Appendix for Testreport

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.

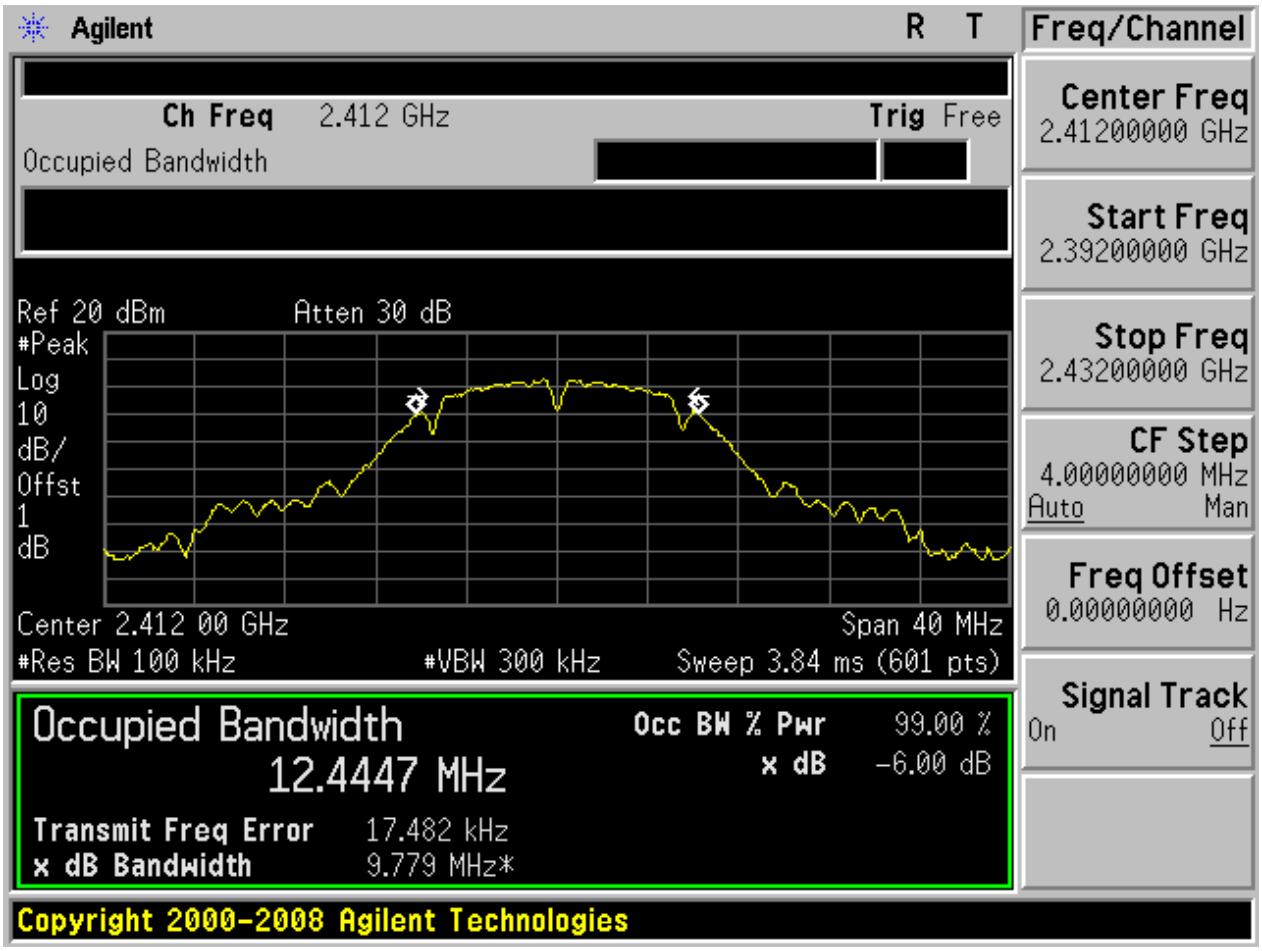
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

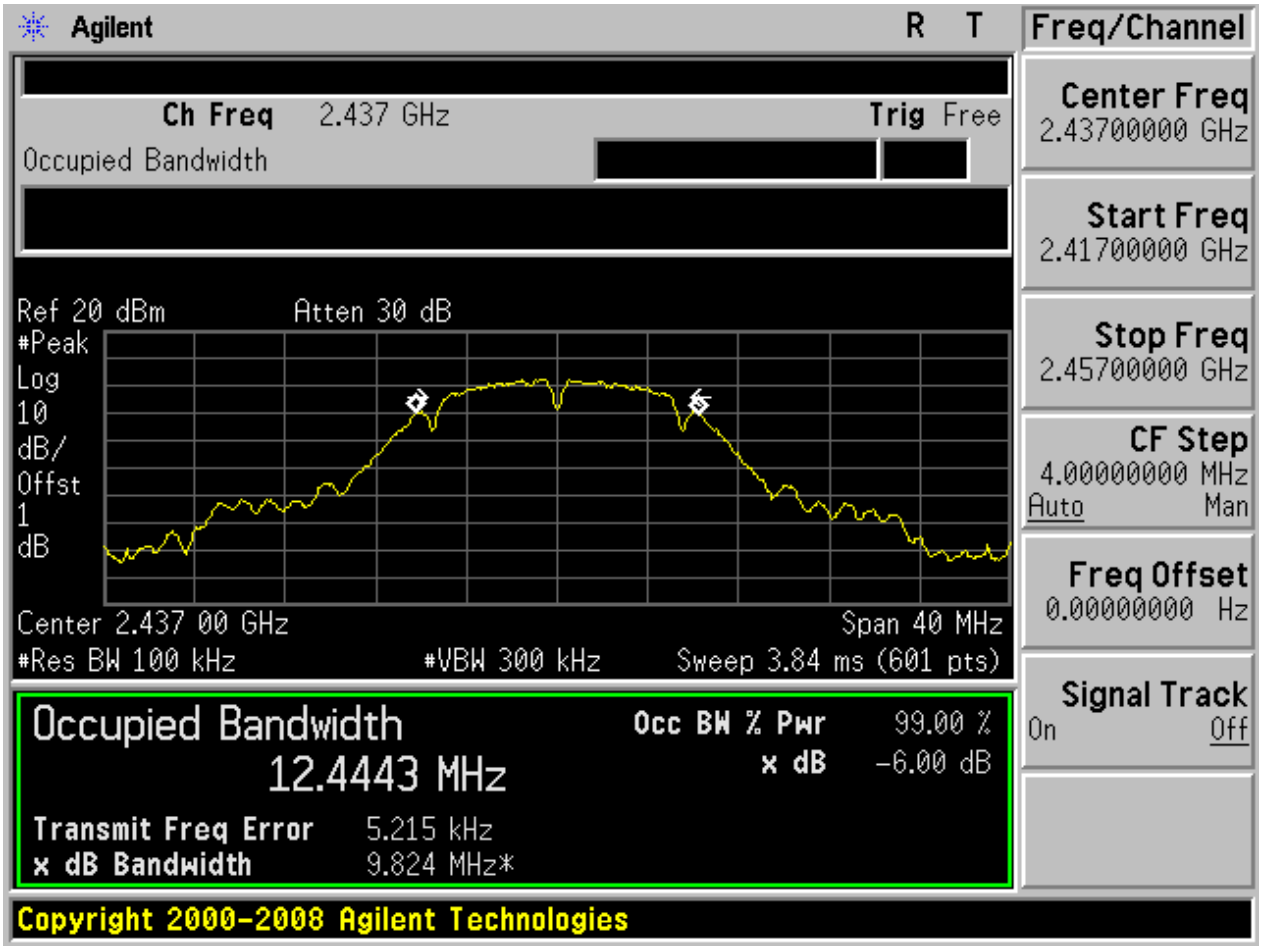
Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
11B	L	2412	Ant 1	9.78	pass
11B	M	2437	Ant 1	9.82	pass
11B	H	2462	Ant 1	9.73	pass
11G	L	2412	Ant 1	16.49	pass
11G	M	2437	Ant 1	16.45	pass
11G	H	2462	Ant 1	16.45	pass
11N20	L	2412	Ant 1	17.82	pass
11N20	M	2437	Ant 1	17.83	pass
11N20	H	2462	Ant 1	17.83	pass
11N40	L	2422	Ant 1	36.56	pass
11N40	M	2437	Ant 1	36.56	pass
11N40	H	2452	Ant 1	36.56	pass

Part II - Test Plots

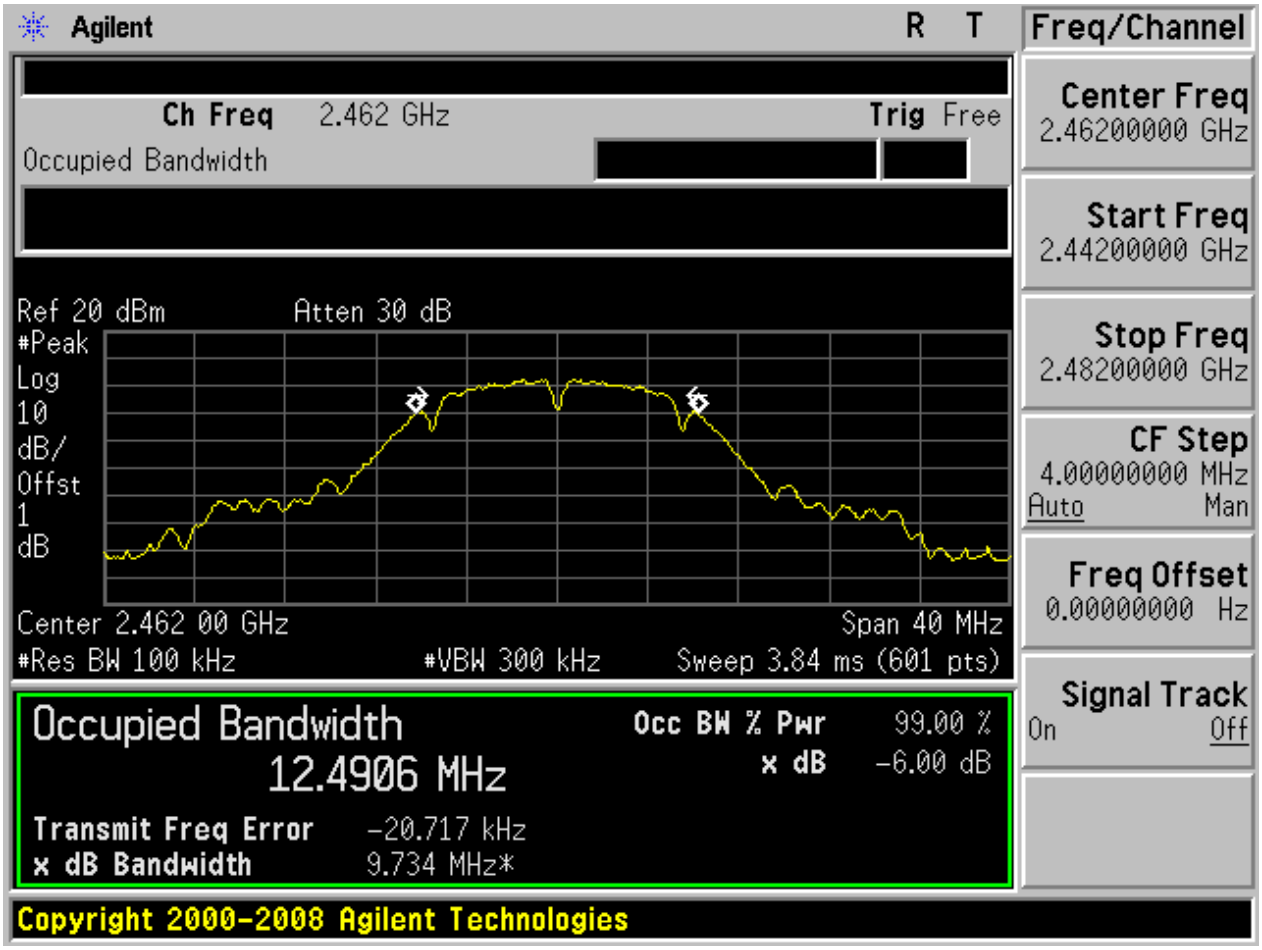
2.1 11B_L@Ant 1



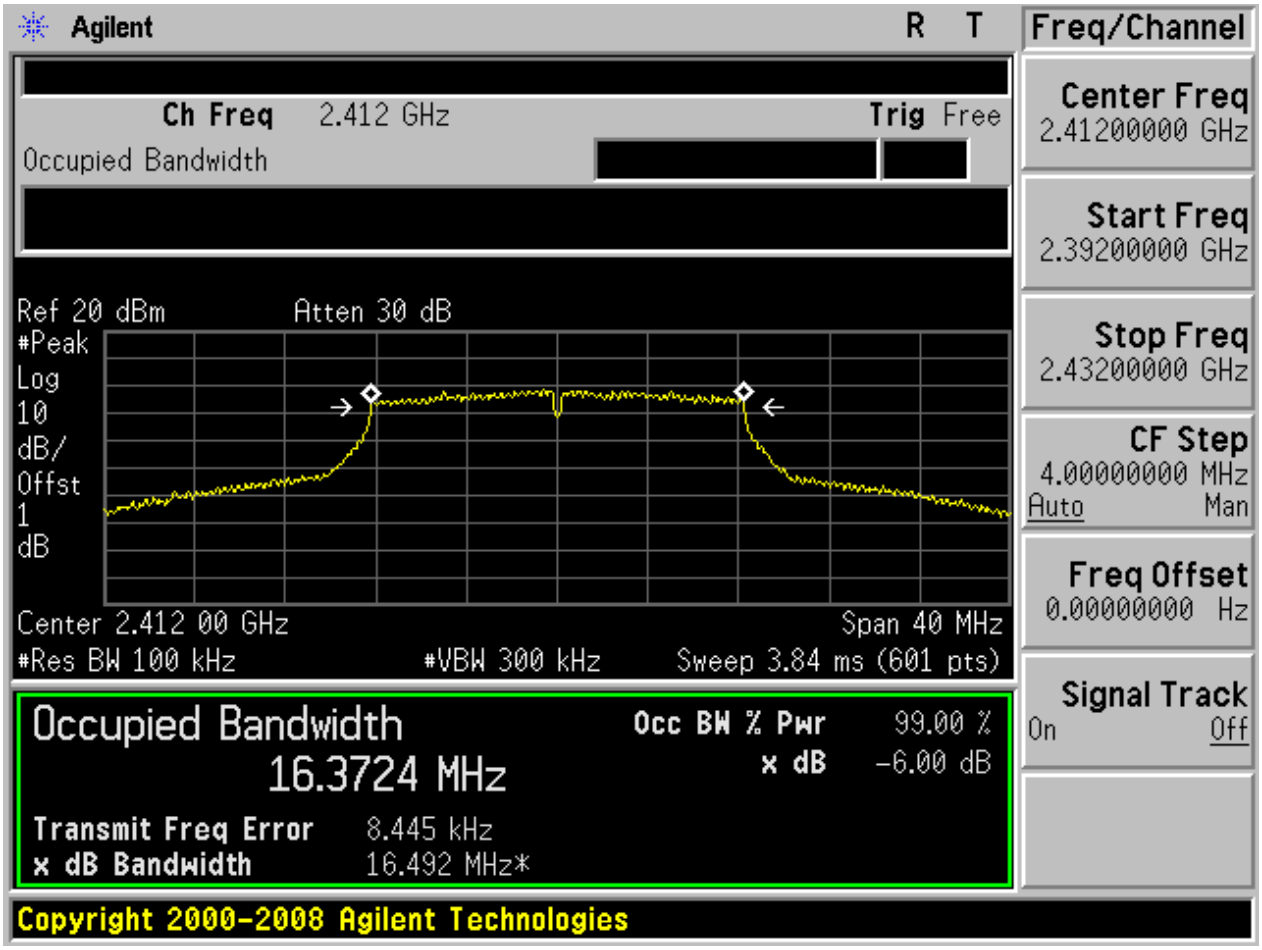
2.2 11B_M@Ant 1



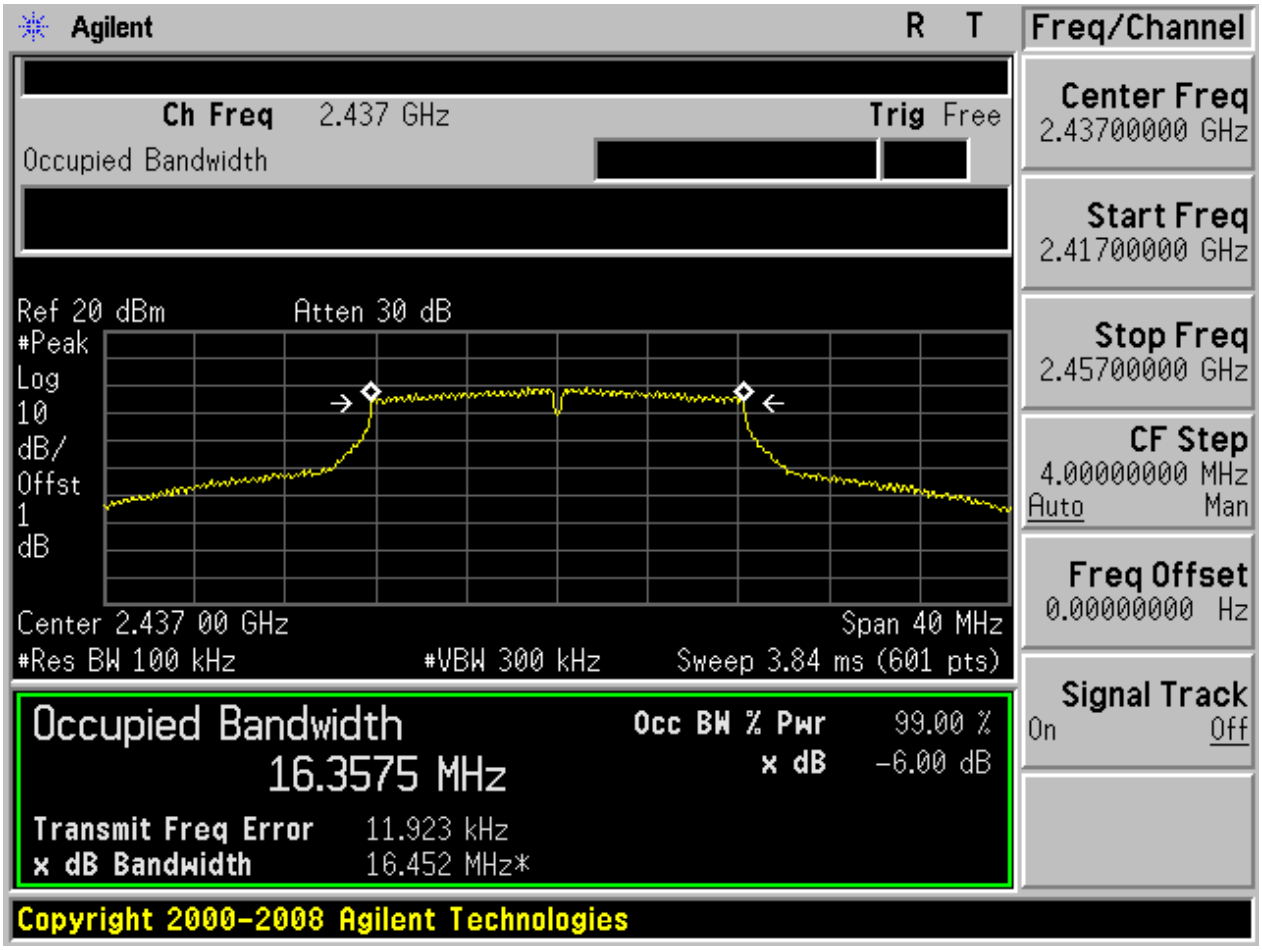
2.3 11B_H@Ant 1



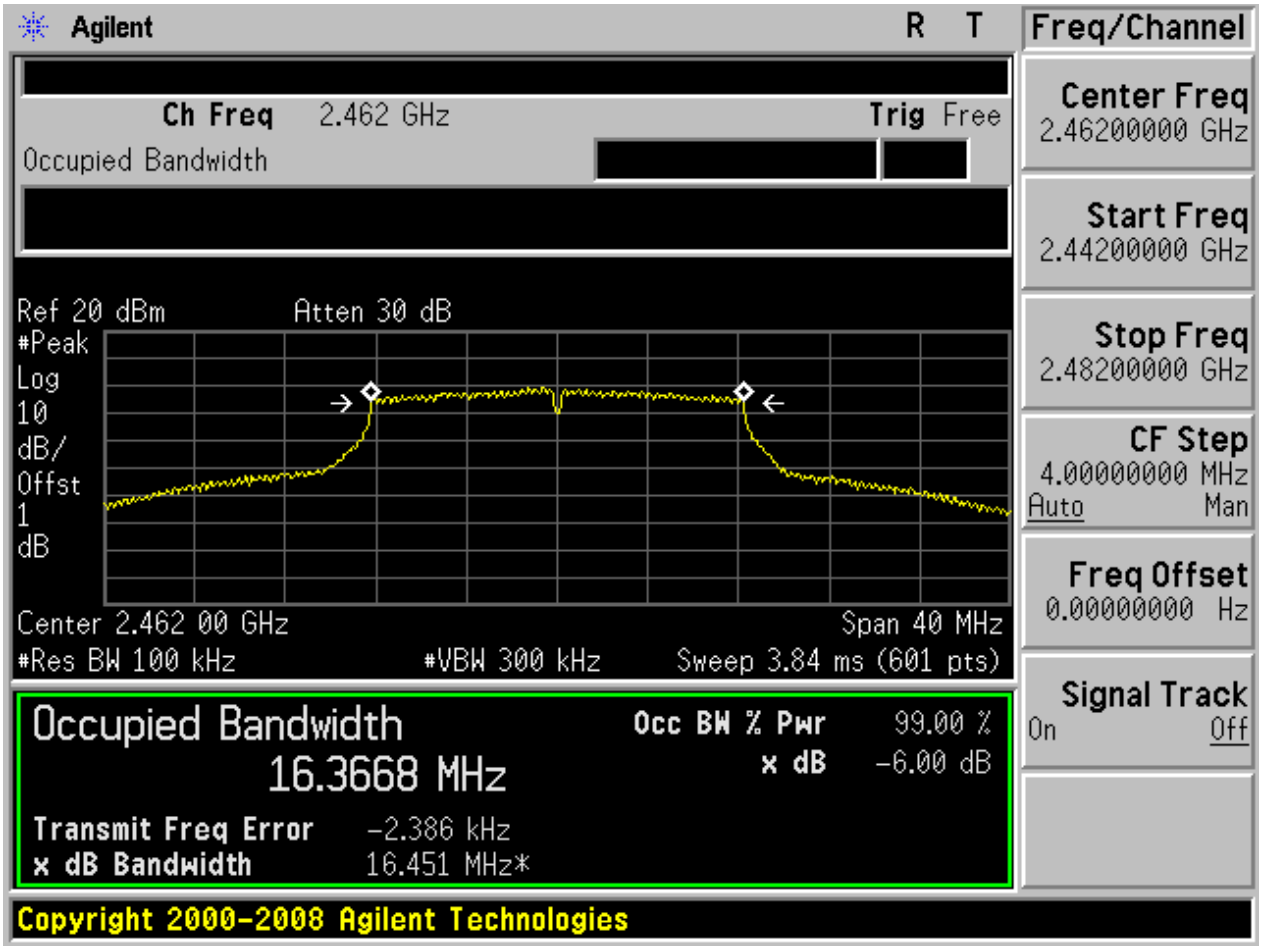
2.4 11G_L@Ant 1



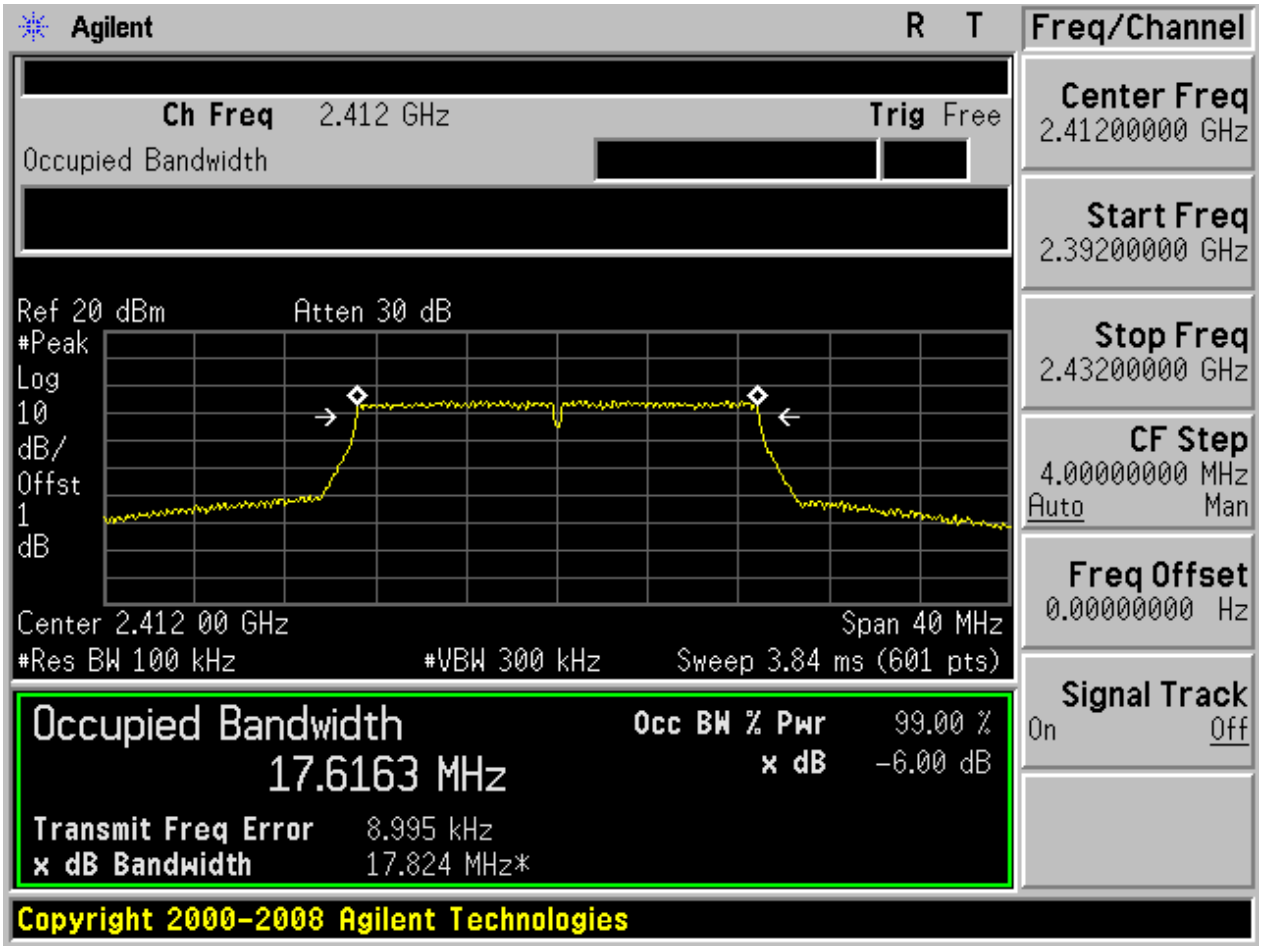
2.5 11G_M@Ant 1



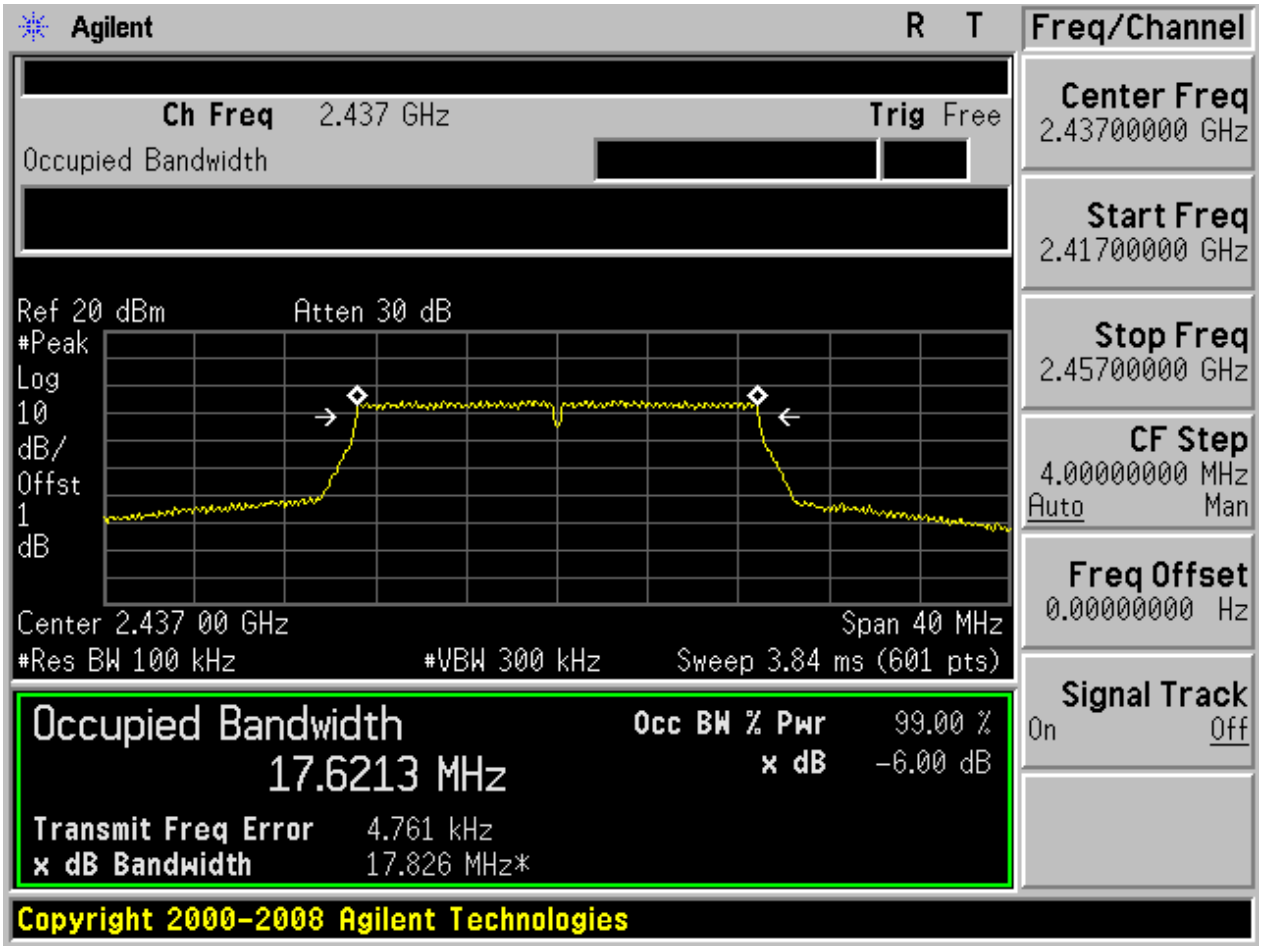
2.6 11G_H@Ant 1



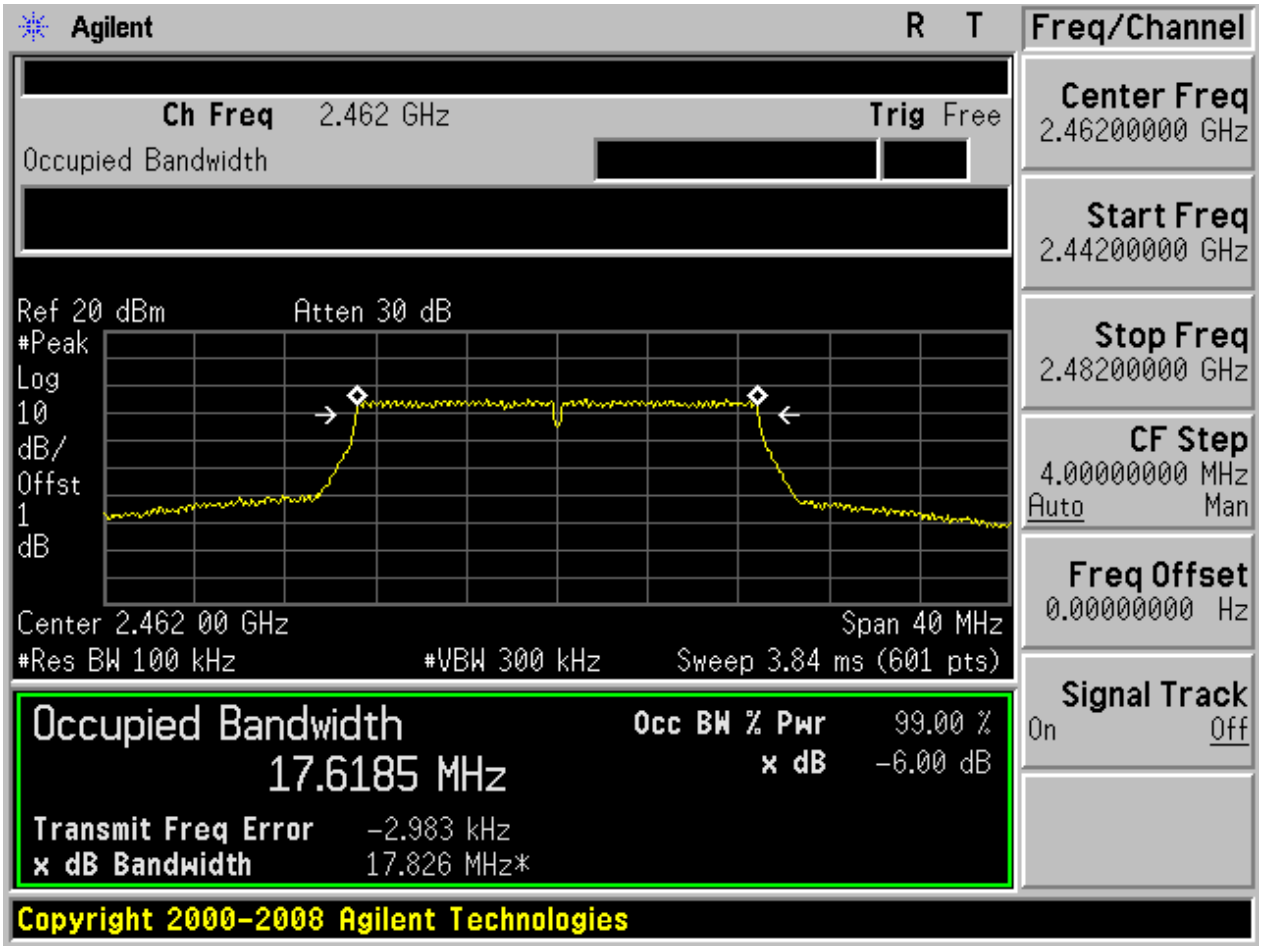
2.7 11N20_L@Ant 1



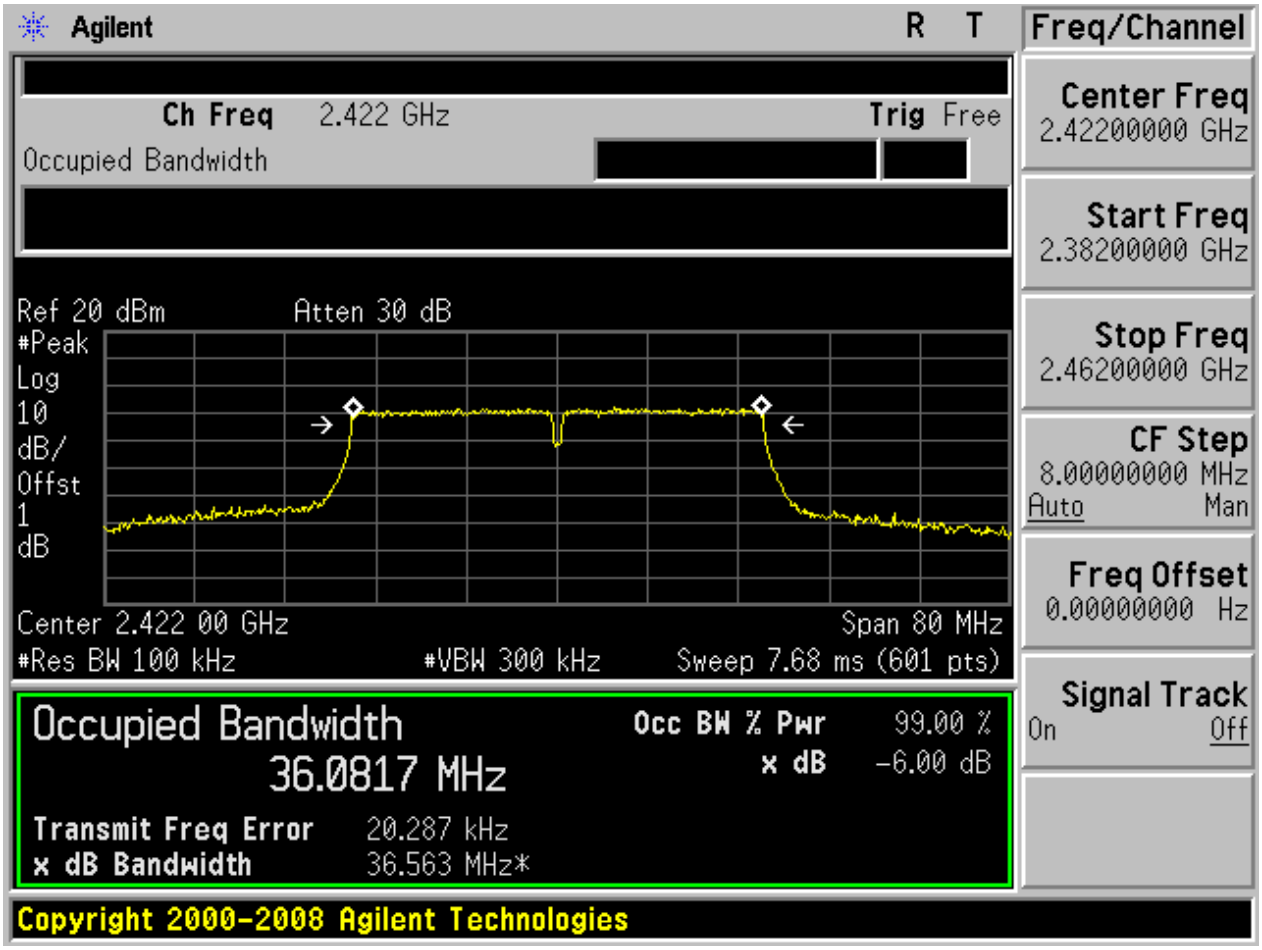
2.8 11N20_M@Ant 1



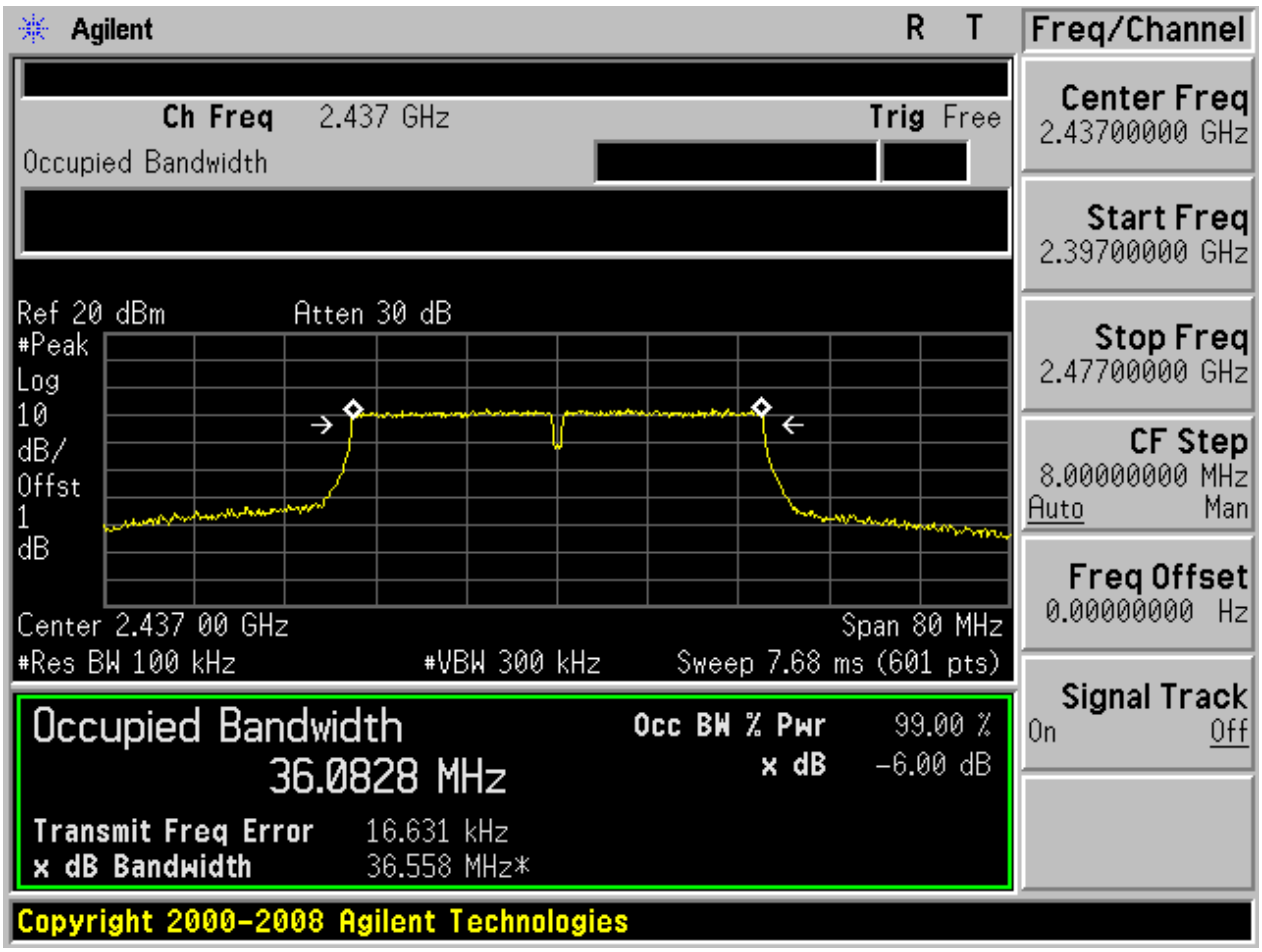
2.9 11N20_H@Ant 1



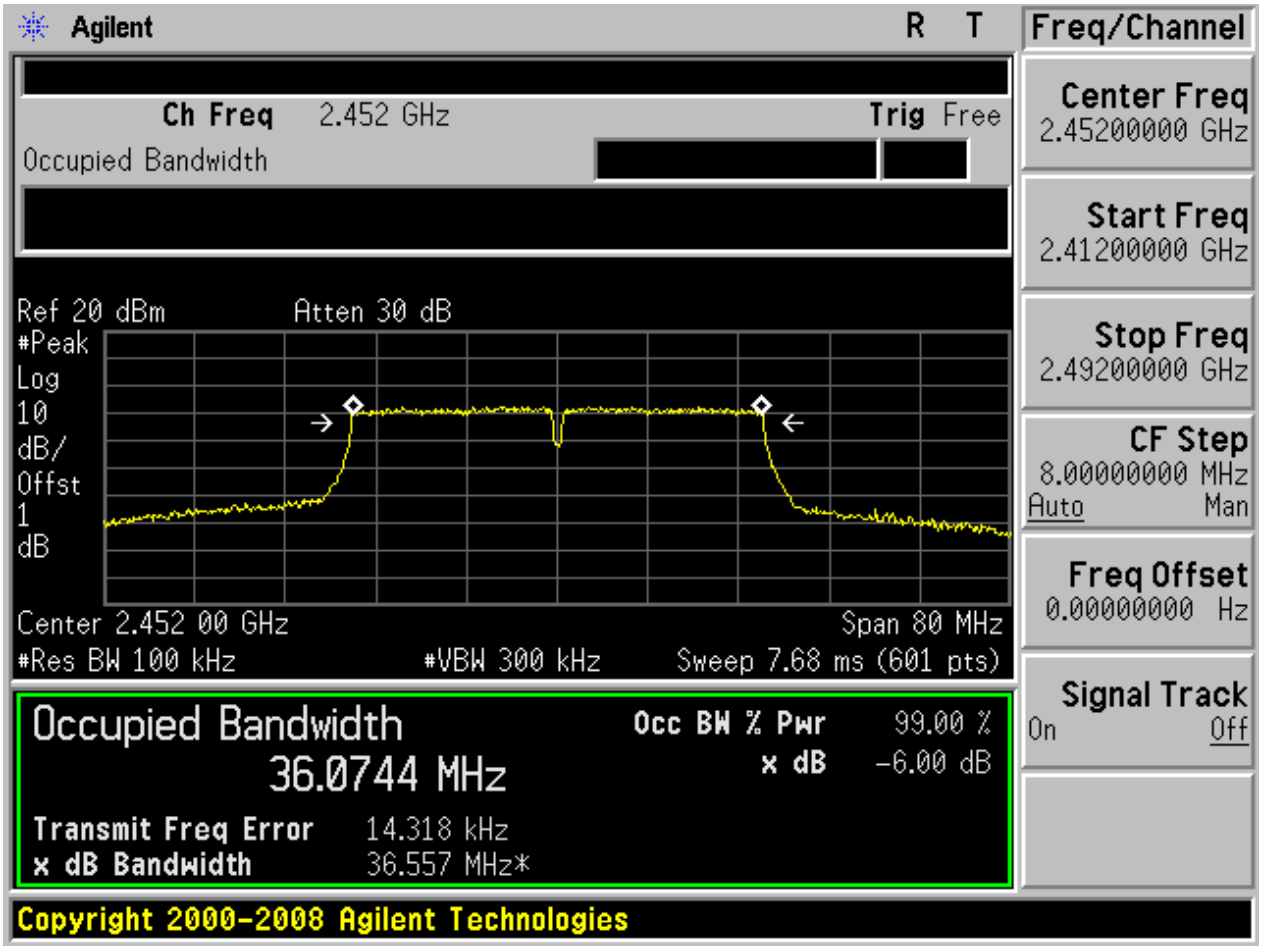
2.10 11N40_L@Ant 1



2.11 11N40_M@Ant 1



2.12 11N40_H@Ant 1



Appendix B: Occupied Bandwidth

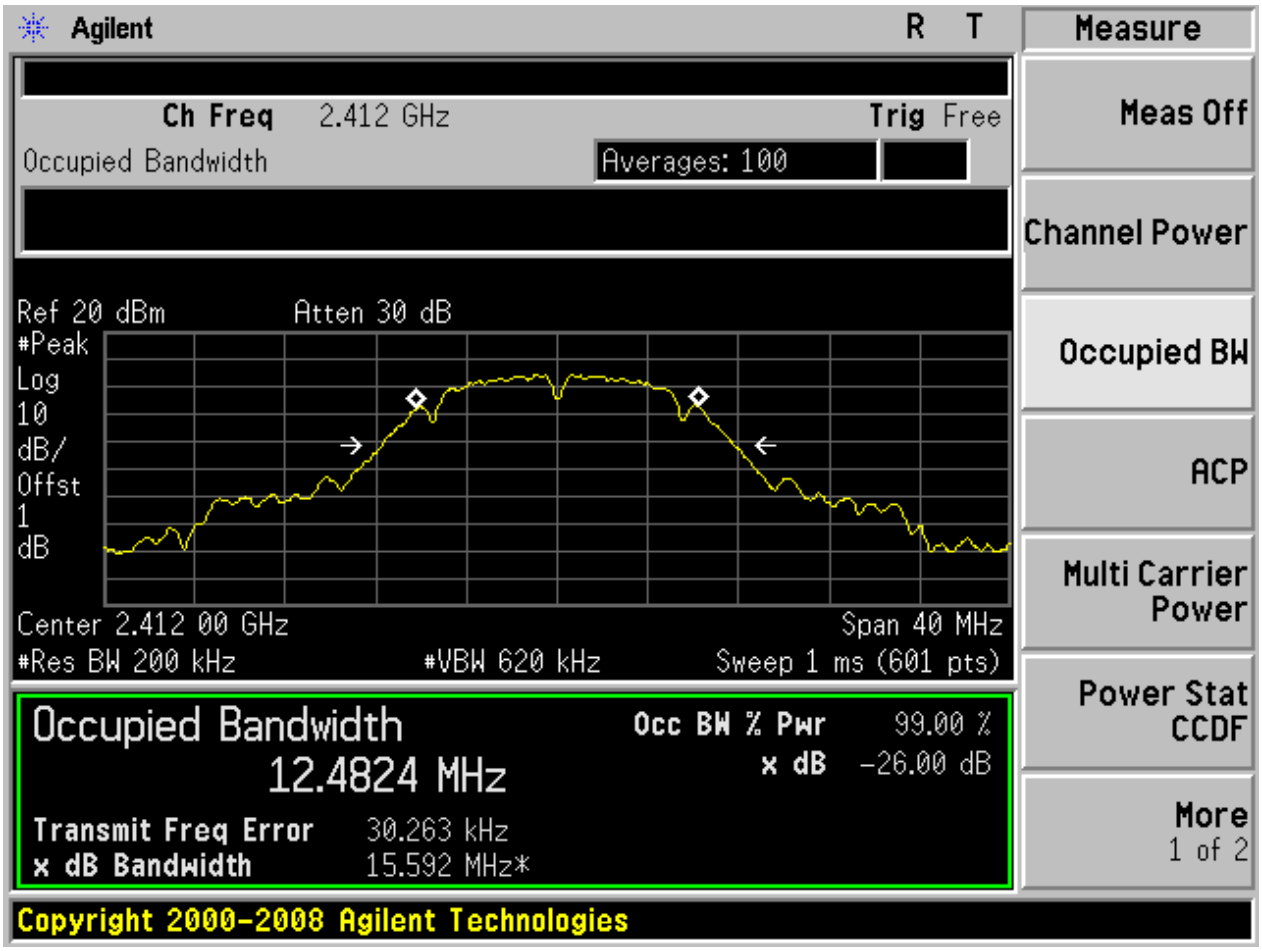
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

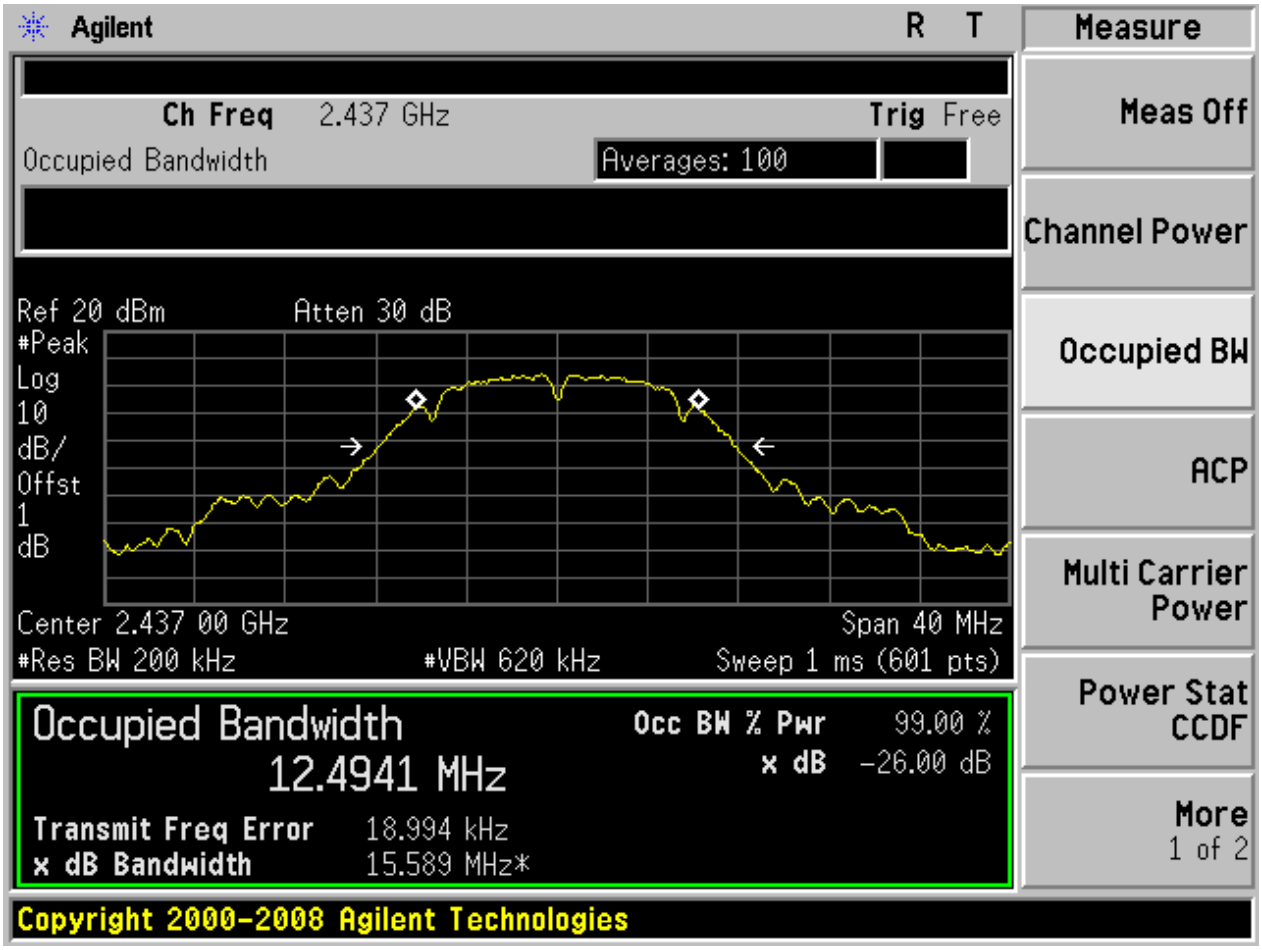
Test Mode	Test Channel	Frequency[MHz]	Ant	Occupied Bandwidth [MHz]	Verdict
11B	L	2412	Ant 1	12.48	pass
11B	M	2437	Ant 1	12.49	pass
11B	H	2462	Ant 1	12.49	pass
11G	L	2412	Ant 1	16.40	pass
11G	M	2437	Ant 1	16.43	pass
11G	H	2462	Ant 1	16.41	pass
11N20	L	2412	Ant 1	17.61	pass
11N20	M	2437	Ant 1	17.67	pass
11N20	H	2462	Ant 1	17.68	pass
11N40	L	2422	Ant 1	36.09	pass
11N40	M	2437	Ant 1	35.85	pass
11N40	H	2452	Ant 1	36.06	pass

