



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.

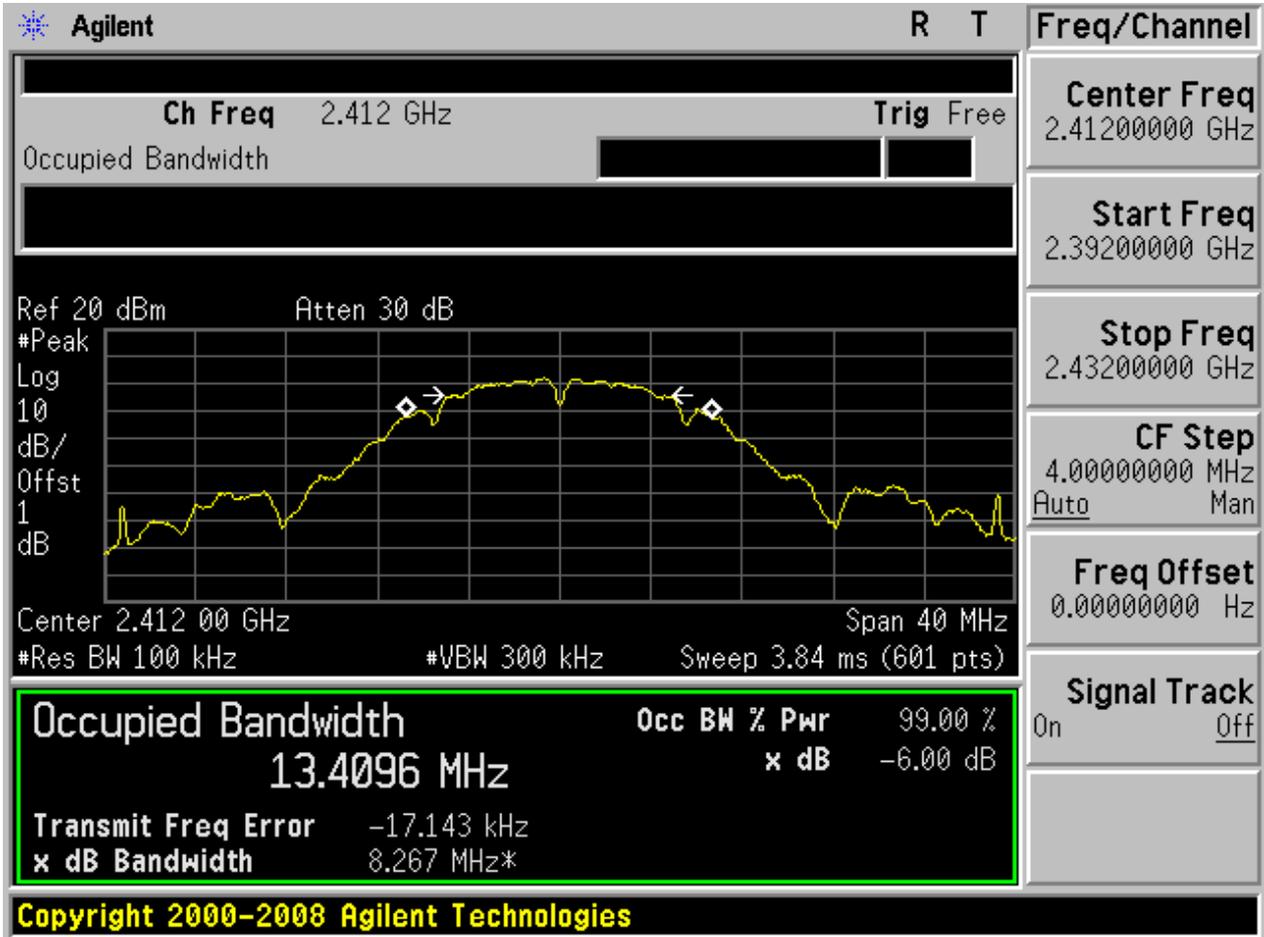
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
11B	L	2412	Ant 1	8.27	pass
11B	M	2437	Ant 1	8.68	pass
11B	H	2462	Ant 1	8.77	pass
11G	L	2412	Ant 1	16.60	pass
11G	M	2437	Ant 1	16.58	pass
11G	H	2462	Ant 1	16.58	pass
11N20	L	2412	Ant 1	17.83	pass
11N20	M	2437	Ant 1	17.81	pass
11N20	H	2462	Ant 1	17.82	pass

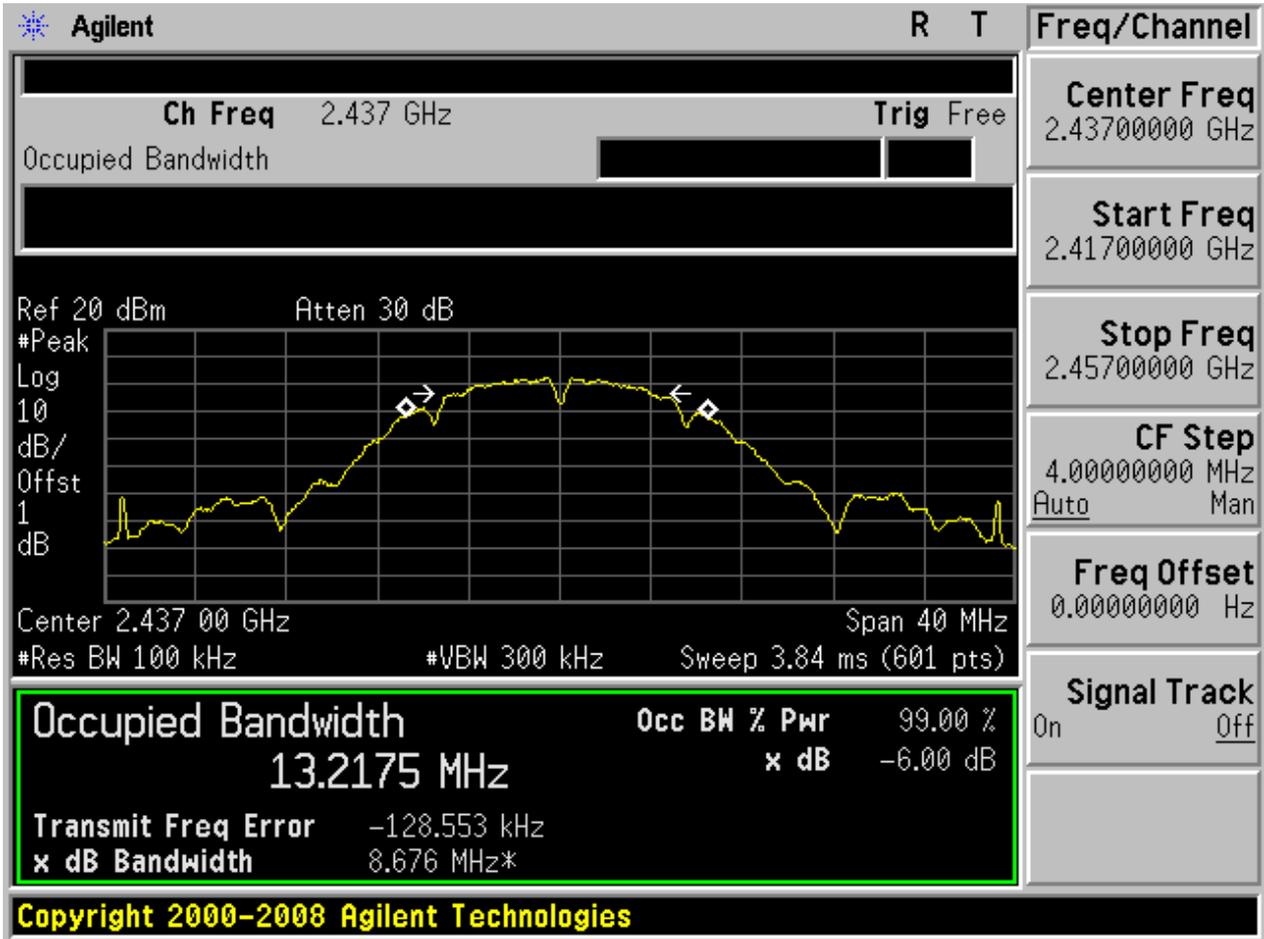
Part II - Test Plots

2.1 11B_L@Ant 1



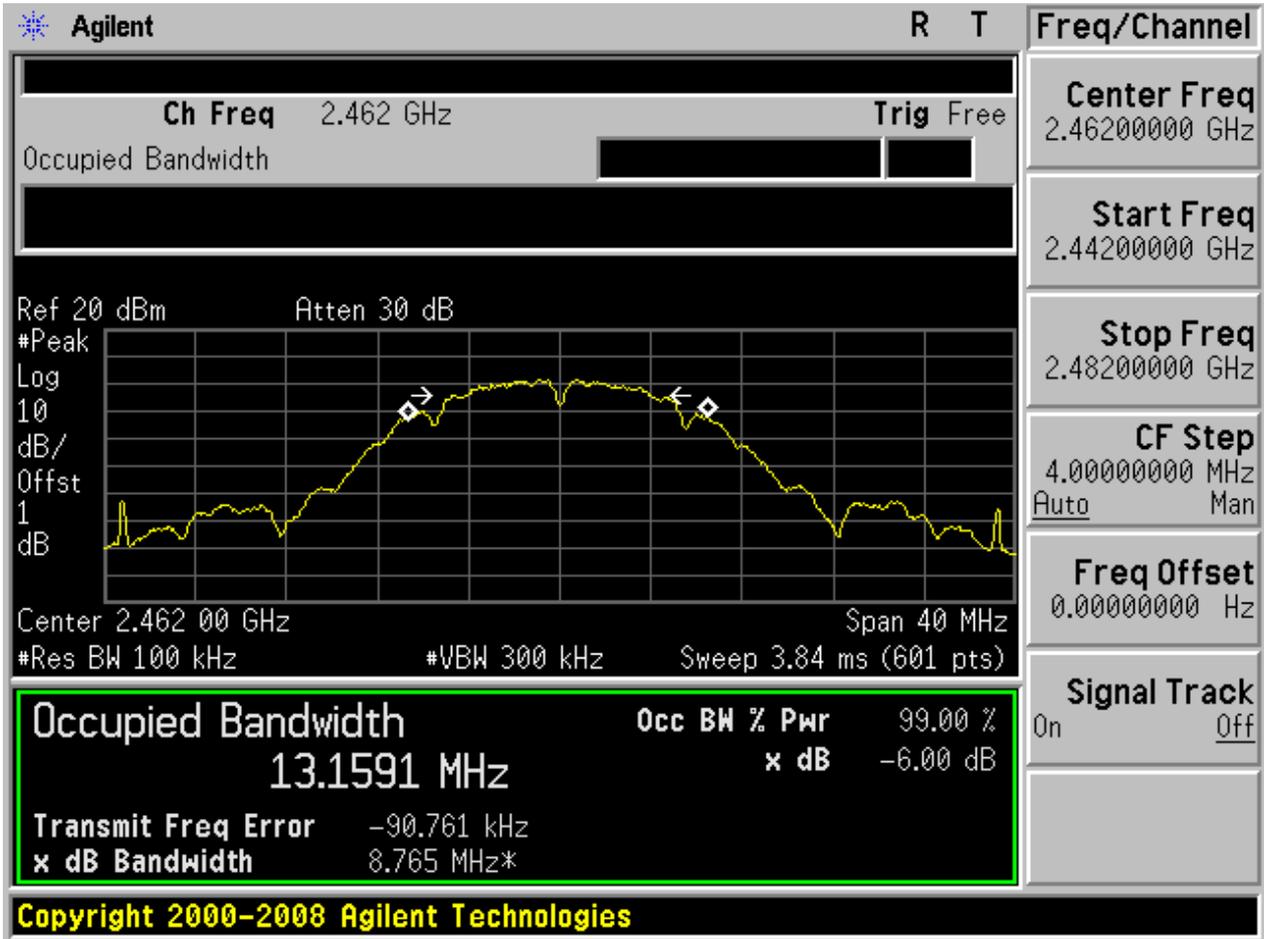


2.2 11B_M@Ant 1



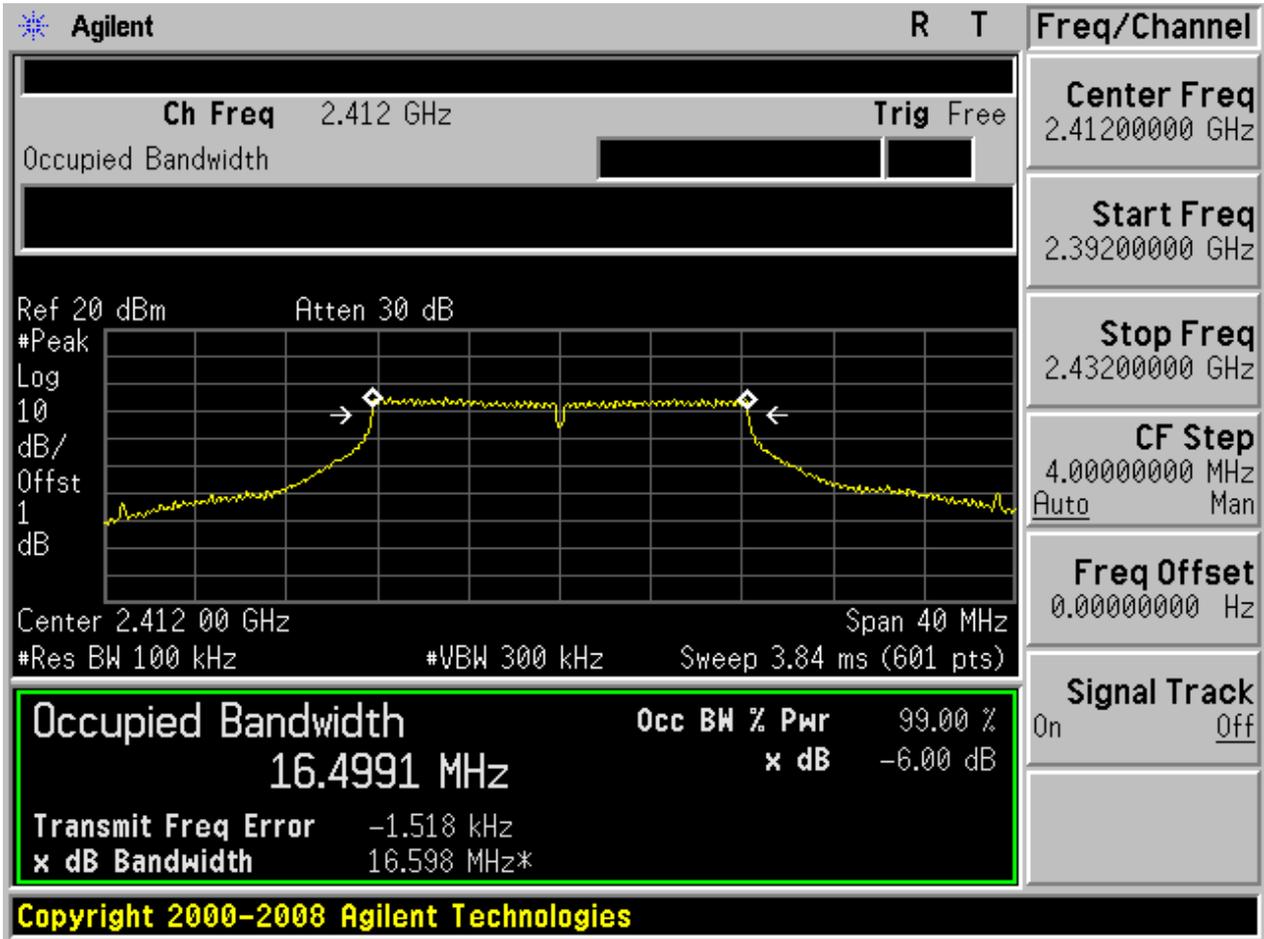


2.3 11B_H@Ant 1



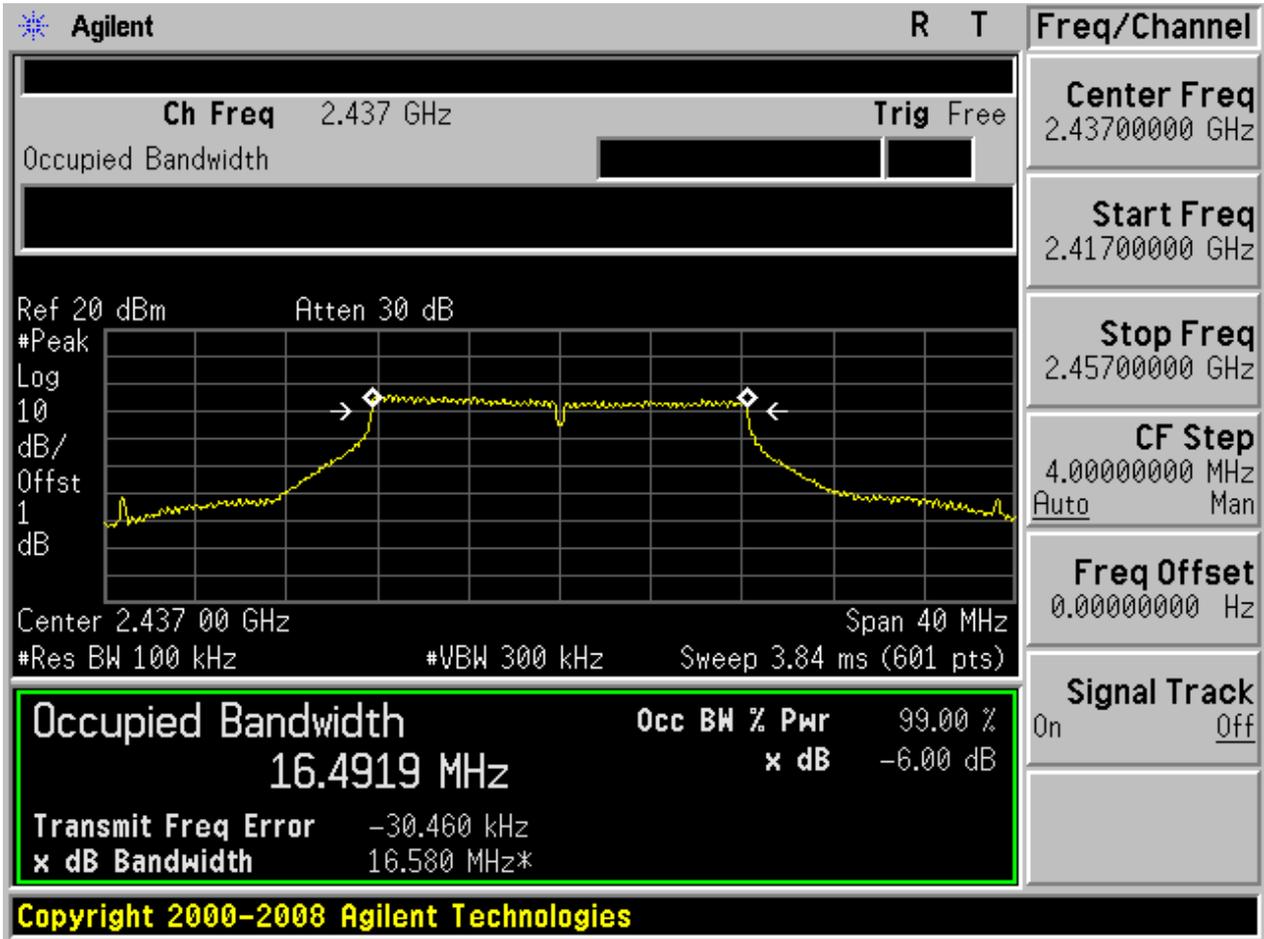


2.4 11G_L@Ant 1



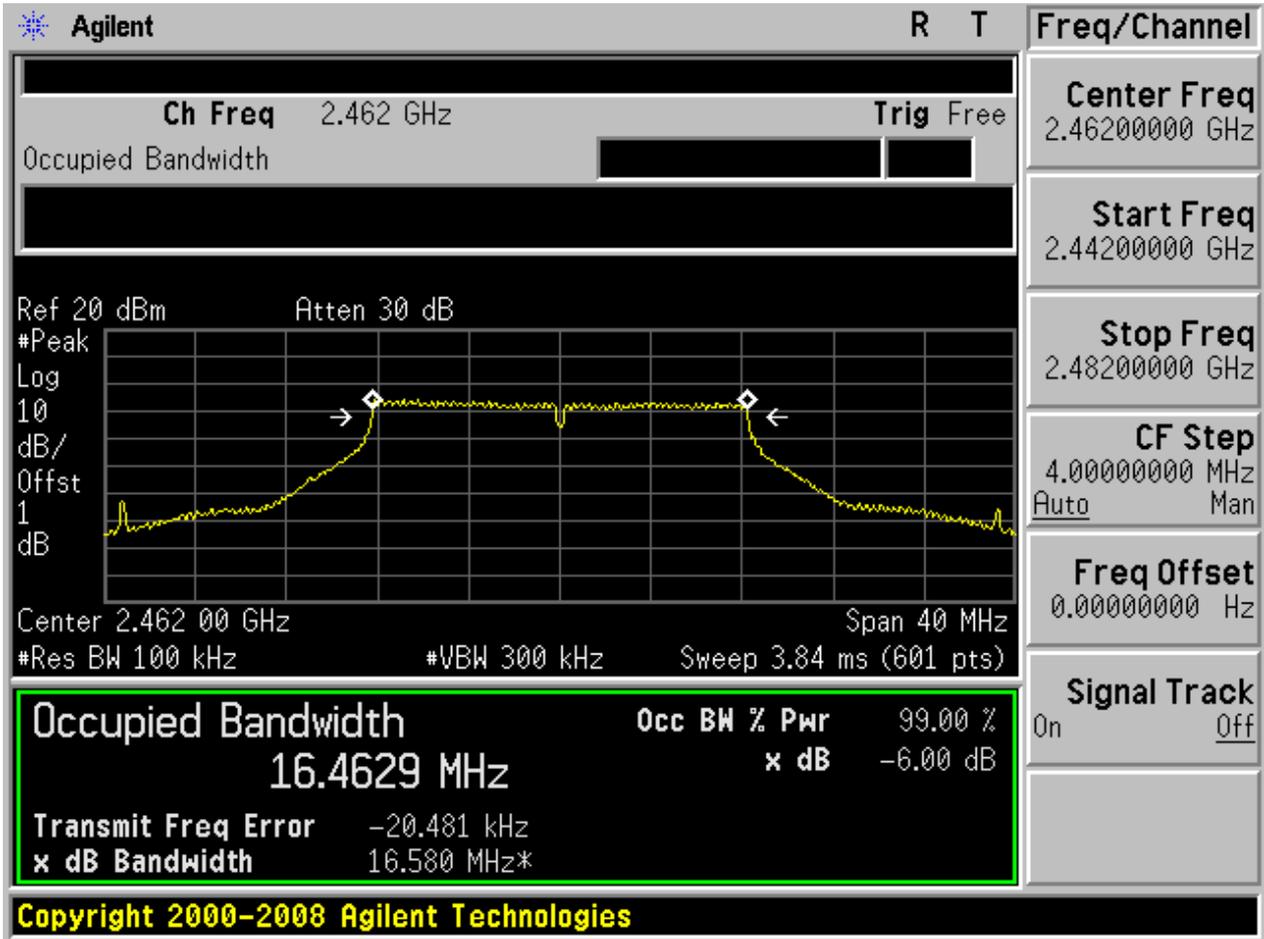


2.5 11G_M@Ant 1



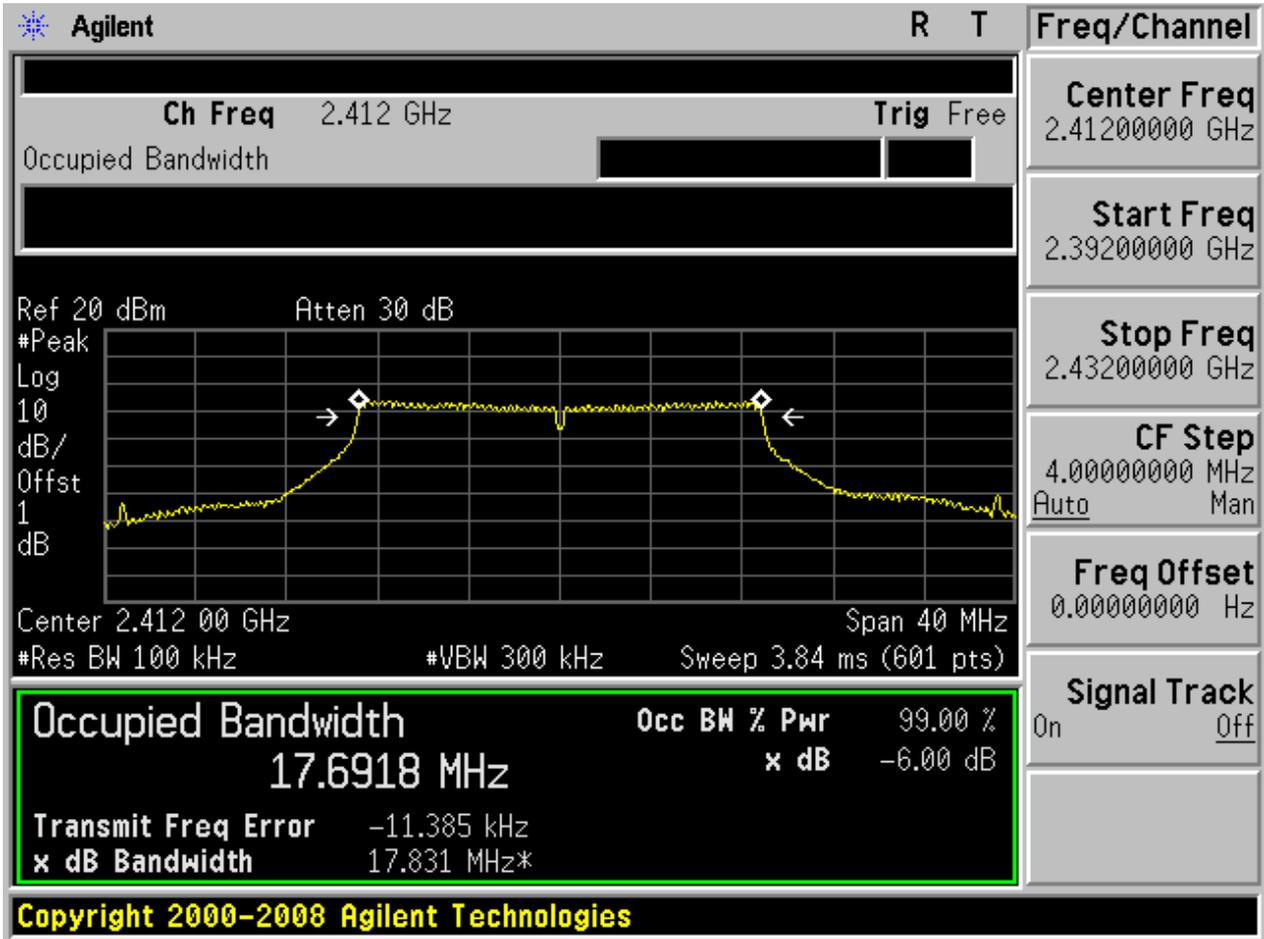


2.6 11G_H@Ant 1



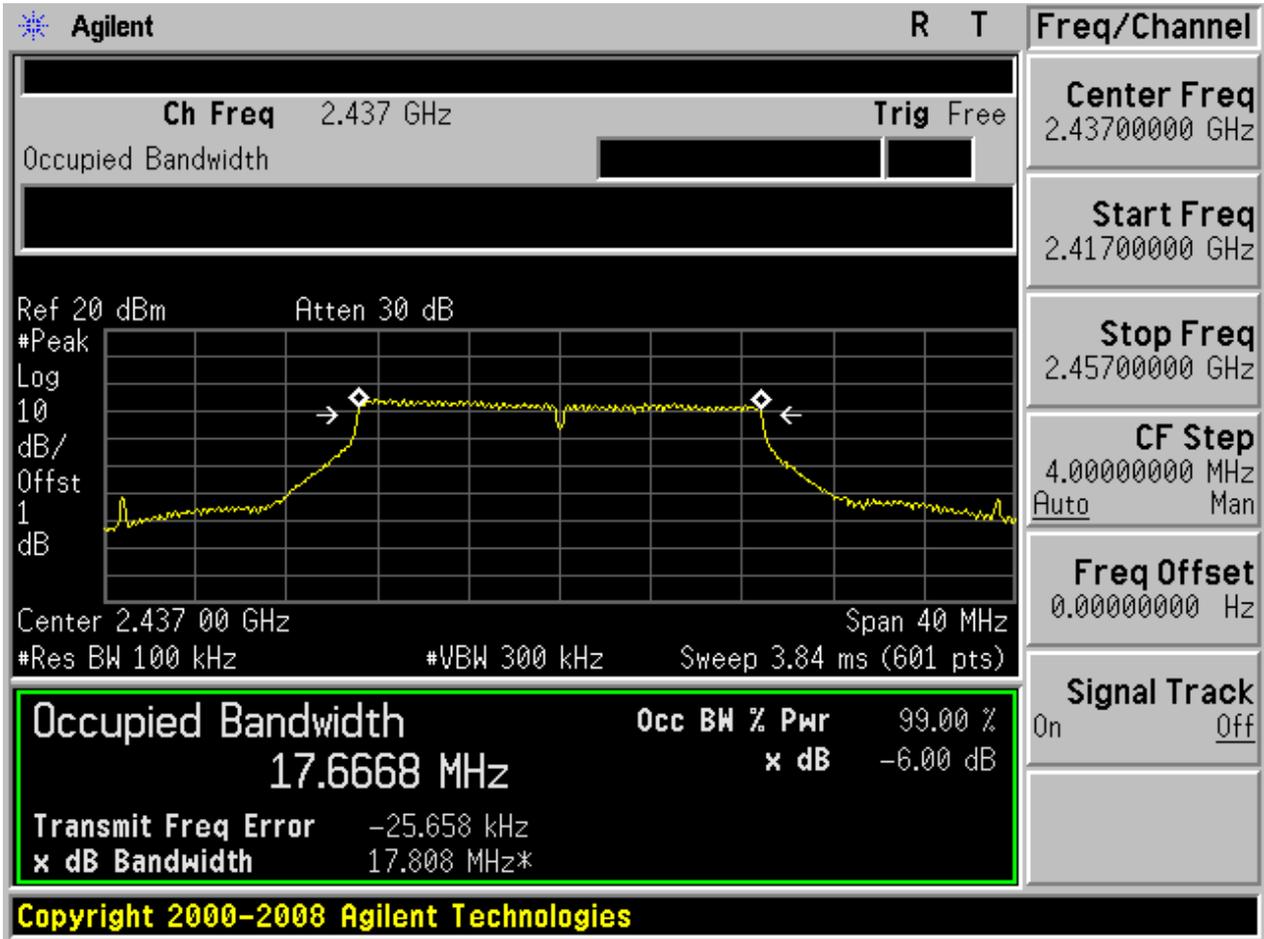


2.7 11N20_L@Ant 1



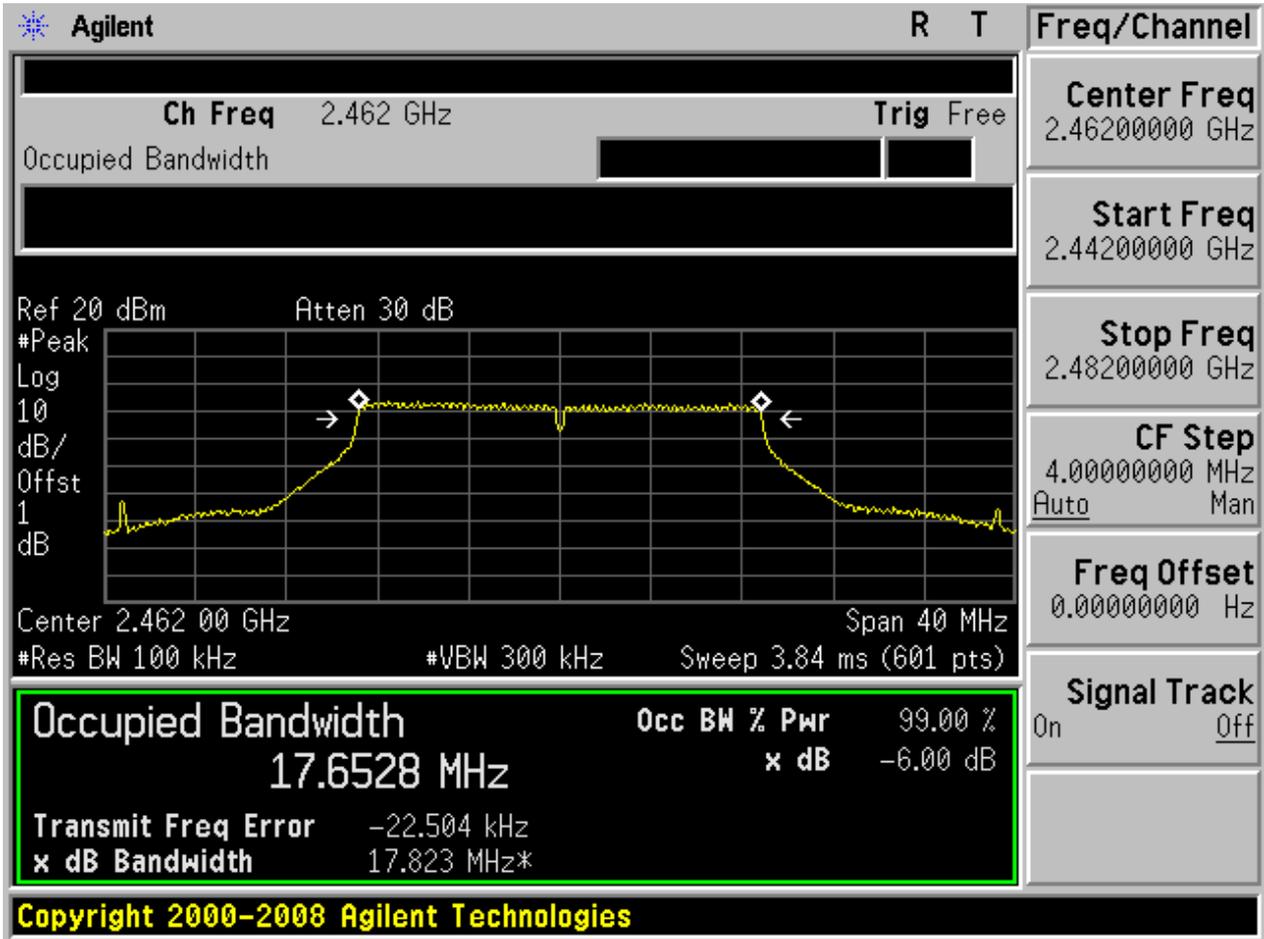


2.8 11N20_M@Ant 1





2.9 11N20_H@Ant 1





Appendix B: Occupied Bandwidth

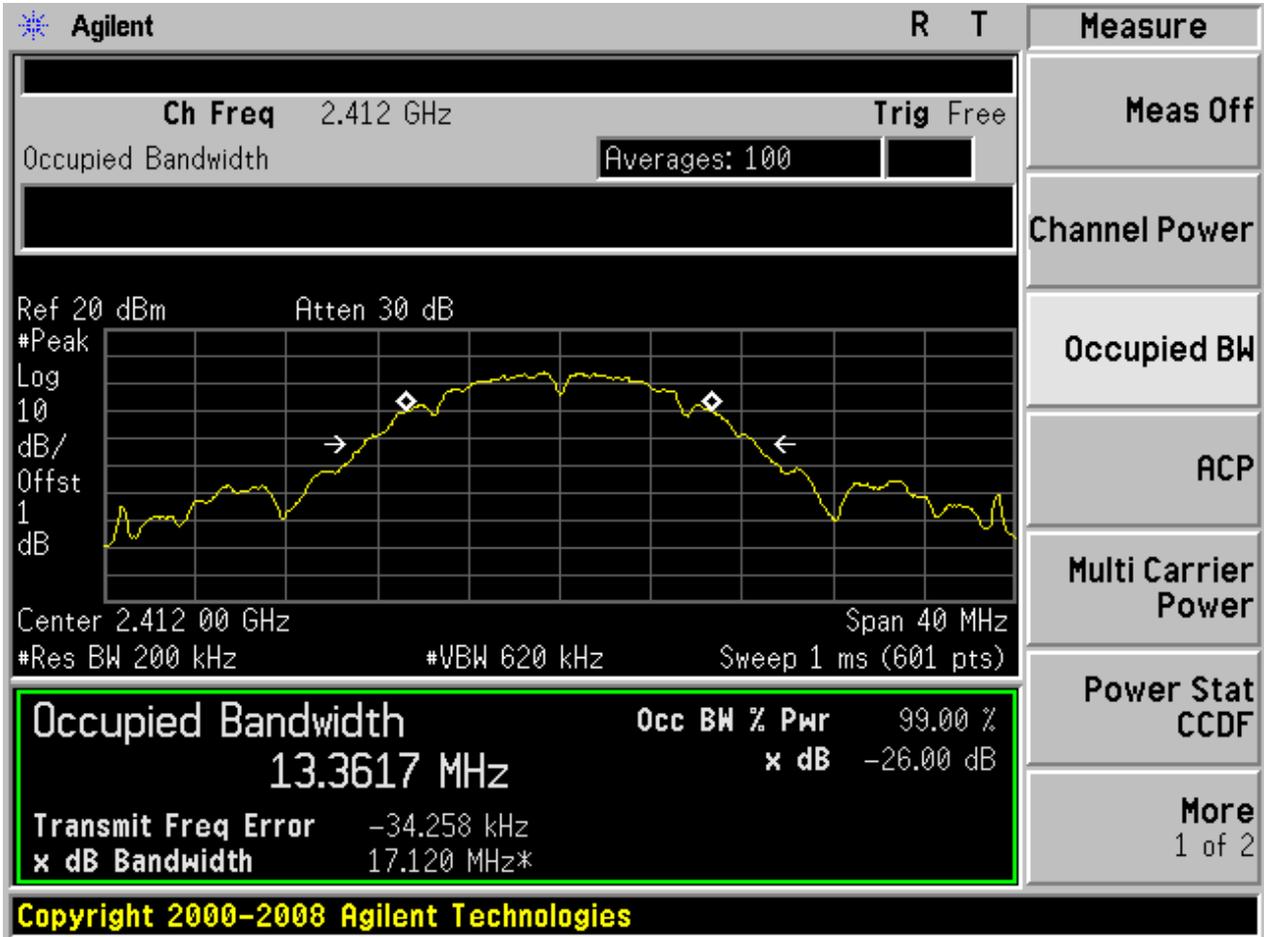
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Occupied Bandwidth [MHz]	Verdict
11B	L	2412	Ant 1	13.36	pass
11B	M	2437	Ant 1	13.32	pass
11B	H	2462	Ant 1	13.15	pass
11G	L	2412	Ant 1	16.62	pass
11G	M	2437	Ant 1	16.54	pass
11G	H	2462	Ant 1	16.49	pass
11N20	L	2412	Ant 1	17.73	pass
11N20	M	2437	Ant 1	17.62	pass
11N20	H	2462	Ant 1	17.62	pass

