FCC RF Test Report

Product Name: Vodafone Mobile Wi-Fi

Product Model: R206

Report Number: SYBH(Z-RF)009022013-2002

FCC ID: QISR206

Reliability Laboratory of Huawei Technologies Co., Ltd.

Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

Tel: +86 755 28780808 Fax: +86 755 89652518

Notice

1. The laboratory has Passed the accreditation by China National Accreditation Service for Conformity Assessment (CNAS). The accreditation number is L0310.

2. The laboratory has Passed the accreditation by The American Association for Laboratory Accreditation (A2LA). The accreditation number is 2174.01.

3. The laboratory has been listed by the US Federal Communications Commission to perform electromagnetic emission measurements. The site recognition number is 97456.

4. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 6369A-2.

5. The laboratory has been listed by the VCCI to perform EMC measurements. The accreditation numbers of test site No.1 are R-2364, G-415, C-2583, and T-256, and the accreditation numbers of test site No.2 are R-3760, G-485, C-4210 and T-1237.

6. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.

7. The test report is invalid if there is any evidence of erasure and/or falsification.

8. The test report is only valid for the test samples.

9. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

Applicant:	Huawei Technologies Co., Ltd.
Address:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C
Product Name:	Vodafone Mobile Wi-Fi
Product Model:	R206

Date of Receipt Sample:	2013-03-05
Start Date of Test:	2013-03-08
End Date of Test:	2013-03-15

Test Result: Pass

Approved by Senior Engineer:	2013-03-21	Dai Linjun	
	Date	Name	Signature

Prepared by:	2013-03-21	Ling Kaiyun	
	Date	Name	Signature

Modification Record

No.	Last Report No.	Modification Description

CONTENT

1 General Information

1.1 Applied Standard

Applied Rules:	47 CFR FCC Part 2, Subpart J (2012 Edition) 47 CFR FCC Part 15, Subpart C (2012 Edition)
Test Method:	FCC KDB 558074 D01 DTS Meas Guidance v02 FCC KDB 662911 D01 Multiple Transmitter Output v01r02

1.2 Test Location

Test Location 1:	Reliability Laboratory of Huawei Technologies Co., Ltd.
Address:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

1.3 Test Environment Condition

Ambient Temperature:	19.5to 25 °C
Ambient Relative Humidity:	40 to 55 %
Atmospheric Pressure:	Not applicable

2 Test Summary

Test Item	FCC Part No.	Requirements	Test Result	Verdict (NOTE 2)
DTS (6 dB) Bandwidth	15.247(a)(2)	≥ 500 kHz.	Appendix A	Pass
Maximum Peak Conducted Output Power	15.247(b)(3)	For directional gain: < 30 dBm – (G[dBi] – 6 [dB]), peak; Otherwise: < 30 dBm, peak.	Appendix B	Pass
Maximum Power Spectral Density Level	15.247(e)	For directional gain: < 8 dBm/3 kHz – (G[dBi] – 6 [dB]), peak. Otherwise: < 8 dBm/3 kHz, peak.	Appendix C	Pass
Band Edges Compliance	15.247(d)	< -20 dBr/100 kHz if total peak power ≤ power limit.	Appendix D	Pass
Unwanted Emissions into Non-Restricted Frequency Bands	15.247(d)	< -20 dBr/100 kHz if total peak power ≤ power limit.	Appendix E	Pass
Unwanted Emissions into Restricted Frequency Bands (Conducted)	15.247(d) 15.209 (NOTE 1)	FCC Part 15.209 field strength limit;	Appendix F	Pass
Unwanted Emissions into Restricted Frequency Bands (Radiated)				
AC Power Line Conducted Emissions	15.207	FCC Part 15.207 conducted limit;	Appendix G	Pass

NOTE 1: According to KDB 558074, antenna-port conducted measurements are acceptable as an alternative to radiated measurements for demonstrating compliance to the limits in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case emissions will also be required.

NOTE 2: For the verdict, the “N/A” denotes “not applicable”, the “N/T” denotes “not tested”.

3 Description of the Equipment under Test (EUT)

3.1 General Description

R206 HSPA+/2100M/900M/EDGE Quad Band is subscriber equipment in the UMTS/GSM system. R206 implement such functions as RF signal receiving/ transmitting, HSPA+/WCDMA protocol processing, data service etc, and it can act as a Wi-Fi hotspot for user accessing to internet. Externally it provides USB interface (to connect to the notebook etc.), USIM card interface. R206 has 3 internal antennas as default Wi-Fi, diversity, and main antenna.

NOTE: Only WIFI test data included in this report.

3.2 EUT Identity

NOTE: Unless otherwise noted in the report, the functional boards installed in the units shall be selected from the below list, but not means all the functional boards listed below shall be installed in one unit.

3.2.1 Board

Board		
Hardware Version	*Software version*	Description
CH1E5220SM	21.143.05.00.11	Main board

3.2.2 Adapter

Name	Manufacture	Serials number	Description
Adapter	Huawei Technologies Co., Ltd.	HW-050100U1W	AC/DC adapter,0degC-45degC,100V-240V,5.0V/1.0A,2PIN/DC USB2.0,HUAWEI LOGO,ERP V

3.2.3 Battery

Name	Manufacture	Serials number	Description
Li-ion Battery	Huawei Technologies Co., Ltd.	HB5A2H	Rated capacity: 1150mAh Nominal Voltage: ⎓ +3.7V Charging Voltage: ⎓ +4.2V

3.2.4 USB Cable

Name	Manufacture	Description
USB Cable	Huawei Technologies Co., Ltd.	Terminal Accessory, Data Cable, Usb A male to Micro Usb , Terminal Dedicated

3.3 Technical Description

Characteristics	Description			
IEEE 802.11 WLAN Mode Supported	☒ 802.11b (20 MHz channel bandwidth), ☒ 802.11g (20 MHz channel bandwidth) ☒ 802.11n (20 MHz channel bandwidth), ☐ 802.11n (40 MHz channel bandwidth)			
TX/RX Operating Range	2412-2462 MHz band	fc = 2407 MHz + N * 5 MHz, where: - fc = “Operating Frequency” in MHz, - N = “Channel Number” with the range from 1 to 11 for the 20 MHz channel bandwidth, or 3 to 9 for the 40 MHz channel bandwidth.		
Data Rate	802.11b	1 Mbps, 2 Mbps, 5.5 Mbps, 11 Mbps		
	802.11g	6 Mbps, 9 Mbps, 12 Mbps, 18 Mbps, 24 Mbps, 36 Mbps, 48 Mbps, 54 Mbps		
	802.11n (SISO)	MCS 0 to MCS 7		
Modulation Type	DBPSK/DQPSK/CCK (DSSS), BPSK/QPSK/16QAM/64QAM (OFDM).			
Emission Designator	8M06G1D (for 802.11b mode), 16M3G7D (for 802.11g mode), 17M7G7D (for 802.11n with 20MHz mode)			
TX Power Control	☒ Supported, ☐ Not Supported			
Standby Mode	☐ Supported, ☒ Not Supported			
Equipment Type	☐ Stand-alone equipment, ☐ Plug-in radio device, ☒ Combined equipment			
Antenna	Description	Isotropic Antenna		
	Type	☐ External, ☒ Integrated		
	Ports	☒ Ant 1, ☐ Ant 2, ☐ Ant 3		
	Smart System	☒ SISO (for 802.11b/g/n), ☐ MIMO (for 802.11n): 2 Tx & 2 Rx, ☐ Diversity (for 802.11b/g) : Tx & Rx		
	Gain	0.58dBi (per antenna port, max.)		
	Remark	When the EUT is put into service, the practical maximum antenna gain should NOT exceed the value as described above.		
Power Supply	Type	☒ AC/DC Adapter	☐ PoE:	☐ Other:

4 General Test Conditions / Configurations

4.1 Test Modes

NOTE: Typical working modes for each IEEE 802.11 mode are selected to perform tests.

Test Mode	Test Modes Description
11B	IEEE 802.11b with data rate of 11 Mbps using SISO mode.
11G	IEEE 802.11g with data rate of 54 Mbps using SISO mode.
11N20	IEEE 802.11n with data date of MCS7 and bandwidth of 20 MHz using SISO mode.

4.2 EUT Configurations

4.2.1 General Configurations

Configuration	Description
Test Antenna Ports	Until otherwise specified, - All TX tests are performed at all TX antenna ports of the EUT, and - All RX tests are performed at all RX antenna ports of the EUT.
Multiple RF Sources	Other than the tested RF source of the EUT, other RF source(s) are disabled or shutdown during measurements.

4.2.2 Customized Configurations

Test Mode	RF Ch.	Antenna Port	TX Freq. [MHz]	RX Freq. [MHz]	Ch. BW [MHz]	Power Conf., per Port
11B	L	Ant 1	Ch No. 1 / 2412 MHz	---	20	14
11B	M	Ant 1	Ch No. 6 / 2437 MHz	---	20	14
11B	H	Ant 1	Ch No. 11 / 2462 MHz	---	20	14
11G	L	Ant 1	Ch No. 1 / 2412 MHz	---	20	11
11G	M	Ant 1	Ch No. 6 / 2437 MHz	---	20	11
11G	H	Ant 1	Ch No. 11 / 2462 MHz	---	20	11
11N20	L	Ant 1	Ch No. 1 / 2412 MHz	---	20	9
11N20	M	Ant 1	Ch No. 6 / 2437 MHz	---	20	9
11N20	H	Ant 1	Ch No. 11 / 2462 MHz	---	20	9

4.3 Test Environments

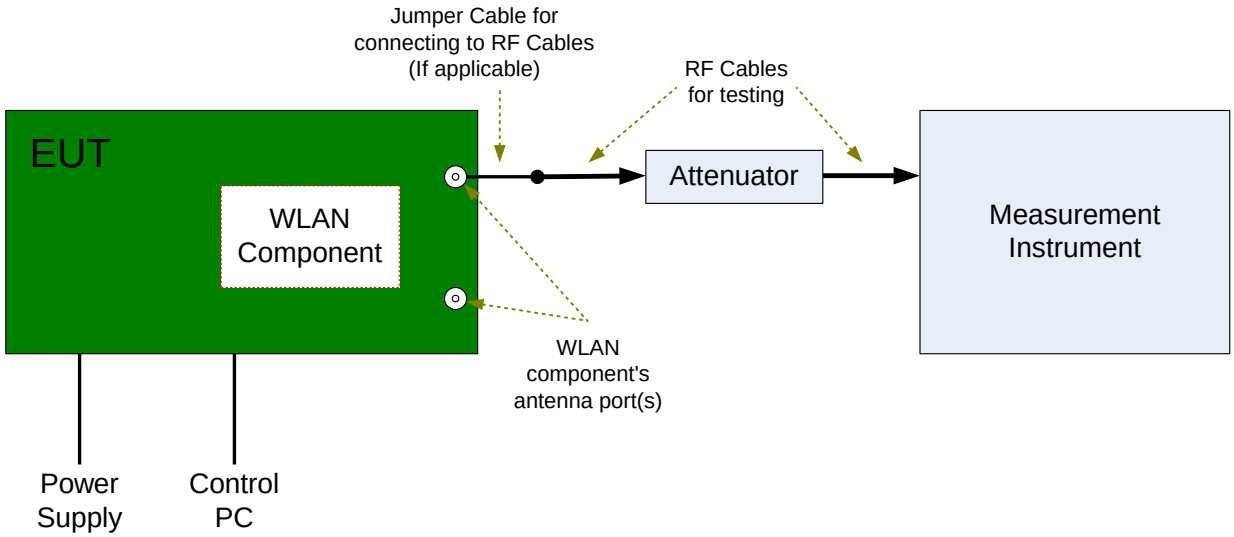
NOTE: The values used in the test report may be stringent than the declared.

Environment Parameter	Selected Values During Tests		
	Temperature	Voltage	Relative Humidity
NTNV	Ambient	3.7V	Ambient

4.4 Test Setups

4.4.1 Test Setup 1

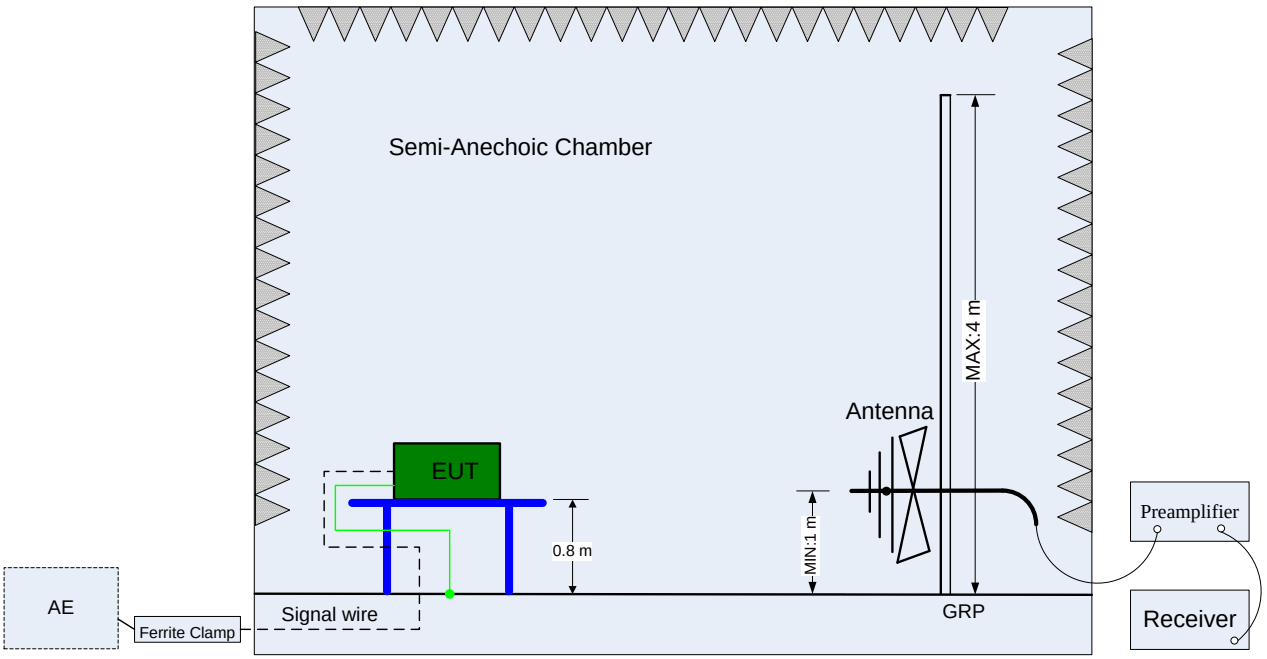
The WLAN component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



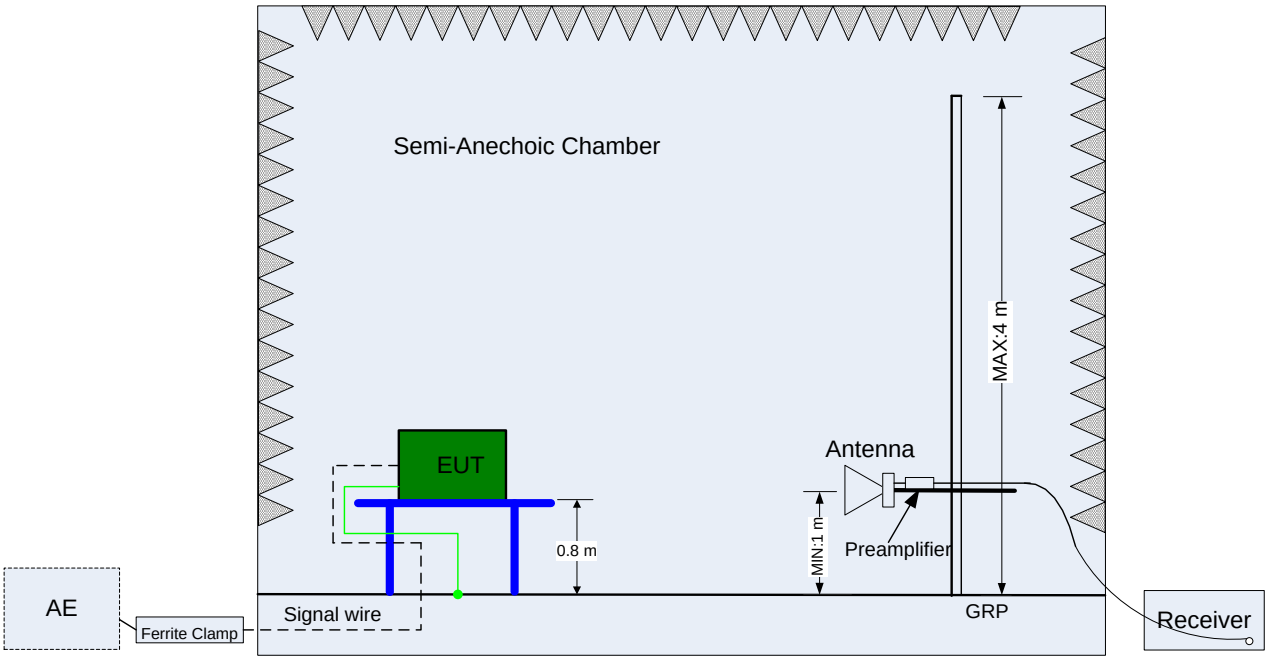
4.4.2 Test Setup 2

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.4. The test distance is 3m.The setup is according to ANSI C63.4 and CAN/CSA-CEI/IEC CISPR 22.

The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).



(Below 1 GHz)

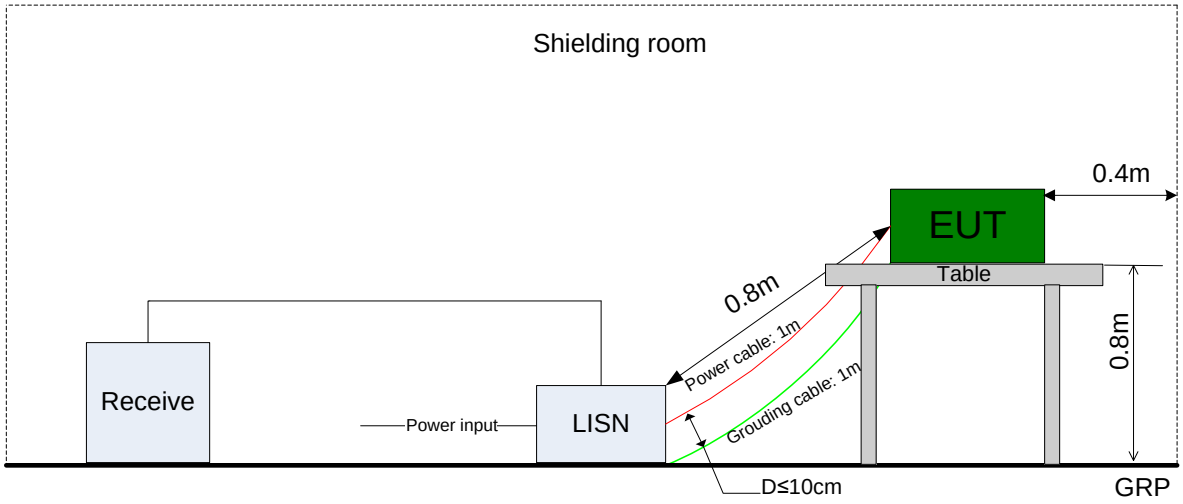


(Above 1 GHz)

4.4.3 Test Setup 3

The mains cable of the EUT (maybe per AC/DC Adapter) must be connected to LISN. The LISN shall be placed 0.8 m from the boundary of EUT and bonded to a ground reference plane for LISN mounted on top of the ground reference plane. This distance is between the closest points of the LISN and the EUT. All other units of the EUT and associated equipment shall be at least 0.8m from the LISN.

Ground connections, where required for safety purposes, shall be connected to the reference ground point of the LISN and, where not otherwise provided or specified by the manufacturer, shall be of same length as the mains cable and run parallel to the mains connection at a separation distance of not more than 0.1 m.



4.5 Test Conditions

Test Case	Test Conditions	
	Configuration	Description
DTS (6 dB) Bandwidth	Measurement Method	FCC KDB 558074 §7.2 Option 2.
	Test Environment	NTNV
	Test Setup	Test Setup 1
	EUT Configuration	11B_L, 11B_M, 11B_H 11G_L, 11G_M, 11G_H 11N20_L, 11 N20_M, 11 N20_H
Maximum Peak Conducted Output Power	Measurement Method	FCC KDB 558074 §8.1 .2 Option 2 (integrated band power method).
	Test Environment	NTNV
	Test Setup	Test Setup 1
	EUT Configuration	11B_L, 11B_M, 11B_H 11G_L, 11G_M, 11G_H 11N20_L, 11 N20_M, 11 N20_H
Maximum Power Spectral Density Level	Measurement Method	FCC KDB 558074 §9.1 Option 1 (peak PSD).
	Test Environment	NTNV
	Test Setup	Test Setup 1
	EUT Configuration	11B_L, 11B_M, 11B_H 11G_L, 11G_M, 11G_H 11N20_L, 11 N20_M, 11 N20_H
Unwanted Emissions into Non-Restricted Frequency Bands	Measurement Method	FCC KDB 558074 §10.1.
	Test Environment	NTNV
	Test Setup	Test Setup 1
	EUT Configuration	11B_L, 11B_M, 11B_H 11G_L, 11G_M, 11G_H 11N20_L, 11 N20_M, 11 N20_H
Unwanted Emissions into Restricted Frequency Bands (Conducted)	Measurement Method	FCC KDB 558074 §10.2, Conducted (antenna-port).
	Test Environment	NTNV
	Test Setup	Test Setup 1
	EUT Configuration	11B_L, 11B_M, 11B_H 11G_L, 11G_M, 11G_H 11N20_L, 11 N20_M, 11 N20_H
Unwanted Emissions into Restricted Frequency Bands (Radiated)	Measurement Method	ANSI C63.10; FCC KDB 558074 §10.2, Radiated
	Test Environment	NTNV
	Test Setup	Test Setup 2
	EUT Placement	☒ Flatwise, ☐ Upright, ☐ Hung
	EUT Configuration	(1) 30 MHz to 1 GHz: 11B_L (Worst Conf.). (2) 1 GHz to 3 GHz: 11B_L, 11B_H

Test Case	Test Conditions	
	Configuration	Description
		11G_L, 11G_H 11N20_L, 11 N20_H (3) 3 GHz to 18 GHz: 11B_L (Worse Conf.), 11B_H (Worse Conf.). (4) 18 GHz to 26.5 GHz: 11B_L (Worse Conf.), 11B_H (Worse Conf.).
AC Power Line Conducted Emissions	Measurement Method	AC mains conducted.
	Test Environment	NTNV
	Test Setup	Test Setup 3
	EUT Configuration	11B_L (Worst Conf.).

5 Main Test Instruments

Equipment Name	Manufacturer	Model	Serial Number	Cal Date	Cal- Due
Power supply	KEITHLEY	2303	1288003	2012-11-19	2014-11-18
Spectrum Analyzer	Agilent	E4440A	MY48250119	2012-08-20	2013-08-19
Signal Analyzer	R&S	FSQ31	200021	2012-11-09	2013-11-08
Spectrum Analyzer	Agilent	N9030A	MY49431698	2012-11-09	2013-11-08
Temperature Chamber	WEISS	WKL64	56246002940010	2013-01-29	2014-01-28
Signal generator	Agilent	E8257D	MY49281095	2012-09-14	2013-09-13
Spectrum analyzer	R&S	FSU3	200474	2013-01-29	2014-01-28
Spectrum analyzer	R&S	FSU43	100144	2013-01-29	2014-01-28
Double-Ridged Waveguide Horn Antenna (1G~18GHz)	R&S	HF907	100304	2013-02-02	2014-02-01
Double-Ridged Waveguide Horn Antenna (1G~18GHz)	R&S	HF907	100391	2011-10-12	2013-10-11
Trilog Broadband Antenna (30M~3GHz)	SCHWARZBECK	VULB 9163	9163-521	2011-12-09	2013-12-08
Pyramidal Horn Antenna(18GHz-26-5 GHz)	ETS-Lindgren	3160-09	00091989	2011-10-20	2013-10-19

END

Appendix for Test report

Appendix A: DTS (6 dB) Bandwidth

In this document, the "DTS6dBBW" refers to the measured "DTS (6 dB) Bandwidth" value. In this Appendix, the "fc(DTS6dBBW)" refers to the centre of the measured "DTS6dBBW". The introduction of the "fc(DTS6dBBW)" is due to that other measurements use it as the spectrum analyzer setting.

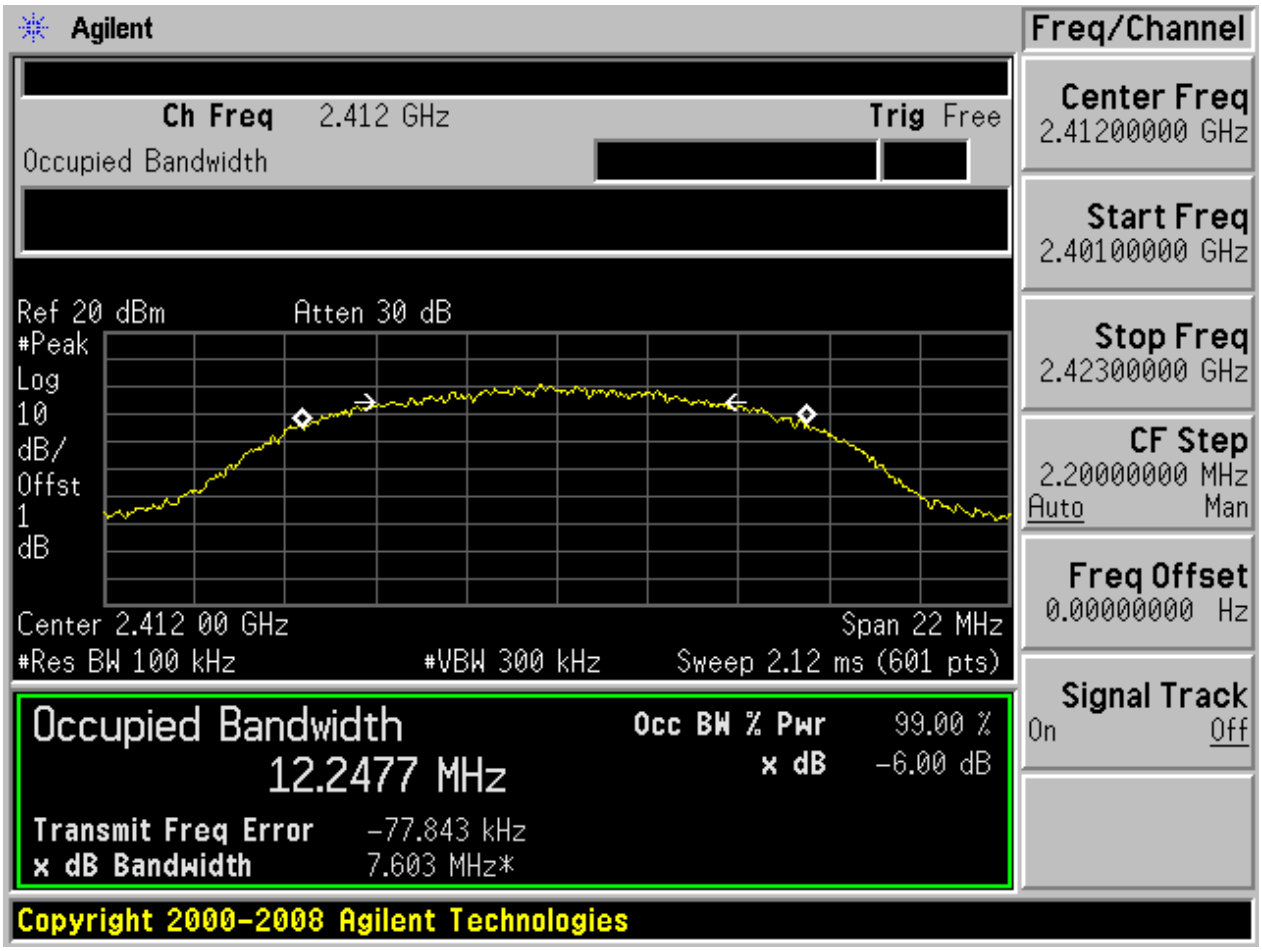
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

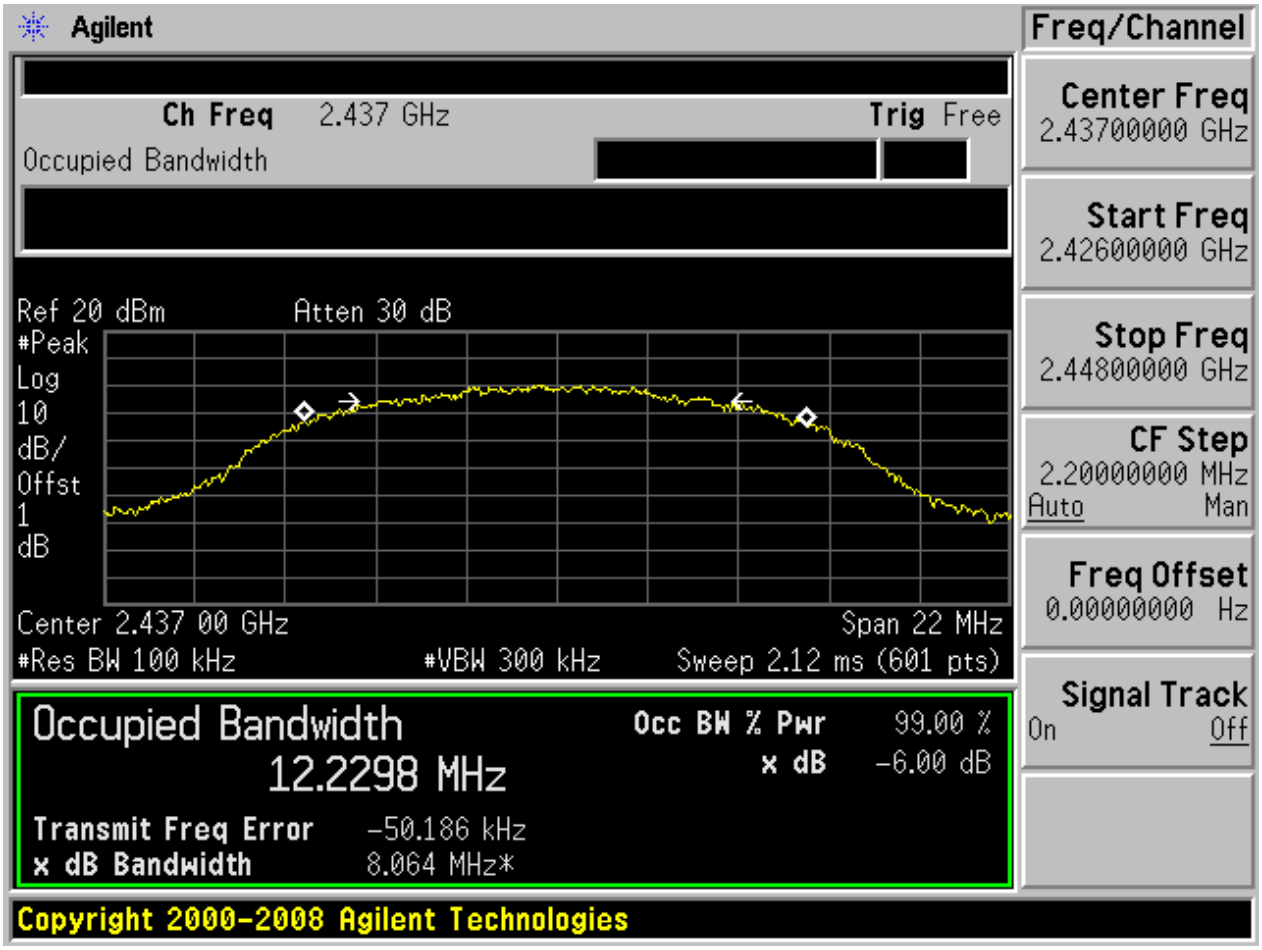
Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
11B	L	2412	Ant 1	7.60	pass
11B	M	2437	Ant 1	8.06	pass
11B	H	2462	Ant 1	7.90	pass
11G	L	2412	Ant 1	15.69	pass
11G	M	2437	Ant 1	16.11	pass
11G	H	2462	Ant 1	16.21	pass
11N20_SISO	L	2412	Ant 1	17.62	pass
11N20_SISO	M	2437	Ant 1	17.57	pass
11N20_SISO	H	2462	Ant 1	17.60	pass