Part II - Test Plots

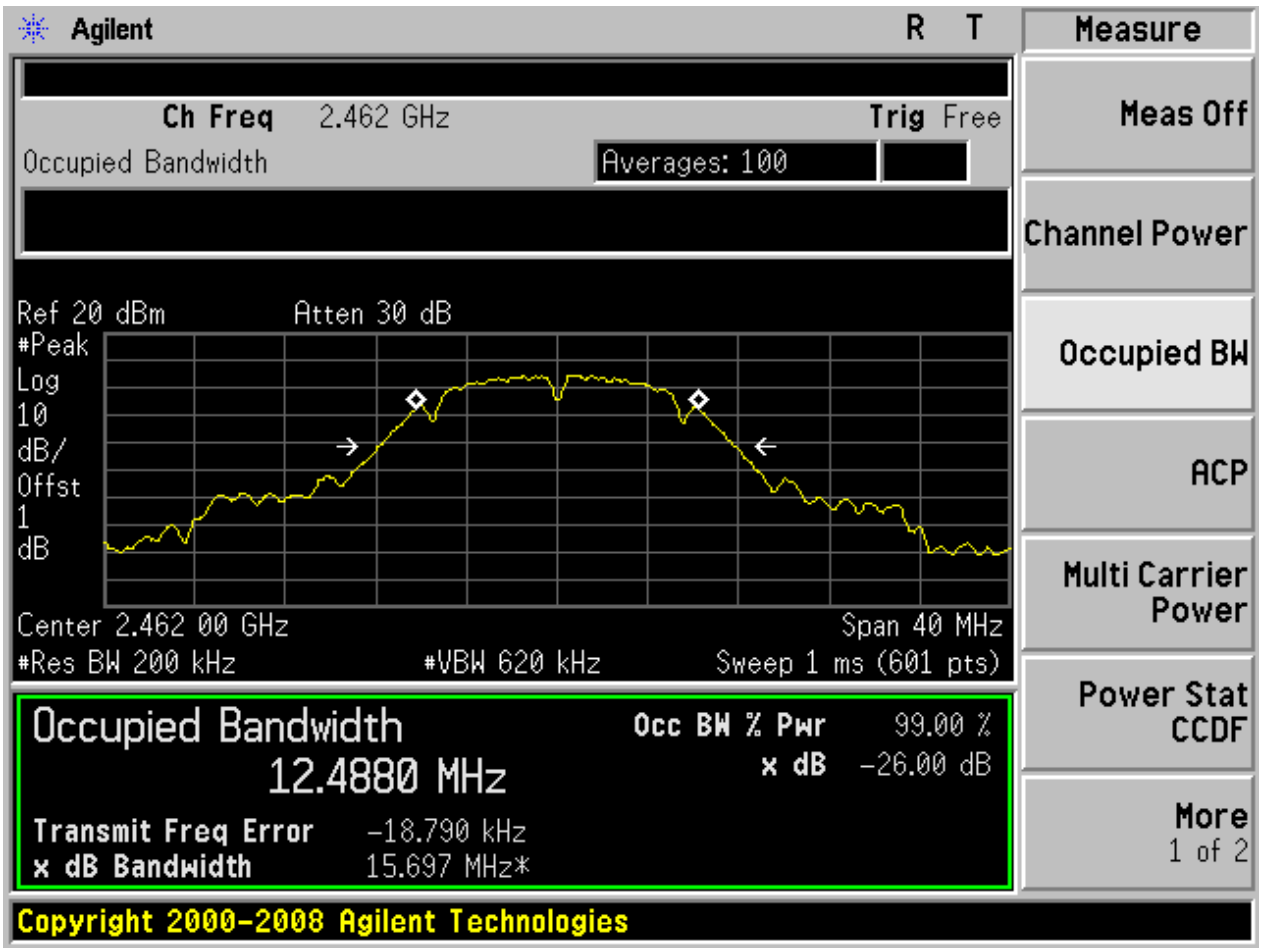
2.1 11B_L@Ant 1



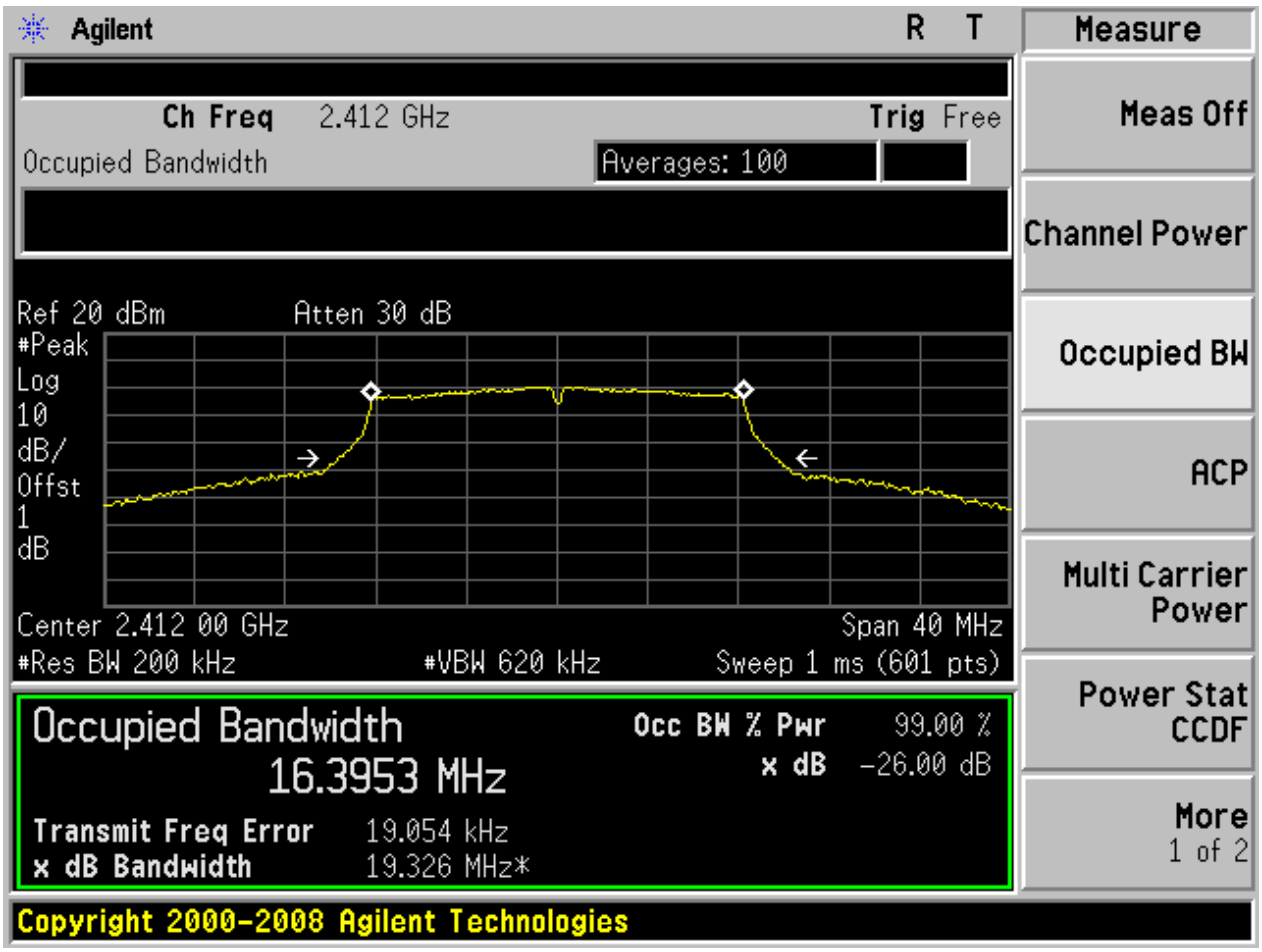
2.2 11B_M@Ant 1



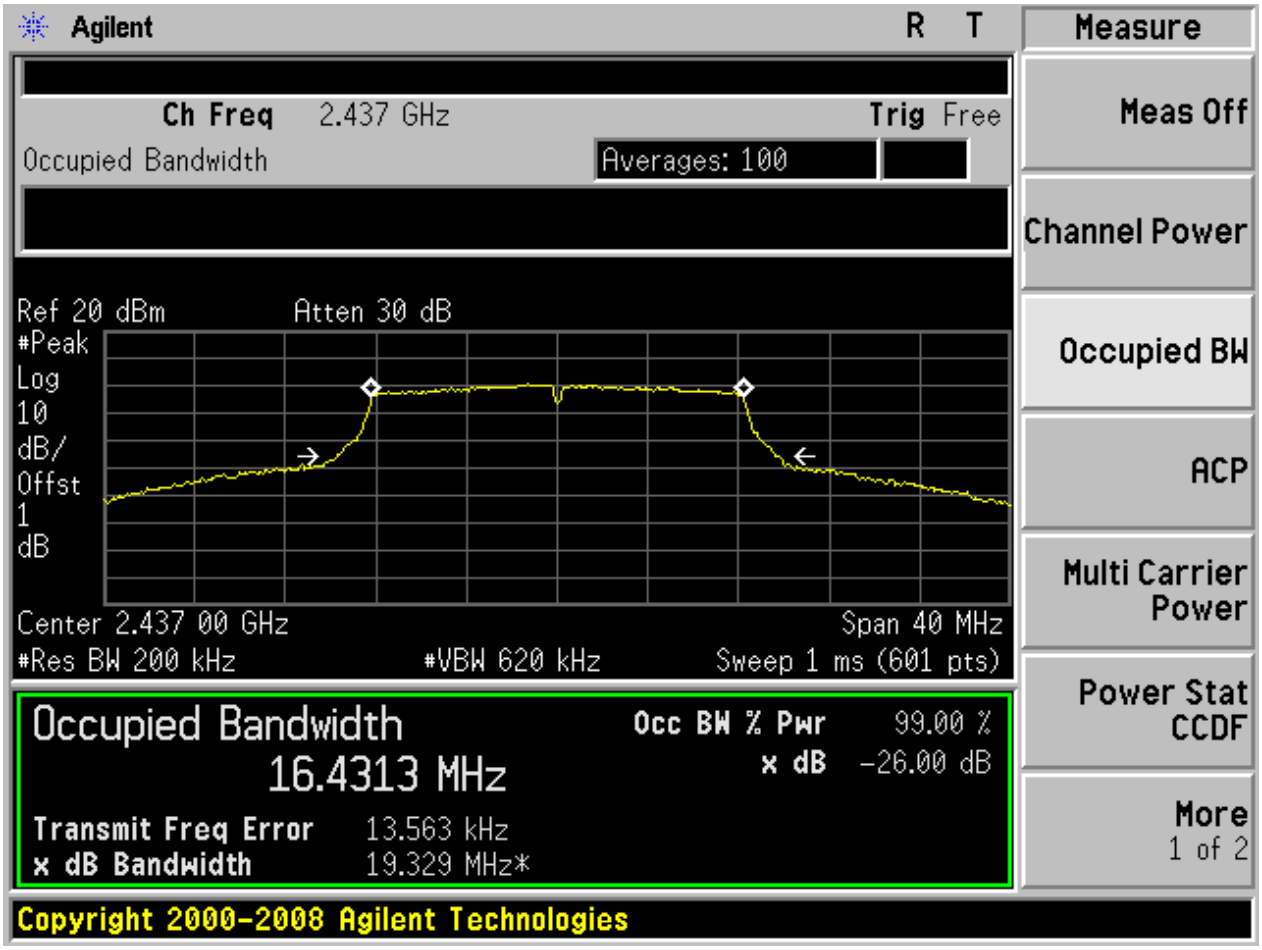
2.3 11B_H@Ant 1



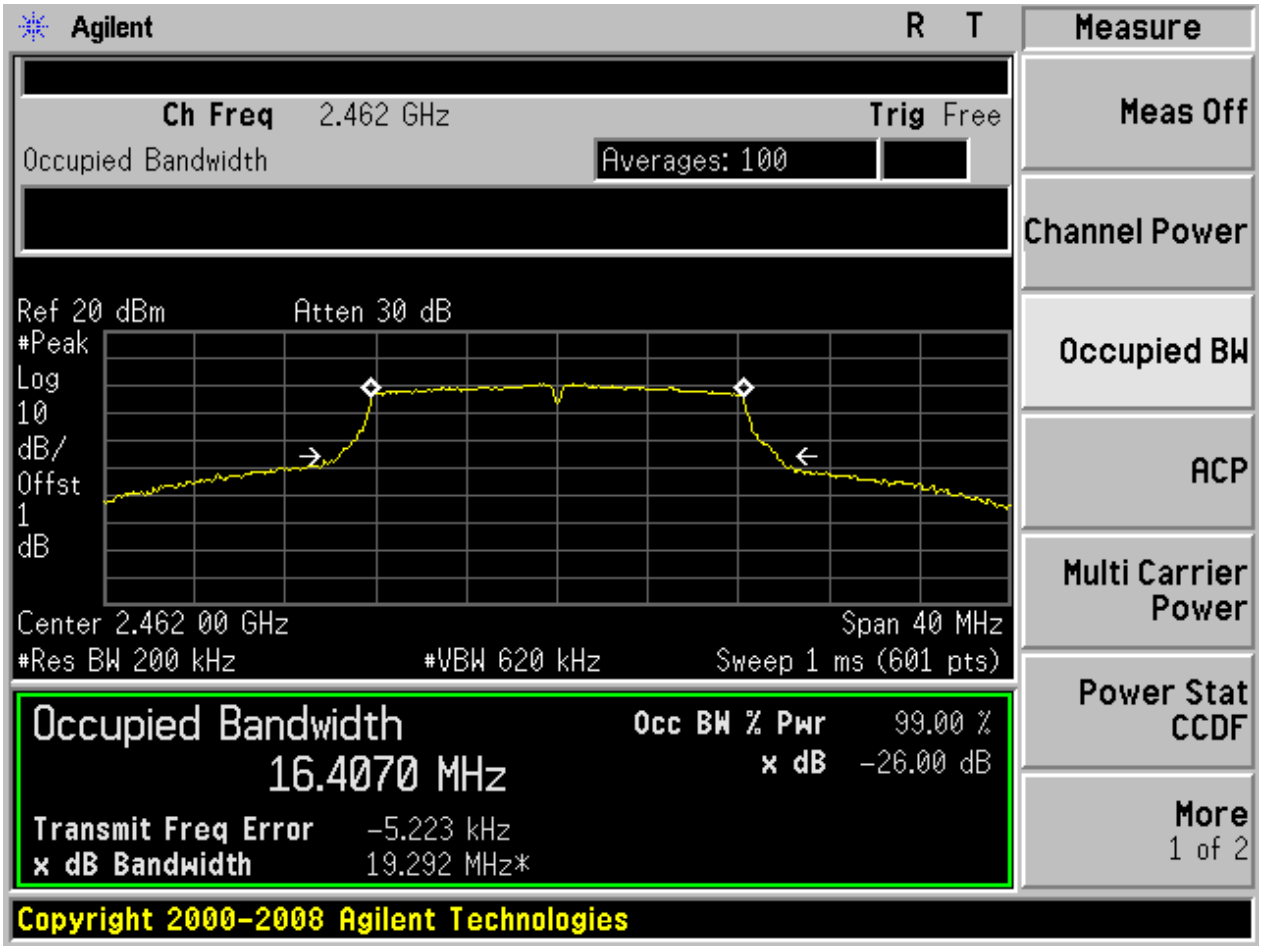
2.4 11G_L@Ant 1



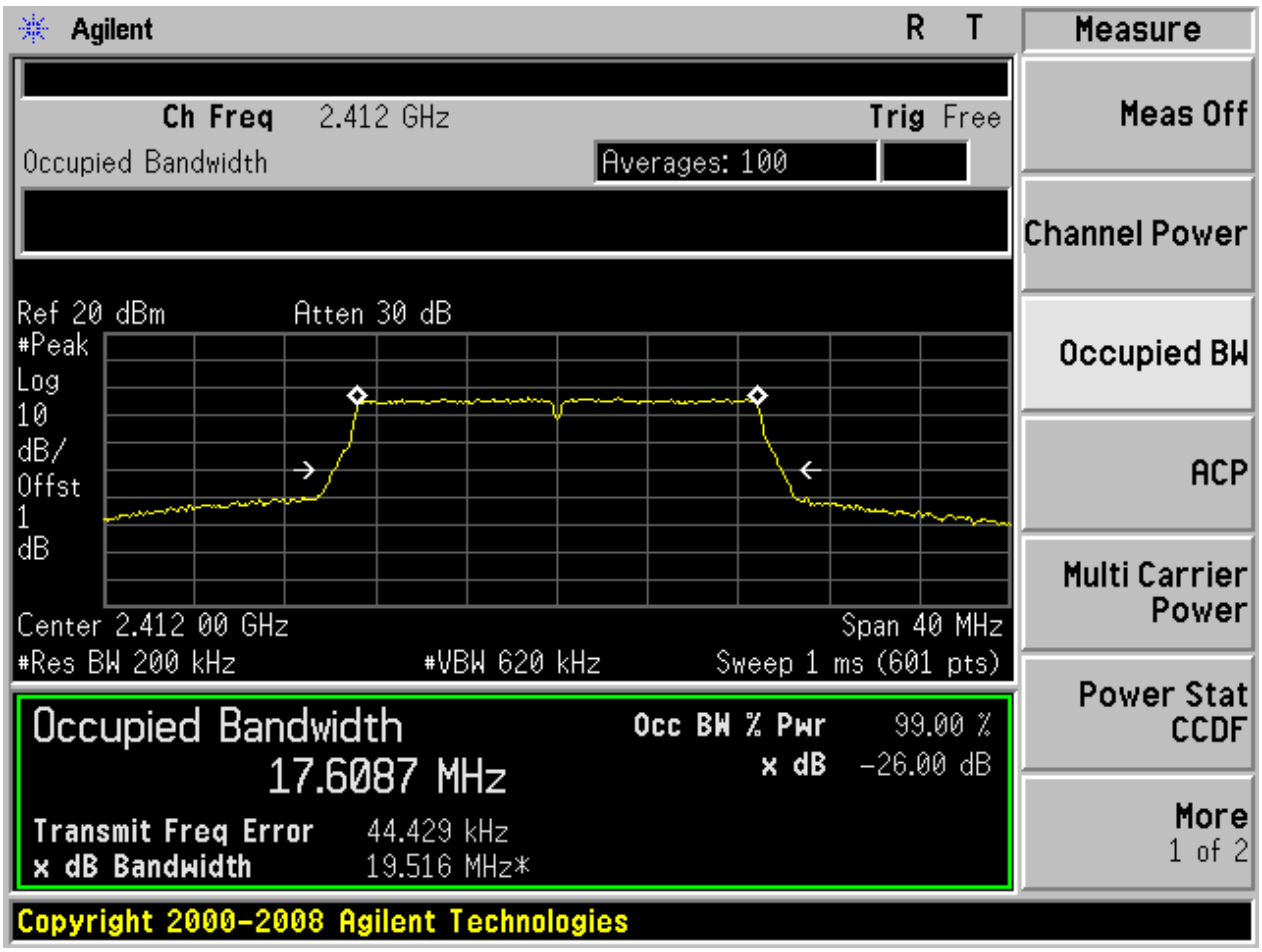
2.5 11G_M@Ant 1



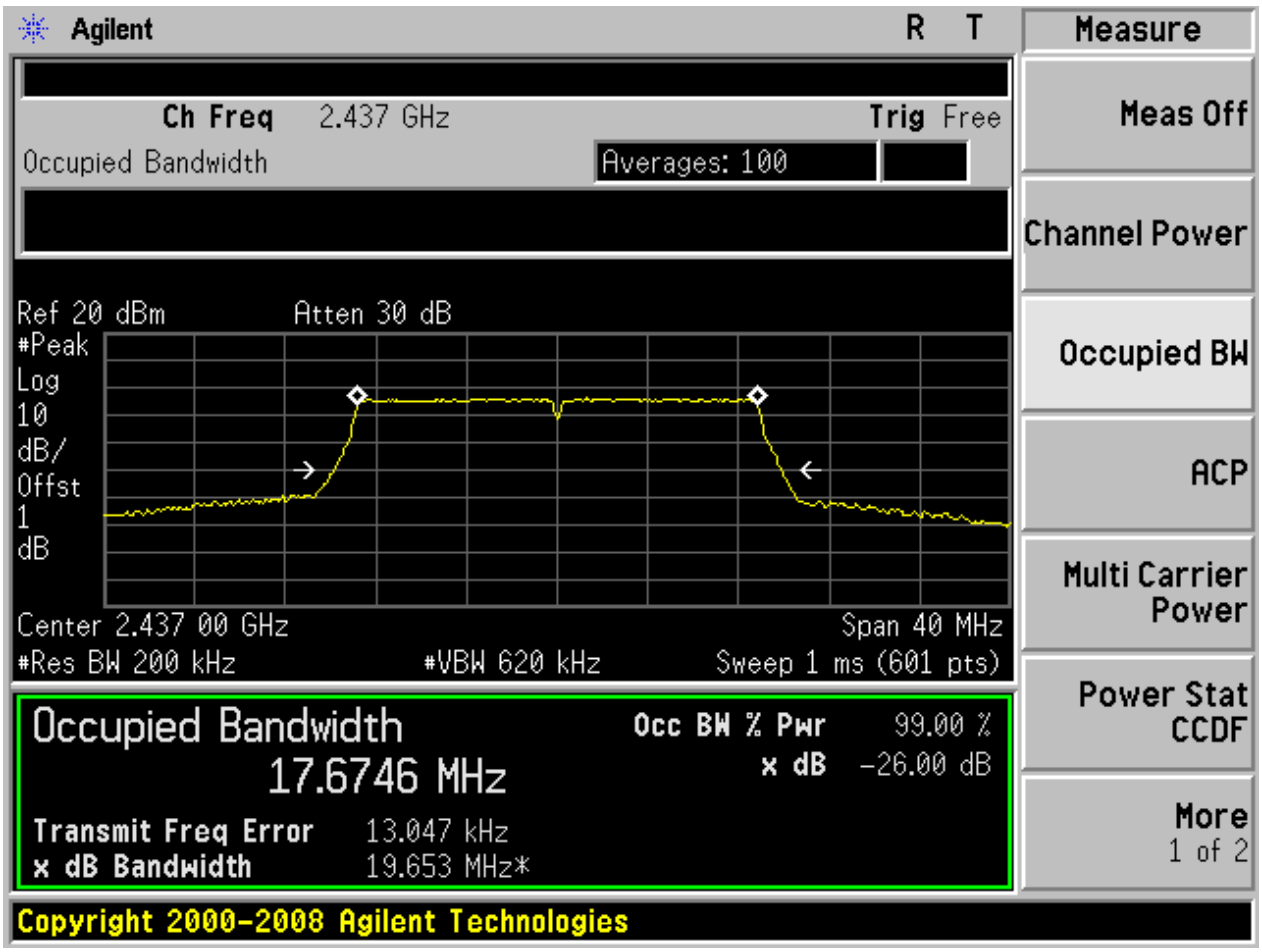
2.6 11G_H@Ant 1



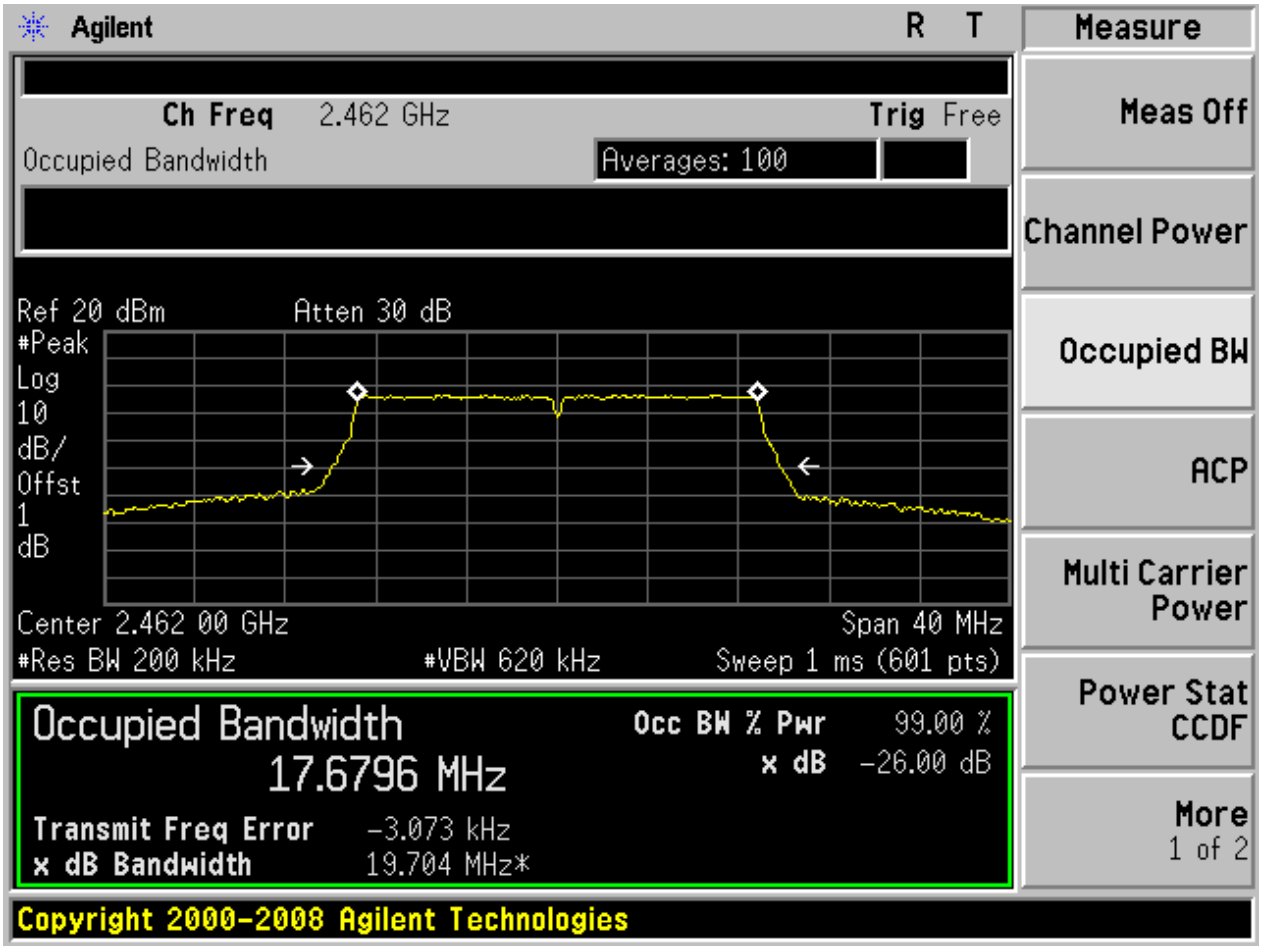
2.7 11N20_L@Ant 1



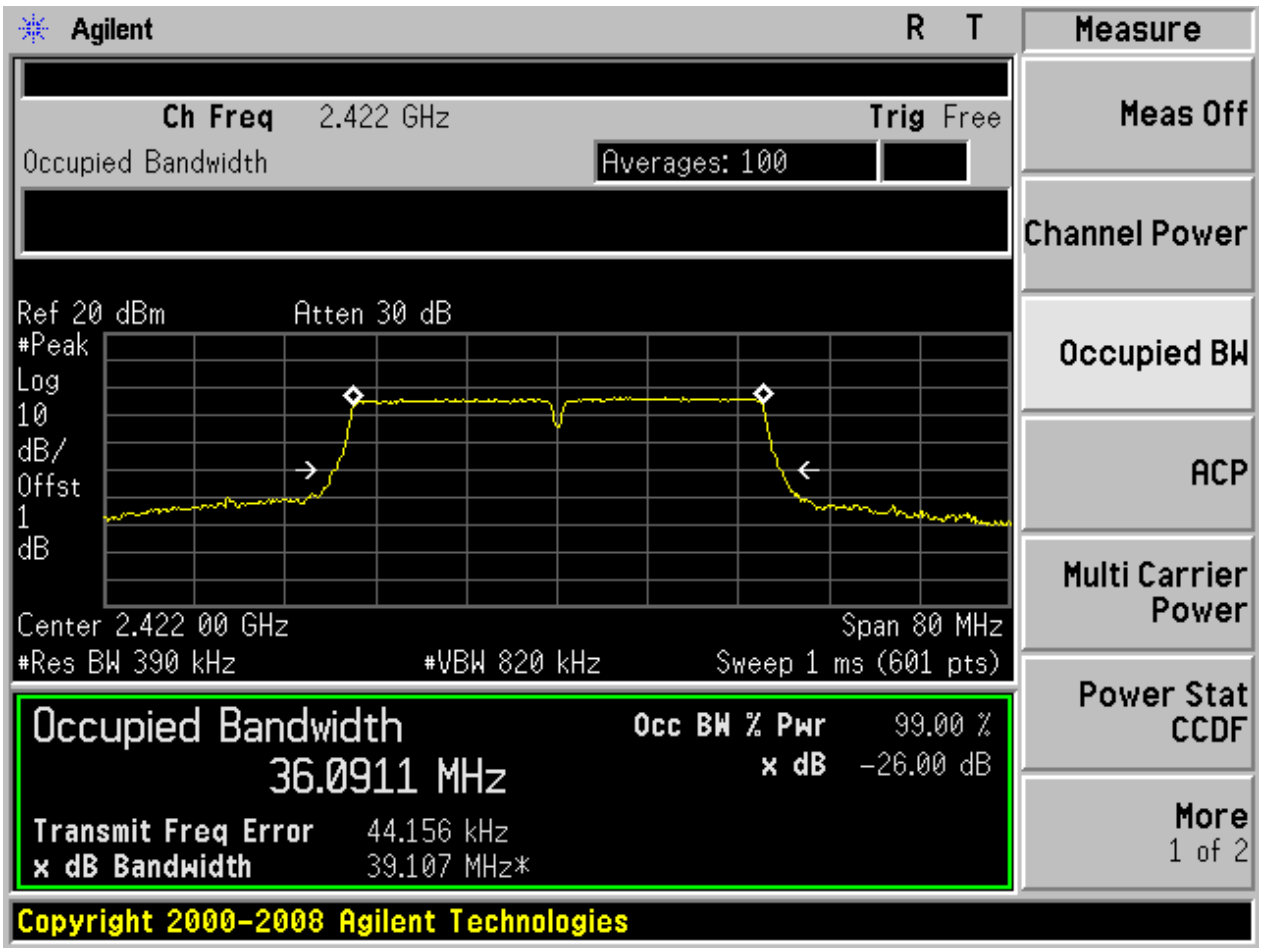
2.8 11N20_M@Ant 1



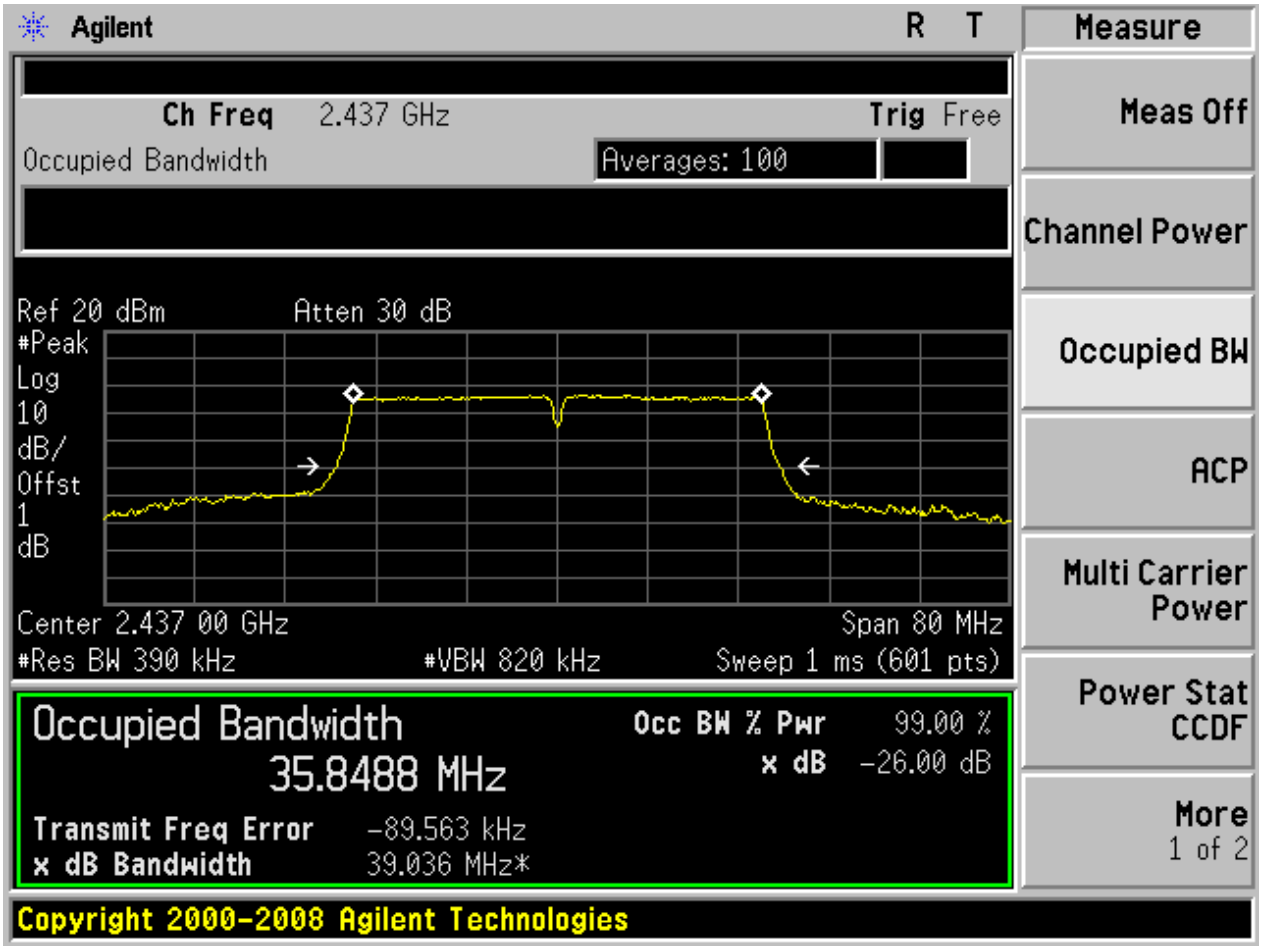
2.9 11N20_H@Ant 1



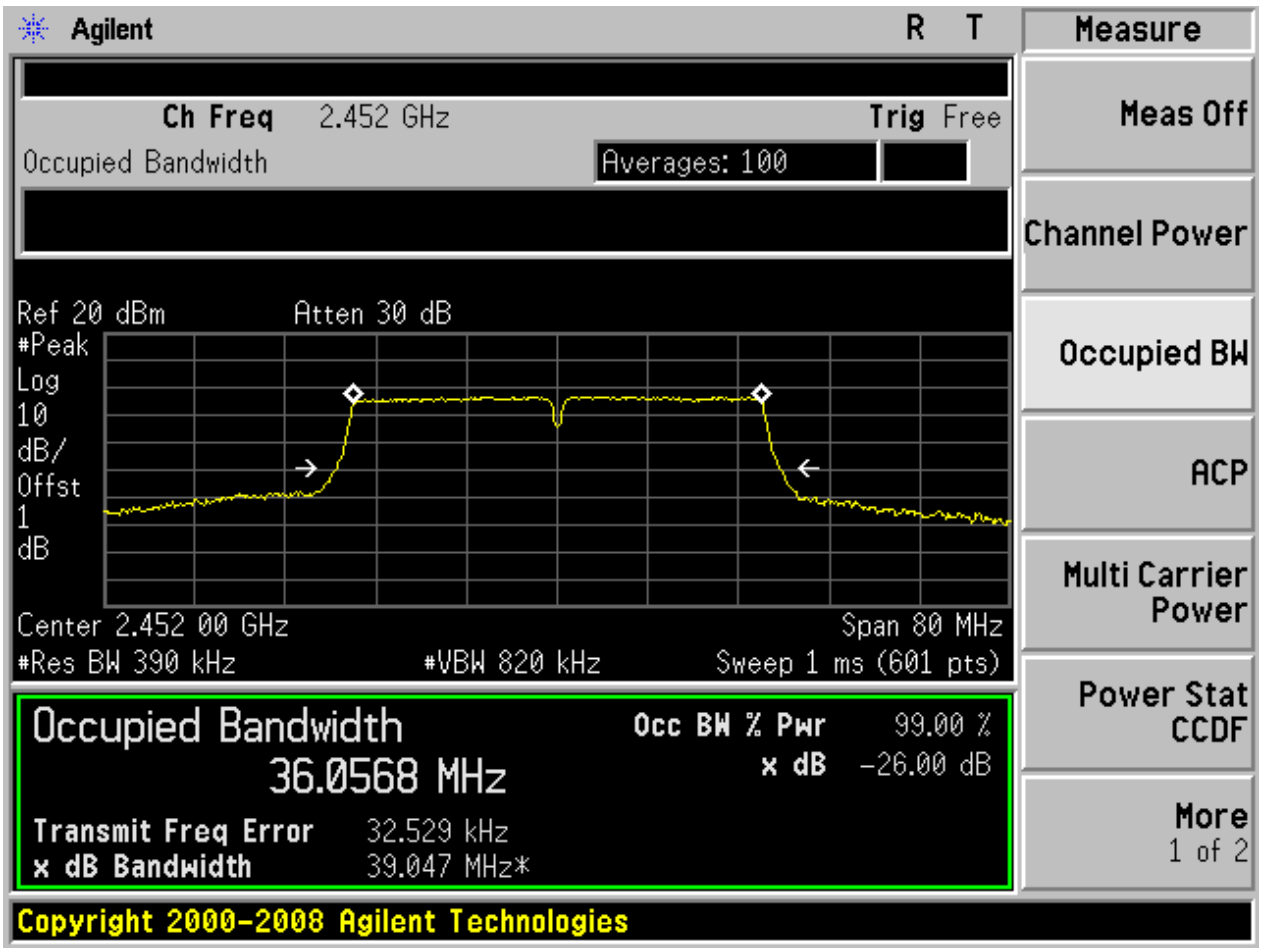
2.10 11N40_L@Ant 1



2.11 11N40_M@Ant 1



2.12 11N40_H@Ant 1



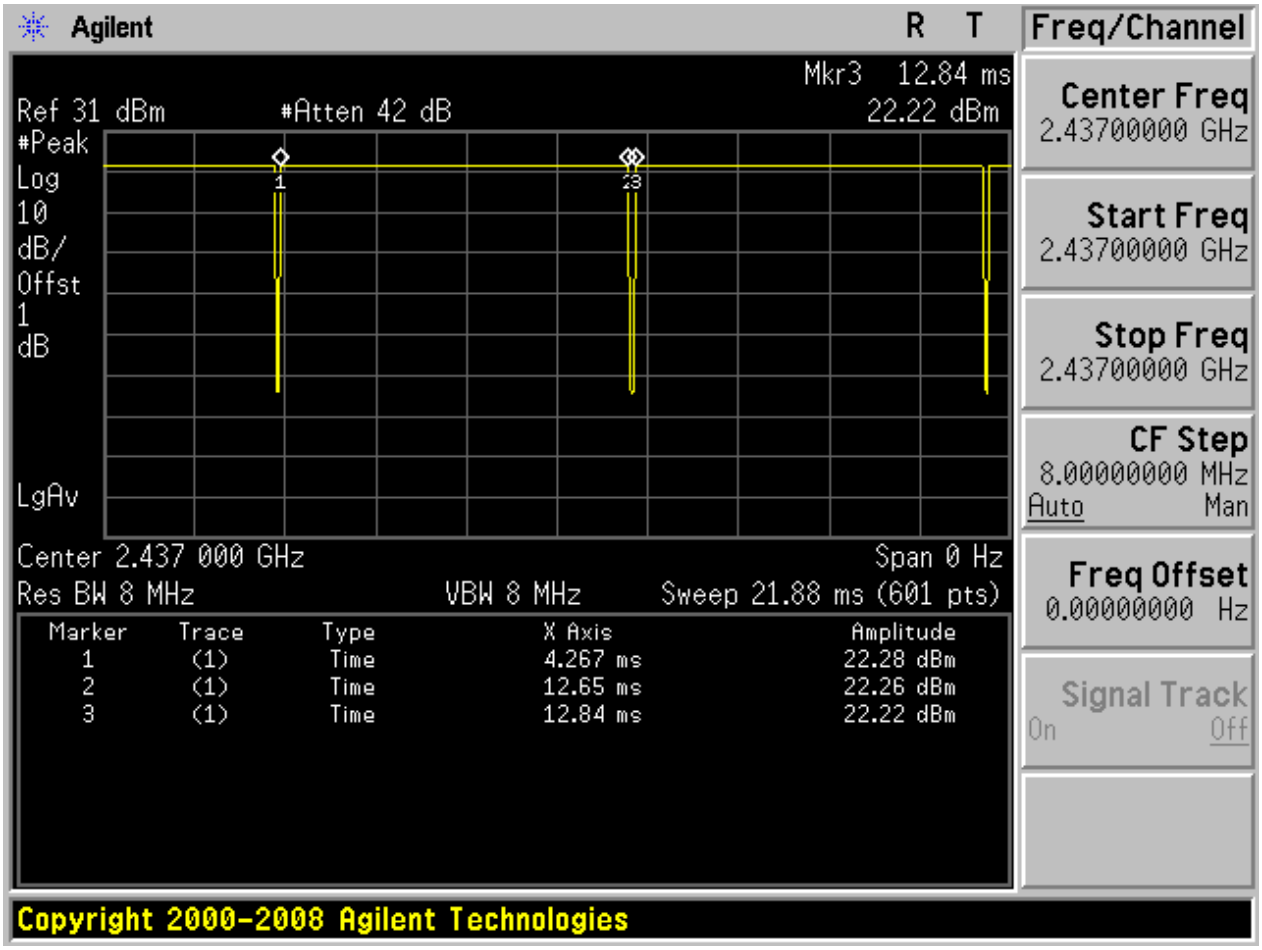
Appendix C: Duty Cycle

Part I - Test Results

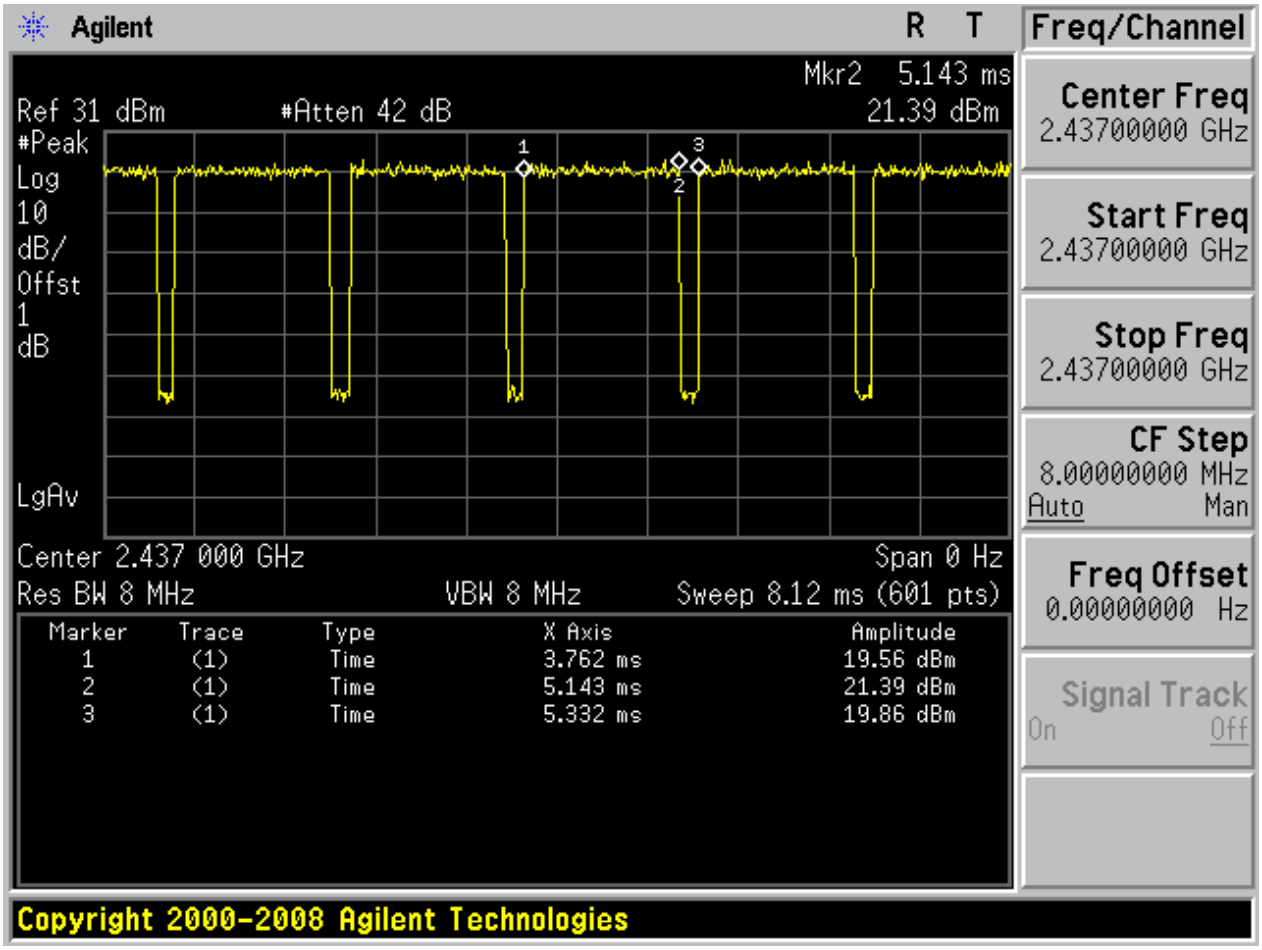
Test Mode	TX Freq. [MHz]	Duty cycle [%]
11B	Ant 1: CH1,CH6,CH11	98
11G	Ant 1: CH1,CH6,CH11	88
11N_20M_SISO	Ant 1: CH1,CH6,CH11	88
11N_40M_SISO	Ant 1: CH3,CH6,CH9	78

Part II - Test Plots

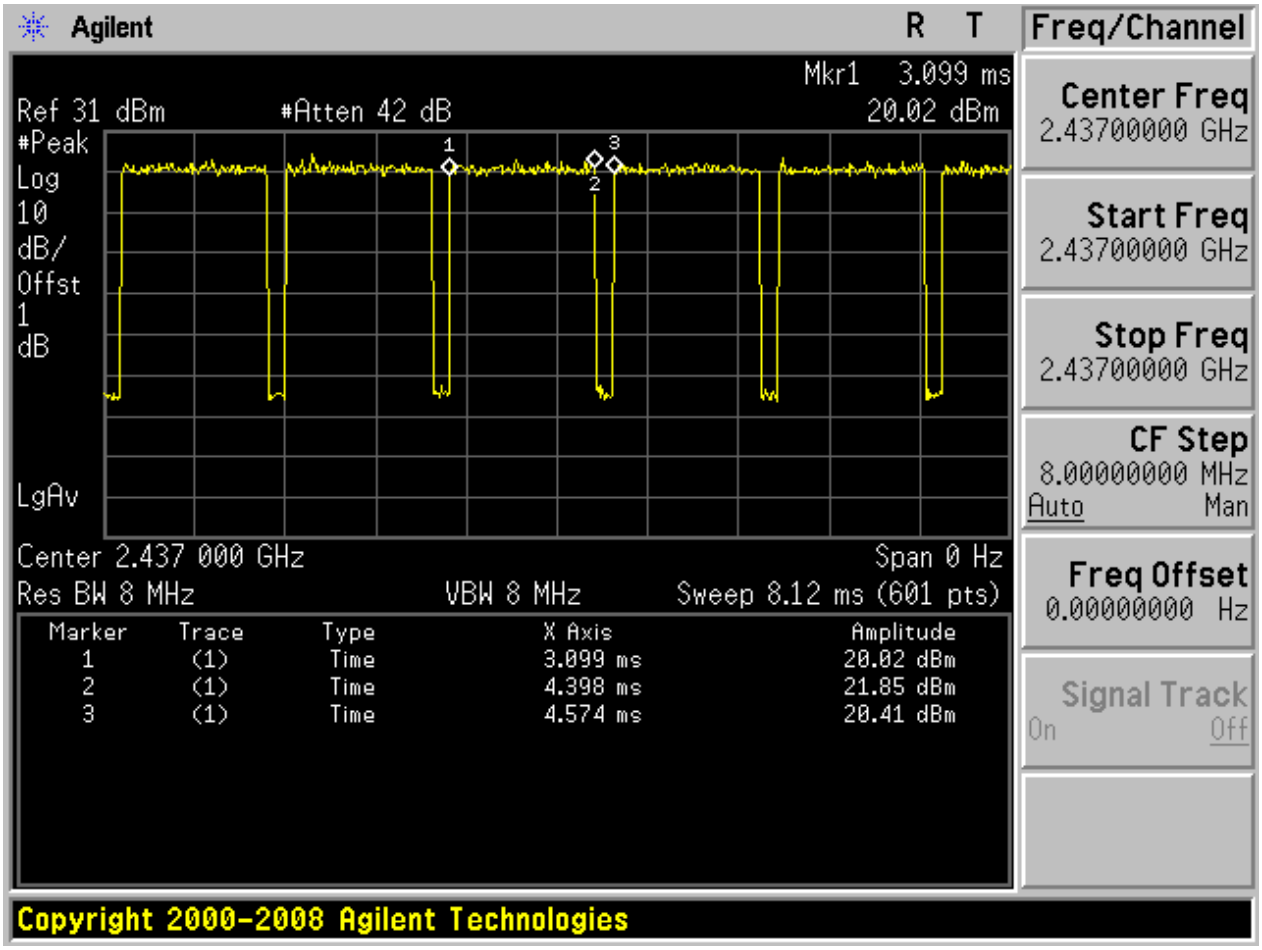
2.1 11B



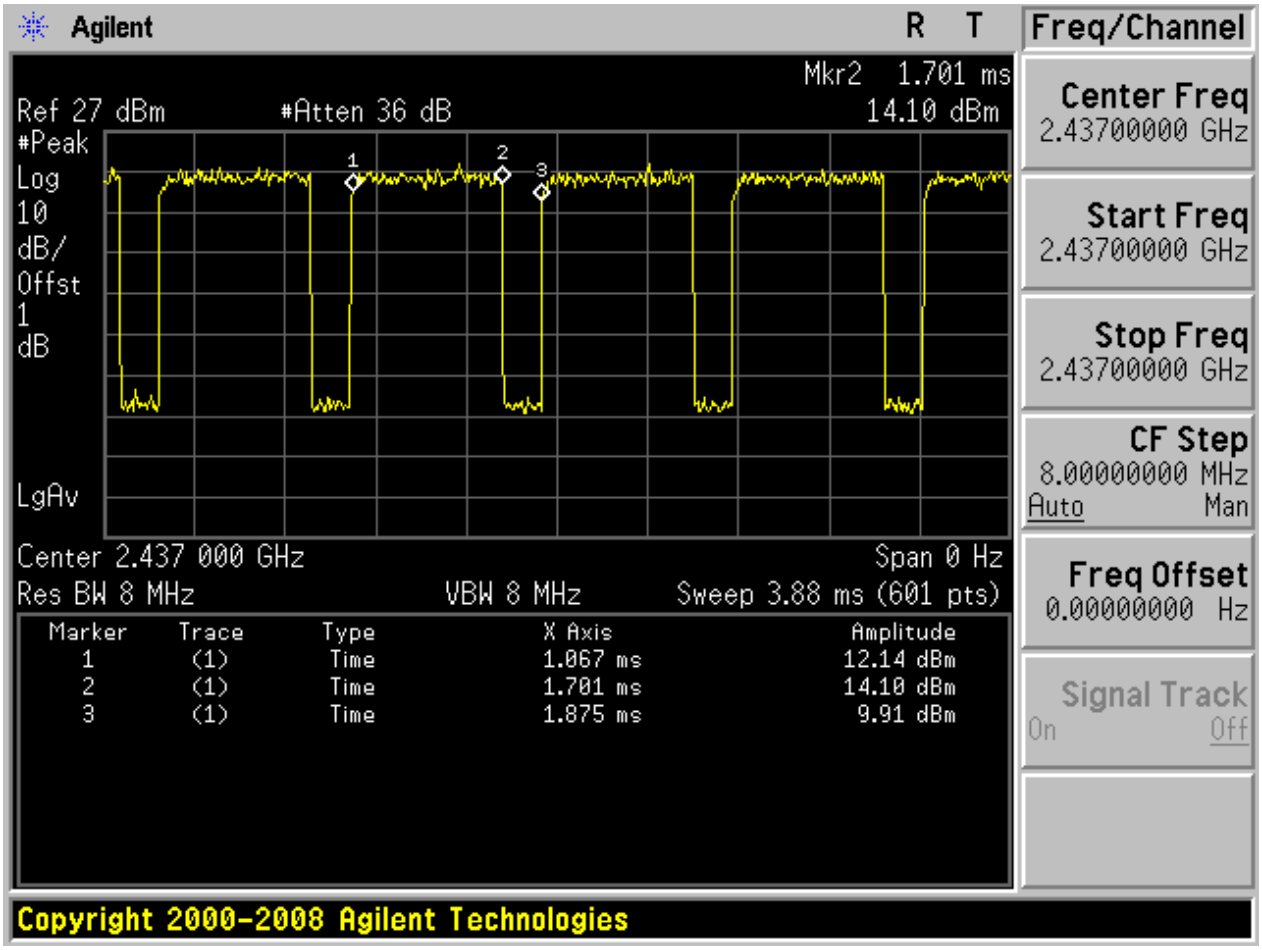
2.2 11G



2.3 11N20



2.4 11N40



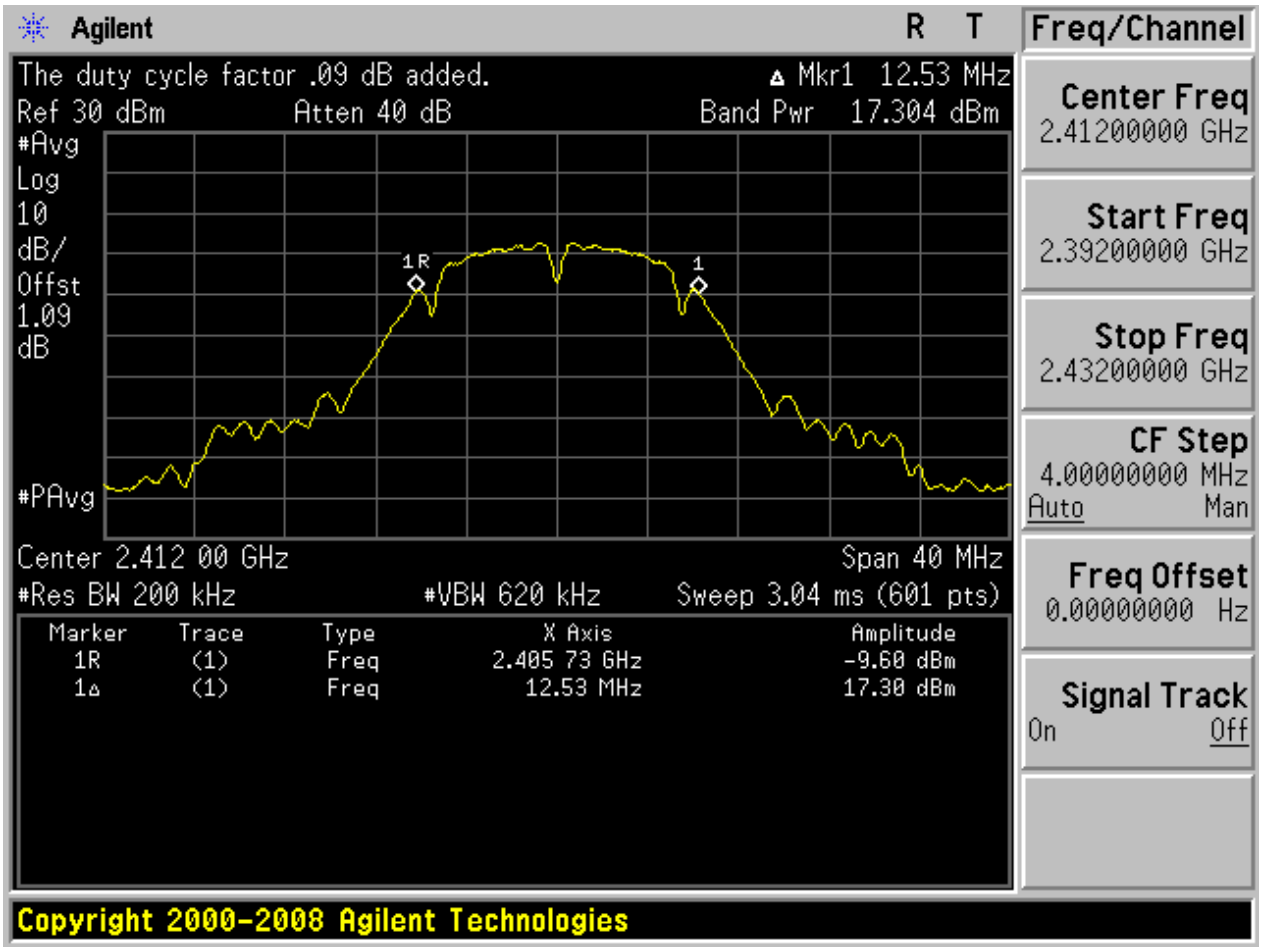
Appendix D: Maximum Conducted Average Output Power

Part I - Test Results

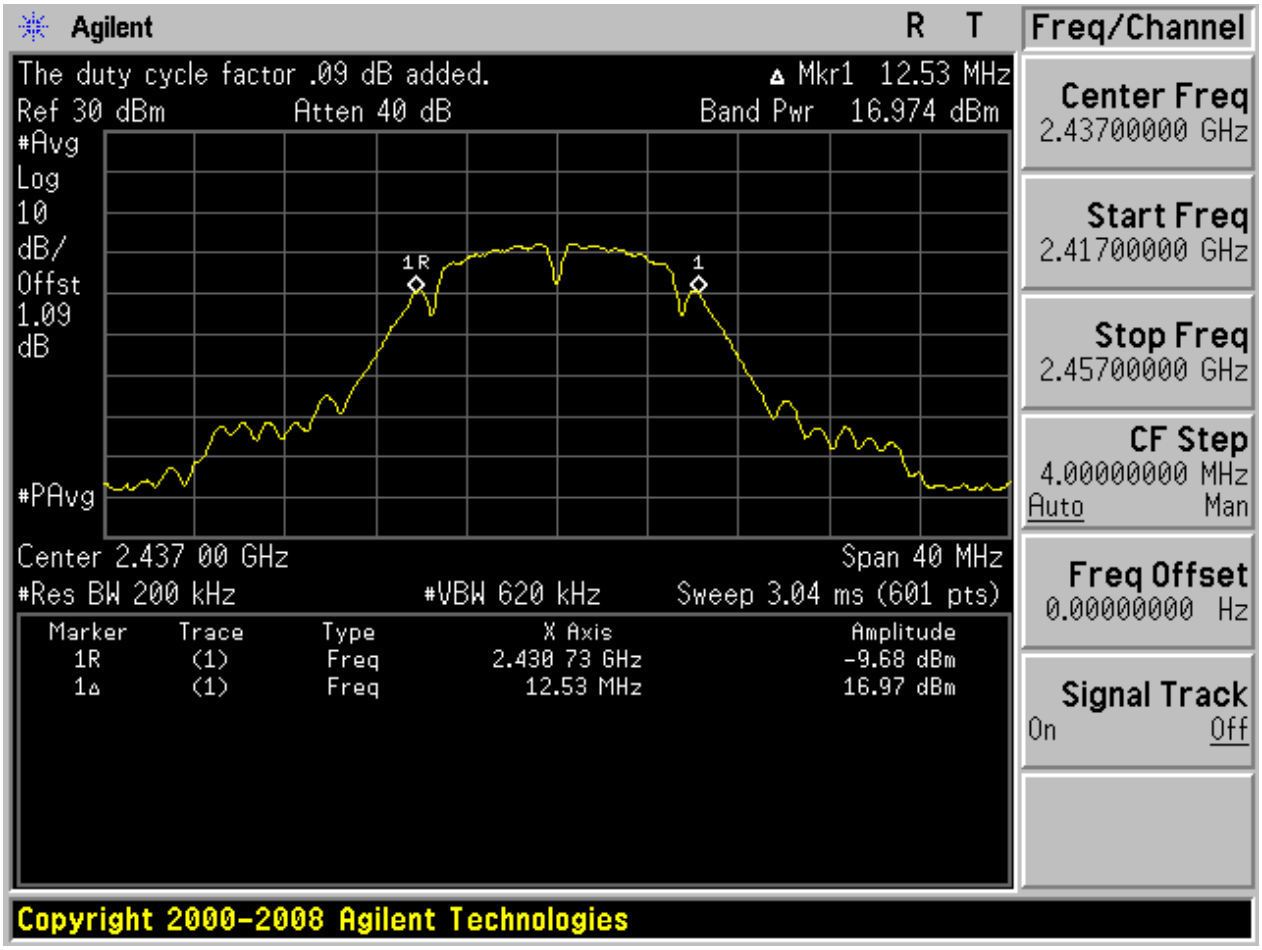
Test Mode	Test Channel	Frequency[MHz]	Ant	Power[dBm]	Verdict
11B	L	2412	Ant 1	17.30	pass
11B	M	2437	Ant 1	16.97	pass
11B	H	2462	Ant 1	17.27	pass
11G	L	2412	Ant 1	16.15	pass
11G	M	2437	Ant 1	16.50	pass
11G	H	2462	Ant 1	16.51	pass
11N20	L	2412	Ant 1	13.36	pass
11N20	M	2437	Ant 1	13.58	pass
11N20	H	2462	Ant 1	13.68	pass
11N40	L	2422	Ant 1	13.54	pass
11N40	M	2437	Ant 1	13.43	pass
11N40	H	2452	Ant 1	13.72	pass

