



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.

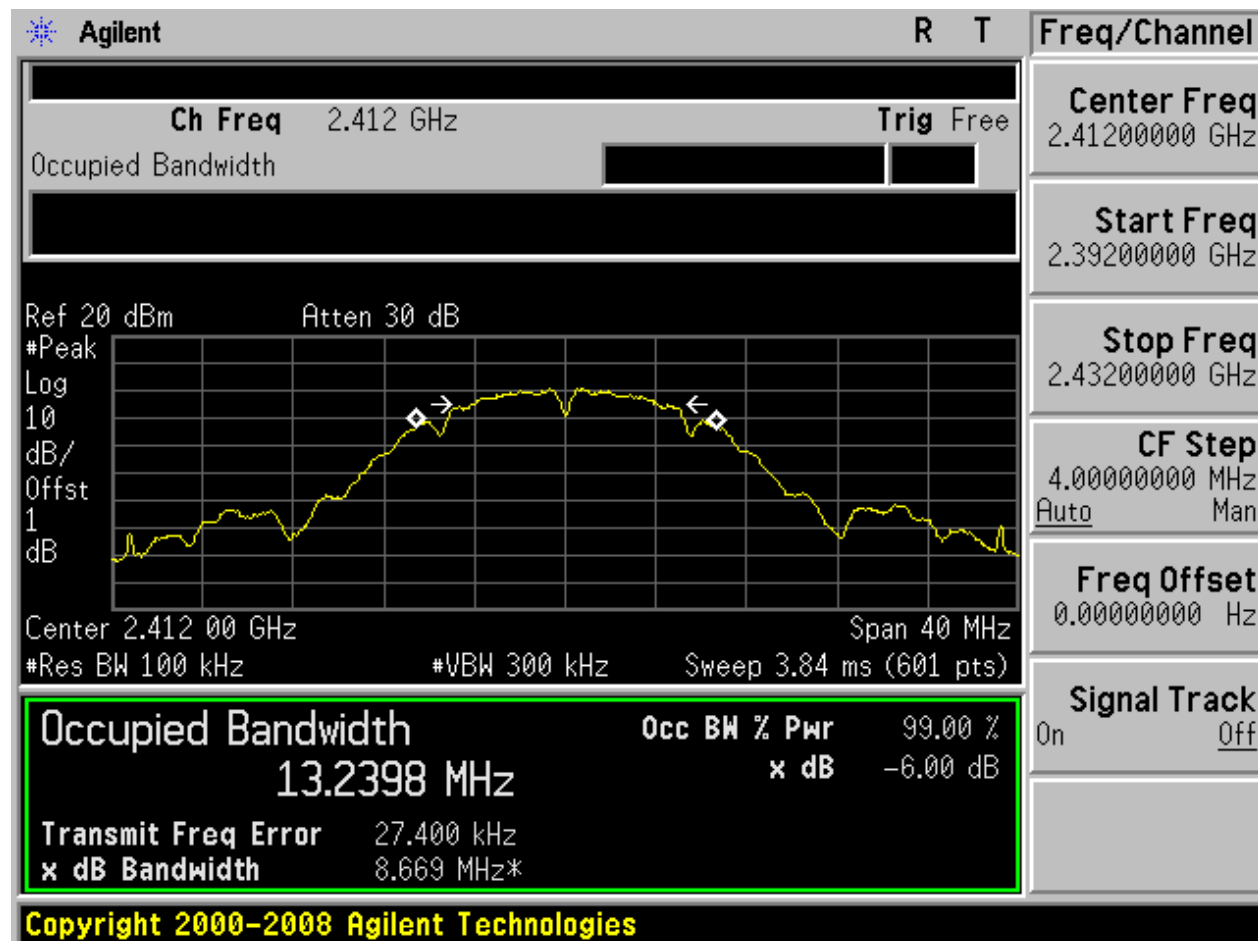
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

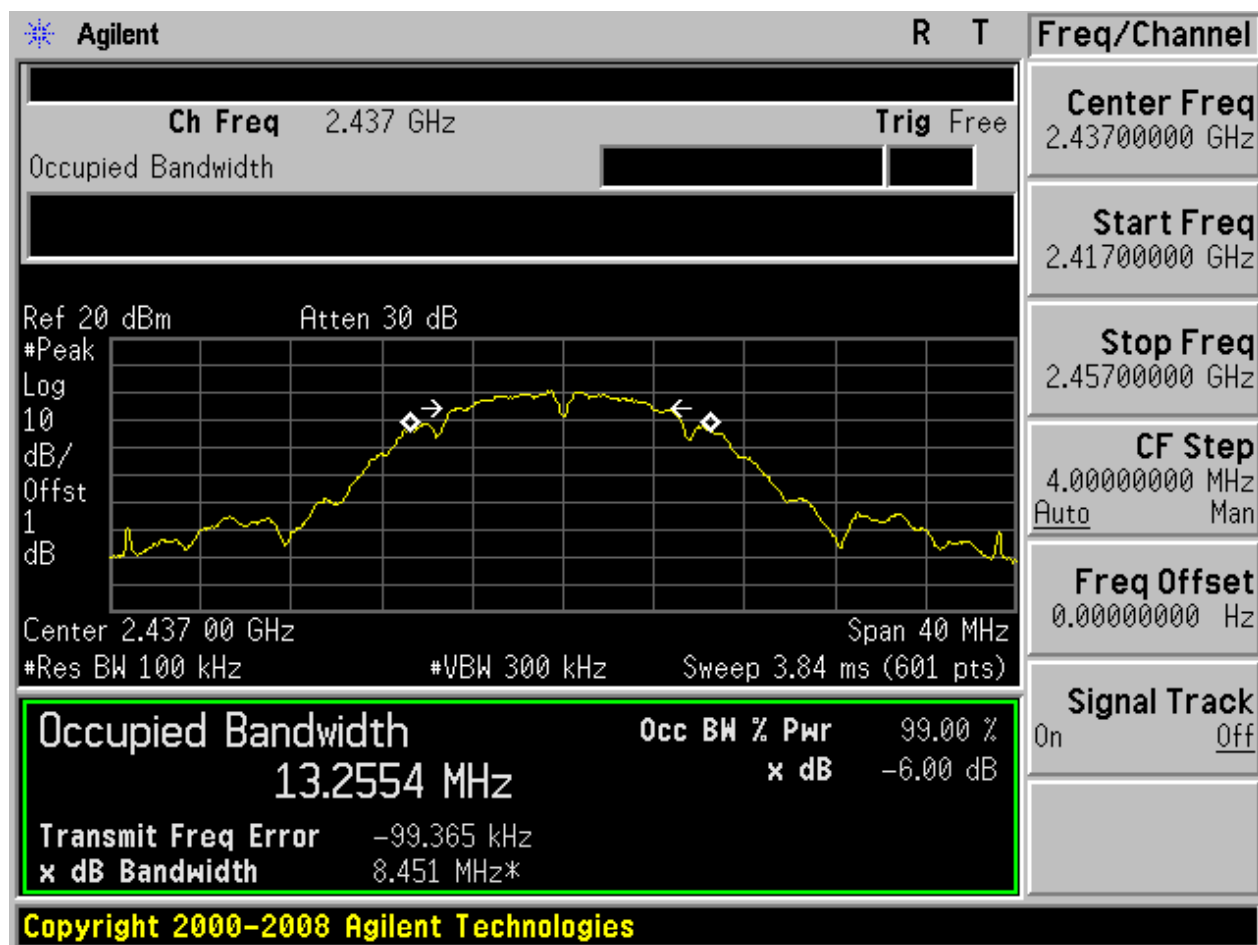
Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
11B	L	2412	Ant 1	8.67	pass
11B	M	2437	Ant 1	8.45	pass
11B	H	2462	Ant 1	8.79	pass
11G	L	2412	Ant 1	16.59	pass
11G	M	2437	Ant 1	16.58	pass
11G	H	2462	Ant 1	16.59	pass
11N20	L	2412	Ant 1	17.82	pass
11N20	M	2437	Ant 1	17.82	pass
11N20	H	2462	Ant 1	17.83	pass

Part II - Test Plots

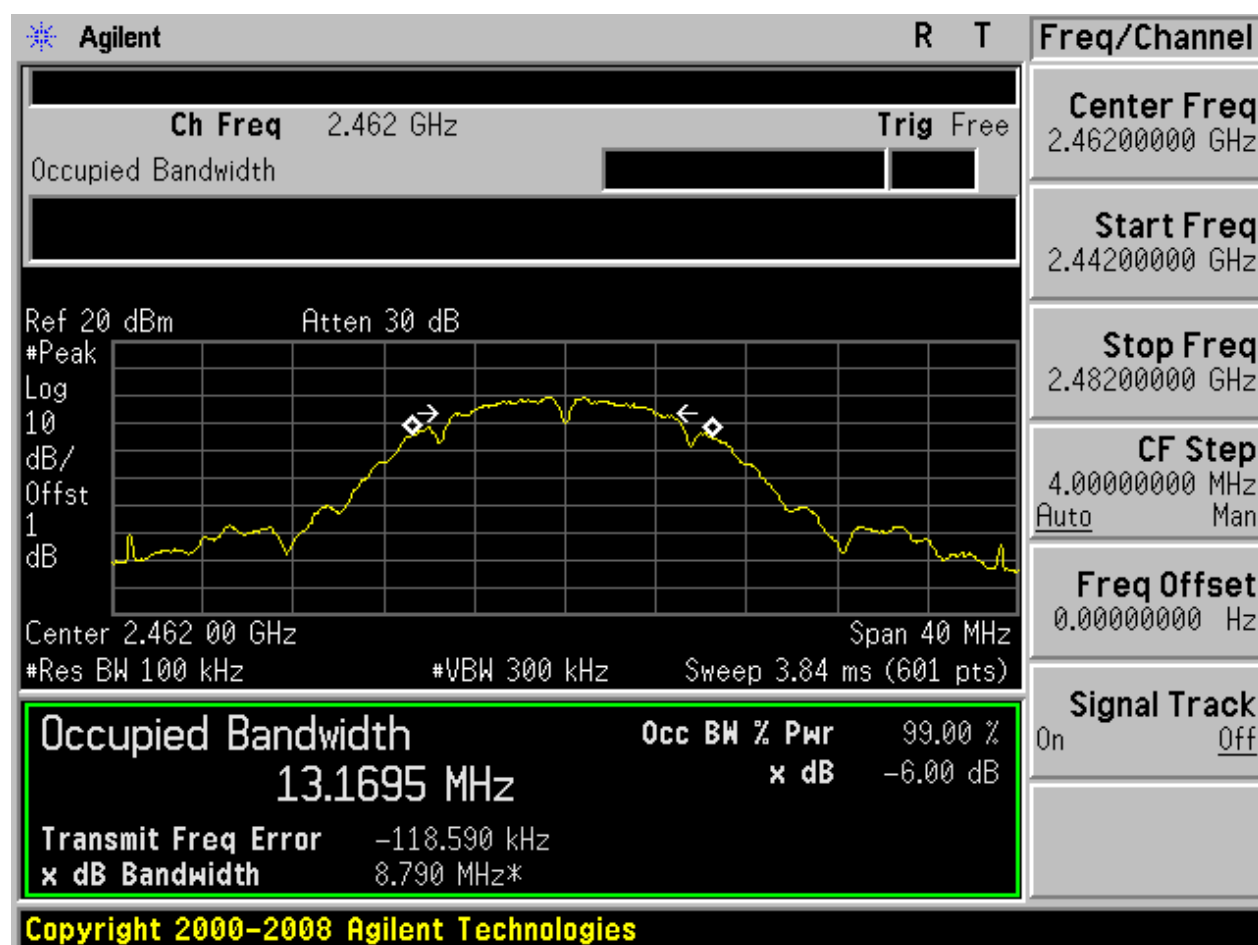
2.1 11B_L@Ant 1



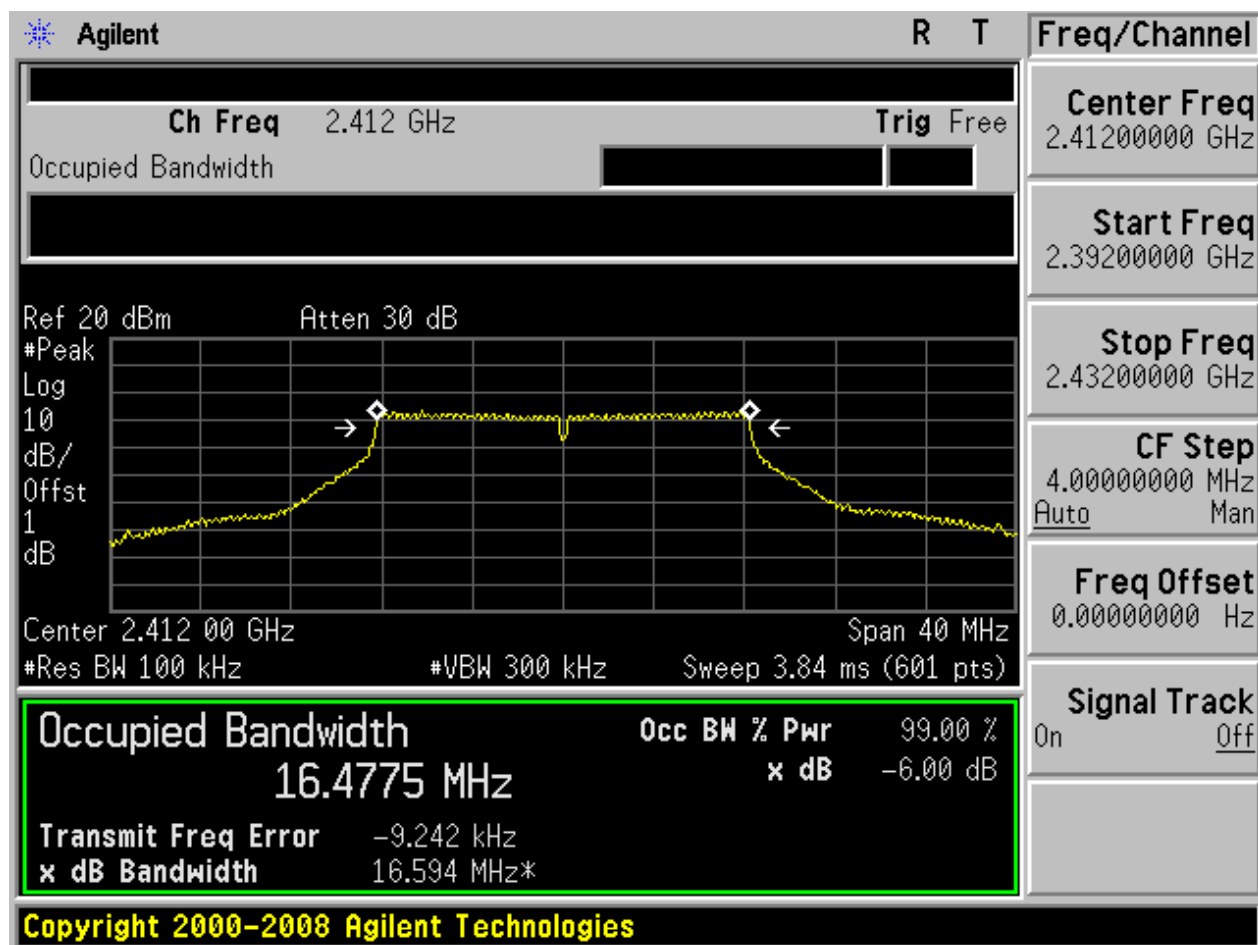
2.2 11B_M@Ant 1



2.3 11B_H@Ant 1

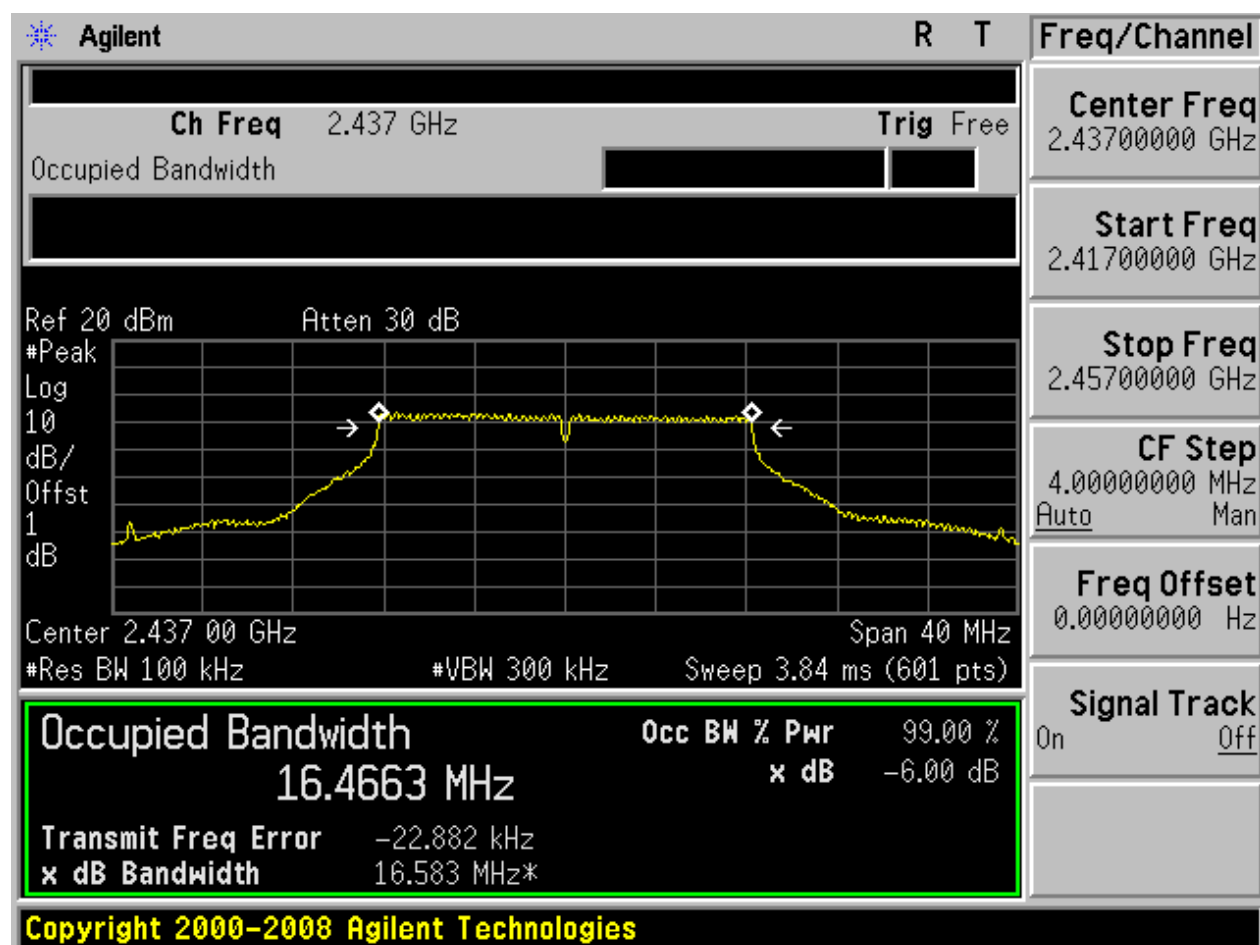


2.4 11G_L@Ant 1

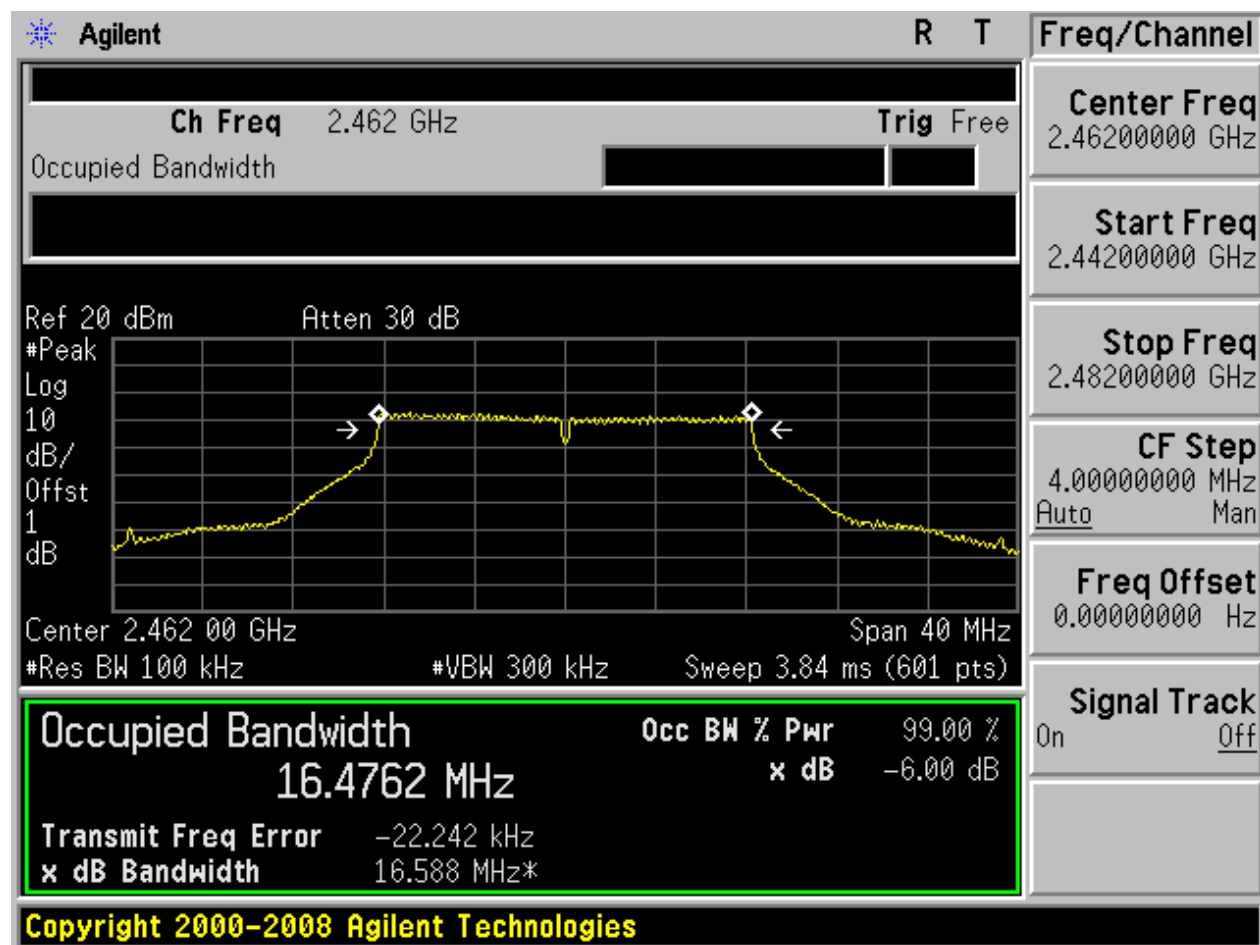




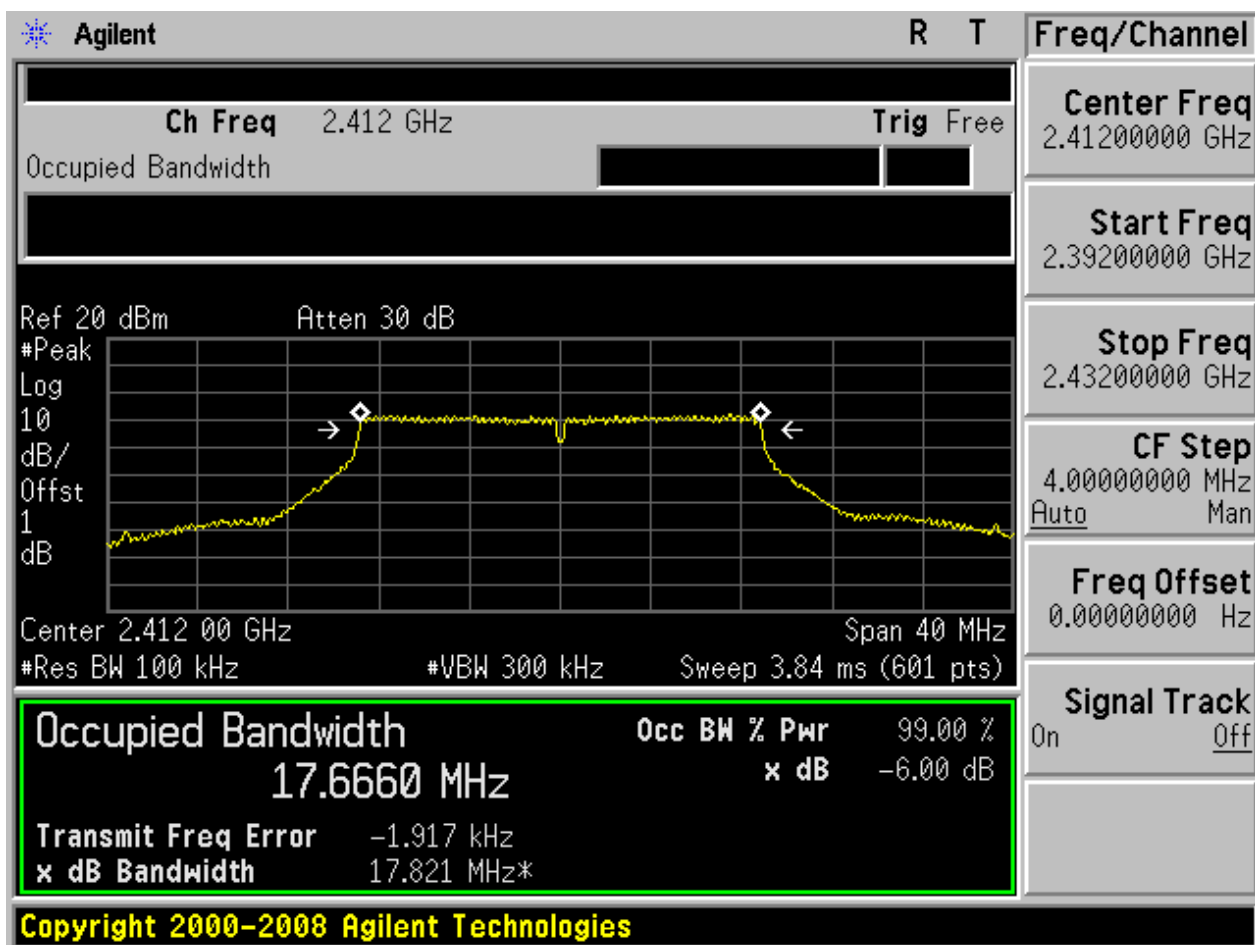
2.5 11G_M@Ant 1



2.6 11G_H@Ant 1

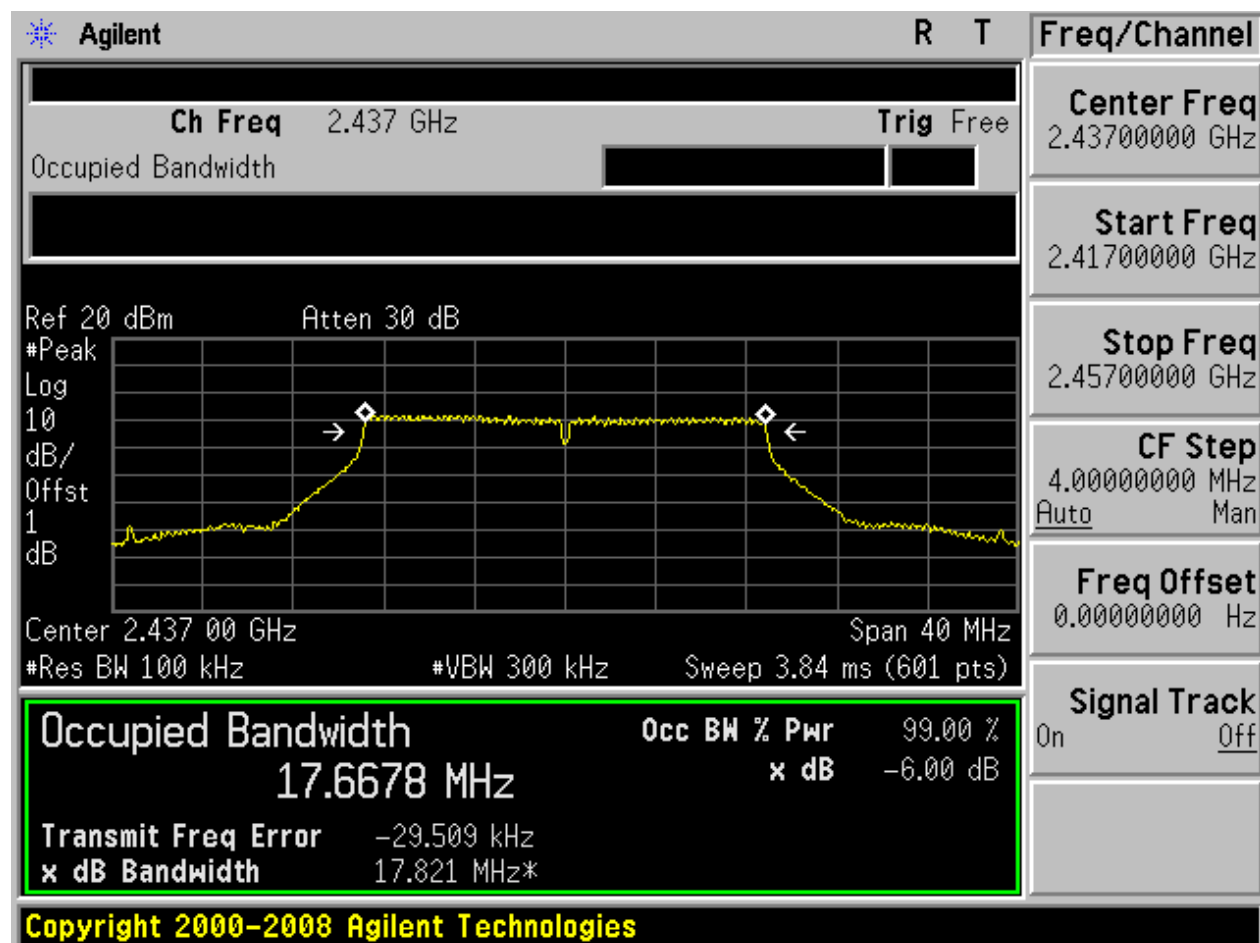


2.7 11N20_L@Ant 1

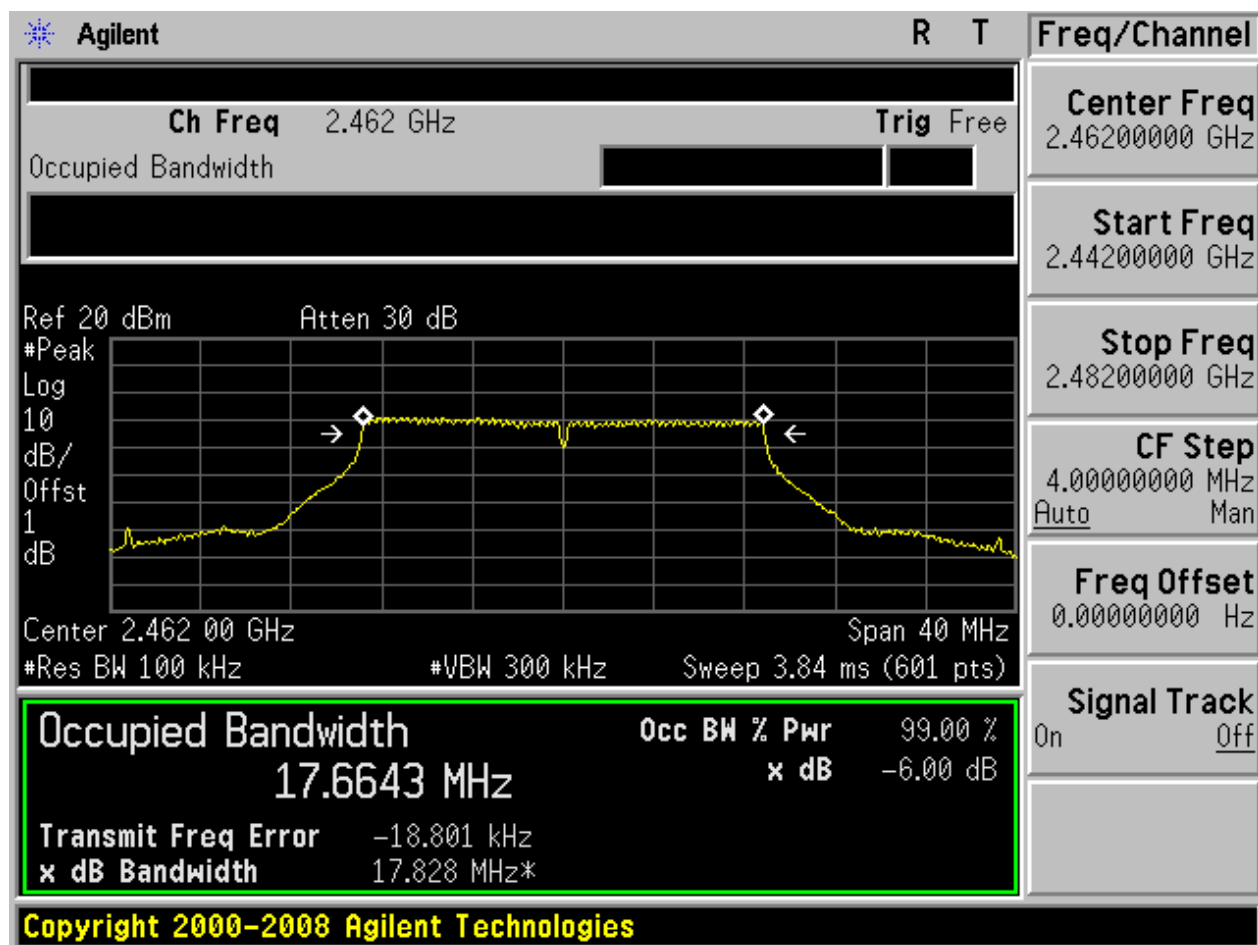




2.8 11N20_M@Ant 1



2.9 11N20_H@Ant 1



Appendix B: Occupied Bandwidth

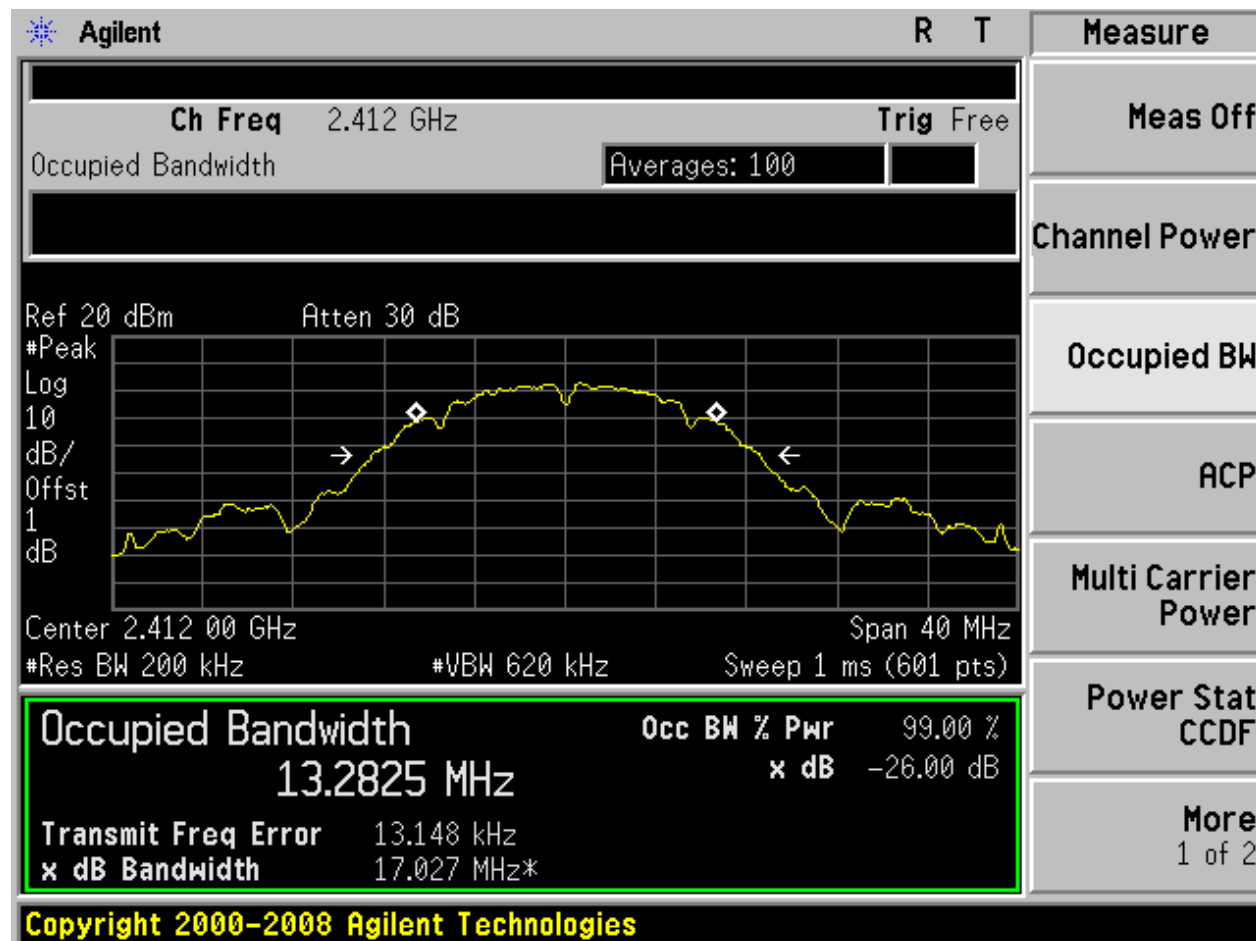
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

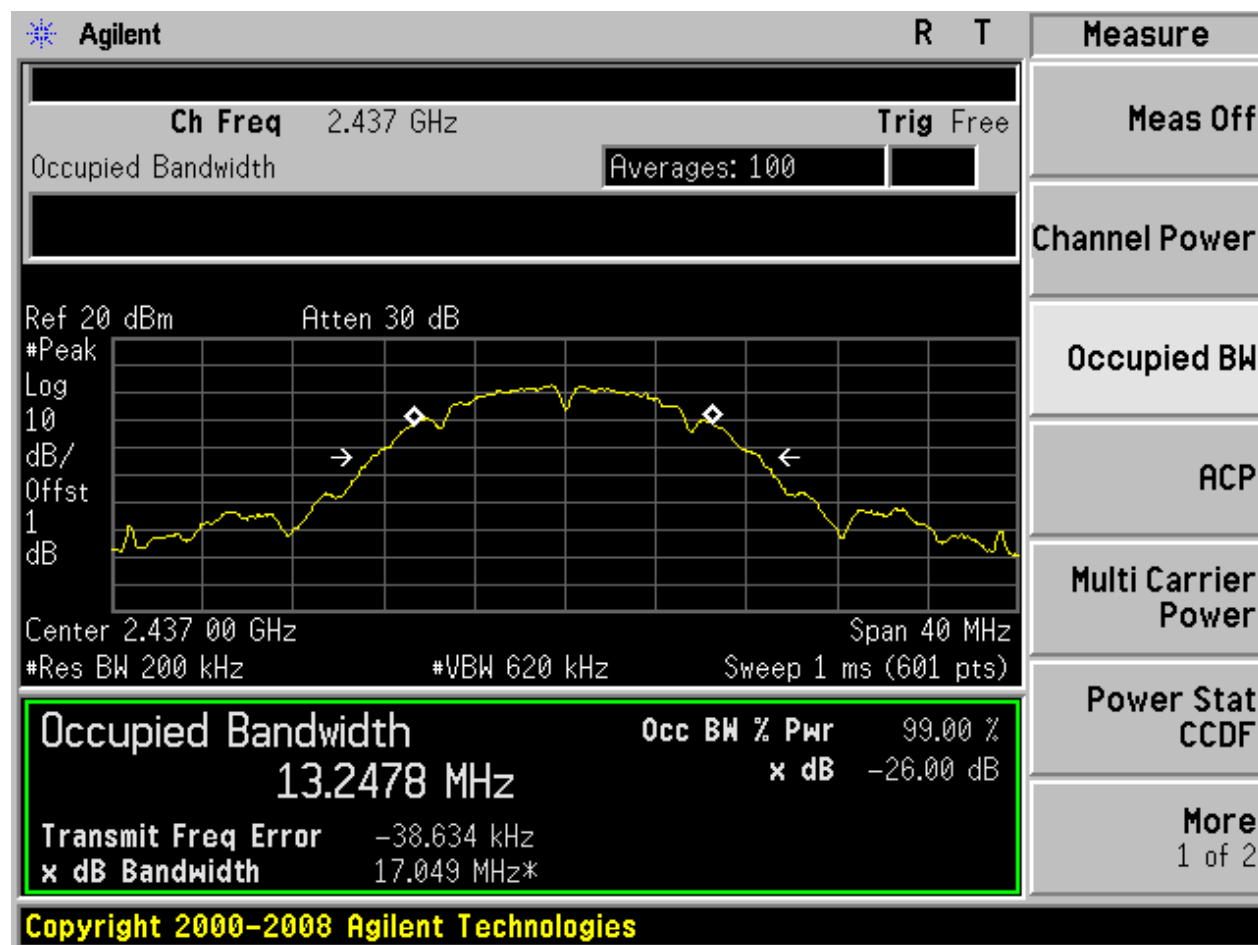
Test Mode	Test Channel	Frequency[MHz]	Ant	Occupied Bandwidth [MHz]	Verdict
11B	L	2412	Ant 1	13.28	pass
11B	M	2437	Ant 1	13.25	pass
11B	H	2462	Ant 1	13.29	pass
11G	L	2412	Ant 1	16.56	pass
11G	M	2437	Ant 1	16.52	pass
11G	H	2462	Ant 1	16.48	pass
11N20	L	2412	Ant 1	17.66	pass
11N20	M	2437	Ant 1	17.71	pass
11N20	H	2462	Ant 1	17.67	pass