Part II - Test Plots

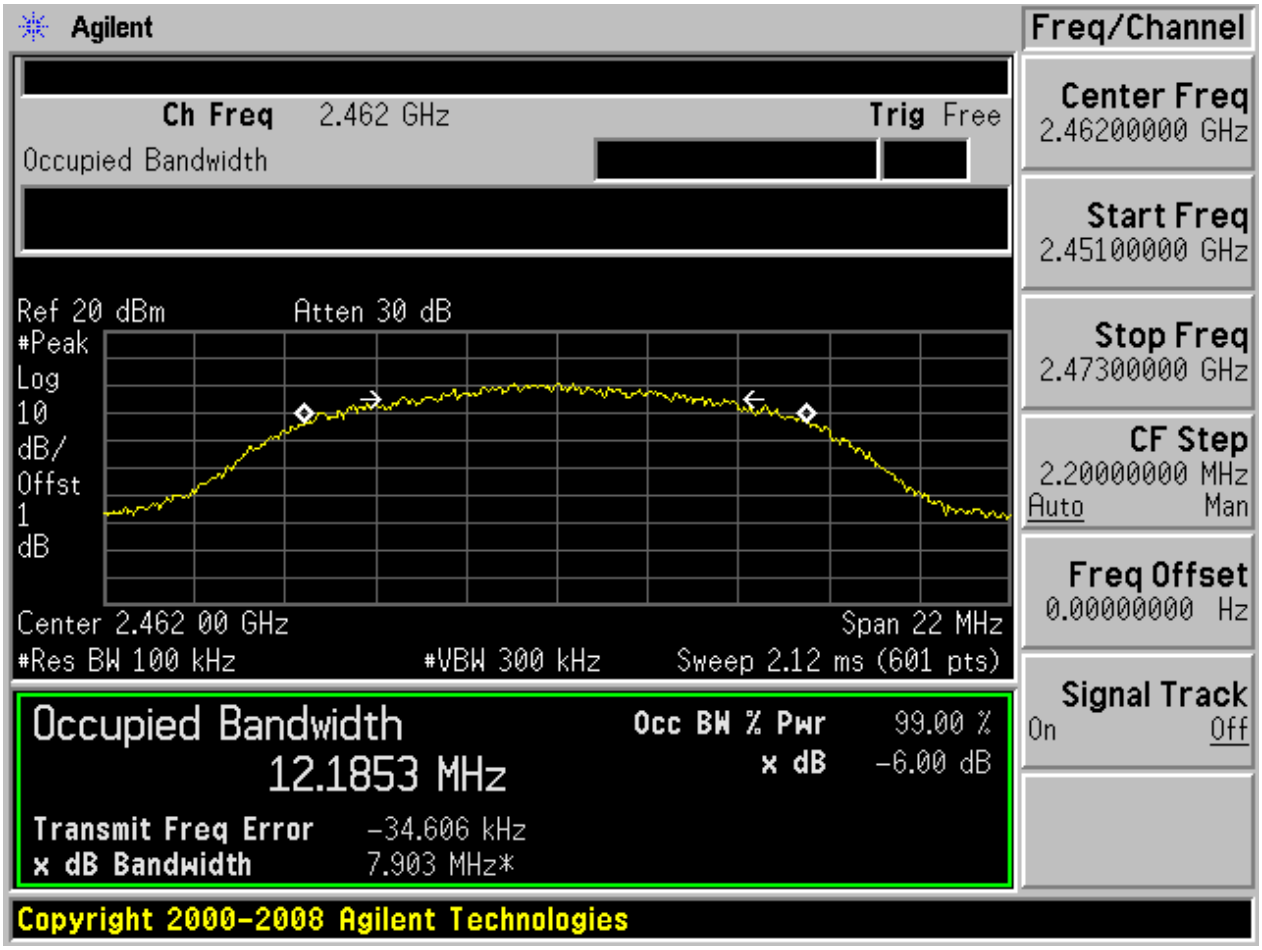
2.1 11B_L@Ant 1



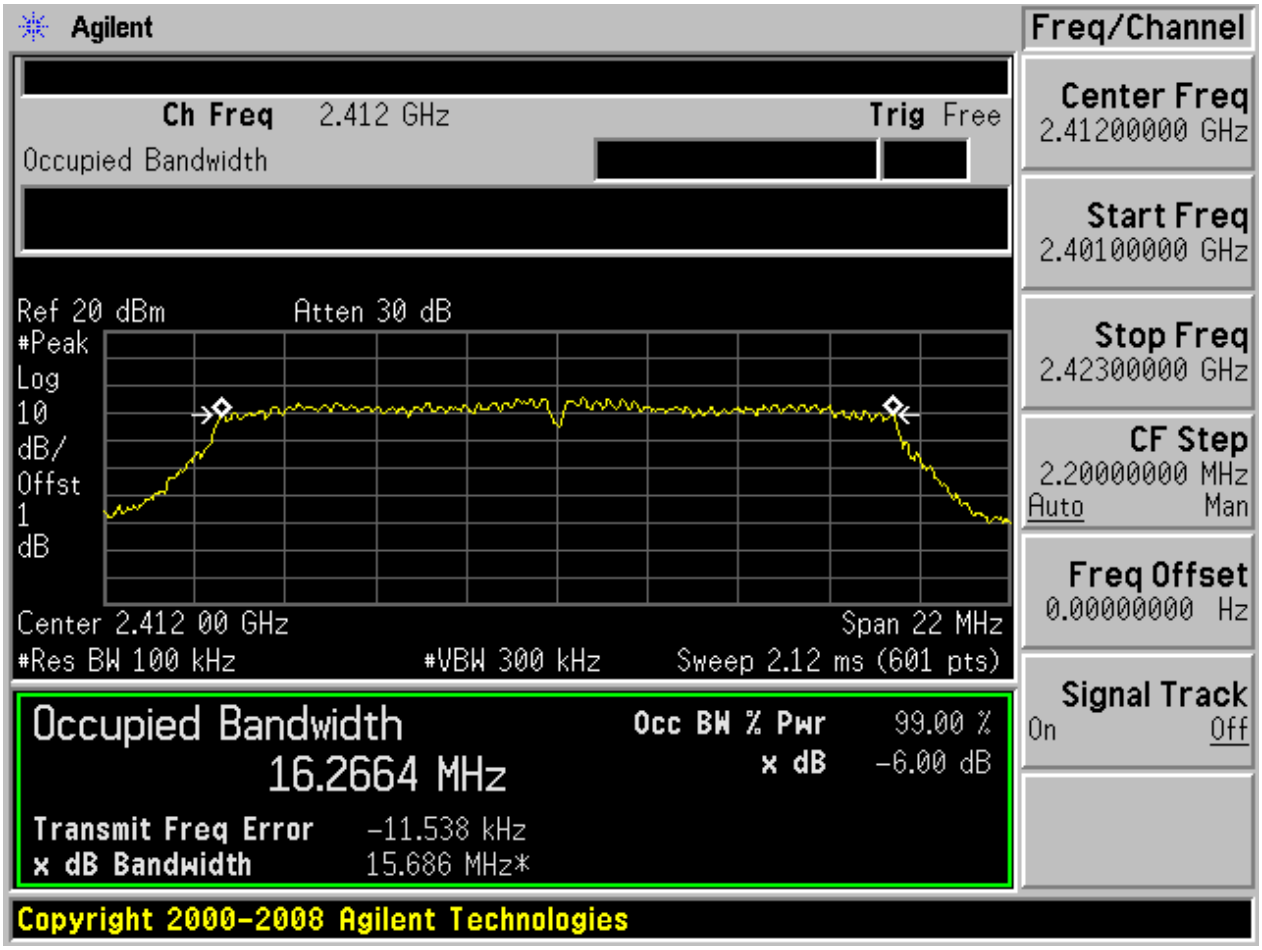
2.2 11B_M@Ant 1



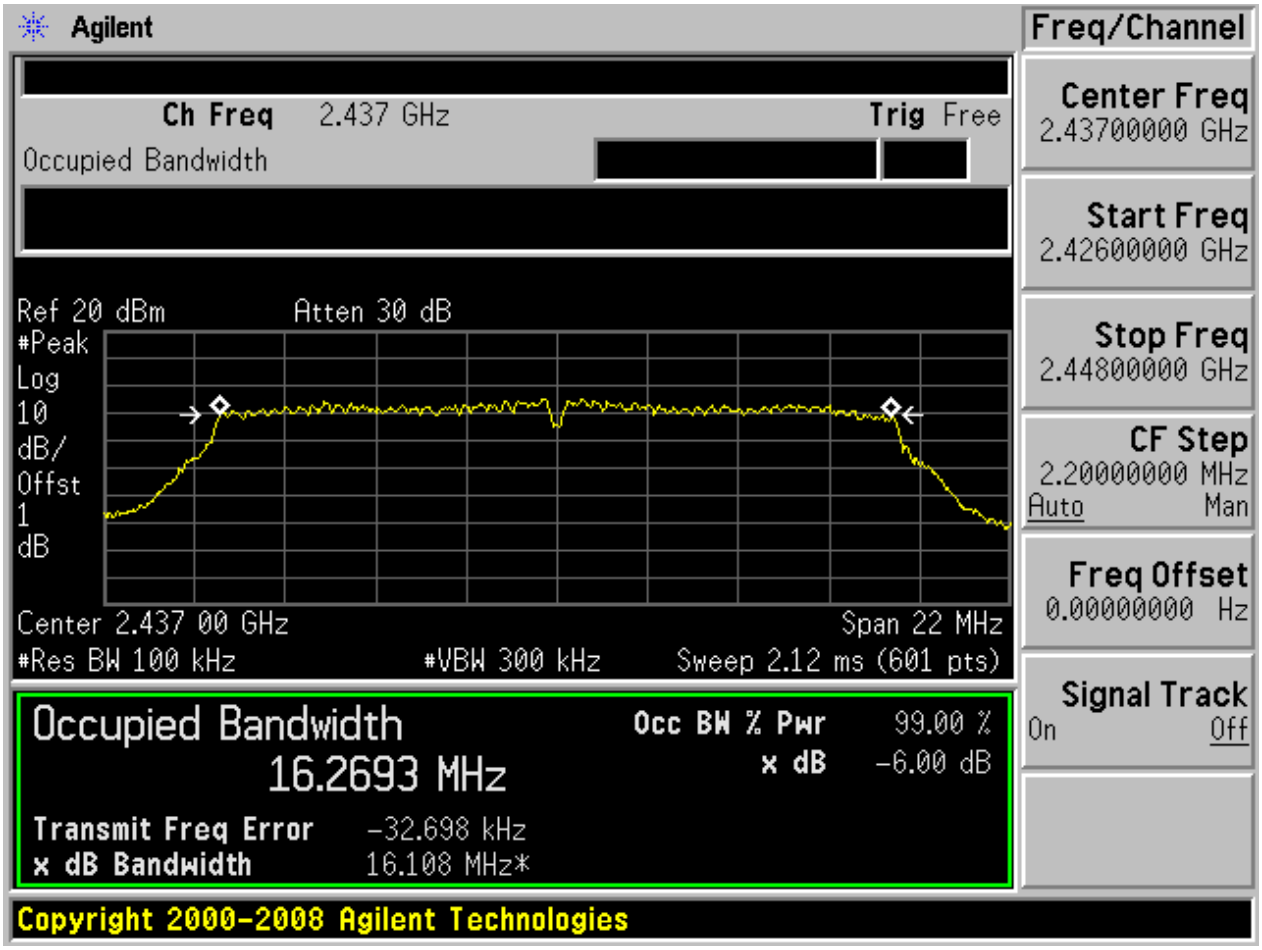
2.3 11B_H@Ant 1



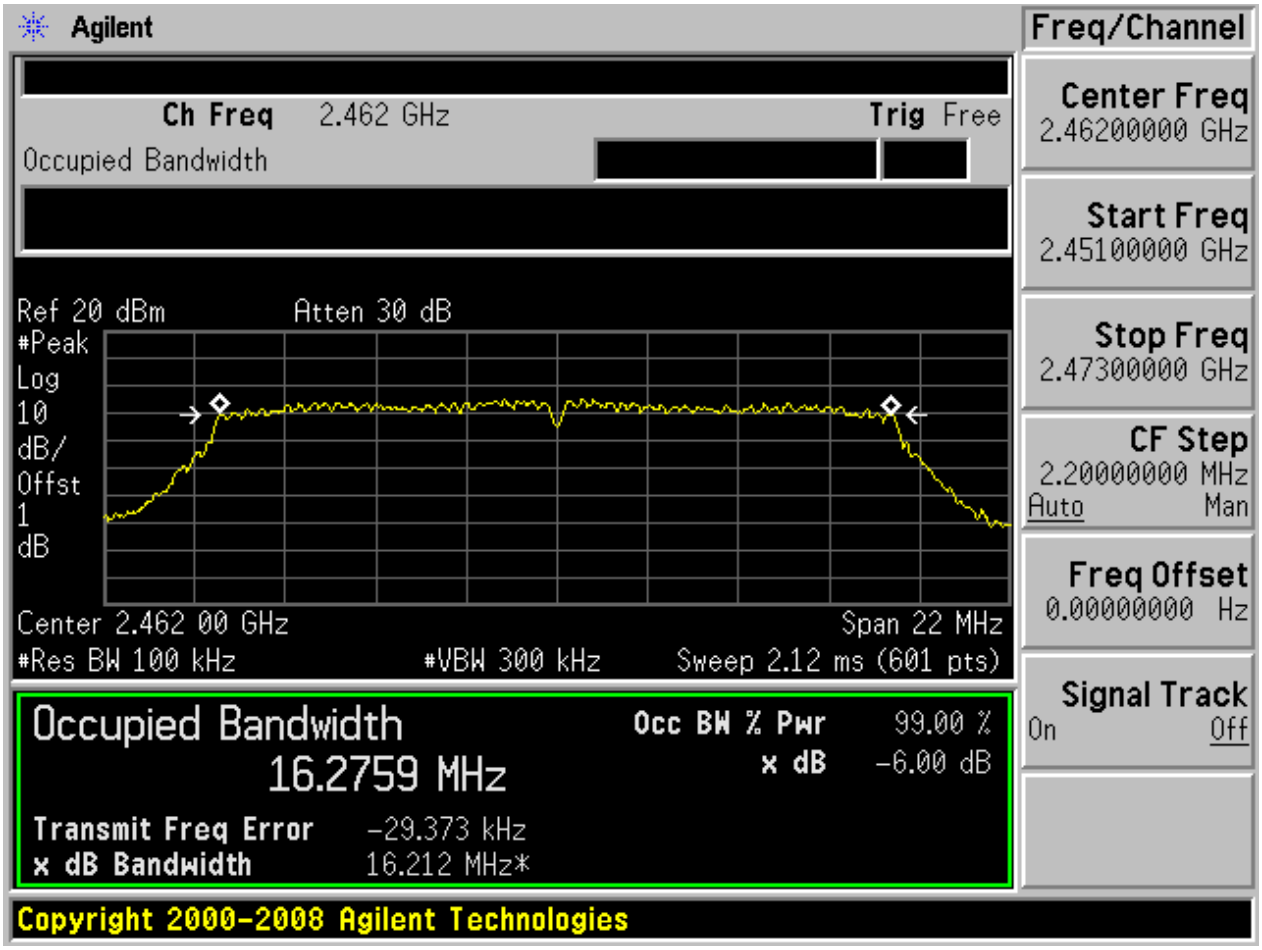
2.4 11G_L@Ant 1



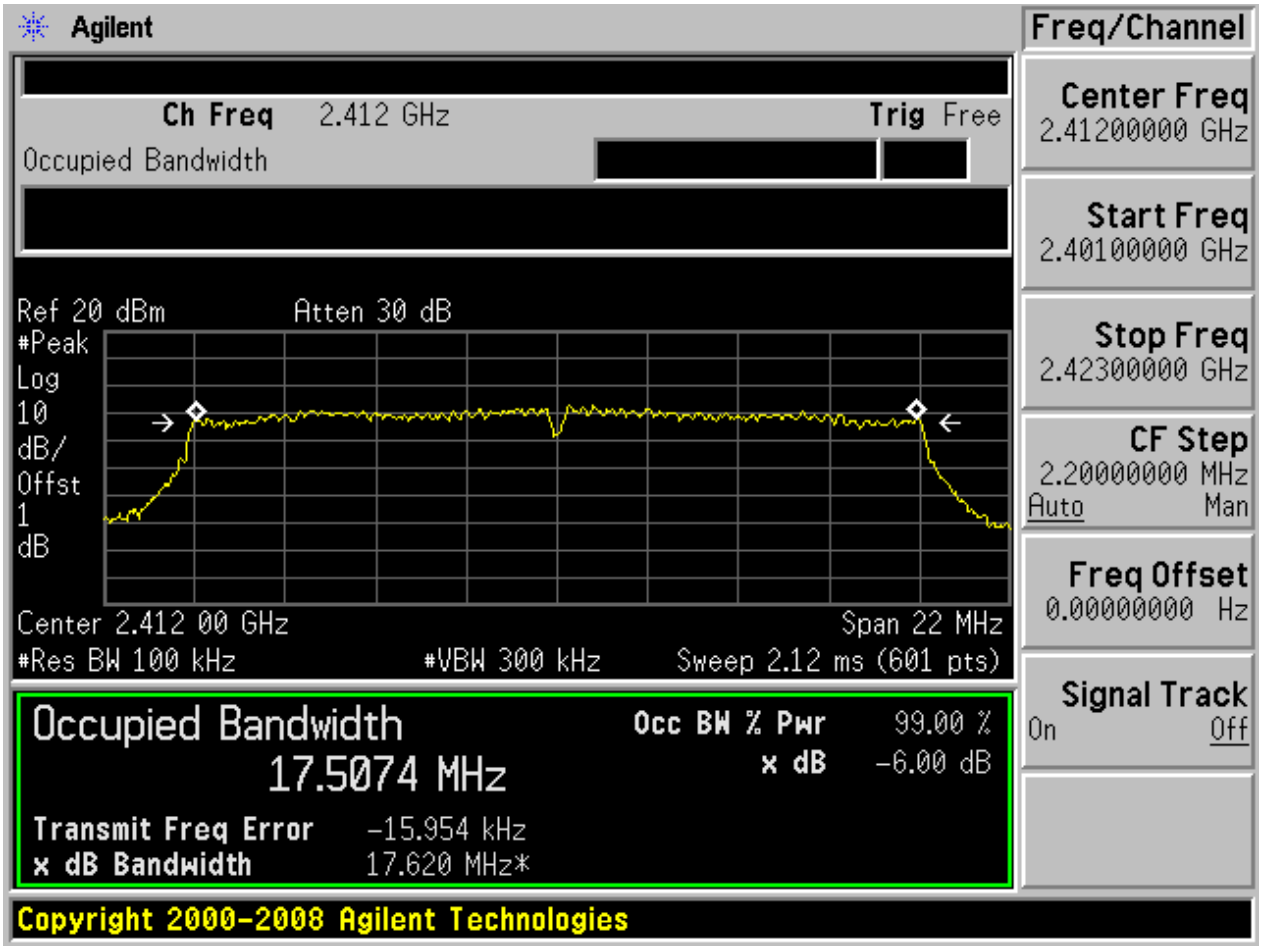
2.5 11G_M@Ant 1



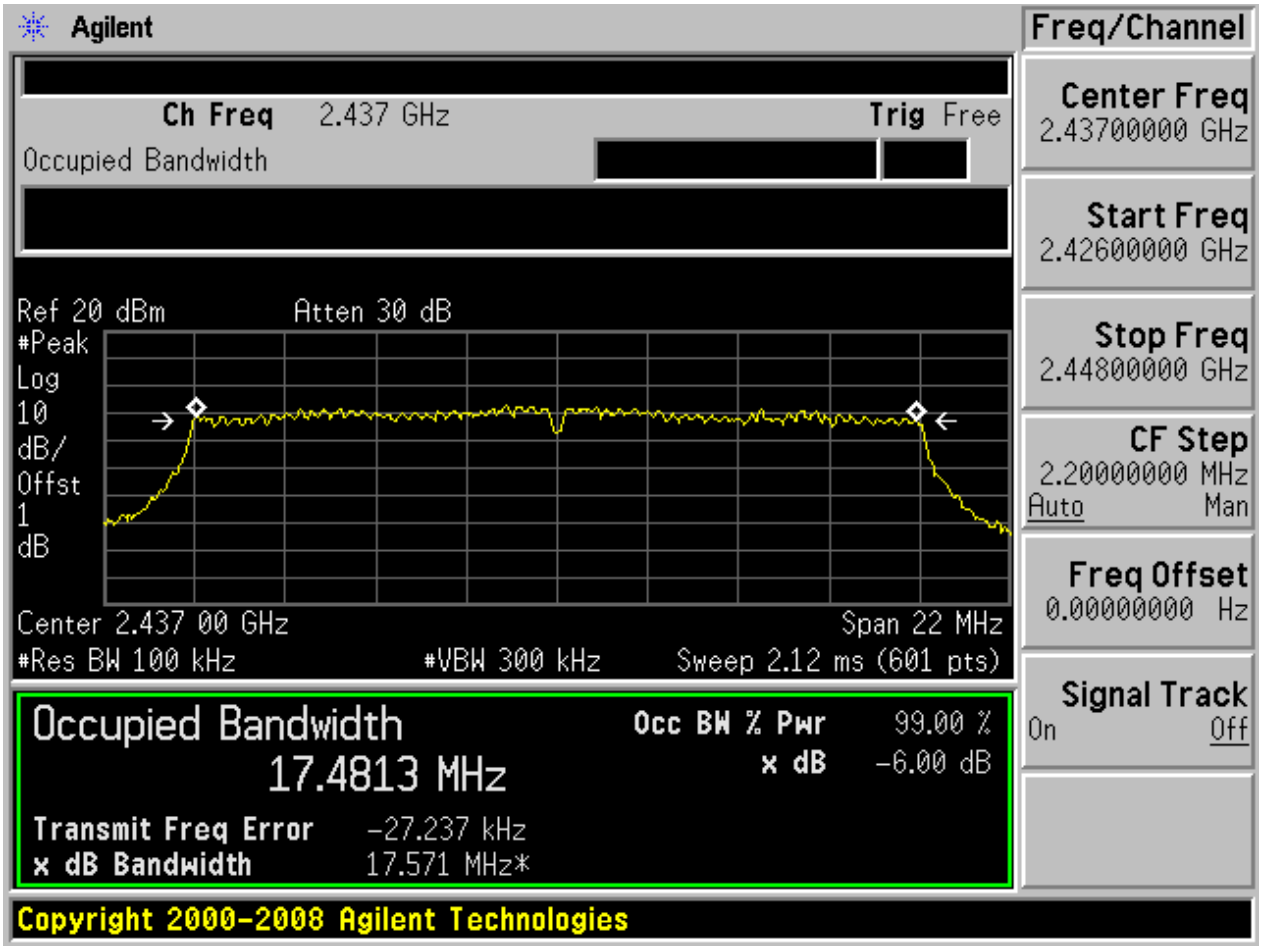
2.6 11G_H@Ant 1



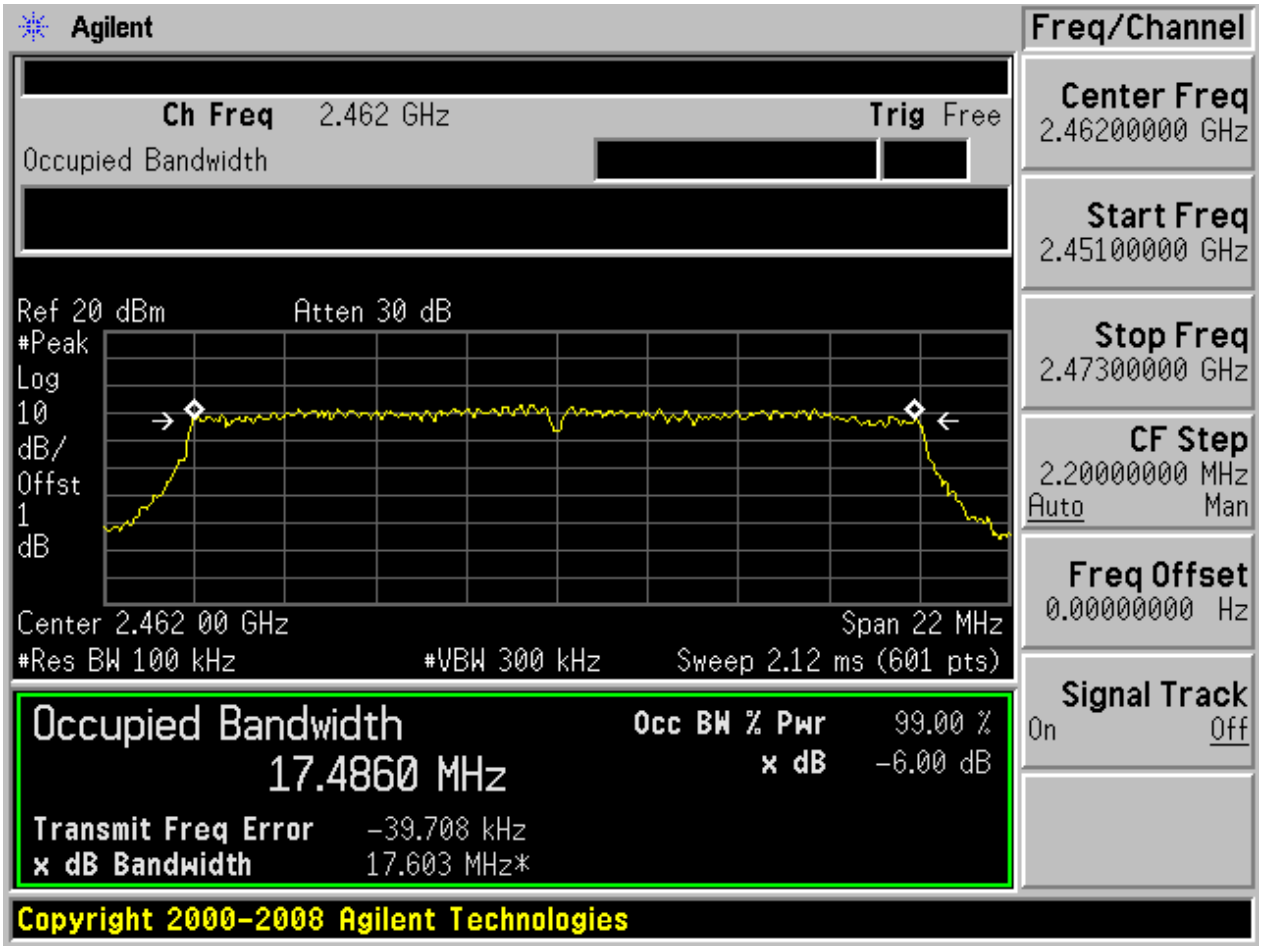
2.7 11N20_SISO_L@Ant 1



2.8 11N20_SISO_M@Ant 1



2.9 11N20_SISO_H@Ant 1



Appendix B: Maximum Peak Conducted Output Power

Test Results

Test Mode	Test Channel	Frequency[MHz]	Meas. Level (Cond.) [dBm]	Verdict
11B	L	2412	21.63	pass
11B	M	2437	21.27	pass
11B	H	2462	21.14	pass
11G	L	2412	21.28	pass
11G	M	2437	21.16	pass
11G	H	2462	21.23	pass
11N20_SISO	L	2412	19.16	pass
11N20_SISO	M	2437	19.04	pass
11N20_SISO	H	2462	19.03	pass

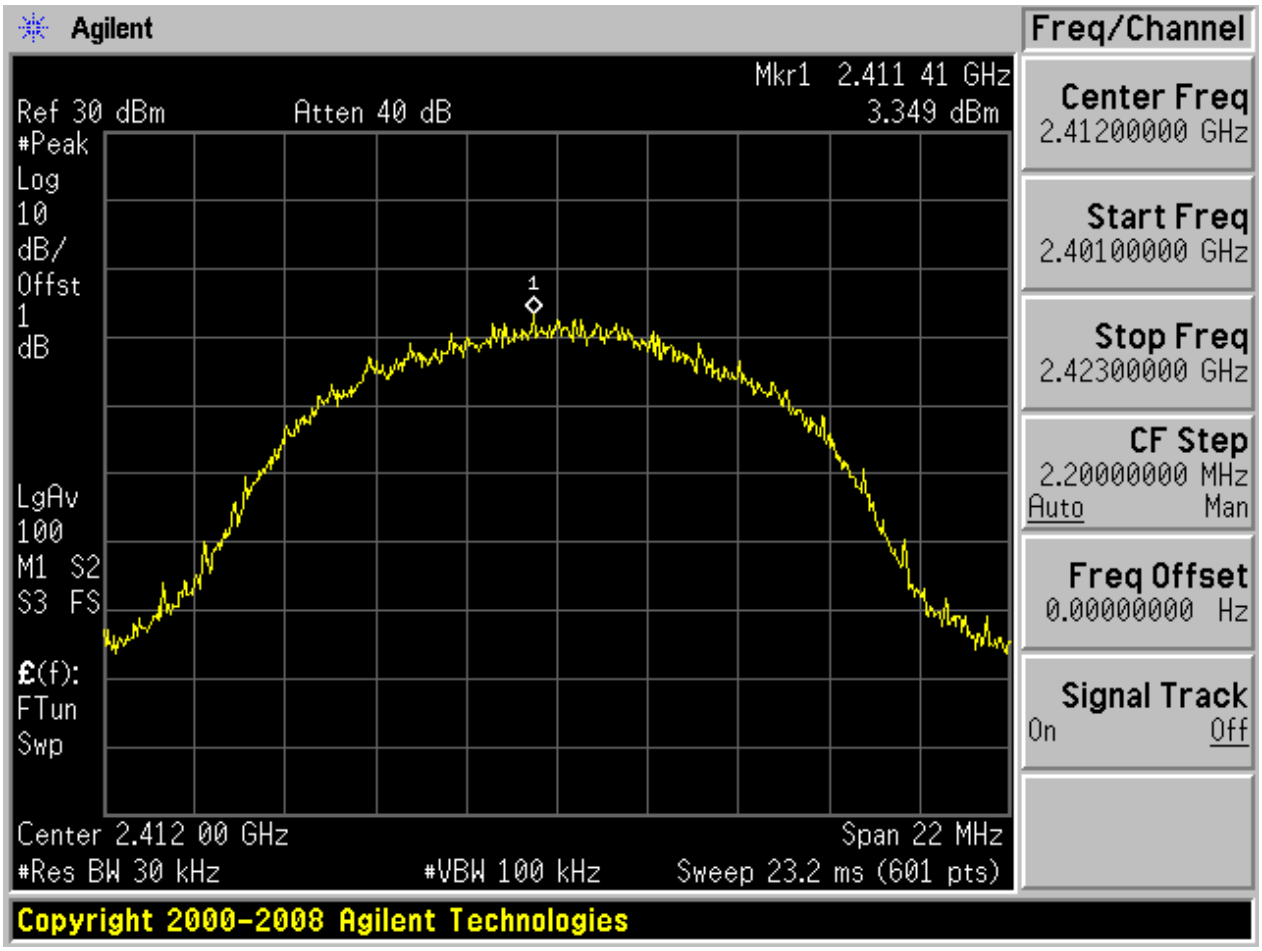
Appendix C: Maximum Power Spectral Density Level

Part I - Test Results

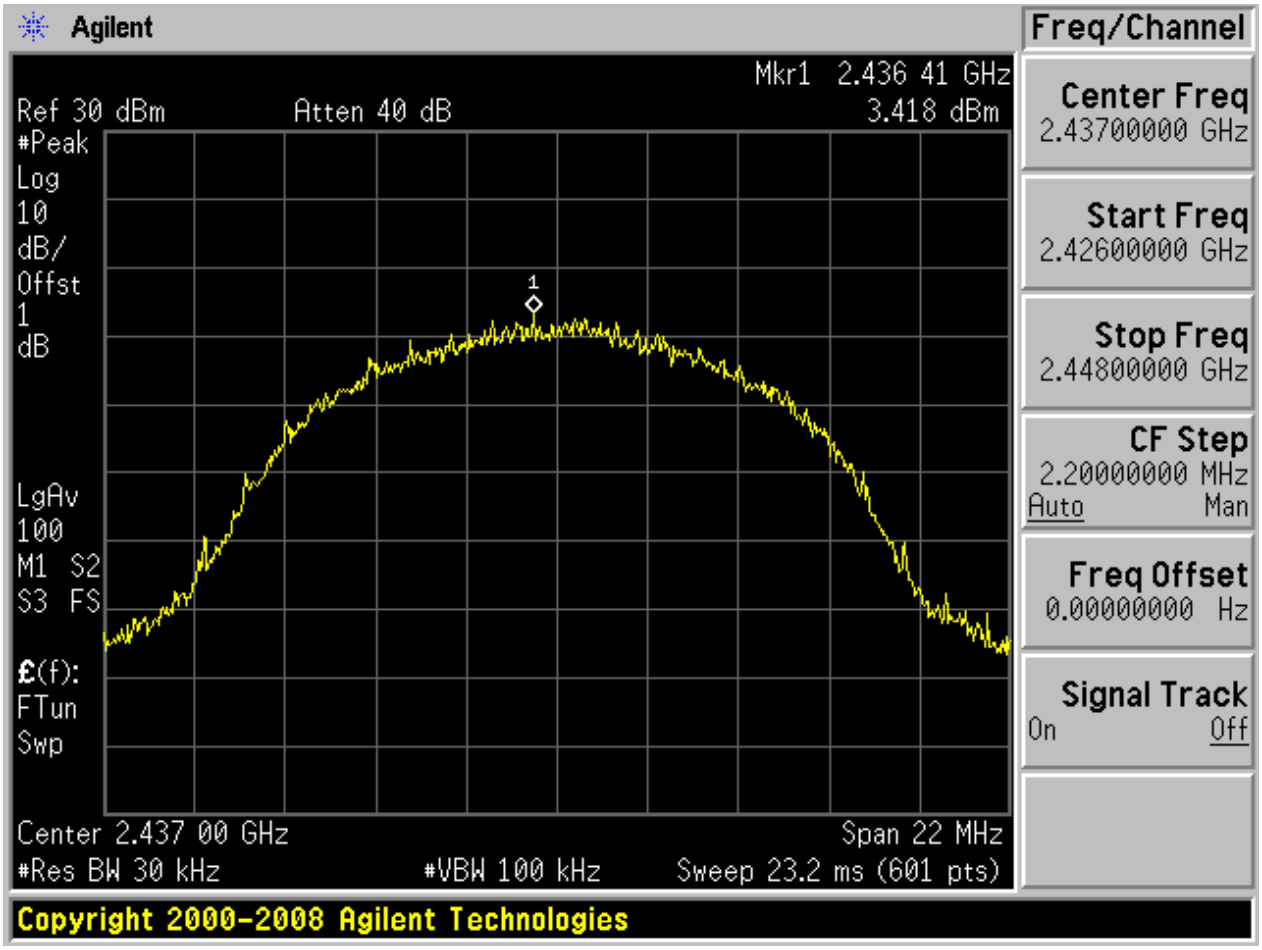
Test Mode	Test Channel	Frequency[MHz]	Ant	PD[MHz]	Verdict
11B	L	2412	Ant 1	3.35	pass
11B	M	2437	Ant 1	3.42	pass
11B	H	2462	Ant 1	3.29	pass
11G	L	2412	Ant 1	-3.54	pass
11G	M	2437	Ant 1	-2.67	pass
11G	H	2462	Ant 1	-3.00	pass
11N20_SISO	L	2412	Ant 1	-5.27	pass
11N20_SISO	M	2437	Ant 1	-5.71	pass
11N20_SISO	H	2462	Ant 1	-5.59	pass

Part II - Test Plots

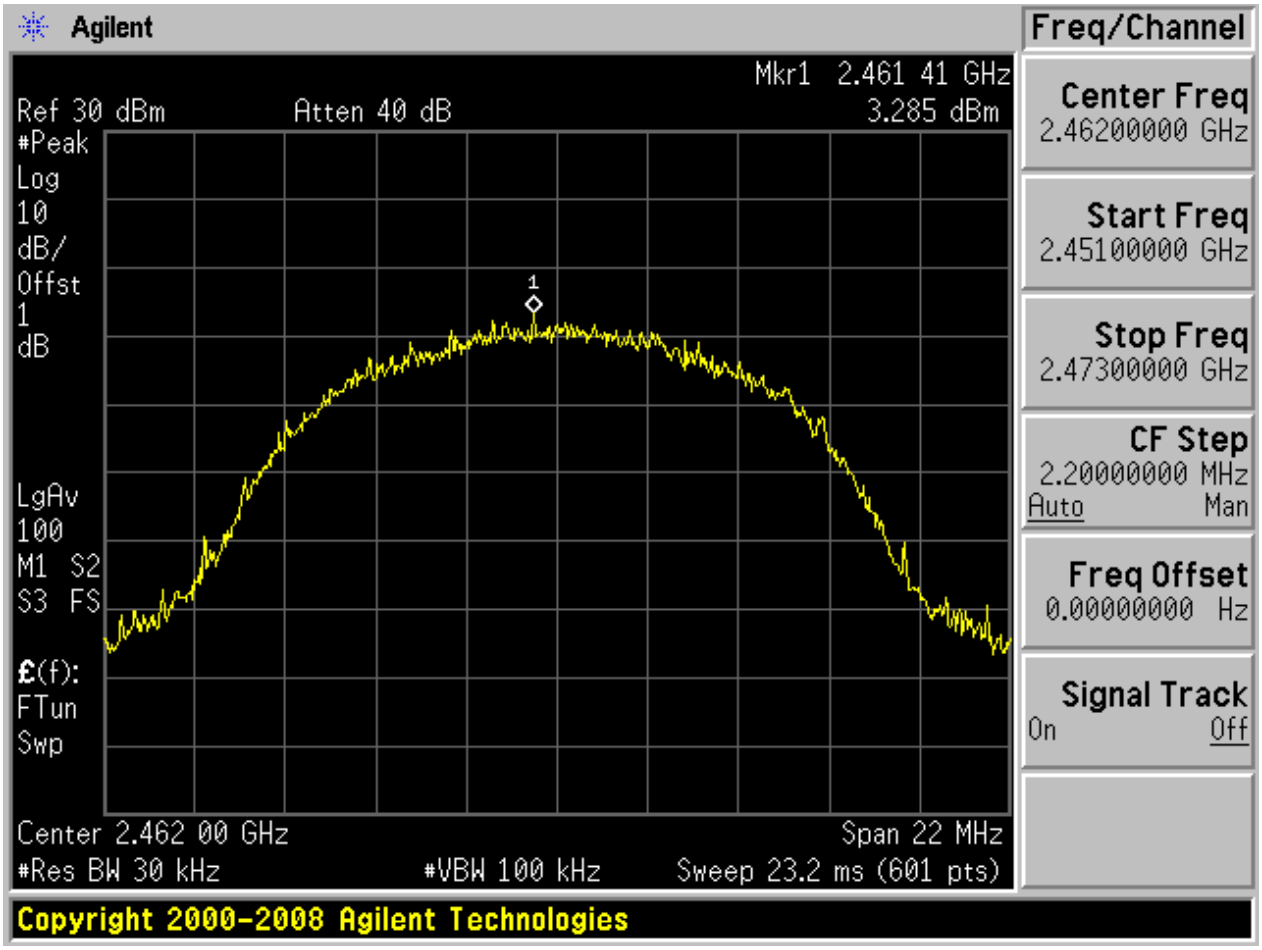
2.1 11B_L@Ant 1



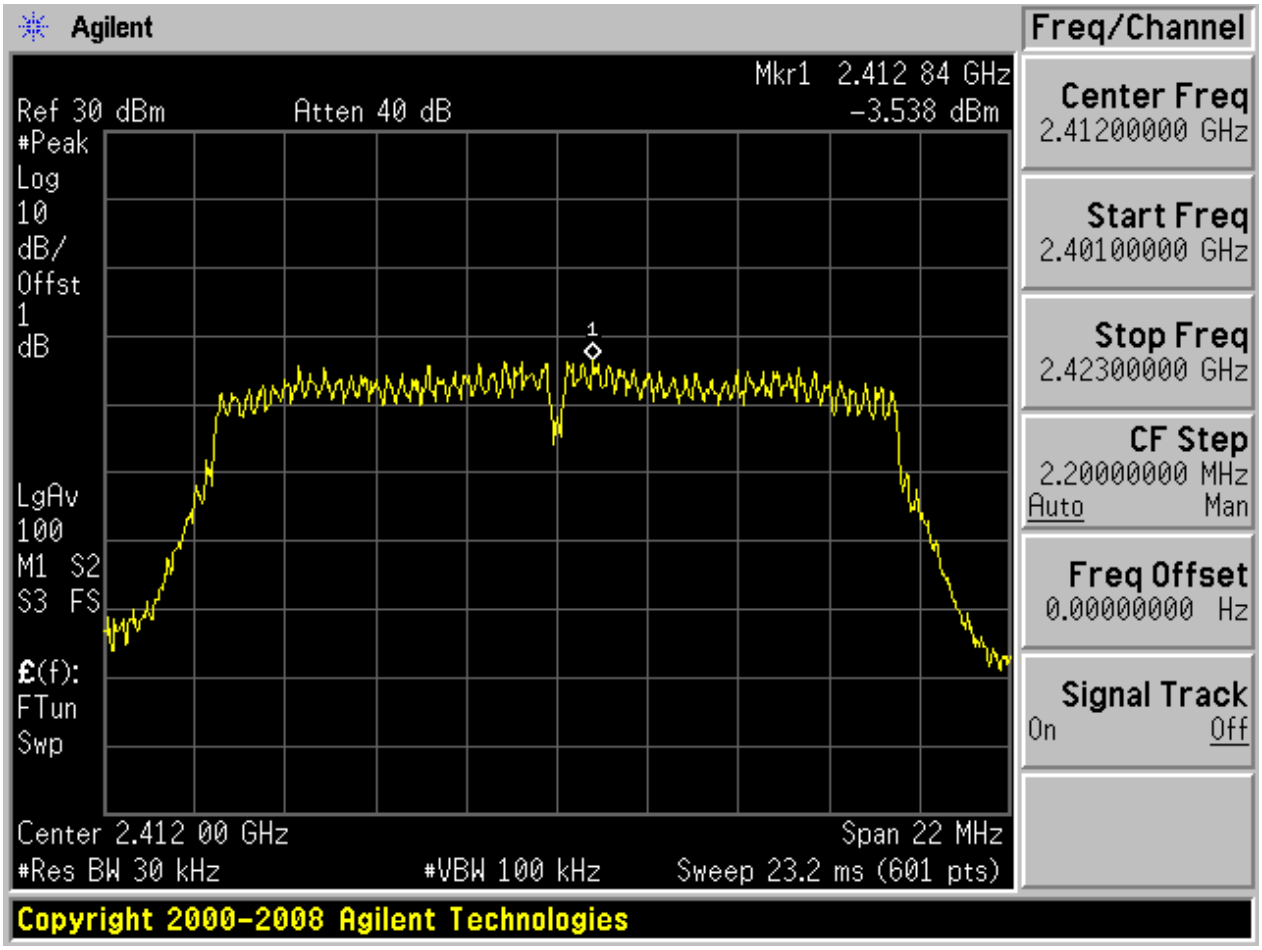
2.2 11B_M@Ant 1



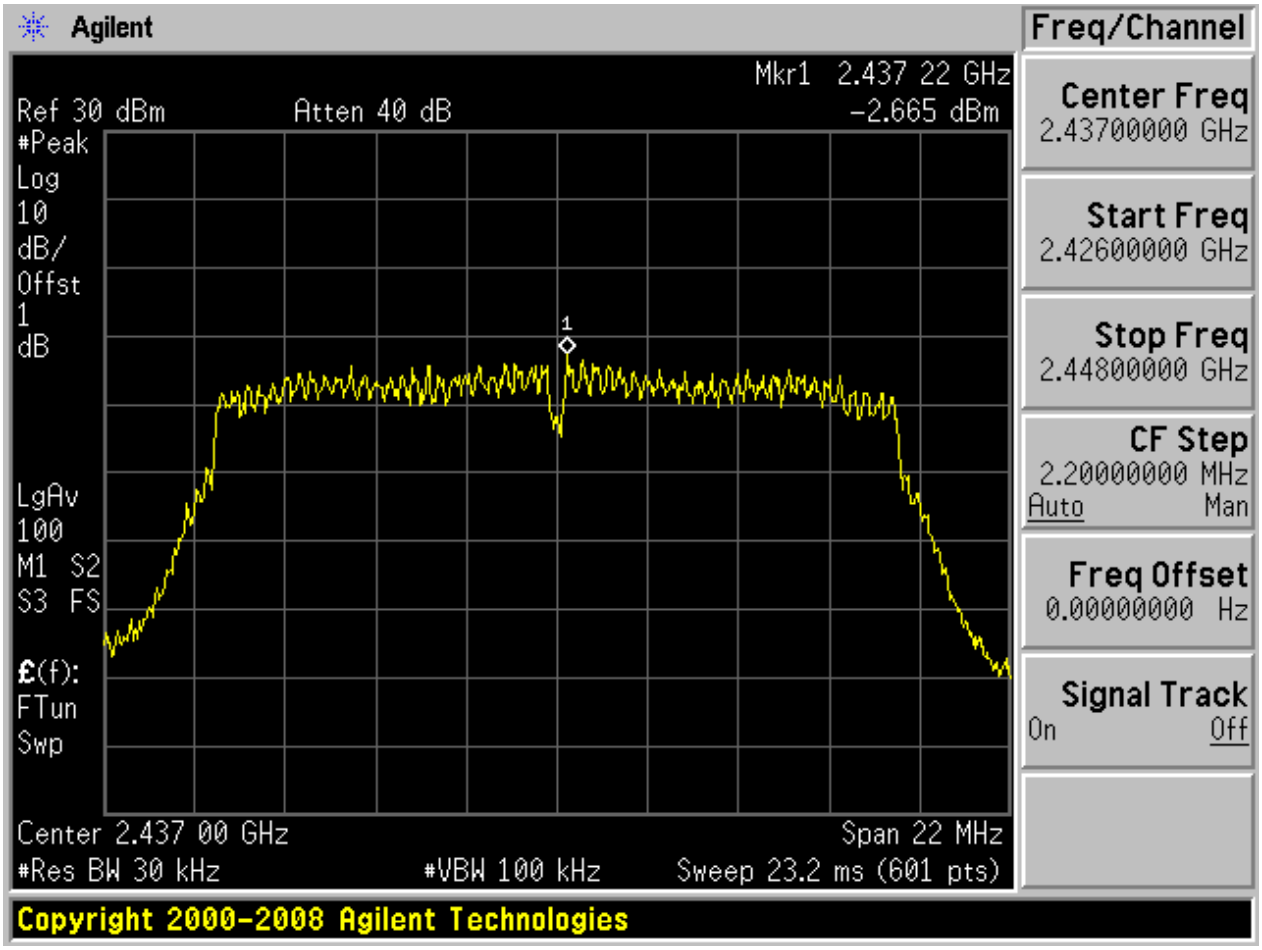
2.3 11B_H@Ant 1



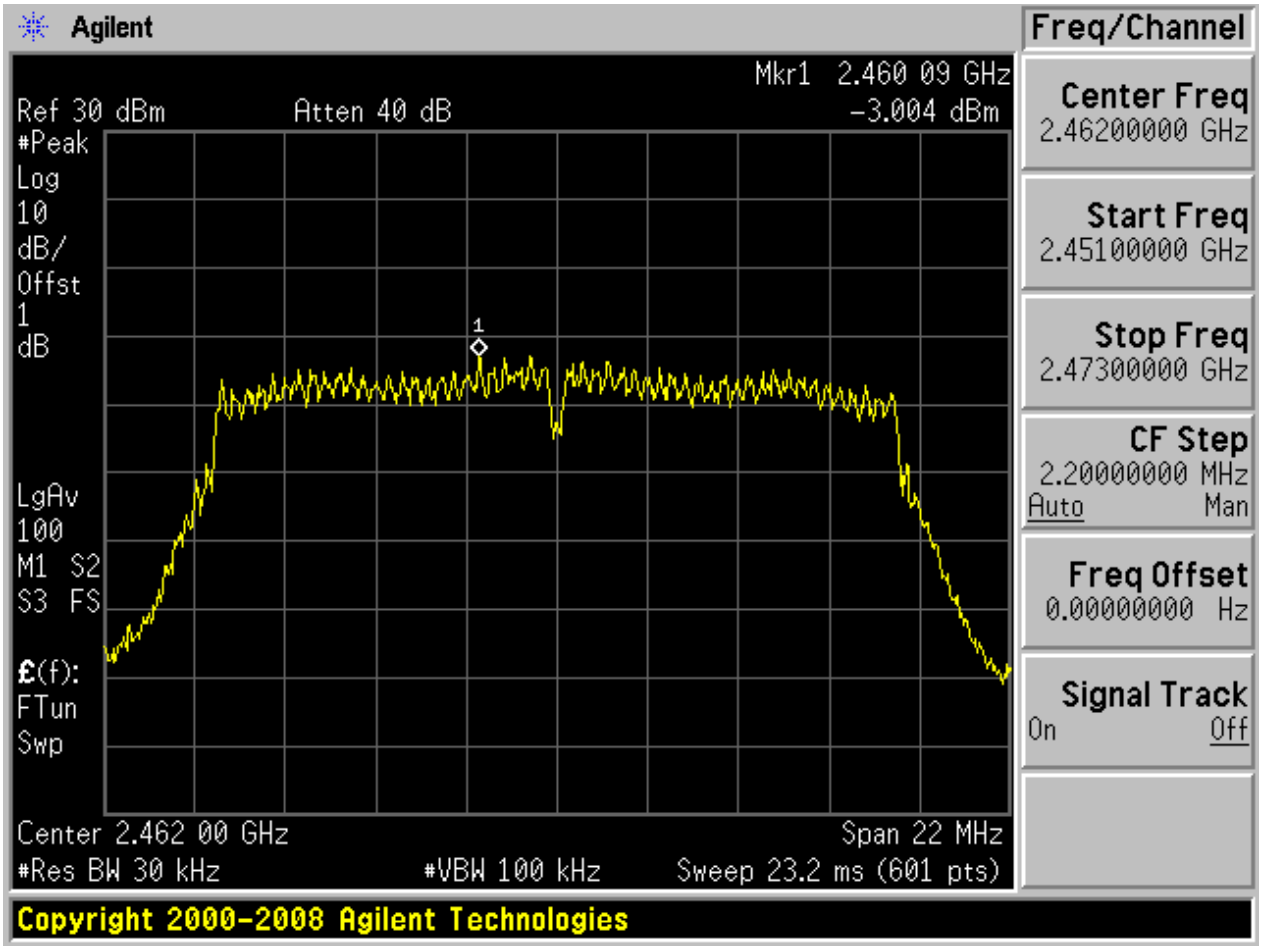
2.4 11G_L@Ant 1



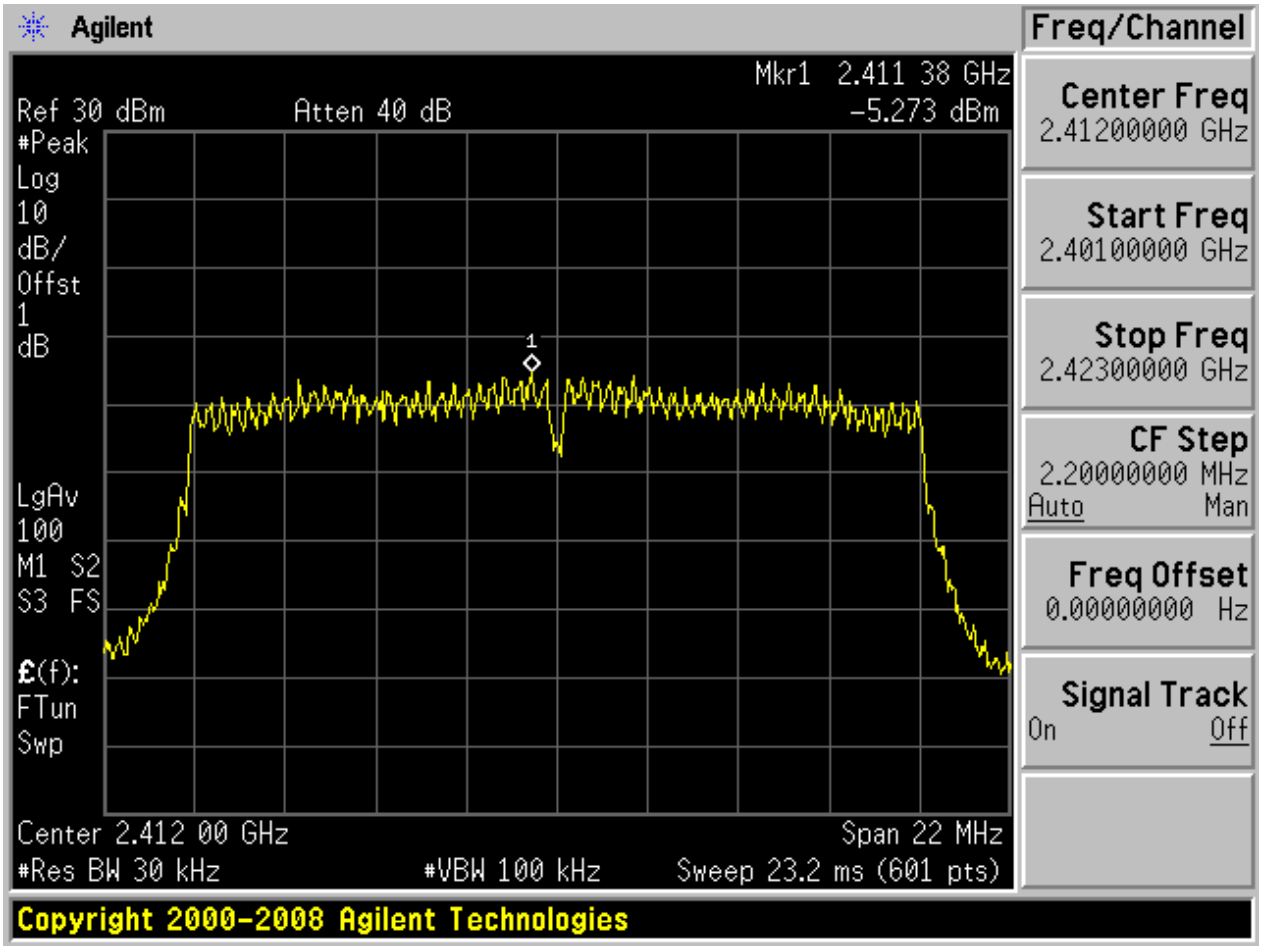
2.5 11G_M@Ant 1



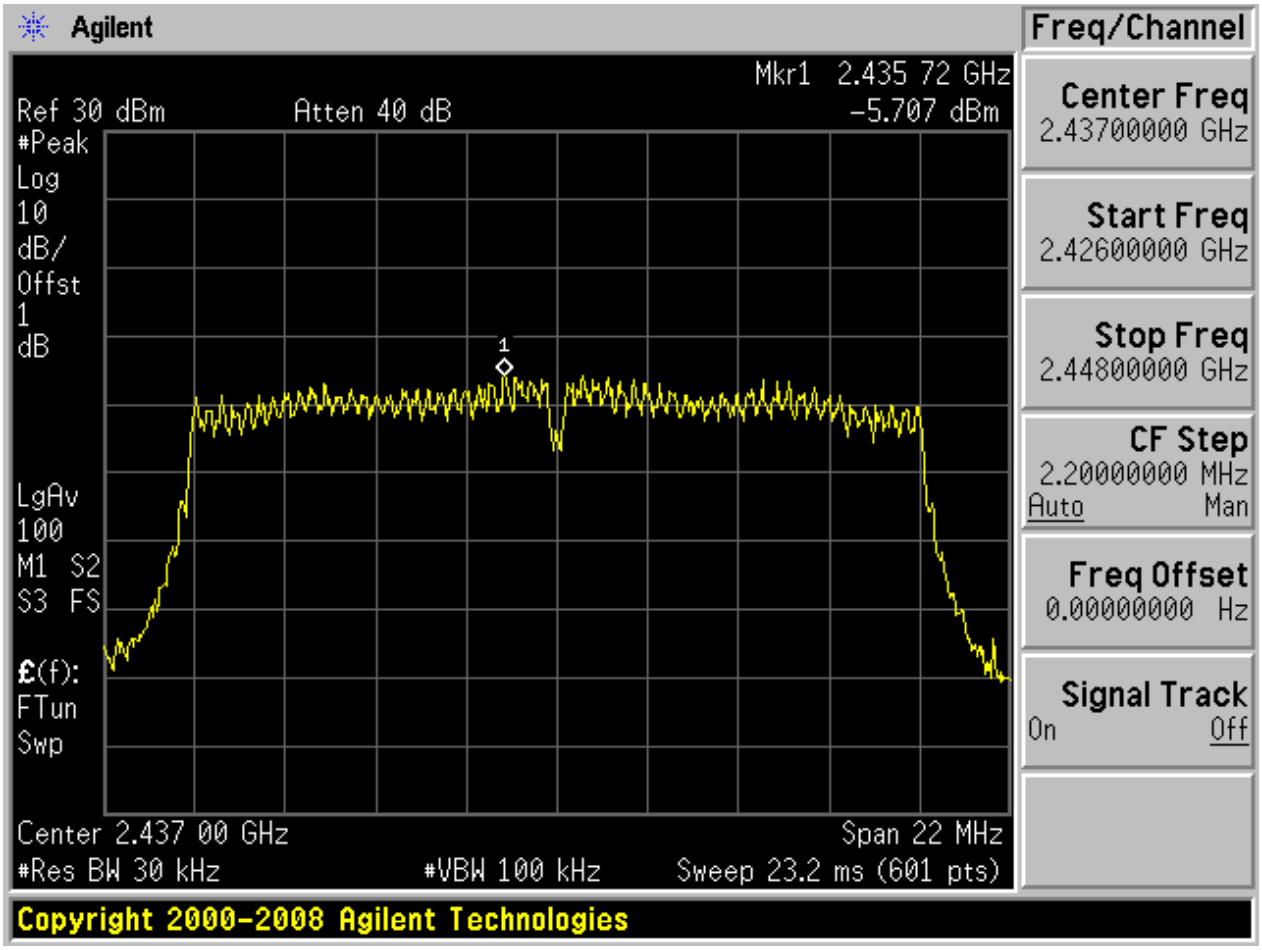
2.6 11G_H@Ant 1



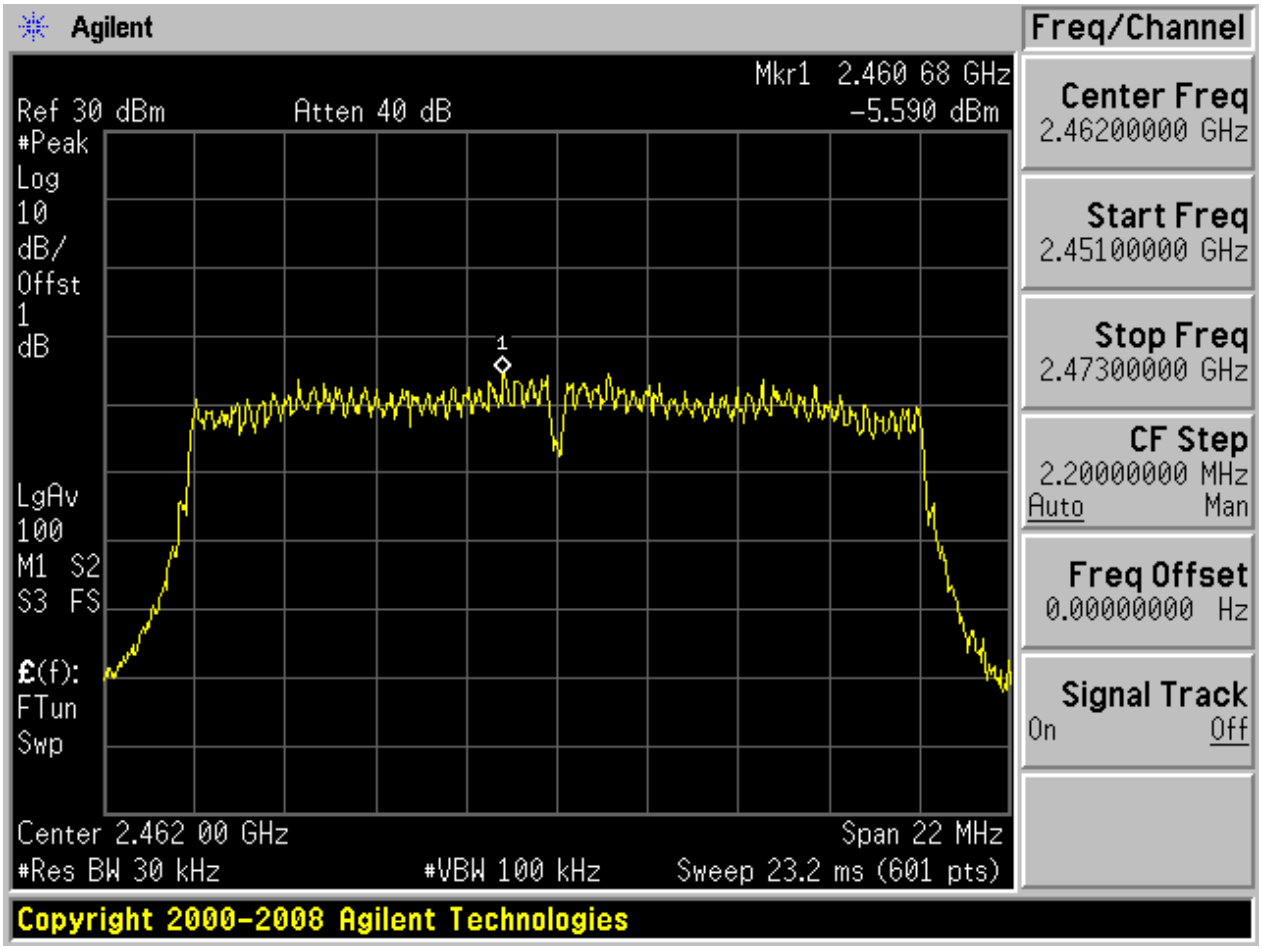
2.7 11N20_SISO_L@Ant 1



2.8 11N20_SISO_M@Ant 1



2.9 11N20_SISO_H@Ant 1



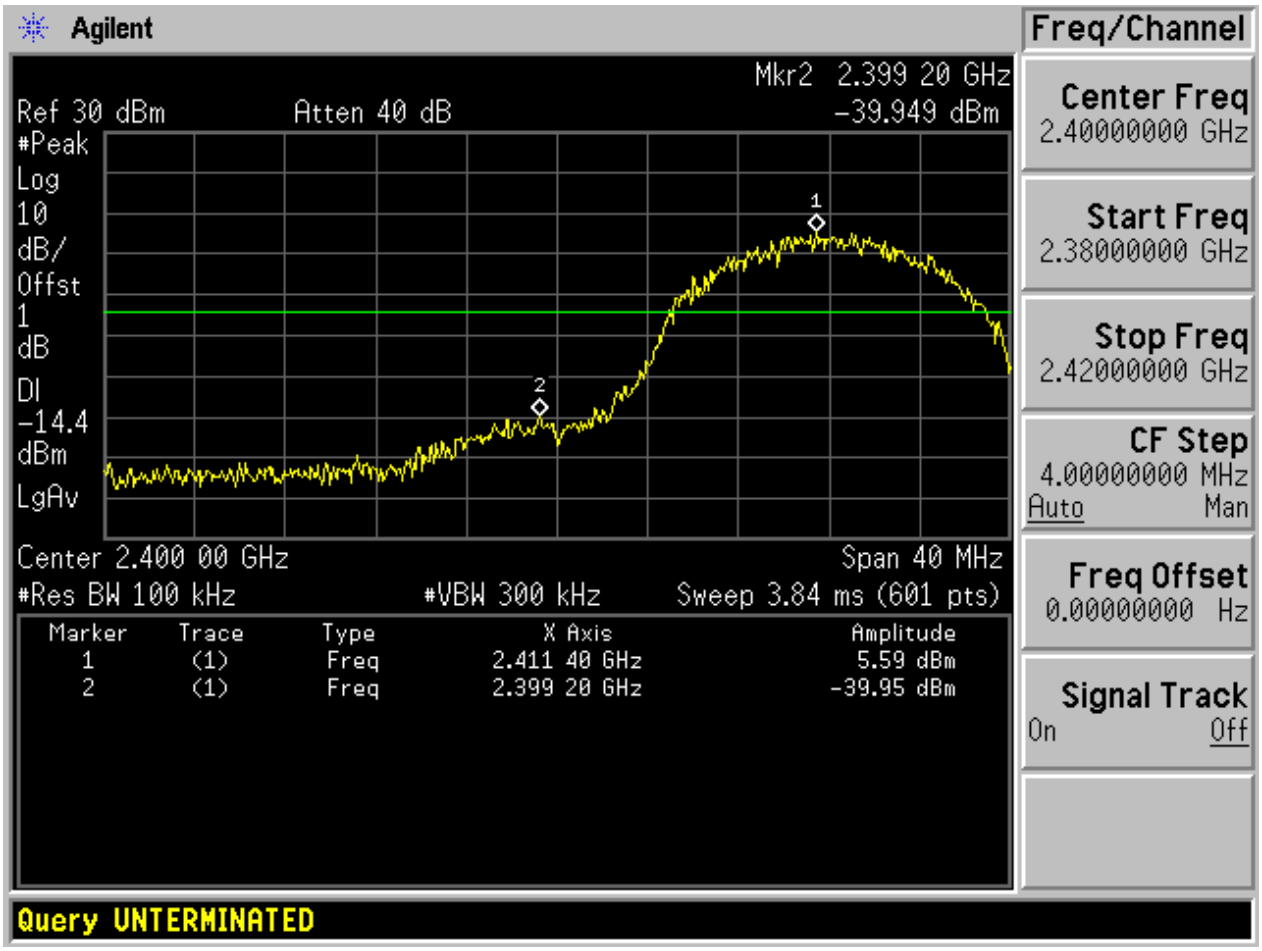
Appendix D: Band Edges Compliance

Part I - Test Results

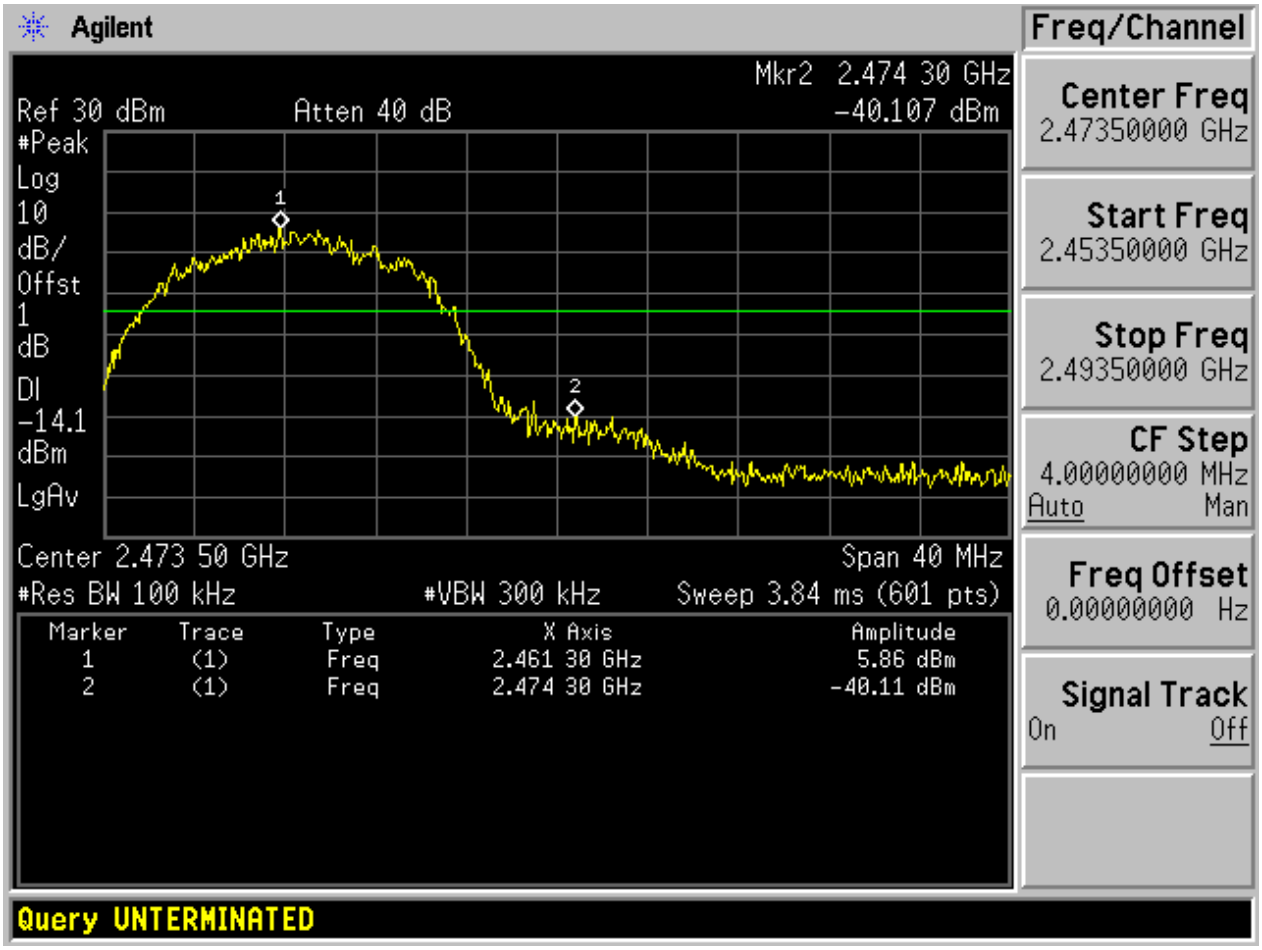
Test Mode	Test Channel	Frequency [MHz]	Ant	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
11B	L	2412	Ant 1	5.59	-39.95	pass
11B	H	2462	Ant 1	5.86	-40.11	pass
11G	L	2412	Ant 1	-1.41	-38.86	pass
11G	H	2462	Ant 1	-1.08	-42.88	pass
11N20_SISO	L	2412	Ant 1	-1.55	-44.62	pass
11N20_SISO	H	2462	Ant 1	-3.56	-43.55	pass

