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.

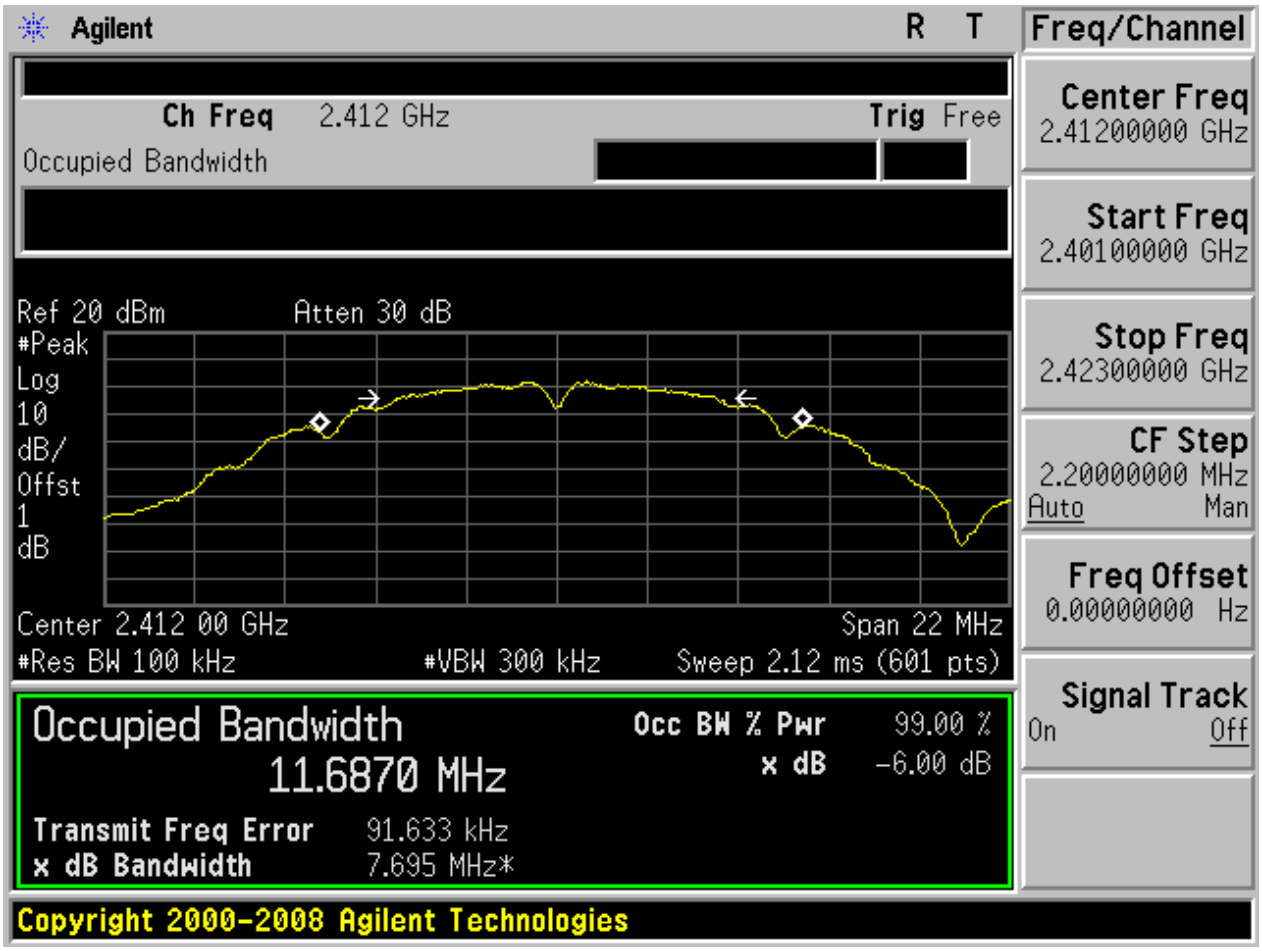
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

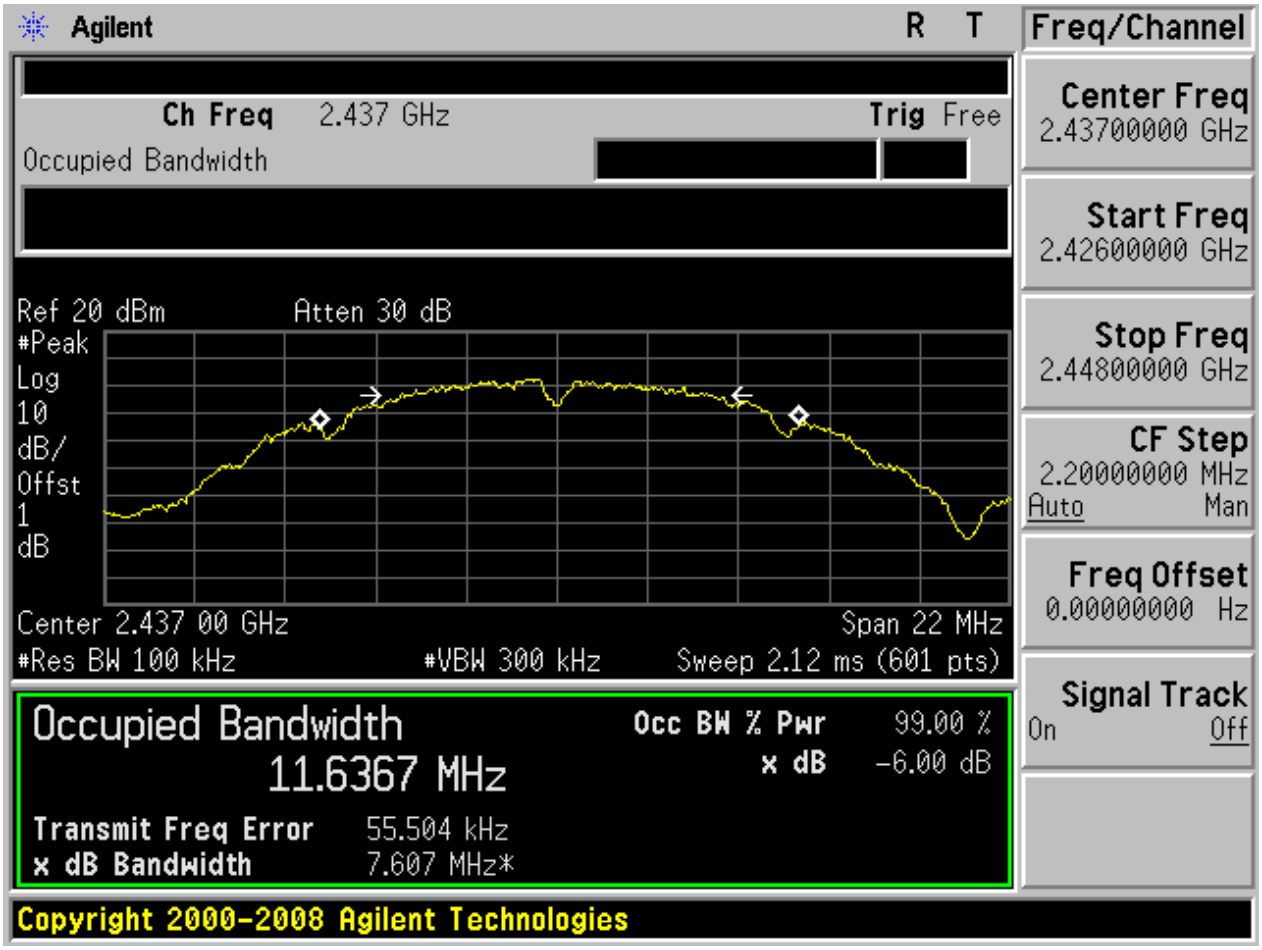
Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
11B	L	2412	Ant 1	7.69	pass
11B	M	2437	Ant 1	7.61	pass
11B	H	2462	Ant 1	7.55	pass
11G	L	2412	Ant 1	16.56	pass
11G	M	2437	Ant 1	16.57	pass
11G	H	2462	Ant 1	16.58	pass
11N20	L	2412	Ant 1	17.80	pass
11N20	M	2437	Ant 1	17.68	pass
11N20	H	2462	Ant 1	17.80	pass

Part II - Test Plots

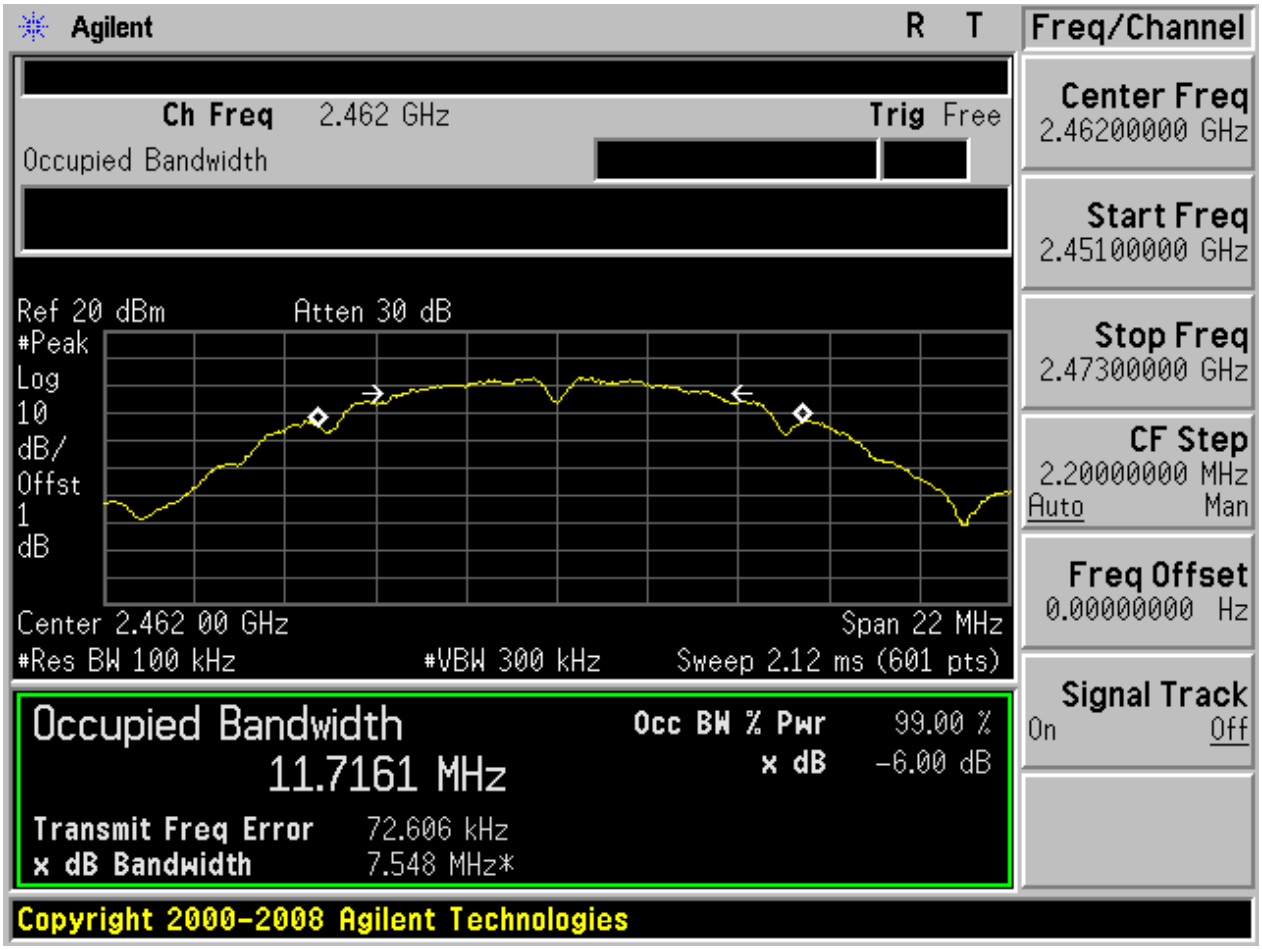
2.1 11B_L@Ant 1



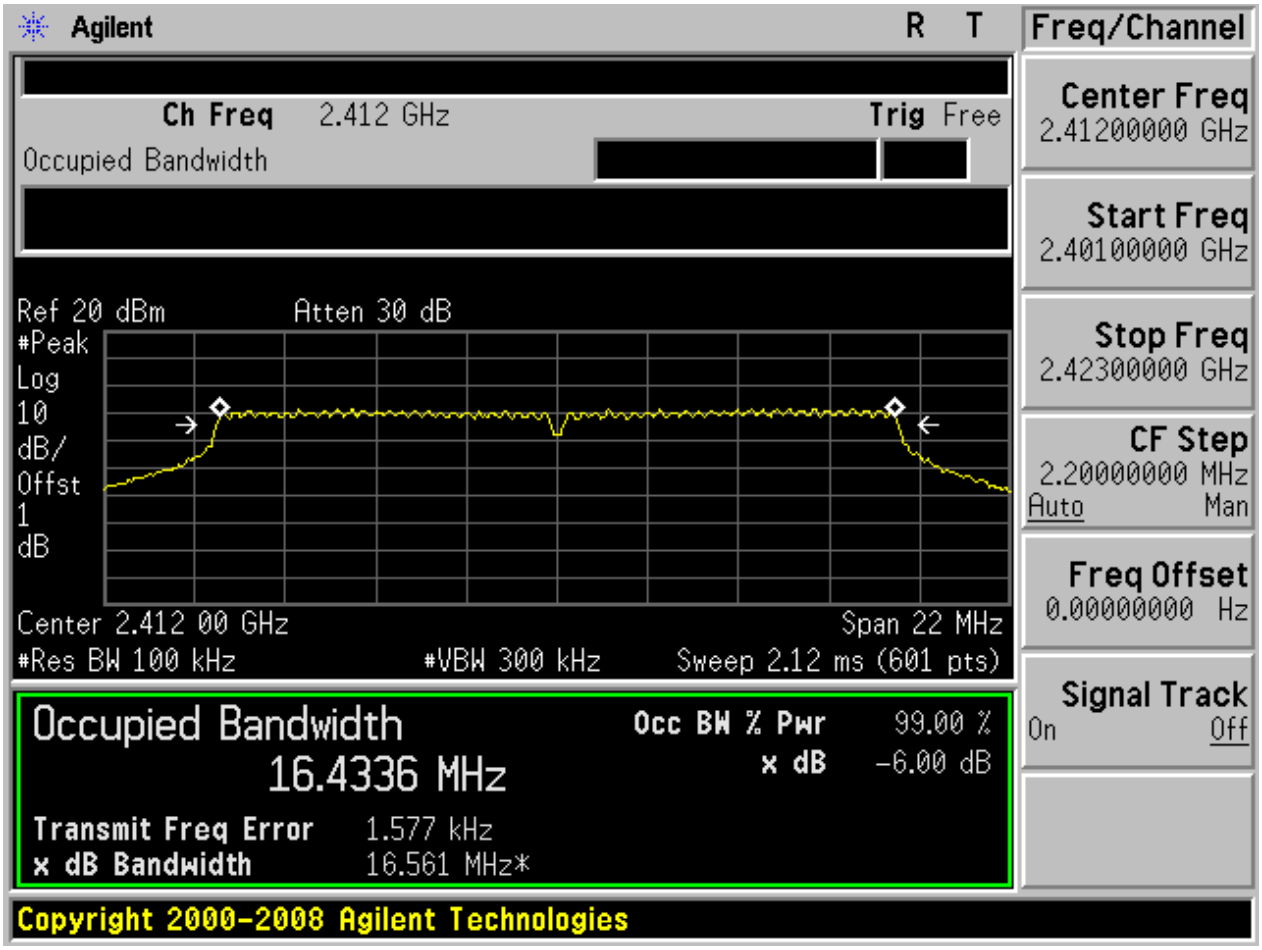
2.3 11B_M@Ant 1



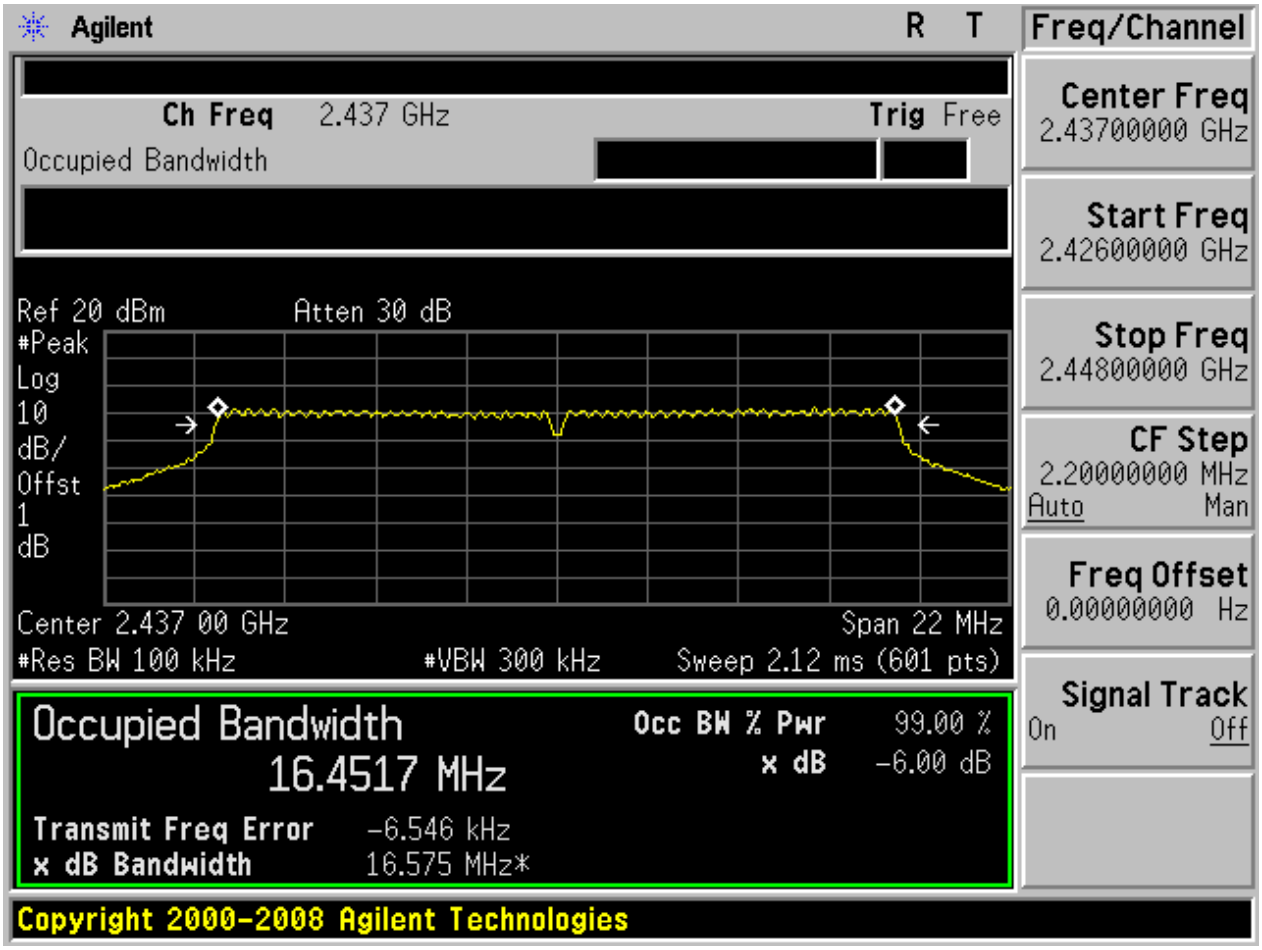
2.5 11B_H@Ant 1



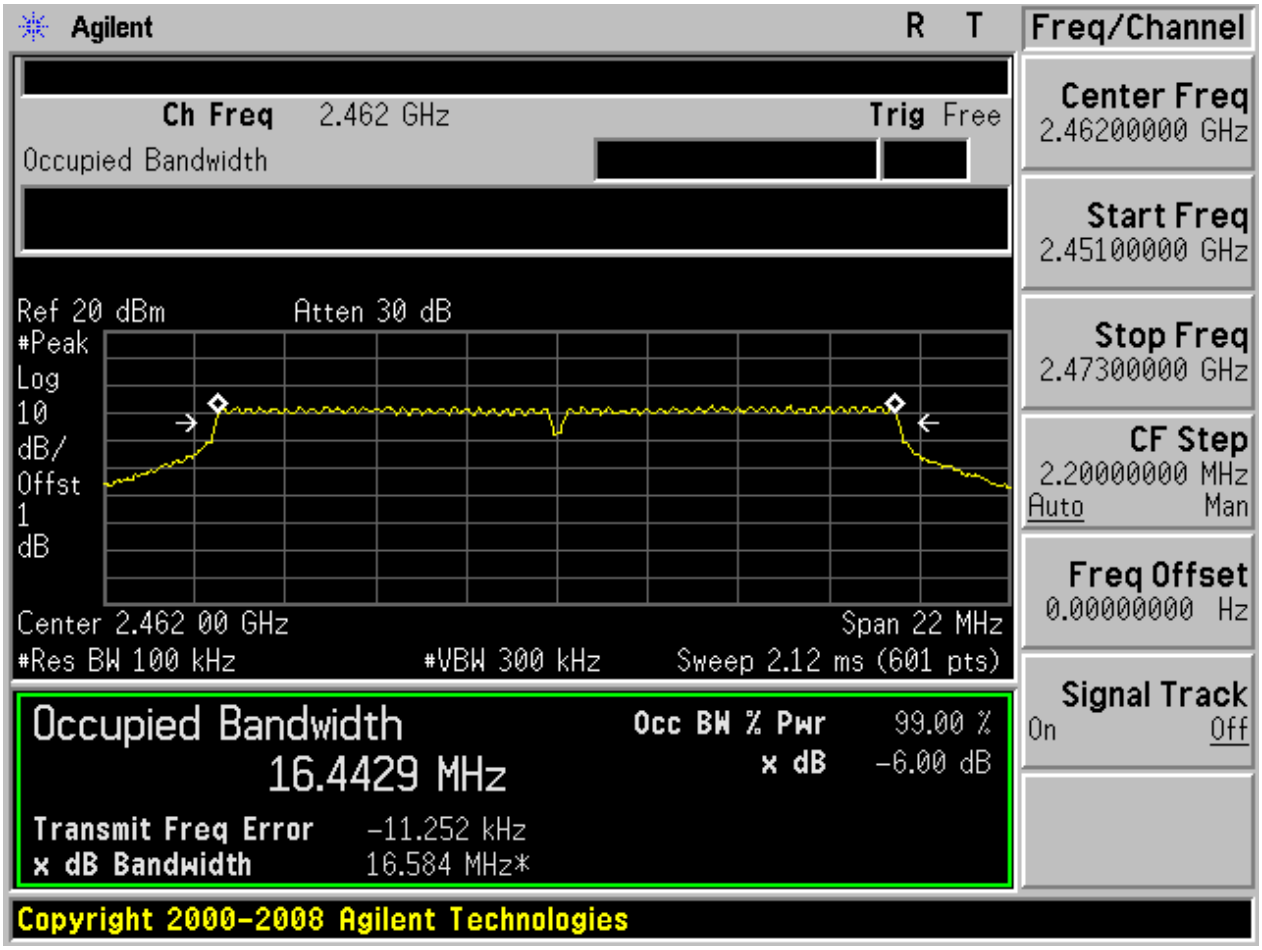
2.7 11G_L@Ant 1



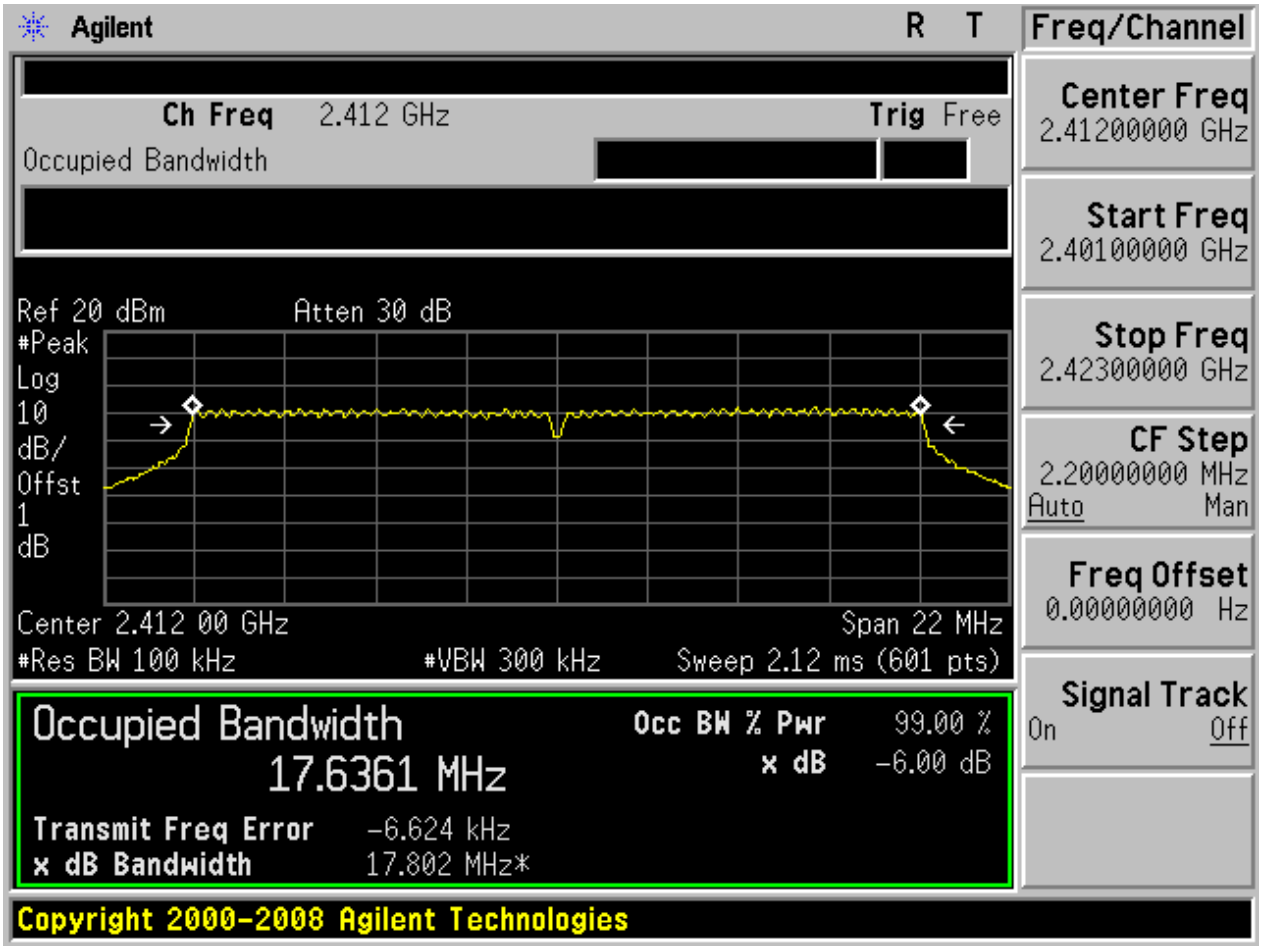
2.9 11G_M@Ant 1



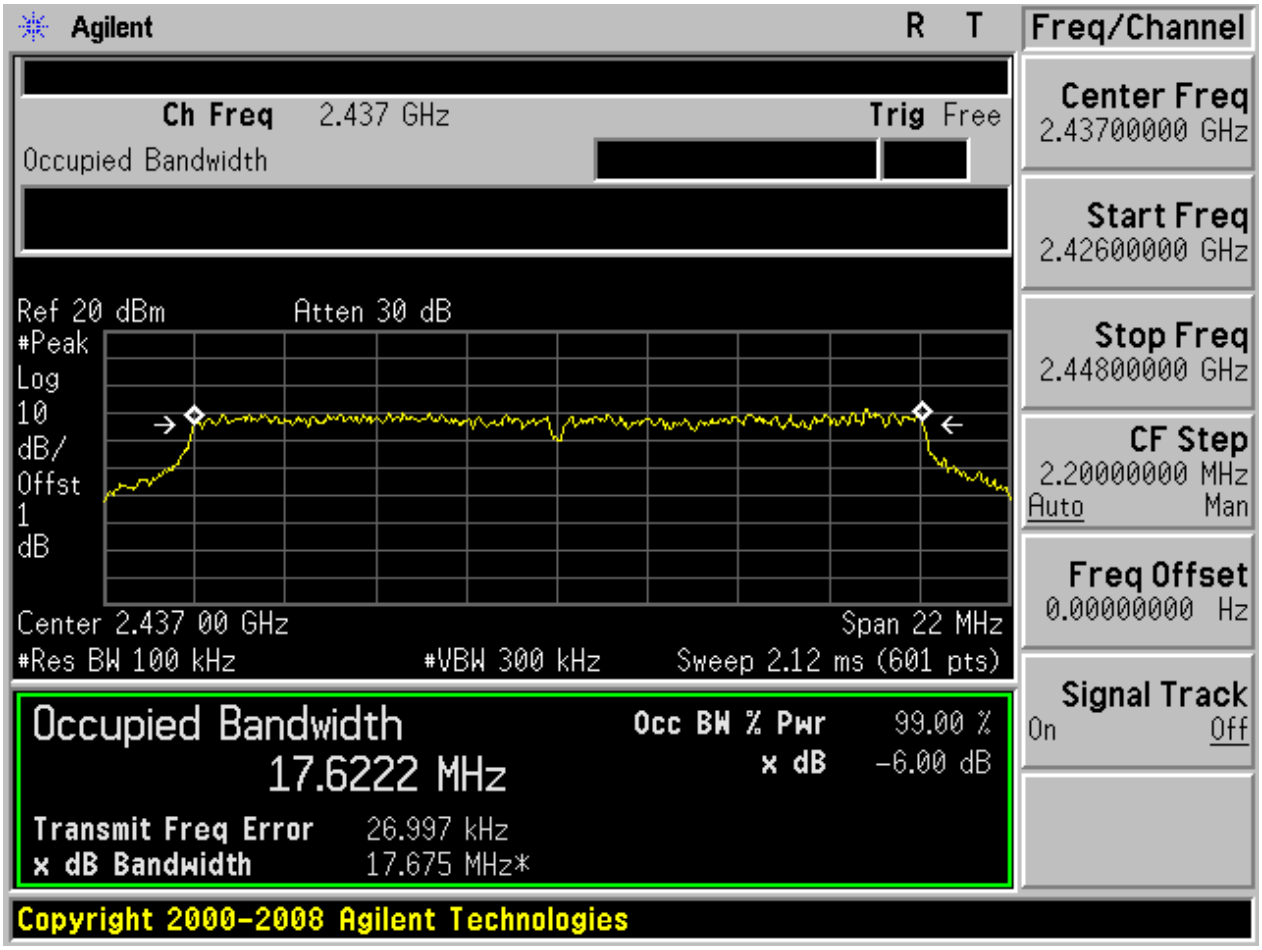
2.11 11G_H@Ant 1



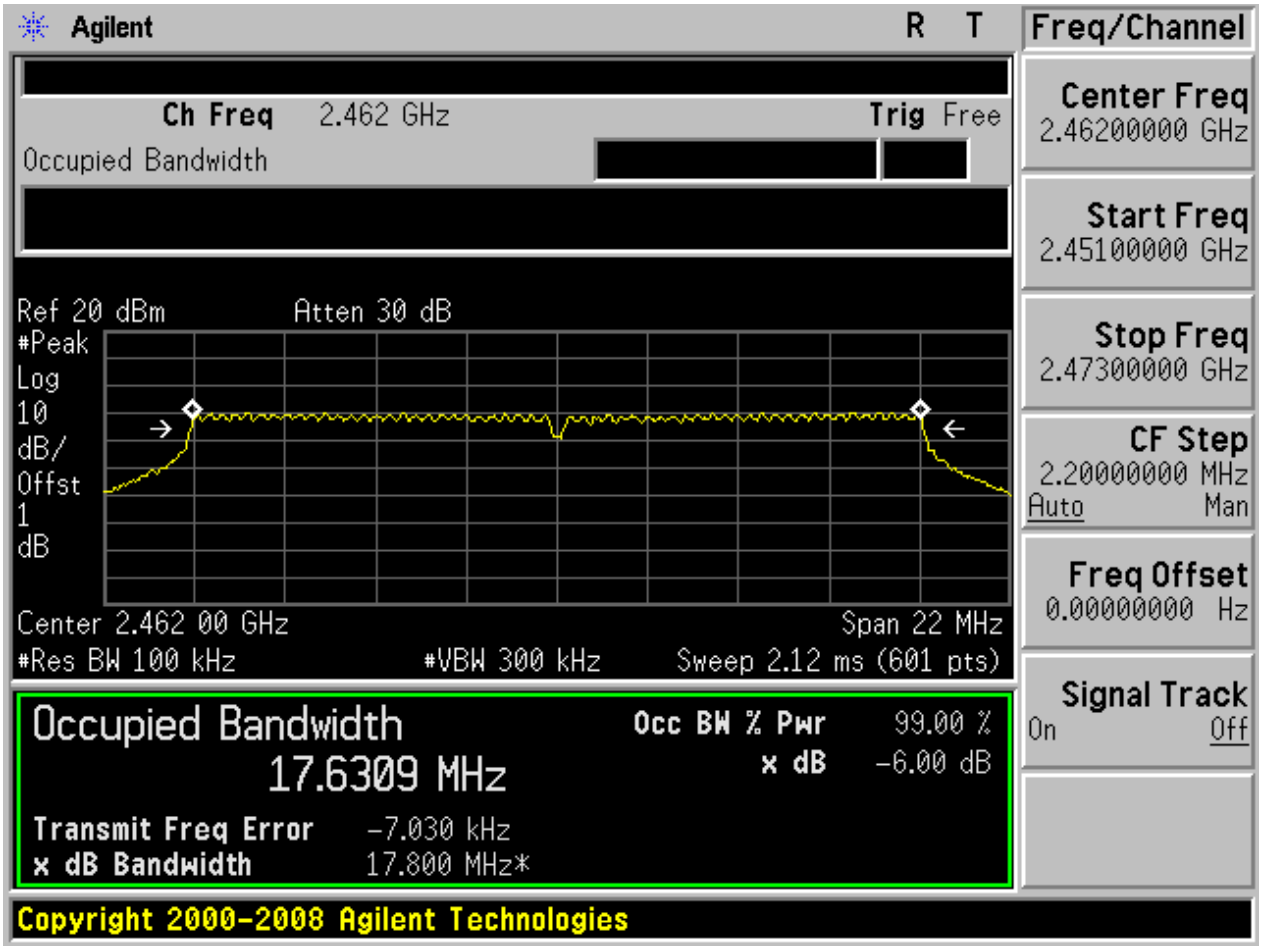
2.13 11N20_L@Ant 1



2.15 11N20_M@Ant 1



2.17 11N20_H@Ant 1



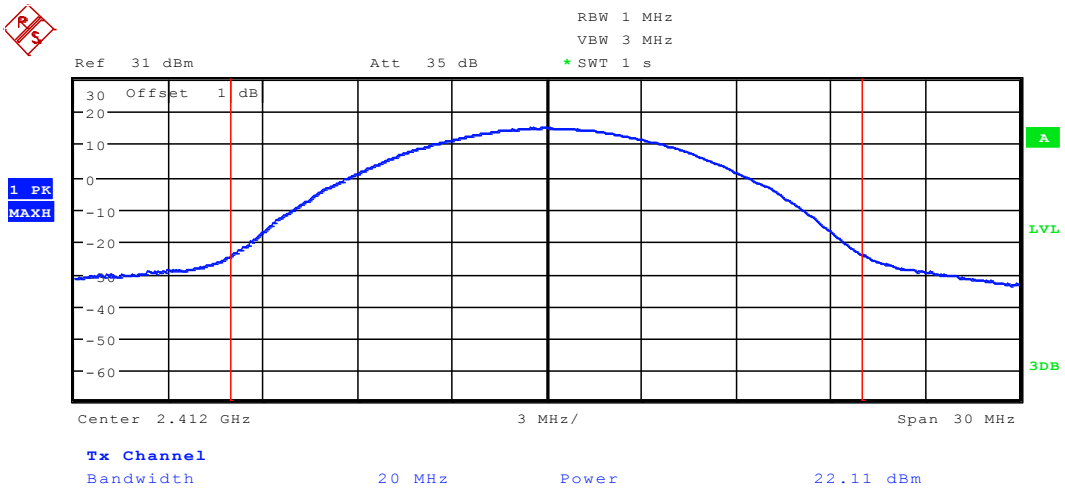
Appendix B: Maximum Peak Conducted Output Power

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Meas. Level (Cond.) [dBm]	Verdict
11B	L	2412	22.11	pass
11B	M	2437	22.00	pass
11B	H	2462	22.81	pass
11G	L	2412	18.97	pass
11G	M	2437	19.09	pass
11G	H	2462	19.84	pass
11N20	L	2412	16.59	pass
11N20	M	2437	16.73	pass
11N20	H	2462	17.49	pass

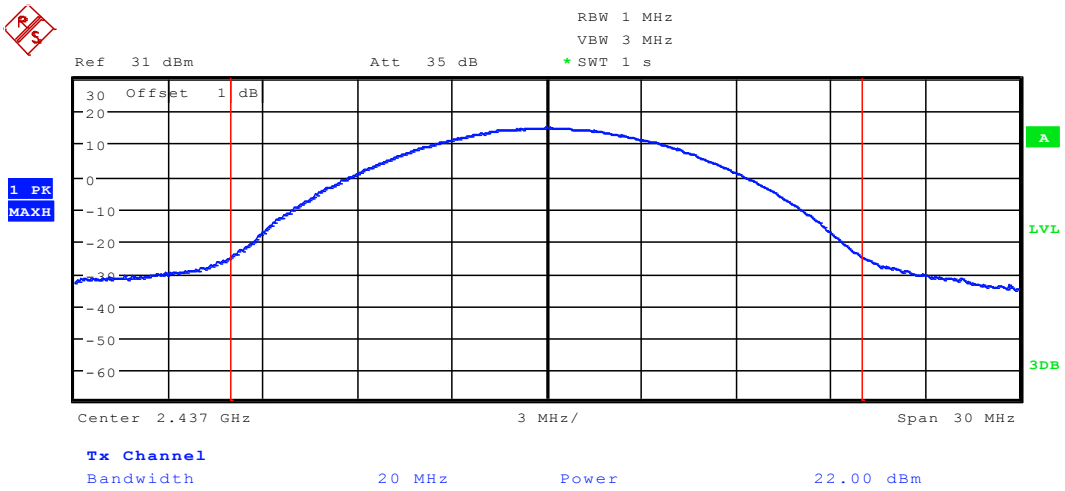
Part II - Test Plots

2.1 11B_L



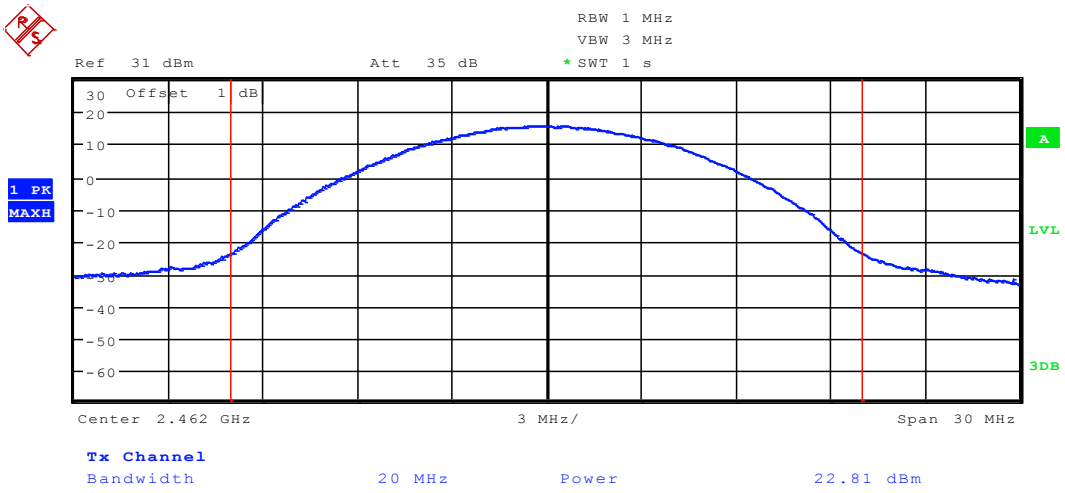
Date: 23.APR.2014 17:10:22

2.1 11B_M



Date: 23.APR.2014 17:11:05

2.1
11B_H



Date: 23.APR.2014 17:11:29

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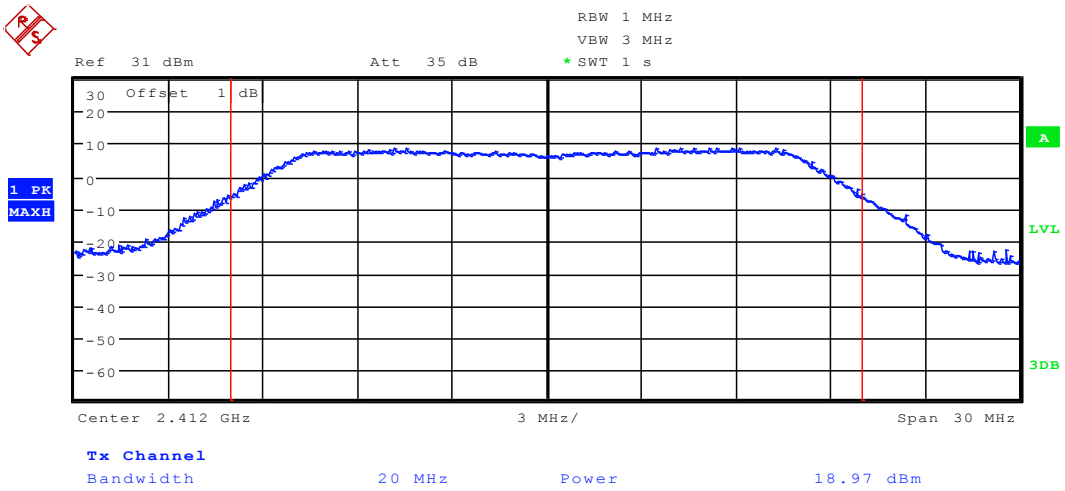

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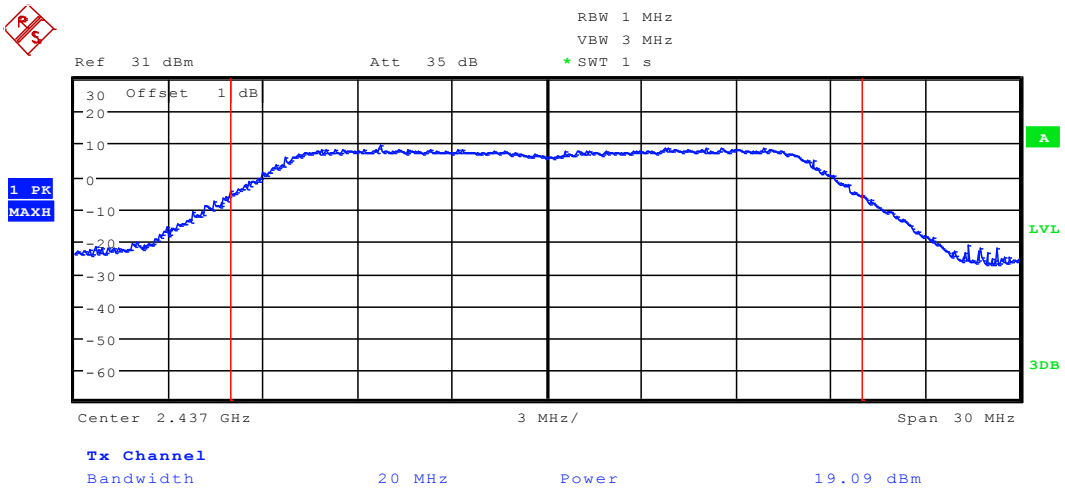
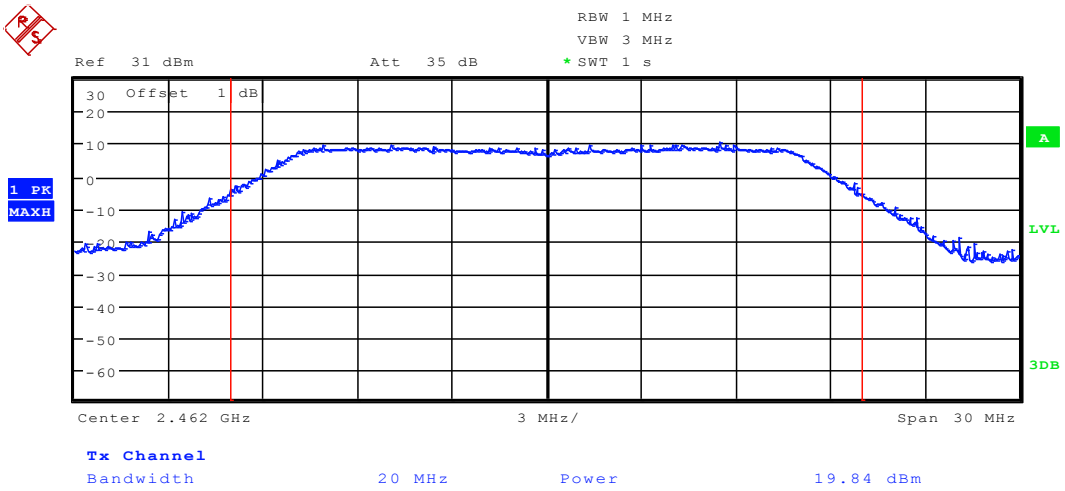
2.1 11G_M



