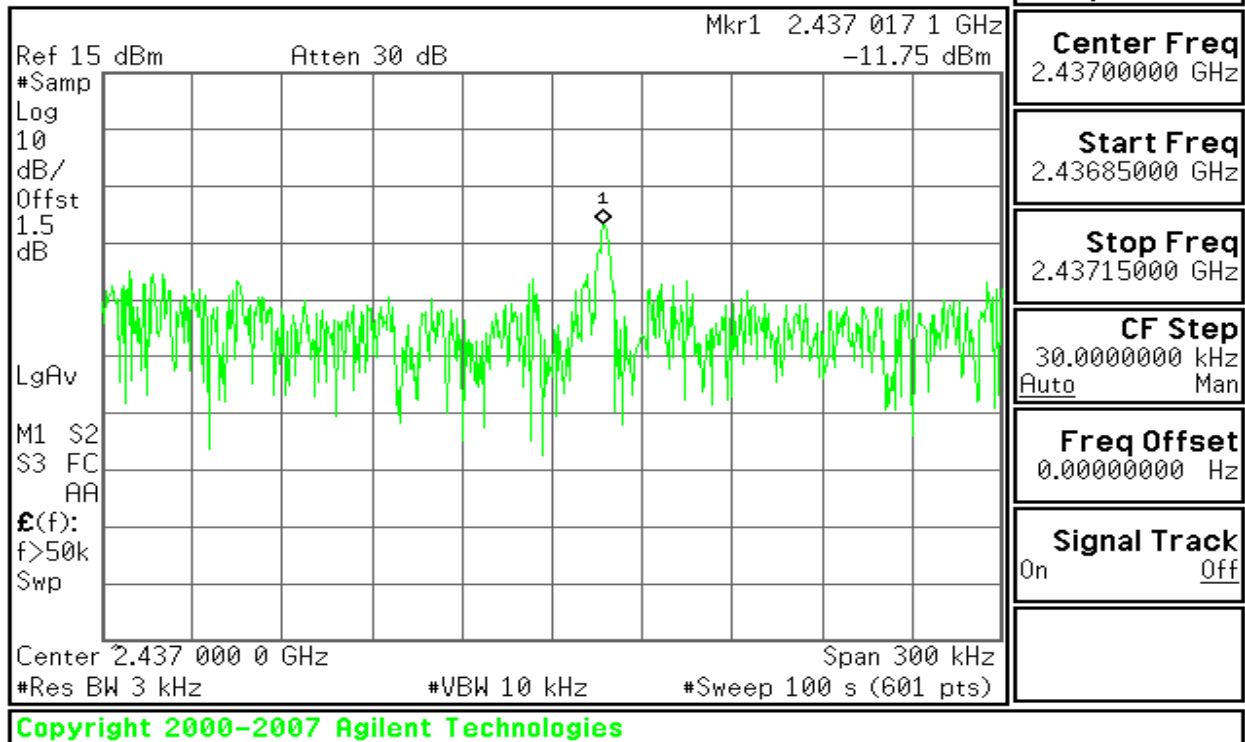




draft 802.11n Standard-20 MHz Channel mode / Chain 2

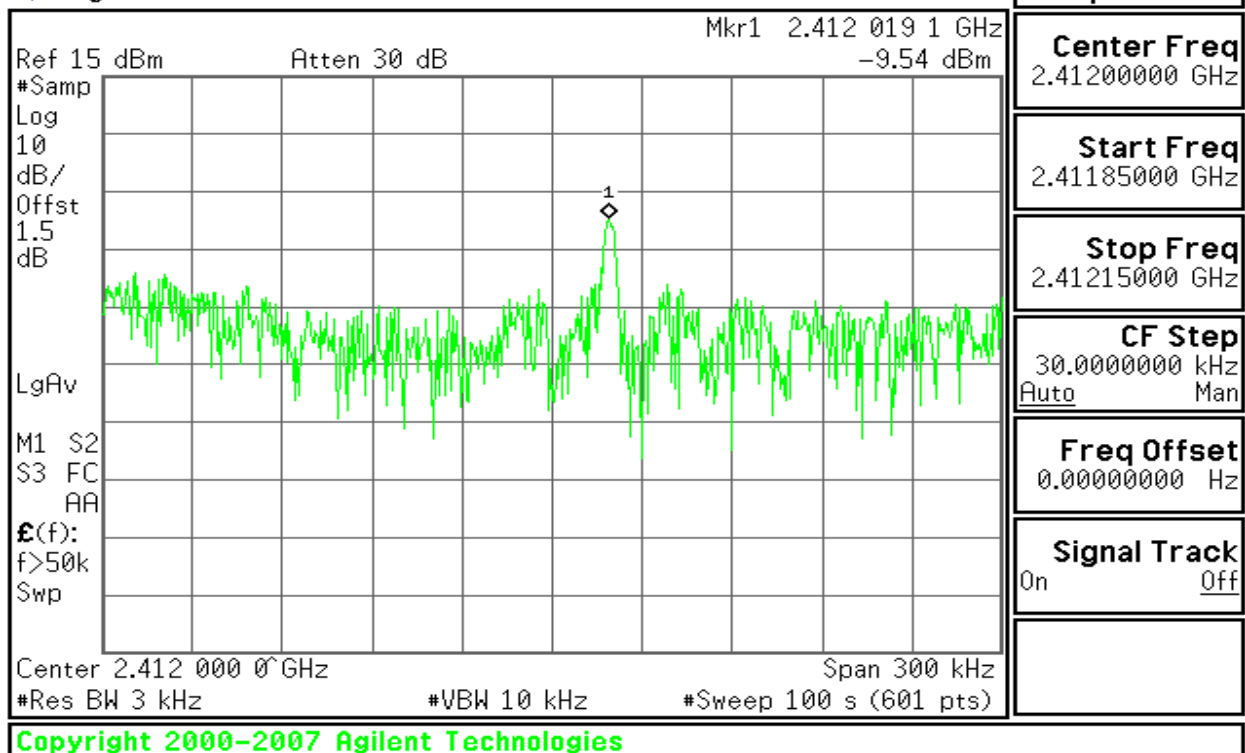
PPSD (CH Low)

Agilent



PPSD (CH Mid)

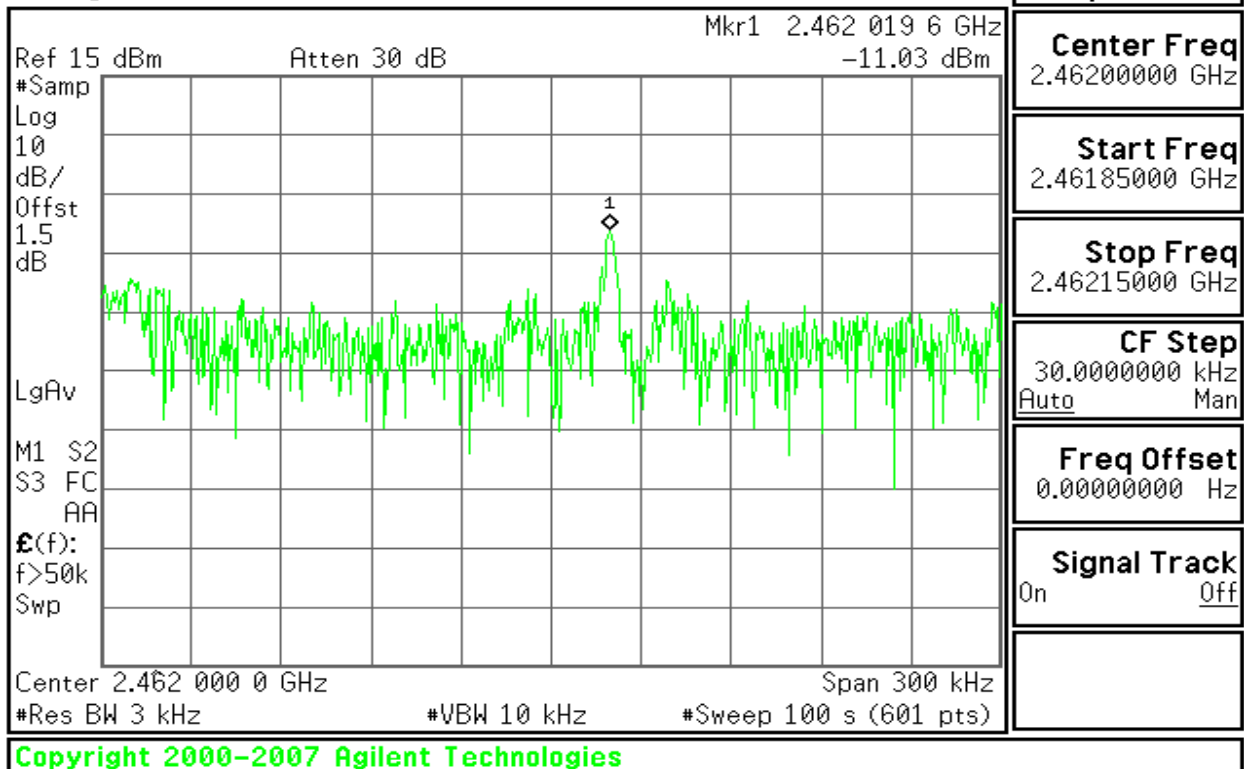
Agilent





PPSD (CH High)

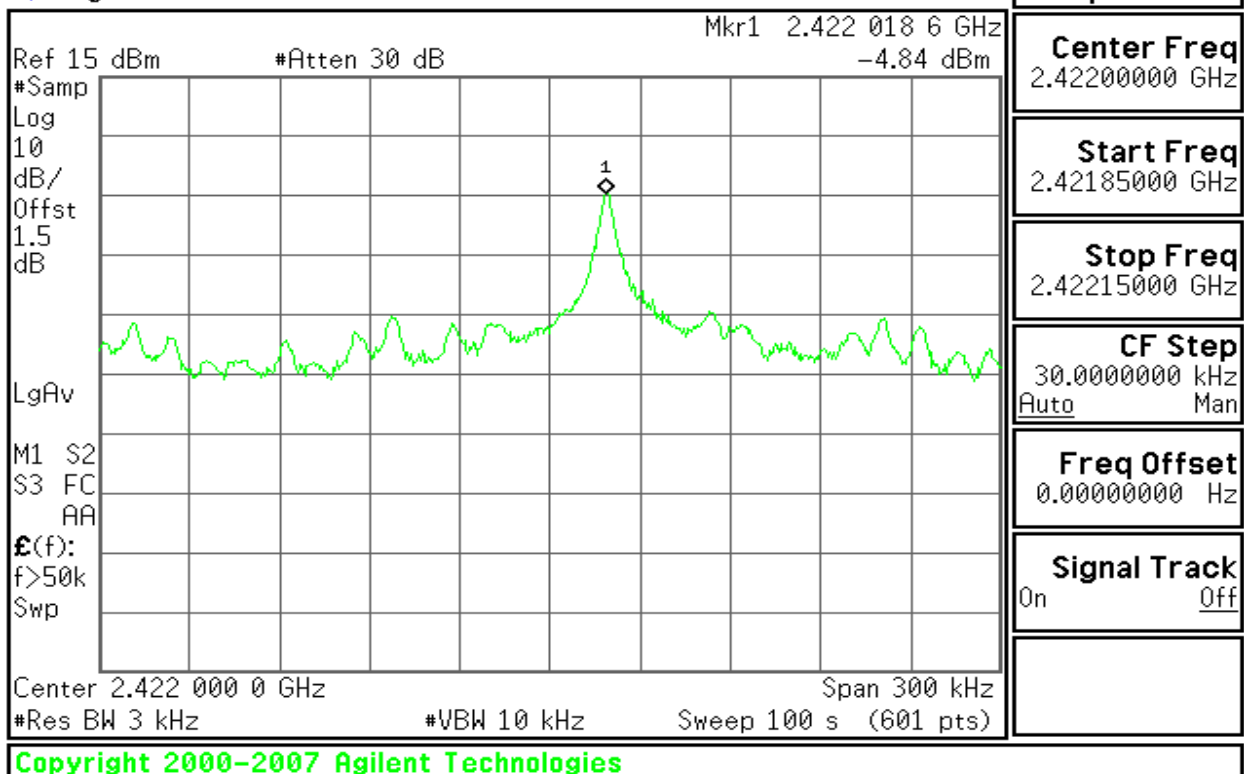
Agilent



draft 802.11n Wide-40 MHz Channel mode / Chain 0

PPSD (CH Low)

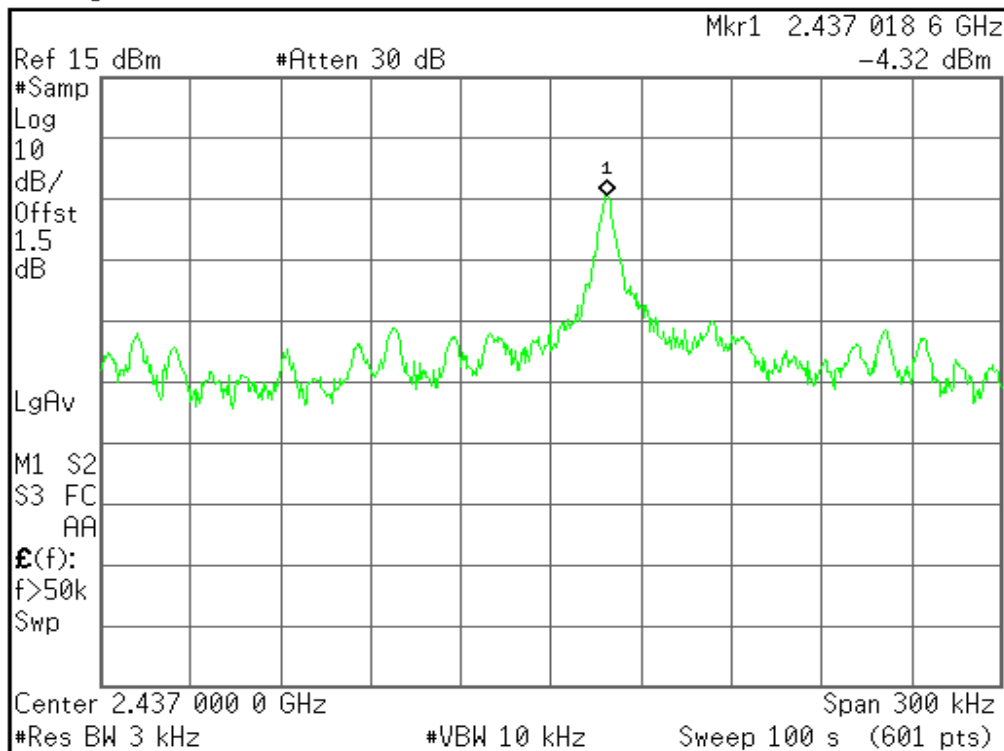
Agilent





PPSD (CH Mid)

Agilent



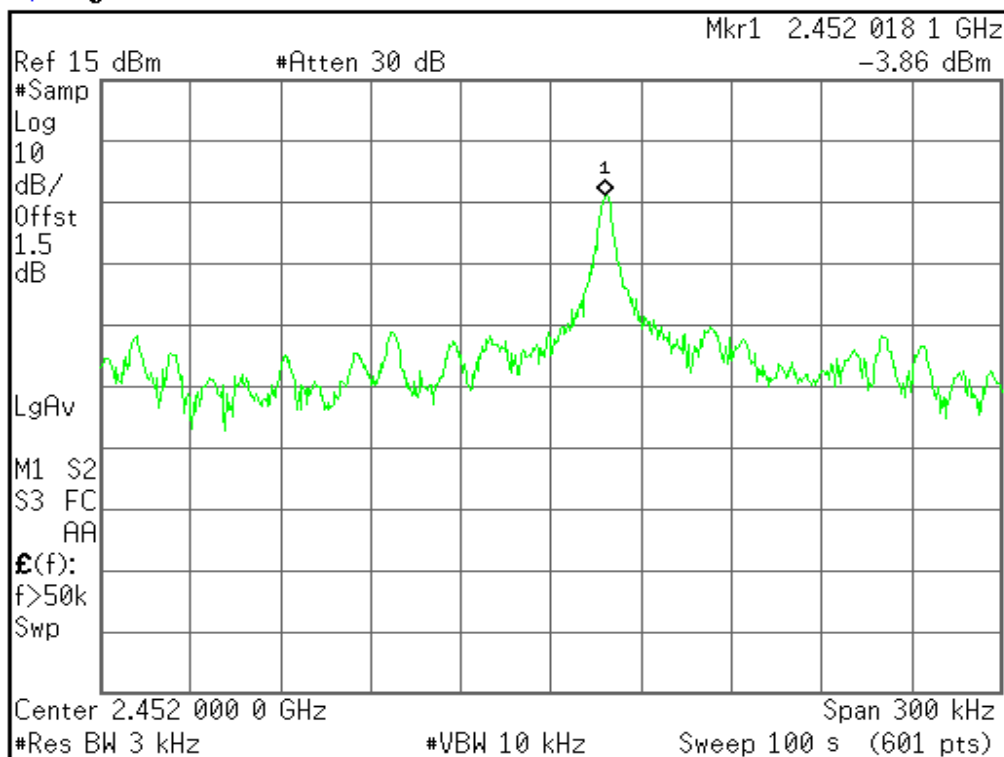
Freq/Channel

Center Freq
2.43700000 GHzStart Freq
2.43685000 GHzStop Freq
2.43715000 GHzCF Step
30.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

PPSD (CH High)

Agilent



Freq/Channel

Center Freq
2.45200000 GHzStart Freq
2.45185000 GHzStop Freq
2.45215000 GHzCF Step
30.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

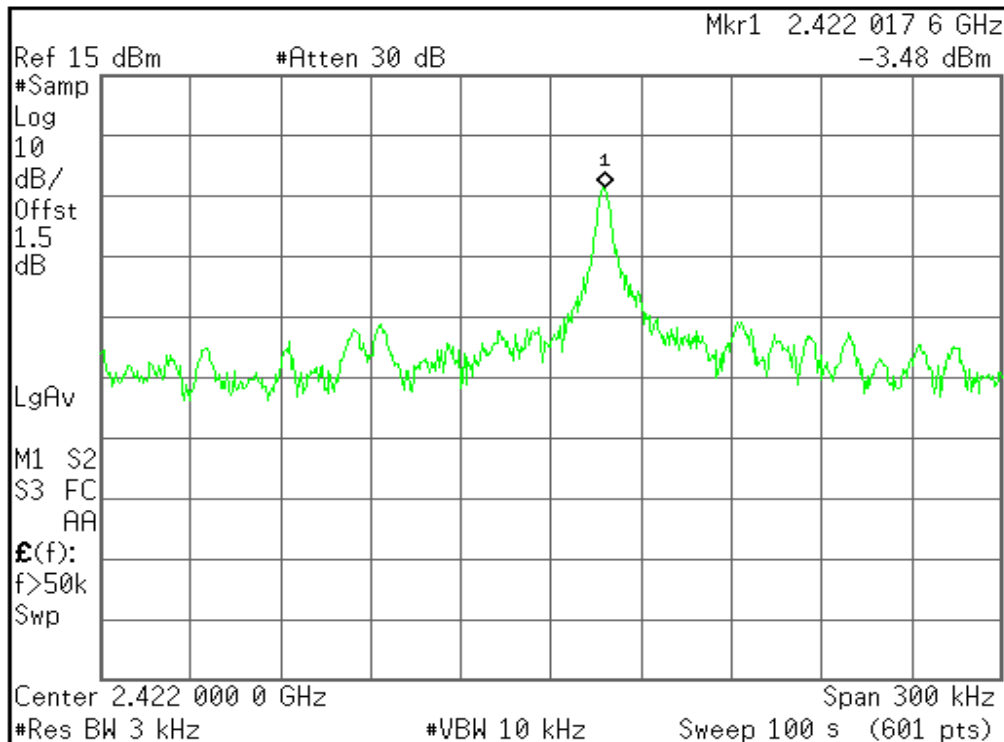
Copyright 2000-2007 Agilent Technologies



draft 802.11n Wide-40 MHz Channel mode / Chain 1

PPSD (CH Low)

Agilent



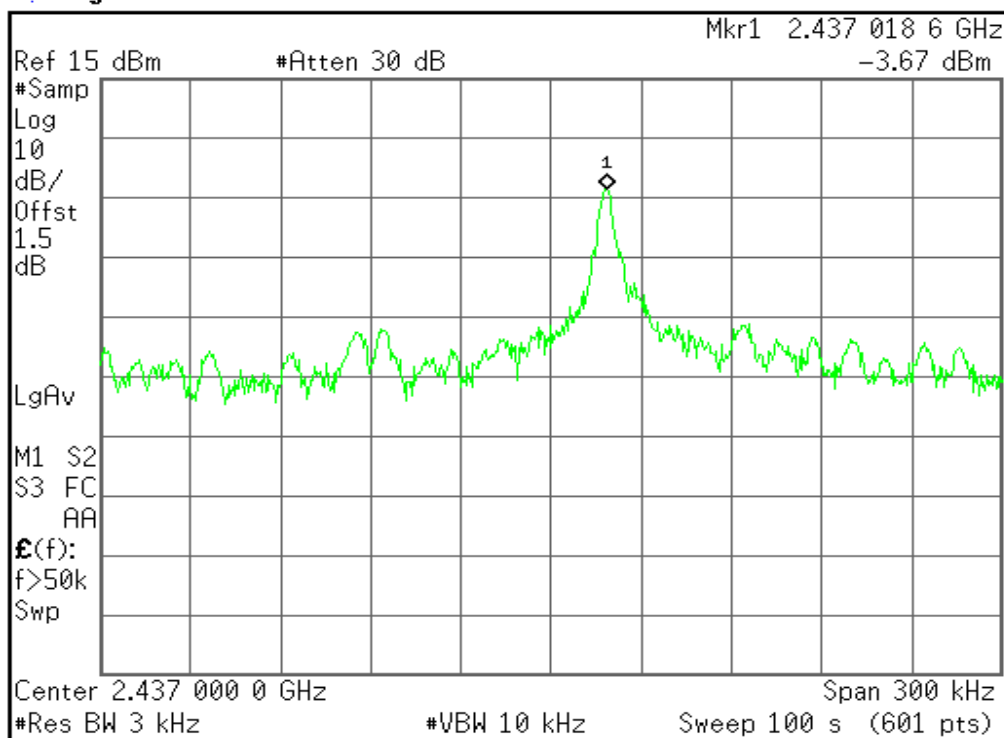
Freq/Channel

Center Freq
2.42200000 GHzStart Freq
2.42185000 GHzStop Freq
2.42215000 GHzCF Step
30.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

PPSD (CH Mid)

Agilent



Freq/Channel

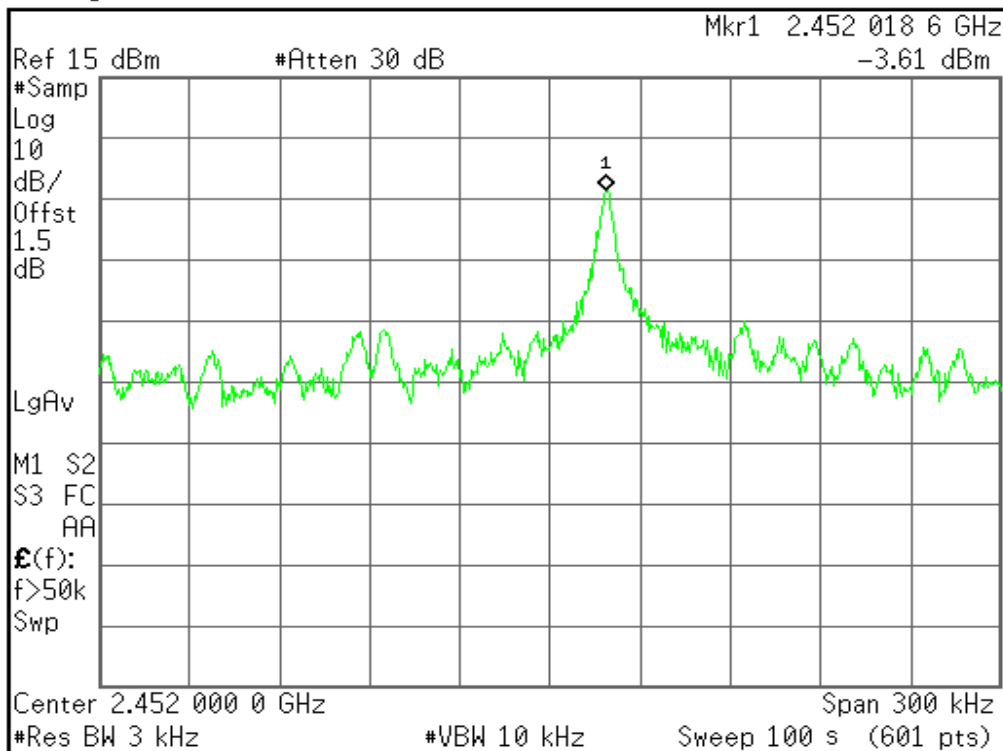
Center Freq
2.43700000 GHzStart Freq
2.43685000 GHzStop Freq
2.43715000 GHzCF Step
30.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



PPSD (CH High)

Agilent



Freq/Channel

Center Freq
2.45200000 GHz

Start Freq
2.45185000 GHz

Stop Freq
2.45215000 GHz

CF Step
30.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

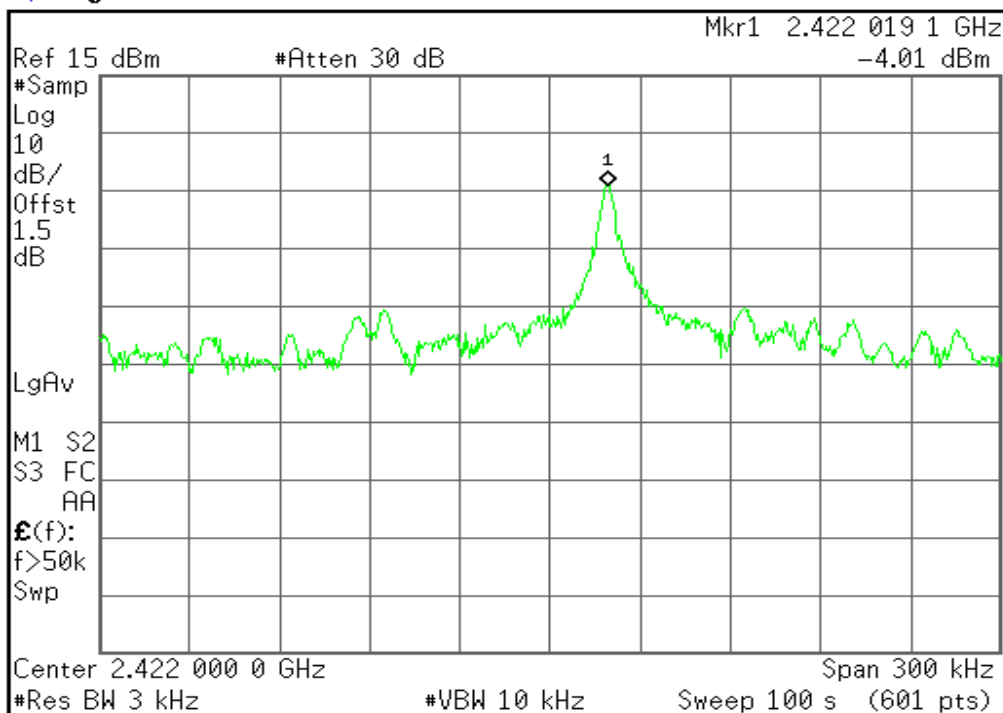
Signal Track
On Off

Copyright 2000-2007 Agilent Technologies

draft 802.11n Wide-40 MHz Channel mode / Chain 2

PPSD (CH Low)

Agilent



Freq/Channel

Center Freq
2.42200000 GHz

Start Freq
2.42185000 GHz

Stop Freq
2.42215000 GHz

CF Step
30.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

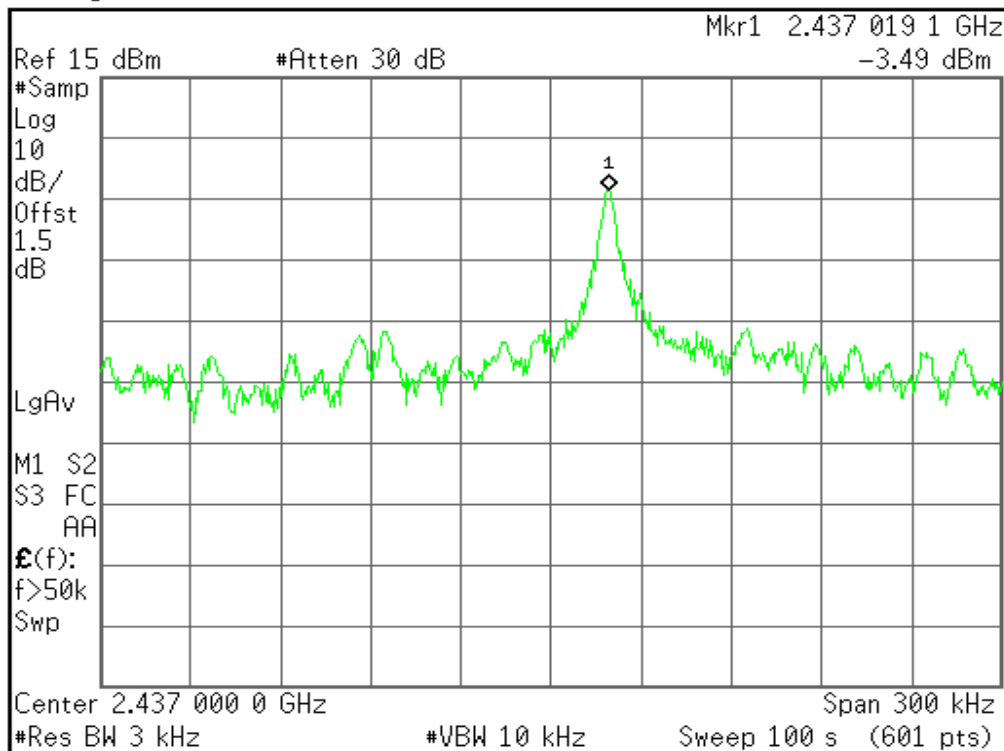
Signal Track
On Off

Copyright 2000-2007 Agilent Technologies



PPSD (CH Mid)

Agilent



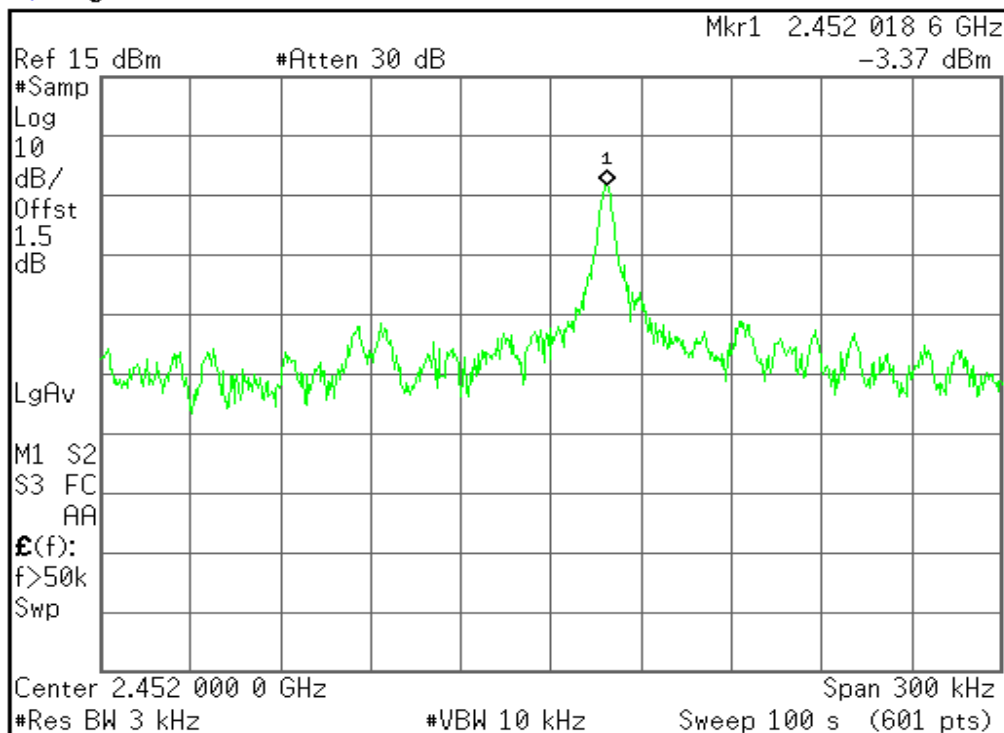
Freq/Channel

Center Freq
2.43700000 GHzStart Freq
2.43685000 GHzStop Freq
2.43715000 GHzCF Step
30.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

PPSD (CH High)

Agilent



Freq/Channel

Center Freq
2.45200000 GHzStart Freq
2.45185000 GHzStop Freq
2.45215000 GHzCF Step
30.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

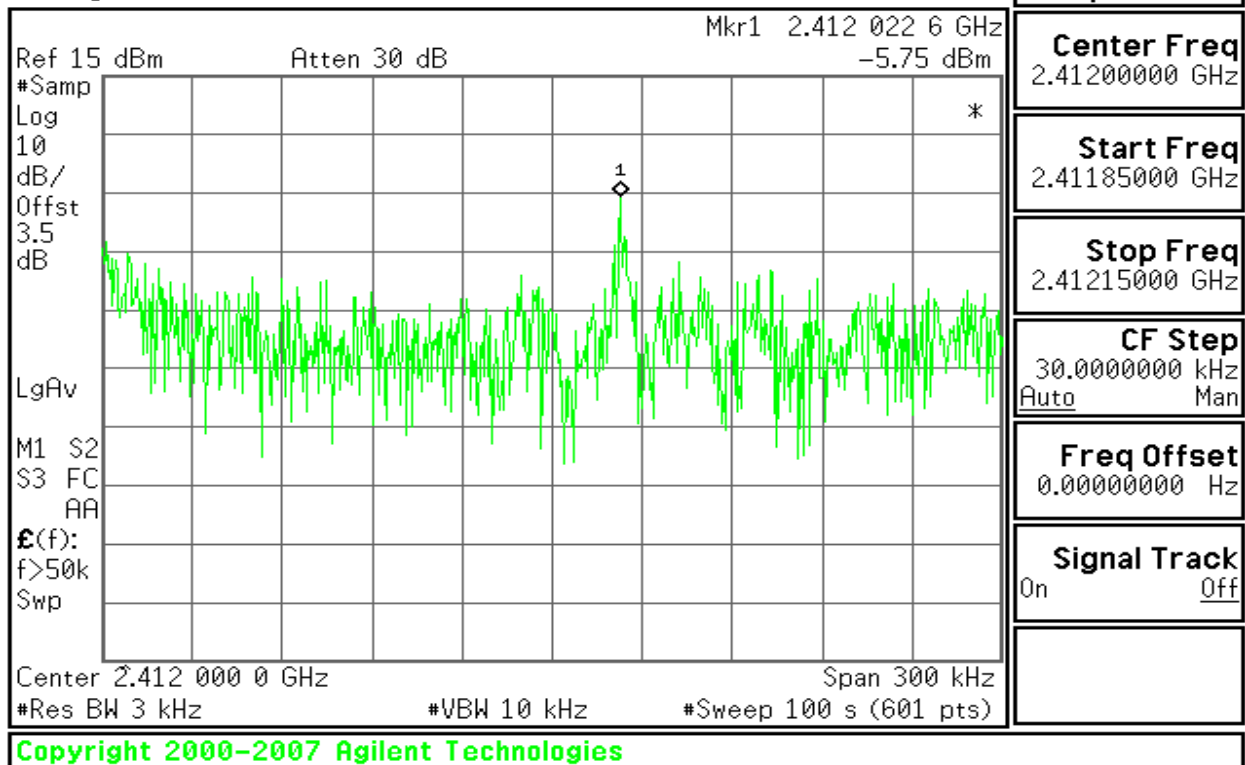
File Operation Status, A:\SCREN274.GIF file saved



draft 802.11n Standard-20 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

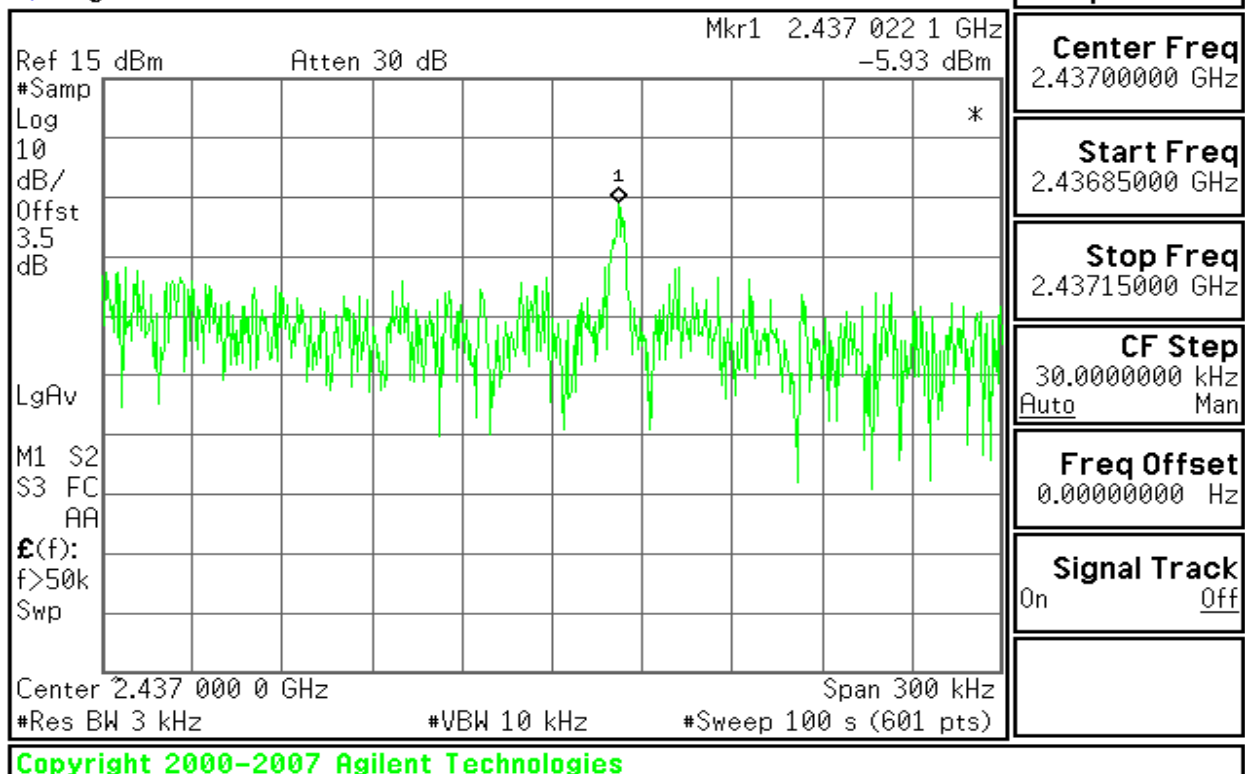
PPSD (CH Low)

Agilent



PPSD (CH Mid)

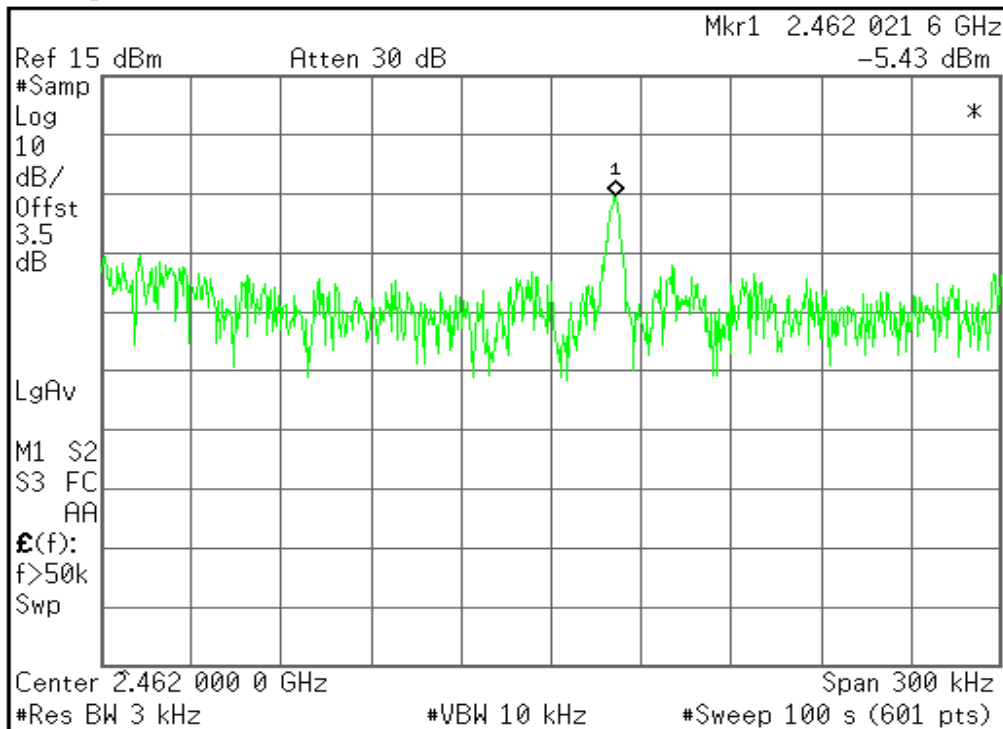
Agilent





PPSD (CH High)

Agilent



Freq/Channel

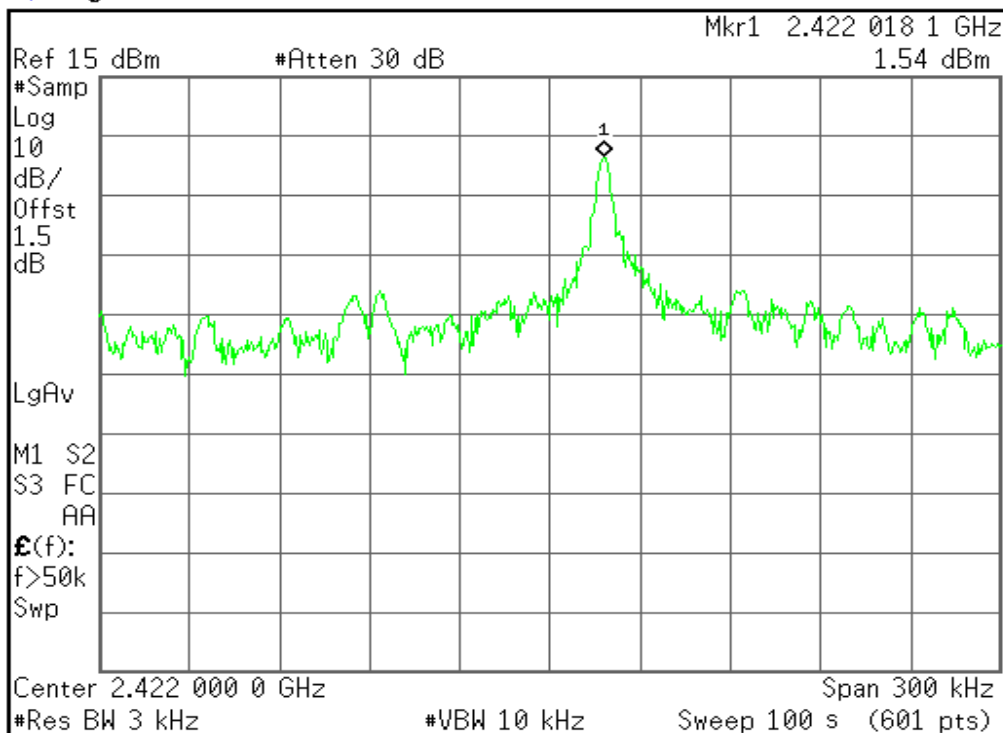
Center Freq
2.46200000 GHzStart Freq
2.46185000 GHzStop Freq
2.46215000 GHzCF Step
30.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

draft 802.11n Wide-40 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

PPSD (CH Low)

Agilent



Freq/Channel

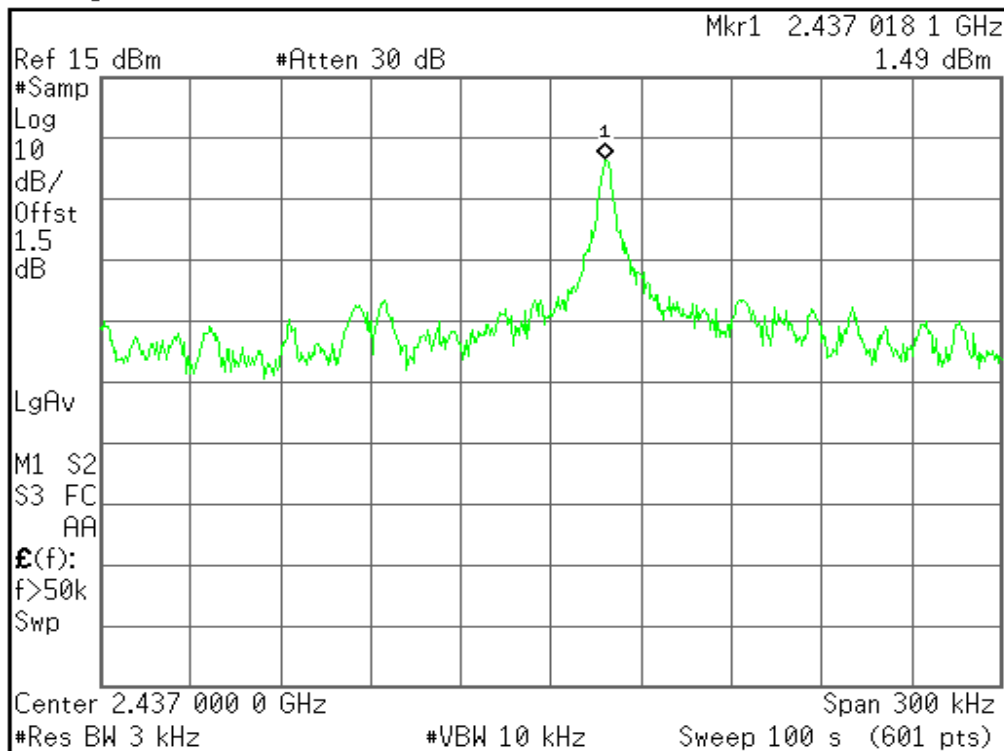
Center Freq
2.42200000 GHzStart Freq
2.42185000 GHzStop Freq
2.42215000 GHzCF Step
30.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



PPSD (CH Mid)

Agilent



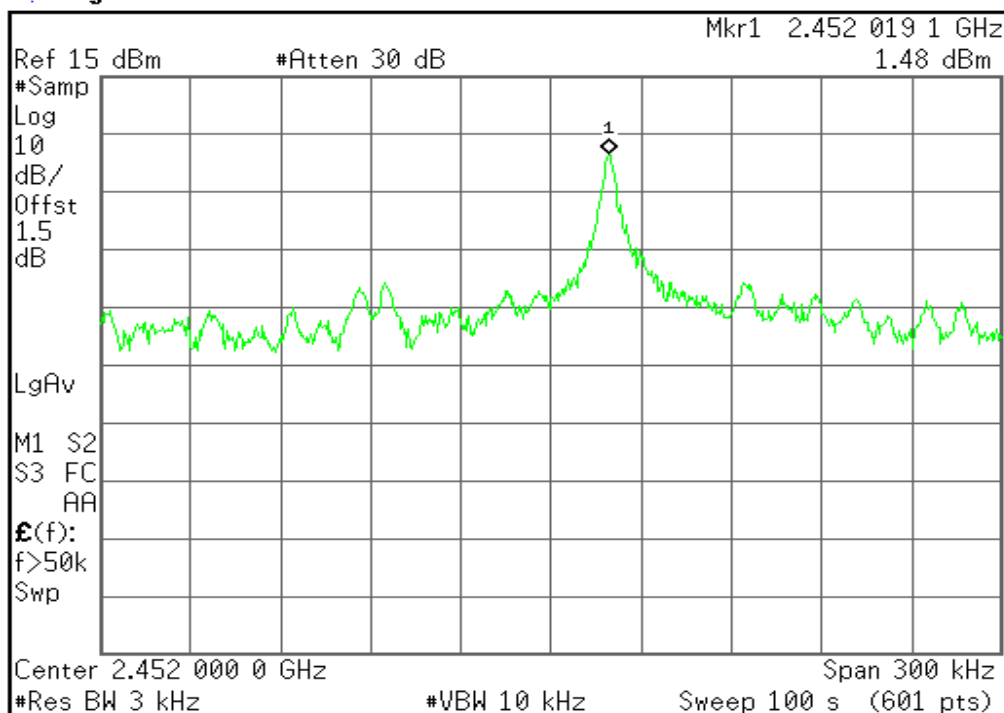
Freq/Channel

Center Freq
2.43700000 GHzStart Freq
2.43685000 GHzStop Freq
2.43715000 GHzCF Step
30.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

PPSD (CH High)

Agilent



Freq/Channel

Center Freq
2.45200000 GHzStart Freq
2.45185000 GHzStop Freq
2.45215000 GHzCF Step
30.0000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

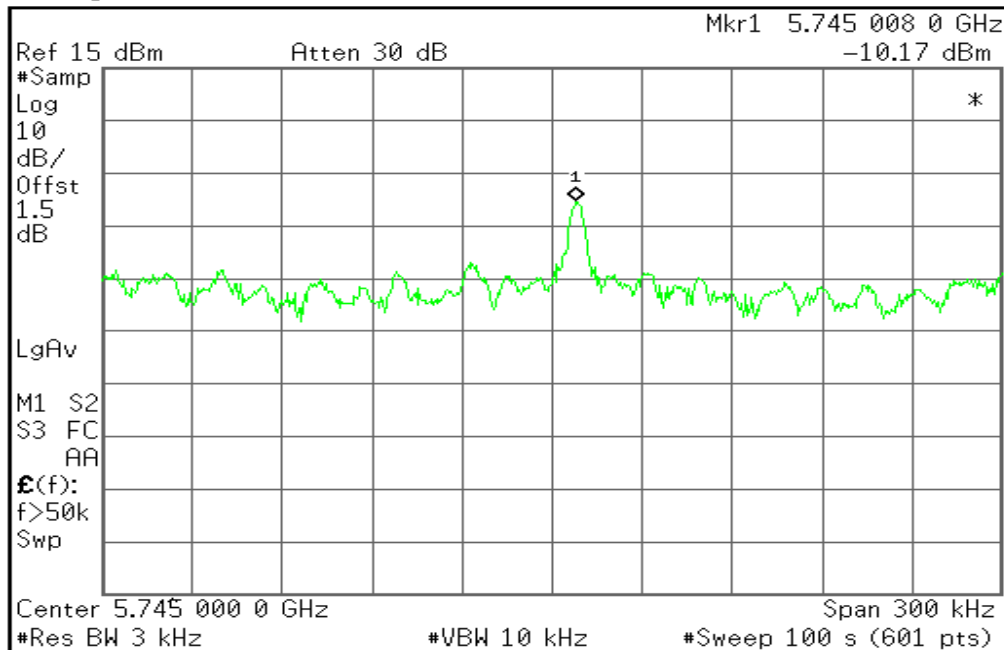


5725-5825

IEEE 802.11a mode

PPSD (CH Low)

Agilent



Freq/Channel

Center Freq

5.74500000 GHz

Start Freq

5.74485000 GHz

Stop Freq

5.74515000 GHz

CF Step

30.00000000 kHz

Auto Man

Freq Offset

0.00000000 Hz

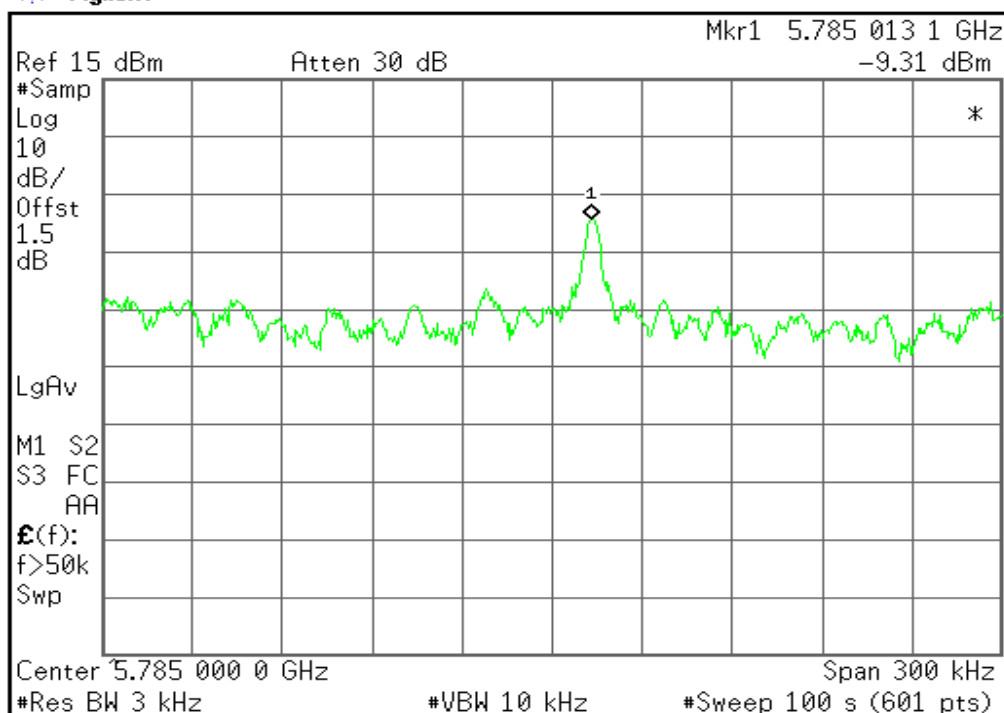
Signal Track

On Off

Copyright 2000-2007 Agilent Technologies

PPSD (CH Mid)

Agilent



Freq/Channel

Center Freq

5.78500000 GHz

Start Freq

5.78485000 GHz

Stop Freq

5.78515000 GHz

CF Step

30.00000000 kHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

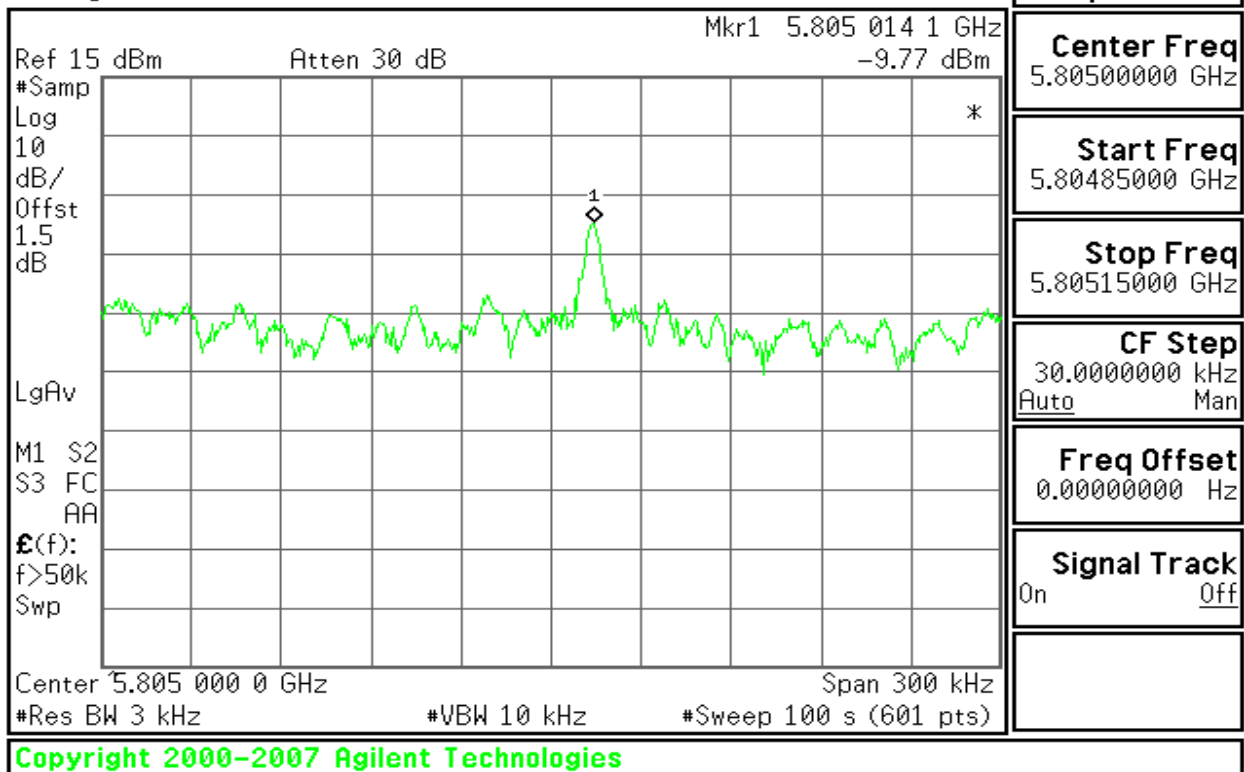
On Off

Copyright 2000-2007 Agilent Technologies



PPSD (CH High)

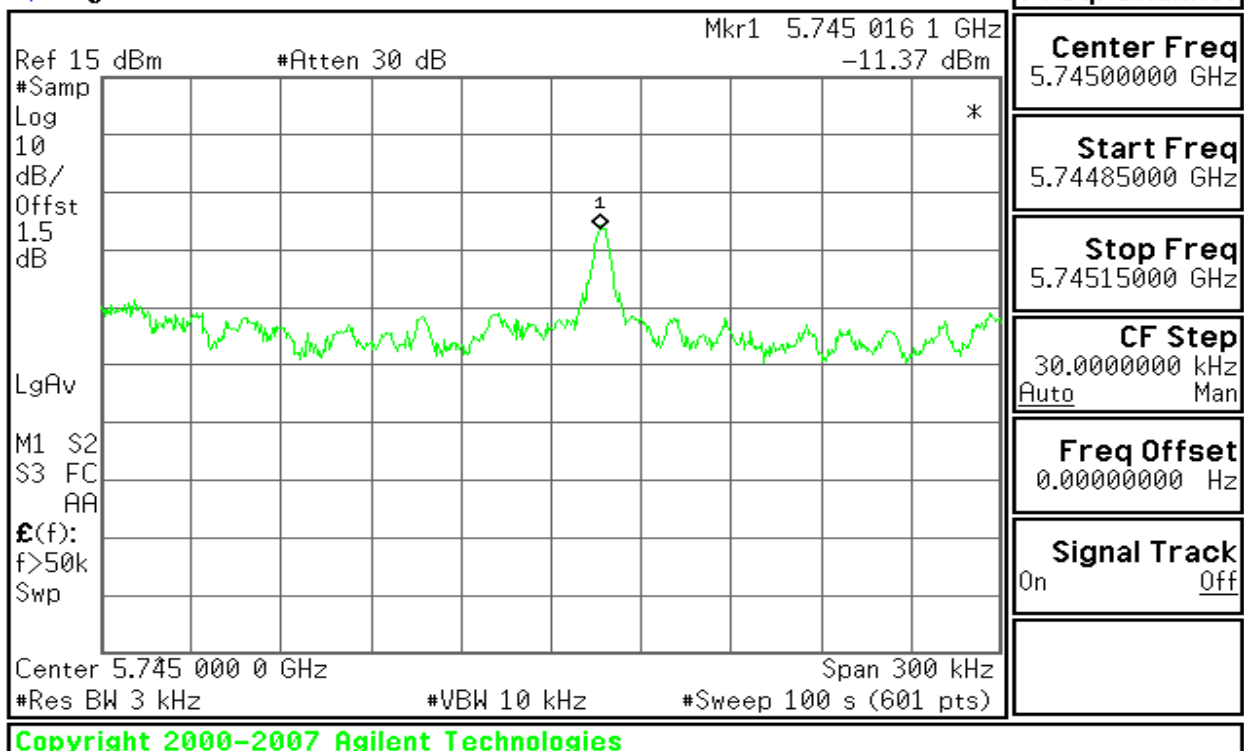
Agilent



draft 802.11n Standard-20 MHz Channel mode / Chain 0

PPSD (CH Low)

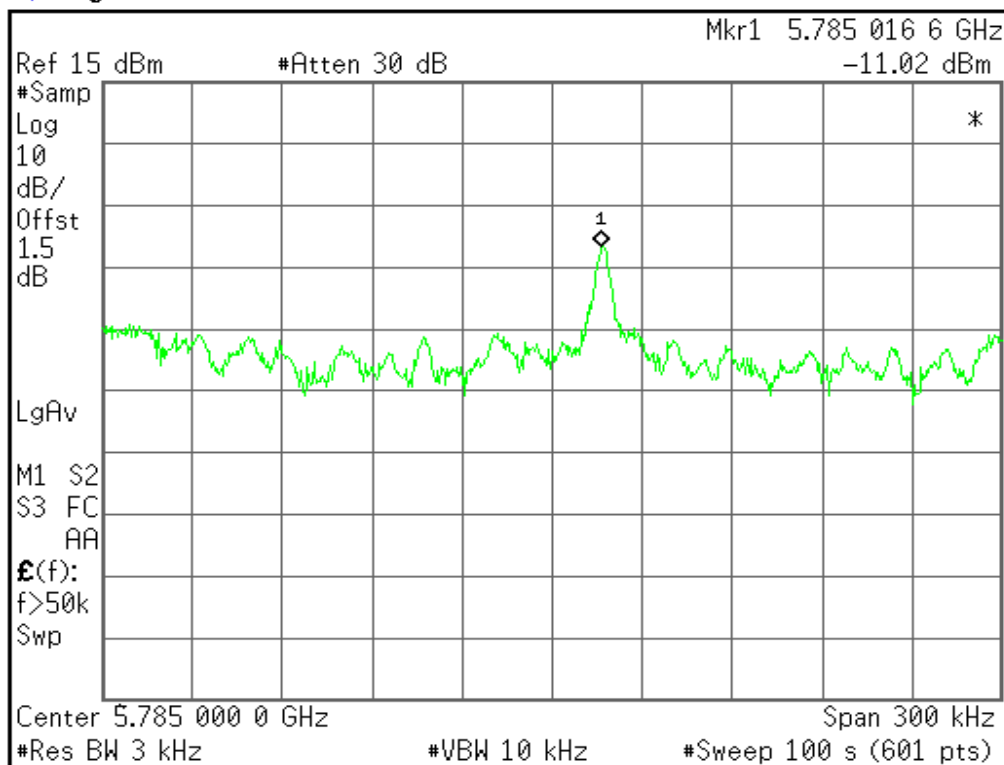
Agilent





PPSD (CH Mid)

* Agilent



Freq/Channel

Center Freq

5.78500000 GHz

Start Freq

5.78485000 GHz

Stop Freq

5.78515000 GHz

CF Step

30.00000000 kHz

Auto Man

Freq Offset

0.00000000 Hz

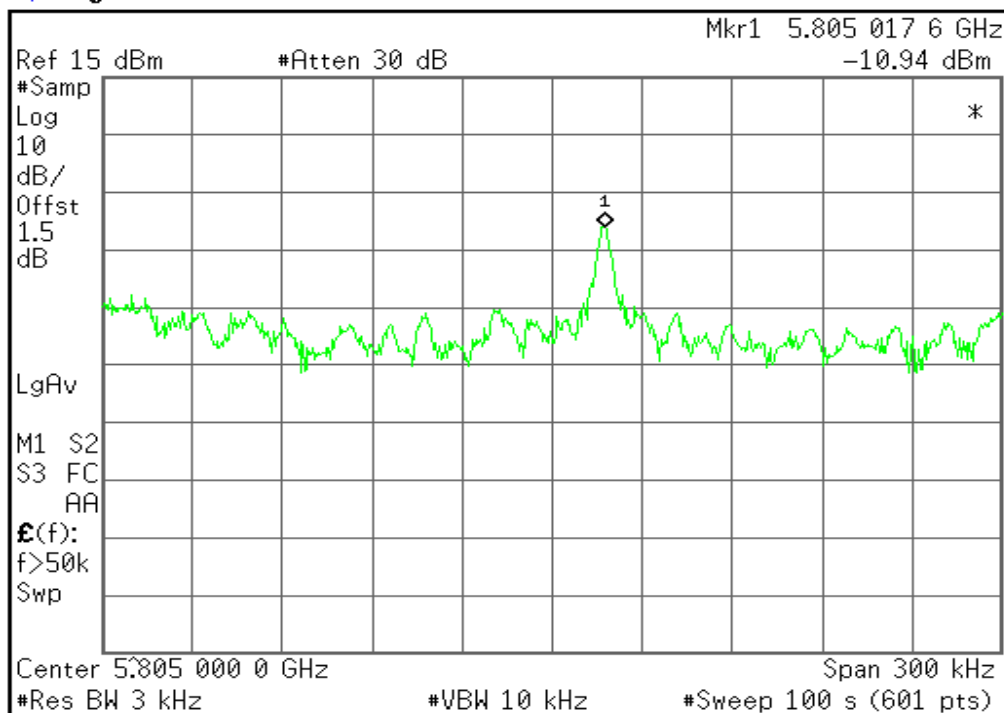
Signal Track

On Off

Copyright 2000-2007 Agilent Technologies

PPSD (CH High)