Part II - Test Plots

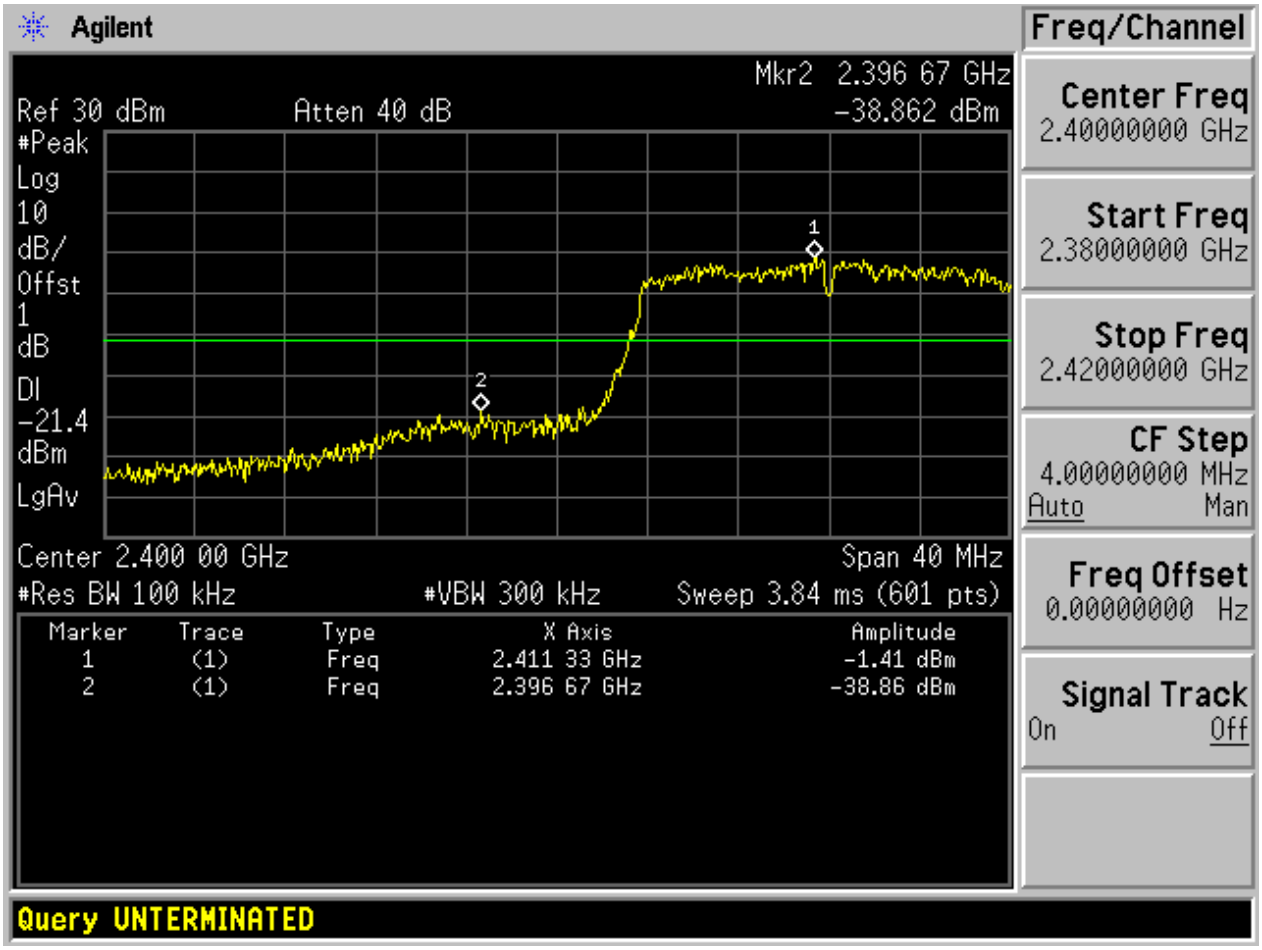
2.1 11B_L@Ant 1



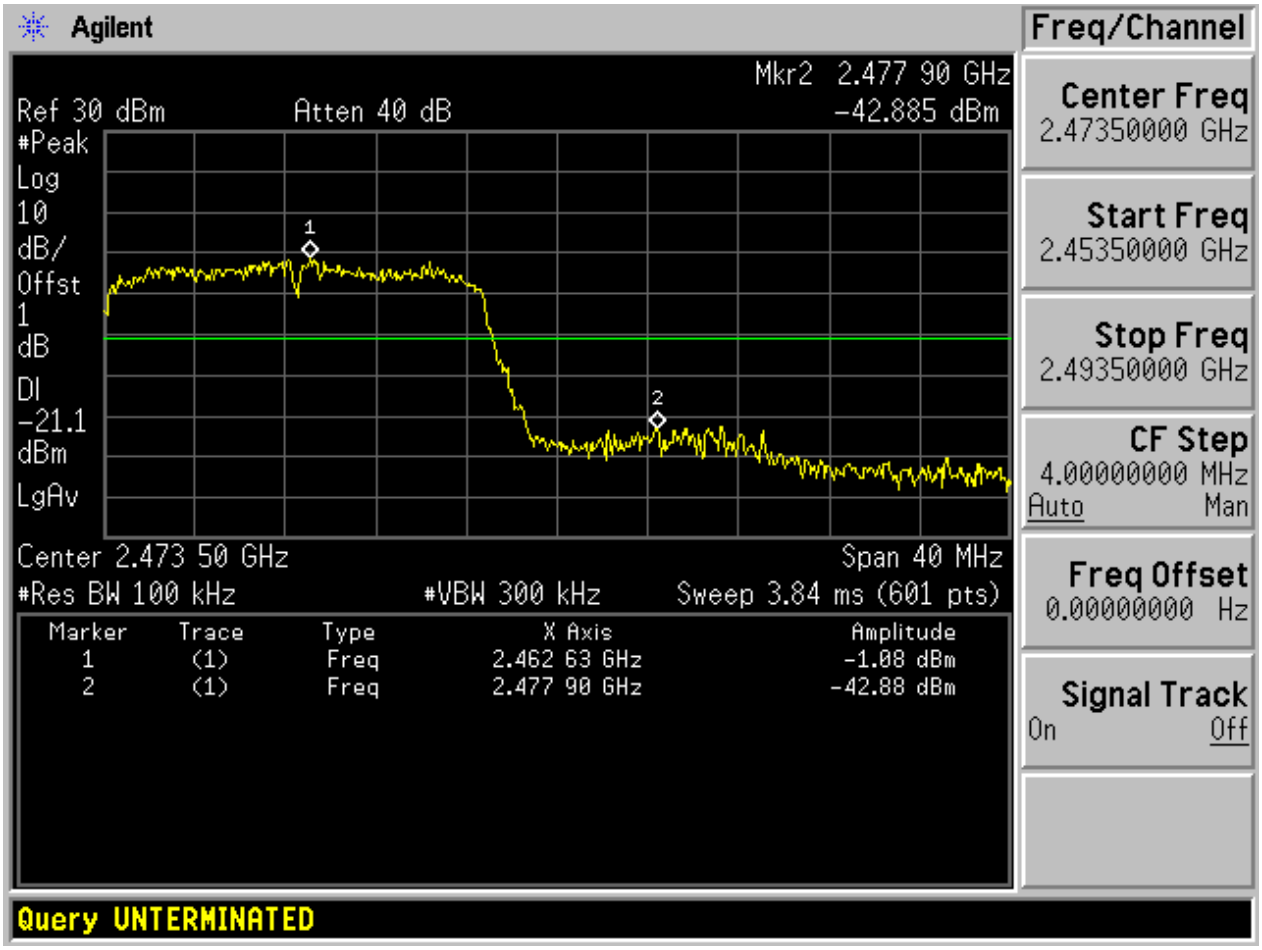
2.2 11B_H@Ant 1



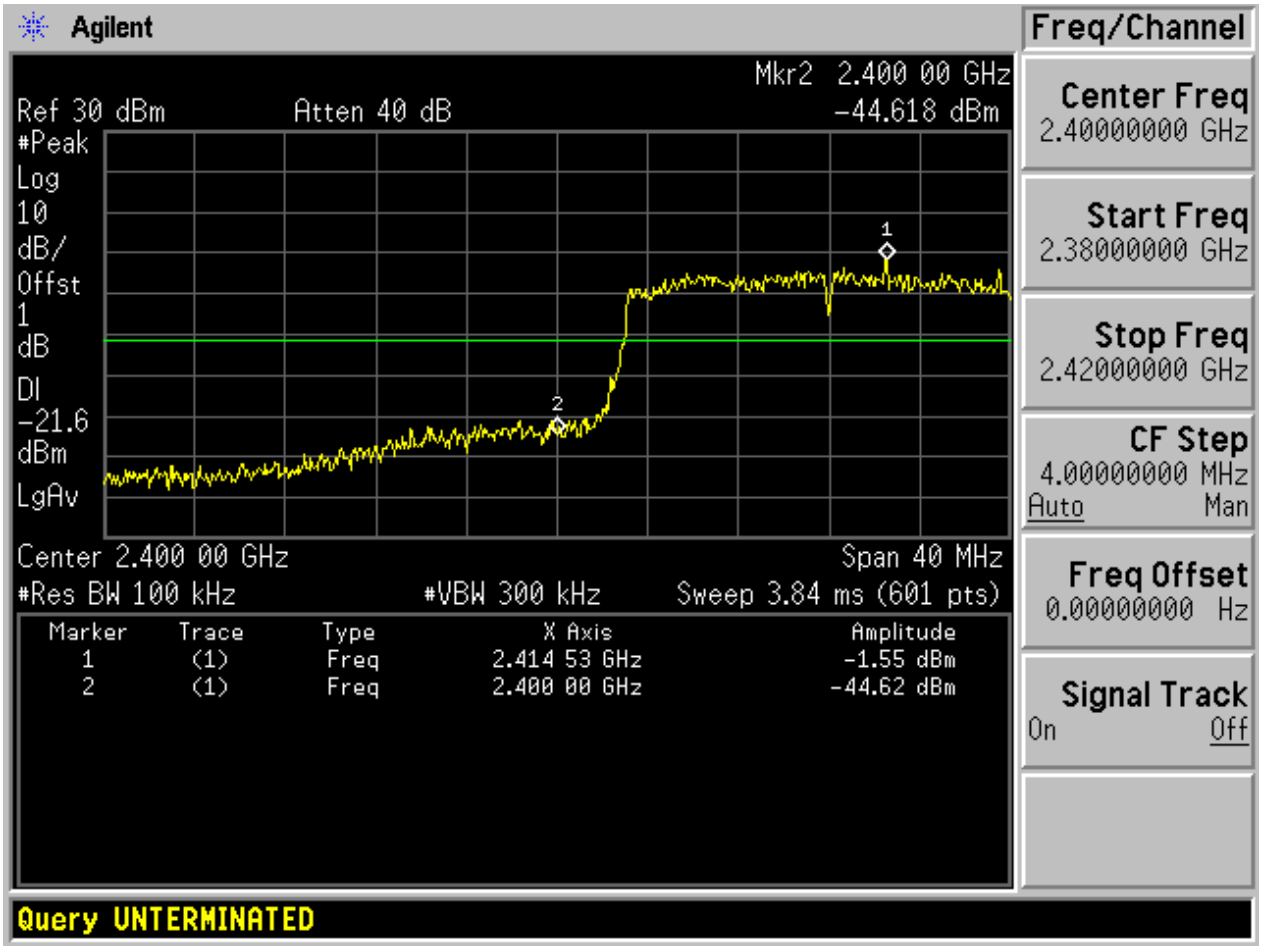
2.3 11G_L@Ant 1



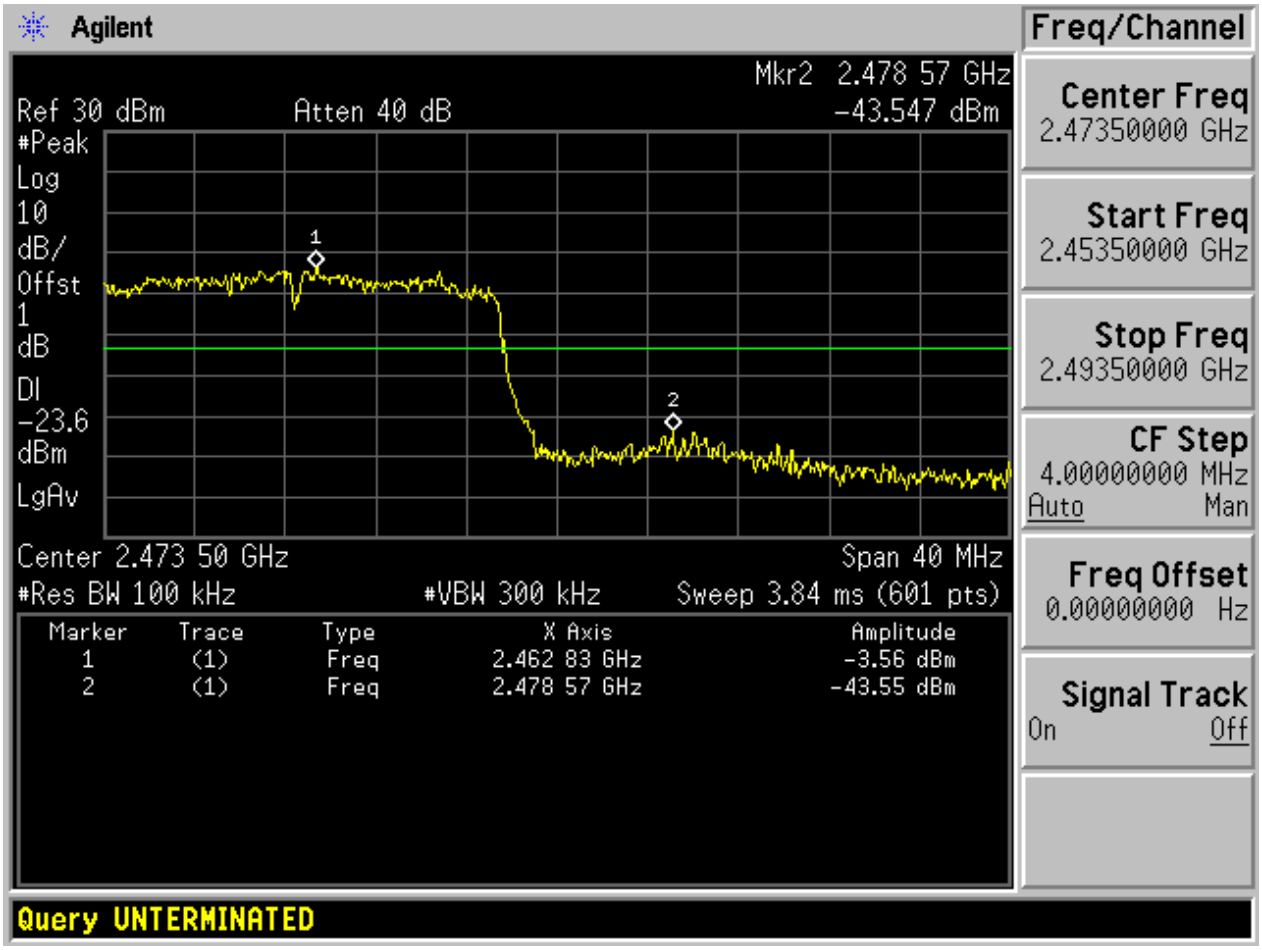
2.4 11G_H@Ant 1



2.5 11N20_SISO_L@Ant 1



2.6 11N20_SISO_H@Ant 1



Appendix E: Unwanted Emissions into Non-Restricted Frequency Bands

In this Appendix, the "Pref", which is used as the reference level, refers to the peak power level in any 100 kHz bandwidth within the fundamental emission, the "Puw" referrers to the maximum emission power in 100 kHz band segments outside of the authorized frequency band.

Considering that the higher ratio of RBW to the span for the frequency ranges below 30 MHz makes the results determination be complicated,a narrower RBW other than 100 kHz is used for these ranges. The measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] = 10 x lg(100 [kHz]/narrower RBW [kHz]). As to this Appendix, the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain and used as respective results for each chain, due to the relative-limit requirement.

In the result table, the "< Limit" denotes that "The Puw [dBm] is less than Pref[dBm]-20[dBm],see test plots for detailed".

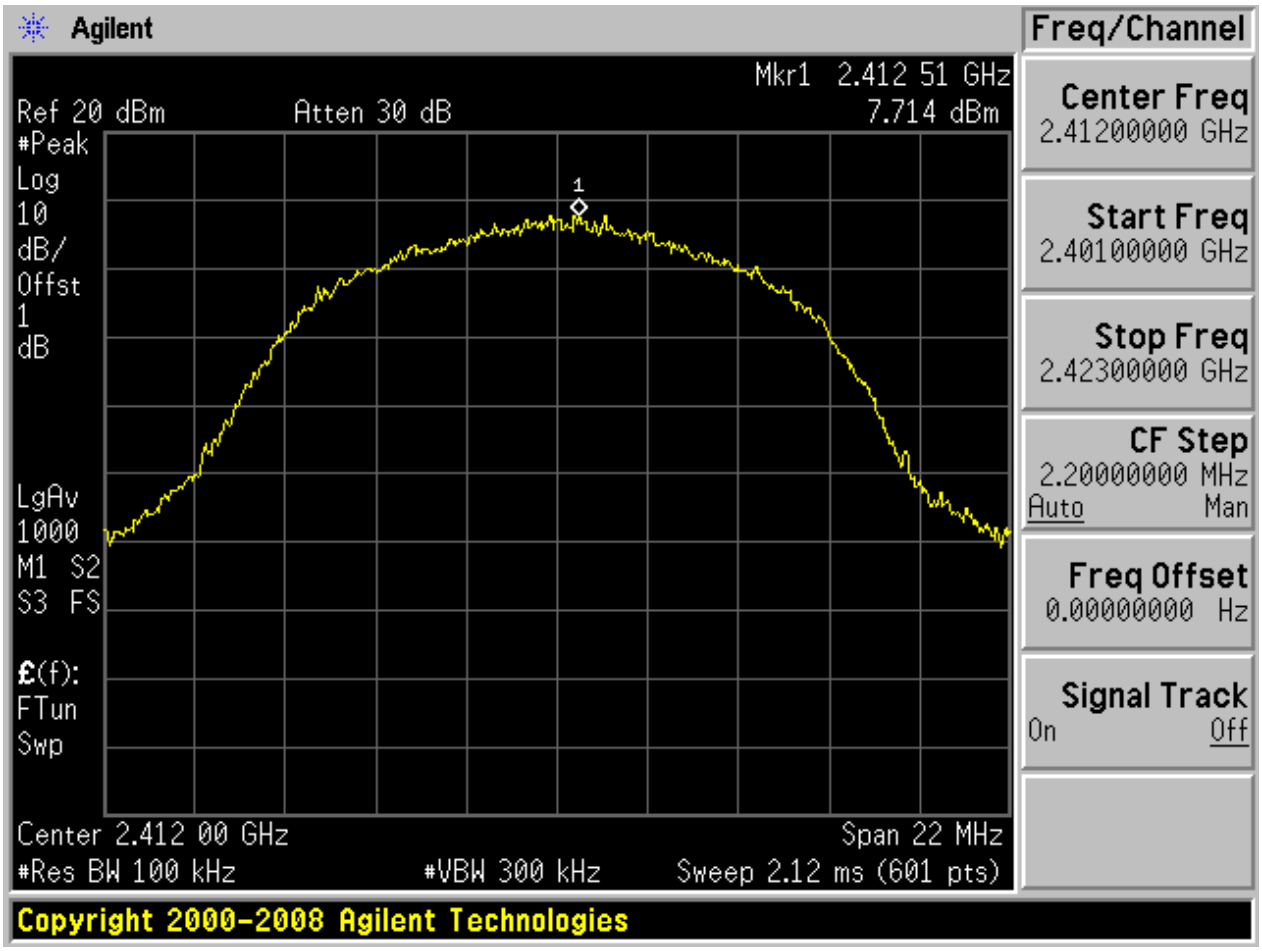
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]	Verdict
11B	L	2412	Ant 1	7.71	<limit	pass
11B	M	2437	Ant 1	7.56	<limit	pass
11B	H	2462	Ant 1	7.72	<limit	pass
11G	L	2412	Ant 1	1.91	<limit	pass
11G	M	2437	Ant 1	1.89	<limit	pass
11G	H	2462	Ant 1	1.60	<limit	pass
11N20_SISO	L	2412	Ant 1	-0.14	<limit	pass
11N20_SISO	M	2437	Ant 1	-0.11	<limit	pass
11N20_SISO	H	2462	Ant 1	0.03	<limit	pass

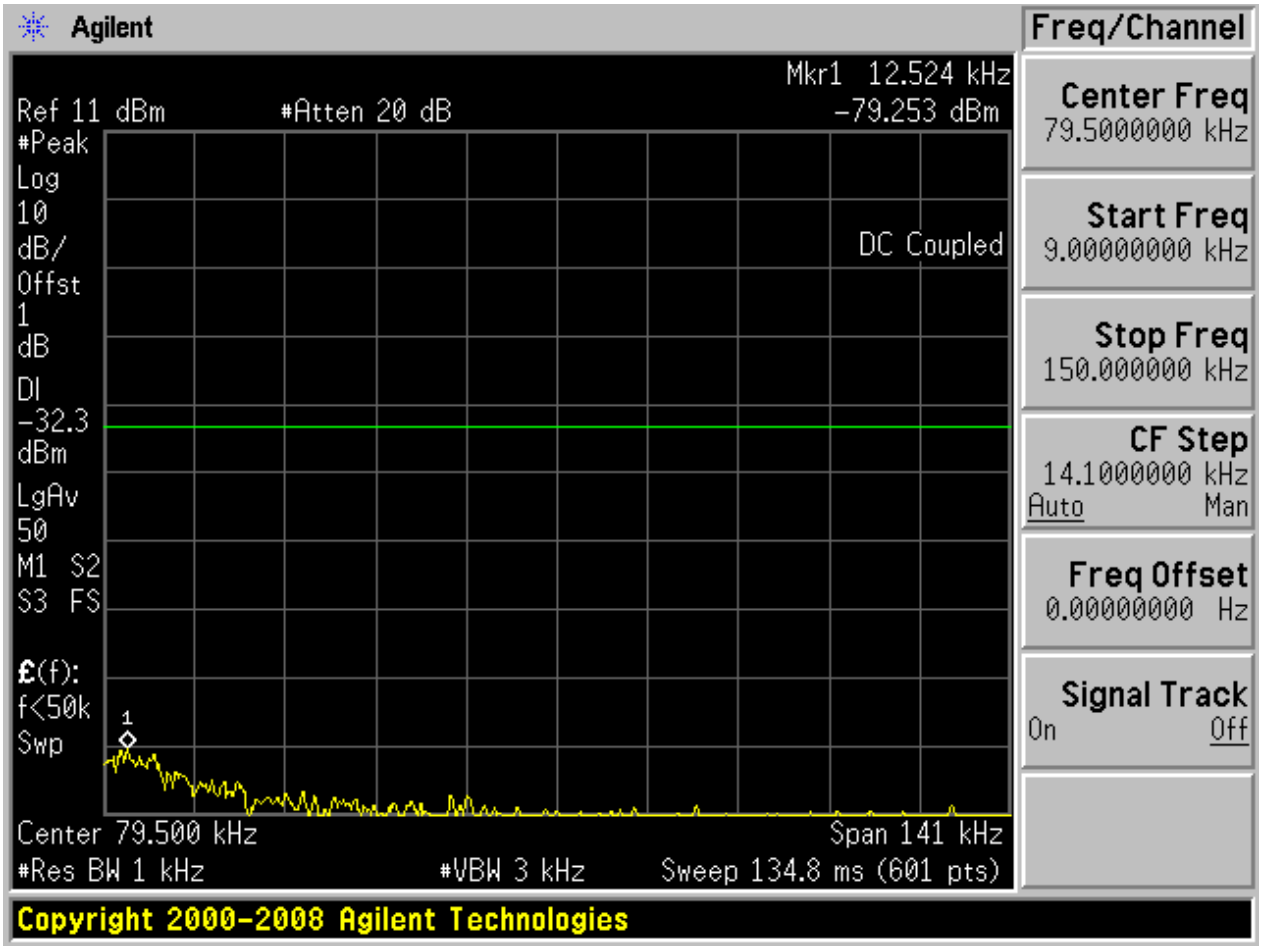
Part II - Test Plots

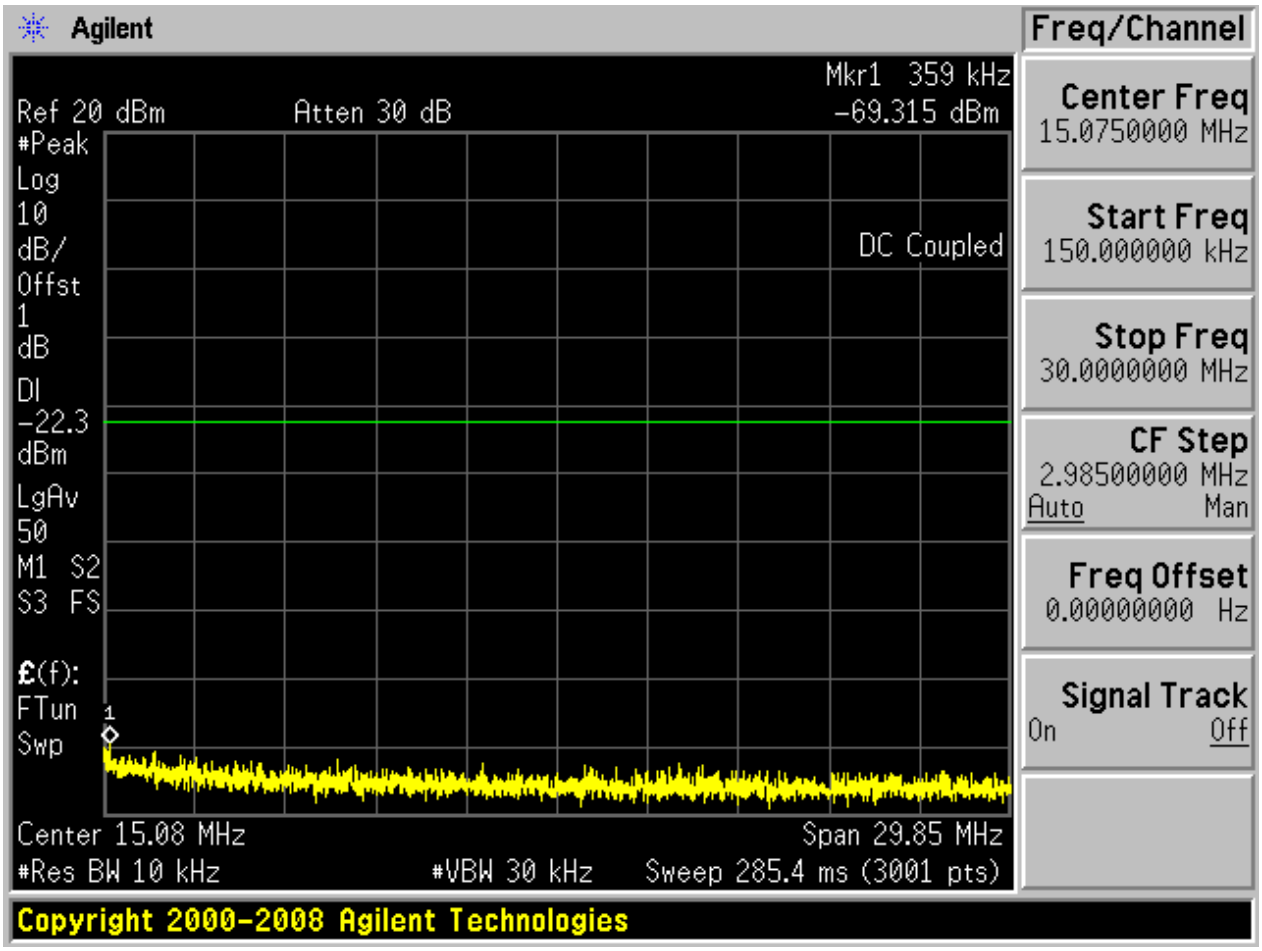
2.1 11B_L@Ant 1

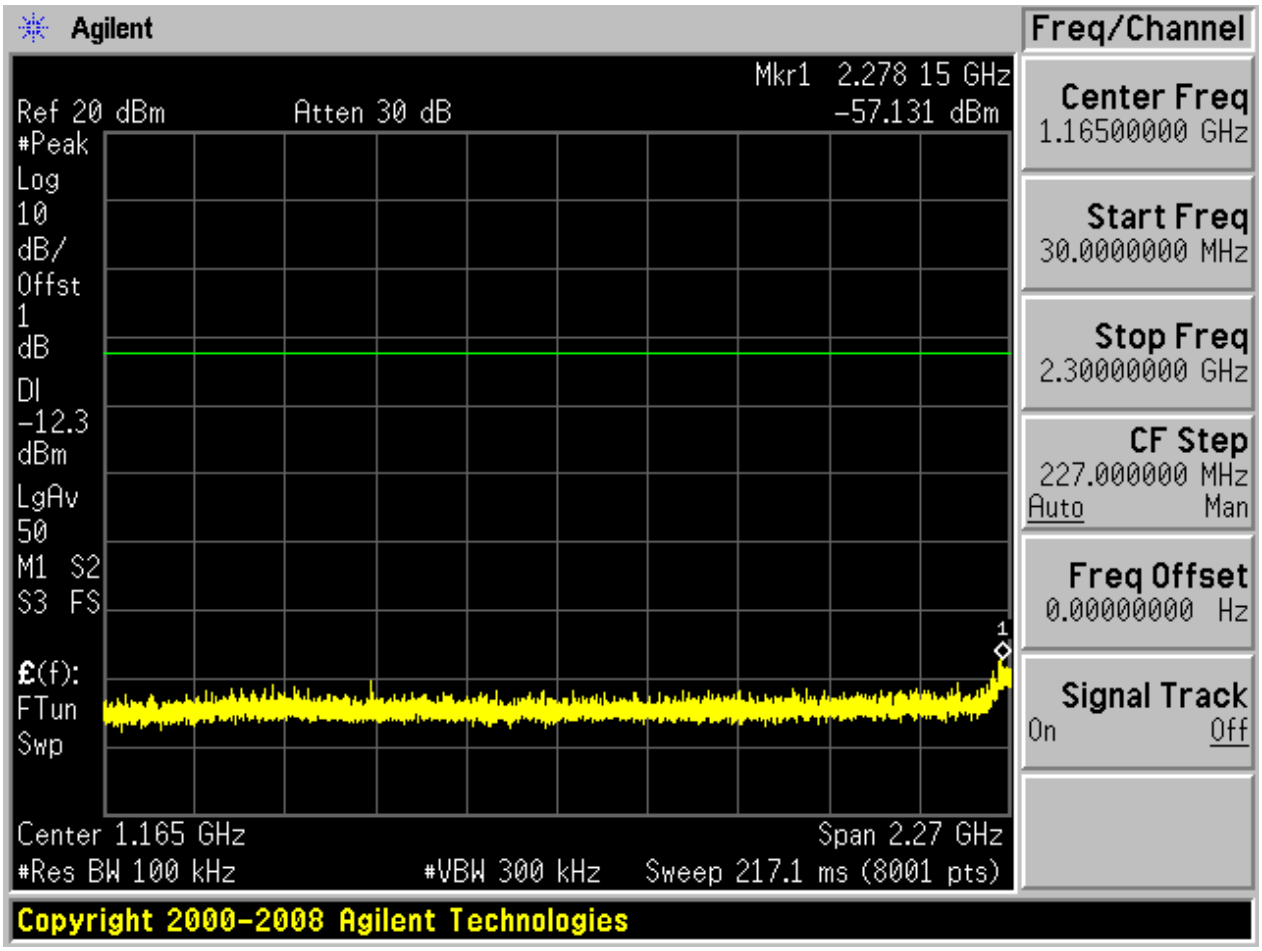
Pref:

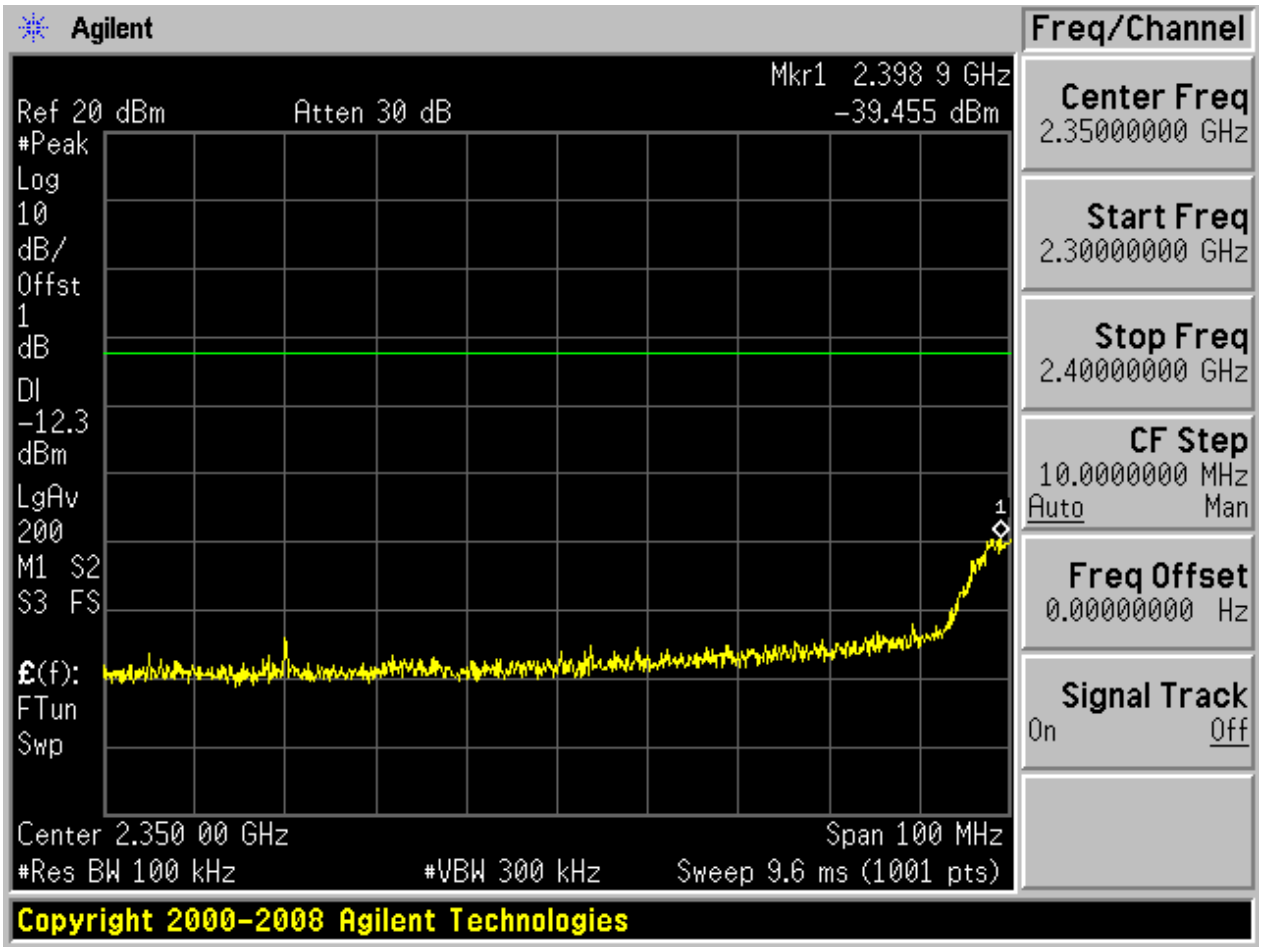


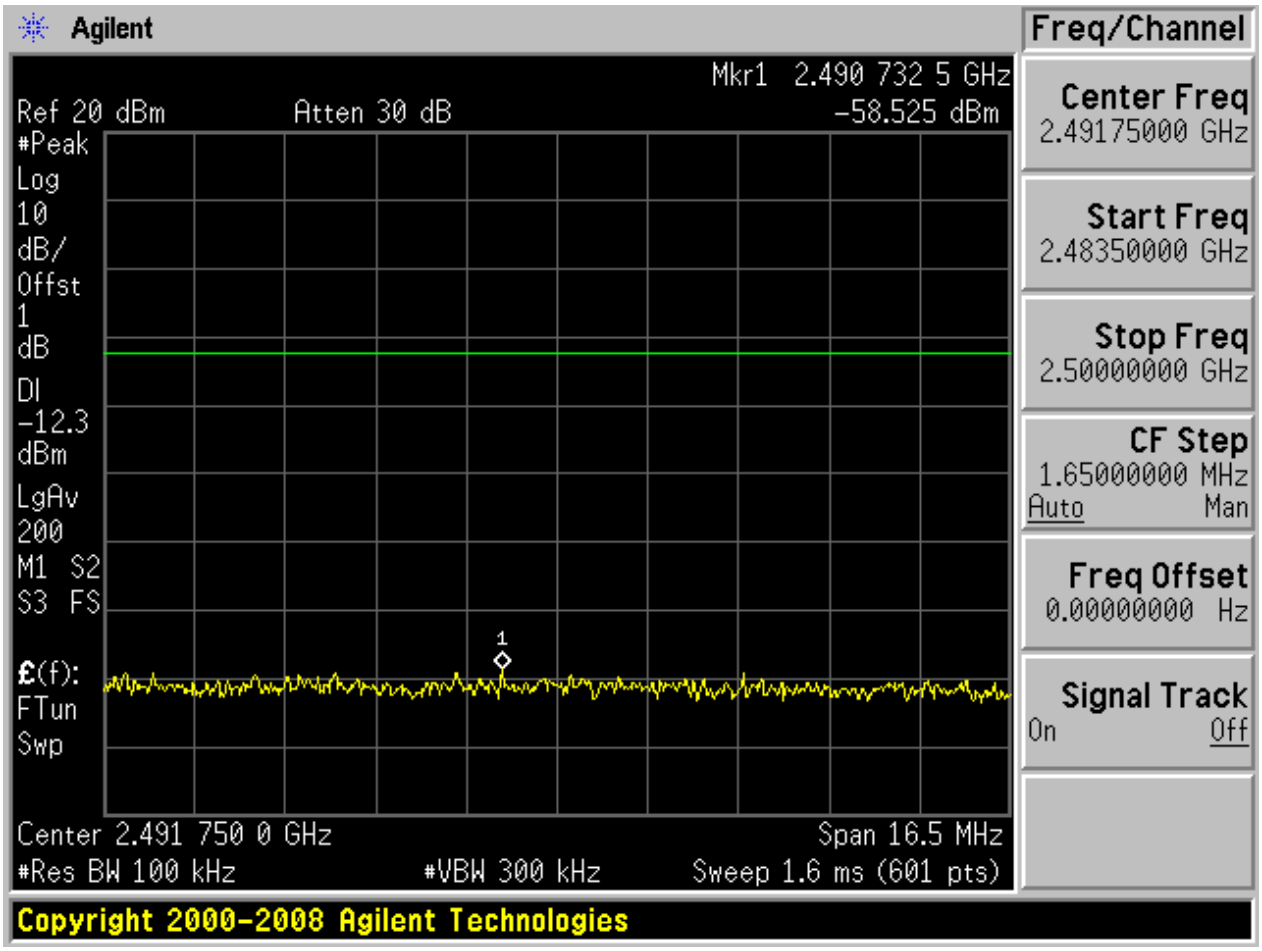
Puw:

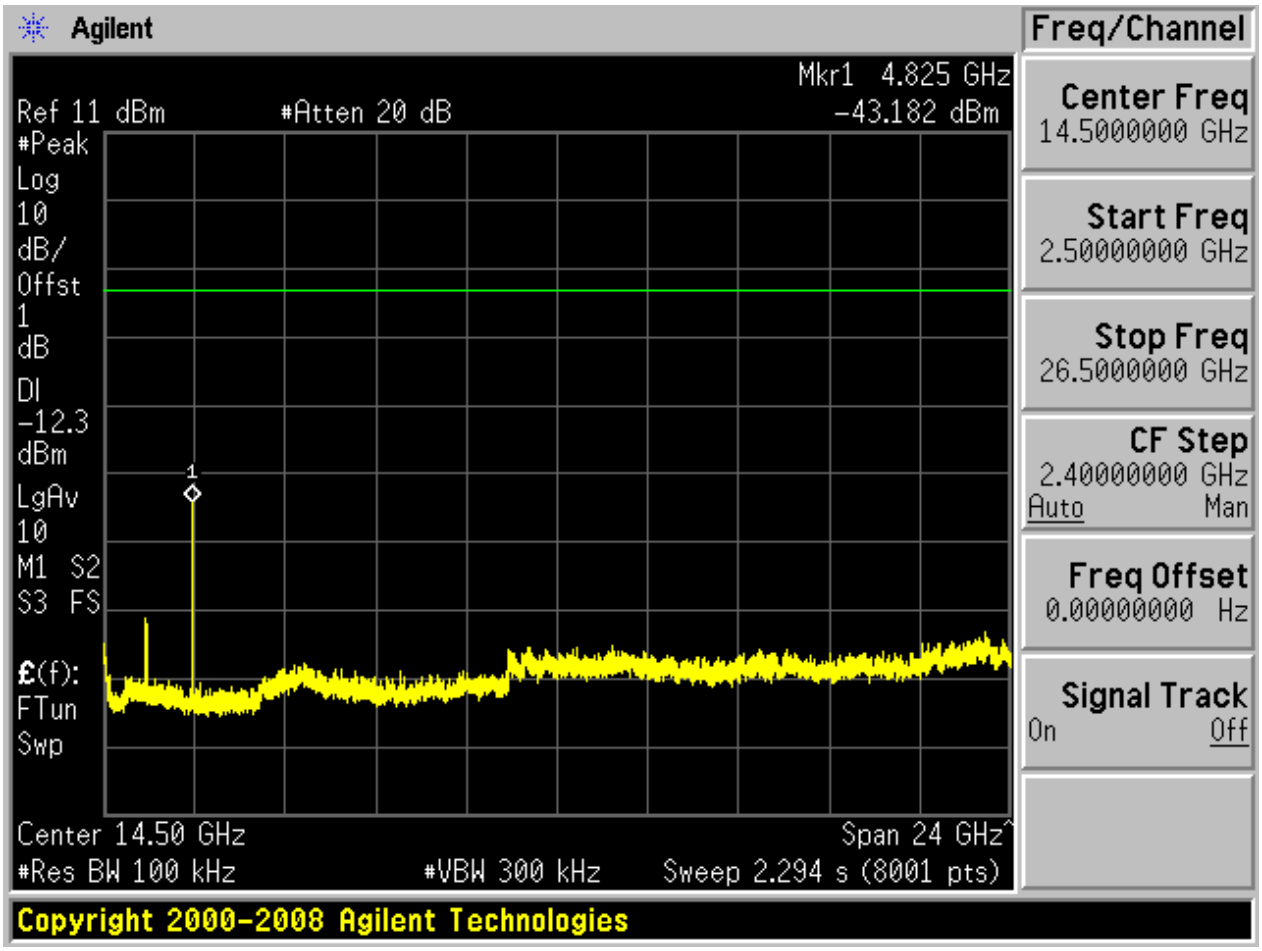






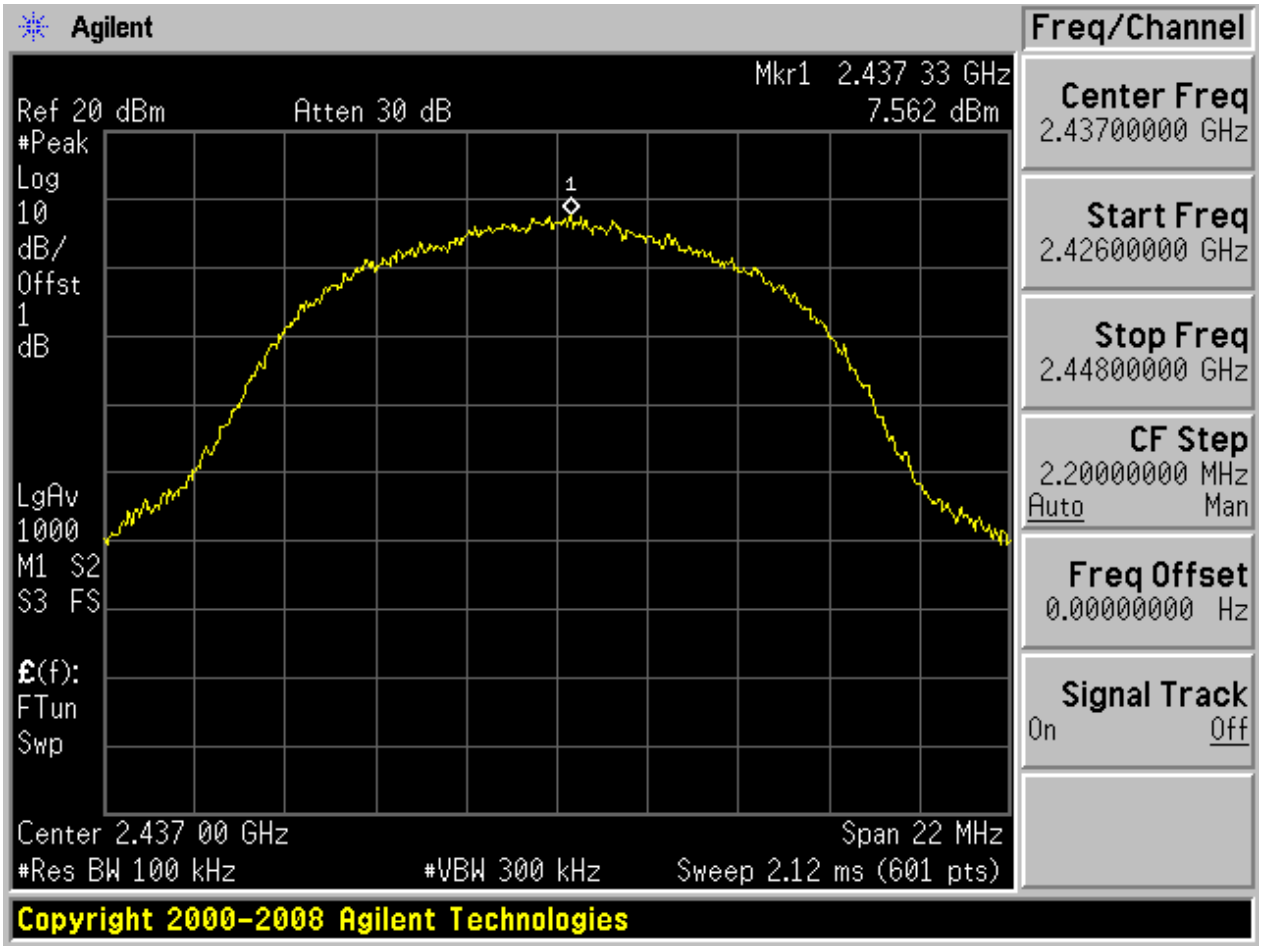




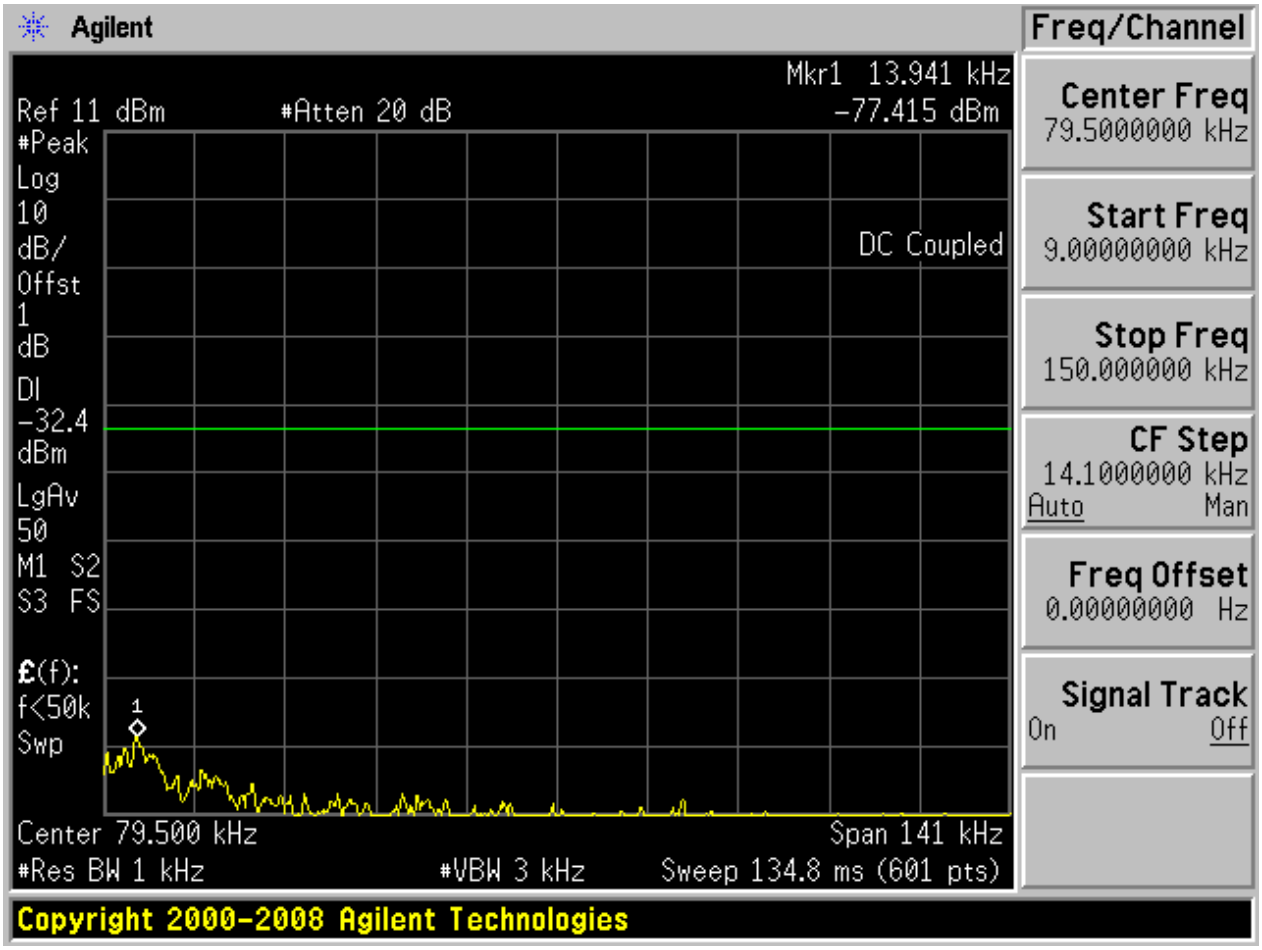


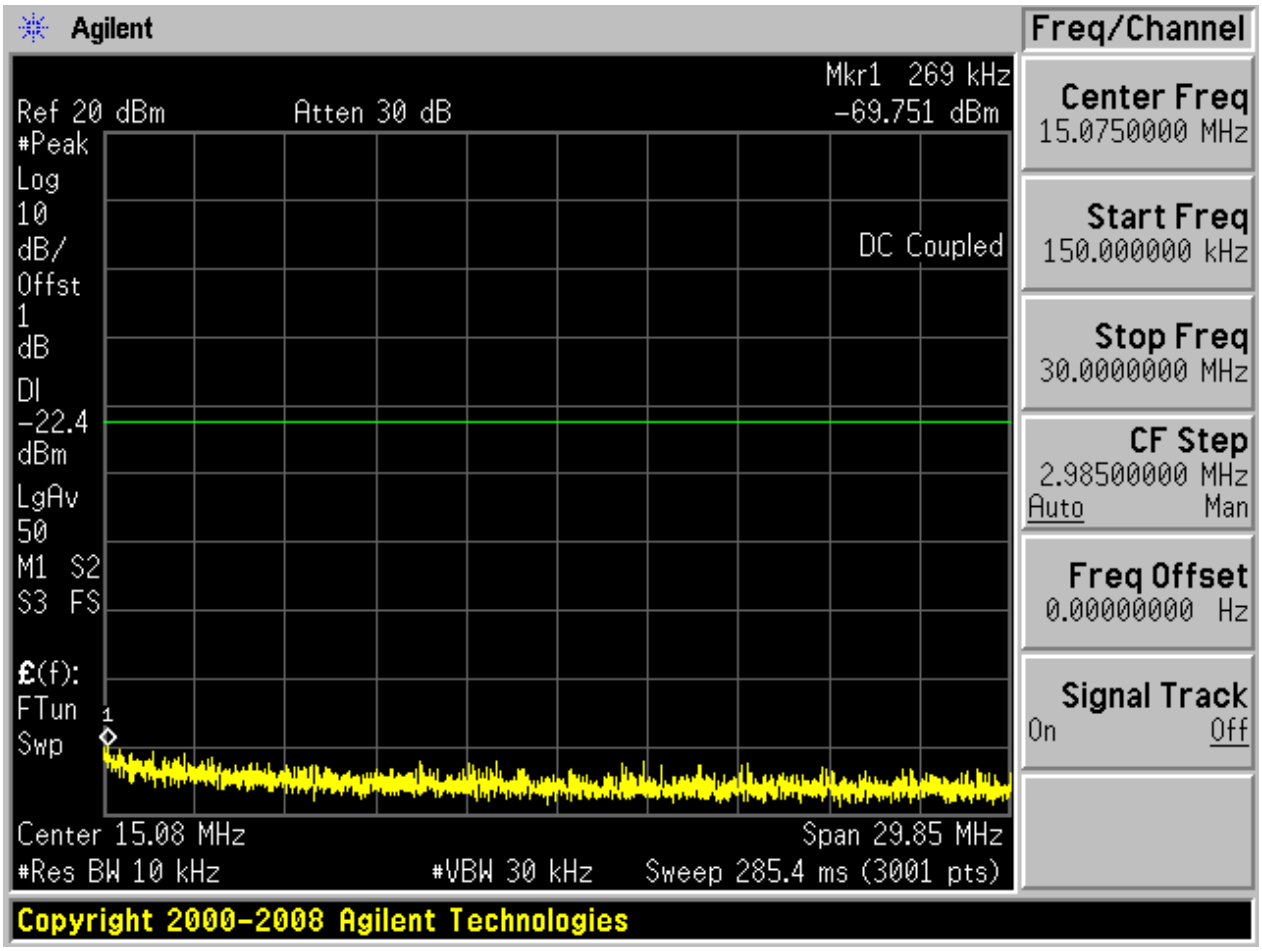
2.2 11B_M@Ant 1

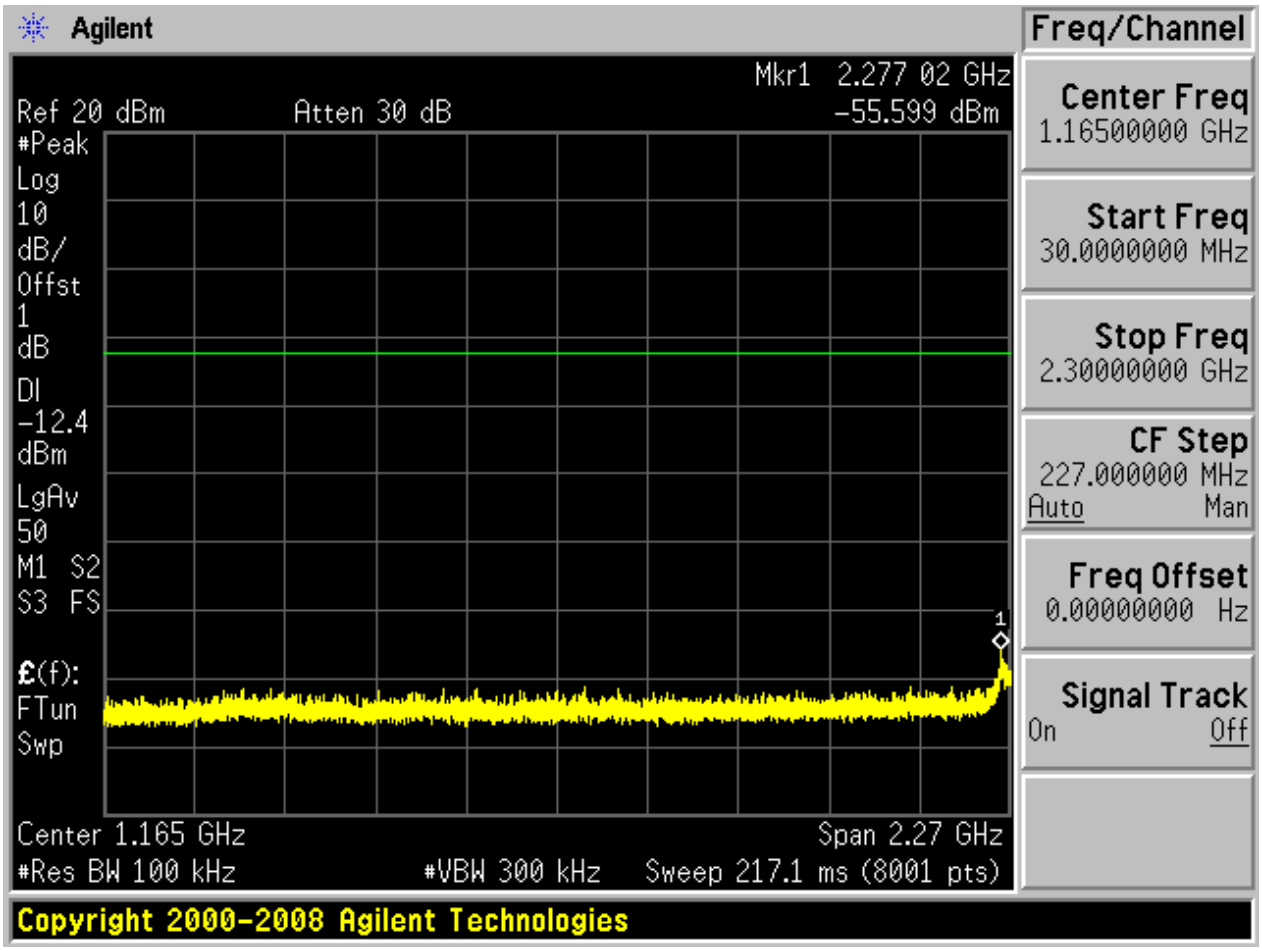
Pref:

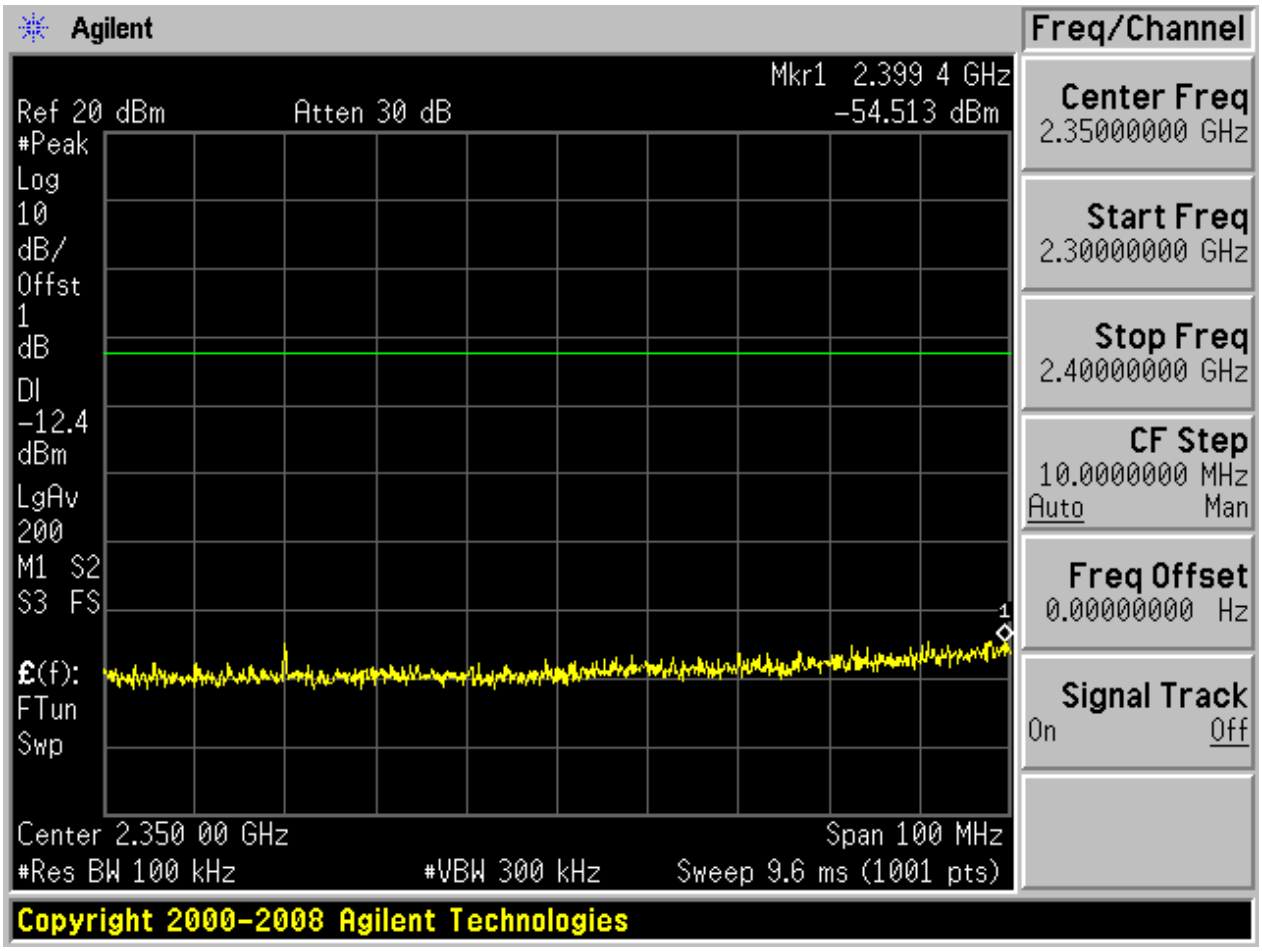


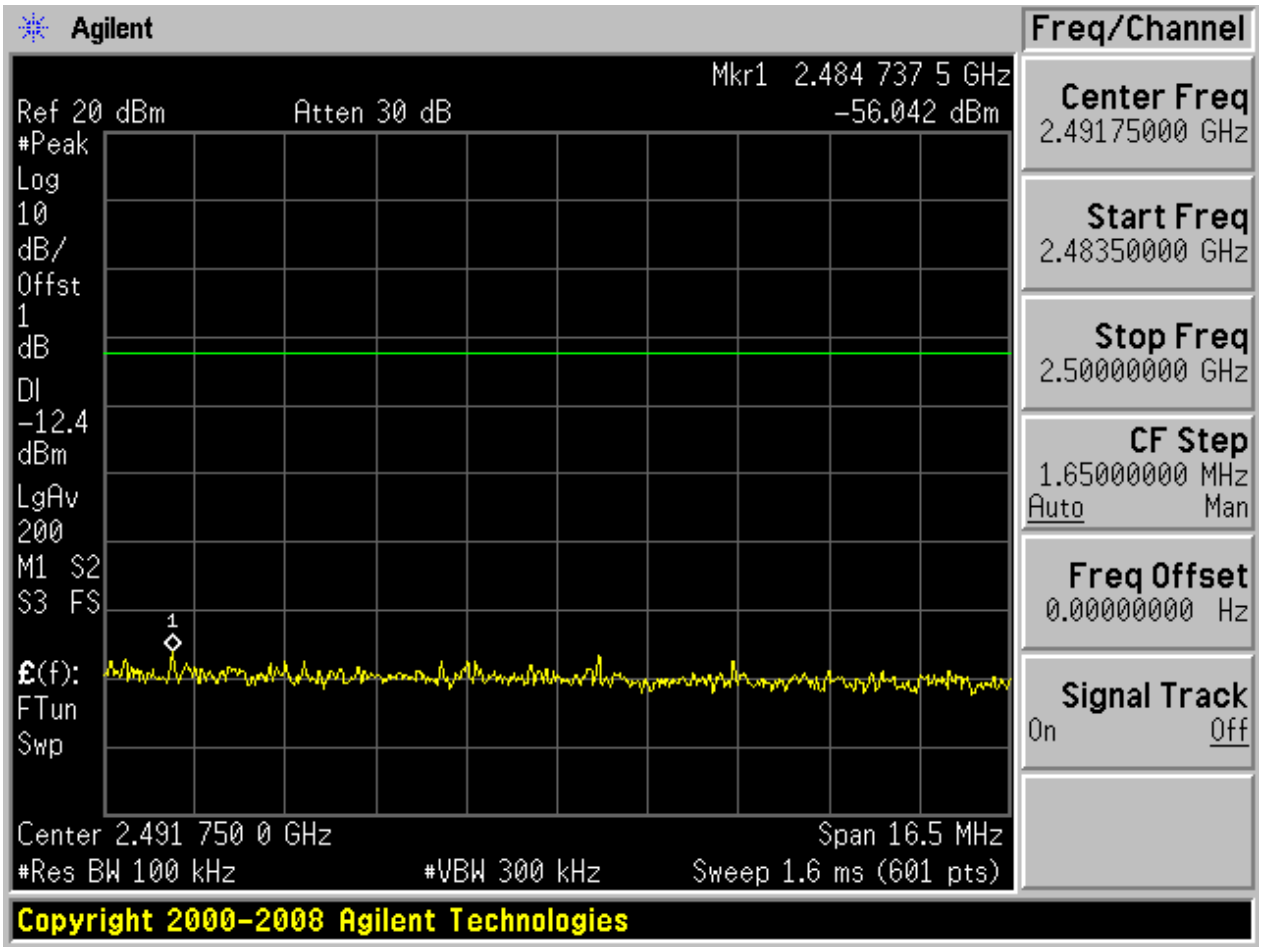
Puw:

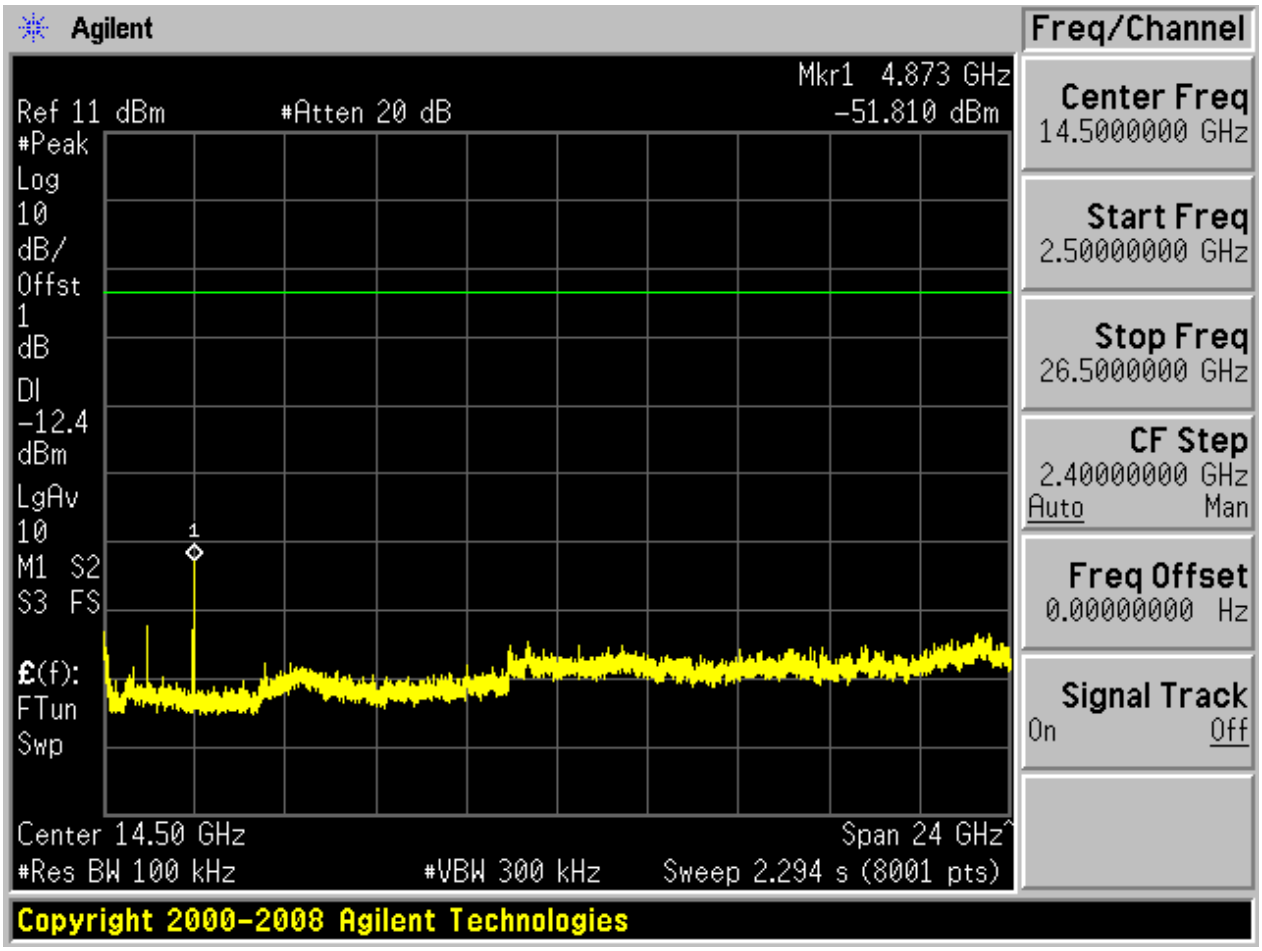






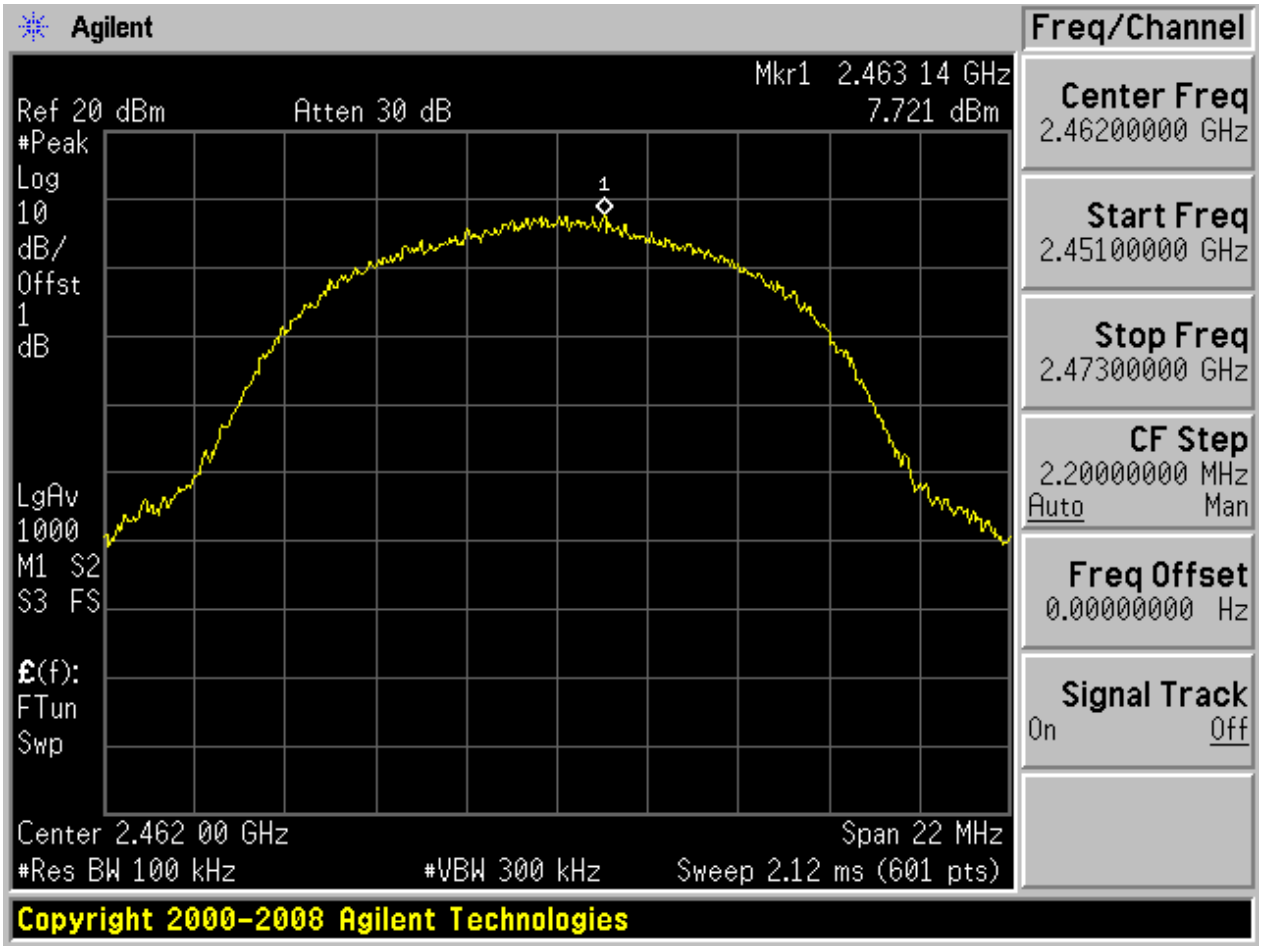




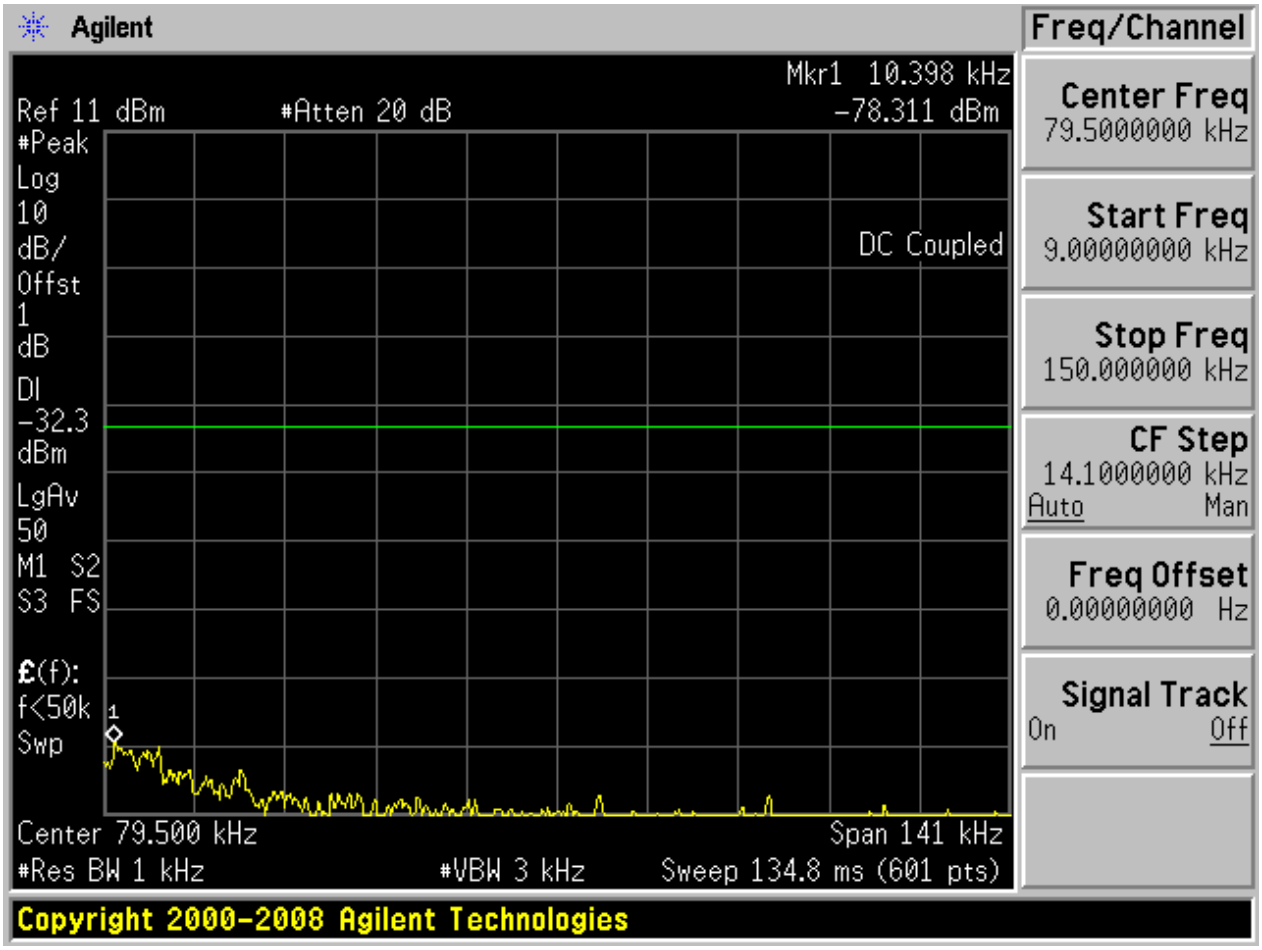


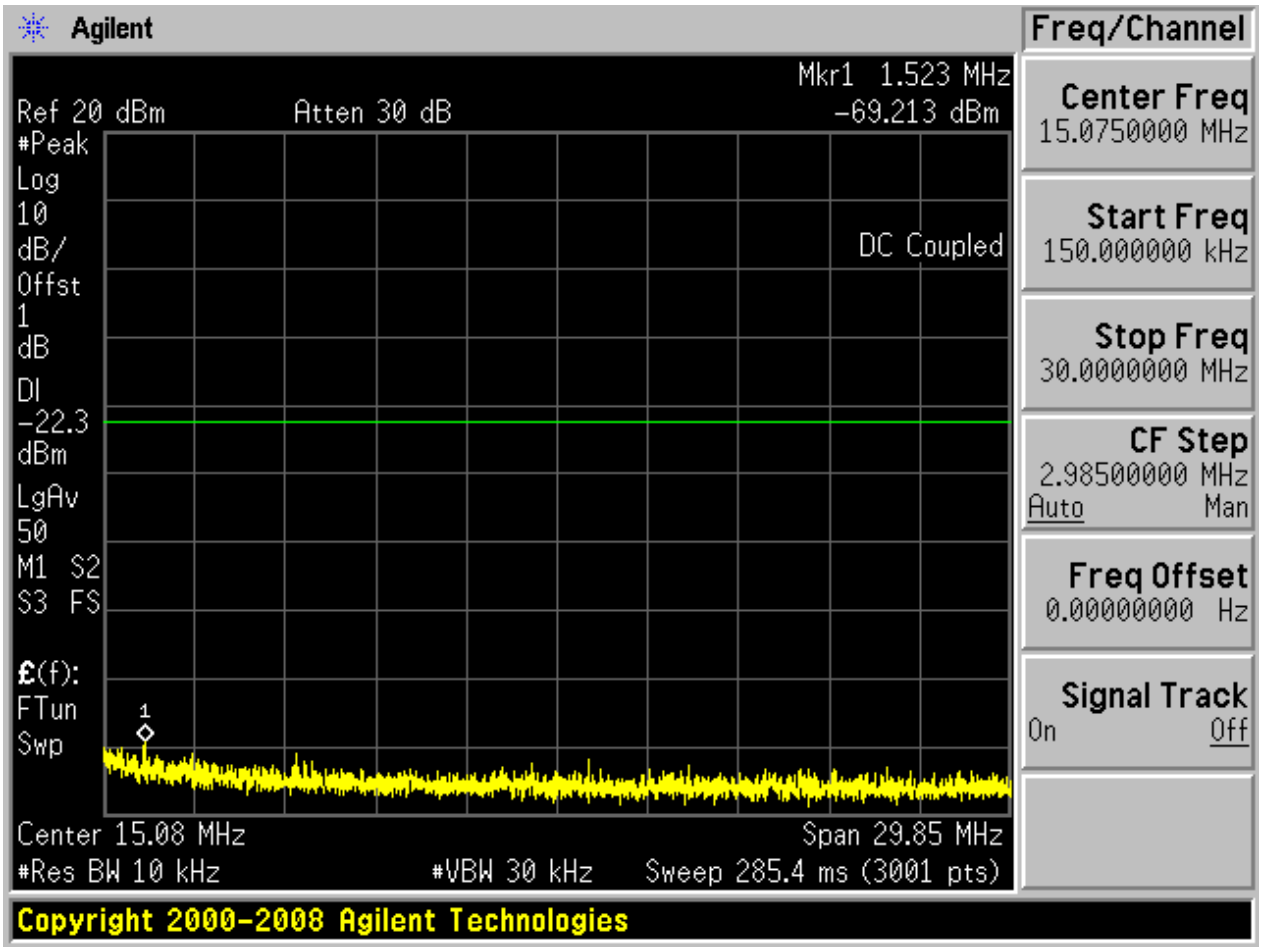
2.3 11B_H@Ant 1

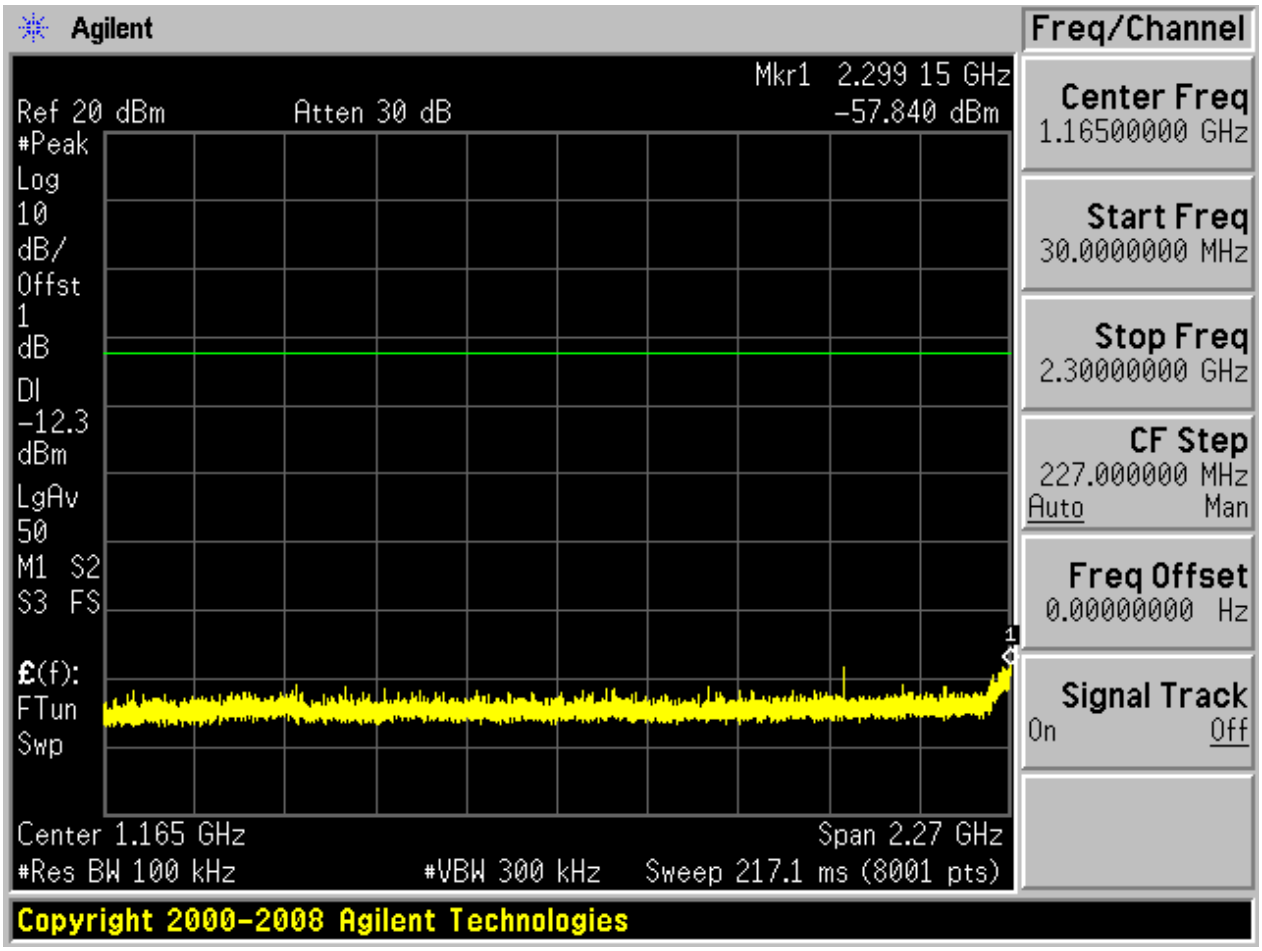
Pref:

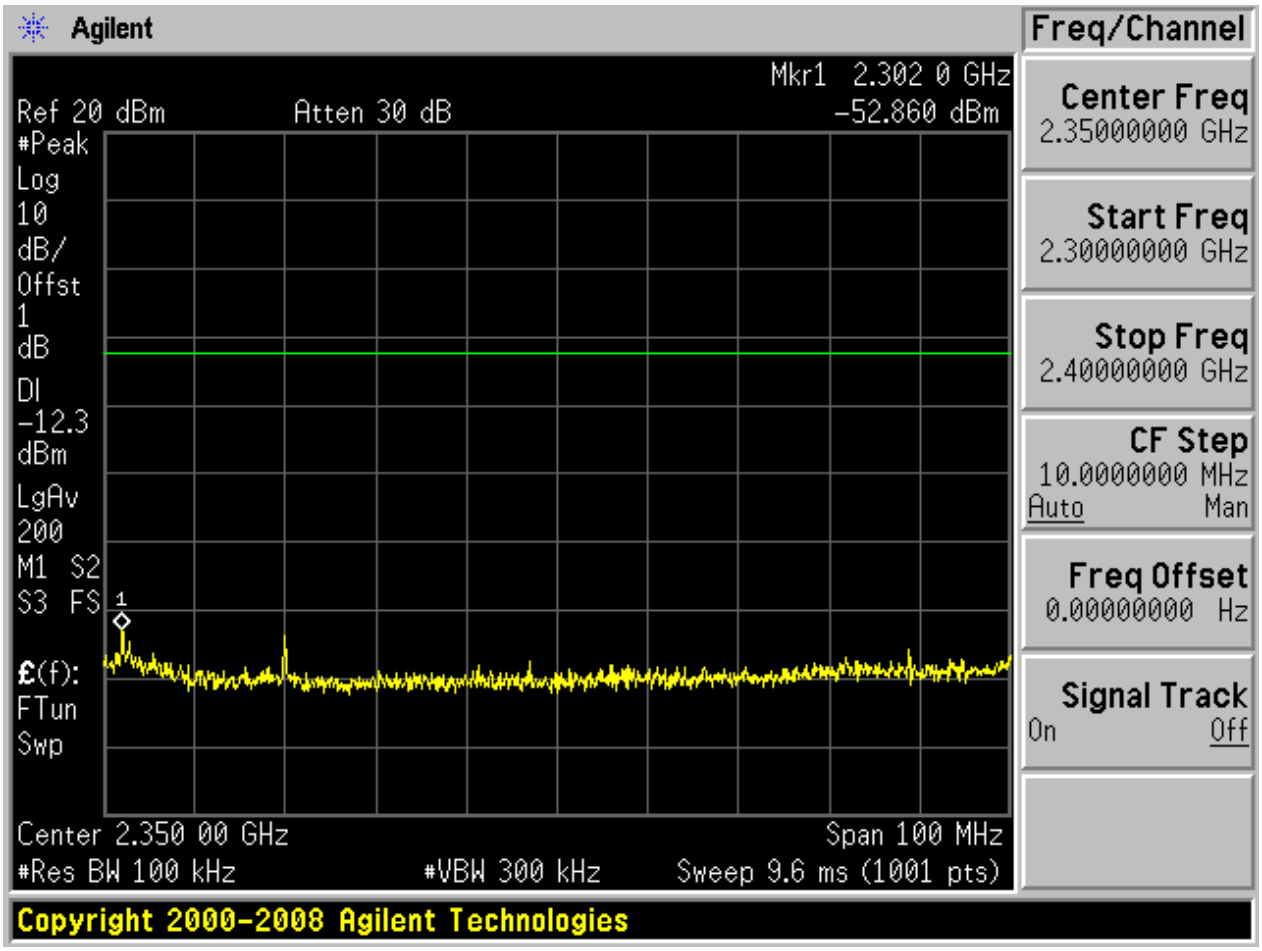


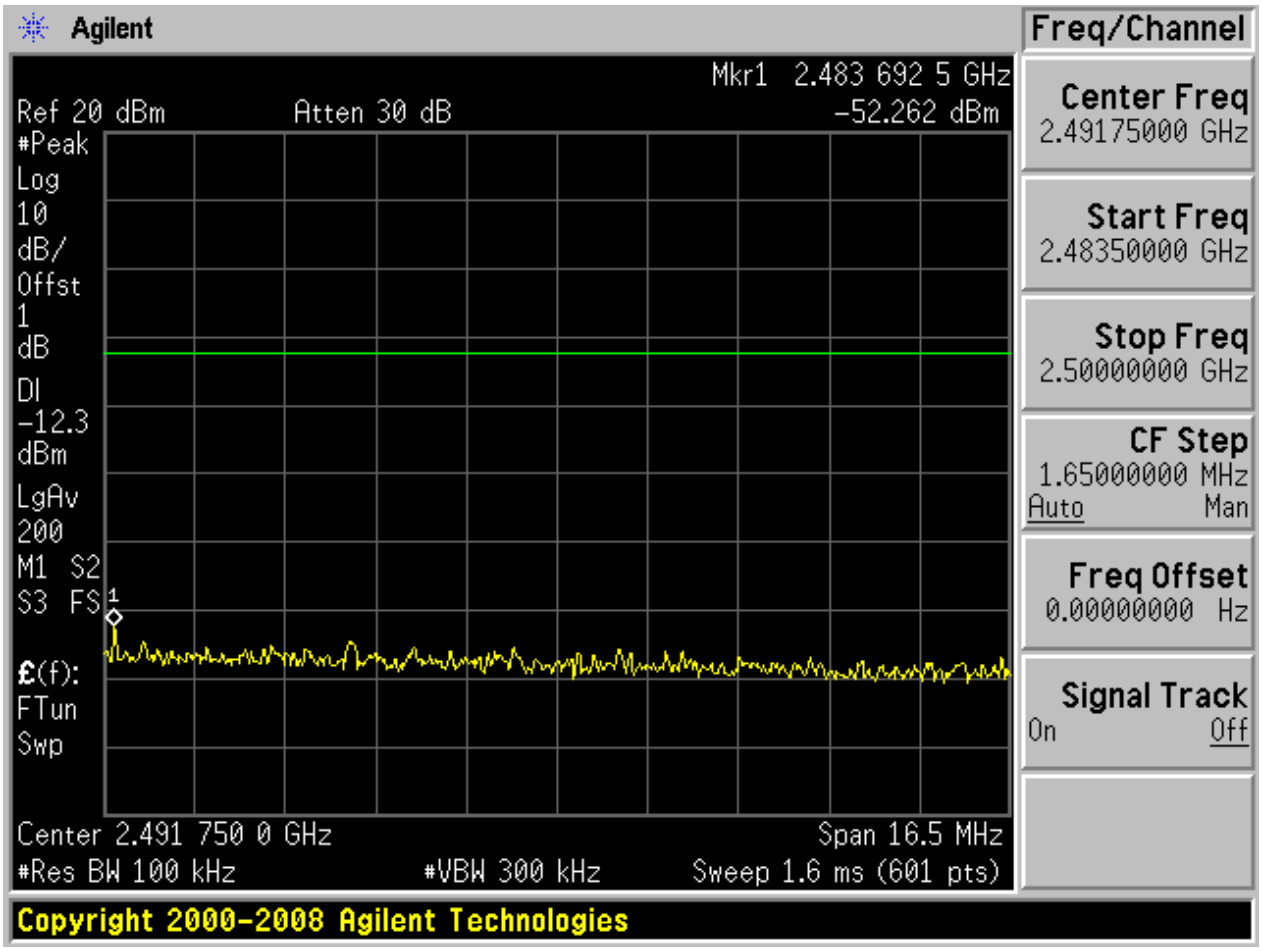
Puw:

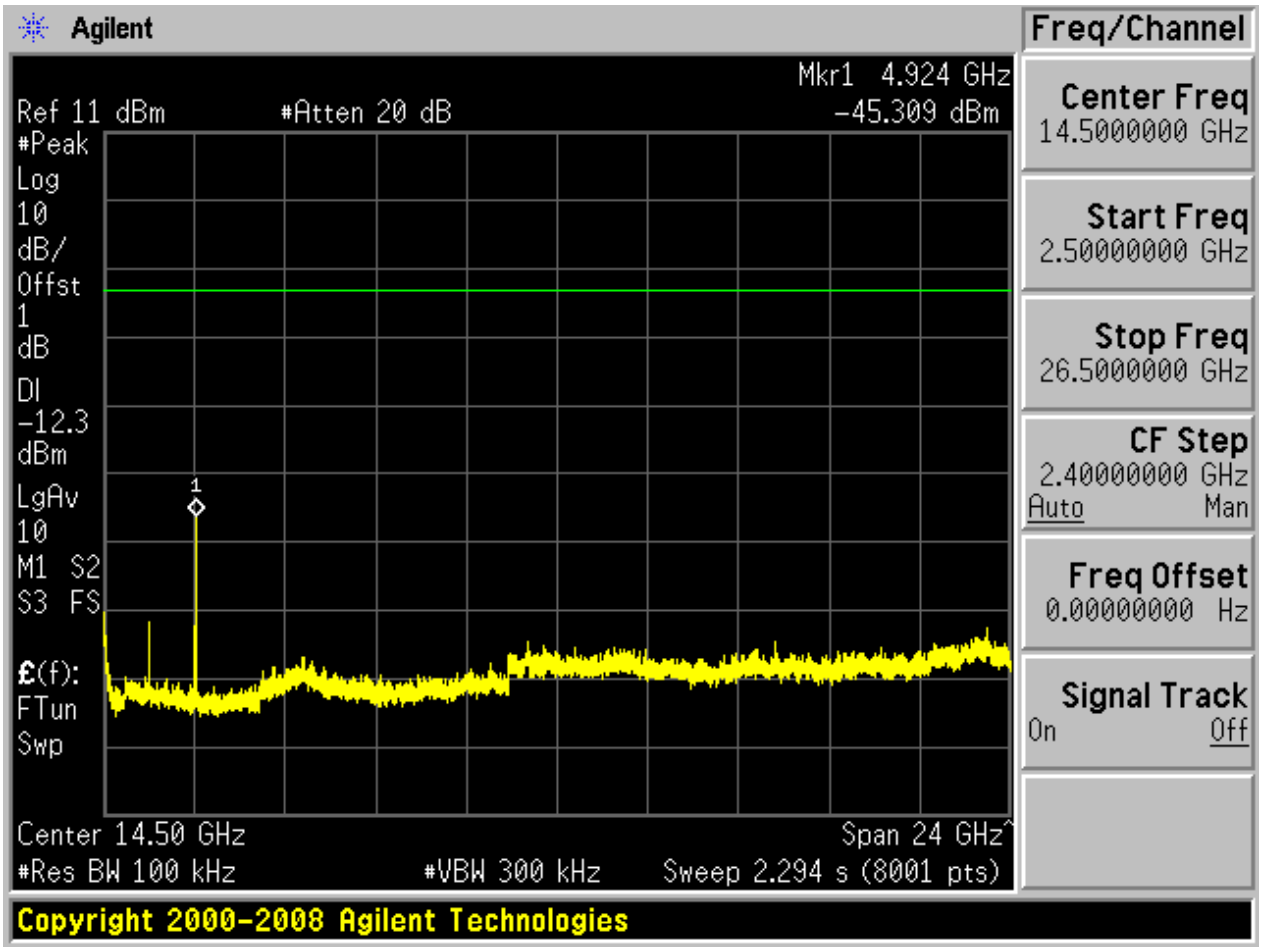






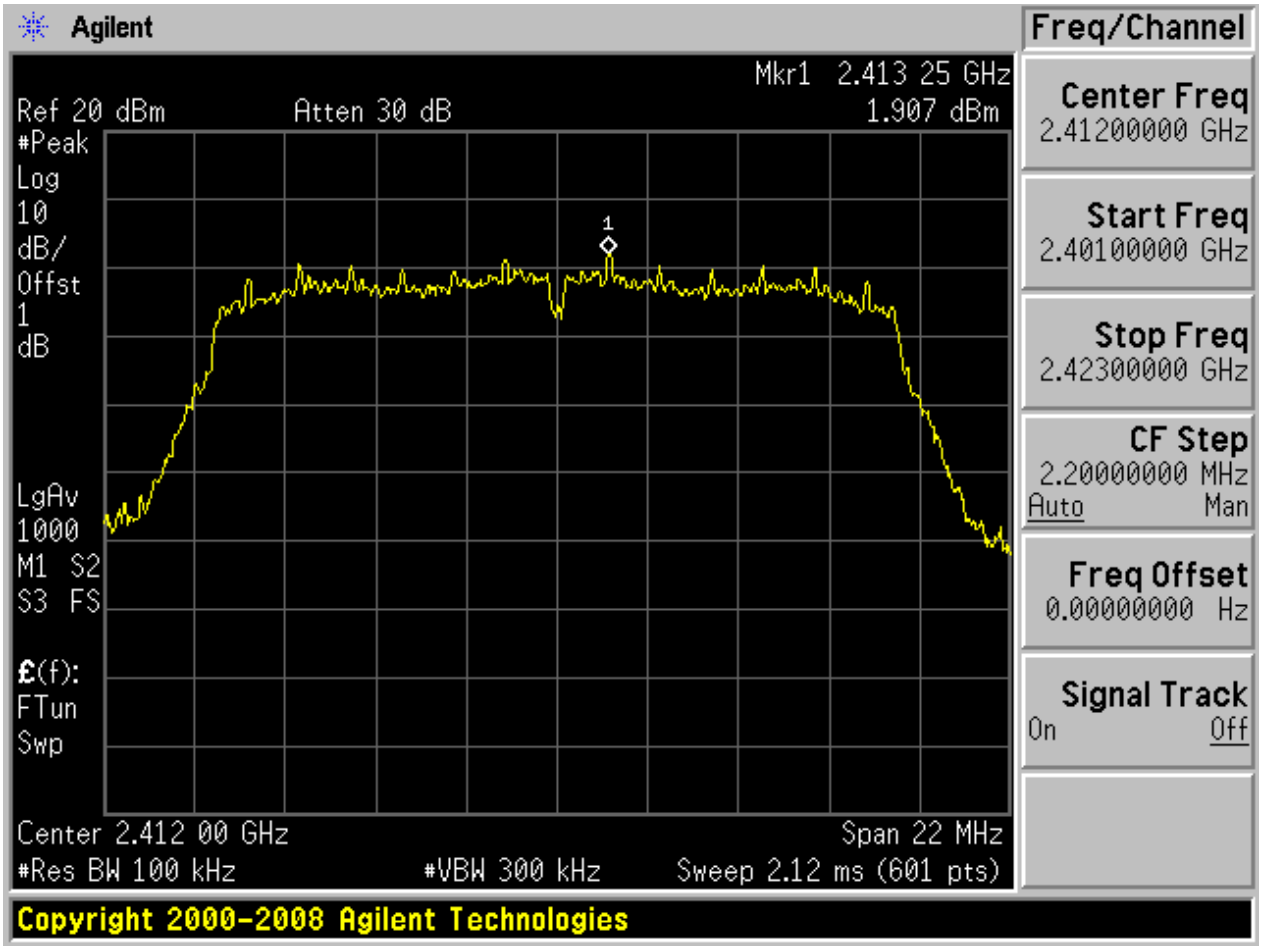




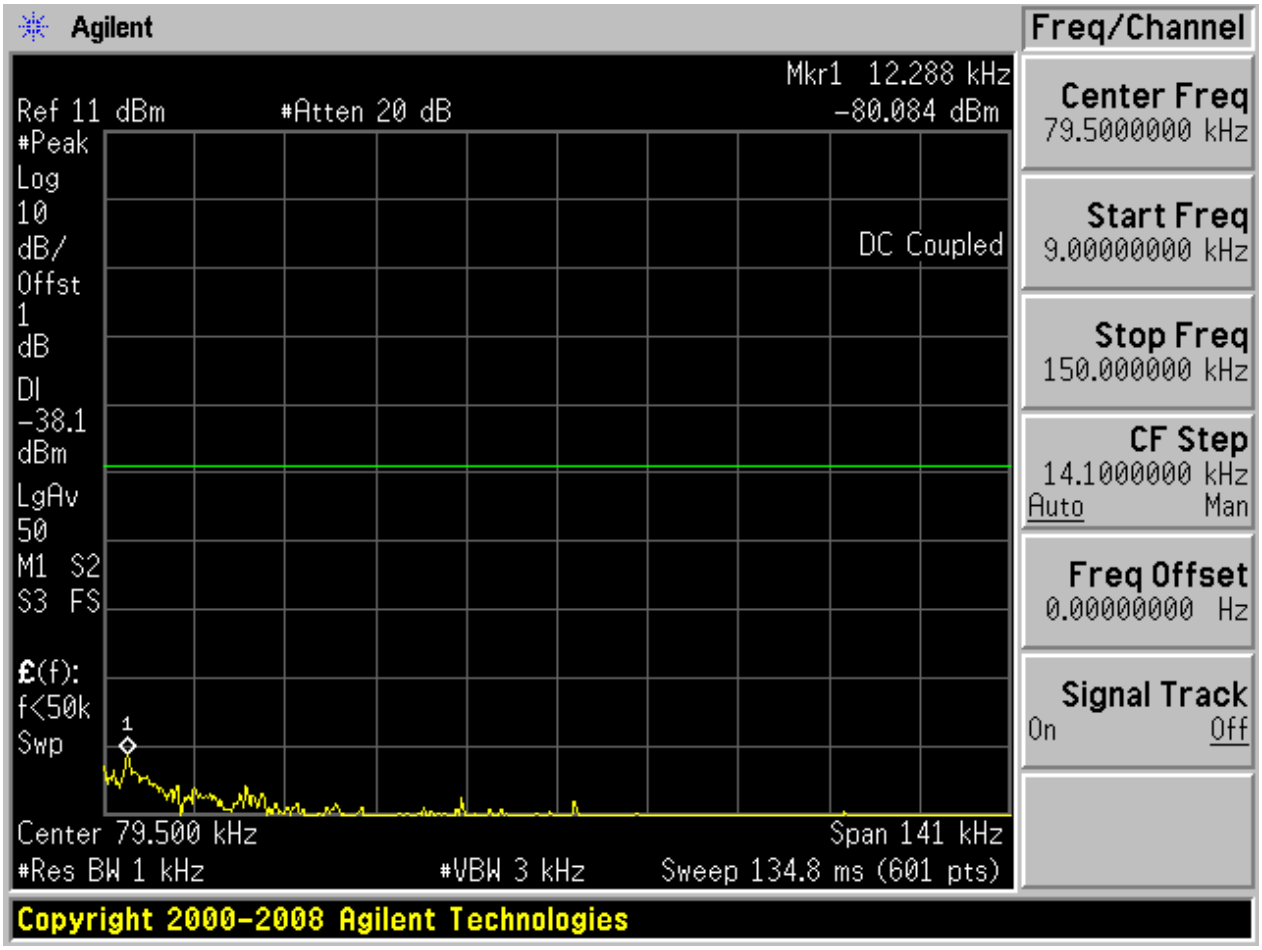


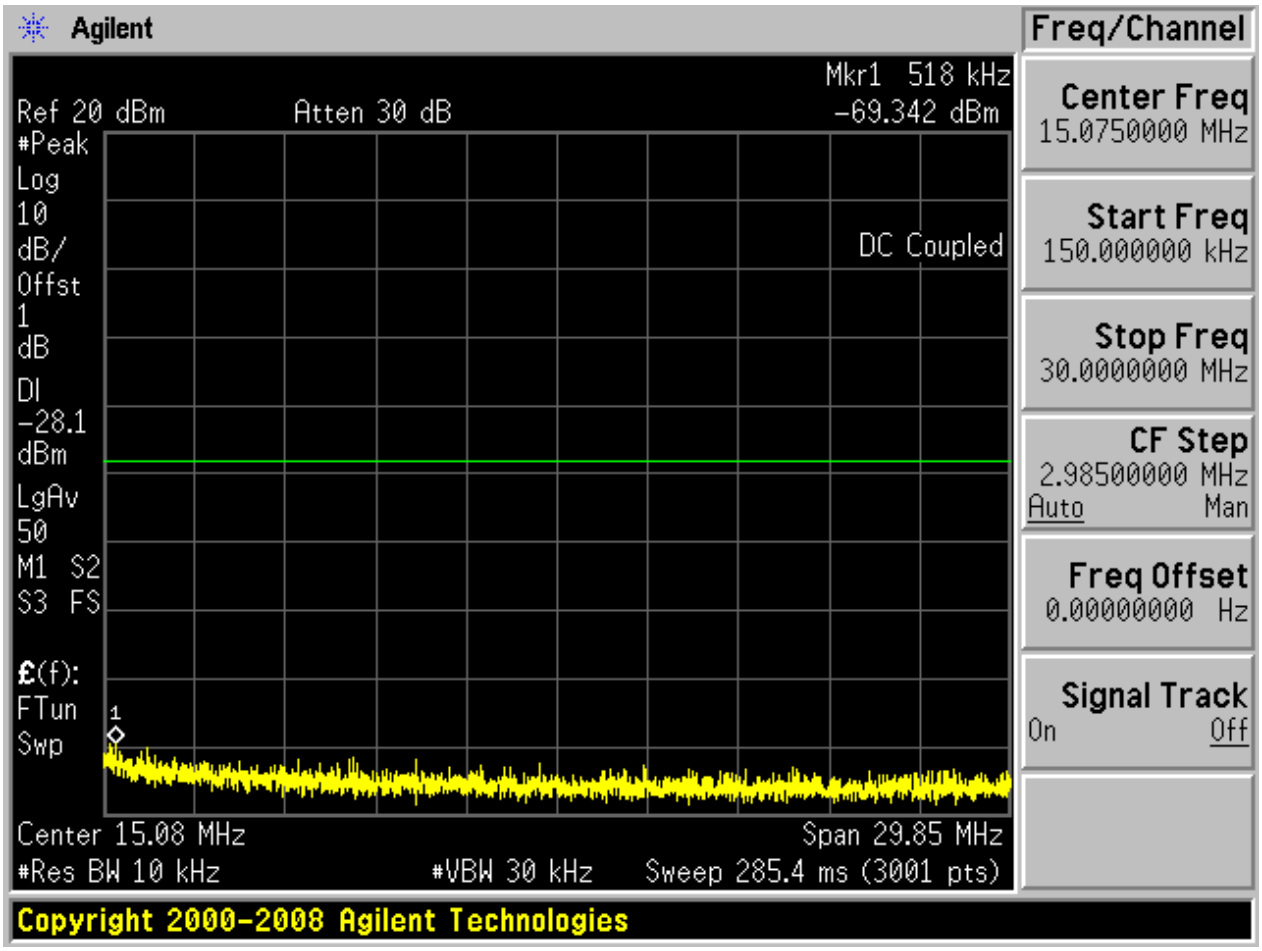
2.4 11G_L@Ant 1

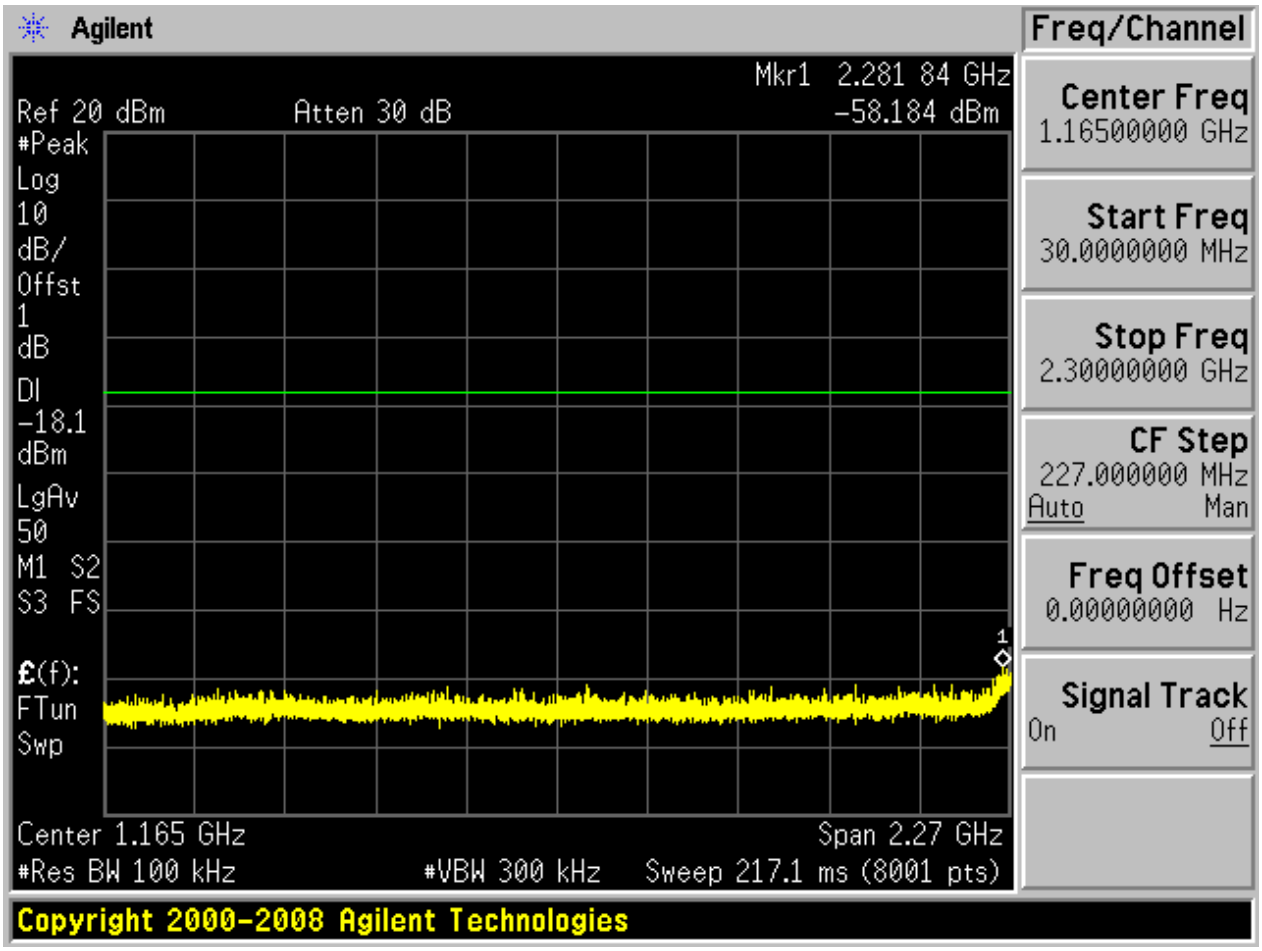
Pref:

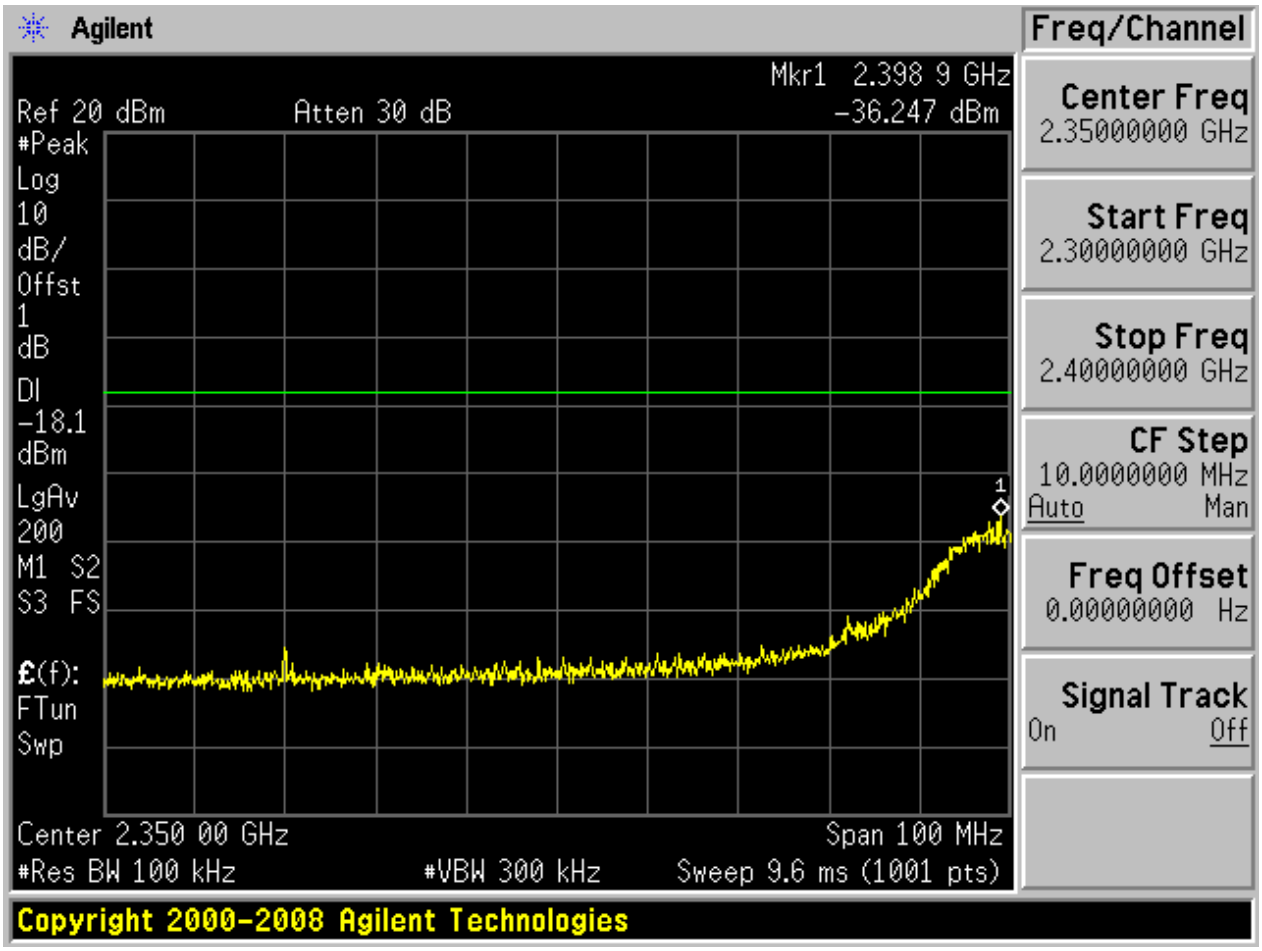


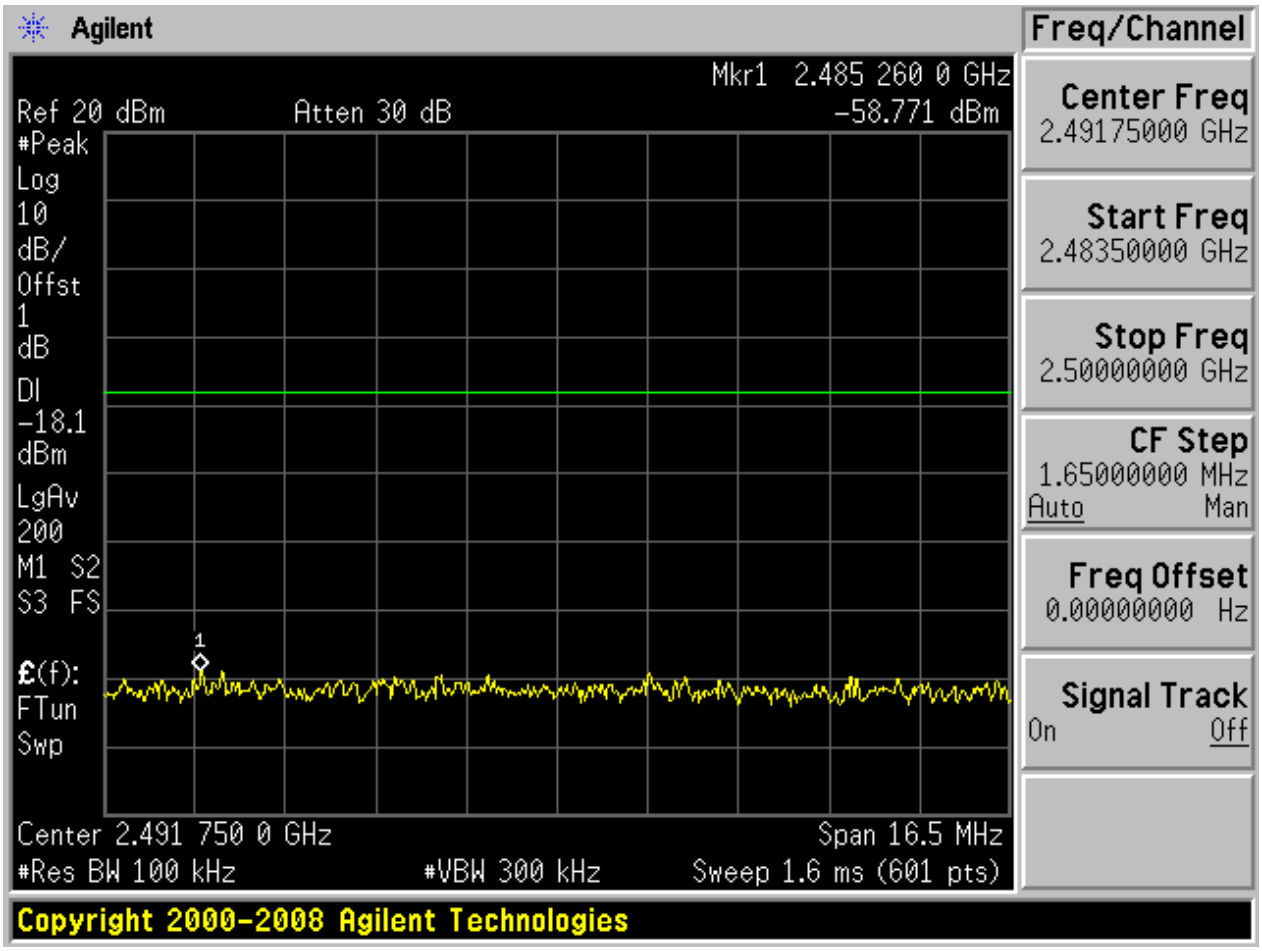
Puw:

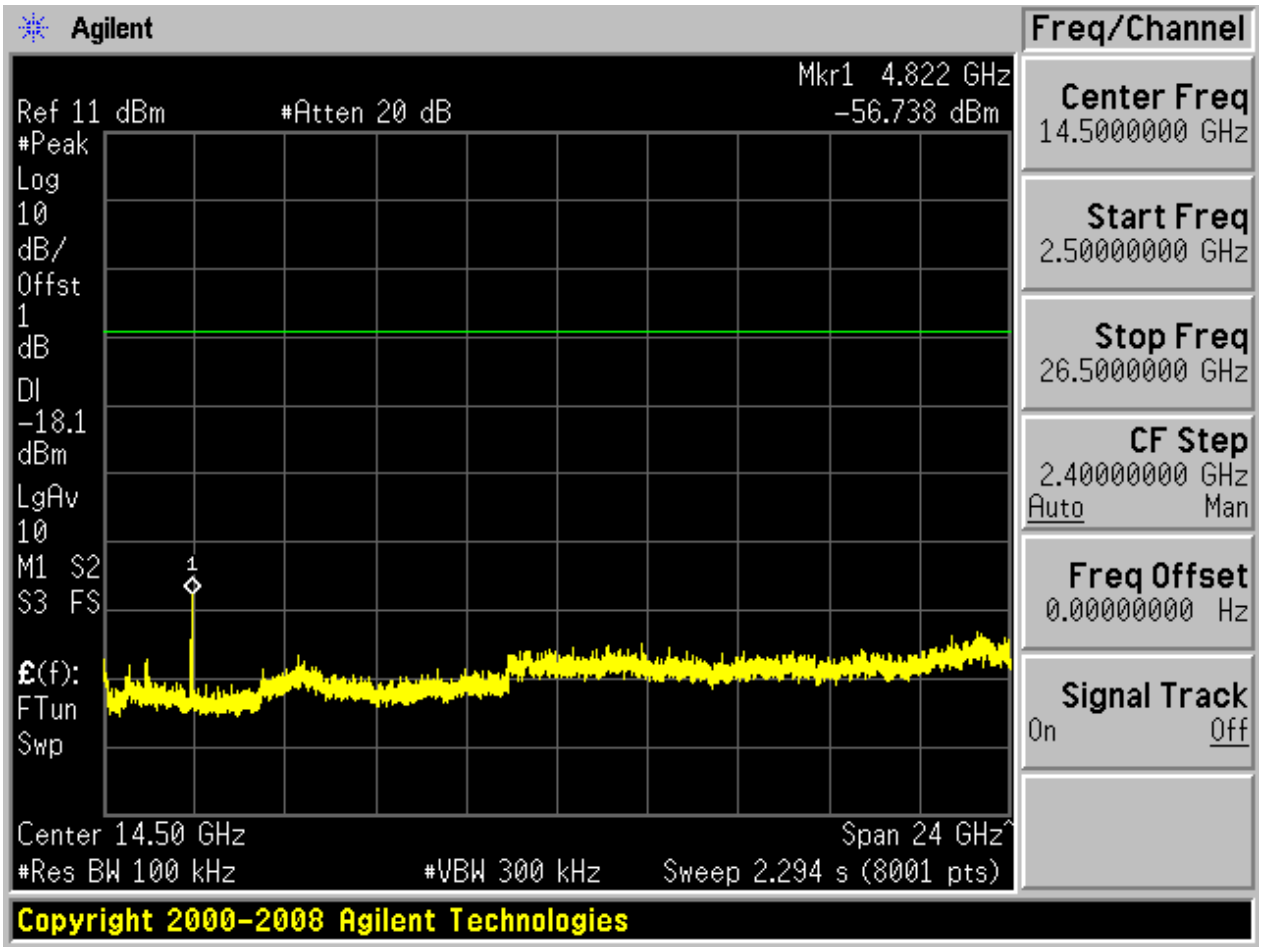






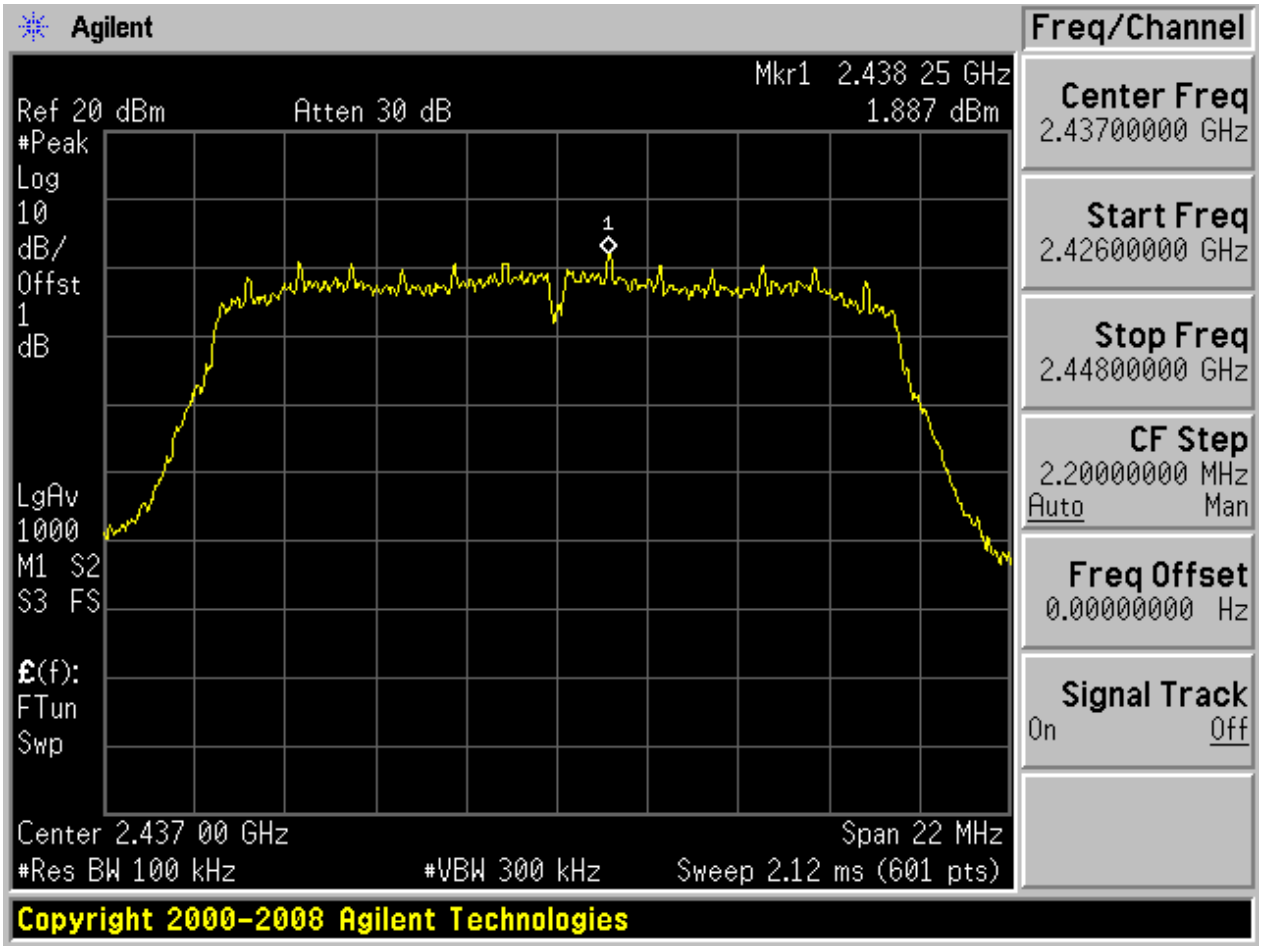




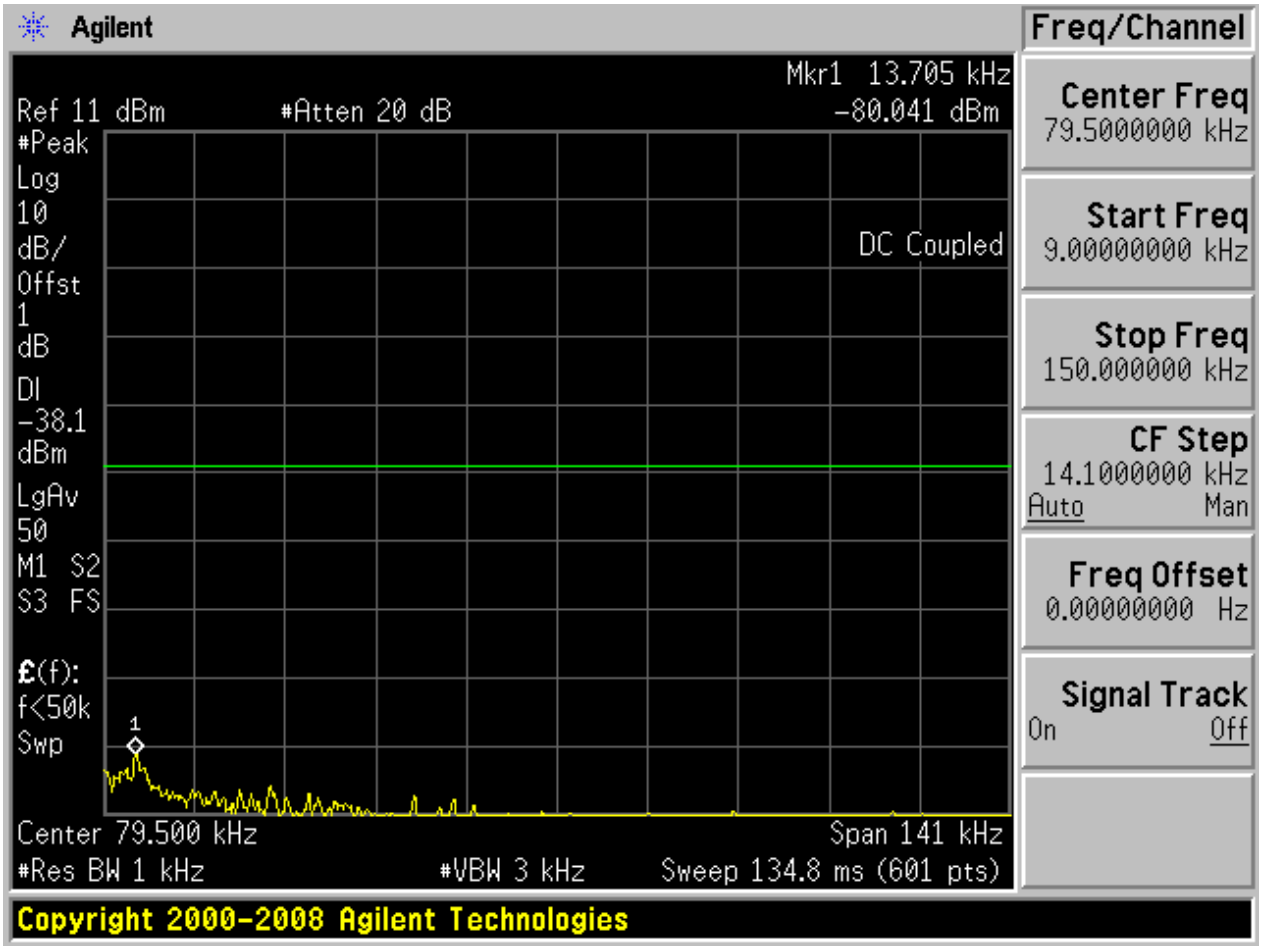


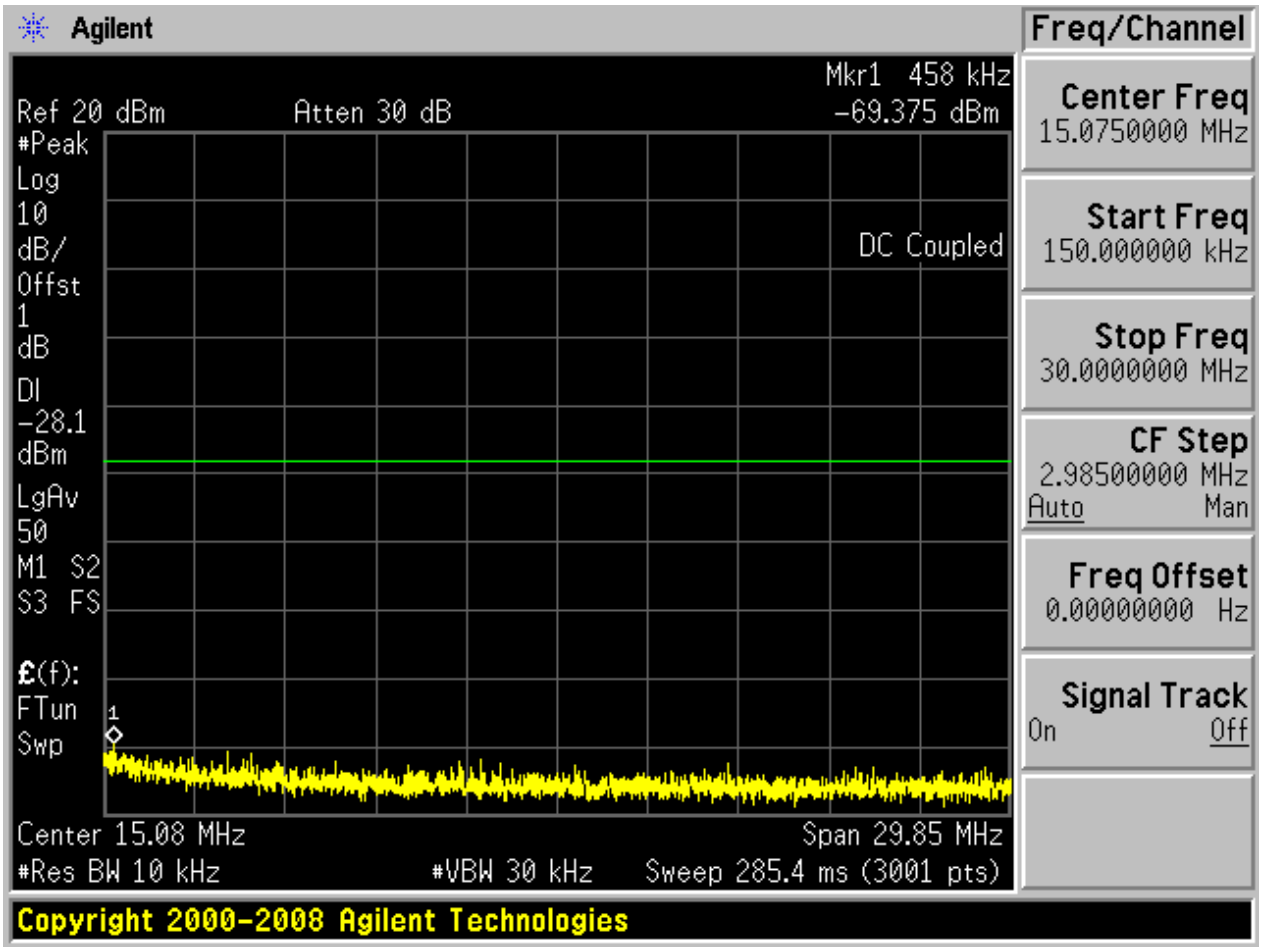
2.5 11G_M@Ant 1

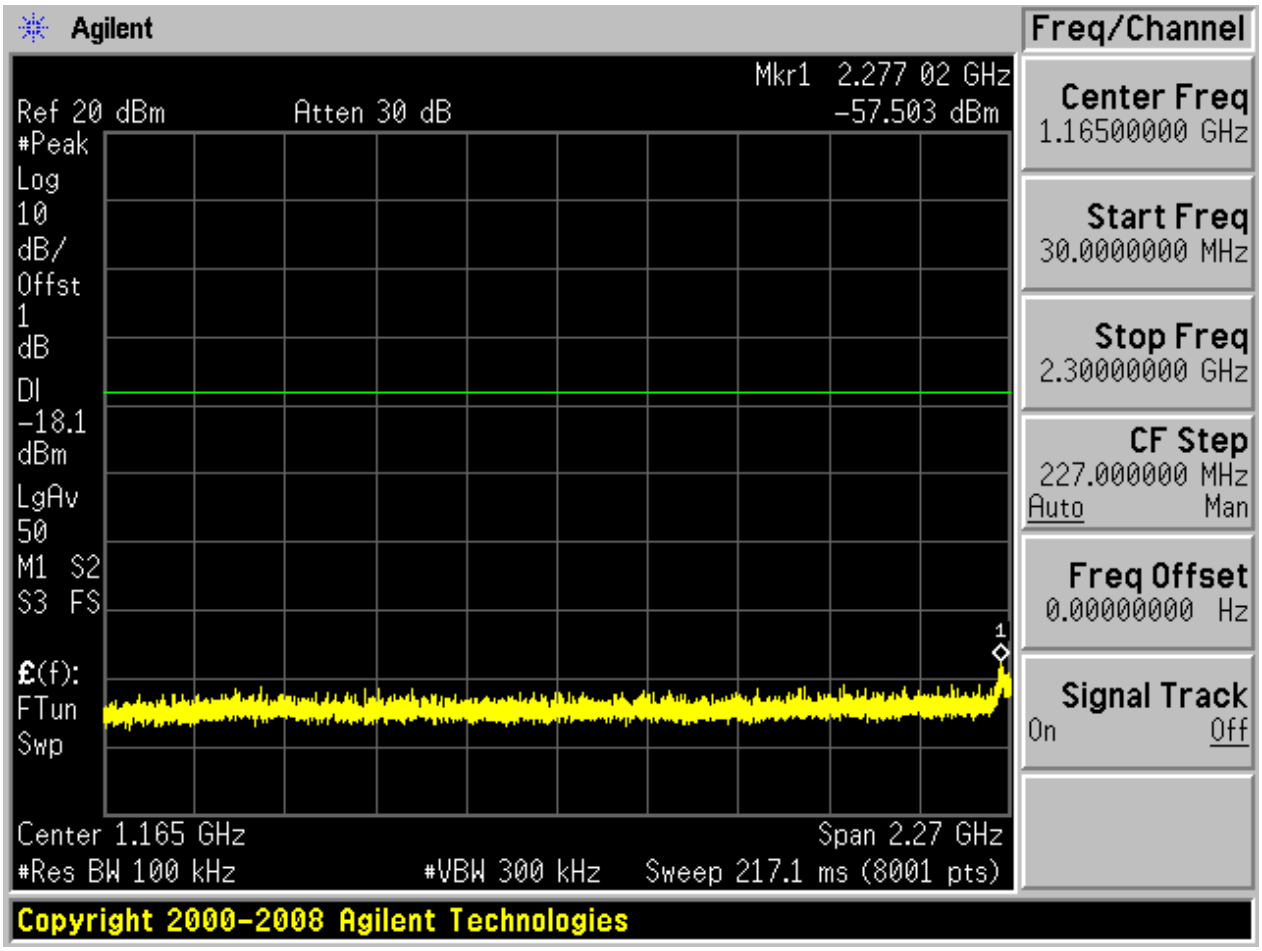
Pref:

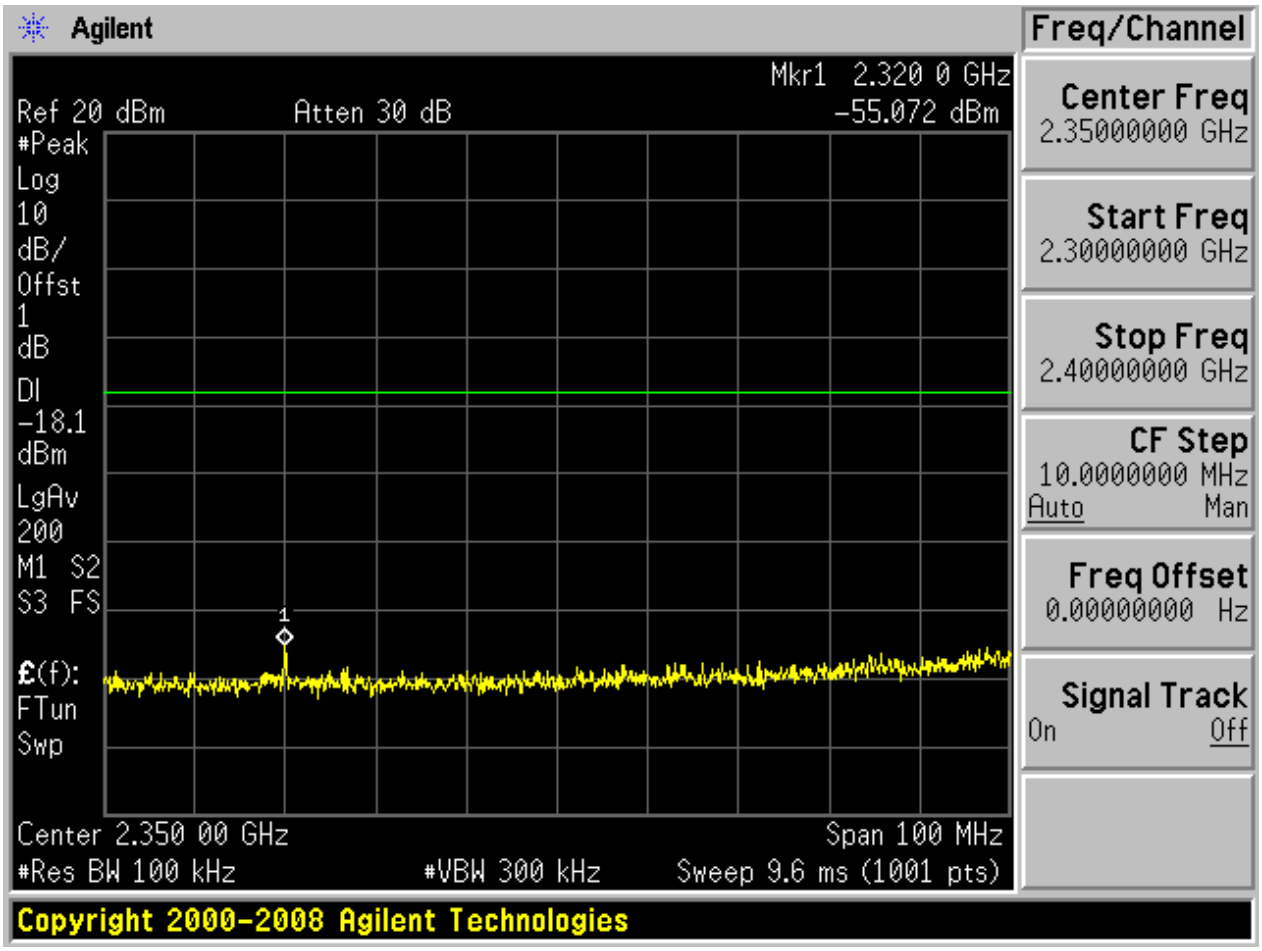


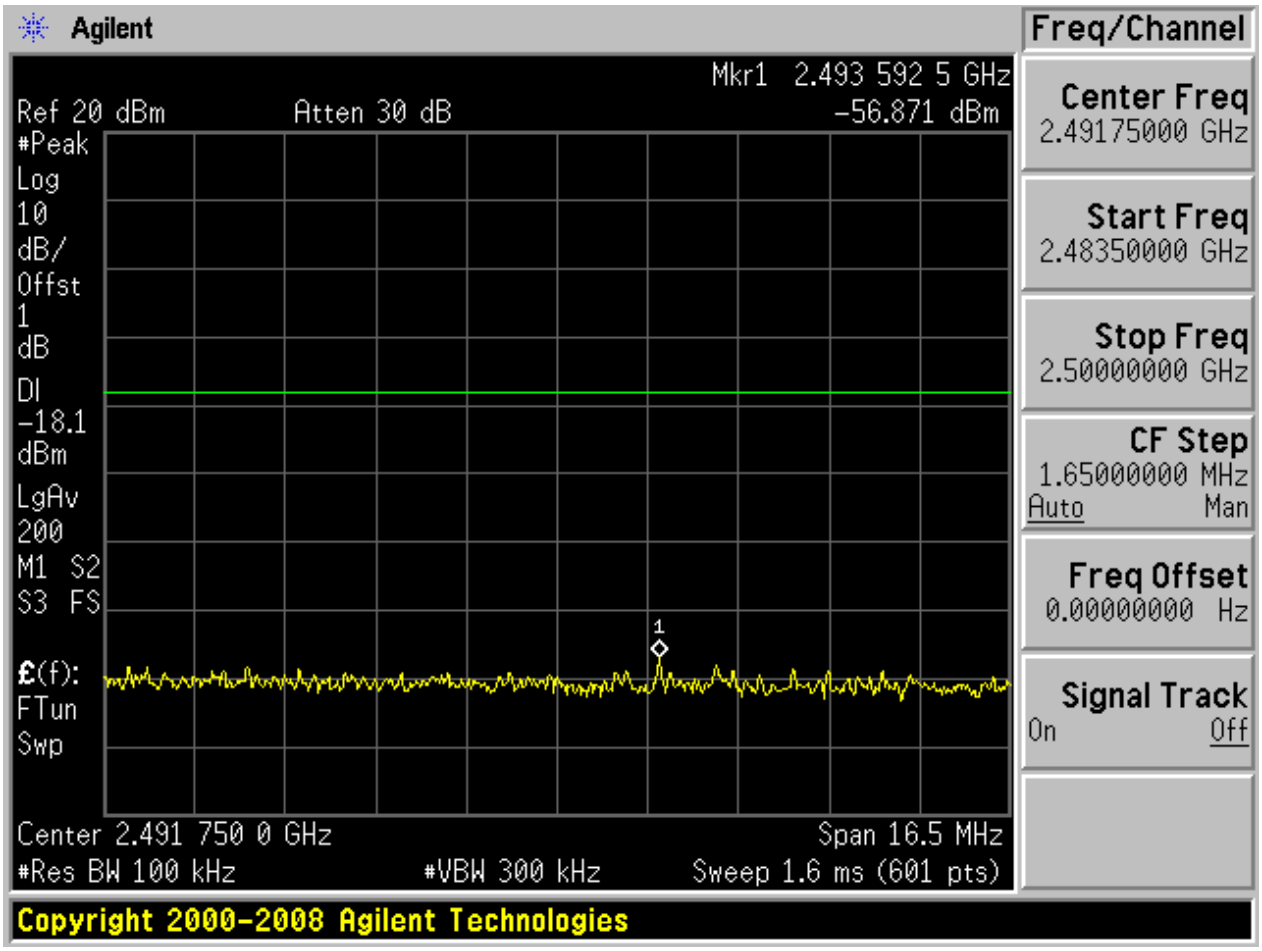
Puw:

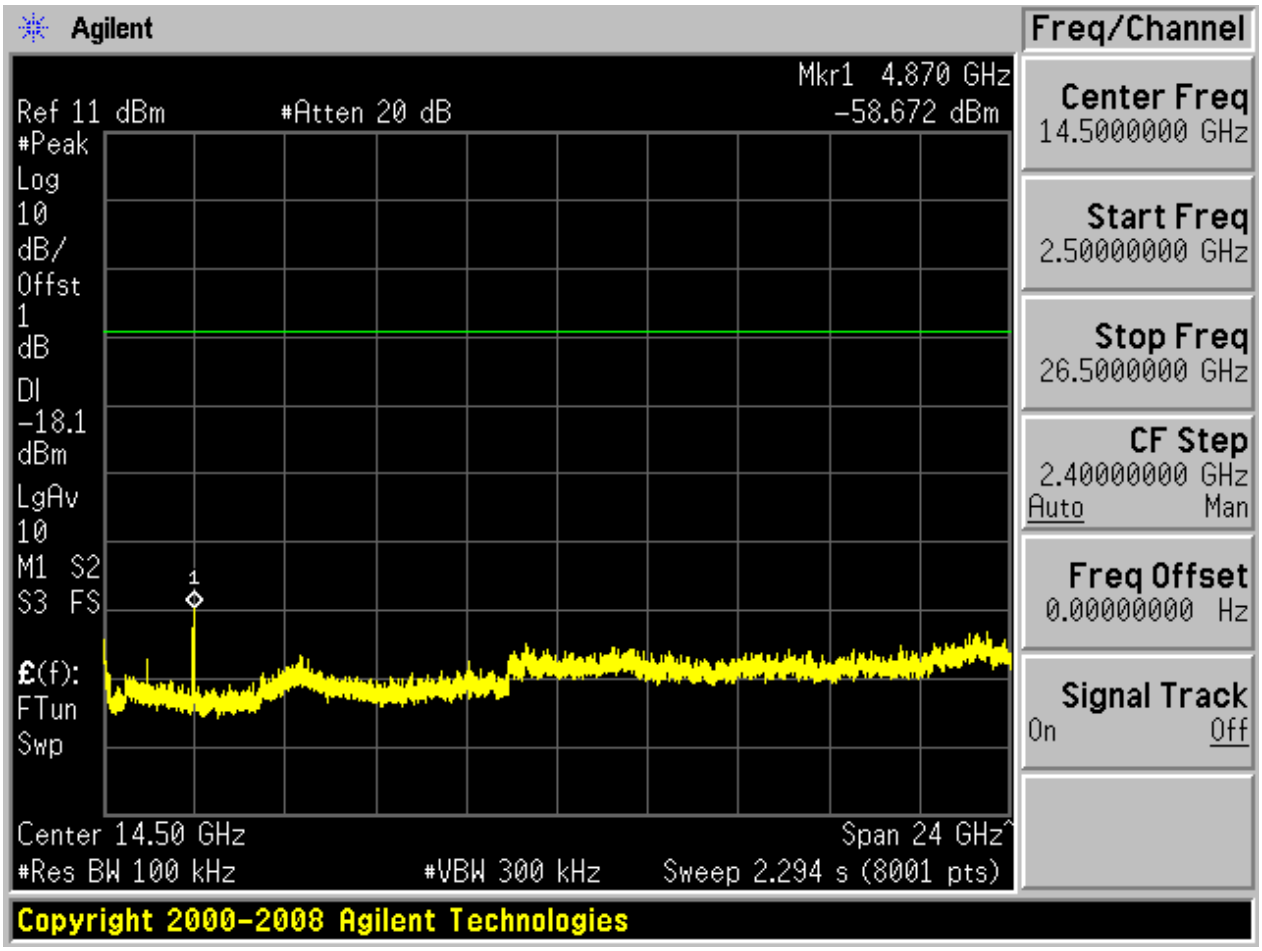






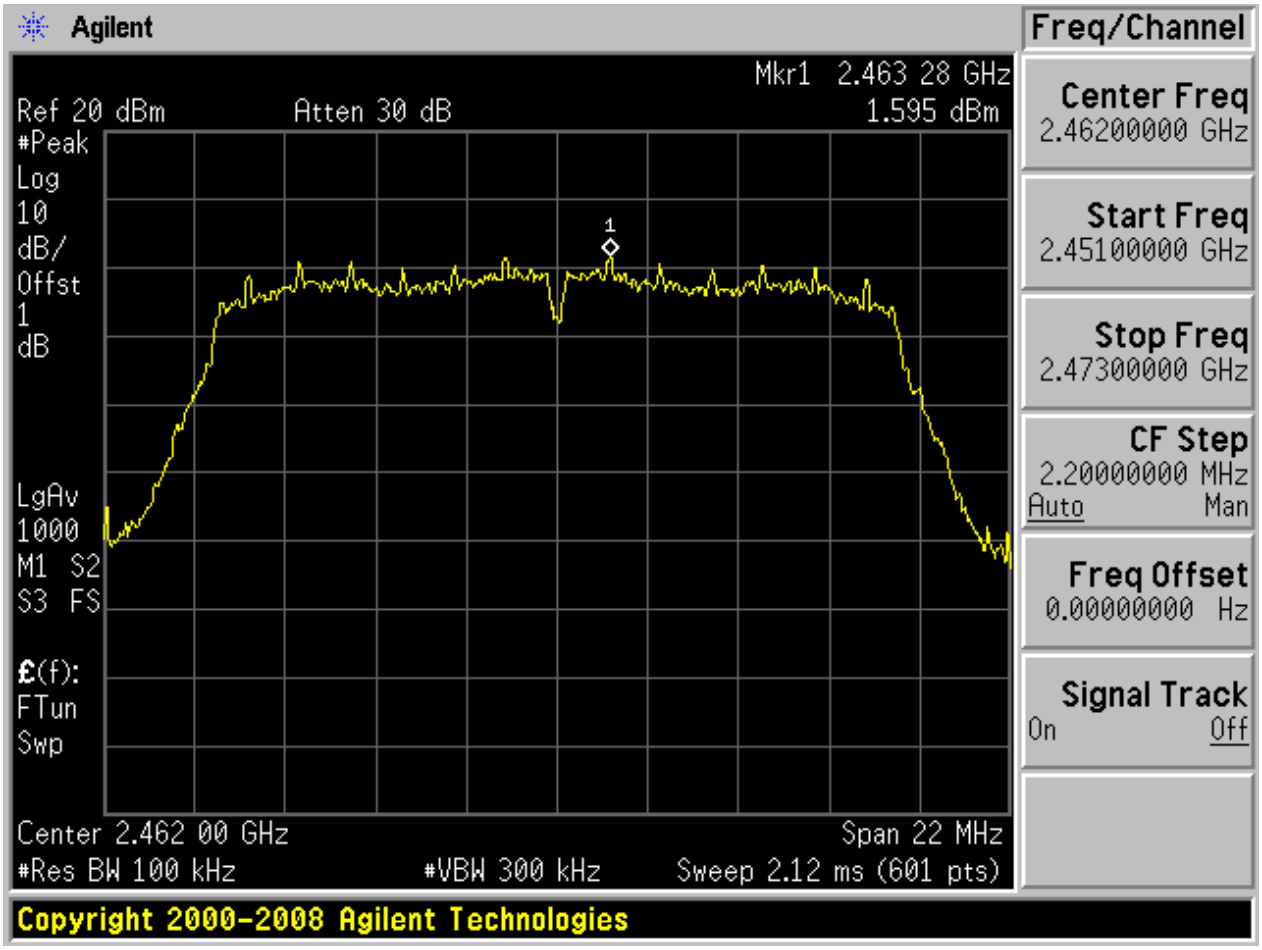




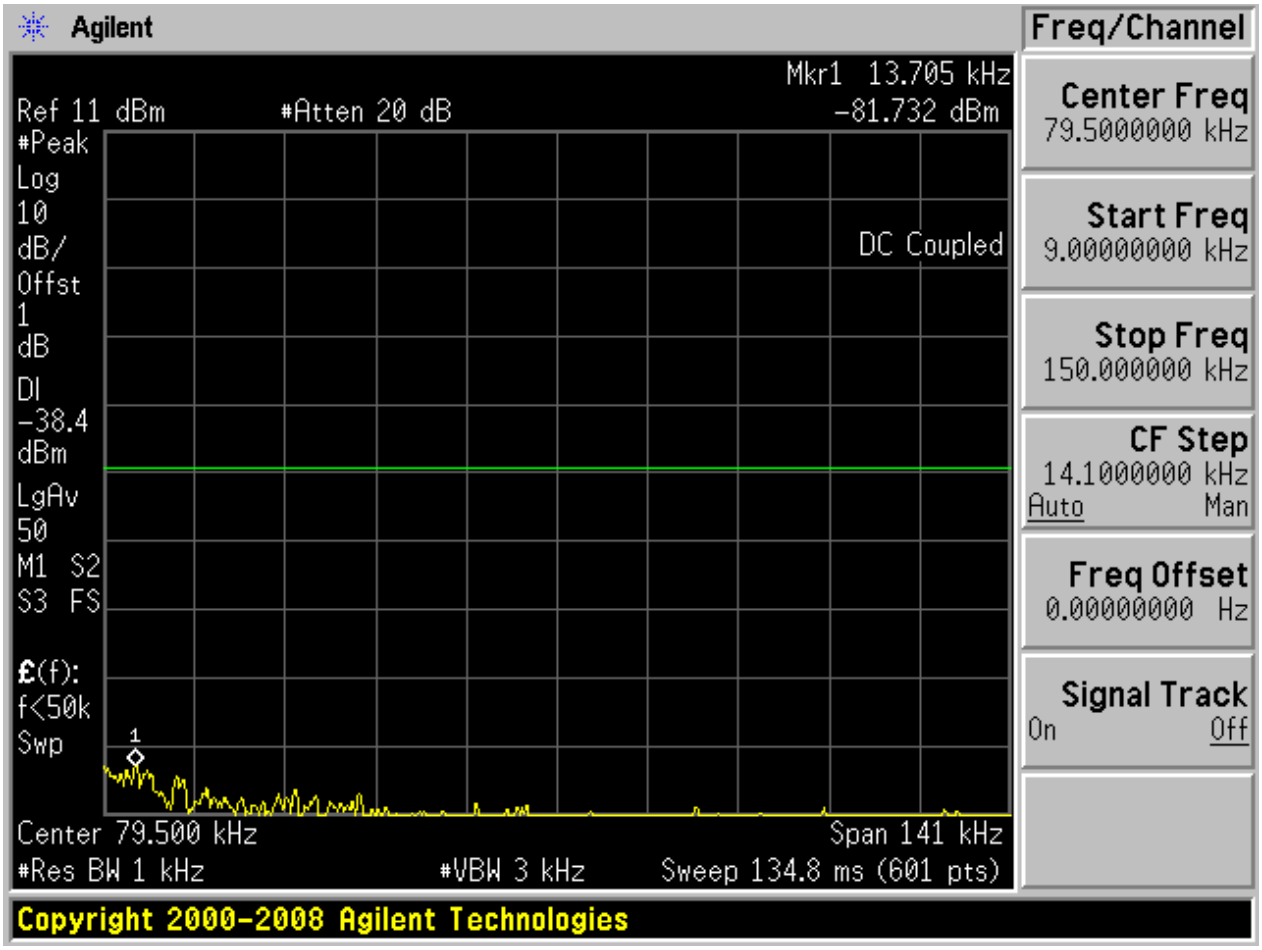


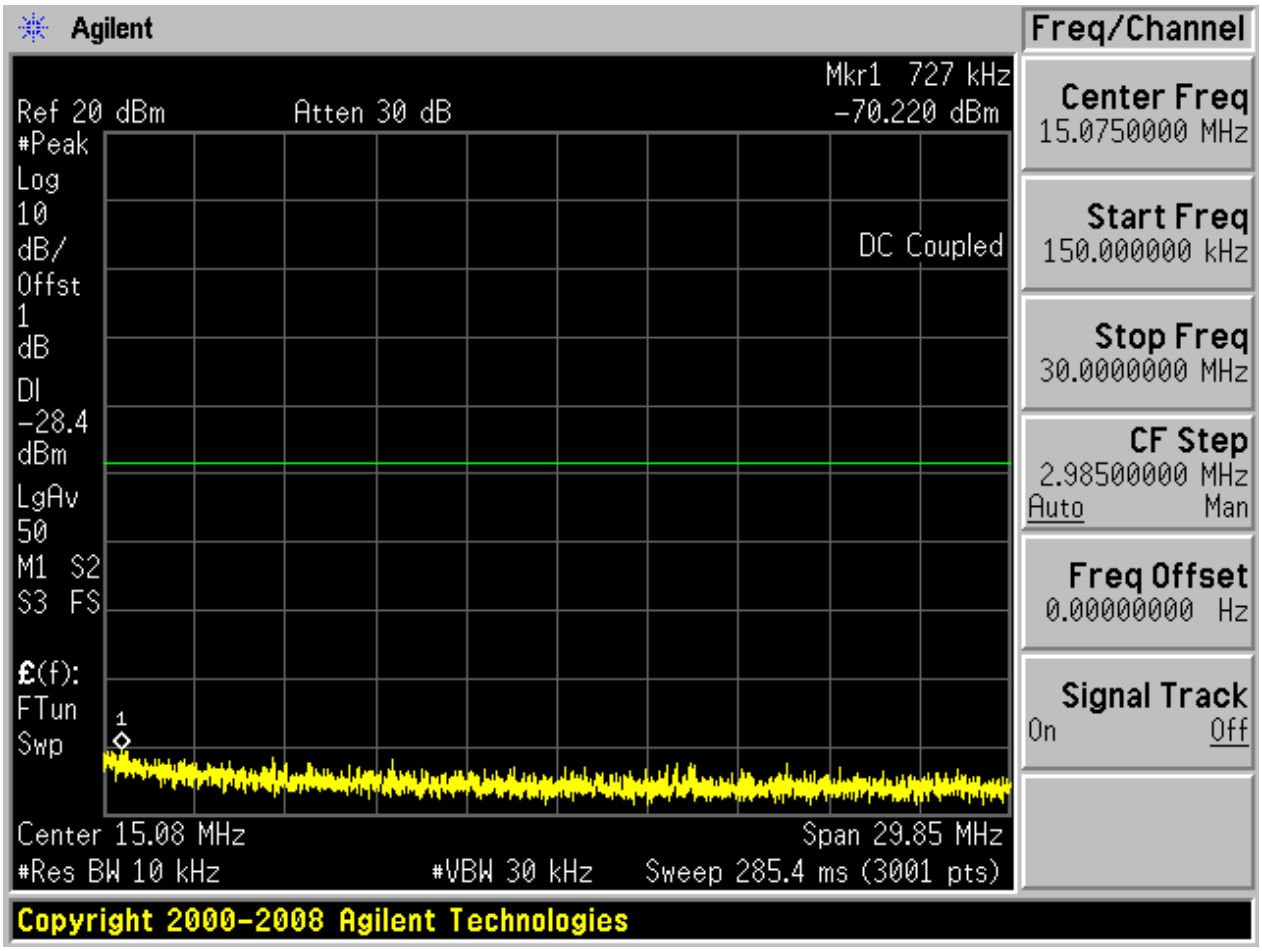
2.6 11G_H@Ant 1

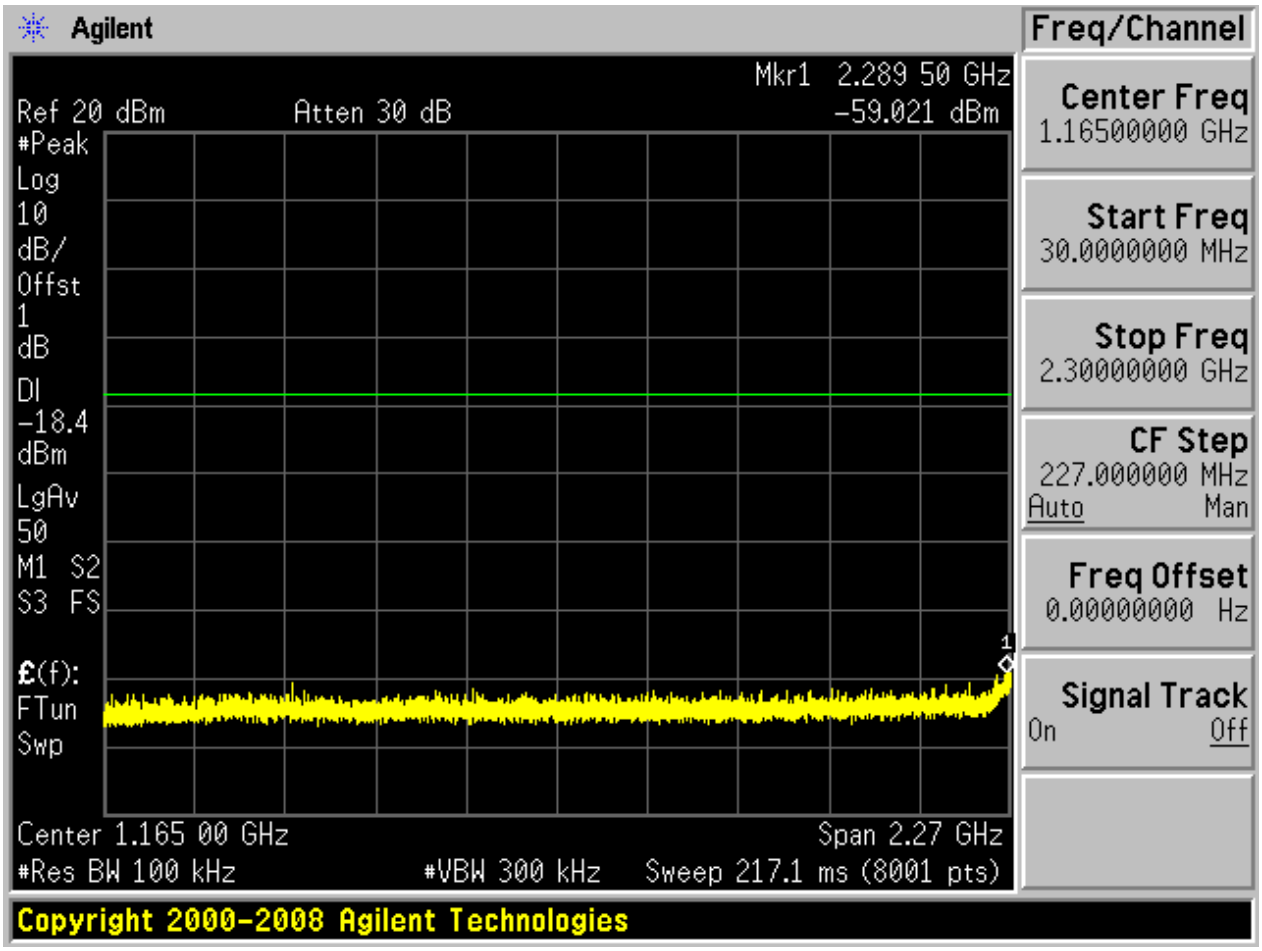
Pref:

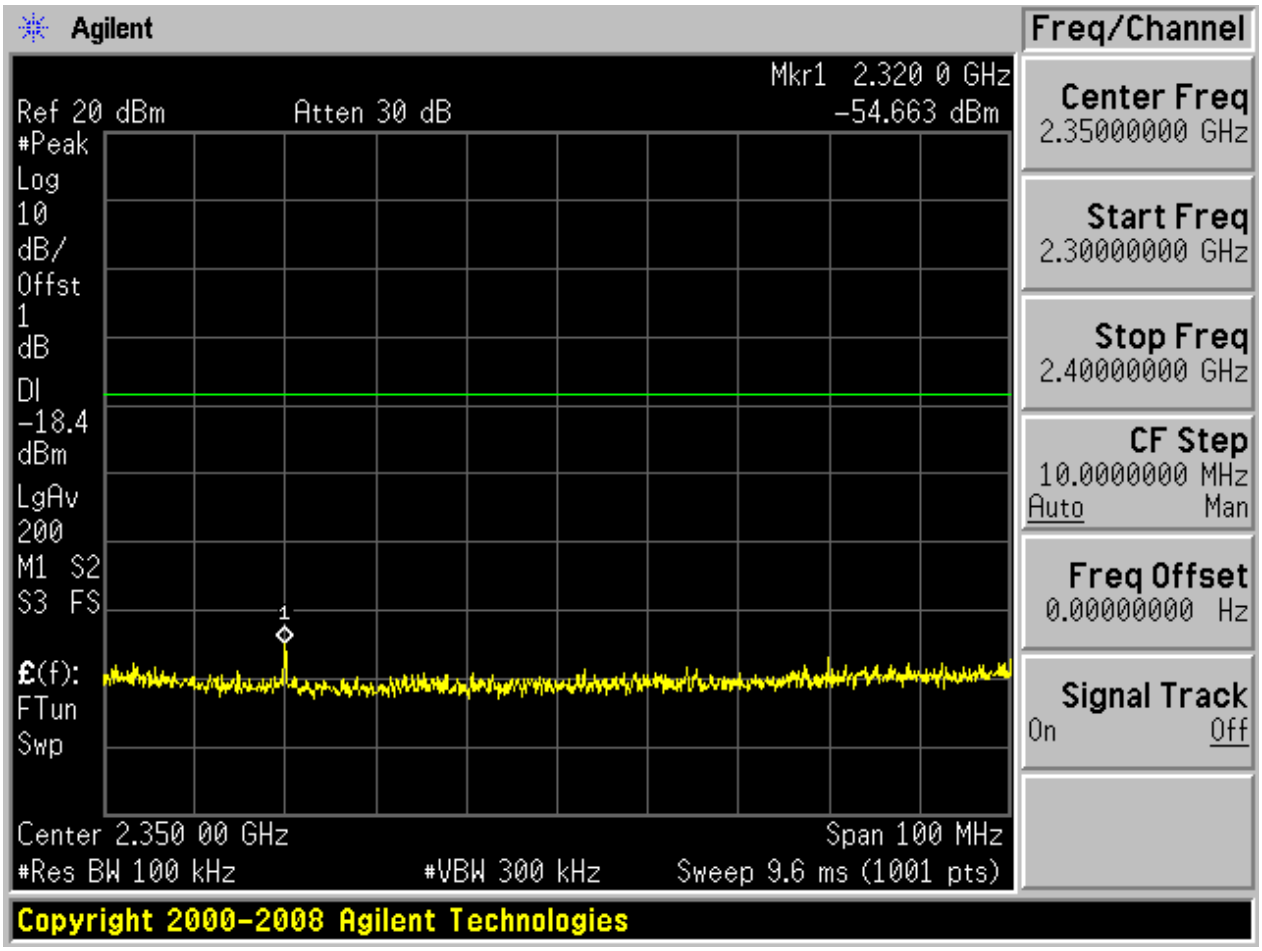


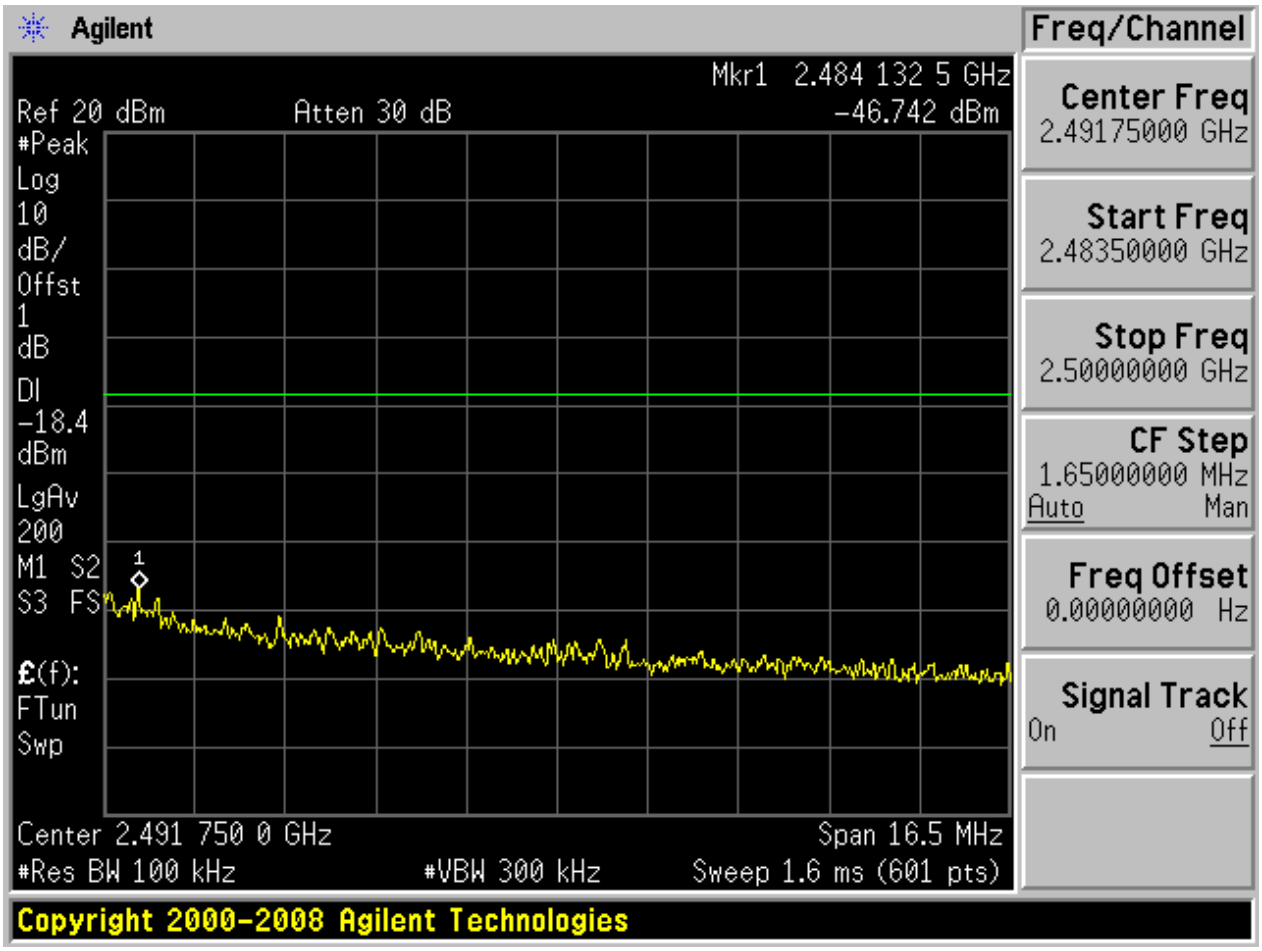
Puw:

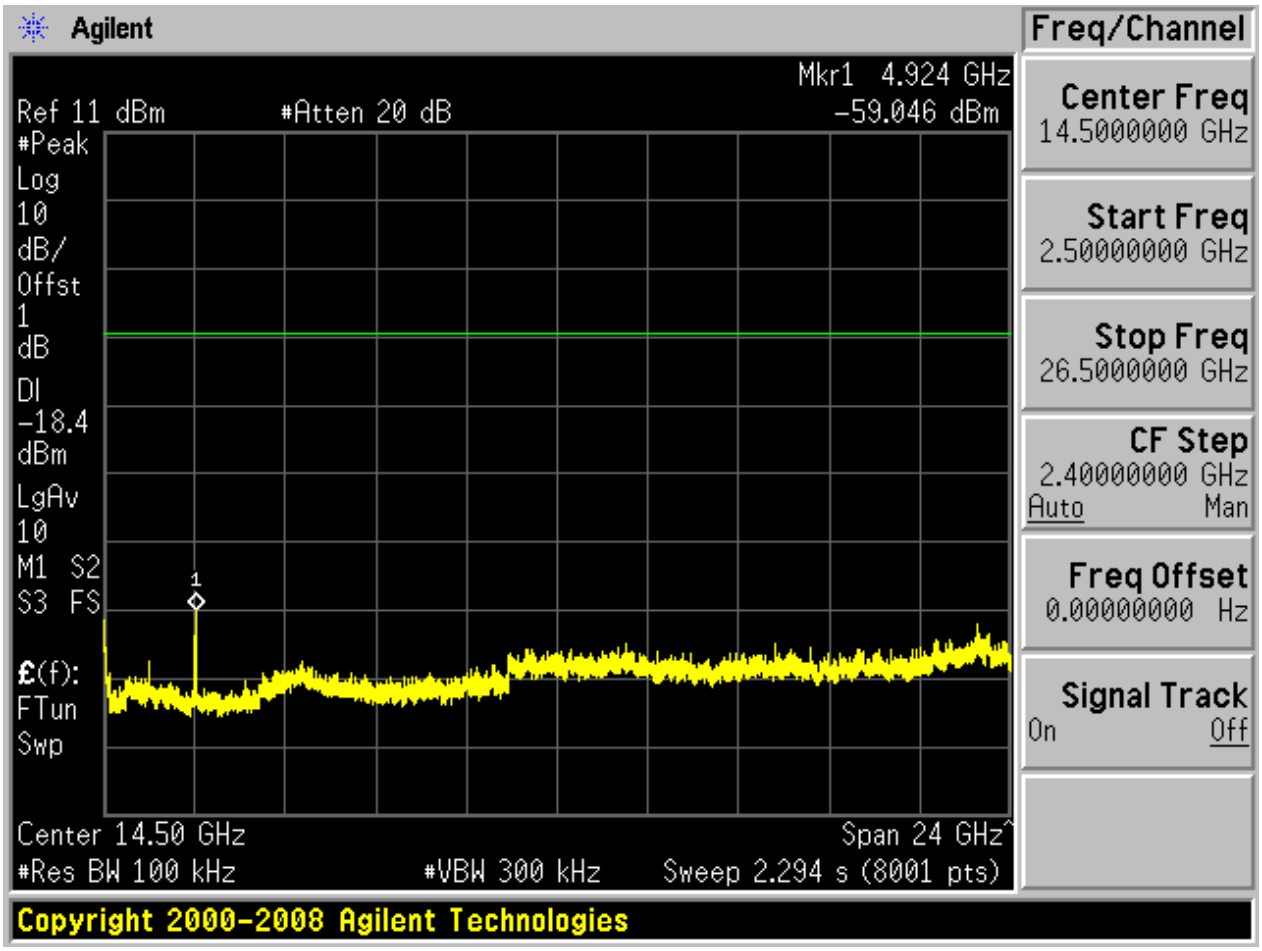






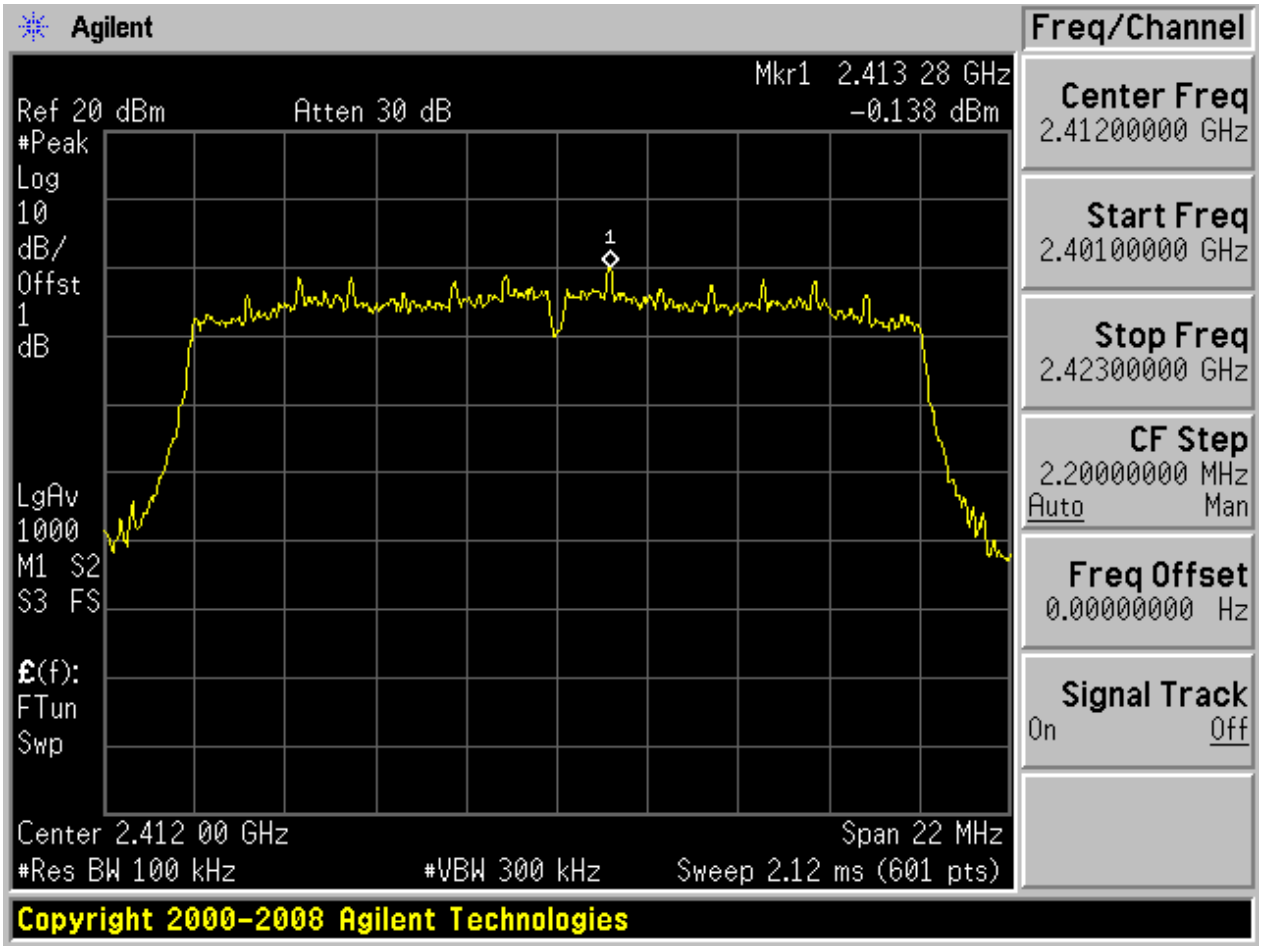




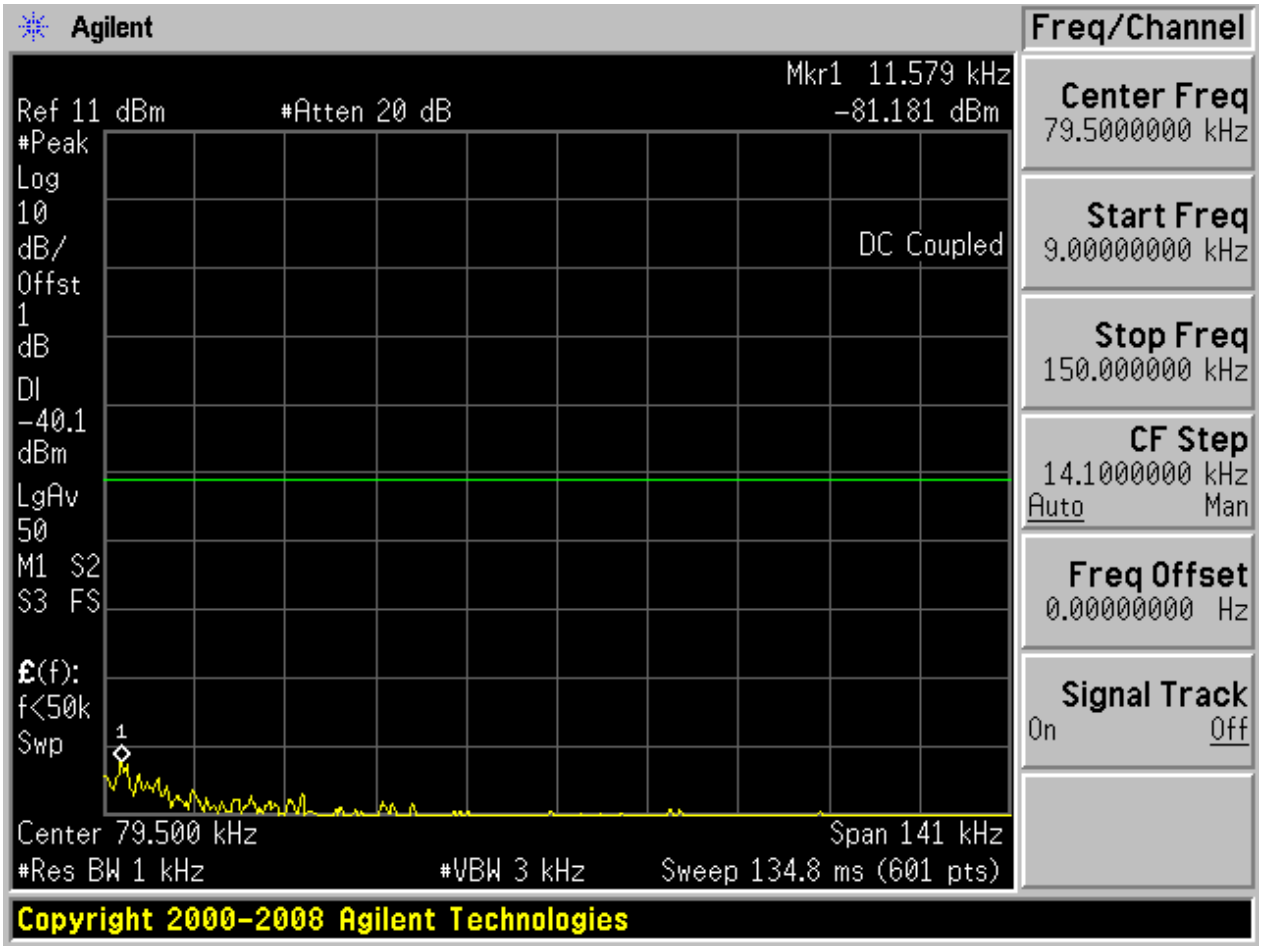


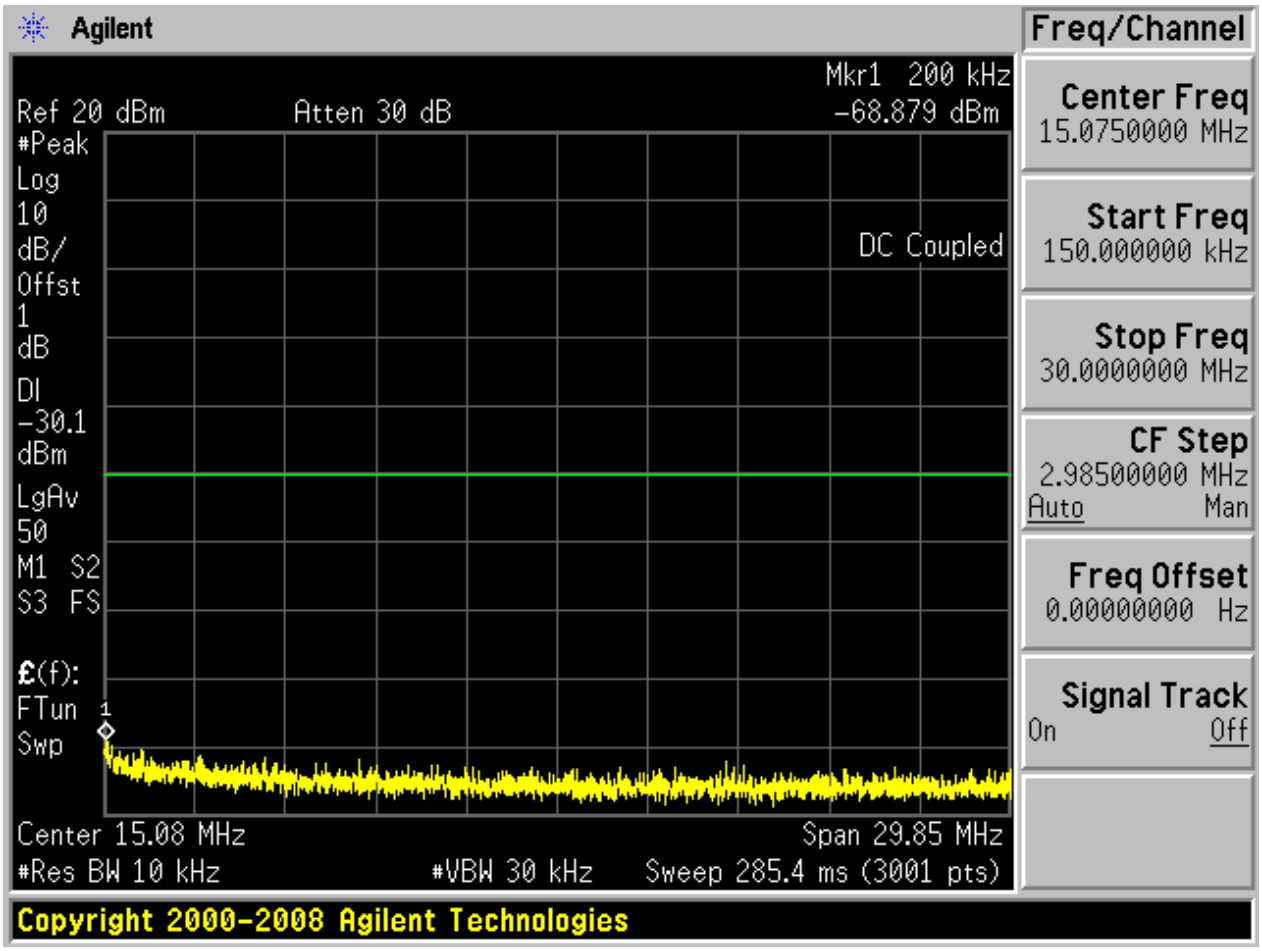
2.7 11N20_SISO_L@Ant 1

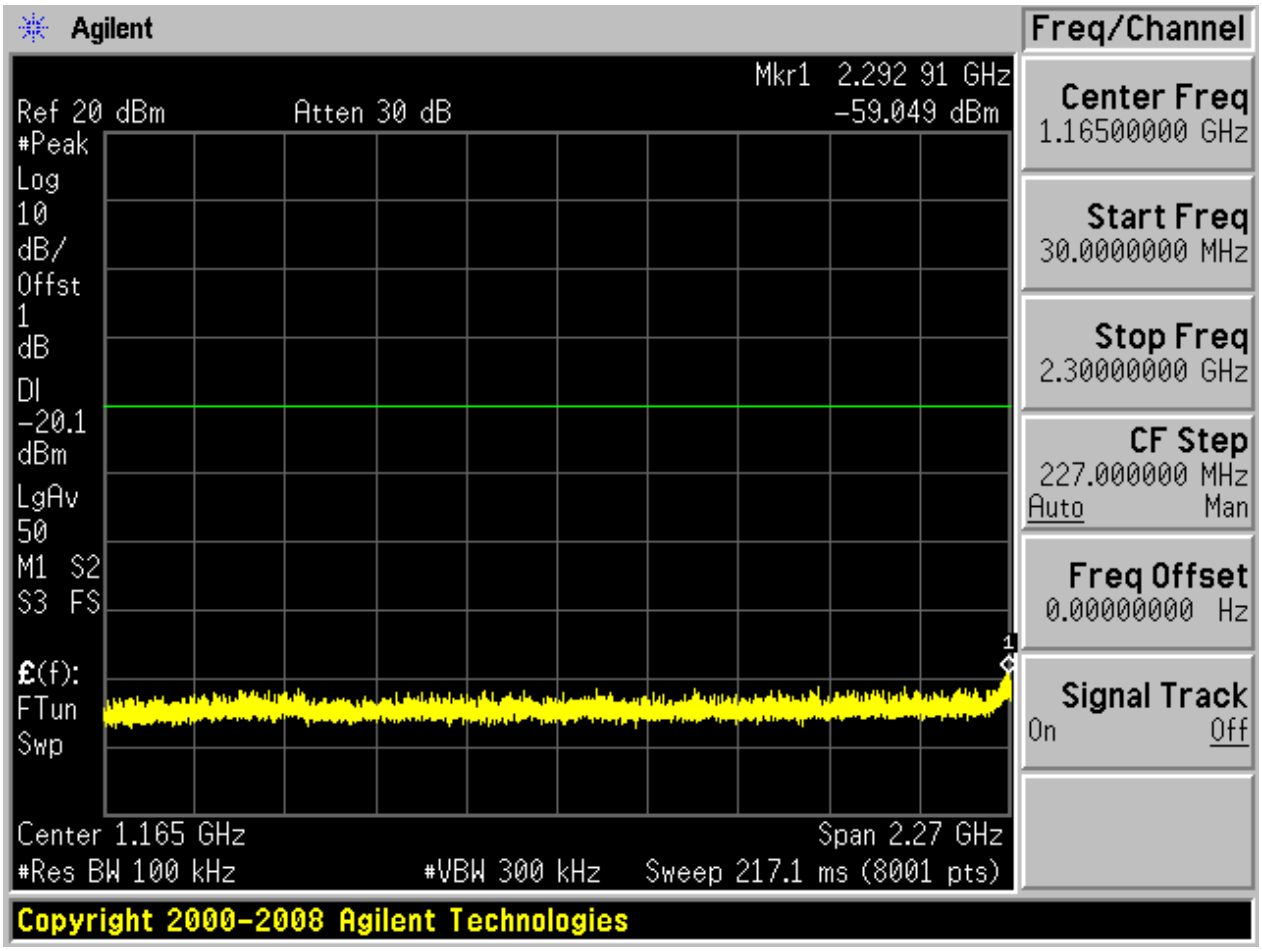
Pref:

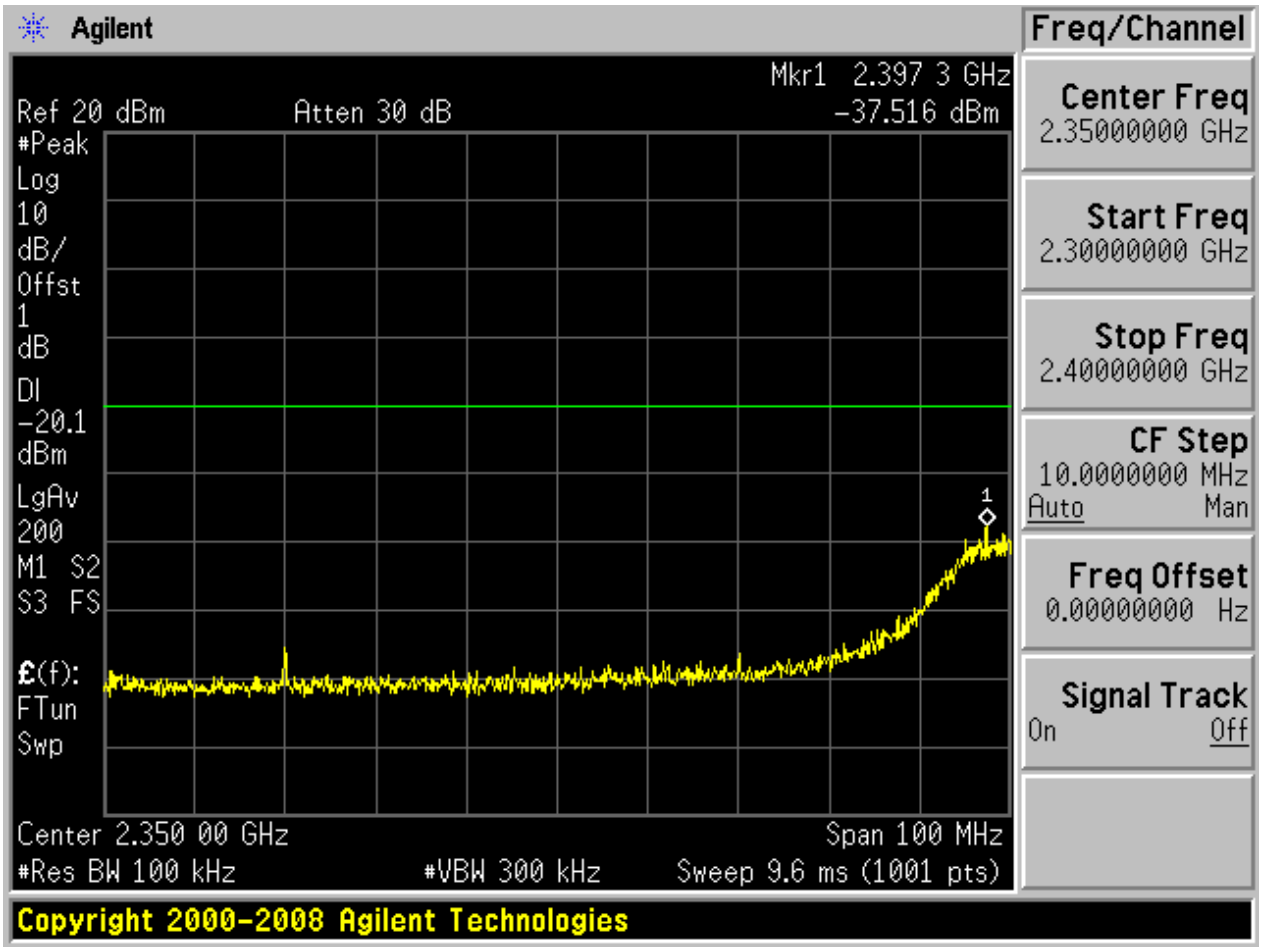


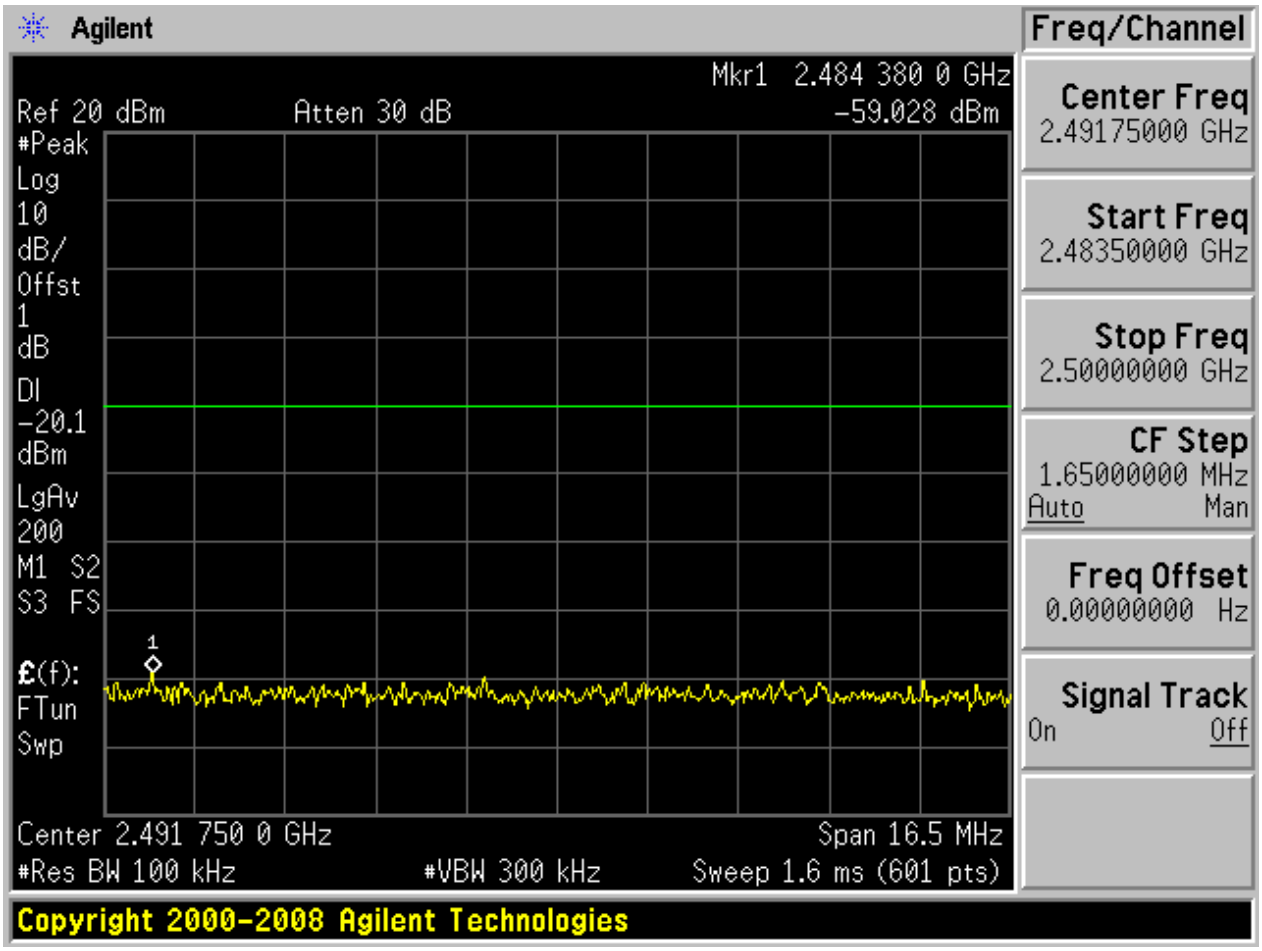
Puw:

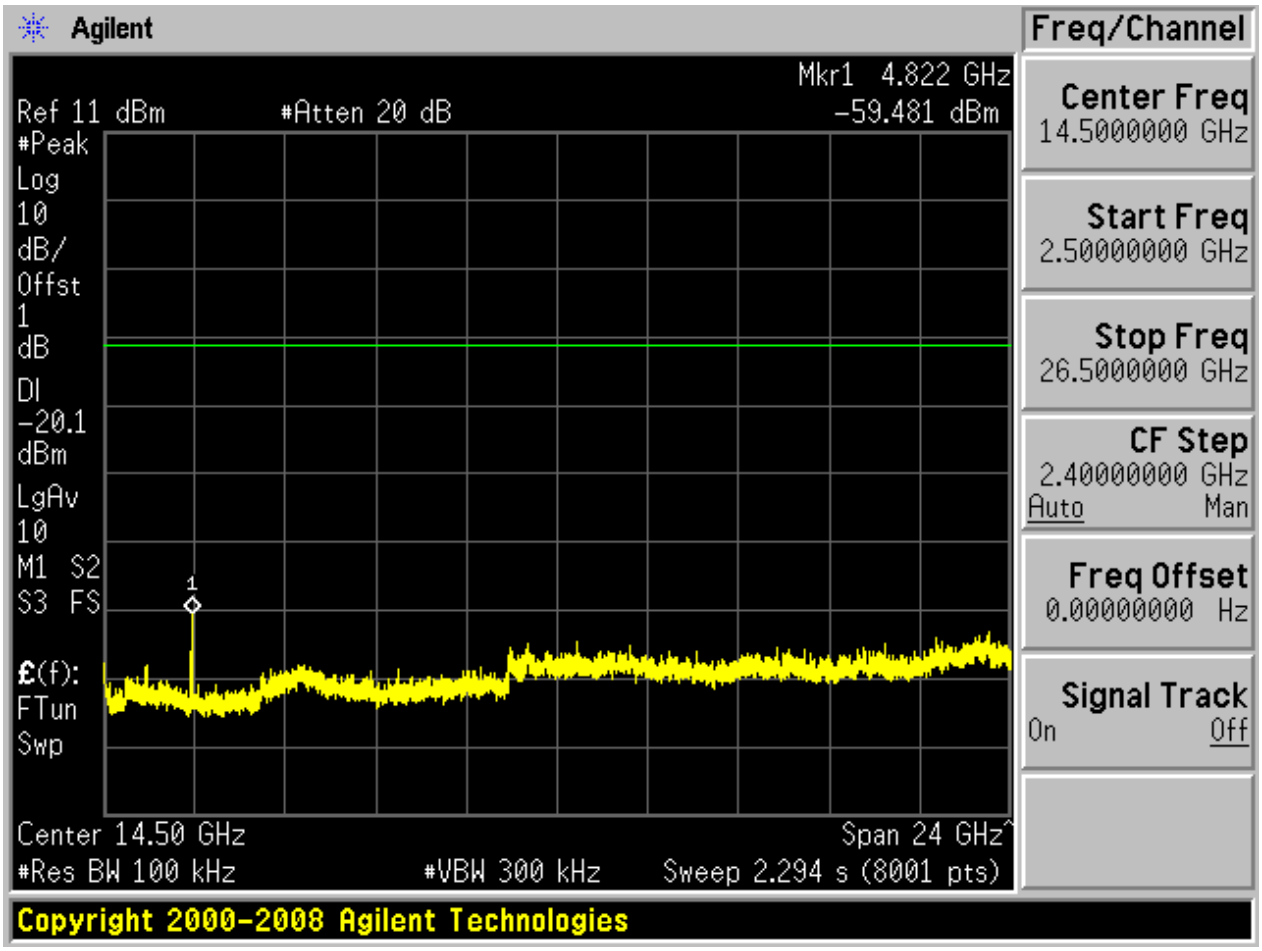






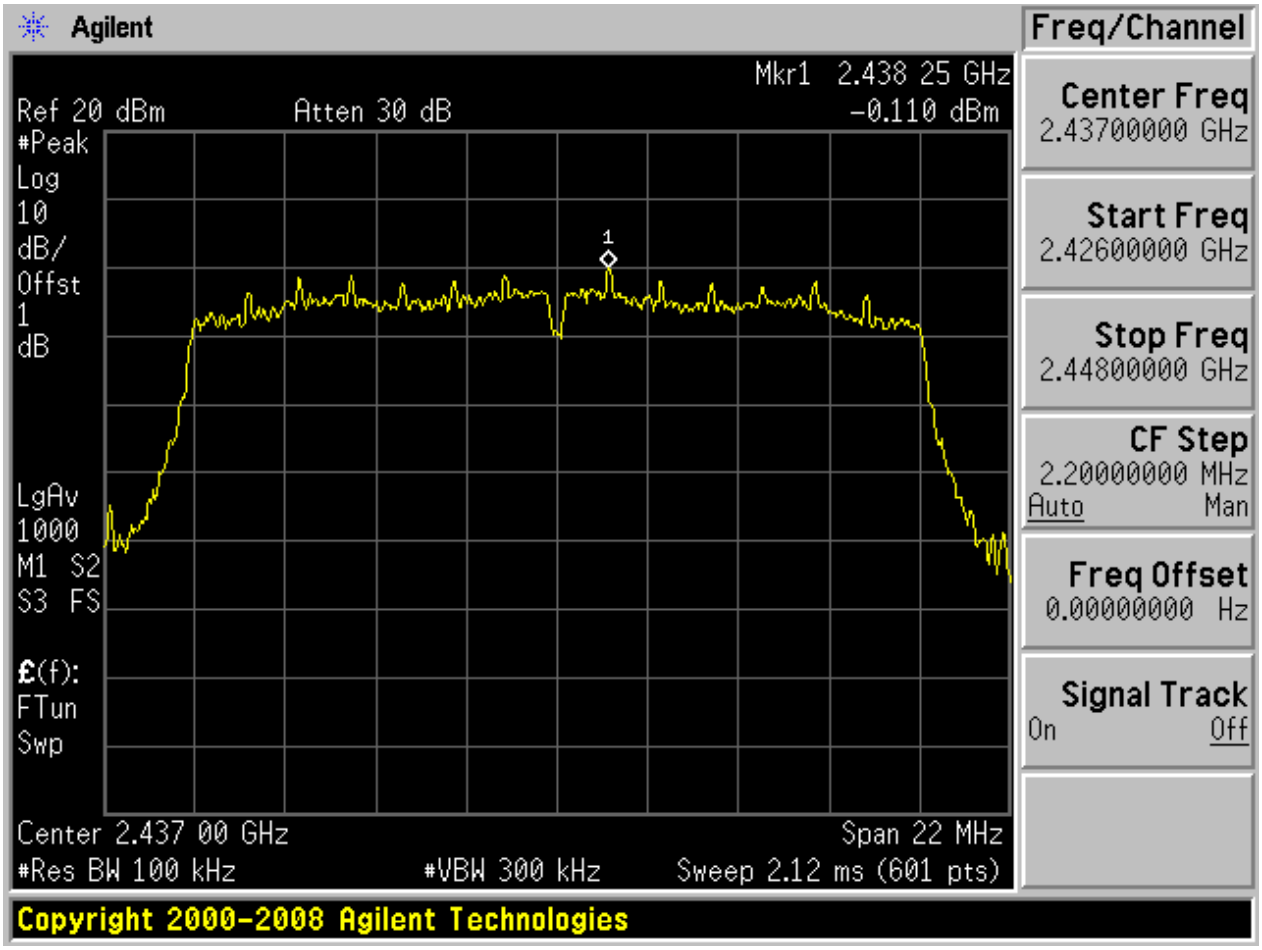




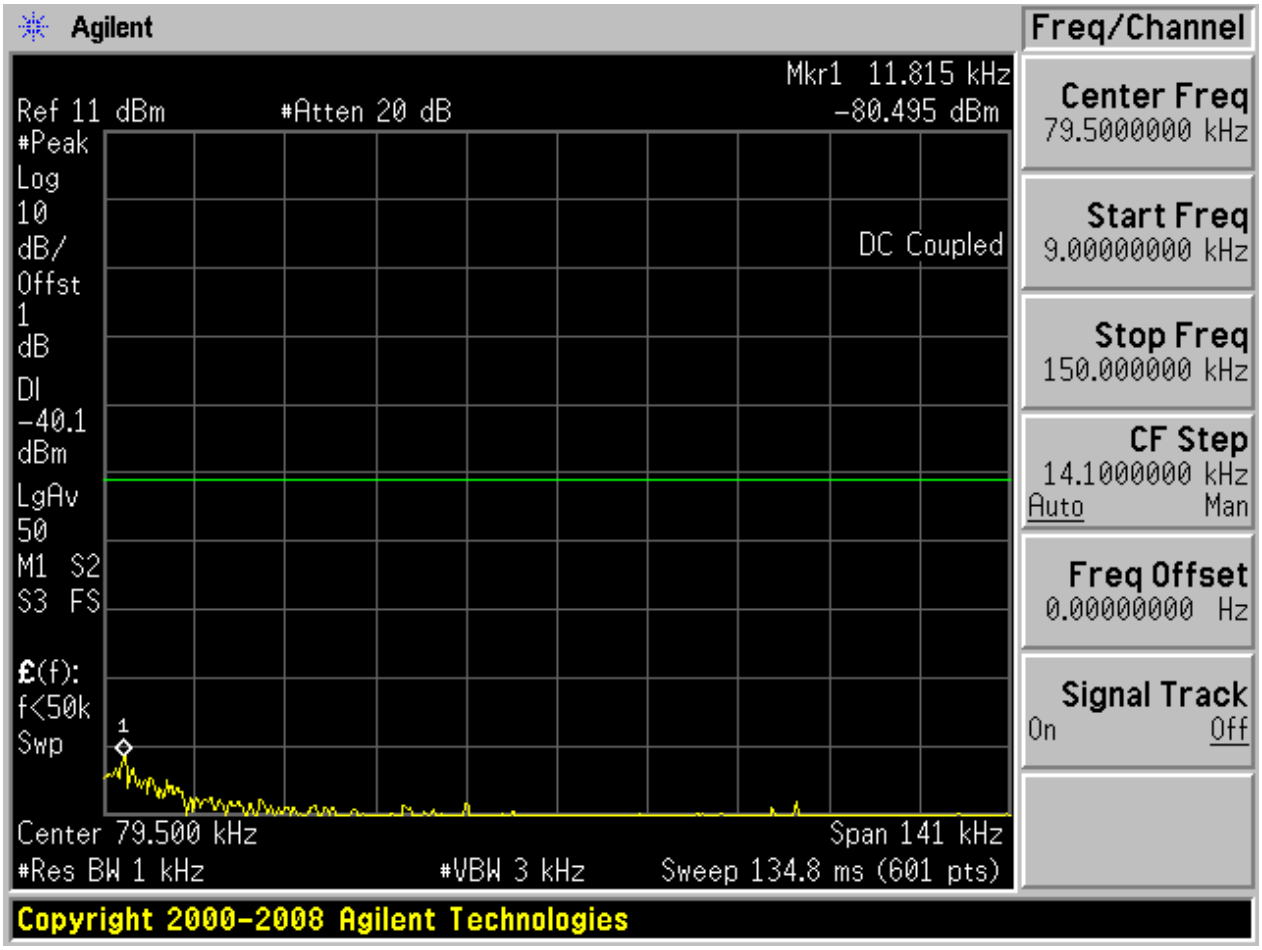


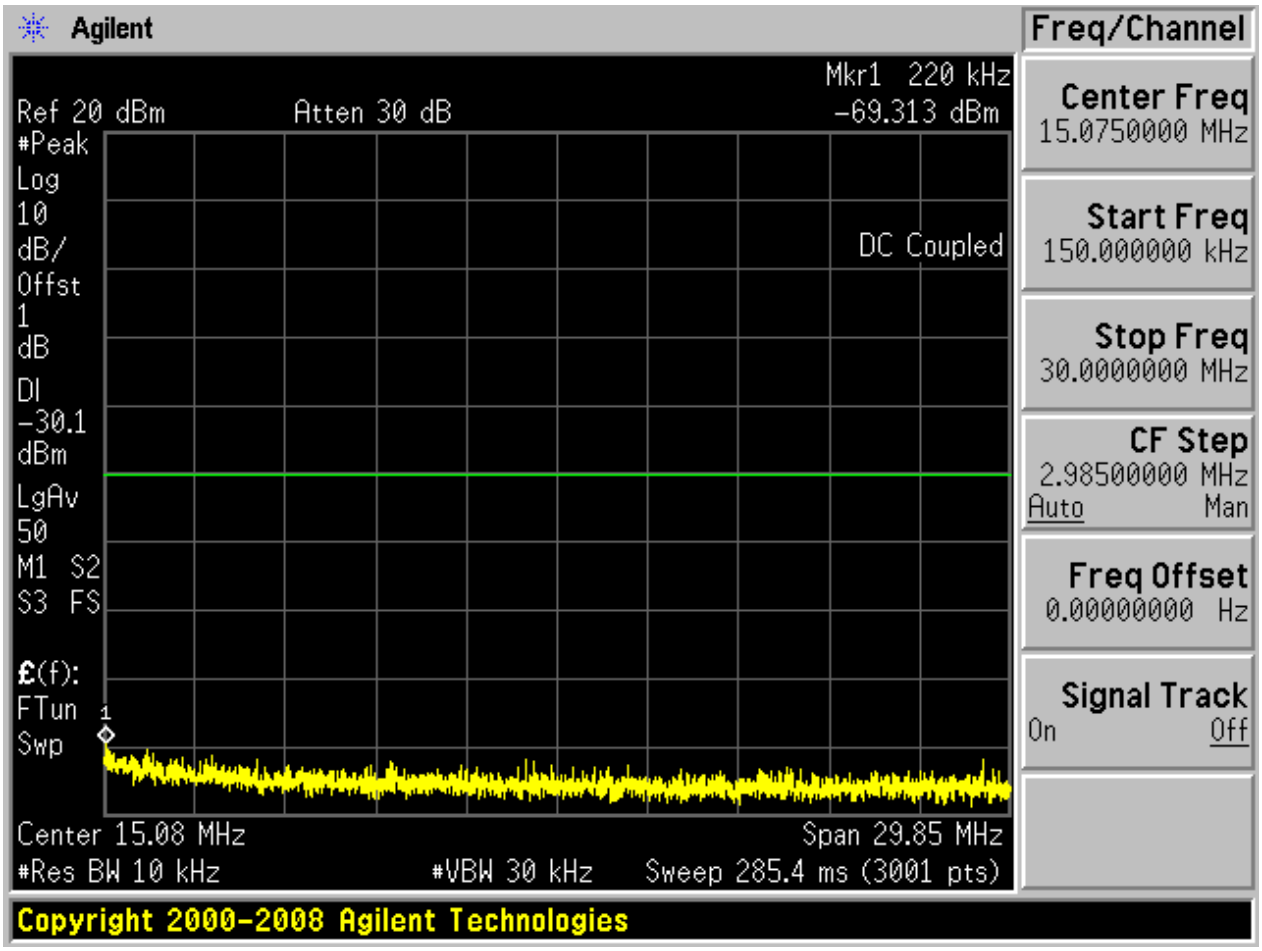
2.8 11N20_SISO_M@Ant 1

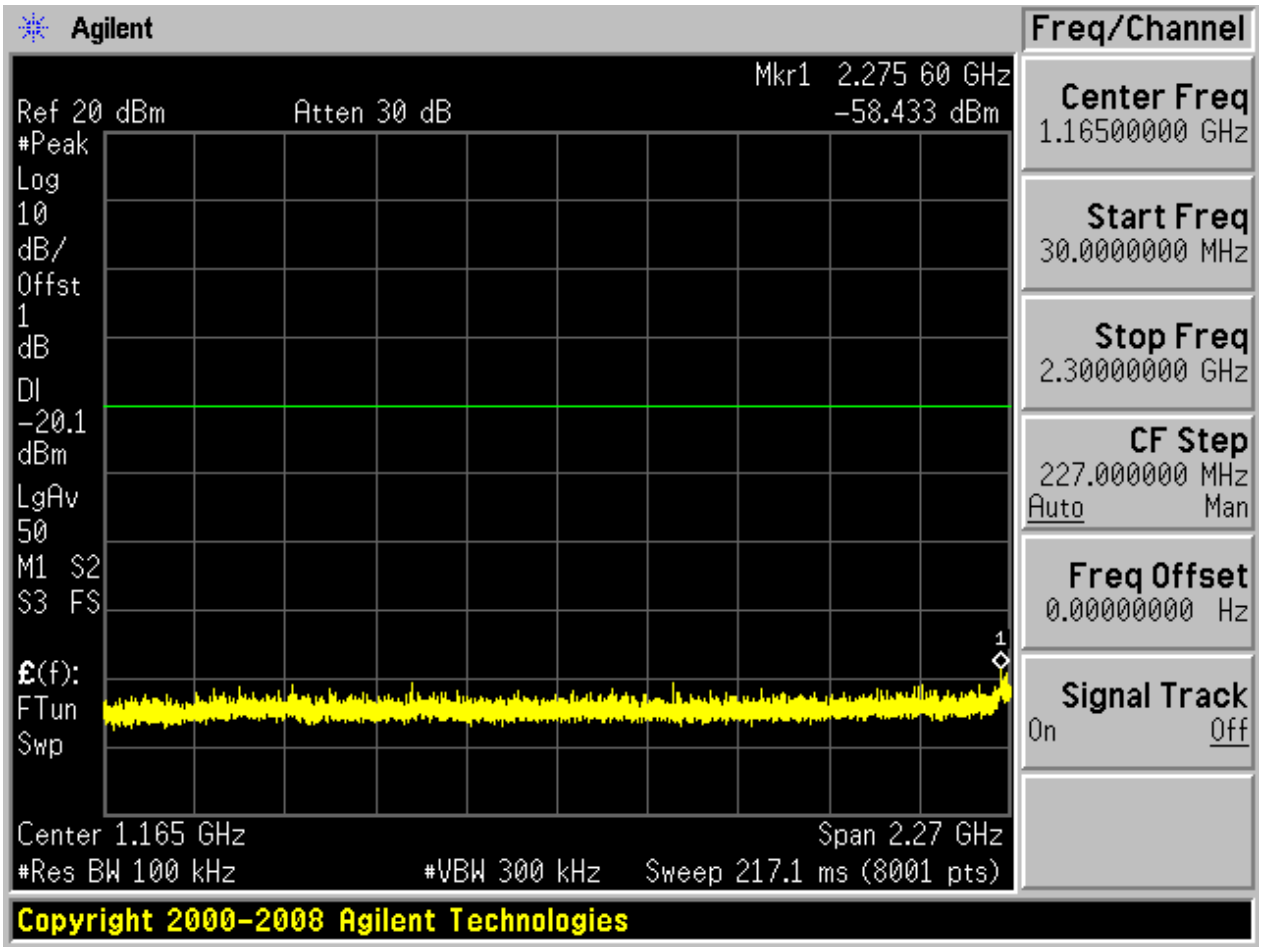
Pref:

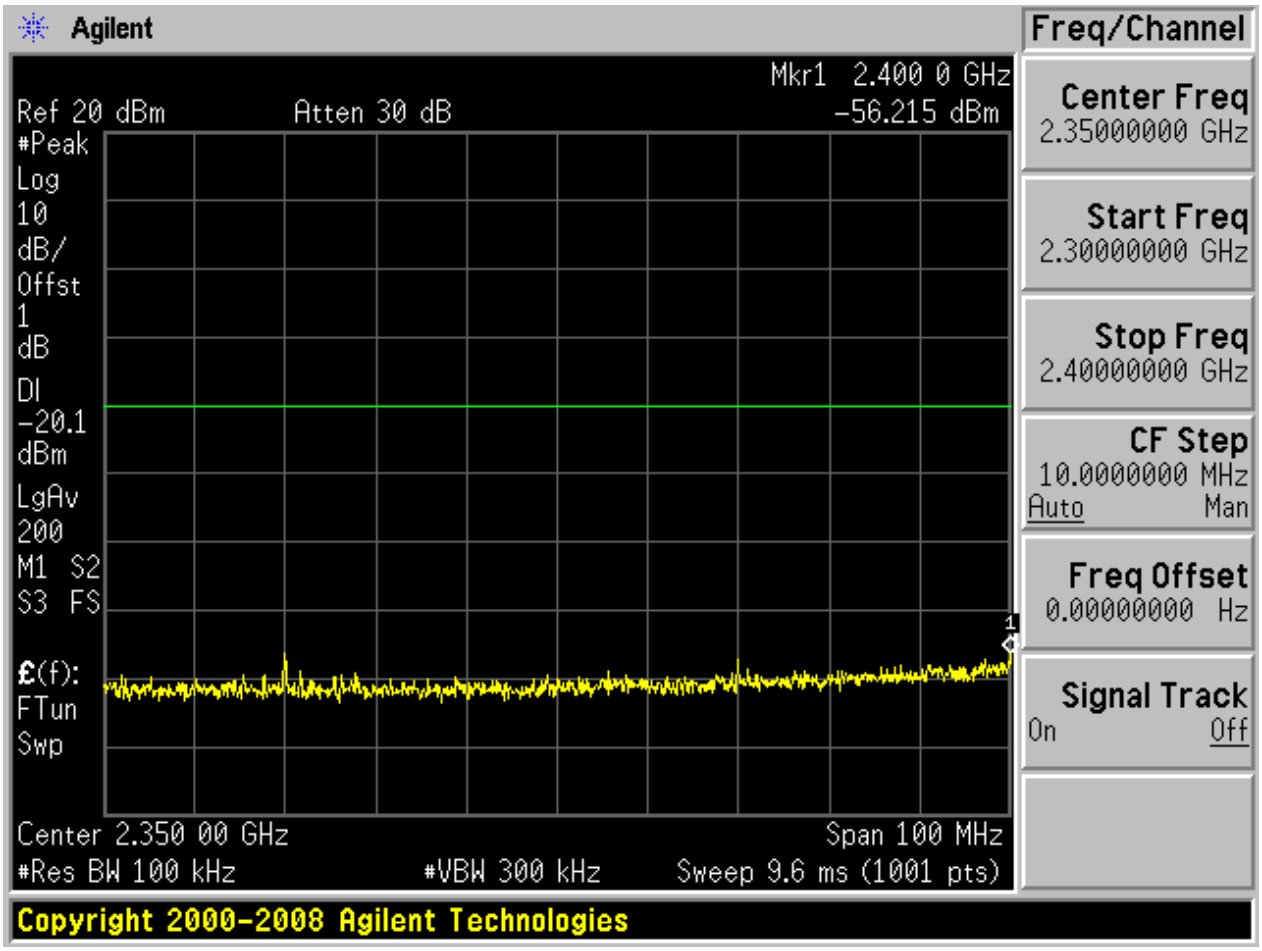


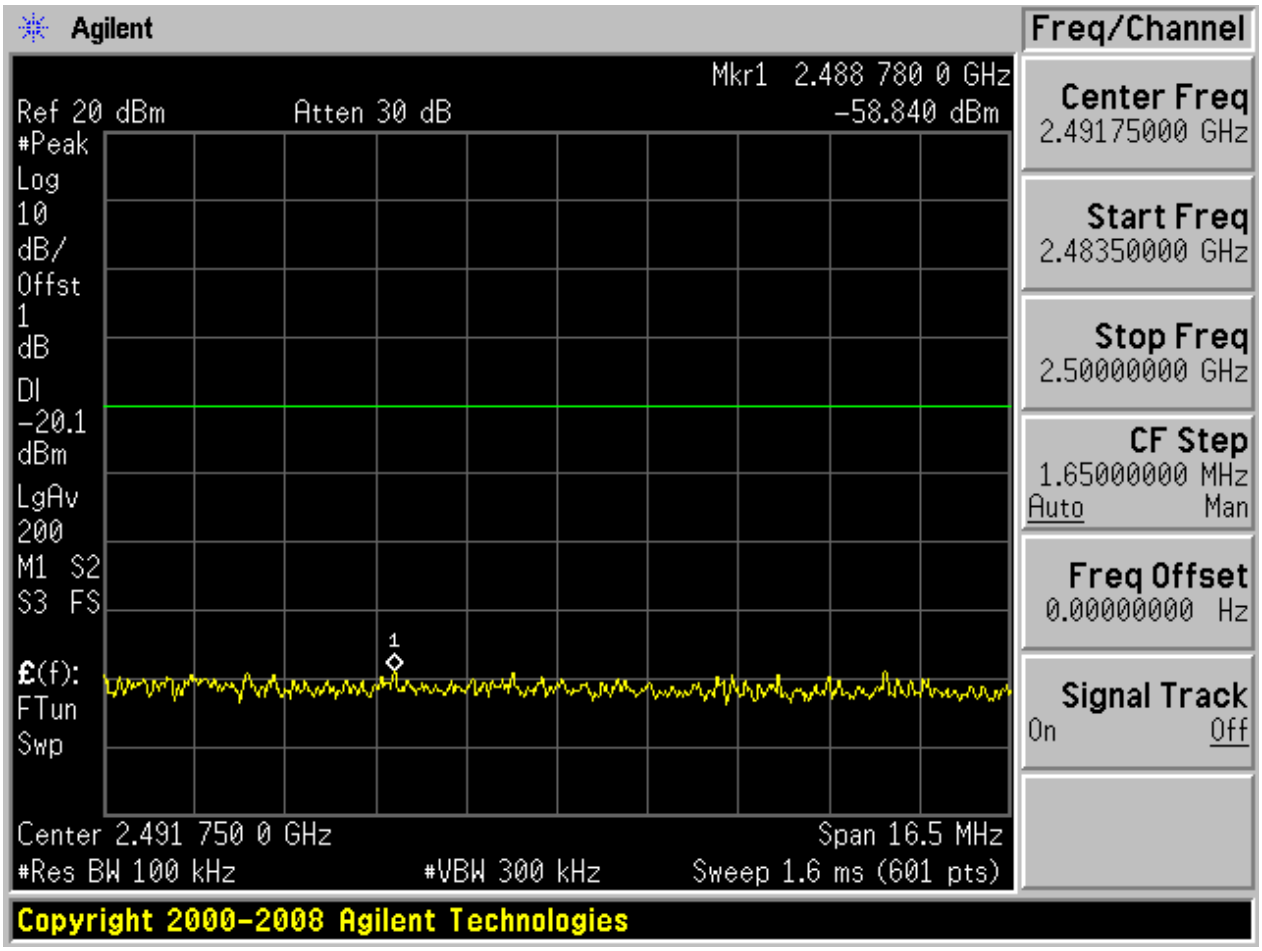
Puw:

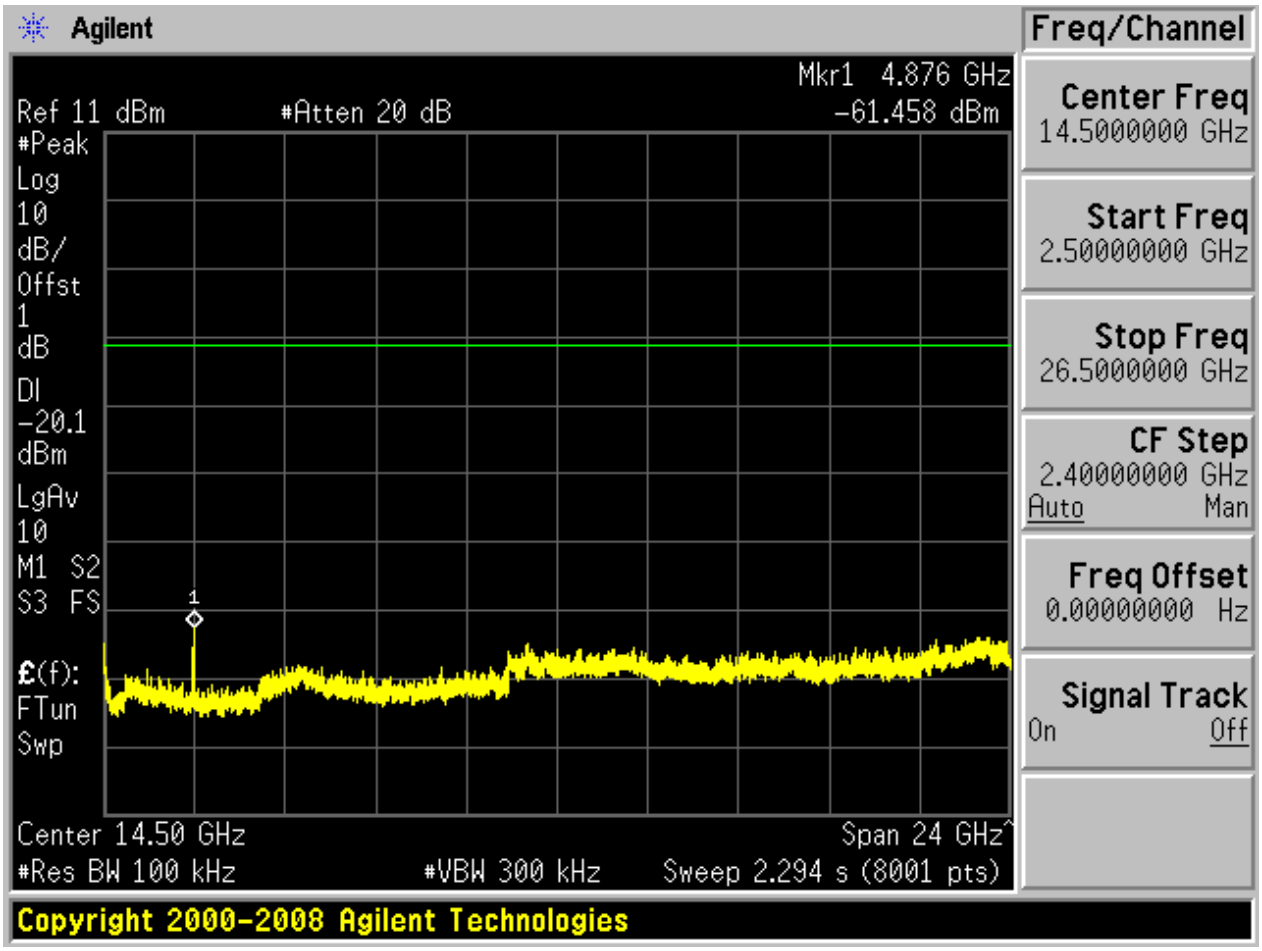






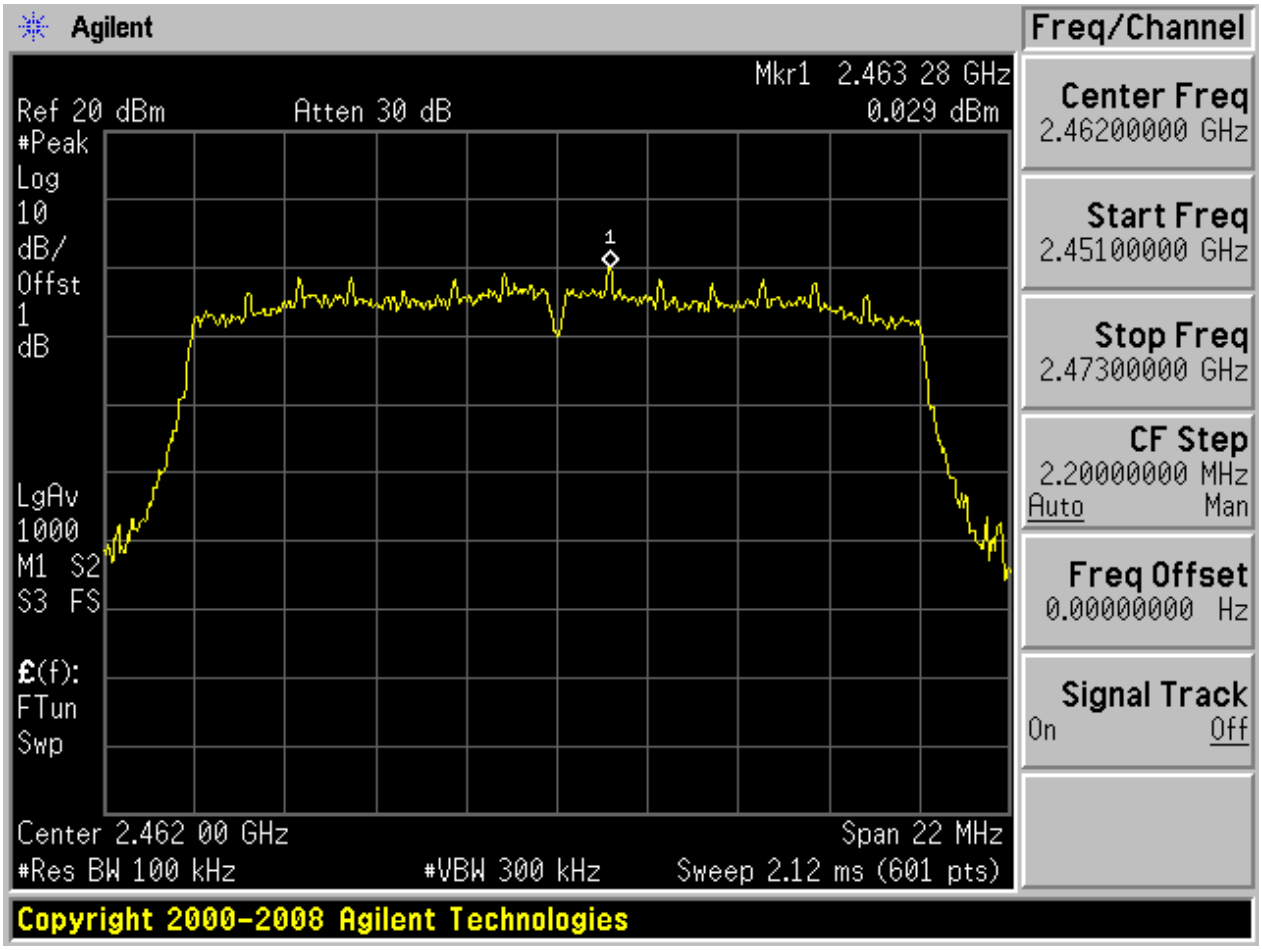




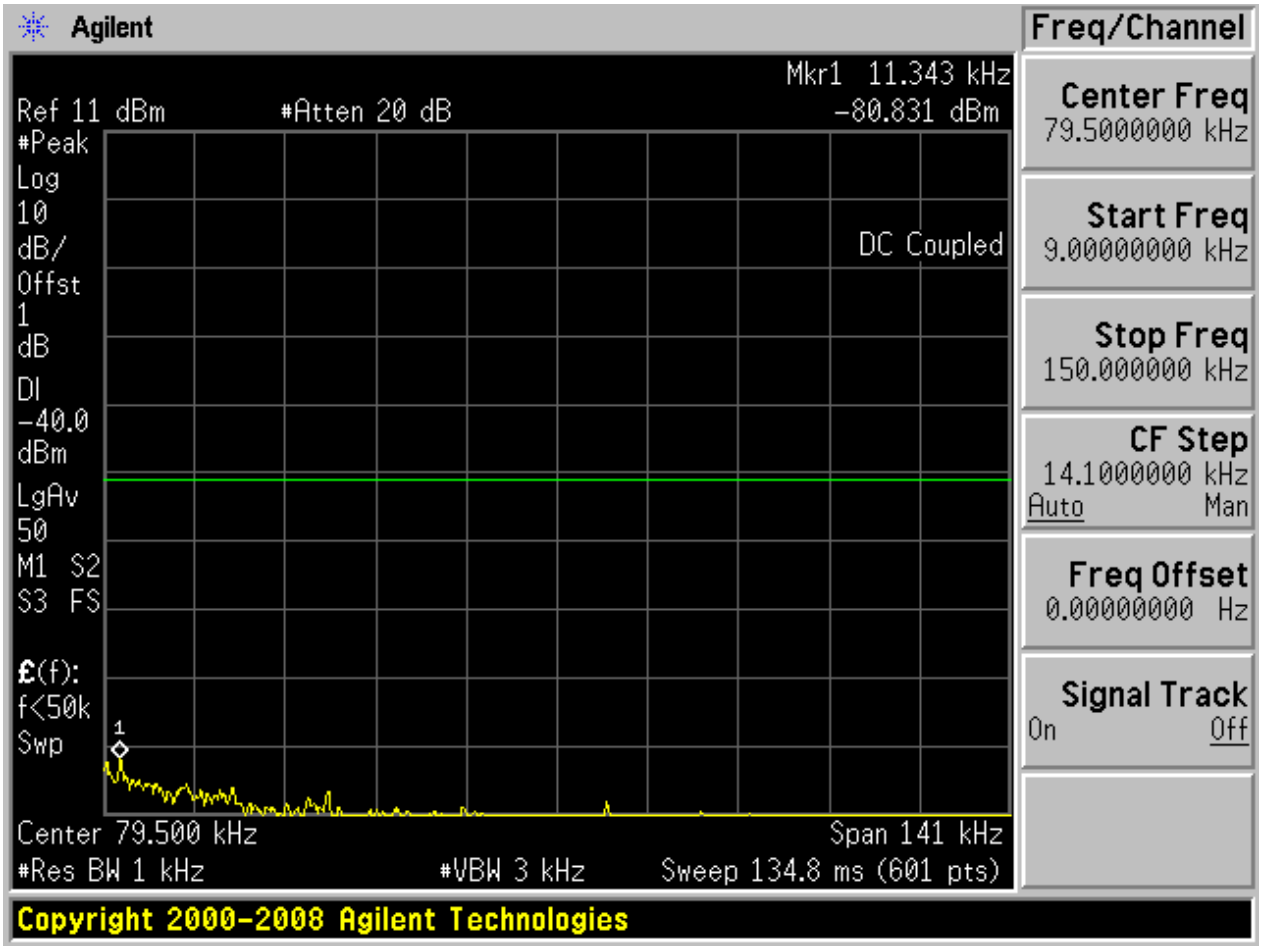


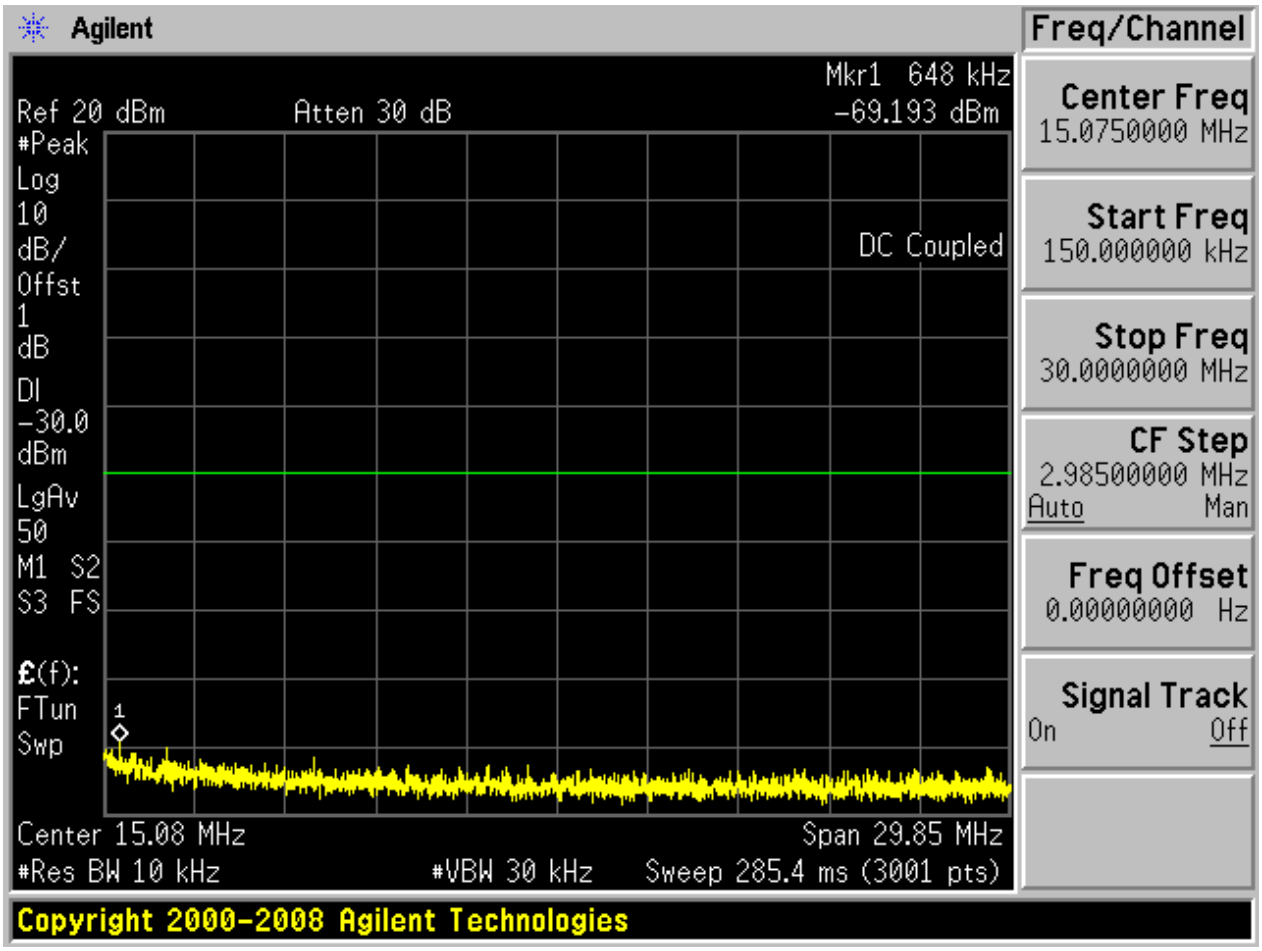
2.9 11N20_SISO_H@Ant 1

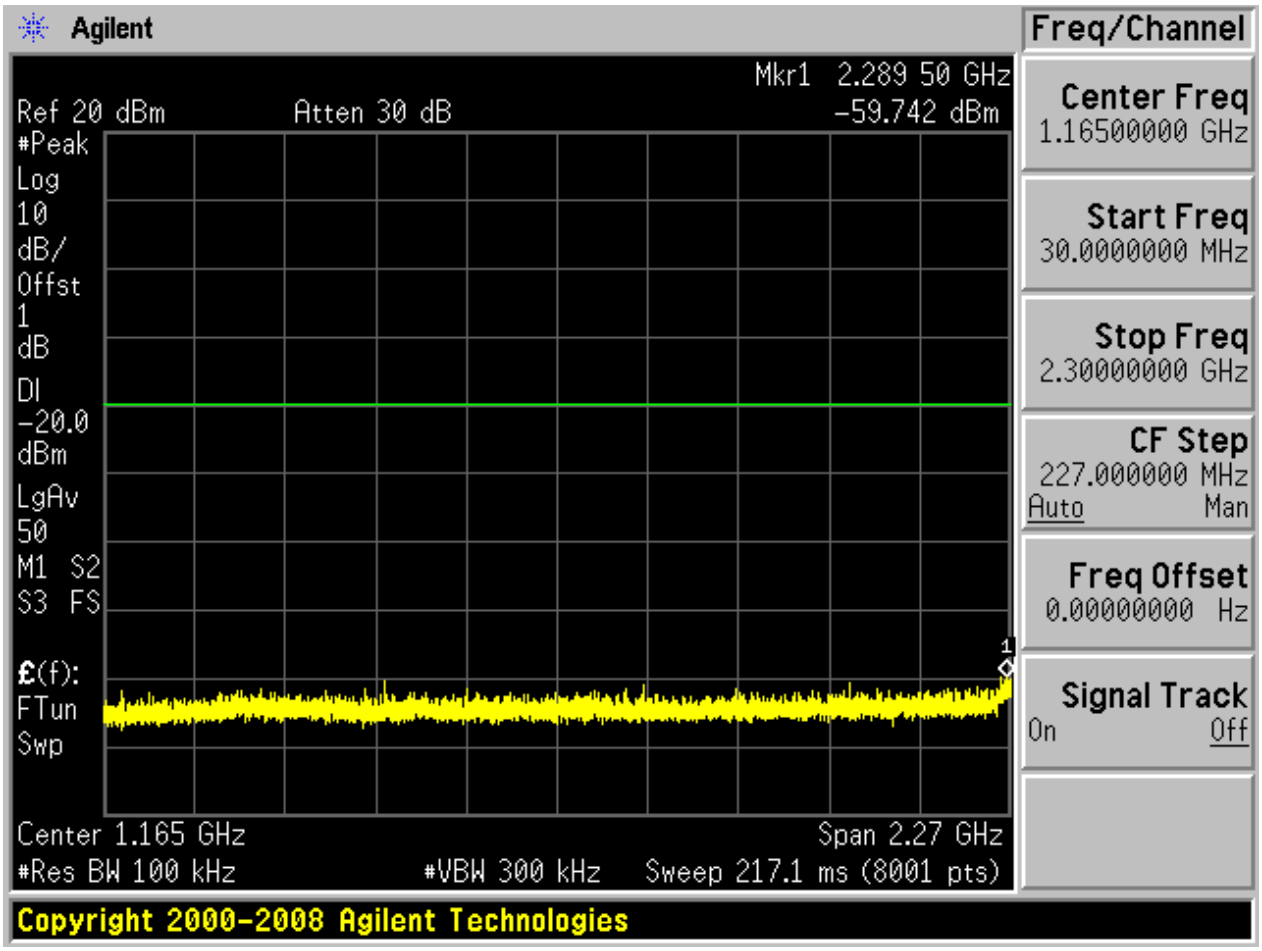
Pref:

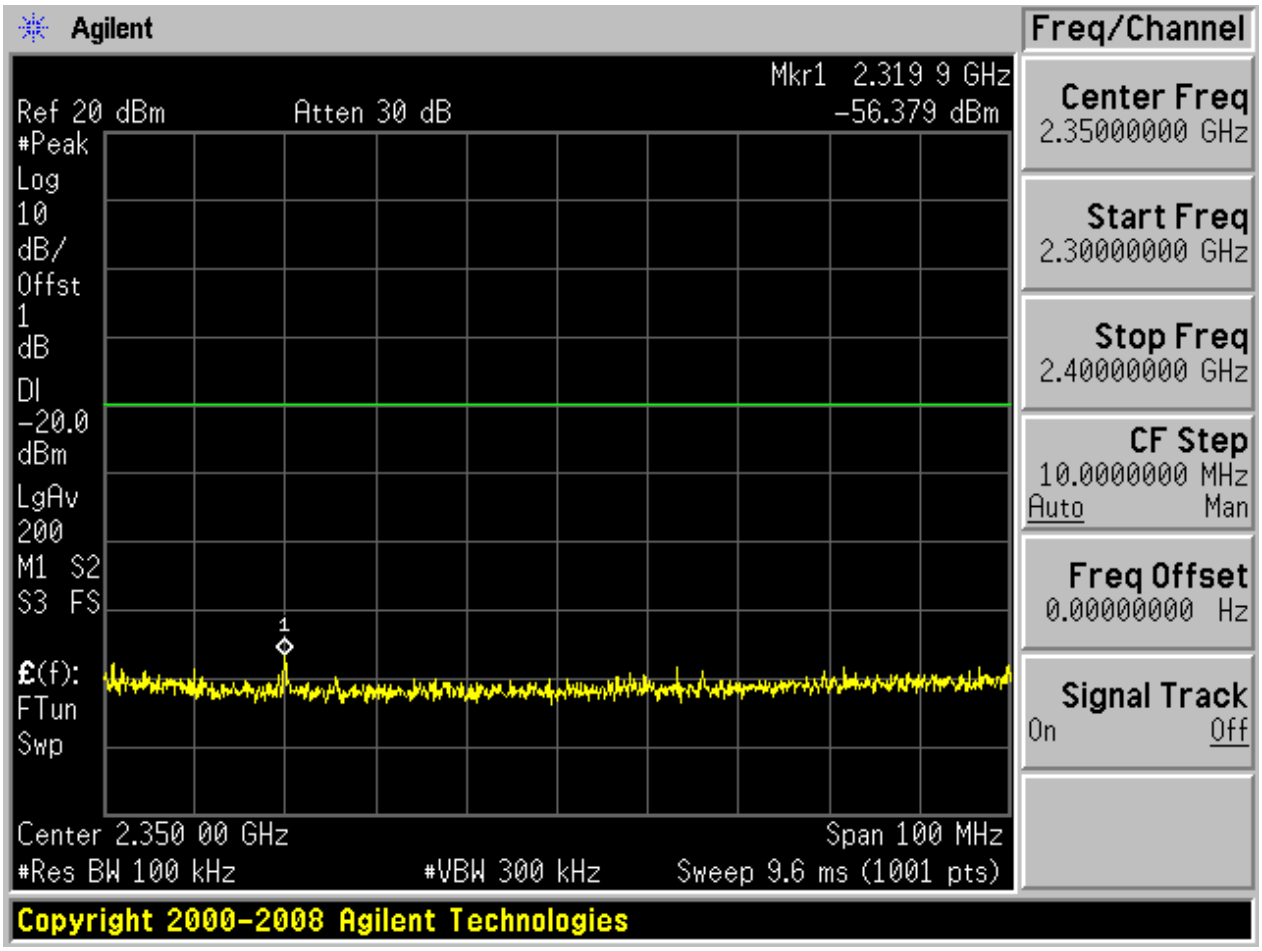


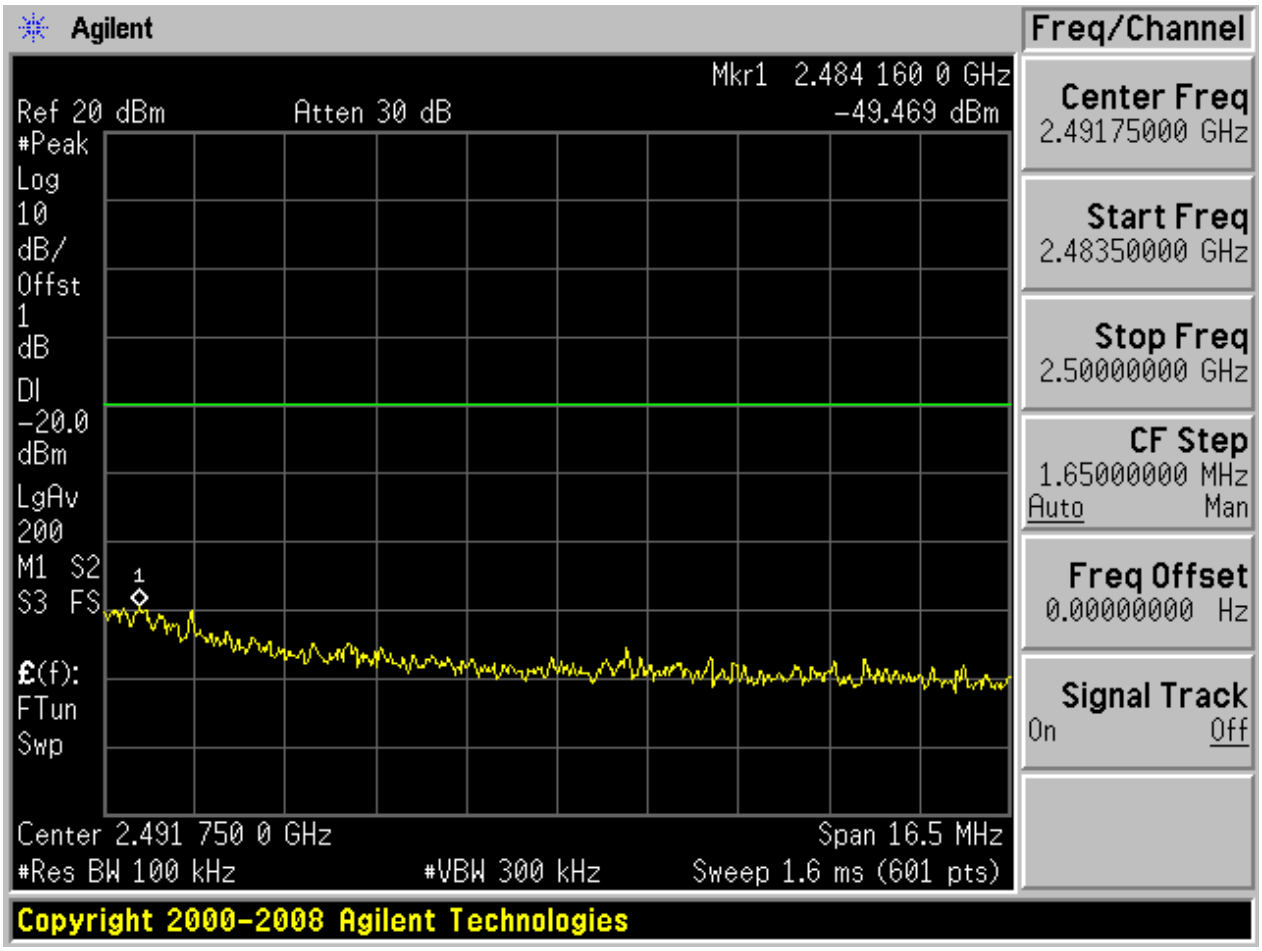
Puw:

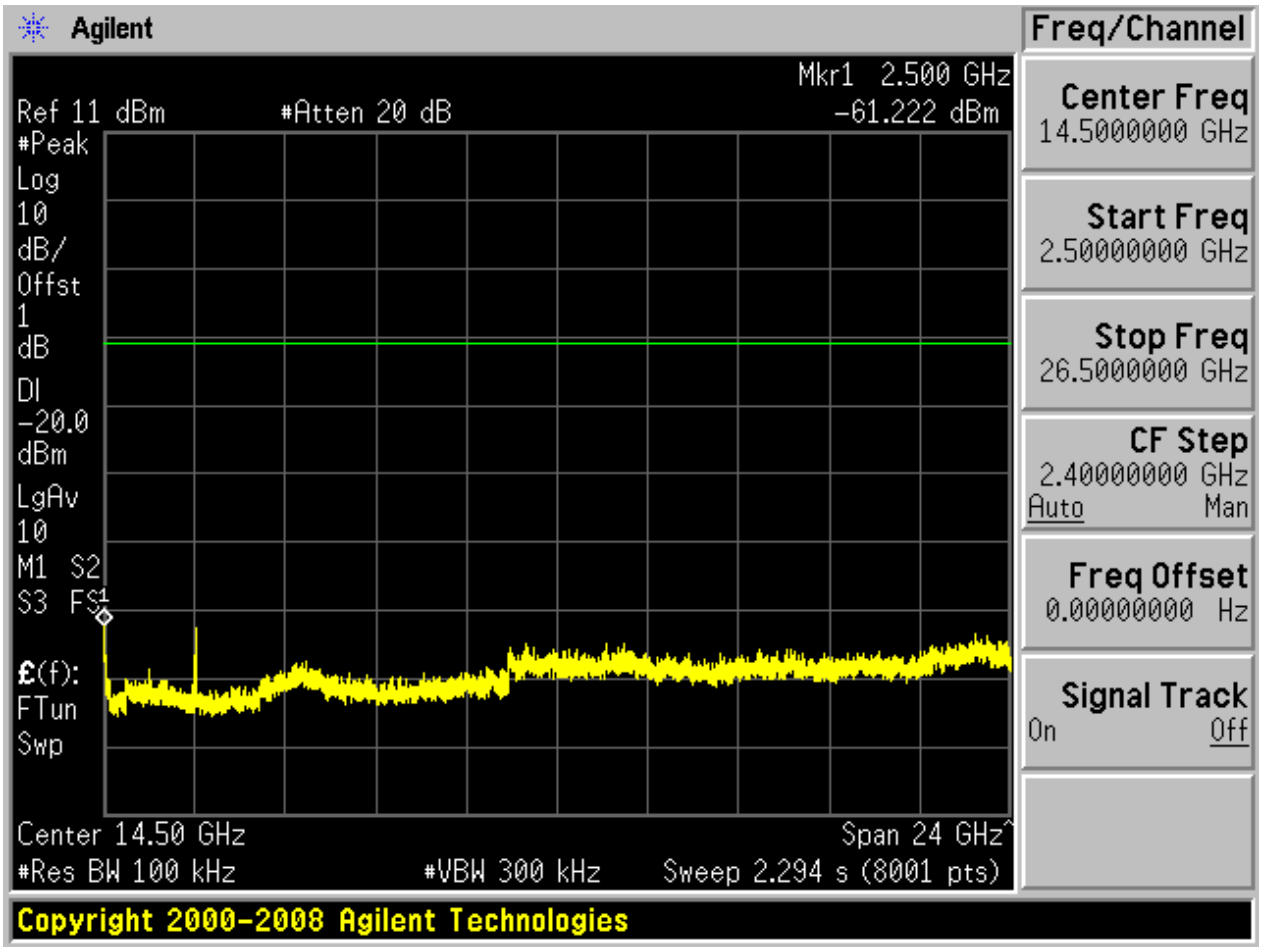










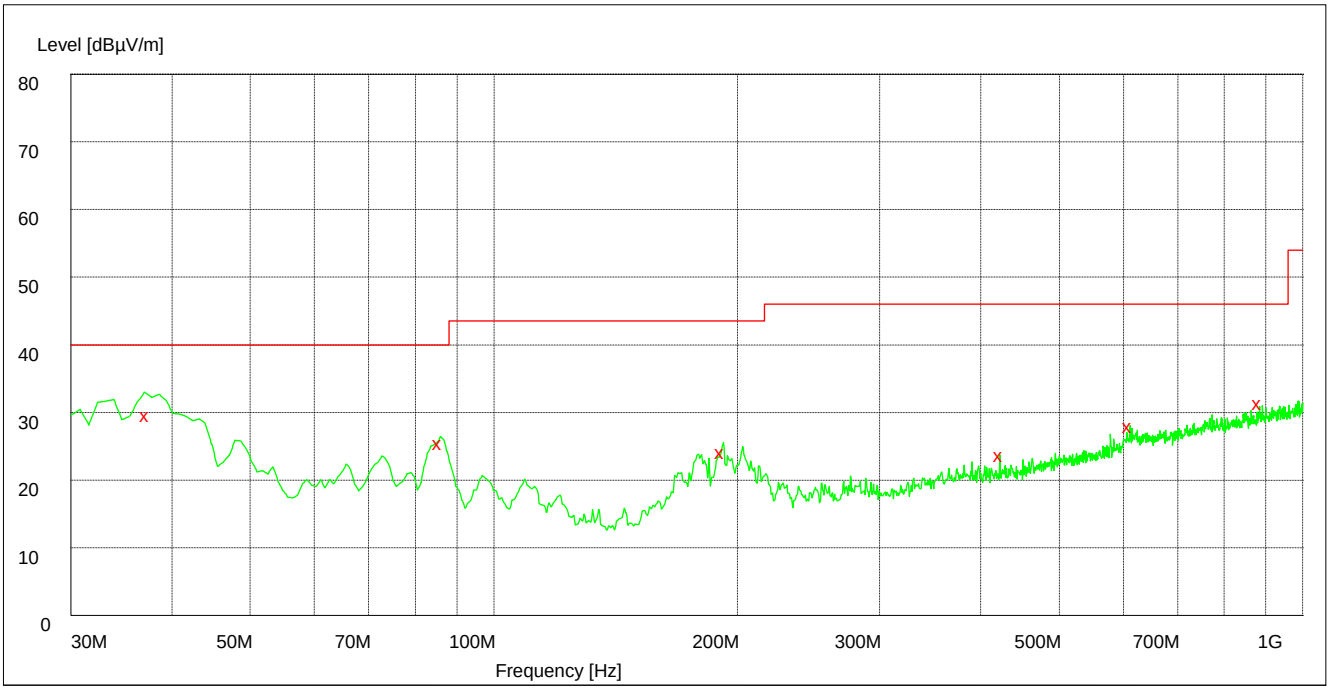


Appendix F：Unwanted Emissions into Restricted Frequency Bands (Radiated)

Part 1: Testing Range of “30 MHz to 1 GHz”

Note 1: The test results and plot for testing range of “30 MHz to 1 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

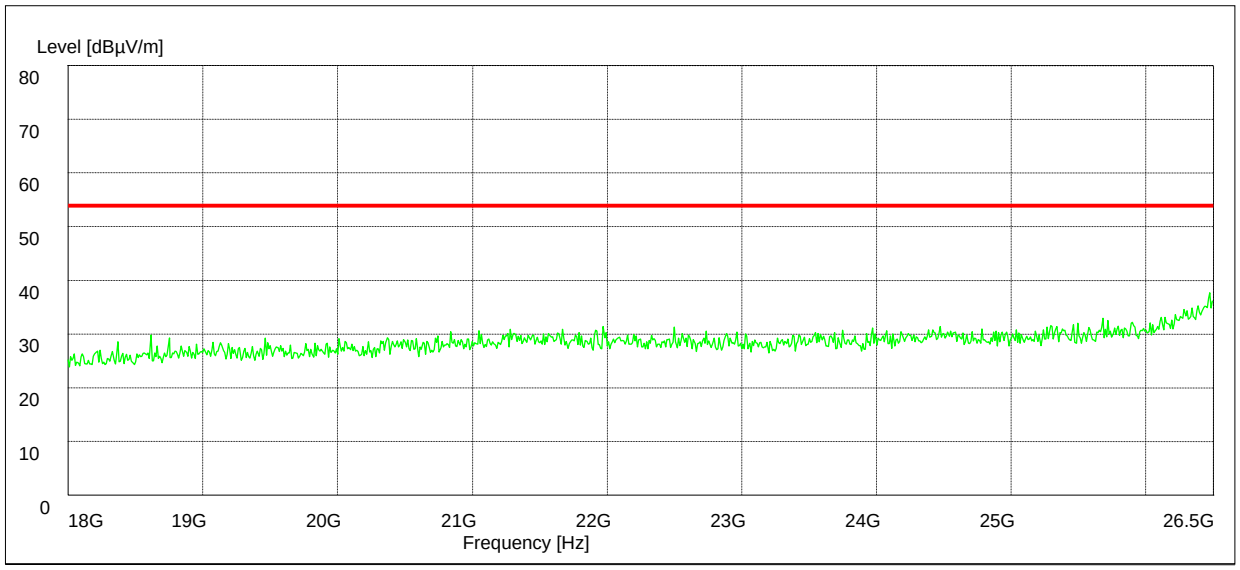
Note 2: The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).



MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarisation
37.320000	30.90	15.2	40.0	9.1	100.0	360.00	VERTICAL
85.980000	26.80	11.2	40.0	13.2	114.0	198.00	VERTICAL
192.000000	25.50	12.1	43.5	18.0	100.0	352.00	VERTICAL
423.540000	25.10	18.0	46.0	20.9	100.0	236.00	VERTICAL
611.640000	29.40	21.5	46.0	16.6	121.0	142.00	VERTICAL
884.940000	32.70	24.8	46.0	13.3	125.0	219.00	VERTICAL

Part 2: Testing Range of “18 GHz to 26.5 GHz”



Note: No peak found in pre- test.

Part 3: Testing Range of “2.3GHz to 2.51GHz”

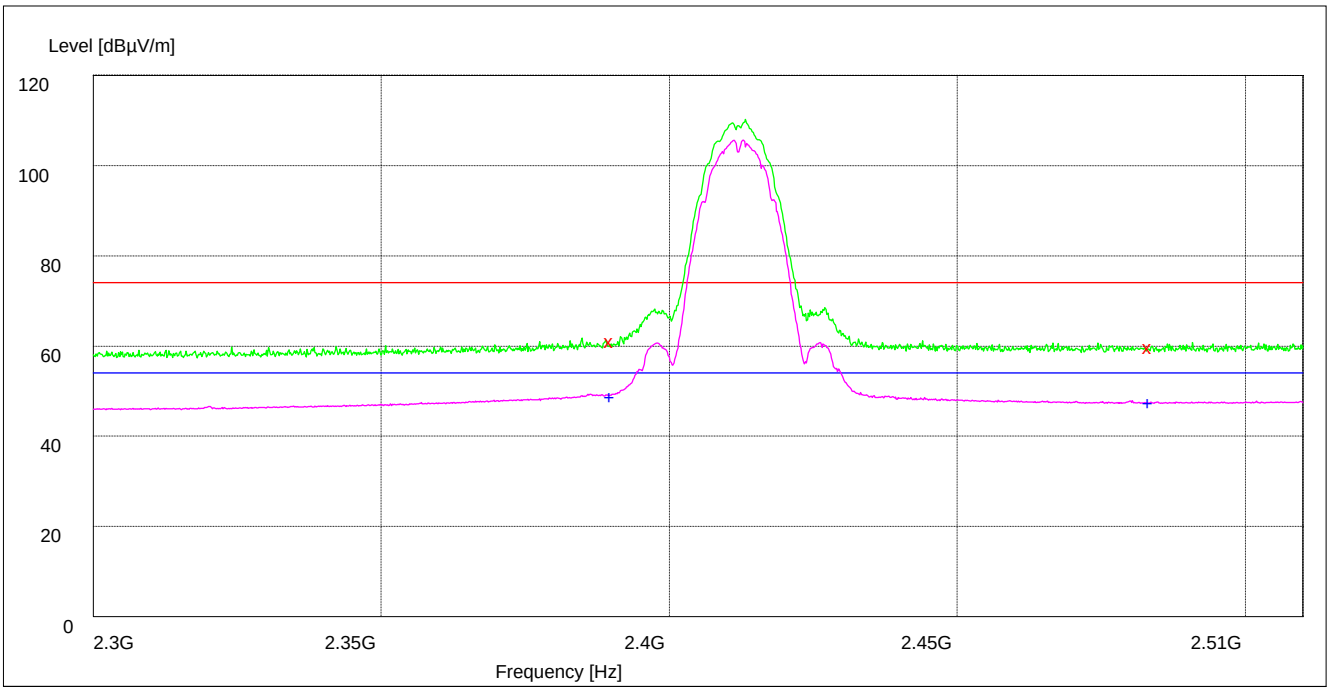
Note 1: The testing range of “2.3 GHz to 2.51 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.

Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBμV/m) and Average Limit (54 dBμV/m).

Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

Test Mode: 11B

Channel 01



Note: The peak exceeds the limit line is carrier frequency.

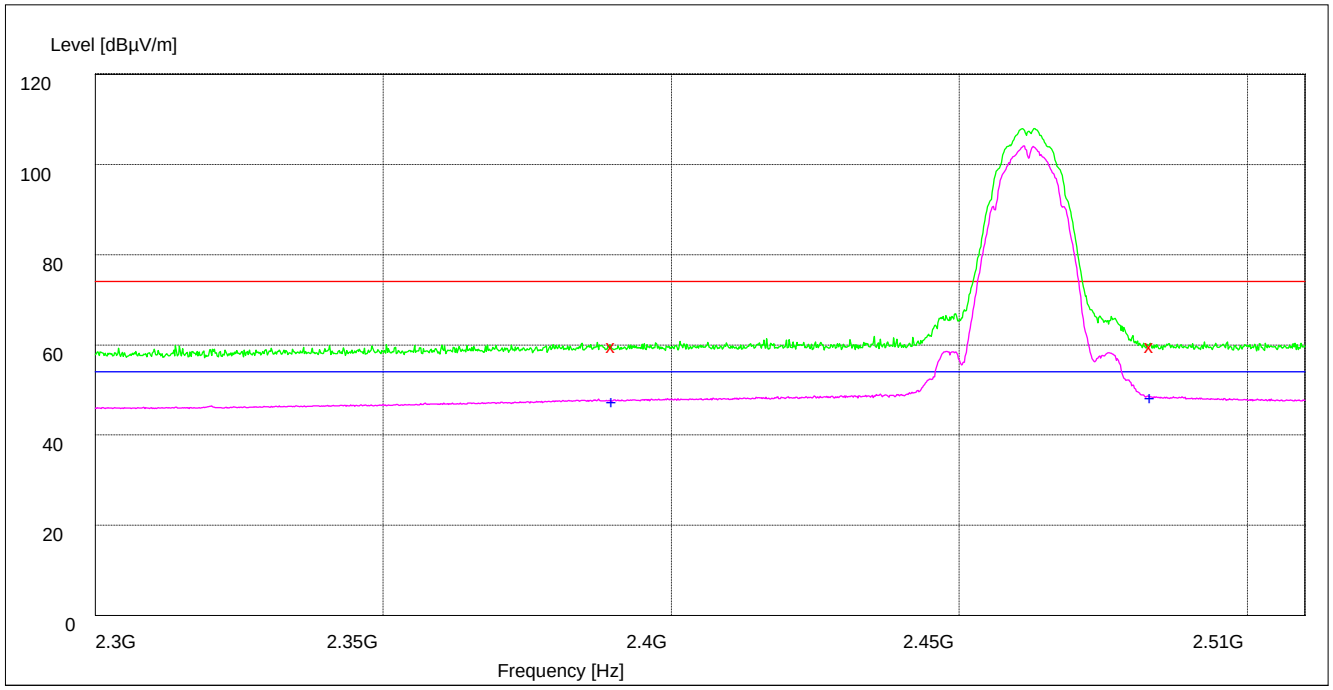
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	60.20	34.8	74.0	13.8	100.0	224.00	HORIZONTAL
2483.500000	60.50	35.1	74.0	13.5	147.0	91.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	48.20	34.8	54.0	5.8	100.0	224.00	HORIZONTAL
2483.500000	48.20	35.1	54.0	5.8	100.0	222.00	HORIZONTAL

Channel 11



Note: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

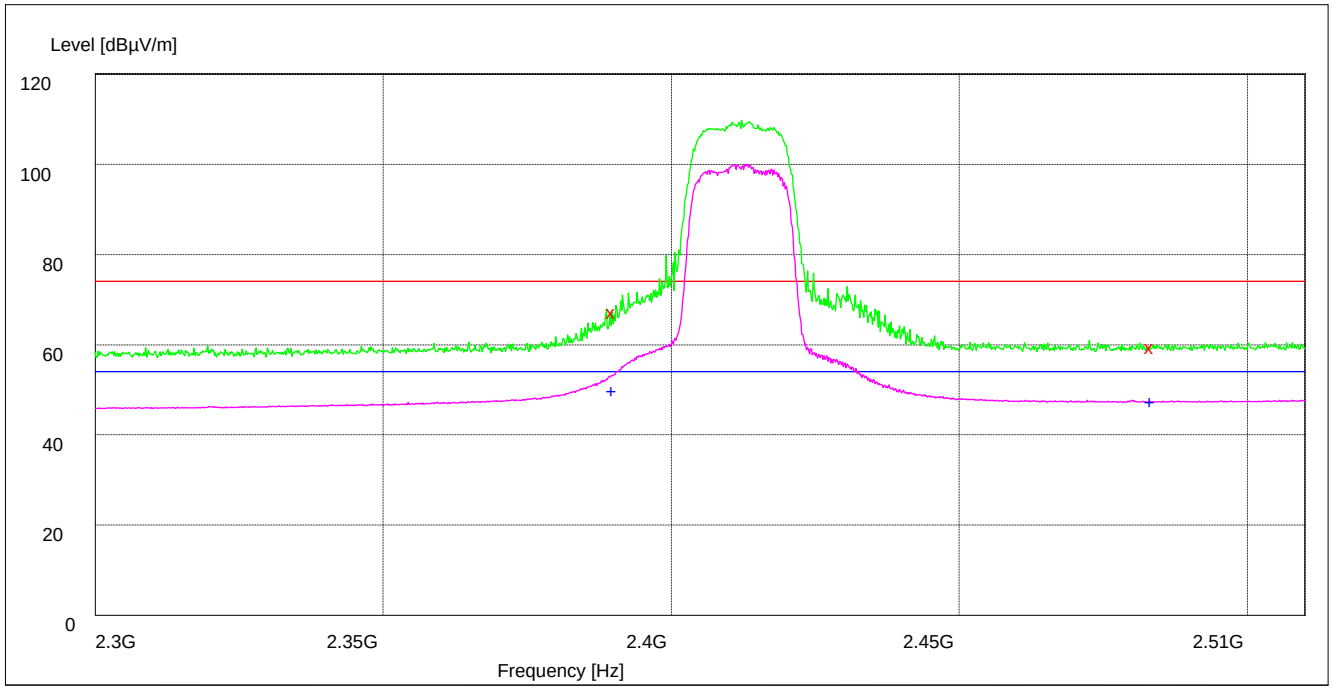
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	60.10	34.8	74.0	13.8	133.0	100.00	VERTICAL
2483.500000	60.50	35.1	74.0	13.5	100.0	259.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	48.20	34.8	54.0	5.8	100.0	264.00	HORIZONTAL
2483.500000	48.50	35.1	54.0	5.5	100.0	219.00	HORIZONTAL

Test Mode: 11G

Channel 01



Note: The peak exceeds the limit line is carrier frequency.

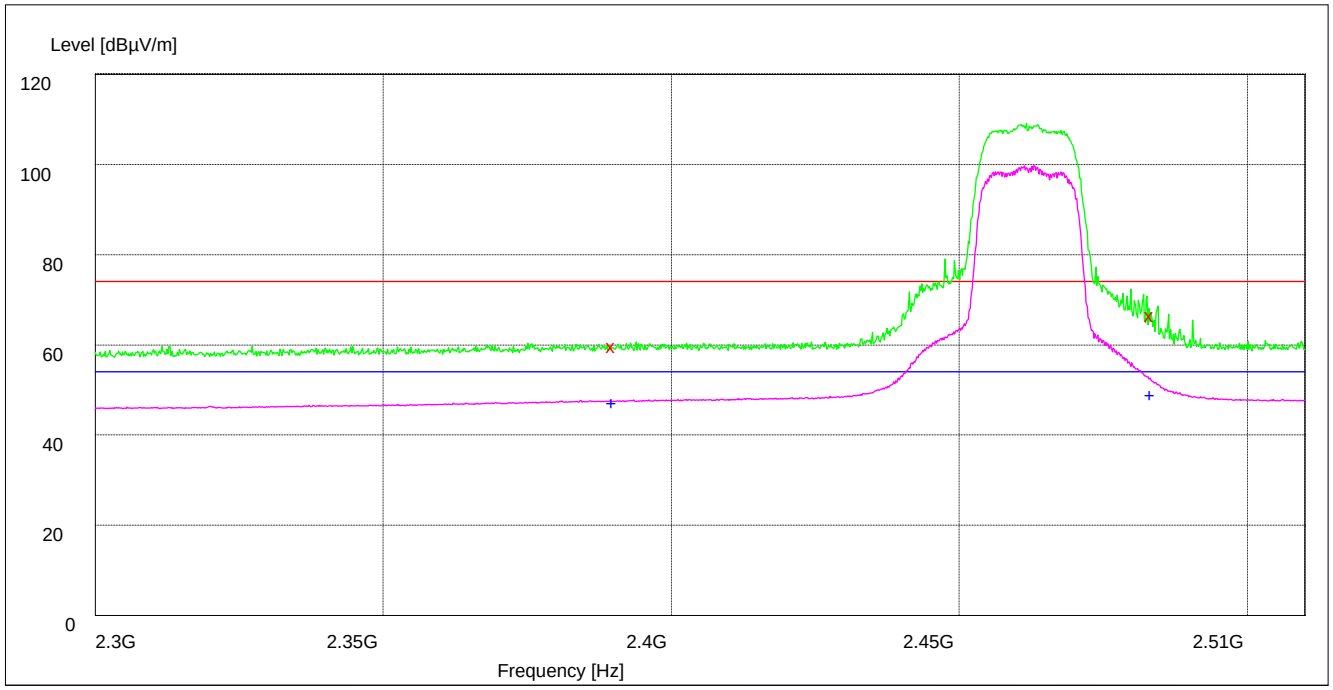
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	69.30	34.8	74.0	4.7	100.0	235.00	HORIZONTAL
2483.500000	59.70	35.1	74.0	14.3	100.0	359.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	50.00	34.8	54.0	4.0	100.0	270.00	HORIZONTAL
2483.500000	48.20	35.1	54.0	5.8	100.0	0.00	VERTICAL

Channel 11



Note: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

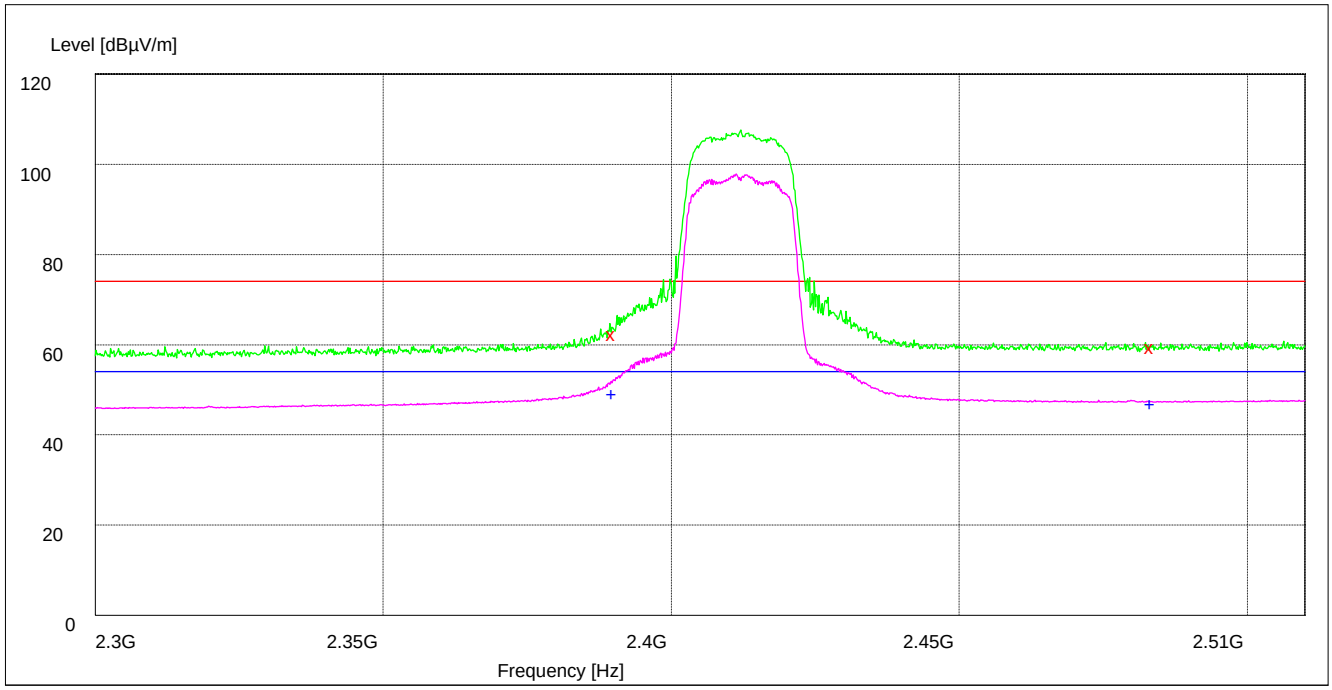
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	60.00	34.8	74.0	14.0	139.0	43.00	VERTICAL
2483.500000	68.50	35.1	74.0	5.5	100.0	198.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	48.40	34.8	54.0	5.6	100.0	216.00	HORIZONTAL
2483.500000	49.30	35.1	54.0	4.7	100.0	219.00	HORIZONTAL

Test Mode: 11N

Channel 01



Note: The peak exceeds the limit line is carrier frequency.

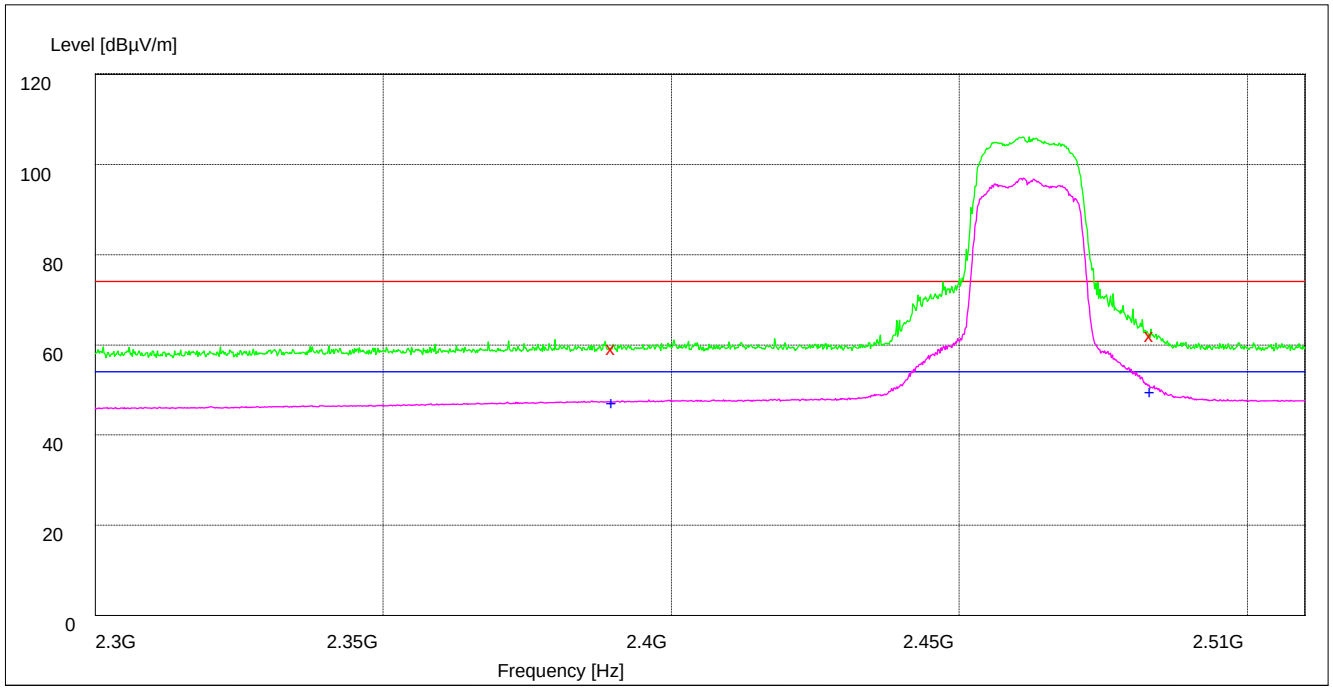
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	63.60	34.8	74.0	10.4	100.0	267.00	HORIZONTAL
2483.500000	60.30	35.1	74.0	13.7	146.0	360.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	49.30	34.8	54.0	4.7	102.0	268.00	HORIZONTAL
2483.500000	48.00	35.1	54.0	6.0	123.0	267.00	HORIZONTAL

Channel 11



Note: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	60.10	34.8	74.0	13.9	142.0	192.00	VERTICAL
2483.500000	63.00	35.1	74.0	11.0	150.0	170.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

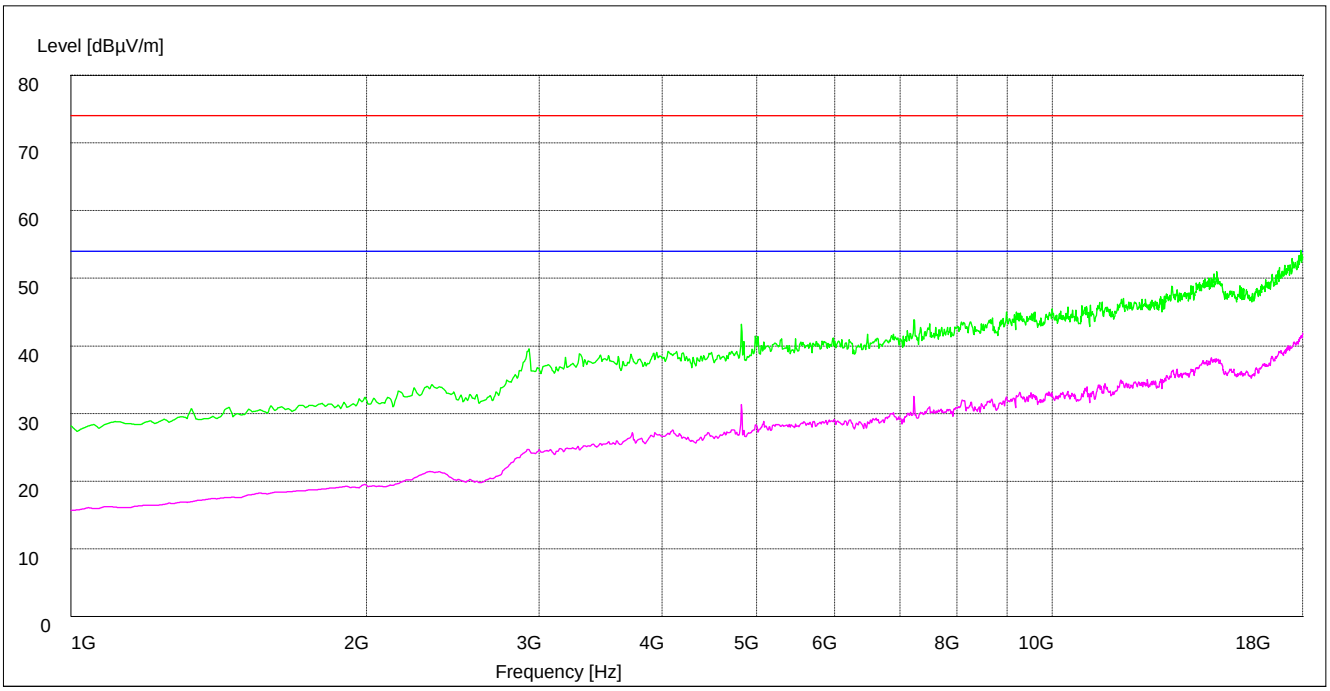
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	48.20	34.8	54.0	5.8	105.0	212.00	HORIZONTAL
2483.500000	49.00	35.1	54.0	5.0	101.0	221.00	HORIZONTAL

Part 4: Testing Range of “1 GHz to 18 GHz”

Note 1: The test results and plot for testing range of “1 GHz to 18 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

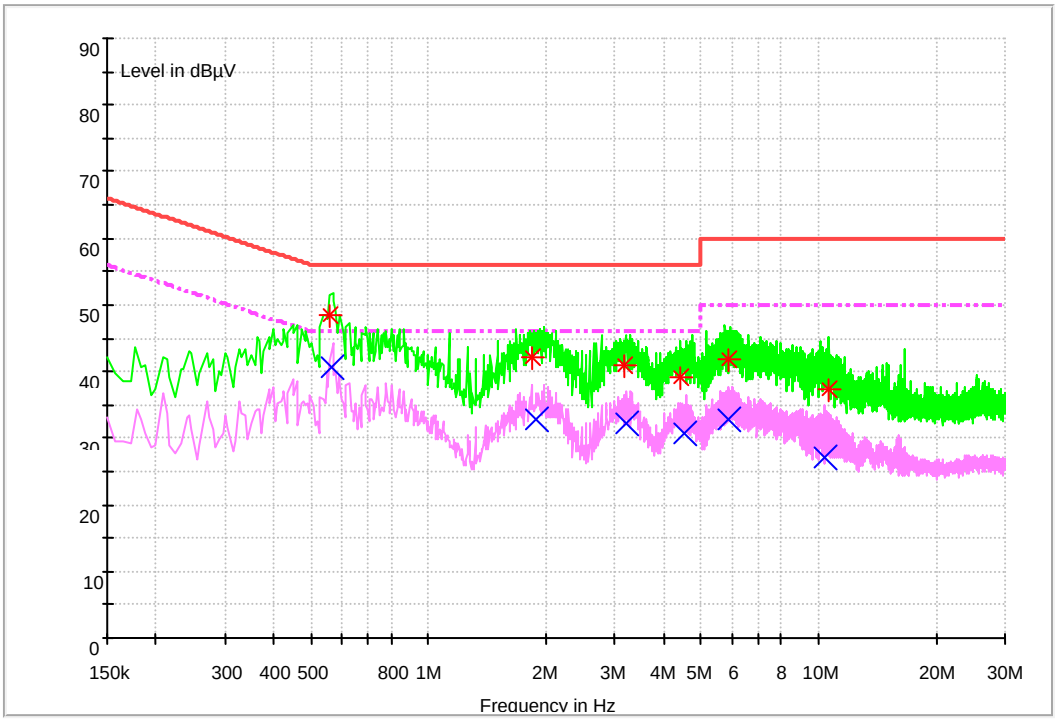
Note 2: The testing range of “1 GHz to 18 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBμV/m) and Average Limit (54 dBμV/m).



Appendix G：AC Power Line Conducted Emissions

Channel 6



MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.556470	48.5	9.7	56.0	7.5	N	FLO
1.845158	42.1	9.7	56.0	13.9	N	FLO
3.162818	40.9	9.7	56.0	15.1	N	FLO
4.393934	39.2	9.8	56.0	16.8	N	FLO
5.832135	41.7	9.8	60.0	18.3	N	FLO
10.542806	37.2	9.9	60.0	22.8	N	FLO

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.566752	40.6	9.7	46.0	5.4	N	FLO
1.885556	32.8	9.7	46.0	13.2	N	FLO
3.221674	32.2	9.7	46.0	13.8	N	FLO
4.523434	30.8	9.8	46.0	15.2	N	FLO
5.875395	32.8	9.8	50.0	17.2	N	FLO
10.359285	27.1	9.9	50.0	22.9	N	FLO

----------END----------