



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.

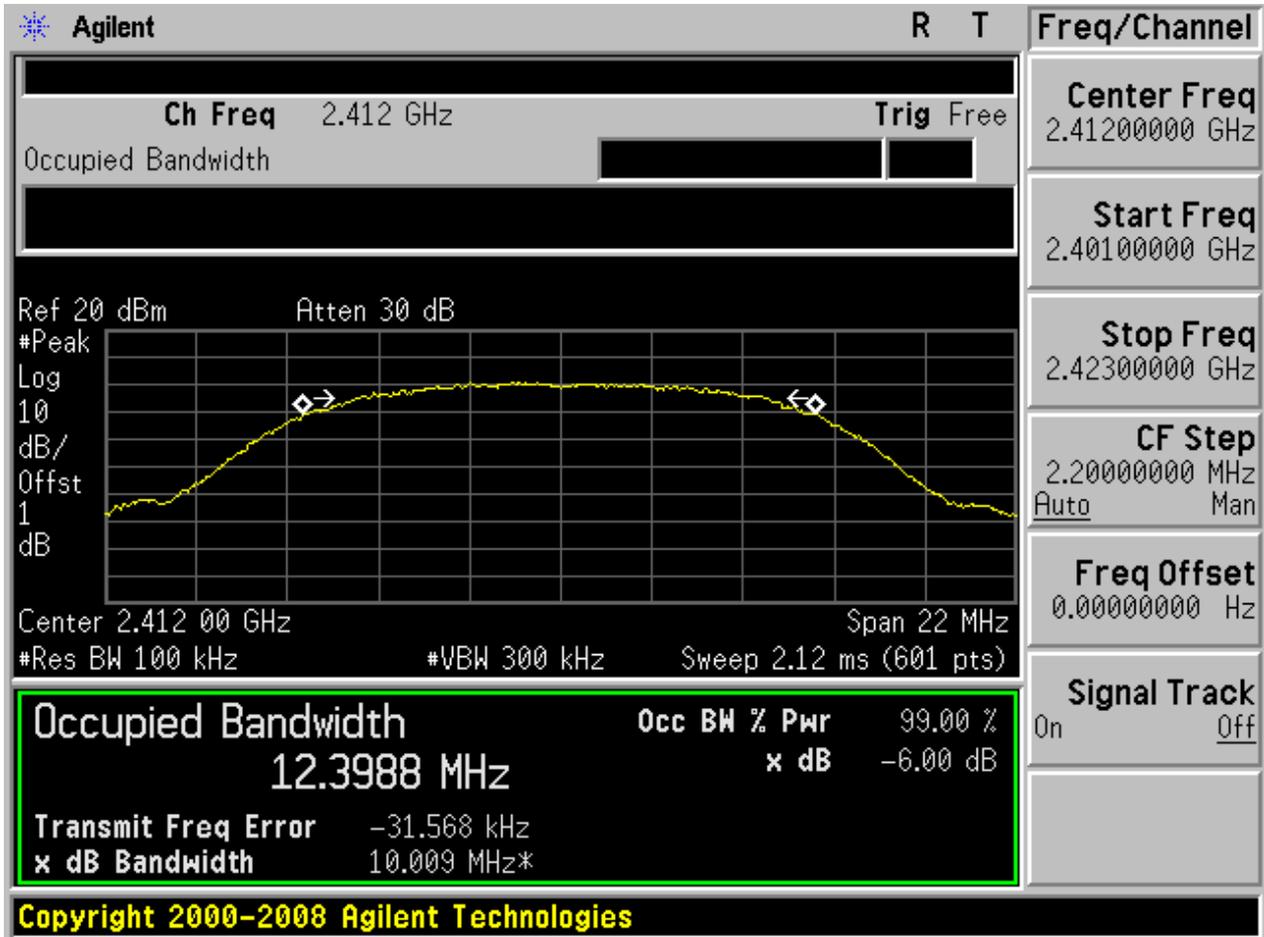
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

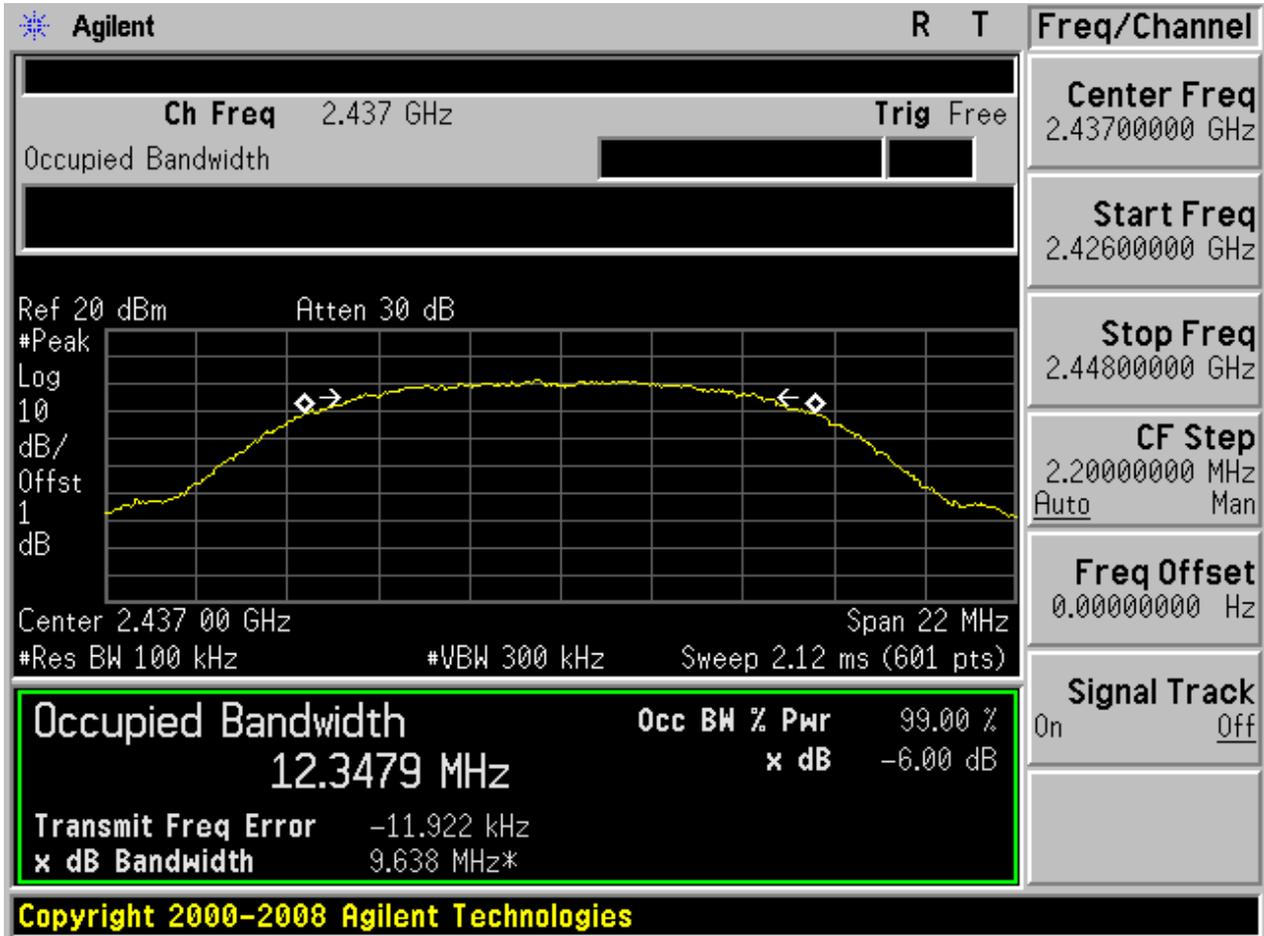
Test Mode	Test Channel	Frequency[MHz]	DTS6dBBW[MHz]	Verdict
11B	L	2412	10.01	pass
11B	M	2437	9.64	pass
11B	H	2462	9.89	pass
11G	L	2412	16.37	pass
11G	M	2437	16.10	pass
11G	H	2462	16.44	pass
11N20	L	2412	16.01	pass
11N20	M	2437	17.61	pass
11N20	H	2462	15.77	pass

Part II - Test Plots

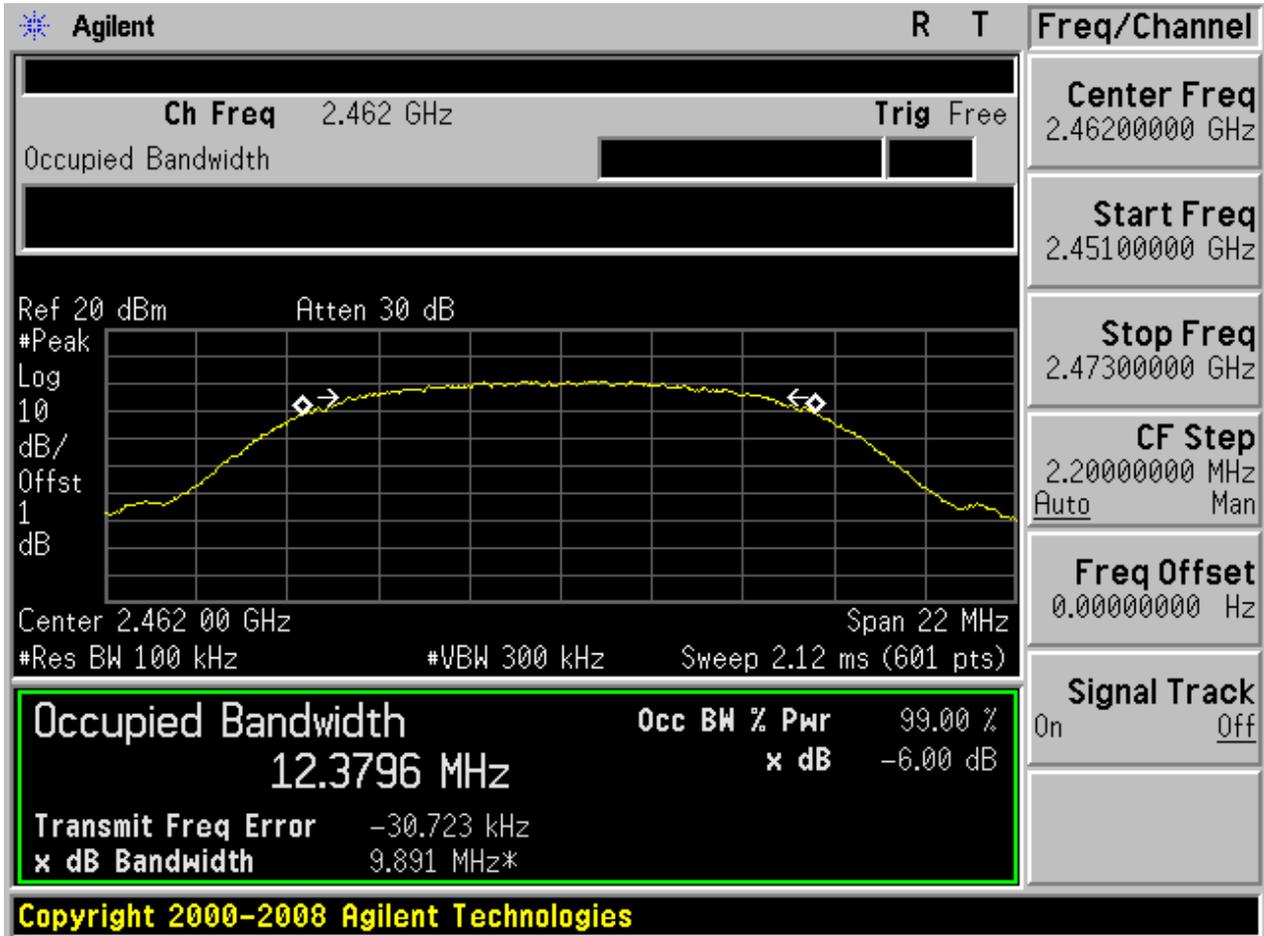
2.1 11B_L



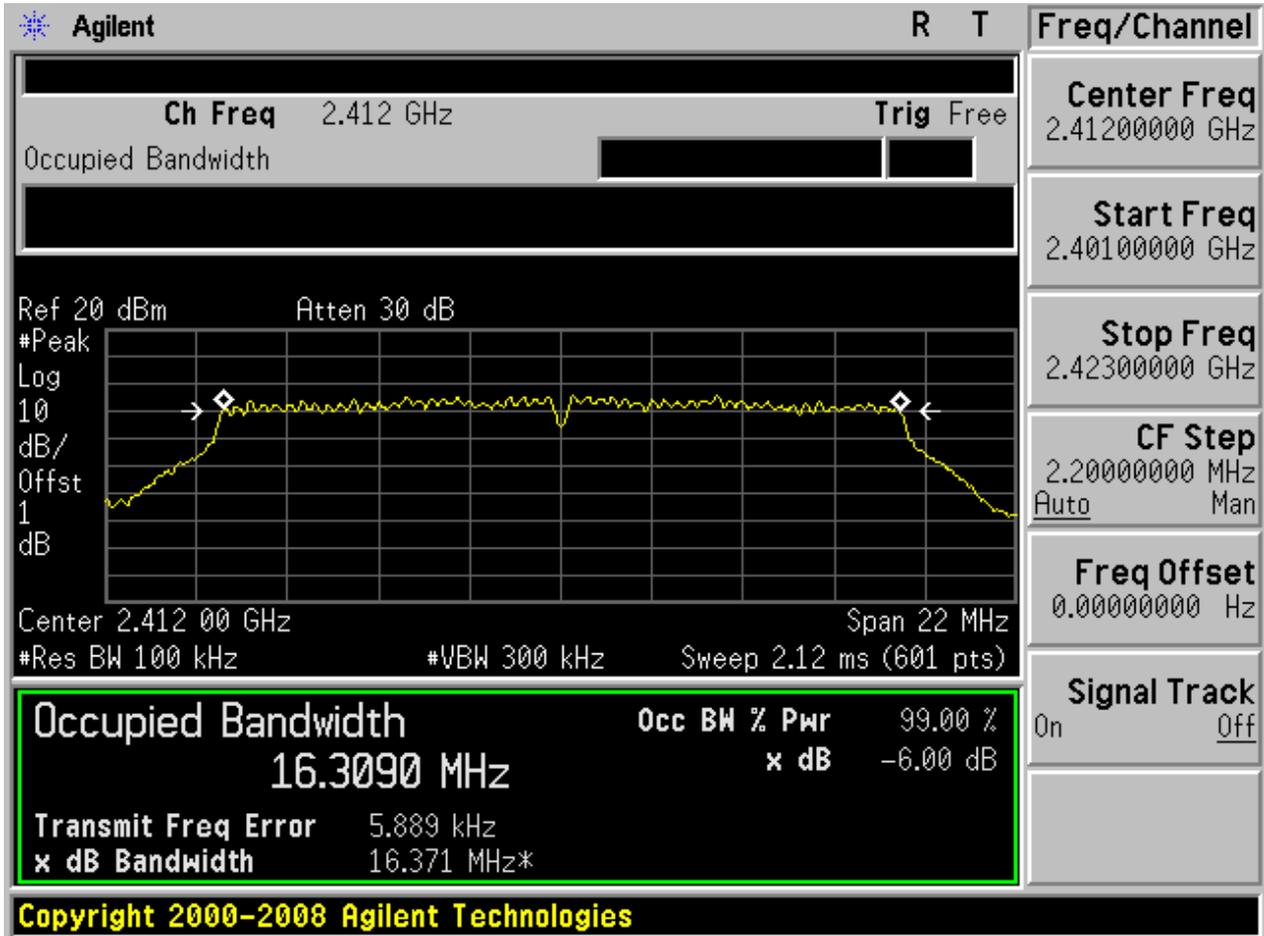
2.2 11B_M



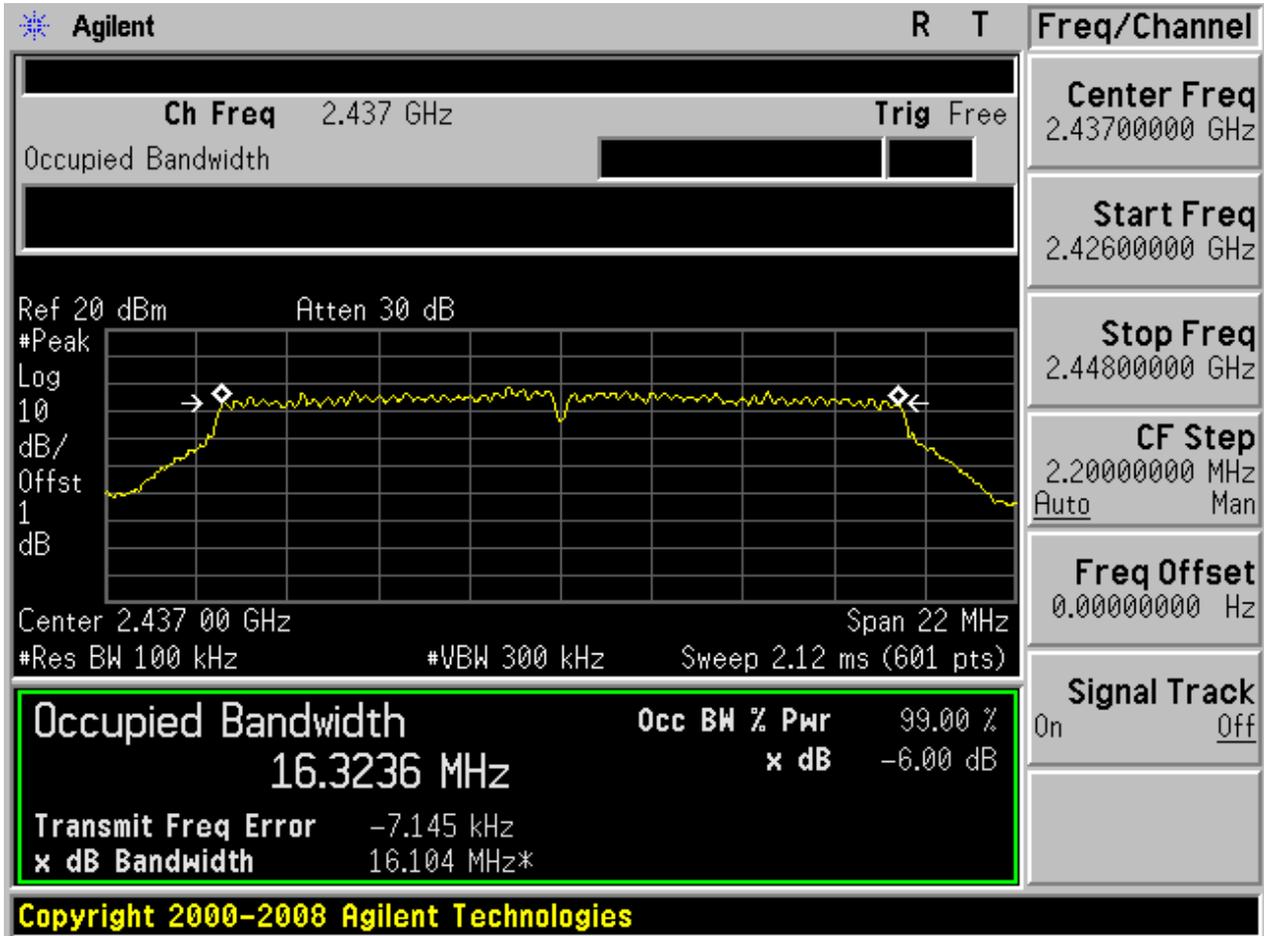
2.3 11B_H



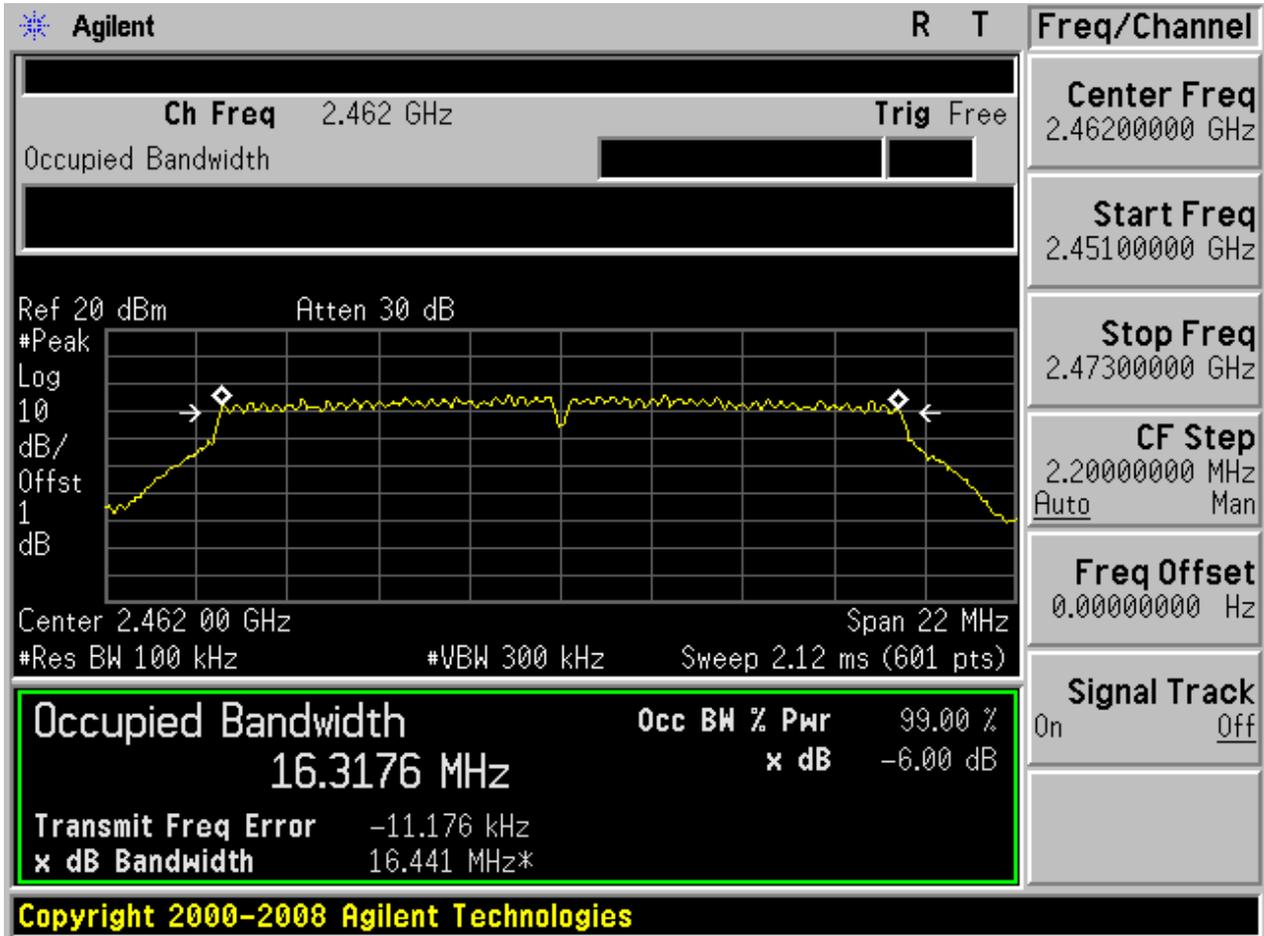
2.4 11G_L



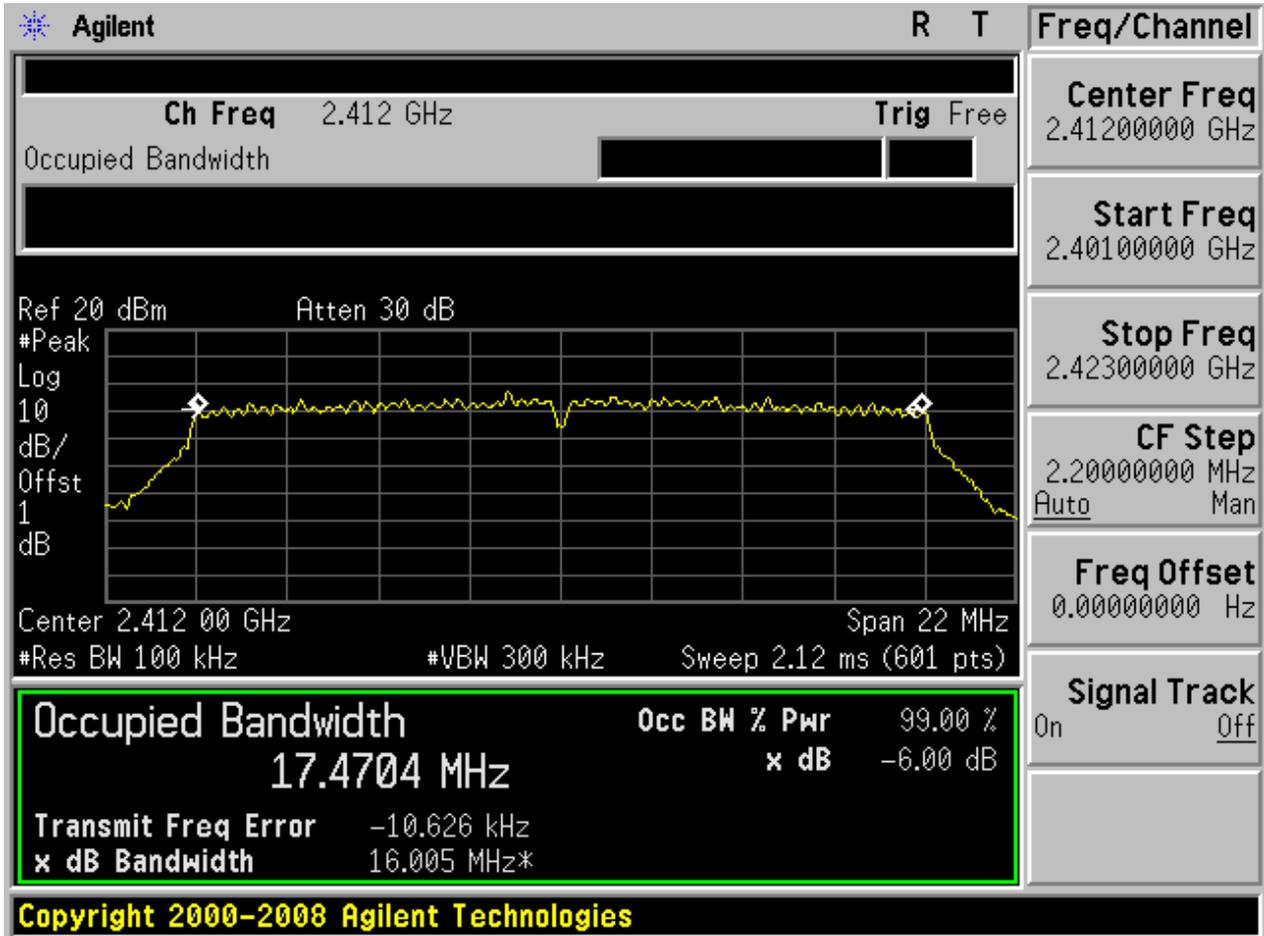
2.5 11G_M



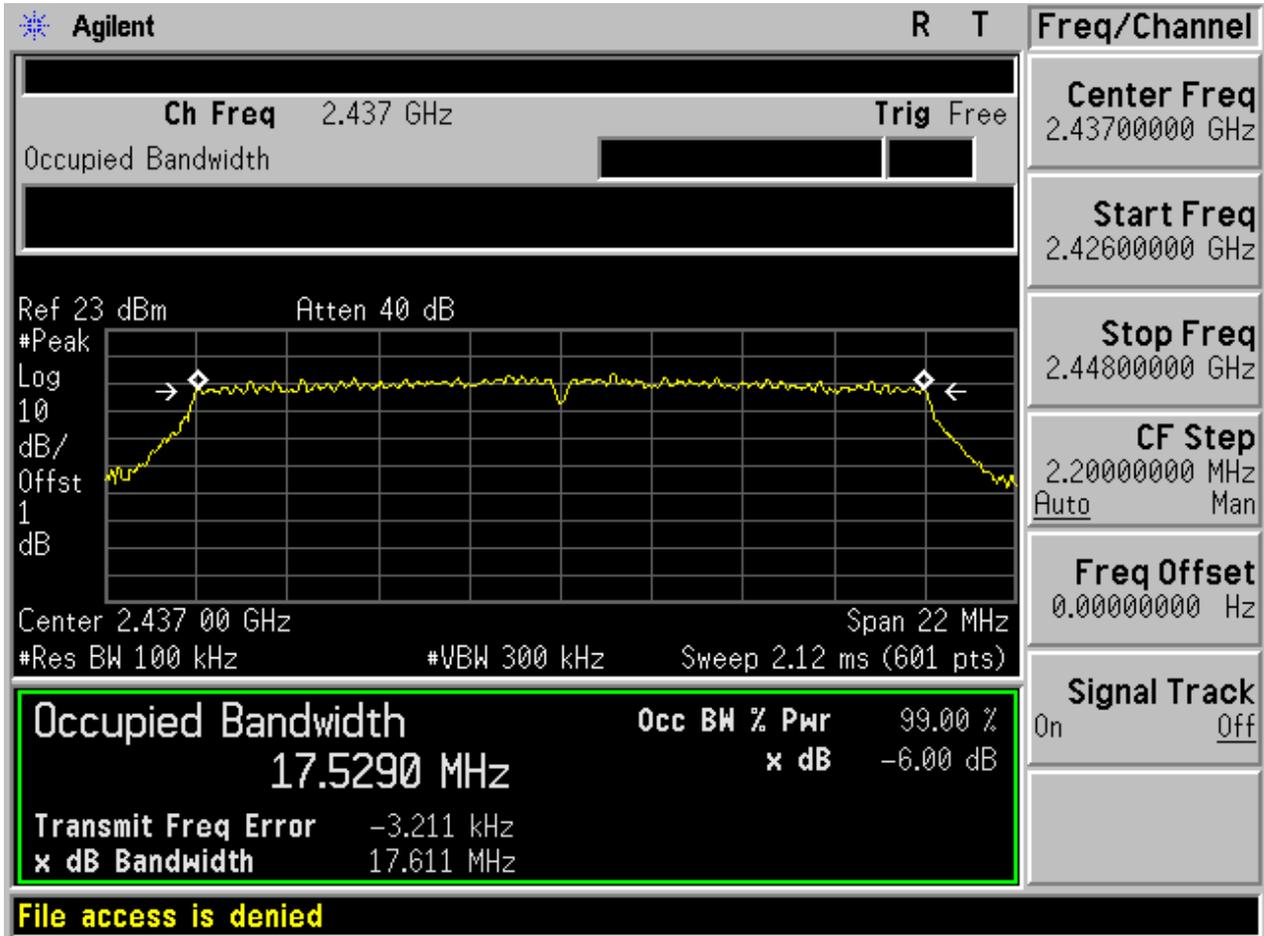
2.6 11G_H



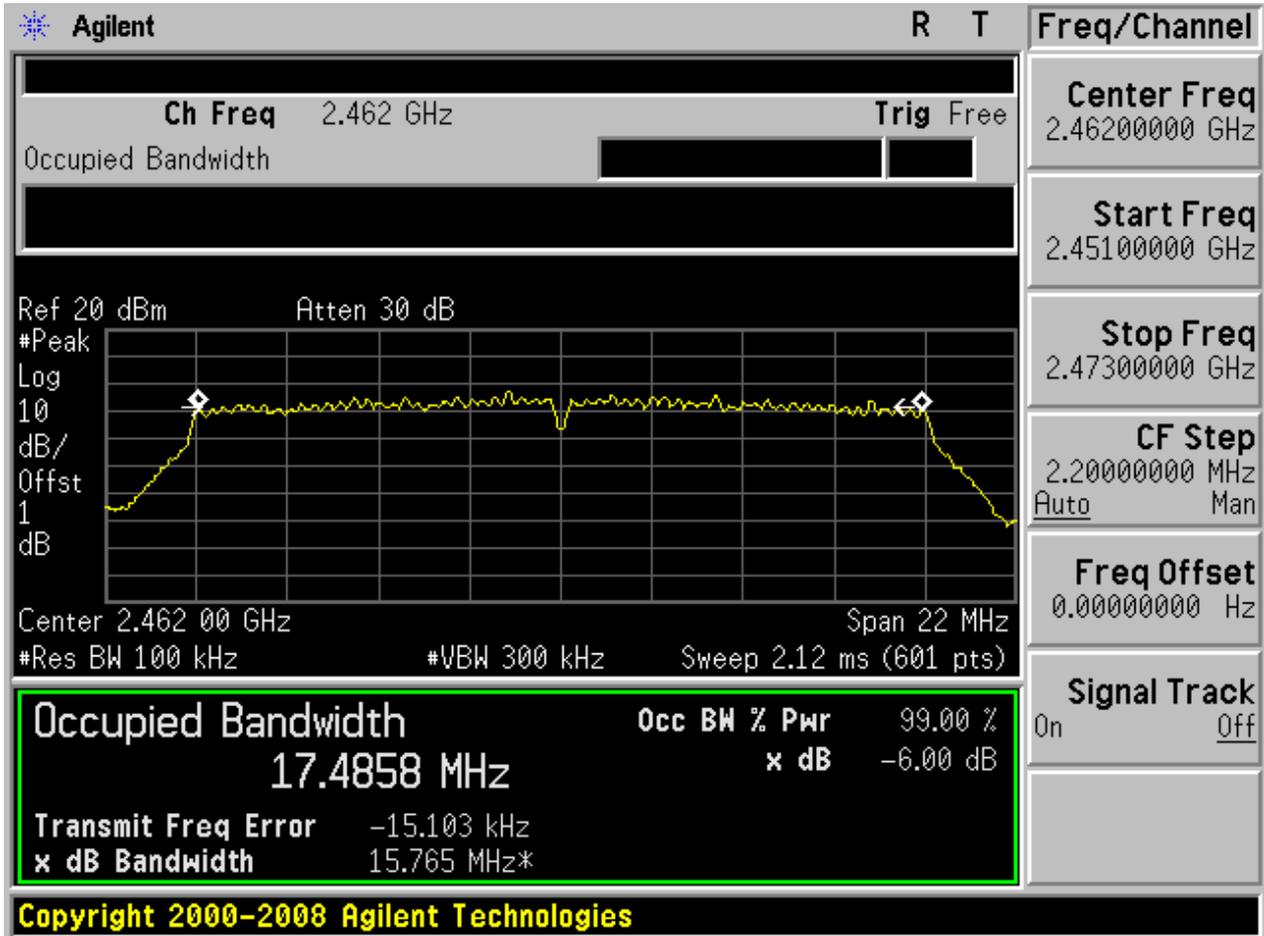
2.7 11N20_L



2.8 11N20_M



2.9 11N20_H



Appendix B: Maximum Peak Conducted Output Power

Part I - Test Results

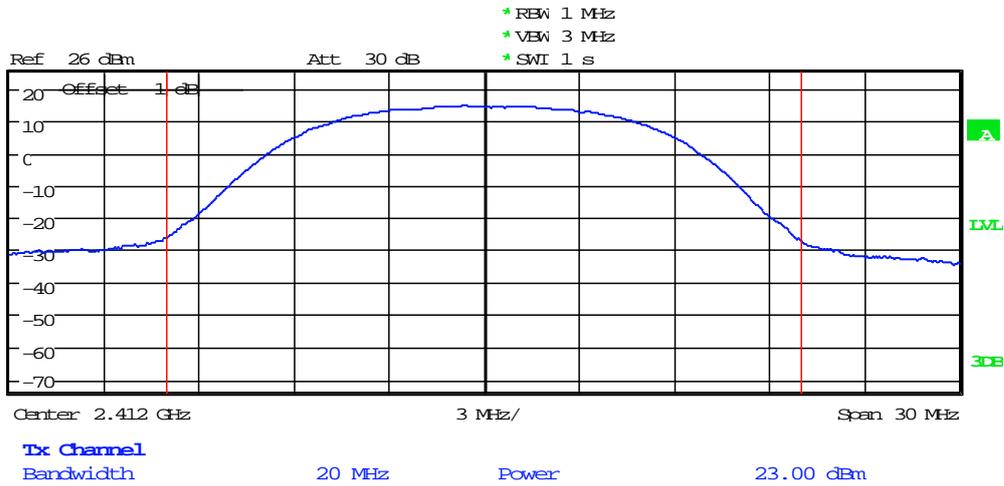
Test Mode	Test Channel	Frequency[MHz]	Meas. Level (Cond.) [dBm]	Verdict
11B	L	2412	23.00	pass
11B	M	2437	23.10	pass
11B	H	2462	23.20	pass
11G	L	2412	23.51	pass
11G	M	2437	23.74	pass
11G	H	2462	23.86	pass
11N20	L	2412	23.60	pass
11N20	M	2437	23.37	pass
11N20	H	2462	23.97	pass

Part II - Test Plots

2.1 11B_L



1 EK
MAXE

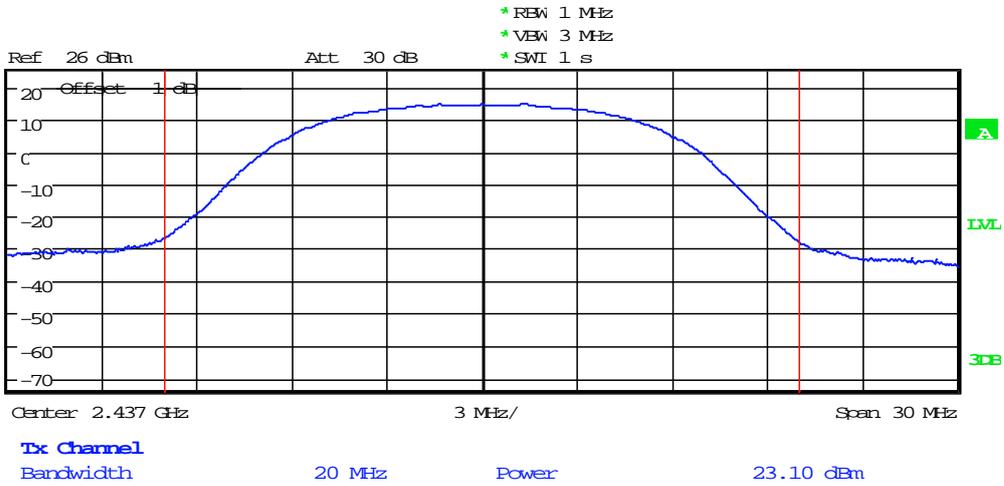


Date: 26.FEB.2014 16:12:43

2.2 11B_M



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MAX

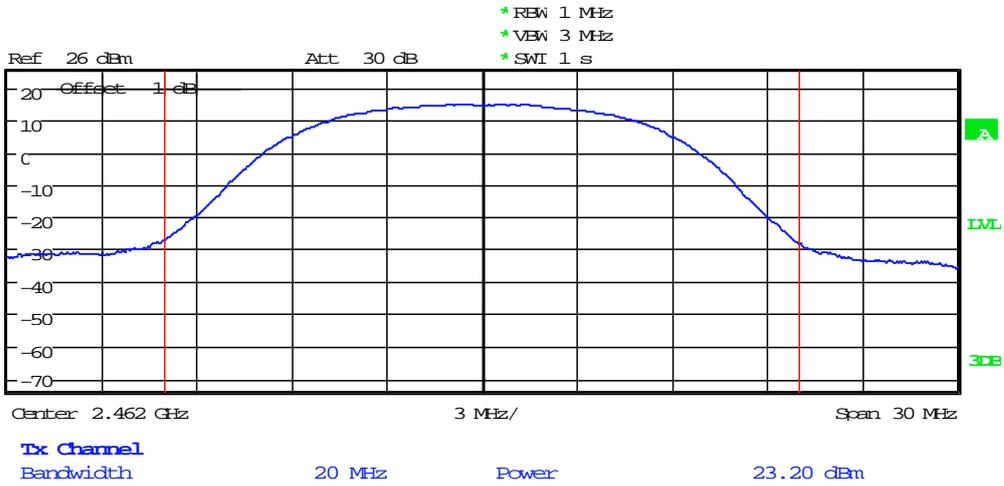


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2.3 11B_H

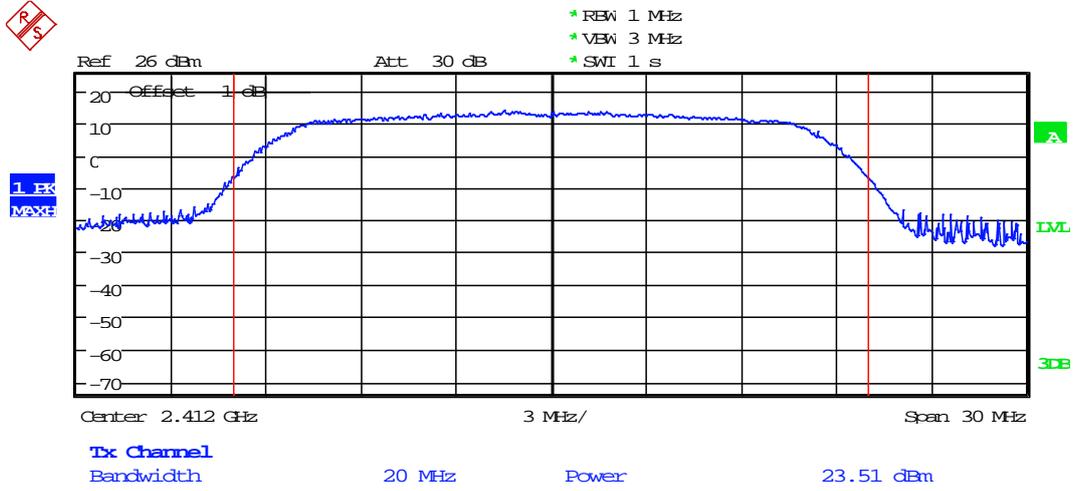


1. EK
MAXH



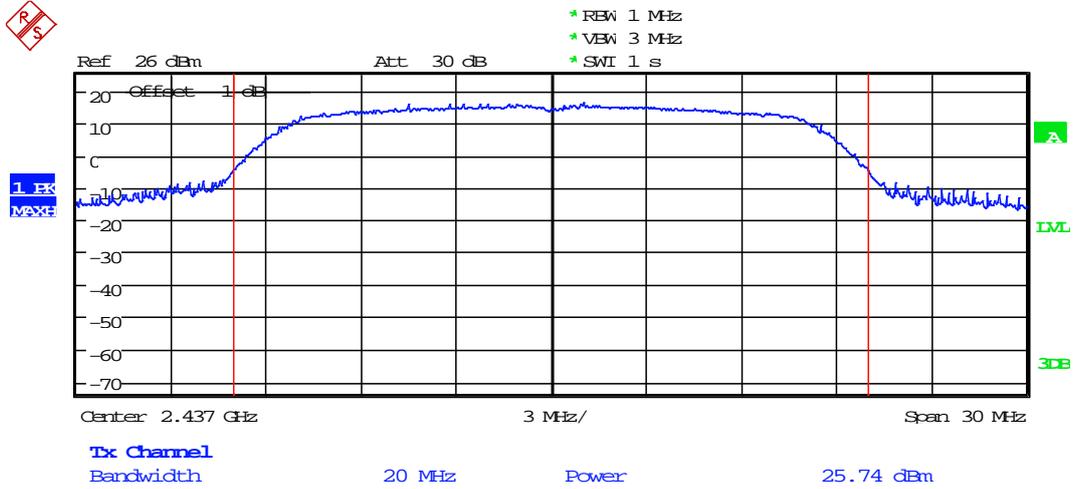
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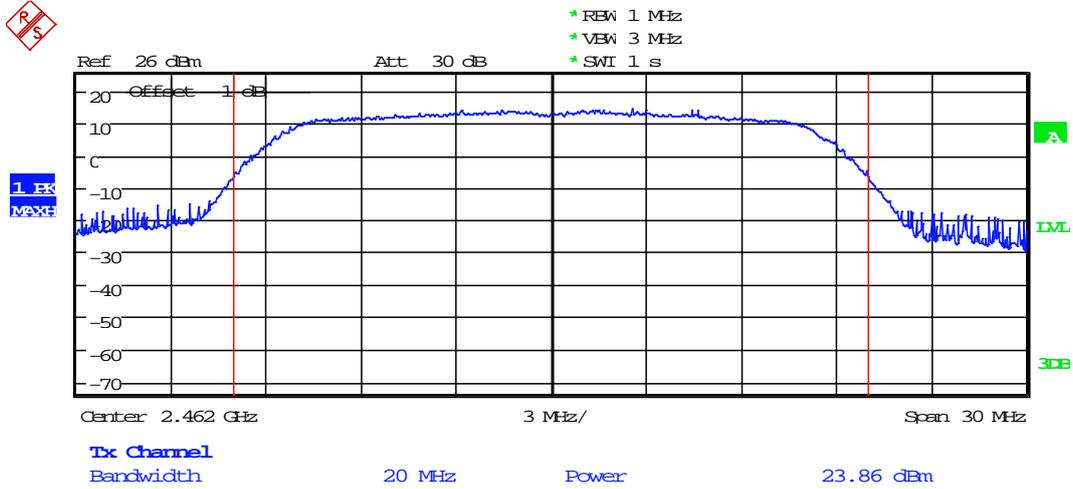
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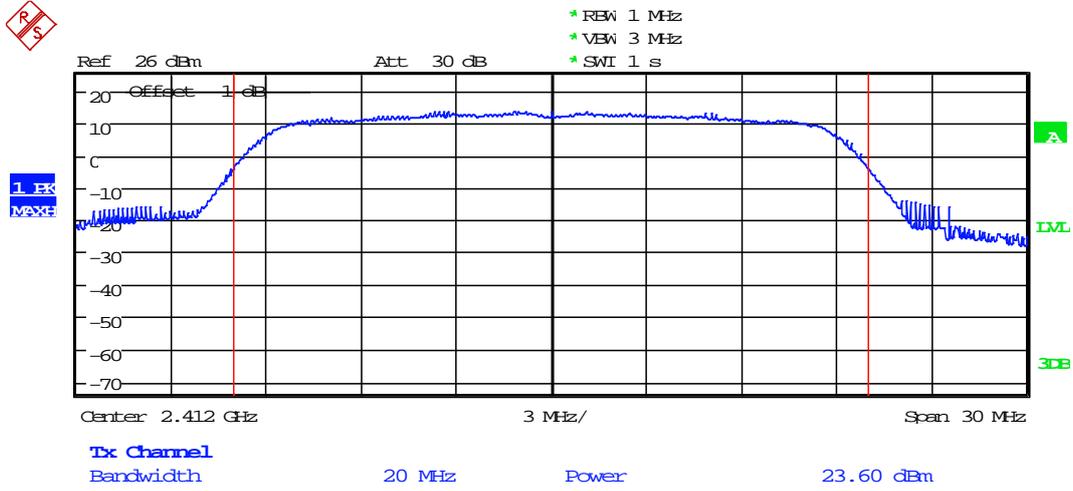
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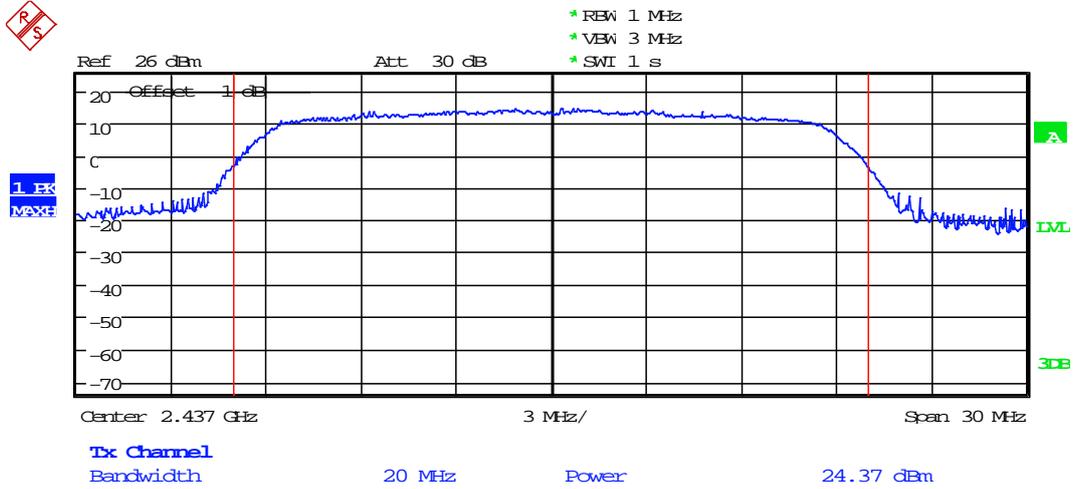
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2.7 11N20_L