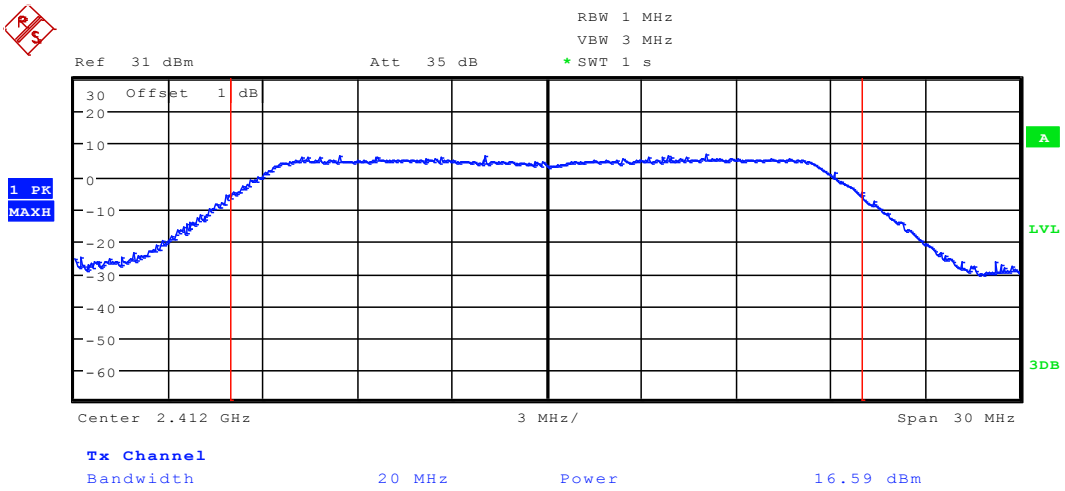
Date: 23.APR.2014 17:12:28

2.1 11G_H



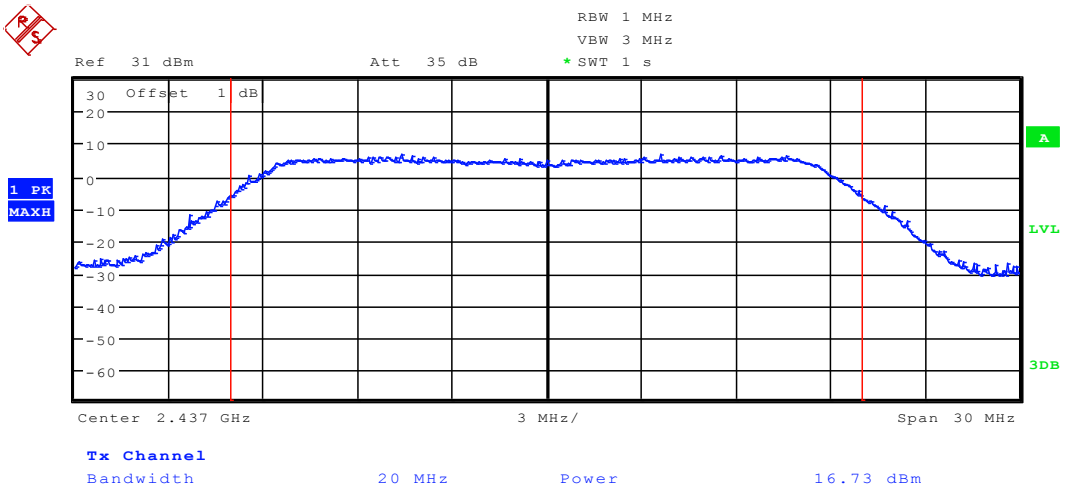
Date: 23.APR.2014 17:12:52

2.1 11N20_L



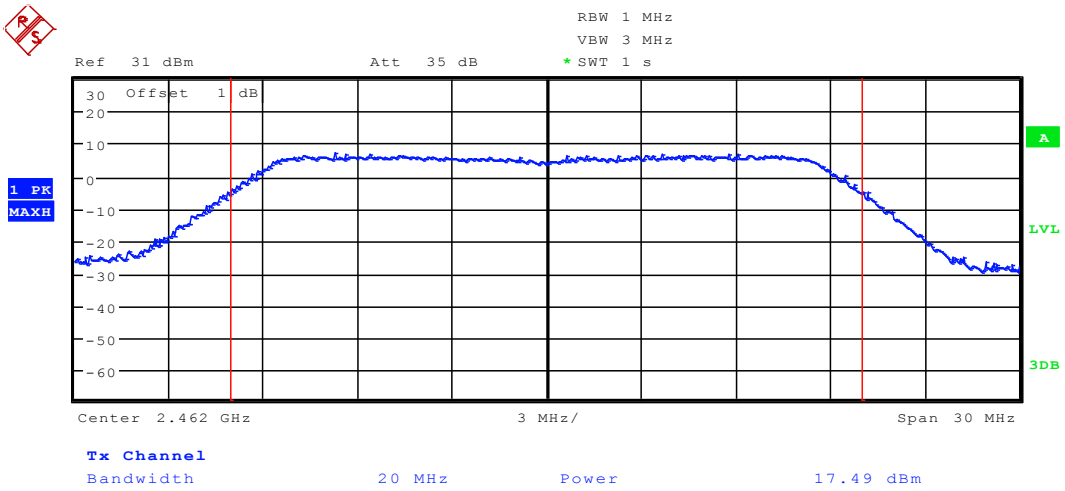
Date: 23.APR.2014 17:13:22

2.1 11N20_M



Date: 23.APR.2014 17:13:52

2.1 1120_H



Date: 23.APR.2014 17:14:18

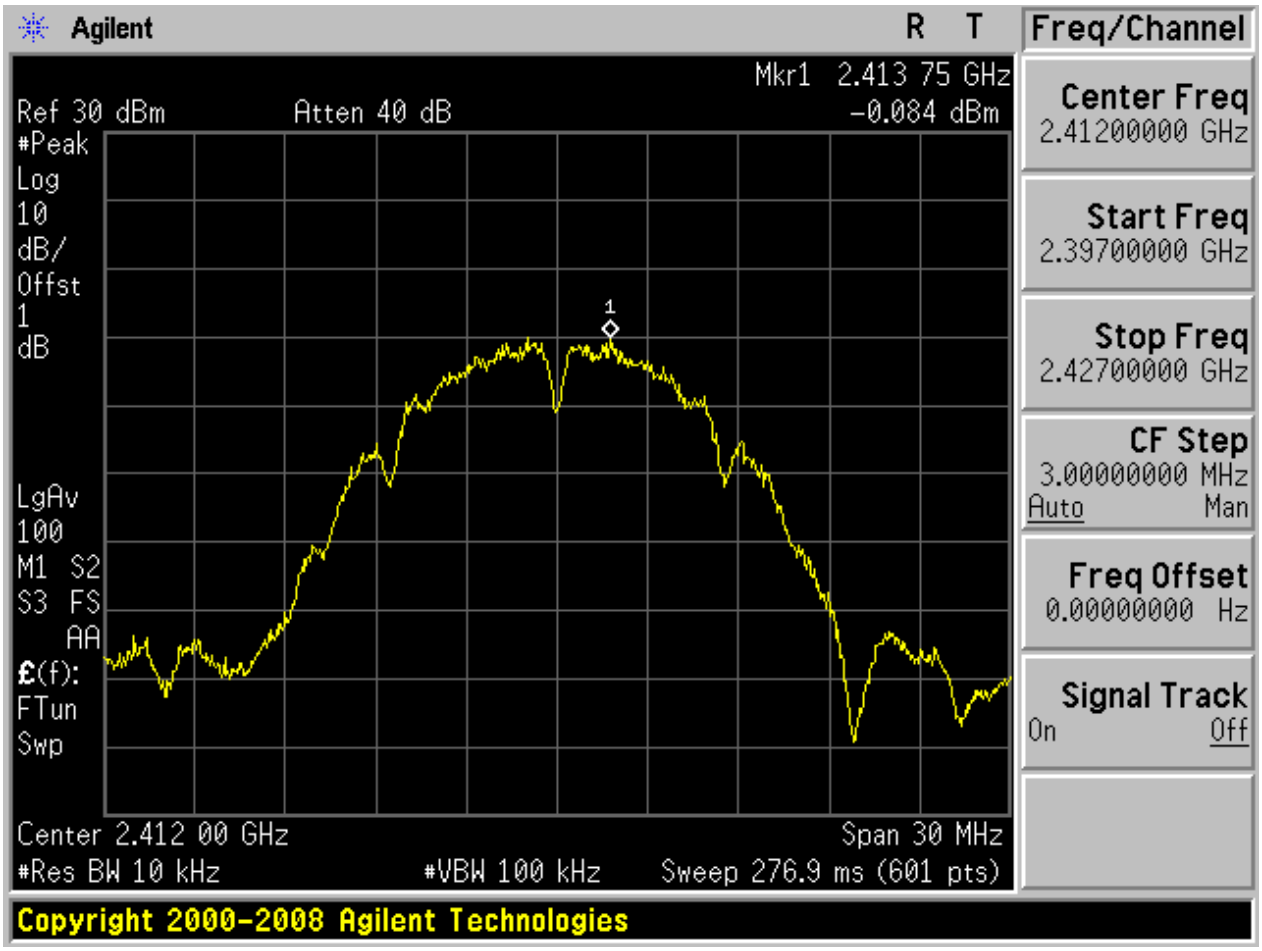
Appendix C: Maximum Power Spectral Density Level

Part I - Test Results

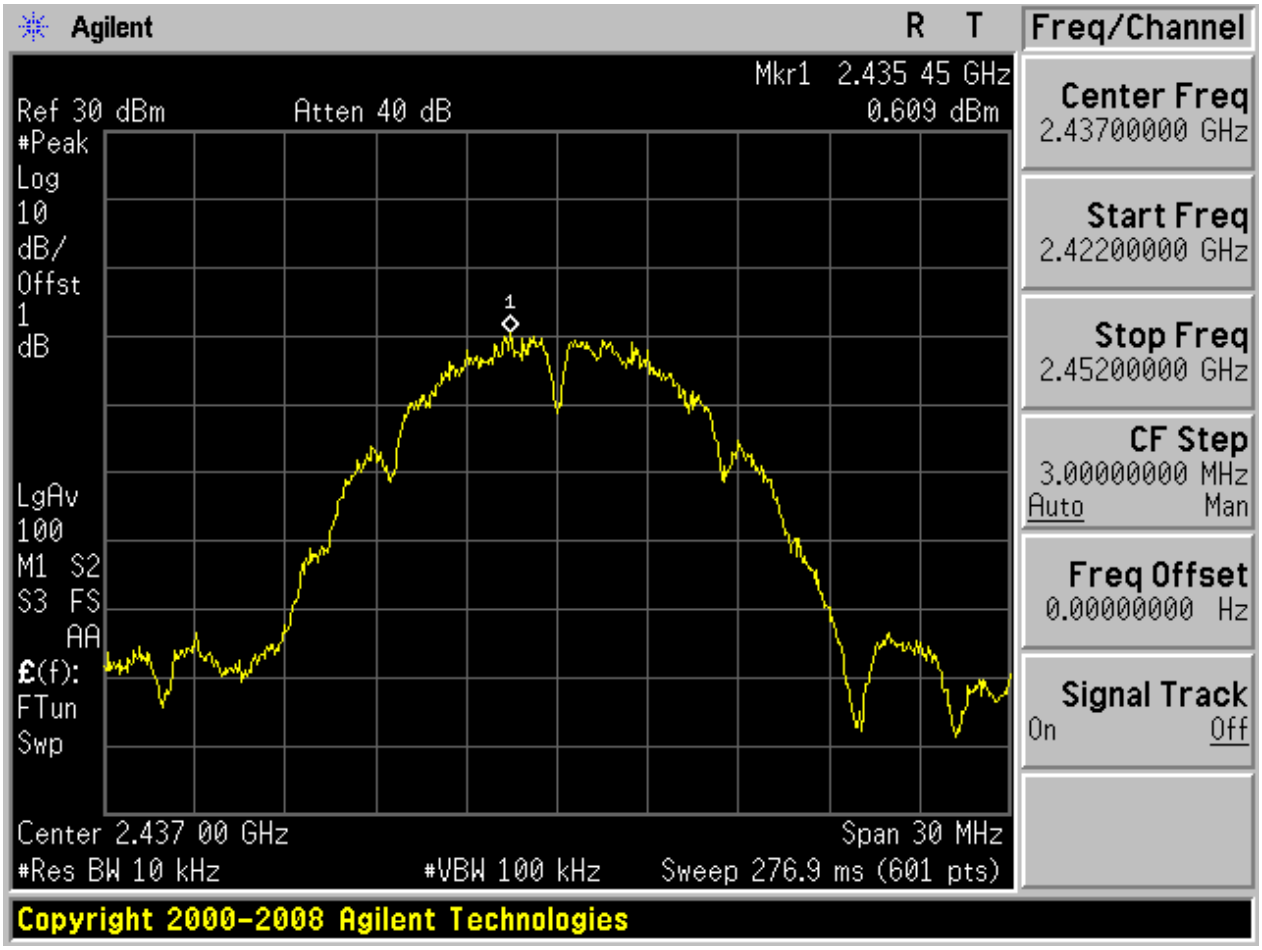
Test Mode	Test Channel	Frequency[MHz]	Ant	PD[MHz]	Verdict
11B	L	2412	Ant 1	-0.08	pass
11B	M	2437	Ant 1	0.61	pass
11B	H	2462	Ant 1	1.70	pass
11G	L	2412	Ant 1	-8.79	pass
11G	M	2437	Ant 1	-8.45	pass
11G	H	2462	Ant 1	-7.73	pass
11N20	L	2412	Ant 1	-10.90	pass
11N20	M	2437	Ant 1	-11.29	pass
11N20	H	2462	Ant 1	-10.39	pass

Part II - Test Plots

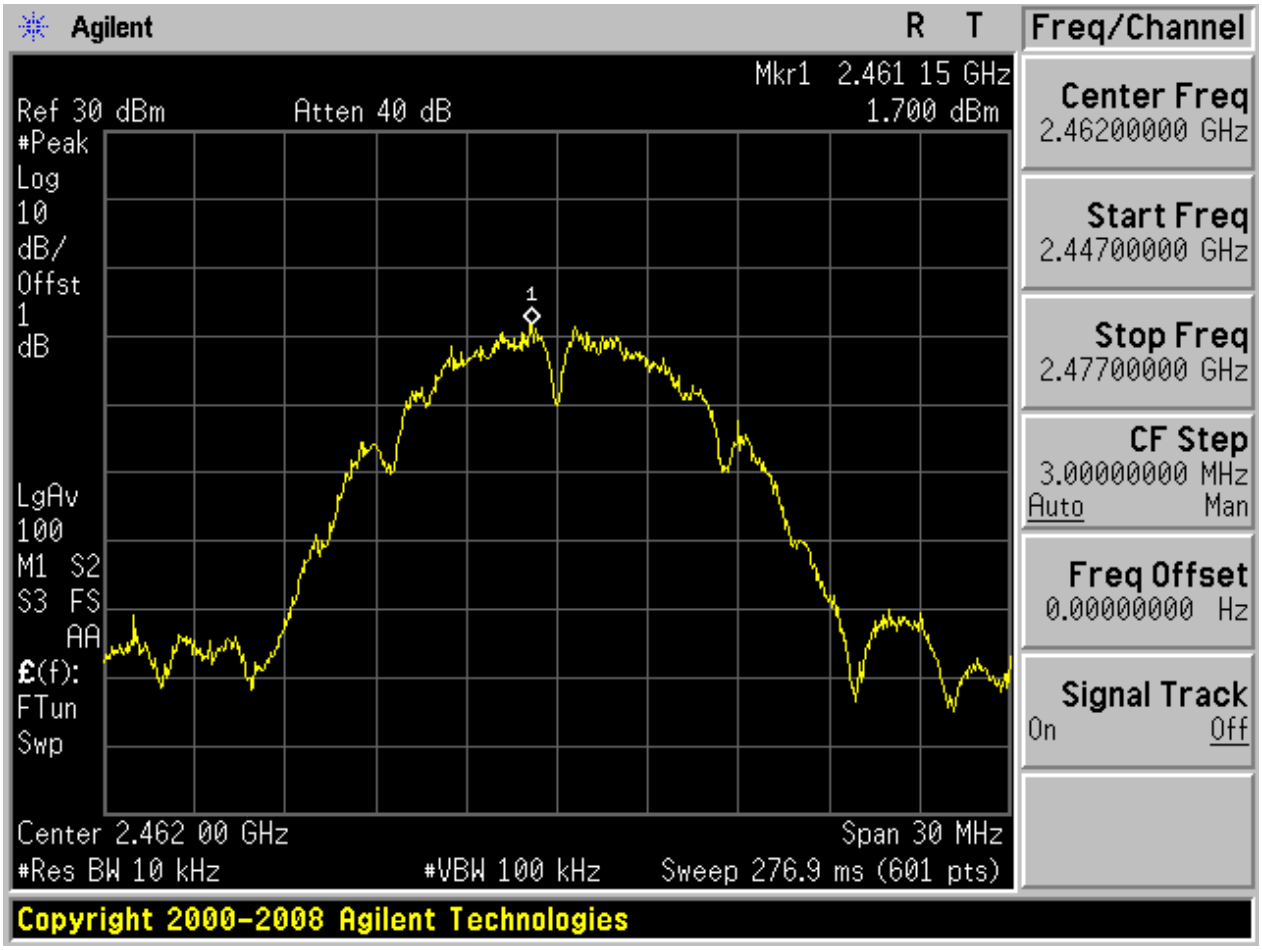
2.1 11B_L@Ant 1



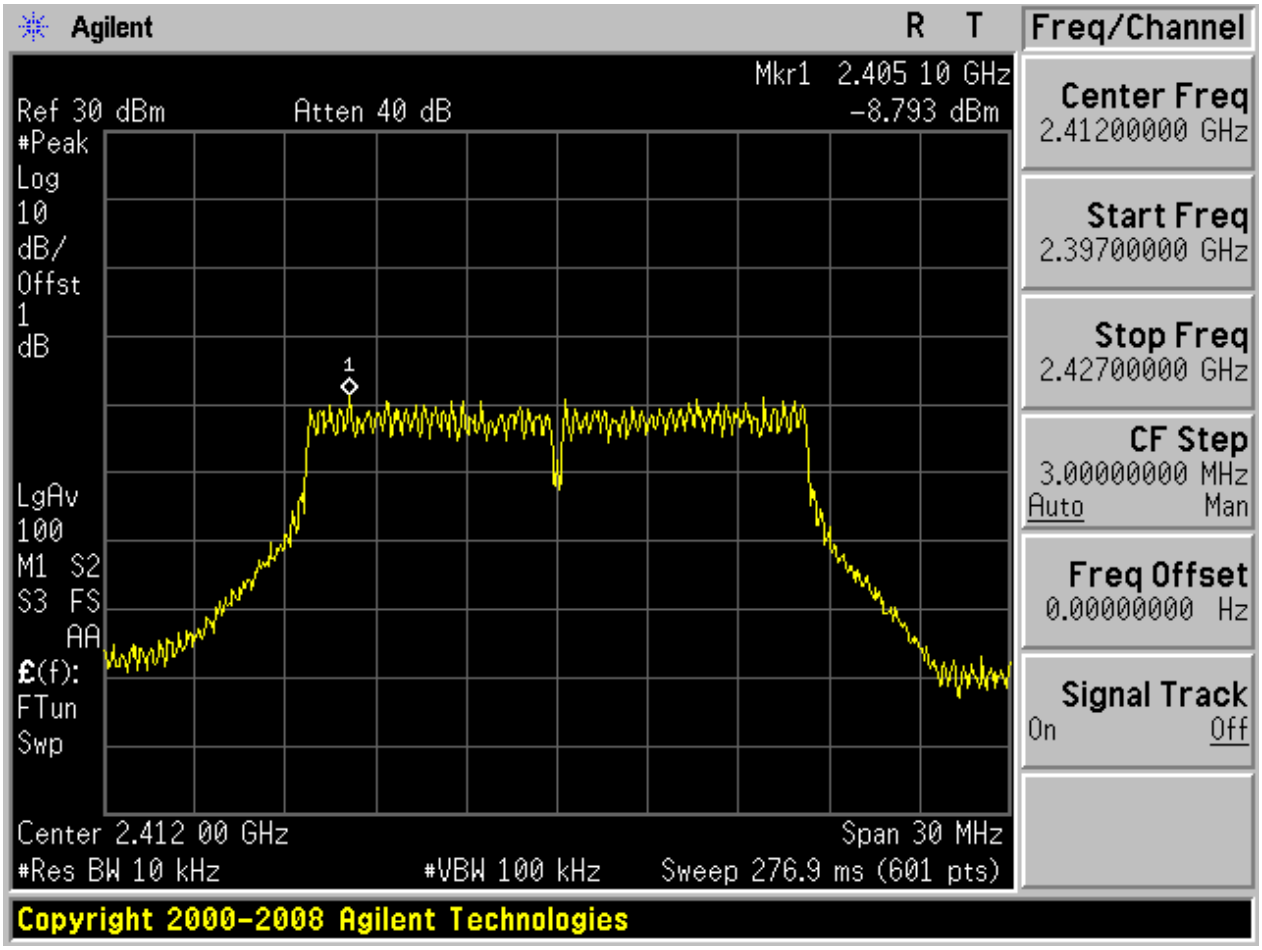
2.3 11B_M@Ant 1



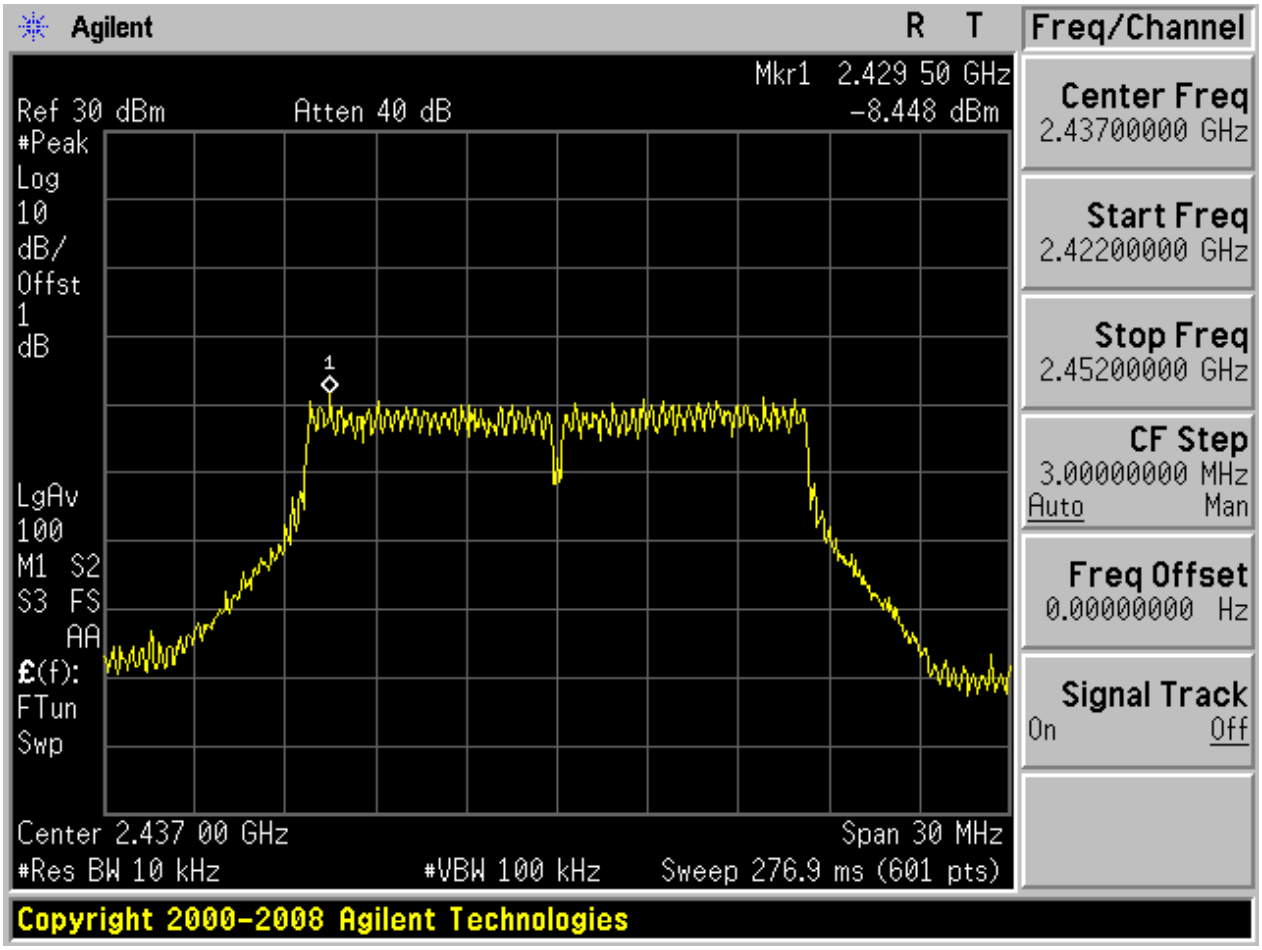
2.5 11B_H@Ant 1



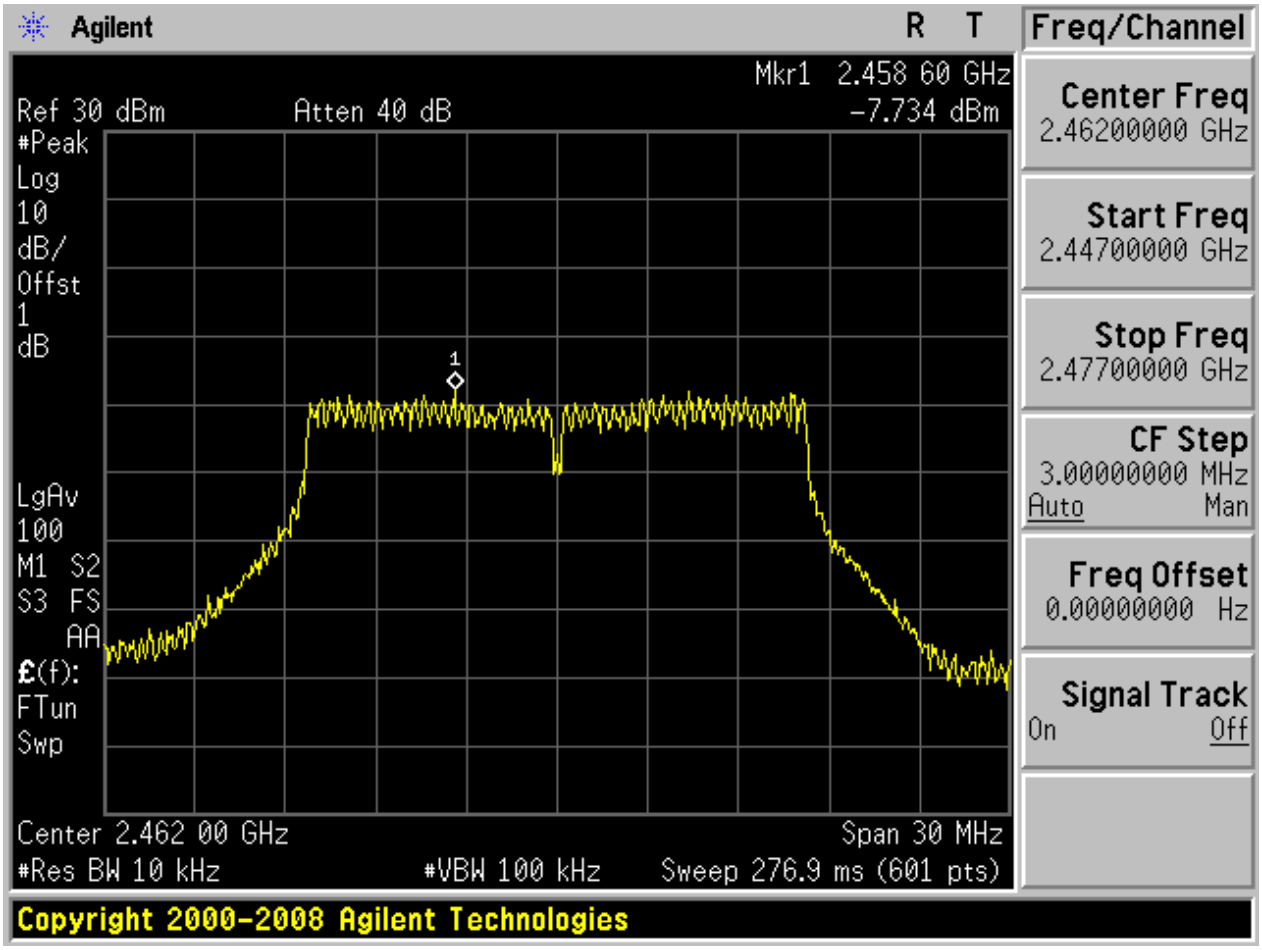
2.7 11G_L@Ant 1



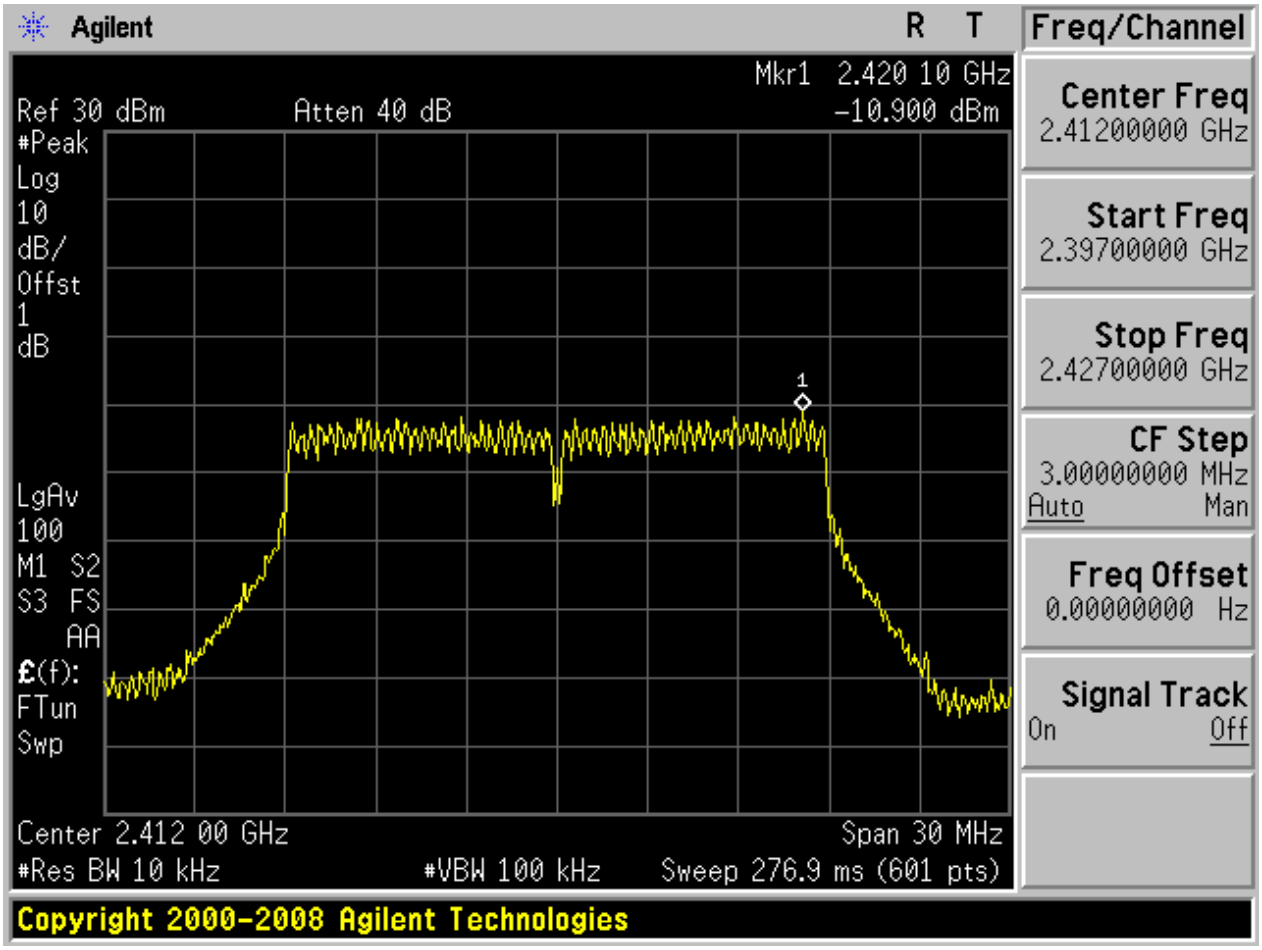
2.9 11G_M@Ant 1



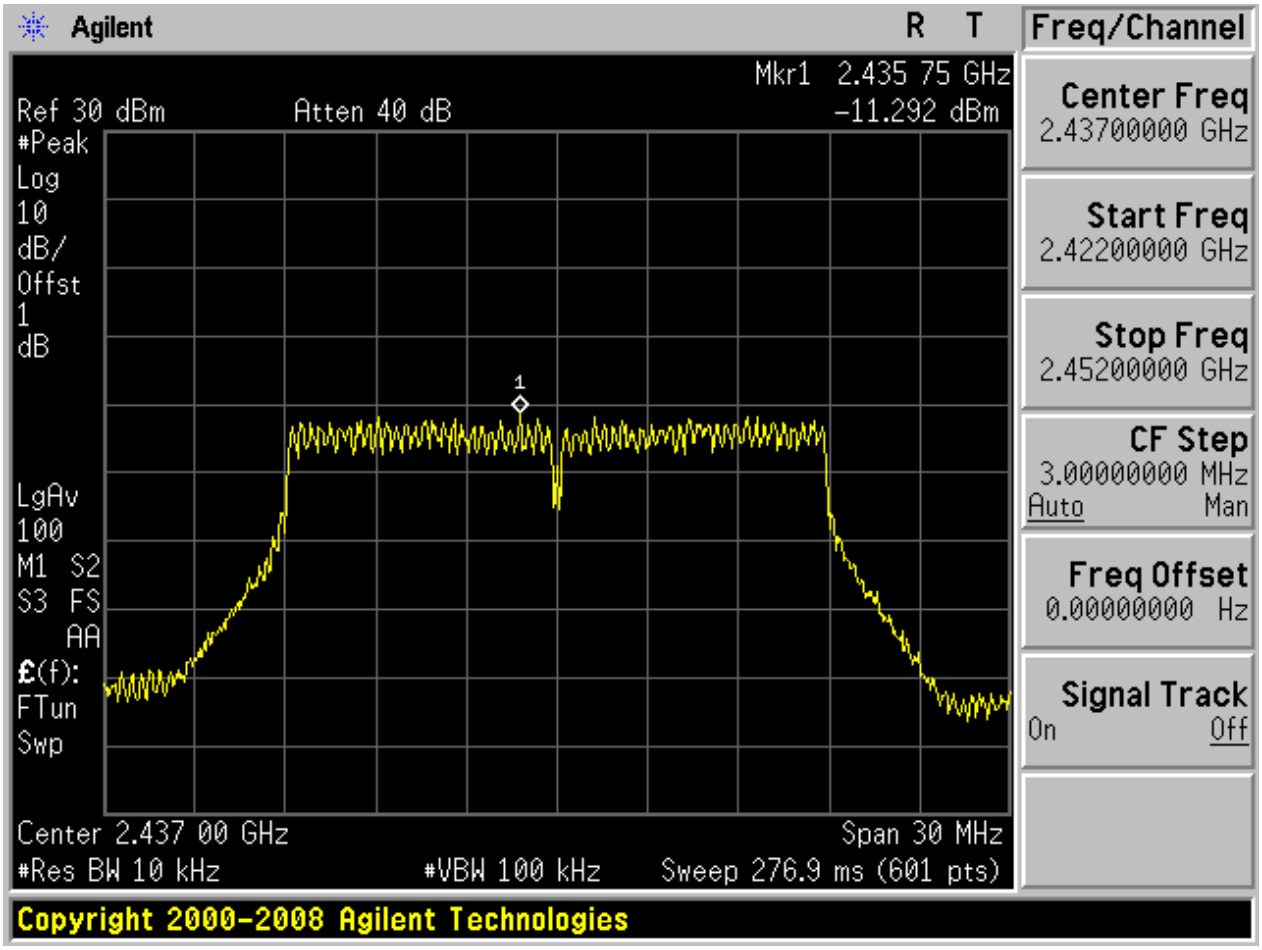
2.11 11G_H@Ant 1



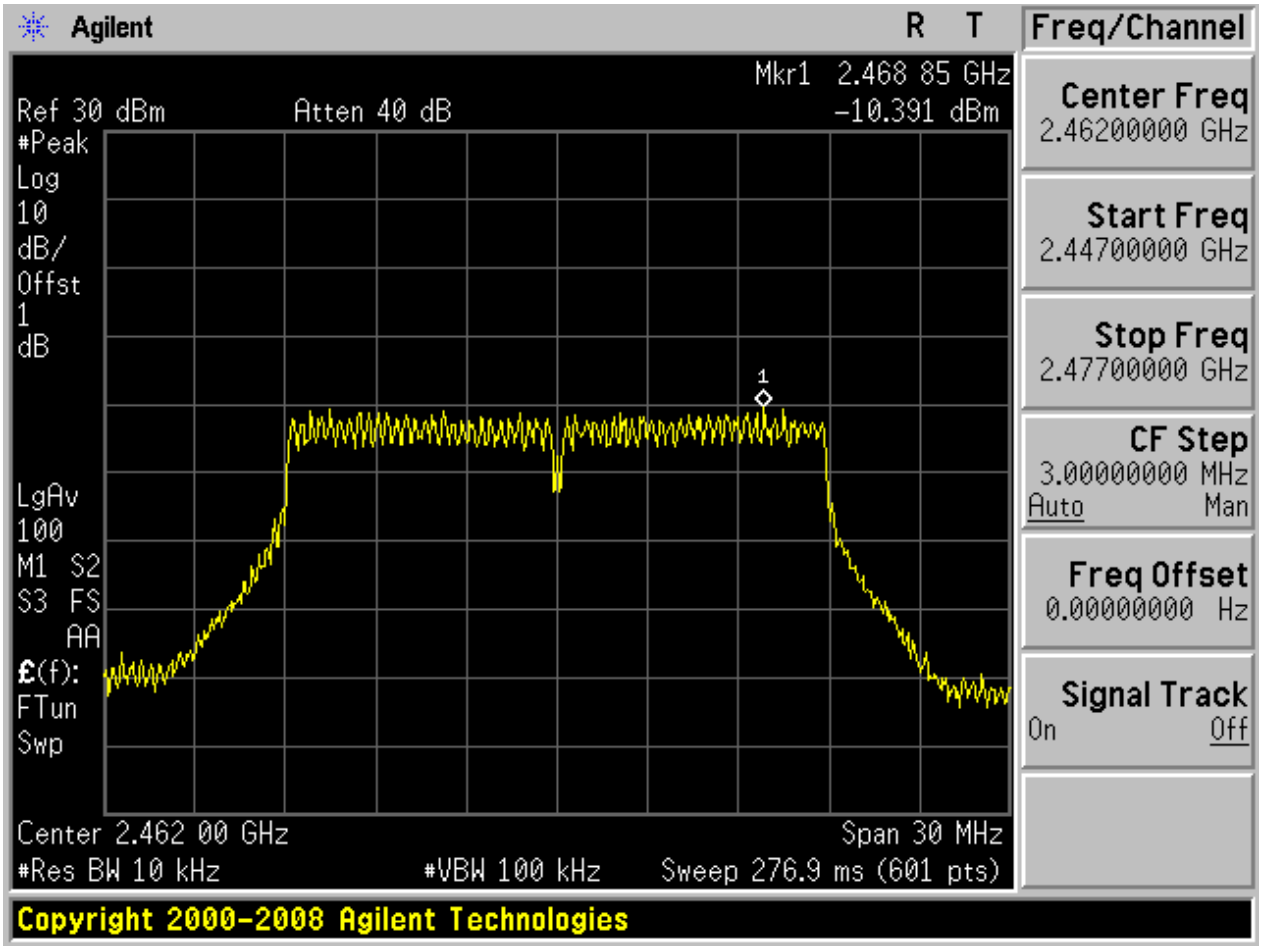
2.13 11N20_L@Ant 1



2.15 11N20_M@Ant 1



2.17 11N20_H@Ant 1



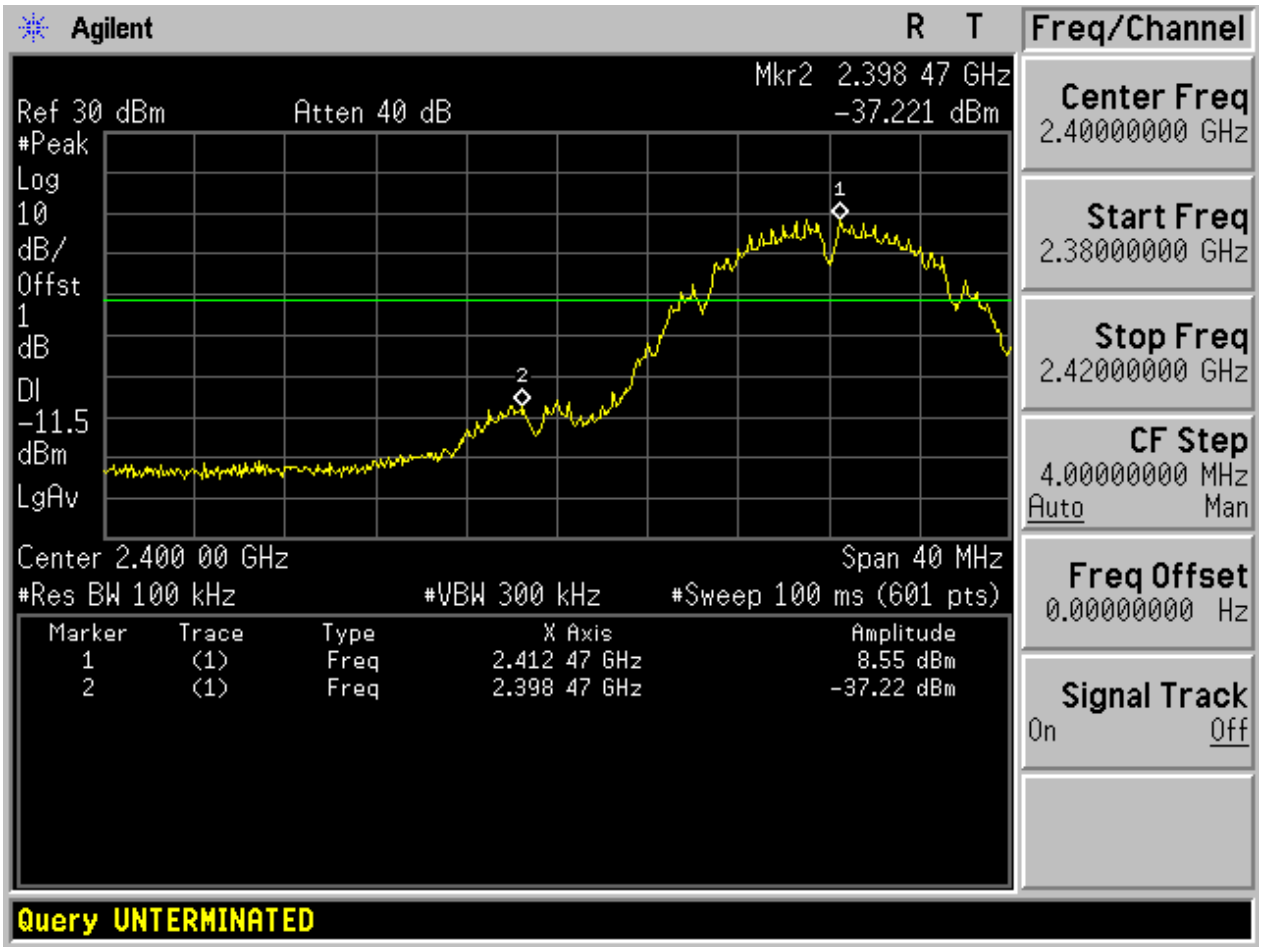
Appendix D: Band Edges Compliance

Part I - Test Results

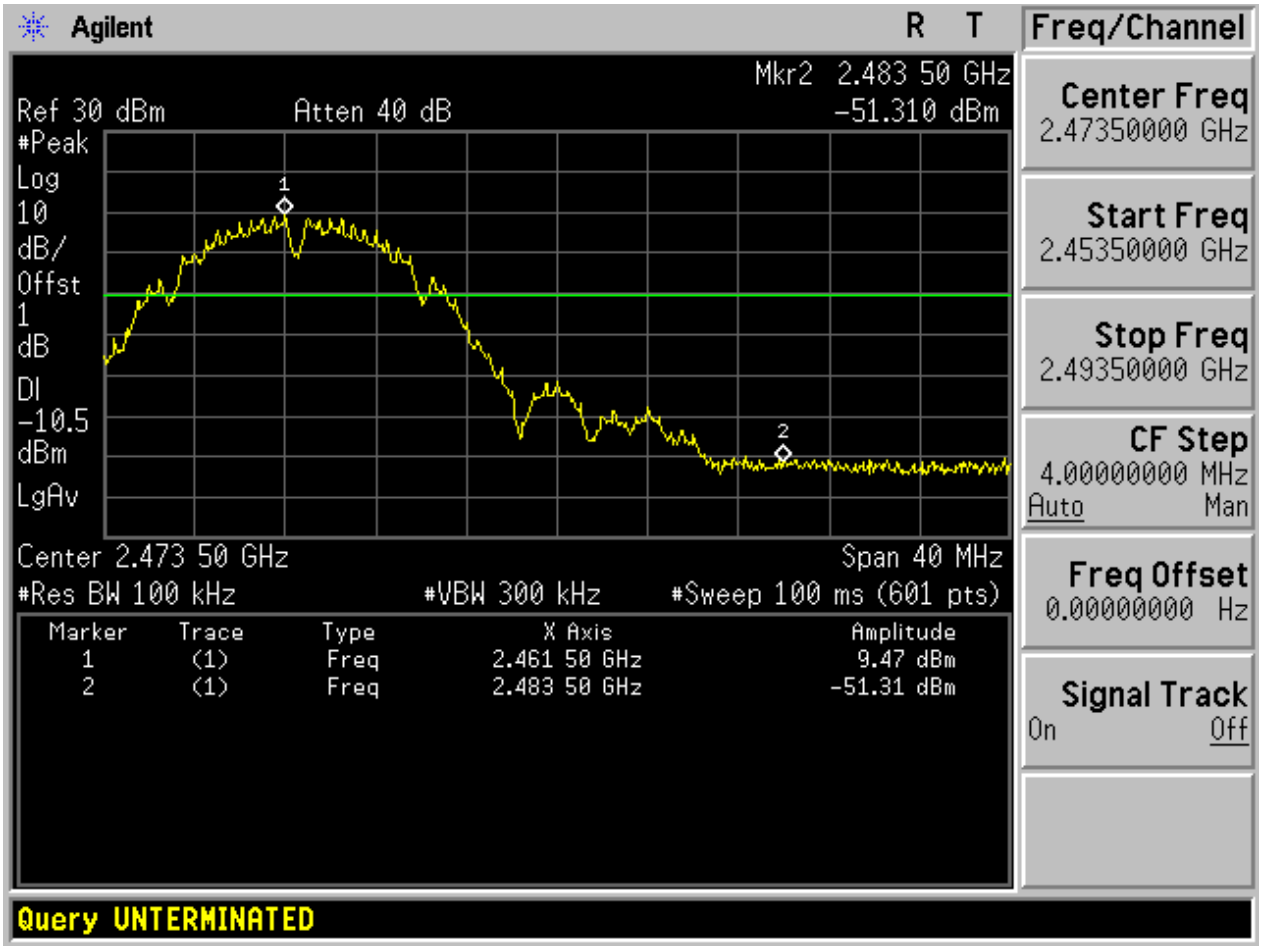
Test Mode	Test Channel	Frequency[MHz]	Ant	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
11B	L	2412	Ant 1	8.55	-37.22	pass
11B	H	2462	Ant 1	9.47	-51.31	pass
11G	L	2412	Ant 1	-0.86	-34.88	pass
11G	H	2462	Ant 1	-0.21	-45.18	pass
11N20	L	2412	Ant 1	-2.97	-37.99	pass
11N20	H	2462	Ant 1	-2.17	-47.67	pass