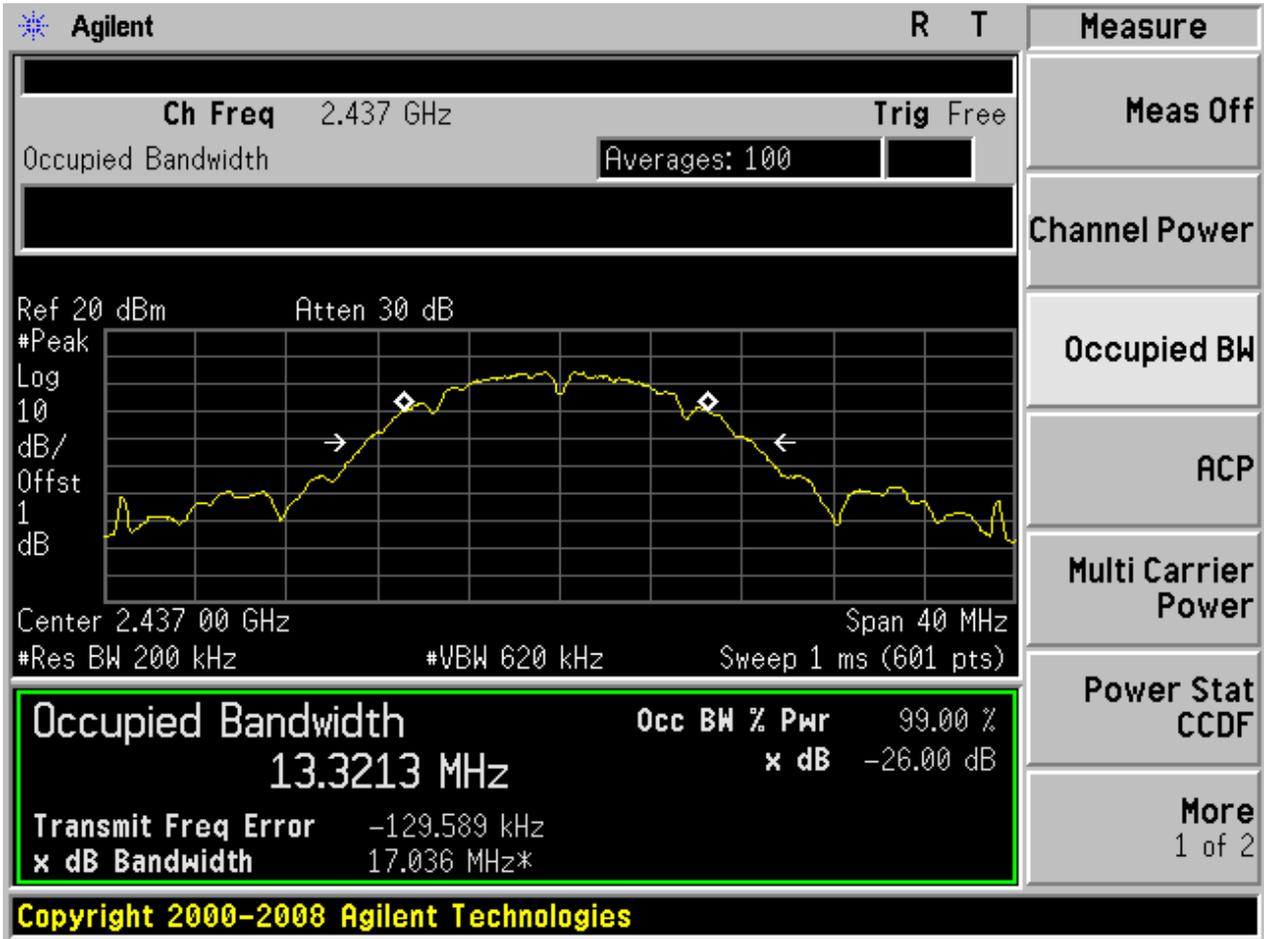
Part II - Test Plots

2.1 11B_L@Ant 1

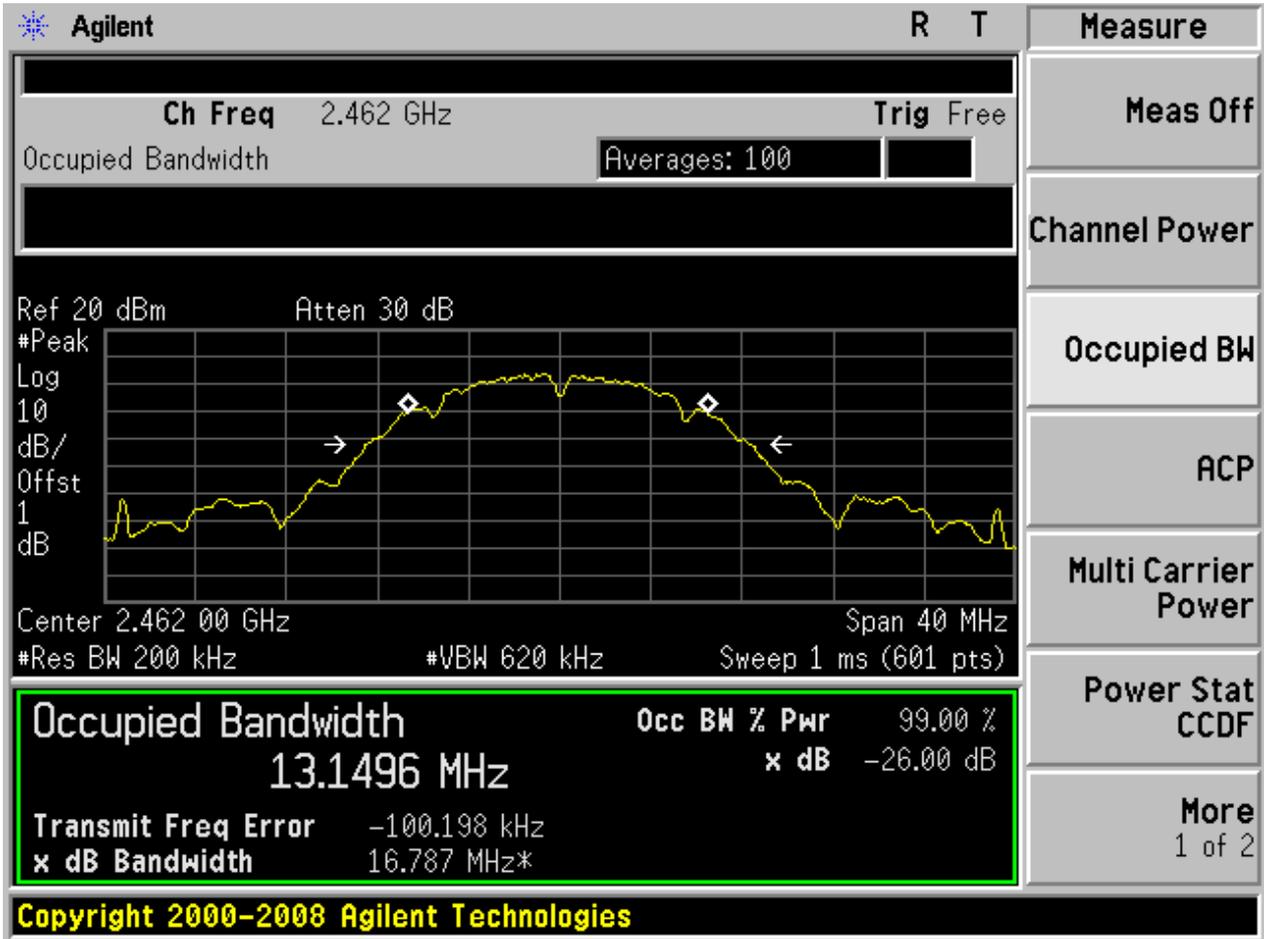




2.2 11B_M@Ant 1

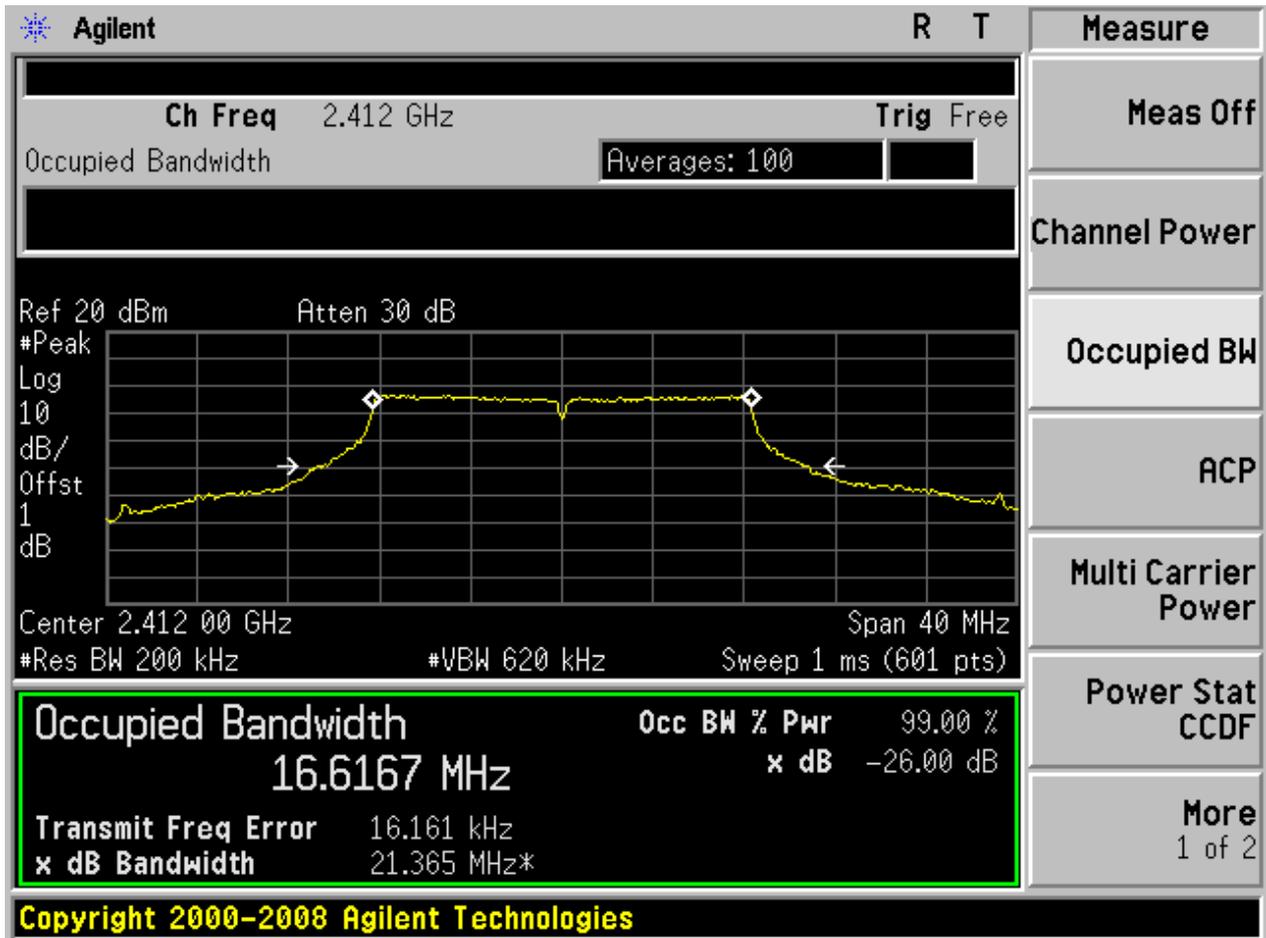


2.3 11B_H@Ant 1



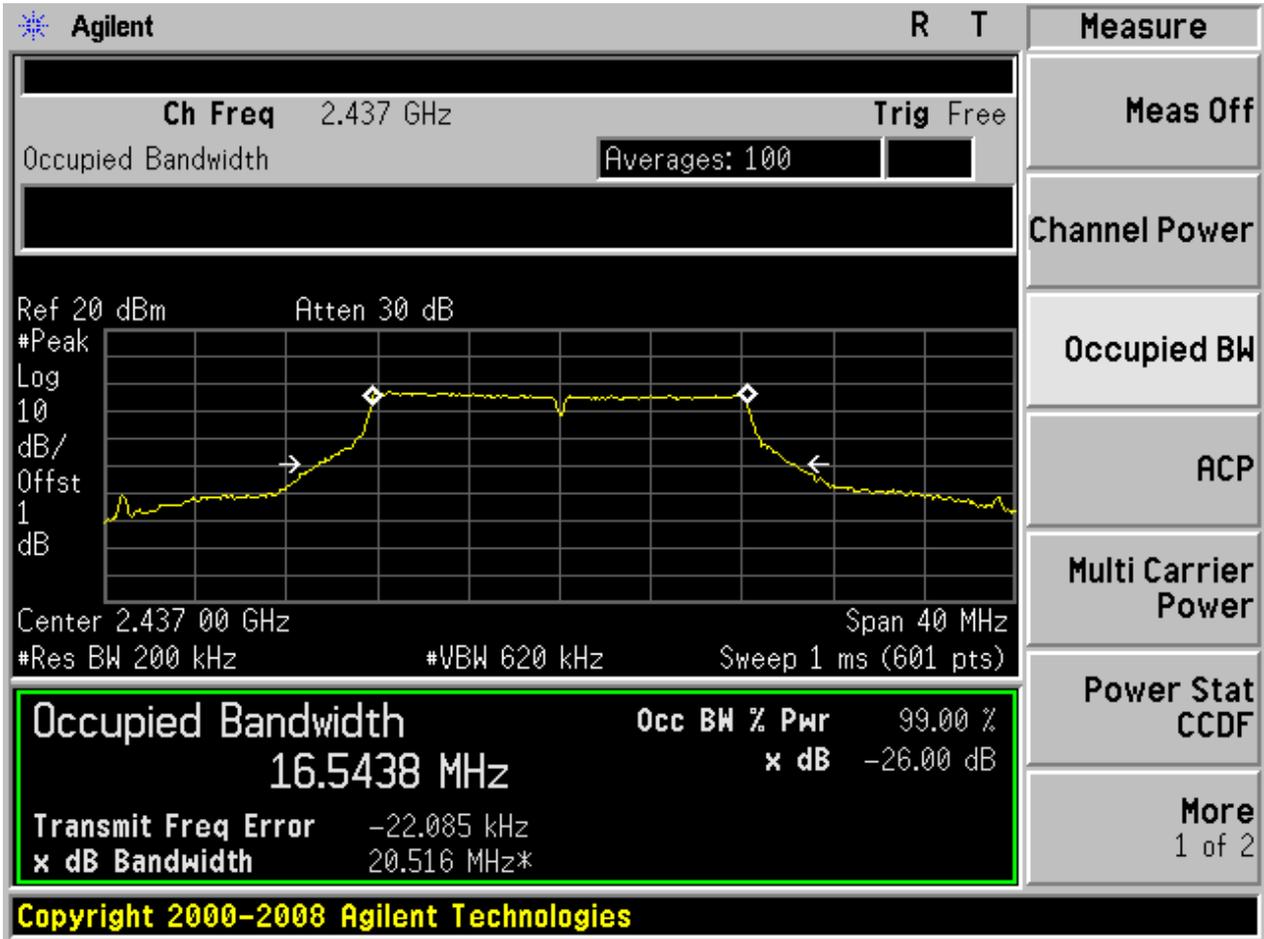


2.4 11G_L@Ant 1

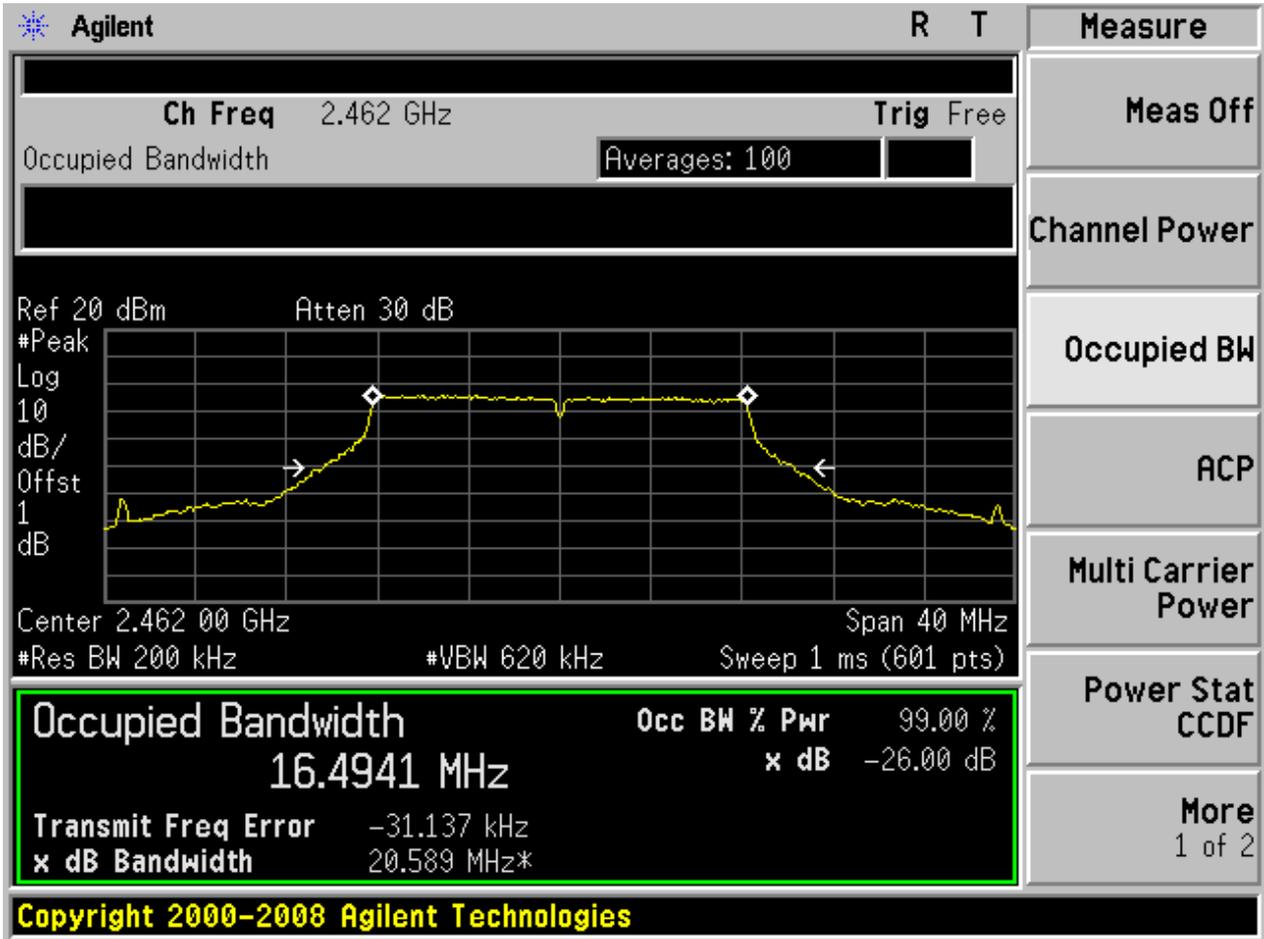




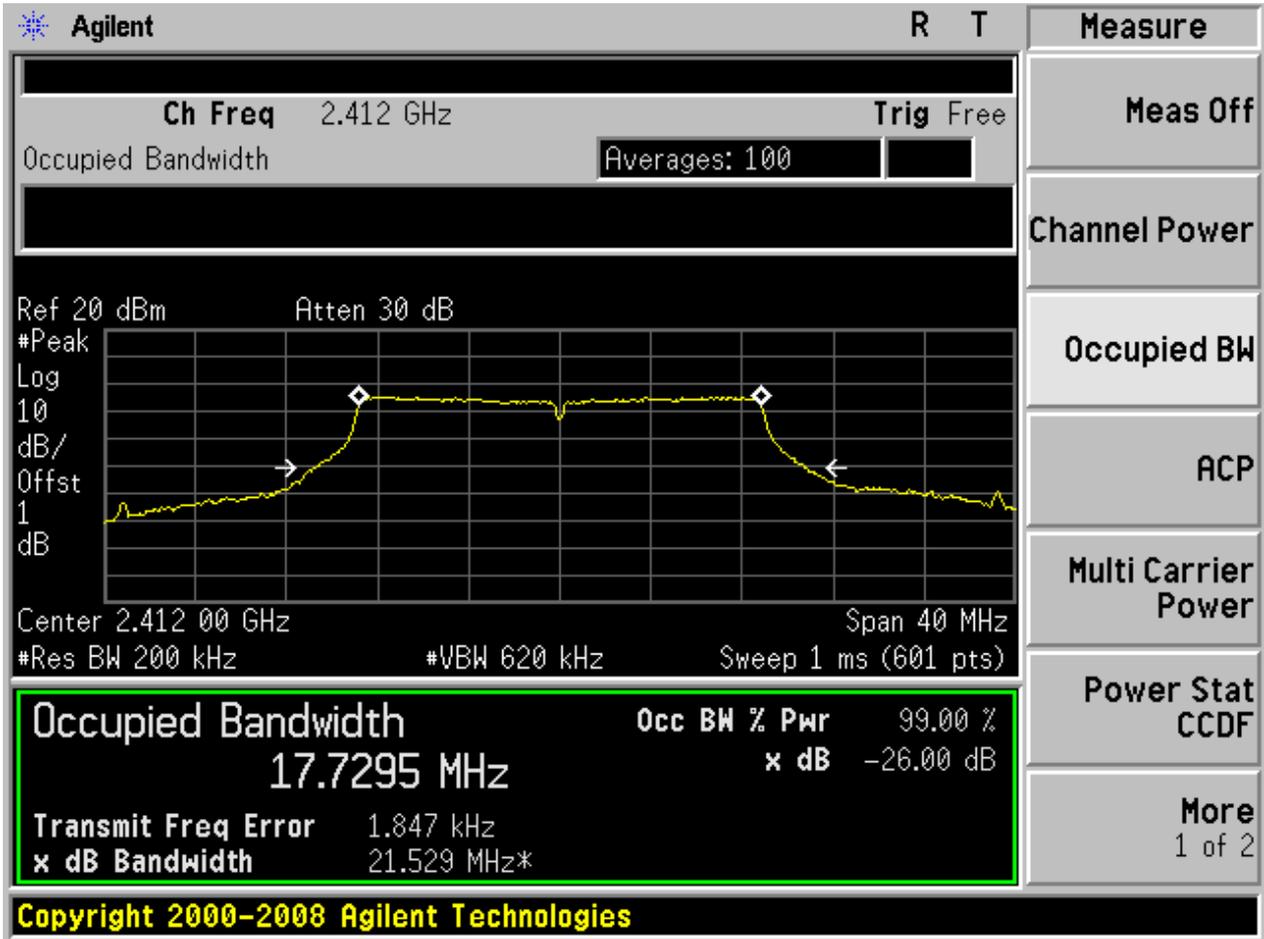
2.5 11G_M@Ant 1



2.6 11G_H@Ant 1

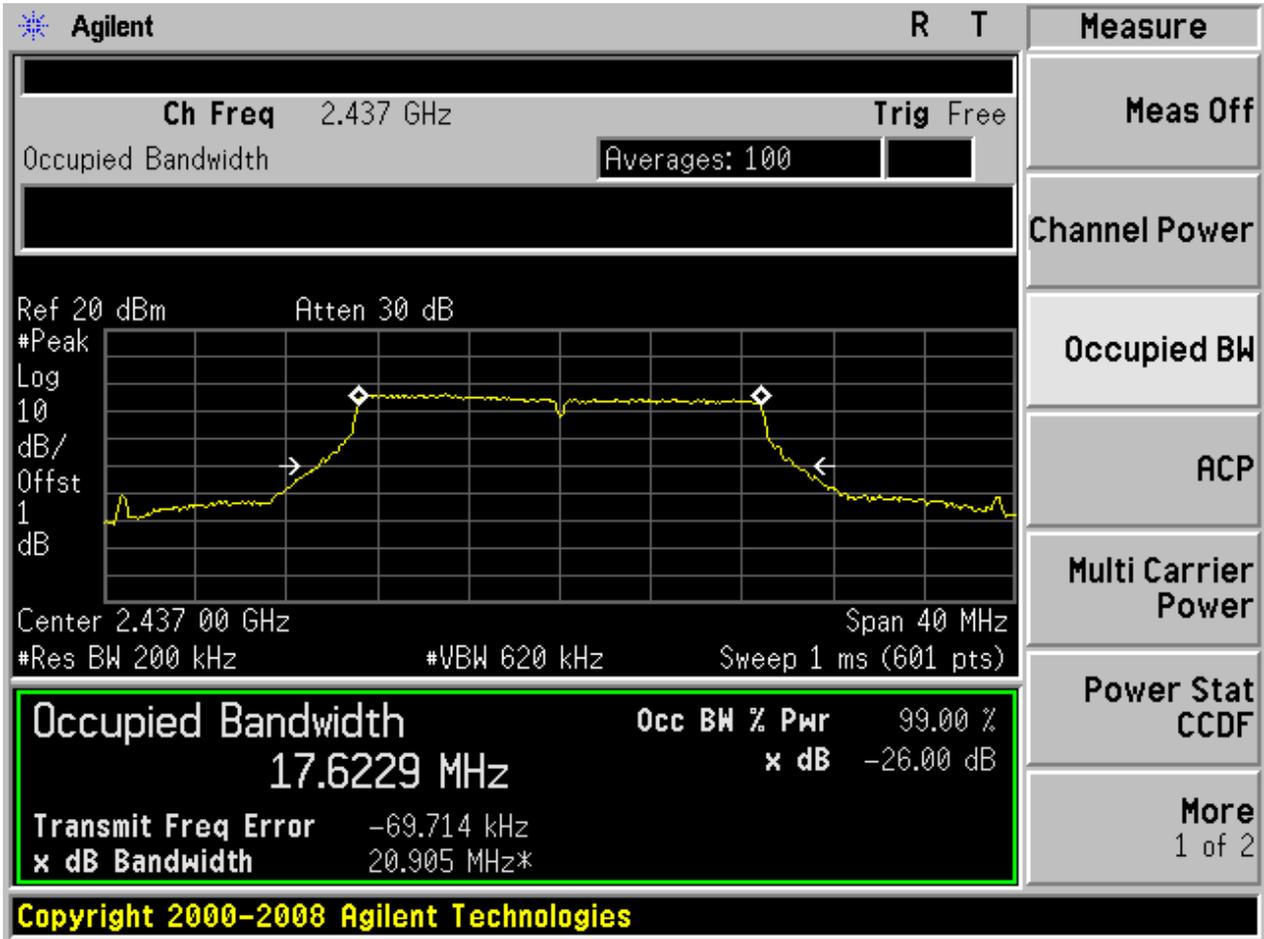


2.7 11N20_L@Ant 1



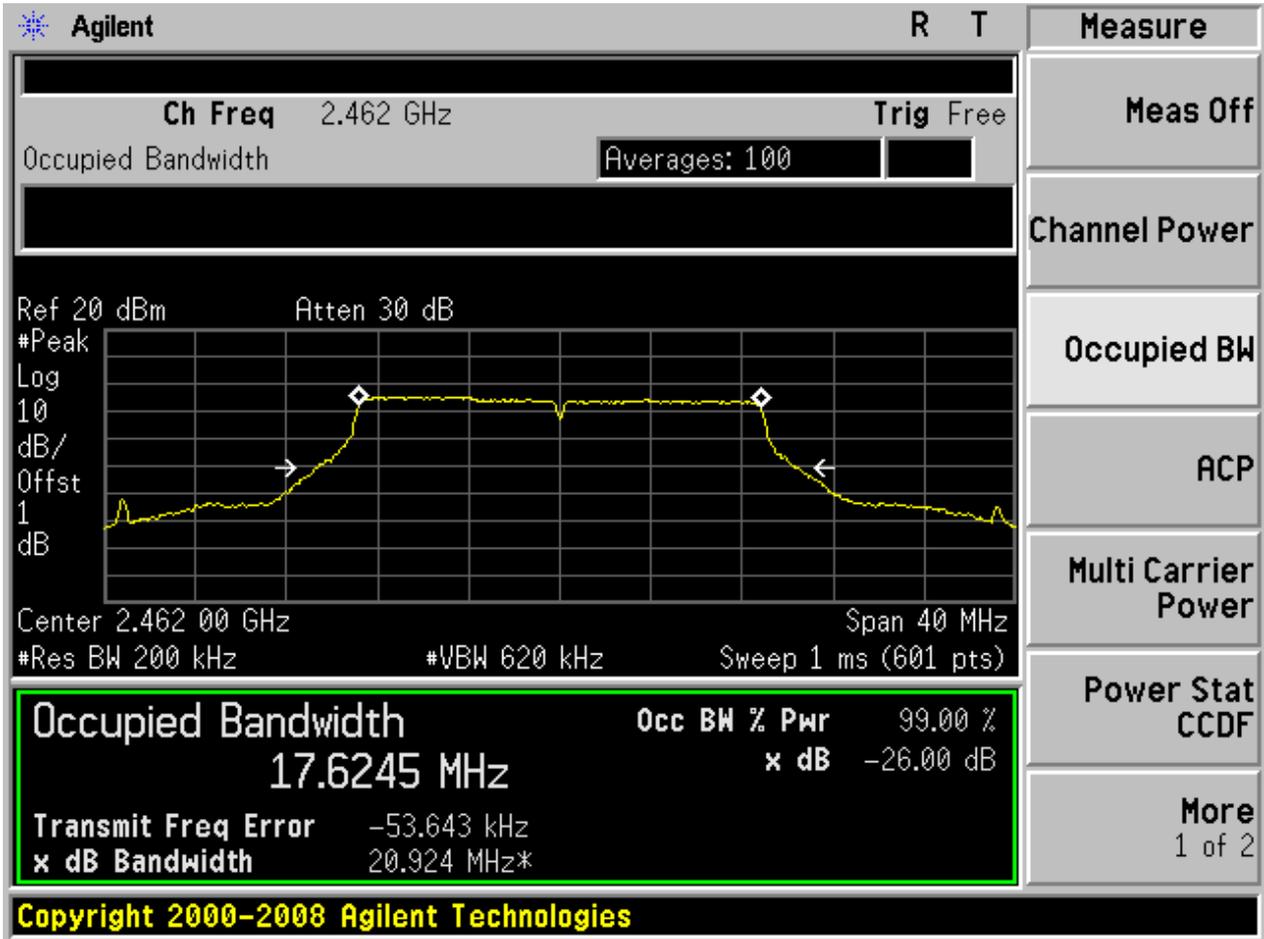


2.8 11N20_M@Ant 1





2.9 11N20_H@Ant 1





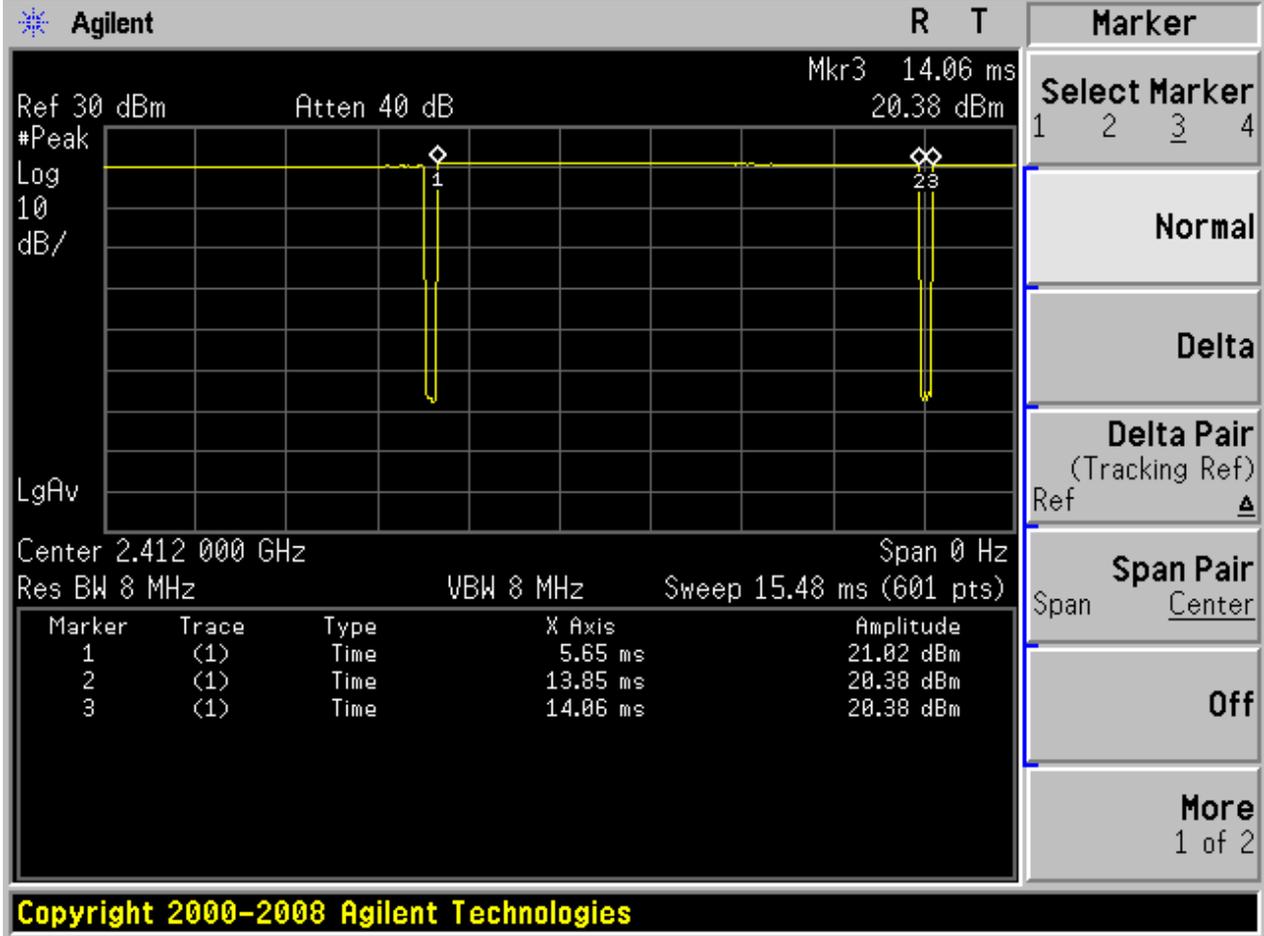
Appendix C: Duty Cycle

Part I - Test Results

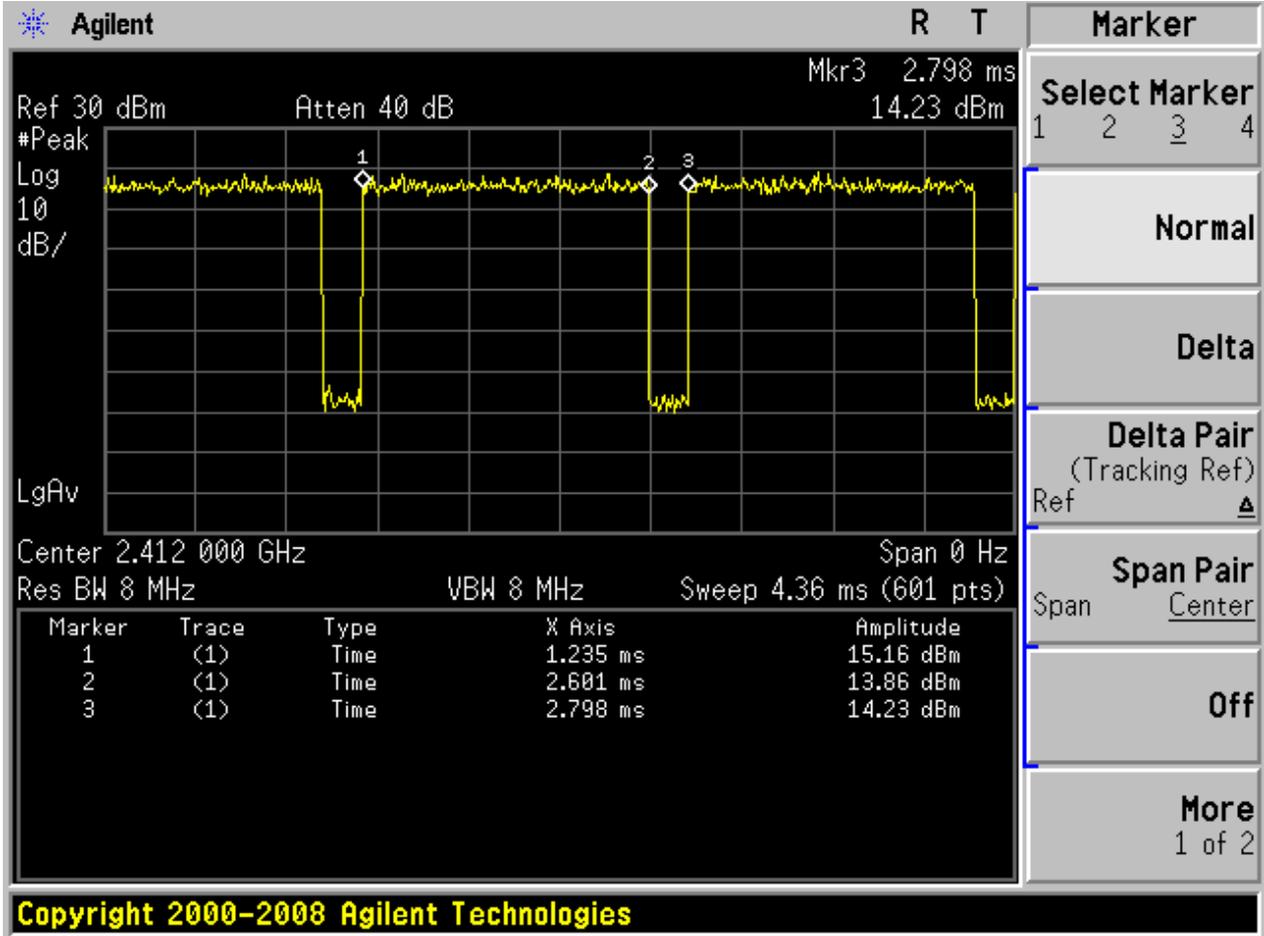
Test Mode	TX Freq. [MHz]	Duty cycle [%]
11B	Ant 1: CH1,CH6,CH11	98
11G	Ant 1: CH1,CH6,CH11	87
11N_20M_SISO	Ant 1: CH1,CH6,CH11	87

Part II - Test Plots

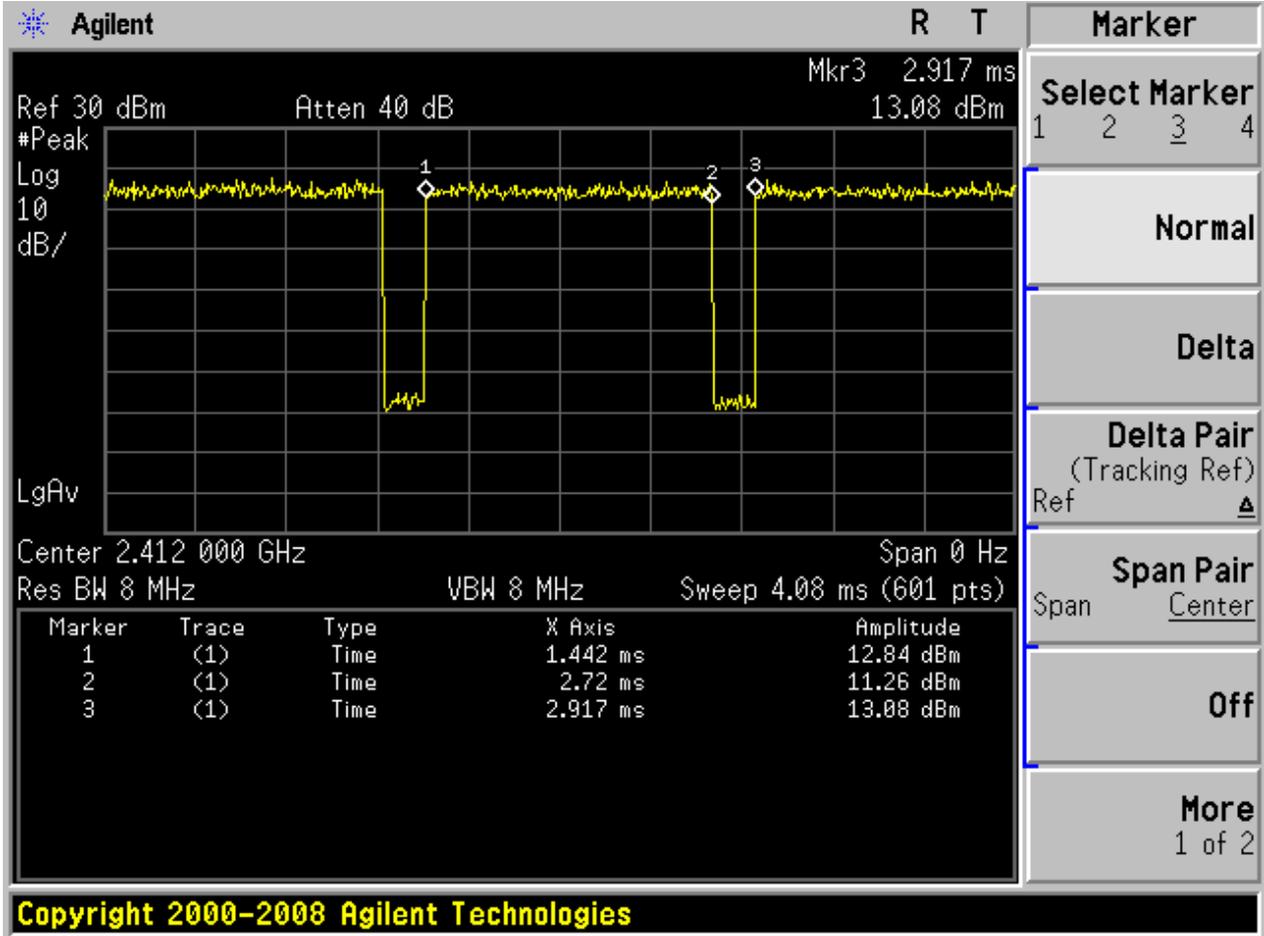
2.1 11B



2.2 11G



2.3 11N20



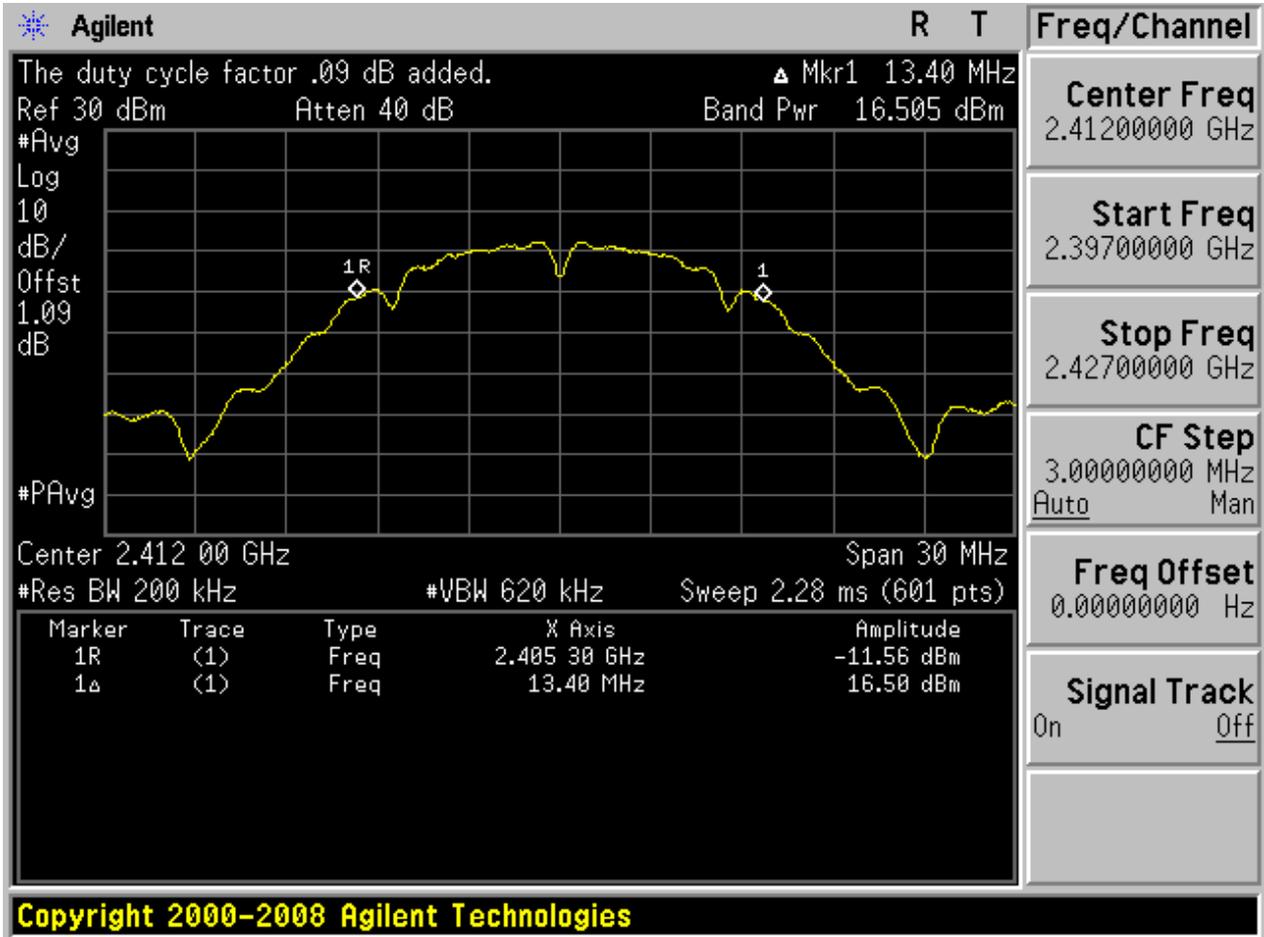
Appendix D: Maximum Conducted Average Output Power

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Power[dBm]	Verdict
11B	L	2412	Ant 1	16.51	pass
11B	M	2437	Ant 1	16.86	pass
11B	H	2462	Ant 1	16.15	pass
11G	L	2412	Ant 1	12.98	pass
11G	M	2437	Ant 1	13.25	pass
11G	H	2462	Ant 1	12.37	pass
11N20	L	2412	Ant 1	12.10	pass
11N20	M	2437	Ant 1	12.38	pass
11N20	H	2462	Ant 1	12.00	pass

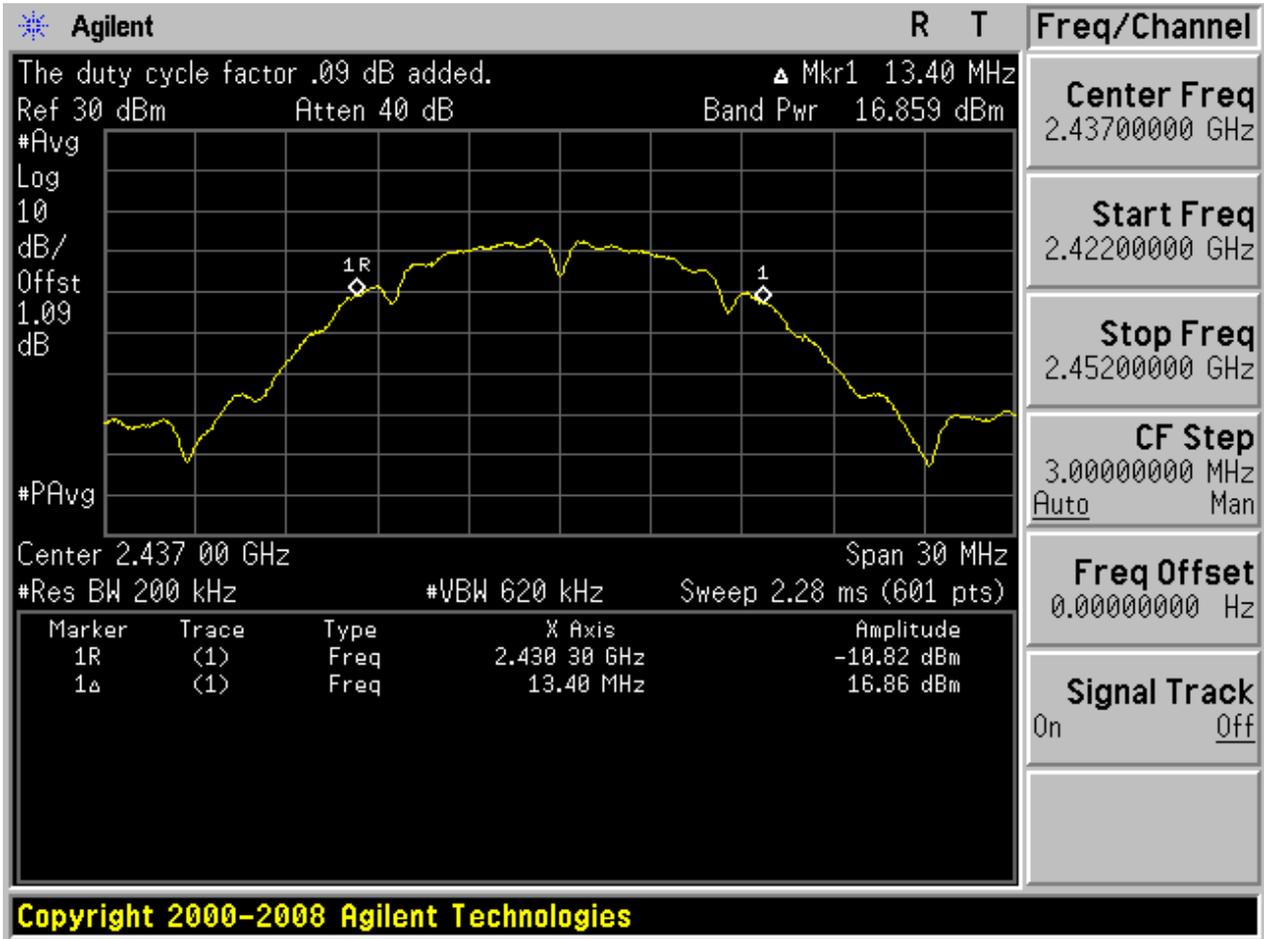
Part II - Test Plots

2.1 11B_L@Ant 1

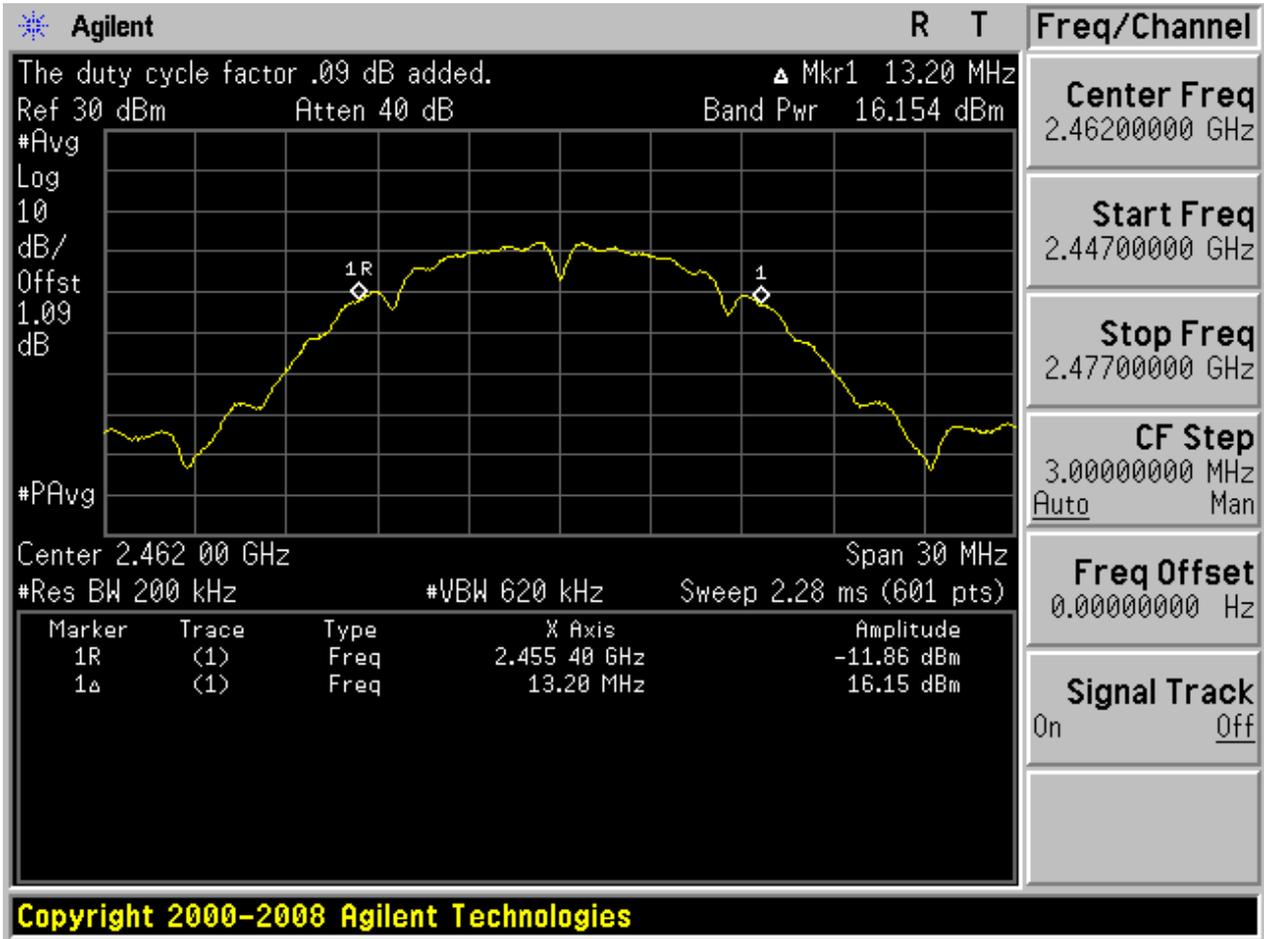




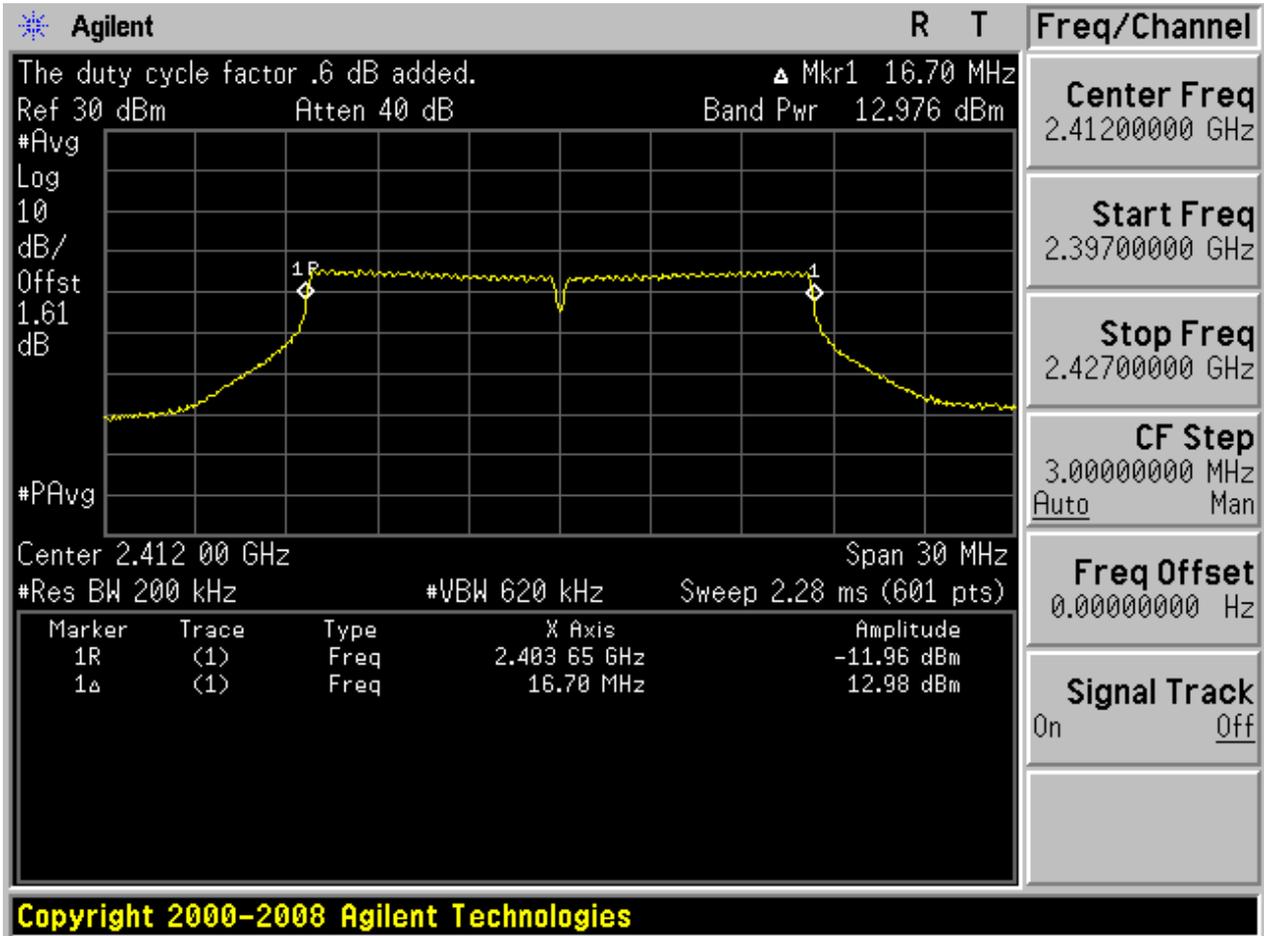
2.2 11B_M@Ant 1



2.3 11B_H@Ant 1

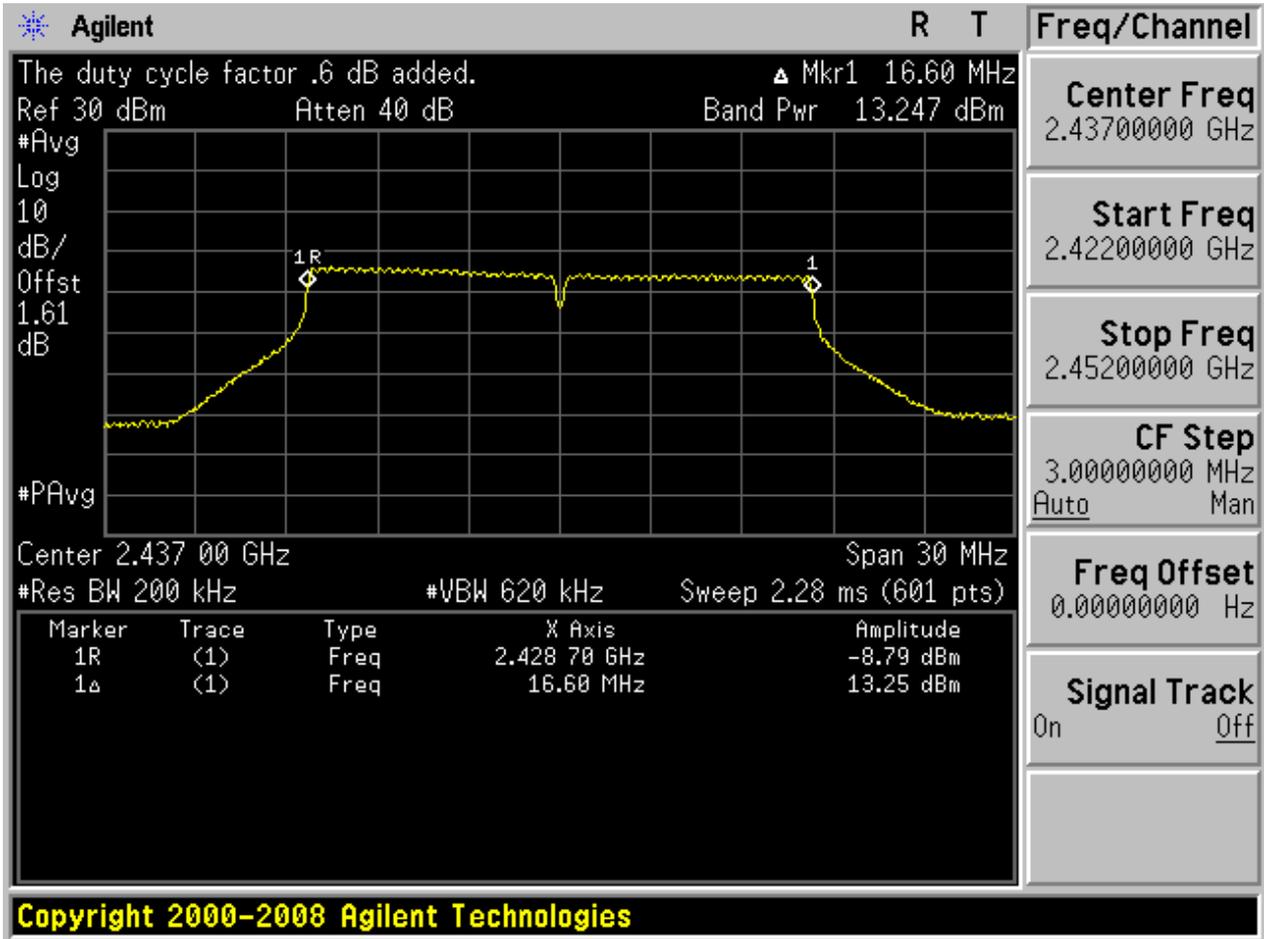


2.4 11G_L@Ant 1



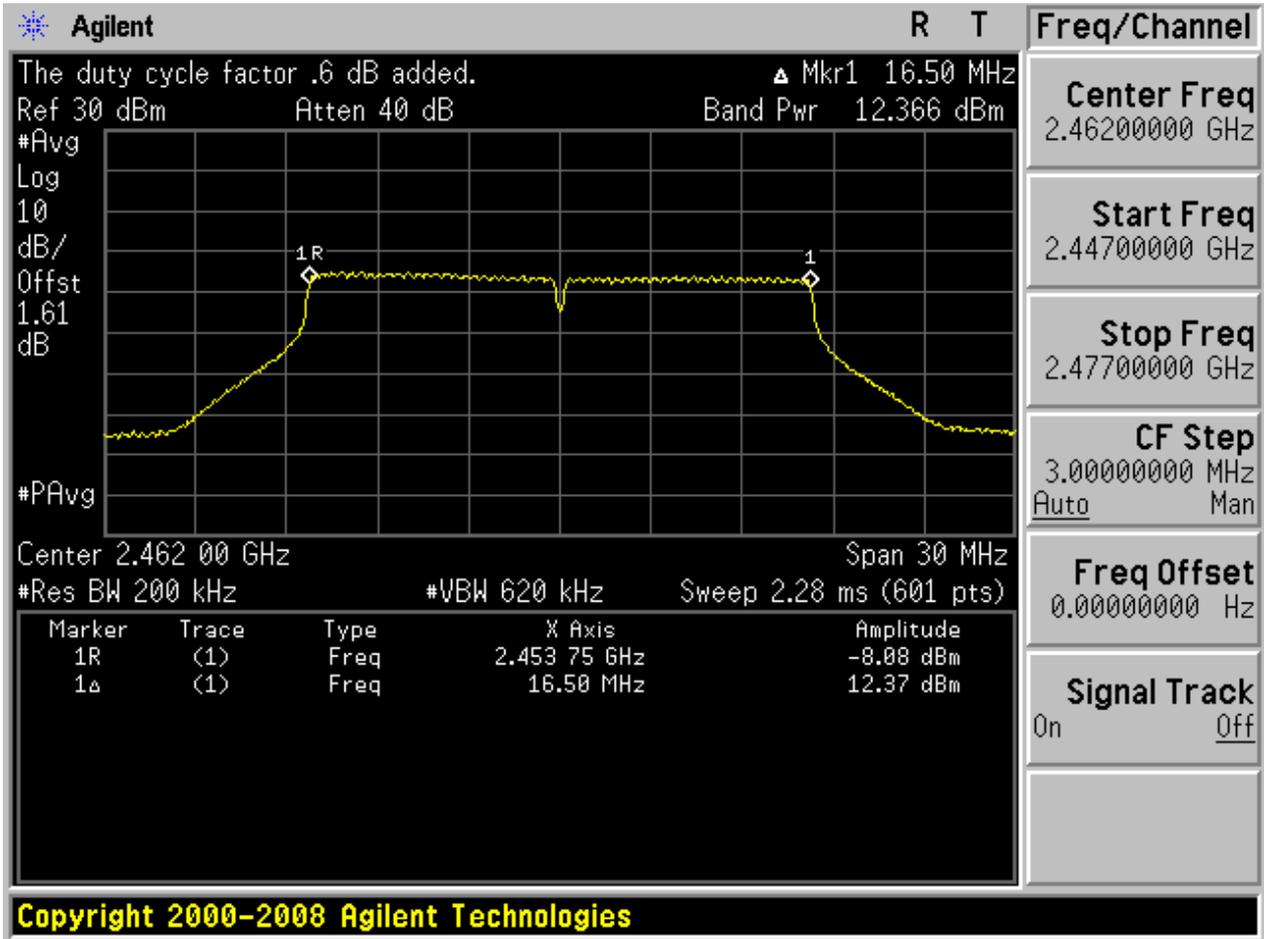


2.5 11G_M@Ant 1

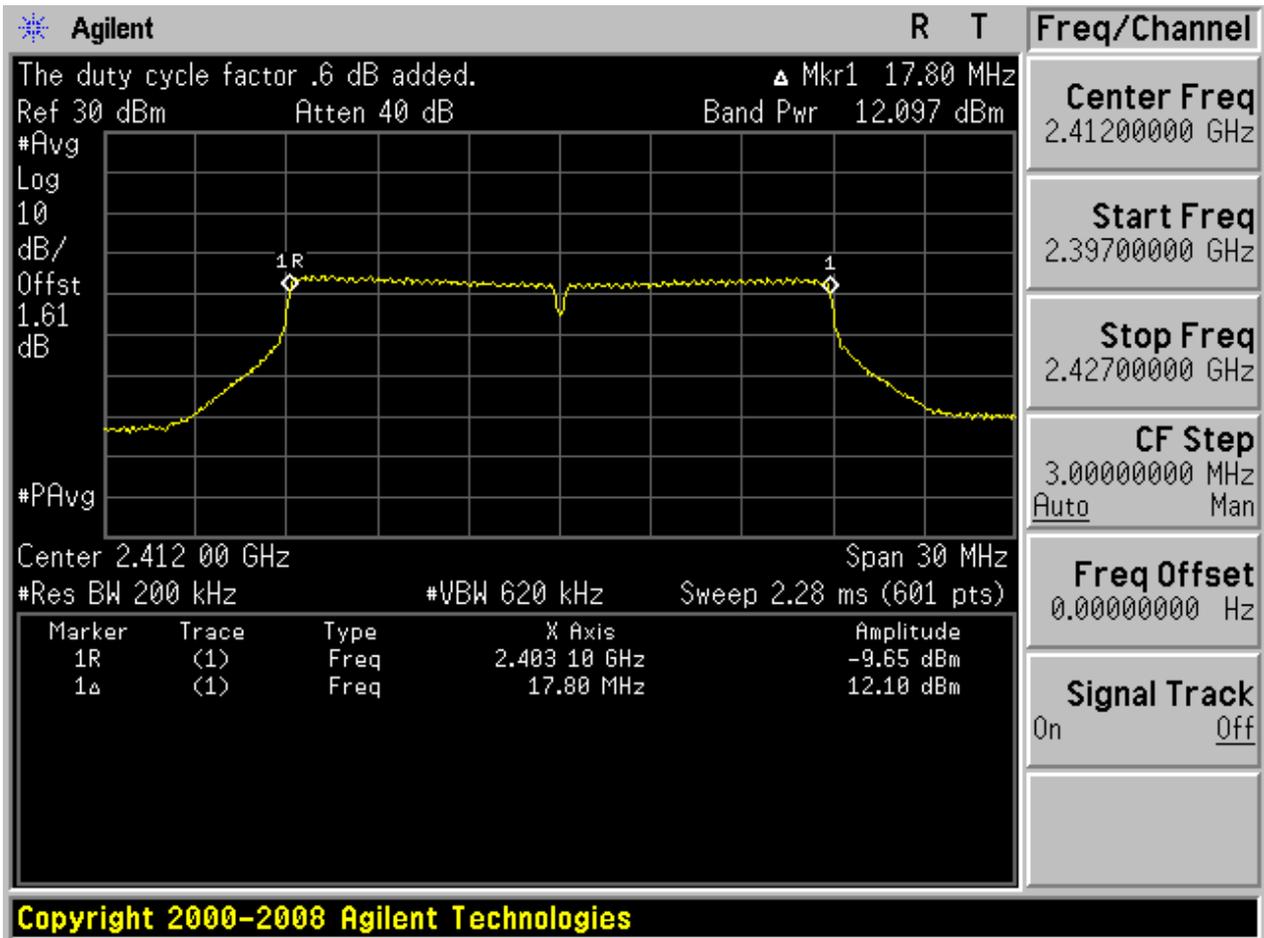




2.6 11G_H@Ant 1

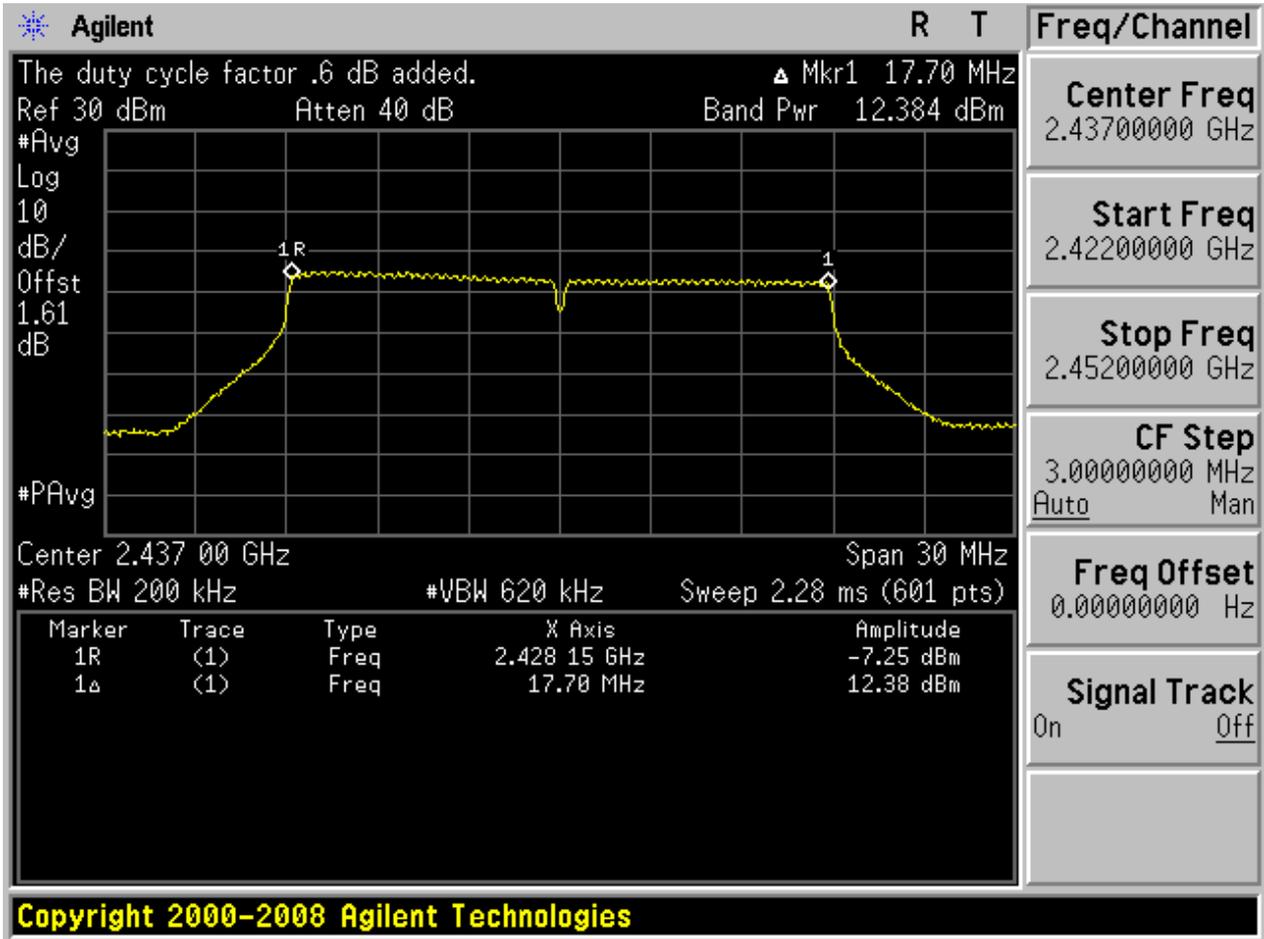


2.7 11N20_L@Ant 1

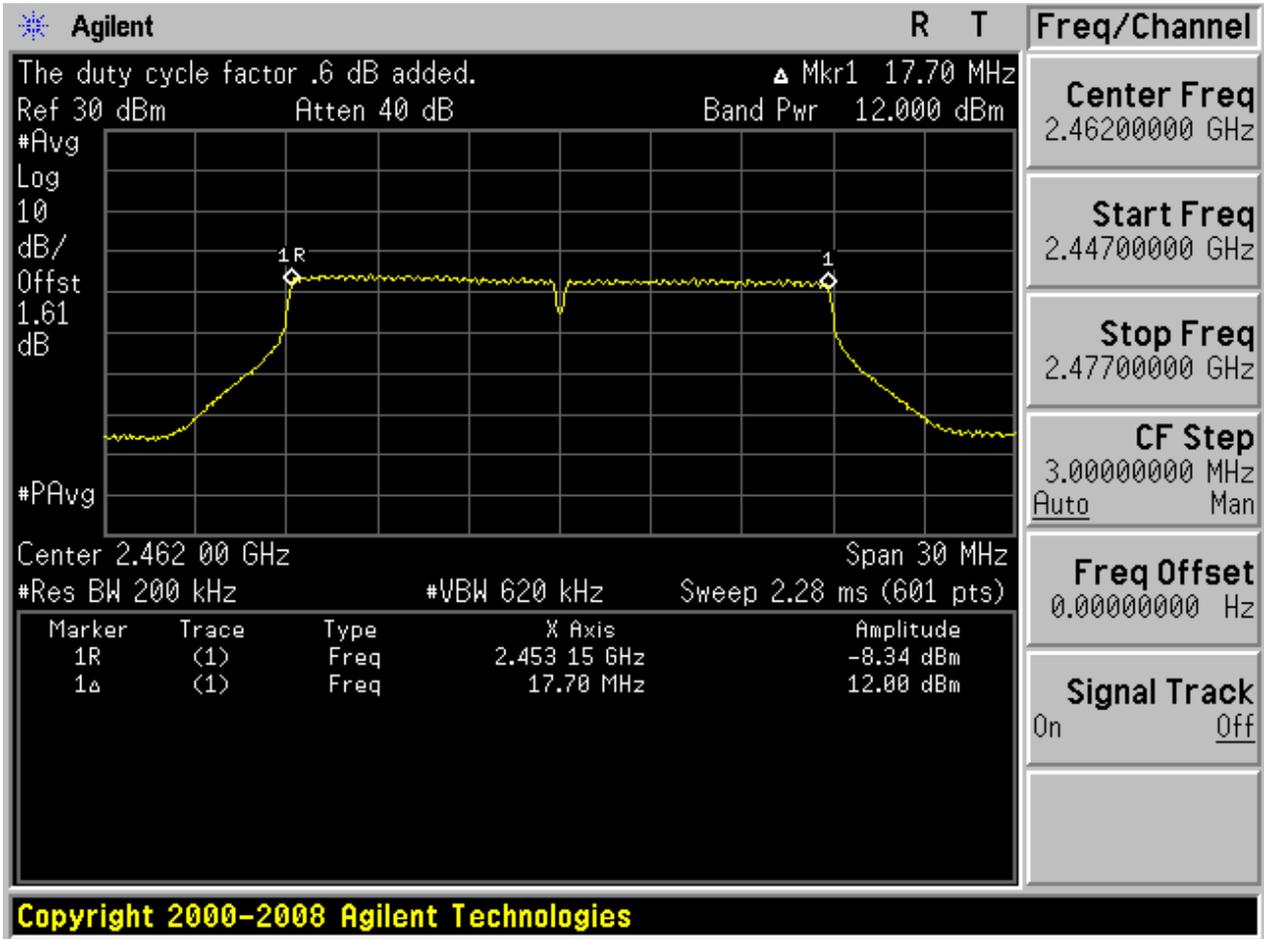




2.8 11N20_M@Ant 1



2.9 11N20_H@Ant 1





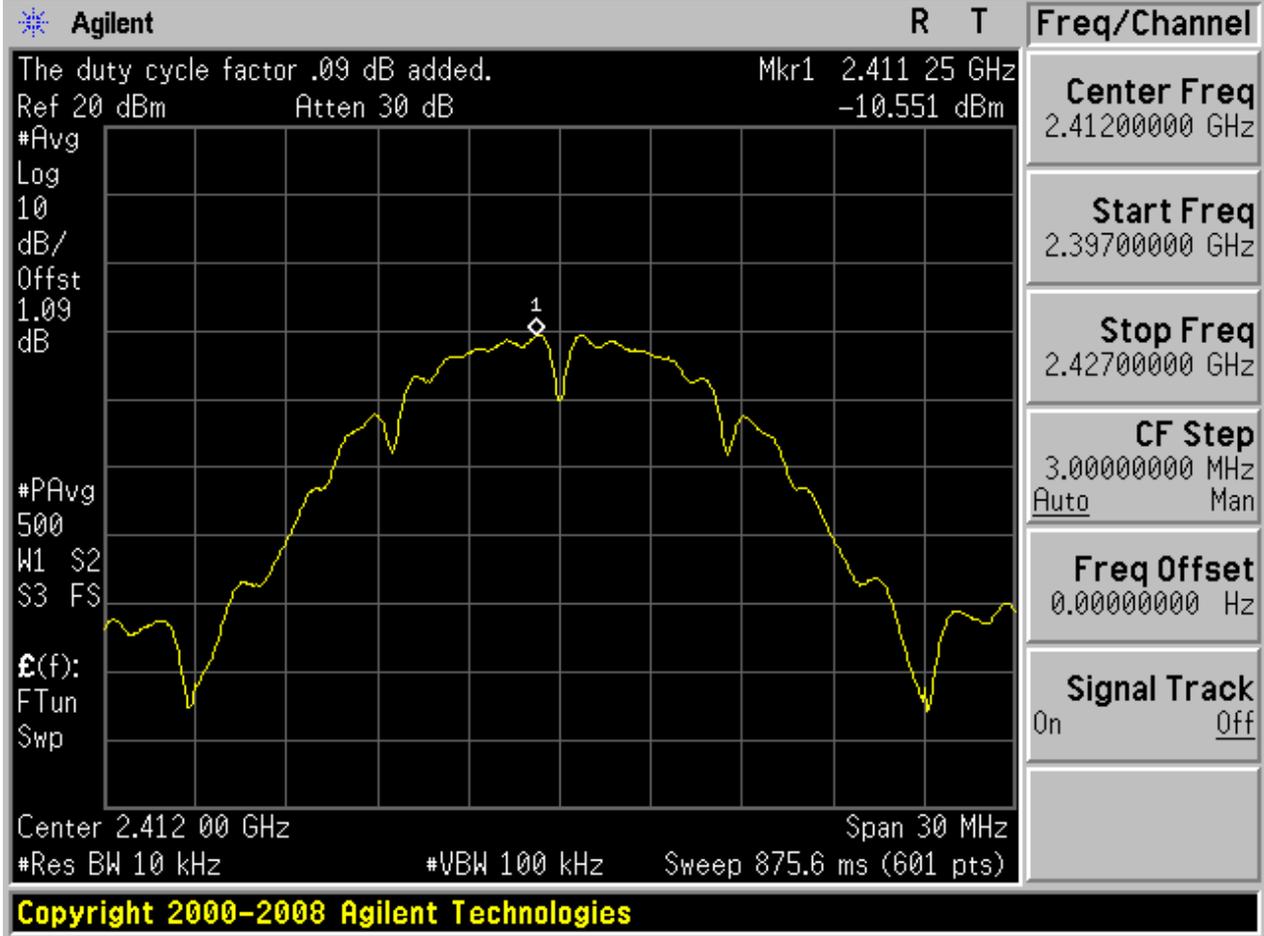
Appendix E: Maximum Power Spectral Density Level