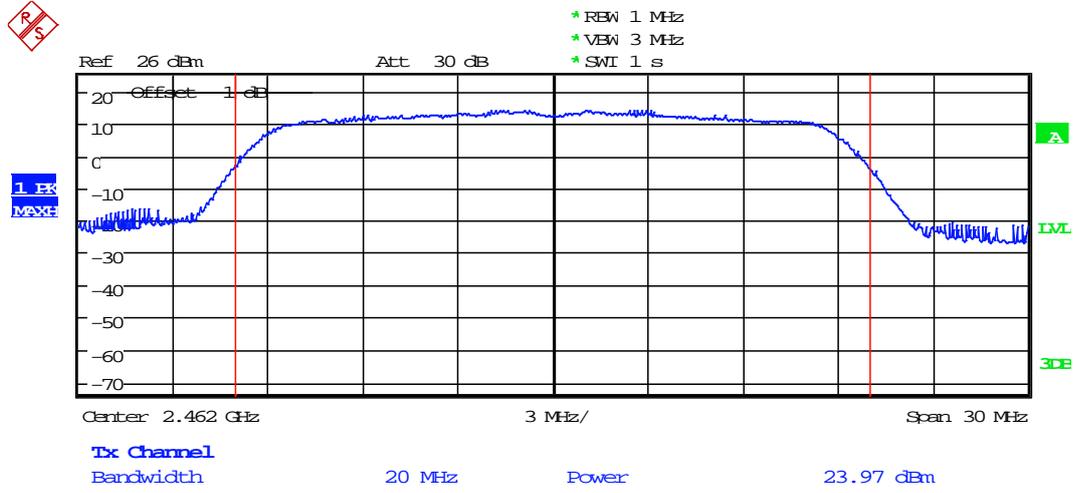
Date: 26.FEB.2014 16:17:23

2.8 11N20_M



Date: 26.FEB.2014 16:18:07

2.9 11N20_H



Date: 26.FEB.2014 16:18:39

Appendix C: Average Power

Test Mode	Test Channel	Frequency[MHz]	Average Power
11B	L	2412	16.11
11B	M	2437	16.22
11B	H	2462	16.33
11G	L	2412	13.79
11G	M	2437	15.96
11G	H	2462	14.18
11N20	L	2412	13.74
11N20	M	2437	14.81
11N20	H	2462	14.16

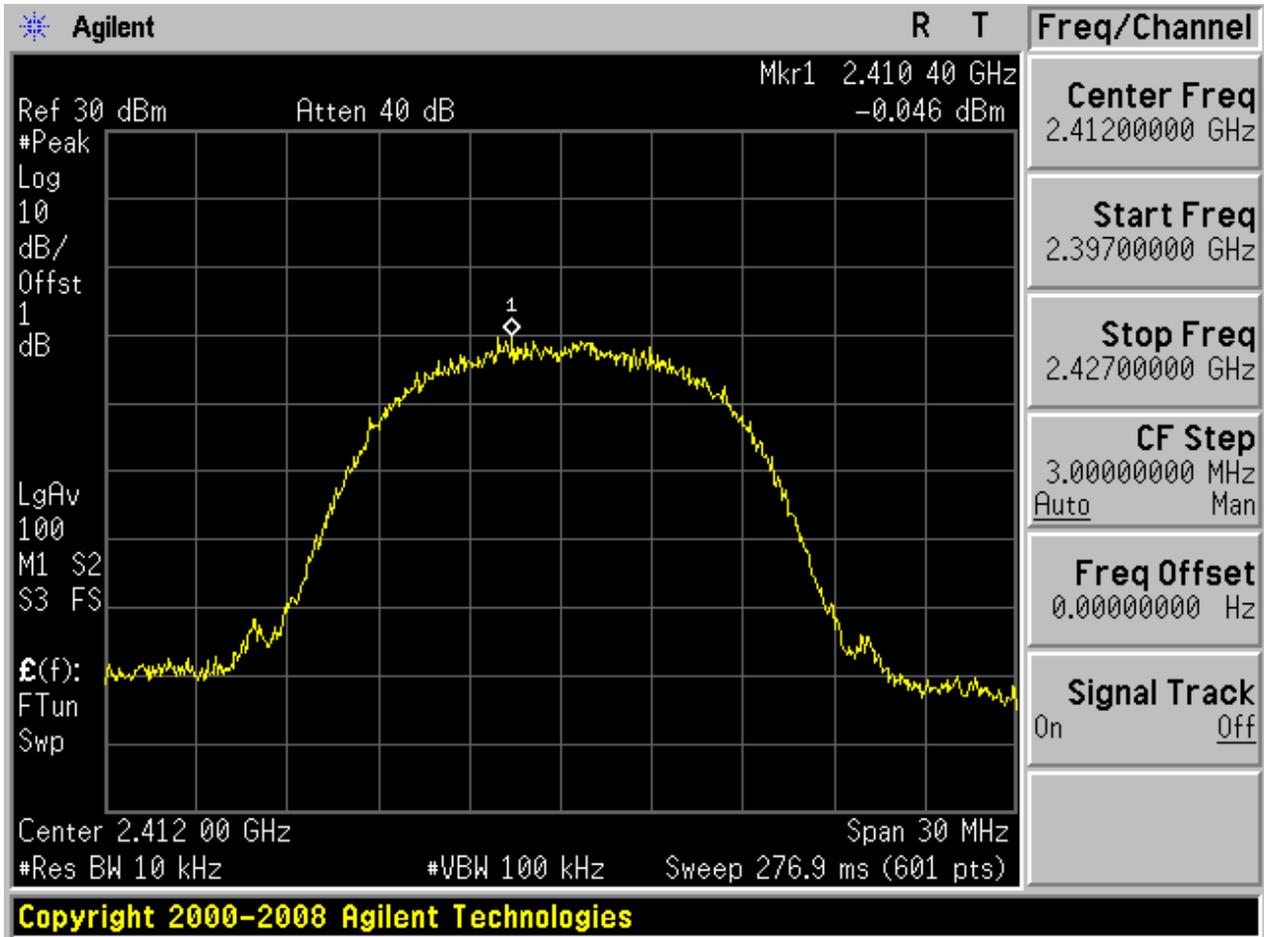
Appendix D: Maximum Power Spectral Density Level

Part I - Test Results

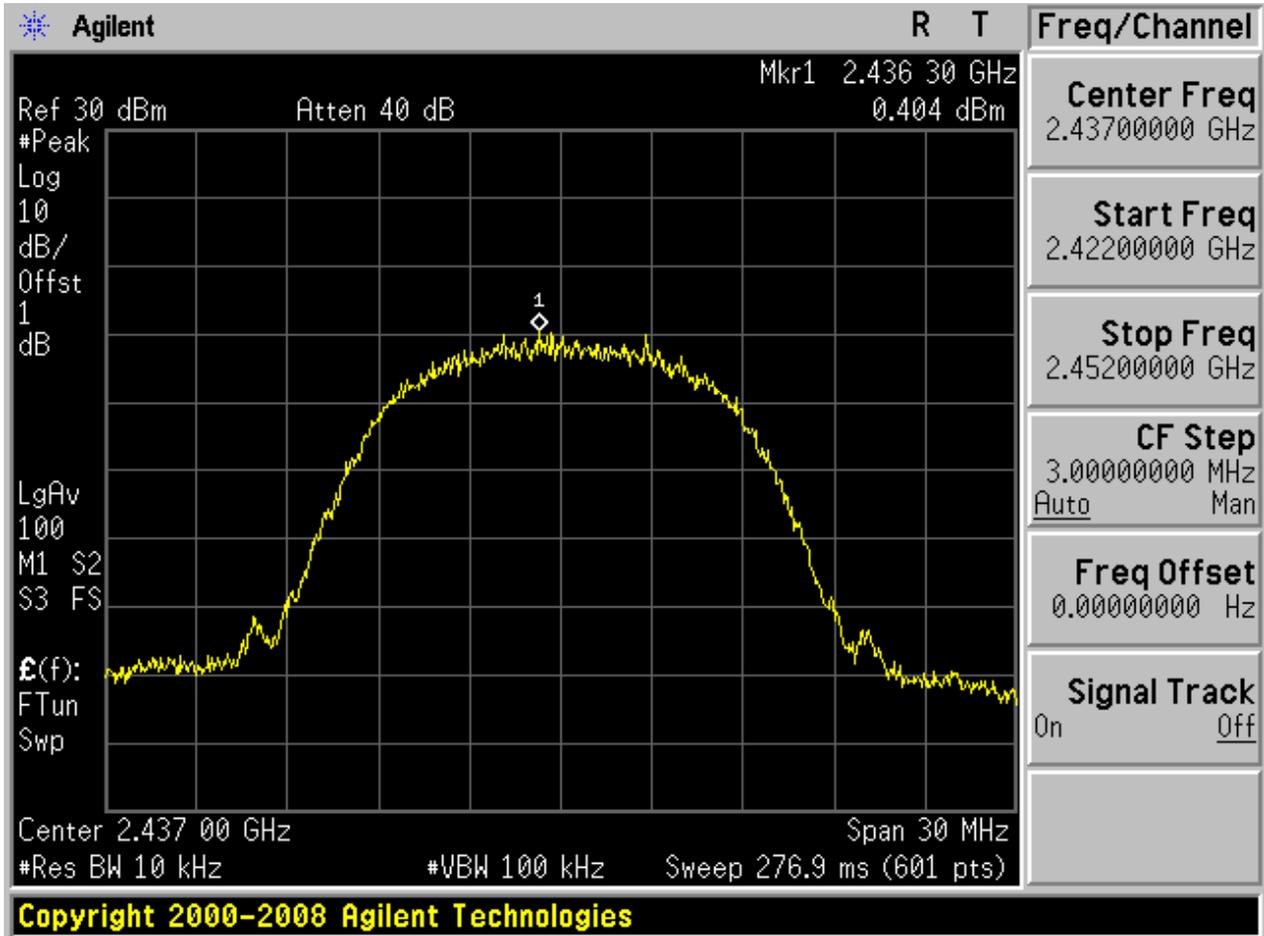
Test Mode	Test Channel	Frequency[MHz]	PD[MHz]	Verdict
11B	L	2412	-0.05	pass
11B	M	2437	0.40	pass
11B	H	2462	-0.64	pass
11G	L	2412	-2.89	pass
11G	M	2437	-1.32	pass
11G	H	2462	-2.39	pass
11N20	L	2412	-3.62	pass
11N20	M	2437	-1.96	pass
11N20	H	2462	-2.92	pass

Part II - Test Plots

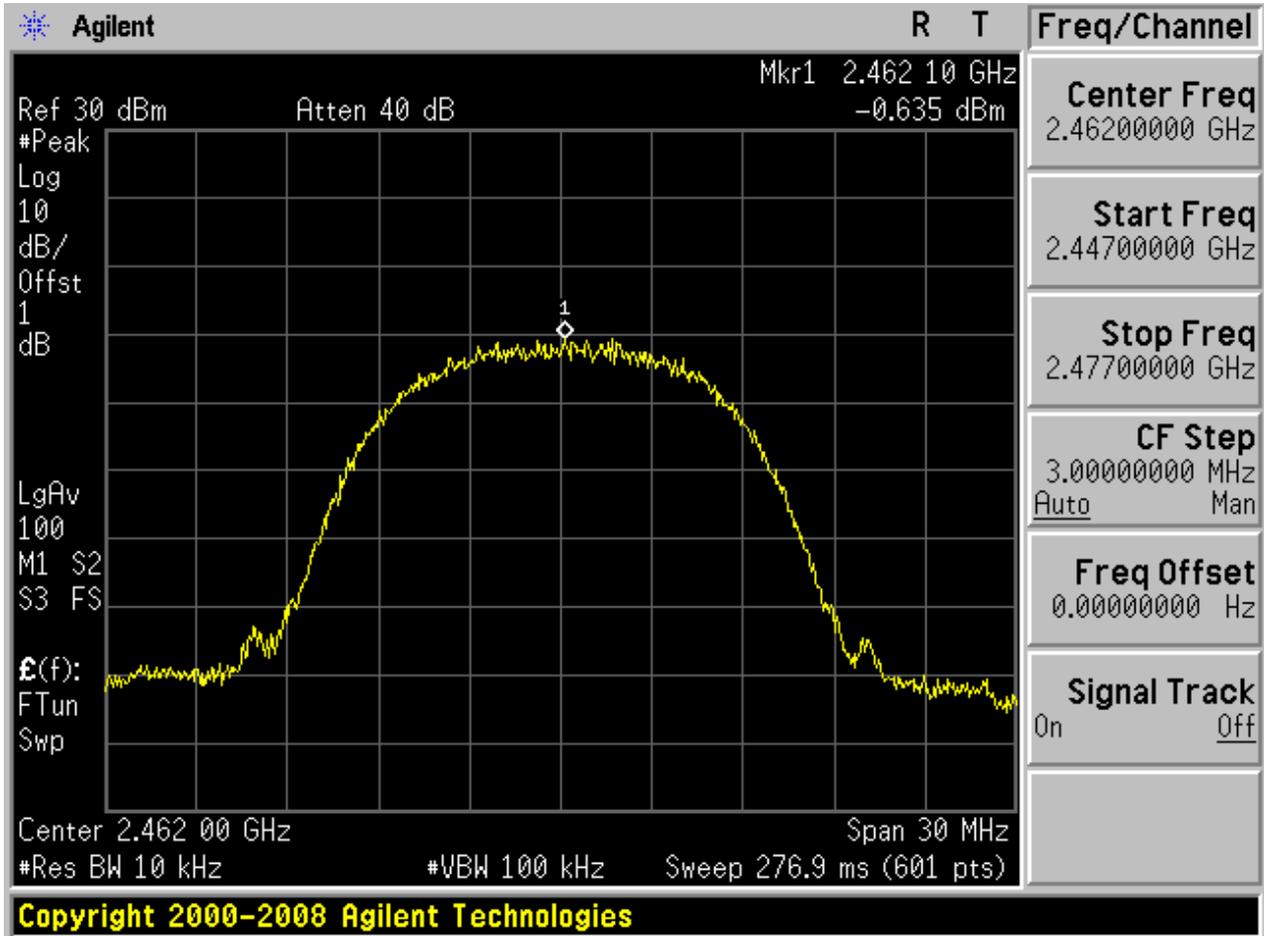
2.1 11B_L



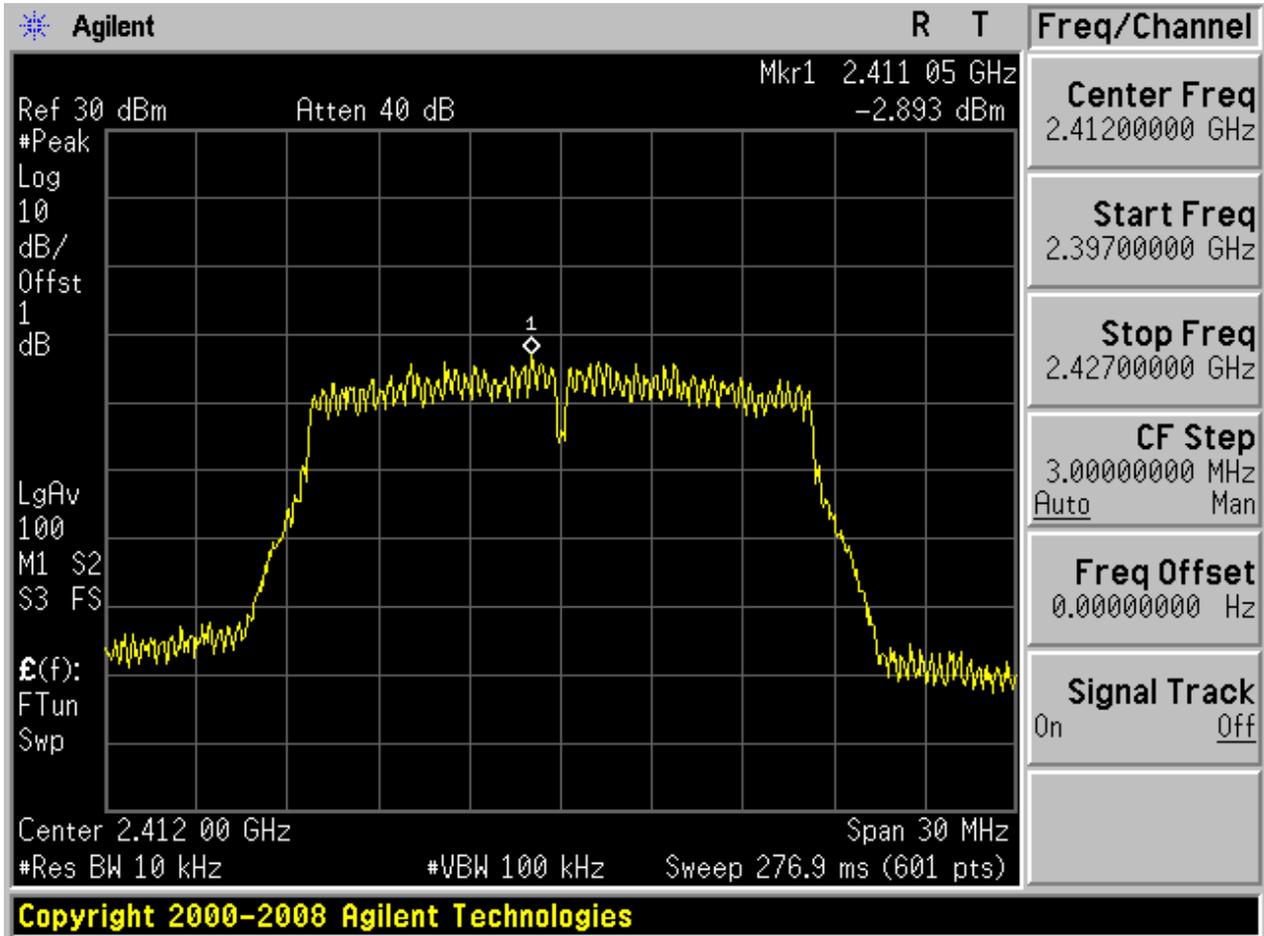
2.2 11B_M



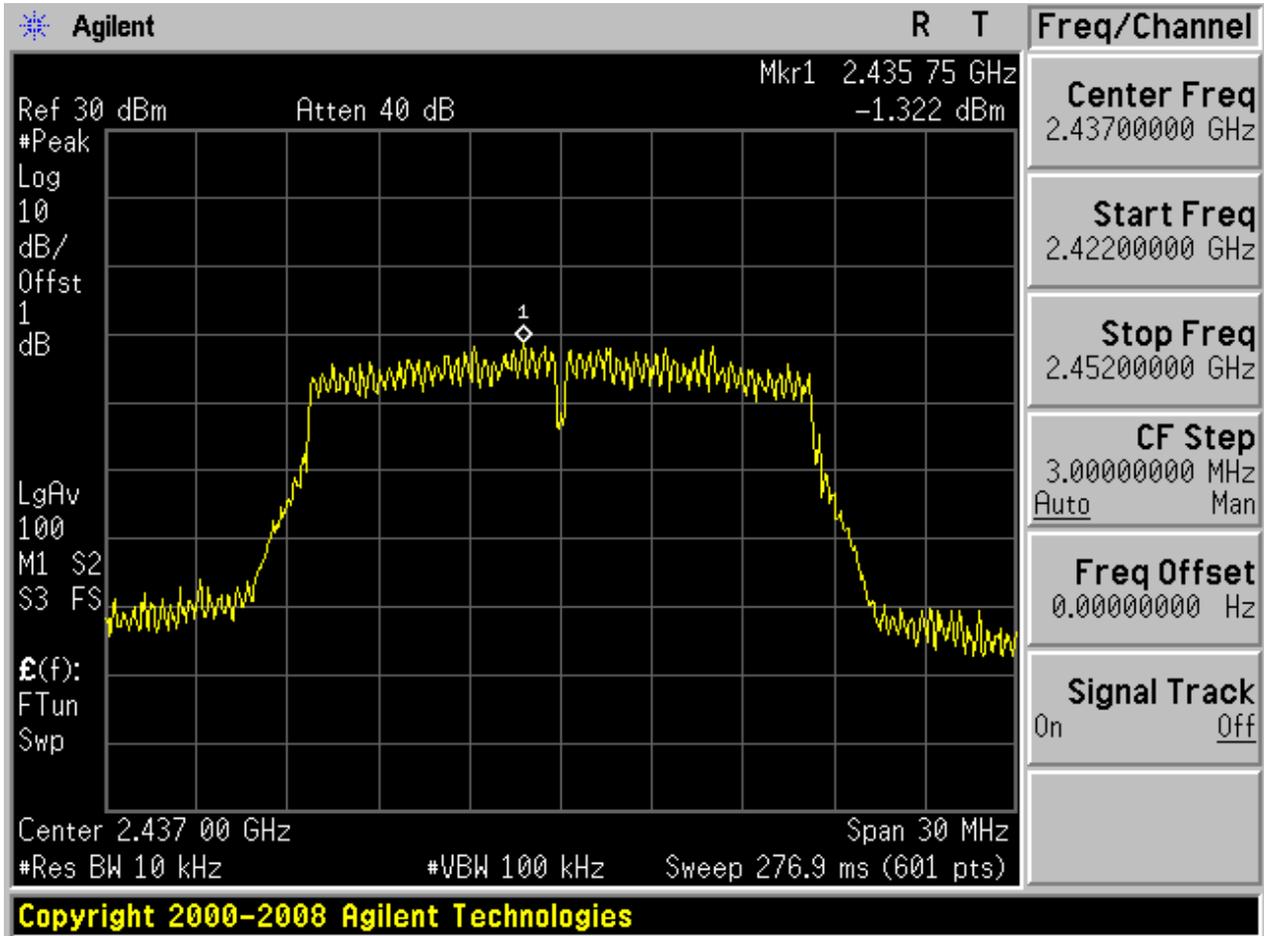
2.3 11B_H



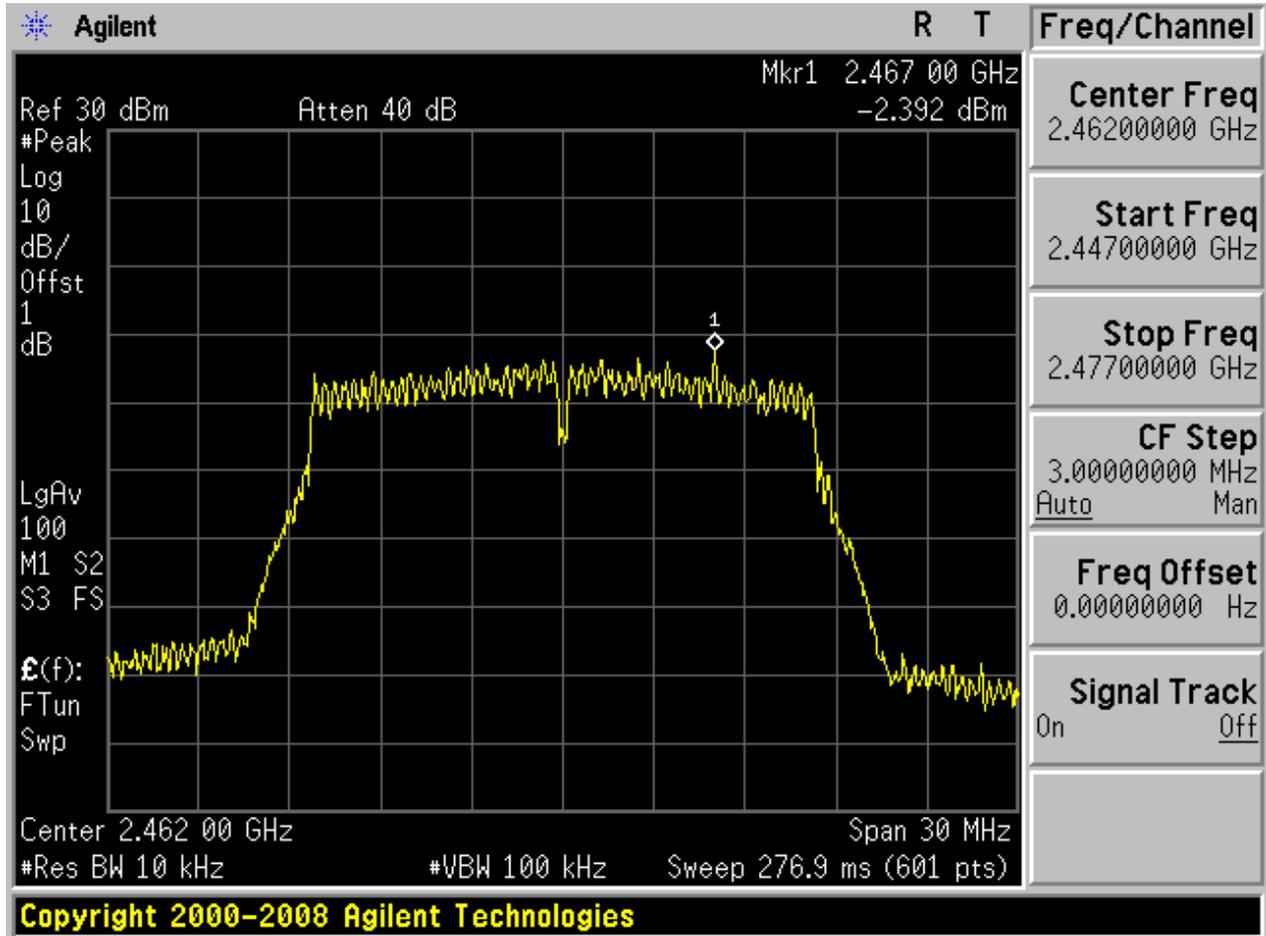
2.4 11G_L



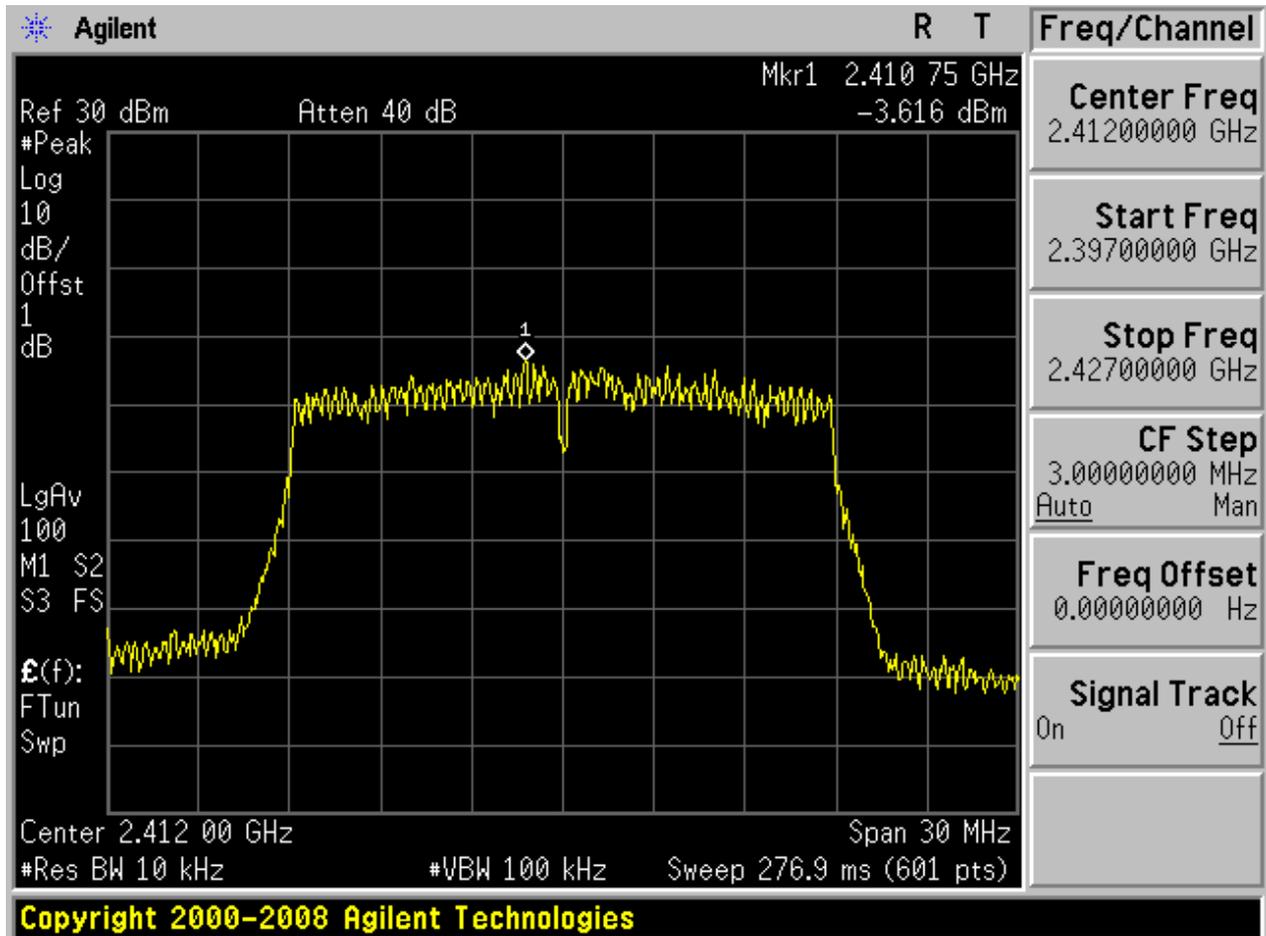
2.5 11G_M



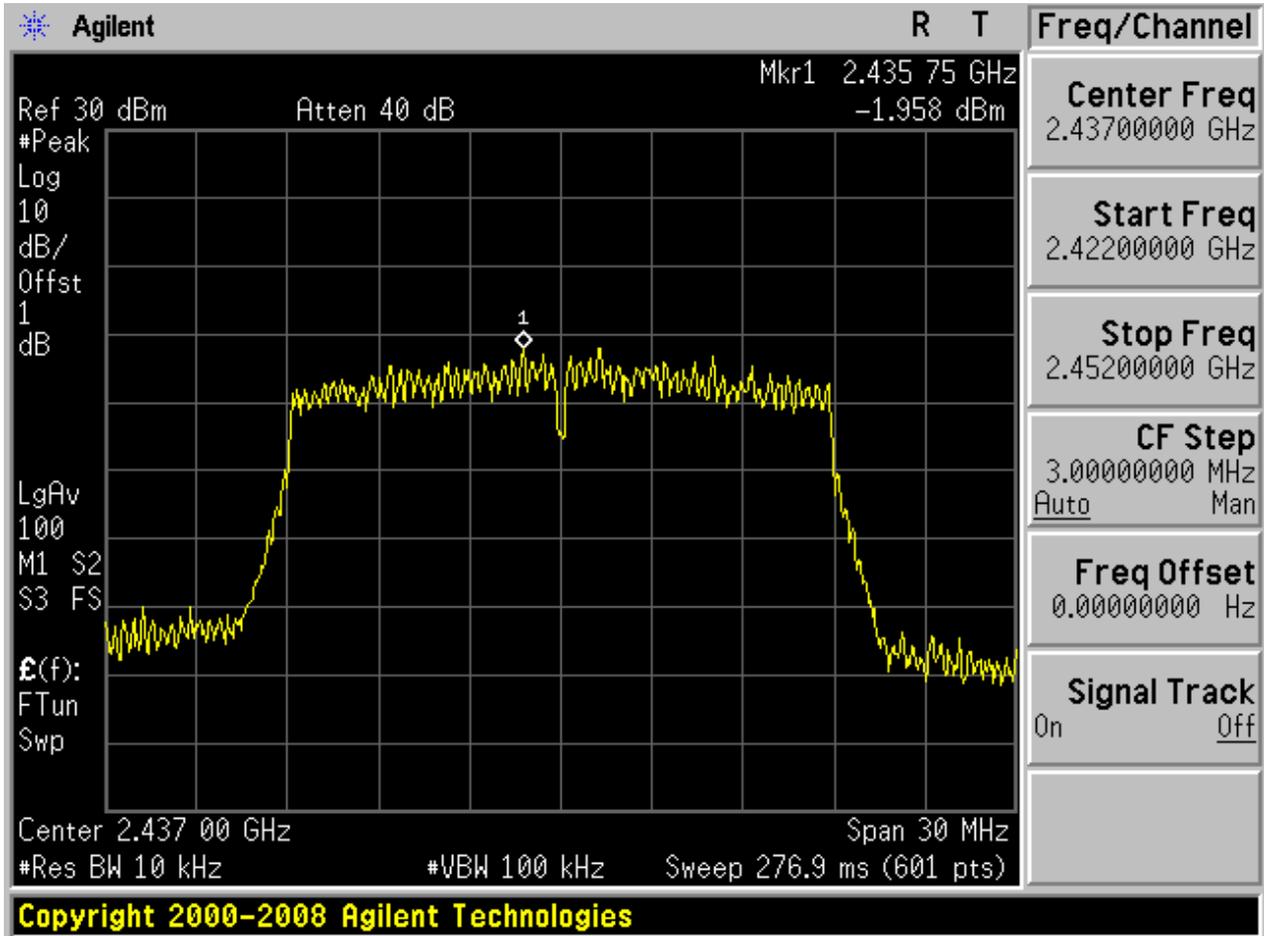
2.6 11G_H



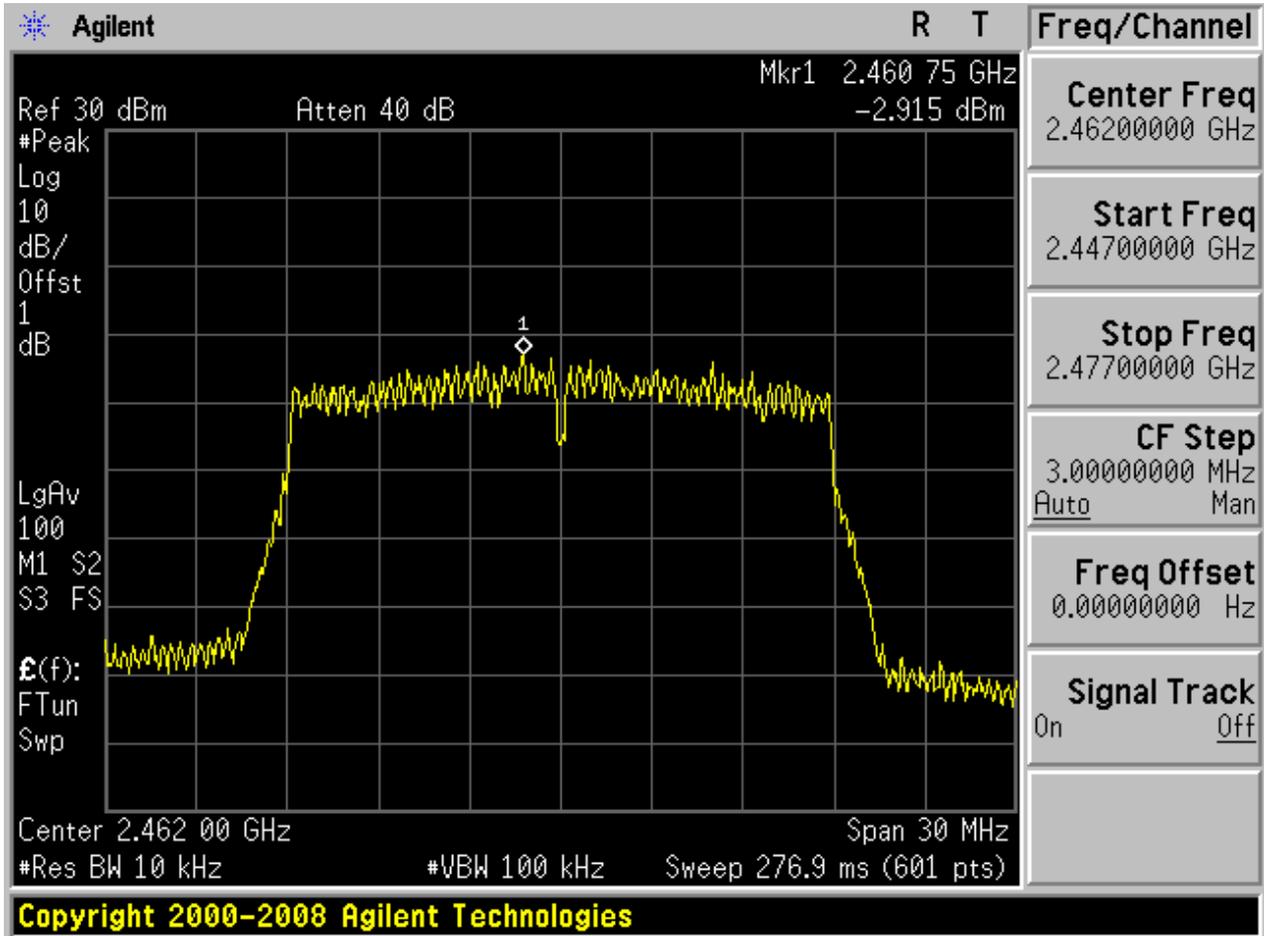
2.7 11N20_L



2.8 11N20_M



2.9 11N20_H



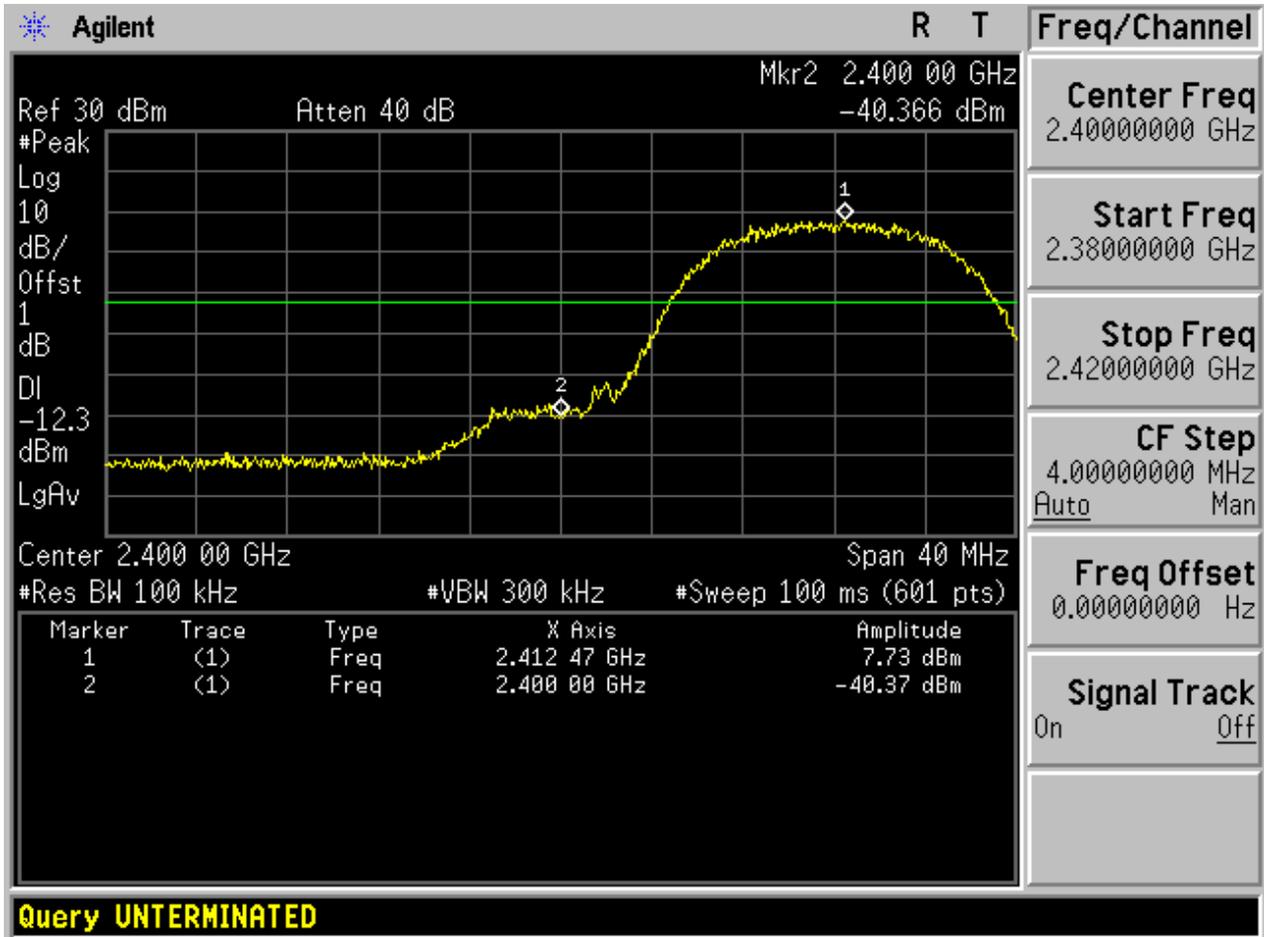
Appendix E: Band Edges Compliance

Part I - Test Results

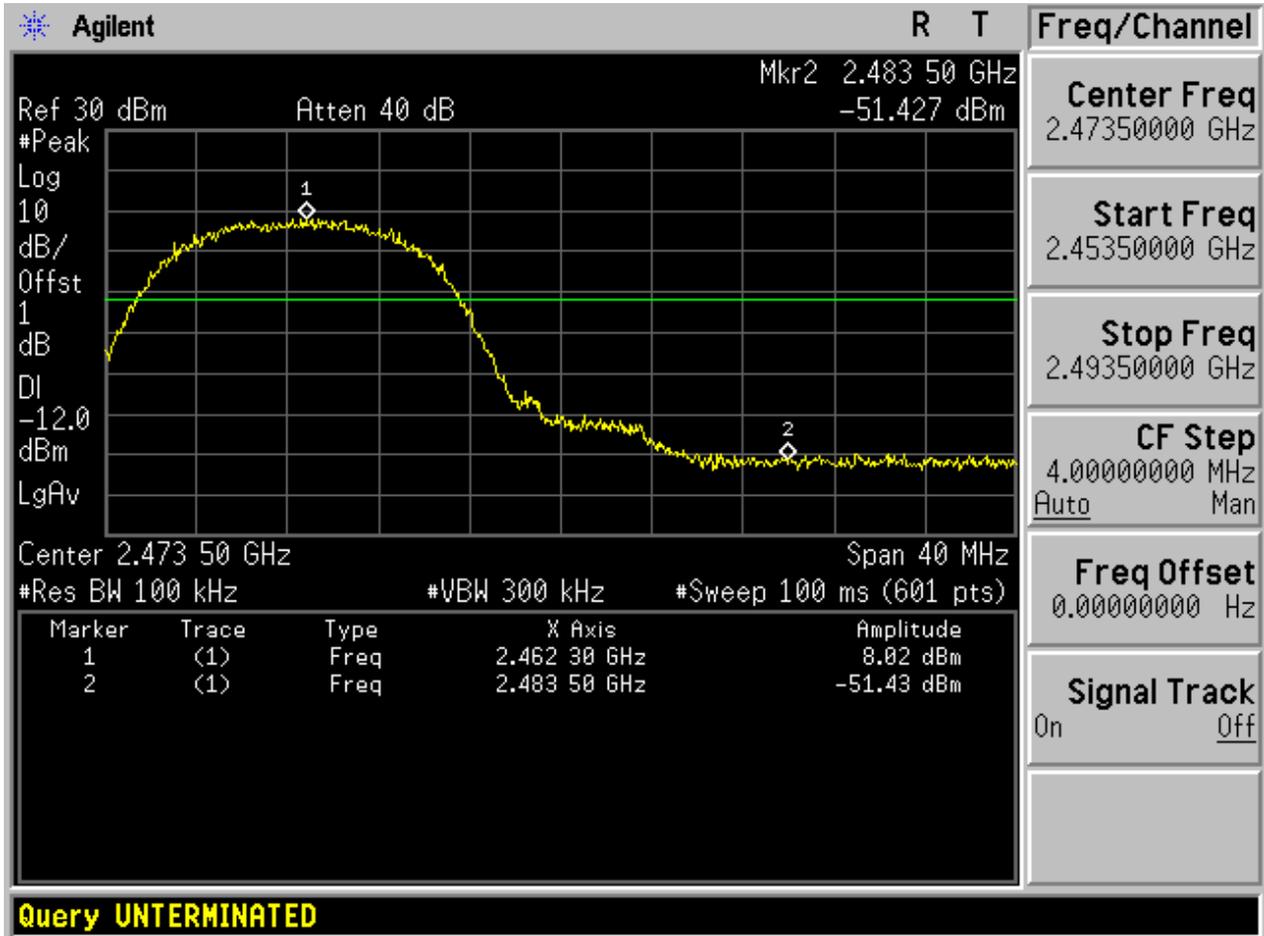
Test Mode	Test Channel	Frequency[MHz]	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
11B	L	2412	7.73	-40.37	pass
11B	H	2462	8.02	-51.43	pass
11G	L	2412	4.94	-32.38	pass
11G	H	2462	5.26	-46.20	pass
11N20	L	2412	4.86	-31.55	pass
11N20	H	2462	5.25	-47.02	pass

