



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.

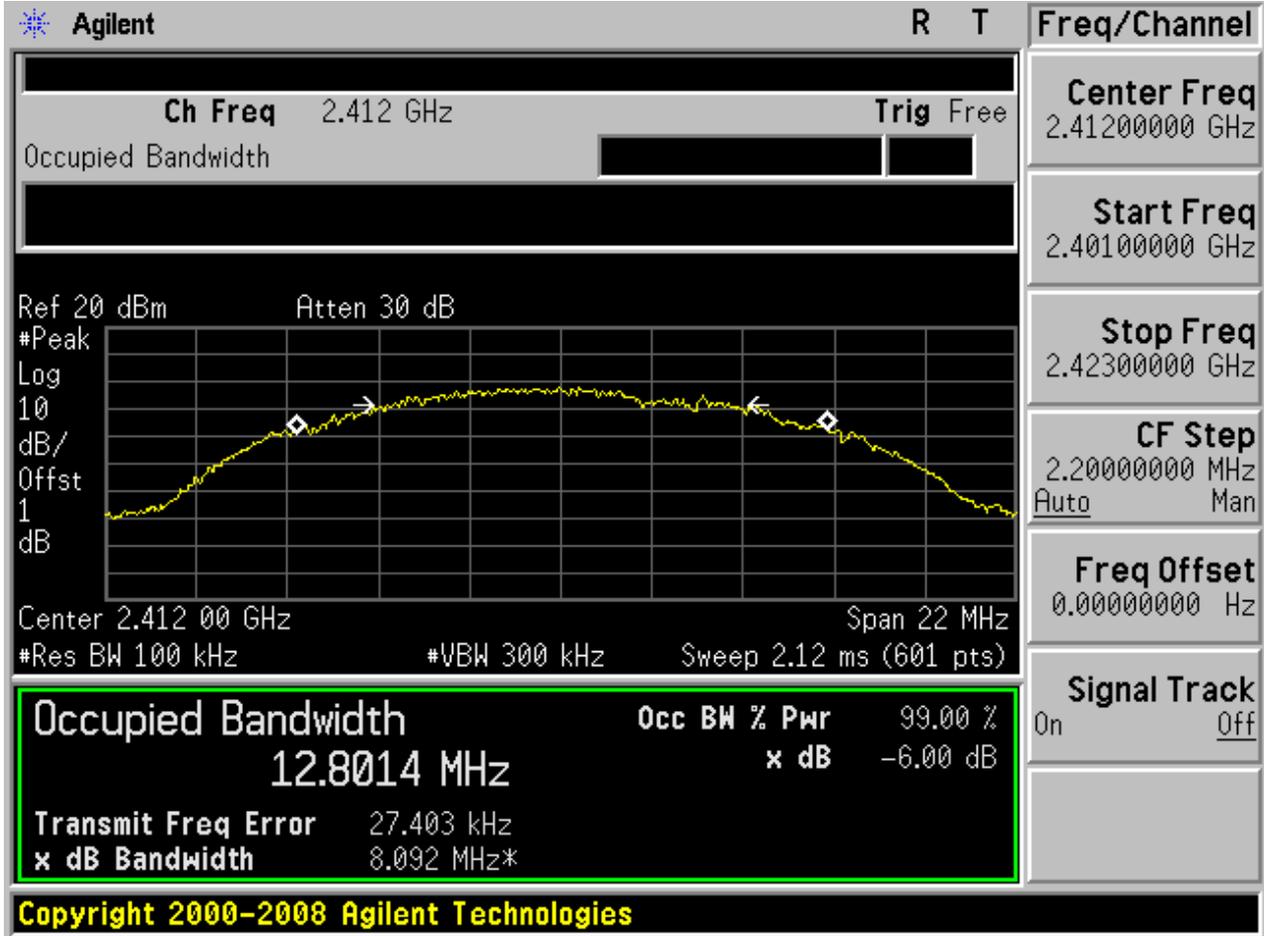
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	DTS6dBBW[MHz]	Verdict
11B	L	2412	8.09	pass
11B	M	2437	8.41	pass
11B	H	2462	8.47	pass
11G	L	2412	16.53	pass
11G	M	2437	16.53	pass
11G	H	2462	16.49	pass
11N20	L	2412	17.70	pass
11N20	M	2437	17.71	pass
11N20	H	2462	17.63	pass



Part II - Test Plots

2.1 11B_L



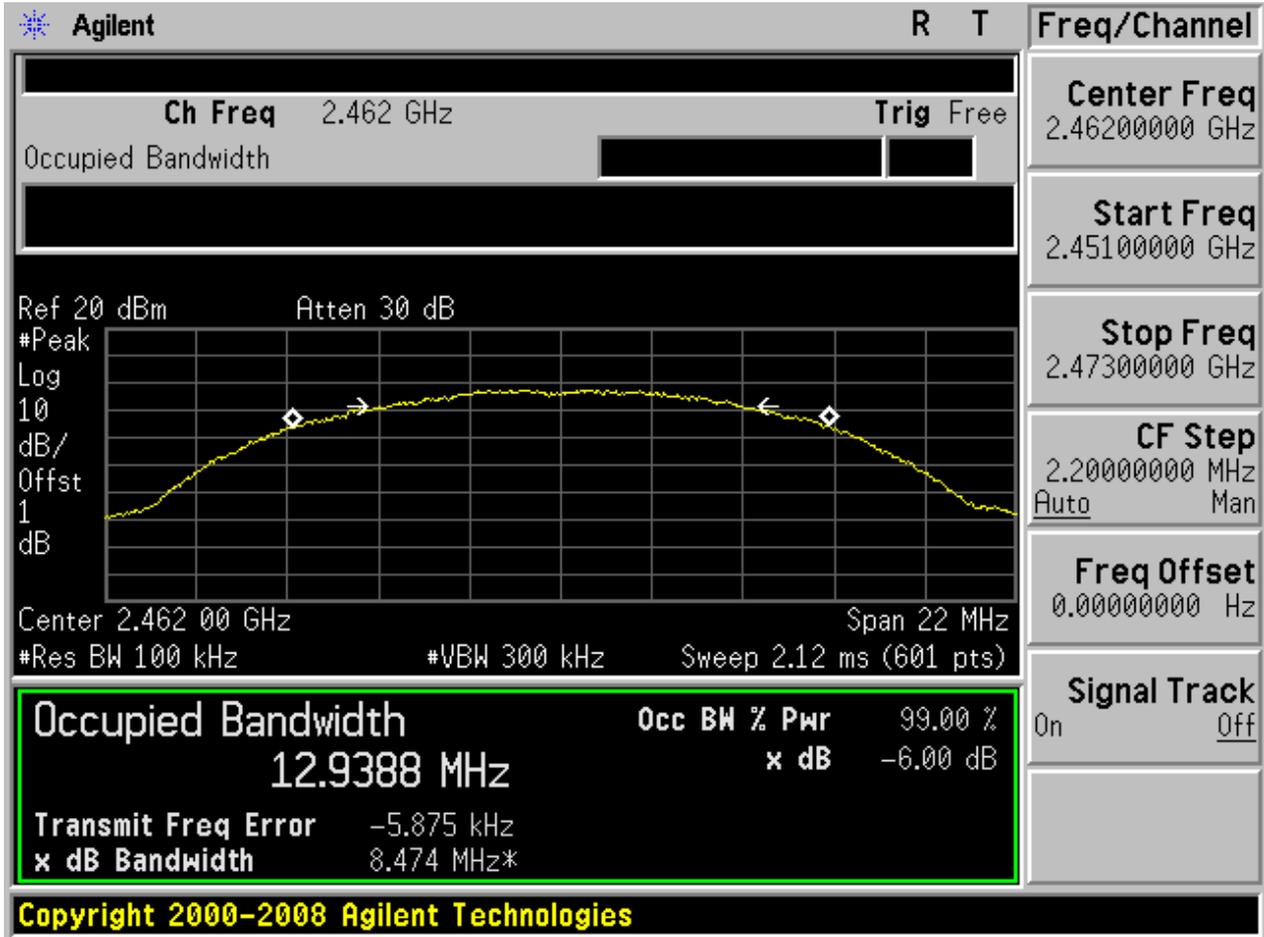


2.2 11B_M

Agilent R T		Freq/Channel	
Ch Freq 2.437 GHz		Center Freq 2.43700000 GHz	
Trig Free		Start Freq 2.42600000 GHz	
Occupied Bandwidth █		Stop Freq 2.44800000 GHz	
Ref 20 dBm Atten 30 dB		CF Step 2.20000000 MHz Auto Man	
#Peak Log 10 dB/ Offst 1 dB		Freq Offset 0.00000000 Hz	
		Signal Track On Off	
Center 2.437 00 GHz Span 22 MHz		Occupied Bandwidth Occ BW % Pwr 99.00 %	
#Res BW 100 kHz #VBW 300 kHz Sweep 2.12 ms (601 pts)		12.9096 MHz x dB -6.00 dB	
Transmit Freq Error 15.623 kHz		x dB Bandwidth 8.414 MHz*	
Copyright 2000-2008 Agilent Technologies			

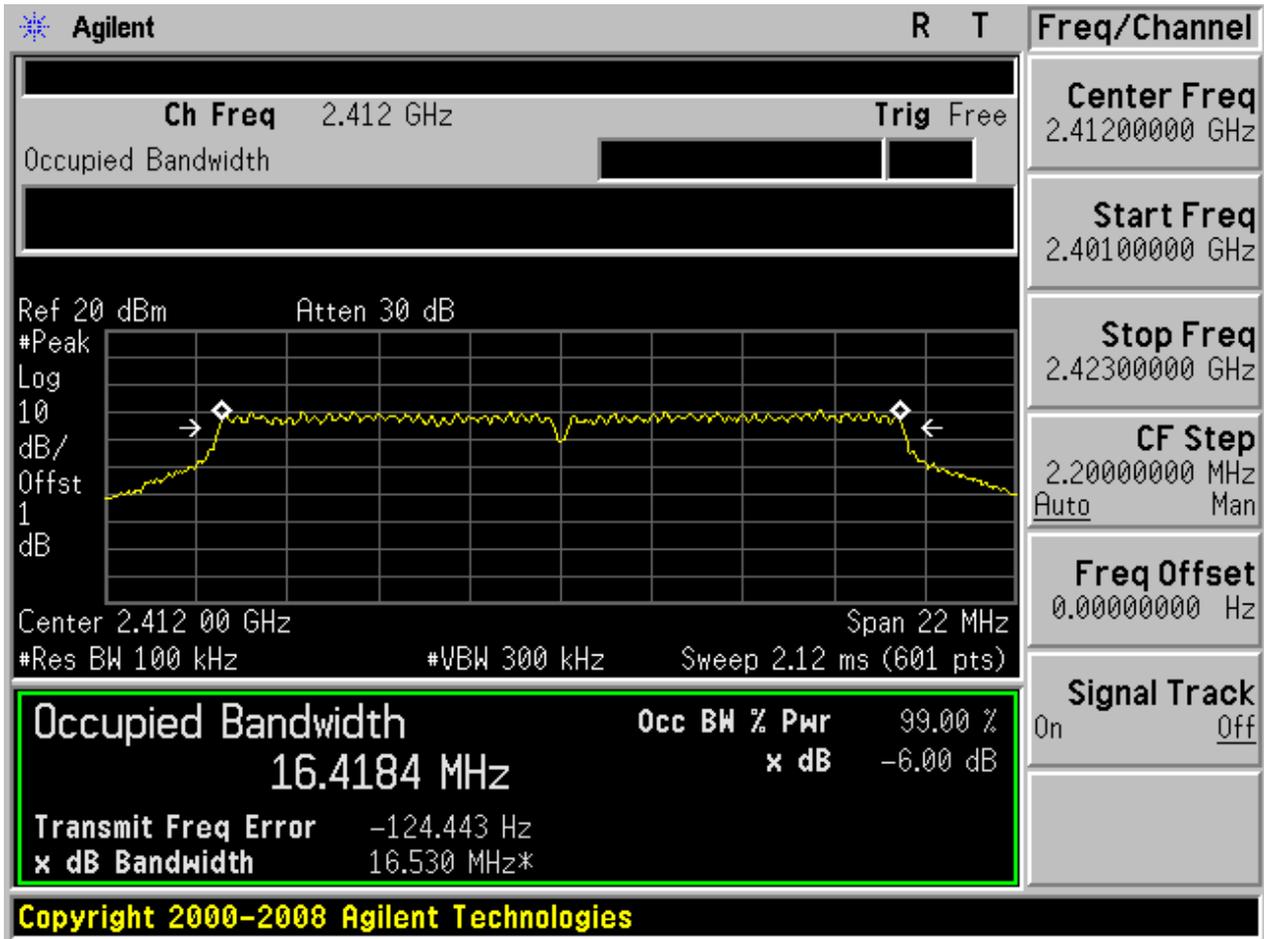


2.3 11B_H





2.4 11G_L



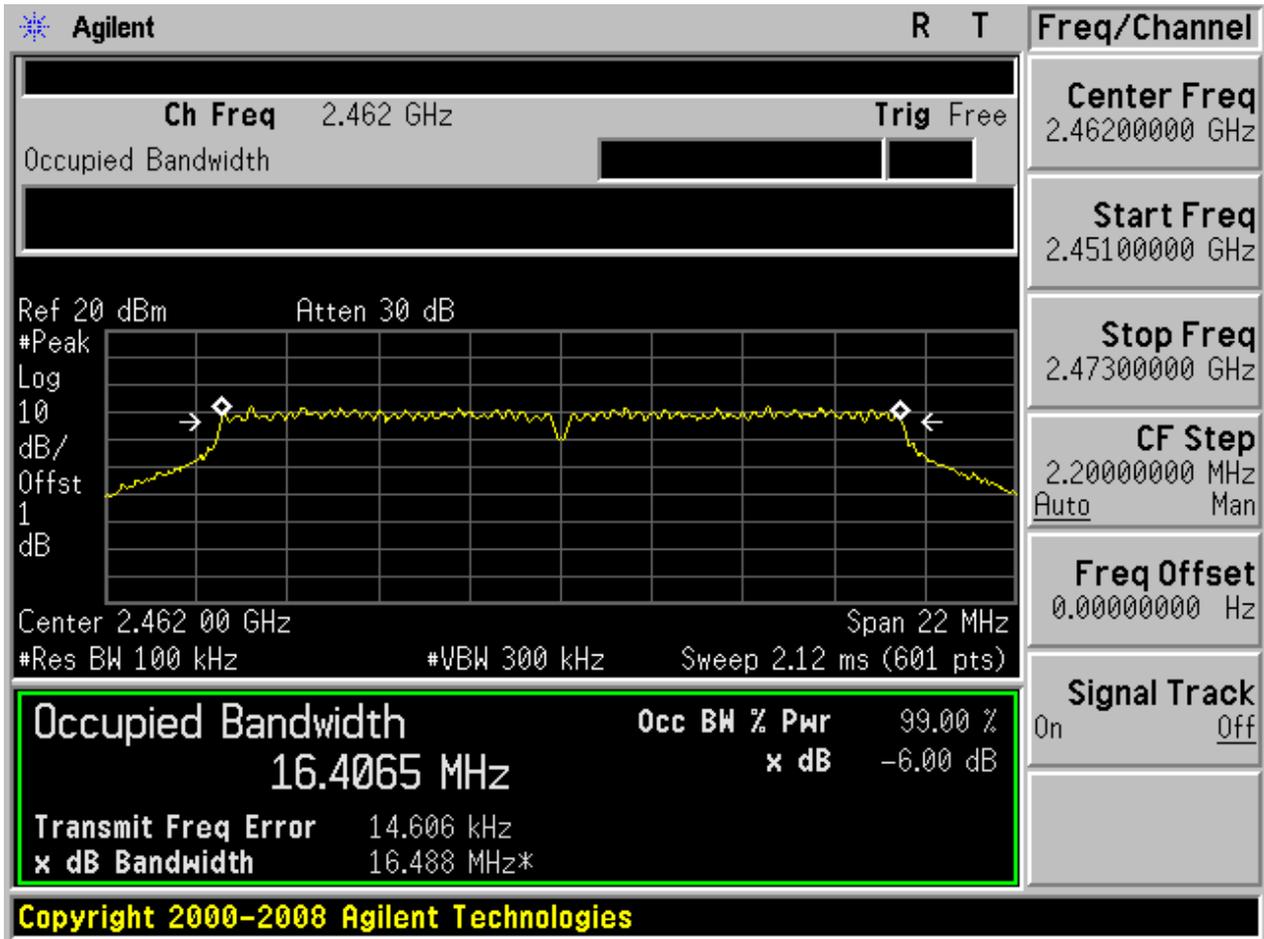


2.5 11G_M

Agilent		R	T	Freq/Channel	
Ch Freq 2.437 GHz		Trig Free		Center Freq 2.43700000 GHz	
Occupied Bandwidth				Start Freq 2.42600000 GHz	
Ref 20 dBm		Atten 30 dB		Stop Freq 2.44800000 GHz	
				CF Step 2.20000000 MHz Auto Man	
Center 2.437 00 GHz		Span 22 MHz		Freq Offset 0.00000000 Hz	
#Res BW 100 kHz		#VBW 300 kHz		Signal Track On Off	
Sweep 2.12 ms (601 pts)					
Occupied Bandwidth 16.4334 MHz		Occ BW % Pwr 99.00 %			
Transmit Freq Error 5.072 kHz		x dB -6.00 dB			
x dB Bandwidth 16.533 MHz*					
Copyright 2000-2008 Agilent Technologies					

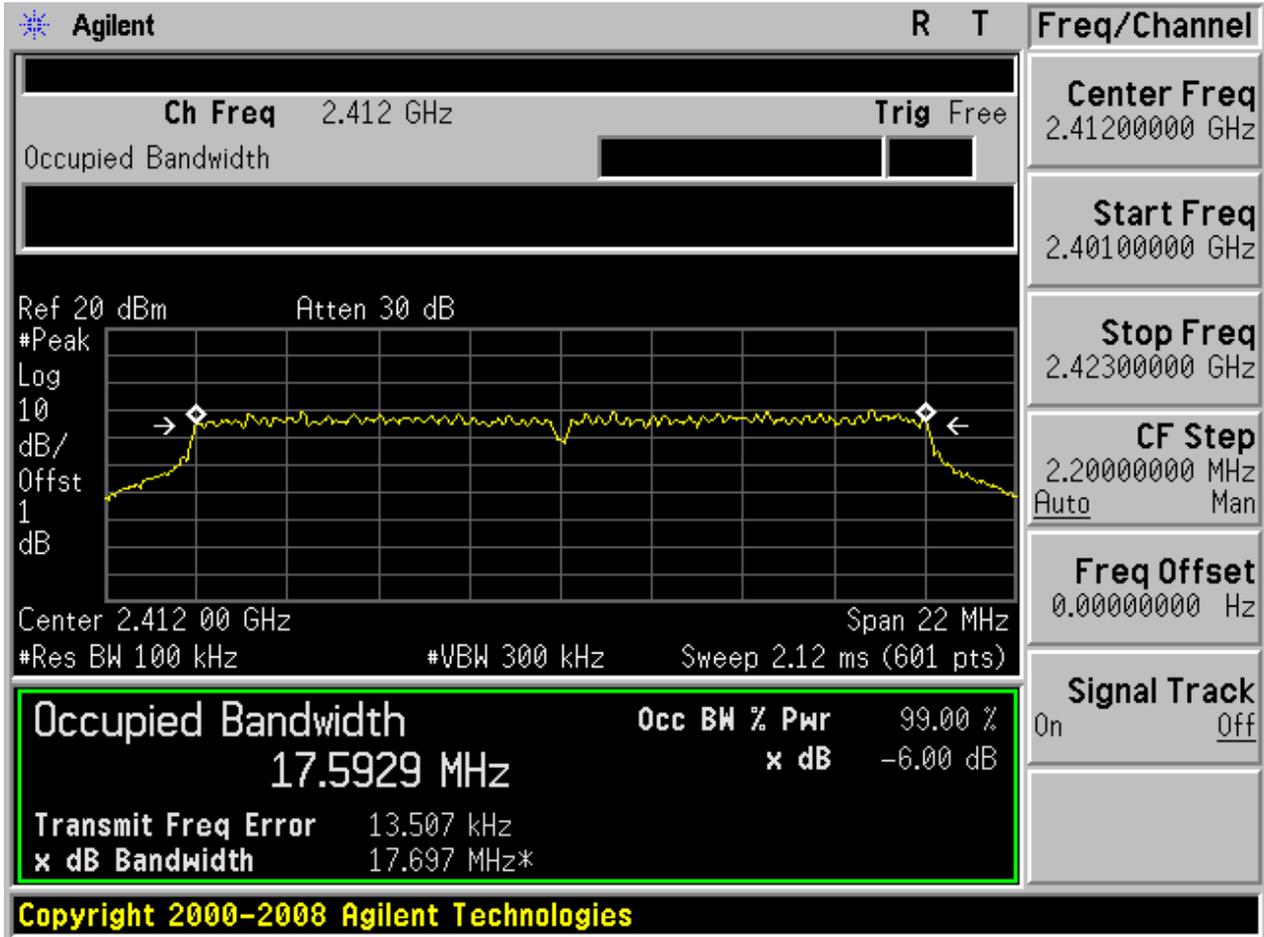


2.6 11G_H



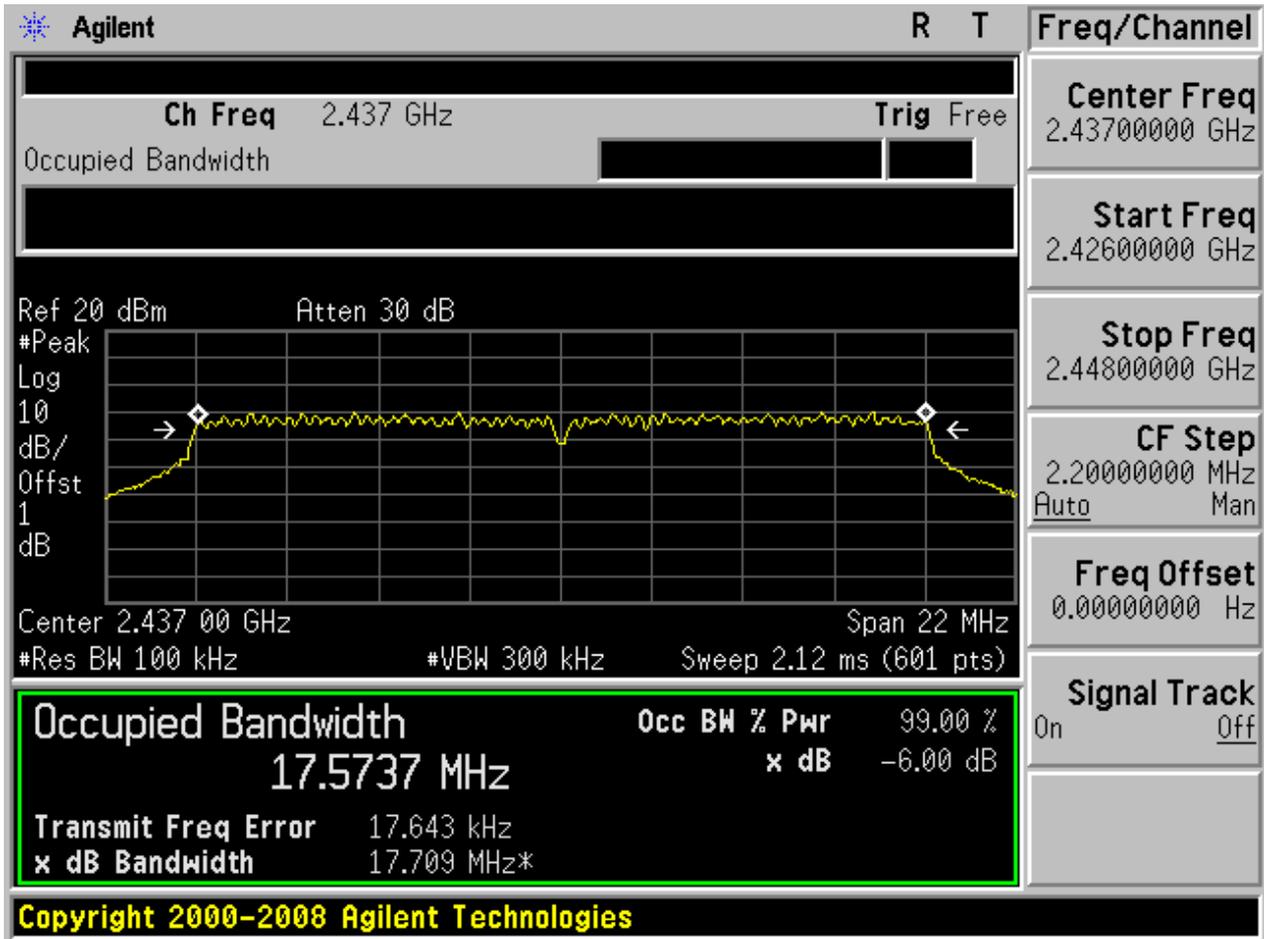


2.7 11N20_L





2.8 11N20_M





2.9 11N20_H

Agilent R T		Freq/Channel
Ch Freq 2.462 GHz Trig Free		Center Freq 2.46200000 GHz
Occupied Bandwidth █		Start Freq 2.45100000 GHz
Ref 20 dBm Atten 30 dB		Stop Freq 2.47300000 GHz
		CF Step 2.20000000 MHz Auto Man
Center 2.462 00 GHz Span 22 MHz		Freq Offset 0.00000000 Hz
#Res BW 100 kHz #VBW 300 kHz Sweep 2.12 ms (601 pts)		Signal Track On Off
Occupied Bandwidth Occ BW % Pwr 99.00 %		
17.5810 MHz x dB -6.00 dB		
Transmit Freq Error 16.207 kHz		
x dB Bandwidth 17.634 MHz*		
Copyright 2000-2008 Agilent Technologies		

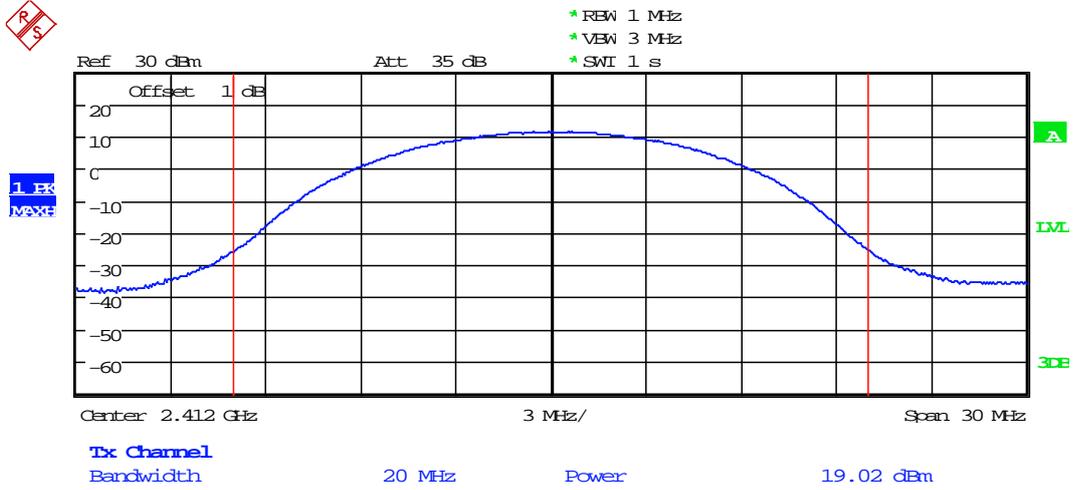
Appendix B: Maximum Peak Conducted Output Power

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Meas. Level (Cond.) [dBm]	Verdict
11B	L	2412	19.02	pass
11B	M	2437	19.72	pass
11B	H	2462	20.25	pass
11G	L	2412	20.17	pass
11G	M	2437	21.29	pass
11G	H	2462	21.59	pass
11N20	L	2412	19.65	pass
11N20	M	2437	20.17	pass
11N20	H	2462	20.65	pass

Part II - Test Plots

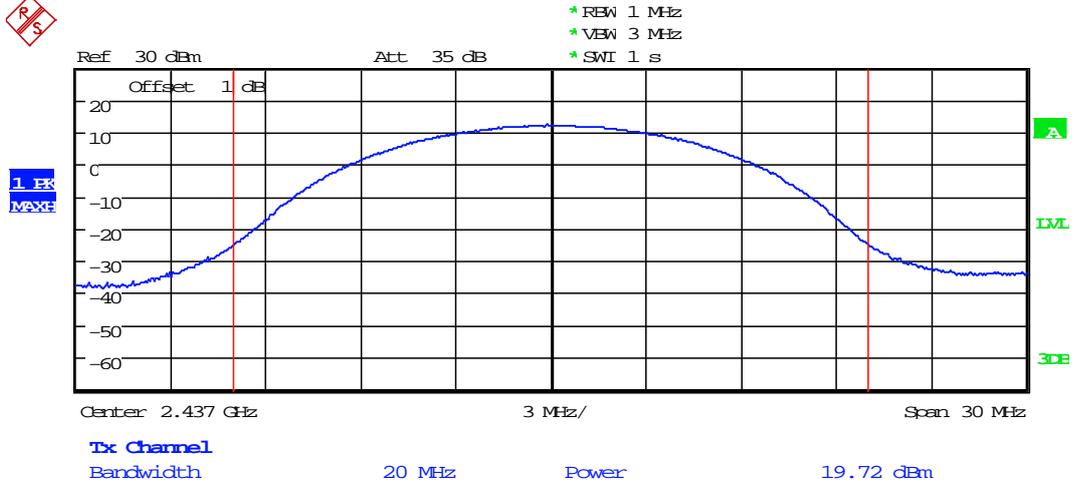
2.1 11B_L



Date: 8.MAR.2014 17:23:18

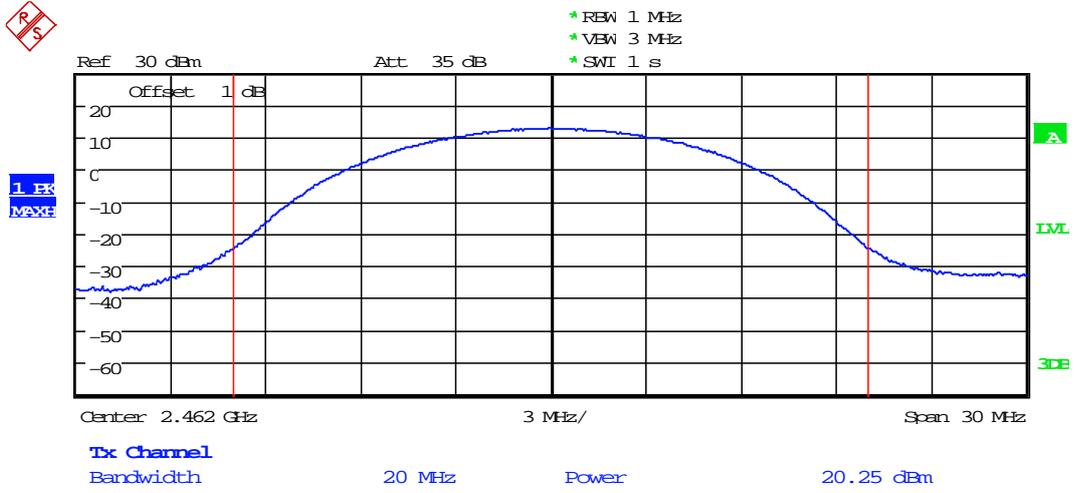


2.2 11B_M



Date: 8.MAR.2014 17:24:05

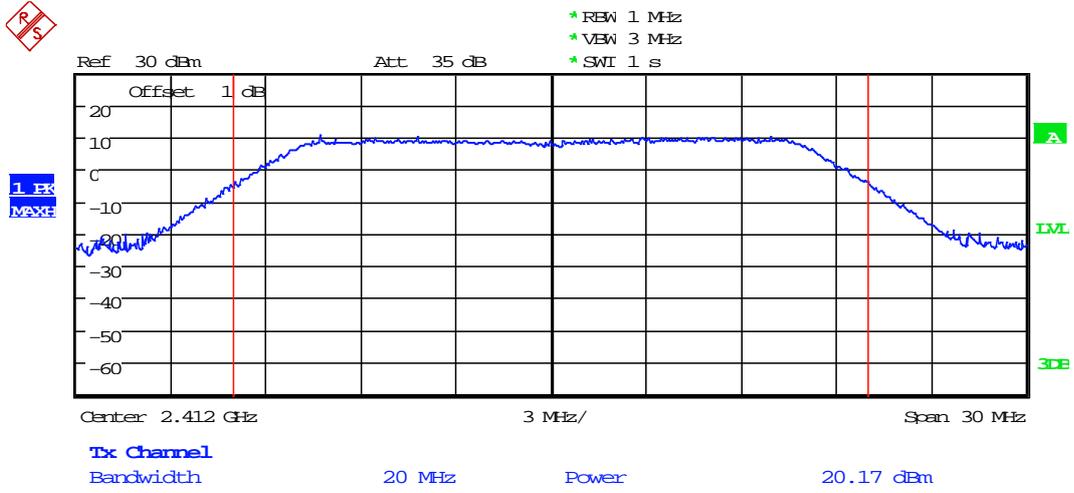
2.3 11B_H



Date: 8.MAR.2014 17:24:48



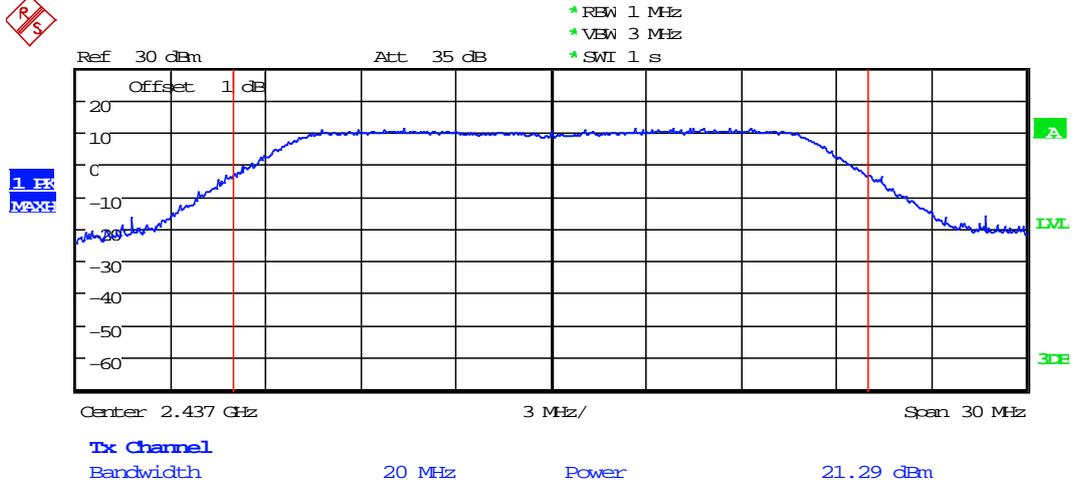
2.4 11G_L



Date: 8.MAR.2014 17:25:35



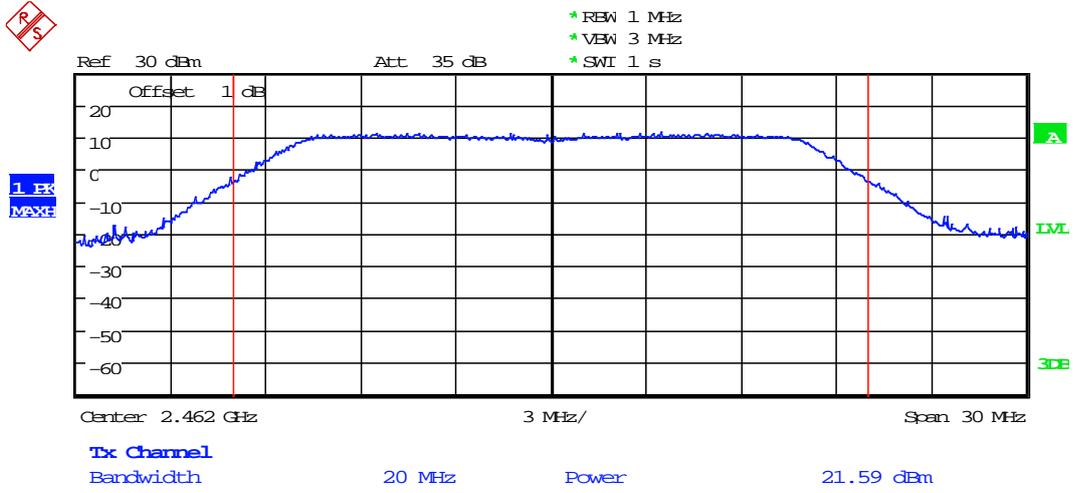
2.5 11G_M



Date: 8.MAR.2014 17:26:58



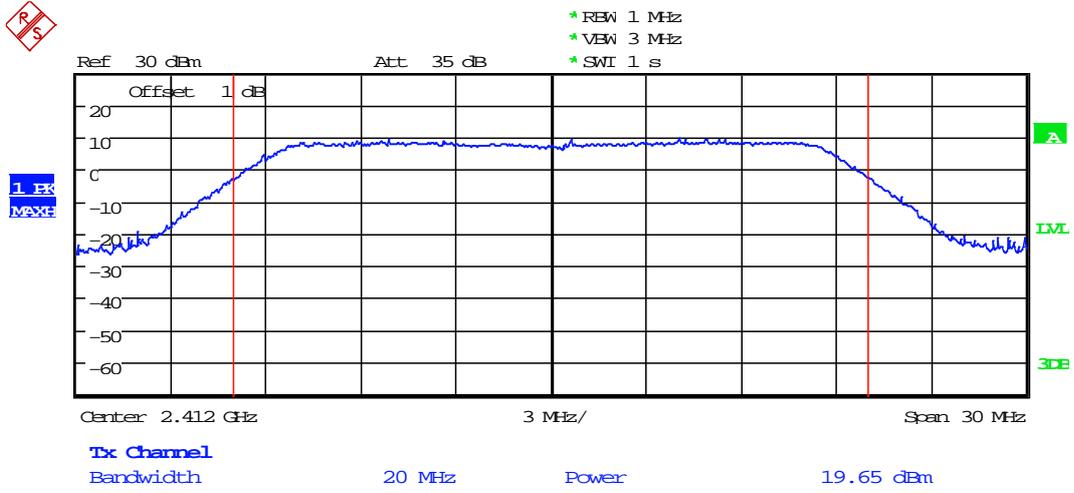
2.6 11G_H



Date: 8.MAR.2014 17:27:44



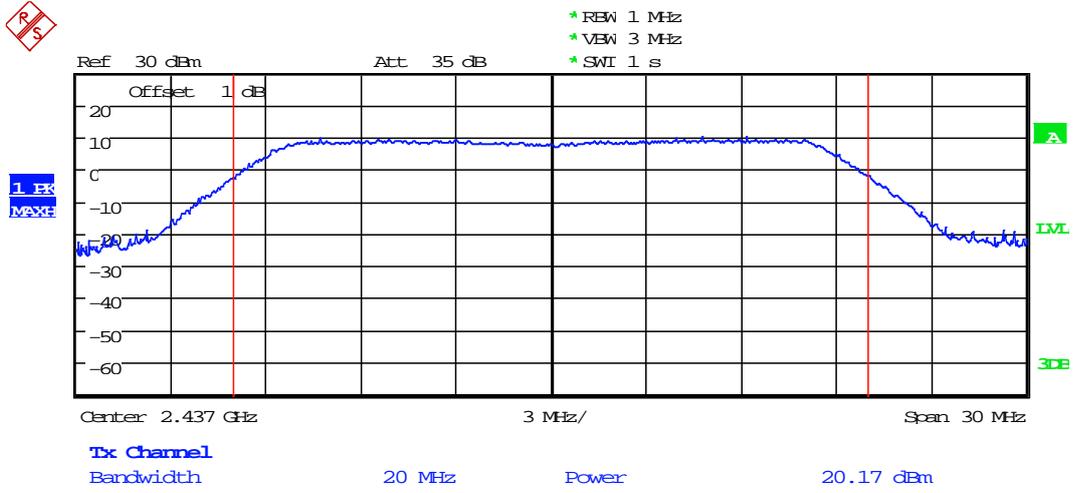
2.7 11N20_L



Date: 8.MAR.2014 17:29:41



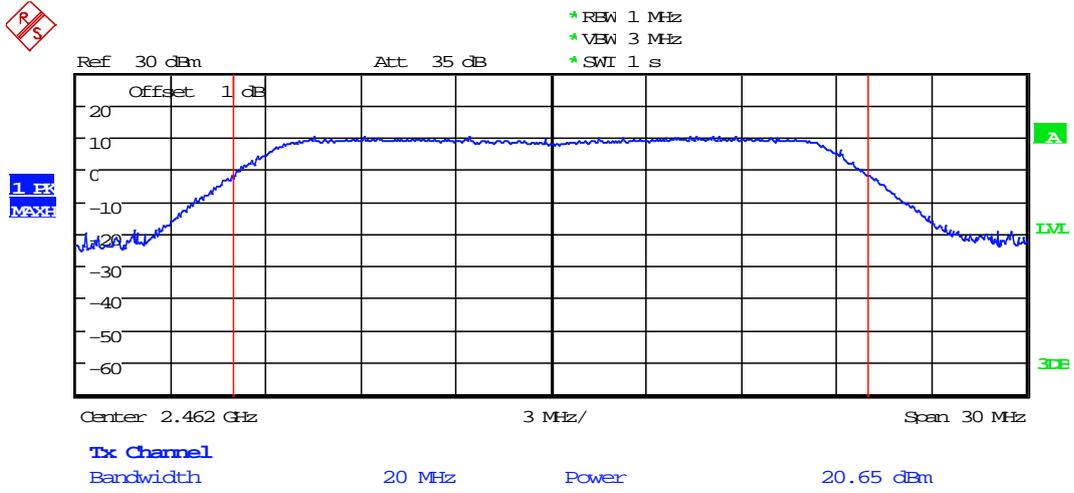
2.8 11N20_M



Date: 8.MAR.2014 17:30:43



2.9 11N20_H



Date: 8.MAR.2014 17:31:32

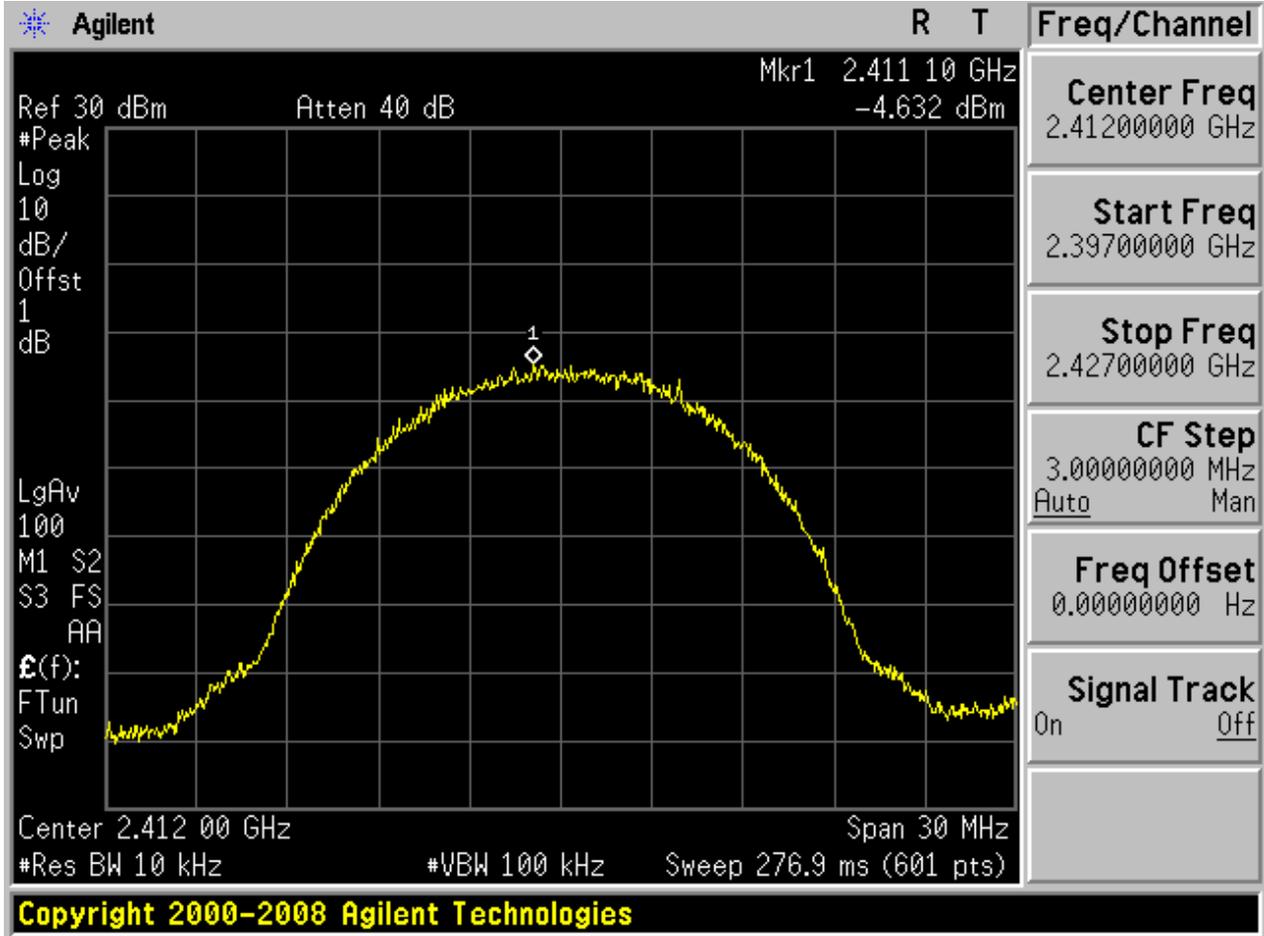
Appendix C: Maximum Power Spectral Density Level