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	PD[MHz]	Verdict
11B	L	2412	Ant 1	-10.55	pass
11B	M	2437	Ant 1	-10.20	pass
11B	H	2462	Ant 1	-10.89	pass
11G	L	2412	Ant 1	-16.37	pass
11G	M	2437	Ant 1	-15.70	pass
11G	H	2462	Ant 1	-17.12	pass
11N20	L	2412	Ant 1	-17.55	pass
11N20	M	2437	Ant 1	-16.94	pass
11N20	H	2462	Ant 1	-17.77	pass

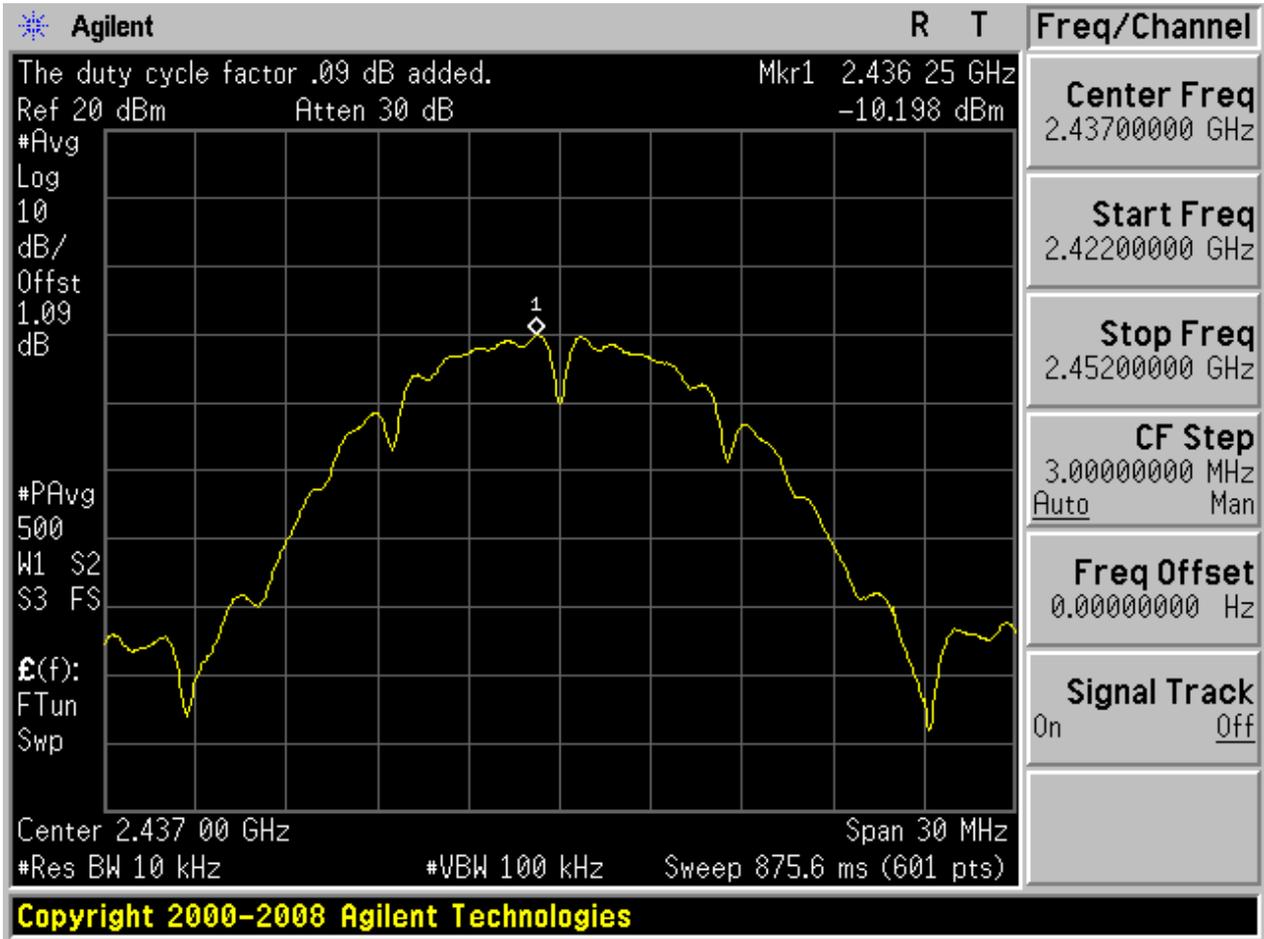
Part II - Test Plots

2.1 11B_L@Ant 1



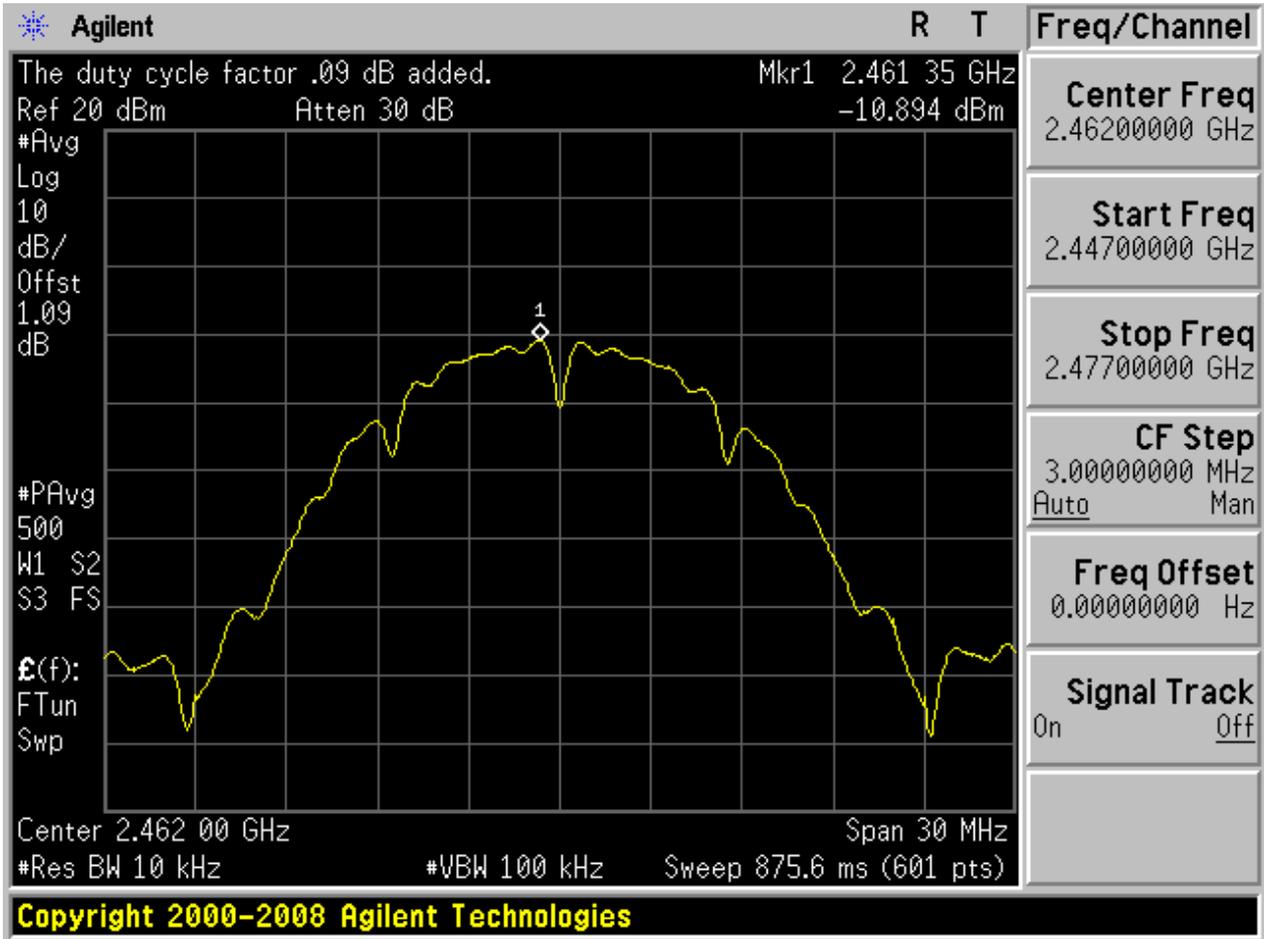


2.2 11B_M@Ant 1



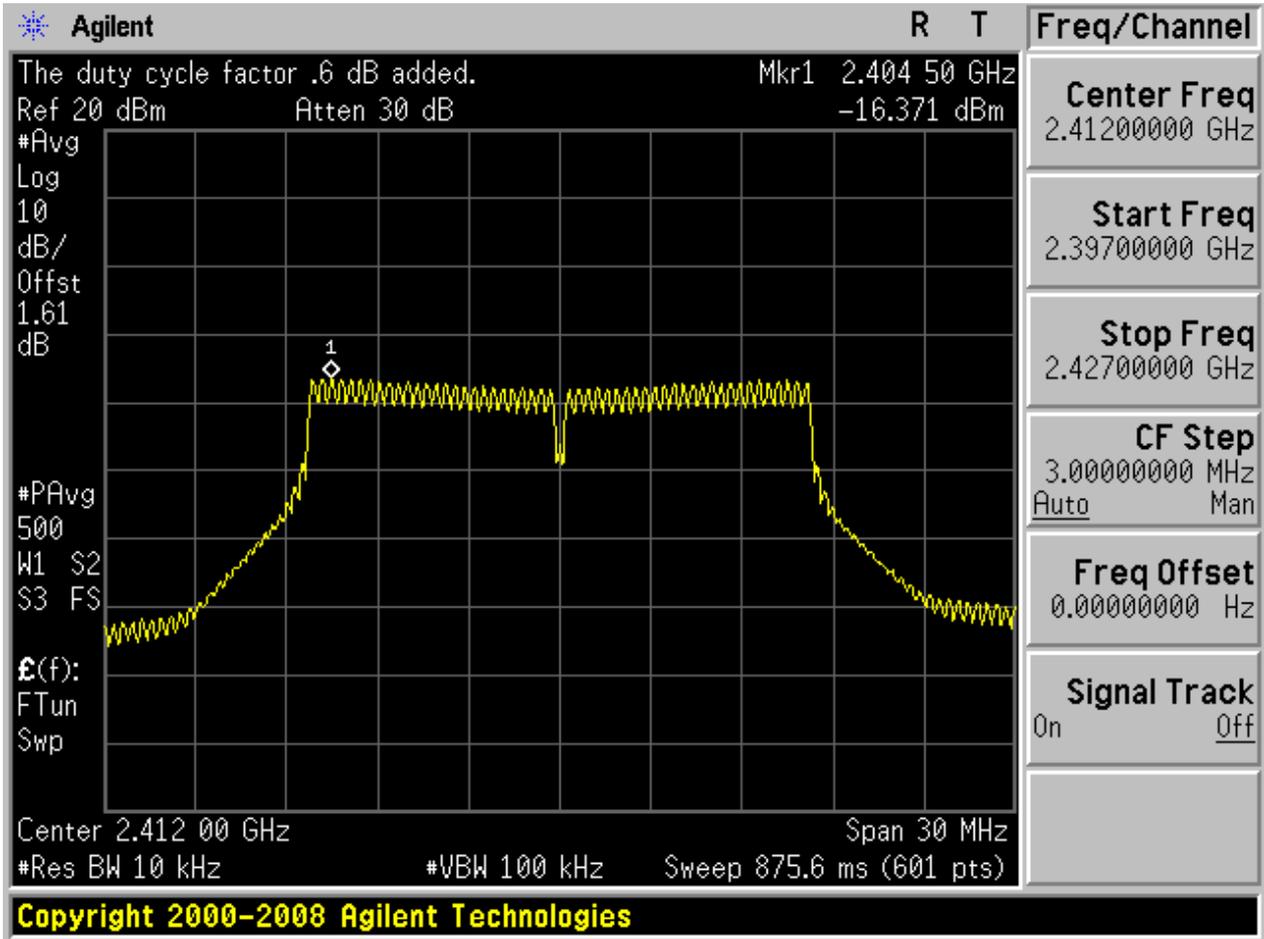


2.3 11B_H@Ant 1



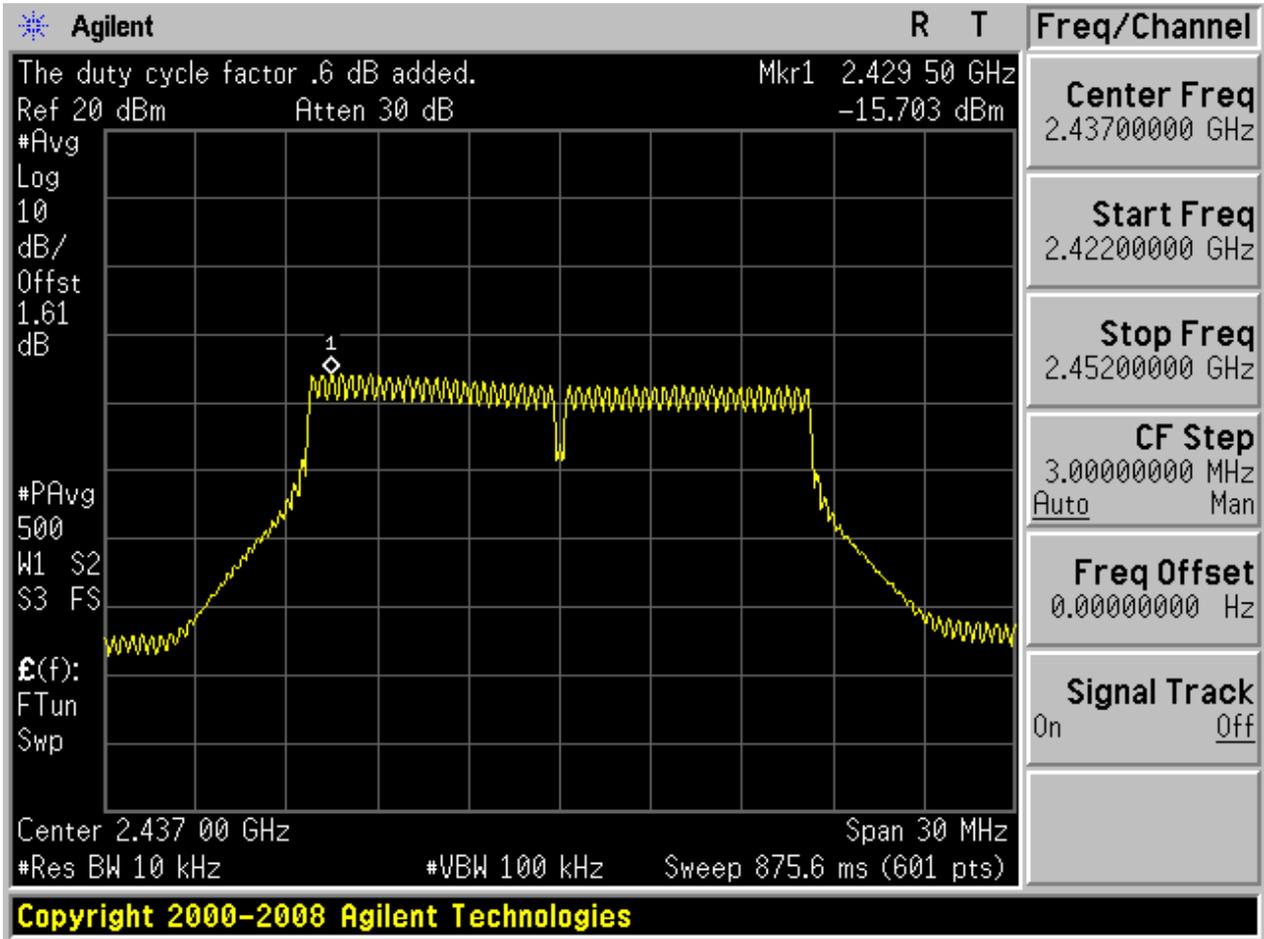


2.4 11G_L@Ant 1



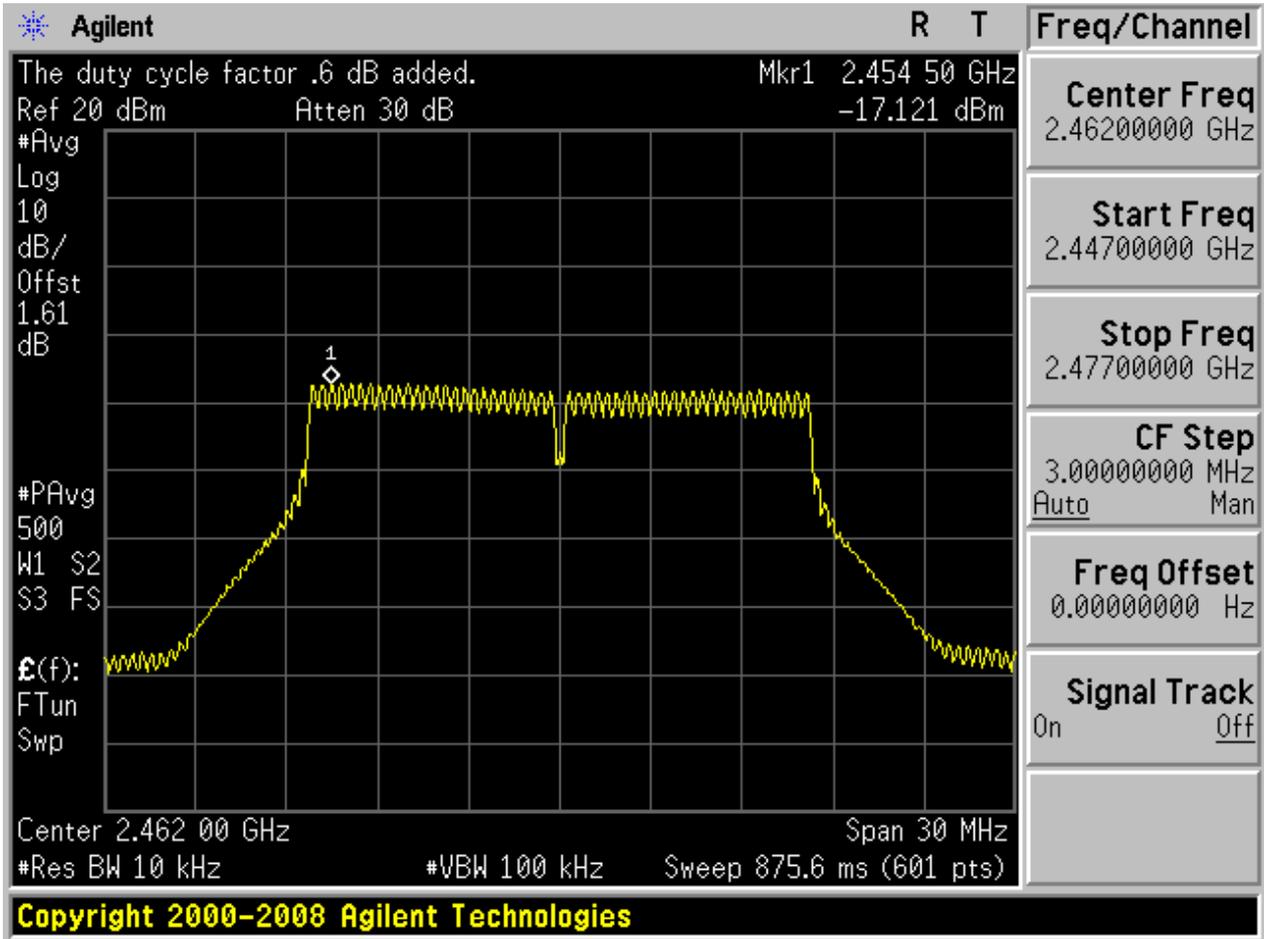


2.5 11G_M@Ant 1



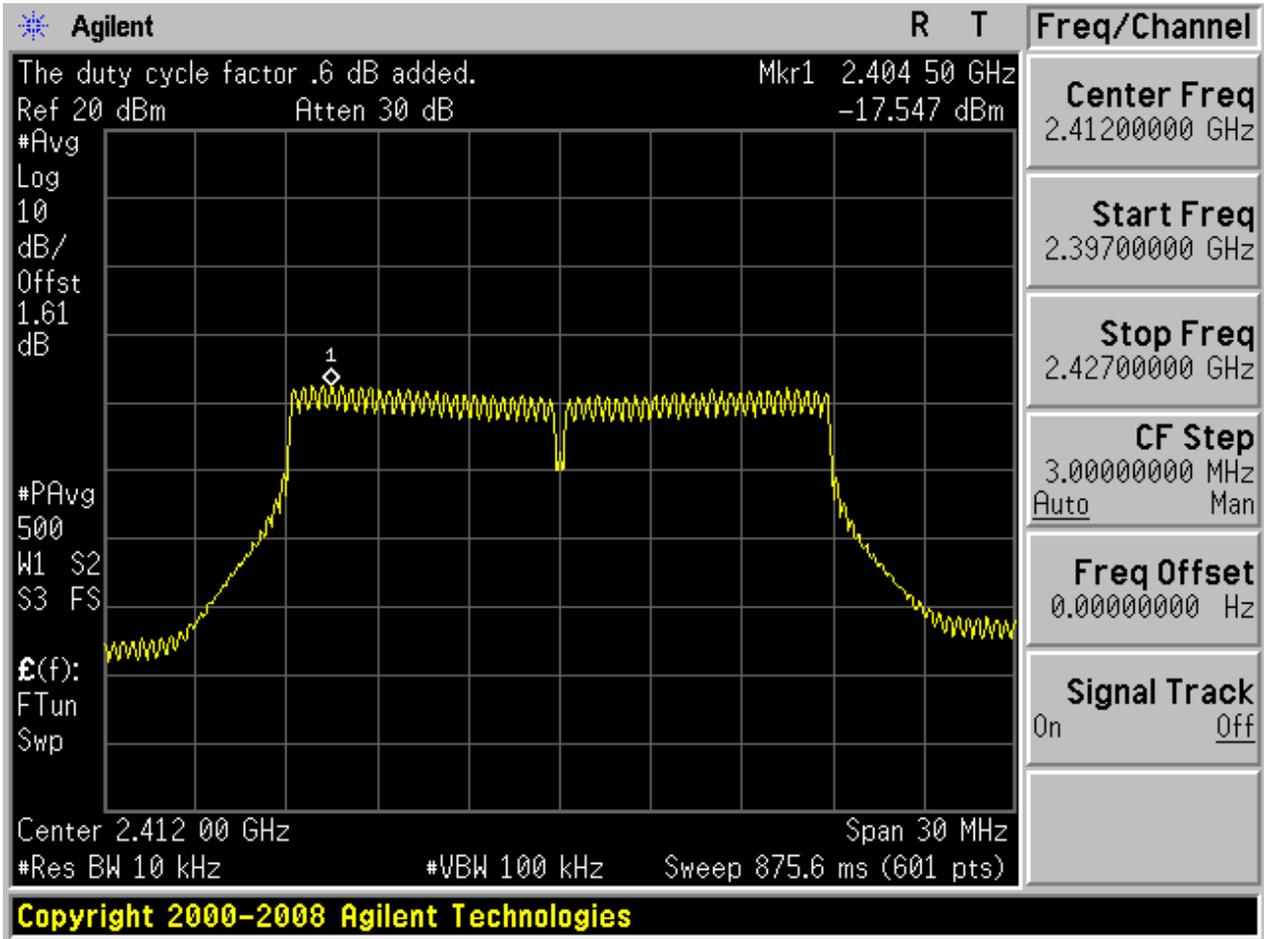


2.6 11G_H@Ant 1



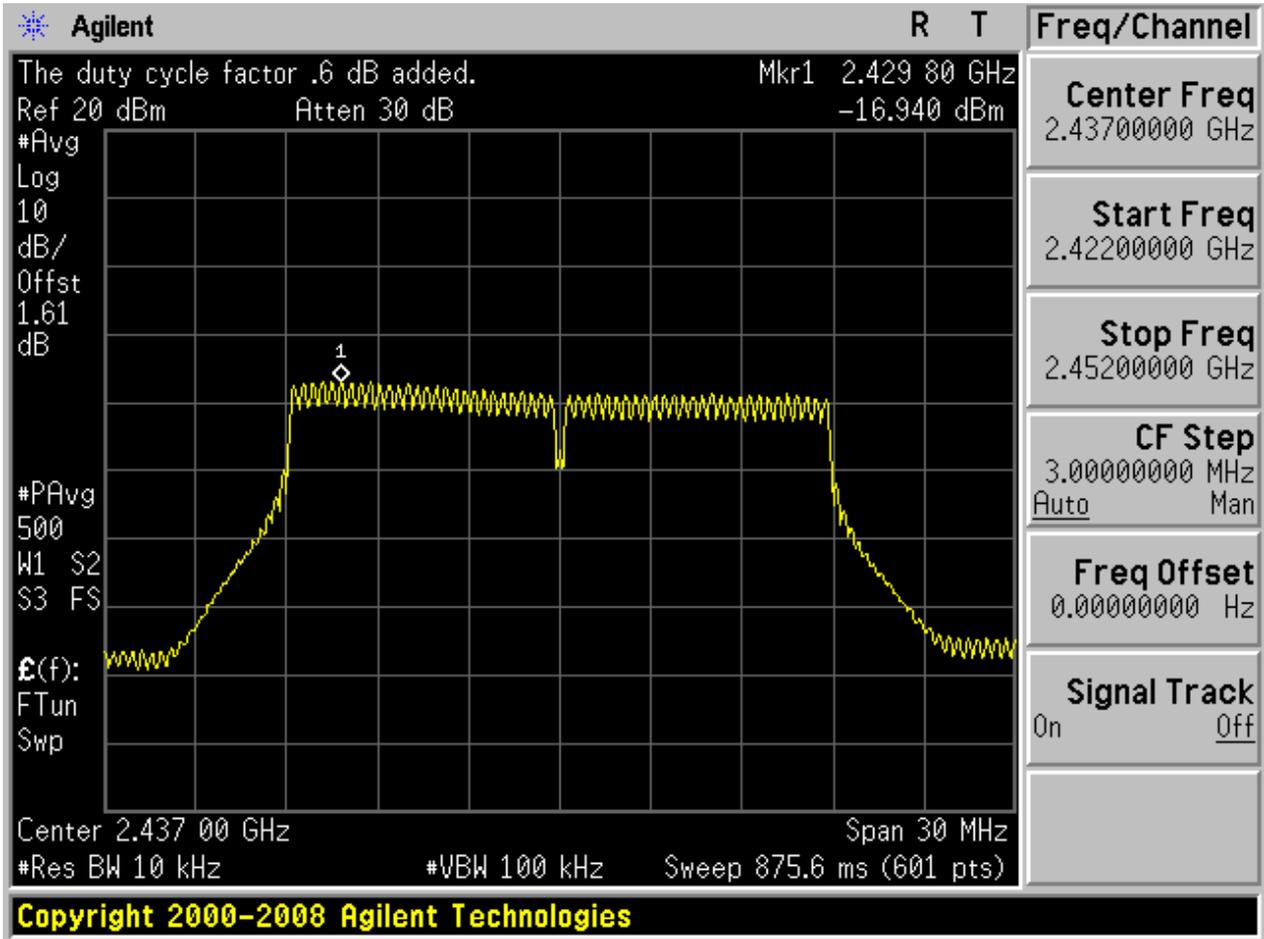


2.7 11N20_L@Ant 1





2.8 11N20_M@Ant 1



Appendix F: Band Edges Compliance

Part I - Test Results

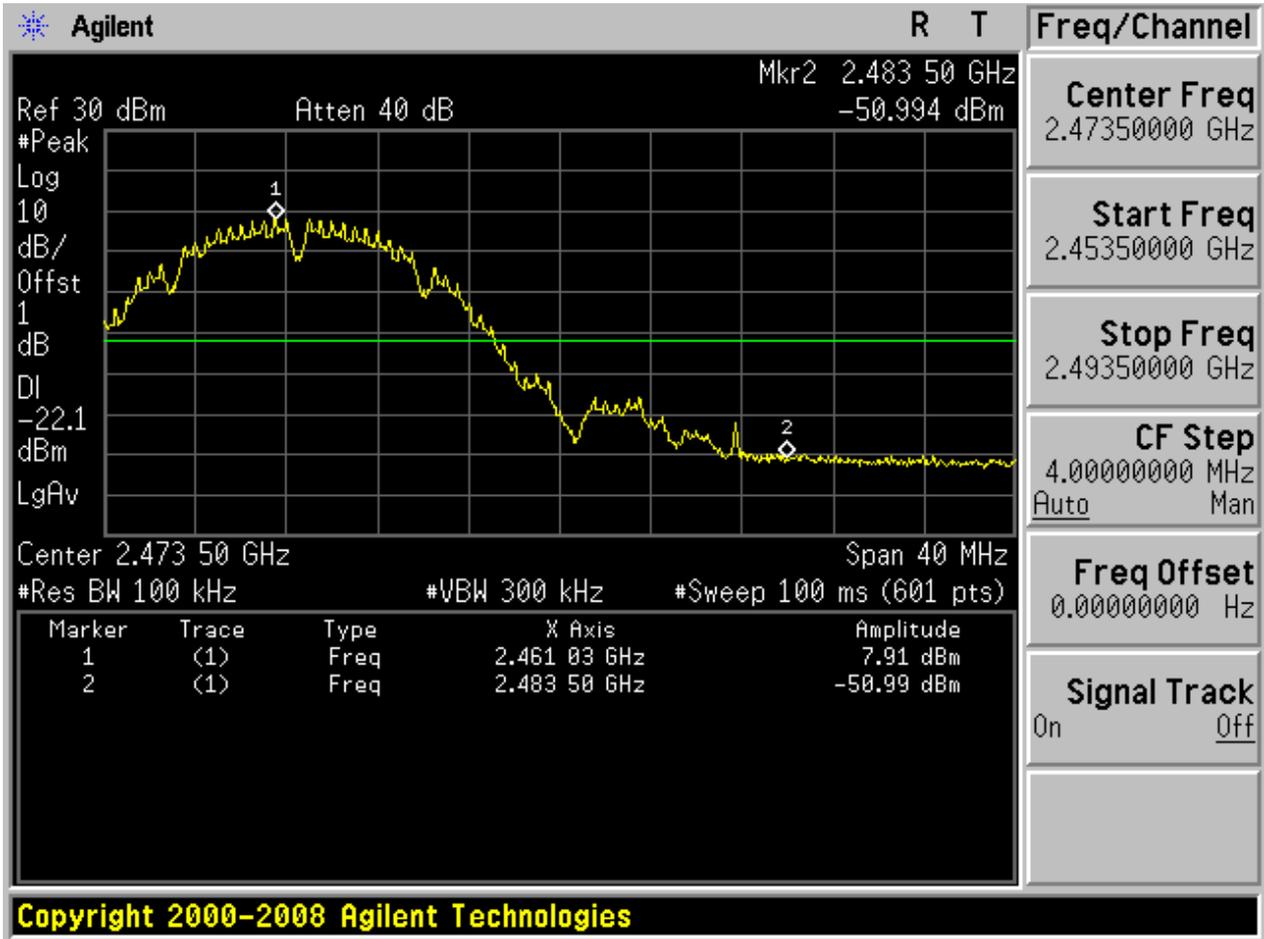
Test Mode	Test Channel	Frequency[MHz]	Ant	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
11B	L	2412	Ant 1	8.26	-52.09	pass
11B	H	2462	Ant 1	7.91	-51.46	pass
11G	L	2412	Ant 1	2.06	-49.12	pass
11G	H	2462	Ant 1	1.42	-46.87	pass
11N20	L	2412	Ant 1	1.20	-48.25	pass
11N20	H	2462	Ant 1	1.05	-47.59	pass

Part II - Test Plots

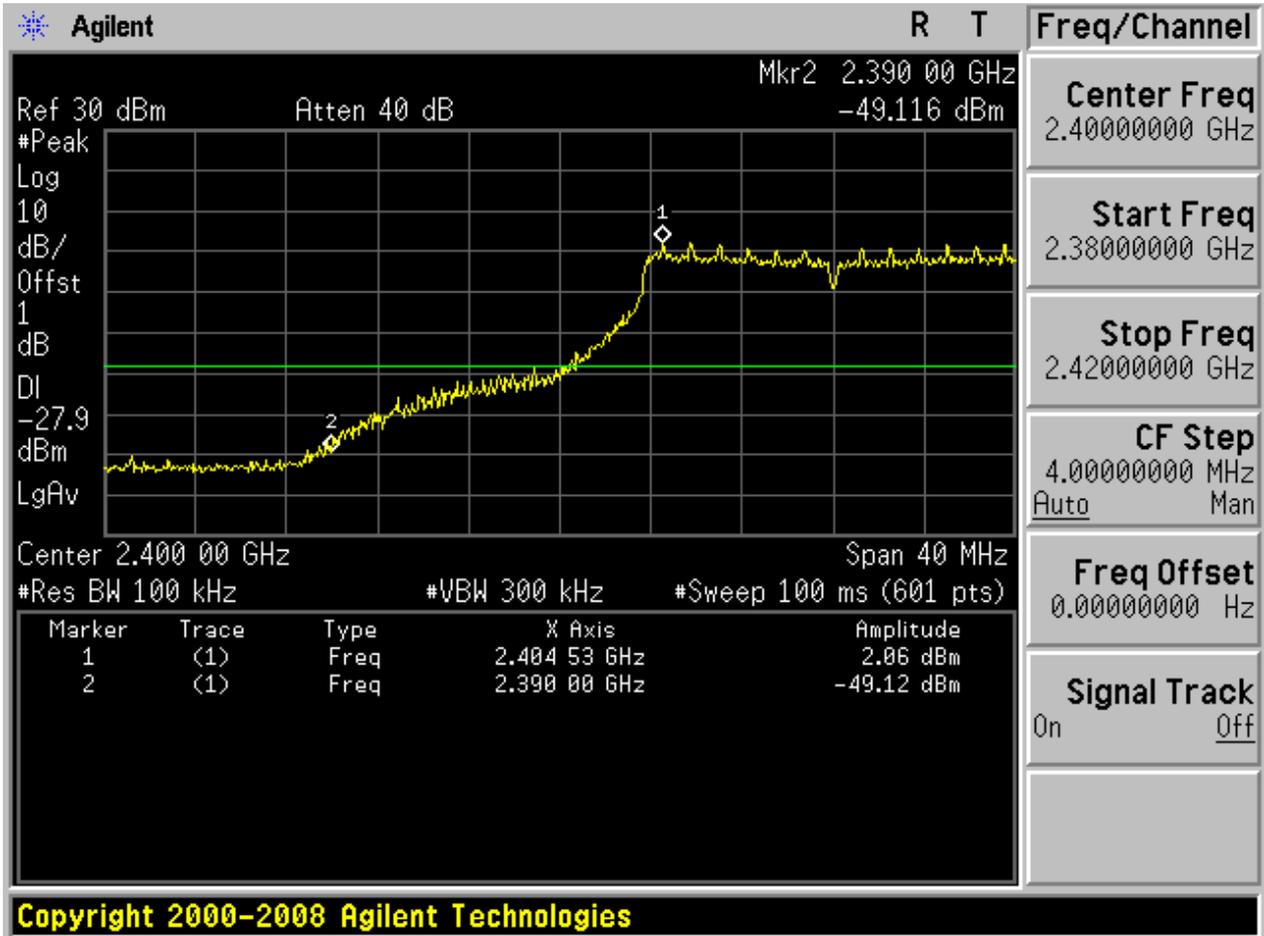
2.1 11B_L@Ant 1



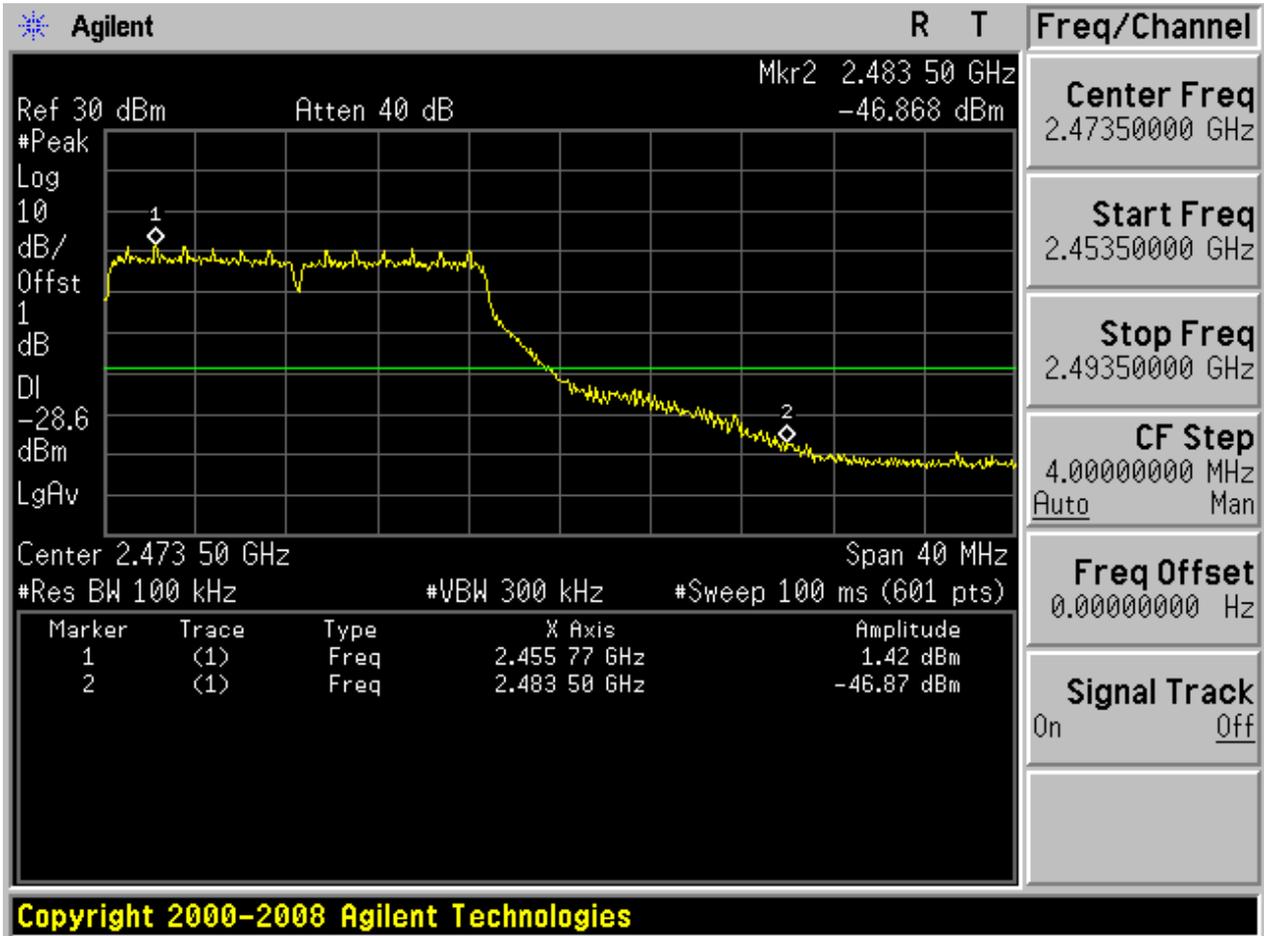
2.2 11B_H@Ant 1



2.3 11G_L@Ant 1

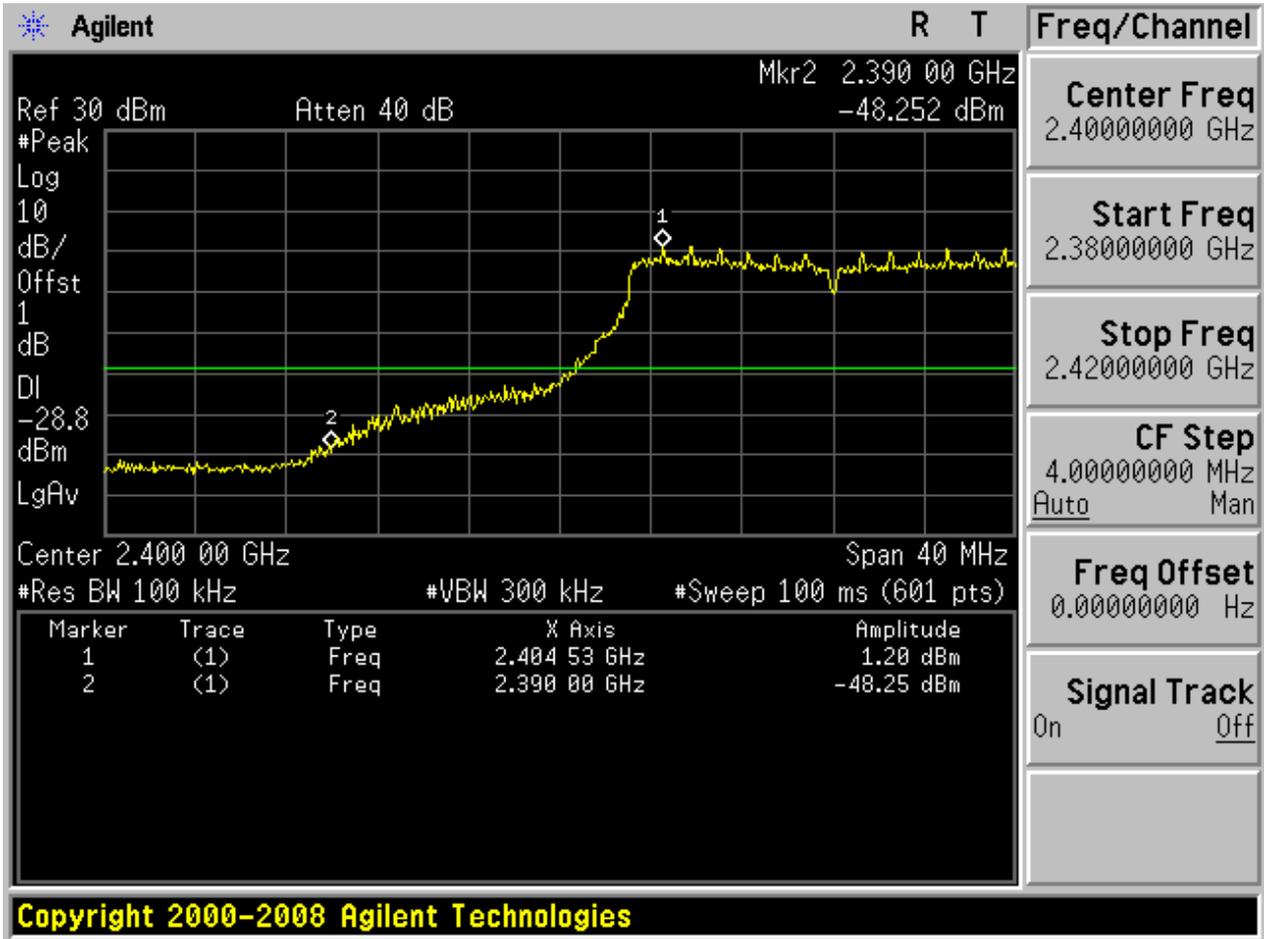


2.4 11G_H@Ant 1

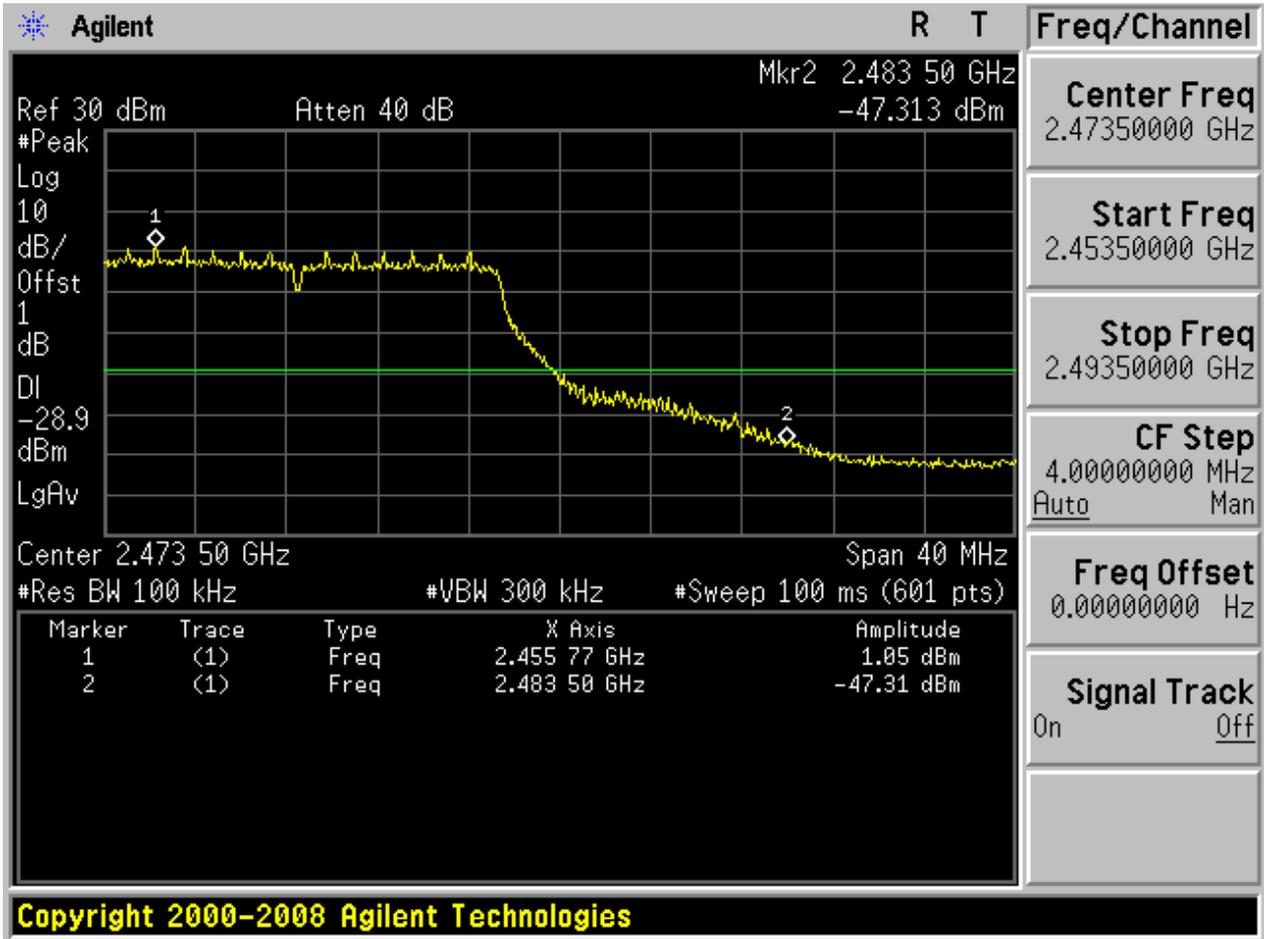




2.5 11N20_L@Ant 1



2.6 11N20_H@Ant 1



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" 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".