Part II - Test Plots

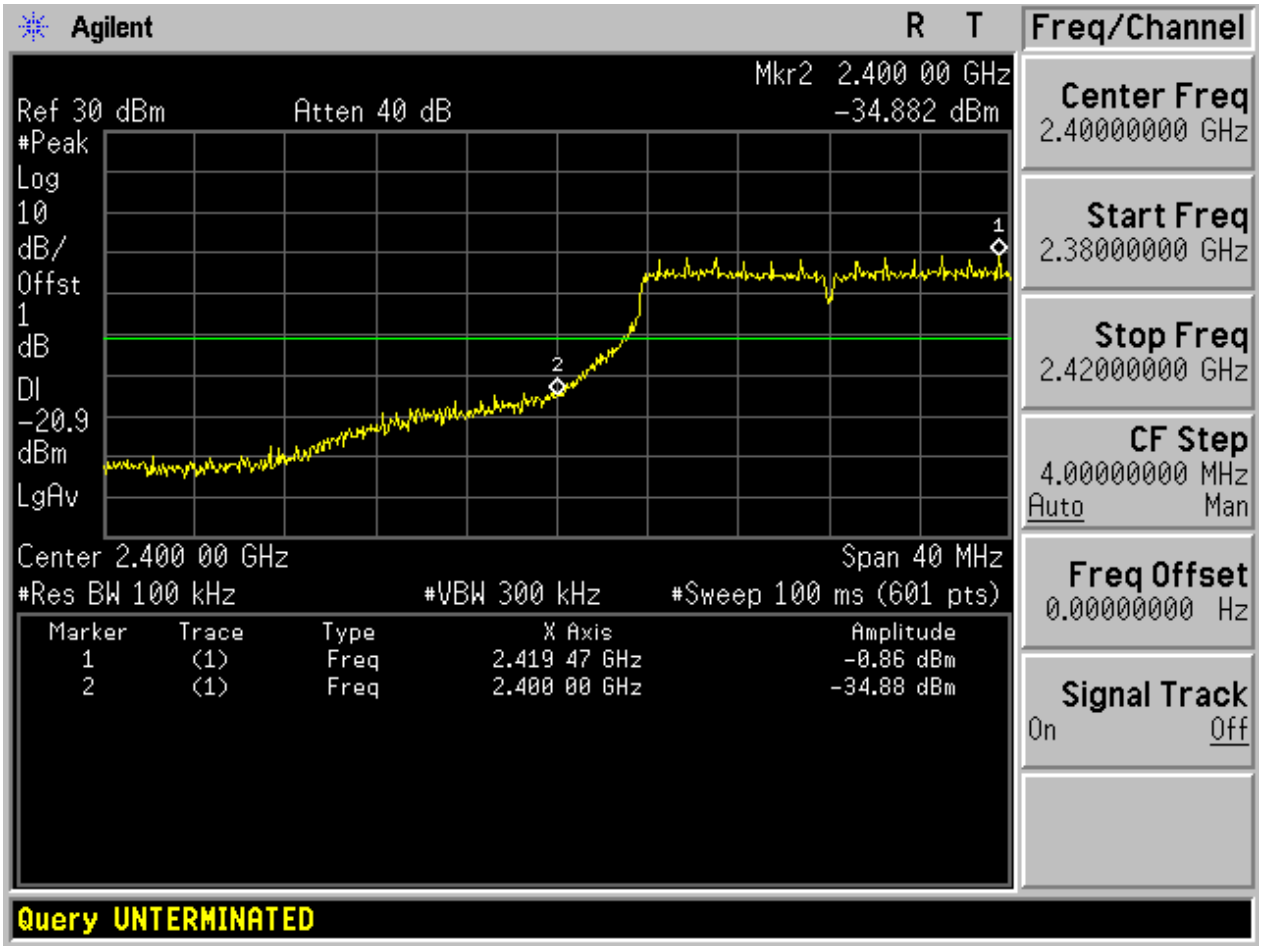
2.1 11B_L@Ant 1



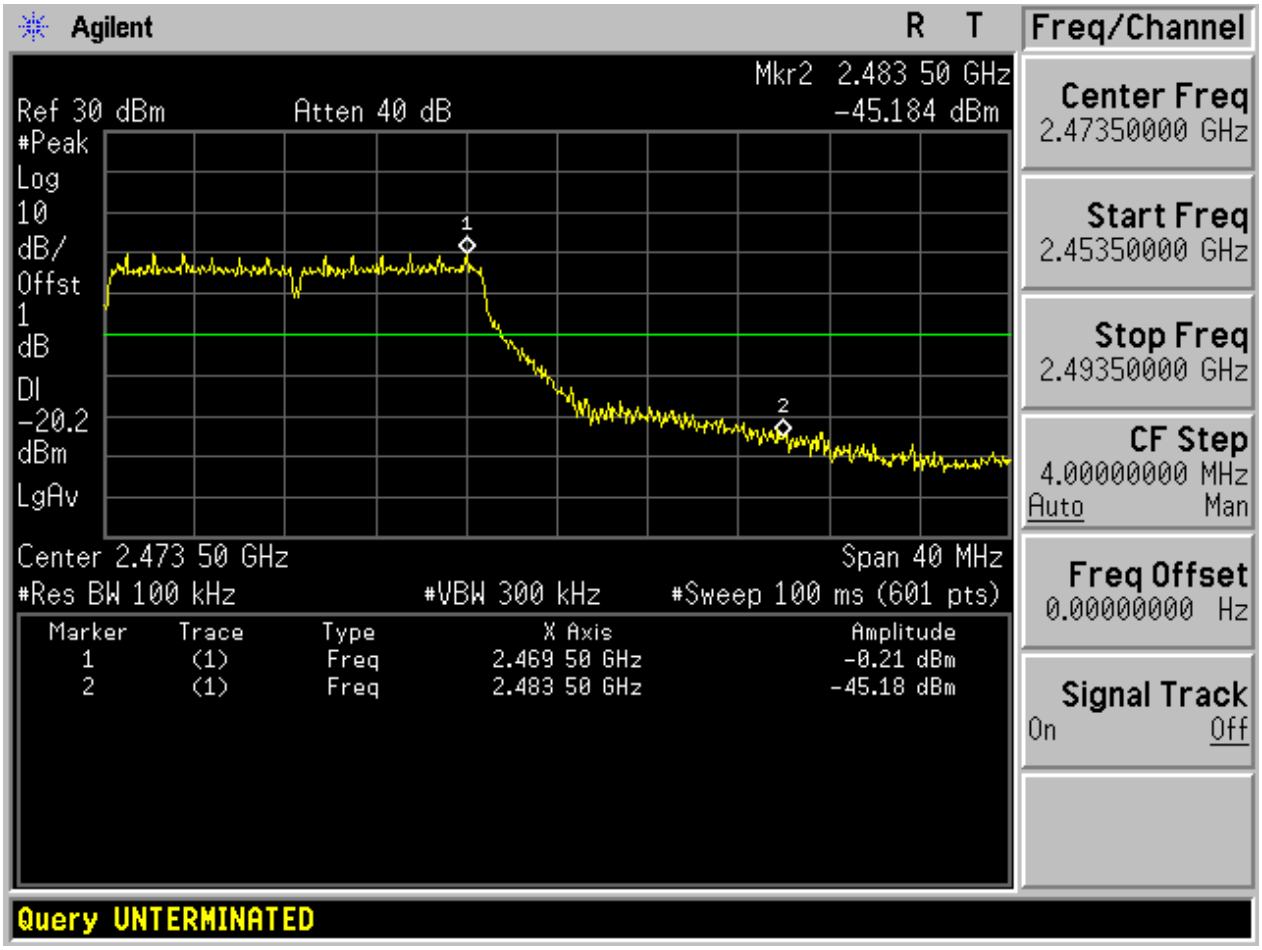
2.3 11B_H@Ant 1



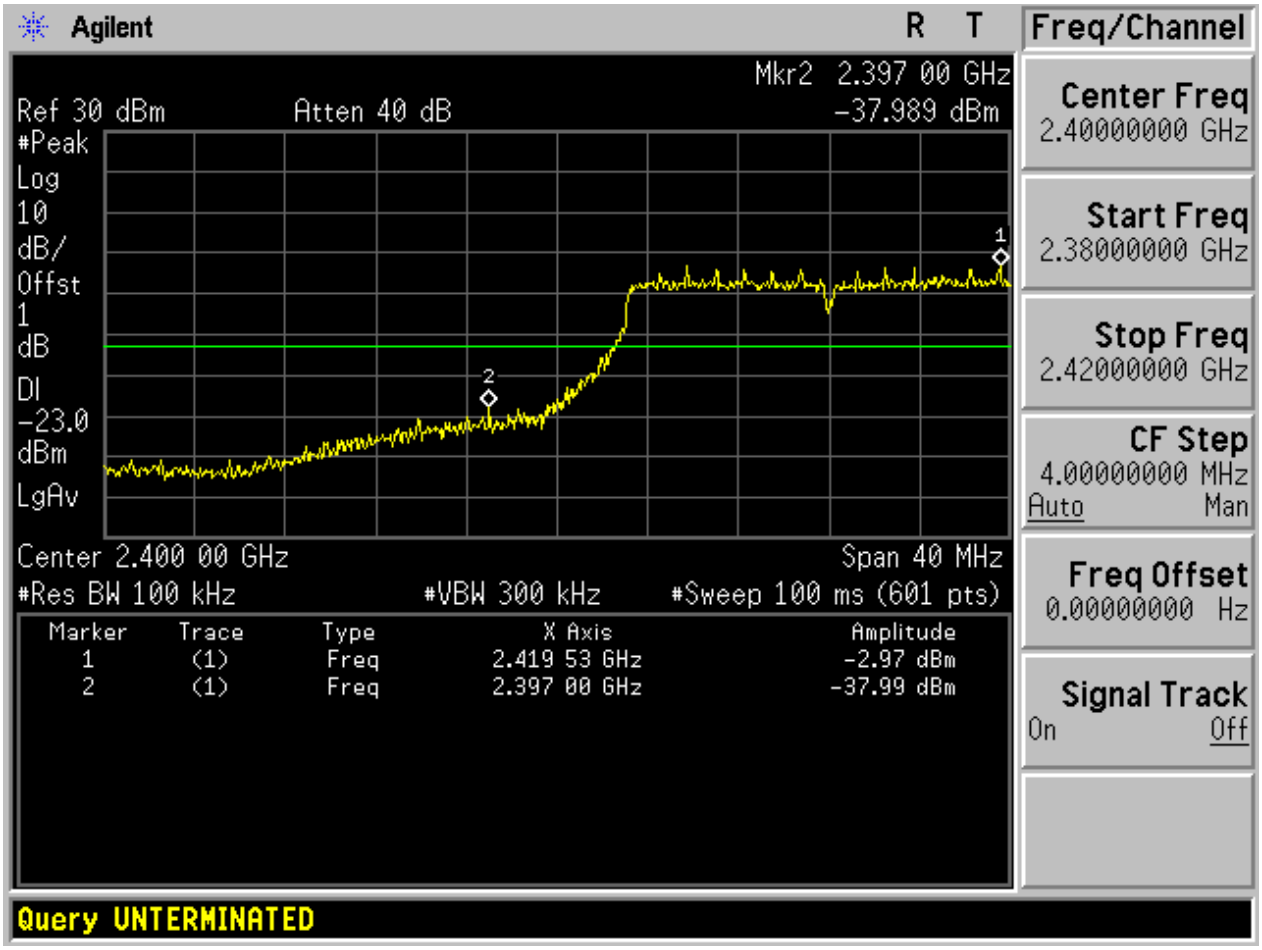
2.5 11G_L@Ant 1



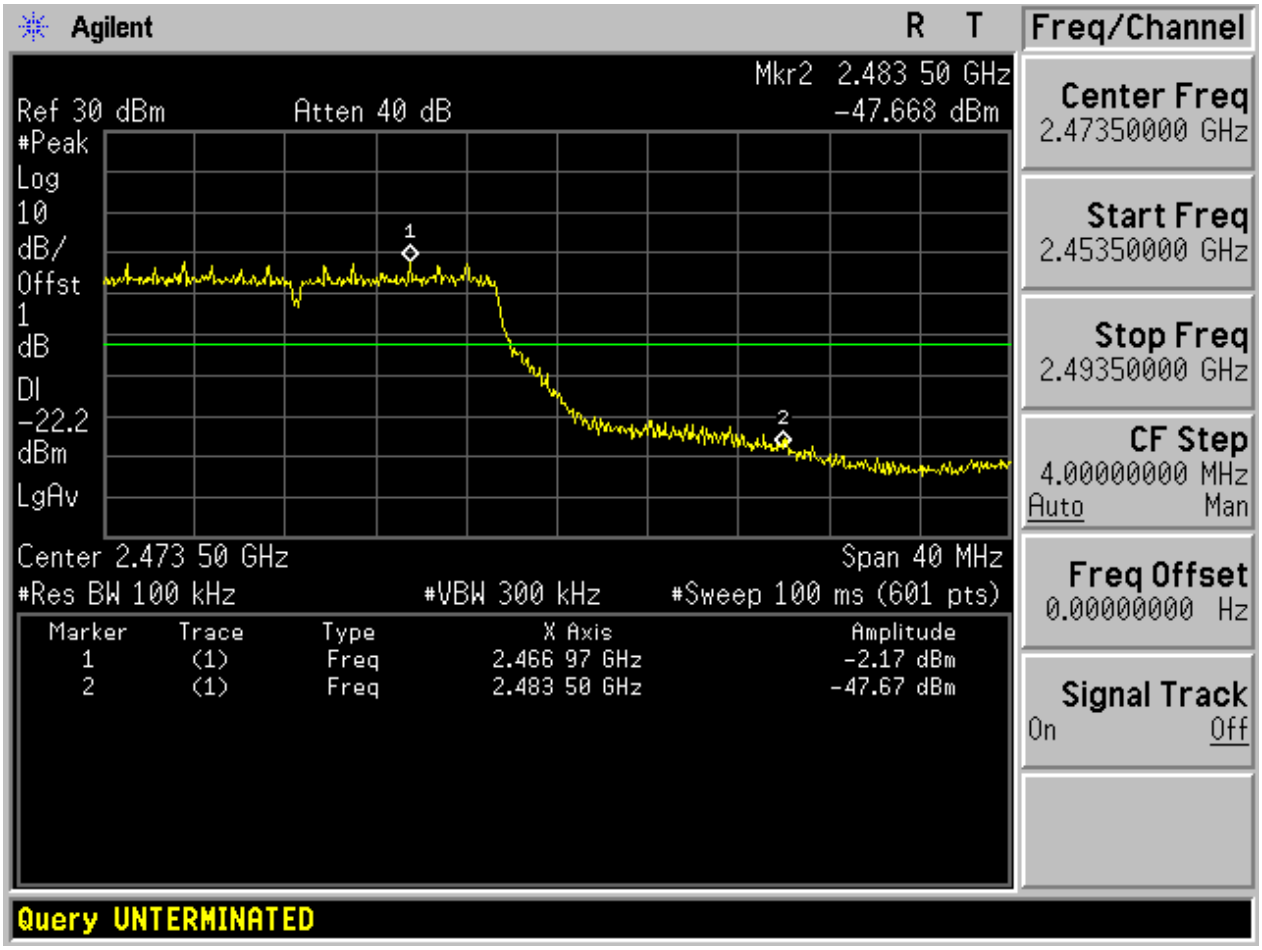
2.7 11G_H@Ant 1



2.9 11N20_L@Ant 1



2.11 11N20_H@Ant 1



Appendix E: Unwanted Emissions into Non-Restricted Frequency Bands

In this Appendix, the "Pref", which is used as the reference level, refers to the peak power level in any 100 kHz bandwidth within the fundamental emission, the "Puw" referrers to the maximum emission power in 100 kHz band segments outside of the authorized frequency band.

Considering that the higher ratio of RBW to the span for the frequency ranges below 30 MHz makes the results determination be complicated,a narrower RBW other than 100 kHz is used for these ranges. The measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] = 10 x lg(100 [kHz]/narrower RBW [kHz]). As to this Appendix, the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

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

In the result table, the "< Limit" denotes that "The Puw [dBm] is less than Pref[dBm]-20[dBm],see test plots for detailed".

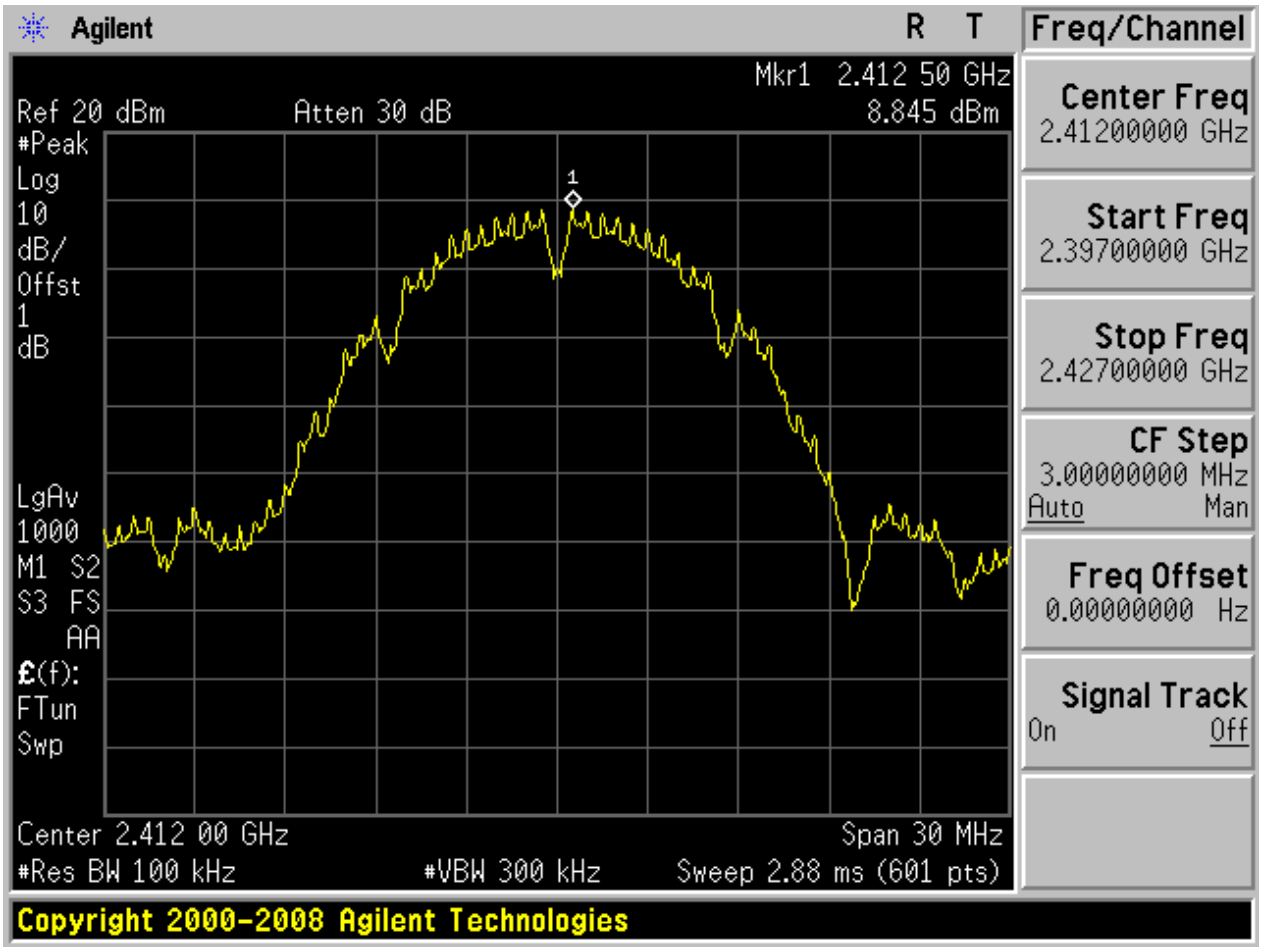
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]	Verdict
11B	L	2412	Ant 1	8.85	<limit	pass
11B	M	2437	Ant 1	9.18	<limit	pass
11B	H	2462	Ant 1	9.96	<limit	pass
11G	L	2412	Ant 1	-0.69	<limit	pass
11G	M	2437	Ant 1	-0.64	<limit	pass
11G	H	2462	Ant 1	0.32	<limit	pass
11N20	L	2412	Ant 1	-2.77	<limit	pass
11N20	M	2437	Ant 1	-2.82	<limit	pass
11N20	H	2462	Ant 1	-1.92	<limit	pass

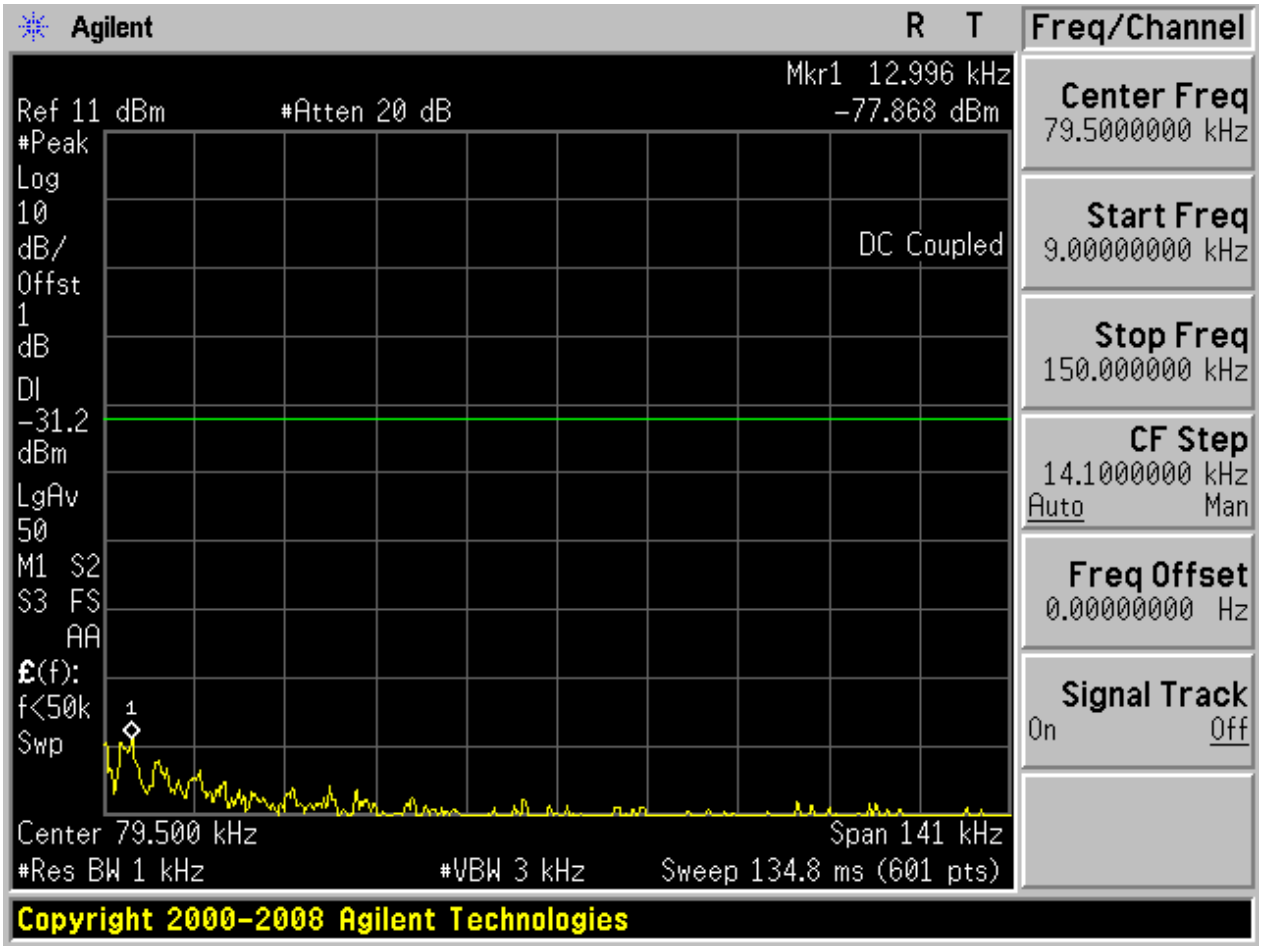
Part II - Test Plots

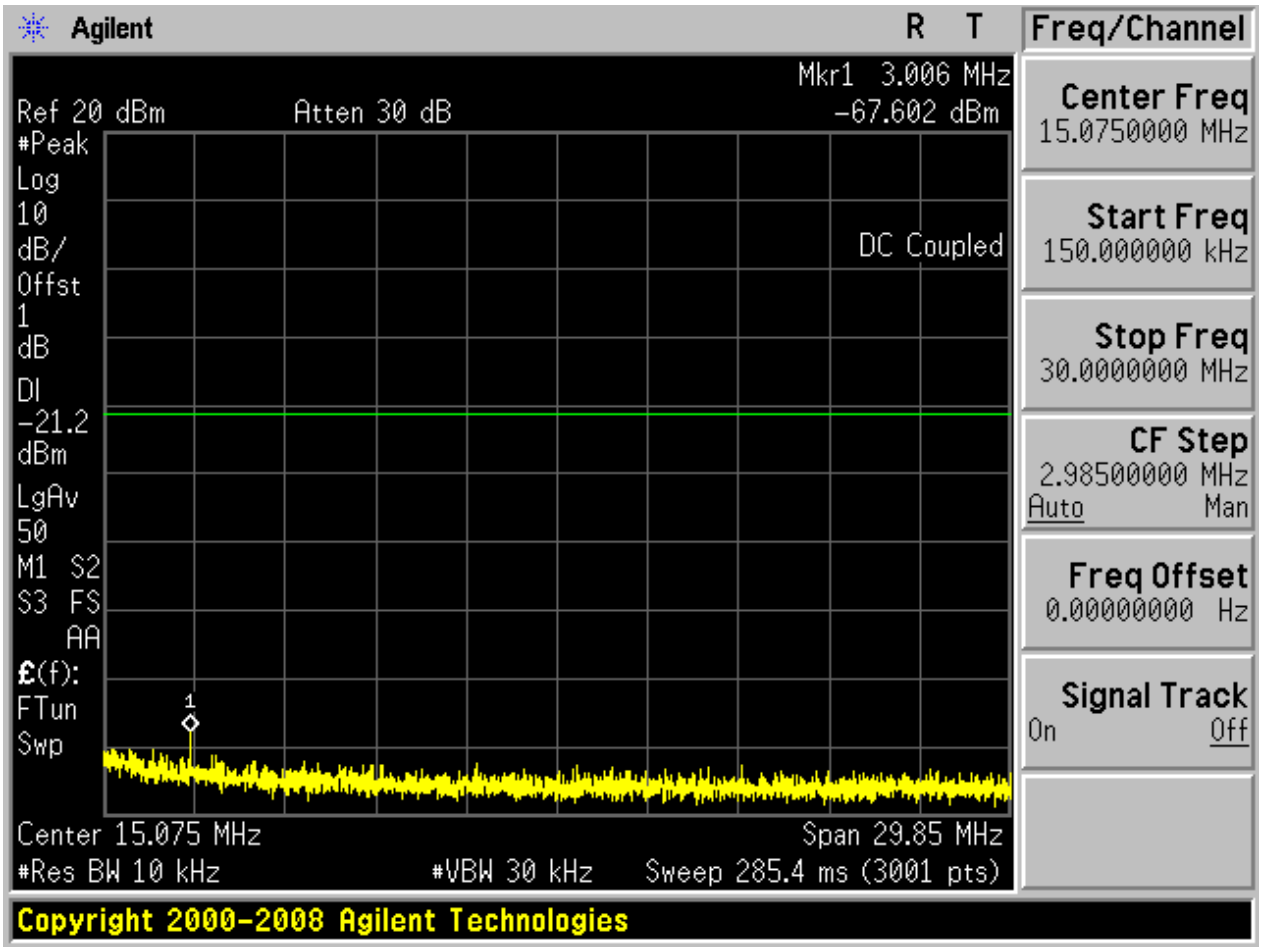
2.1 11B_L@Ant 1

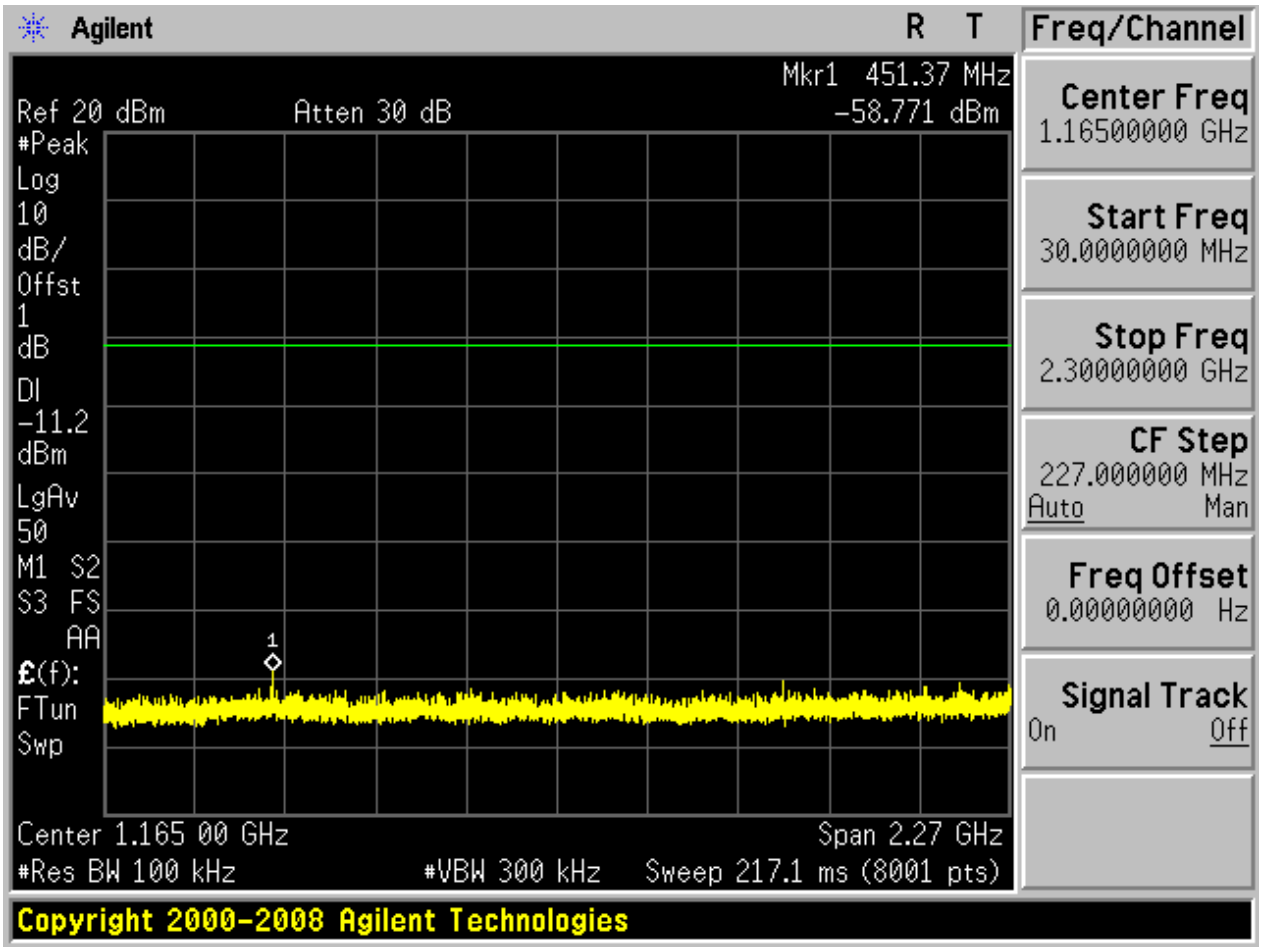
Pref:

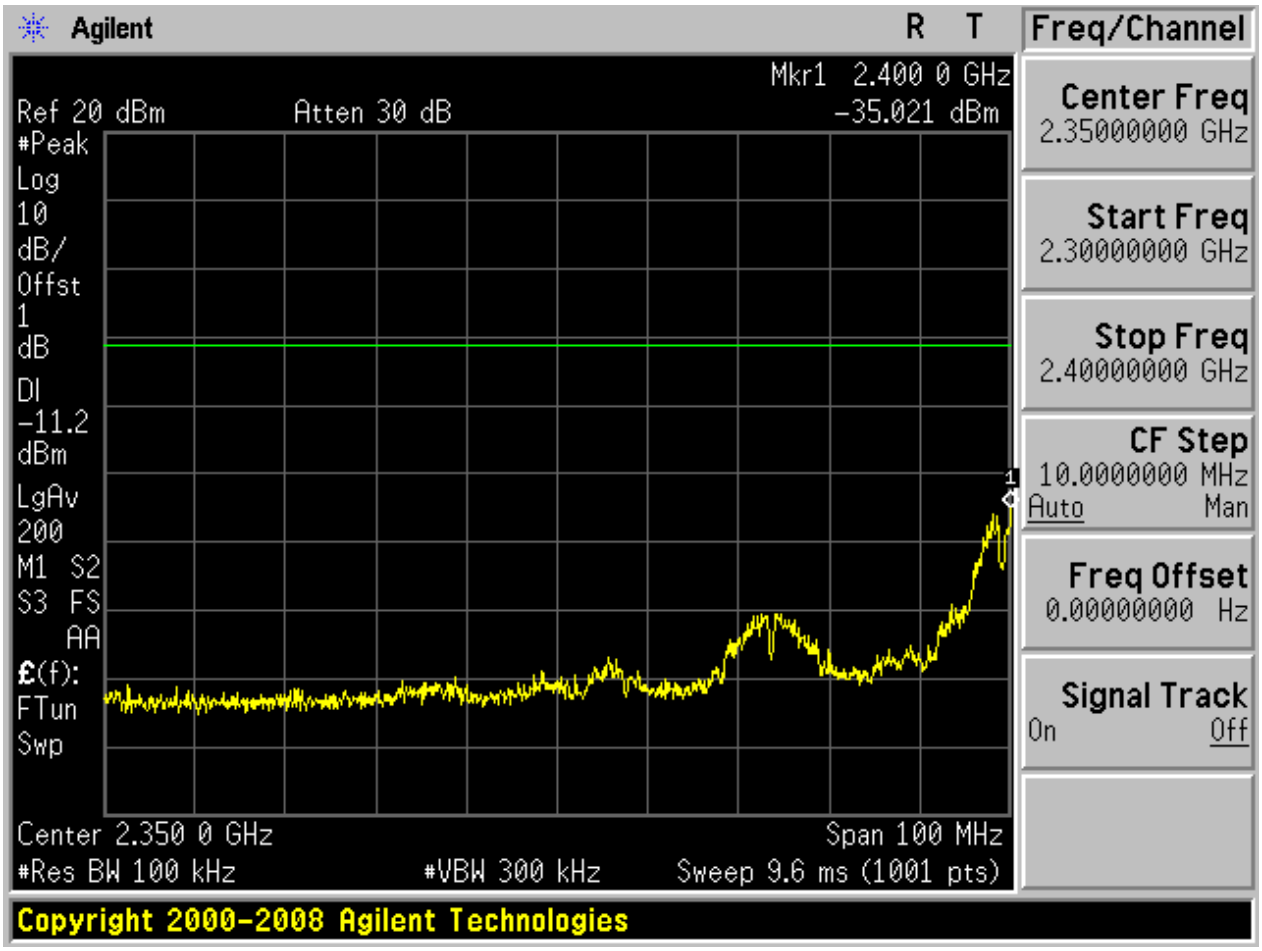


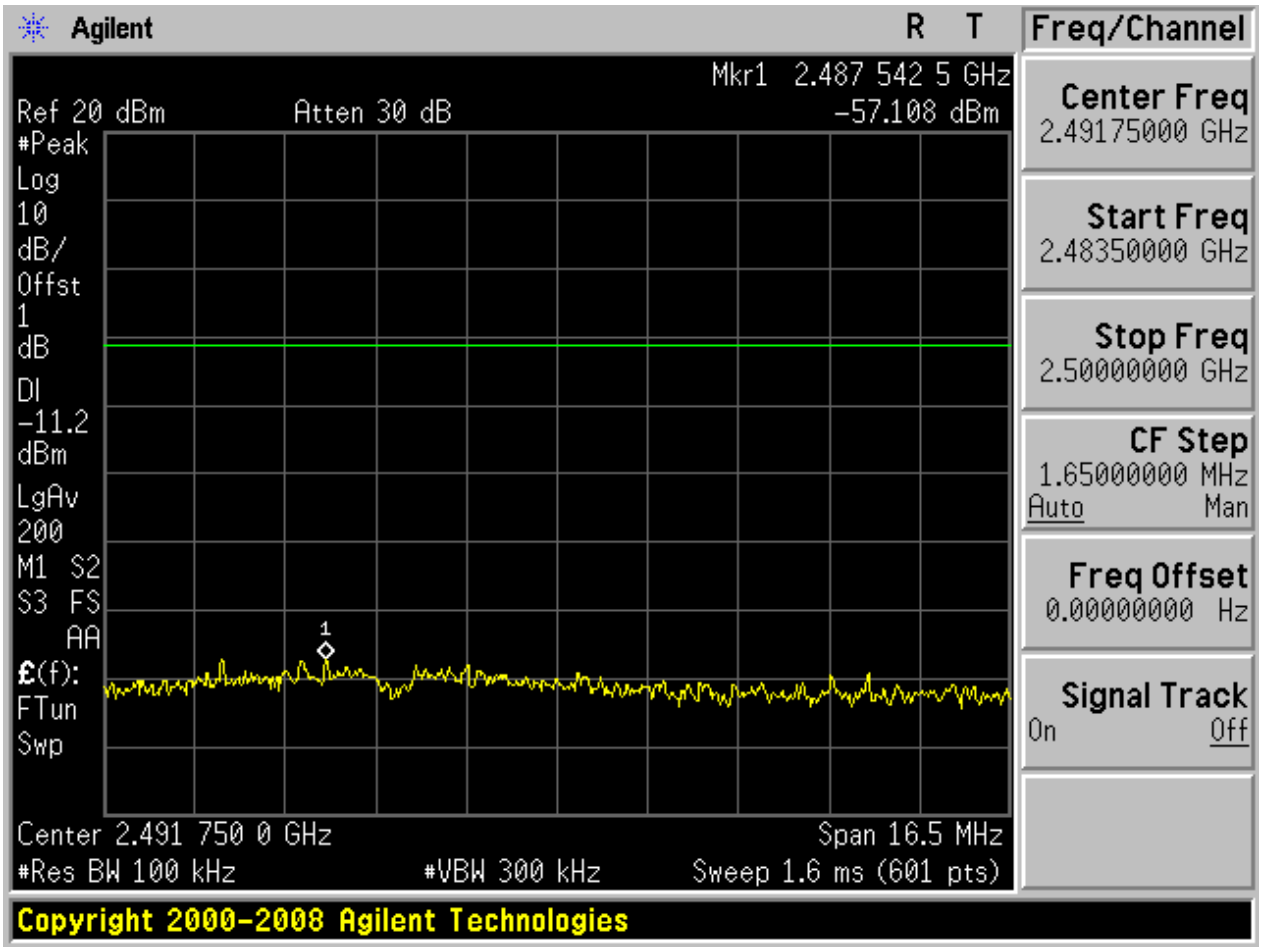
Puw:

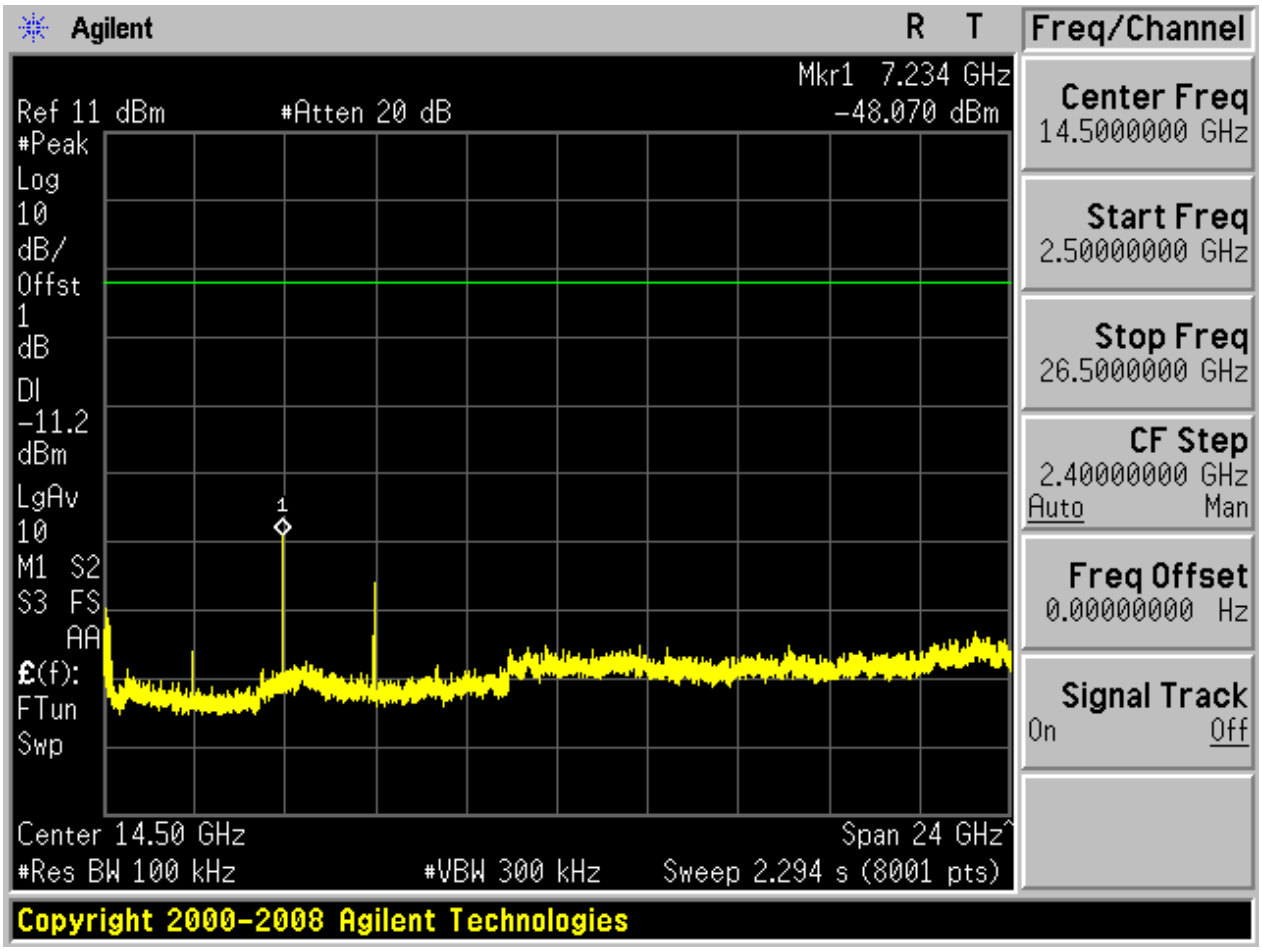






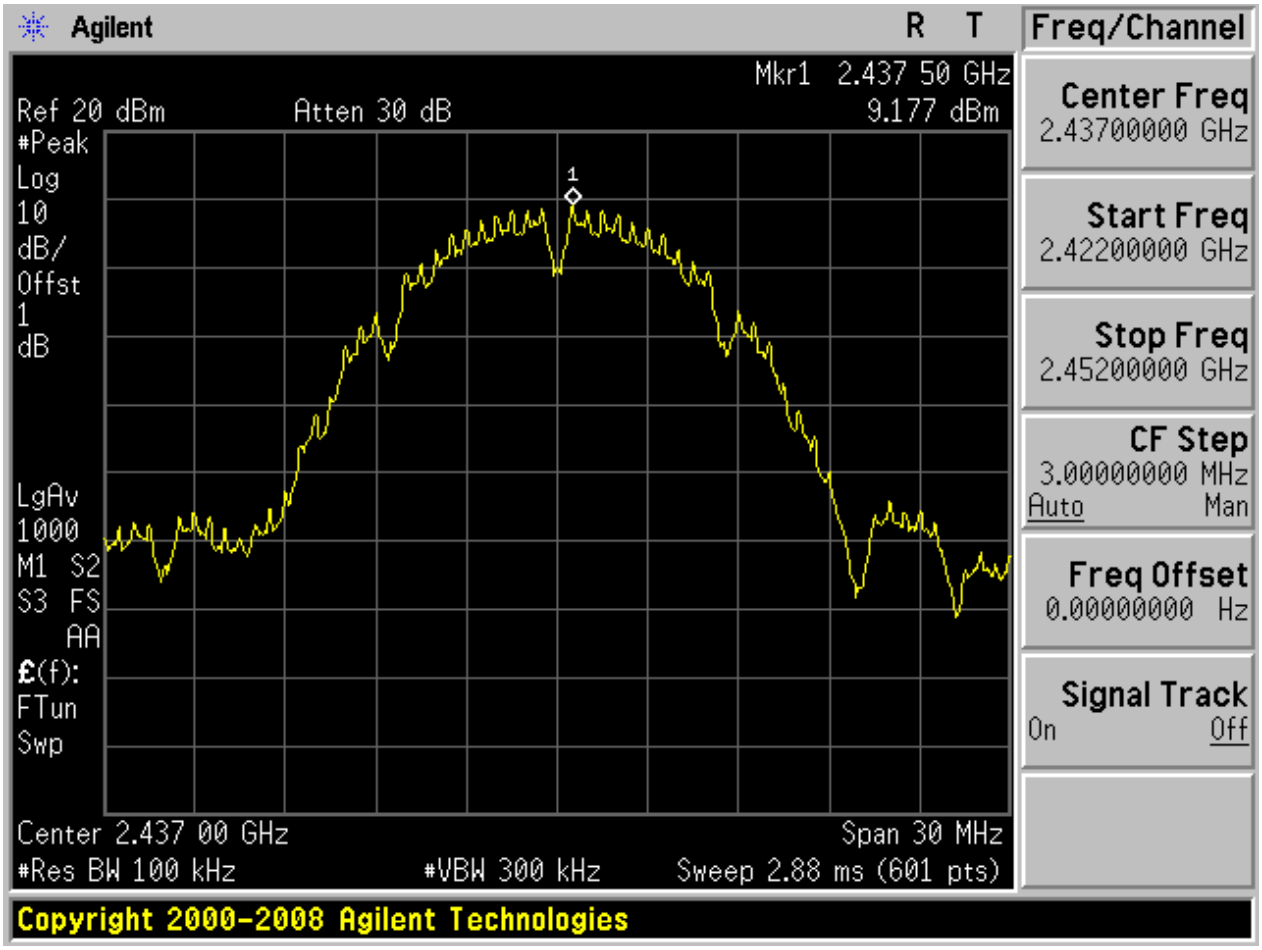




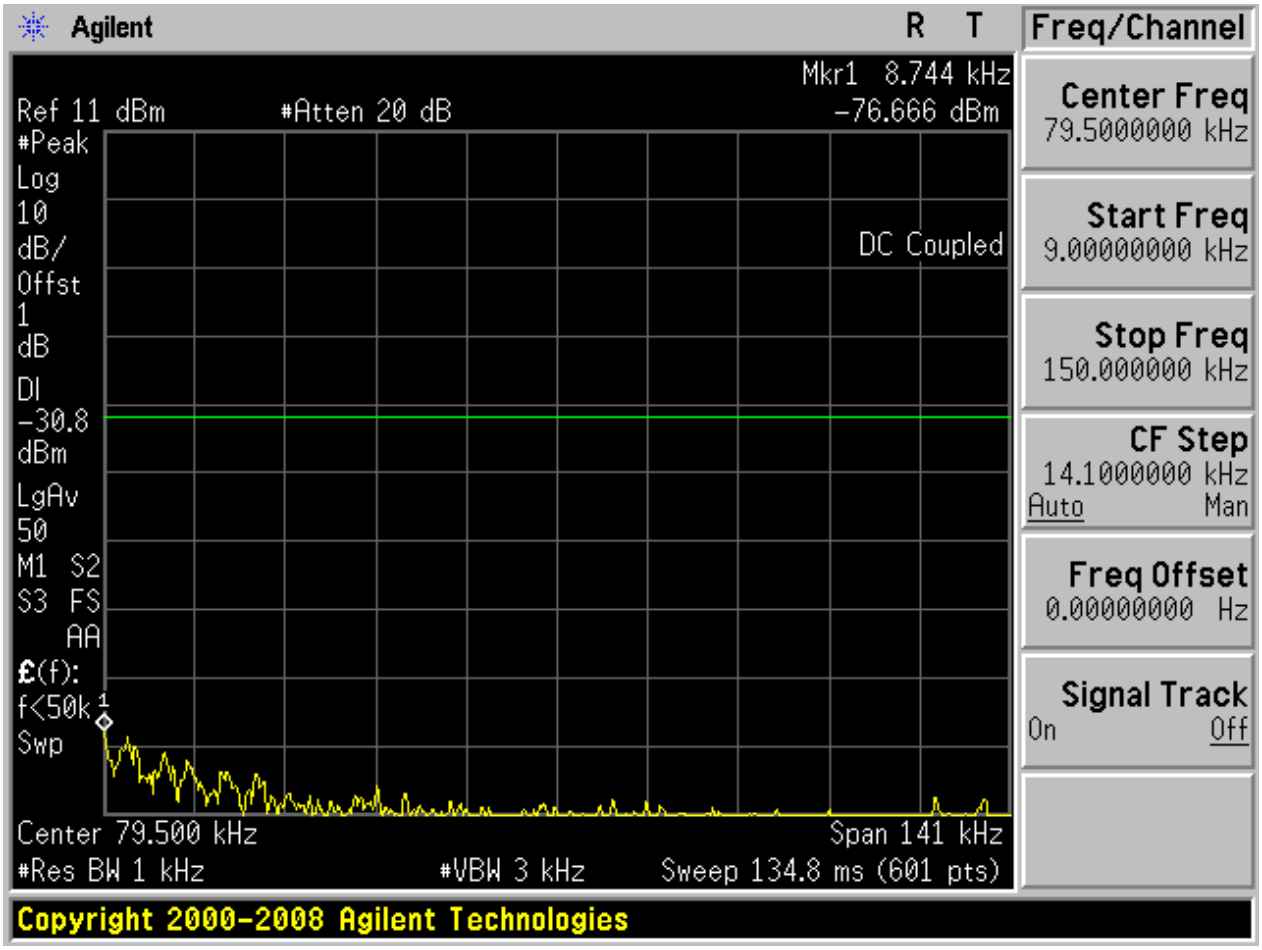


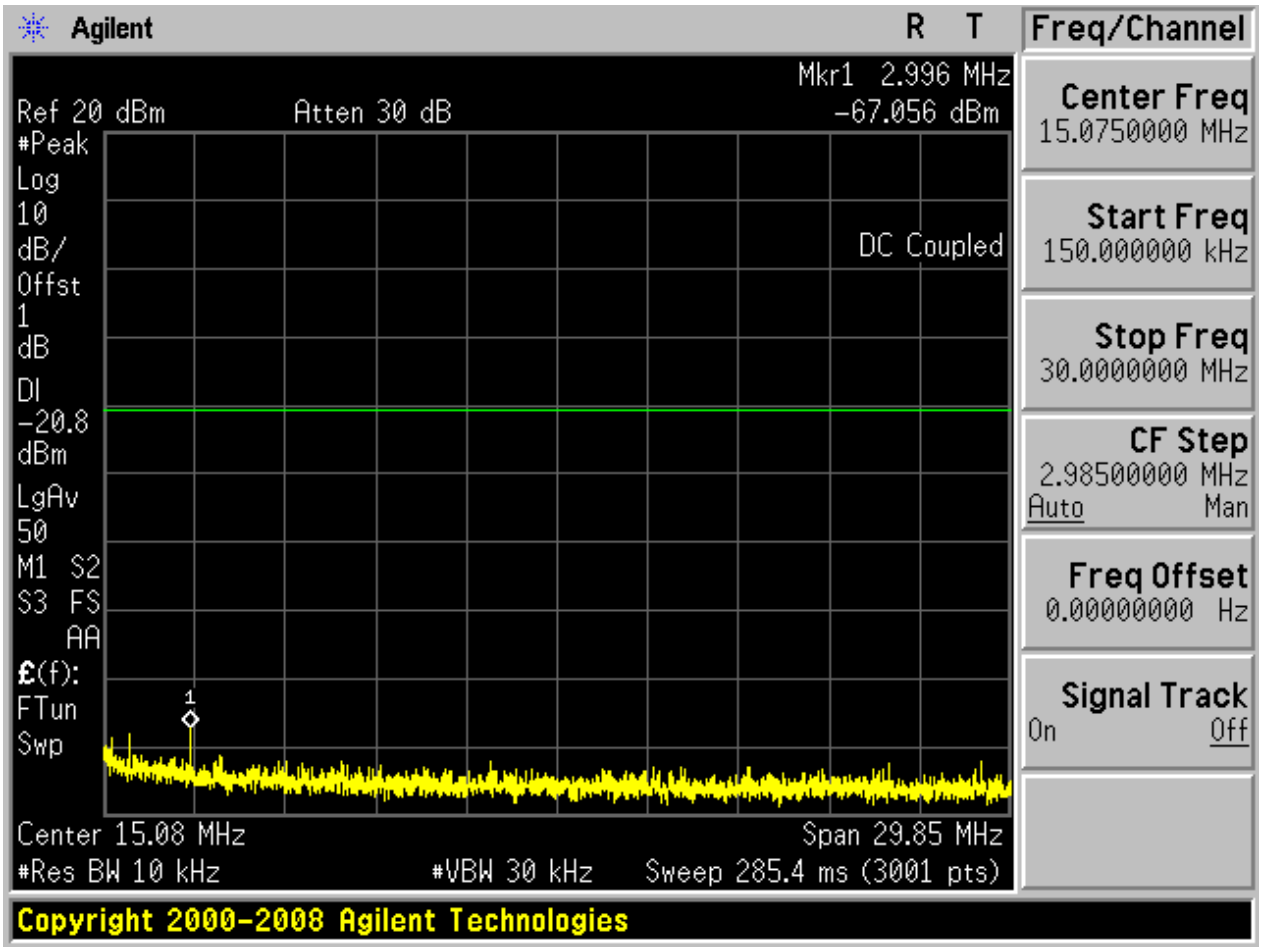
2.3 11B_M@Ant 1

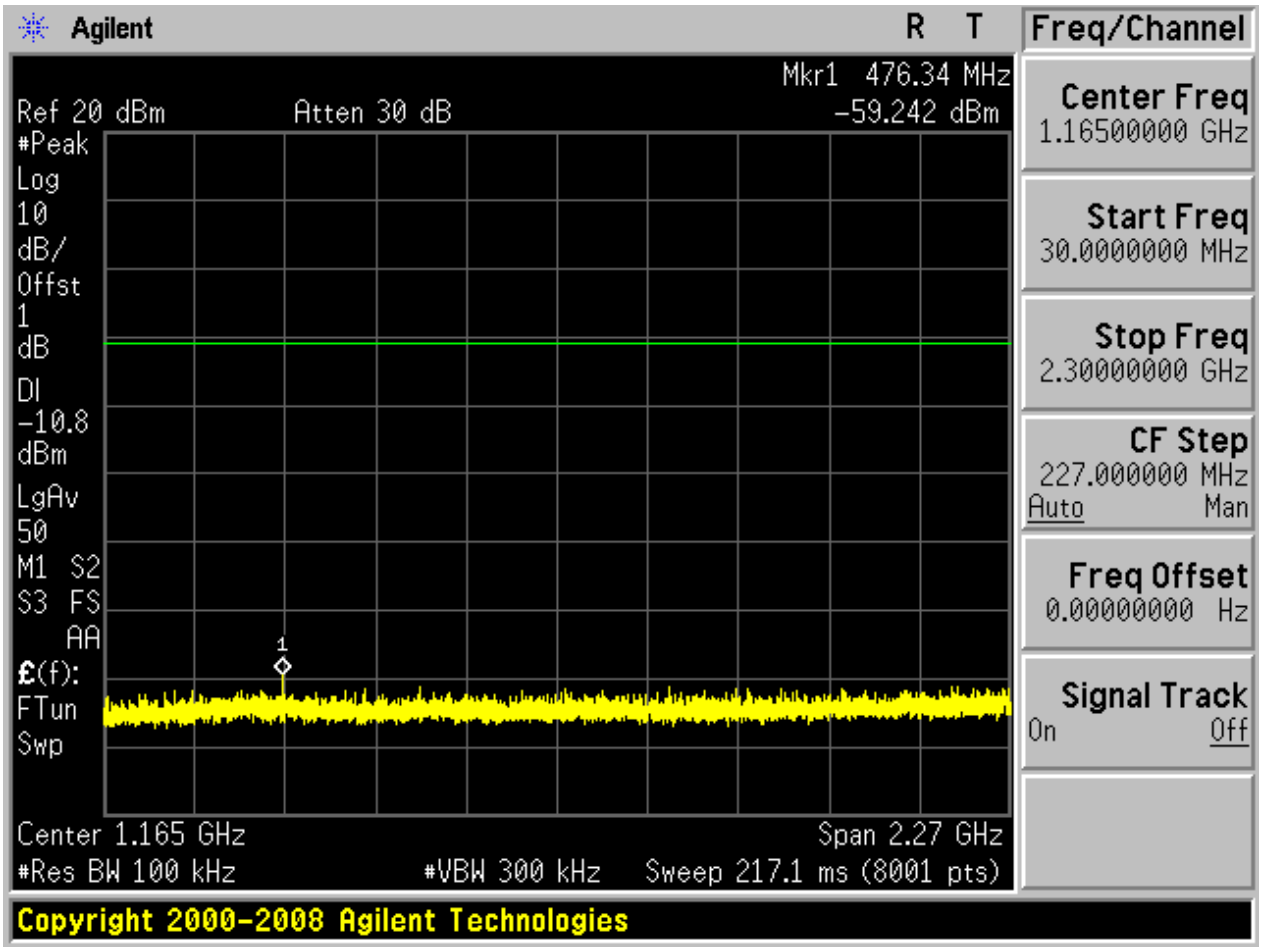
Pref:

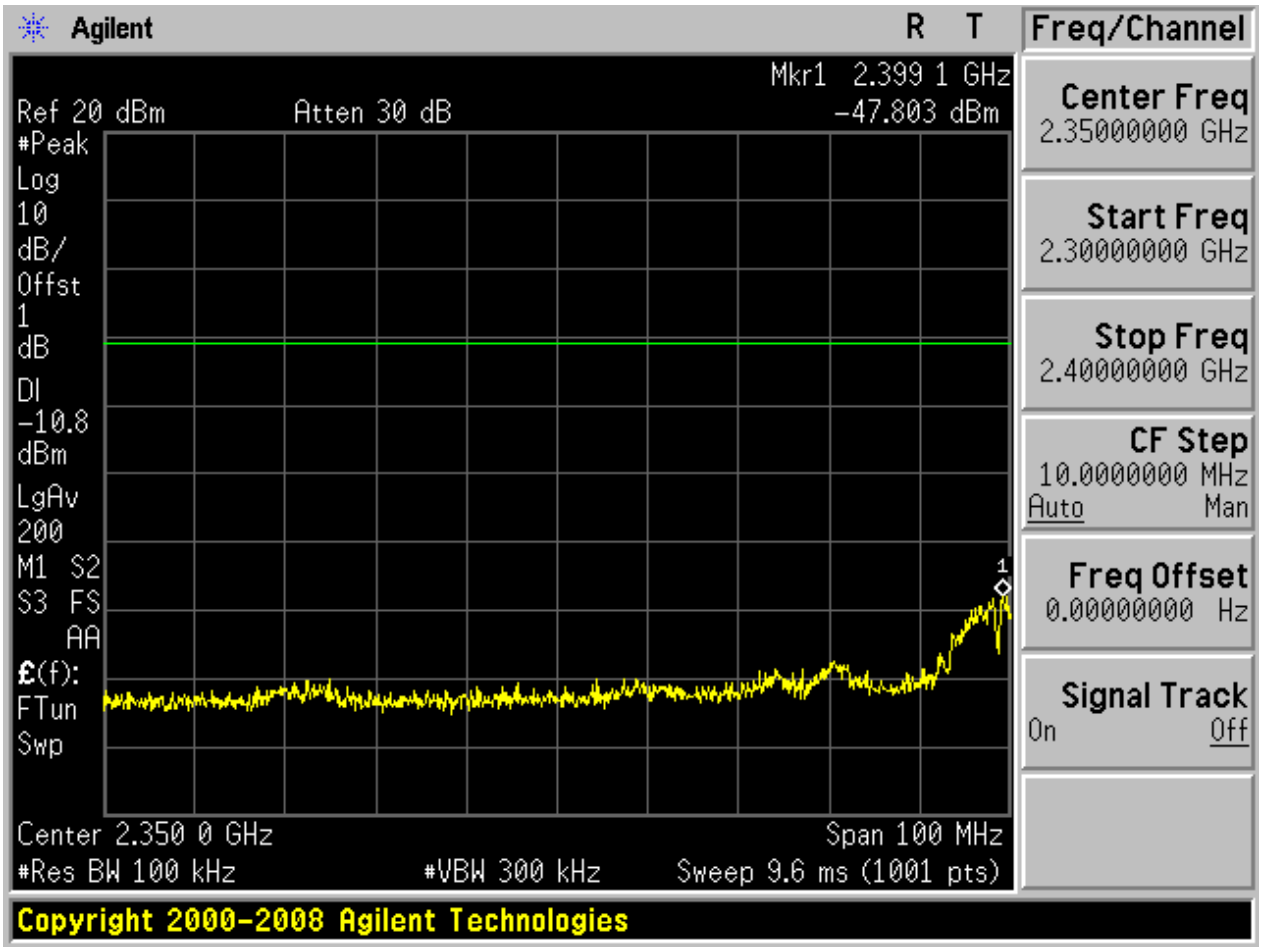


Puw:








Agilent
R T
Freq/Channel
Mkr1 2.399 1 GHz
Ref 20 dBm
Atten 30 dB
-47.803 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-10.8
dBm
LgAv
200
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center Freq
2.35000000 GHz
Start Freq
2.30000000 GHz
Stop Freq
2.40000000 GHz
CF Step
10.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
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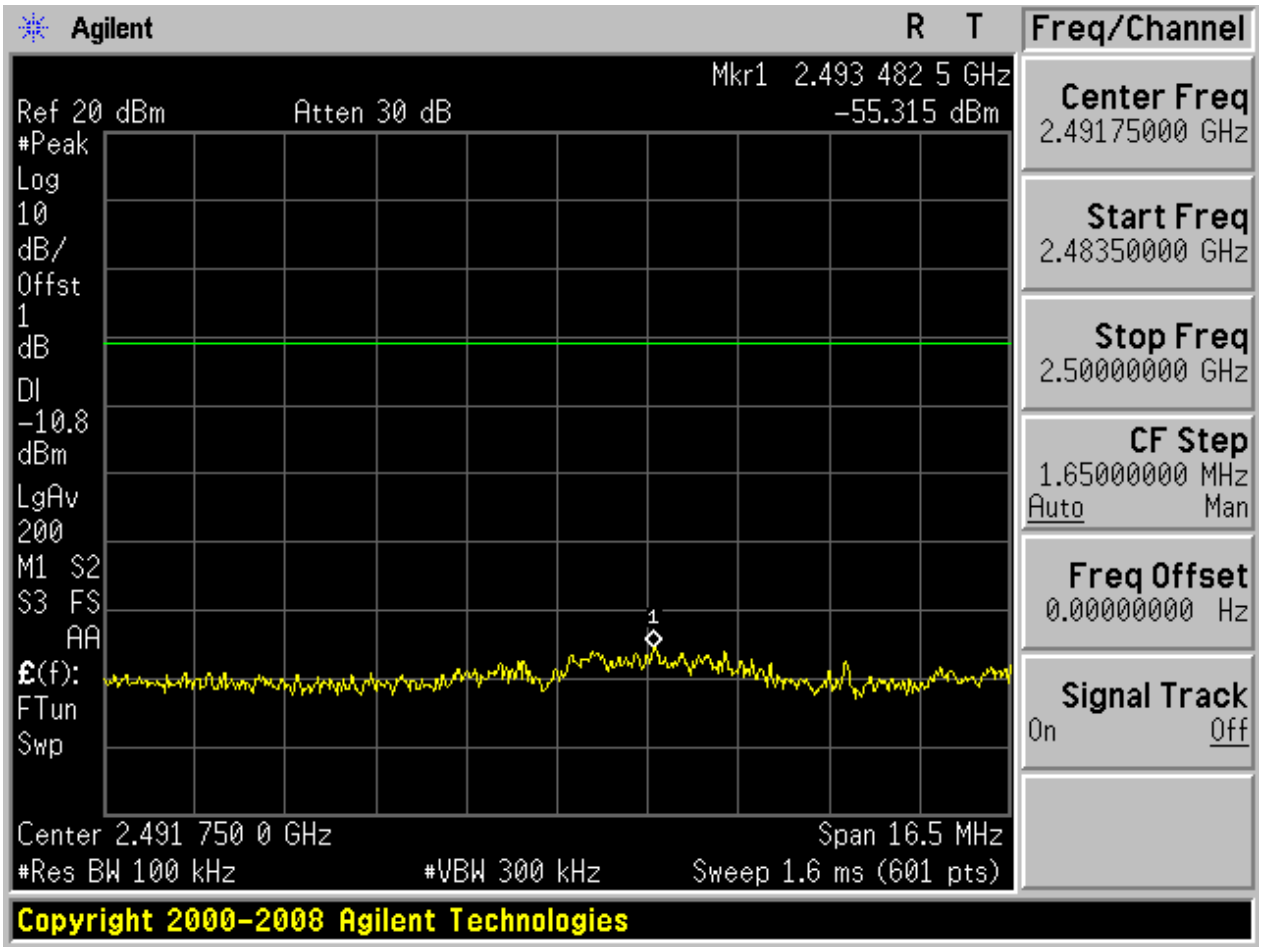
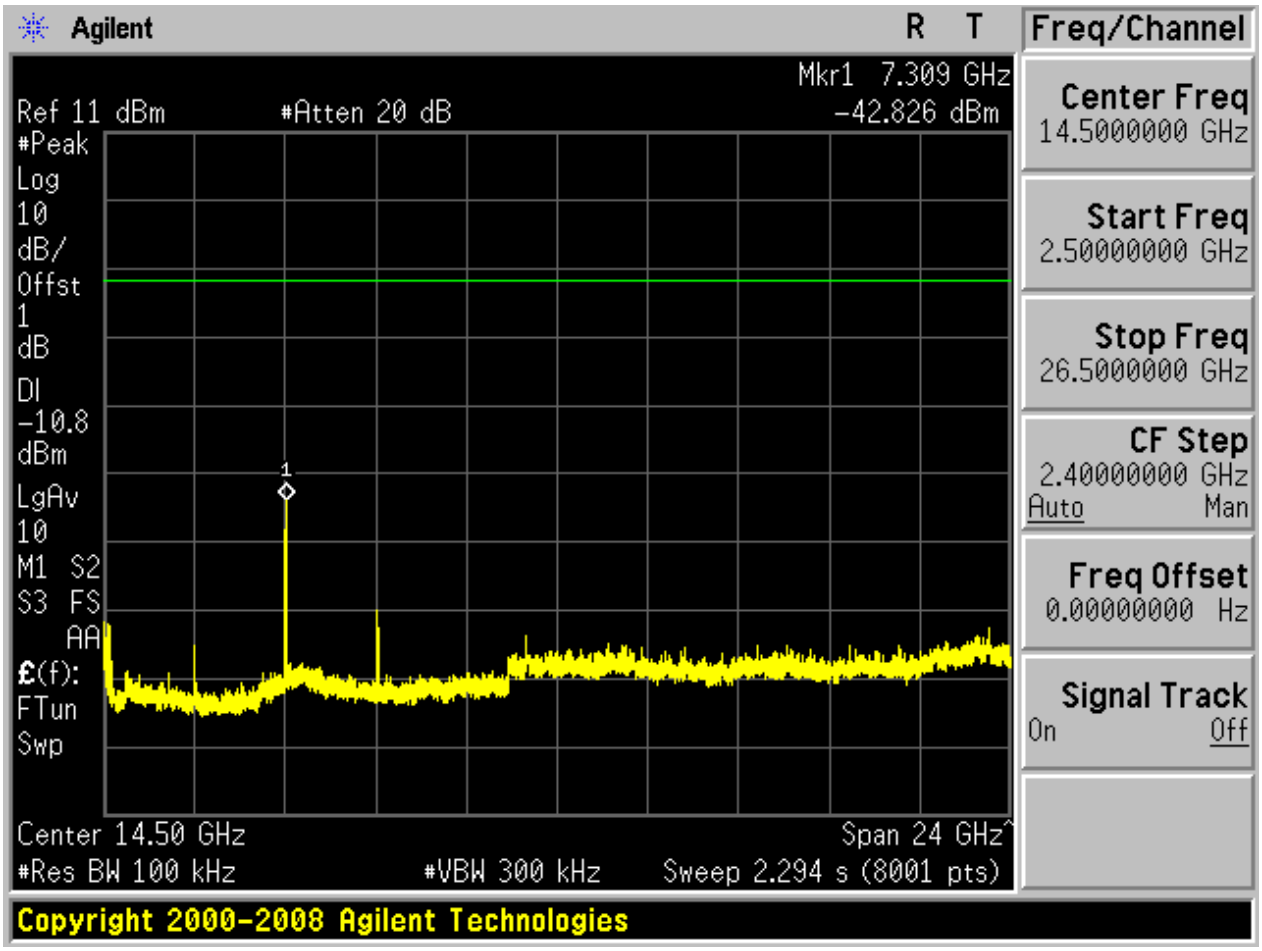
Span 100 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 9.6 ms (1001 pts)
Copyright 2000-2008 Agilent Technologies





2.5 11B_H@Ant 1

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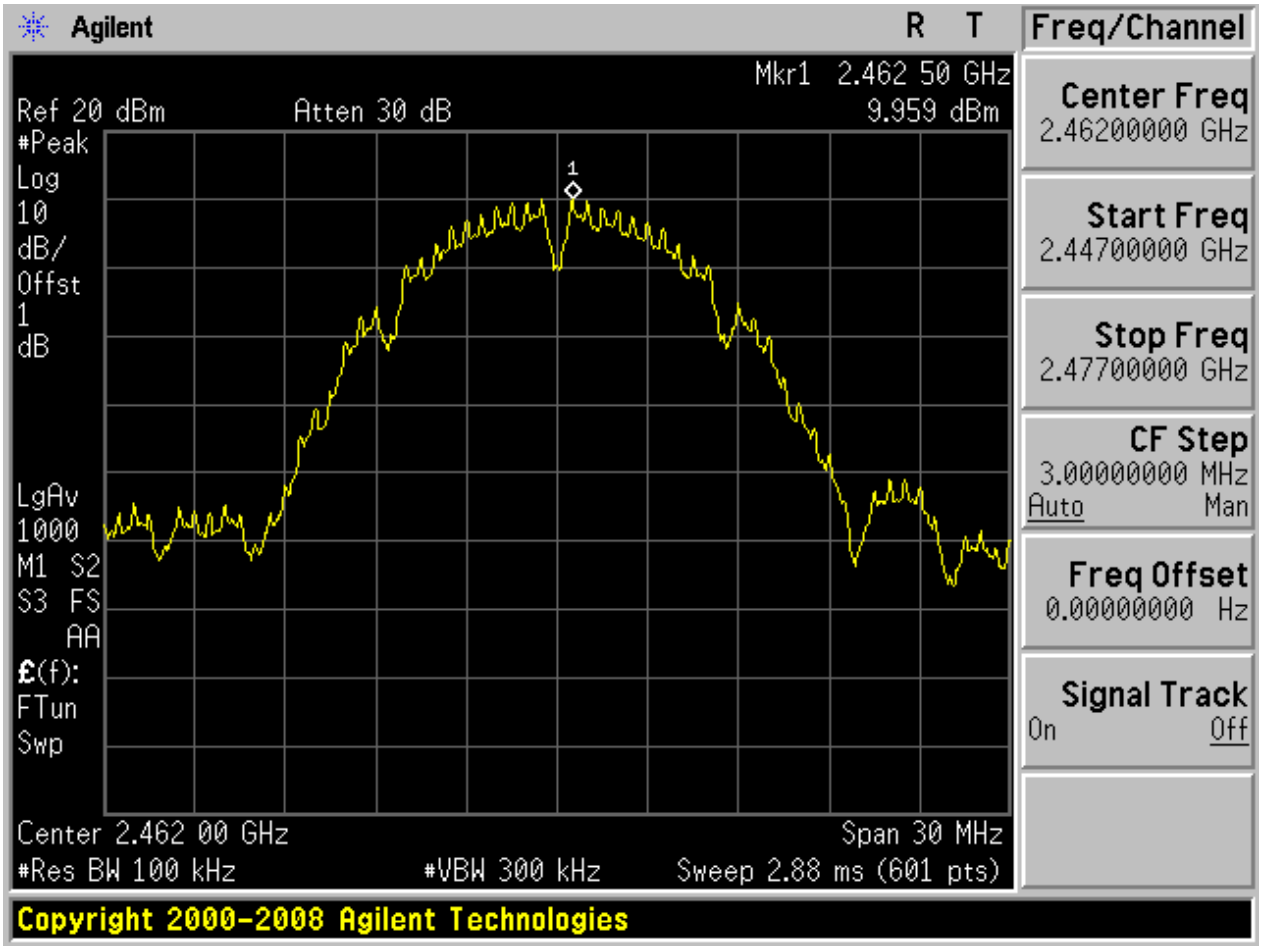

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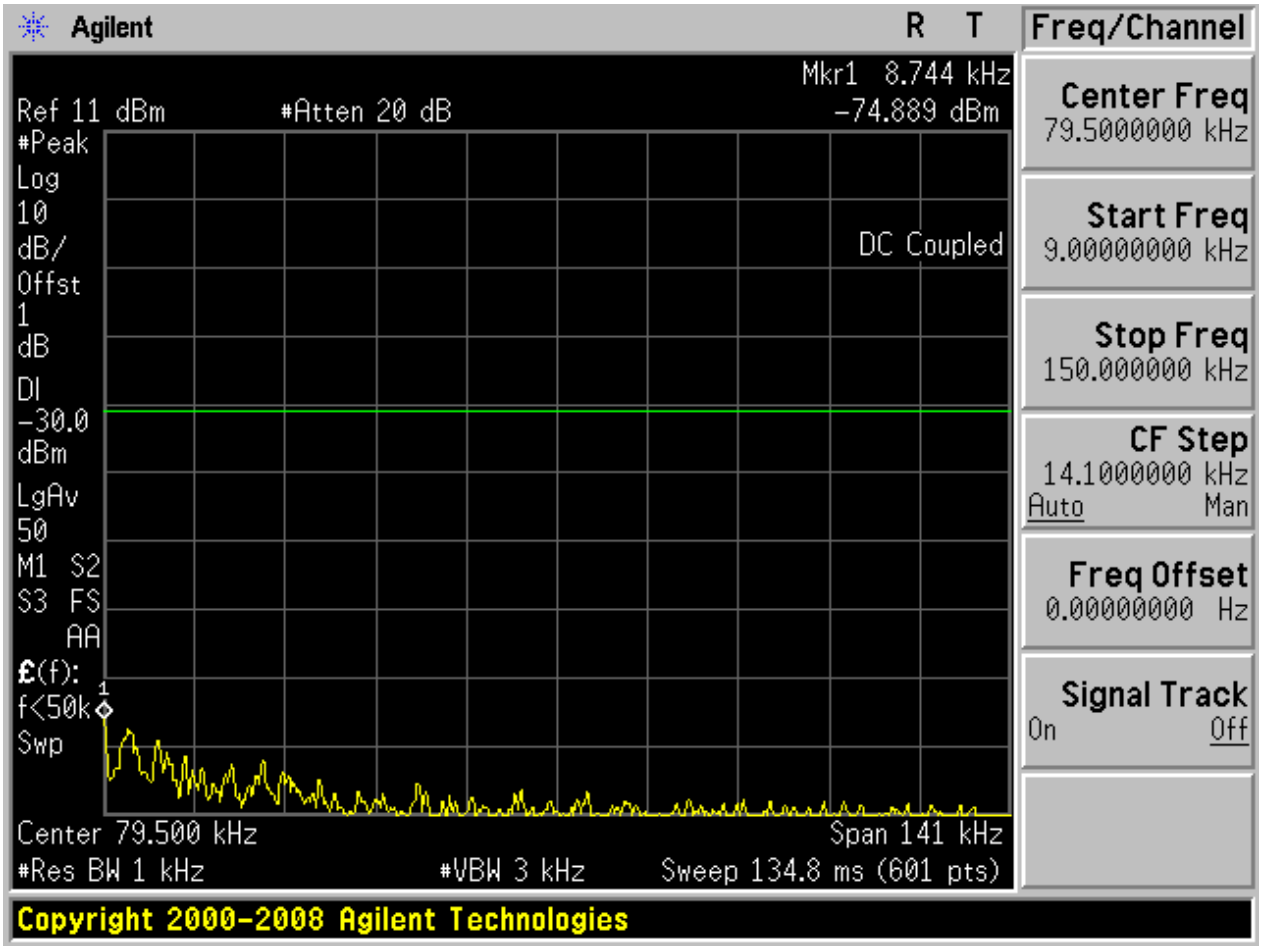