Part II - Test Plots

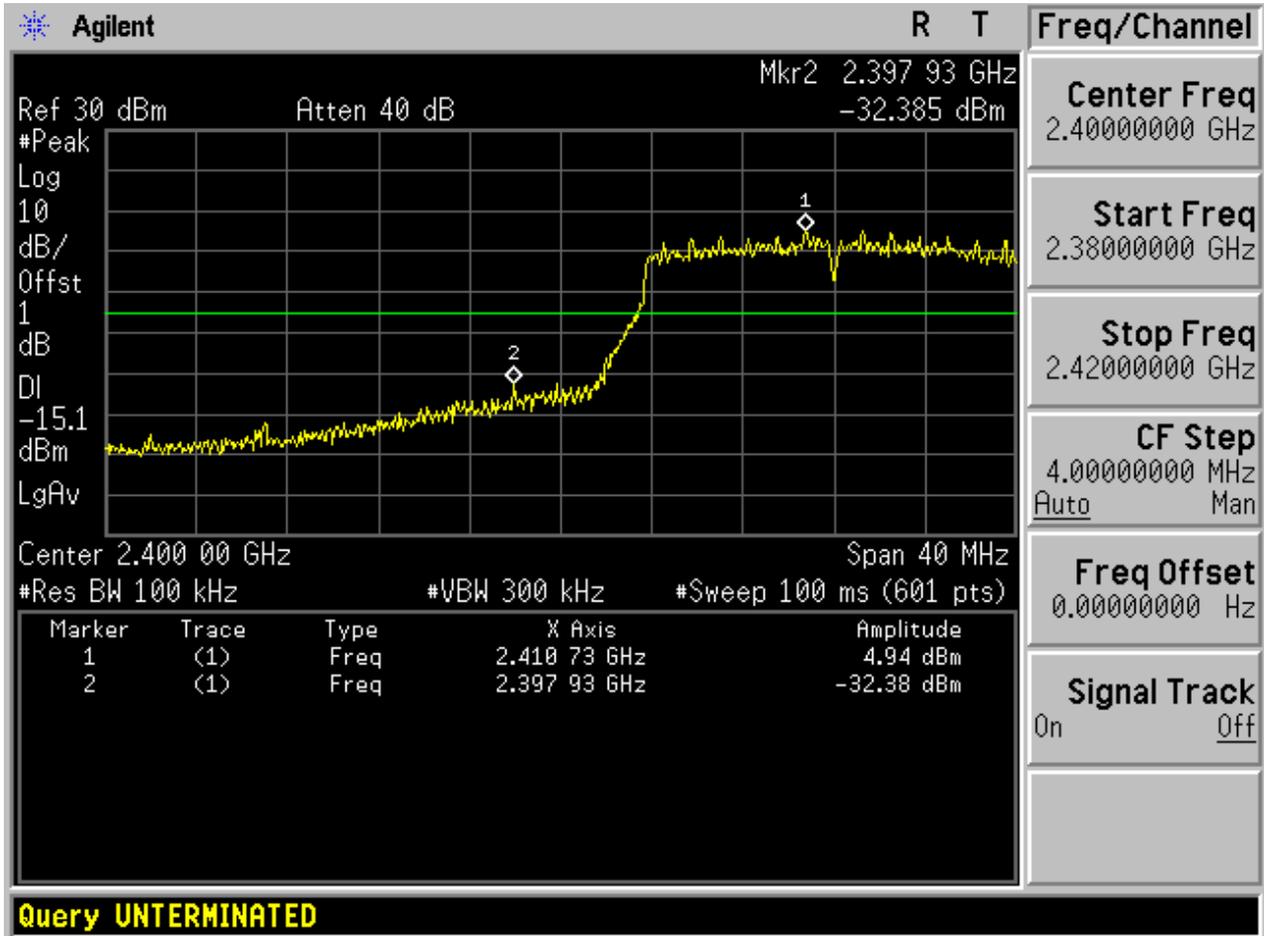
2.1 11B_L



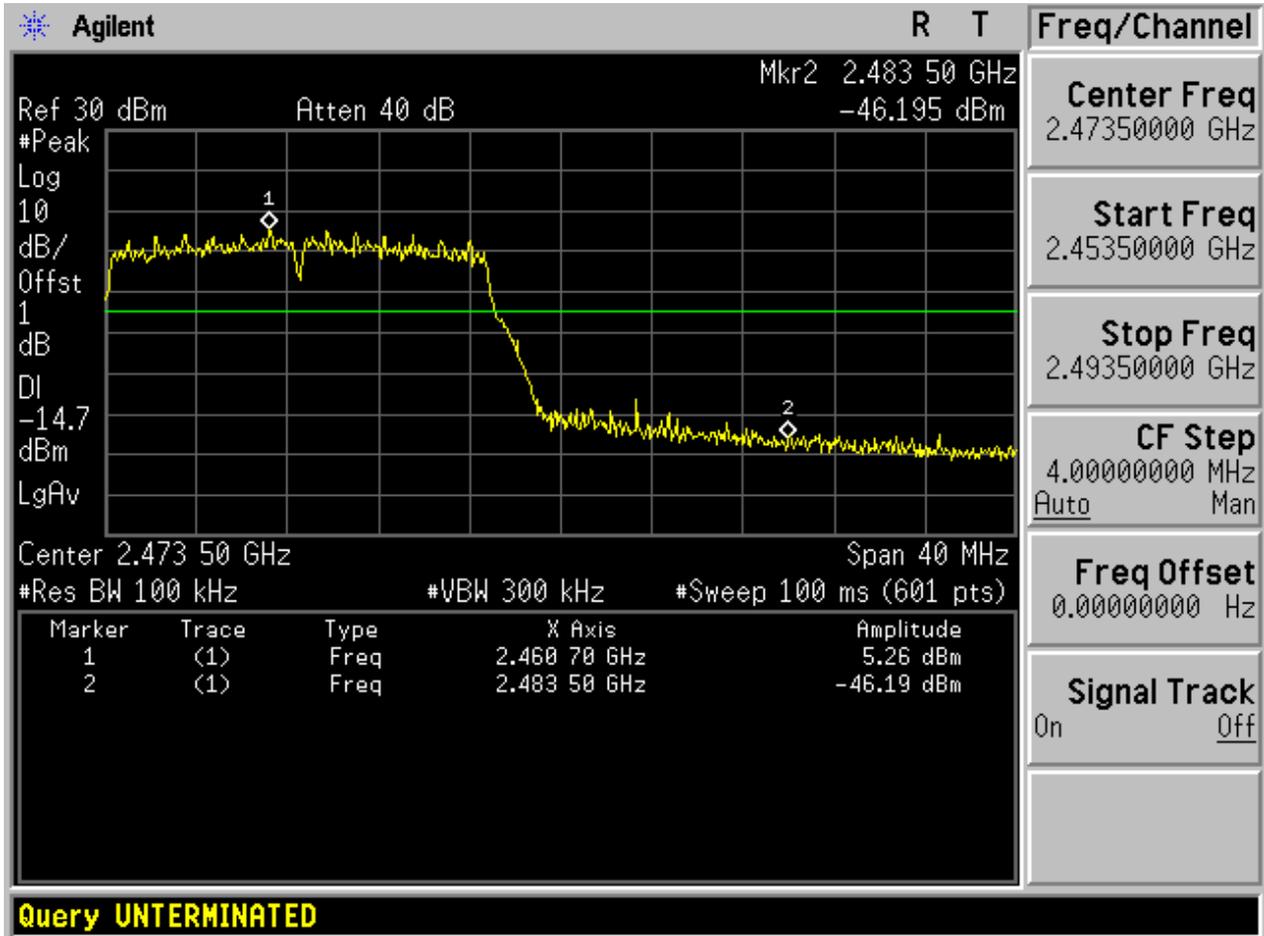
2.2 11B_H



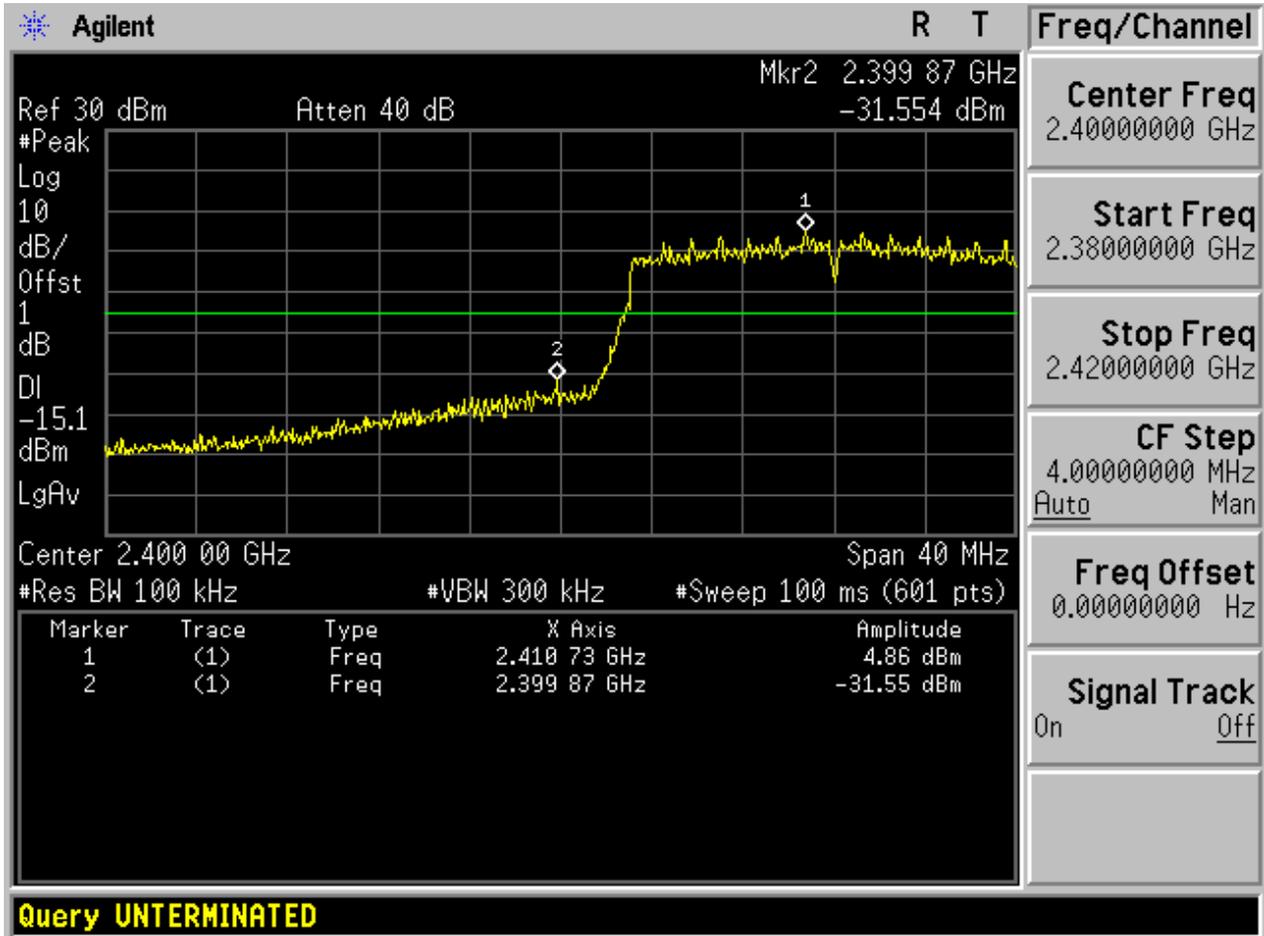
2.3 11G_L



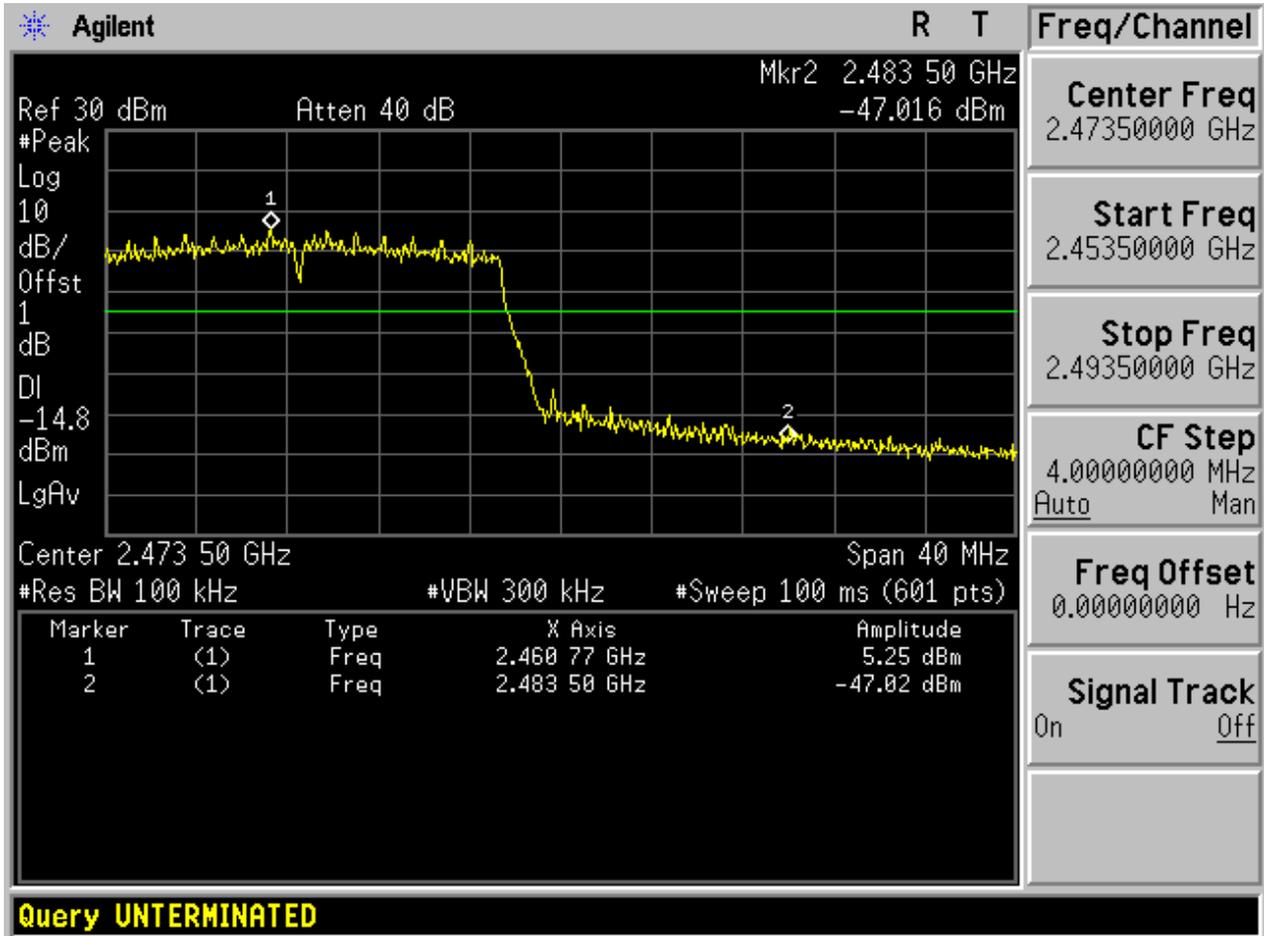
2.4 11G_H



2.5 11N20_L



2.6 11N20_H



Appendix F: 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".

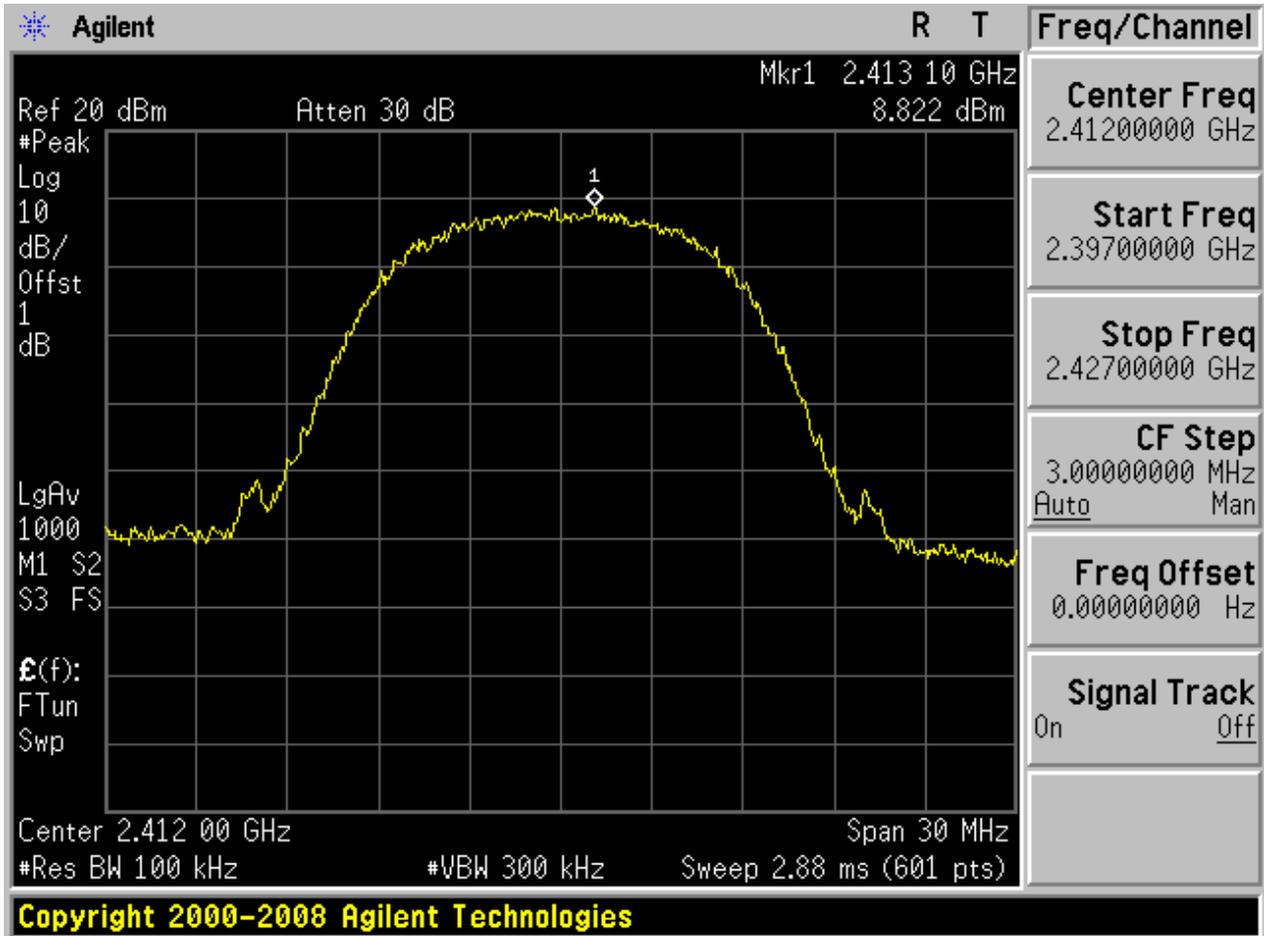
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Pref[dBm]	Puw[dBm]	Verdict
11B	L	2412	8.82	<limit	pass
11B	M	2437	9.42	<limit	pass
11B	H	2462	9.72	<limit	pass
11G	L	2412	5.65	<limit	pass
11G	M	2437	7.67	<limit	pass
11G	H	2462	5.88	<limit	pass
11N20	L	2412	5.49	<limit	pass
11N20	M	2437	6.86	<limit	pass
11N20	H	2462	5.89	<limit	pass

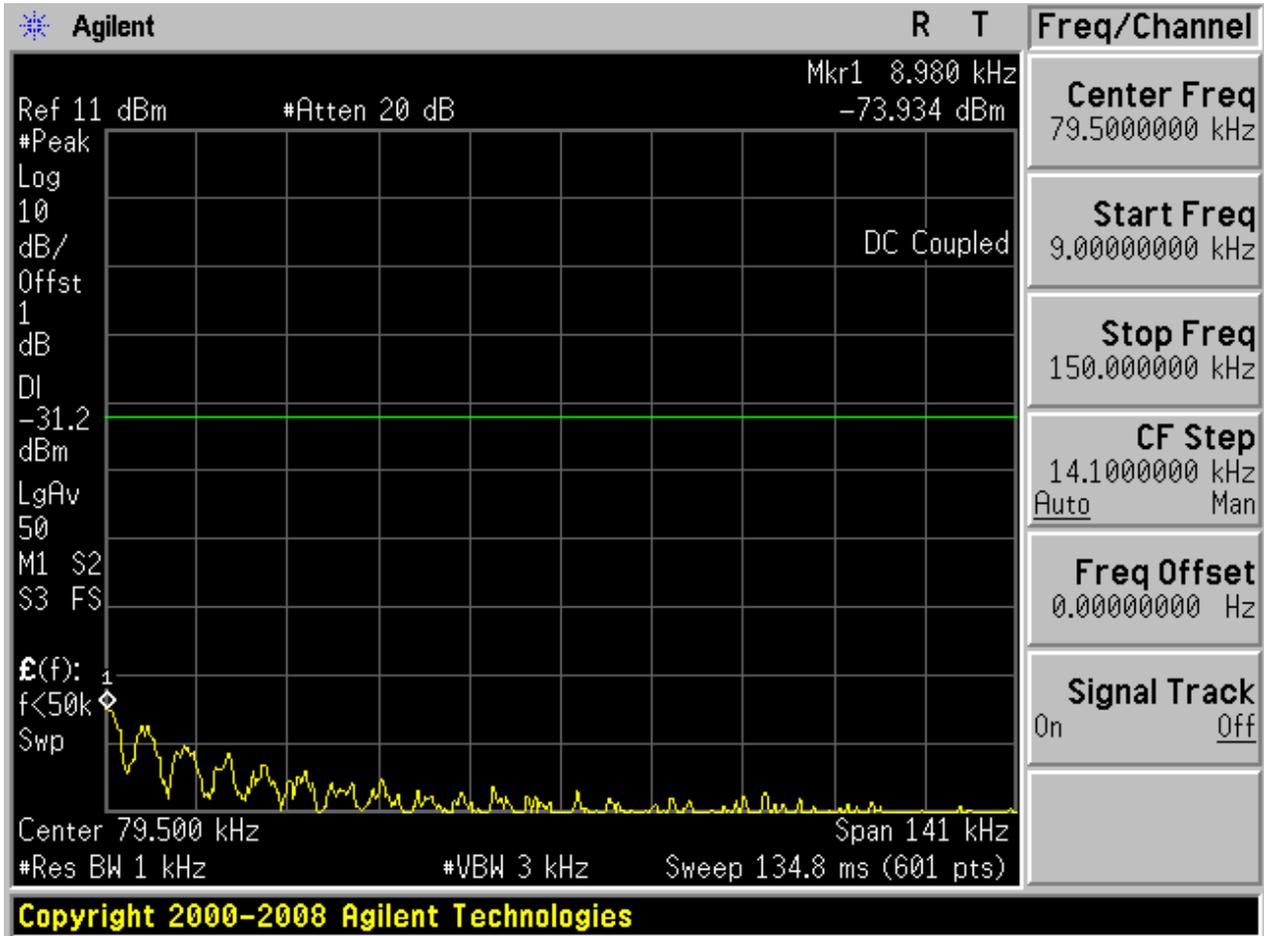
Part II - Test Plots

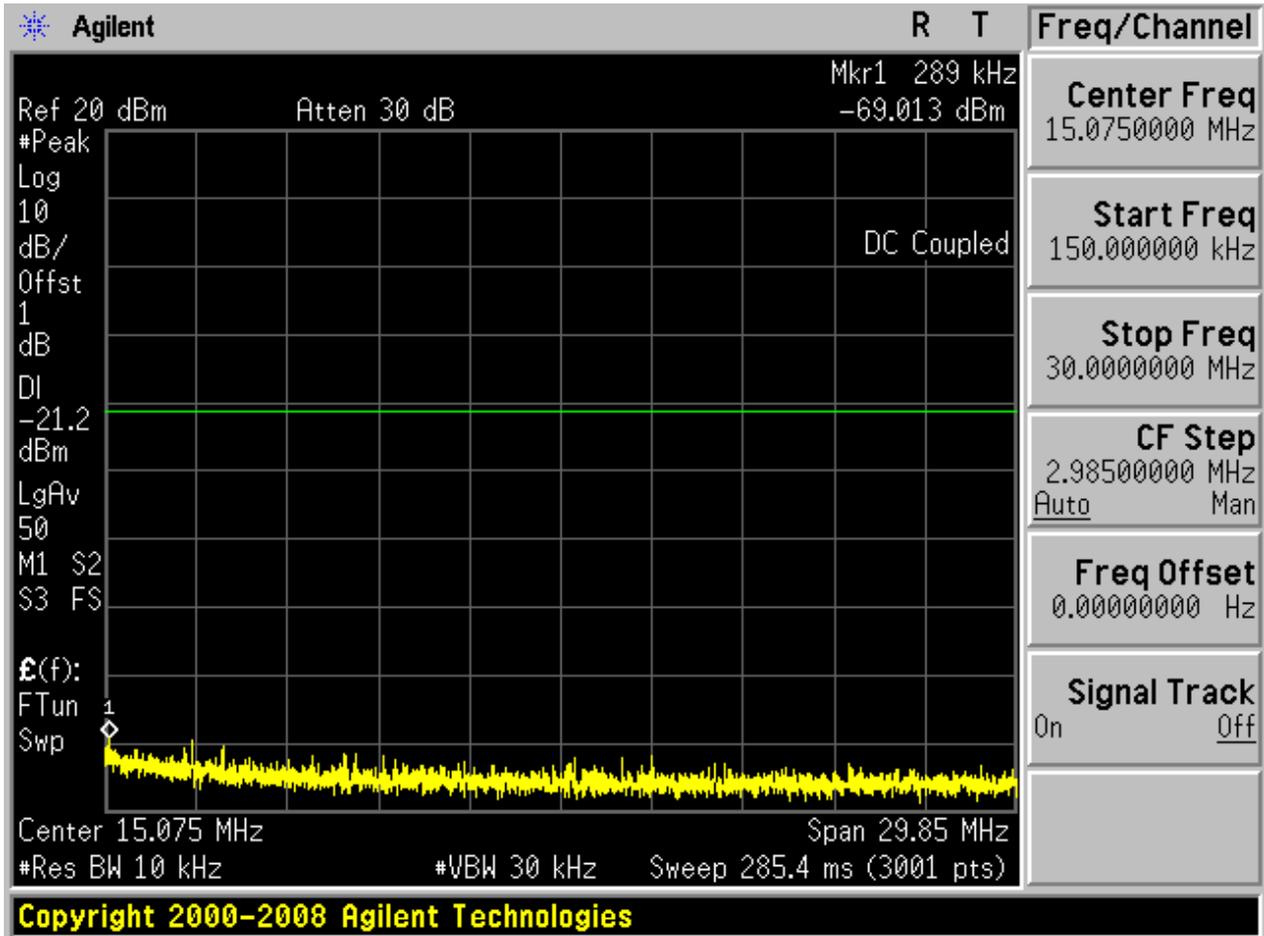
2.1 11B_L

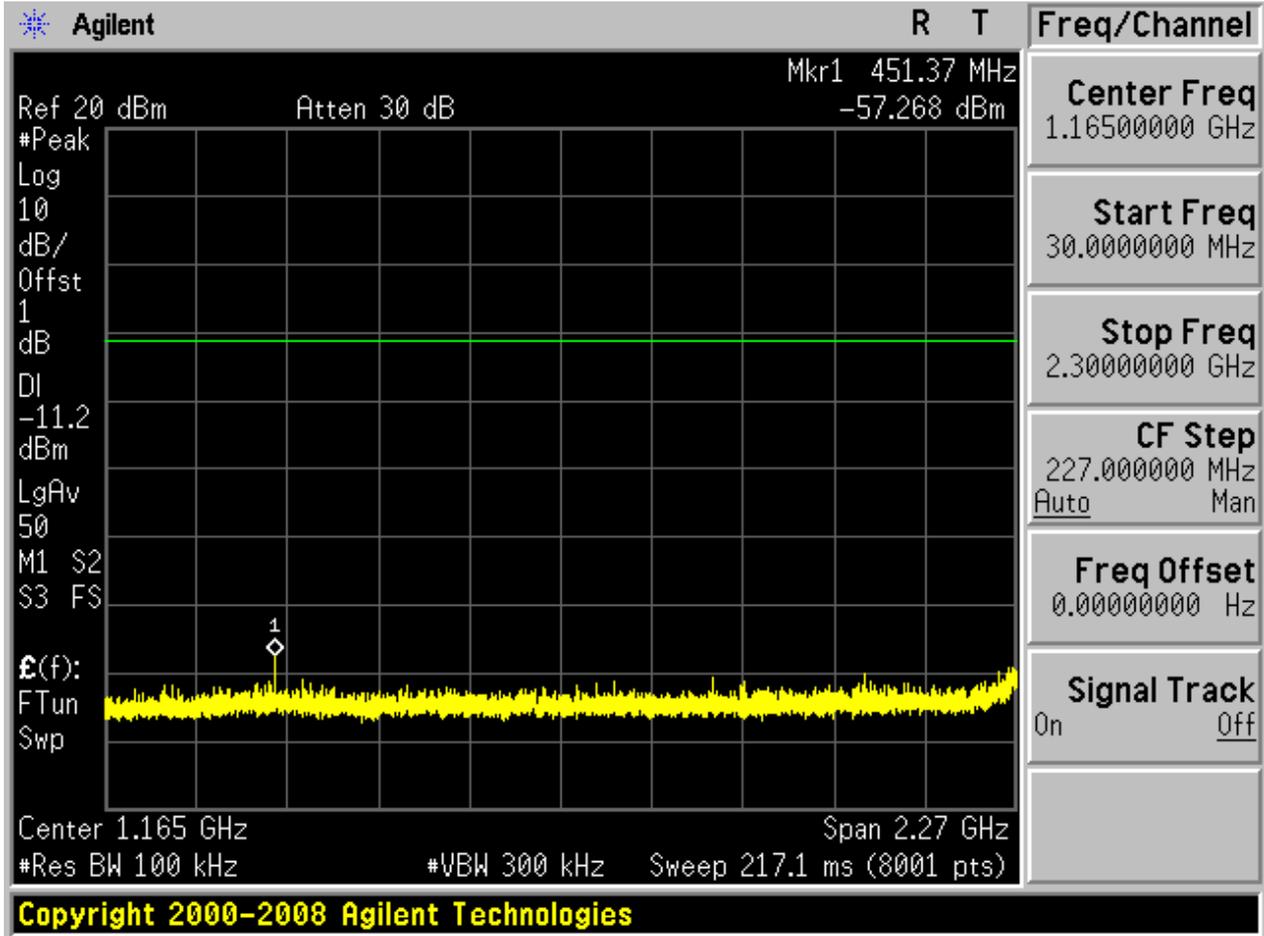
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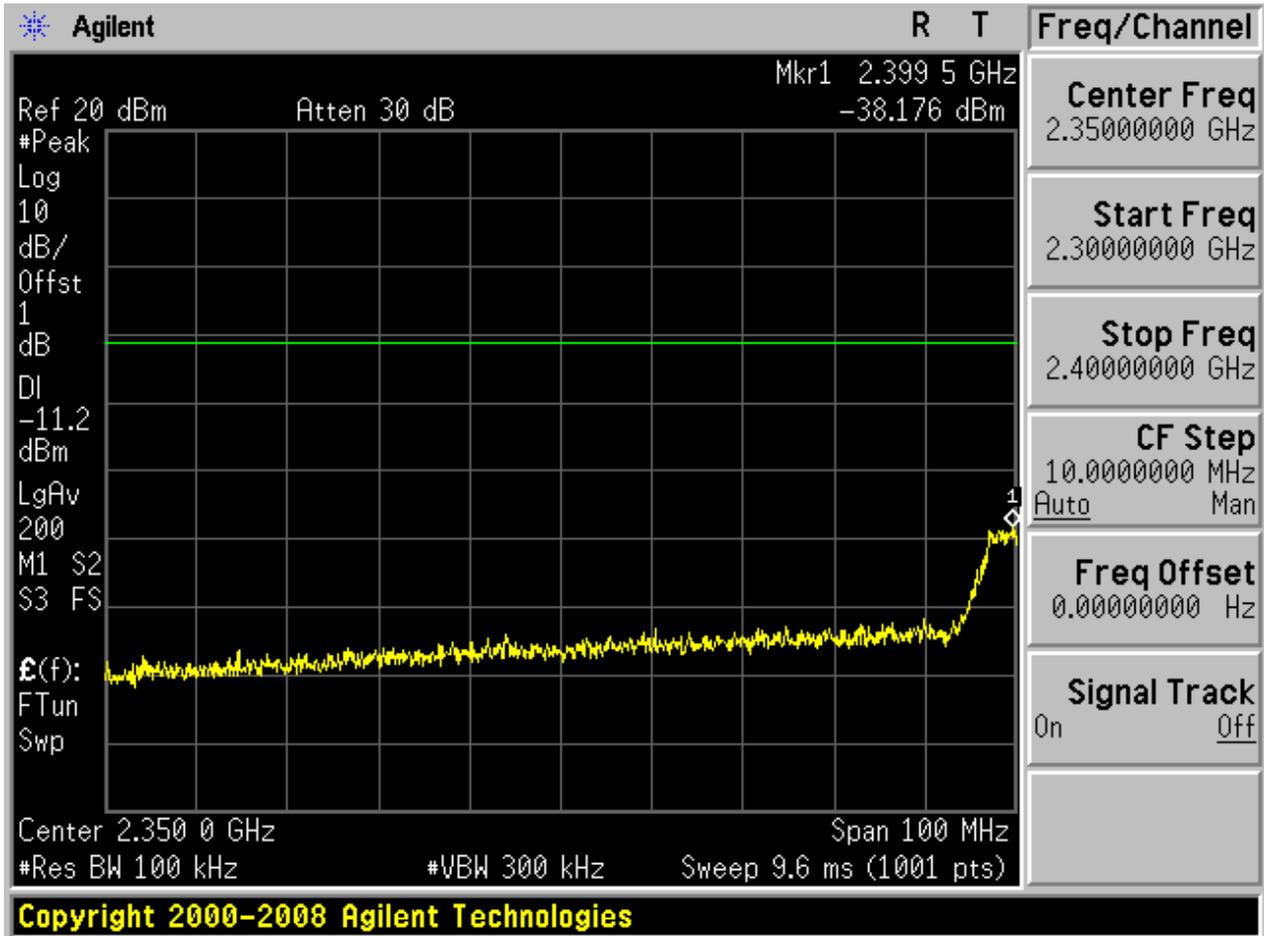


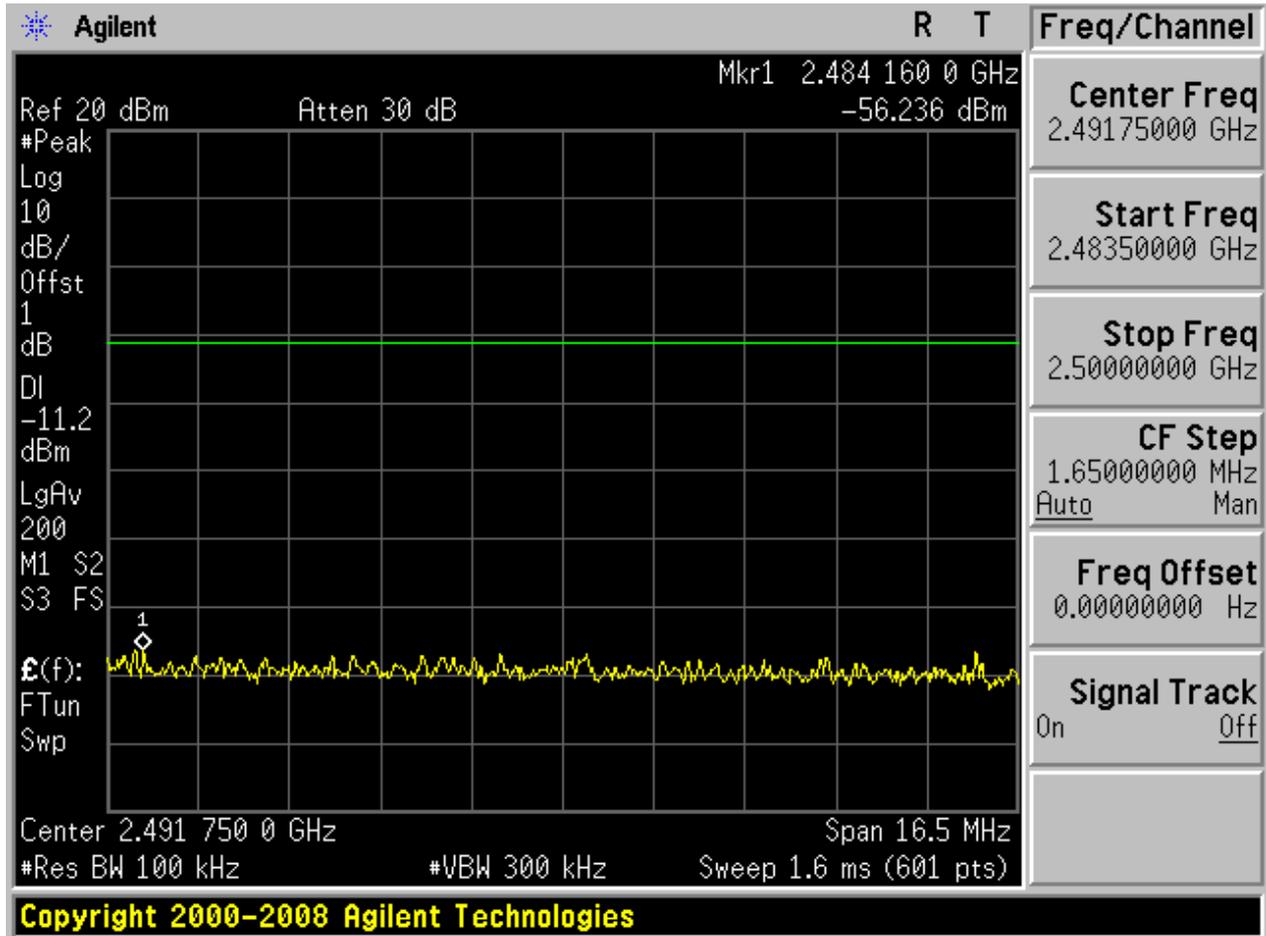
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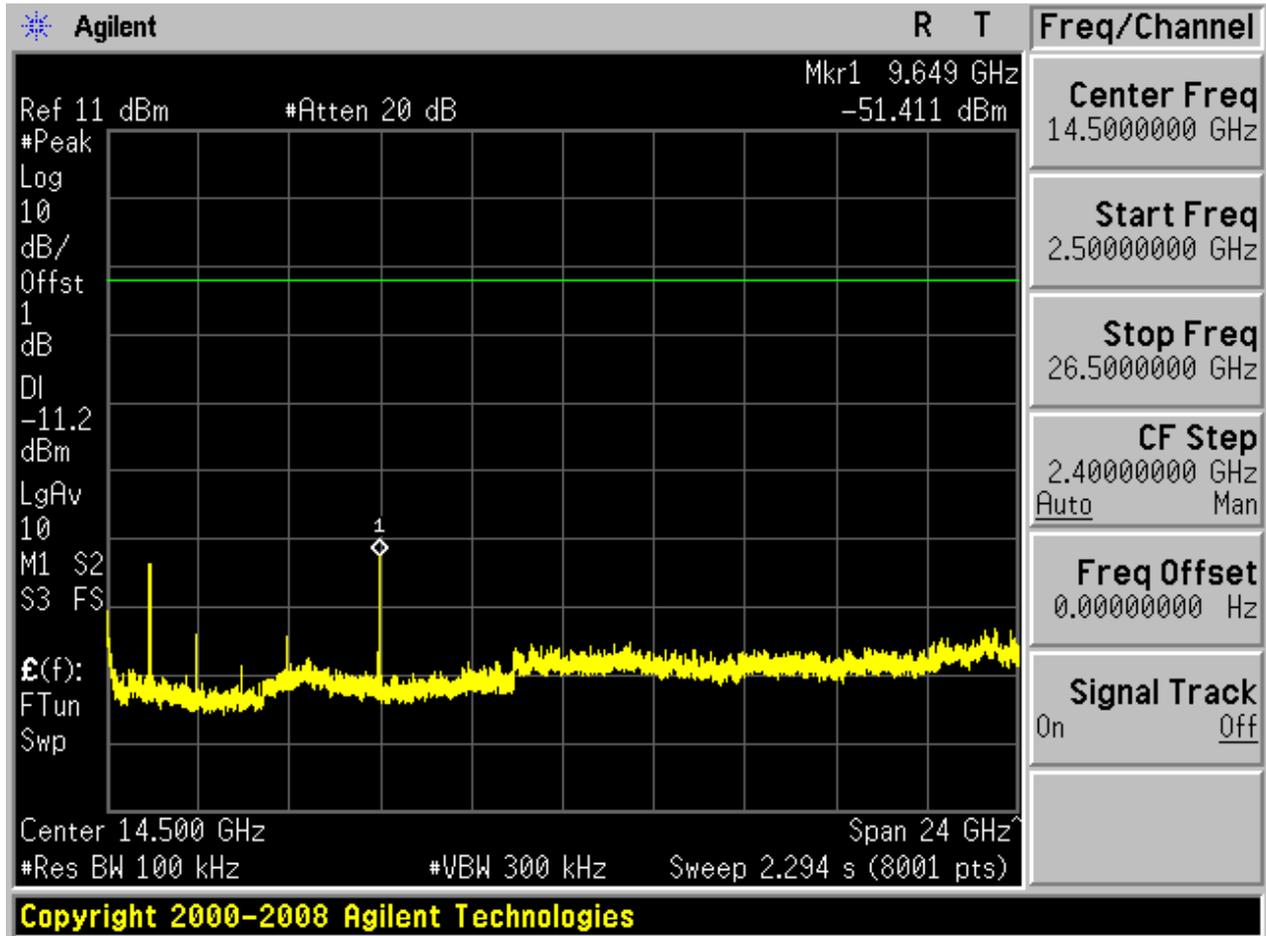