Part II - Test Plots

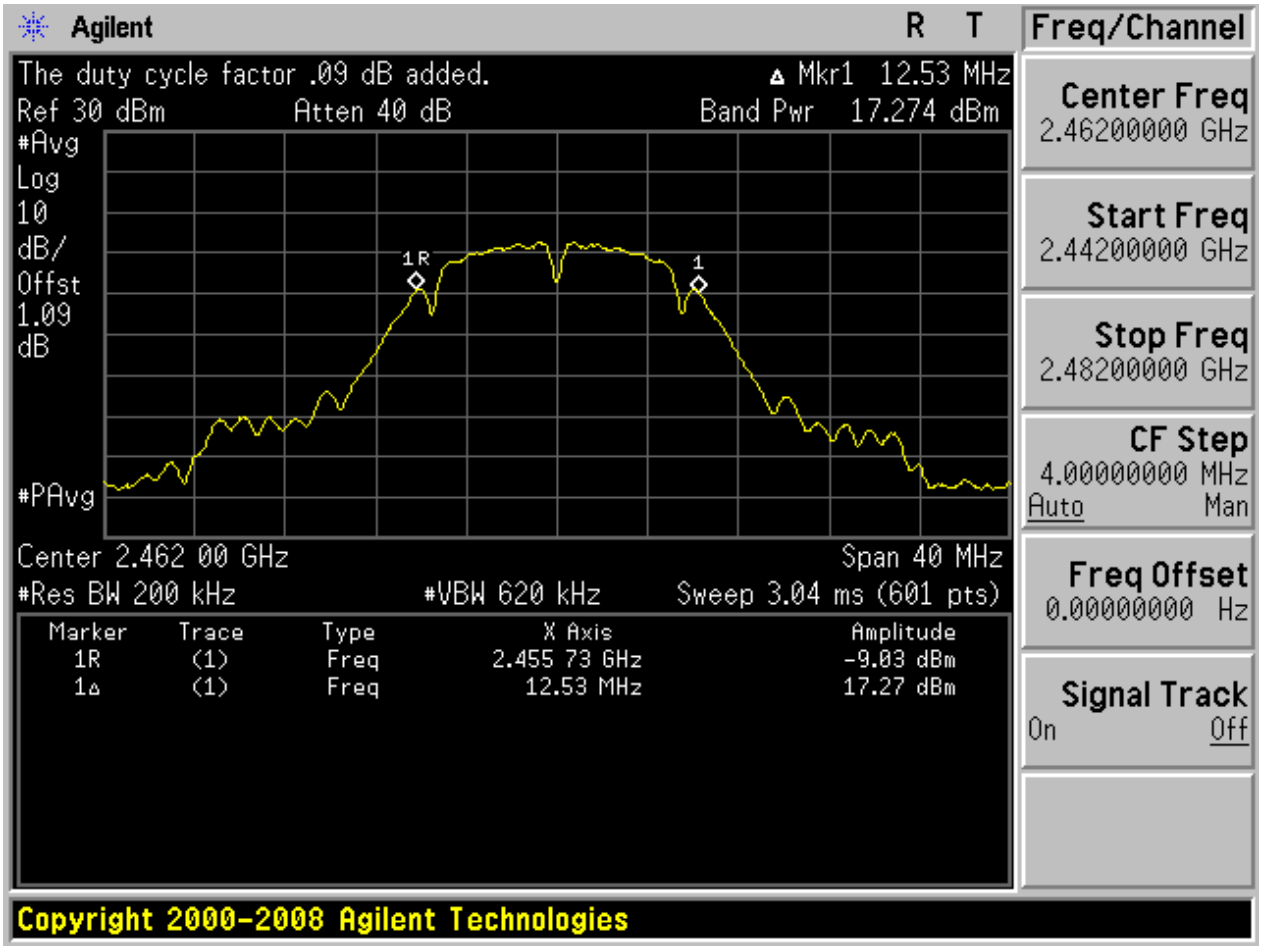
2.1 11B_L@Ant 1



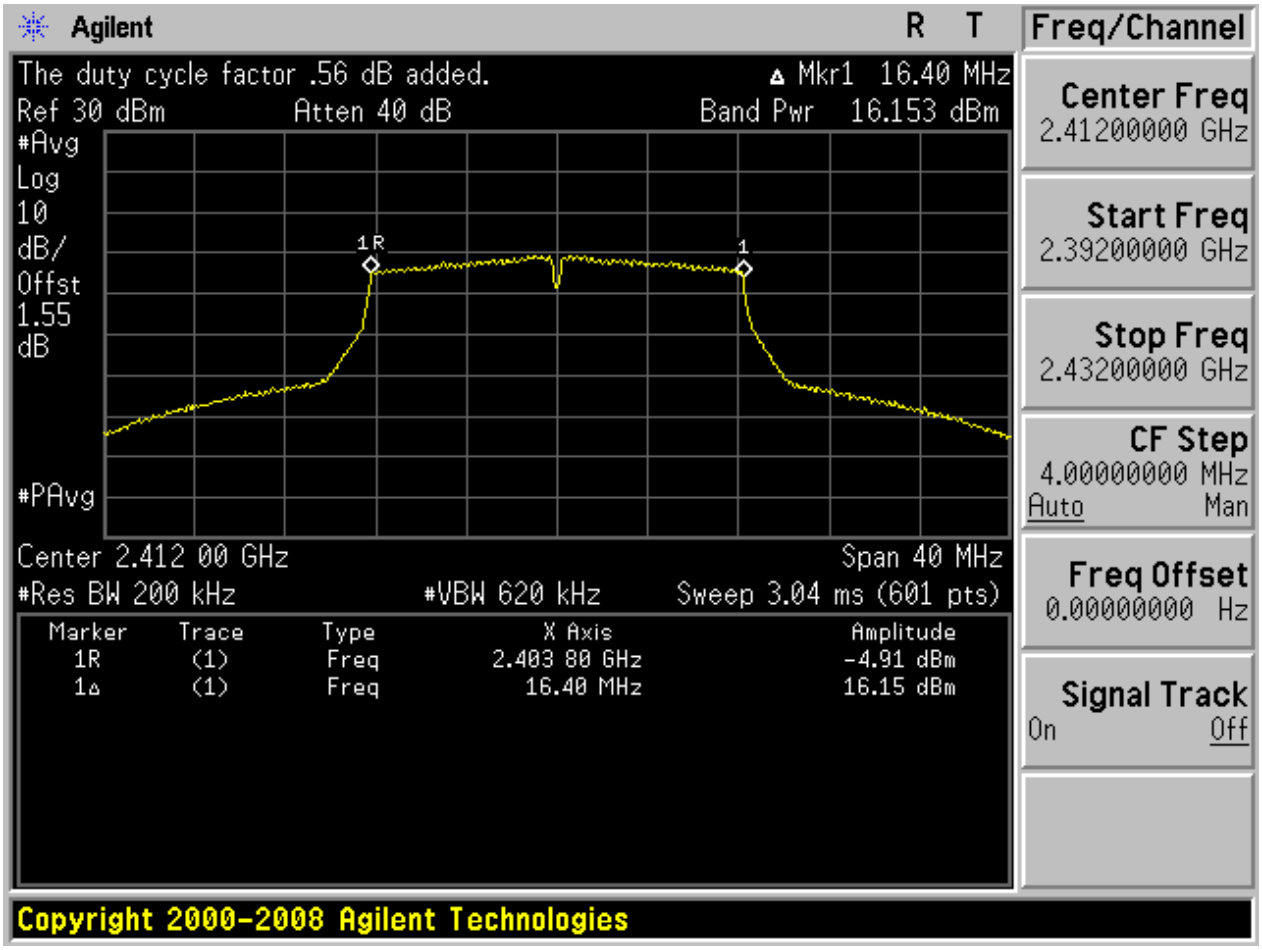
2.2 11B_M@Ant 1



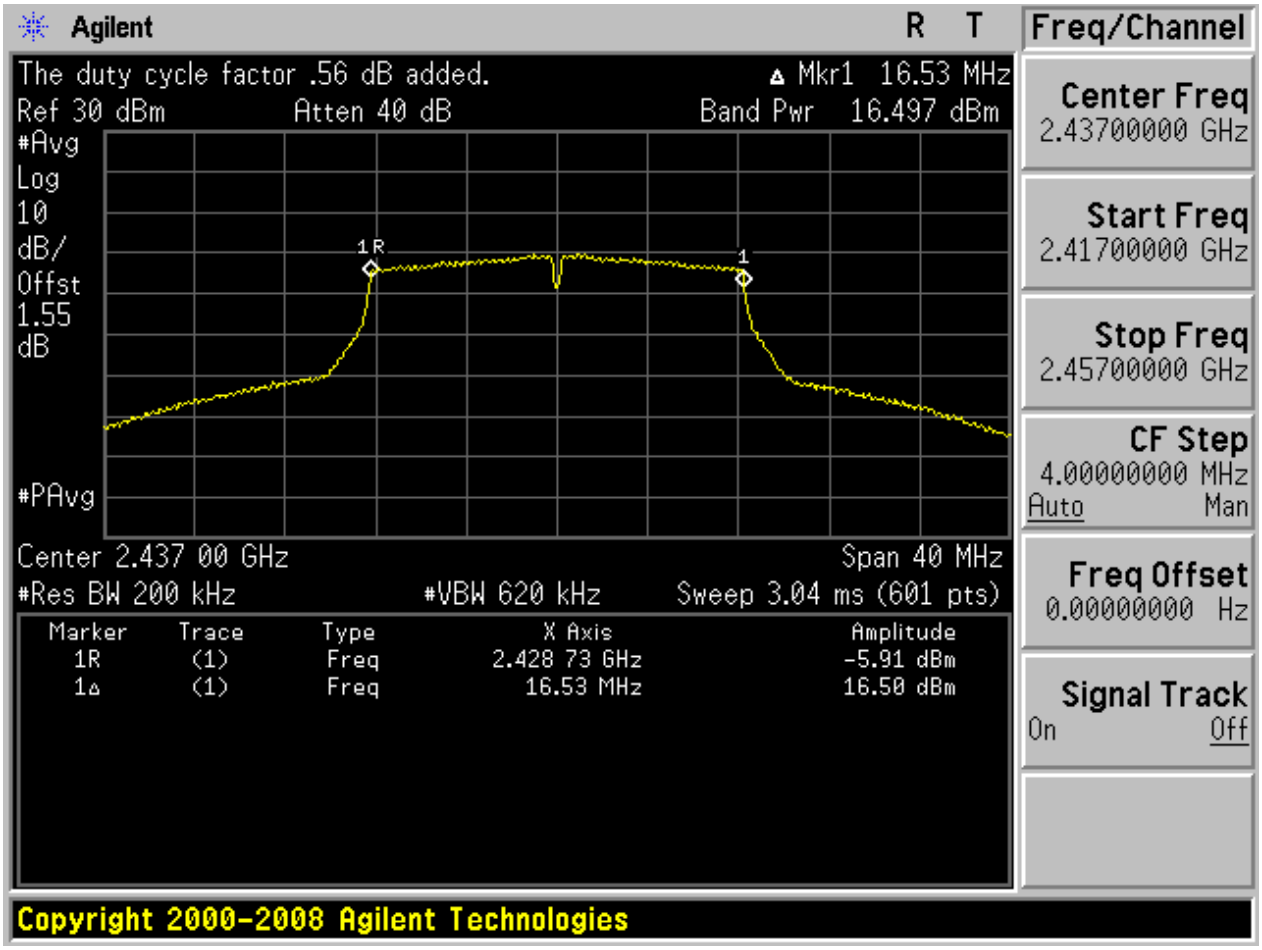
2.3 11B_H@Ant 1



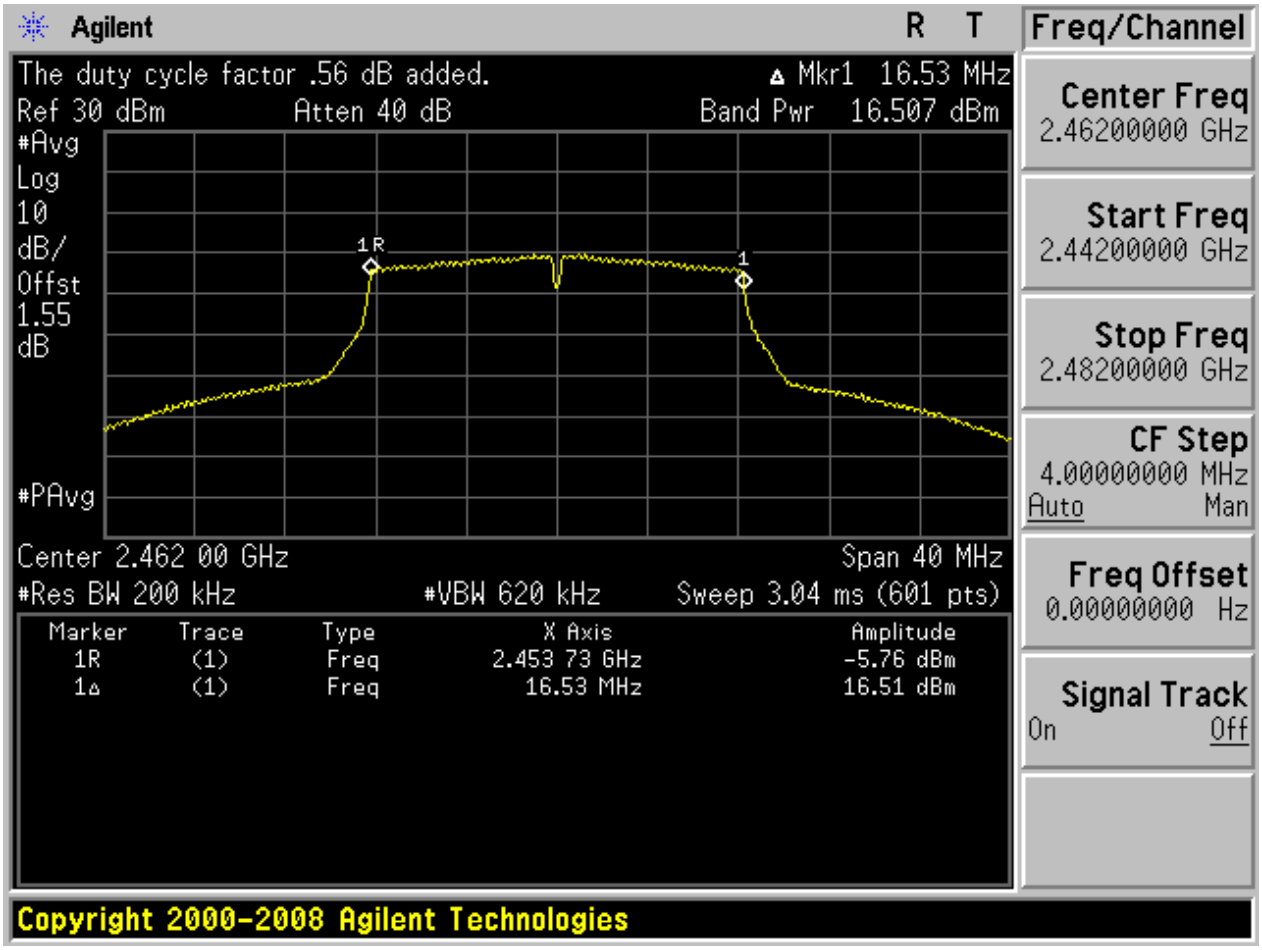
2.4 11G_L@Ant 1



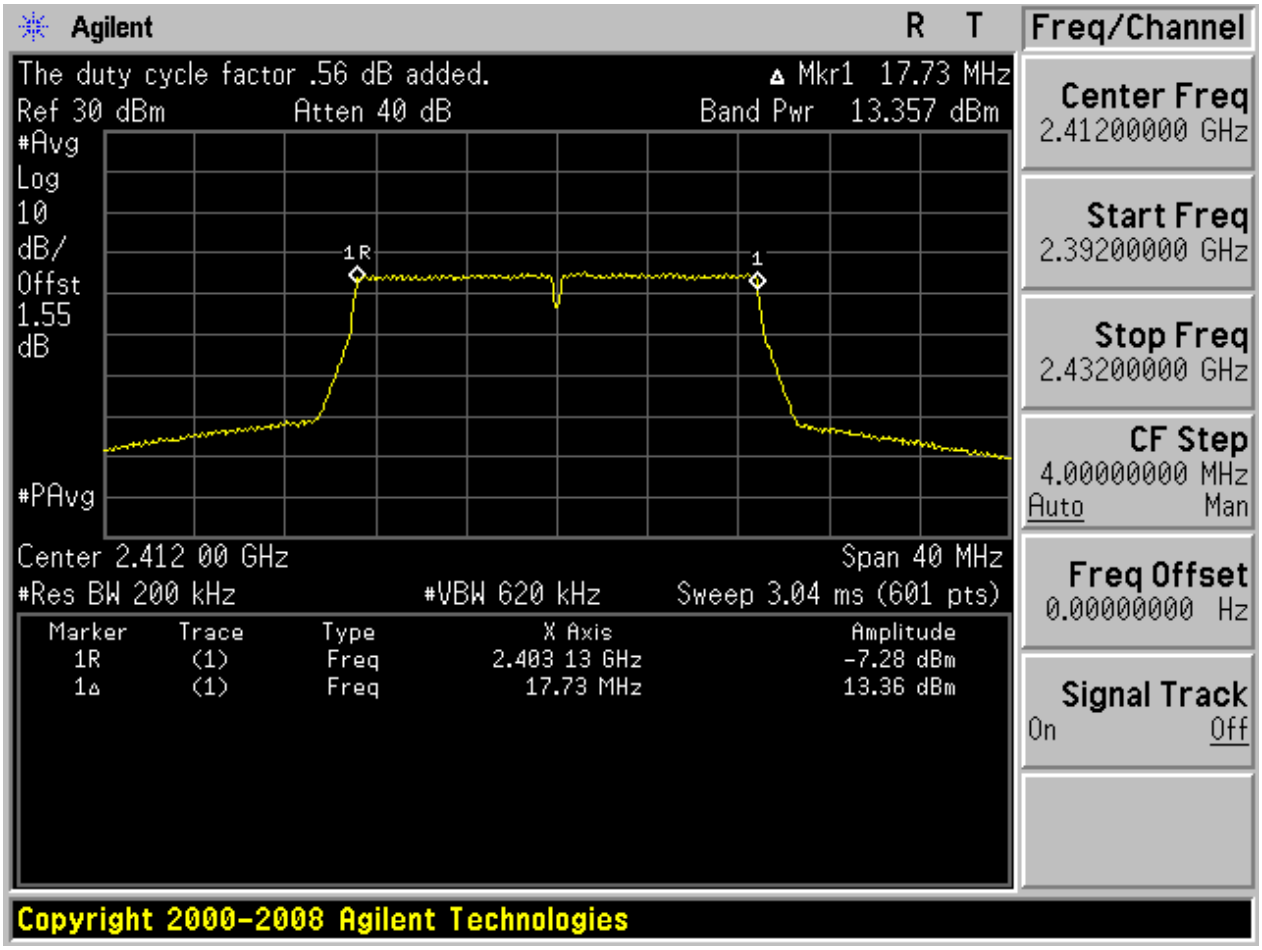
2.5 11G_M@Ant 1



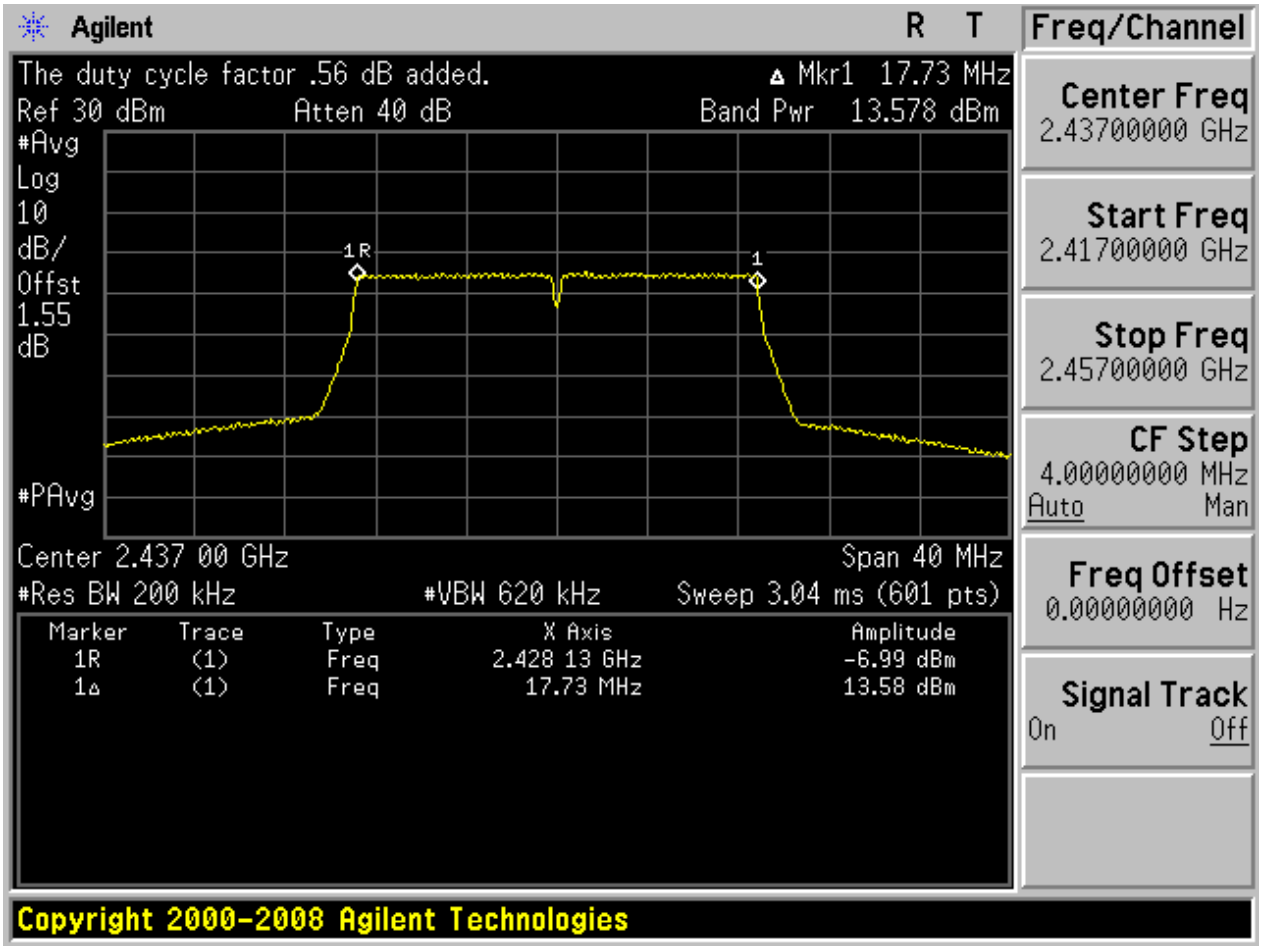
2.6 11G_H@Ant 1



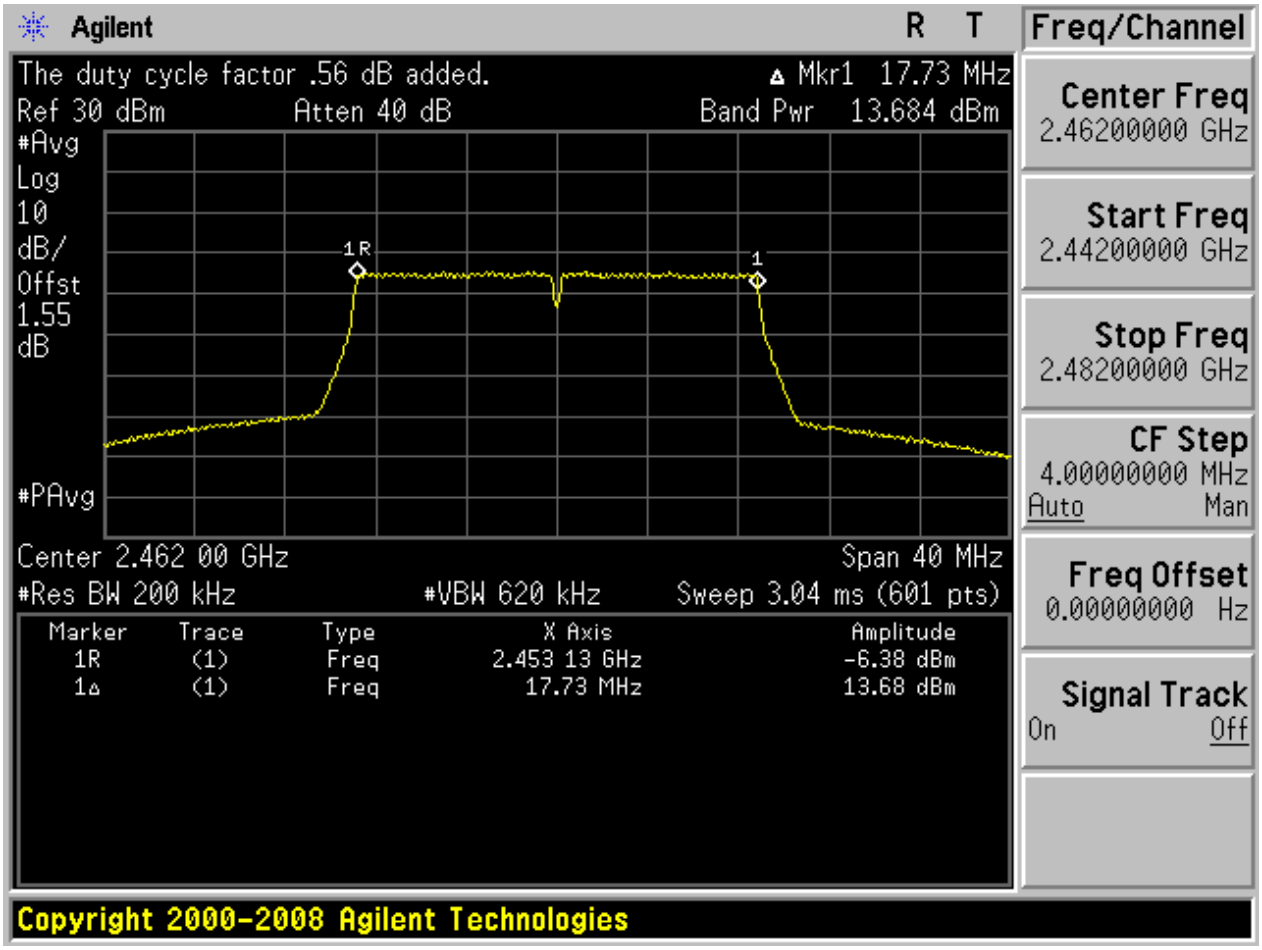
2.7 11N20_L@Ant 1



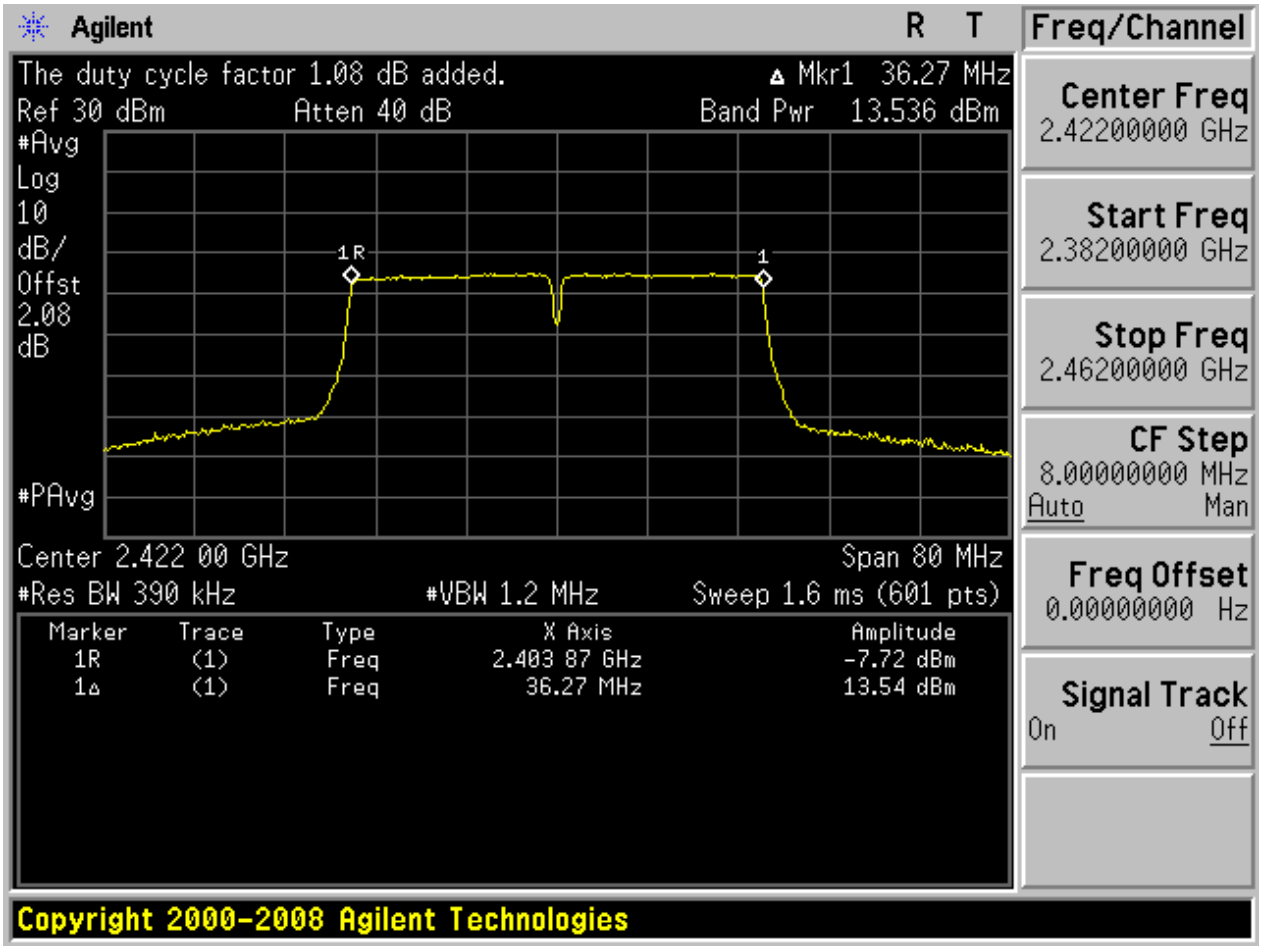
2.8 11N20_M@Ant 1



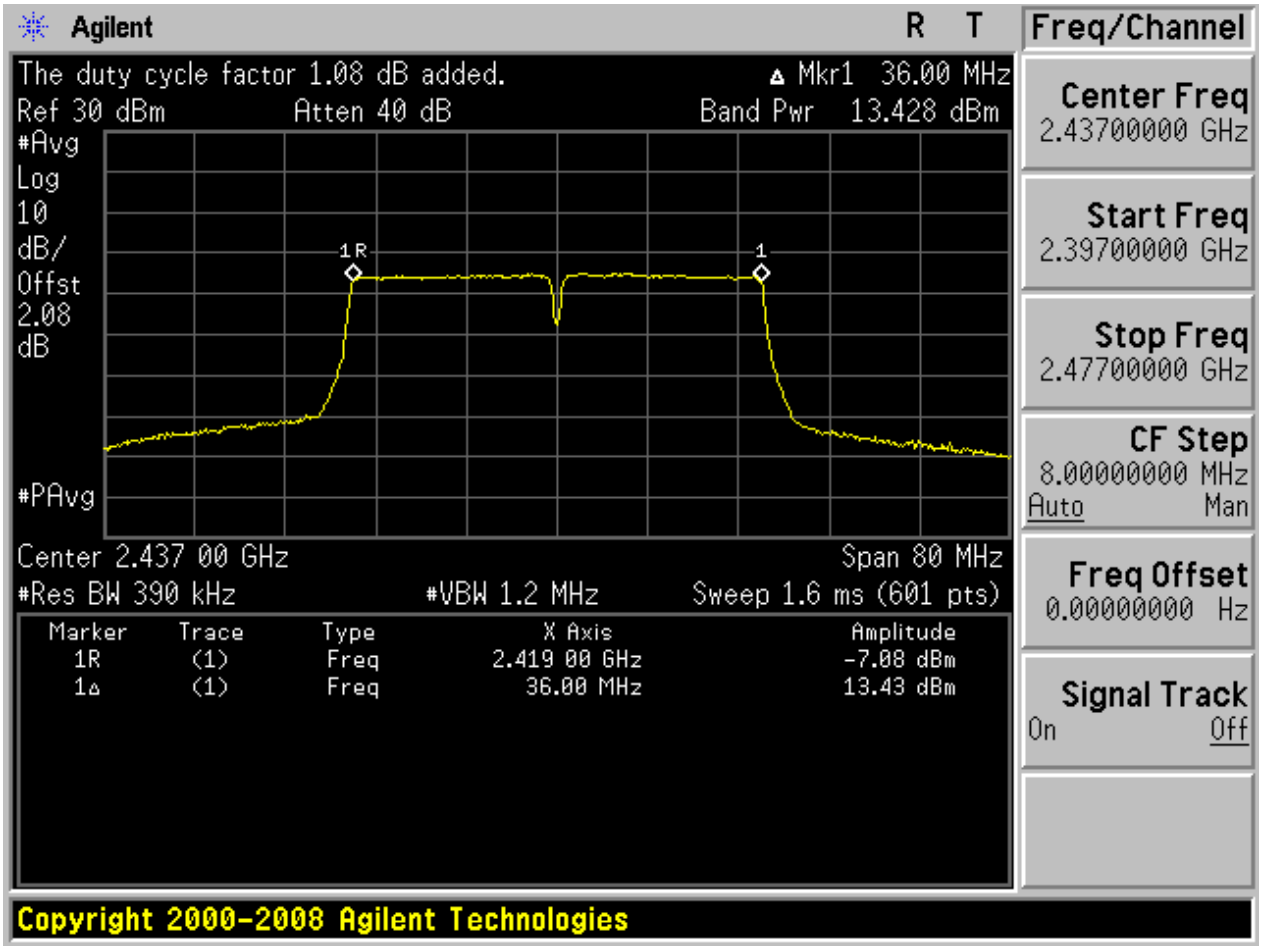
2.9 11N20_H@Ant 1



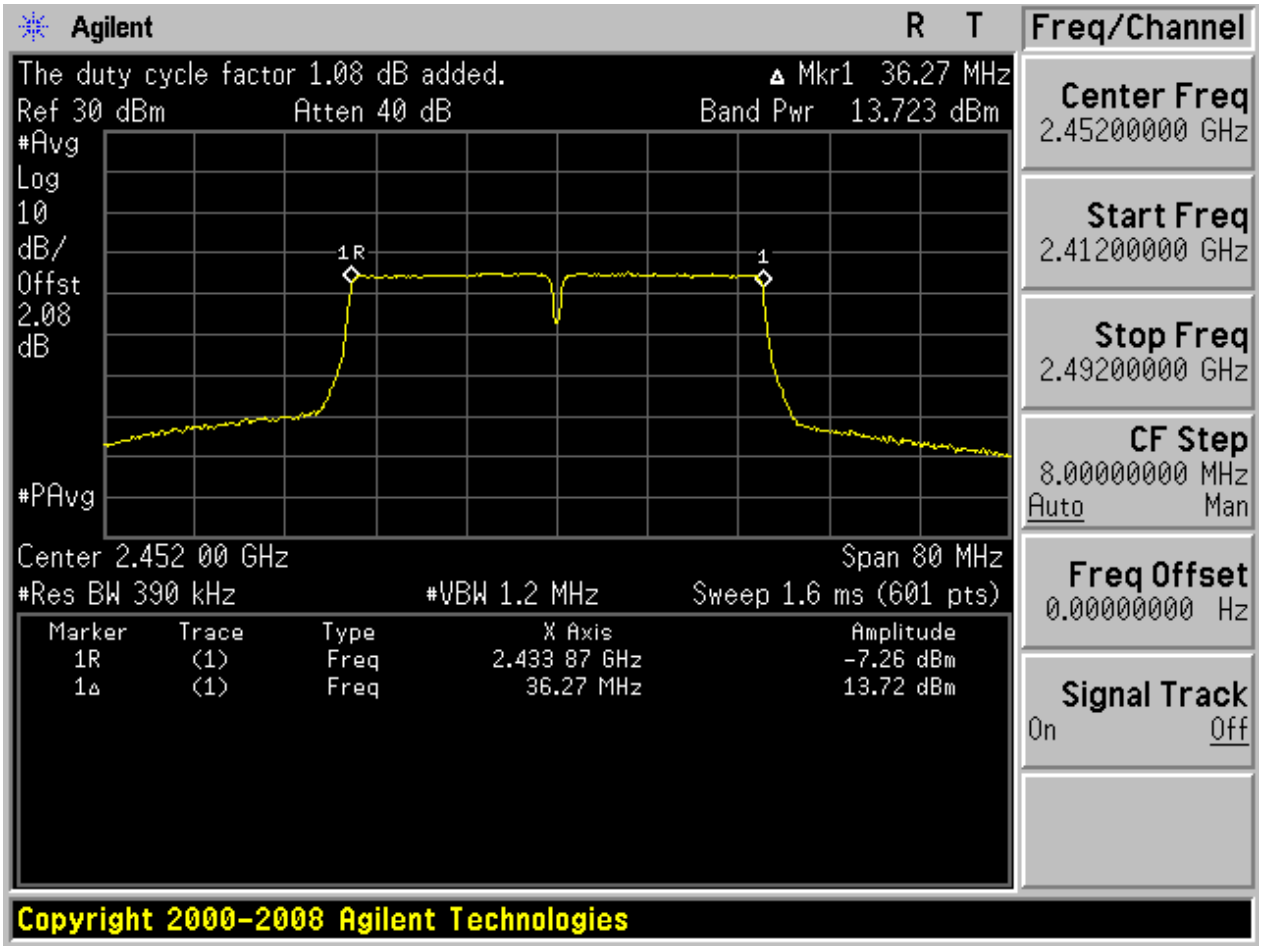
2.10 11N40_L@Ant 1



2.11 11N40_M@Ant 1



2.12 11N40_H@Ant 1



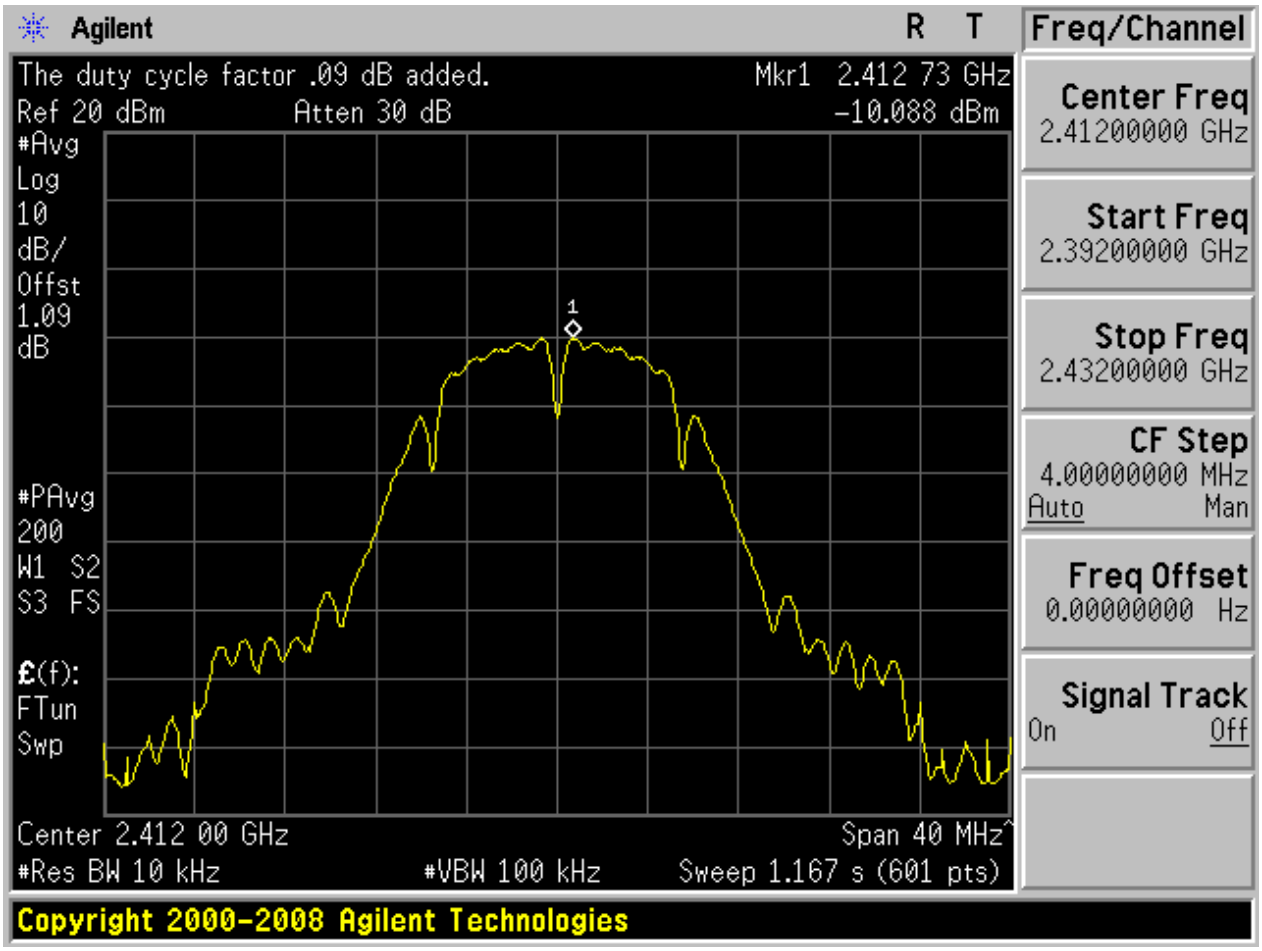
Appendix E: Maximum Power Spectral Density Level

Part I - Test Results

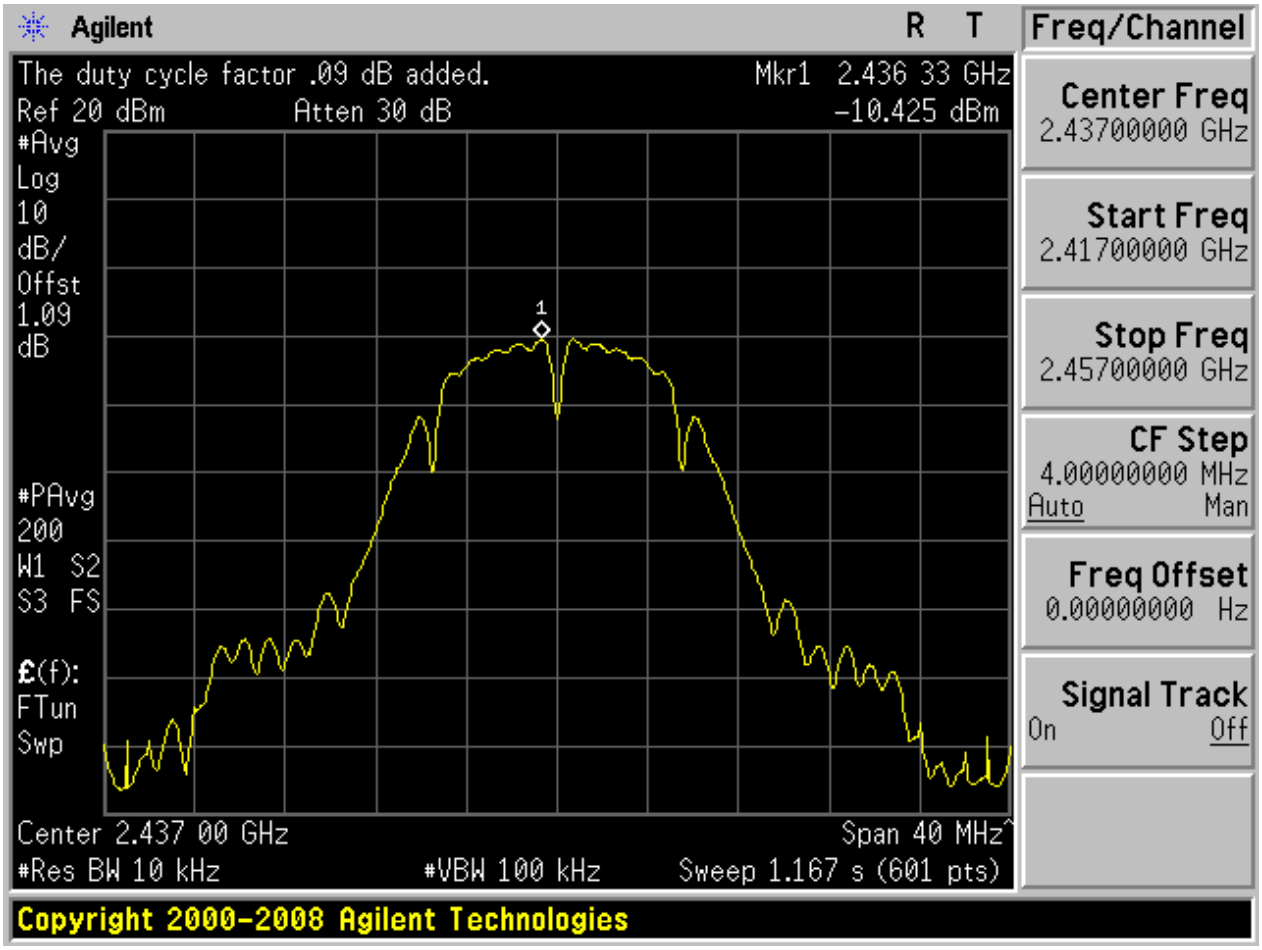
Test Mode	Test Channel	Frequency[MHz]	Ant	PD[MHz]	Verdict
11B	L	2412	Ant 1	-10.09	pass
11B	M	2437	Ant 1	-10.43	pass
11B	H	2462	Ant 1	-10.17	pass
11G	L	2412	Ant 1	-12.61	pass
11G	M	2437	Ant 1	-12.32	pass
11G	H	2462	Ant 1	-12.33	pass
11N20	L	2412	Ant 1	-16.83	pass
11N20	M	2437	Ant 1	-16.76	pass
11N20	H	2462	Ant 1	-16.37	pass
11N40	L	2422	Ant 1	-19.91	pass
11N40	M	2437	Ant 1	-19.53	pass
11N40	H	2452	Ant 1	-19.78	pass

Part II - Test Plots

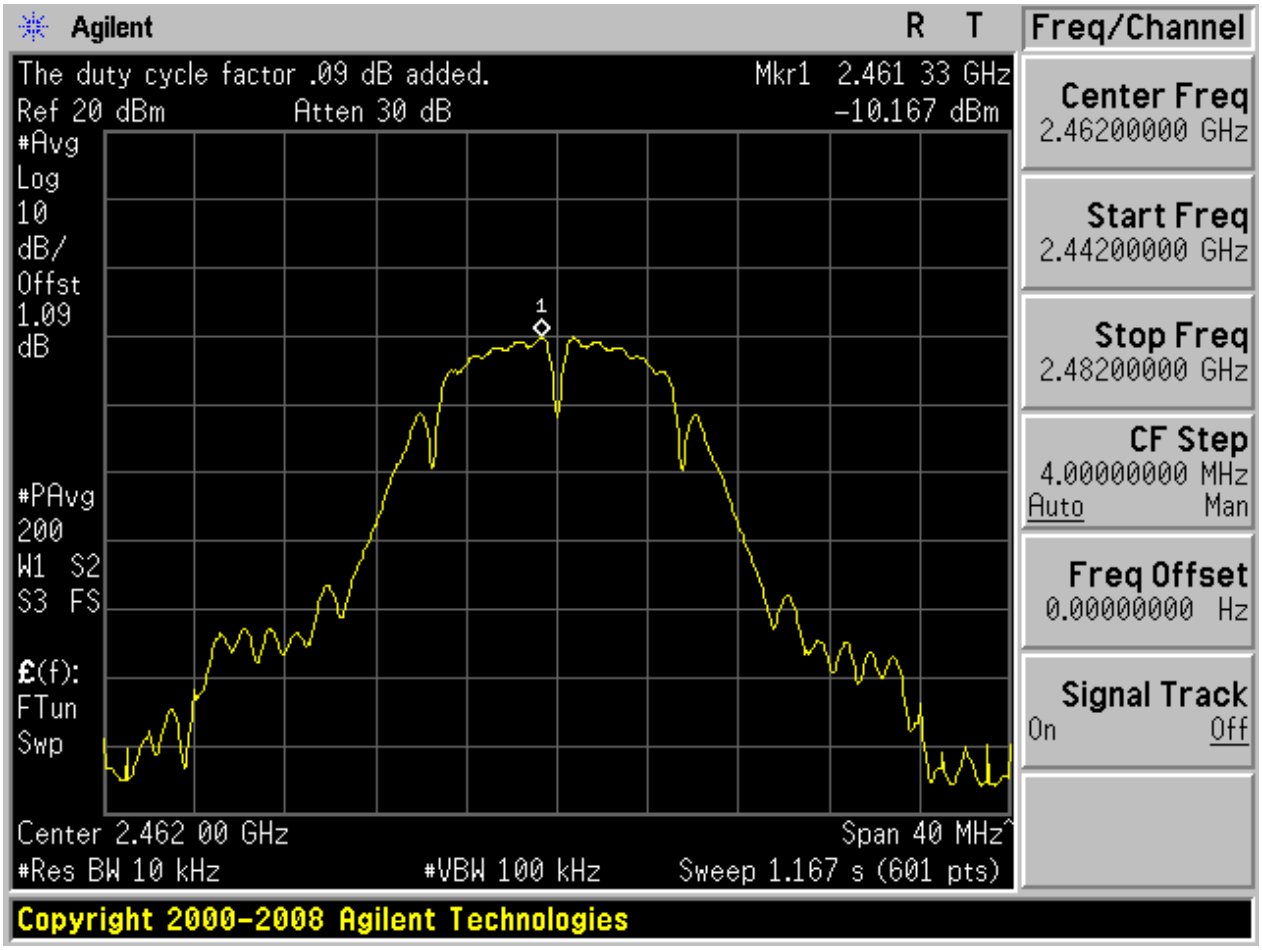
2.1 11B_L@Ant 1



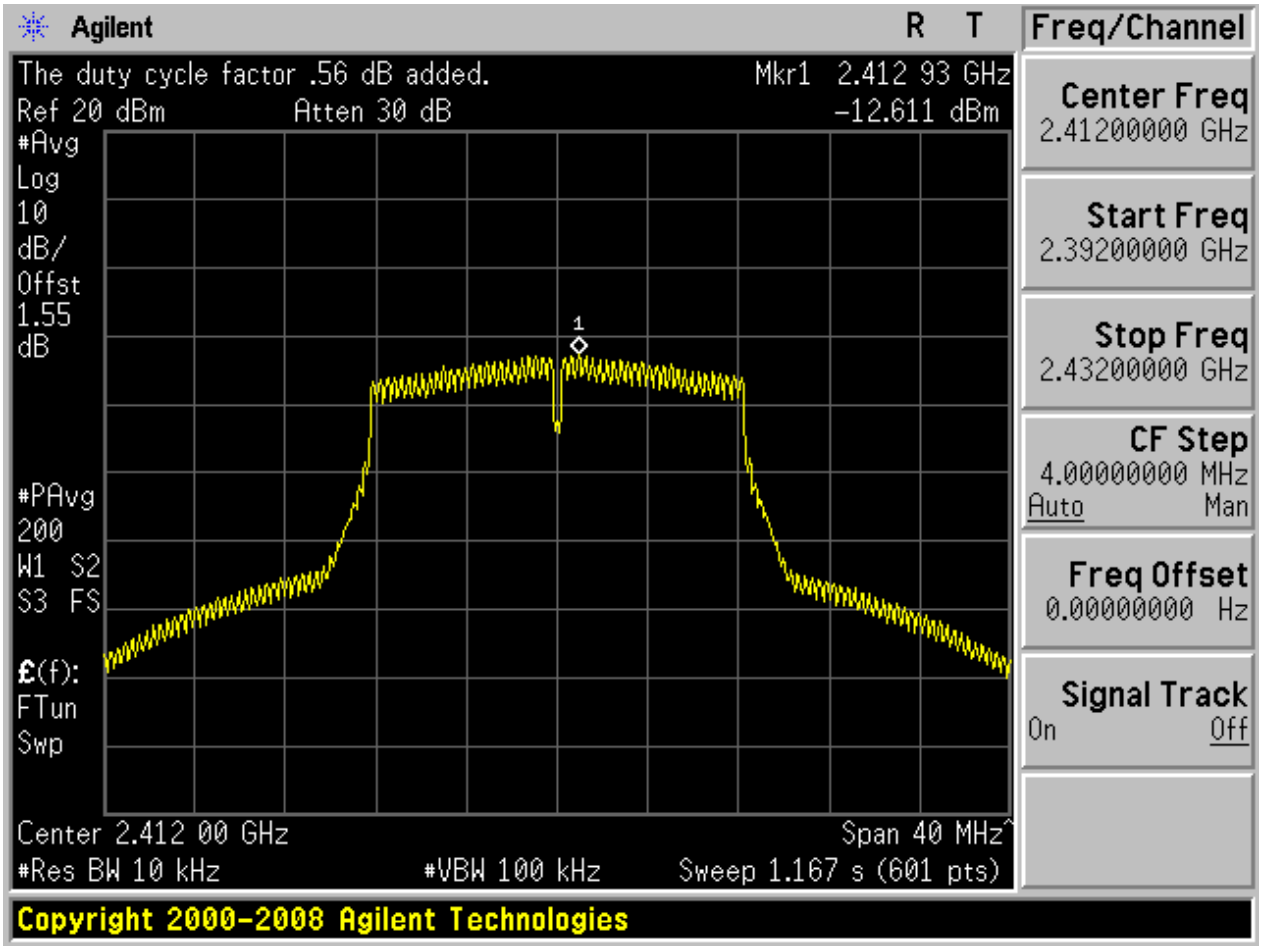
2.2 11B_M@Ant 1



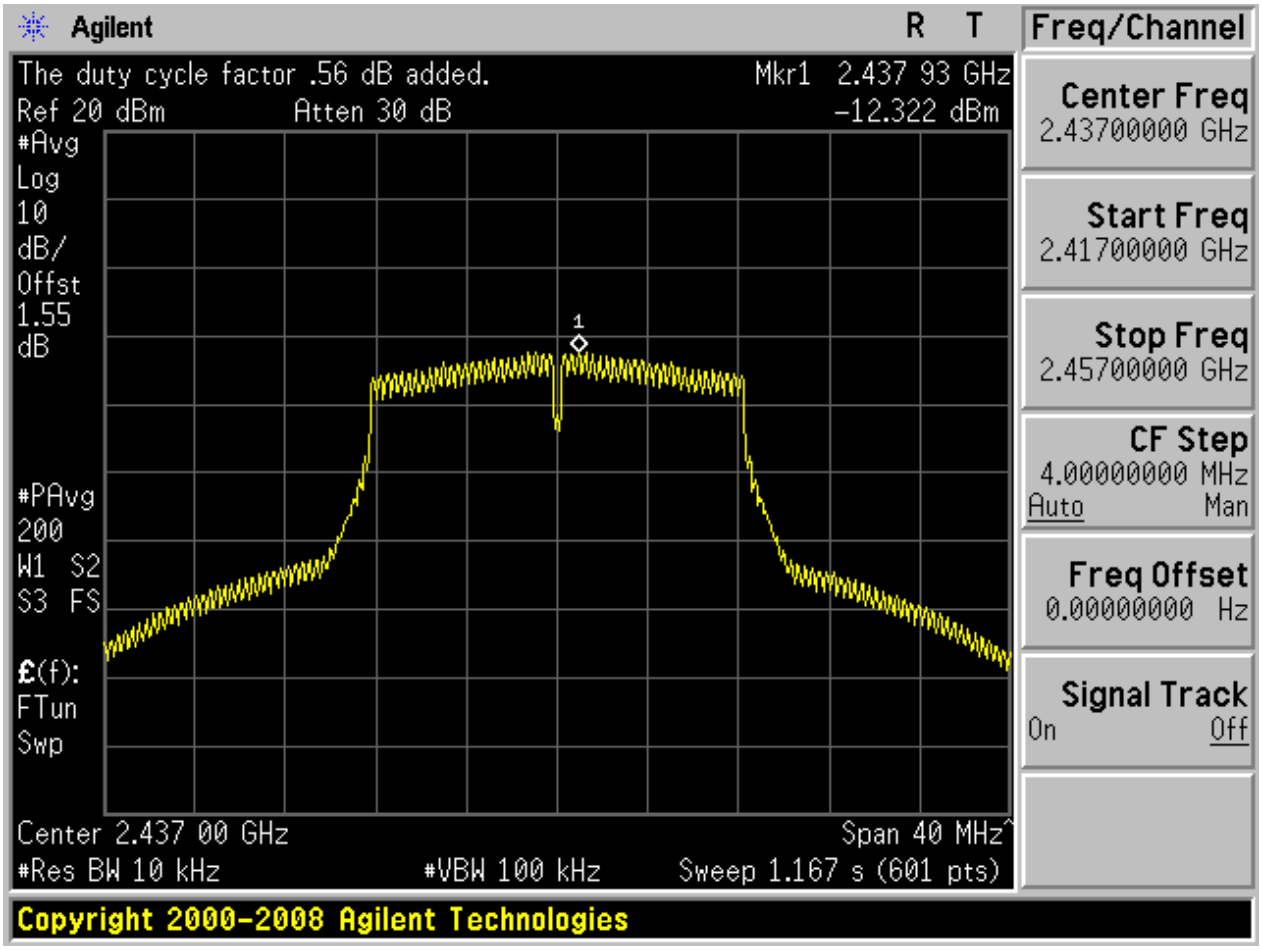
2.3 11B_H@Ant 1



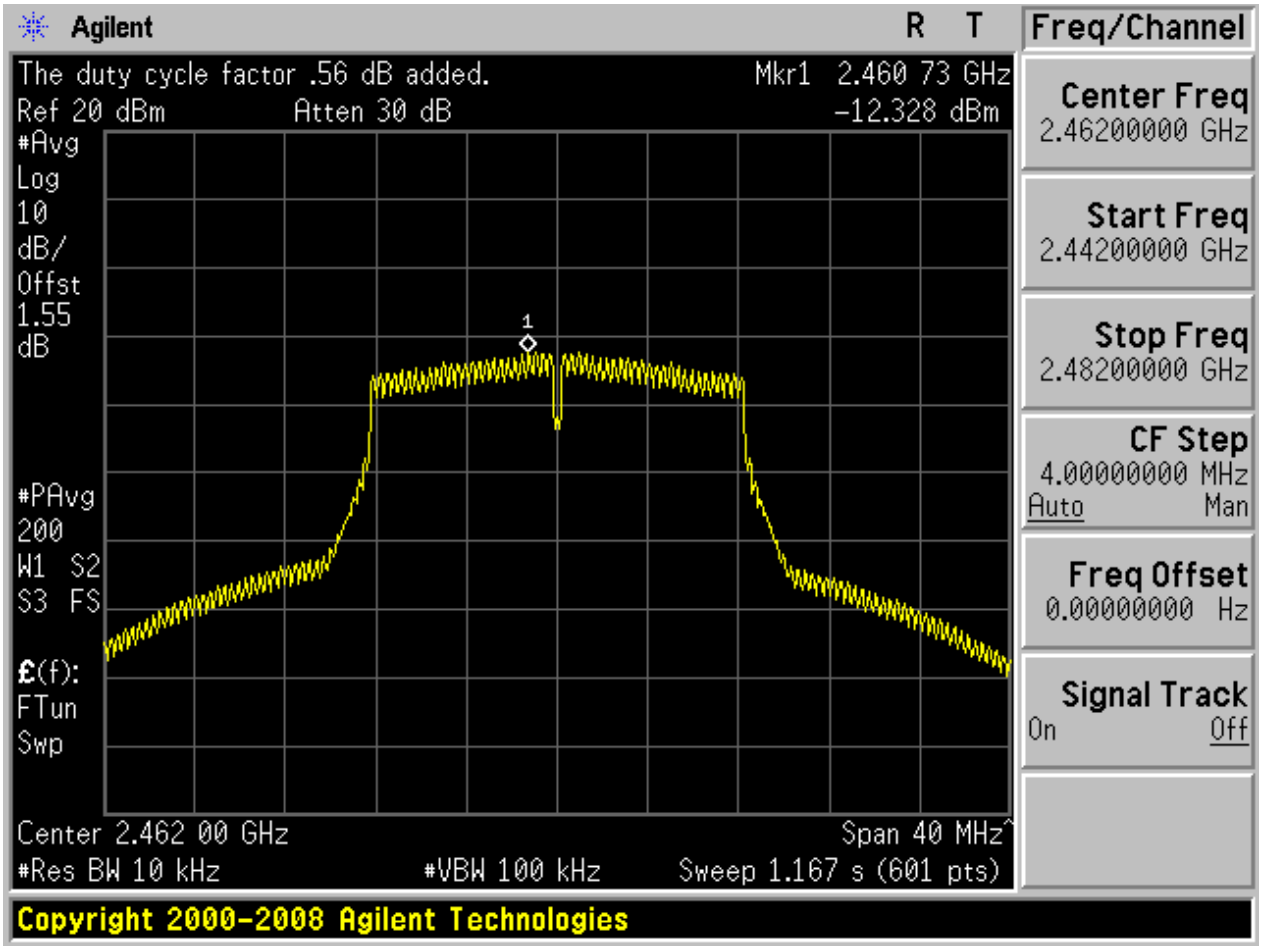
2.4 11G_L@Ant 1



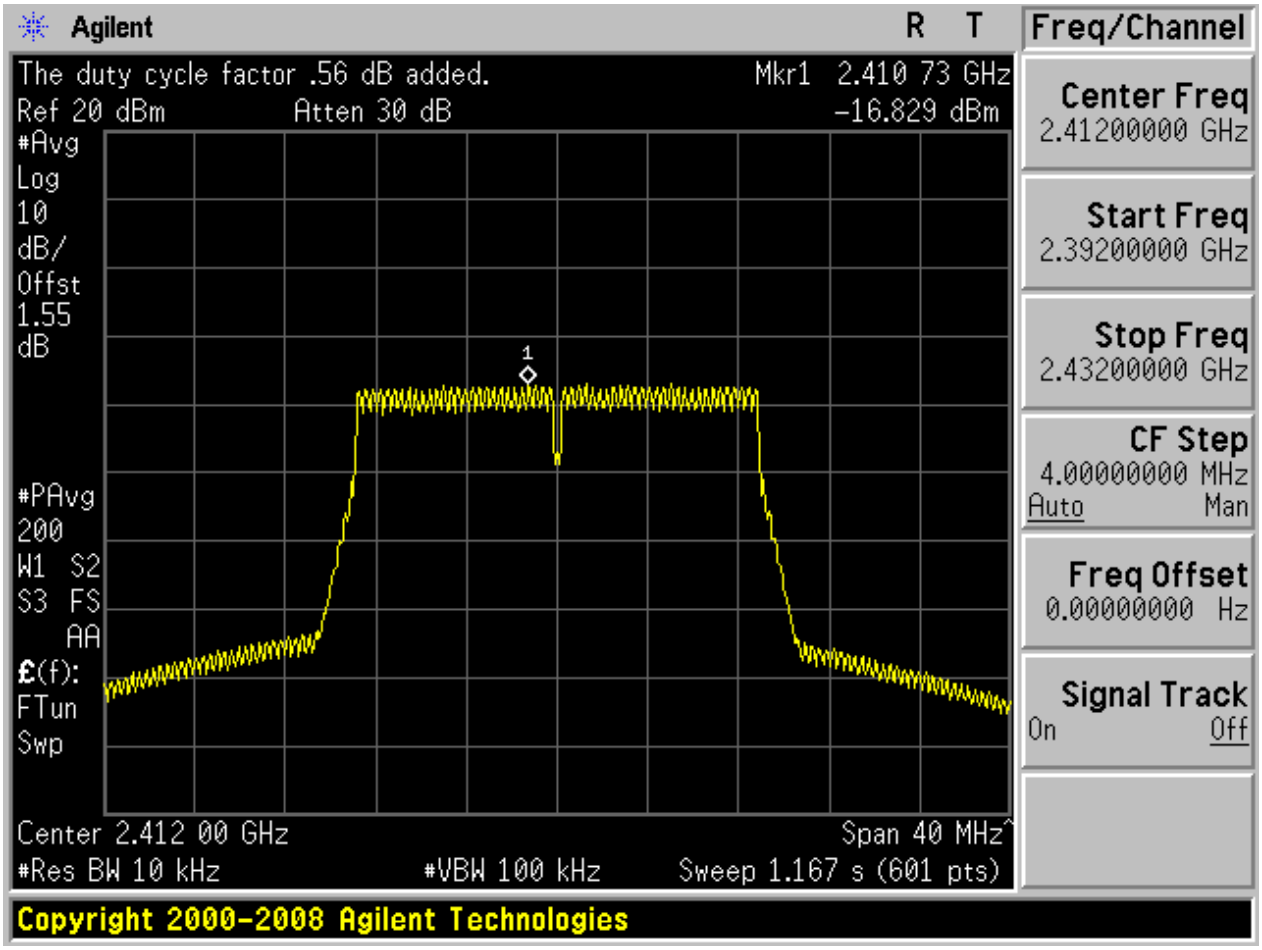
2.5 11G_M@Ant 1



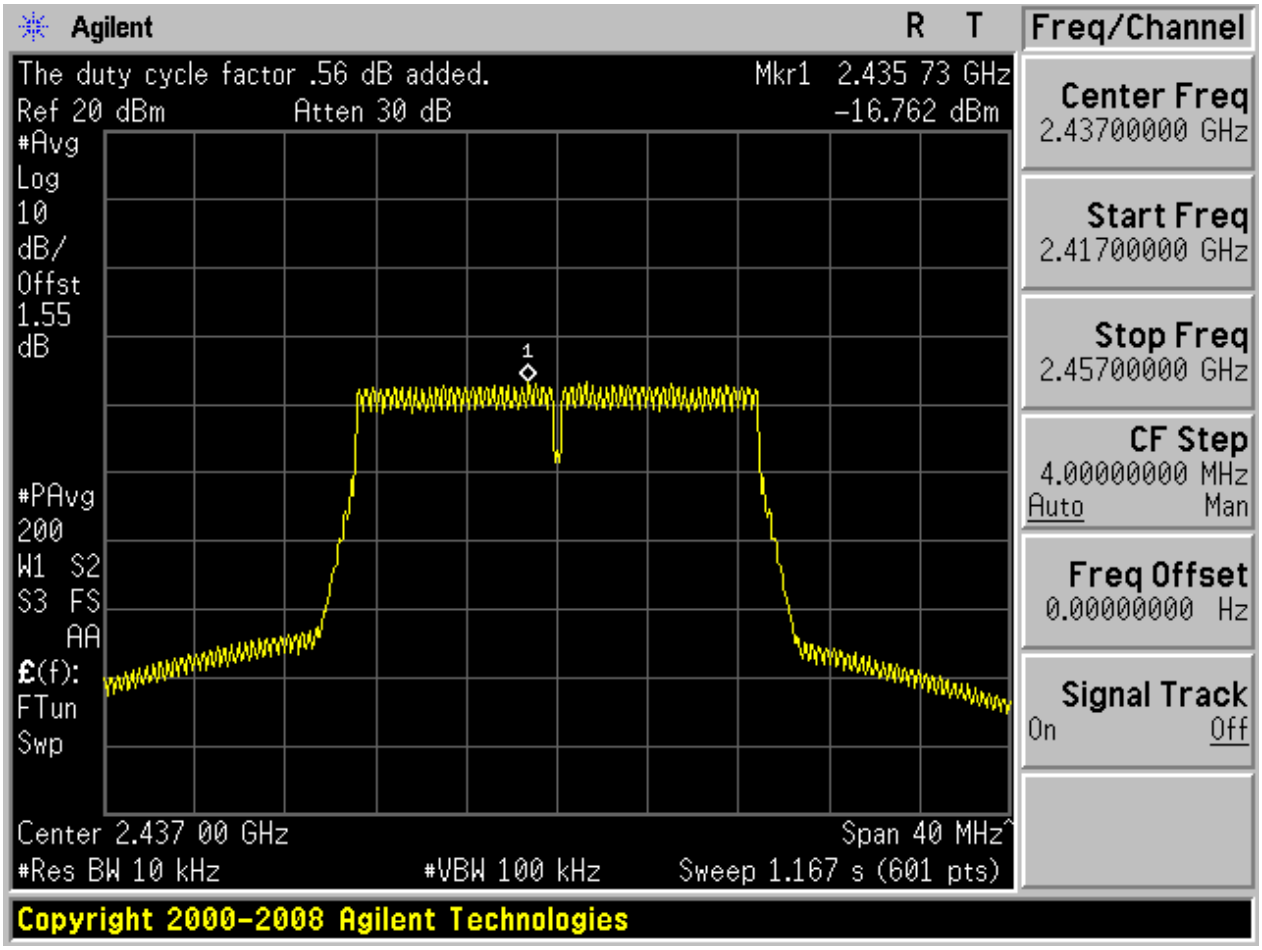
2.6 11G_H@Ant 1



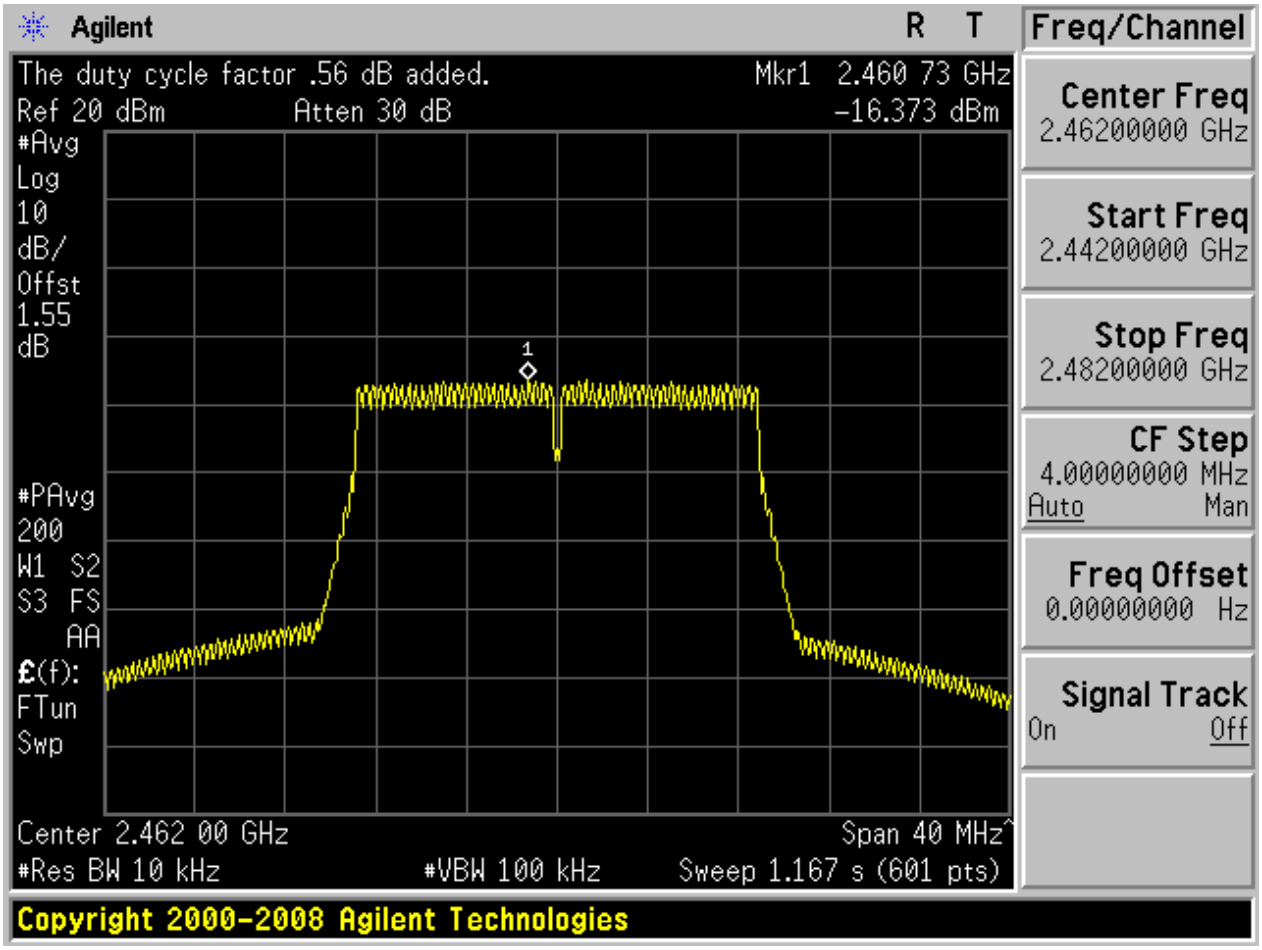
2.7 11N20_L@Ant 1



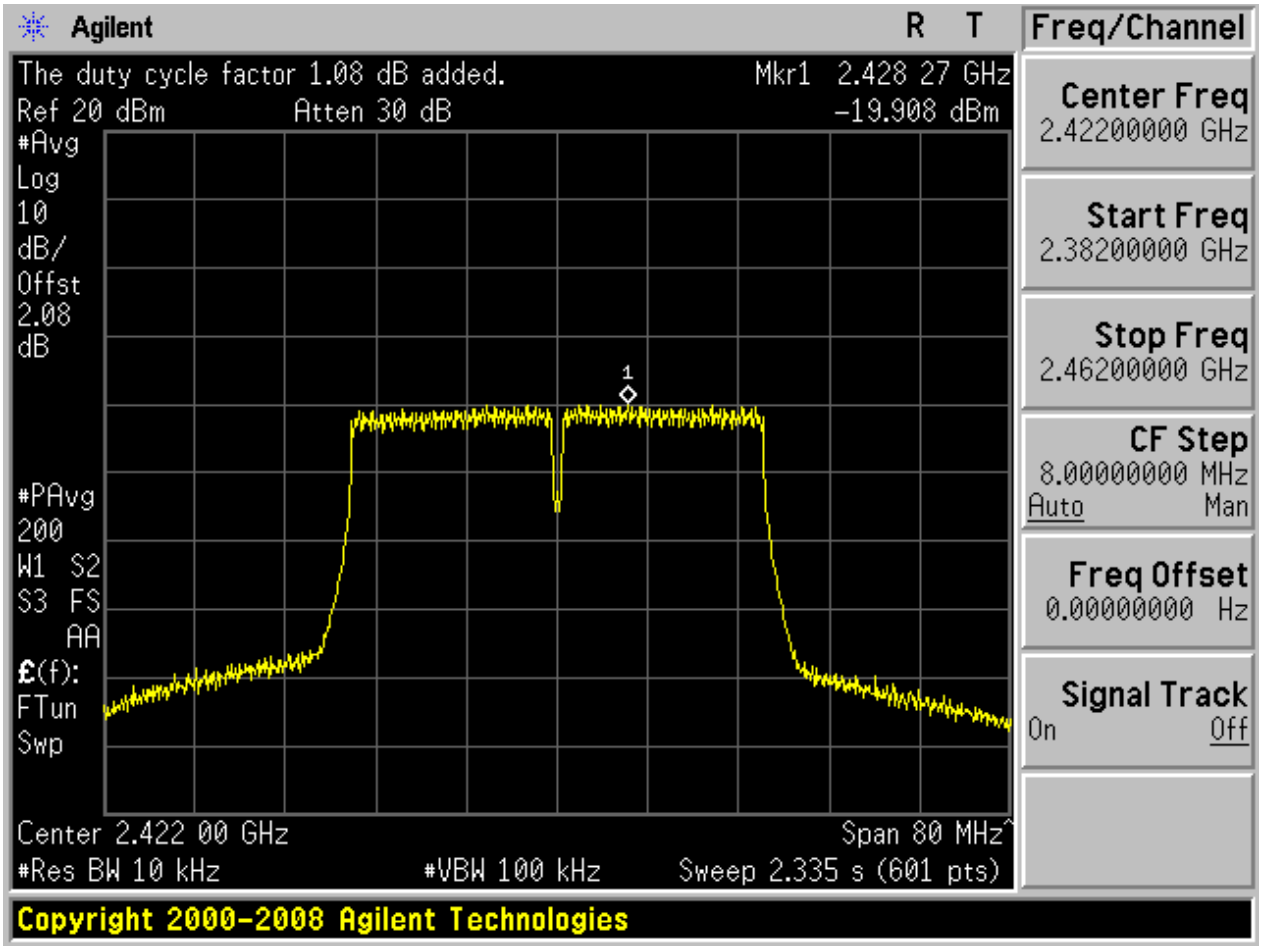
2.8 11N20_M@Ant 1



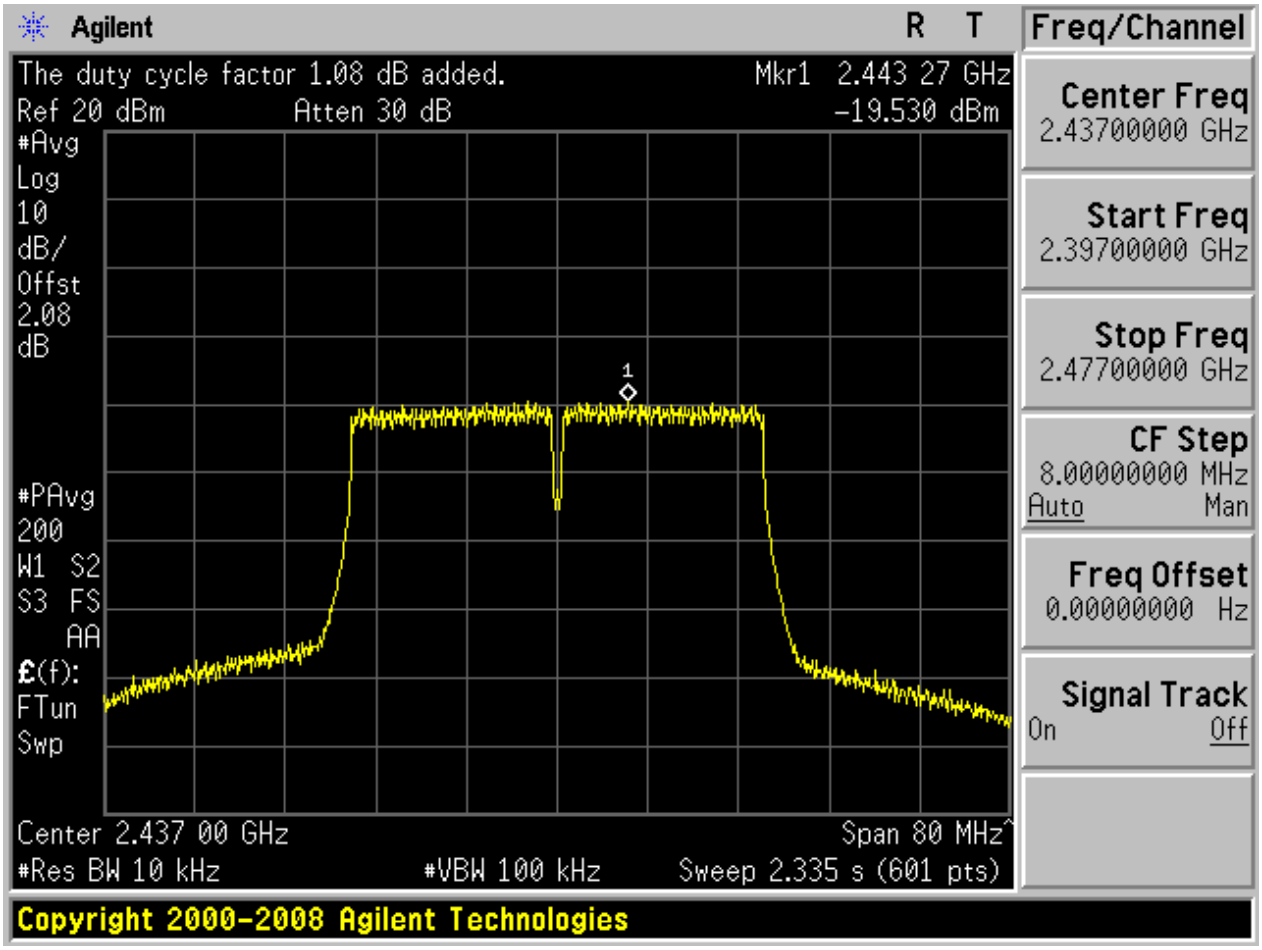
2.9 11N20_H@Ant 1



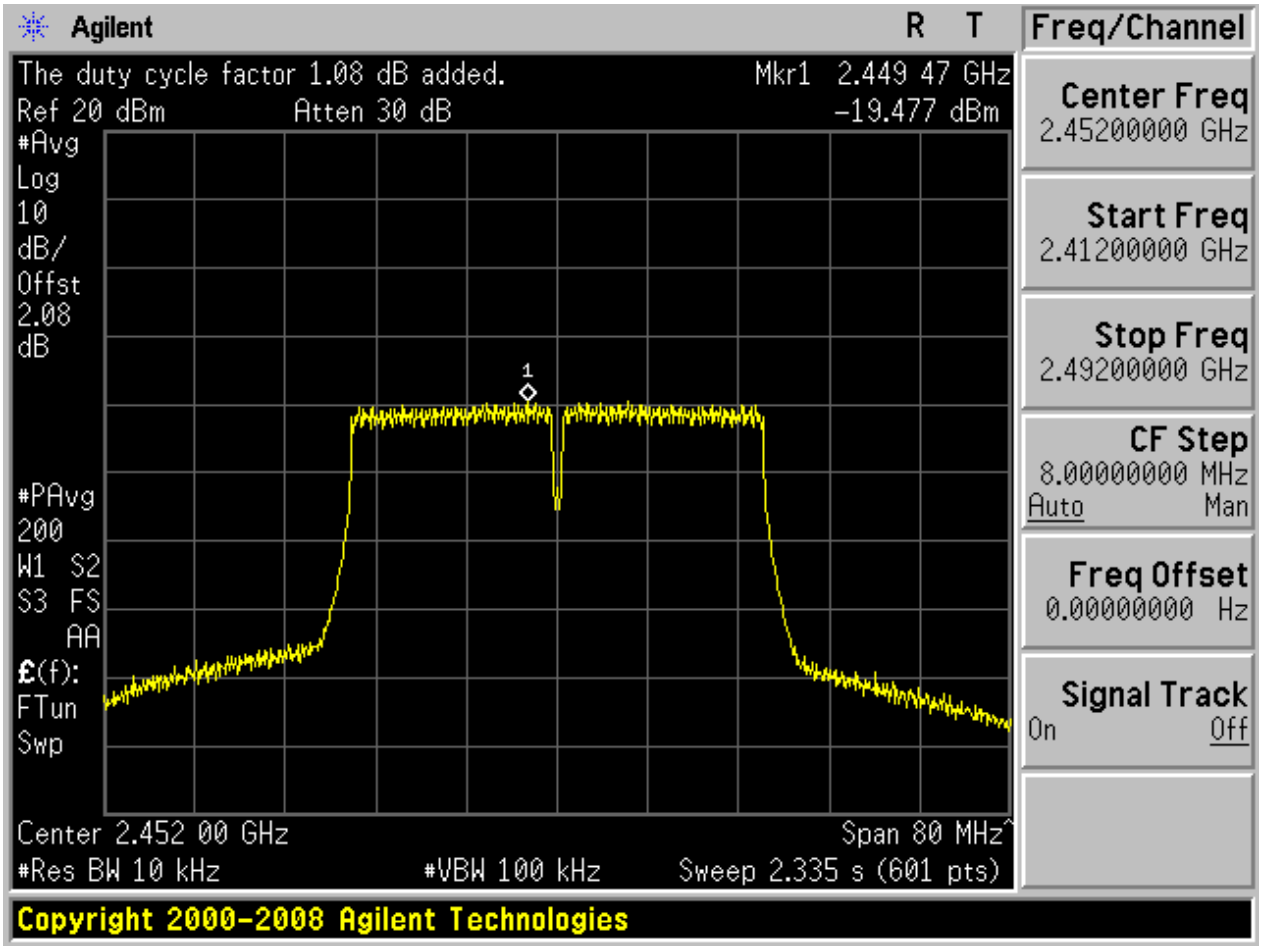
2.10 11N40_L@Ant 1



2.11 11N40_M@Ant 1



2.12 11N40_H@Ant 1



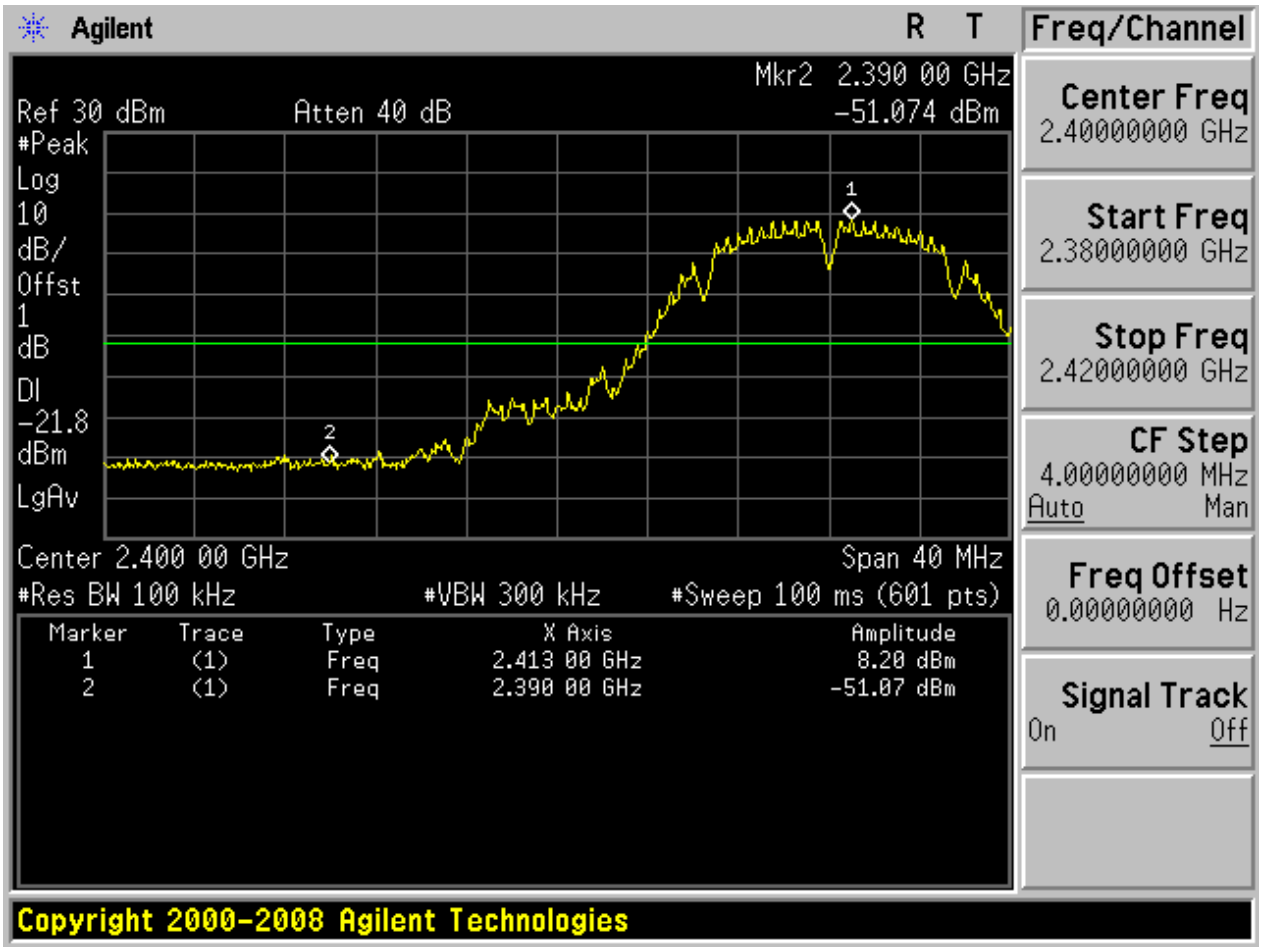
Appendix F: Band Edges Compliance

Part I - Test Results

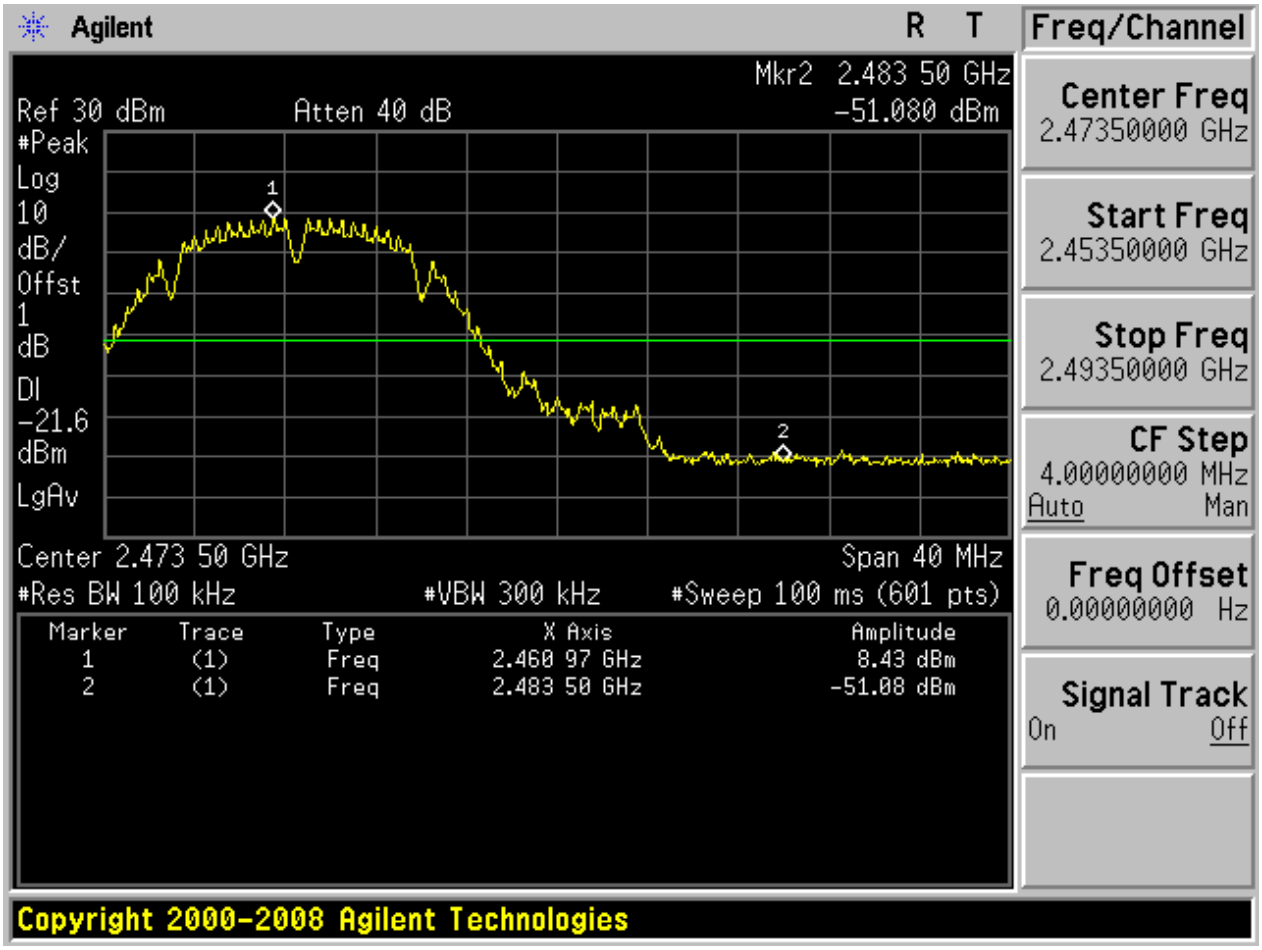
Test Mode	Test Channel	Frequency[MHz]	Ant	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
11B	L	2412	Ant 1	8.20	-51.07	pass
11B	H	2462	Ant 1	8.43	-51.08	pass
11G	L	2412	Ant 1	5.53	-41.62	pass
11G	H	2462	Ant 1	6.29	-39.49	pass
11N20	L	2412	Ant 1	2.11	-43.83	pass
11N20	H	2462	Ant 1	2.39	-44.03	pass
11N40	L	2422	Ant 1	-0.69	-39.00	pass
11N40	H	2452	Ant 1	-0.87	-40.87	pass