Part II - Test Plots

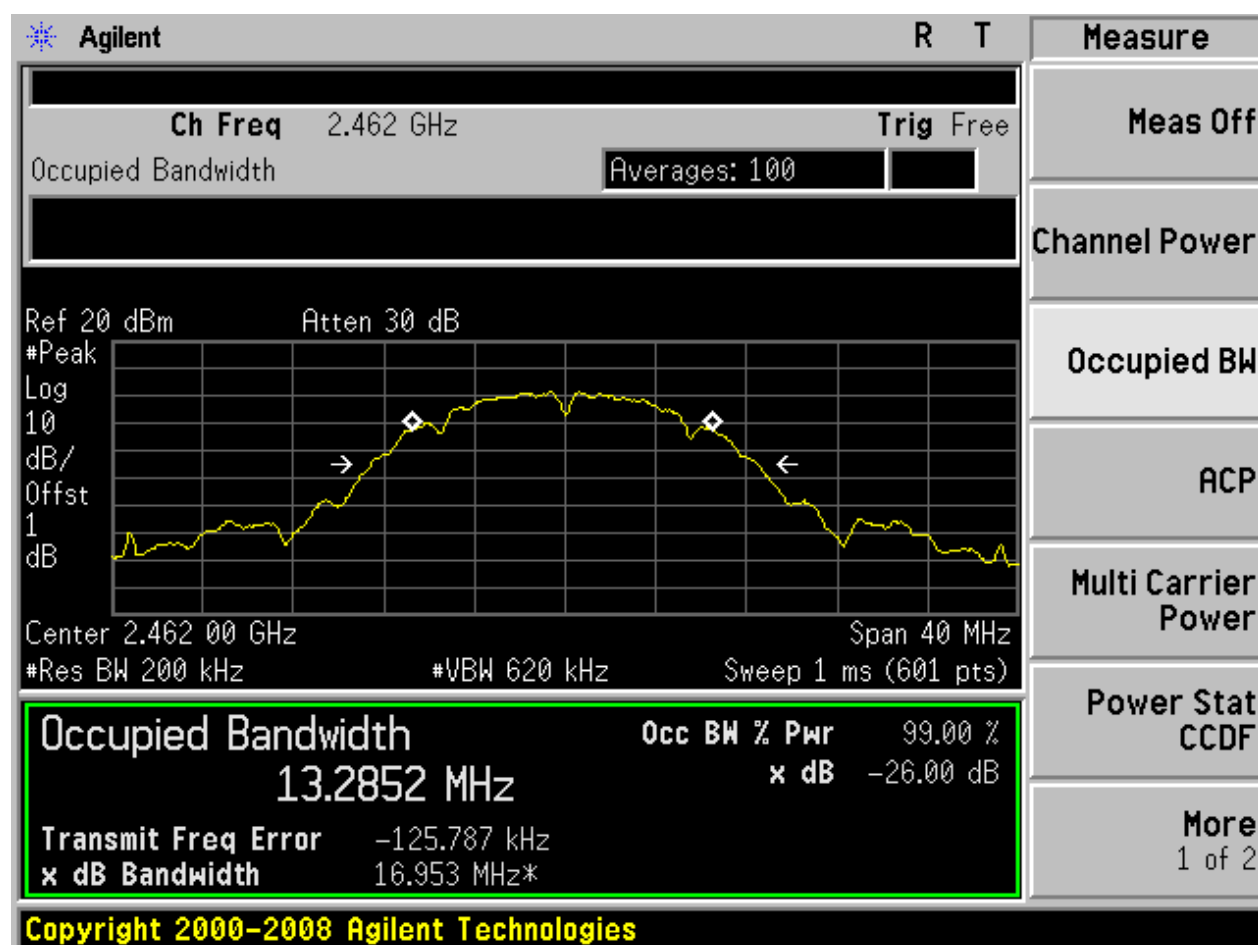
2.1 11B_L@Ant 1



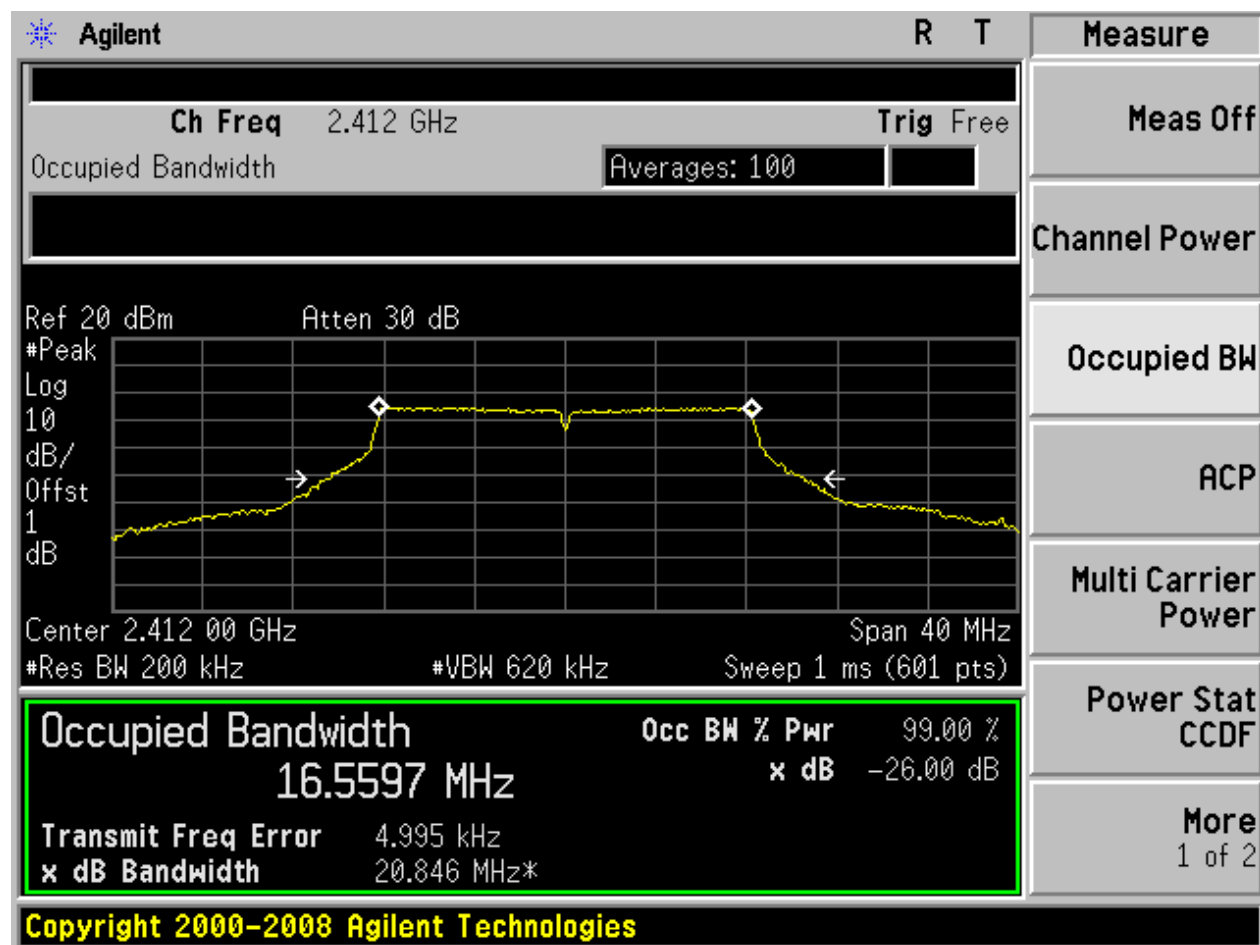
2.2 11B_M@Ant 1



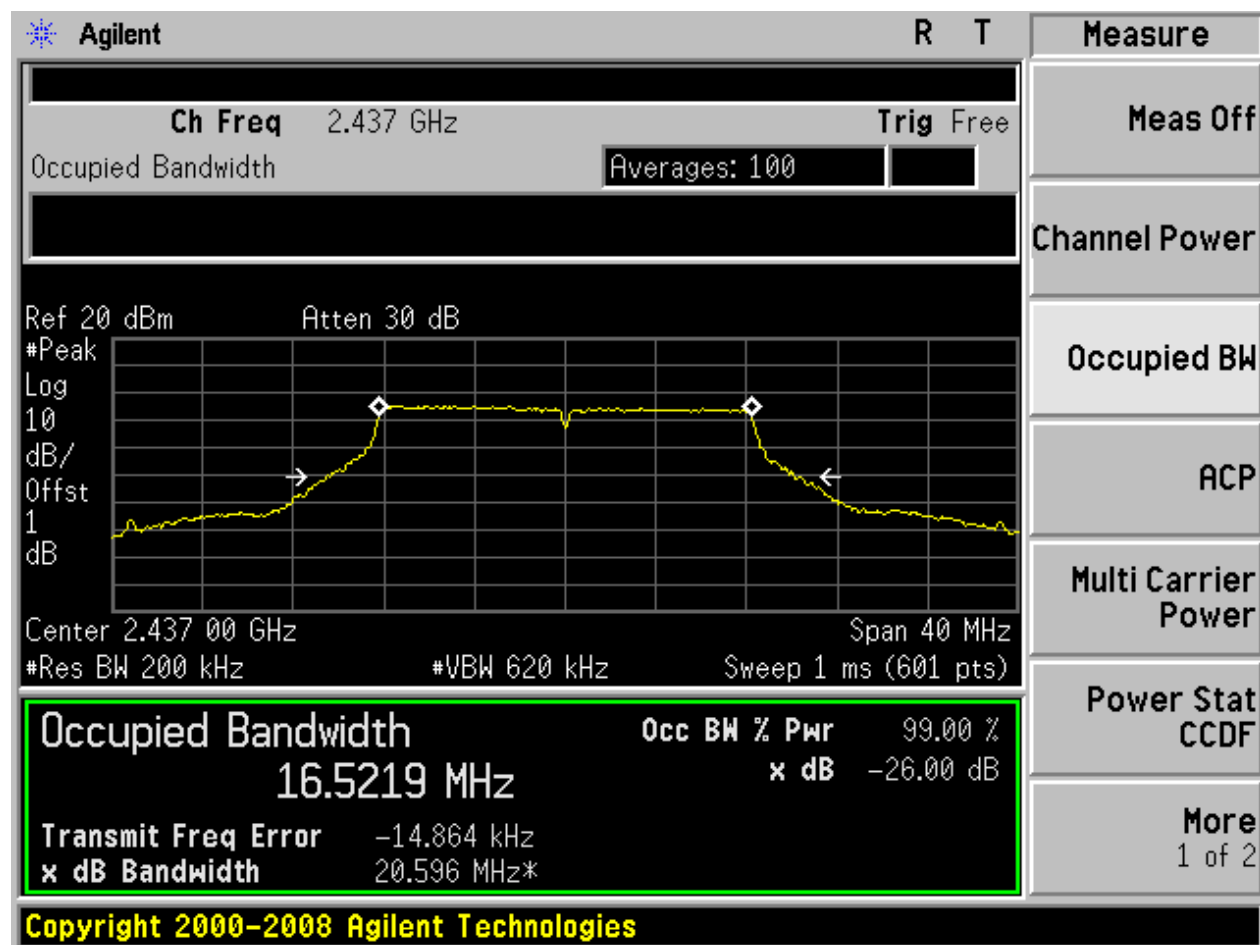
2.3 11B_H@Ant 1



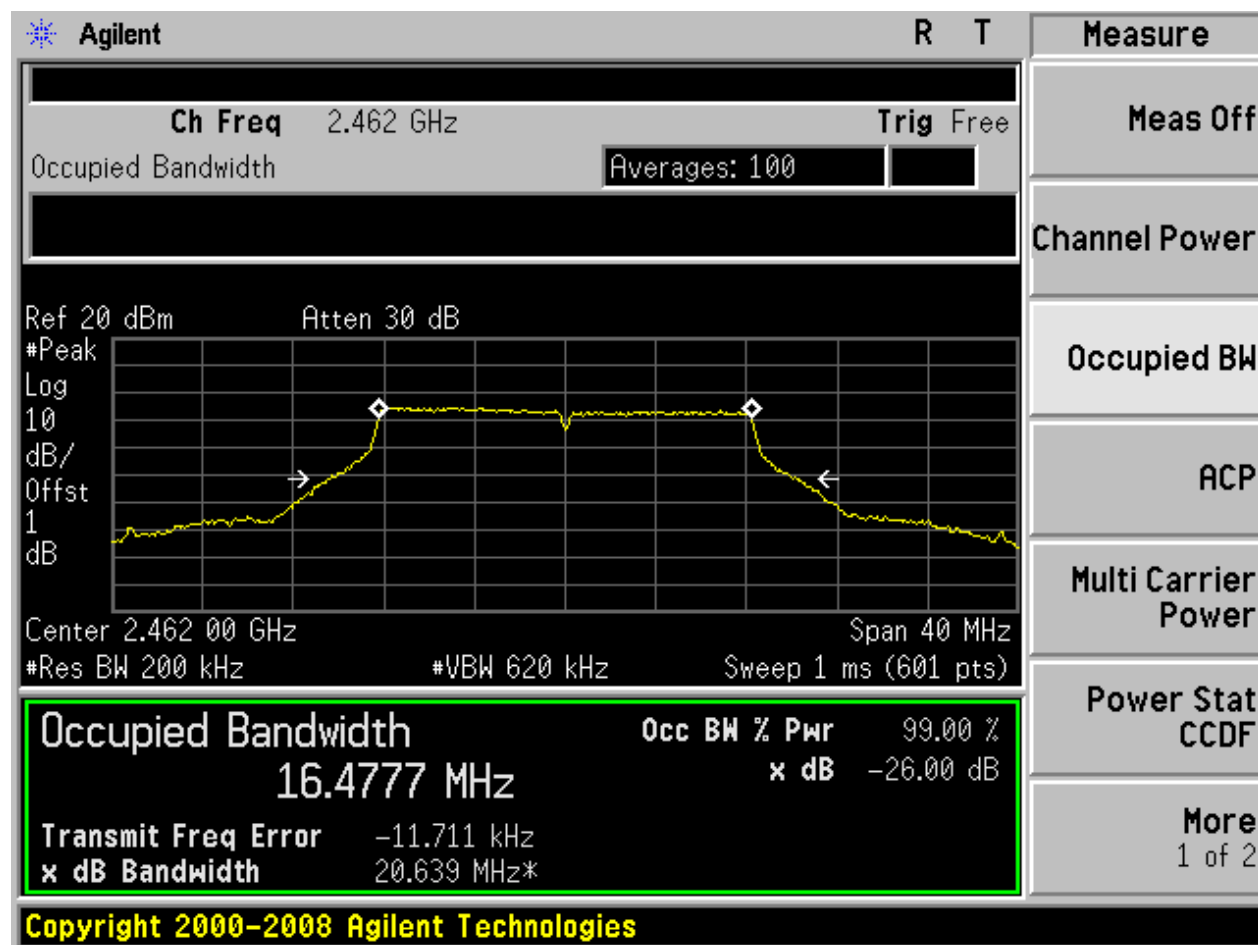
2.4 11G_L@Ant 1



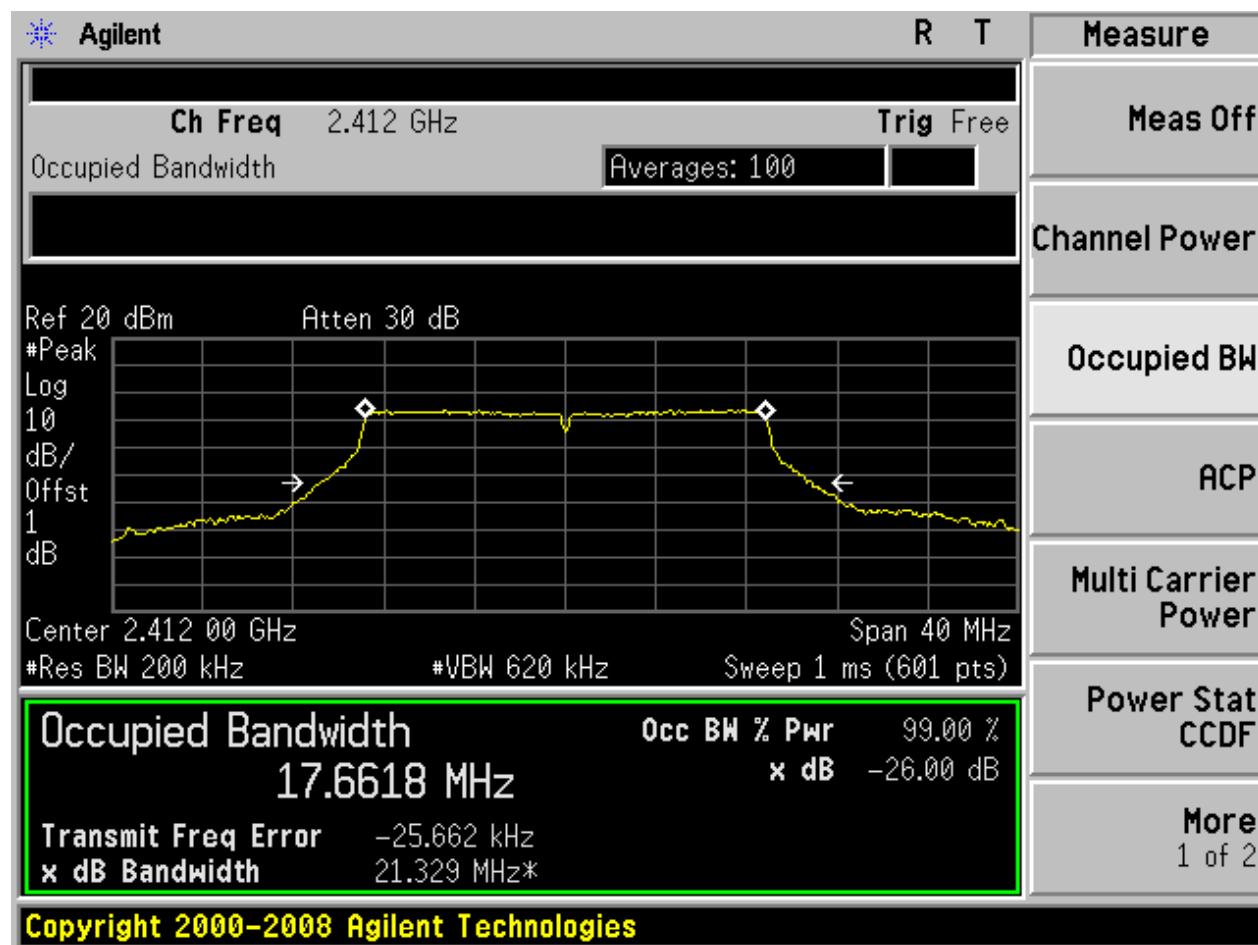
2.5 11G_M@Ant 1



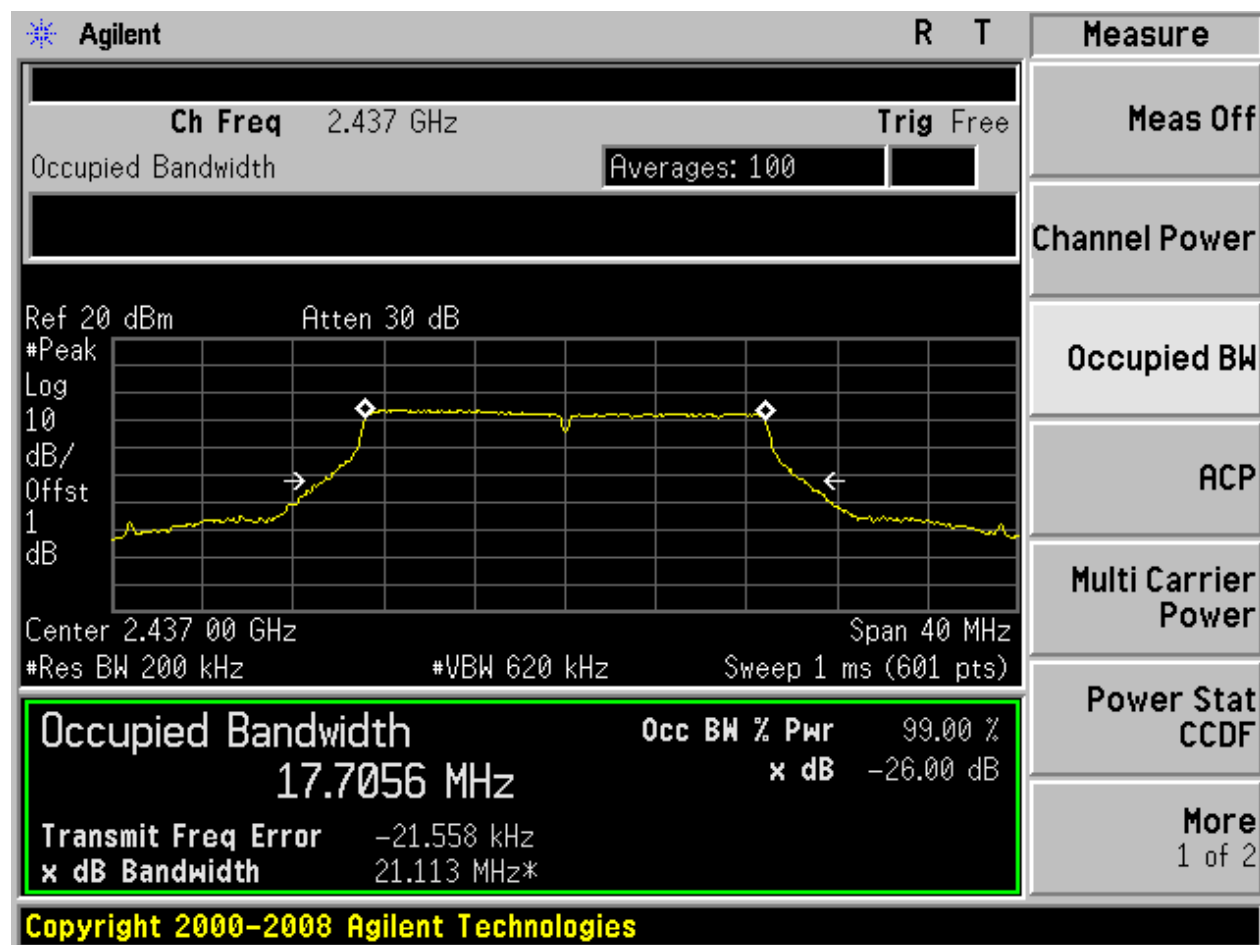
2.6 11G_H@Ant 1



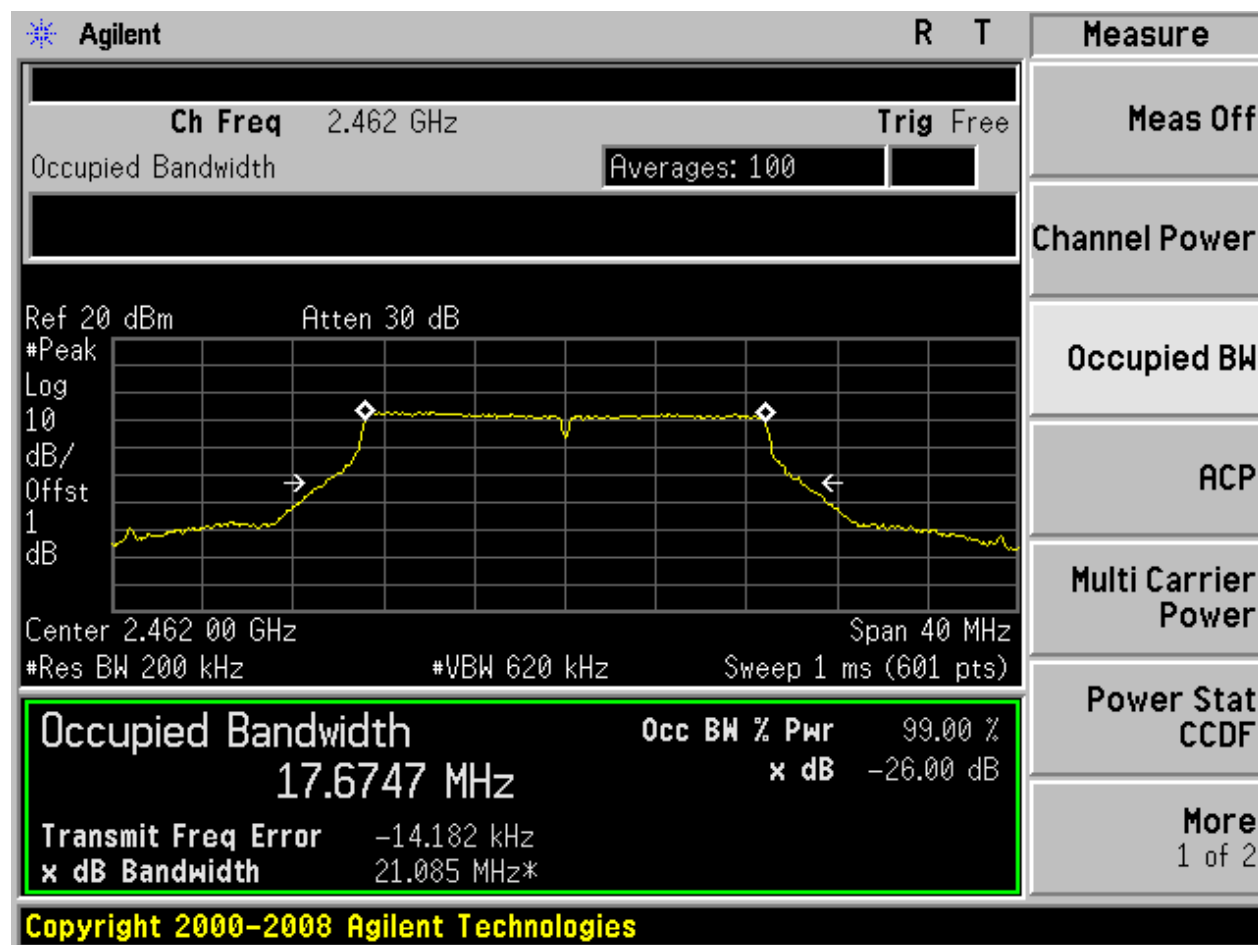
2.7 11N20_L@Ant 1



2.8 11N20_M@Ant 1



2.9 11N20_H@Ant 1



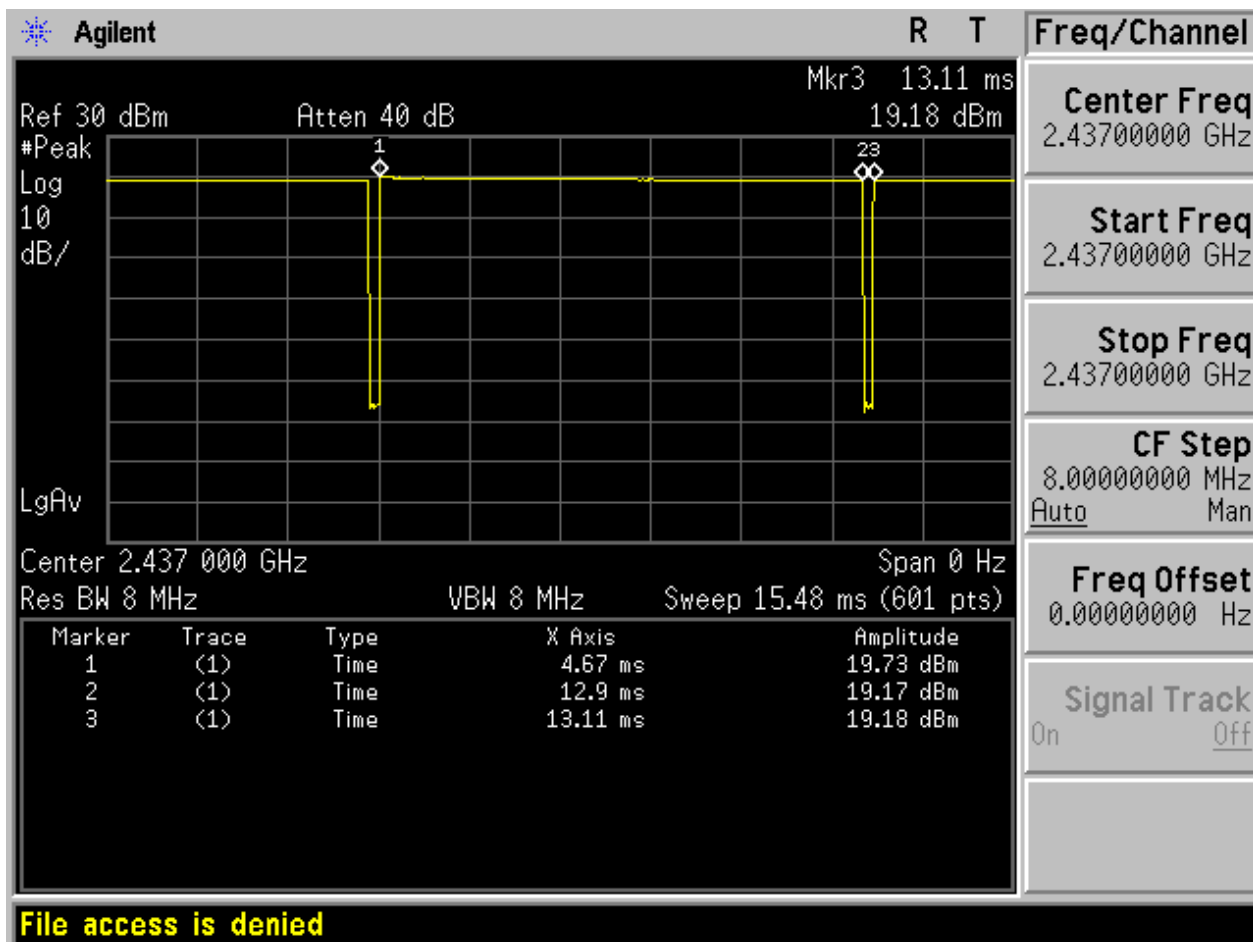
Appendix C: Duty Cycle

Part I - Test Results

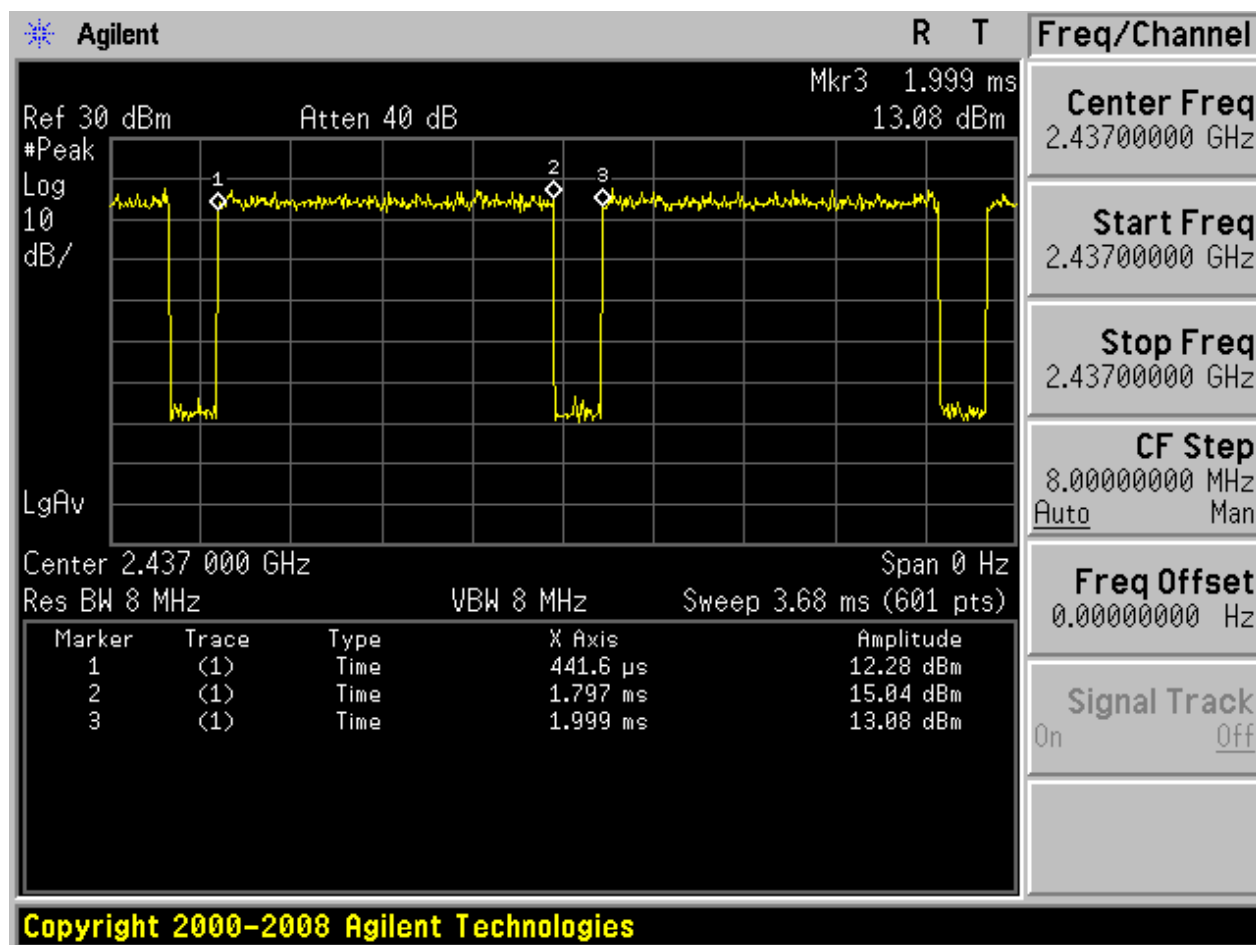
Test Mode	TX Freq. [MHz]	Duty cycle [%]
11B	Ant 1: CH1,CH6,CH11	98
11G	Ant 1: CH1,CH6,CH11	87
11N_20M_SISO	Ant 1: CH1,CH6,CH11	87

Part II - Test Plots

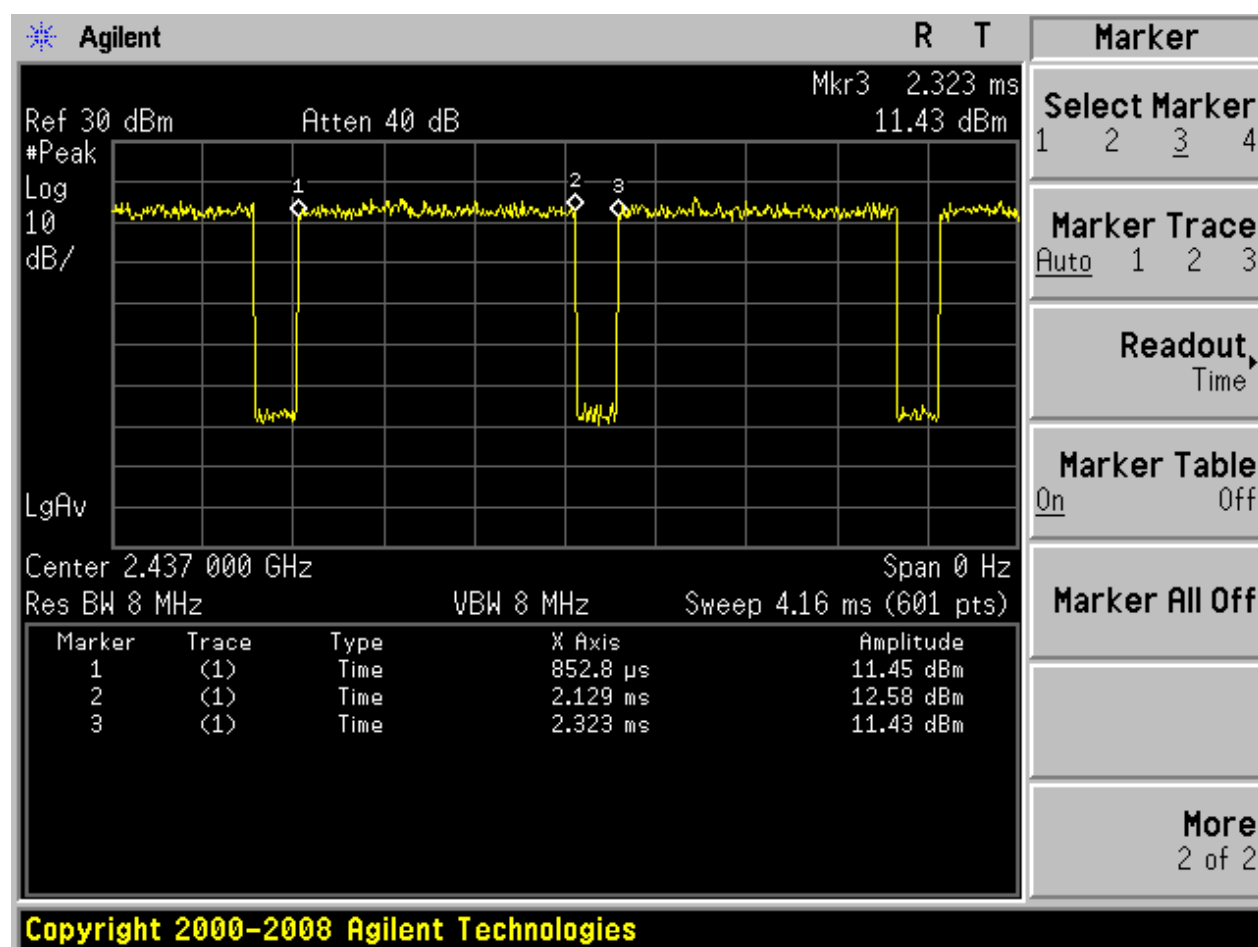
2.1 11B



2.2 11G



2.3 11N20



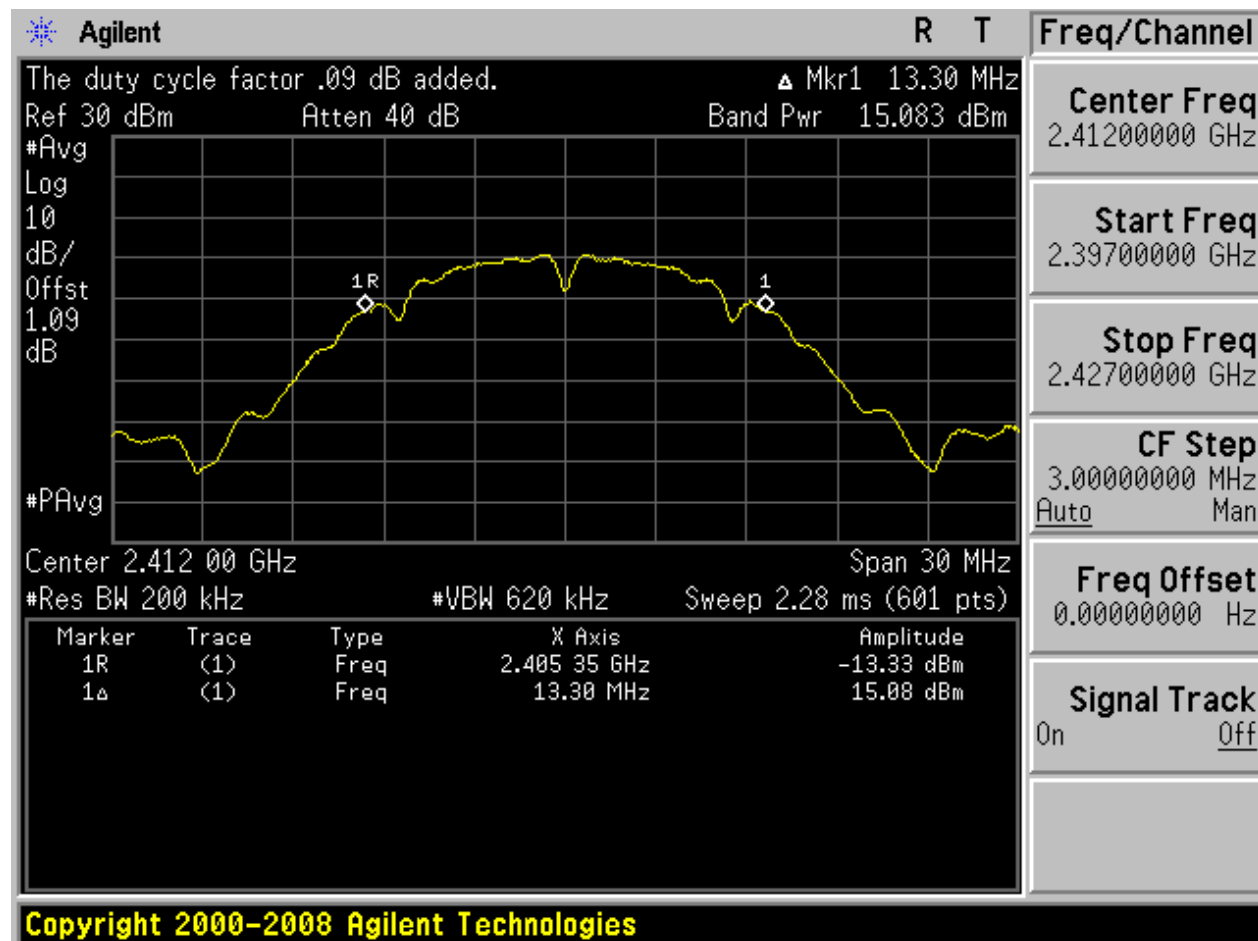
Appendix D: Maximum Conducted Average Output Power

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Power[dBm]	Verdict
11B	L	2412	Ant 1	15.08	pass
11B	M	2437	Ant 1	14.92	pass
11B	H	2462	Ant 1	14.04	pass
11G	L	2412	Ant 1	11.53	pass
11G	M	2437	Ant 1	11.59	pass
11G	H	2462	Ant 1	10.74	pass
11N20	L	2412	Ant 1	10.64	pass
11N20	M	2437	Ant 1	10.43	pass
11N20	H	2462	Ant 1	9.58	pass

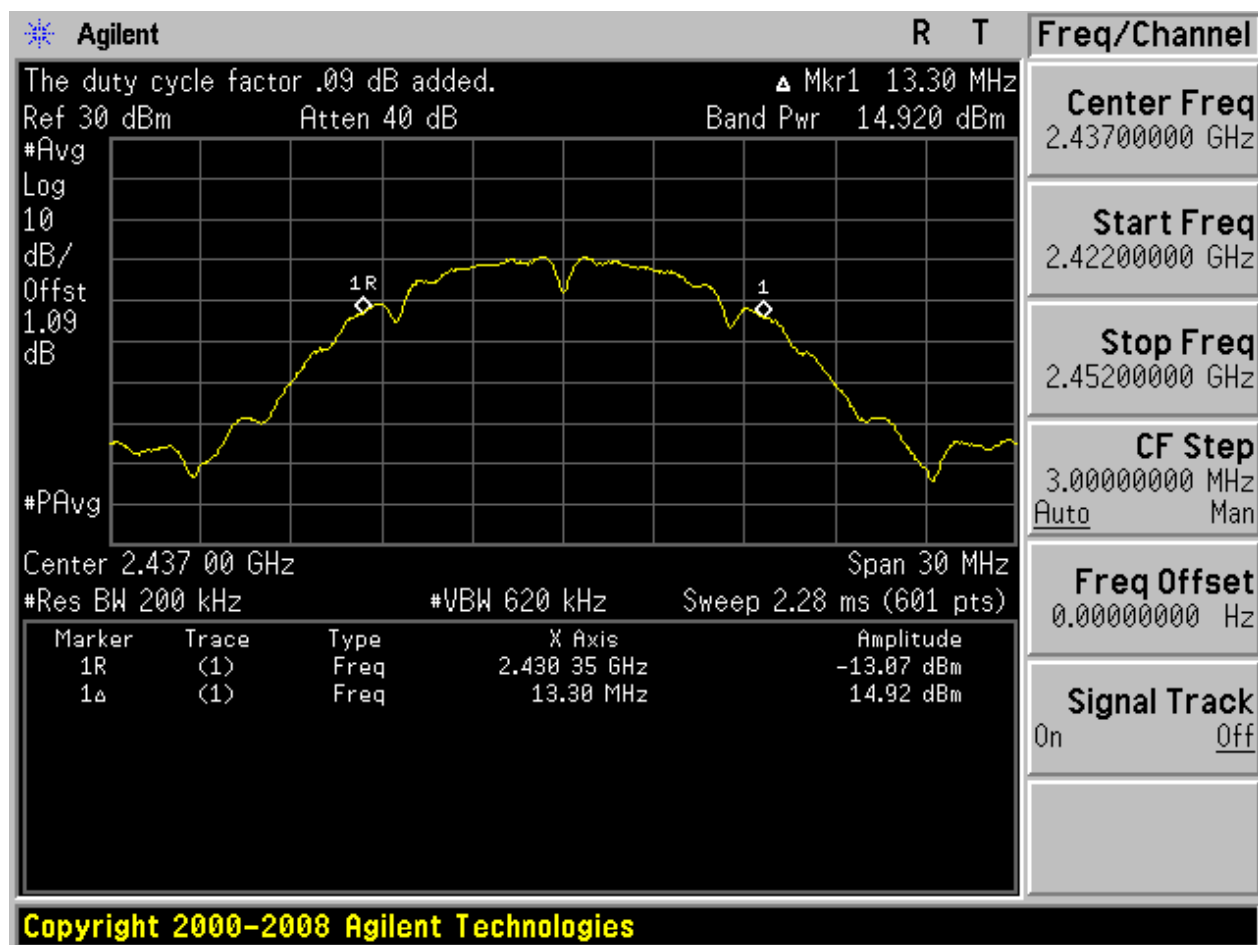
Part II - Test Plots

2.1 11B_L@Ant 1

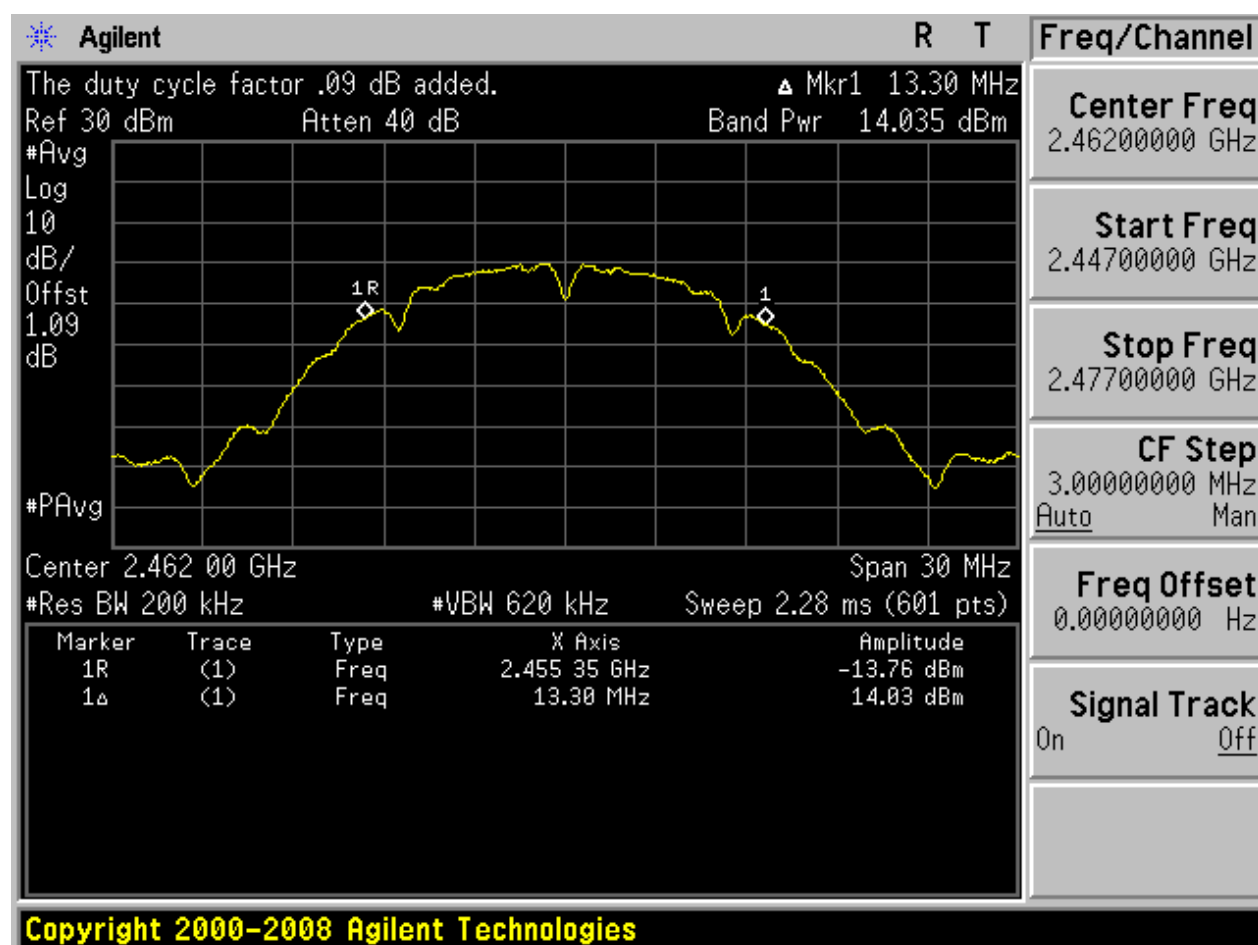




2.2 11B_M@Ant 1

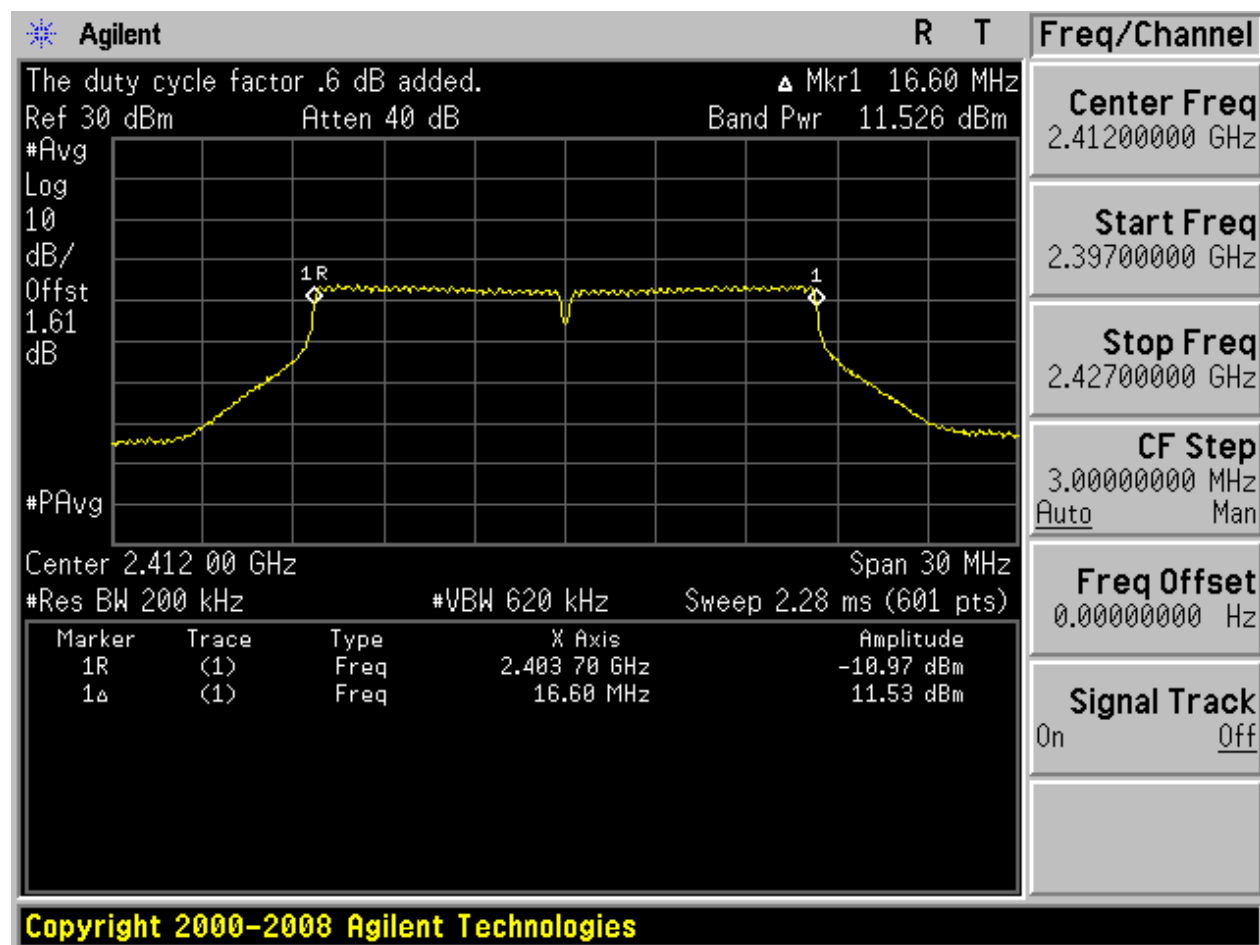


2.3 11B_H@Ant 1



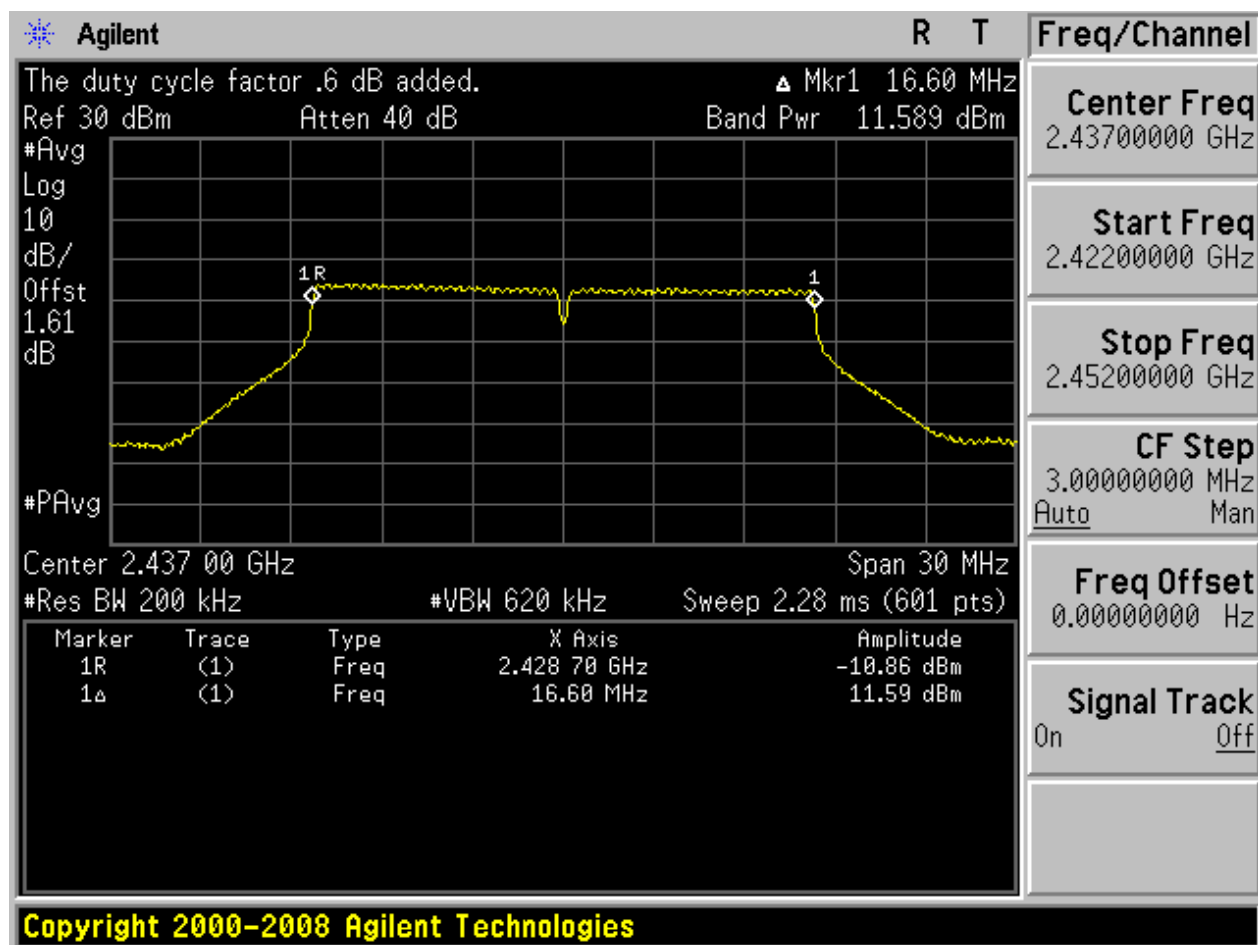


2.4 11G_L@Ant 1

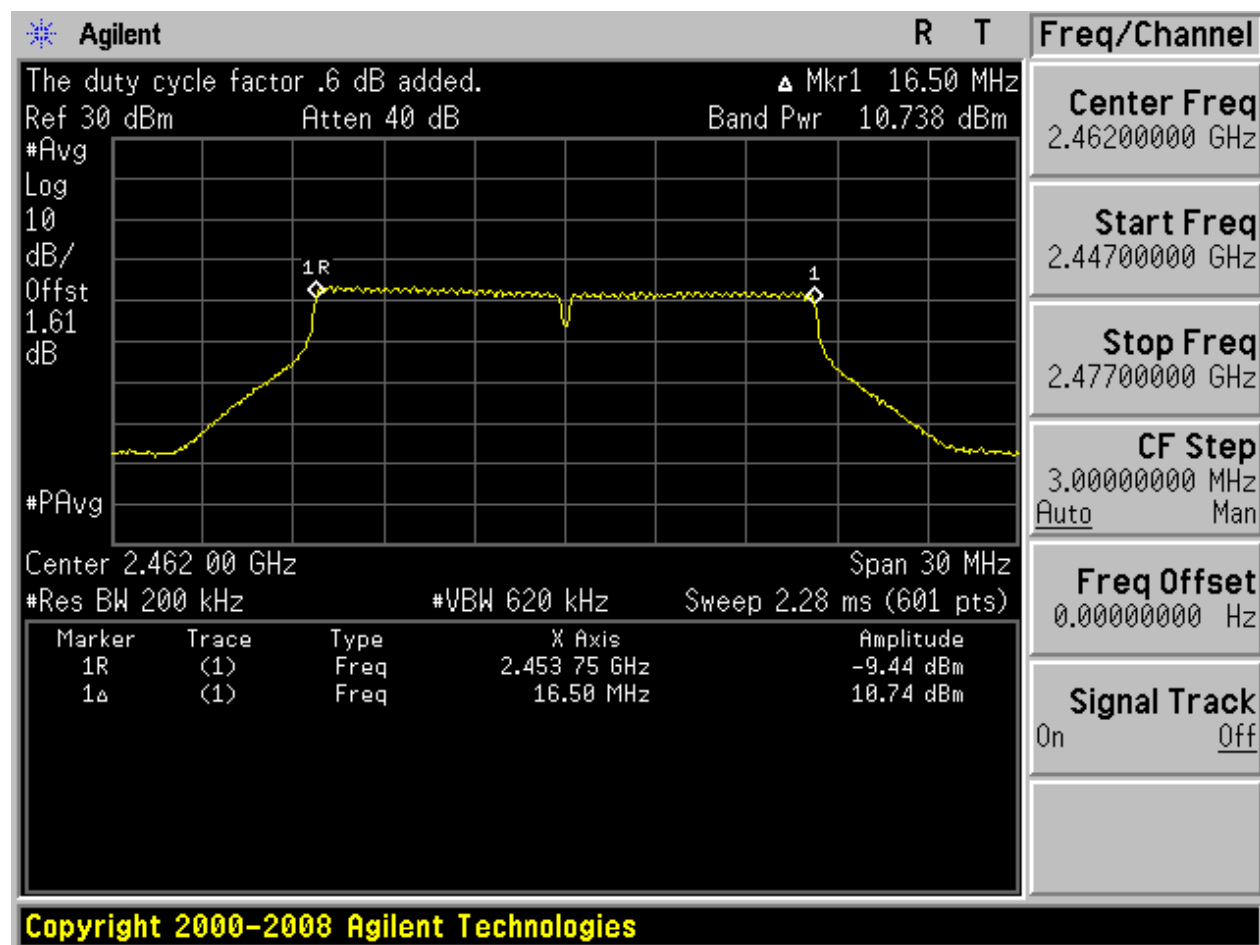




2.5 11G_M@Ant 1

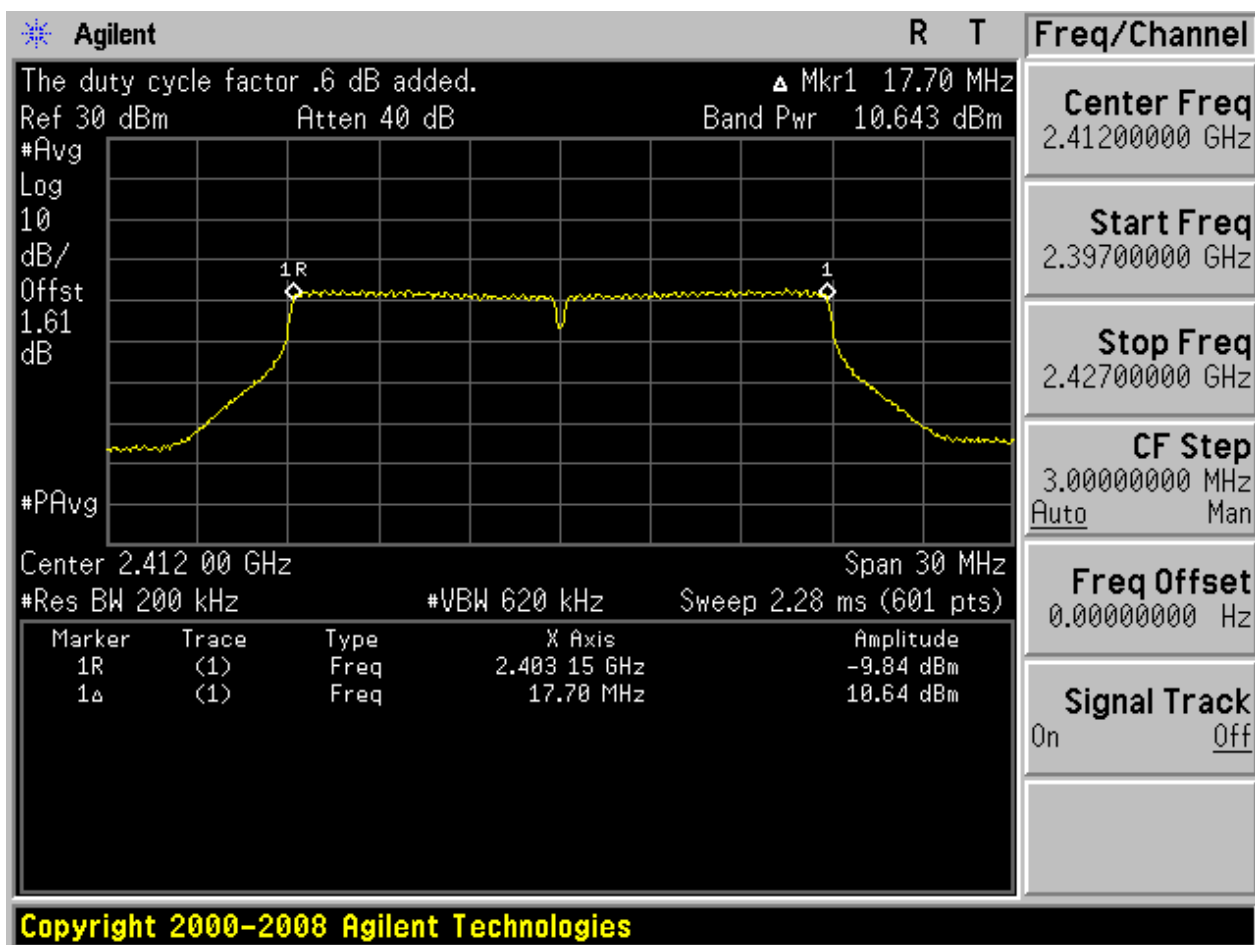


2.6 11G_H@Ant 1

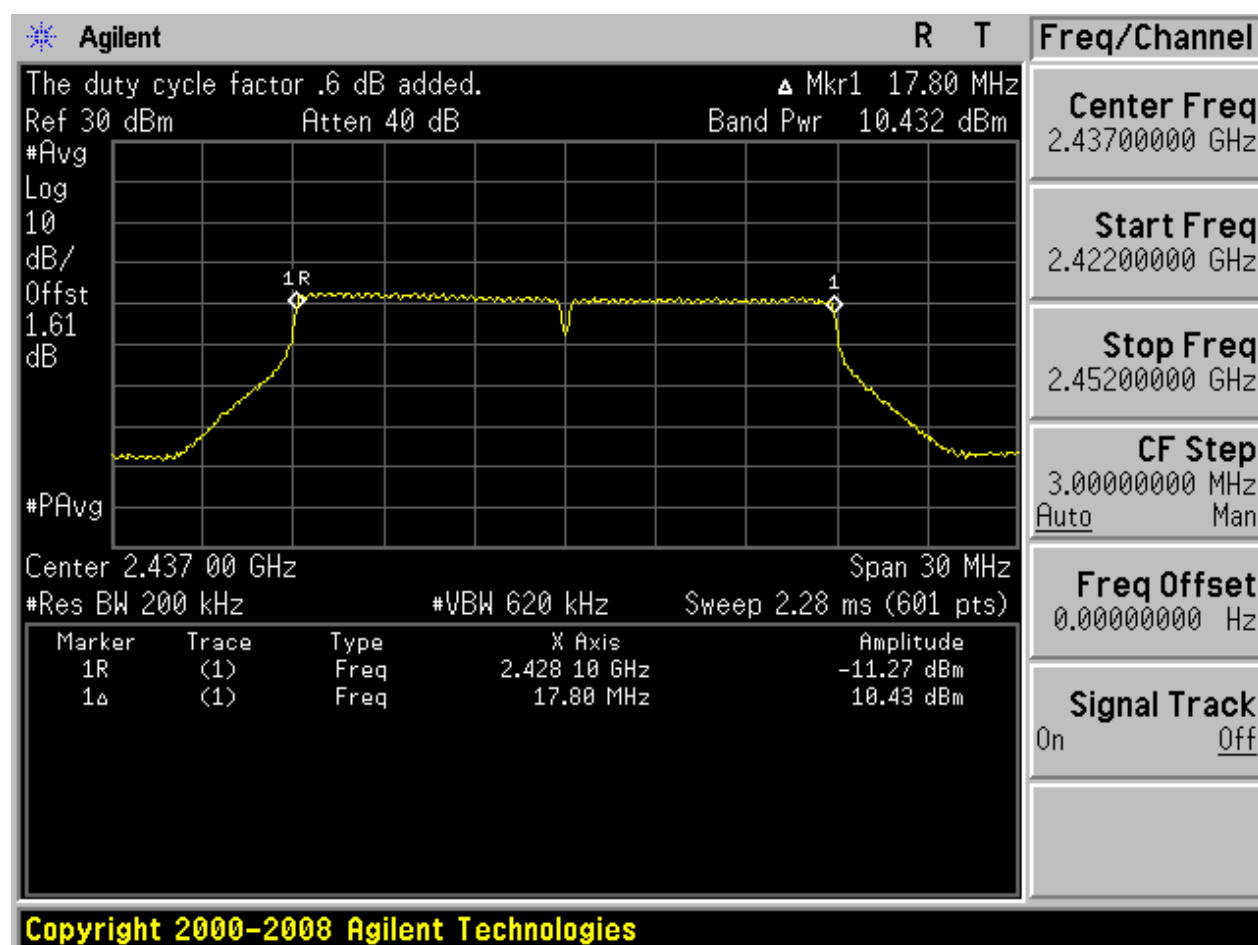




2.7 11N20_L@Ant 1

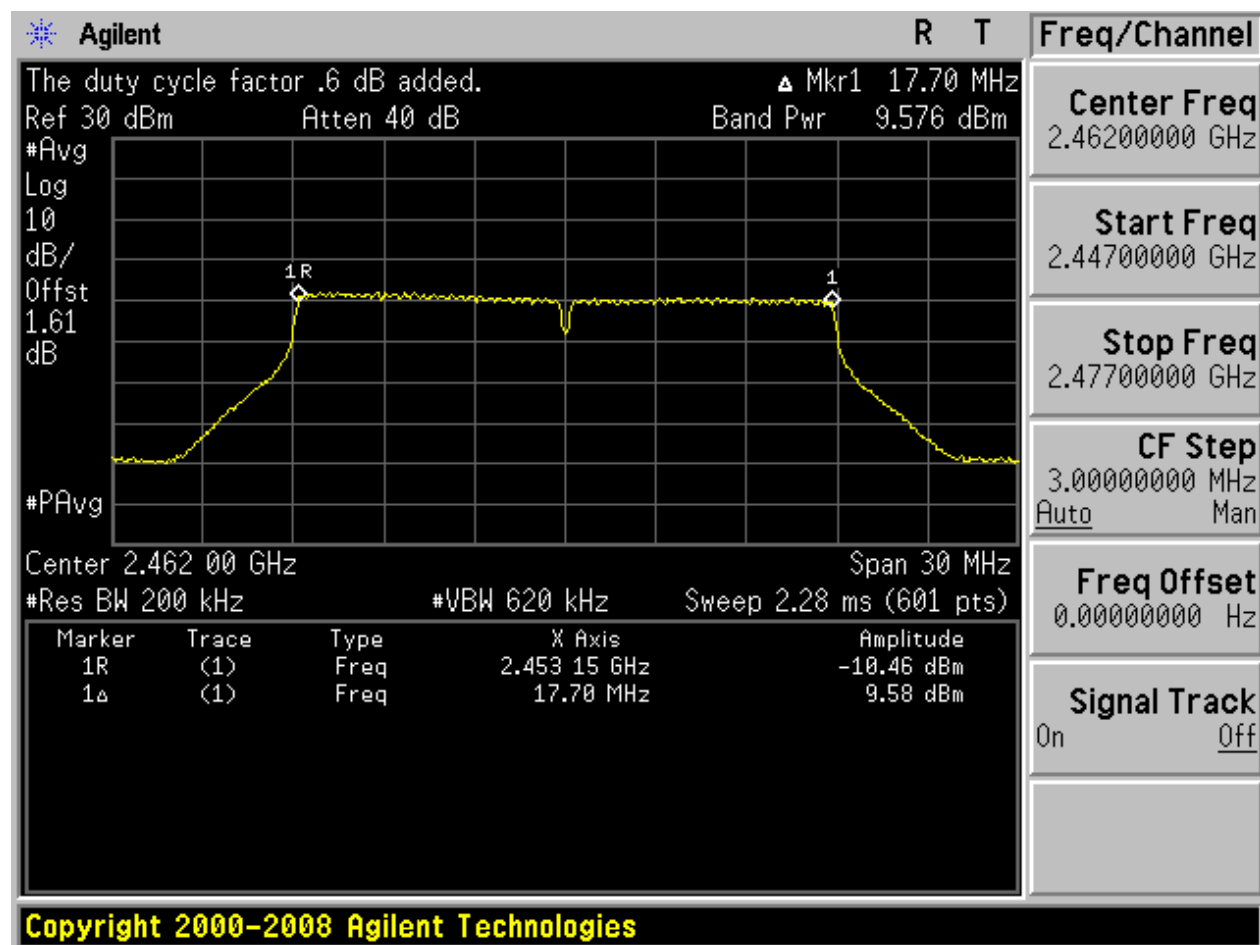


2.8 11N20_M@Ant 1





2.9 11N20_H@Ant 1



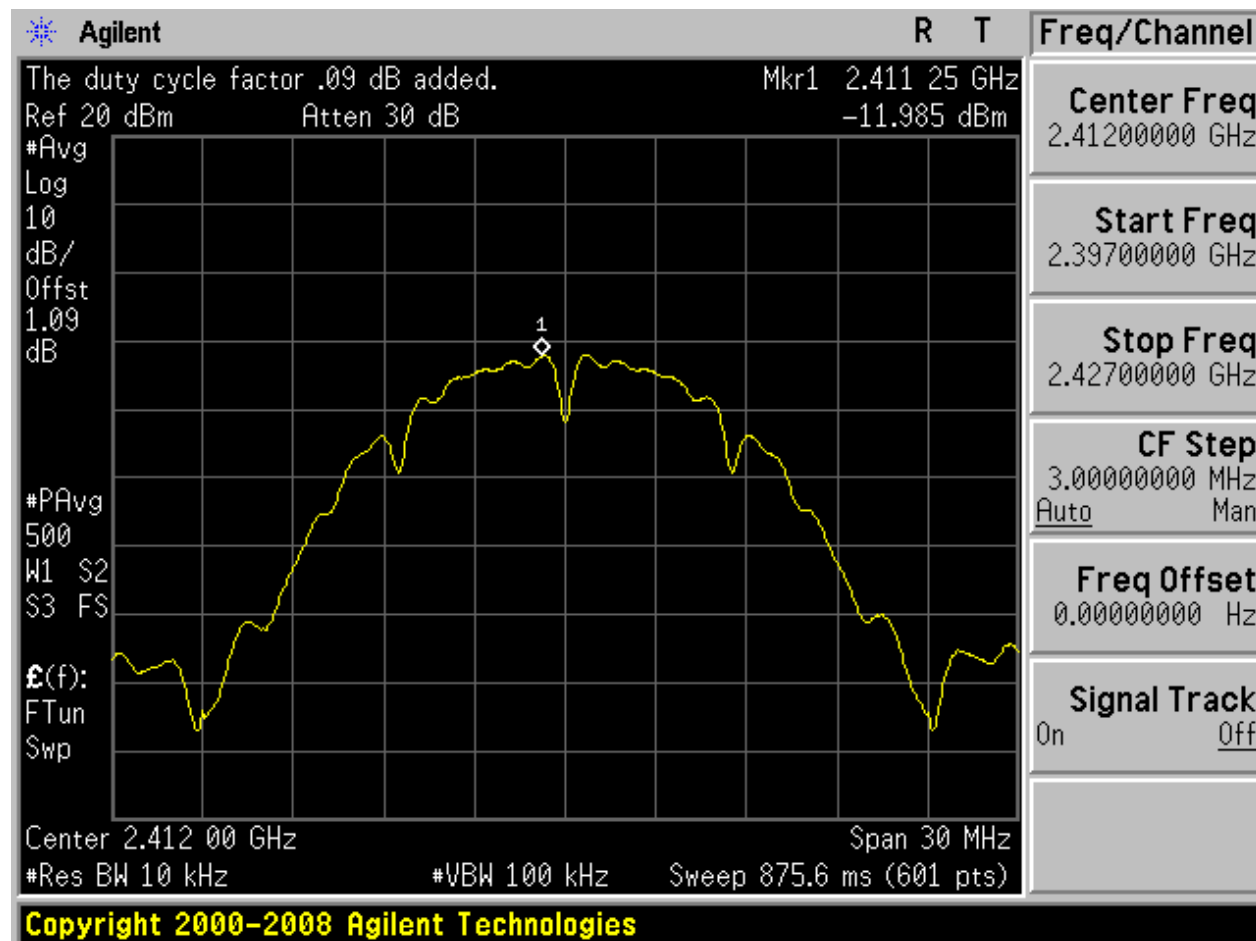
Appendix E: Maximum Power Spectral Density Level