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	PD[MHz]	Verdict
11B	L	2412	-4.63	pass
11B	M	2437	-3.50	pass
11B	H	2462	-2.96	pass
11G	L	2412	-8.07	pass
11G	M	2437	-7.93	pass
11G	H	2462	-7.35	pass
11N20	L	2412	-8.73	pass
11N20	M	2437	-7.98	pass
11N20	H	2462	-6.85	pass

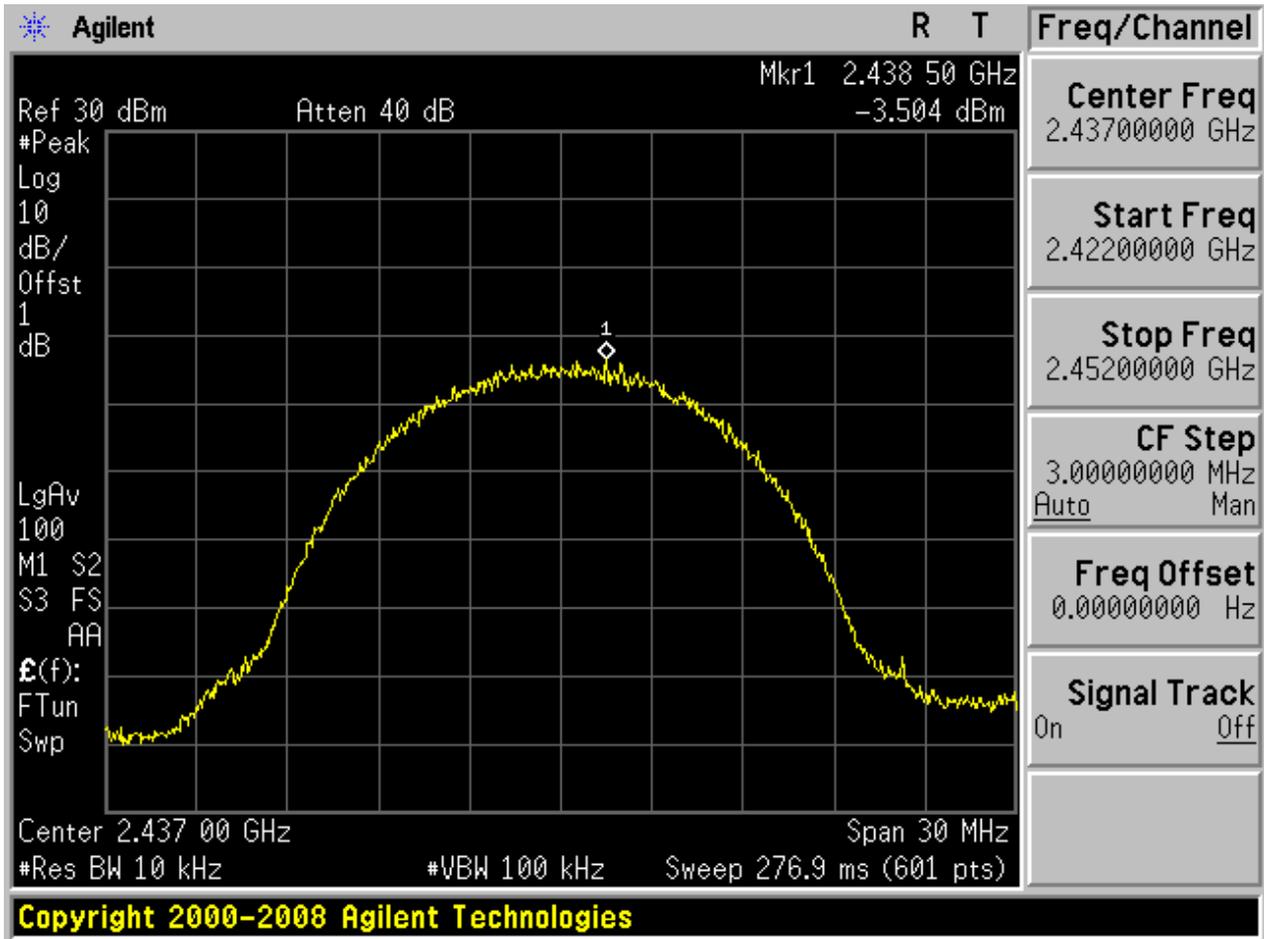
Part II - Test Plots

2.1 11B_L



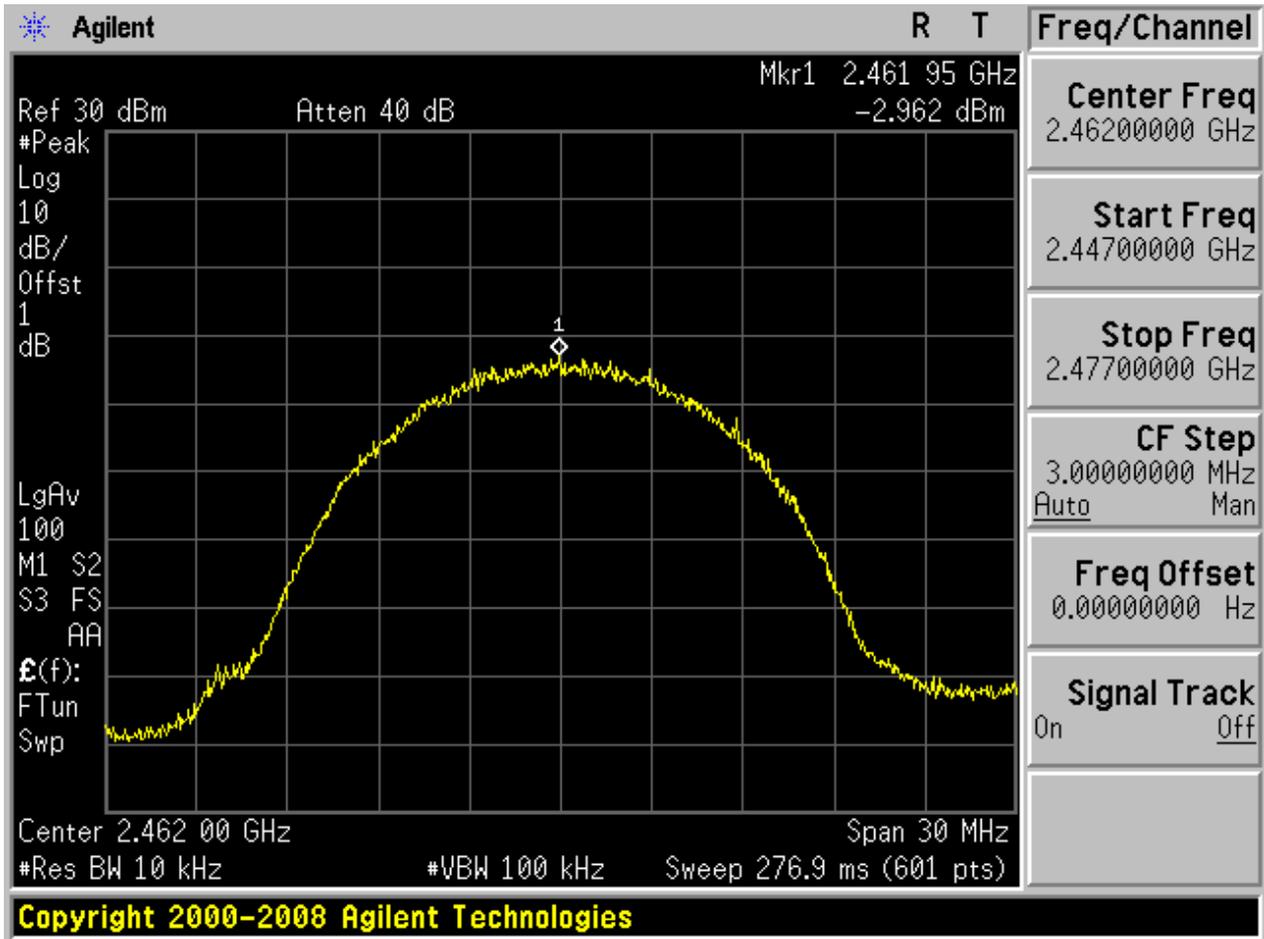


2.2 11B_M



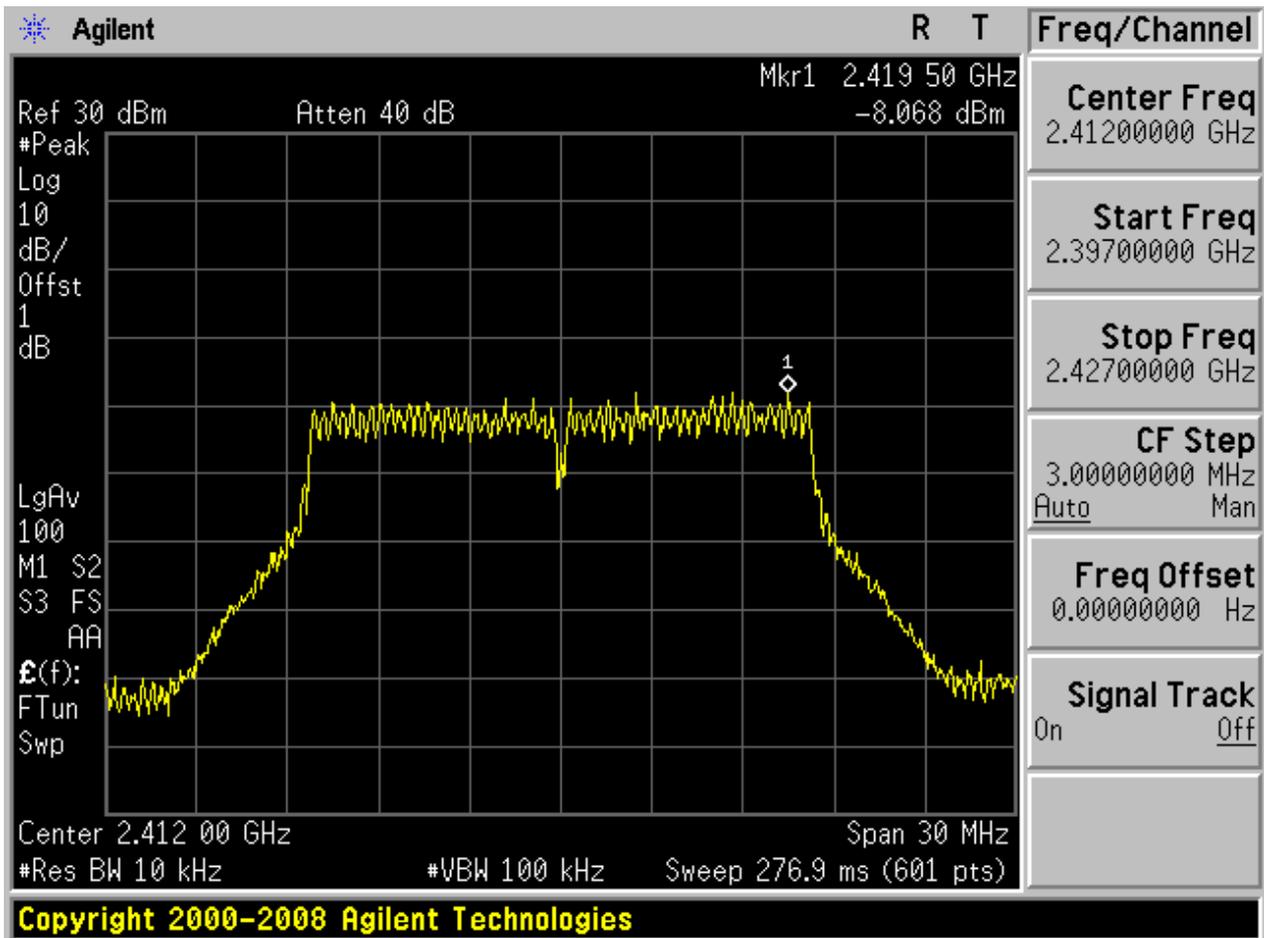


2.3 11B_H



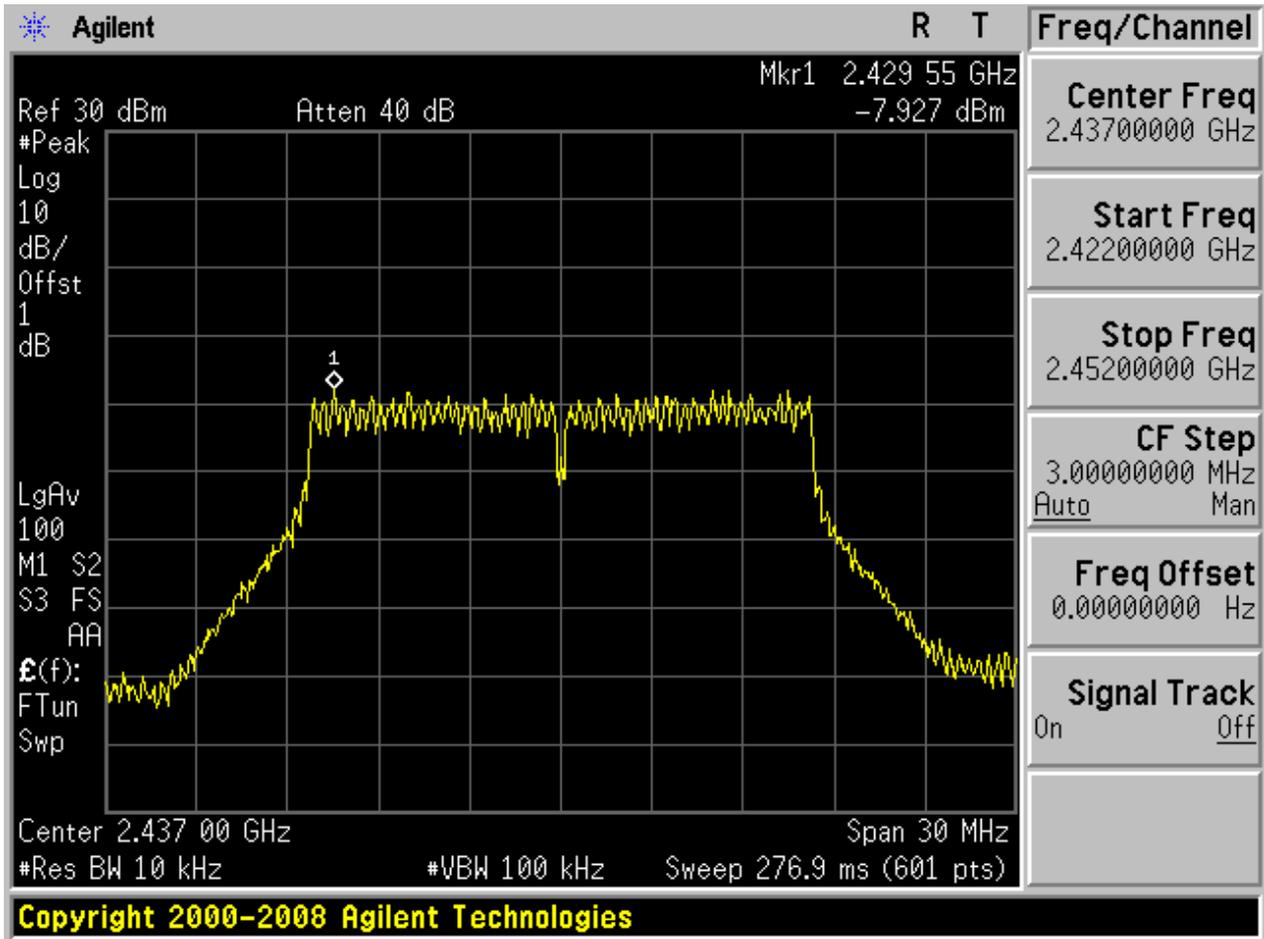


2.4 11G_L



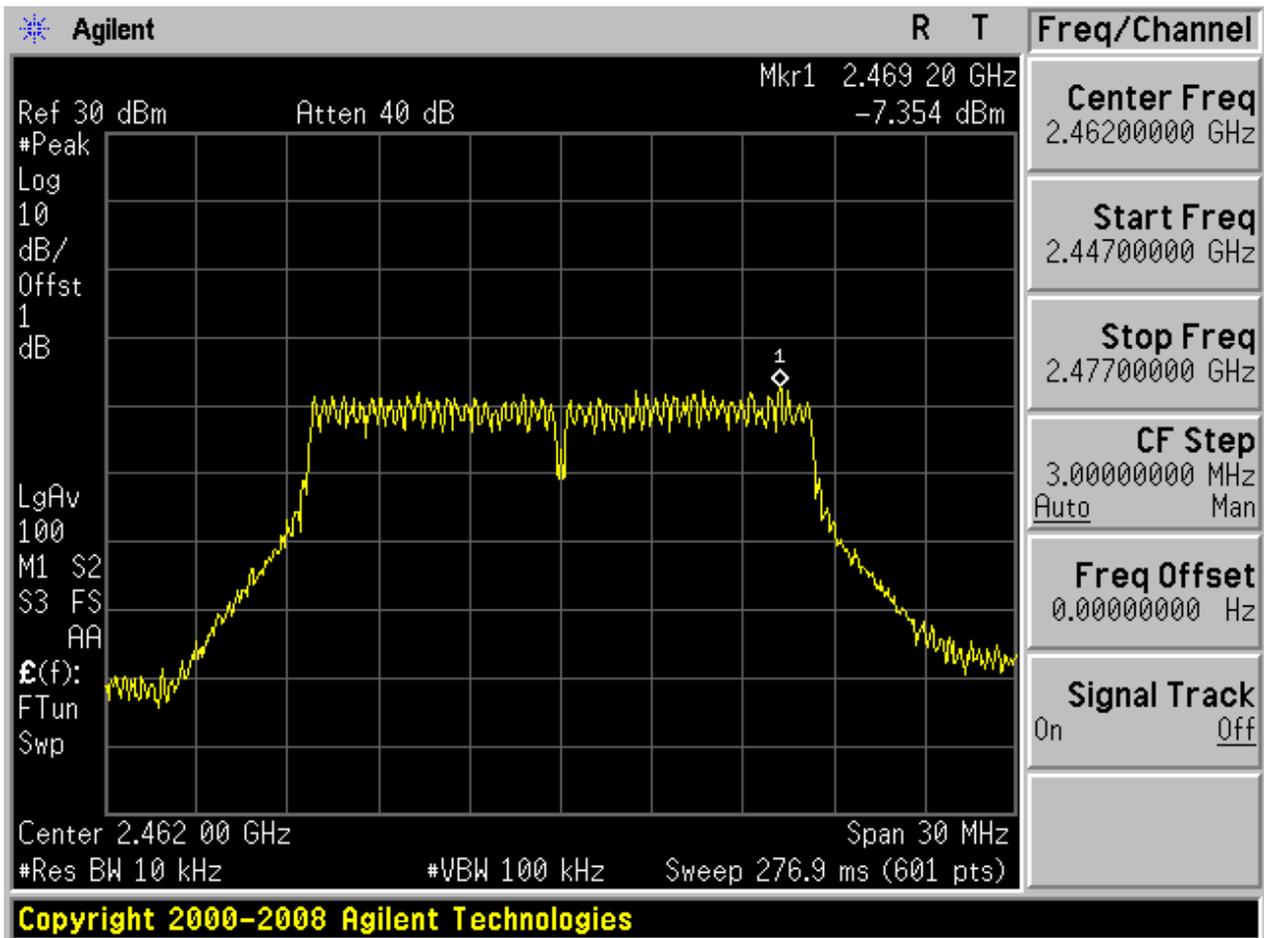


2.5 11G_M



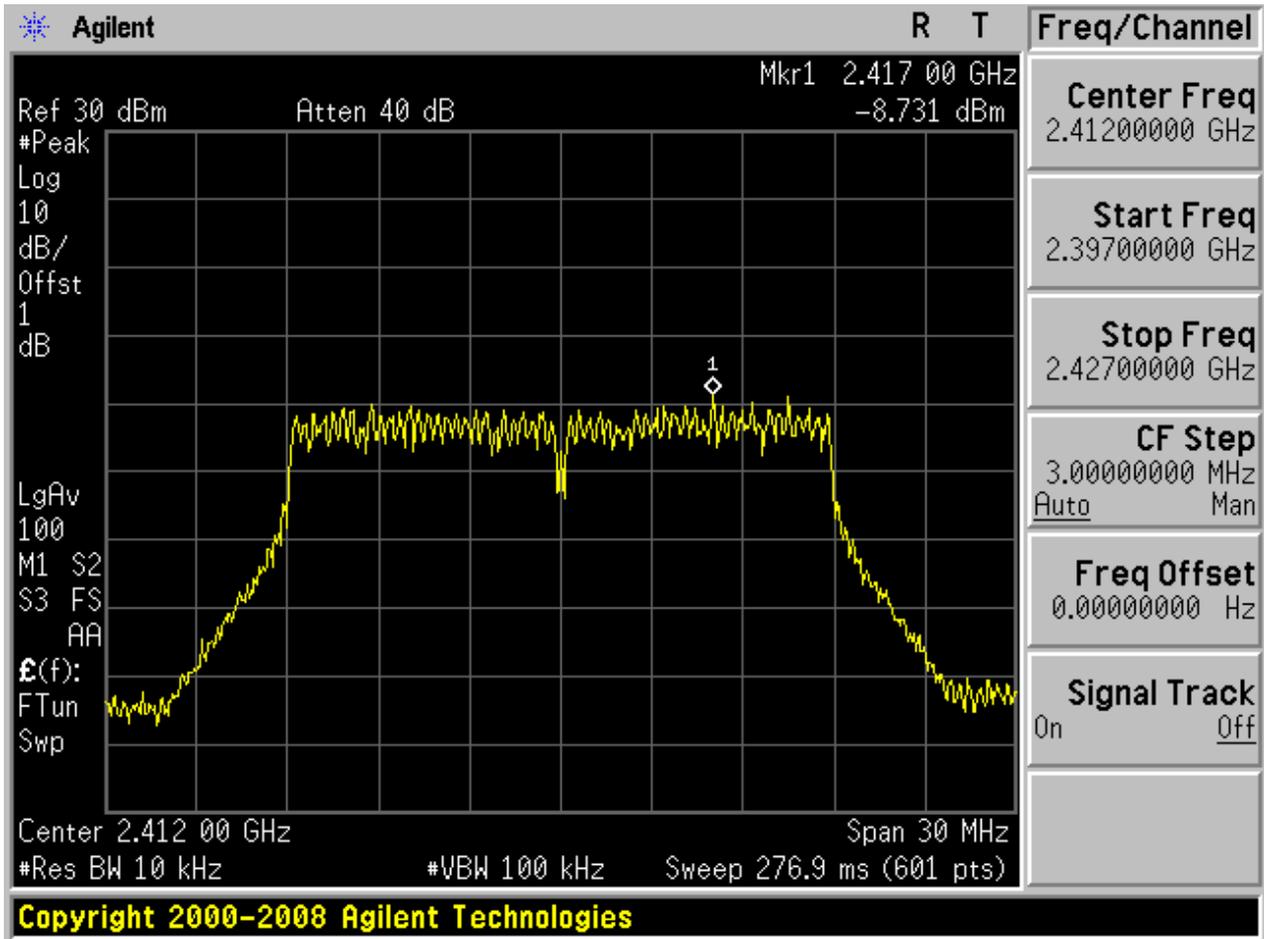


2.6 11G_H

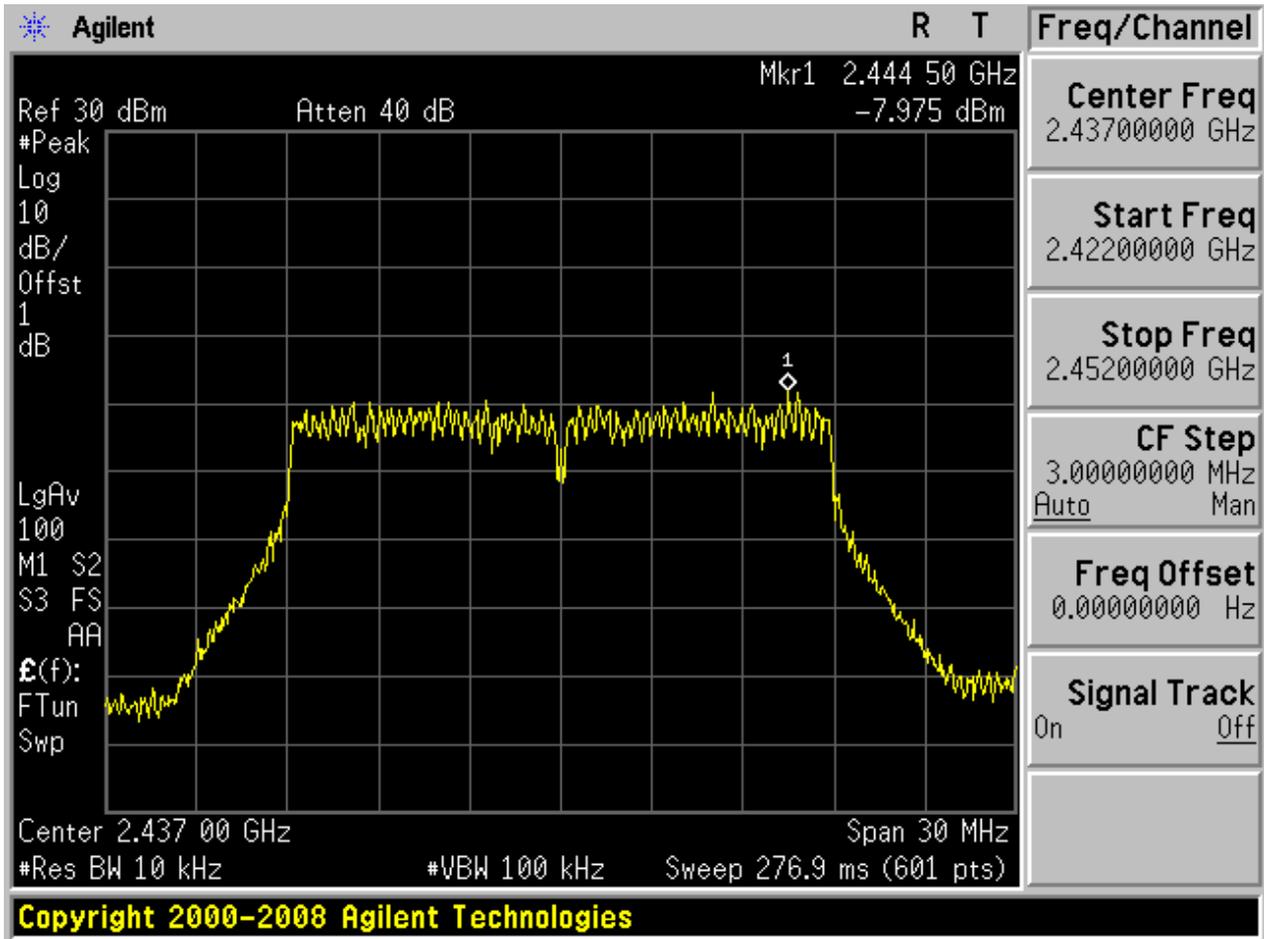




2.7 11N20_L

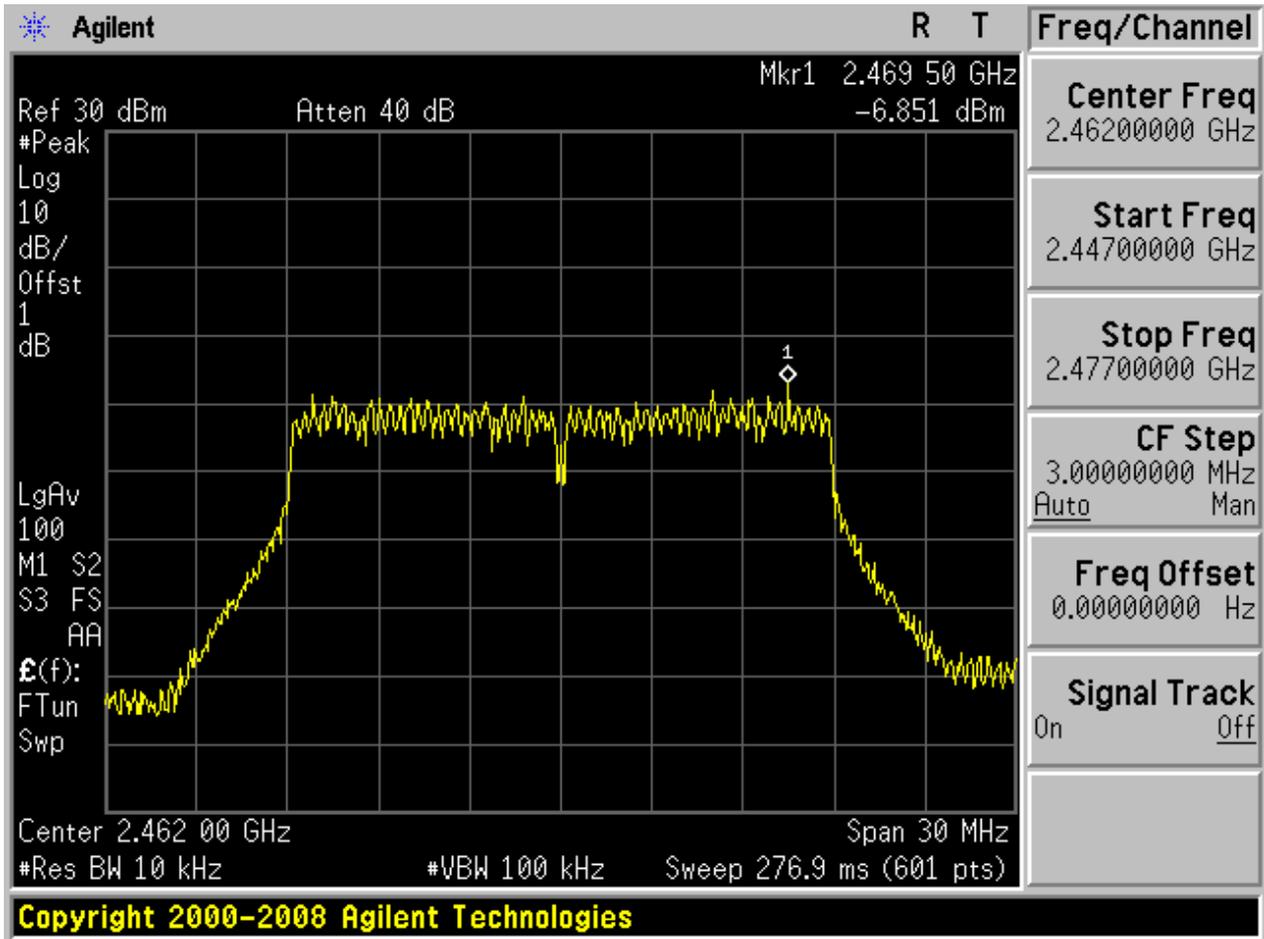


2.8 11N20_M





2.9 11N20_H



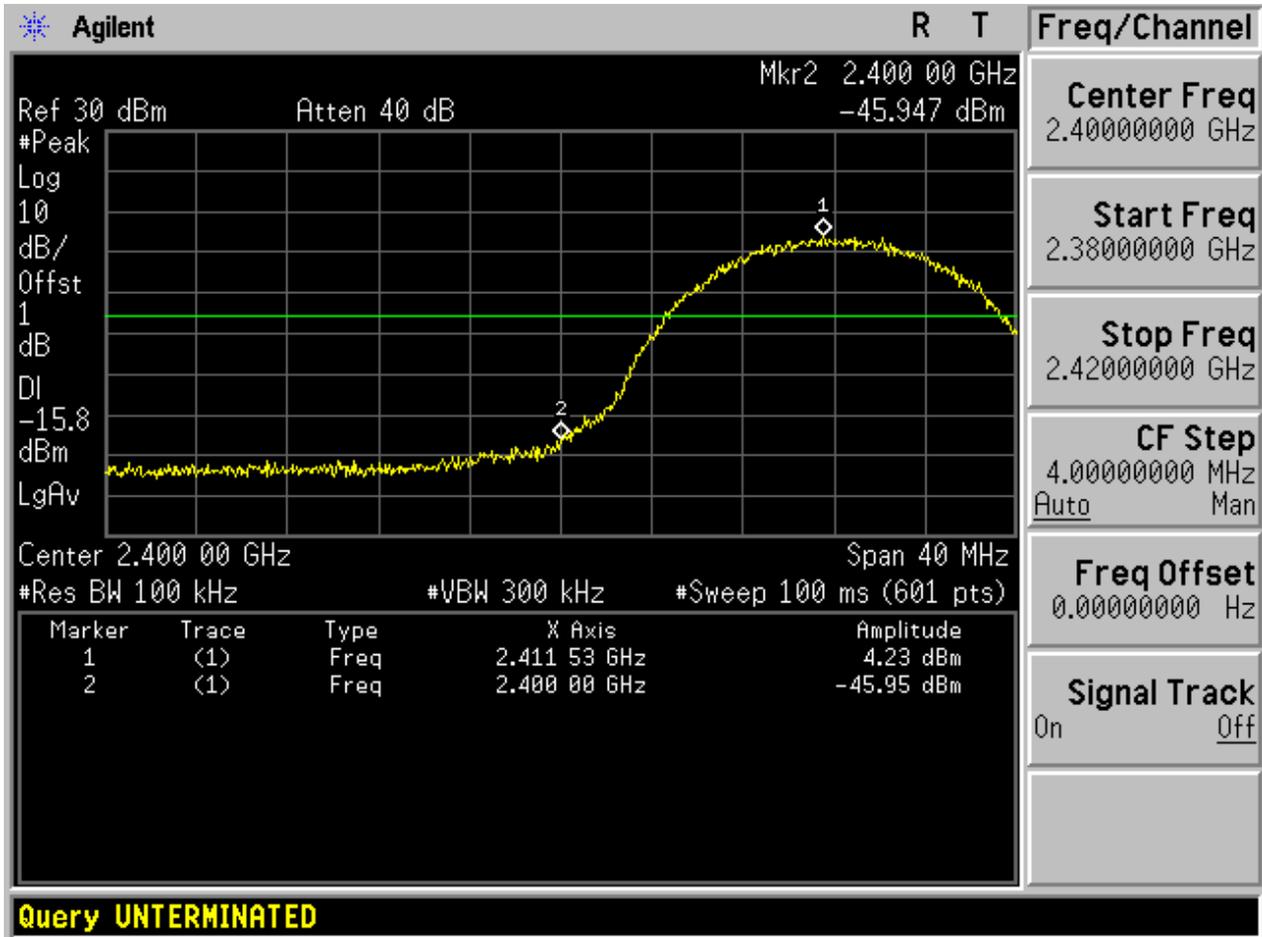
Appendix D: Band Edges Compliance

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
11B	L	2412	4.23	-45.95	pass
11B	H	2462	5.26	-52.13	pass
11G	L	2412	-0.01	-39.30	pass
11G	H	2462	1.25	-44.09	pass
11N20	L	2412	-0.93	-40.24	pass
11N20	H	2462	0.24	-43.08	pass