* Agilent



Freq/Channel

Center Freq

5.80500000 GHz

Start Freq

5.80485000 GHz

Stop Freq

5.80515000 GHz

CF Step

30.00000000 kHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

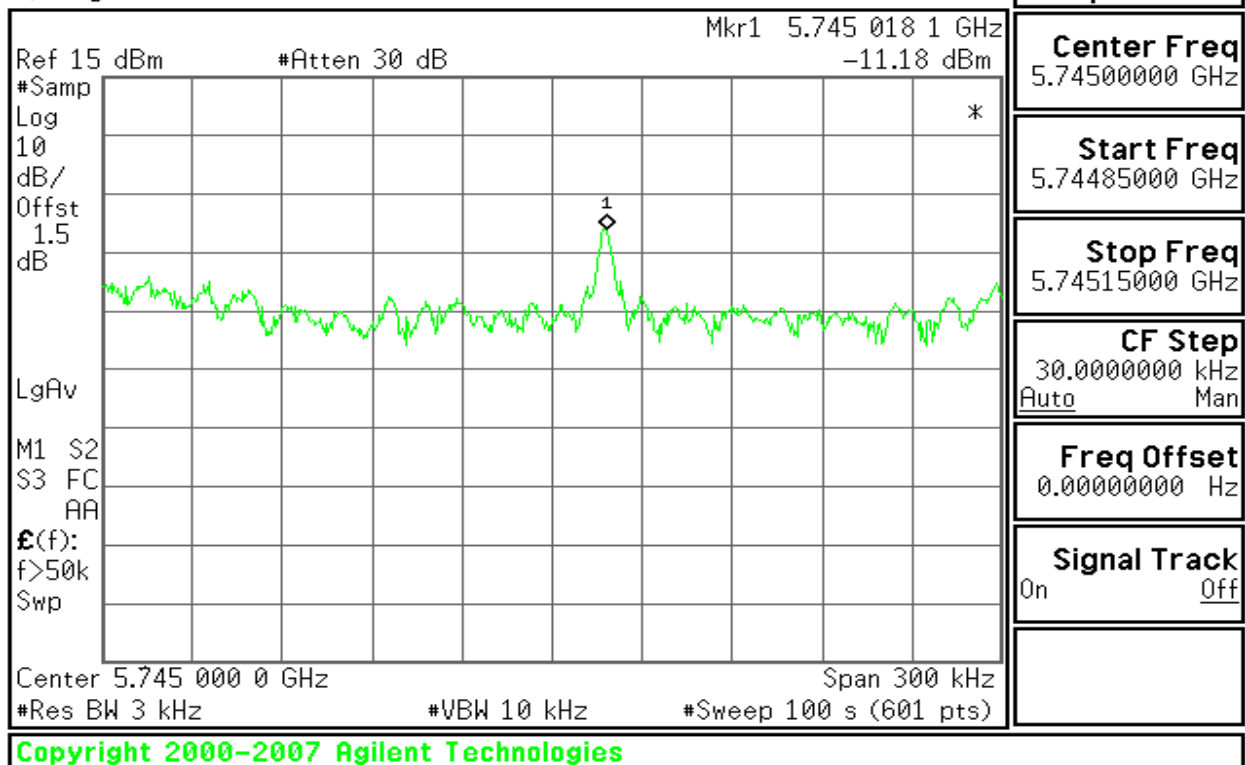
Copyright 2000-2007 Agilent Technologies



draft 802.11n Standard-20 MHz Channel mode / Chain 1

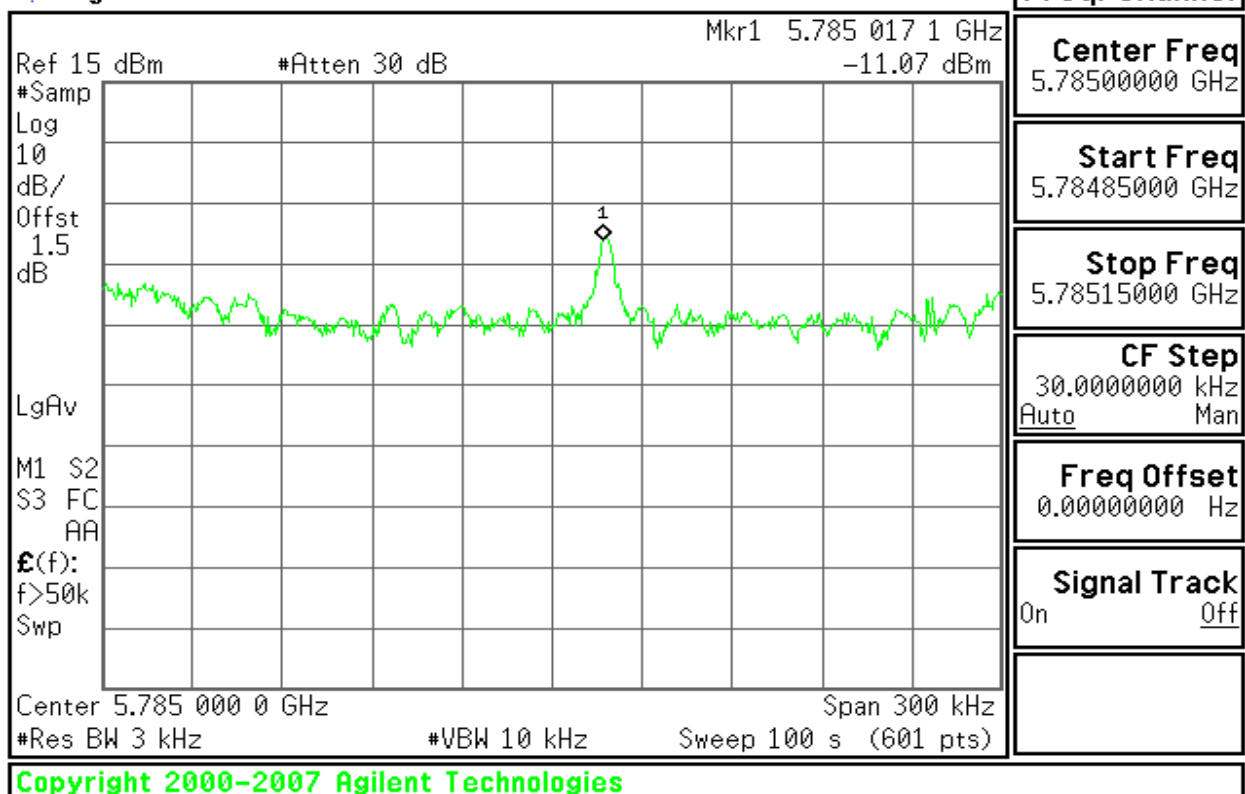
PPSD (CH Low)

Agilent



PPSD (CH Mid)

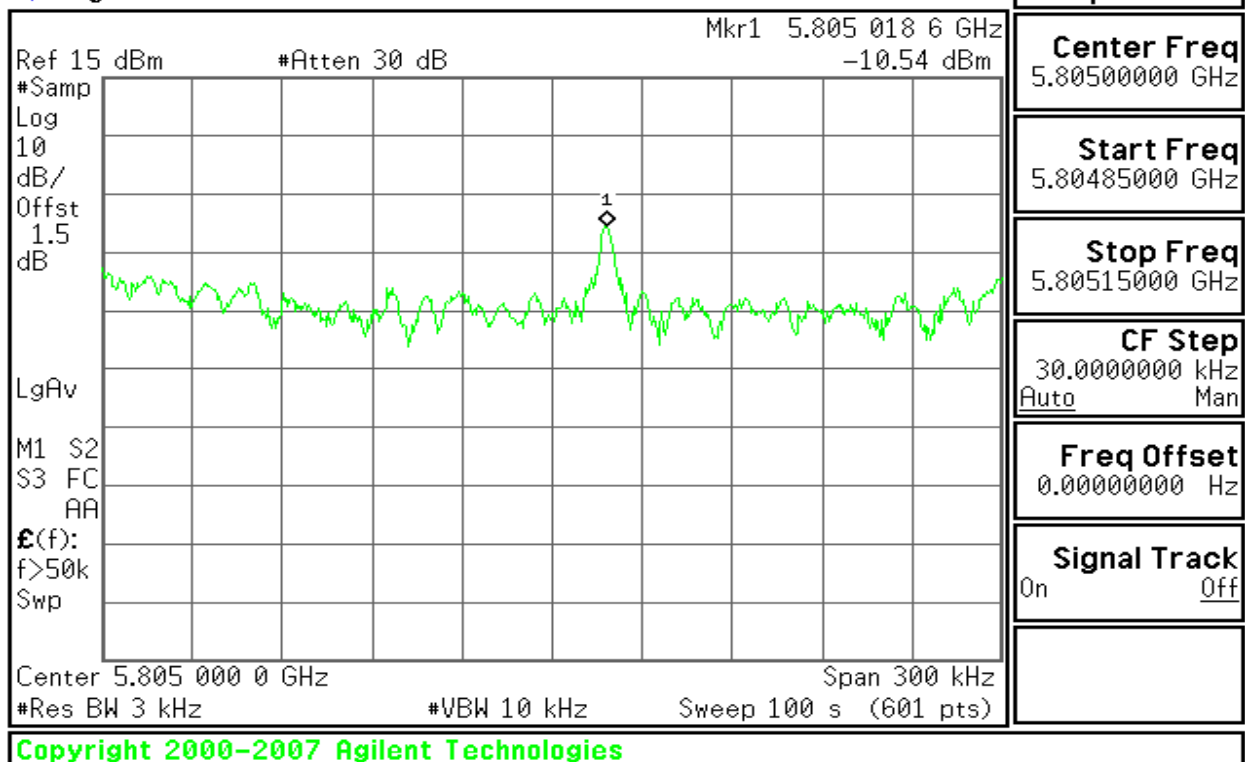
Agilent





PPSD (CH High)

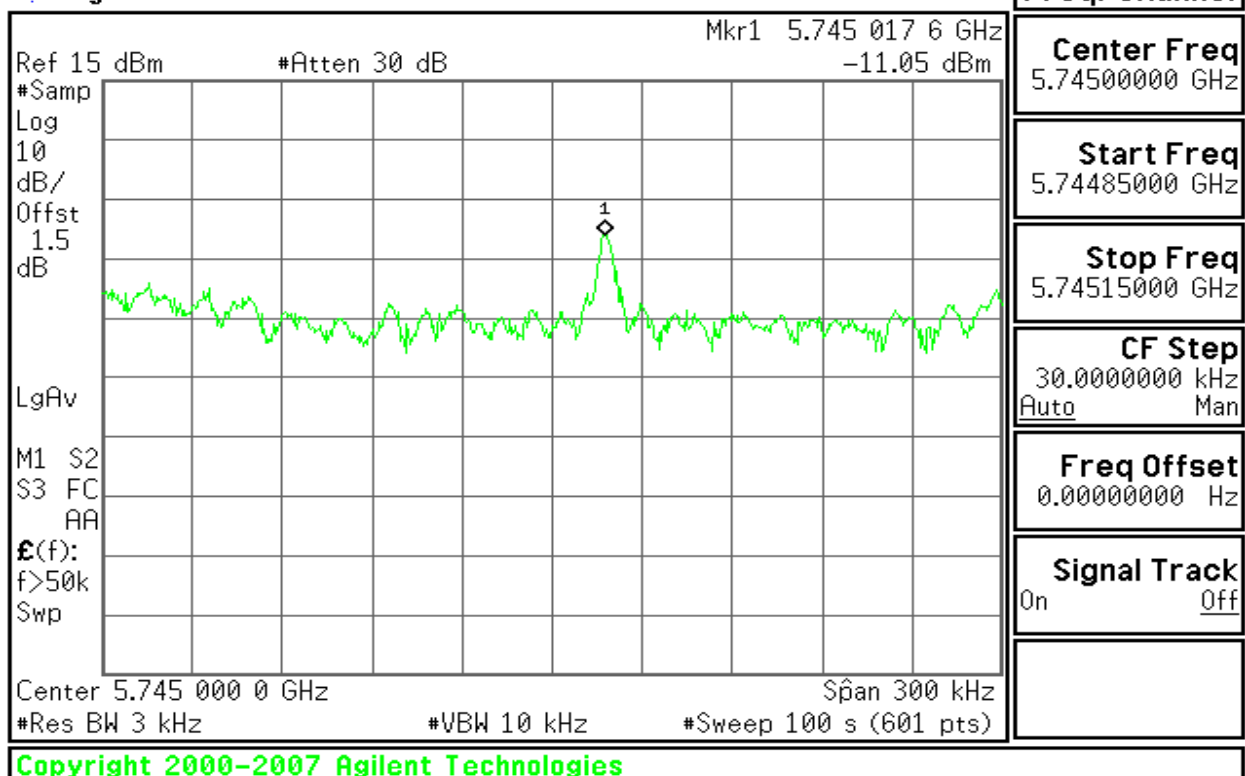
Agilent



draft 802.11n Standard-20 MHz Channel mode / Chain 2

PPSD (CH Low)

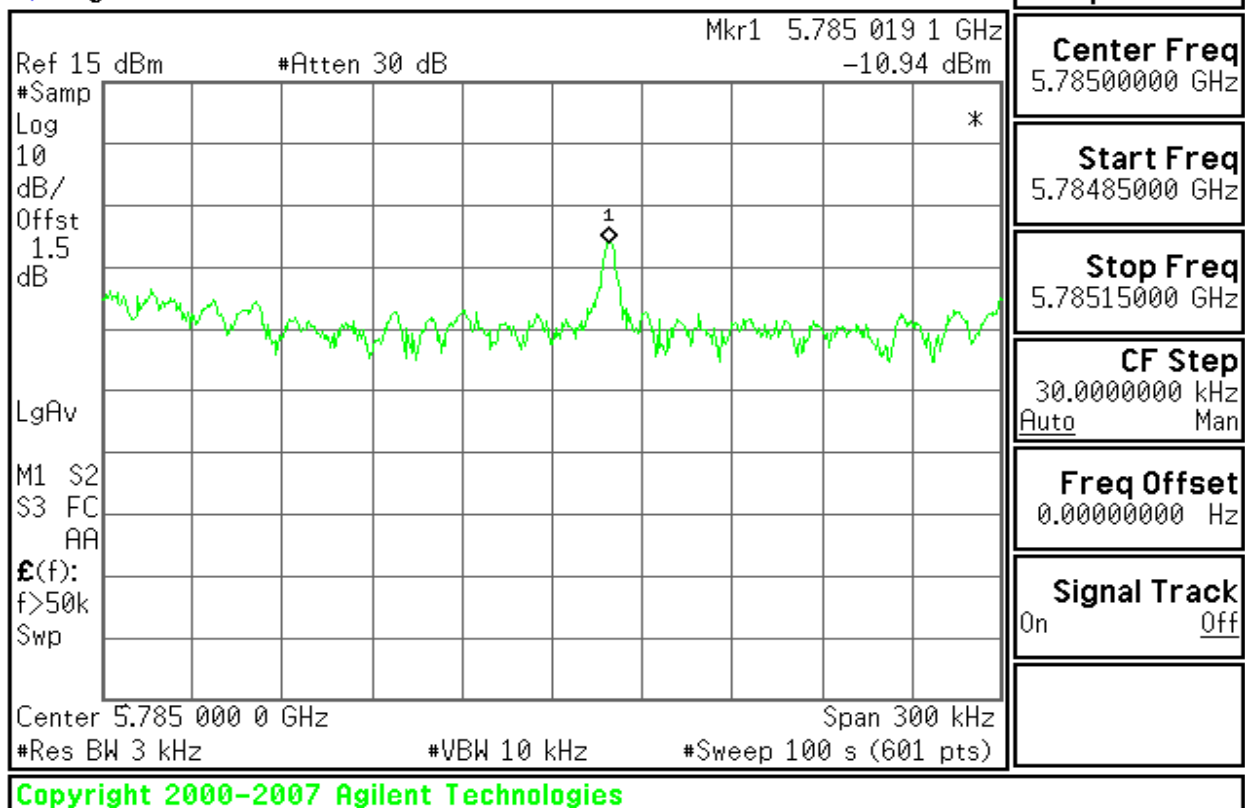
Agilent





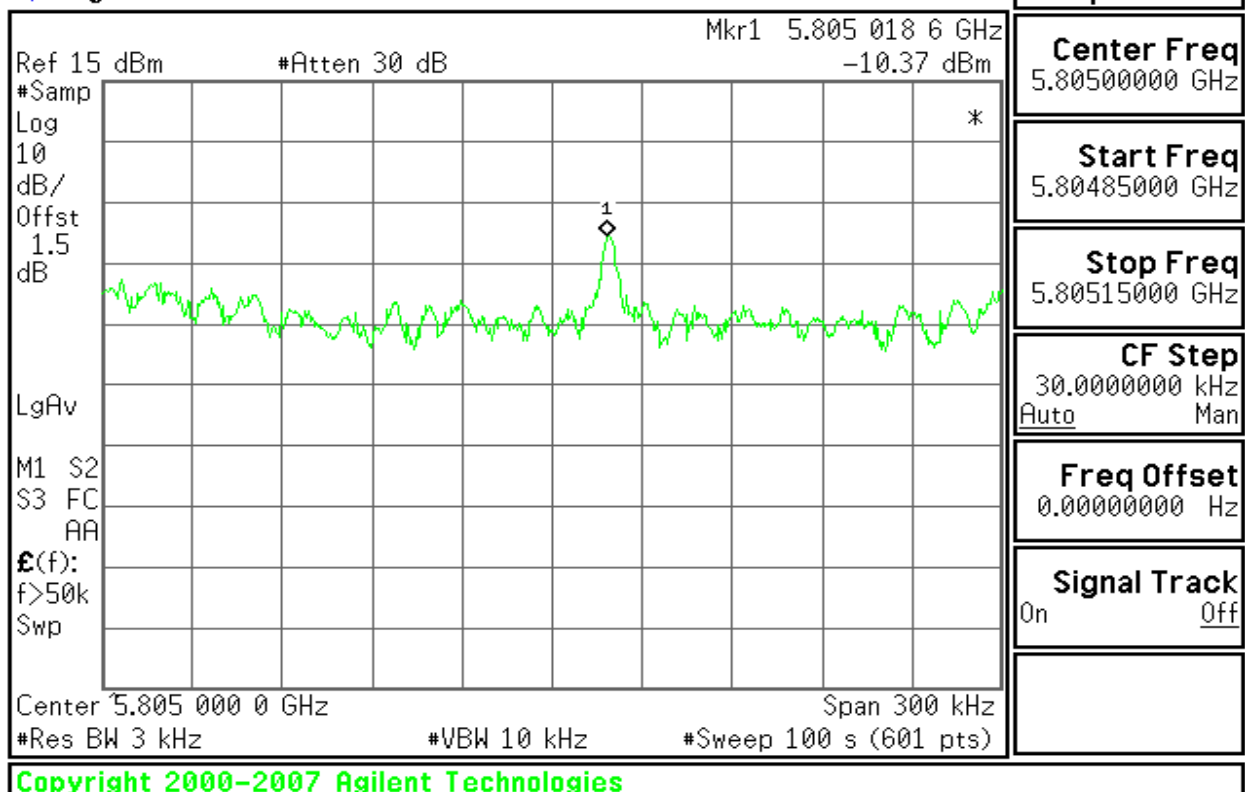
PPSD (CH Mid)

Agilent



PPSD (CH High)

Agilent

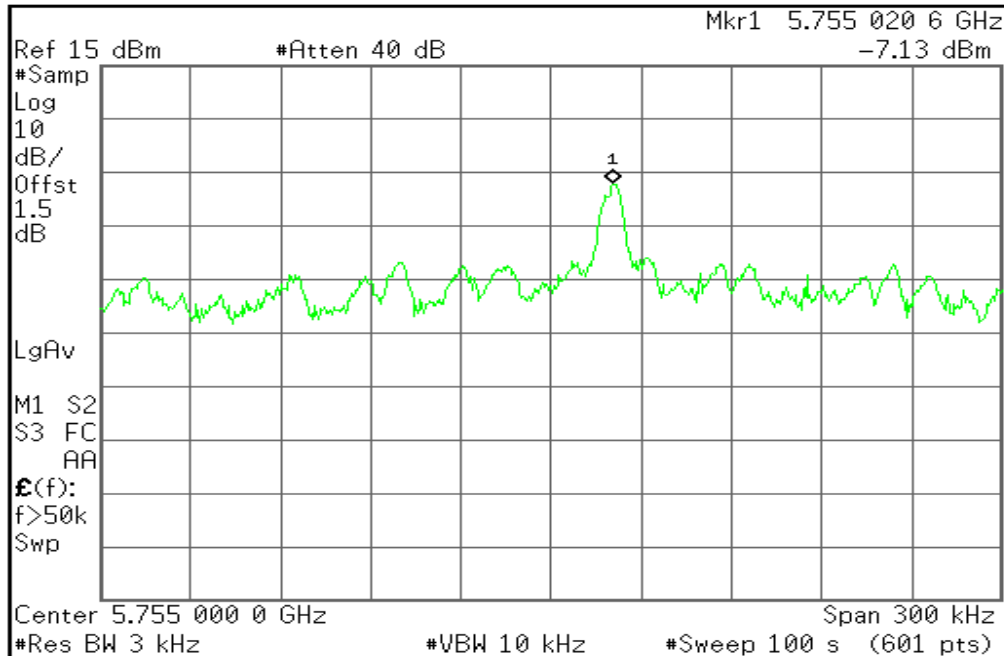




draft 802.11n Standard-40 MHz Channel mode / Chain 0

PPSD (CH Low)

Agilent



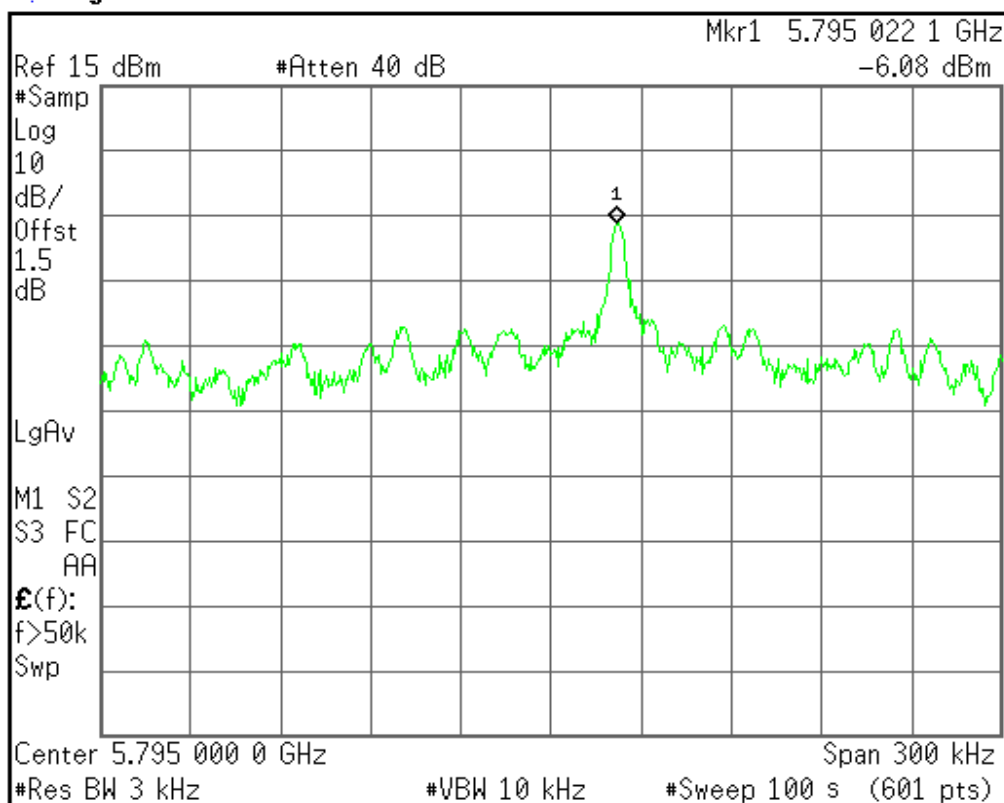
Freq/Channel

Center Freq
5.75500000 GHzStart Freq
5.75485000 GHzStop Freq
5.75515000 GHzCF Step
30.00000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

PPSD (CH High)

Agilent



Freq/Channel

Center Freq
5.79500000 GHzStart Freq
5.79485000 GHzStop Freq
5.79515000 GHzCF Step
30.00000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

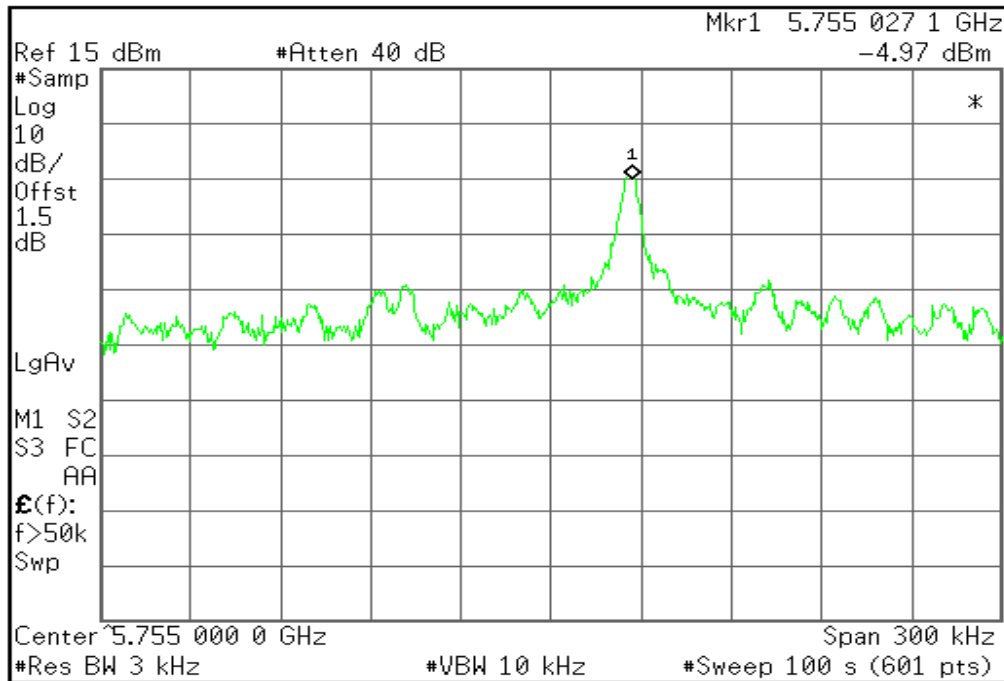
Copyright 2000-2007 Agilent Technologies



draft 802.11n Standard-40 MHz Channel mode / Chain 1

PPSD (CH Low)

Agilent



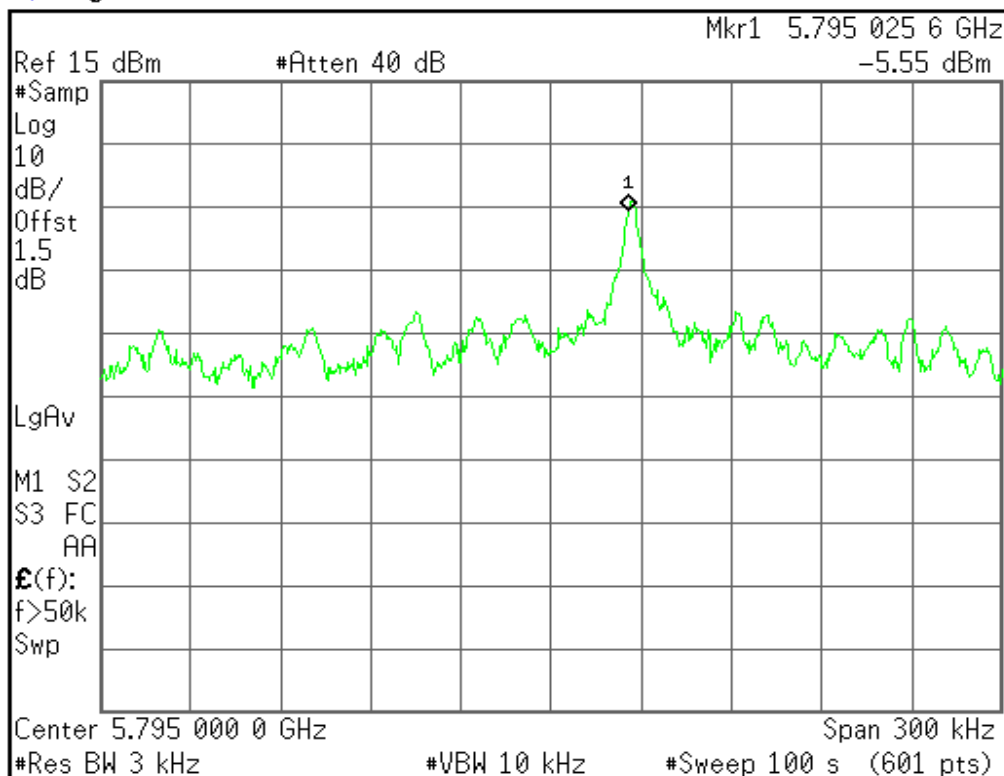
Freq/Channel

Center Freq
5.75500000 GHzStart Freq
5.75485000 GHzStop Freq
5.75515000 GHzCF Step
30.00000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

PPSD (CH High)

Agilent



Freq/Channel

Center Freq
5.79500000 GHzStart Freq
5.79485000 GHzStop Freq
5.79515000 GHzCF Step
30.00000000 kHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

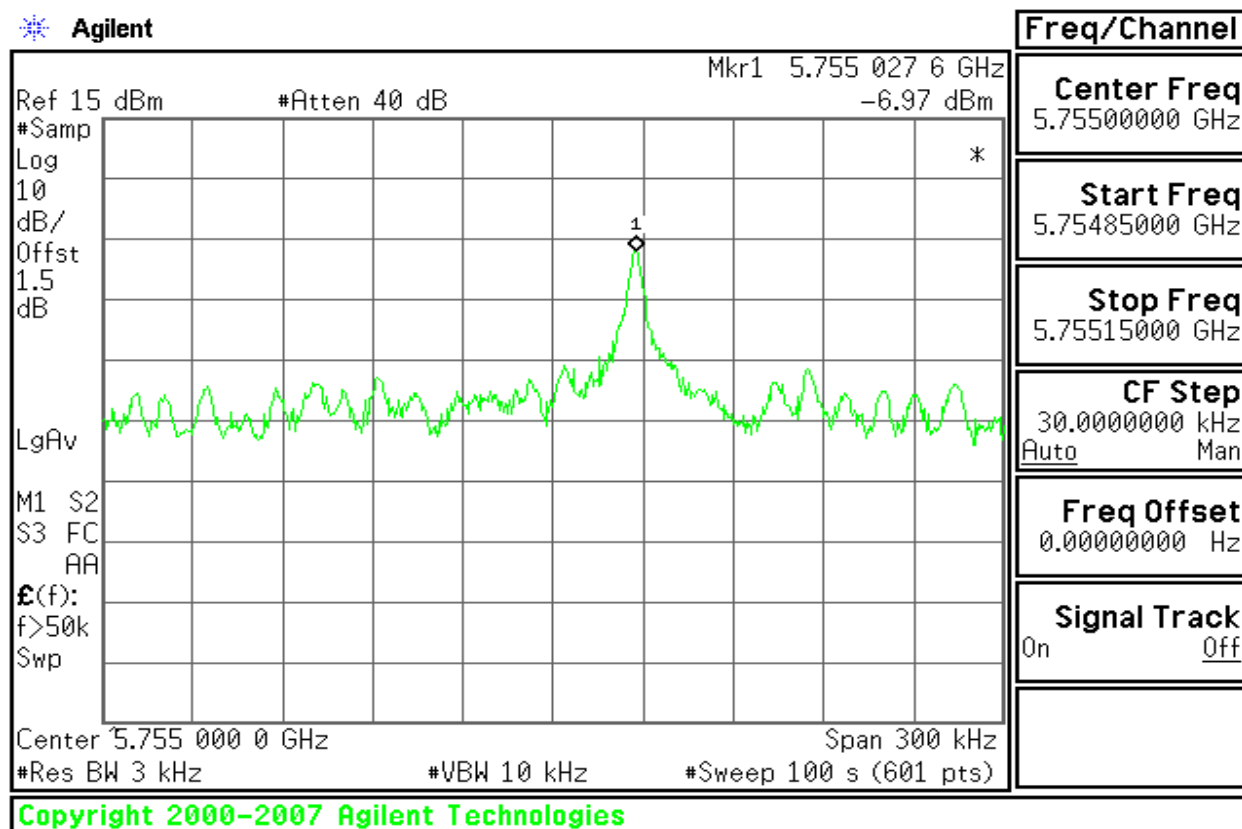
Copyright 2000-2007 Agilent Technologies



draft 802.11n Standard-40 MHz Channel mode / Chain 2

PPSD (CH Low)

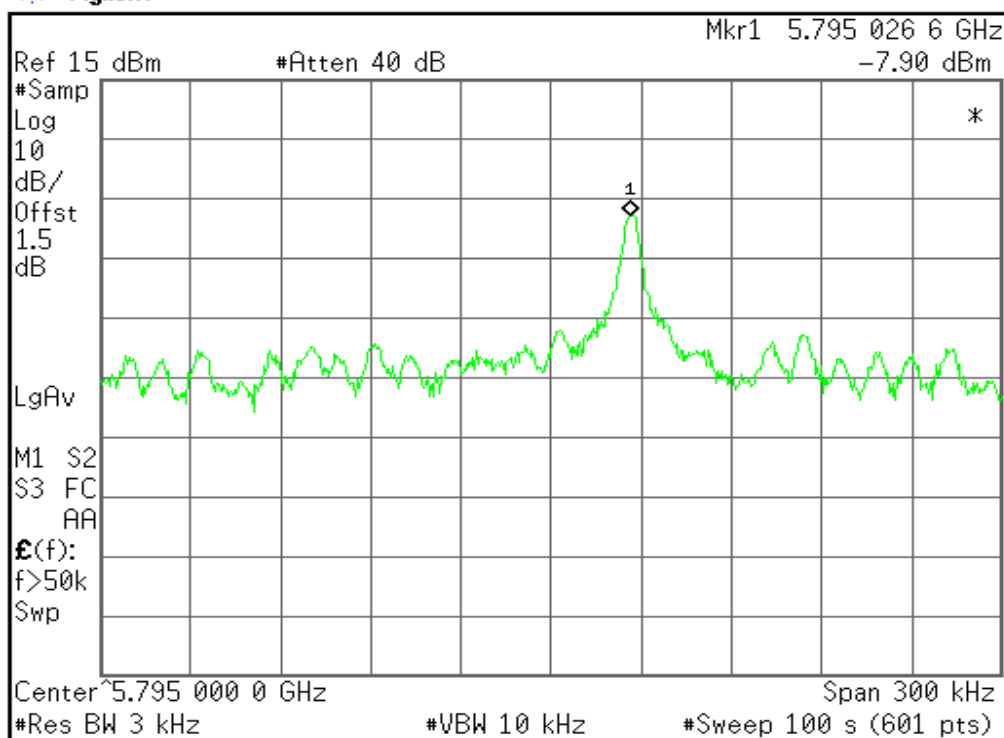
Agilent



PPSD (CH High)



Agilent



Freq/Channel

Center Freq
5.79500000 GHz

Start Freq
5.79485000 GHz

Stop Freq
5.79515000 GHz

CF Step
30.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

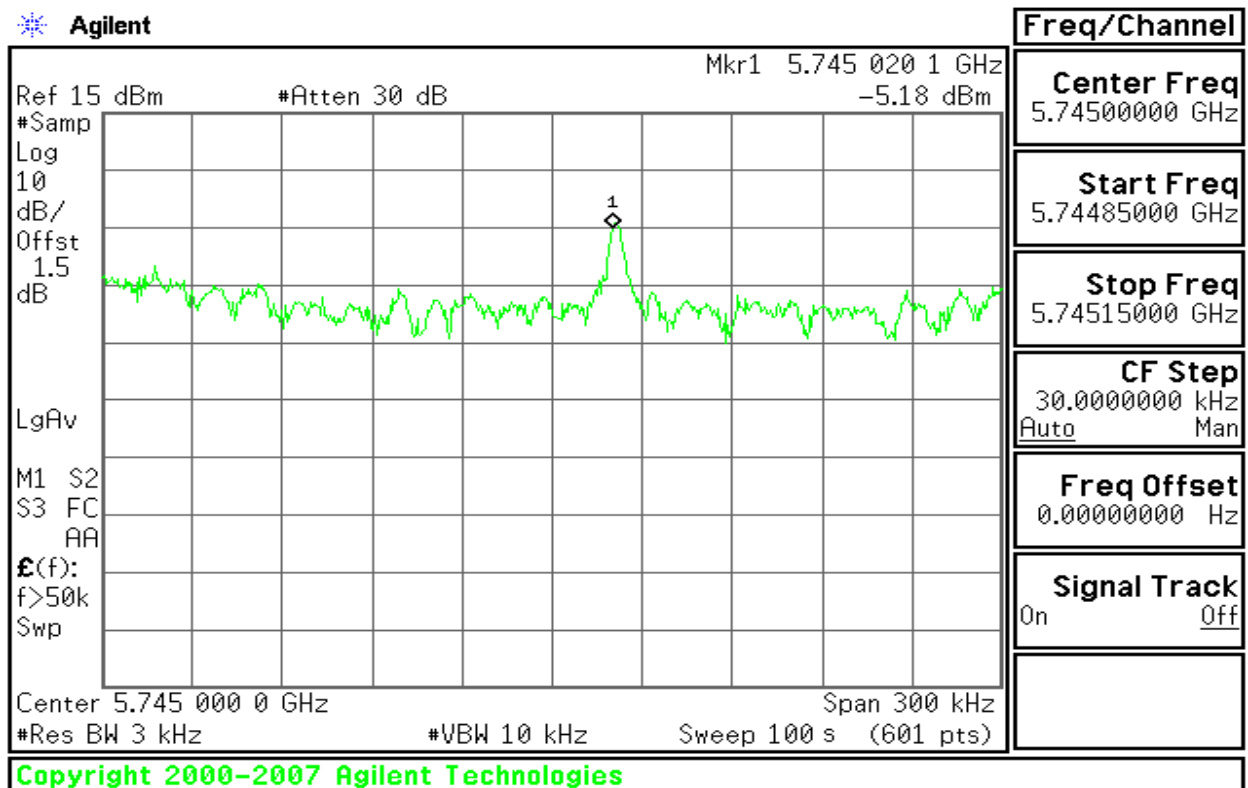
Copyright 2000-2007 Agilent Technologies



draft 802.11n Standard-20 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

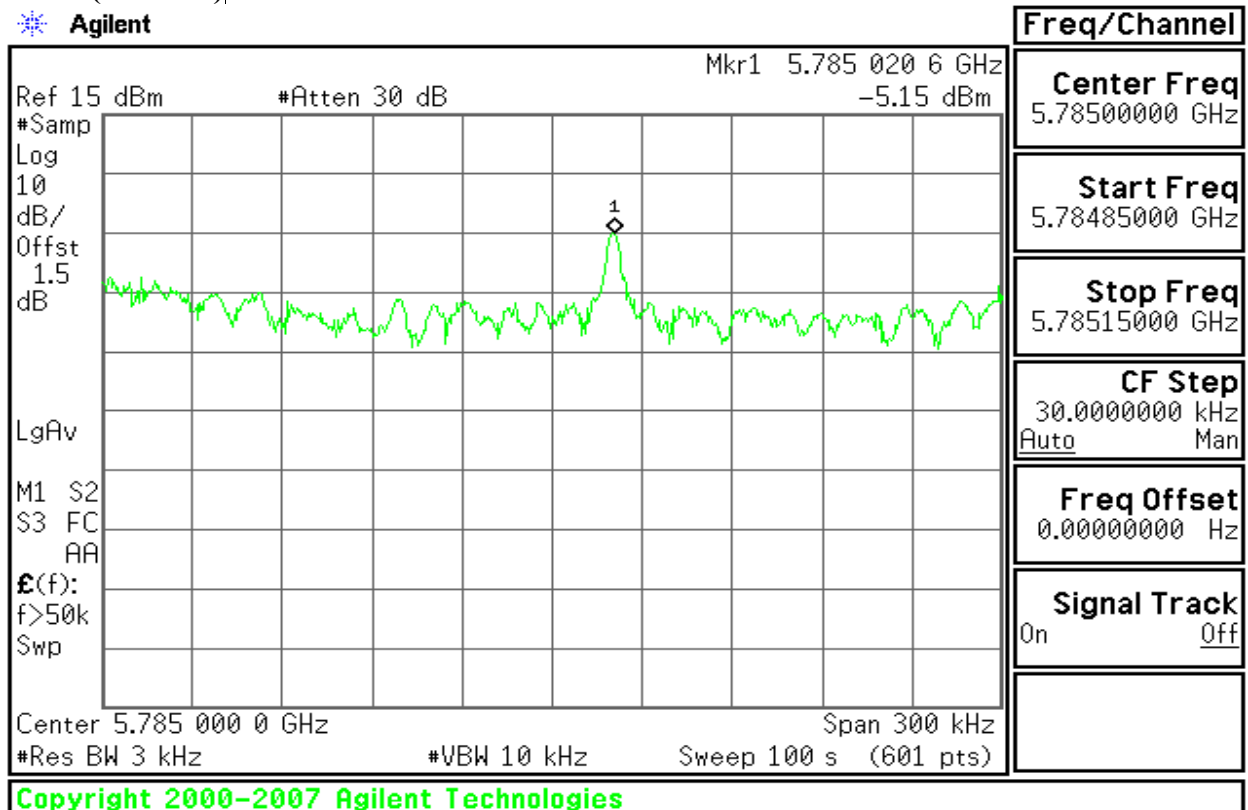
PPSD (CH Low)

Agilent



PPSD (CH Mid)

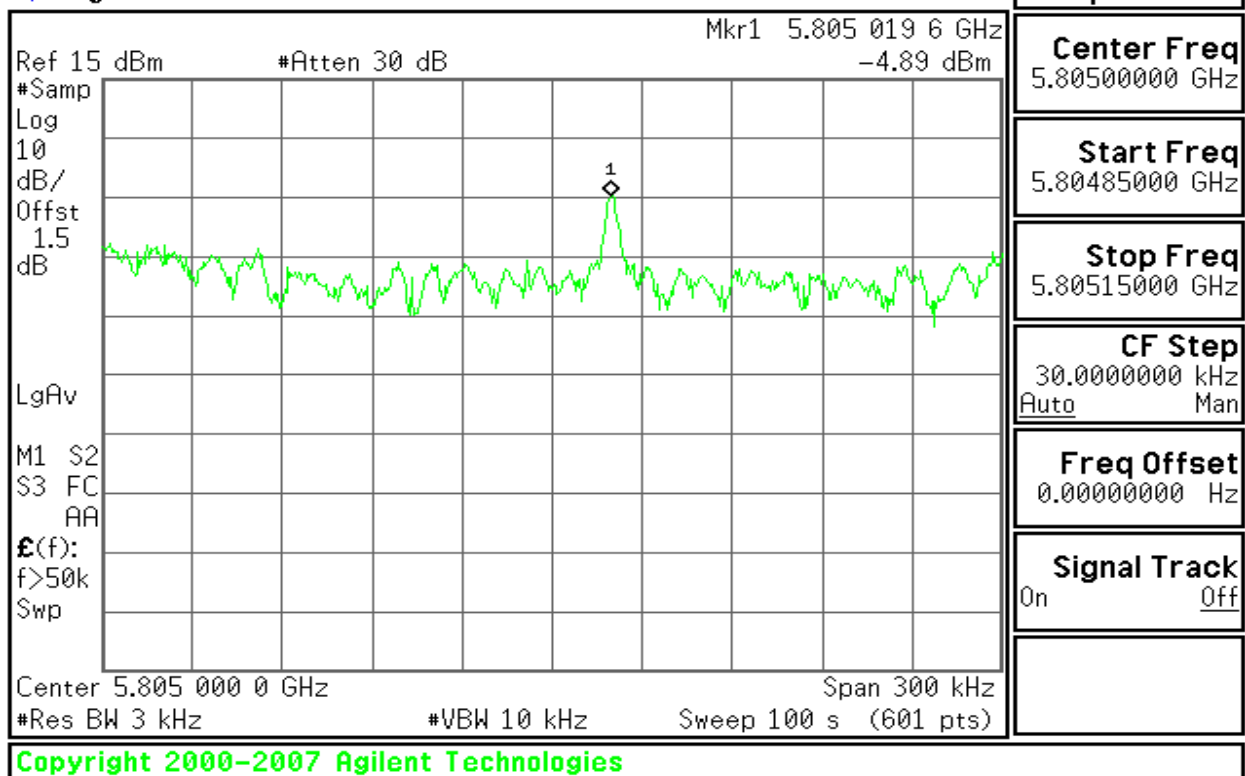
Agilent





PPSD (CH High)

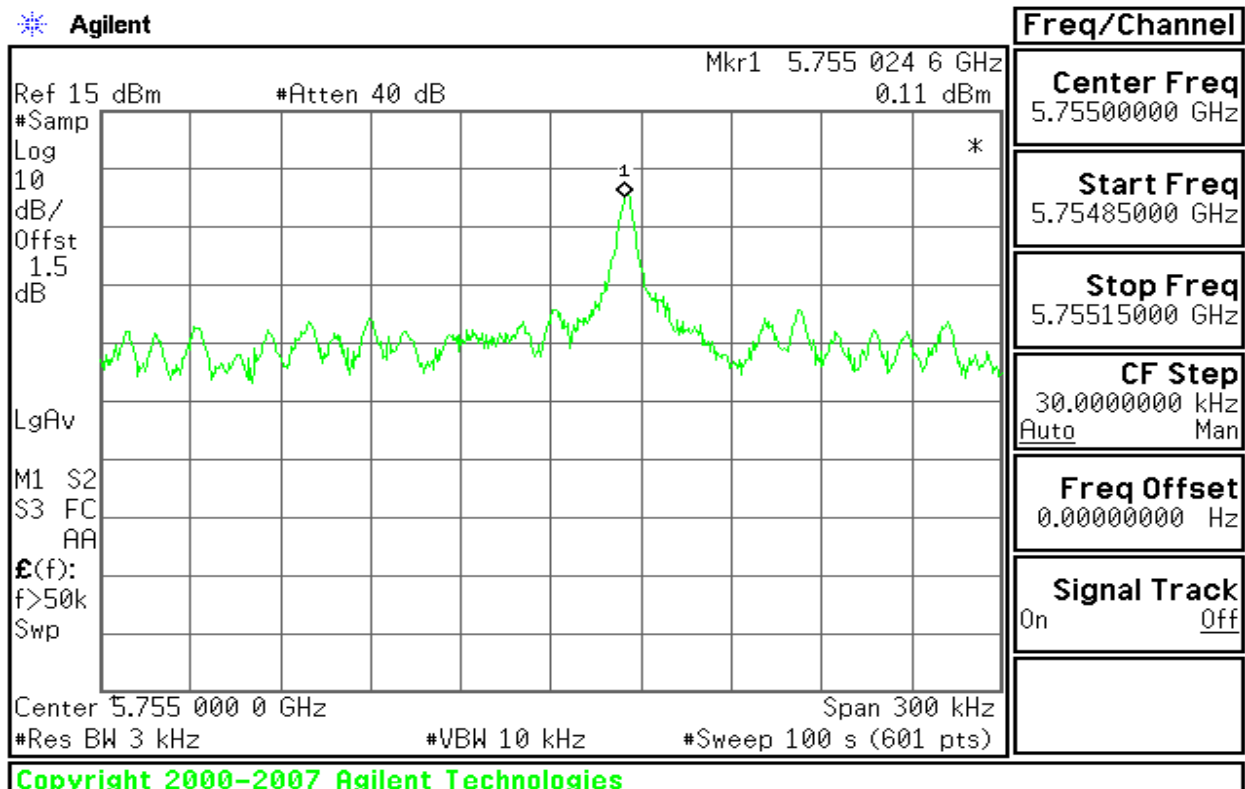
Agilent



draft 802.11n Standard-40 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

PPSD (CH Low)

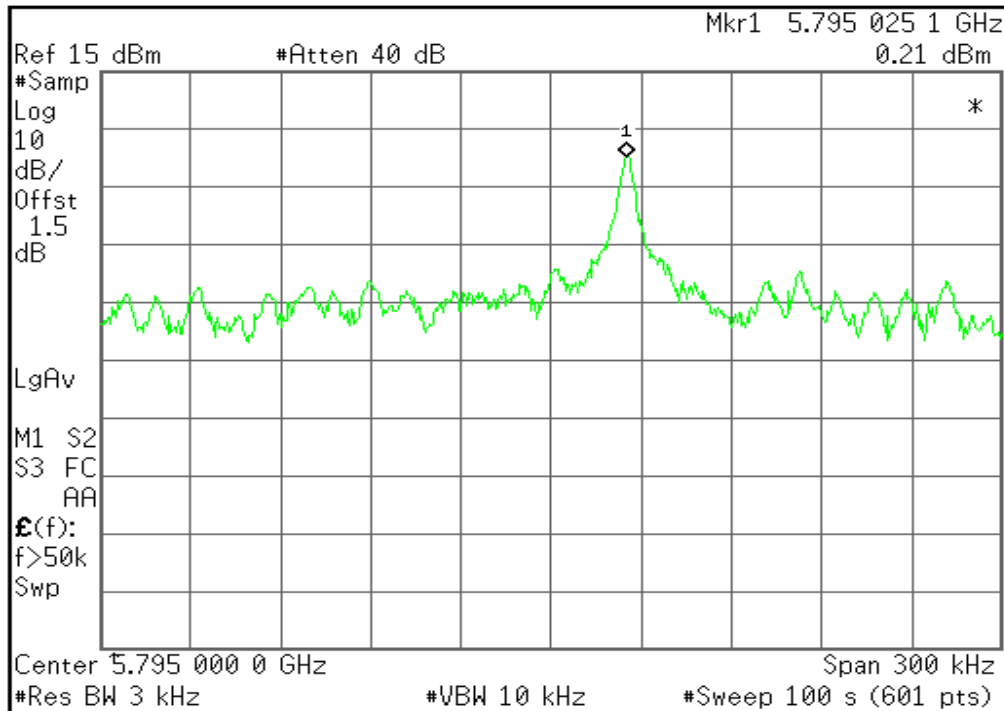
Agilent





PPSD (CH High)

Agilent



Freq/Channel

Center Freq
5.79500000 GHz

Start Freq
5.79485000 GHz

Stop Freq
5.79515000 GHz

CF Step
30.0000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

Copyright 2000-2007 Agilent Technologies



SPURIOUS EMISSIONS

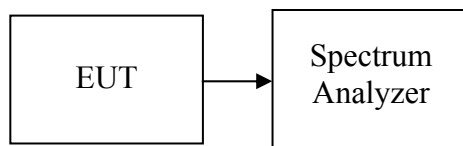
Conducted Measurement

LIMIT

According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a) (see Section 15.205(c)).

Conducted power was measured based on the use of RMS averaging over a time interval, therefore the required attenuation is 30 dB.

Test Configuration





TEST PROCEDURE

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

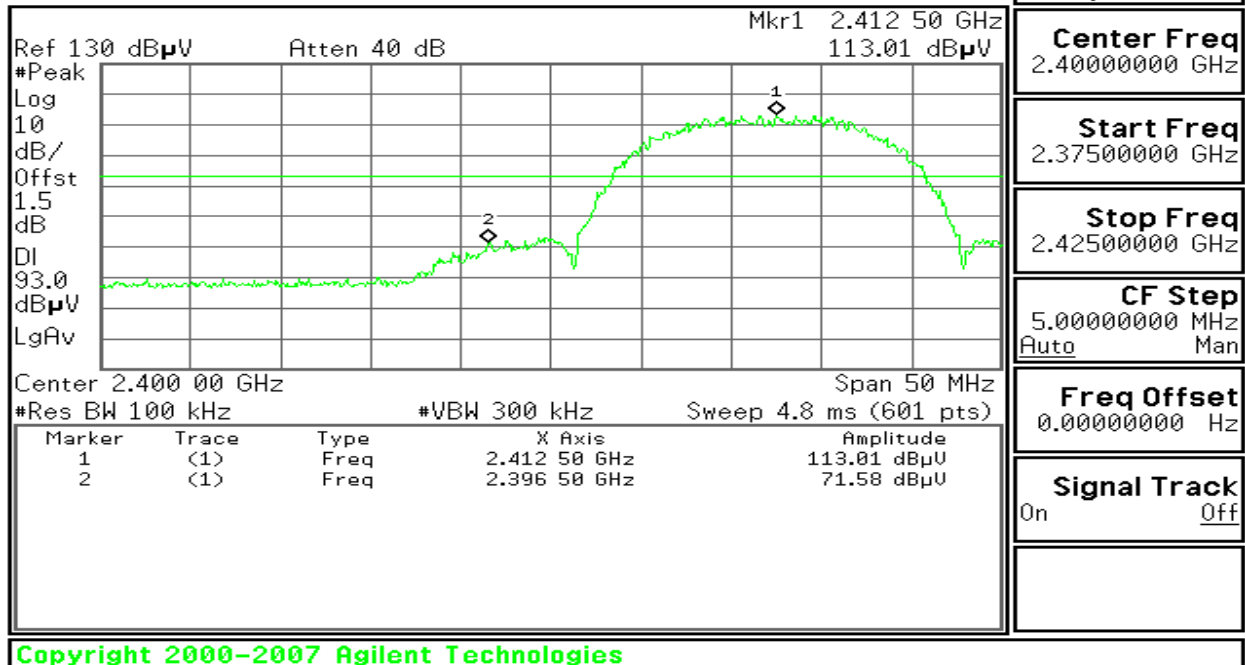
Measurements are made over the 30MHz to 40GHz range with the transmitter set to the lowest, middle, and highest channels.

TEST RESULTS

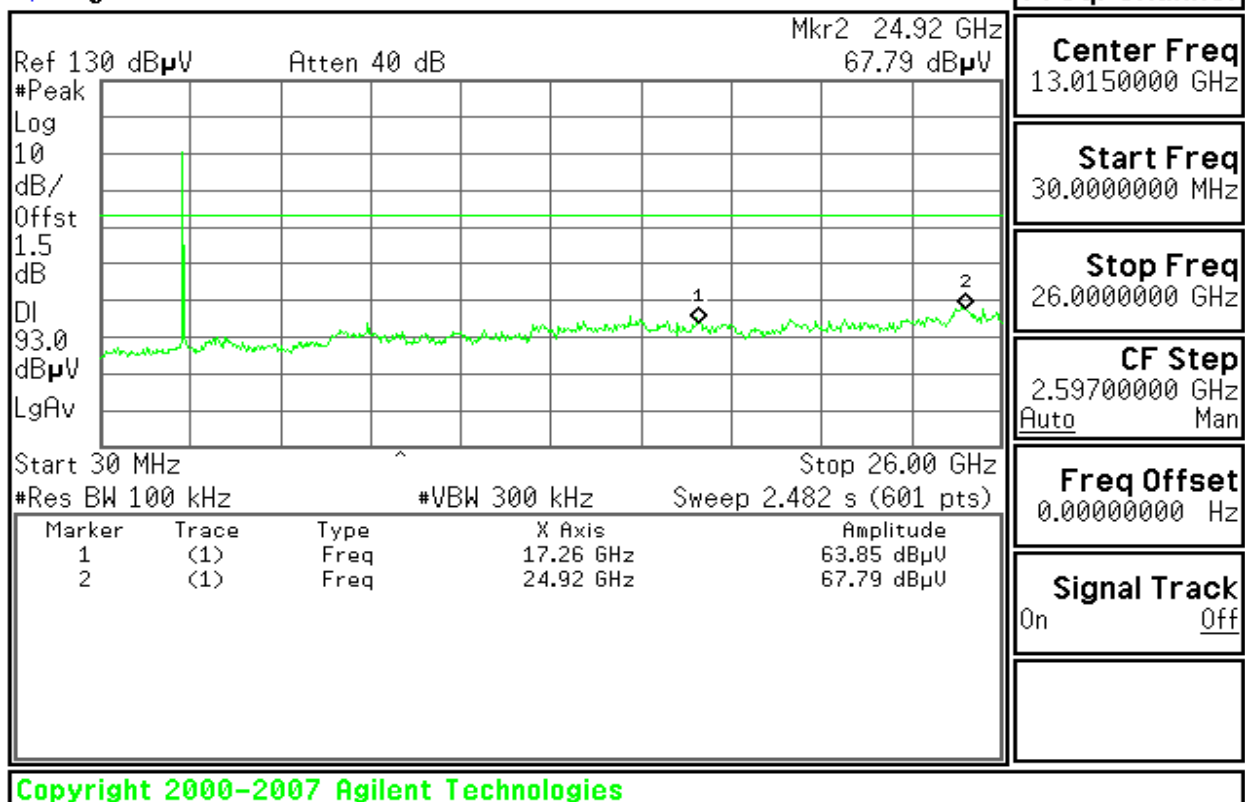
No non-compliance noted

**Test Plot****IEEE 802.11b mode****CH Low**

Agilent

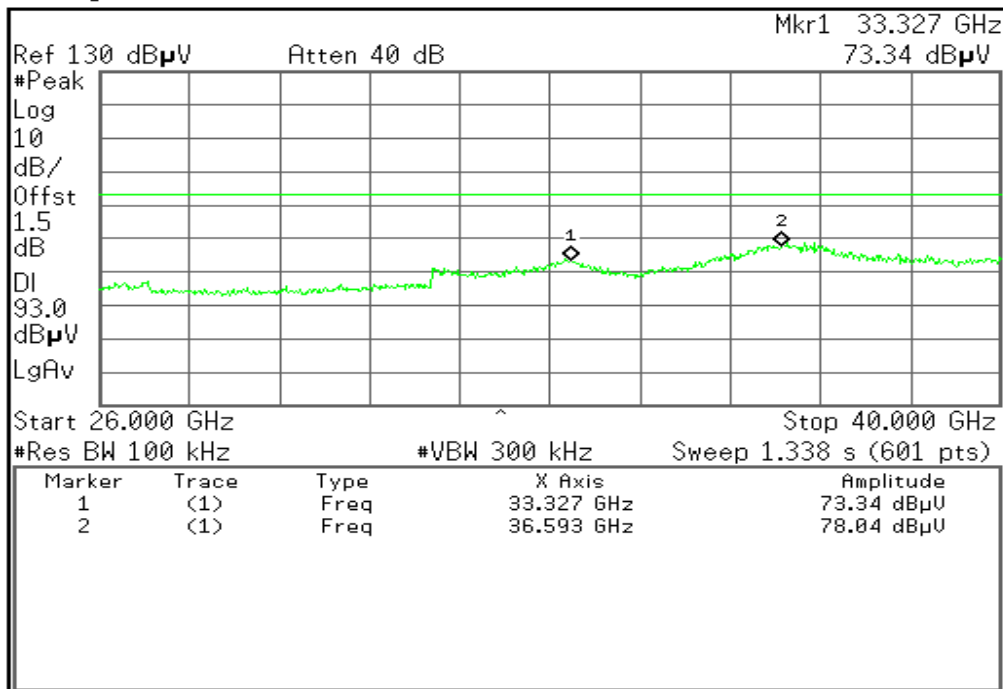


Agilent





* Agilent



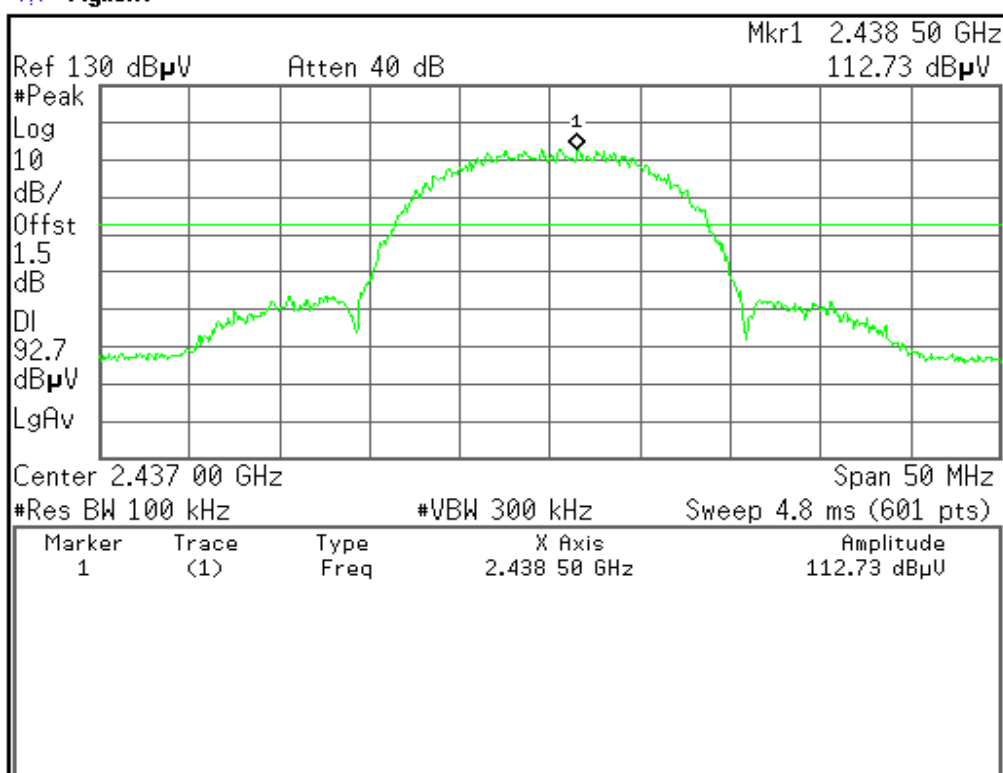
Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

CH Mid

* Agilent



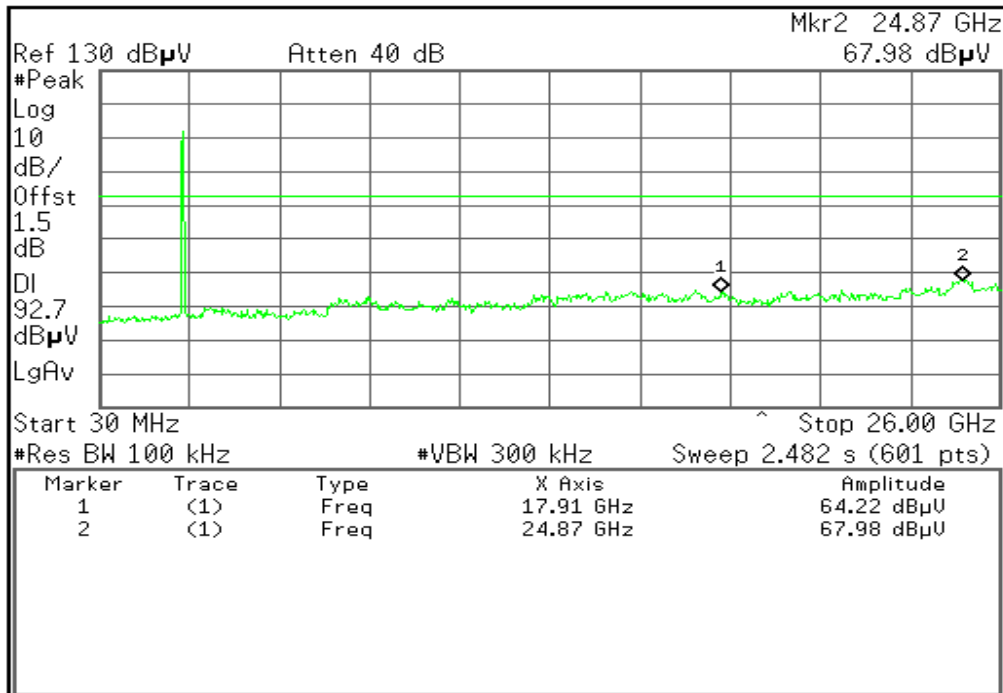
Freq/Channel

Center Freq
2.43700000 GHzStart Freq
2.41200000 GHzStop Freq
2.46200000 GHzCF Step
5.00000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



Agilent

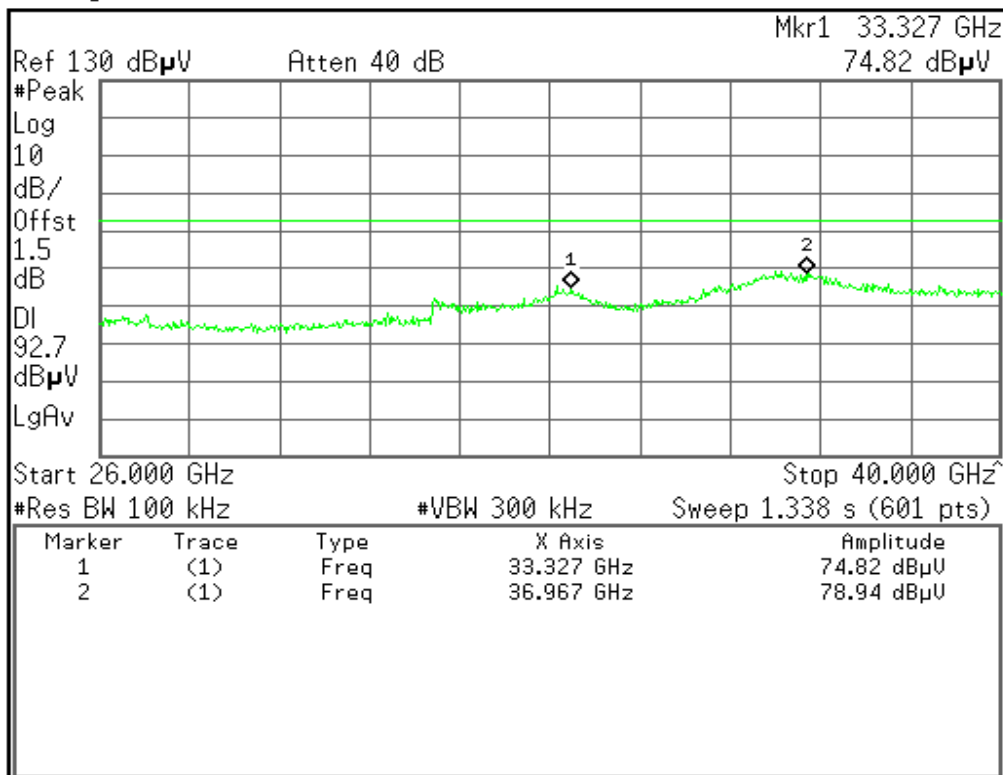


Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Agilent



Freq/Channel

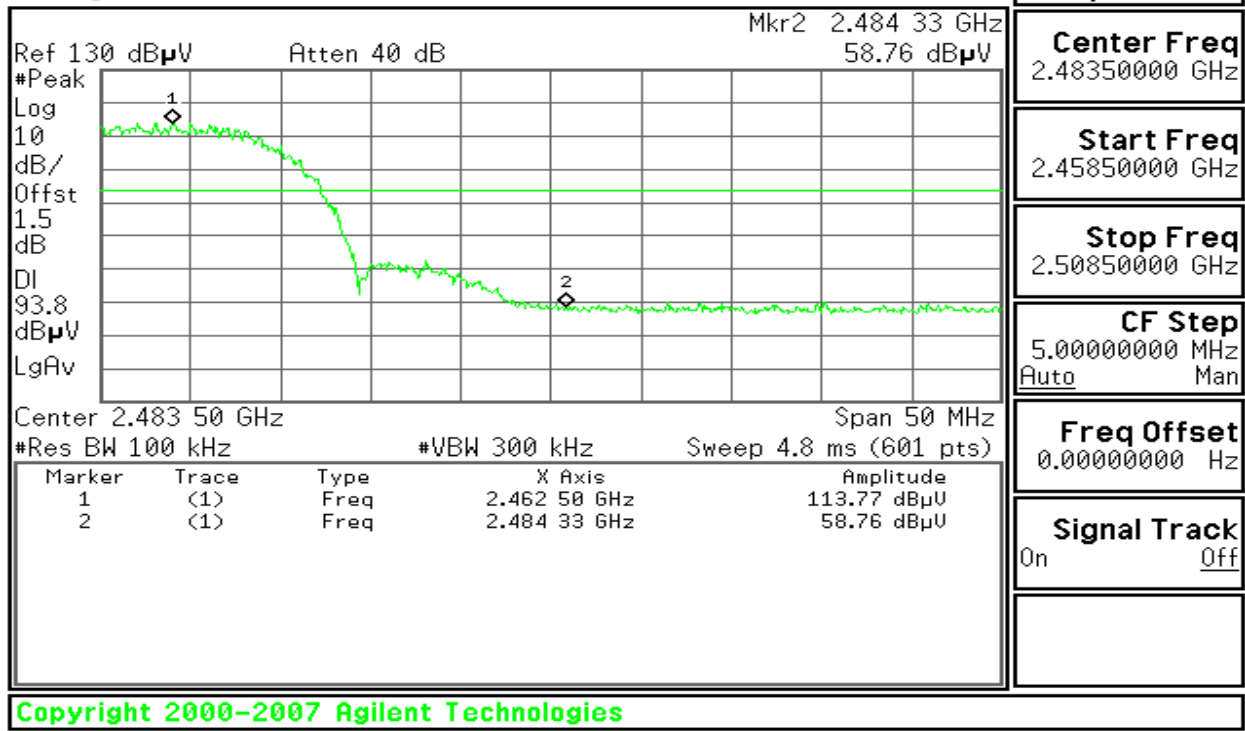
Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