Part I - Test Results

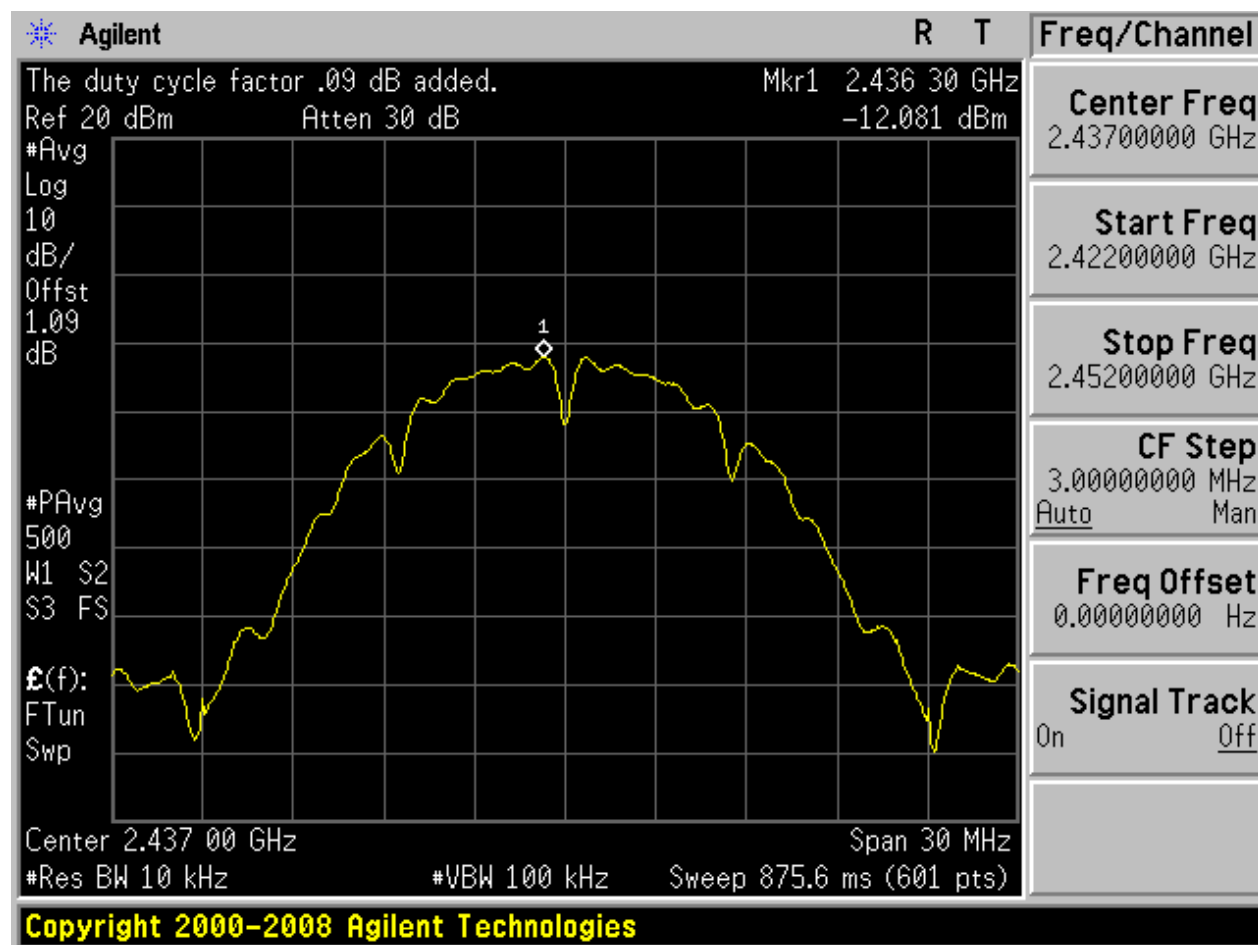
Test Mode	Test Channel	Frequency[MHz]	Ant	PD[MHz]	Verdict
11B	L	2412	Ant 1	-11.99	pass
11B	M	2437	Ant 1	-12.08	pass
11B	H	2462	Ant 1	-13.08	pass
11G	L	2412	Ant 1	-18.14	pass
11G	M	2437	Ant 1	-18.03	pass
11G	H	2462	Ant 1	-18.59	pass
11N20	L	2412	Ant 1	-18.96	pass
11N20	M	2437	Ant 1	-19.23	pass
11N20	H	2462	Ant 1	-20.13	pass

Part II - Test Plots

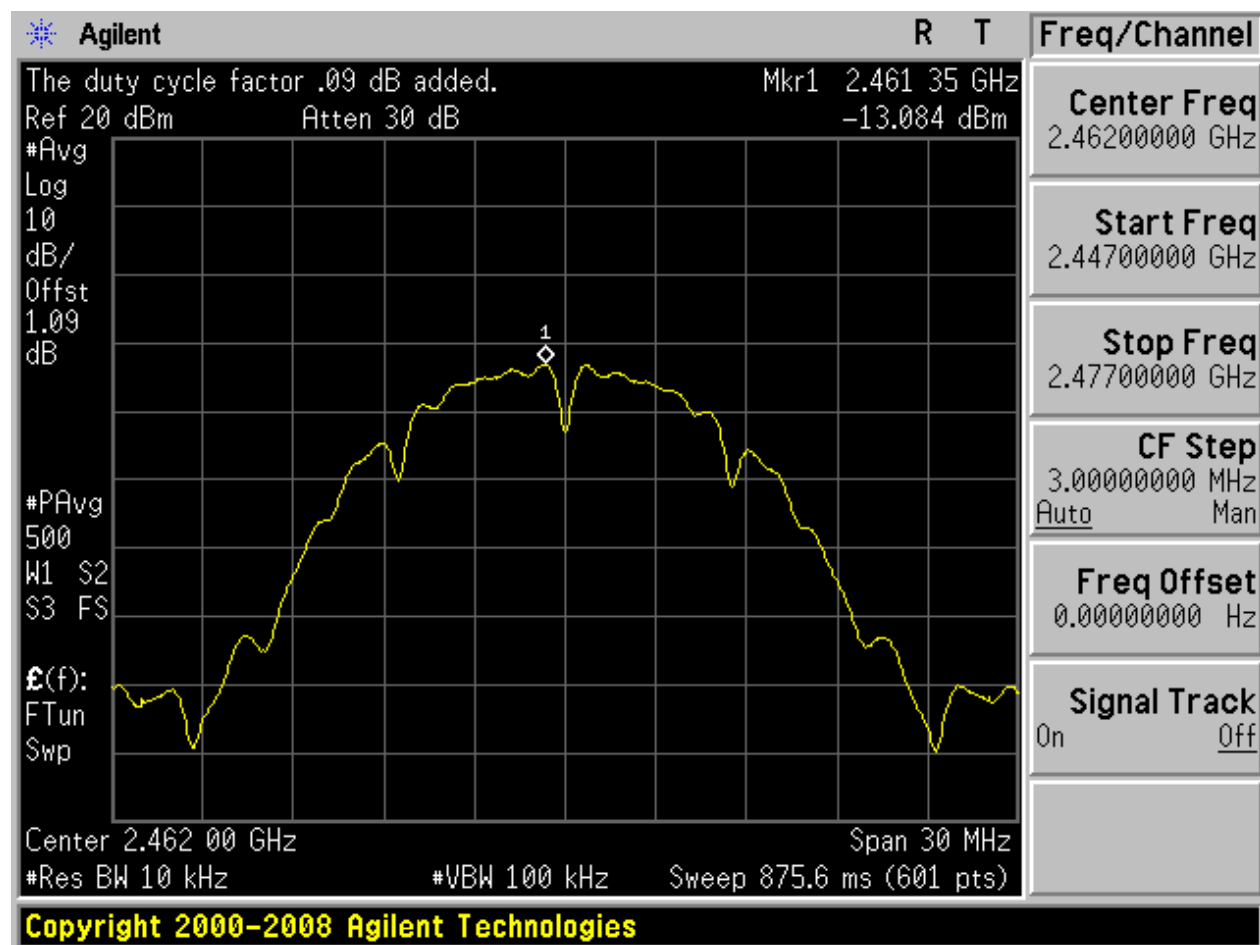
2.1 11B_L@Ant 1



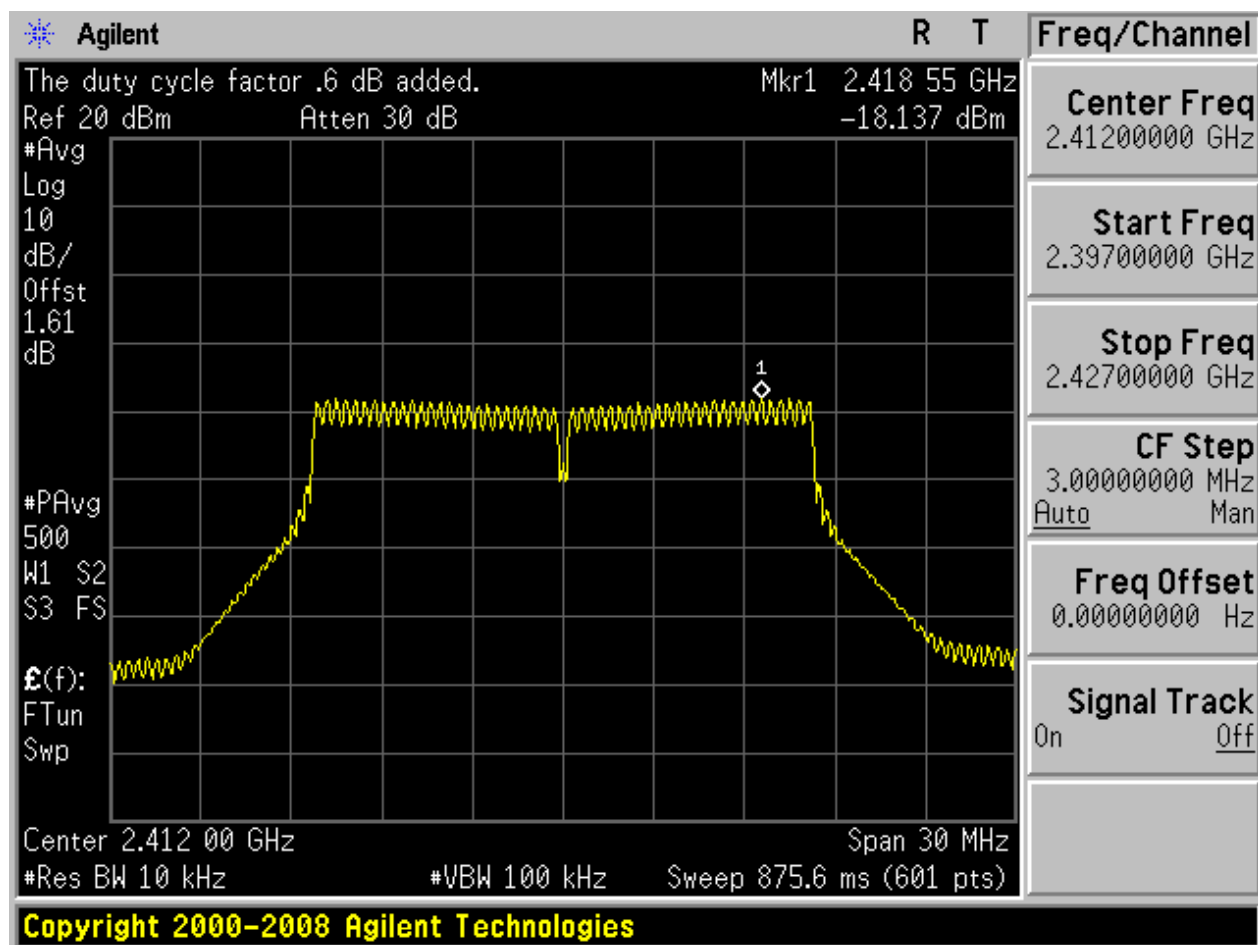
2.2 11B_M@Ant 1



2.3 11B_H@Ant 1

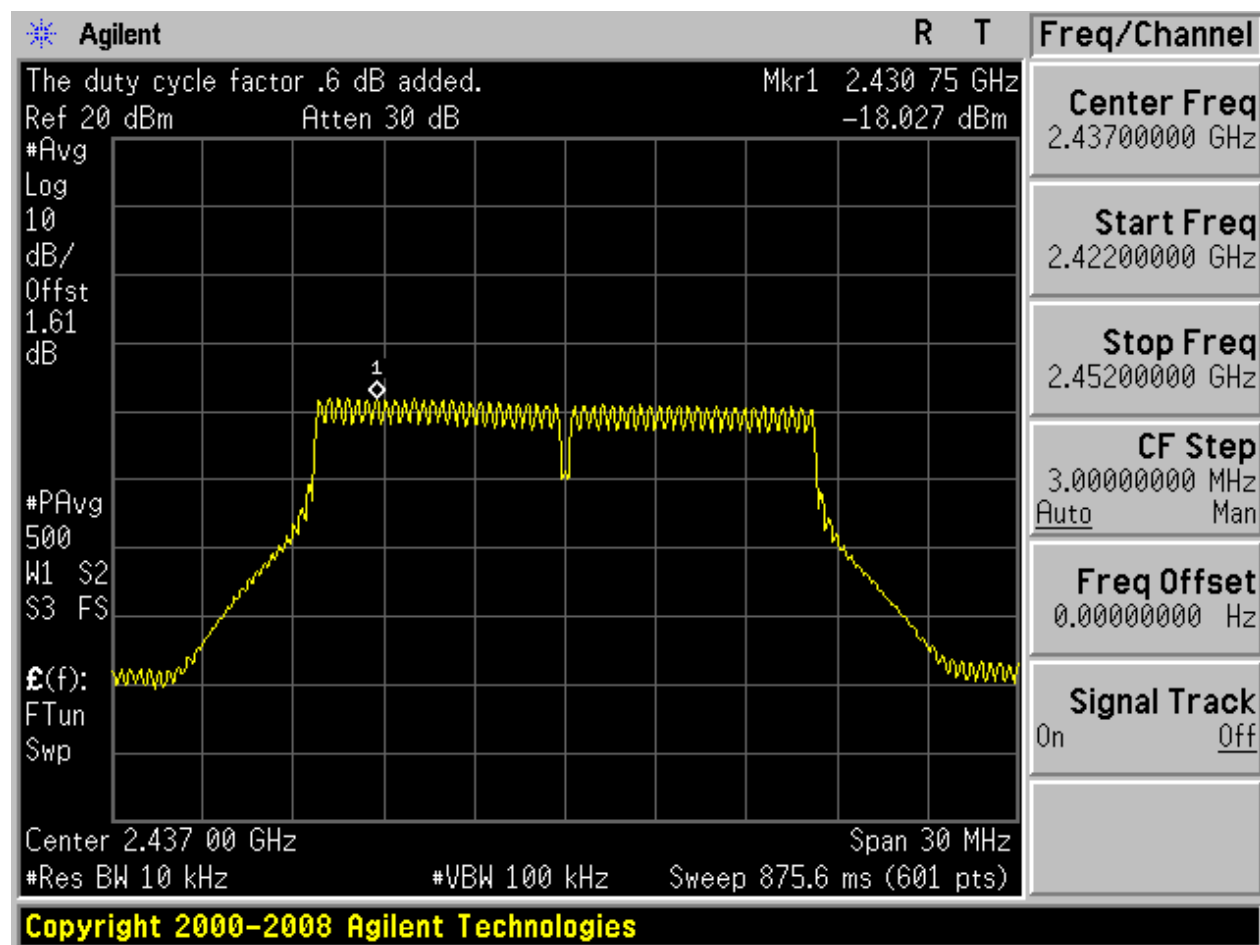


2.4 11G_L@Ant 1

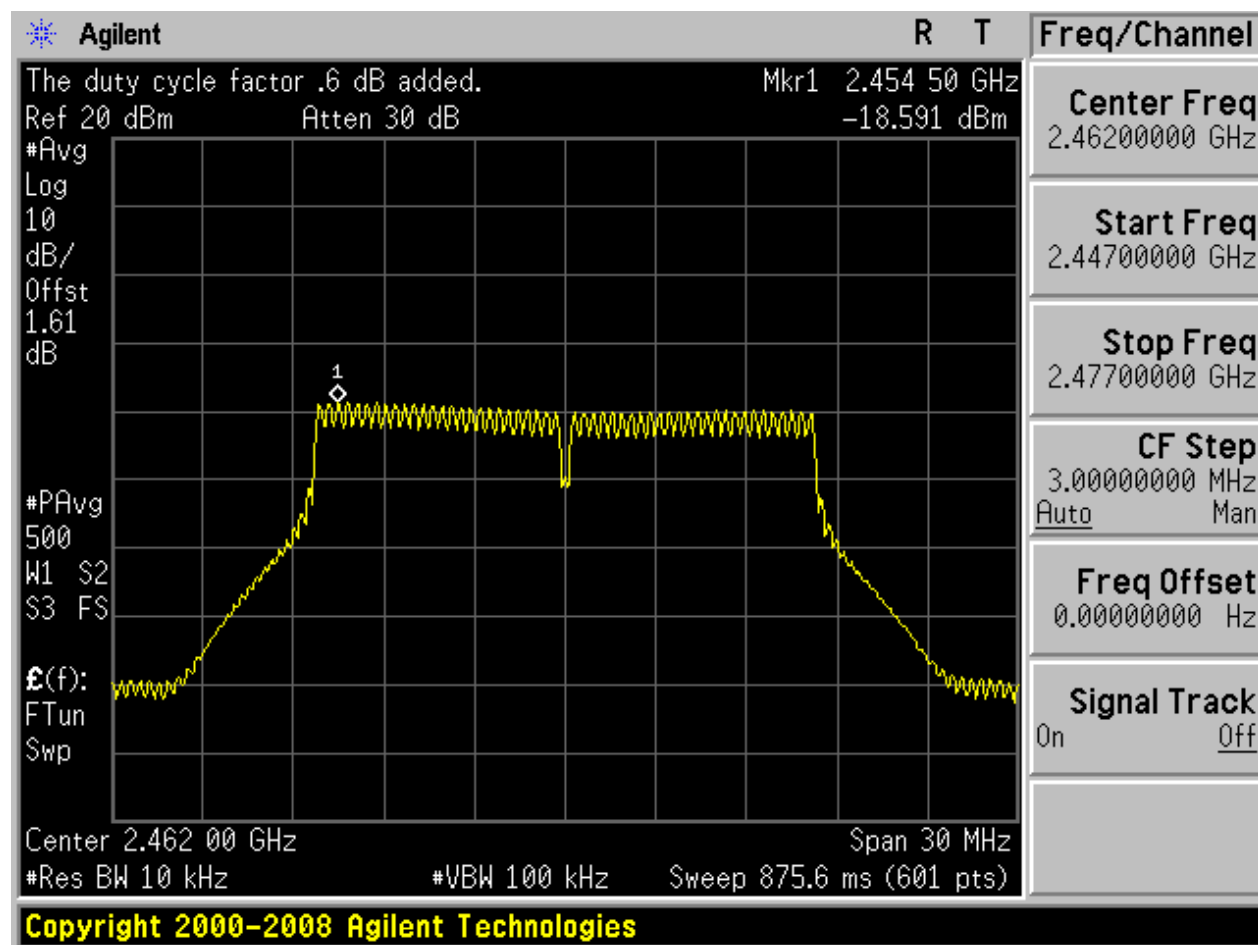




2.5 11G_M@Ant 1

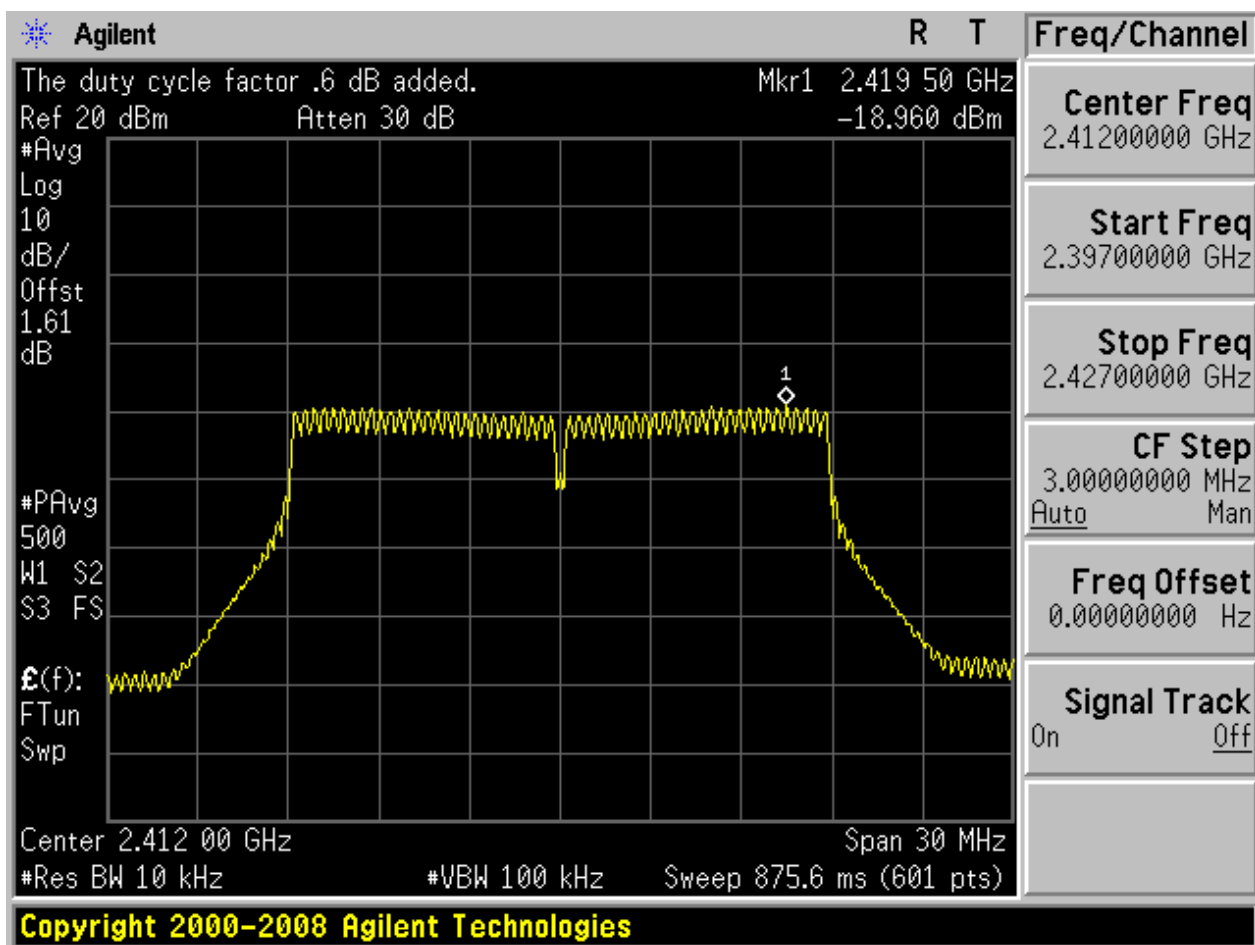


2.6 11G_H@Ant 1

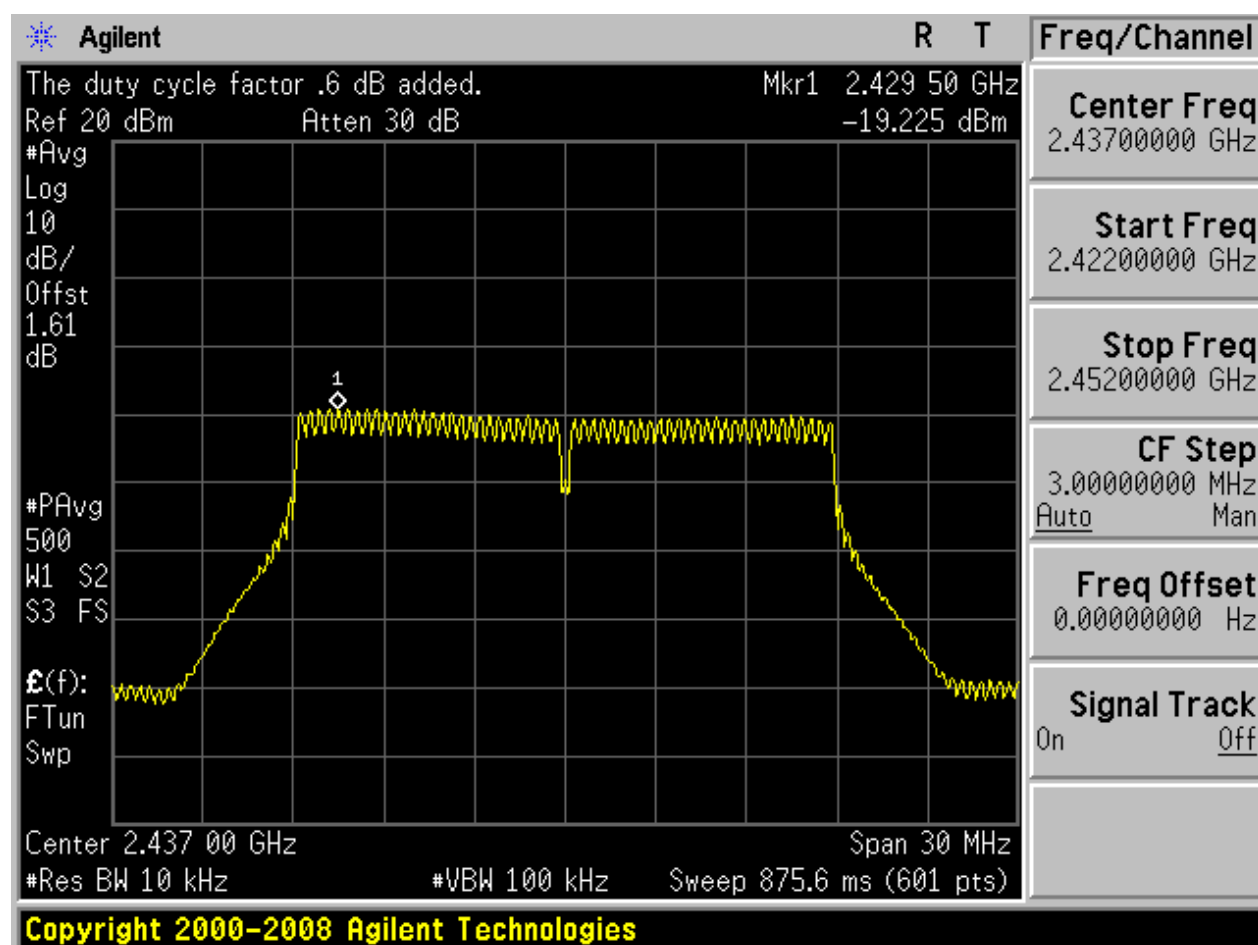




2.7 11N20_L@Ant 1

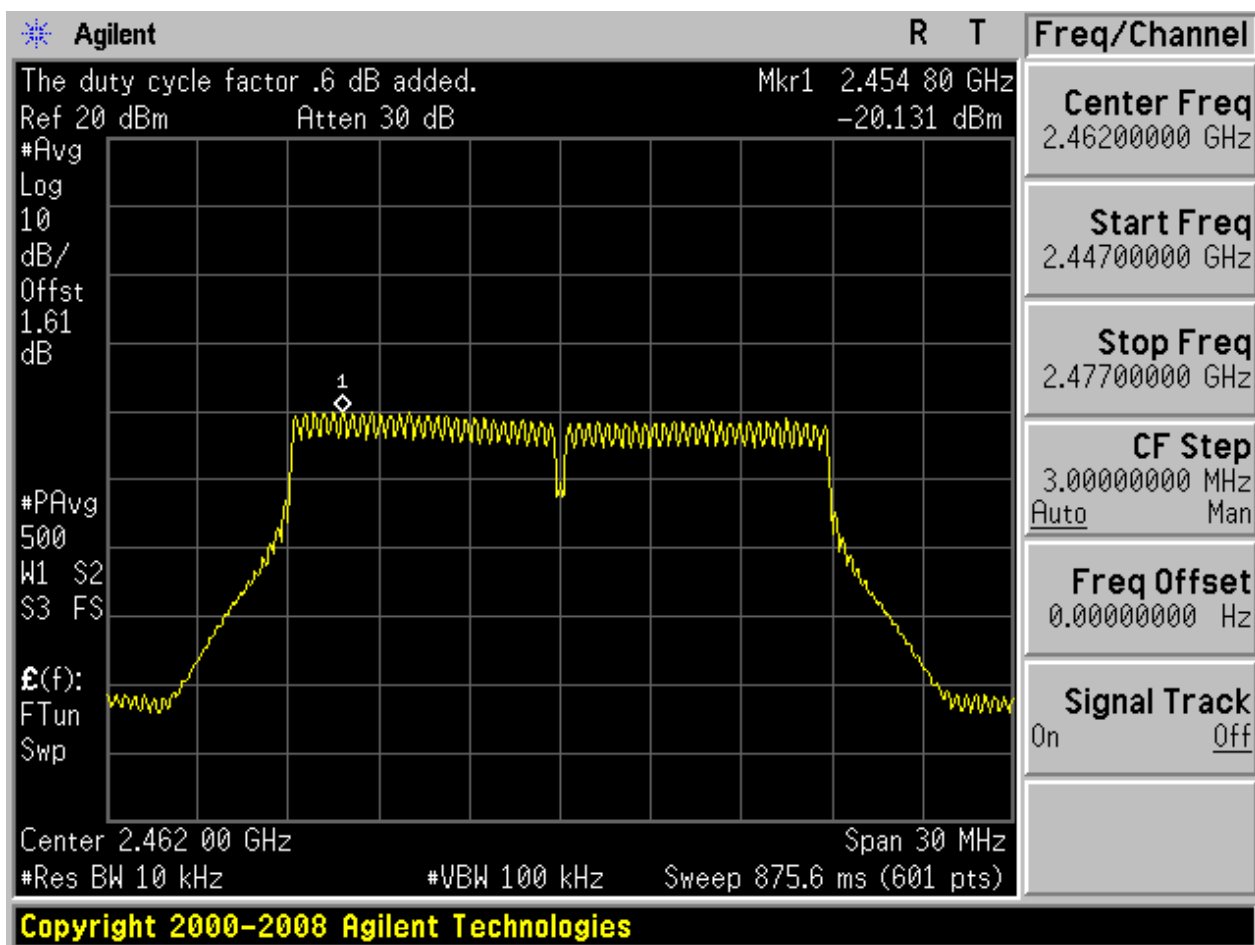


2.8 11N20_M@Ant 1





2.9 11N20_H@Ant 1



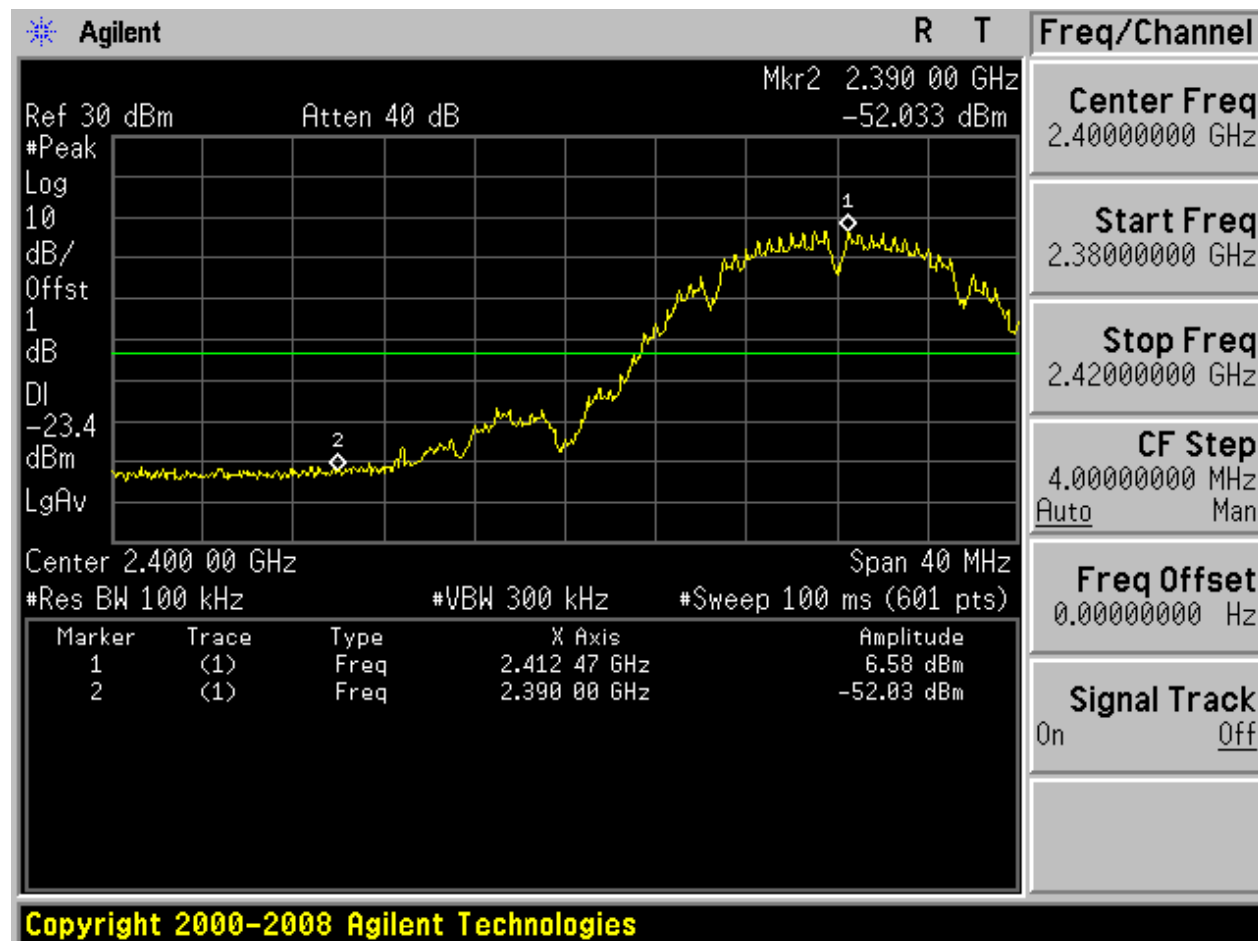
Appendix F: Band Edges Compliance

Part I - Test Results

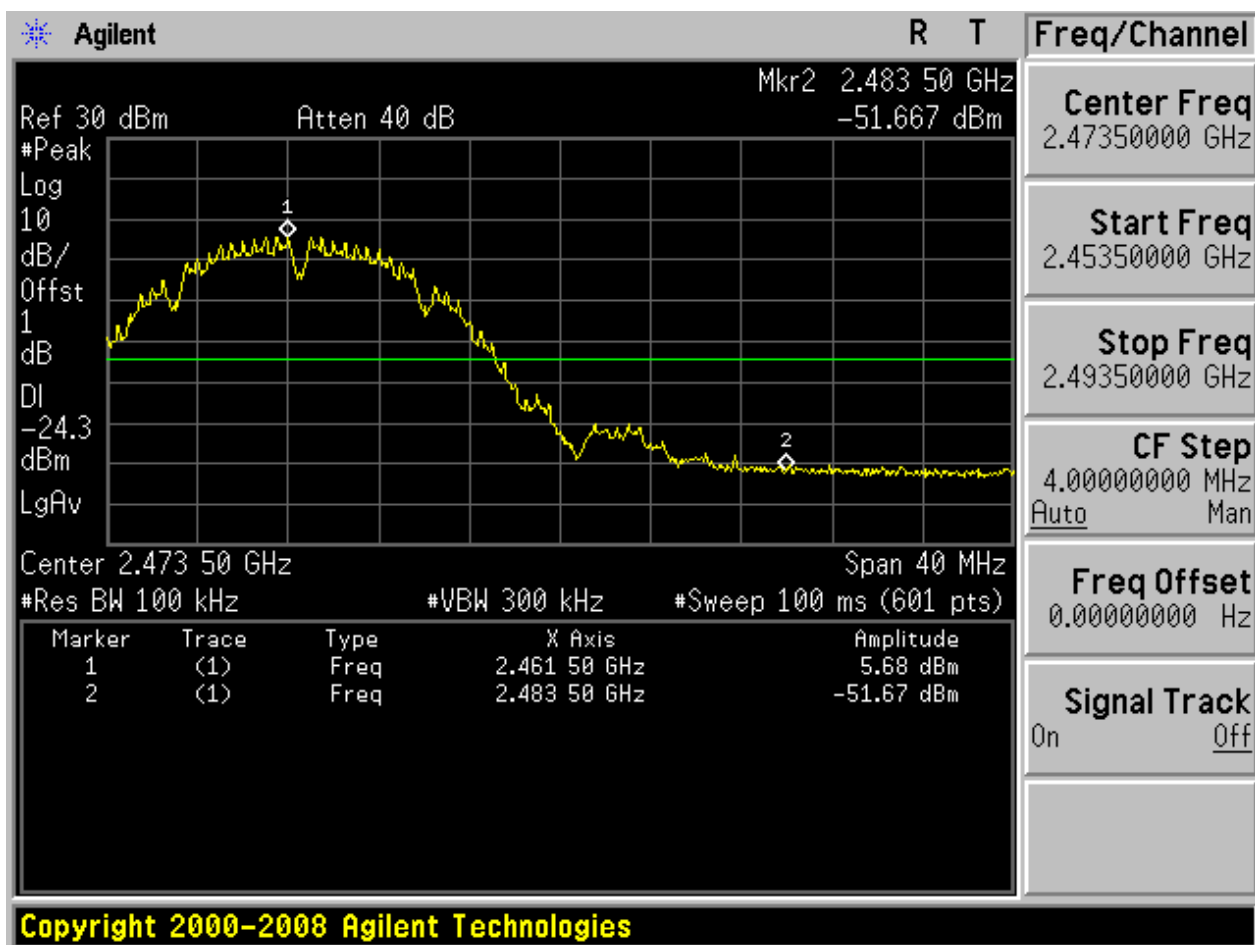
Test Mode	Test Channel	Frequency[MHz]	Ant	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
11B	L	2412	Ant 1	6.58	-52.03	pass
11B	H	2462	Ant 1	5.68	-51.67	pass
11G	L	2412	Ant 1	0.55	-50.14	pass
11G	H	2462	Ant 1	-0.07	-50.05	pass
11N20	L	2412	Ant 1	-0.39	-50.55	pass
11N20	H	2462	Ant 1	-1.23	-50.84	pass

Part II - Test Plots

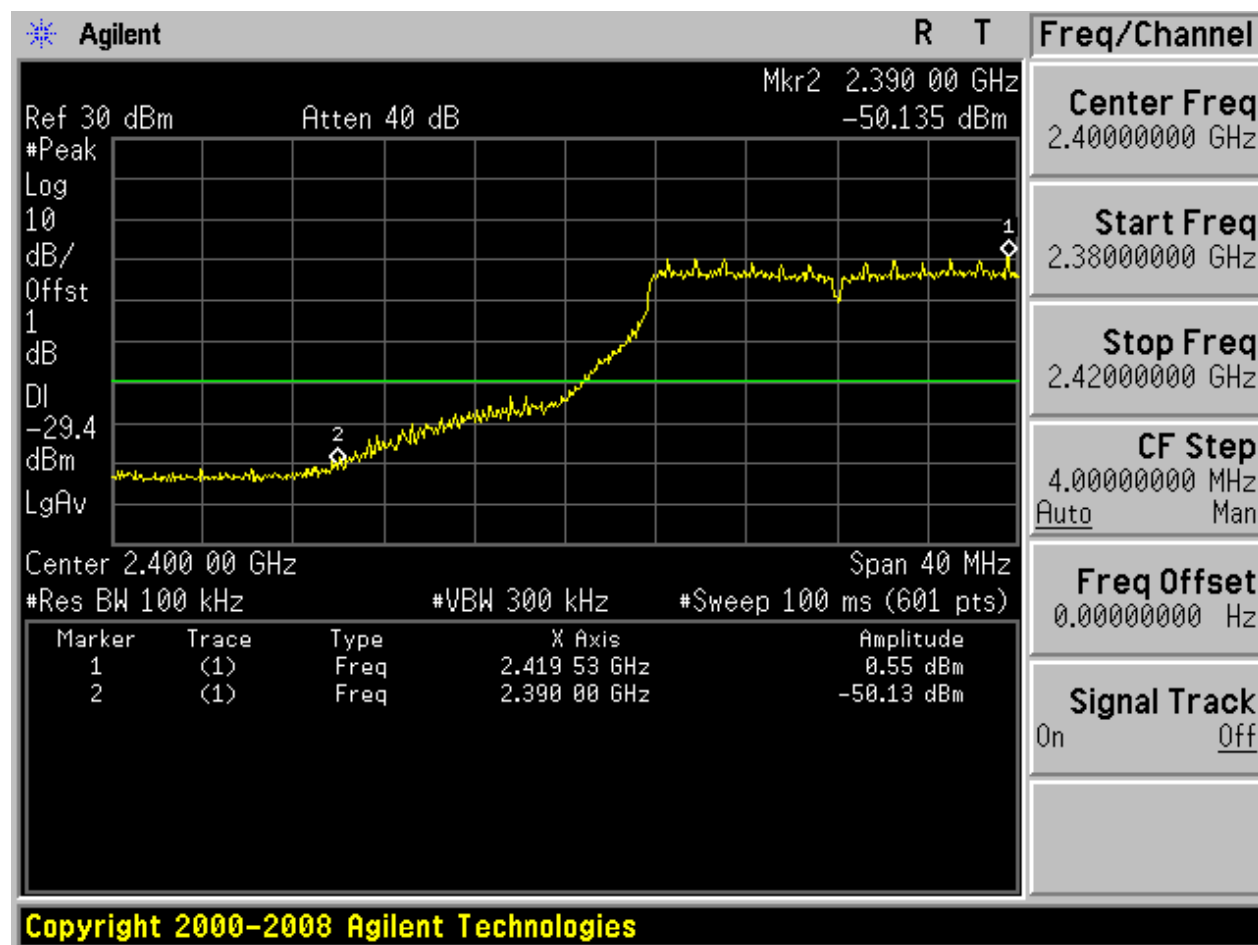
2.1 11B_L@Ant 1



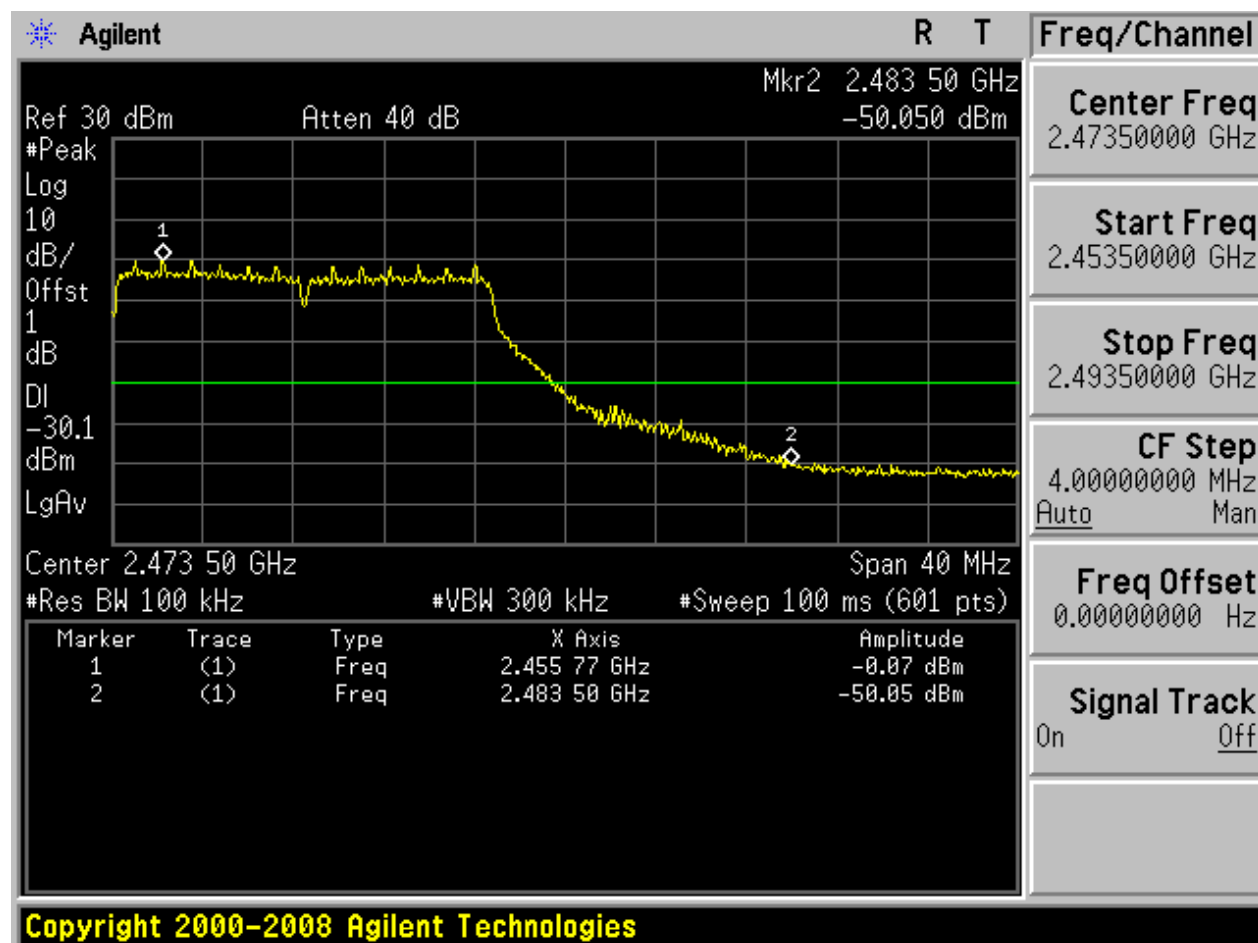
2.2 11B_H@Ant 1



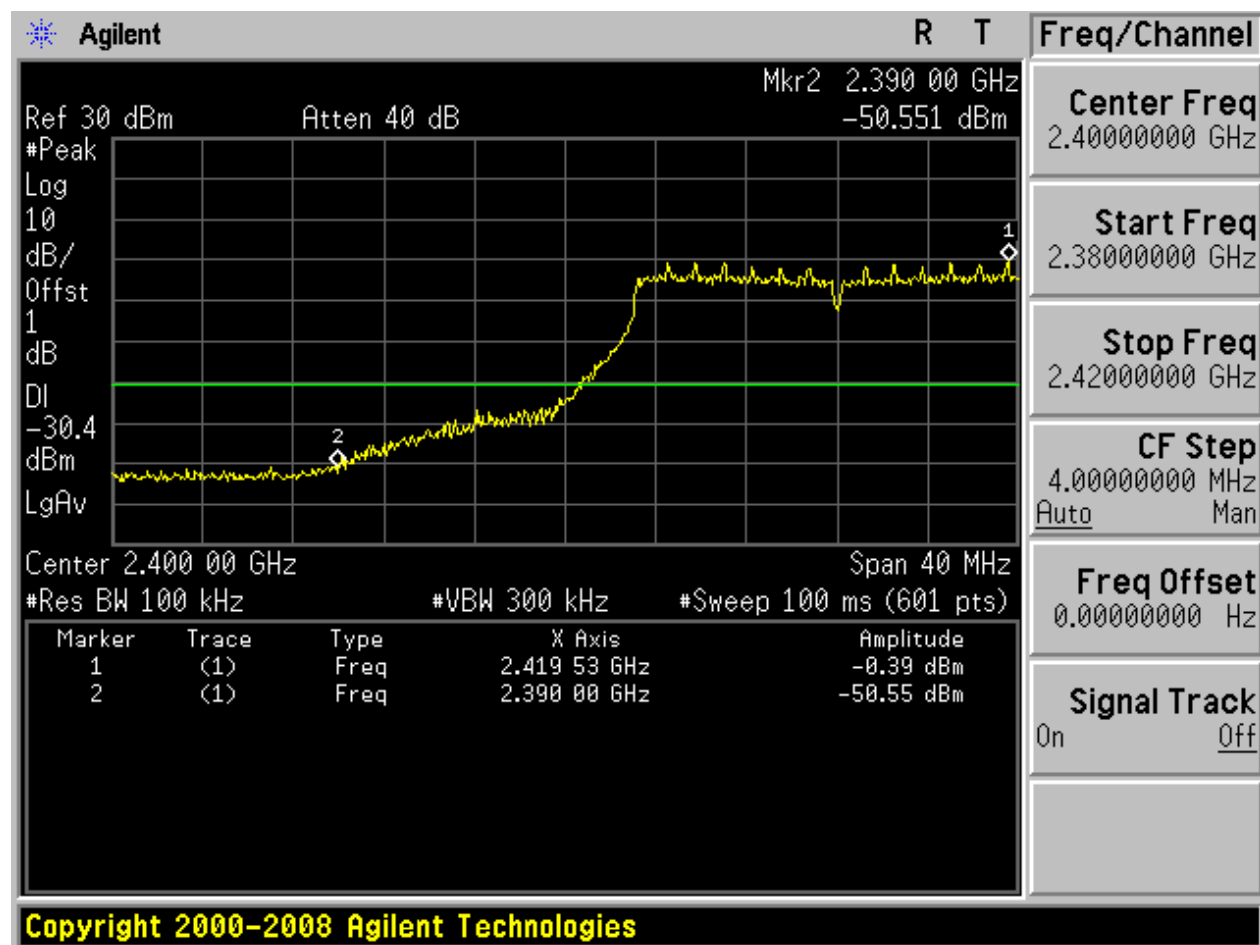
2.3 11G_L@Ant 1



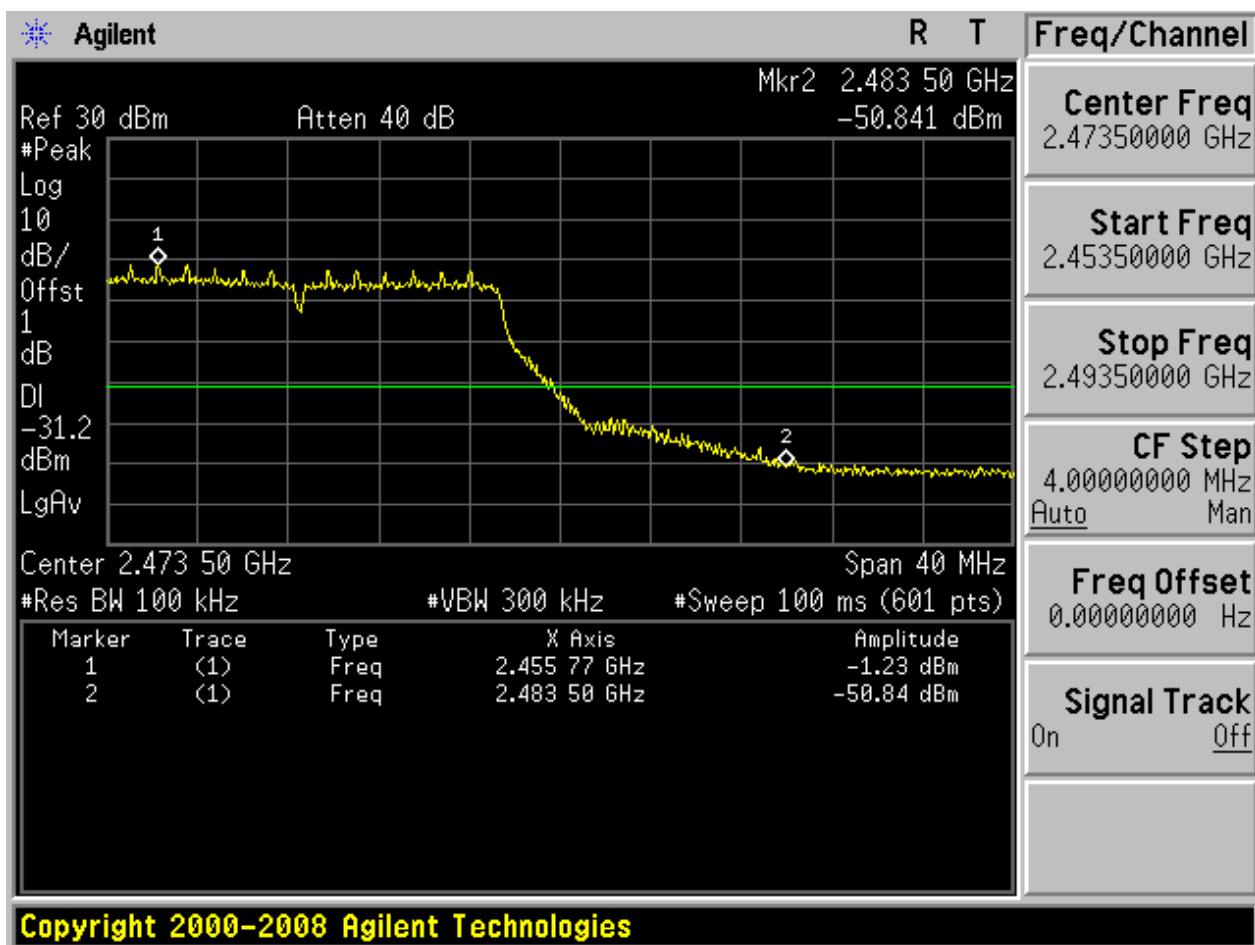
2.4 11G_H@Ant 1



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".