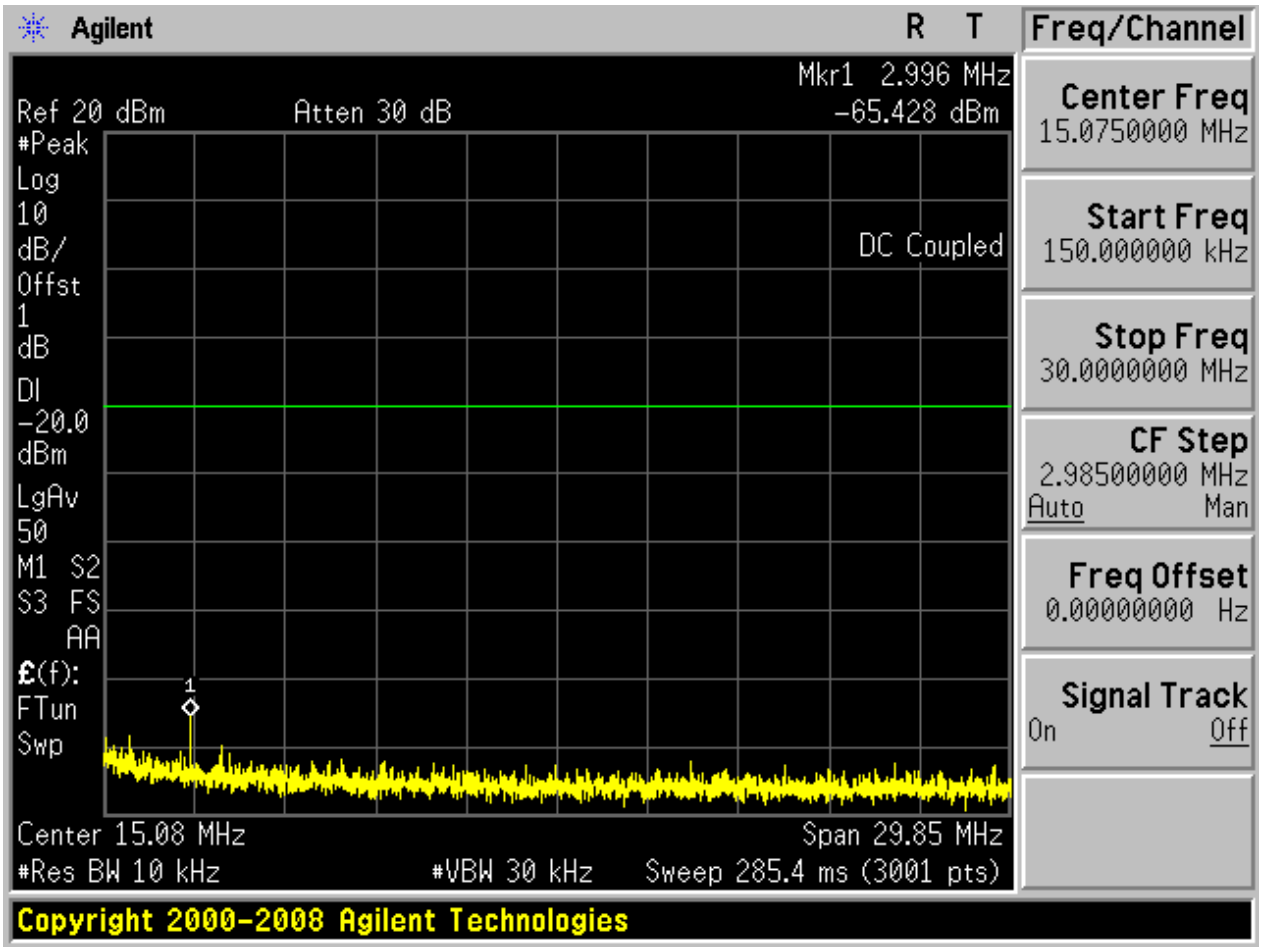

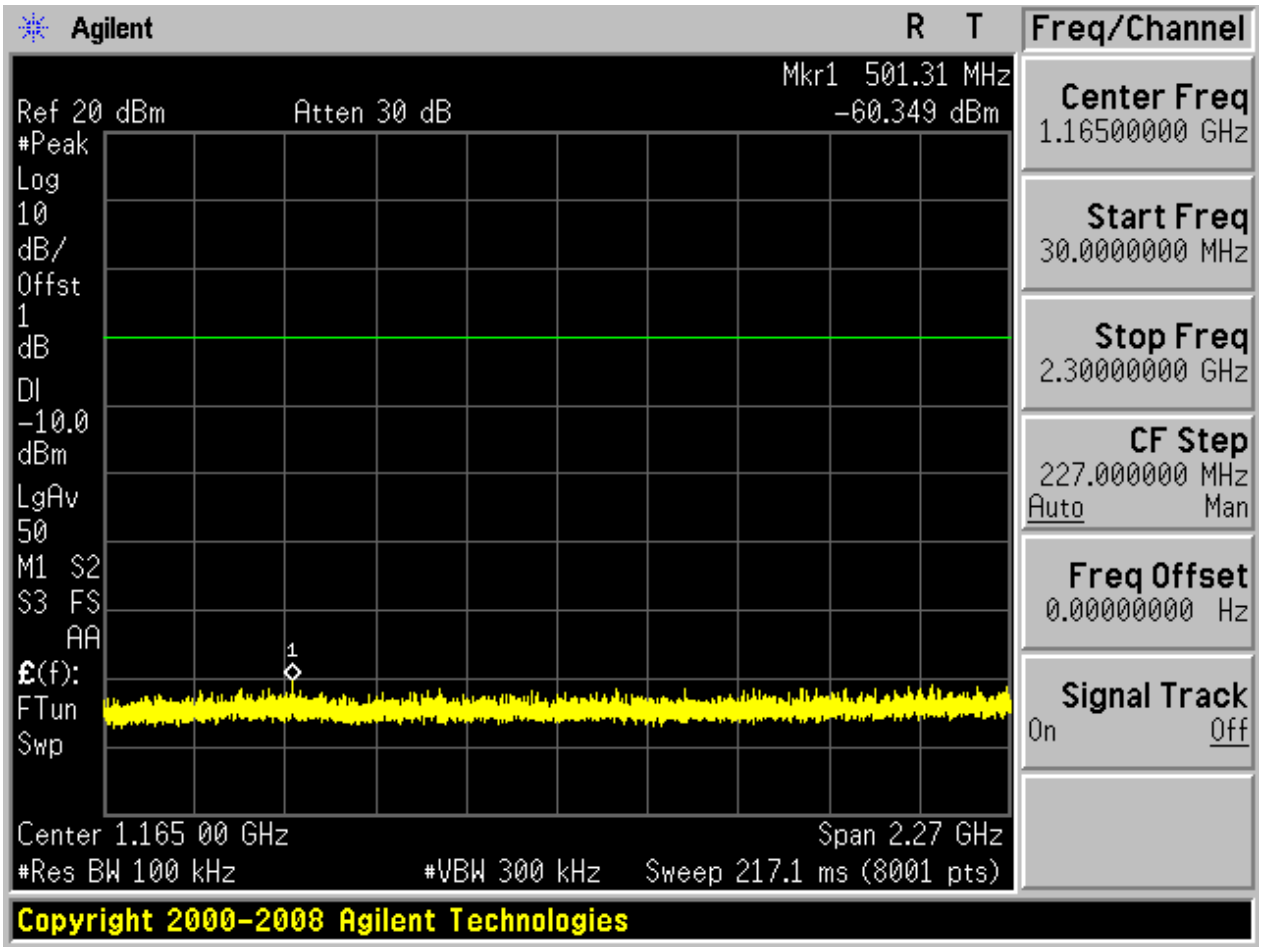

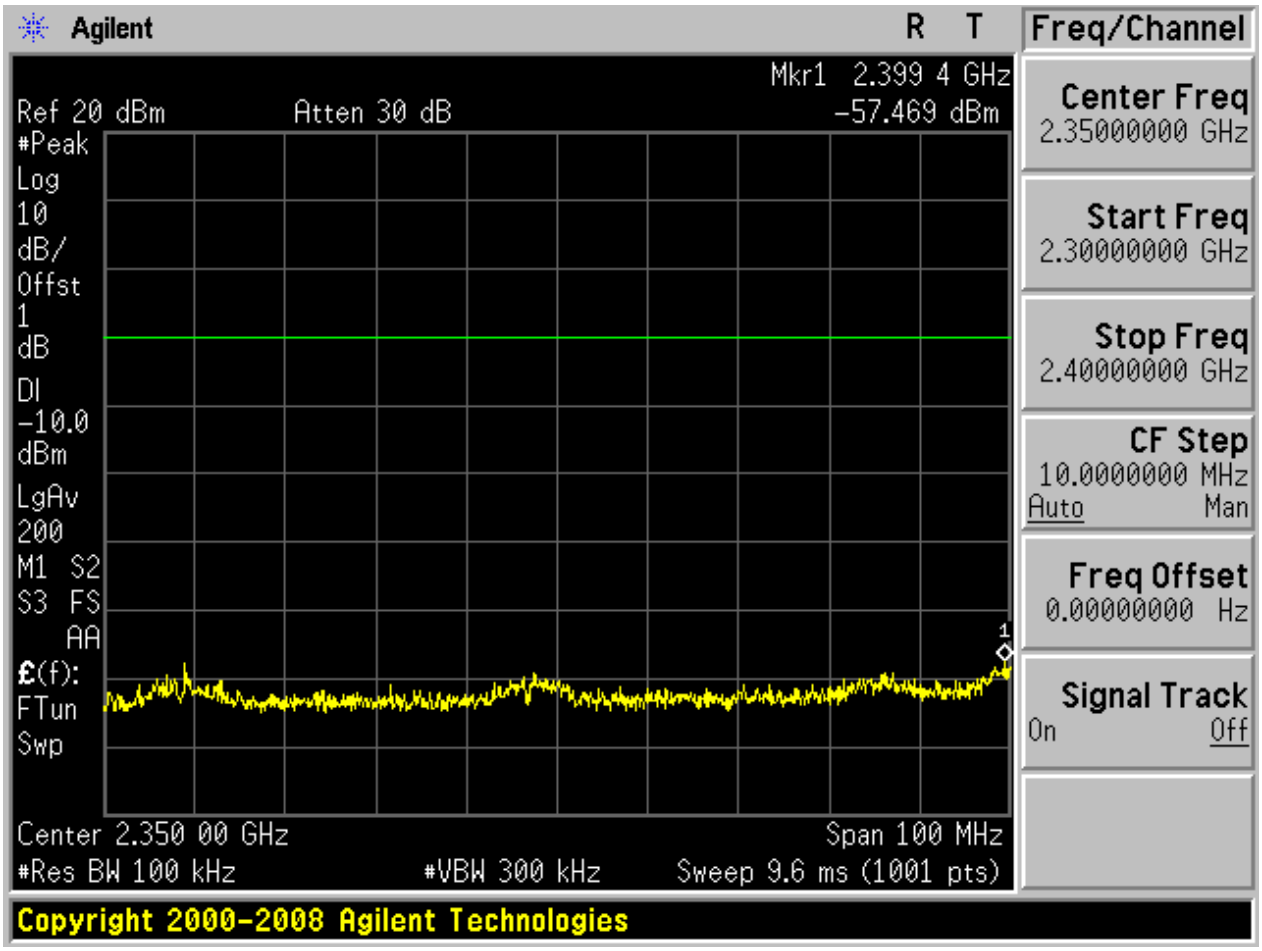

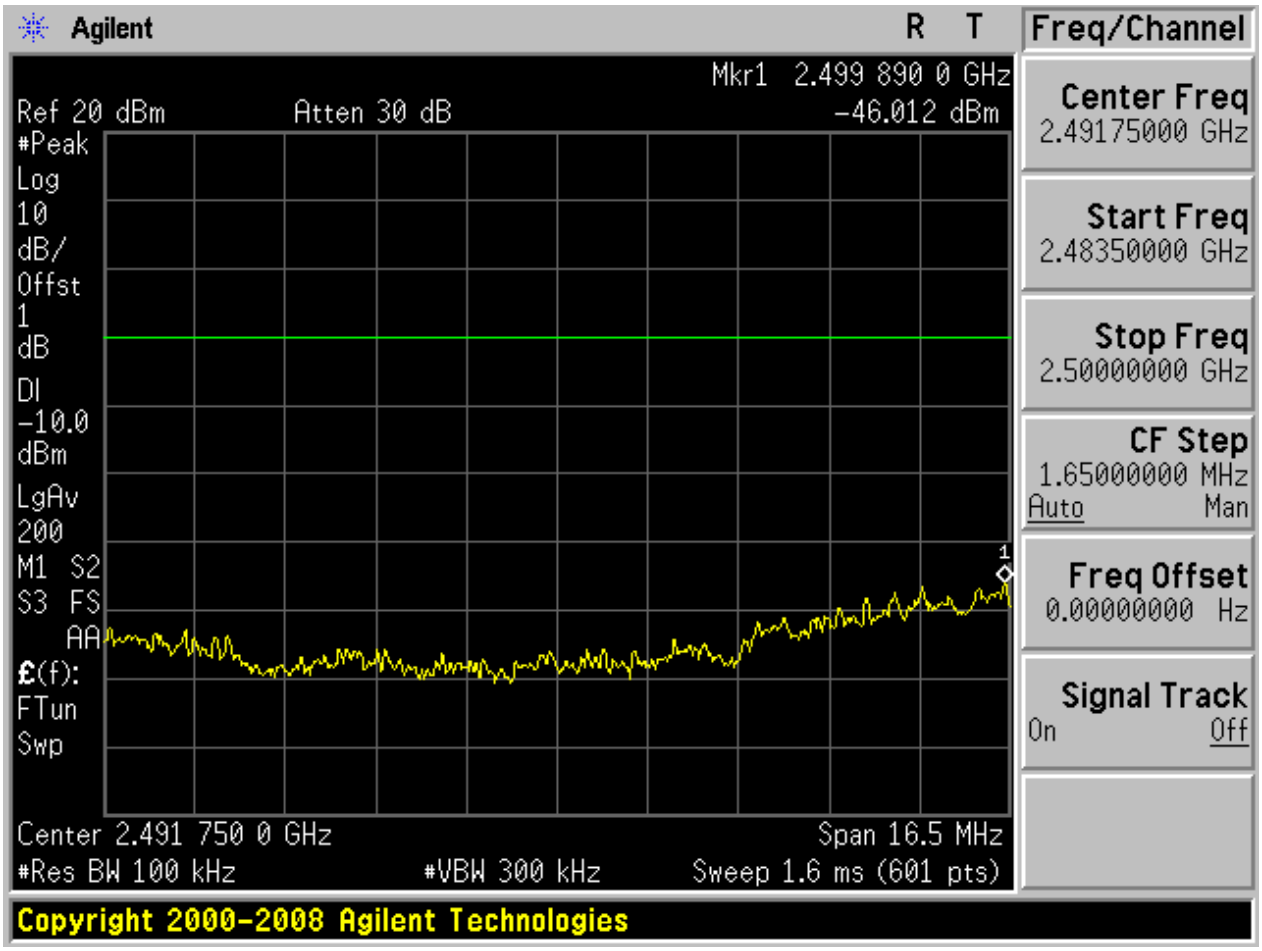

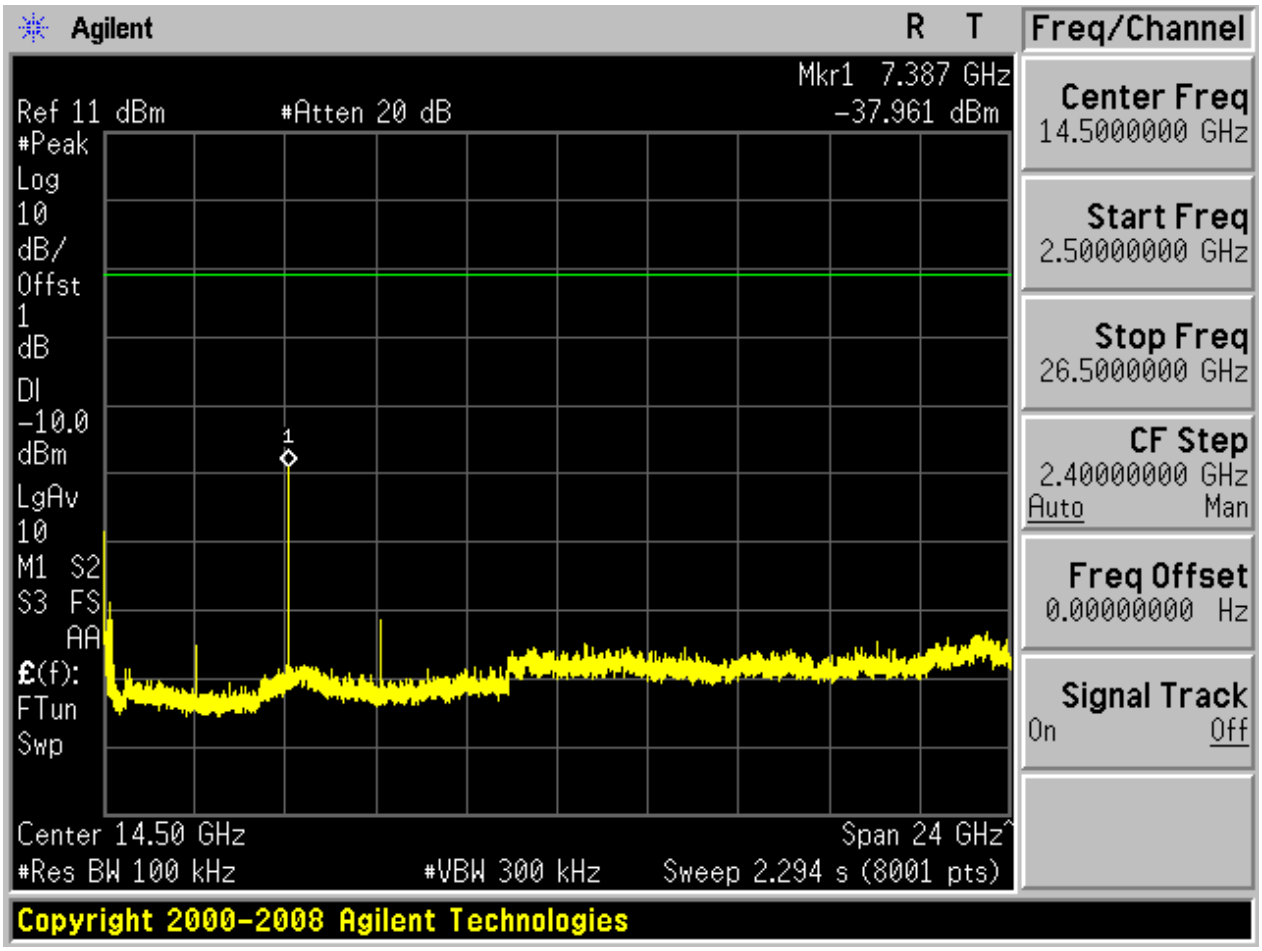

2.7 11G_L@Ant 1

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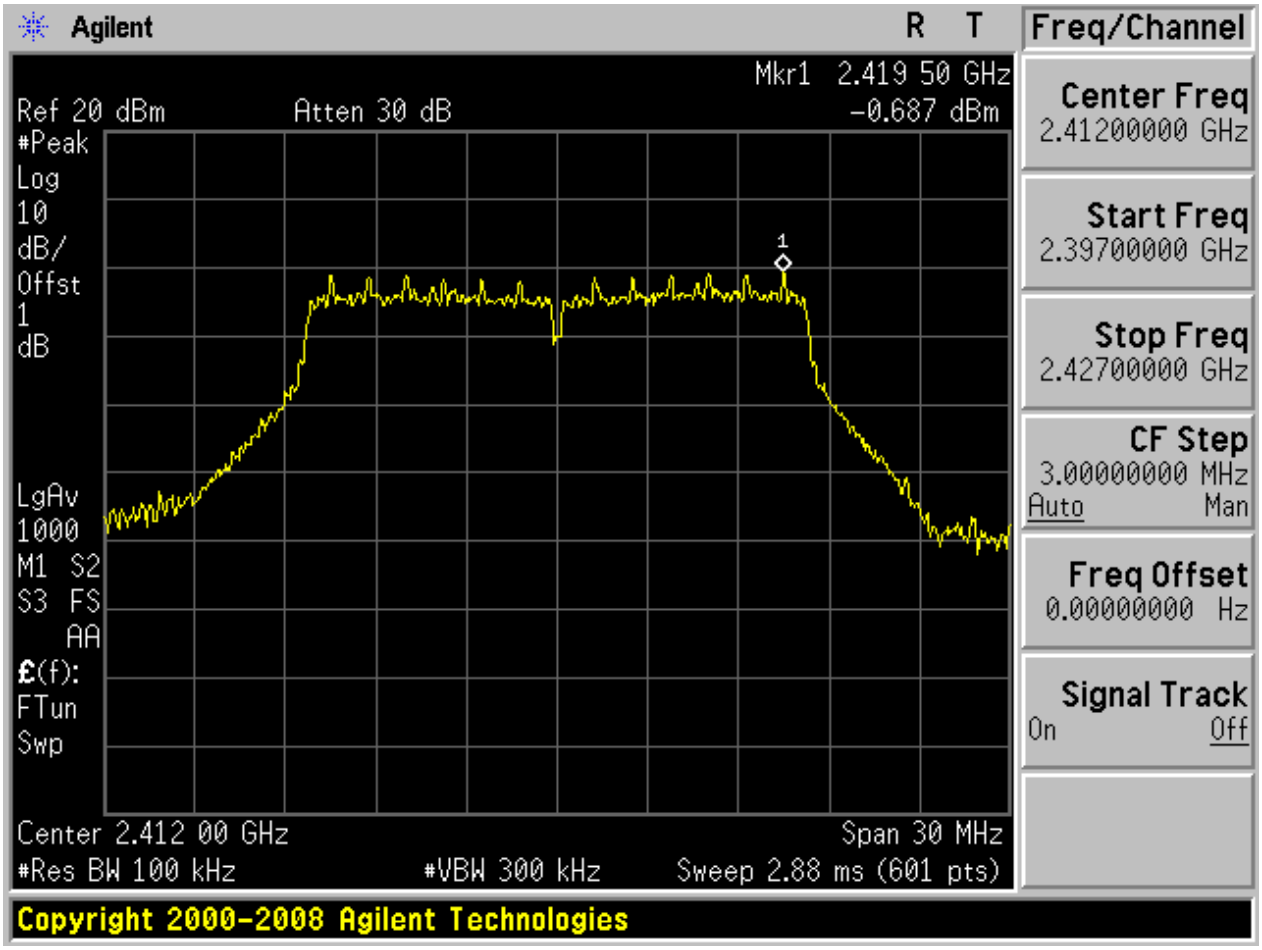

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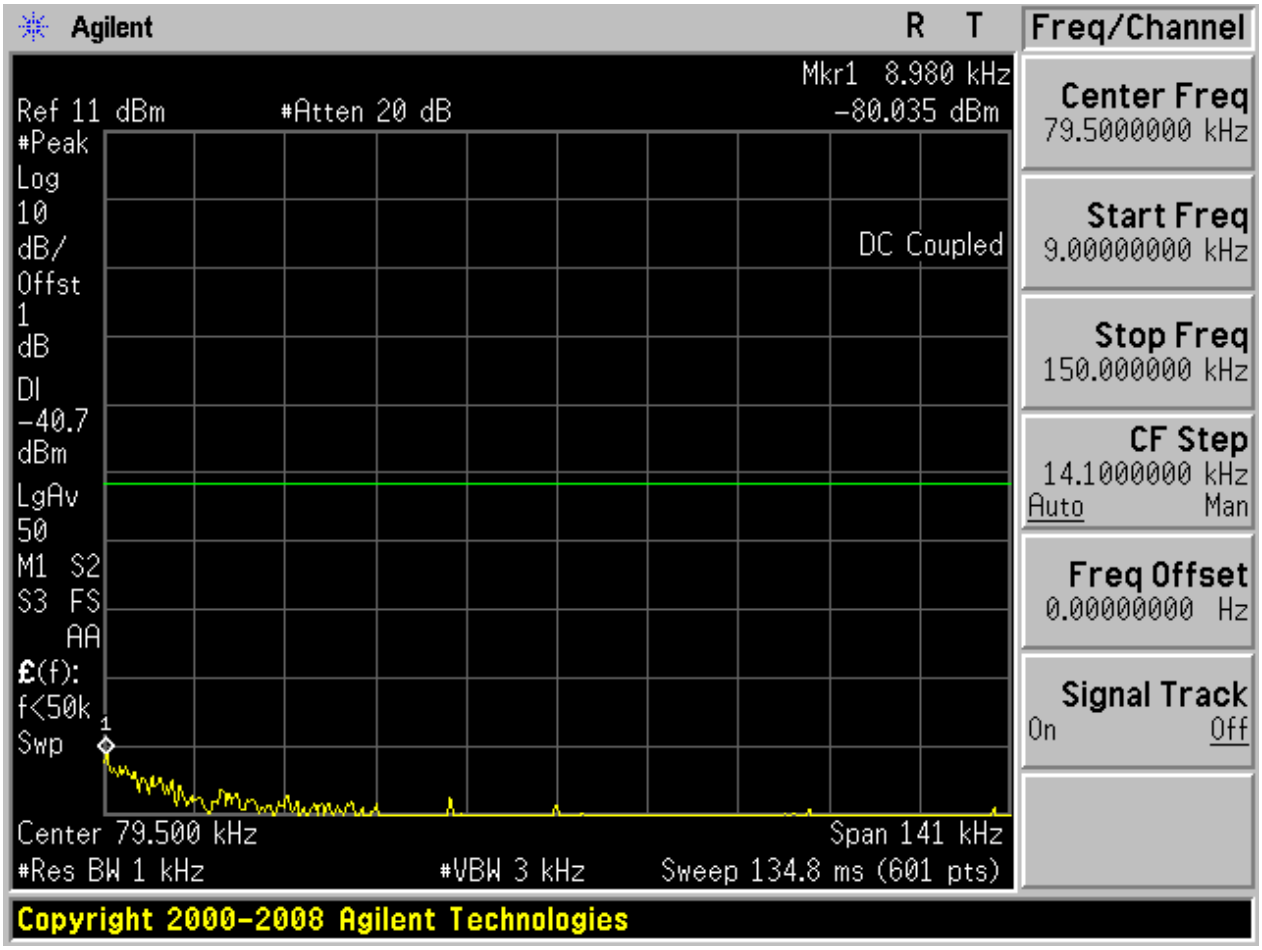

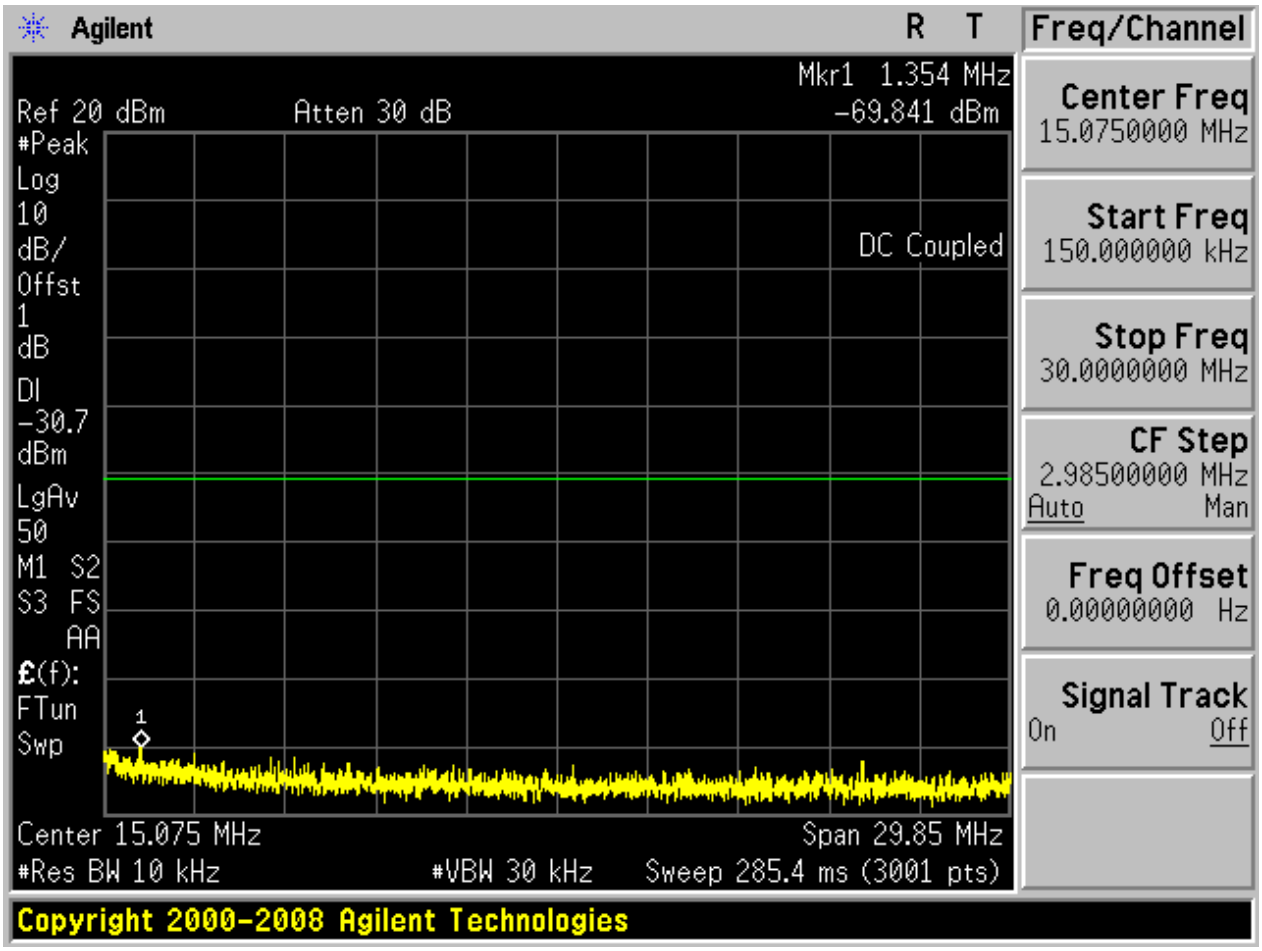

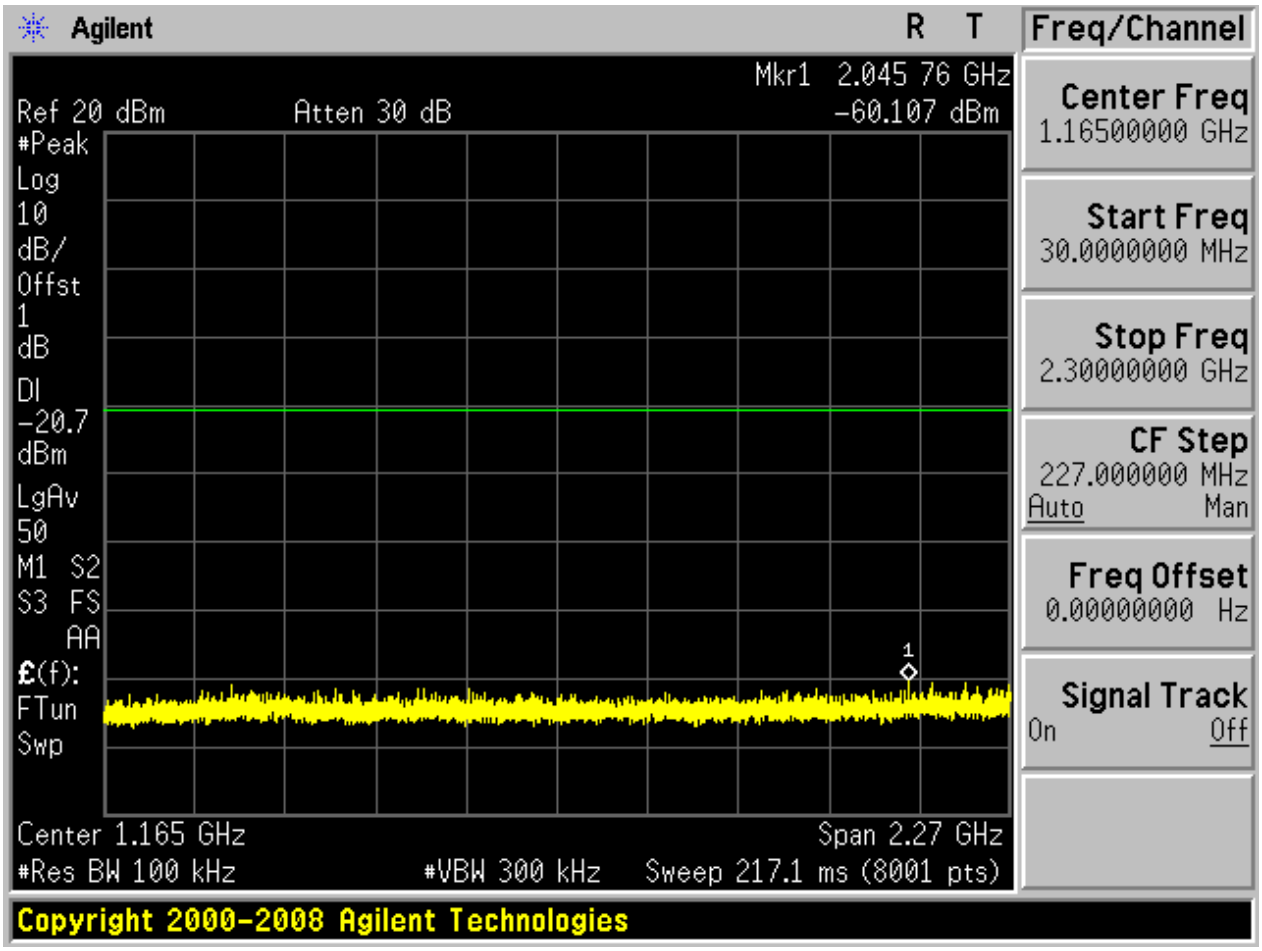

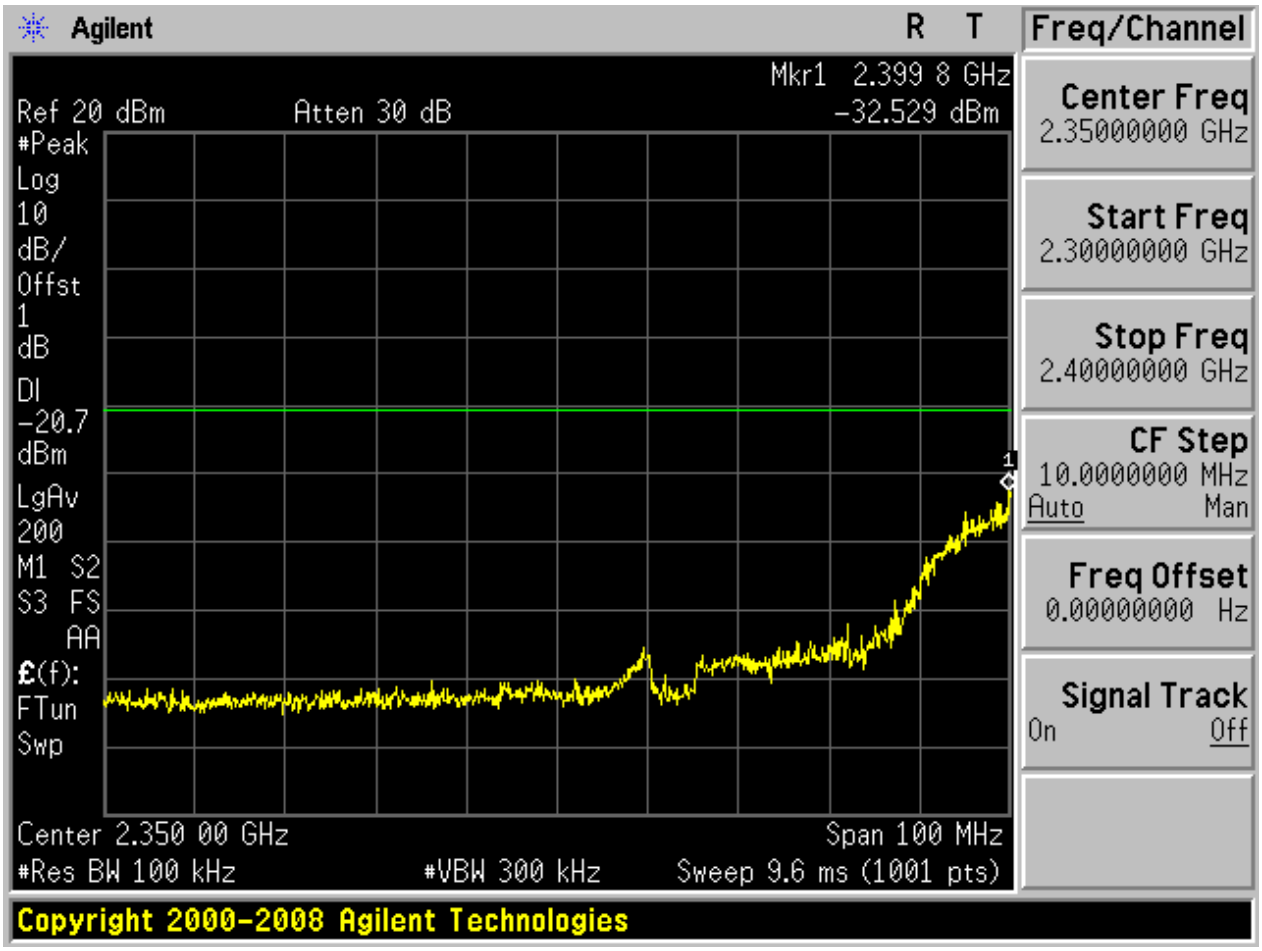

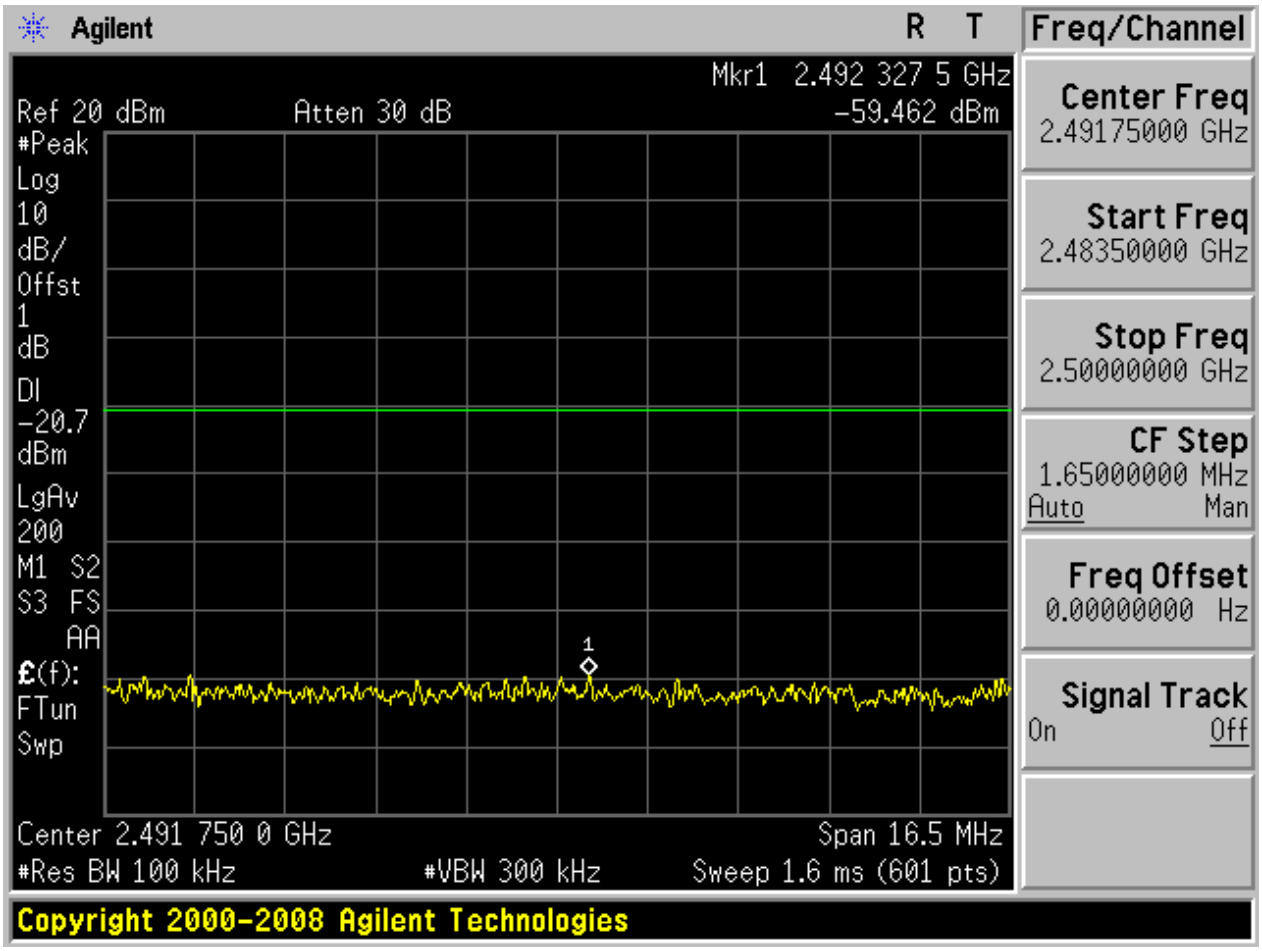

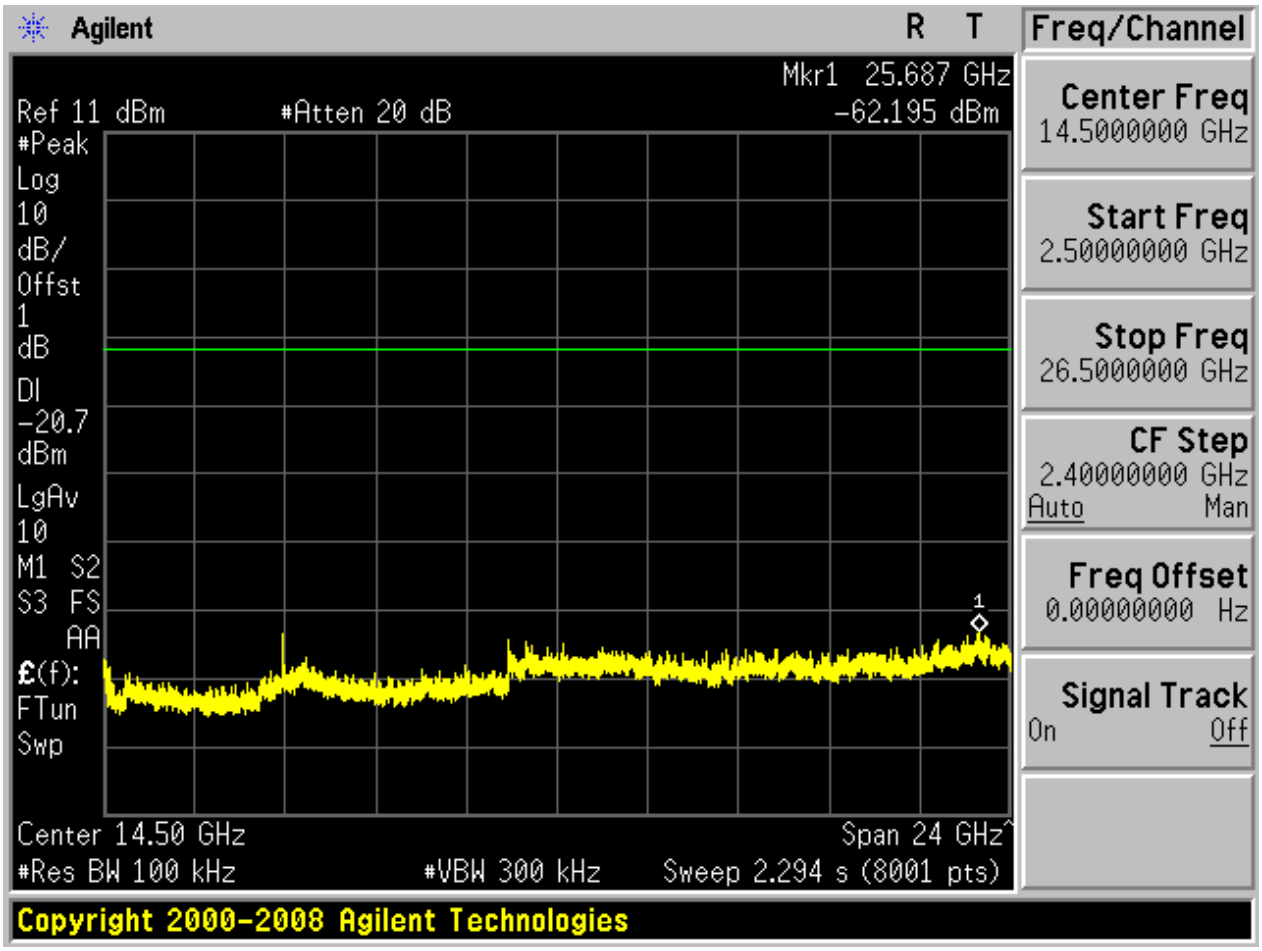

2.9 11G_M@Ant 1

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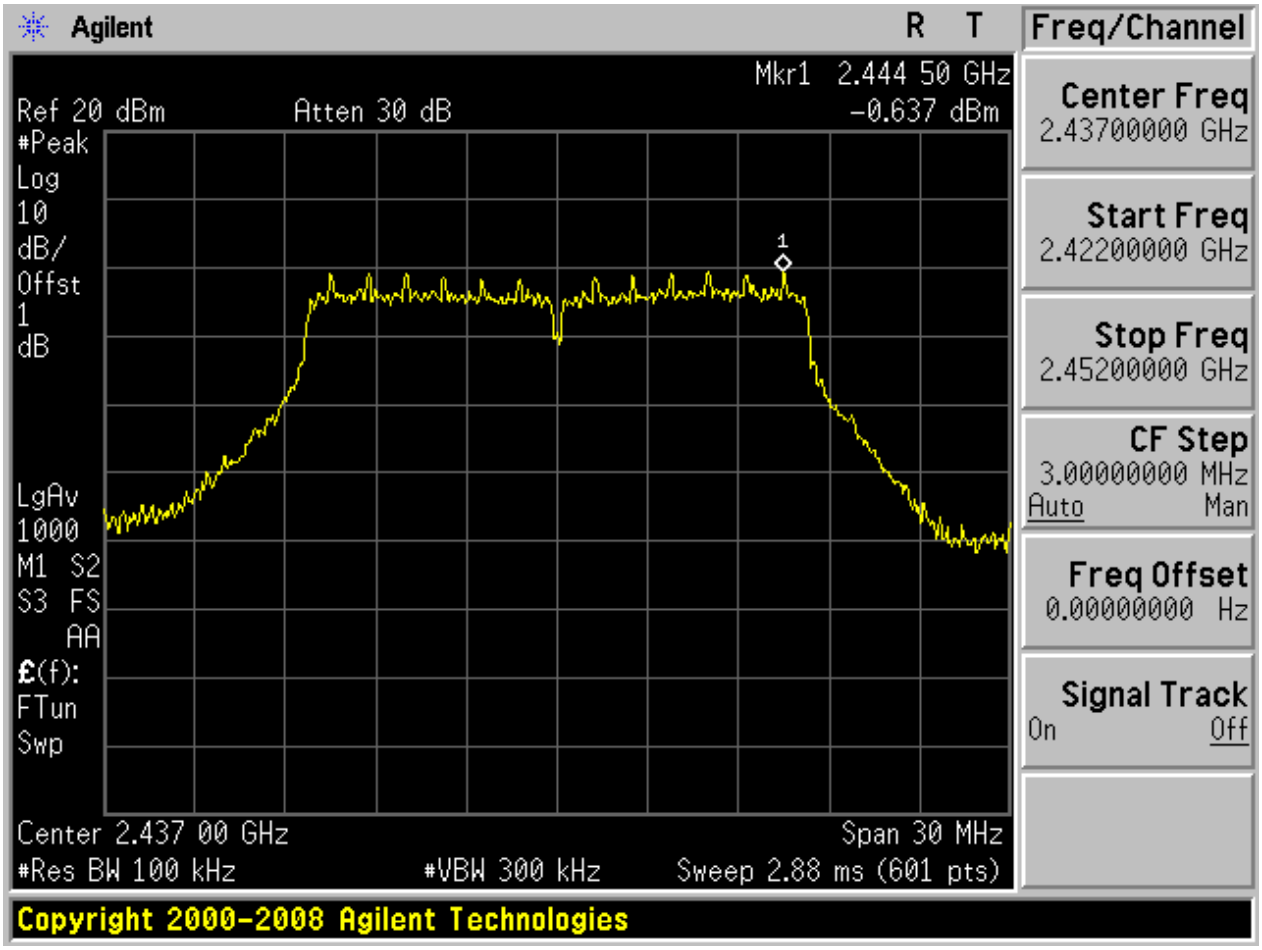

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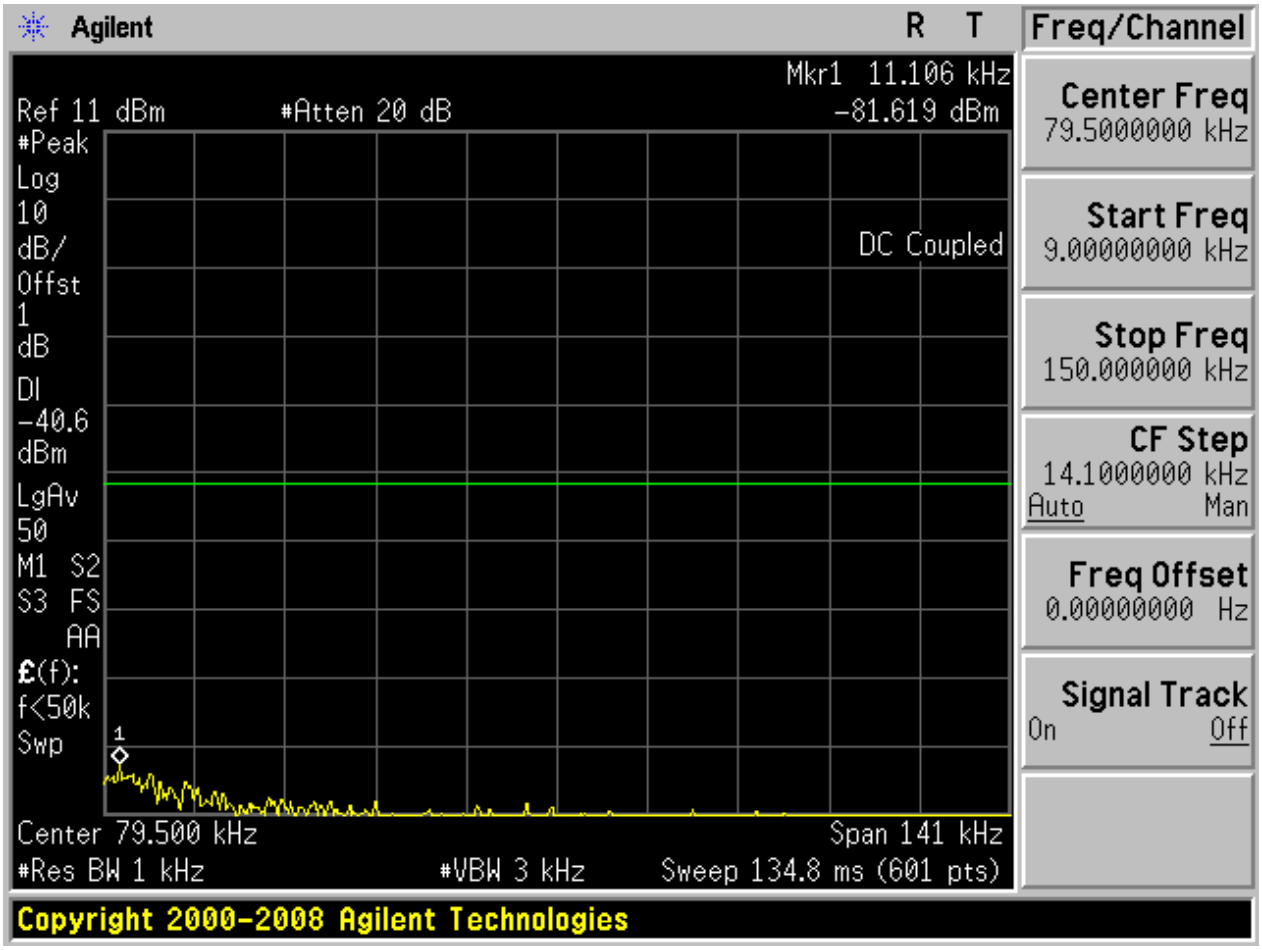