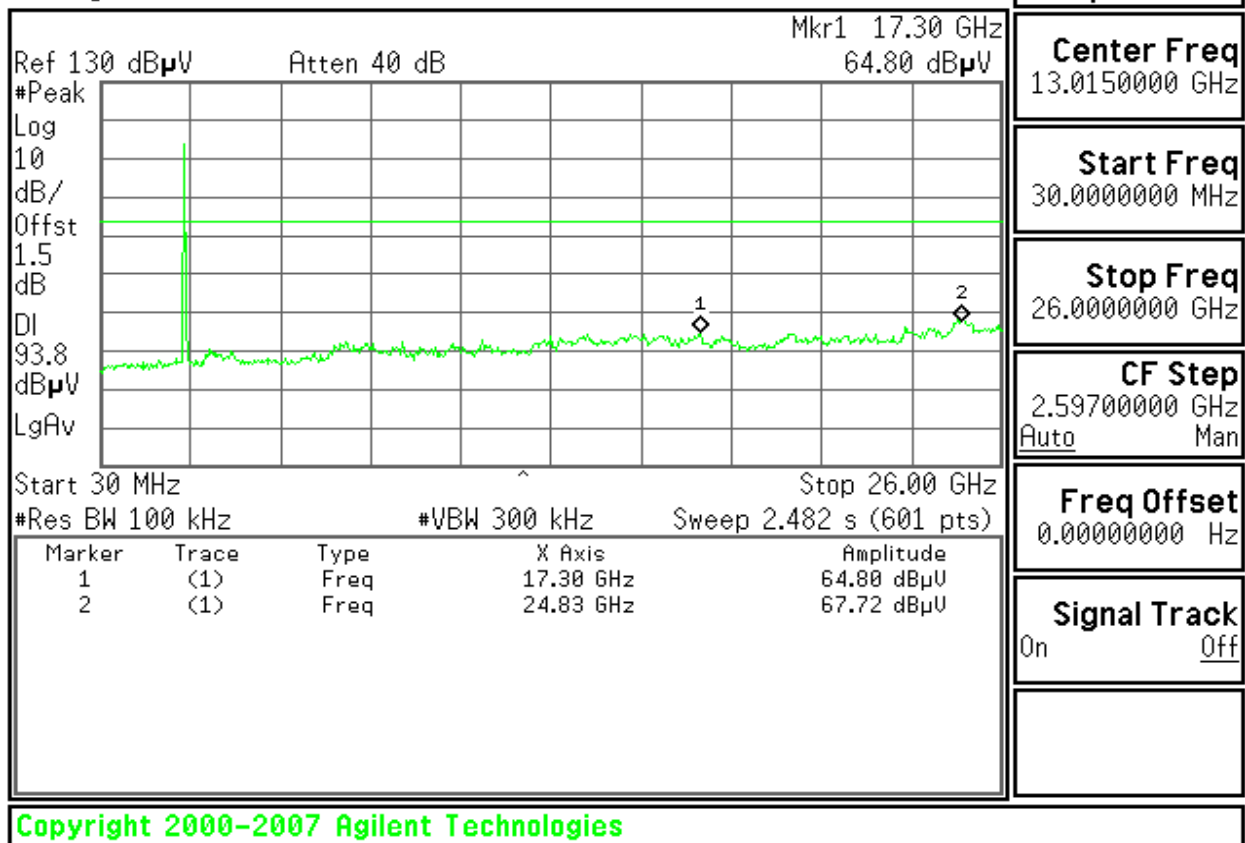


CH High

Agilent

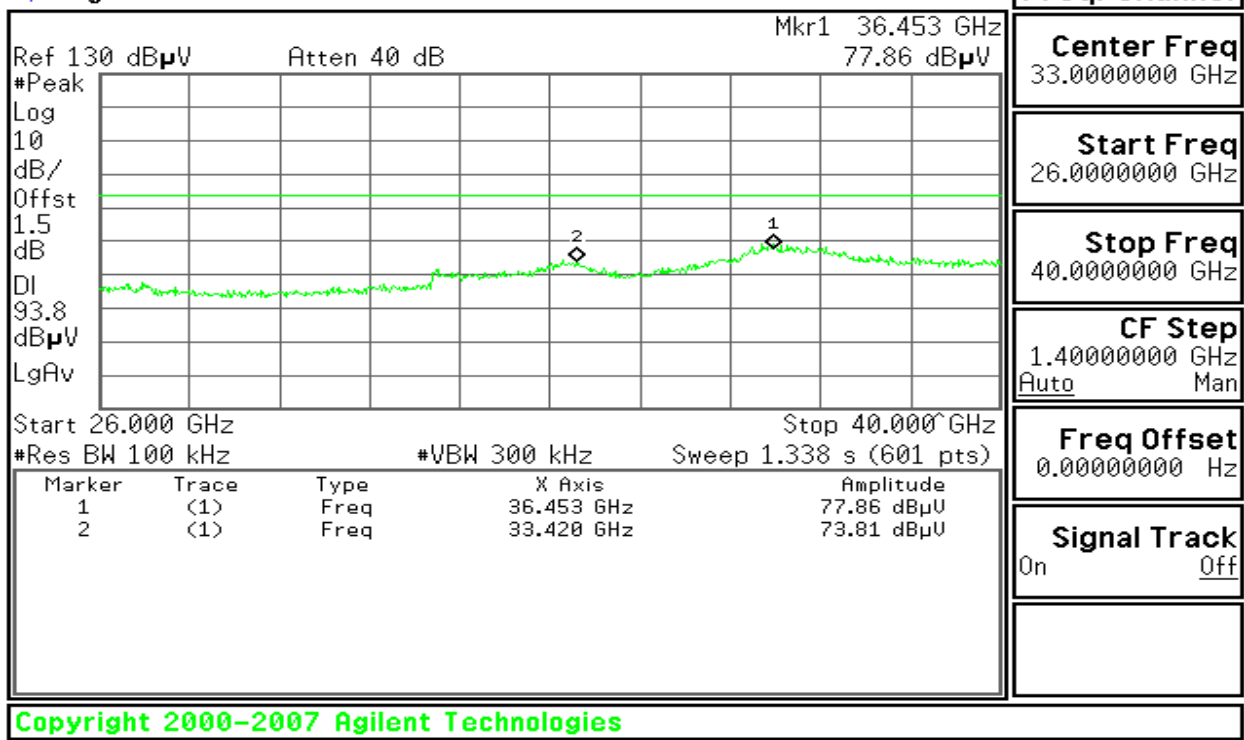


Agilent



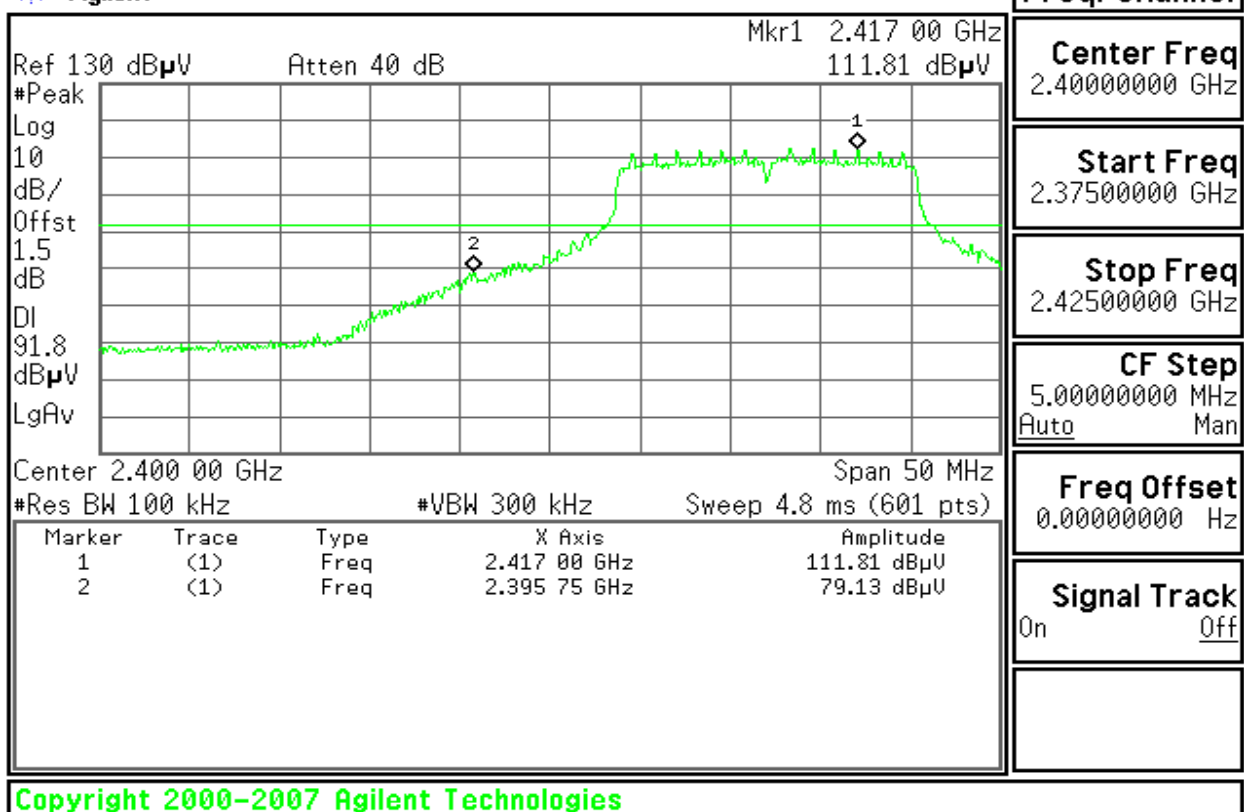


Agilent

IEEE 802.11g mode

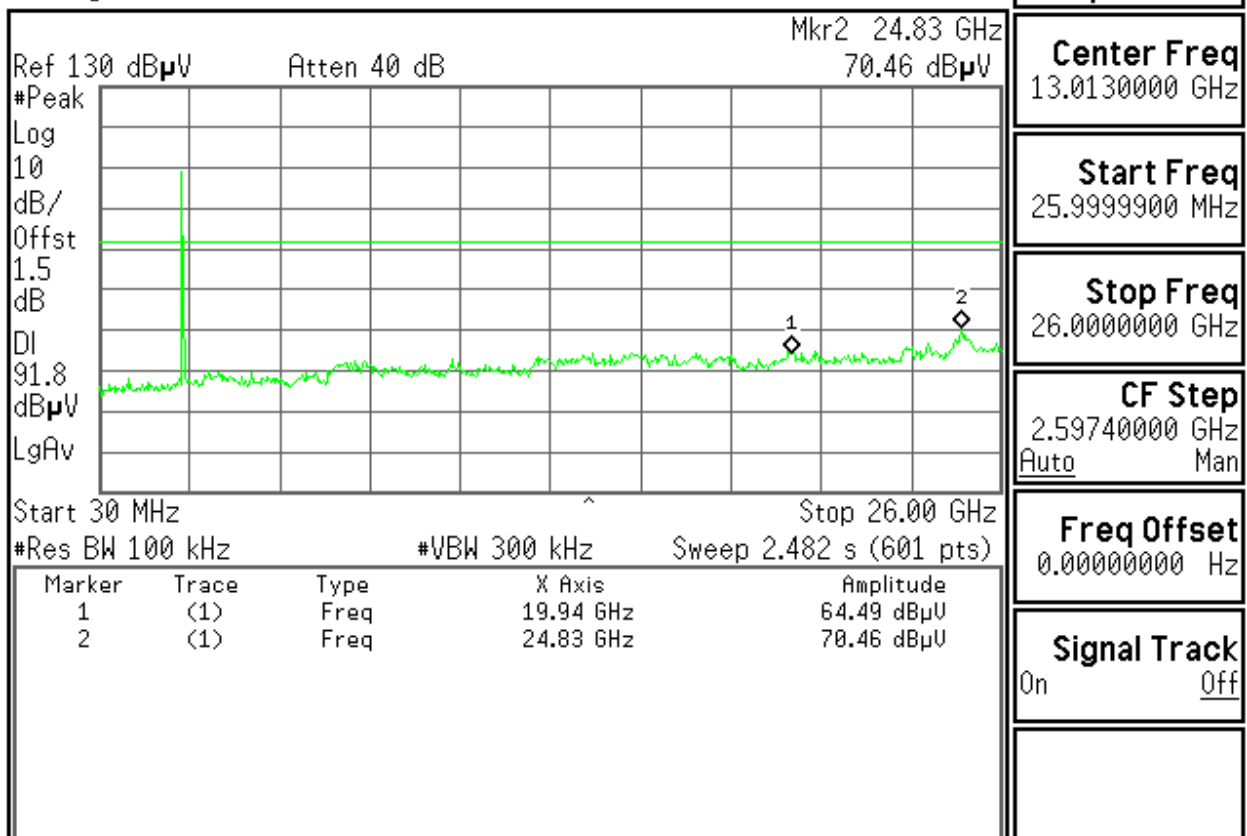
CH Low

Agilent



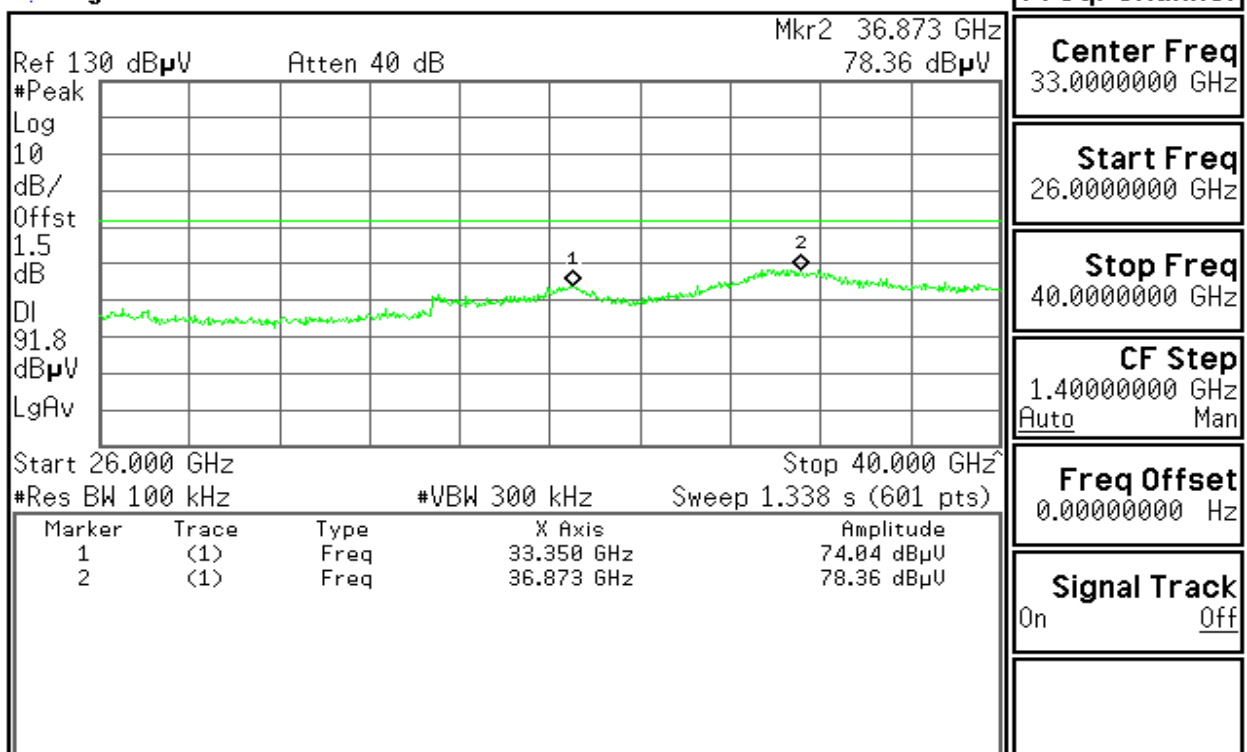


Agilent



Copyright 2000-2007 Agilent Technologies

Agilent

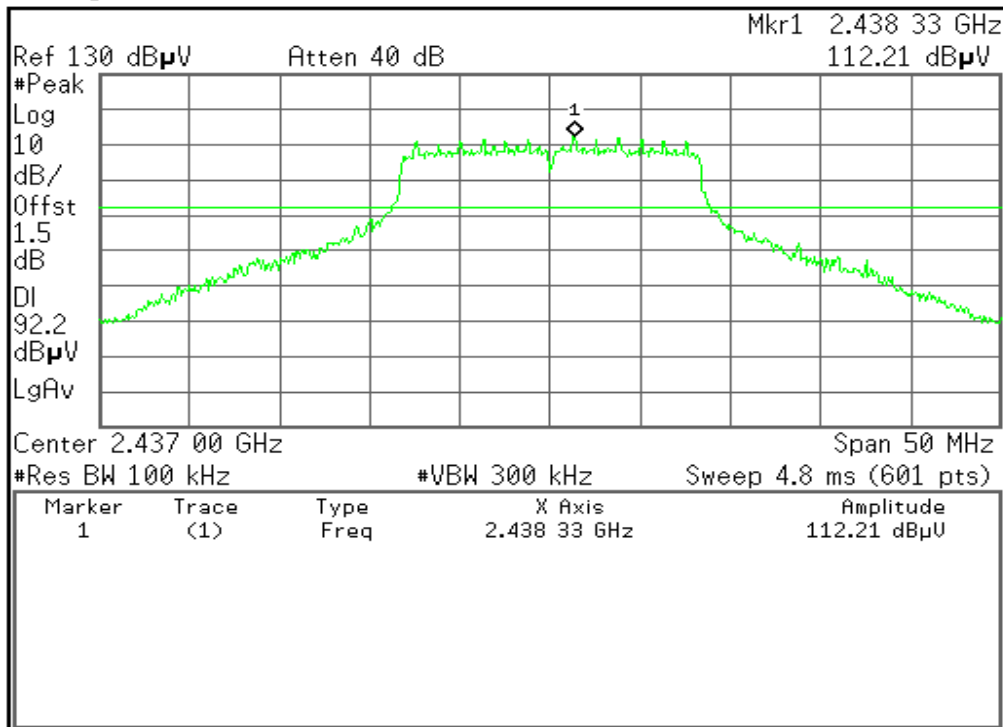


Copyright 2000-2007 Agilent Technologies



CH Mid

Agilent

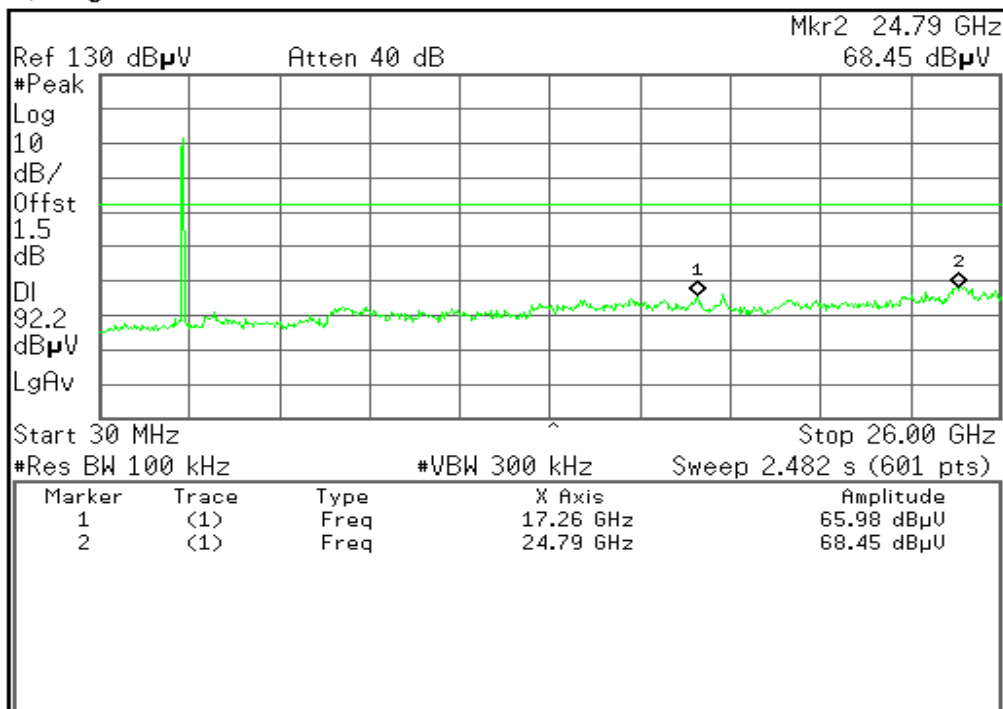


Freq/Channel

Center Freq
2.43700000 GHzStart Freq
2.41200000 GHzStop Freq
2.46200000 GHzCF Step
5.00000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Agilent



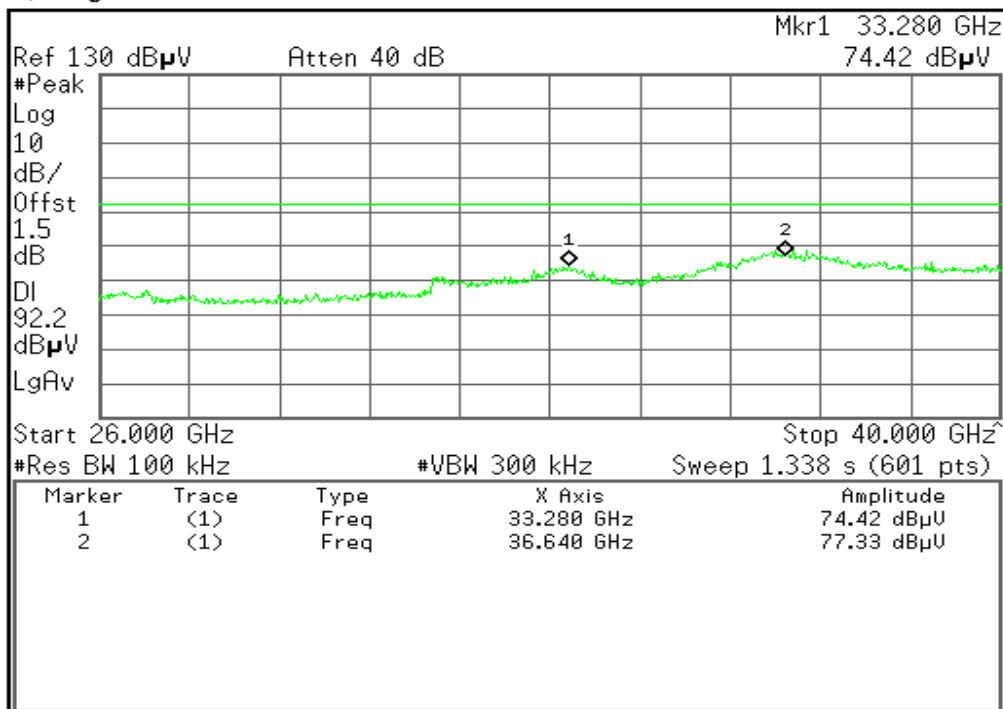
Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



* Agilent



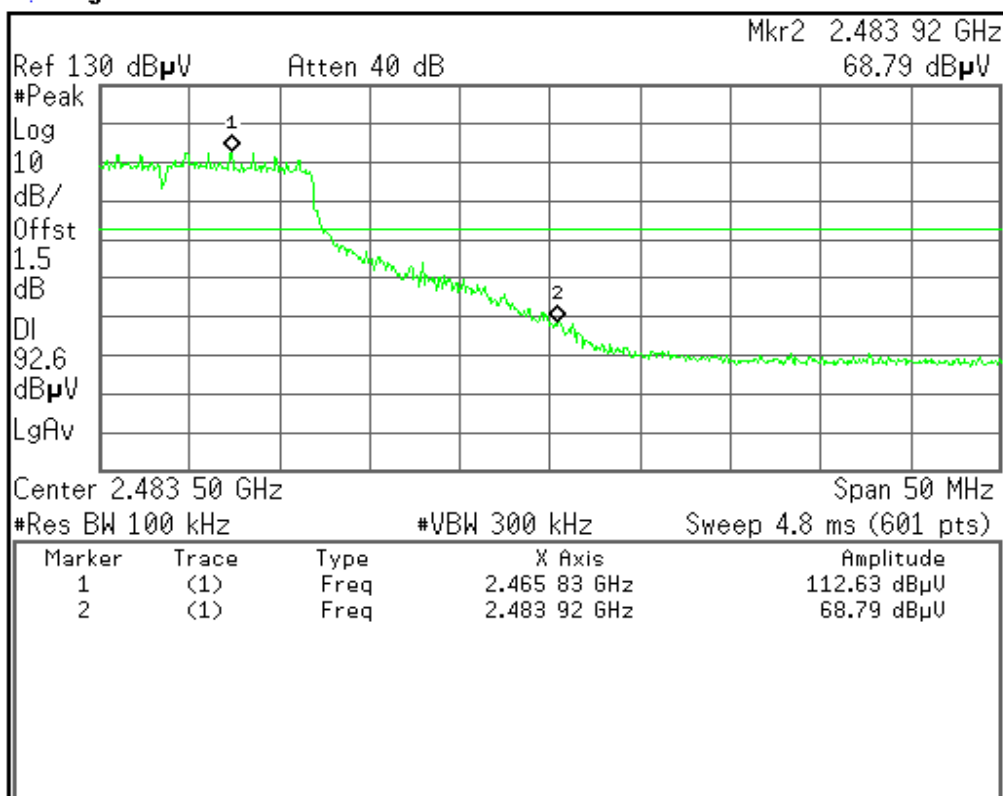
Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies

CH High

* Agilent



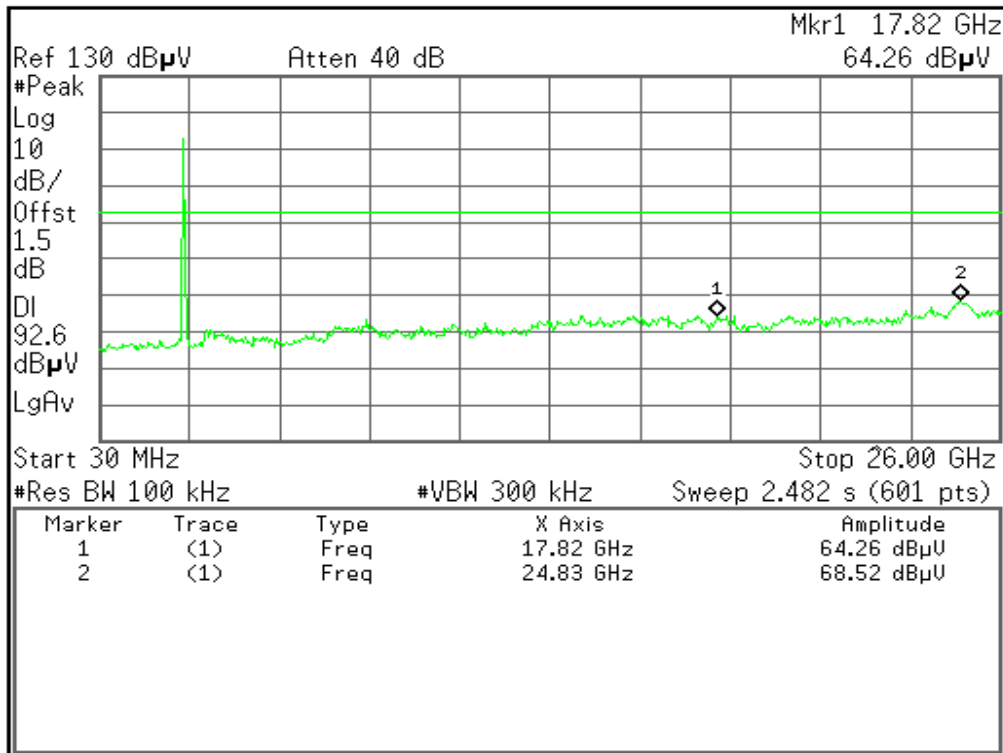
Freq/Channel

Center Freq
2.48350000 GHzStart Freq
2.45850000 GHzStop Freq
2.50850000 GHzCF Step
5.00000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies



Agilent

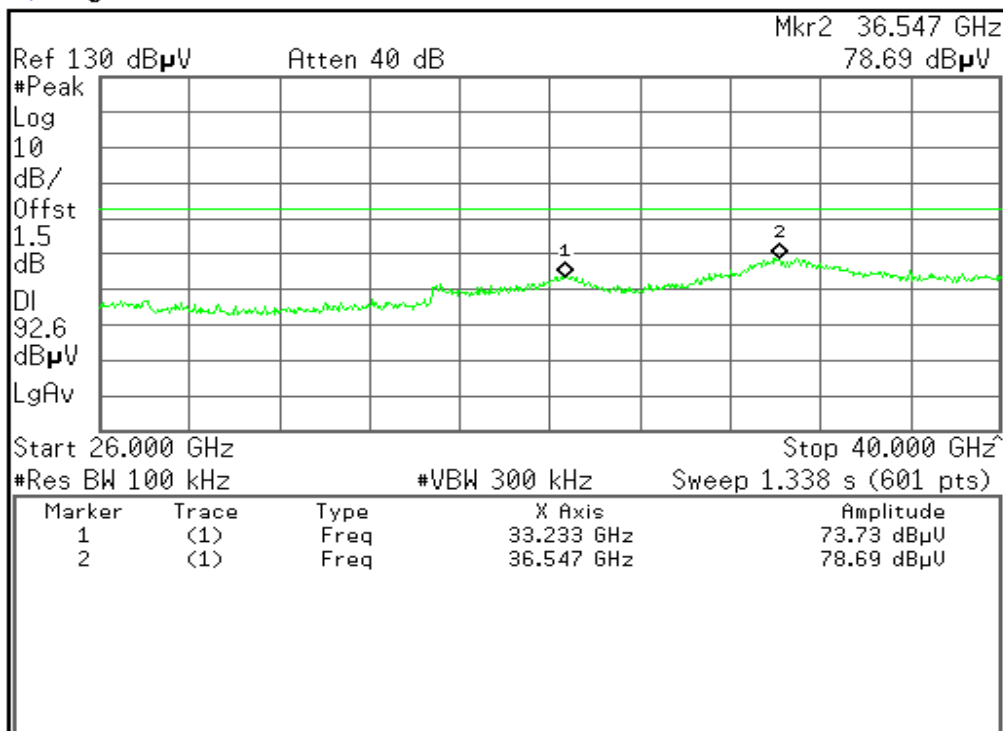


Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Agilent



Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

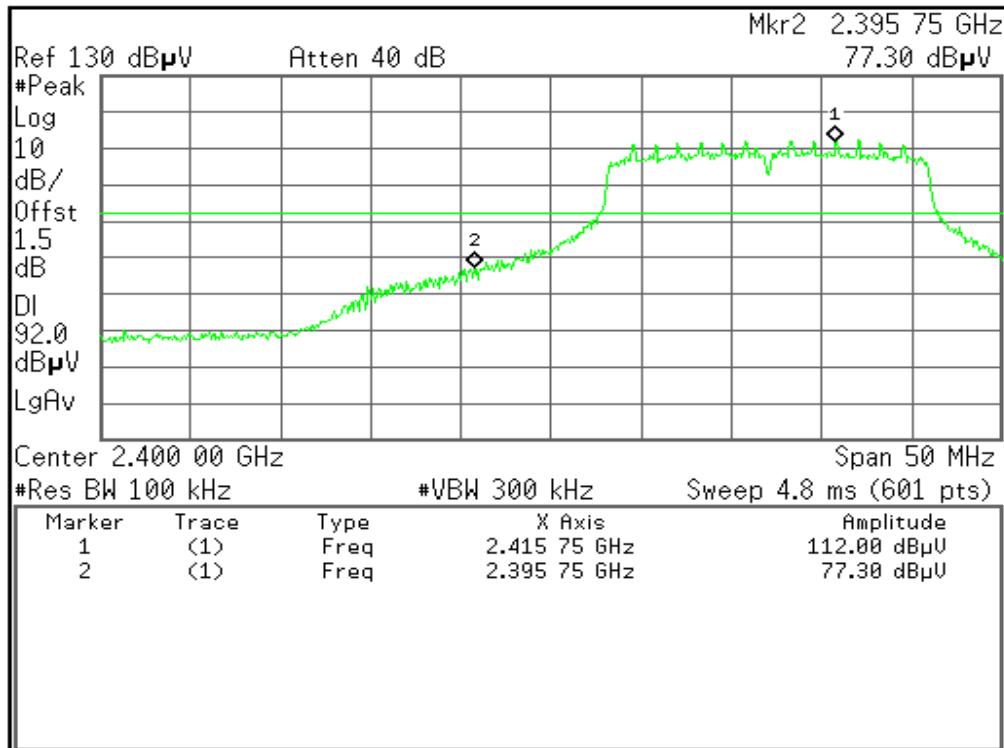
Copyright 2000-2007 Agilent Technologies



draft 802.11n Standard-20 MHz Channel mode / Chain 0

CH Low

Agilent

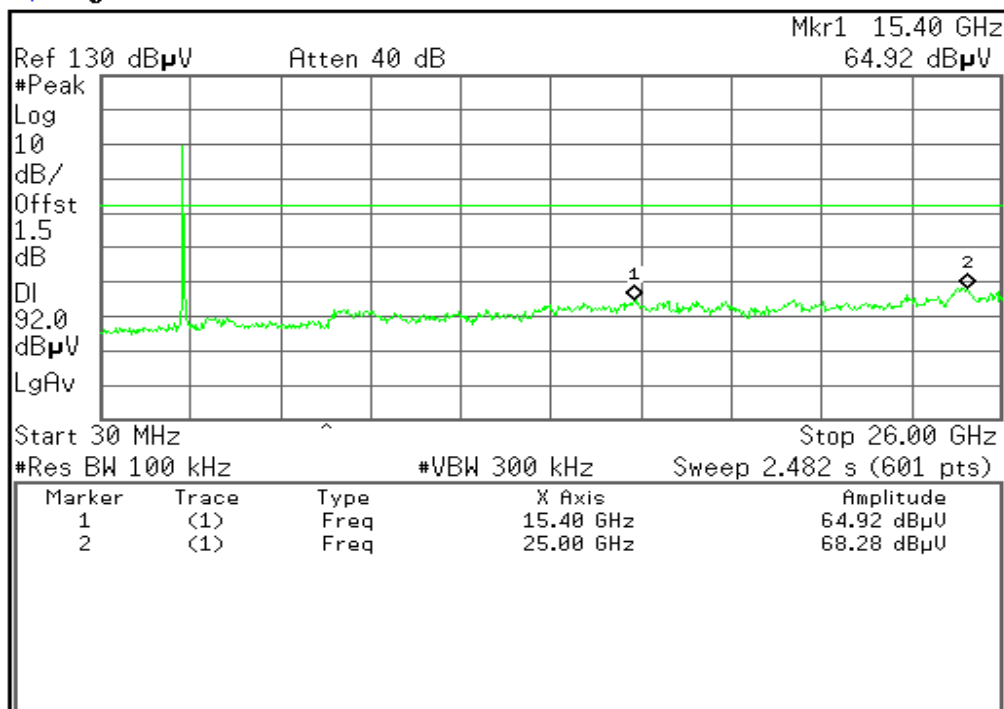


Freq/Channel

Center Freq
2.40000000 GHzStart Freq
2.37500000 GHzStop Freq
2.42500000 GHzCF Step
5.00000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Agilent



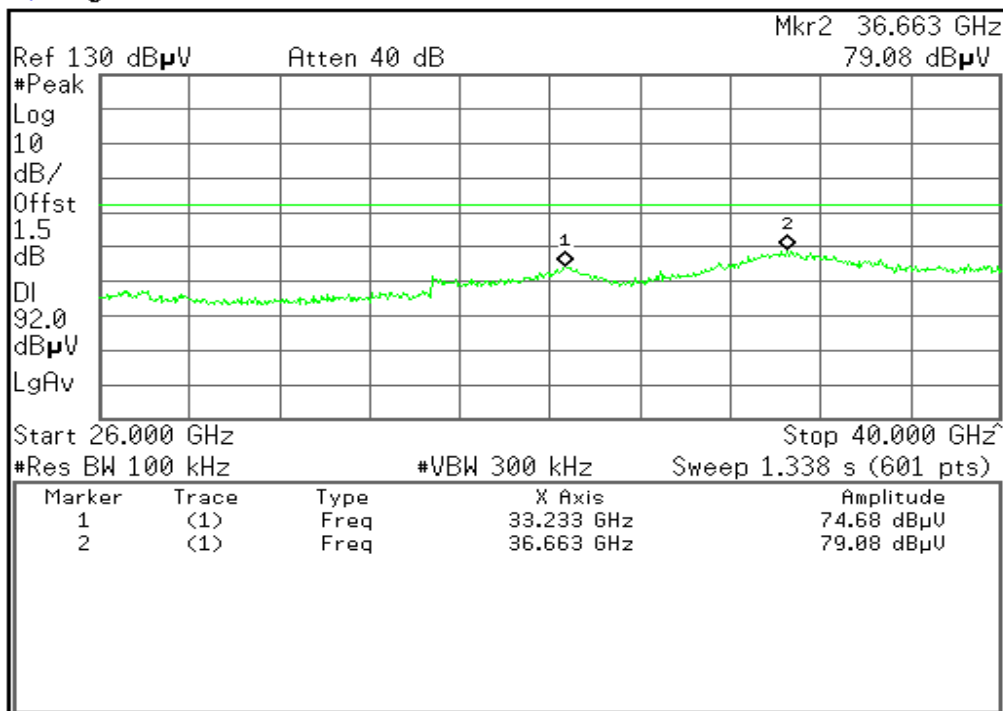
Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



* Agilent



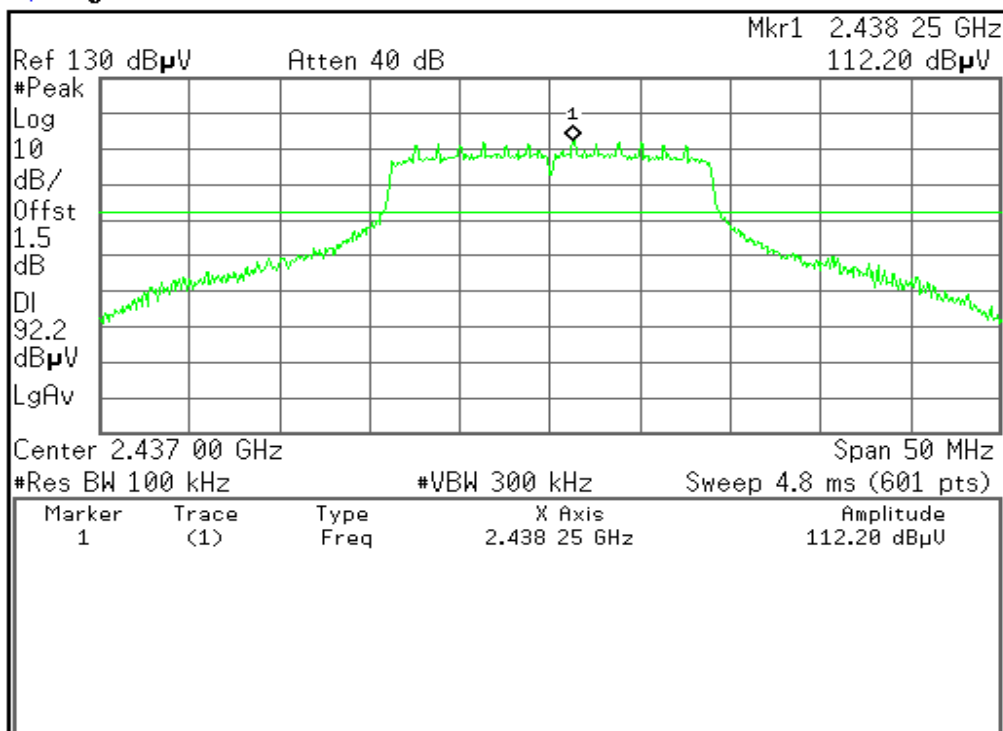
Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

File Operation Status, A:\SCREN067.GIF file saved

CH Mid

* Agilent



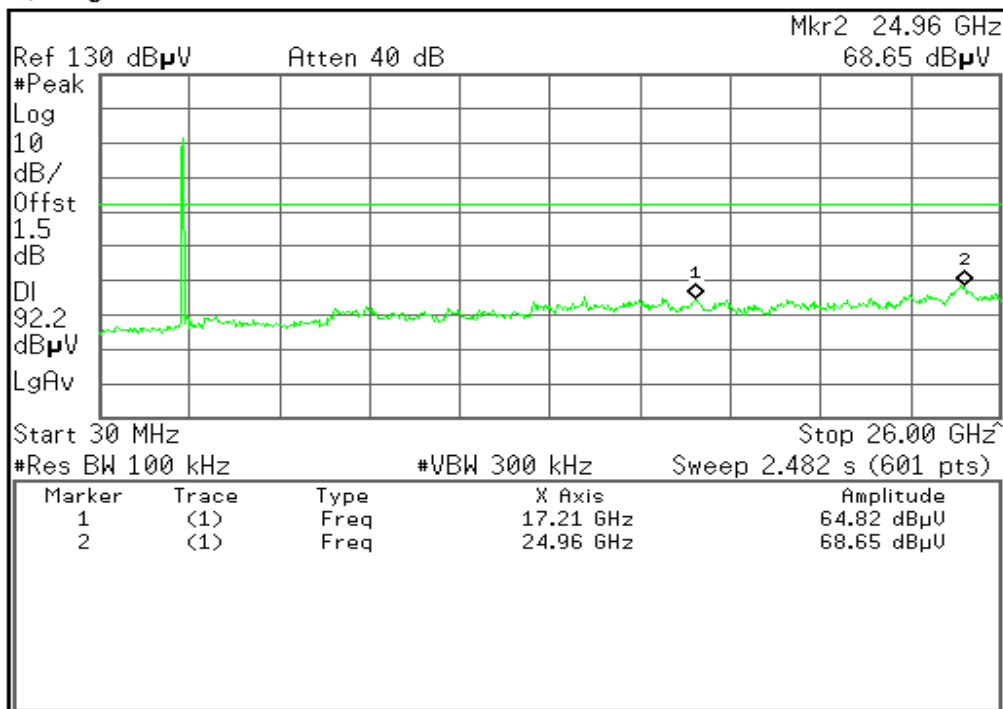
Freq/Channel

Center Freq
2.43700000 GHzStart Freq
2.41200000 GHzStop Freq
2.46200000 GHzCF Step
5.00000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



* Agilent

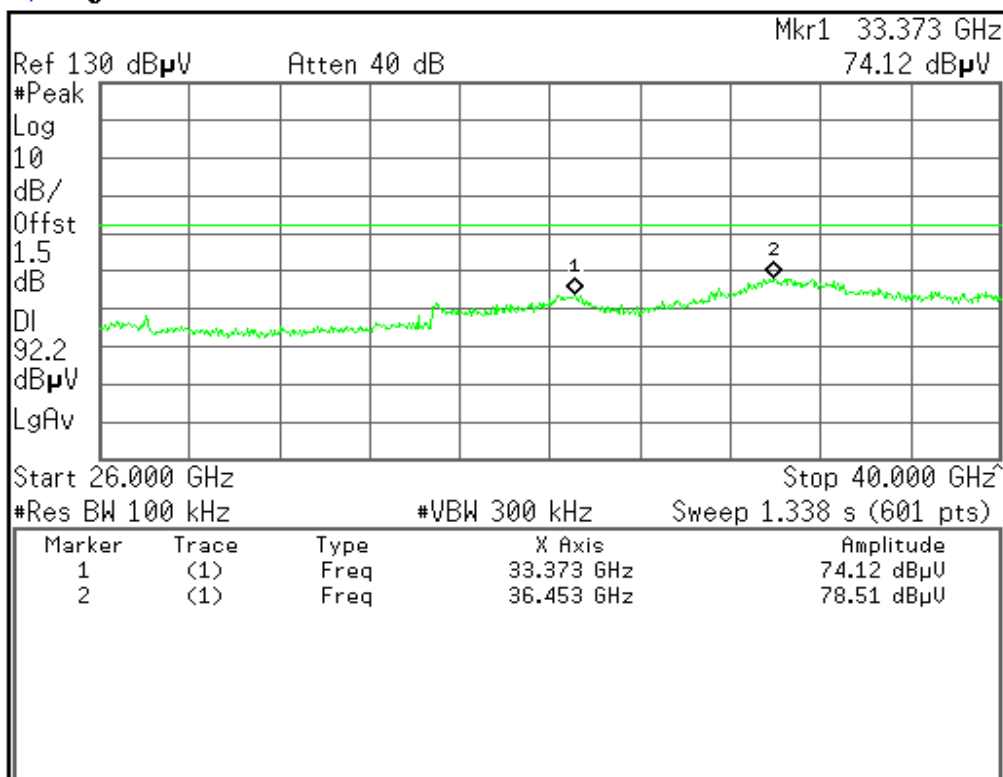


Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies

* Agilent



Freq/Channel

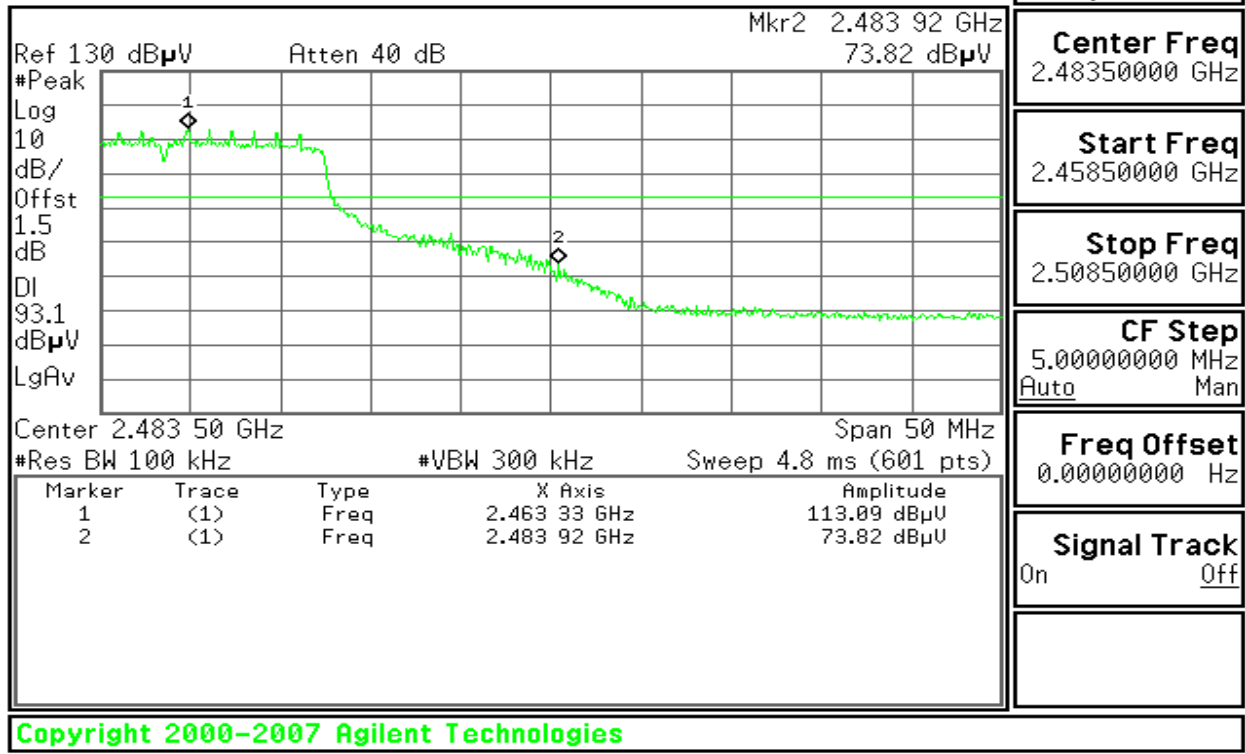
Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies

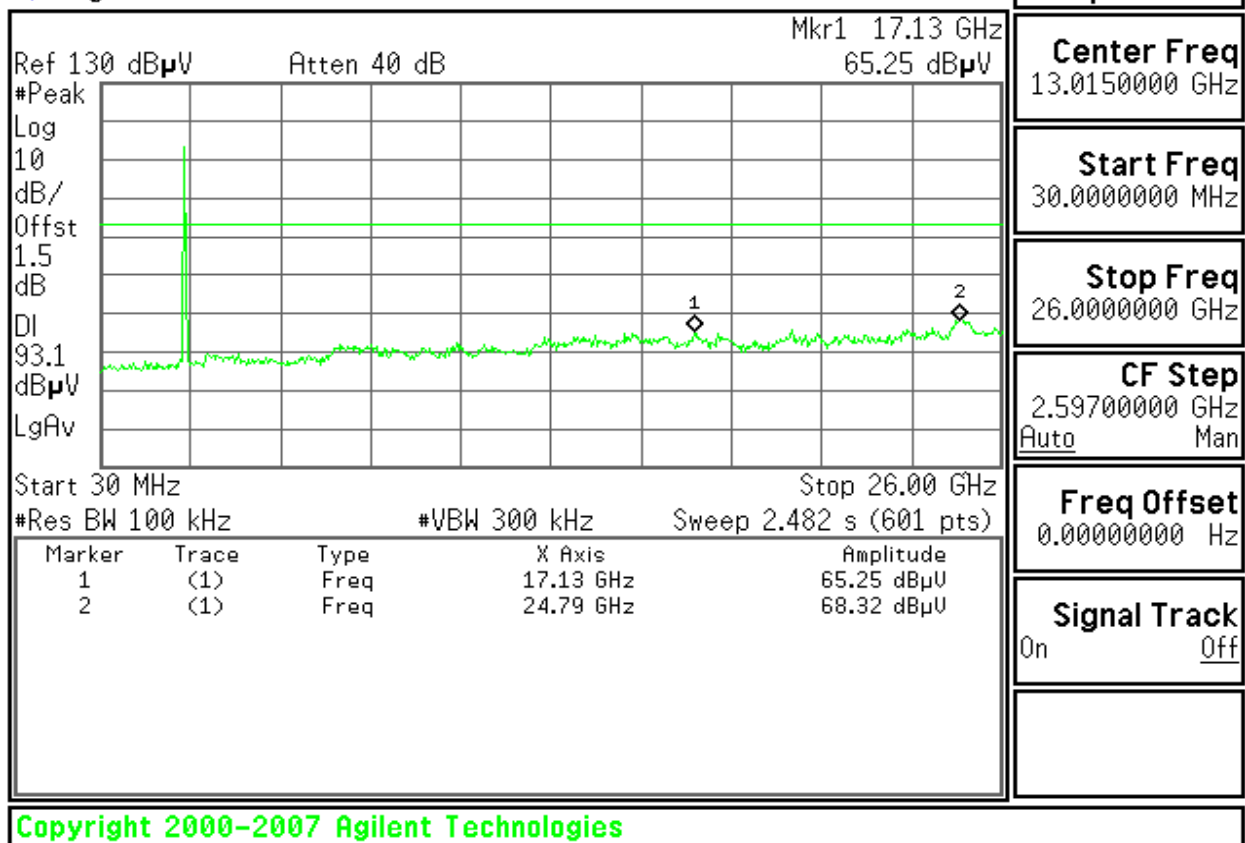


CH High

Agilent

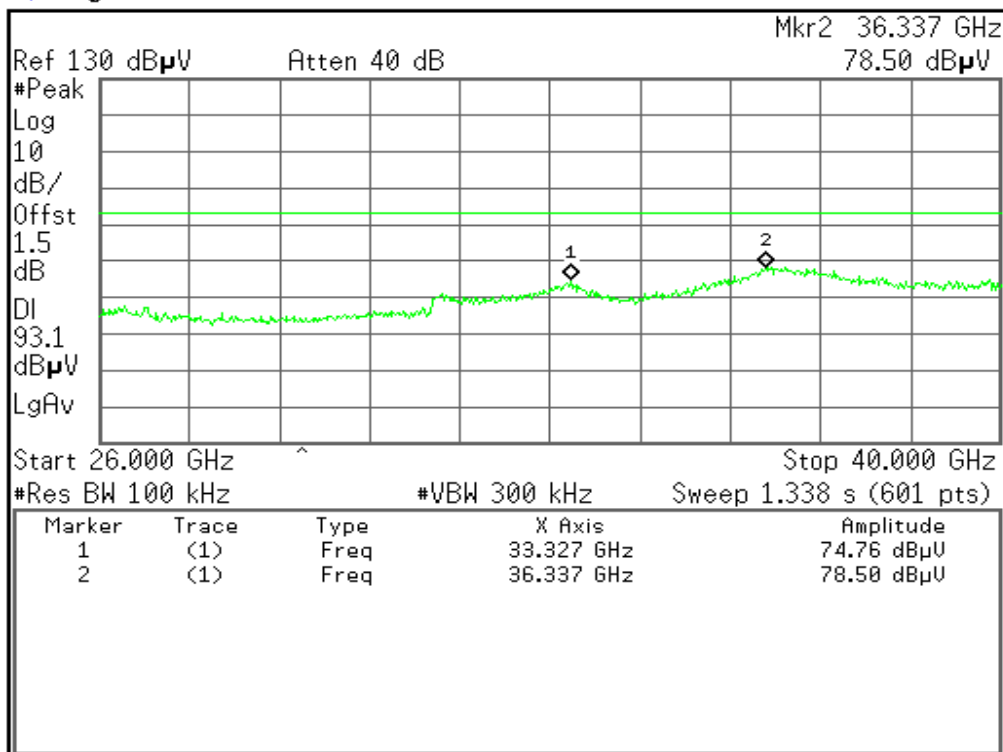


Agilent





Agilent



Freq/Channel

Center Freq

33.0000000 GHz

Start Freq

26.0000000 GHz

Stop Freq

40.0000000 GHz

CF Step

1.40000000 GHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

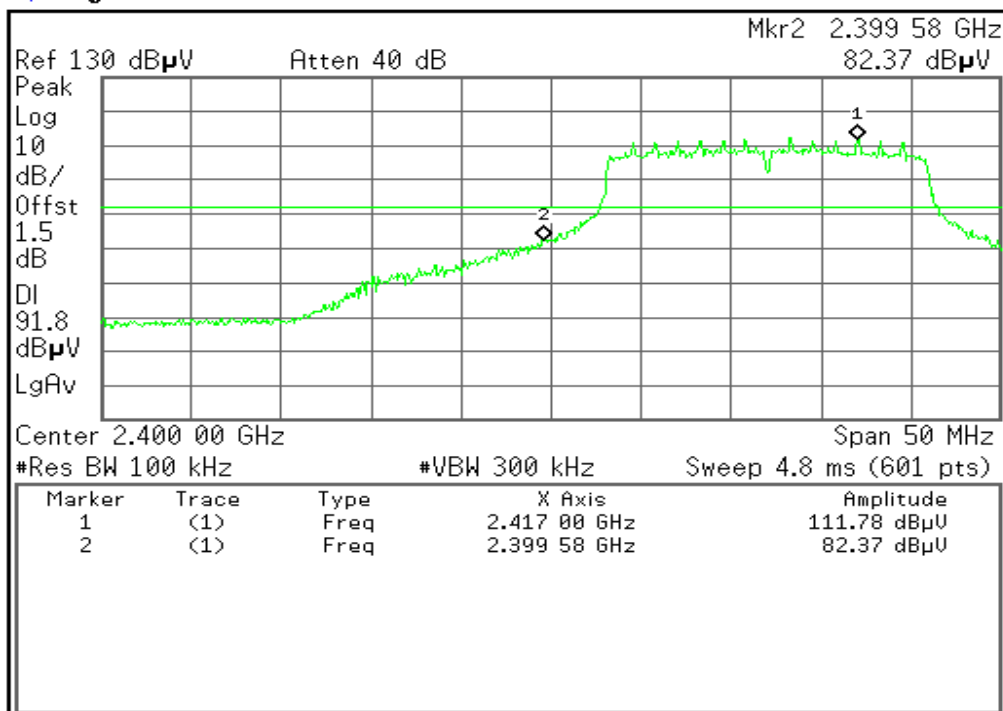
On Off

Copyright 2000-2007 Agilent Technologies

draft 802.11n Standard-20 MHz Channel mode / Chain 1

CH Low

Agilent



Freq/Channel

Center Freq

2.40000000 GHz

Start Freq

2.37500000 GHz

Stop Freq

2.42500000 GHz

CF Step

5.00000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

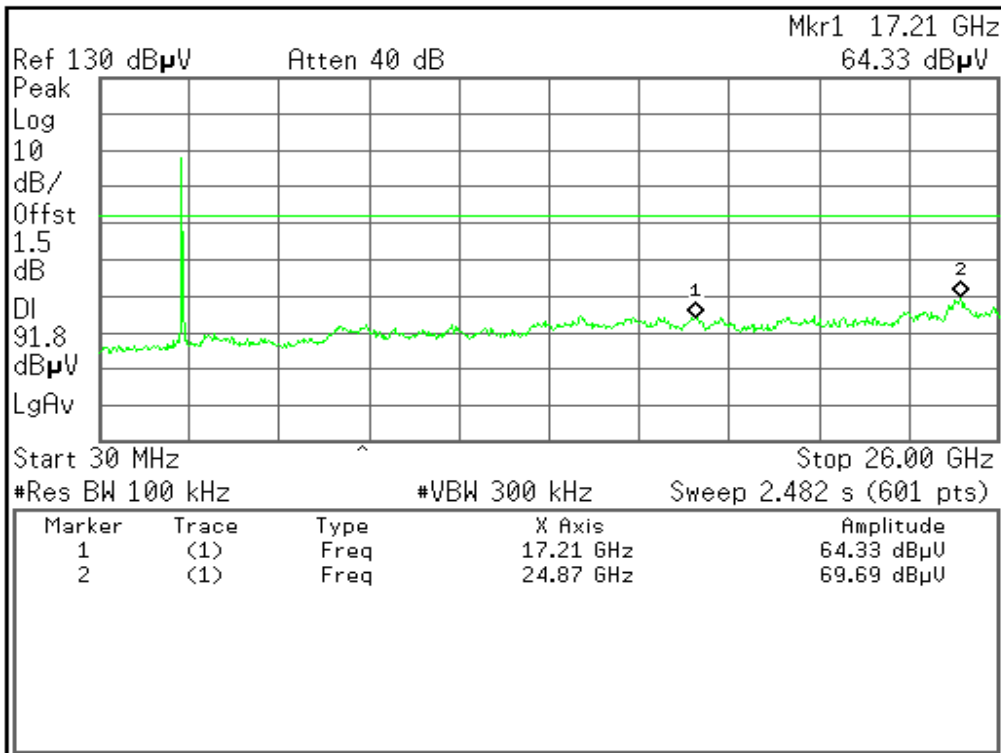
Signal Track

On Off

Copyright 2000-2007 Agilent Technologies



Agilent

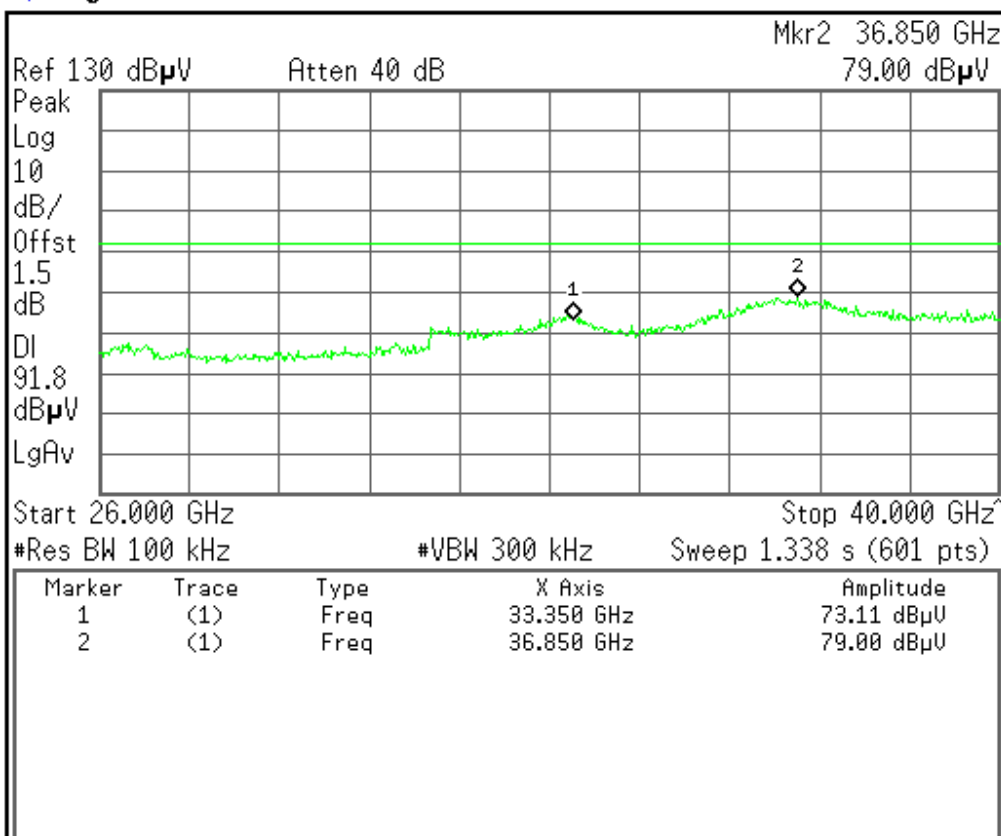


Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies

Agilent



Freq/Channel

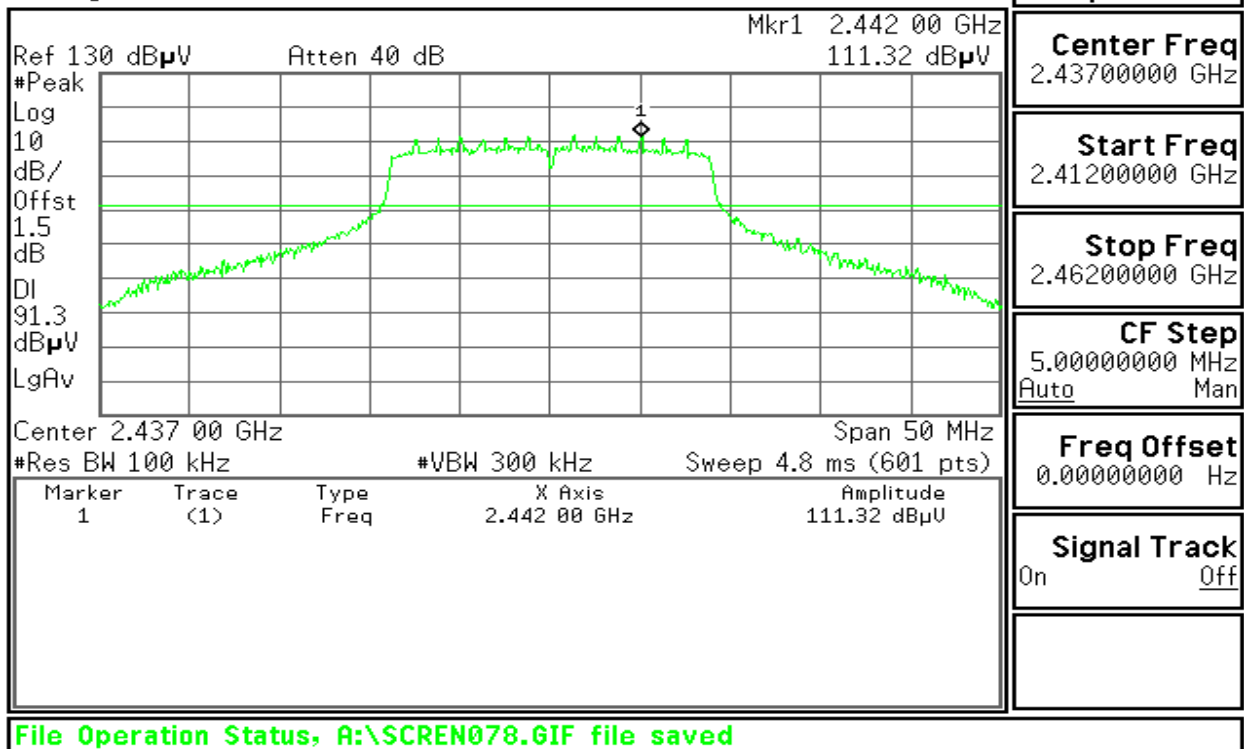
Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies