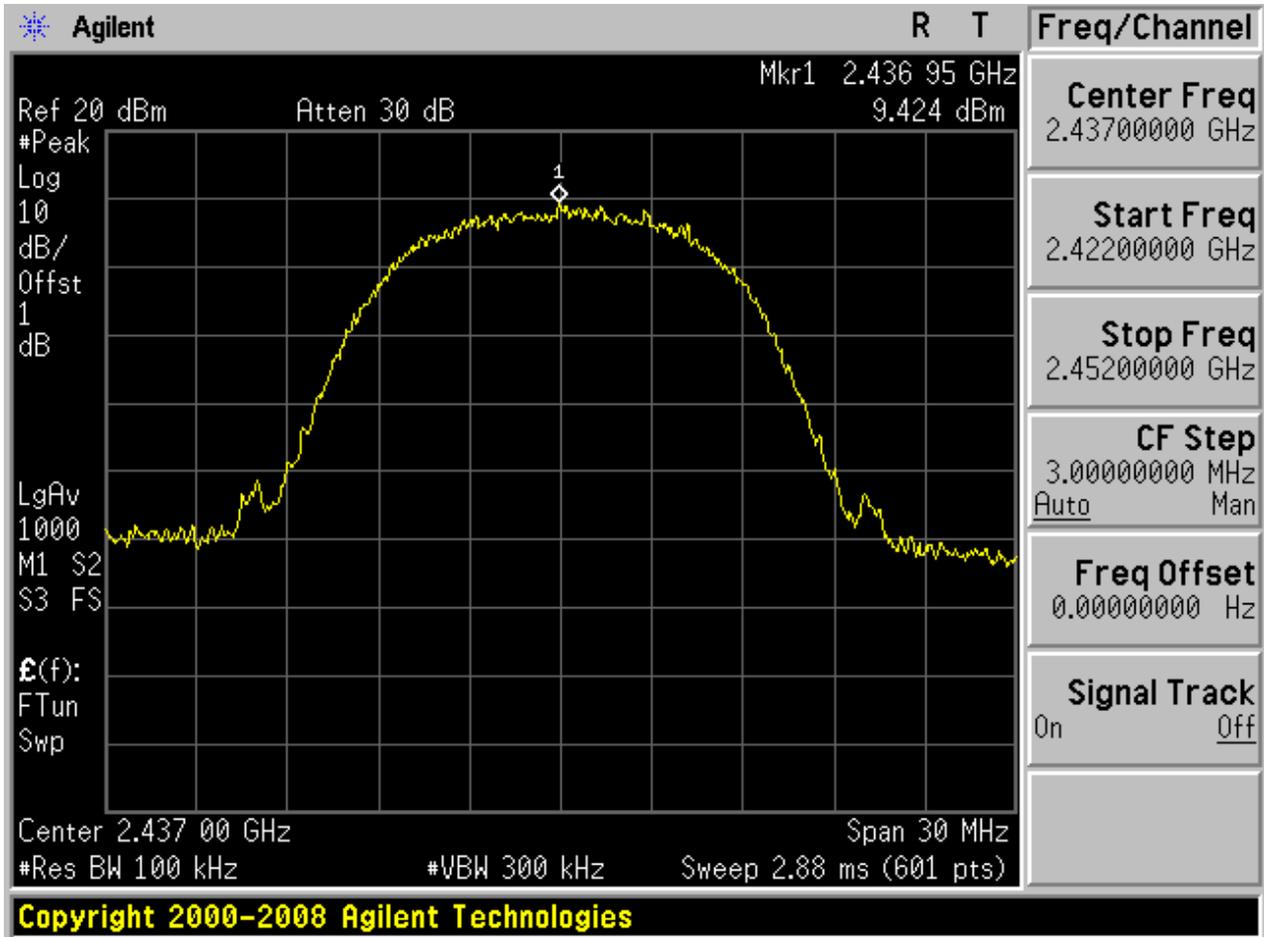




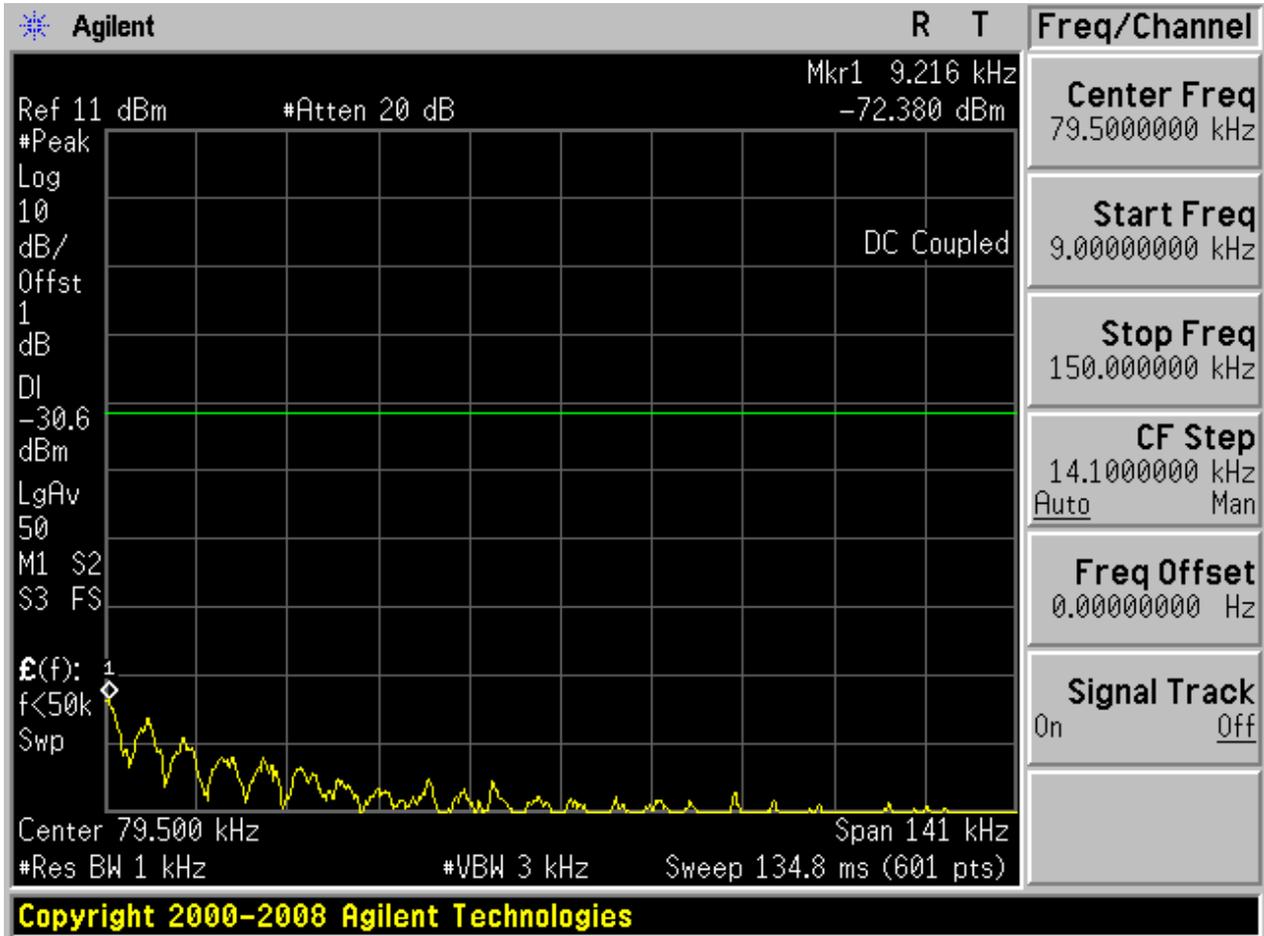


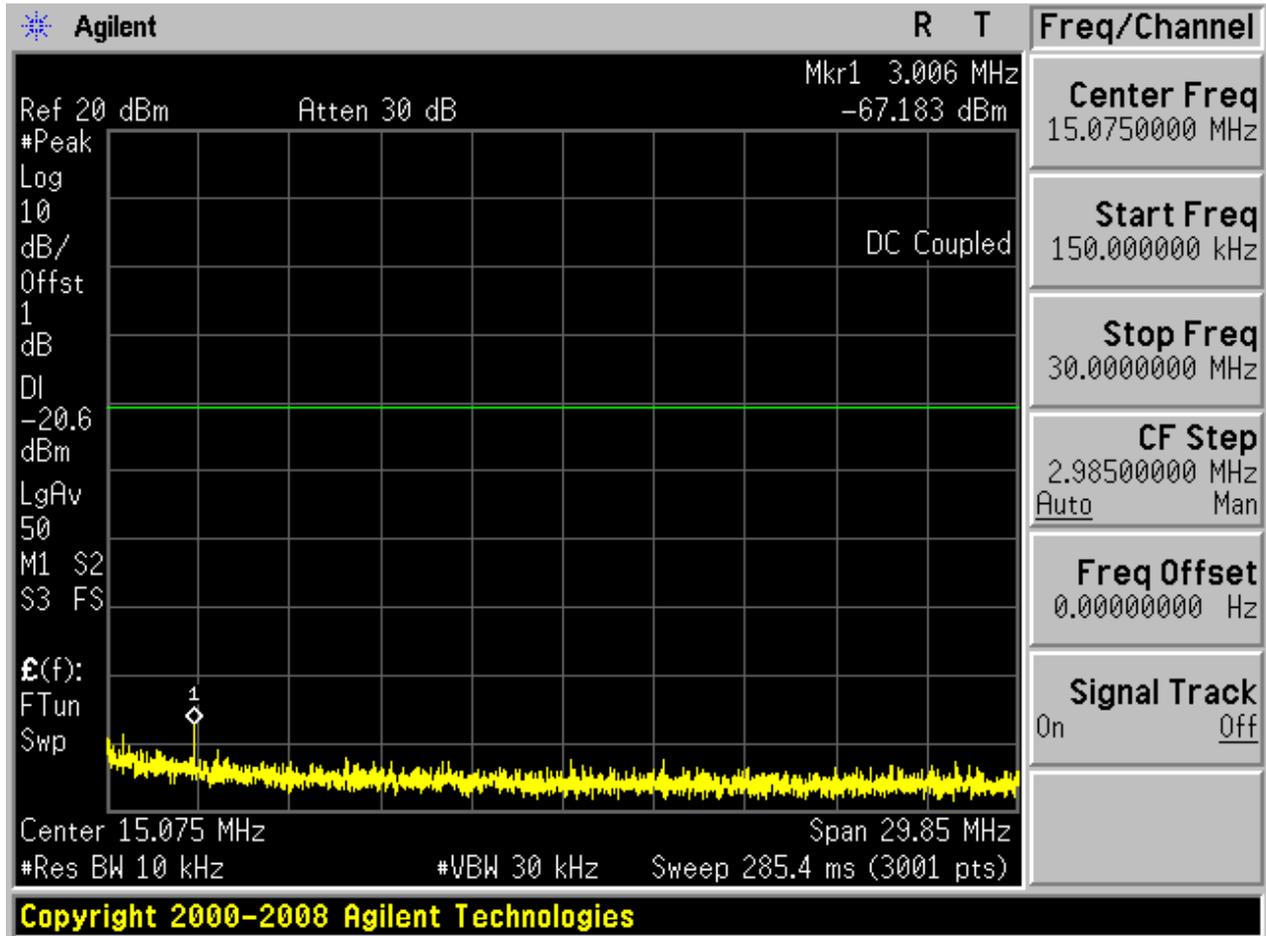
2.2 11B_M

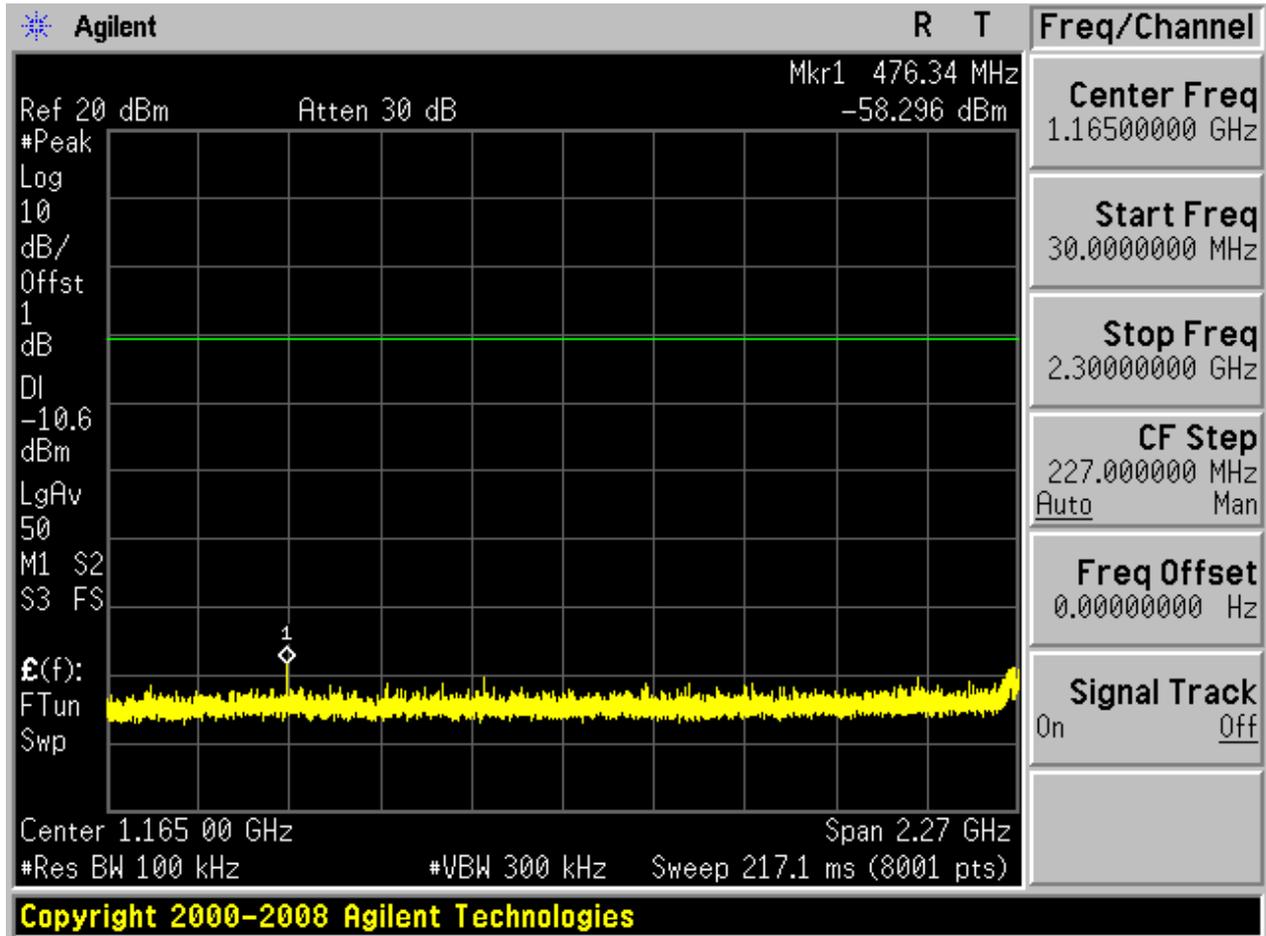
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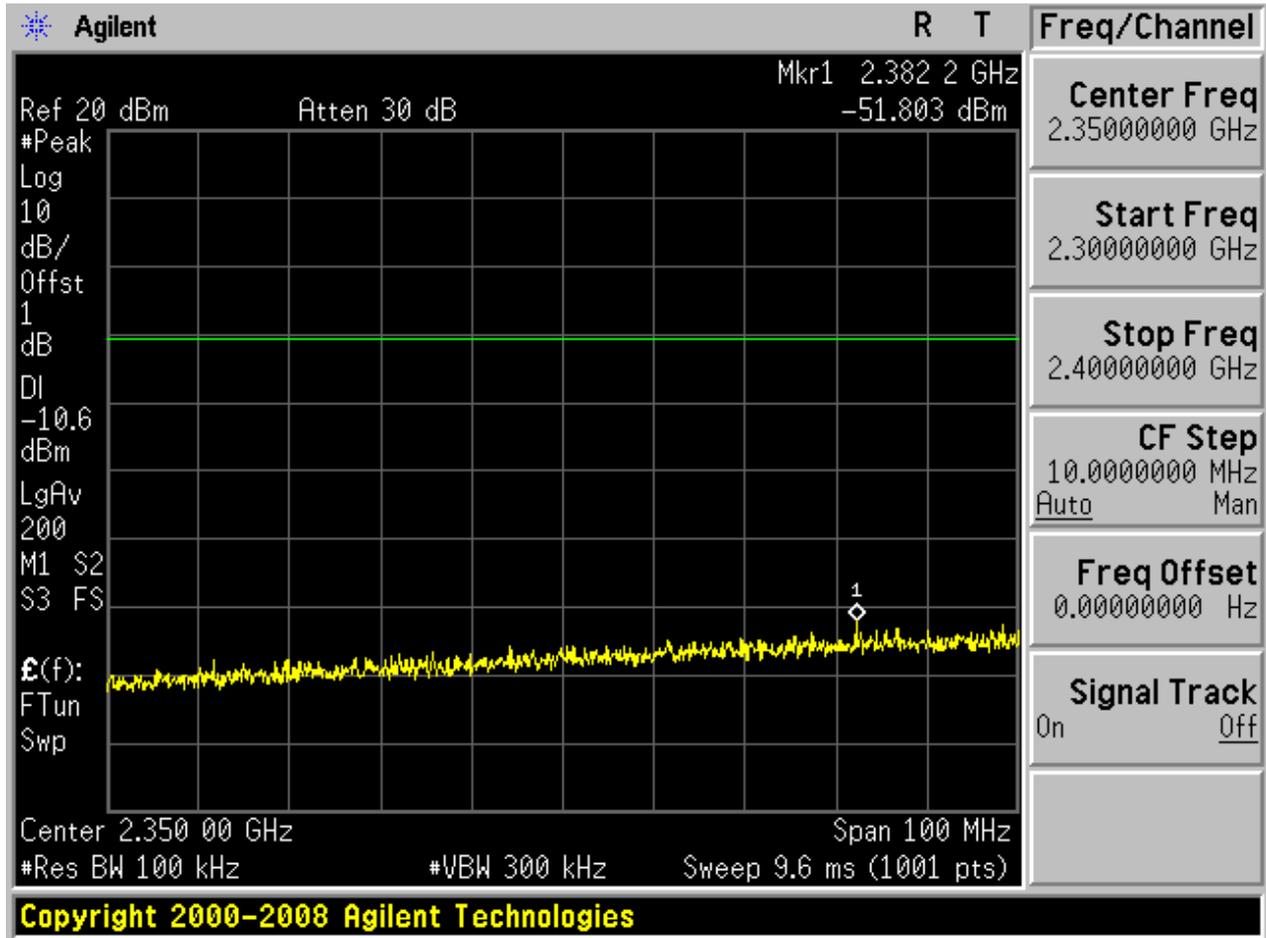


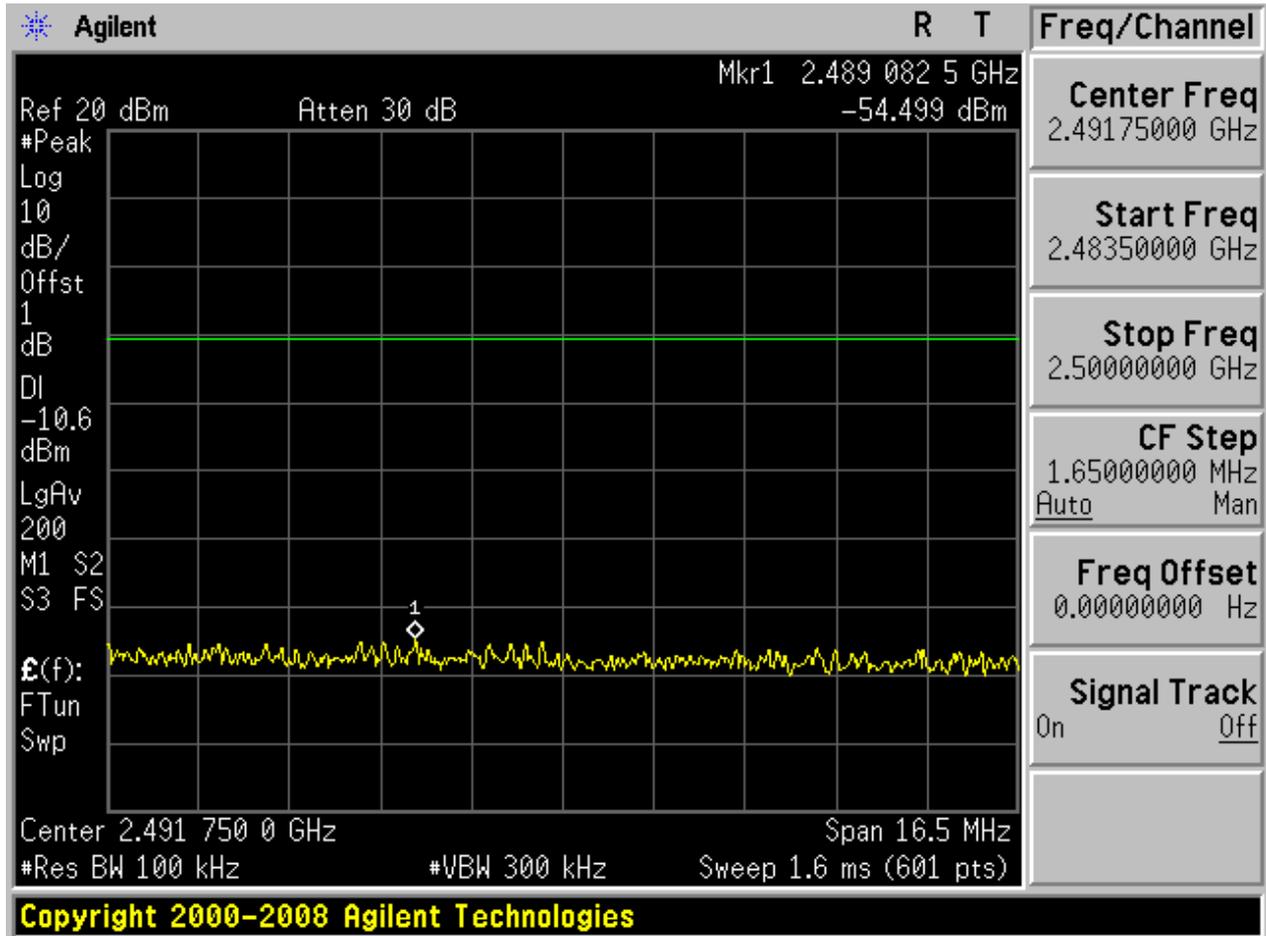
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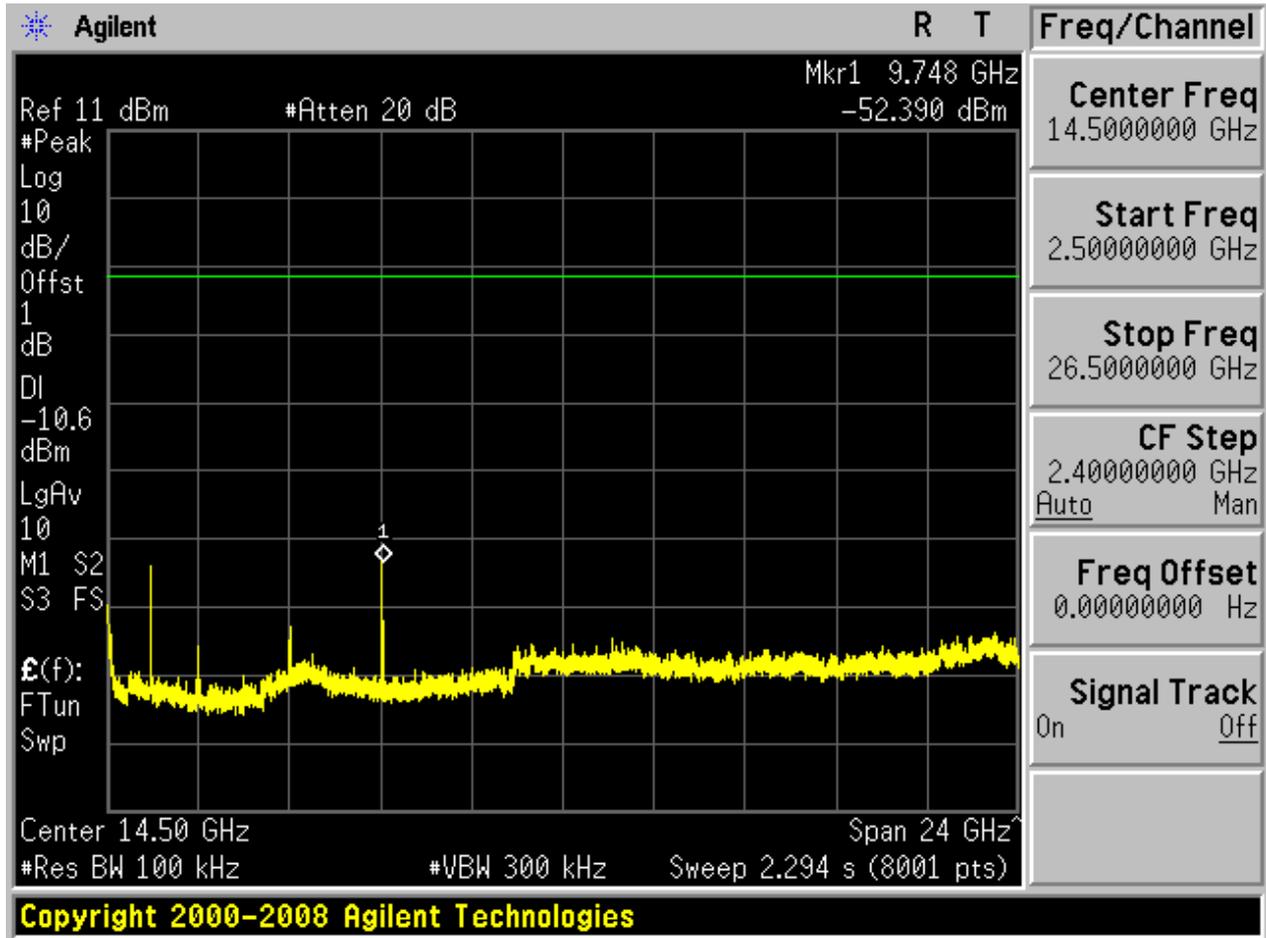






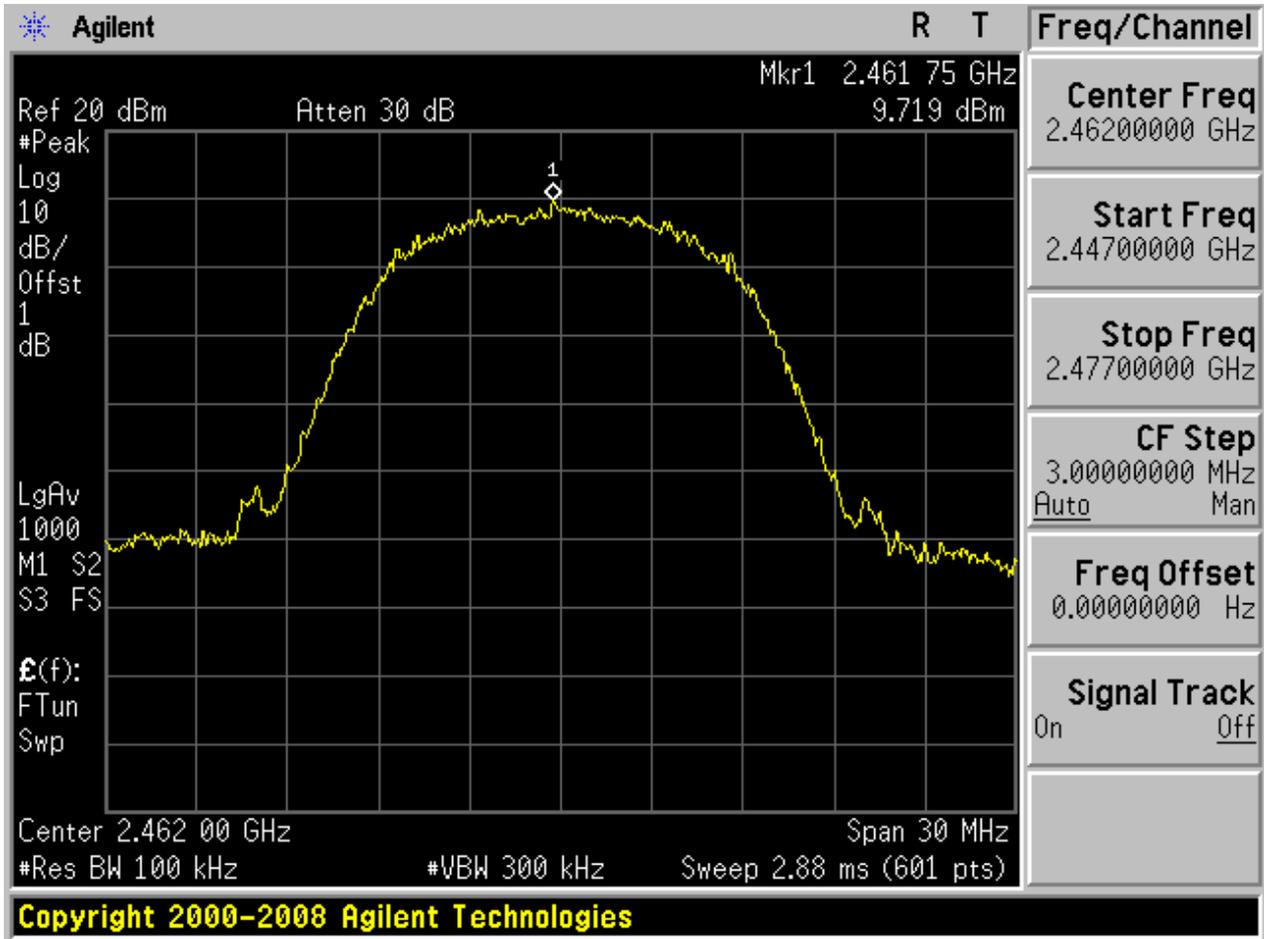




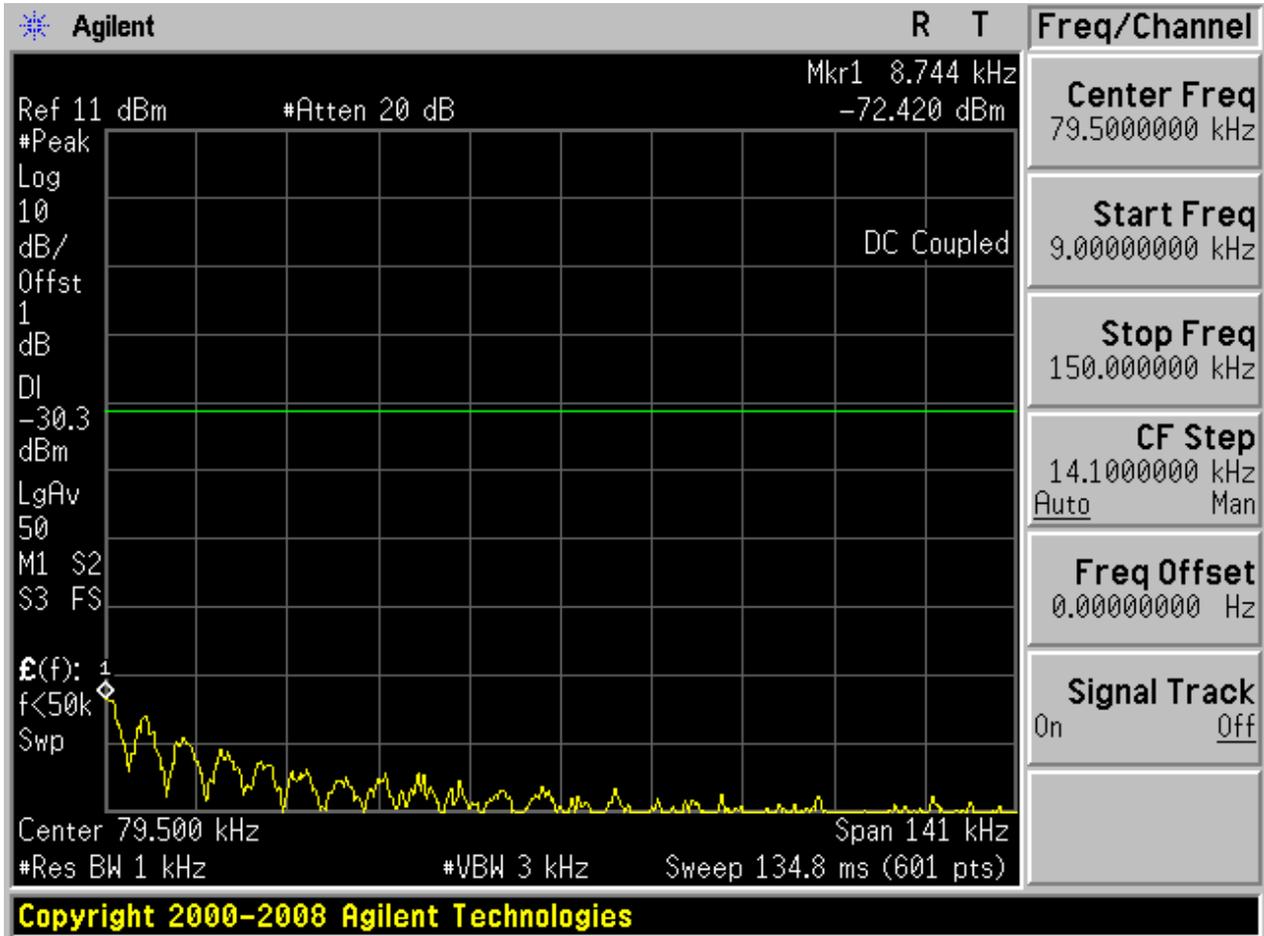


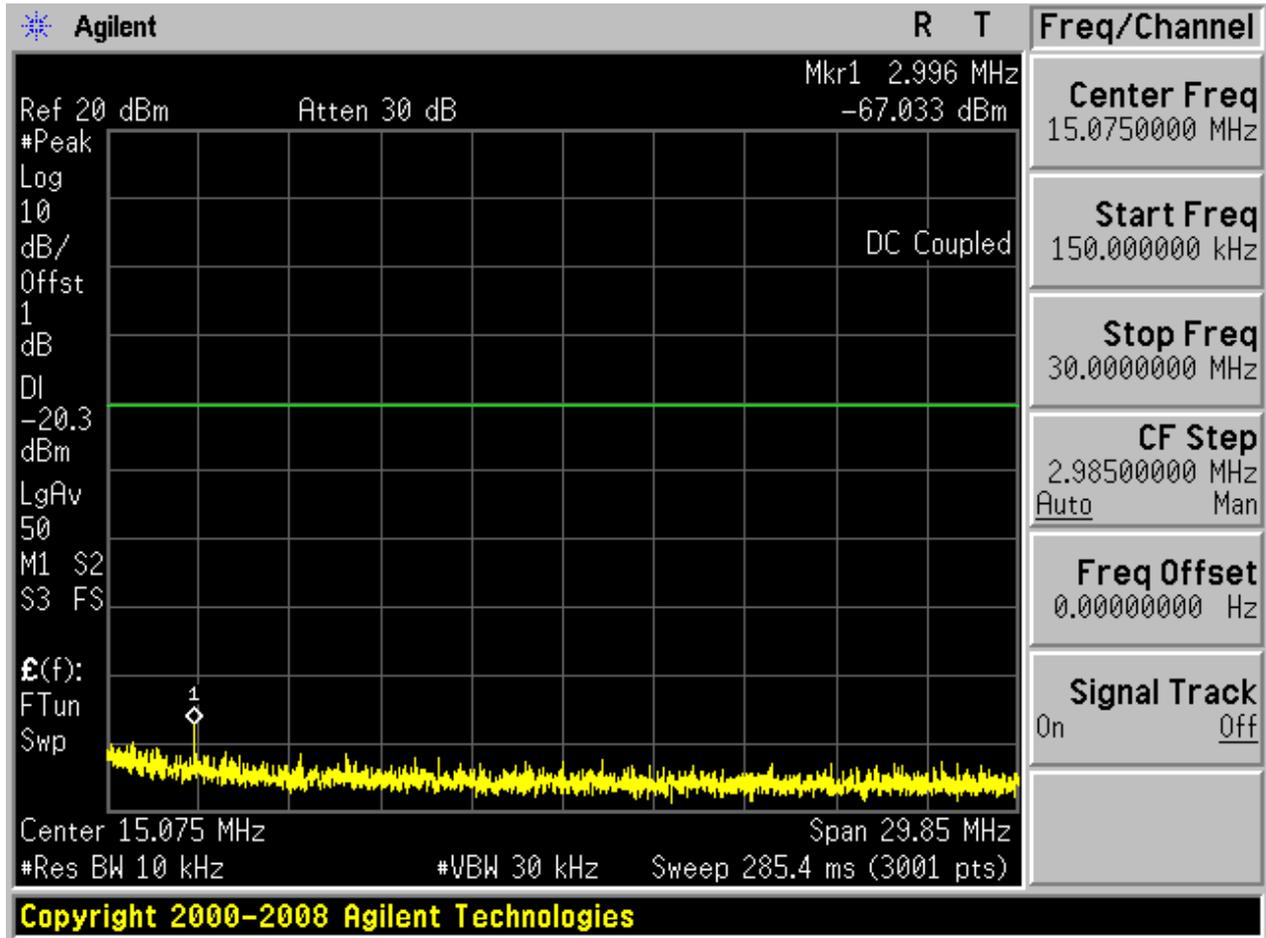
2.3 11B_H

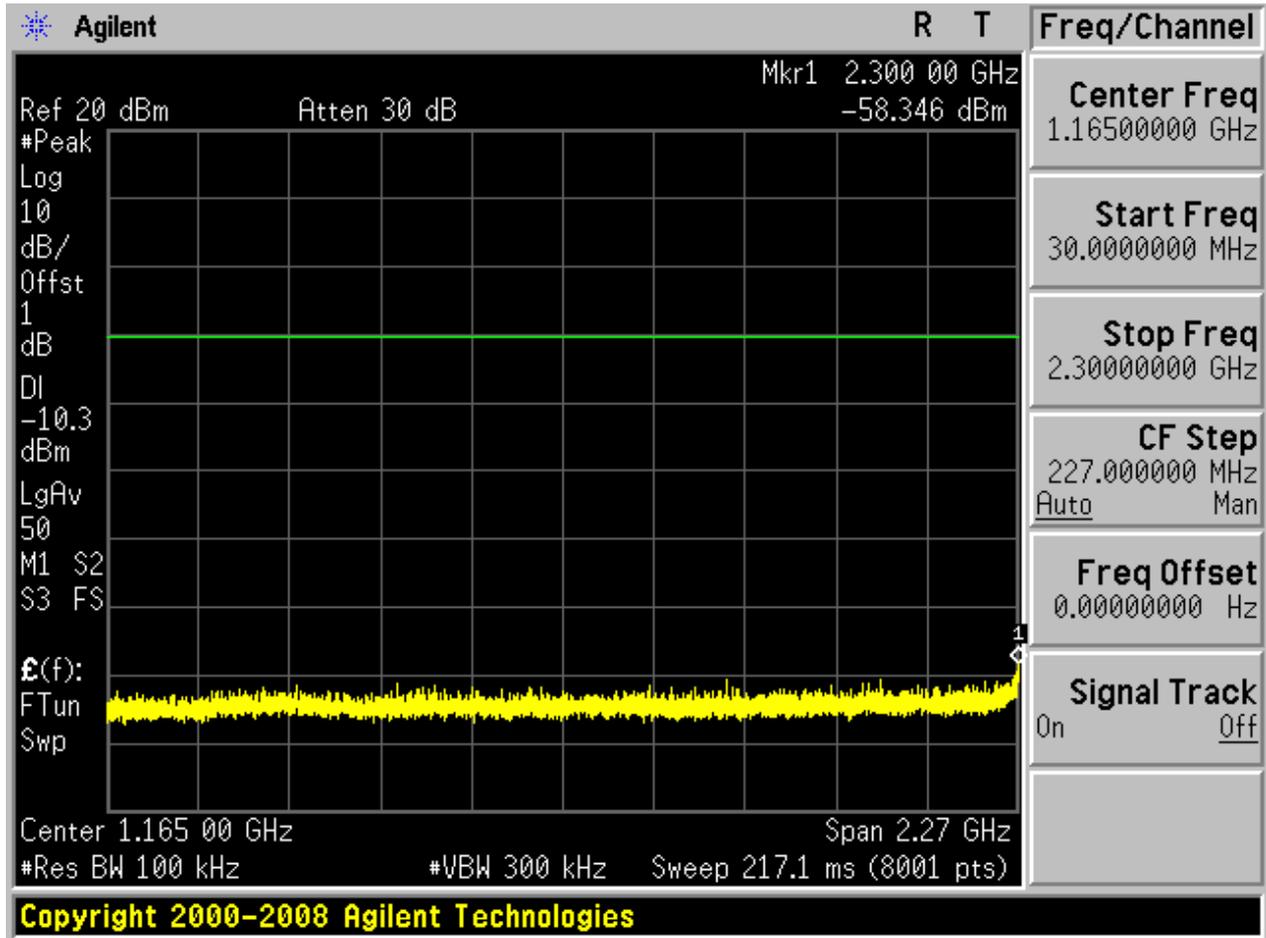
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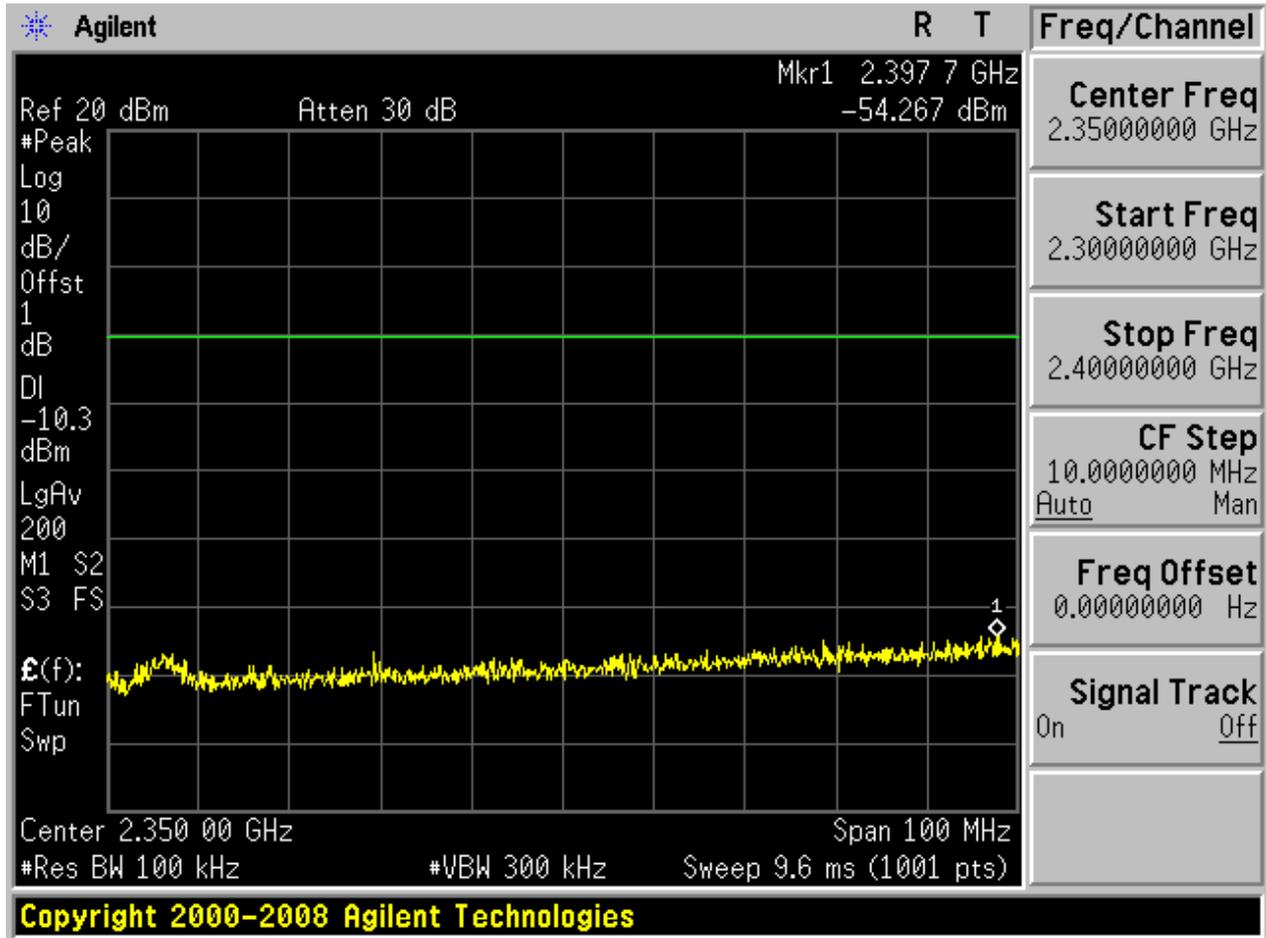


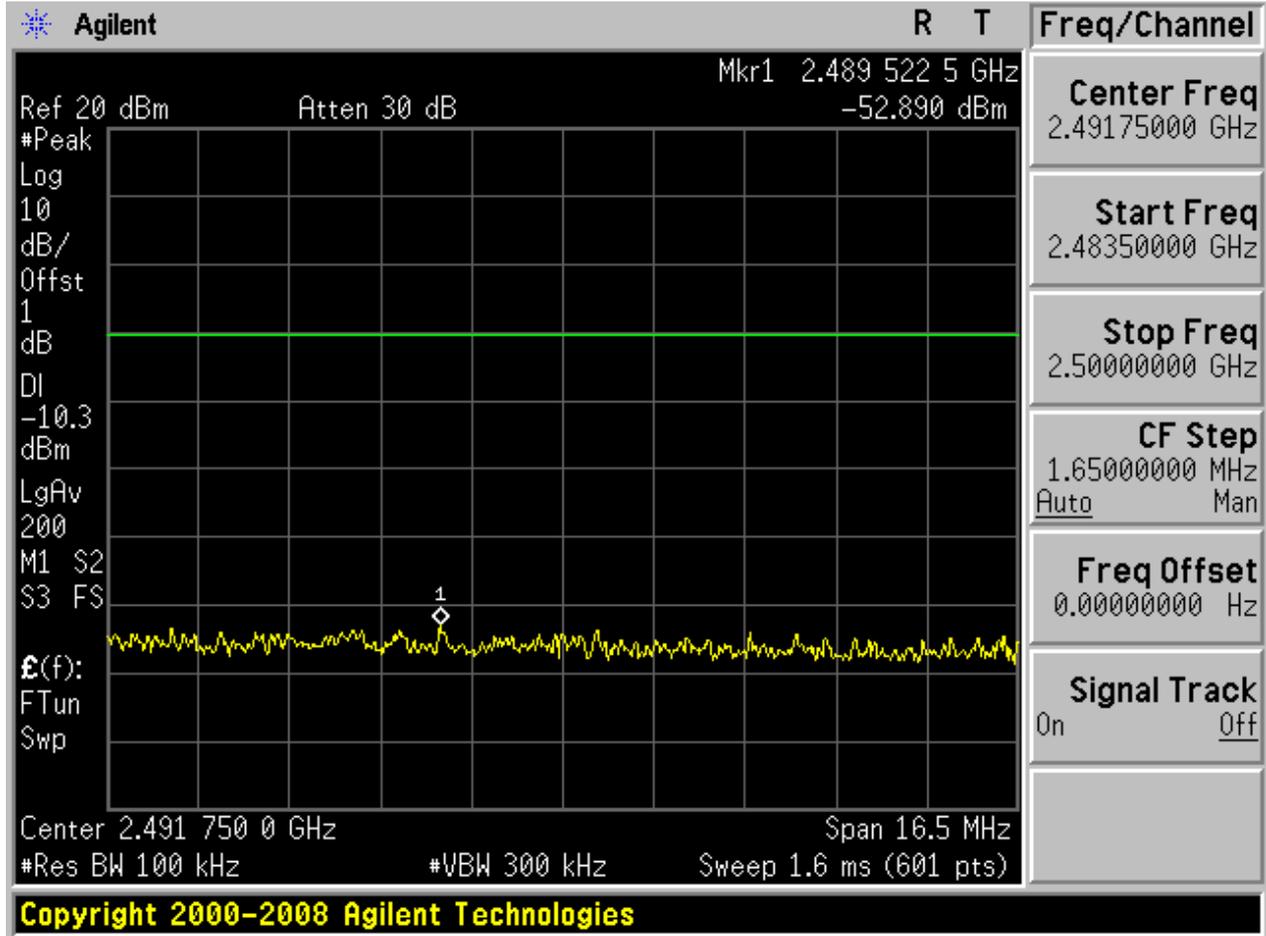
Puw:

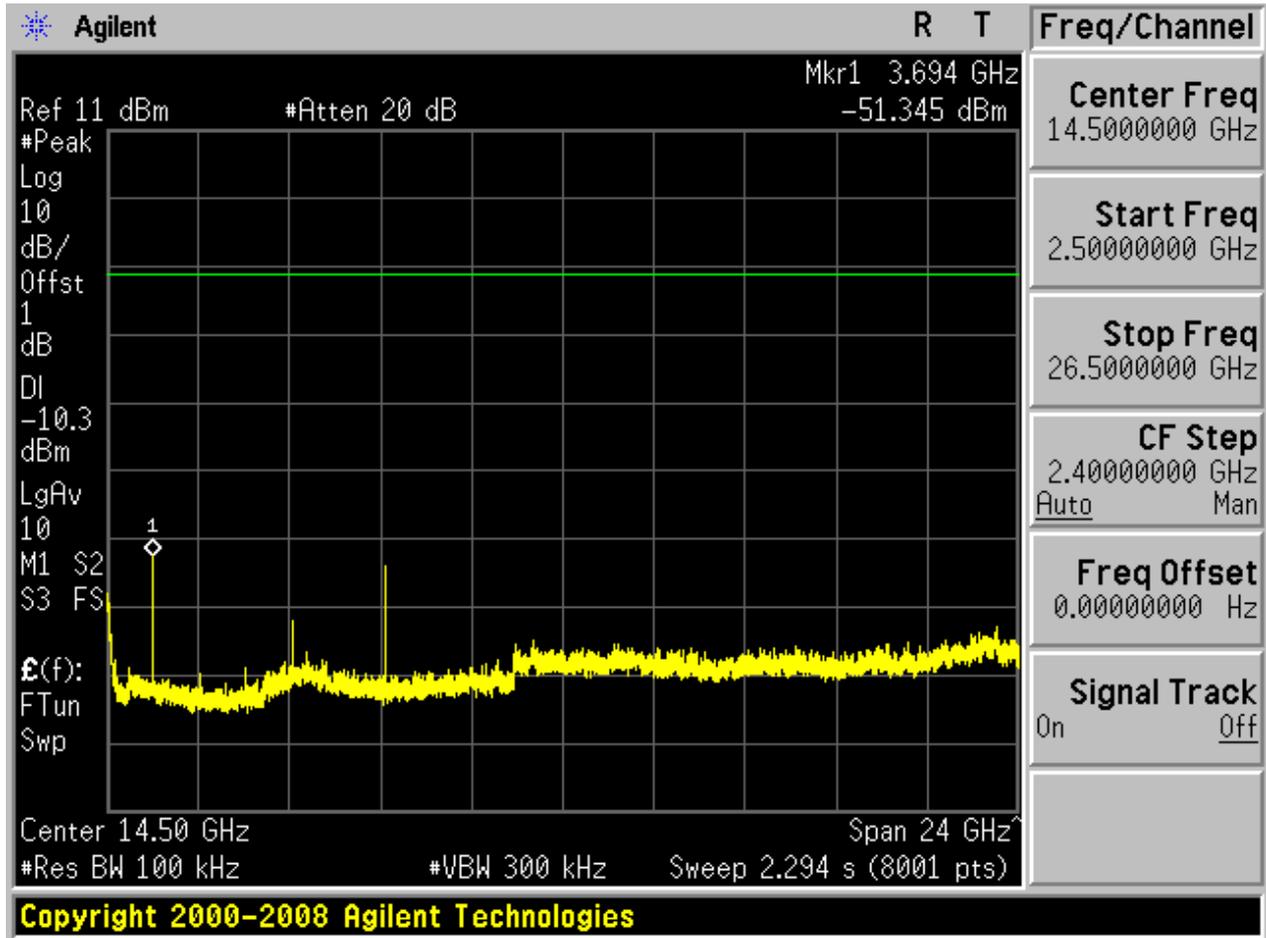






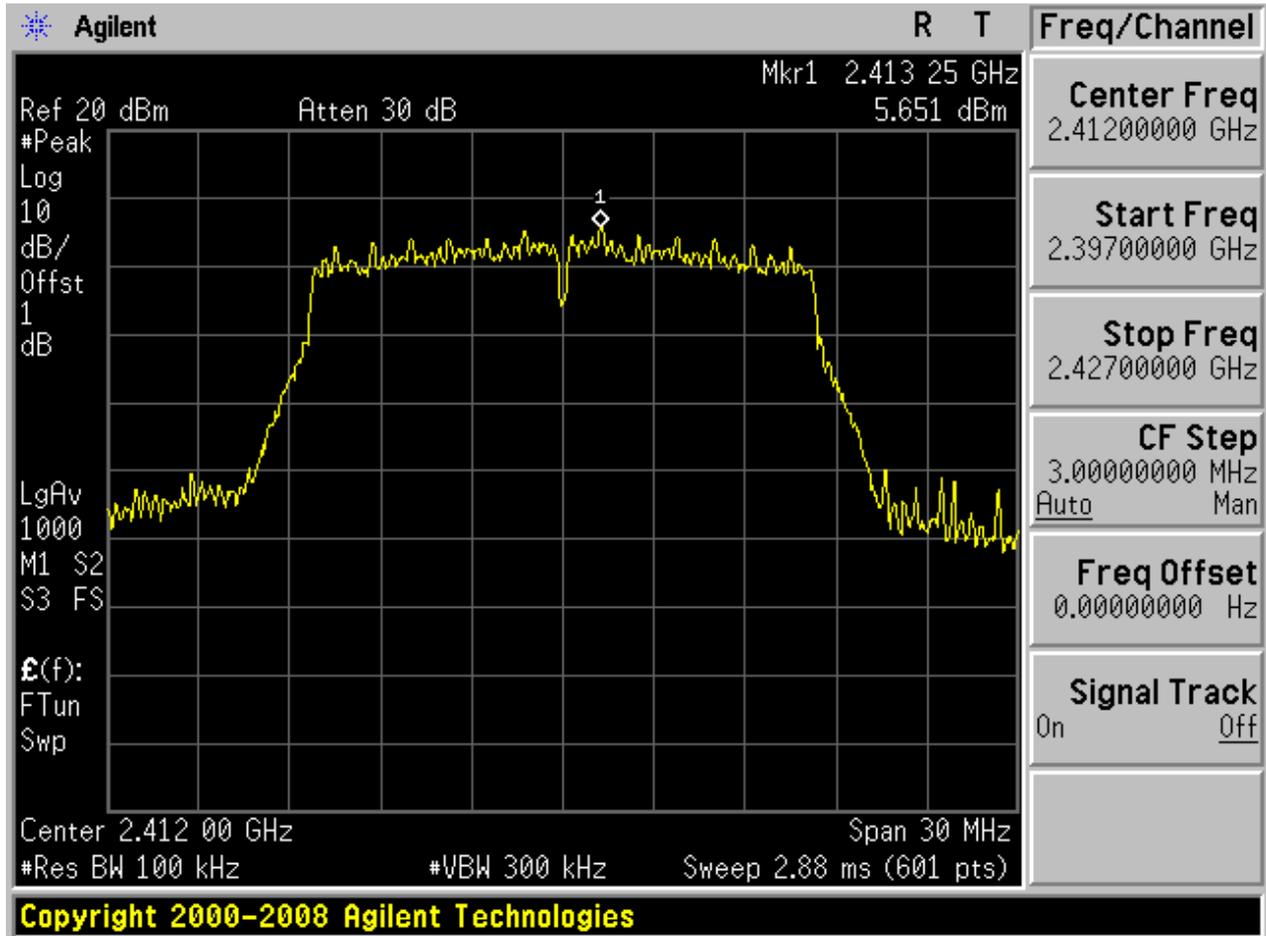




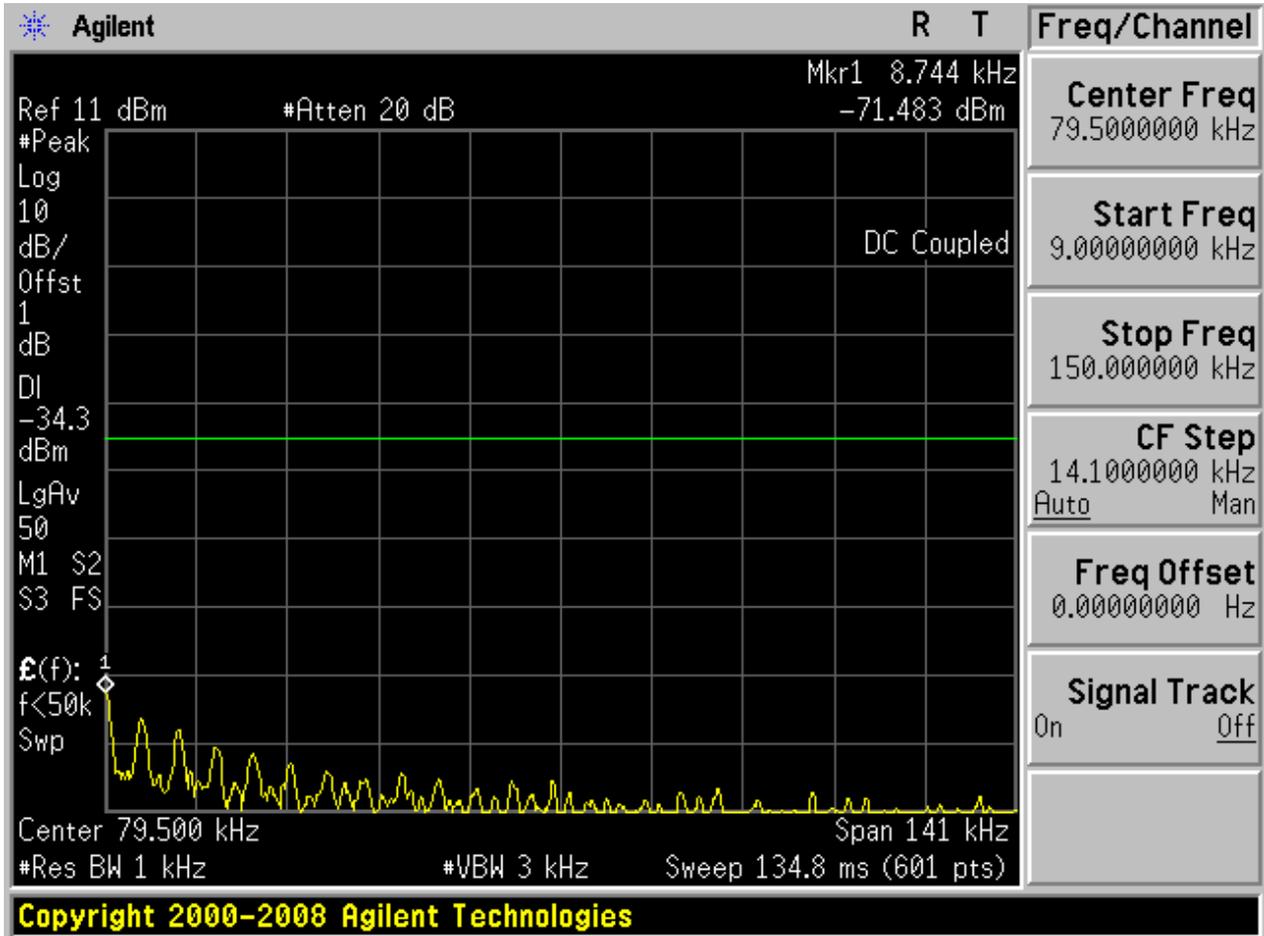


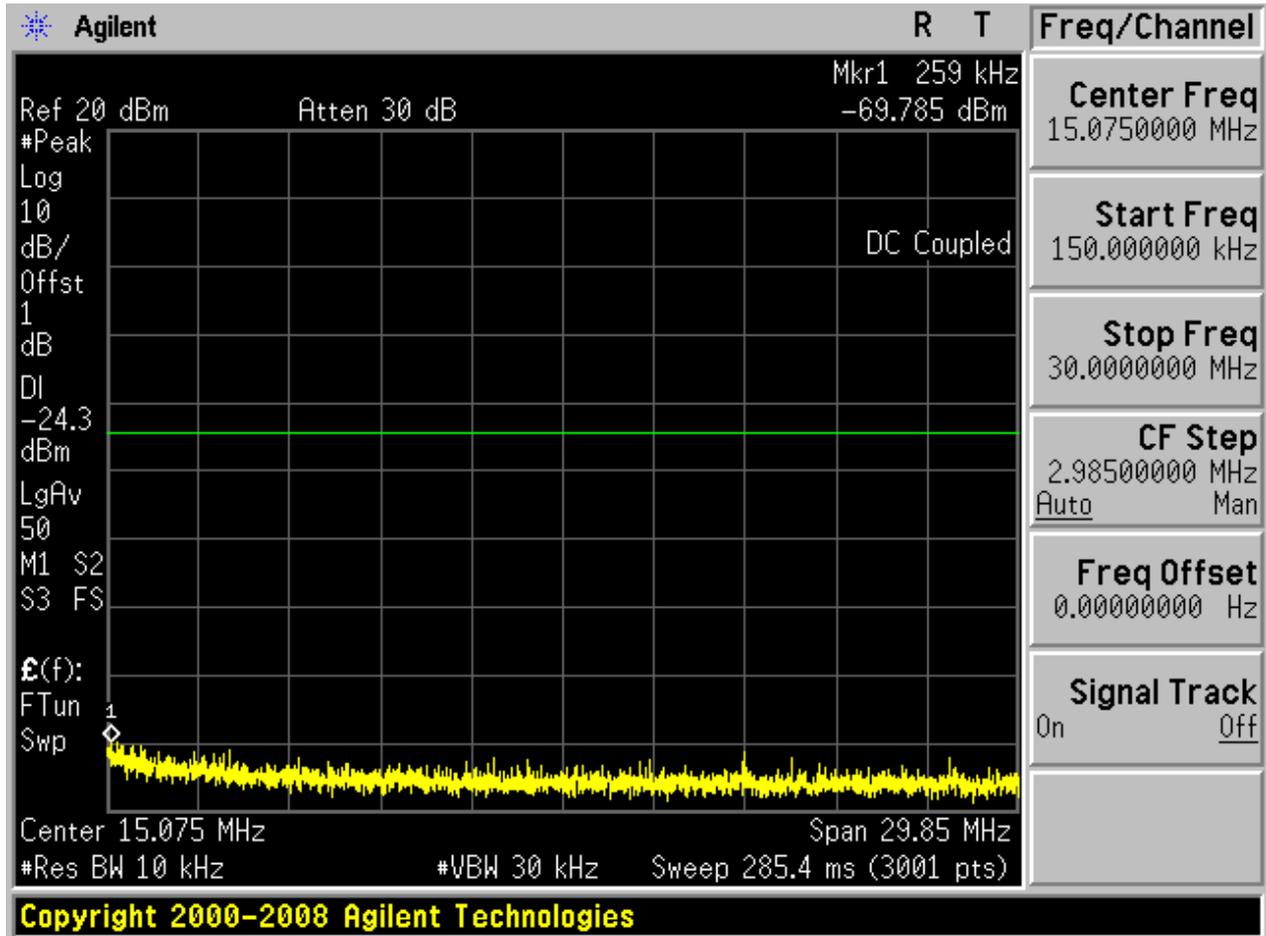
2.4 11G_L

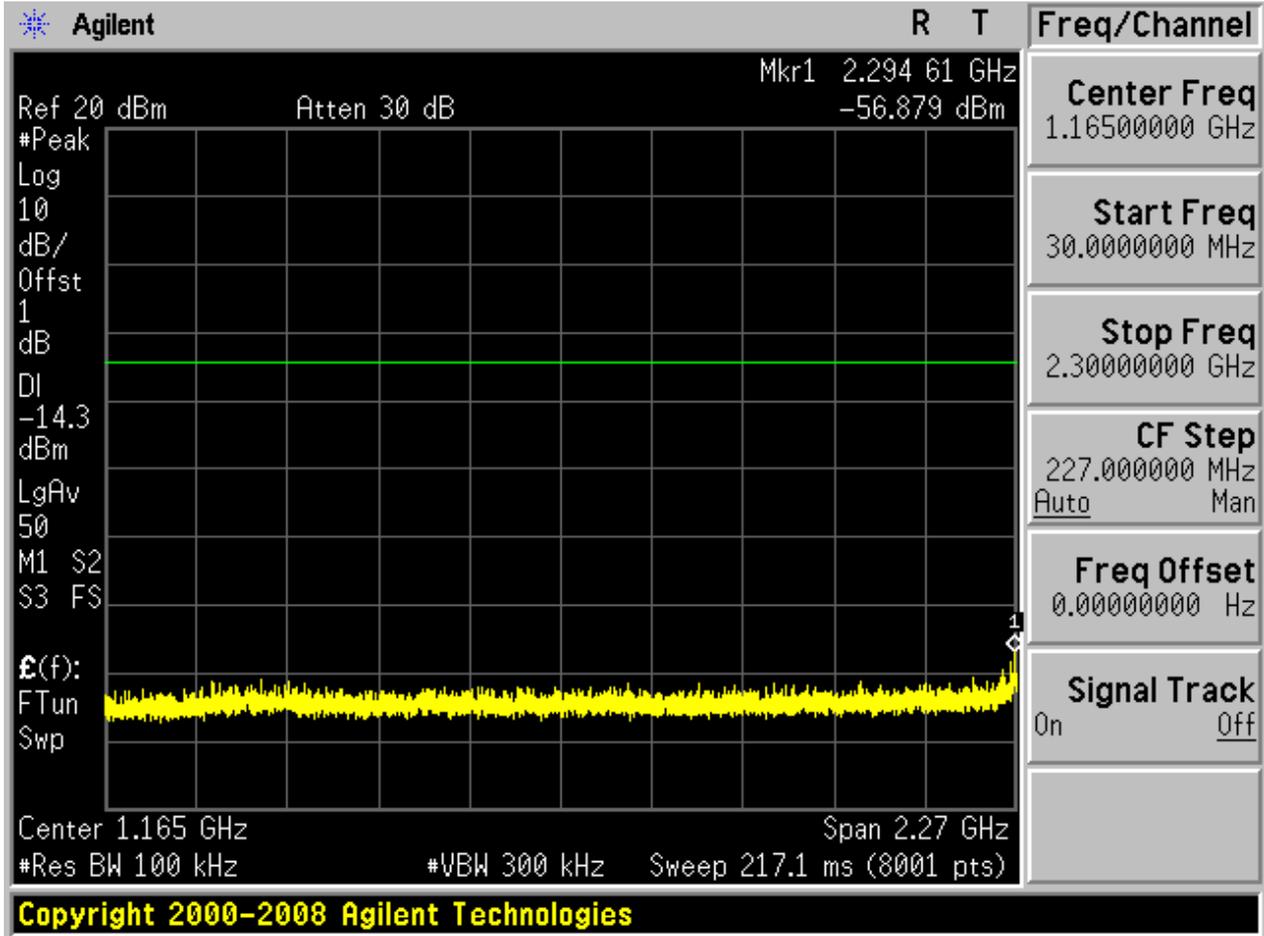
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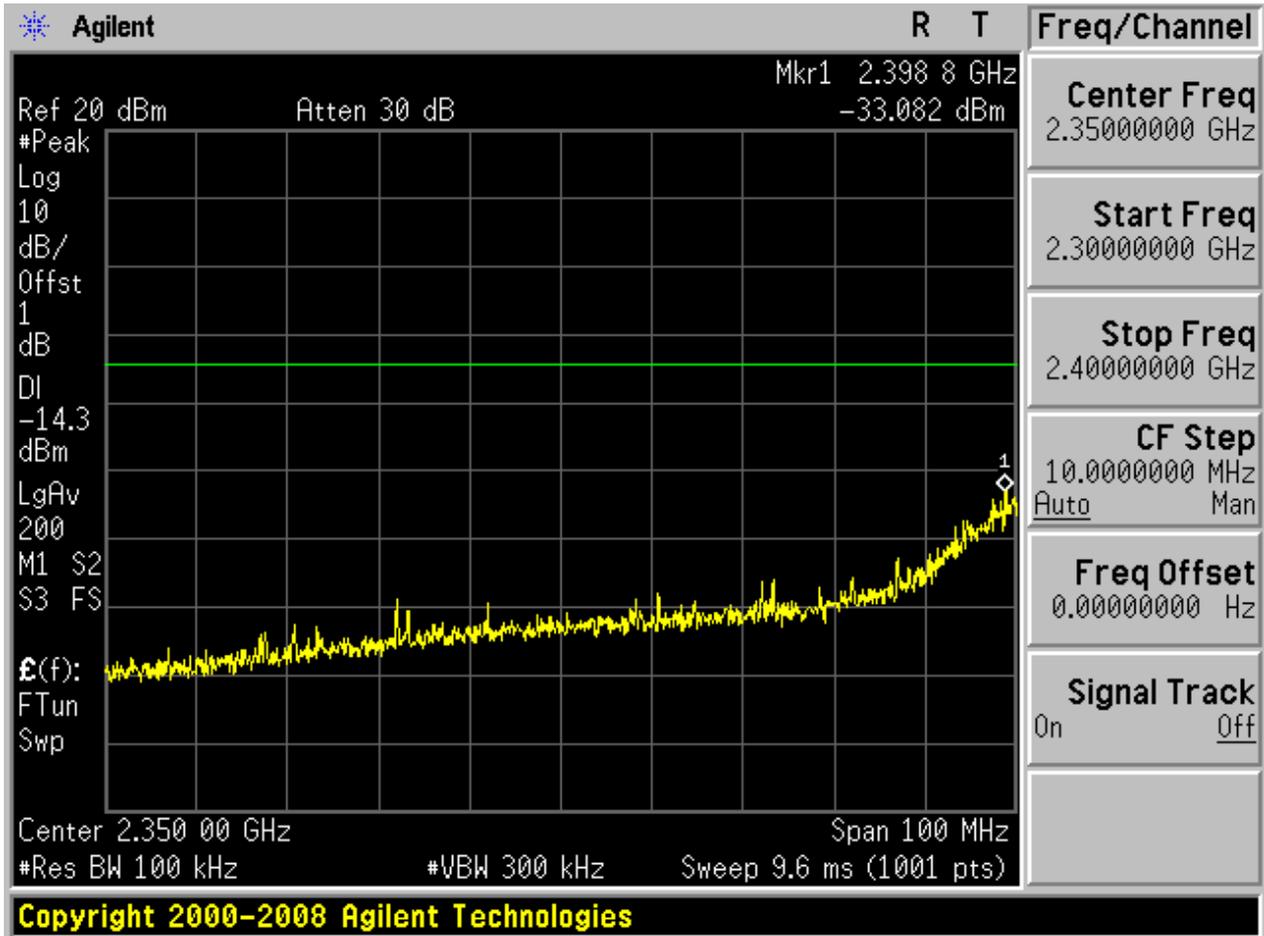


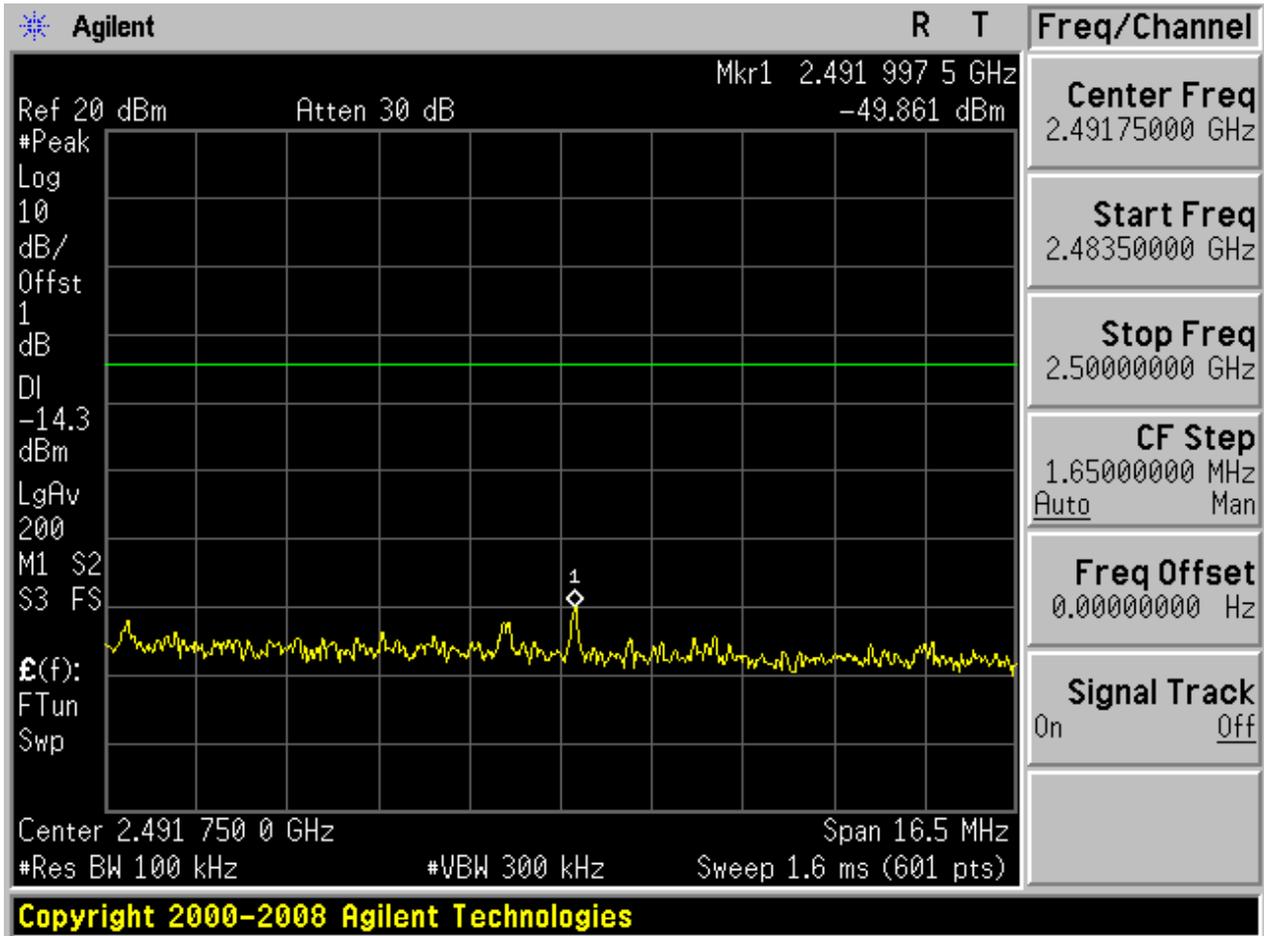
P_{uw}:

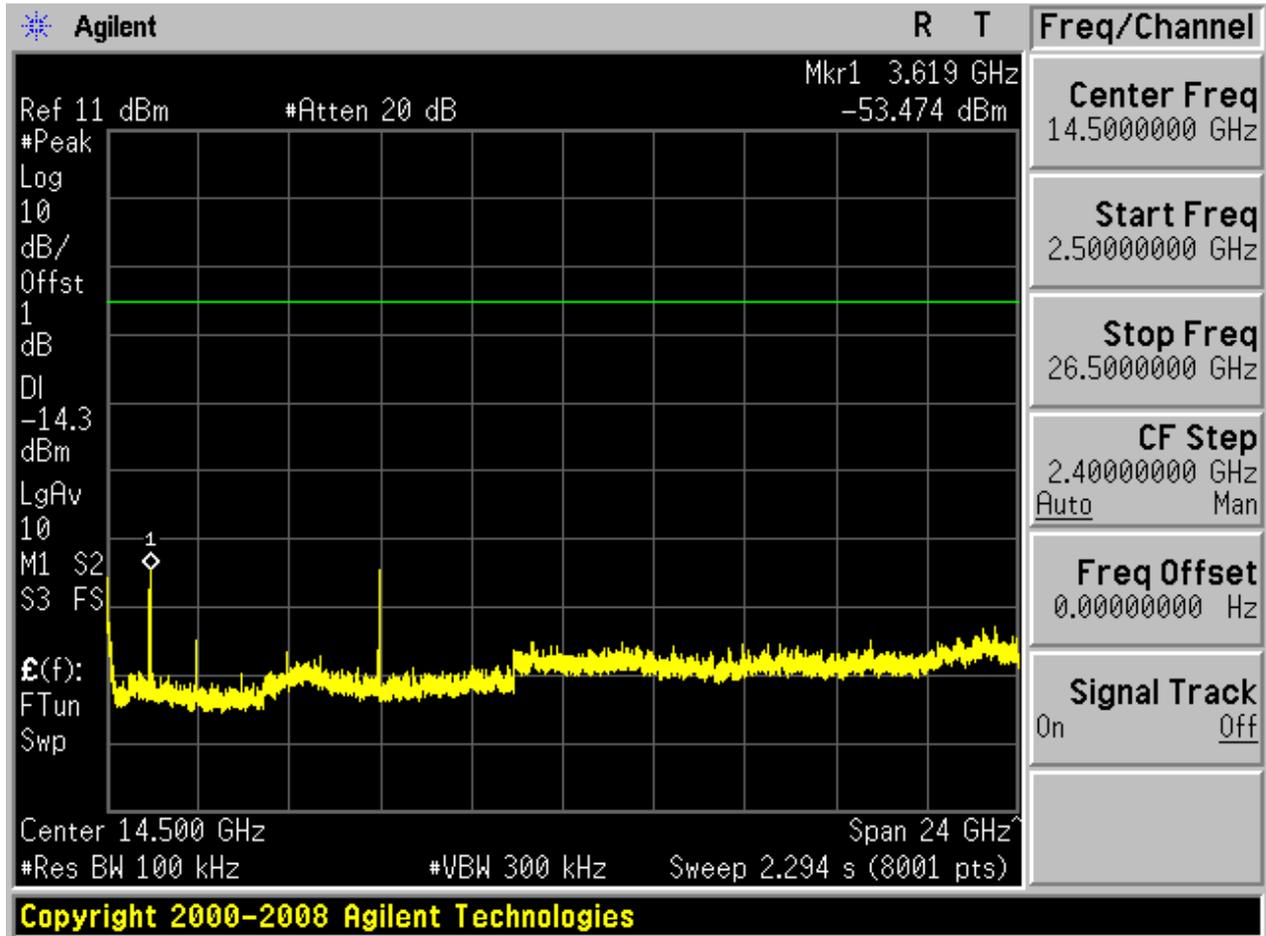








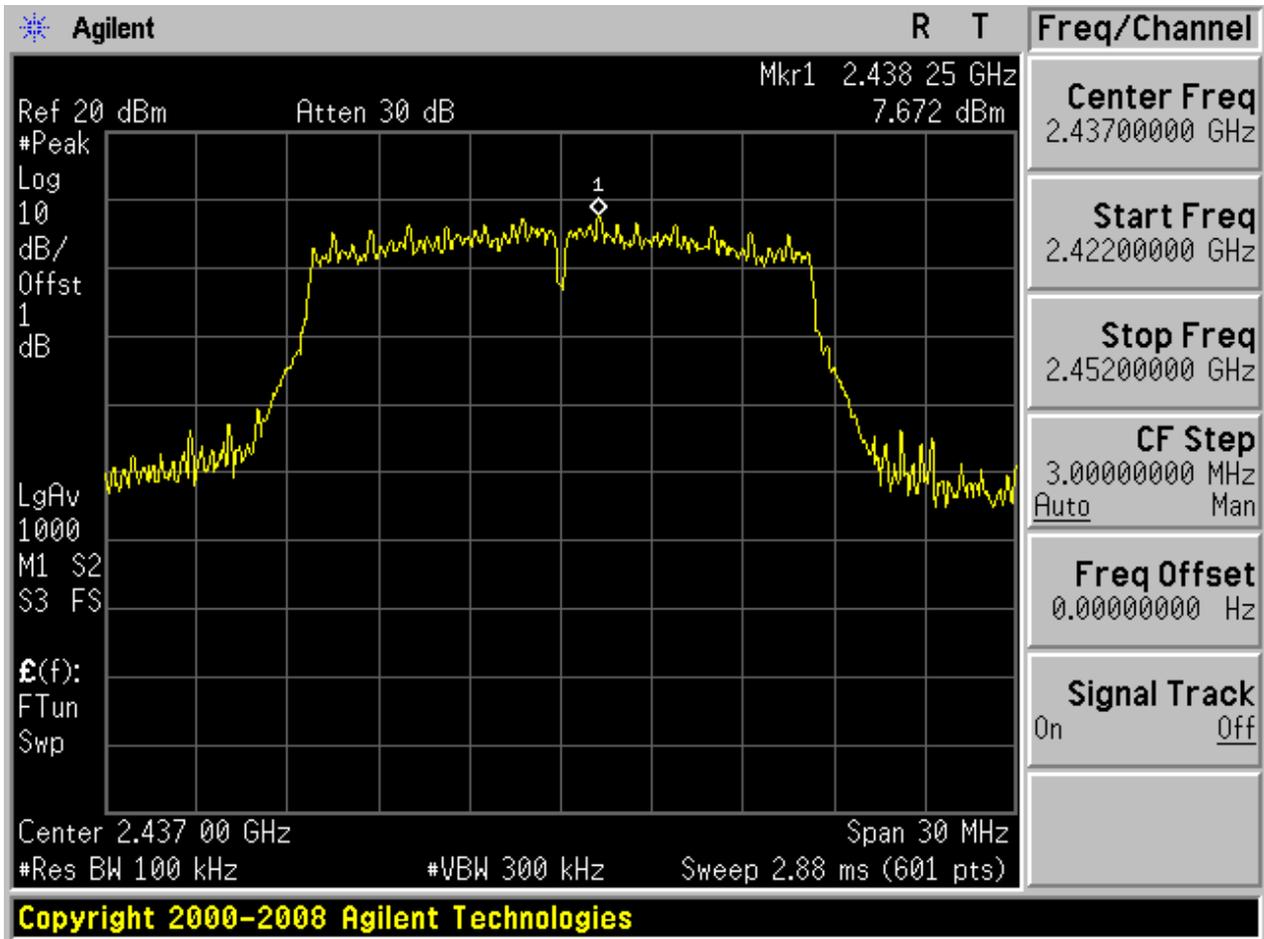






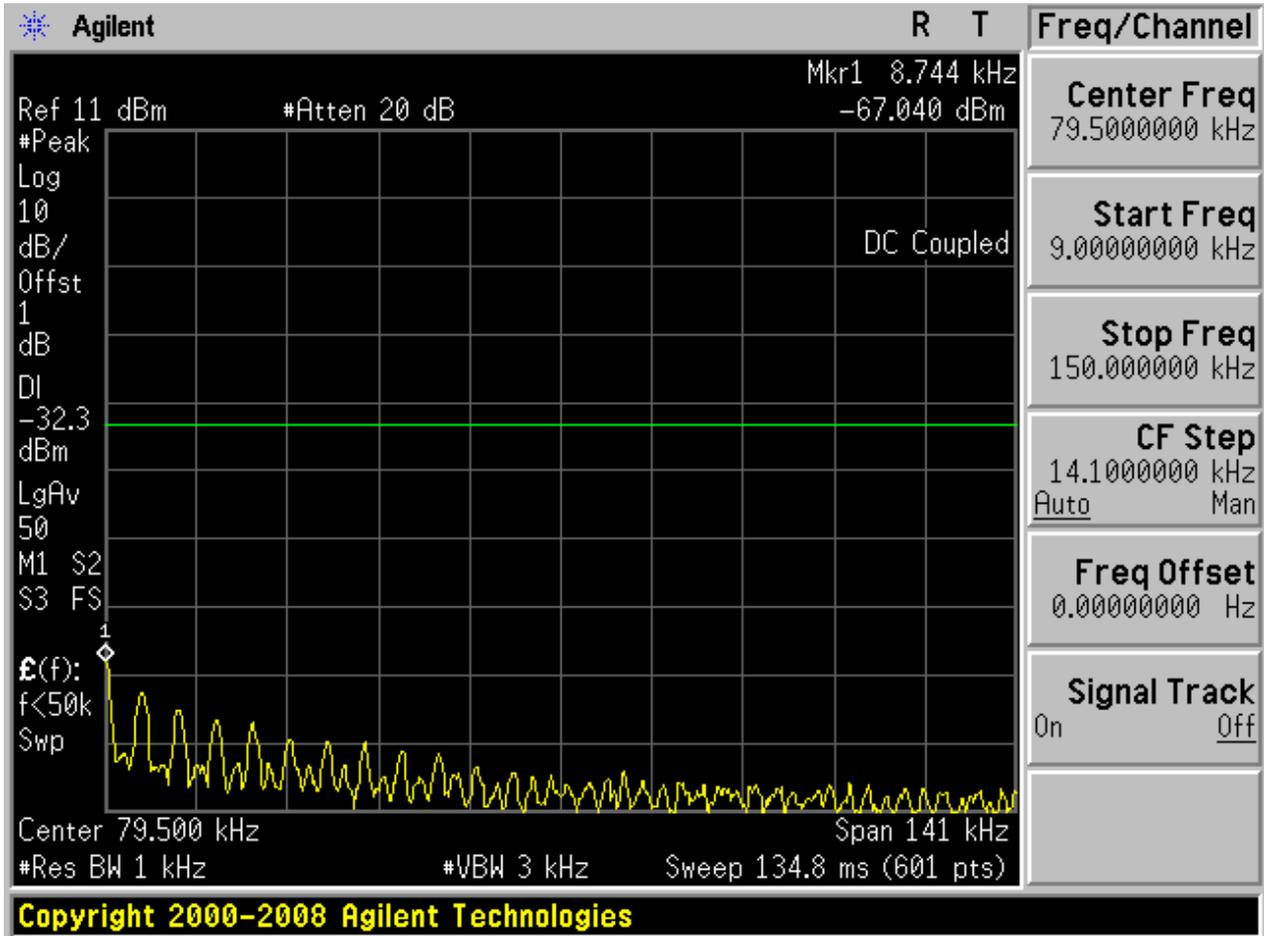
2.5 11G_M

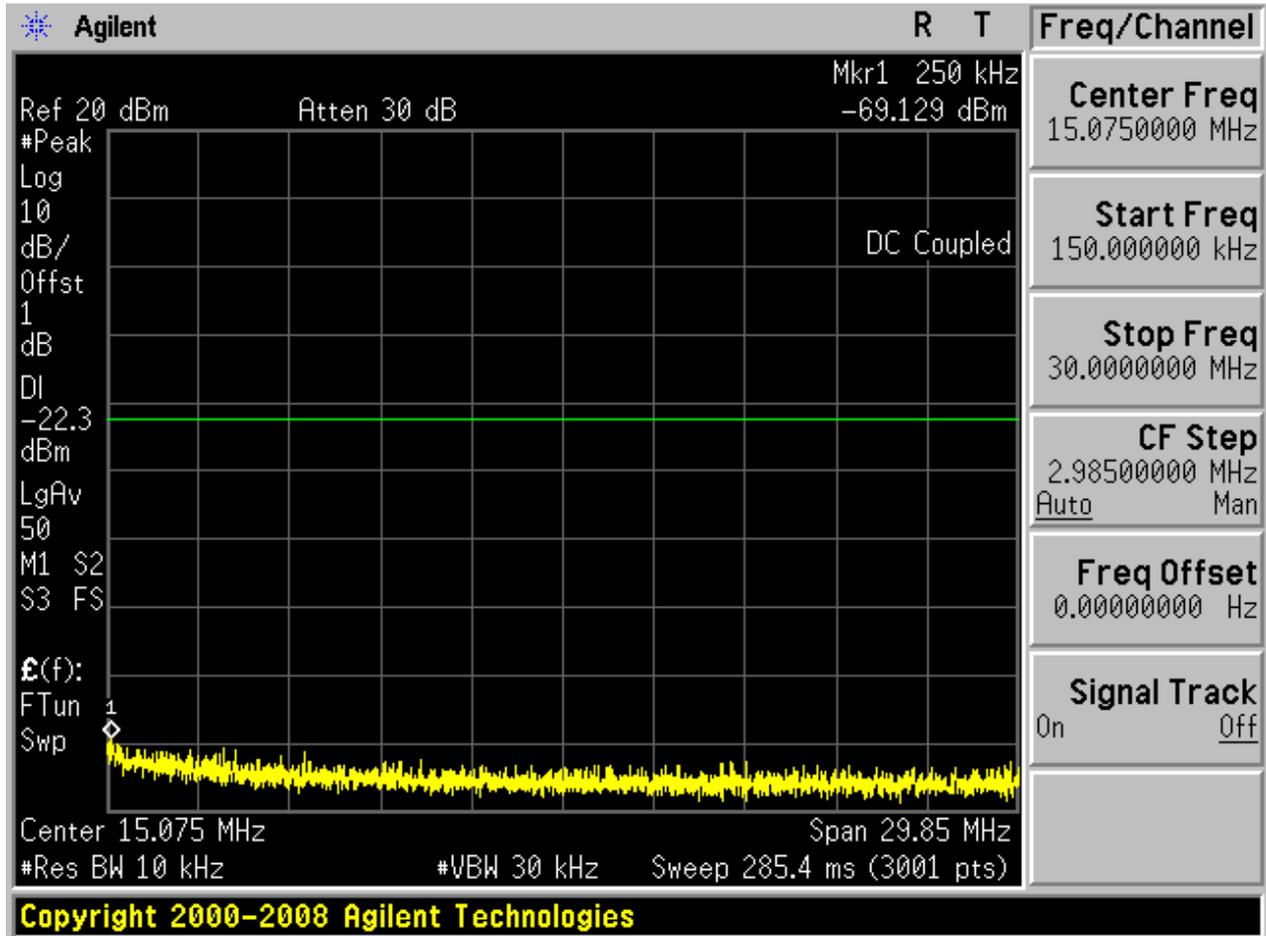
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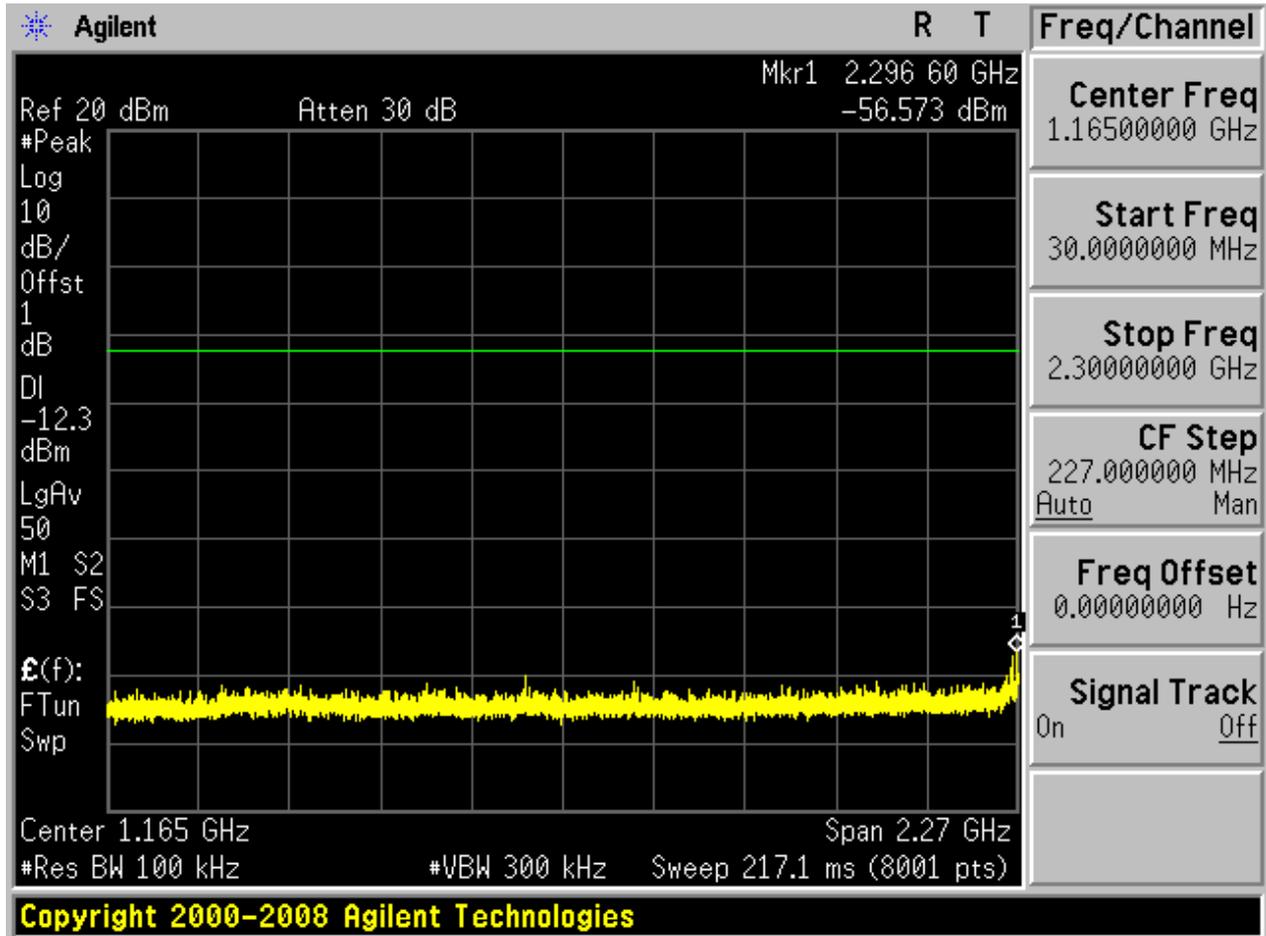


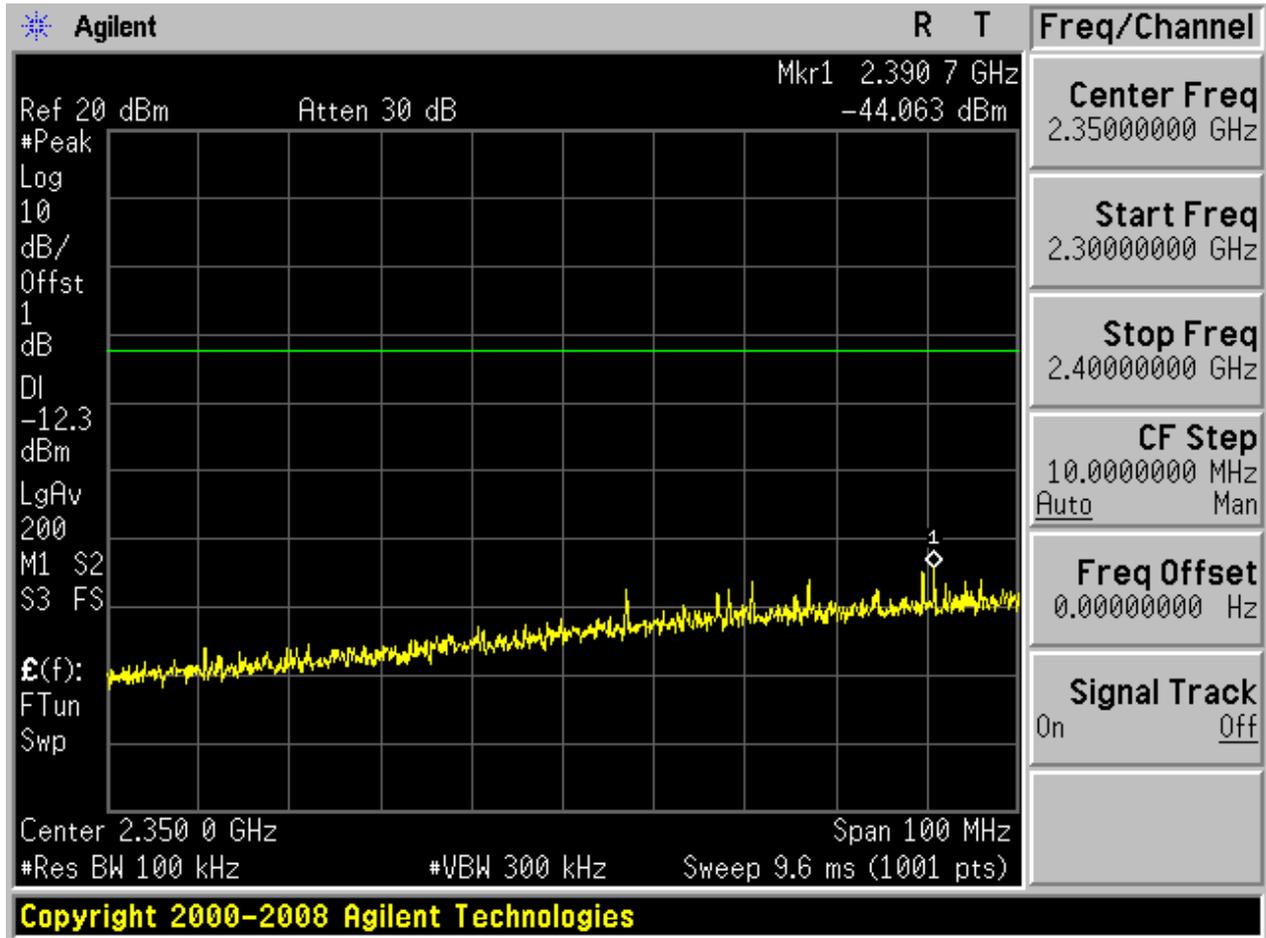


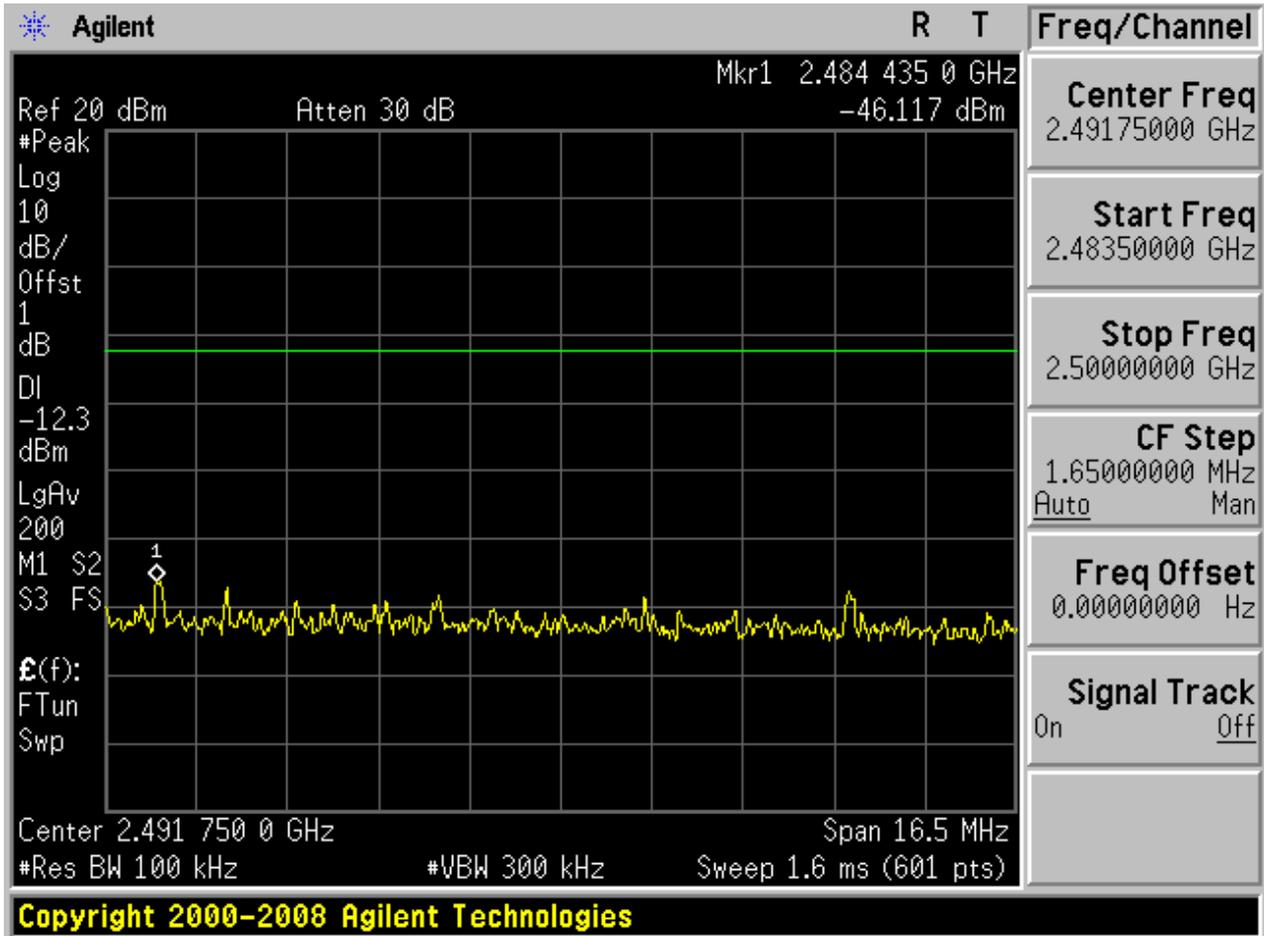
Puw:

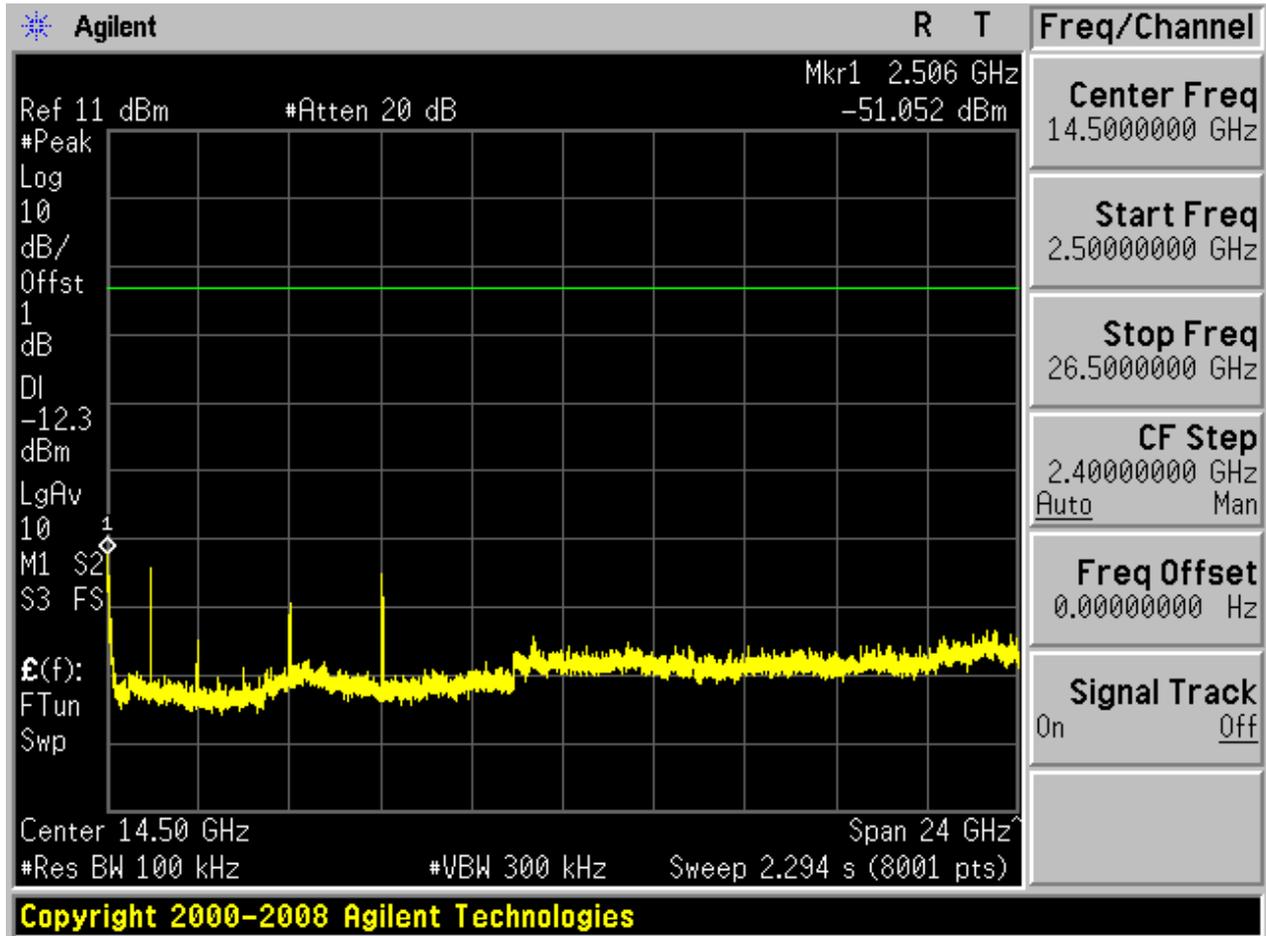






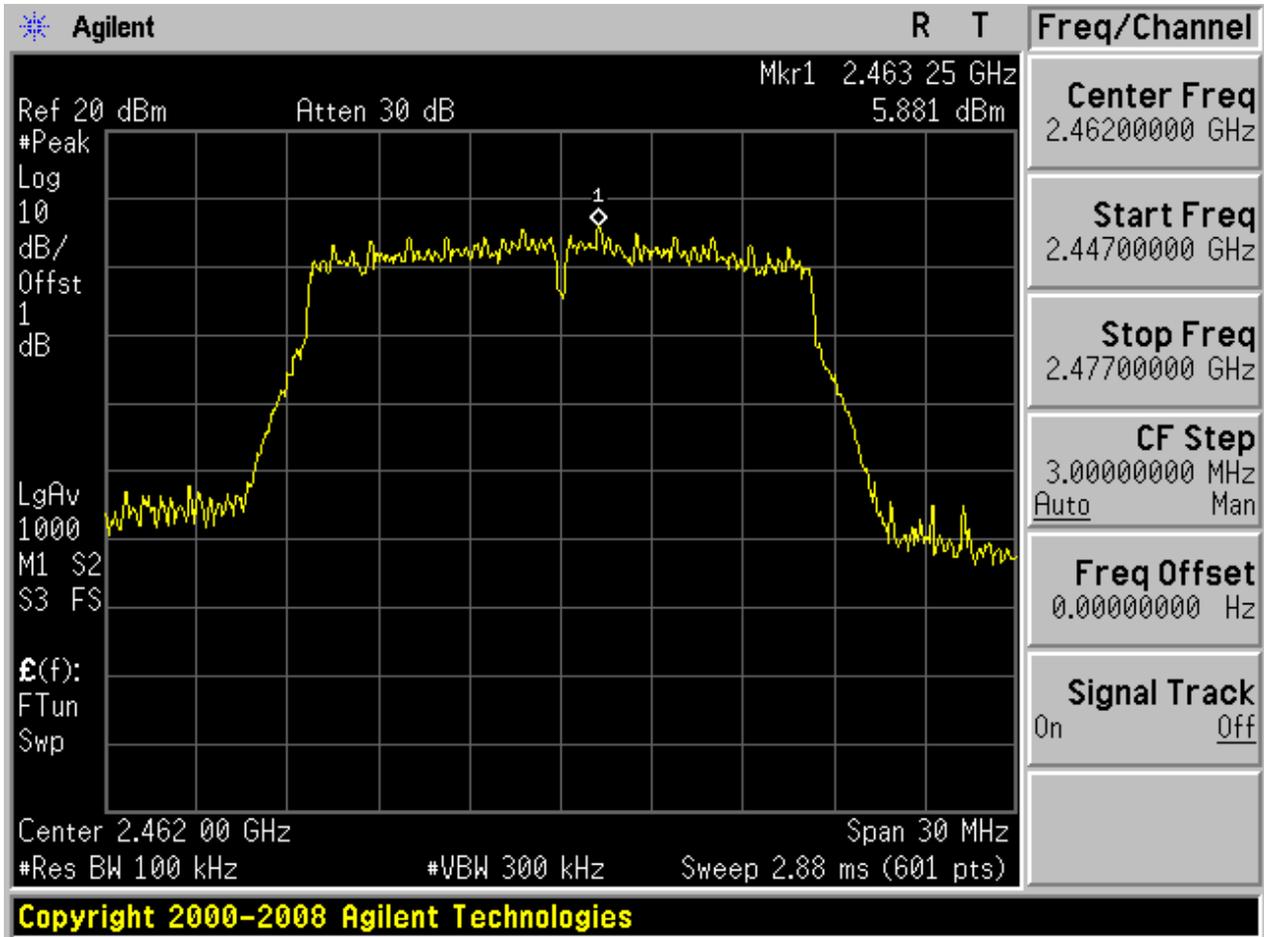






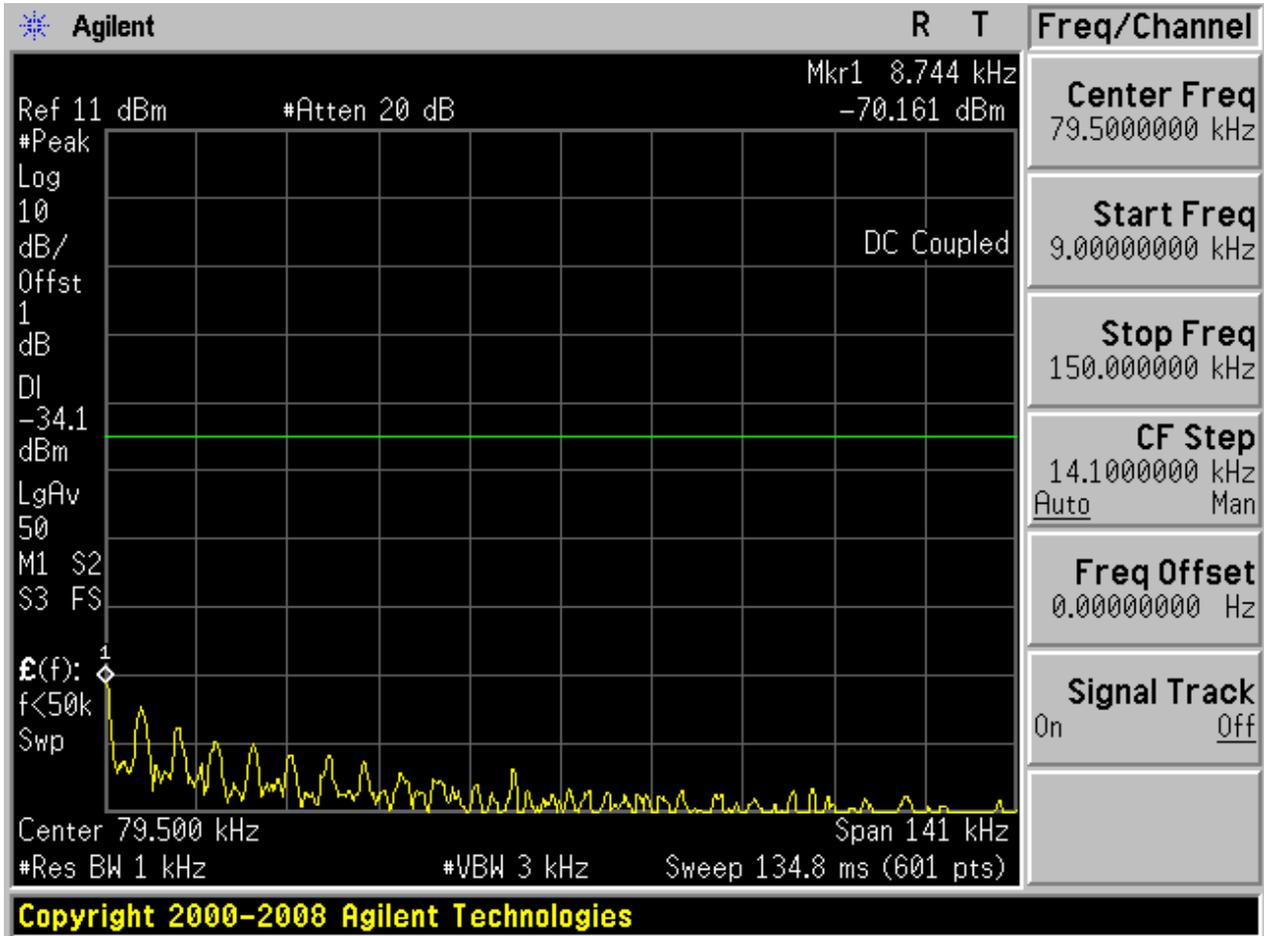
2.6 11G_H

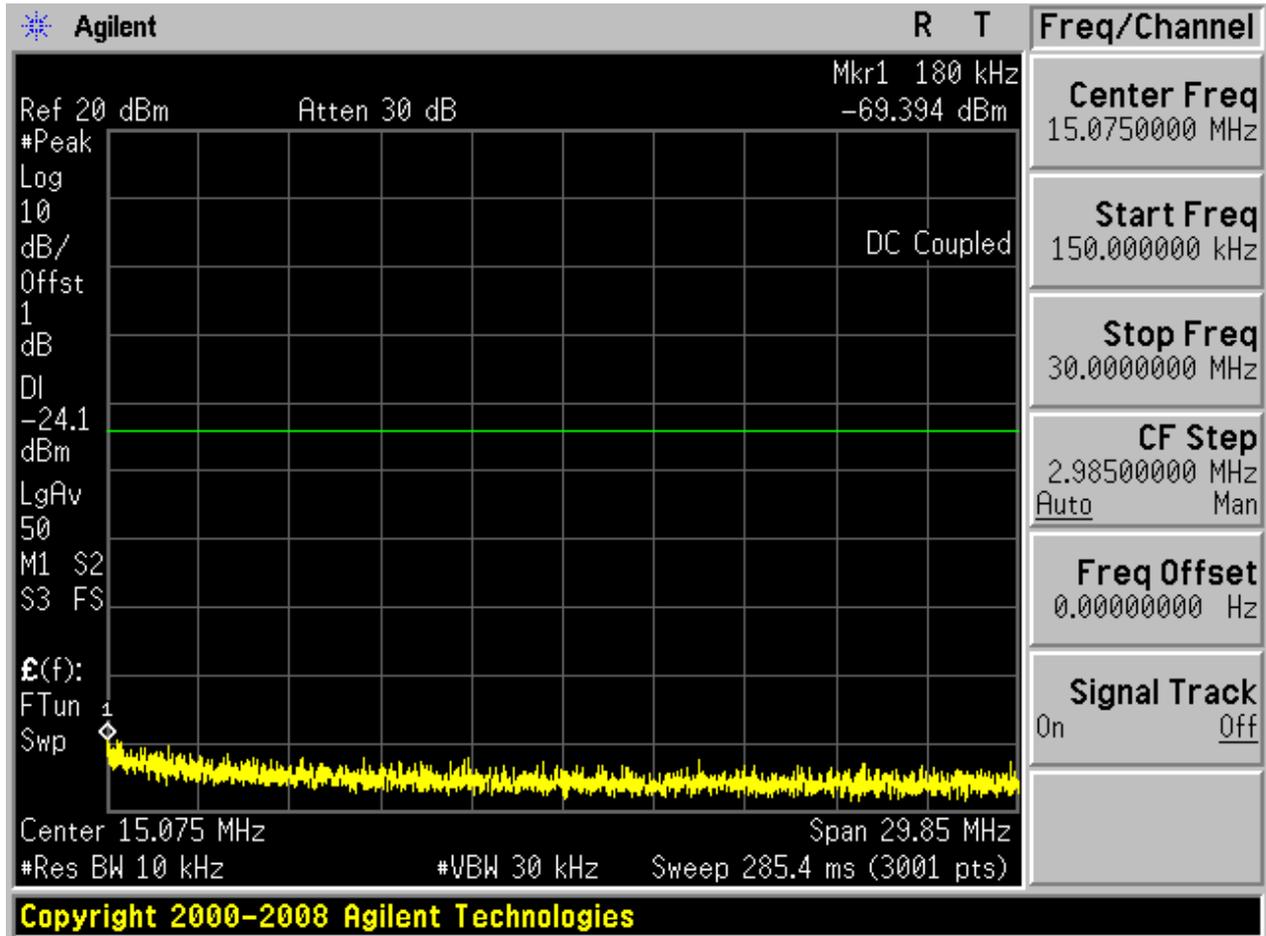
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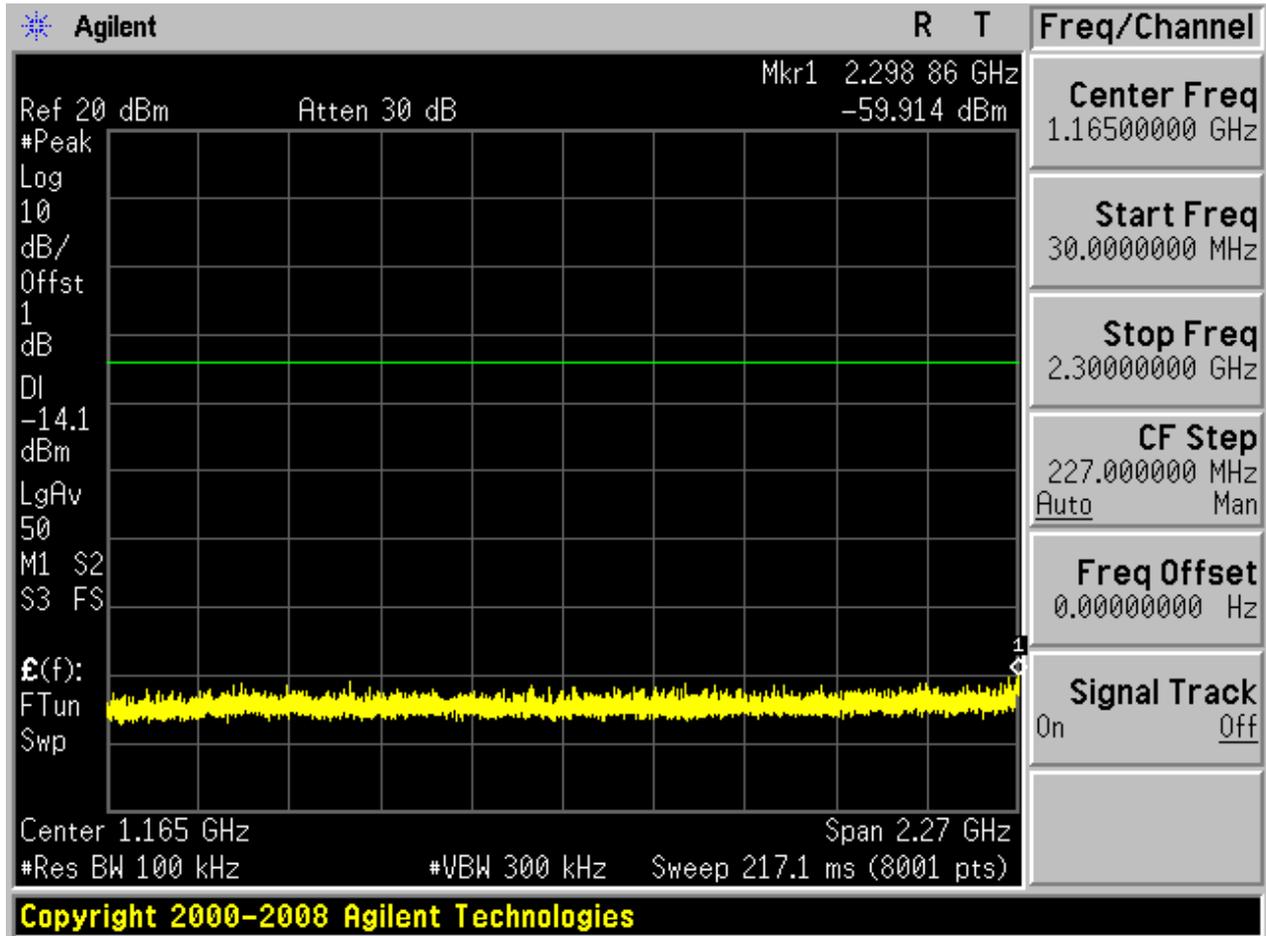


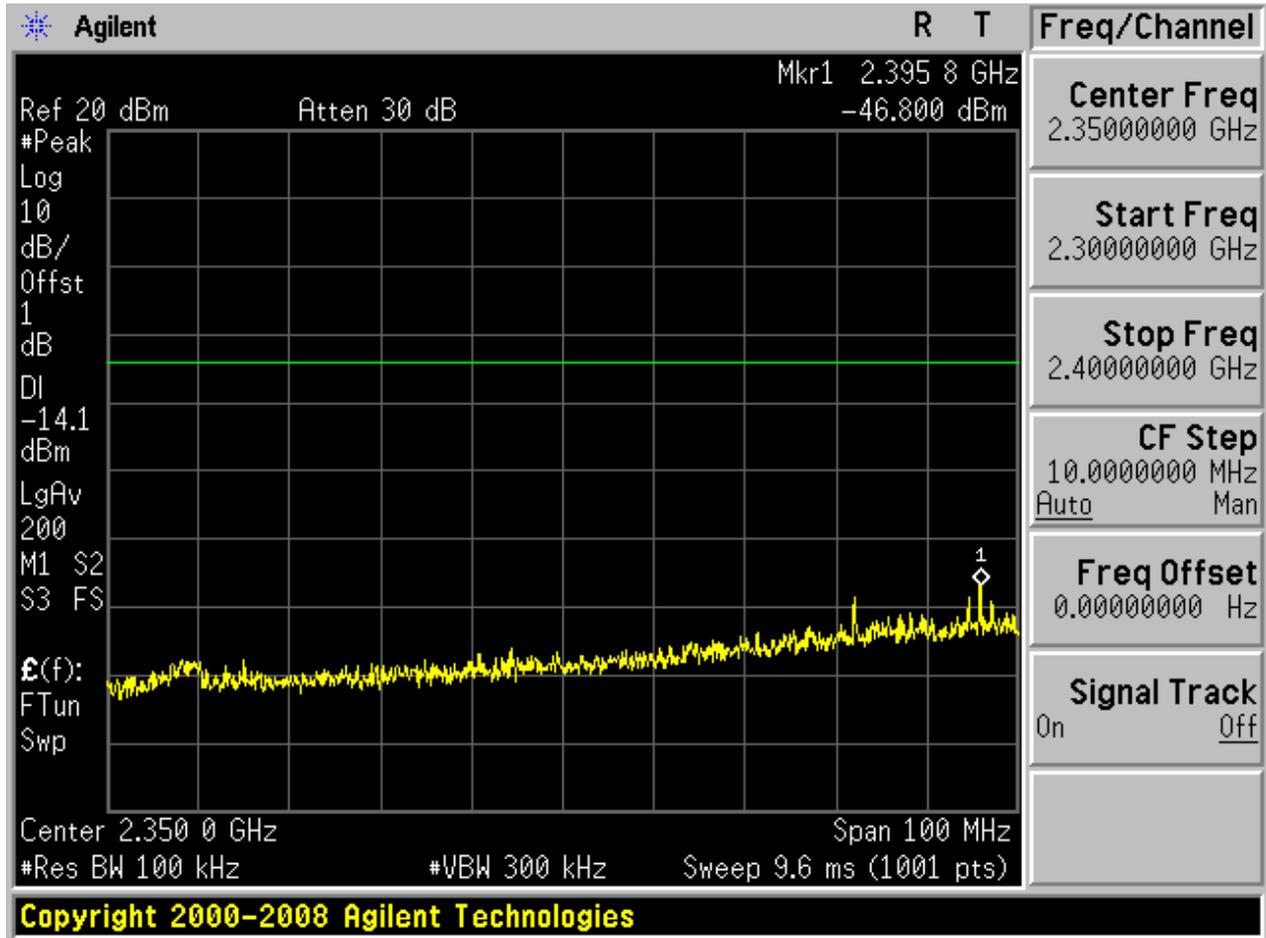


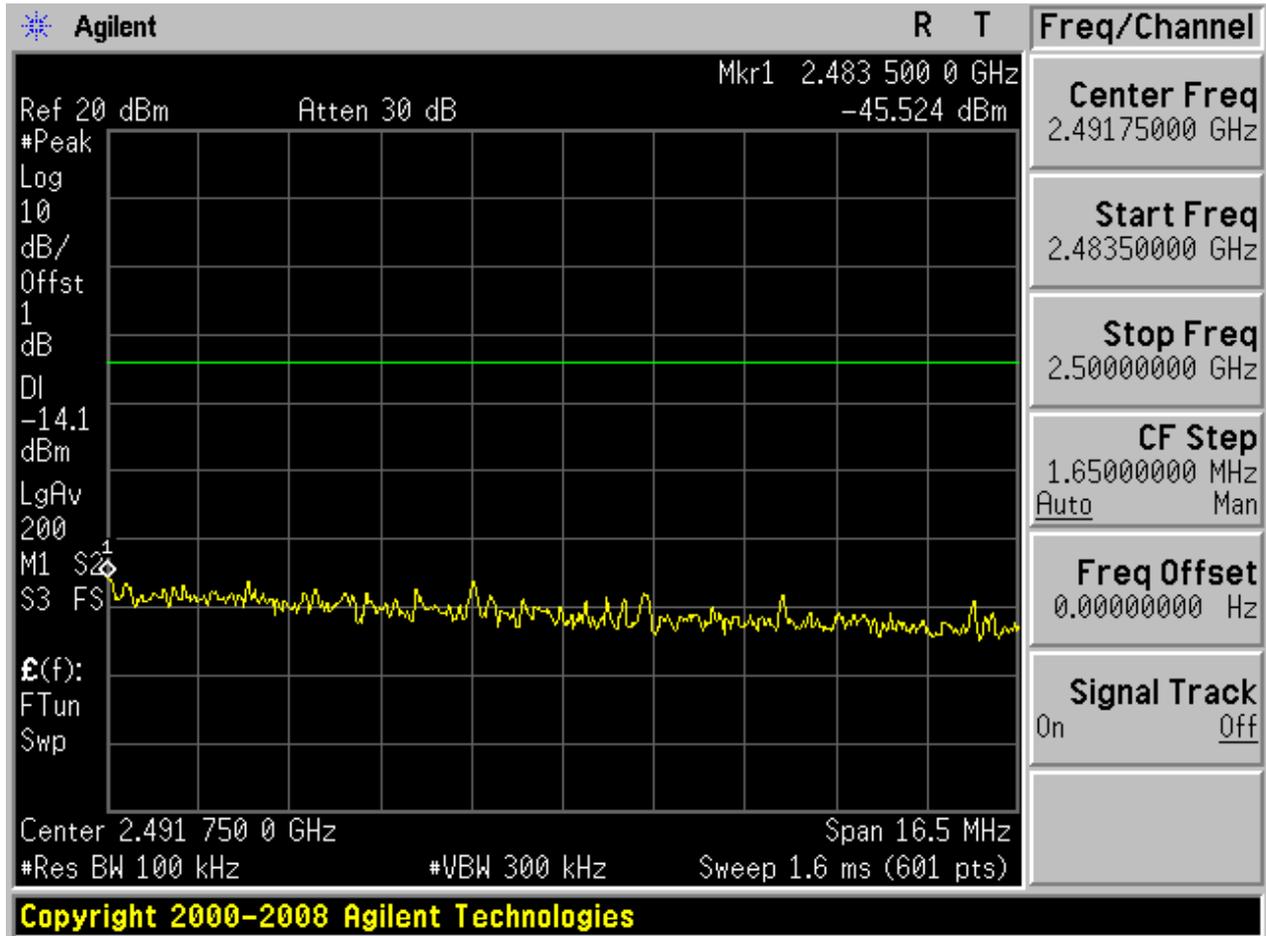
P_{uw}:

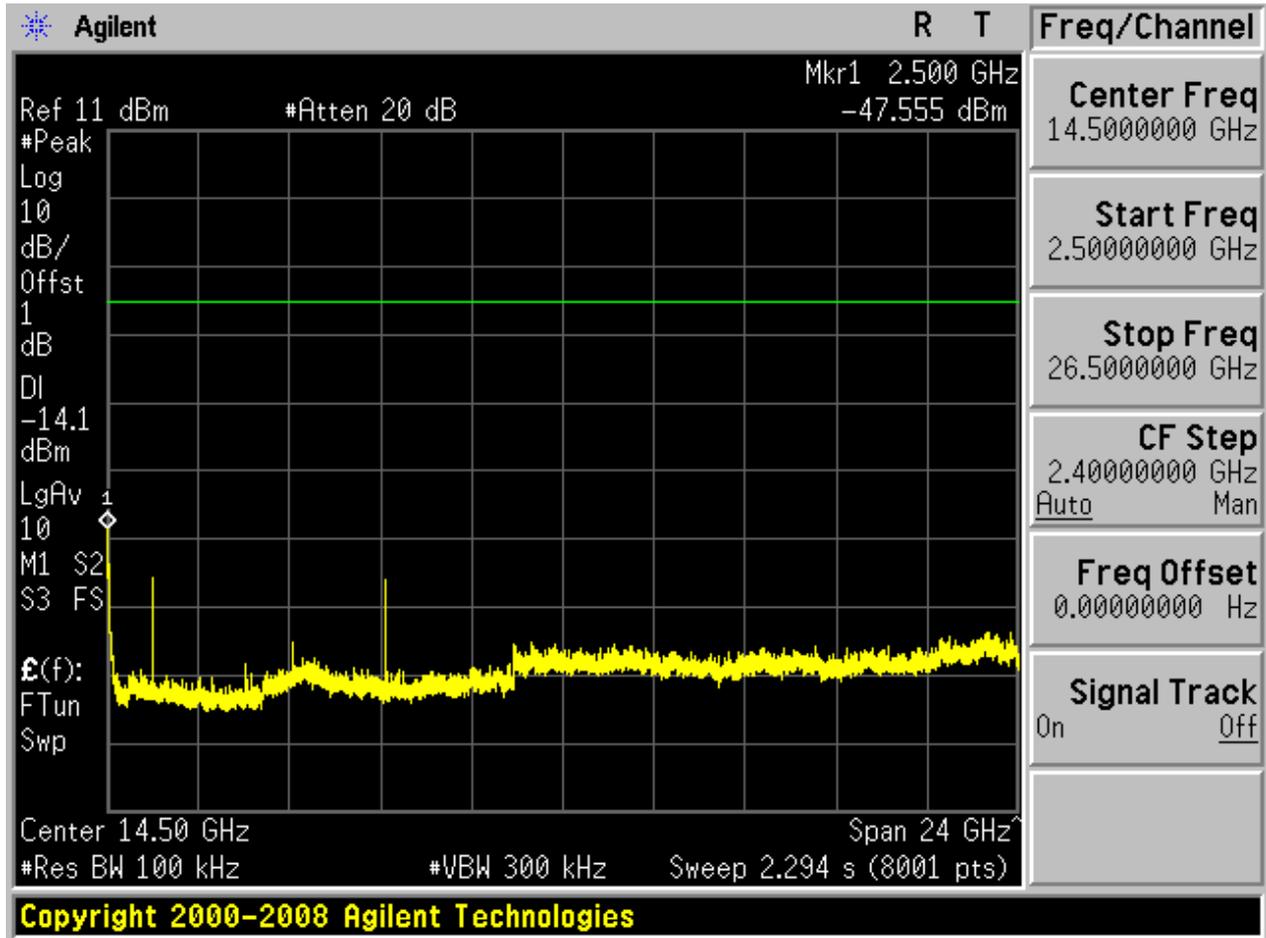






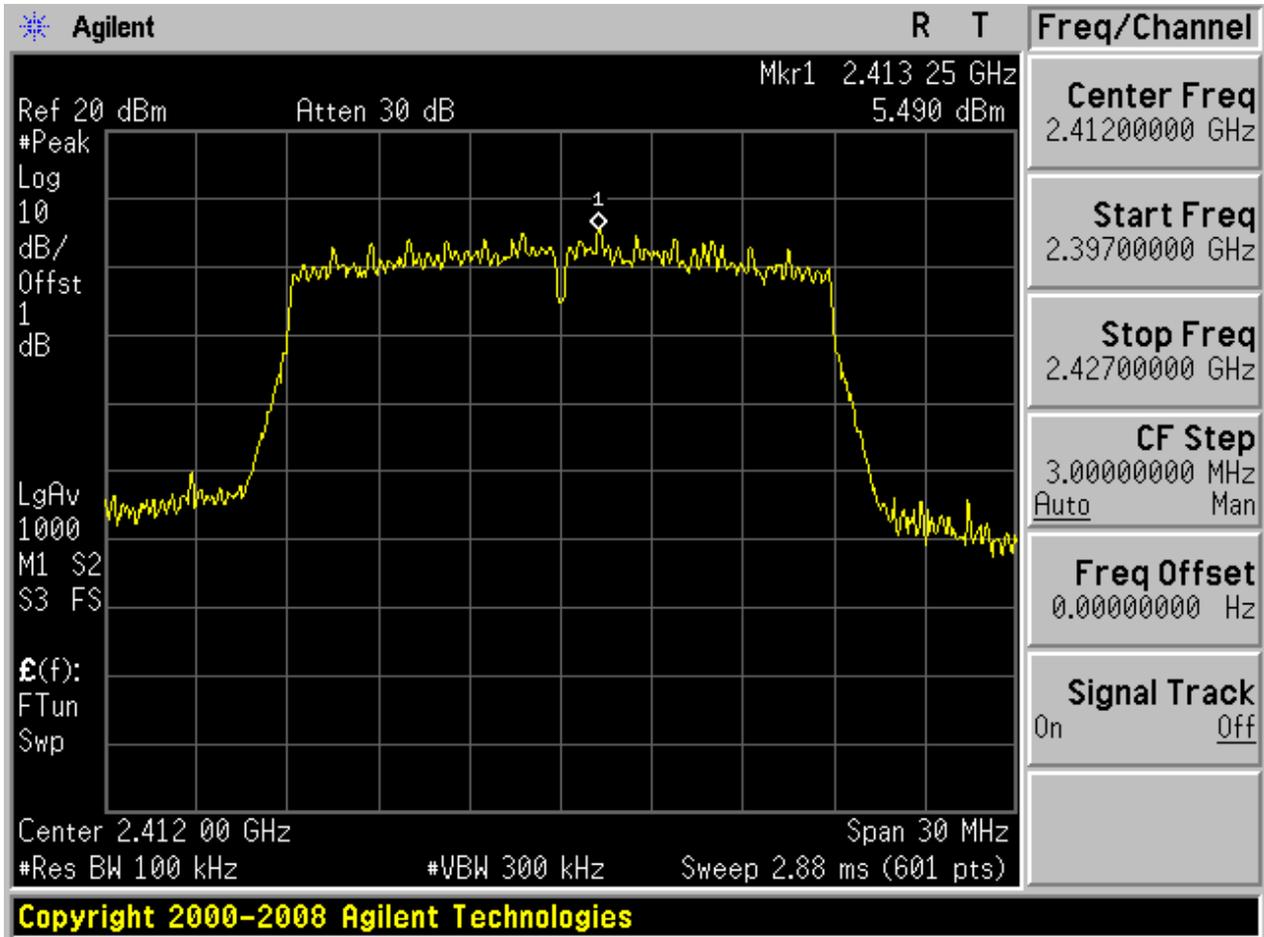




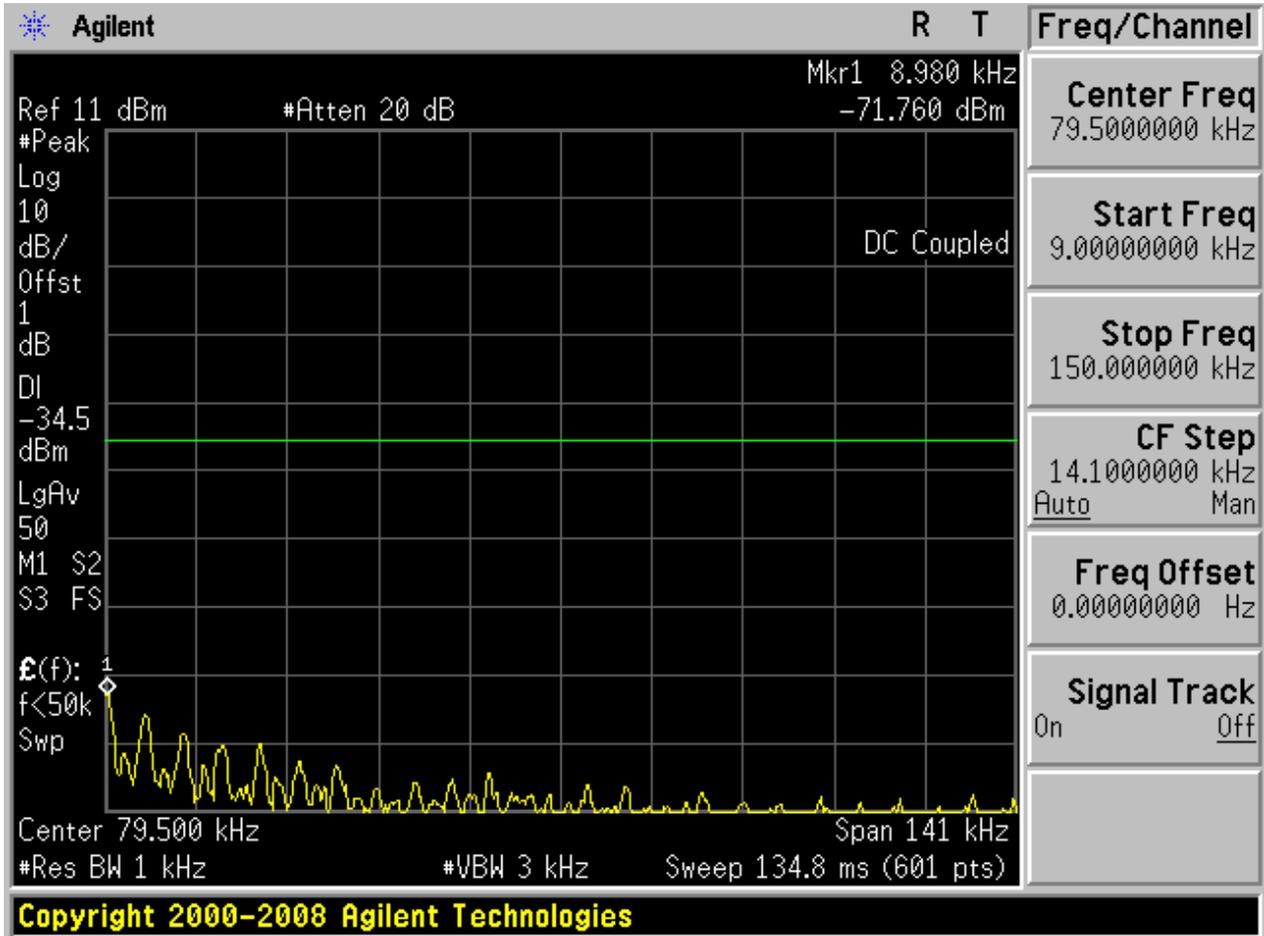


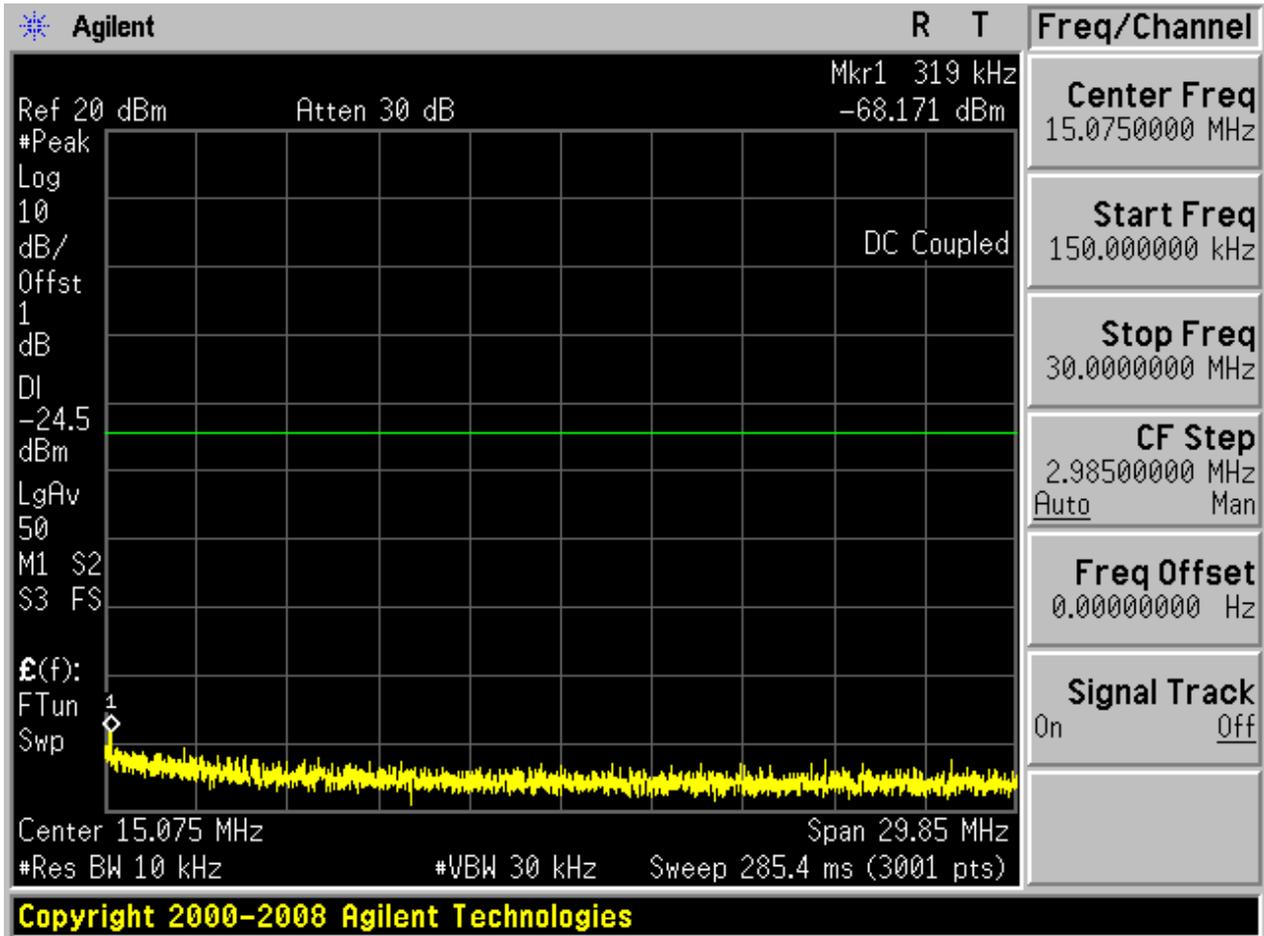
2.7 11N20_L

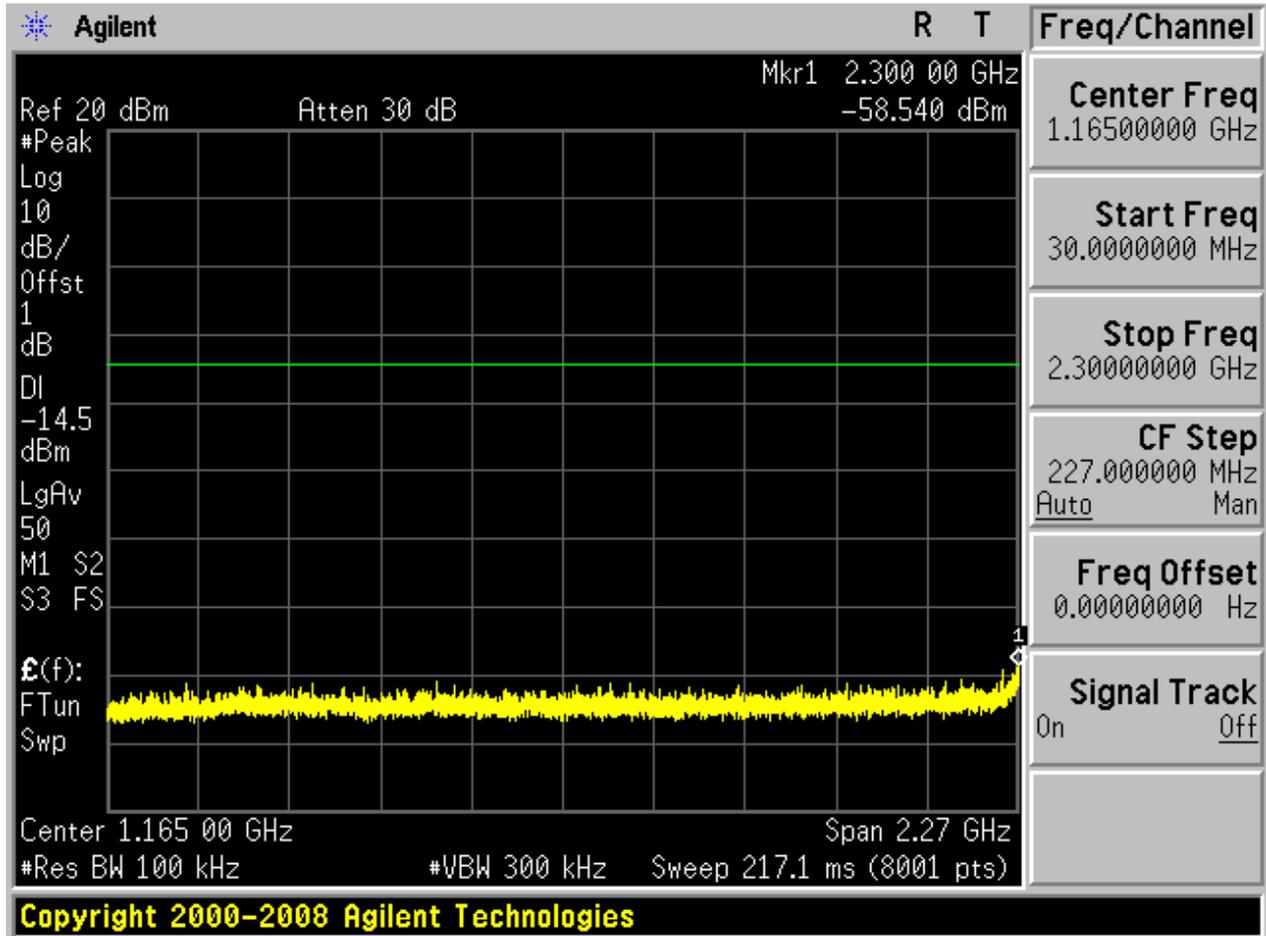
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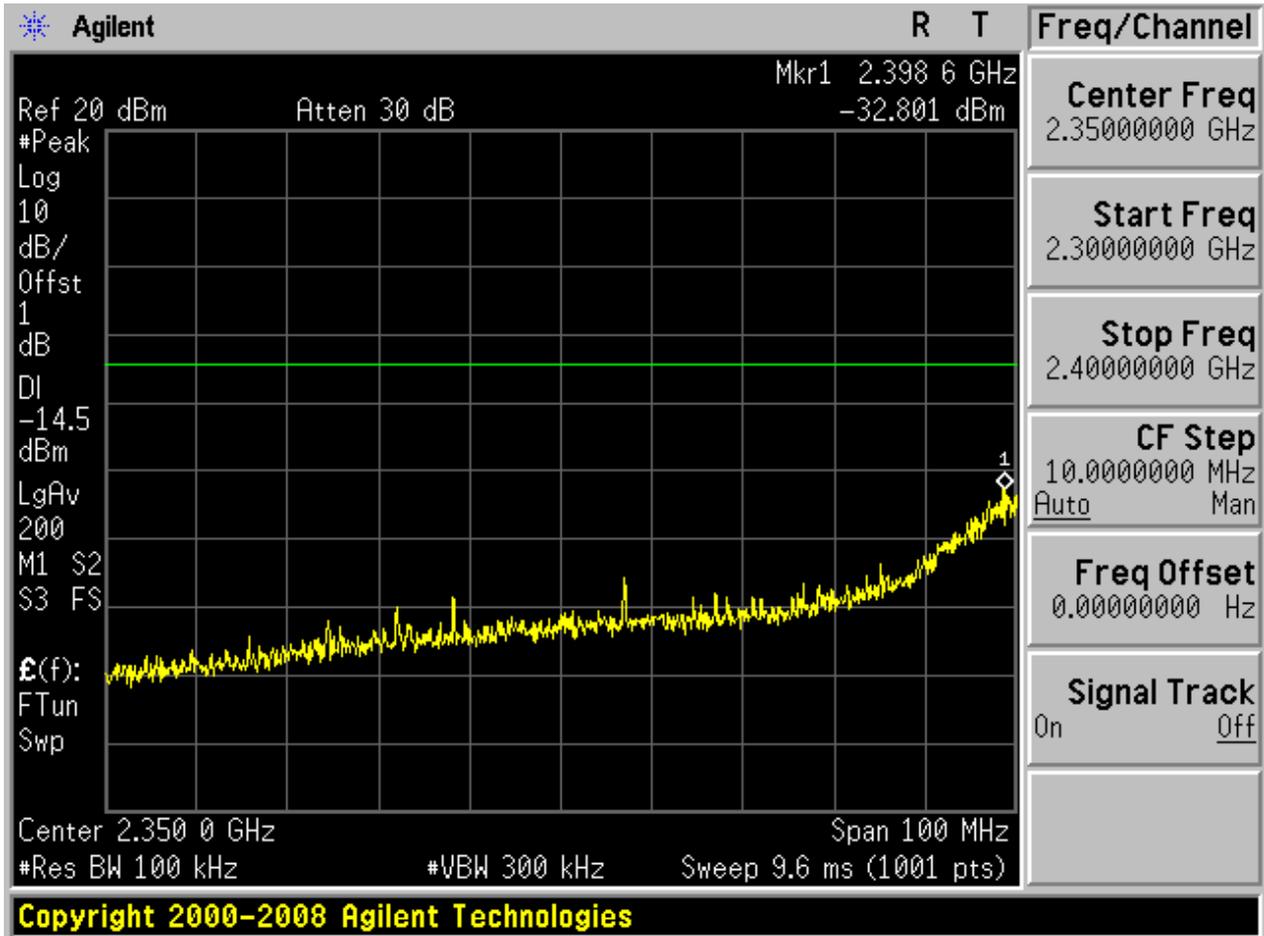