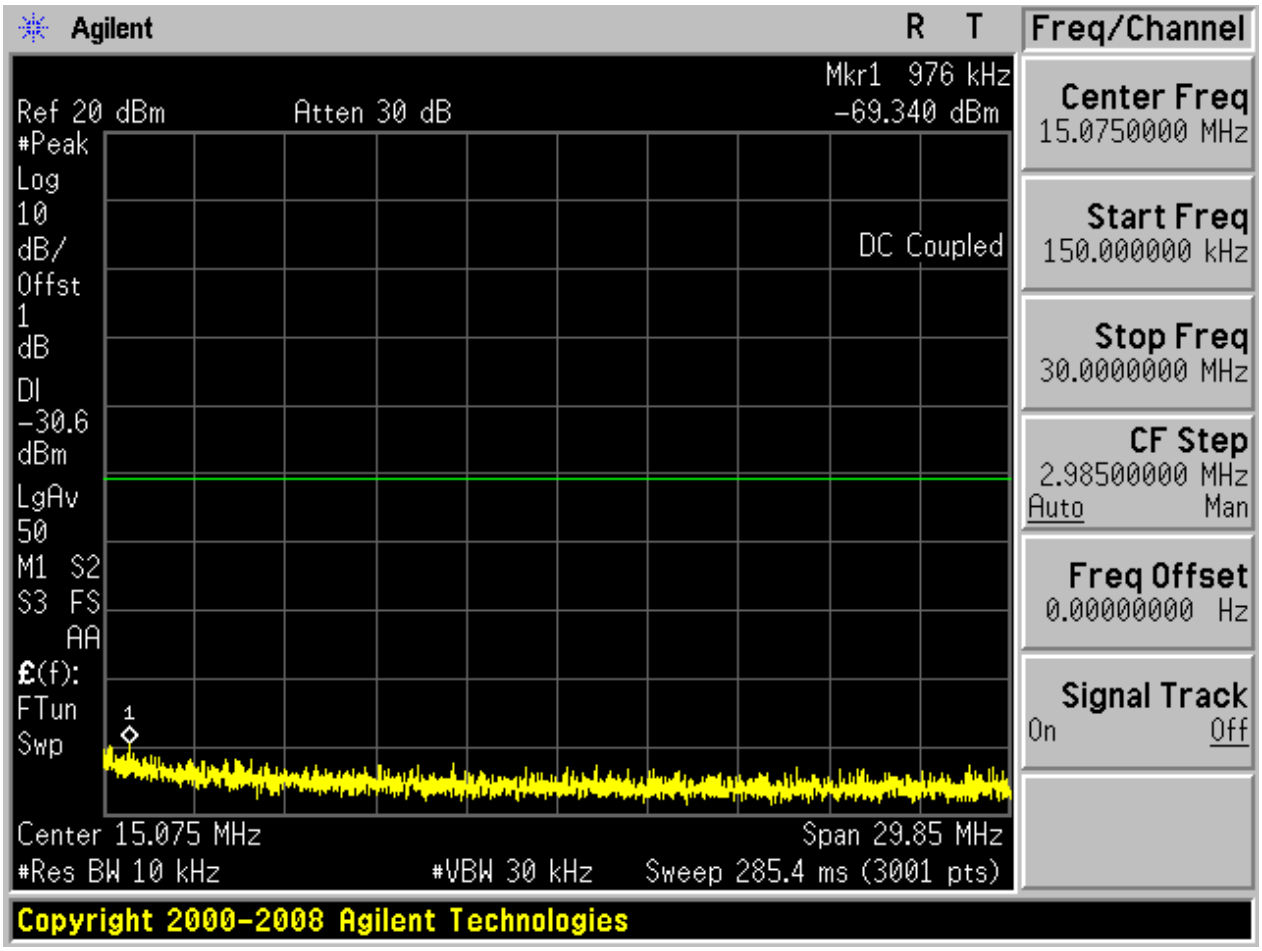

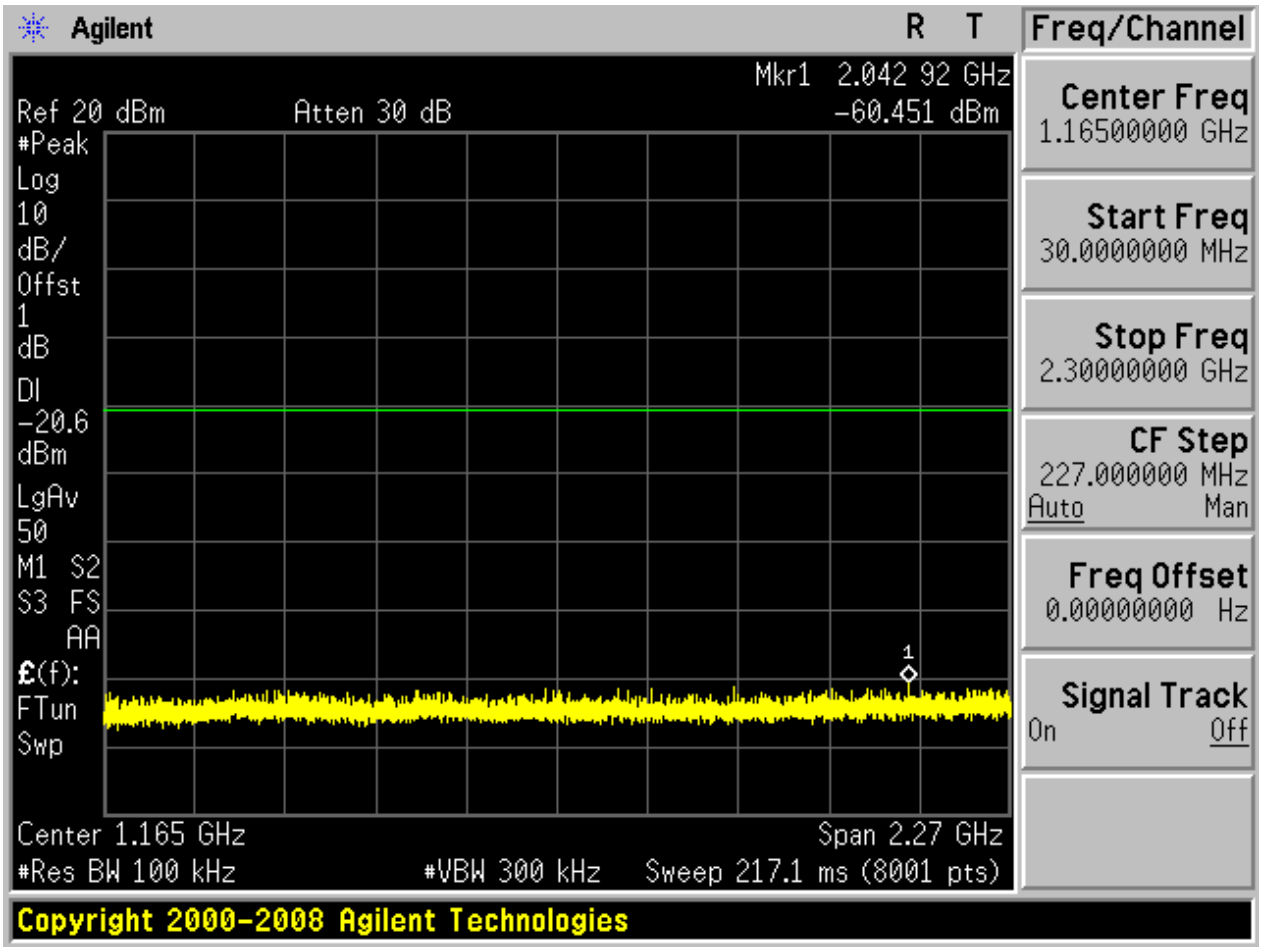

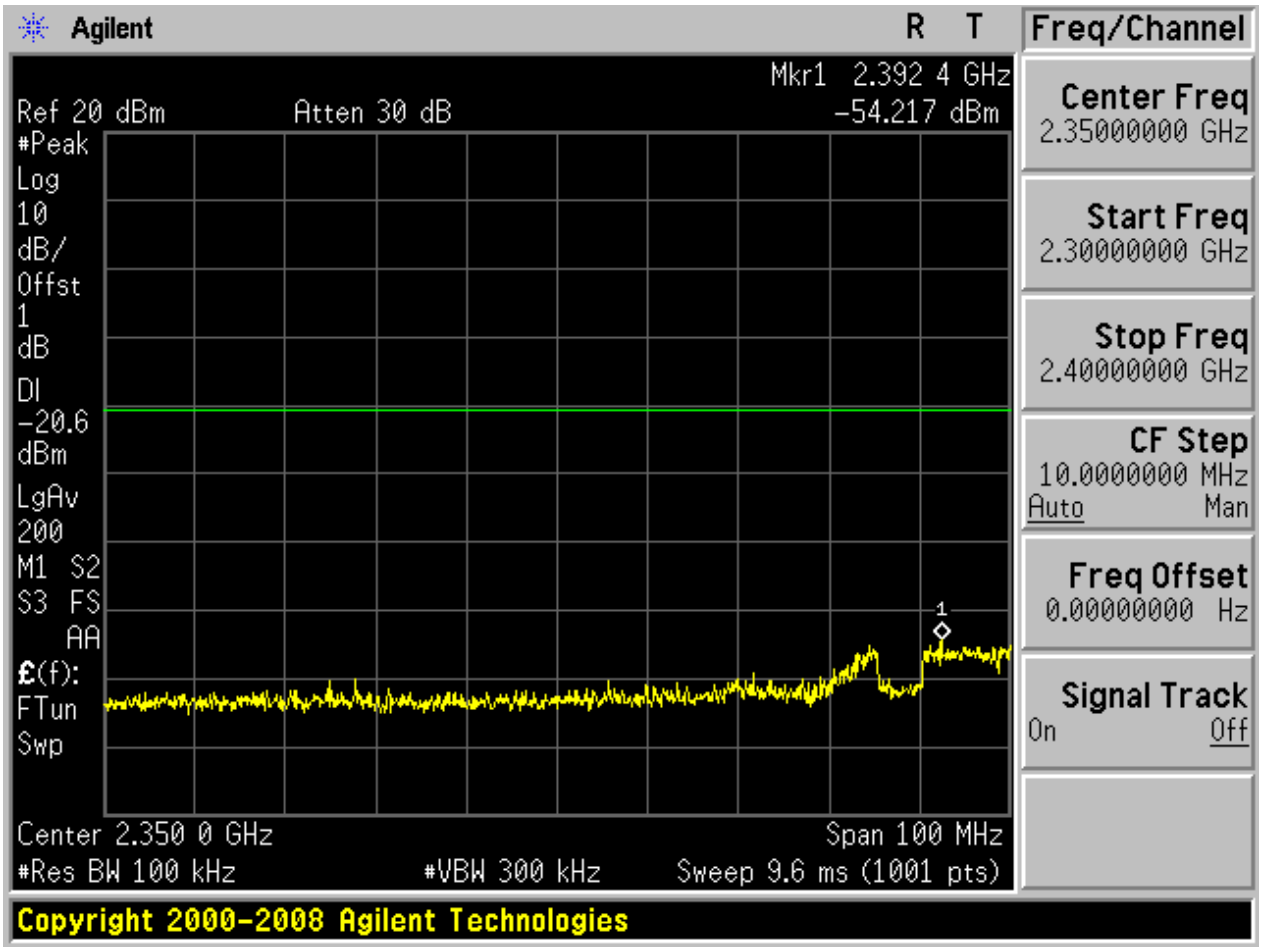

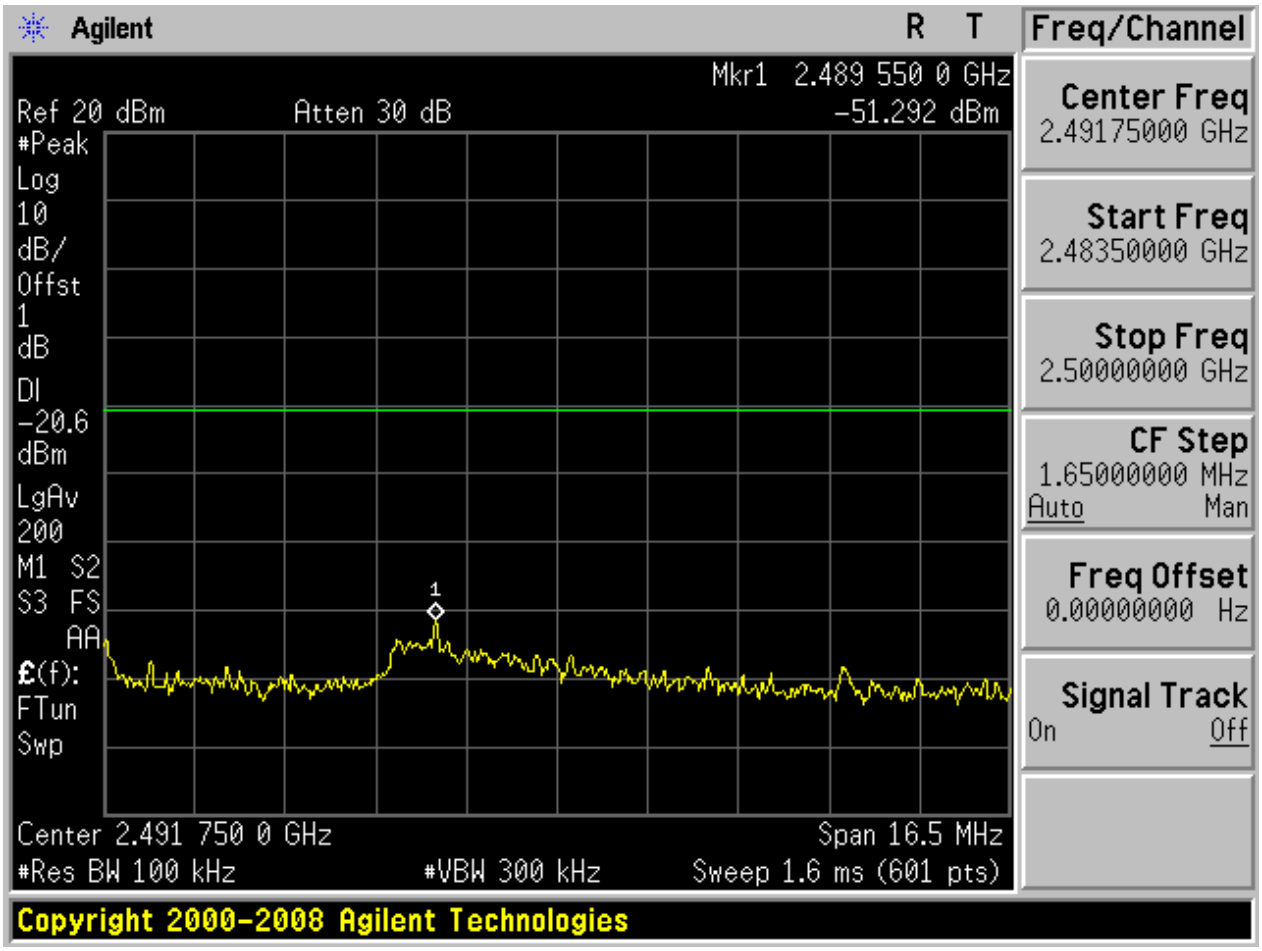

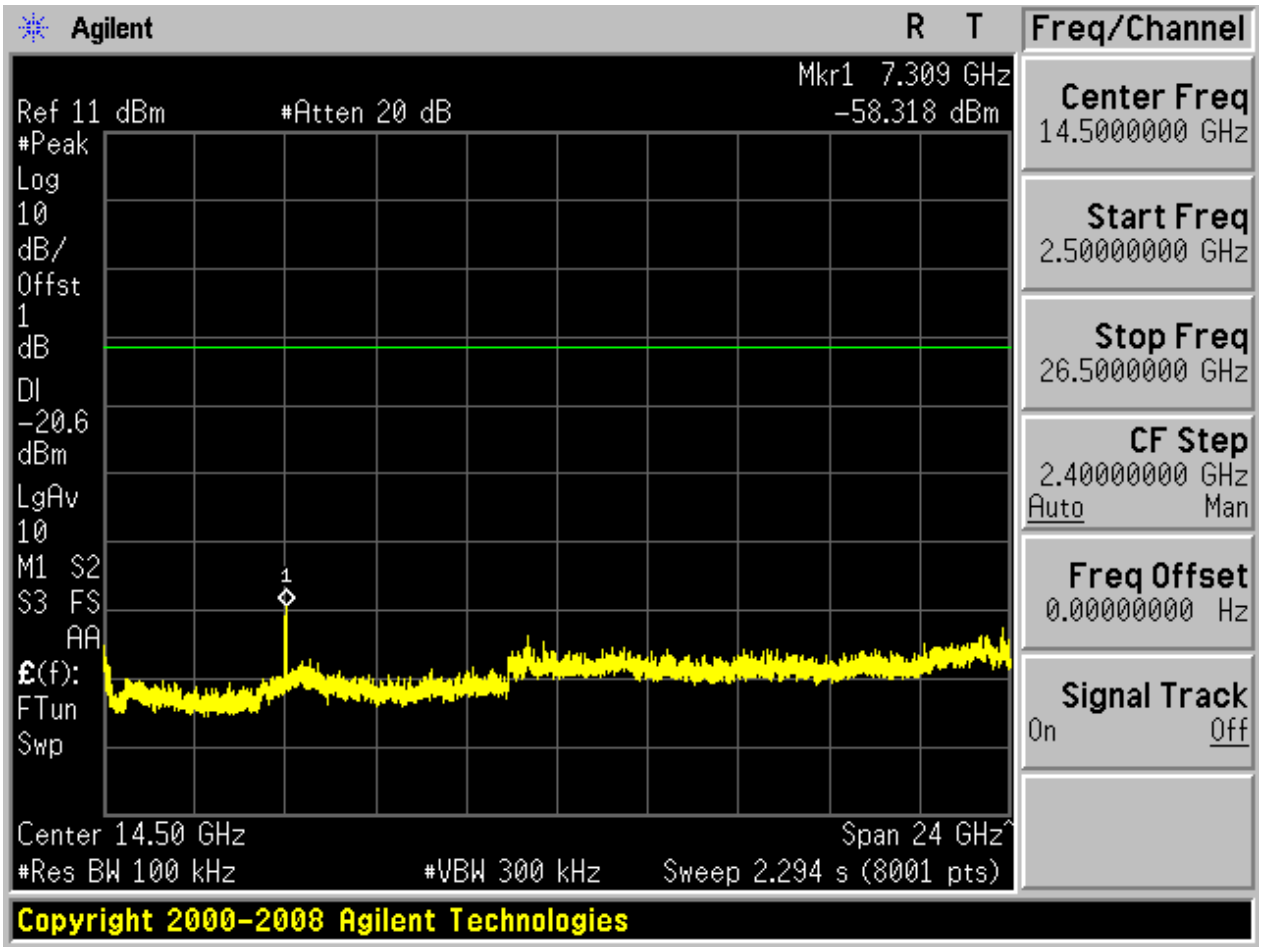

2.11 11G_H@Ant 1

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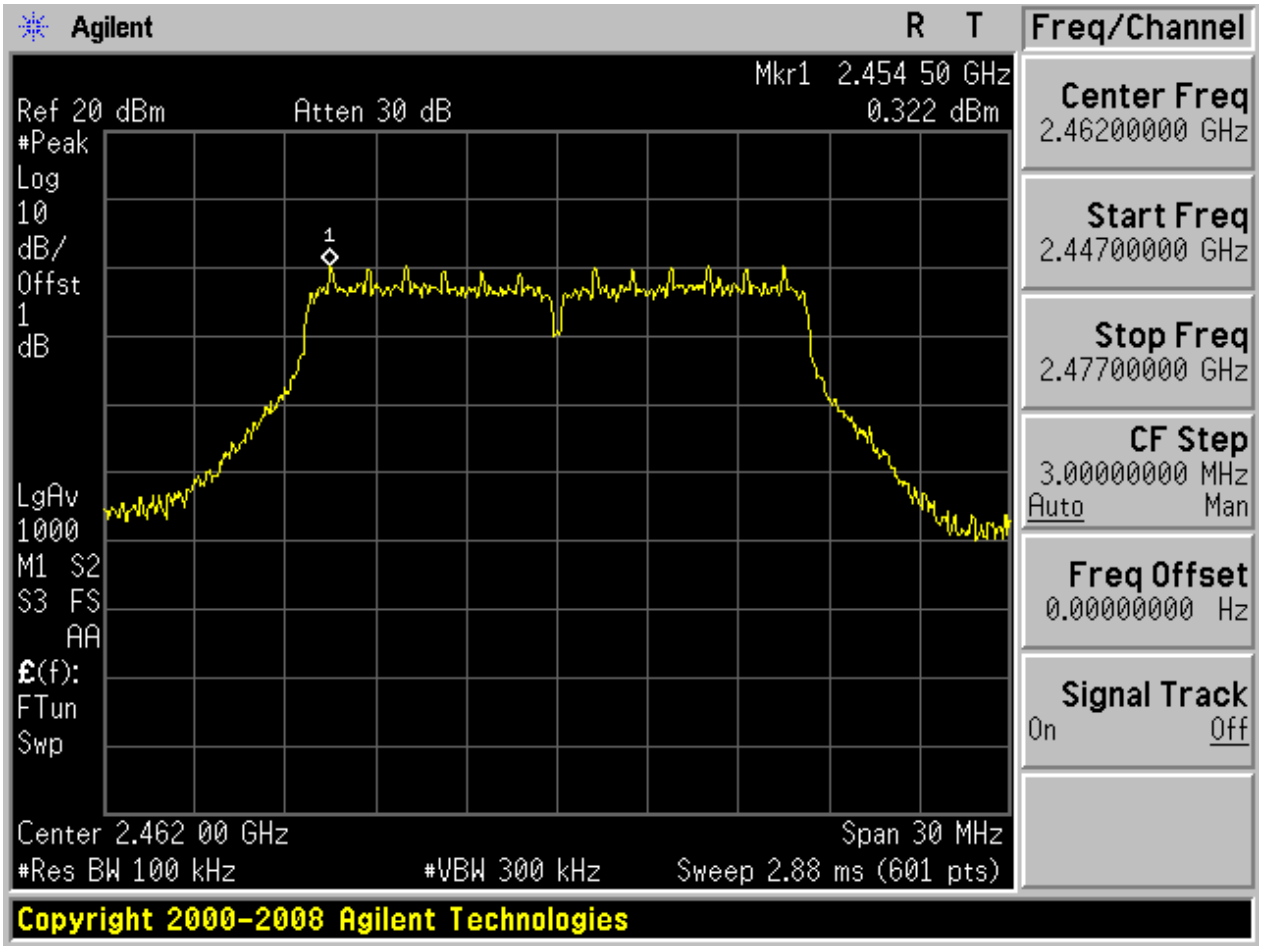

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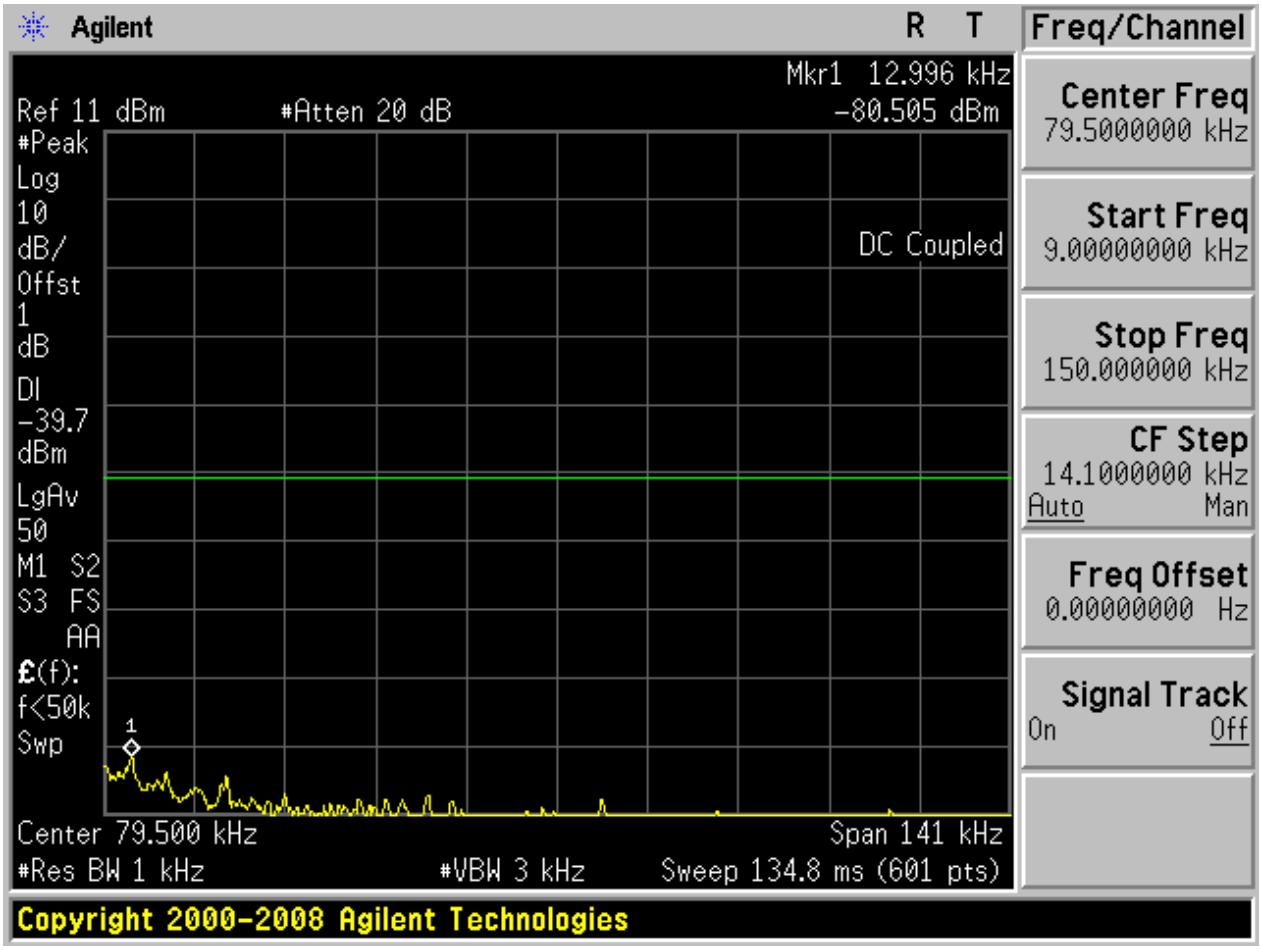

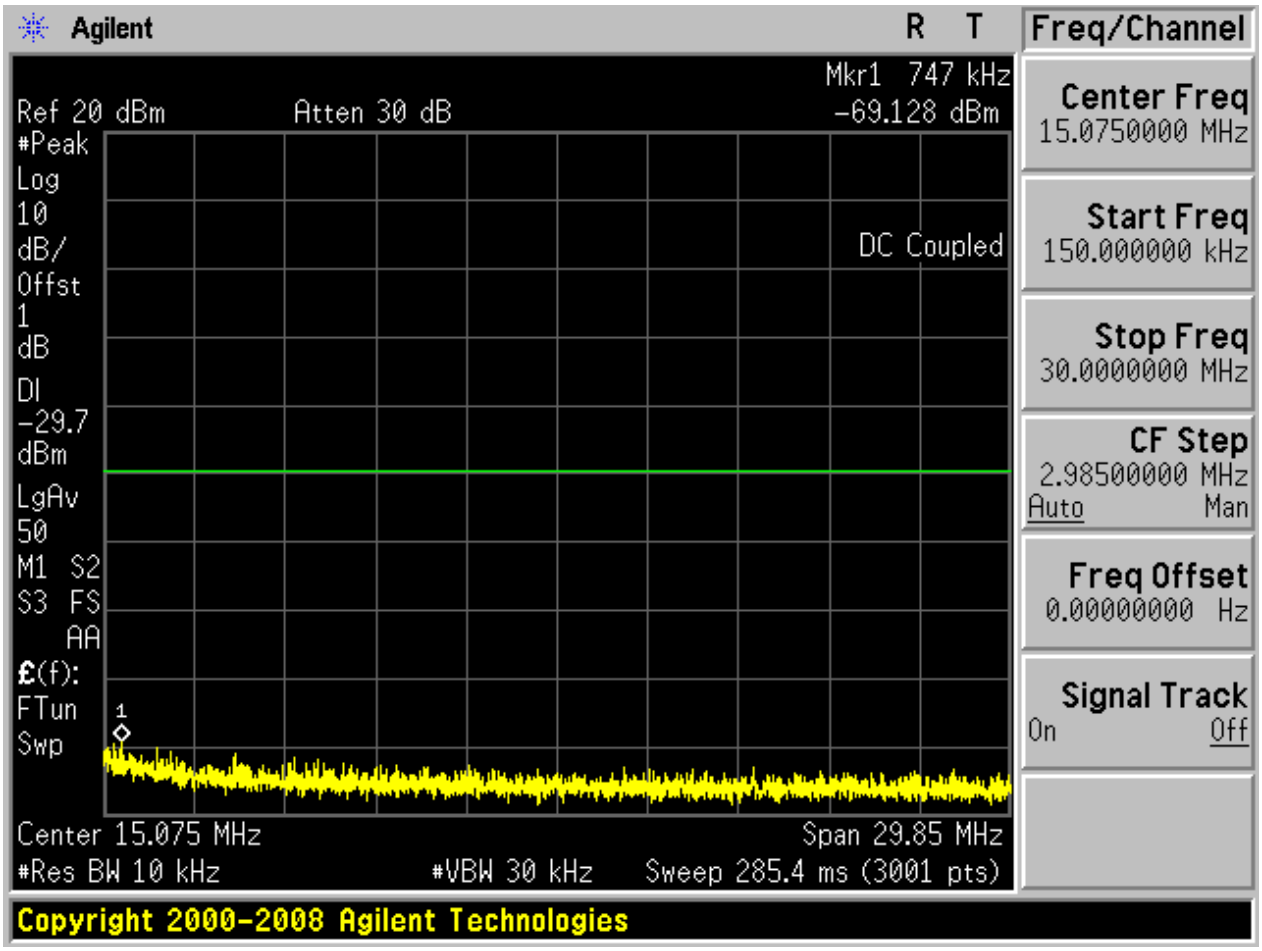

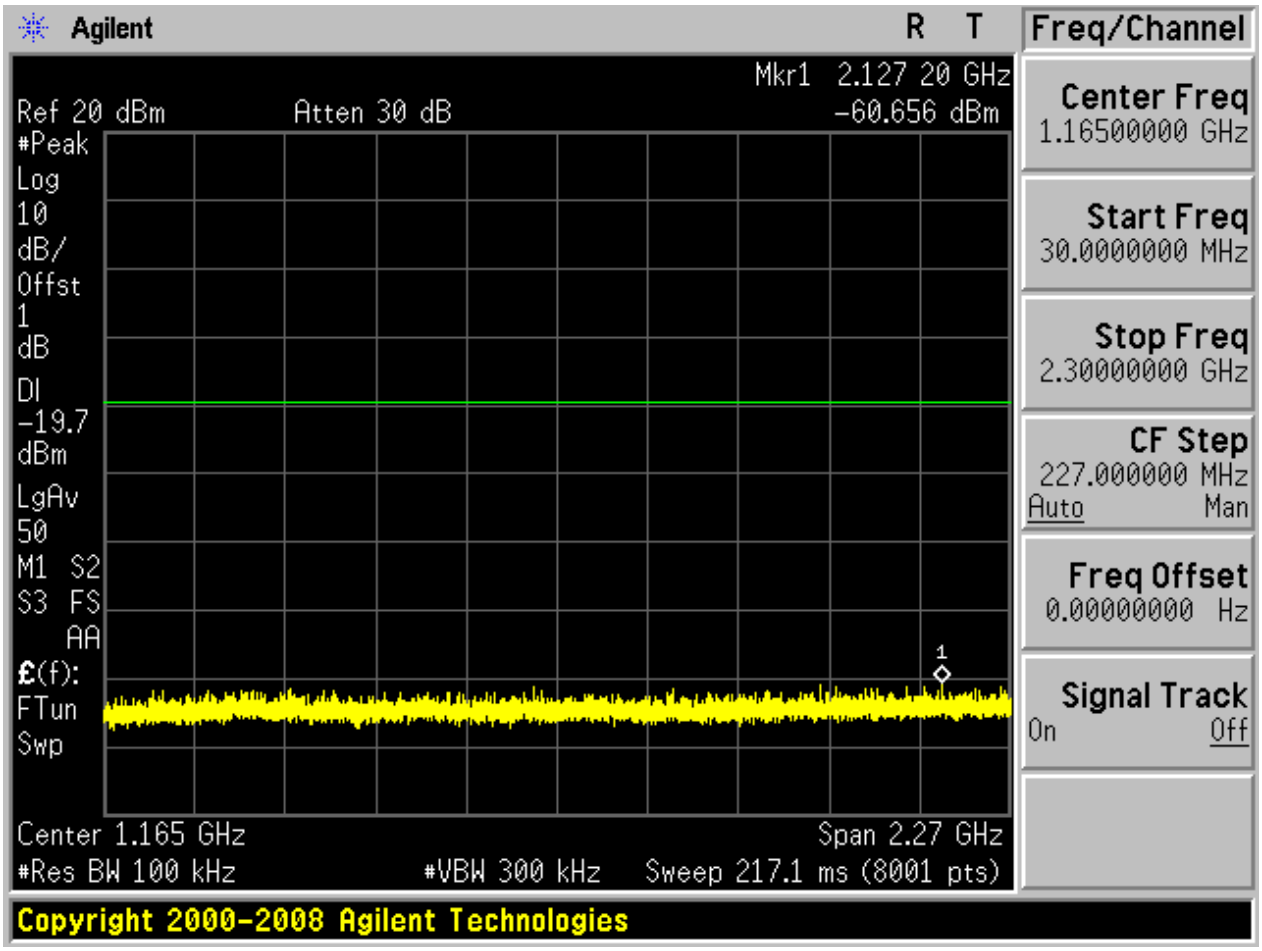

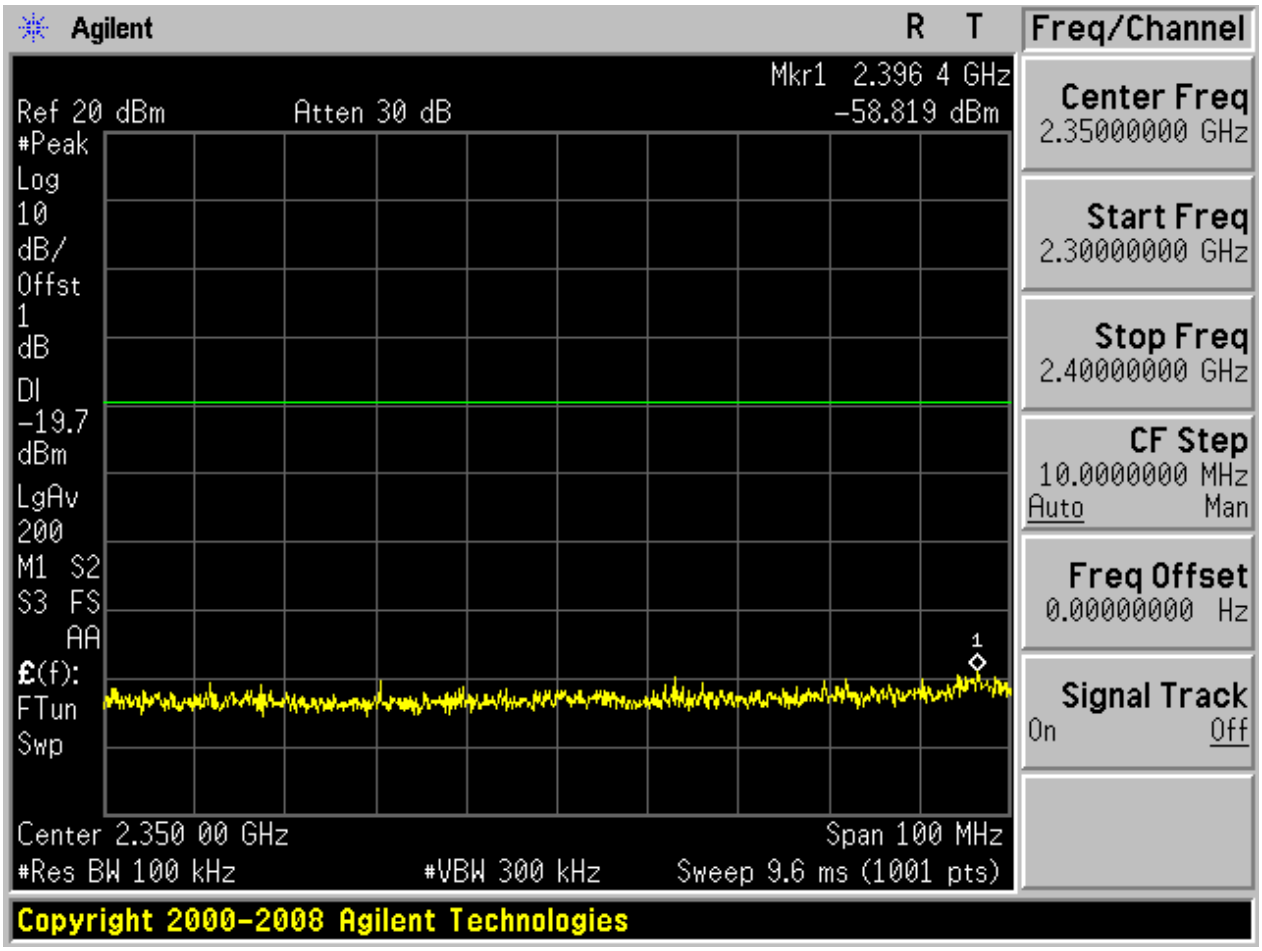

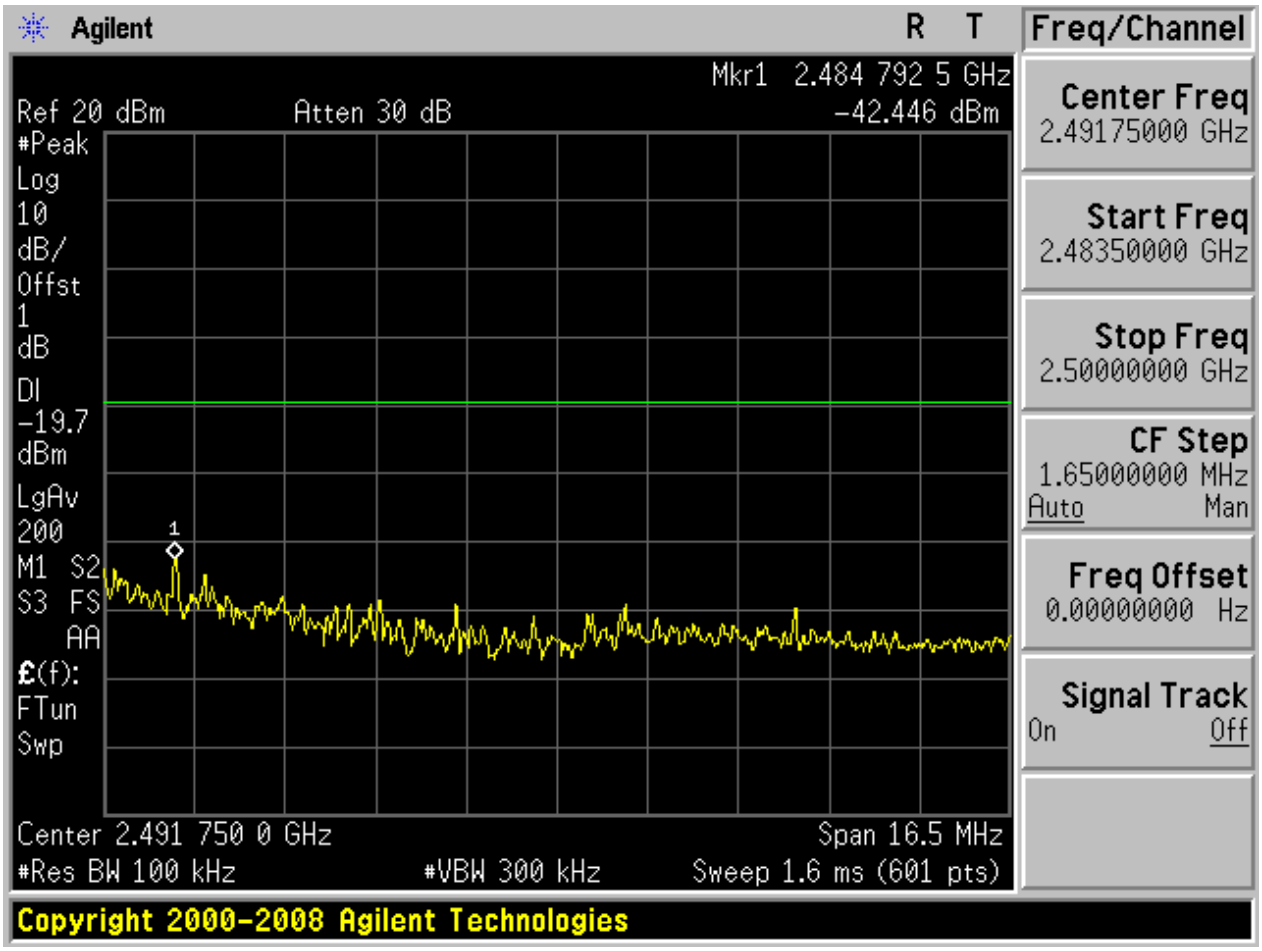

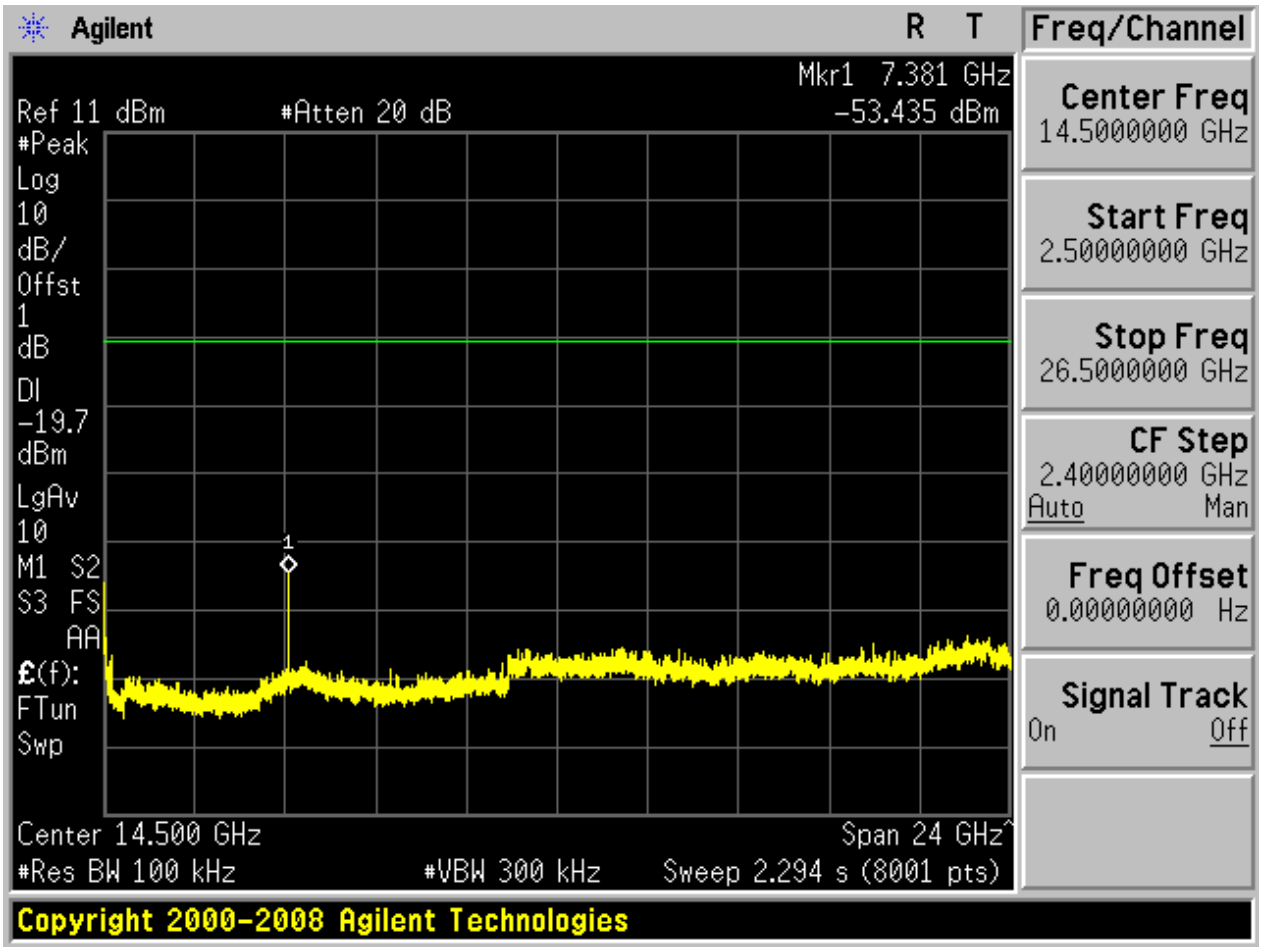

2.13 11N20_L@Ant 1

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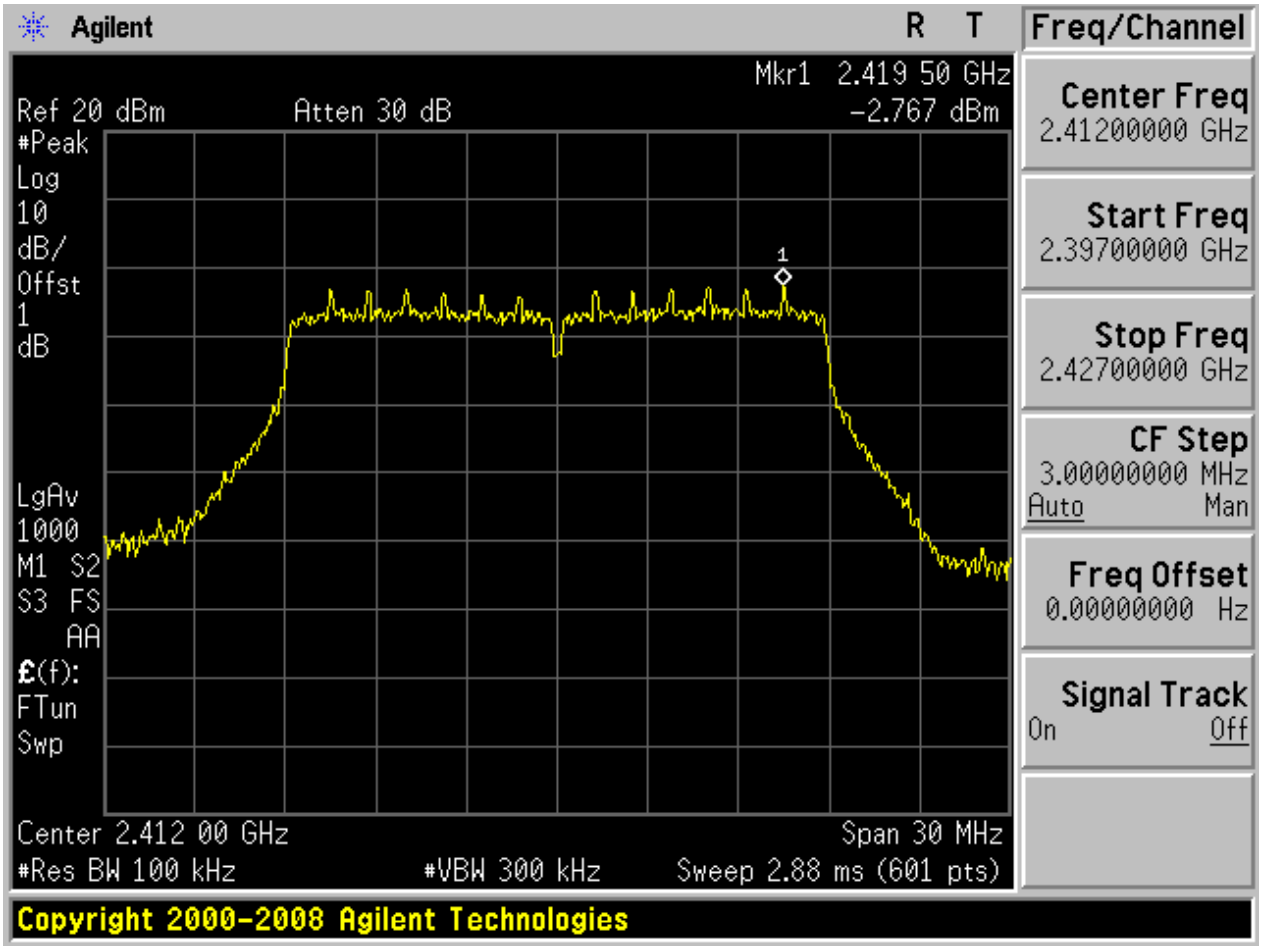