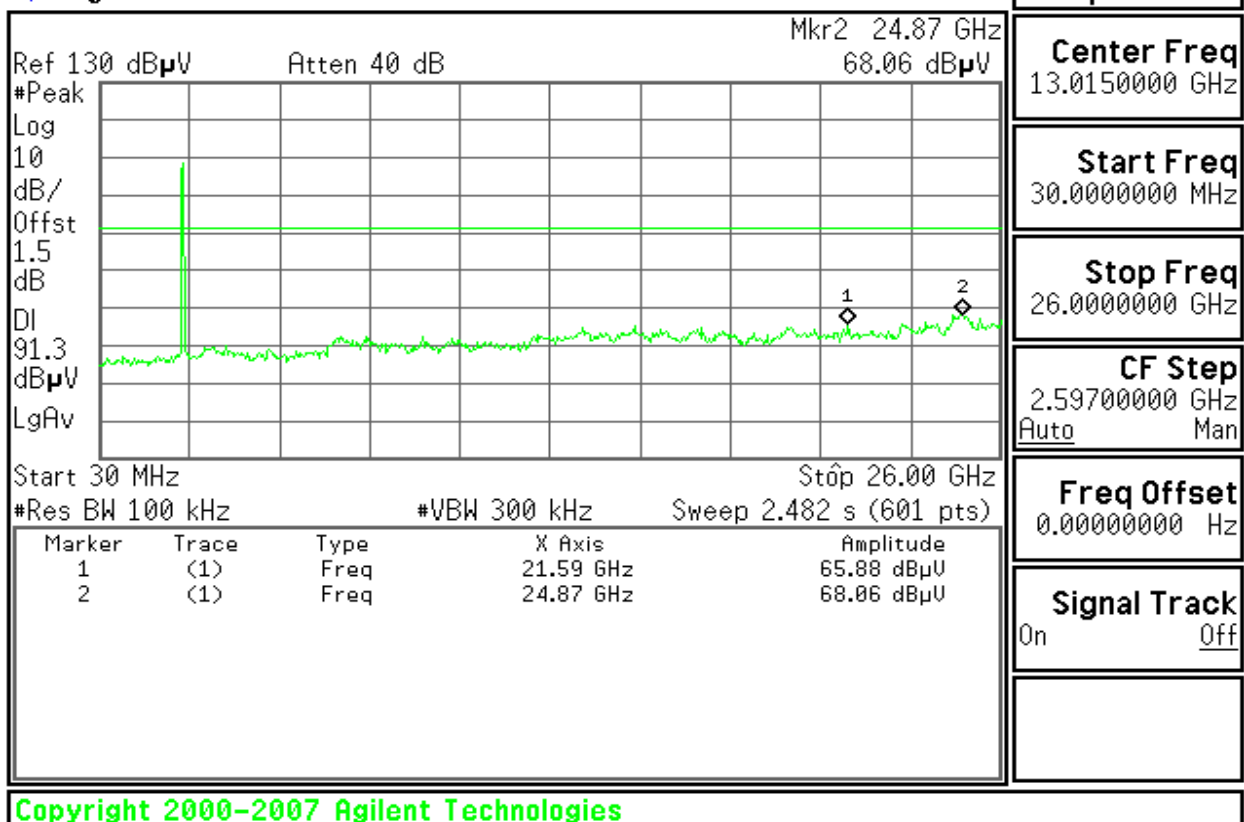


CH Mid

Agilent

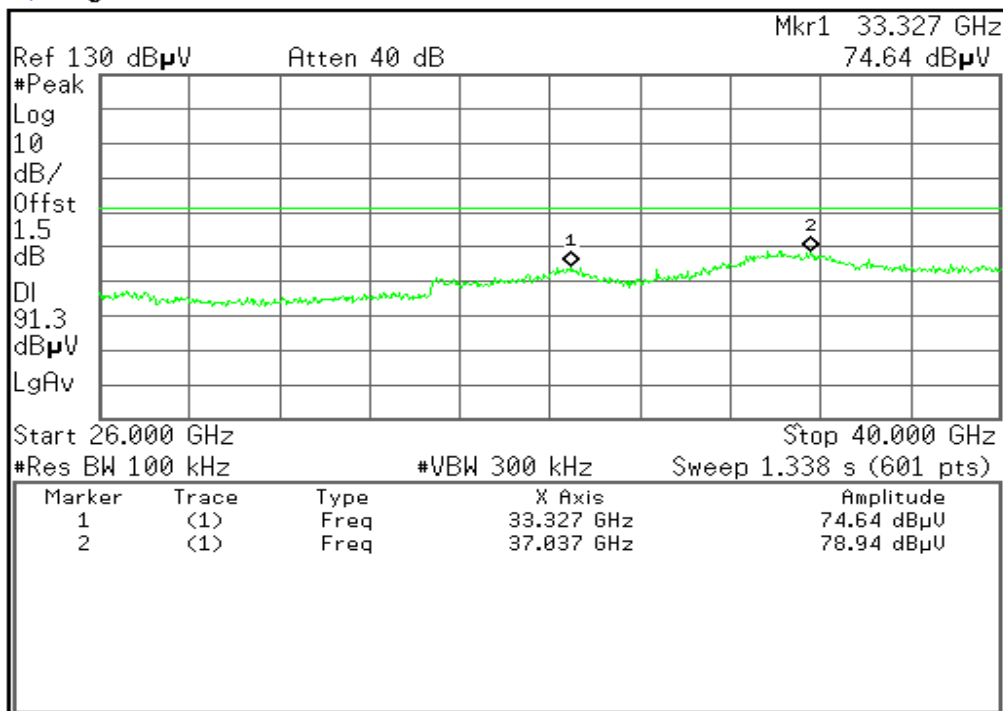


Agilent





* Agilent



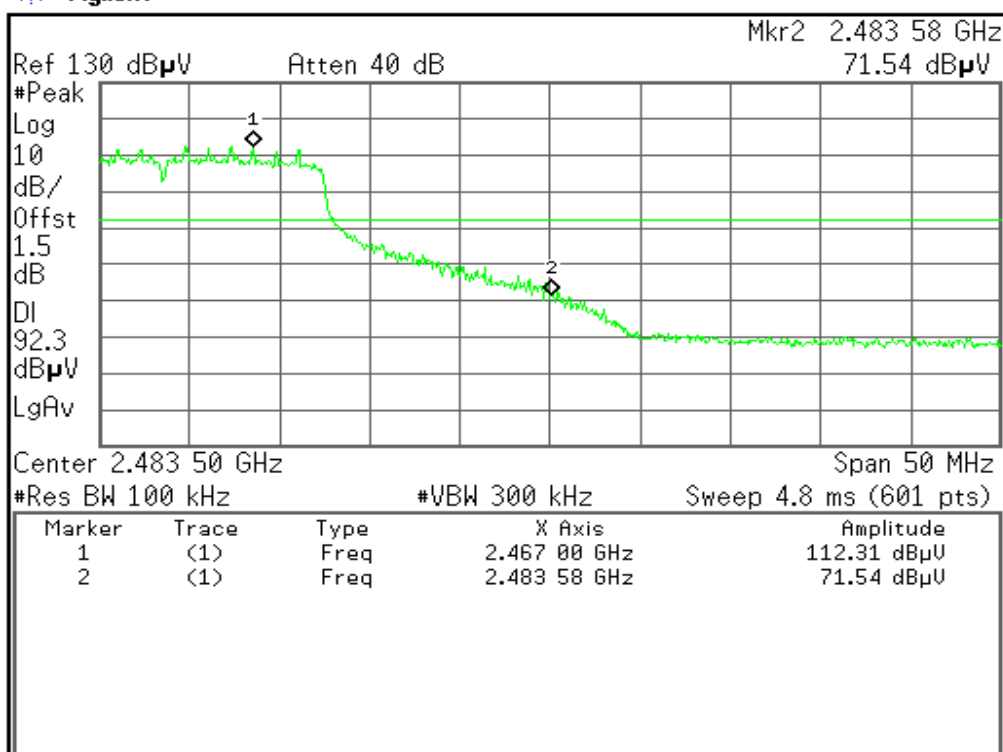
Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

CH High

* Agilent



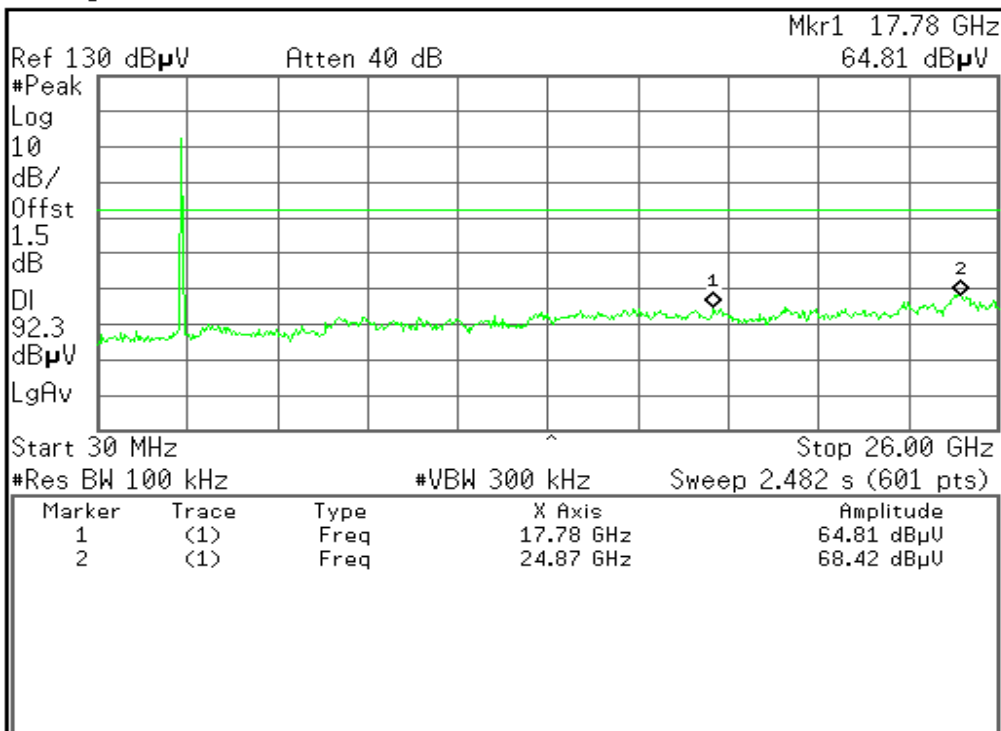
Freq/Channel

Center Freq
2.48350000 GHzStart Freq
2.45850000 GHzStop Freq
2.50850000 GHzCF Step
5.00000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



Agilent

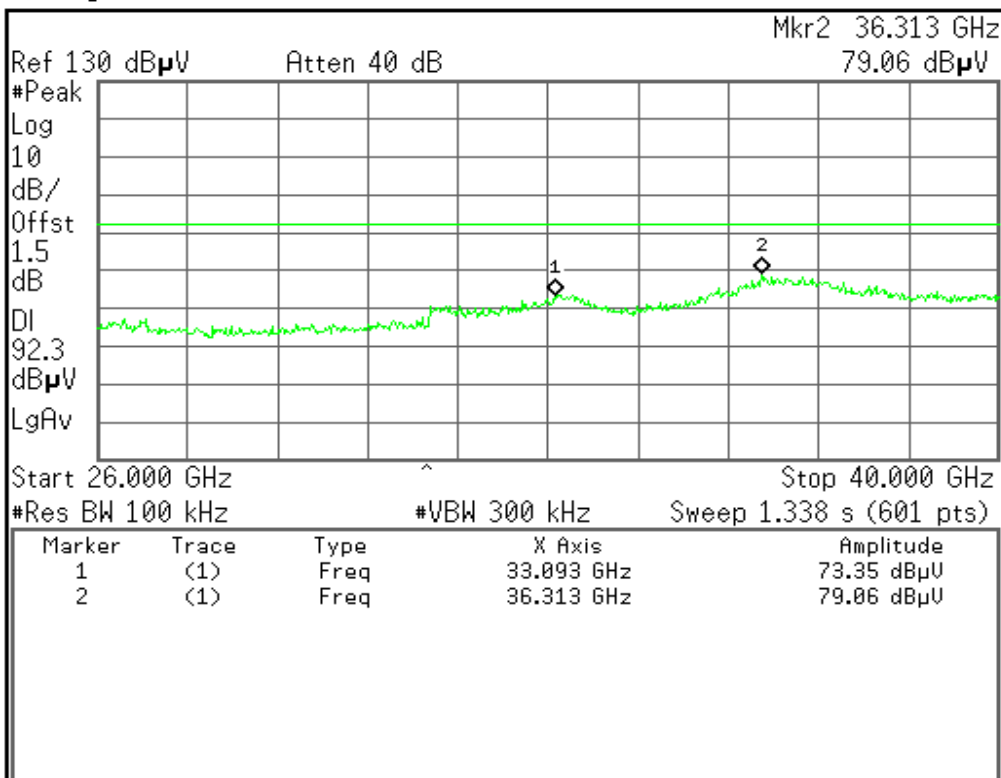


Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Agilent



Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

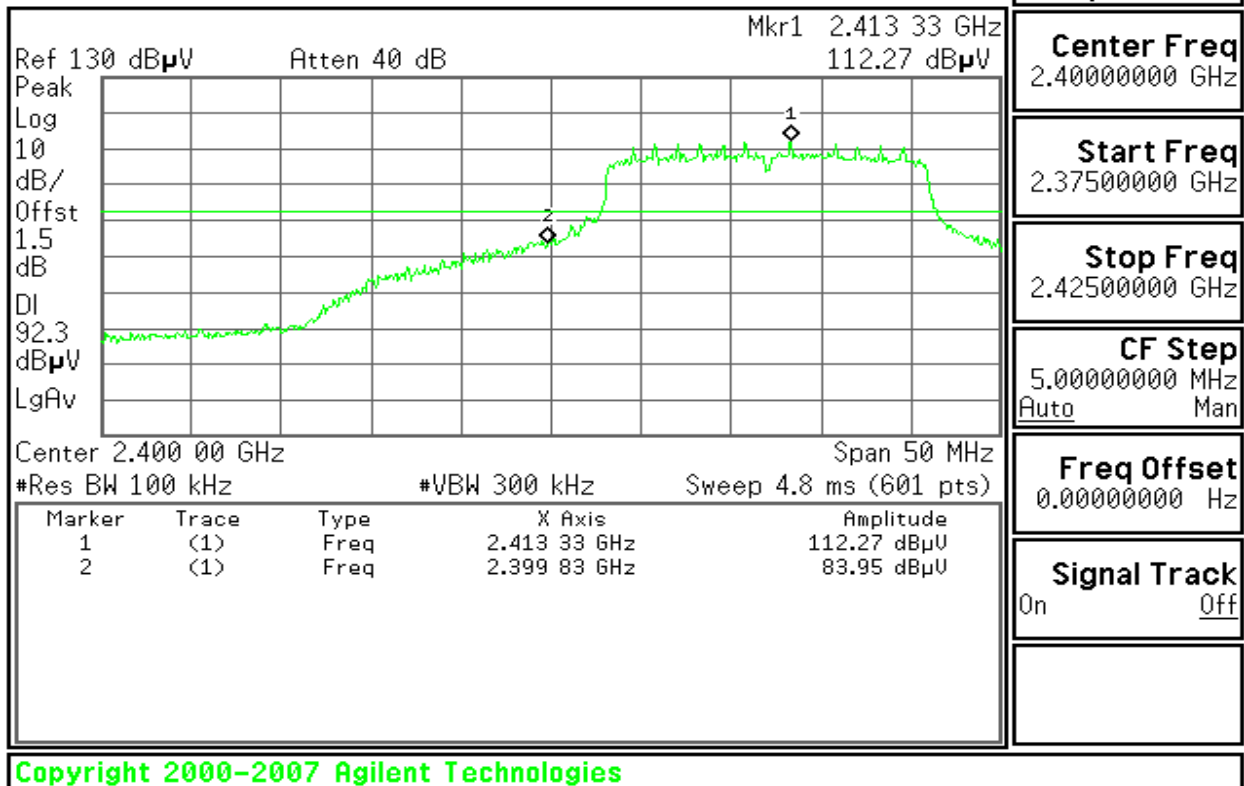
Copyright 2000-2007 Agilent Technologies



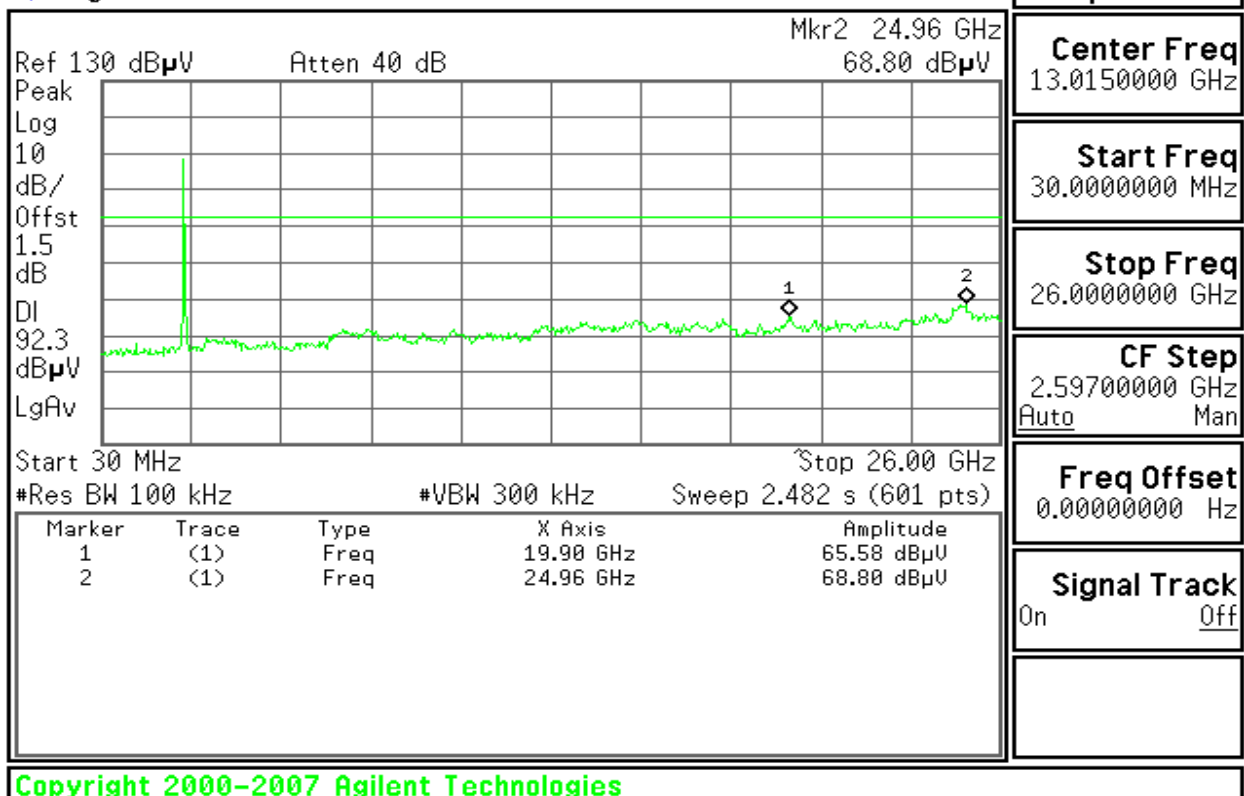
draft 802.11n Standard-20 MHz Channel mode / Chain 2

CH Low

Agilent

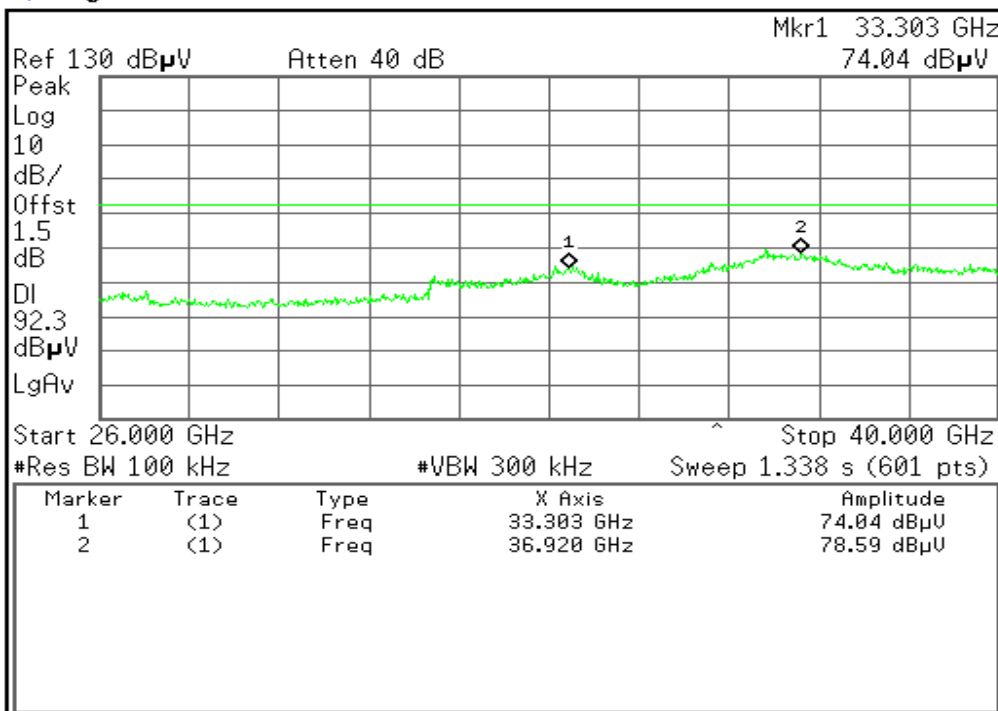


Agilent





* Agilent



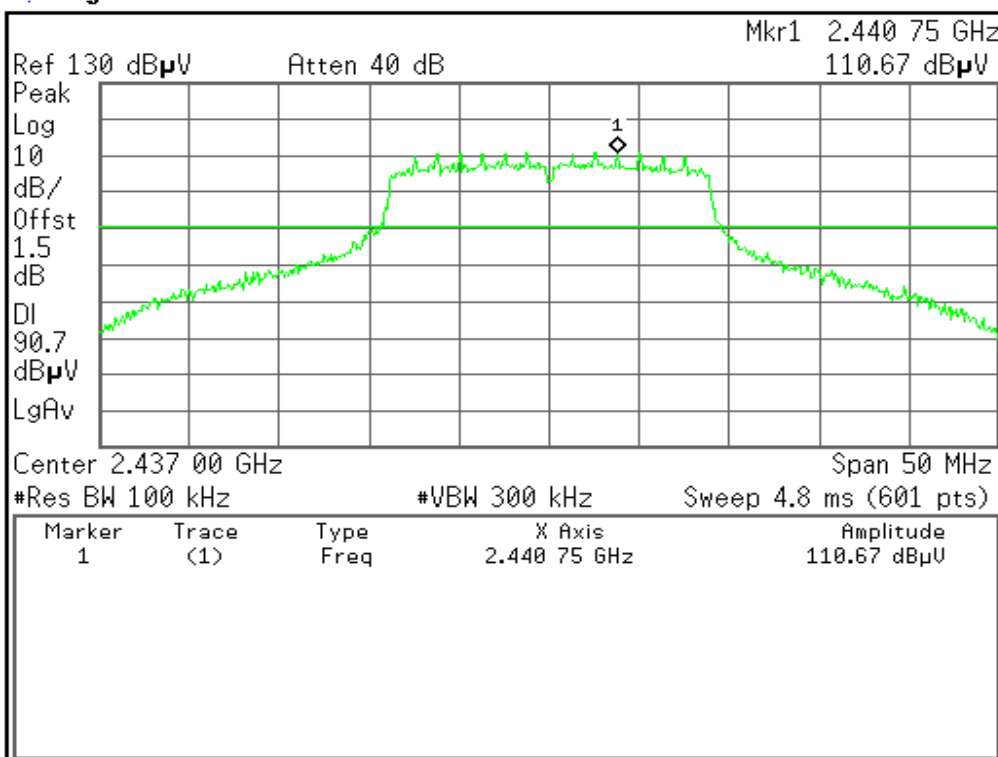
Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

CH Mid

* Agilent



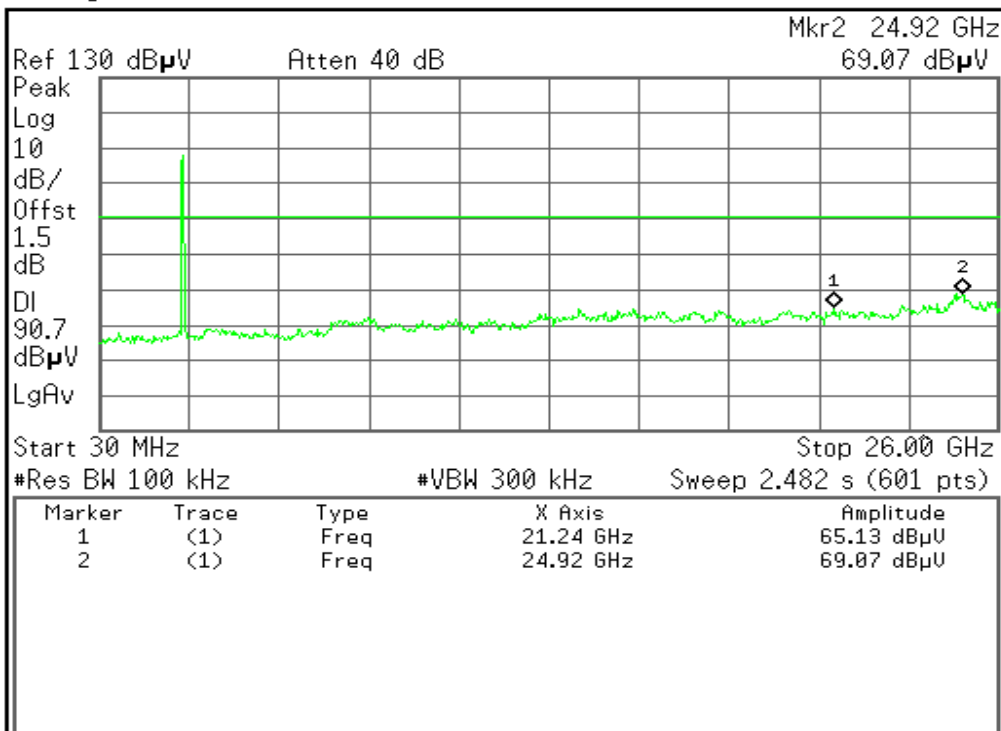
Freq/Channel

Center Freq
2.43700000 GHzStart Freq
2.41200000 GHzStop Freq
2.46200000 GHzCF Step
5.00000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



Agilent

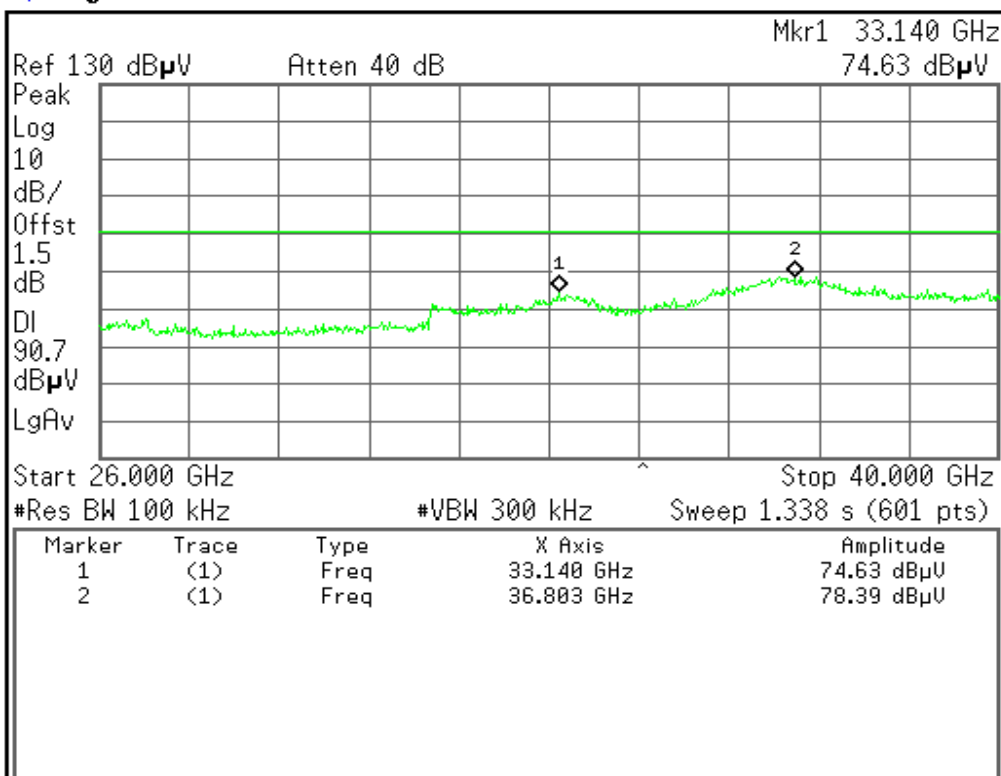


Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Agilent



Freq/Channel

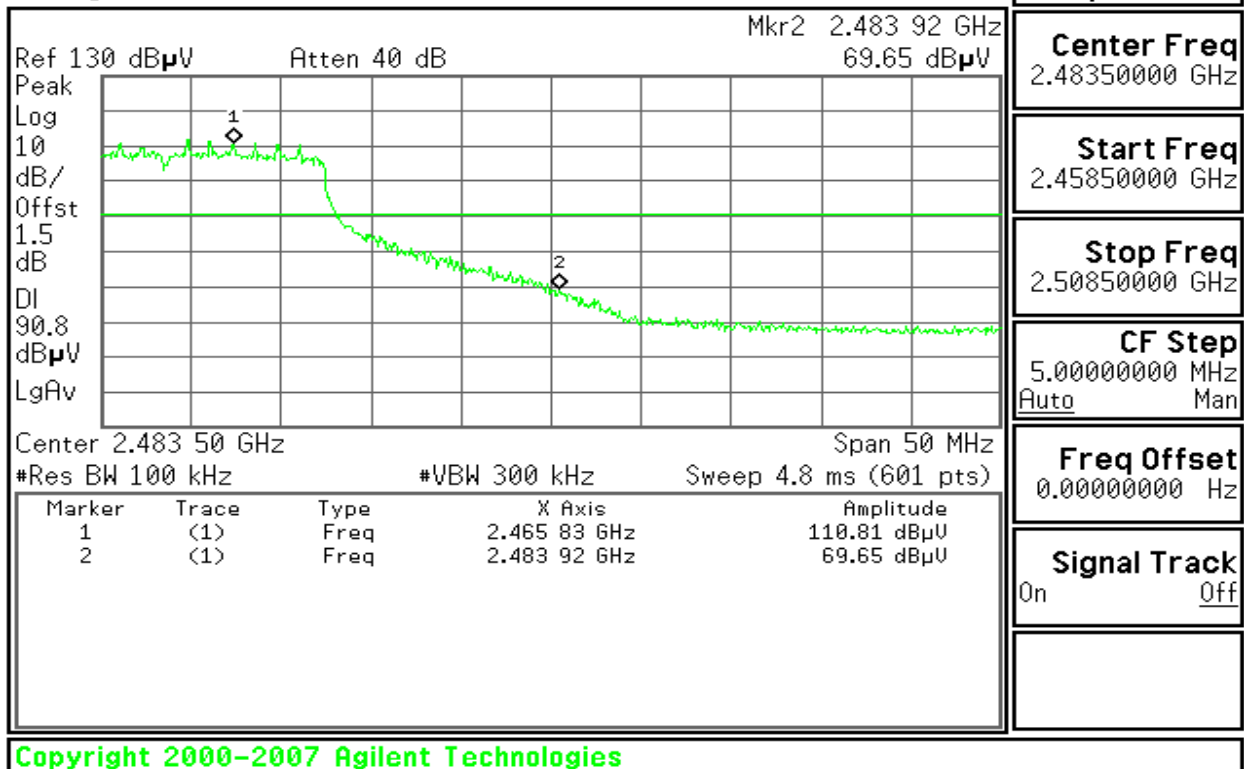
Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

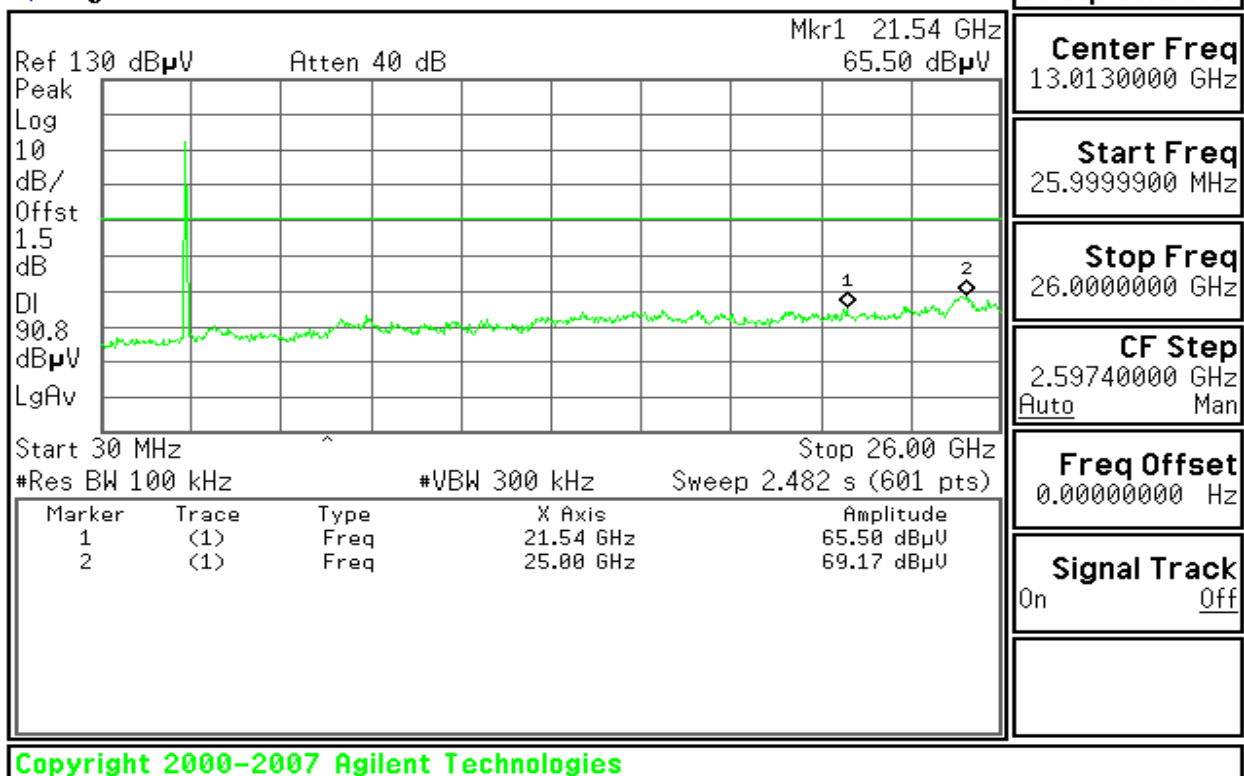


CH High

Agilent

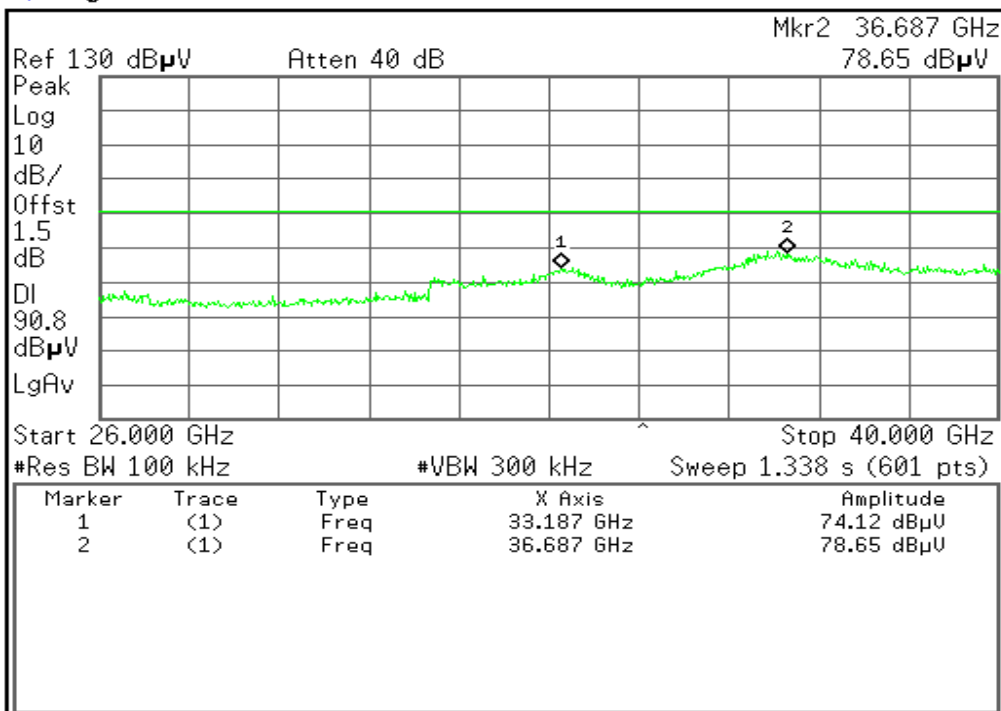


Agilent





* Agilent



Freq/Channel

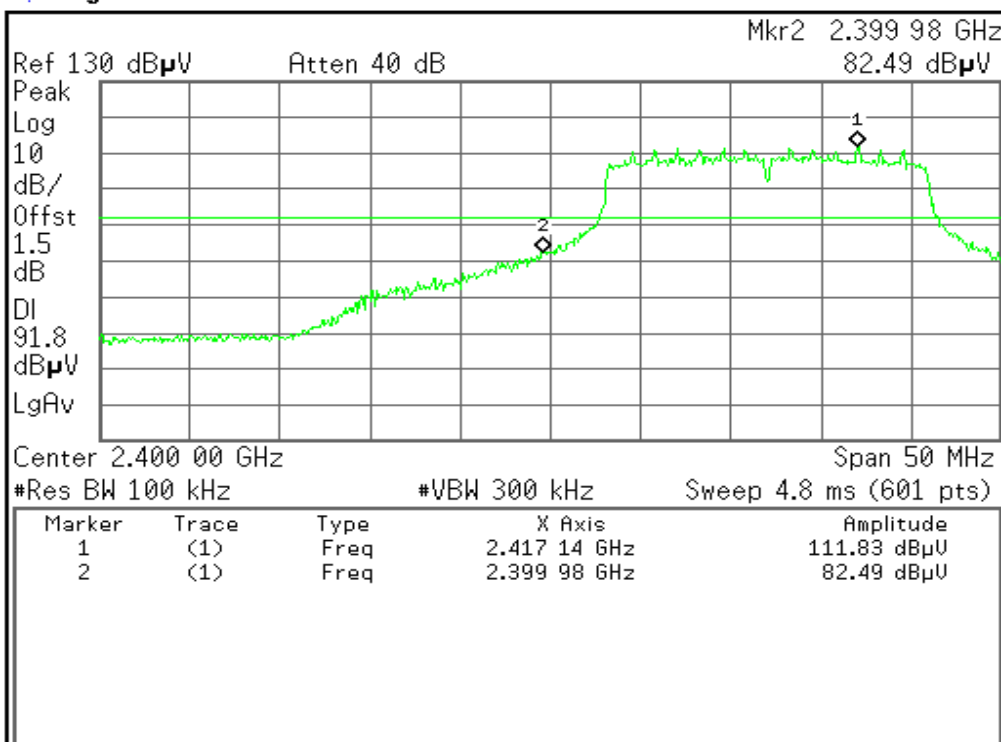
Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

draft 802.11n Standard-20 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

CH Low

* Agilent

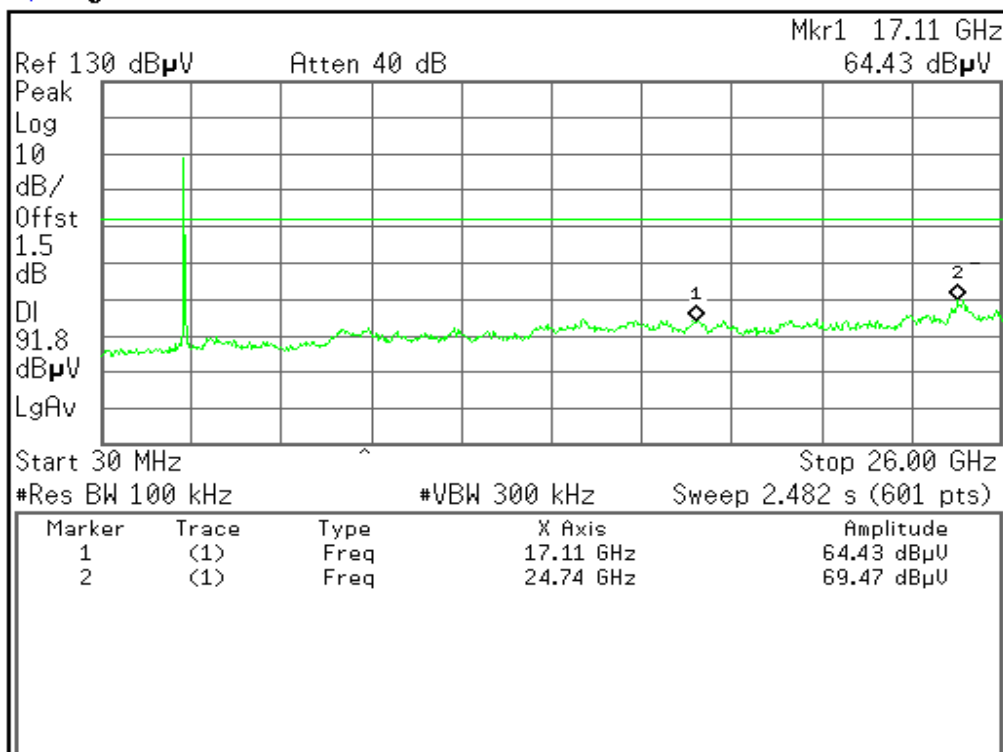


Freq/Channel

Center Freq
2.40000000 GHzStart Freq
2.37500000 GHzStop Freq
2.42500000 GHzCF Step
5.00000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off



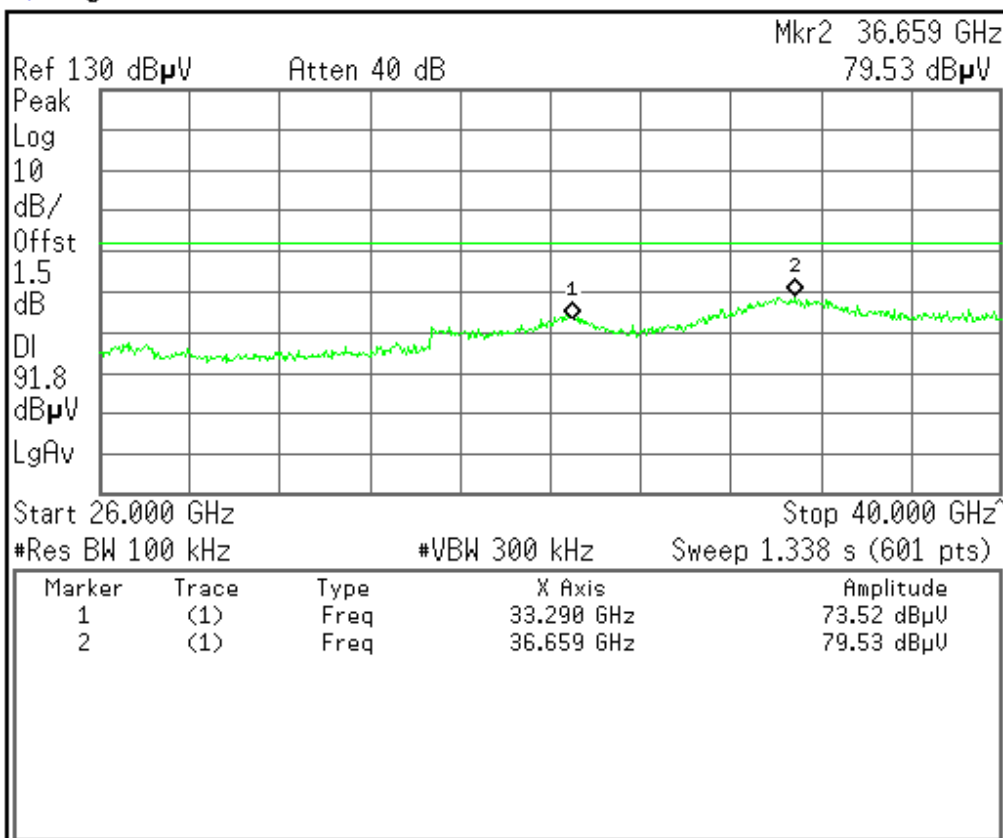
Agilent



Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Agilent



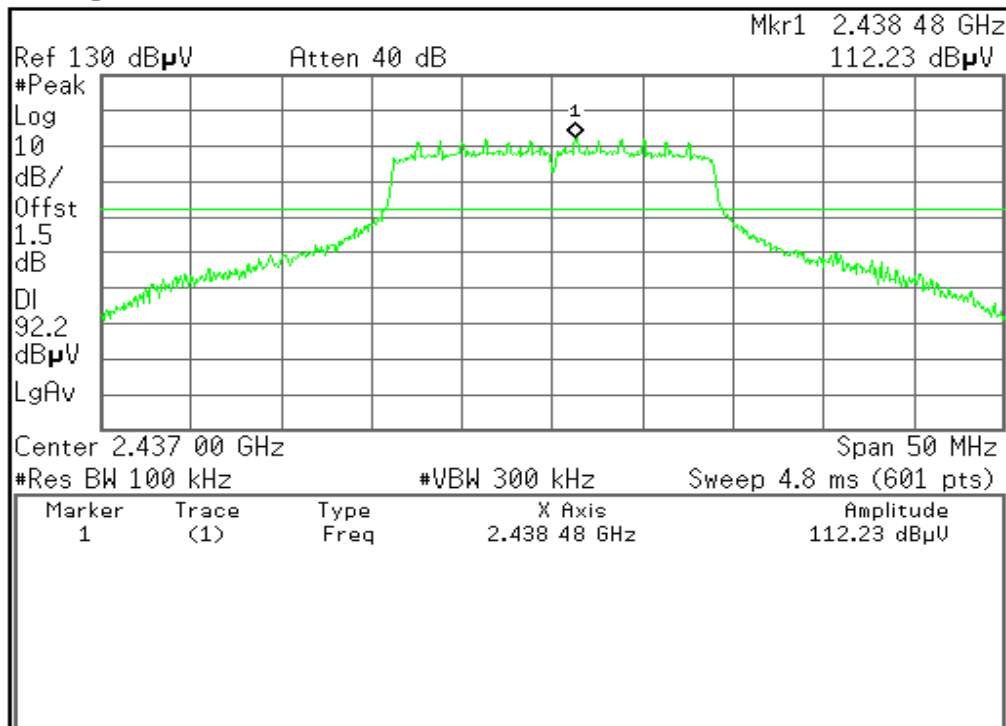
Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off



CH Mid

Agilent



Freq/Channel

Center Freq

2.43700000 GHz

Start Freq

2.41200000 GHz

Stop Freq

2.46200000 GHz

CF Step

5.00000000 MHz

Auto Man

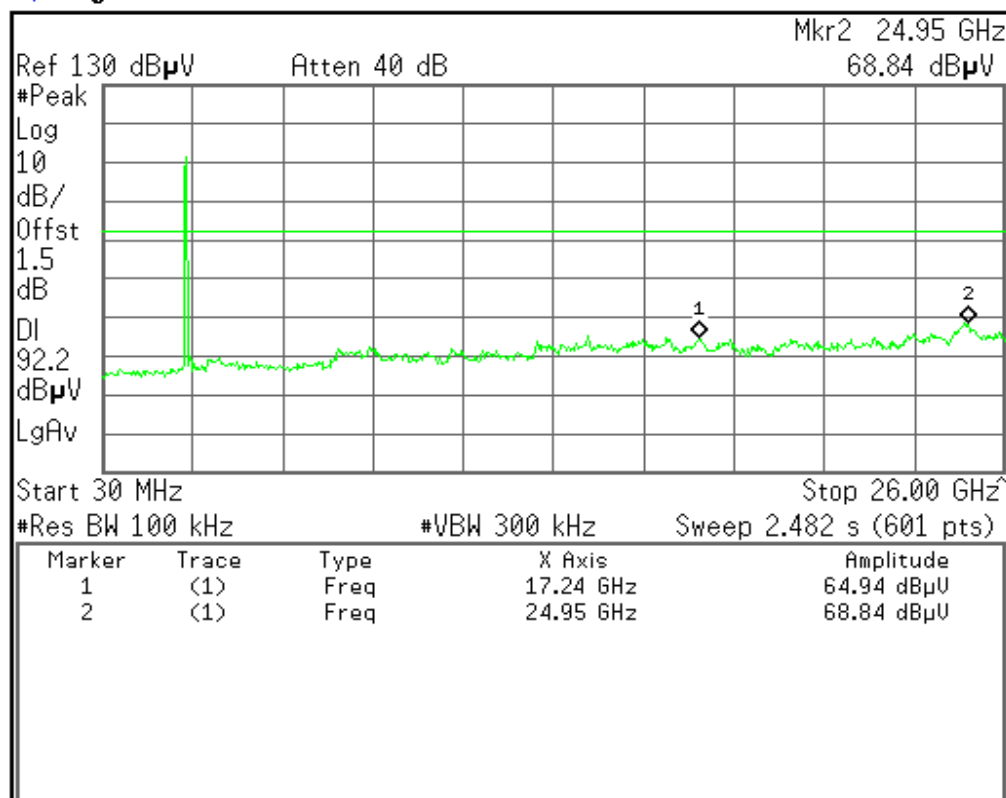
Freq Offset

0.00000000 Hz

Signal Track

On Off

Agilent



Freq/Channel

Center Freq

13.0150000 GHz

Start Freq

30.0000000 MHz

Stop Freq

26.0000000 GHz

CF Step

2.59700000 GHz

Auto Man

Freq Offset

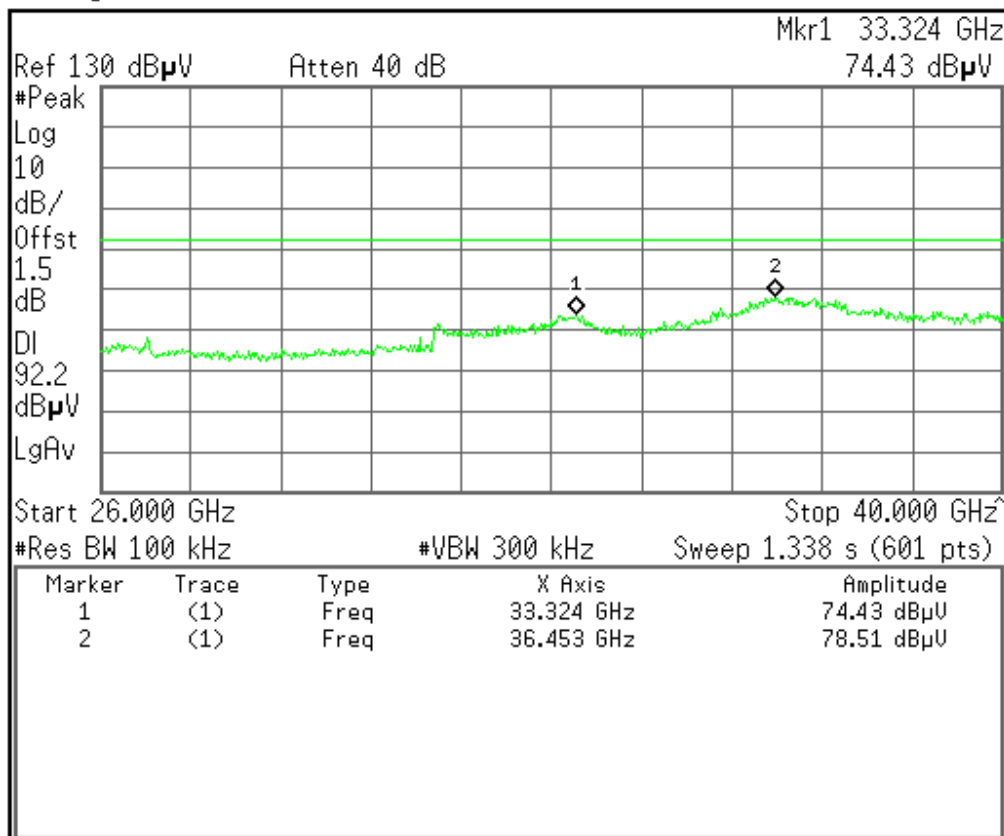
0.00000000 Hz

Signal Track

On Off



Agilent

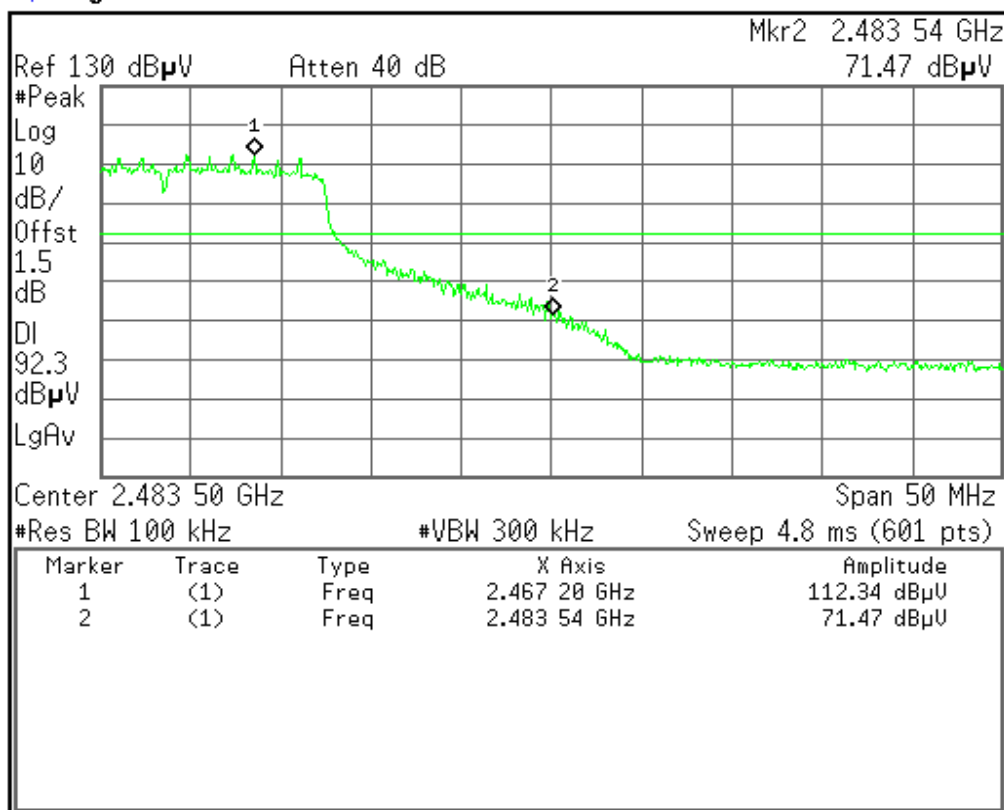


Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

CH High

Agilent

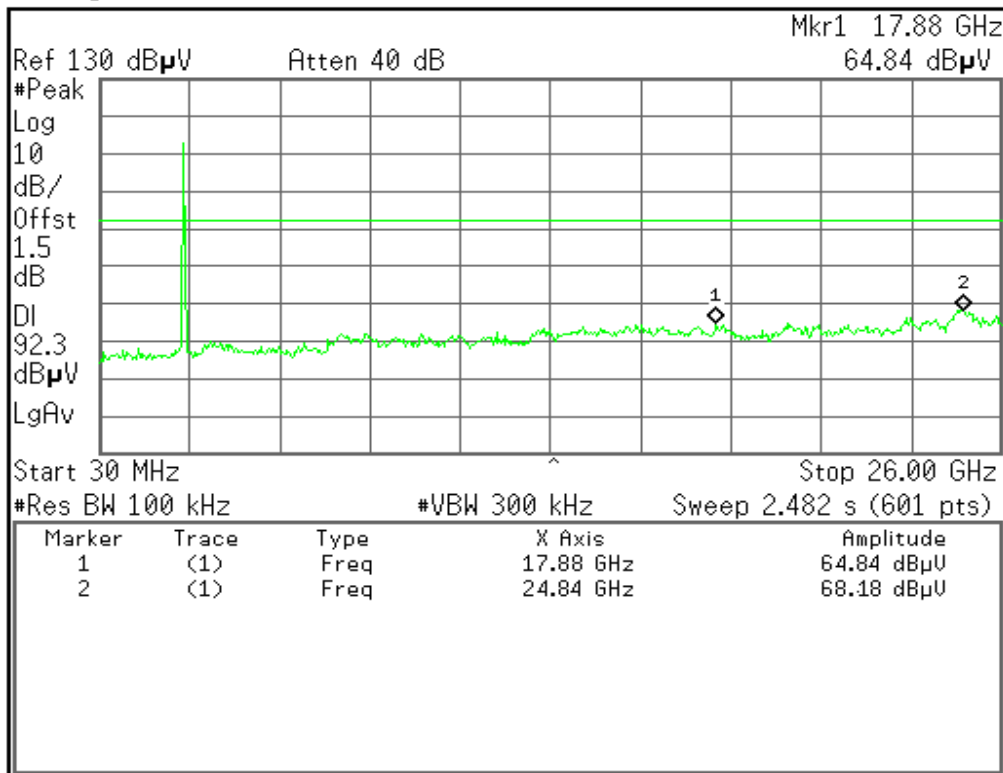


Freq/Channel

Center Freq
2.48350000 GHzStart Freq
2.45850000 GHzStop Freq
2.50850000 GHzCF Step
5.00000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off



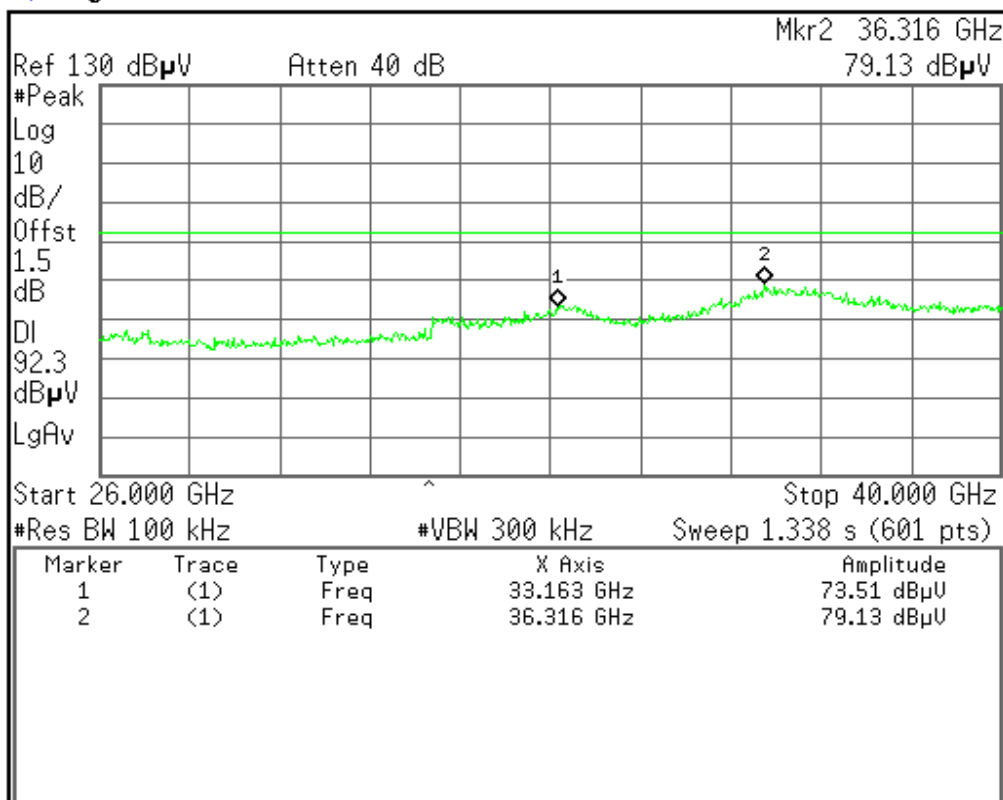
Agilent



Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Agilent



Freq/Channel

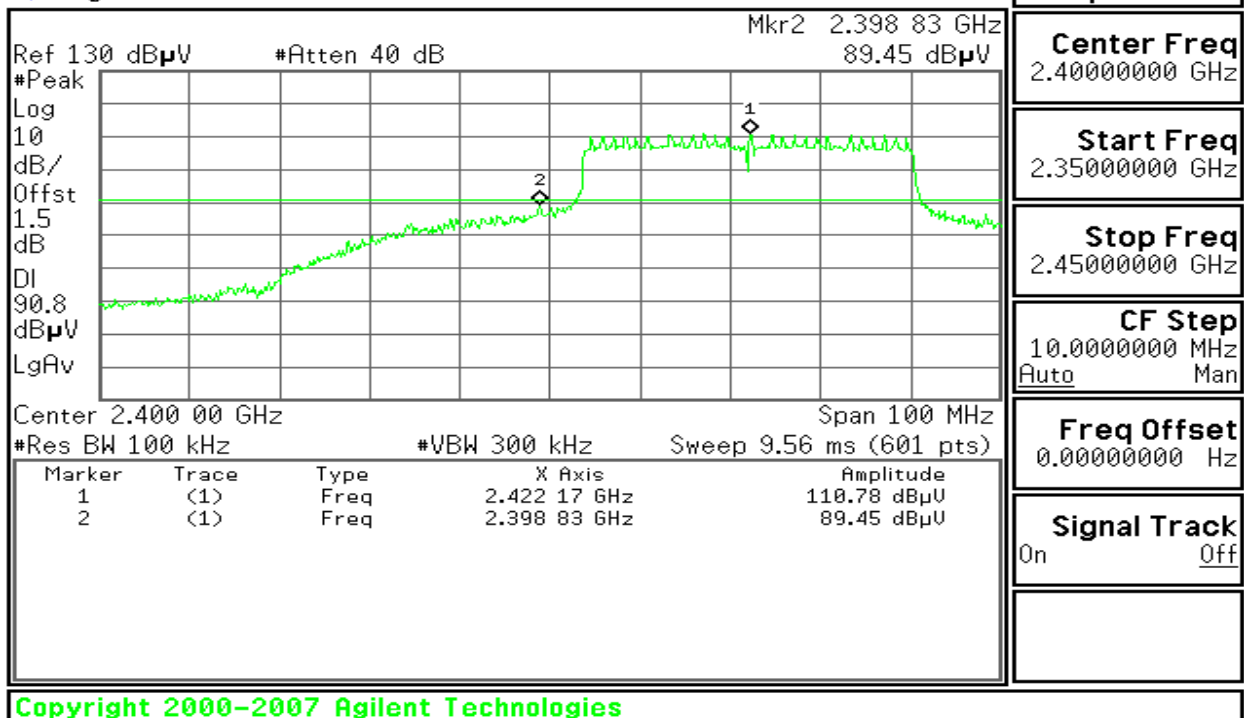
Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off



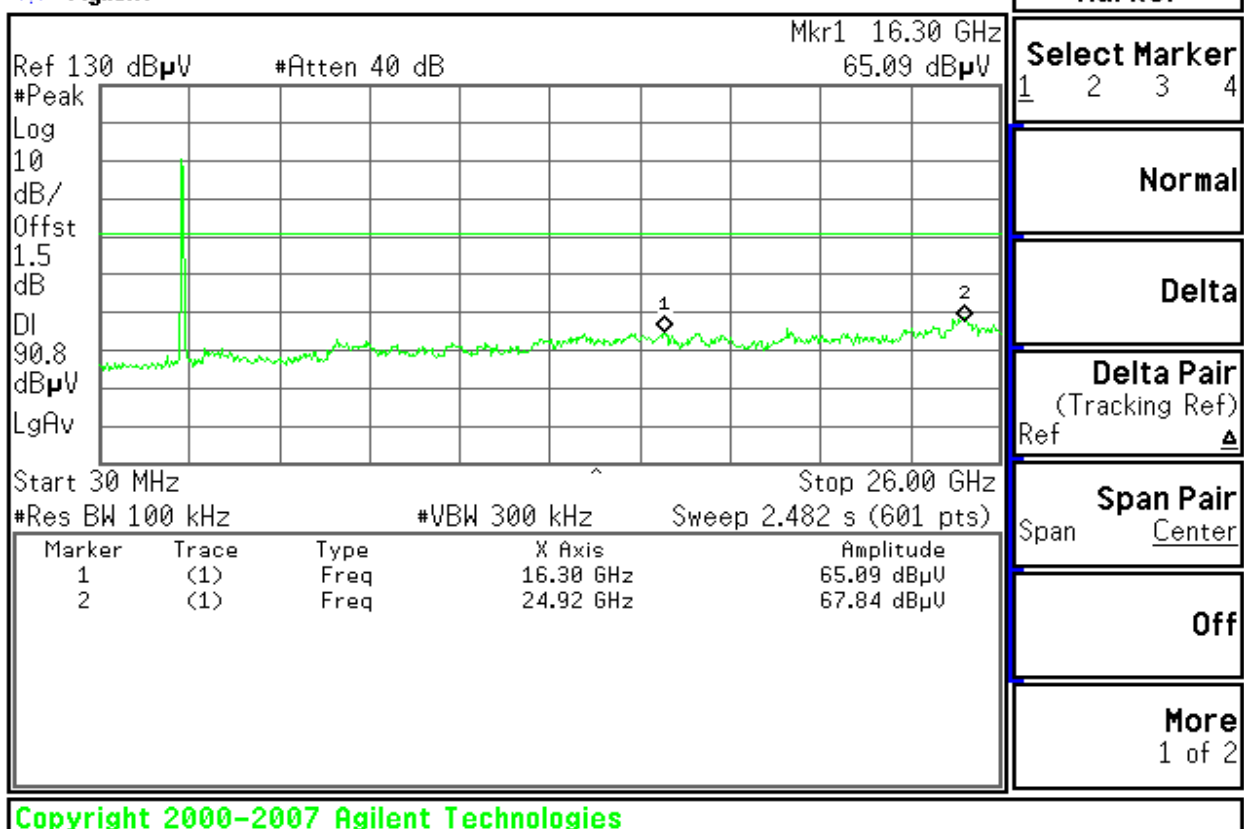
draft 802.11n Wide-40 MHz Channel mode / Chain 0

CH Low

Agilent

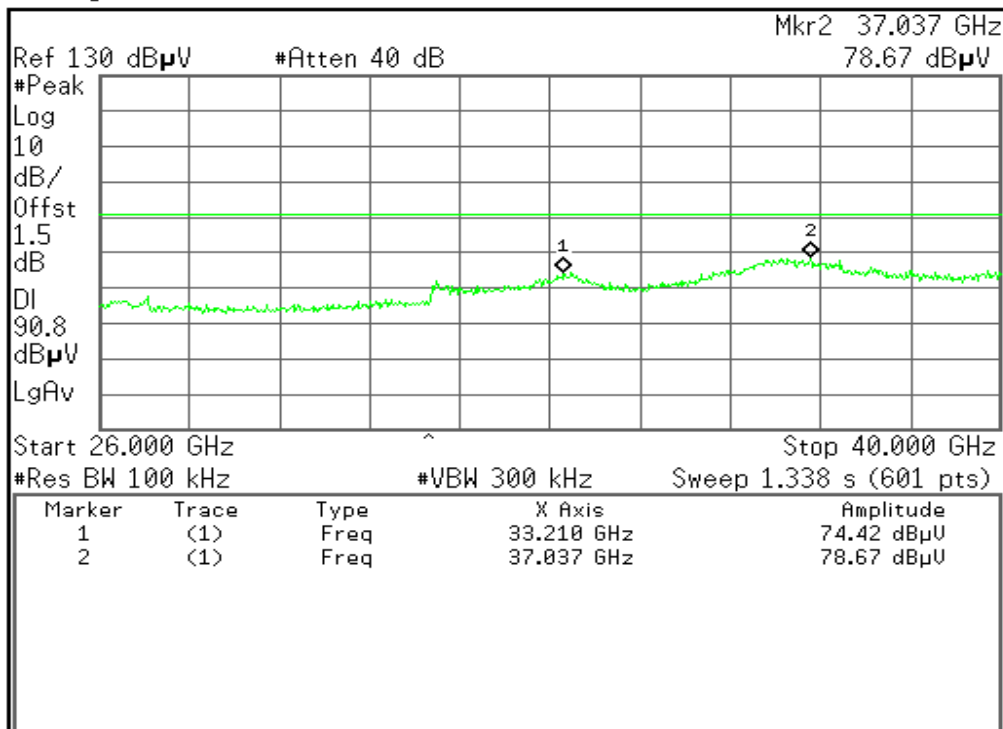


Agilent





Agilent



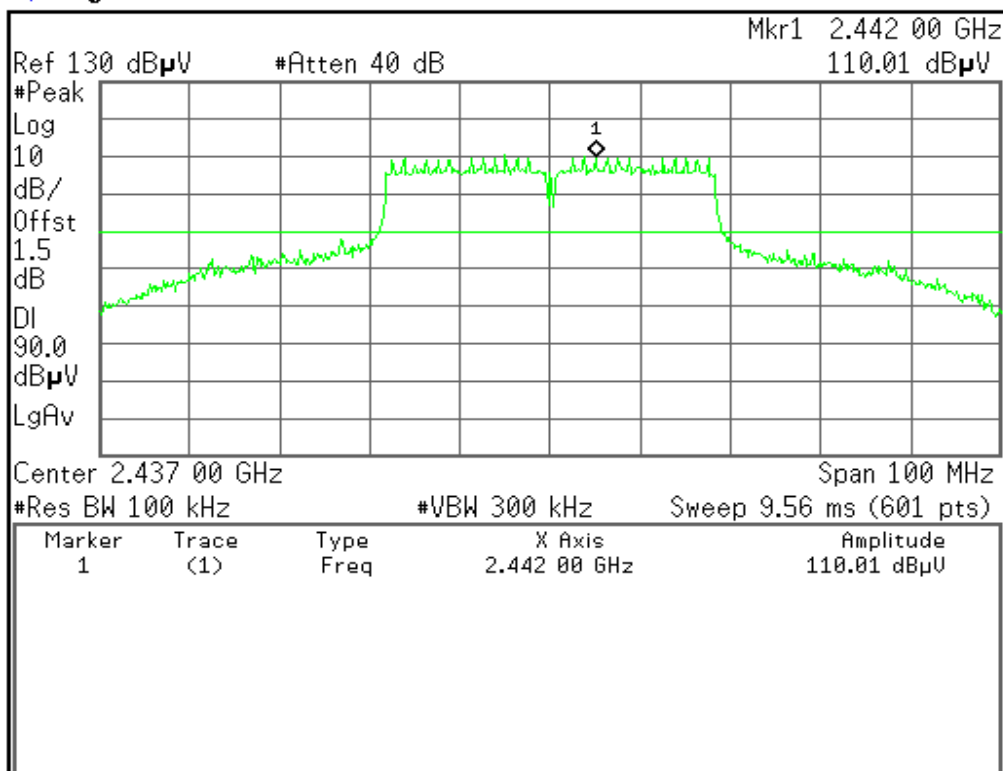
Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies