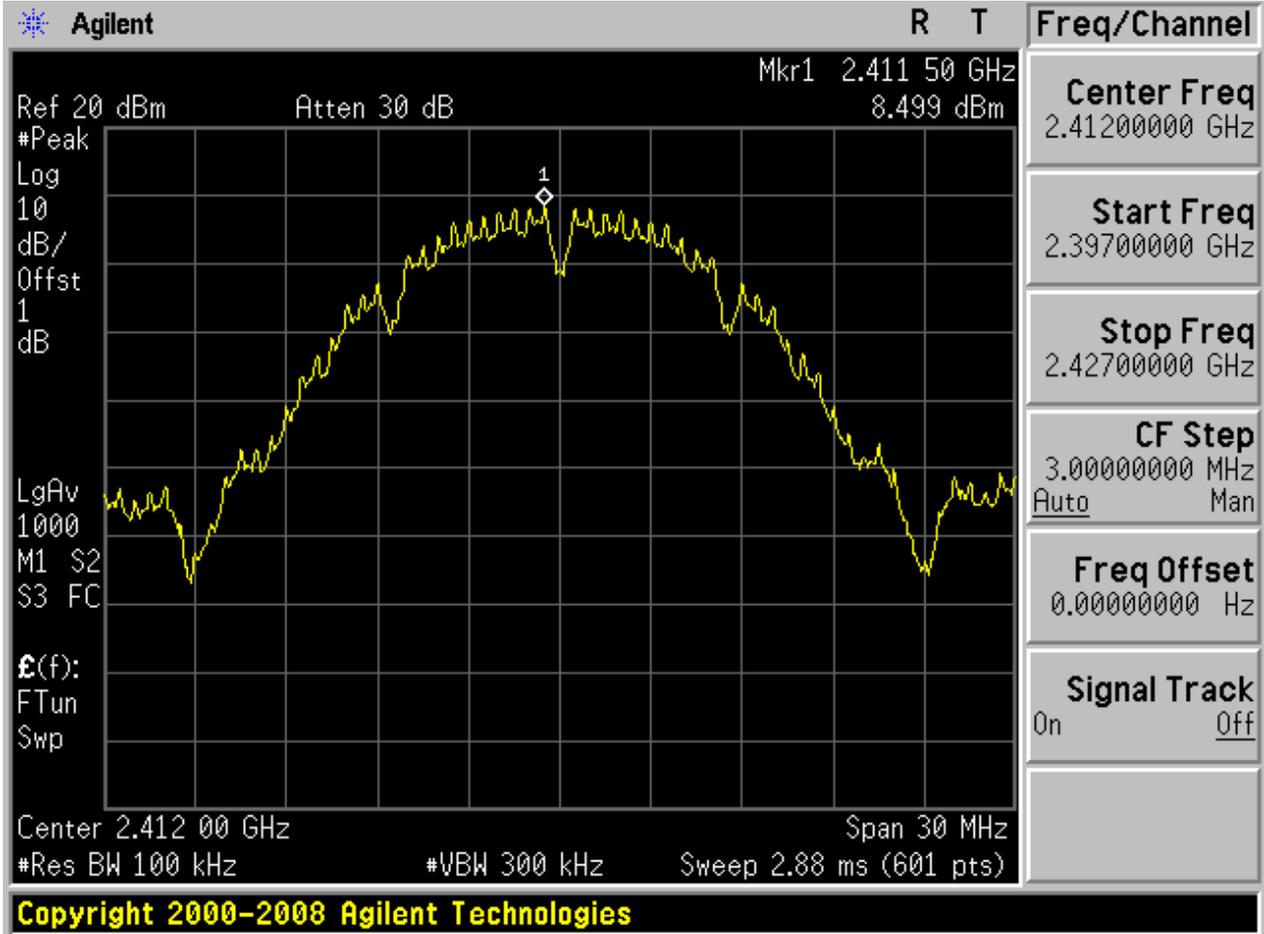
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]	Verdict
11B	L	2412	Ant 1	8.50	<limit	pass
11B	M	2437	Ant 1	8.53	<limit	pass
11B	H	2462	Ant 1	7.80	<limit	pass
11G	L	2412	Ant 1	2.51	<limit	pass
11G	M	2437	Ant 1	3.06	<limit	pass
11G	H	2462	Ant 1	1.63	<limit	pass
11N20	L	2412	Ant 1	1.69	<limit	pass
11N20	M	2437	Ant 1	1.96	<limit	pass
11N20	H	2462	Ant 1	1.23	<limit	pass

Part II - Test Plots

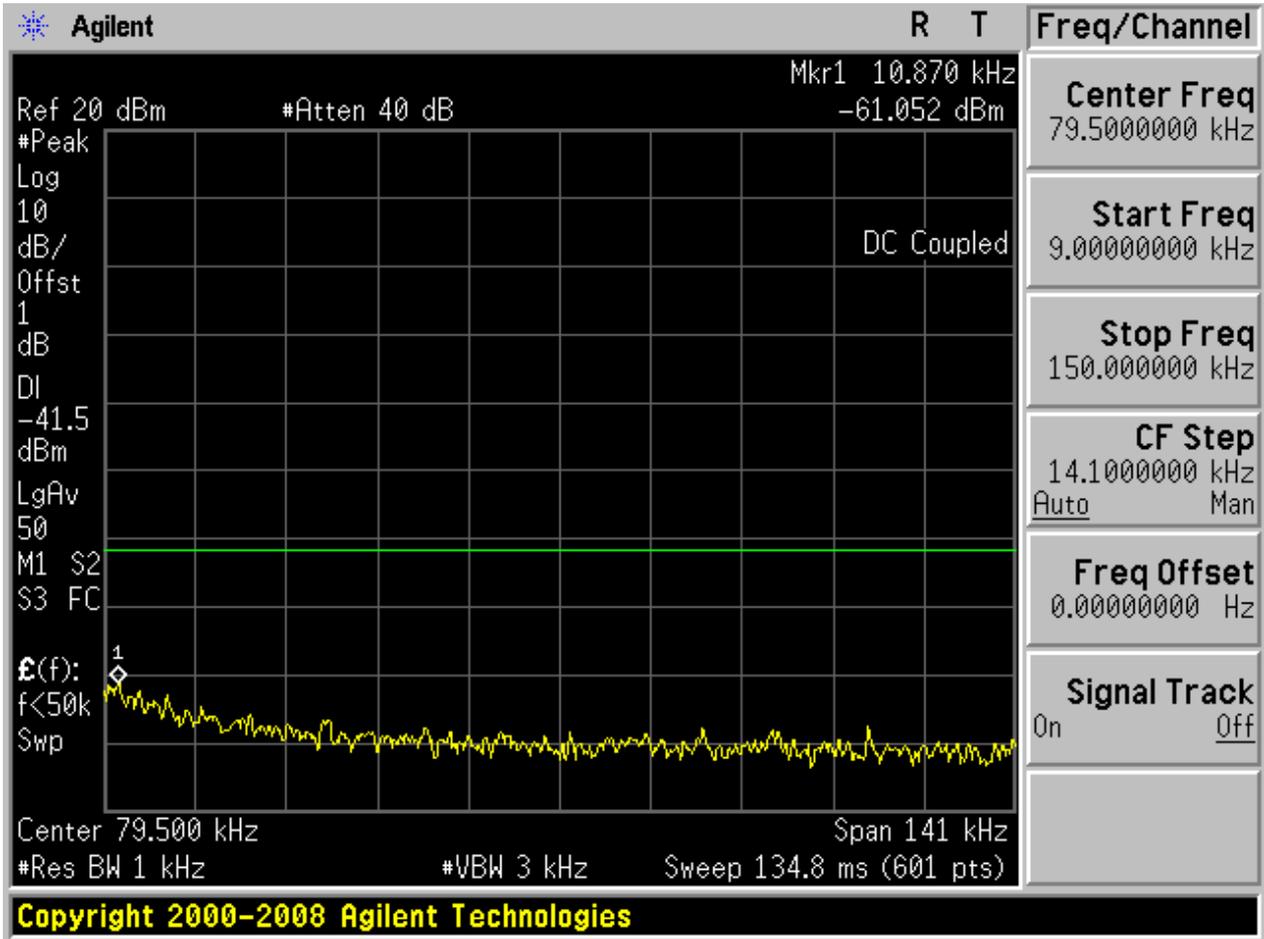
2.1 11B_L@Ant 1

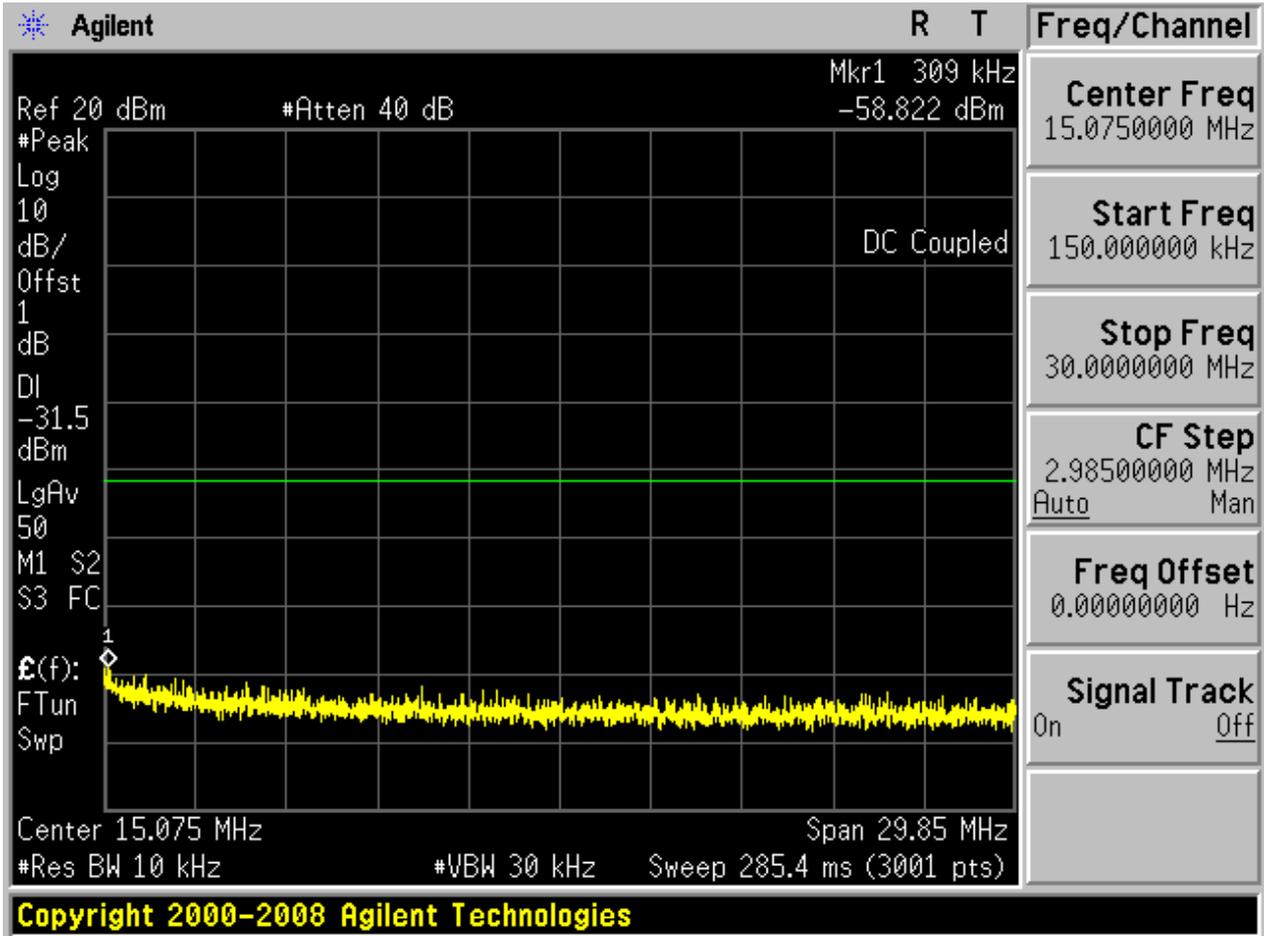
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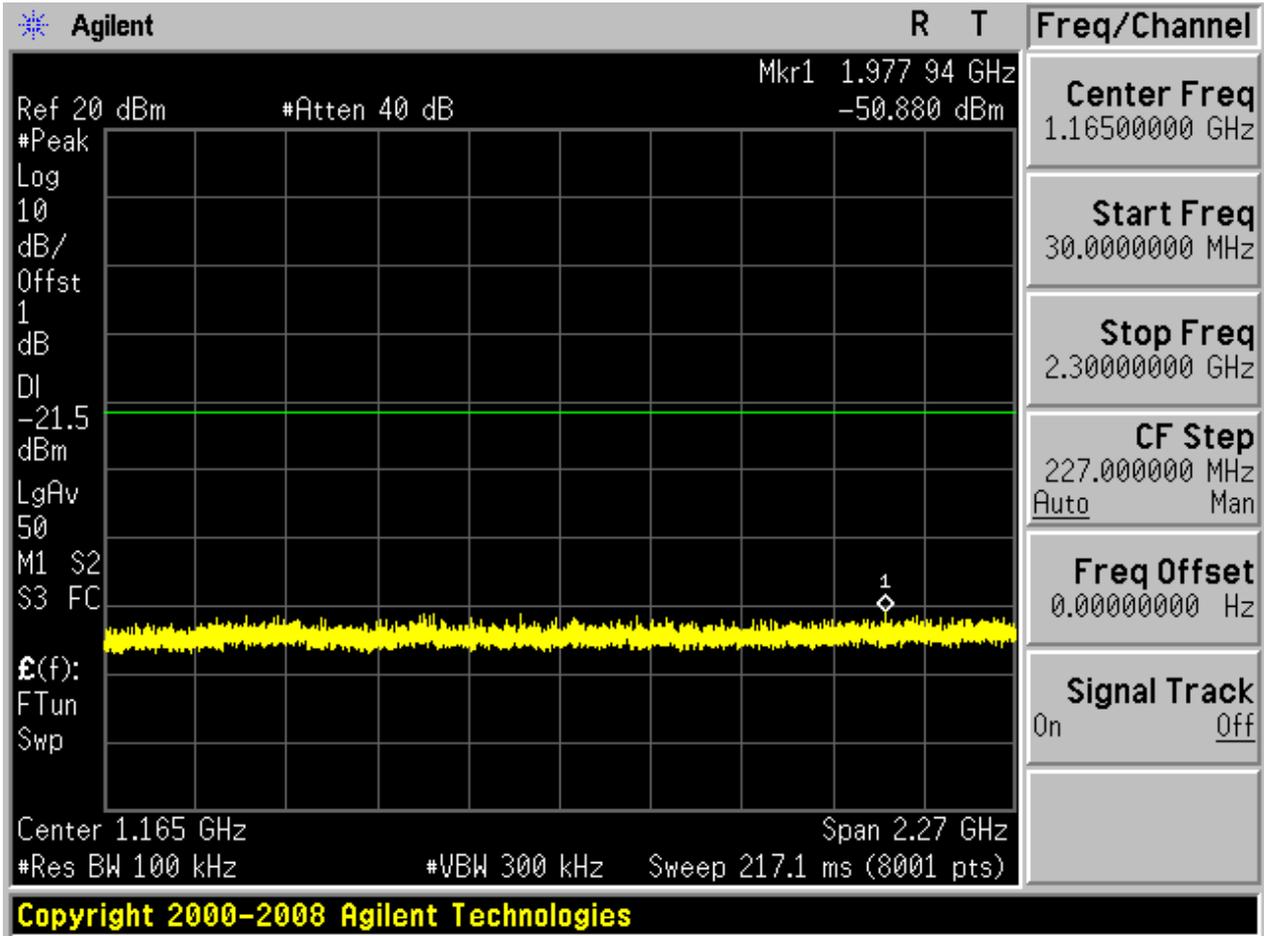


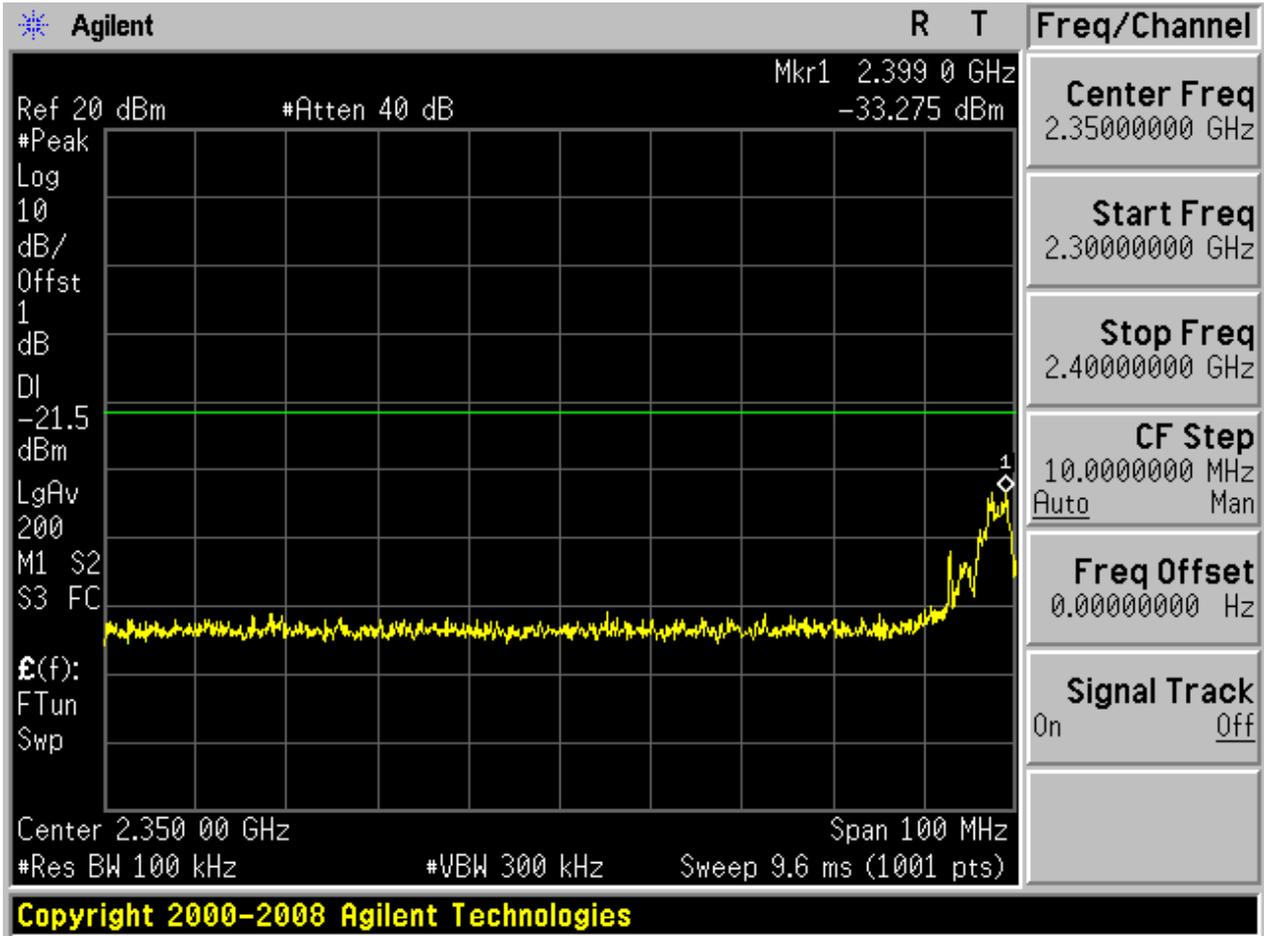


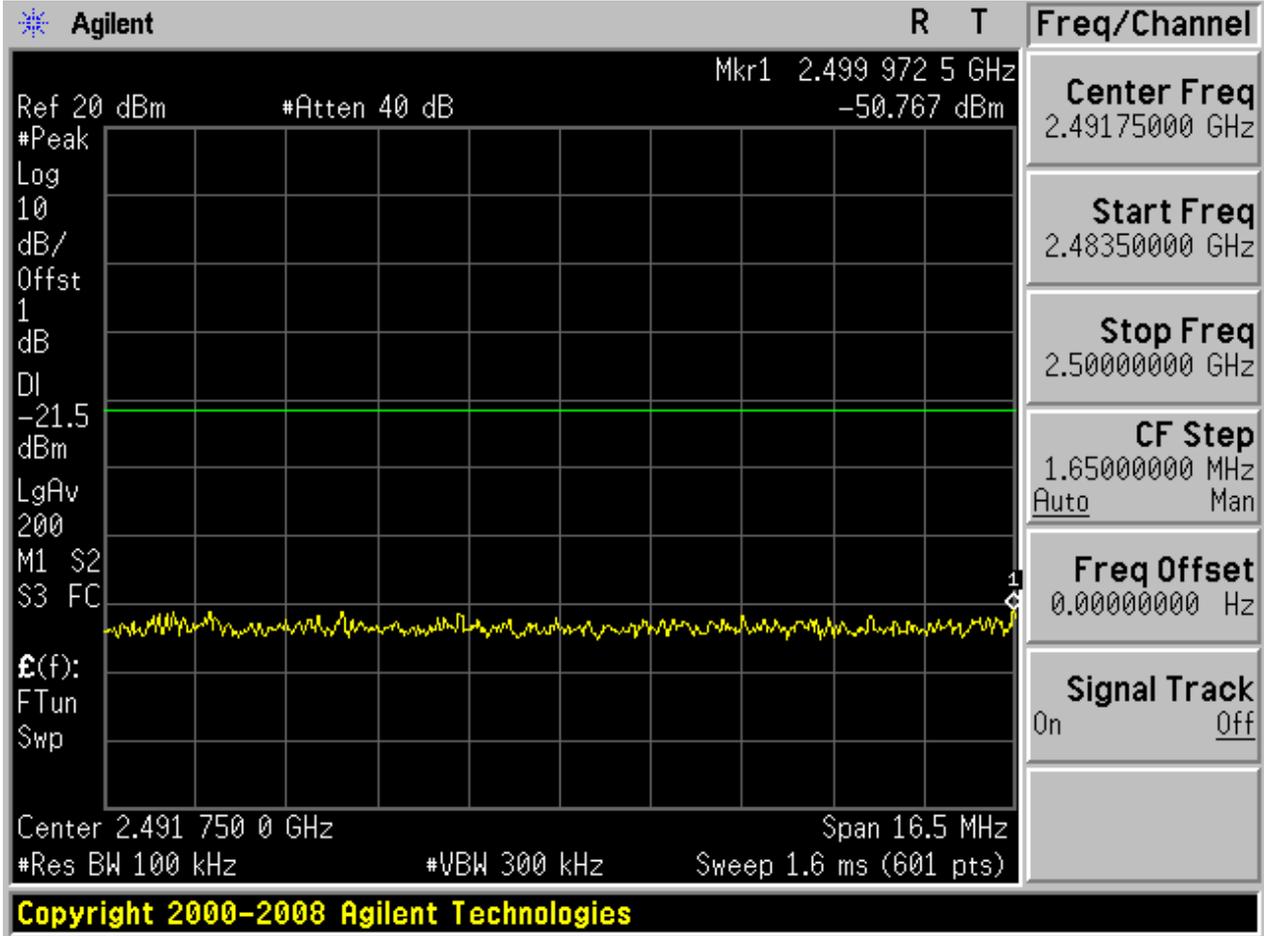
Puw:

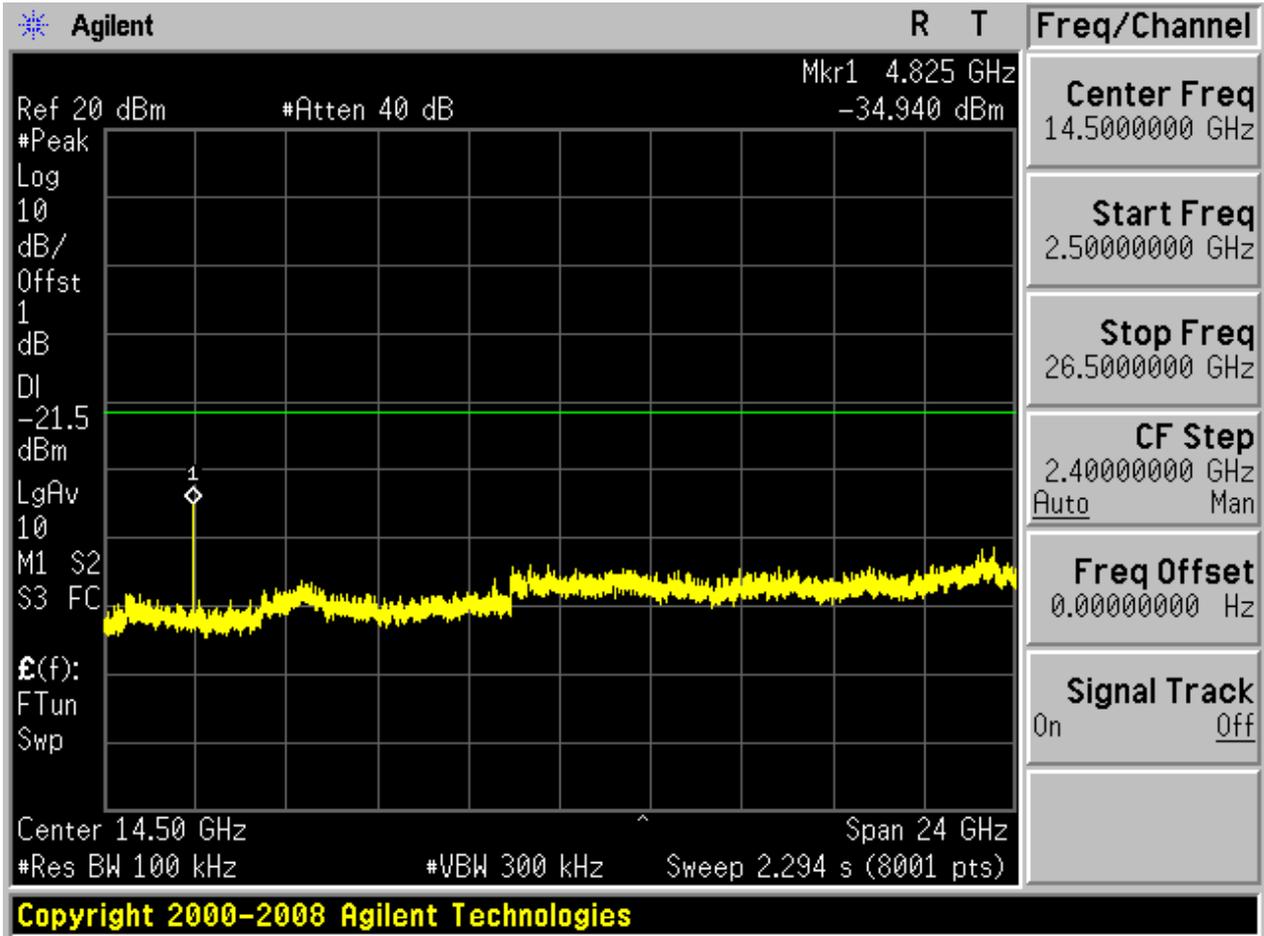








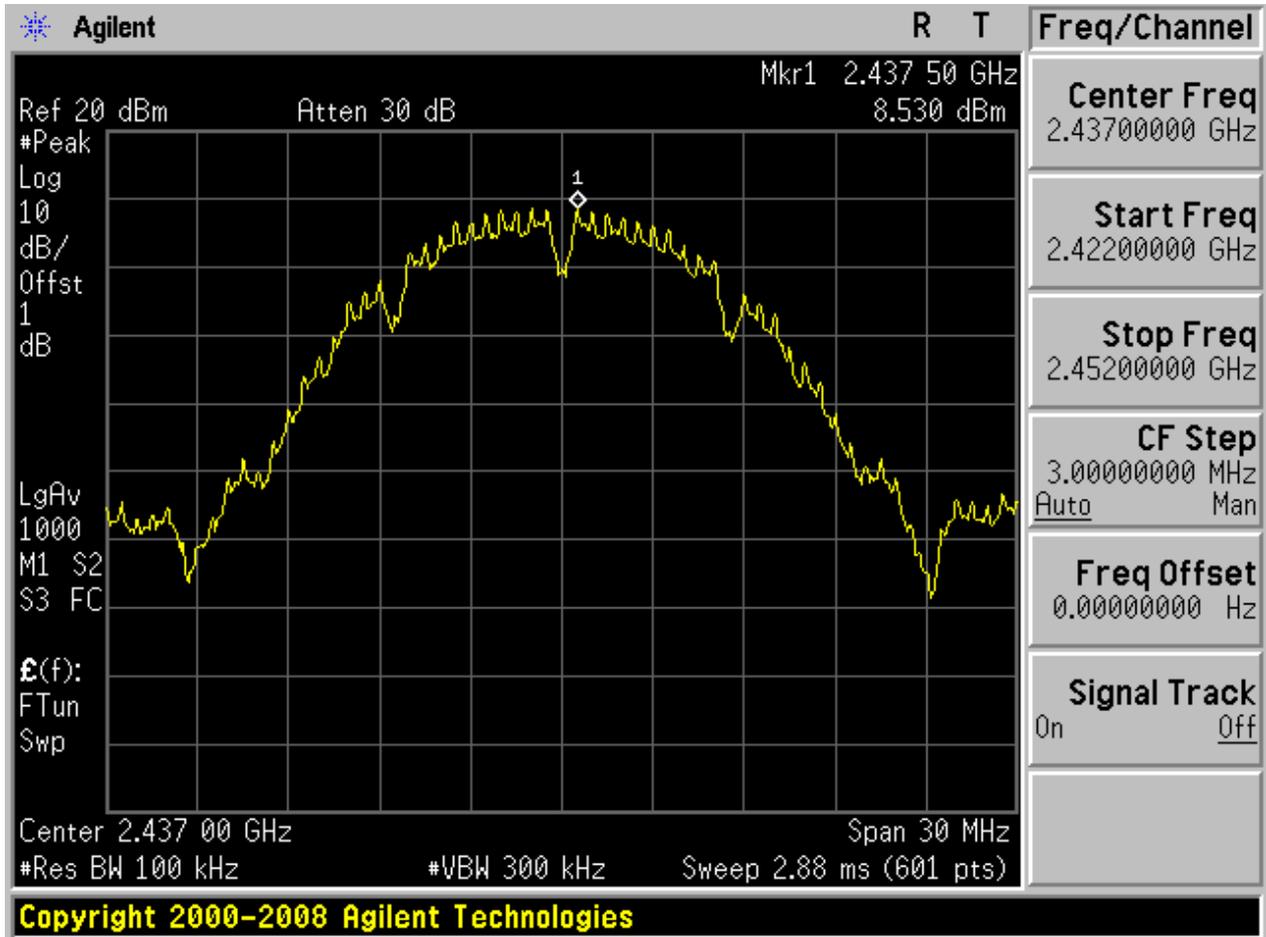






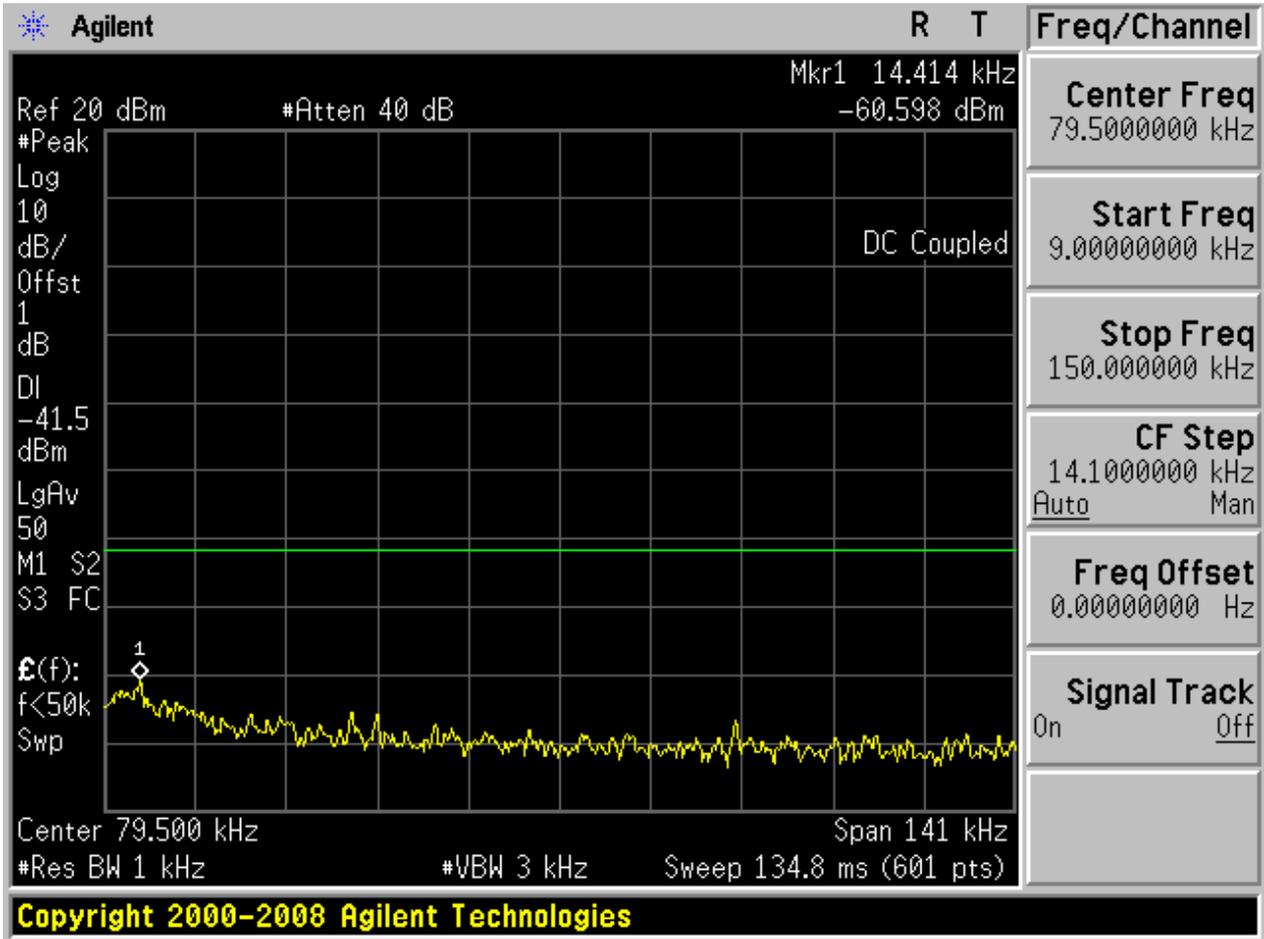
2.2 11B_M@Ant 1

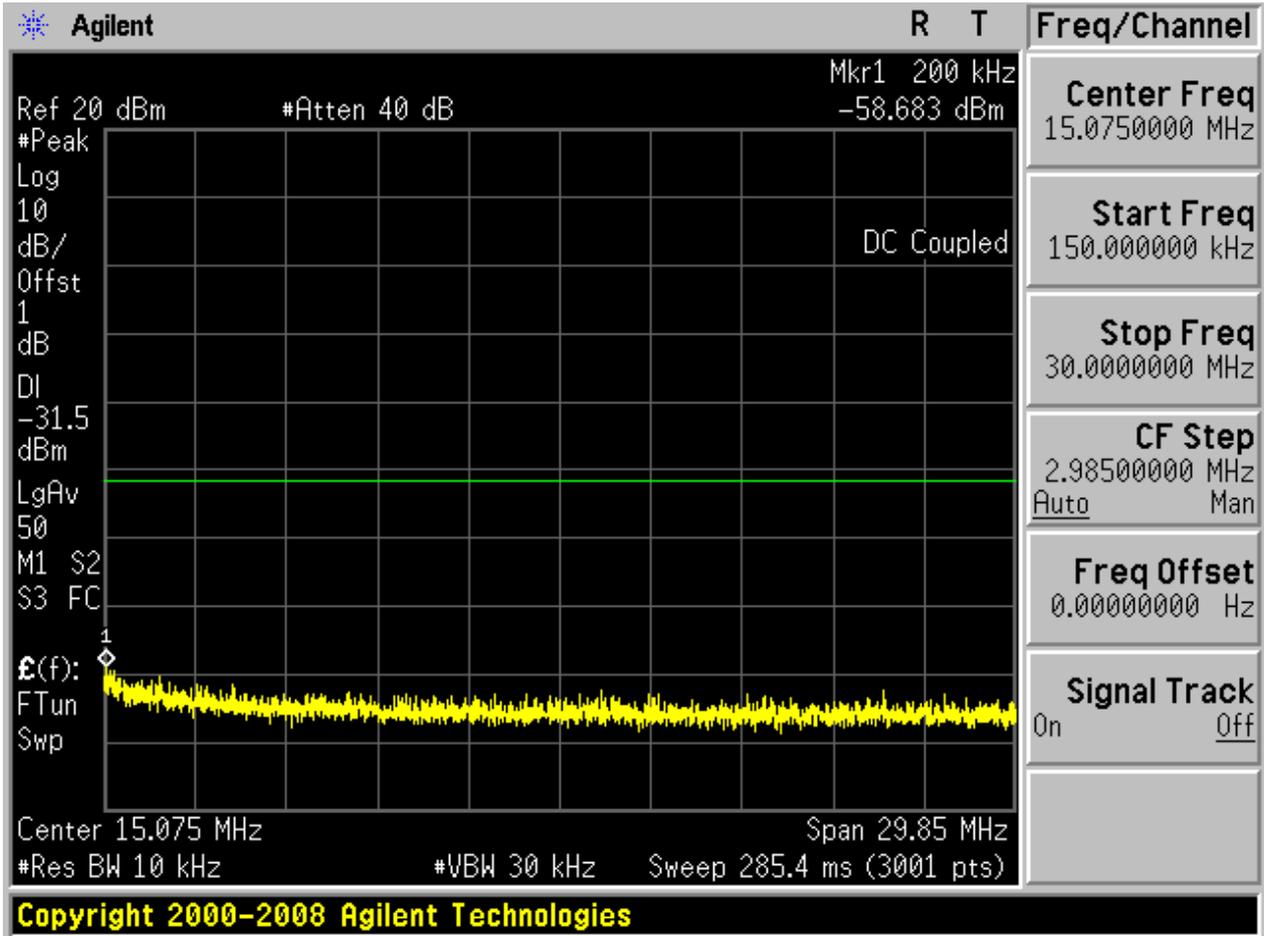
Pref:

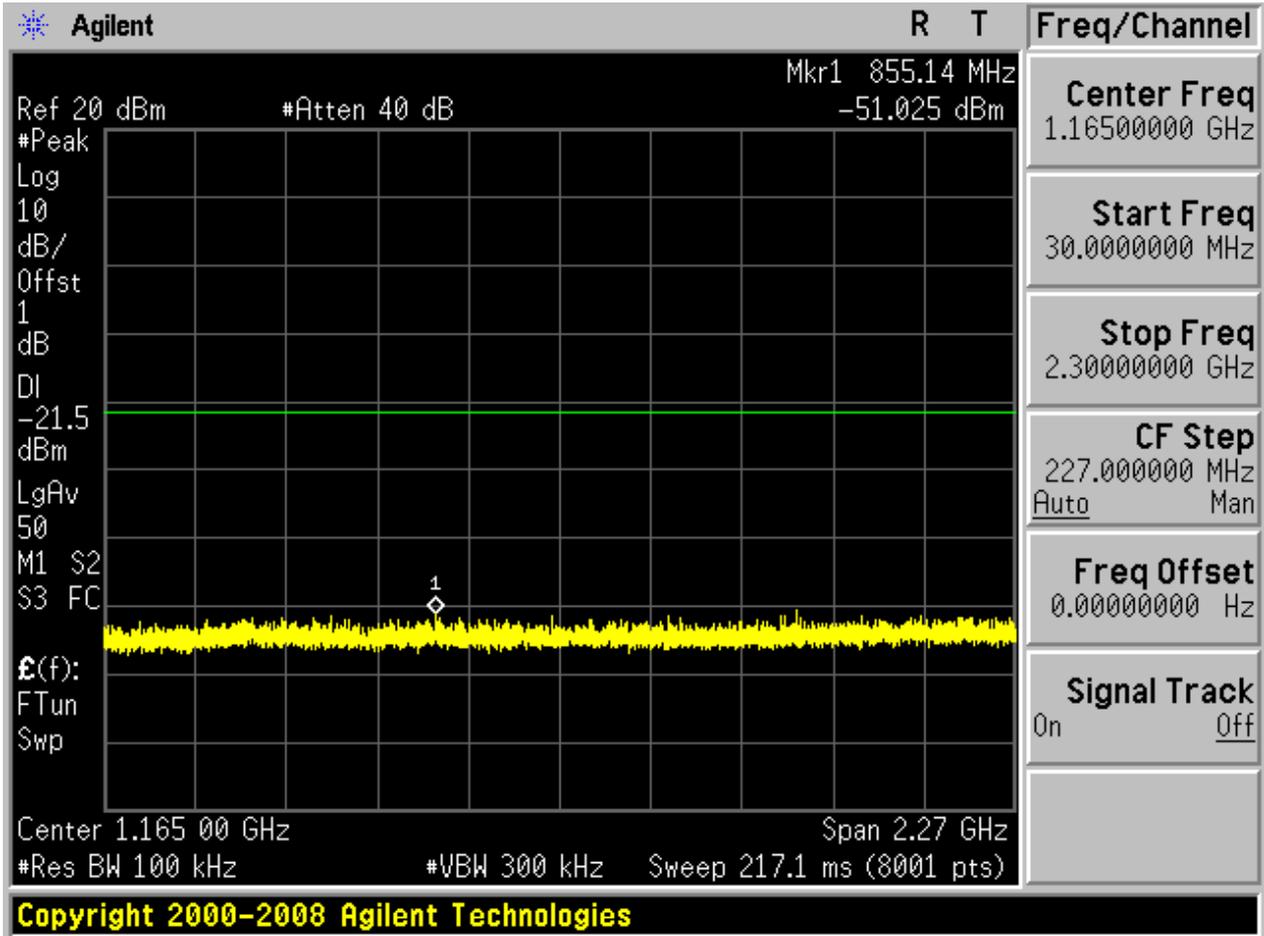


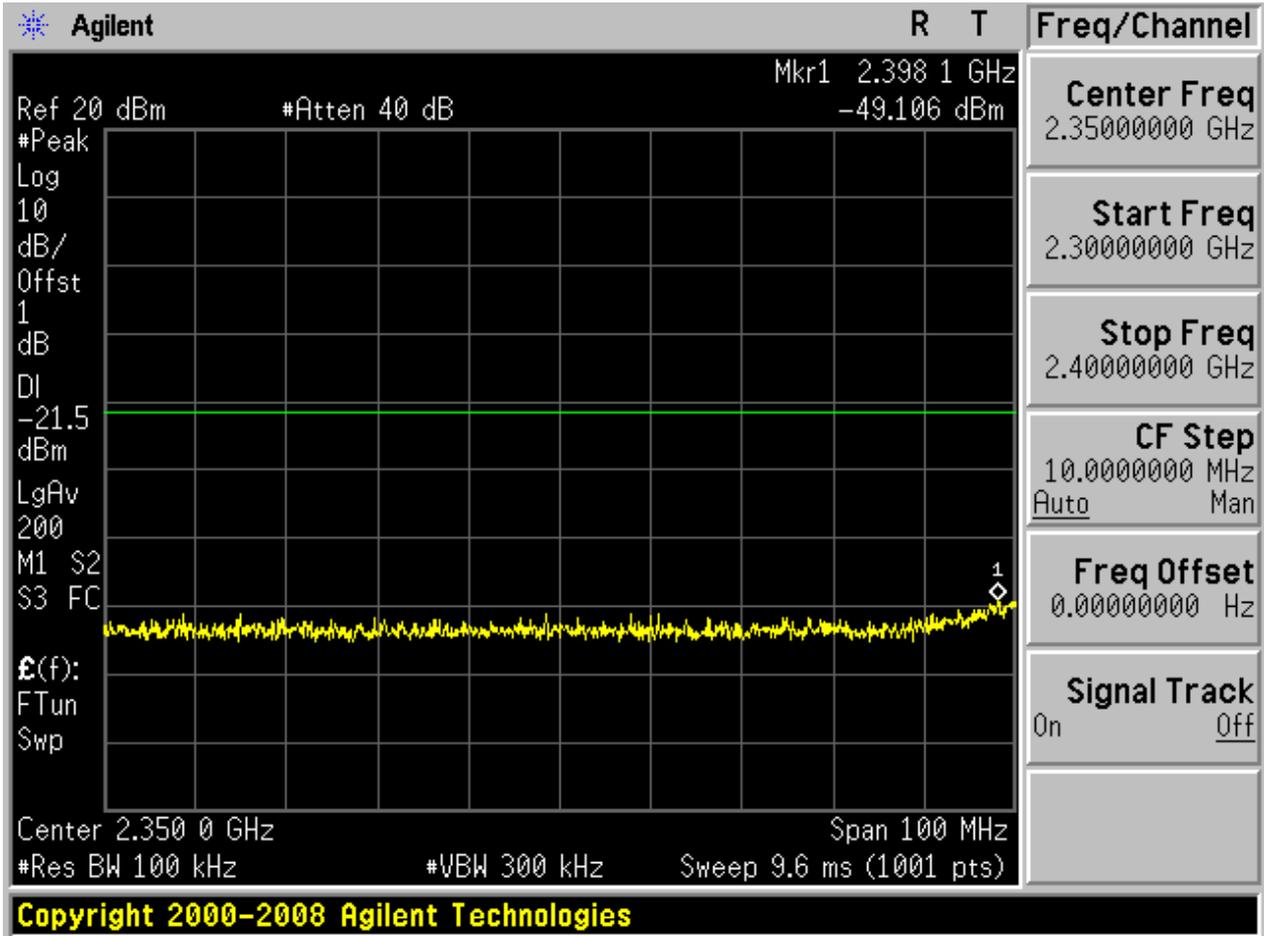


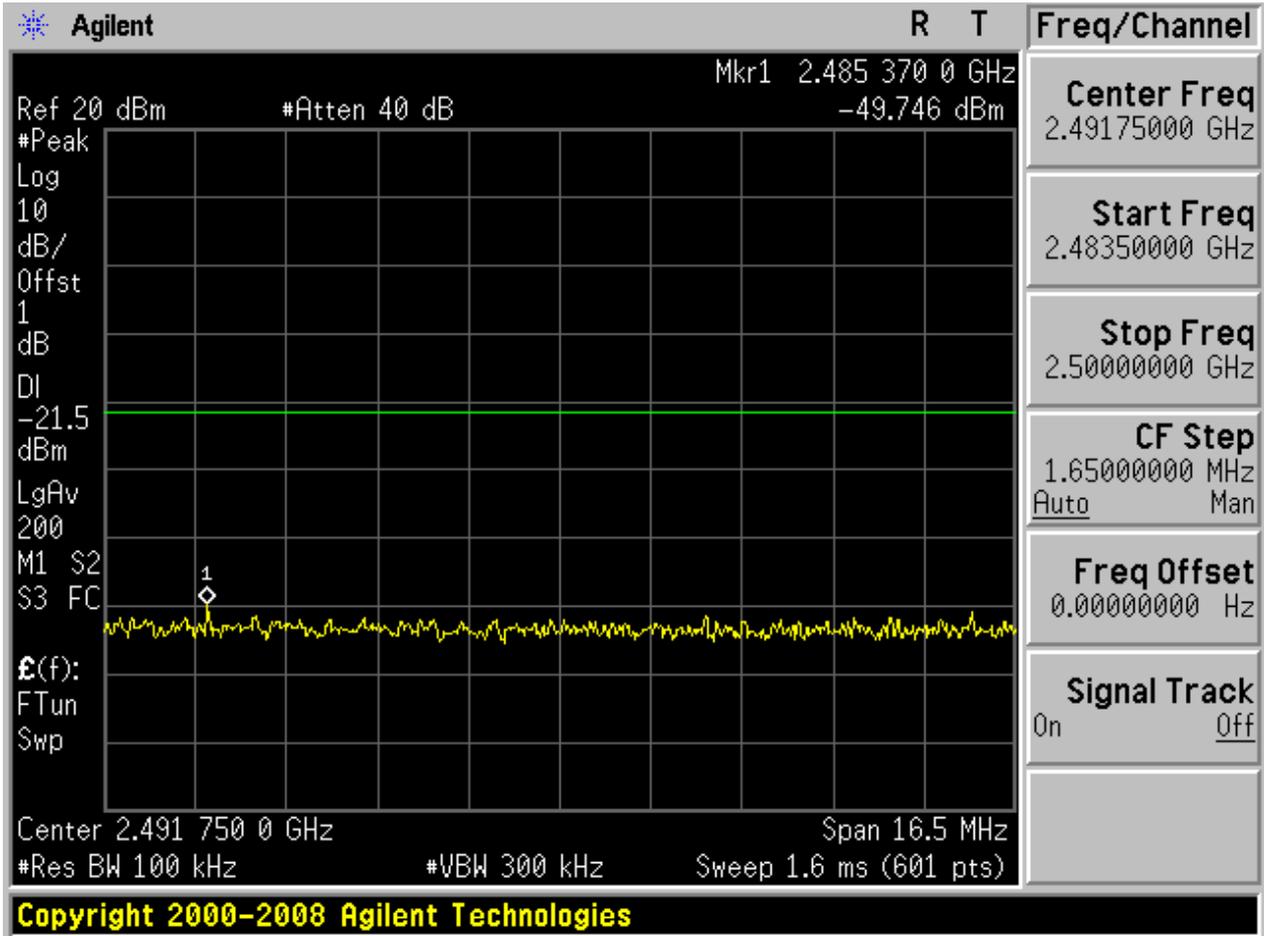
Puw:

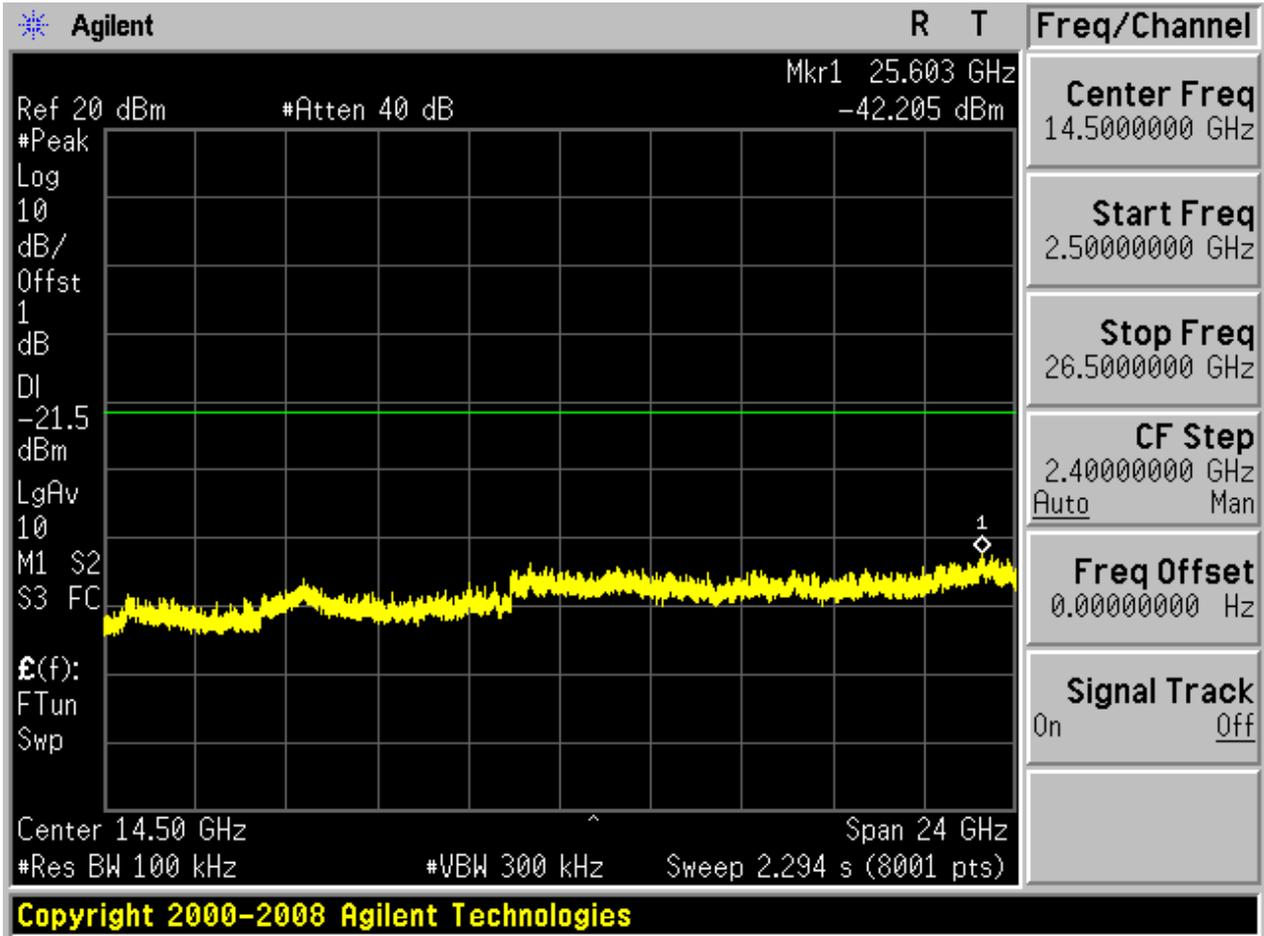






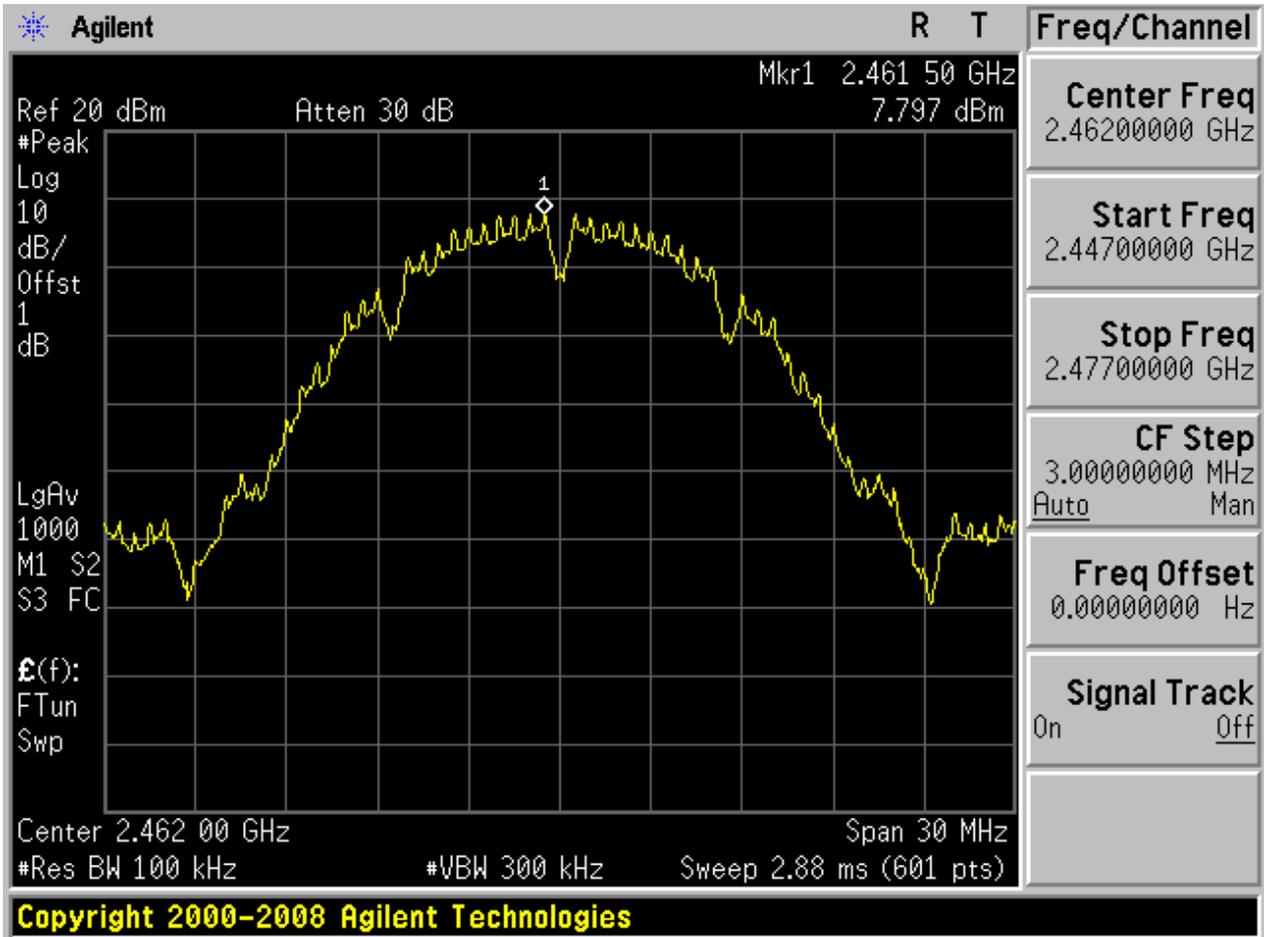






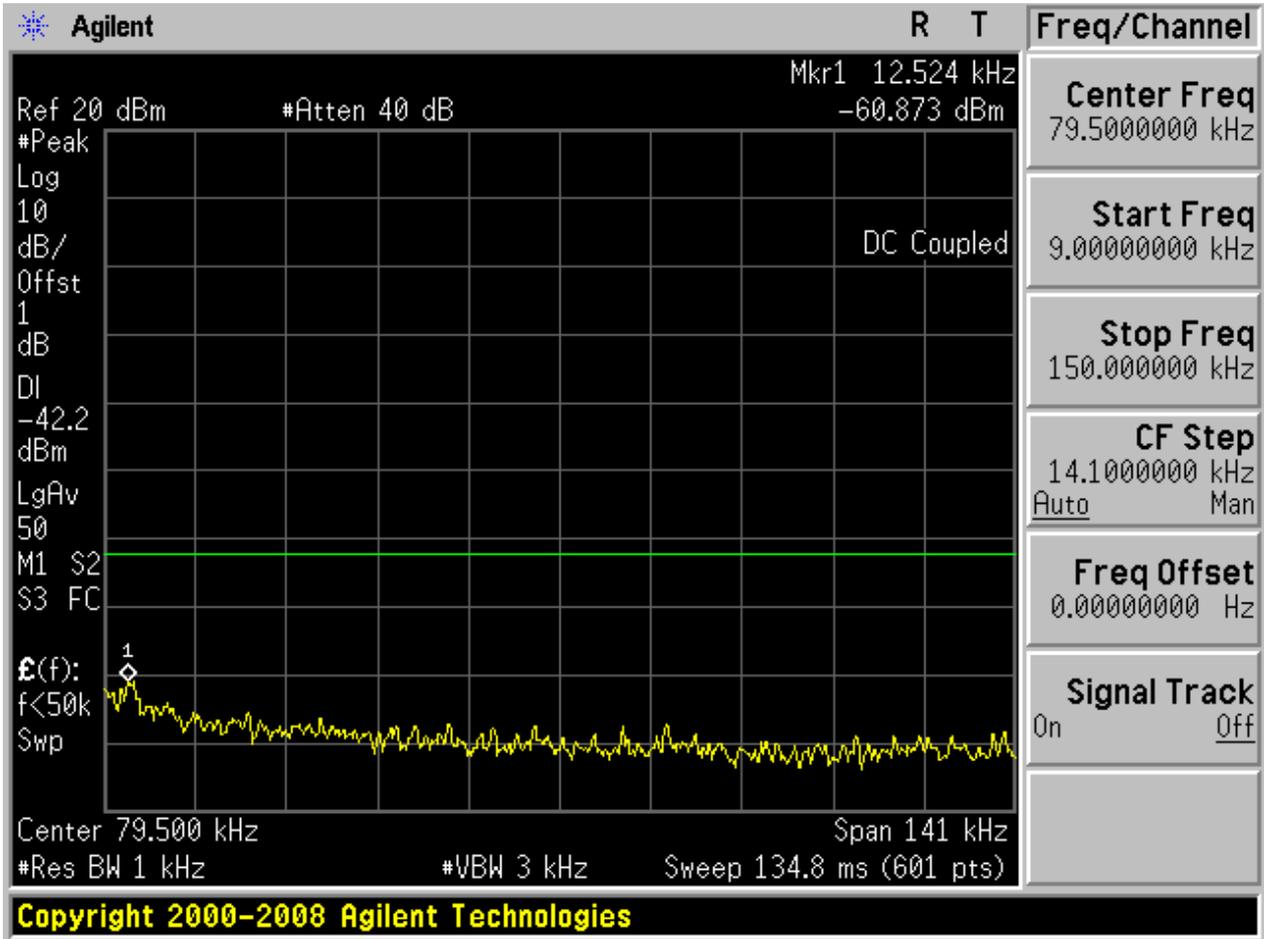
2.3 11B_H@Ant 1

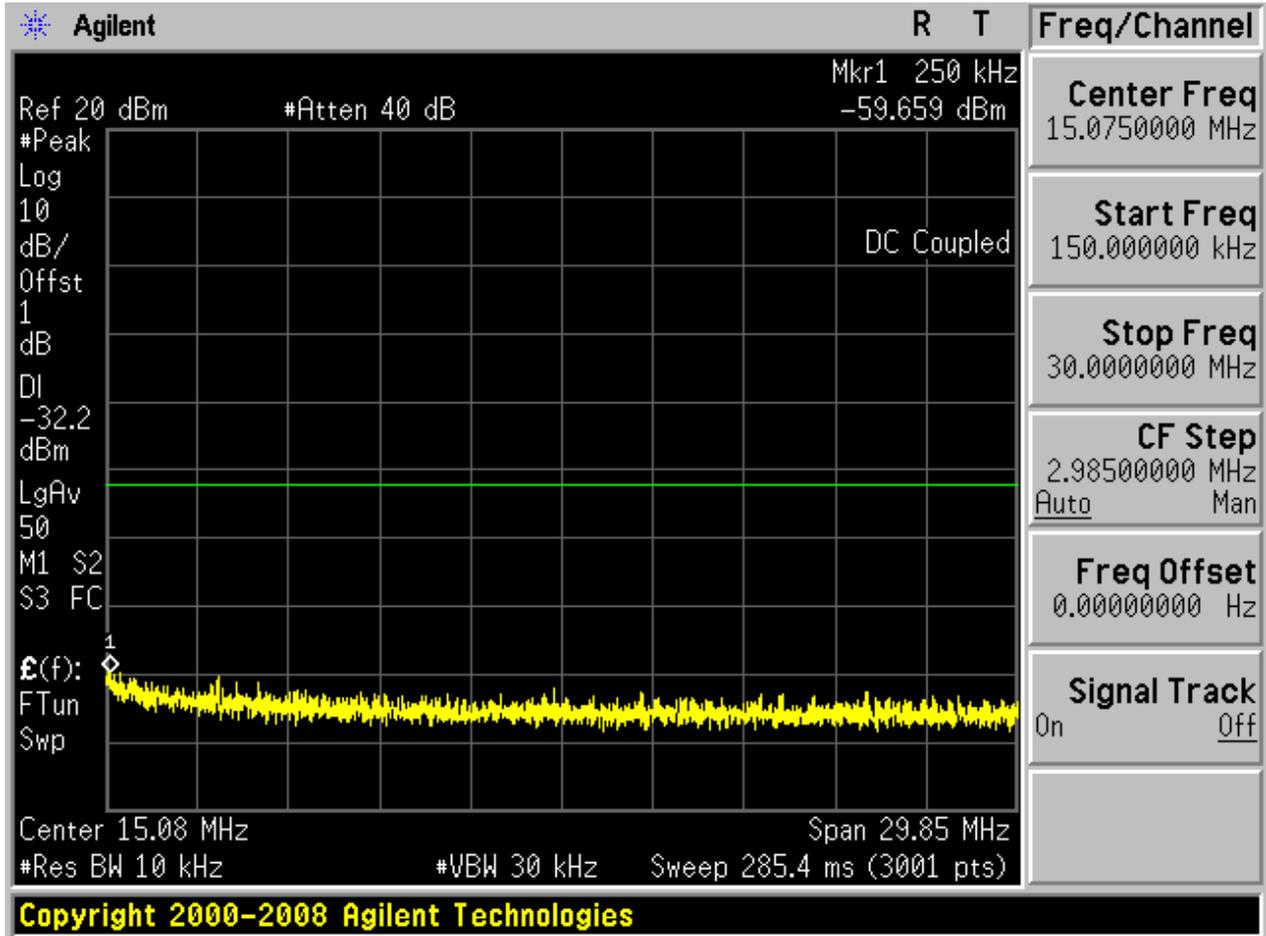
Pref:

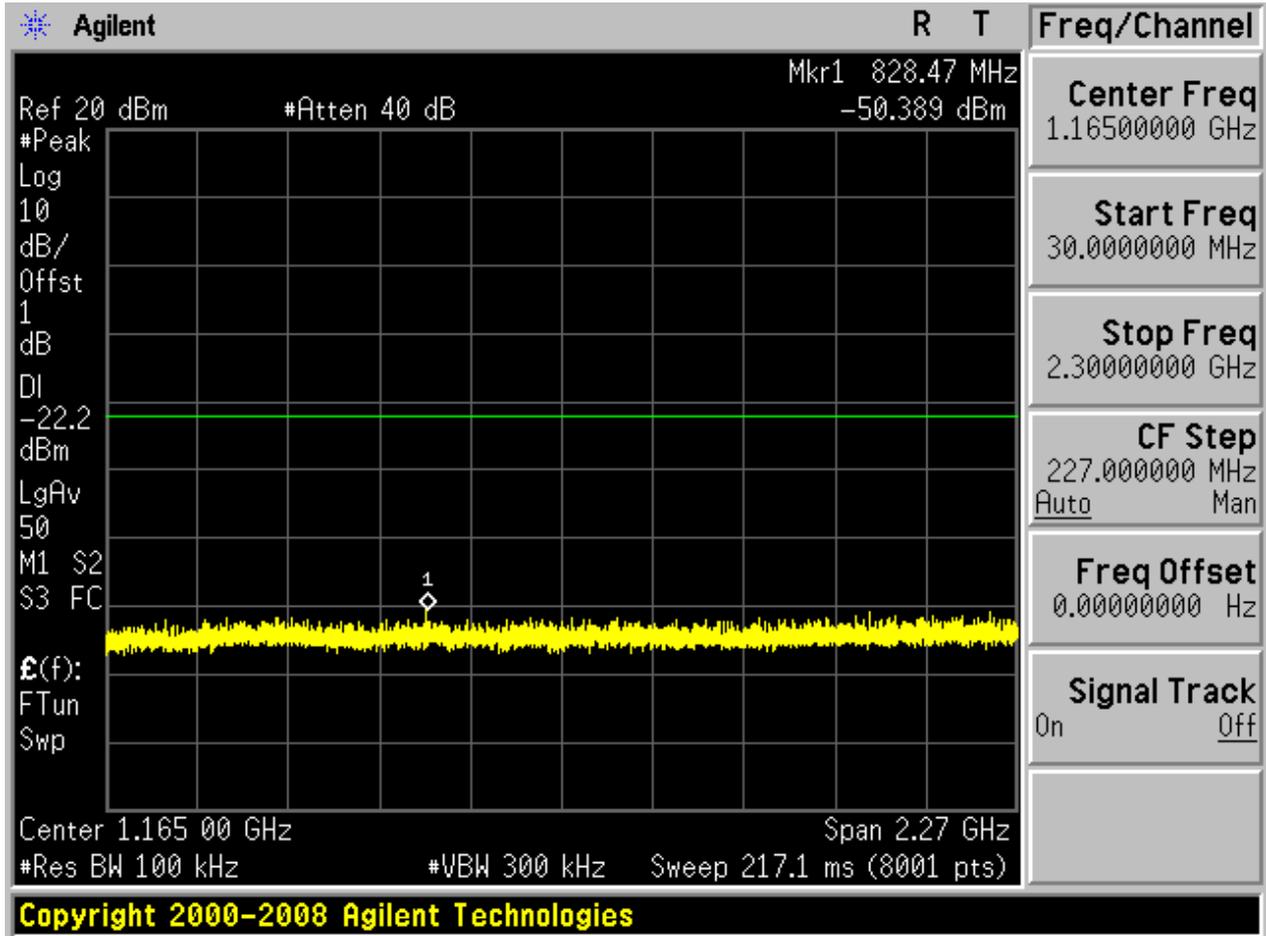


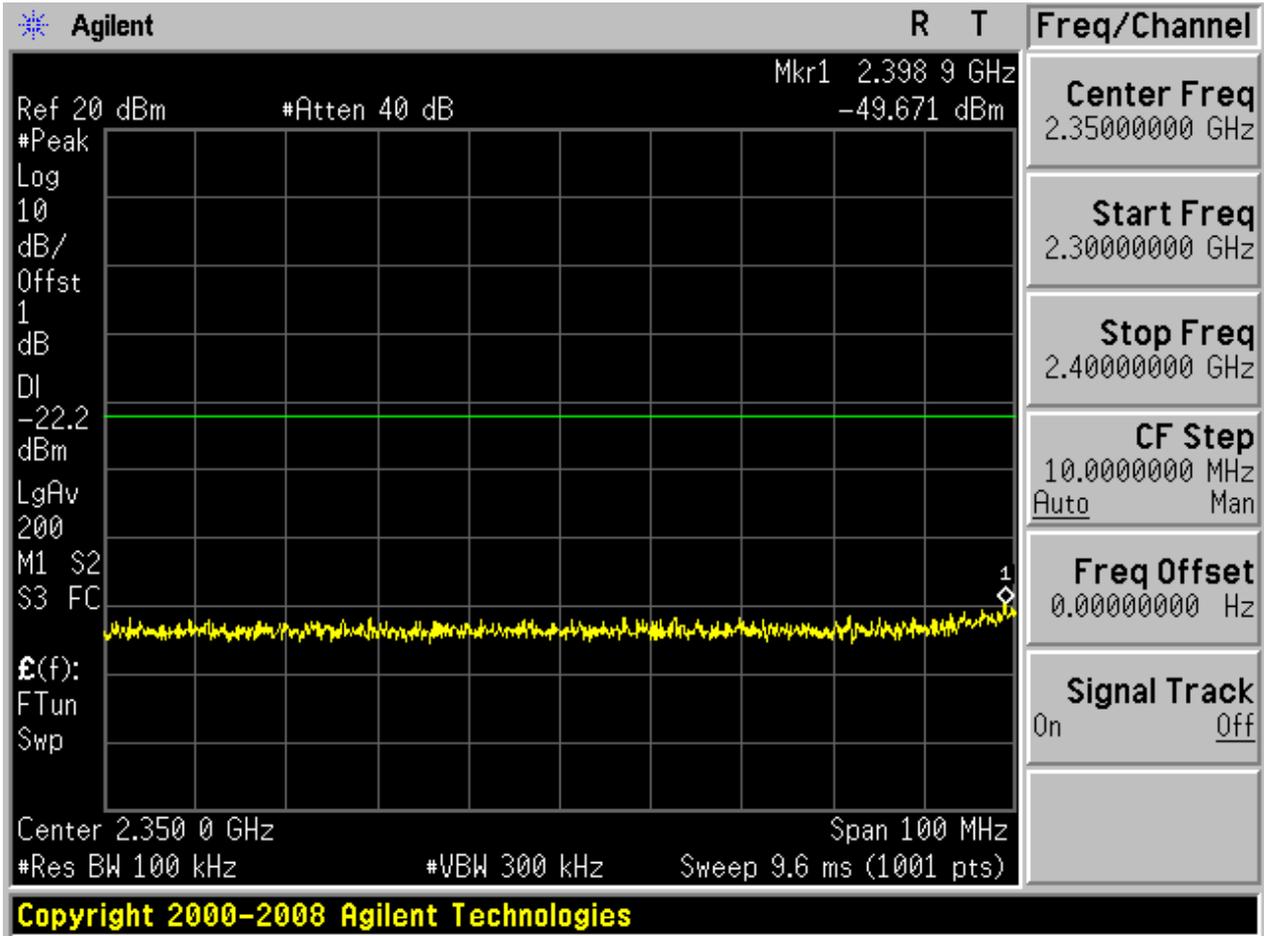


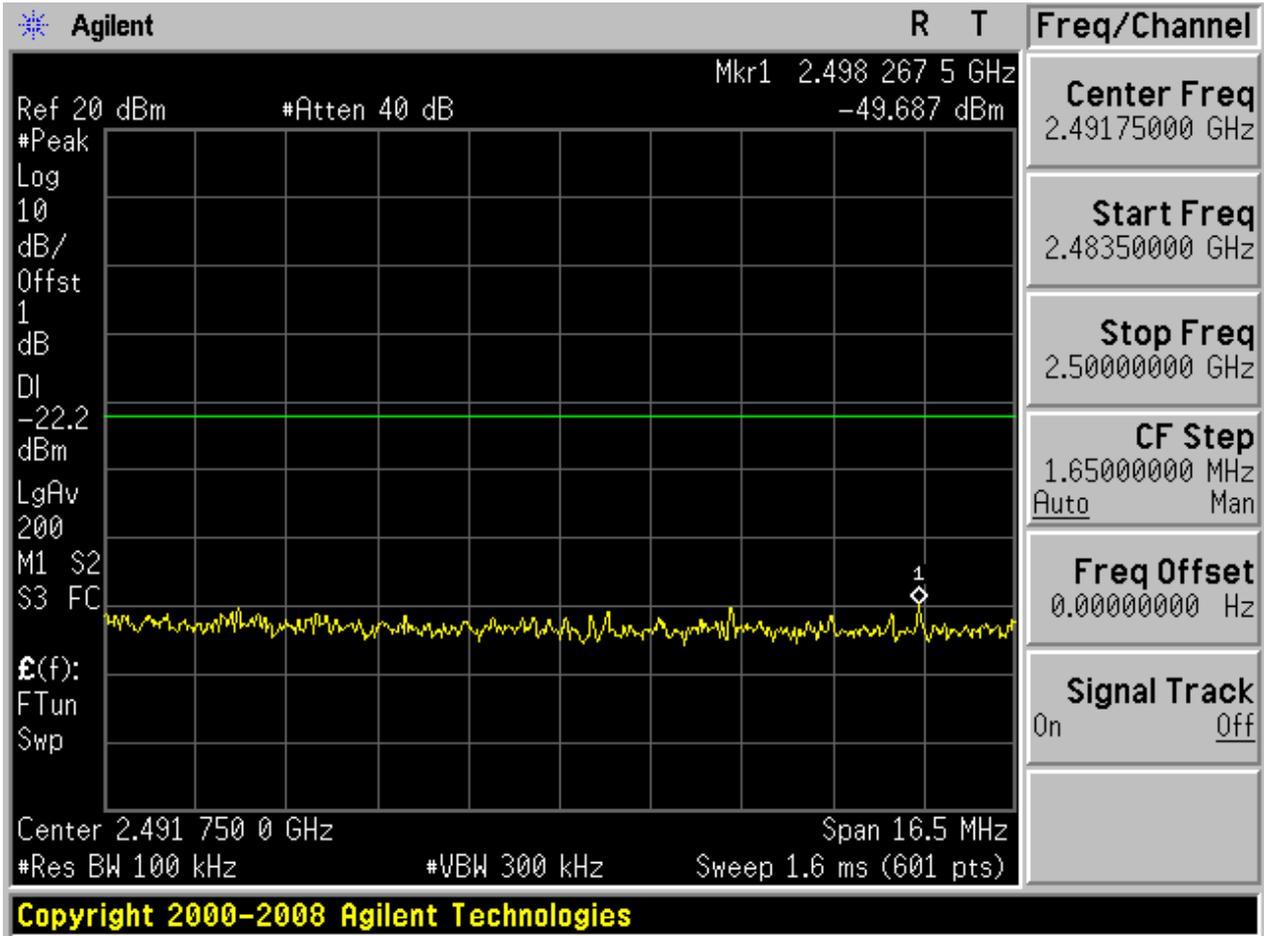
Puw:

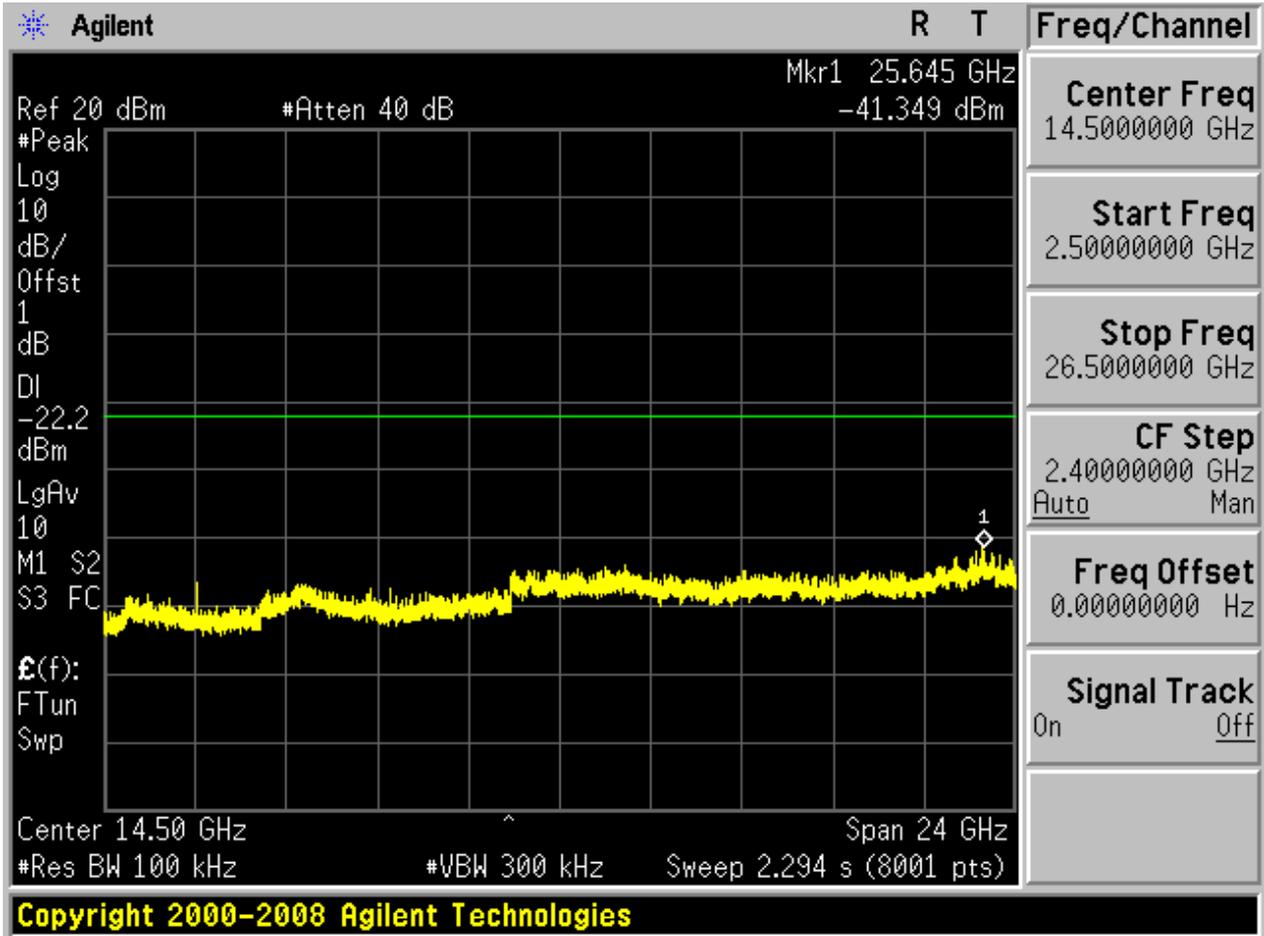






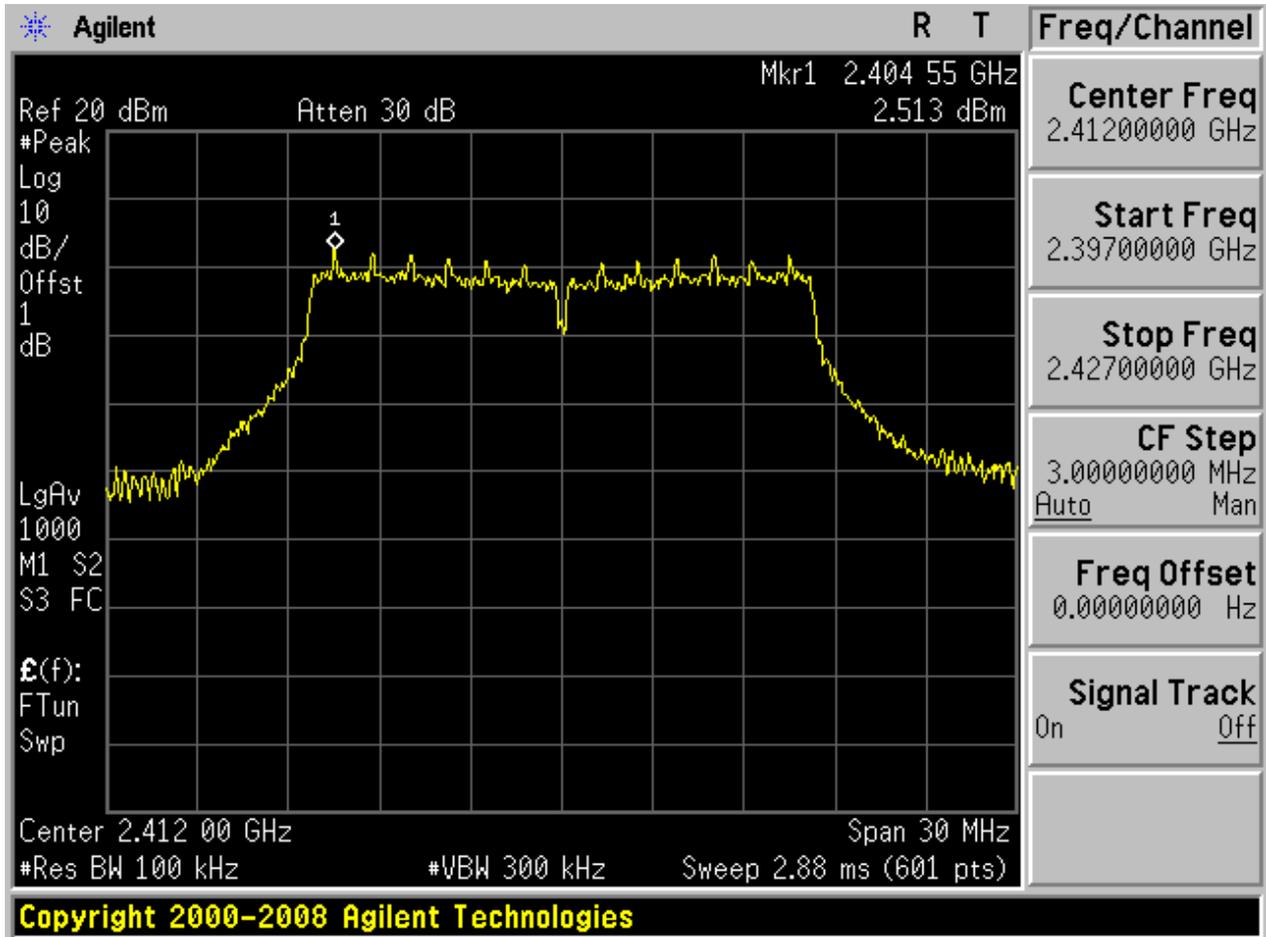






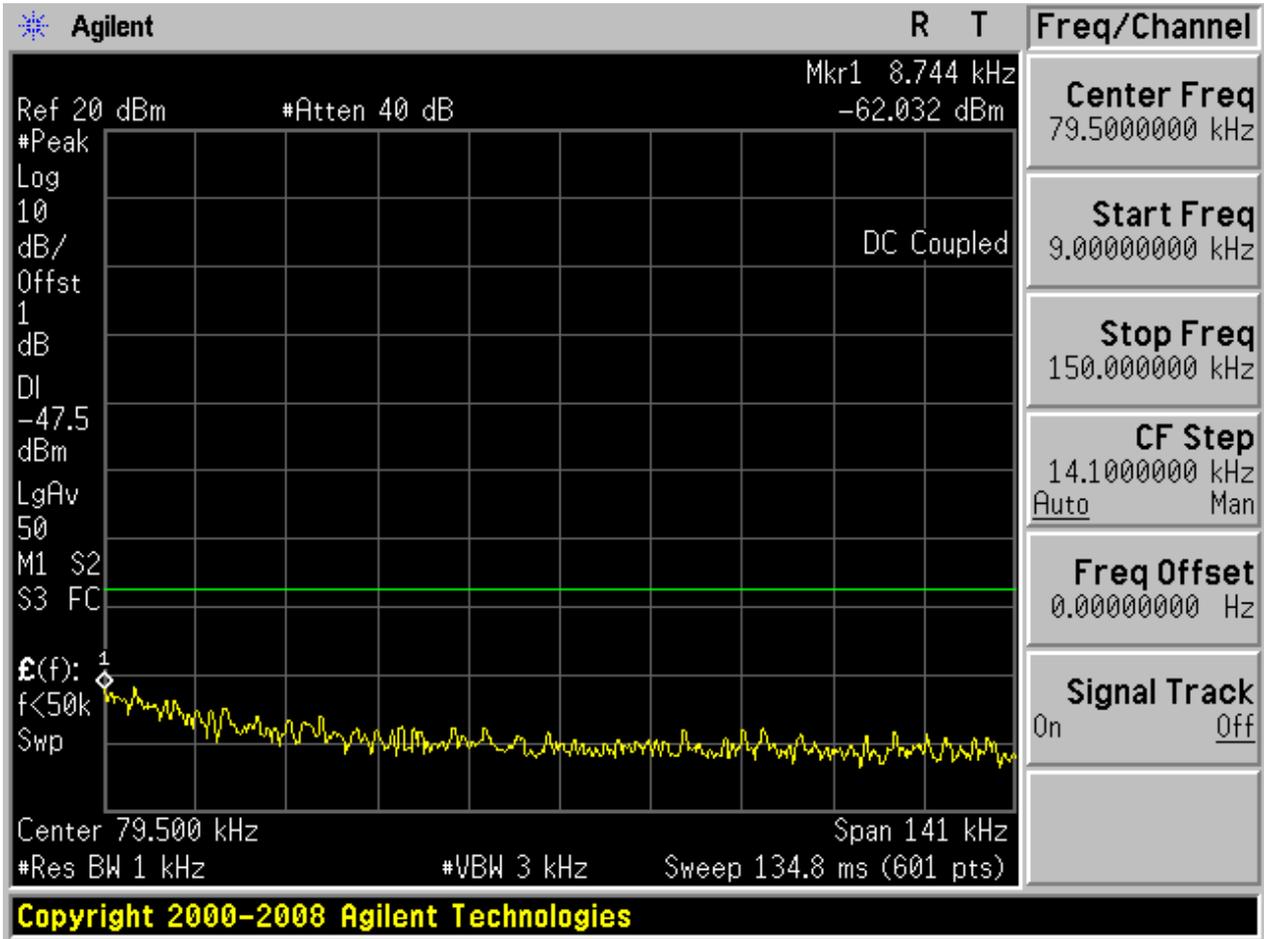
2.4 11G_L@Ant 1

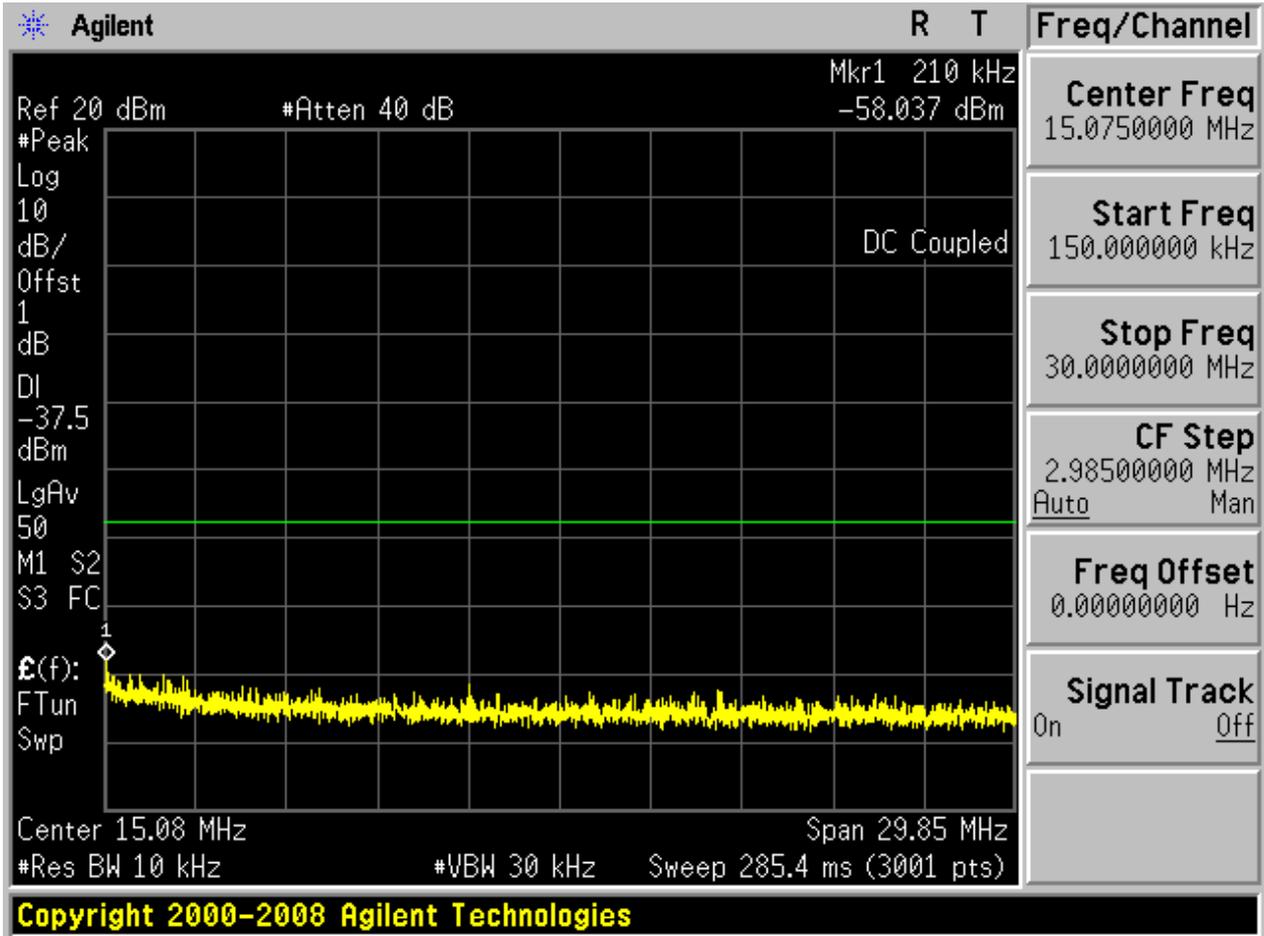
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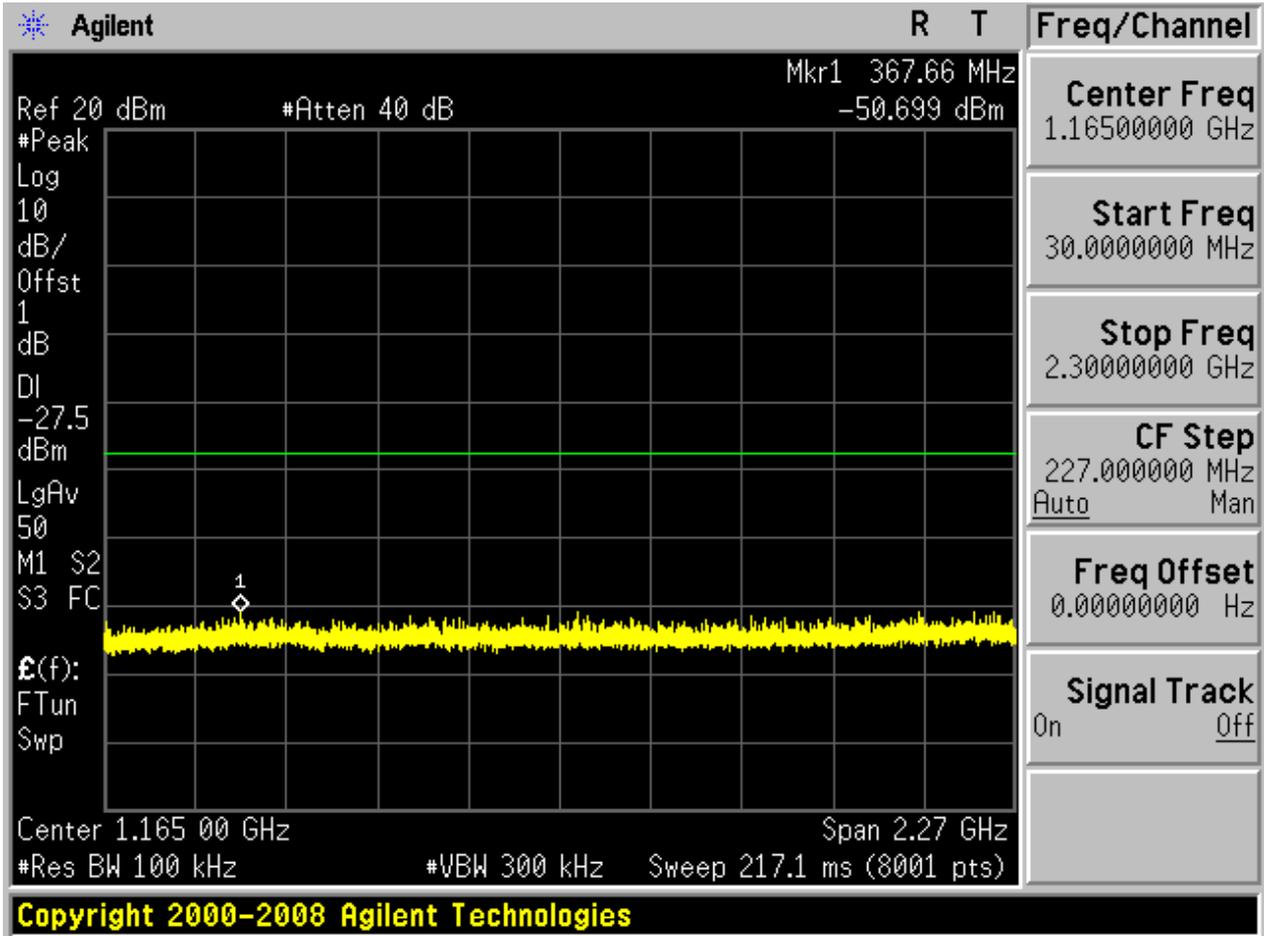


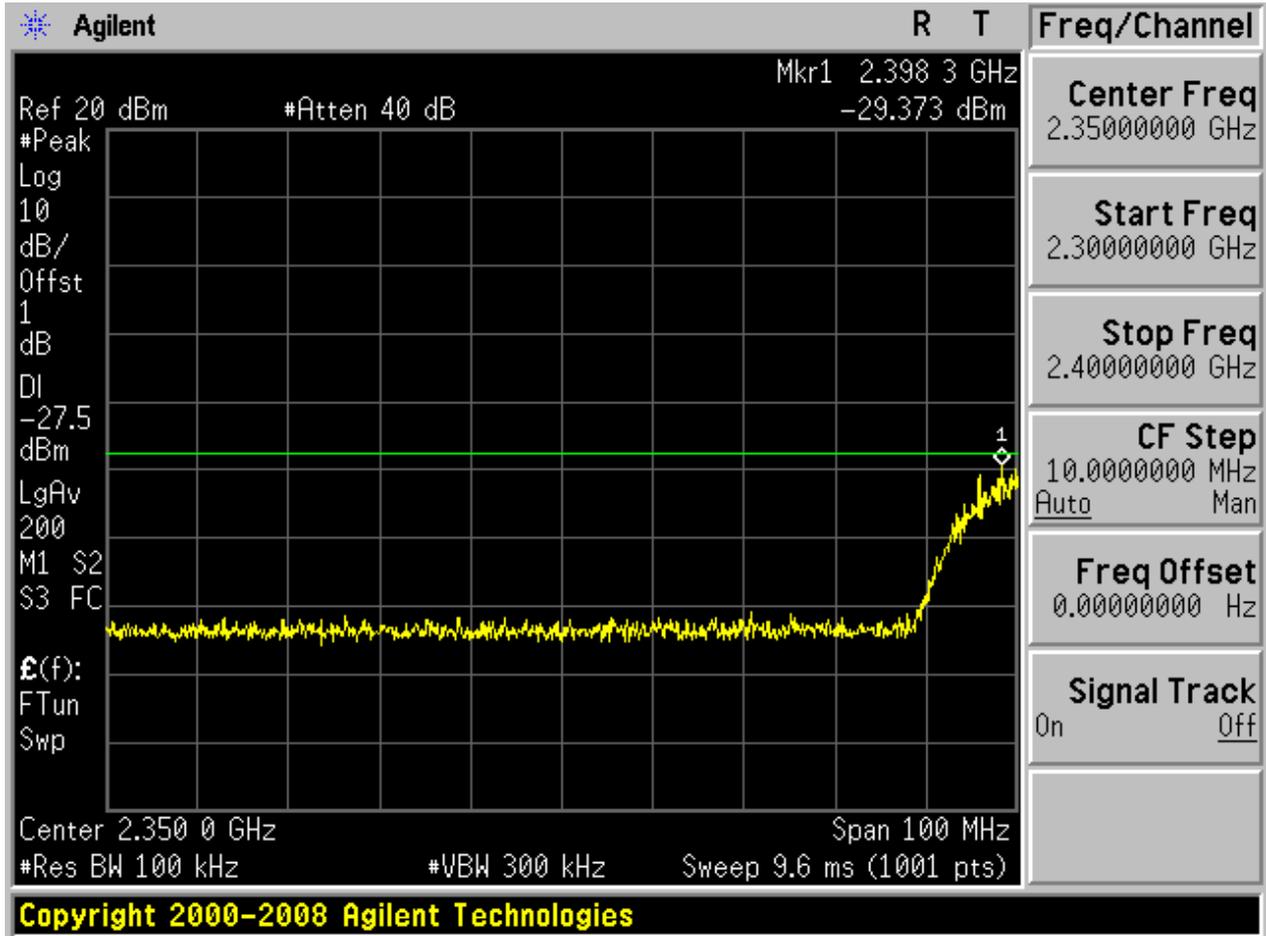


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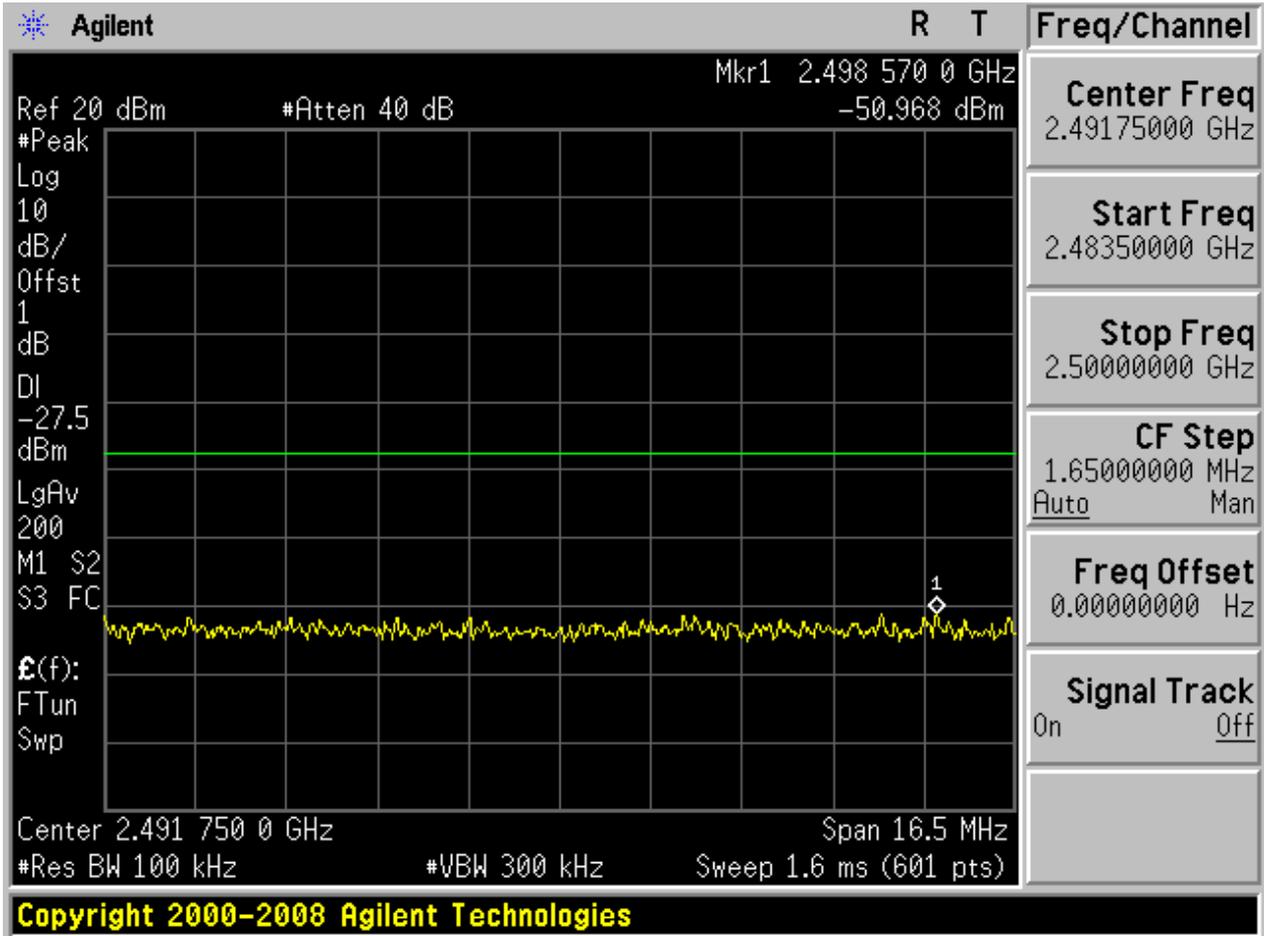


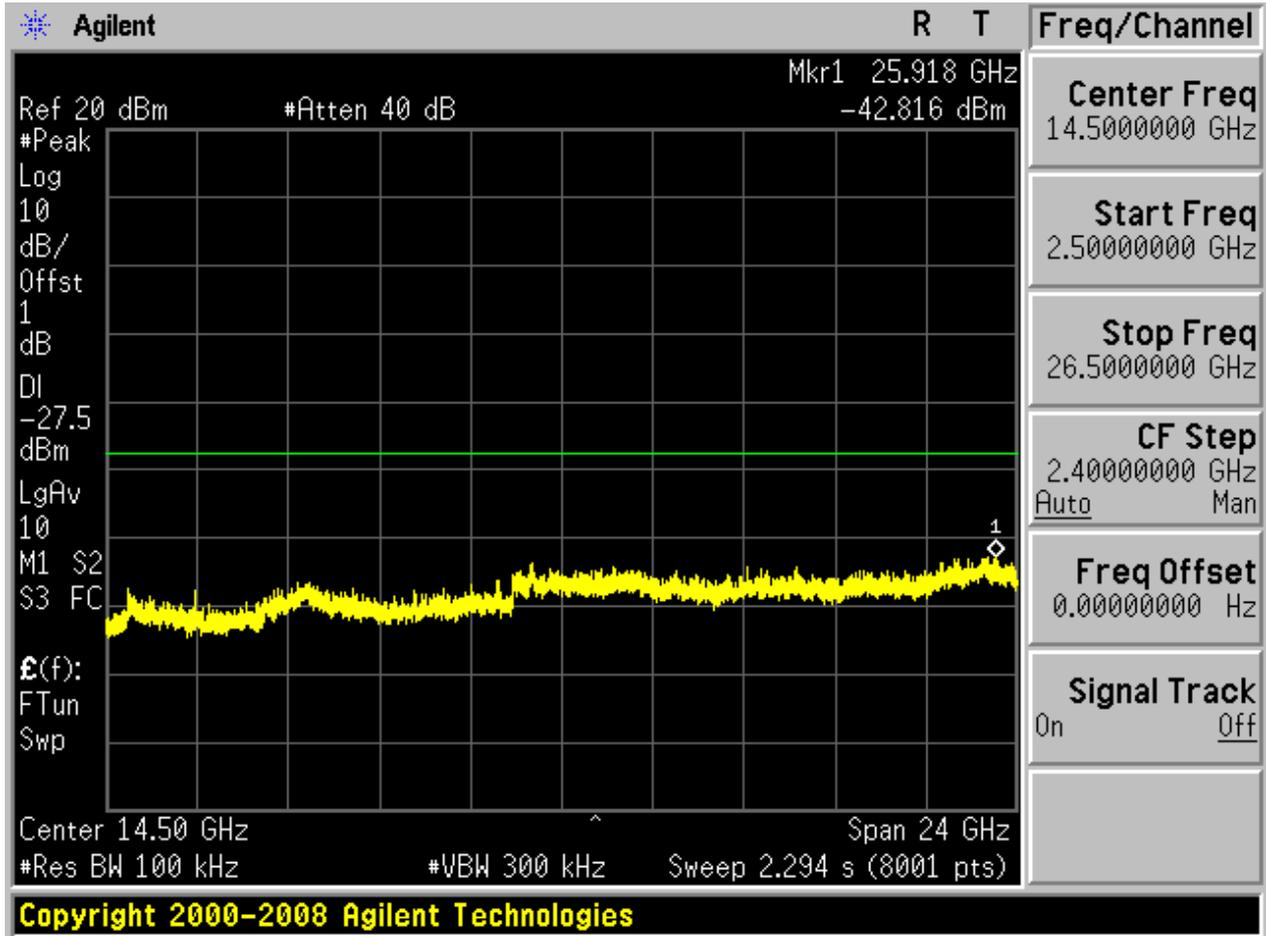






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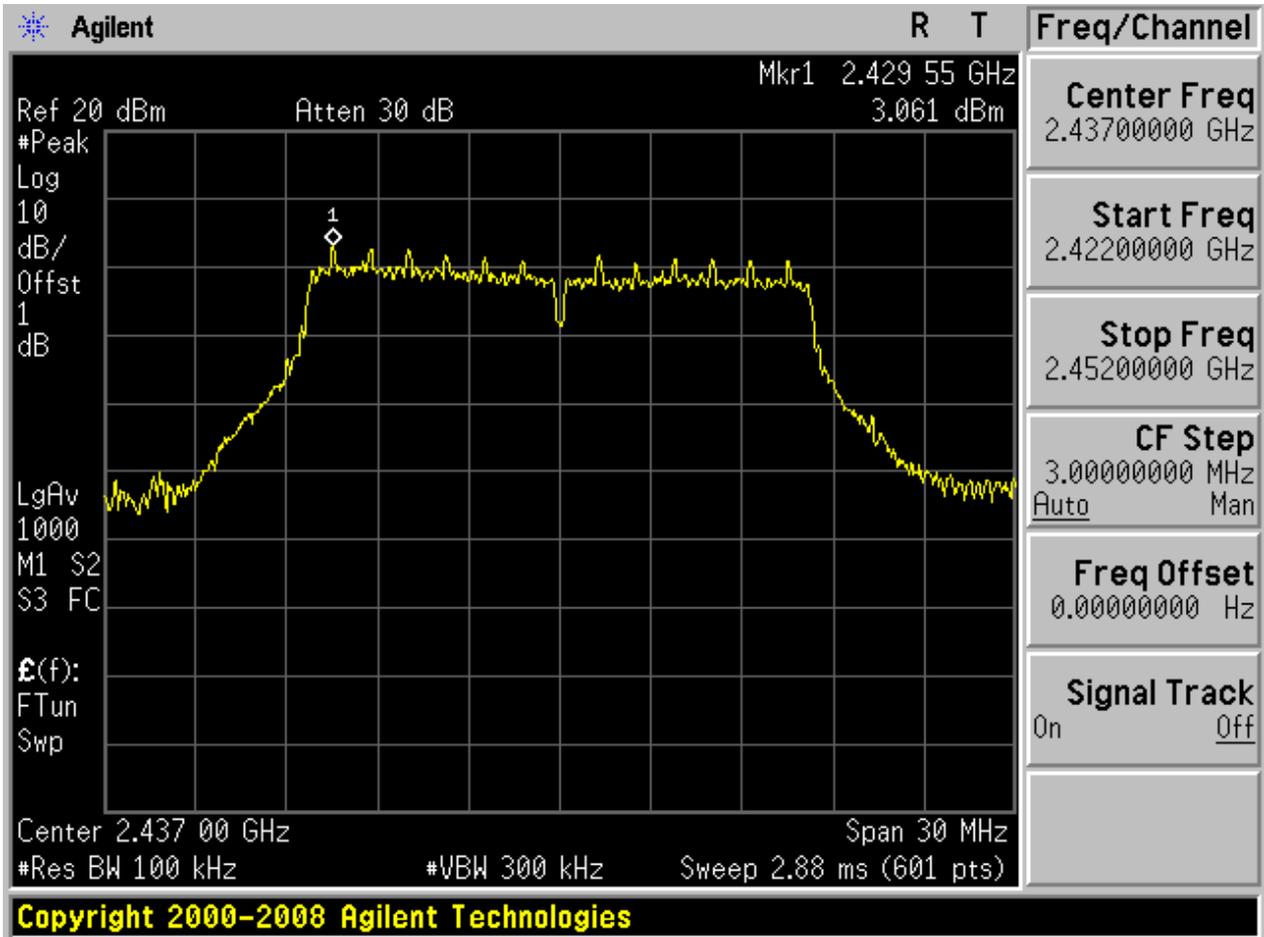




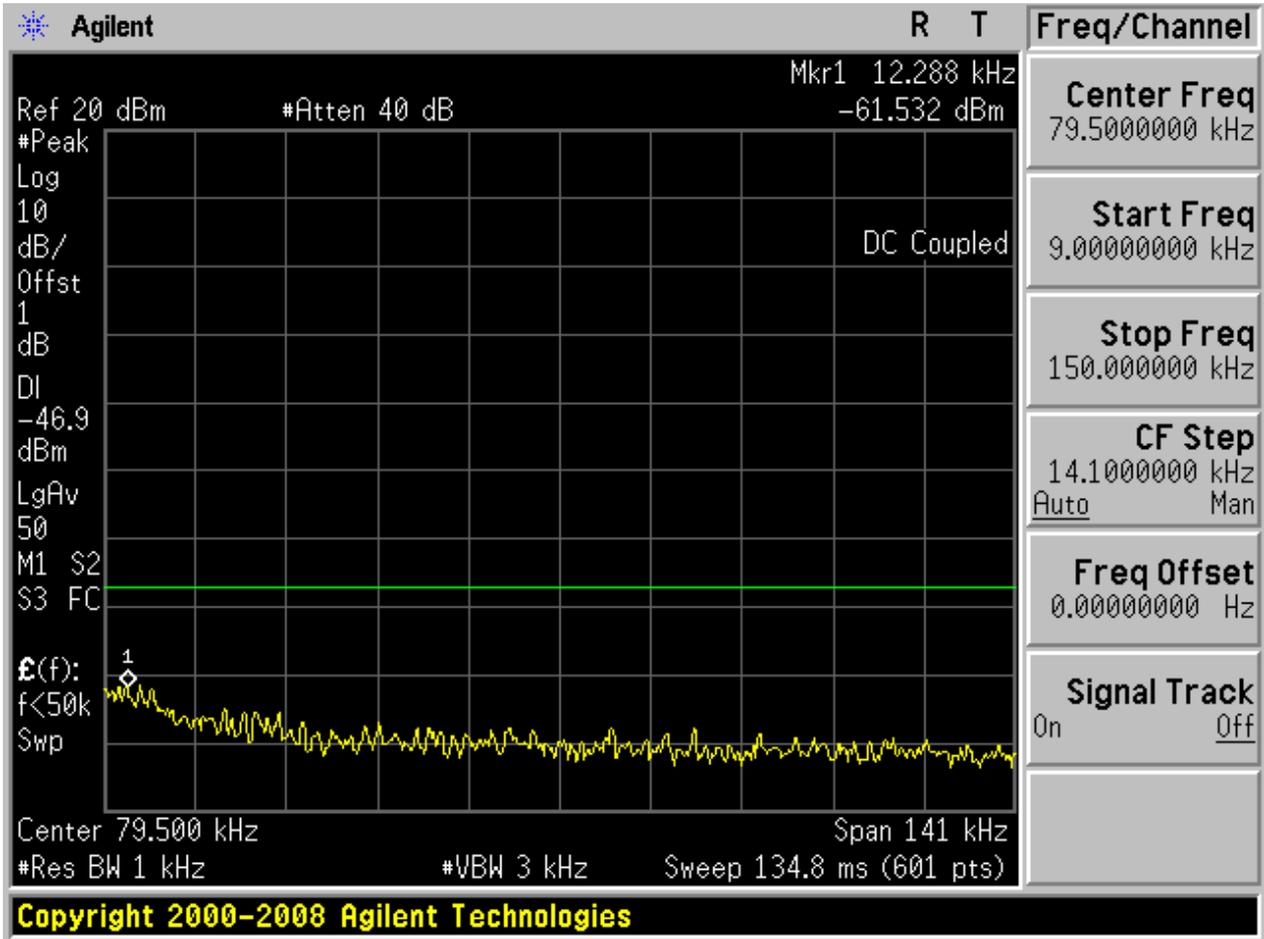


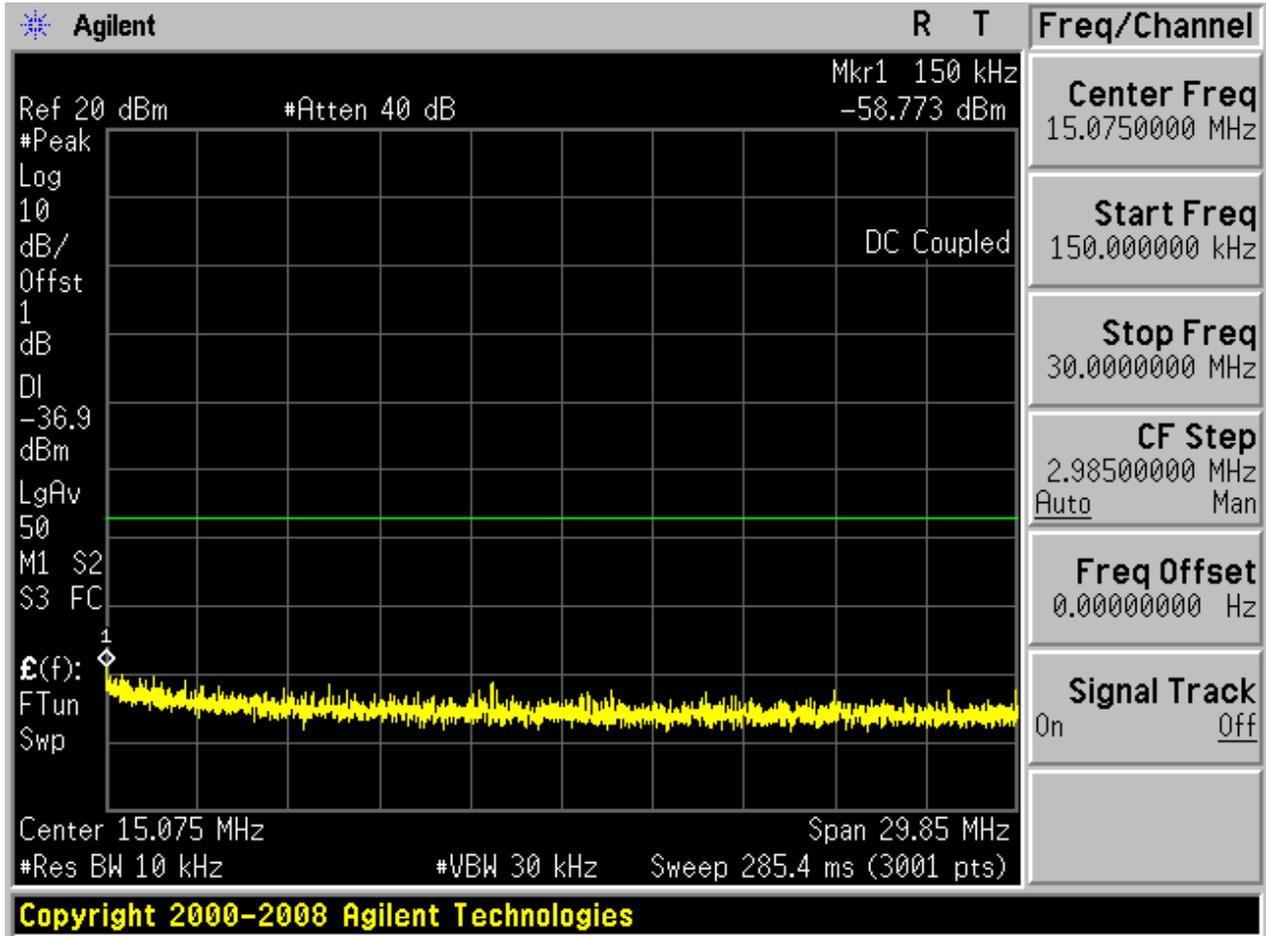
2.5 11G_M@Ant 1

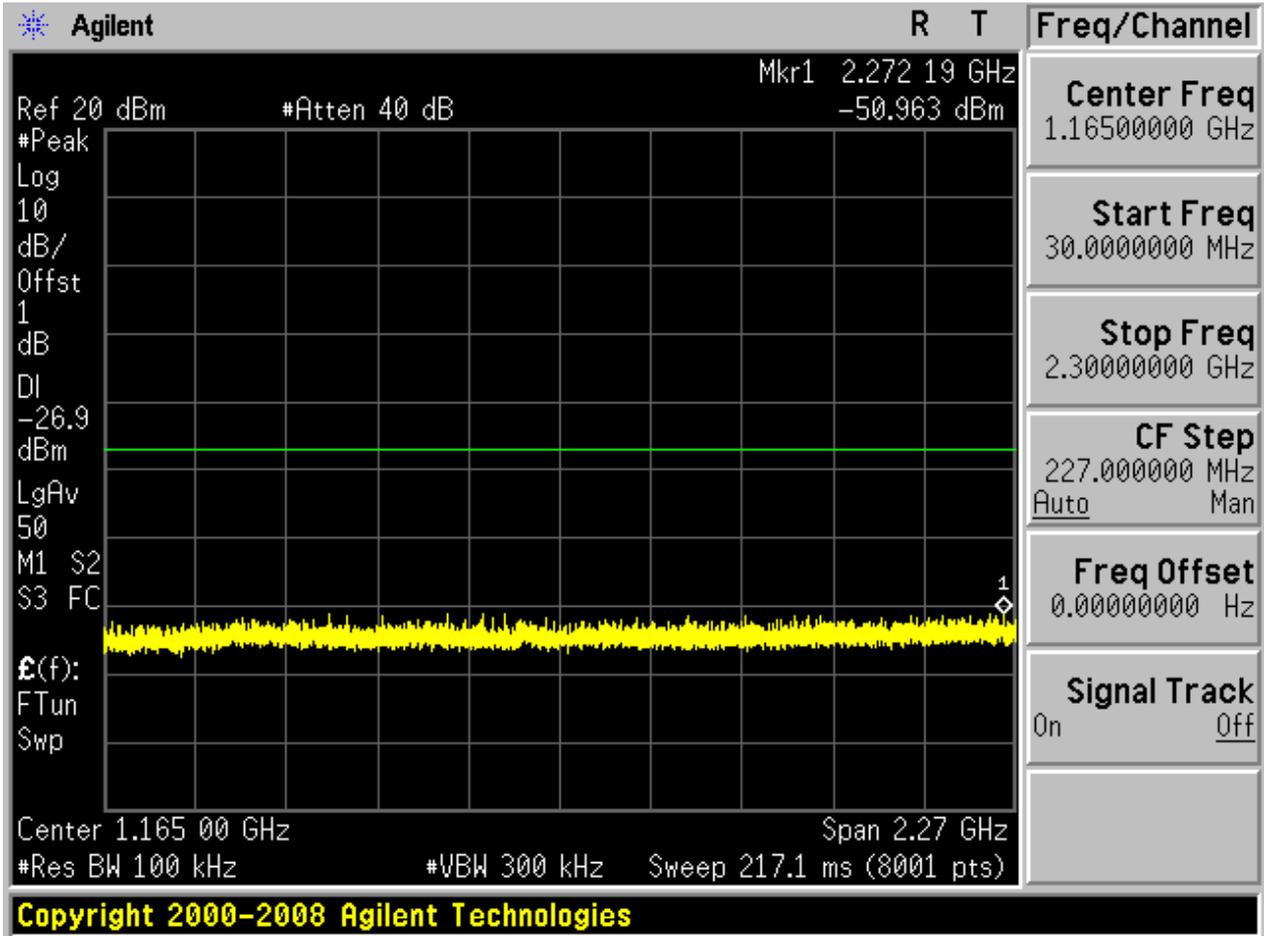
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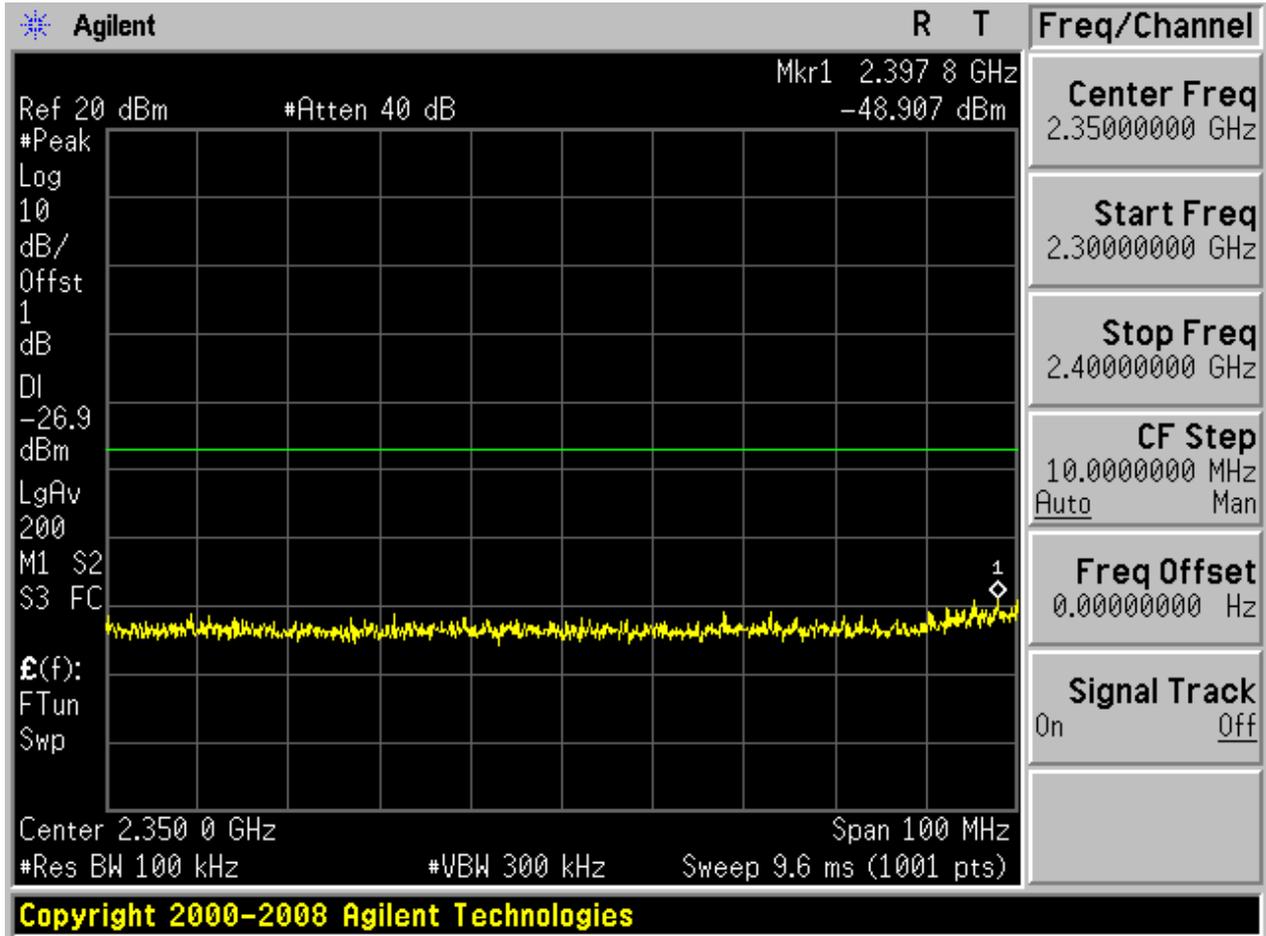