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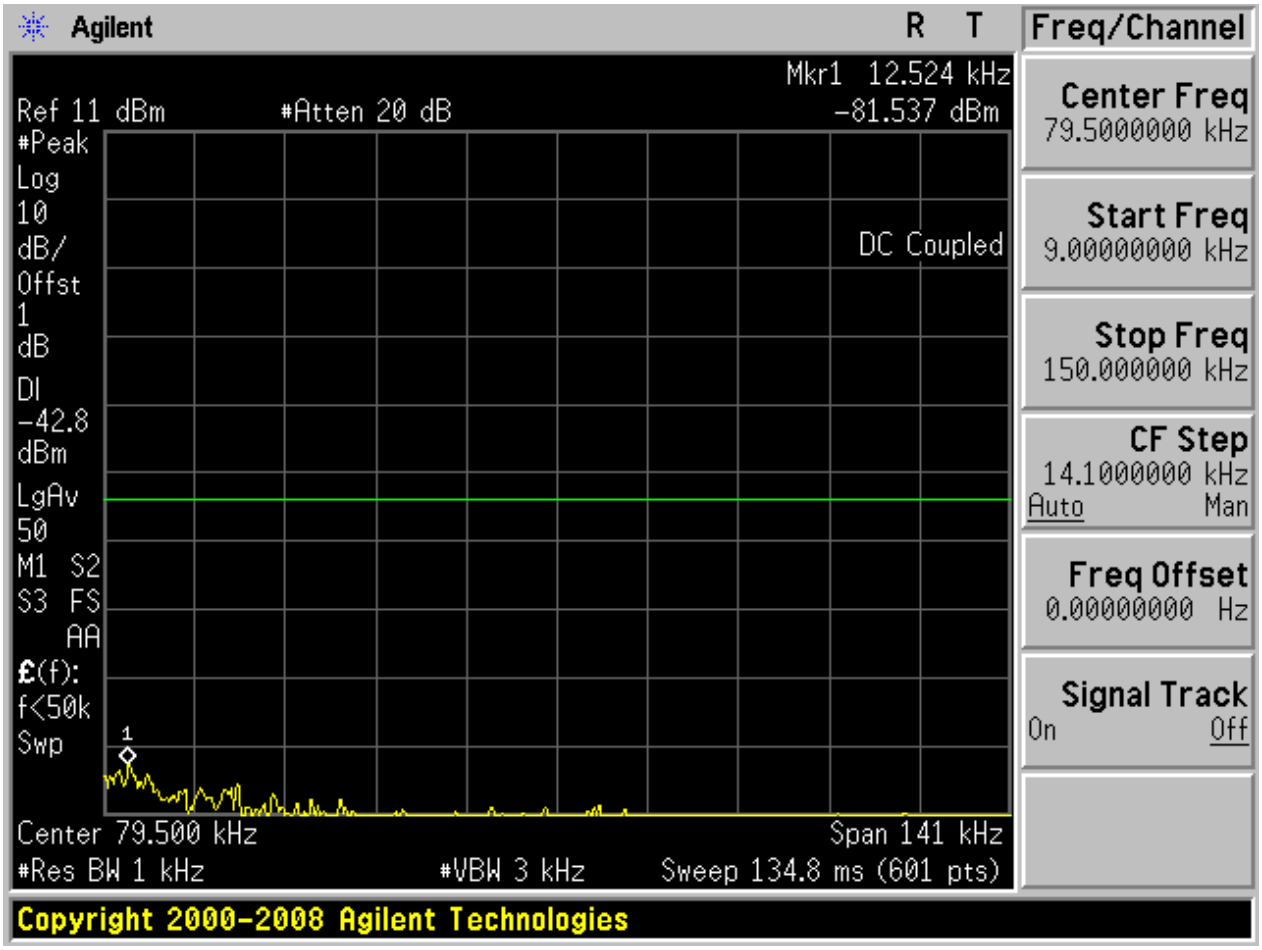

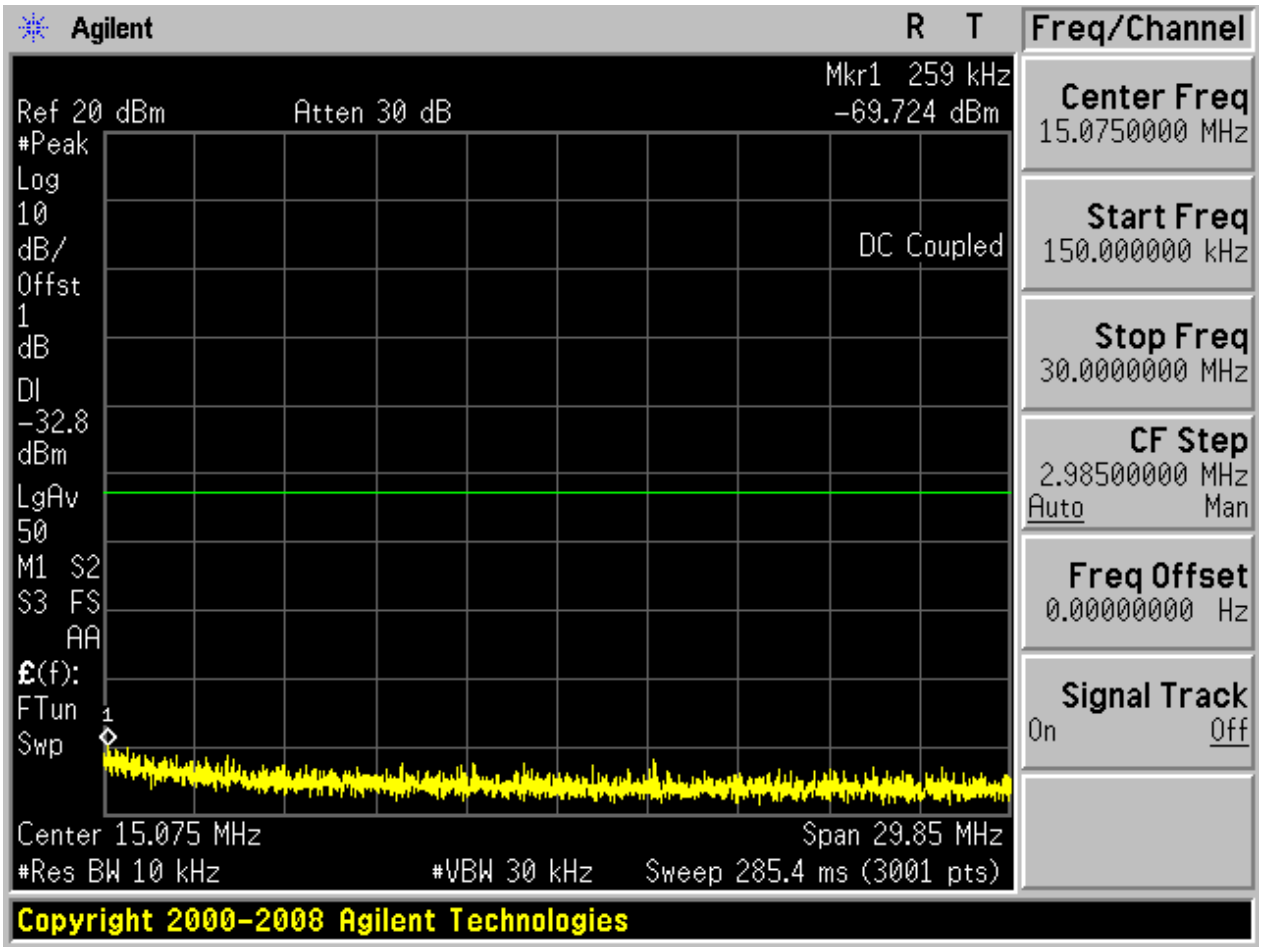

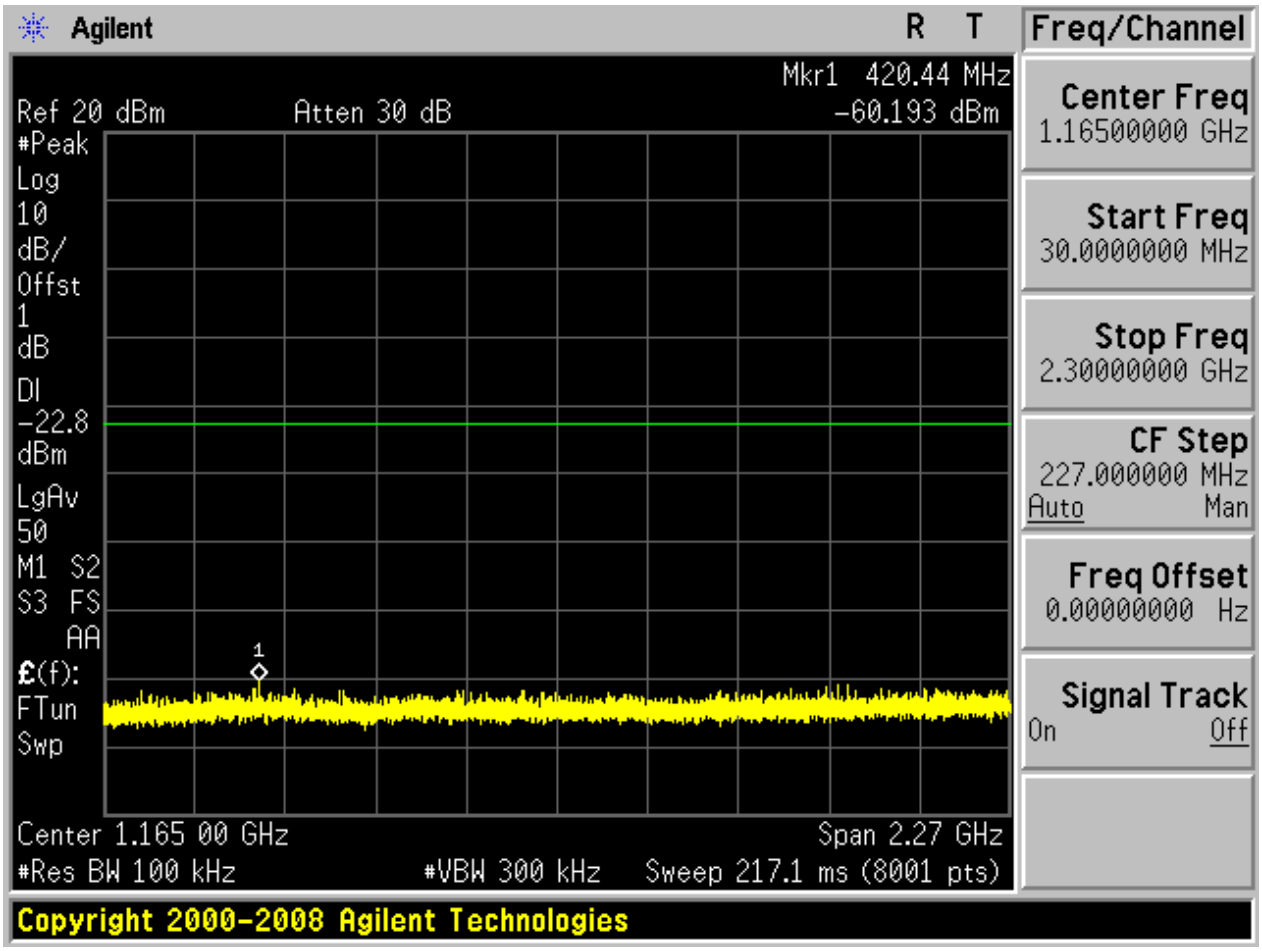

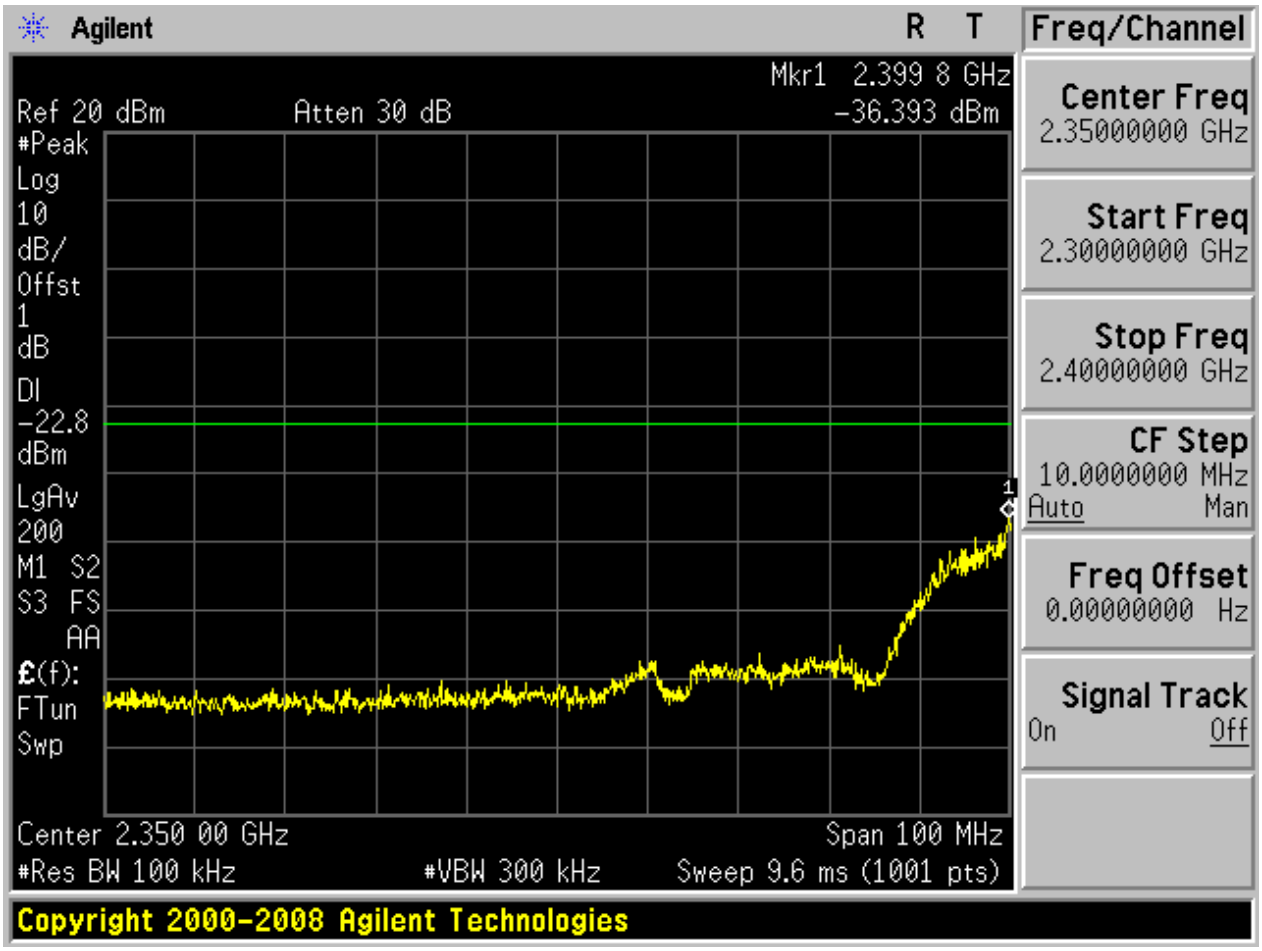

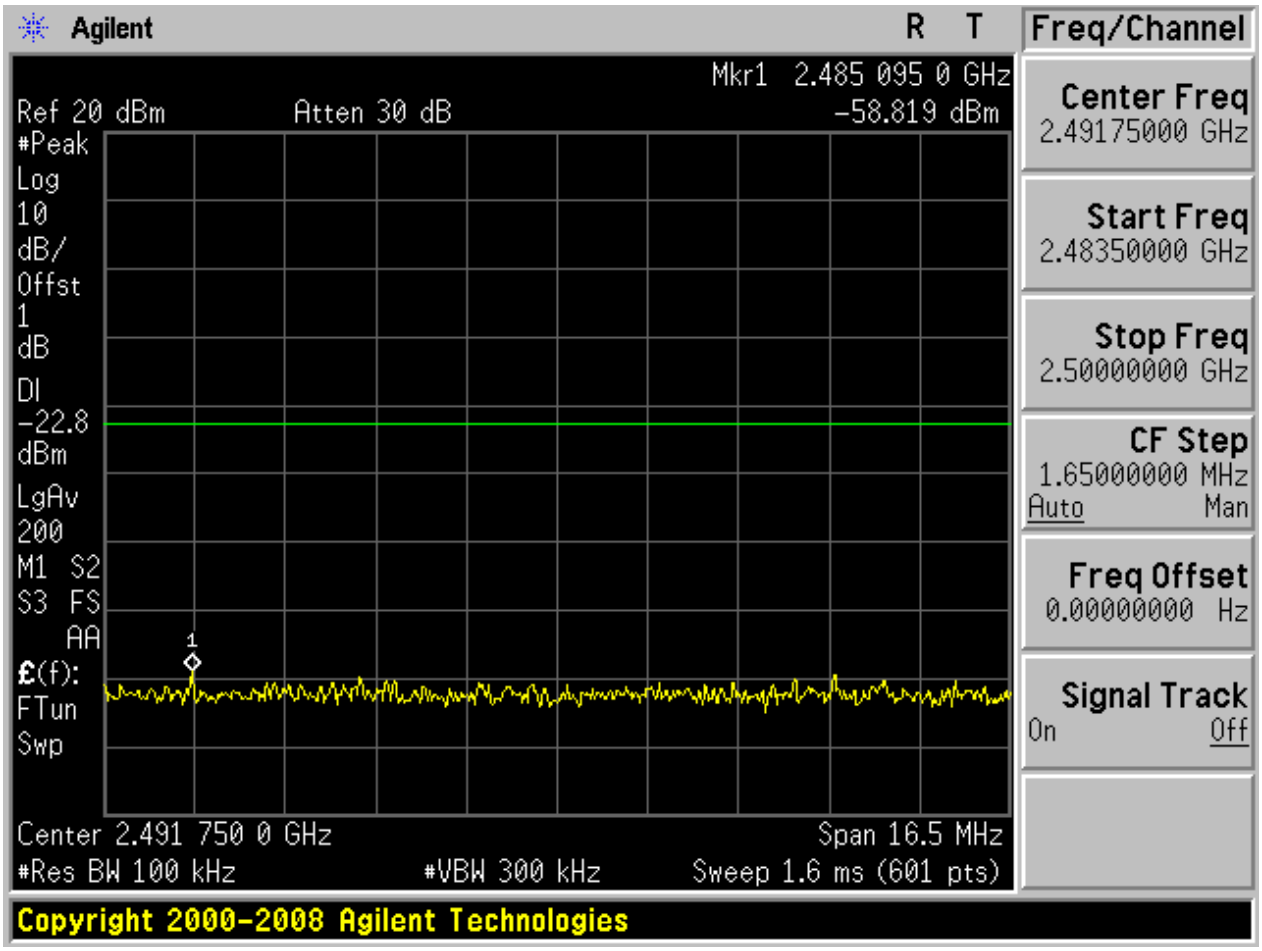

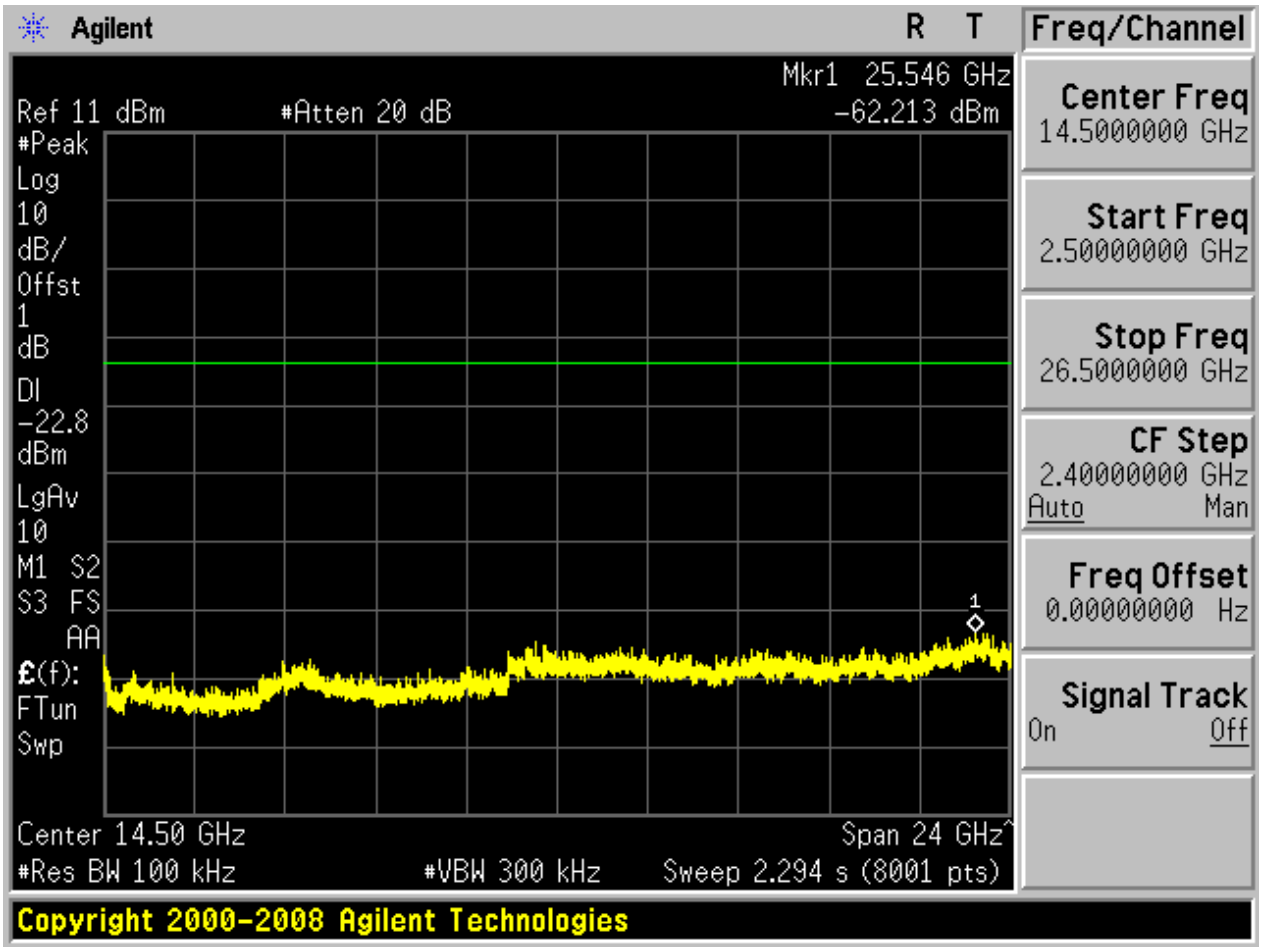

2.15 11N20_M@Ant 1

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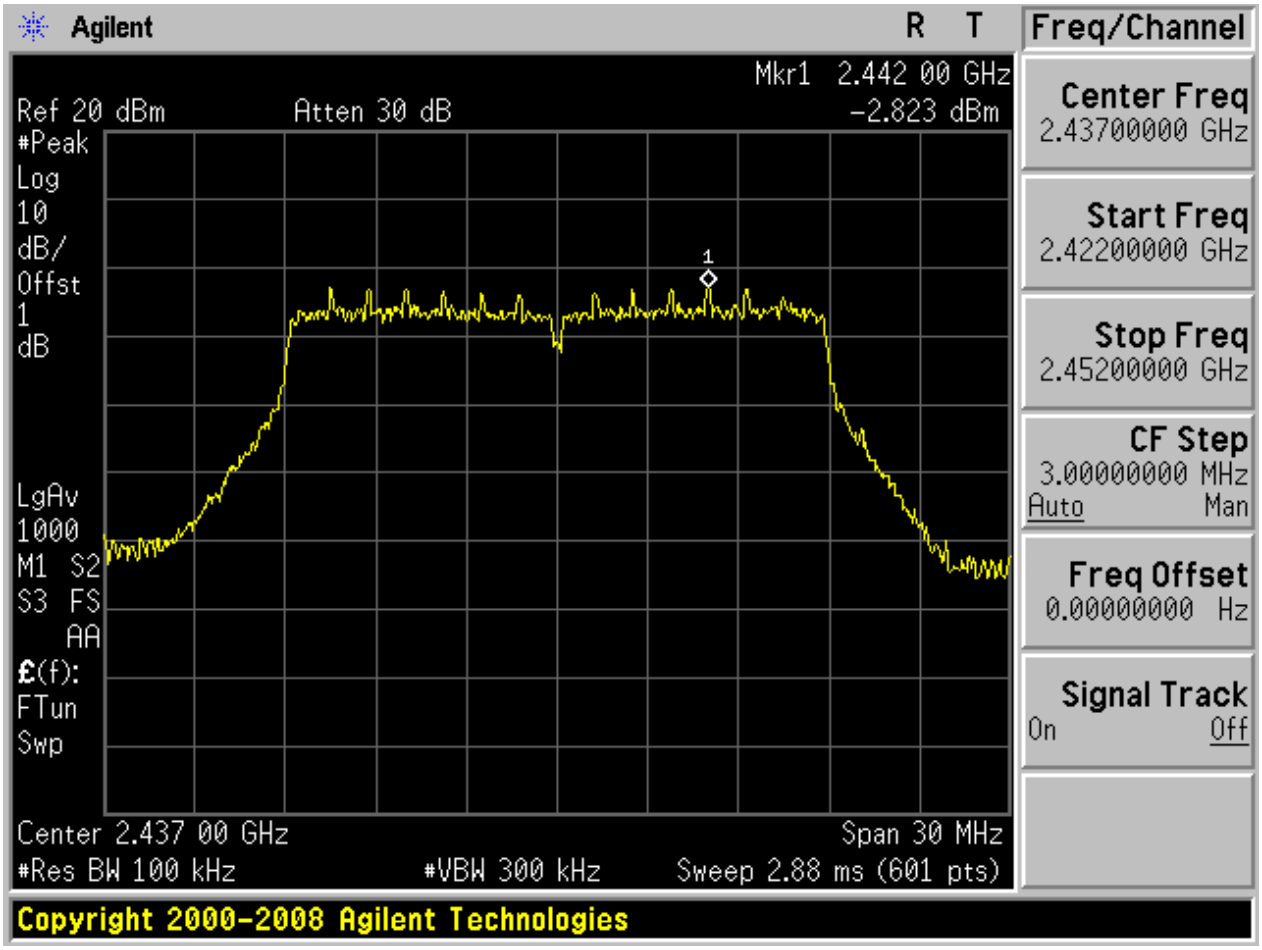

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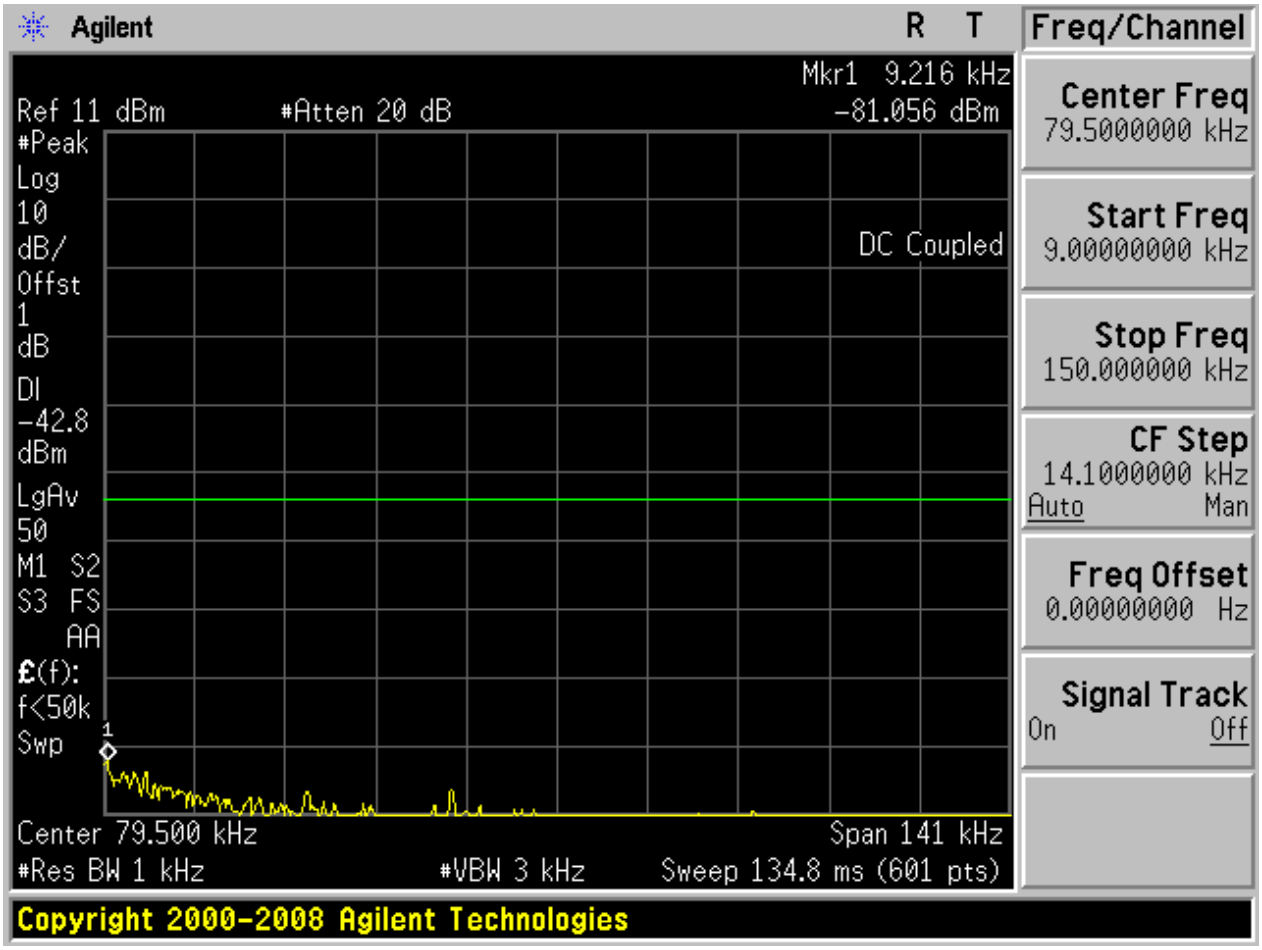