CH Mid

Agilent



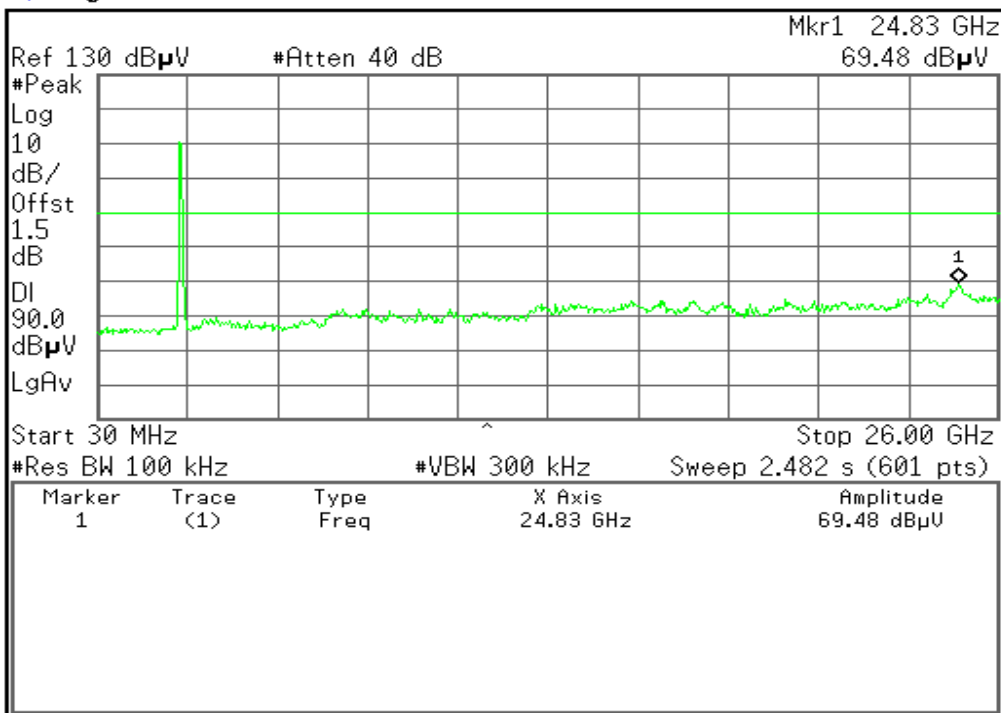
Freq/Channel

Center Freq
2.43700000 GHzStart Freq
2.38700000 GHzStop Freq
2.48700000 GHzCF Step
10.0000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies



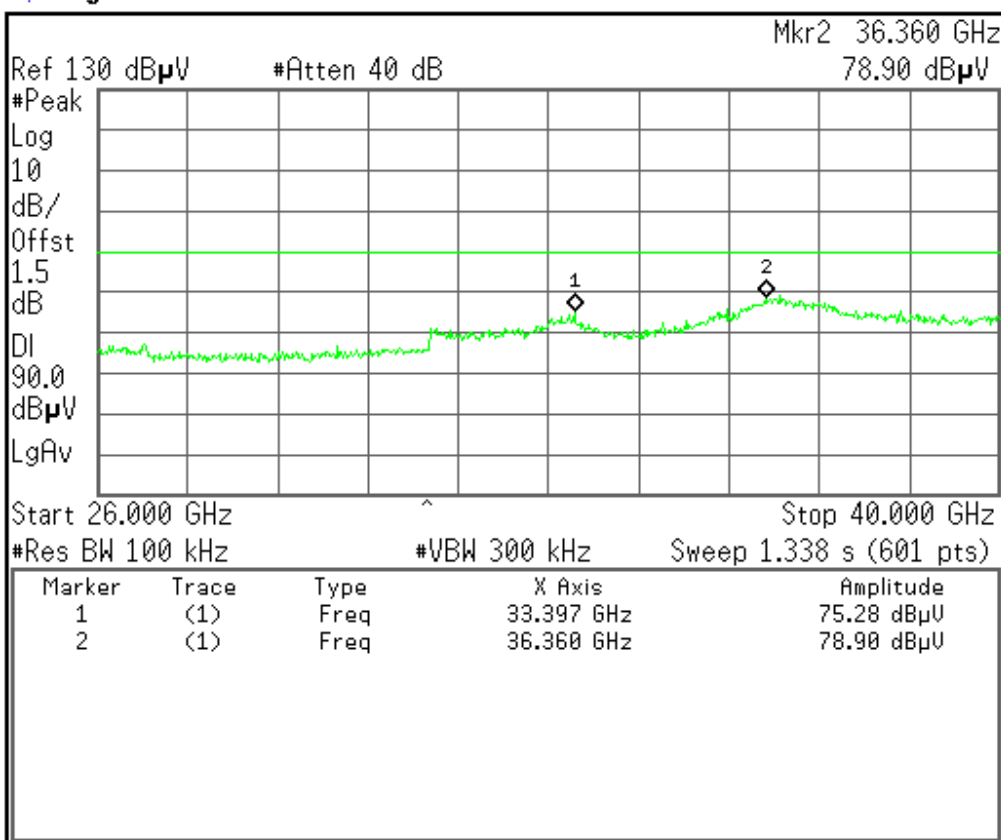
Agilent



Freq/Channel
Center Freq 13.0150000 GHz
Start Freq 30.0000000 MHz
Stop Freq 26.0000000 GHz
CF Step 2.59700000 GHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

Copyright 2000–2007 Agilent Technologies

Agilent



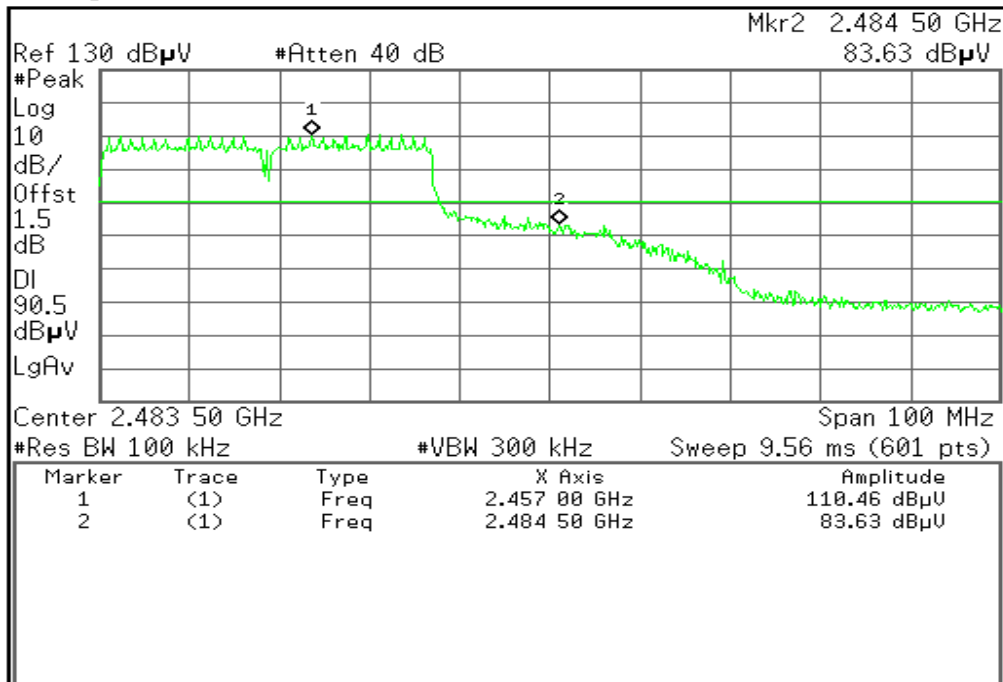
Freq/Channel
Center Freq 33.0000000 GHz
Start Freq 26.0000000 GHz
Stop Freq 40.0000000 GHz
CF Step 1.40000000 GHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

Copyright 2000–2007 Agilent Technologies



CH High

Agilent

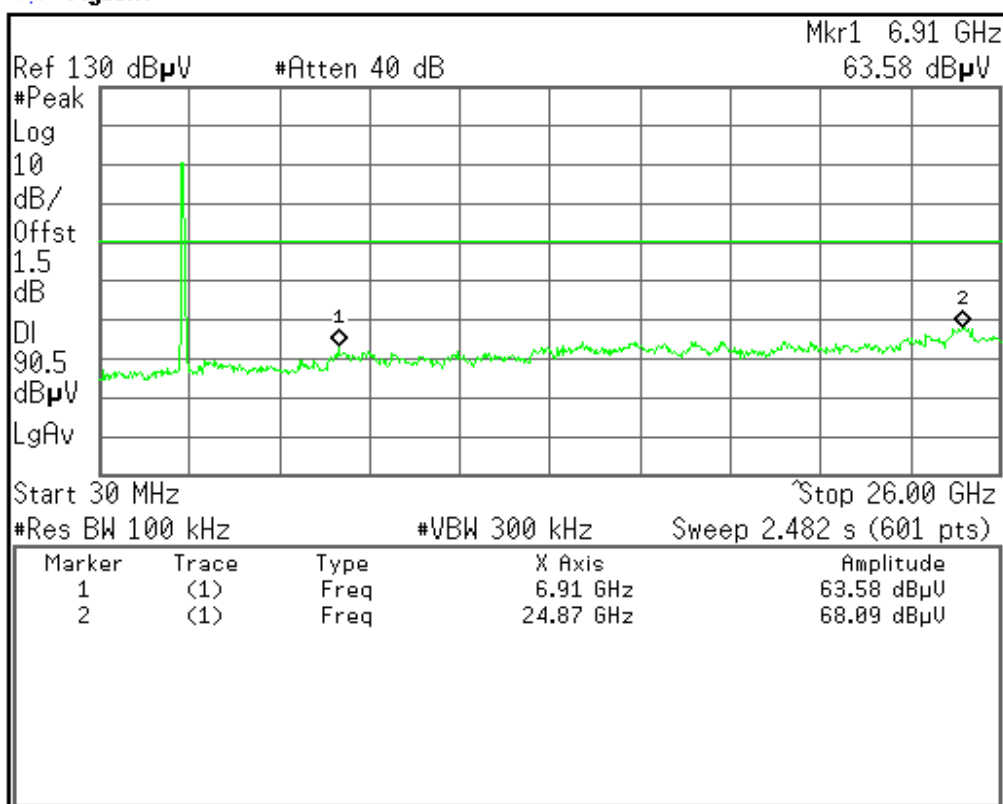


Freq/Channel

Center Freq
2.48350000 GHzStart Freq
2.43350000 GHzStop Freq
2.53350000 GHzCF Step
10.0000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Agilent



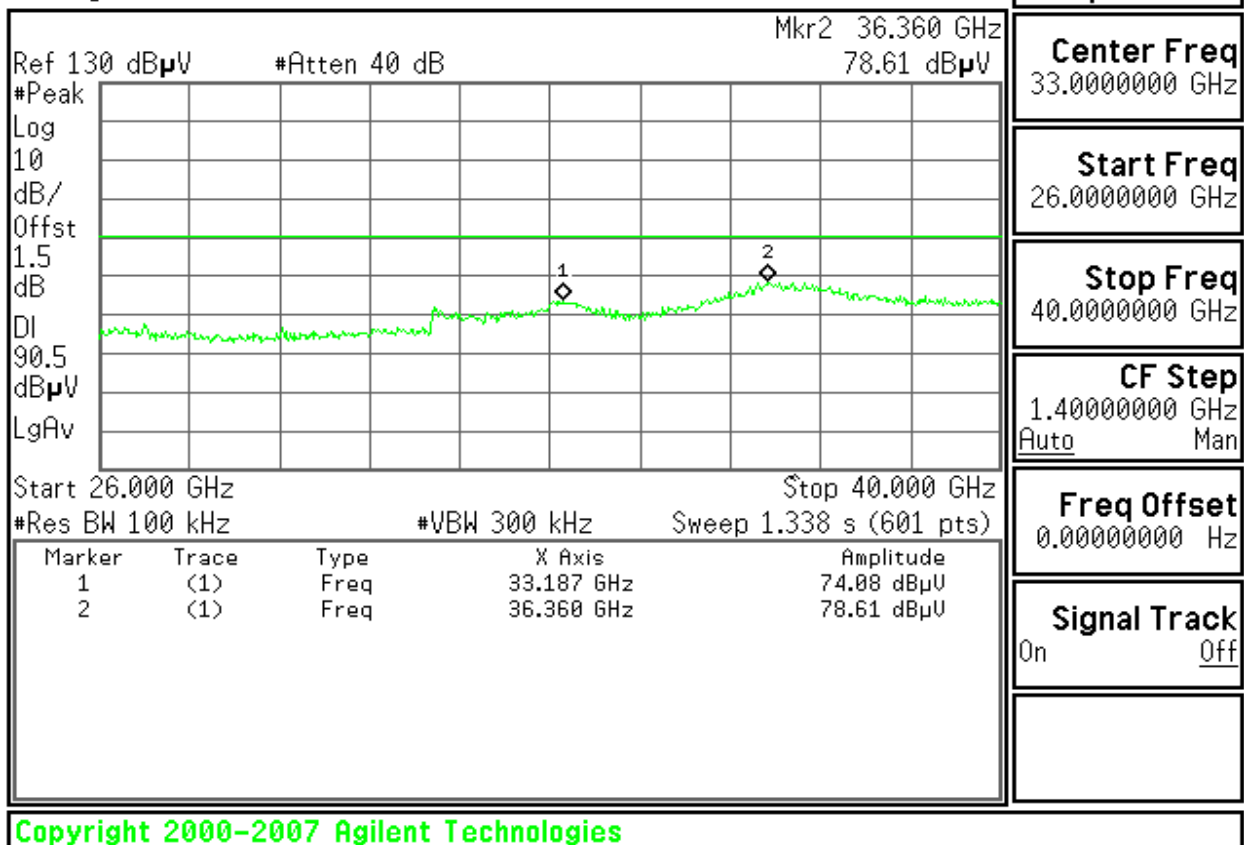
Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



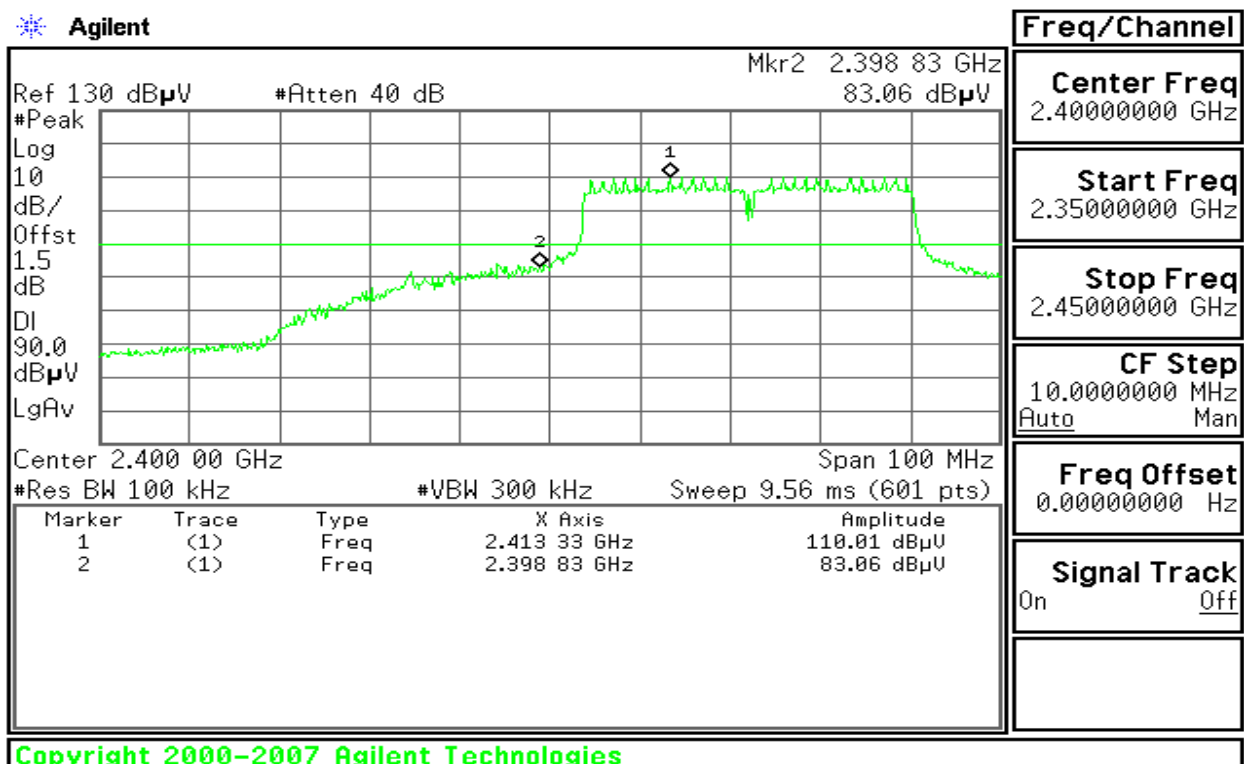
Agilent



draft 802.11n Wide-40 MHz Channel mode / Chain 1

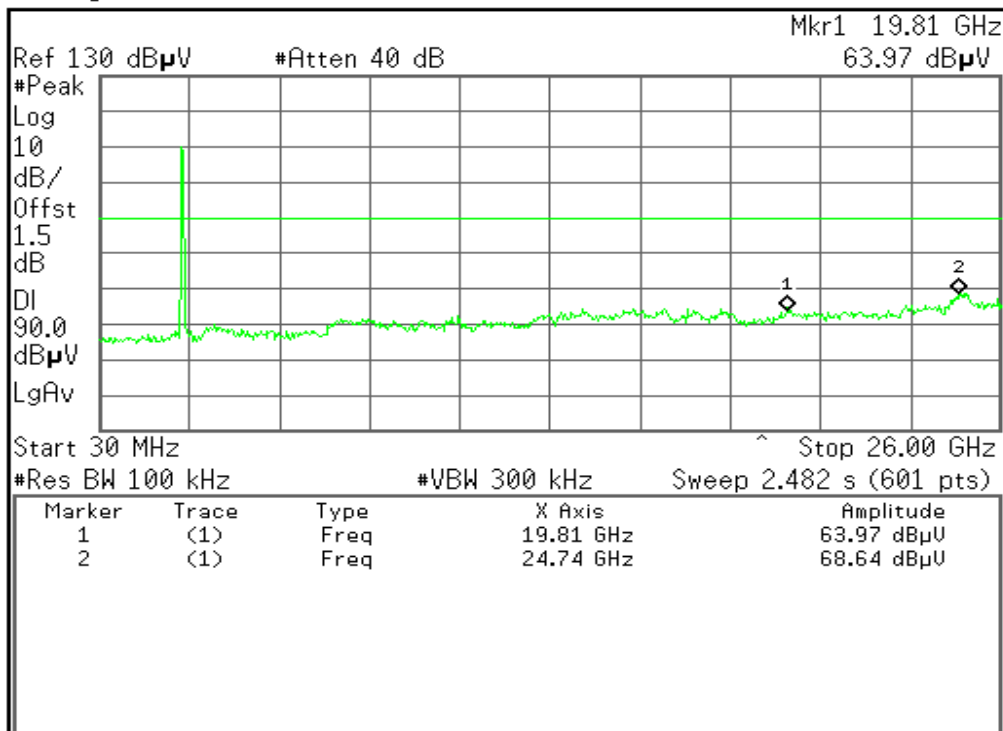
CH Low

Agilent





Agilent

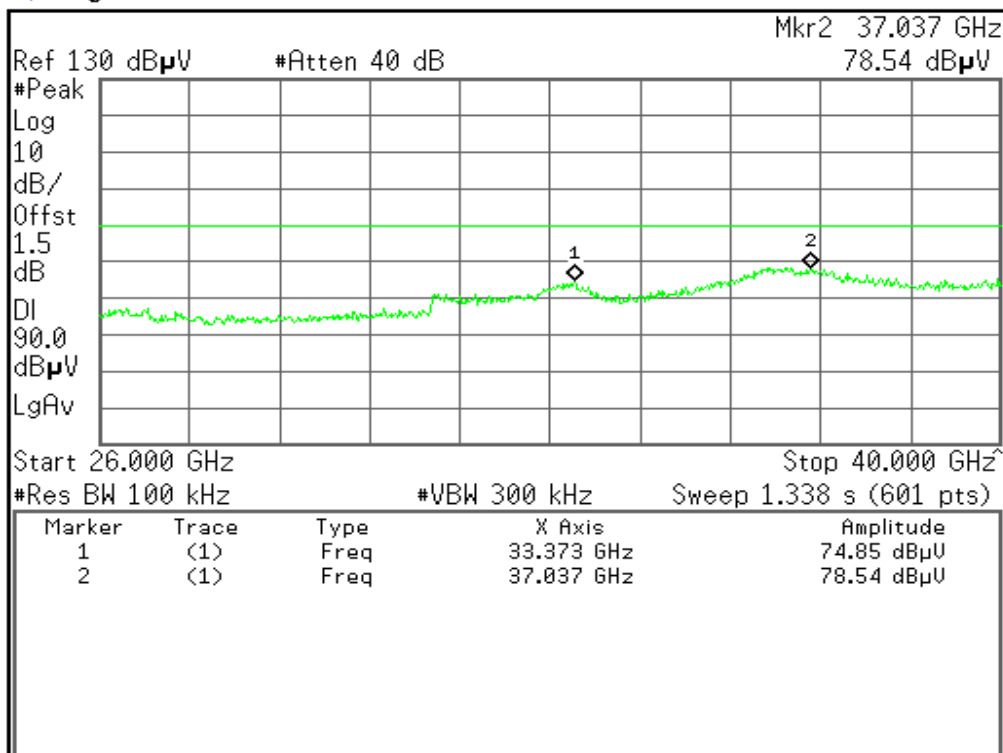


Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Agilent



Freq/Channel

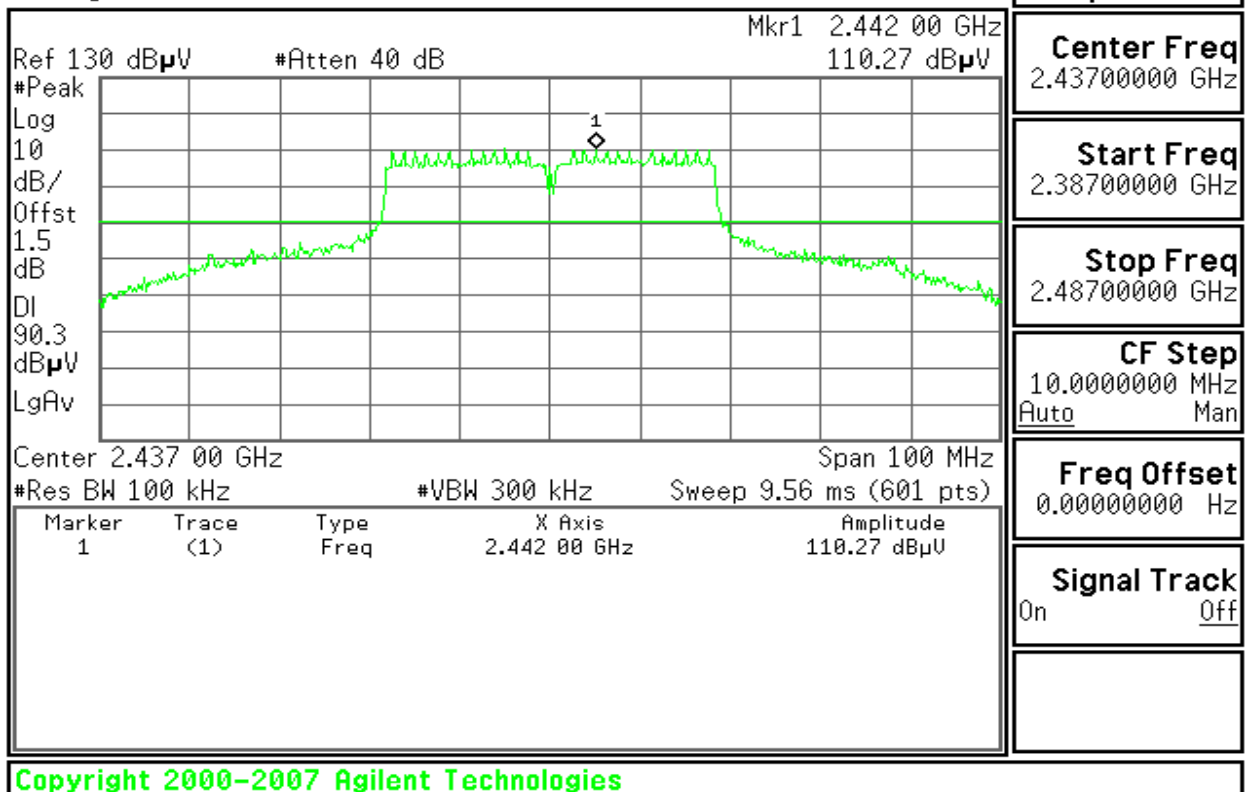
Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

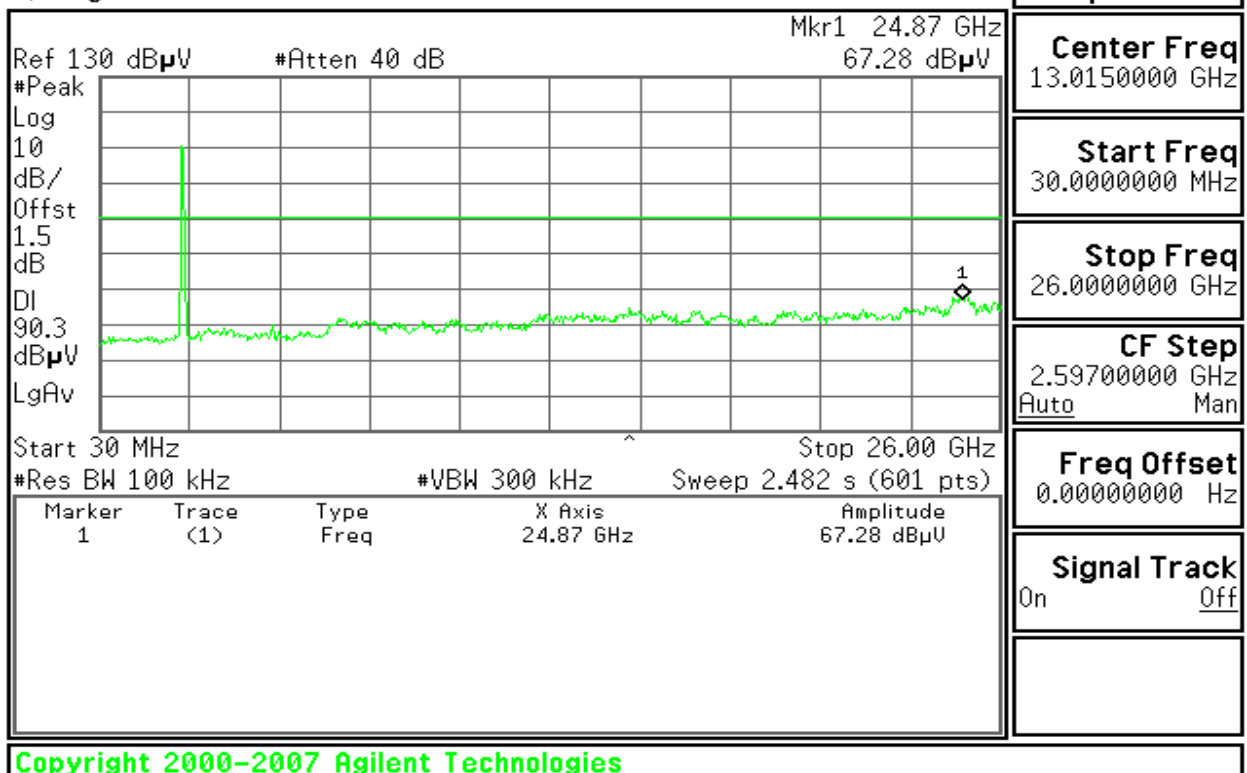


CH Mid

Agilent

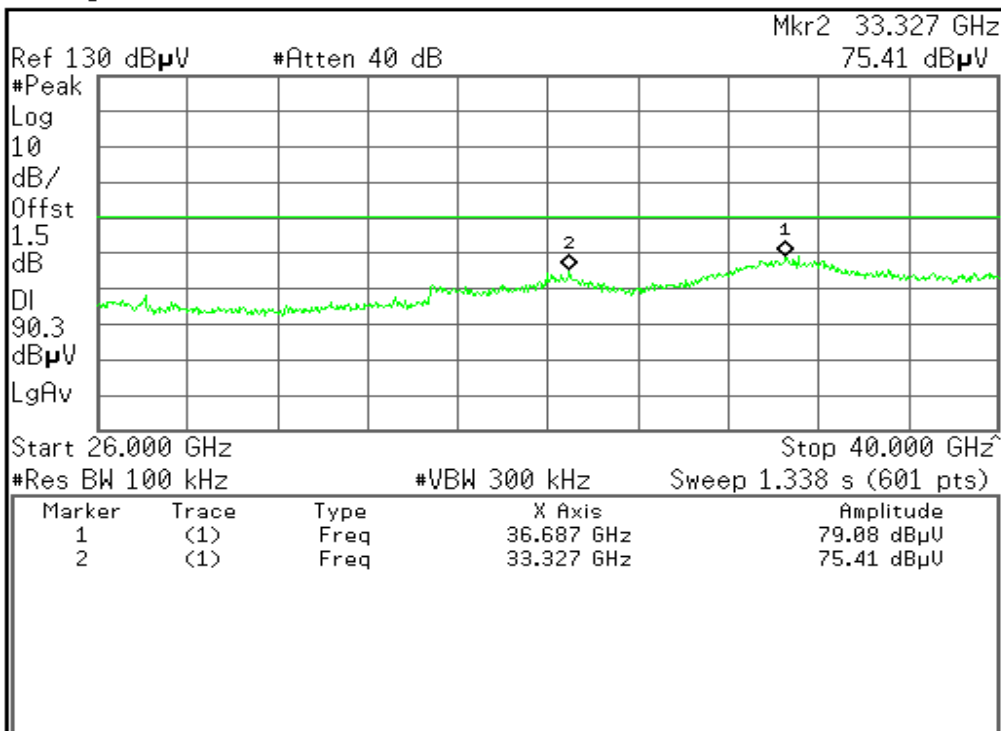


Agilent





Agilent



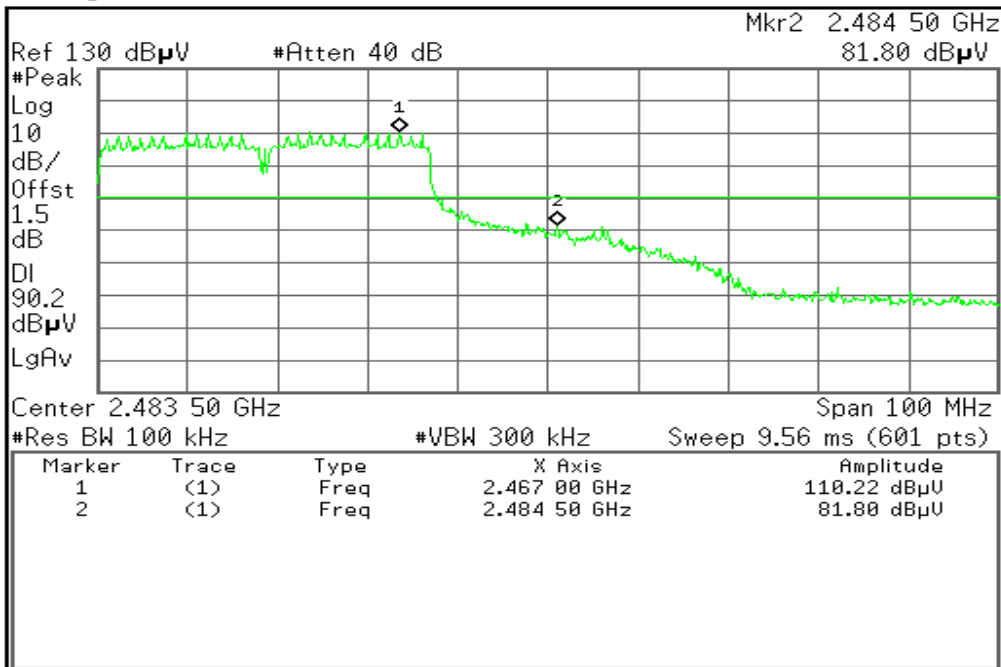
Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.4000000 GHz
Auto ManFreq Offset
0.0000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

CH High

Agilent



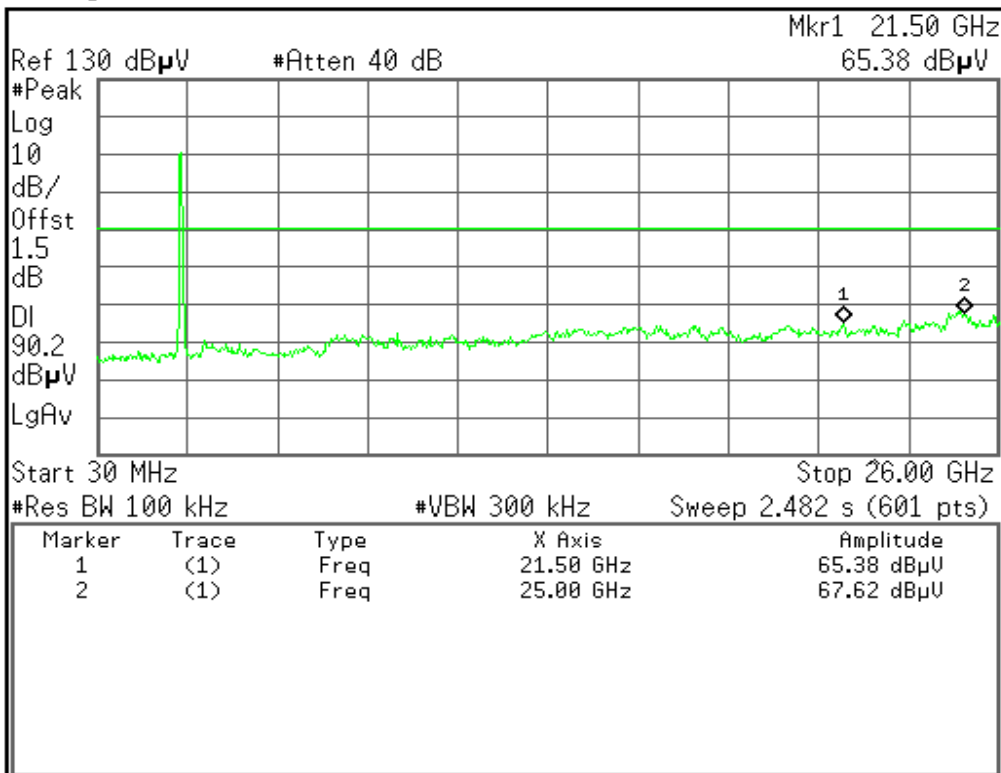
Freq/Channel

Center Freq
2.48350000 GHzStart Freq
2.43350000 GHzStop Freq
2.53350000 GHzCF Step
10.0000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



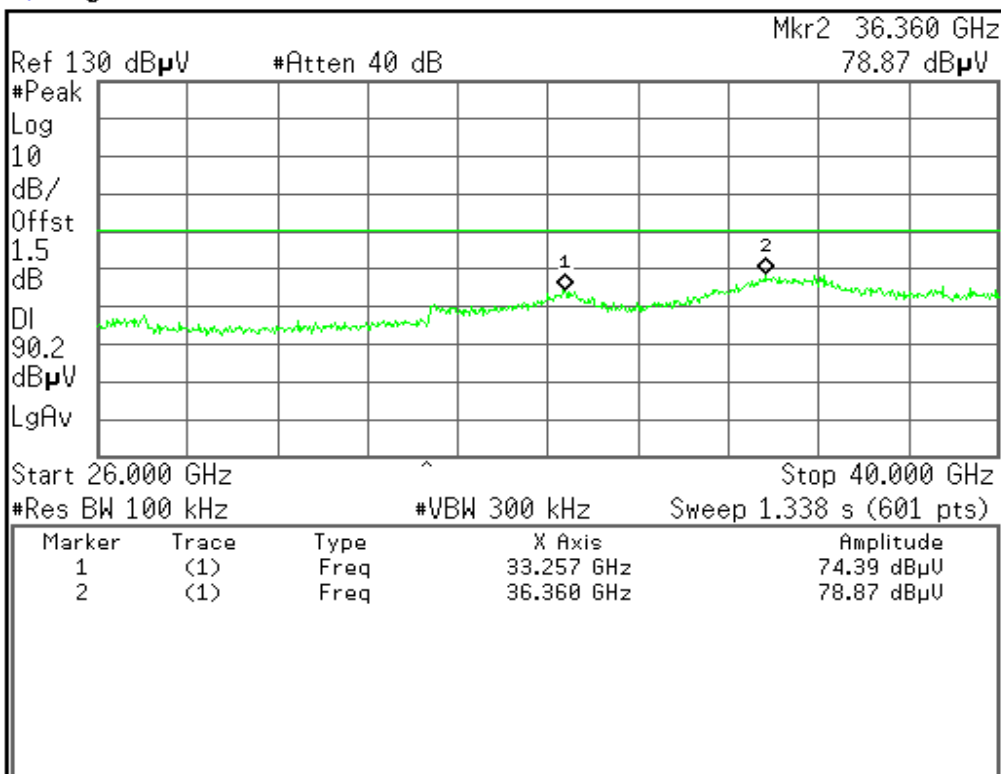
Agilent



Freq/Channel
Center Freq 13.0150000 GHz
Start Freq 30.0000000 MHz
Stop Freq 26.0000000 GHz
CF Step 2.59700000 GHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

Copyright 2000-2007 Agilent Technologies

Agilent



Freq/Channel
Center Freq 33.0000000 GHz
Start Freq 26.0000000 GHz
Stop Freq 40.0000000 GHz
CF Step 1.40000000 GHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

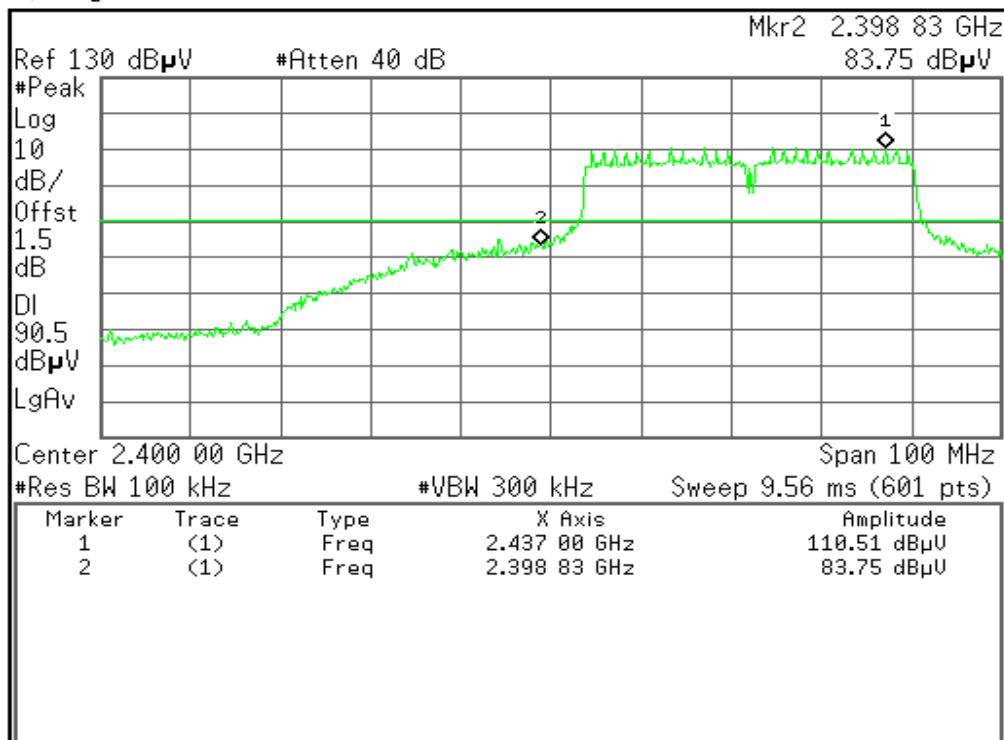
Copyright 2000-2007 Agilent Technologies



draft 802.11n Wide-40 MHz Channel mode / Chain 2

CH Low

Agilent

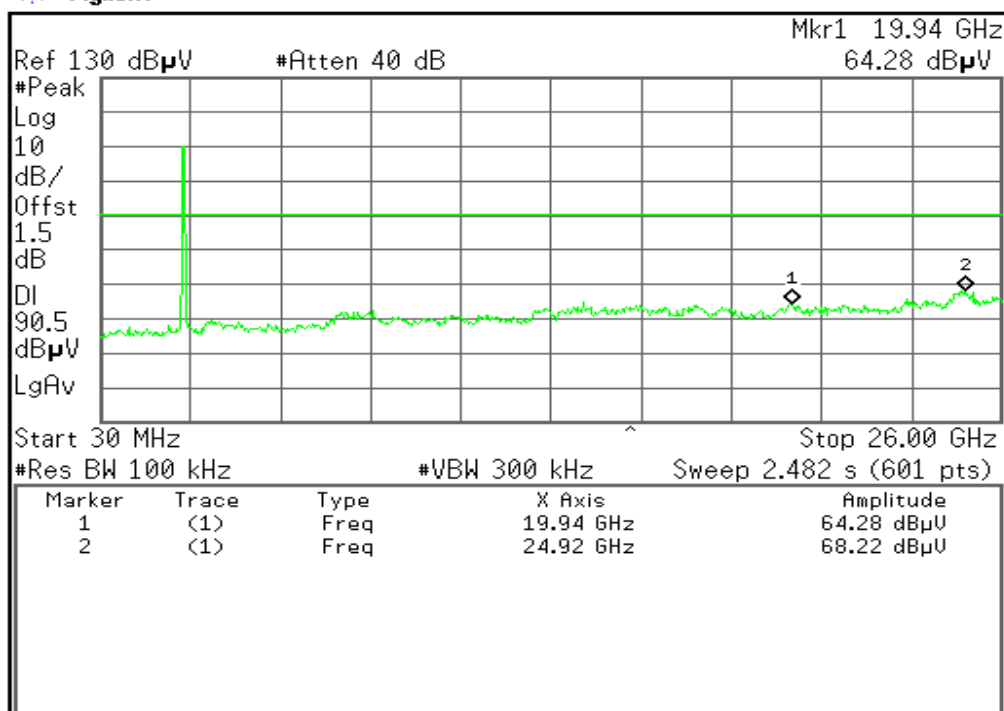


Freq/Channel

Center Freq
2.40000000 GHzStart Freq
2.35000000 GHzStop Freq
2.45000000 GHzCF Step
10.00000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Agilent



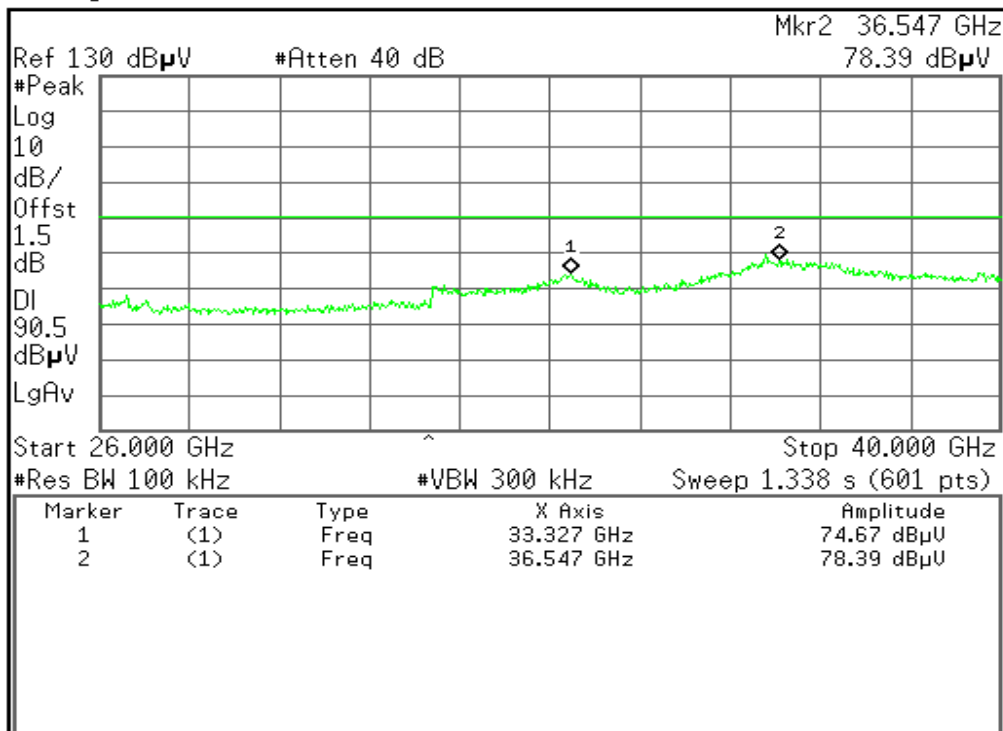
Freq/Channel

Center Freq
13.01500000 GHzStart Freq
30.00000000 MHzStop Freq
26.00000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



Agilent



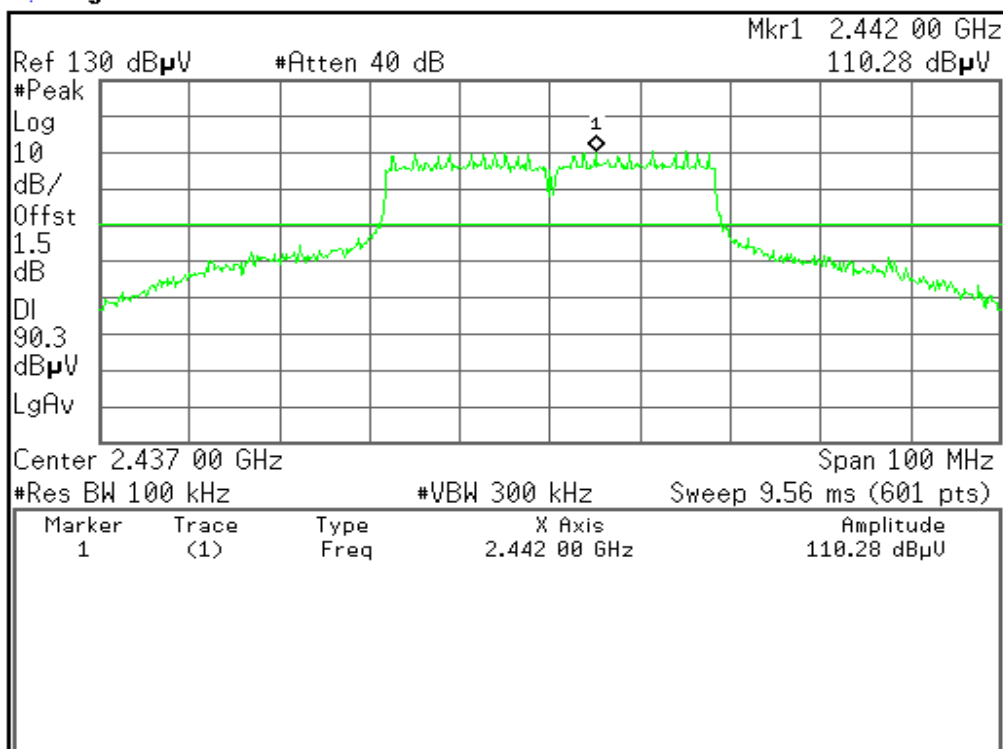
Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

CH Mid

Agilent



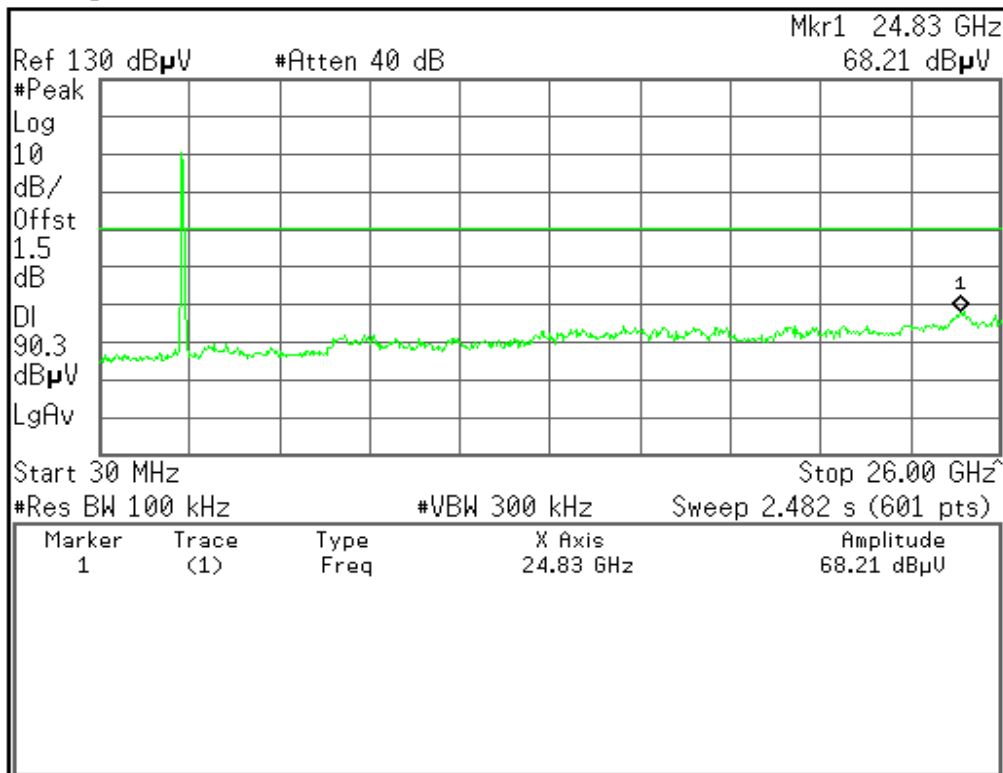
Freq/Channel

Center Freq
2.43700000 GHzStart Freq
2.38700000 GHzStop Freq
2.48700000 GHzCF Step
10.0000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



Agilent

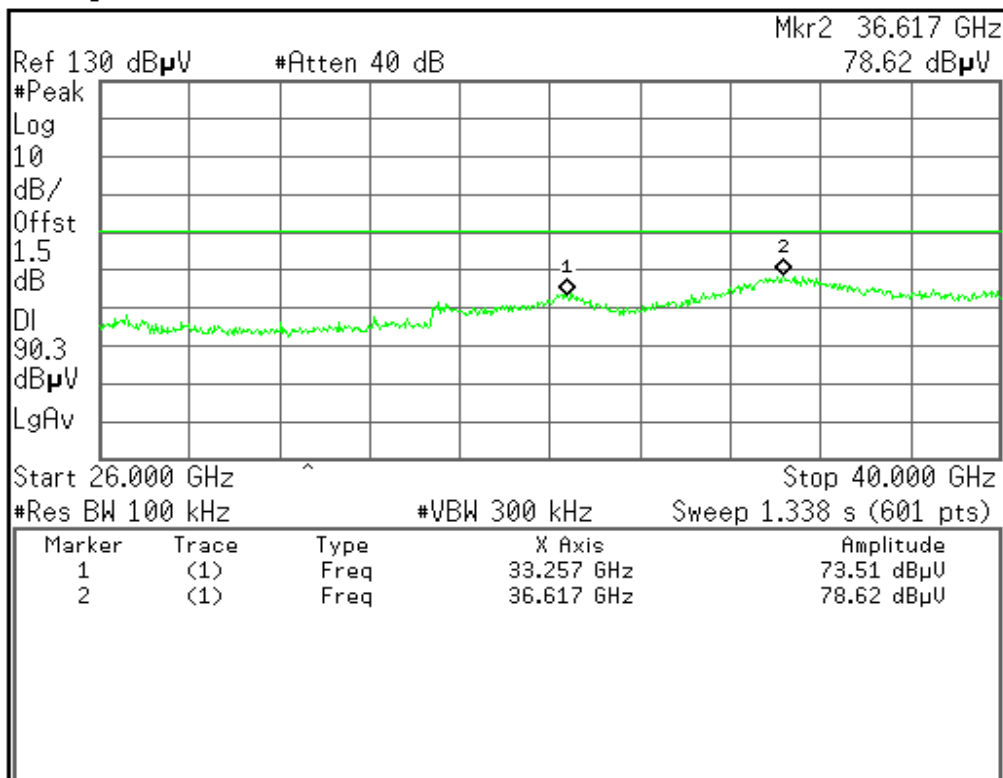


Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Agilent



Freq/Channel

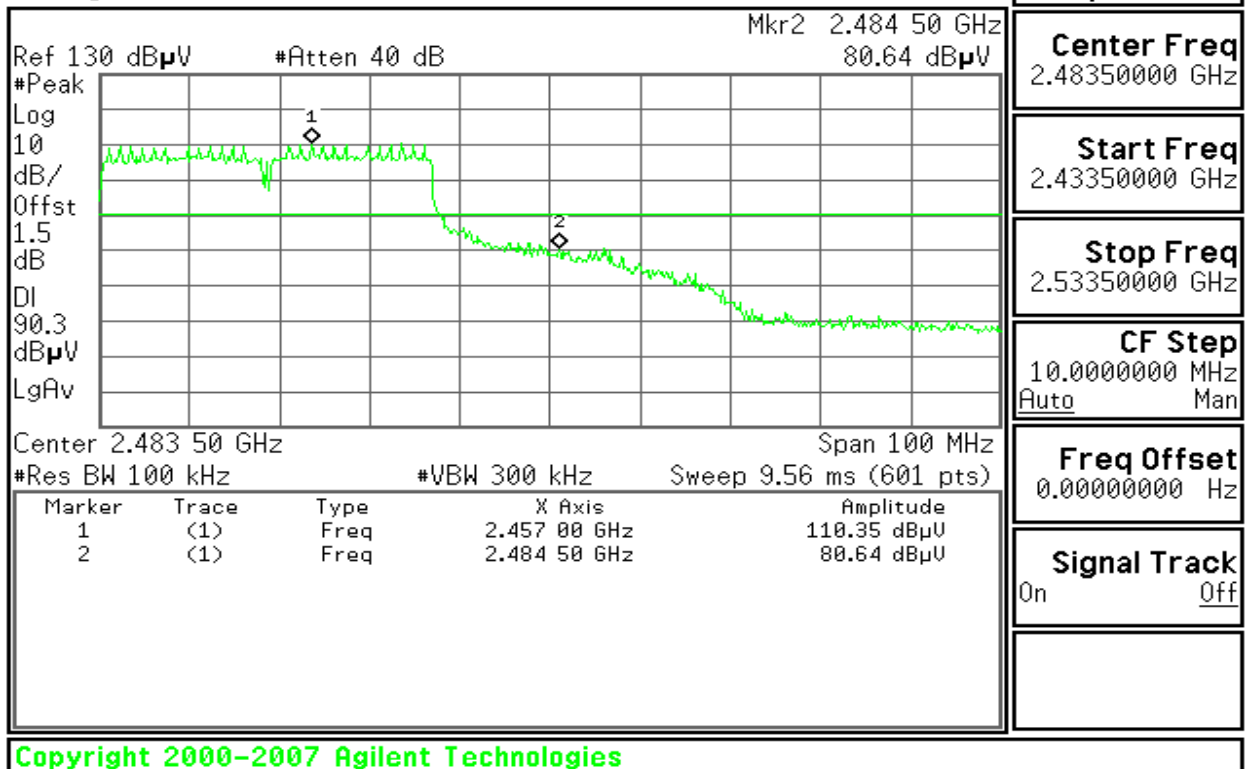
Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

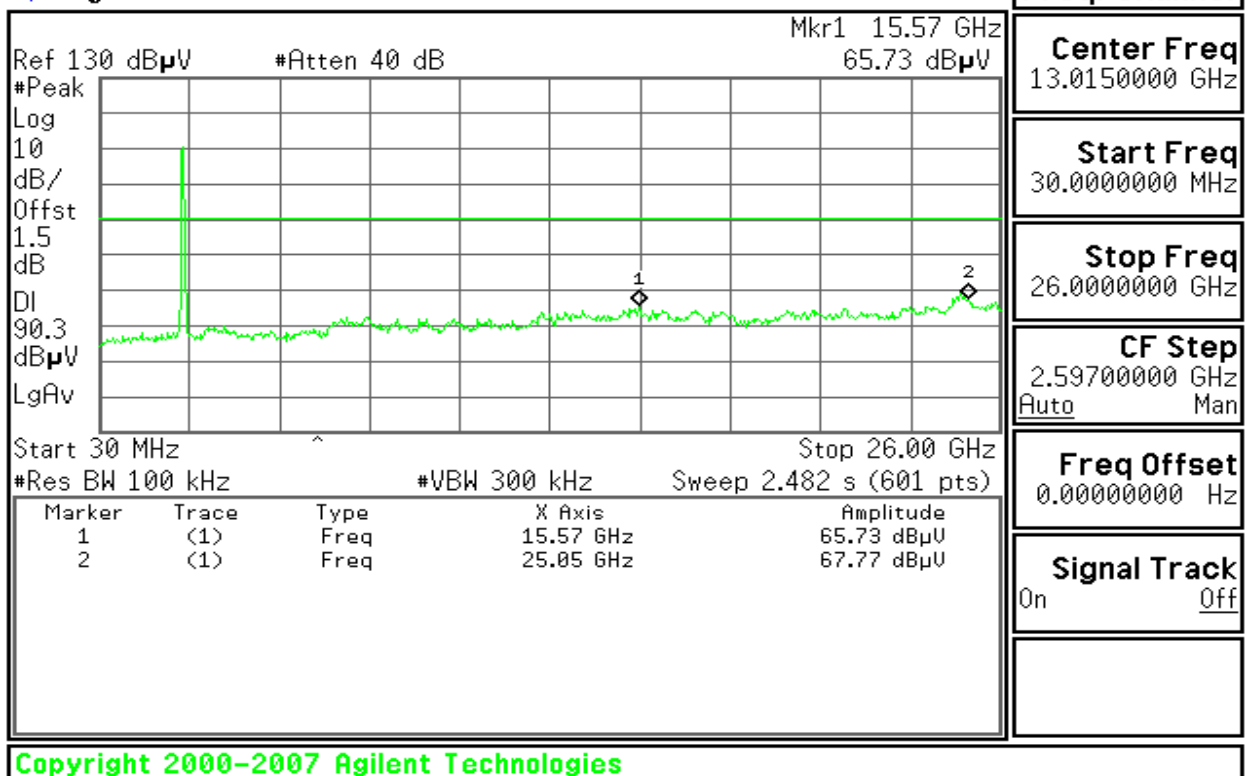


CH High

Agilent

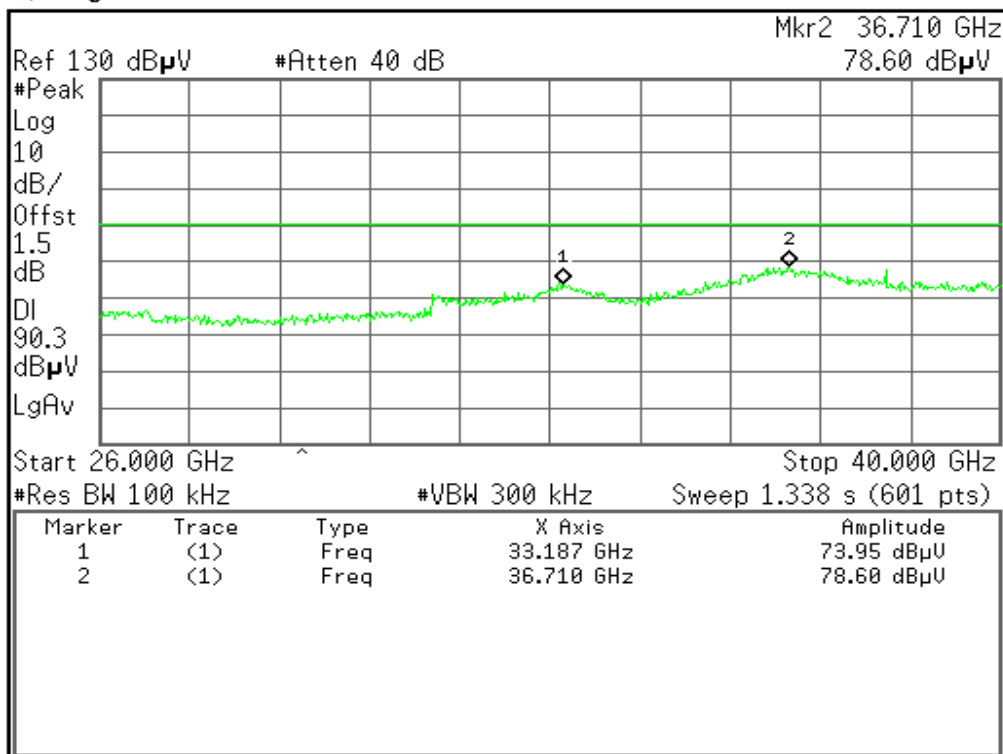


Agilent





Agilent



Freq/Channel

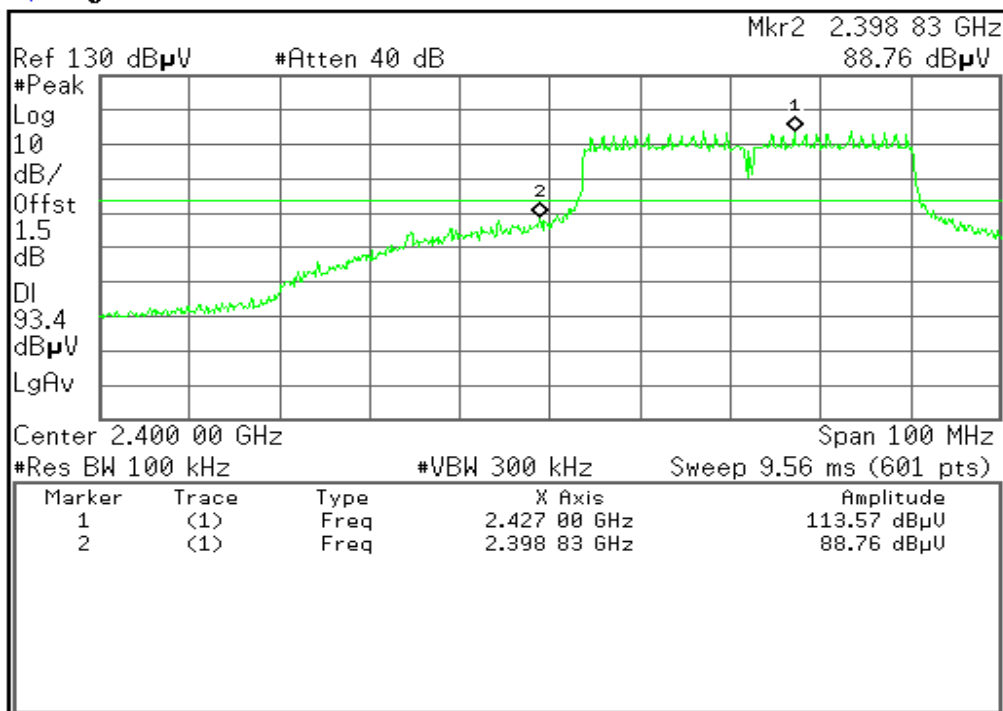
Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

draft 802.11n Wide-40 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

CH Low

Agilent



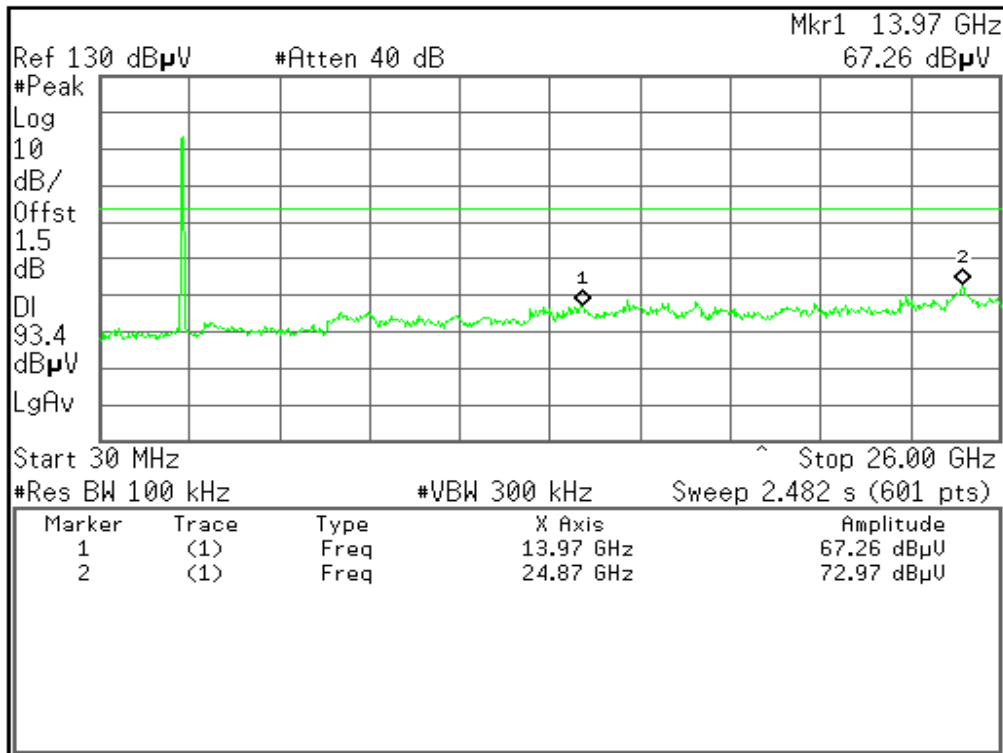
Freq/Channel

Center Freq
2.40000000 GHzStart Freq
2.35000000 GHzStop Freq
2.45000000 GHzCF Step
10.0000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies