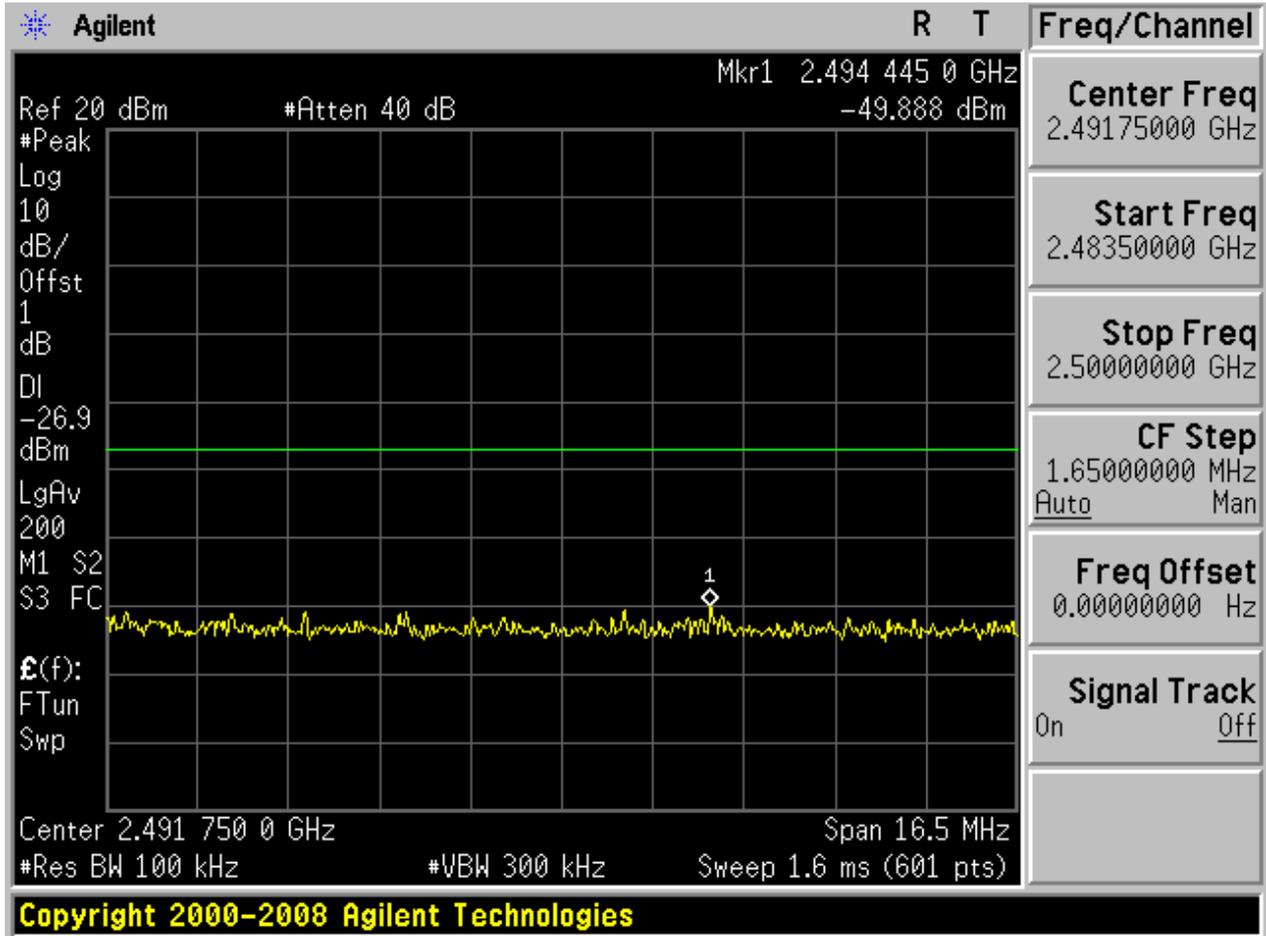
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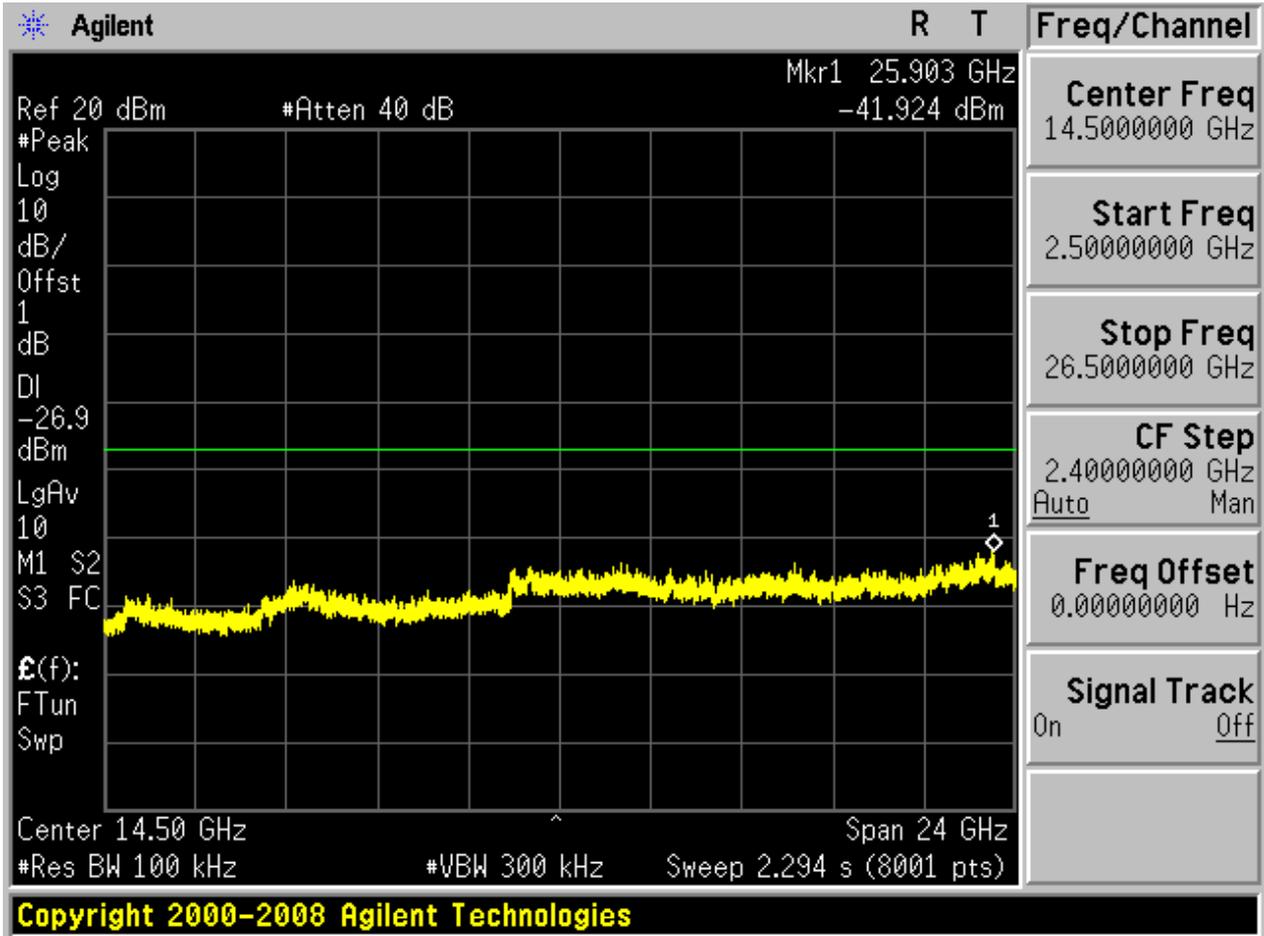








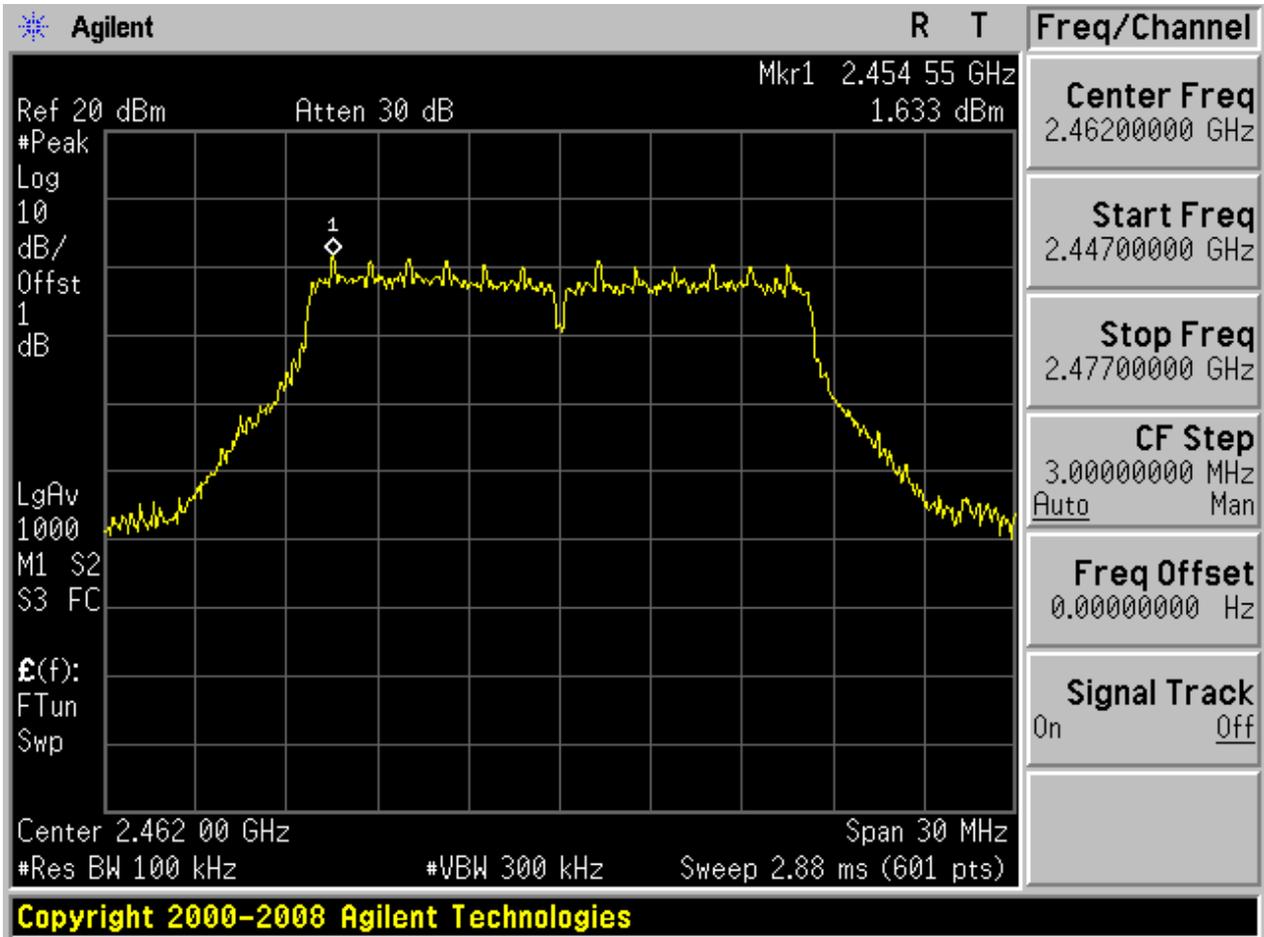




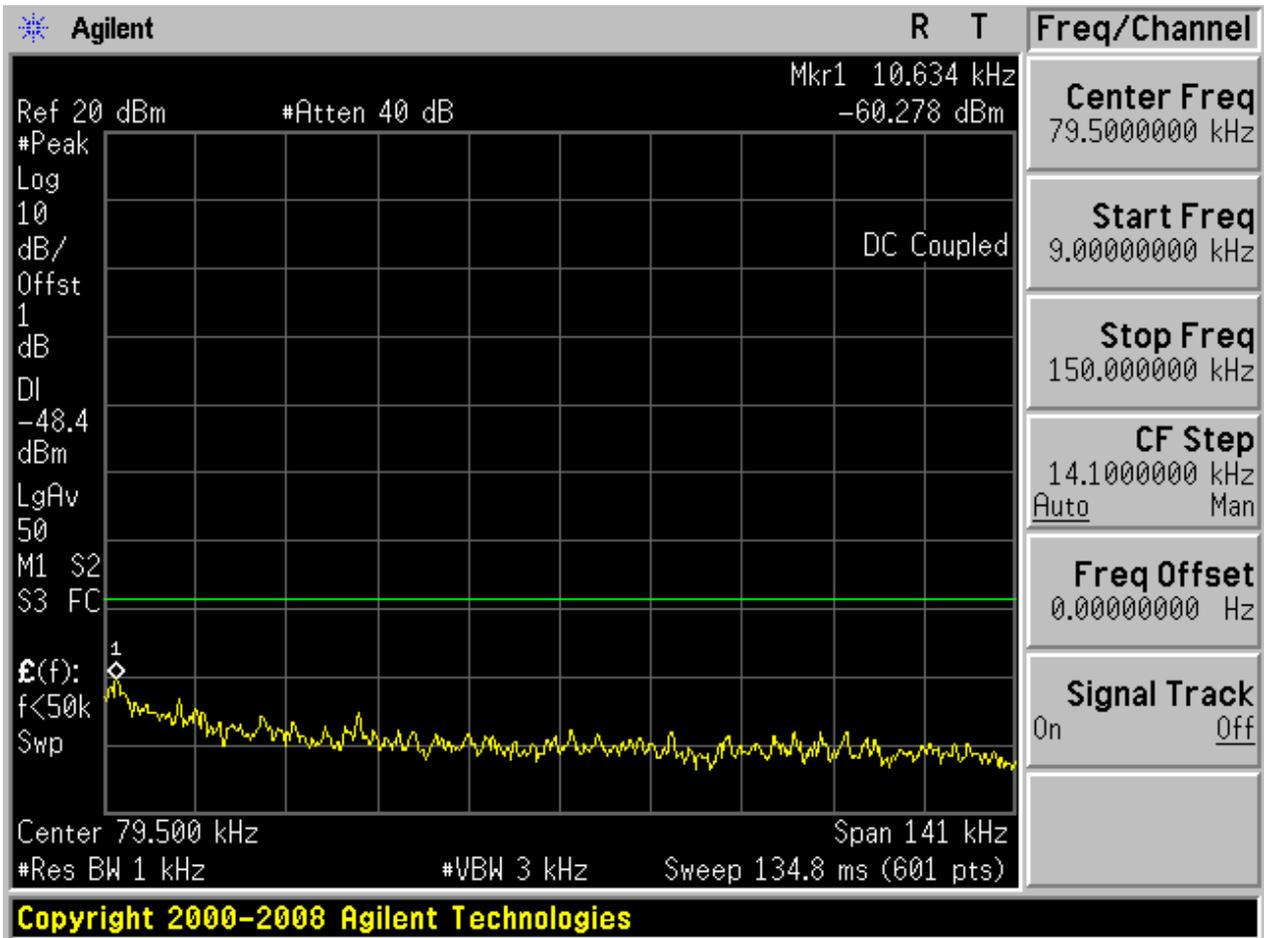


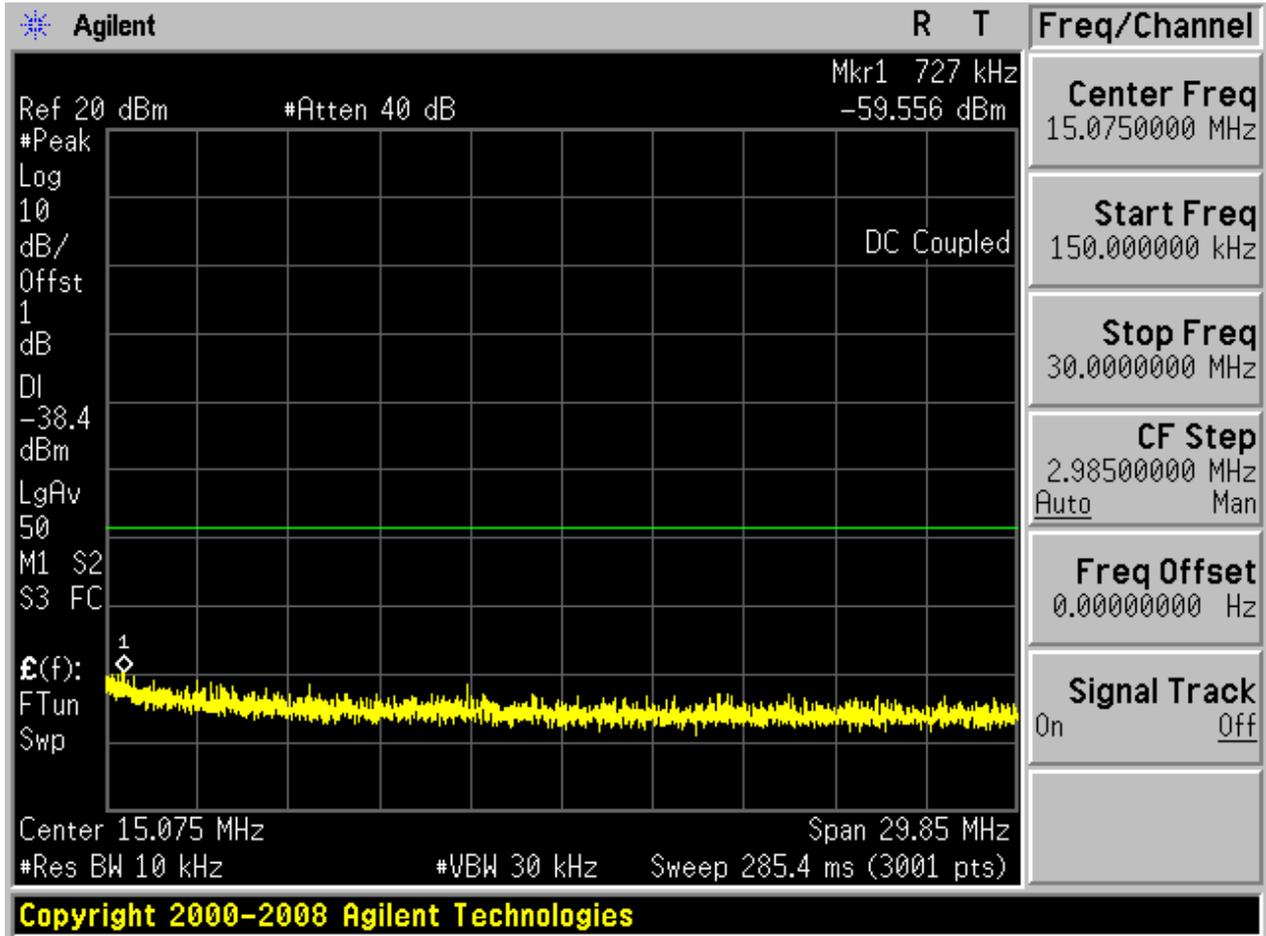
2.6 11G_H@Ant 1

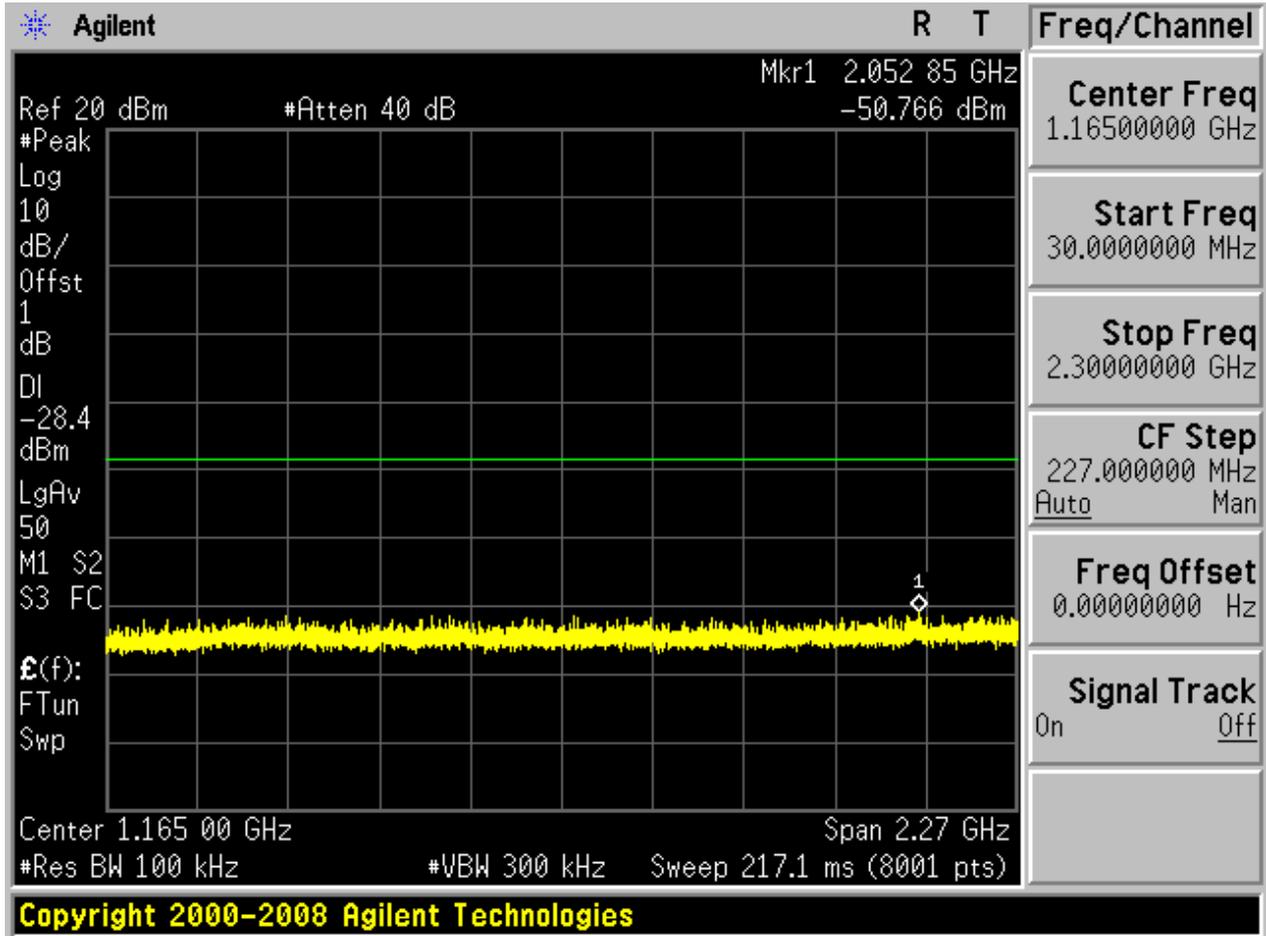
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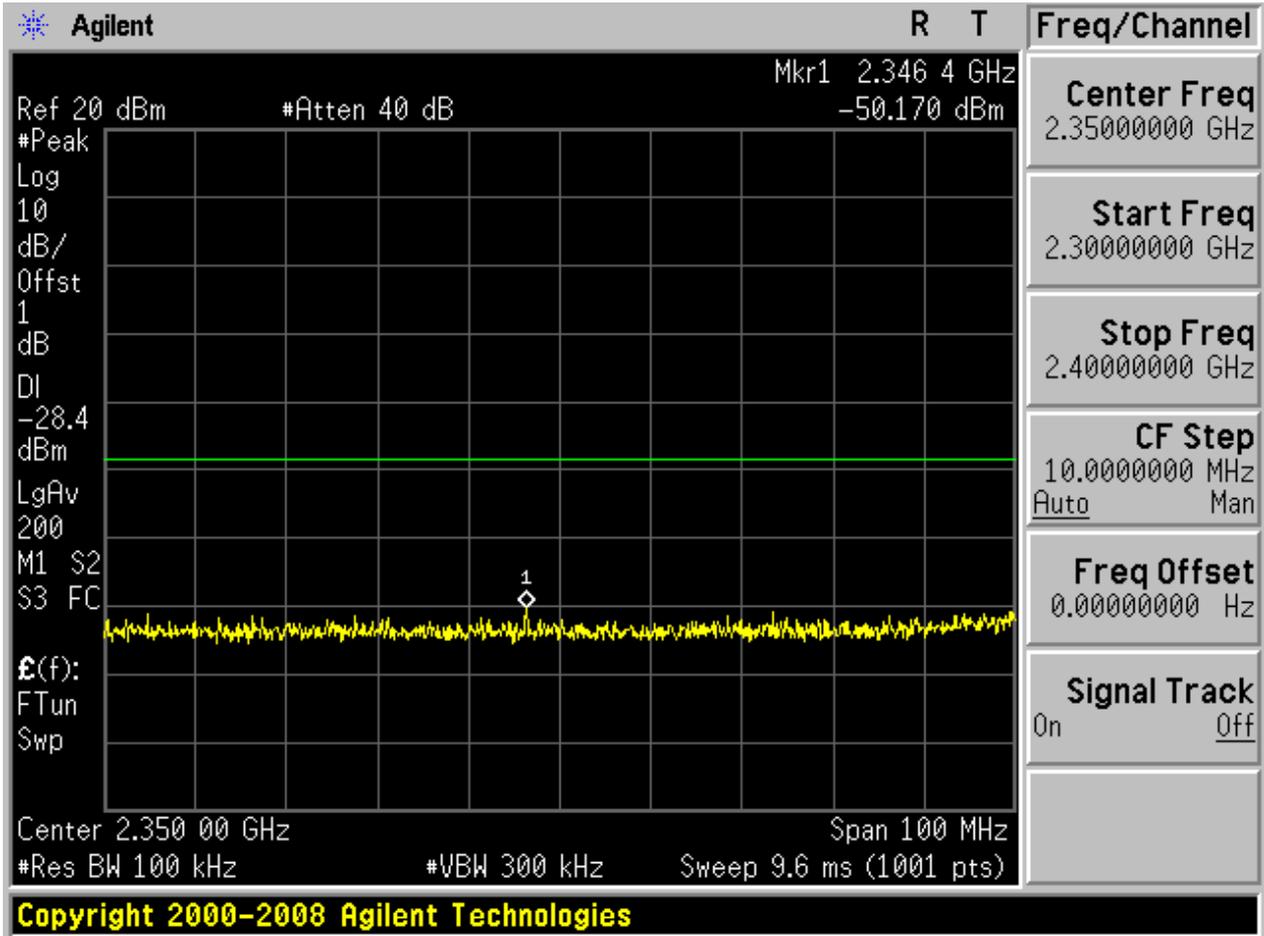


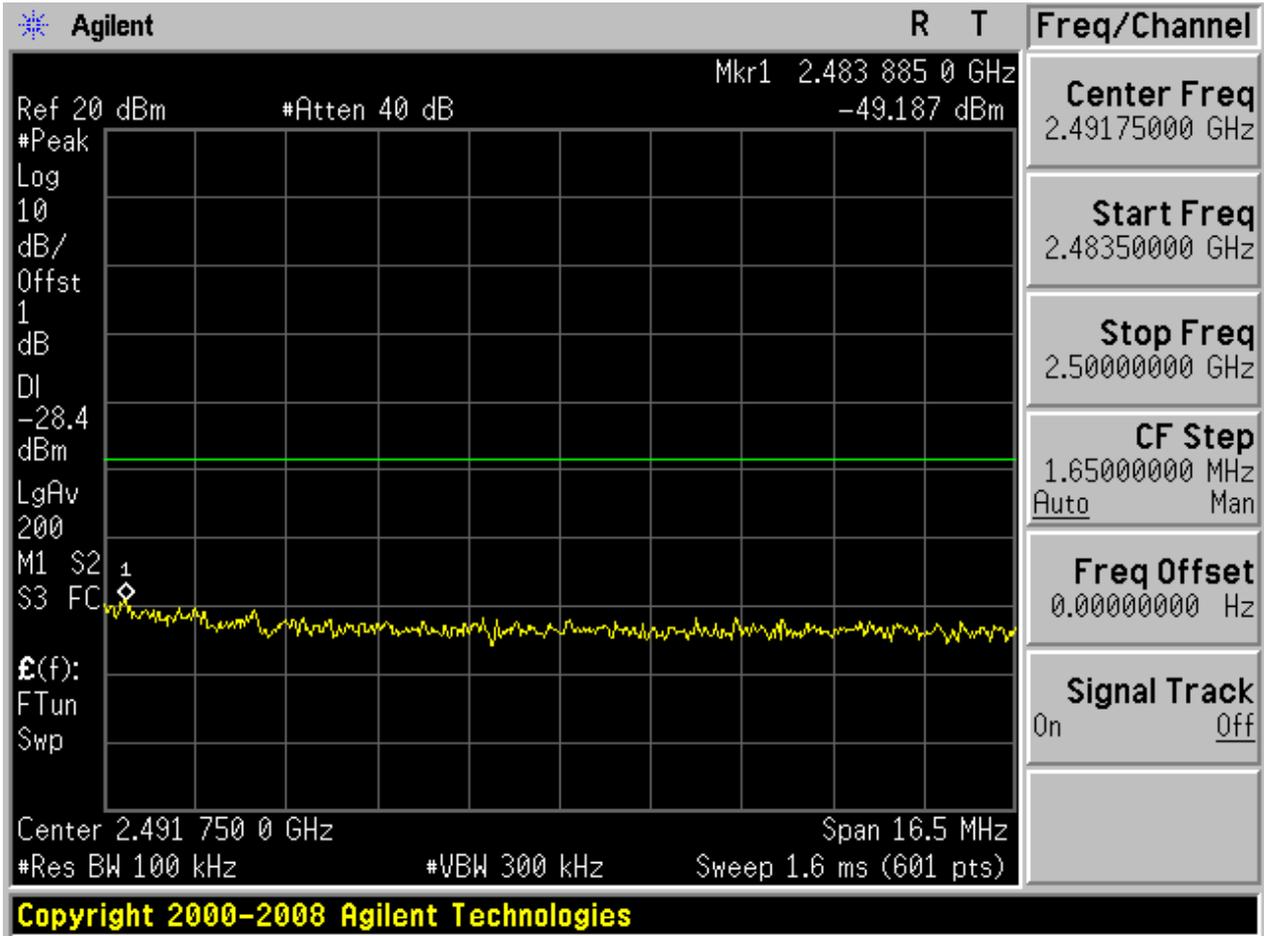
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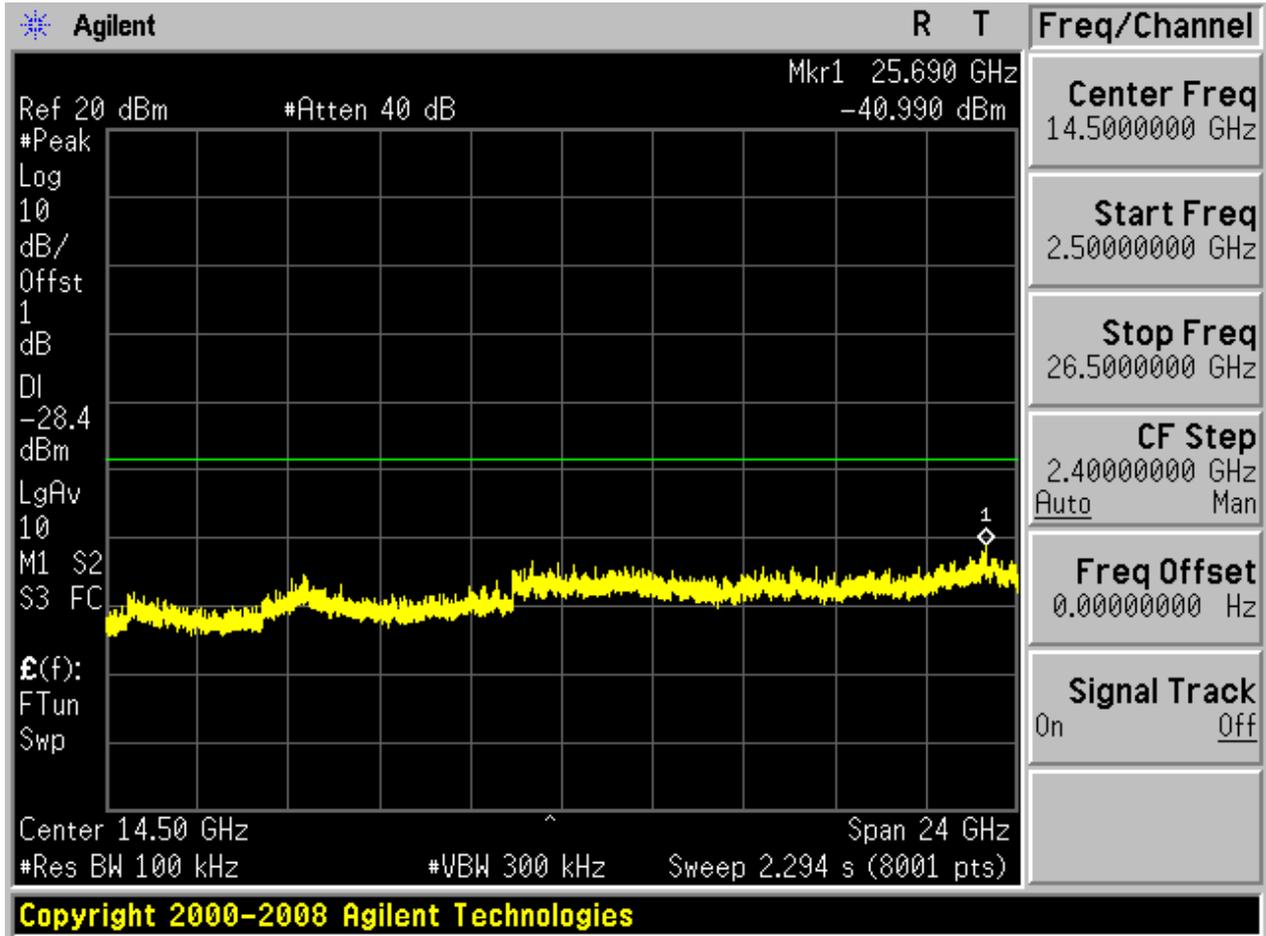








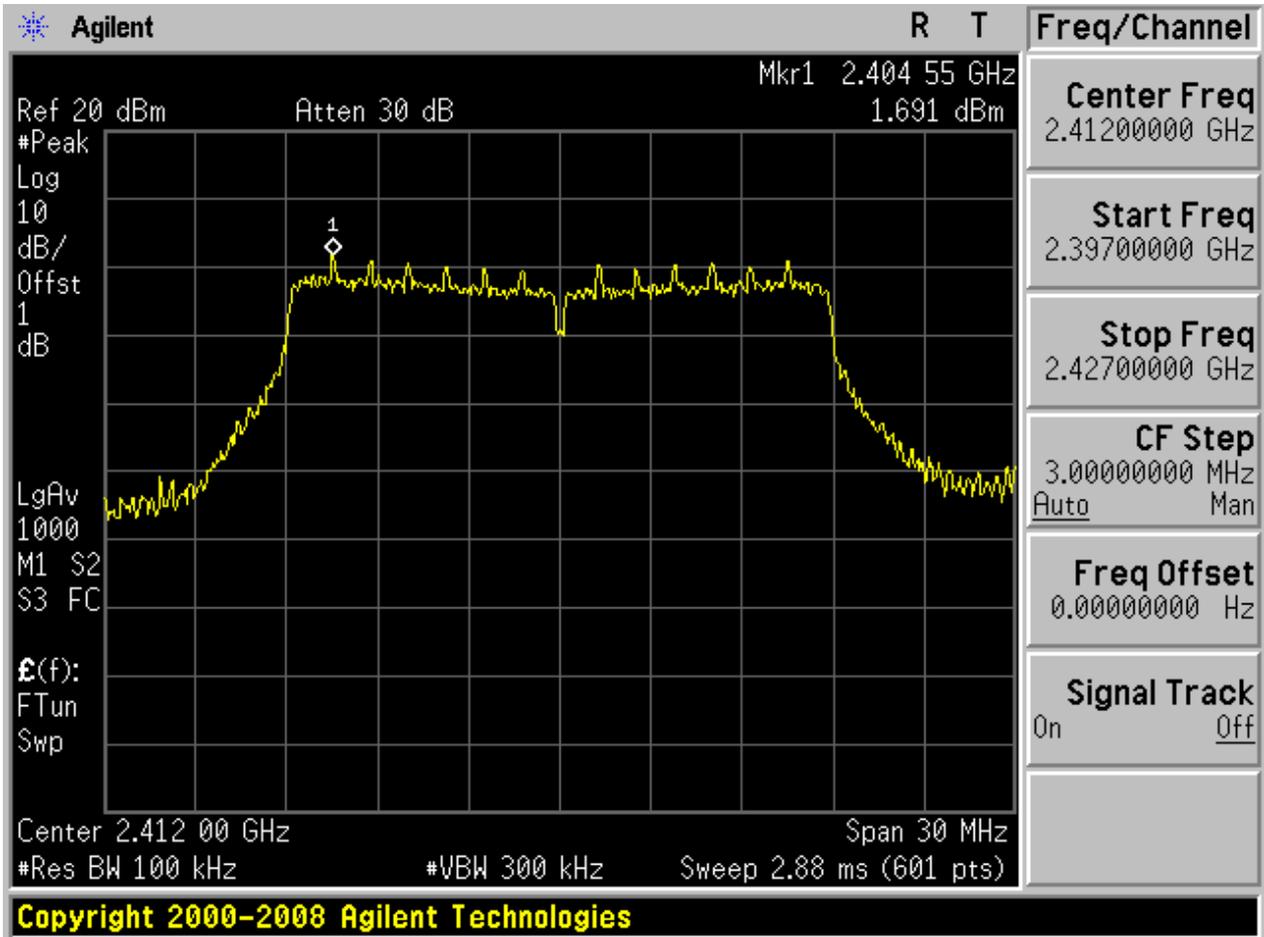




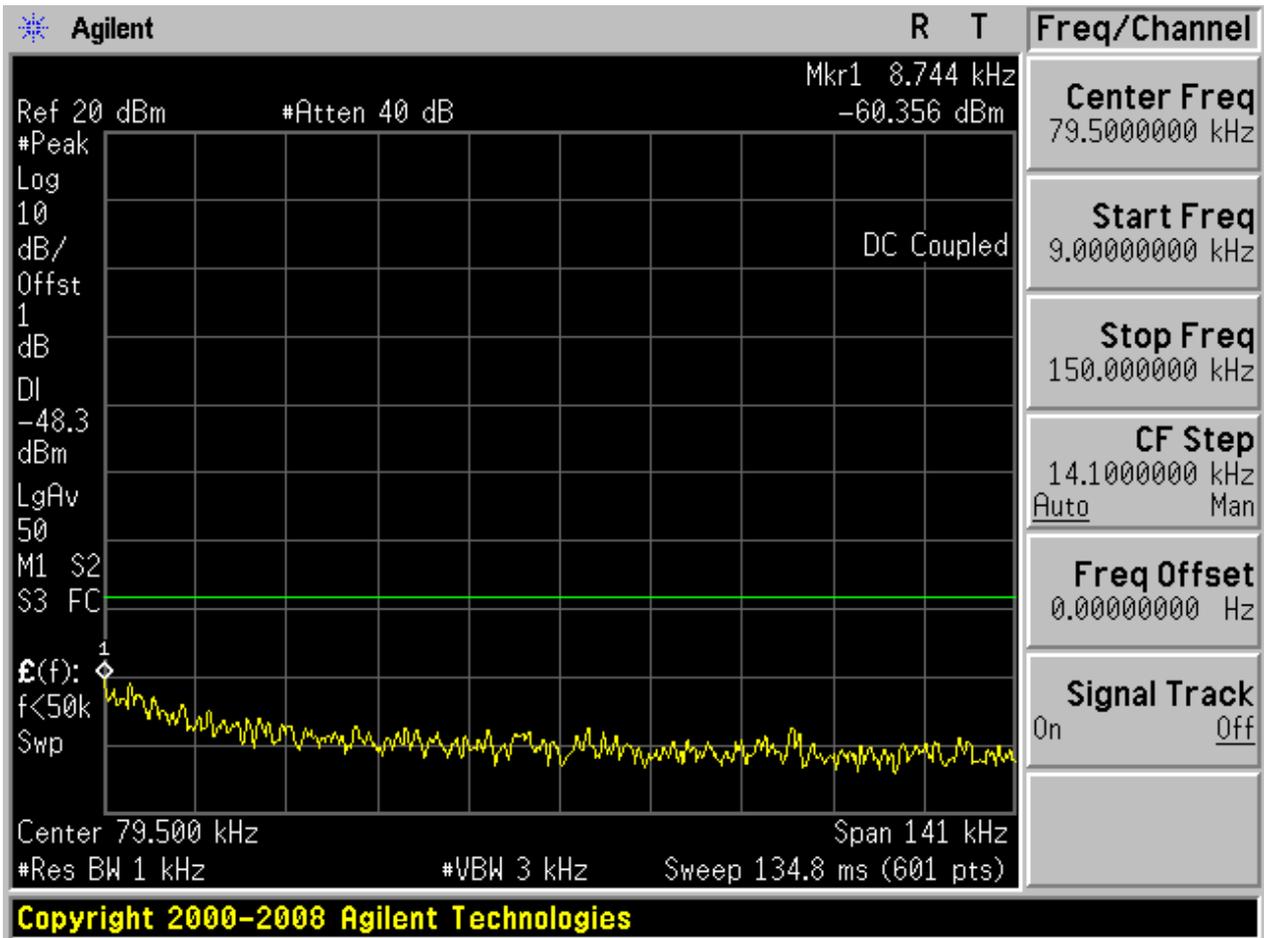


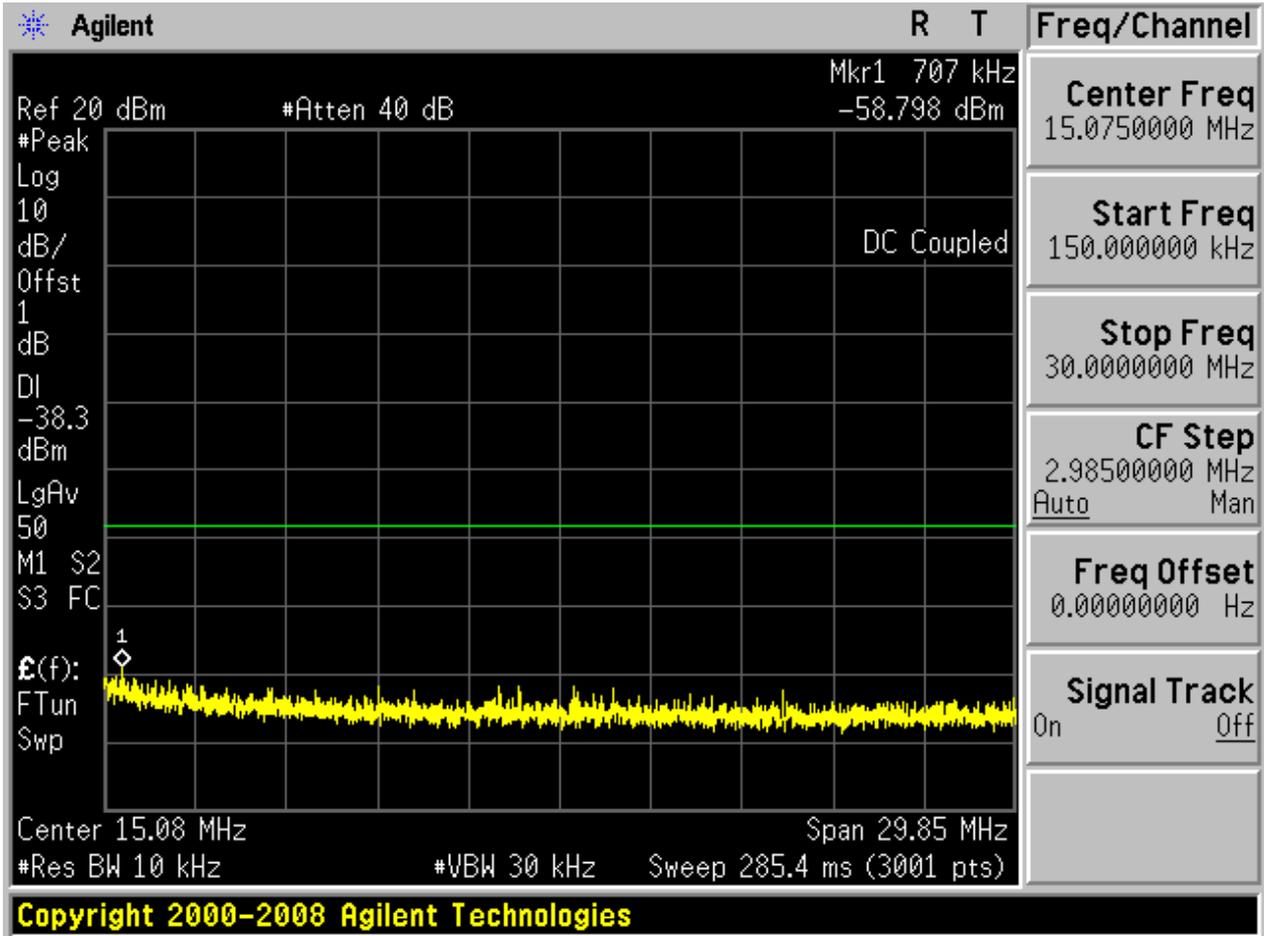
2.7 11N20_L@Ant 1

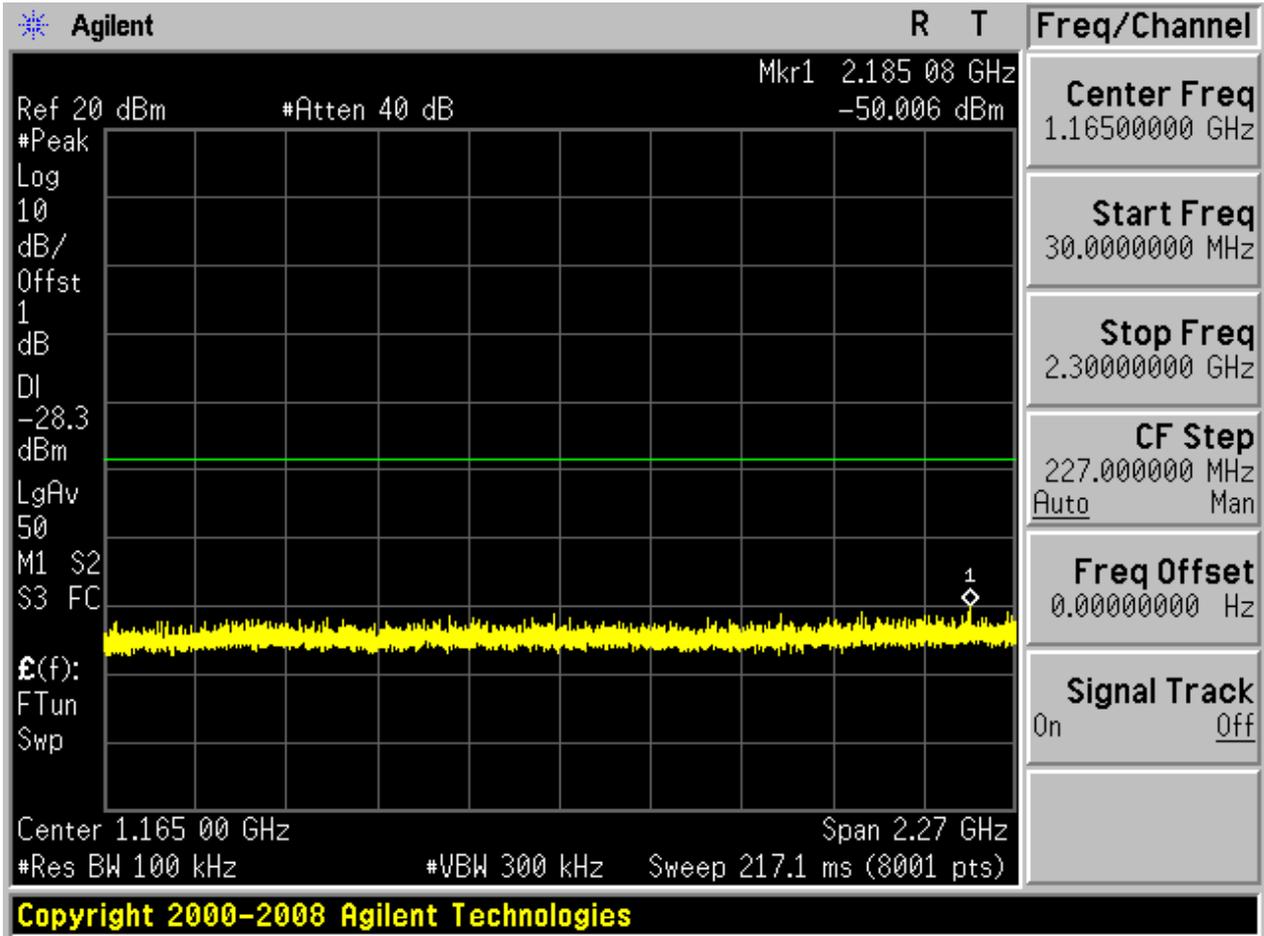
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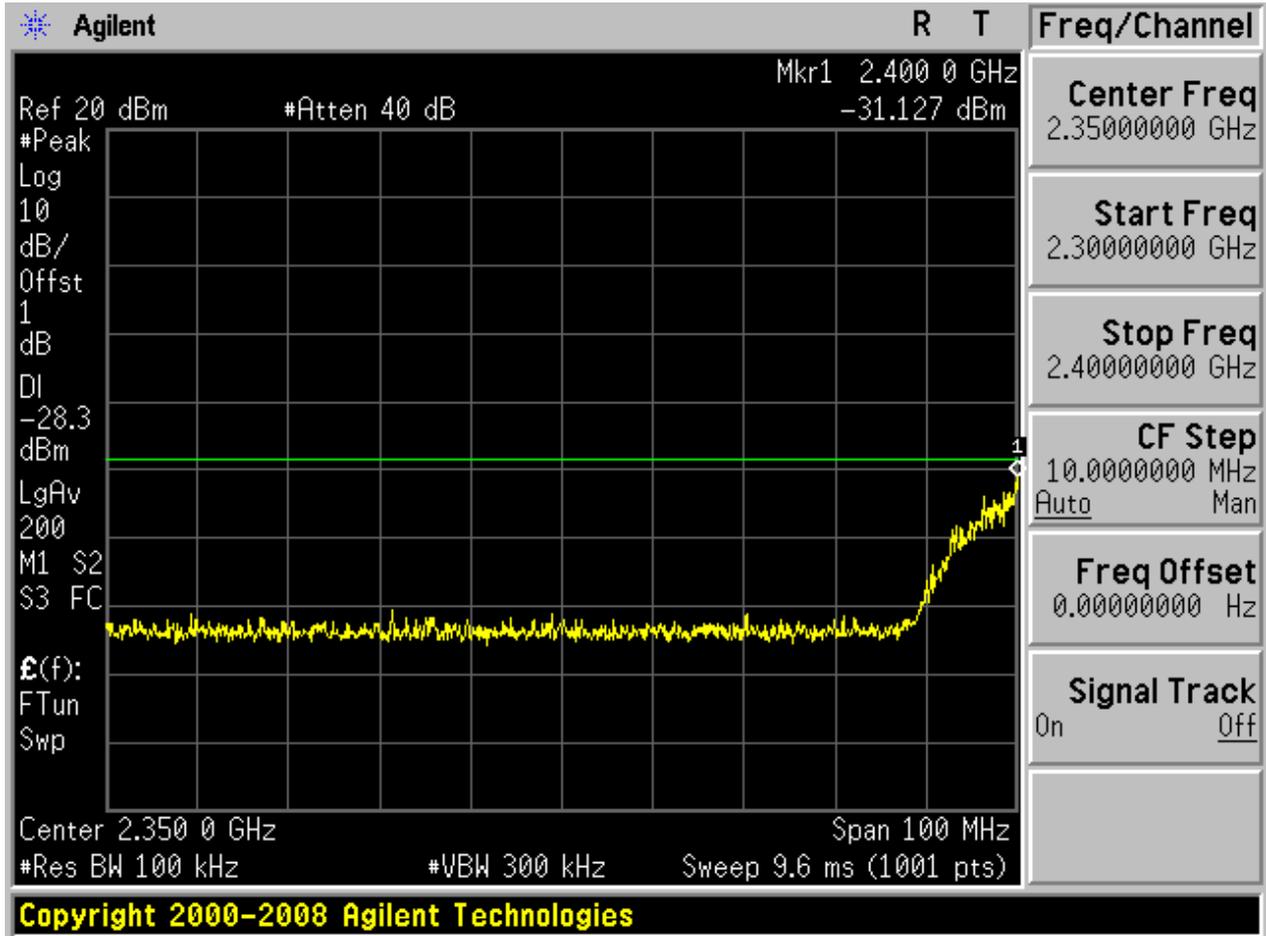