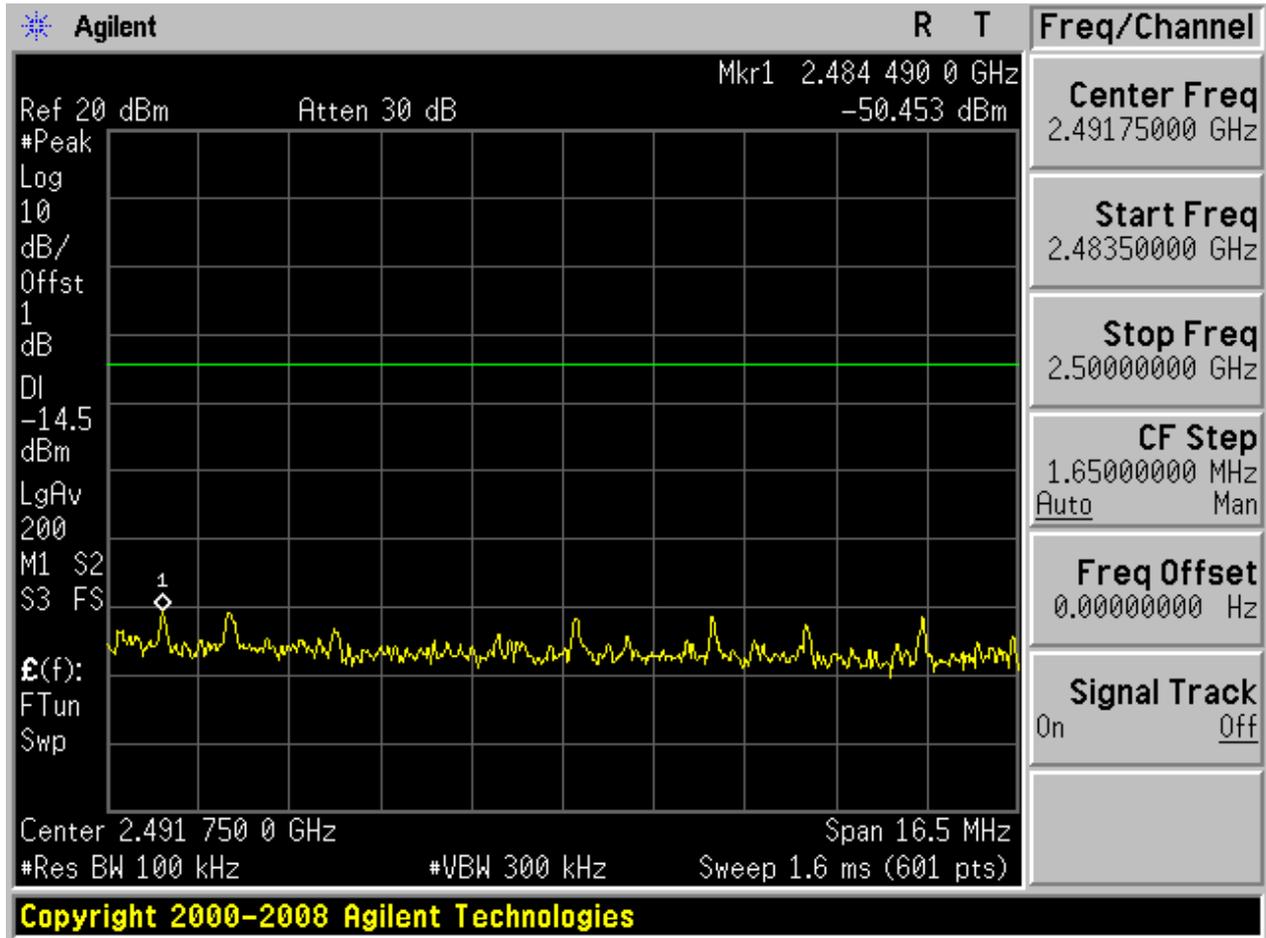
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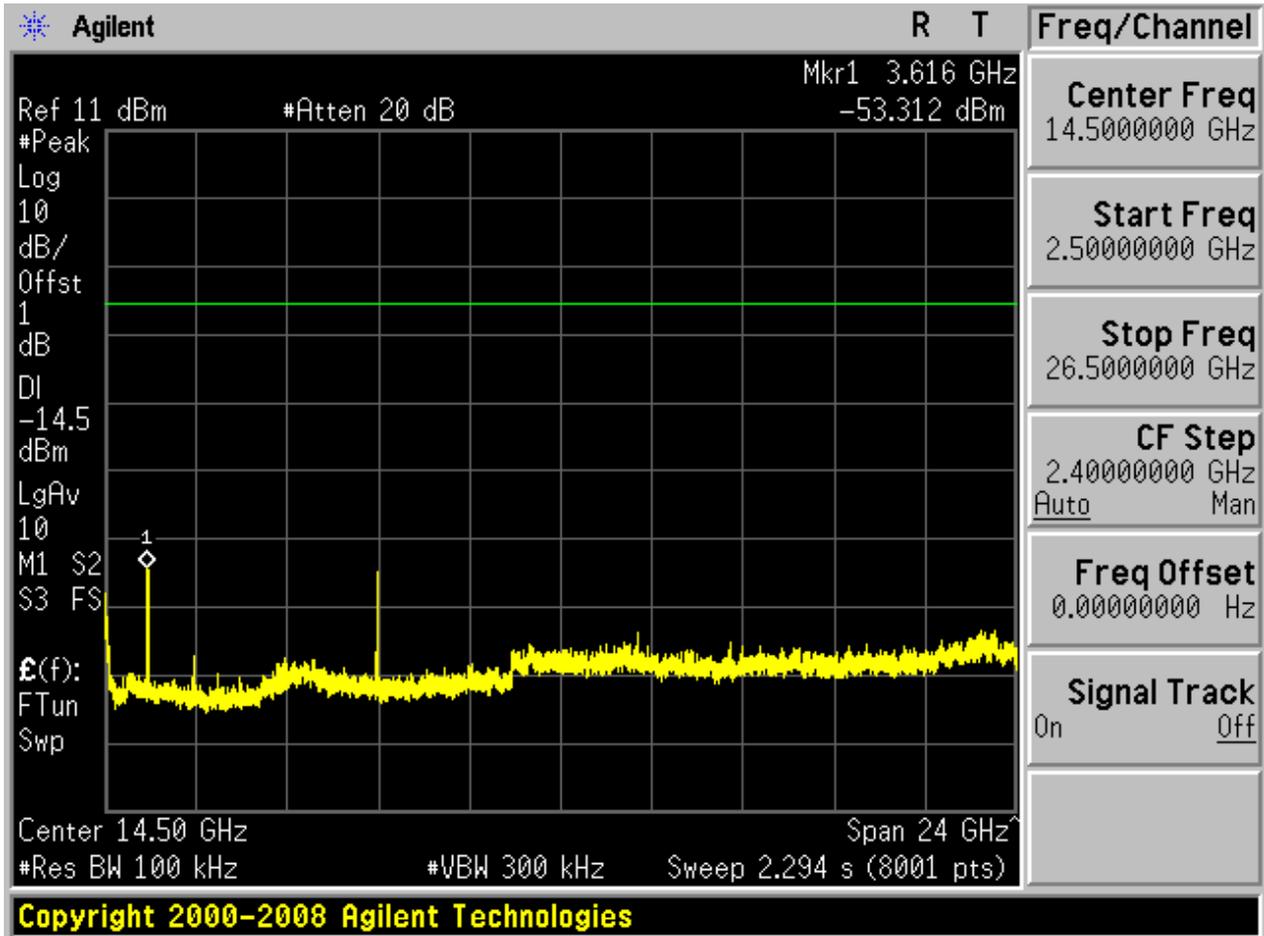






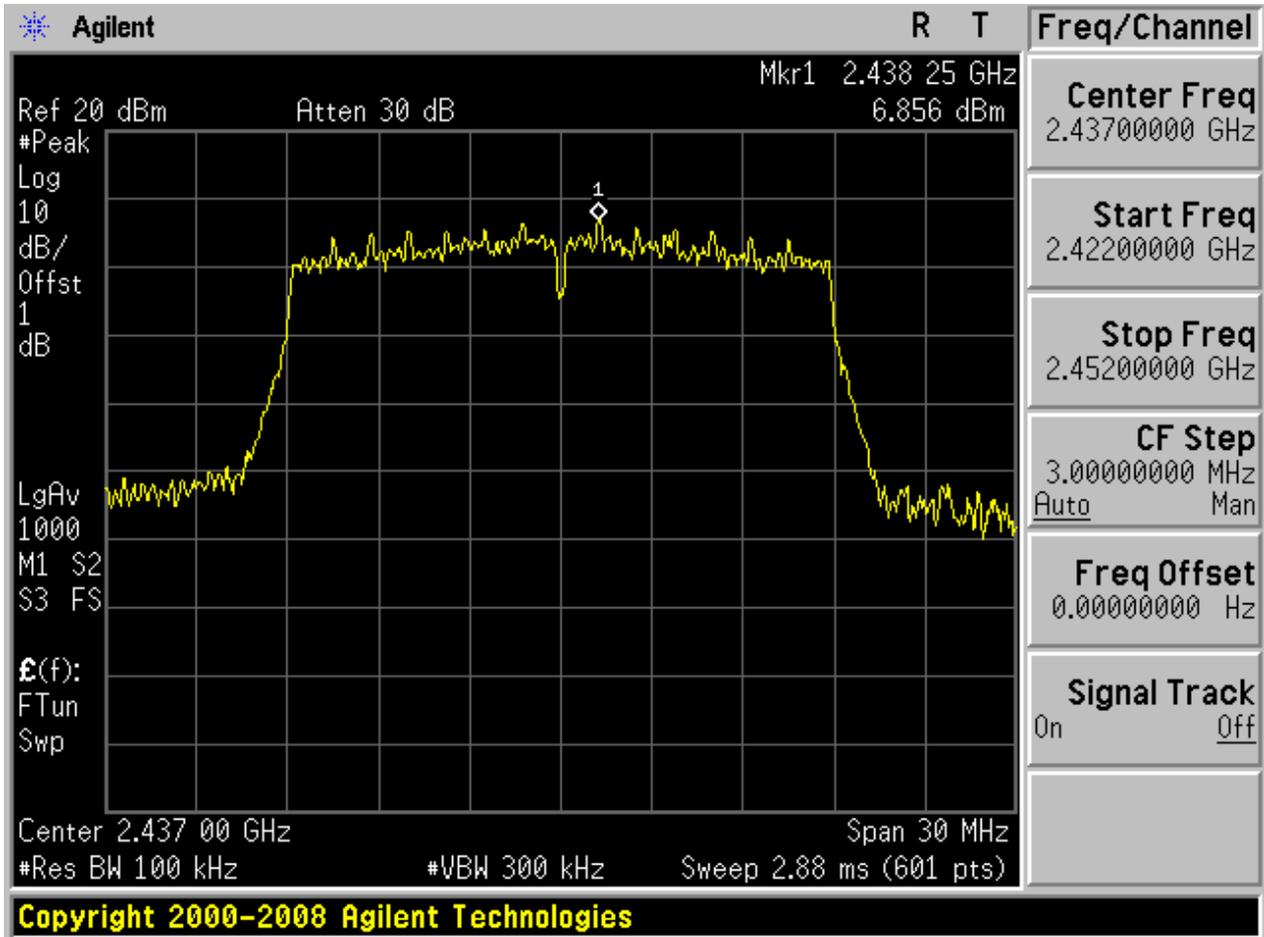






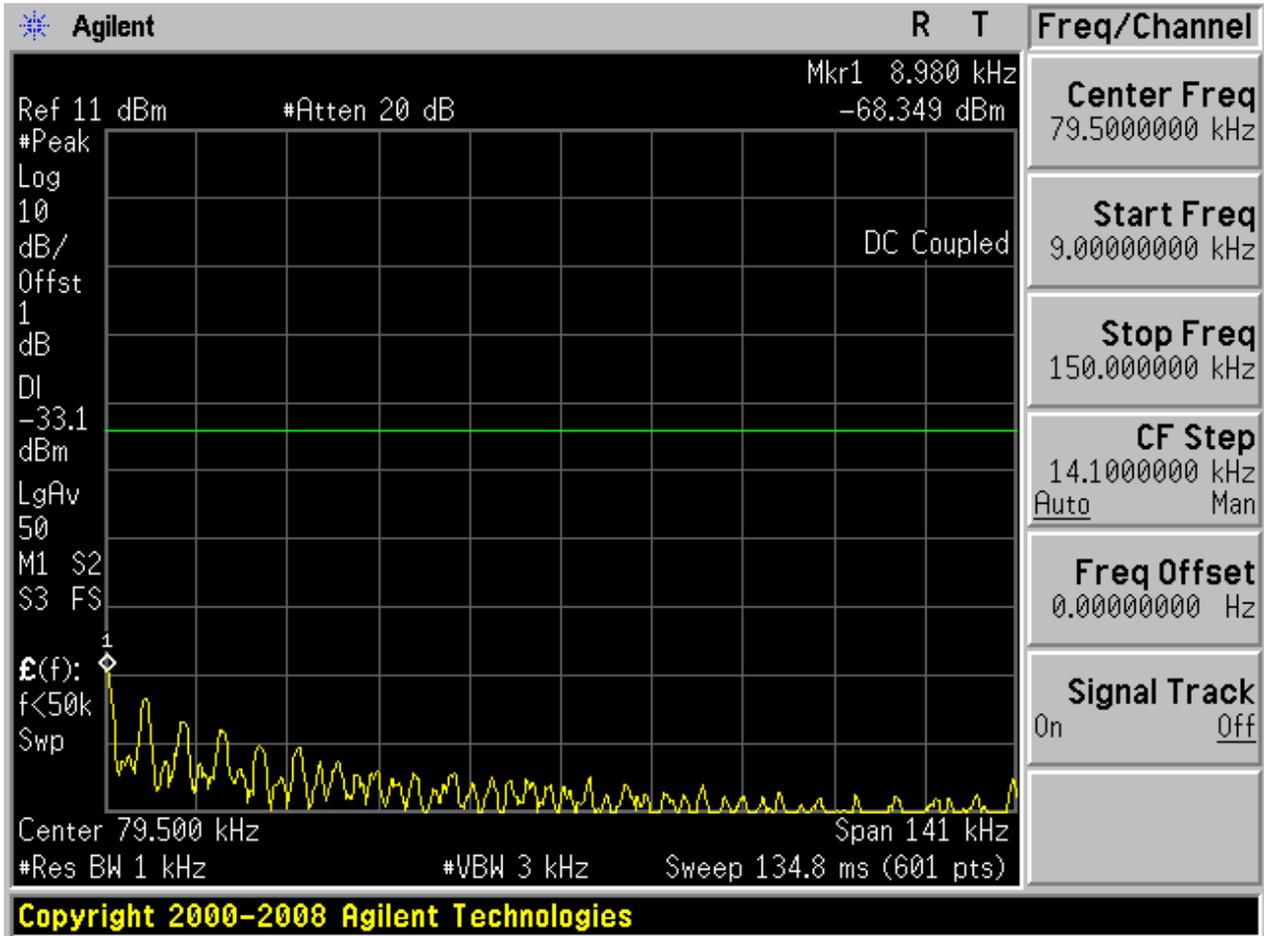
2.8 11N20_M

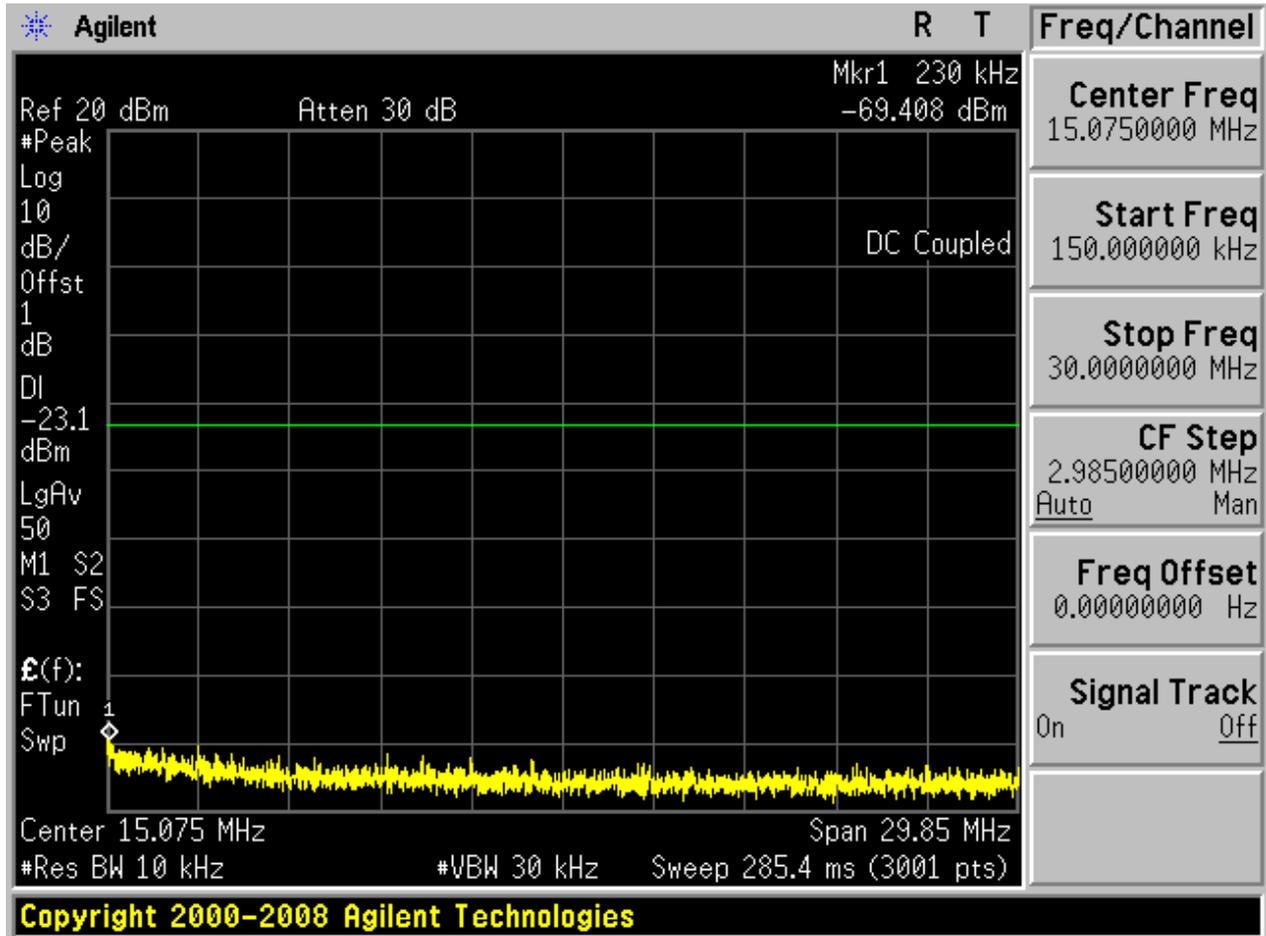
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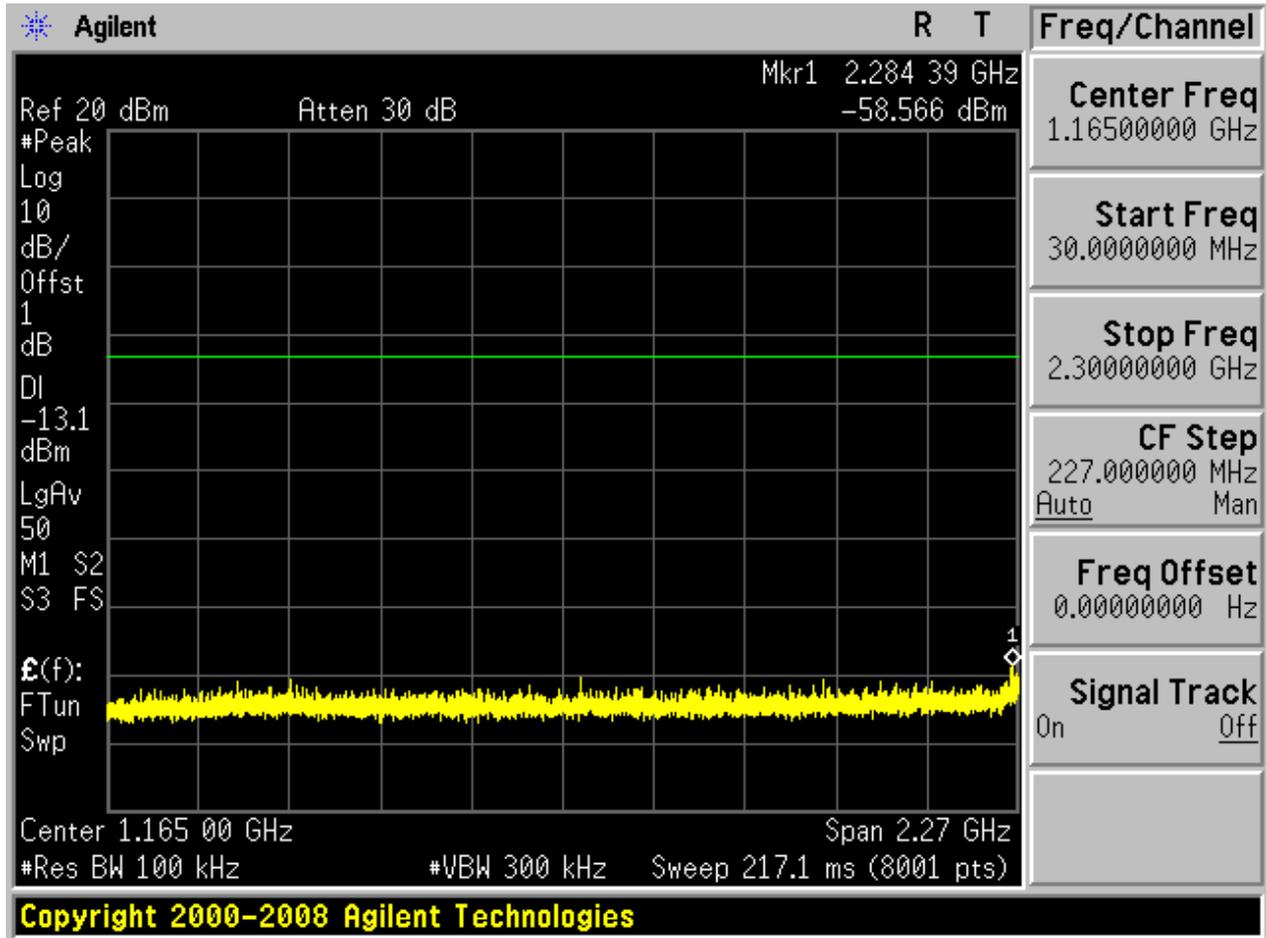


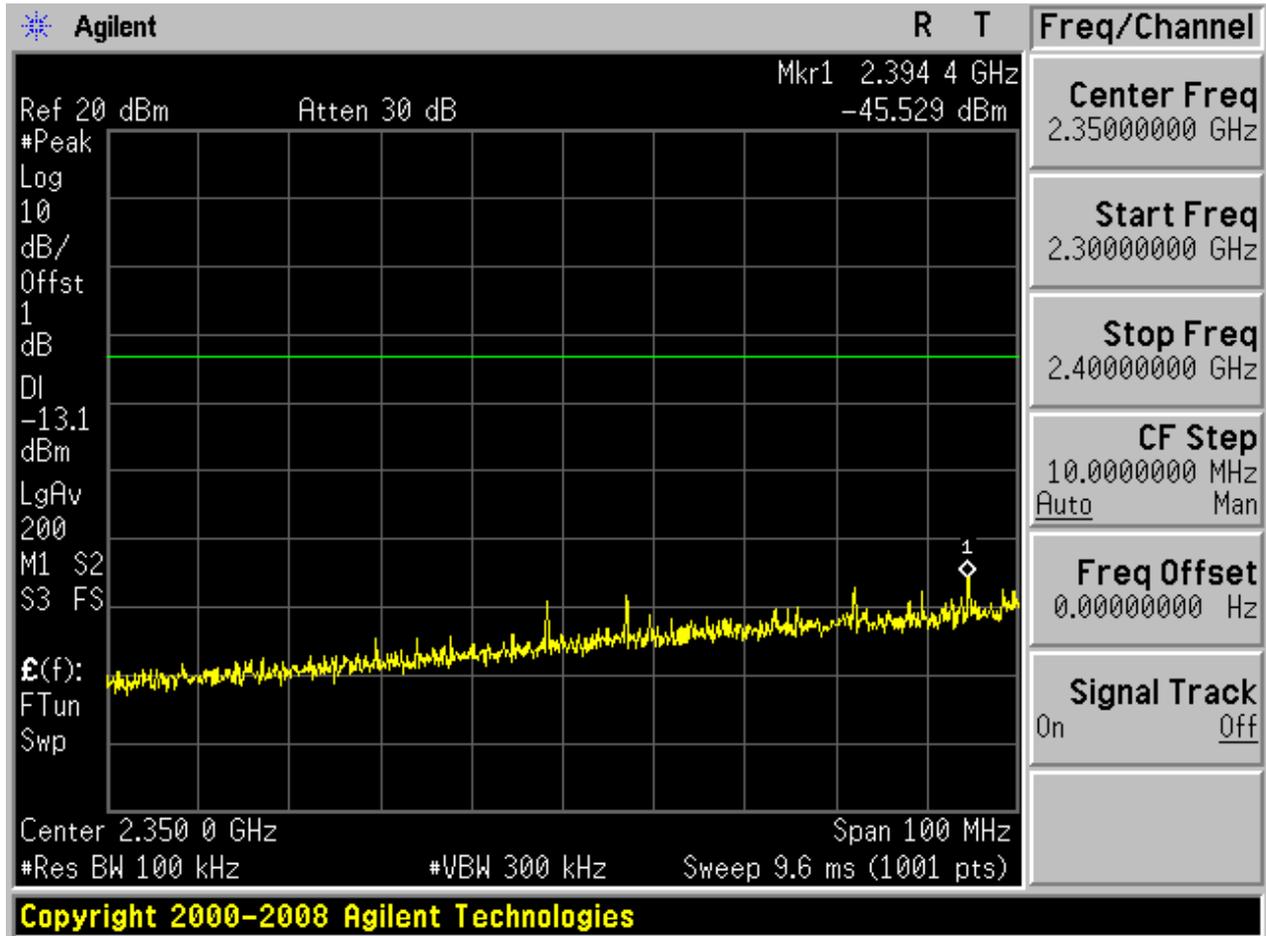


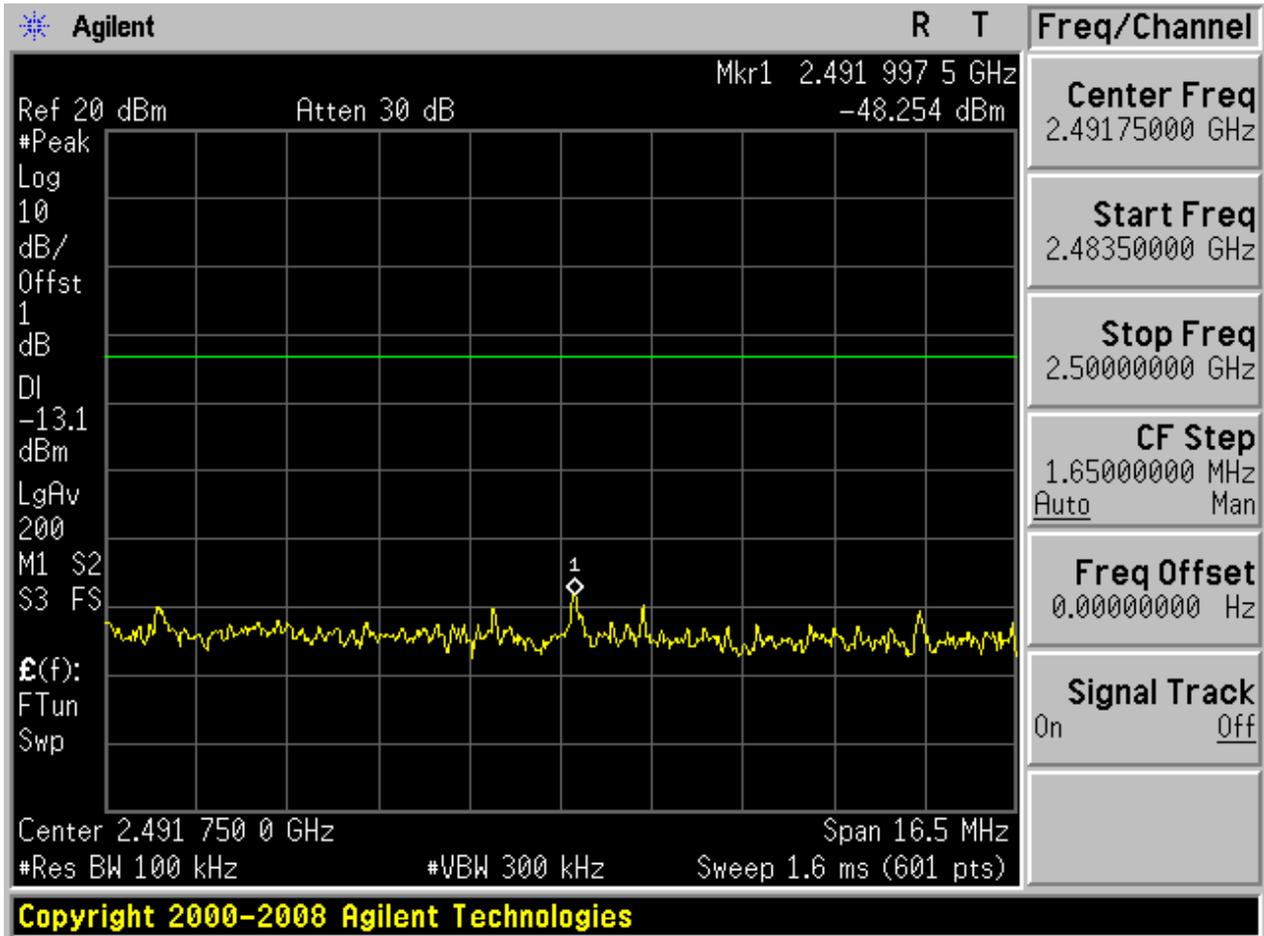
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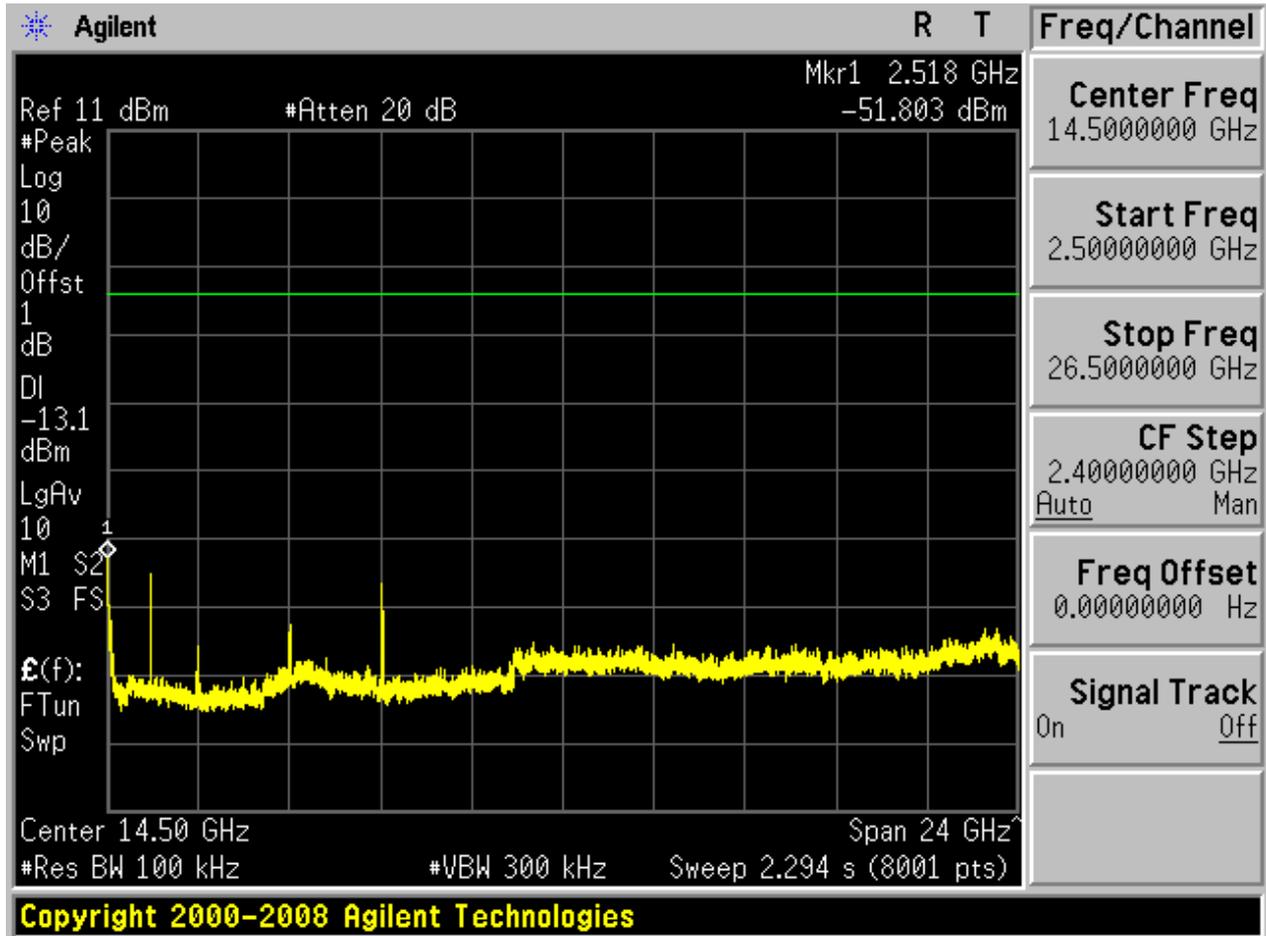






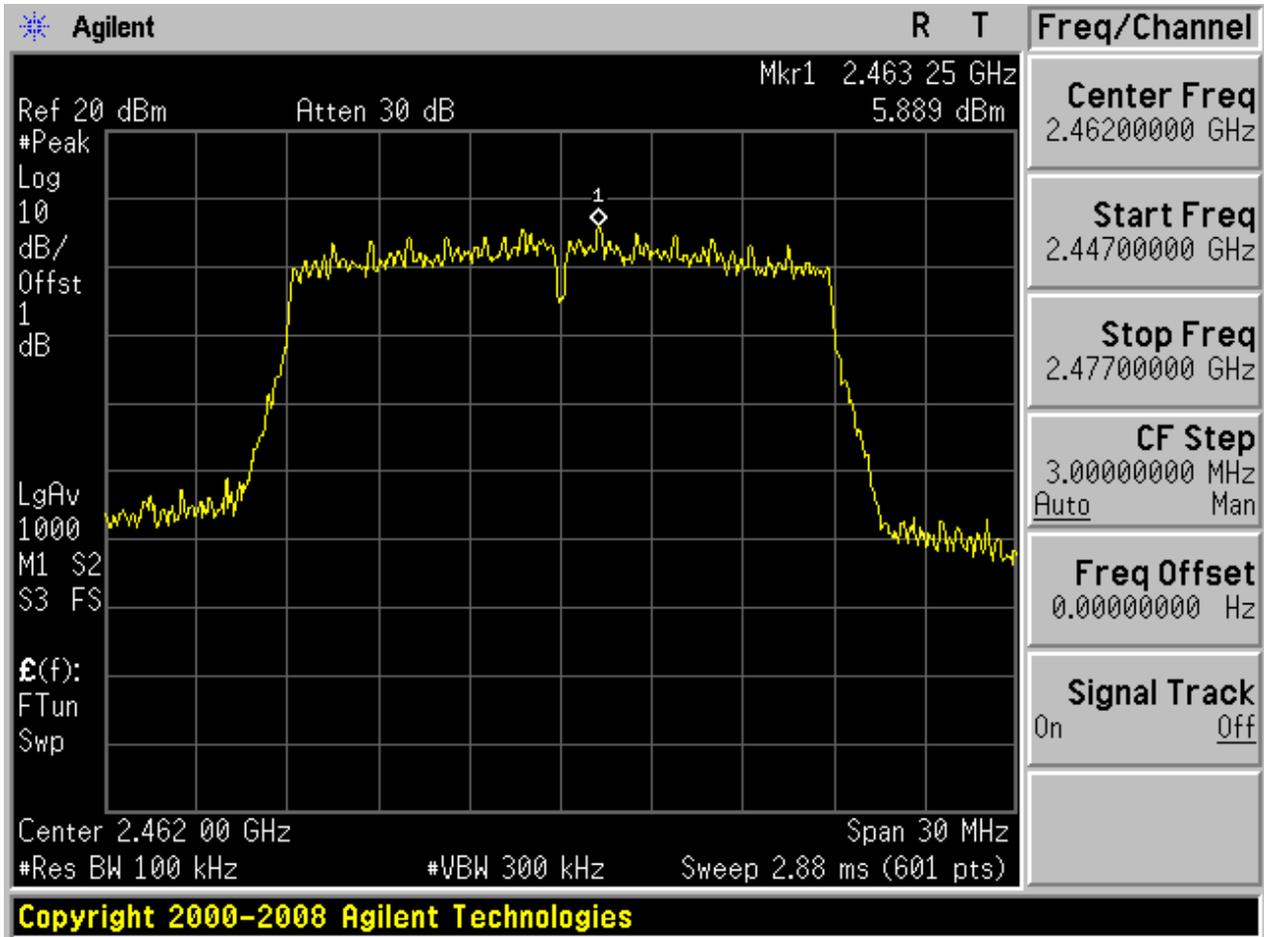




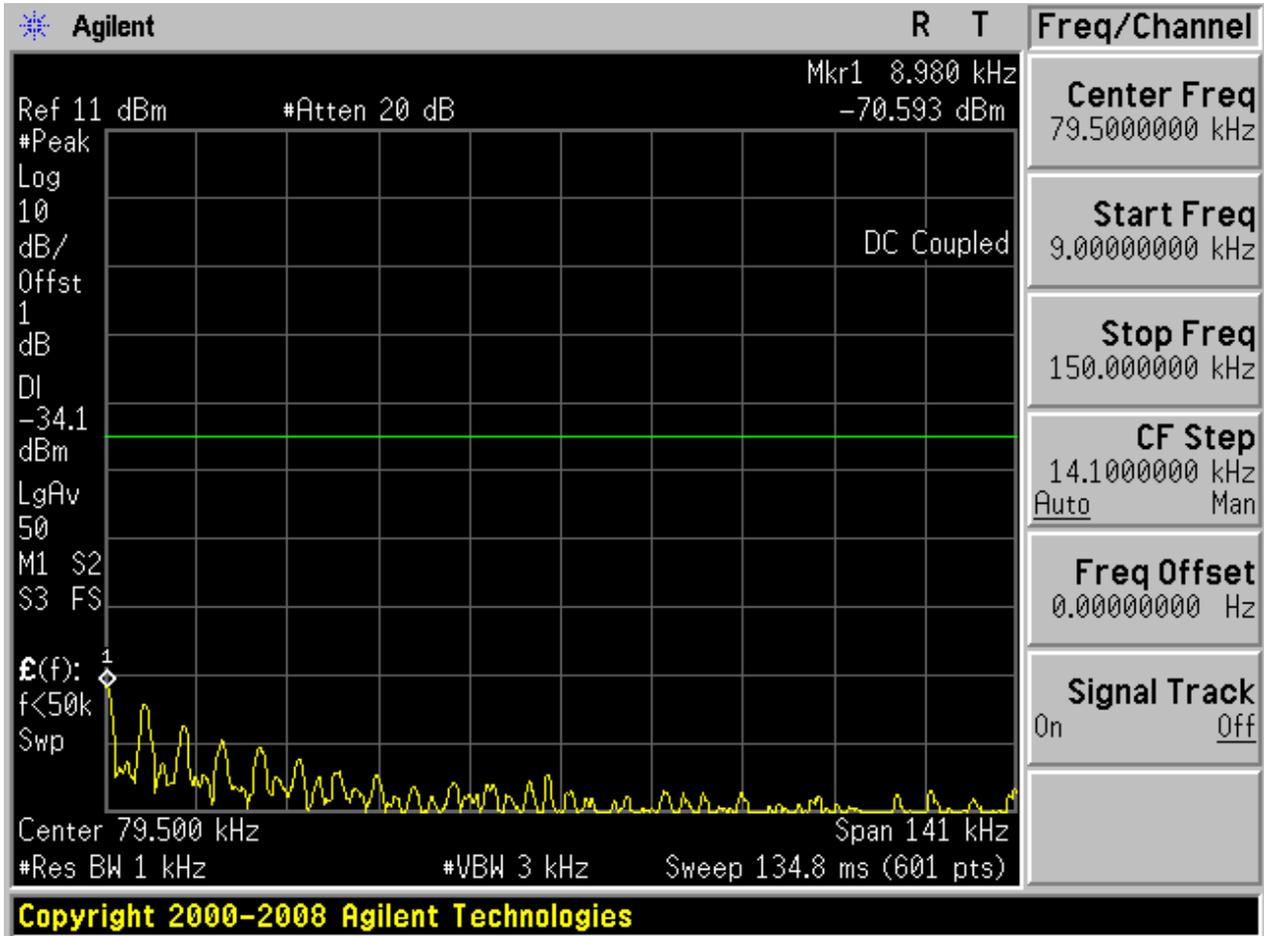


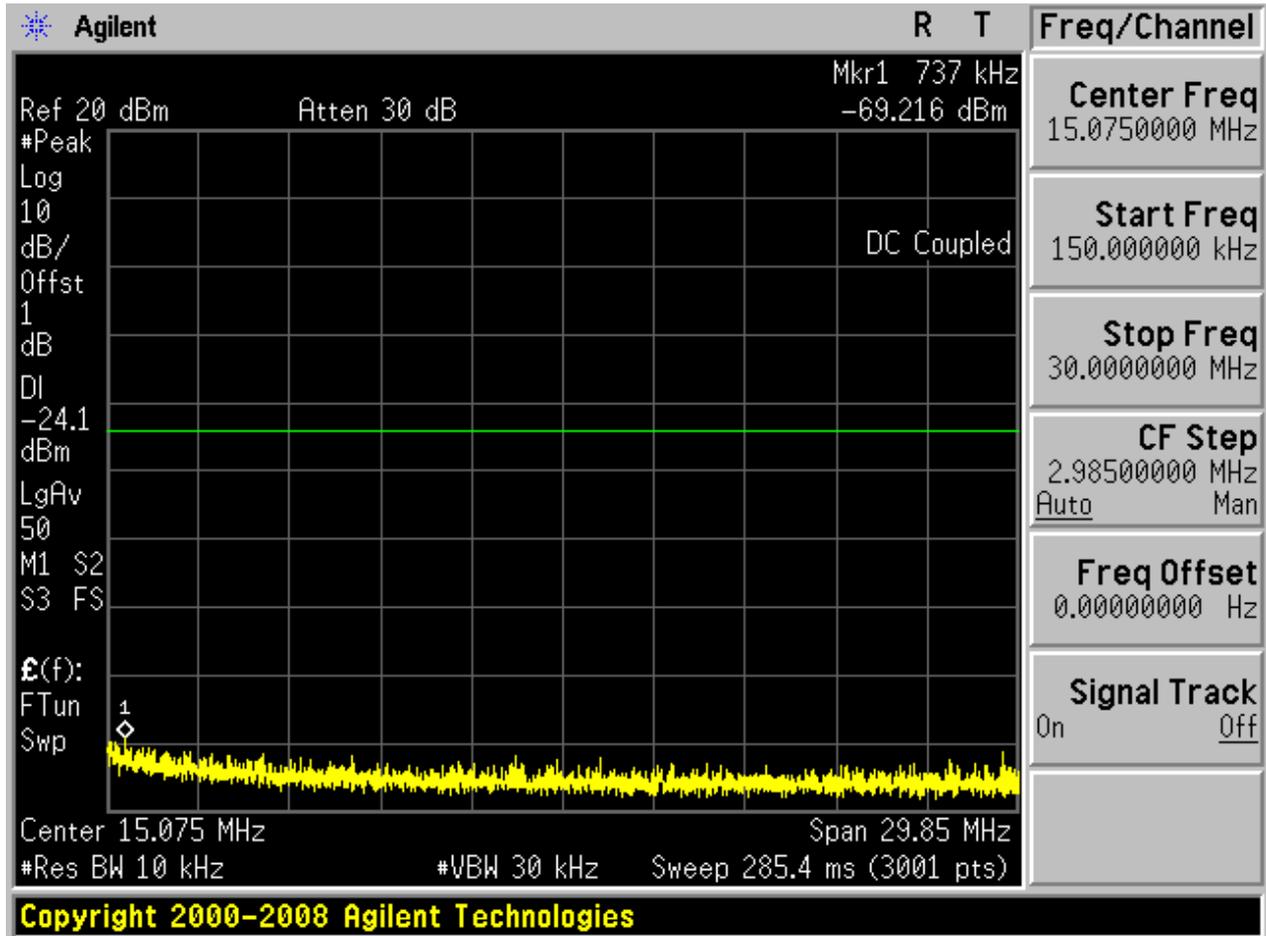
2.9 11N20_H

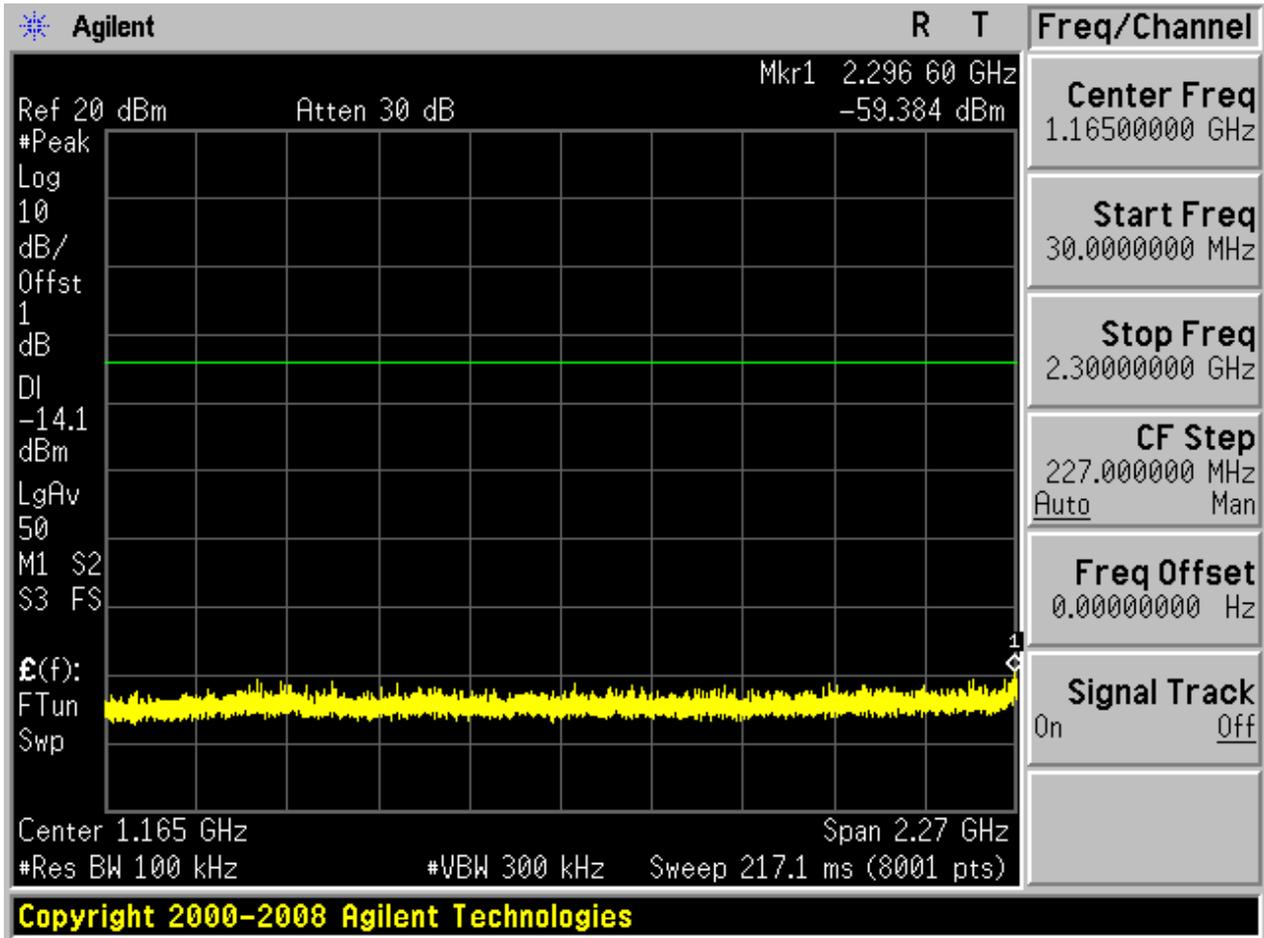
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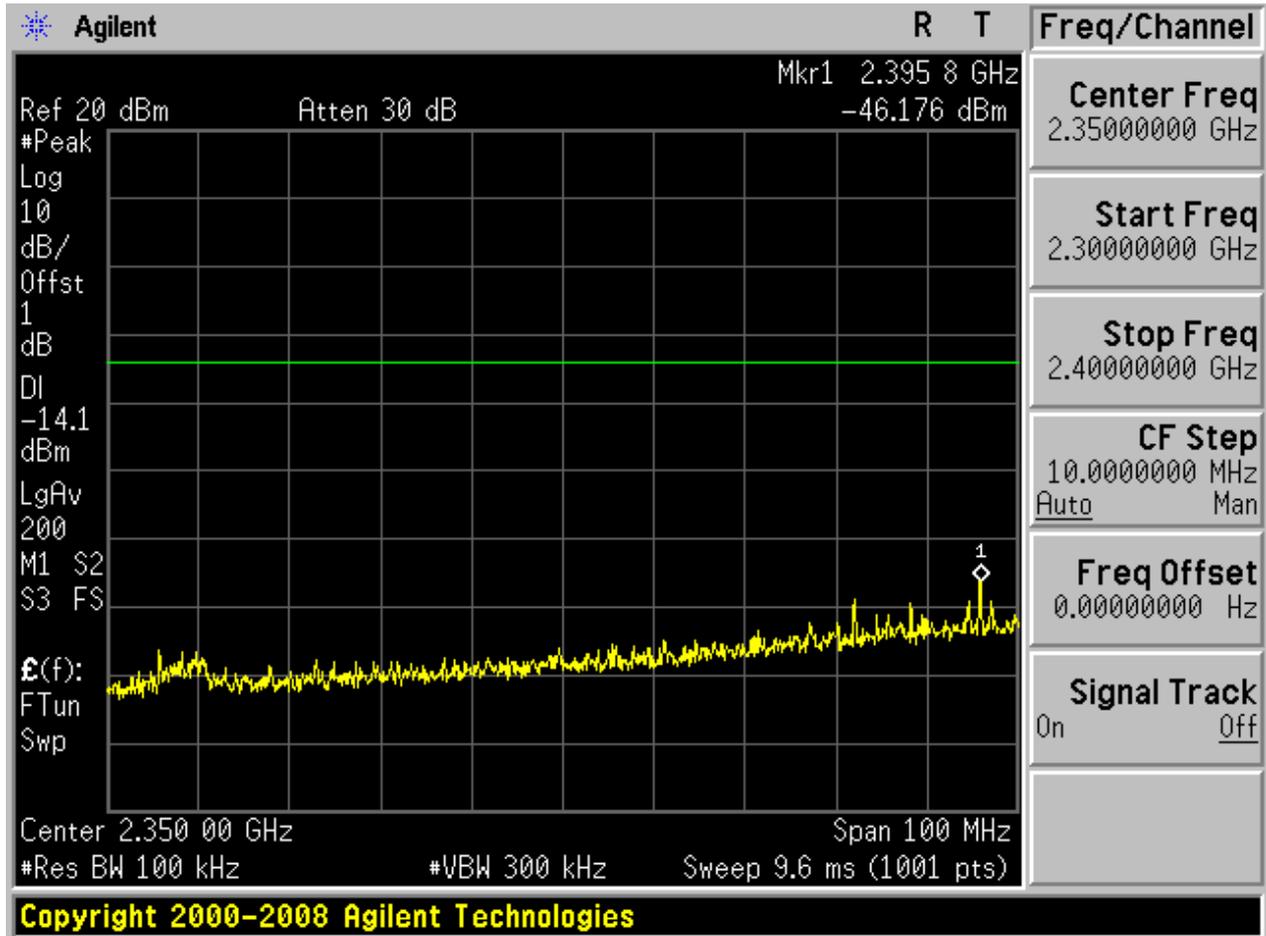