Agilent

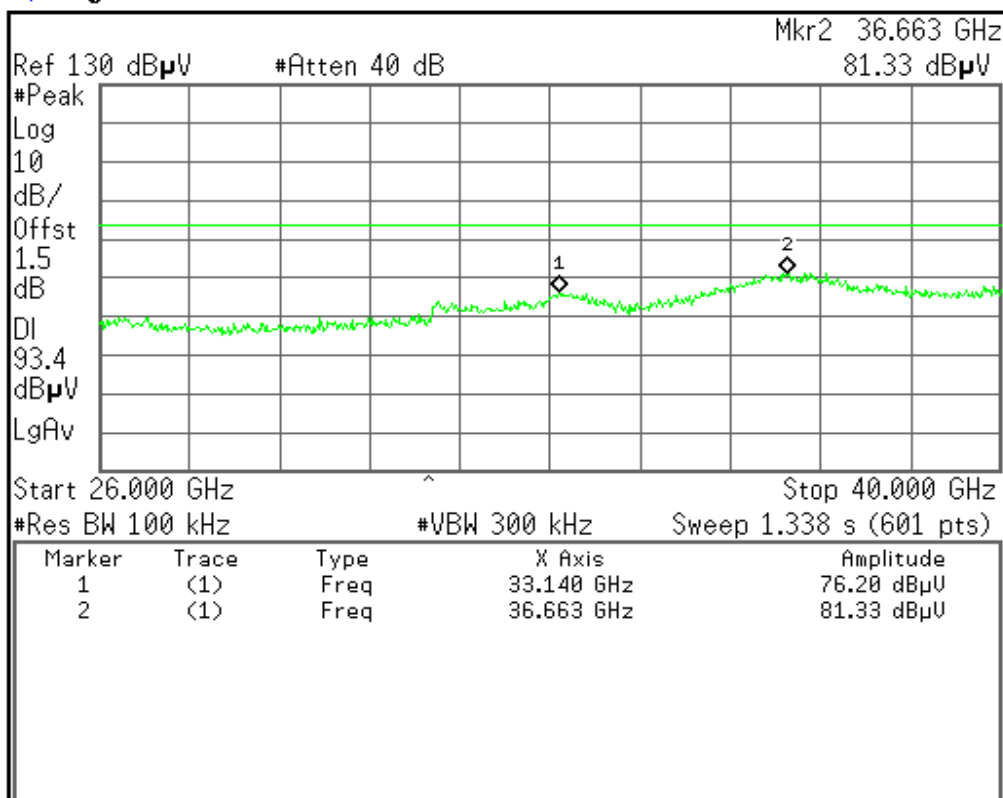


Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

Agilent



Freq/Channel

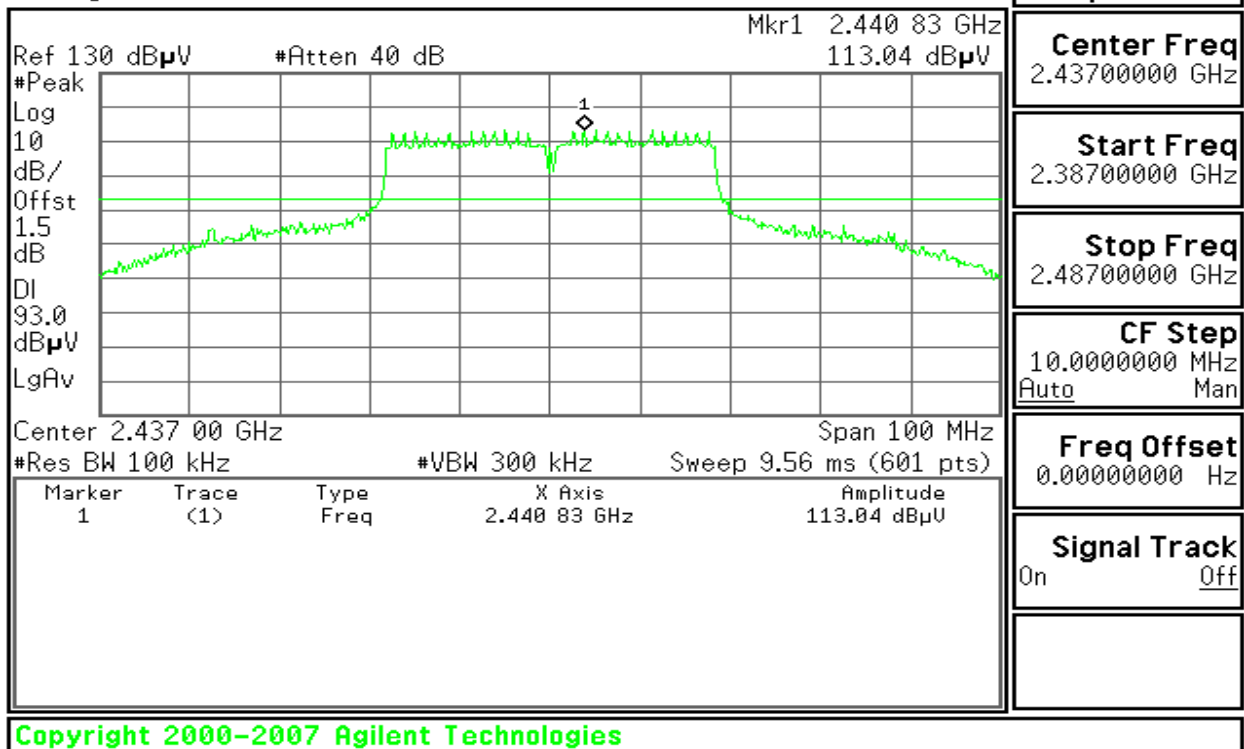
Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000-2007 Agilent Technologies

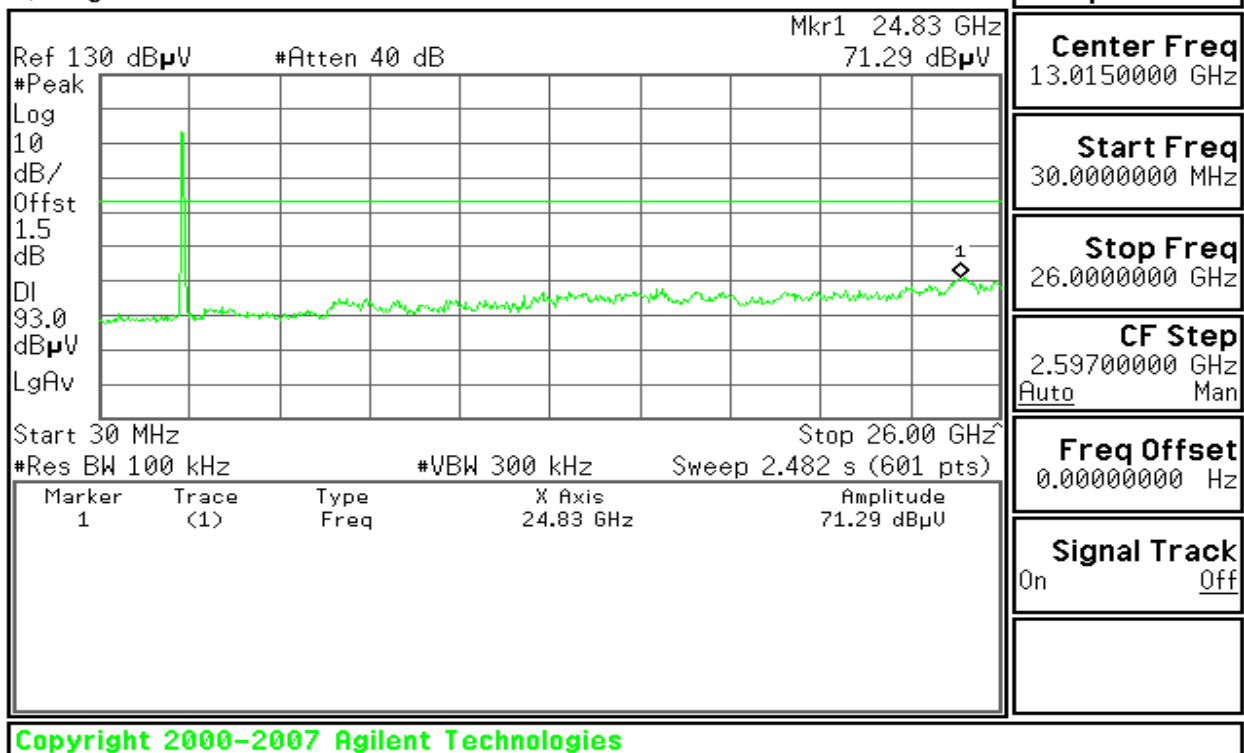


CH Mid

Agilent

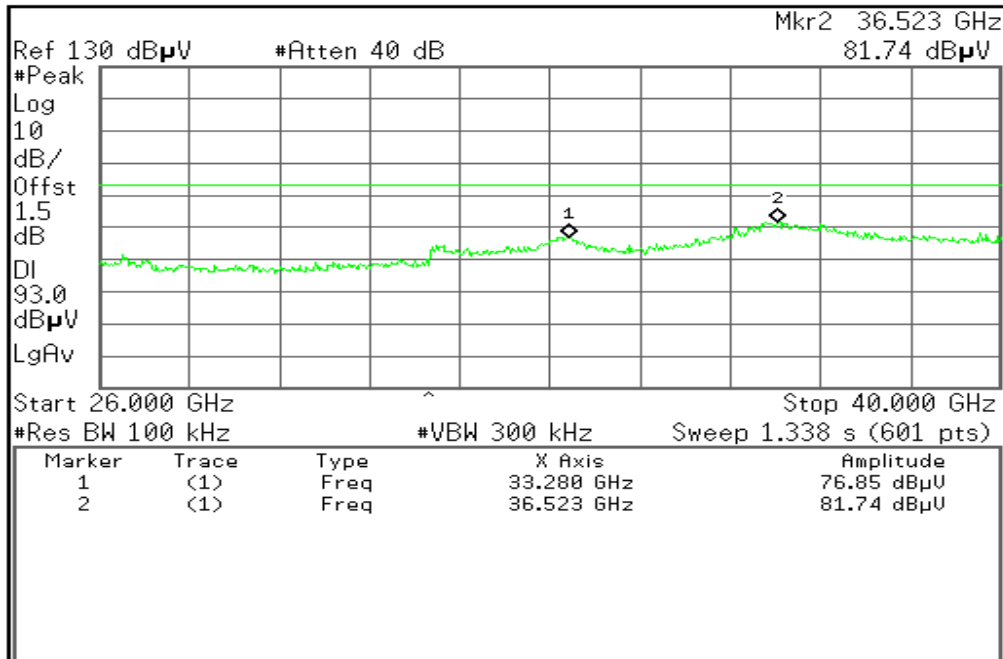


Agilent





Agilent



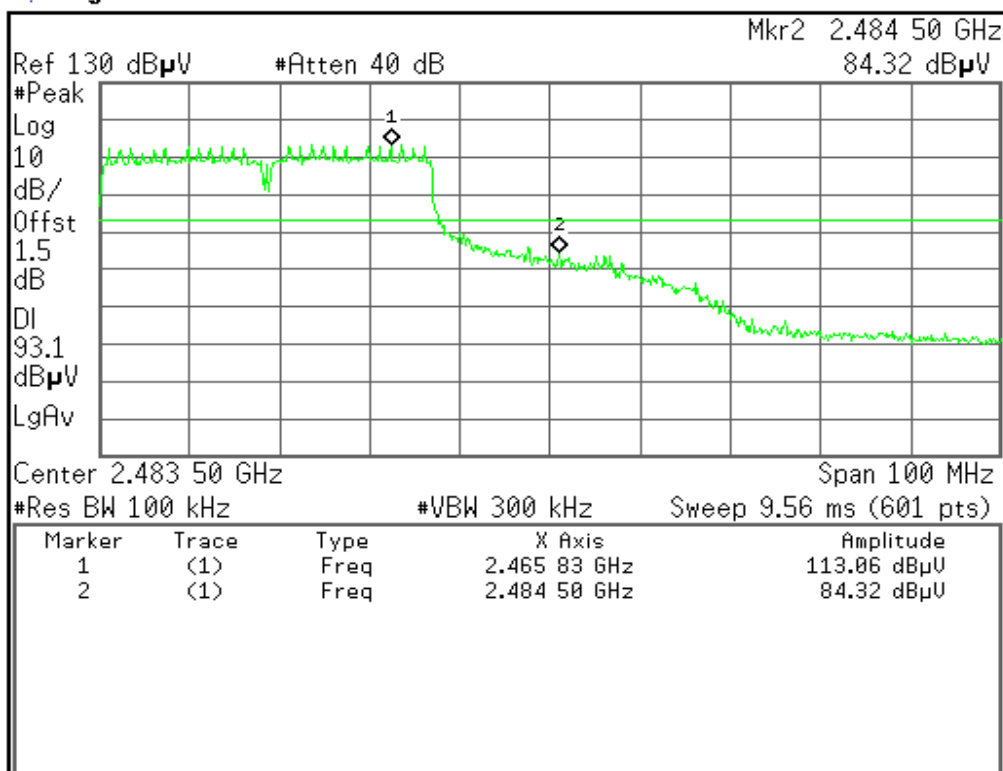
Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies

CH High

Agilent



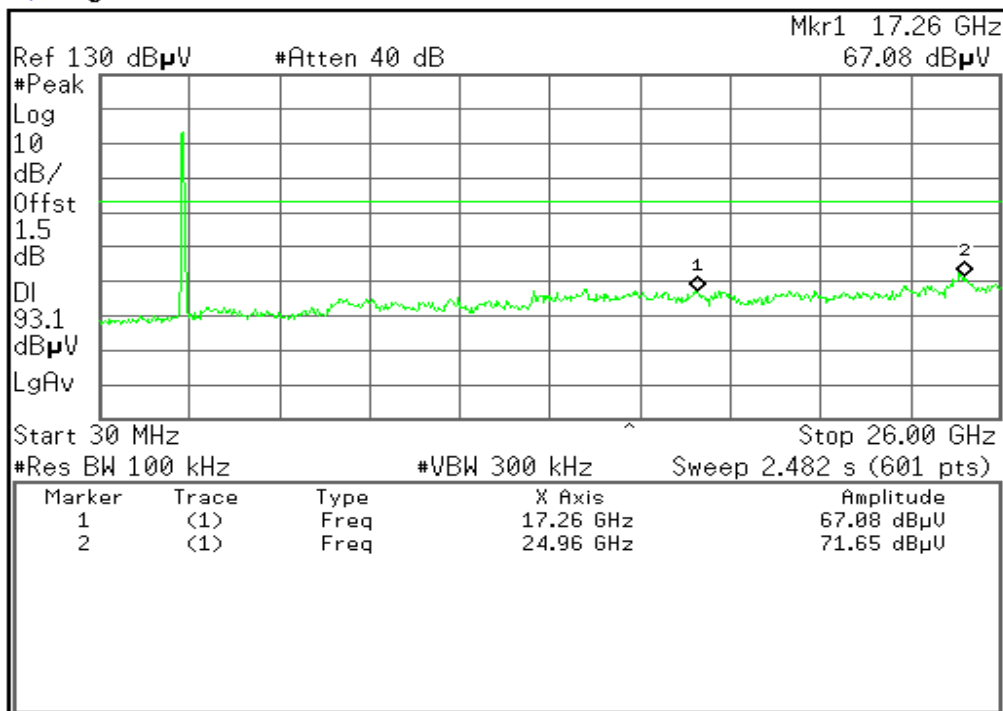
Freq/Channel

Center Freq
2.48350000 GHzStart Freq
2.43350000 GHzStop Freq
2.53350000 GHzCF Step
10.0000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies



Agilent

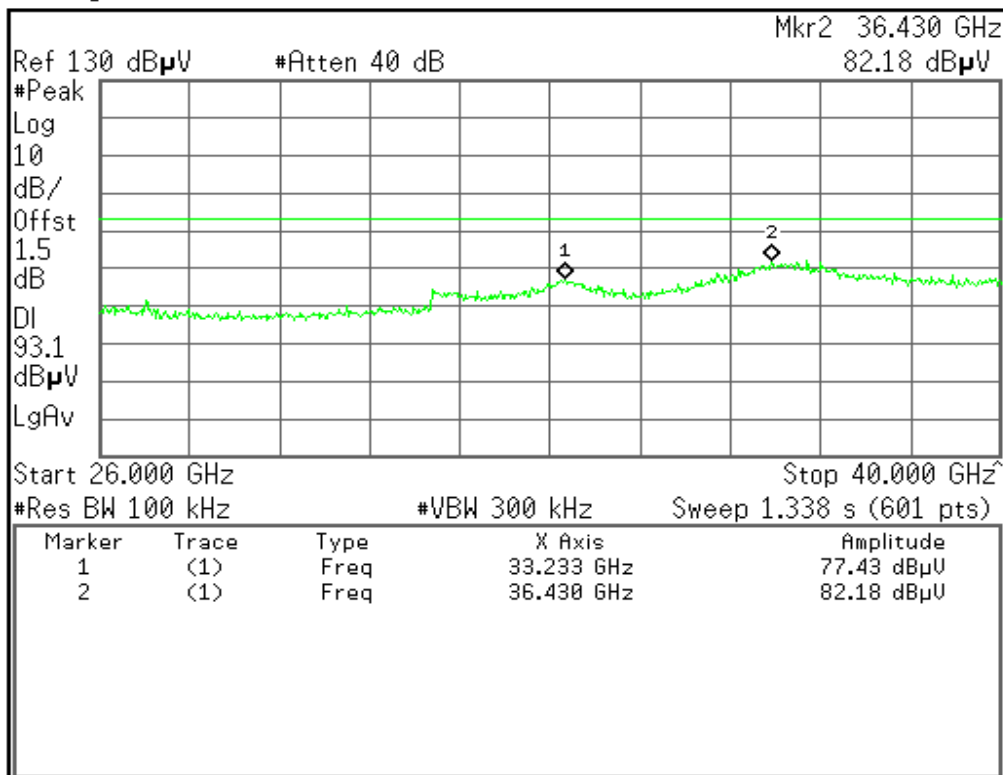


Freq/Channel

Center Freq
13.0150000 GHzStart Freq
30.0000000 MHzStop Freq
26.0000000 GHzCF Step
2.59700000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies

Agilent



Freq/Channel

Center Freq
33.0000000 GHzStart Freq
26.0000000 GHzStop Freq
40.0000000 GHzCF Step
1.40000000 GHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

Copyright 2000–2007 Agilent Technologies

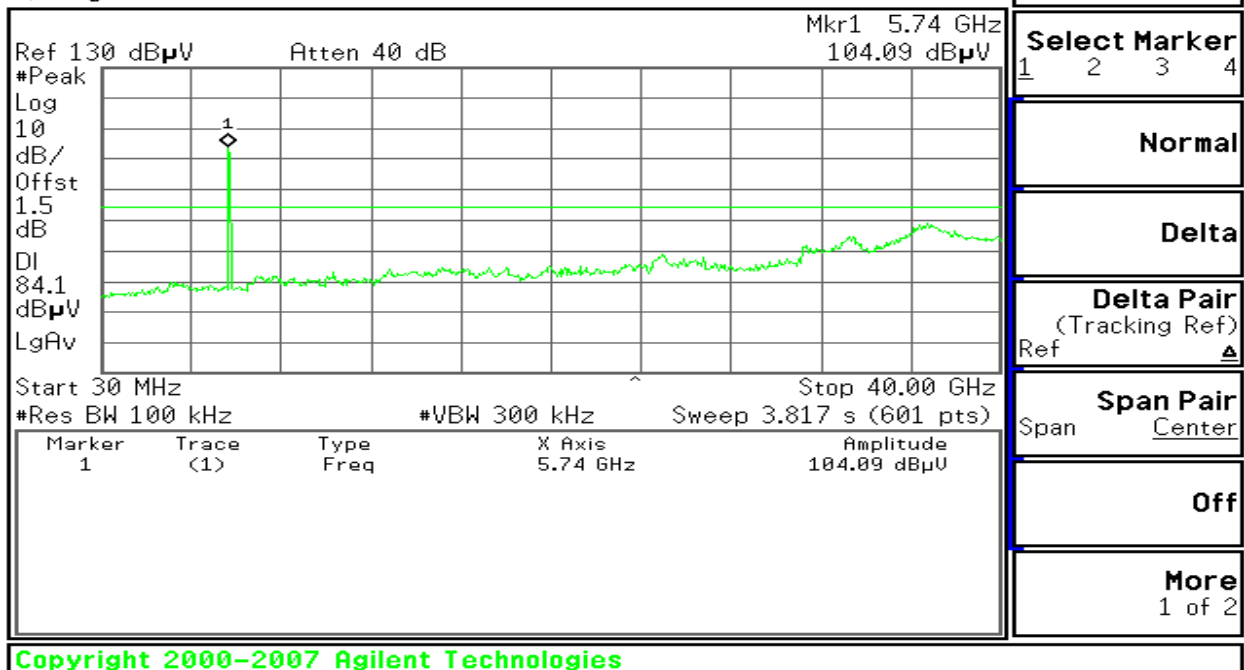


5725-5825

IEEE 802.11a mode

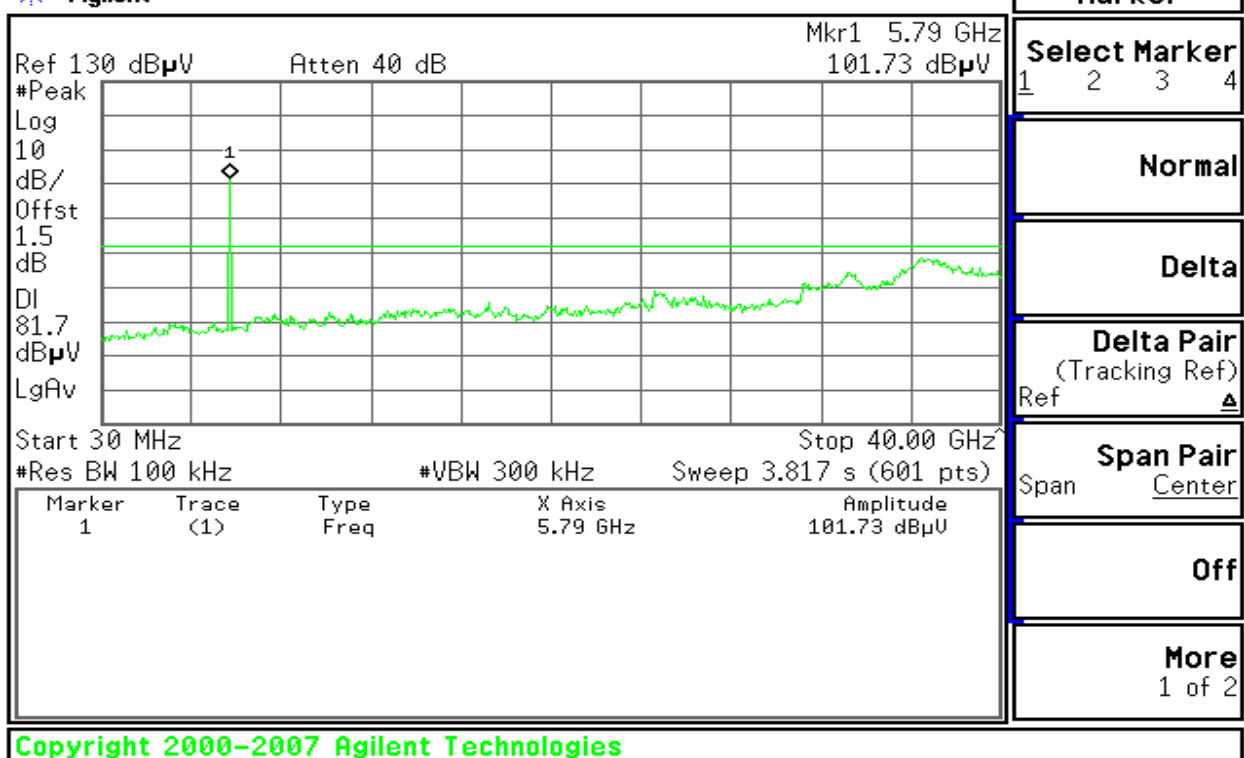
CH Low

Agilent



CH Mid

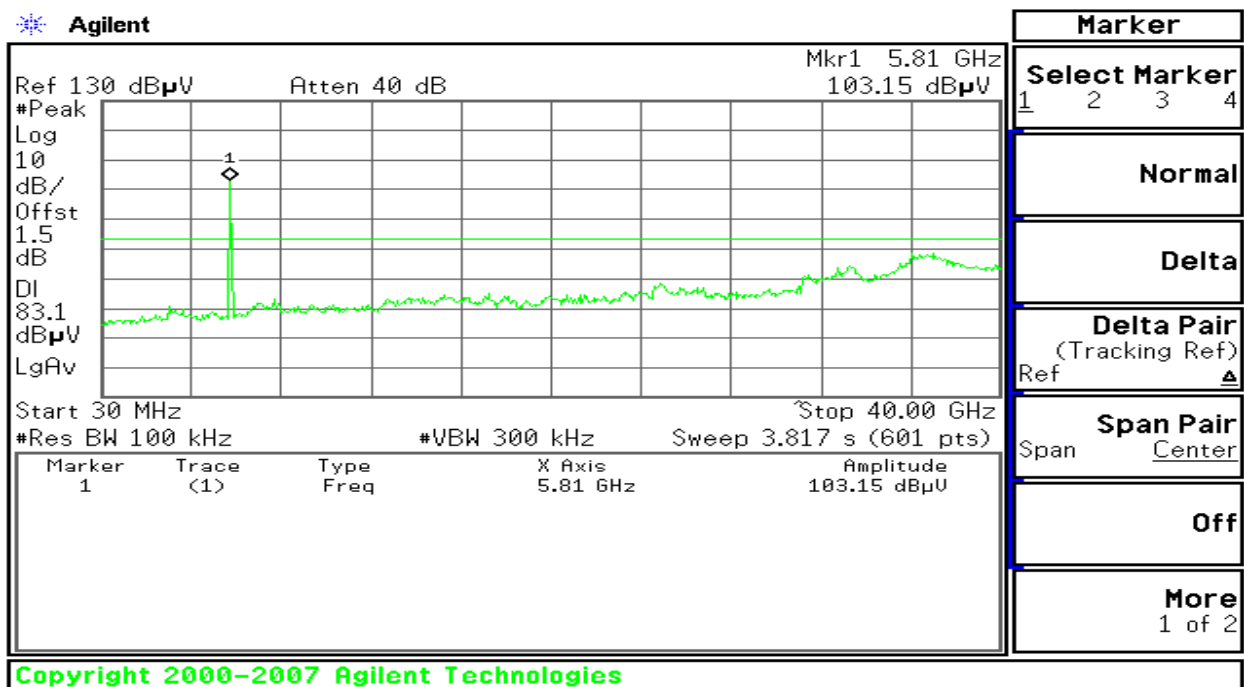
Agilent





CH High

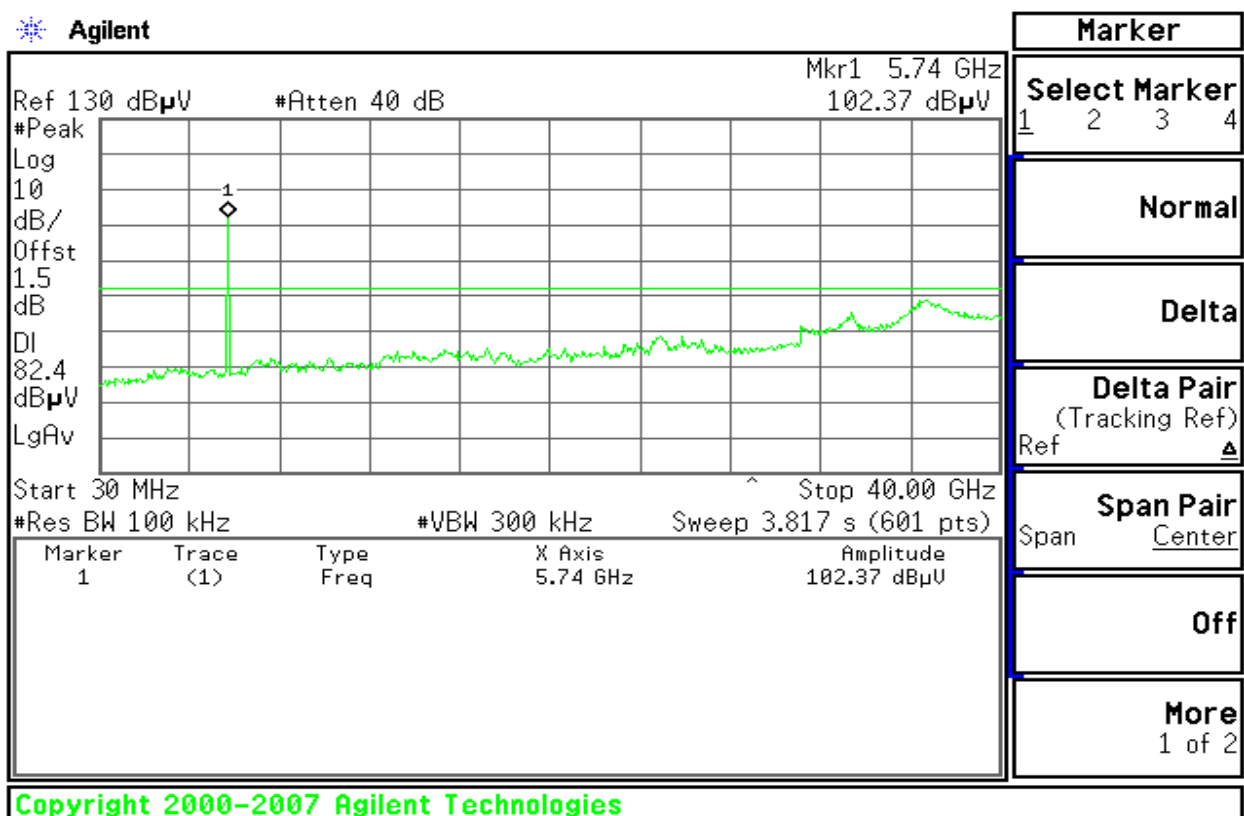
Agilent



draft 802.11n Standard-20 MHz Channel mode / Chain 0

CH Low

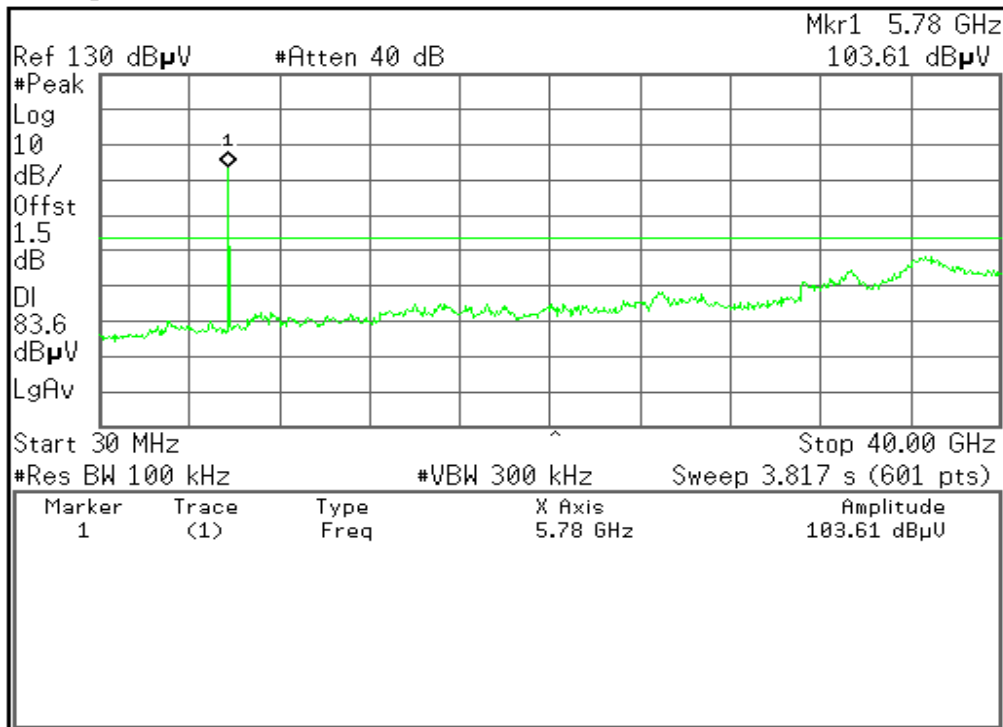
Agilent





CH Mid

Agilent



Marker

Select Marker

1 2 3 4

Normal

Delta

Delta Pair

(Tracking Ref)

Ref

Span Pair

Span Center

Off

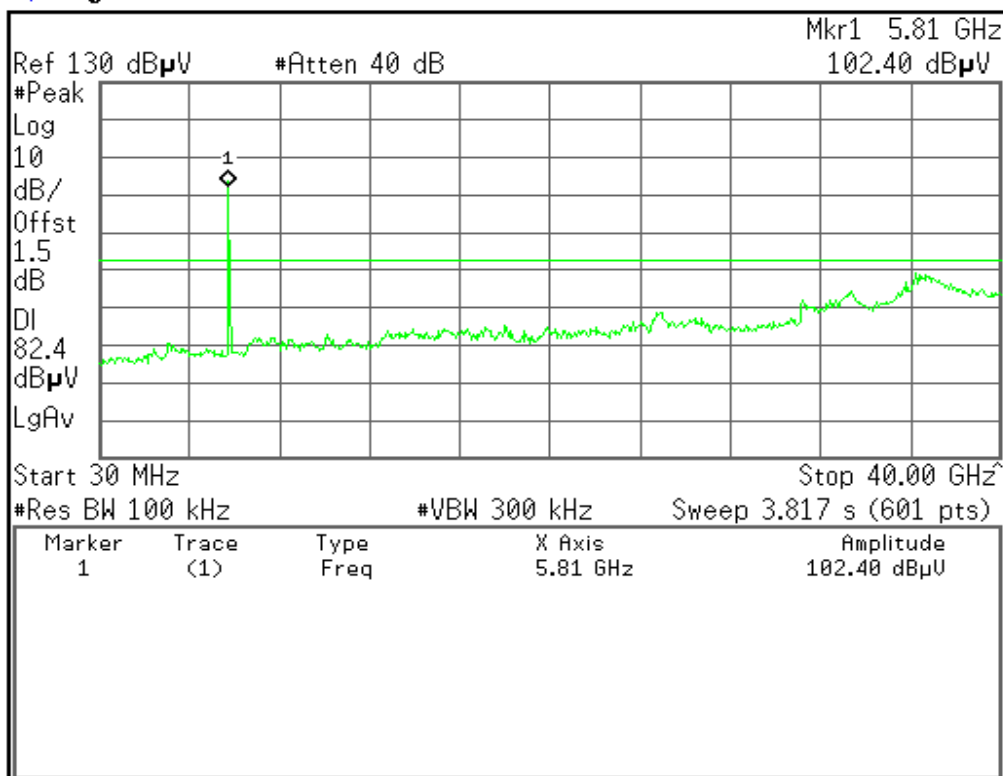
More

1 of 2

Copyright 2000-2007 Agilent Technologies

CH High

Agilent



Marker

Select Marker

1 2 3 4

Normal

Delta

Delta Pair

(Tracking Ref)

Ref

Span Pair

Span Center

Off

More

1 of 2

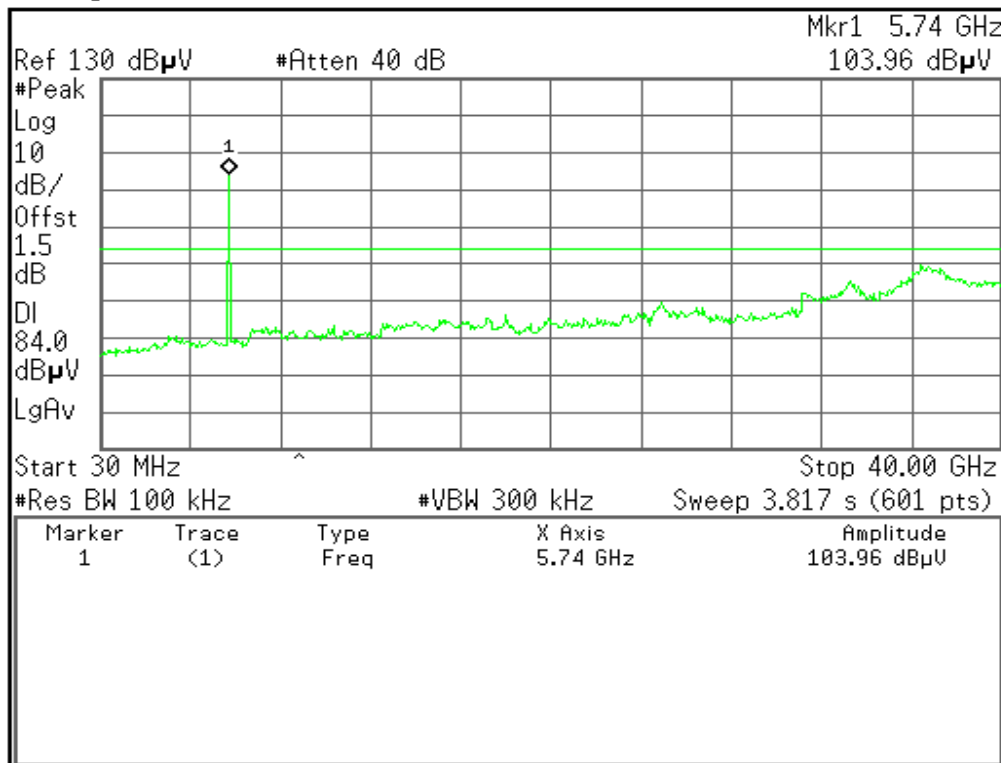
File Operation Status, A:\SCREN113.GIF file saved



draft 802.11n Standard-20 MHz Channel mode / Chain 1

CH Low

Agilent



Marker

Select Marker

1 2 3 4

Normal

Delta

Delta Pair

(Tracking Ref)

Ref

Span Pair

Span Center

Off

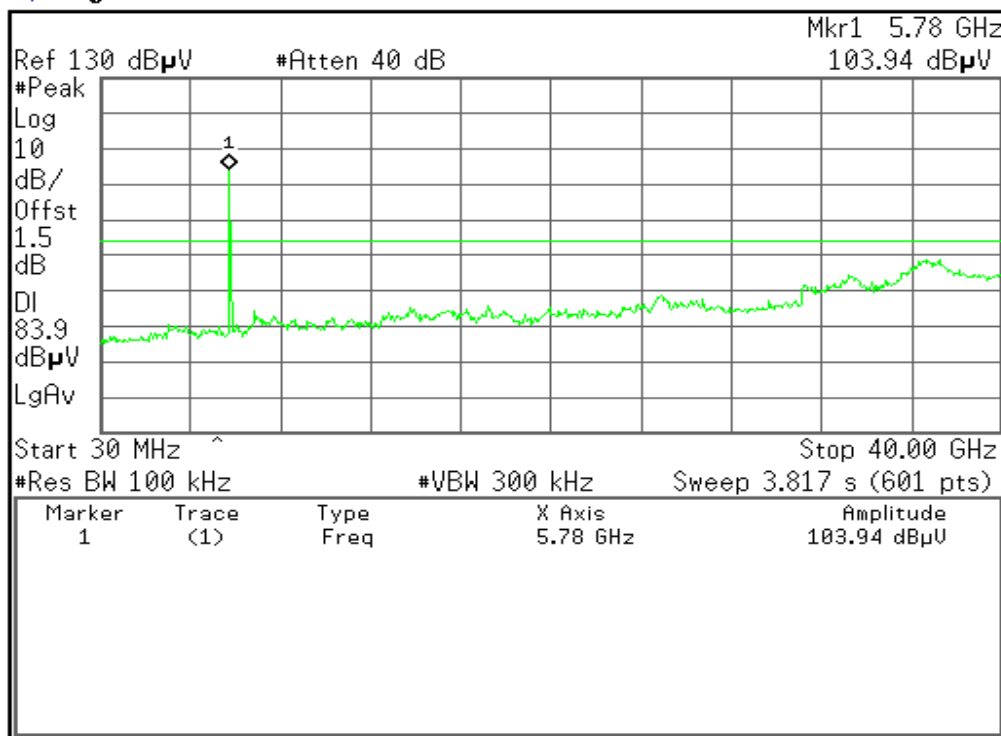
More

1 of 2

Copyright 2000-2007 Agilent Technologies

CH Mid

Agilent



Marker

Select Marker

1 2 3 4

Normal

Delta

Delta Pair

(Tracking Ref)

Ref

Span Pair

Span Center

Off

More

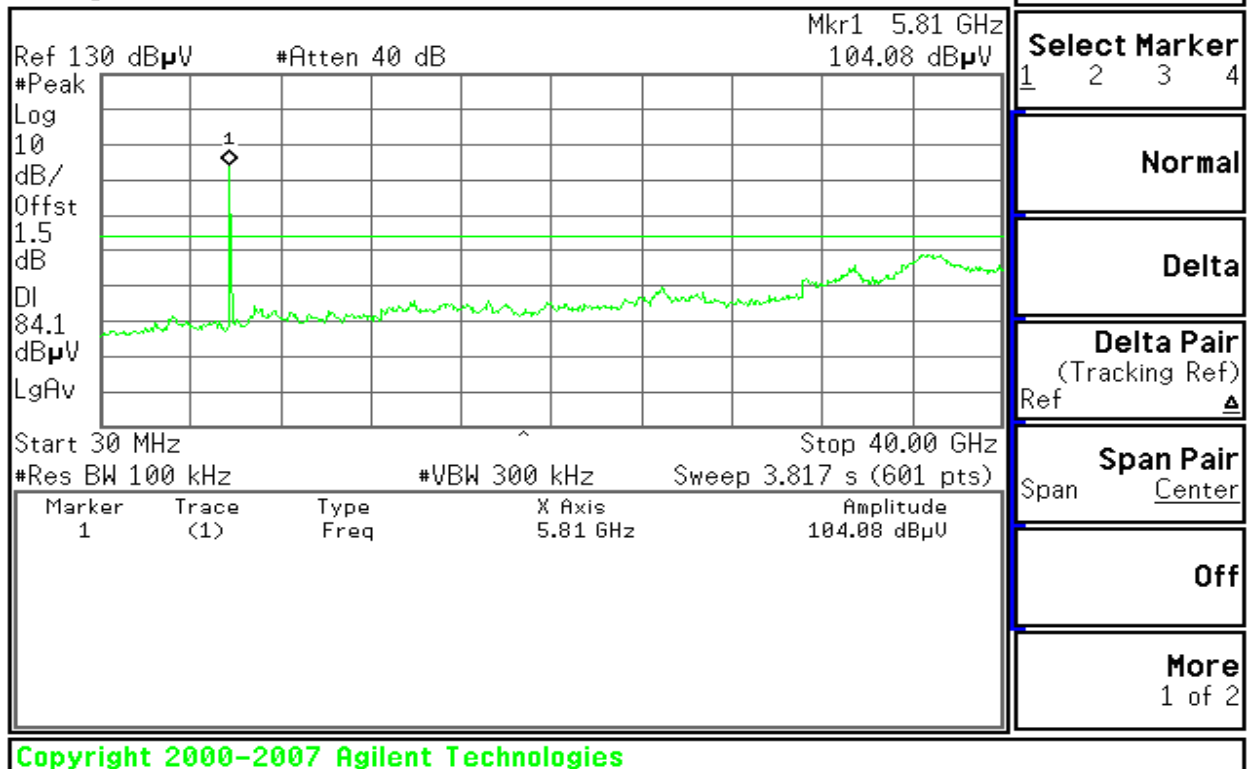
1 of 2

Copyright 2000-2007 Agilent Technologies



CH High

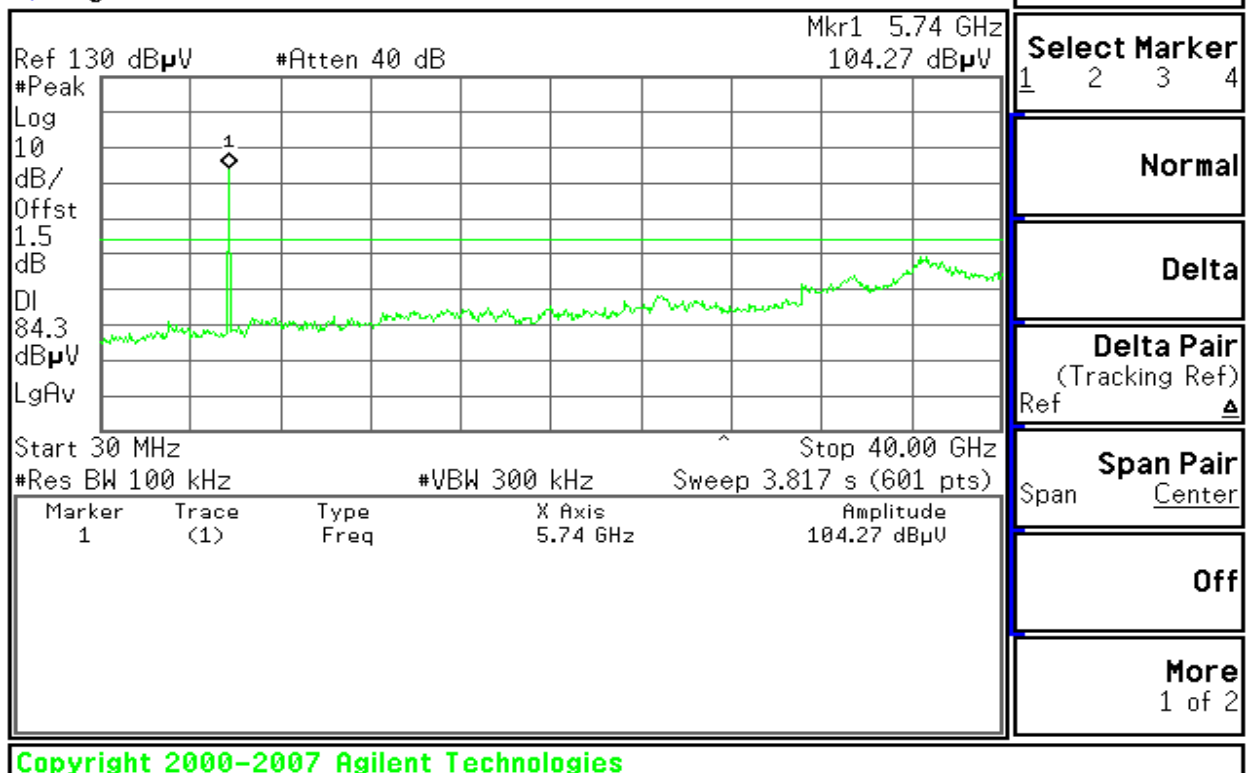
Agilent



draft 802.11n Standard-20 MHz Channel mode / Chain 2

CH Low

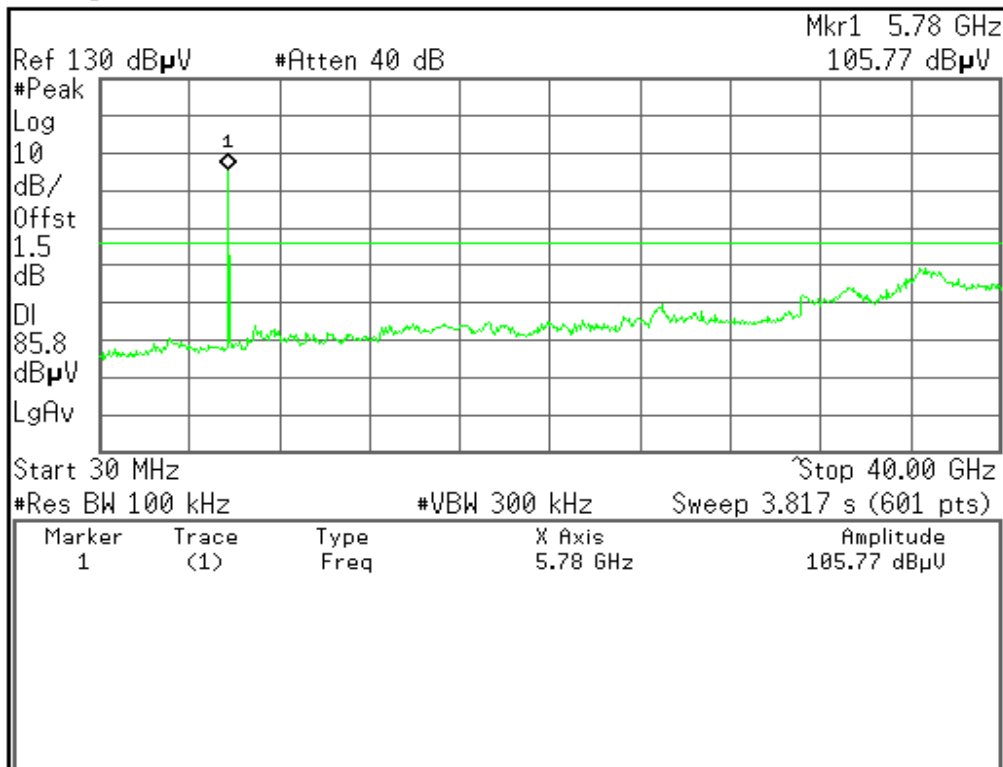
Agilent





CH Mid

Agilent



Marker

Select Marker

1 2 3 4

Normal

Delta

Delta Pair

(Tracking Ref)

Ref

▲

Span Pair

Span

Center

Off

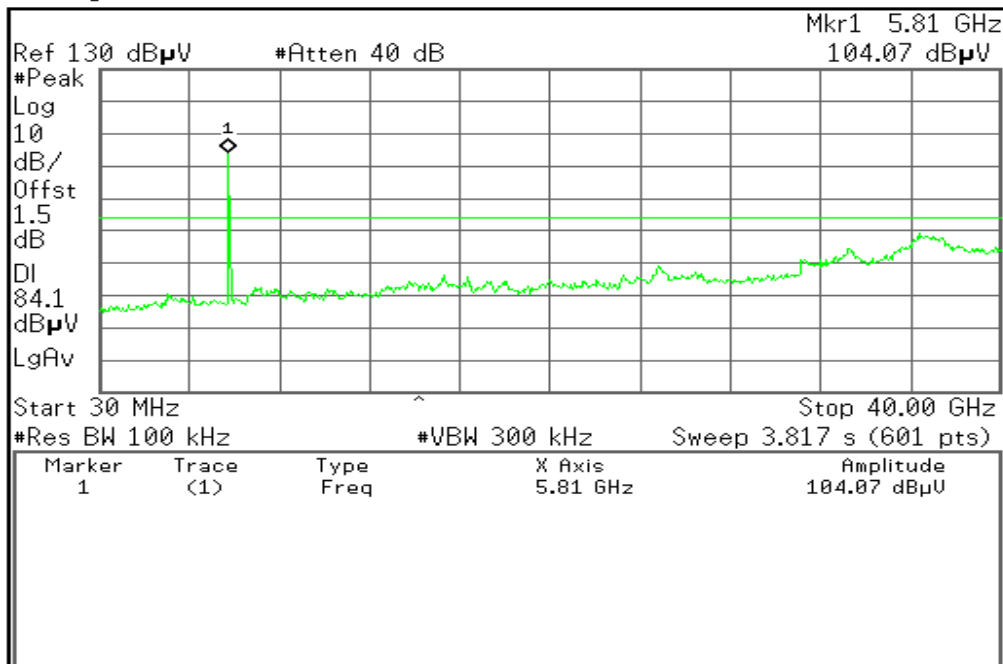
More

1 of 2

Copyright 2000–2007 Agilent Technologies

CH High

Agilent



Marker

Select Marker

1 2 3 4

Normal

Delta

Delta Pair

(Tracking Ref)

Ref

▲

Span Pair

Span

Center

Off

More

1 of 2

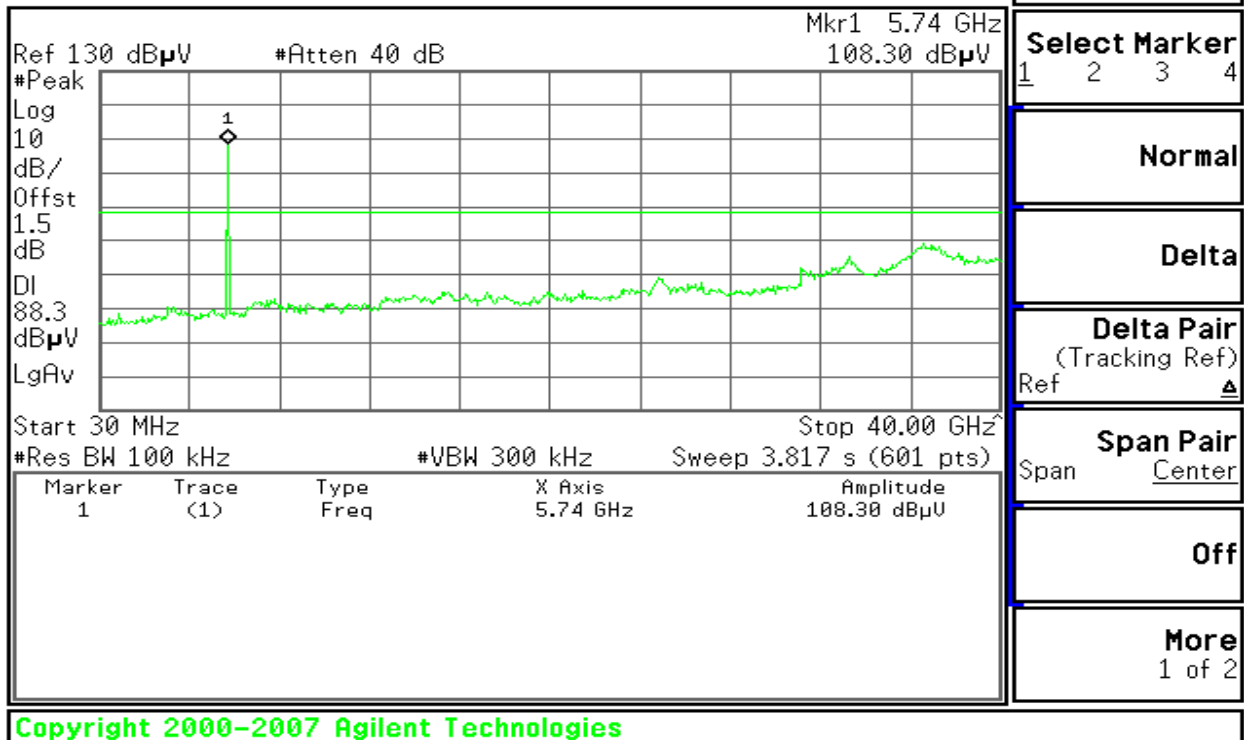
Copyright 2000–2007 Agilent Technologies



draft 802.11n Standard-20 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

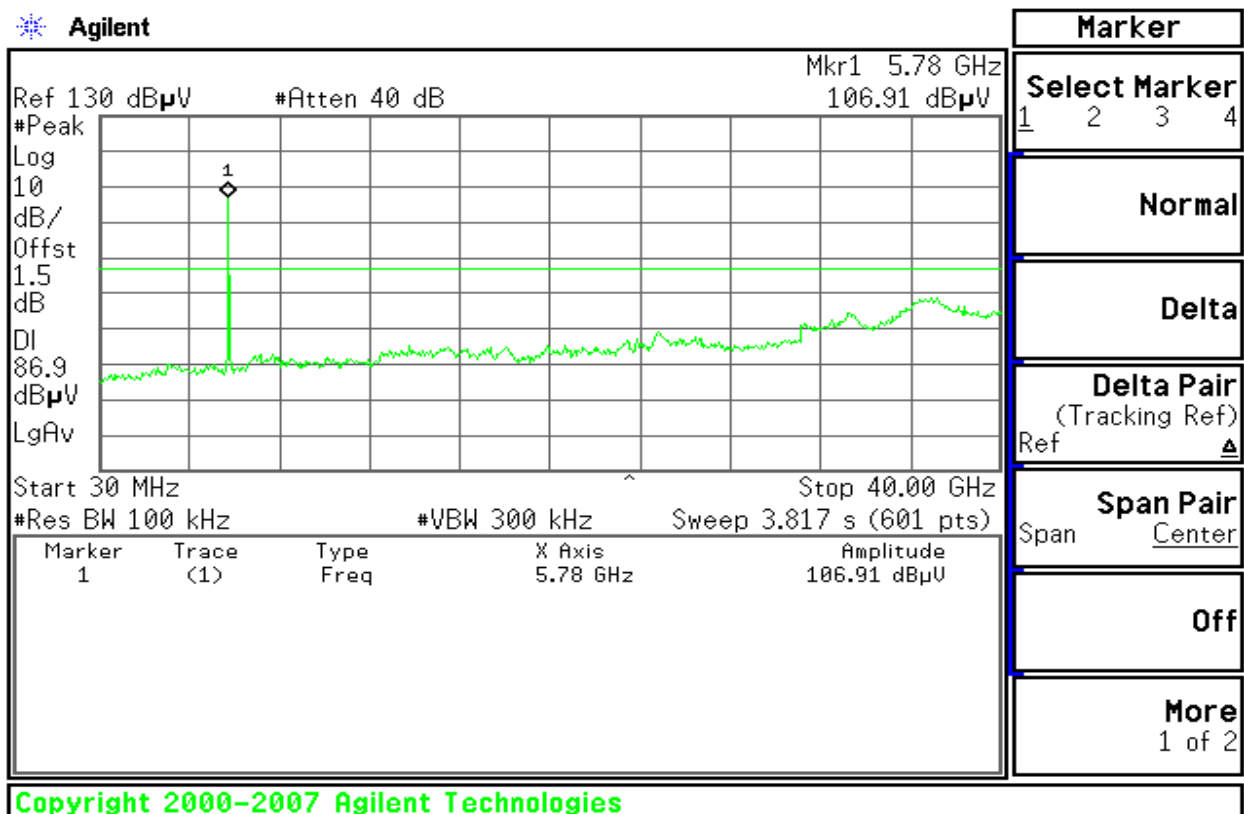
CH Low

Agilent



CH Mid

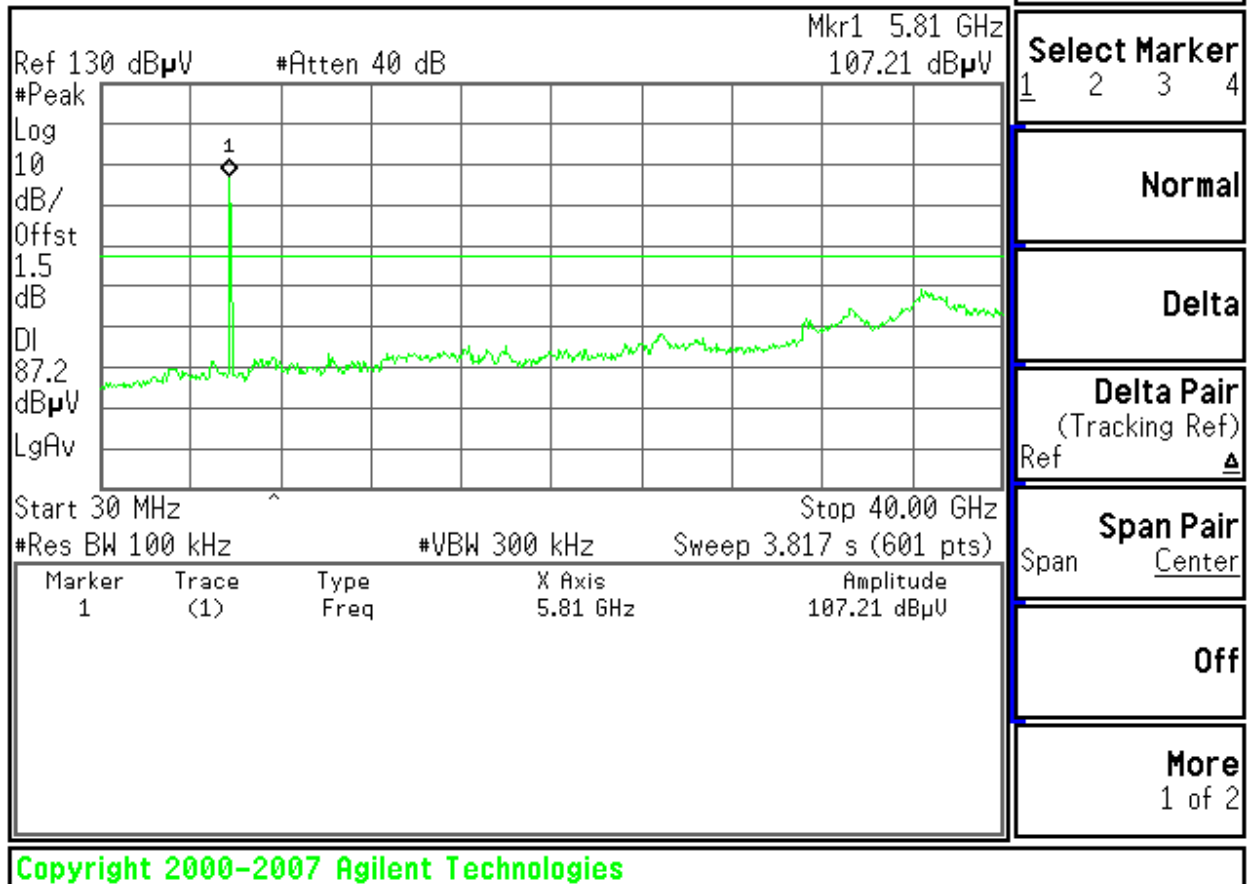
Agilent





CH High

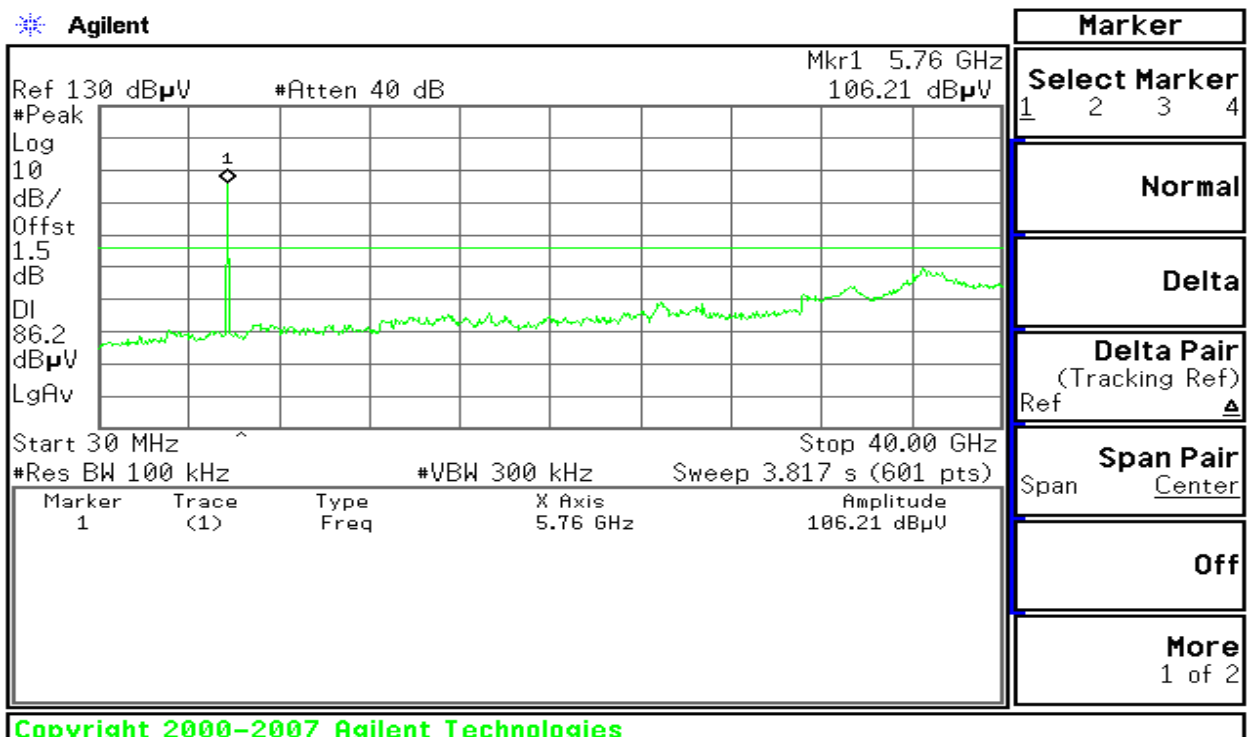
Agilent



draft 802.11n Standard-40 MHz Channel mode / Chain 0

CH Low

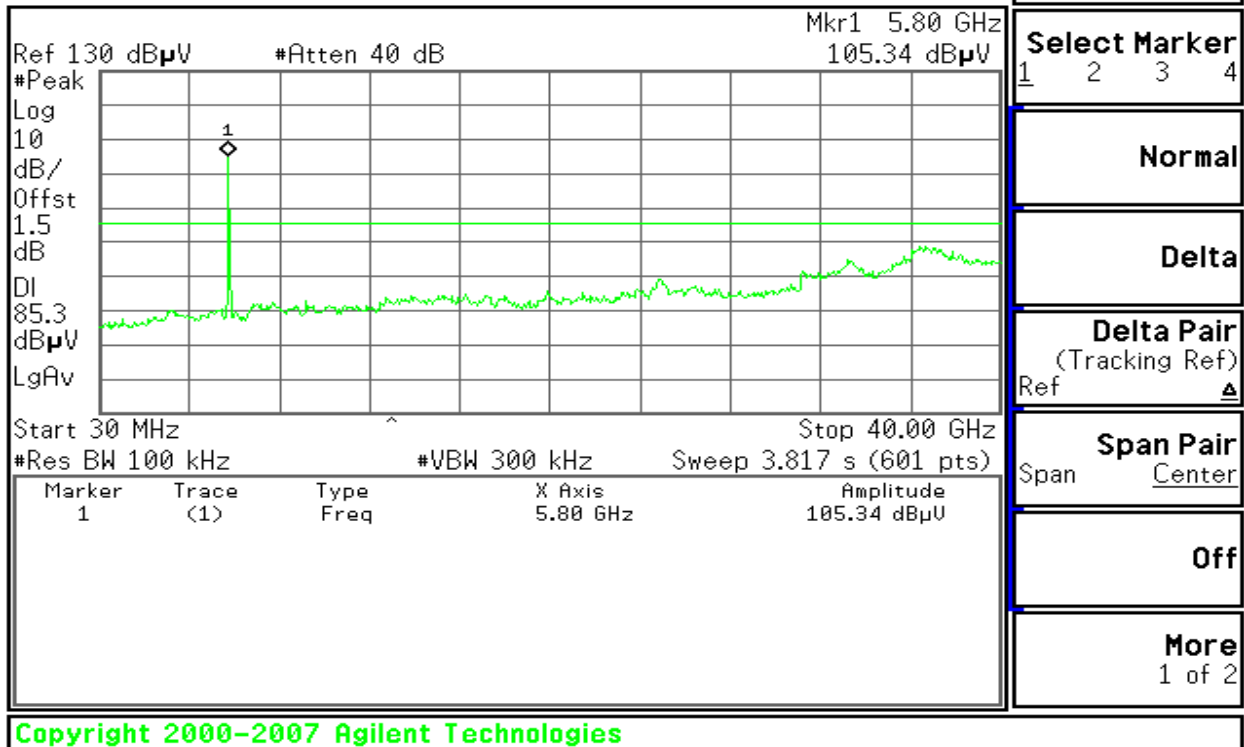
Agilent





CH High

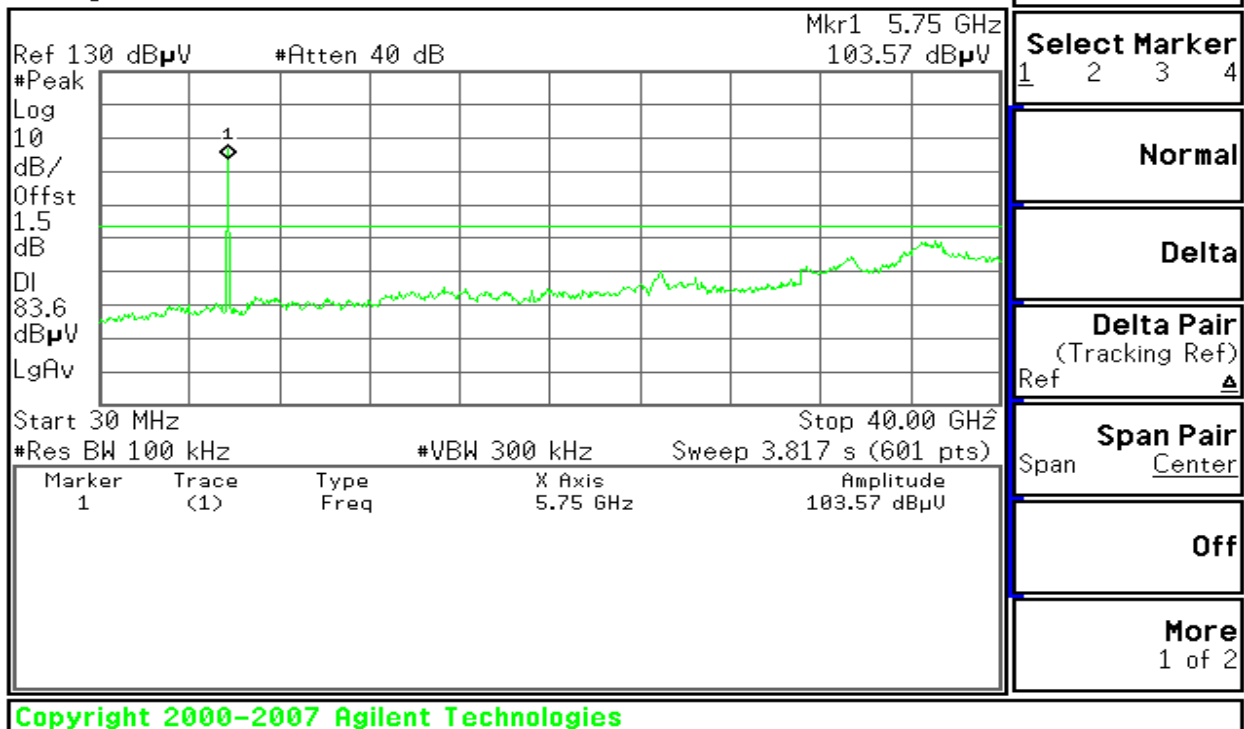
Agilent



draft 802.11n Standard-40 MHz Channel mode / Chain 1

CH Low

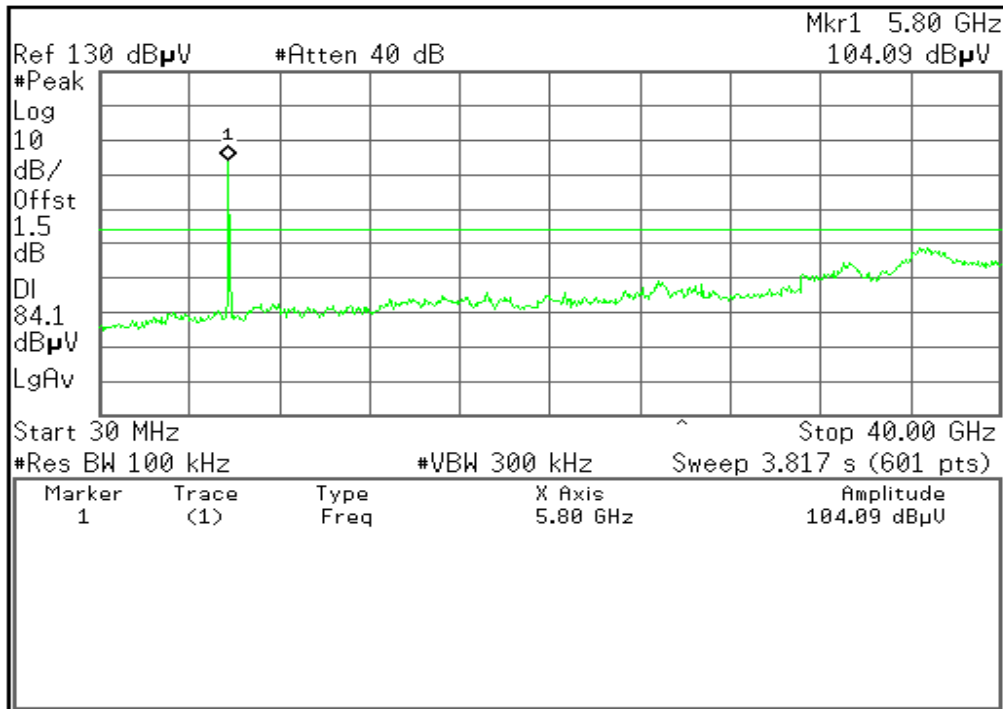
Agilent





CH High

Agilent



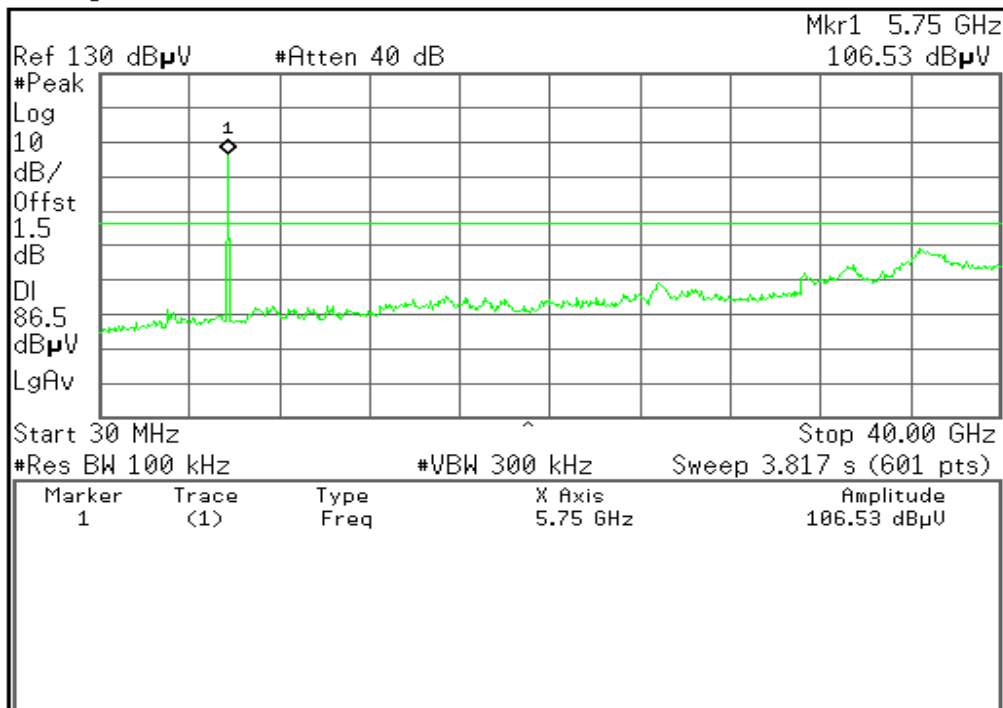
Marker			
Select Marker			
1	2	3	4
Normal			
Delta			
Delta Pair (Tracking Ref)			
Ref			
Span Pair			
Span Center			
Off			
More 1 of 2			