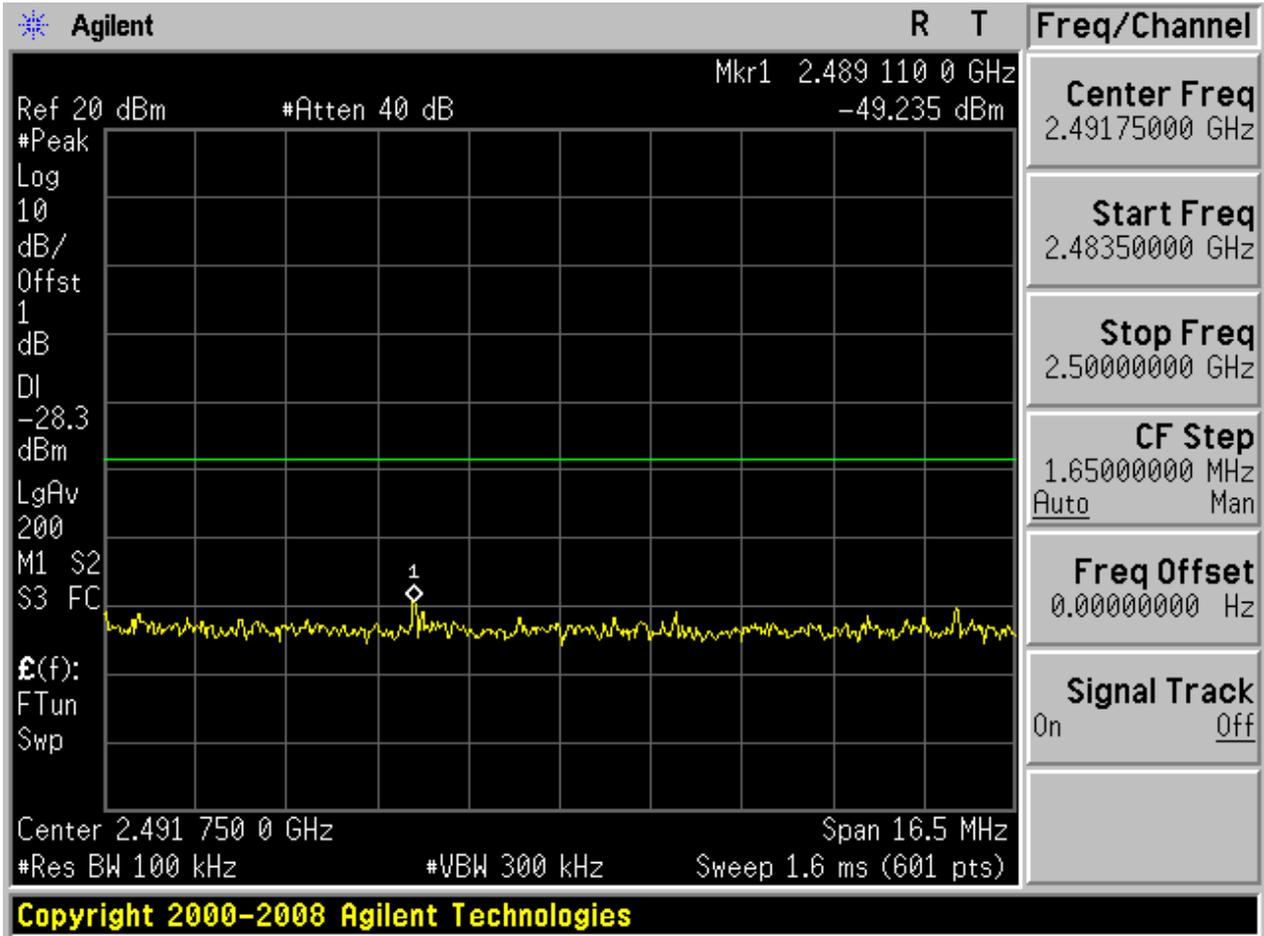
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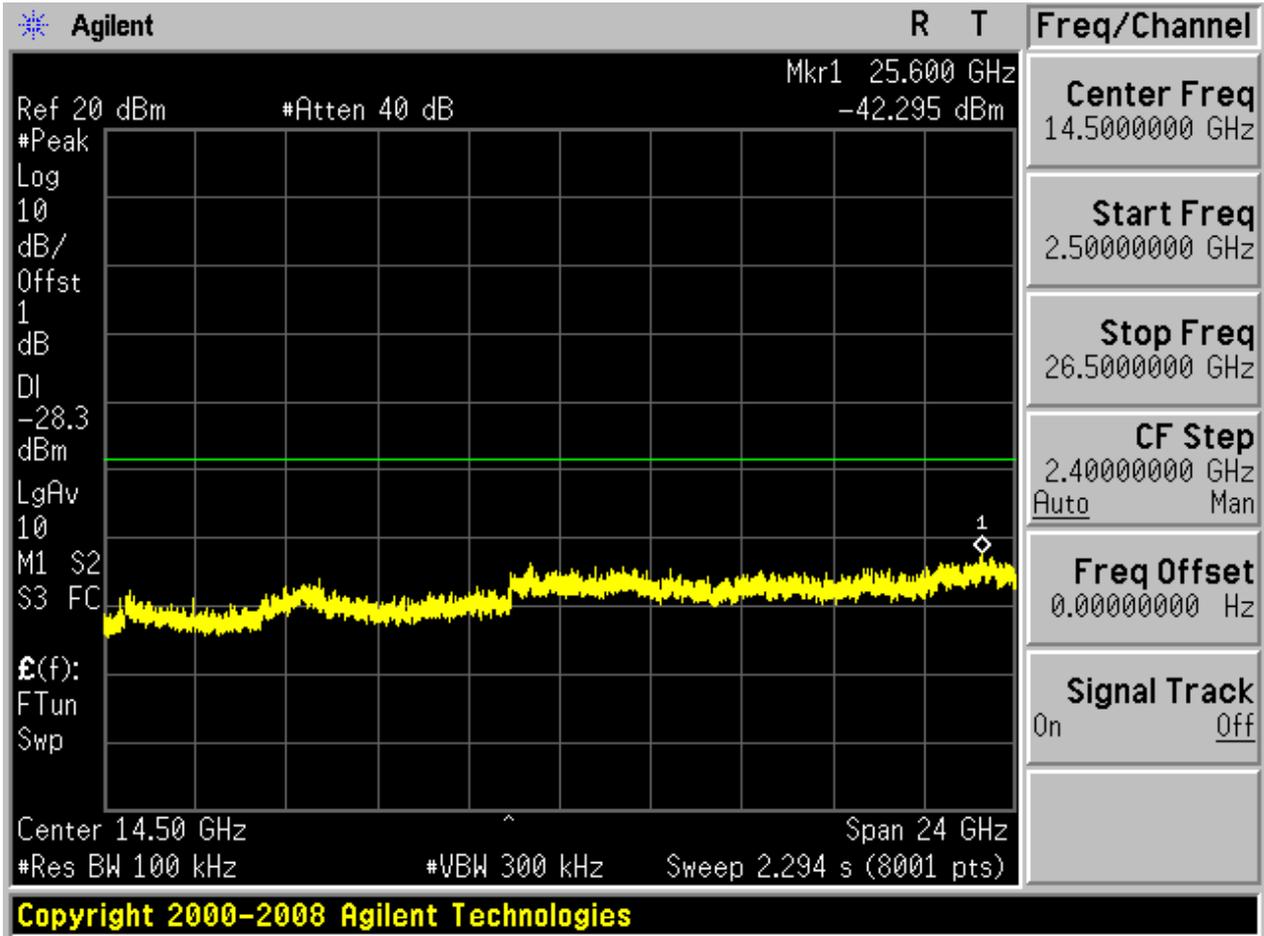






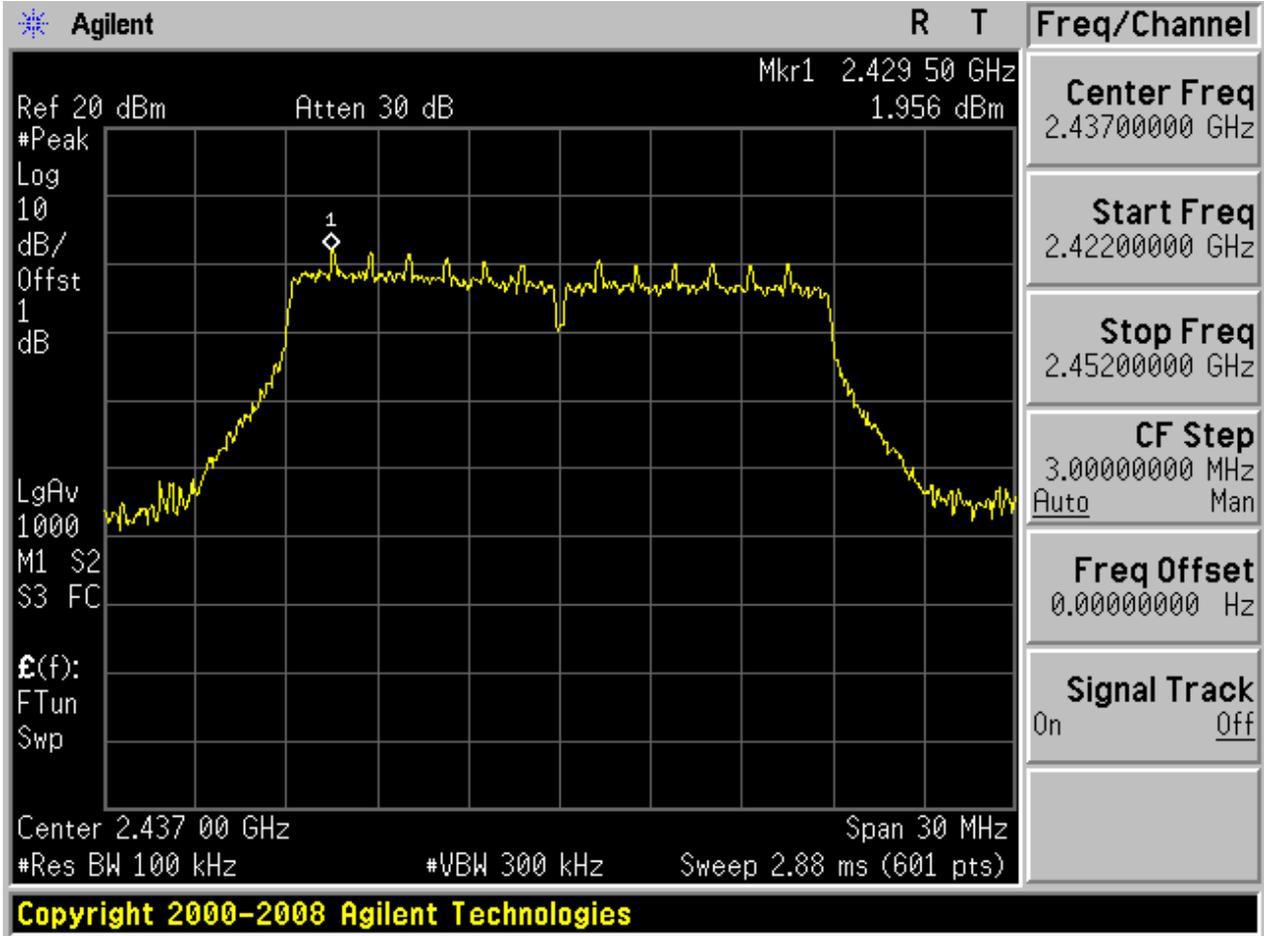






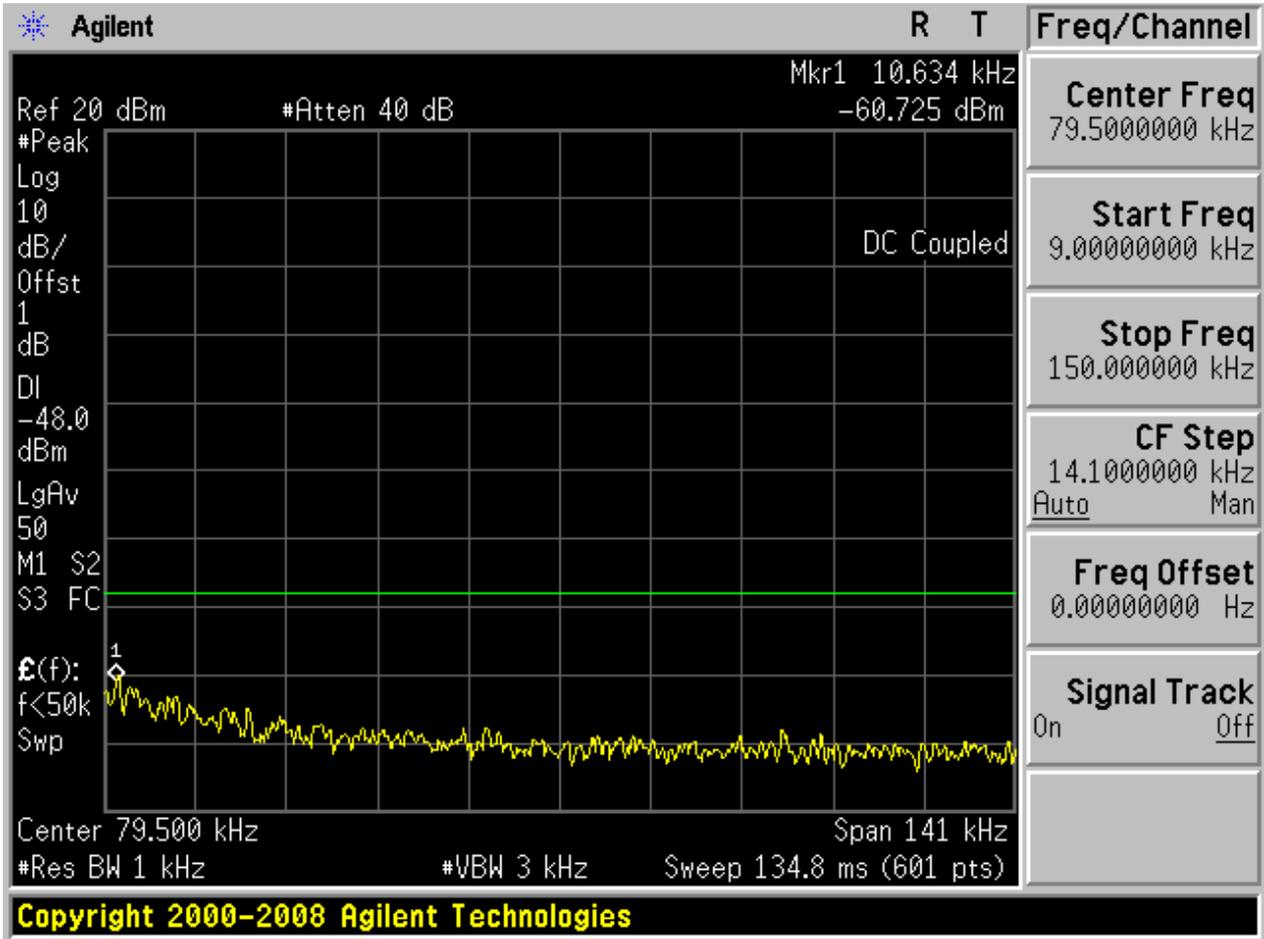
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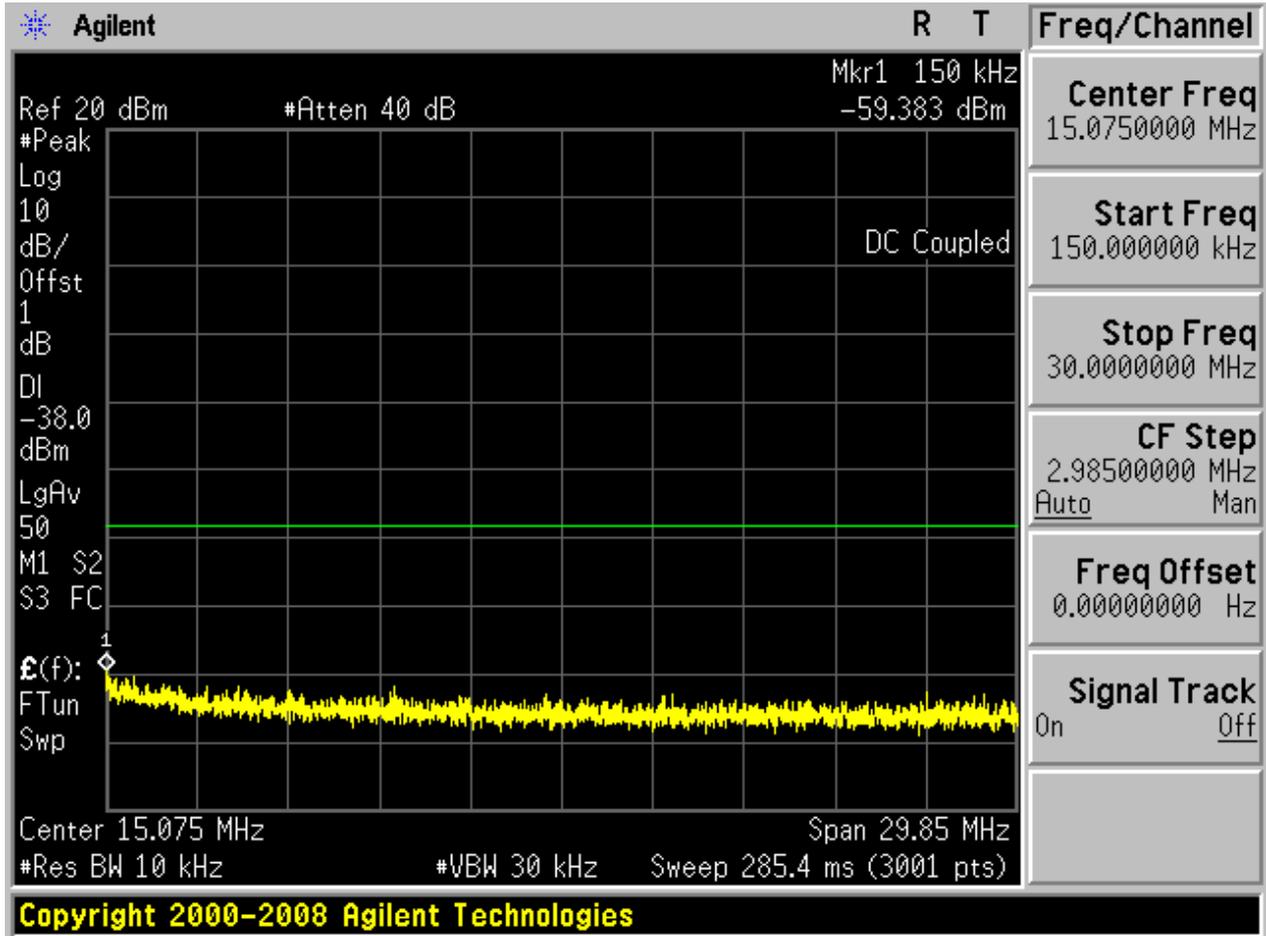
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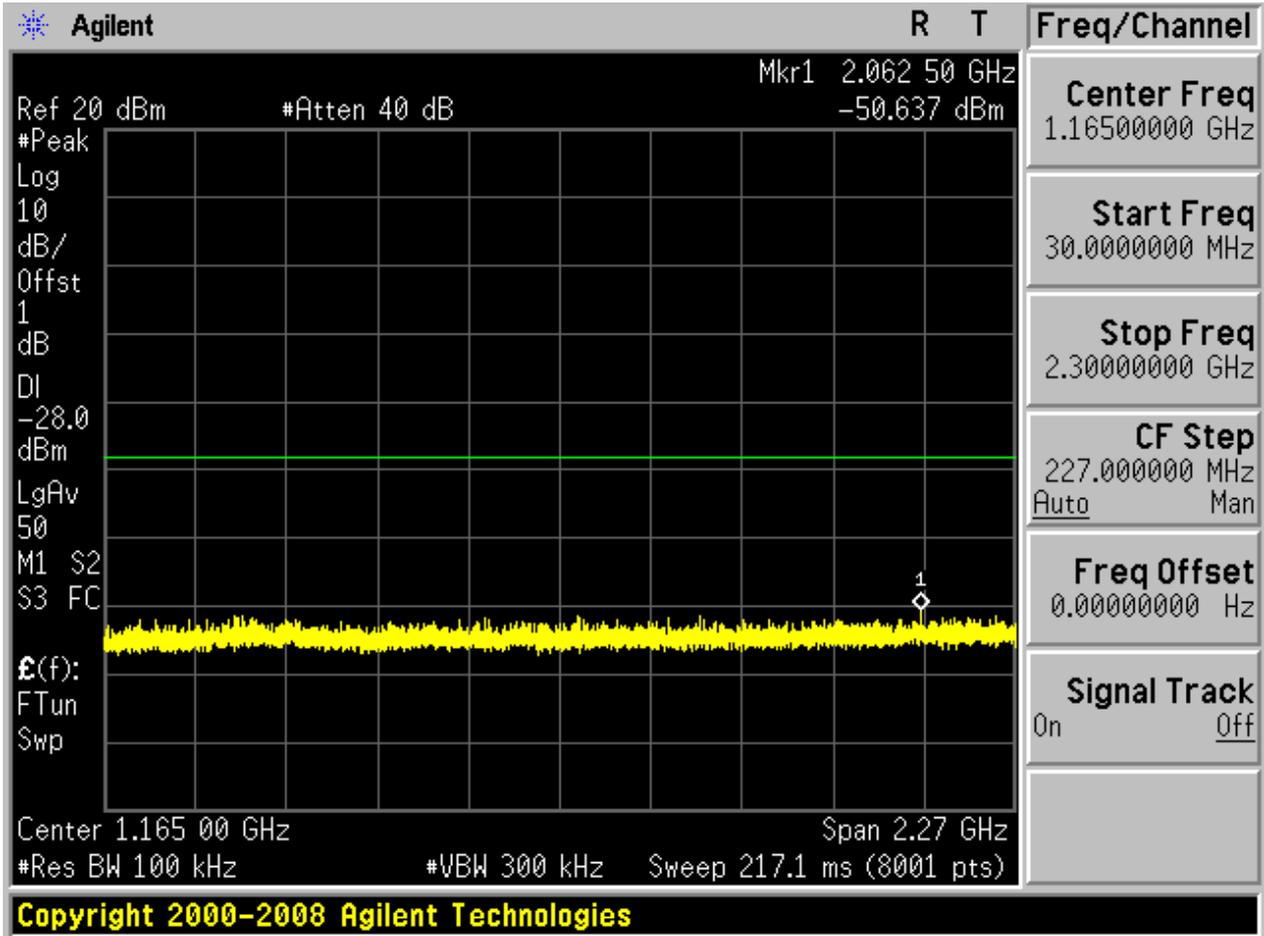


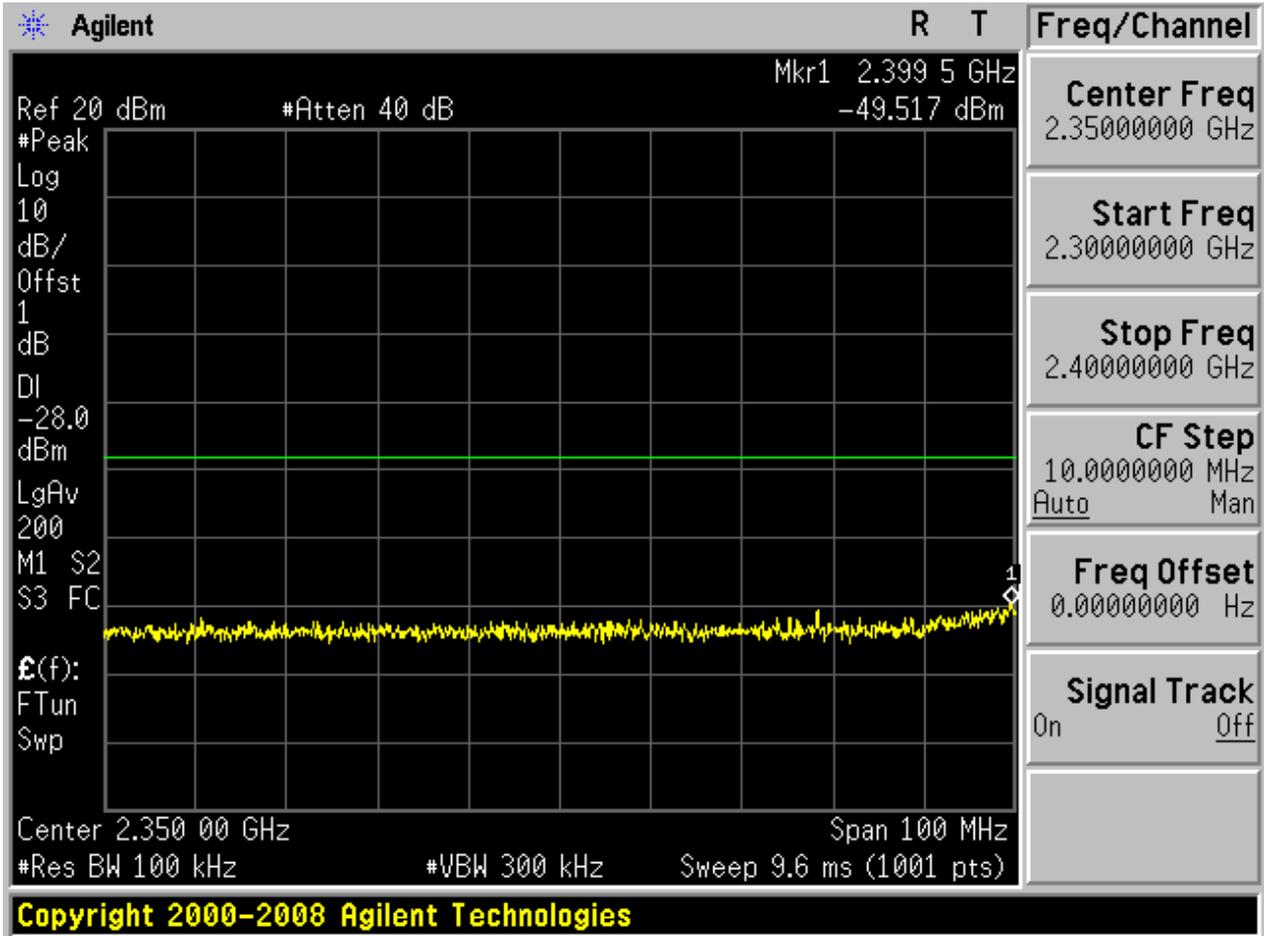


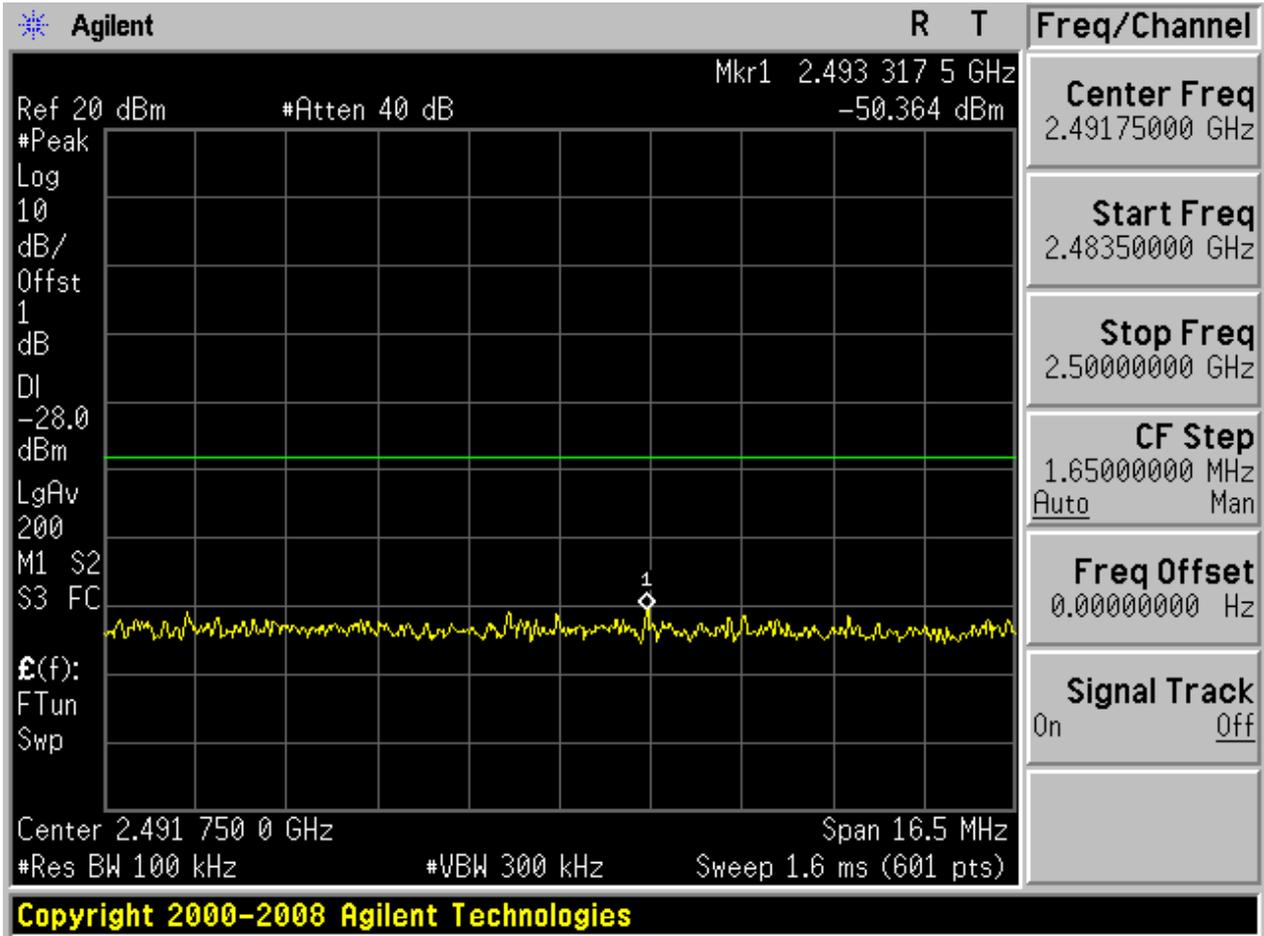
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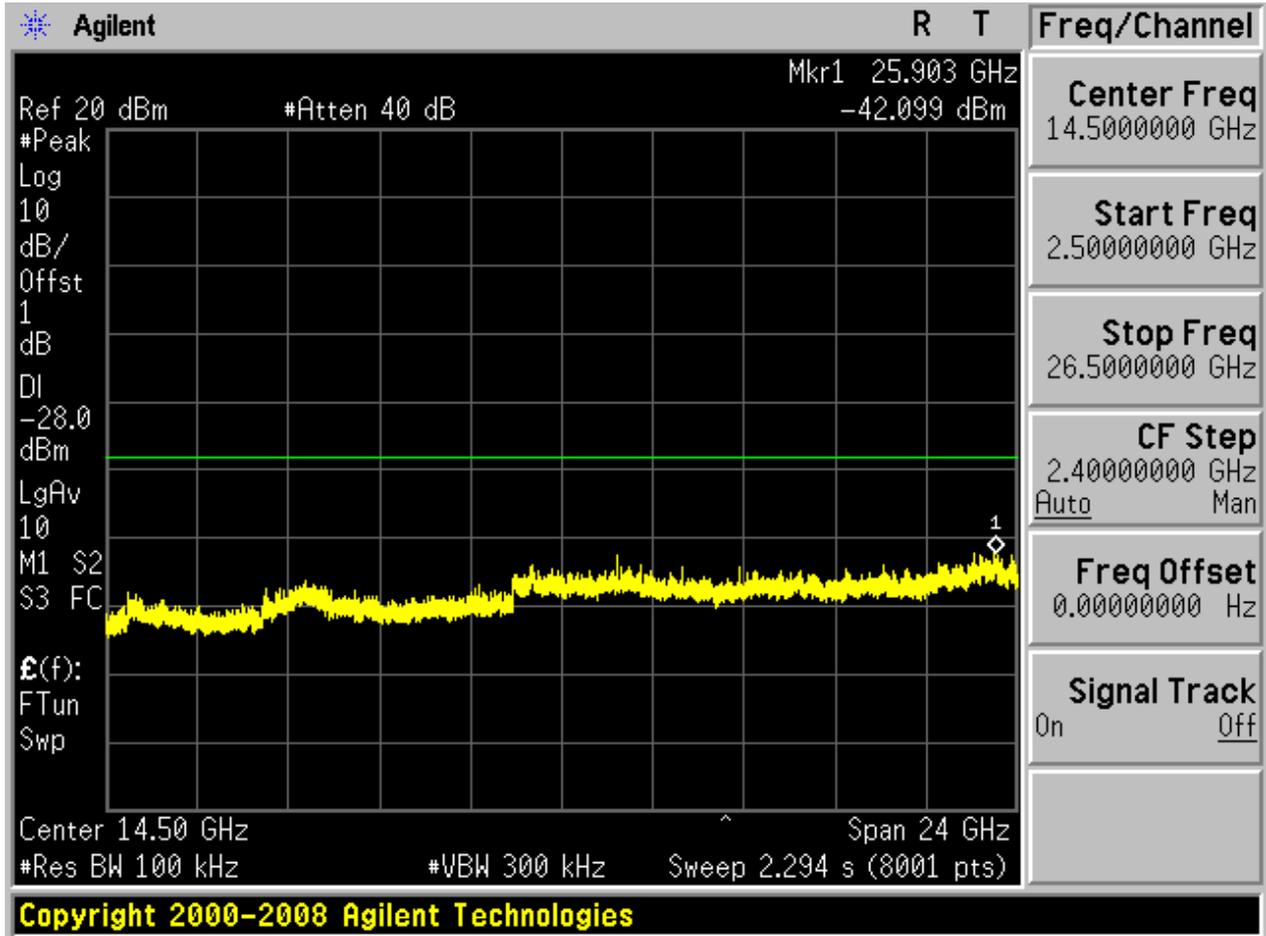








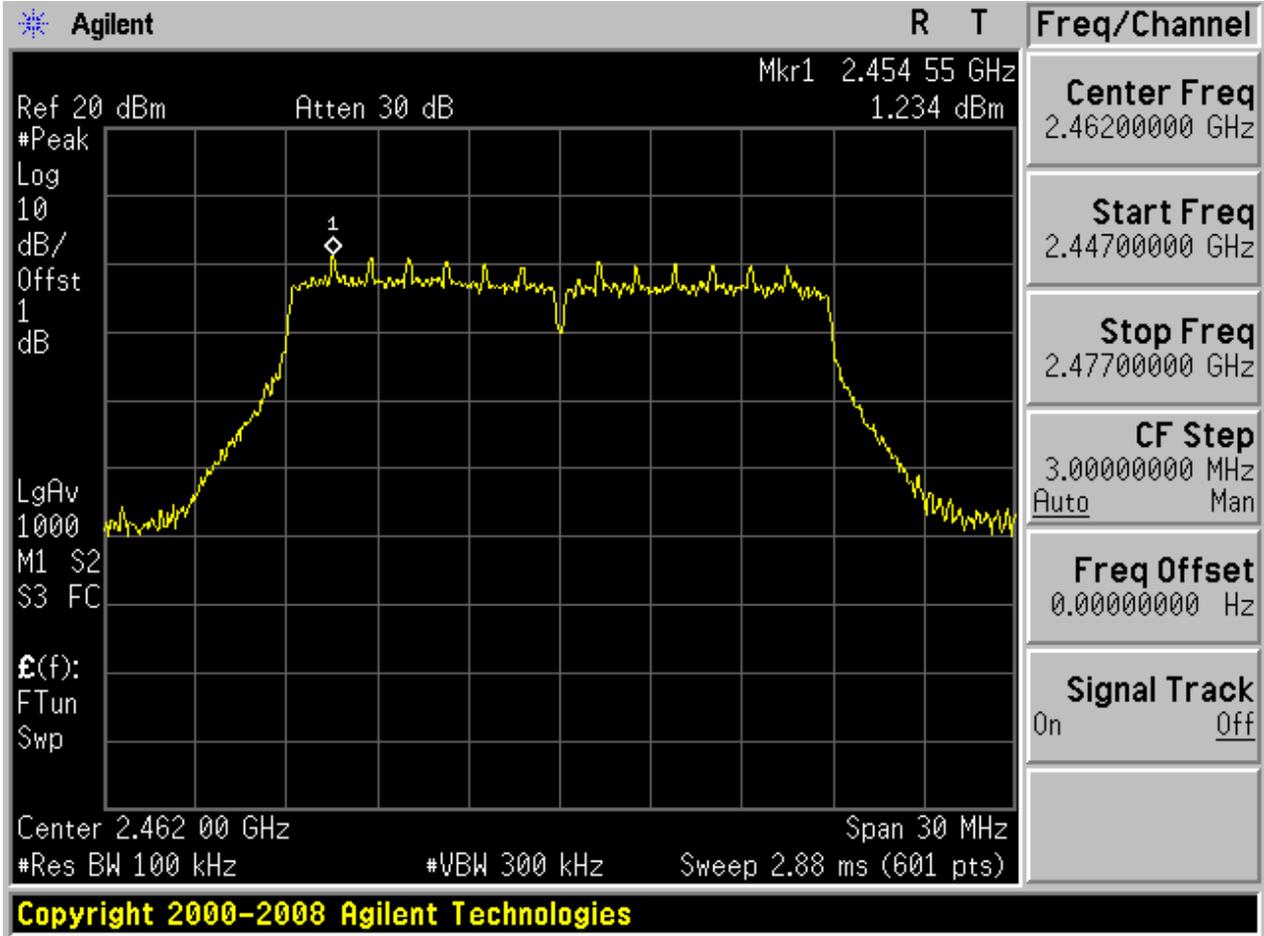






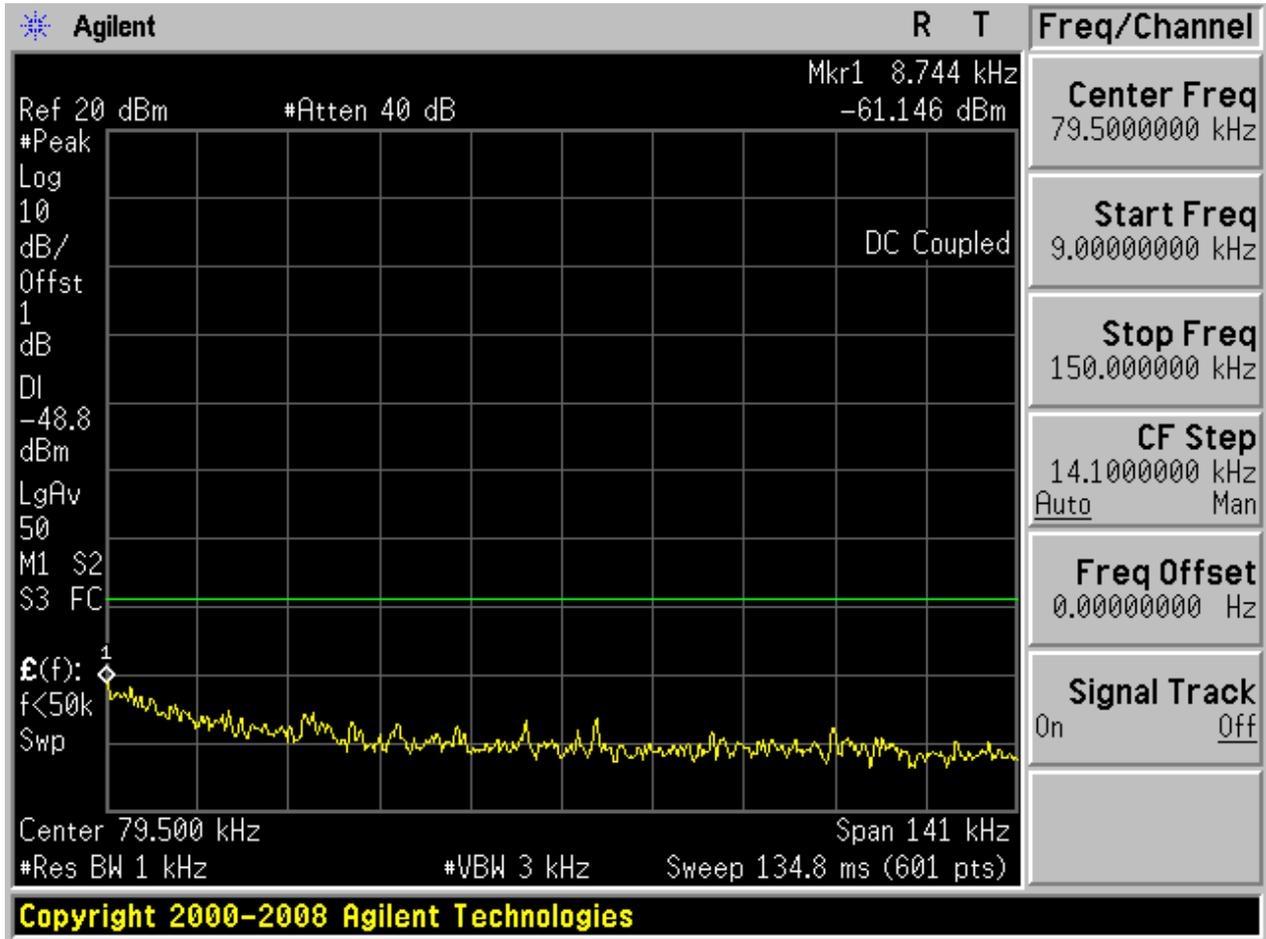
2.9 11N20_H@Ant 1

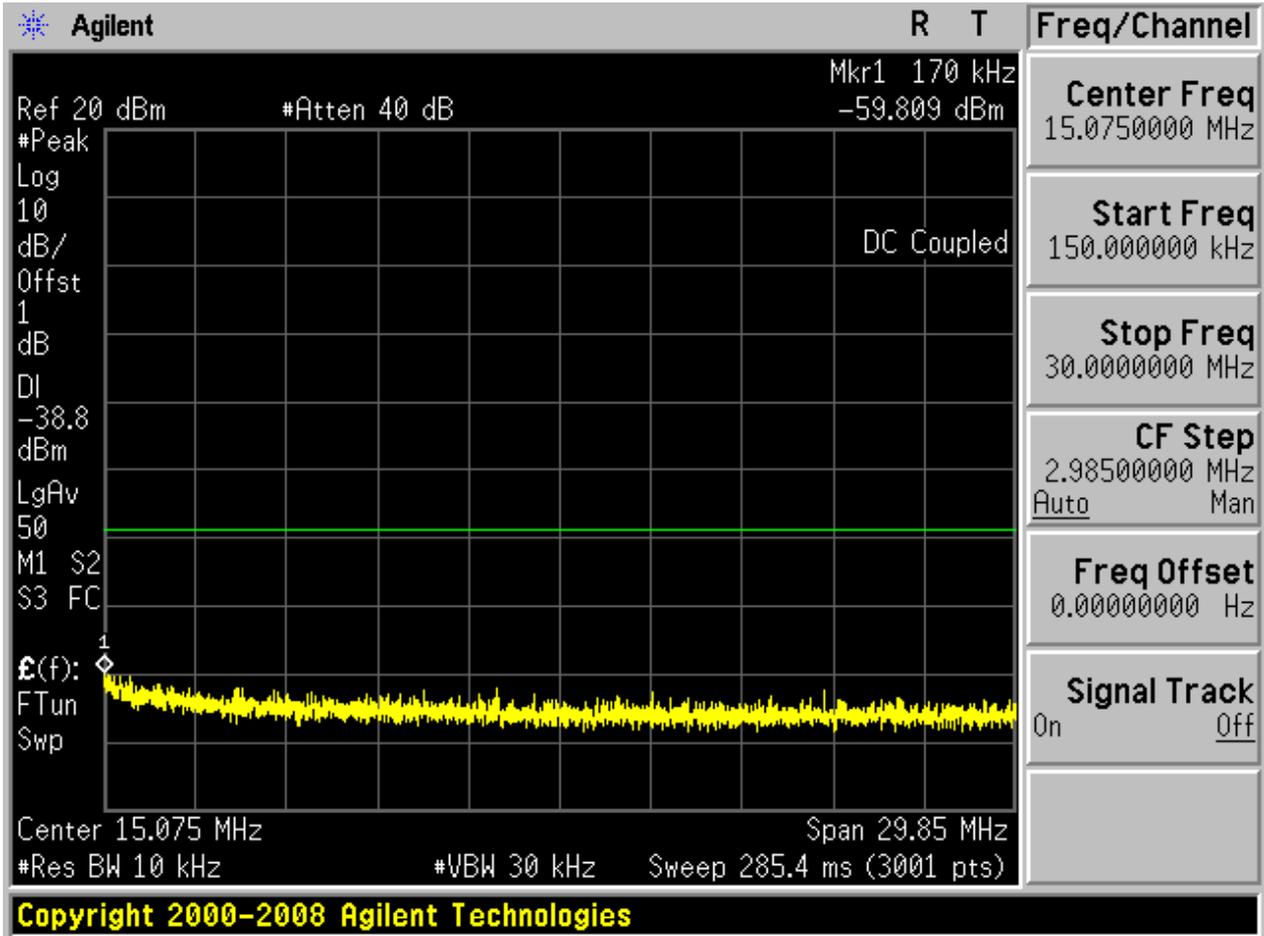
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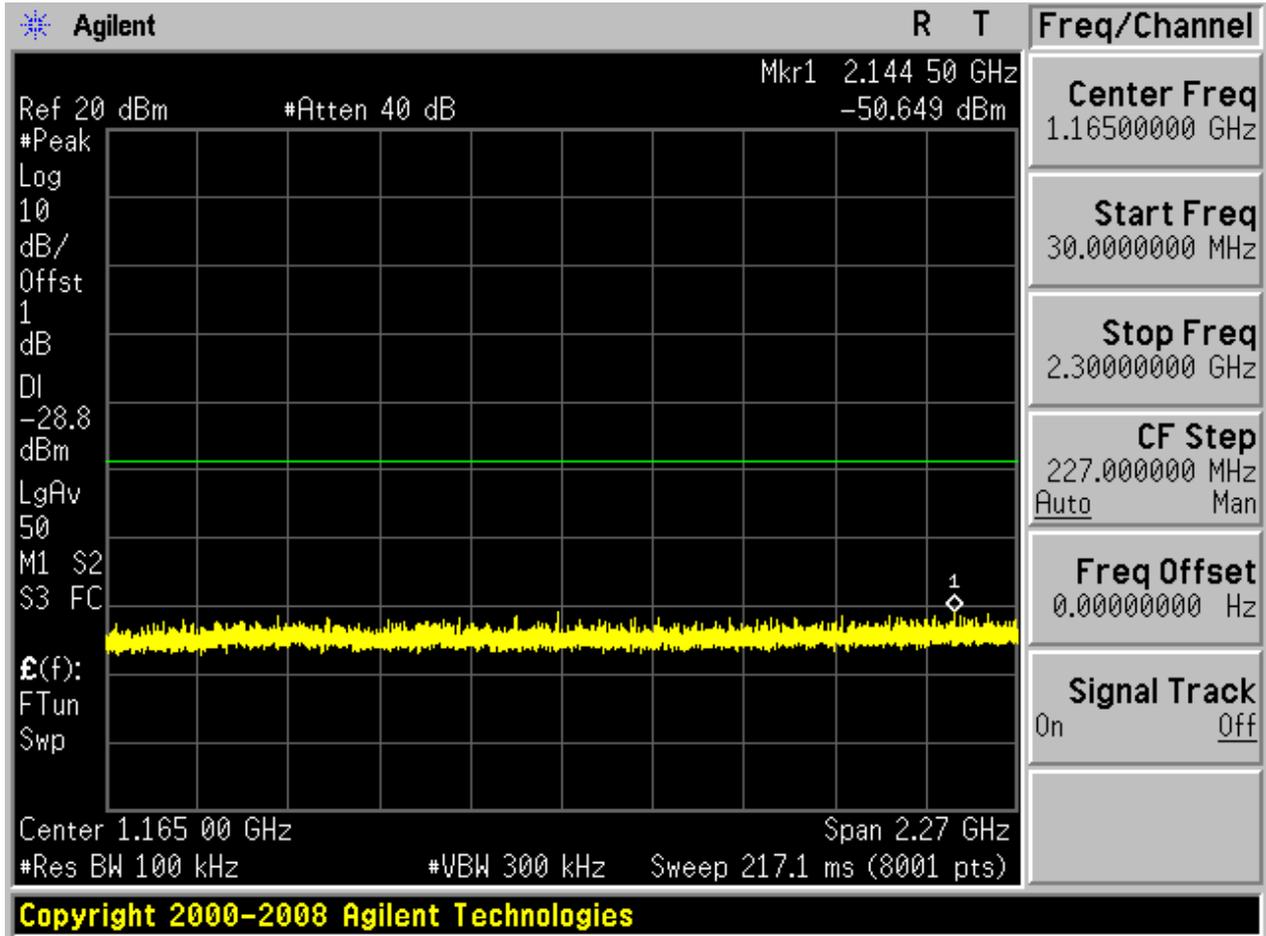


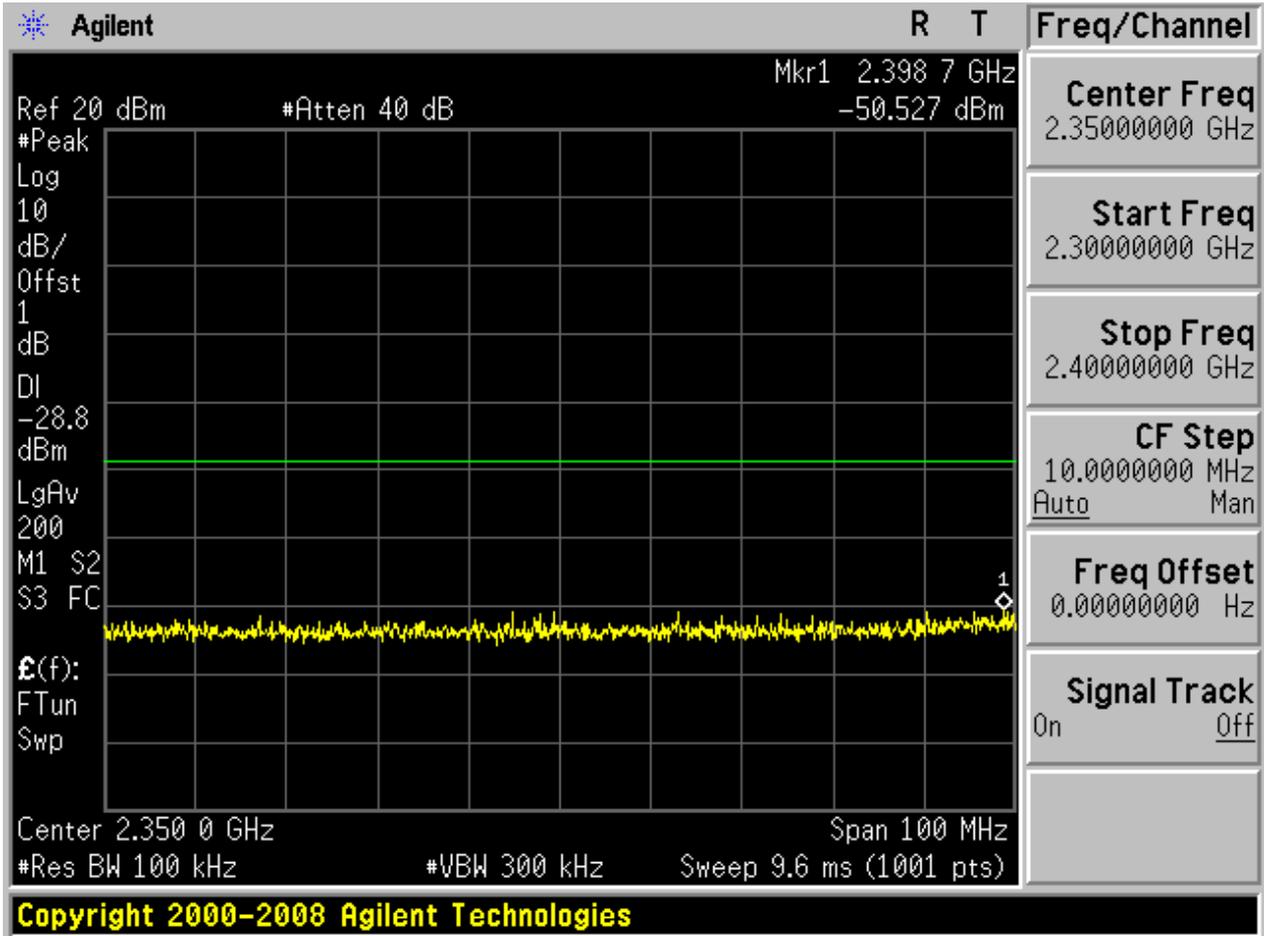


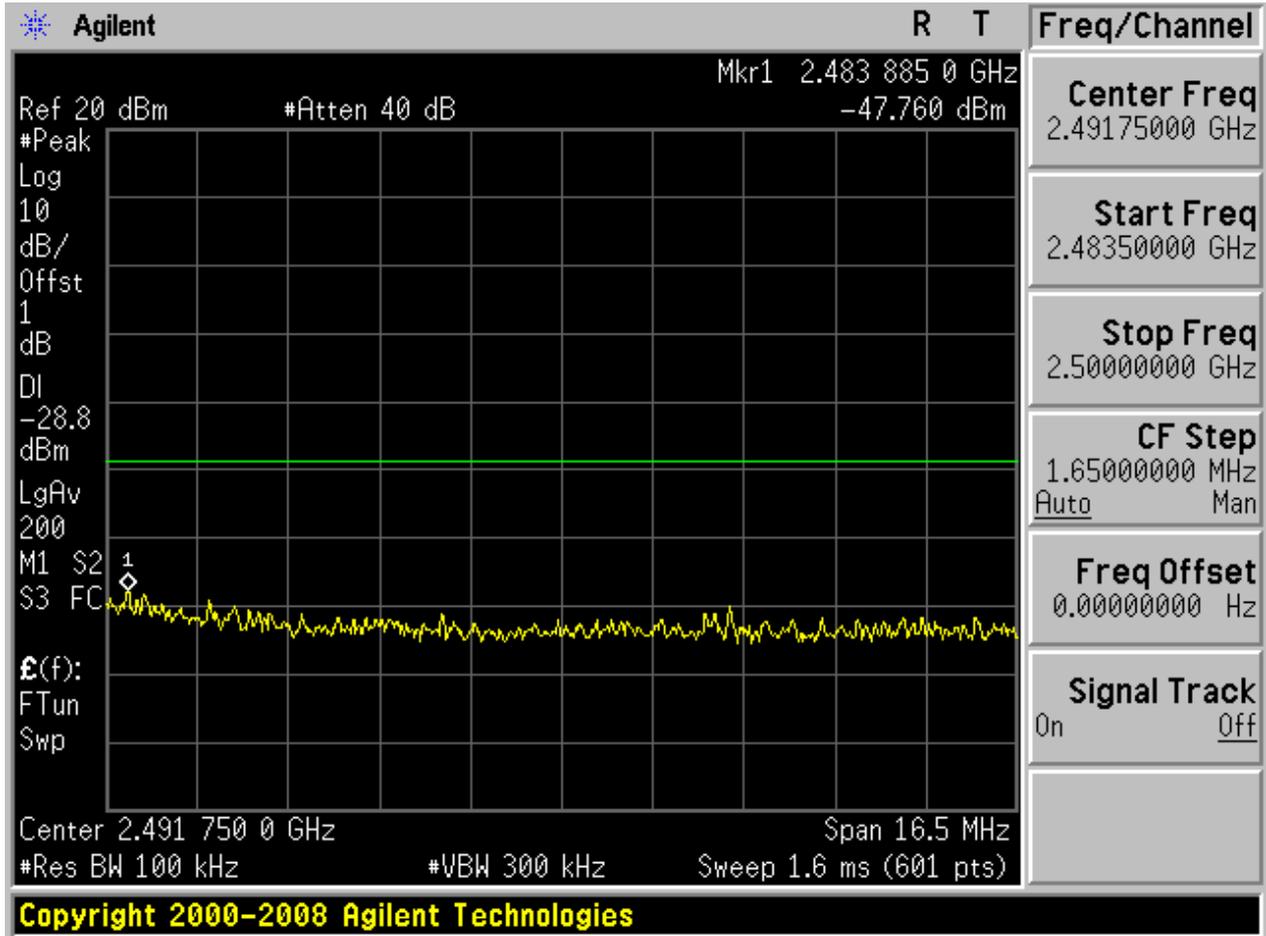
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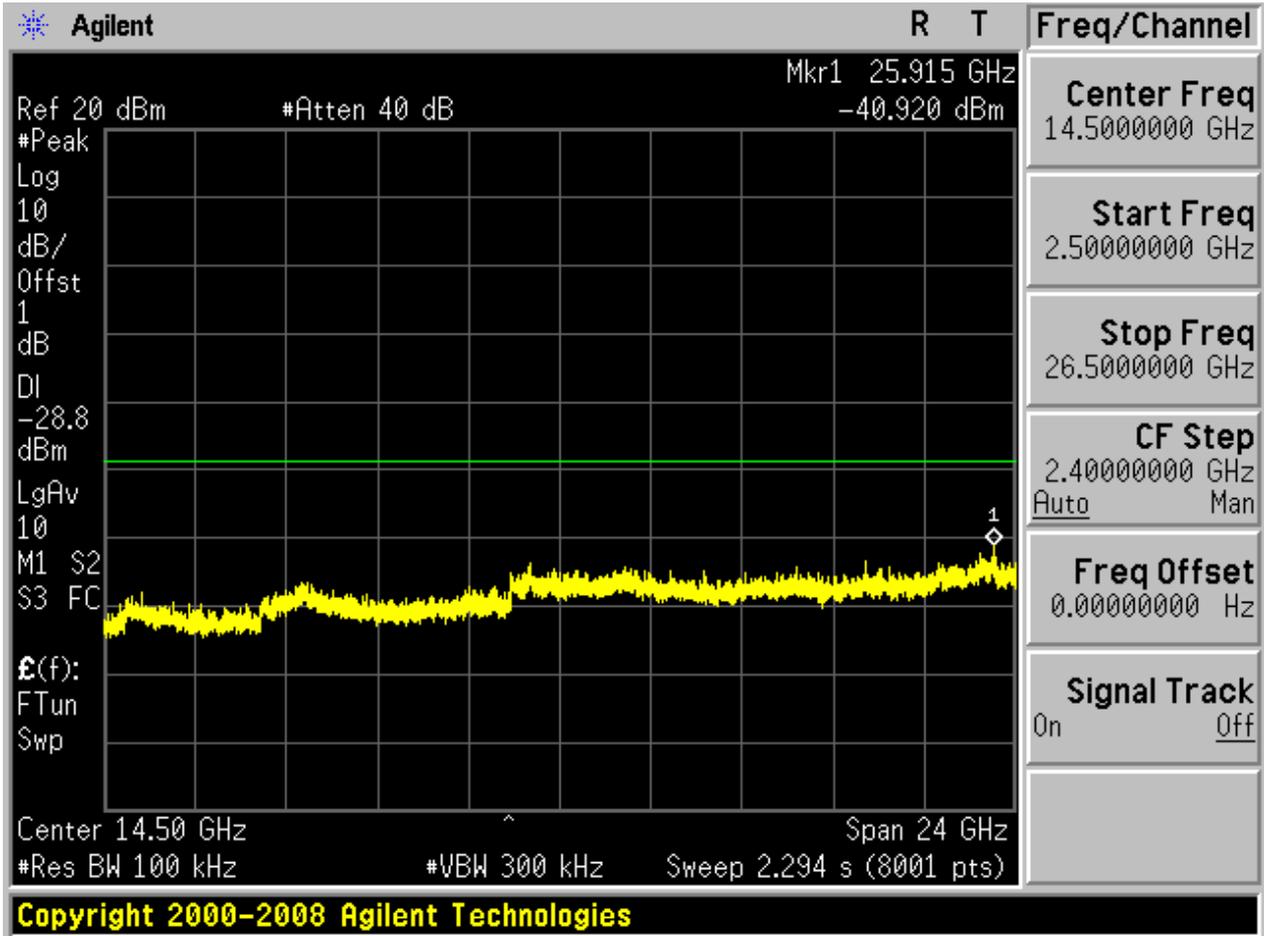












Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

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.