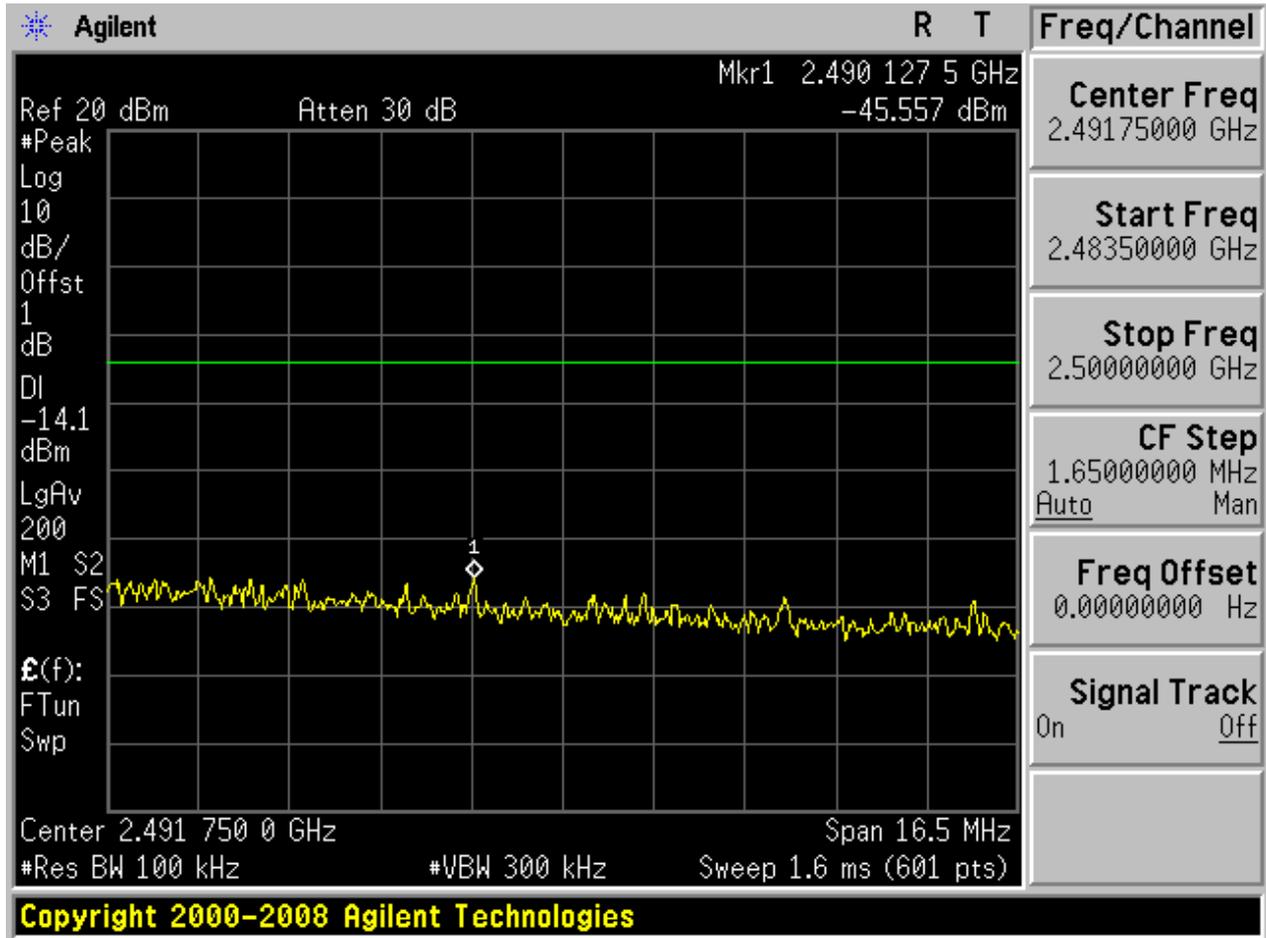
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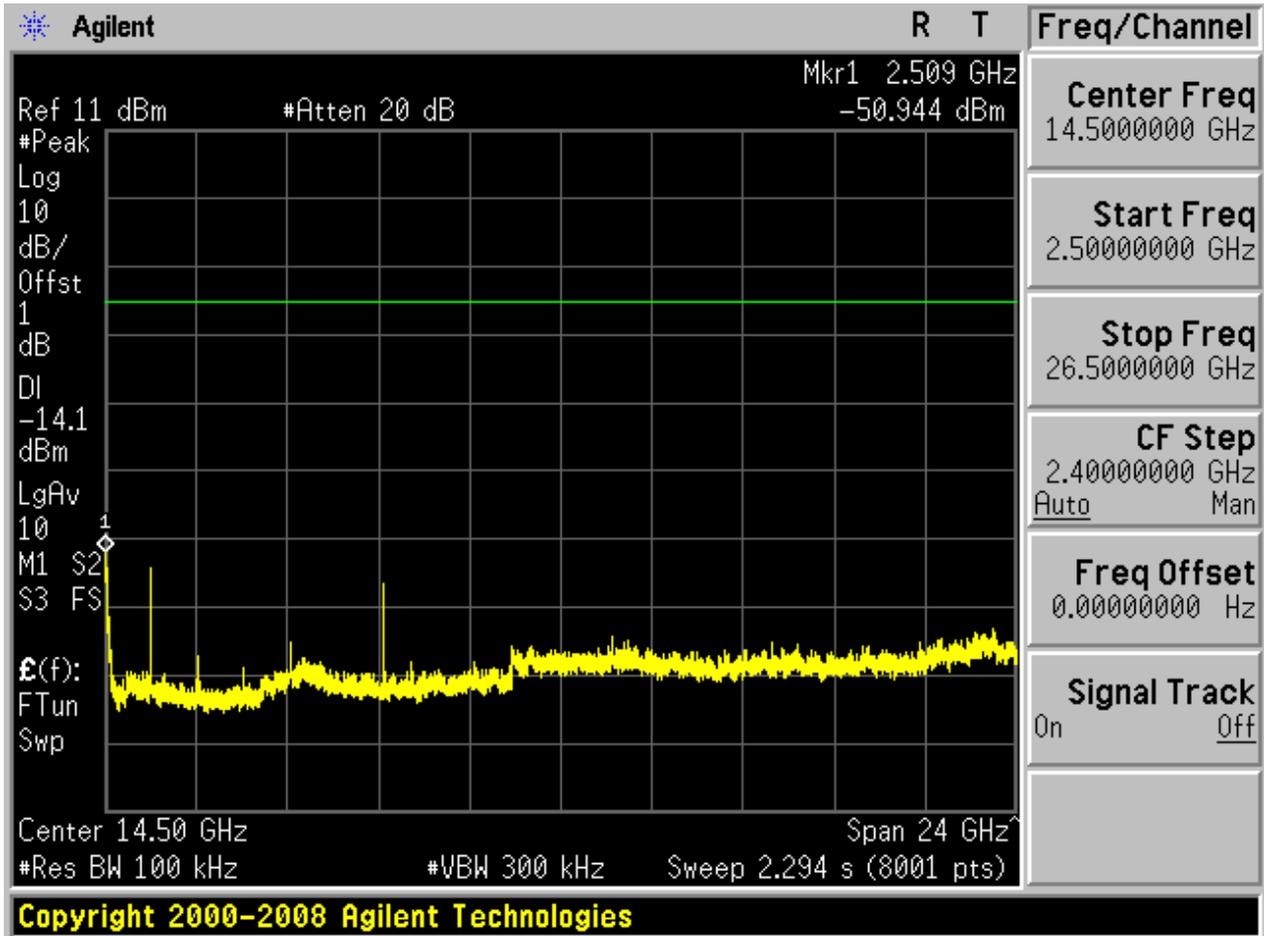












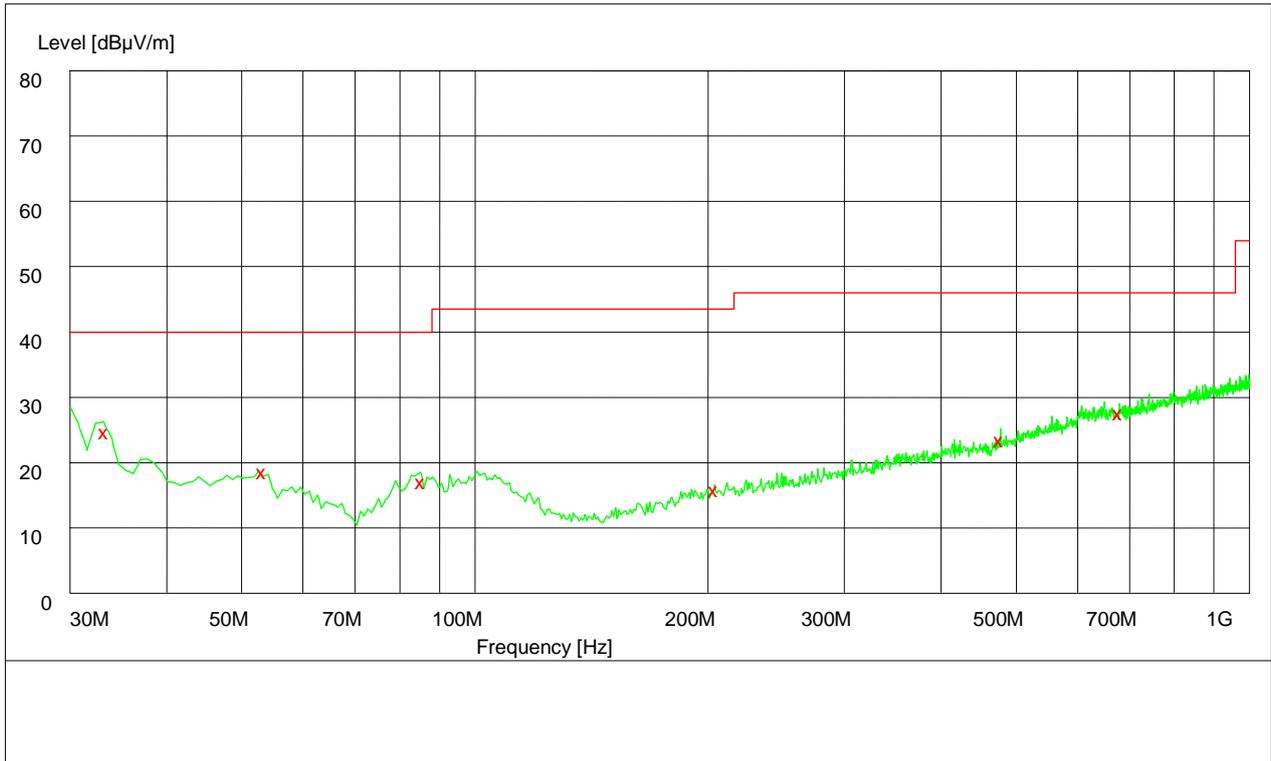


Appendix G

Radiated Spurious Emission & Spurious in Restricted Band (according to FCC Part 15.247(d) & 15.205 & 15.209)

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

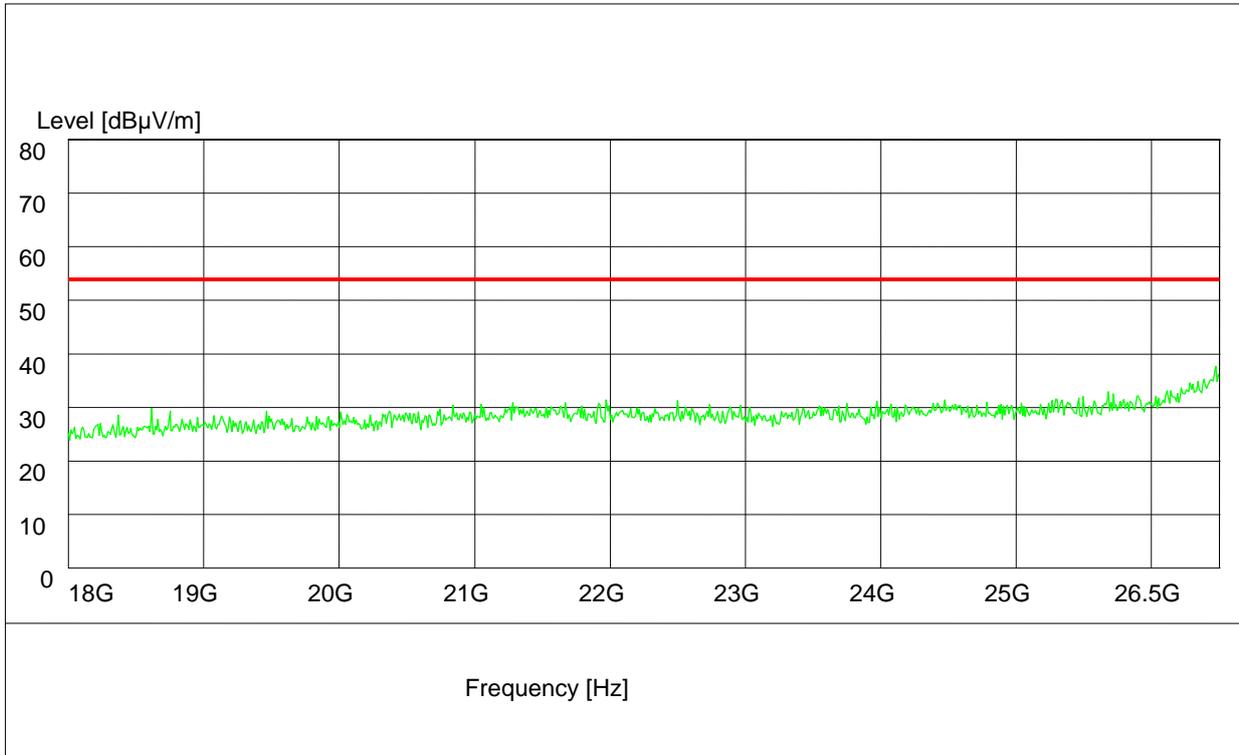
- Note 1: The test results and plot for testing range of “30 MHz to 1 GHz” showed as below is **the WORST case for all Test Modes and Channels**. This range will not be presented for each Test Mode and each Channel.
- Note 2: **The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).**



Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Plarization
33.420000	26.10	11.8	40.0	13.9	100.0	89.00	VERTICAL
53.400000	20.00	12.7	40.0	20.0	100.0	285.00	VERTICAL
85.620000	18.50	10.5	40.0	21.5	100.0	101.00	VERTICAL
204.720000	17.20	12.3	43.5	26.3	100.0	309.00	HORIZONTAL
477.840000	24.80	19.6	46.0	21.2	100.0	52.00	HORIZONTAL
681.000000	29.00	23.3	46.0	17.0	100.0	0.00	VERTICAL

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

Note: No peak found in pre- test.

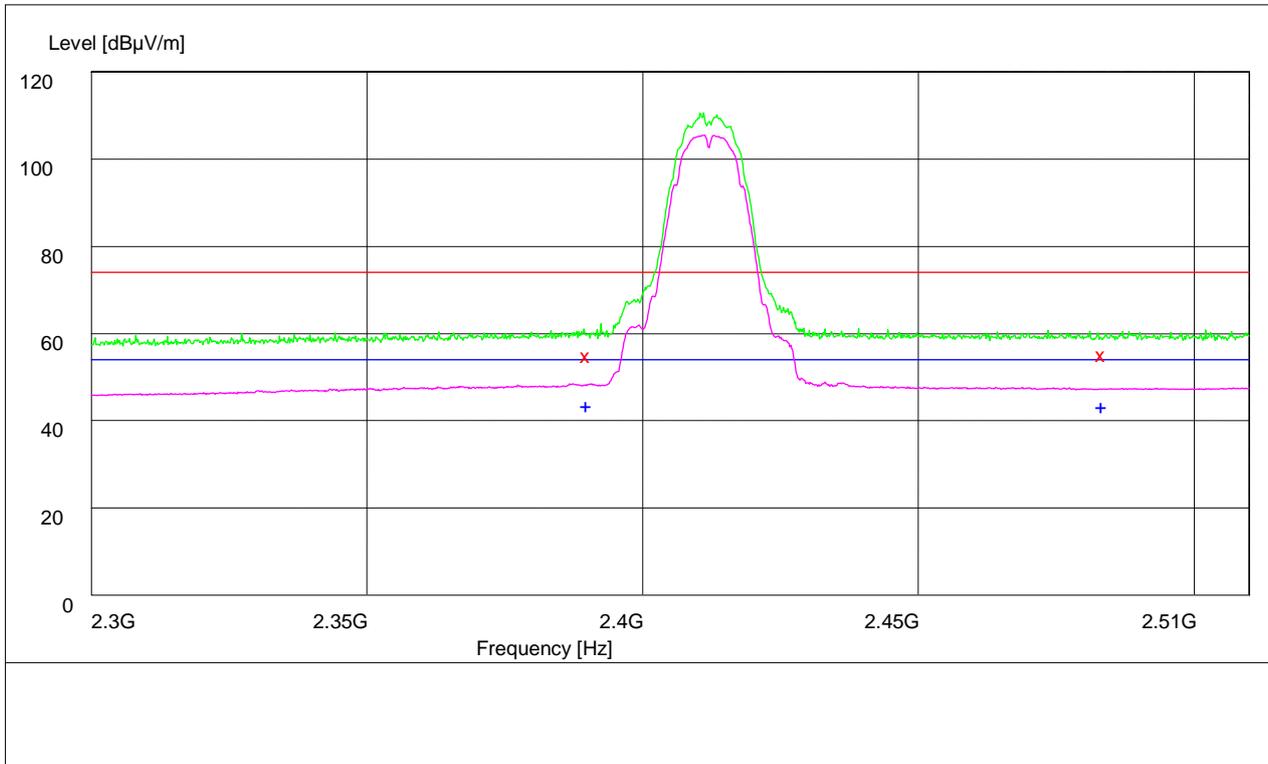


Part 3: Testing Range of “2.3GHz to 2.5GHz”

- 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

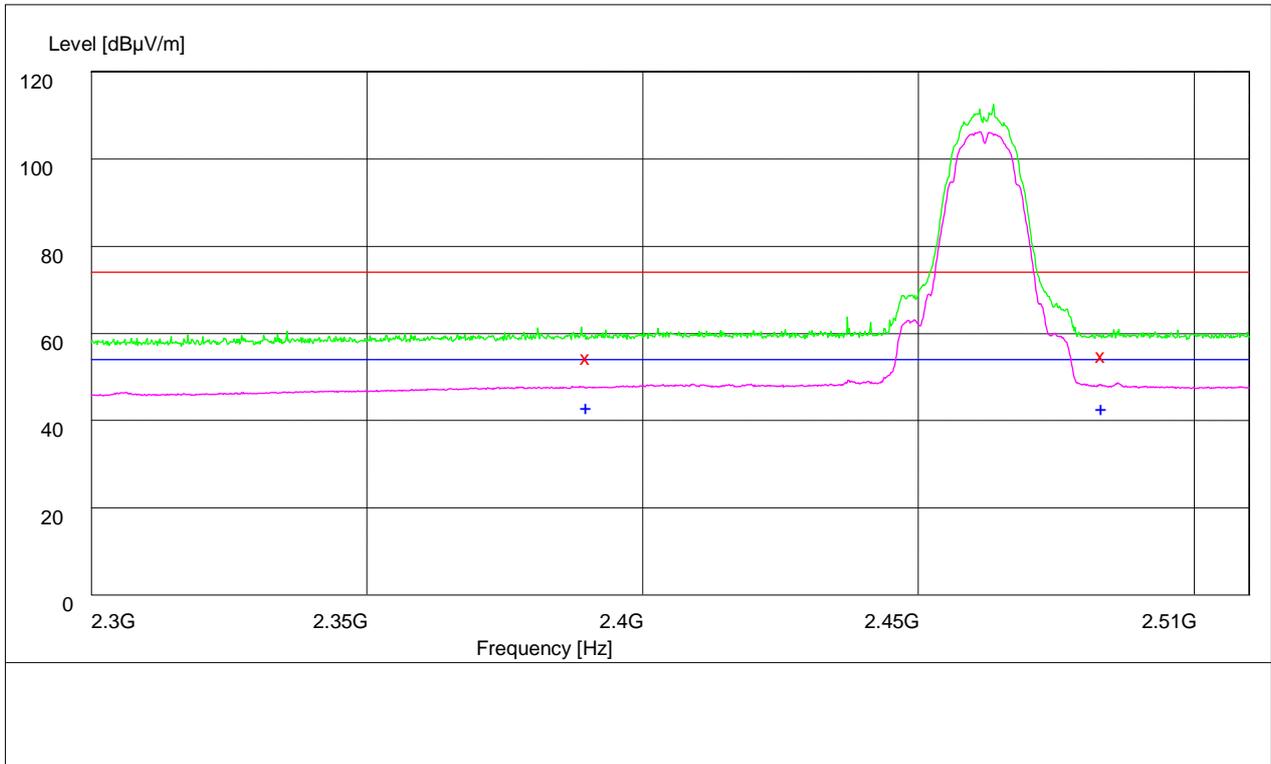
Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	57.00	34.7	74.0	17.0	100.0	106.00	HORIZONTAL
2483.500000	57.20	35.0	74.0	16.8	100.0	85.00	HORIZONTAL

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	45.70	34.7	54.0	8.3	100.0	262.00	HORIZONTAL

2483.500000	45.50	35.0	54.0	8.5	100.0	238.00	HORIZONTAL
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Channel 11



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

MEASUREMENT RESULT: PK Detector

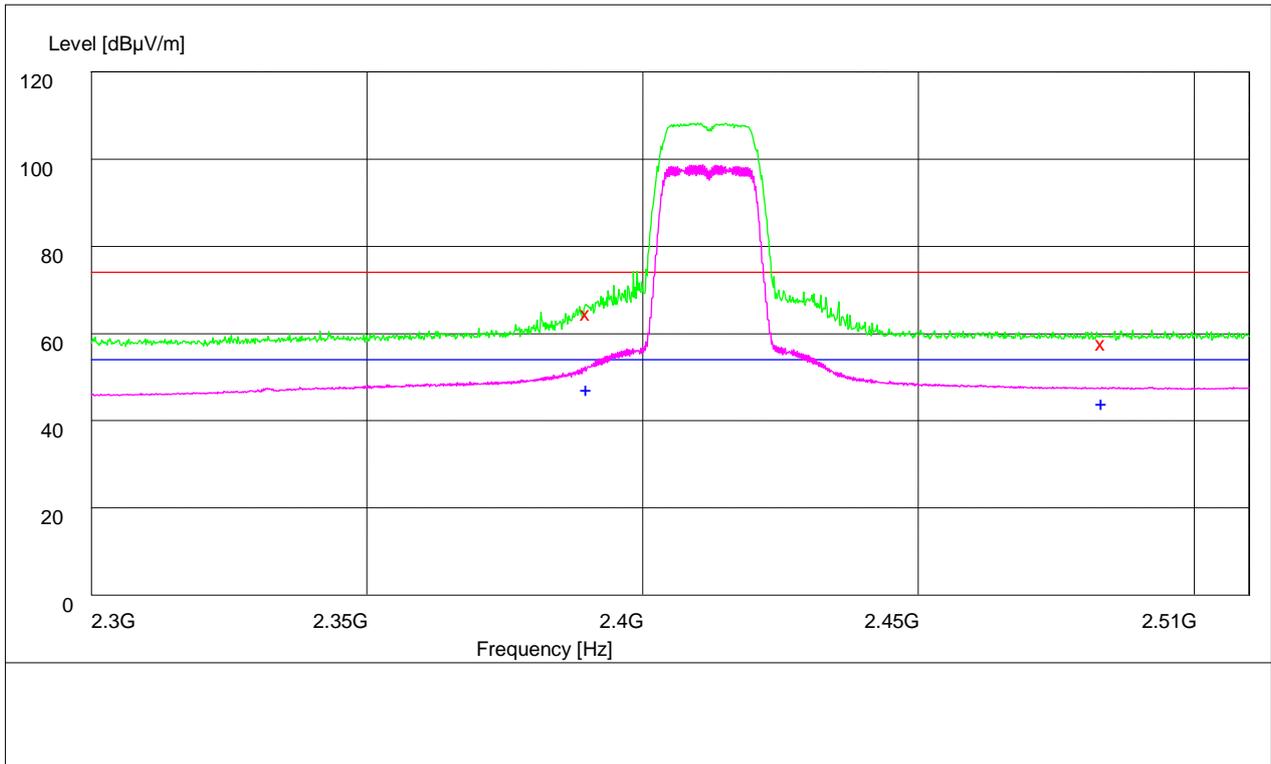
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	56.60	34.7	74.0	17.4	100.0	262.00	HORIZONTAL
2483.500000	57.00	35.0	74.0	17.0	100.0	269.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	45.10	34.7	54.0	8.9	100.0	231.00	HORIZONTAL
2483.500000	45.00	35.0	54.0	9.0	100.0	237.00	HORIZONTAL

Test Mode: 11g

Channel 01



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

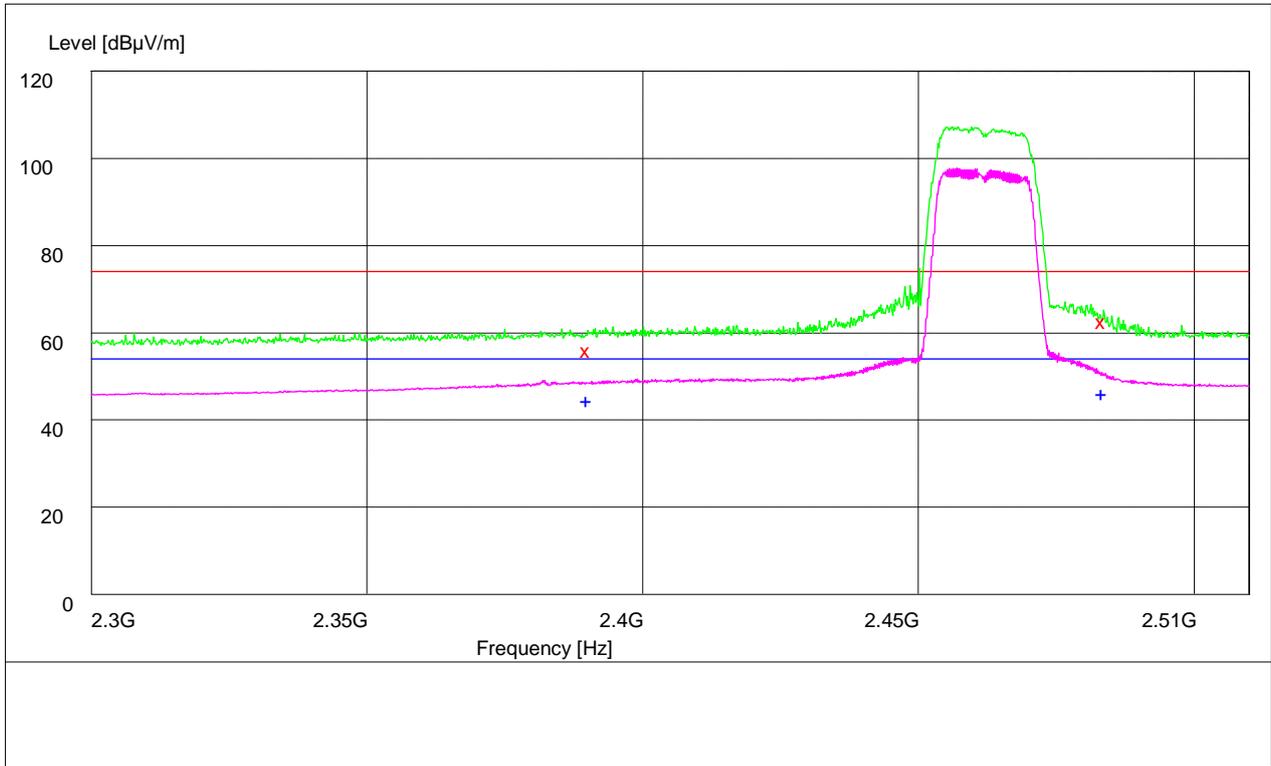
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	66.70	34.7	74.0	7.3	100.0	256.00	HORIZONTAL
2483.500000	60.00	35.0	74.0	14.0	100.0	62.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	49.40	34.7	54.0	4.6	100.0	257.00	HORIZONTAL
2483.500000	46.10	35.0	54.0	7.9	100.0	255.00	HORIZONTAL

Channel 11



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

MEASUREMENT RESULT: PK Detector

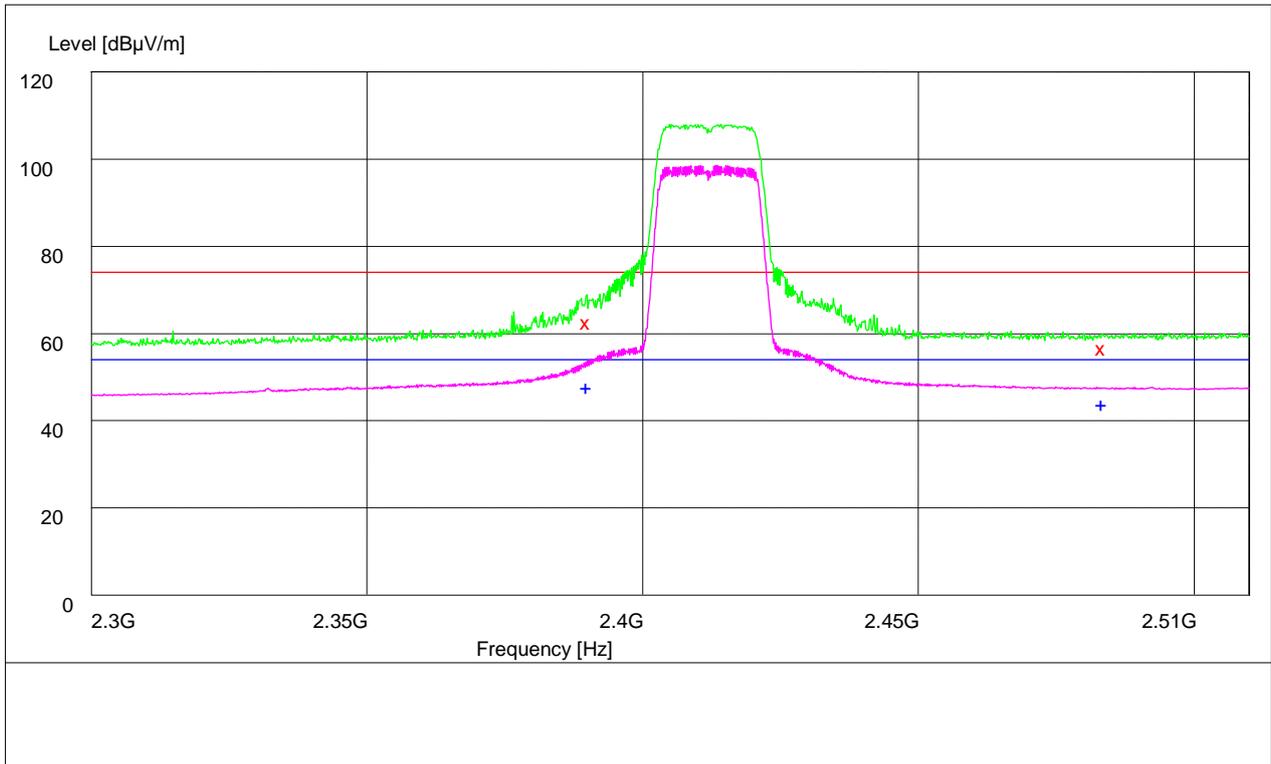
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	58.10	34.7	74.0	15.9	100.0	248.00	HORIZONTAL
2483.500000	64.70	35.0	74.0	9.3	100.0	258.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	46.70	34.7	54.0	7.3	100.0	259.00	HORIZONTAL
2483.500000	48.30	35.0	54.0	5.7	100.0	258.00	HORIZONTAL

Test Mode: 11n

Channel 01



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

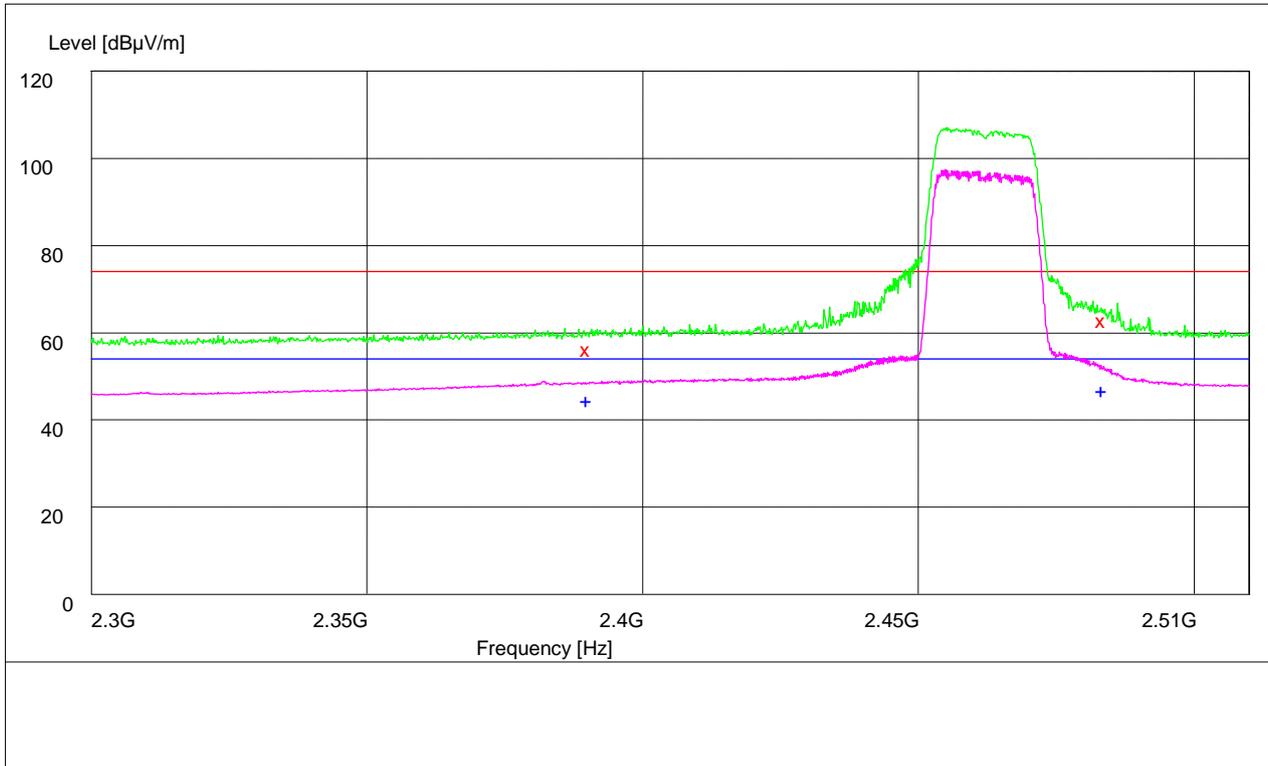
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	64.60	34.7	74.0	9.4	100.0	241.00	HORIZONTAL
2483.500000	58.70	35.0	74.0	15.3	100.0	0.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	49.80	34.7	54.0	4.2	100.0	255.00	HORIZONTAL
2483.500000	46.00	35.0	54.0	8.0	100.0	260.00	HORIZONTAL

Channel 11



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

MEASUREMENT RESULT: PK Detector

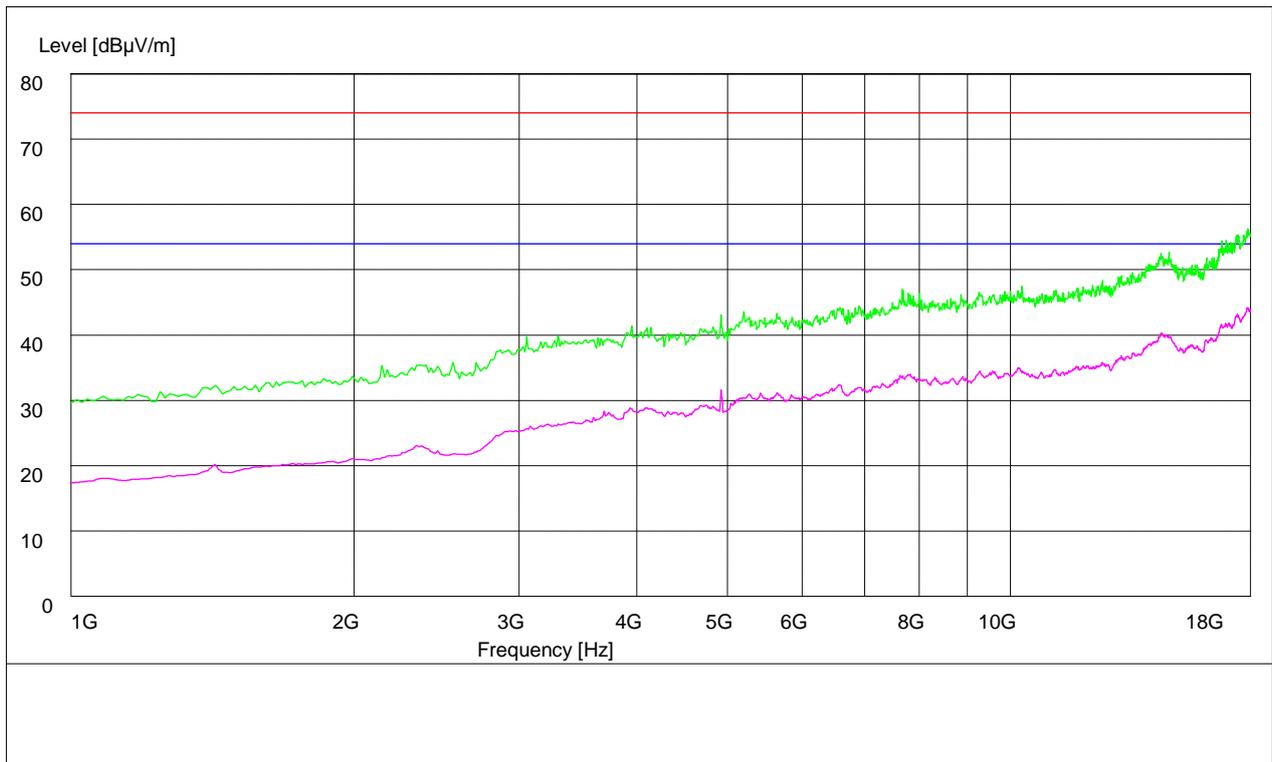
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	58.20	34.7	74.0	15.8	100.0	272.00	HORIZONTAL
2483.500000	65.00	35.0	74.0	9.0	100.0	253.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	46.70	34.7	54.0	7.3	100.0	260.00	HORIZONTAL
2483.500000	48.90	35.0	54.0	5.1	100.0	261.00	HORIZONTAL

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

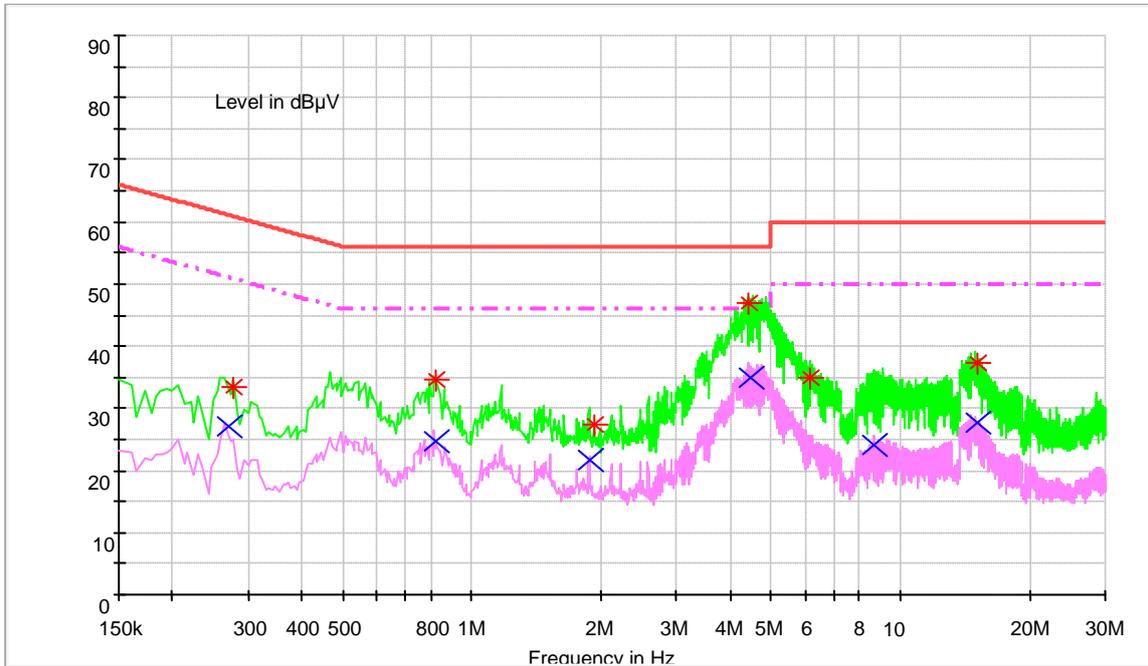
- Note 1: The test results and plot for testing range of “1 GHz to 18 GHz” showed as below is **the WORST case for all Test Modes and Channels**. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of “1 GHz to 18 GHz” is for checking radiated emissions located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





Appendix H: AC Power Line Conducted Emissions

Channel 6



MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.277212	33.4	9.7	60.9	27.5	N	FLO
0.823676	34.6	9.7	56.0	21.4	N	FLO
1.932559	27.4	9.7	56.0	28.6	N	FLO
4.426098	47.1	9.8	56.0	8.9	N	FLO
6.136099	35.1	9.8	60.0	24.9	N	FLO
15.065028	37.4	10.1	60.0	22.6	N	FLO

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.269719	27.2	9.7	51.1	23.9	N	FLO
0.824936	24.6	9.7	46.0	21.4	N	FLO
1.877434	21.7	9.7	46.0	24.3	N	FLO
4.476952	34.8	9.8	46.0	11.2	N	FLO
8.711794	24.2	9.9	50.0	25.8	N	FLO
15.043046	27.6	10.1	50.0	22.4	N	FLO

END