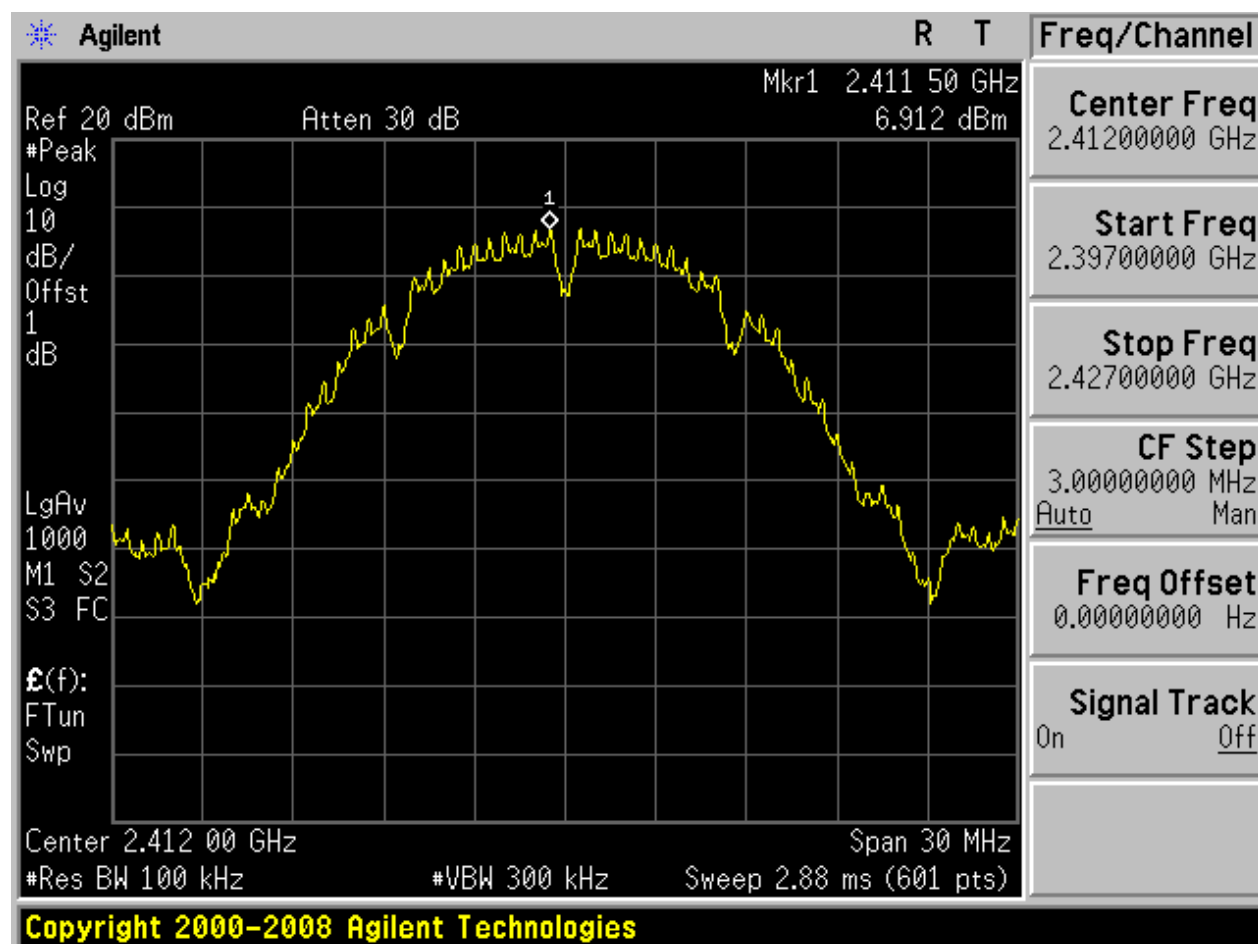
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]	Verdict
11B	L	2412	Ant 1	6.91	<limit	pass
11B	M	2437	Ant 1	6.79	<limit	pass
11B	H	2462	Ant 1	5.72	<limit	pass
11G	L	2412	Ant 1	0.64	<limit	pass
11G	M	2437	Ant 1	0.7	<limit	pass
11G	H	2462	Ant 1	0.23	<limit	pass
11N20	L	2412	Ant 1	-0.23	<limit	pass
11N20	M	2437	Ant 1	-0.02	<limit	pass
11N20	H	2462	Ant 1	-0.92	<limit	pass

Part II - Test Plots

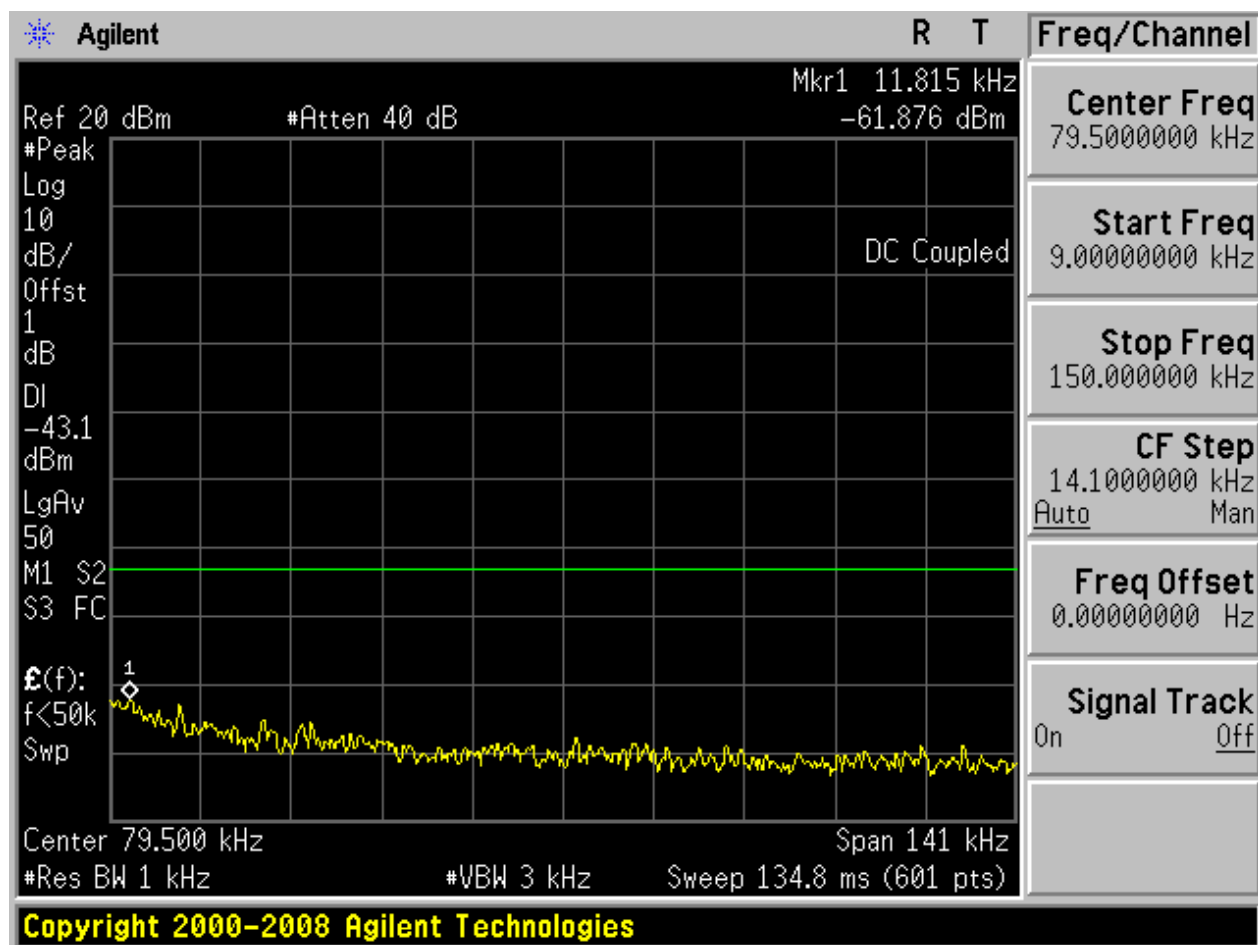
2.1 11B_L@Ant 1

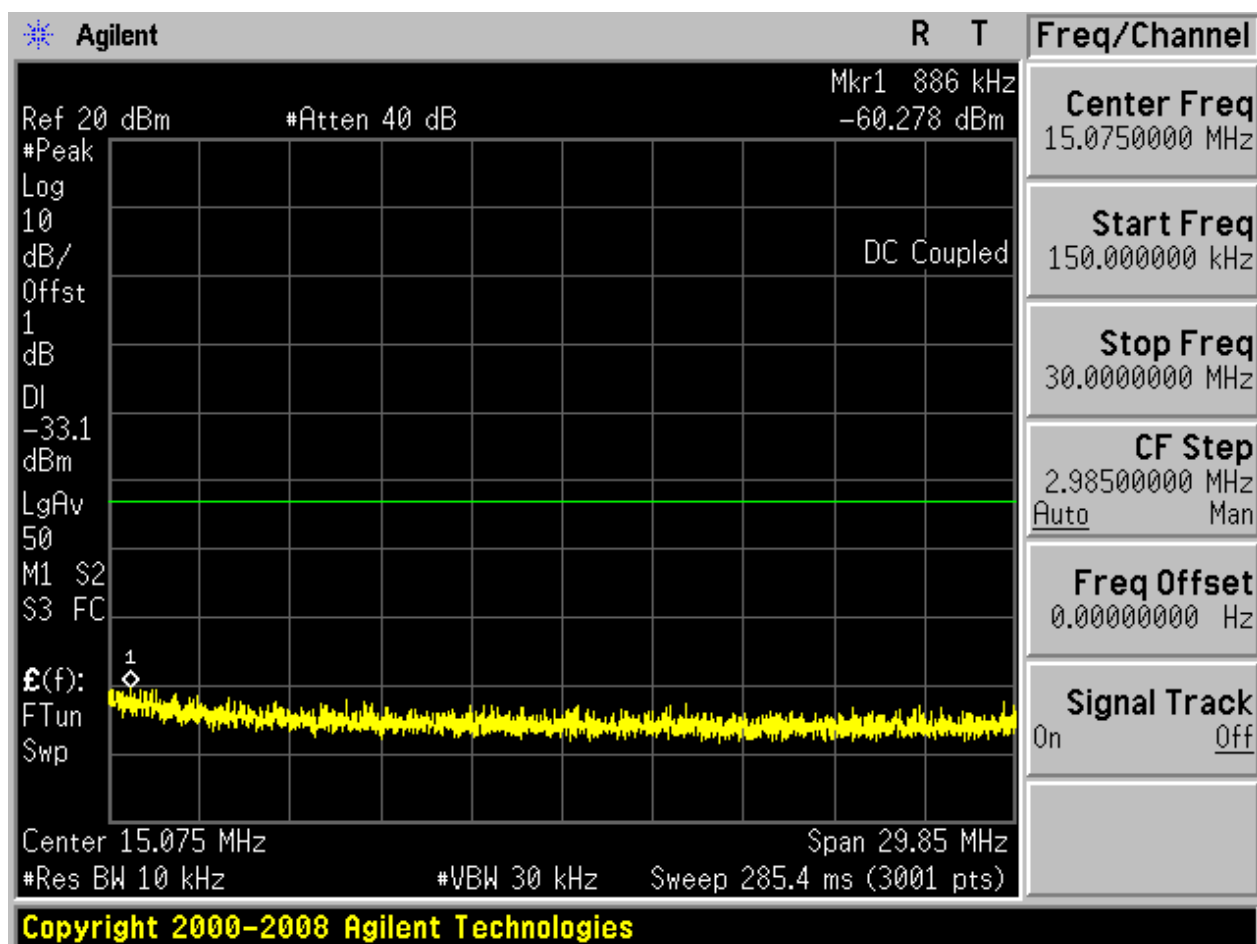
Pref:

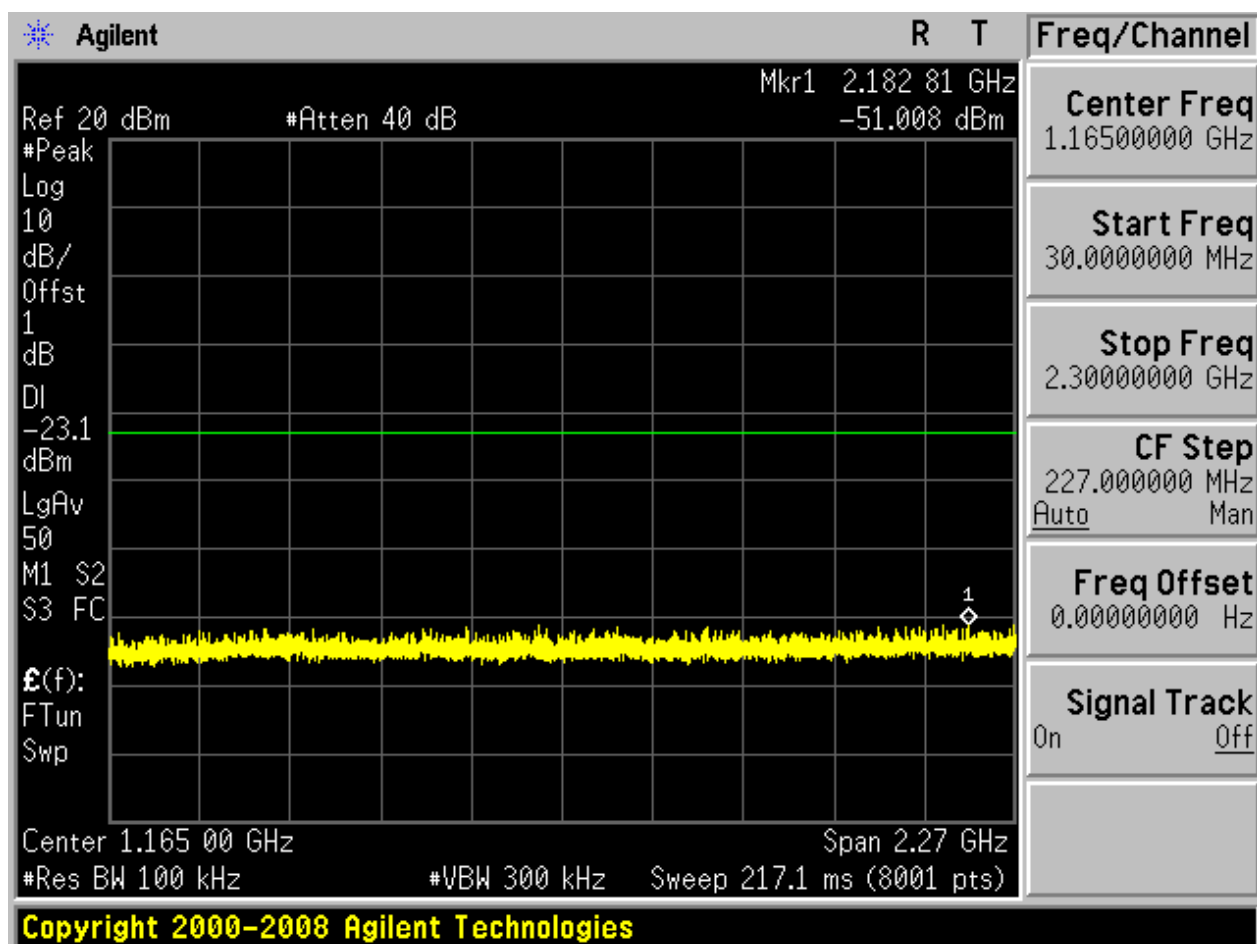


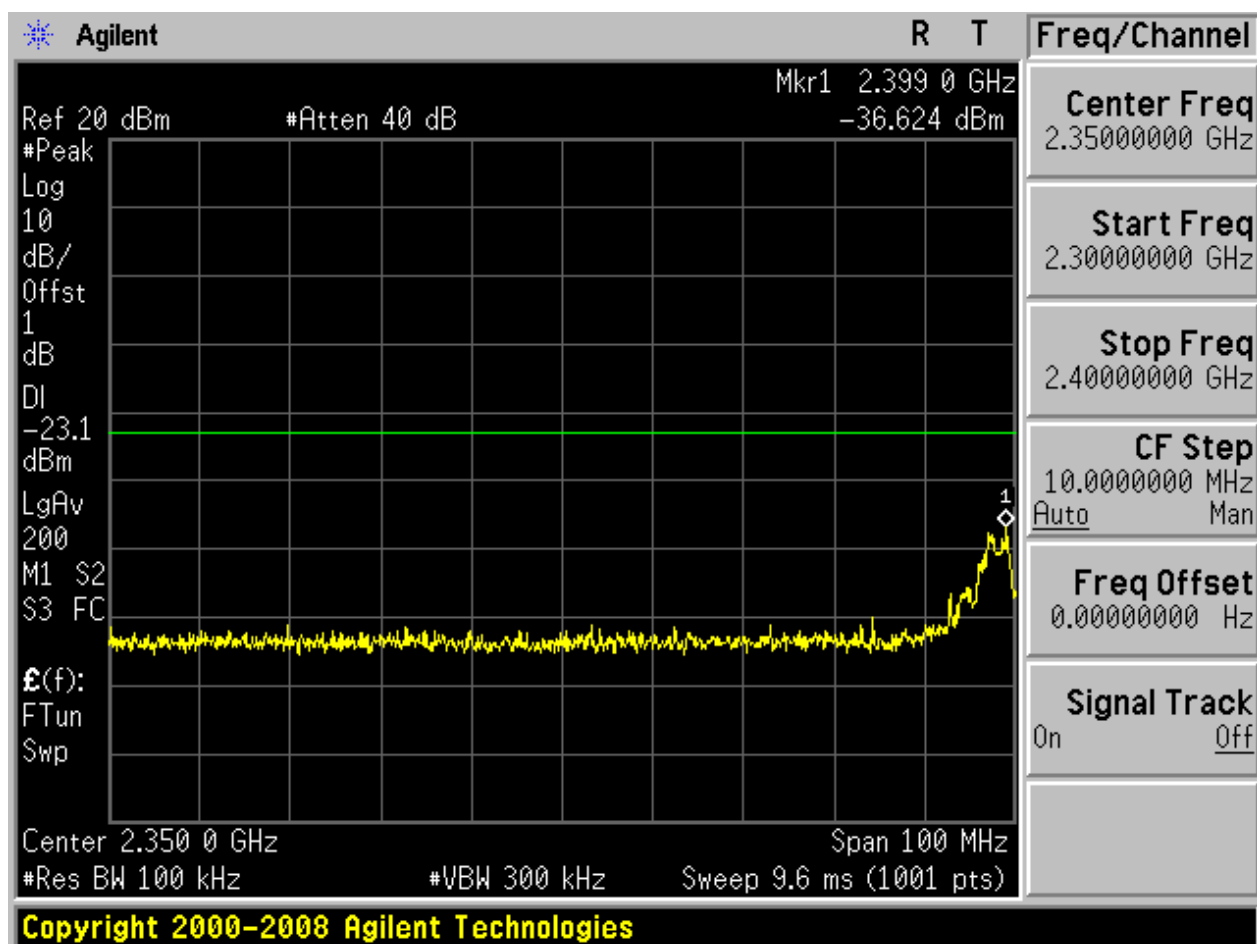


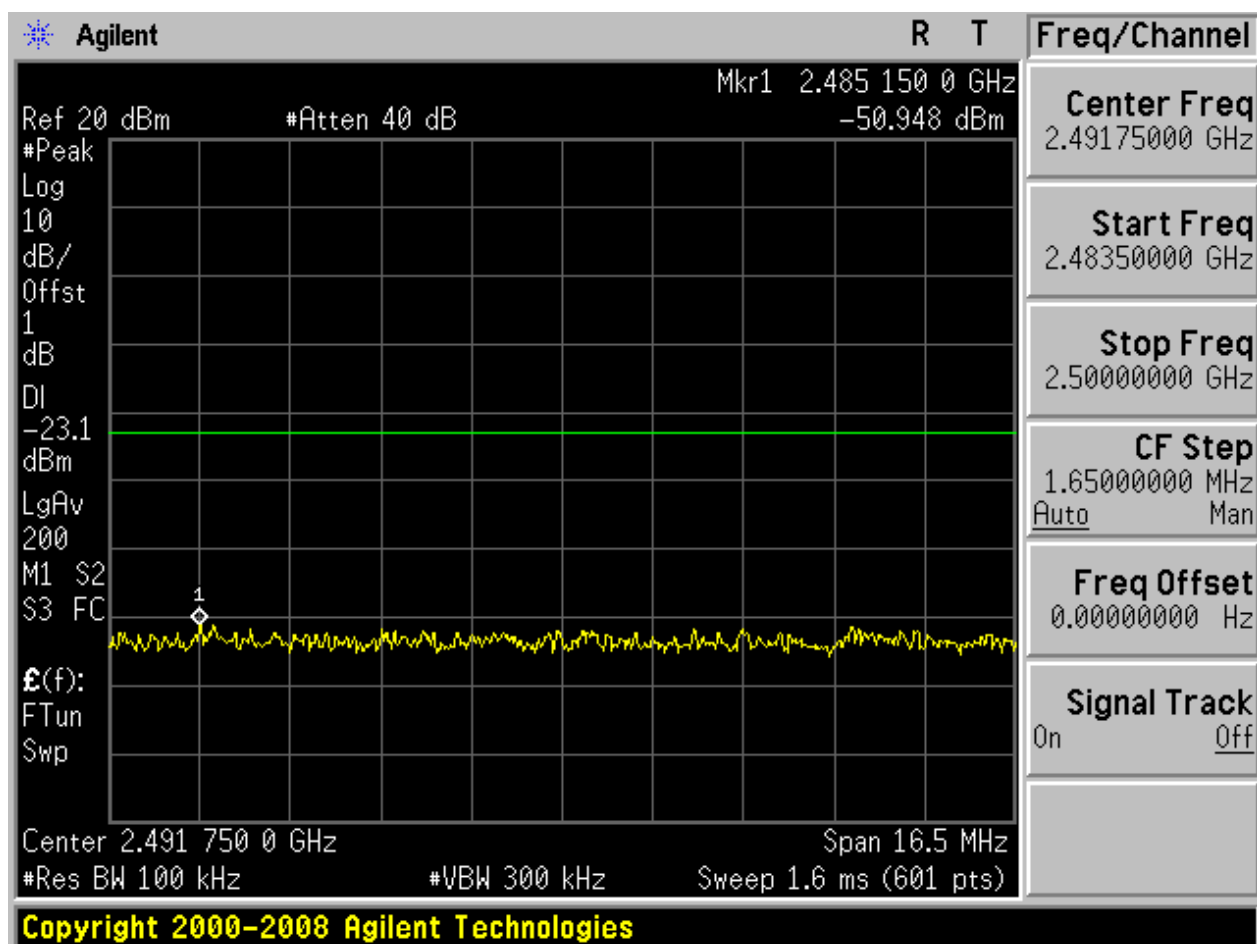
Puw:

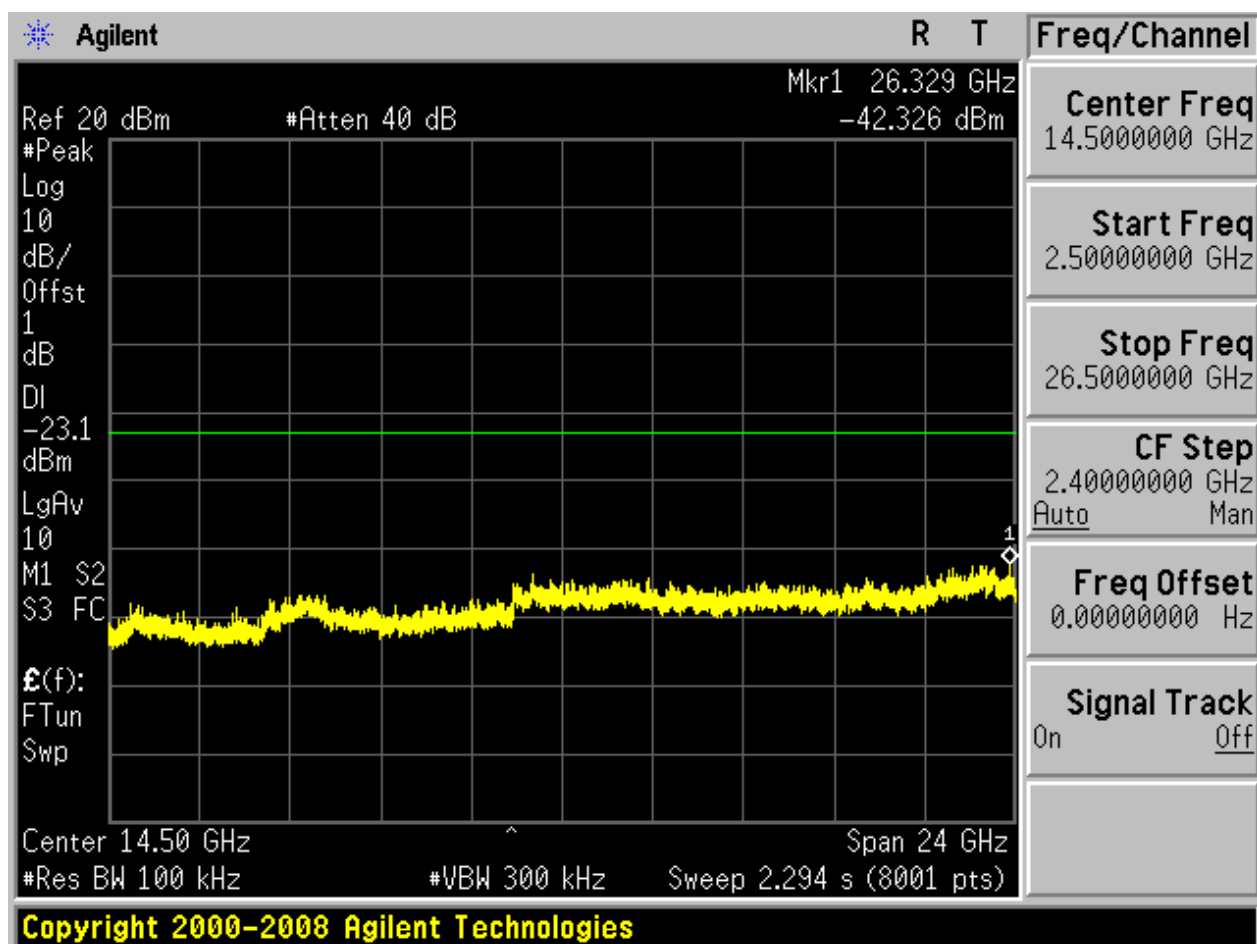






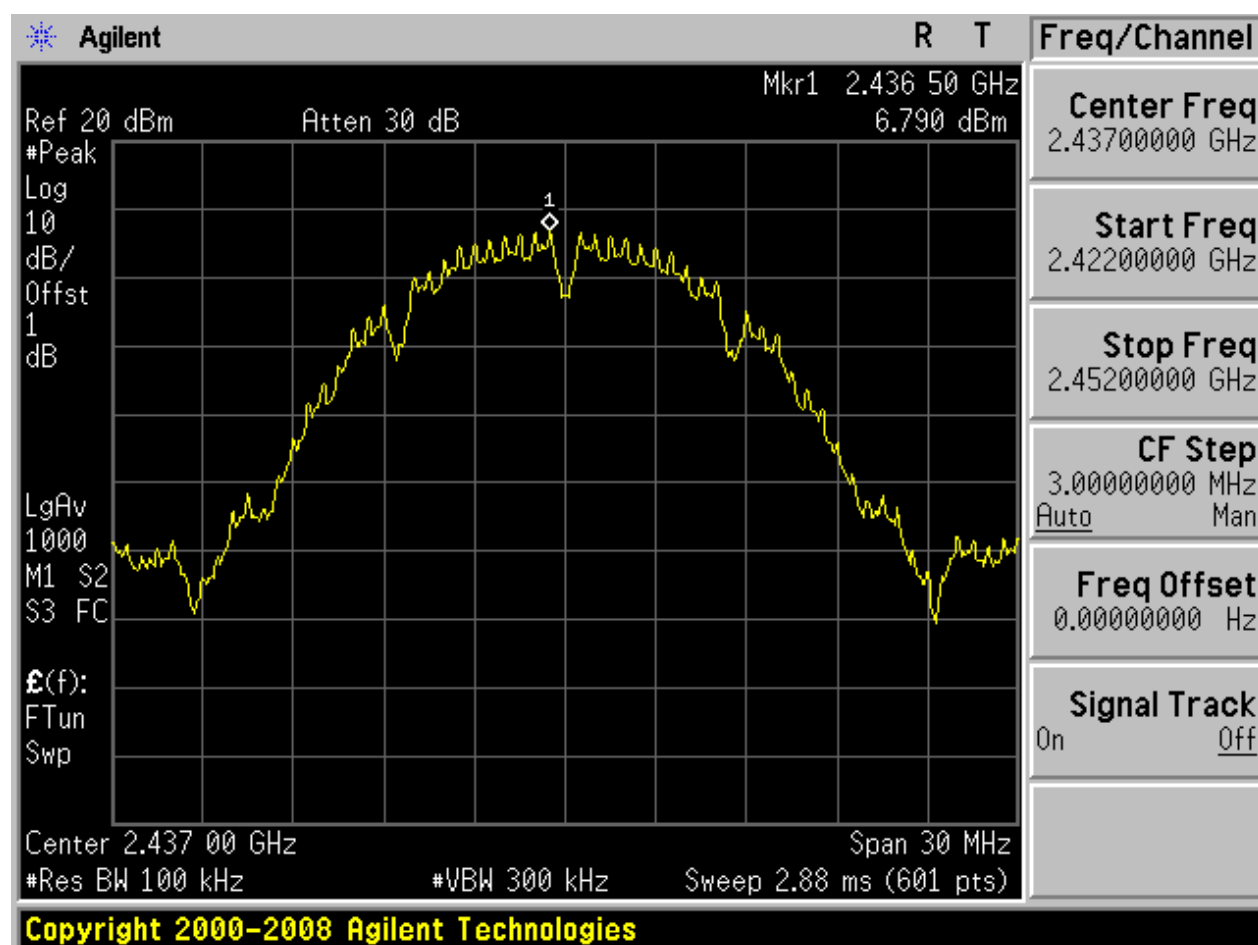






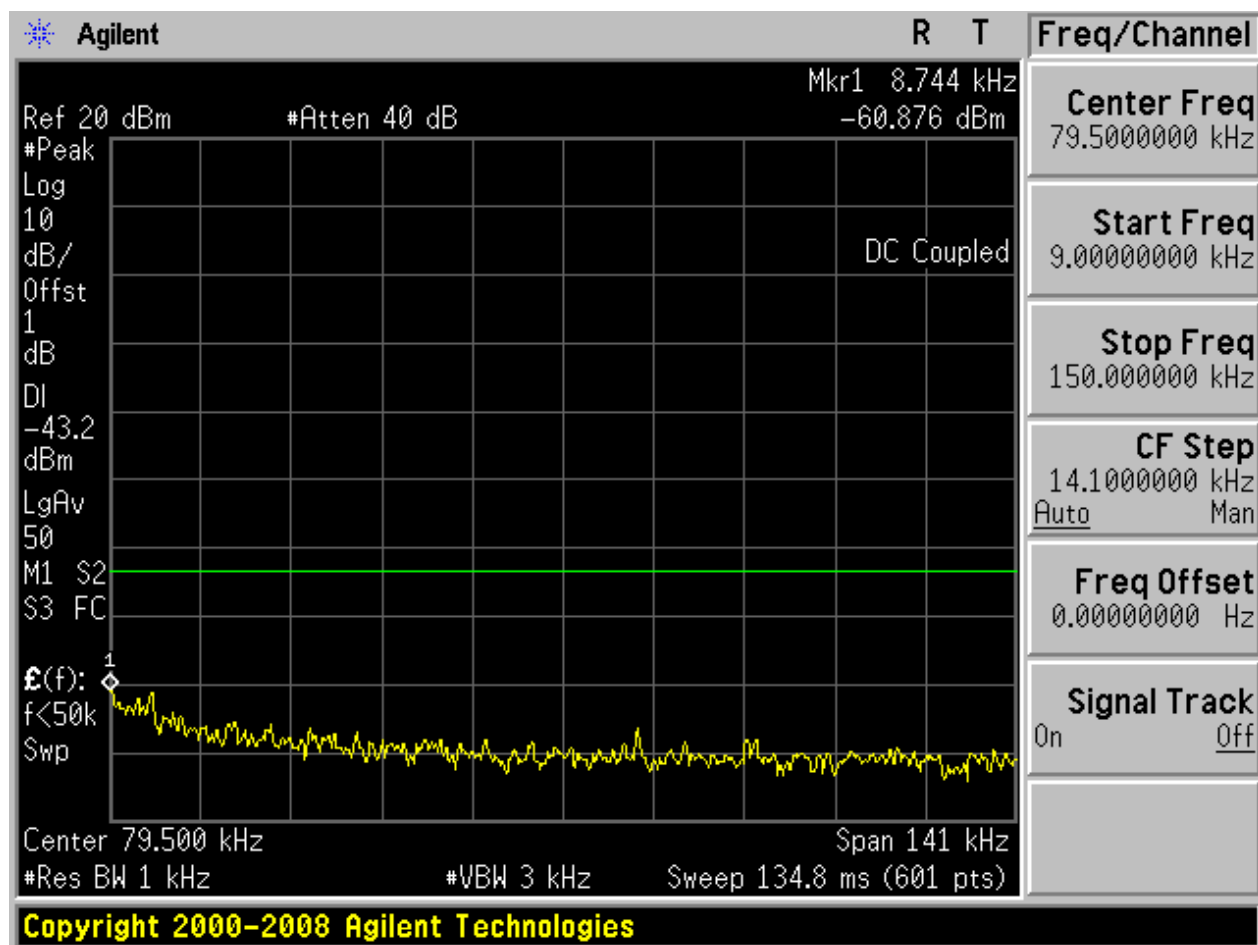
2.2 11B_M@Ant 1

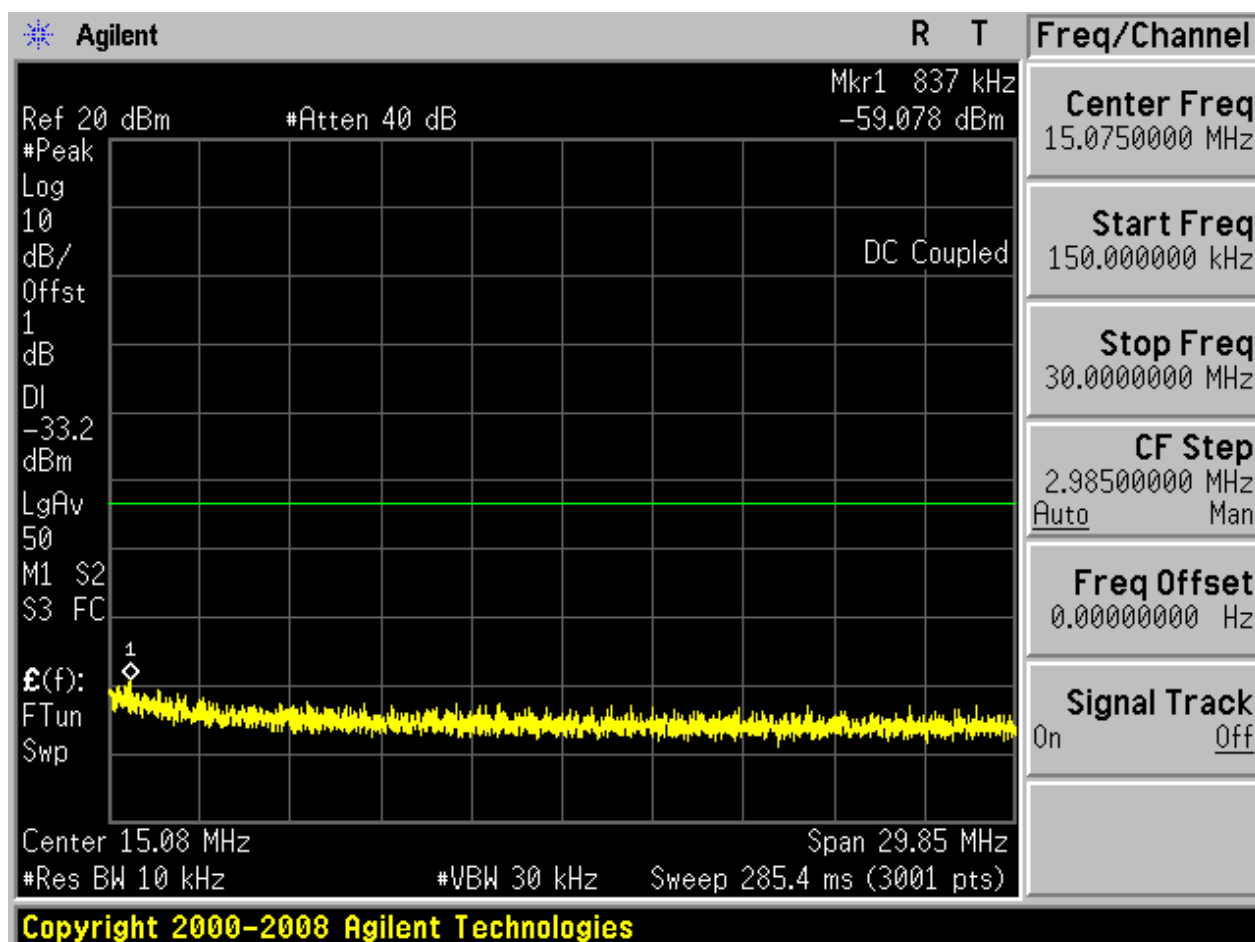
Pref:

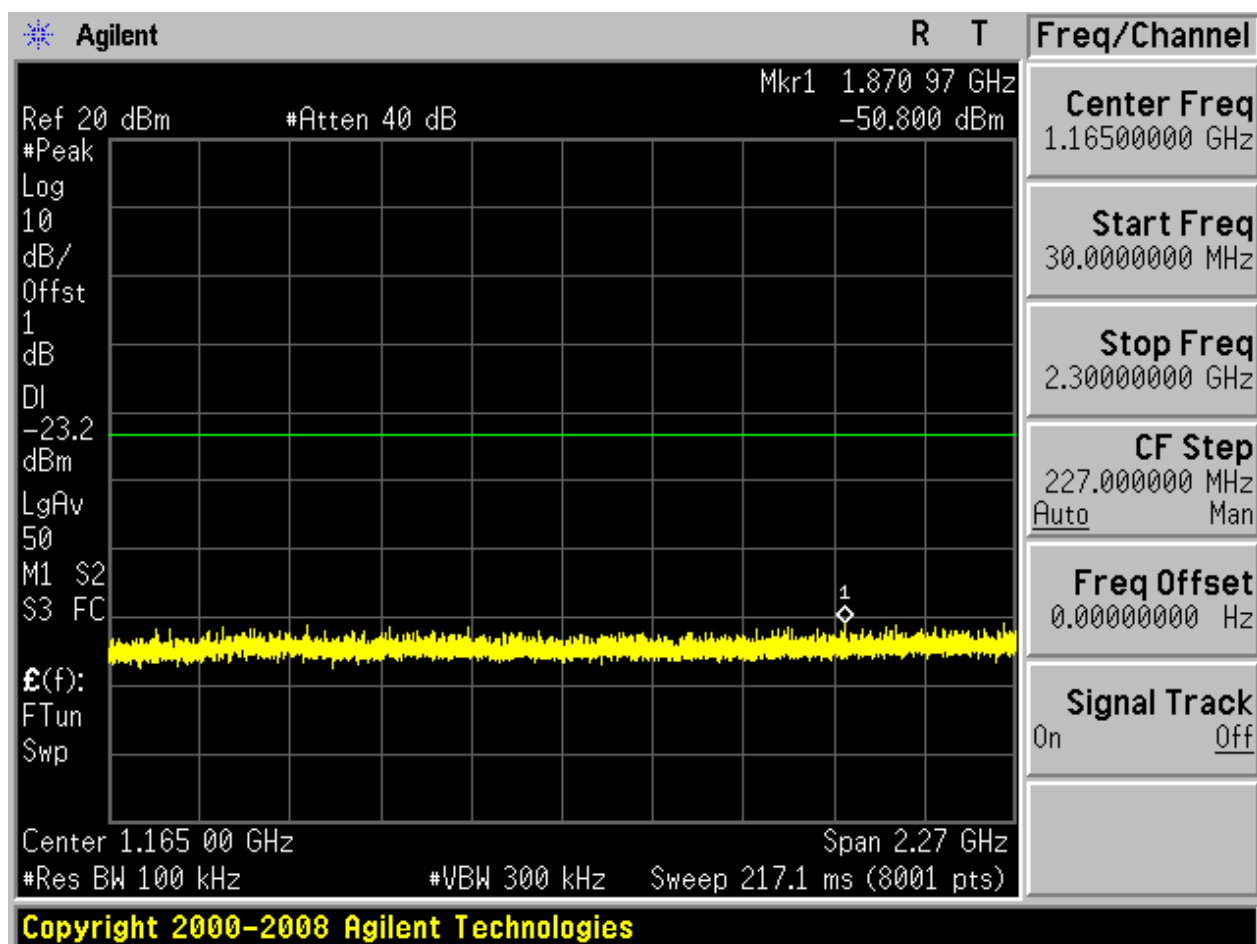


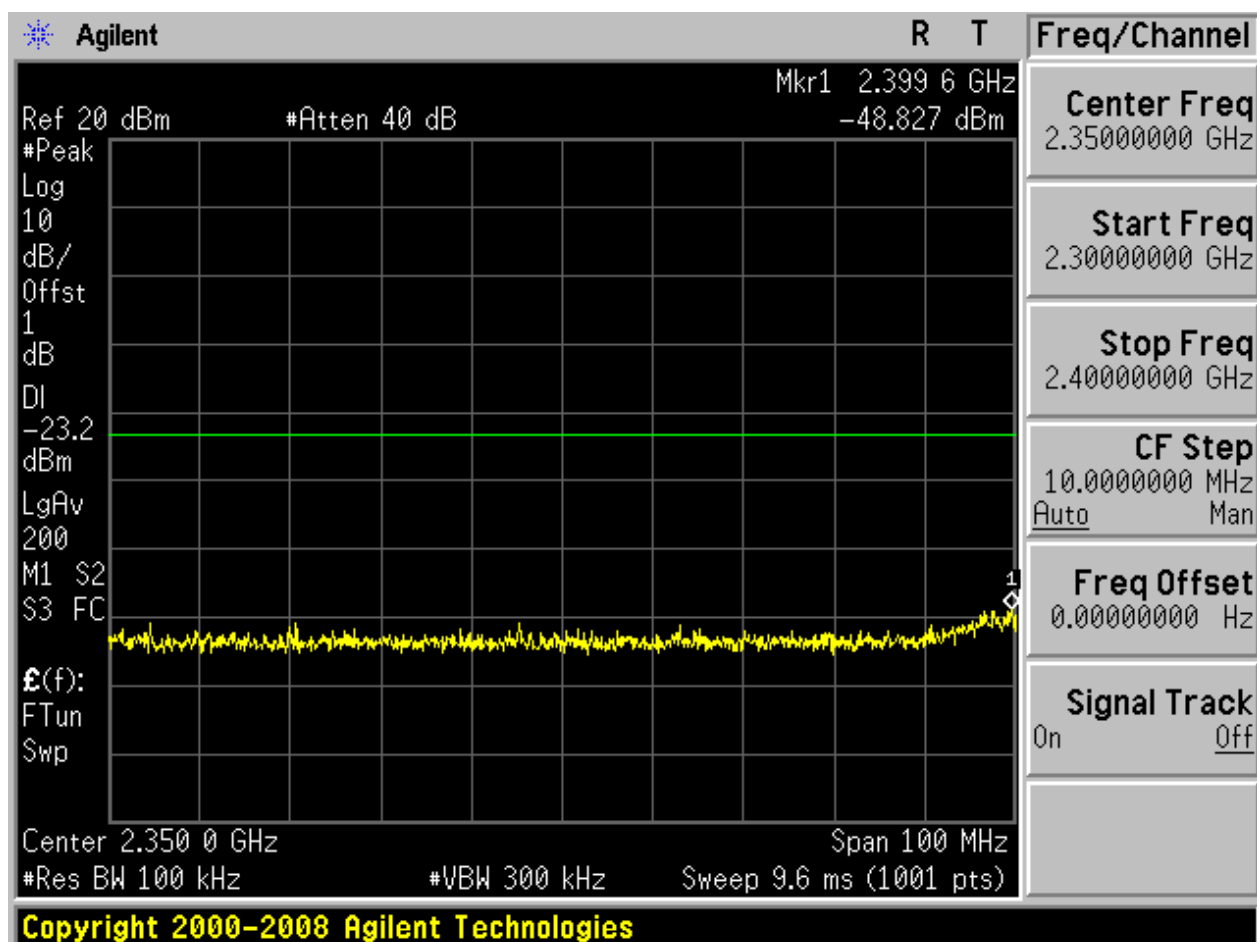


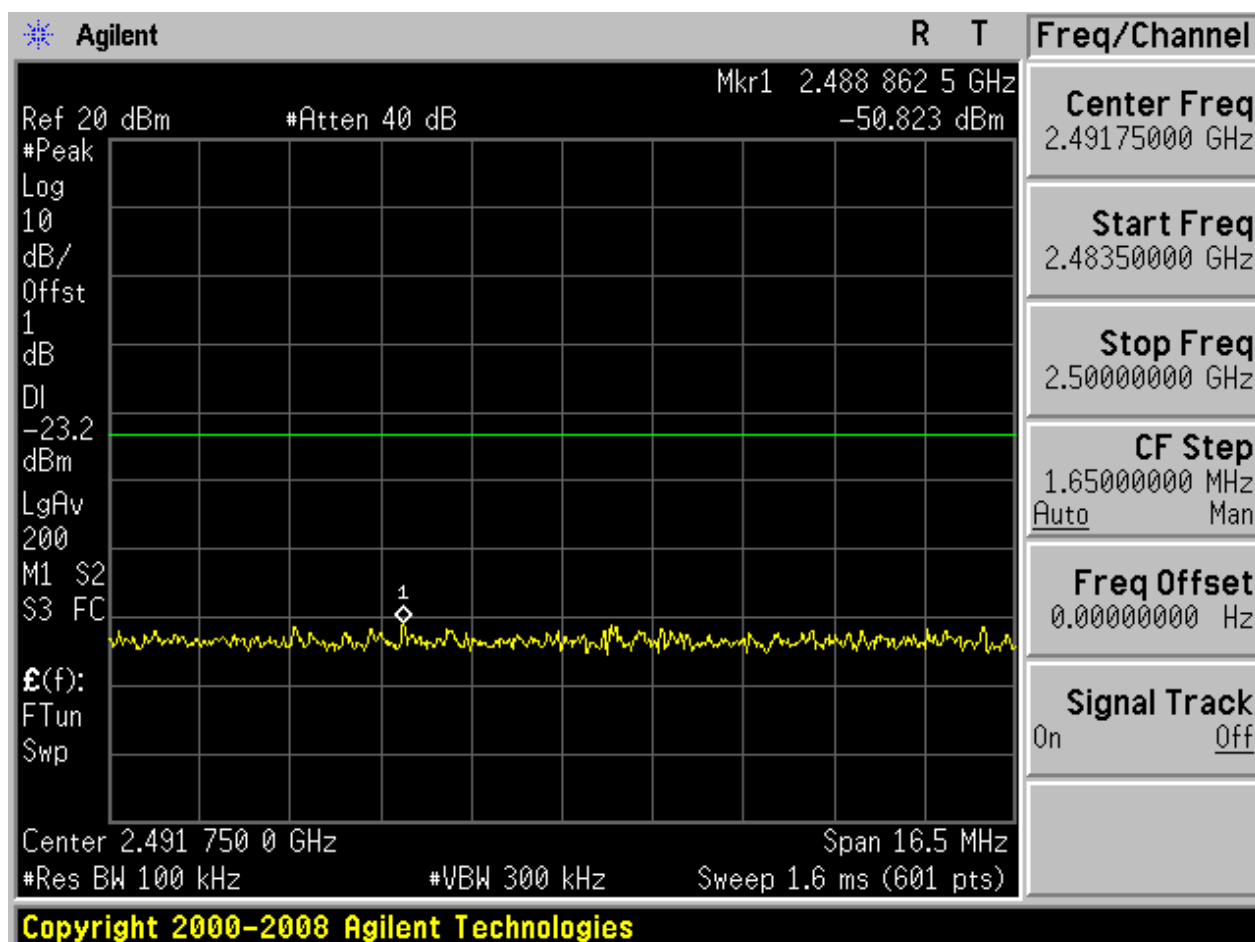
Puw:

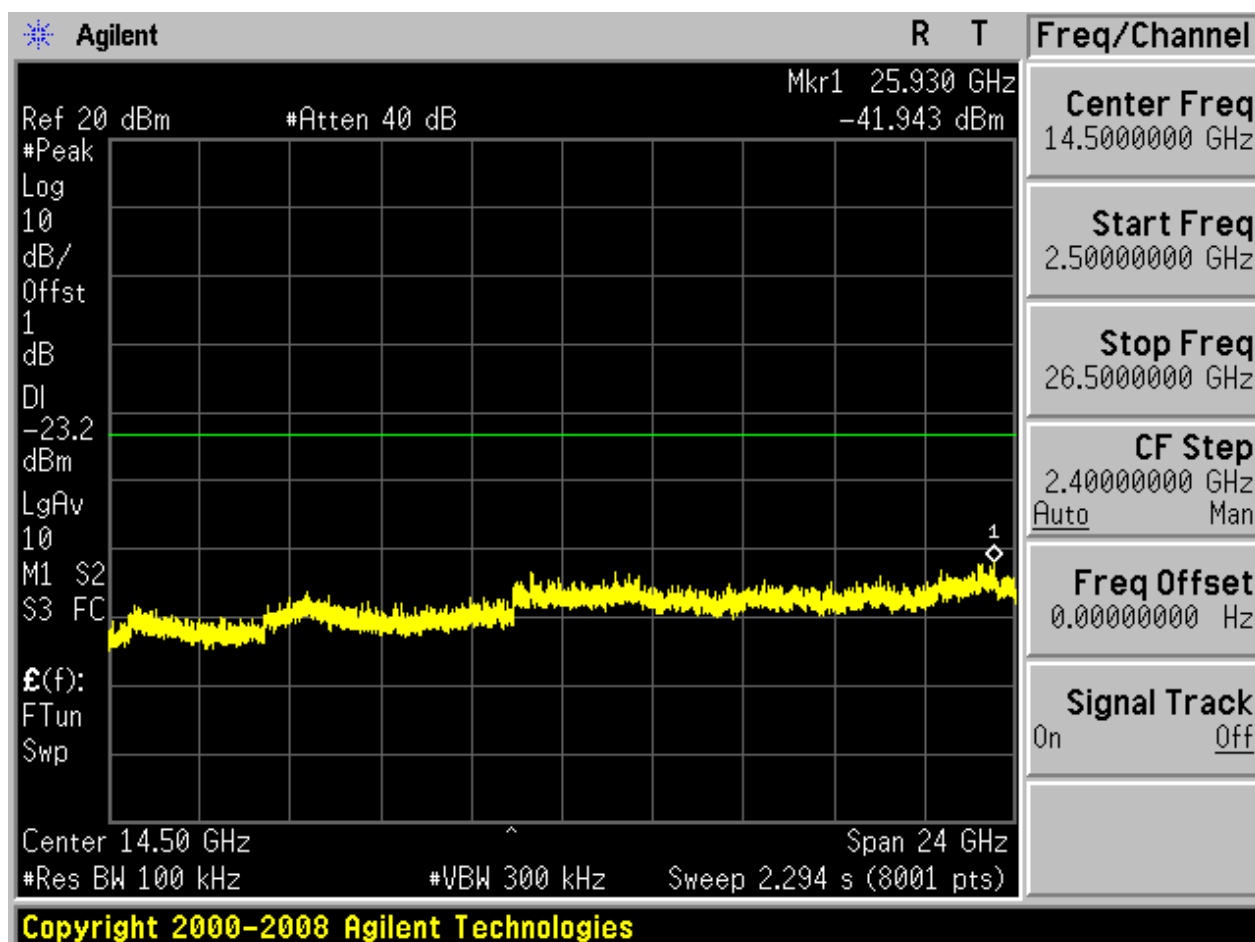






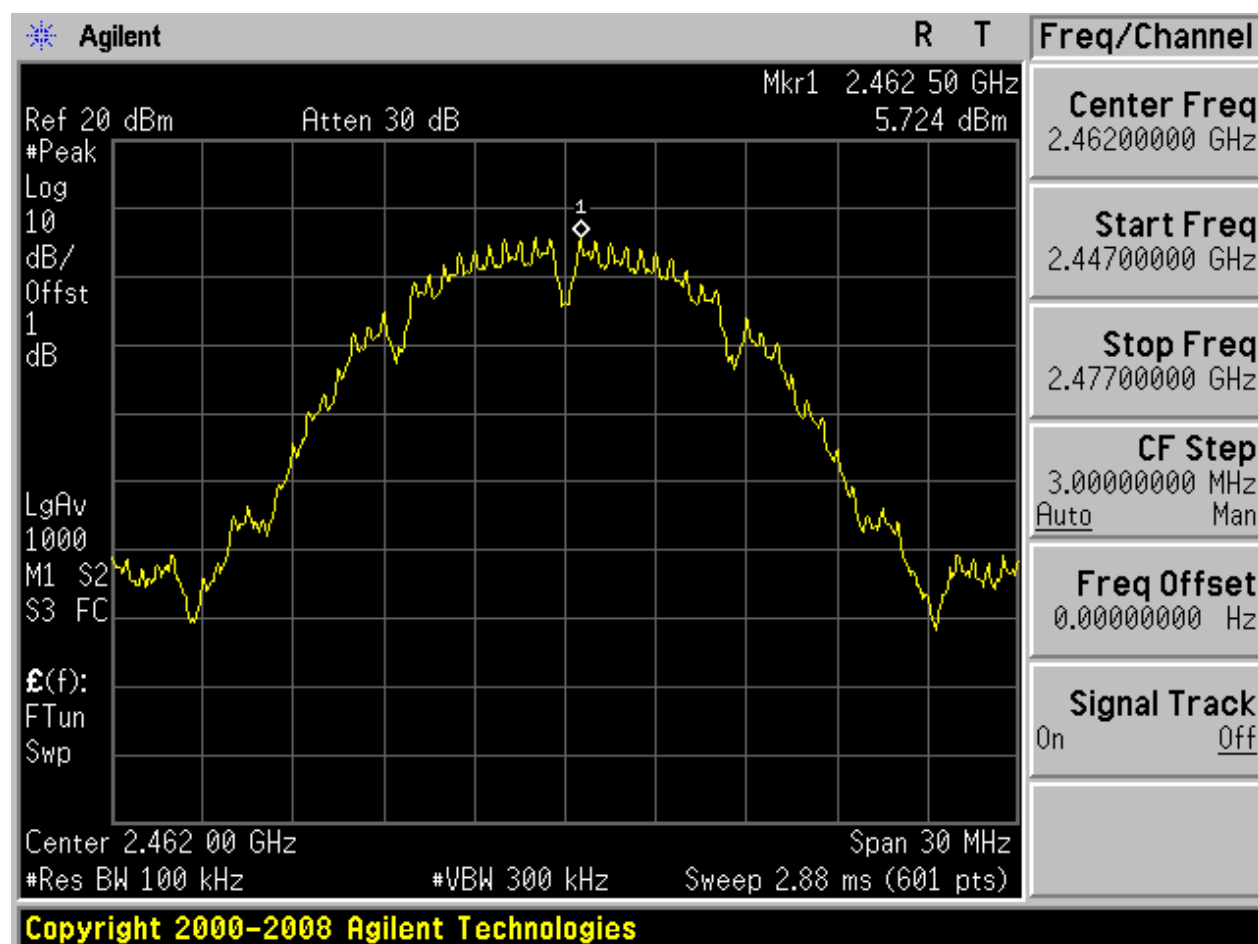




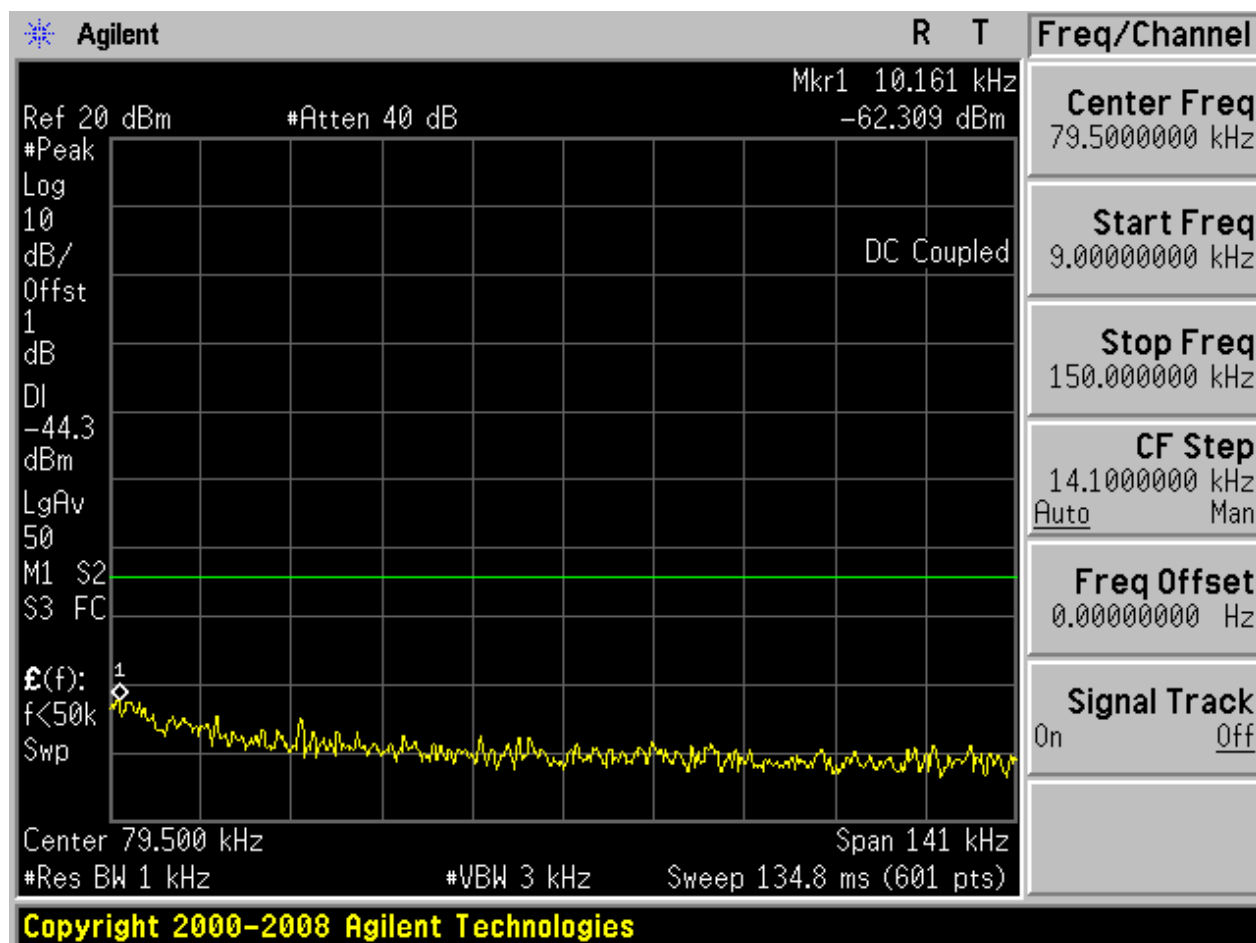


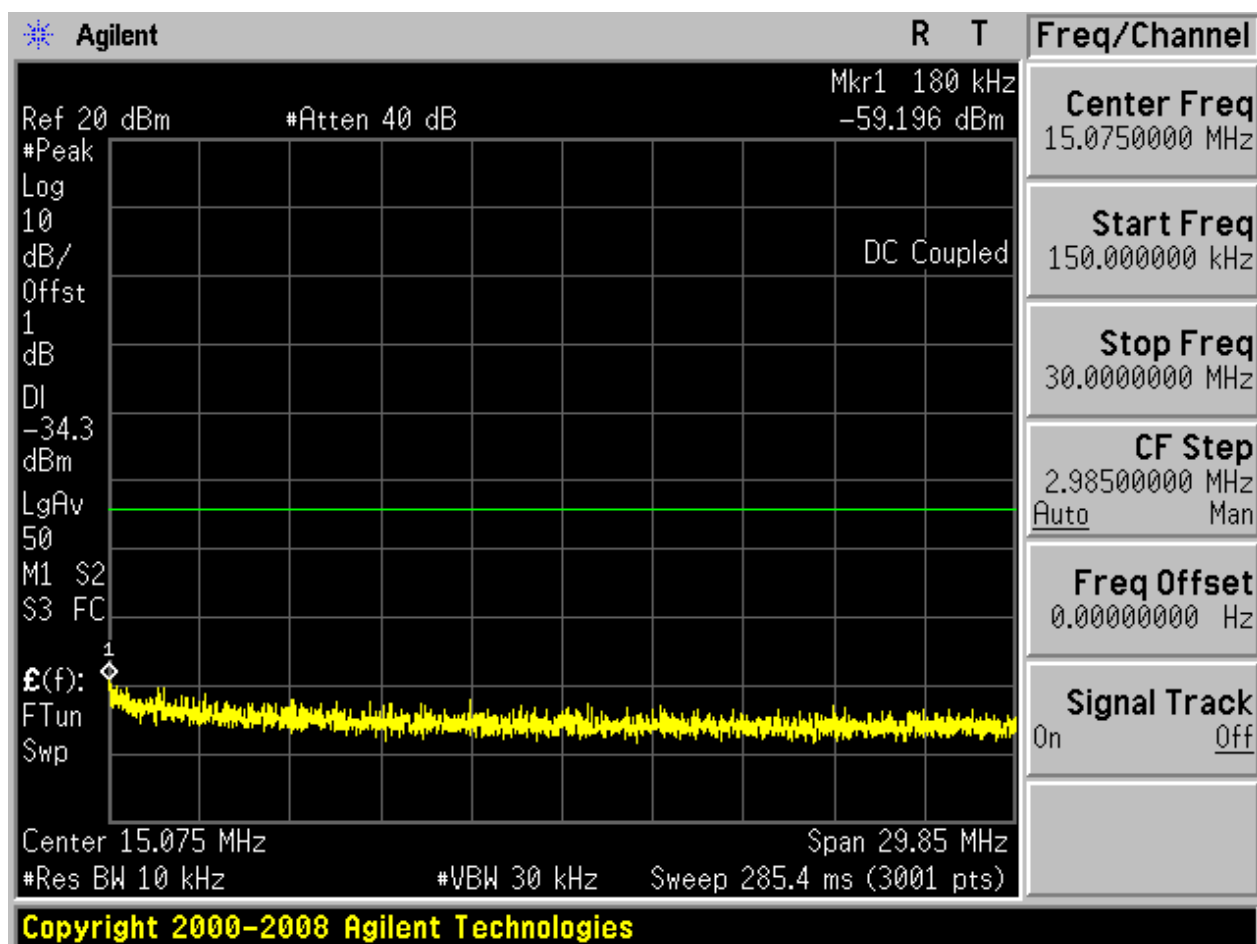
2.3 11B_H@Ant 1

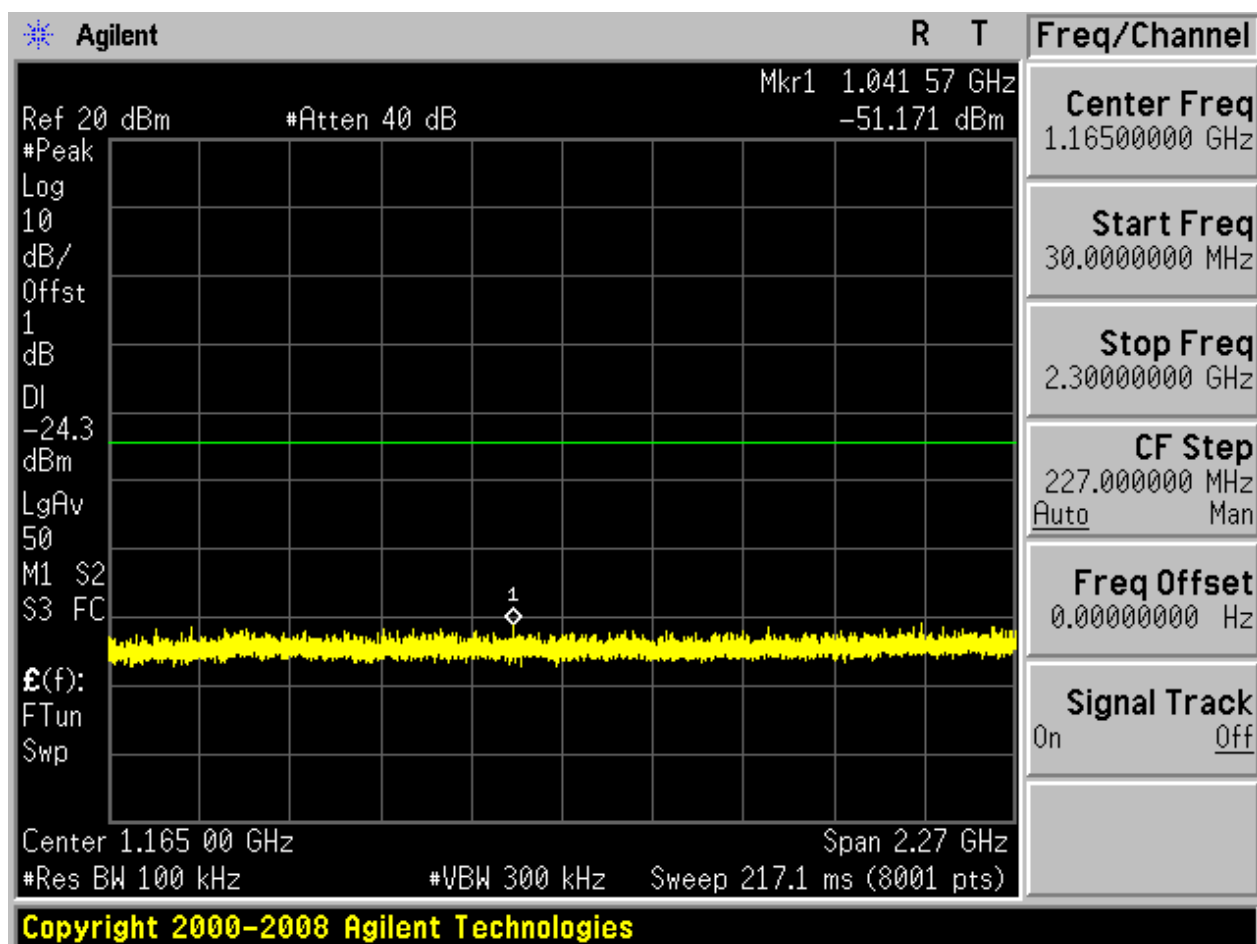
Pref:

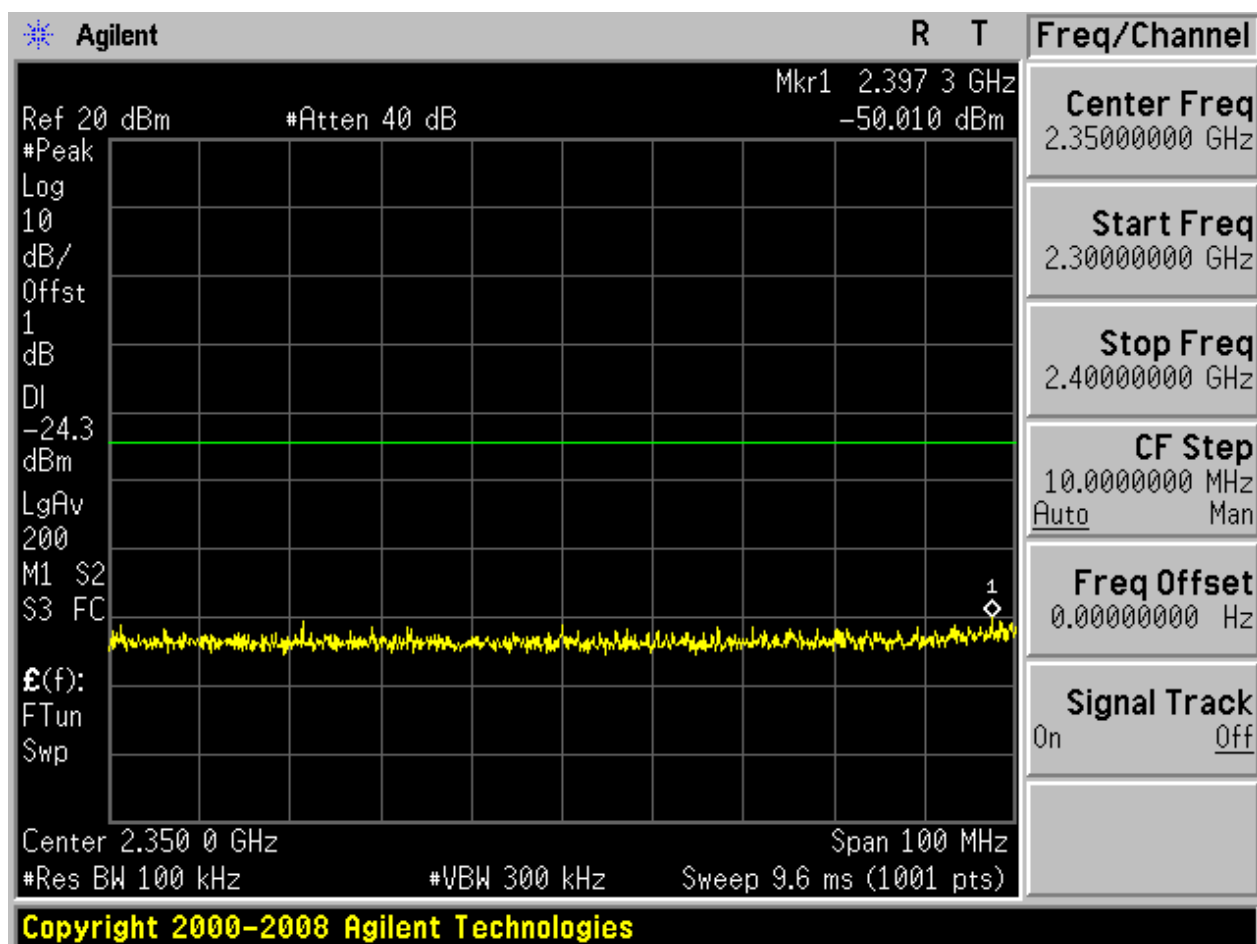


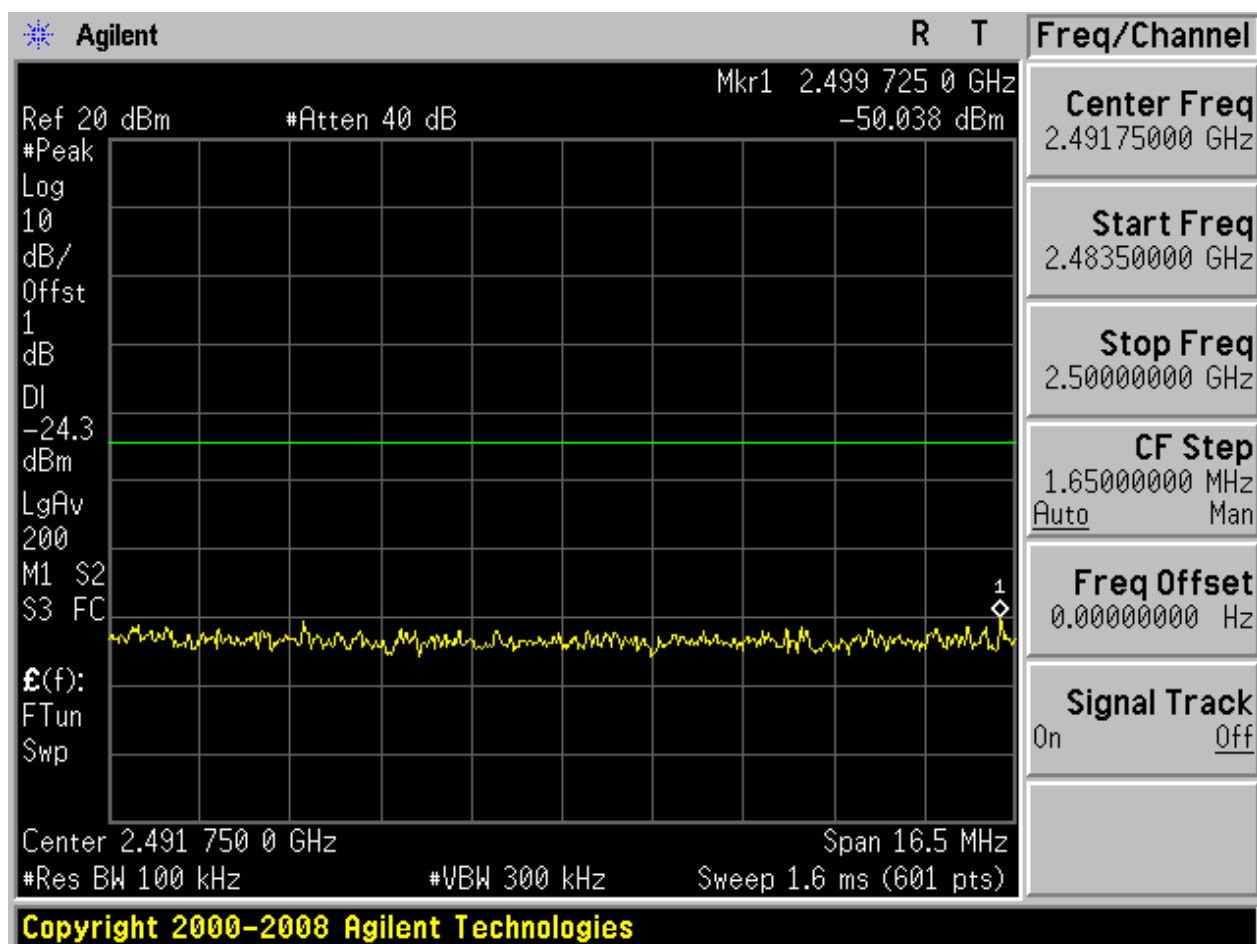
Puw:

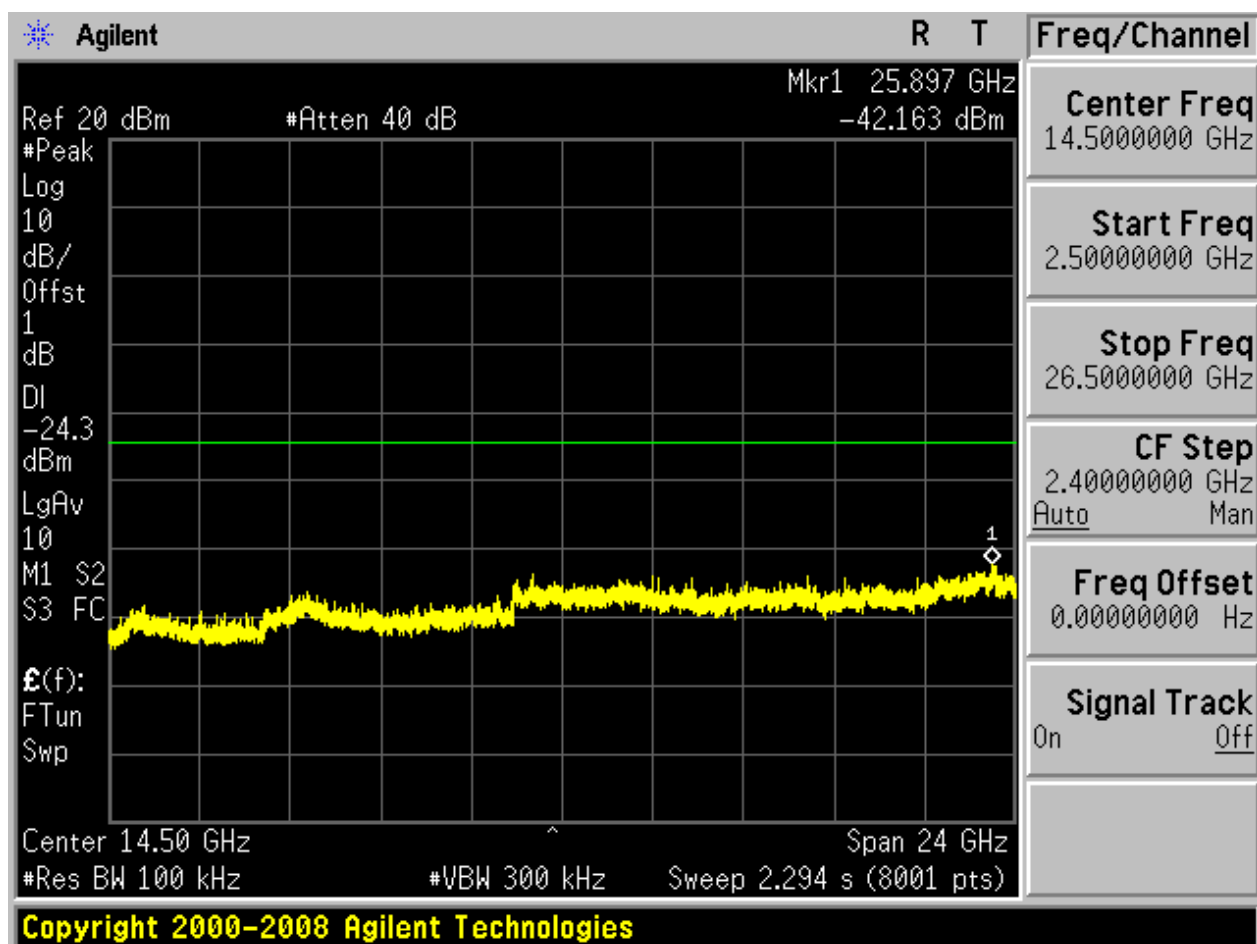






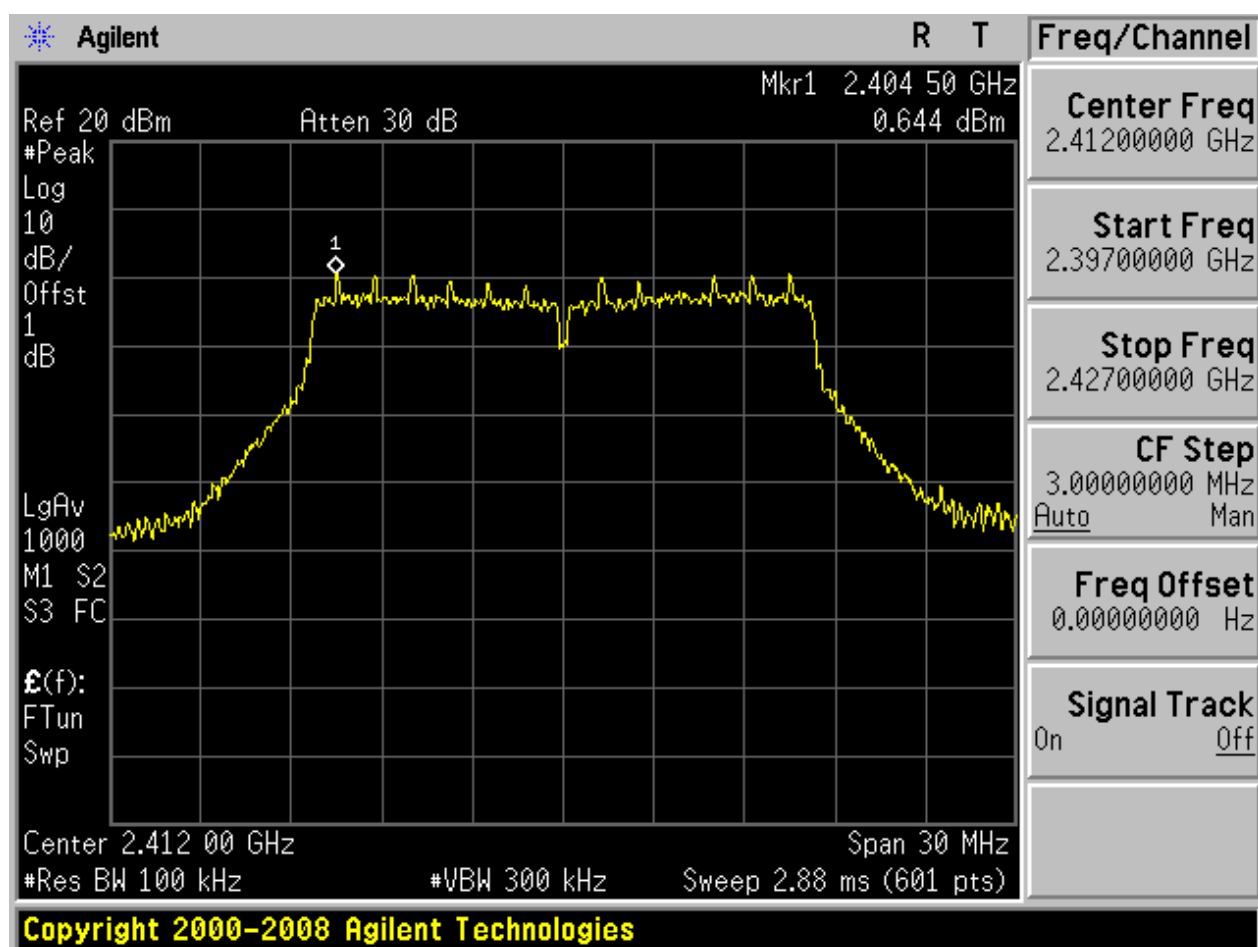






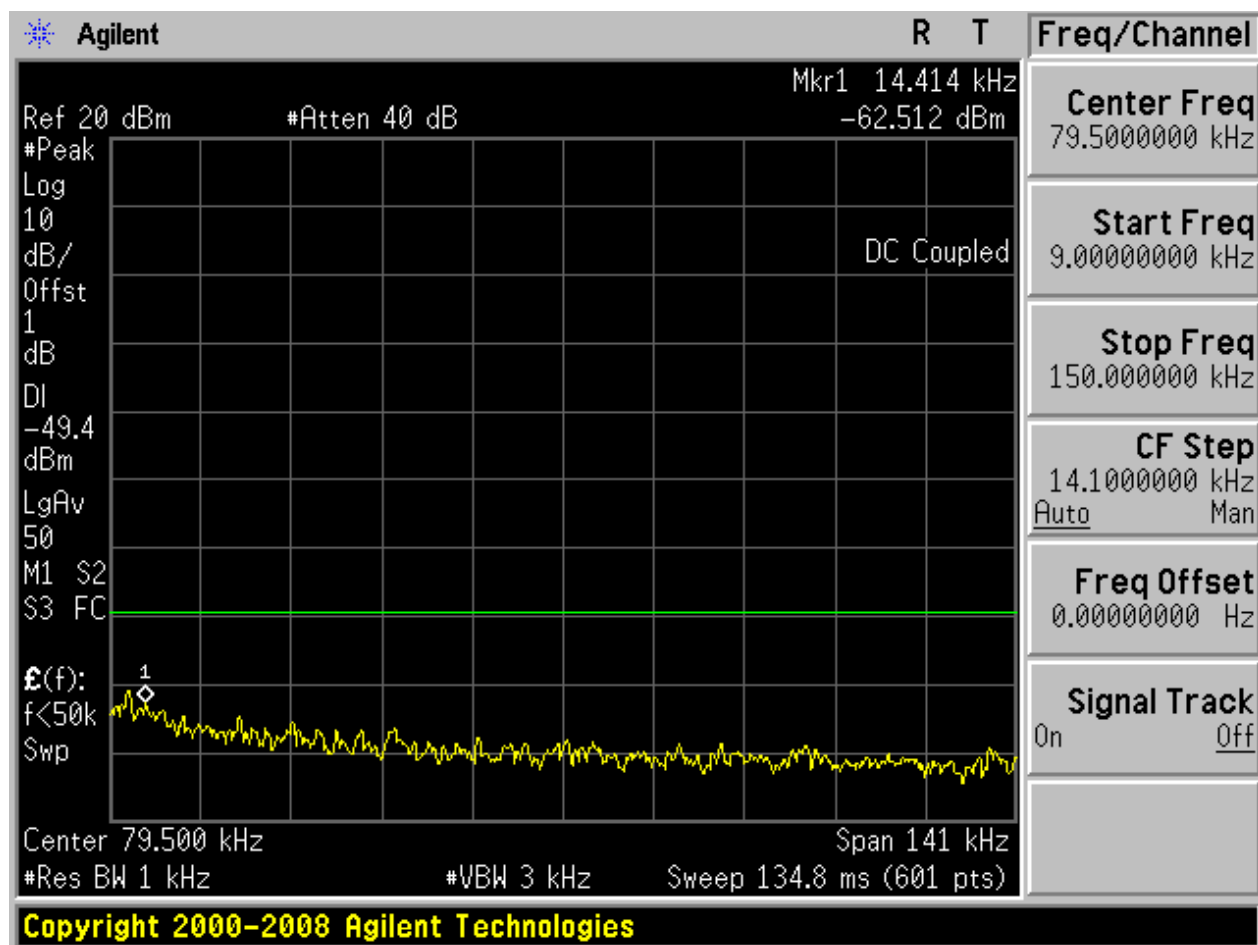
2.4 11G_L@Ant 1

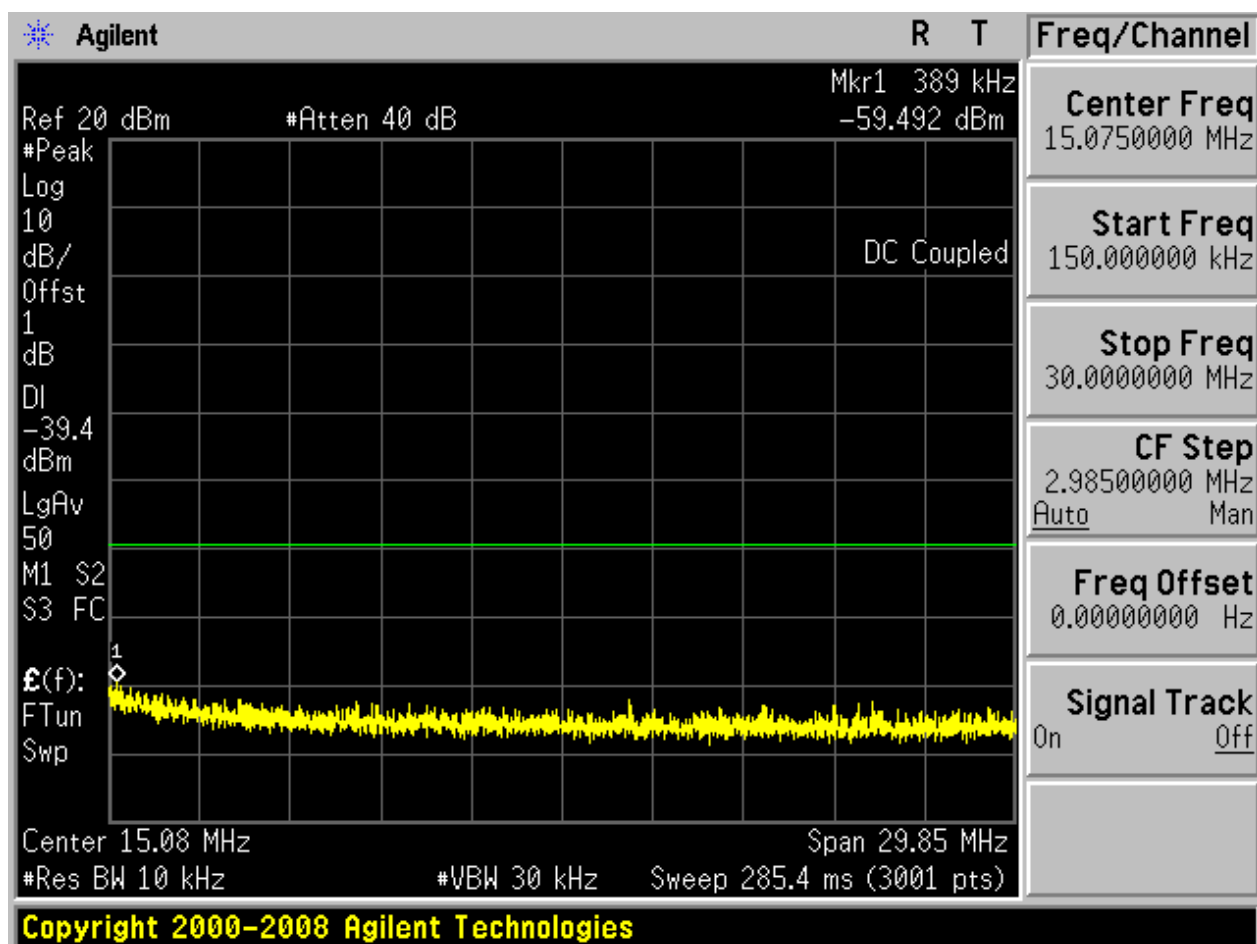
Pref:

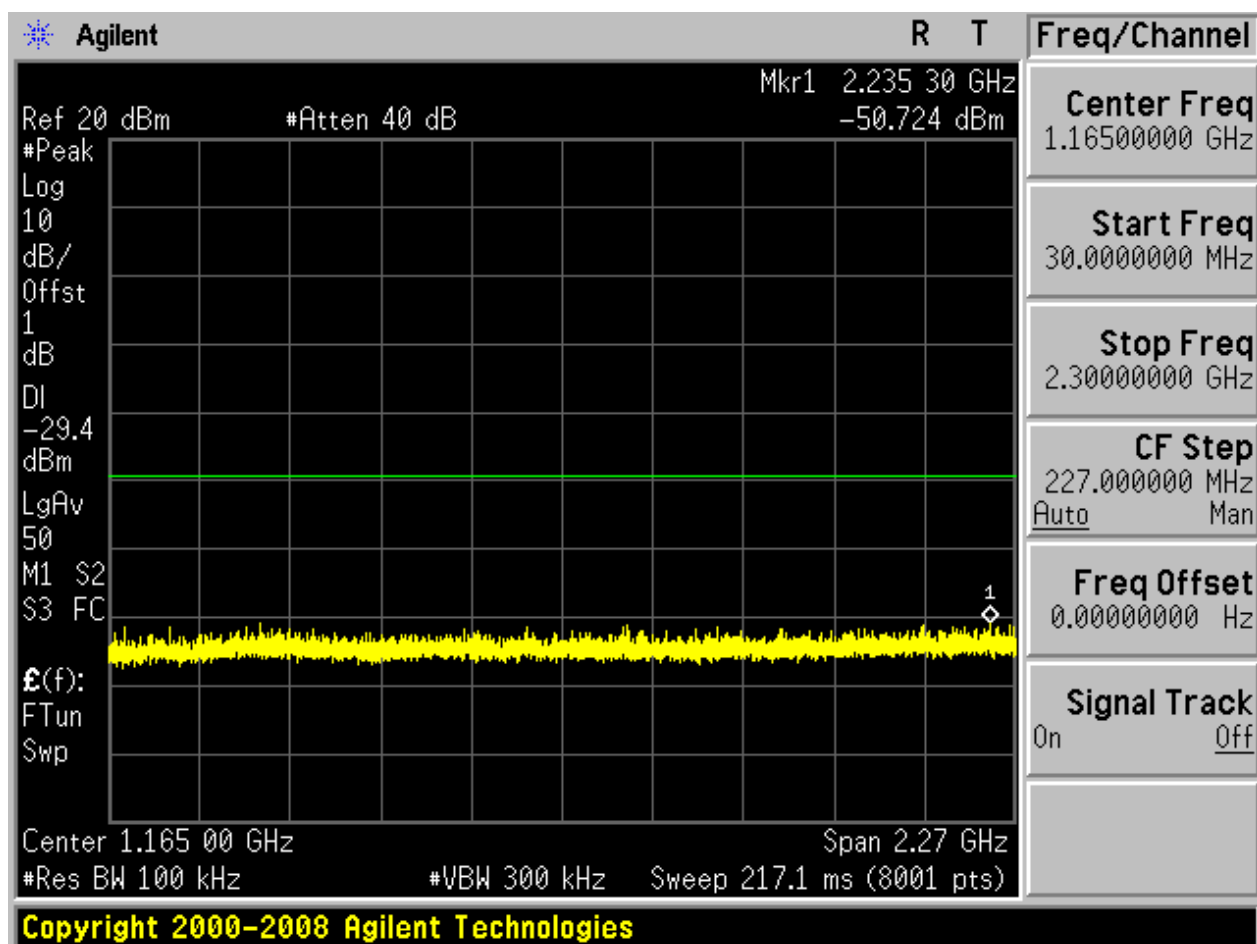


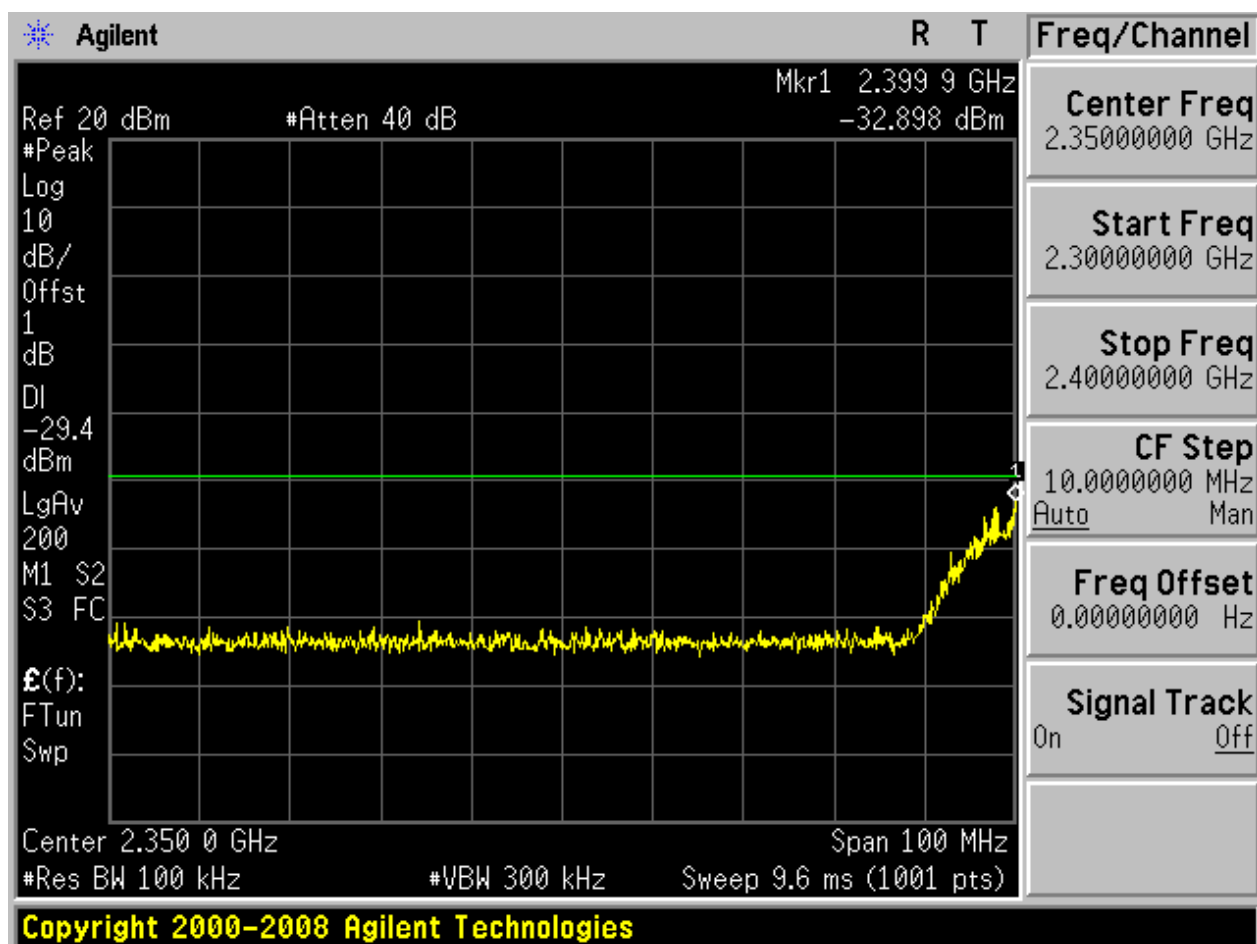


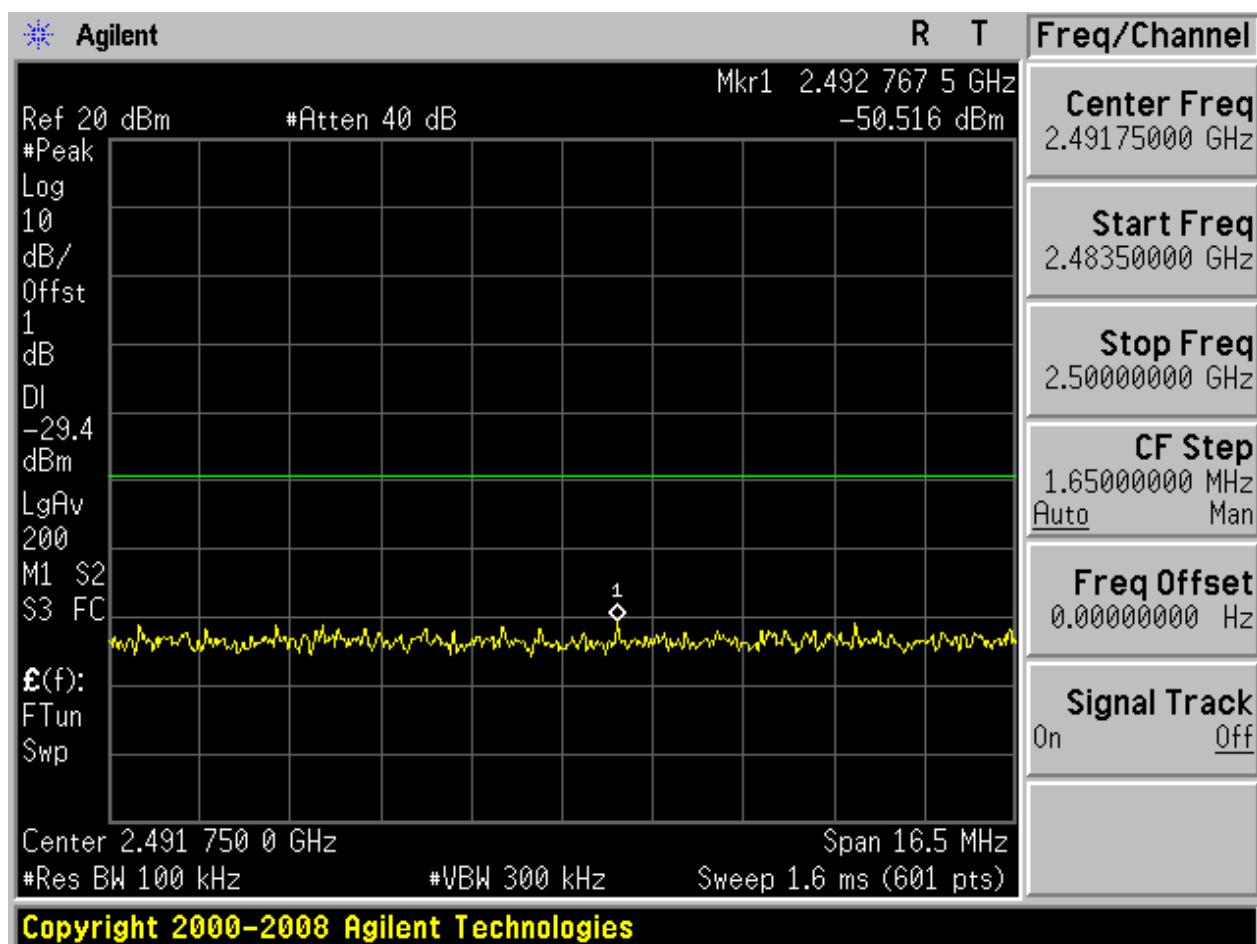
Puw:

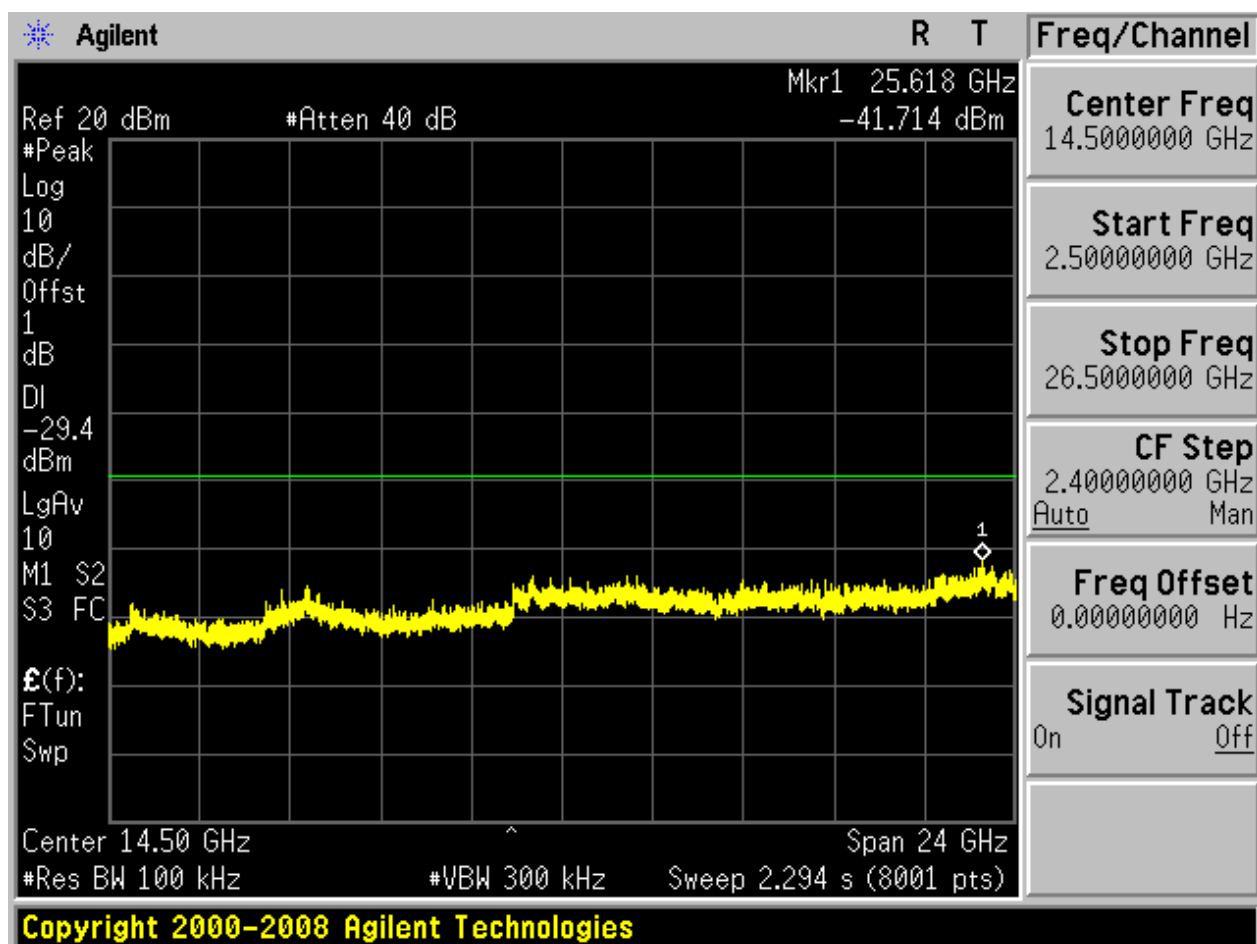






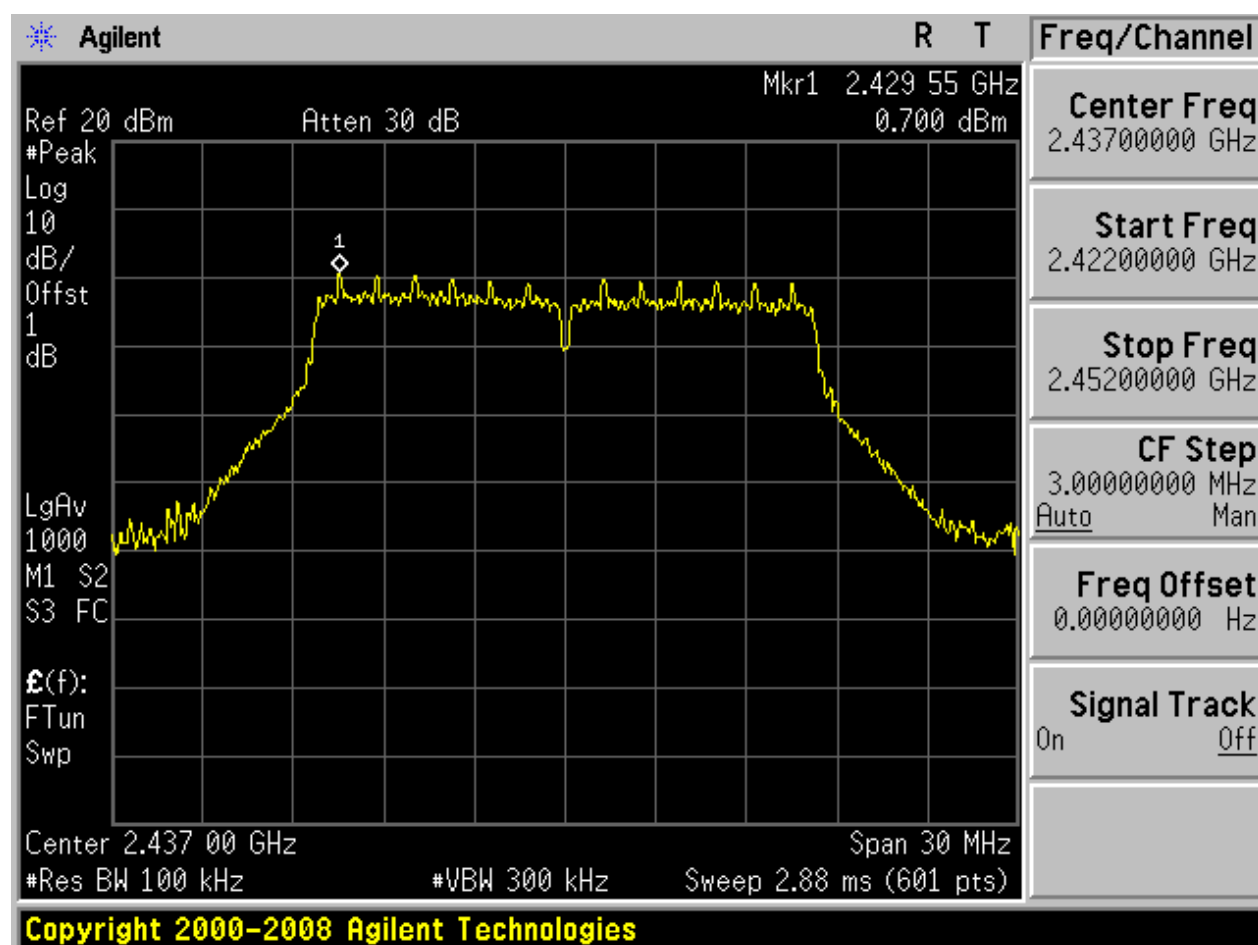






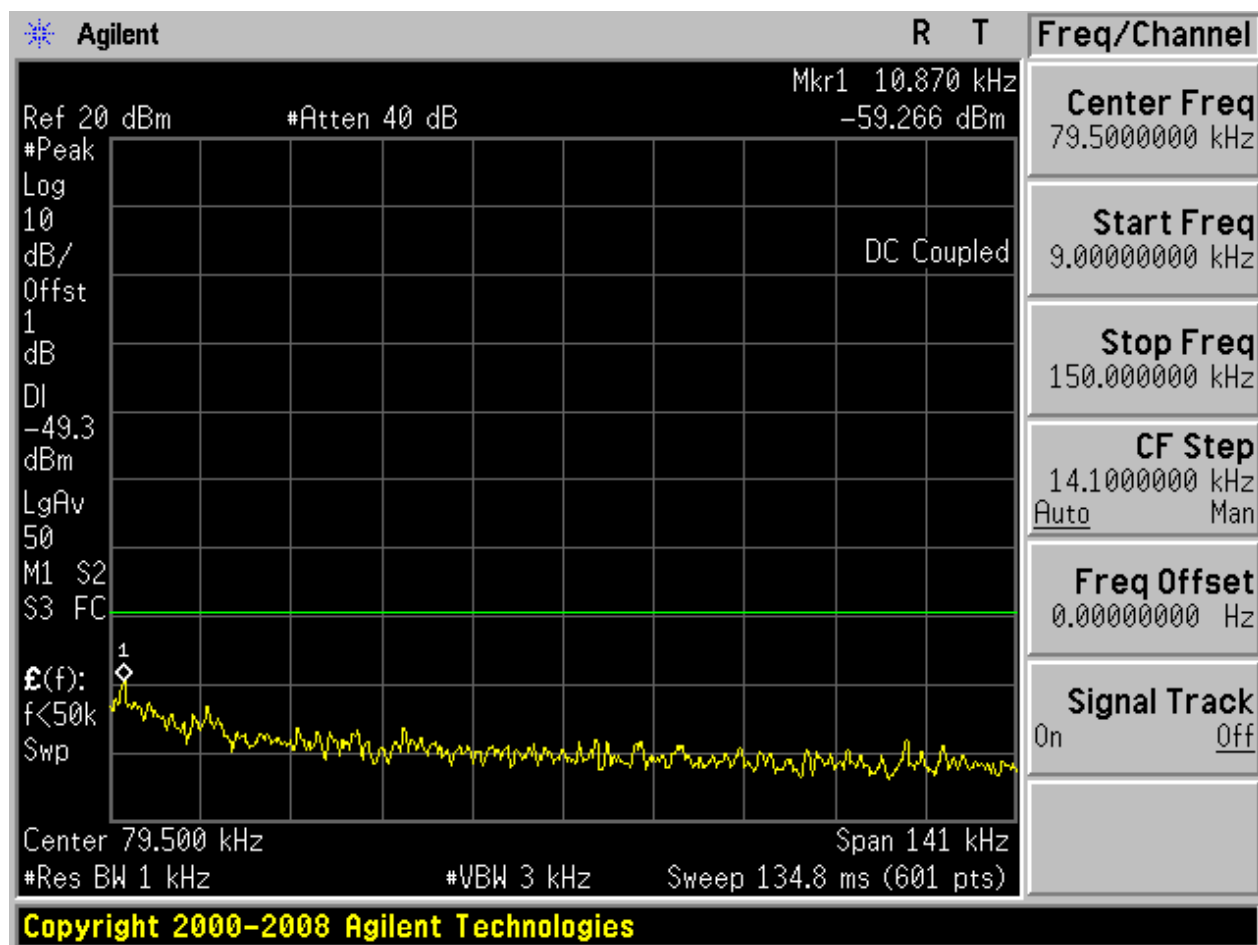
2.5 11G_M@Ant 1

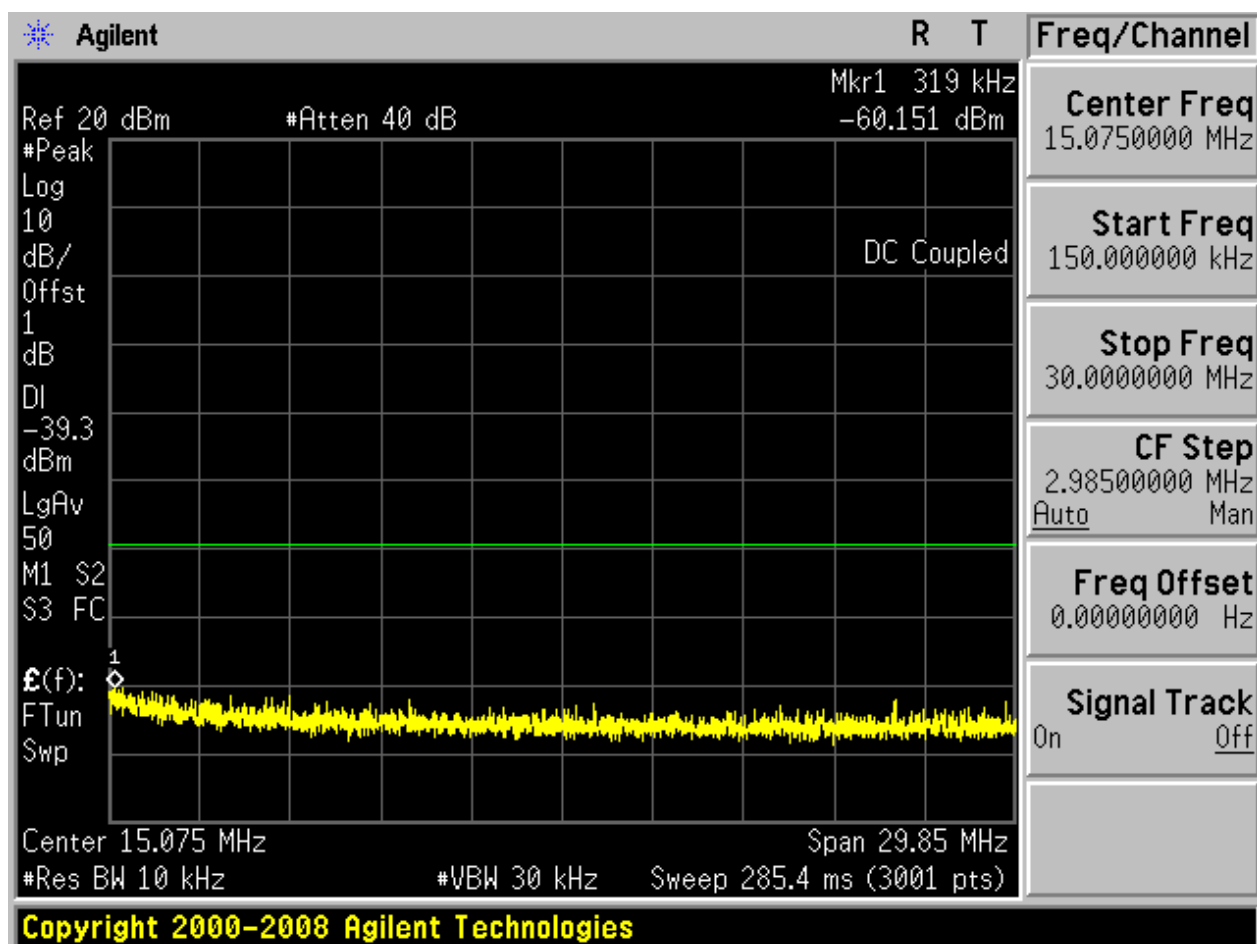
Pref:

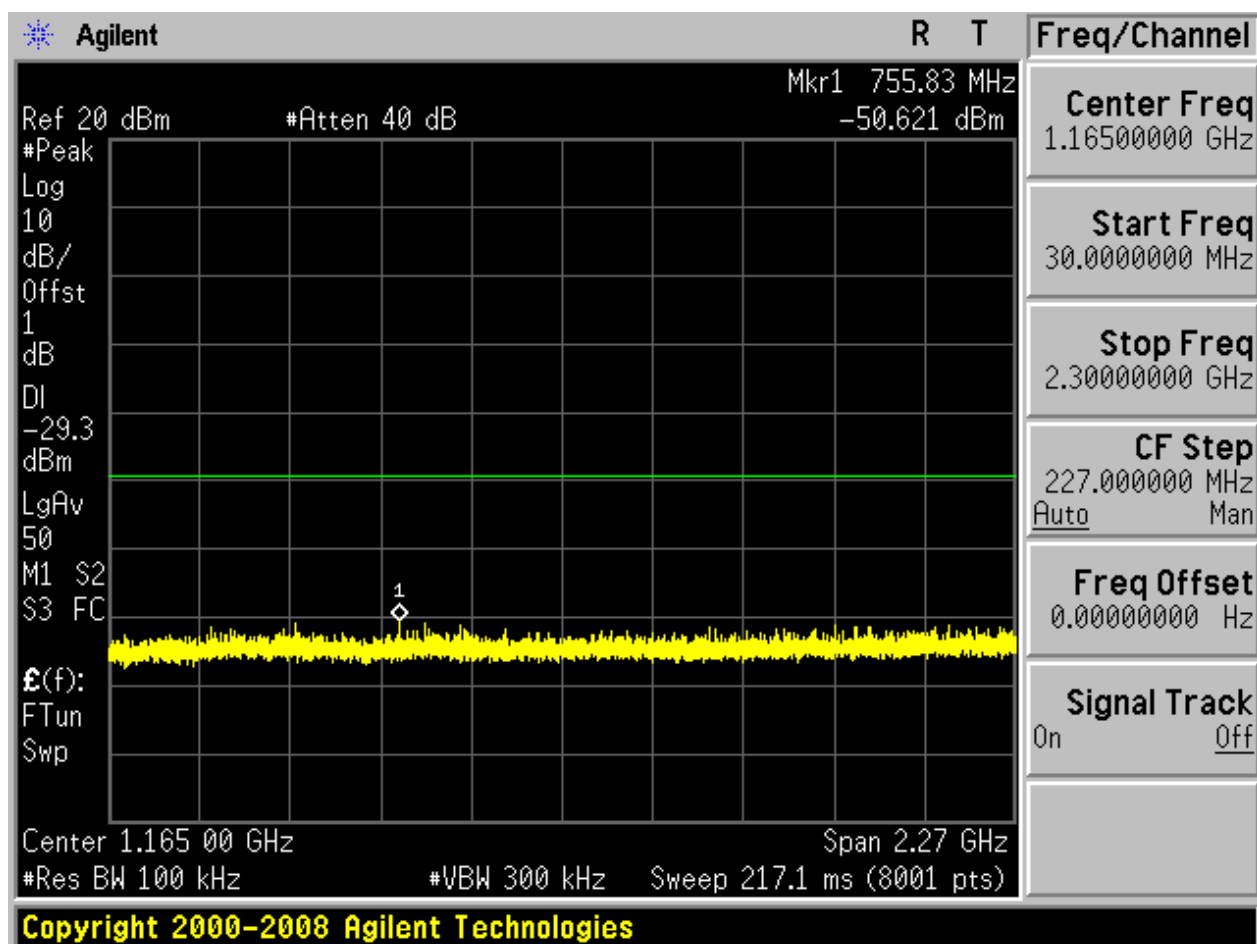


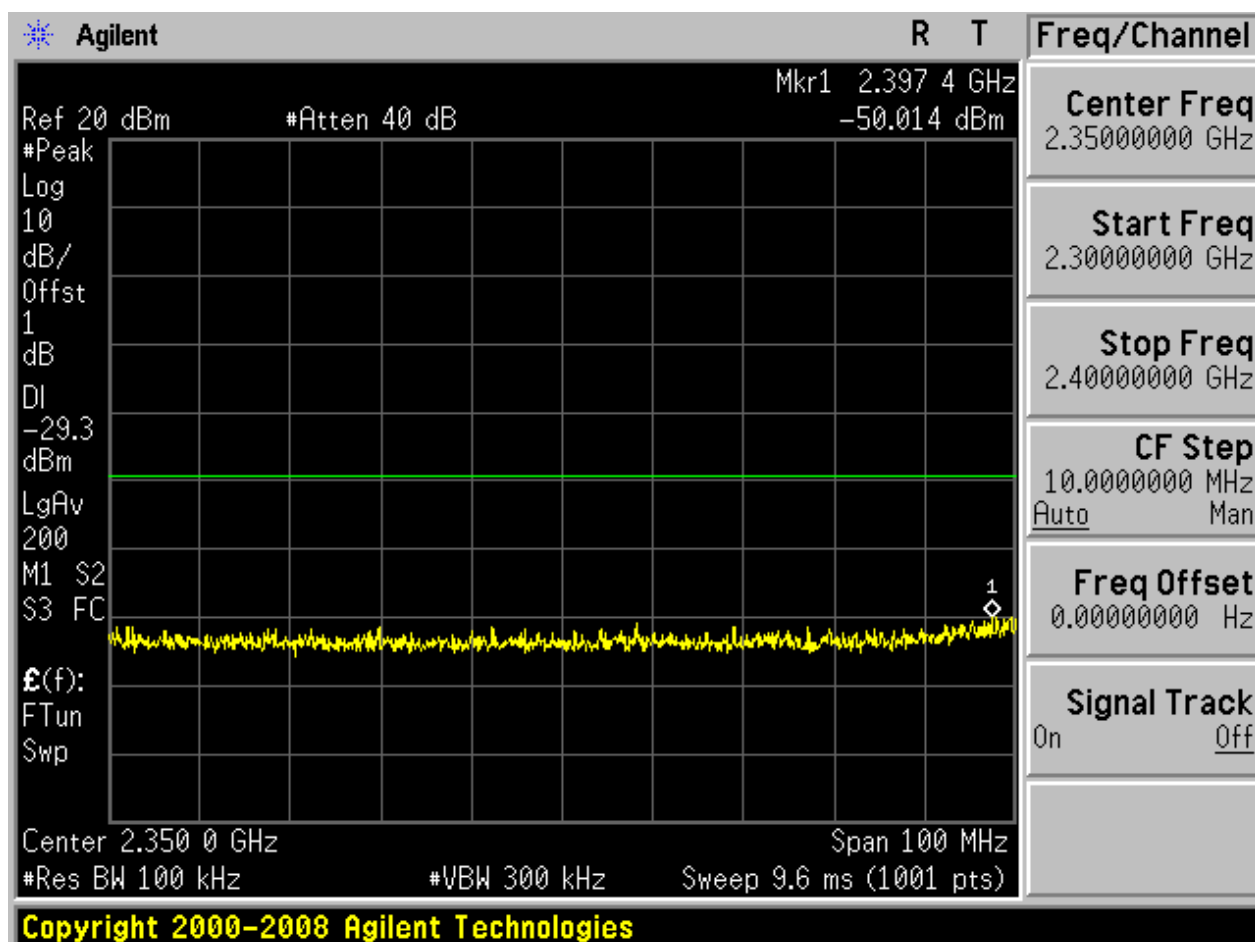


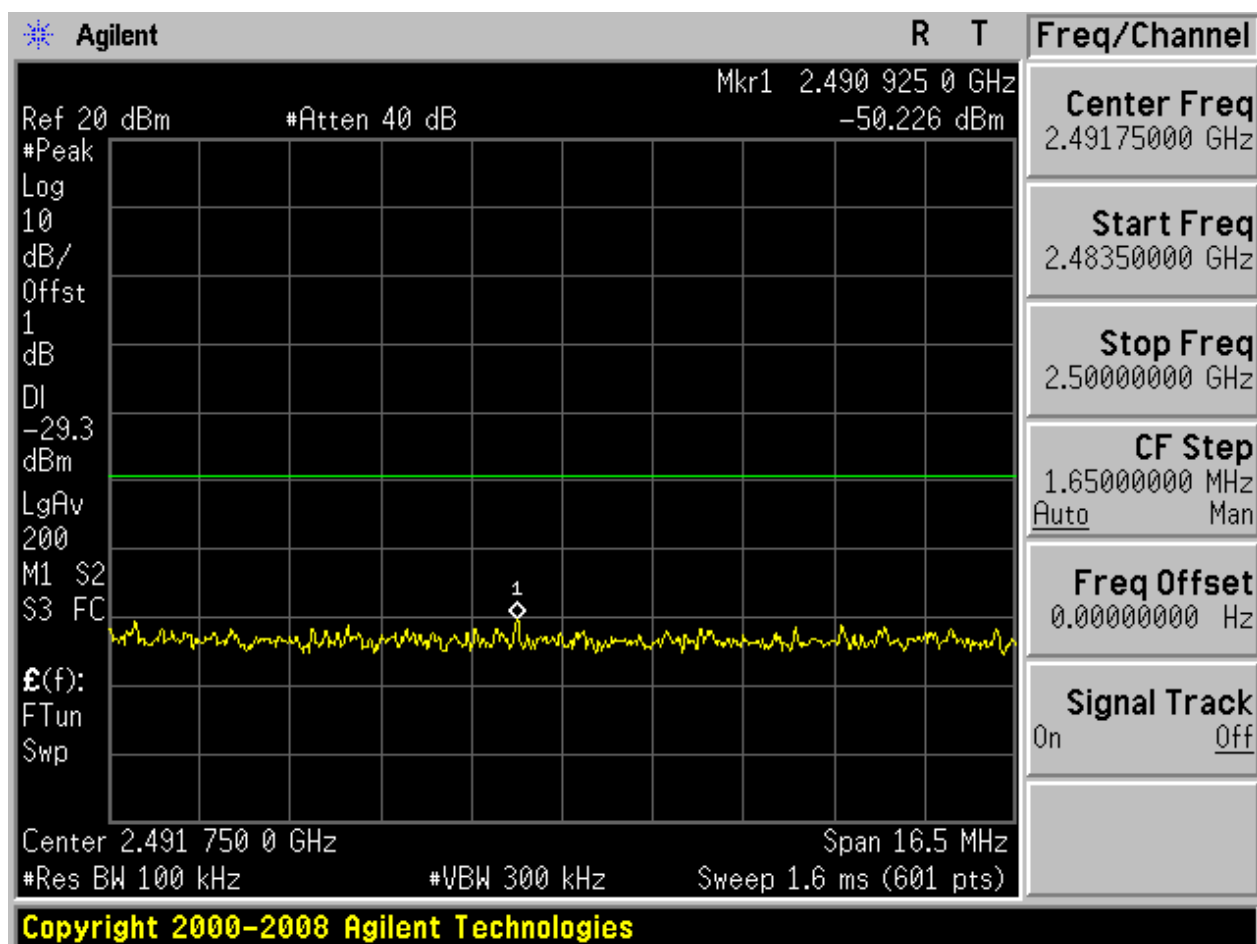
Puw:

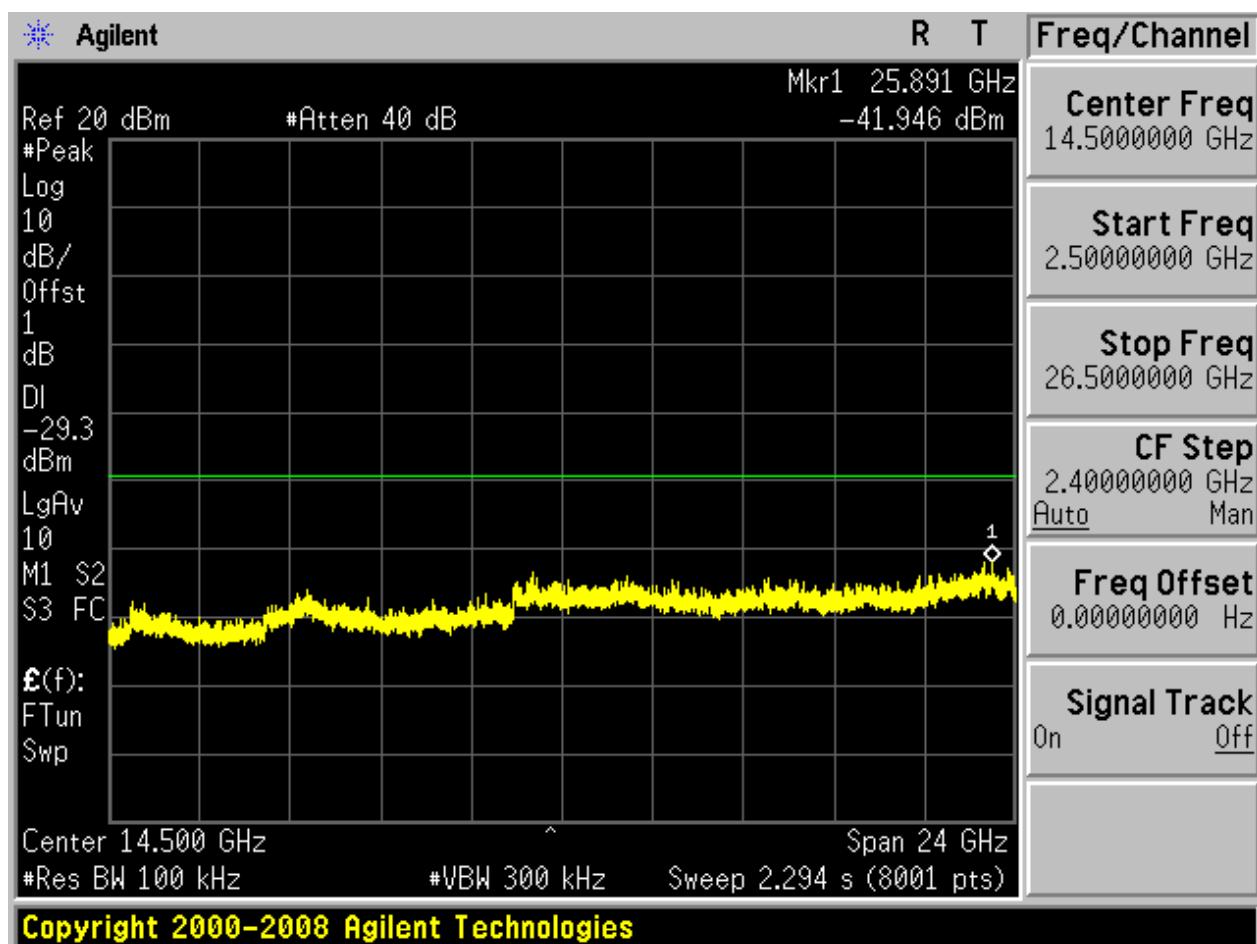






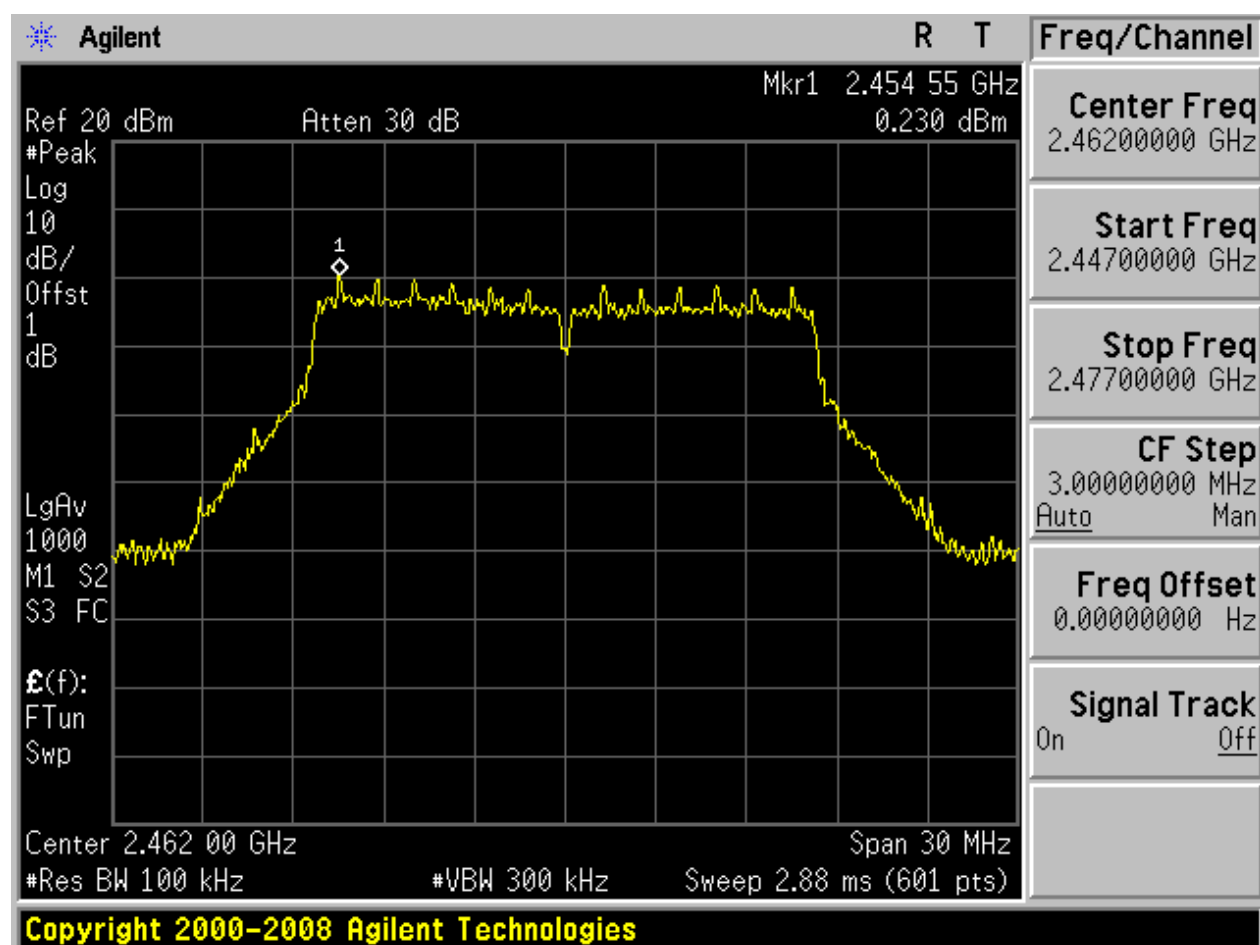






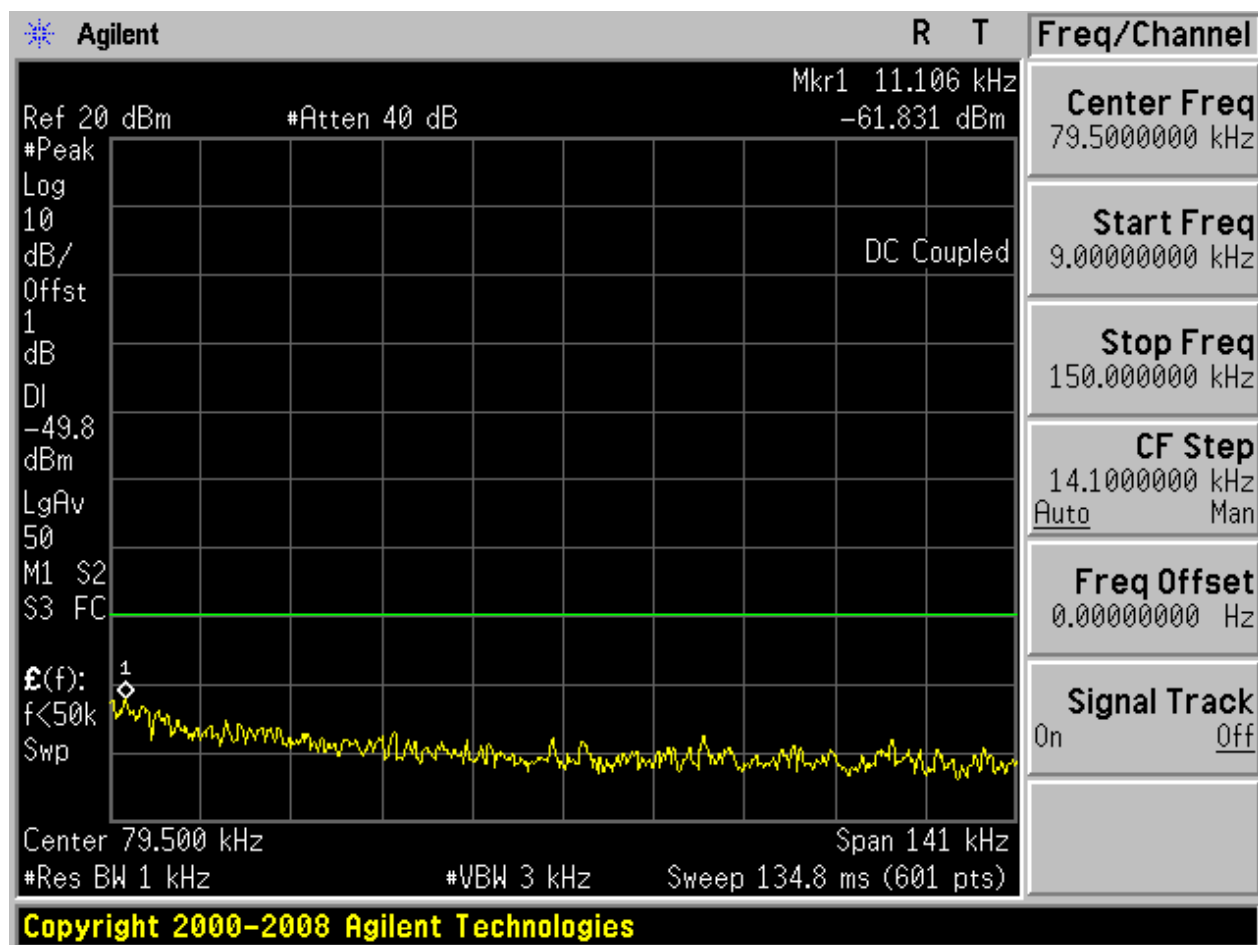
2.6 11G_H@Ant 1

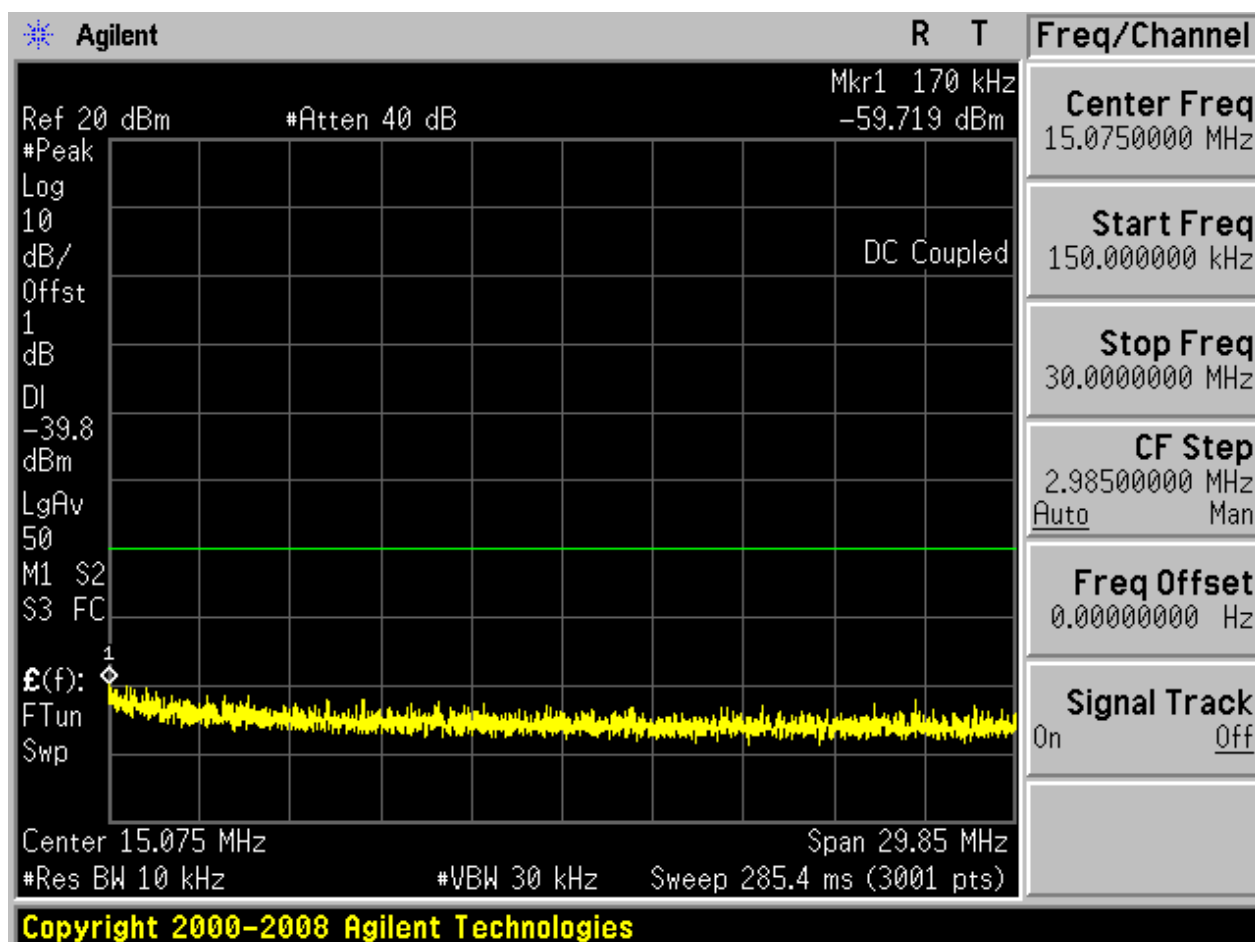
Pref:

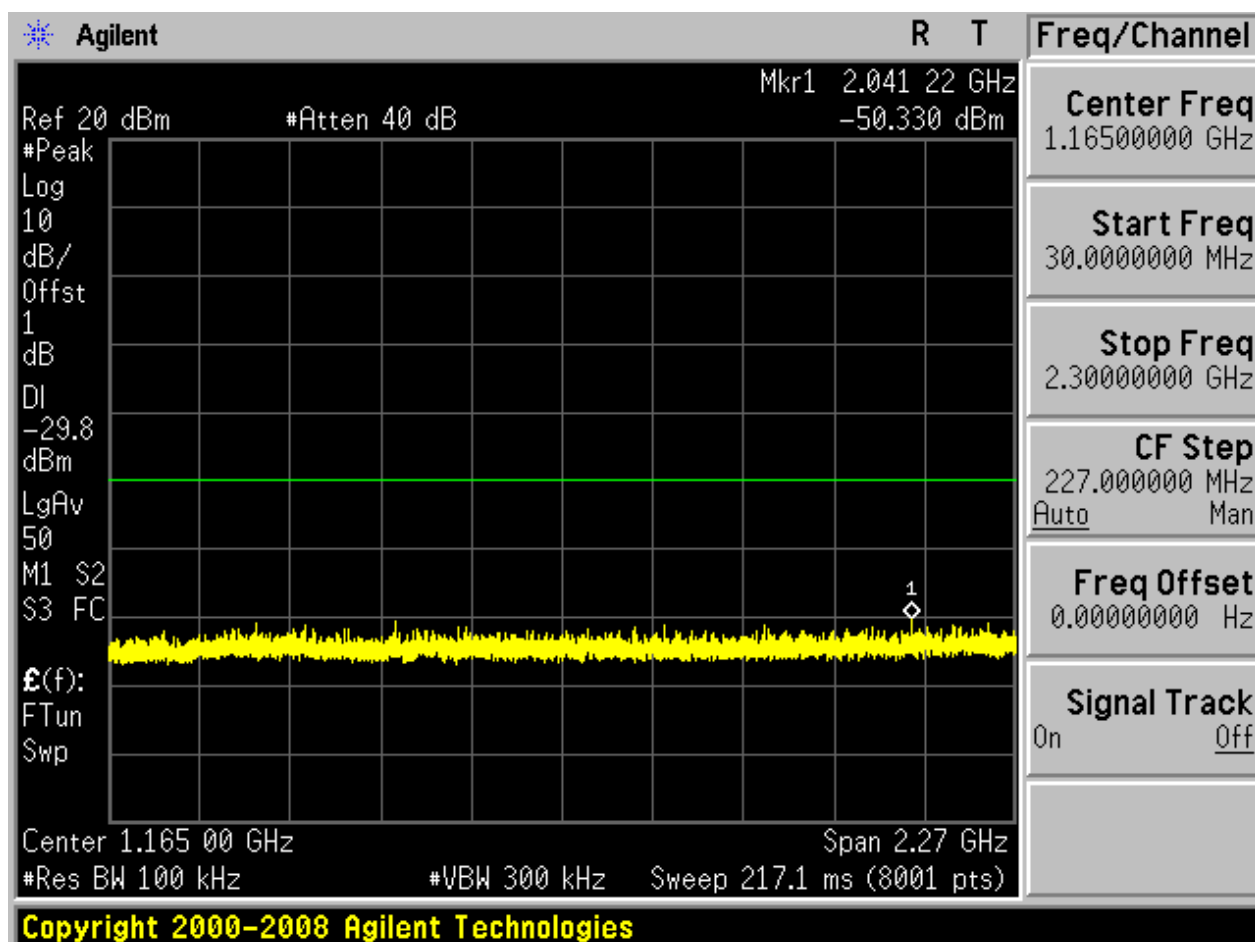


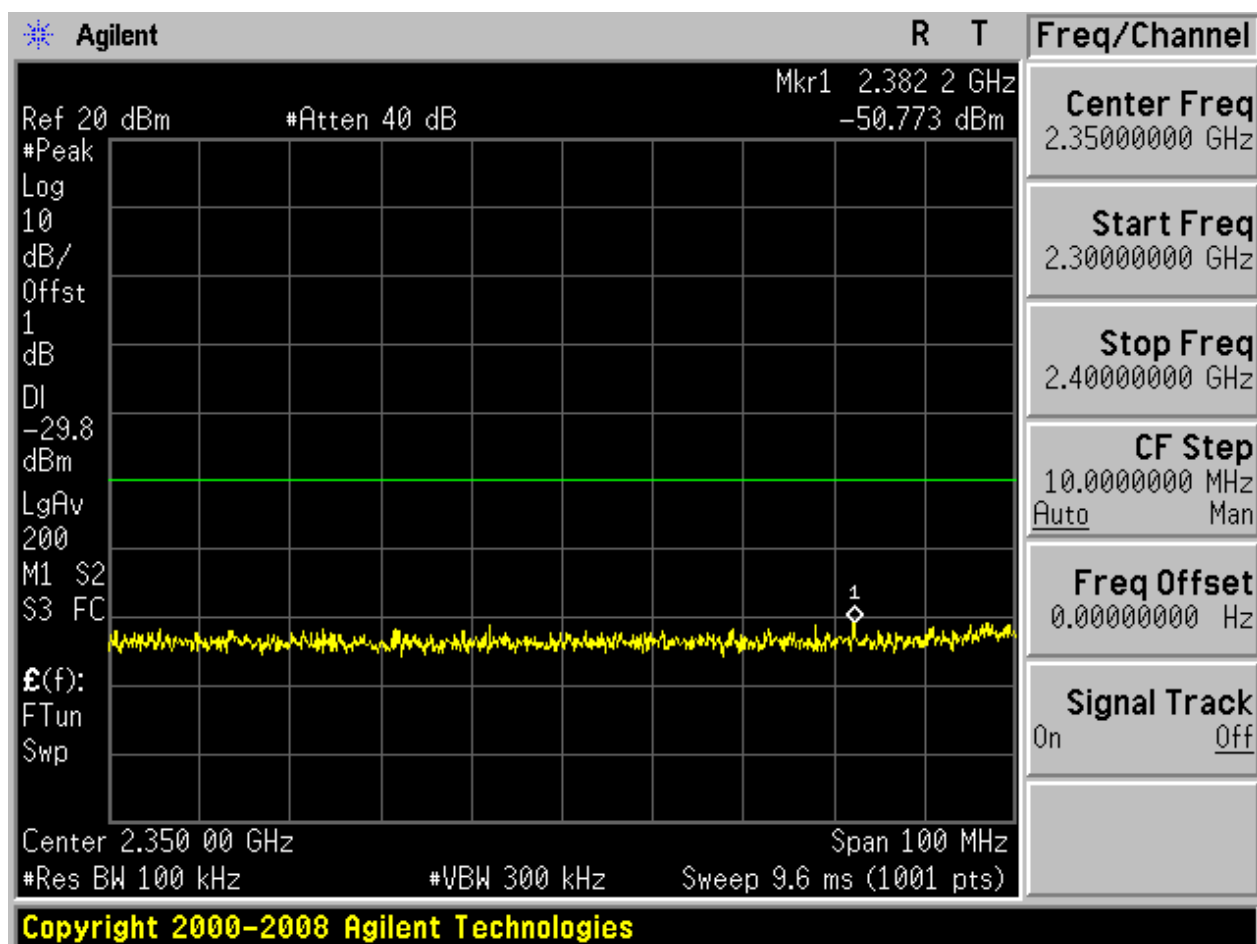


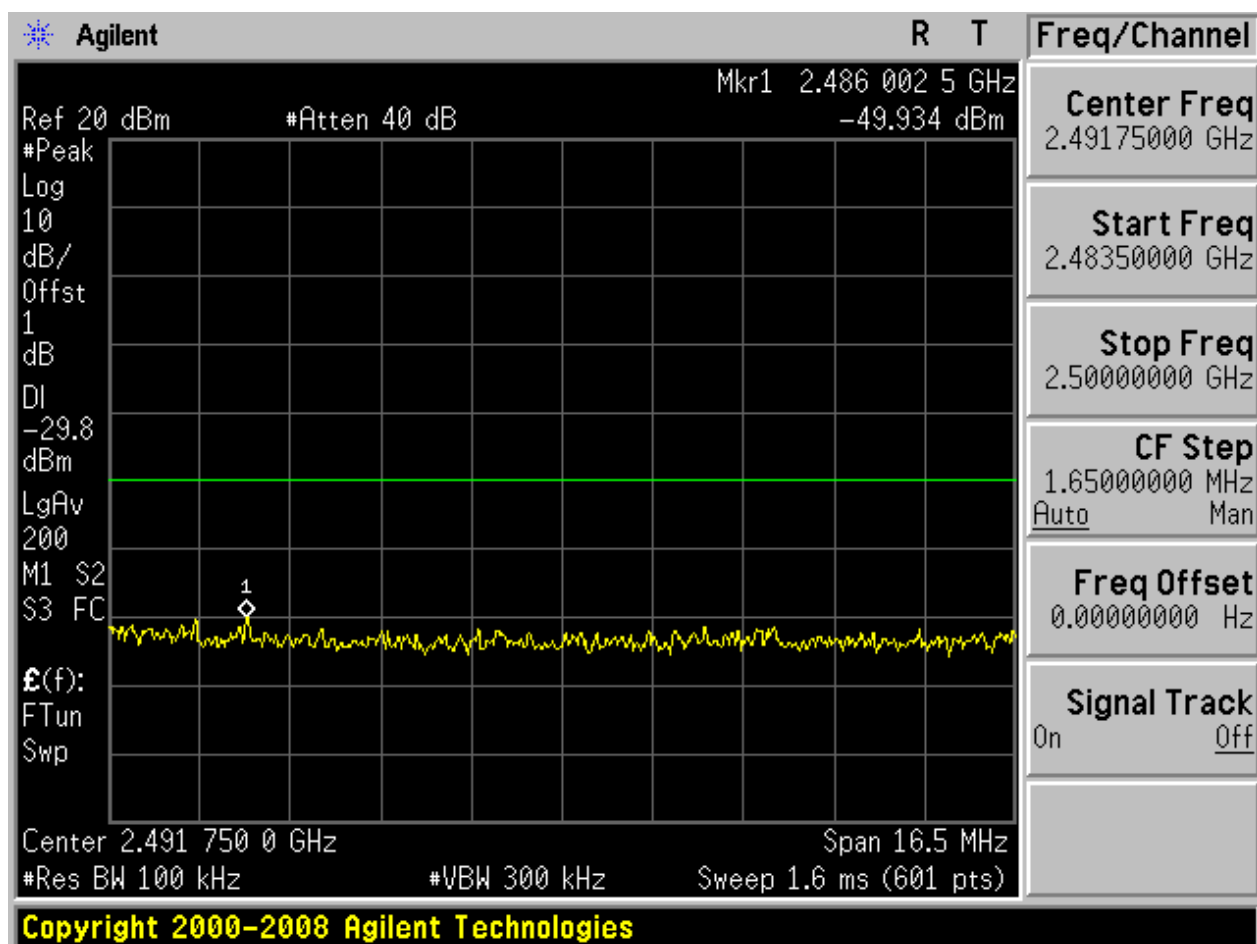
Puw:

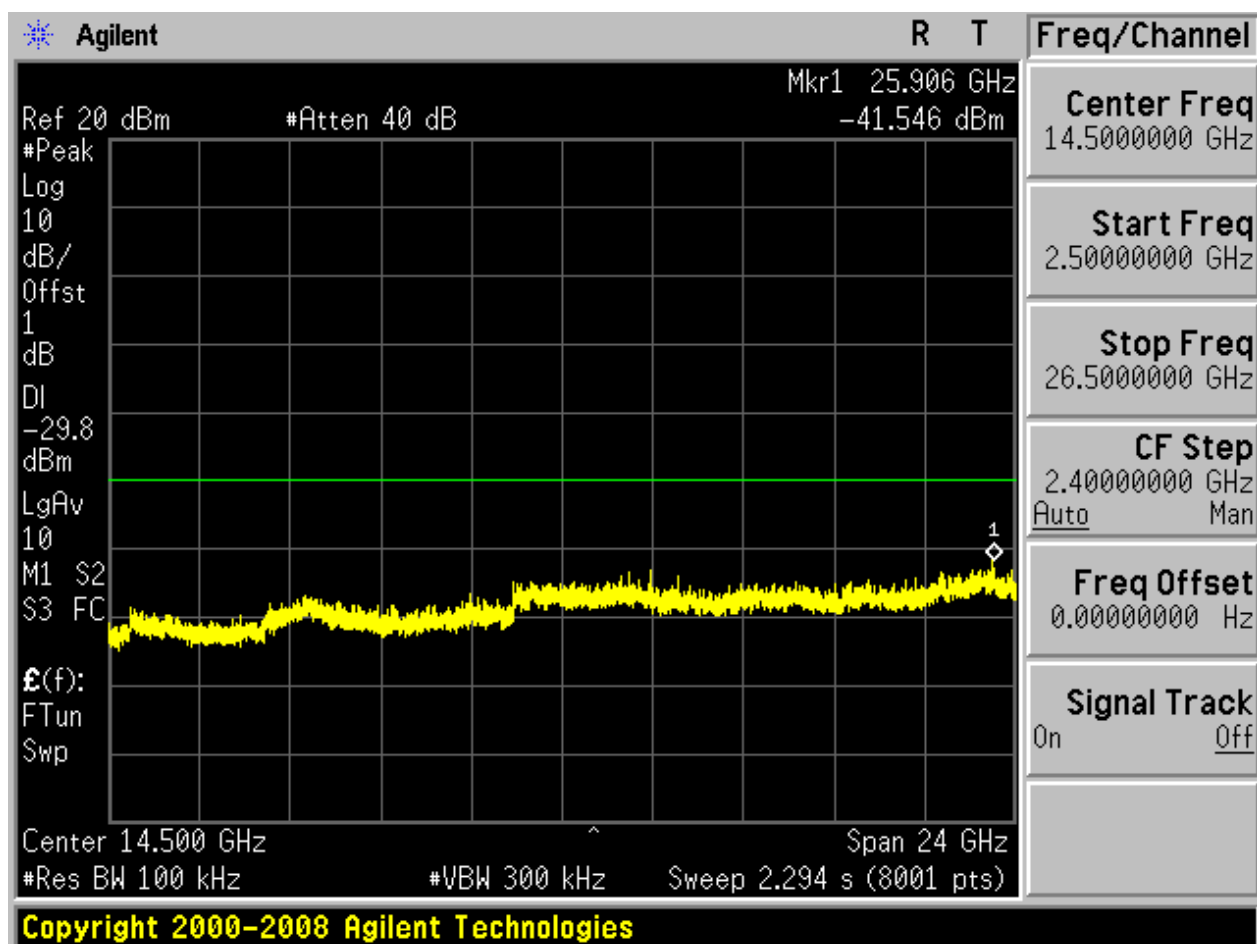






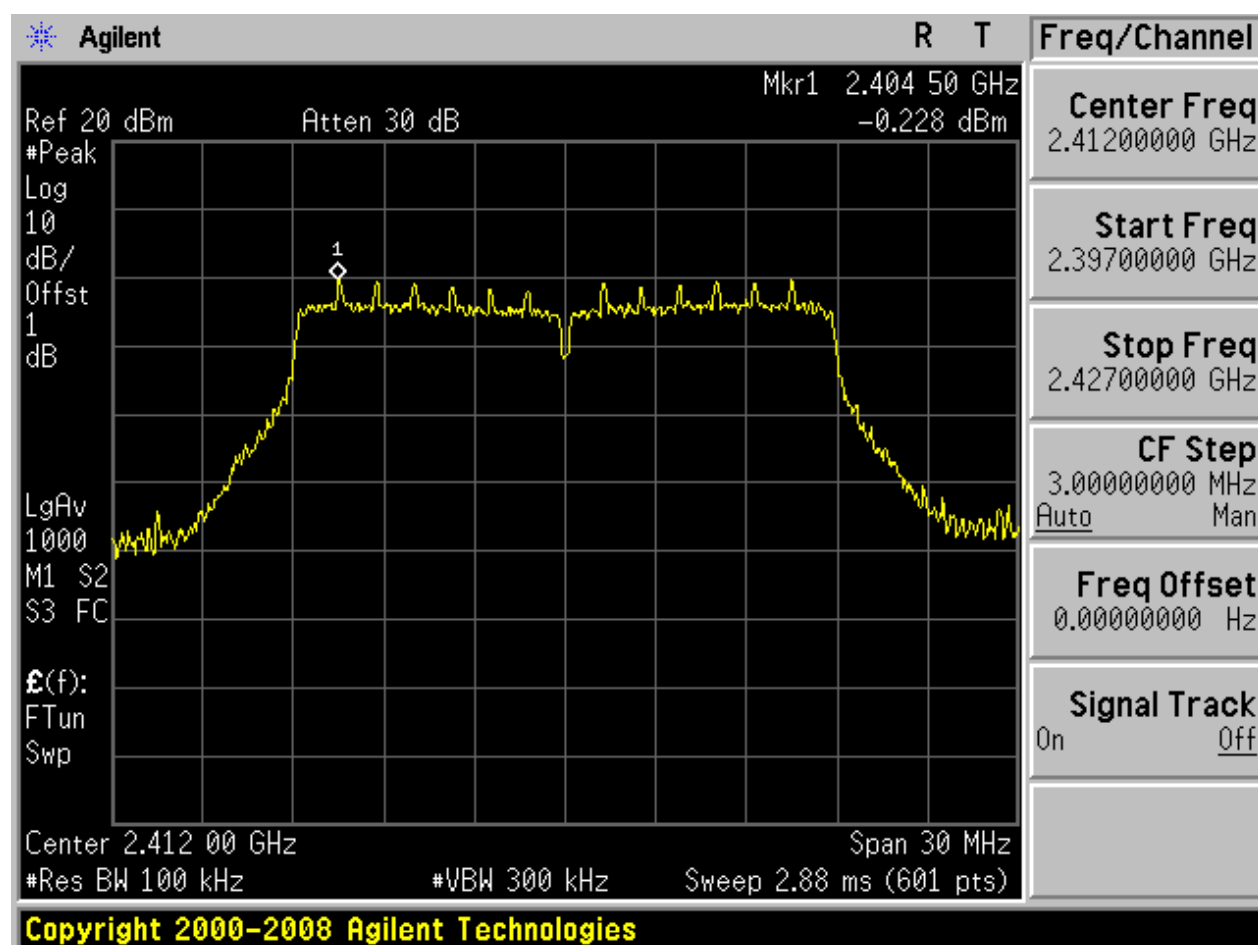




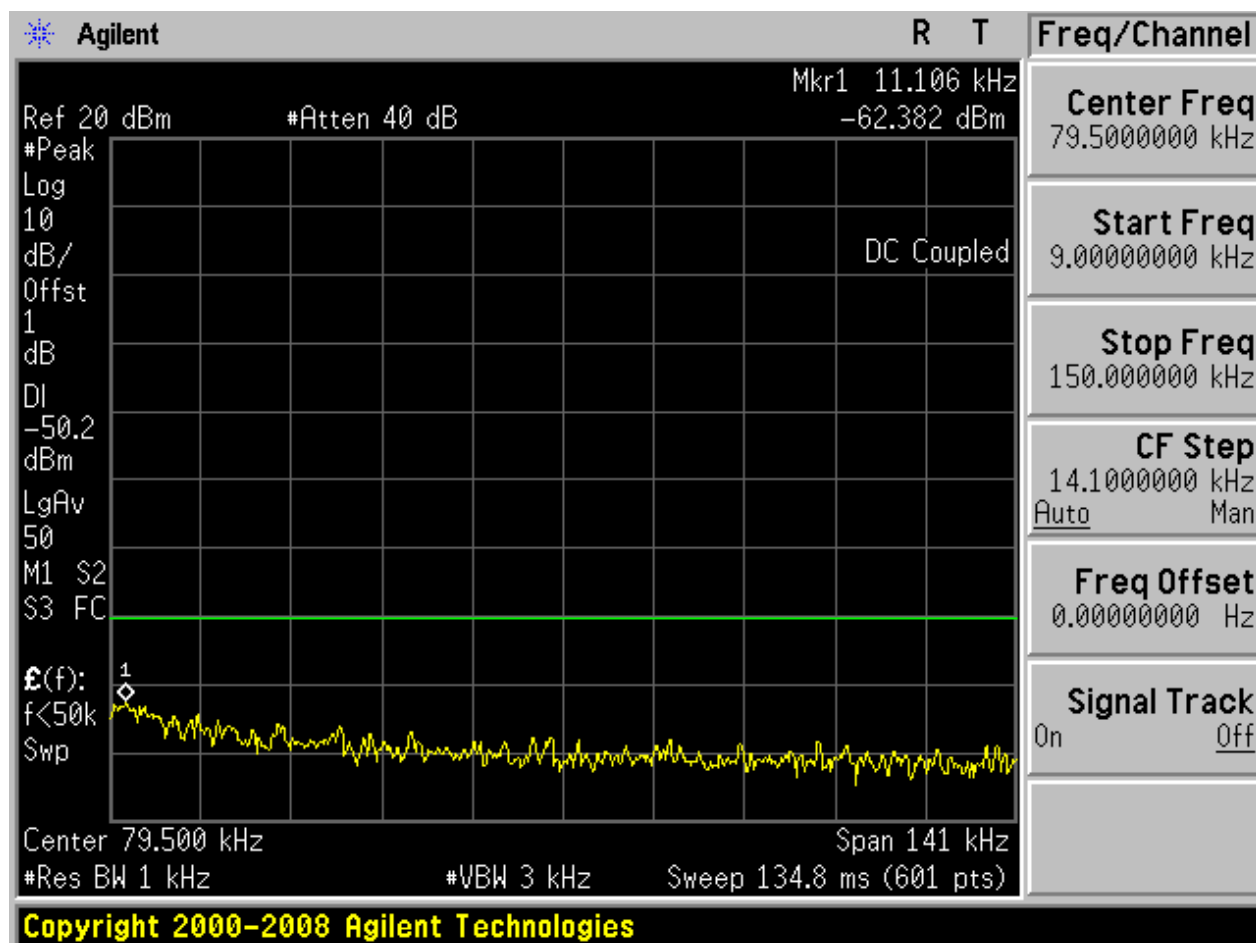


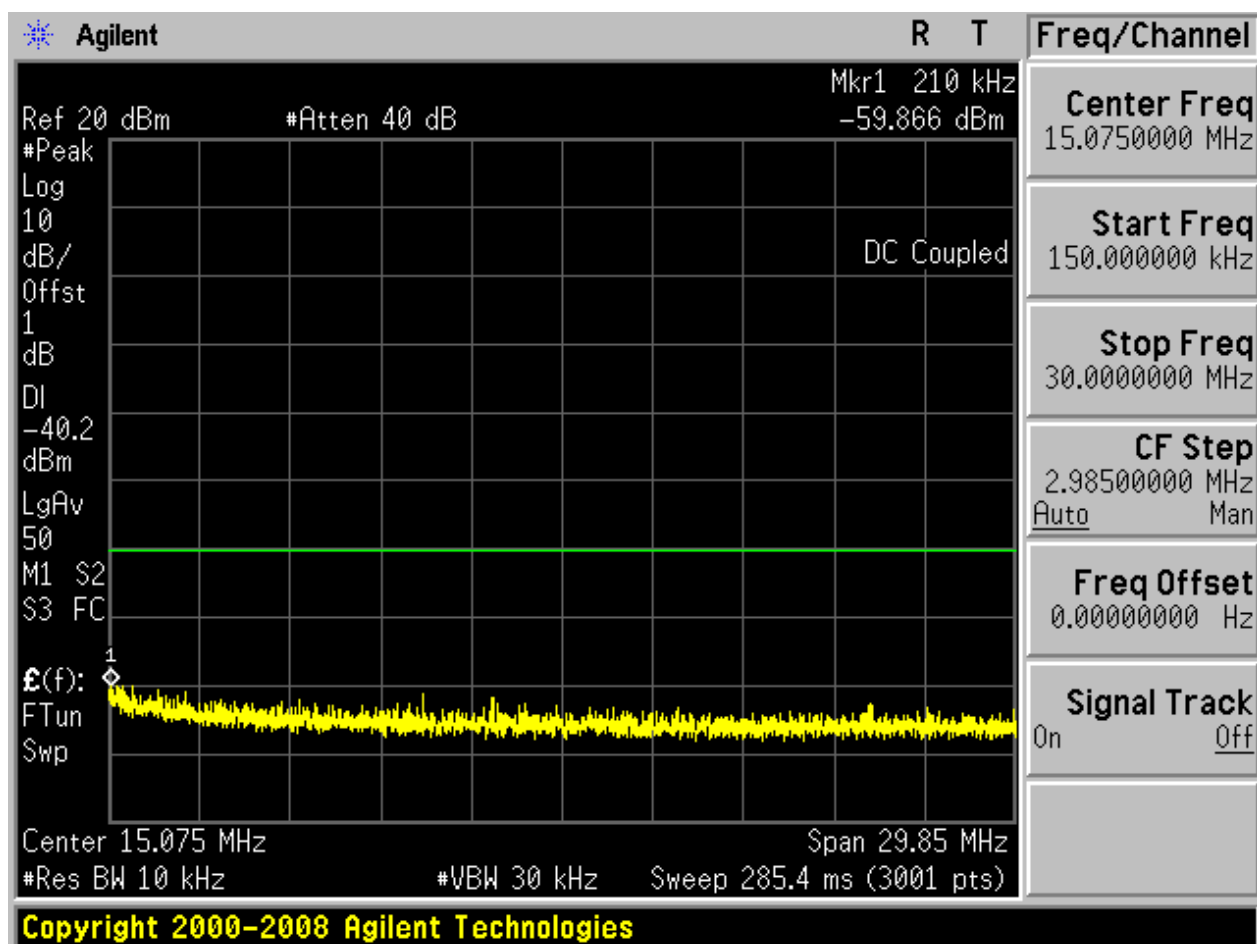
2.7 11N20_L@Ant 1

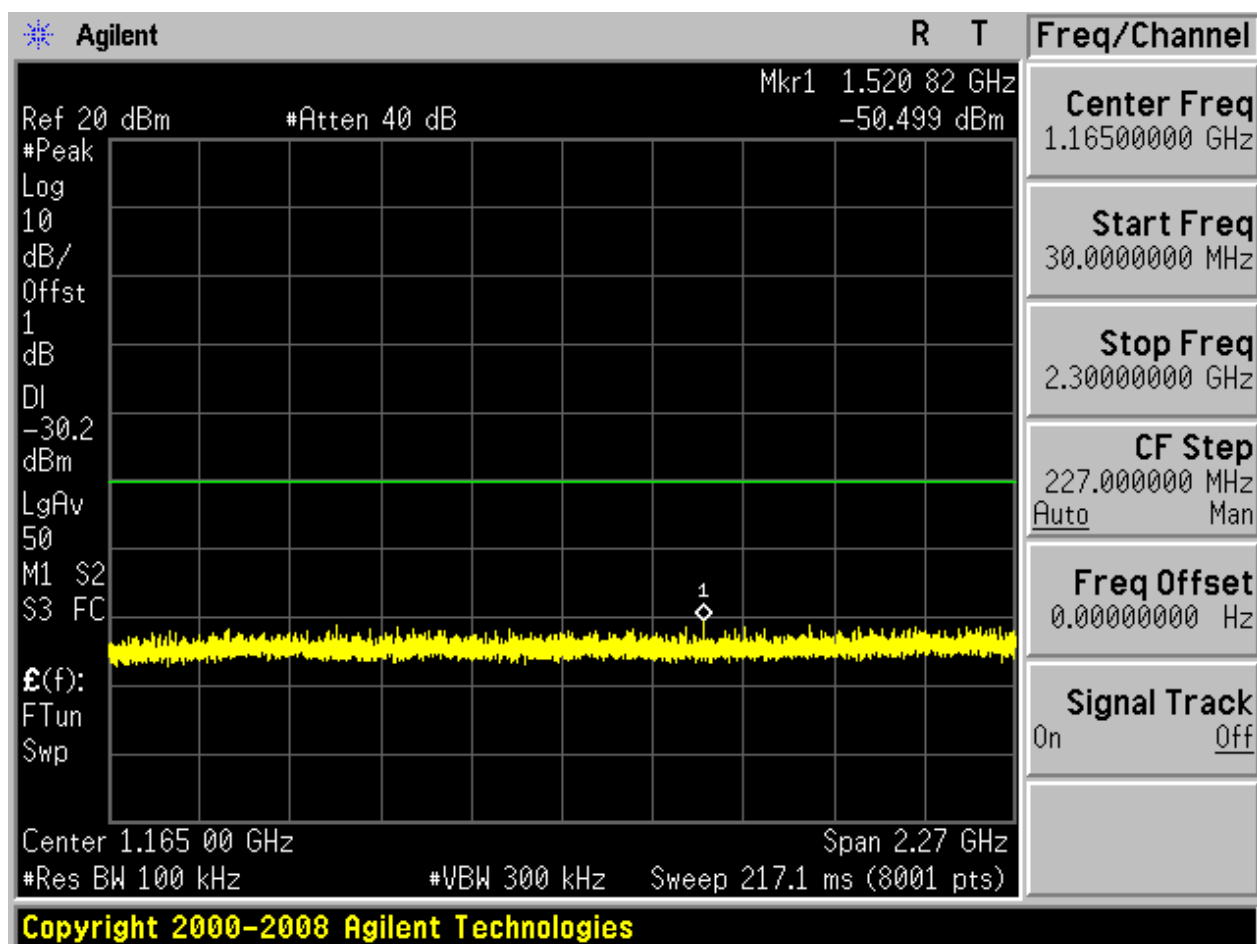
Pref:

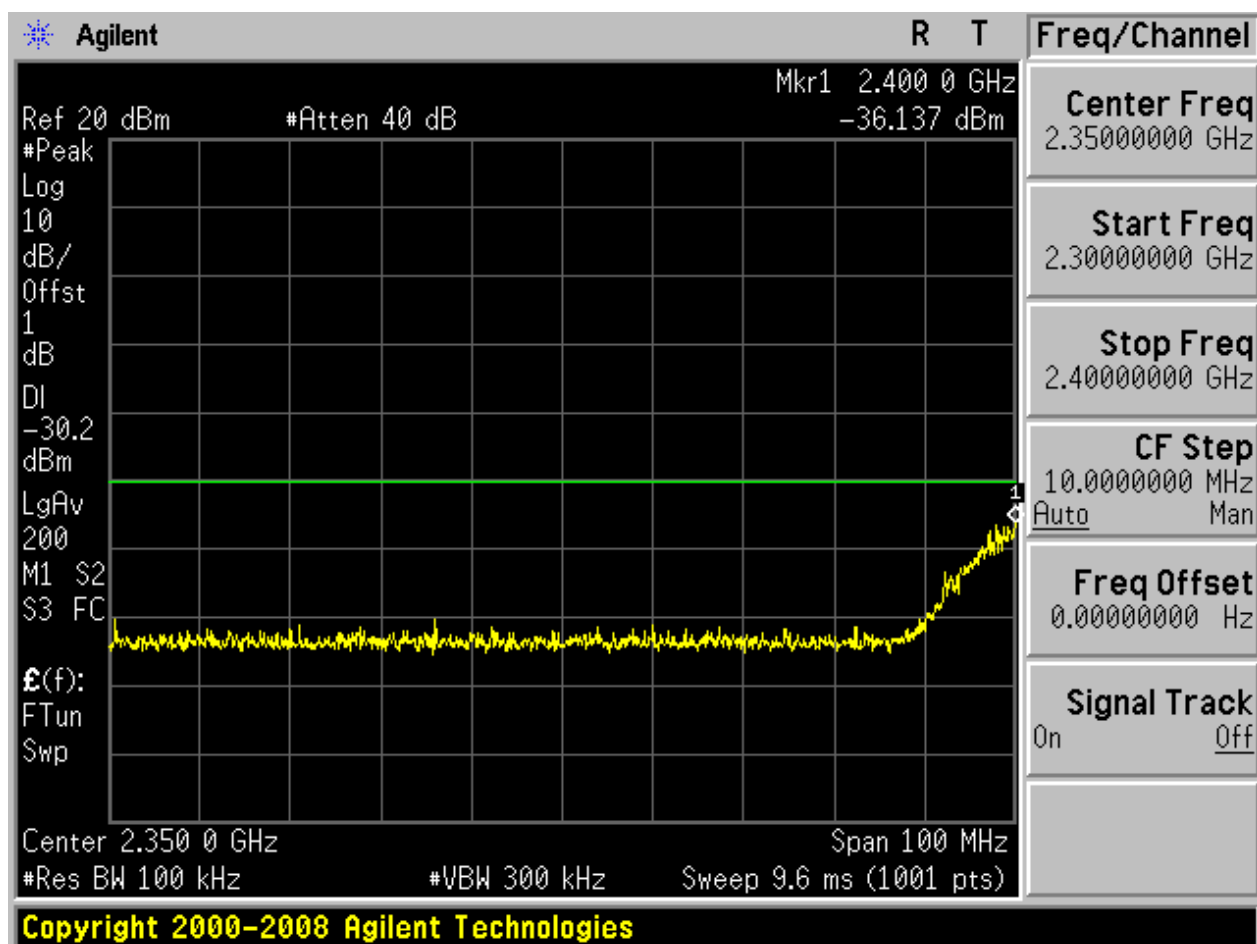


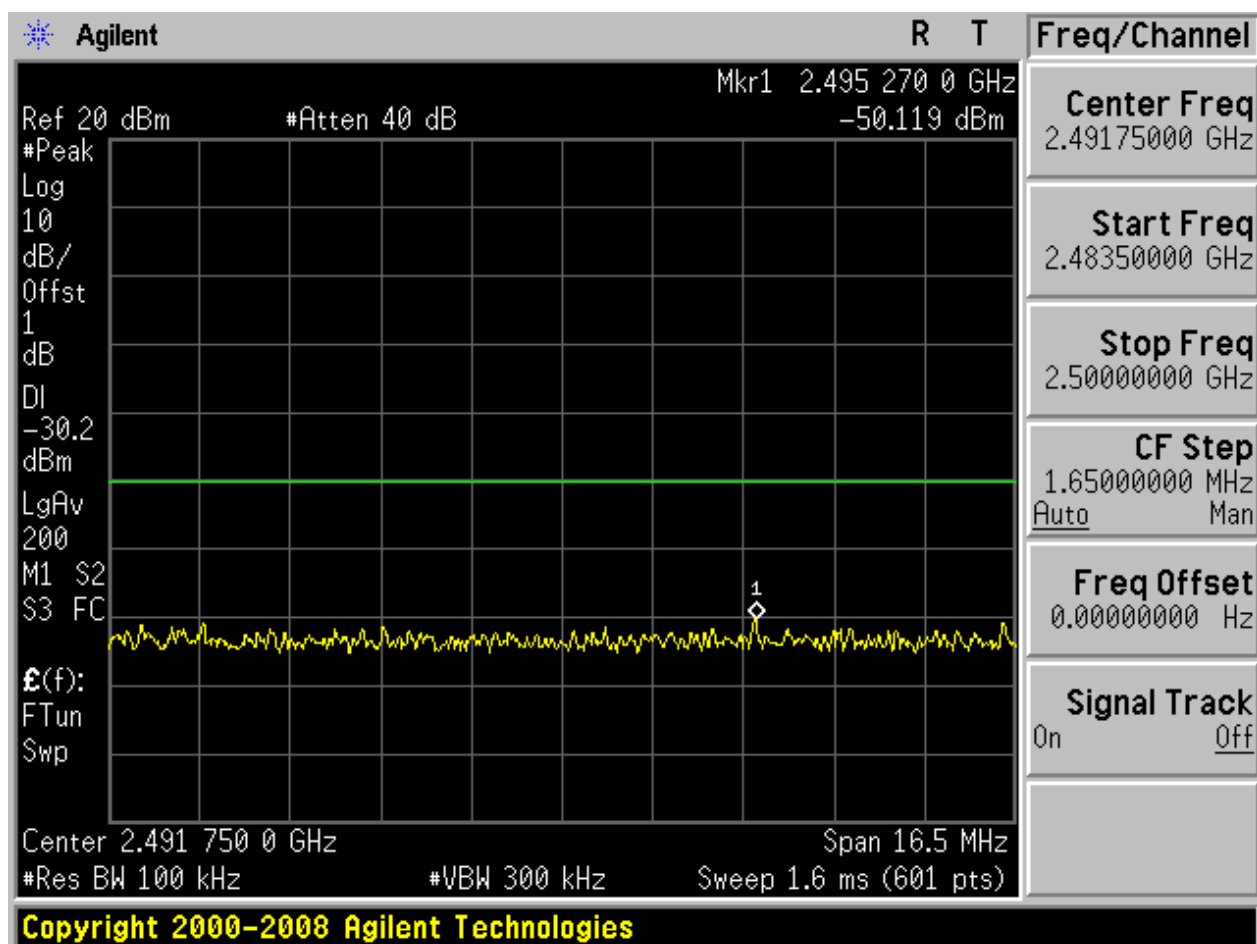
Puw:

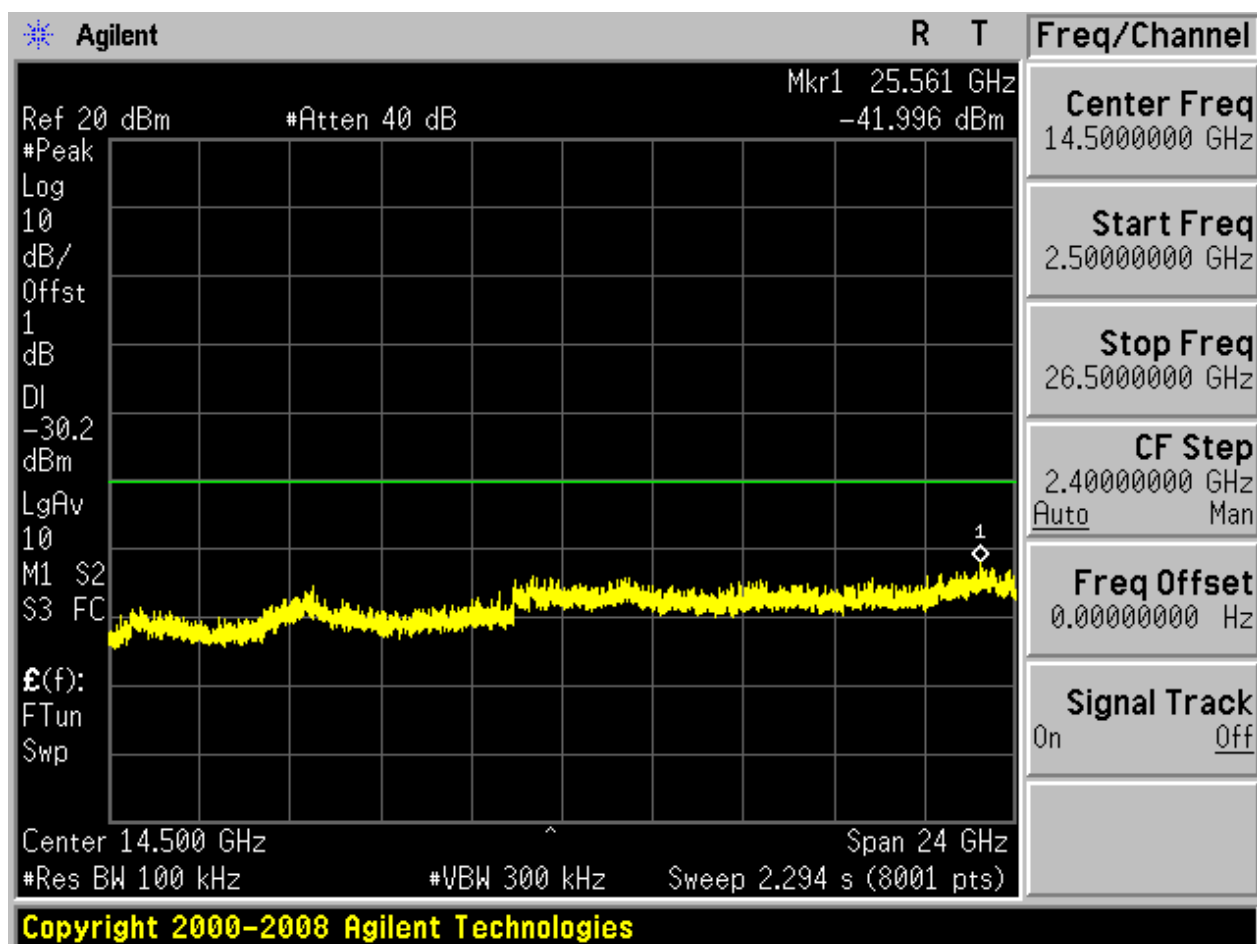






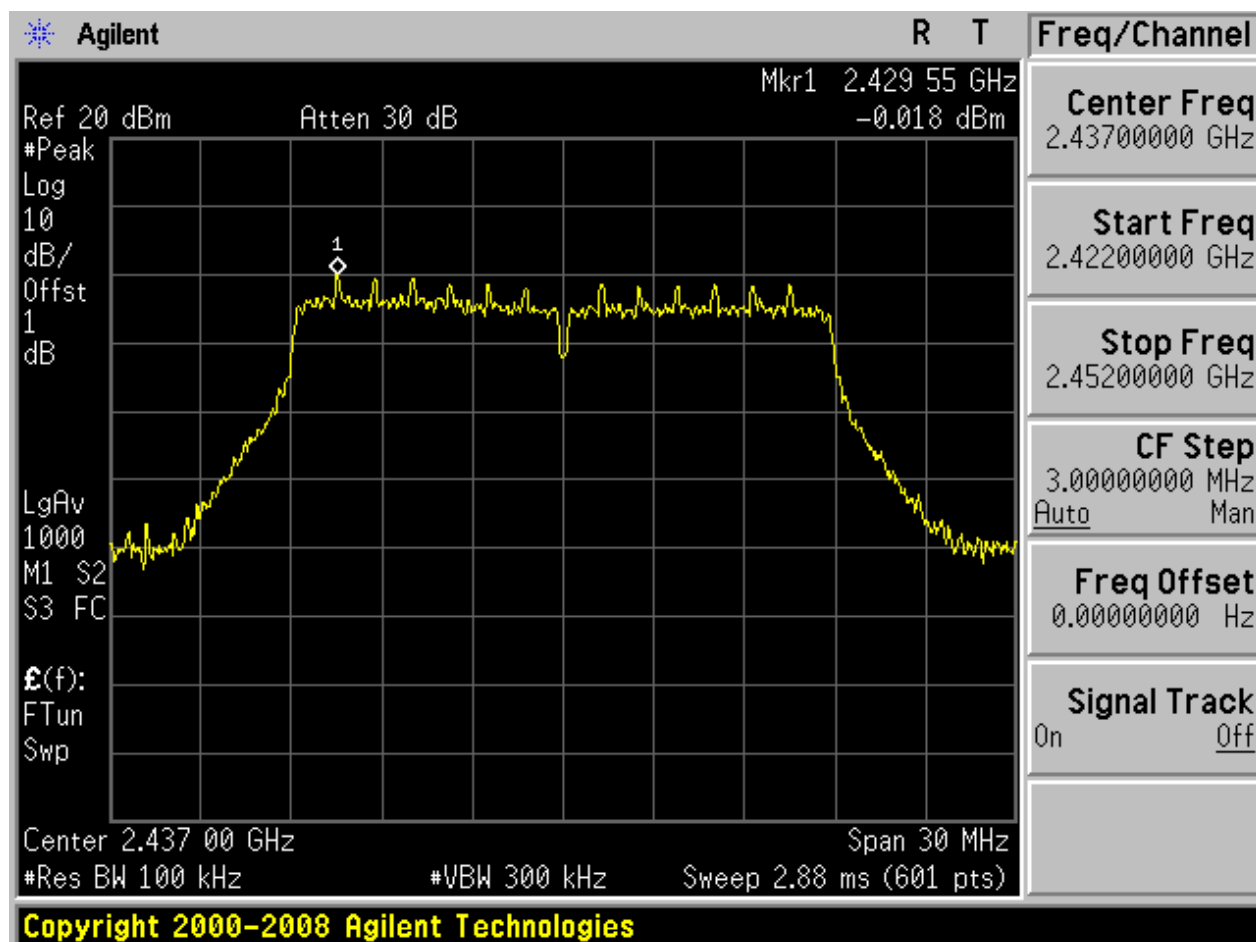






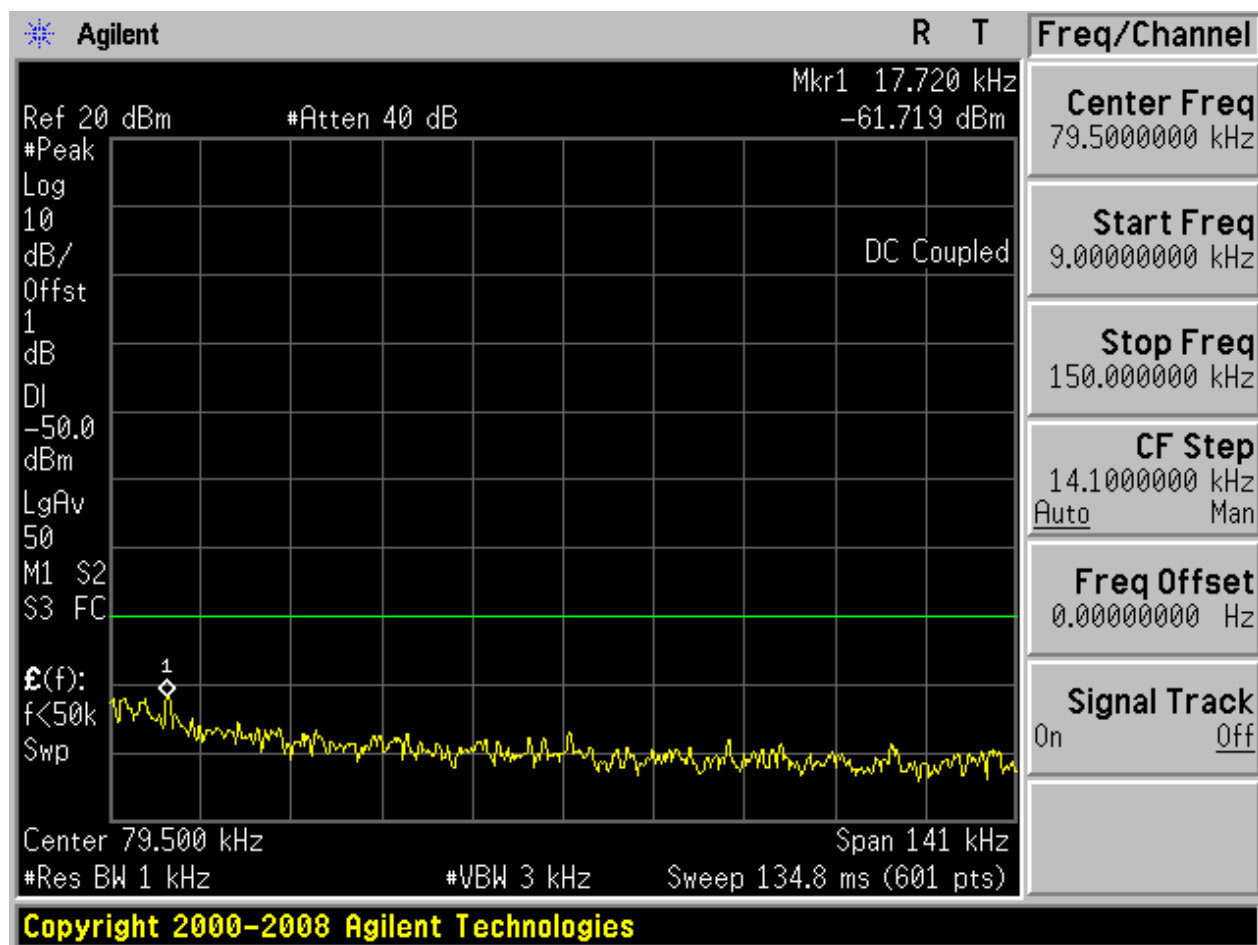
2.8 11N20_M@Ant 1

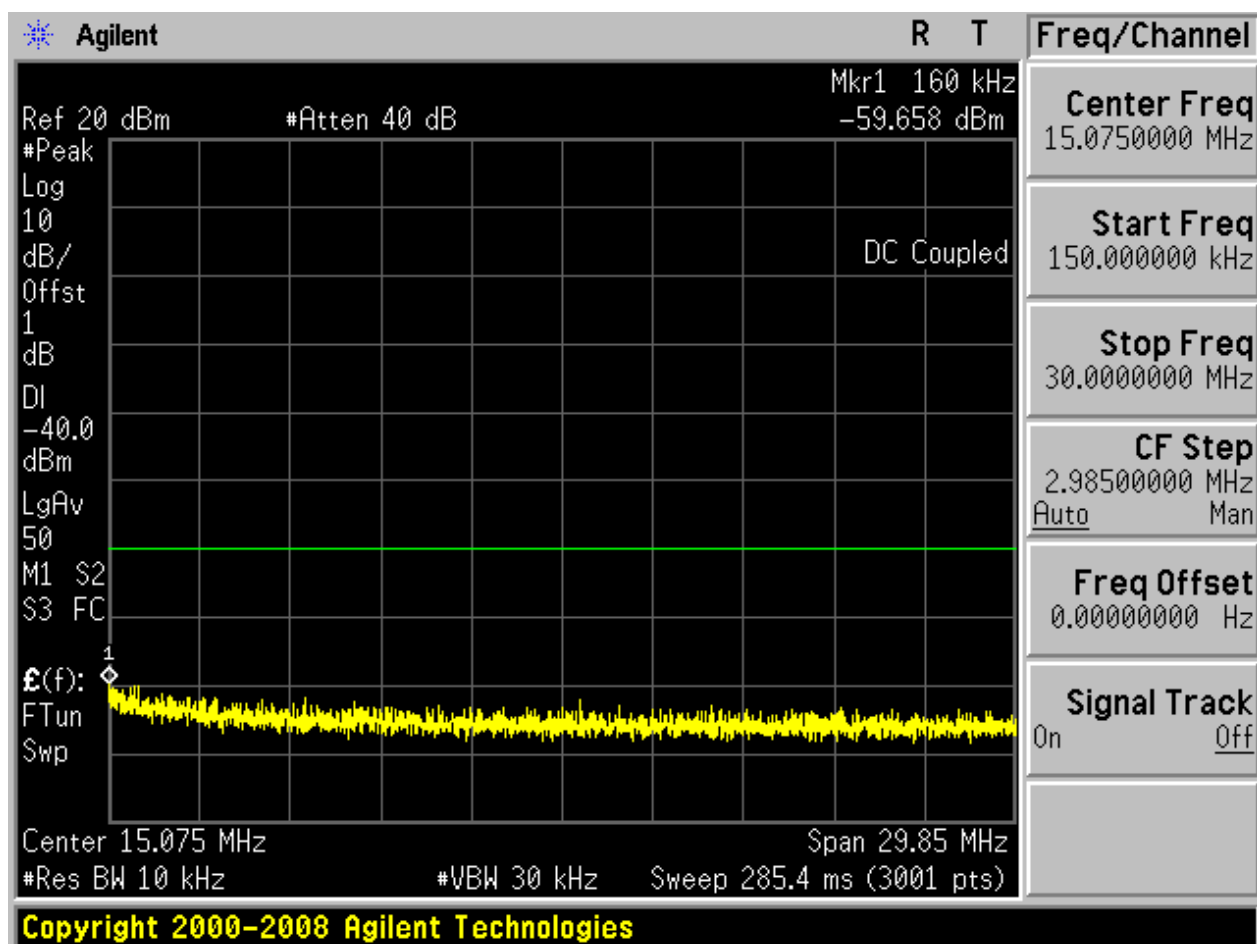
Pref:

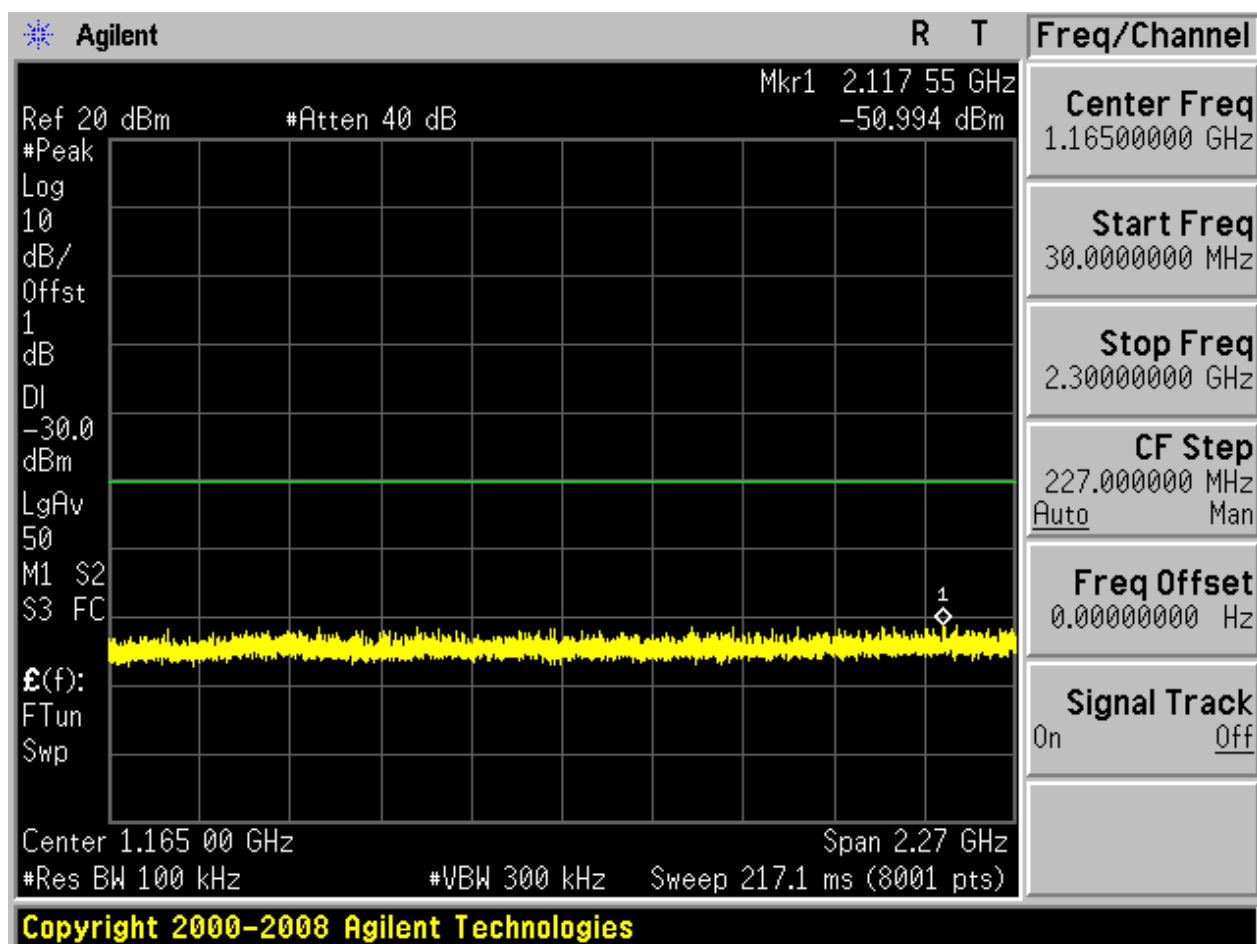


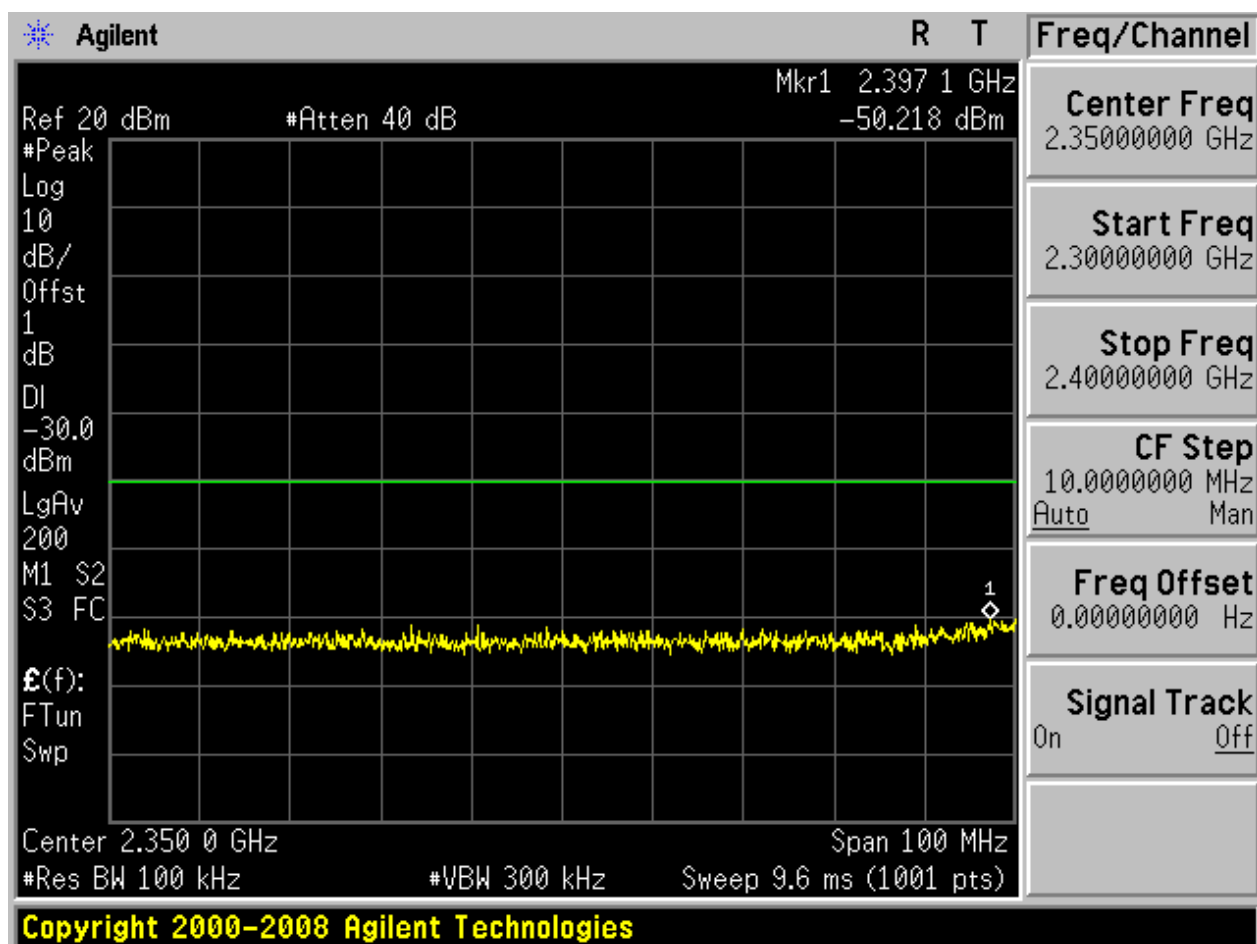


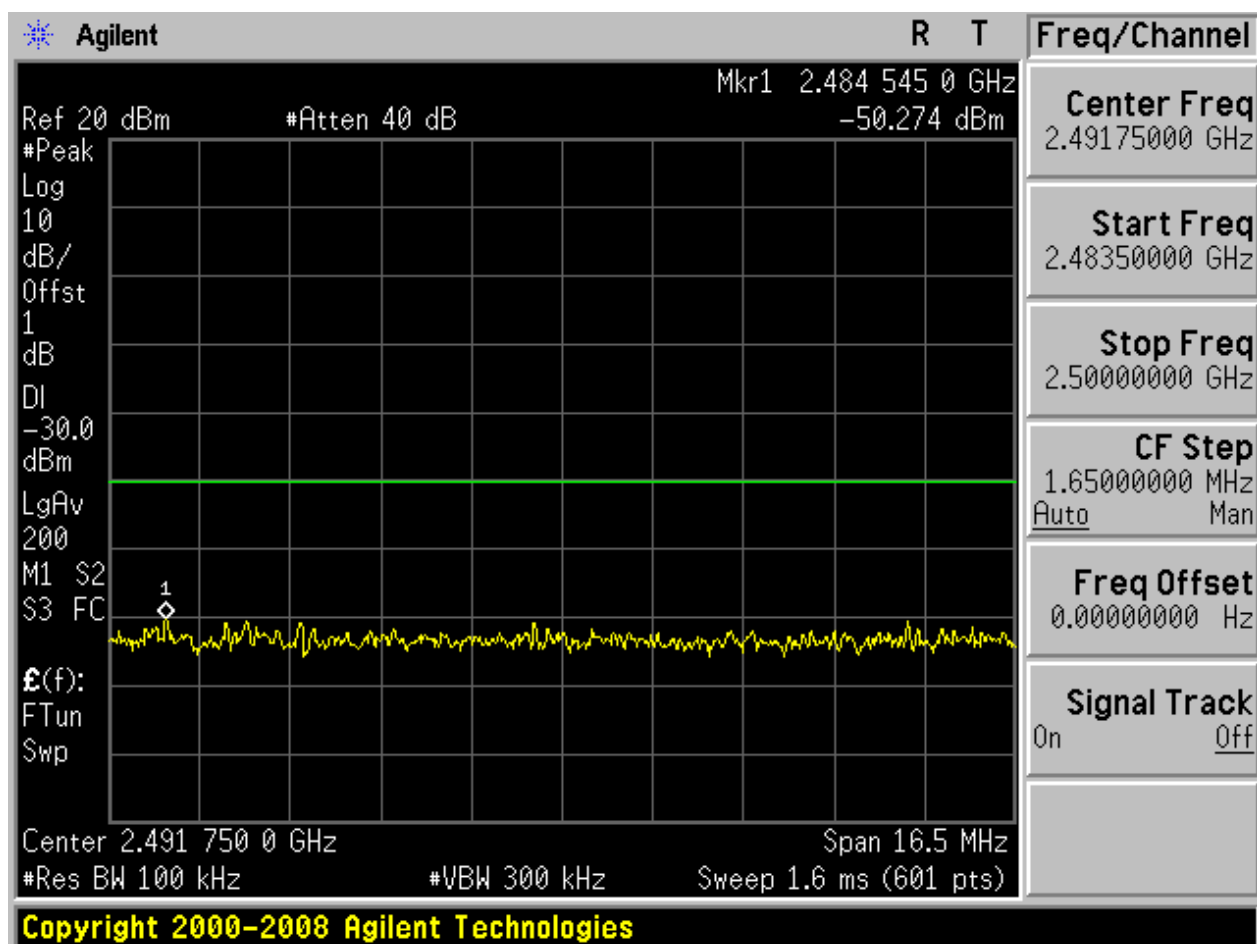
Puw:

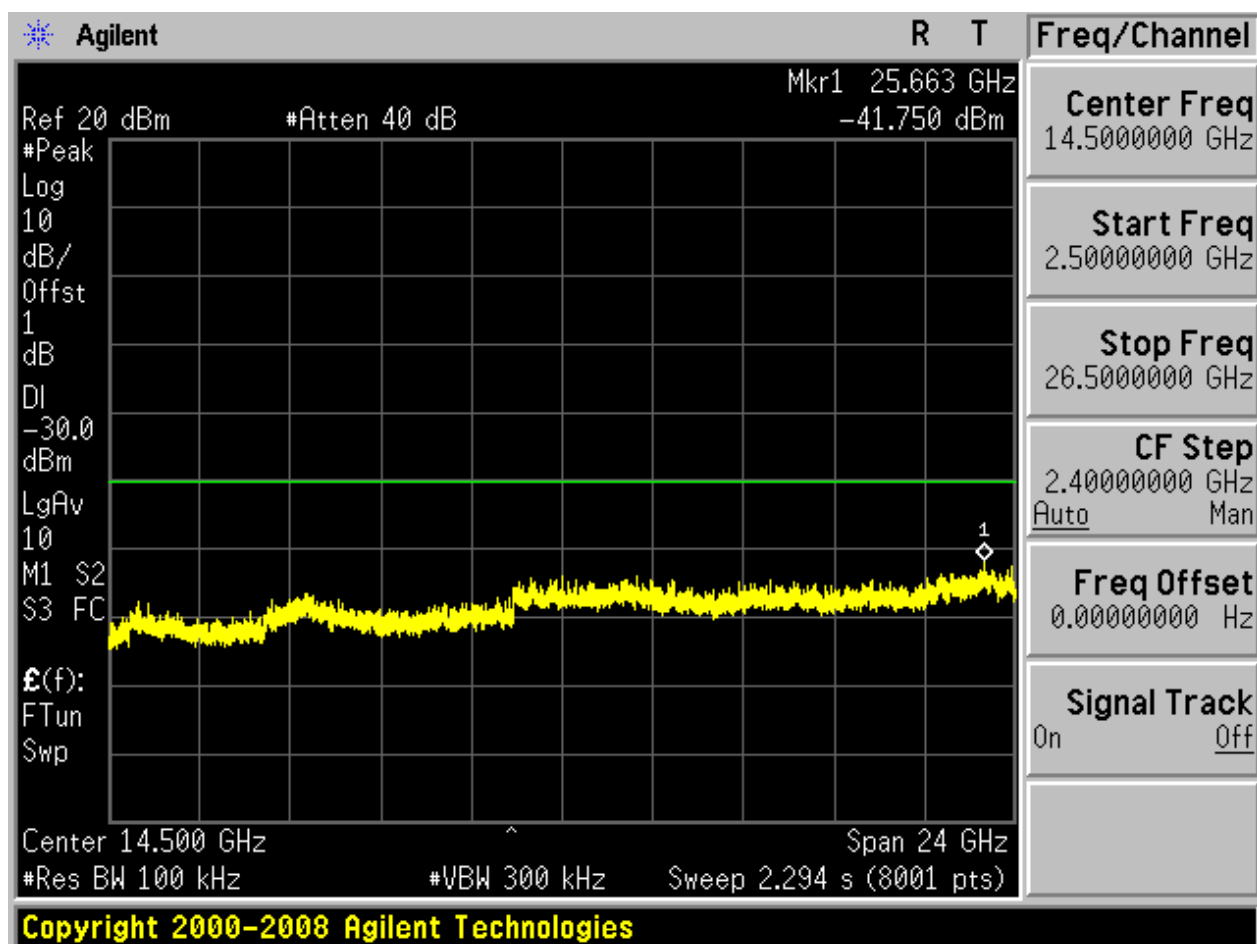






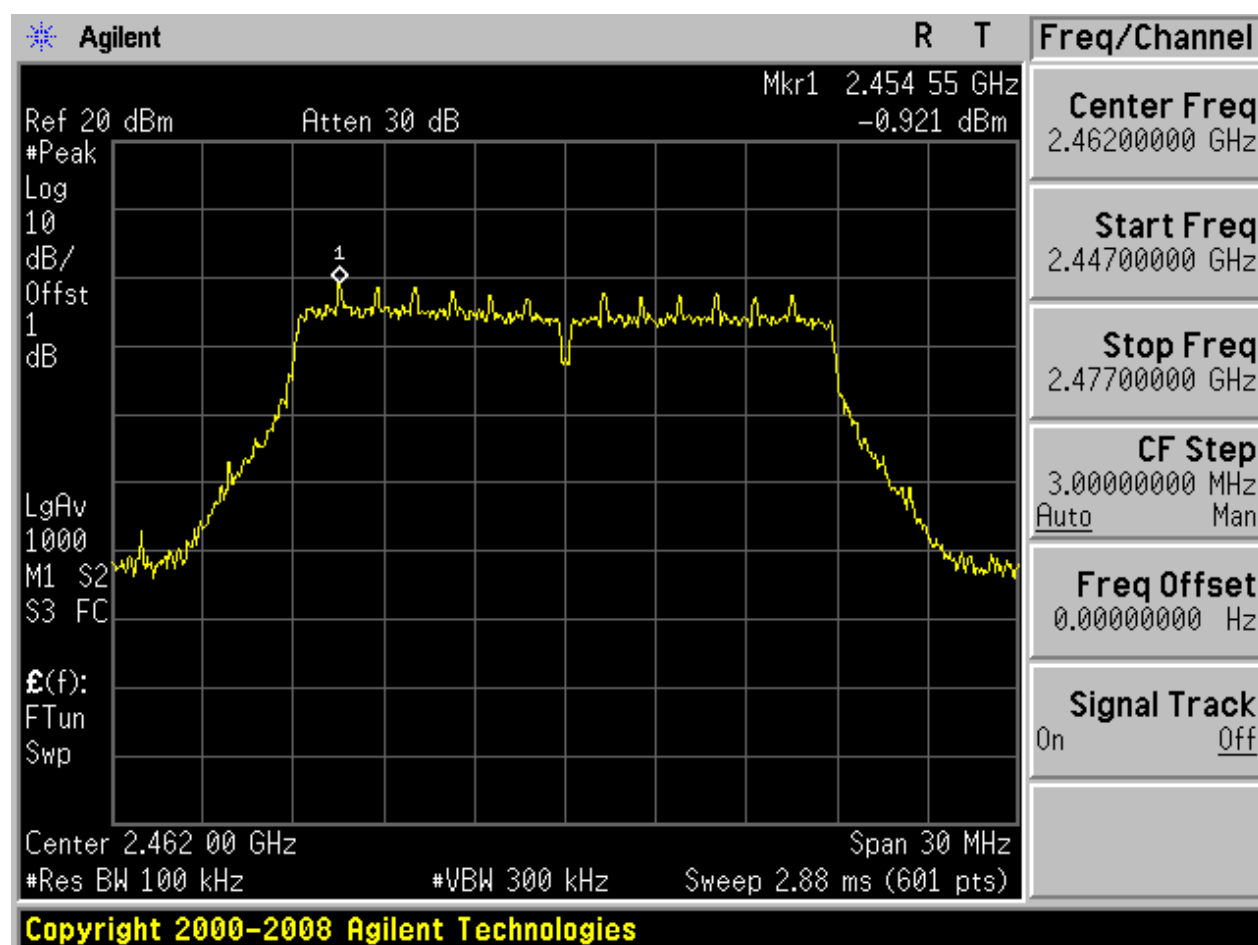






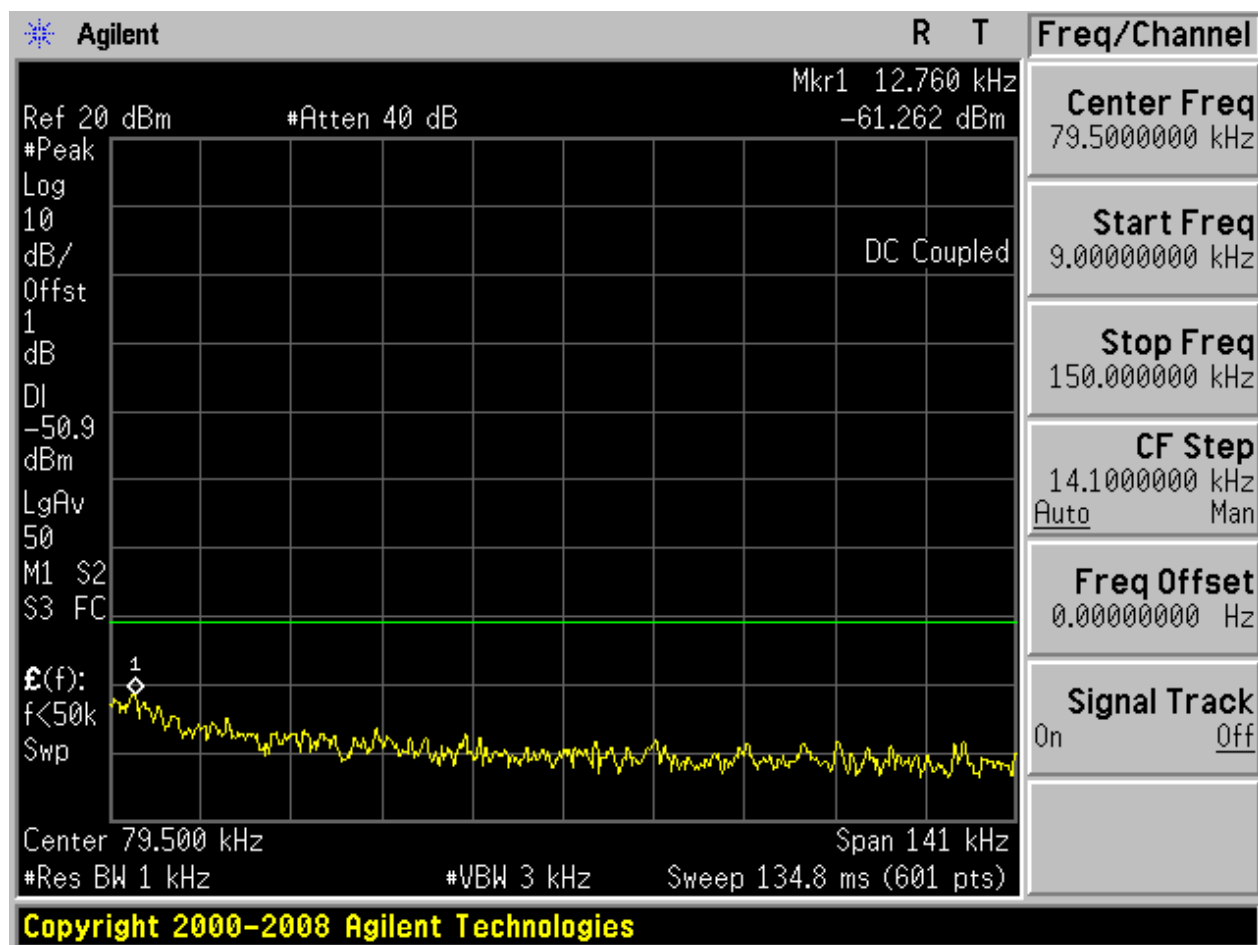
2.9 11N20_H@Ant 1

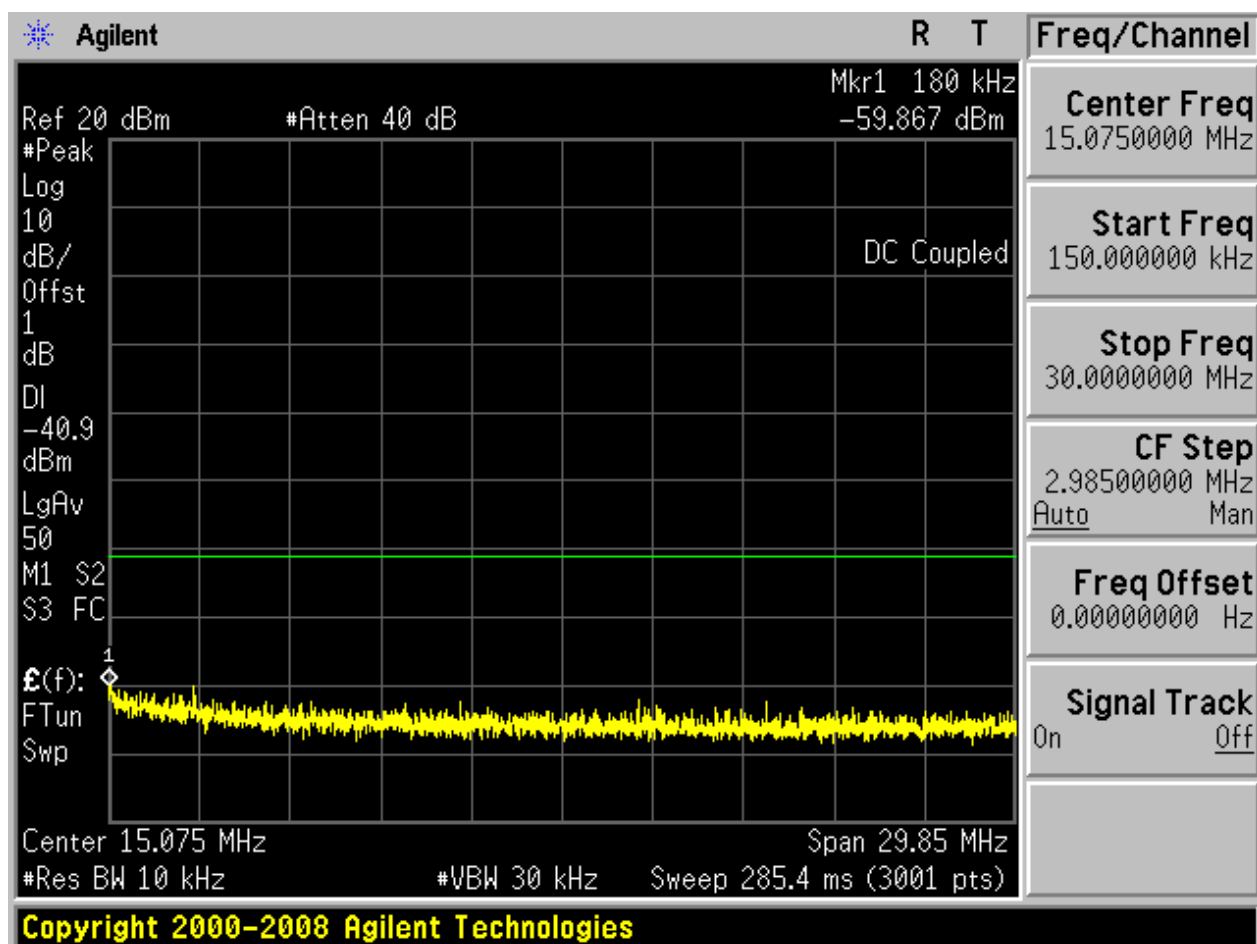
Pref:

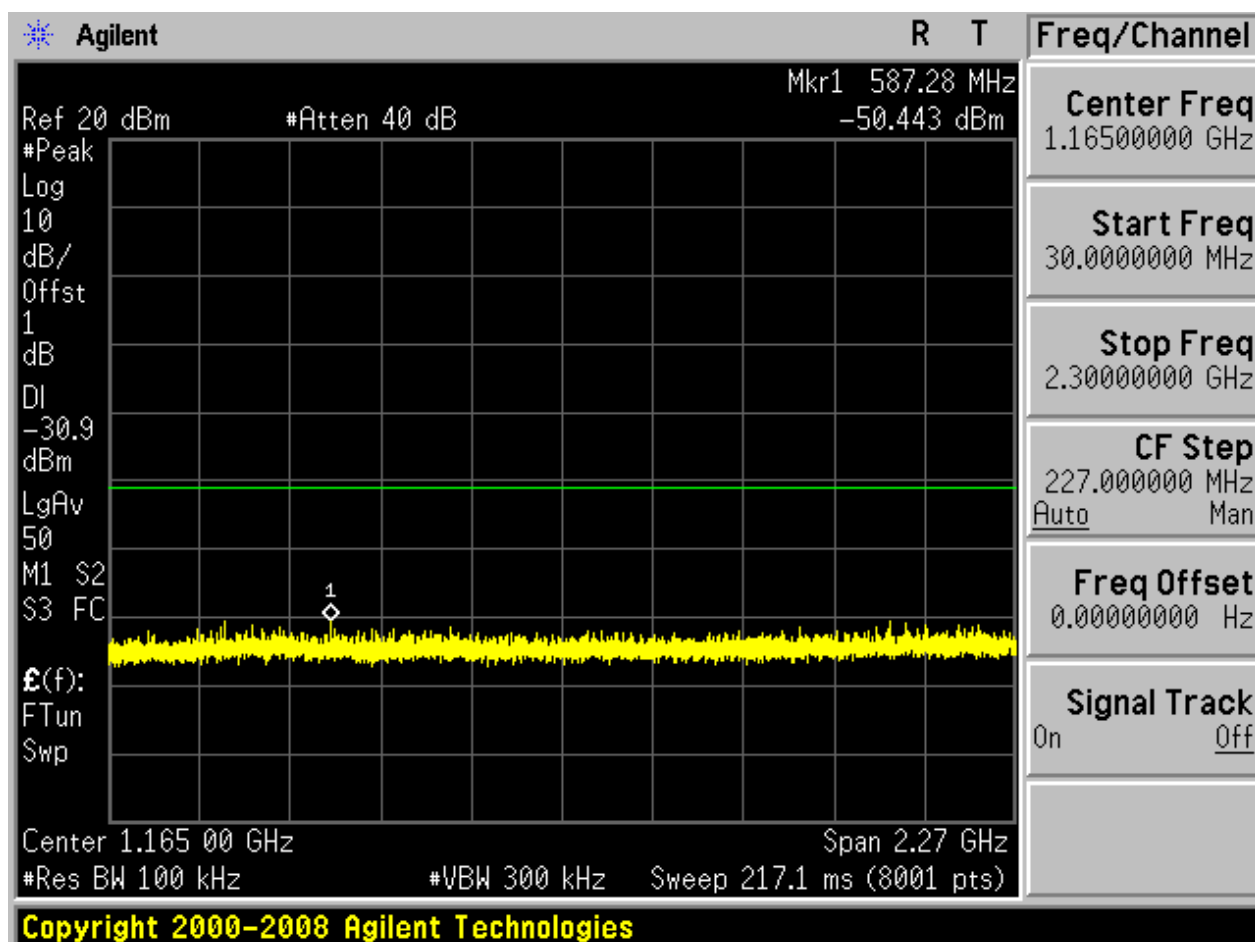


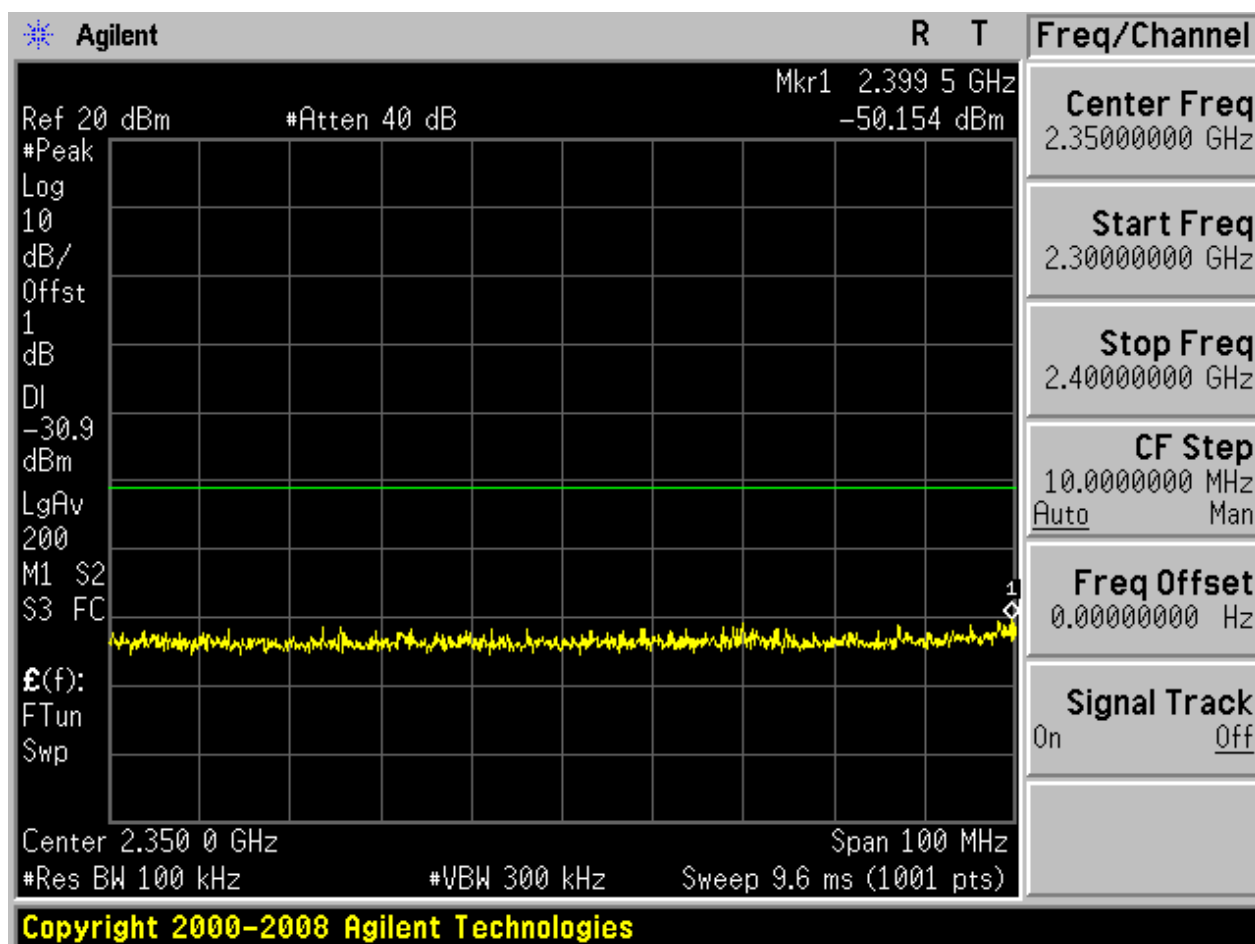


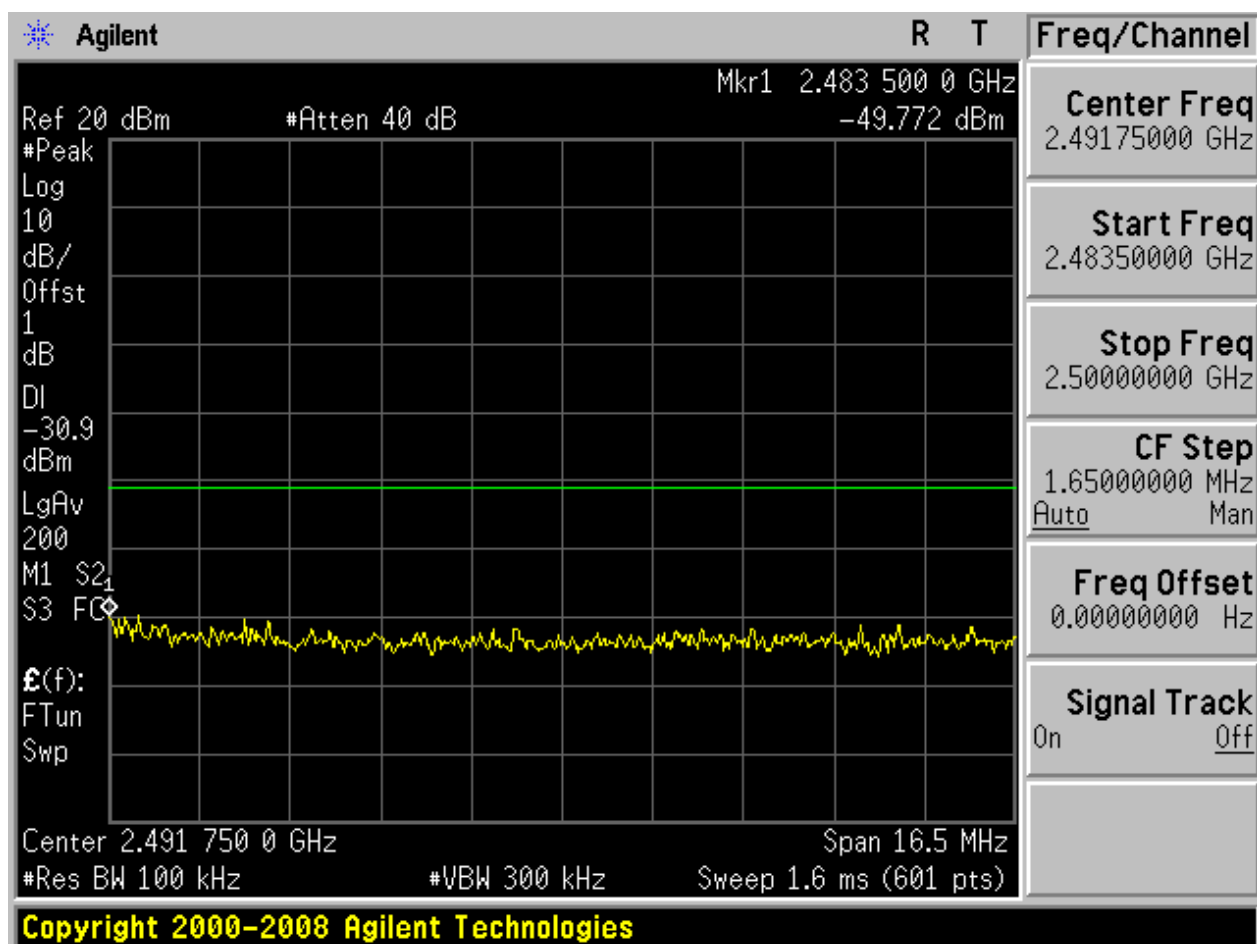
Puw:

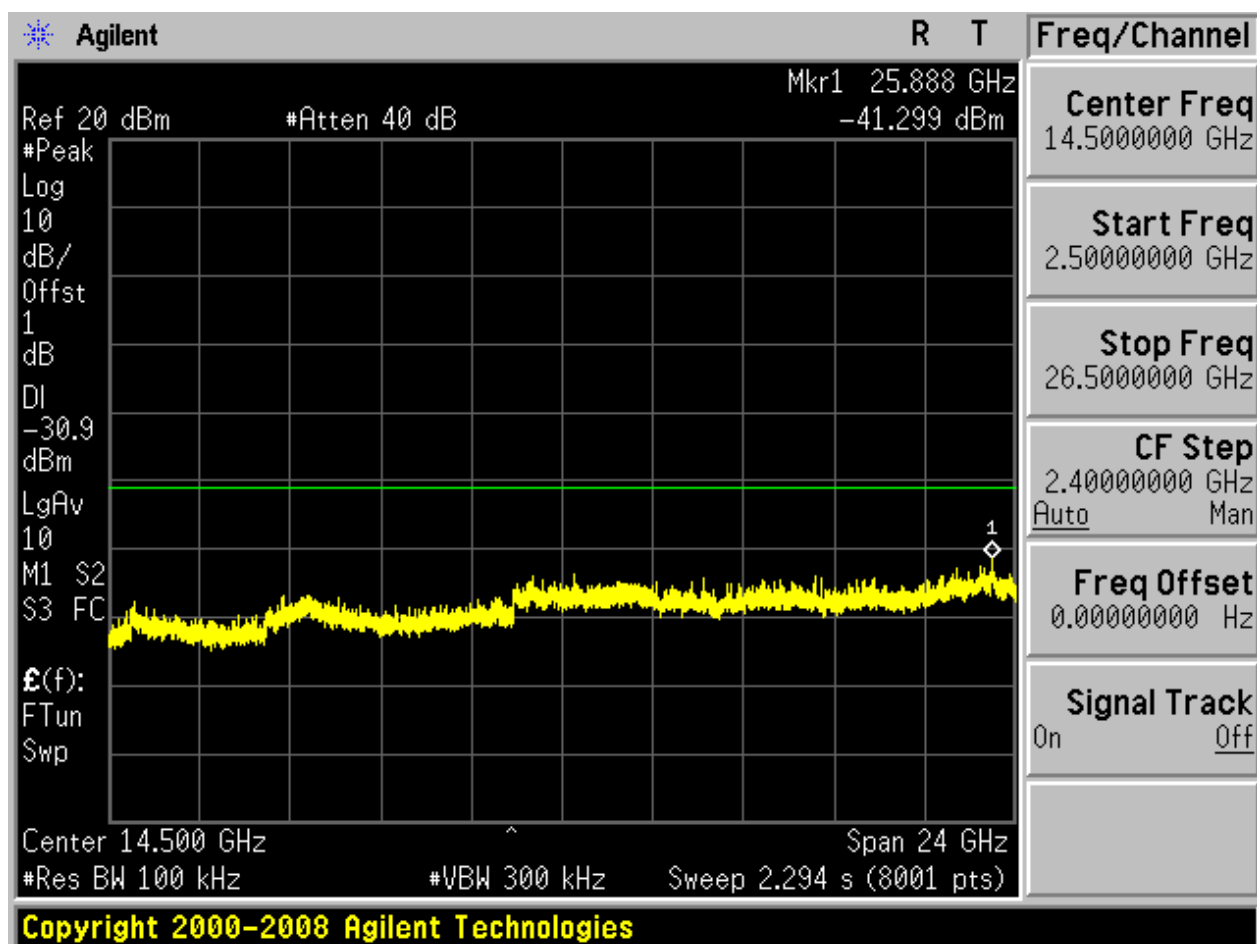












Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

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.