Copyright 2000–2007 Agilent Technologies

draft 802.11n Standard-40 MHz Channel mode / Chain 2

CH Low

Agilent



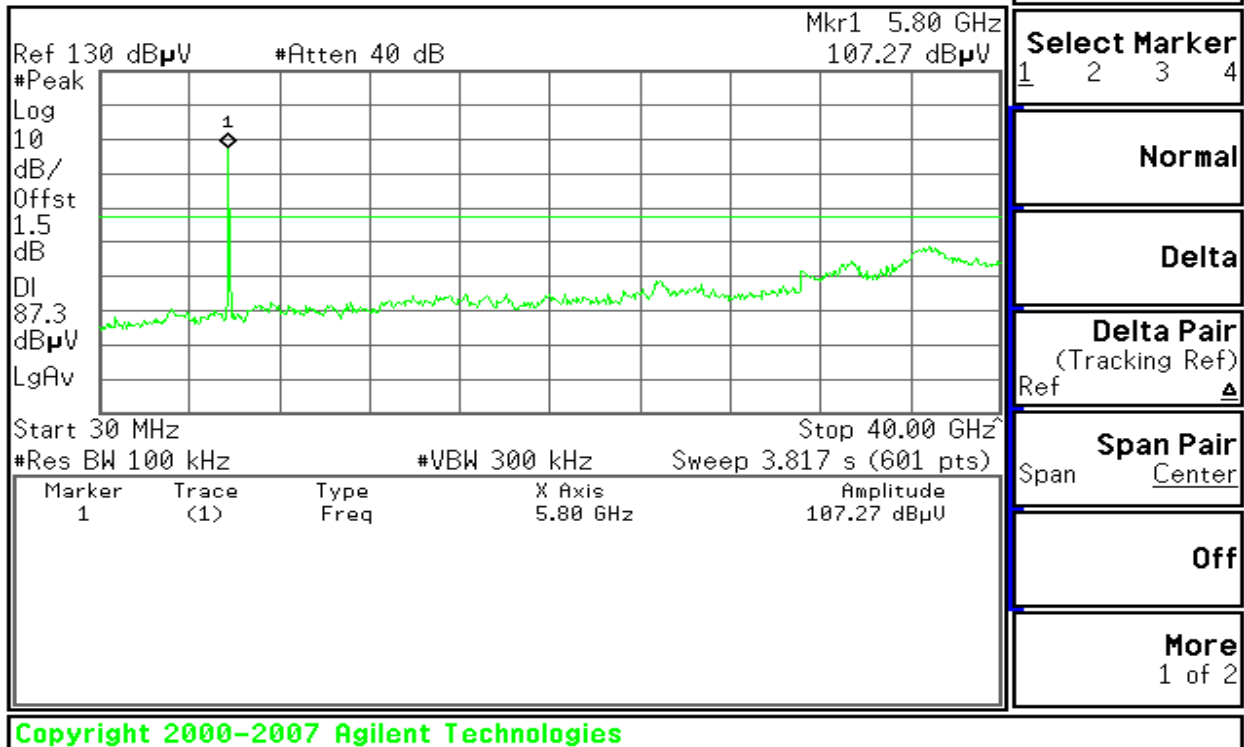
Marker			
Select Marker			
1	2	3	4
Normal			
Delta			
Delta Pair (Tracking Ref)			
Ref			
Span Pair			
Span Center			
Off			
More 1 of 2			

Copyright 2000–2007 Agilent Technologies



CH High

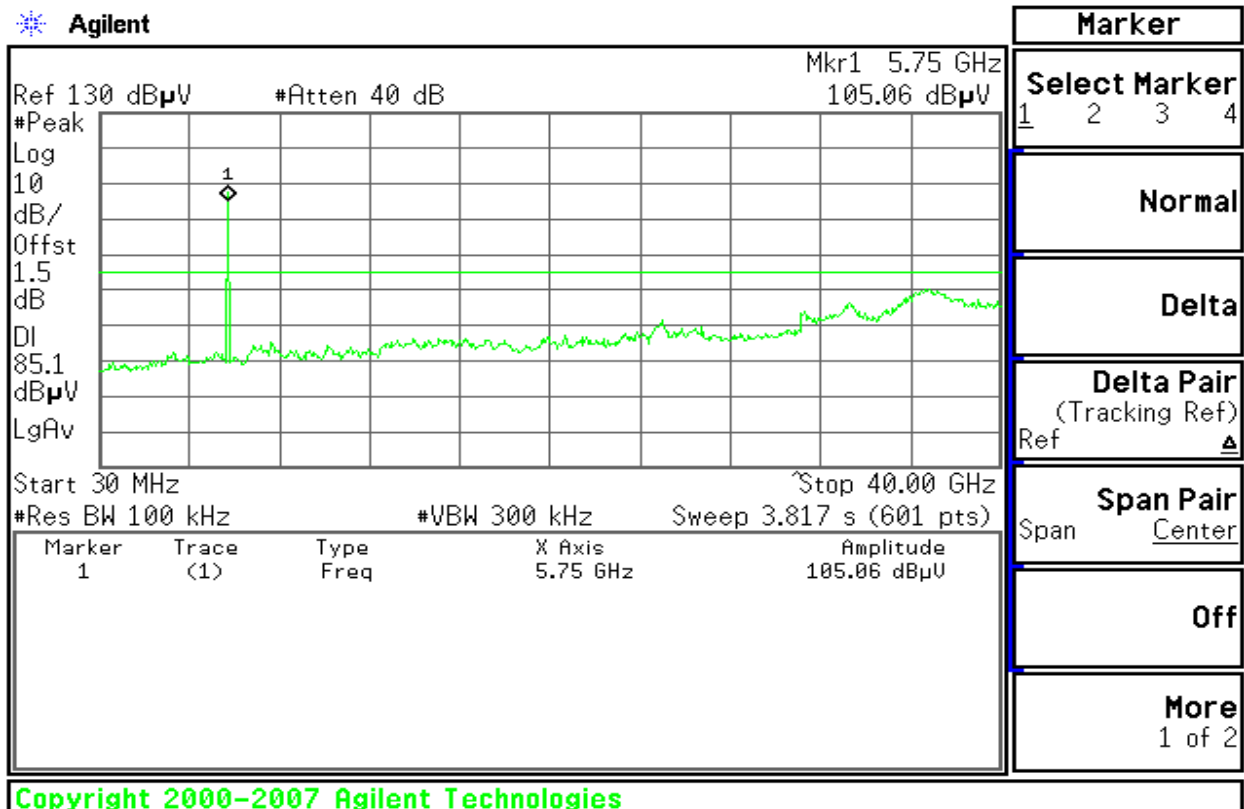
Agilent



draft 802.11n Standard-40 MHz Channel mode / Chain 0+ Chain 1+ Chain 2

CH Low

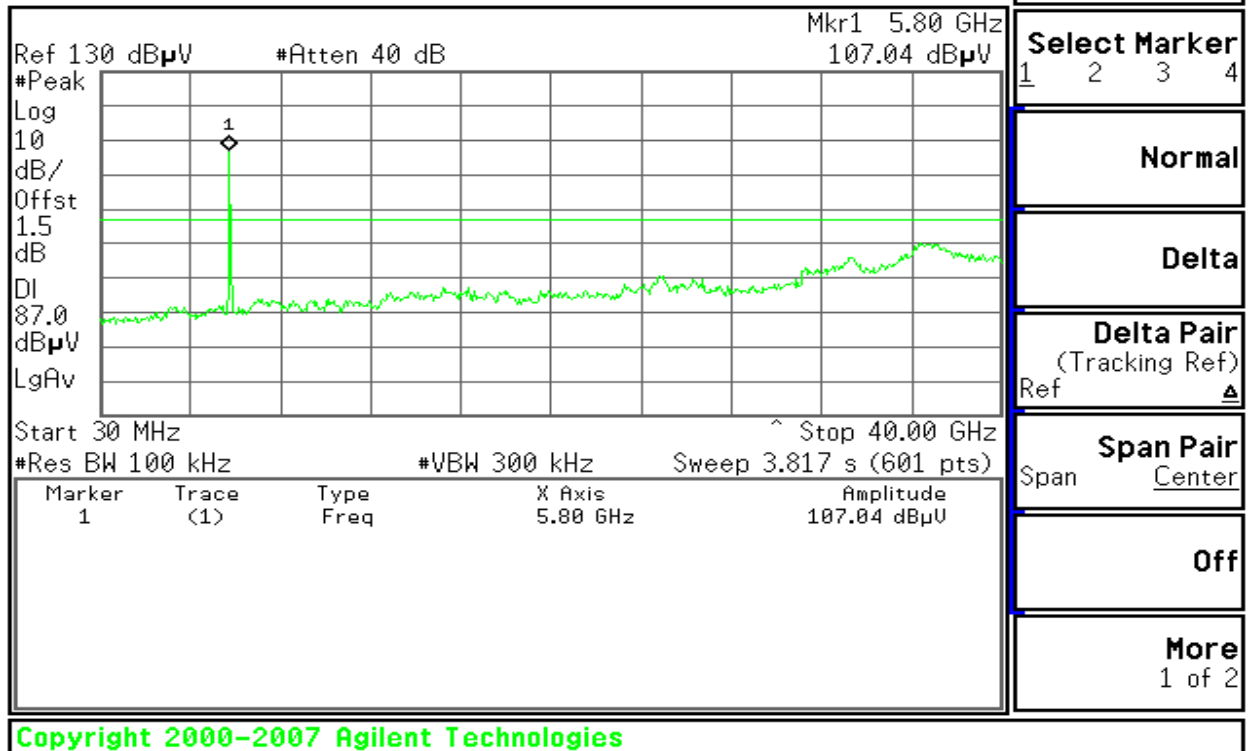
Agilent





CH High

Agilent





RADIATED EMISSIONS

LIMIT

1. According to §15.209(a), except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measurement Distance (m)
30-88	100*	3
88-216	150*	3
216-960	200*	3
Above 960	500	3

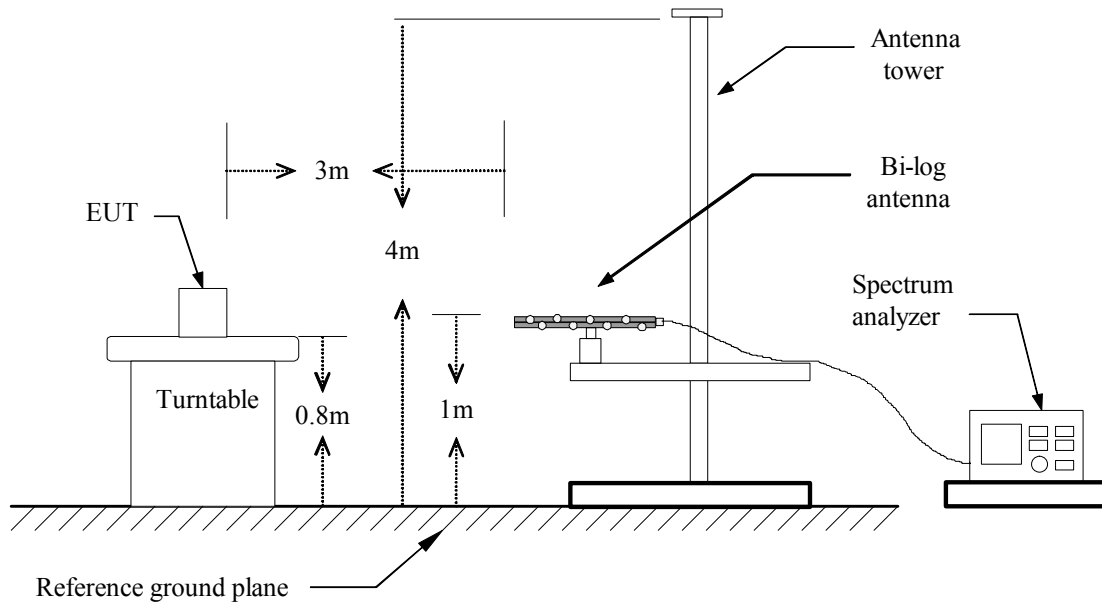
Remark: Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of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

2. In the emission table above, the tighter limit applies at the band edges.

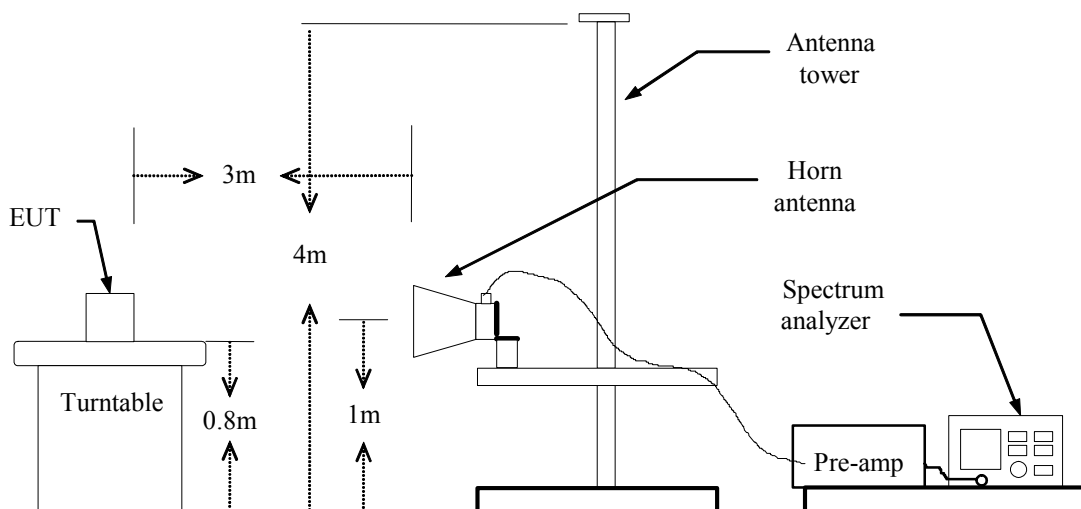
Frequency (MHz)	Field Strength ($\mu\text{V/m}$ at 3-meter)	Field Strength (dB $\mu\text{V/m}$ at 3-meter)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Test Configuration

Below 1 GHz



Above 1 GHz



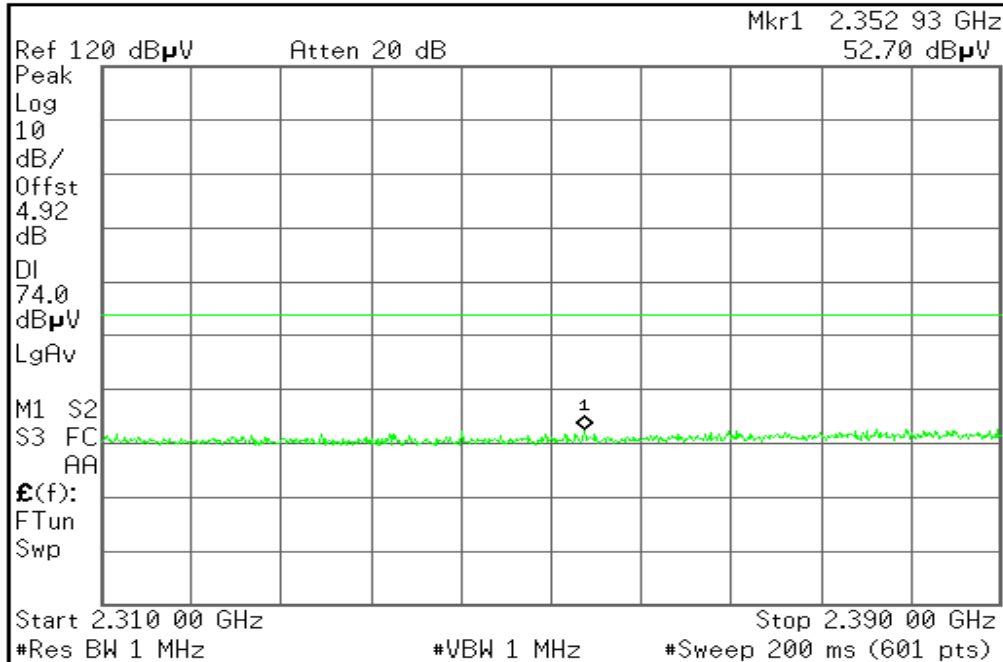


TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be 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 emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:
Below 1GHz:
RBW=100kHz / VBW=300kHz / Sweep=AUTO
Above 1GHz:
(a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO
7. Repeat above procedures until the measurements for all frequencies are complete.

**TEST RESULTS****RESTRICTED BANDEDGE (b Mode, Low Channel, Horizontal)****PEAK**

Agilent

**Peak Search**

Next Peak

Next Pk Right

Next Pk Left

Min Search

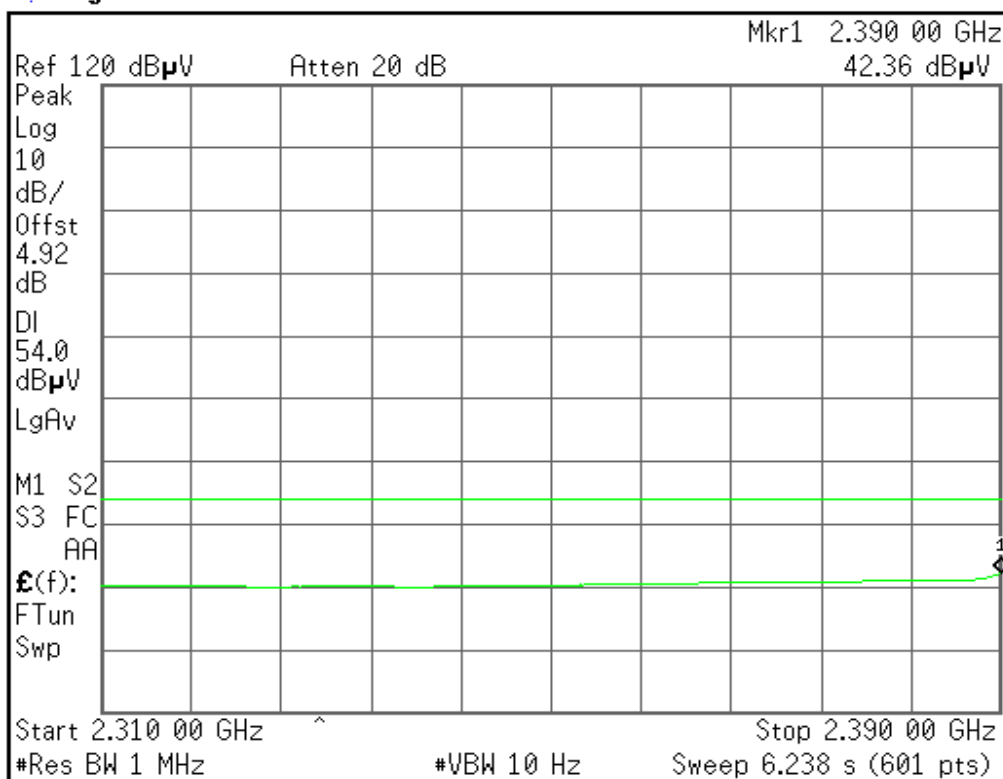
Pk-Pk Search

Mkr \rightarrow CFMore
1 of 2

Copyright 2000-2007 Agilent Technologies

AVG

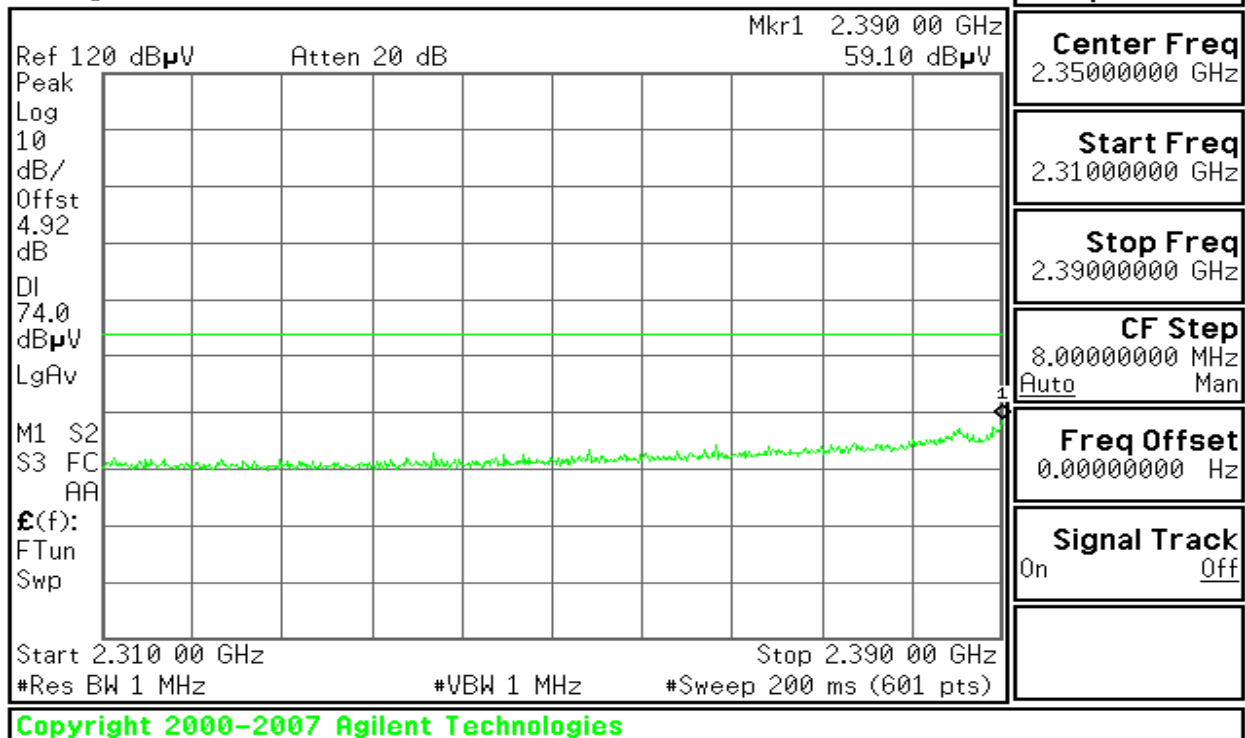
Agilent

**Freq/Channel****Center Freq**
2.35000000 GHz**Start Freq**
2.31000000 GHz**Stop Freq**
2.39000000 GHz**CF Step**
8.00000000 MHz
Auto Man**Freq Offset**
0.00000000 Hz**Signal Track**
On Off

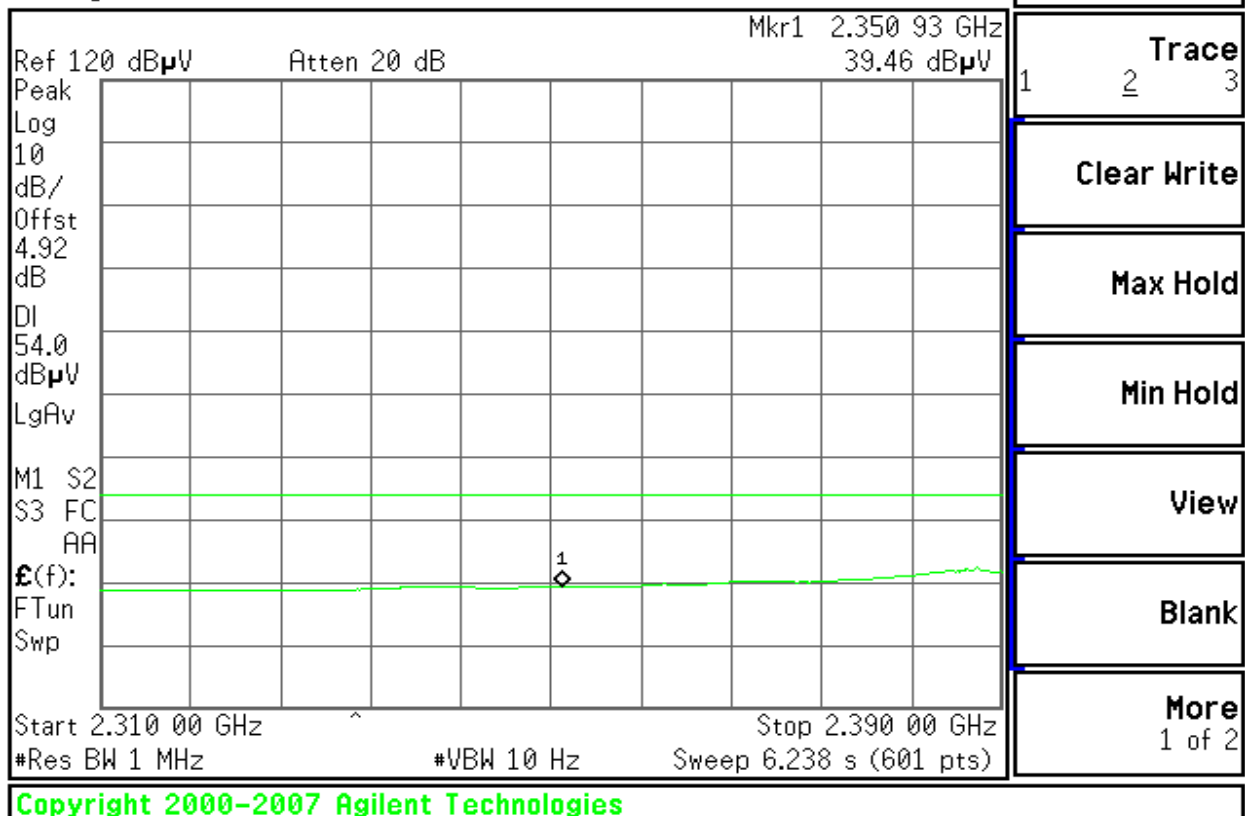
Copyright 2000-2007 Agilent Technologies

**RESTRICTED BANDEDGE (b Mode, Low Channel, Vertical)****PEAK**

Agilent

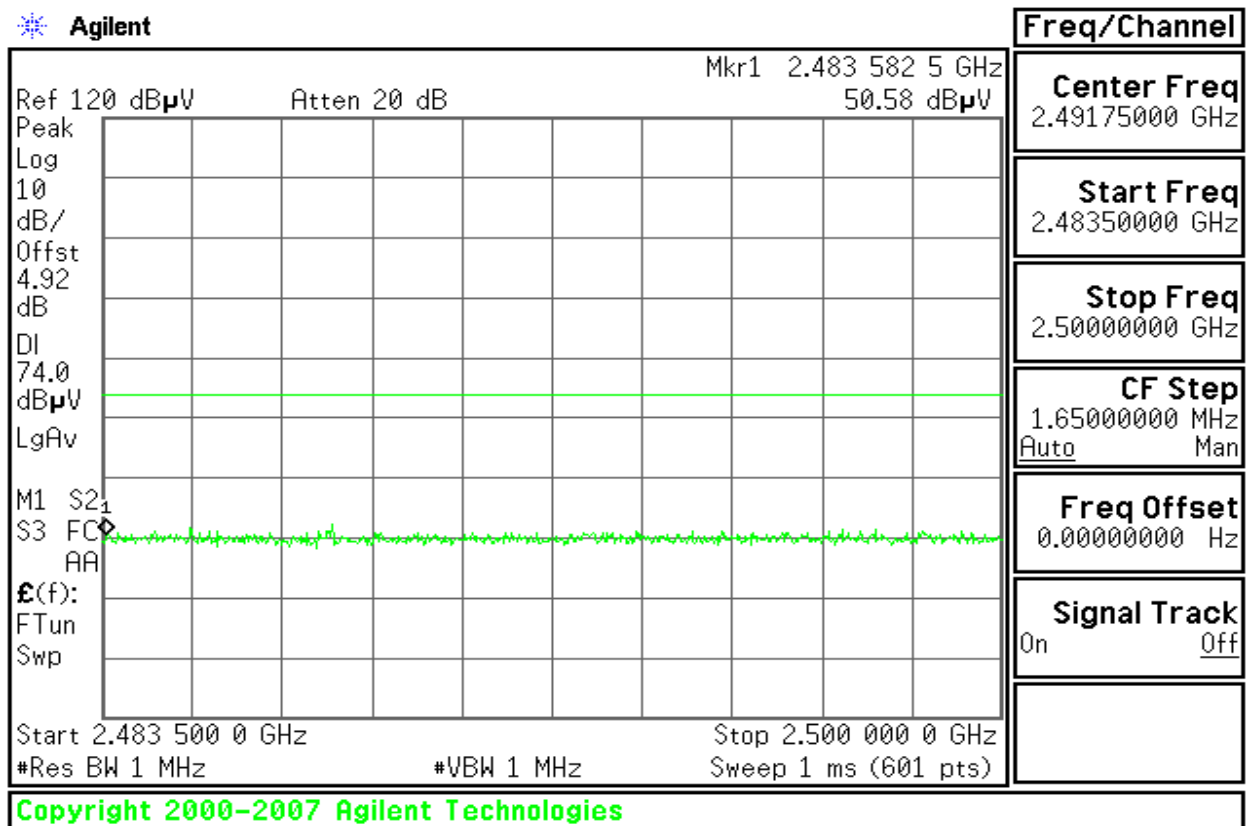
**AVG**

Agilent

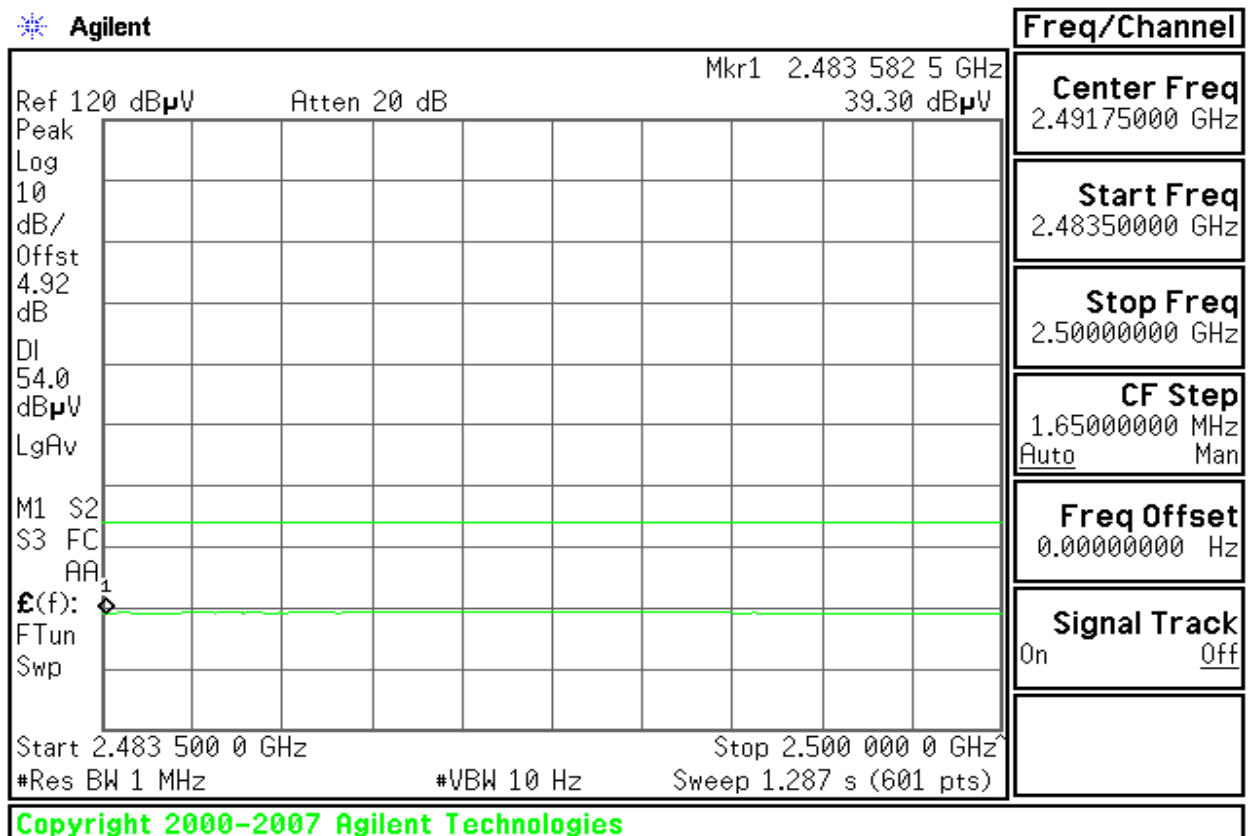


**RESTRICTED BANDEDGE (b Mode, High Channel, Horizontal)****PEAK**

Agilent

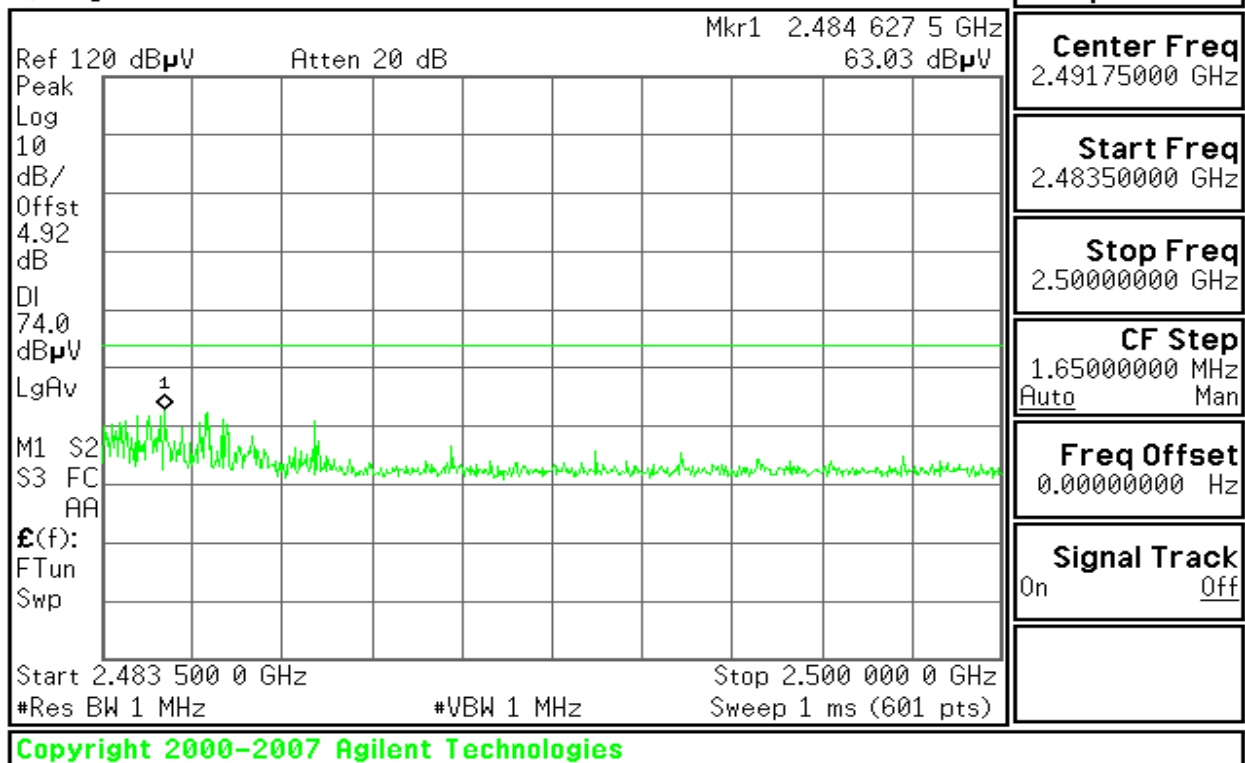
**AVG**

Agilent

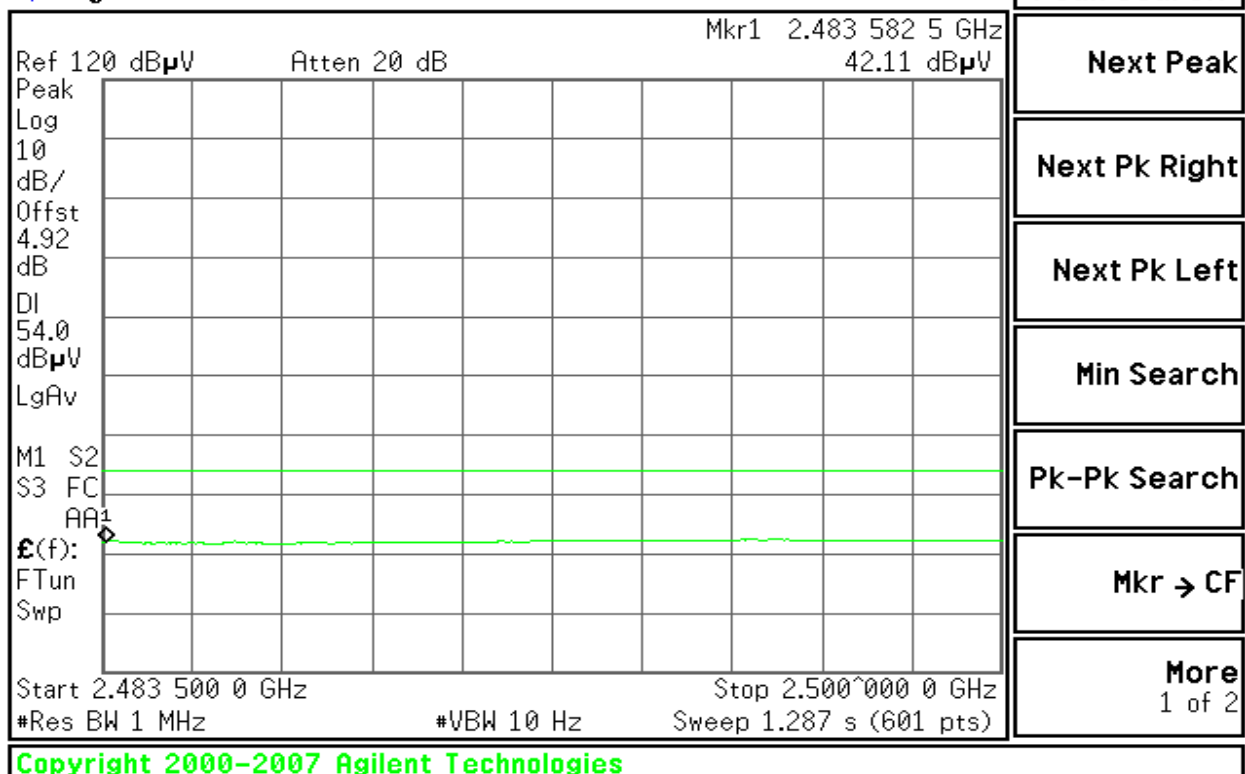


**RESTRICTED BANDEDGE (b Mode, High Channel, Vertical)****PEAK**

Agilent

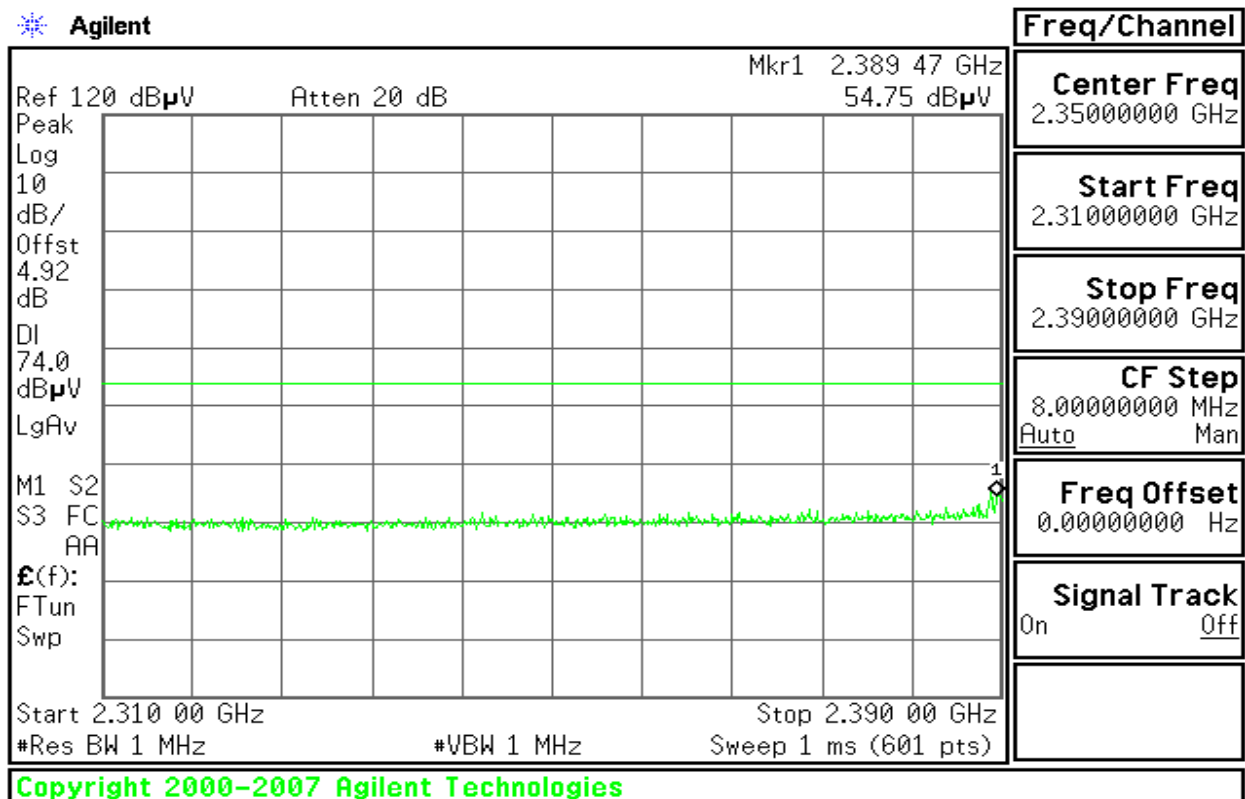
**AVG**

Agilent

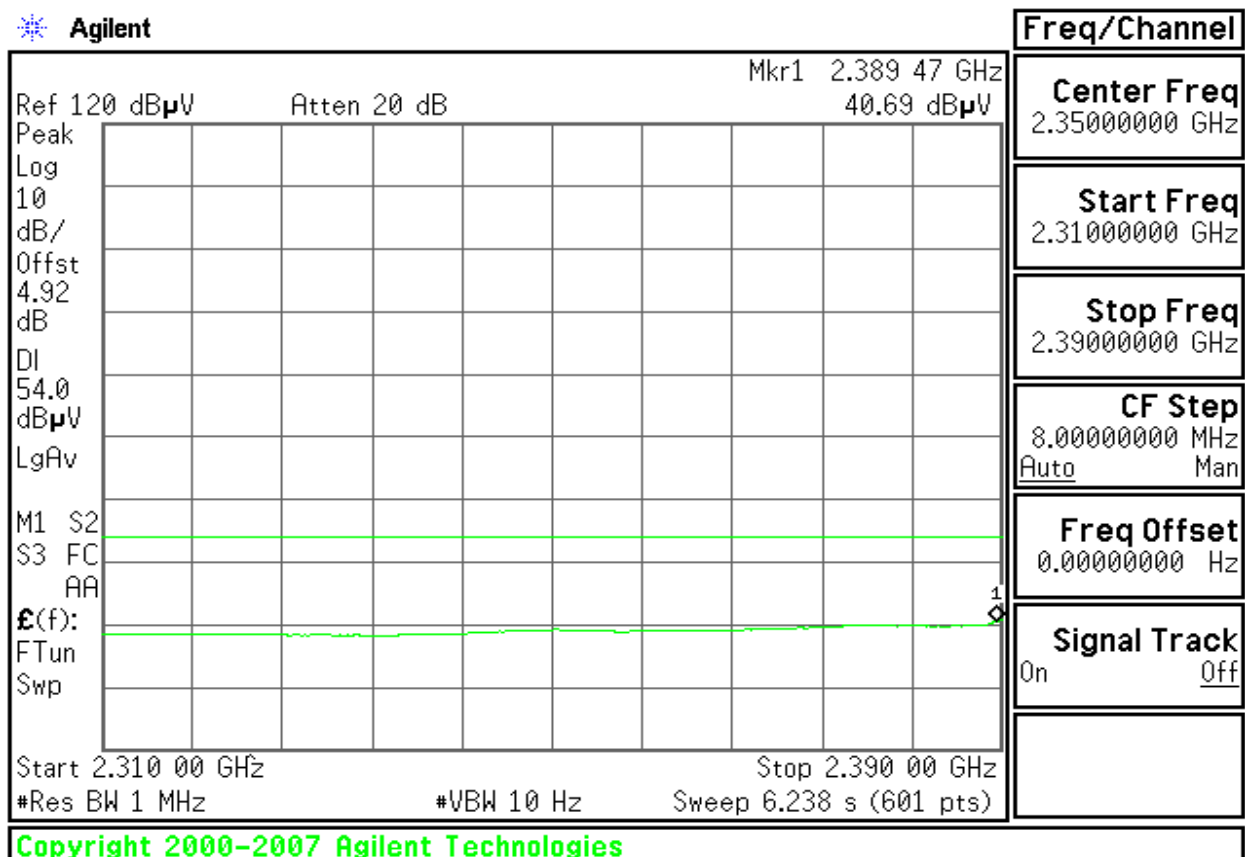


**RESTRICTED BANDEDGE (g Mode, Low Channel, Horizontal)****PEAK**

* Agilent

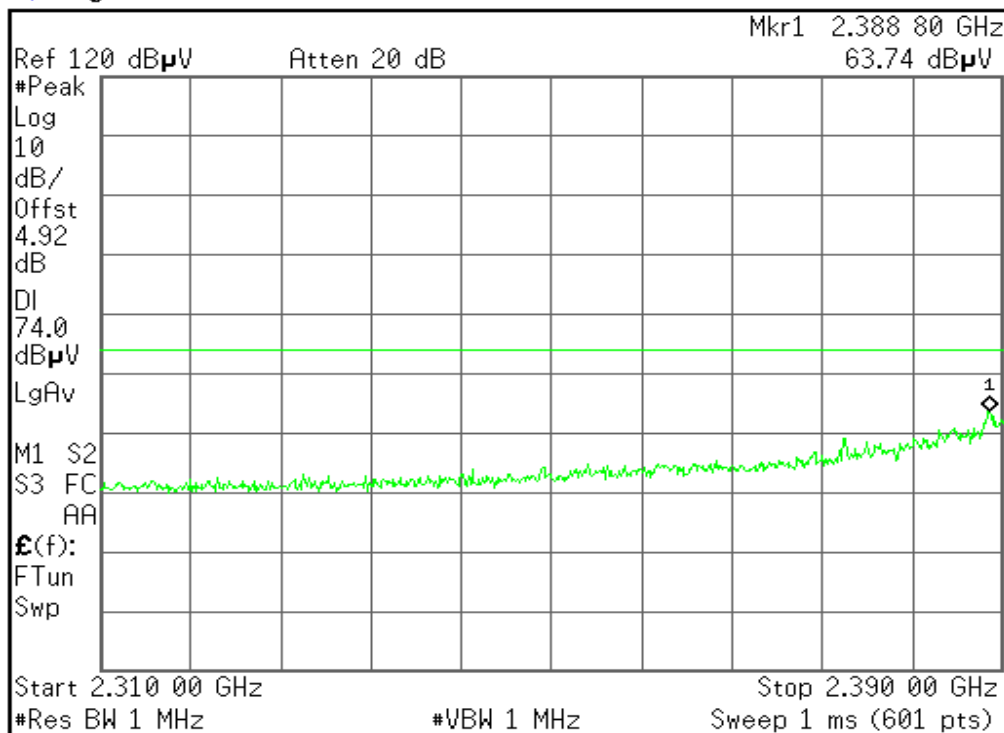
**AVG**

* Agilent



**RESTRICTED BANDEDGE (g Mode, Low Channel, Vertical)****PEAK**

Agilent



Peak Search

Next Peak

Next Pk Right

Next Pk Left

Min Search

Pk-Pk Search

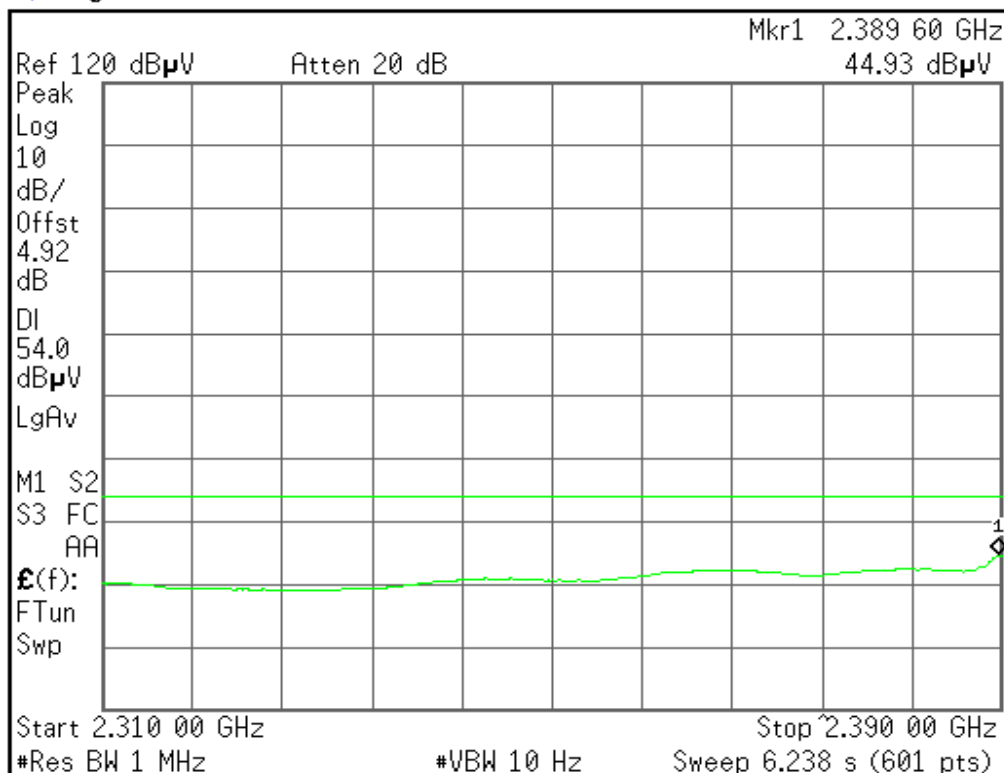
Mkr → CF

More
1 of 2

Unable to save file

AVG

Agilent



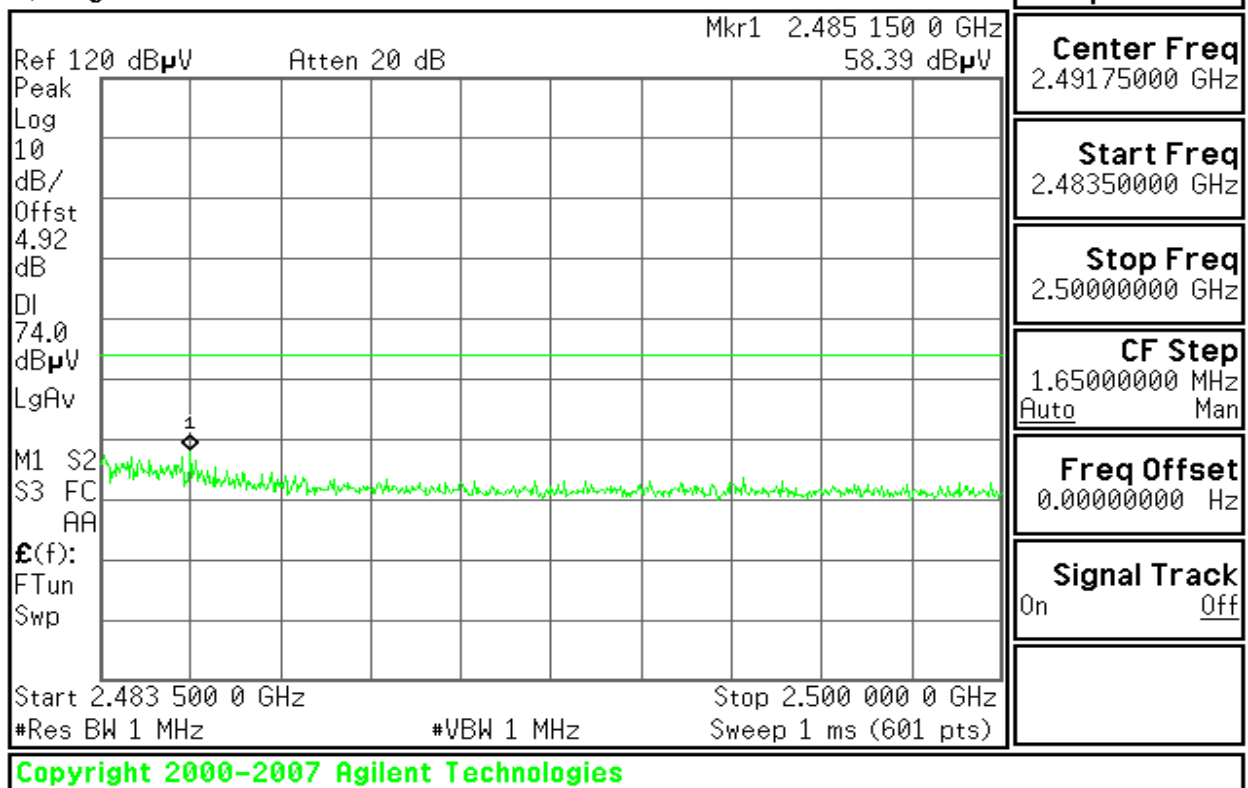
Freq/Channel

Center Freq
2.35000000 GHzStart Freq
2.31000000 GHzStop Freq
2.39000000 GHzCF Step
8.00000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

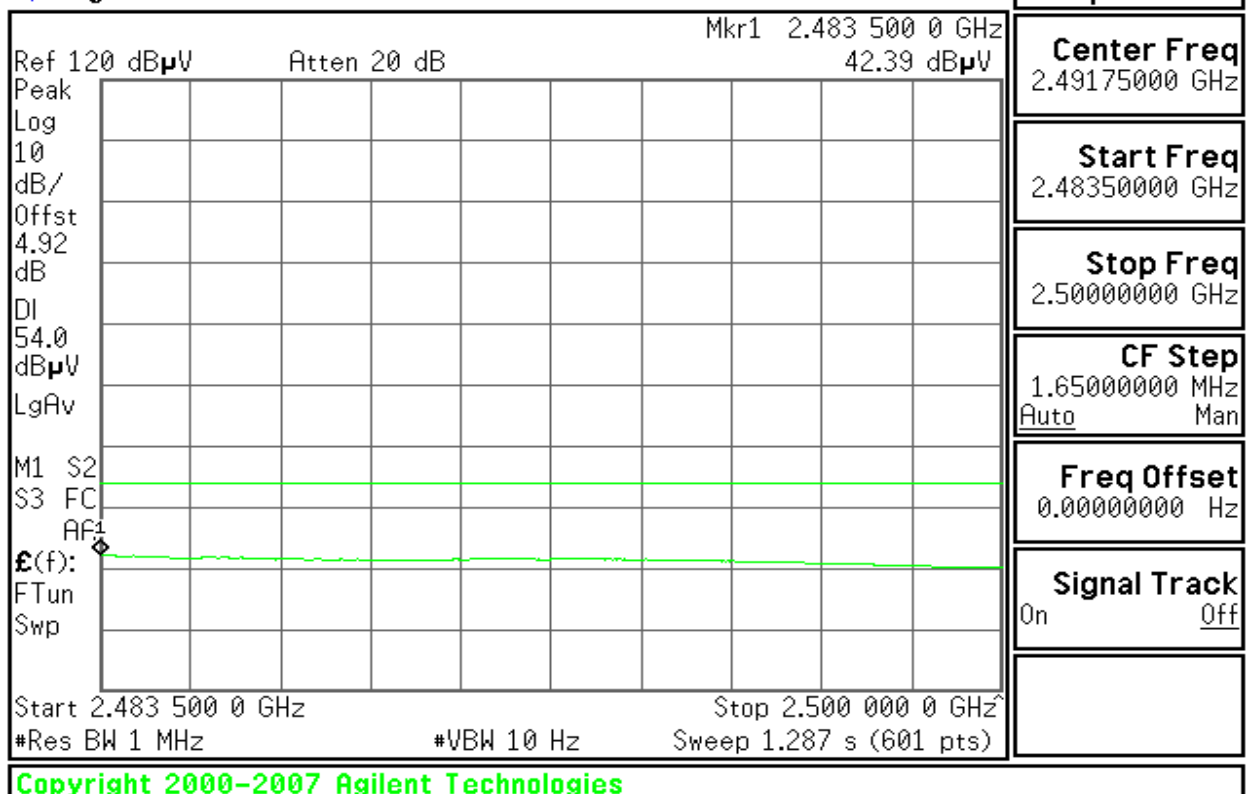
Copyright 2000-2007 Agilent Technologies