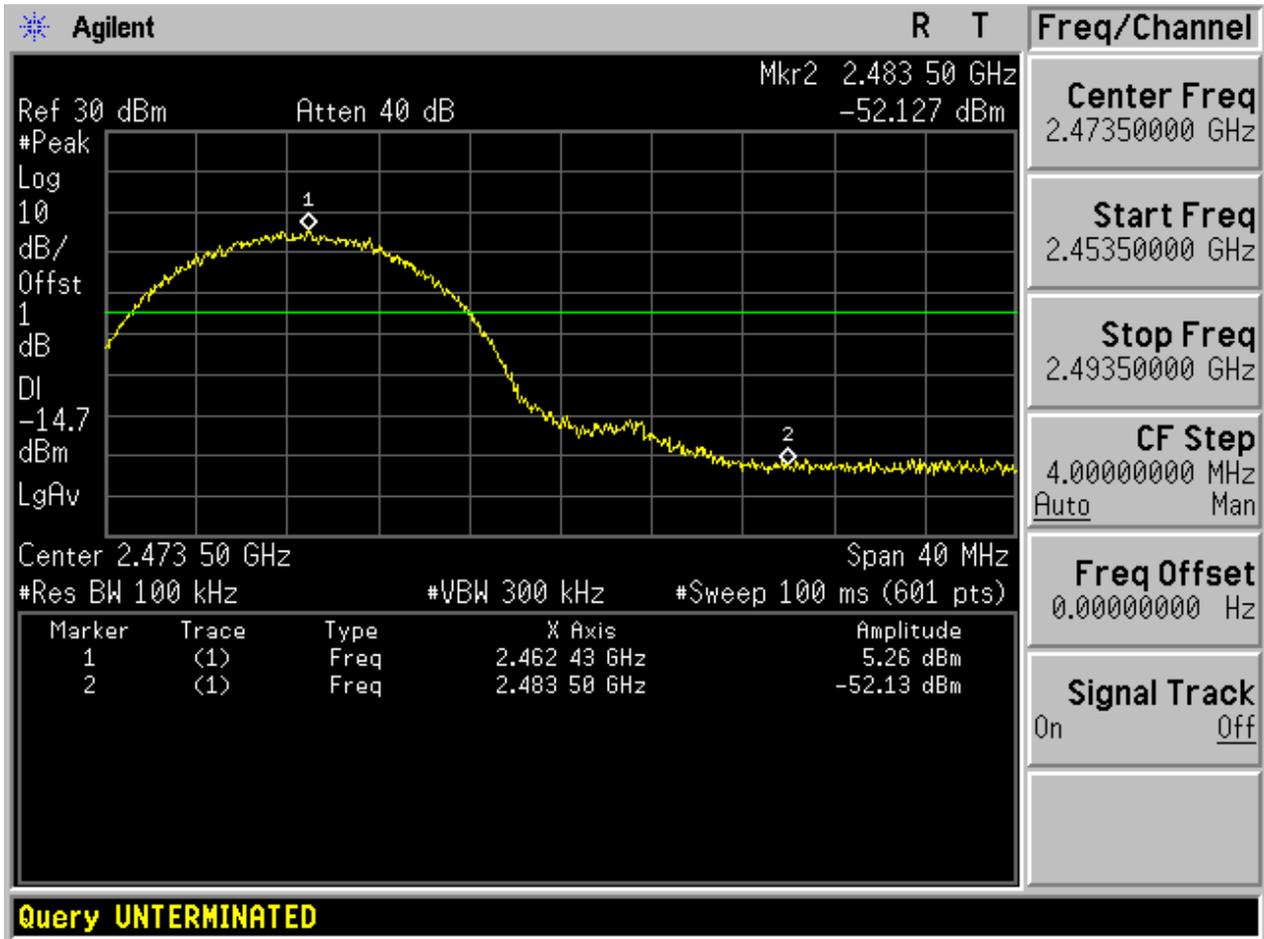
Part II - Test Plots

2.1 11B_L



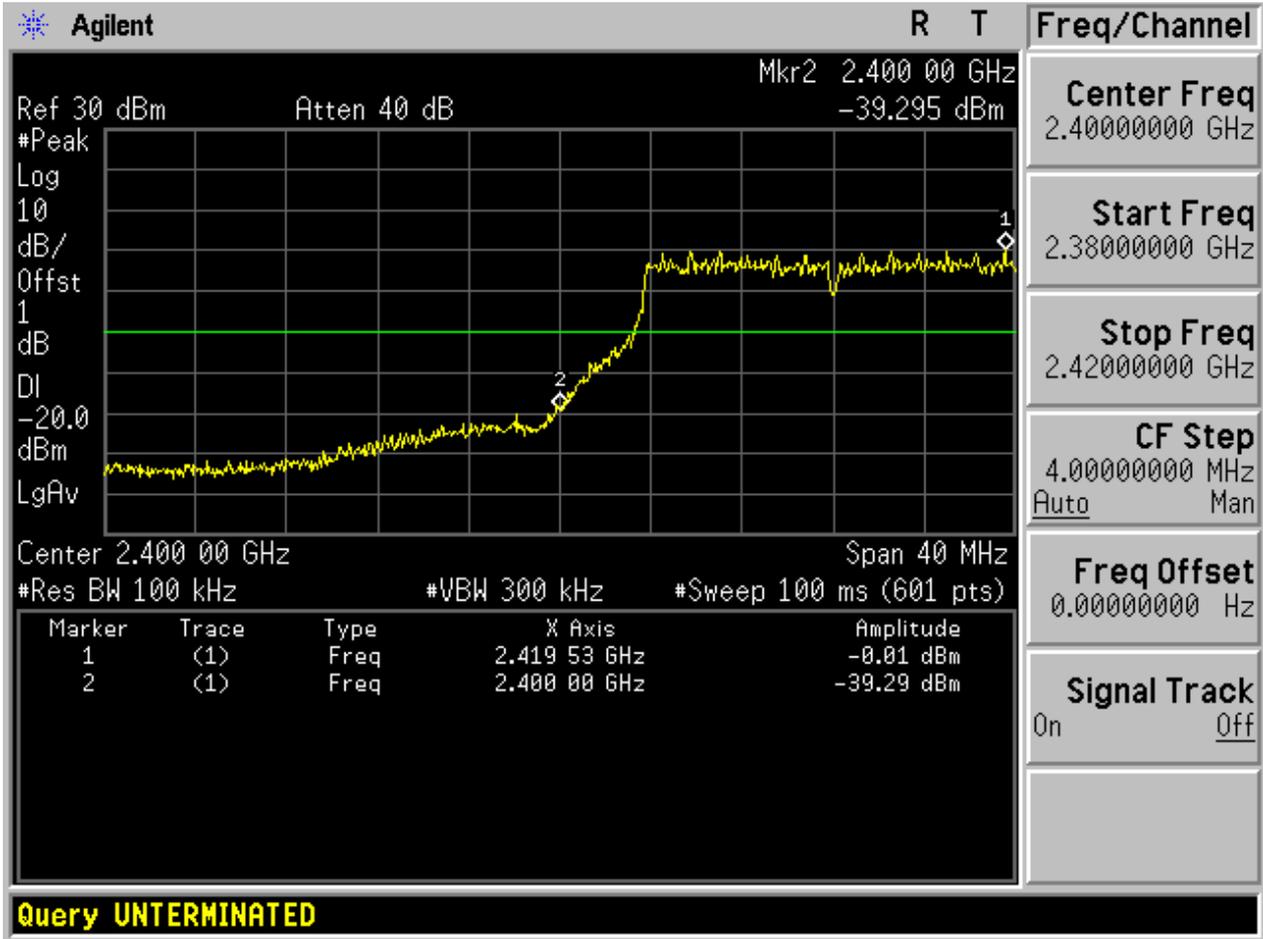


2.2 11B_H



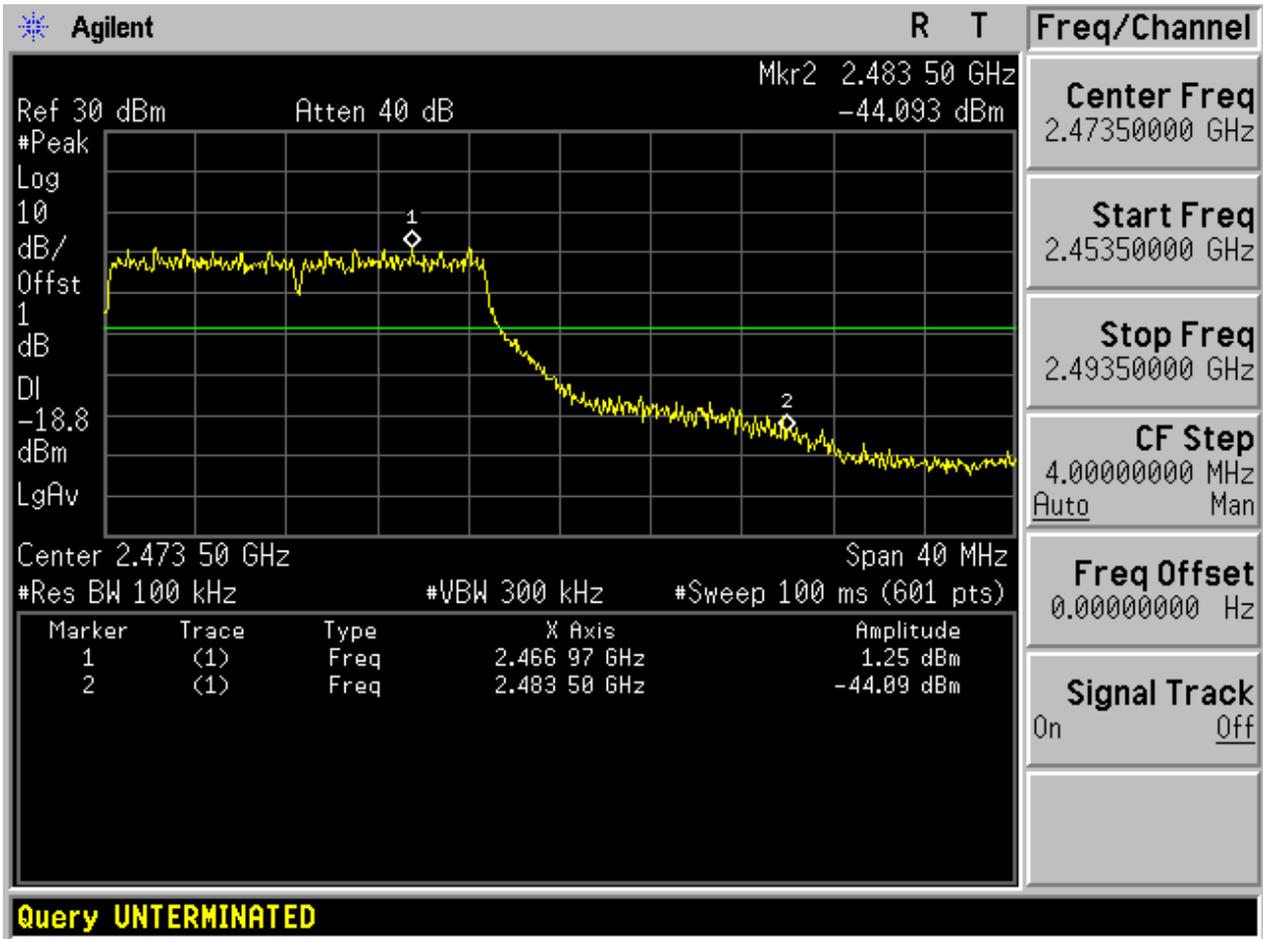


2.3 11G_L



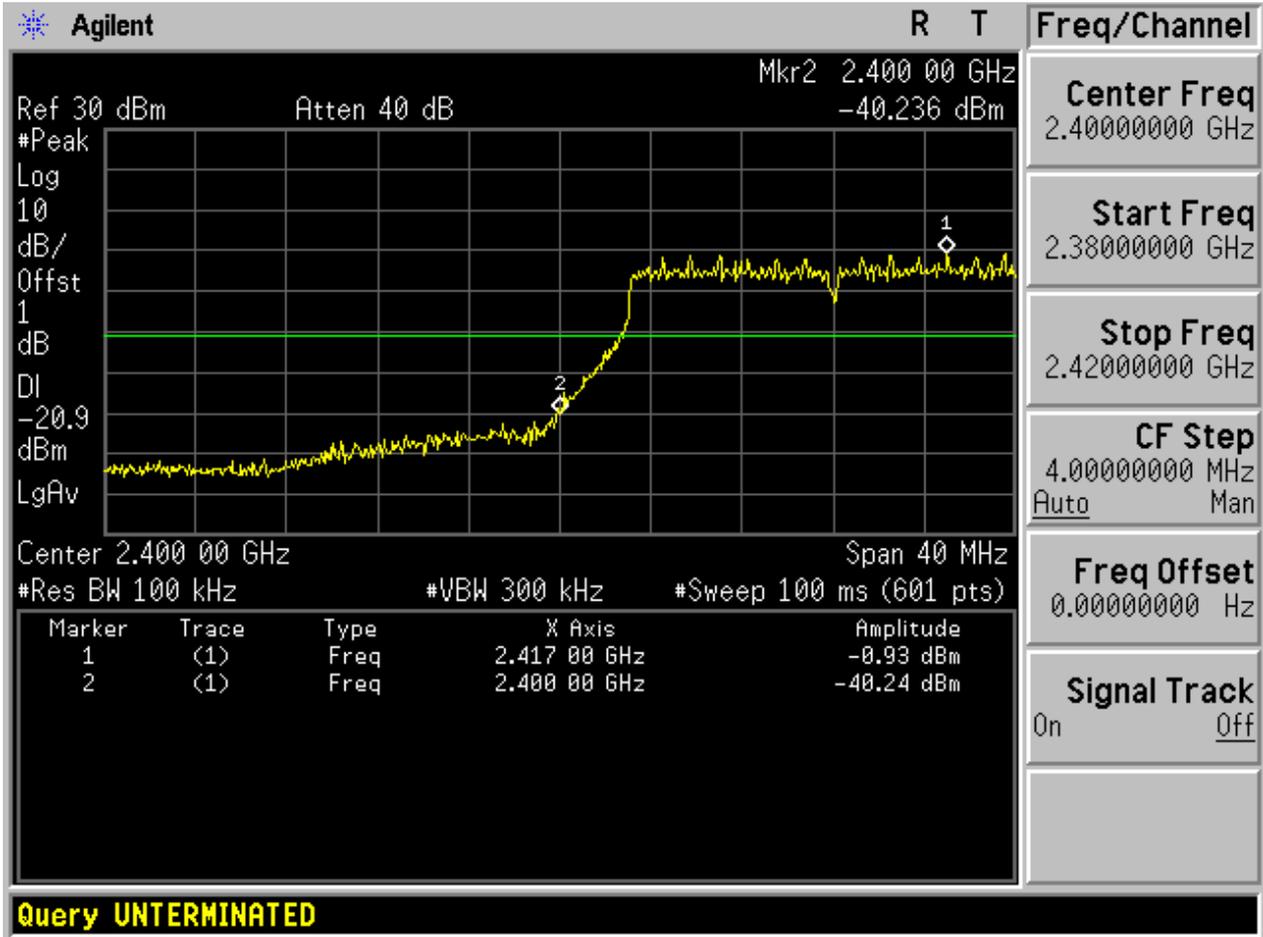


2.4 11G_H



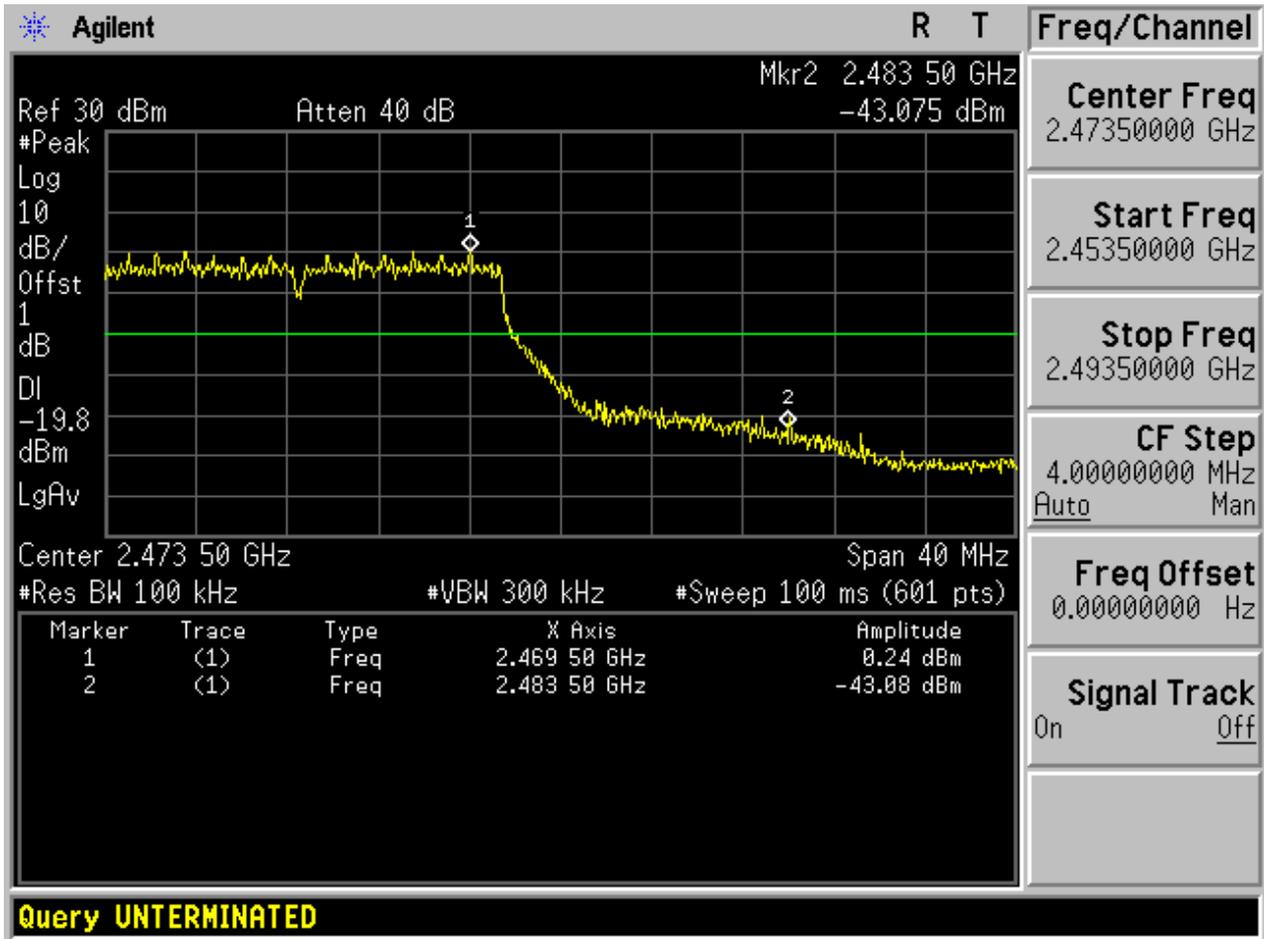


2.5 11N20_L





2.6 11N20_H



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" refers 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 $RBWCF [dB] = 10 \times \lg(100 [kHz]/\text{narrower RBW [kHz]})$. 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

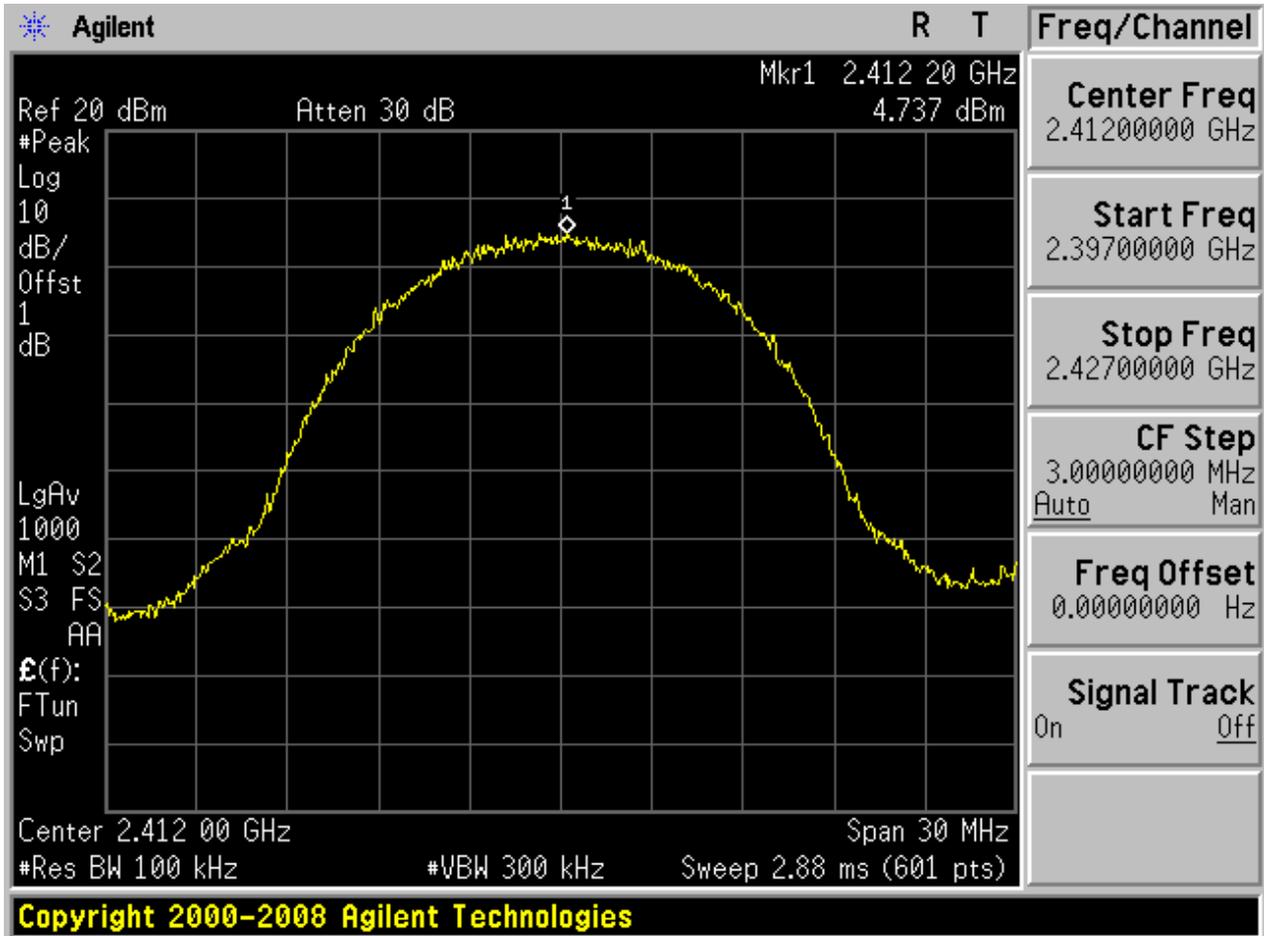
Test Mode	Test Channel	Frequency[MHz]	Pref[dBm]	Puw[dBm]	Verdict
11B	L	2412	4.74	<limit	pass
11B	M	2437	5.95	<limit	pass
11B	H	2462	5.94	<limit	pass
11G	L	2412	0.17	<limit	pass
11G	M	2437	0.83	<limit	pass
11G	H	2462	1.36	<limit	pass
11N20	L	2412	-0.78	<limit	pass
11N20	M	2437	-0.20	<limit	pass
11N20	H	2462	0.34	<limit	pass



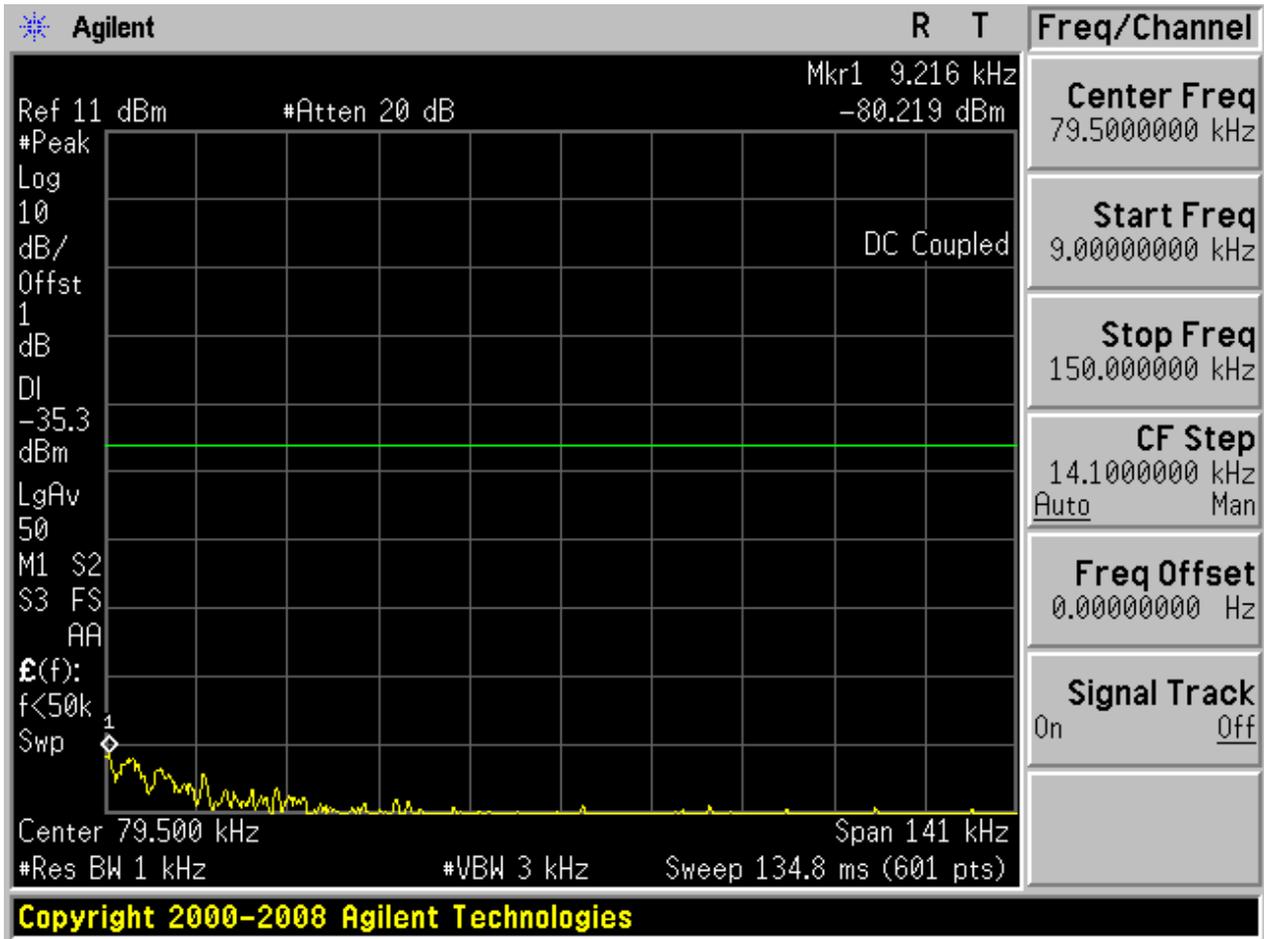
Part II - Test Plots

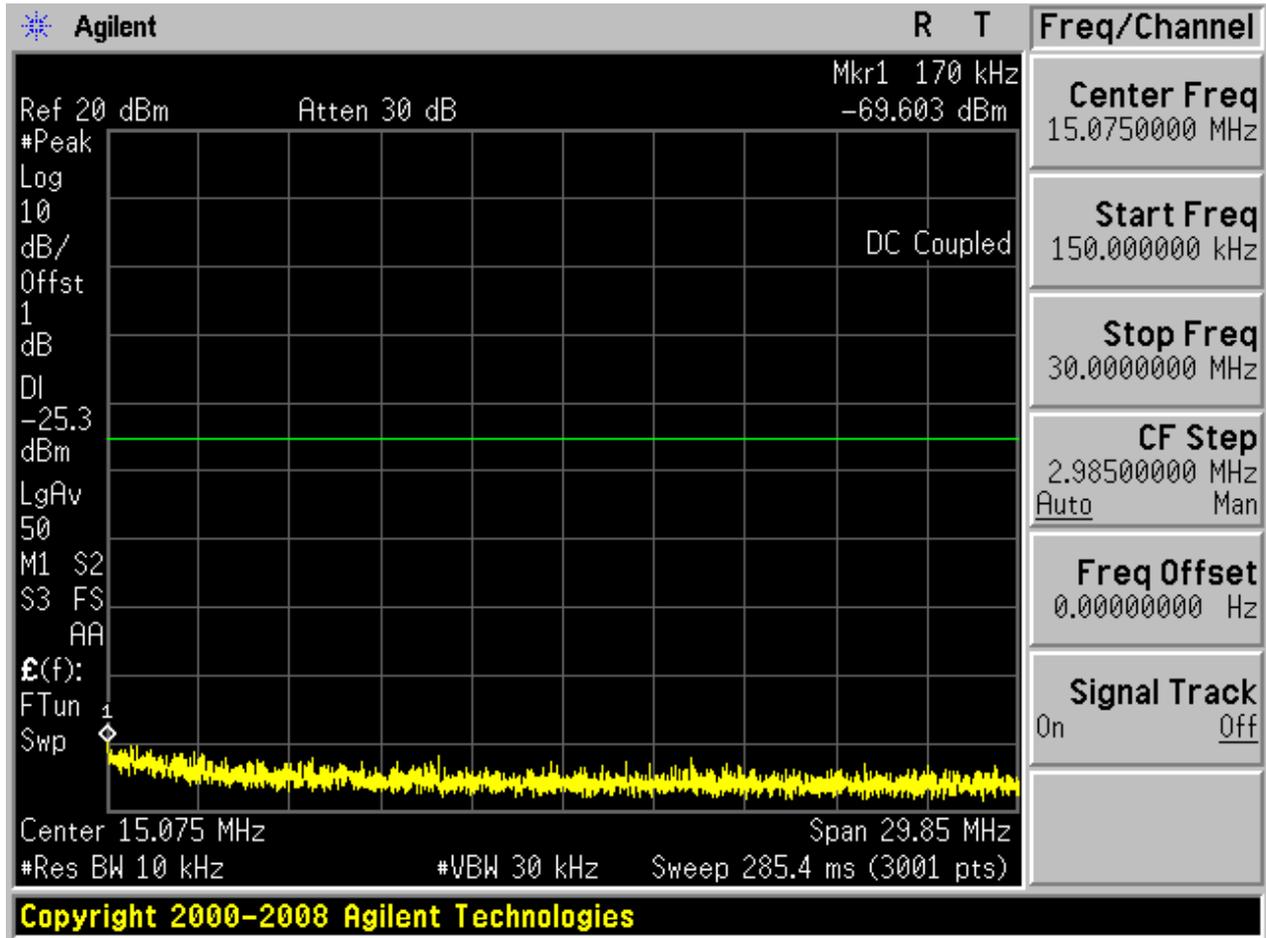
2.1 11B_L

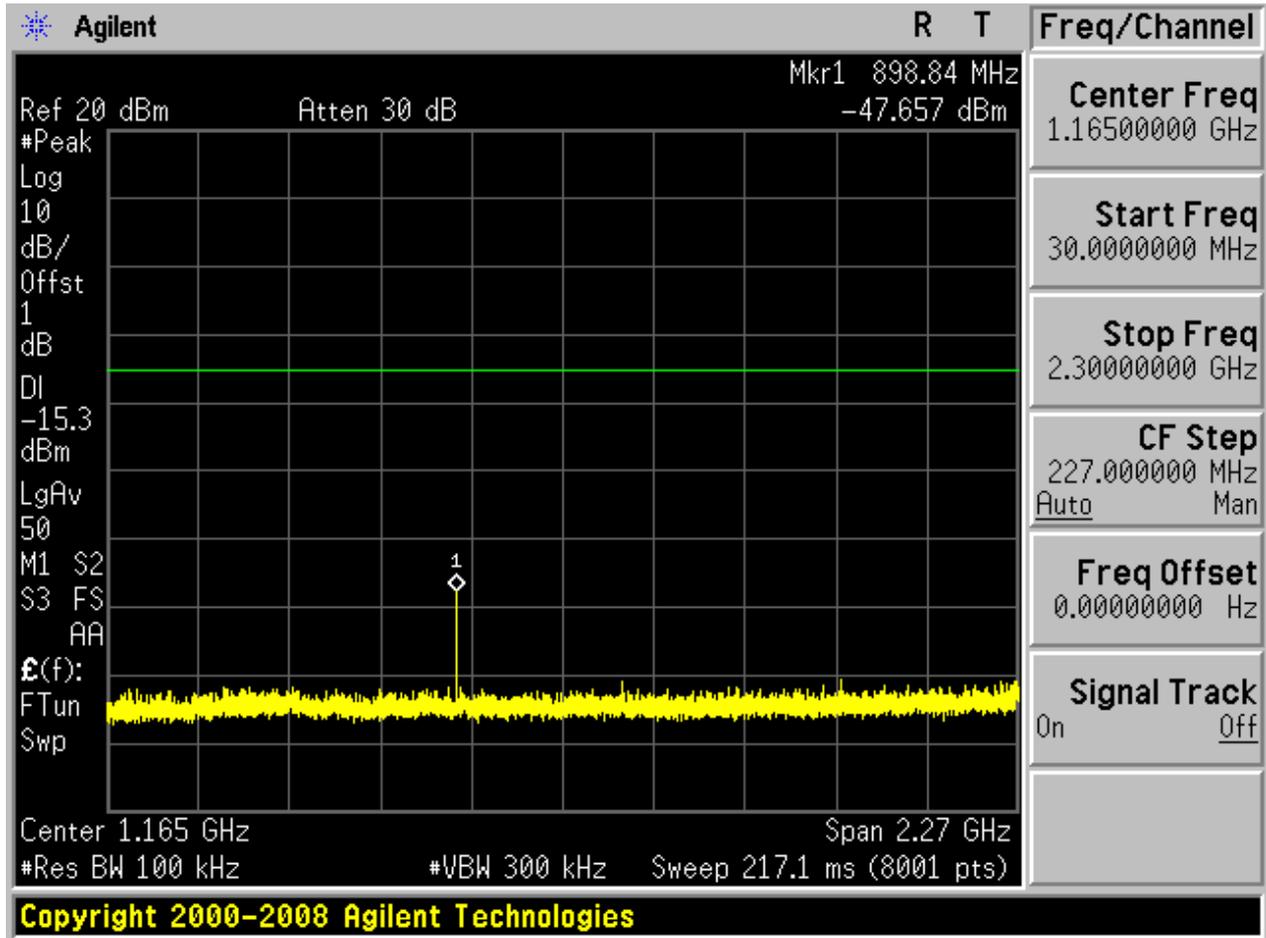
Pref:

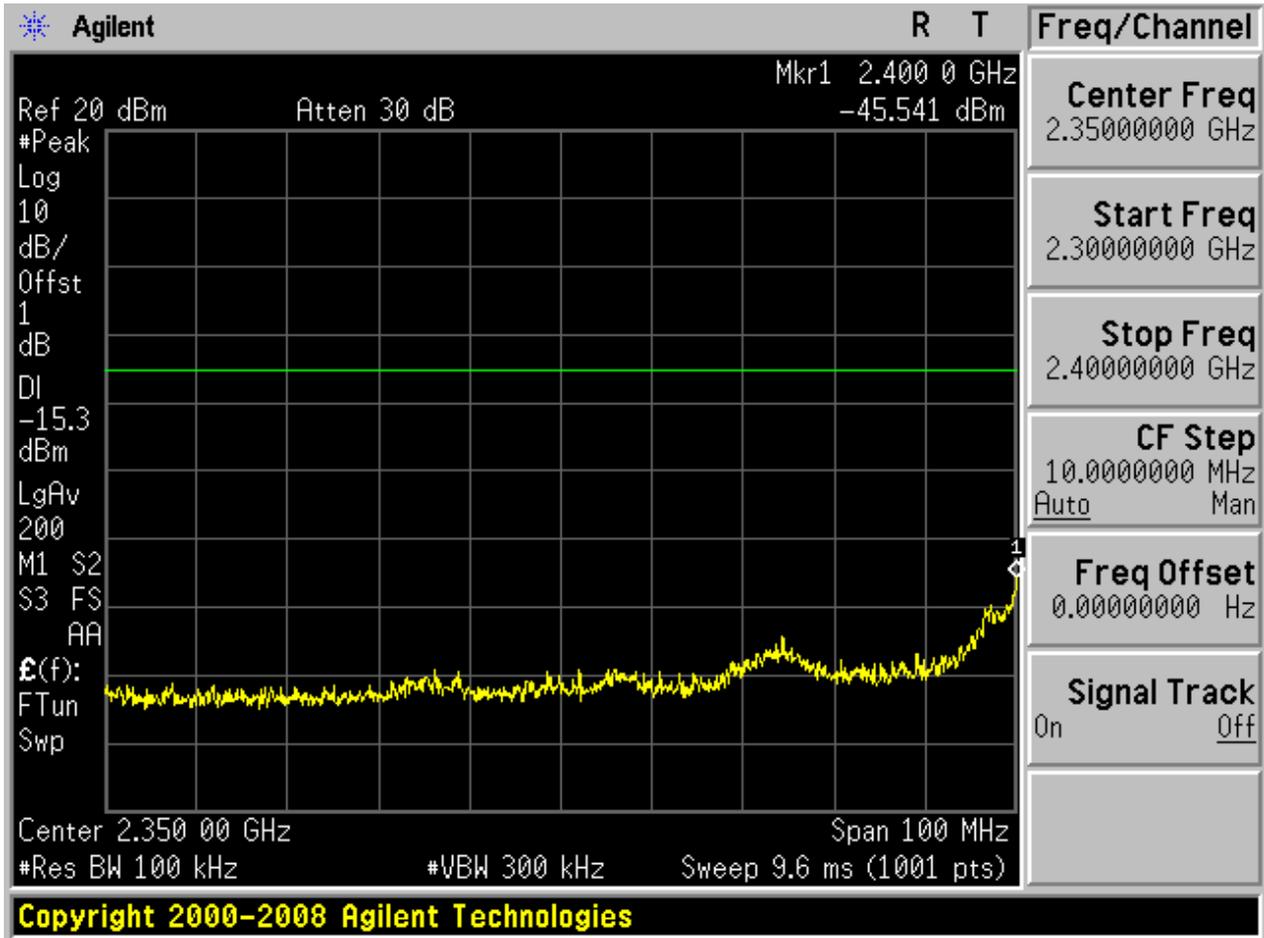


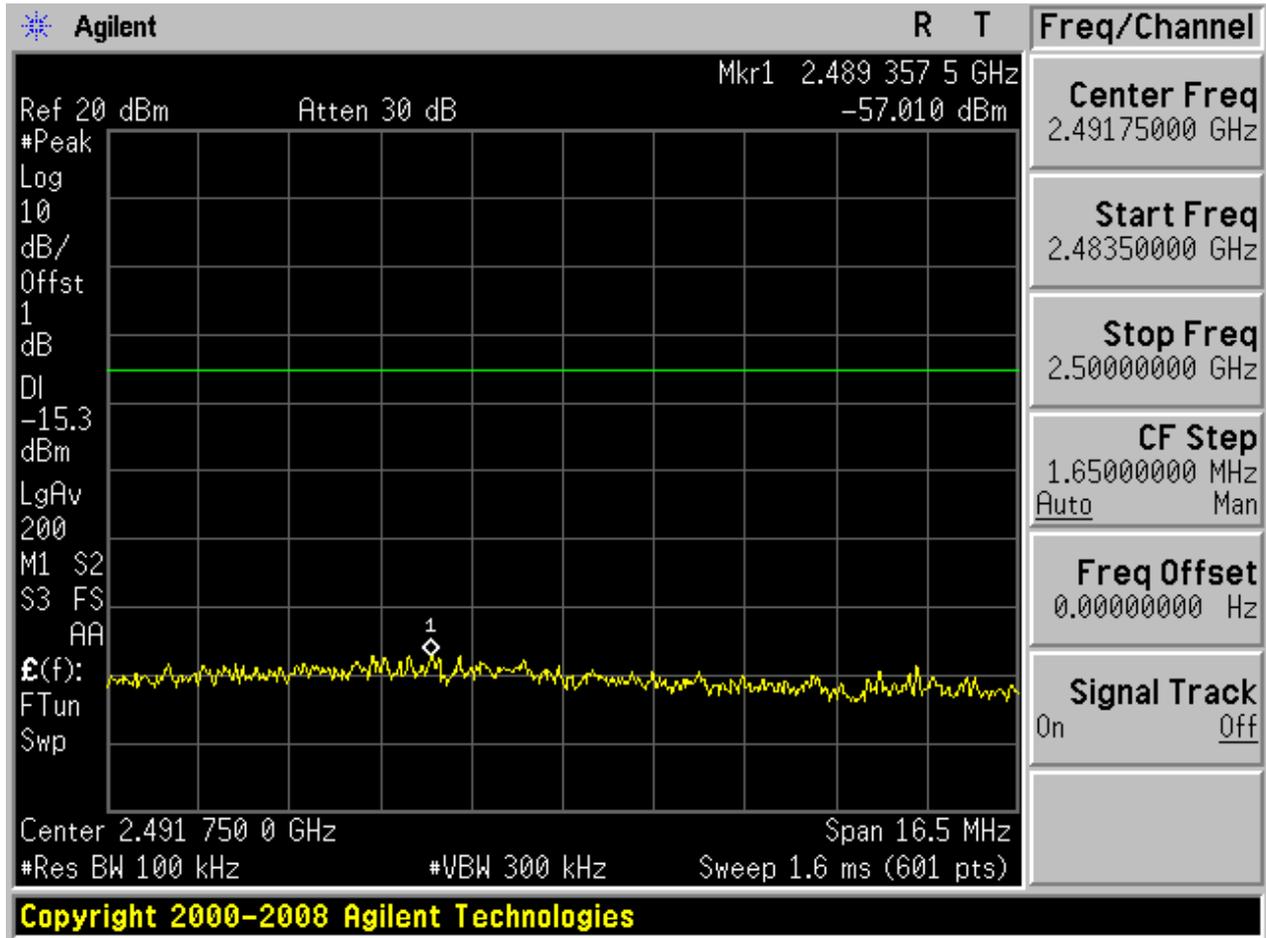
Puw:

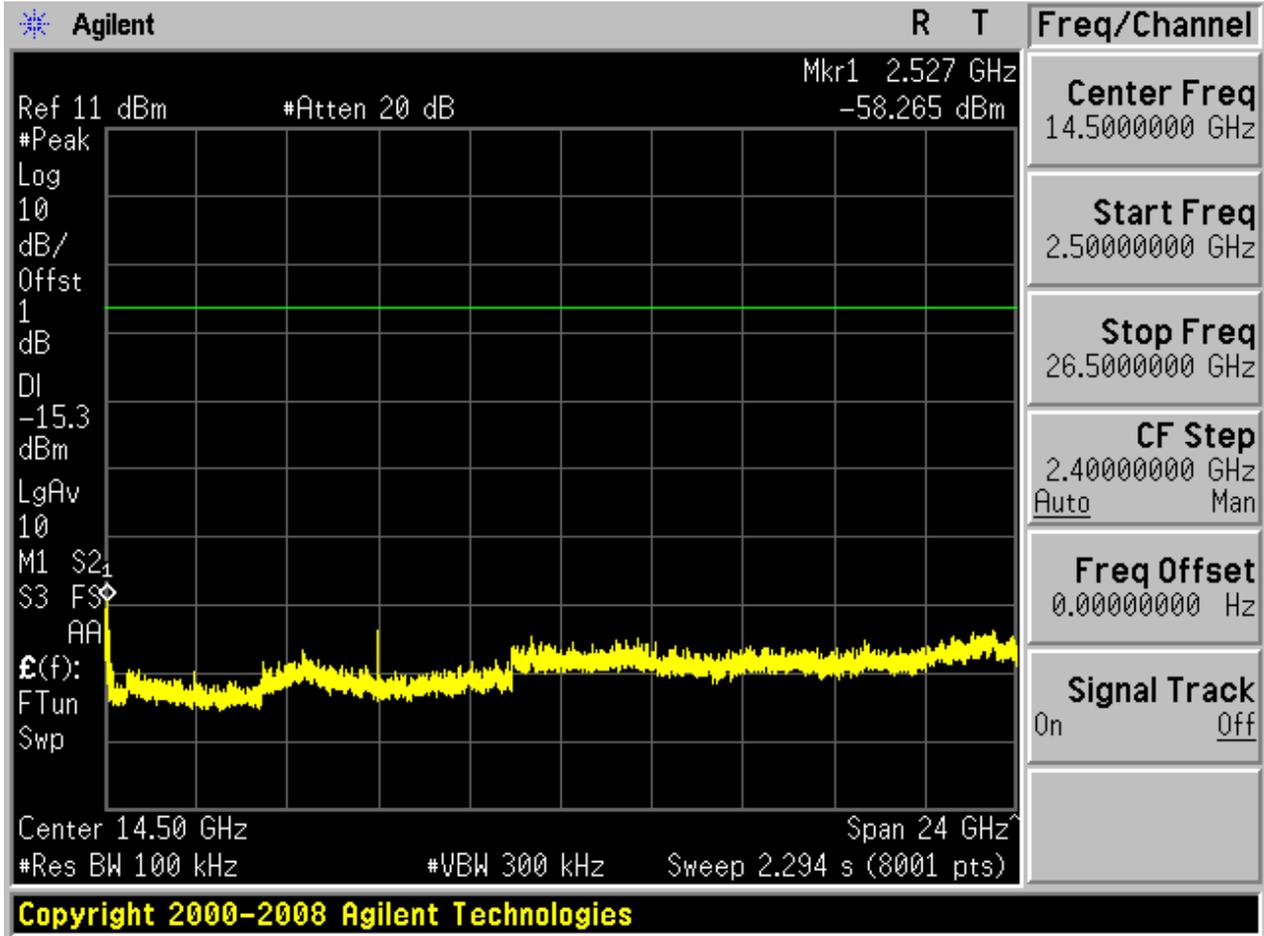








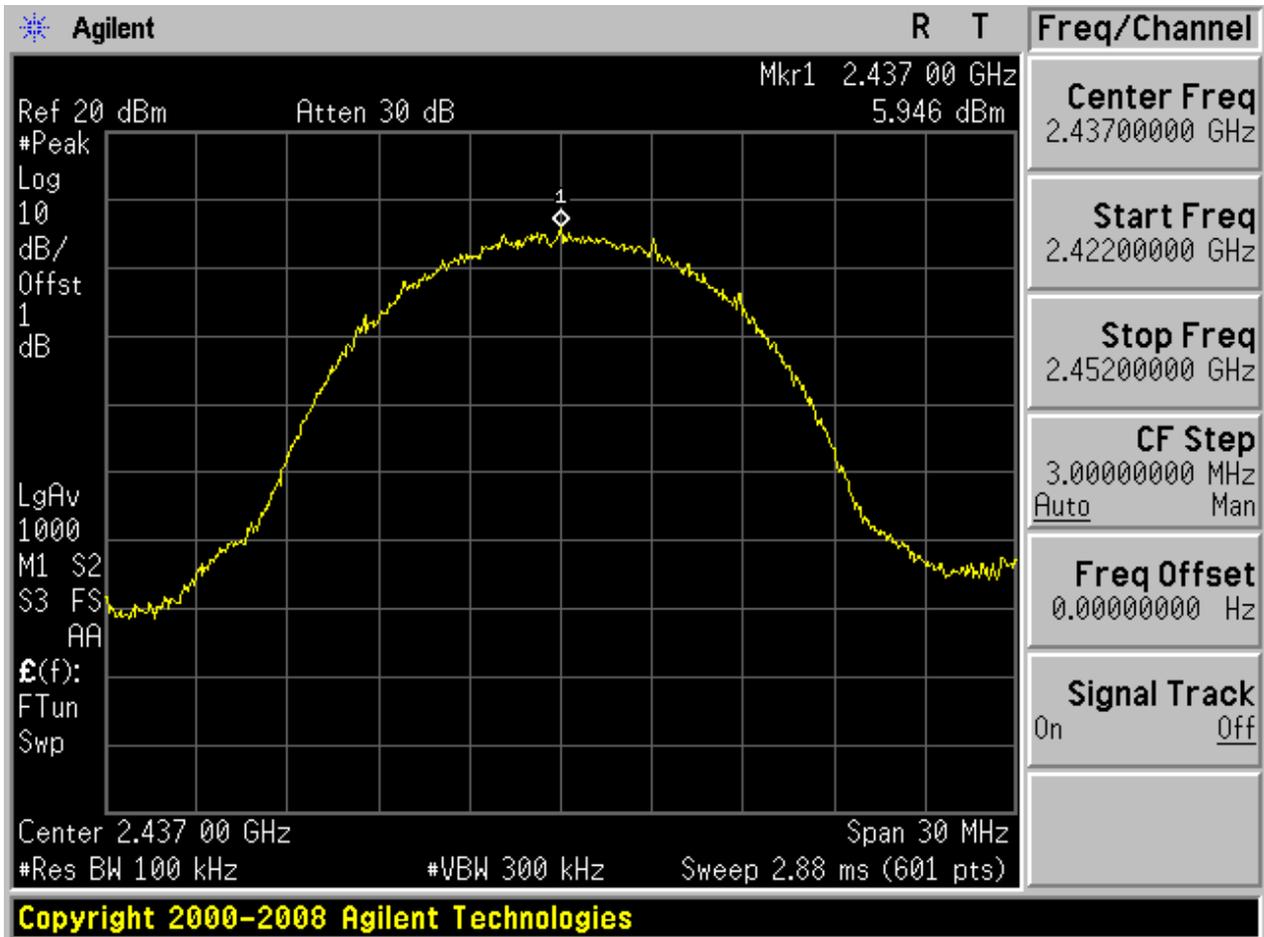






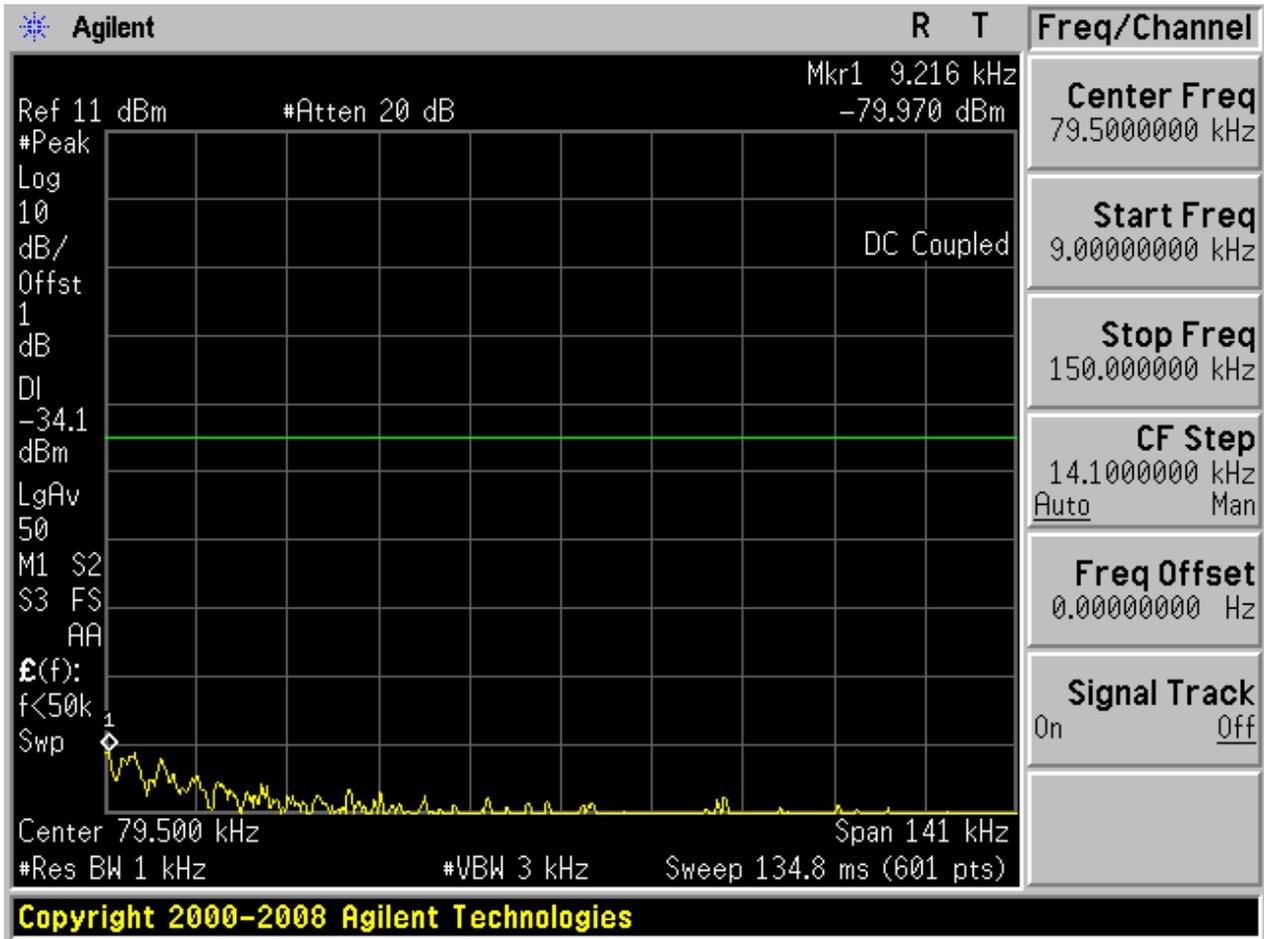
2.2 11B_M

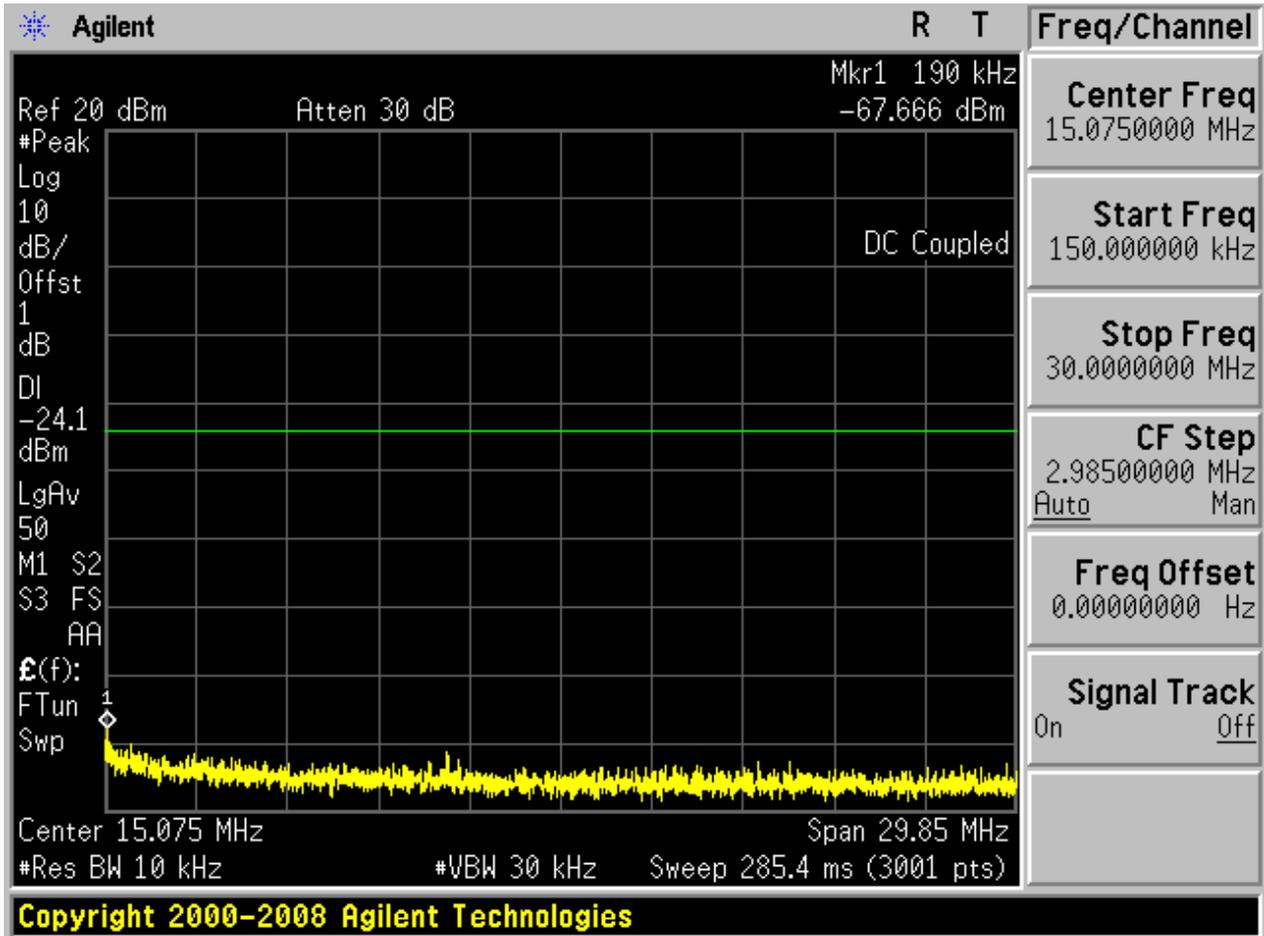
Pref:

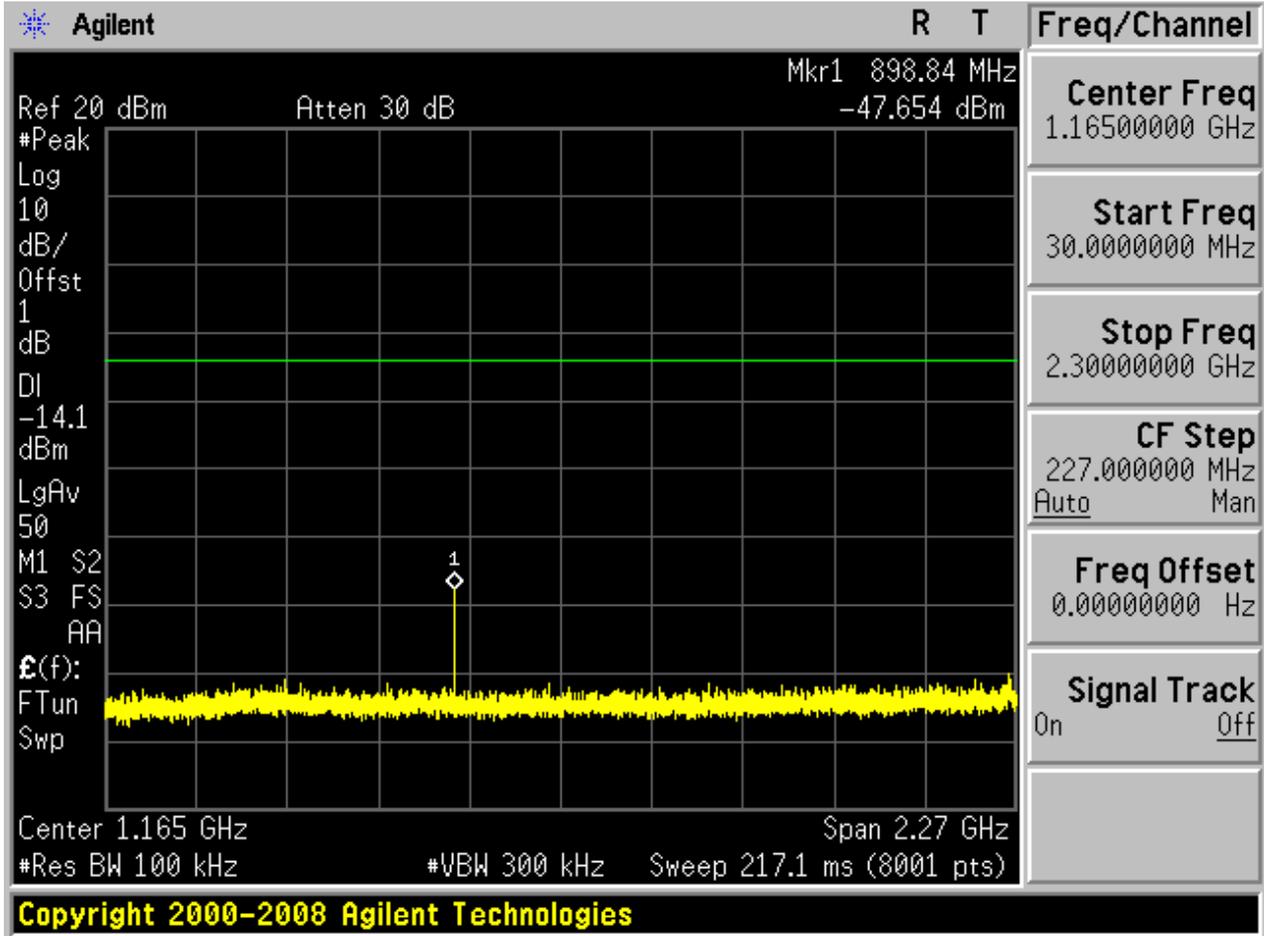


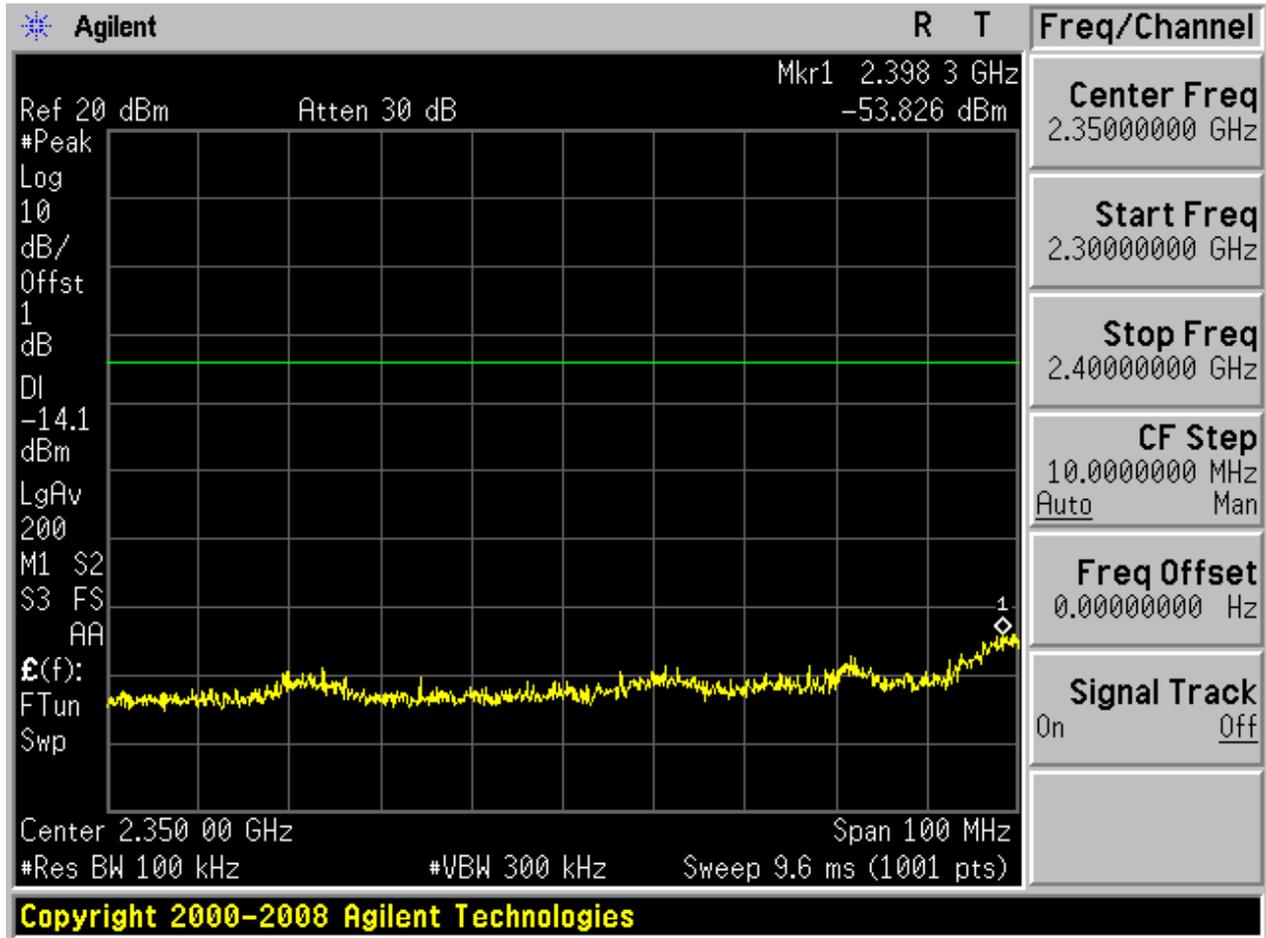


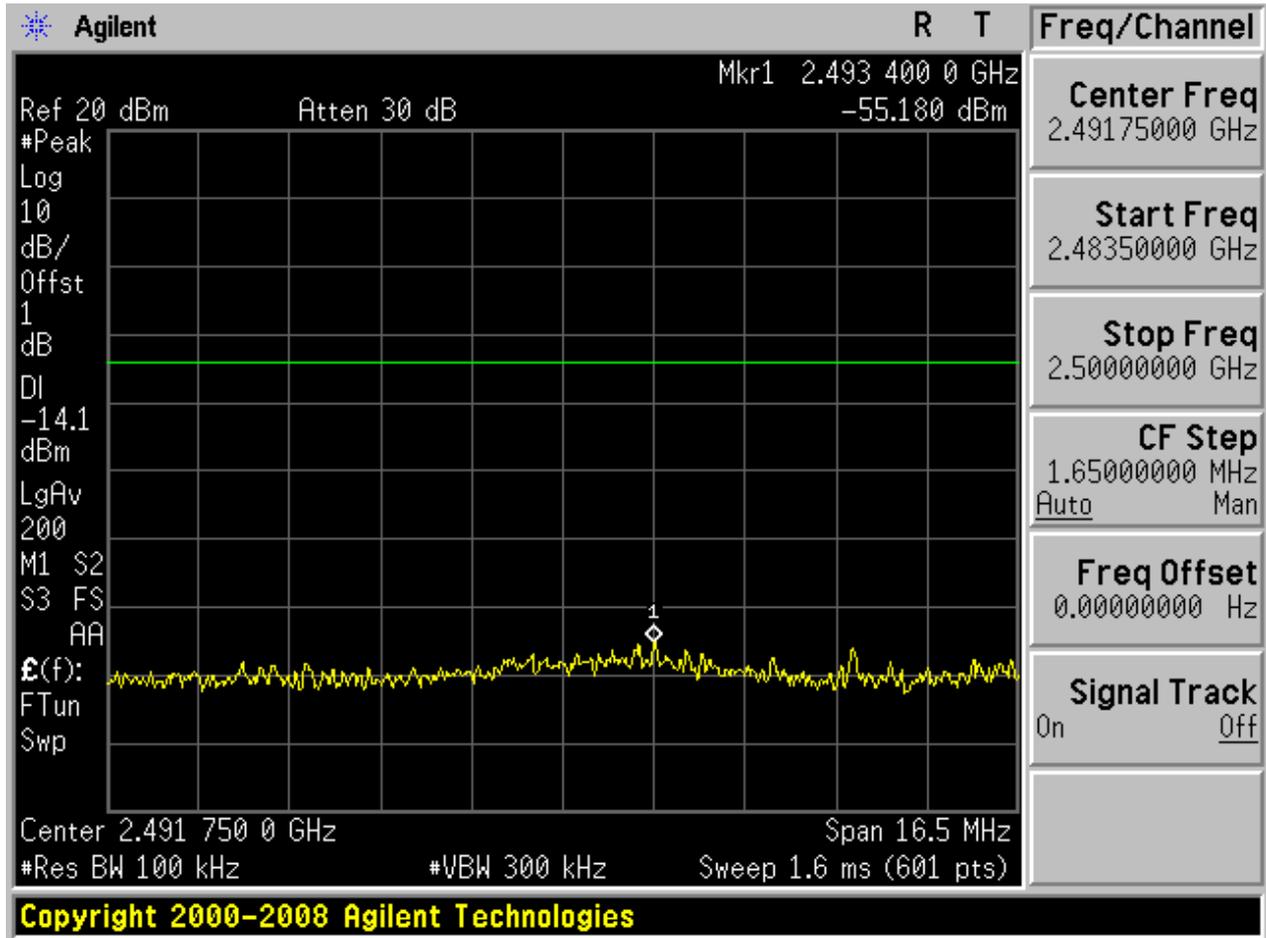
Puw:

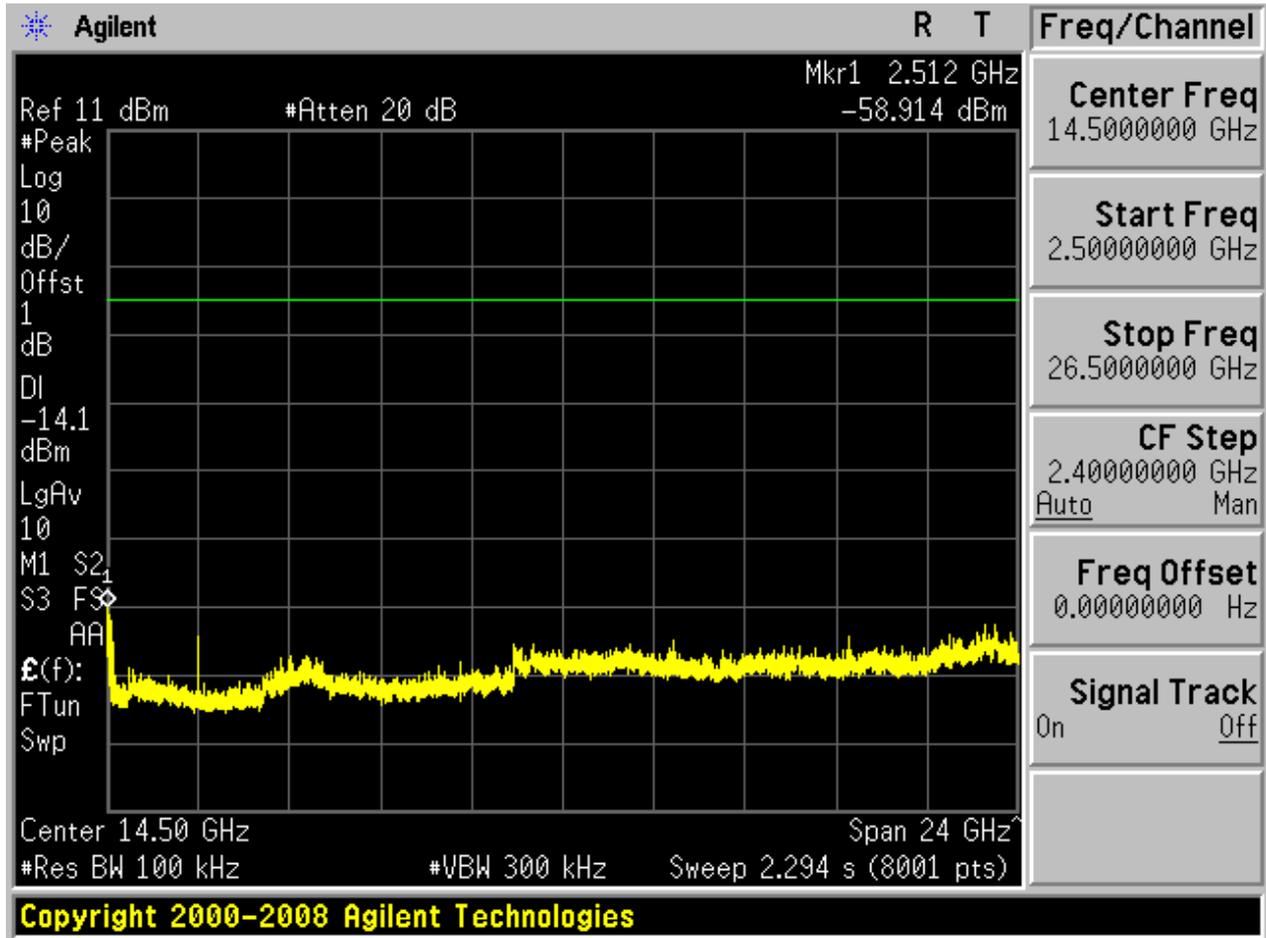






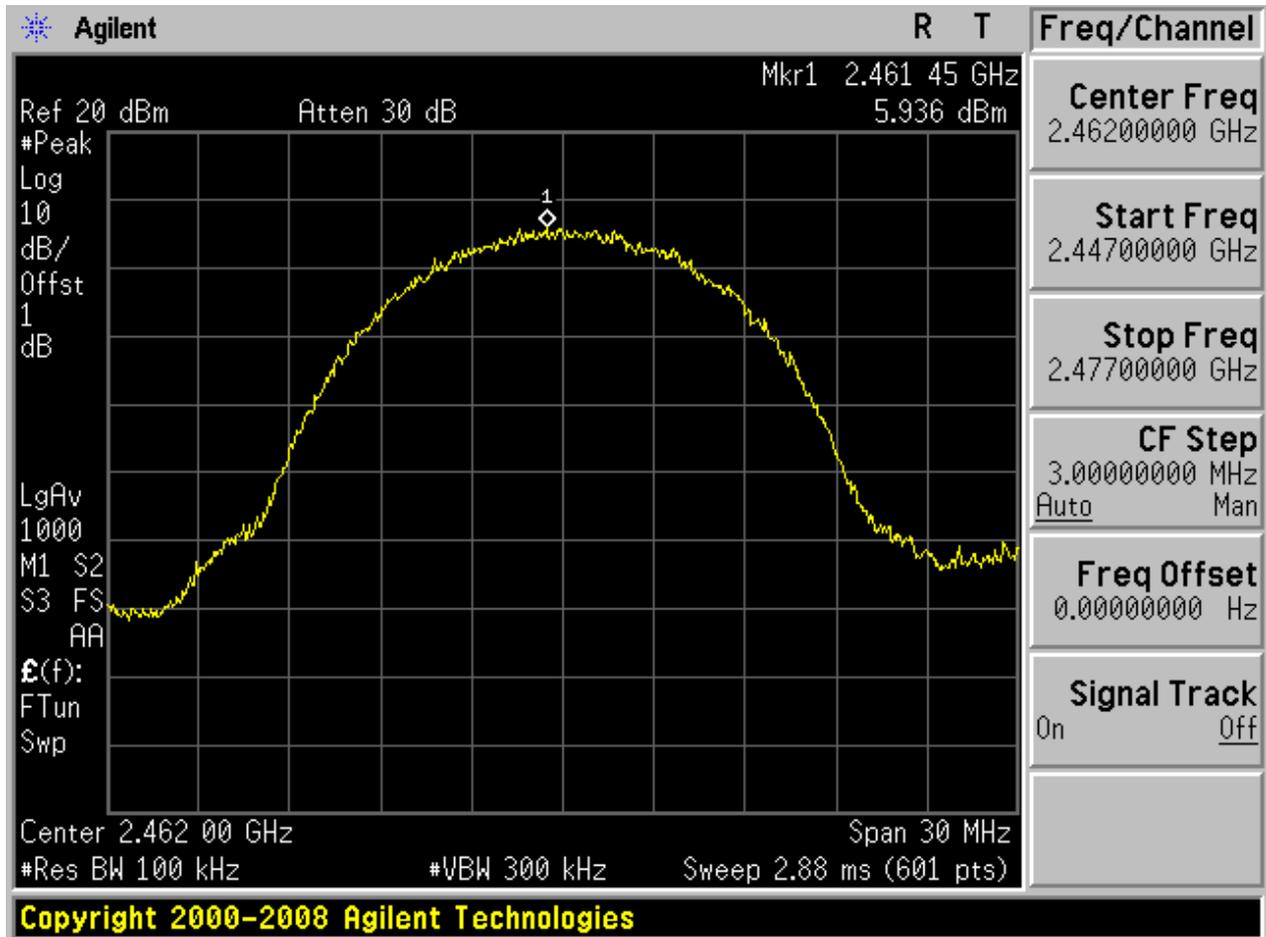






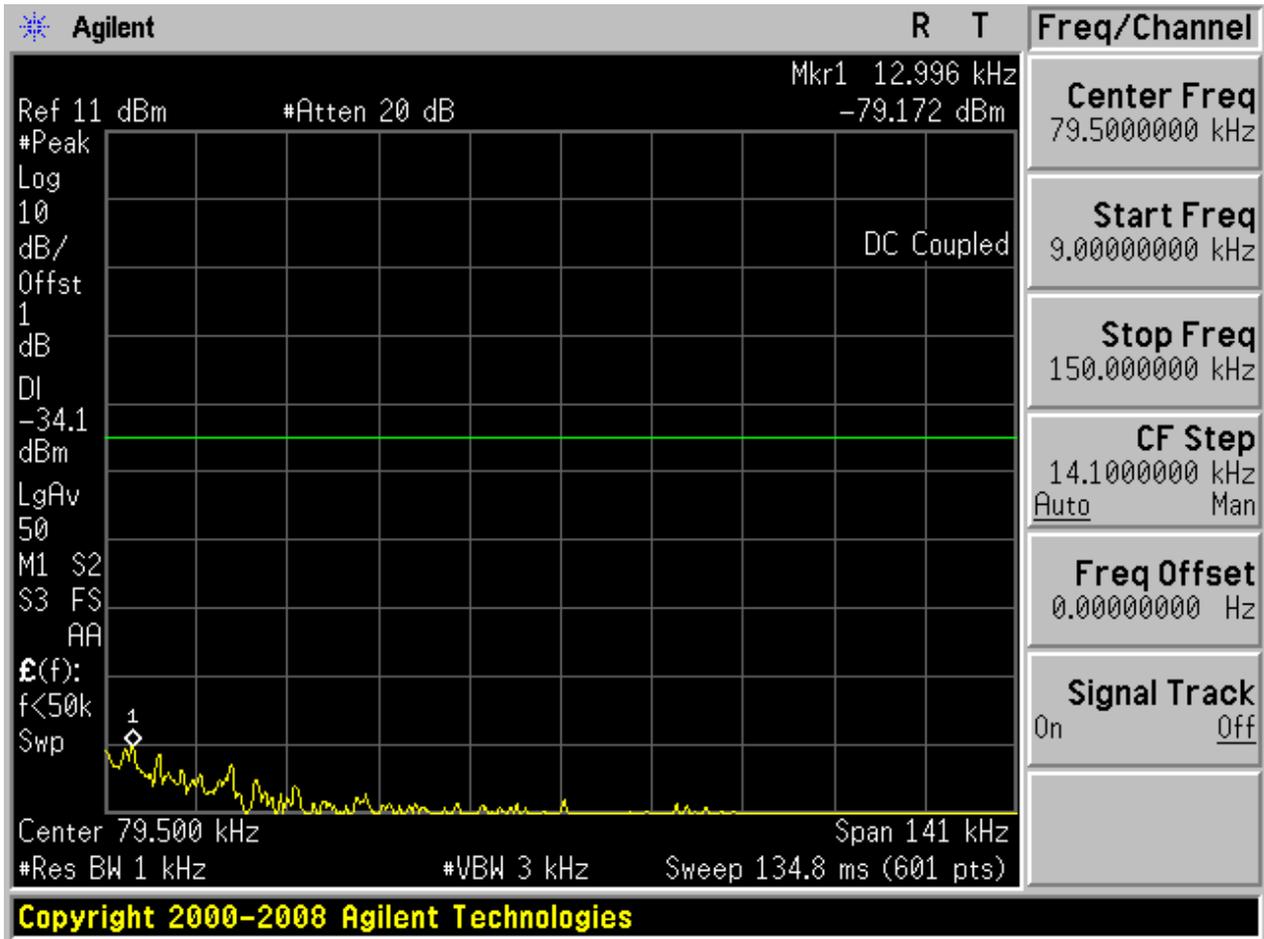
2.3 11B_H

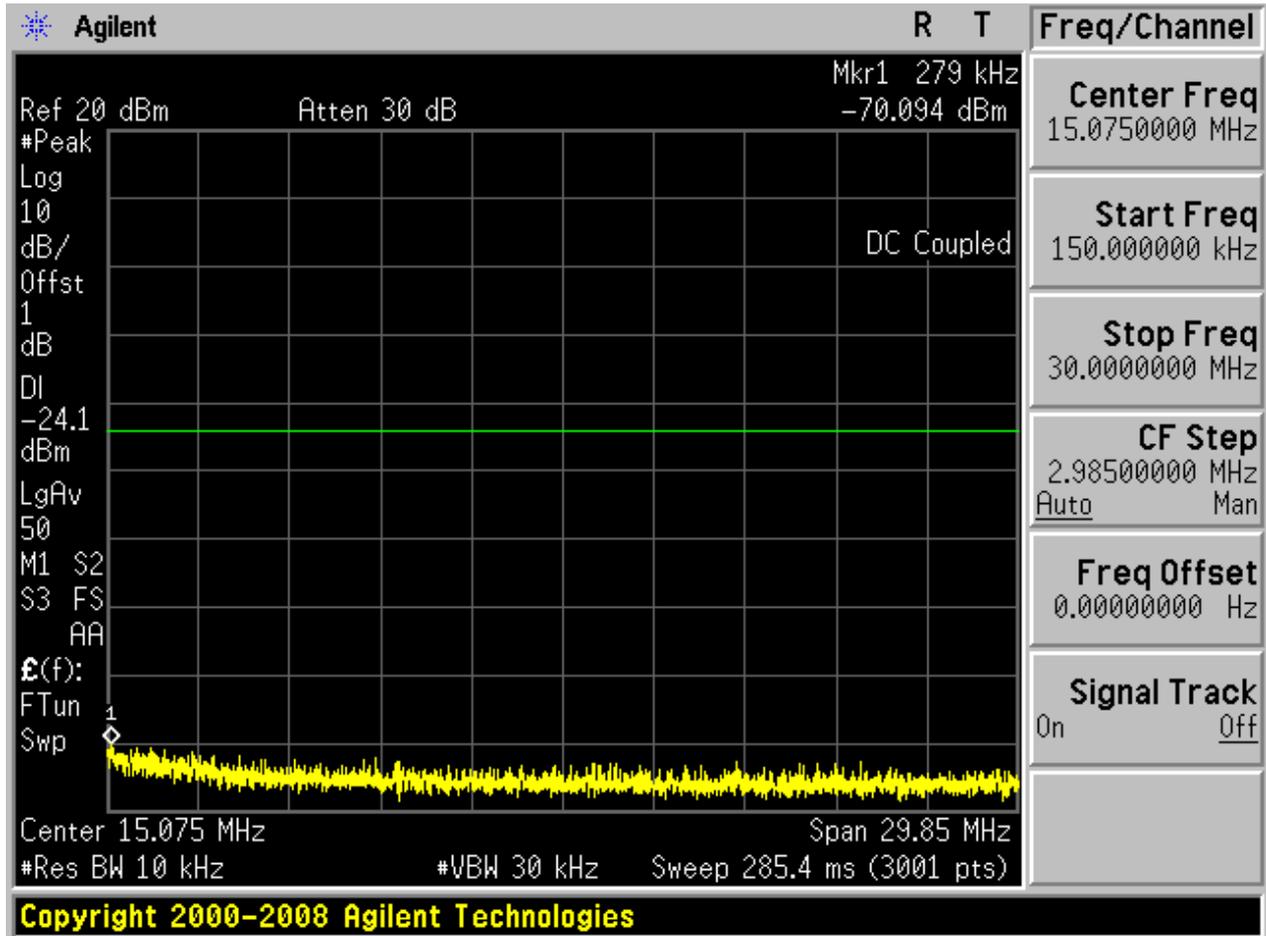
Pref:

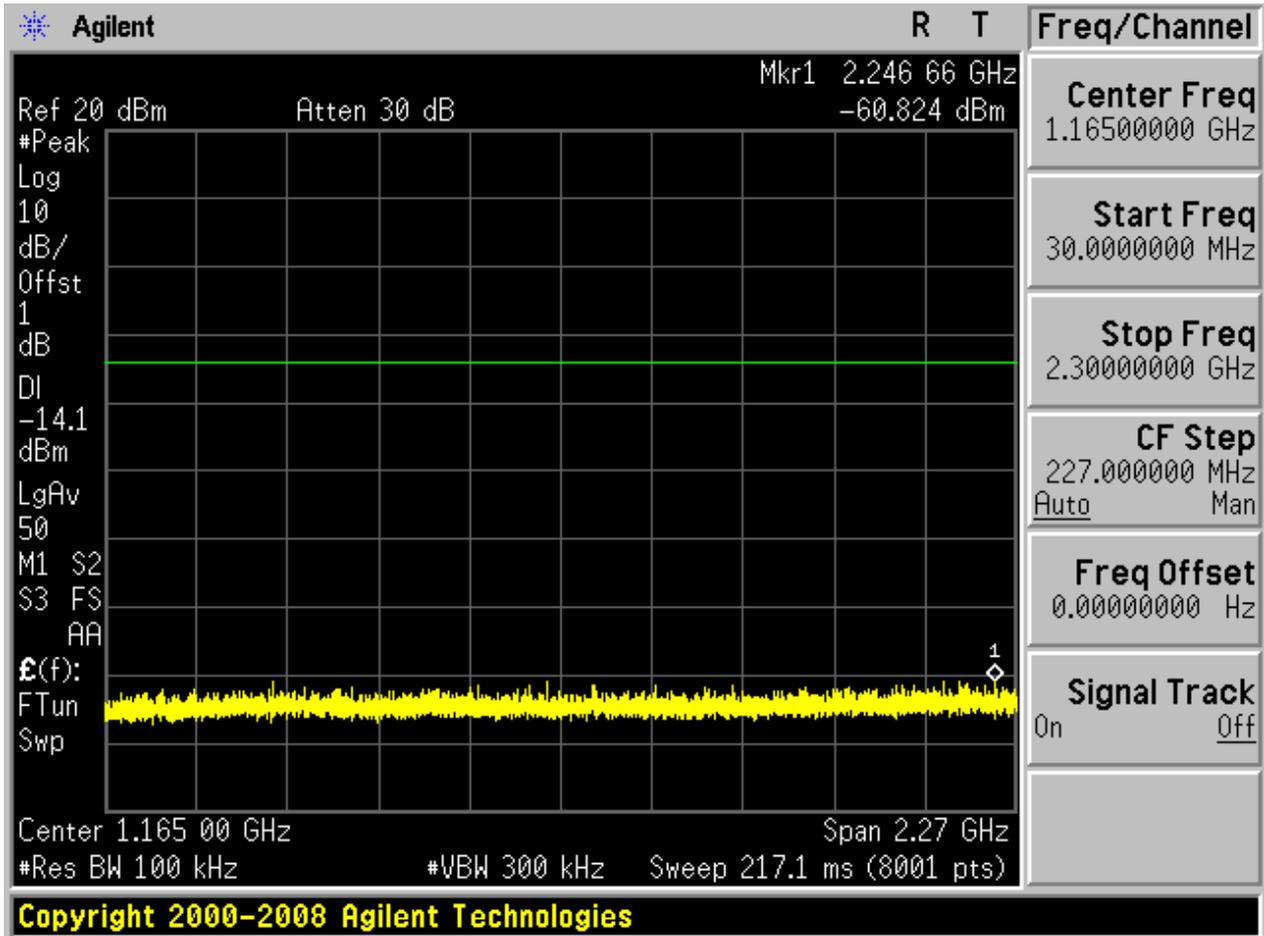


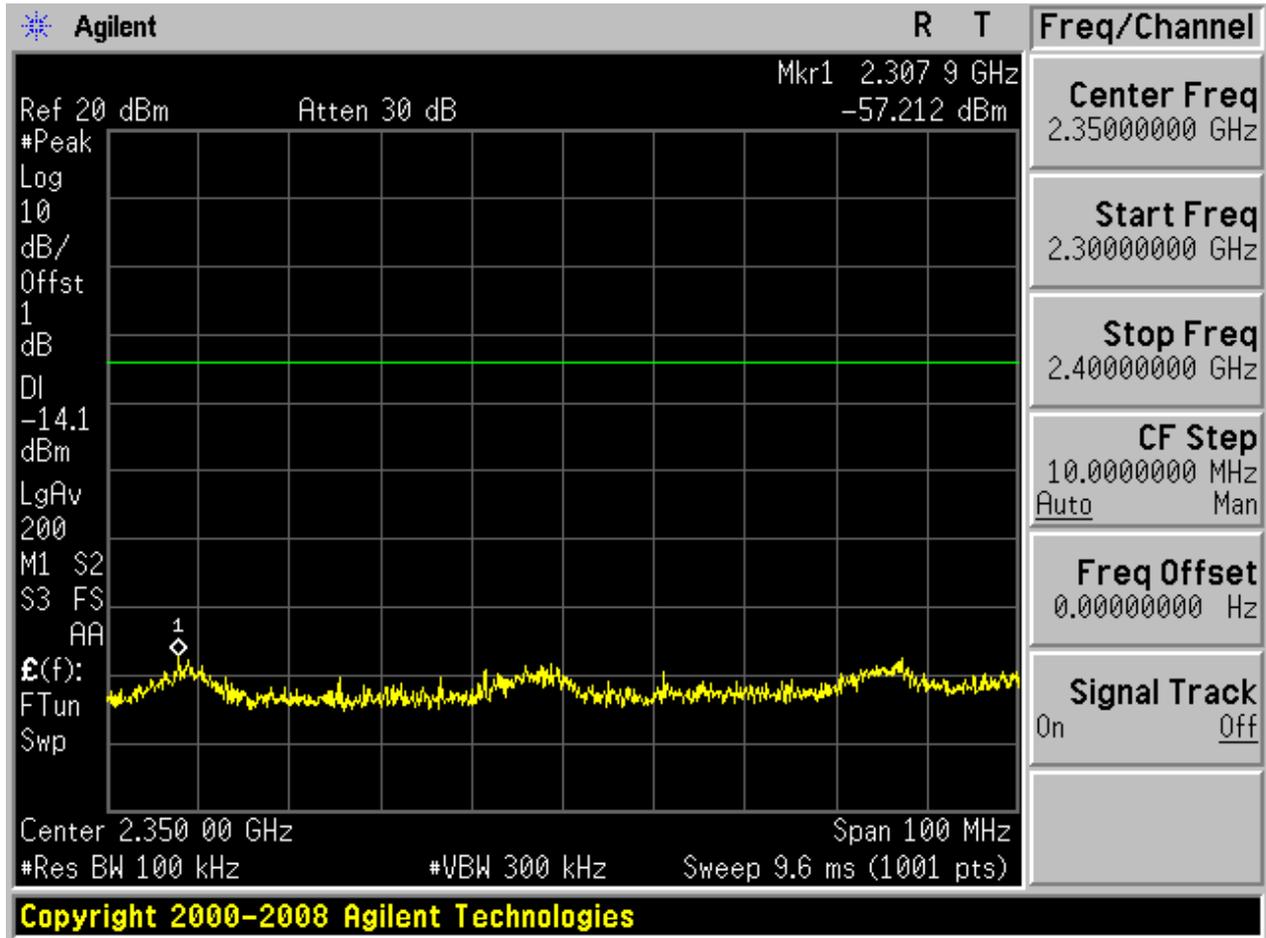


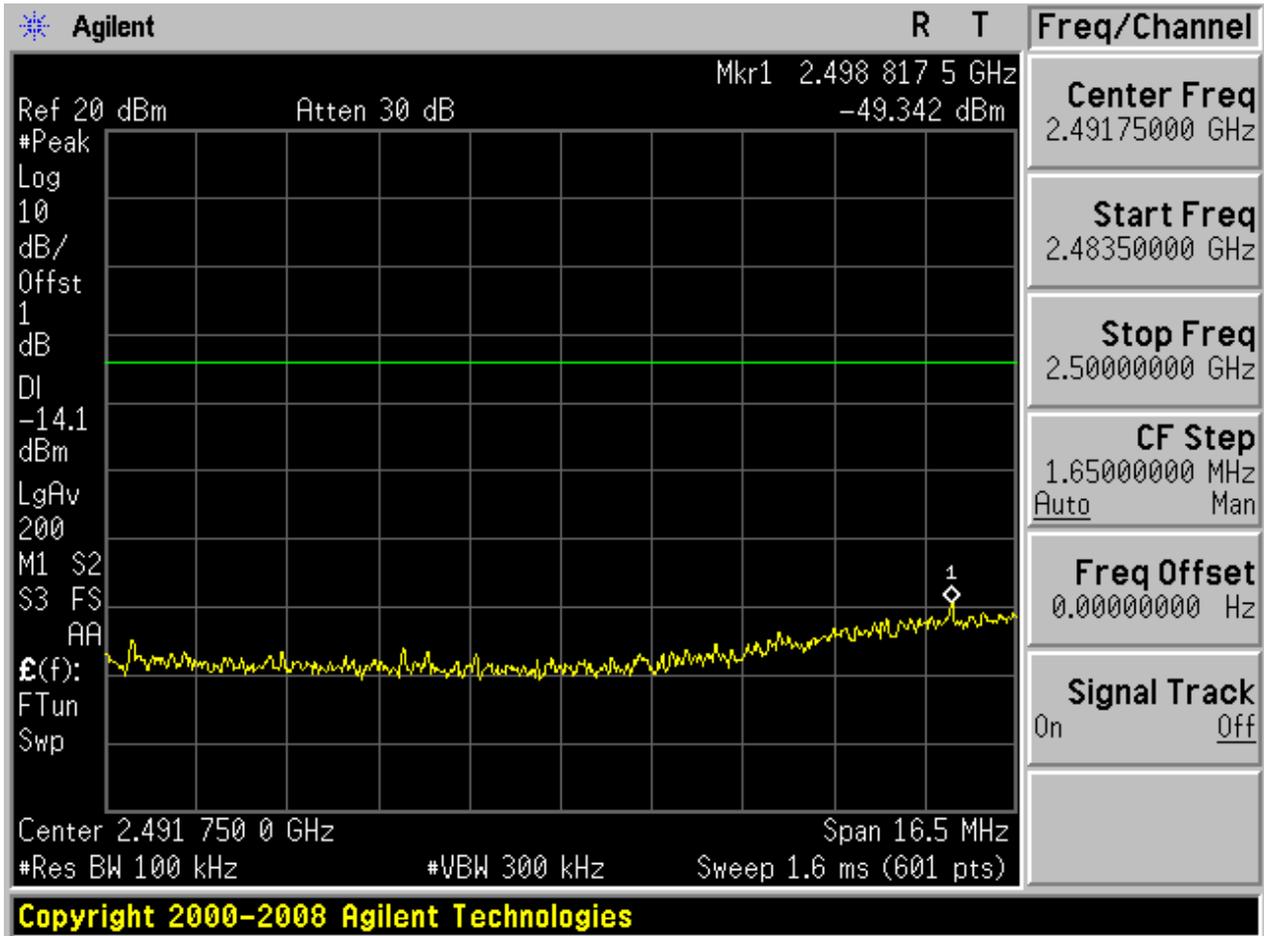
Puw:

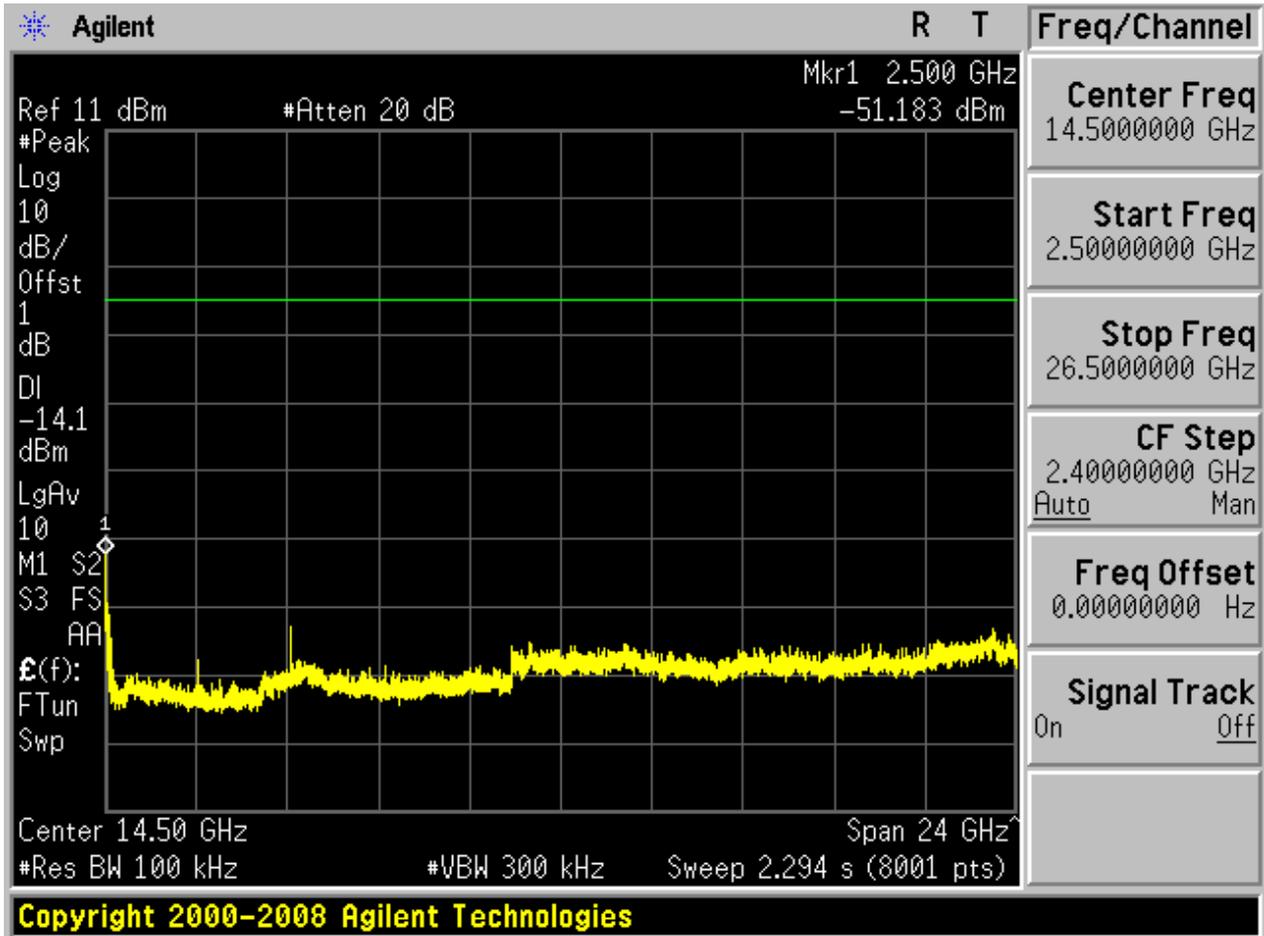








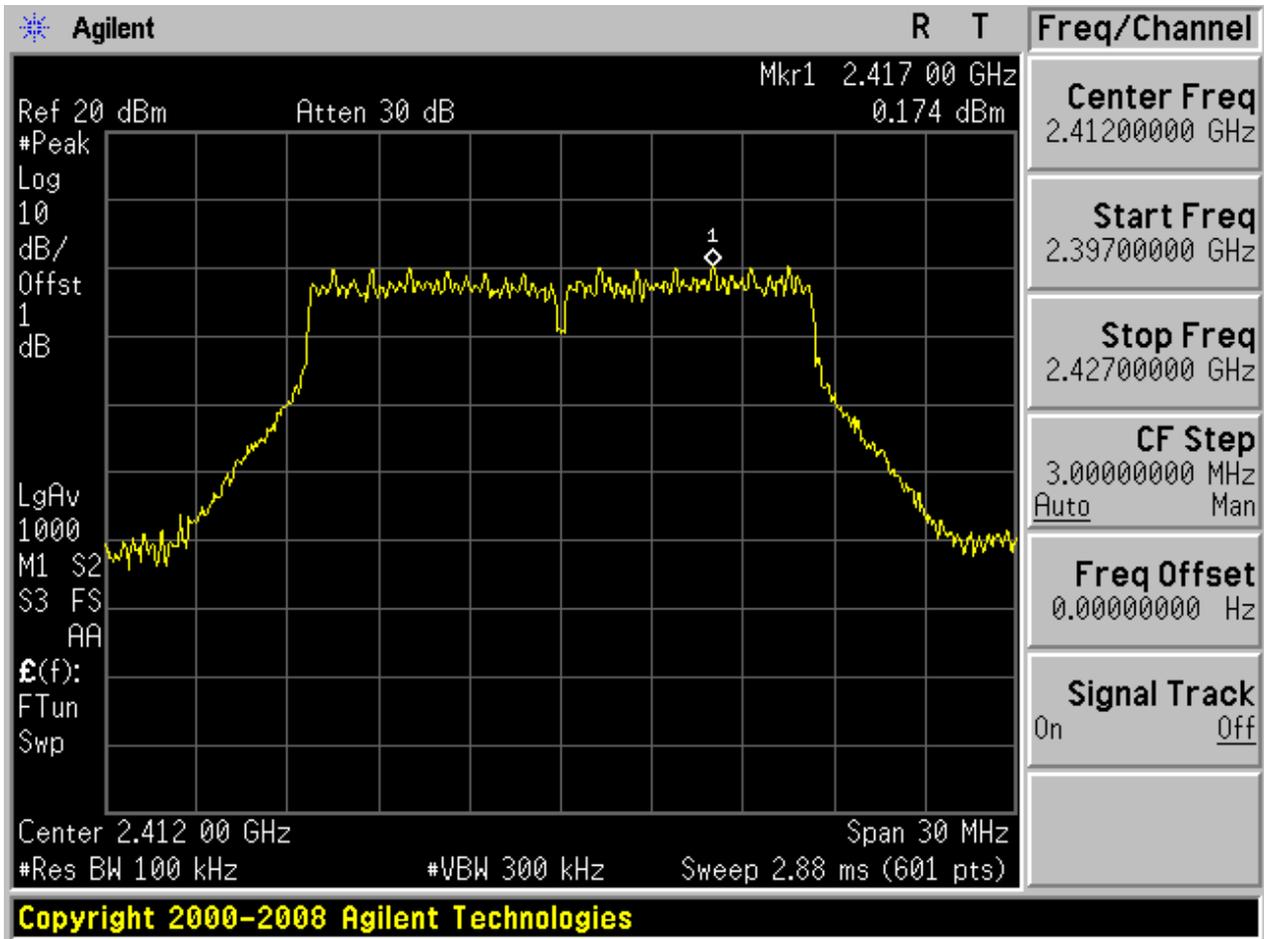






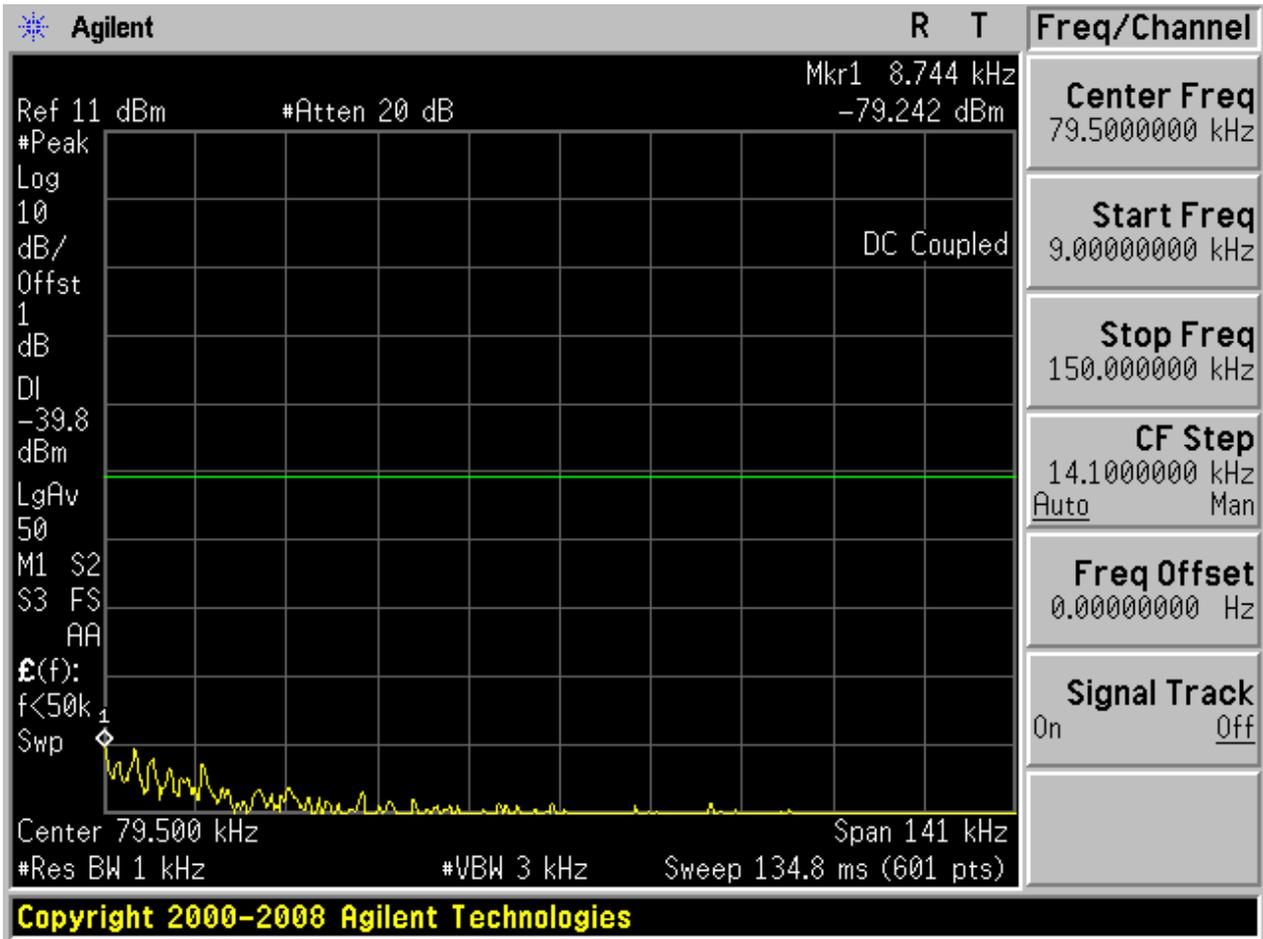
2.4 11G_L

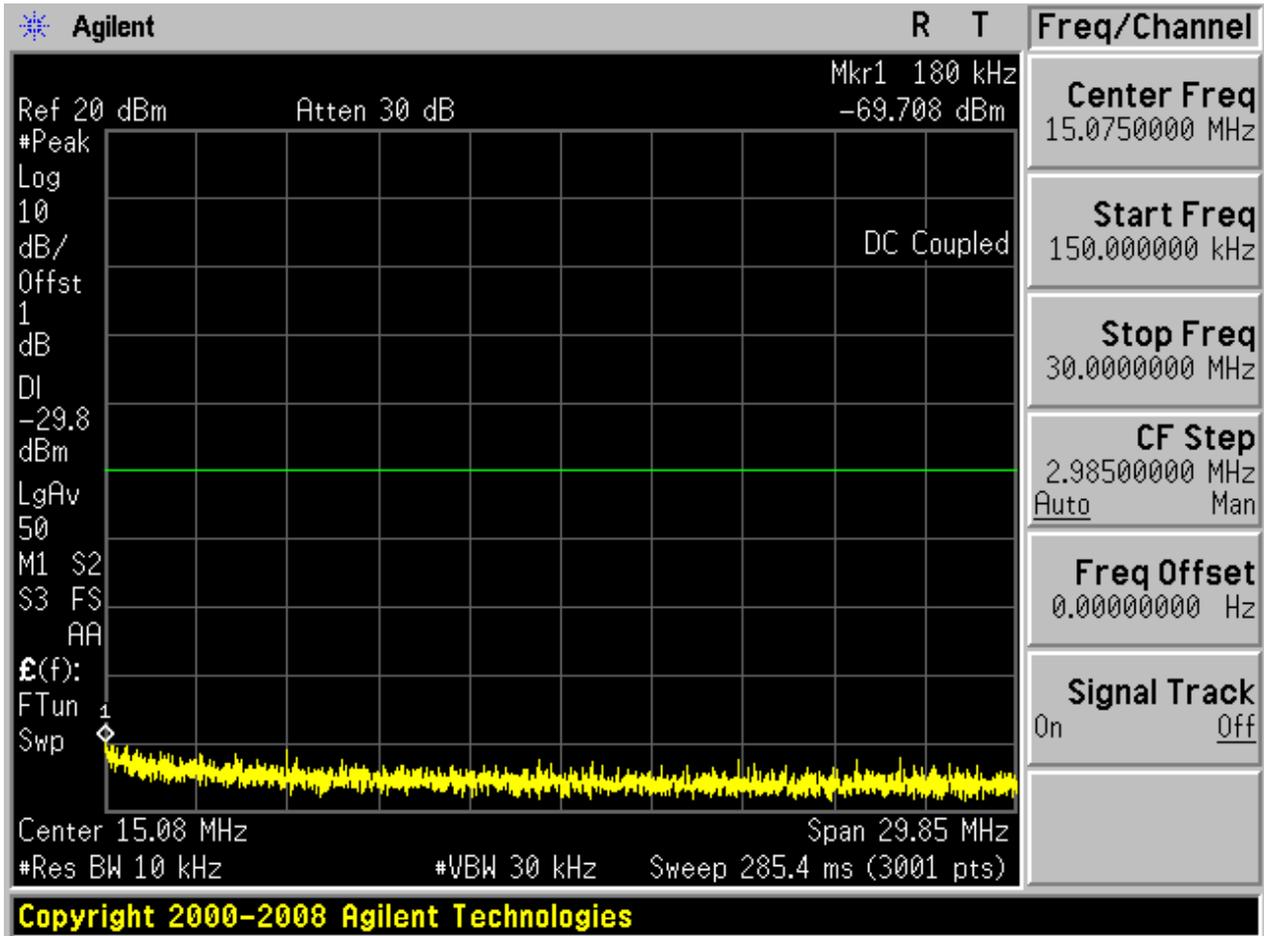
Pref:

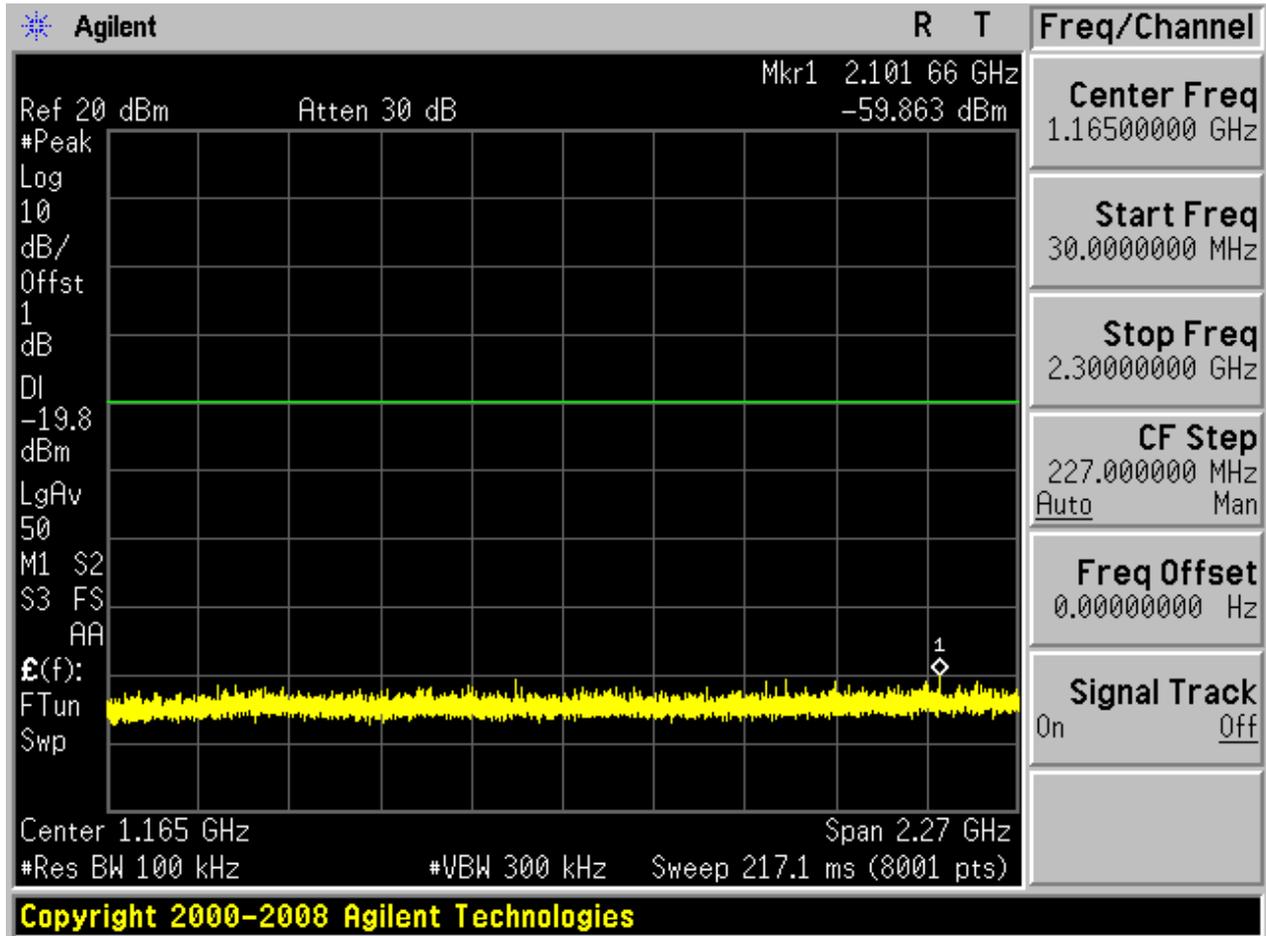


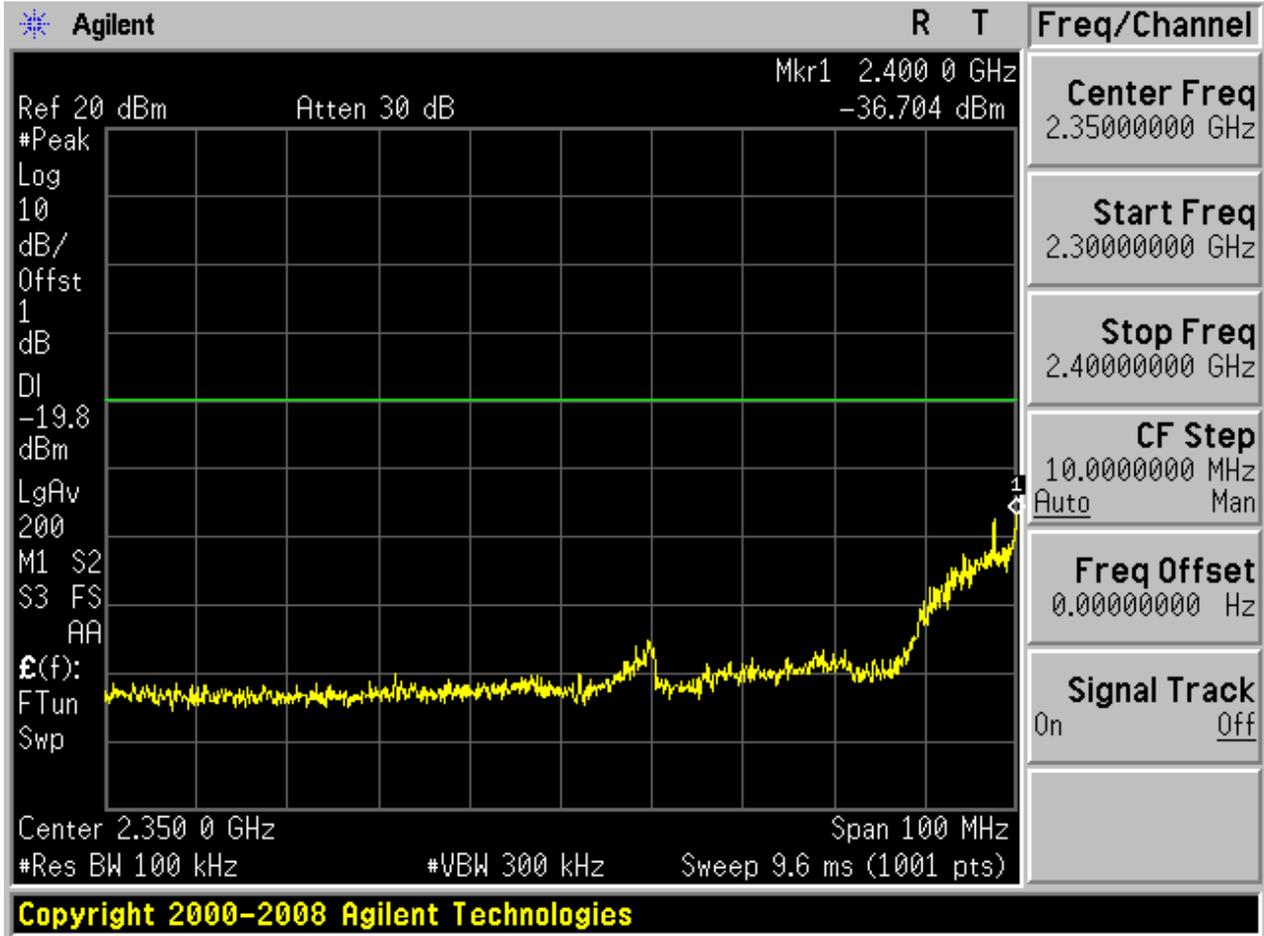


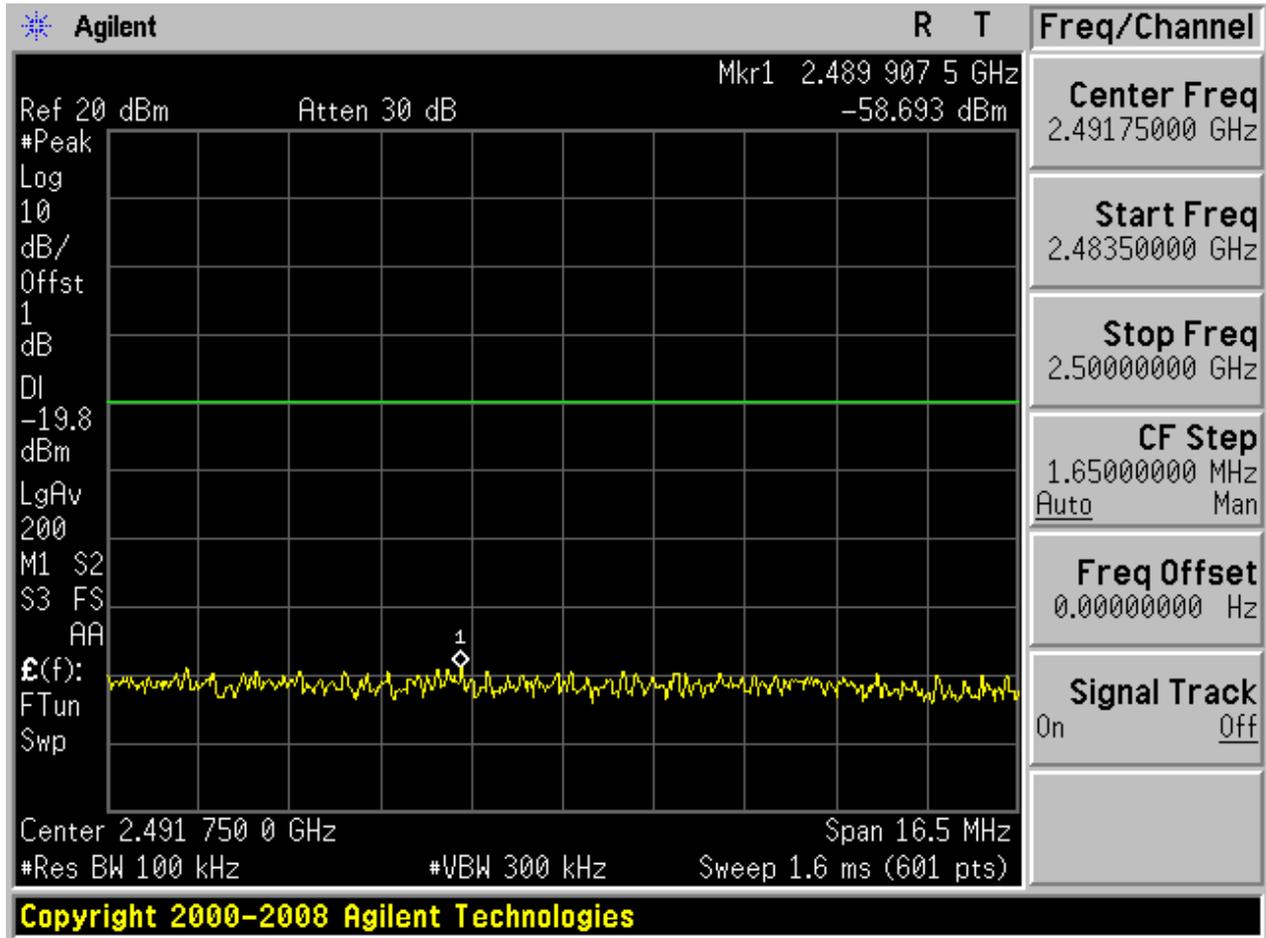
Puw:



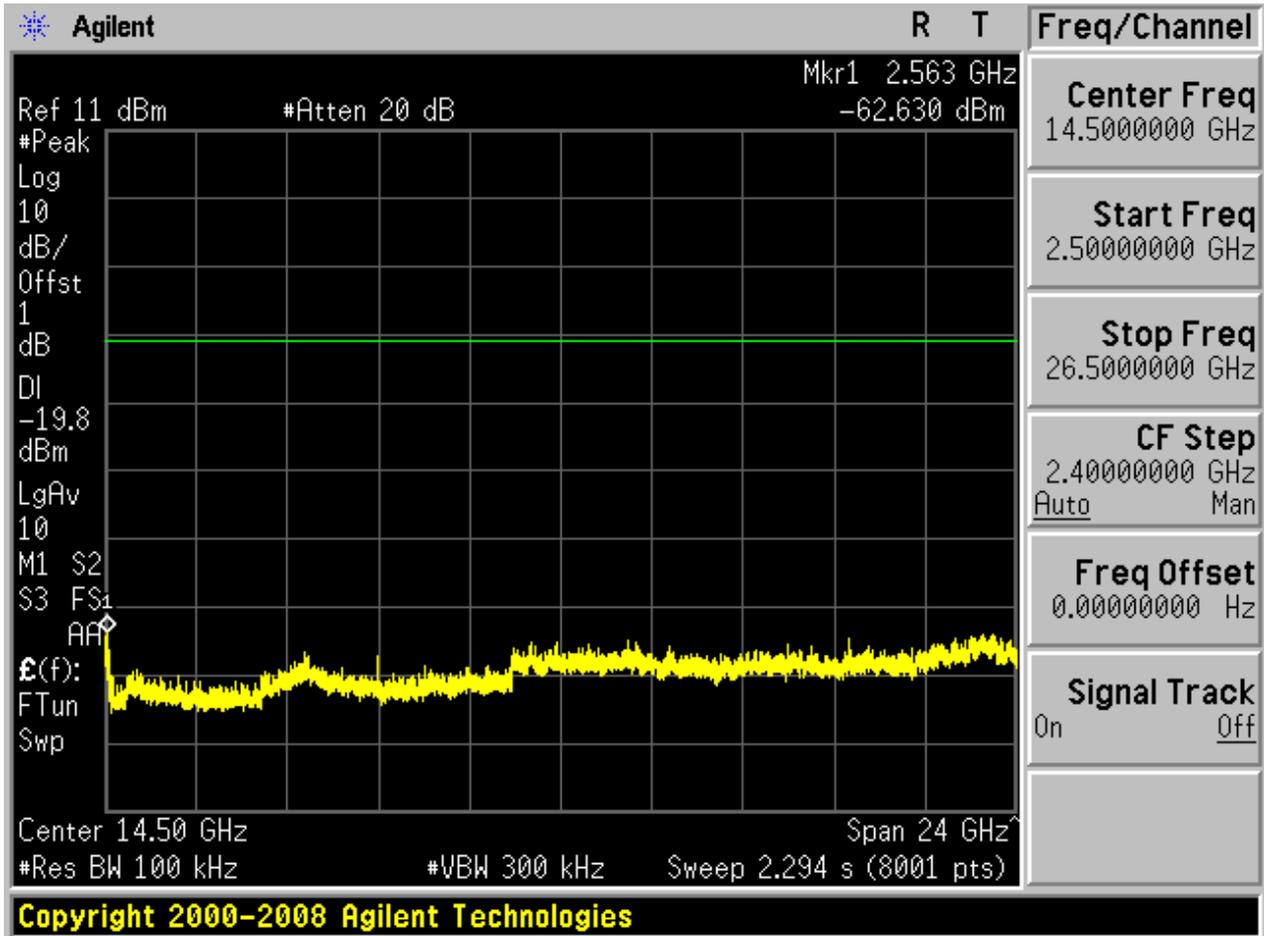








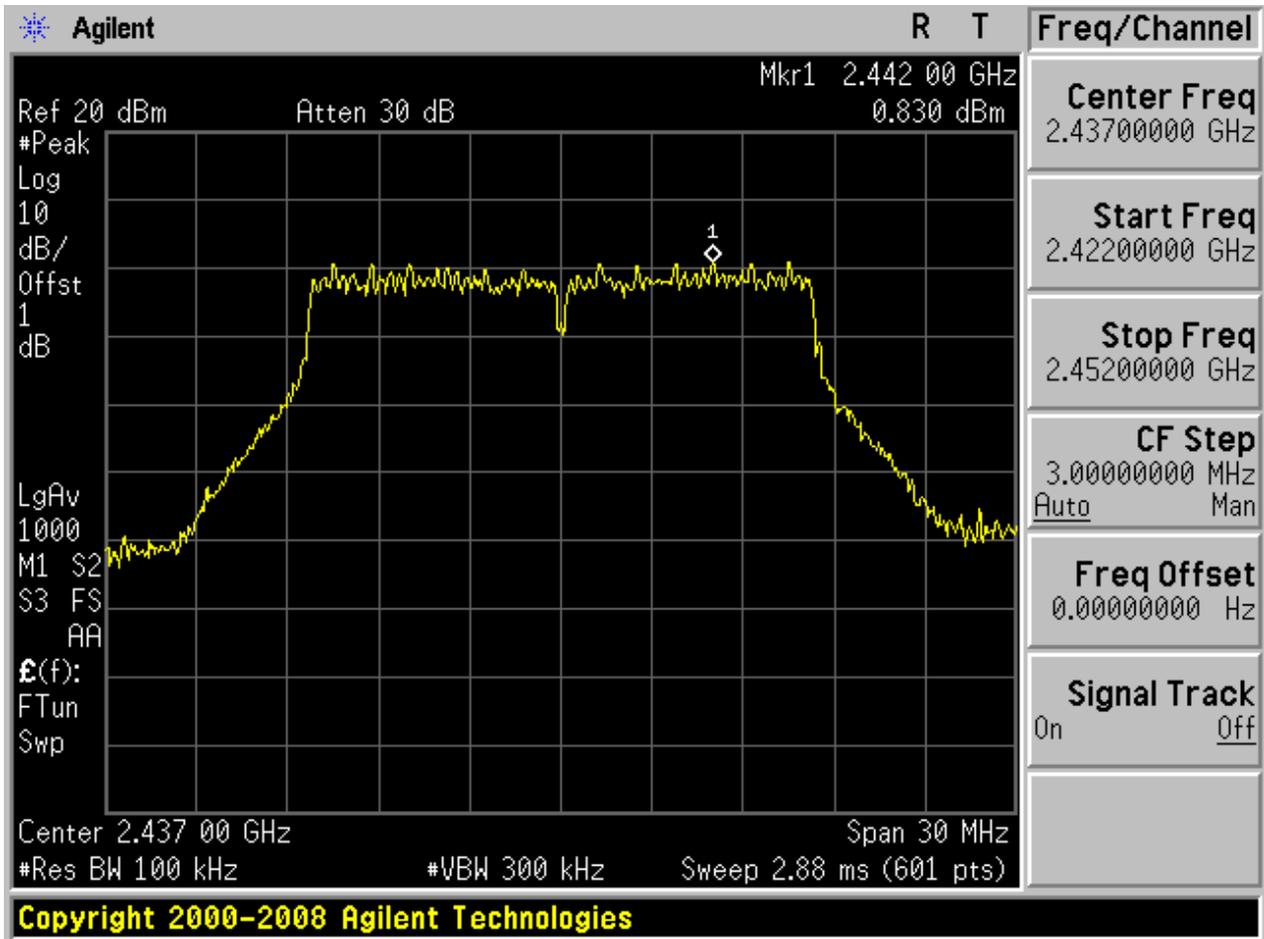
Copyright 2000-2008 Agilent Technologies





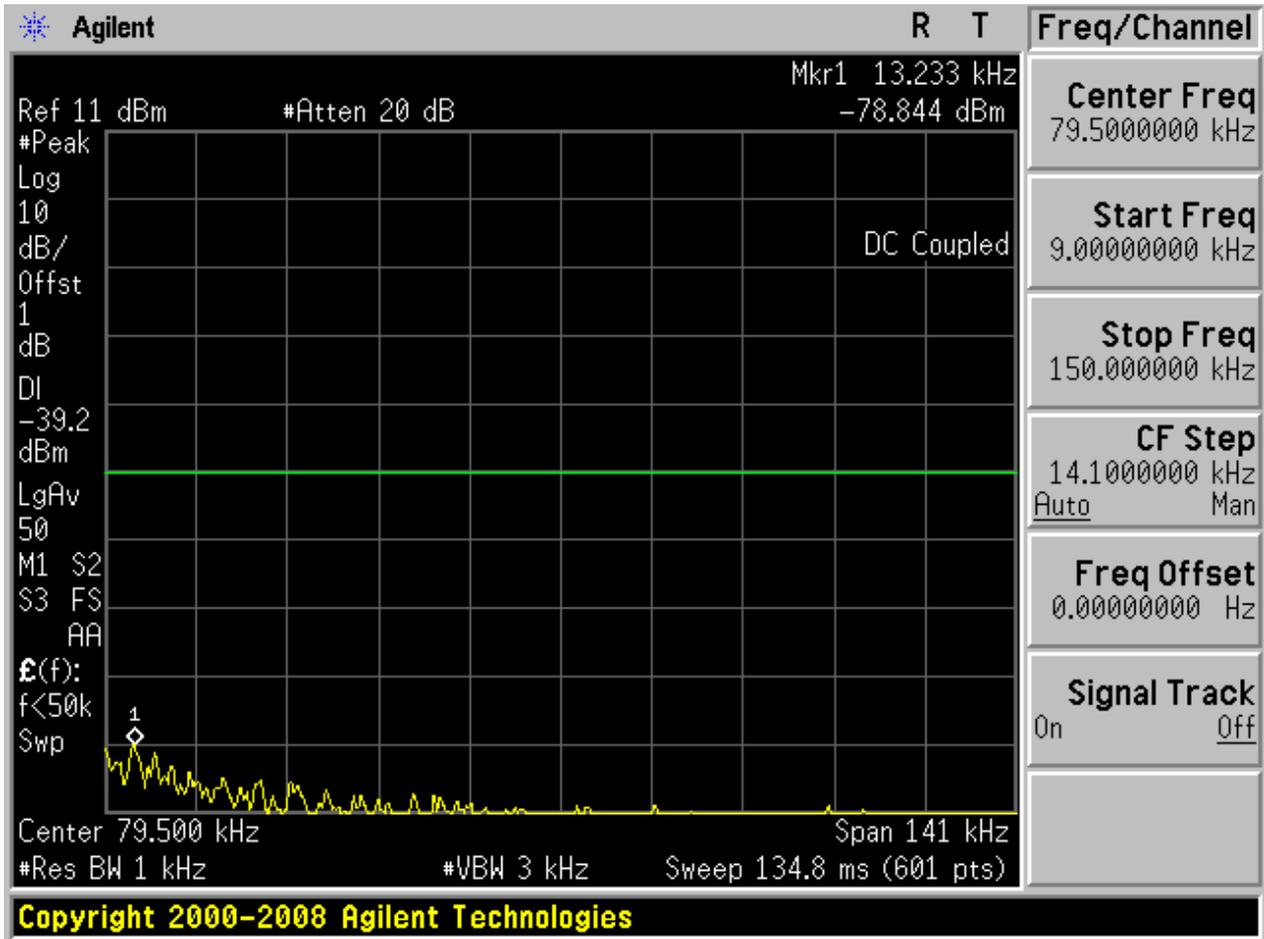
2.5 11G_M

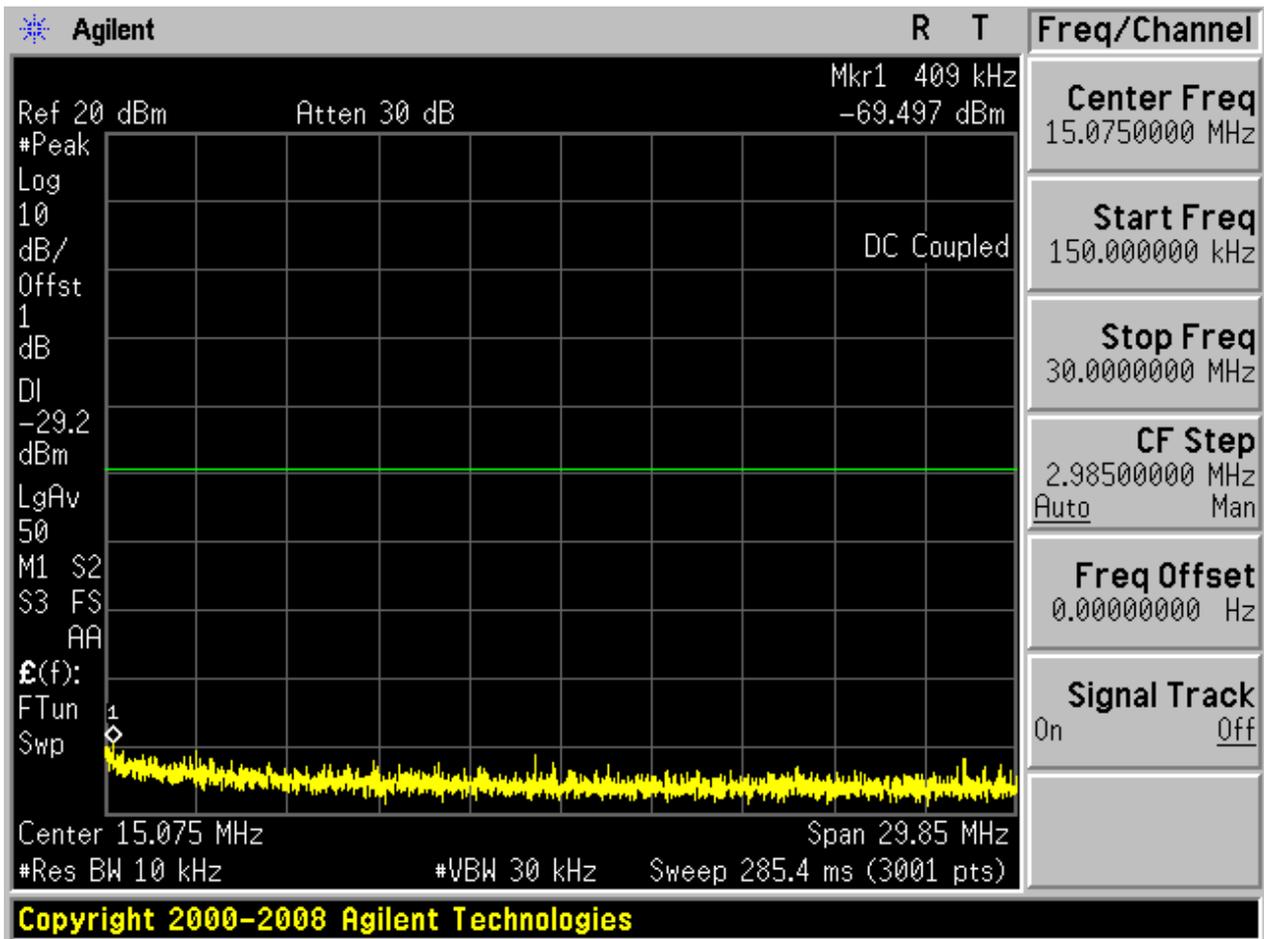
Pref:

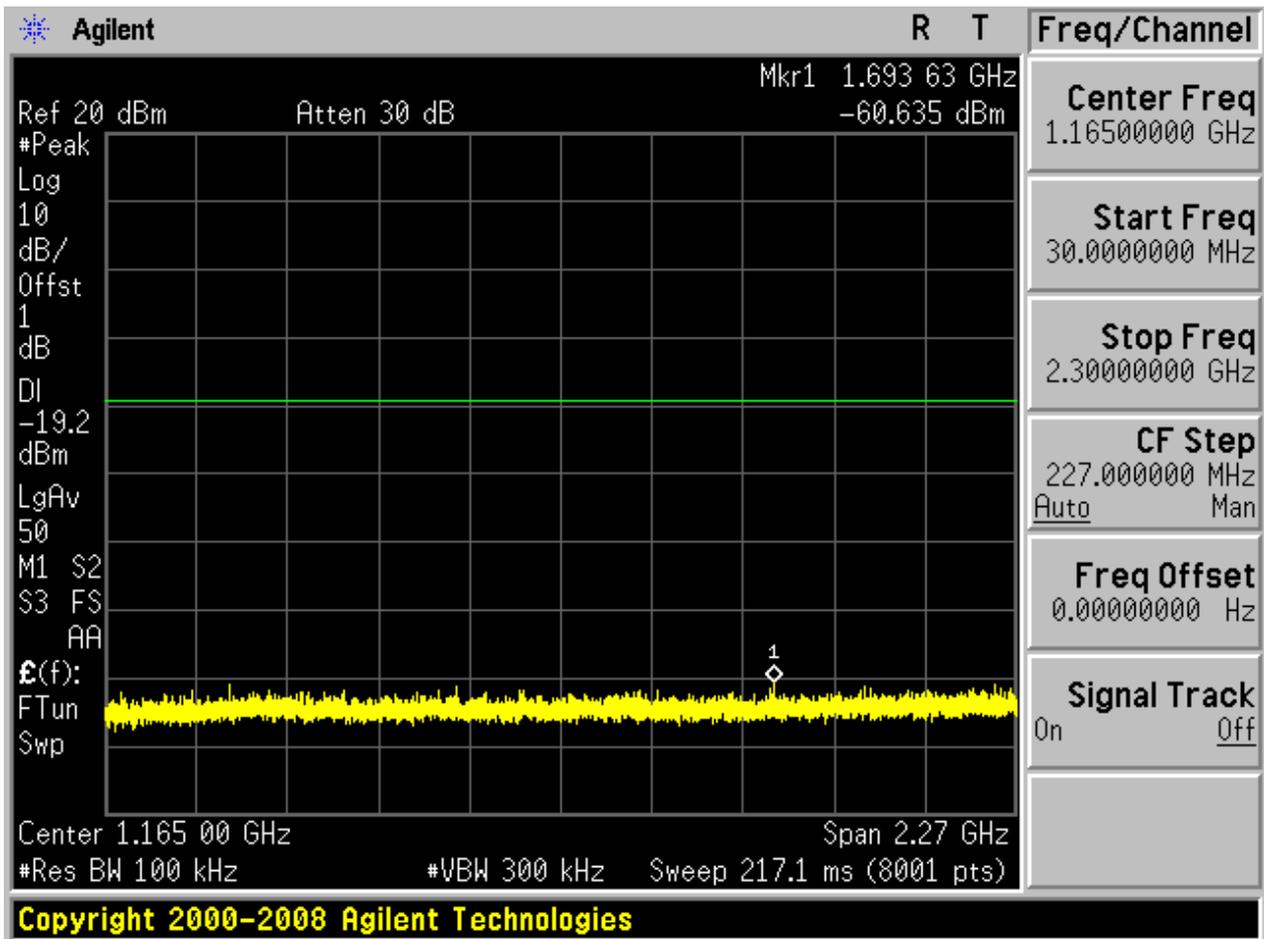


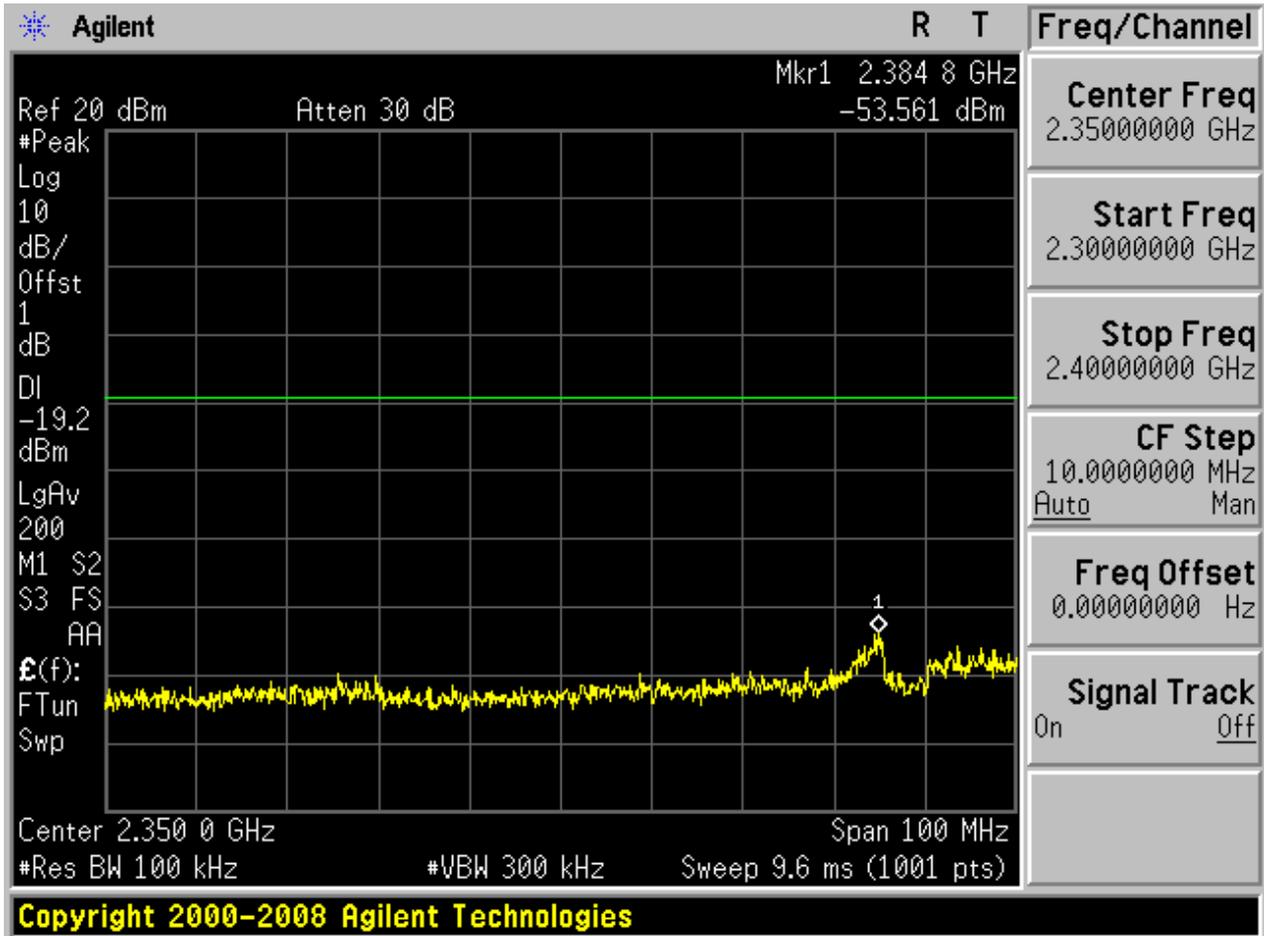


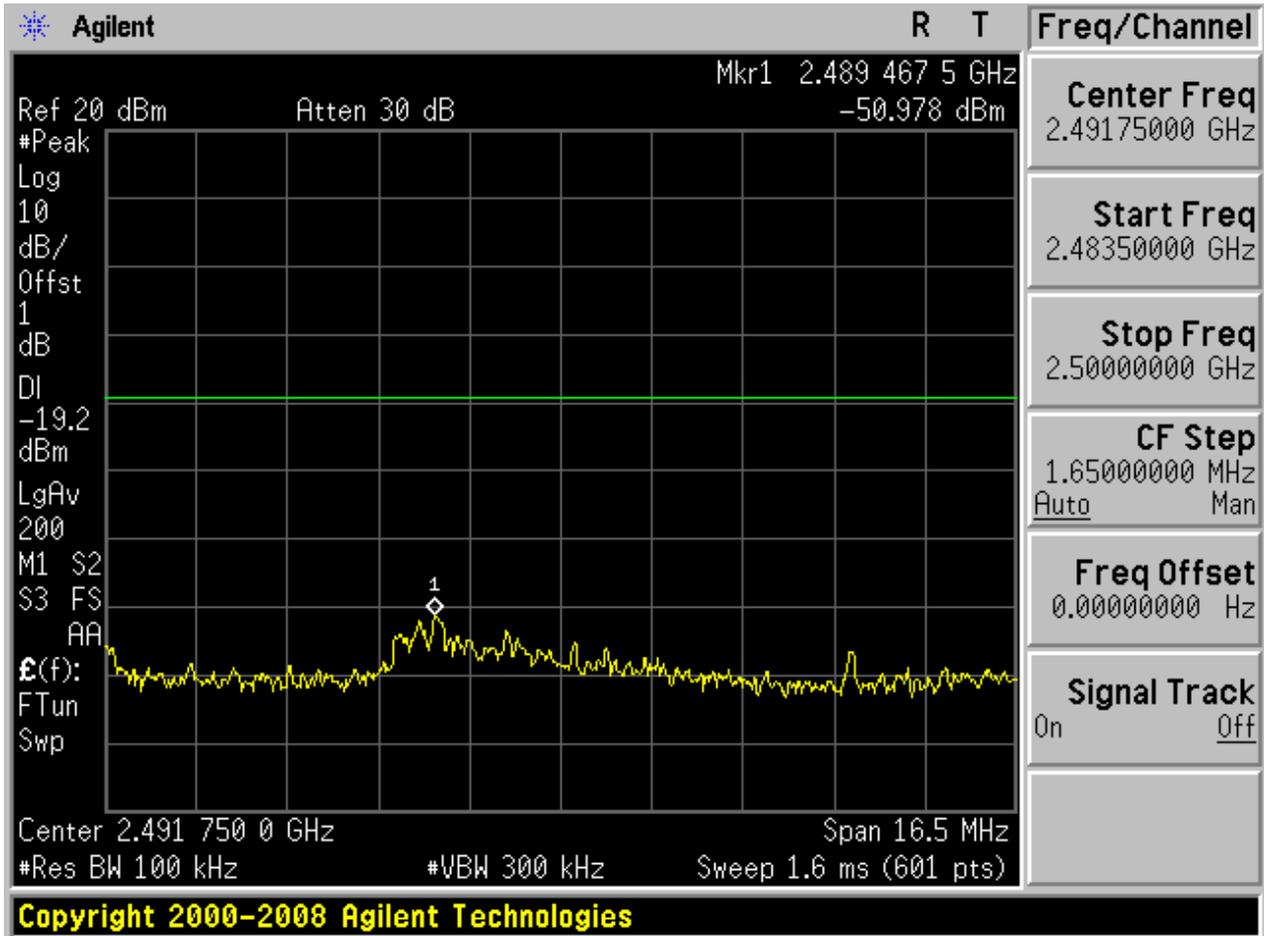
Puw:

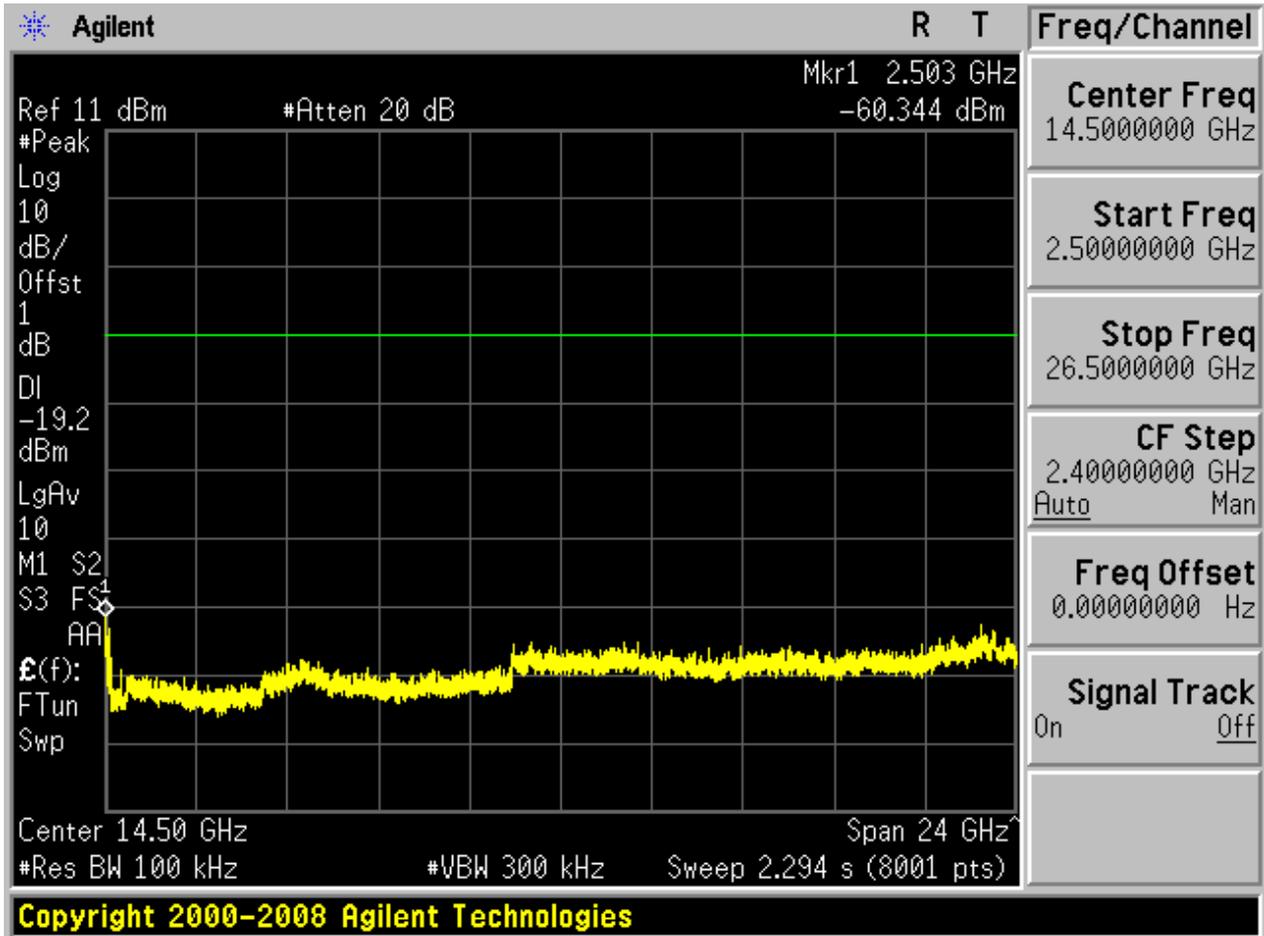








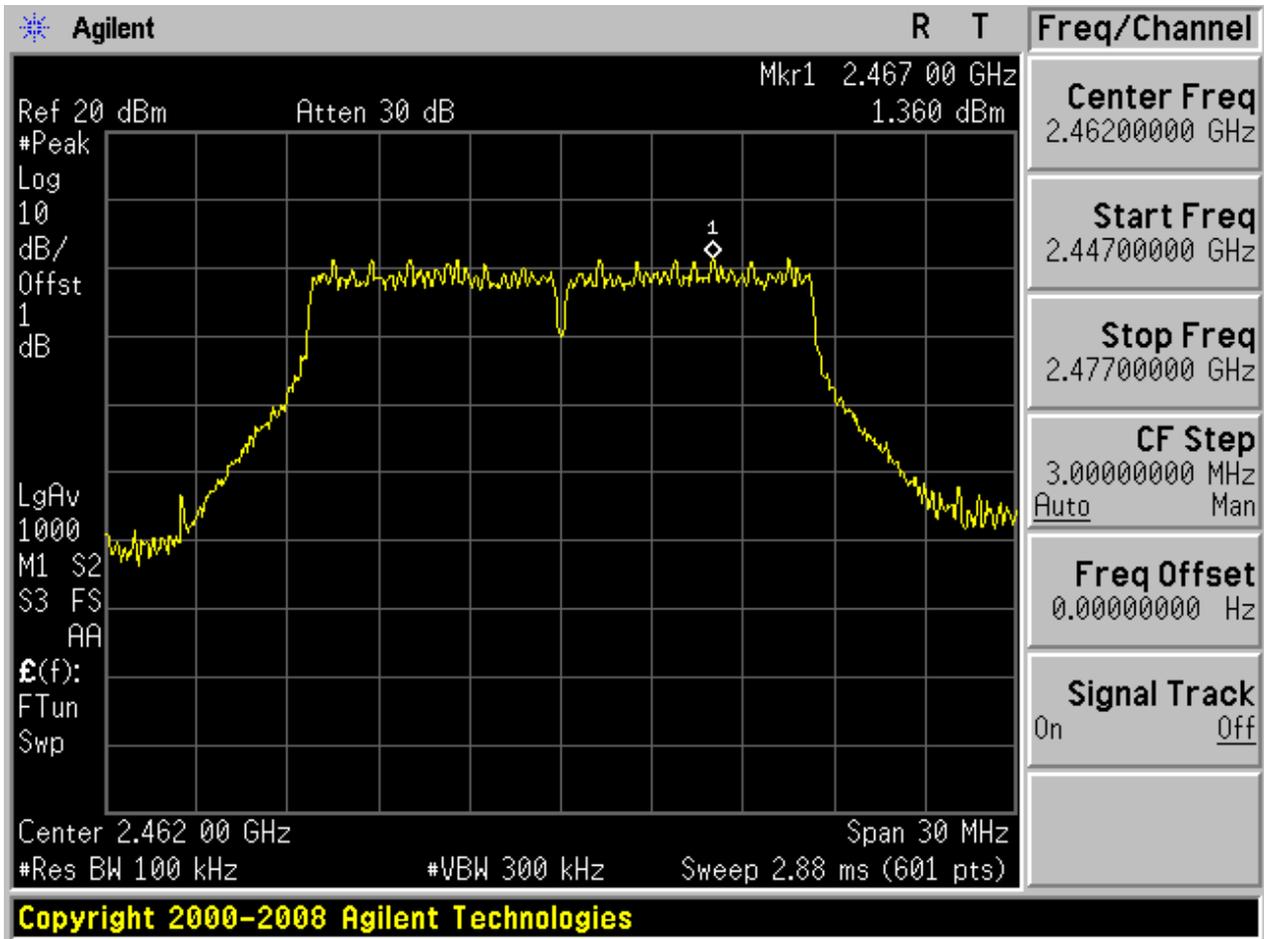




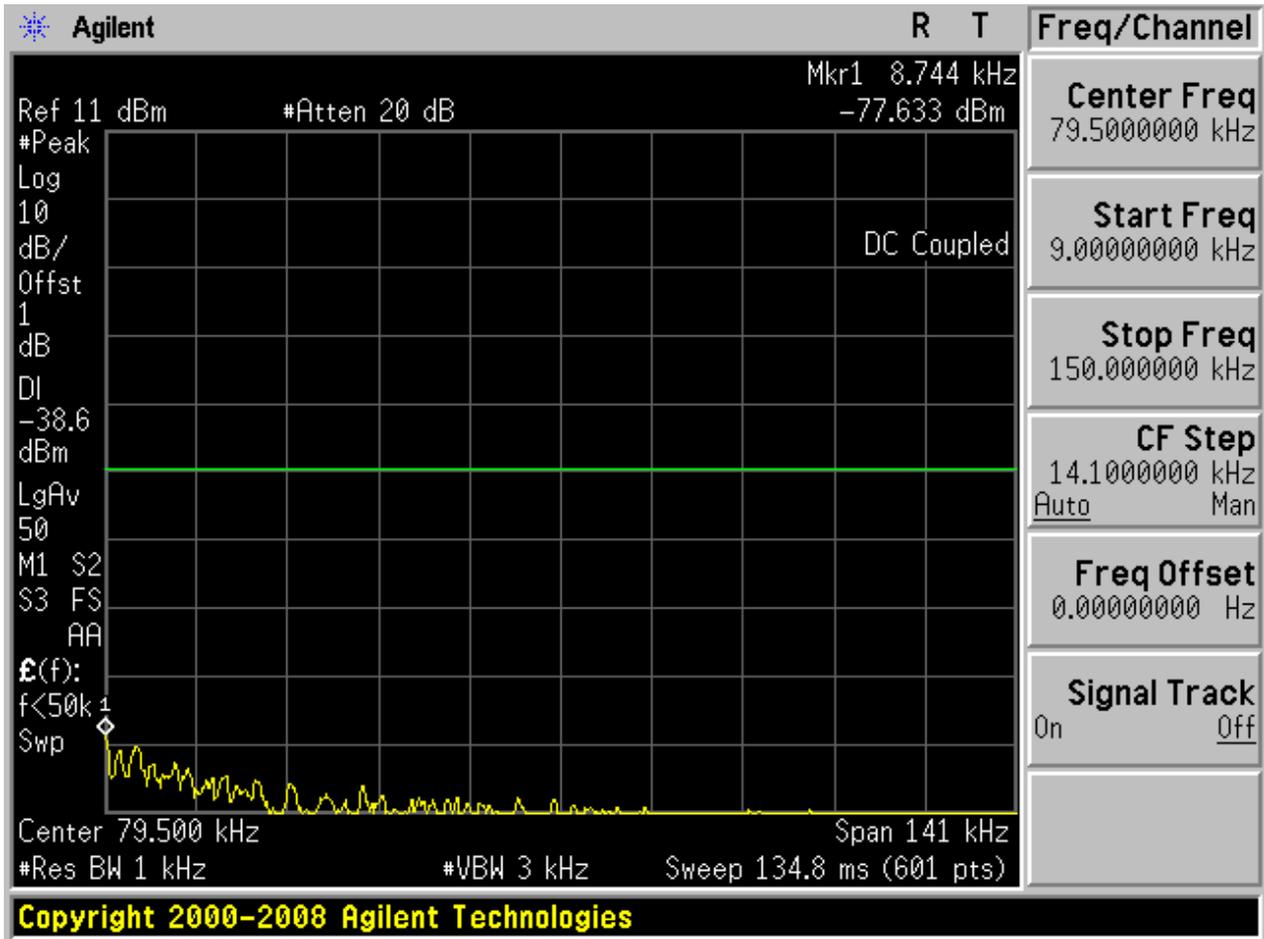


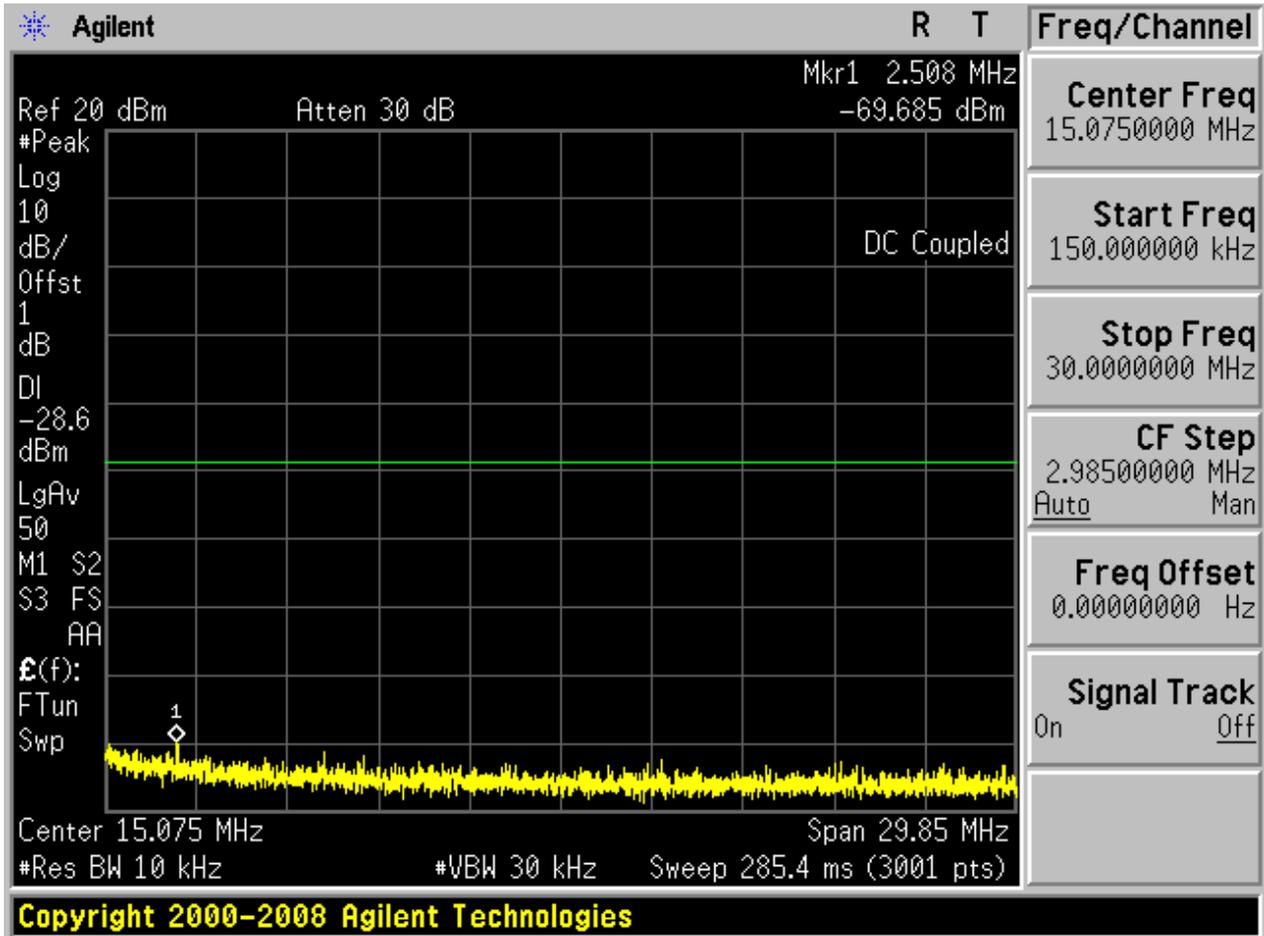
2.6 11G_H

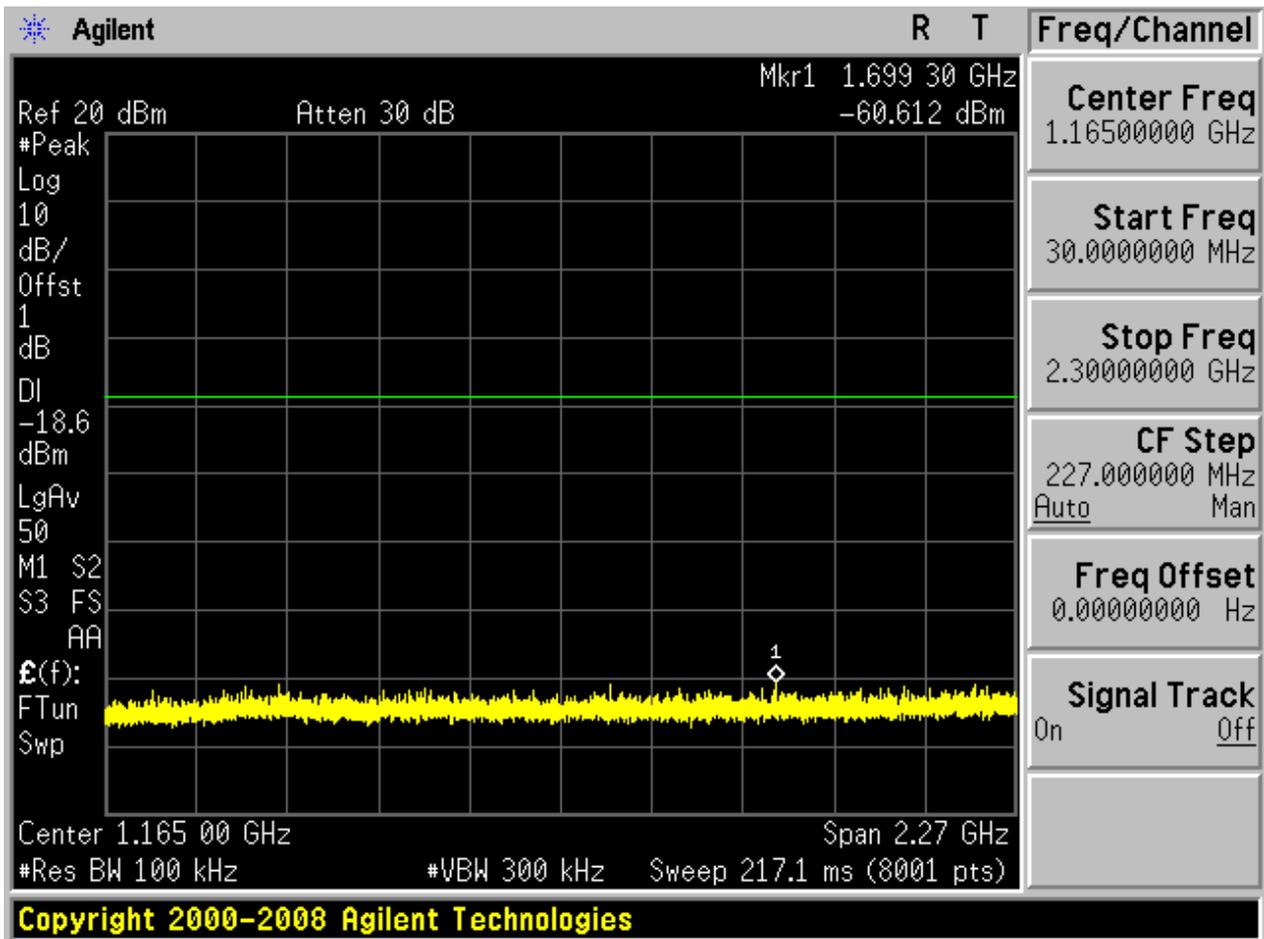
Pref:

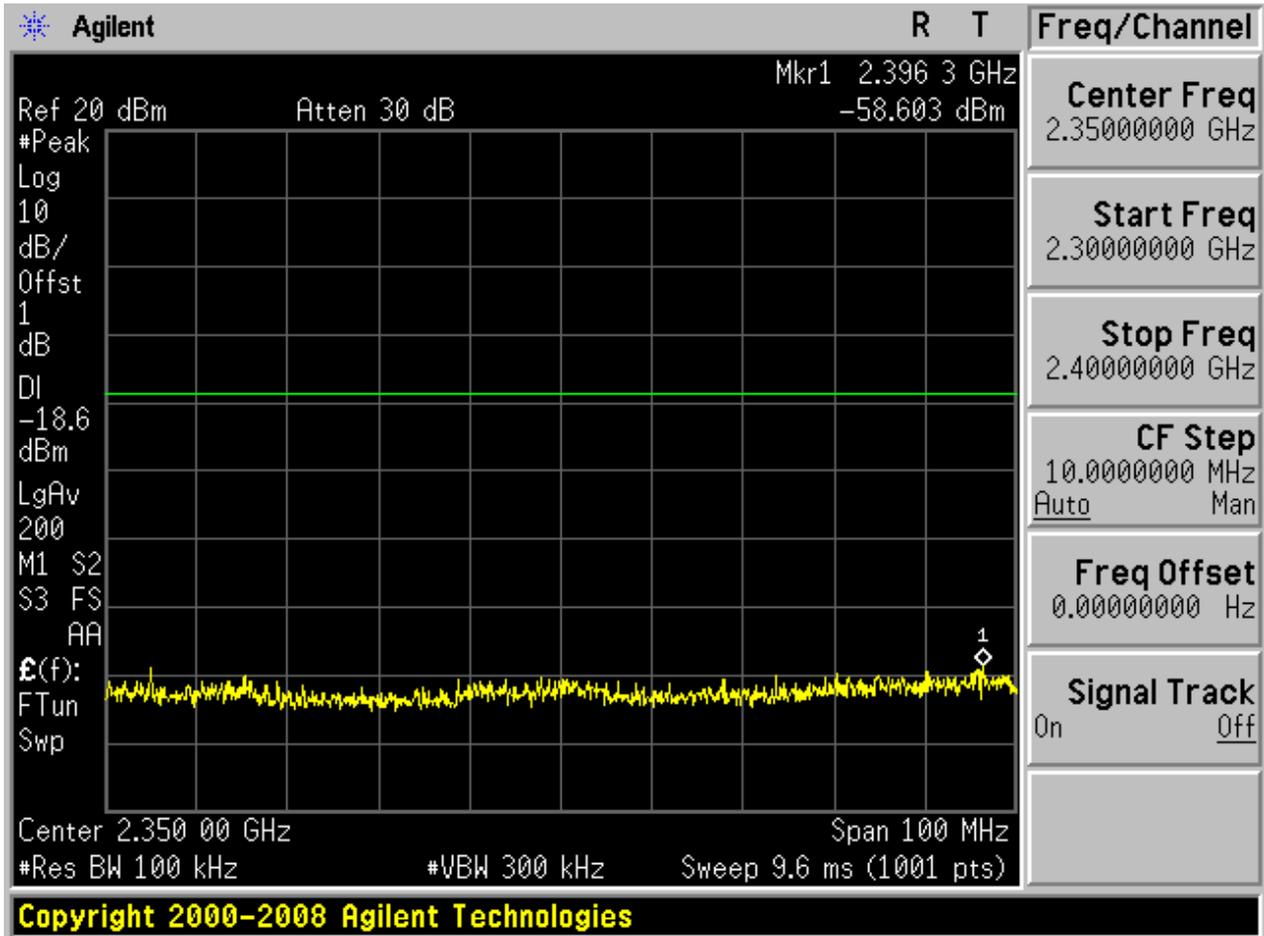


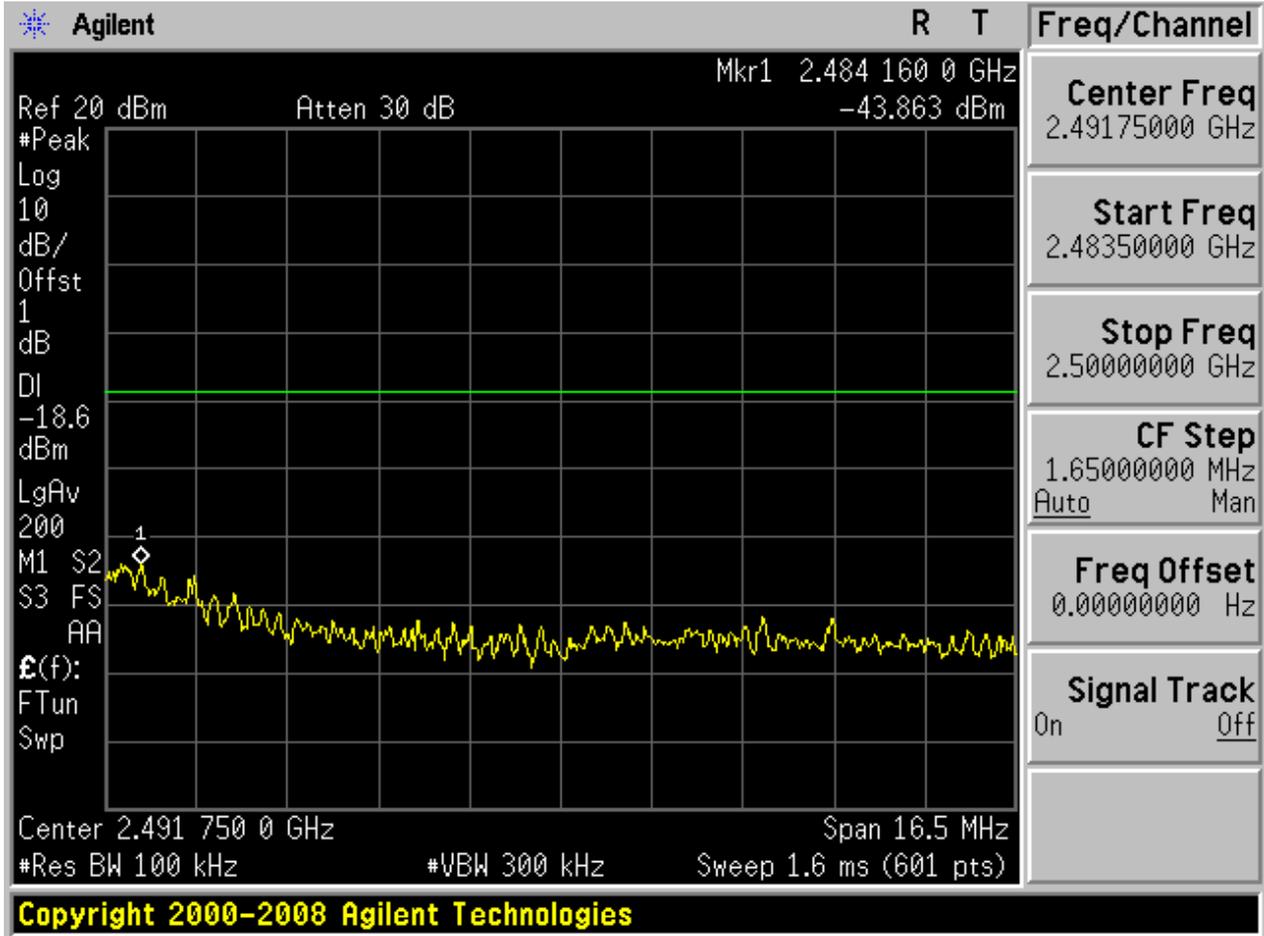
Puw:

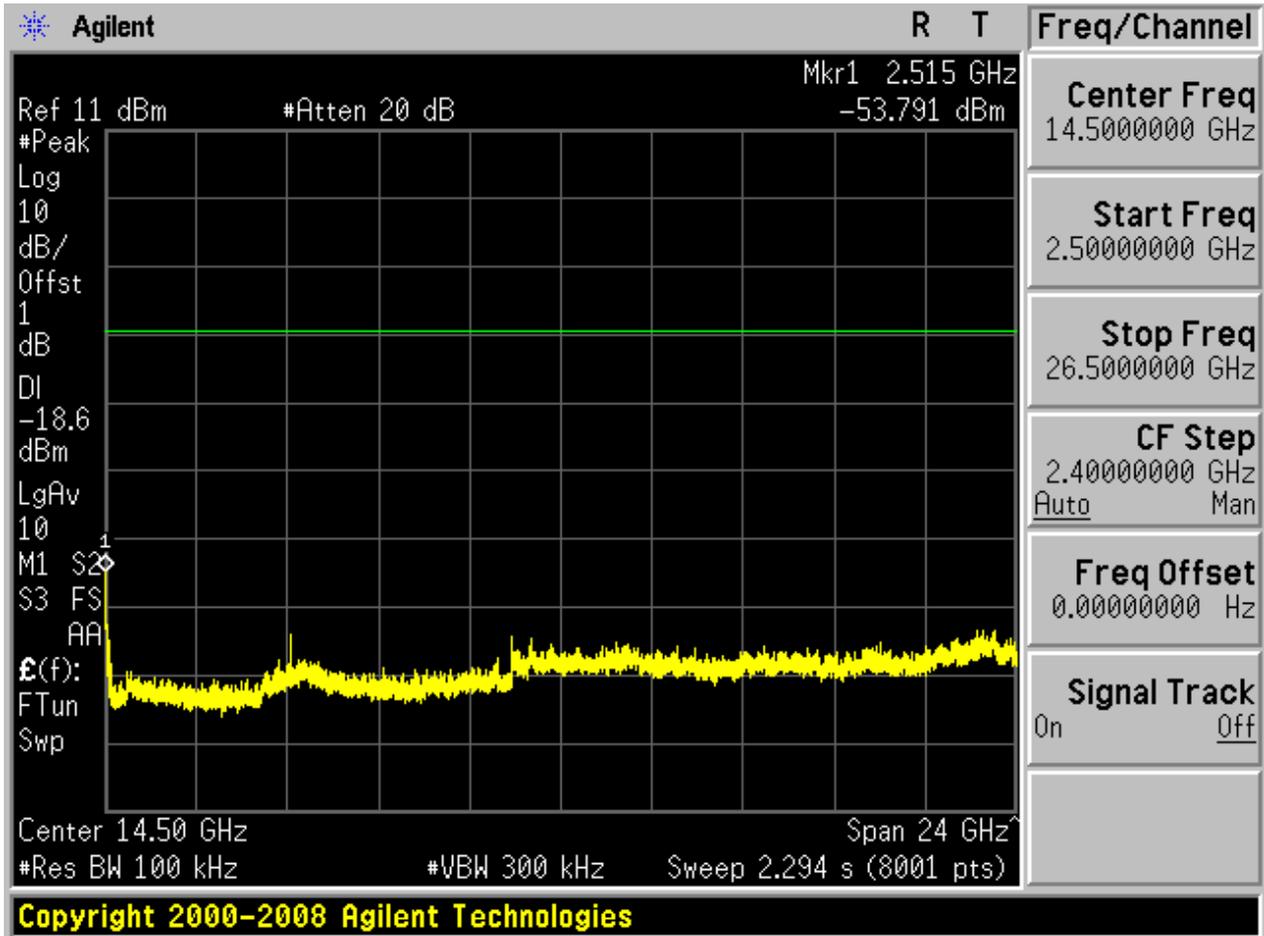








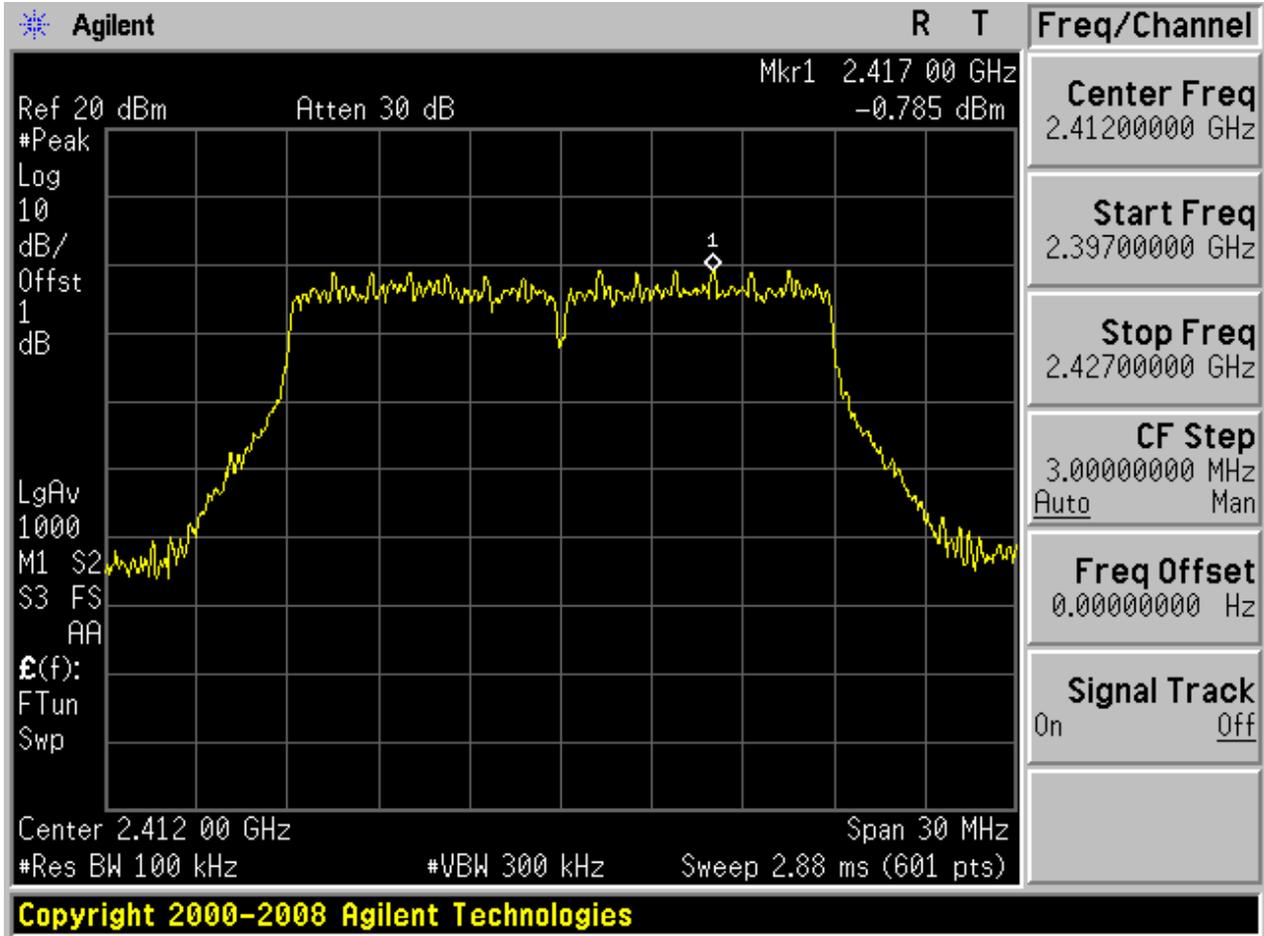






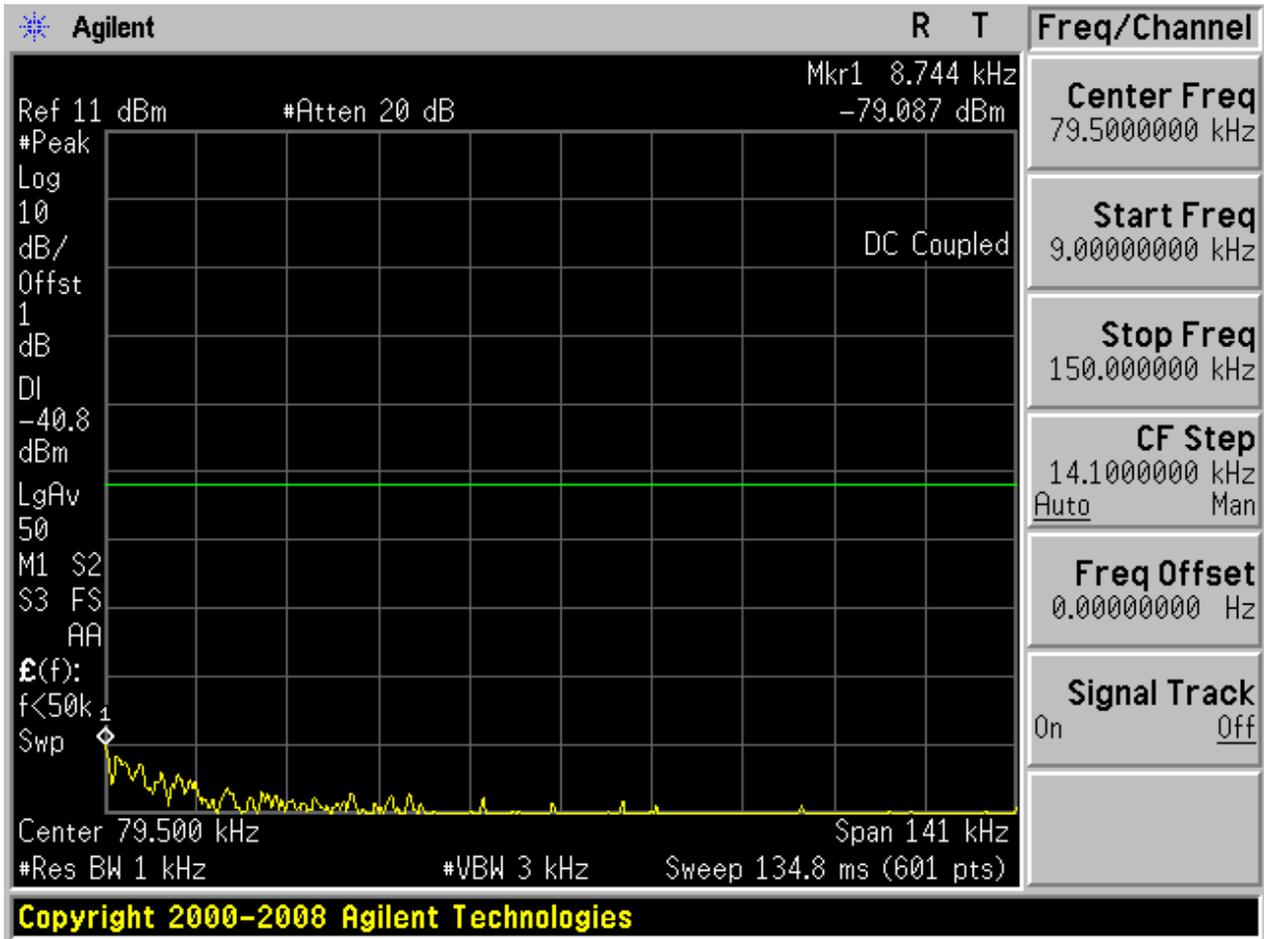
2.7 11N20_L

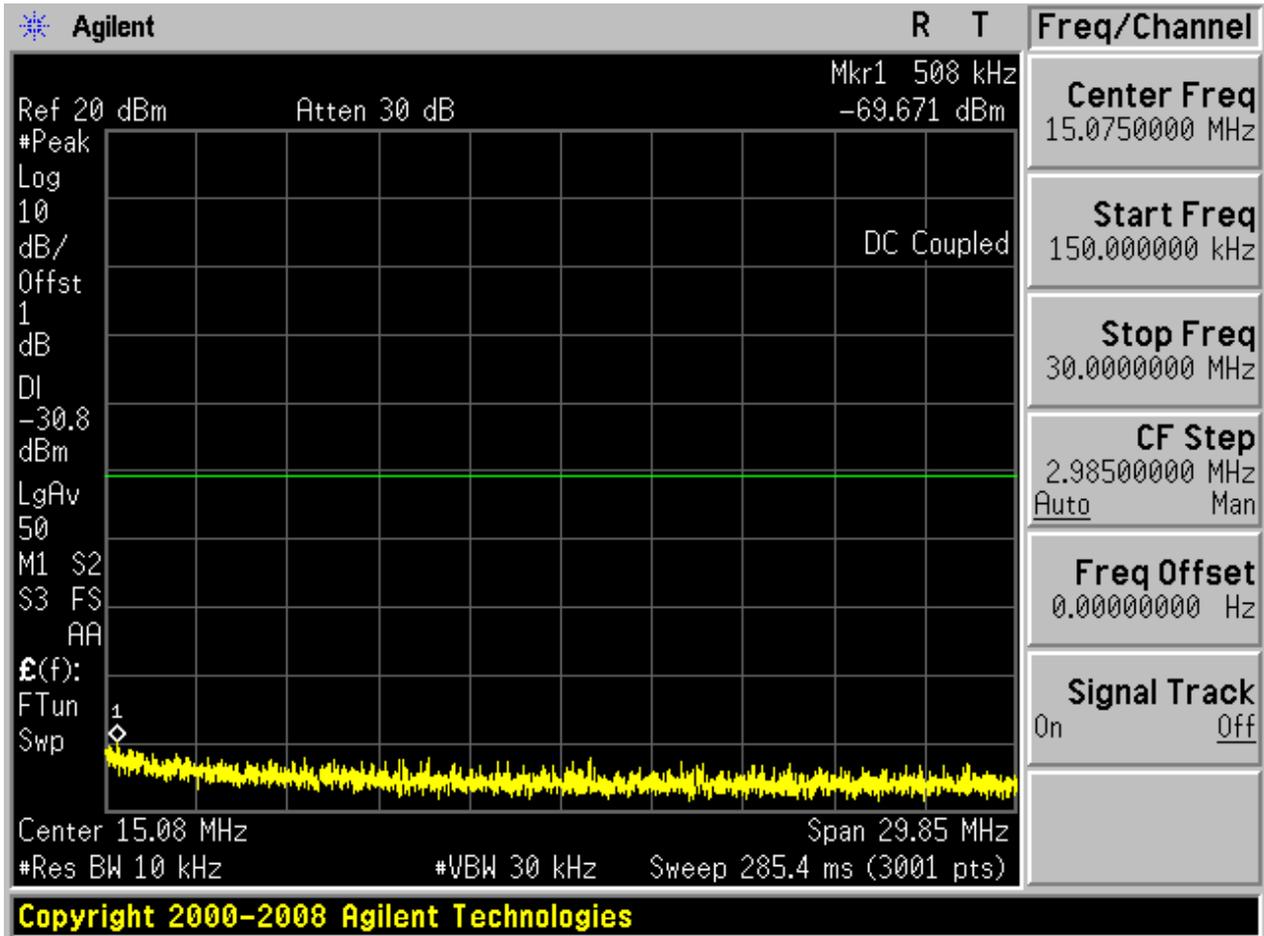
Pref:

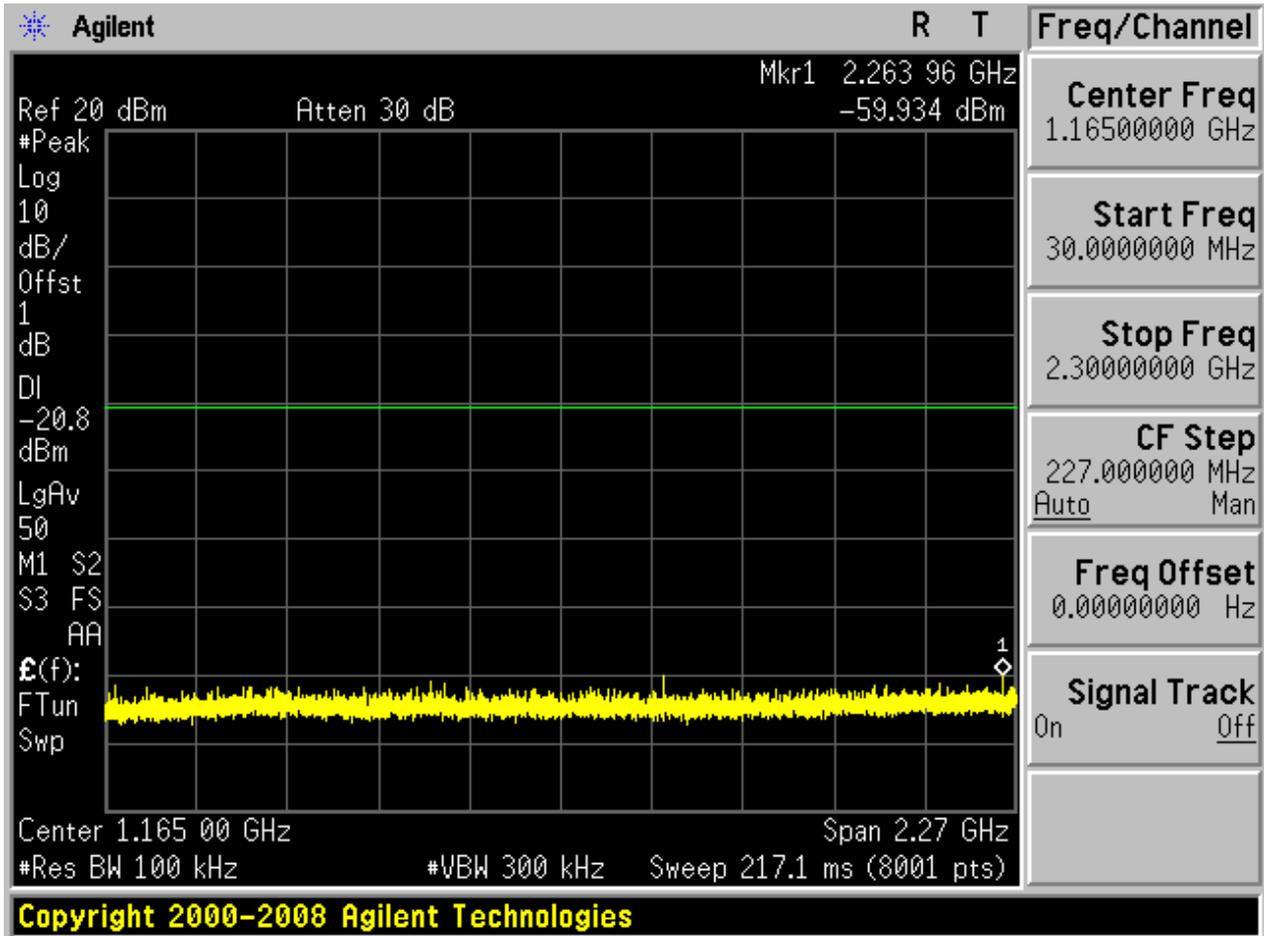


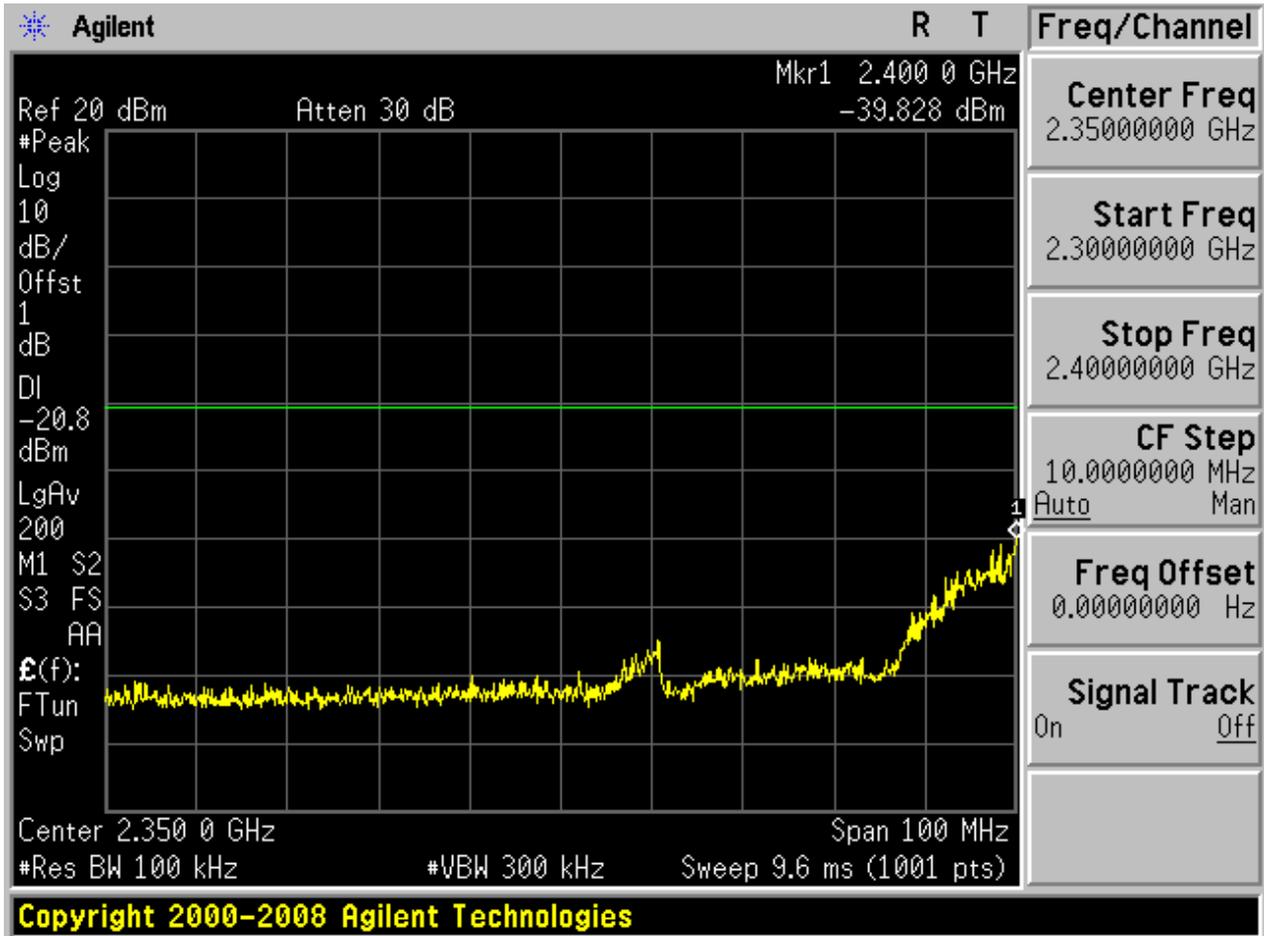


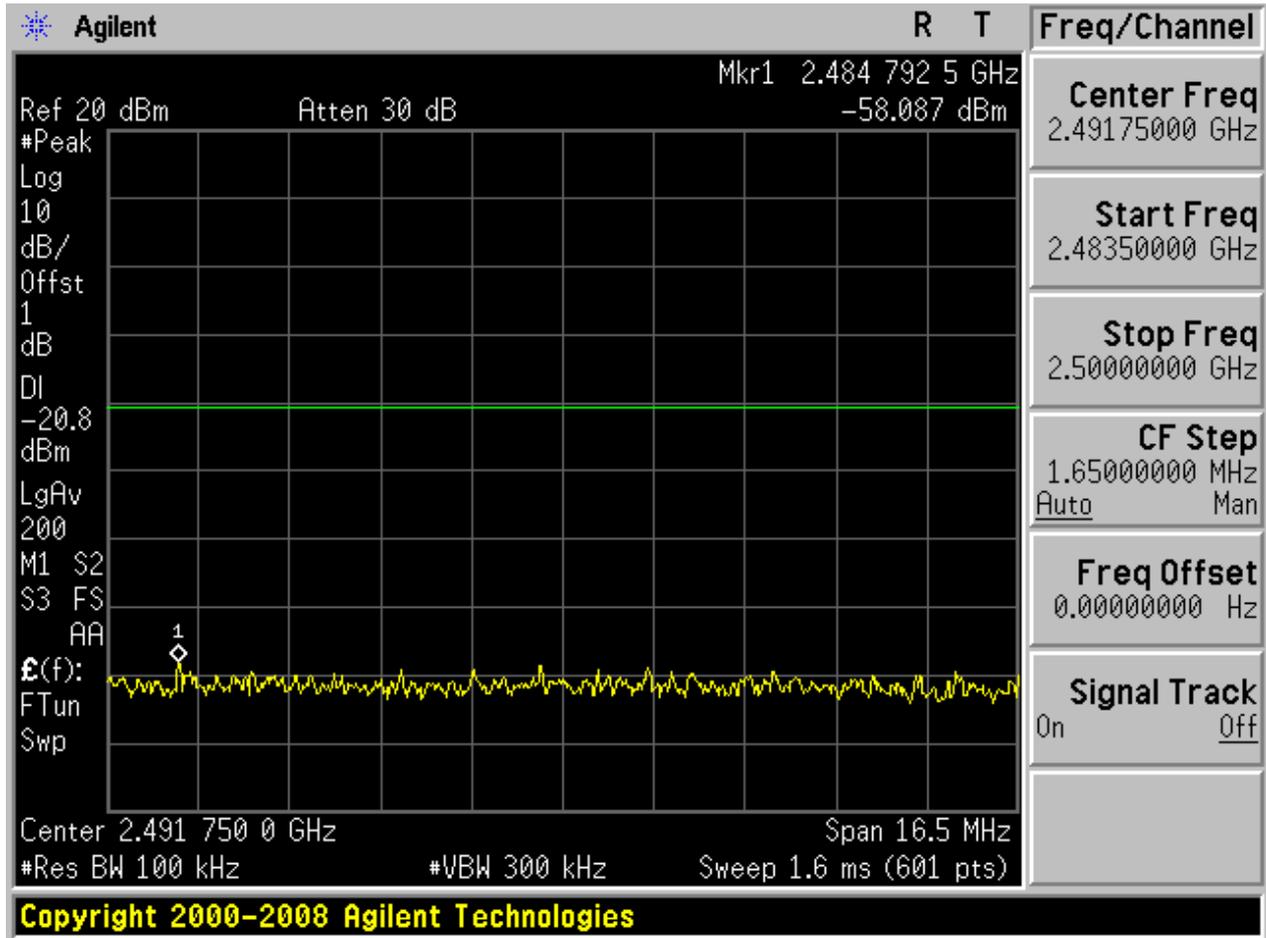
Puw:



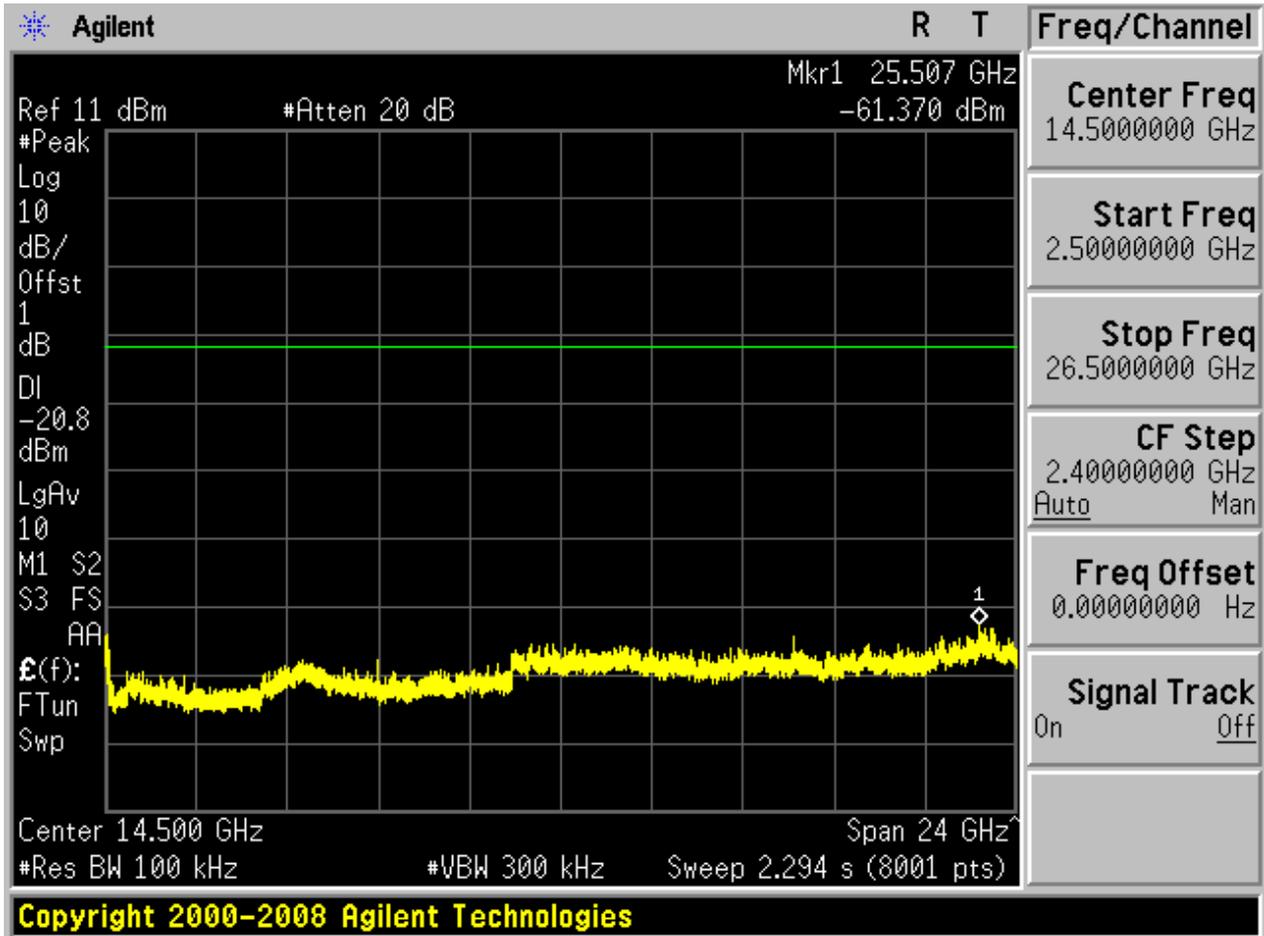








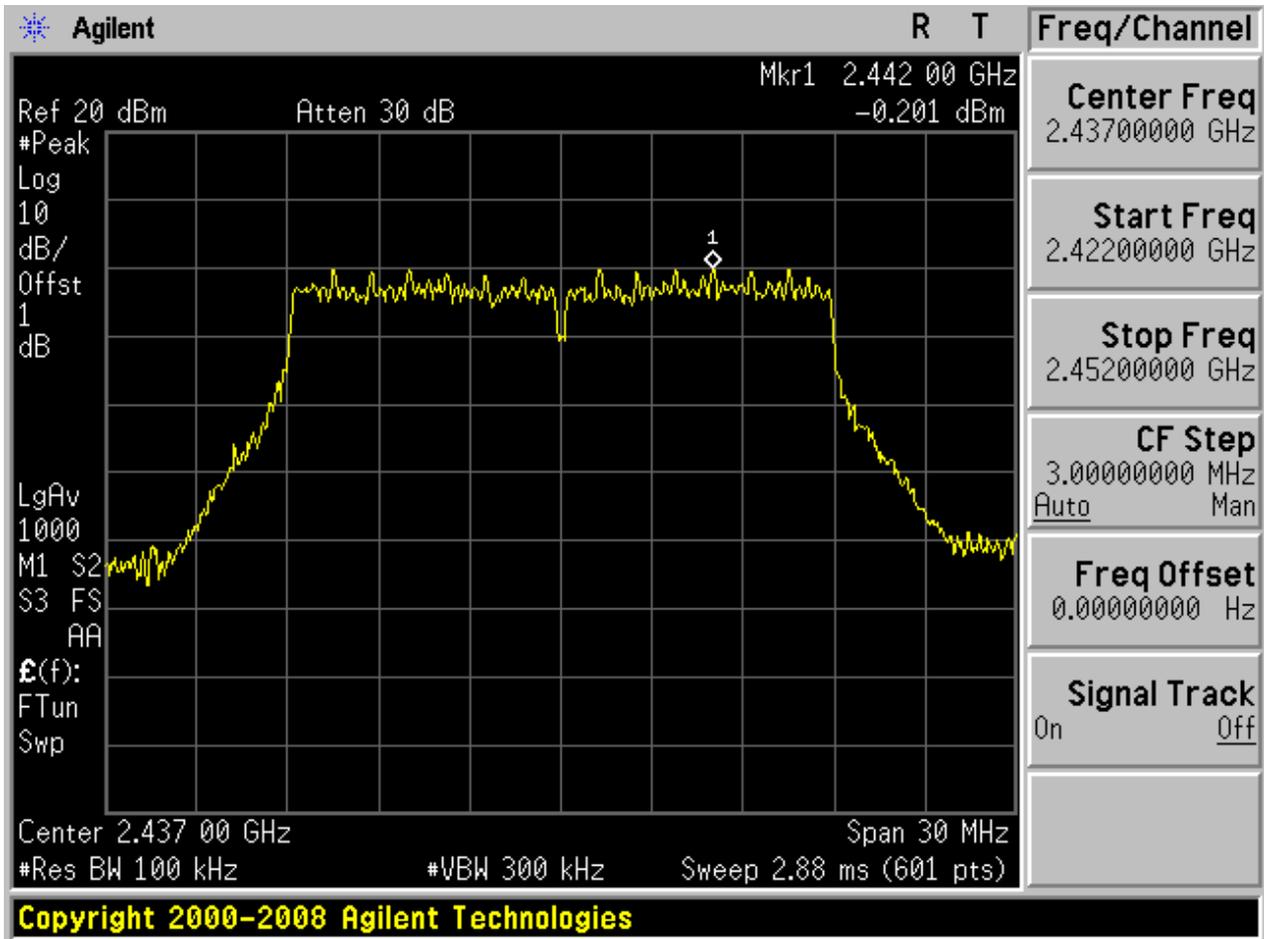
Copyright 2000-2008 Agilent Technologies





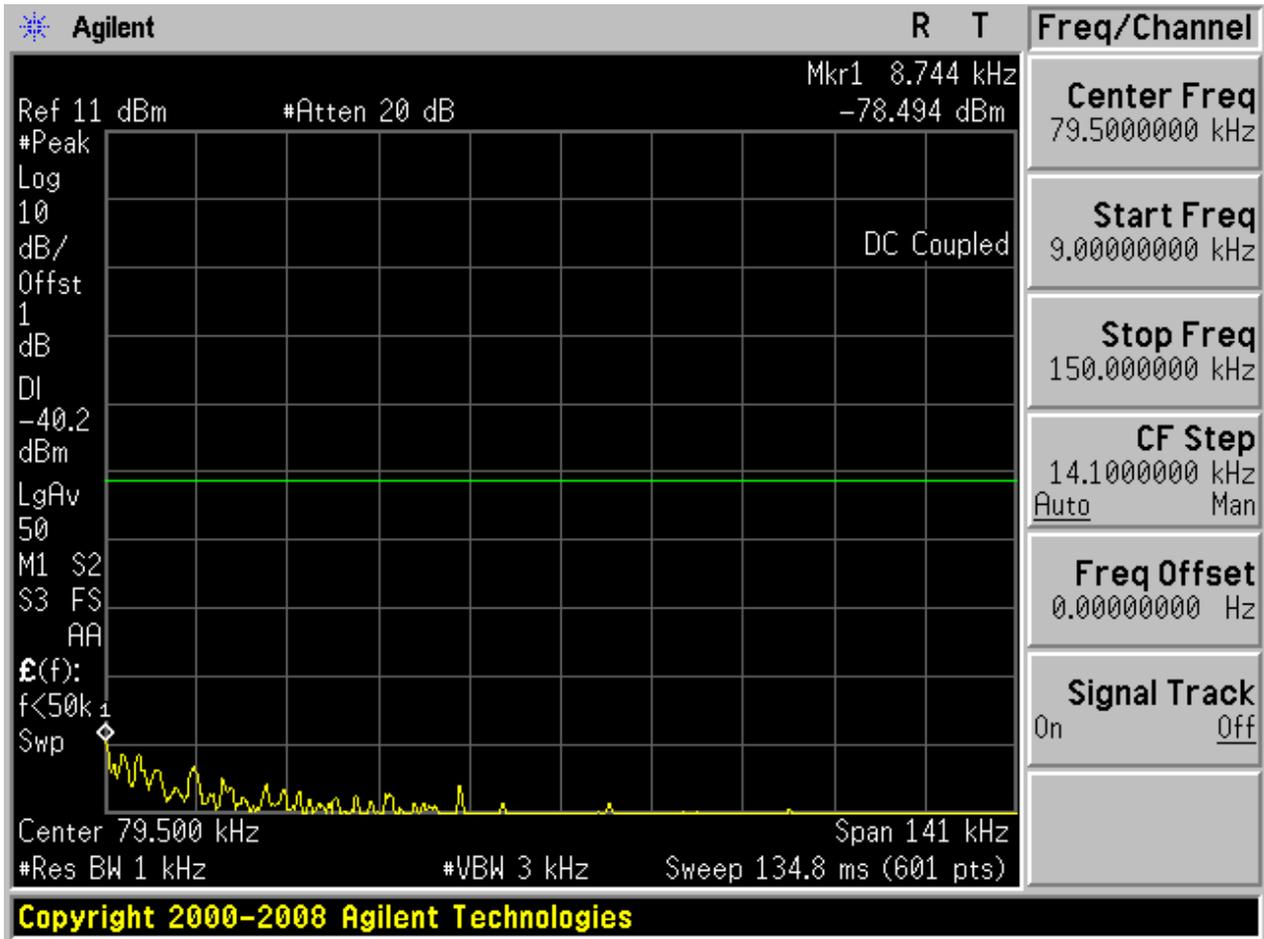
2.8 11N20_M

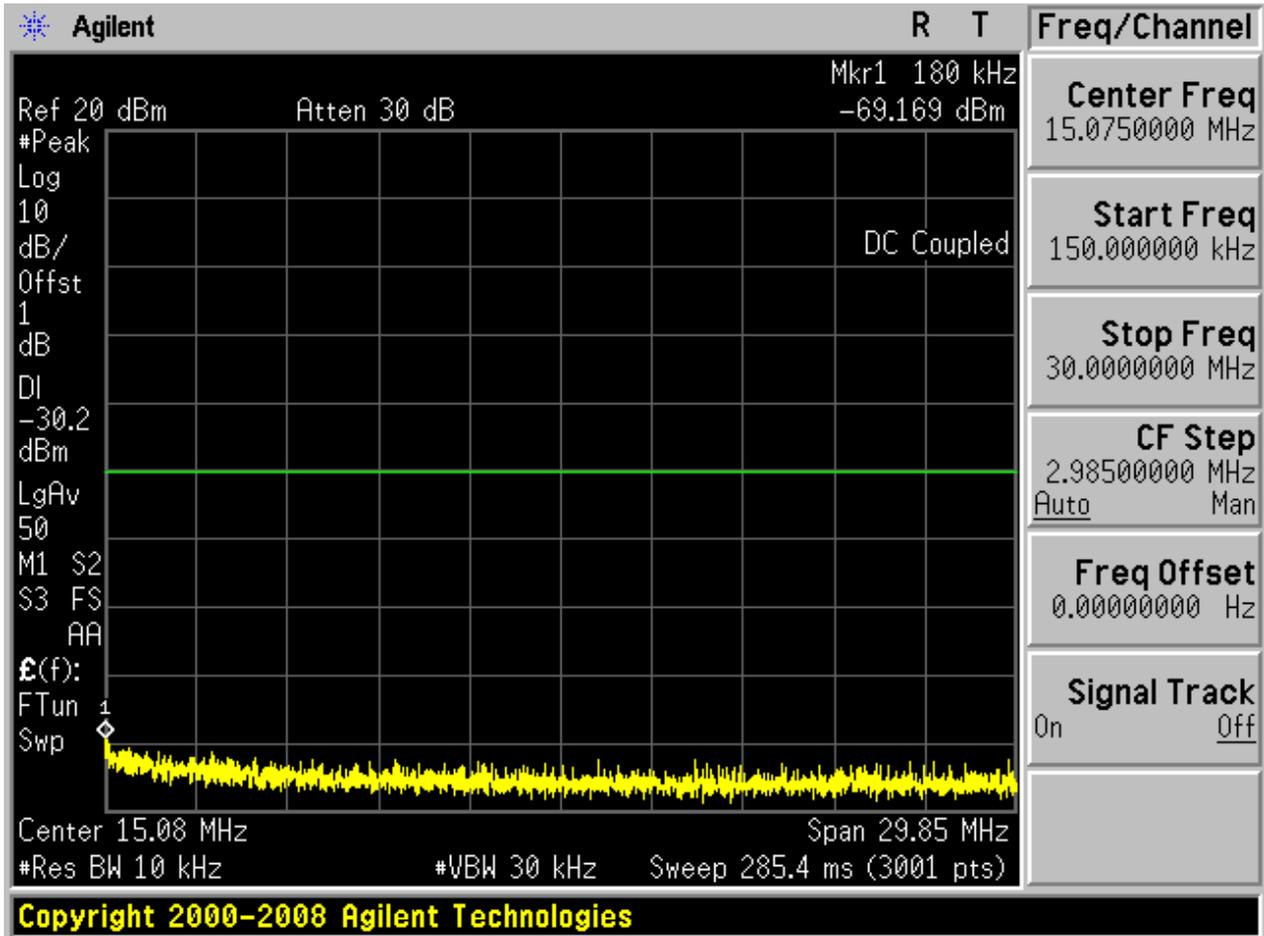
Pref:

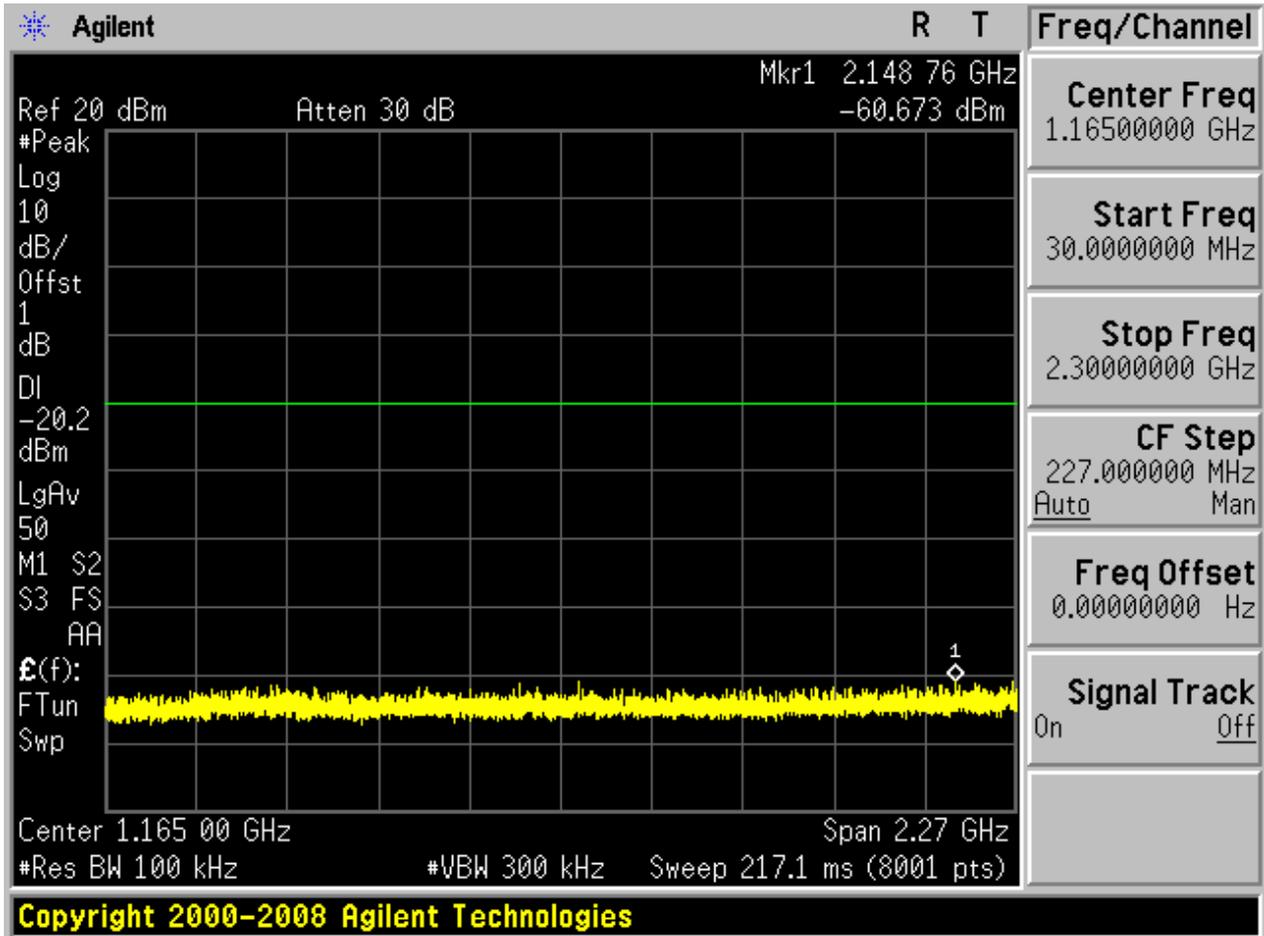


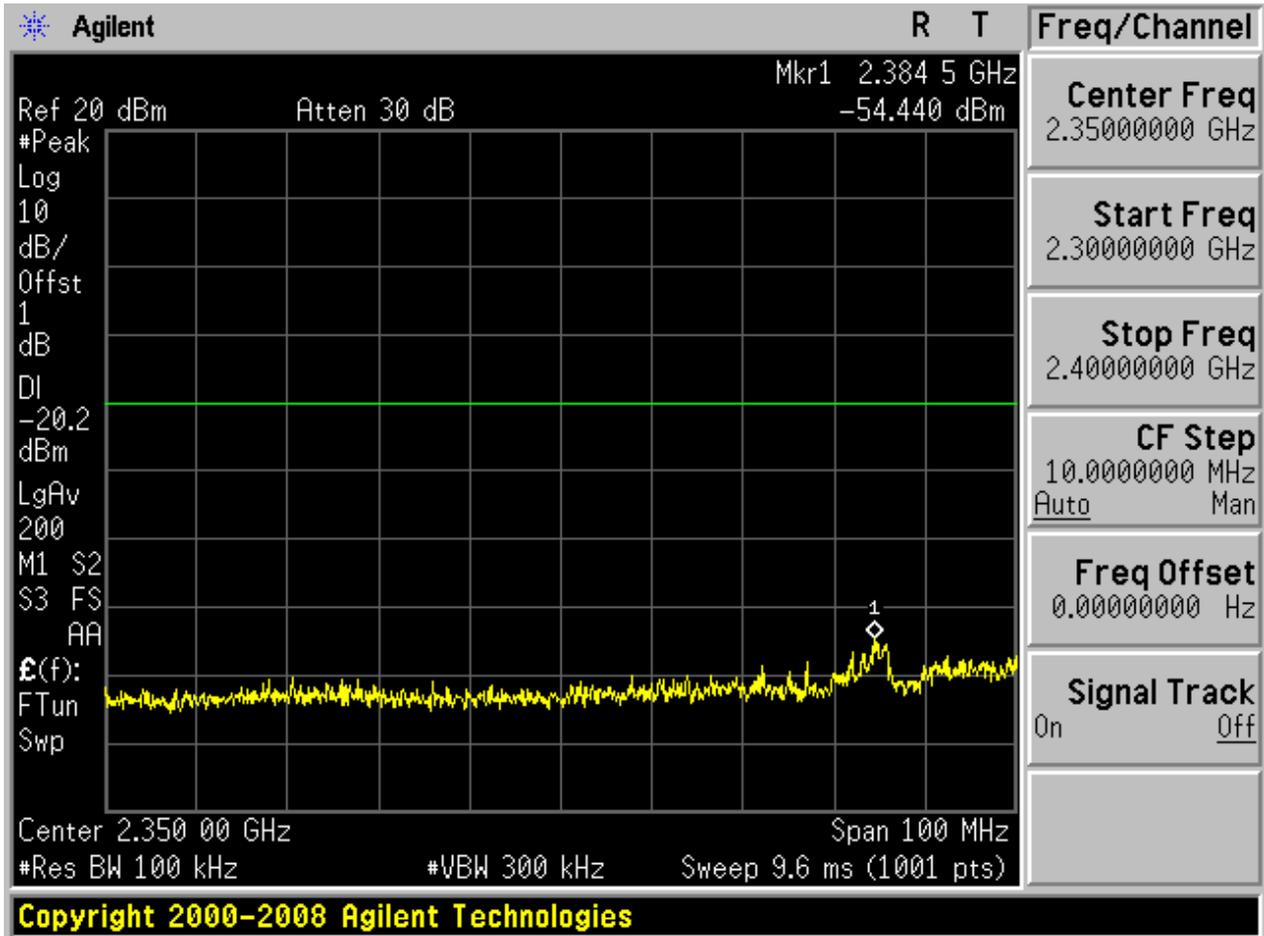


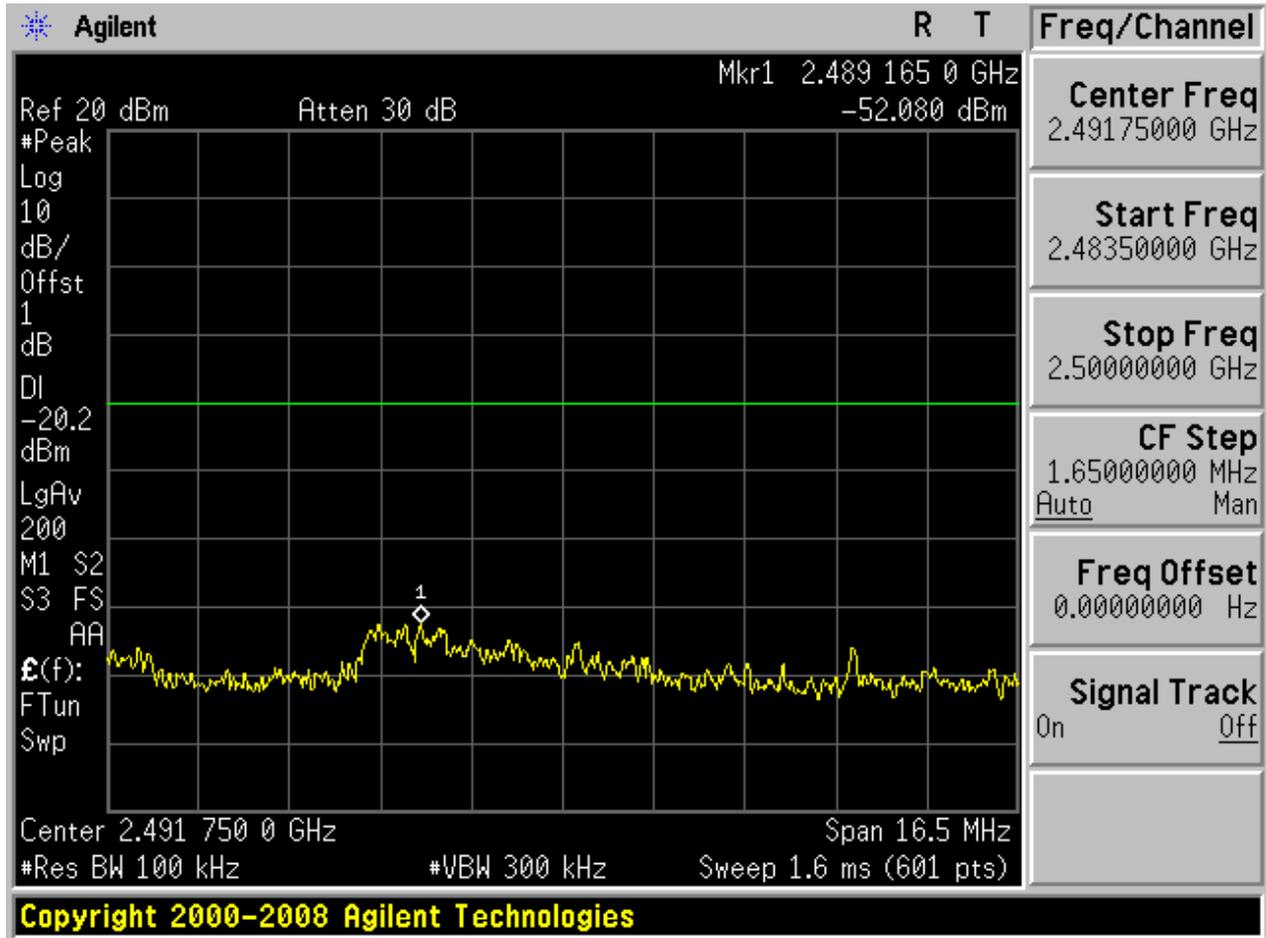
Puw:

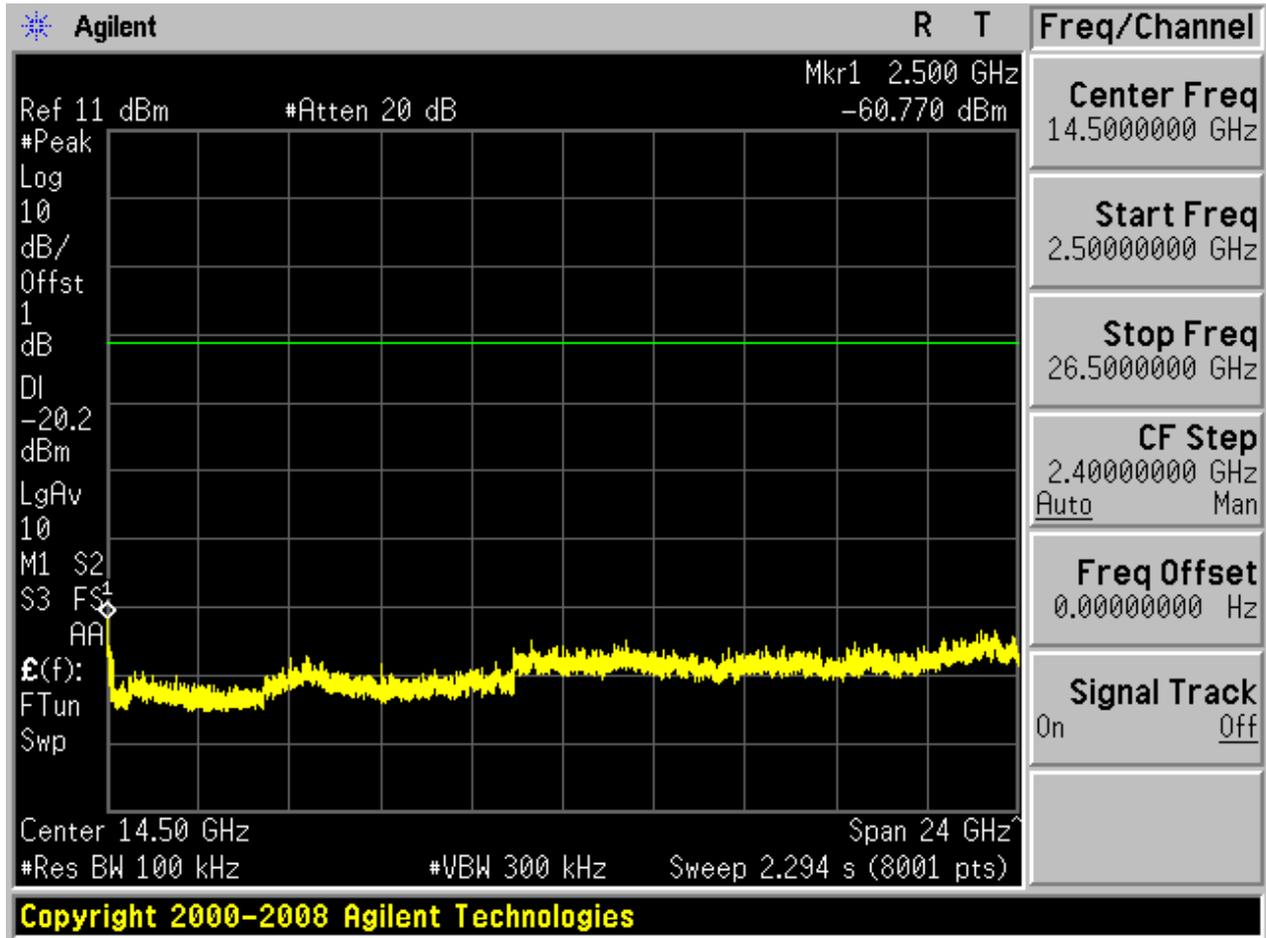






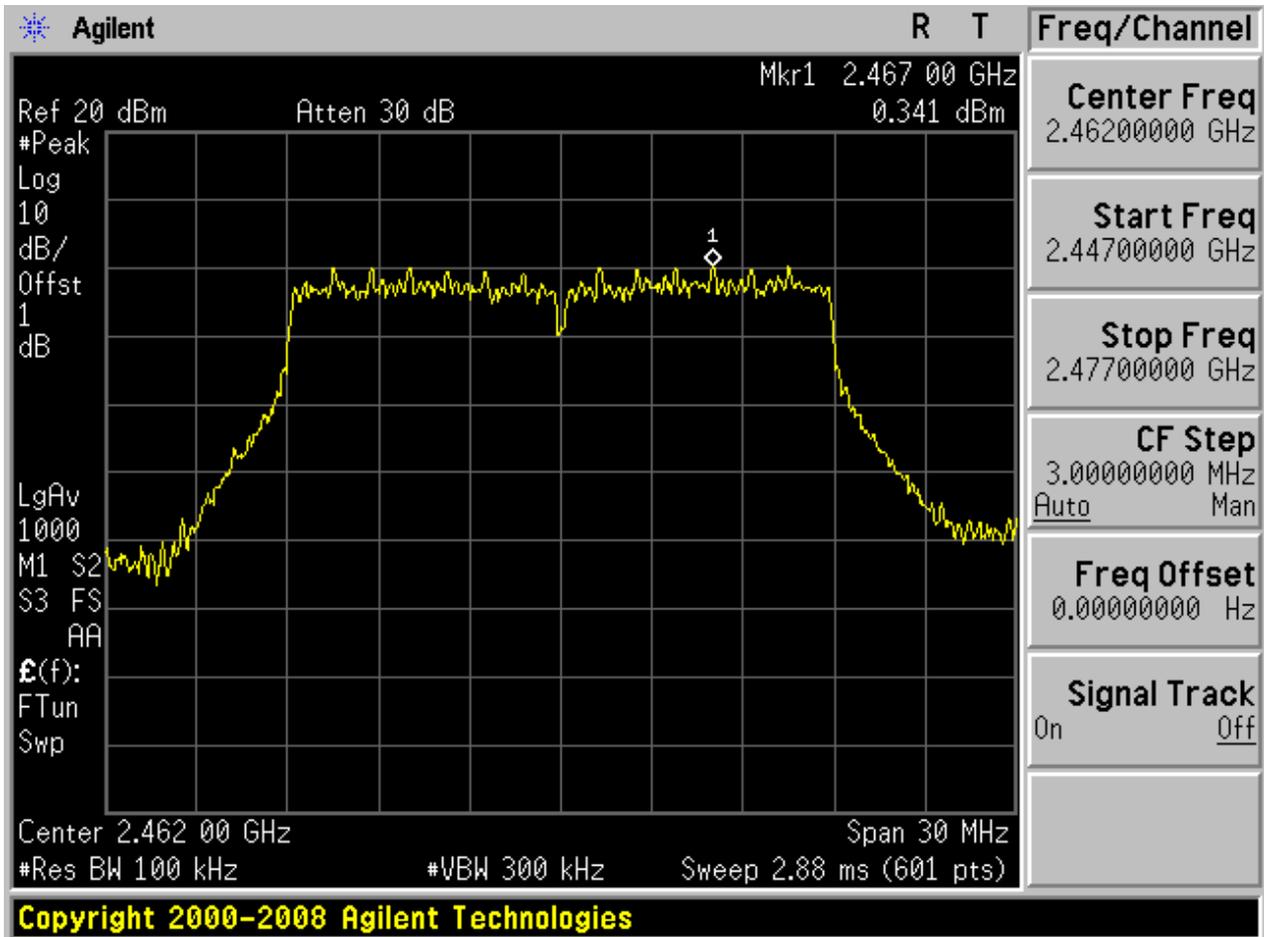






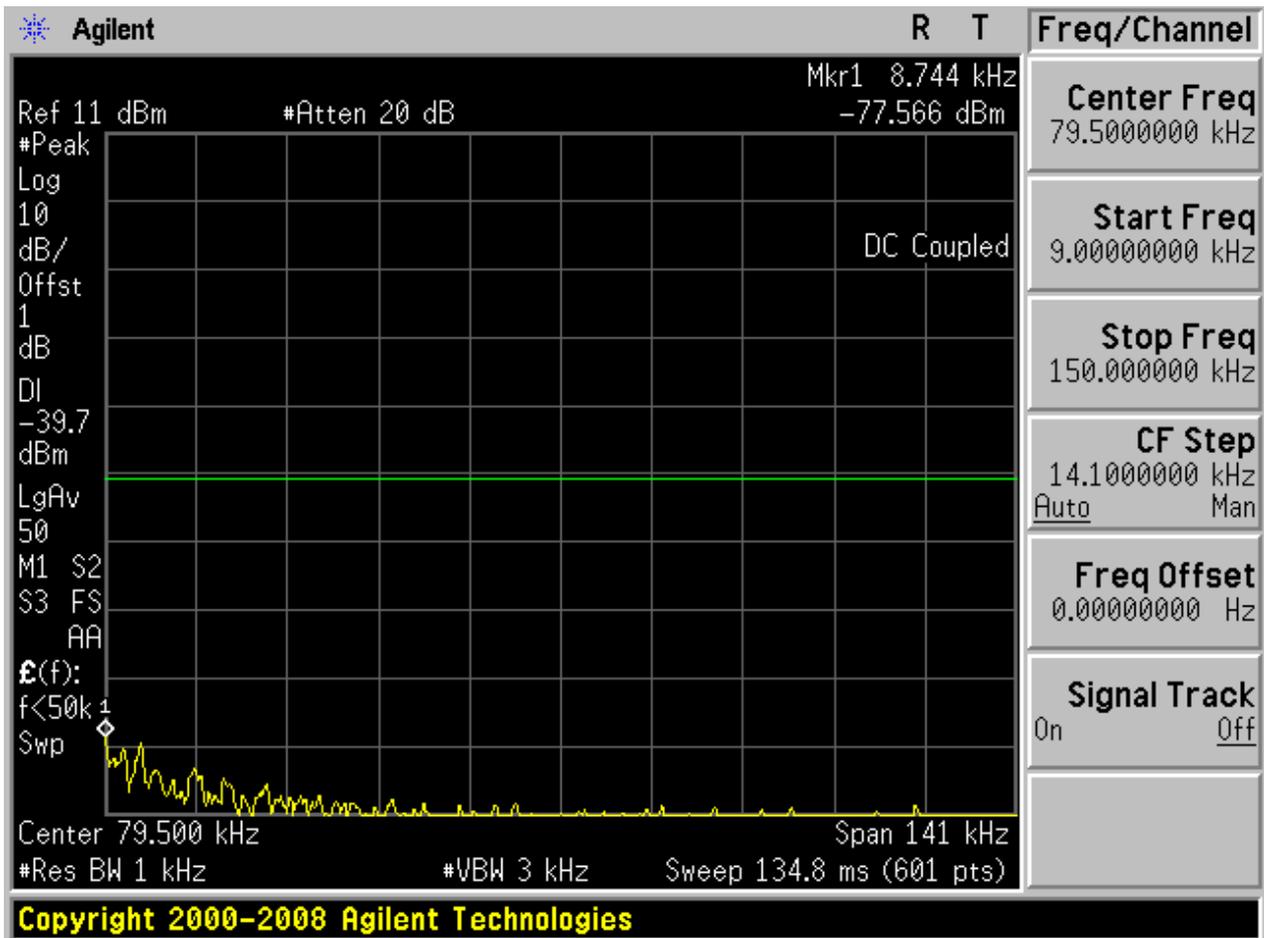
2.9 11N20_H

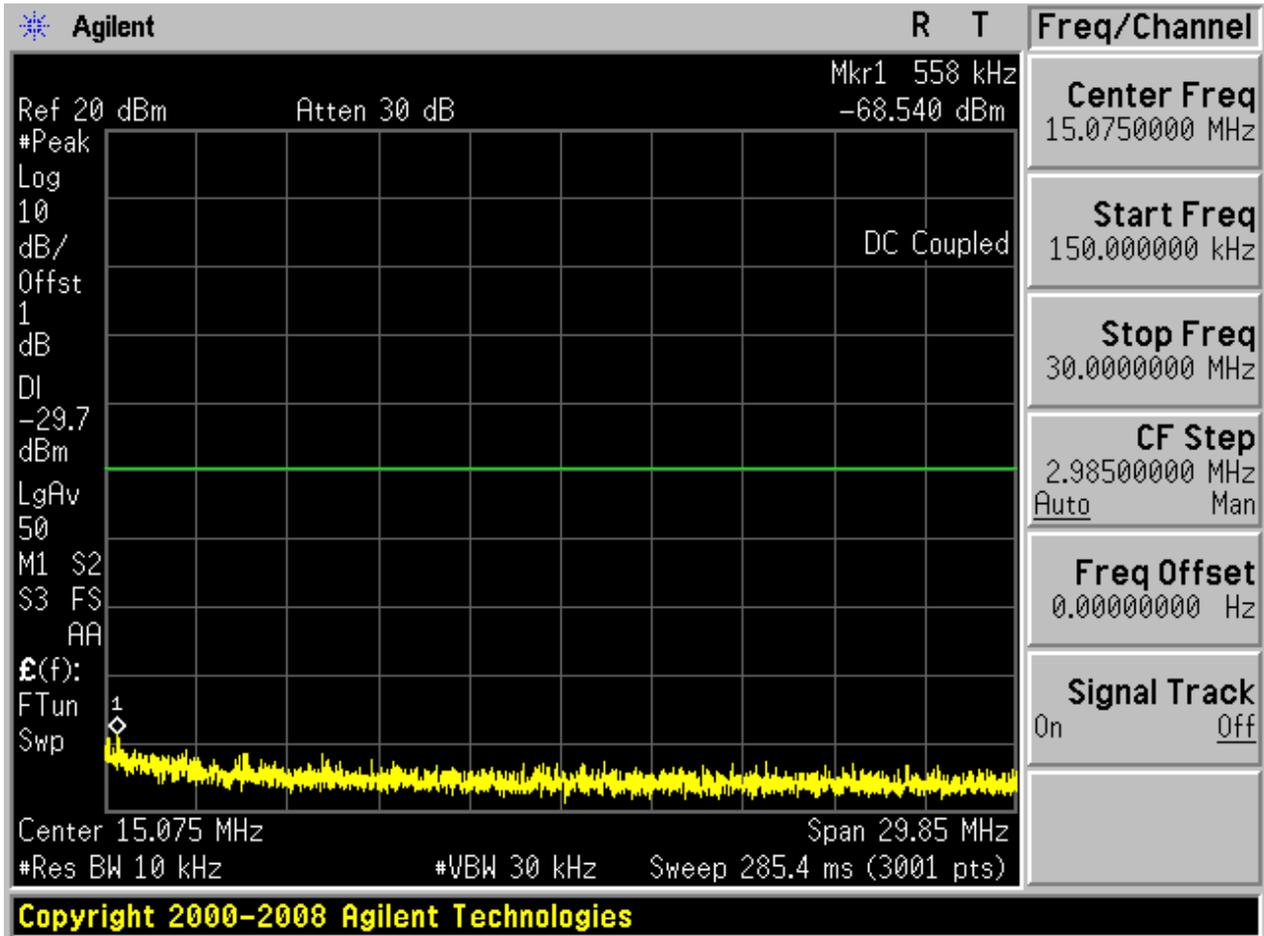
Pref:

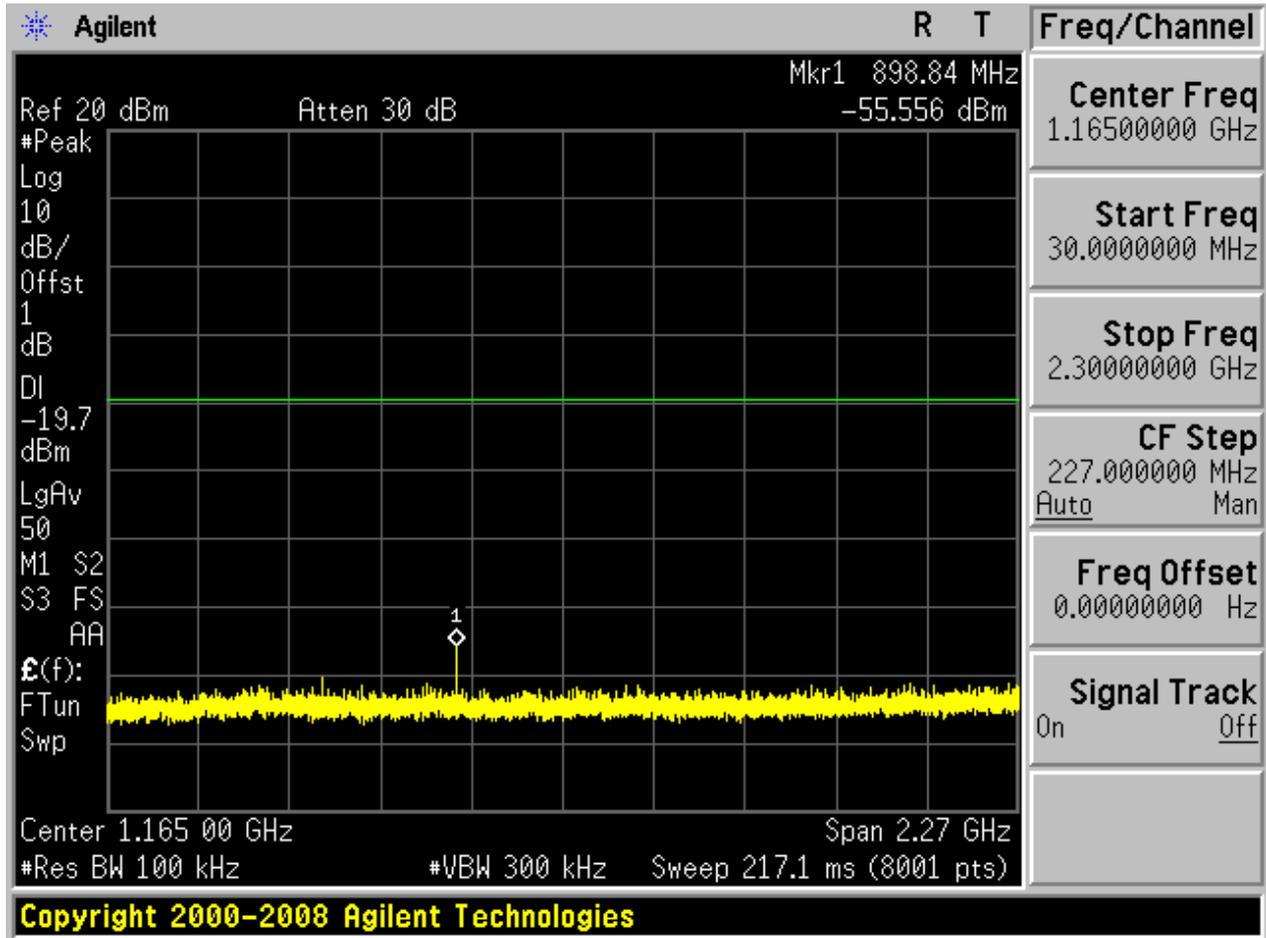


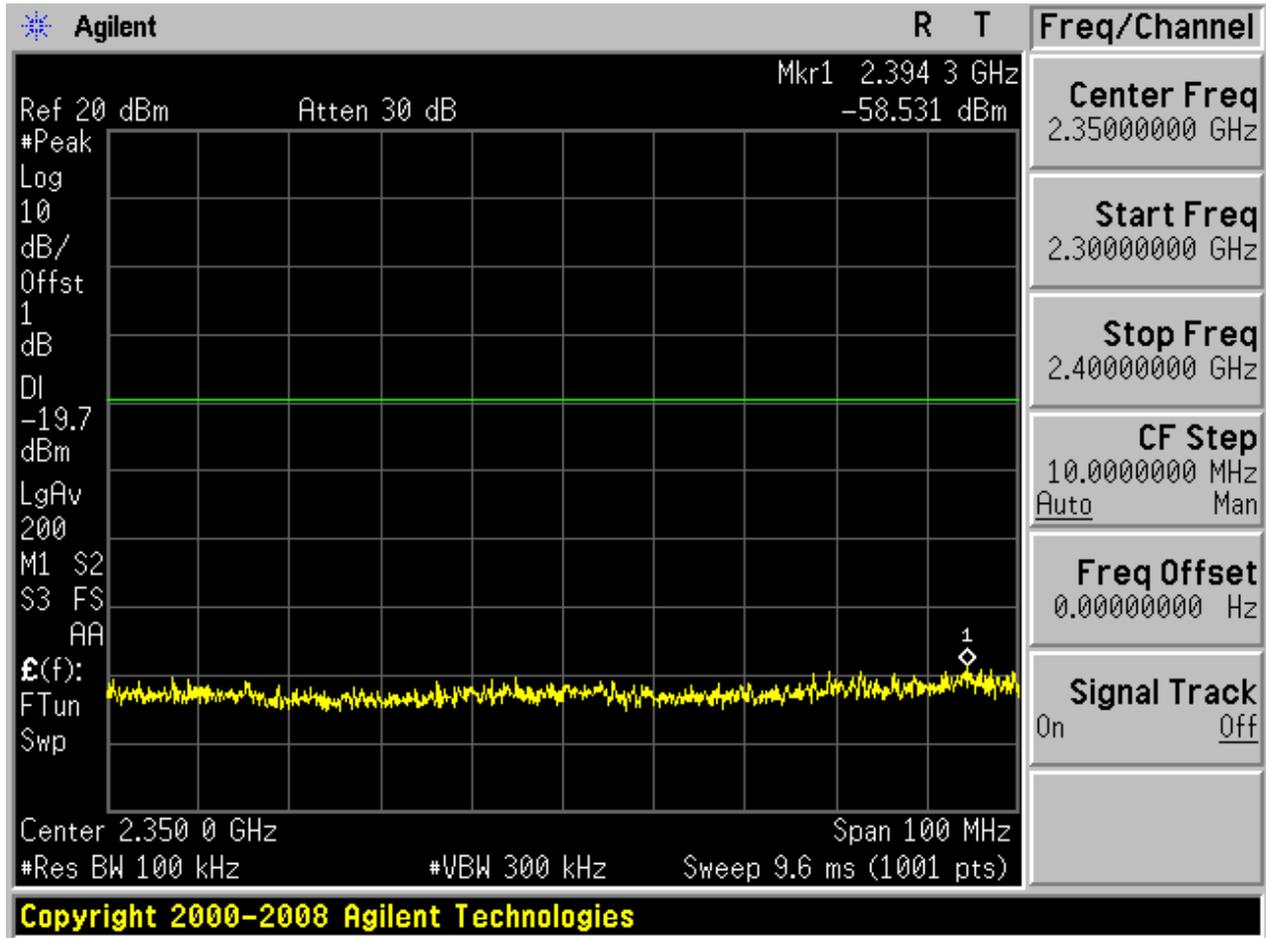


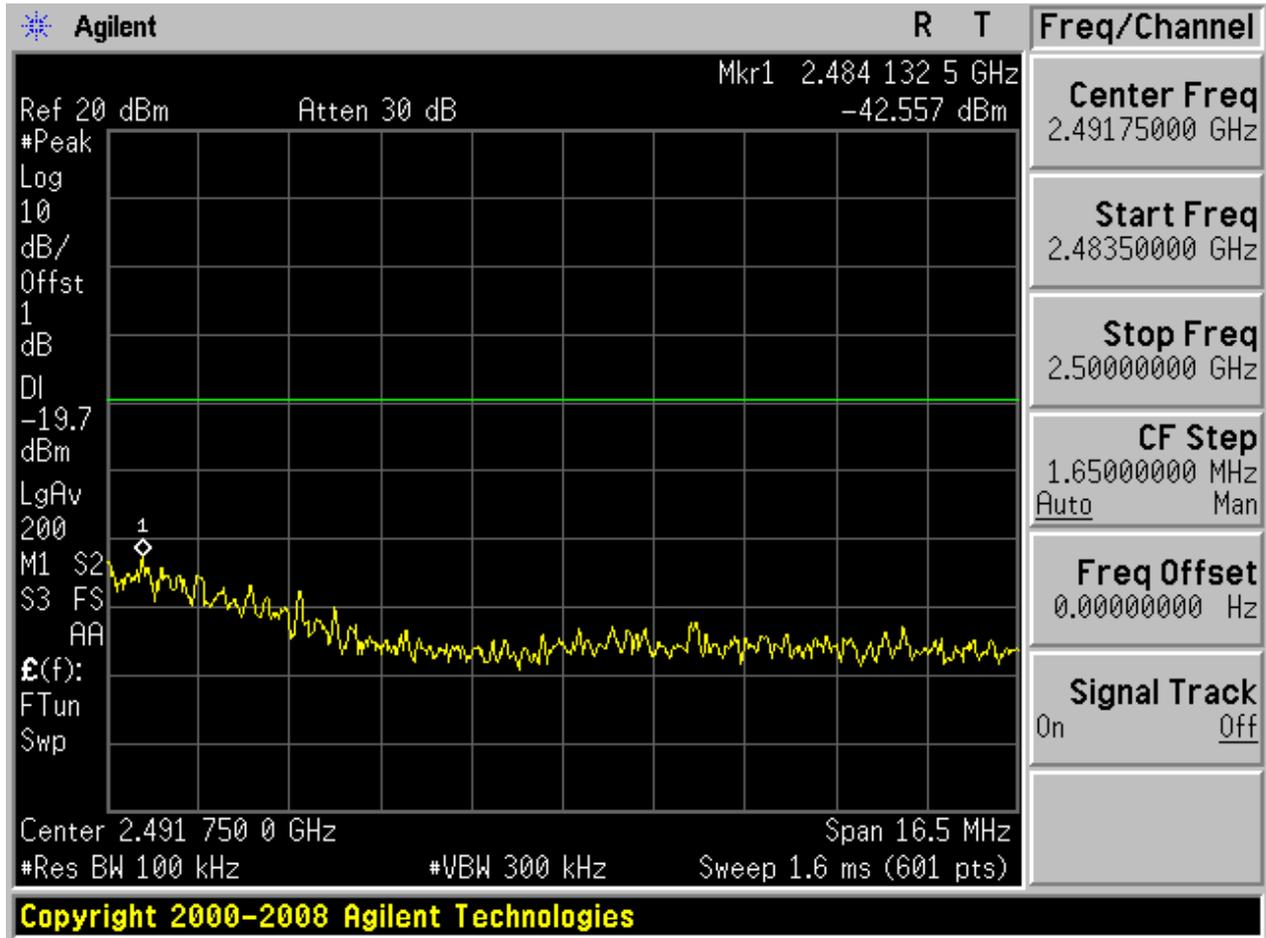
Puw:

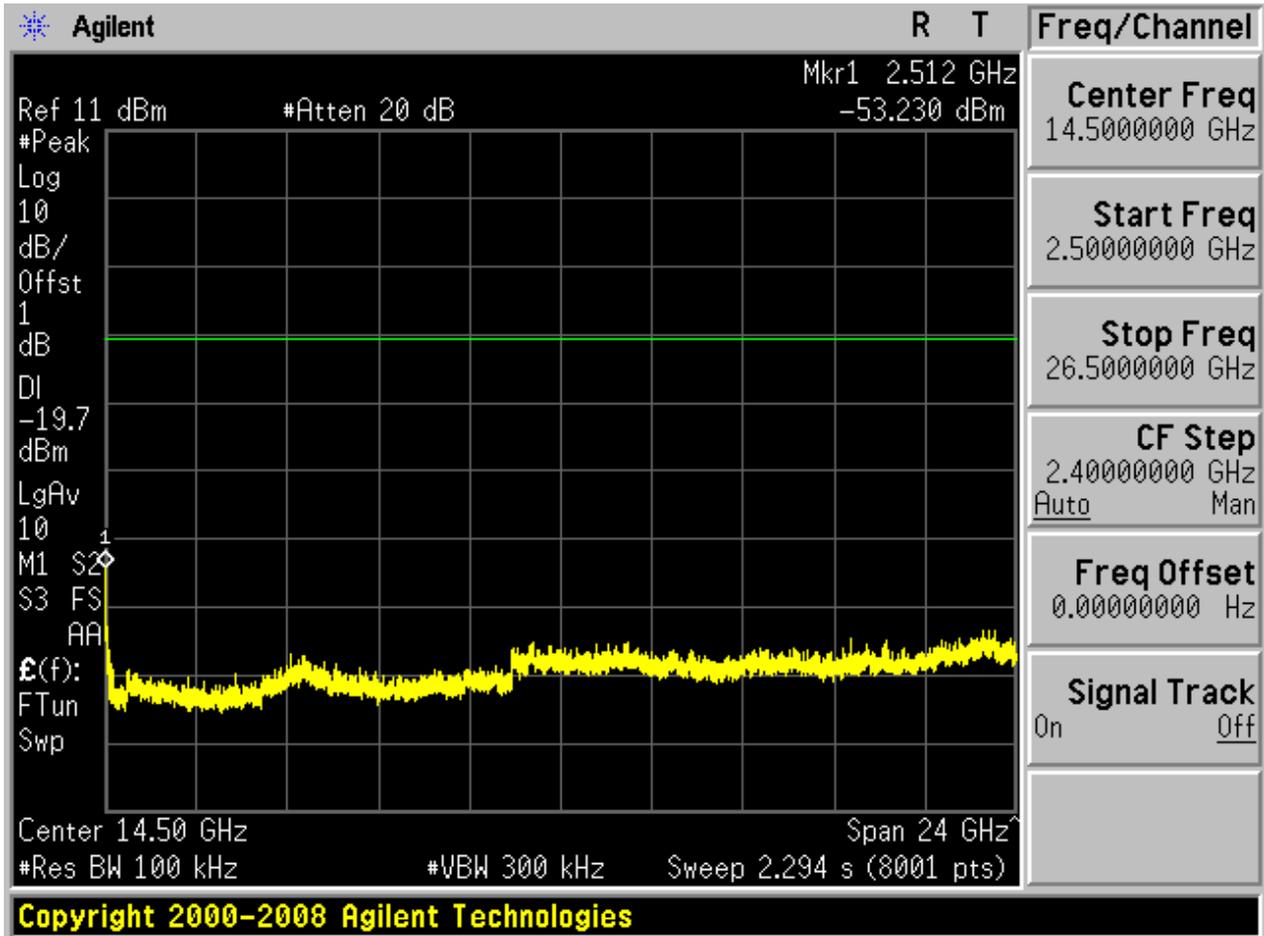












Appendix F: Radiated Spurious Emission & Spurious in Restricted Band

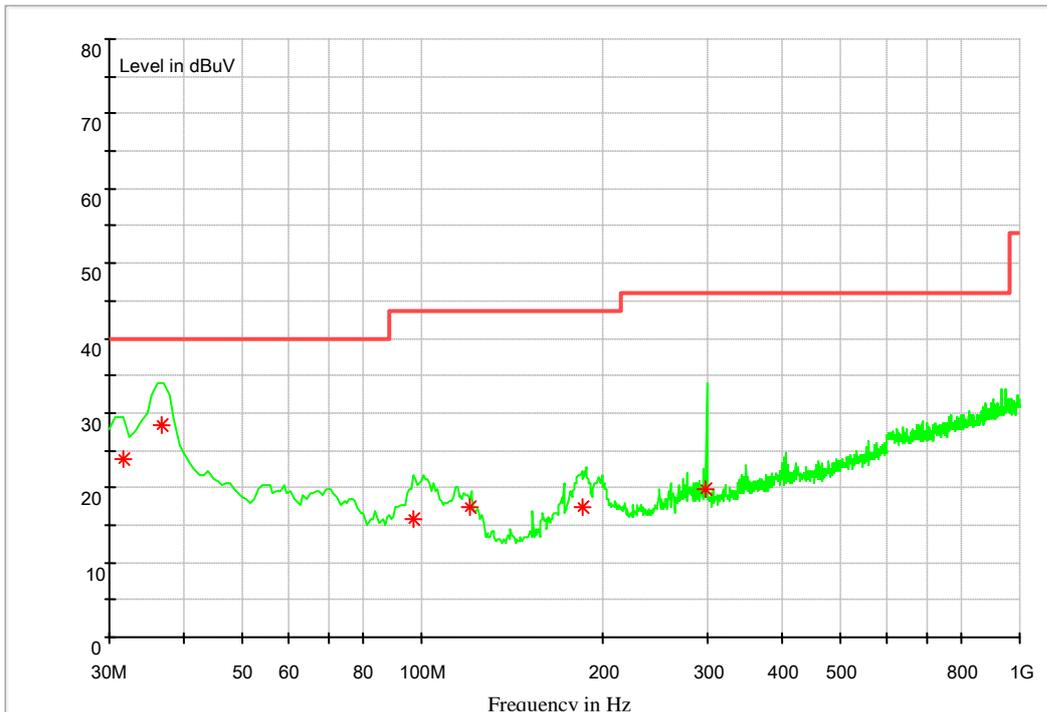
Note: Below 1GHz, RBW = 100 kHz, VBW = 300 kHz.

Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

The simultaneous transmission has been considered

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).**

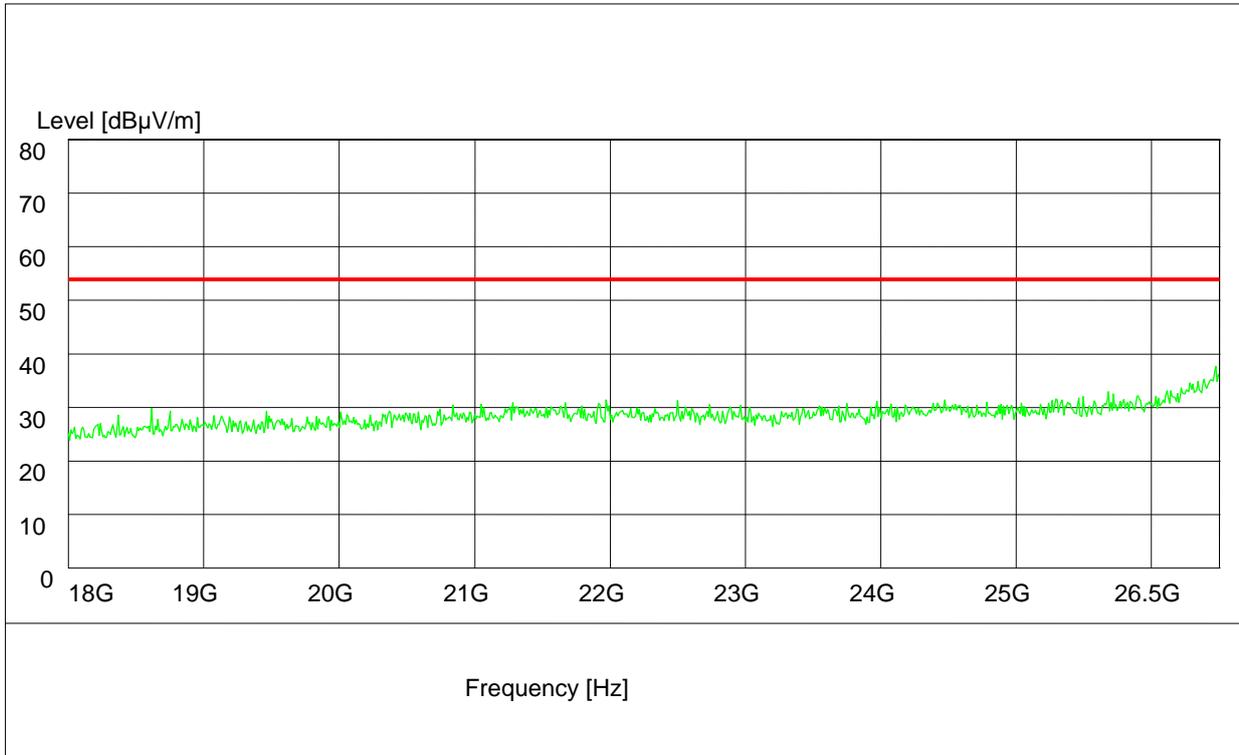


MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBμV/m	Transducer dB	Limit dBμV/m	Margin dB	Height cm	Azimuth deg	Polarisation
31.707264	23.9	14.1	40.0	16.1	100.0	353.0	VERTICAL
36.632640	28.2	14.8	40.0	11.8	100.0	16.0	VERTICAL
96.599680	15.9	13.1	43.5	27.6	400.0	193.0	VERTICAL
120.102720	17.5	11.8	43.5	26.0	278.0	303.0	HORIZONTAL
186.033280	17.4	12.1	43.5	26.1	172.0	250.0	HORIZONTAL
299.210880	19.8	15.5	46.0	26.2	100.0	96.0	HORIZONTAL

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

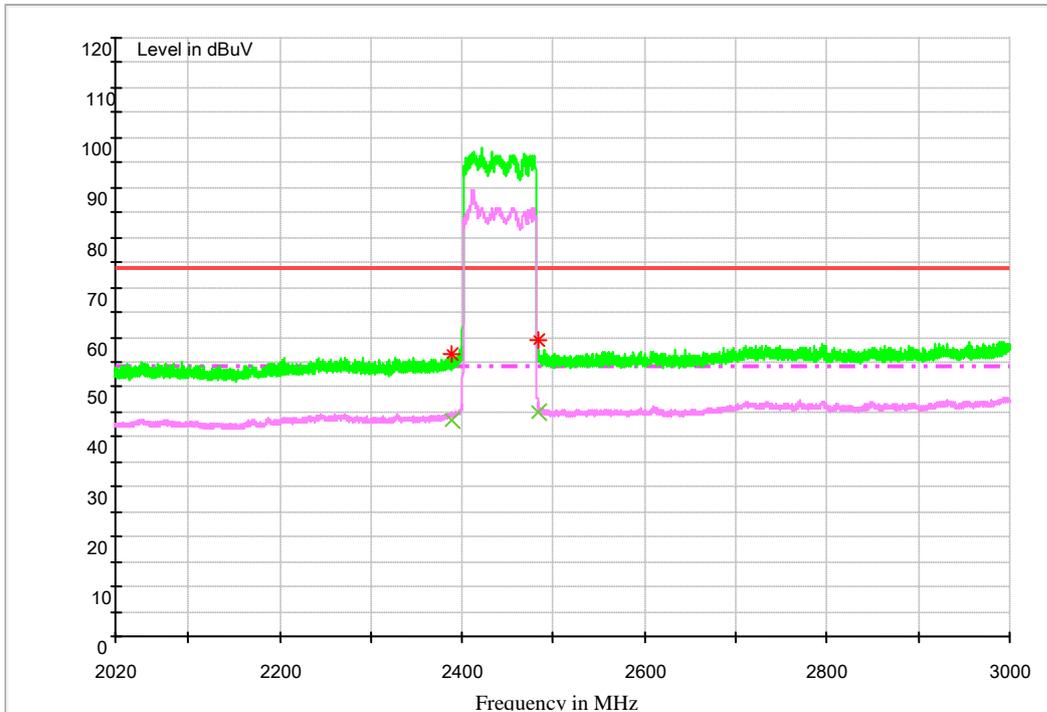
Note: No peak found in pre- test.

**Part 3: Testing Range of “2.3GHz to 2.5GHz”**

- Note 1: The testing range of “2.3 GHz to 2.5 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 dB μ V/m) and Average Limit (54 dB μ V/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.

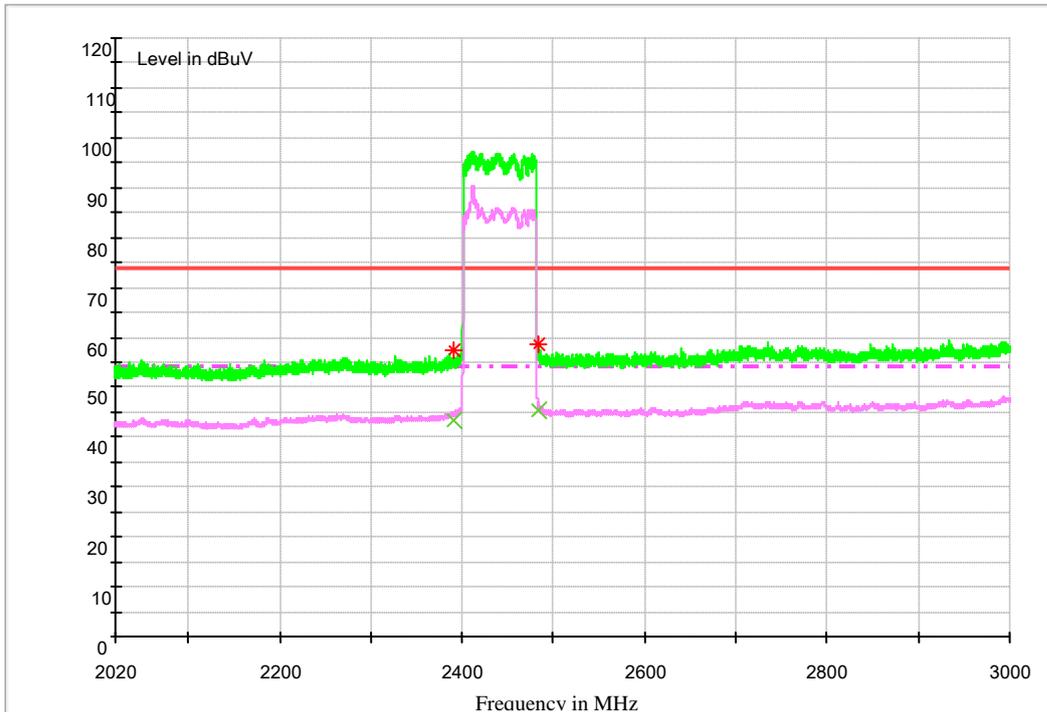
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	56.7	38.3	74.0	17.3	100.0	45.0	HORIZONTAL
2483.500000	59.3	40.7	74.0	14.7	100.0	197.0	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.2	38.3	54.0	10.8	100.0	282.0	VERTICAL
2483.500000	45.1	40.7	54.0	8.9	100.0	197.0	VERTICAL

Channel 11



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

MEASUREMENT RESULT: PK Detector

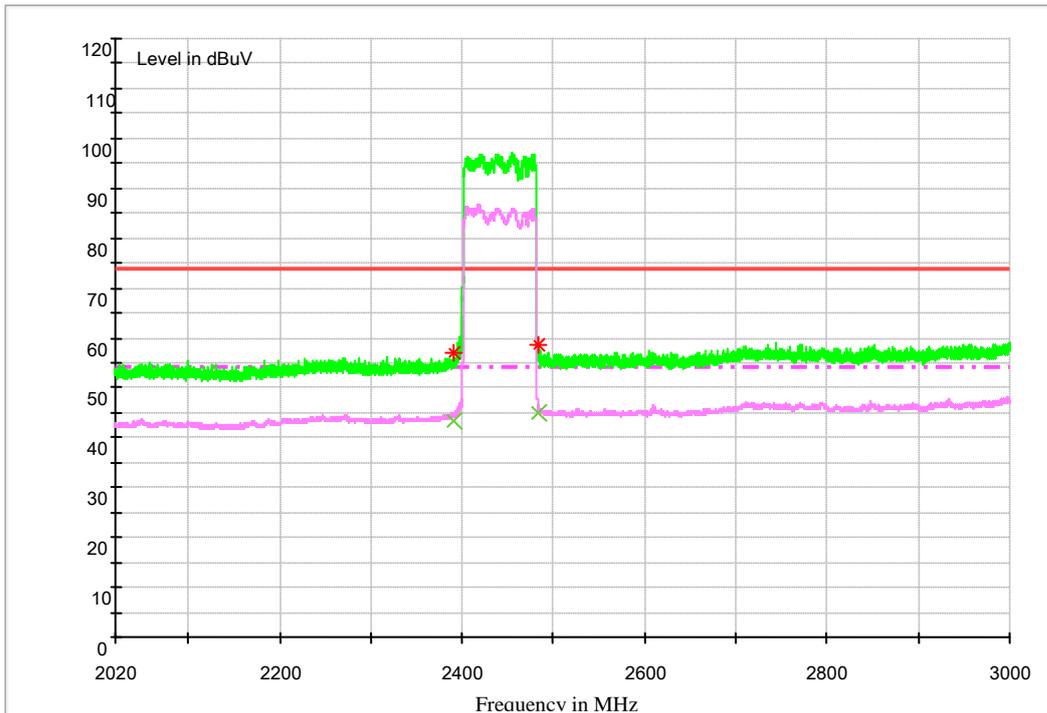
Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	57.4	38.3	74.0	16.6	121.0	45.0	VERTICAL
2483.500000	58.5	40.2	74.0	15.5	100.0	231.0	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.2	38.3	54.0	10.8	100.0	18.0	HORIZONTAL
2483.500000	45.2	40.8	54.0	8.8	100.0	0.0	HORIZONTAL

Test Mode: 11g

Channel 01



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

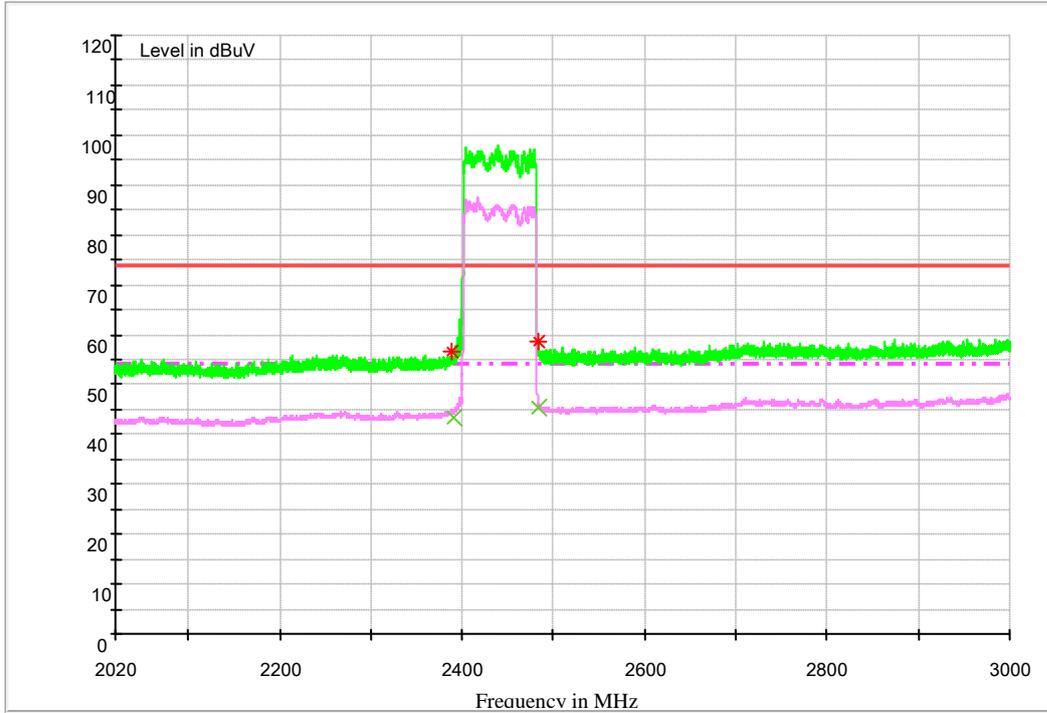
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	57.0	38.3	74.0	17.0	120.0	45.0	HORIZONTAL
2483.500000	58.8	40.8	74.0	15.2	100.0	250.0	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.2	38.3	54.0	10.8	100.0	0.0	HORIZONTAL
2483.500000	45.1	40.6	54.0	8.9	100.0	283.0	HORIZONTAL

Channel 11



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

MEASUREMENT RESULT: PK Detector

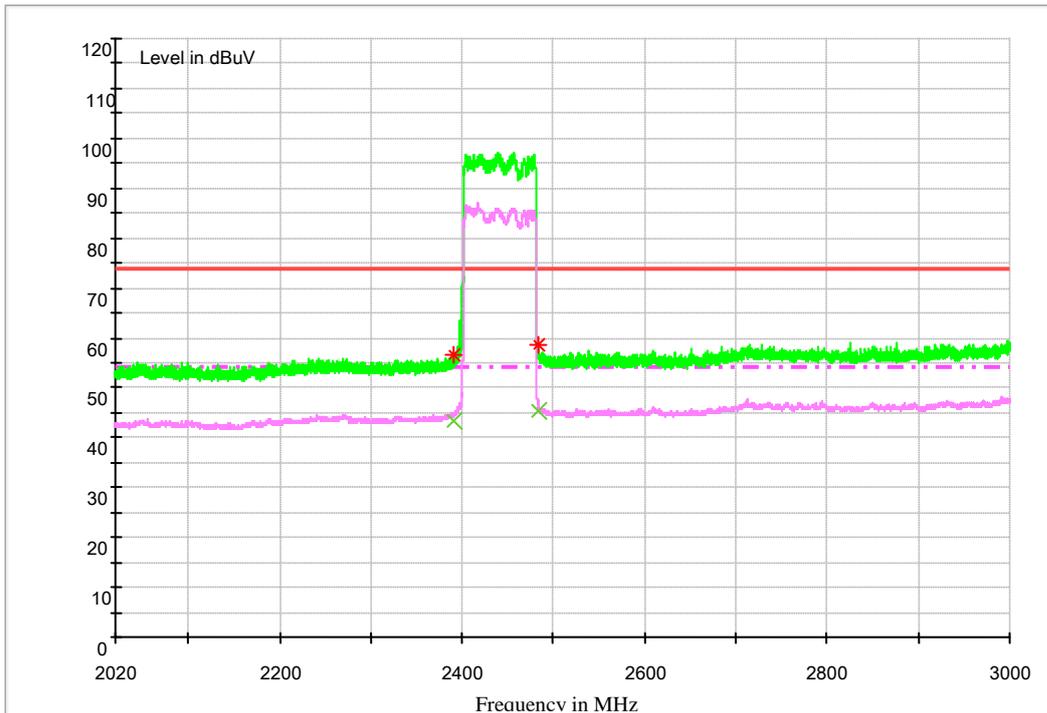
Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	56.6	38.3	74.0	17.4	100.0	129.0	VERTICAL
2483.500000	58.5	40.5	74.0	15.5	113.0	55.0	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.2	38.3	54.0	10.8	100.0	0.0	HORIZONTAL
2483.500000	45.2	40.7	54.0	8.8	100.0	55.0	HORIZONTAL

Test Mode: 11n

Channel 01



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

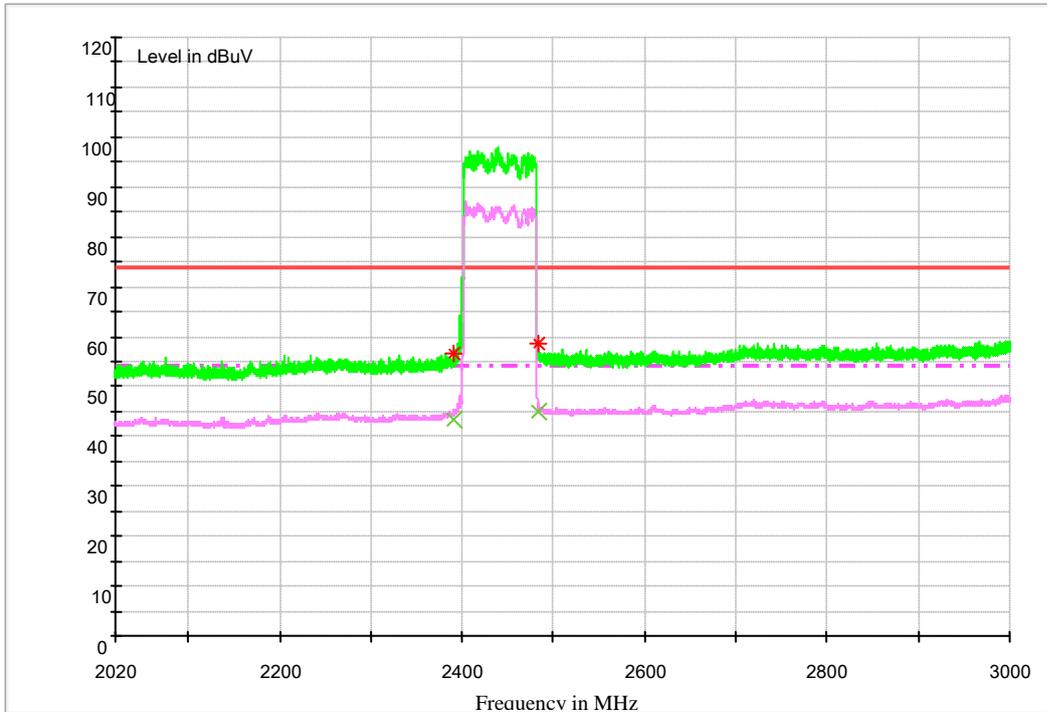
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	56.5	38.3	74.0	17.5	100.0	304.0	VERTICAL
2483.500000	58.6	40.4	74.0	15.4	100.0	123.0	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.3	38.3	54.0	10.7	100.0	164.0	HORIZONTAL
2483.500000	45.2	40.8	54.0	8.8	100.0	72.0	HORIZONTAL

Channel 11



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

MEASUREMENT RESULT: PK Detector

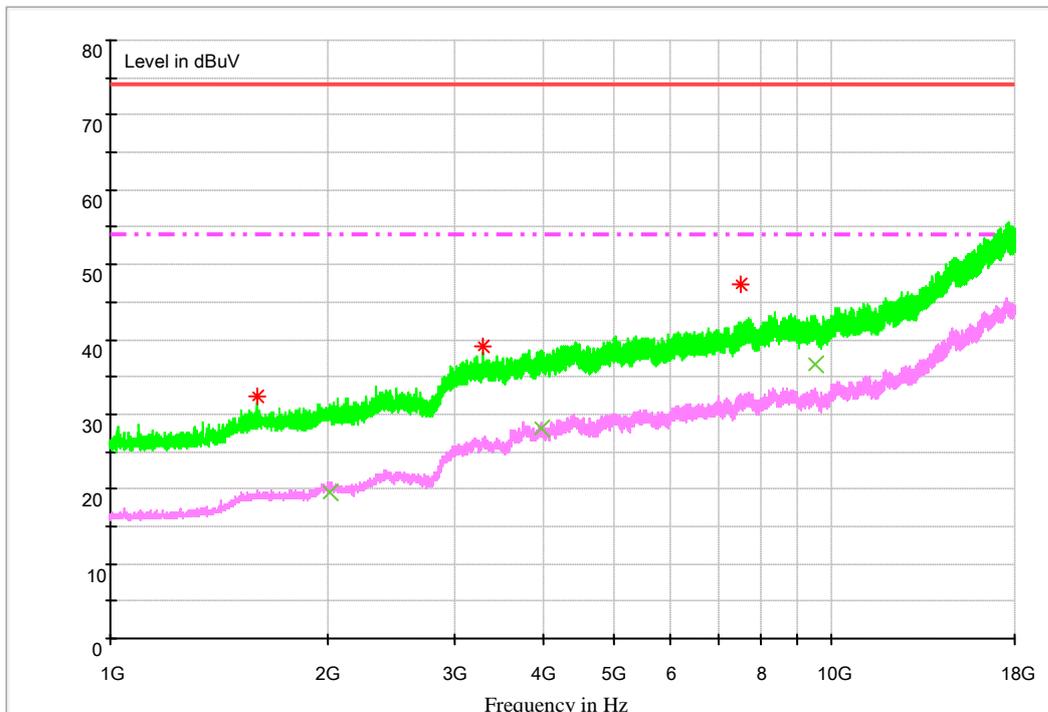
Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	56.7	38.3	74.0	17.3	120.0	48.0	HORIZONTAL
2483.500000	58.6	40.4	74.0	15.4	100.0	312.0	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.2	38.3	54.0	10.8	100.0	61.0	HORIZONTAL
2483.500000	45.0	40.6	54.0	9.0	100.0	312.0	VERTICAL

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

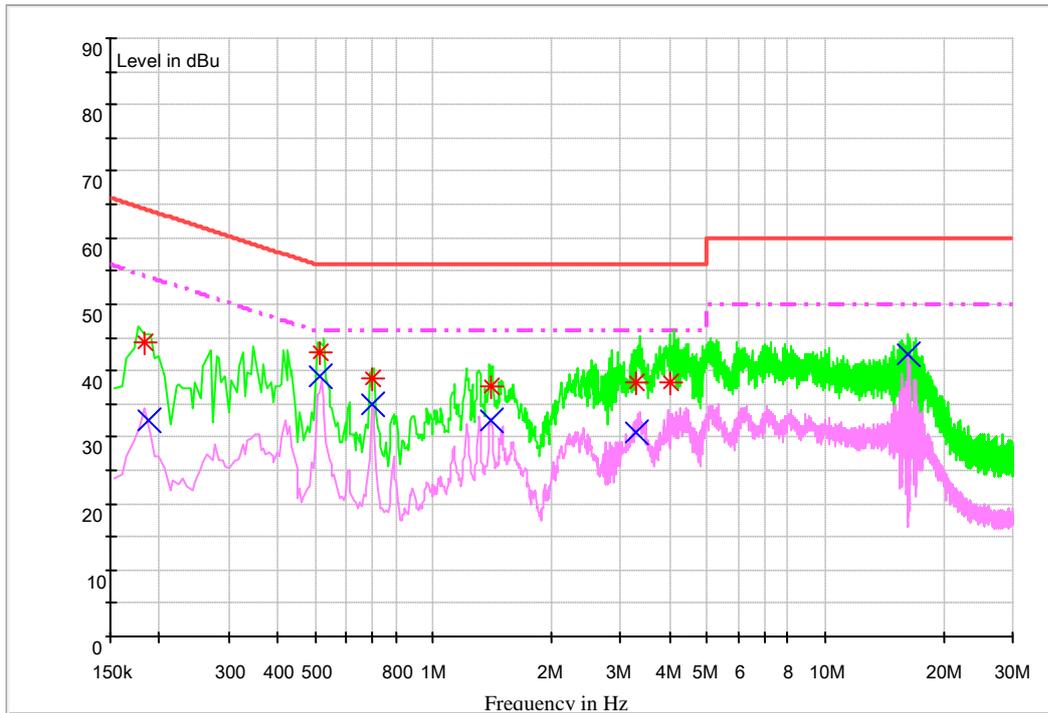
- Note 1: The test results and plot for testing range of “1 GHz to 18 GHz” showed as below is **the WORST case for all Test Modes and Channels**. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of “1 GHz to 18 GHz” is for checking radiated emissions located 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 dB μ V/m) and Average Limit (54 dB μ V/m).



Appendix G: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz

Channel 6



MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Line	PE
0.182354	44.3	9.7	64.4	20.1	N	FLO
0.515718	42.6	9.7	56.0	13.4	L1	FLO
0.698441	38.8	9.7	56.0	17.2	L1	FLO
1.397006	37.5	9.7	56.0	18.5	L1	FLO
3.275715	38.3	9.7	56.0	17.7	N	FLO
4.030009	38.3	9.8	56.0	17.7	L1	FLO

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Line	PE
------------------	---------------------	--------------	---------------------	--------------	------	----



0.186812	32.5	9.7	54.2	21.7	L1	FLO
0.515906	39.1	9.7	46.0	6.9	L1	FLO
0.699885	35.0	9.7	46.0	11.0	L1	FLO
1.401738	32.6	9.7	46.0	13.4	L1	FLO
3.285908	30.9	9.7	46.0	15.1	N	FLO
16.266701	42.5	10.0	50.0	7.5	L1	FLO

END