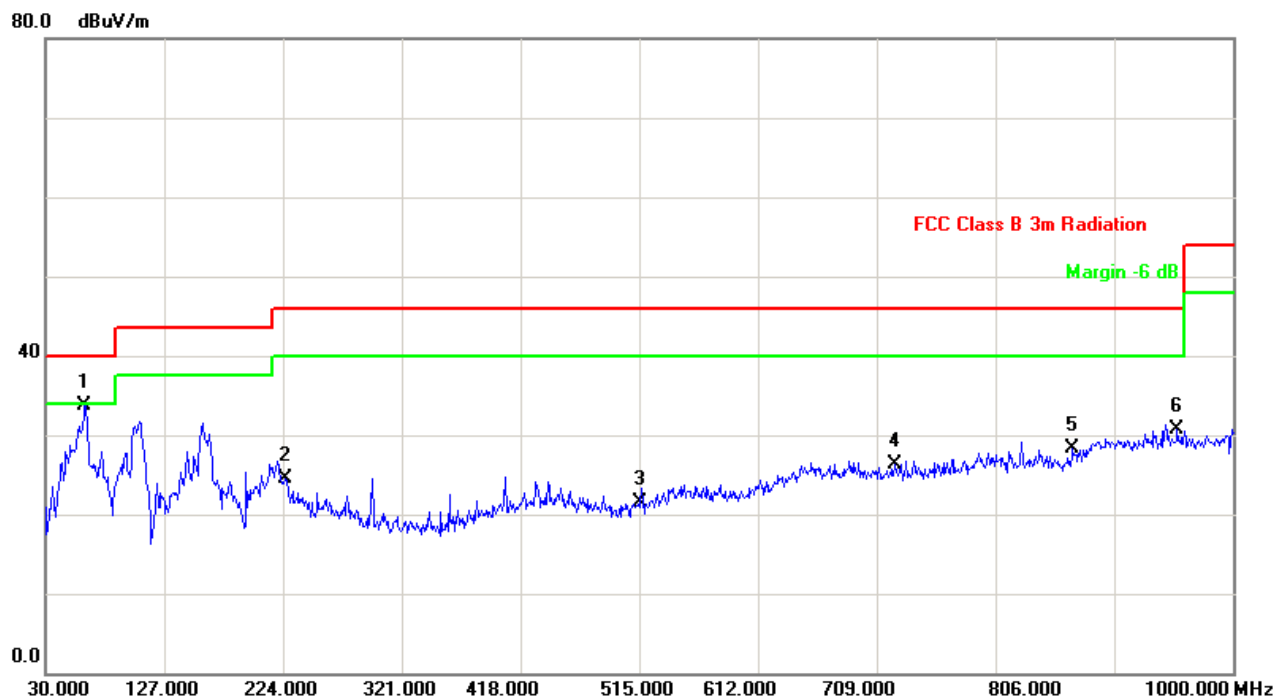
Part 1: Testing Range of “9 kHz to 30MHz”

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

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

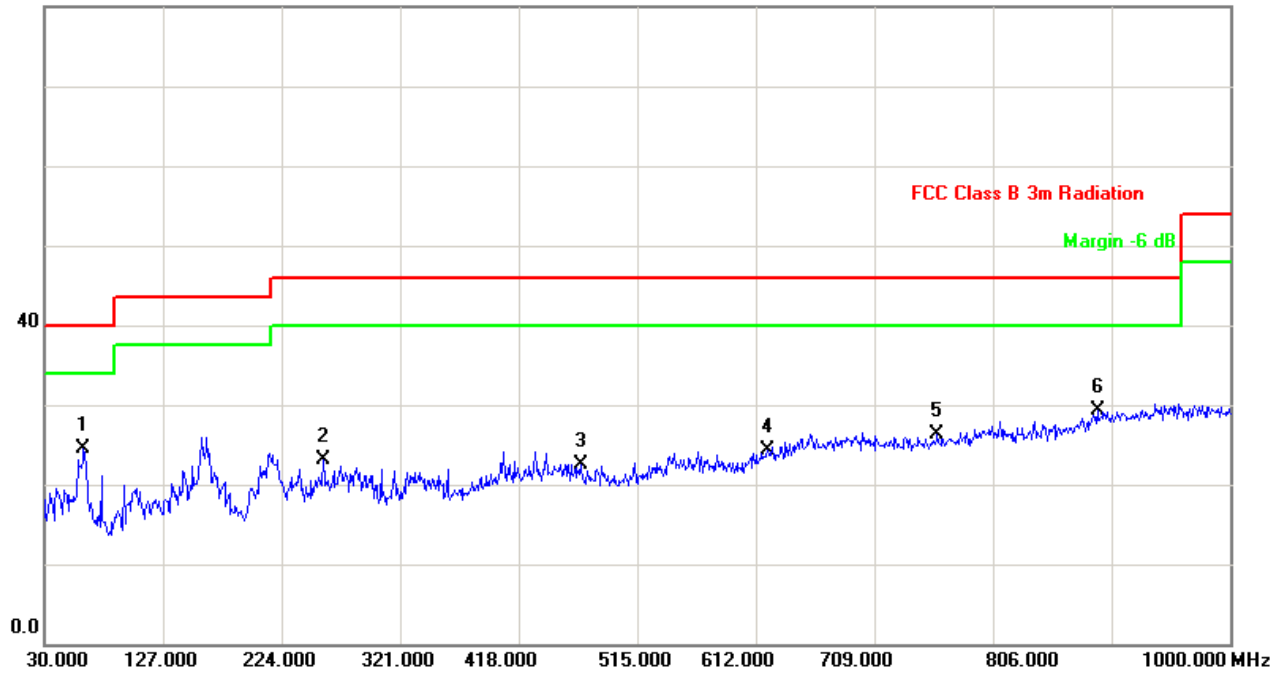
Note 1: The test results and plot for testing range of “30 MHz to 1 GHz” showed as below is **the WORST case for all Test Modes and Channels**. This range will not be presented for each Test Mode and each Channel.

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		62.0100	47.59	-13.83	33.76	40.00	-6.24	VERTICAL
2		225.9400	37.55	-13.01	24.54	46.00	-21.46	VERTICAL
3		515.9700	27.94	-6.50	21.44	46.00	-24.56	VERTICAL
4		723.5500	27.76	-1.44	26.32	46.00	-19.68	VERTICAL
5		869.0500	27.53	0.71	28.24	46.00	-17.76	VERTICAL
6		954.4100	27.62	3.07	30.69	46.00	-15.31	VERTICAL

80.0 dBuV/m



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Plarization
1		62.0100	38.30	-13.83	24.47	40.00	-15.53	HORIZONTAL
2		257.9500	35.73	-12.64	23.09	46.00	-22.91	HORIZONTAL
3		468.4400	29.00	-6.44	22.56	46.00	-23.44	HORIZONTAL
4		621.7000	27.57	-3.34	24.23	46.00	-21.77	HORIZONTAL
5		760.4100	27.32	-1.10	26.22	46.00	-19.78	HORIZONTAL
6		891.3600	27.89	1.40	29.29	46.00	-16.71	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”

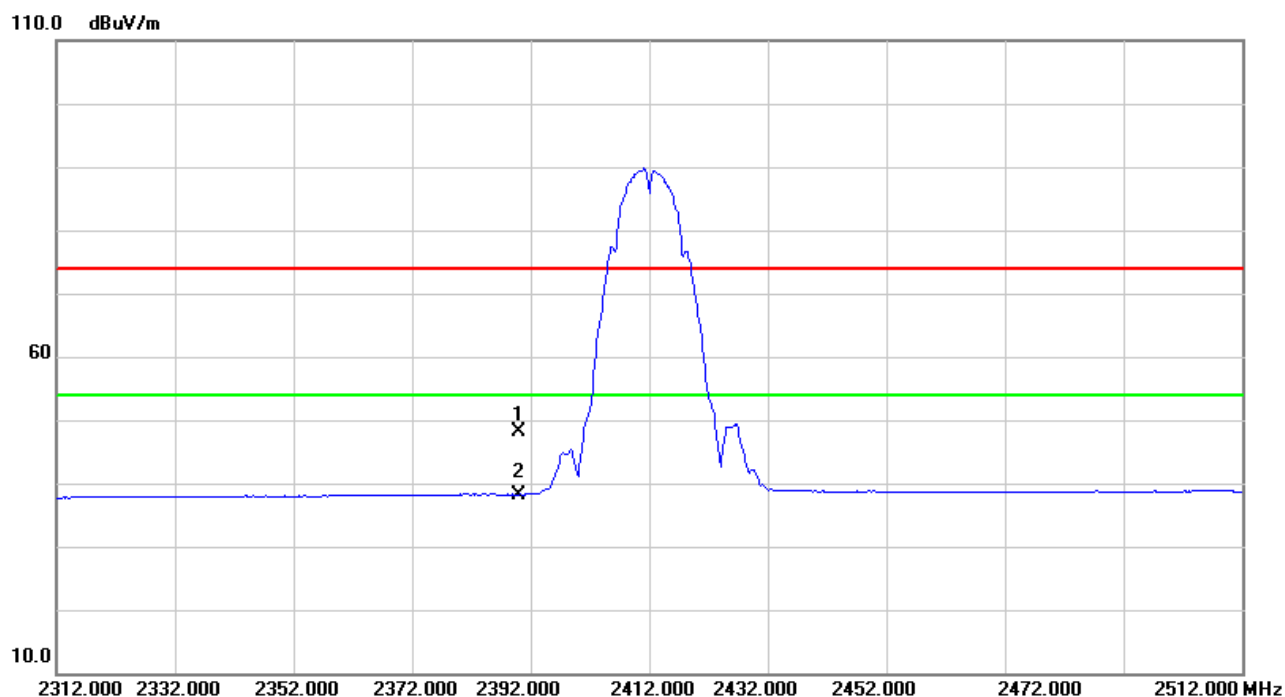
Part 4: Testing Range of “2.3GHz to 2.5GHz”

- 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

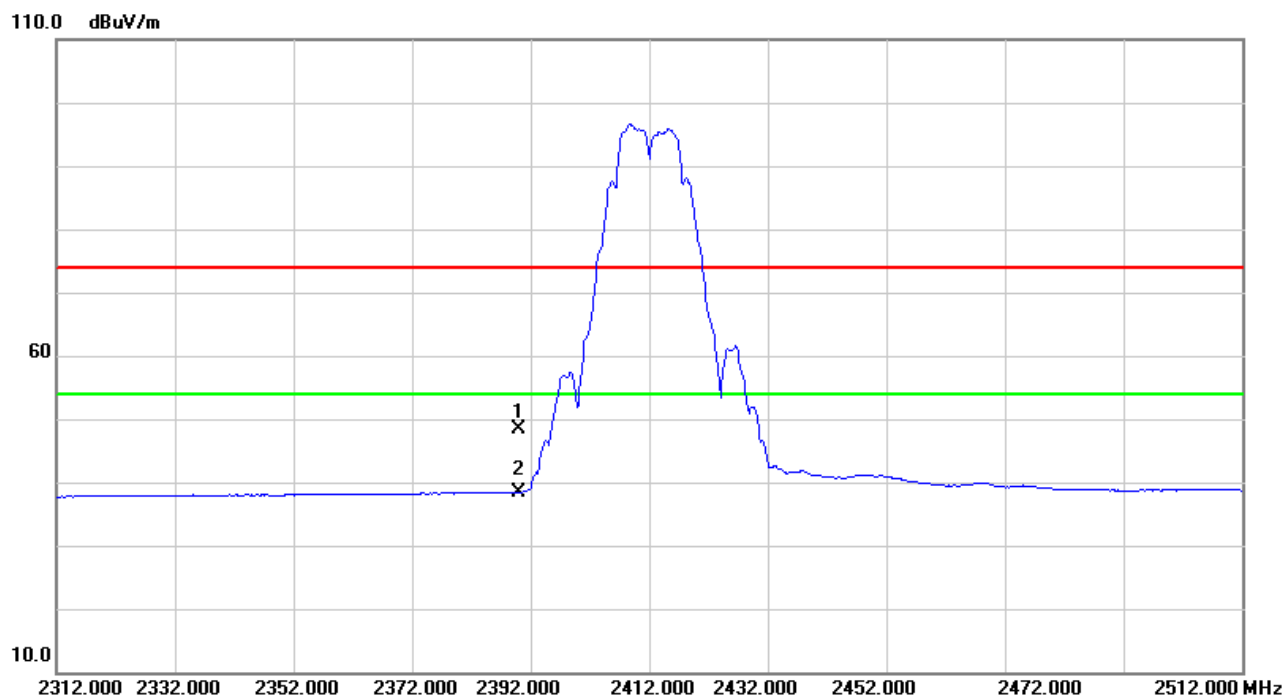
Vertical



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	13.79	34.23	48.02	74.00	-25.98	peak	VERTICAL
2	*	2390.000	4.02	34.23	38.25	54.00	-15.75	AVG	VERTICAL

Horizontal

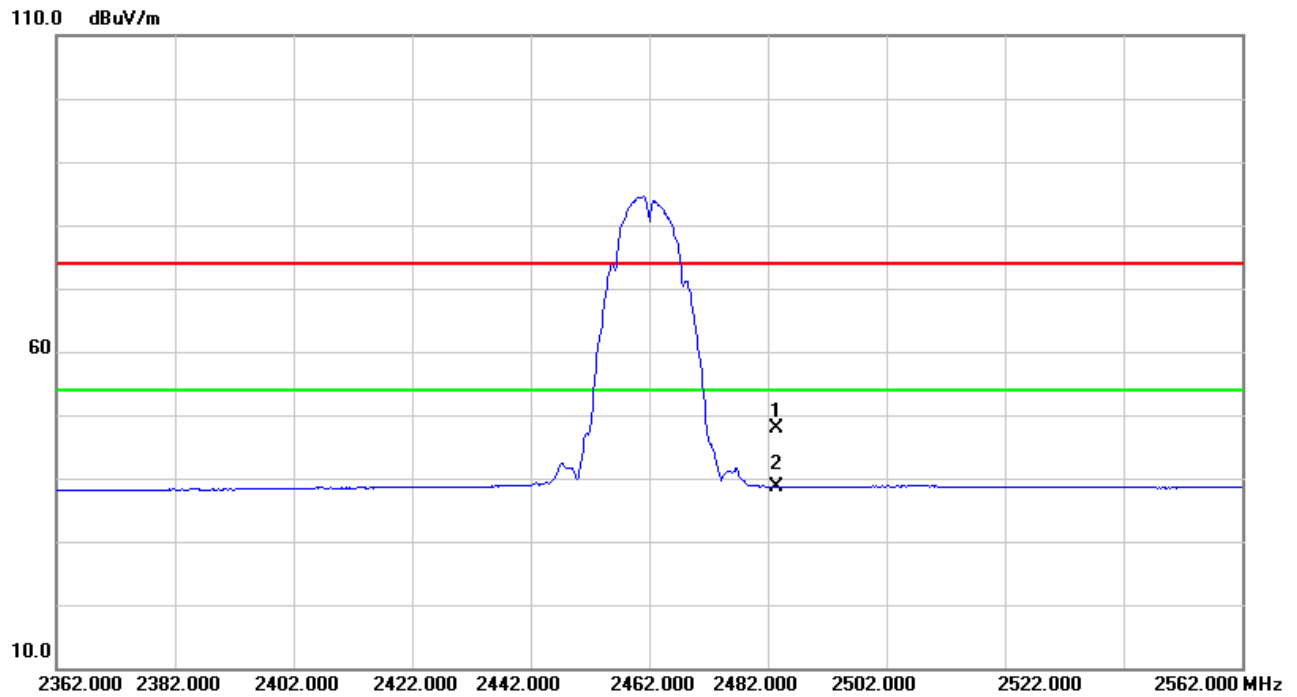


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Polarization
1		2390.000	14.03	34.23	48.26	74.00	-25.74	peak	HORIZONTAL
2	*	2390.000	4.15	34.23	38.38	54.00	-15.62	AVG	HORIZONTAL

Channel 11

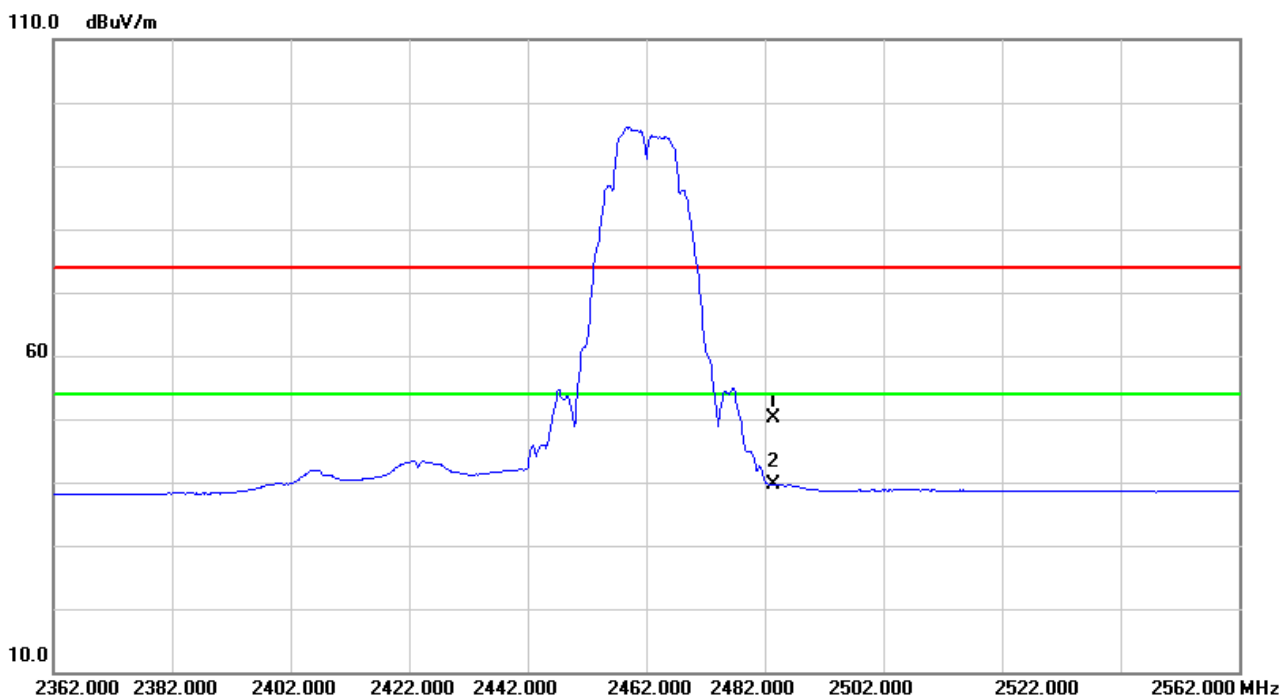
Vertical



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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Polarization
1		2483.500	13.20	34.78	47.98	74.00	-26.02	peak	VERTICAL
2	*	2483.500	3.85	34.78	38.63	54.00	-15.37	AVG	VERTICAL

Horizontal



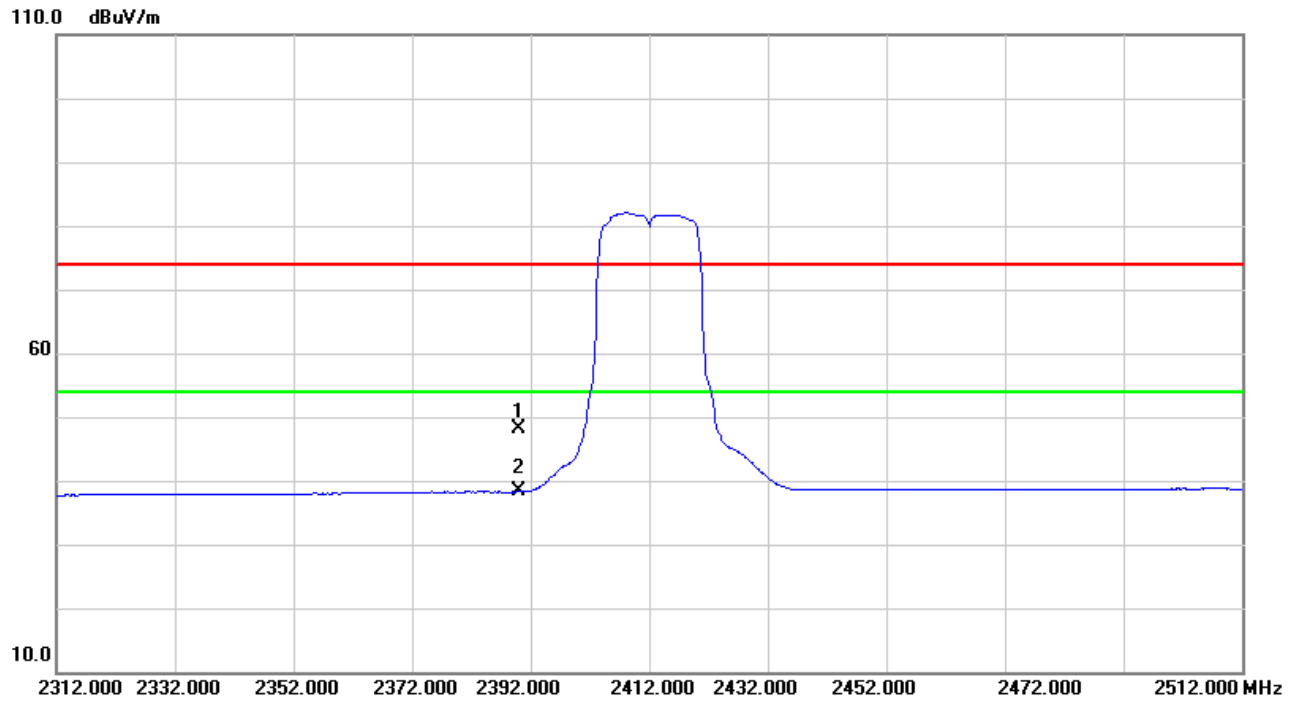
Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Polarization
1		2483.500	15.25	34.78	50.03	74.00	-23.97	peak	HORIZONTAL
2	*	2483.500	4.82	34.78	39.60	54.00	-14.40	AVG	HORIZONTAL

Test Mode: 11g

Channel 1

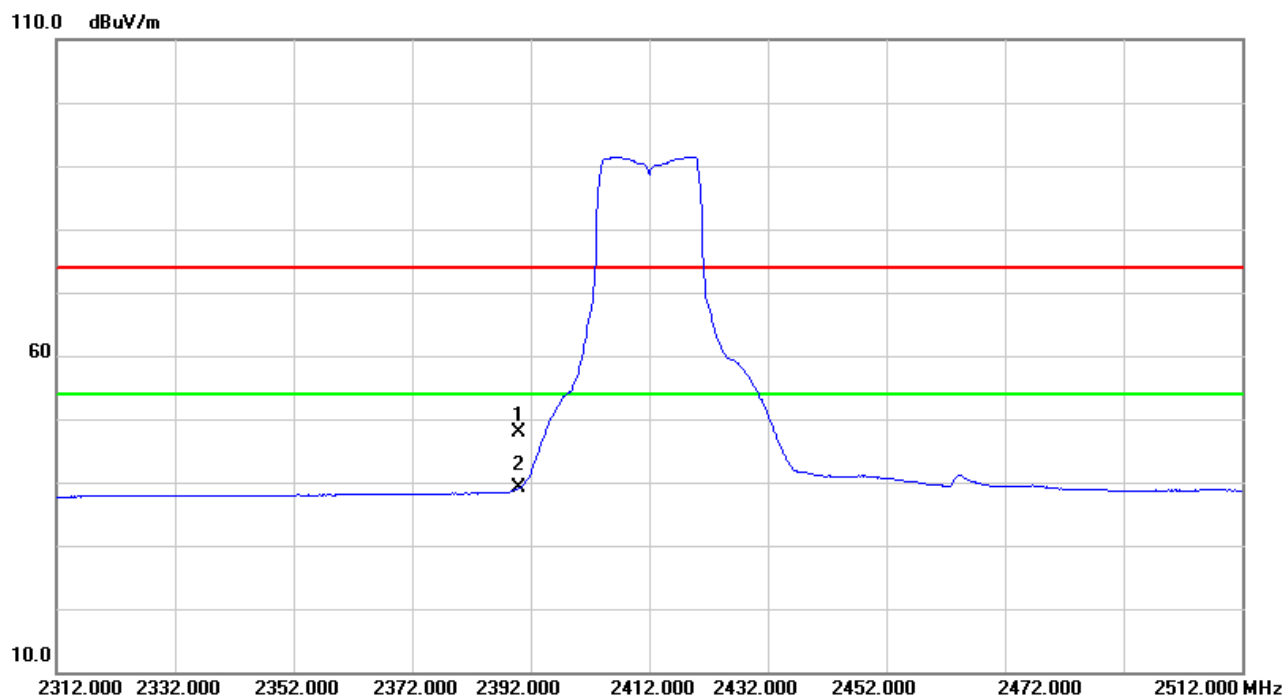
Vertical



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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Polarization
1		2390.000	13.90	34.23	48.13	74.00	-25.87	peak	VERTICAL
2	*	2390.000	4.05	34.23	38.28	54.00	-15.72	AVG	VERTICAL

Horizontal

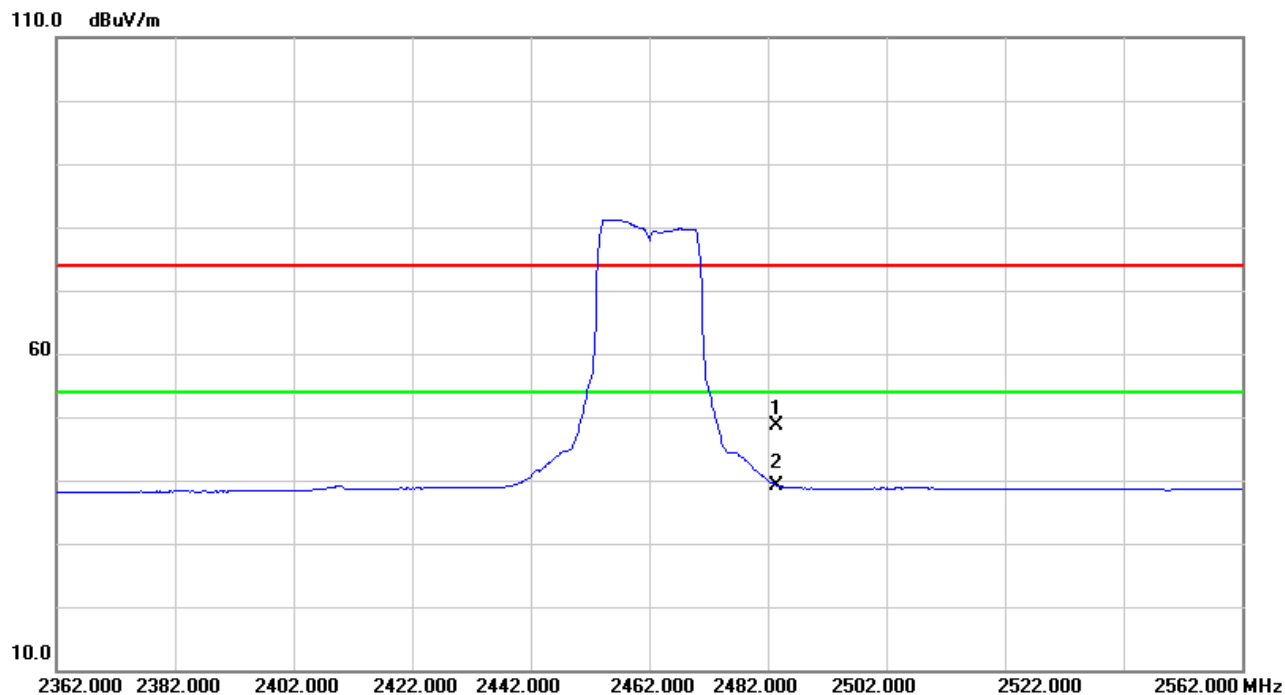


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Polarization
1		2390.000	13.58	34.23	47.81	74.00	-26.19	peak	HORIZONTAL
2	*	2390.000	4.78	34.23	39.01	54.00	-14.99	AVG	HORIZONTAL

Channel 11

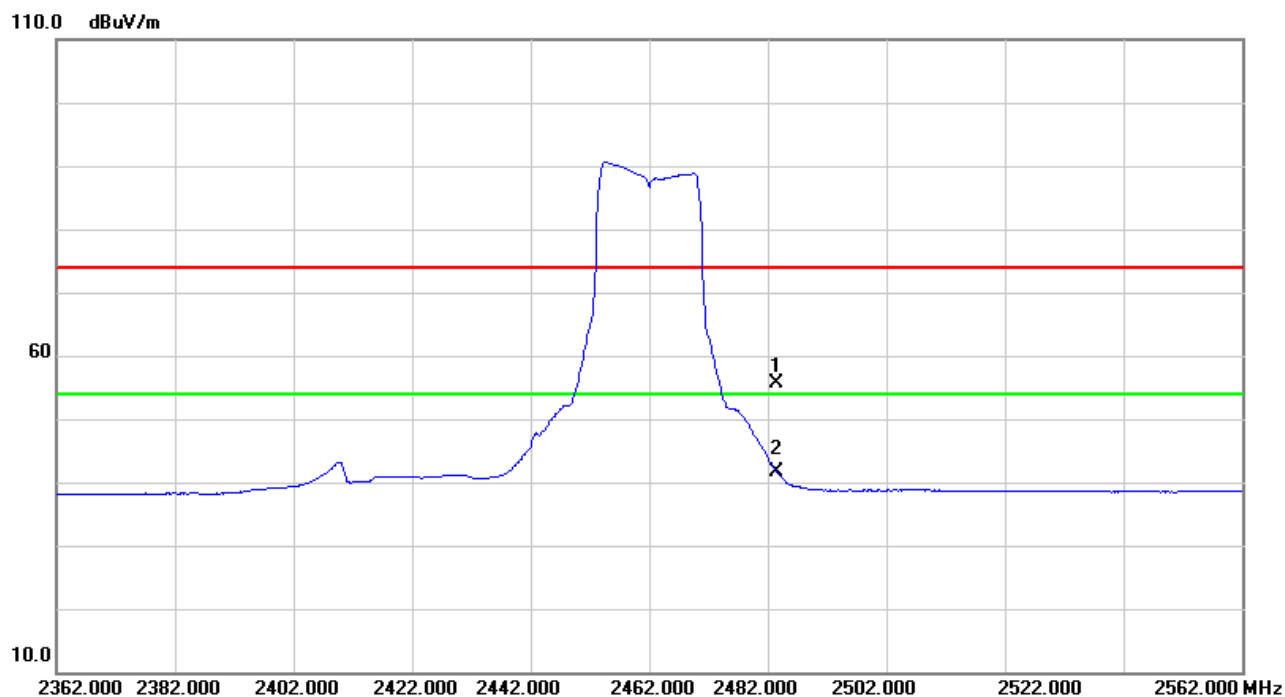
Vertical



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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Polarization
1		2483.500	13.77	34.78	48.55	74.00	-25.45	peak	VERTICAL
2	*	2483.500	4.45	34.78	39.23	54.00	-14.77	AVG	VERTICAL

Horizontal



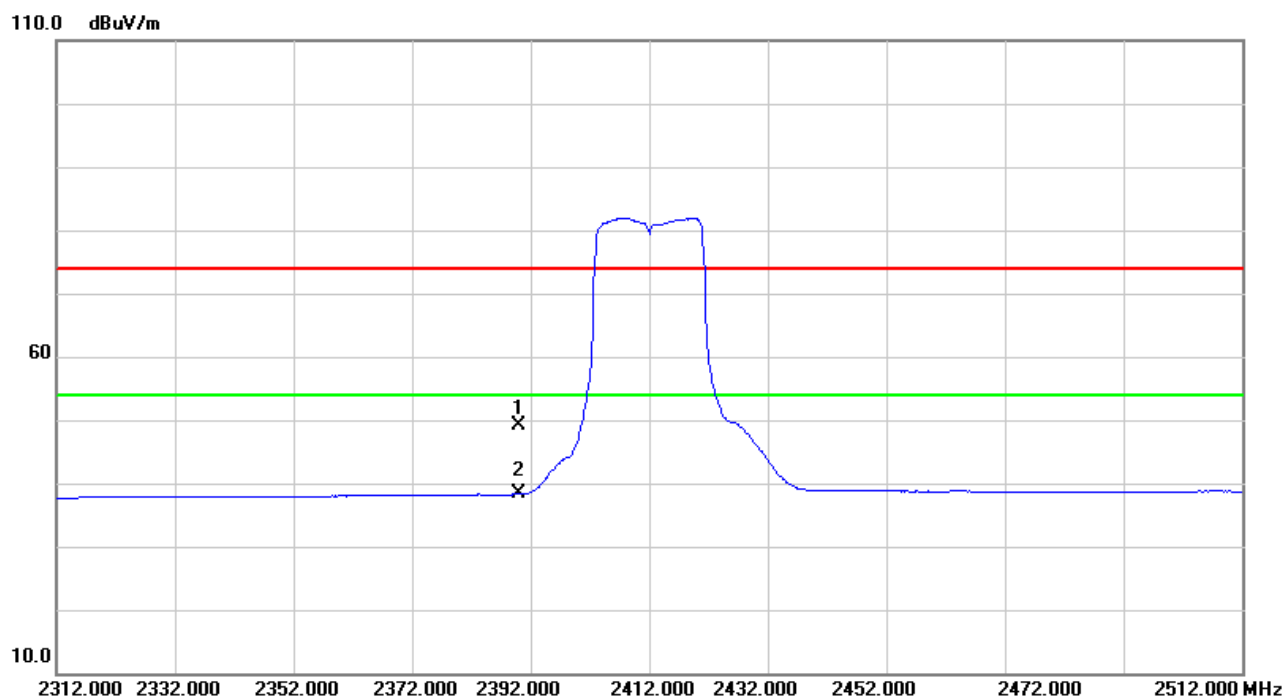
Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Polarization
1		2483.500	20.83	34.78	55.61	74.00	-18.39	peak	HORIZONTAL
2	*	2483.500	6.74	34.78	41.52	54.00	-12.48	AVG	HORIZONTAL

Test Mode: 11N

Channel 1

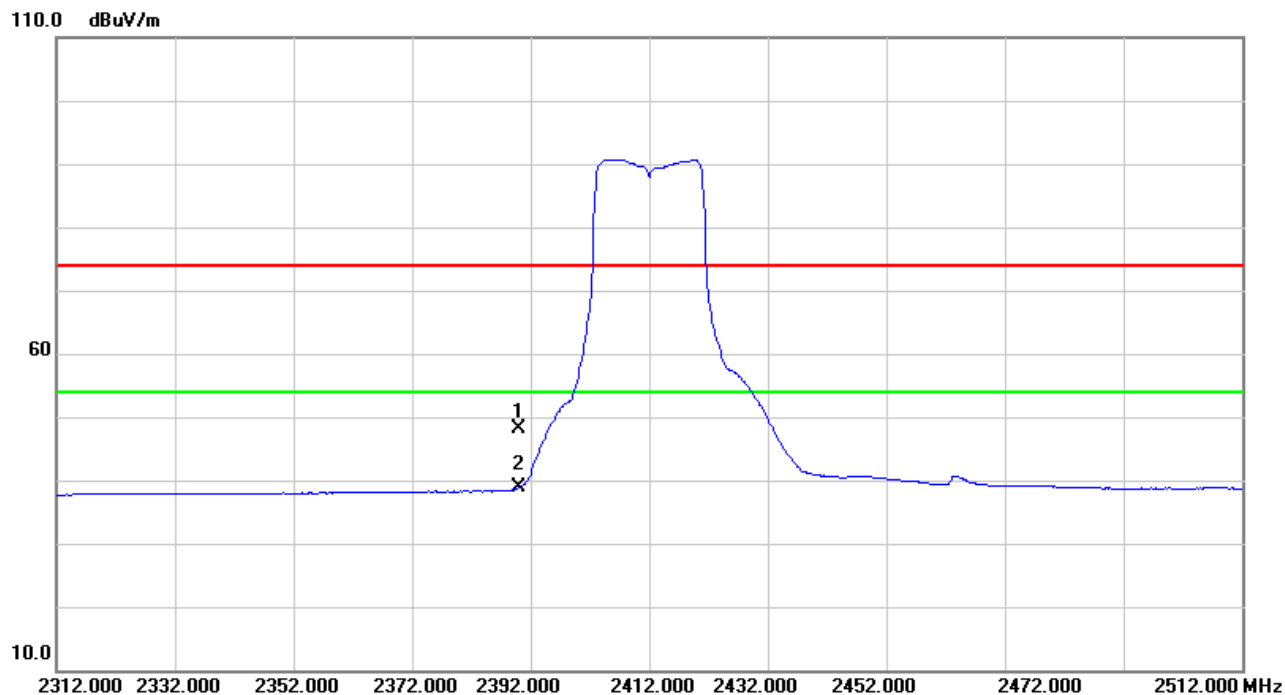
Vertical



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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Polarization
1		2390.000	14.88	34.23	49.11	74.00	-24.89	peak	VERTICAL
2	*	2390.000	4.06	34.23	38.29	54.00	-15.71	AVG	VERTICAL

Horizontal

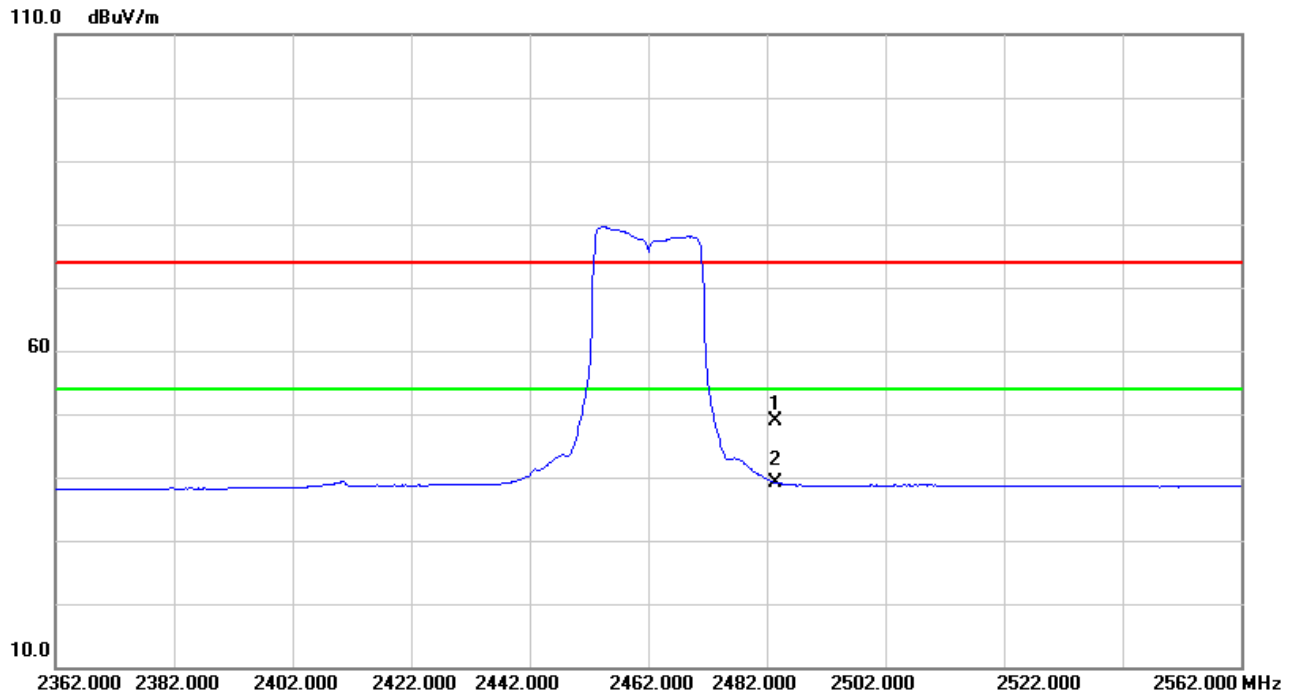


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Polarization
1		2390.000	13.94	34.23	48.17	74.00	-25.83	peak	HORIZONTAL
2	*	2390.000	4.57	34.23	38.80	54.00	-15.20	AVG	HORIZONTAL

Channel 11

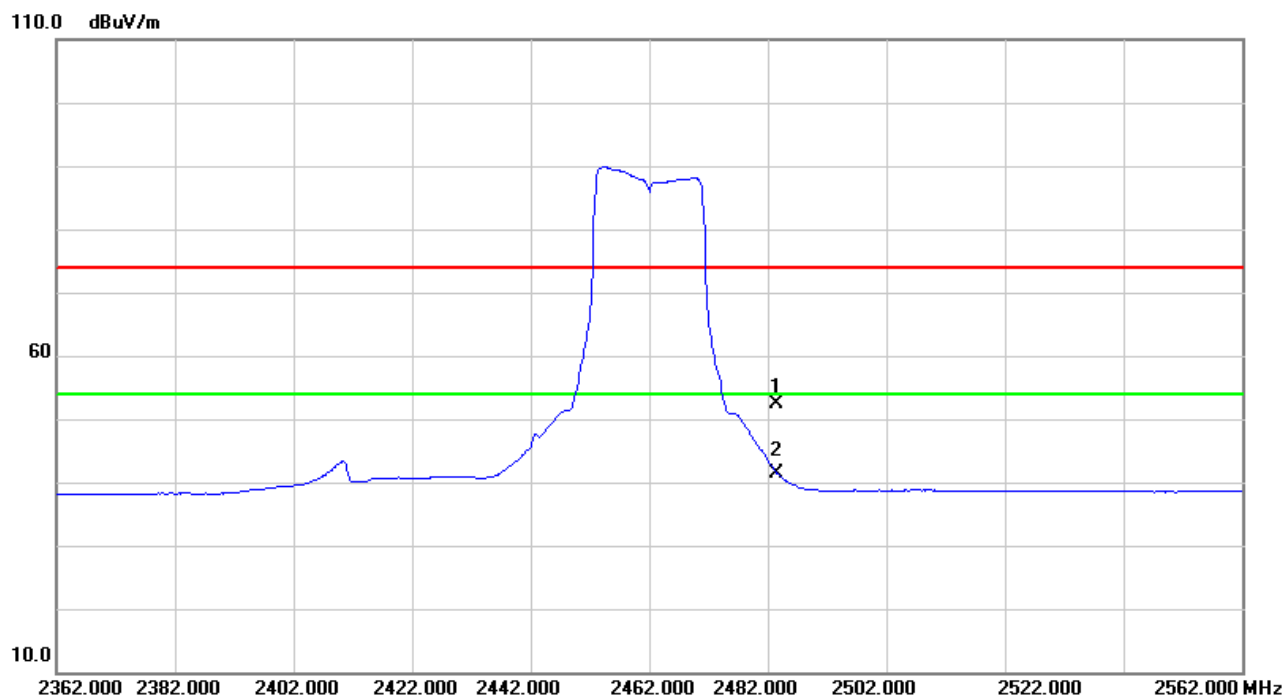
Vertical



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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Polarization
1		2483.500	14.03	34.78	48.81	74.00	-25.19	peak	VERTICAL
2	*	2483.500	4.42	34.78	39.20	54.00	-14.80	AVG	VERTICAL

Horizontal



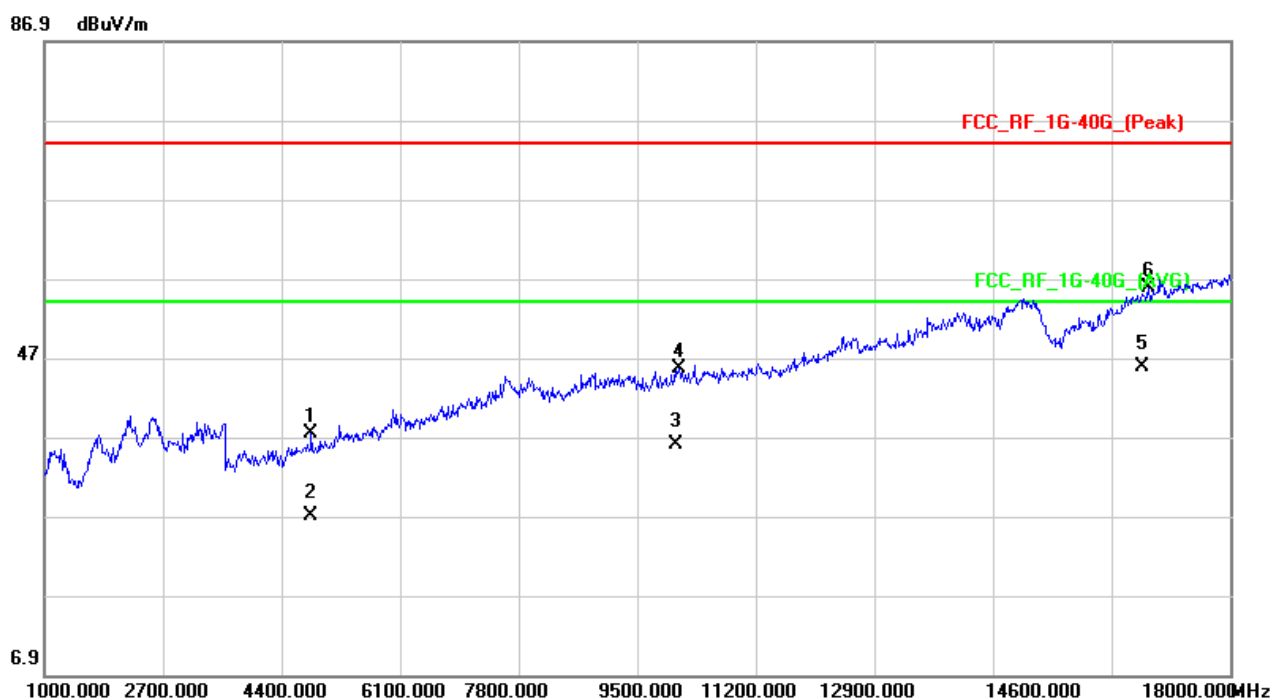
Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Polarization
1		2483.500	17.59	34.78	52.37	74.00	-21.63	peak	HORIZONTAL
2	*	2483.500	6.63	34.78	41.41	54.00	-12.59	AVG	HORIZONTAL

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

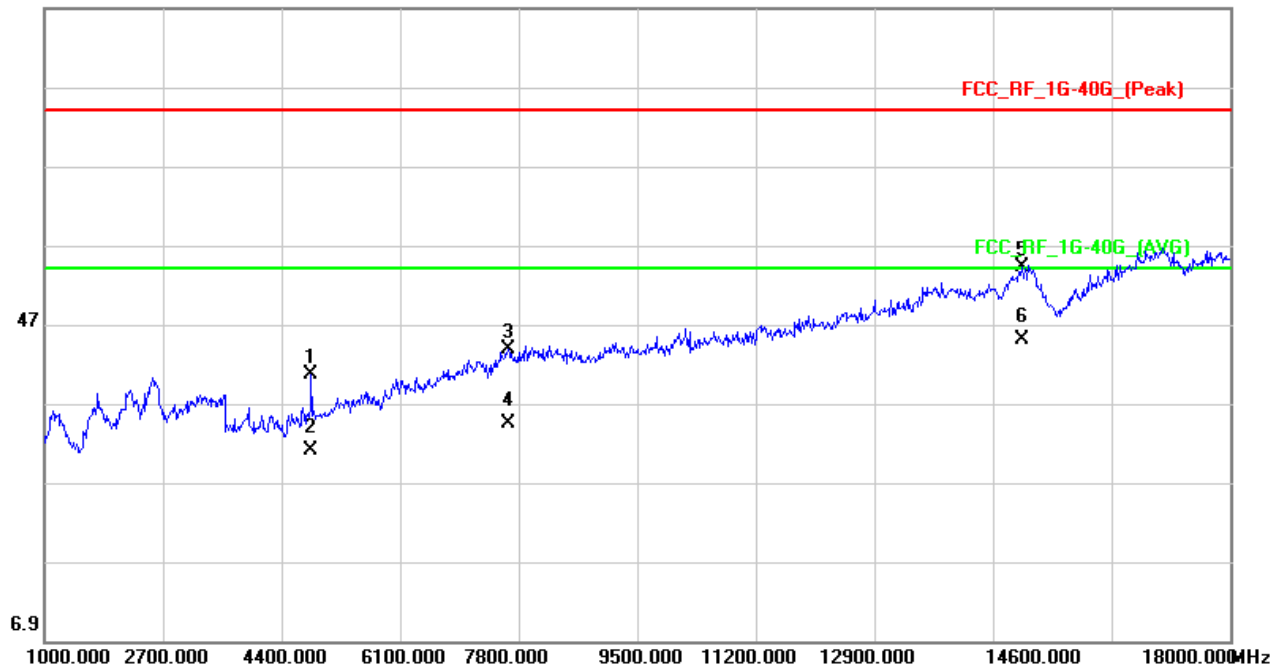
- Note 1: The test results and plot for testing range of “1 GHz to 18 GHz” showed as below is **the WORST case for all Test Modes and Channels**. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of “1 GHz to 18 GHz” is for checking radiated emissions located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

86.9 dBuV/m

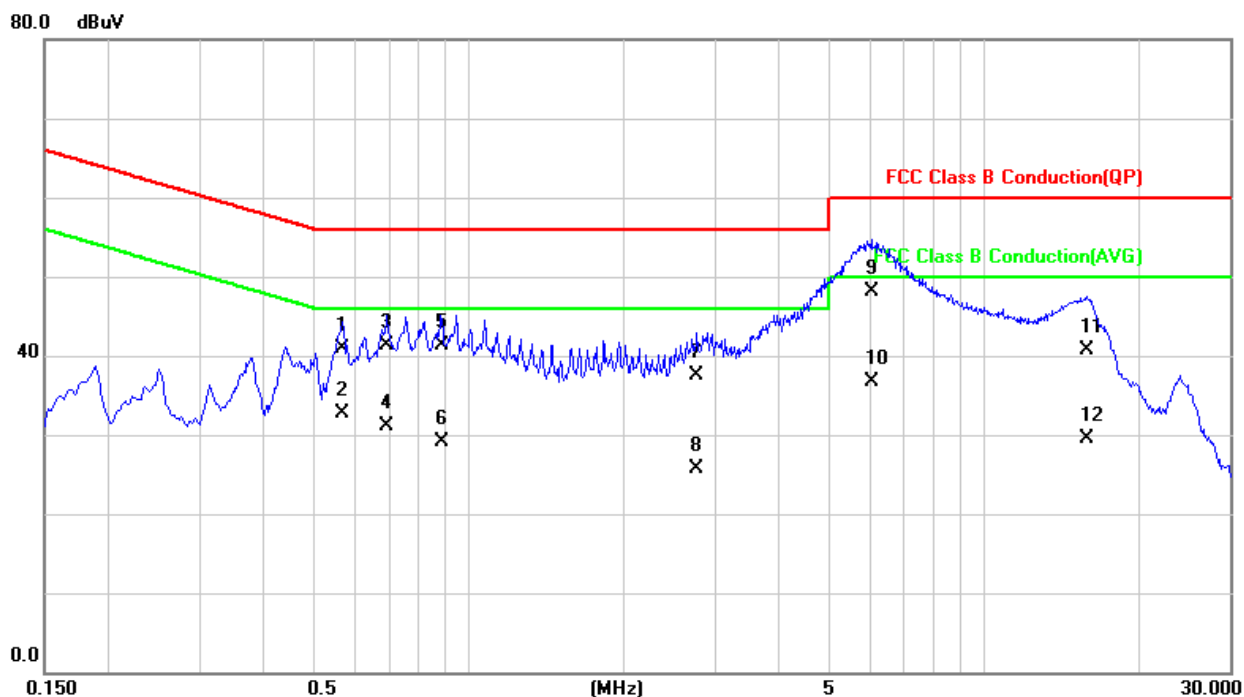




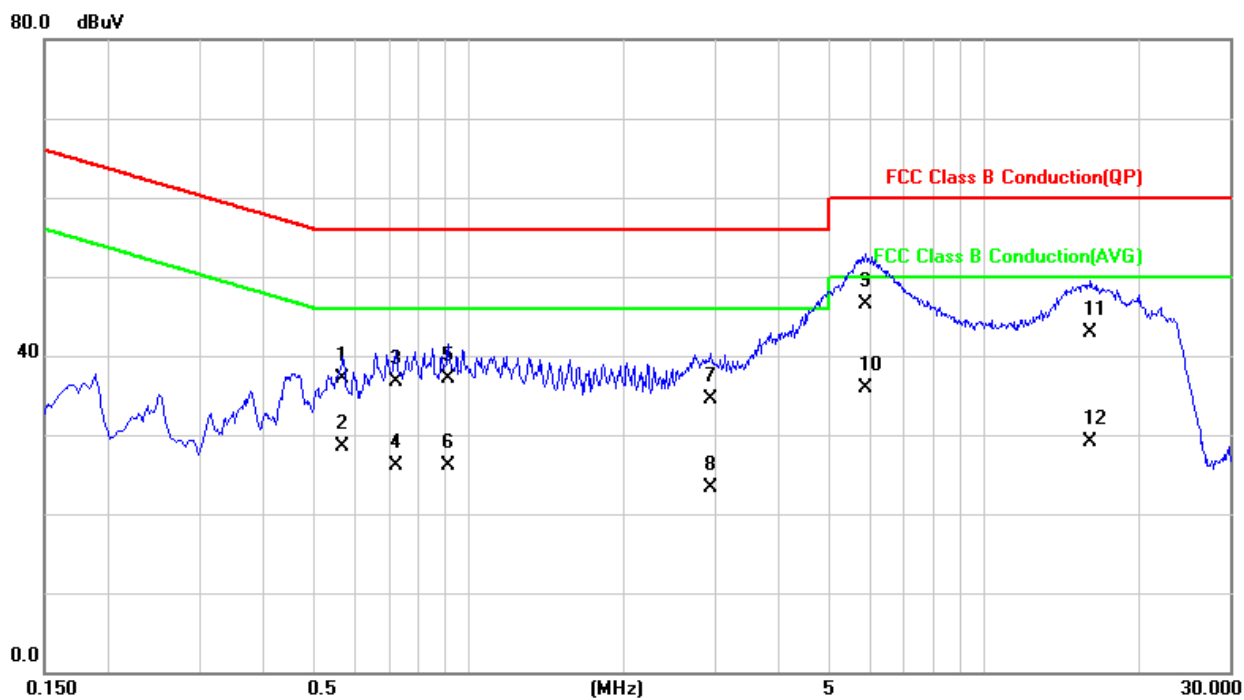
Appendix I: Conducted Emission at Power Port

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	0.5662	31.10	9.84	40.94	56.00	-15.06	QP	L1
2	0.5662	22.90	9.84	32.74	46.00	-13.26	AVG	L1
3	0.6945	31.50	9.90	41.40	56.00	-14.60	QP	L1
4	0.6945	21.30	9.90	31.20	46.00	-14.80	AVG	L1
5	0.8835	31.40	9.95	41.35	56.00	-14.65	QP	L1
6	0.8835	19.10	9.95	29.05	46.00	-16.95	AVG	L1
7	2.7690	27.60	9.87	37.47	56.00	-18.53	QP	L1
8	2.7690	15.80	9.87	25.67	46.00	-20.33	AVG	L1
9	6.0383	38.70	9.47	48.17	60.00	-11.83	QP	L1
10	6.0383	27.30	9.47	36.77	50.00	-13.23	AVG	L1
11	15.8213	30.50	10.30	40.80	60.00	-19.20	QP	L1
12	15.8213	19.20	10.30	29.50	50.00	-20.50	AVG	L1



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Line
1	0.5685	27.50	9.67	37.17	56.00	-18.83	0.5685	N
2	0.5685	18.80	9.67	28.47	46.00	-17.53	0.5685	N
3	0.7236	27.10	9.70	36.80	56.00	-19.20	0.7236	N
4	0.7236	16.50	9.70	26.20	46.00	-19.80	0.7236	N
5	0.9127	27.40	9.75	37.15	56.00	-18.85	0.9127	N
6	0.9127	16.30	9.75	26.05	46.00	-19.95	0.9127	N
7	2.9378	24.80	9.80	34.60	56.00	-21.40	2.9378	N
8	2.9378	13.60	9.80	23.40	46.00	-22.60	2.9378	N
9	5.8988	36.40	10.12	46.52	60.00	-13.48	5.8988	N
10	5.8988	25.80	10.12	35.92	50.00	-14.08	5.8988	N
11	16.0935	32.70	10.27	42.97	60.00	-17.03	16.0935	N
12	16.0935	18.80	10.27	29.07	50.00	-20.93	16.0935	N

END