**RESTRICTED BANDEDGE (g Mode, High Channel, Horizontal)****PEAK**

Agilent

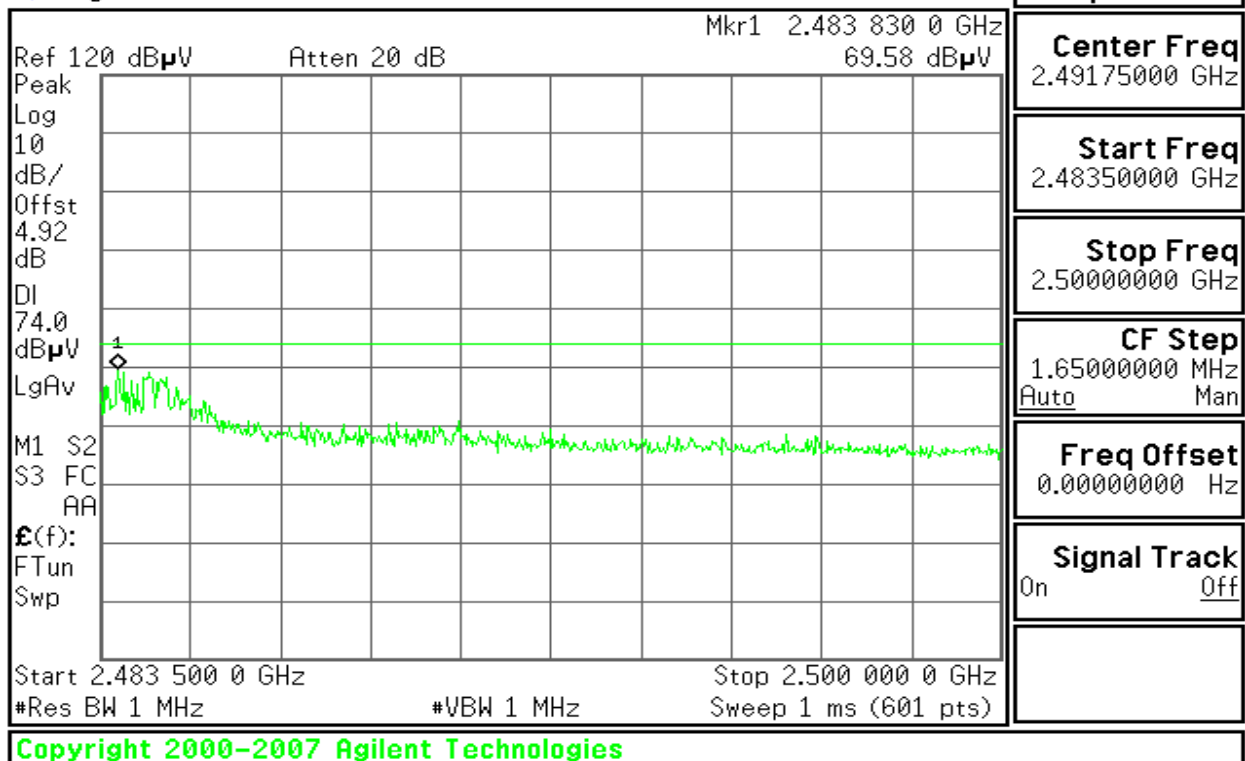
**AVG**

Agilent

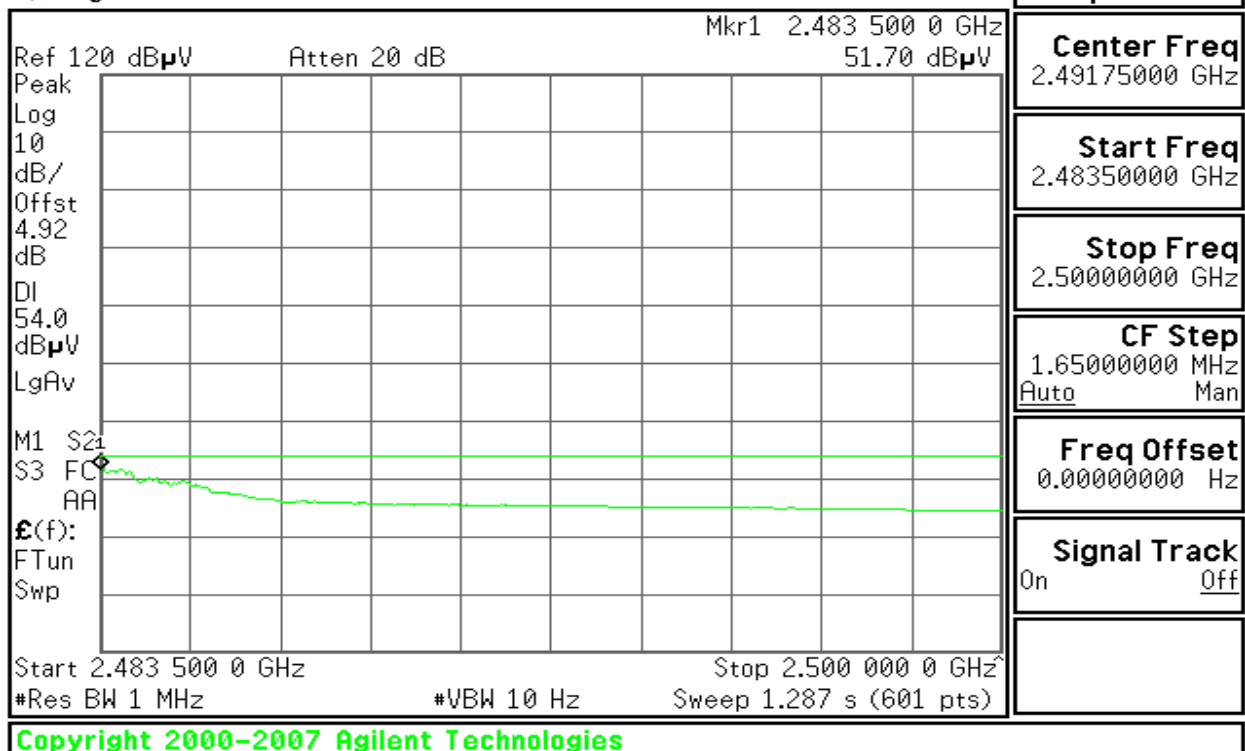


**RESTRICTED BANDEDGE (g Mode, High Channel, Vertical)****PEAK**

Agilent

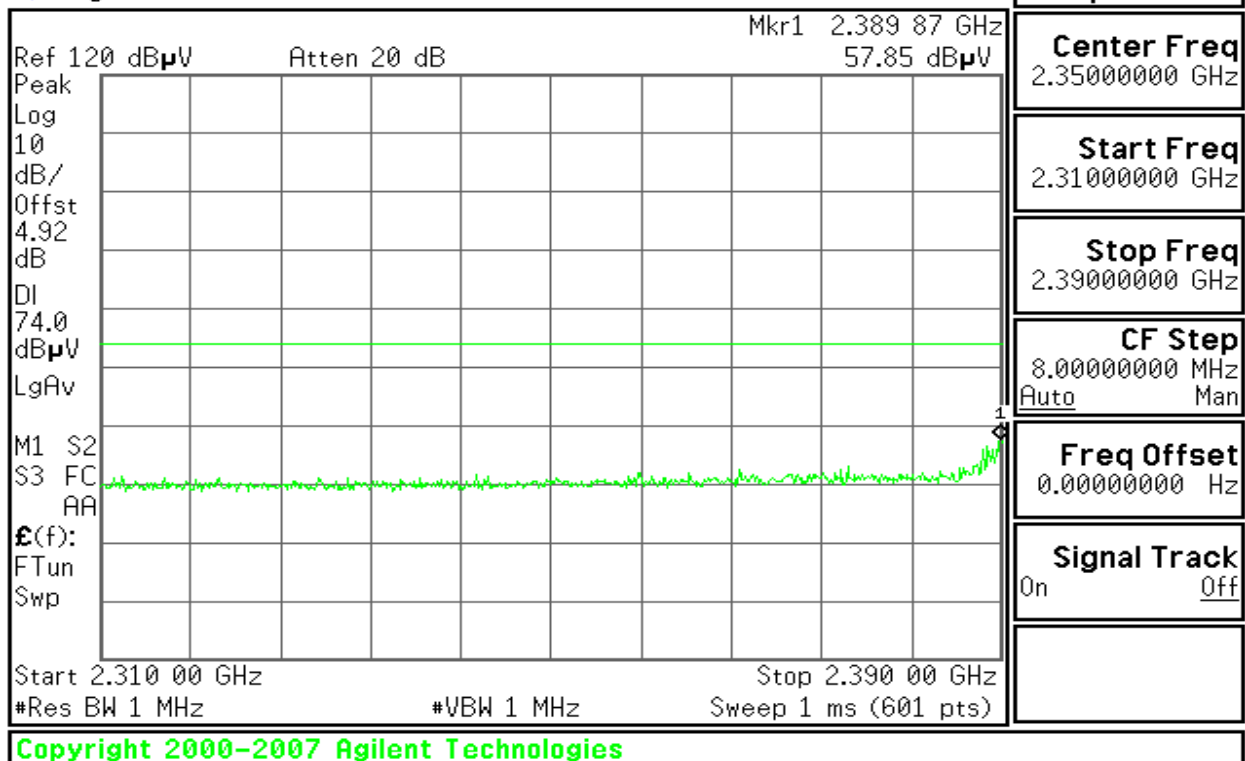
**AVG**

Agilent

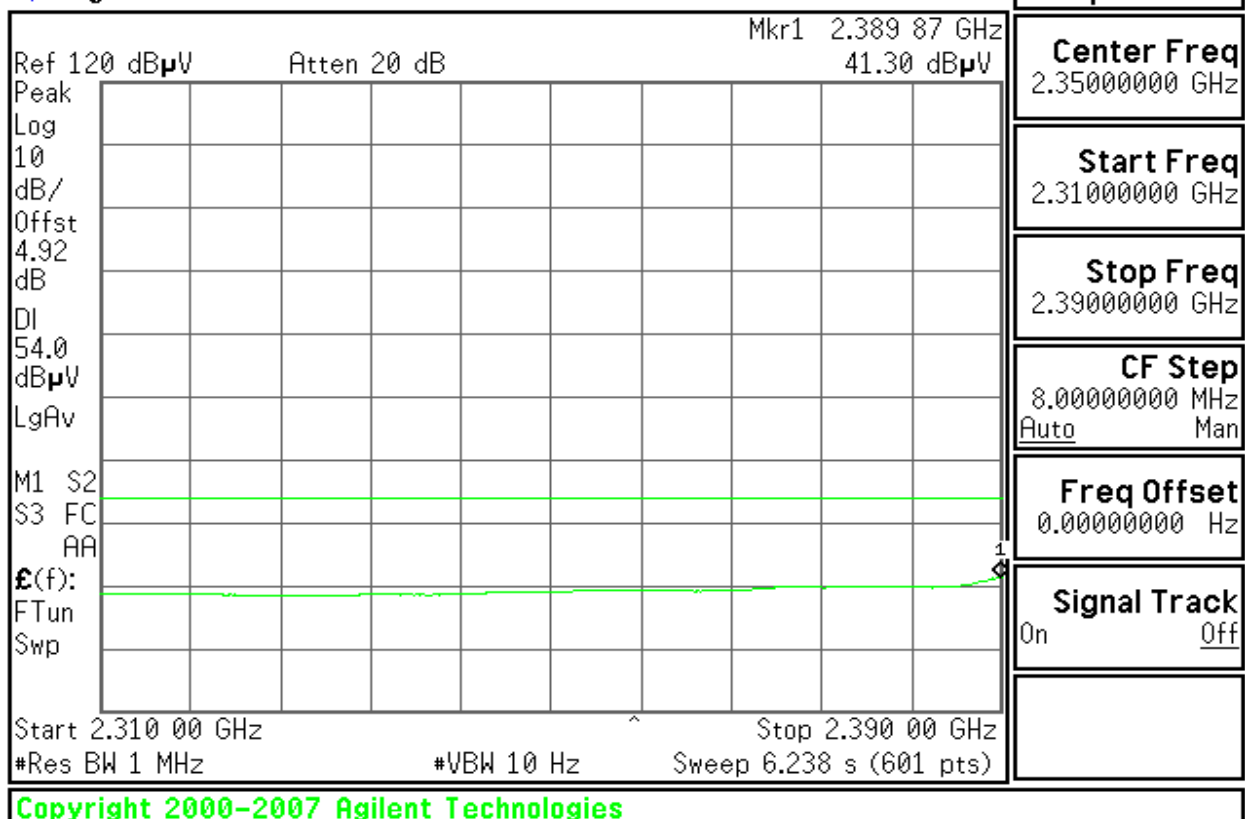


**RESTRICTED BANDEDGE** (draft 802.11n Standard-20 MHz Channel mode, Low Channel, Horizontal)**PEAK**

Agilent

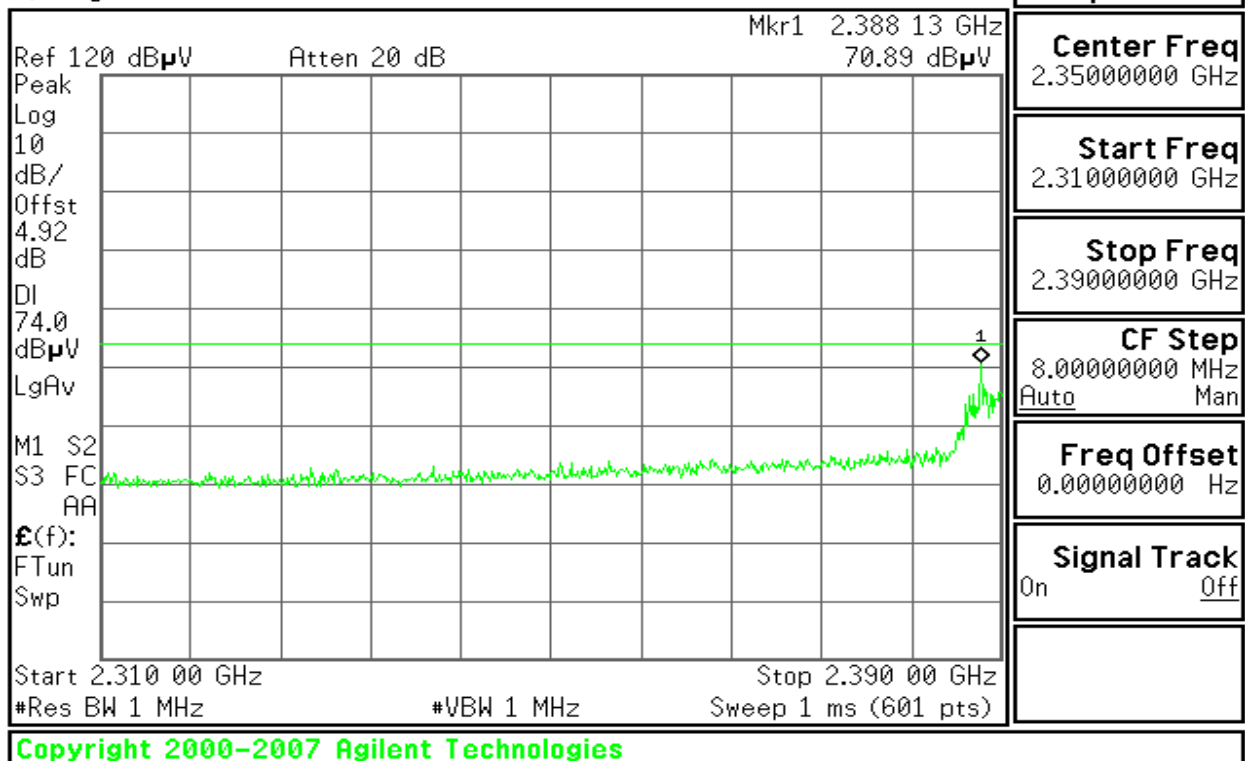
**AVG**

Agilent

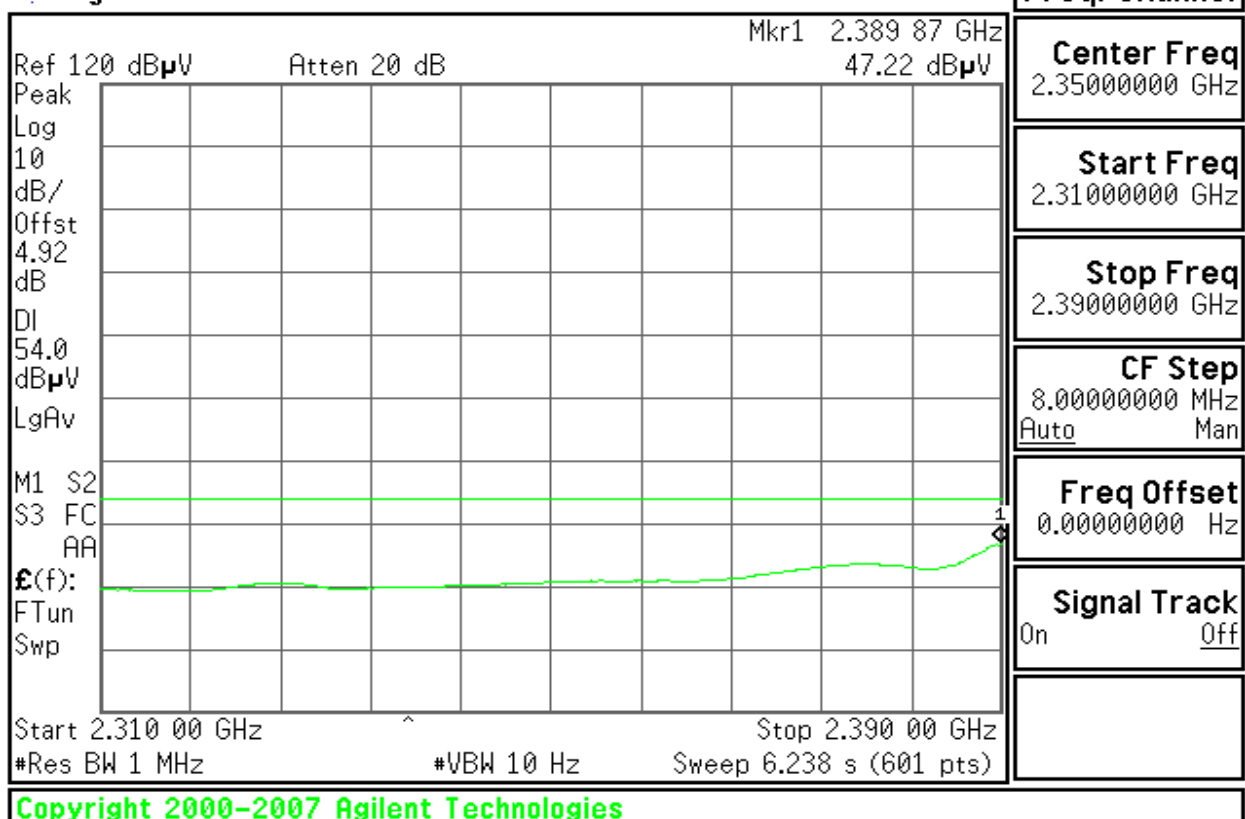


**RESTRICTED BANDEDGE** (draft 802.11n Standard-20 MHz Channel mode, Low Channel, Vertical)**PEAK**

Agilent

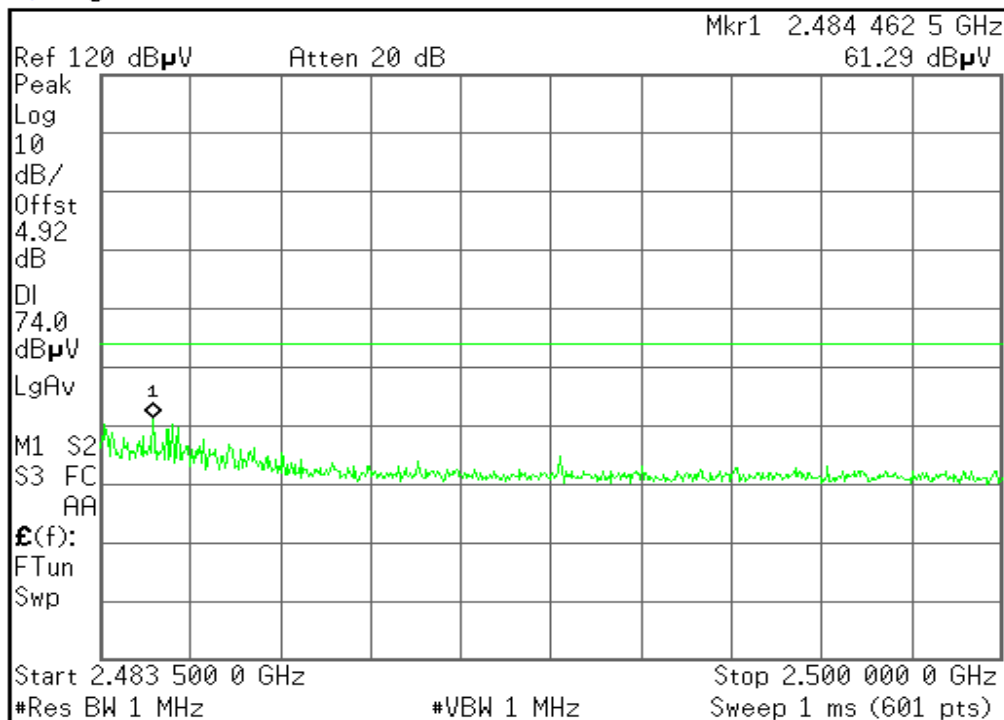
**AVG**

Agilent



**RESTRICTED BANDEDGE** (draft 802.11n Standard-20 MHz Channel mode, High Channel, Horizontal)**PEAK**

Agilent



Peak Search

Next Peak

Next Pk Right

Next Pk Left

Min Search

Pk-Pk Search

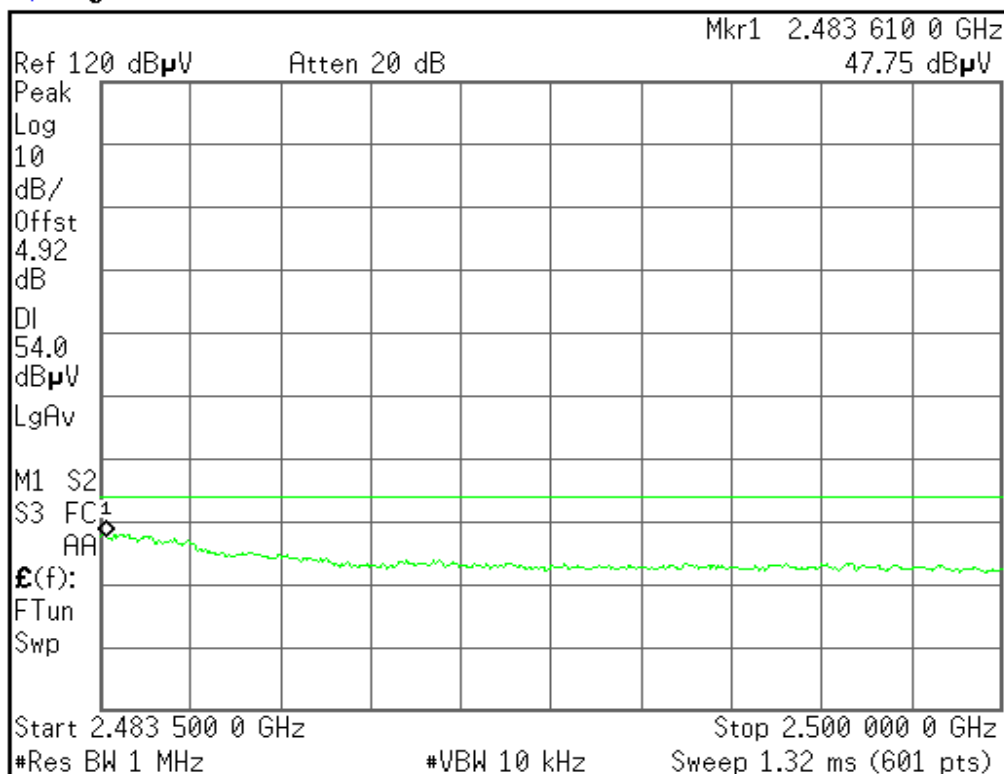
Mkr → CF

More
1 of 2

Copyright 2000–2007 Agilent Technologies

AVG

Agilent



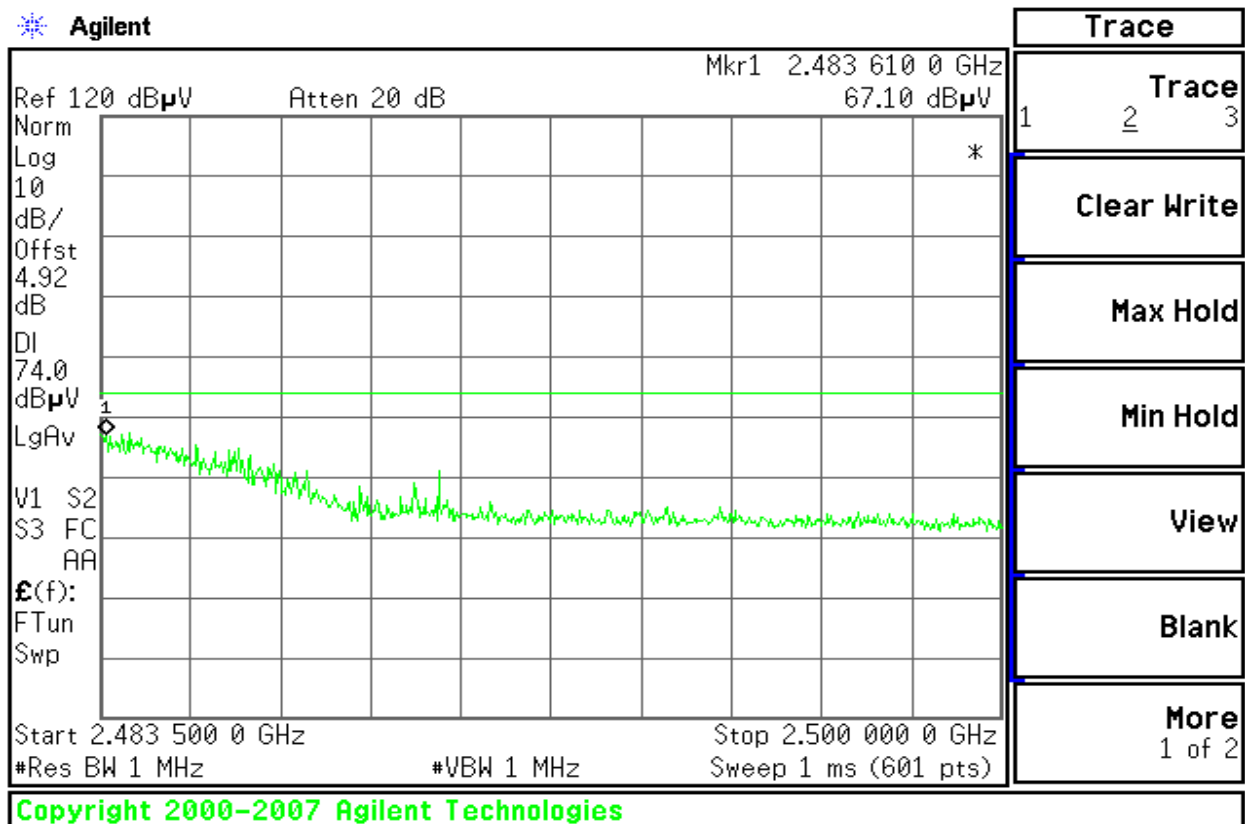
Freq/Channel

Center Freq
2.49175000 GHzStart Freq
2.48350000 GHzStop Freq
2.50000000 GHzCF Step
1.65000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

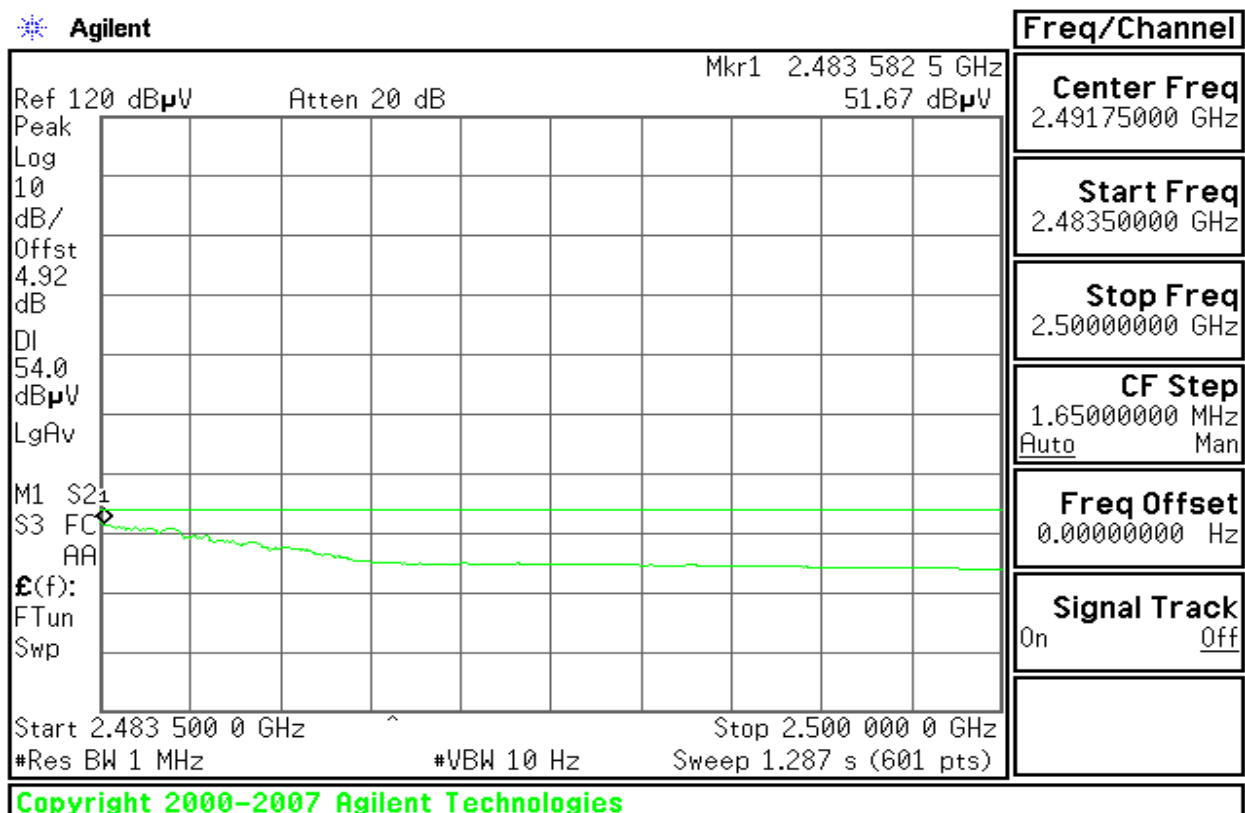
Copyright 2000–2007 Agilent Technologies

RESTRICTED BANDEDGE (draft 802.11n Standard-20 MHz Channel mode, High Channel, Vertical)

PEAK

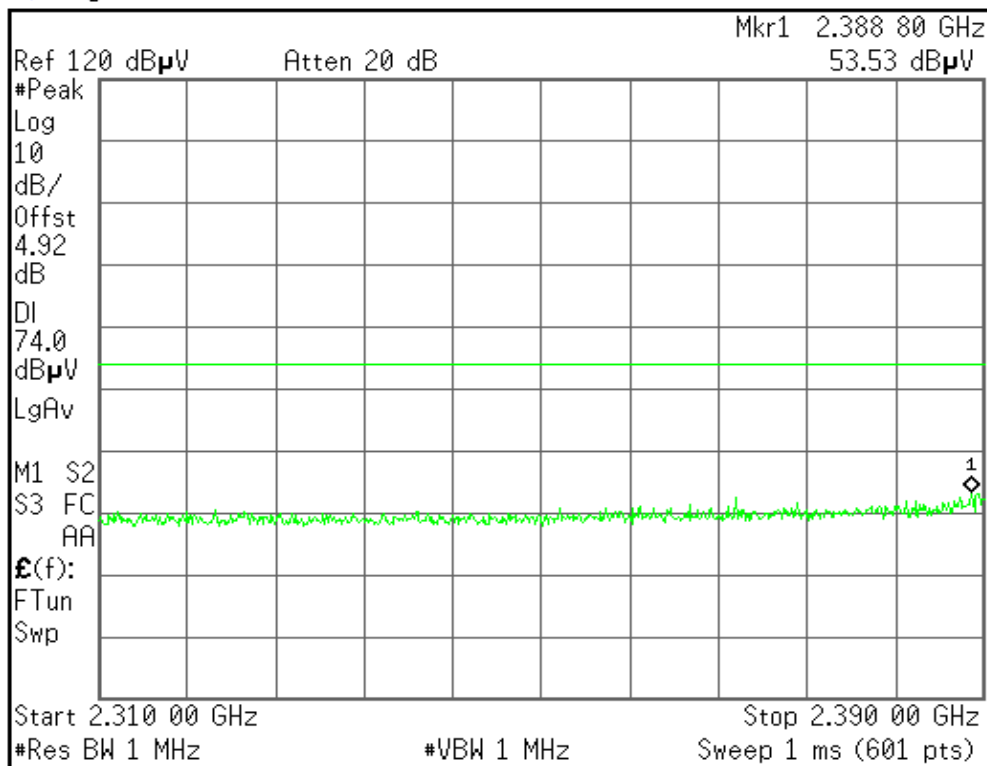


AVG



**RESTRICTED BANDEDGE** (draft 802.11n Wide -40 MHz Channel mode, Low Channel, Horizontal)**PEAK**

Agilent

**Peak Search**

Next Peak

Next Pk Right

Next Pk Left

Min Search

Pk-Pk Search

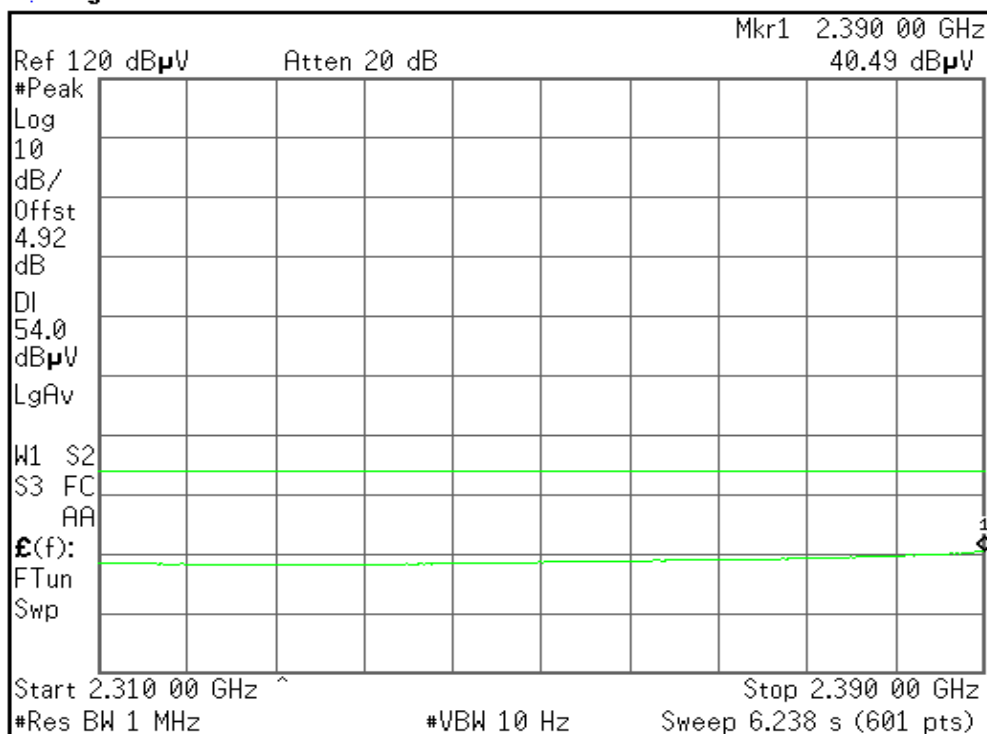
Mkr → CF

More
1 of 2

Copyright 2000–2007 Agilent Technologies

AVG

Agilent

**Display**

Full Screen

Display Line
54.00 dB μ V
On Off

Limits>

Active Fctn
Position>
Center

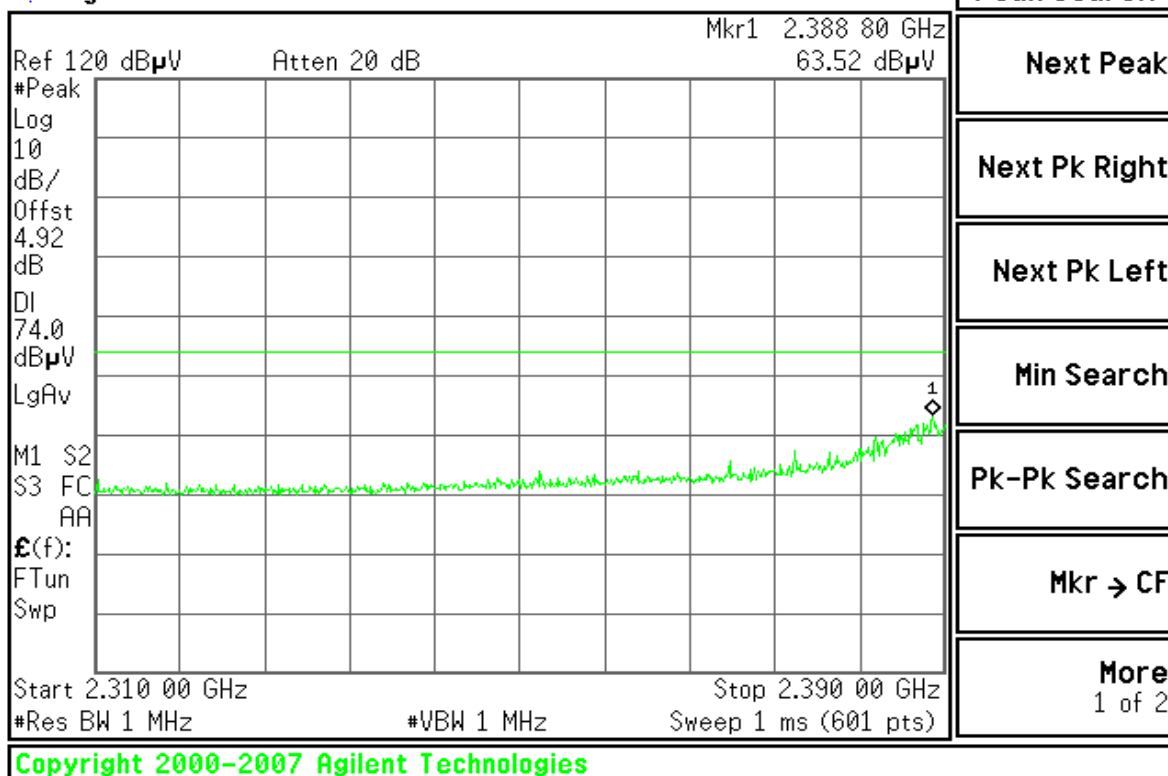
Title>

Preferences>

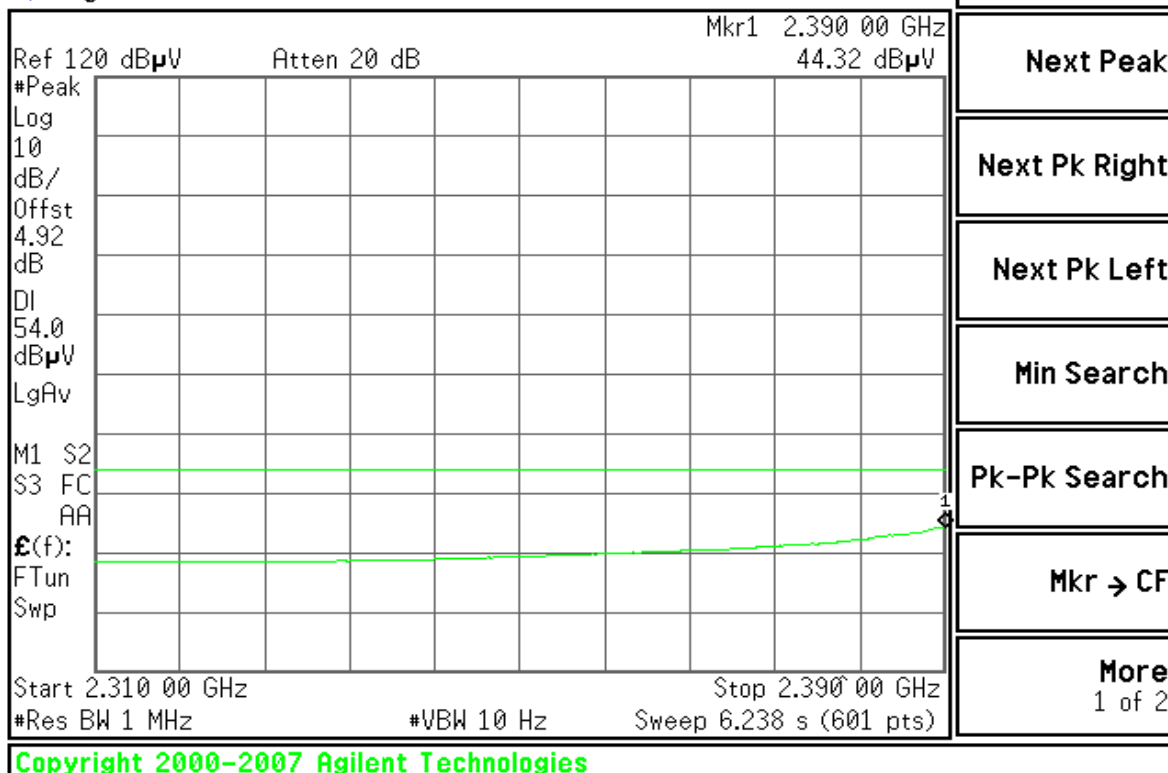
Copyright 2000–2007 Agilent Technologies

**RESTRICTED BANDEDGE** (draft 802.11n Wide -40 MHz Channel mode, Low Channel, Vertical)**PEAK**

Agilent

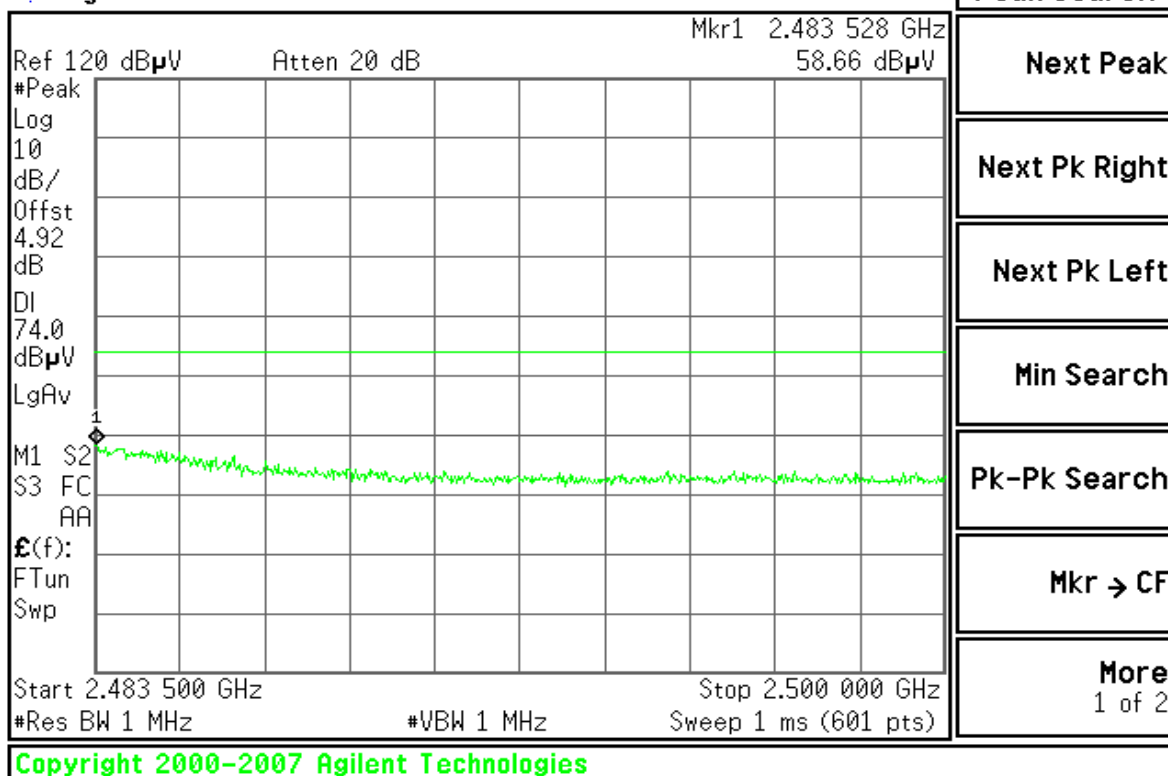
**AVG**

Agilent

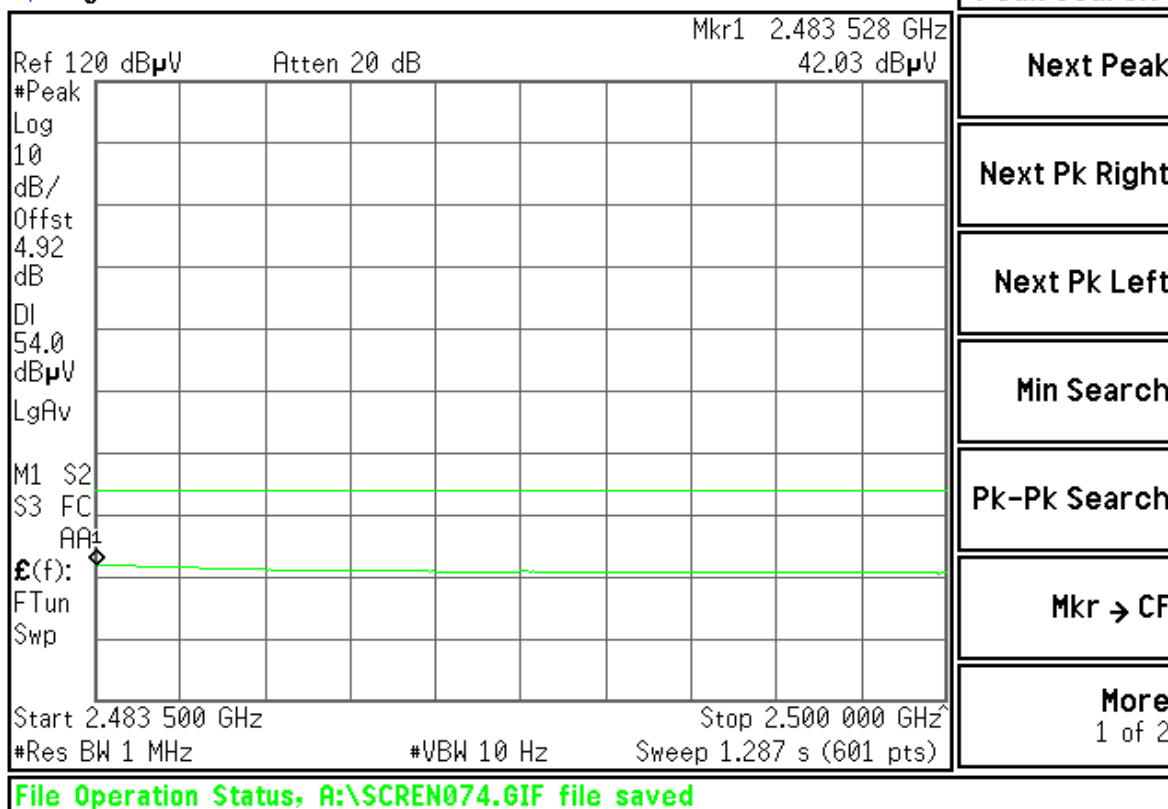


**RESTRICTED BANDEDGE** (draft 802.11n Wide -40 MHz Channel mode, High Channel, Horizontal)**PEAK**

Agilent

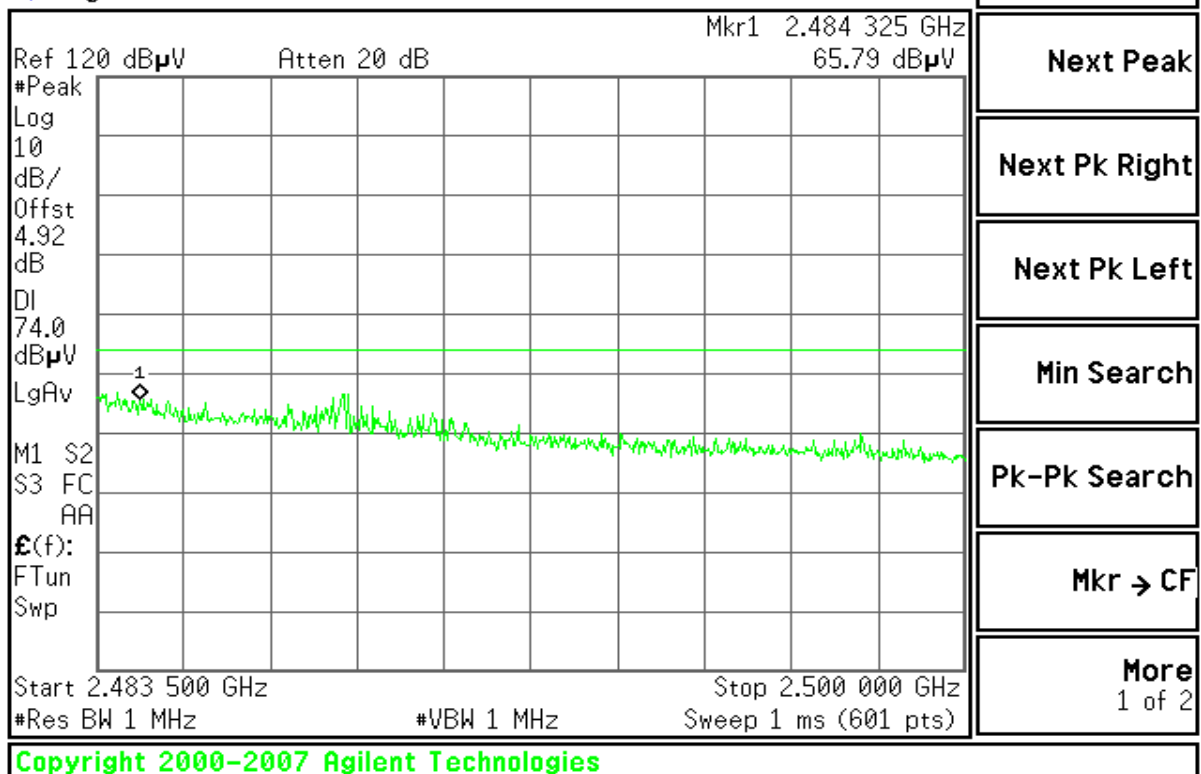
**AVG**

Agilent

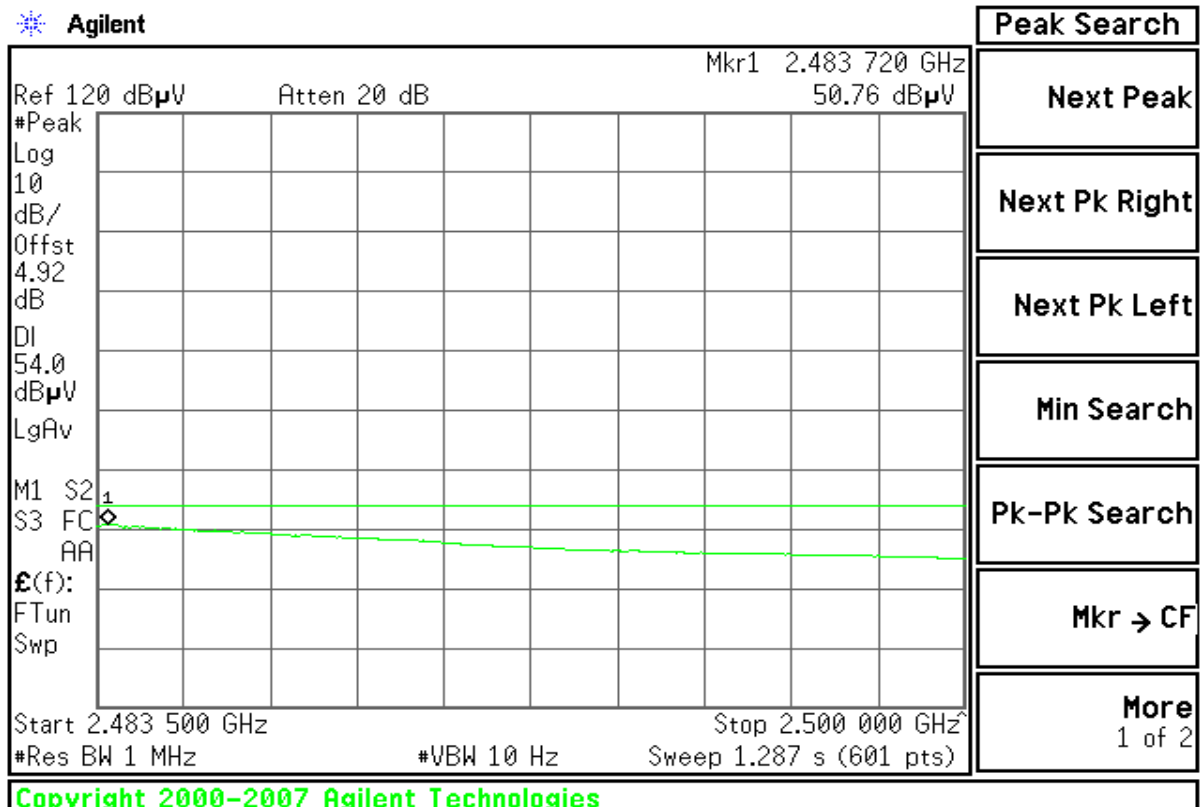


**RESTRICTED BANDEDGE** (draft 802.11n Wide -40 MHz Channel mode, High Channel, Vertical)**PEAK**

Agilent

**AVG**

Agilent



**Below 1GHz****Operation Mode:** Normal Link**Test Date:** August 22, 2008**Temperature:** 22°C**Tested by:** Jeff**Humidity:** 48% RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
45.6914	V	49.17	-12.22	36.95	40.00	-3.05	Peak
76.5331	V	42.79	-14.41	28.38	40.00	-11.62	Peak
155.5311	V	34.53	-9.49	25.04	43.50	-18.46	Peak
733.4669	V	31.90	1.44	33.34	46.00	-12.66	Peak
799.3988	V	30.50	2.38	32.88	46.00	-13.12	Peak
866.7335	V	35.90	3.27	39.17	46.00	-6.83	Peak
36.4930	H	33.96	-5.87	28.09	40.00	-11.91	Peak
77.0741	H	42.67	-14.45	28.22	46.00	-11.78	Peak
143.6273	H	38.03	-9.01	29.02	46.00	-14.48	Peak
733.4669	H	35.63	1.44	37.07	46.00	-8.93	Peak
799.3988	H	34.24	2.38	36.62	46.00	-9.38	Peak
864.4870	H	39.96	3.24	43.20	46.00	-2.80	QP

Remark:

1. Measuring frequencies from 30 MHz to the 1GHz (No emission found between lowest internal used/generated frequency to 30 MHz).
2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using peak/quasi-peak detector mode.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. $\text{Margin (dB)} = \text{Result (dBuV/m)} - \text{Limit (dBuV/m)}$.

**Above 1 GHz****Operation Mode:** TX / IEEE 802.11b / CH Low**Test Date:** August 22, 2008**Temperature:** 22°C**Tested by:** Jeff**Humidity:** 48 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4825.00	V	36.18	---	12.41	48.59	---	74.00	54.00	-5.74	Peak
7236.67	V	38.85	27.71	15.48	54.33	43.19	74.00	54.00	-10.81	Average
4824.33	H	34.36	---	12.41	46.77	---	74.00	54.00	-7.23	Peak
7233.33	H	38.35	27.48	15.47	53.82	42.95	74.00	54.00	-11.05	Average
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser; with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / IEEE 802.11b / CH Mid

Test Date: August 22, 2008

Temperature: 22°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4875.00	V	36.43	---	12.68	49.11	---	74.00	54.00	-4.89	Peak
7316.67	V	37.74	26.17	15.72	53.46	41.89	74.00	54.00	-12.11	Average
N/A										
4876.67	H	35.15	---	12.68	47.83	---	74.00	54.00	-6.17	Peak
7320.67	H	36.82	25.57	15.76	52.58	41.33	74.00	54.00	-12.67	Average
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser; with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Operation Mode:** TX / IEEE 802.11b / CH High**Test Date:** August 22, 2008**Temperature:** 22°C**Tested by:** Jeff**Humidity:** 48 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4924.00	V	35.63	---	12.93	48.56	---	74.00	54.00	-5.44	Peak
7386.33	V	39.64	27.89	15.82	55.46	43.71	74.00	54.00	-10.29	Average
N/A										
4925.33	H	34.28	---	12.93	47.21	---	74.00	54.00	-6.79	Peak
7385.67	H	38.94	26.06	15.82	54.76	41.88	74.00	54.00	-12.12	Average
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser; with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Operation Mode:** TX / IEEE 802.11g / CH Low**Test Date:** August 22, 2008**Temperature:** 24°C**Tested by:** Jeff**Humidity:** 48 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4825.00	V	35.14	---	12.41	47.55	---	74.00	54.00	-6.45	Peak
7235.82	V	36.85	27.28	15.48	52.33	42.76	74.00	54.00	-11.24	Average
N/A										
4824.67	H	34.02	---	12.41	46.43	---	74.00	54.00	-7.57	Peak
7236.45	H	35.30	25.54	15.48	50.78	41.02	74.00	54.00	-12.98	Average
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser; with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / IEEE 802.11g / CH Mid

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4876.34	V	33.61	---	12.68	46.29	---	74.00	54.00	-7.71	Peak
7320.69	V	37.35	25.06	15.76	53.11	40.82	74.00	54.00	-13.18	Average
N/A										
4875.34	H	32.99	---	12.68	45.67	---	74.00	54.00	-8.33	Peak
7318.25	H	37.14	24.04	15.74	52.88	39.78	74.00	54.00	-14.22	Average
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / IEEE 802.11g / CH High

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4926.67	V	33.60	---	12.94	46.54	---	74.00	54.00	-7.46	Peak
7386.66	V	37.38	26.35	15.82	53.20	42.17	74.00	54.00	-11.83	Average
N/A										
4924.58	H	34.38	---	12.93	47.31	---	74.00	54.00	-6.69	Peak
7385.33	H	37.16	25.92	15.82	52.98	41.74	74.00	54.00	-12.26	Average
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser; with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / IEEE 802.11a / CH low

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
10366.33	V	44.22	38.14	2.40	46.62	52.21	74.00	54.00	-13.60	AVG
N/A										
10366.67	H	44.36	37.26	2.40	46.76	39.66	74.00	54.00	-14.34	AVG
N/A										

Remark:

7. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
8. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
9. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
10. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
11. Measurements above show only up to 6 maximum emissions noted, or would be lesser; with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
12. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Operation Mode:** TX / IEEE 802.11a / CH mid**Test Date:** August 22, 2008**Temperature:** 24°C**Tested by:** Jeff**Humidity:** 48 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
10401.67	V	43.36	36.58	2.40	45.76	38.98	74.00	54.00	-19.02	AVG
N/A										
10400.67	H	43.05	37.21	2.40	45.4	39.61	74.00	54.00	-14.39	AVG
N/A										

Remark:

13. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
14. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
15. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
16. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
17. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
18. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Operation Mode:** TX / IEEE 802.11a / CH high**Test Date:** August 22, 2008**Temperature:** 24°C**Tested by:** Jeff**Humidity:** 48 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
10480.00	V	42.67	37.61	2.40	45.07	40.01	74.00	54.00	-13.99	AVG
N/A										
10482.67	H	42.34	37.32	2.40	44.74	39.60	74.00	54.00	-14.40	AVG
N/A										

Remark:

19. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
20. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
21. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
22. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
23. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
24. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / draft 802.11gn Standard-20 MHz Channel mode (Chain 0 + Chain 1+ Chain 2) / CH Low

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4824.33	V	34.48	---	12.41	46.89	---	74.00	54.00	-7.11	Peak
7235.34	V	37.94	26.68	15.48	53.42	42.16	74.00	54.00	-11.84	Average
N/A										
4826.33	H	33.32	---	12.41	45.73	---	74.00	54.00	-8.27	Peak
7234.36	H	36.30	23.17	15.48	51.78	38.65	74.00	54.00	-15.35	Average
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / draft 802.11gn Standard-20 MHz Channel mode (Chain 0 + Chain 1+ Chain 2) / CH Mid

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4876.33	V	34.64	---	12.68	47.32	---	74.00	54.00	-6.68	Peak
7321.23	V	36.89	27.42	15.76	52.65	43.18	74.00	54.00	-10.82	Average
N/A										
4875.64	H	35.00	---	11.02	46.02	---	74.00	54.00	-7.98	Peak
7316.33	H	39.74	27.50	15.72	55.46	43.22	74.00	54.00	-10.78	Average
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / draft 802.11gn Standard-20 MHz Channel mode (Chain 0 + Chain 1+ Chain 2) / CH High

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4923.86	V	37.60	---	12.93	46.52	---	74.00	54.00	-7.48	Peak
7385.67	V	38.30	26.99	15.82	54.12	42.81	74.00	54.00	-11.19	Average
N/A										
4924.67	H	32.74	---	12.93	45.67	---	74.00	54.00	-8.33	Peak
7384.78	H	39.64	28.09	15.82	55.46	43.91	74.00	54.00	-10.09	Average
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / draft 802.11gn Wide-40 MHz Channel mode
(Chain 0 + Chain 1+ Chain 2) / CH Low

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4844.65	V	35.42	---	12.41	47.83	---	74.00	54.00	-6.17	Peak
7385.54	V	39.27	27.80	15.48	54.75	43.28	74.00	54.00	-10.72	Average
N/A										
4844.65	H	34.38	---	12.41	46.79	---	74.00	54.00	-5.29	Peak
7385.62	H	38.55	26.67	15.48	54.03	42.15	74.00	54.00	-11.85	Average
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / draft 802.11gn Wide-40 MHz Channel mode
(Chain 0 + Chain 1+ Chain 2) / CH Mid

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4874.55	V	33.74	---	12.68	46.42	---	74.00	54.00	-7.58	Peak
7313.34	V	36.77	25.38	15.71	52.48	41.09	74.00	54.00	-12.91	Average
N/A										
4874.33	H	32.75	---	12.68	45.43	---	74.00	54.00	-8.57	Peak
7314.56	H	36.26	24.11	15.71	51.97	39.82	74.00	54.00	-14.18	Average
N/A										

Remark:

7. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
8. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
9. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
10. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
11. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
12. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / draft 802.11gn Wide-40 MHz Channel mode
(Chain 0 + Chain 1+ Chain 2) / CH High

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
4905.34	V	37.72	---	12.93	47.07	---	74.00	54.00	-6.93	Peak
7355.64	V	37.89	26.25	15.83	53.72	42.08	74.00	54.00	-11.92	Average
N/A										
4905.82	H	33.58	---	12.93	46.51	---	74.00	54.00	-7.49	Peak
7355.56	H	36.35	24.57	15.82	52.17	40.39	74.00	54.00	-13.61	Average
N/A										

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Operation Mode:** TX / draft 802.11an Standard-20 MHz Channel mode (Chain 0 + Chain 1+ Chain 2) / CH Low**Test Date:** August 22, 2008**Temperature:** 24°C**Tested by:** Jeff**Humidity:** 48 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
11490.33	V	42.61	38.14	5.47	48.08	43.61	74.00	54.00	-10.39	AVG
N/A										
11495.00	H	41.36	37.98	5.47	46.83	43.45	74.00	54.00	-10.55	AVG
N/A										

Remark:

7. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
8. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
9. *Average test would be performed if the peak result were greater than the average limit or as required by the applicant.*
10. *Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
11. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
12. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*



Operation Mode: TX / draft 802.11an Standard-20 MHz Channel mode (Chain 0 + Chain 1+ Chain 2) / CH Mid

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
11570.67	V	40.69	36.57	8.41	49.10	44.98	74.00	54.00	-9.02	AVG
N/A										
11571.33	H	40.47	35.98	8.41	48.88	44.39	74.00	54.00	-9.61	AVG
N/A										

Remark:

7. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
8. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
9. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
10. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
11. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
12. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / draft 802.11an Standard-20 MHz Channel mode (Chain 0 + Chain 1+ Chain 2) / CH High

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
11610.00	V	41.69	35.84	8.41	50.10	44.25	74.00	54.00	-9.75	AVG
N/A										
11612.67	H	40.74	35.74	8.41	49.15	44.15	74.00	54.00	-9.85	AVG
N/A										

Remark:

7. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
8. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
9. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
10. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
11. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
12. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / draft 802.11an Wide-40 MHz Channel mode
(Chain 0 + Chain 1+ Chain 2) / CH Low

Test Date: August 22, 2008

Temperature: 24°C

Tested by: Jeff

Humidity: 48 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
11510.00	V	42.36	37.41	8.41	50.77	45.82	74.00	54.00	-8.18	AVG
N/A										
11510.67	H	41.77	37.01	8.41	50.18	45.42	74.00	54.00	-8.58	AVG
N/A										

Remark:

13. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
14. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
15. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
16. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
17. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
18. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Operation Mode: TX / draft 802.11an Wide-40 MHz Channel mode
(Chain 0 + Chain 1+ Chain 2) / CH High **Test Date:** August 22, 2008

Temperature: 24°C **Tested by:** Jeff

Humidity: 48 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (Peak) (dBuV)	Reading (Average) (dBuV)	Correction Factor (dB/m)	Result (Peak) (dBuV/m)	Result (Average) (dBuV/m)	Limit (Peak) (dBuV/m)	Limit (Average) (dBuV/m)	Margin (dB)	Remark
11590.00	V	41.36	37.25	8.41	49.77	45.66	74.00	54.00	-8.34	AVG
N/A										
11595.00	V	41.74	36.91	8.41	50.15	45.32	74.00	54.00	-8.68	AVG
N/A										

Remark:

7. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
8. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
9. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
10. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
11. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
12. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



POWERLINE CONDUCTED EMISSIONS

LIMIT

According to §15.207(a), except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

* Decreases with the logarithm of the frequency.

Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

**TEST RESULTS**

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Test Data

Operation Mode: Normal Link **Test Date:** August 22, 2008
Temperature: 23°C **Tested by:** Jeff
Humidity: 50% RH

Freq. (MHz)	PEAK. Raw (dBuV)	Q.P. Raw (dBuV)	AVG Raw (dBuV)	Q.P. Limit (dBuV)	AVG Limit (dBuV)	Margin (dB)	Factor (dB)	Remark
0.204	53.21	48.61	41.01	64.47	54.47	-13.46	12.65	Line
0.348	54.46	47.28	35.78	60.33	50.33	-14.55	12.89	Line
0.414	56.48	51.41	44.58	58.46	48.46	-3.88	12.94	Line
0.482	54.37	50.83	43.42	56.51	46.51	-3.09	12.96	Line
1.565	53.87	49.83	37.72	56.00	46.00	-8.28	13.18	Line
2.158	51.31	47.48	33.68	56.00	46.00	-12.32	13.27	Line
0.205	51.99	46.77	39.16	64.43	54.43	-15.27	11.57	Neutral
0.345	51.76	45.26	33.05	60.43	50.43	-17.38	11.68	Neutral
0.411	54.66	50.08	43.93	58.55	48.55	-4.62	11.69	Neutral
0.482	52.70	49.13	41.79	56.51	46.51	-4.72	11.71	Neutral
1.046	52.34	45.46	34.08	56.00	46.00	-11.92	11.81	Neutral
2.164	51.96	47.34	33.54	56.00	46.00	-12.46	11.92	Neutral

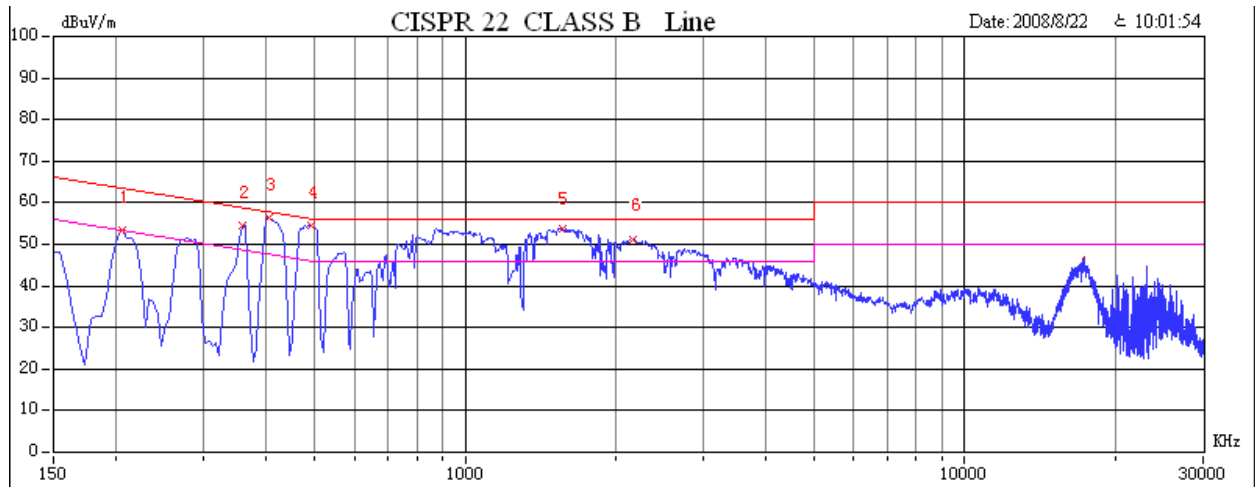
Remark:

1. Measuring frequencies from 0.15 MHz to 30MHz.
2. The emissions measured in frequency range from 0.15 MHz to 30MHz were made with an instrument using Quasi-peak detector and average detector.
3. The IF bandwidth of SPA between 0.15MHz and 30MHz was 10 kHz; the IF bandwidth of Test Receiver between 0.15MHz and 30MHz was 9 kHz;
4. L1 = Line One (Live Line) / L2 = Line Two (Neutral Line)



Test Plots

Conducted emissions (Line 1)



Conducted emissions (Line 2)