Part II - Test Plots

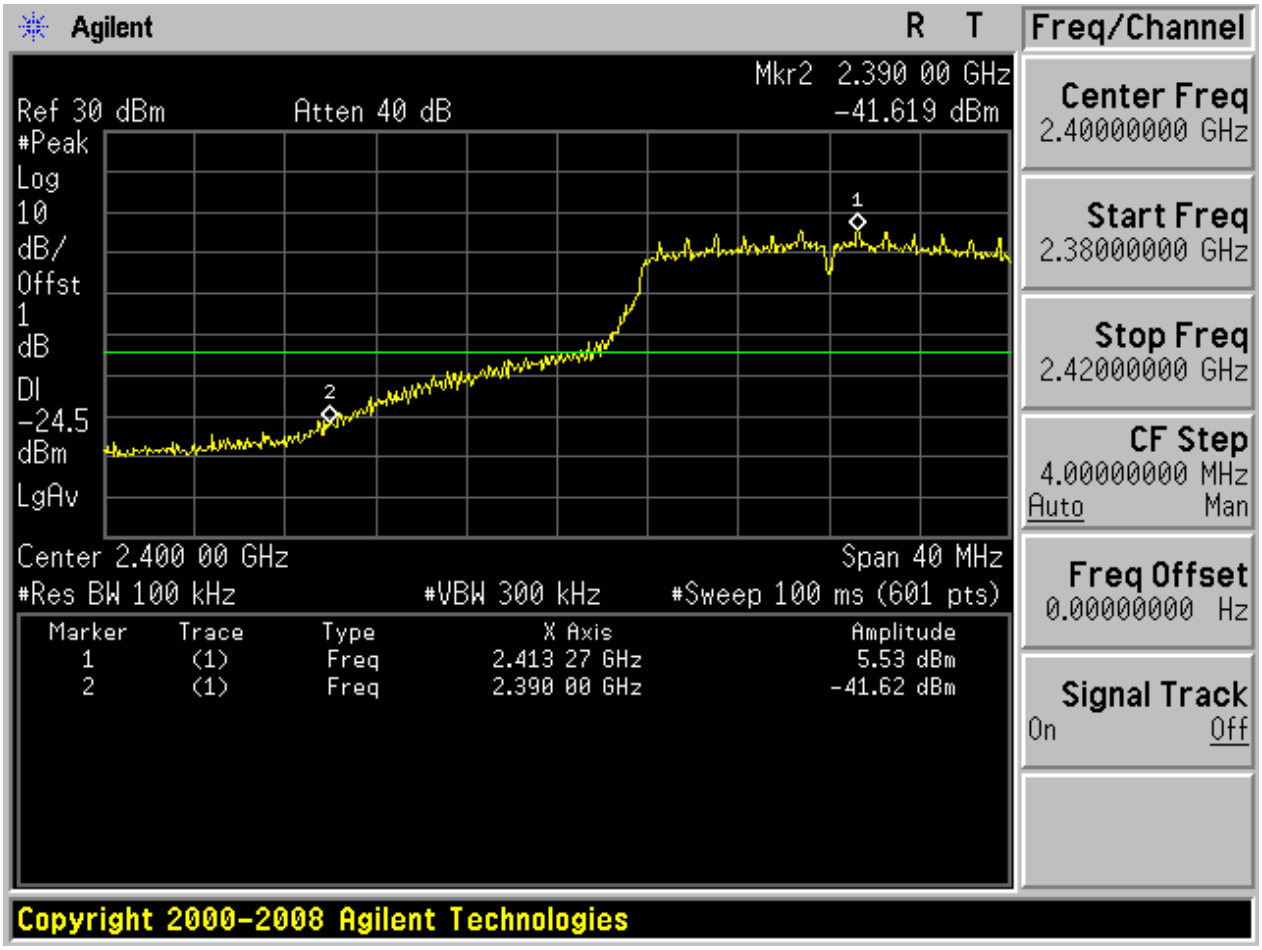
2.1 11B_L@Ant 1



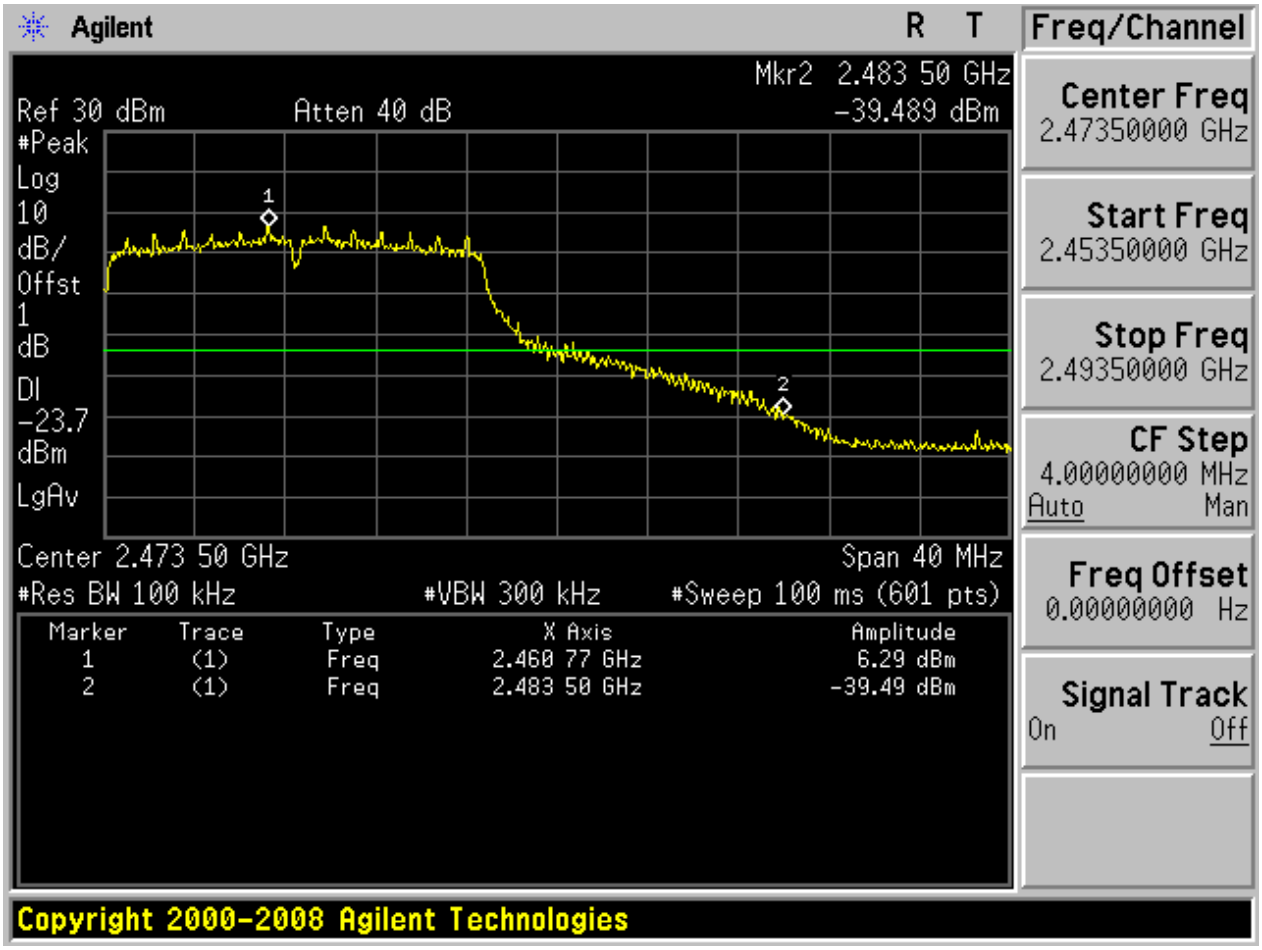
2.2 11B_H@Ant 1



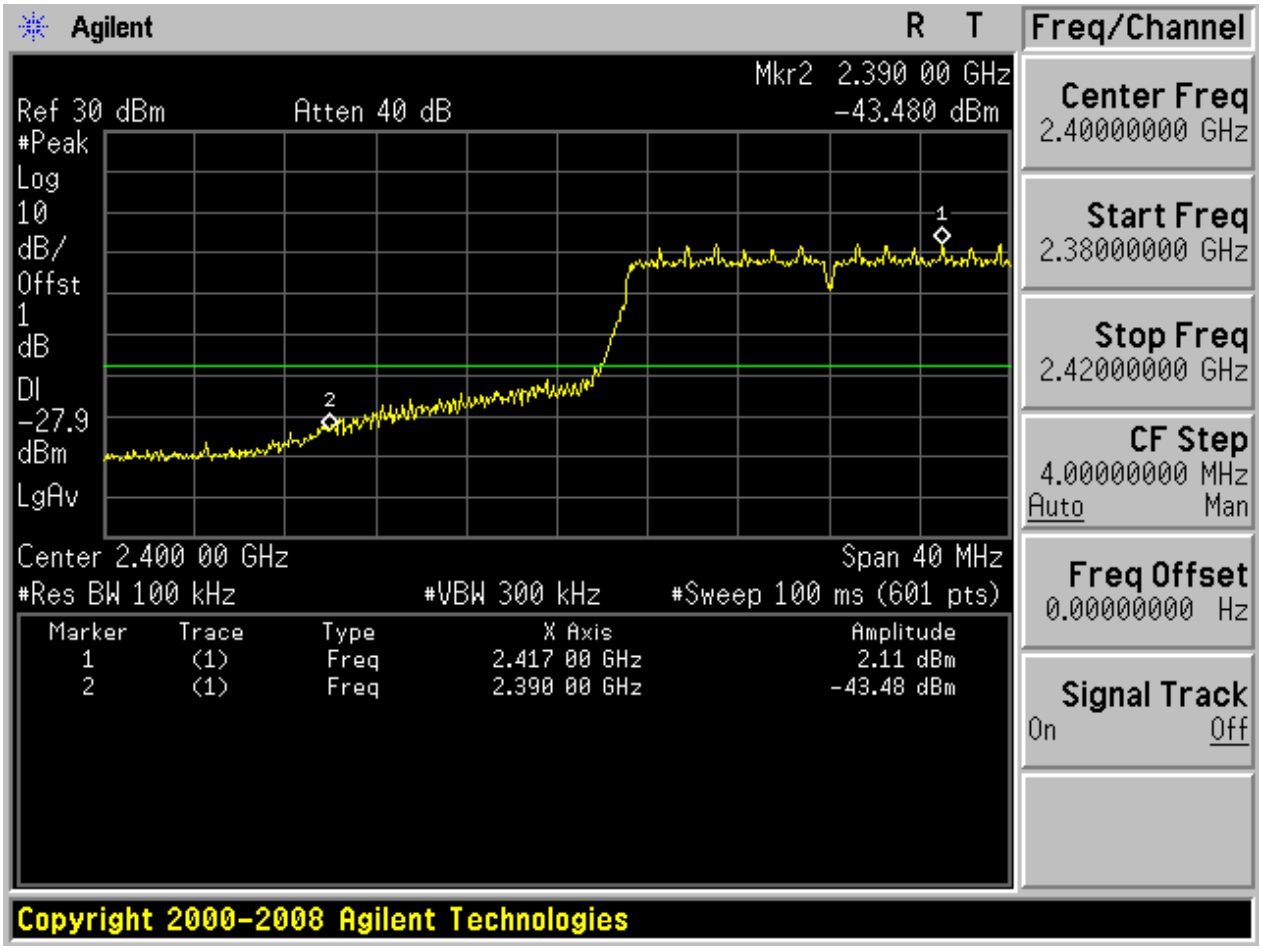
2.3 11G_L@Ant 1



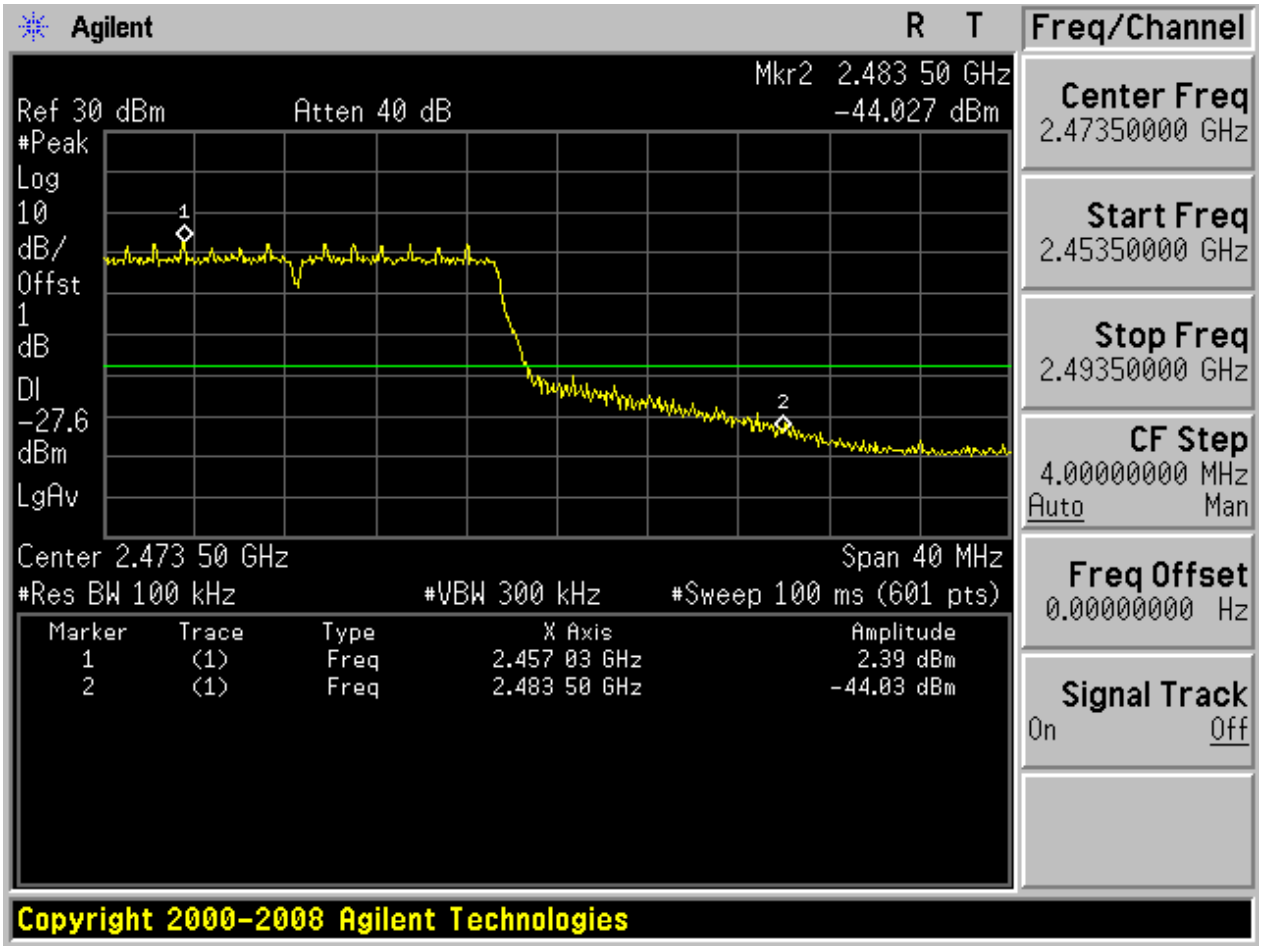
2.4 11G_H@Ant 1



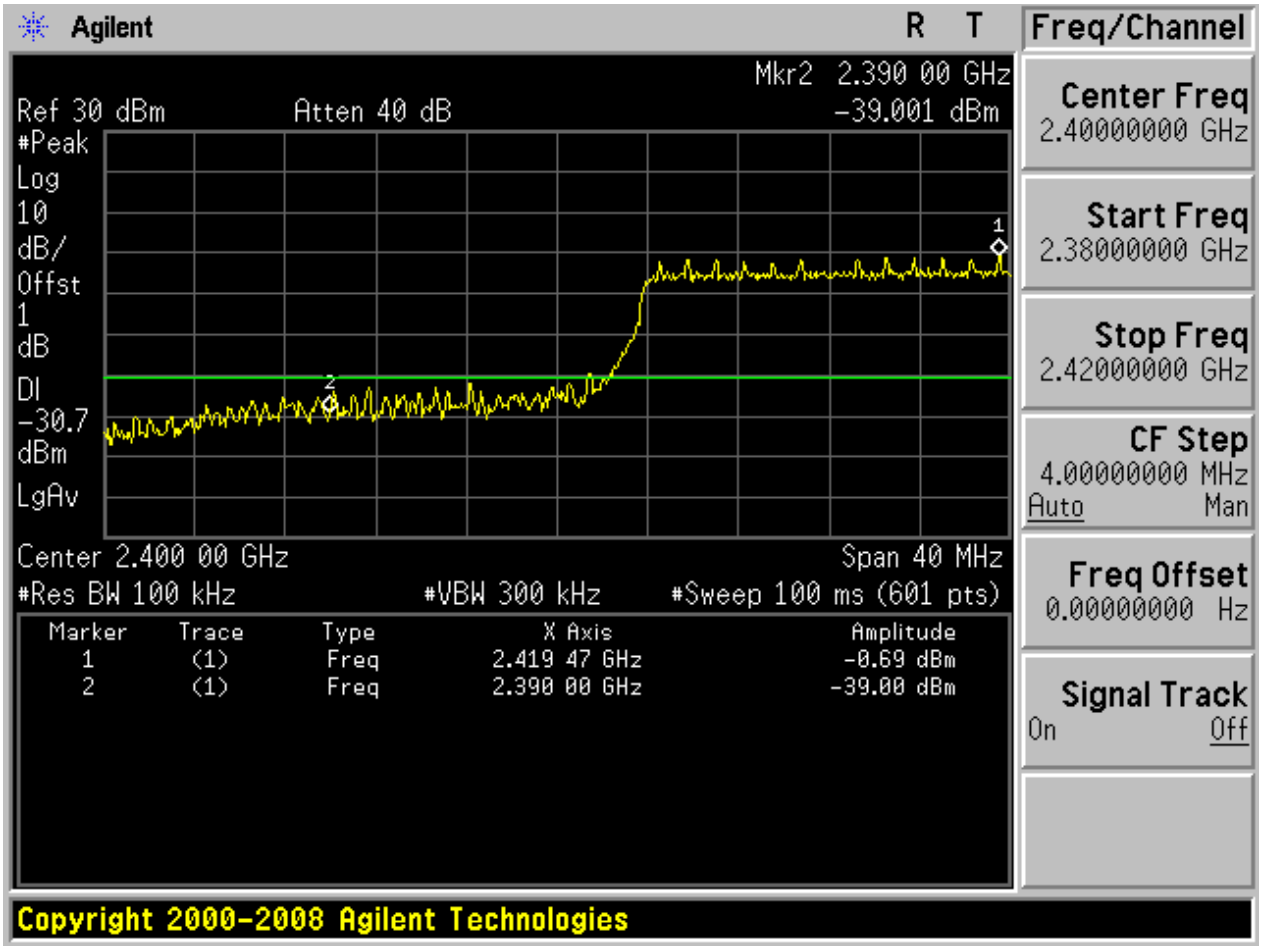
2.5 11N20_L@Ant 1



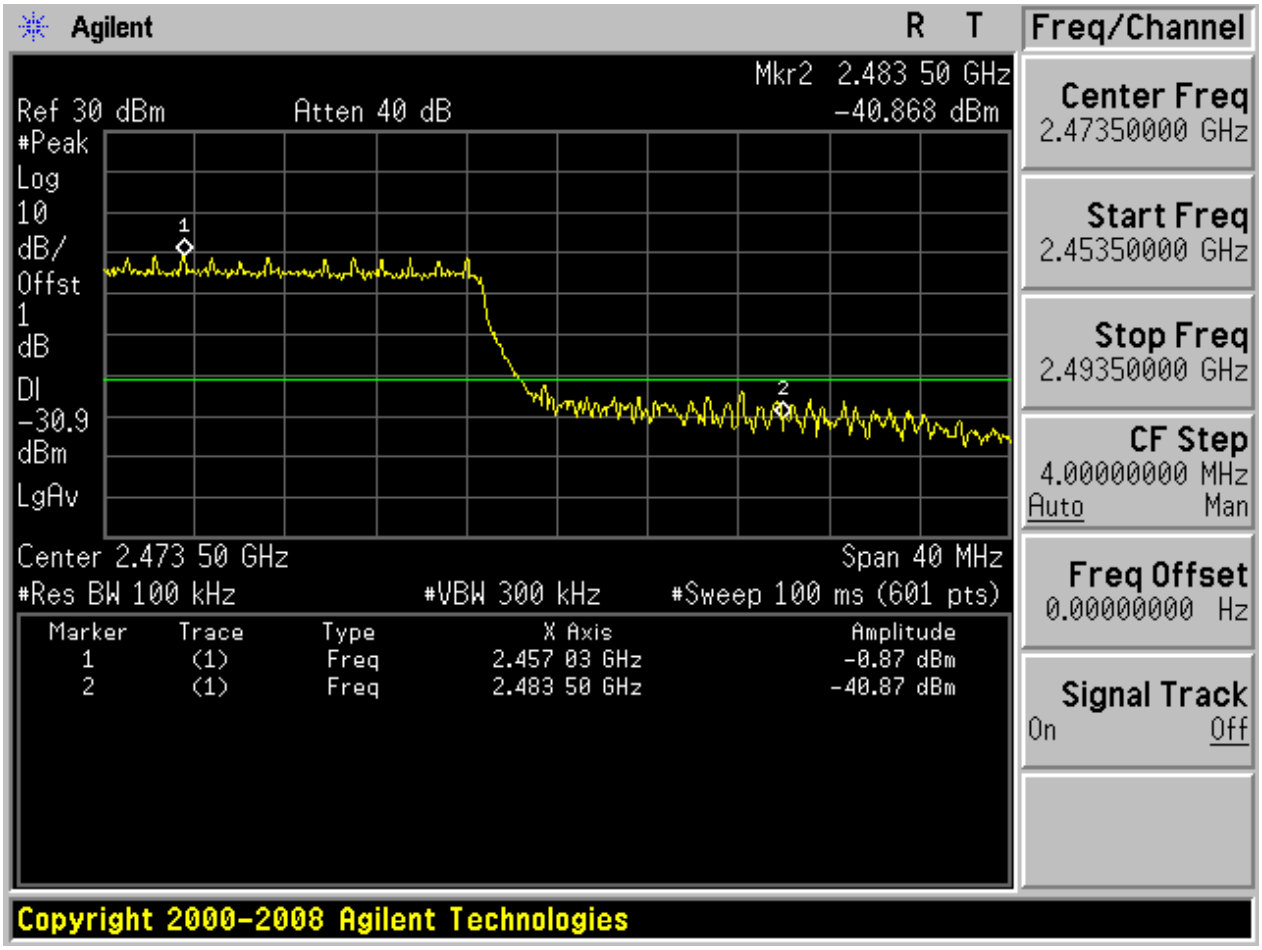
2.6 11N20_H@Ant 1



2.7 11N40_L@Ant 1



2.8 11N40_H@Ant 1



Appendix G: 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]-30[dBm],see test plots for detailed".

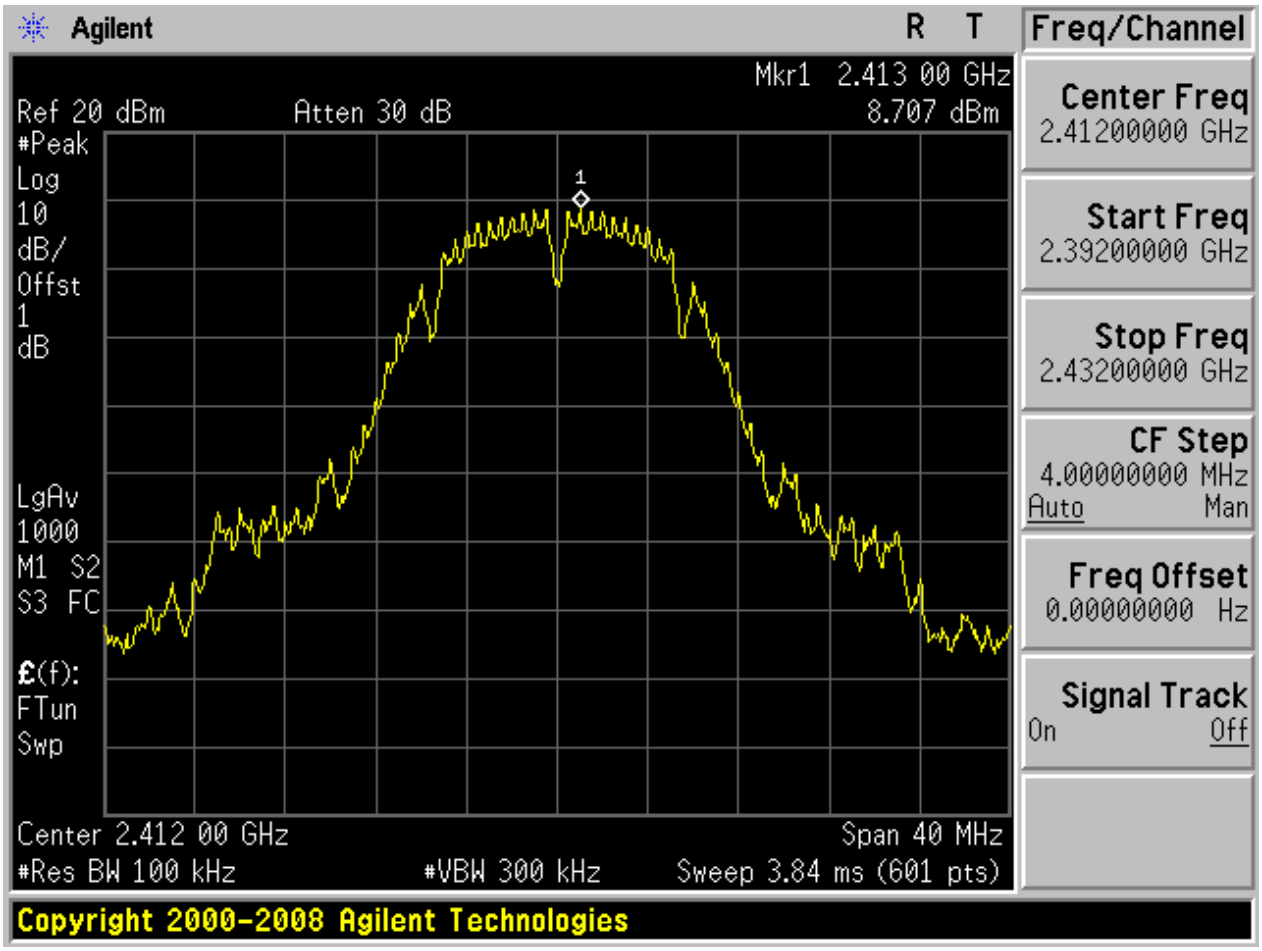
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]	Verdict
11B	L	2412	Ant 1	8.71	<limit	pass
11B	M	2437	Ant 1	8.30	<limit	pass
11B	H	2462	Ant 1	8.55	<limit	pass
11G	L	2412	Ant 1	5.73	<limit	pass
11G	M	2437	Ant 1	6.86	<limit	pass
11G	H	2462	Ant 1	6.76	<limit	pass
11N20	L	2412	Ant 1	2.16	<limit	pass
11N20	M	2437	Ant 1	2.54	<limit	pass
11N20	H	2462	Ant 1	2.94	<limit	pass
11N40	L	2422	Ant 1	-0.60	<limit	pass
11N40	M	2437	Ant 1	-0.45	<limit	pass
11N40	H	2452	Ant 1	-0.14	<limit	pass

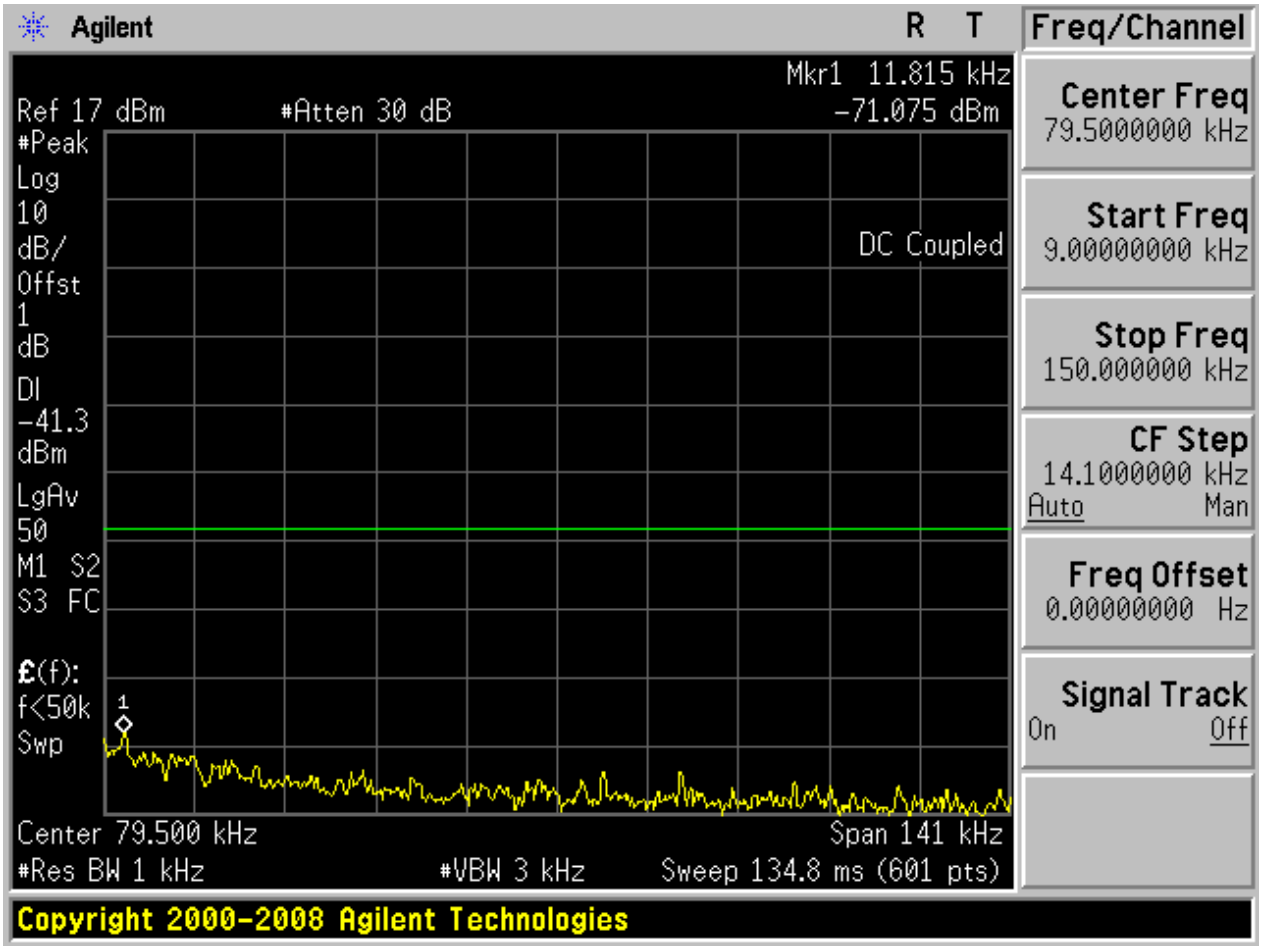
Part II - Test Plots

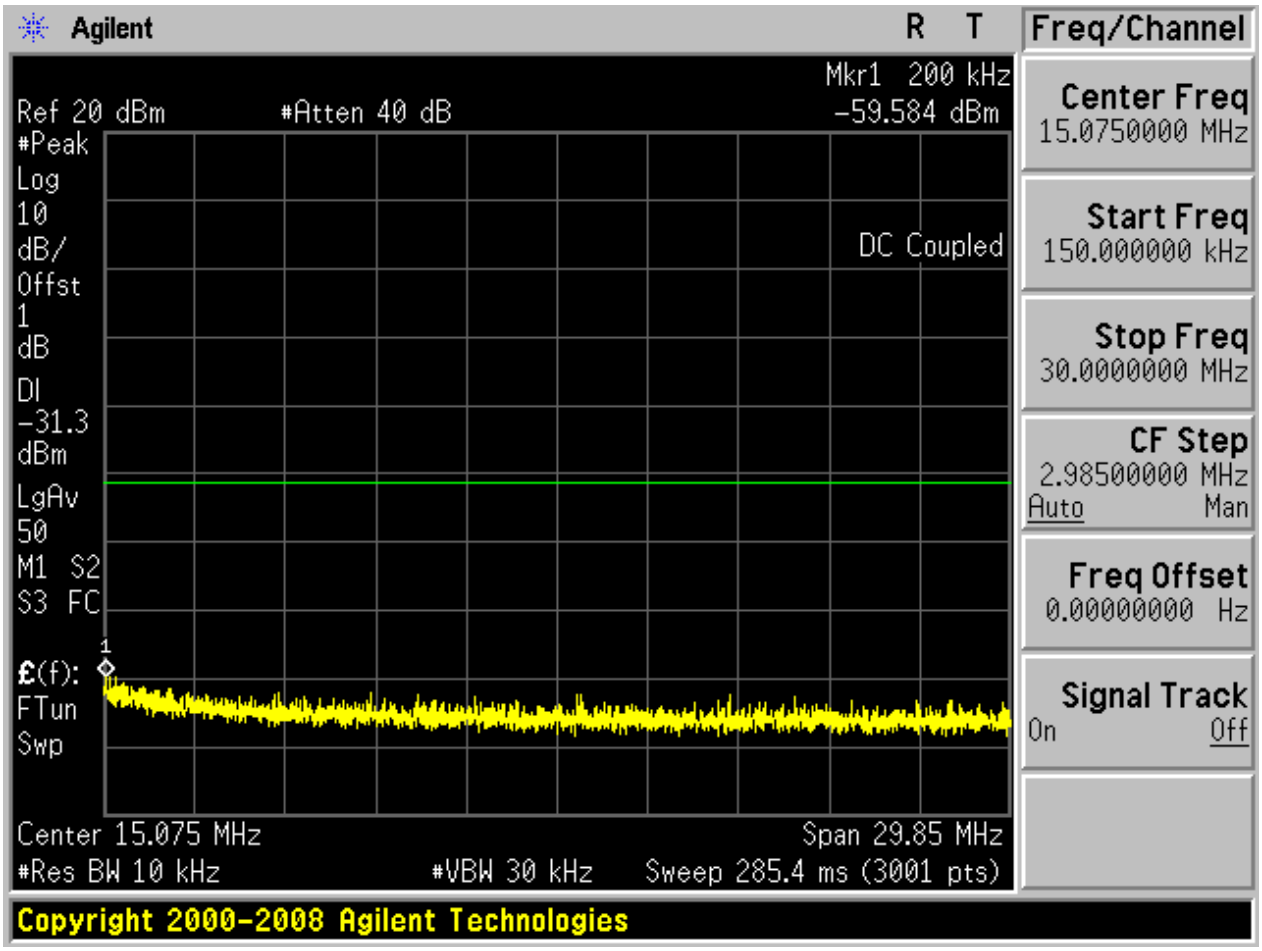
2.1 11B_L@Ant 1

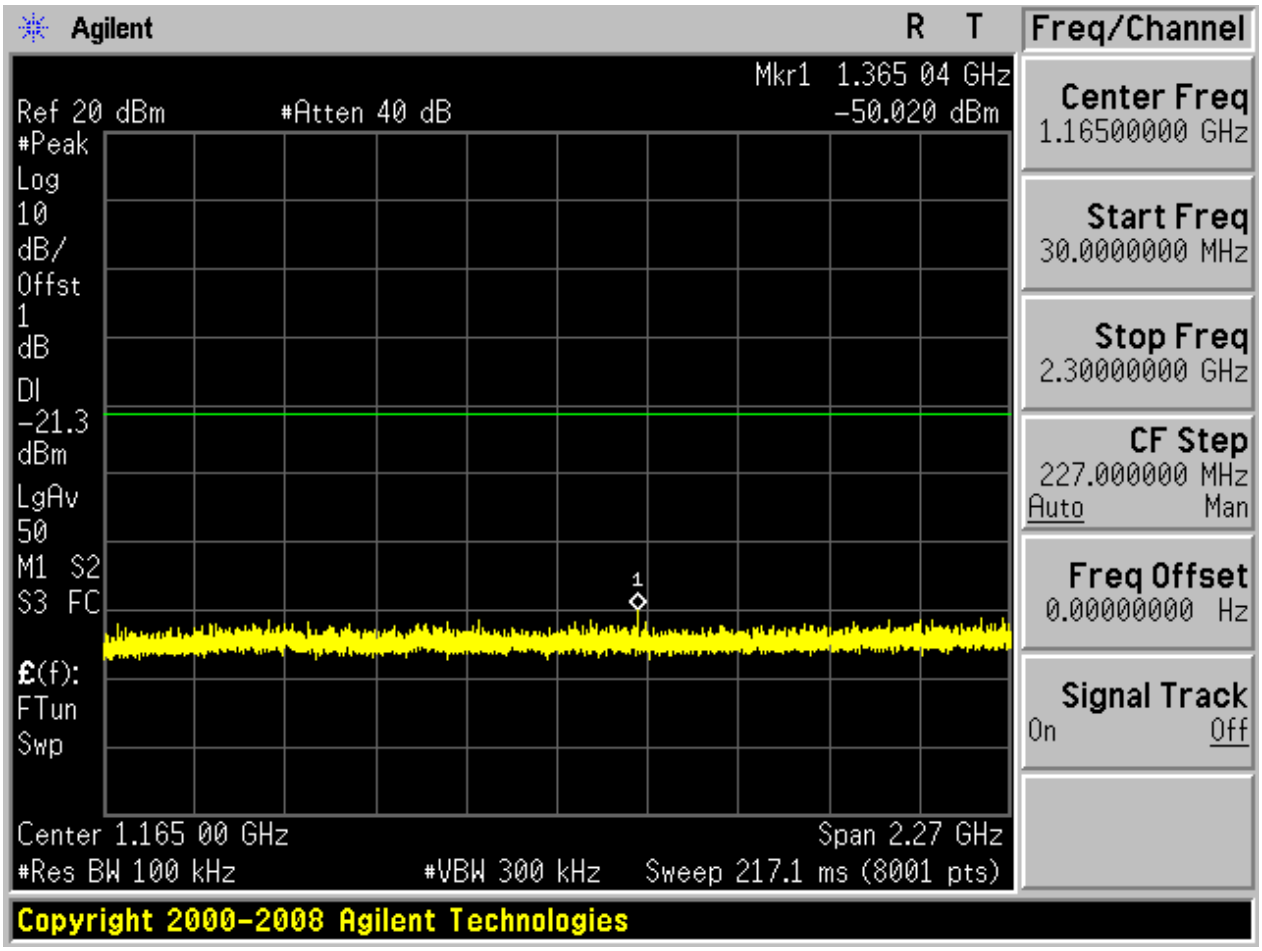
Pref:

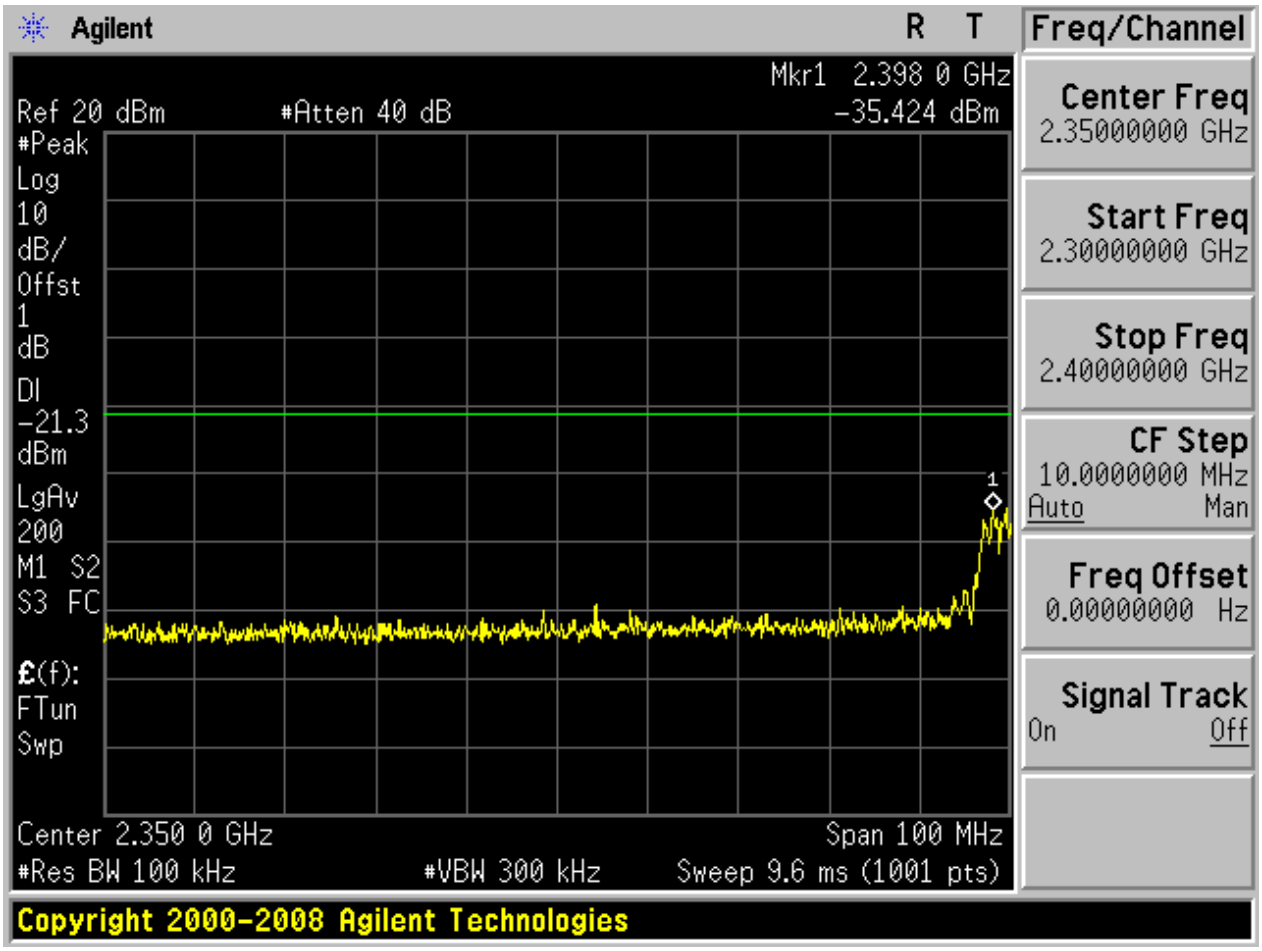


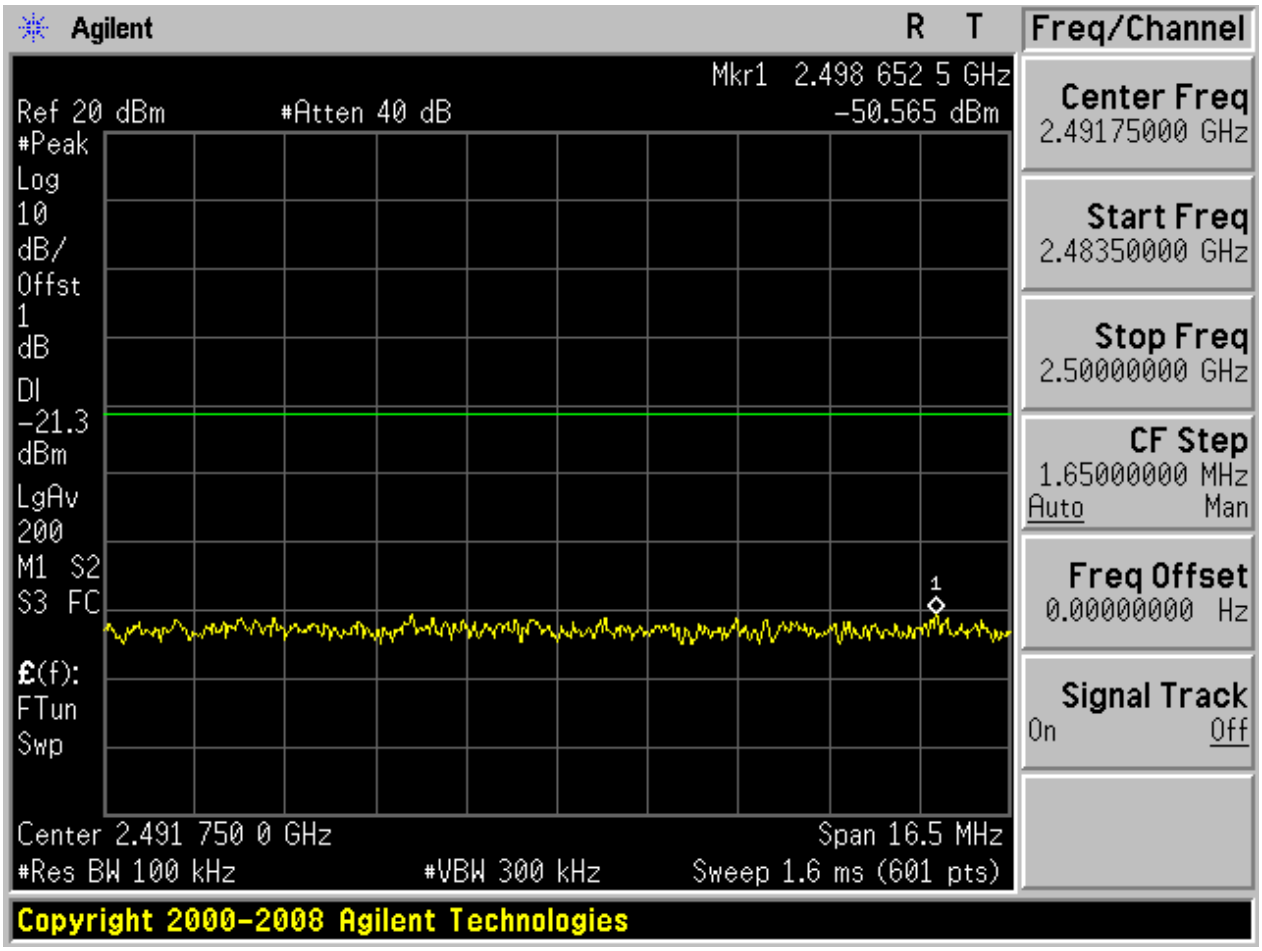
Puw:

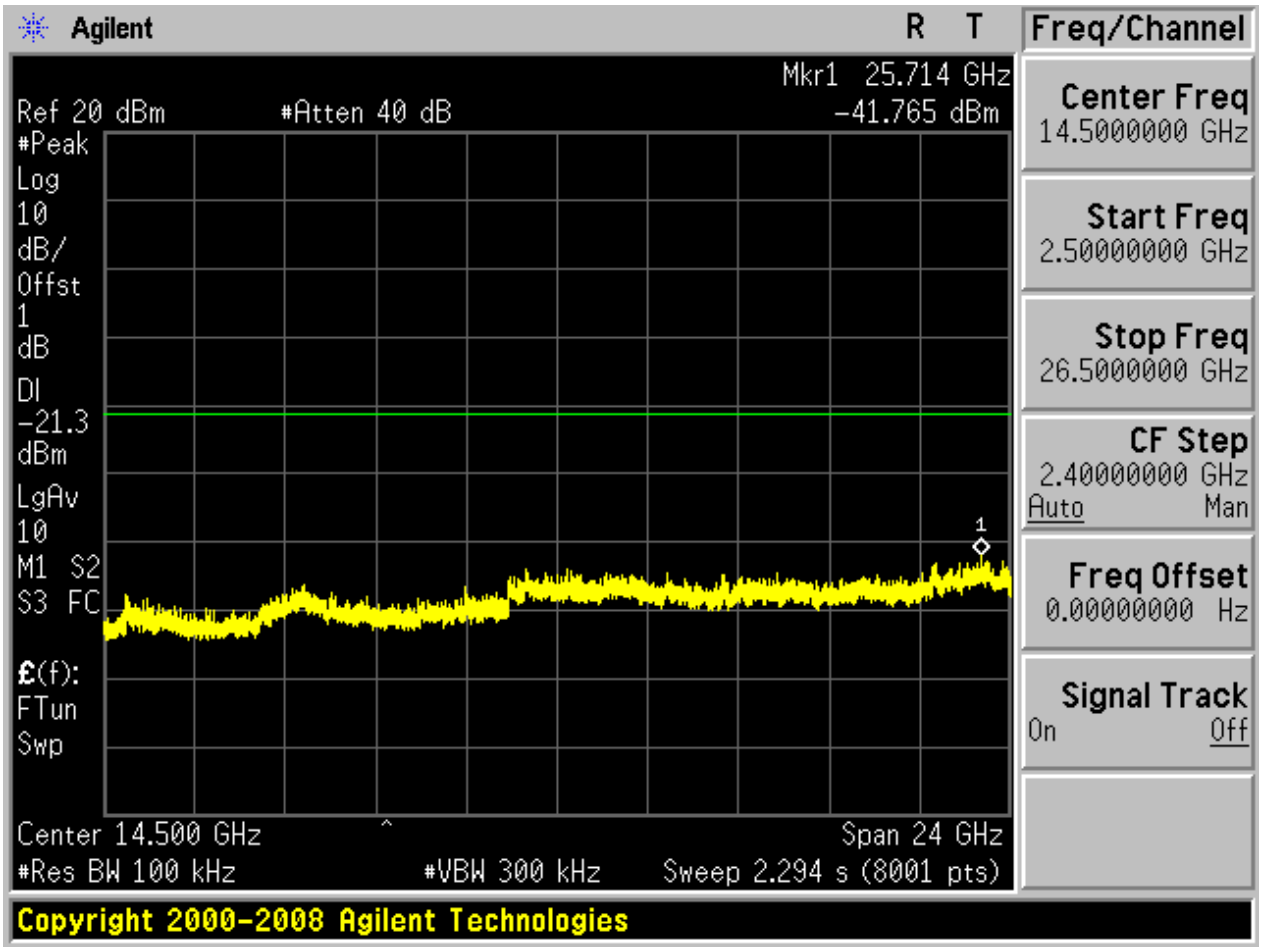






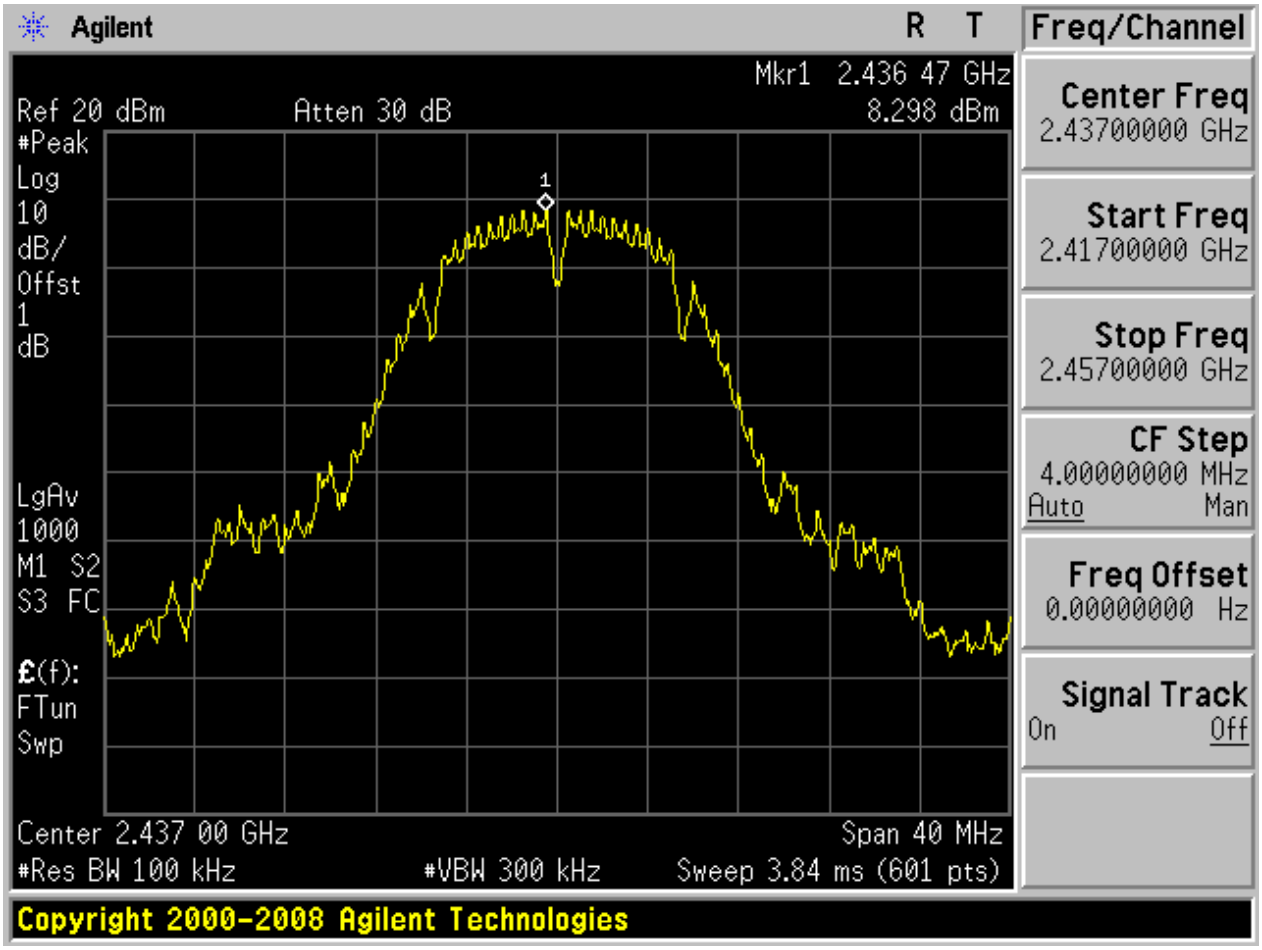




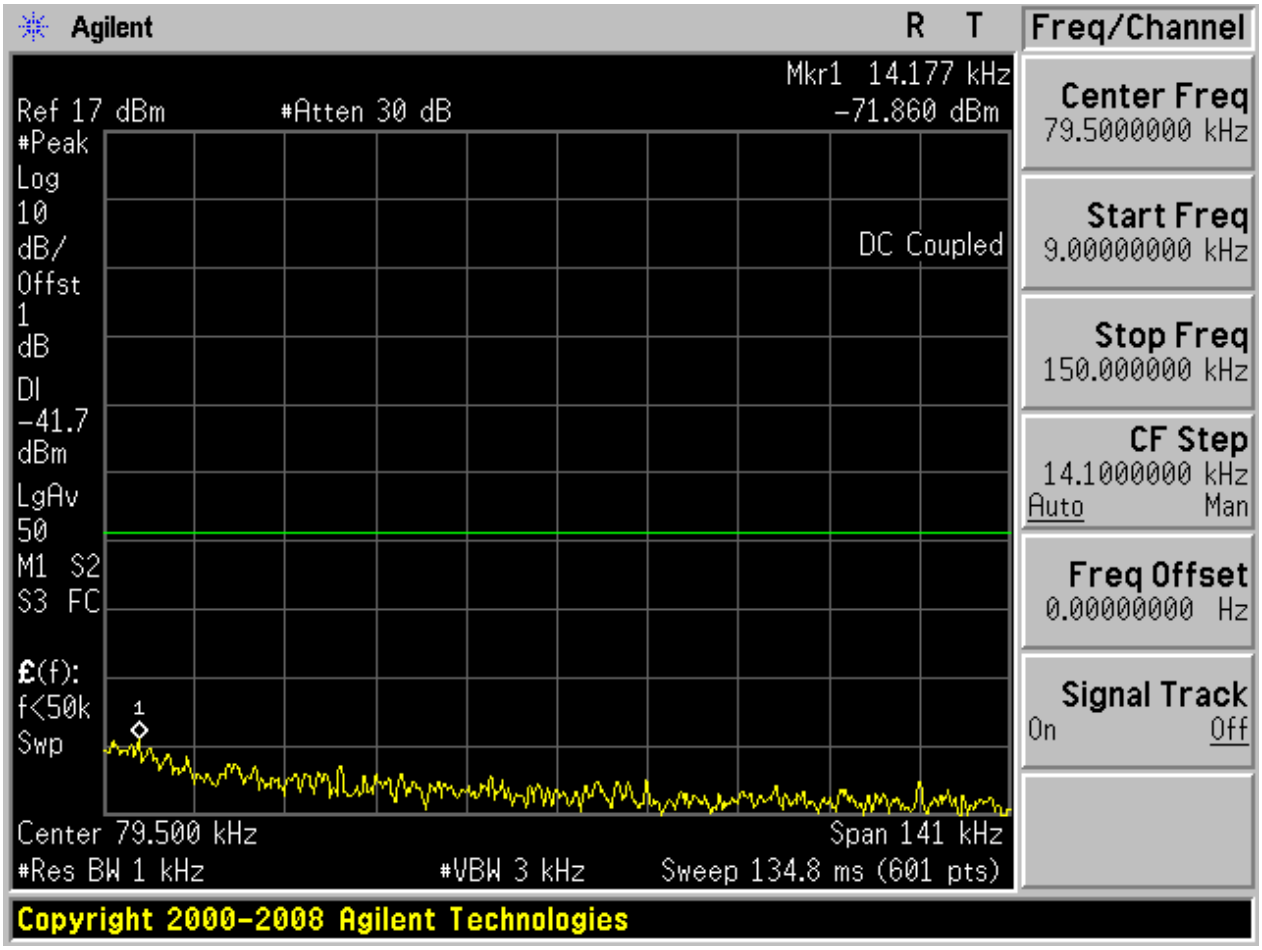


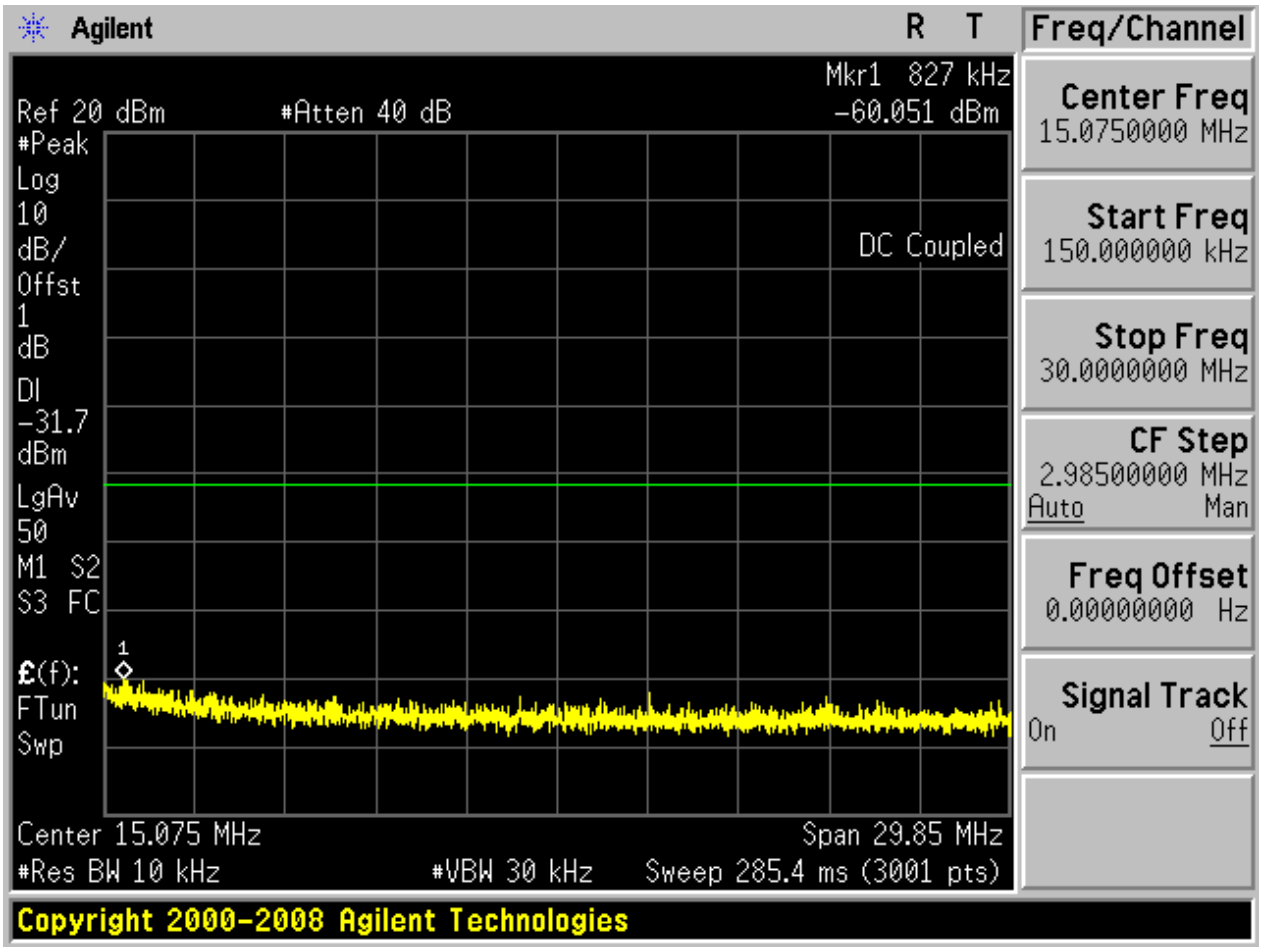
2.2 11B_M@Ant 1

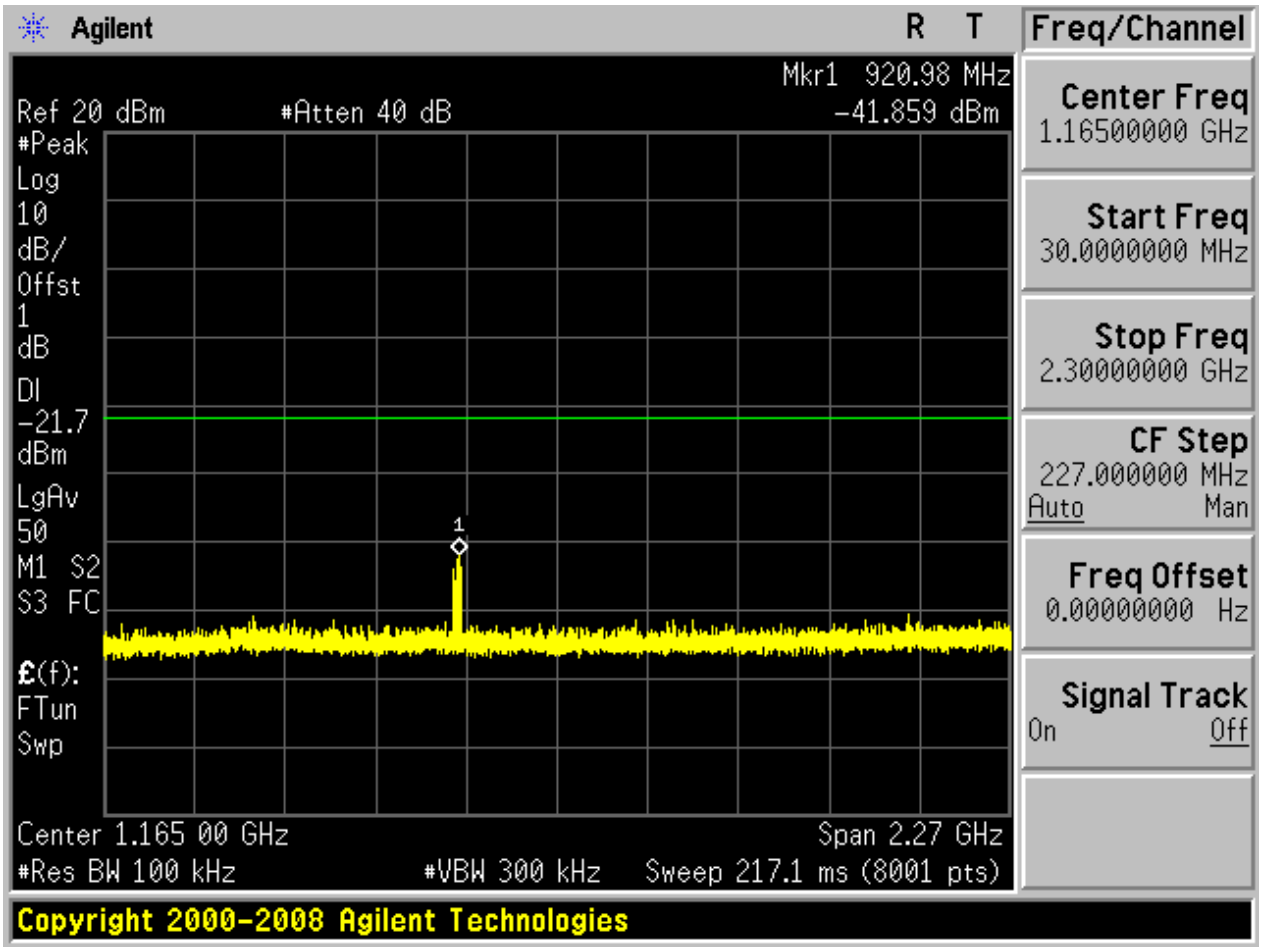
Pref:

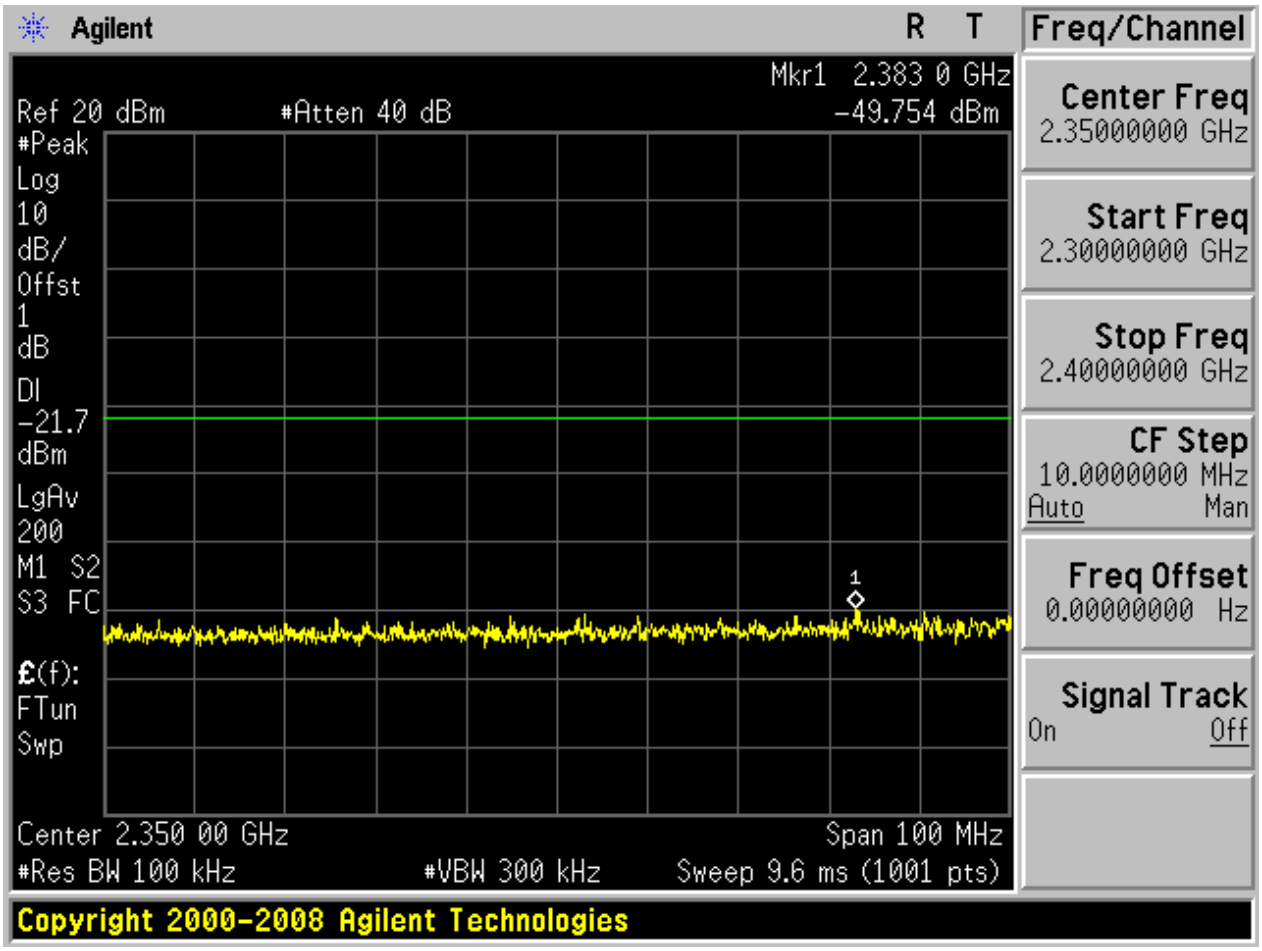


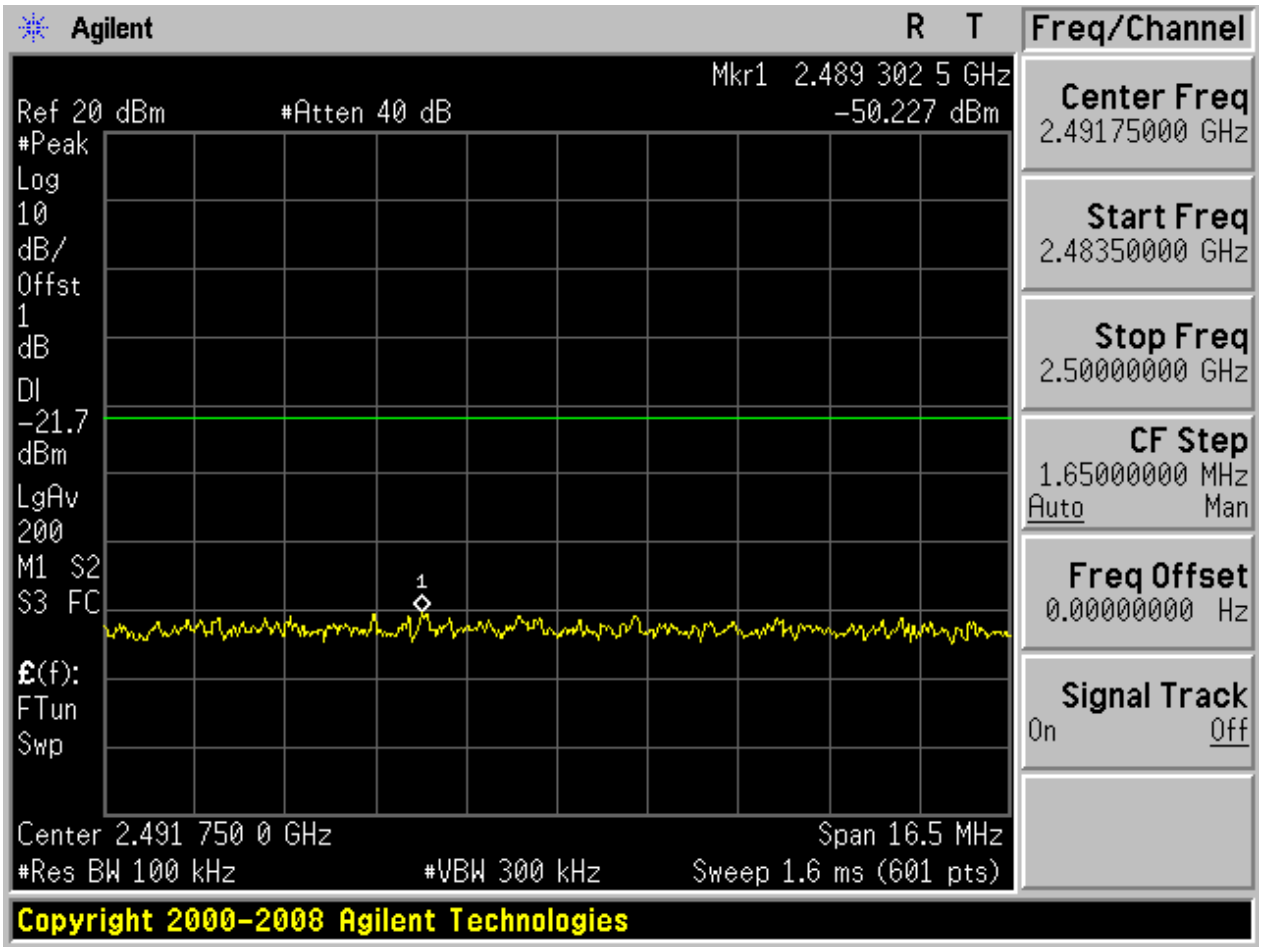
Puw:

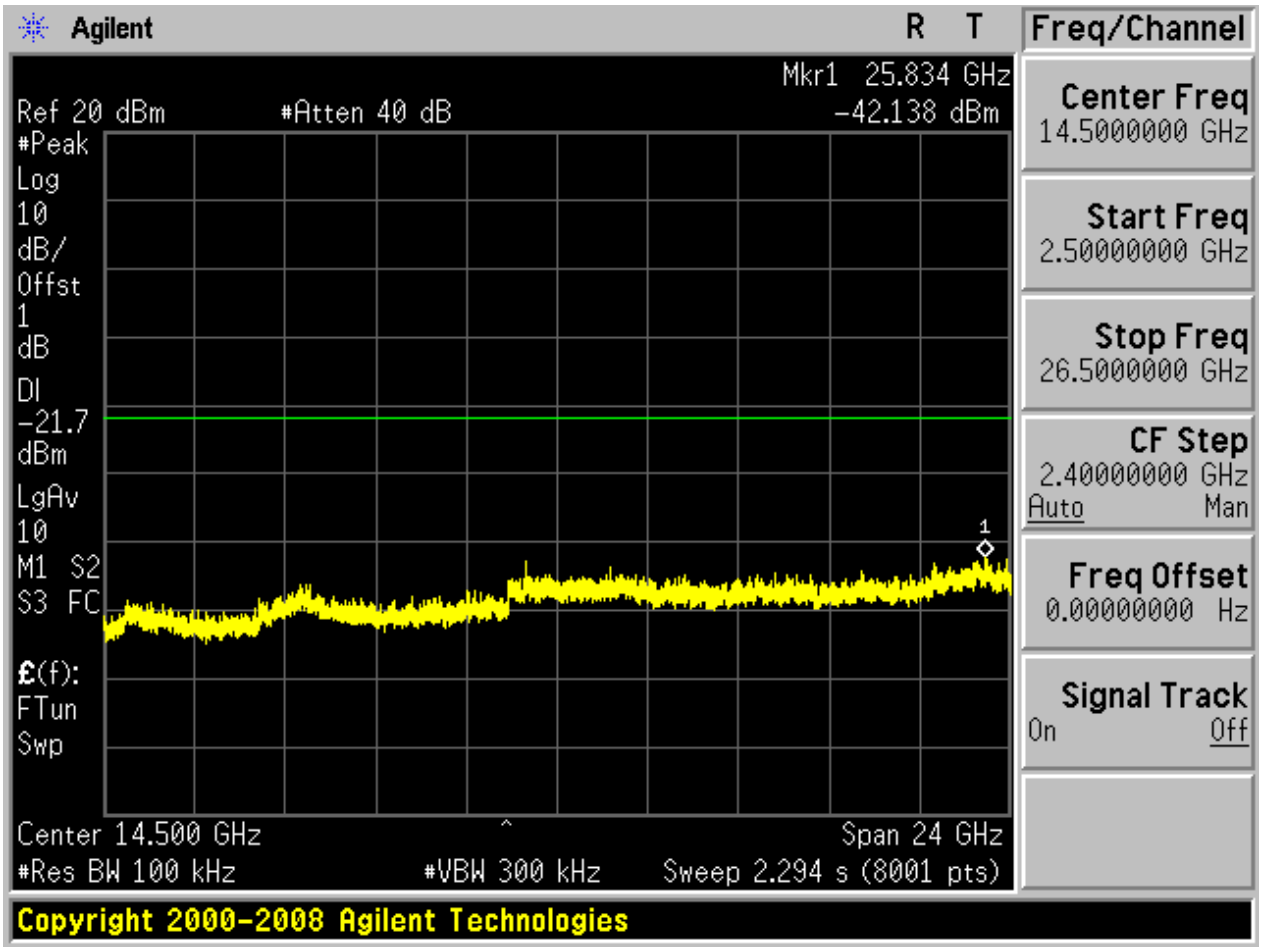






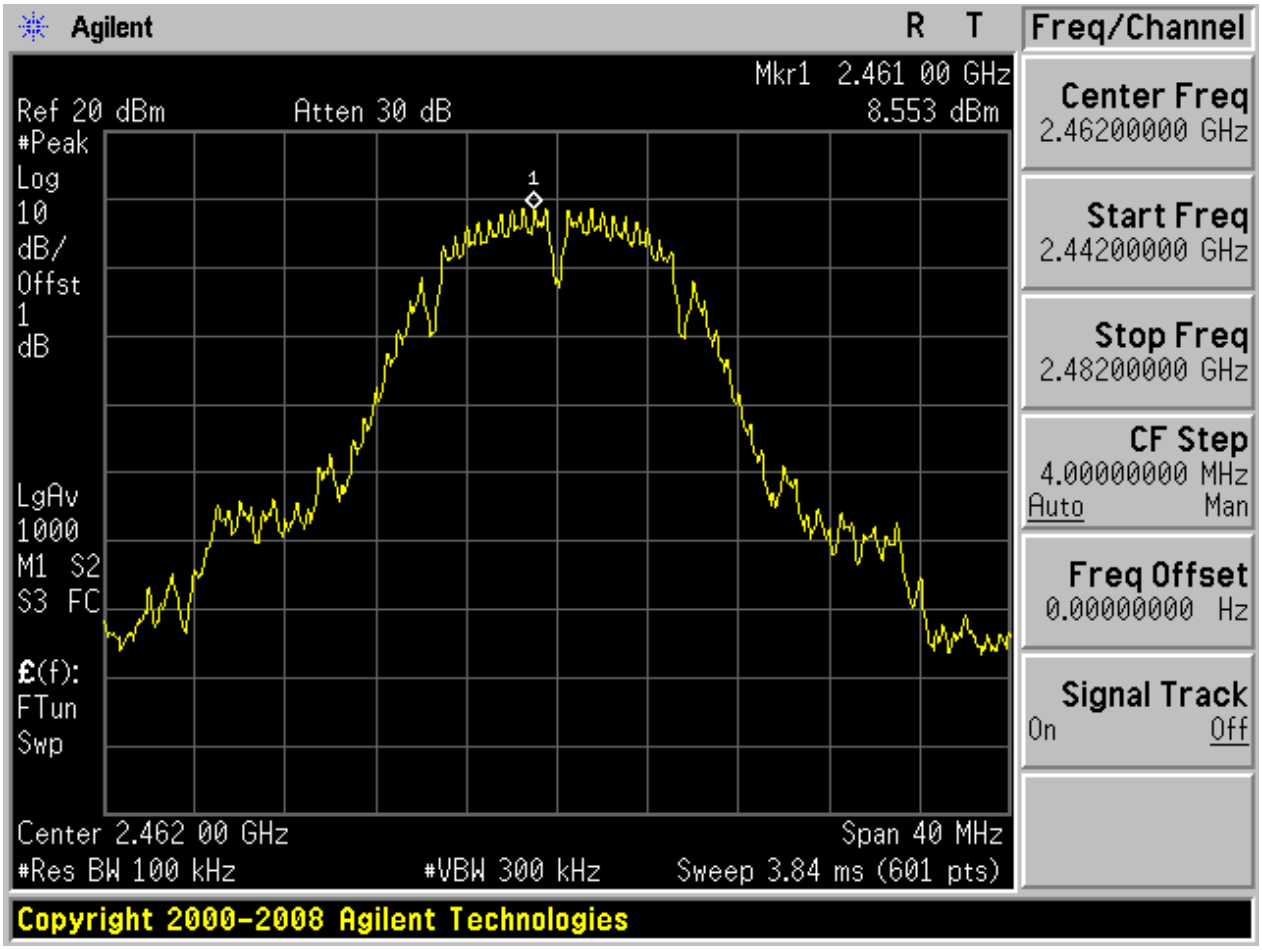




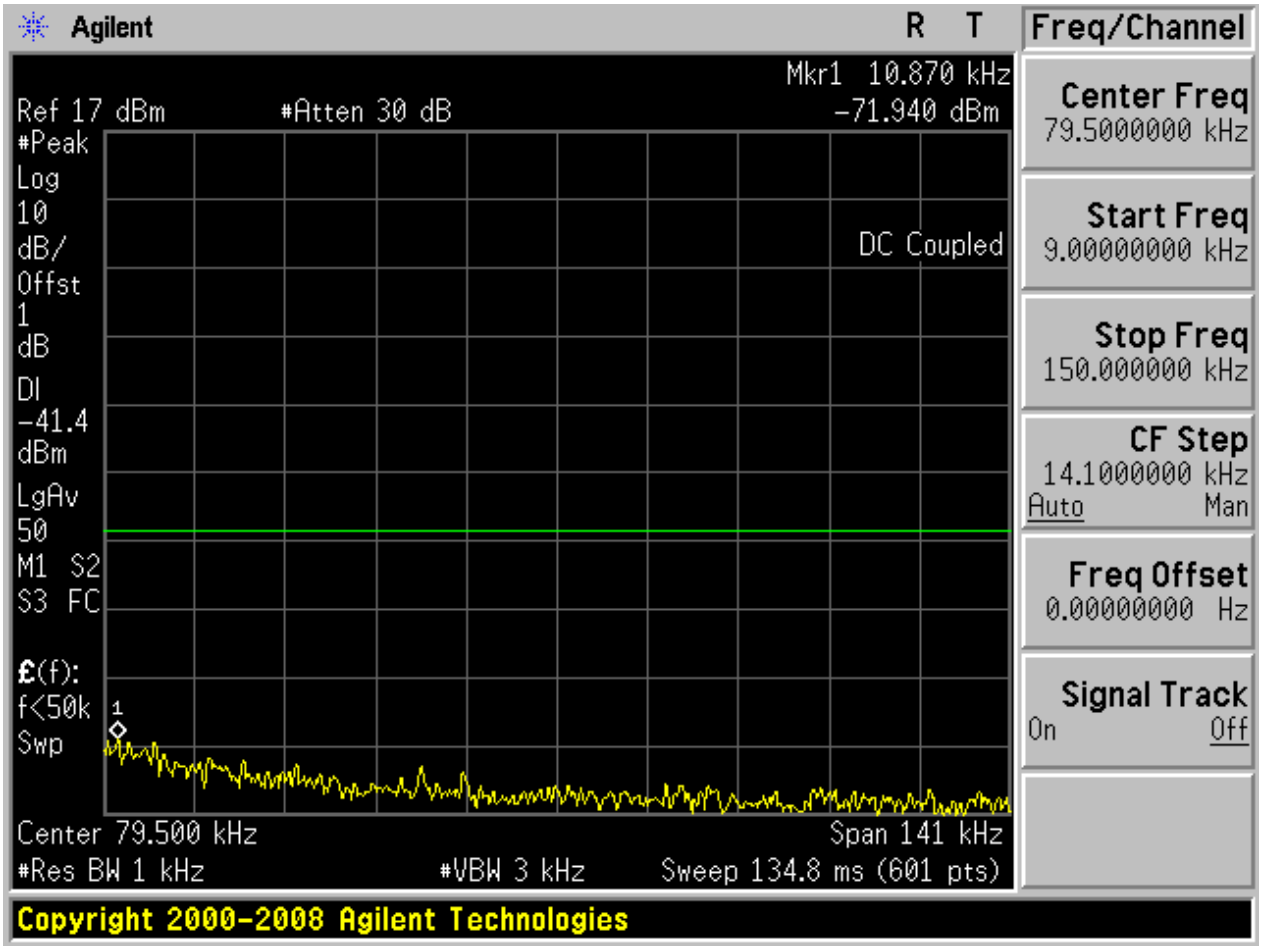


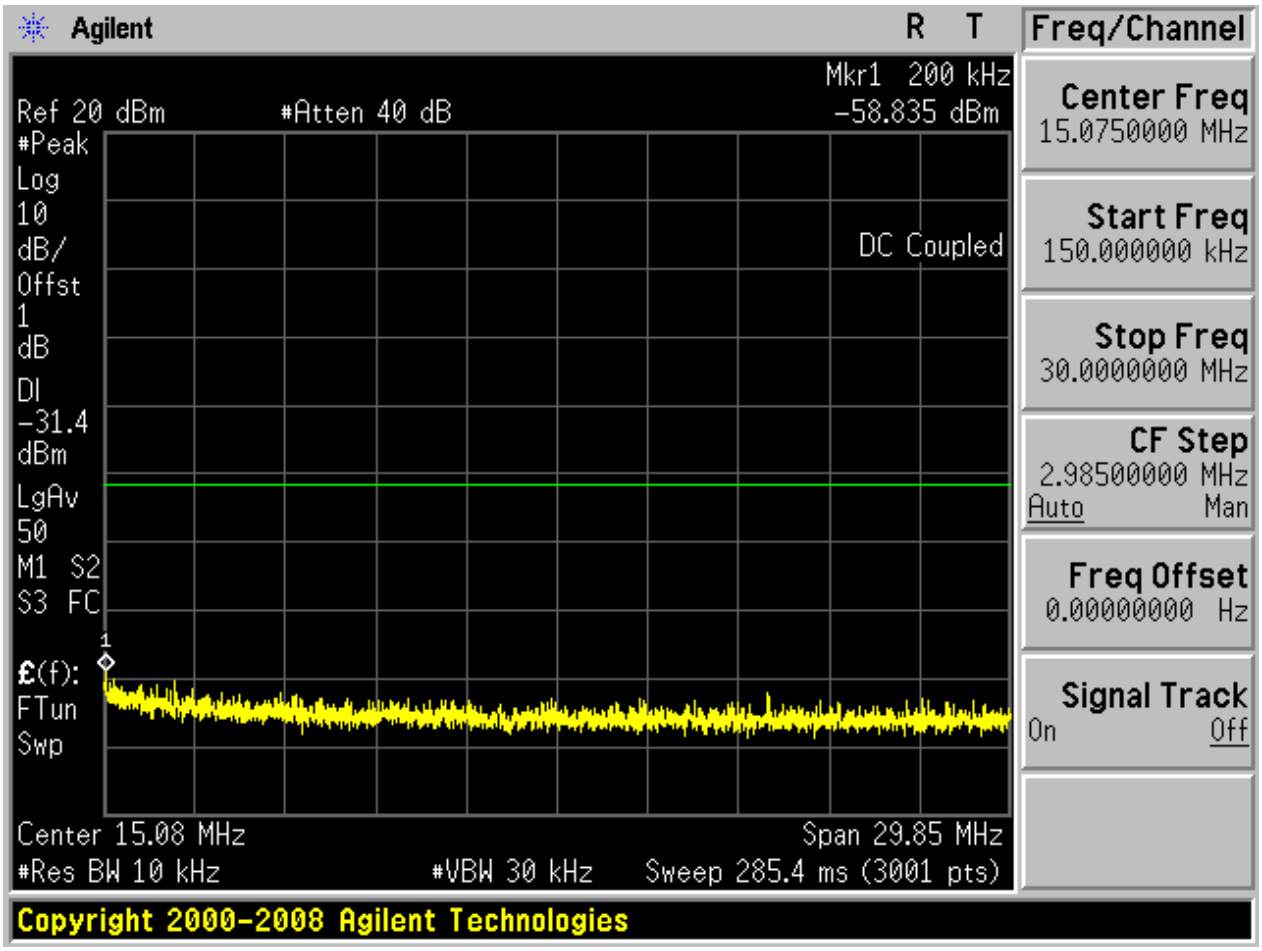
2.3 11B_H@Ant 1

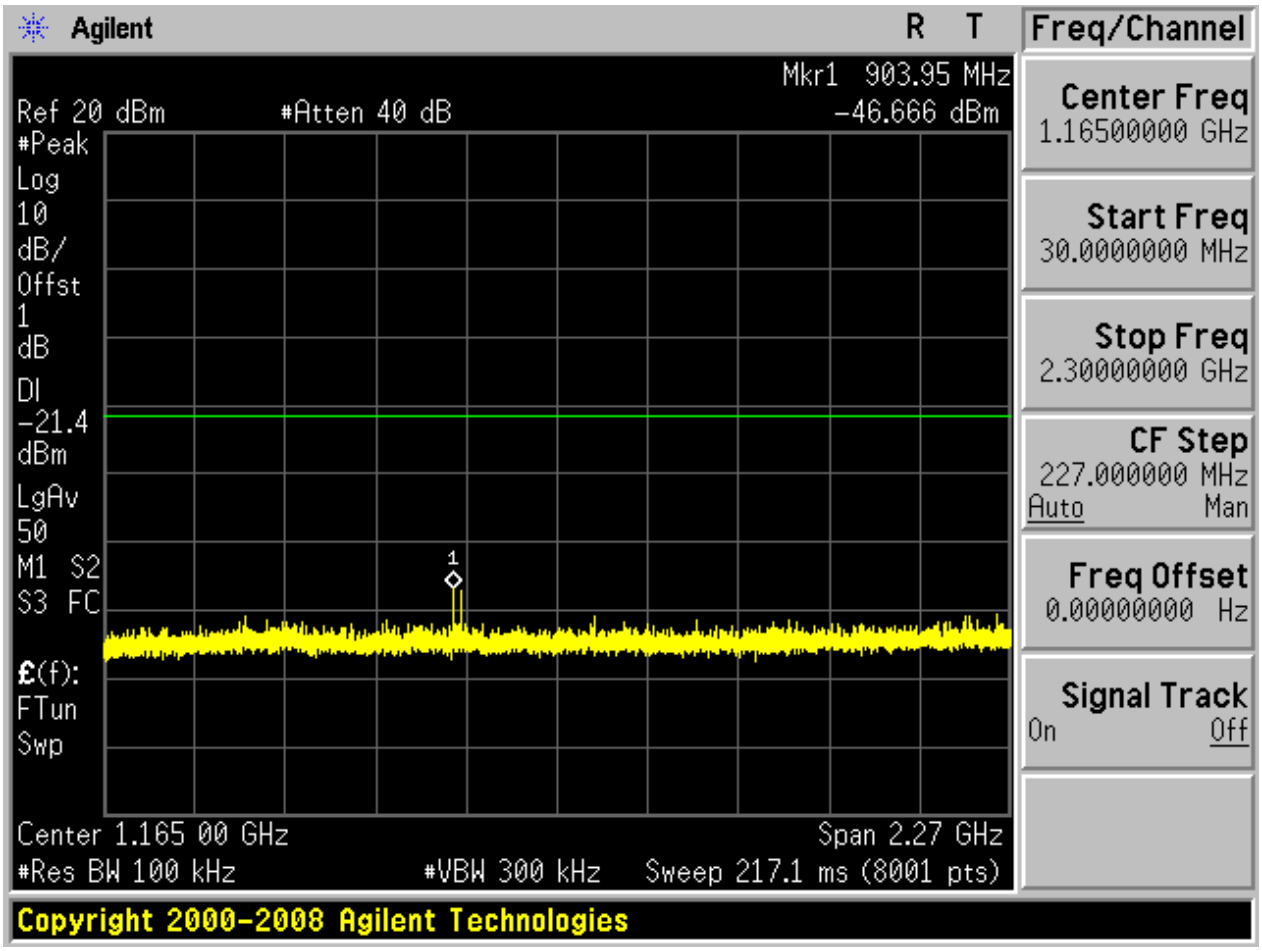
Pref:

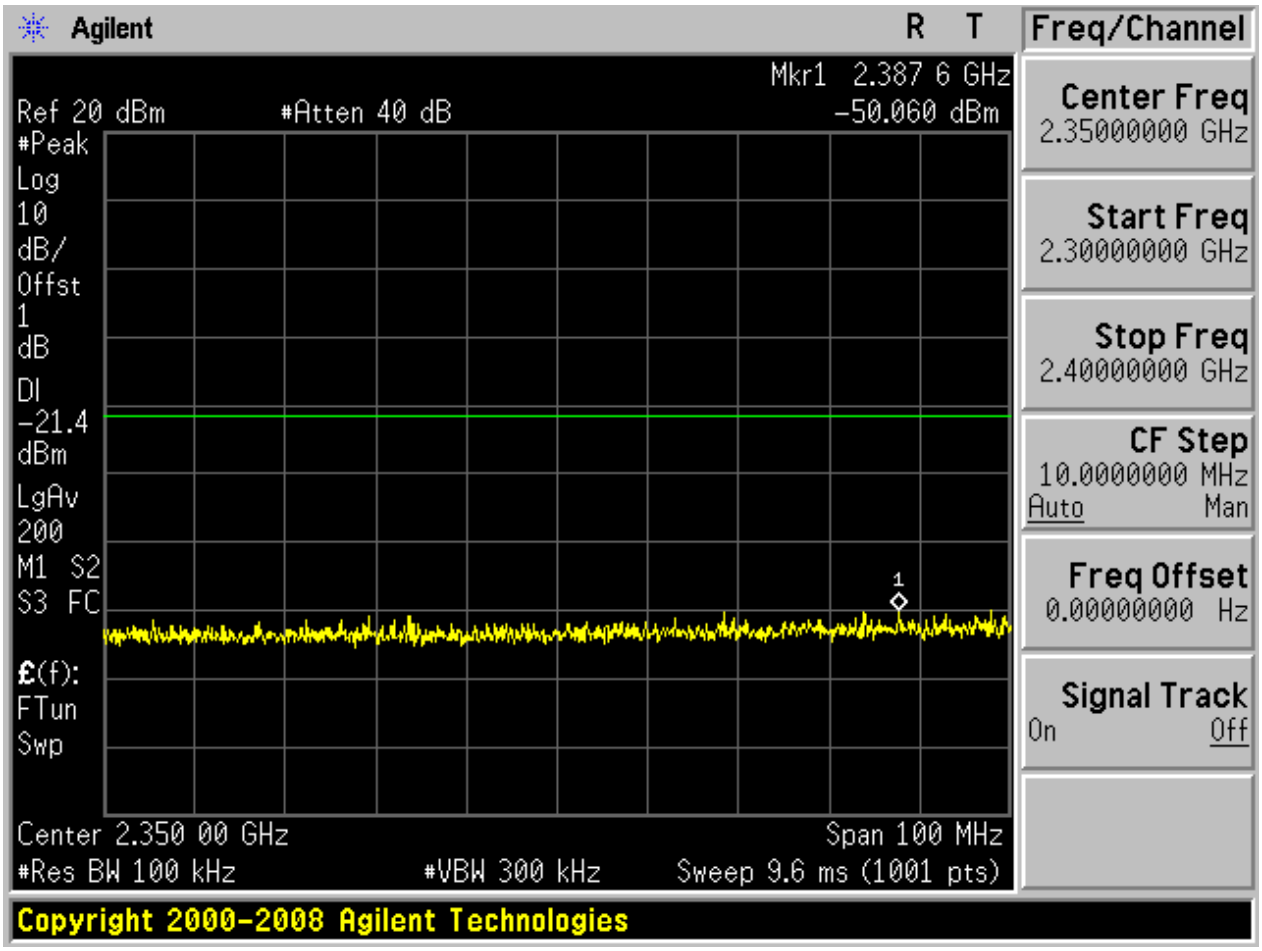


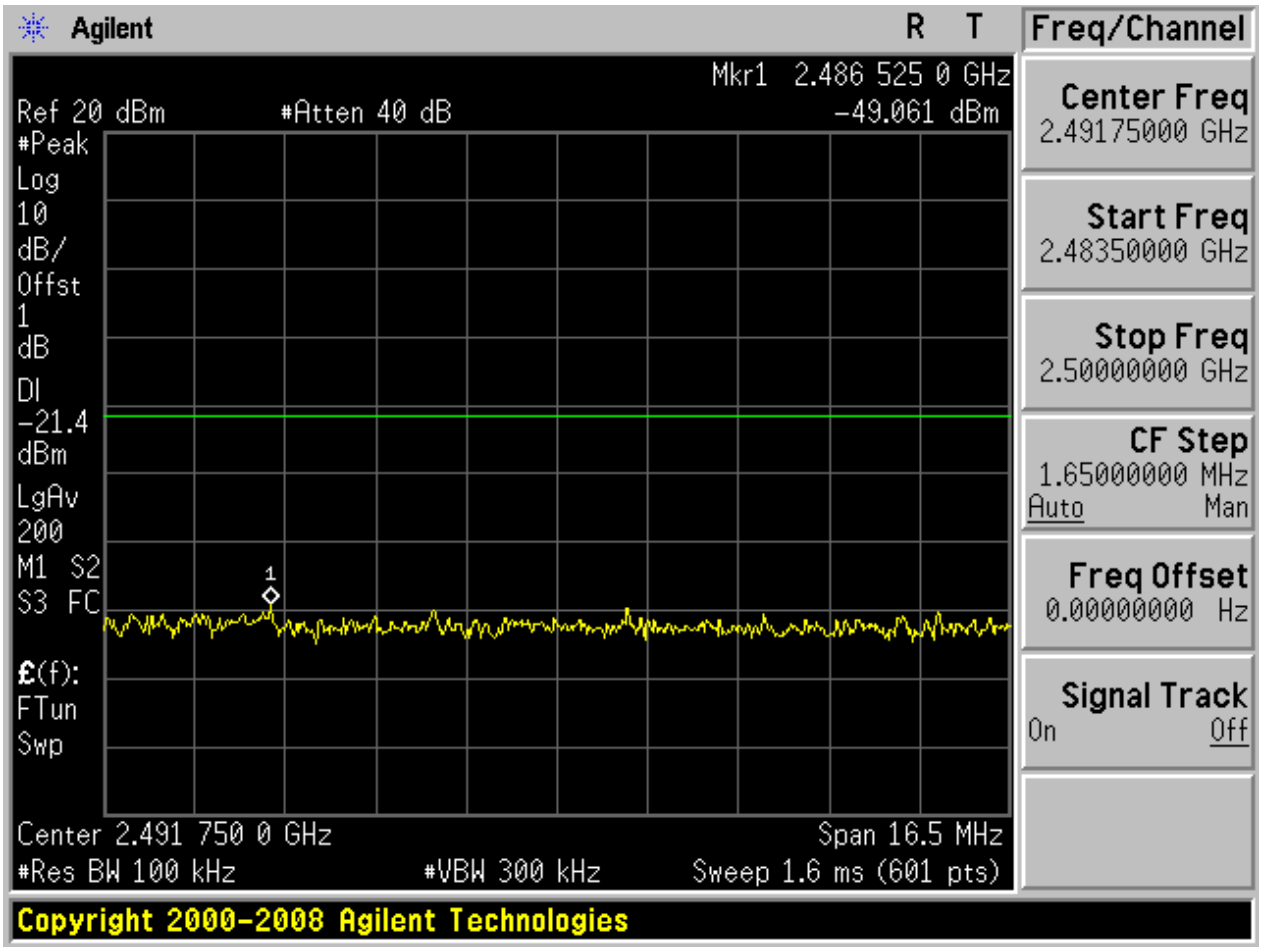
Puw:

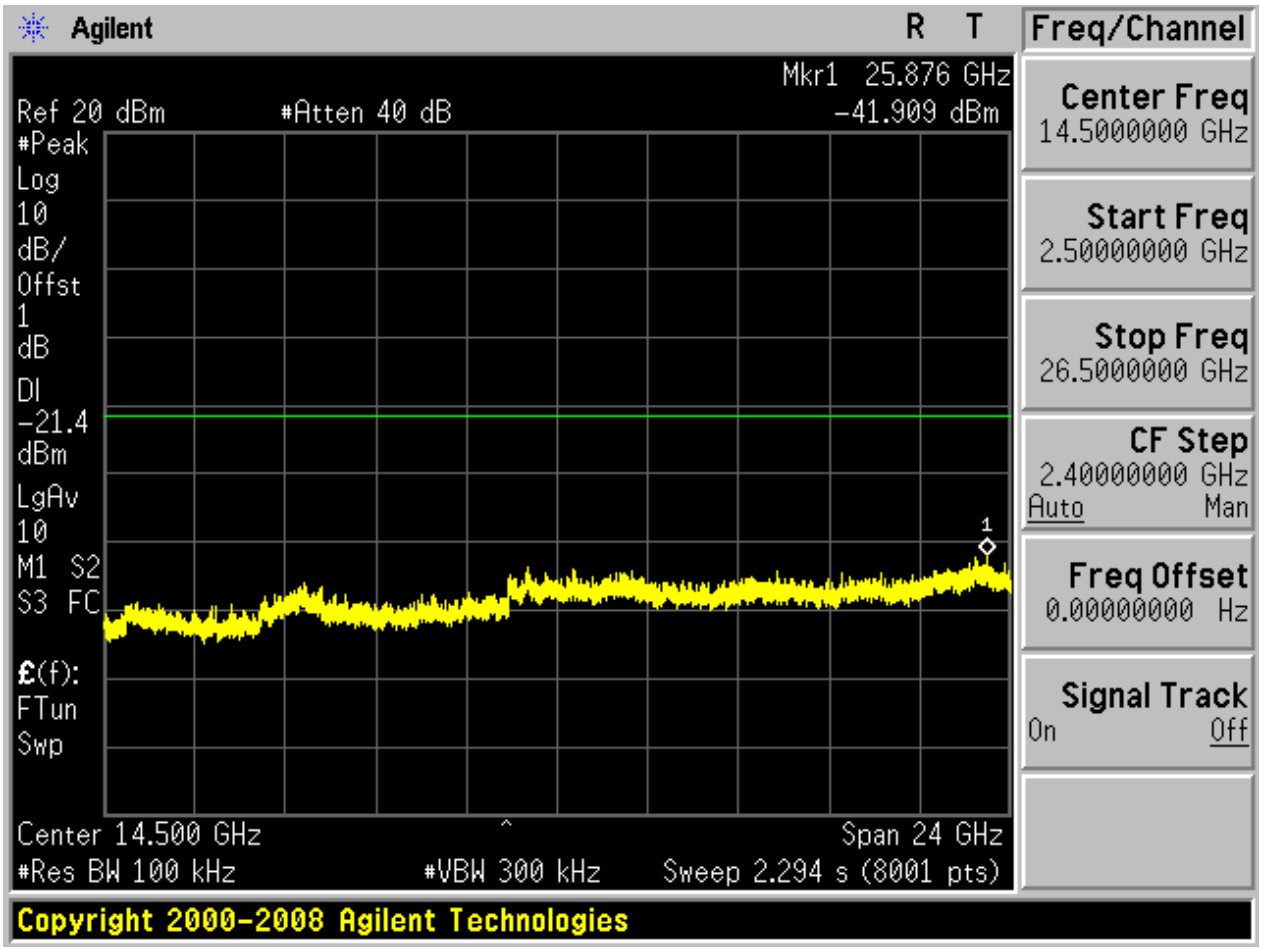












2.4 11G_L@Ant 1

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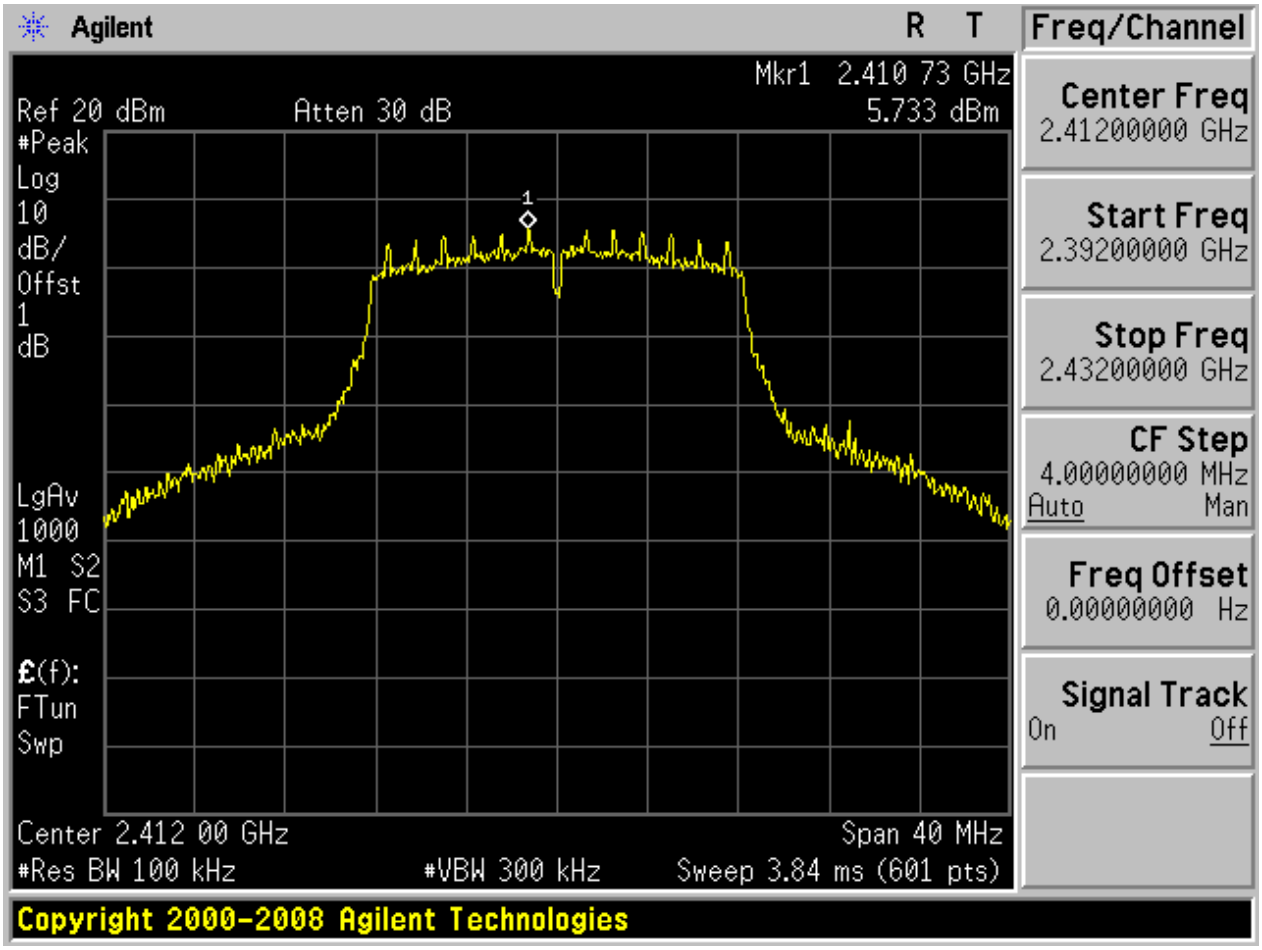

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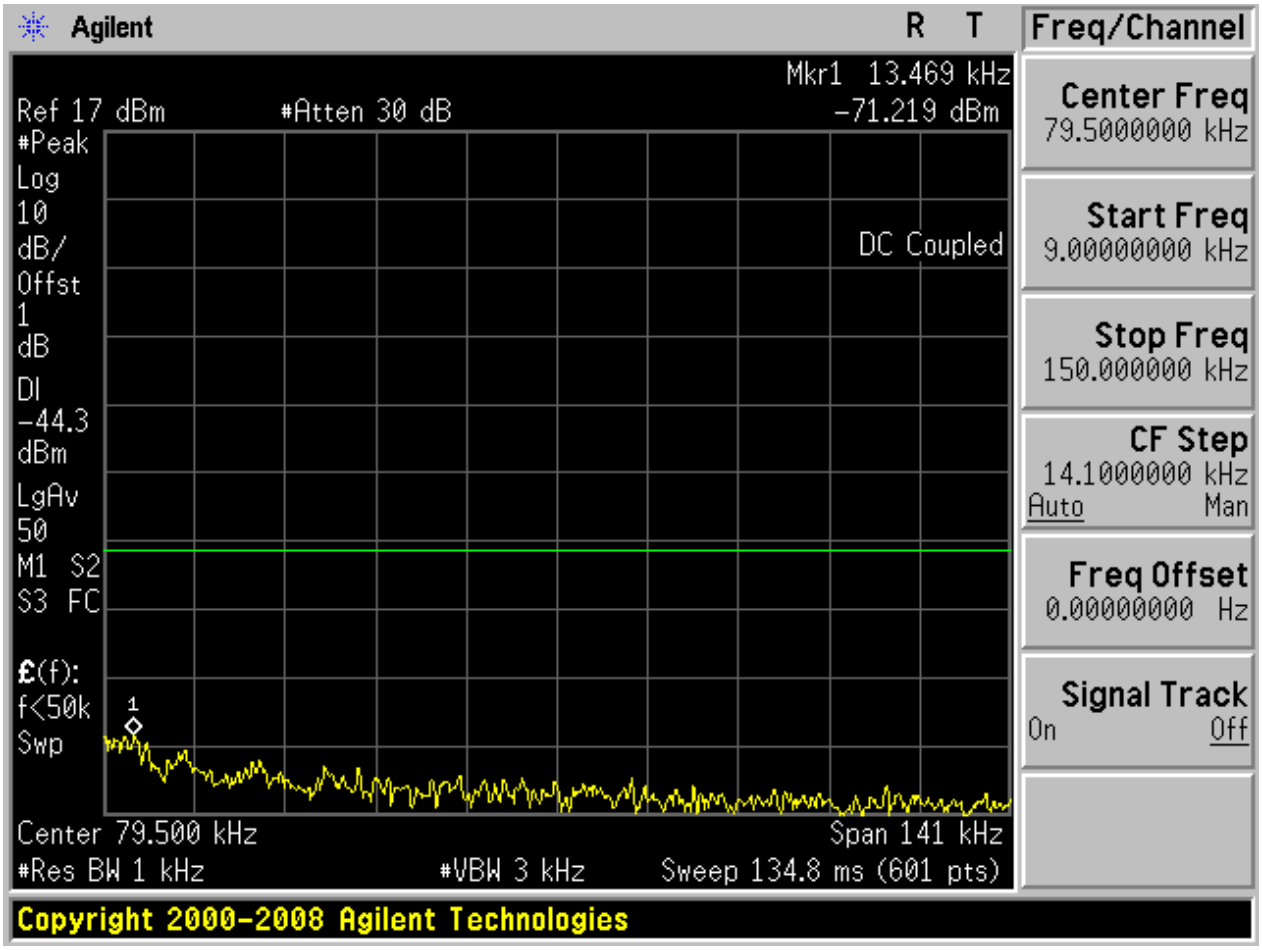

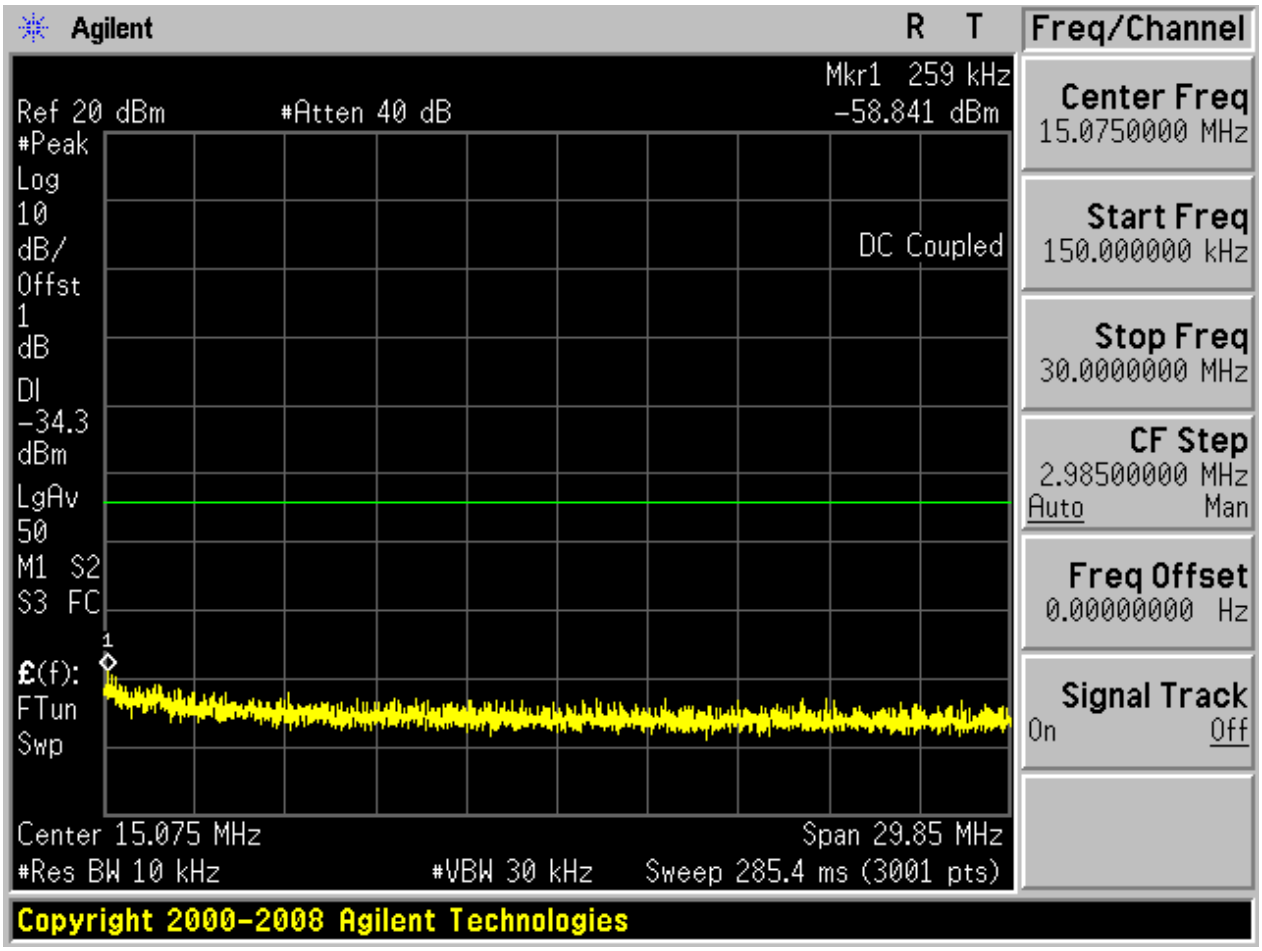

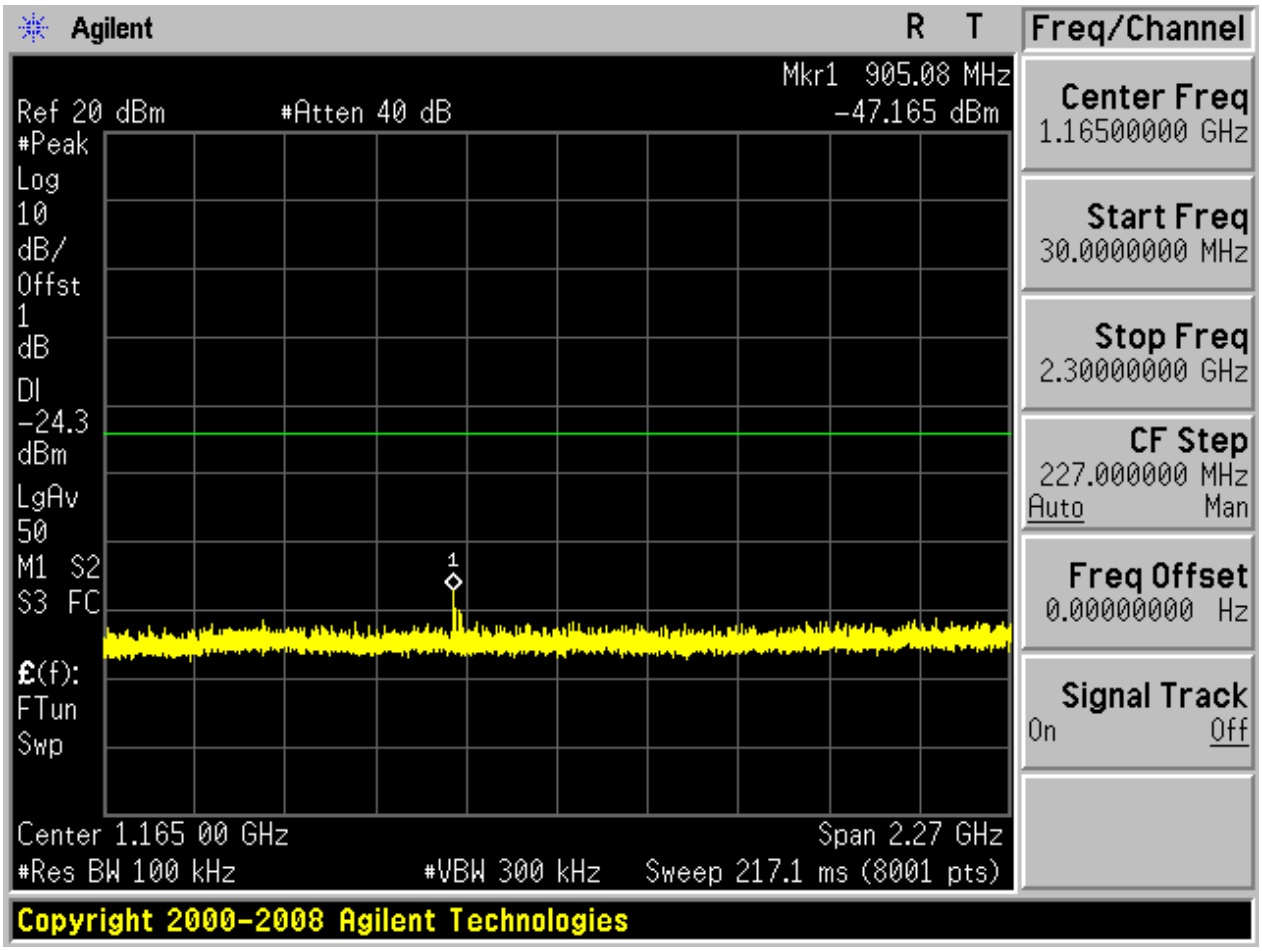

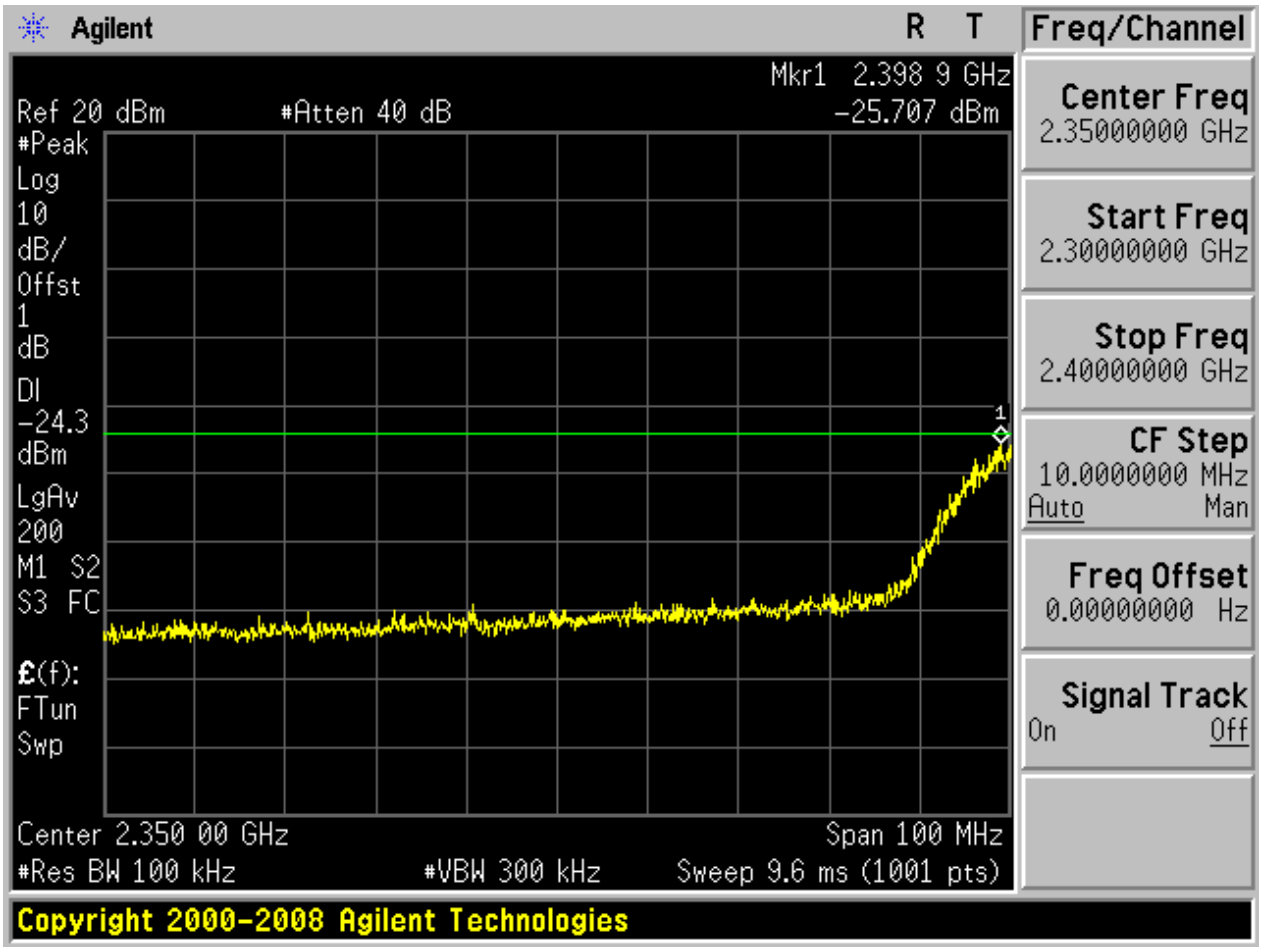

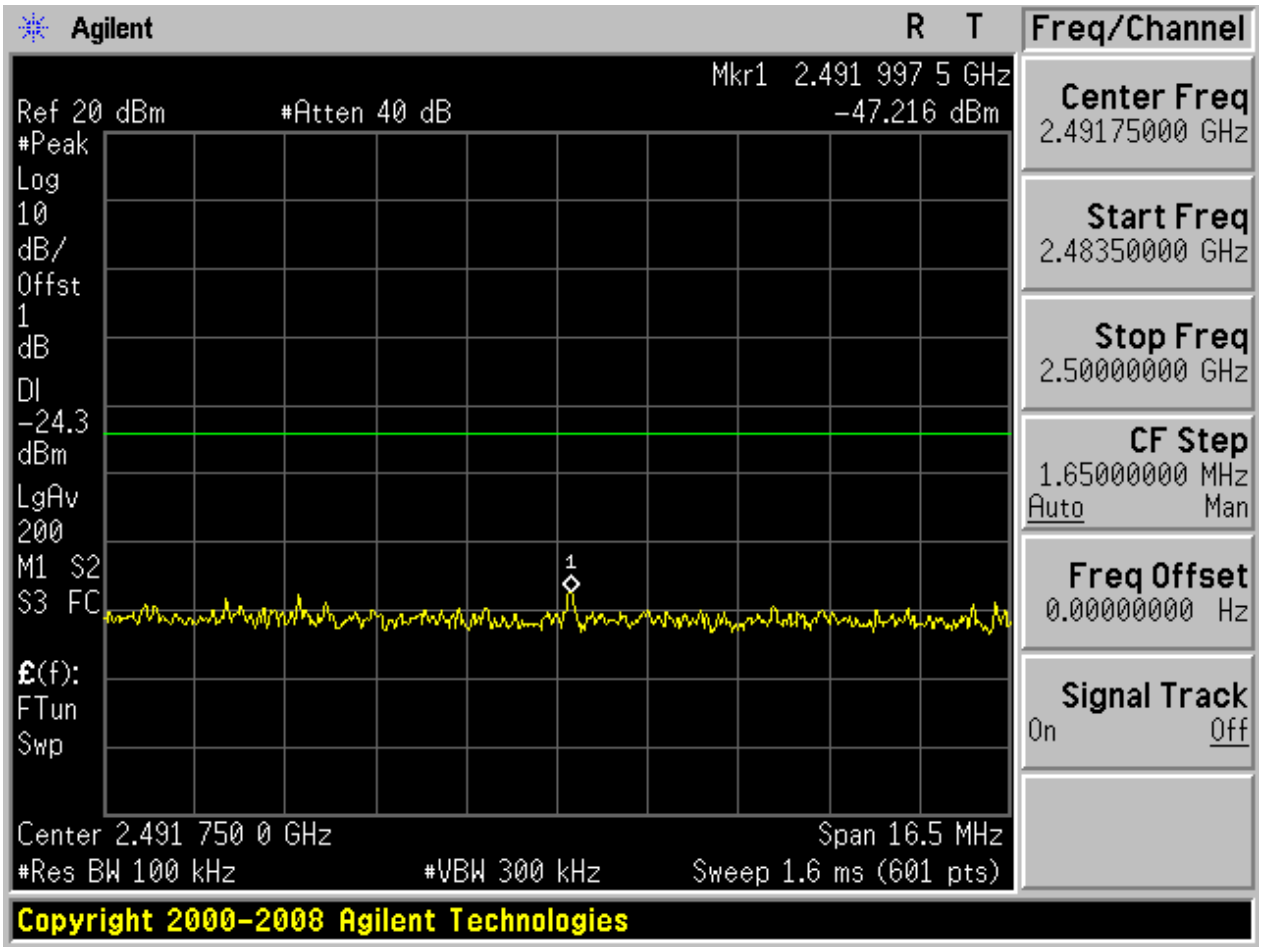

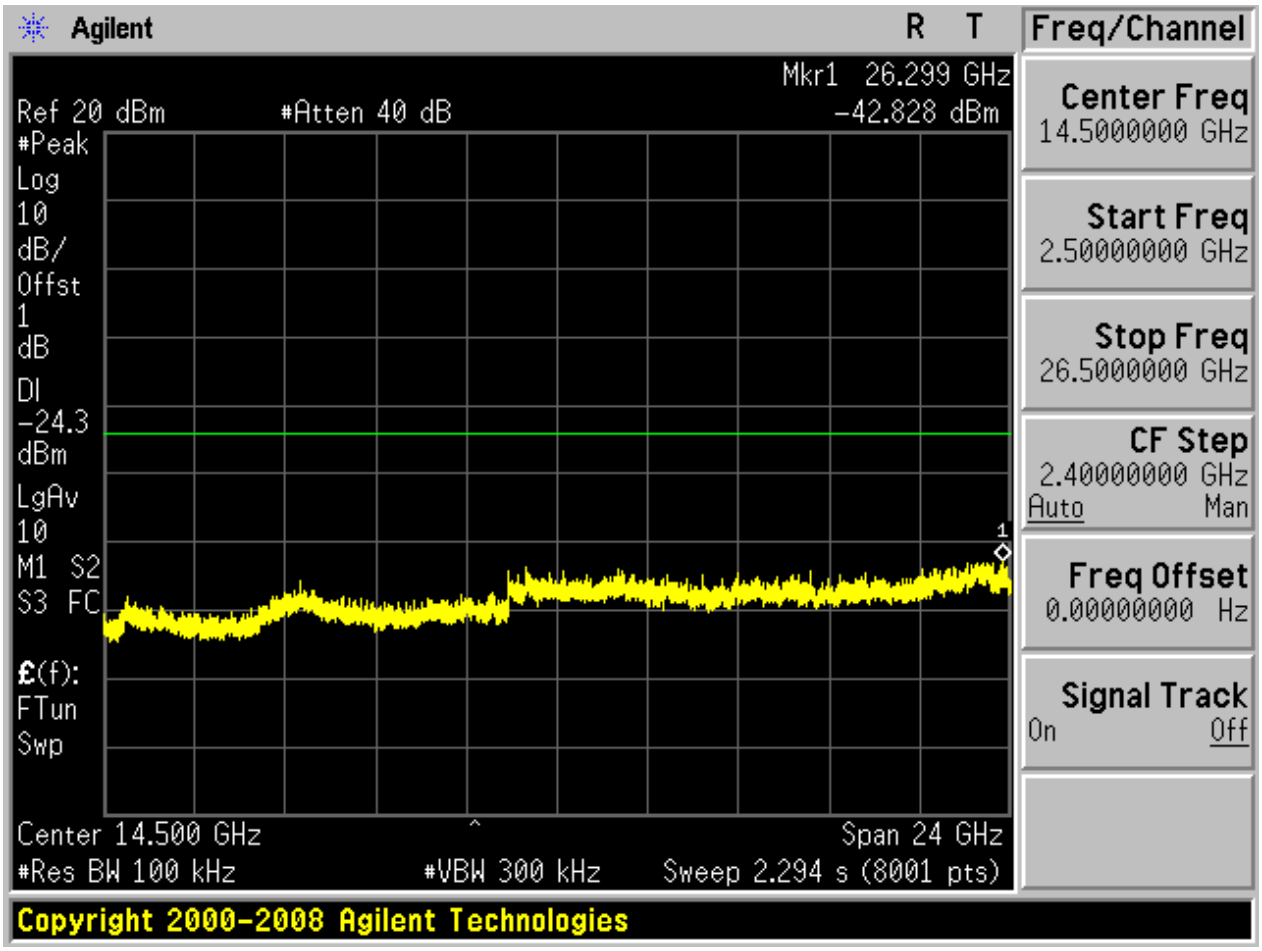

2.5 11G_M@Ant 1

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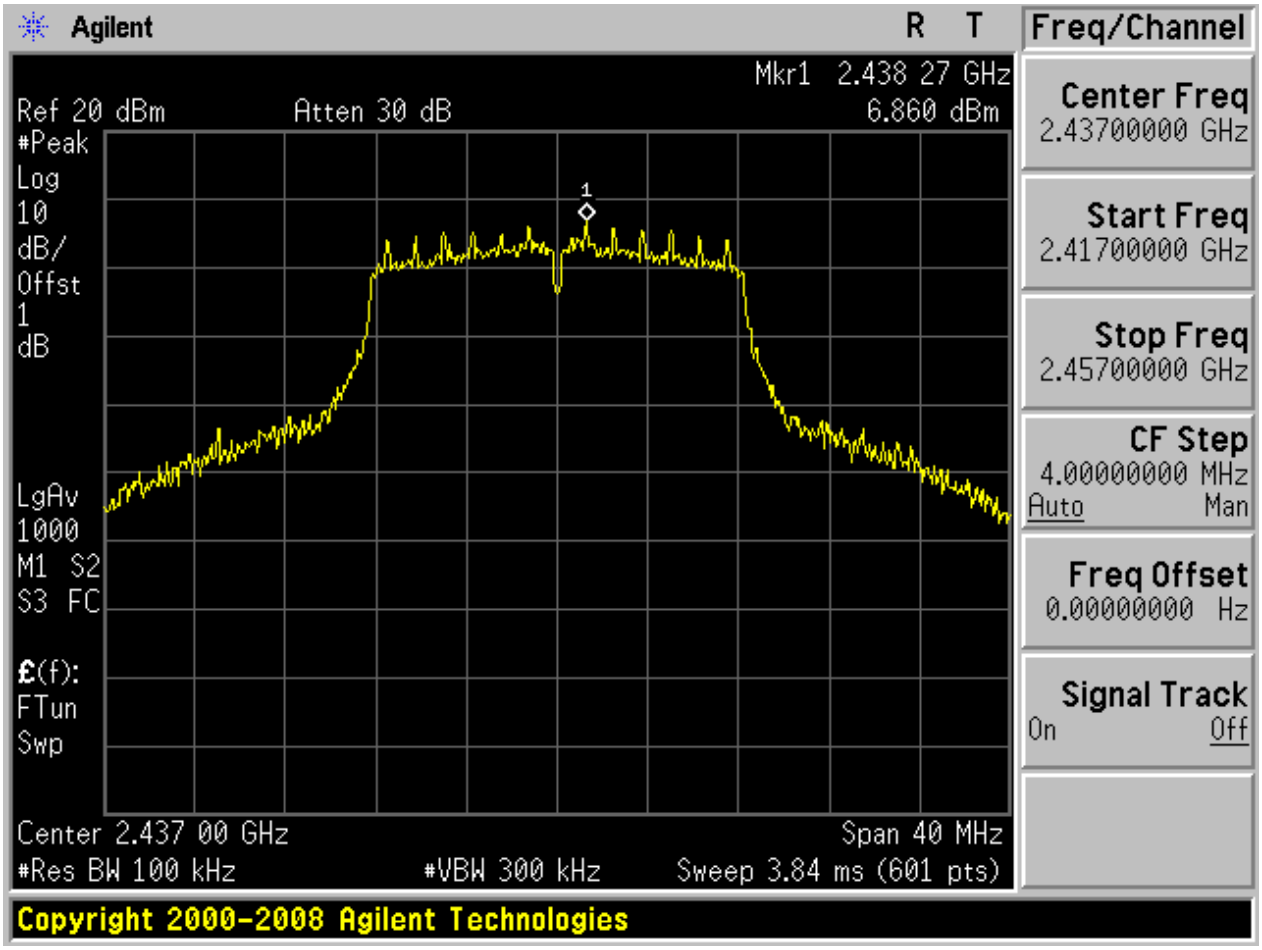
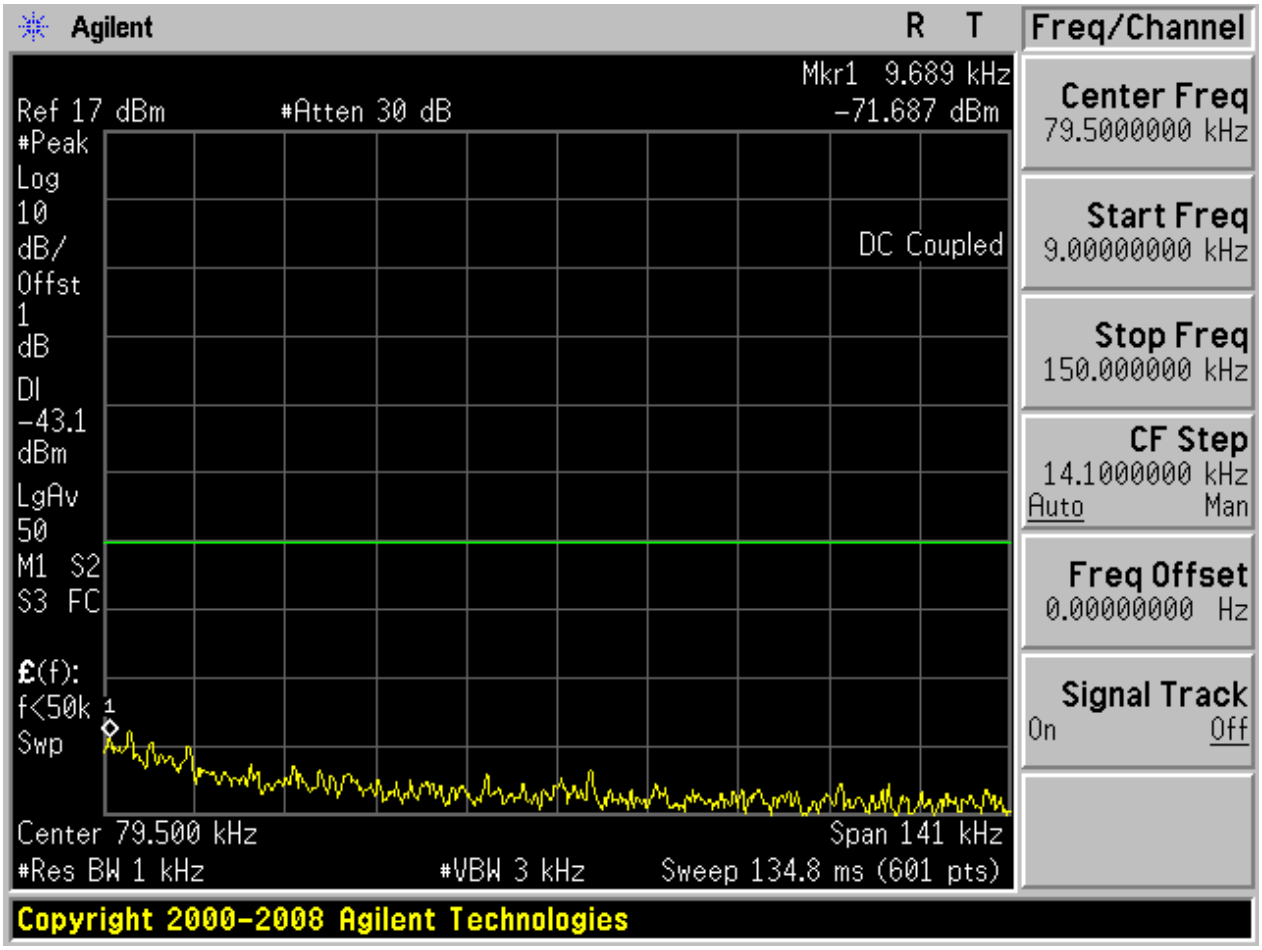
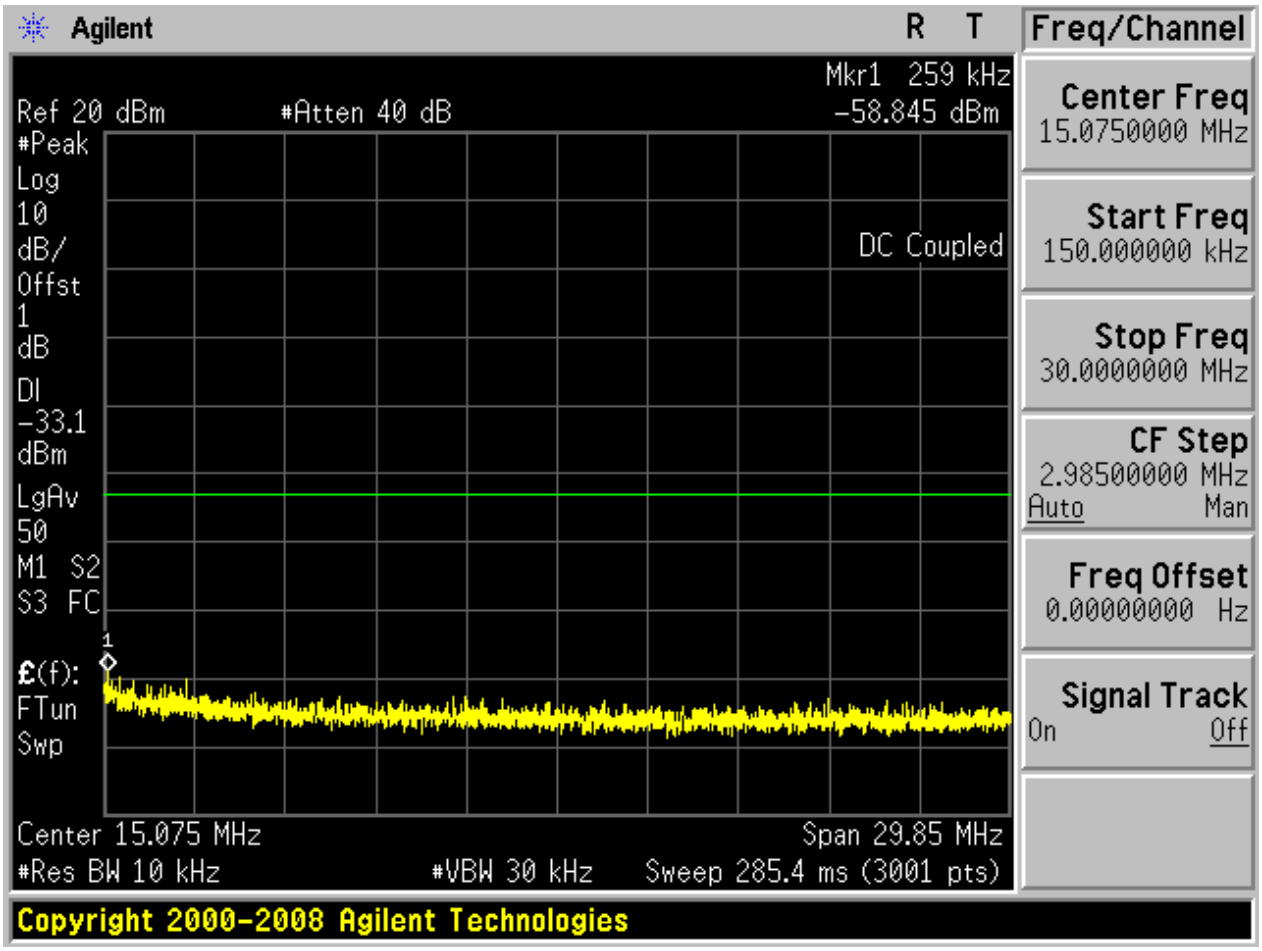
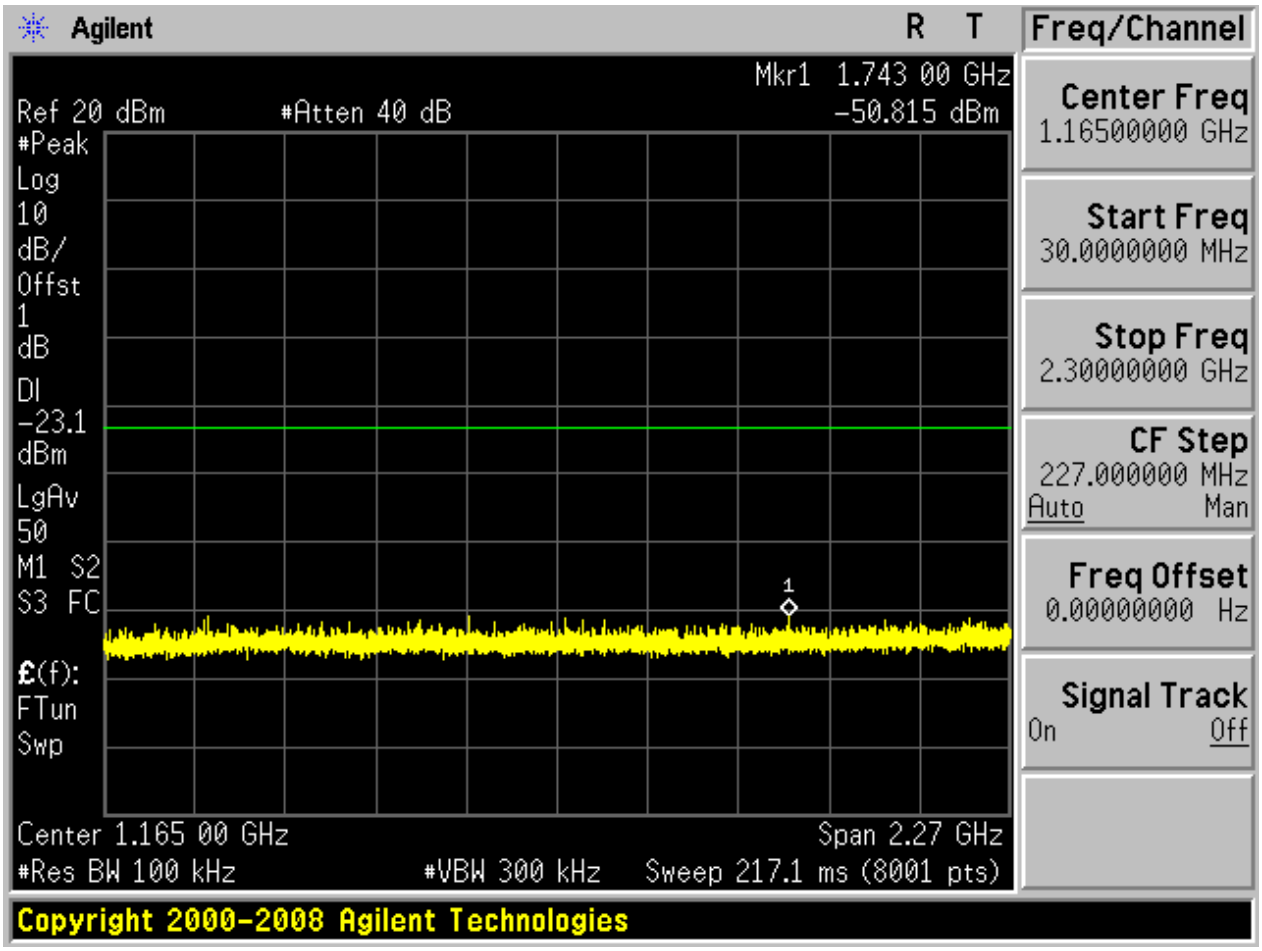
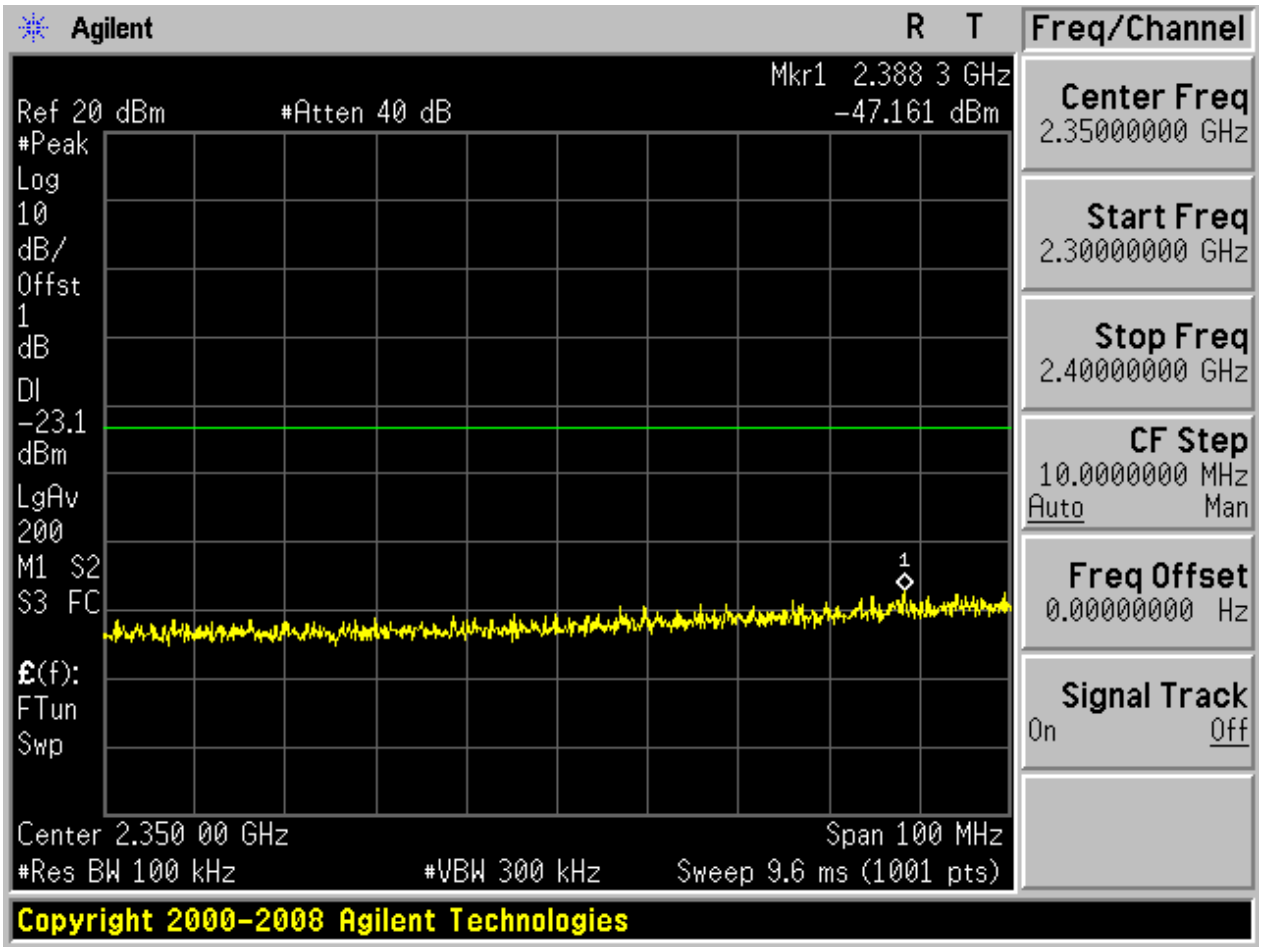


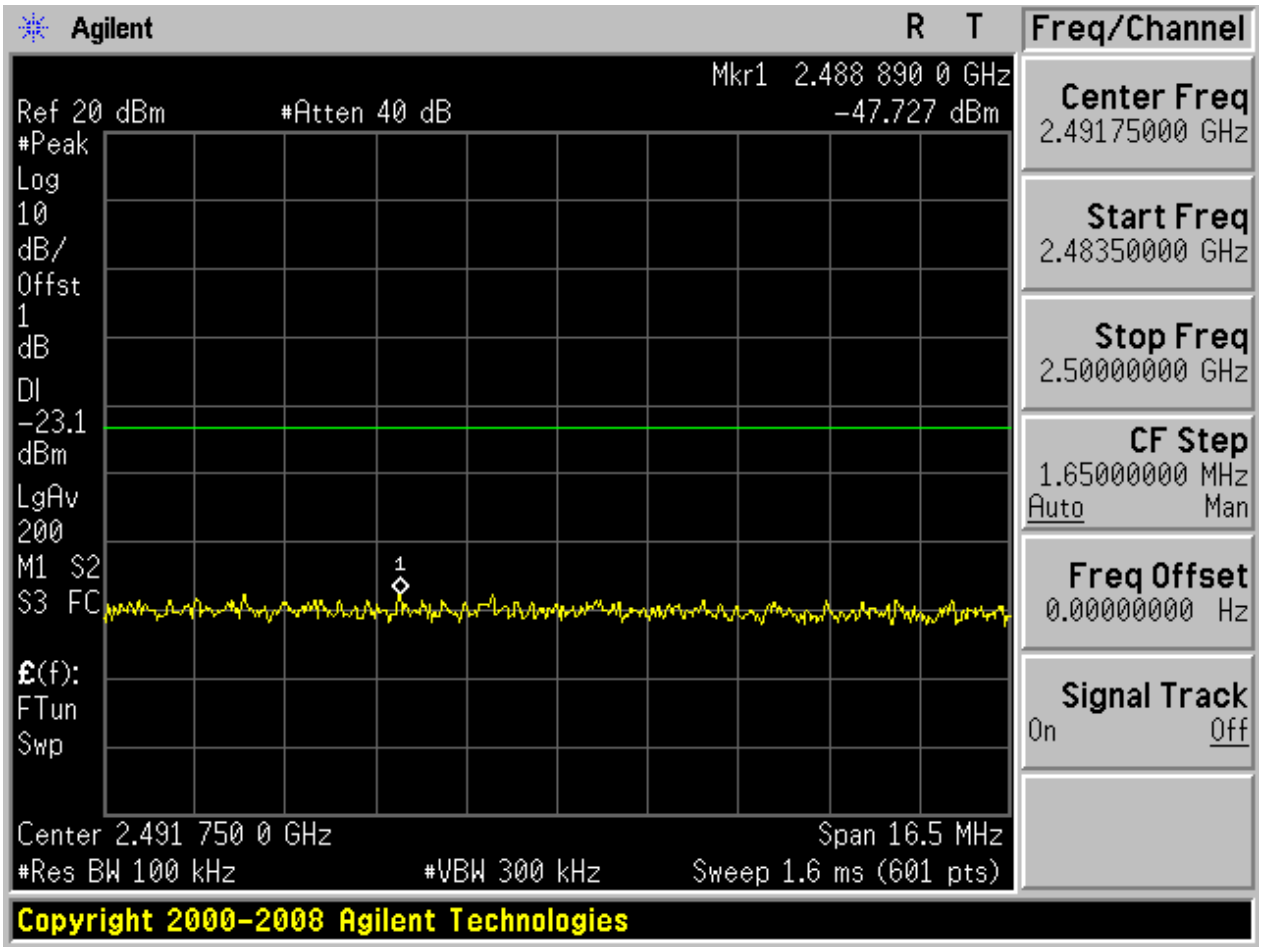
Puw:

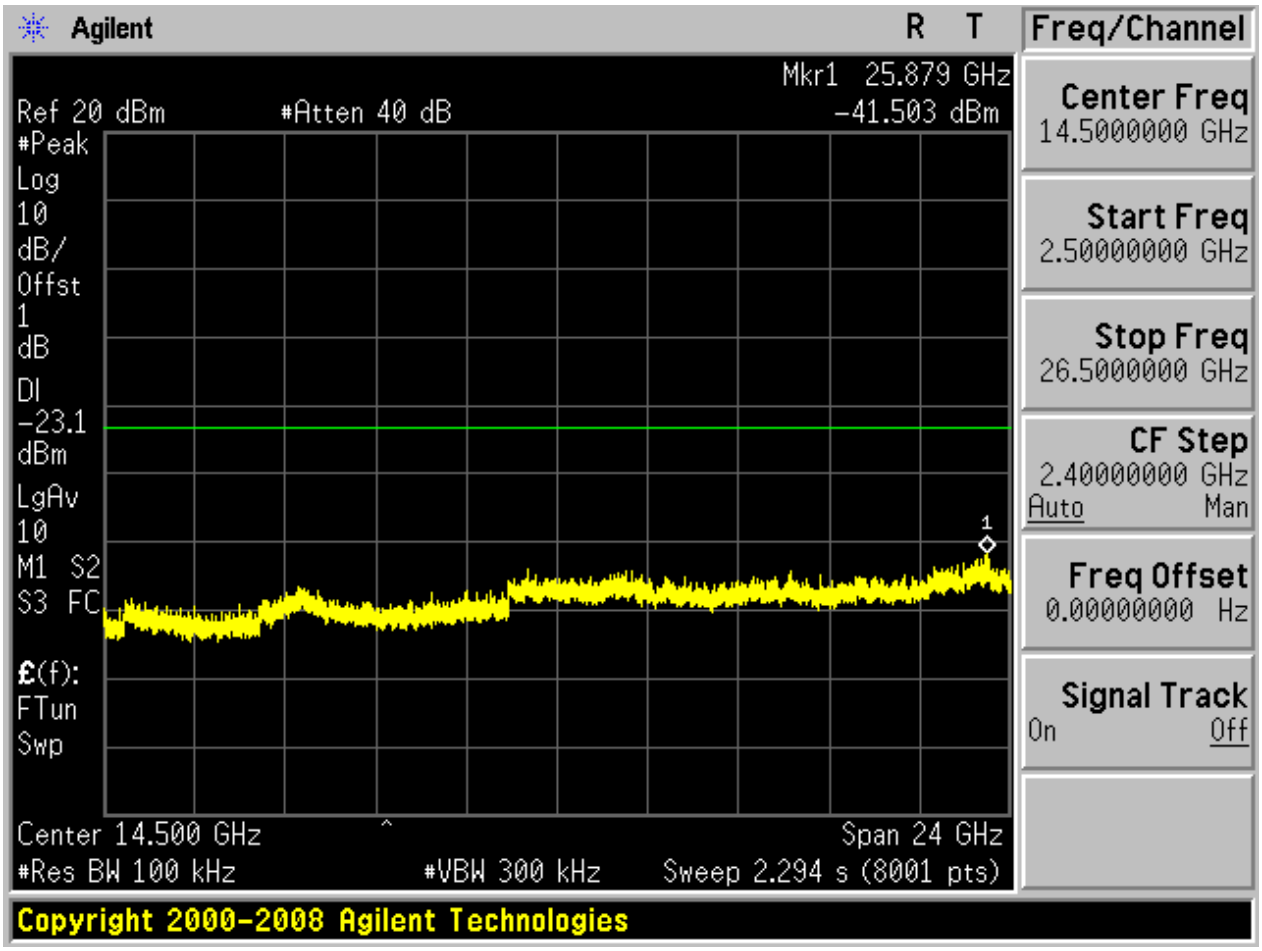






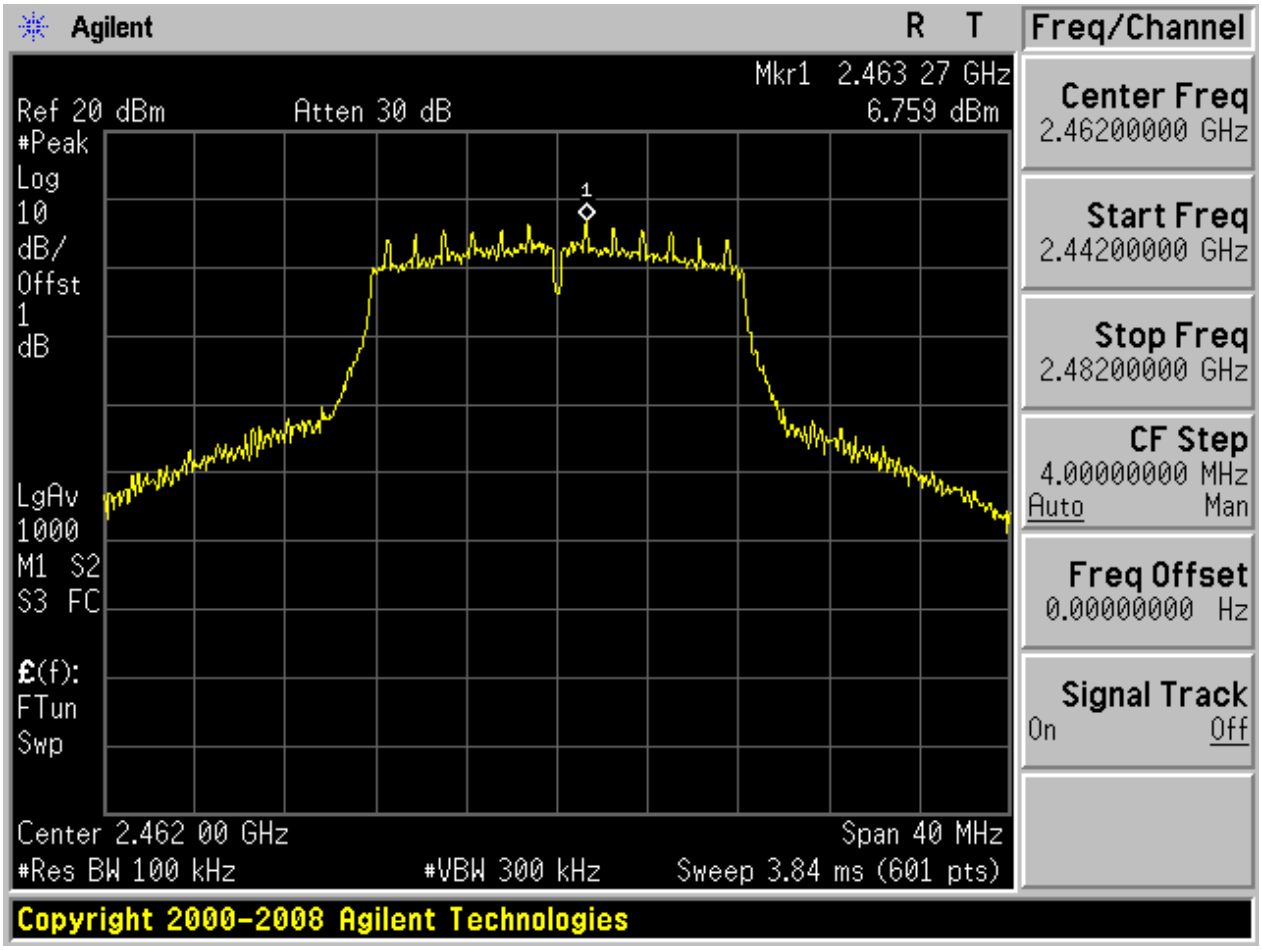




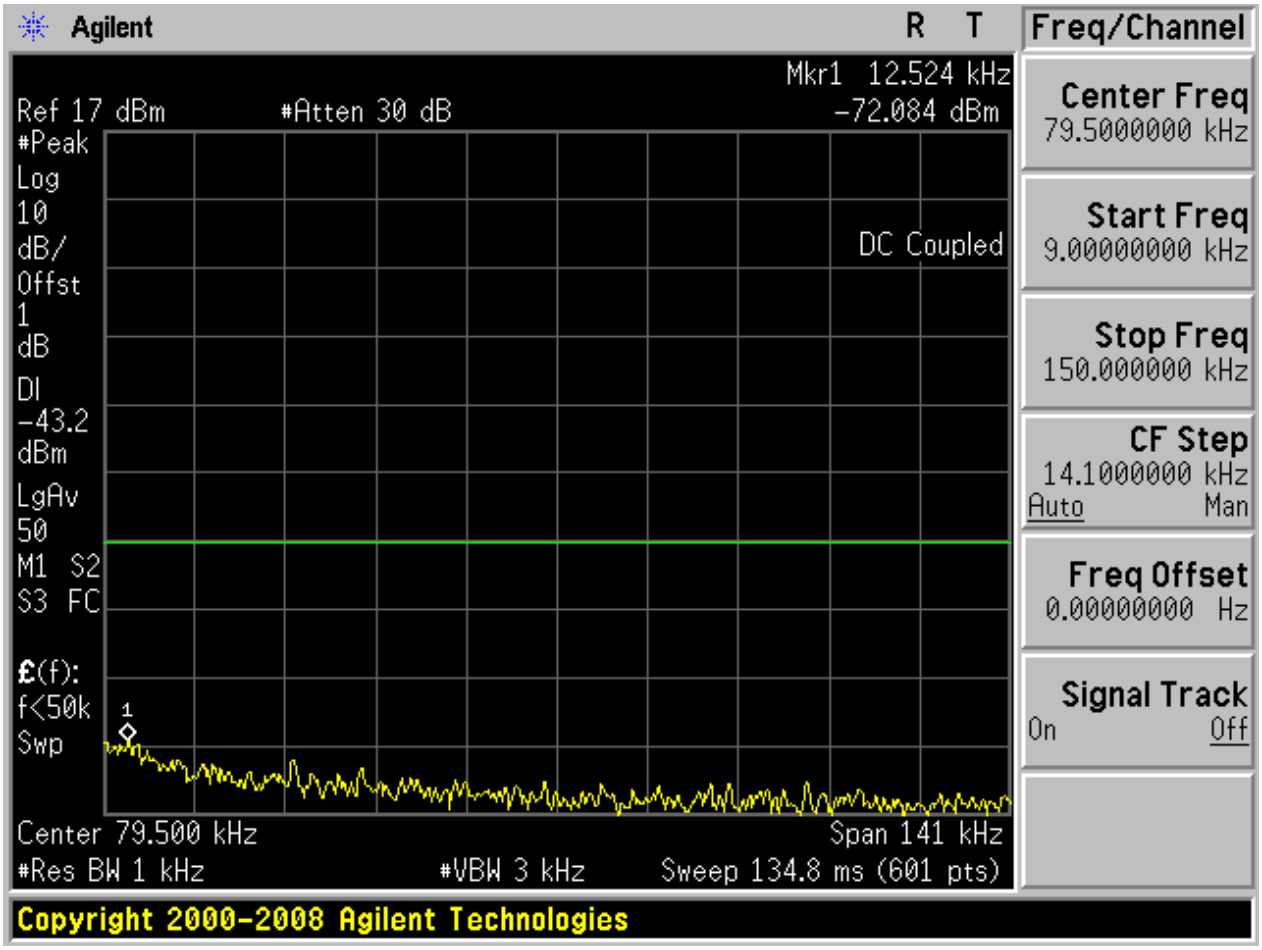


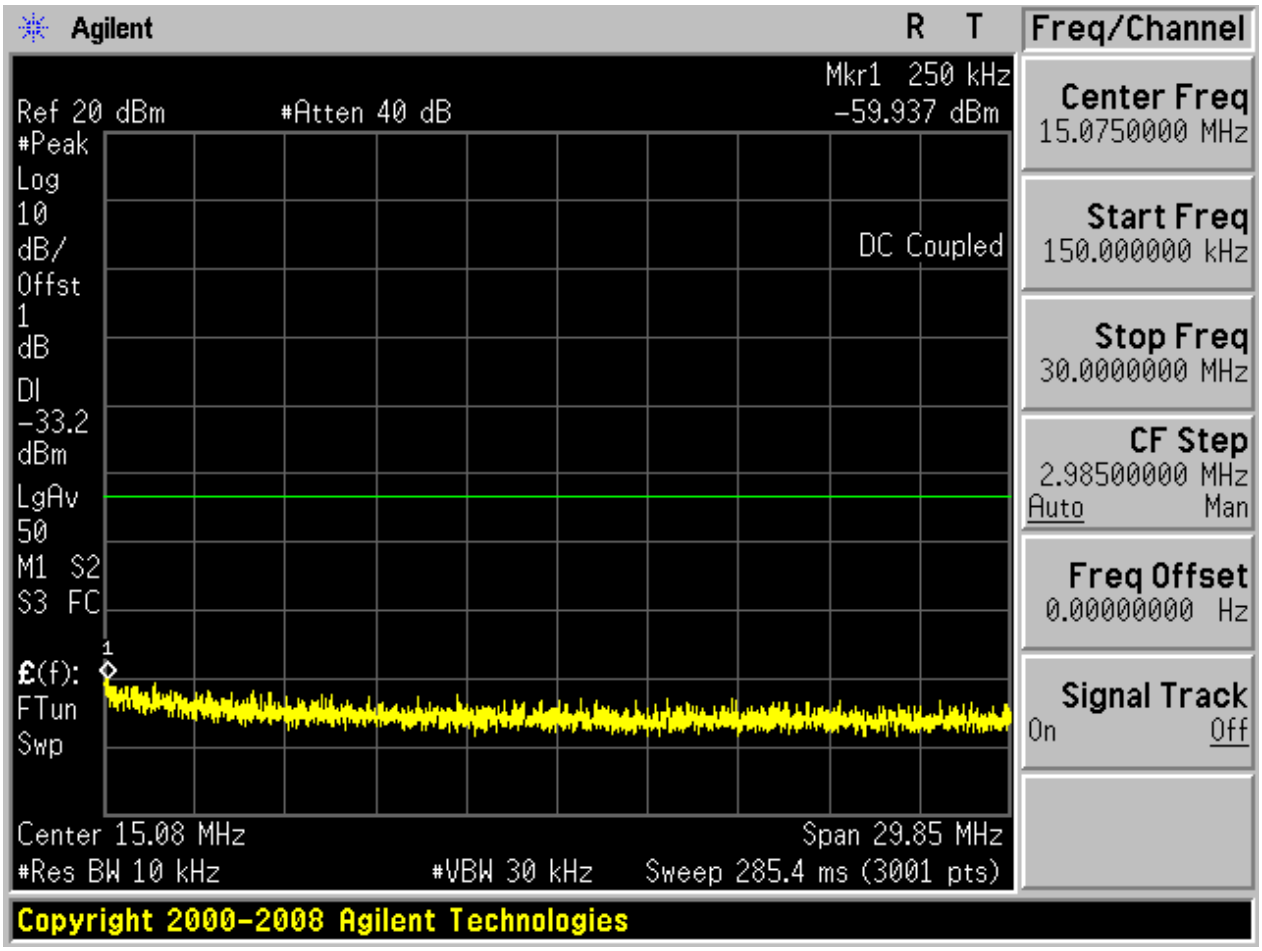
2.6 11G_H@Ant 1

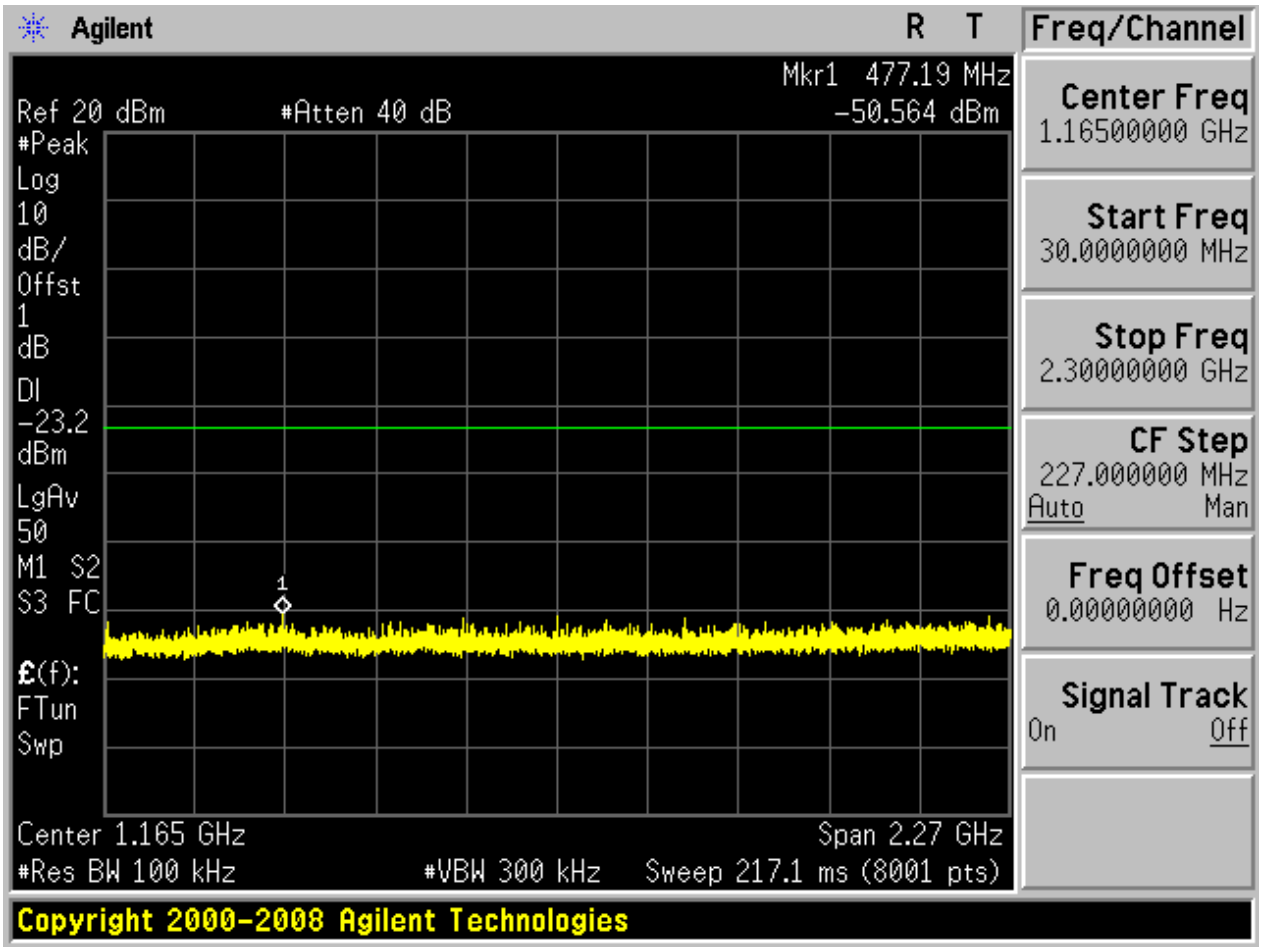
Pref:

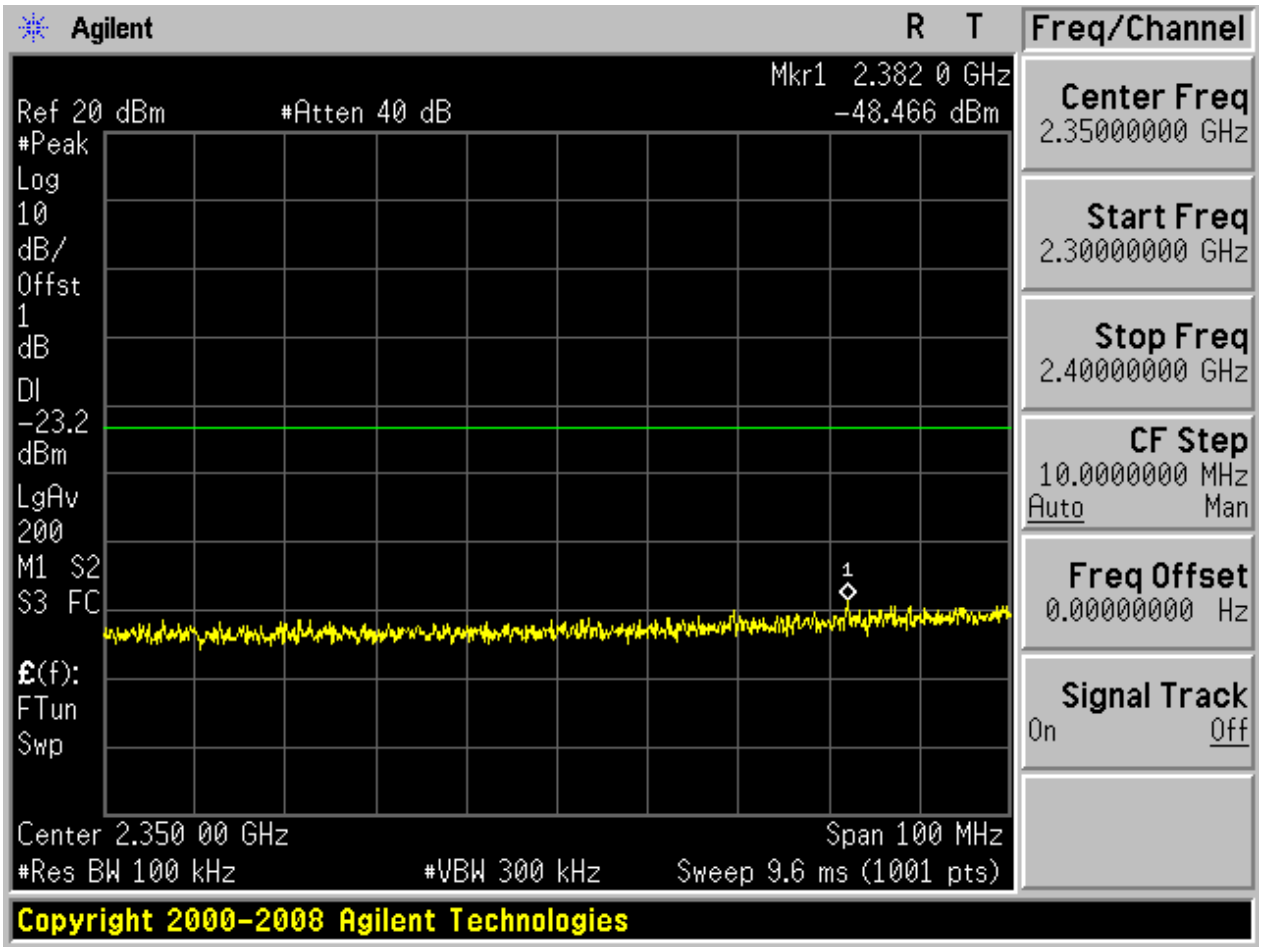


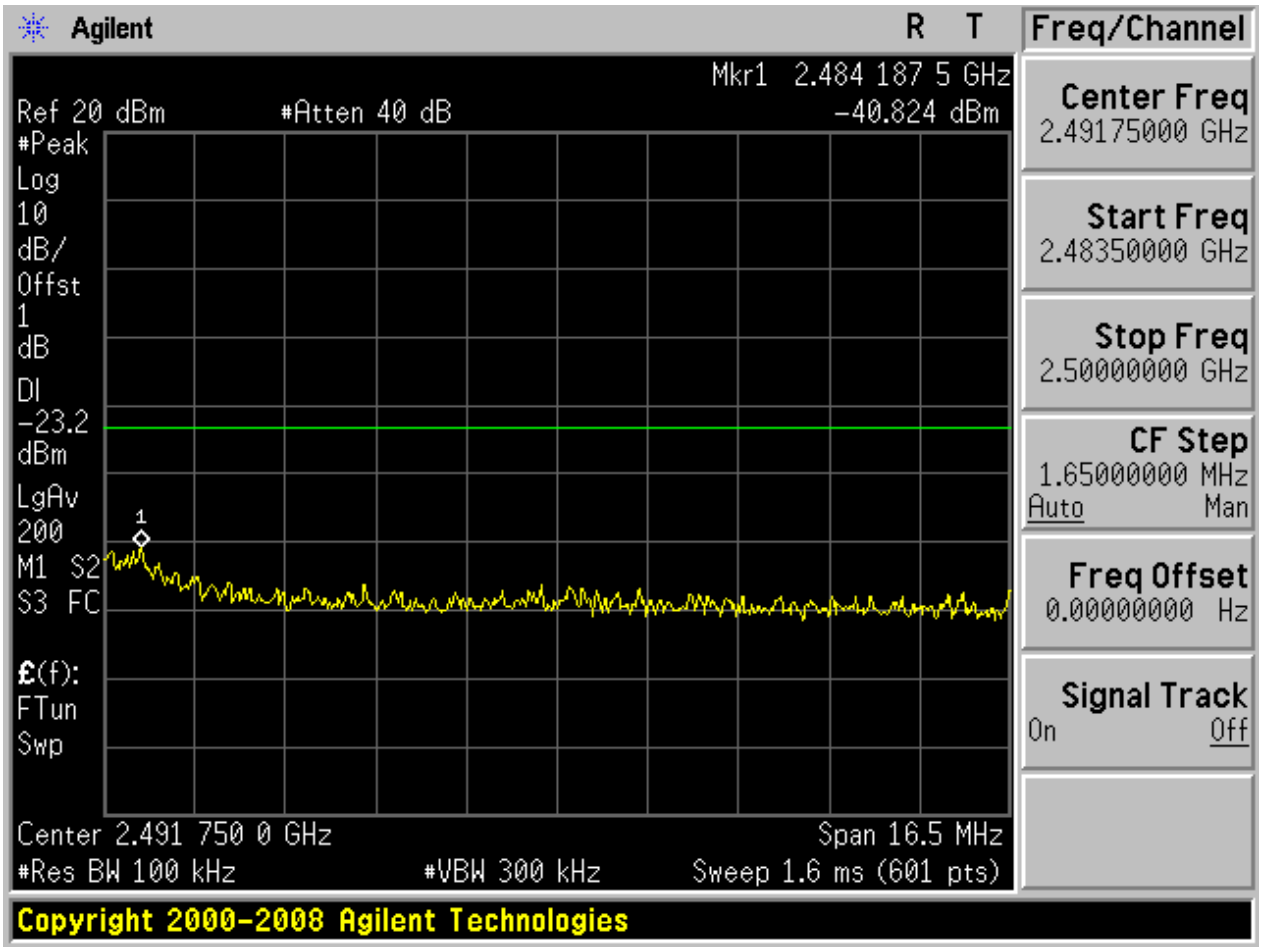
Puw:

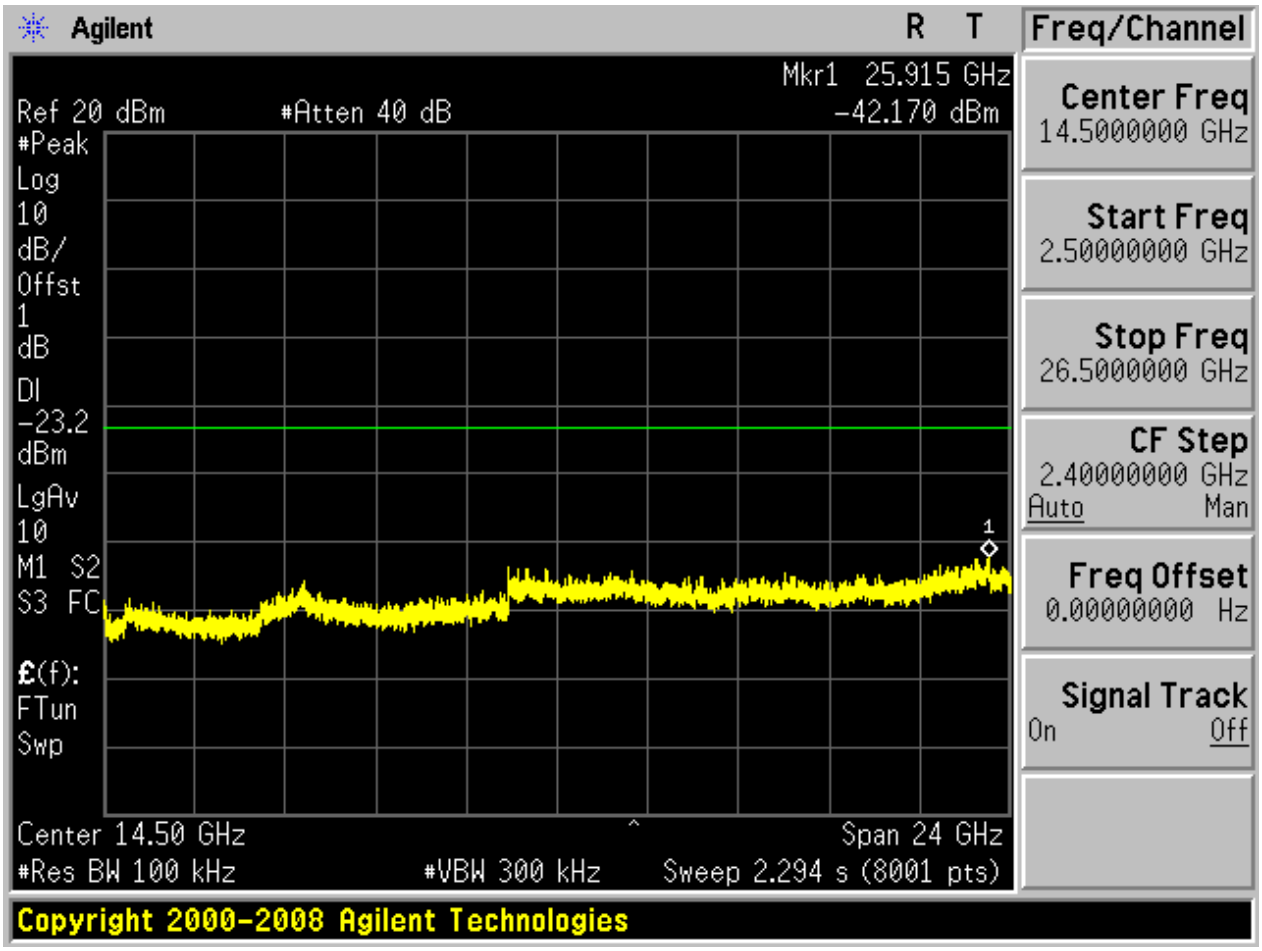






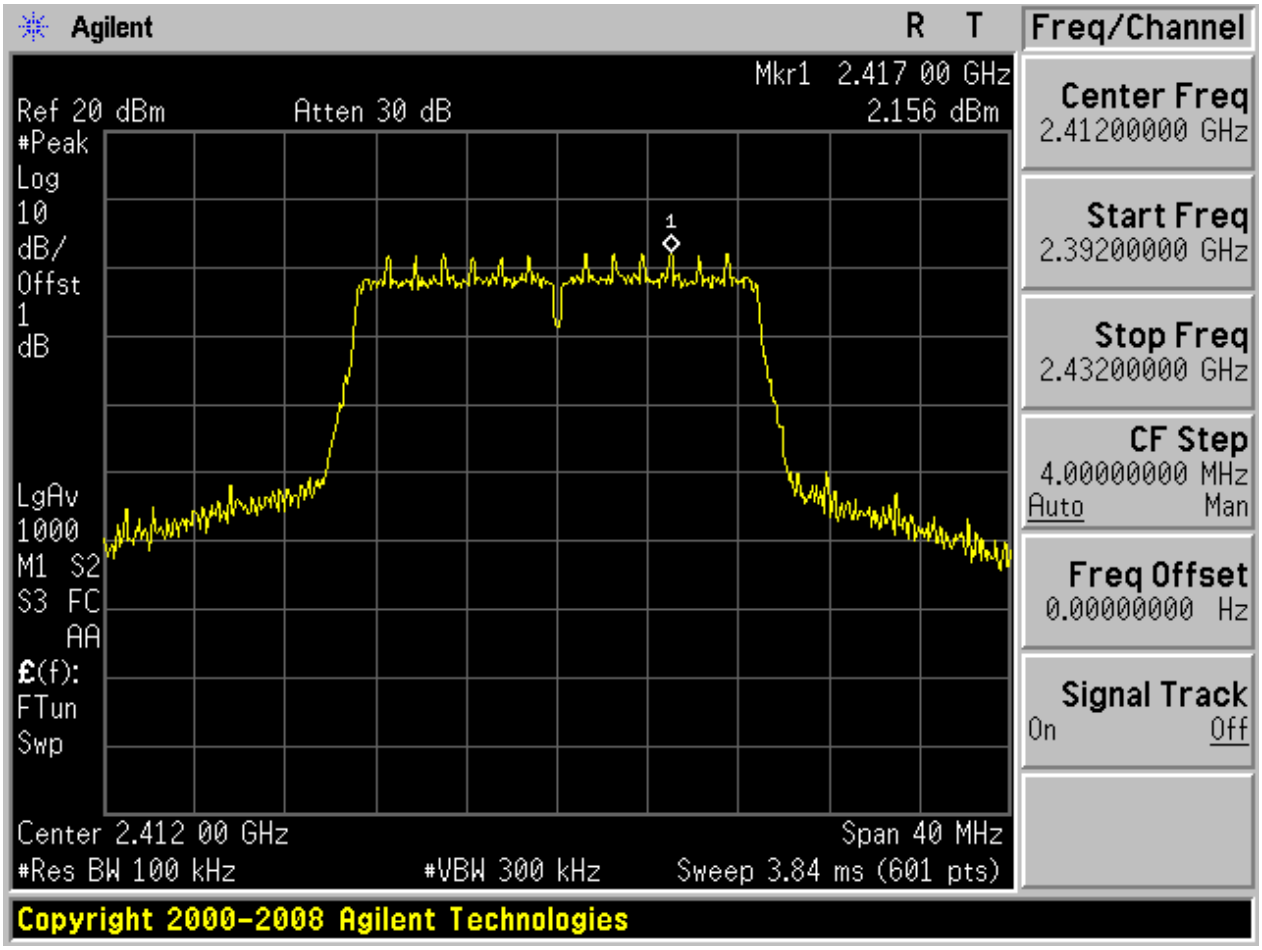




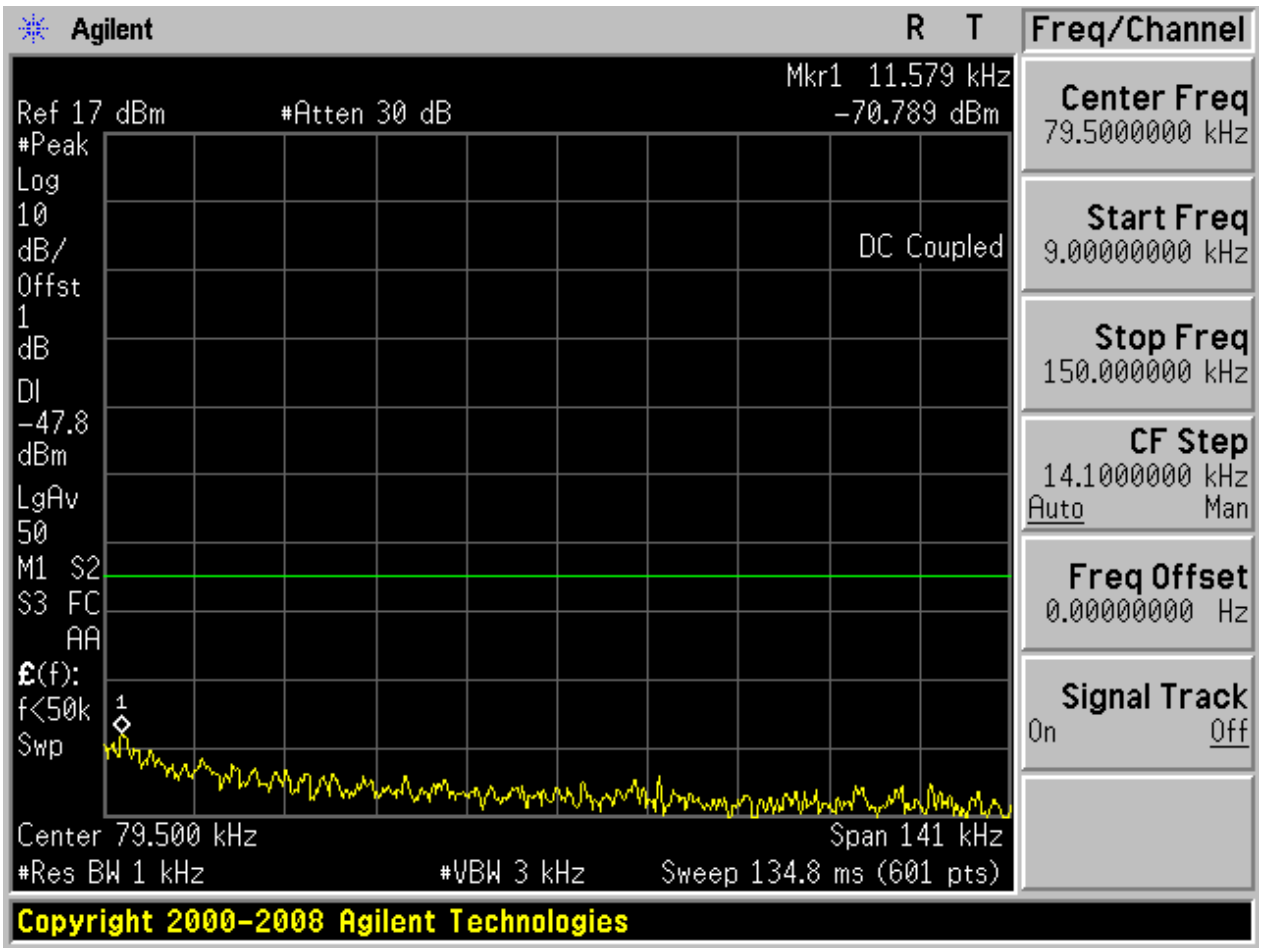


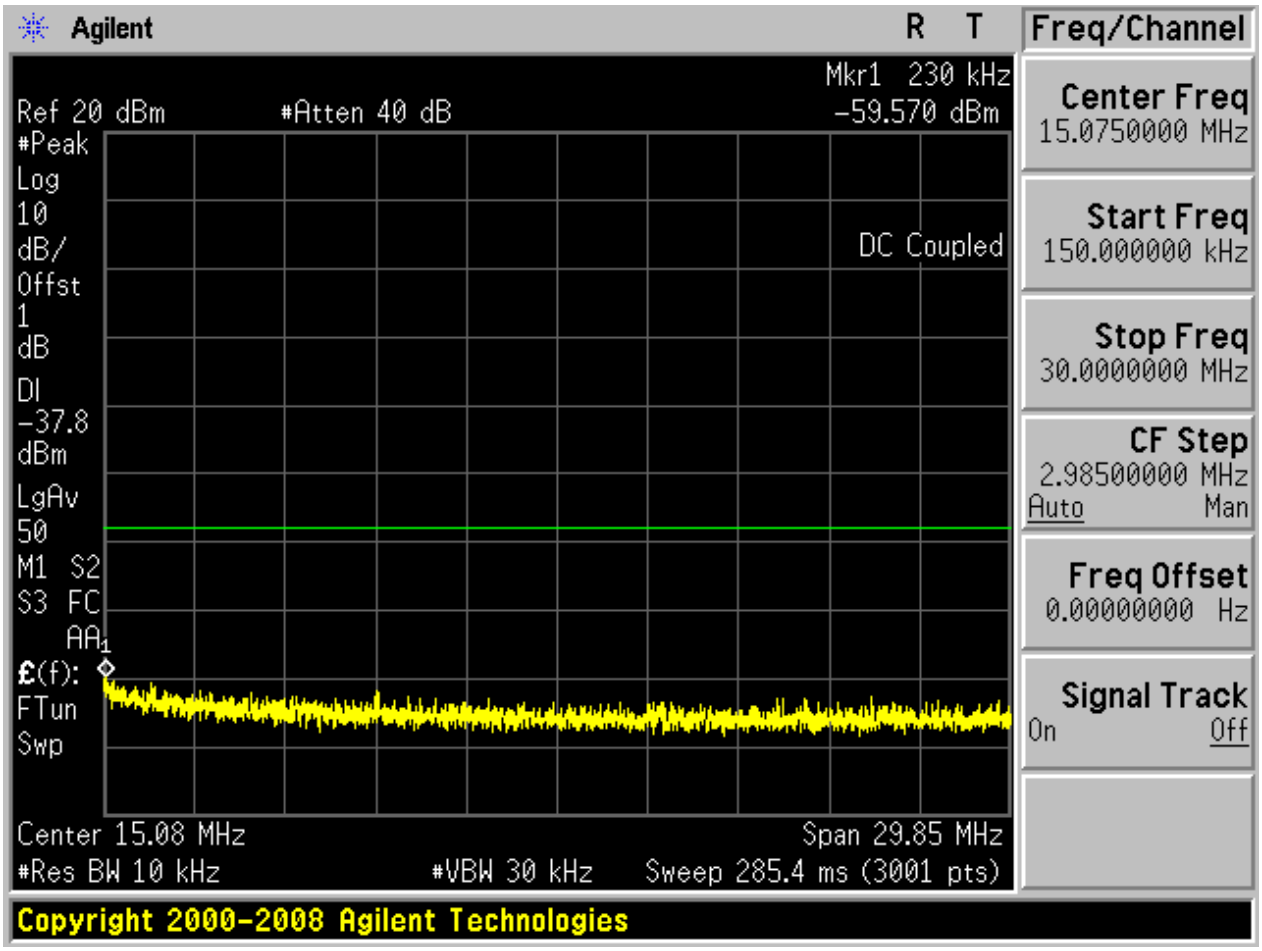
2.7 11N20_L@Ant 1

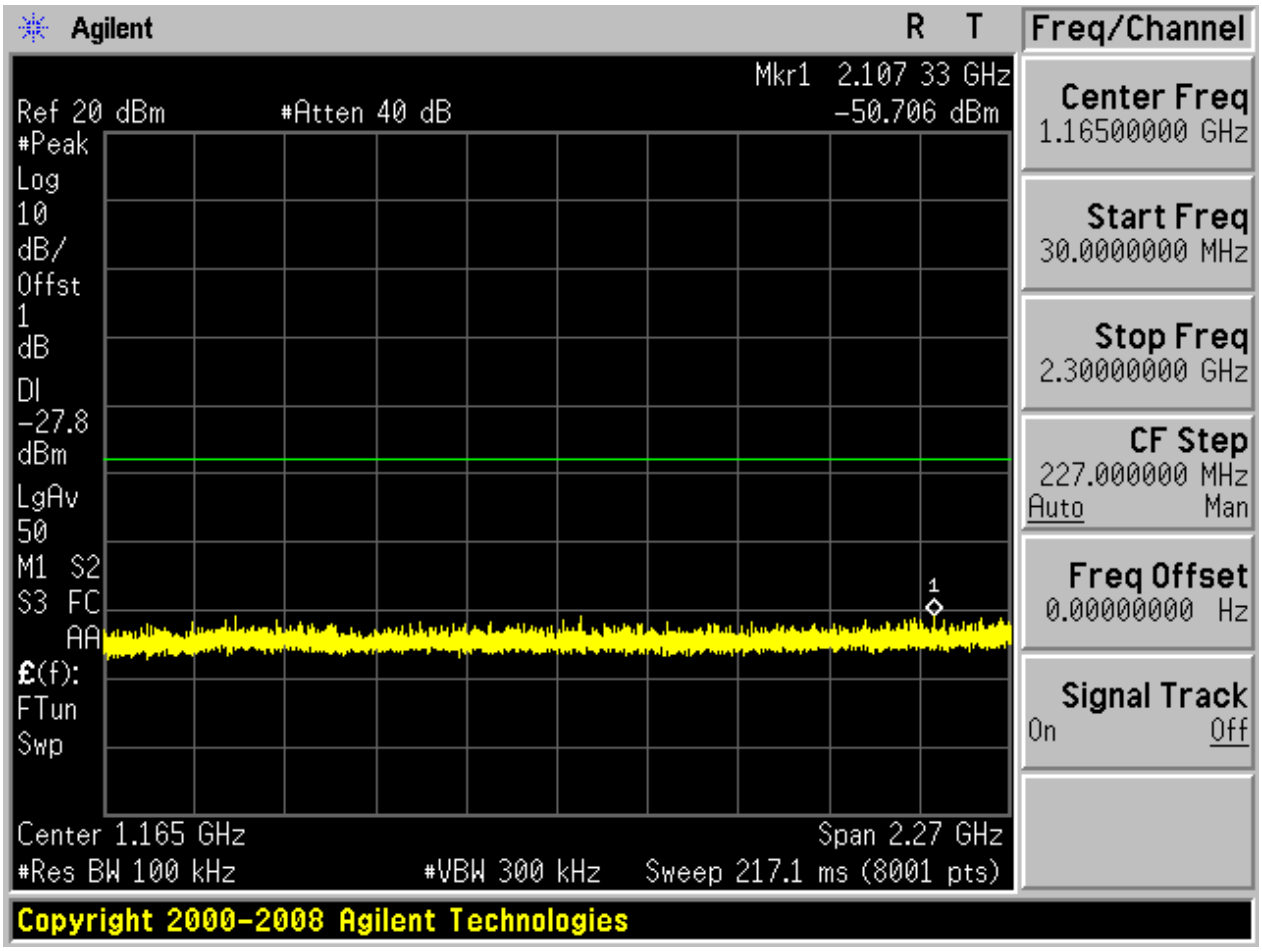
Pref:

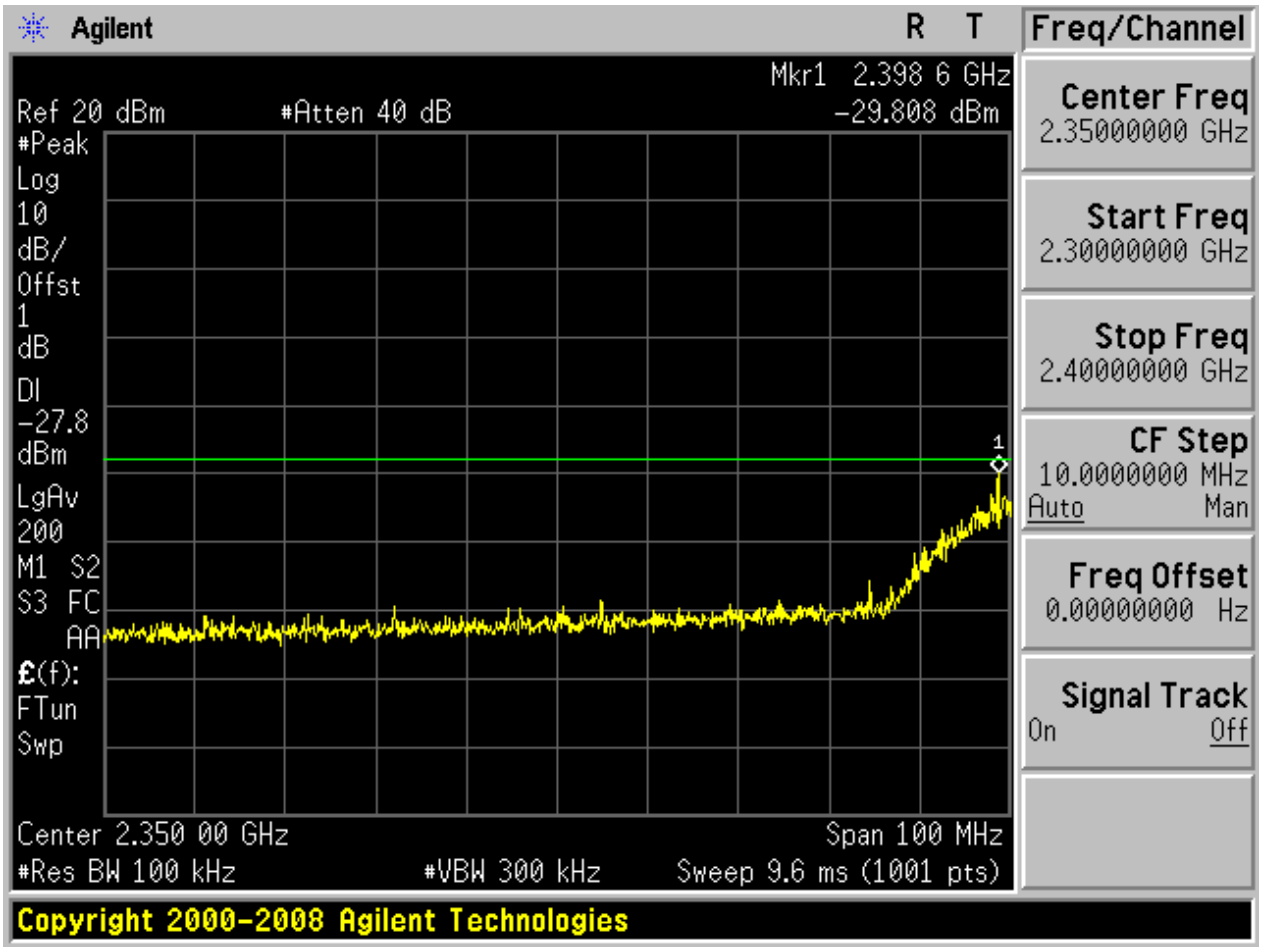


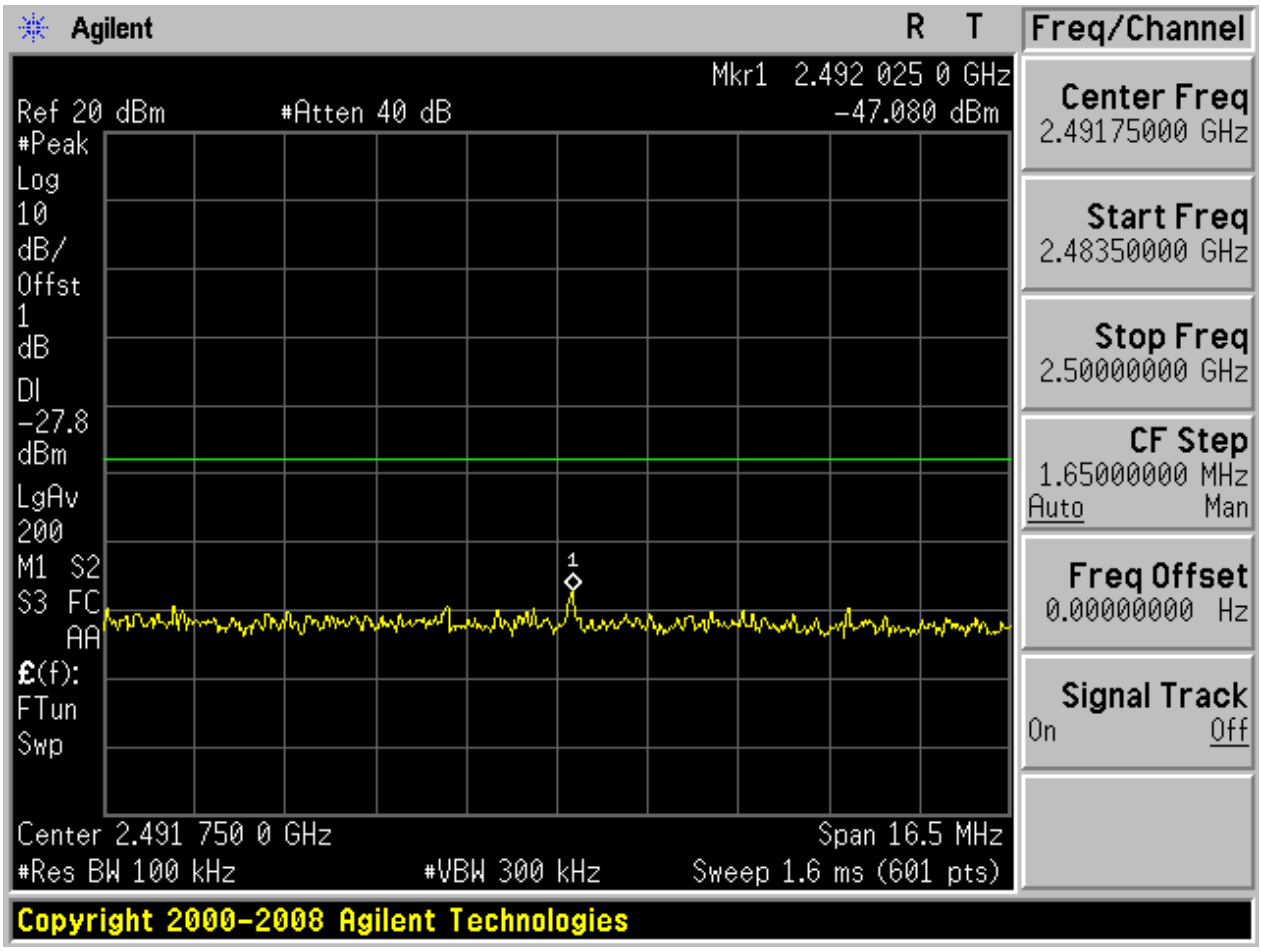
Puw:

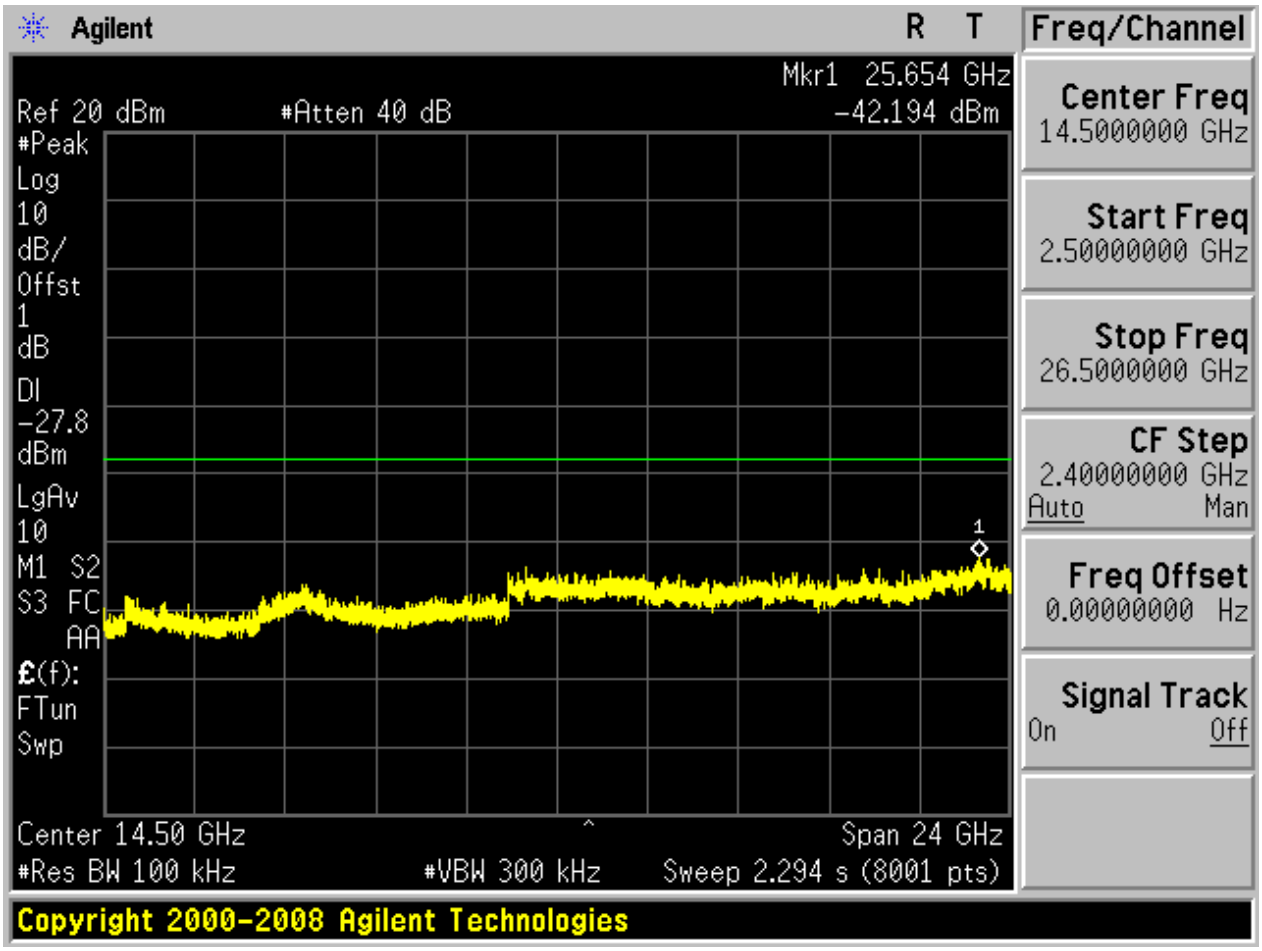






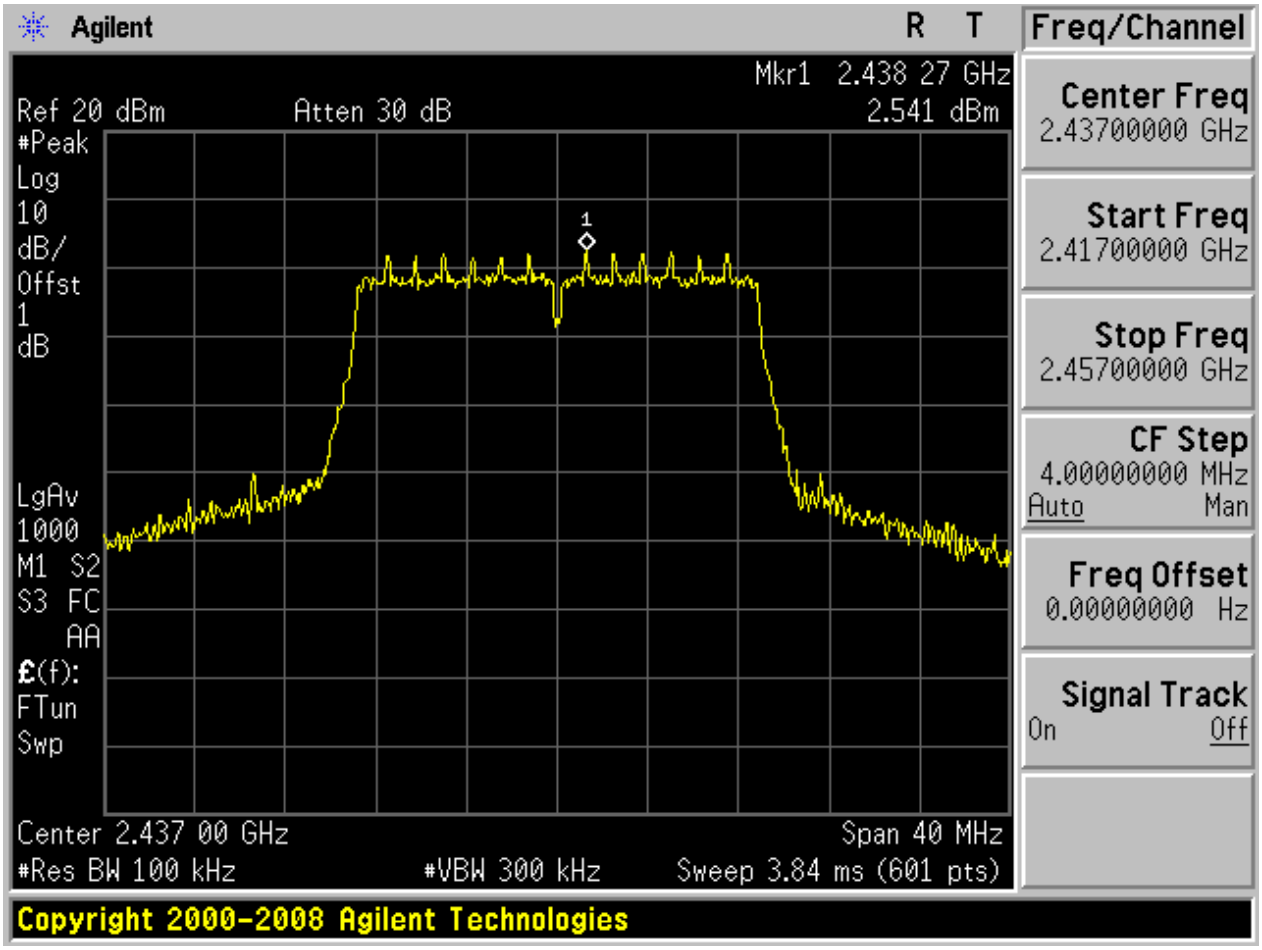






2.8 11N20_M@Ant 1

Pref:



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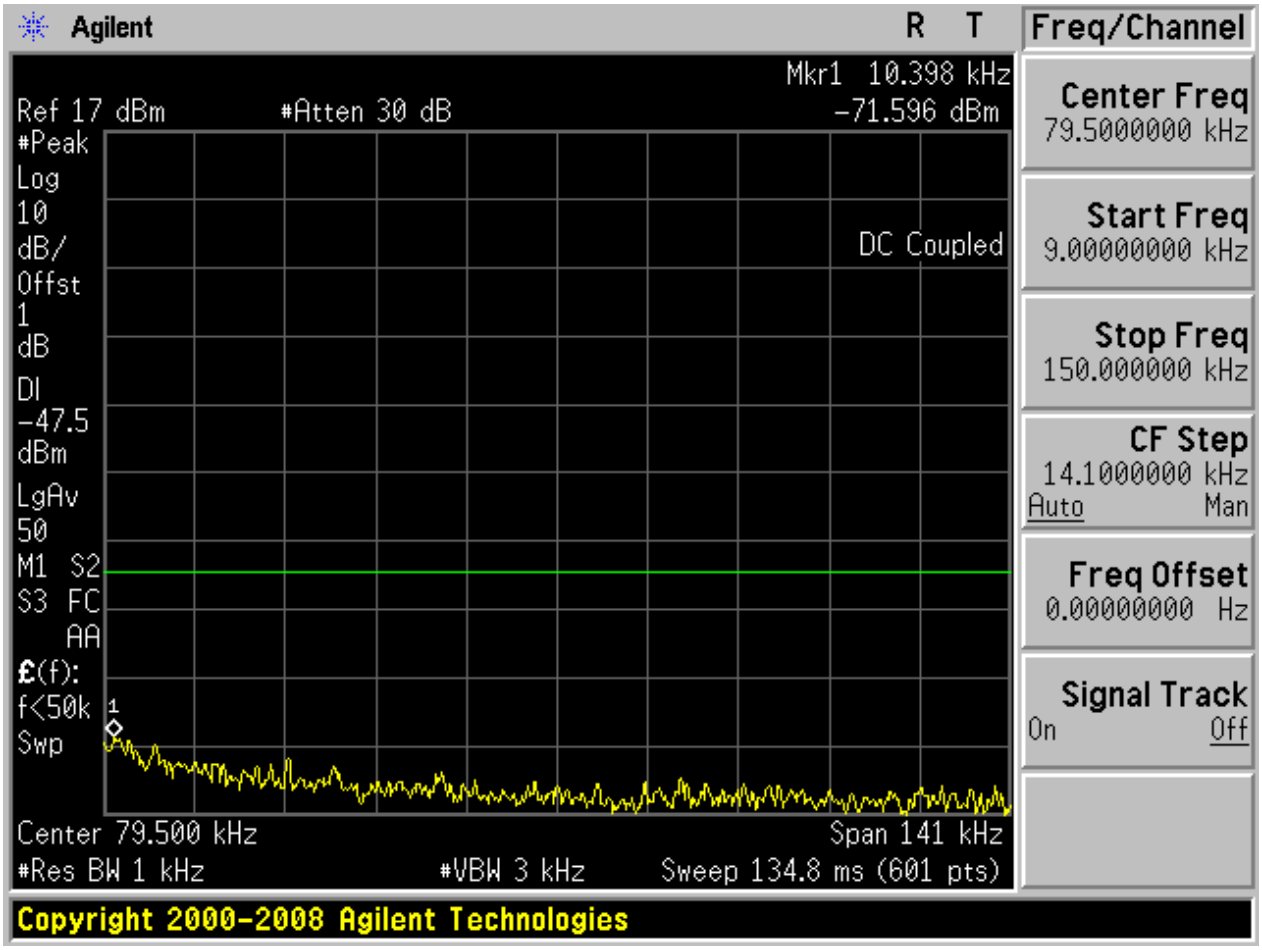
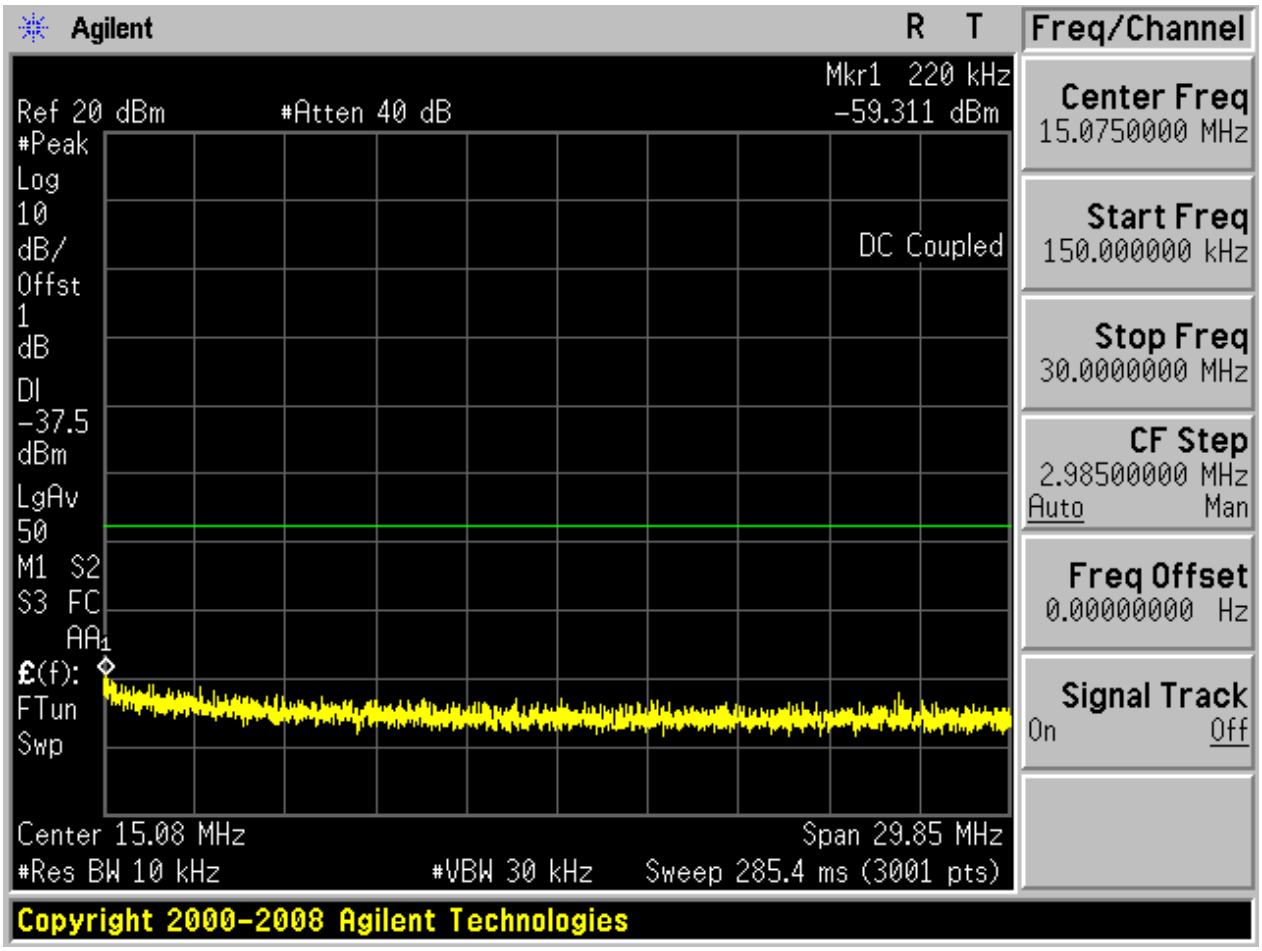
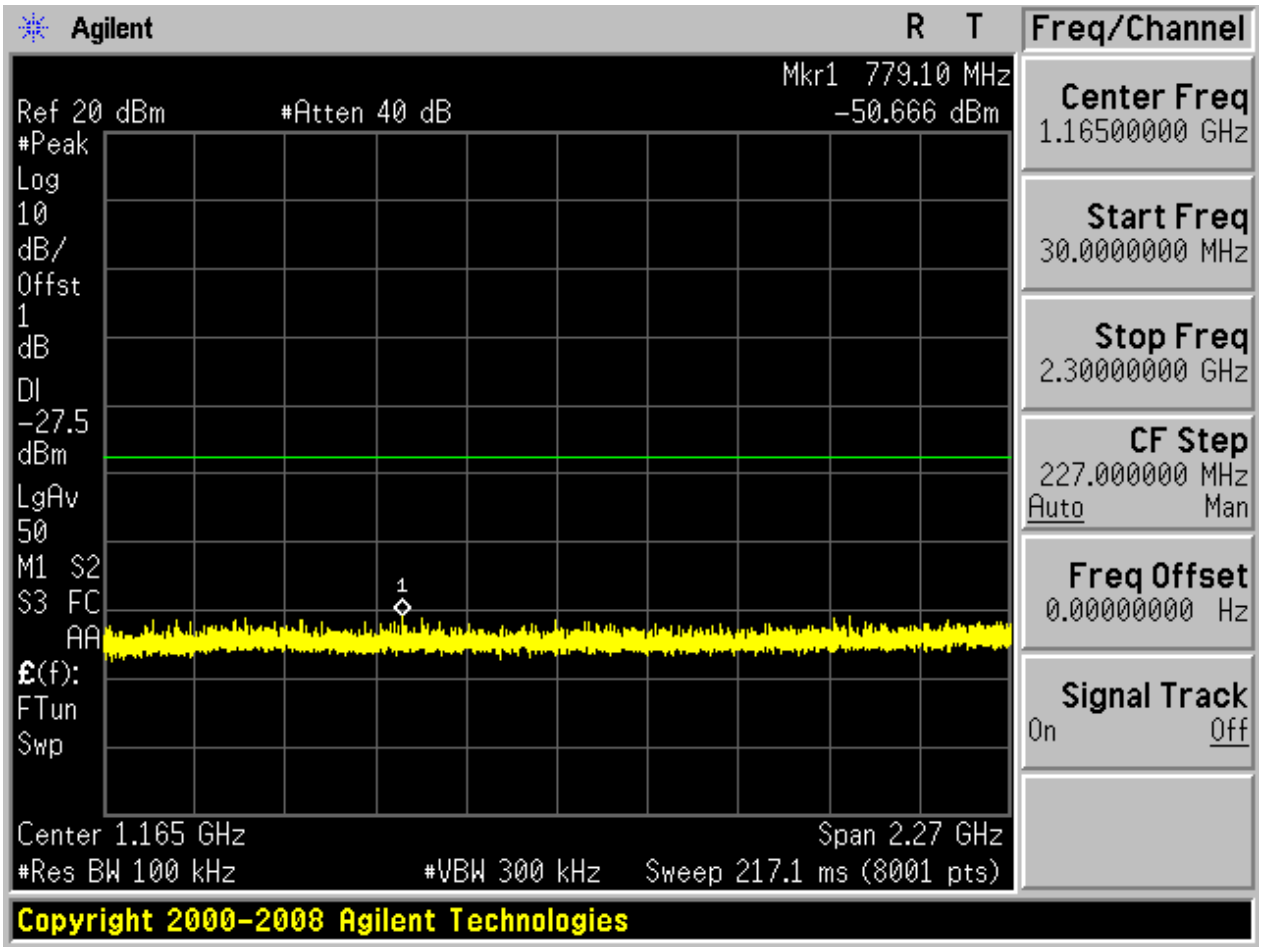
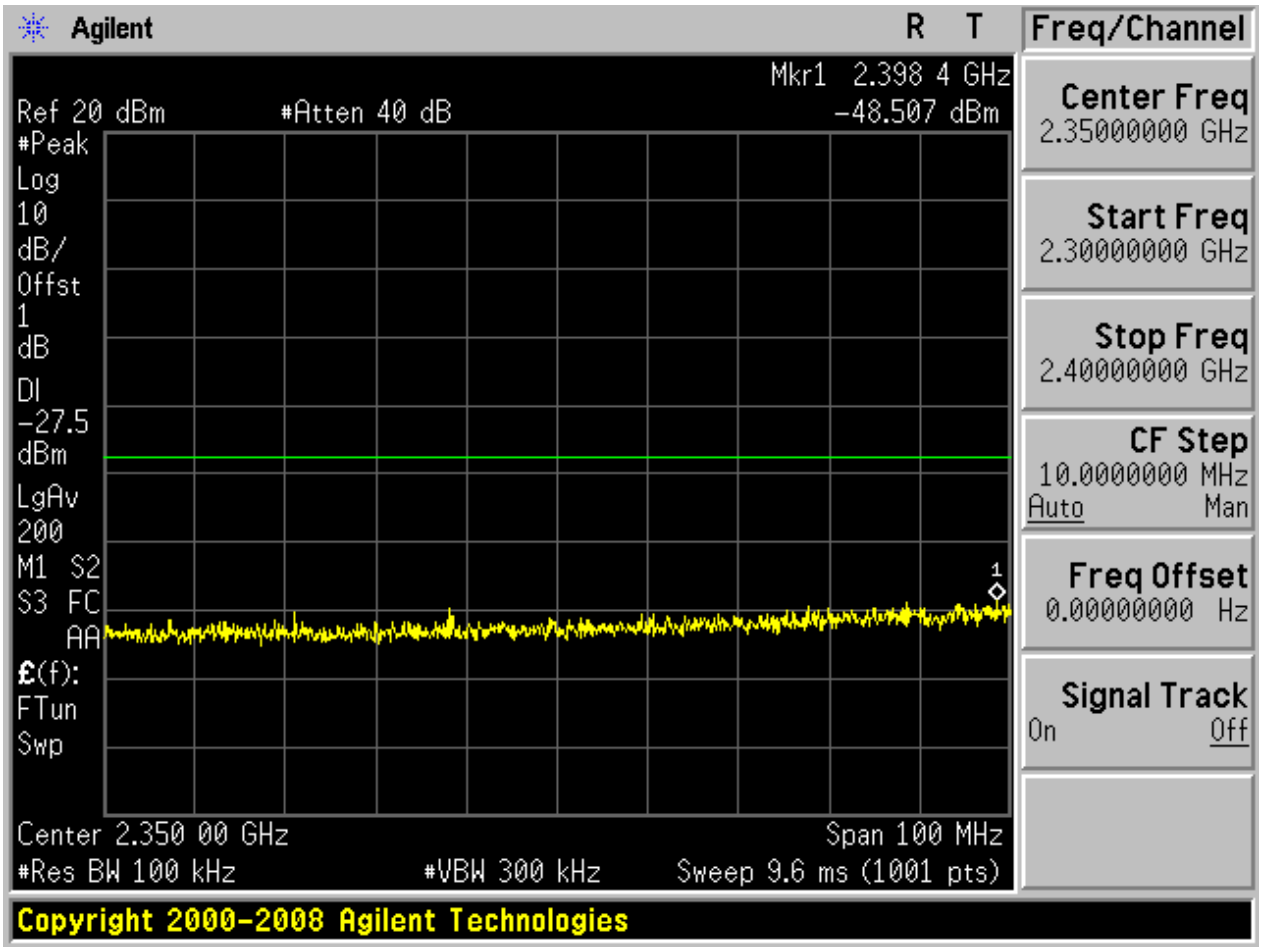
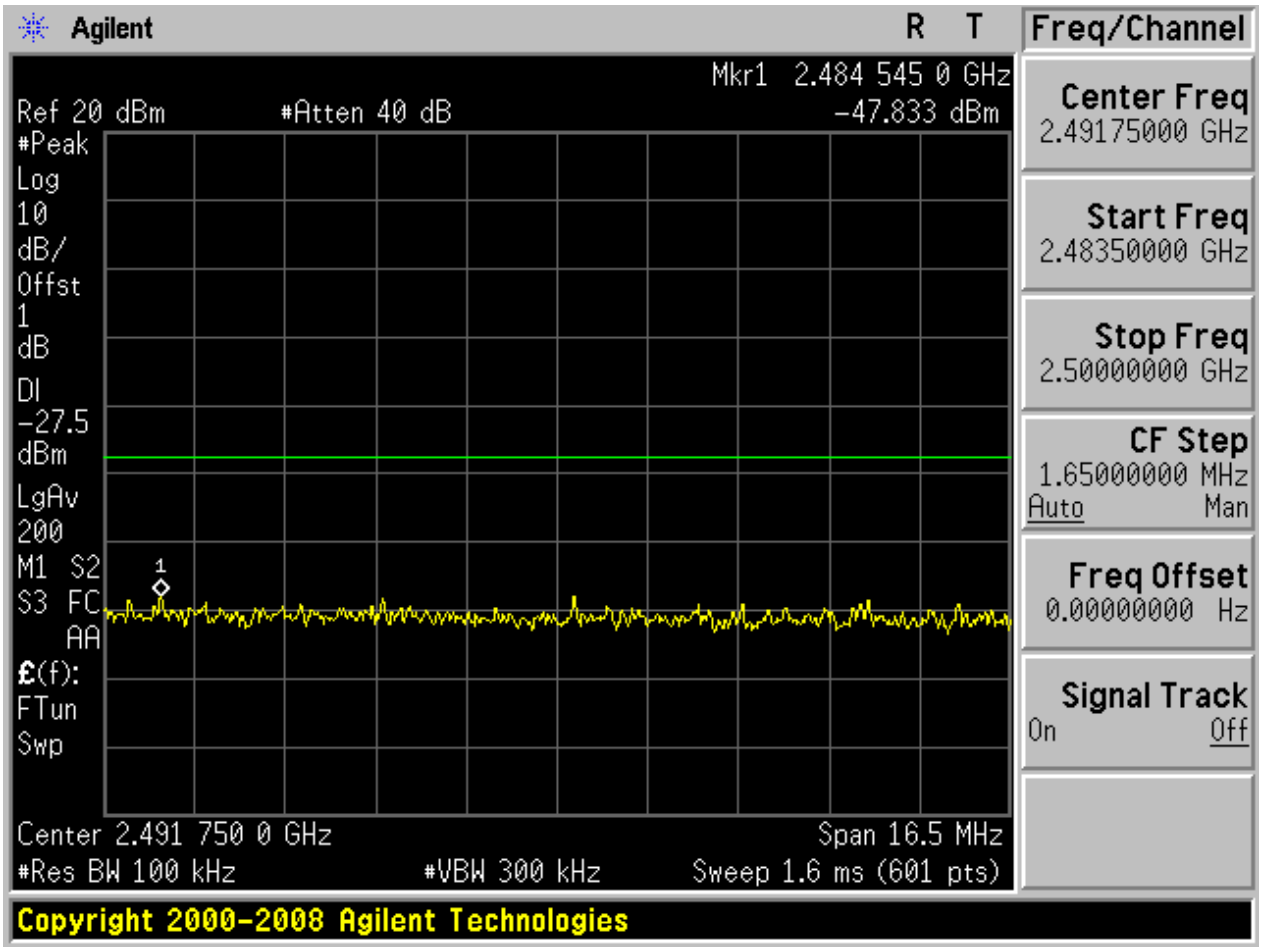
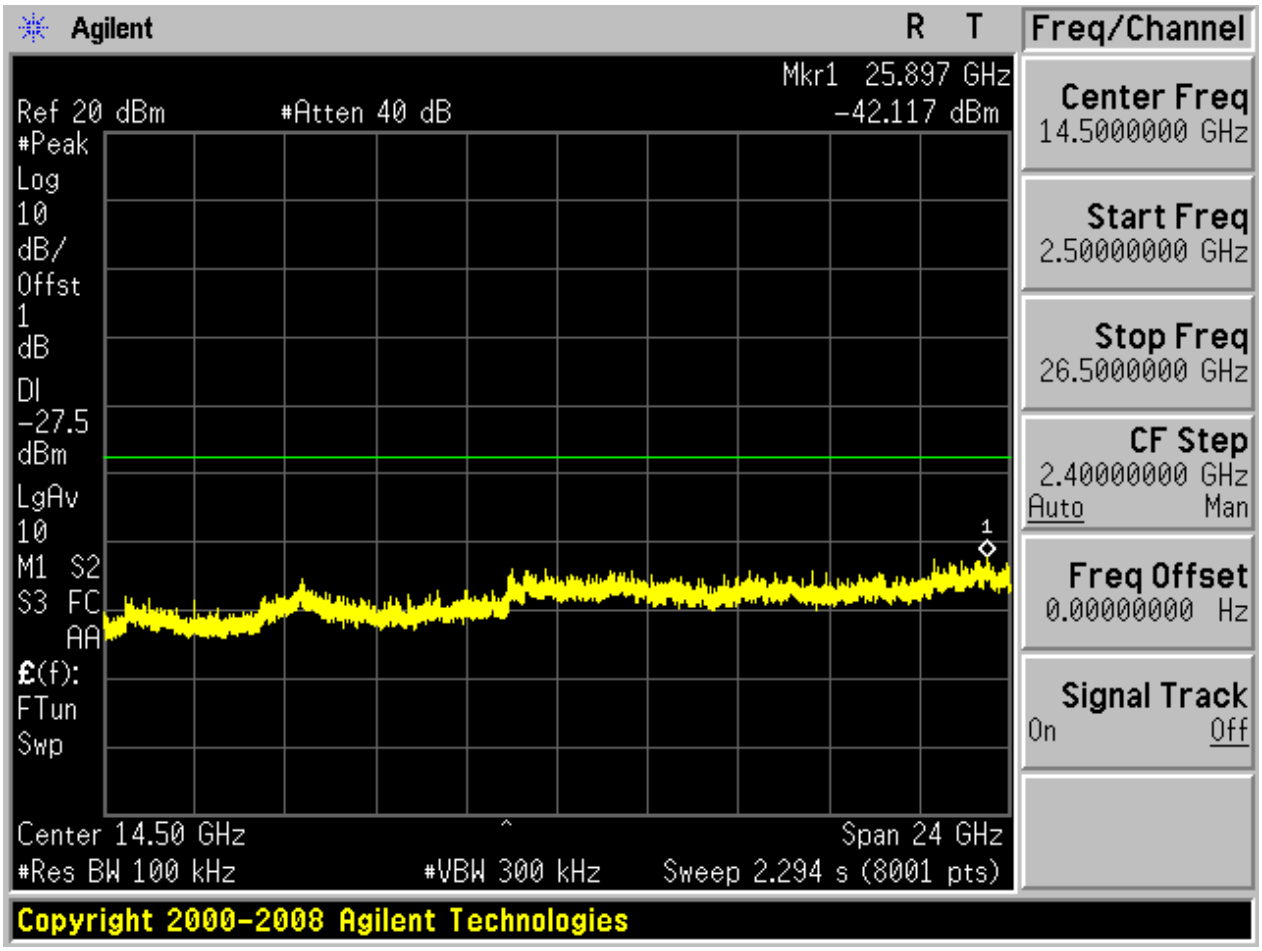