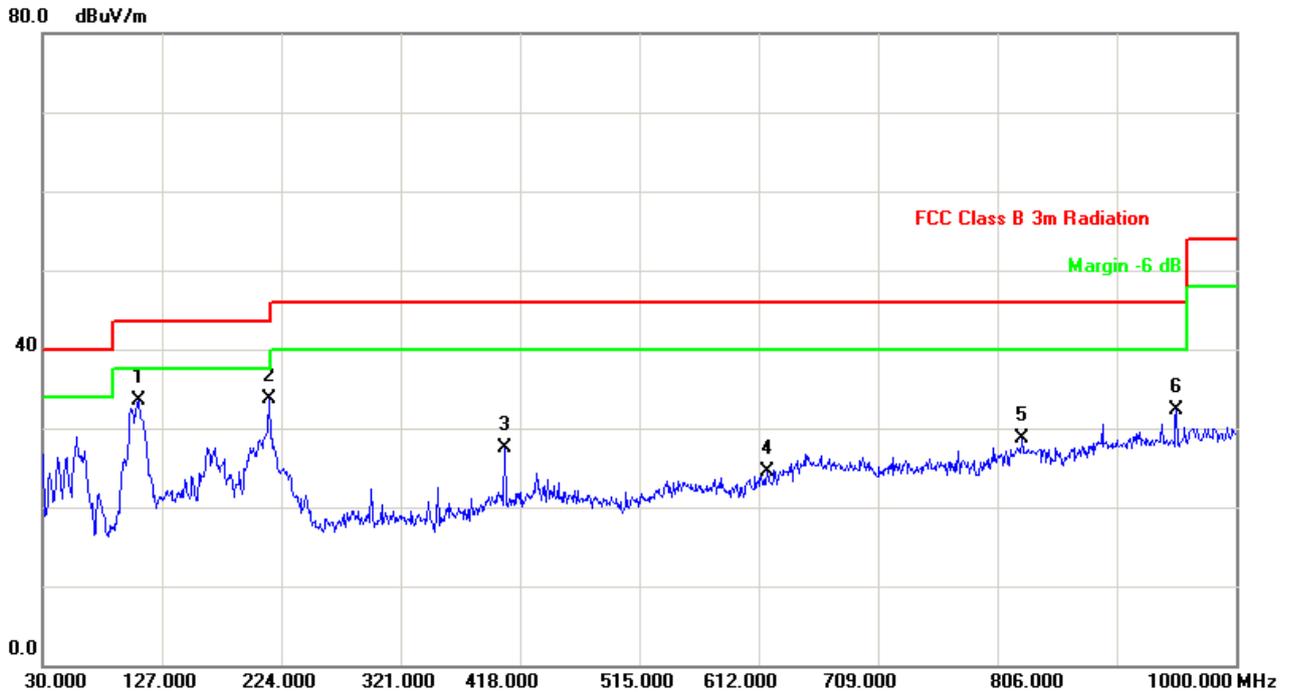
Part 1: Testing Range of “9 kHz to 30MHz”

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

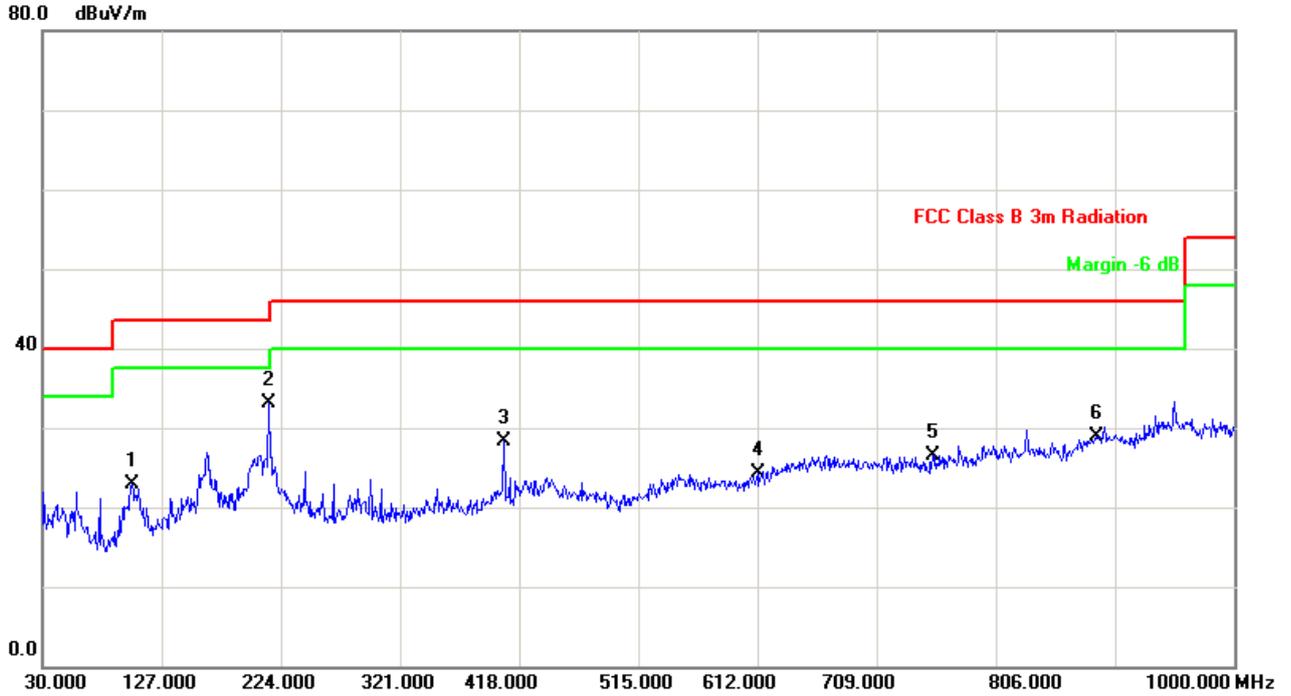
Part 2: Testing Range of “30 MHz to 1 GHz”

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).**



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure -ment dBuV/m	Limit dBuV/m	Margin dB	Plarization
1		107.6000	47.48	-14.01	33.47	43.50	-10.03	VERTICAL
2		214.3000	47.31	-13.58	33.73	43.50	-9.77	VERTICAL
3		405.3900	34.61	-7.12	27.49	46.00	-18.51	VERTICAL
4		618.7900	28.10	-3.51	24.59	46.00	-21.41	VERTICAL
5		826.3700	28.62	0.14	28.76	46.00	-17.24	VERTICAL
6		951.5000	29.27	3.07	32.34	46.00	-13.66	VERTICAL



No.	Mk.	Freq. MHz	Reading	Correct	Measure-	Limit	Margin	Plarization
			Level dBuV	Factor dB	ment dBuV/m			
1		102.7500	37.34	-14.44	22.90	43.50	-20.60	HORIZONTAL
2		214.3000	46.62	-13.58	33.04	43.50	-10.46	HORIZONTAL
3		405.3900	35.35	-7.12	28.23	46.00	-17.77	HORIZONTAL
4		612.0000	28.25	-3.91	24.34	46.00	-21.66	HORIZONTAL
5		754.5900	27.86	-1.27	26.59	46.00	-19.41	HORIZONTAL
6		887.4800	27.70	1.28	28.98	46.00	-17.02	HORIZONTAL



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”

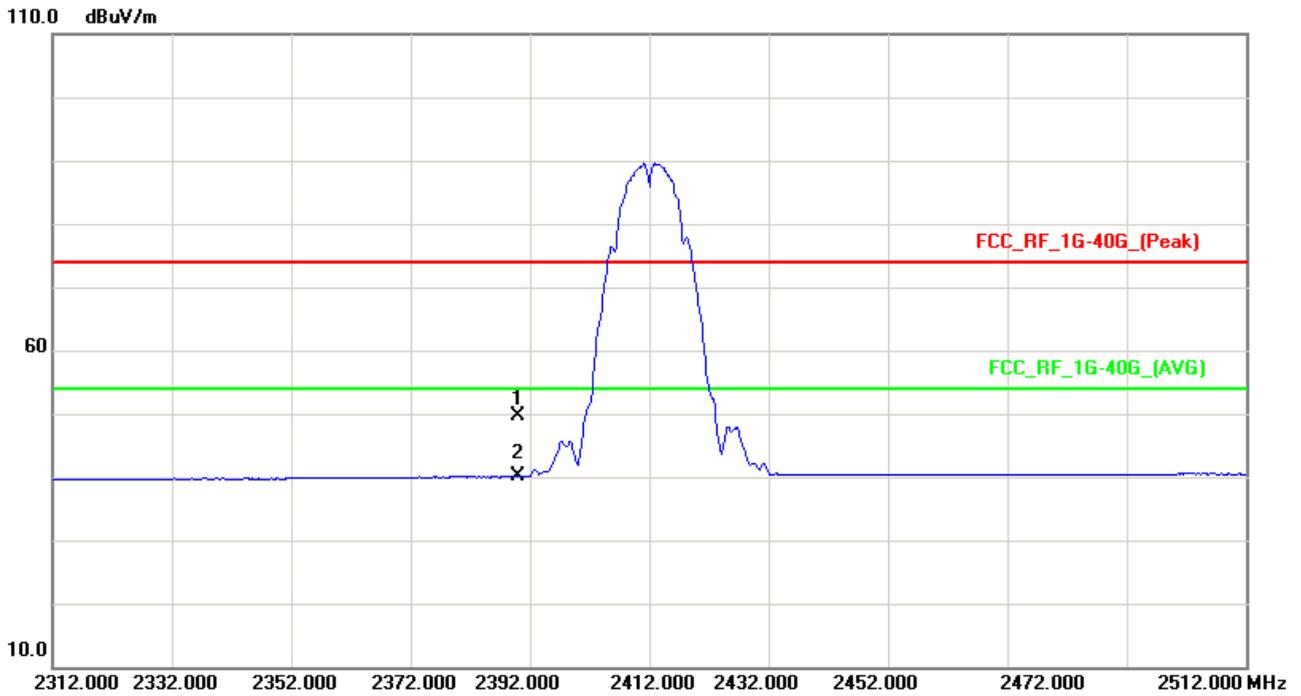
Part 4: Testing Range of “2.3GHz to 2.5GHz”

- 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 1

Vertical

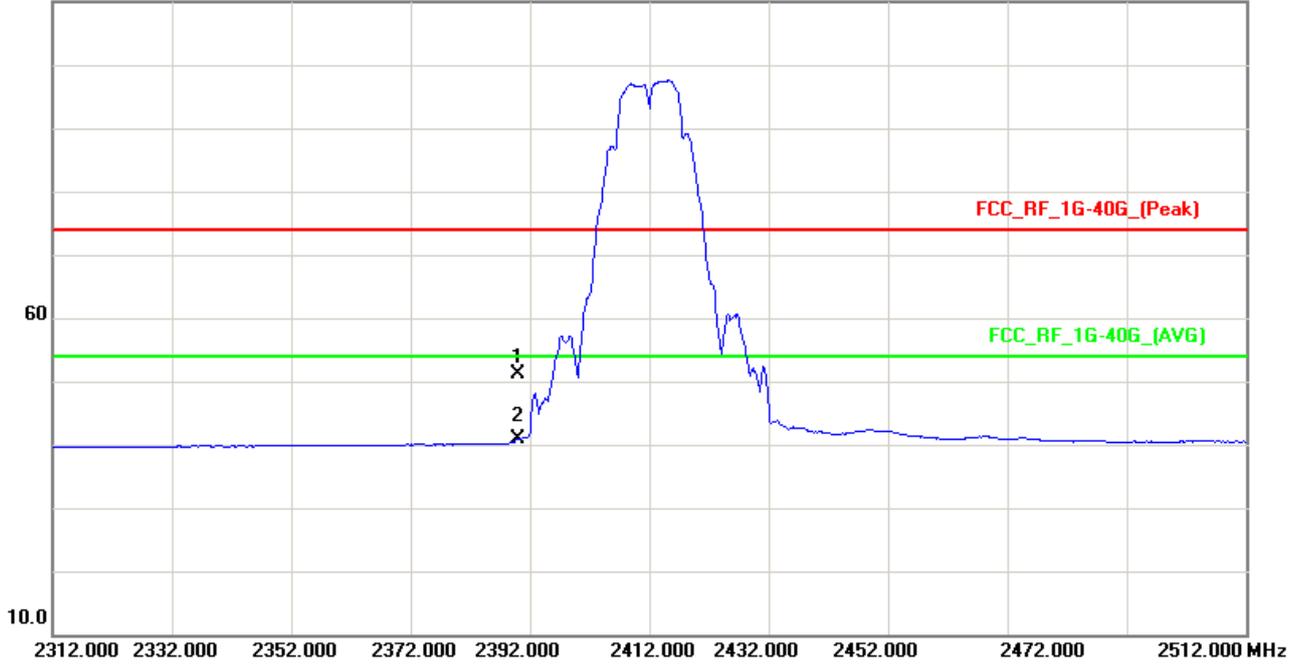


Note: The peak exceeds the limit line is carrier frequency

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/	dB	Detector	Polarization
1		2390.000	13.64	35.88	49.52	74.00	-24.48	peak	VERTICAL
2	*	2390.000	4.19	35.88	40.07	54.00	-13.93	AVG	VERTICAL

Horizontal

110.0 dBuV/m

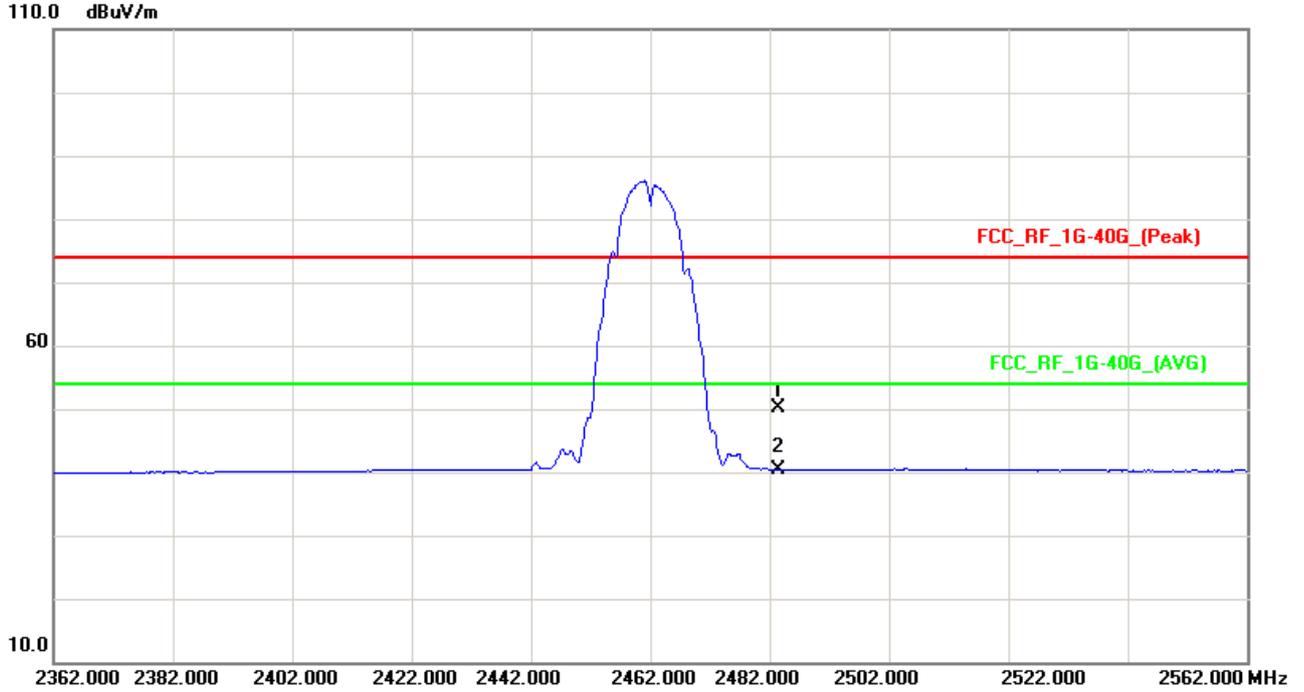


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2390.000	15.22	35.88	51.10	74.00	-22.90	peak	HORIZONTAL
2	*	2390.000	4.88	35.88	40.76	54.00	-13.24	AVG	HORIZONTAL

Channel 11

Vertical

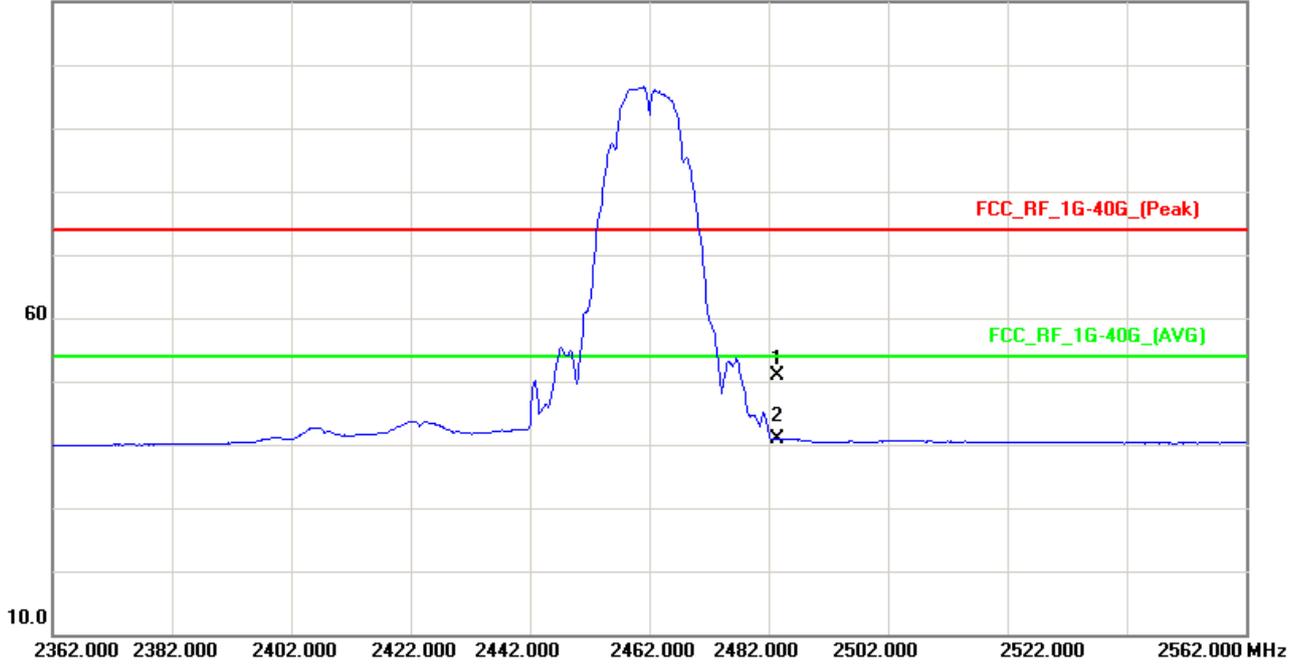


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2483.500	13.78	36.39	50.17	74.00	-23.83	peak	VERTICAL
2	*	2483.500	3.98	36.39	40.37	54.00	-13.63	AVG	VERTICAL

Horizontal

110.0 dBuV/m



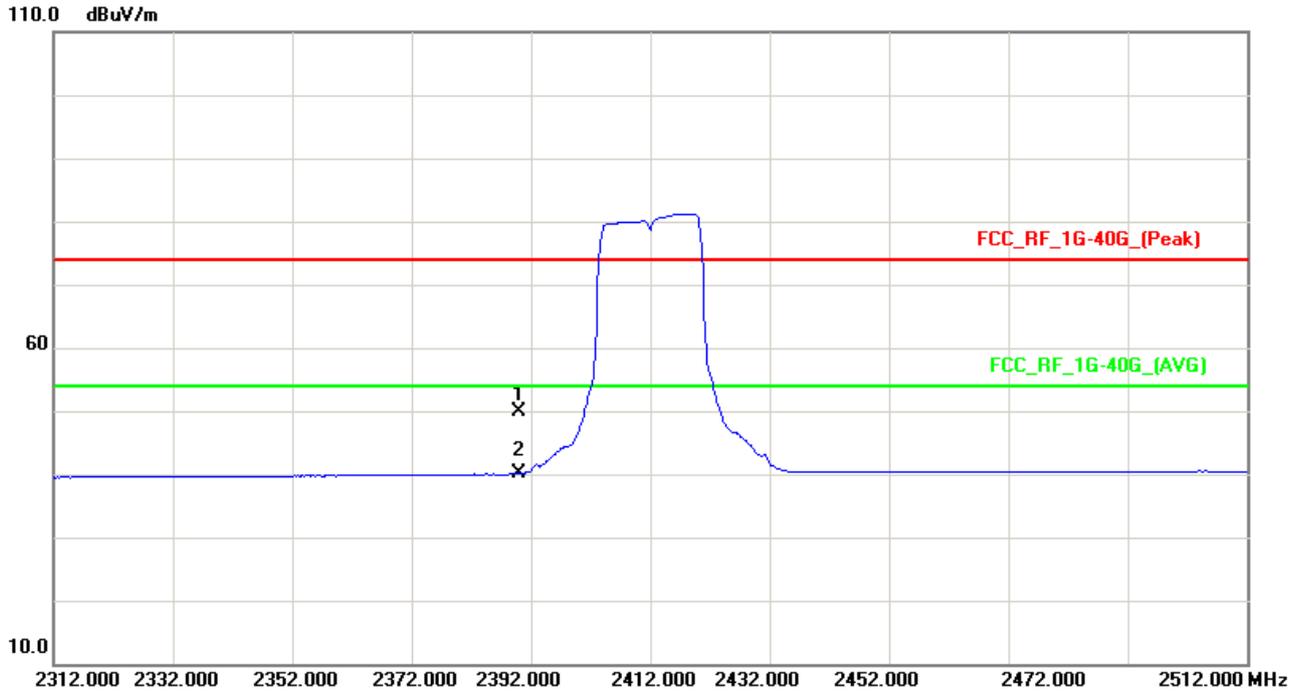
Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2483.500	14.49	36.39	50.88	74.00	-23.12	peak	HORIZONTAL
2	*	2483.500	4.55	36.39	40.94	54.00	-13.06	AVG	HORIZONTAL

Test Mode: 11g

Channel 1

Vertical

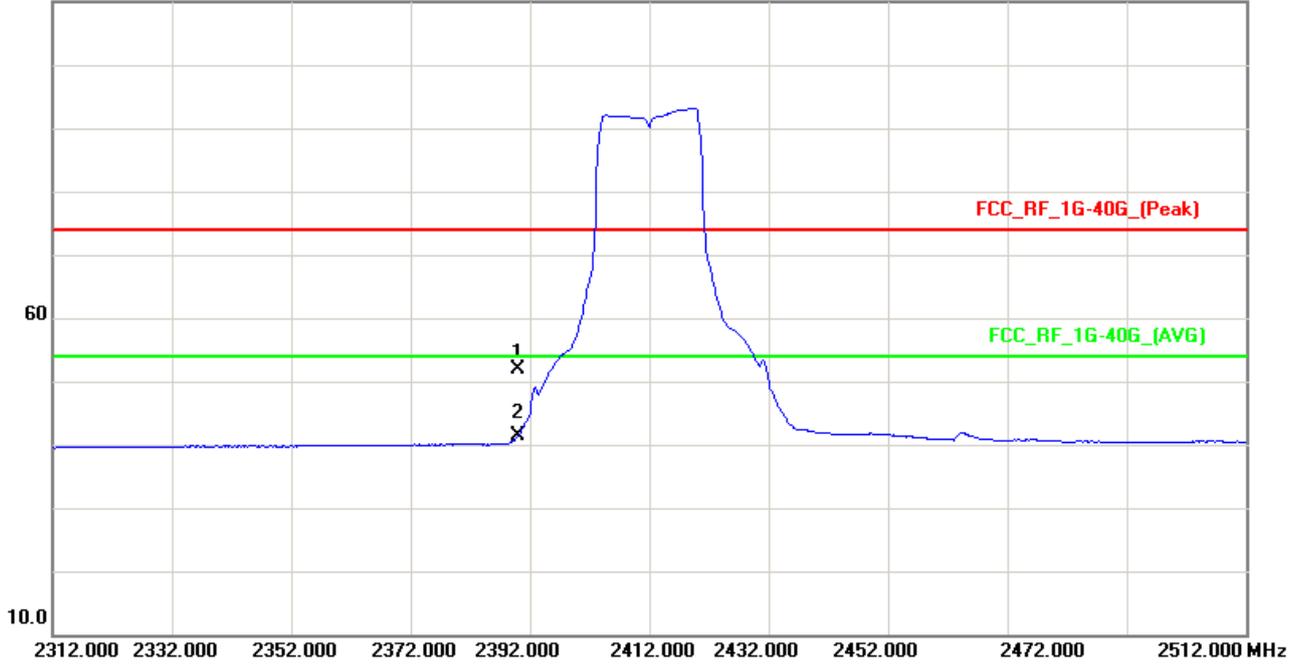


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2390.000	13.94	35.88	49.82	74.00	-24.18	peak	VERTICAL
2	*	2390.000	4.24	35.88	40.12	54.00	-13.88	AVG	VERTICAL

Horizontal

110.0 dBuV/m

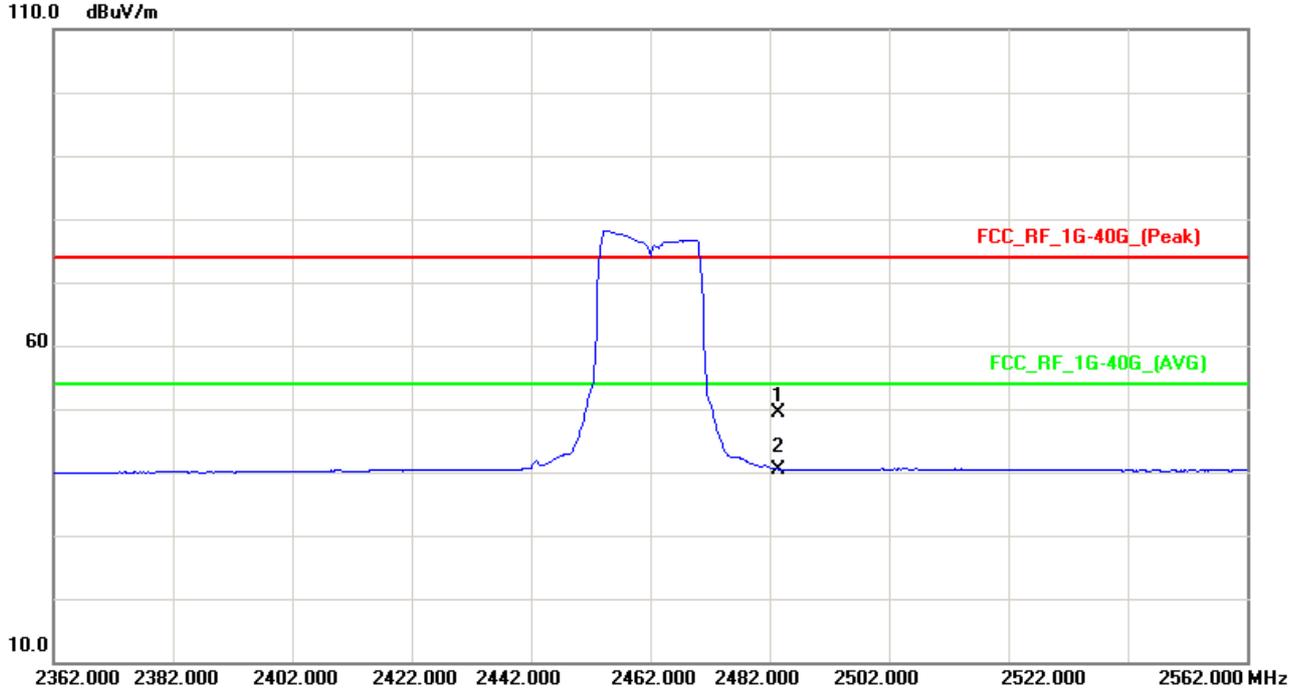


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2390.000	16.01	35.88	51.89	74.00	-22.11	peak	HORIZONTAL
2	*	2390.000	5.43	35.88	41.31	54.00	-12.69	AVG	HORIZONTAL

Channel 11

Vertical

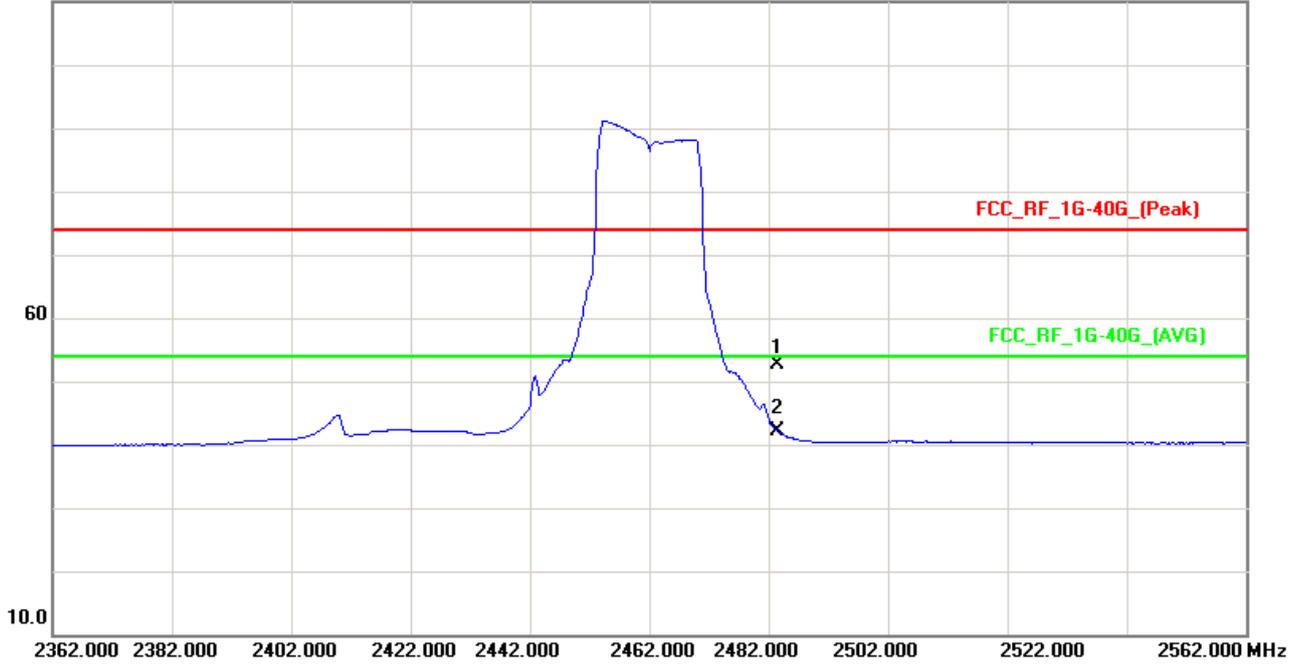


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2483.500	12.94	36.39	49.33	74.00	-24.67	peak	VERTICAL
2	*	2483.500	4.08	36.39	40.47	54.00	-13.53	AVG	VERTICAL

Horizontal

110.0 dBuV/m



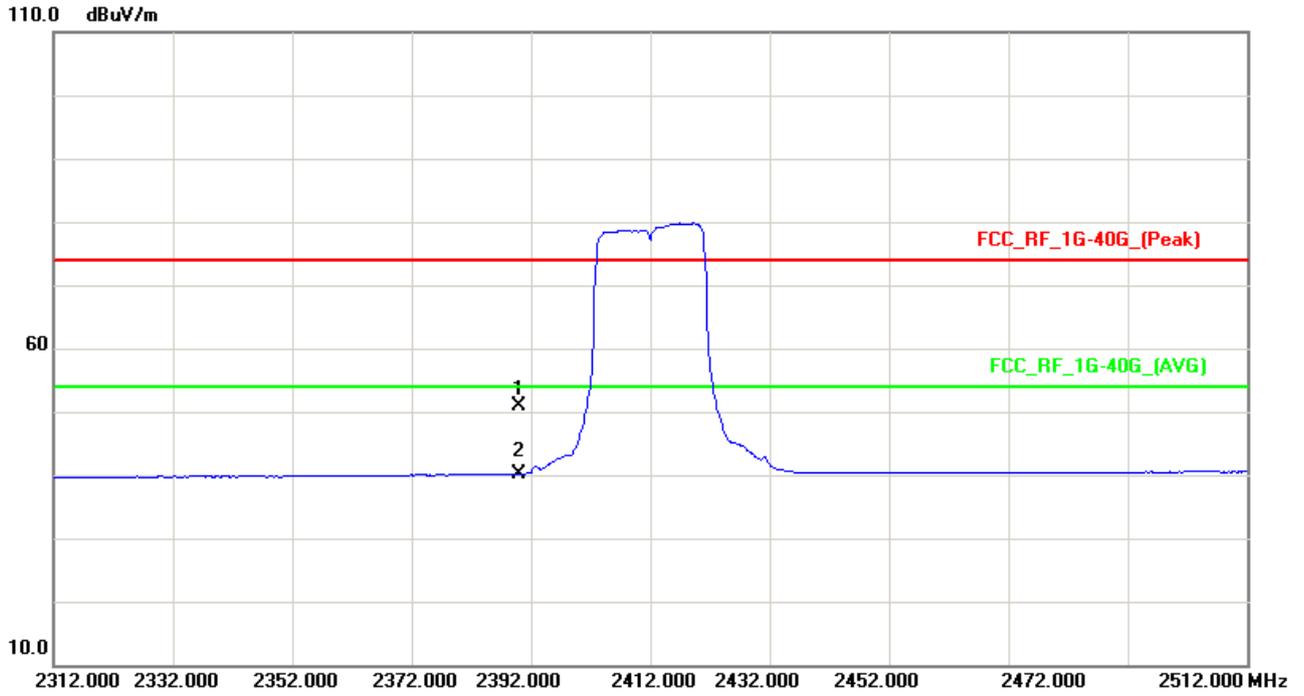
Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2483.500	16.36	36.39	52.75	74.00	-21.25	peak	HORIZONTAL
2	*	2483.500	5.76	36.39	42.15	54.00	-11.85	AVG	HORIZONTAL

Test Mode: 11N

Channel 1

Vertical

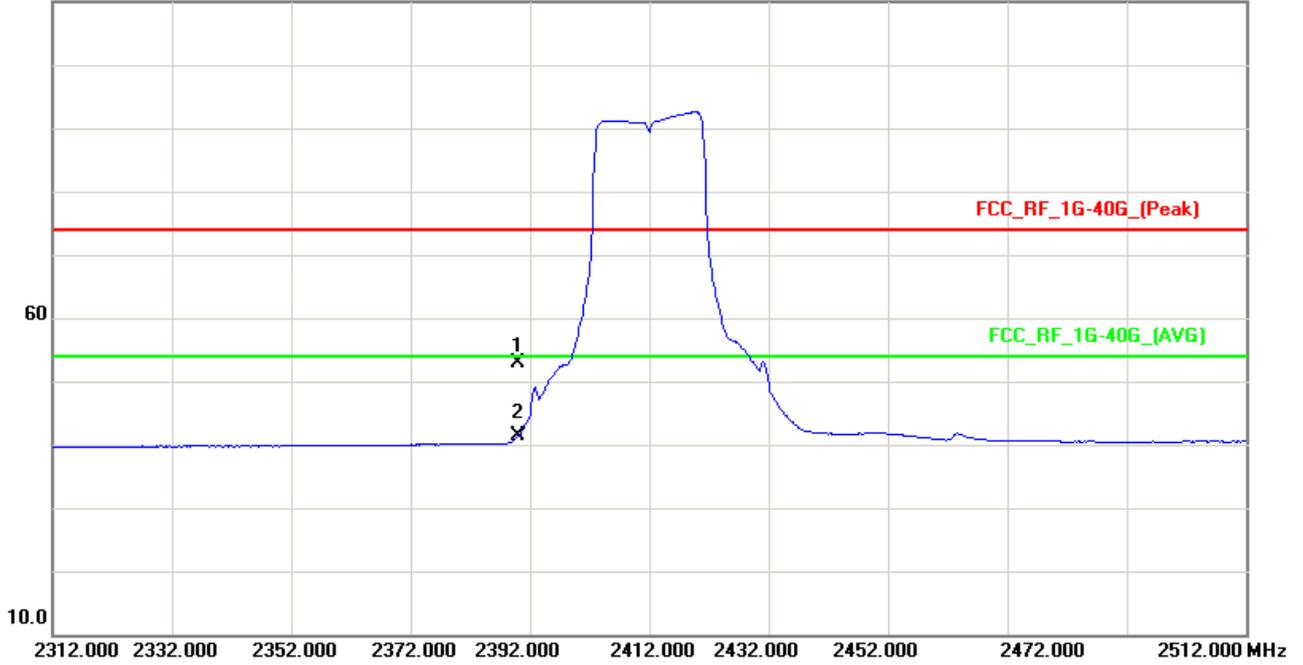


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2390.000	15.09	35.88	50.97	74.00	-23.03	peak	VERTICAL
2	*	2390.000	4.25	35.88	40.13	54.00	-13.87	AVG	VERTICAL

Horizontal

110.0 dBuV/m



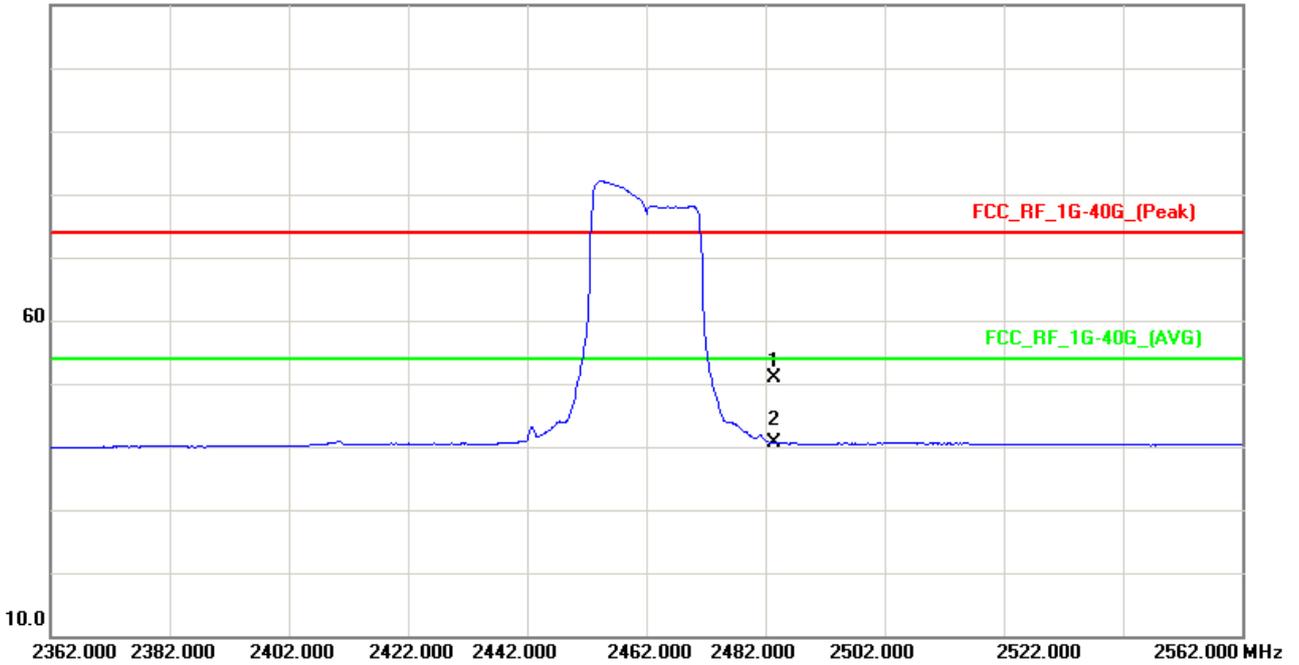
Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2390.000	16.92	35.88	52.80	74.00	-21.20	peak	HORIZONTAL
2	*	2390.000	5.39	35.88	41.27	54.00	-12.73	AVG	HORIZONTAL

Channel 11

Vertical

110.0 dBuV/m

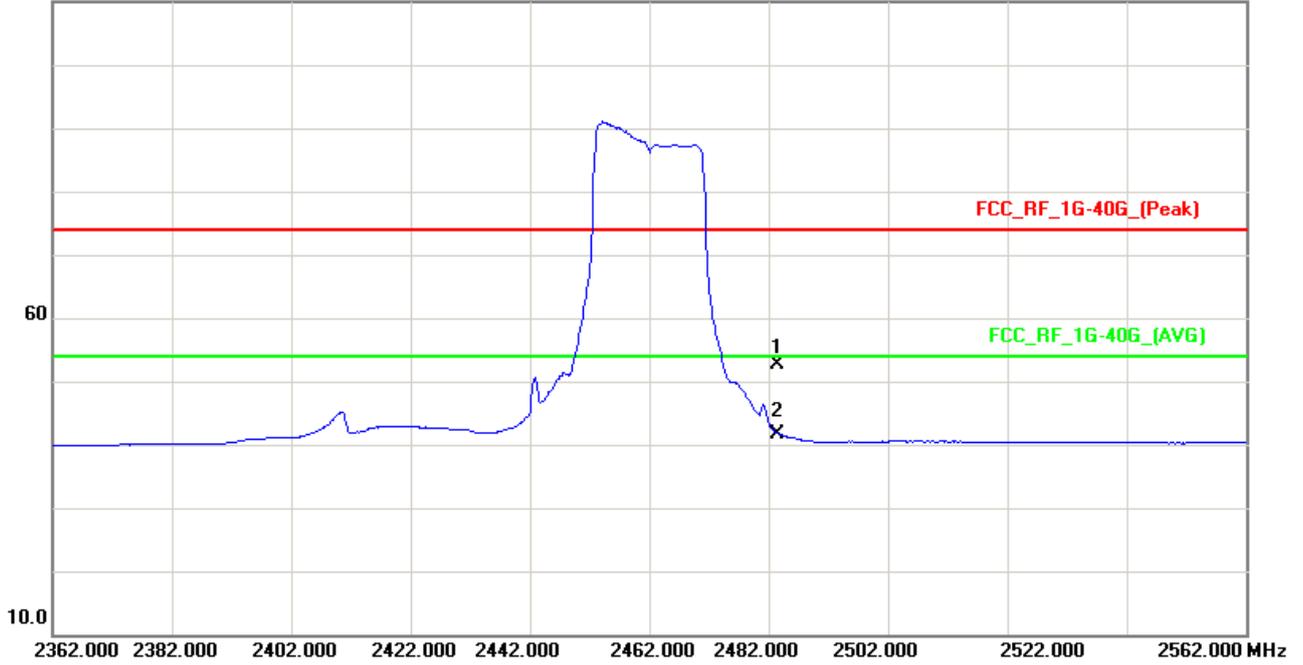


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2483.500	14.42	36.39	50.81	74.00	-23.19	peak	VERTICAL
2	*	2483.500	4.25	36.39	40.64	54.00	-13.36	AVG	VERTICAL

Horizontal

110.0 dBuV/m



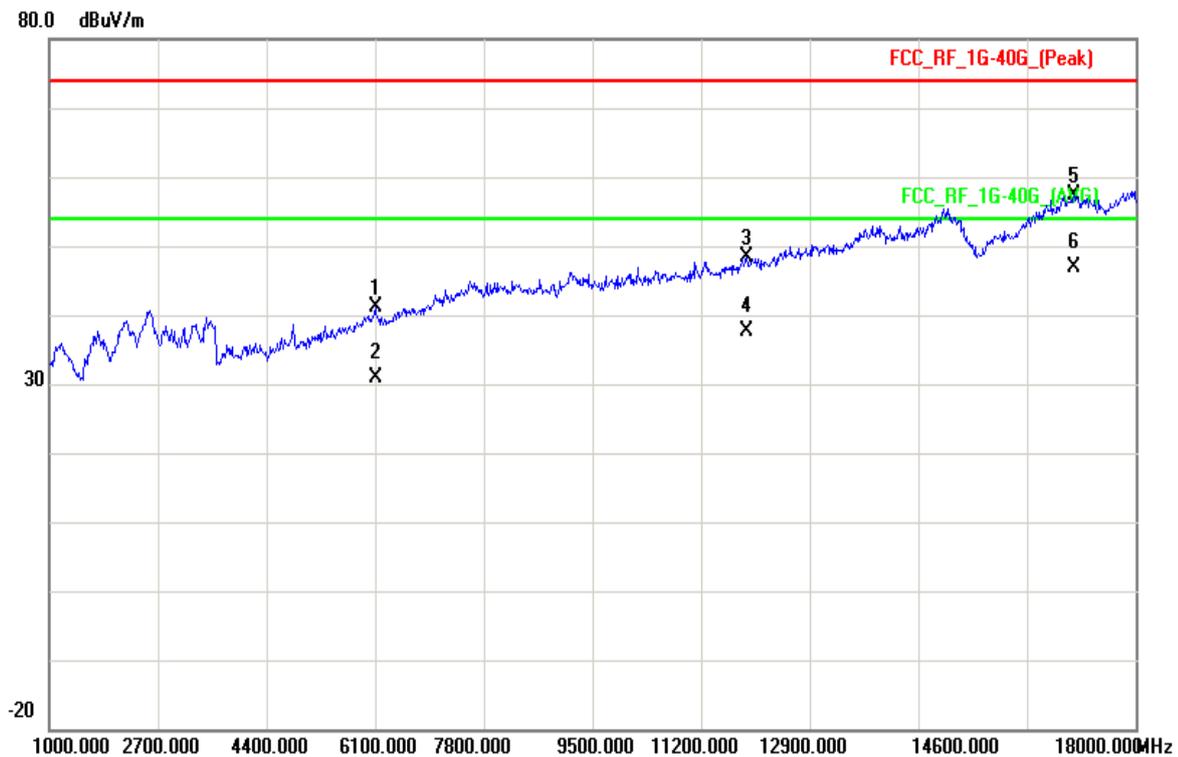
Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2483.500	16.21	36.39	52.60	74.00	-21.40	peak	HORIZONTAL
2	*	2483.500	5.36	36.39	41.75	54.00	-12.25	AVG	HORIZONTAL

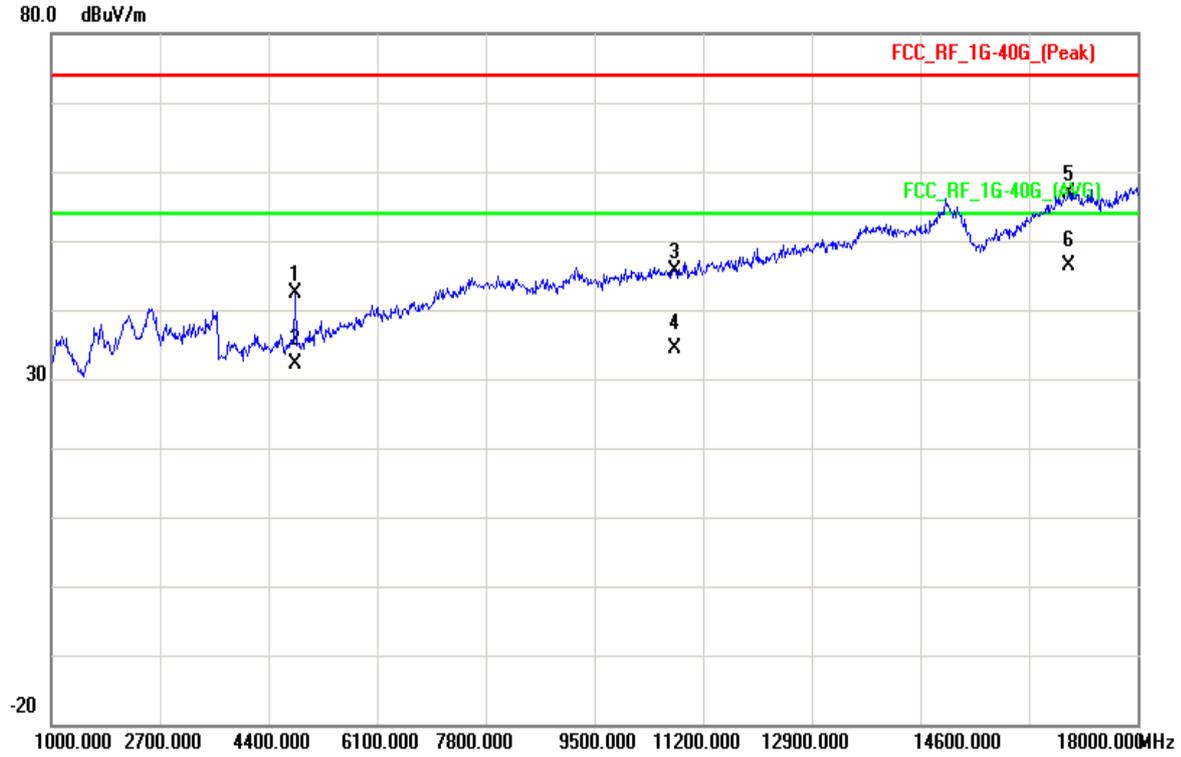
Part 5: Testing Range of “1 GHz to 18 GHz”

- 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).

Vertical



Horizontal

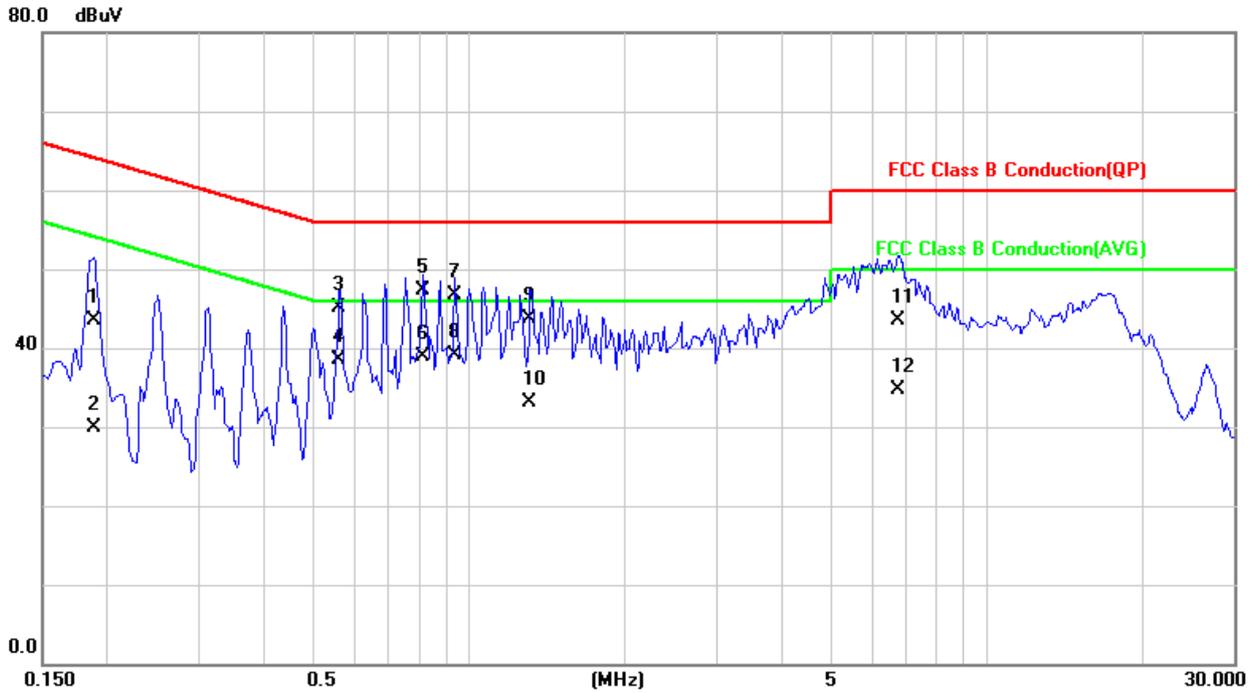




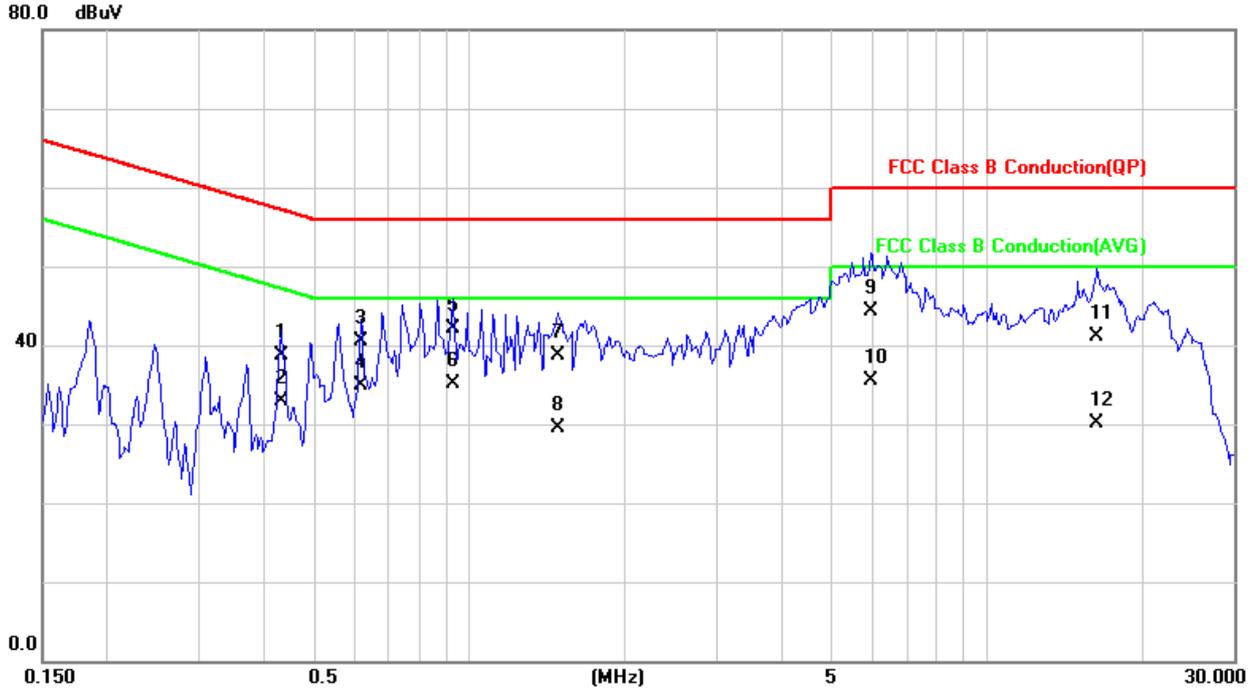
Appendix I: Conducted Emission at Power Port

Note: RBW = 9 kHz, VBW = 30 kHz

Channel 6



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Line
1	0.1891	33.90	9.70	43.60	64.08	-20.48	QP	L1
2	0.1891	20.30	9.70	30.00	54.08	-24.08	AVG	L1
3	0.5641	35.20	9.84	45.04	56.00	-10.96	QP	L1
4	0.5641	28.60	9.84	38.44	46.00	-7.56	AVG	L1
5	0.8141	37.30	9.93	47.23	56.00	-8.77	QP	L1
6	0.8141	29.00	9.93	38.93	46.00	-7.07	AVG	L1
7	0.9391	36.80	9.96	46.76	56.00	-9.24	QP	L1
8	0.9391	29.10	9.96	39.06	46.00	-6.94	AVG	L1
9	1.3141	33.70	9.99	43.69	56.00	-12.31	QP	L1
10	1.3141	23.20	9.99	33.19	46.00	-12.81	AVG	L1
11	6.7656	33.60	9.85	43.45	60.00	-16.55	QP	L1
12	6.7656	24.90	9.85	34.75	50.00	-15.25	AVG	L1



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Line
1	0.4352	29.10	9.64	38.74	57.15	-18.41	QP	N
2	0.4352	23.20	9.64	32.84	47.15	-14.31	AVG	N
3	0.6188	30.80	9.68	40.48	56.00	-15.52	QP	N
4	0.6188	25.20	9.68	34.88	46.00	-11.12	AVG	N
5	0.9313	32.30	9.77	42.07	56.00	-13.93	QP	N
6	0.9313	25.30	9.77	35.07	46.00	-10.93	AVG	N
7	1.4860	28.90	9.82	38.72	56.00	-17.28	QP	N
8	1.4860	19.70	9.82	29.52	46.00	-16.48	AVG	N
9	5.9844	34.20	10.13	44.33	60.00	-15.67	QP	N
10	5.9844	25.30	10.13	35.43	50.00	-14.57	AVG	N
11	16.3711	30.80	10.27	41.07	60.00	-18.93	QP	N
12	16.3711	19.90	10.27	30.17	50.00	-19.83	AVG	N

END