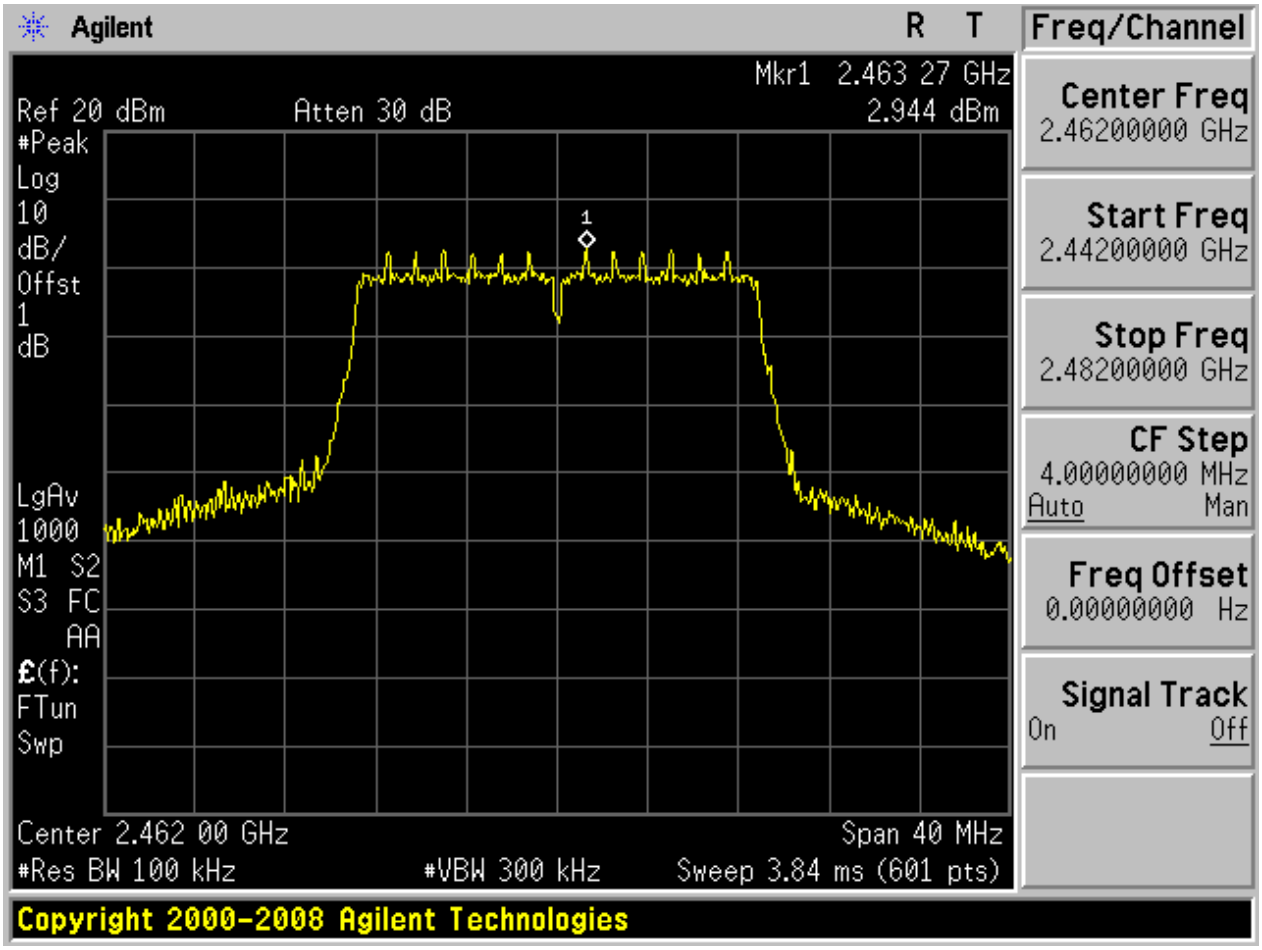






2.9 11N20_H@Ant 1

Pref:



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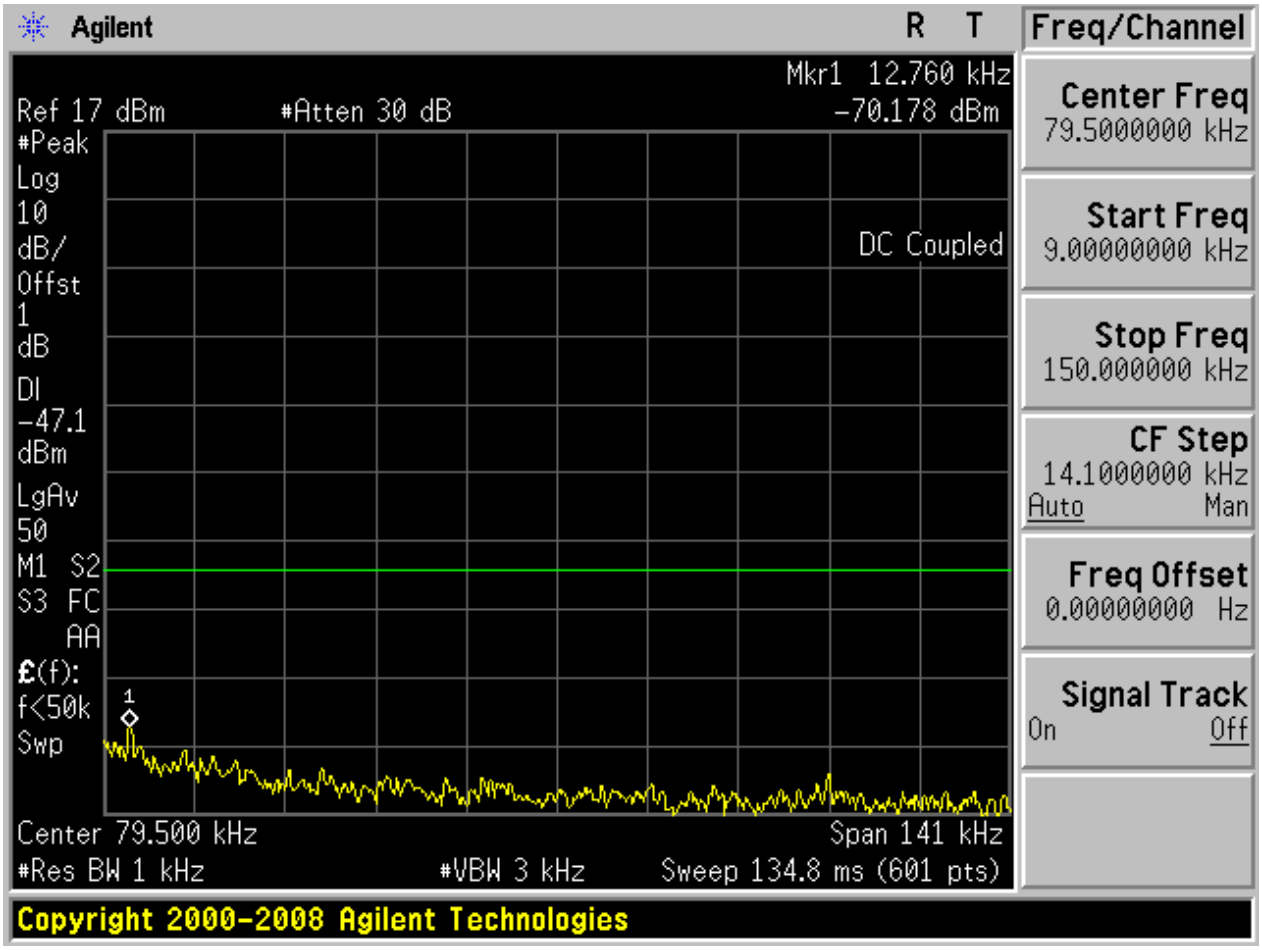
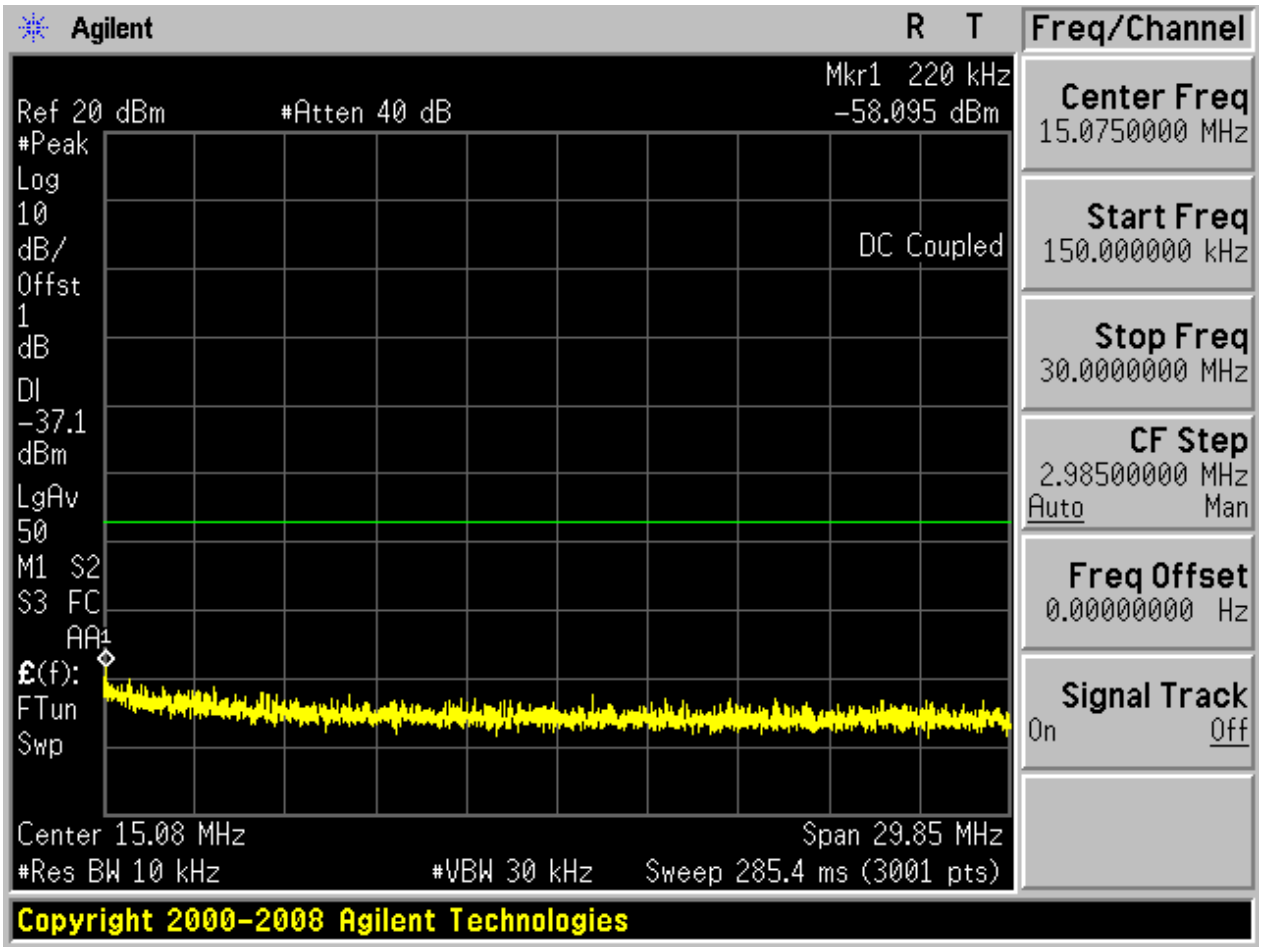
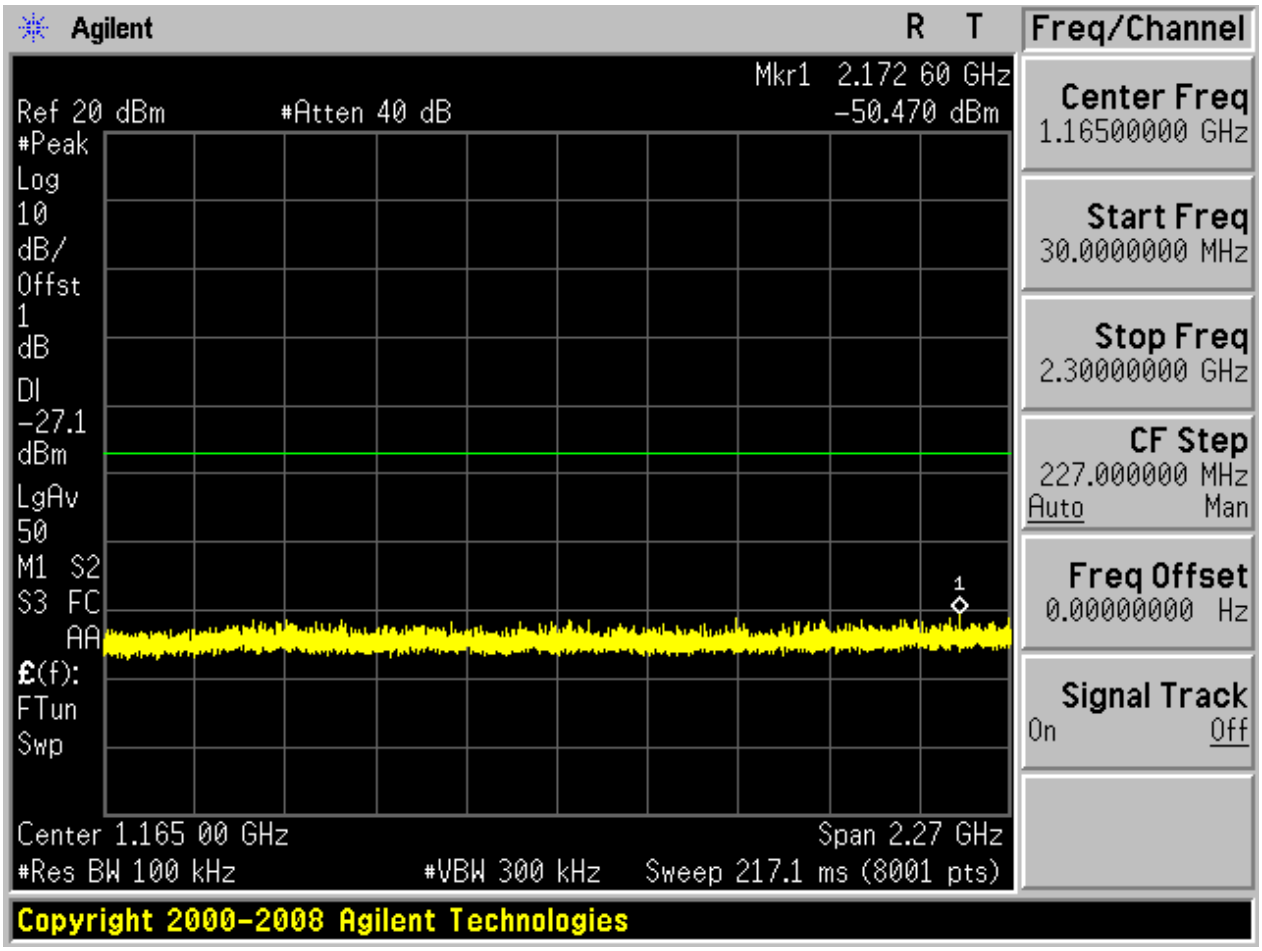
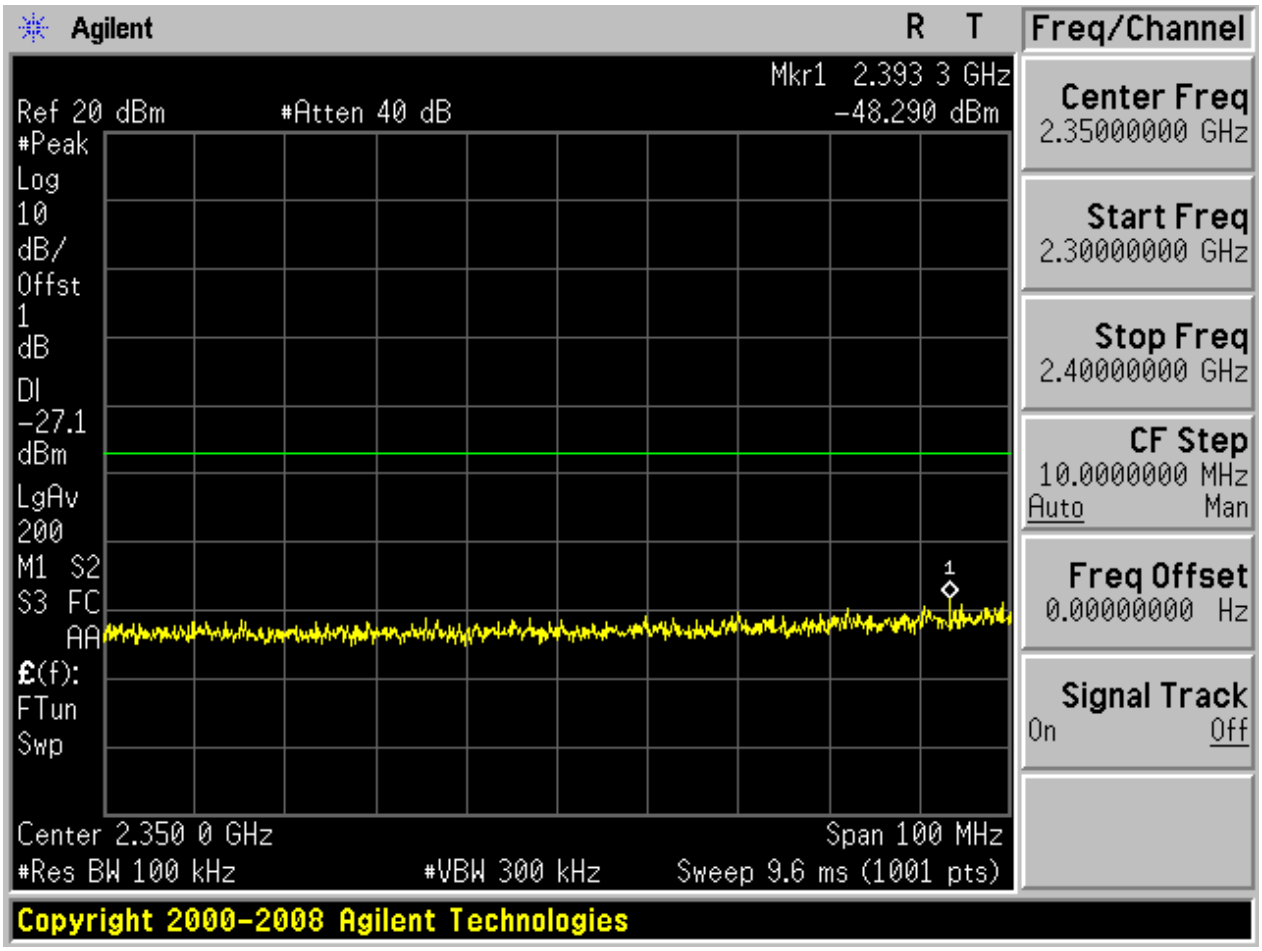
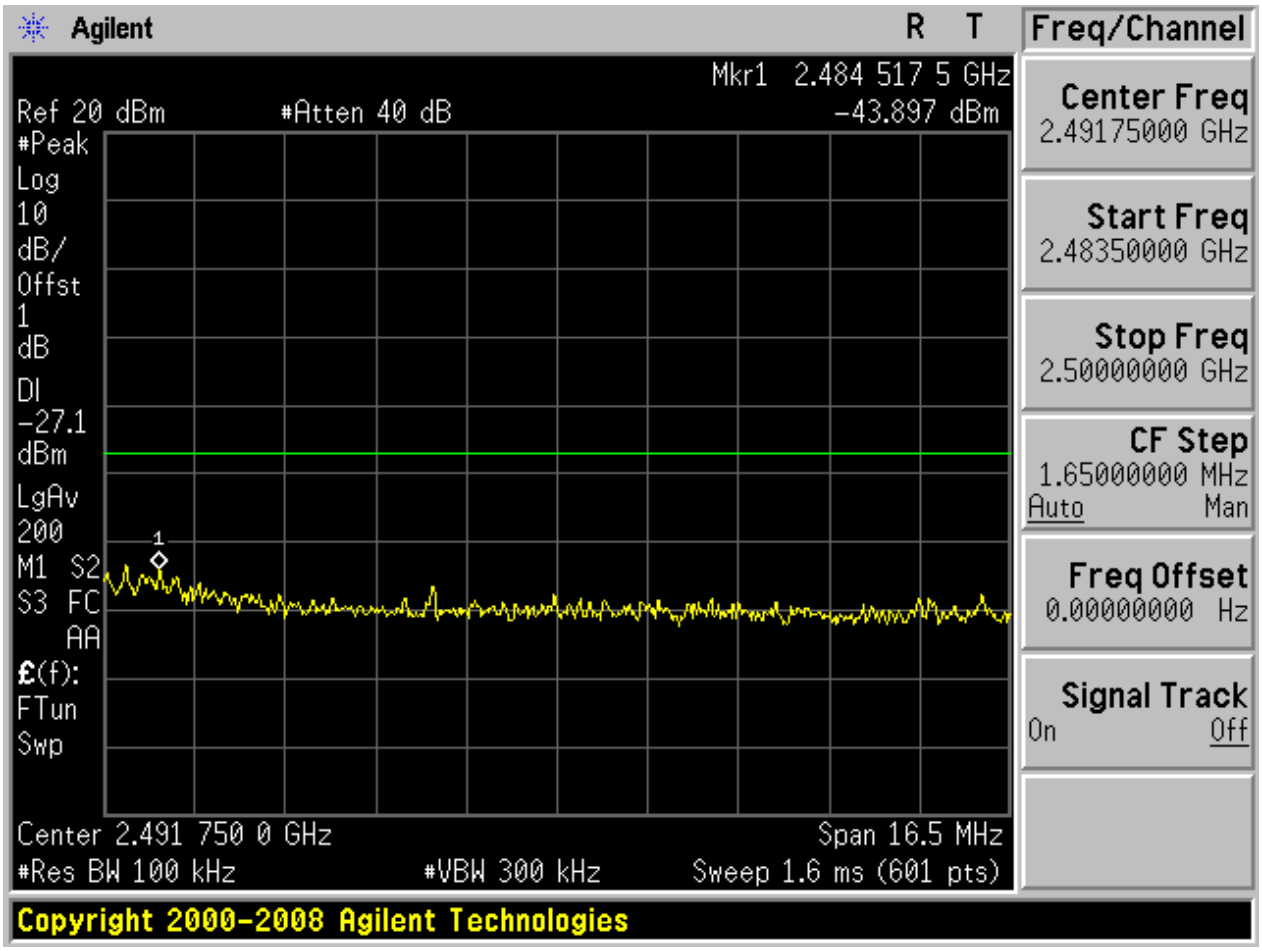
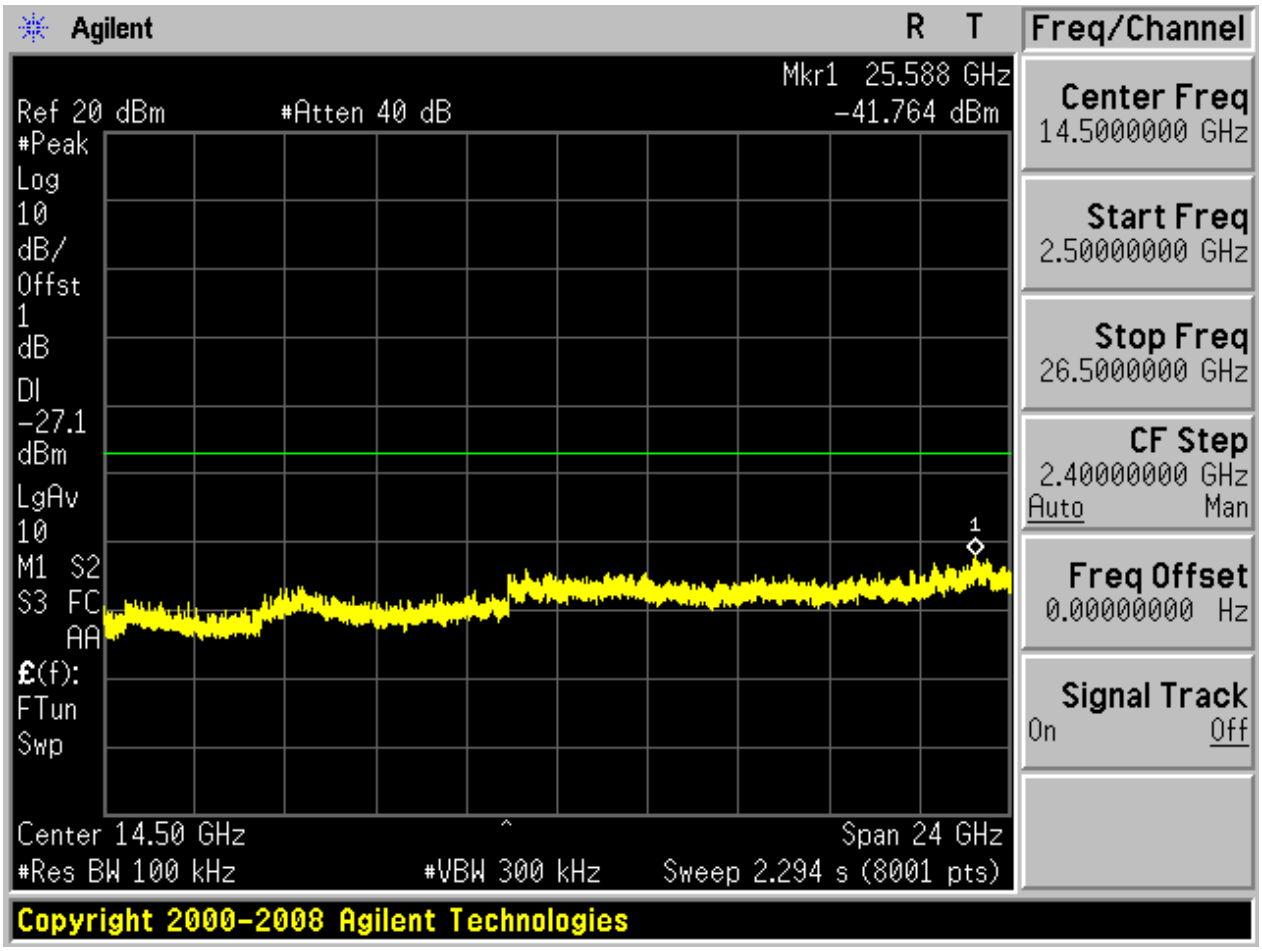






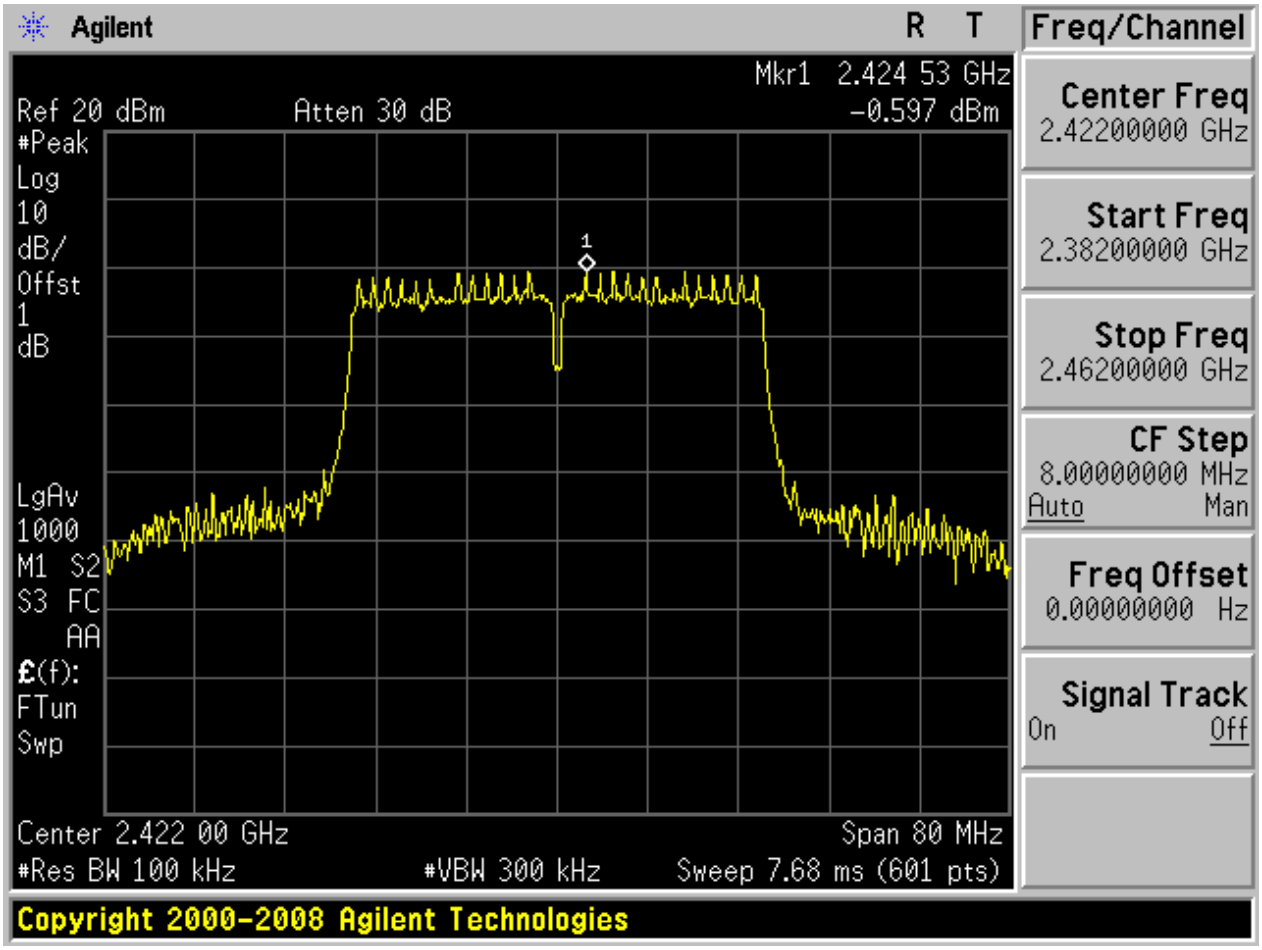






2.10 11N40_L@Ant 1

Pref:



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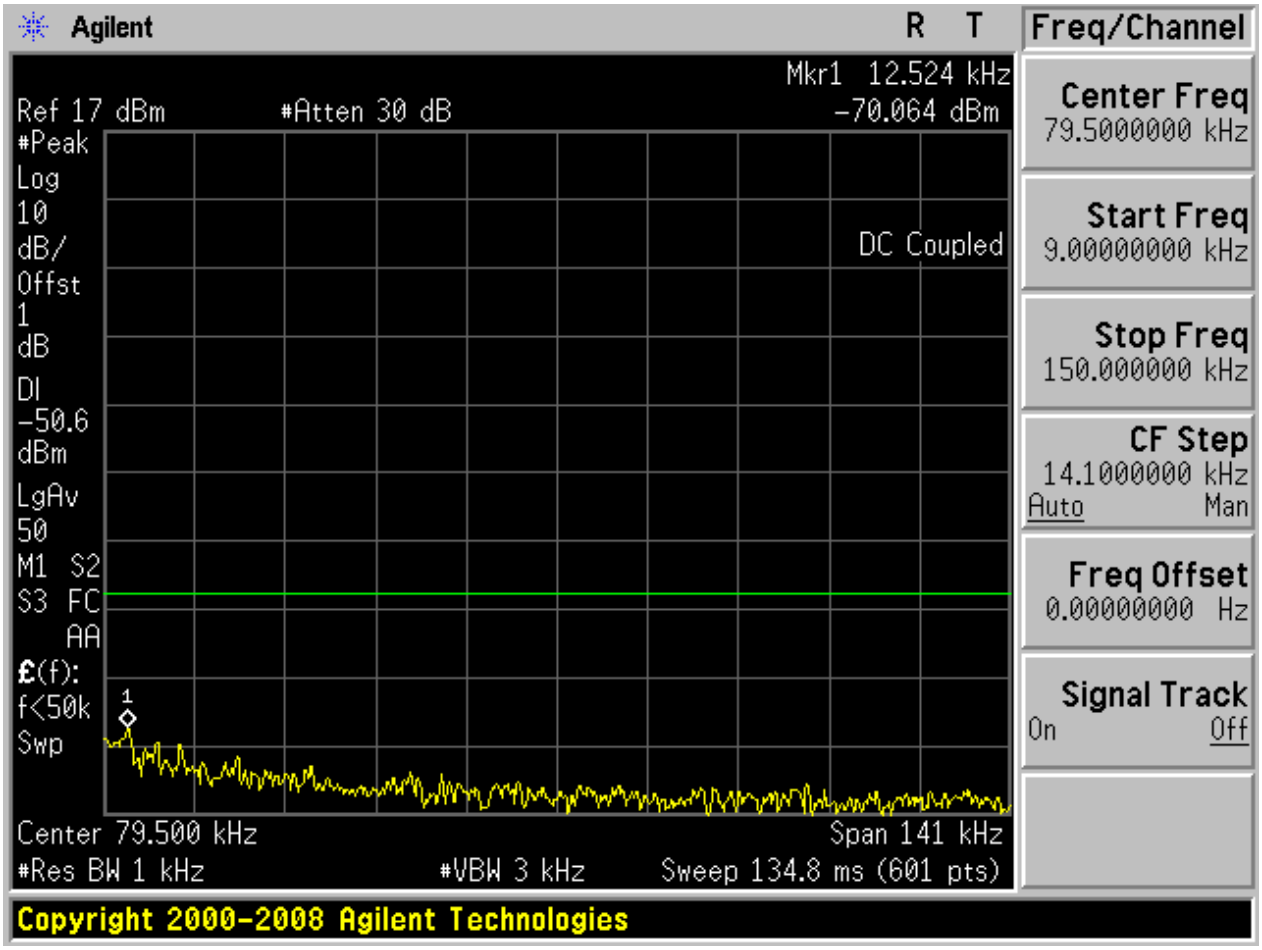
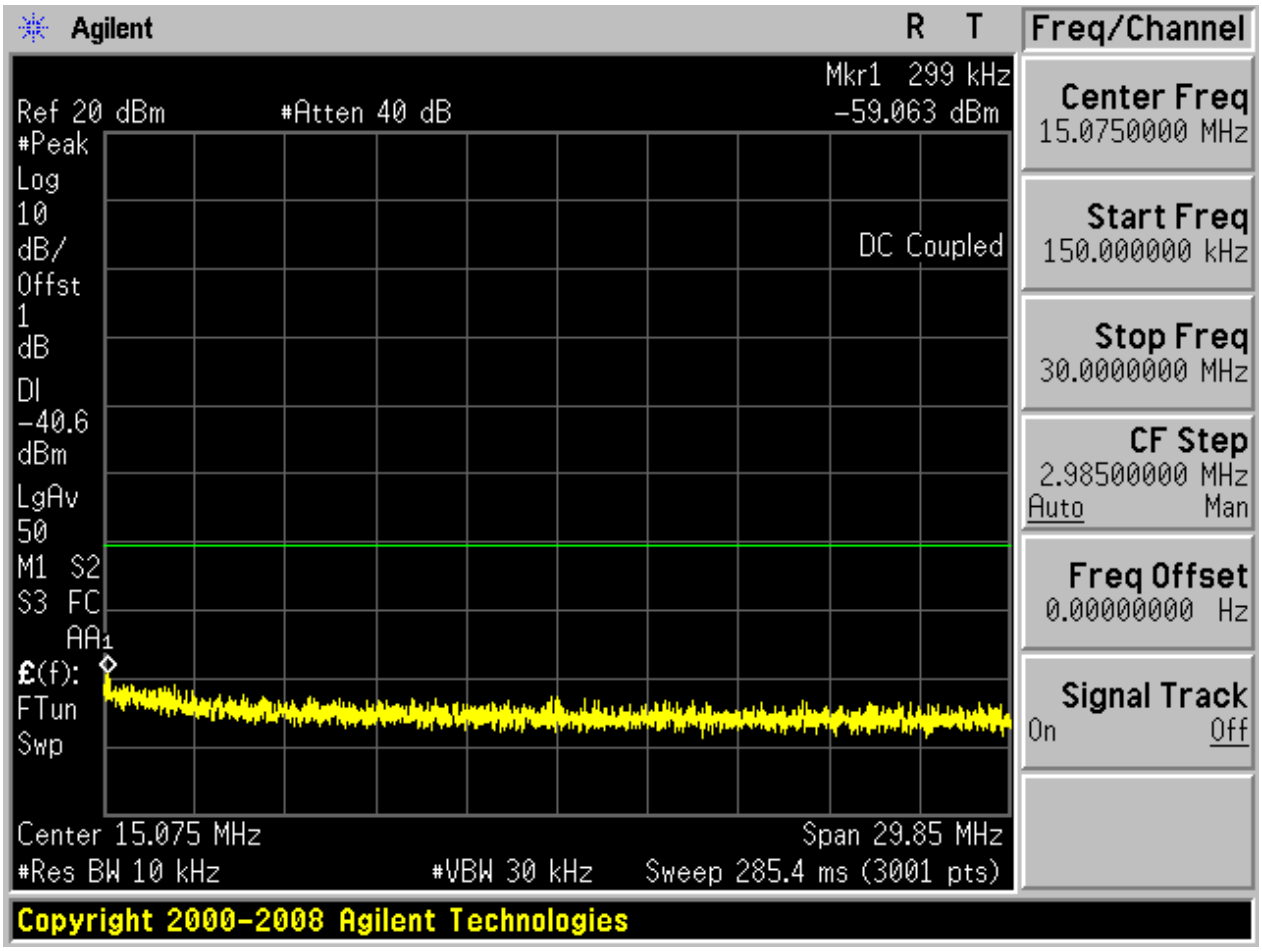
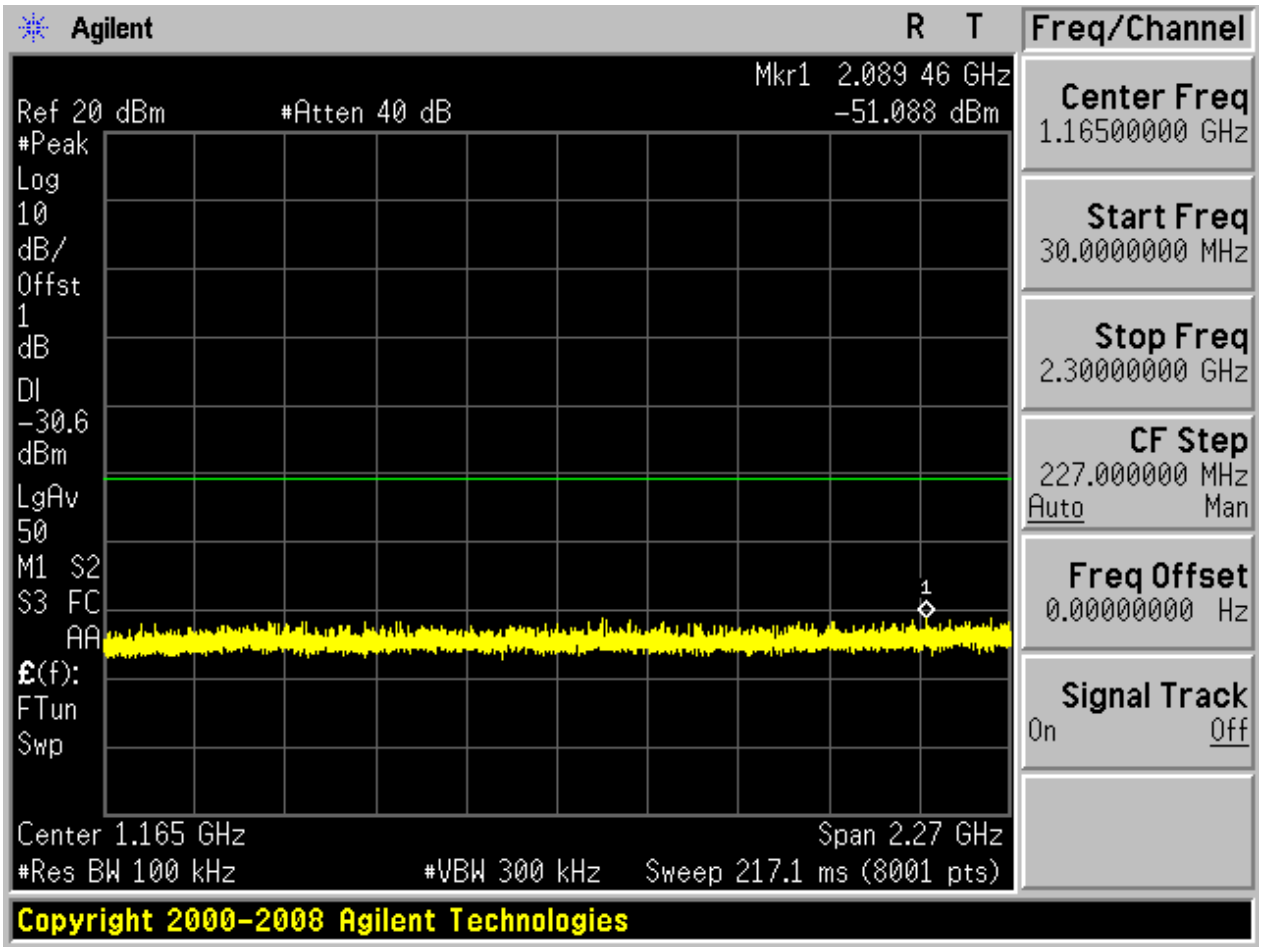
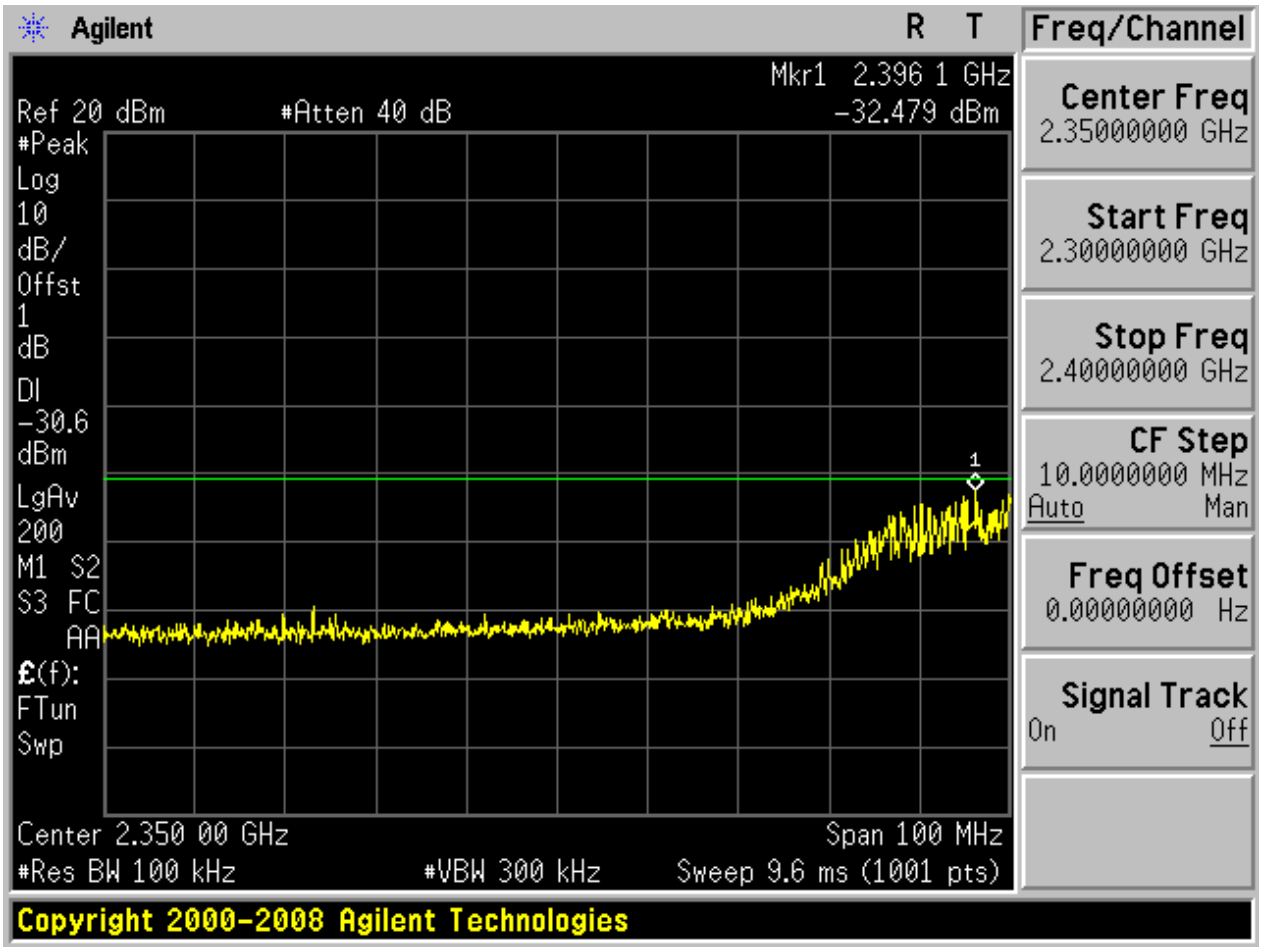
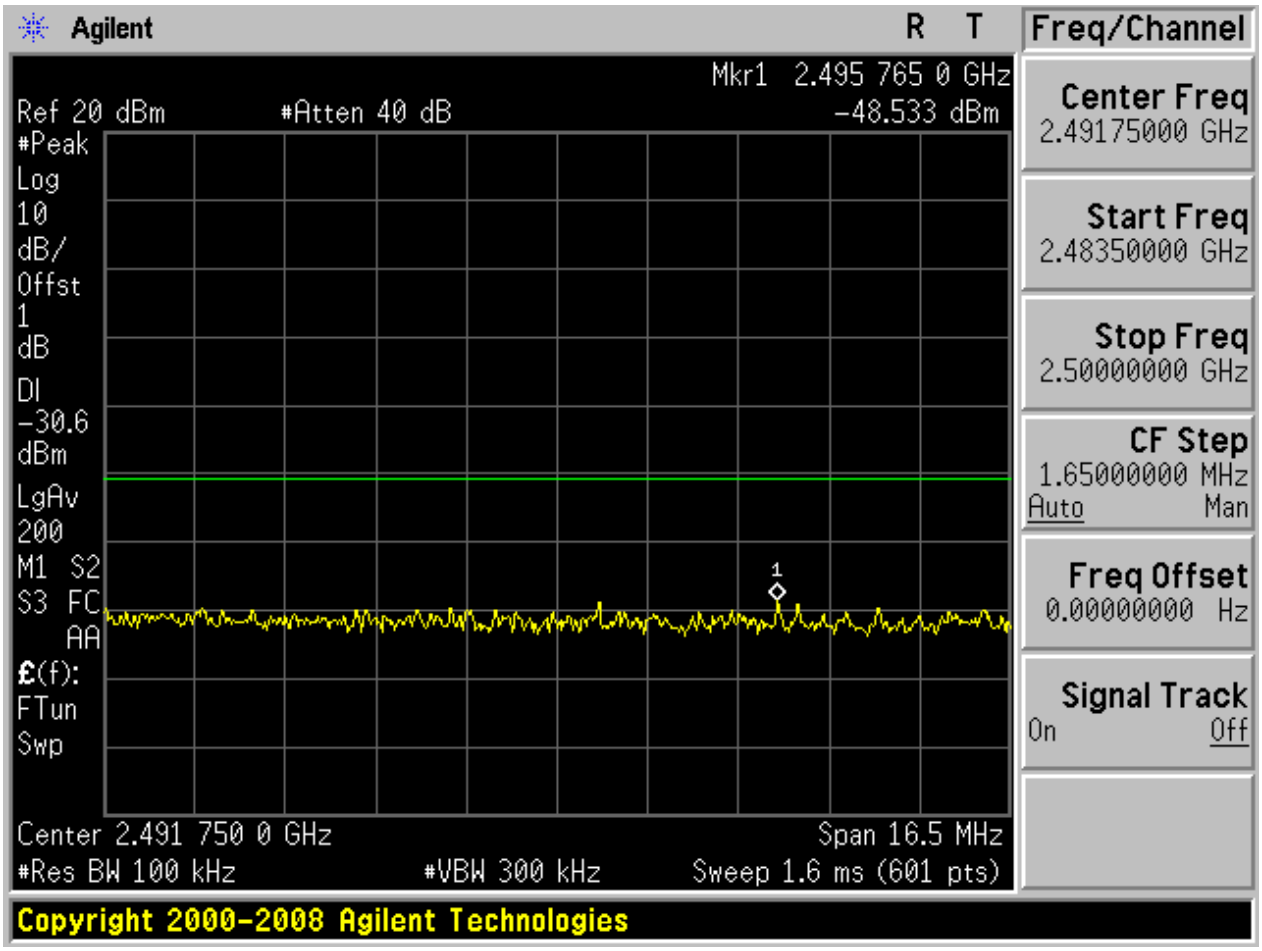
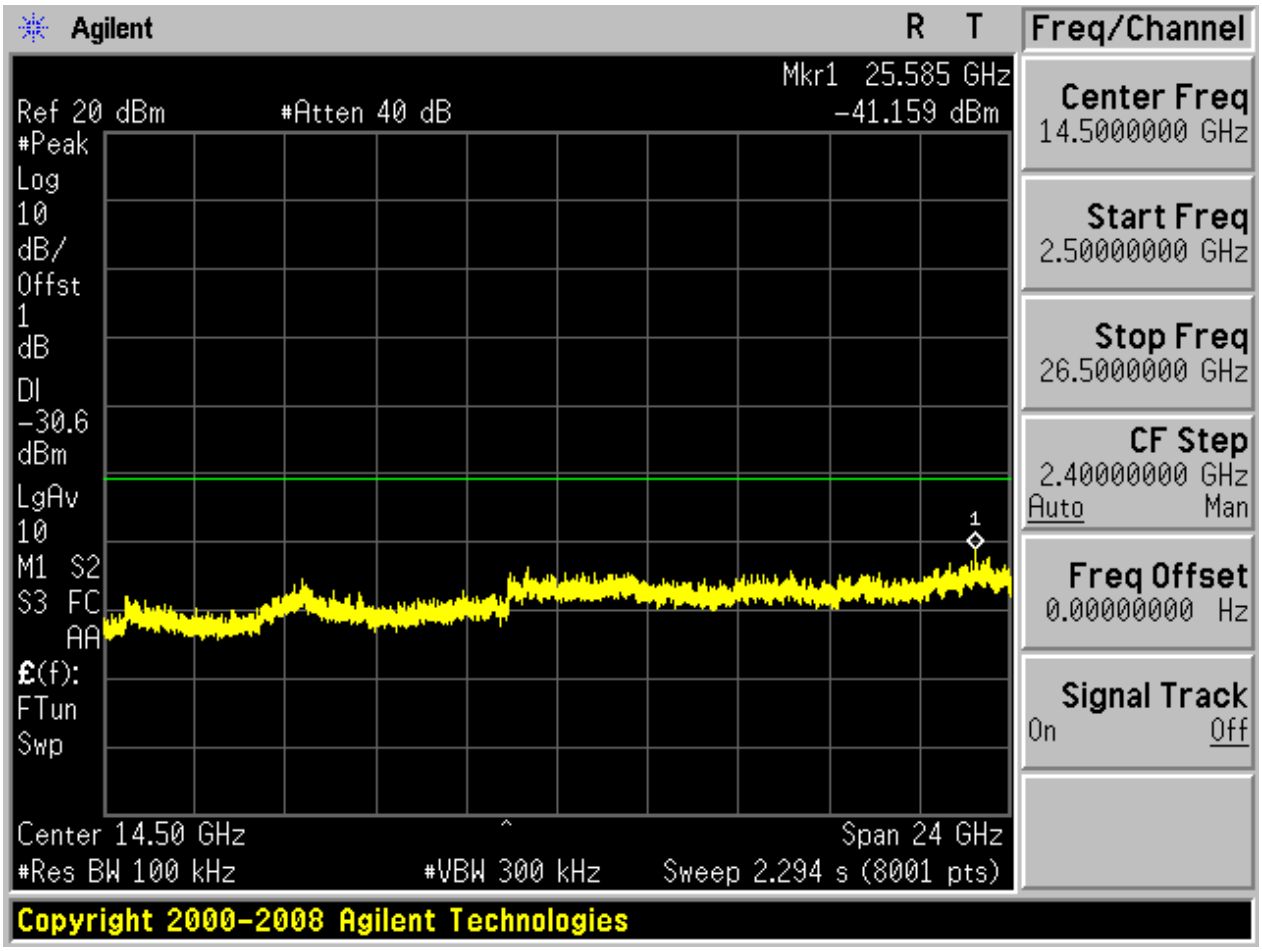






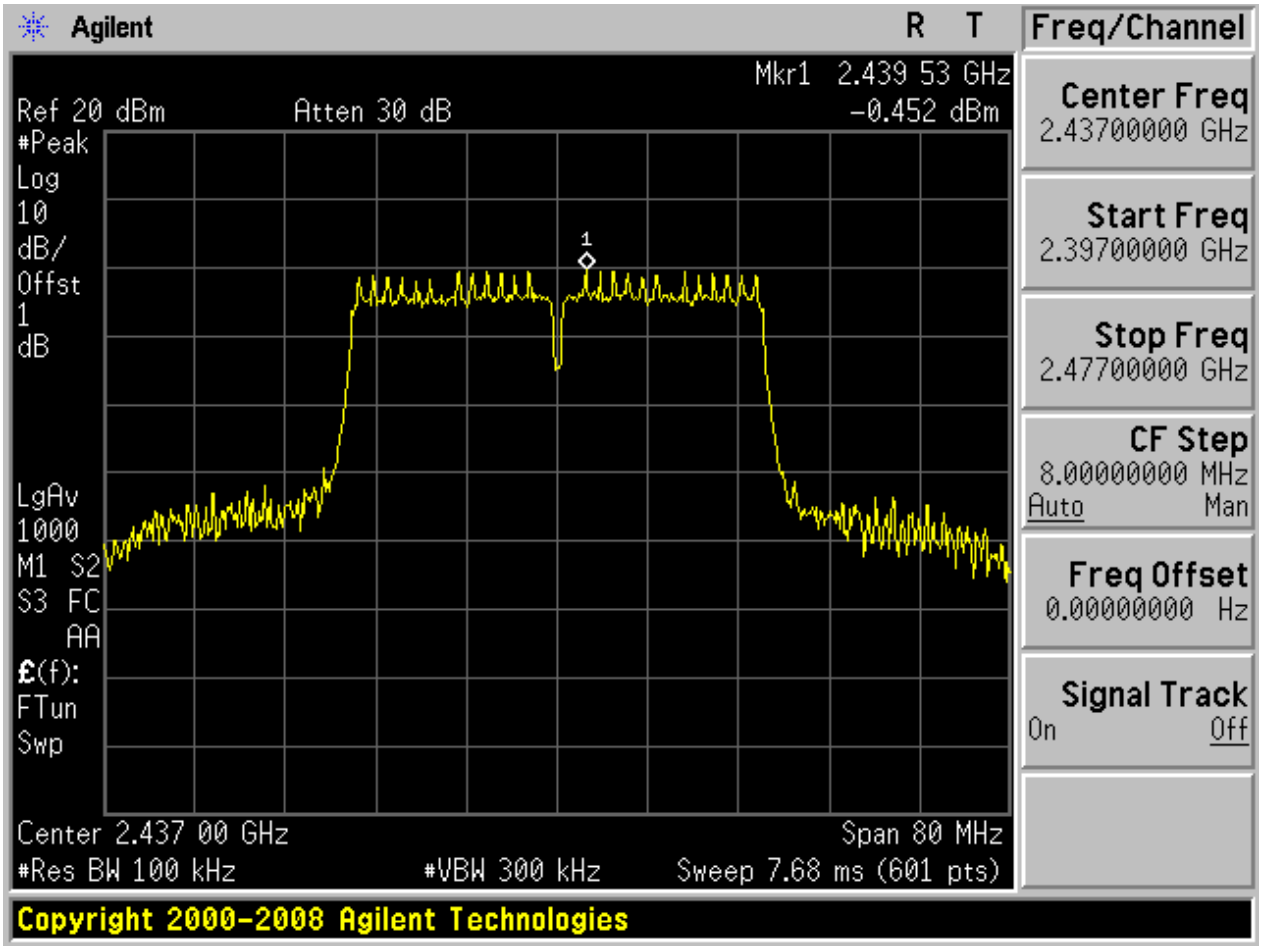






2.11 11N40_M@Ant 1

Pref:



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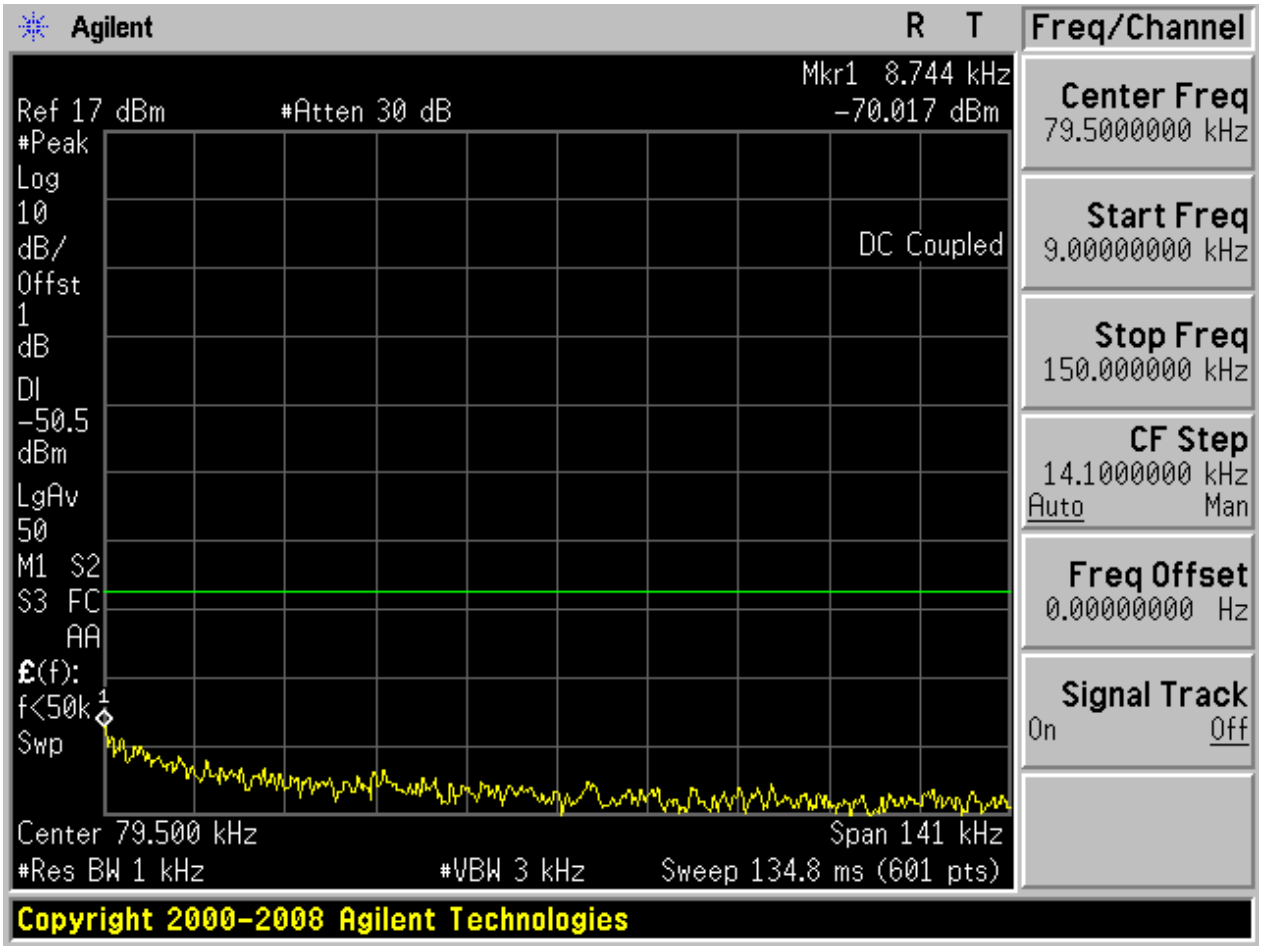
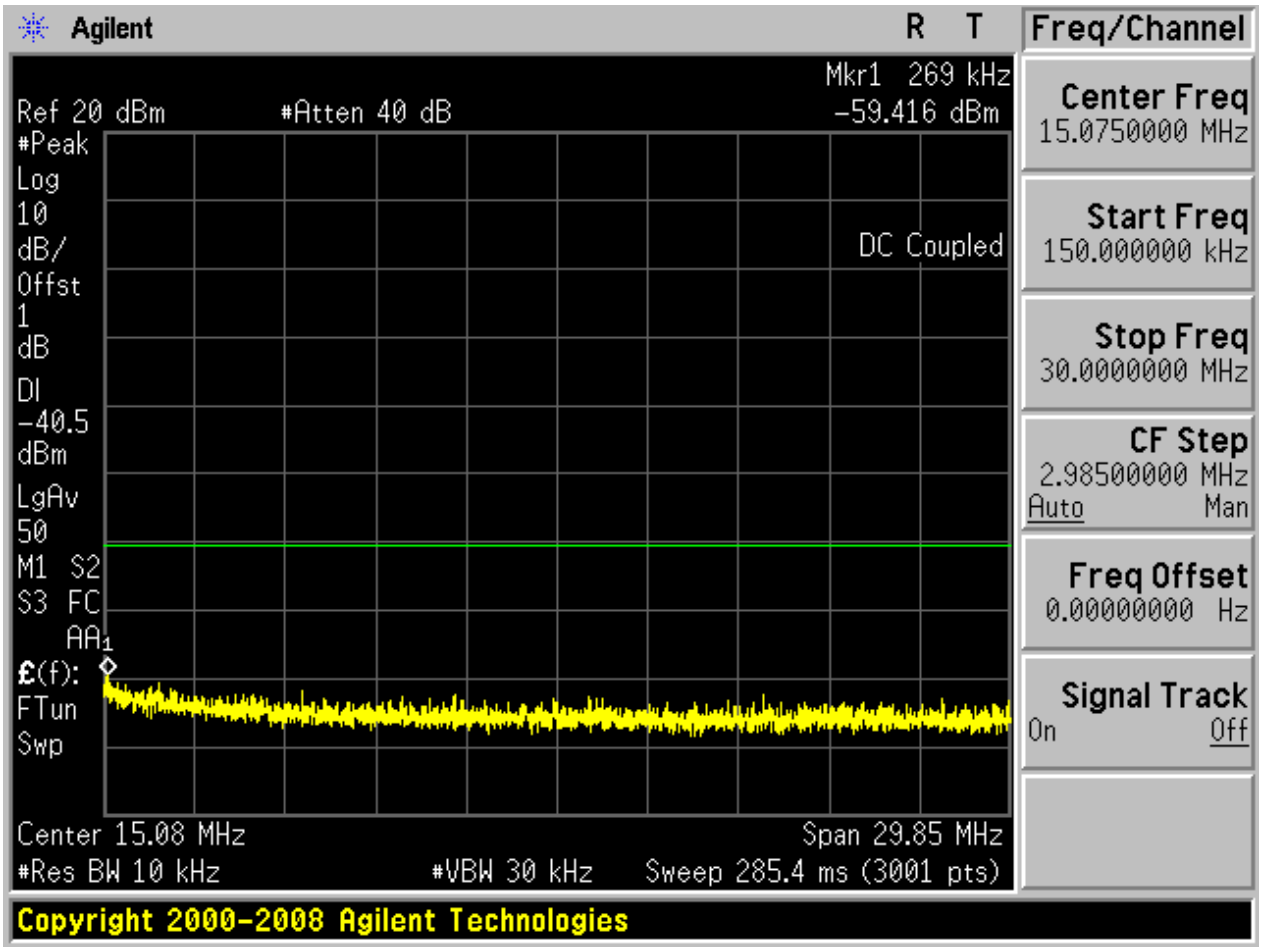
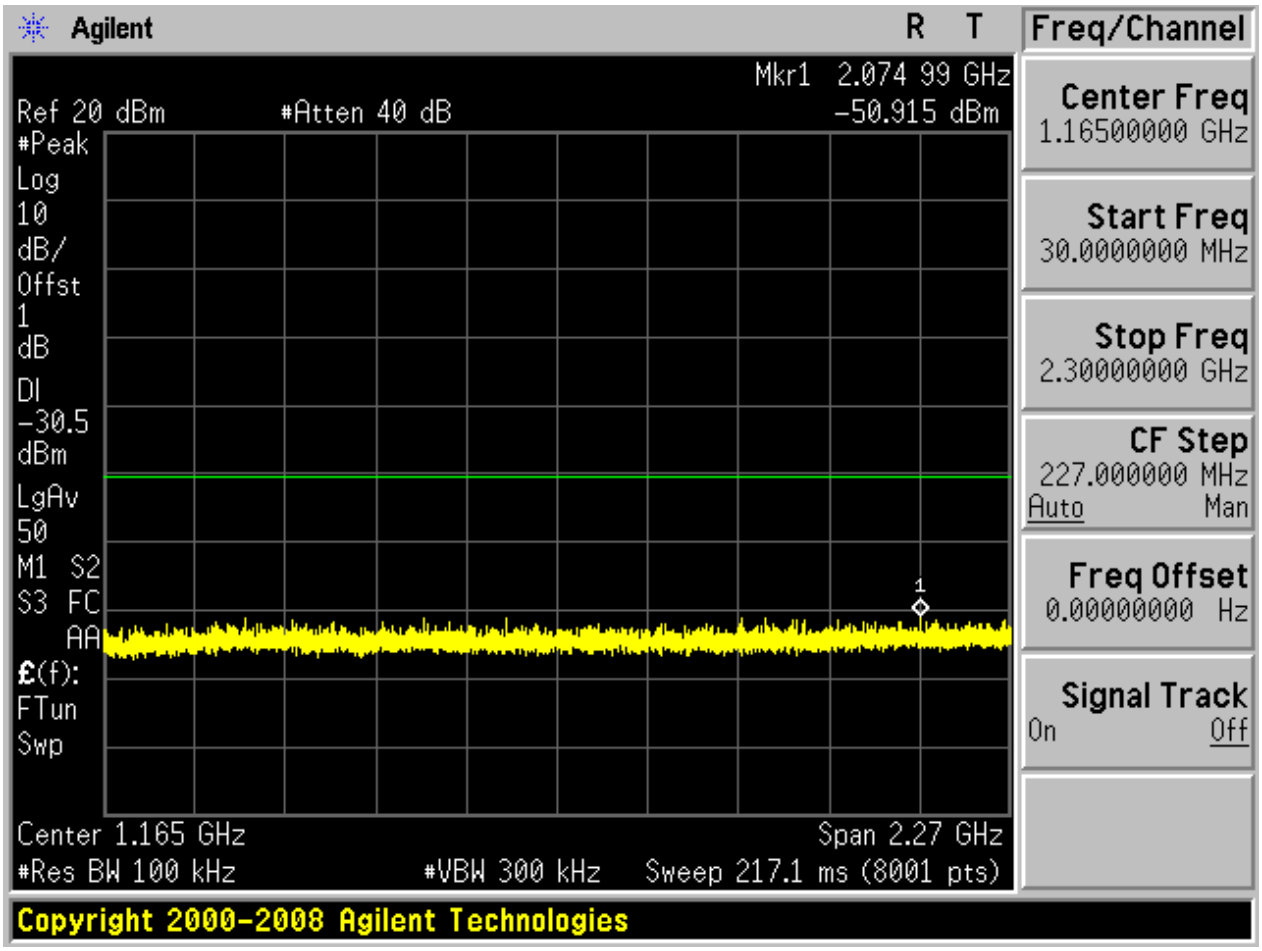
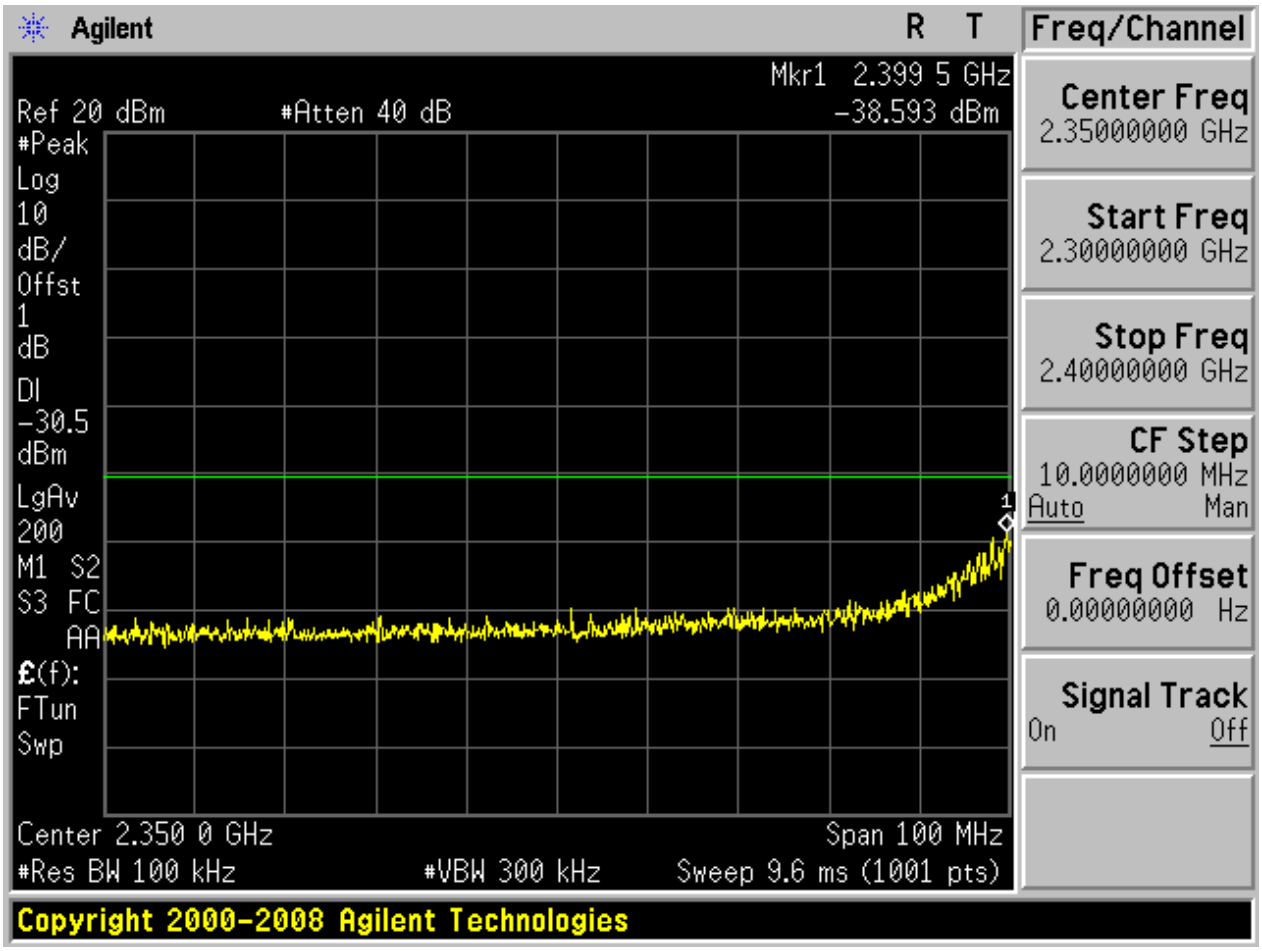
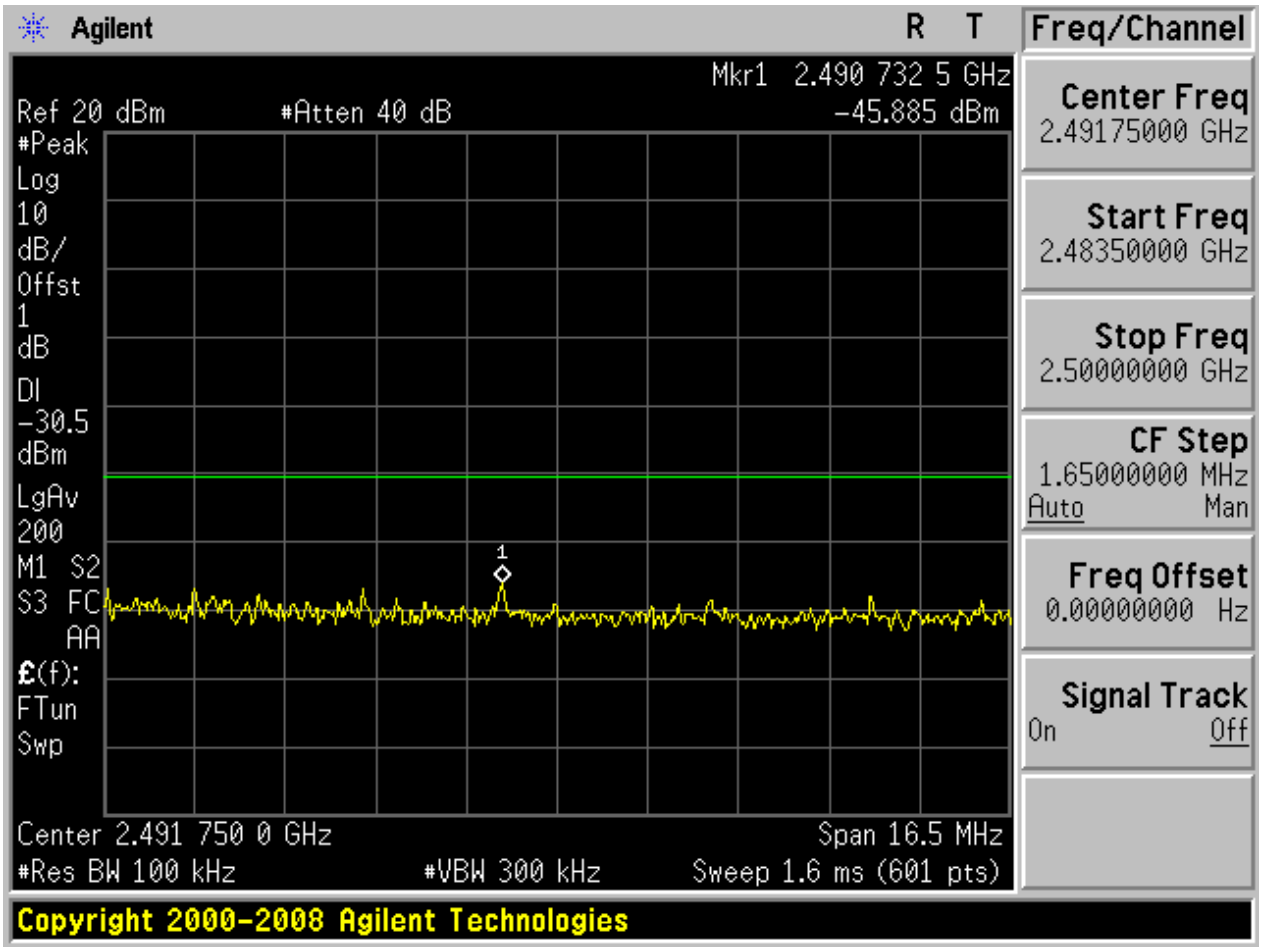
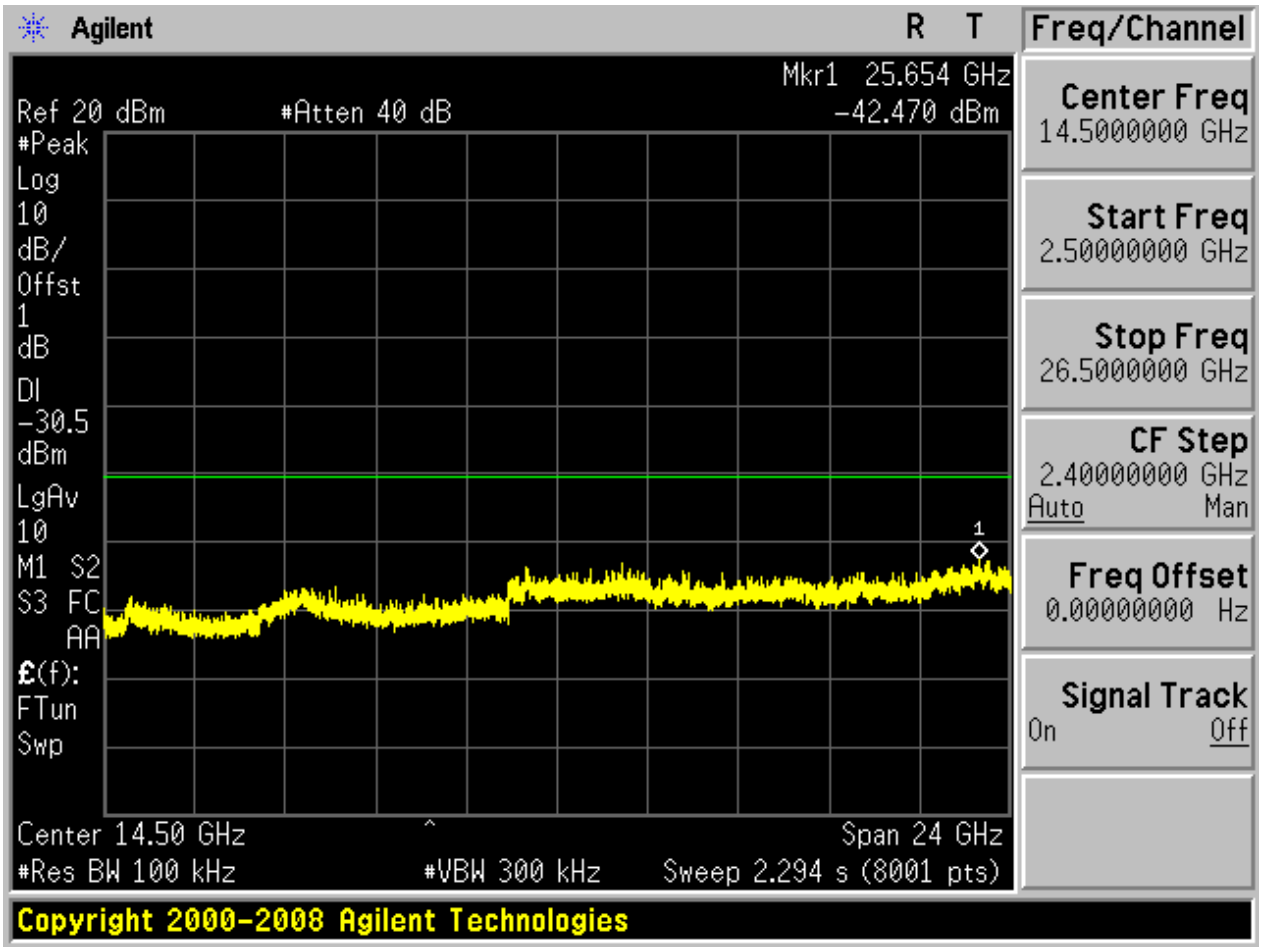






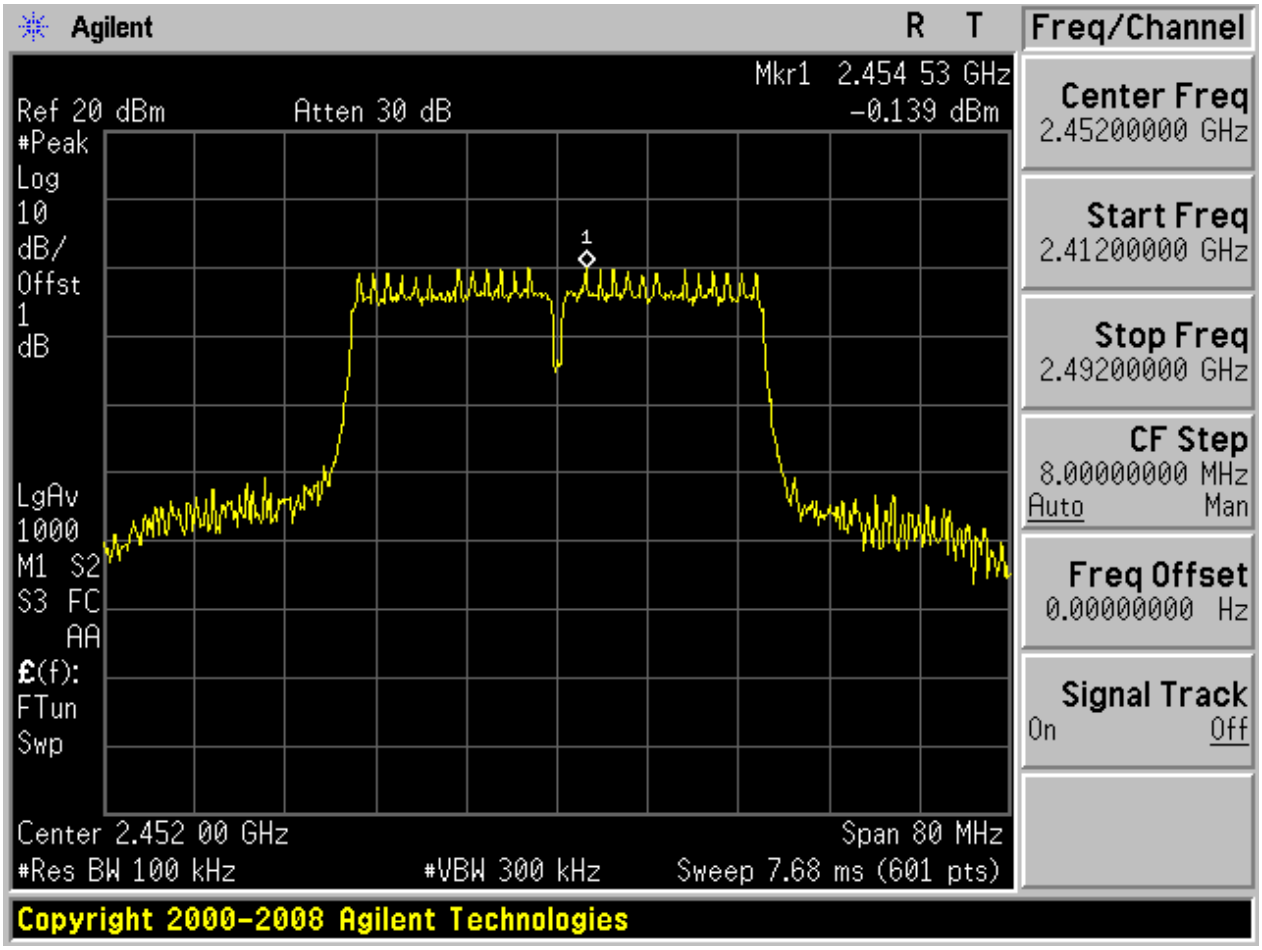






2.12 11N40_H@Ant 1

Pref:



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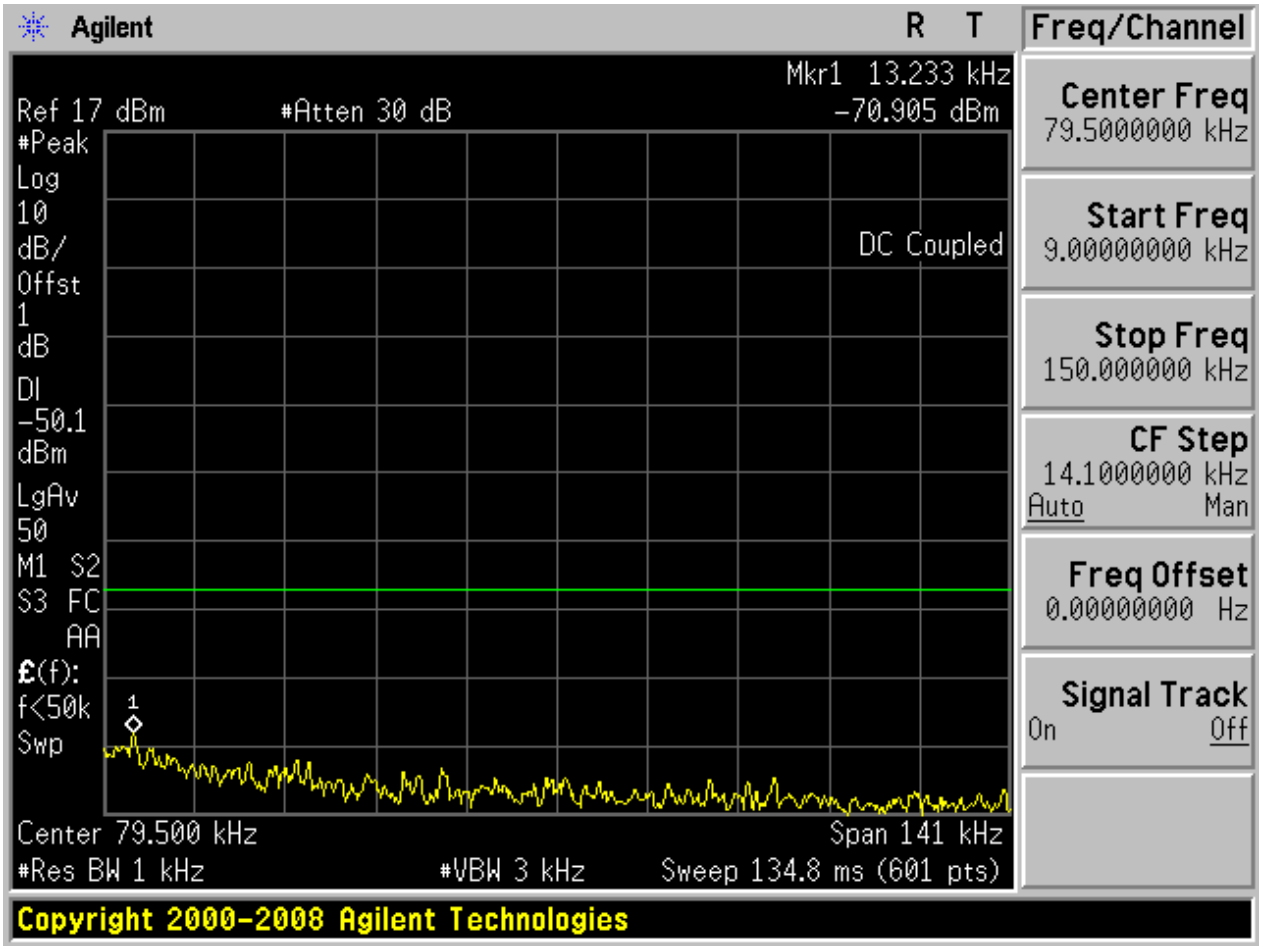
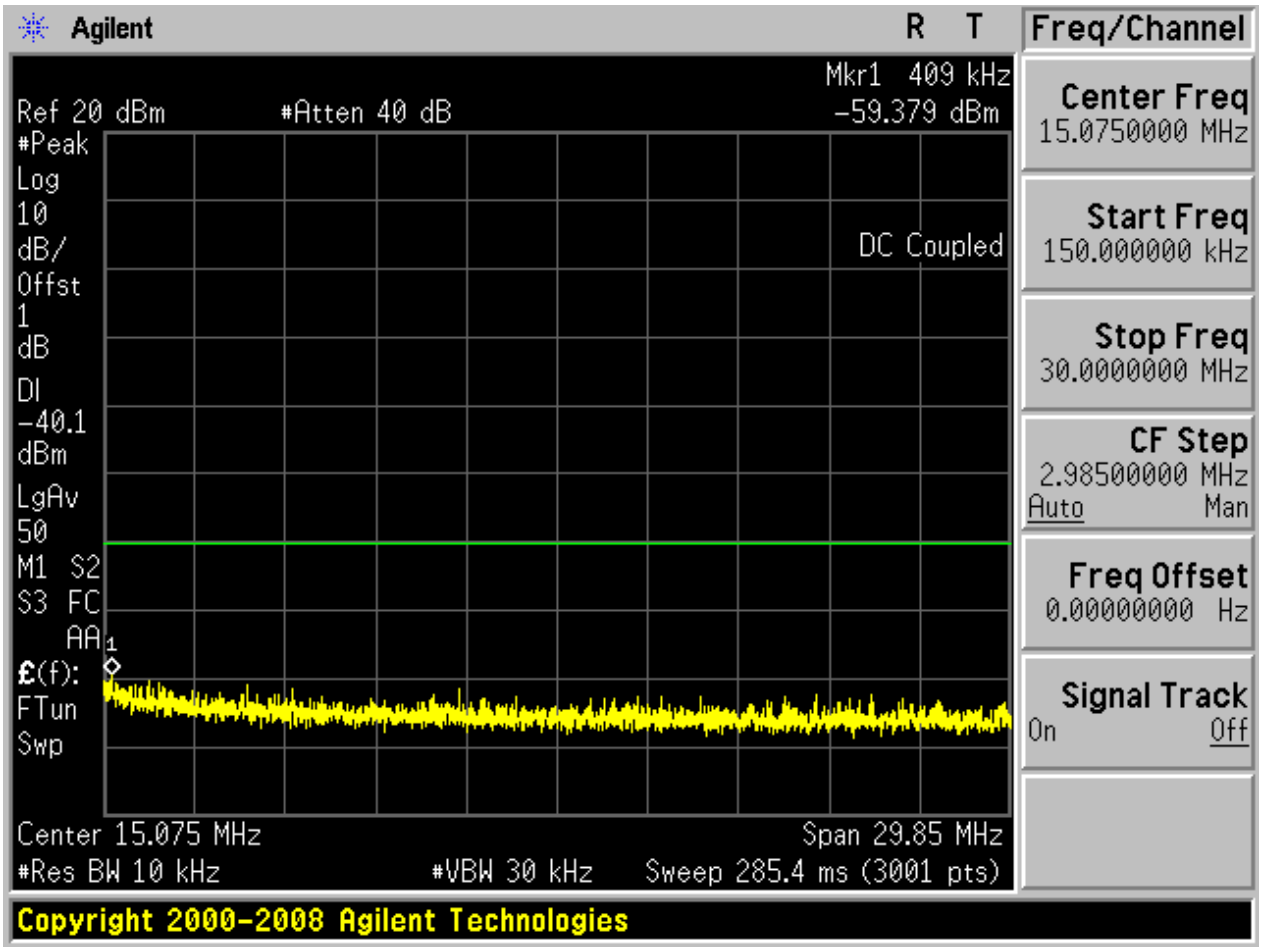
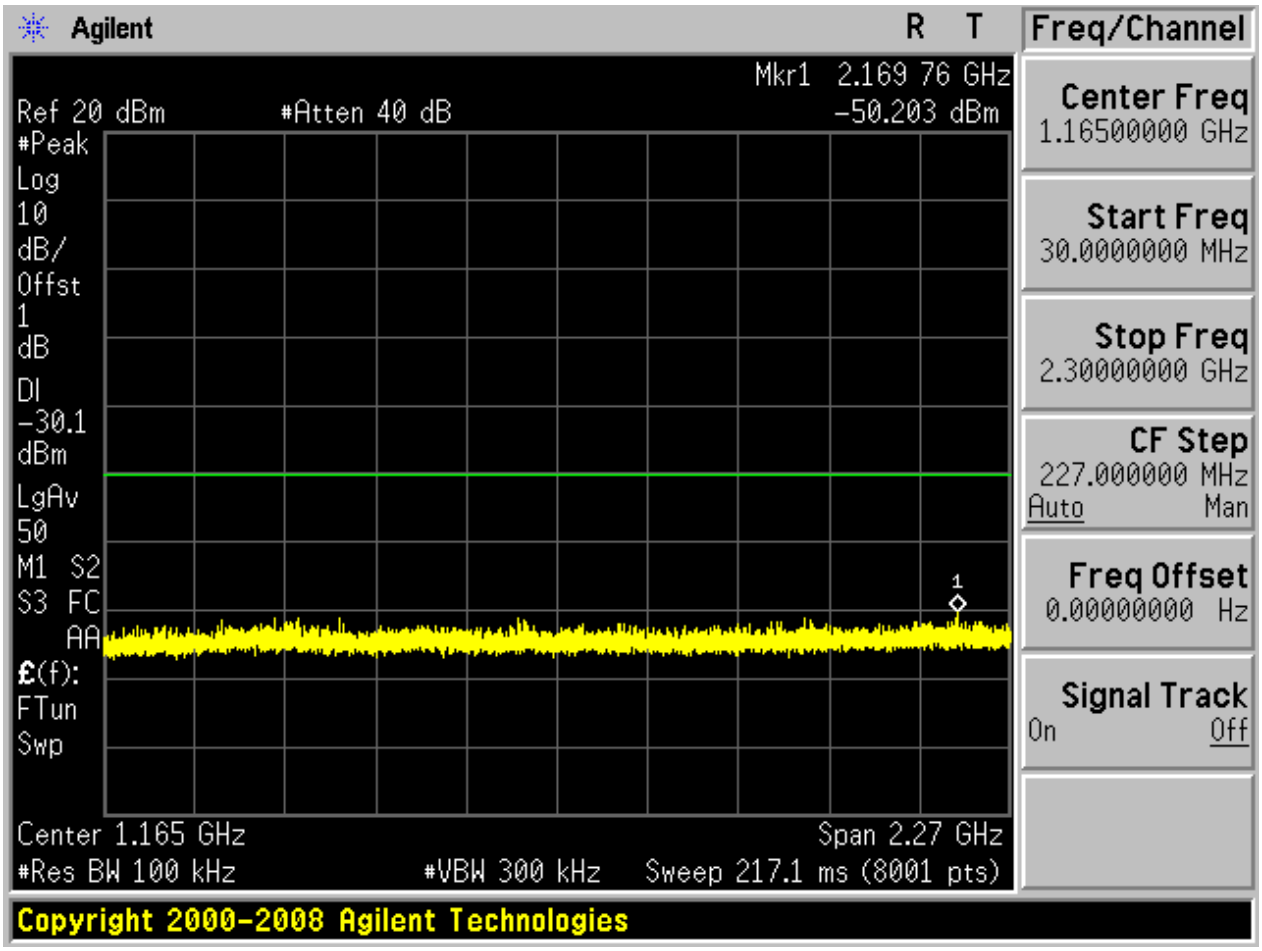
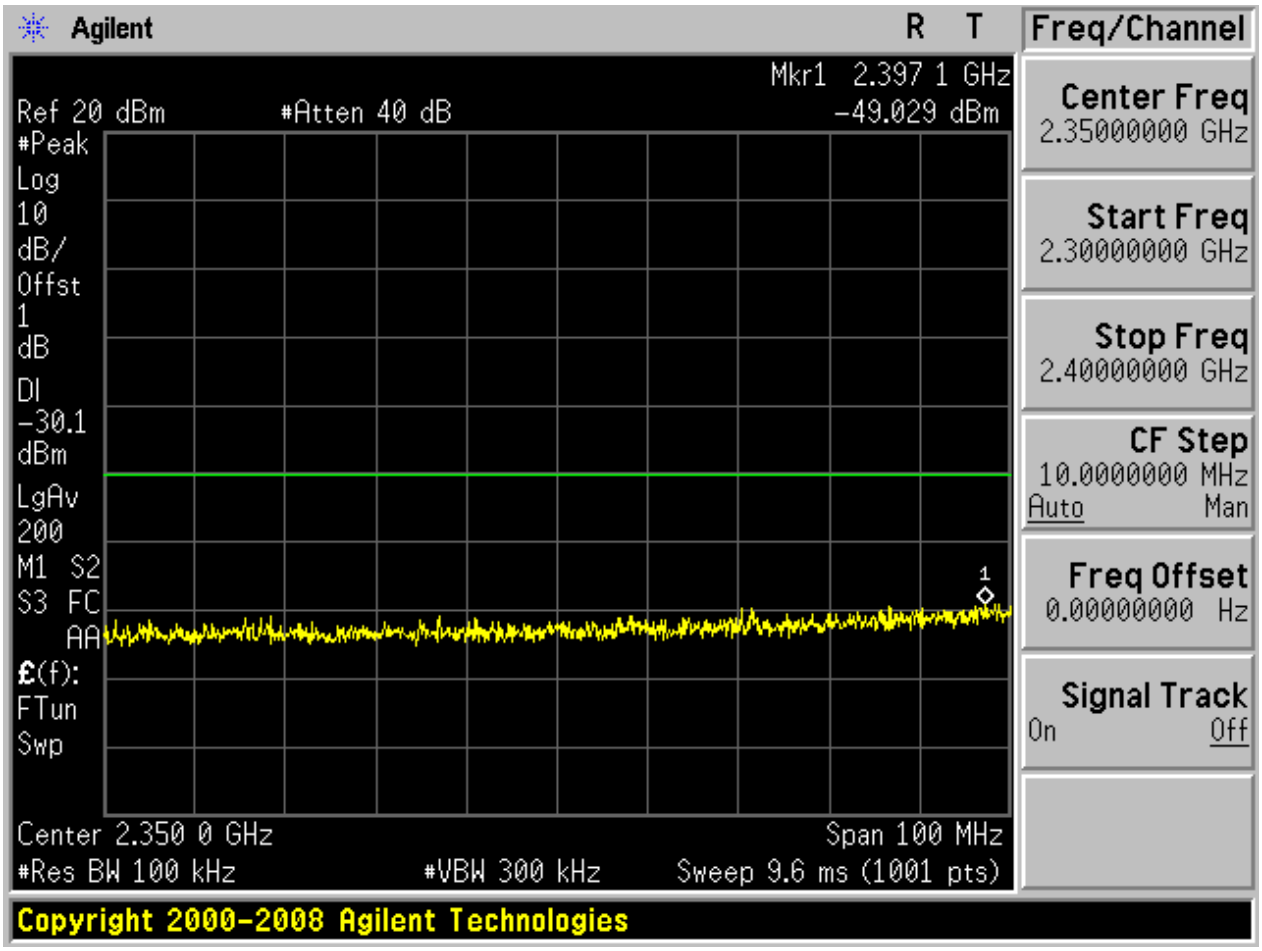
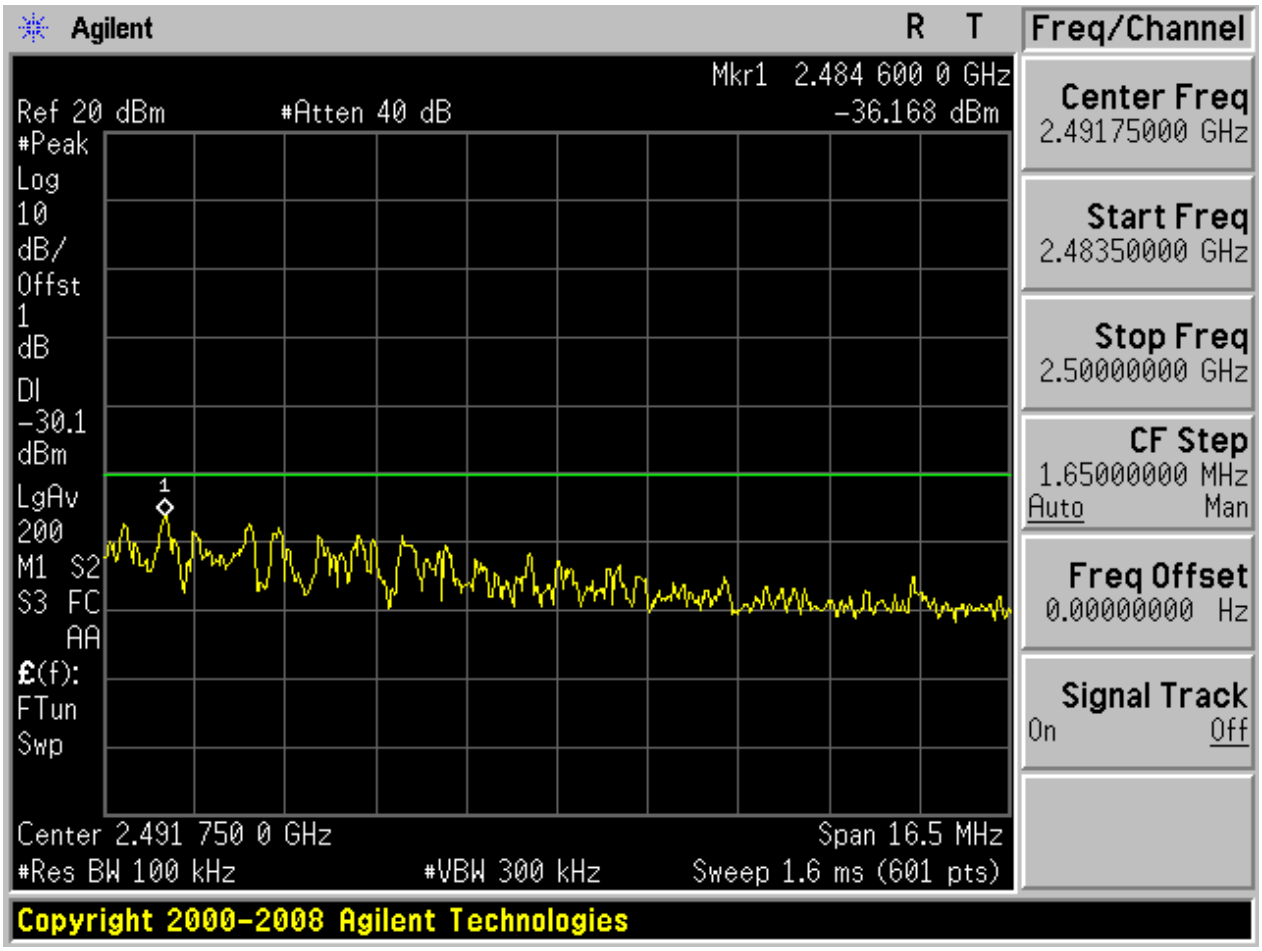
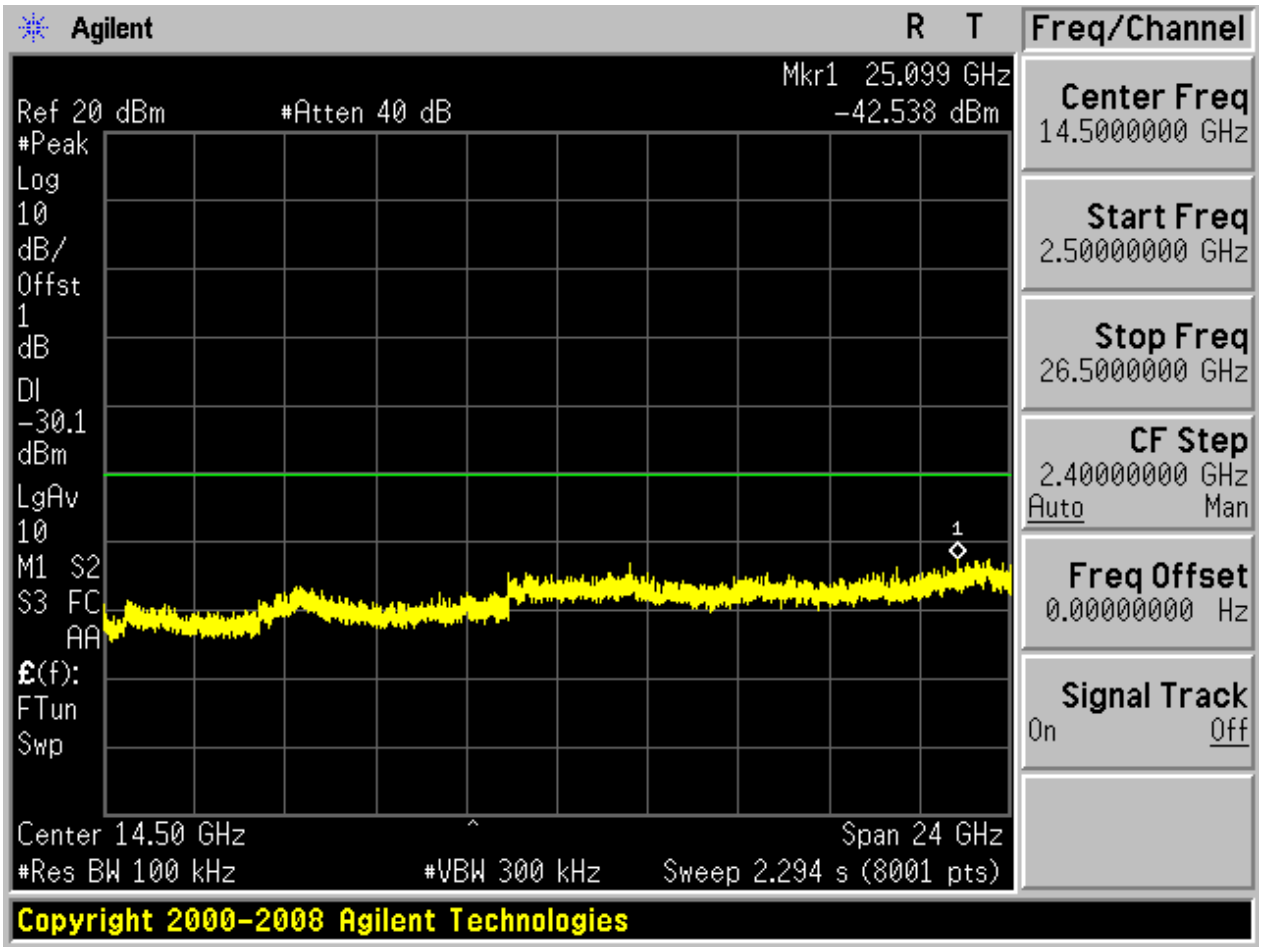







Agilent
R T
Freq/Channel
Mkr1 2.397 1 GHz
Ref 20 dBm
#Atten 40 dB
-49.029 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-30.1
dBm
LgAv
200
M1 S2
S3 FC
AA
£(f):
FTun
Swp
Center Freq
2.35000000 GHz
Start Freq
2.30000000 GHz
Stop Freq
2.40000000 GHz
CF Step
10.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Center 2.350 0 GHz
Span 100 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 9.6 ms (1001 pts)
Copyright 2000-2008 Agilent Technologies





Appendix H: 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

We tested all modes, but the data presented below is the worst case.

Part 1: Testing Range of "9 kHz to 30MHz"

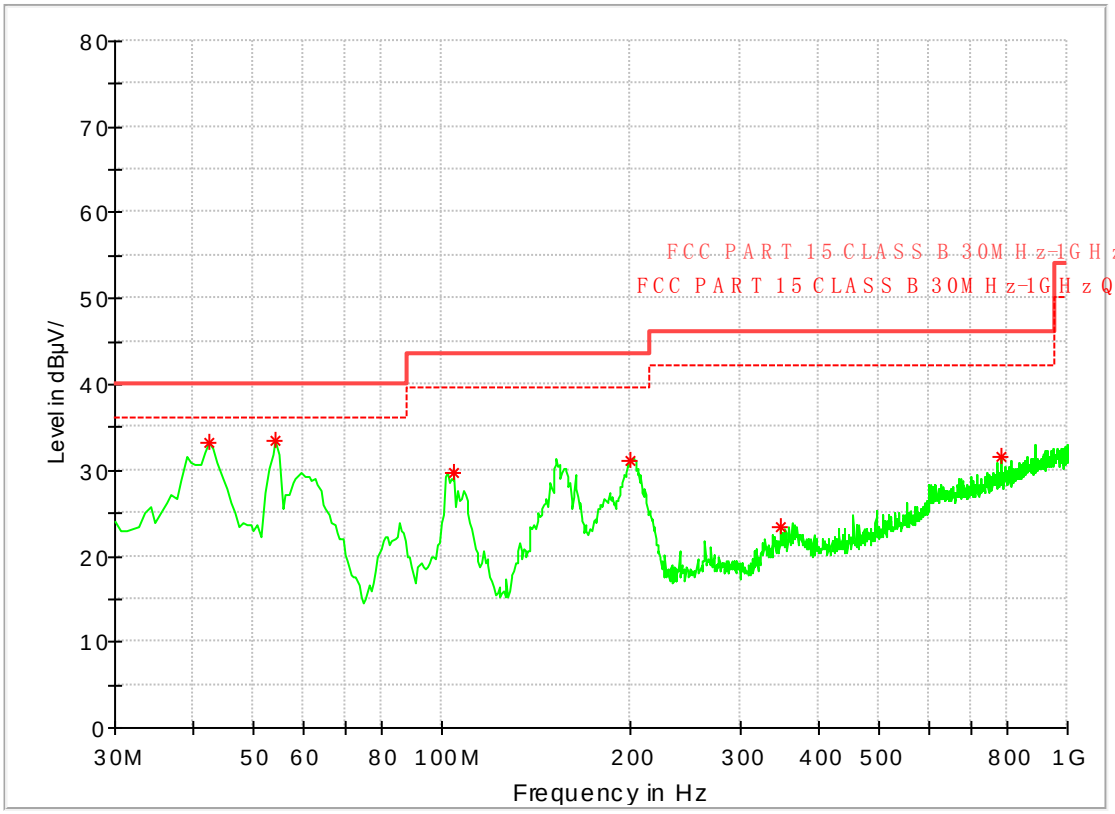
NOTE1: No peak found in the Test Range of "9 kHz to 30MHz"

Part 2: 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).**

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
42.471429	33.15	40.00	-6.85	100.0	V	220.0	15.4
54.250000	33.34	40.00	-6.66	100.0	V	228.0	14.7
104.828571	29.61	43.50	-13.89	100.0	V	4.0	13.5
200.442857	31.17	43.50	-12.33	100.0	V	321.0	12.9
348.021429	23.33	46.00	-22.67	100.0	H	15.0	16.8
785.214286	31.50	46.00	-14.50	100.0	H	312.0	24.1

Part 3: Testing Range of "18 GHz to 26.5 GHz"

NOTE1: No peak found in the Test Range of "18 GHz to 26.5GHz"

Part 4: Testing Range of "1GHz to 3GHz"

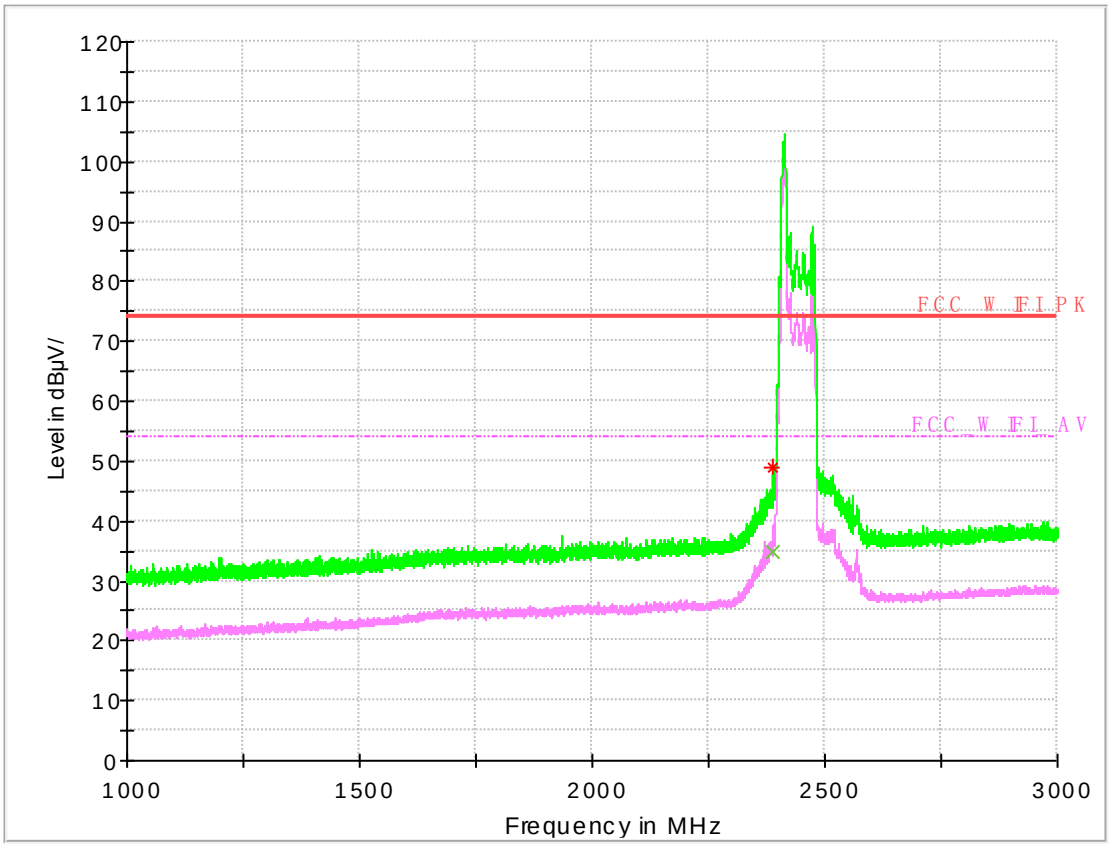
Note 1: The testing range of "1 GHz to 3 GHz" is for checking radiated emissions located in restricted bands near the EUT operating bands.

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

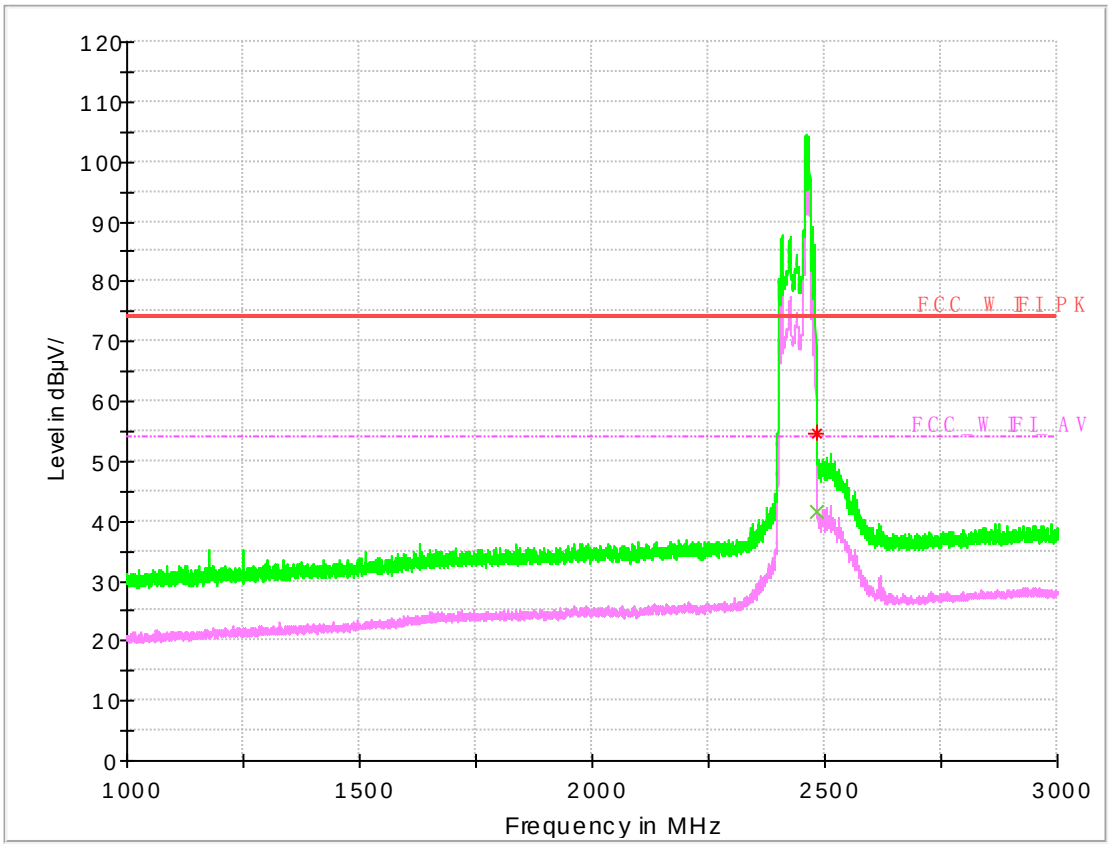
Channel 1



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

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2390.000000	48.81	---	74.00	-25.19	100.0	H	115.0	-8.1
2390.000000	---	34.95	54.00	-19.05	100.0	H	120.0	-8.0

Channel 11

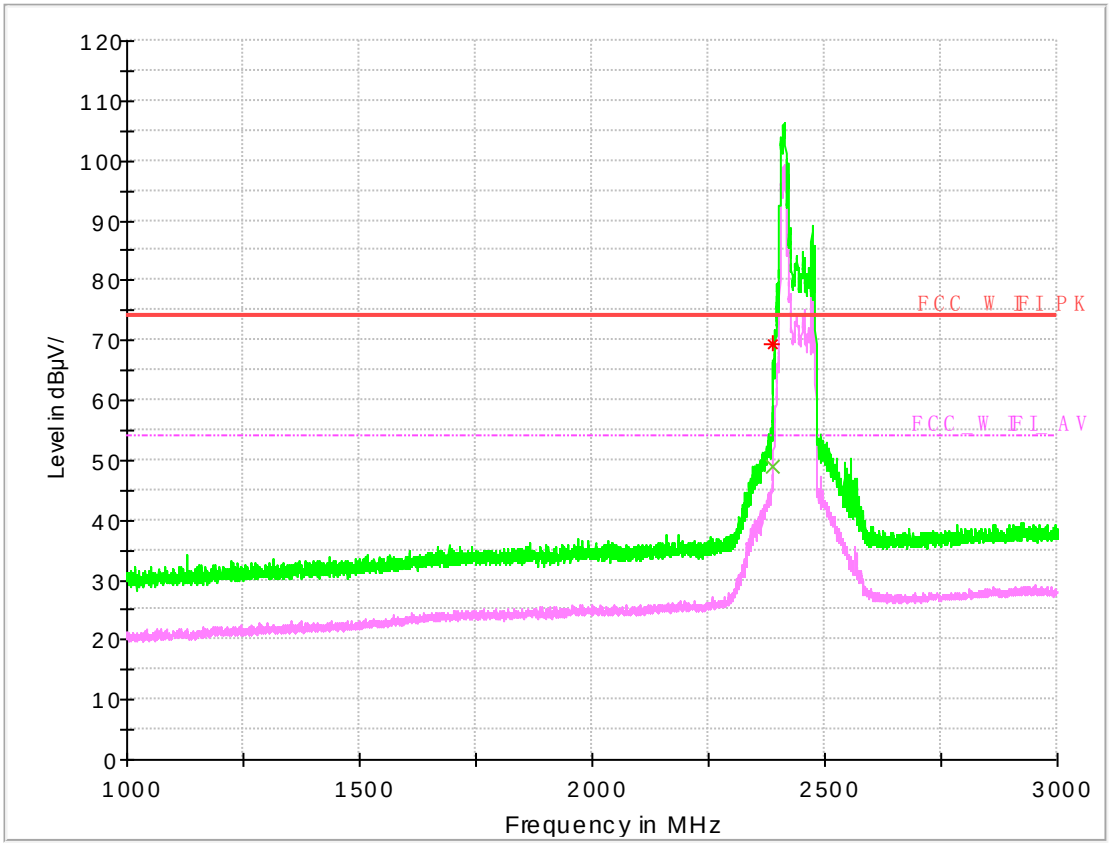


Note: The peak exceeds the limit line is carrier frequency.

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2483.500000	---	41.57	54.00	-12.43	100.0	H	61.0	0.6
2483.500000	54.59	---	74.00	-19.41	100.0	H	64.0	-0.8

Test Mode: 11g

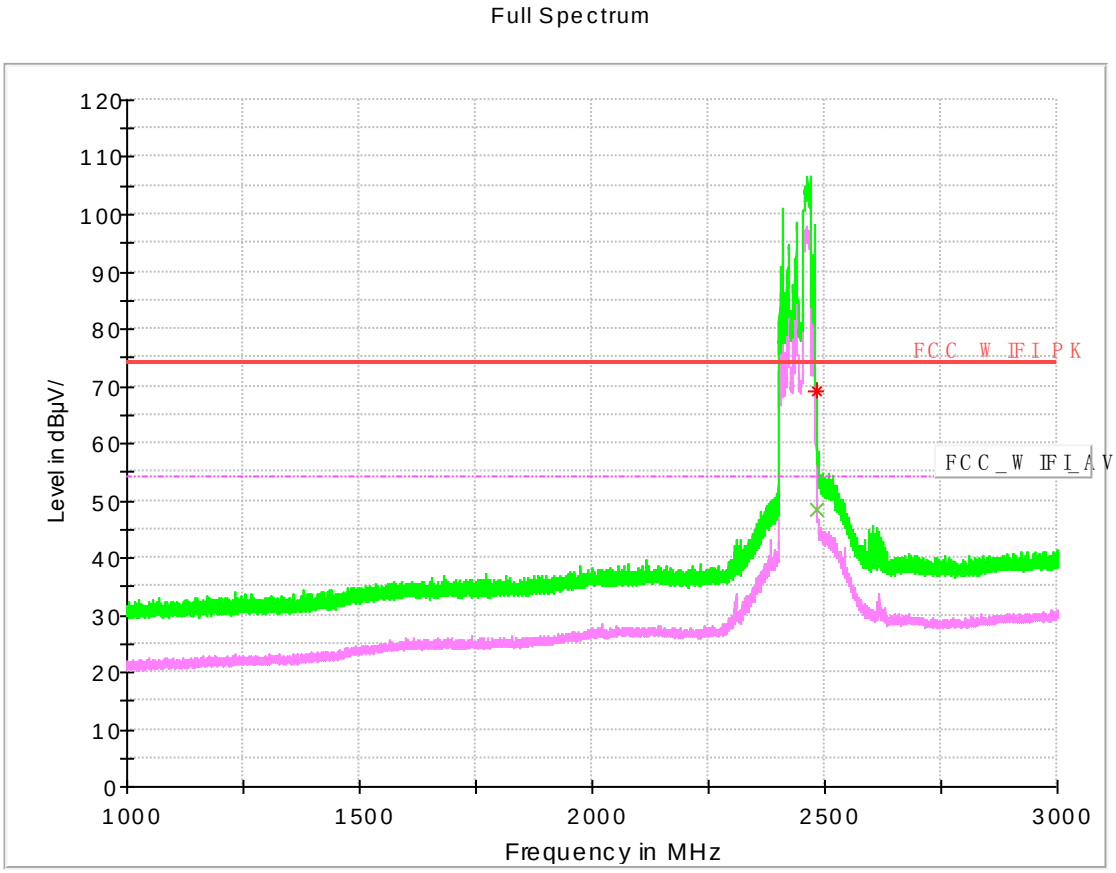
Channel 1



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

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2390.000000	69.48	---	74.00	-4.52	117.0	H	62.0	-7.8
2390.000000	---	48.99	54.00	-5.01	117.0	H	116.0	-7.7

Channel 11

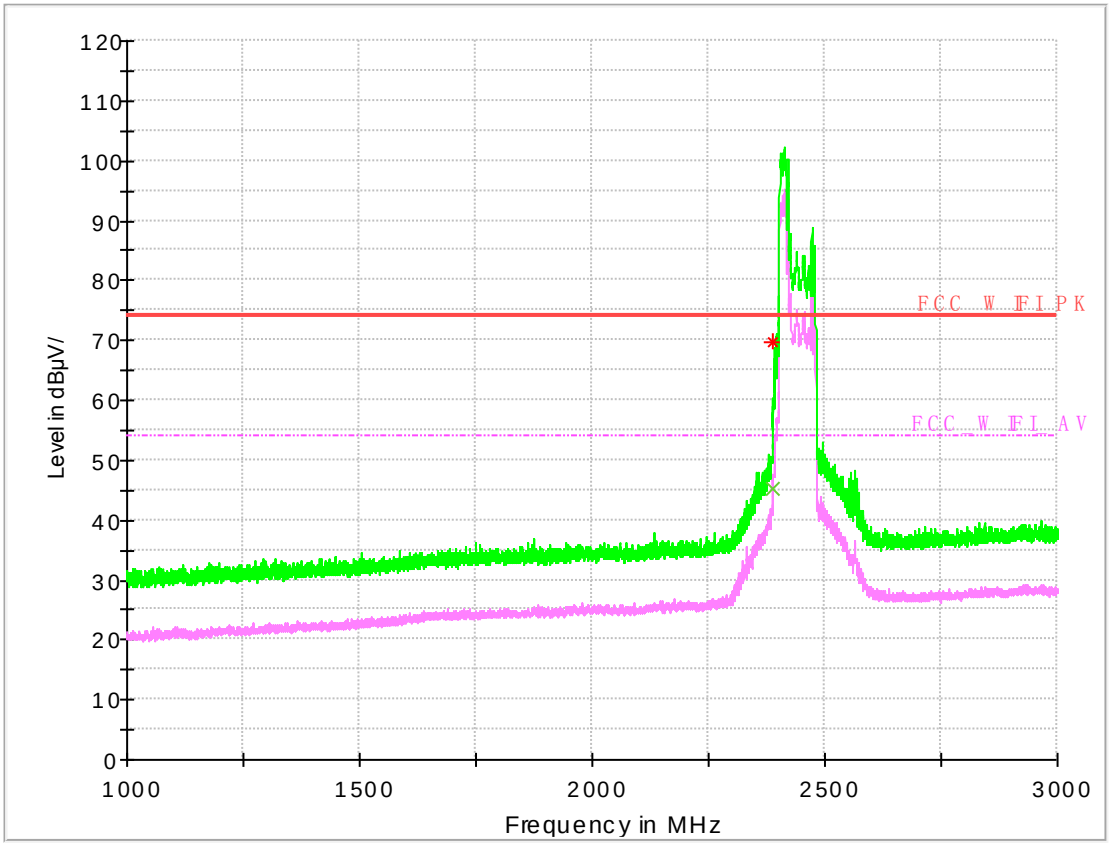


Note: The peak exceeds the limit line is carrier frequency.

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2483.500000	---	48.27	54.00	-5.73	100.0	H	74.0	-5.6
2483.500000	68.98	---	74.00	-5.02	100.0	H	74.0	-5.6

Test Mode: 11N

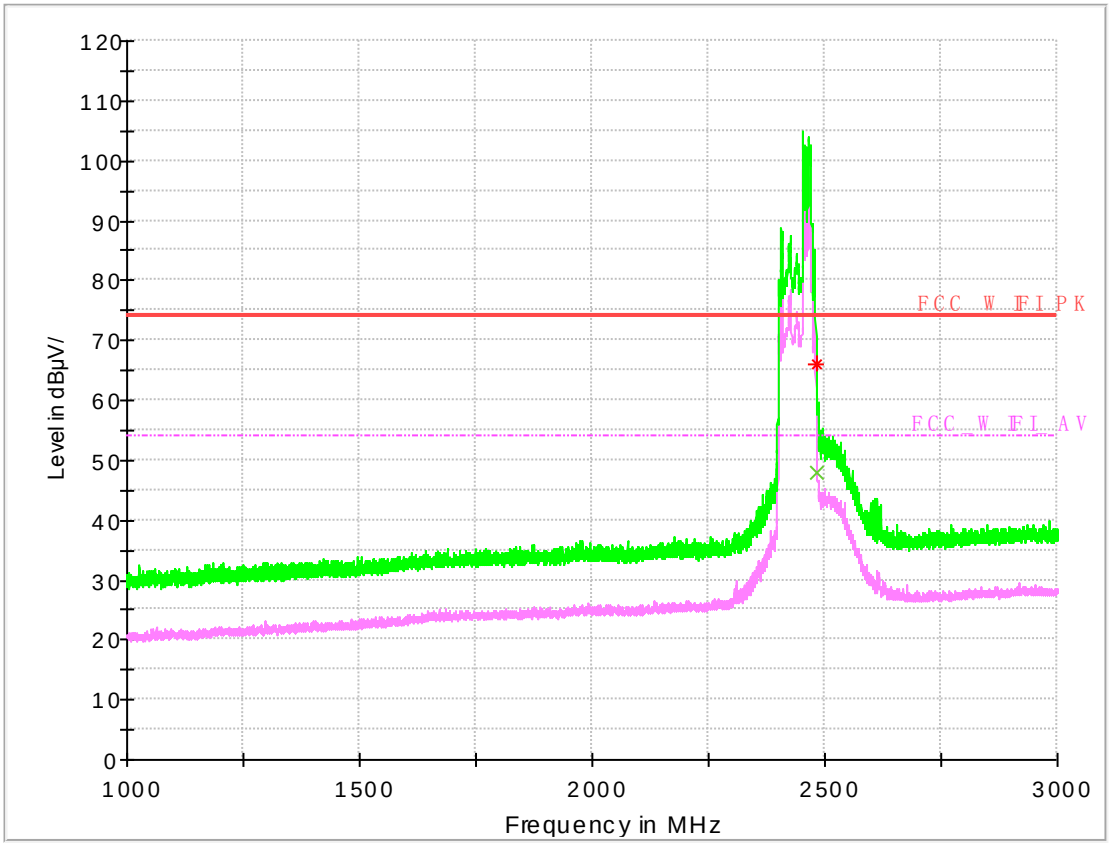
Channel 1



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

Frequency	MaxPeak	Average	Limit	Margin	Height	Pol	Azimuth	Corr.
2390.000000	69.77	---	74.00	-4.23	100.0	H	121.0	-7.8
2390.000000	---	45.25	54.00	-8.75	117.0	H	120.0	-7.7

Channel 11



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

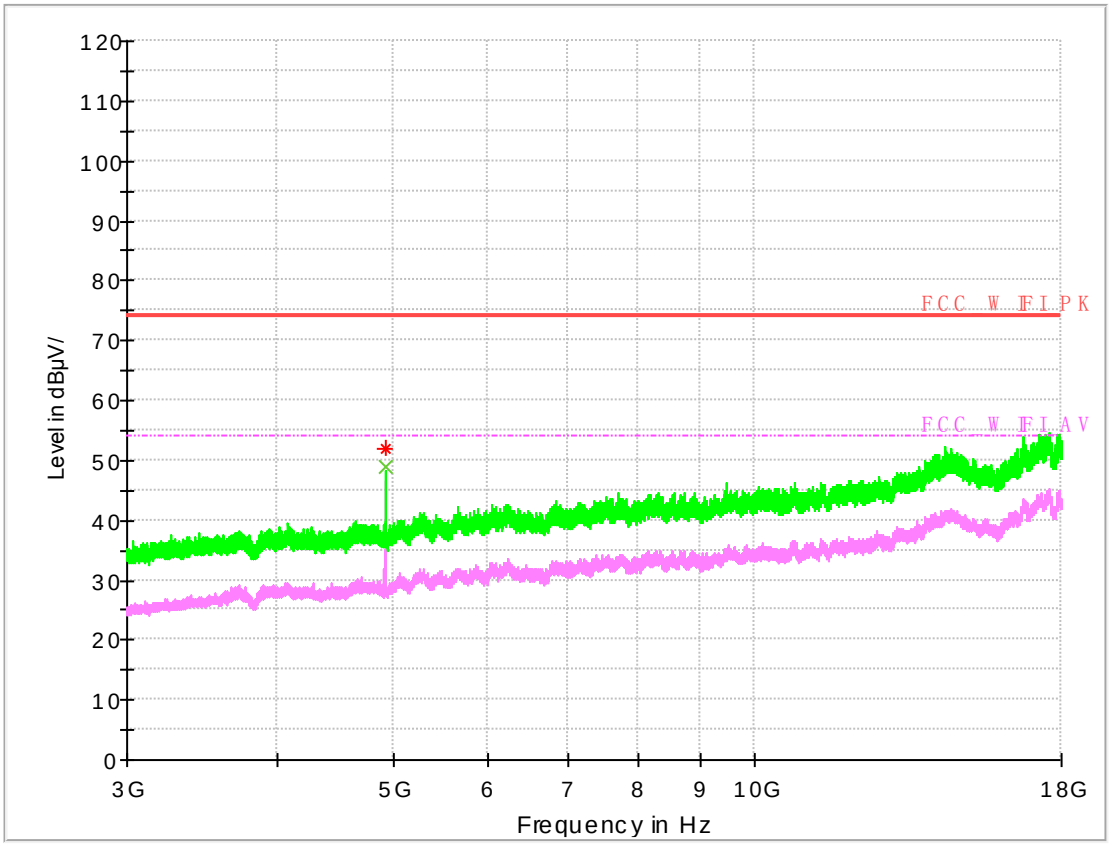
Frequency	MaxPeak	Average	Limit	Margin	Height	Pol	Azimuth	Corr.
2483.500000	66.05	---	74.00	-7.95	130.0	H	-1.0	0.5
2483.500000	---	48.06	54.00	-5.94	130.0	H	0.0	0.2

Part 5: Testing Range of "3 GHz to 18 GHz"

Note 1: The test results and plot for testing range of "3 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 "3 GHz to 18 GHz" is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

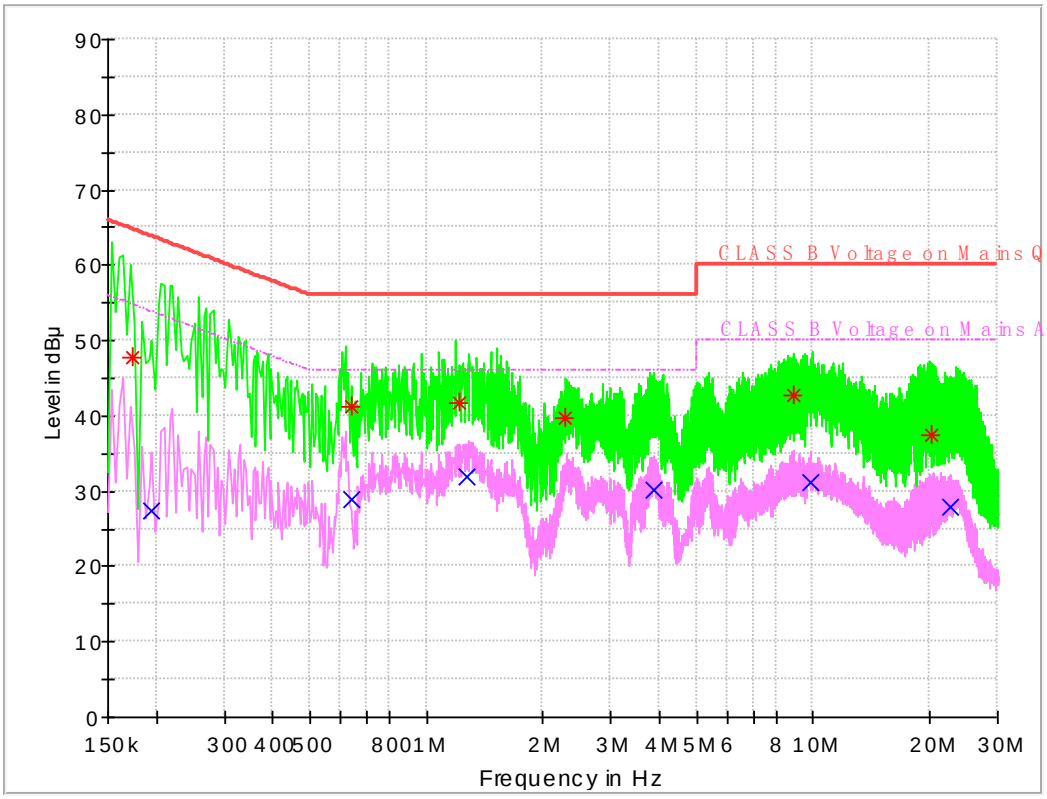
Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBμV/m) and Average Limit (54 dBμV/m).



Appendix I: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz

Channel 6



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Corr. (dB)	Line	Filter
0.174180	47.84	---	64.76	-16.92	9.7	L1	ON
0.639194	41.28	---	56.00	-14.72	9.7	L1	ON
1.212891	41.78	---	56.00	-14.22	9.7	L1	ON
2.287074	39.77	---	56.00	-16.23	9.8	L1	ON
8.915542	42.71	---	60.00	-17.29	10.0	L1	ON
20.228506	37.56	---	60.00	-22.44	10.2	L1	ON
0.193894	---	27.52	53.87	-26.35	9.7	L1	ON
0.639754	---	28.92	46.00	-17.08	9.7	L1	ON
1.265201	---	31.96	46.00	-14.04	9.7	L1	ON
3.875882	---	30.28	46.00	-15.72	9.8	L1	ON
9.890135	---	31.27	50.00	-18.73	10.0	L1	ON
22.573135	---	27.94	50.00	-22.06	10.2	L1	ON

END