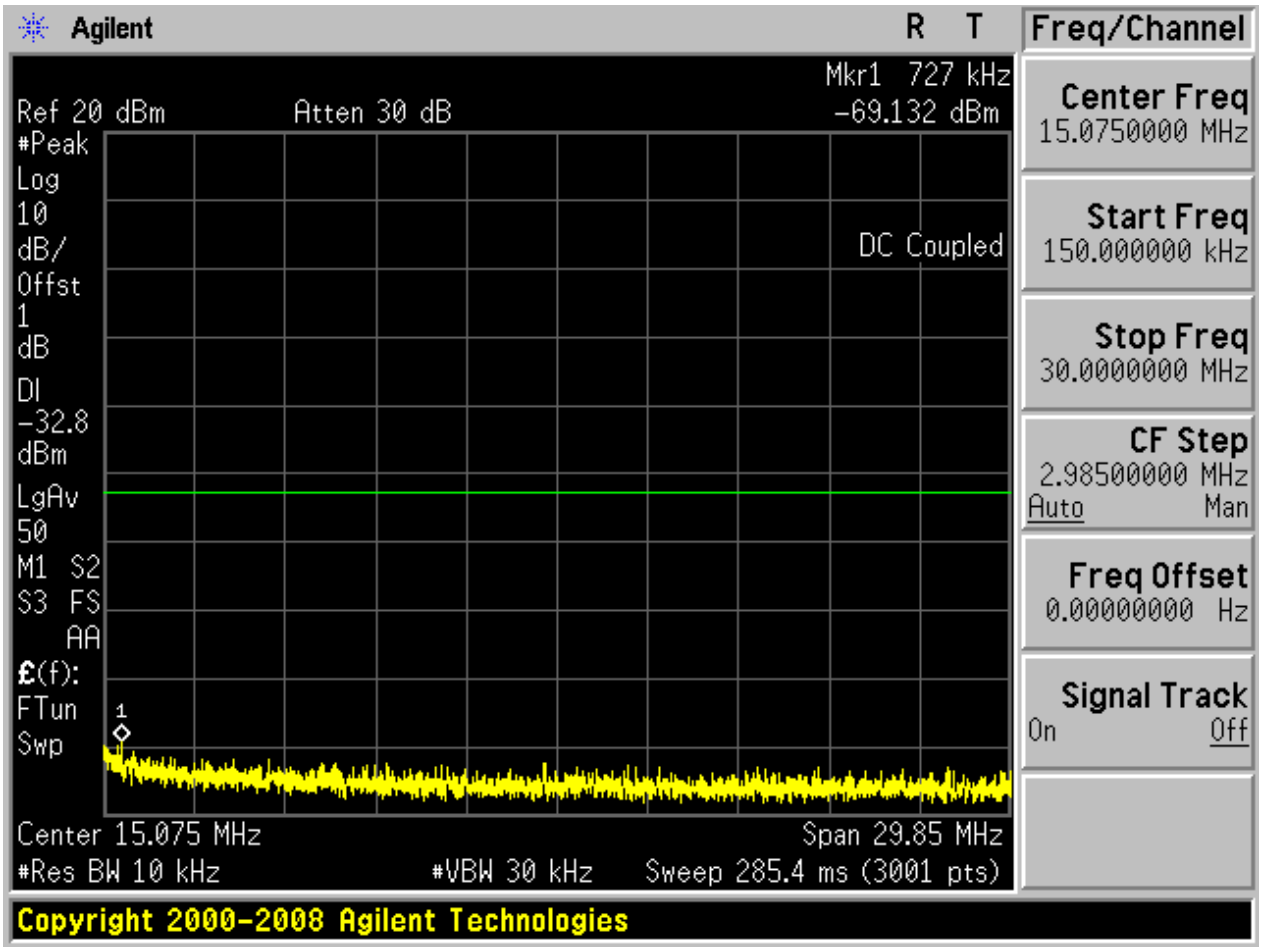

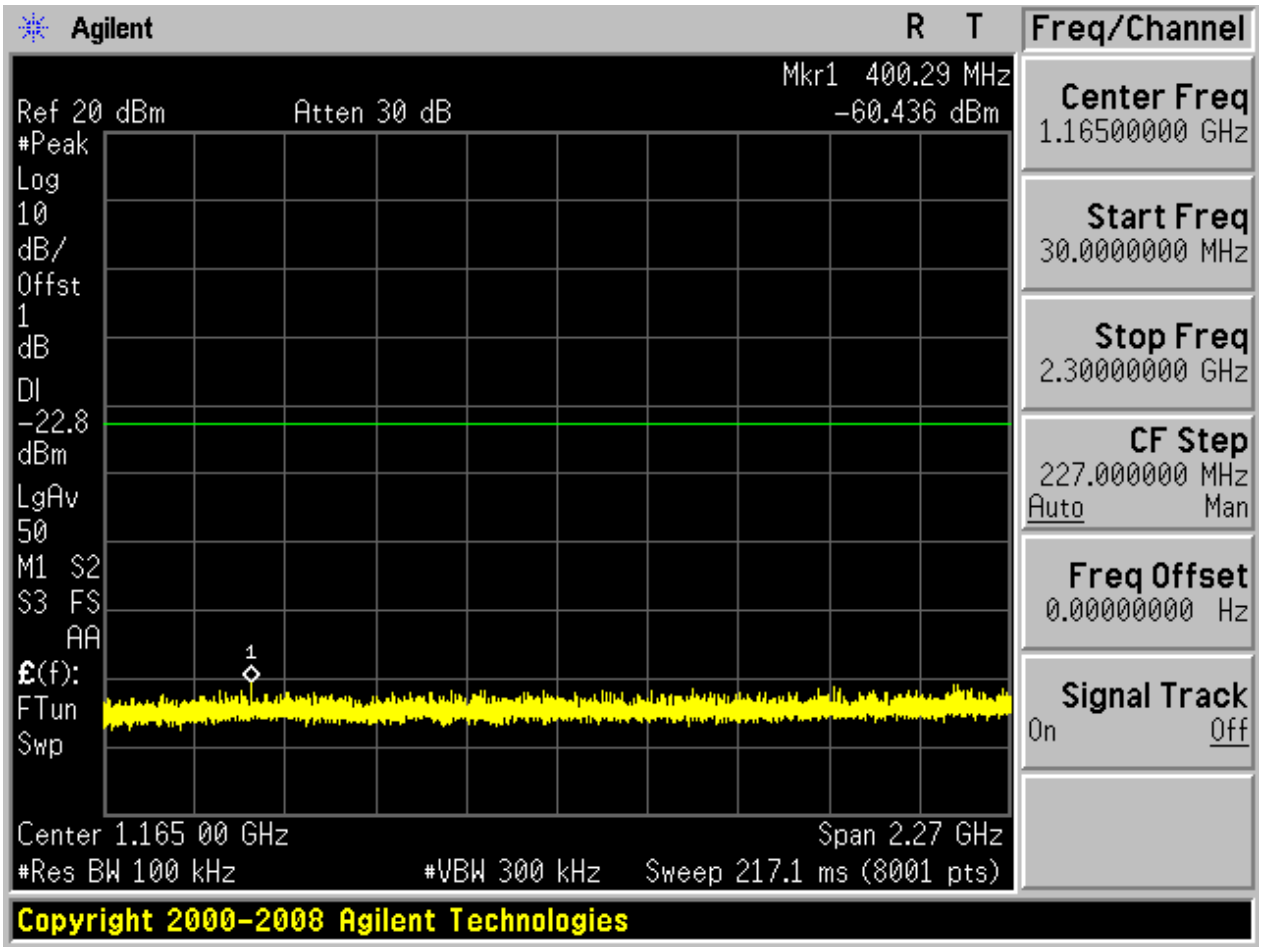

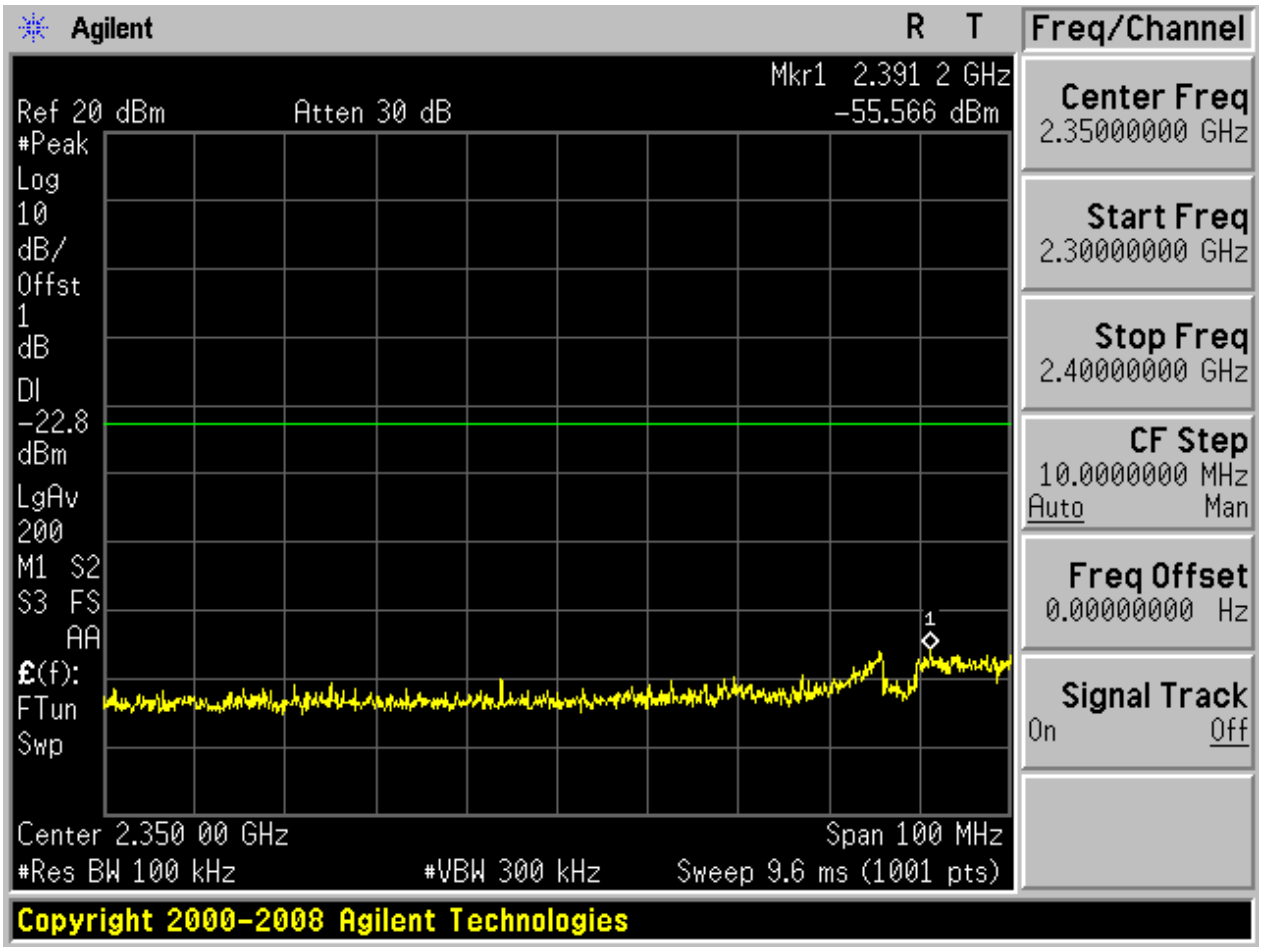

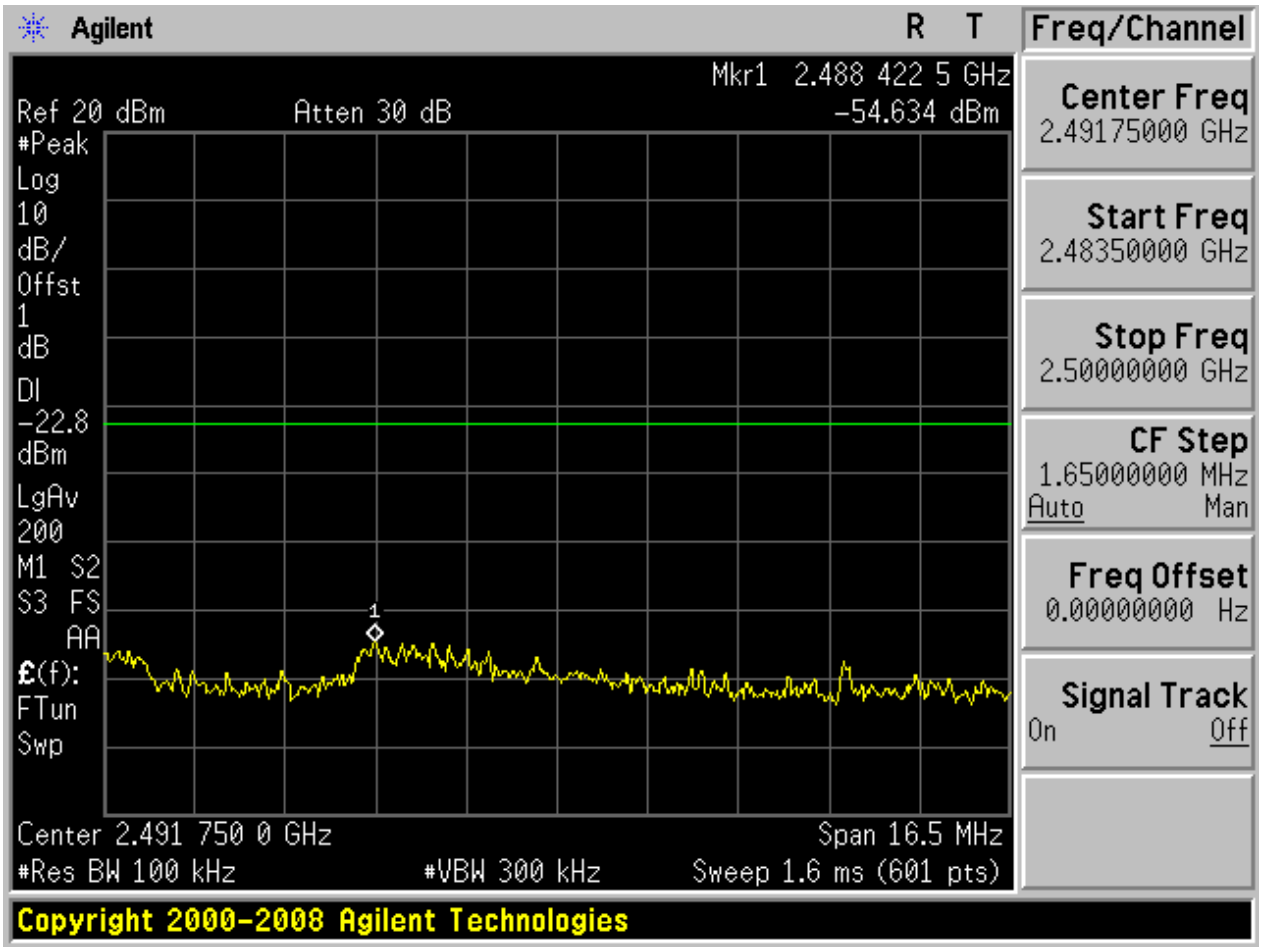

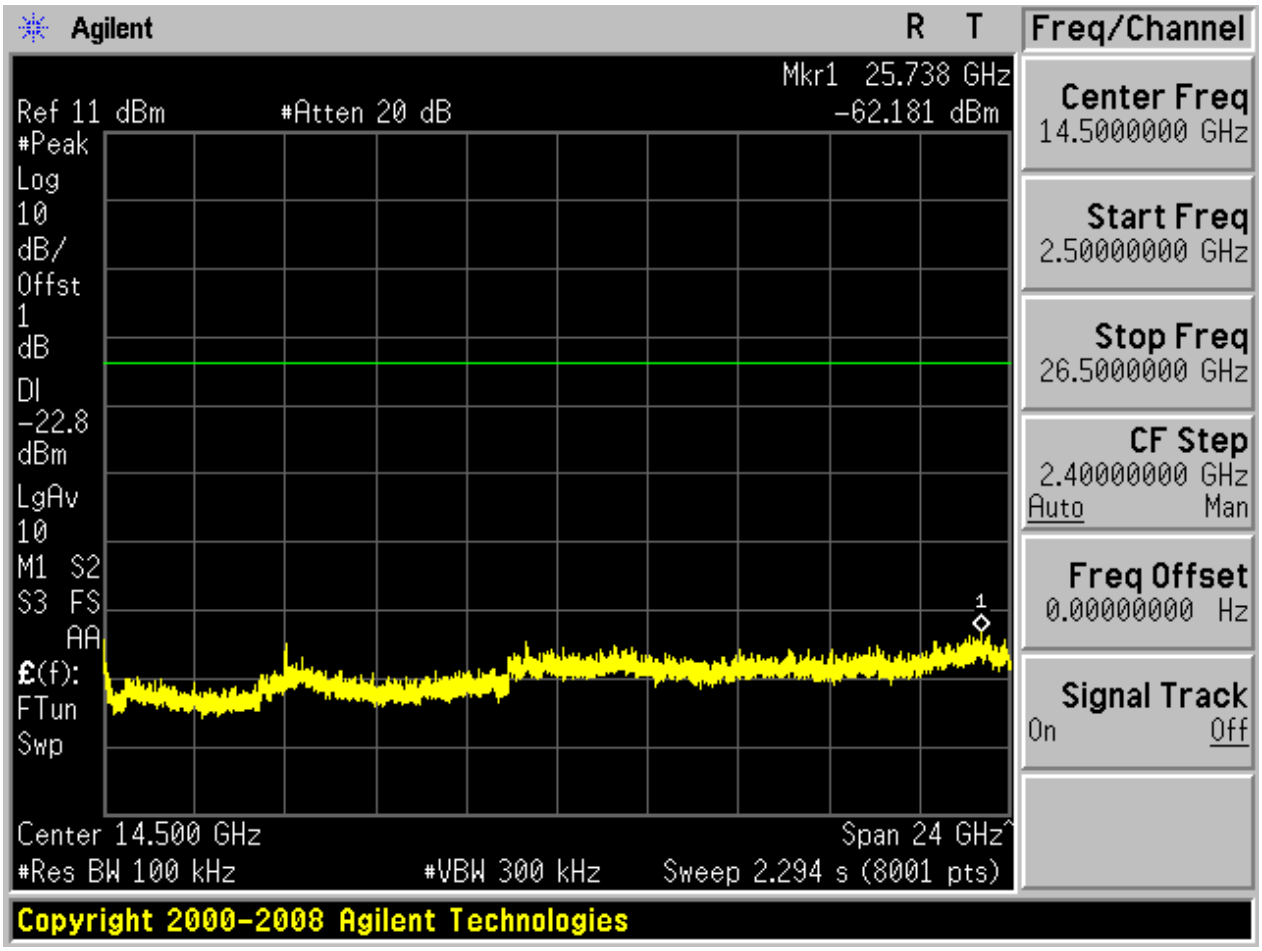

2.17 11N20_H@Ant 1

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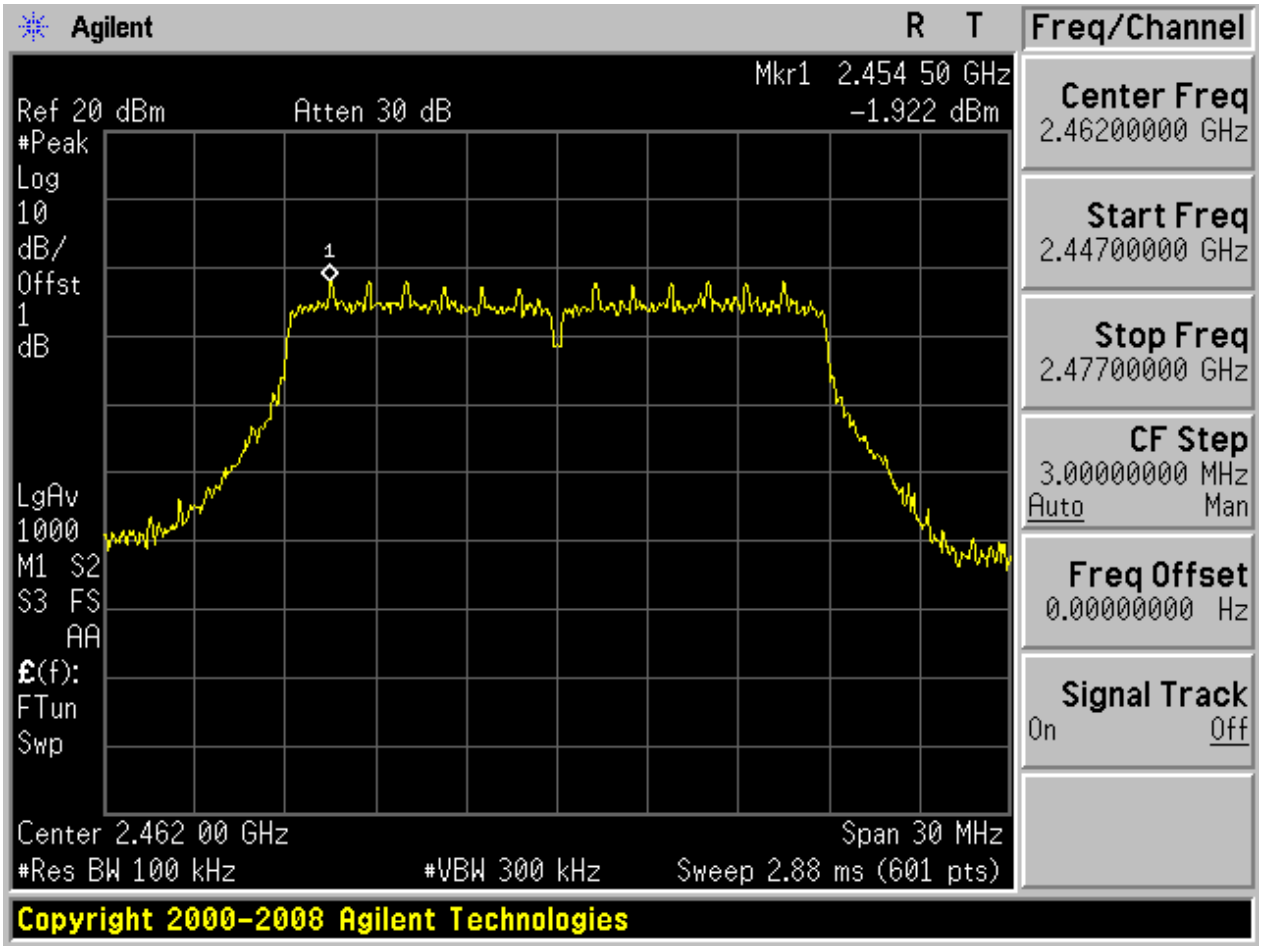

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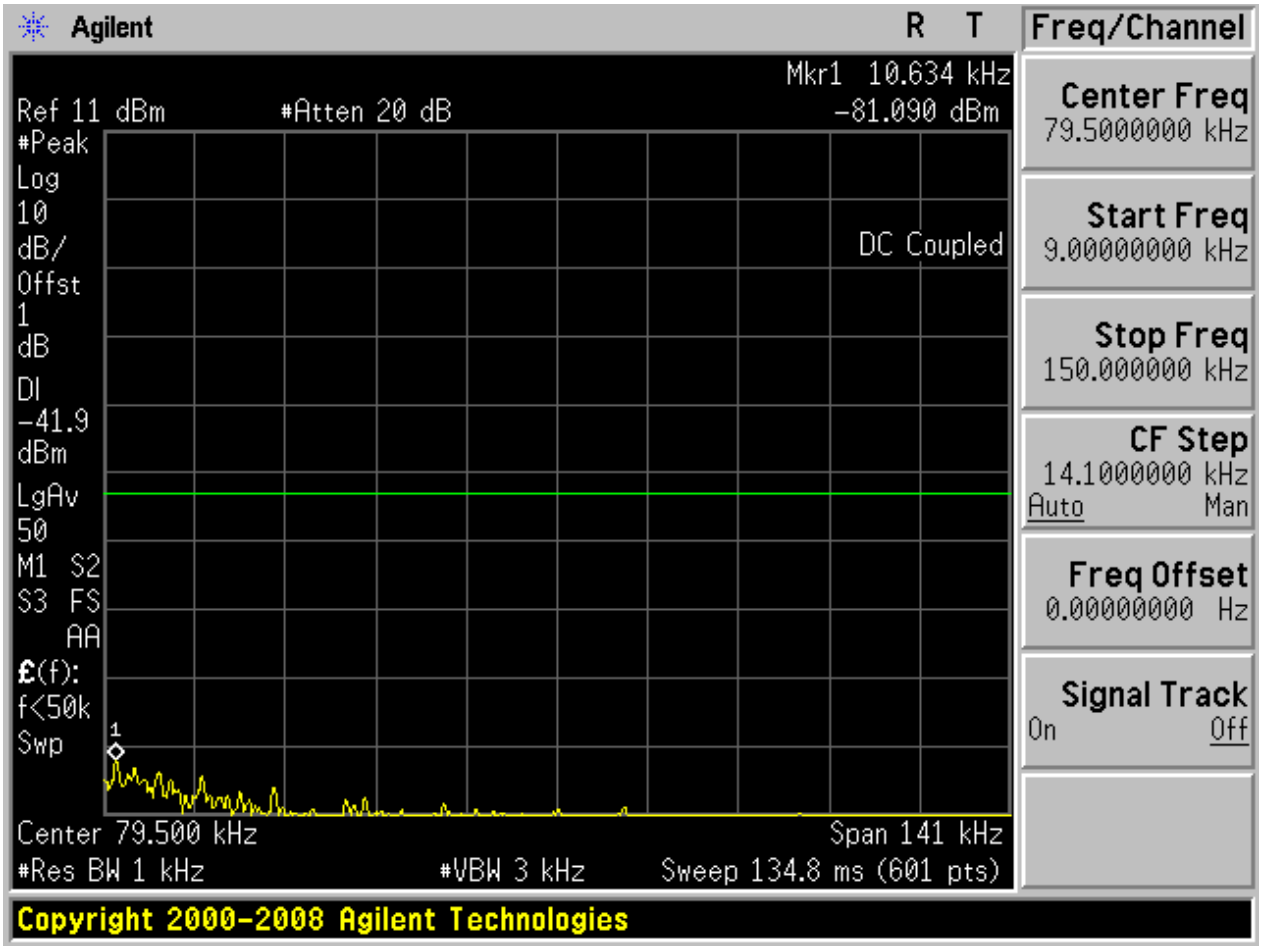
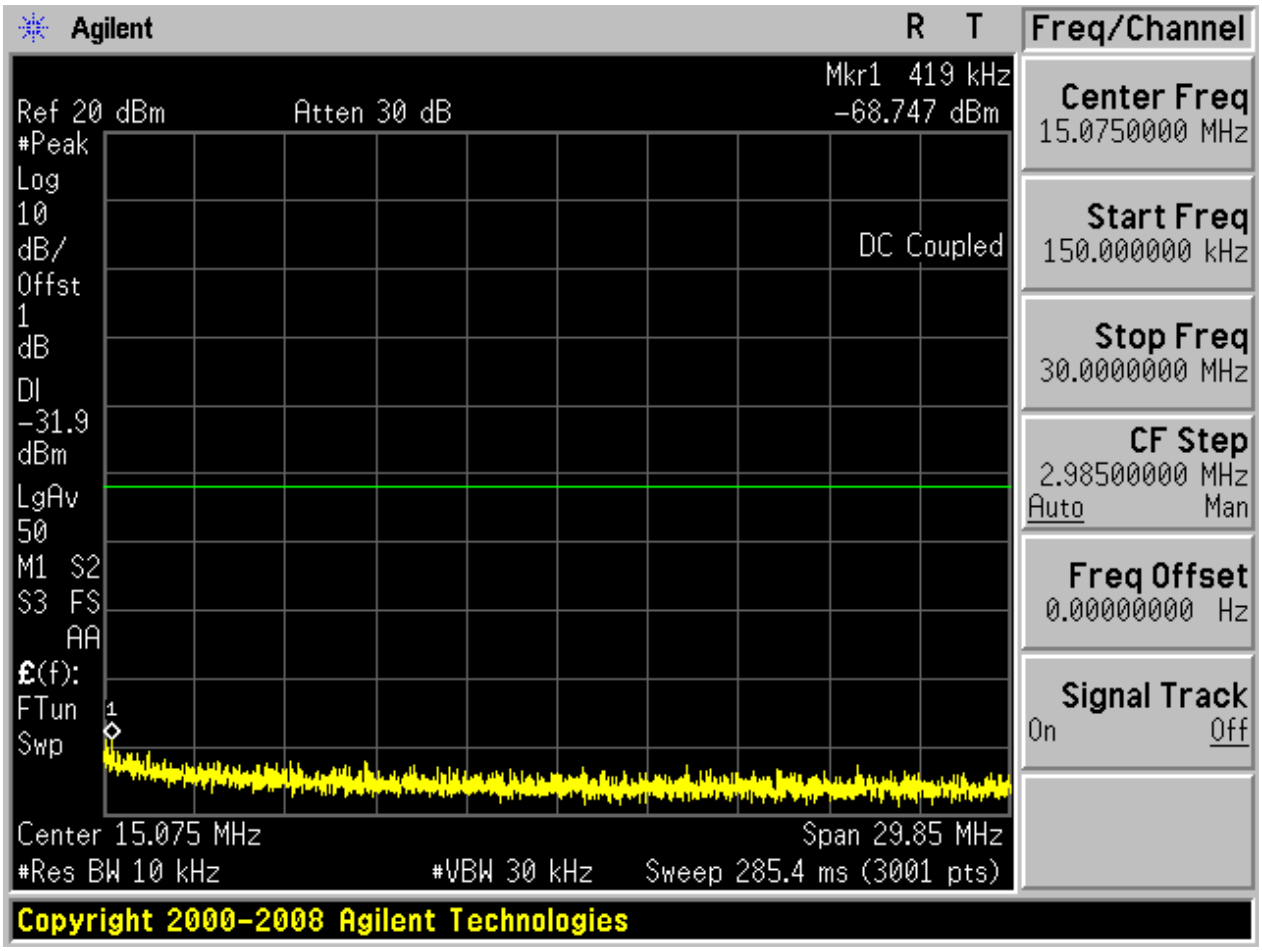
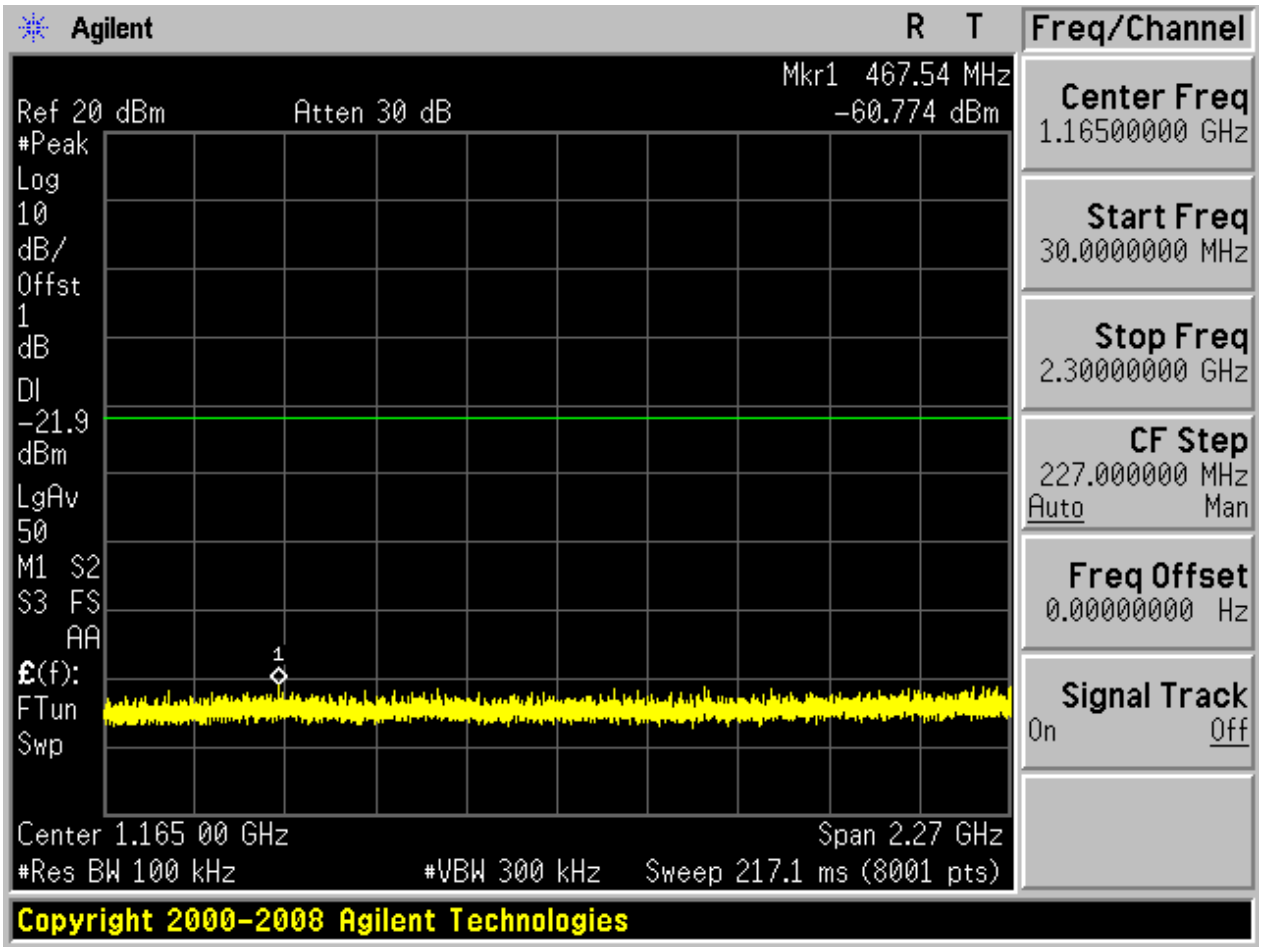
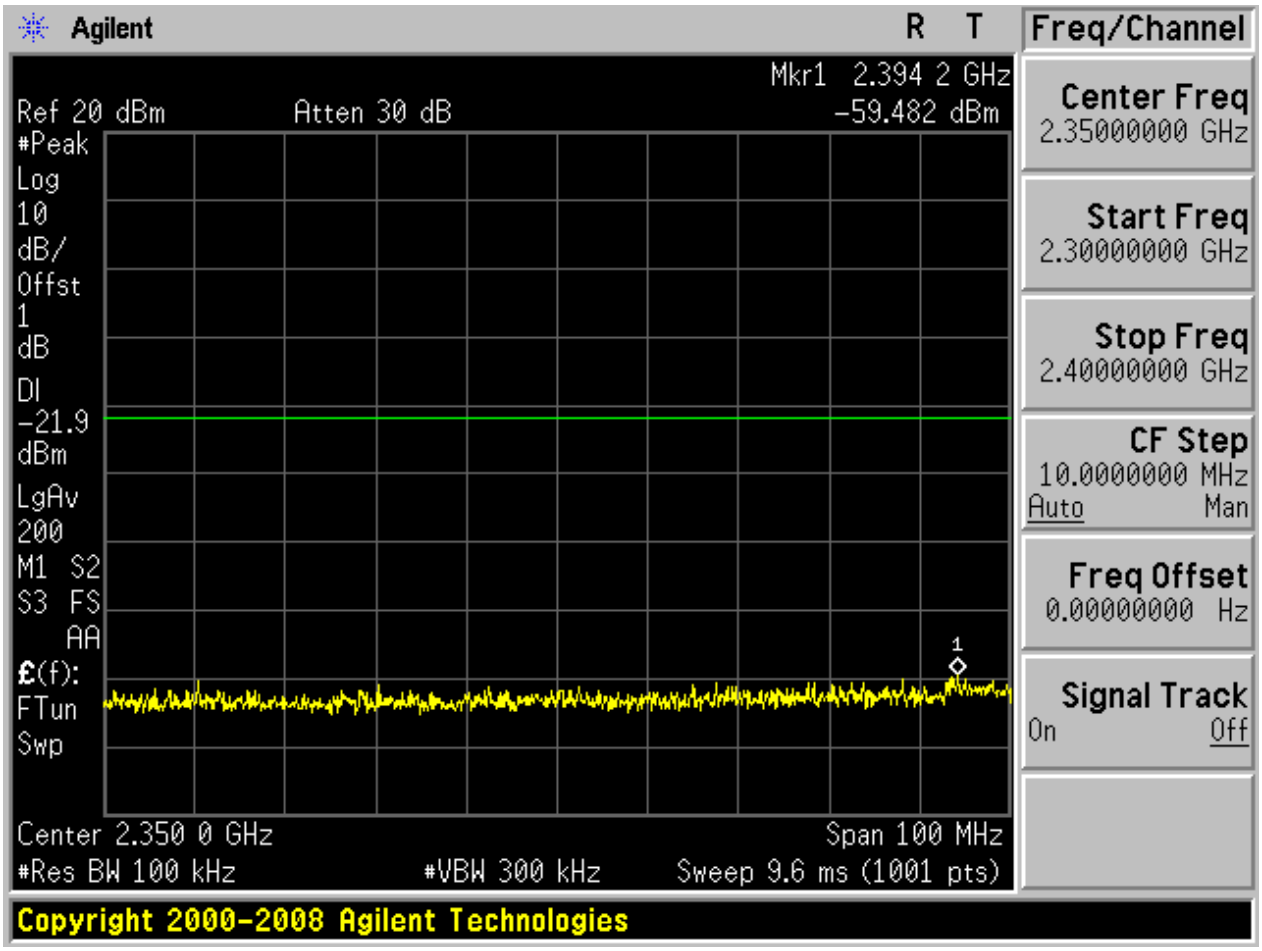
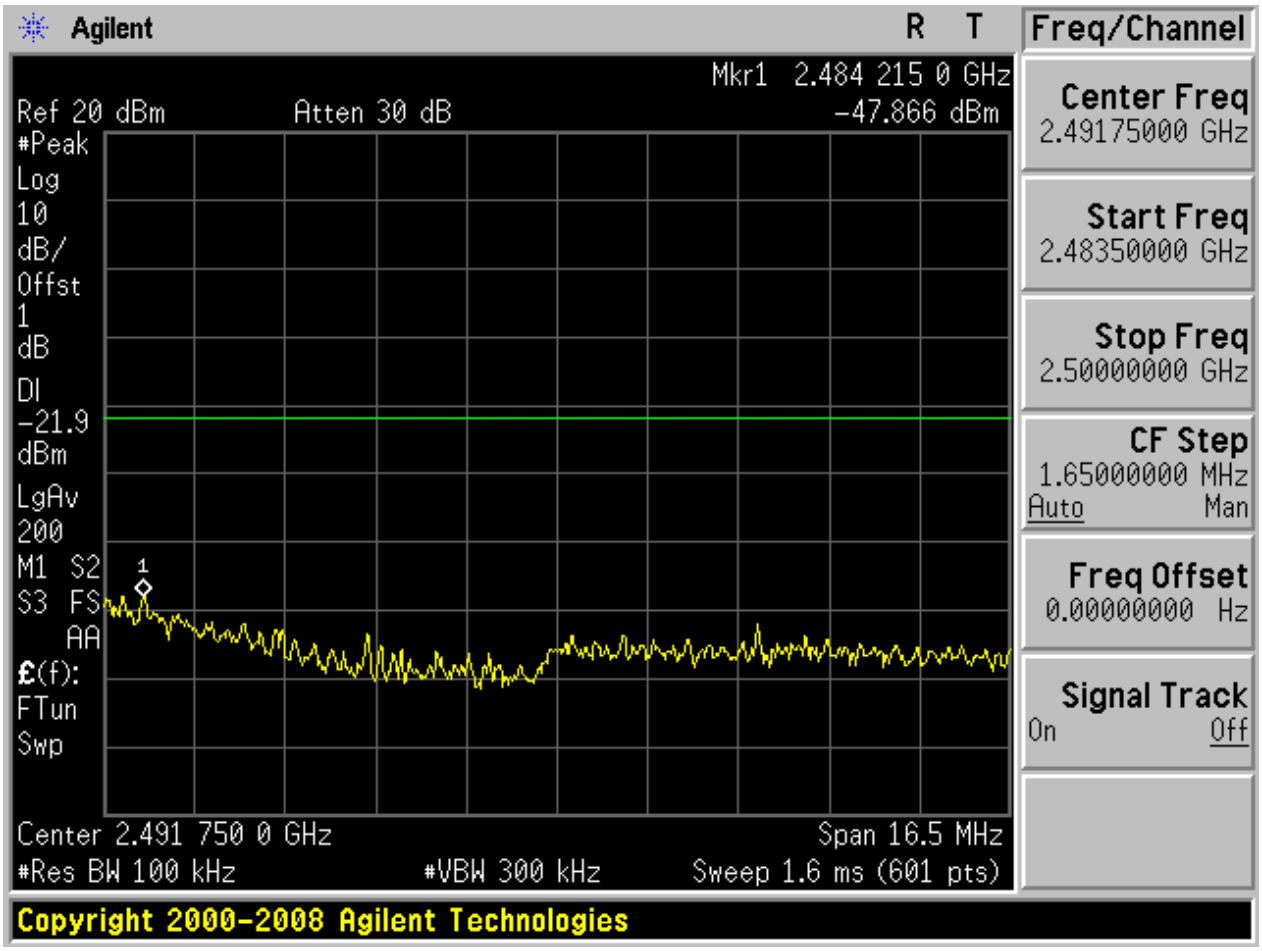
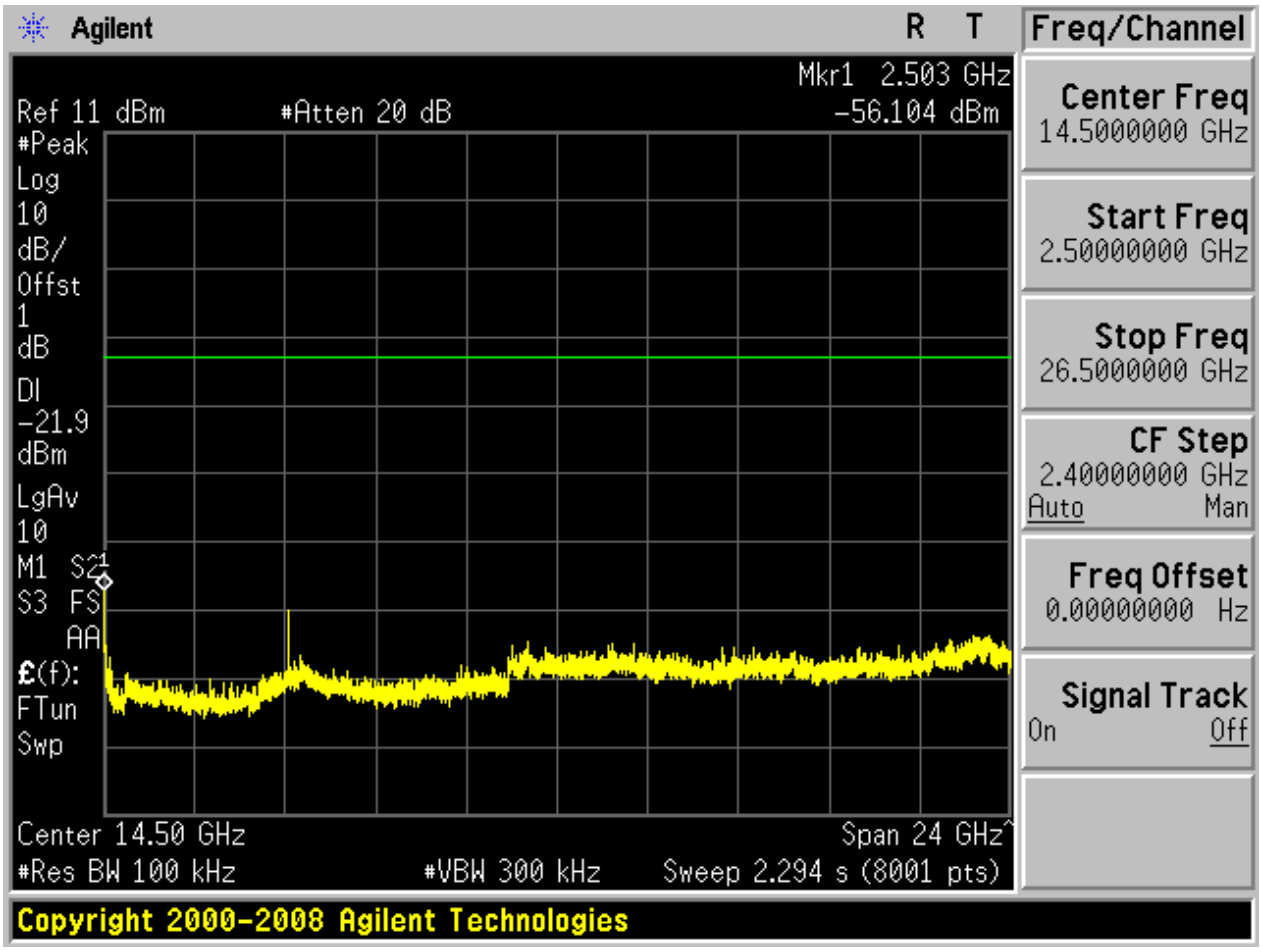












Appendix F: Radiated Spurious Emission & Spurious in Restricted Band

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

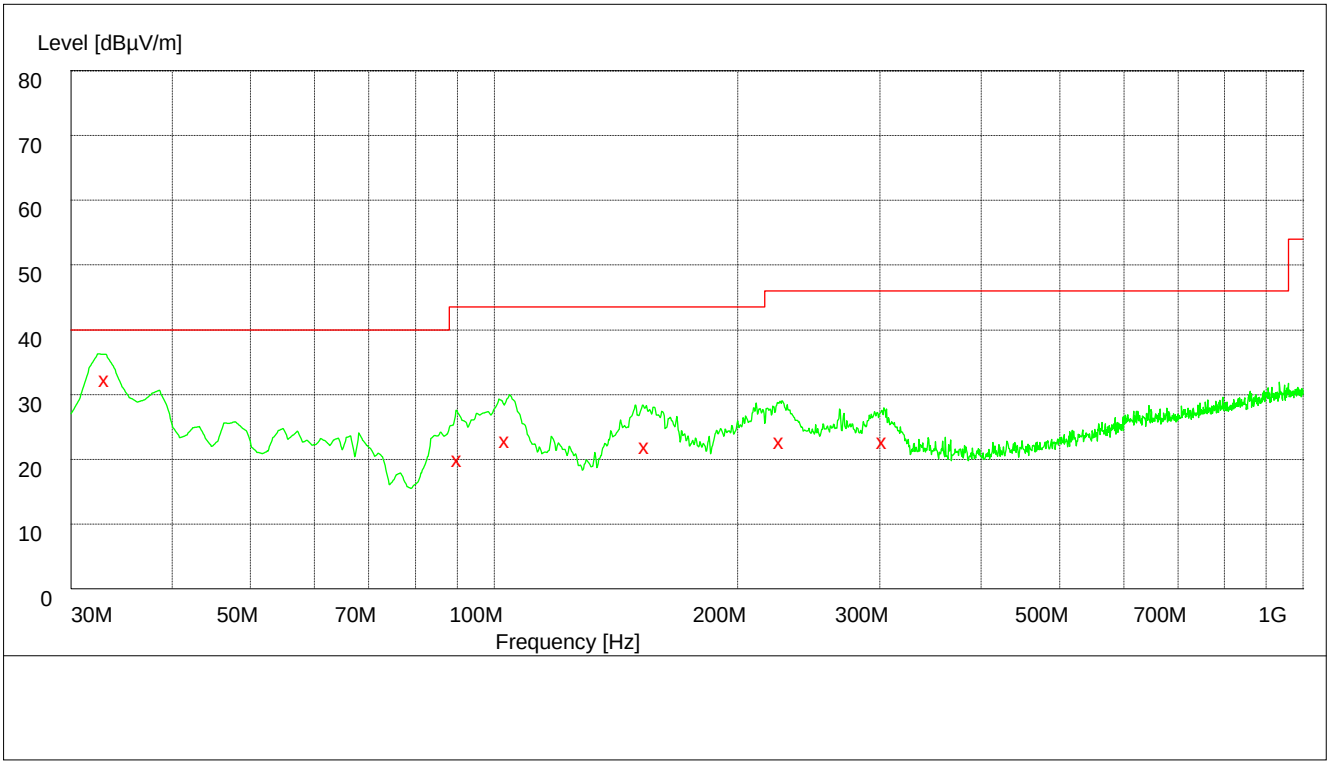
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

The simultaneous transmission has been considered

Part 1: Testing Range of "30 MHz to 1 GHz"

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

Note 2: **The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).**

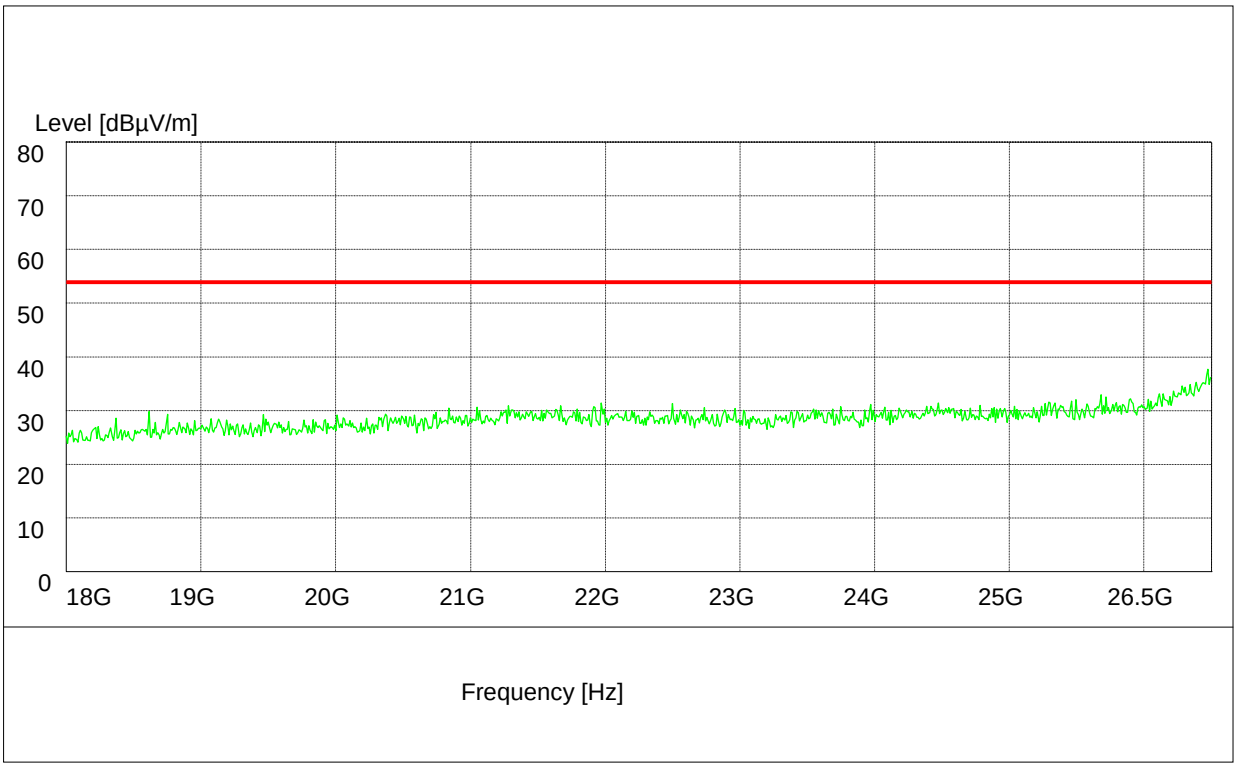


Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Plarization

33.180000	33.80	14.2	40.0	6.2	100.0	360.00	VERTICAL
90.600000	21.50	11.9	43.5	22.0	143.0	102.00	VERTICAL
103.680000	24.50	13.2	43.5	19.0	100.0	44.00	VERTICAL
154.260000	23.50	10.1	43.5	20.0	100.0	98.00	VERTICAL
226.620000	24.20	13.2	46.0	21.8	143.0	124.00	HORIZONTAL
303.600000	24.30	15.3	46.0	21.7	100.0	111.00	HORIZONTAL

Part 2: Testing Range of "18 GHz to 26.5 GHz"

Note: No peak found in pre- test.



Part 3: Testing Range of "2.3GHz to 2.5GHz"

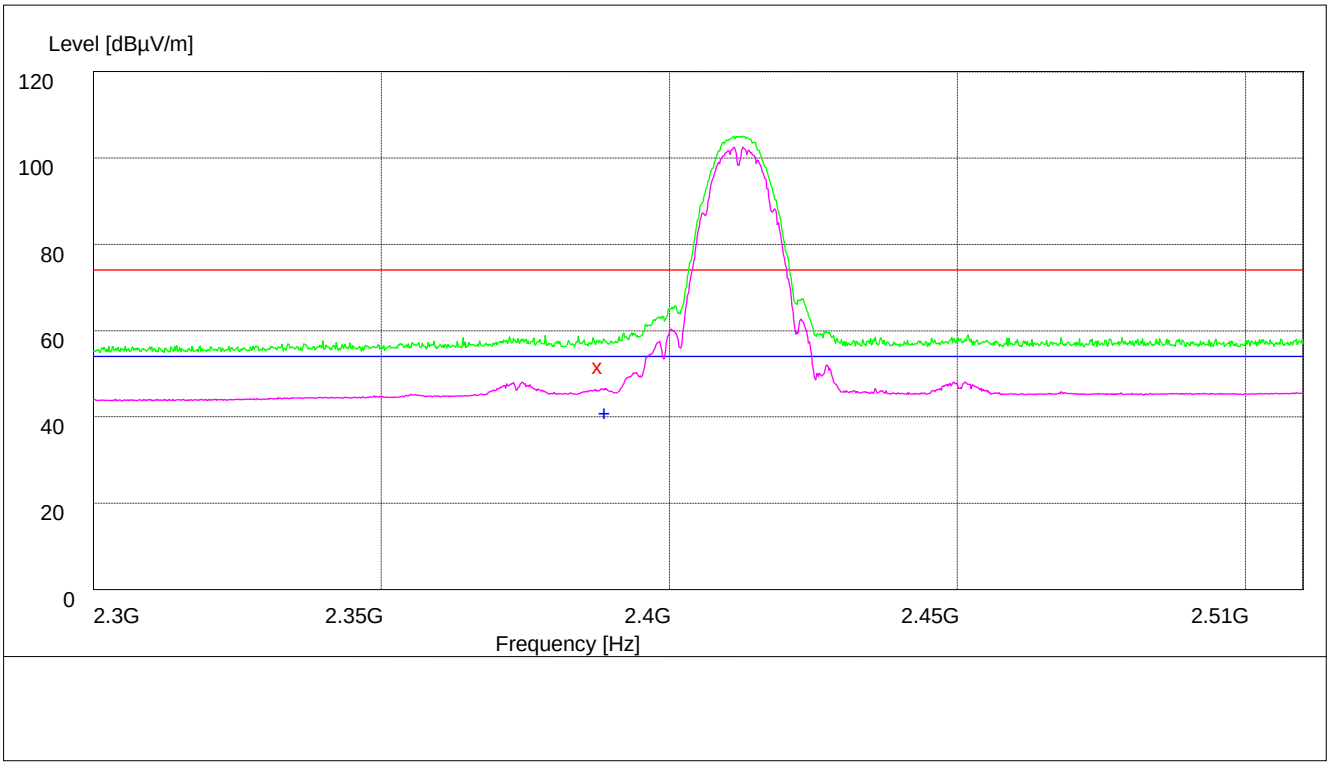
Note 1: The testing range of “2.3 GHz to 2.5 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.

Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBμV/m) and Average Limit (54 dBμV/m).

Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

Test Mode: 11b

Channel 01



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

MEASUREMENT RESULT: PK Detector

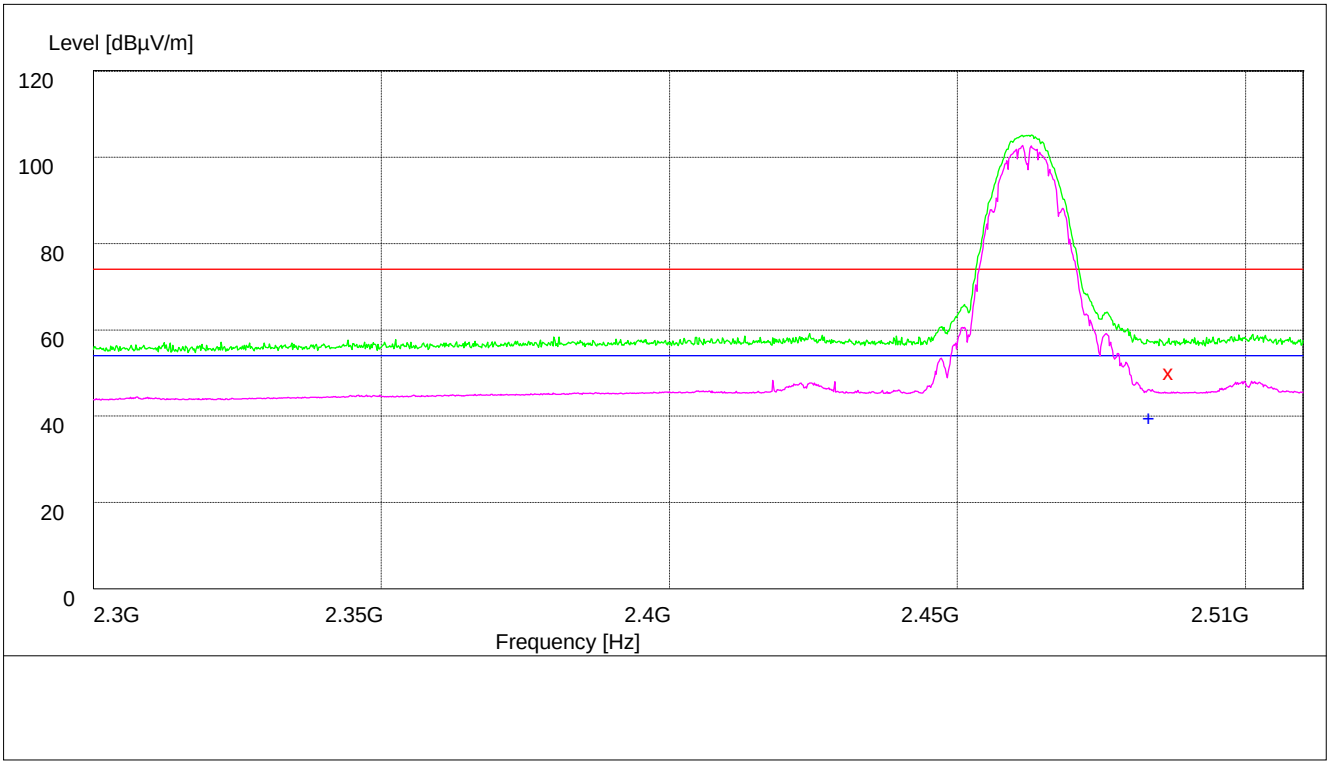
Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Height cm	Azimuth deg	Polarization
2388.000000	54.00	34.7	74.0	20.0	101.0	360.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Height cm	Azimuth deg	Polarization

2389.000000	43.10	34.7	54.0	10.9	101.0	244.00	HORIZONTAL

Channel 11



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

MEASUREMENT RESULT: PK Detector

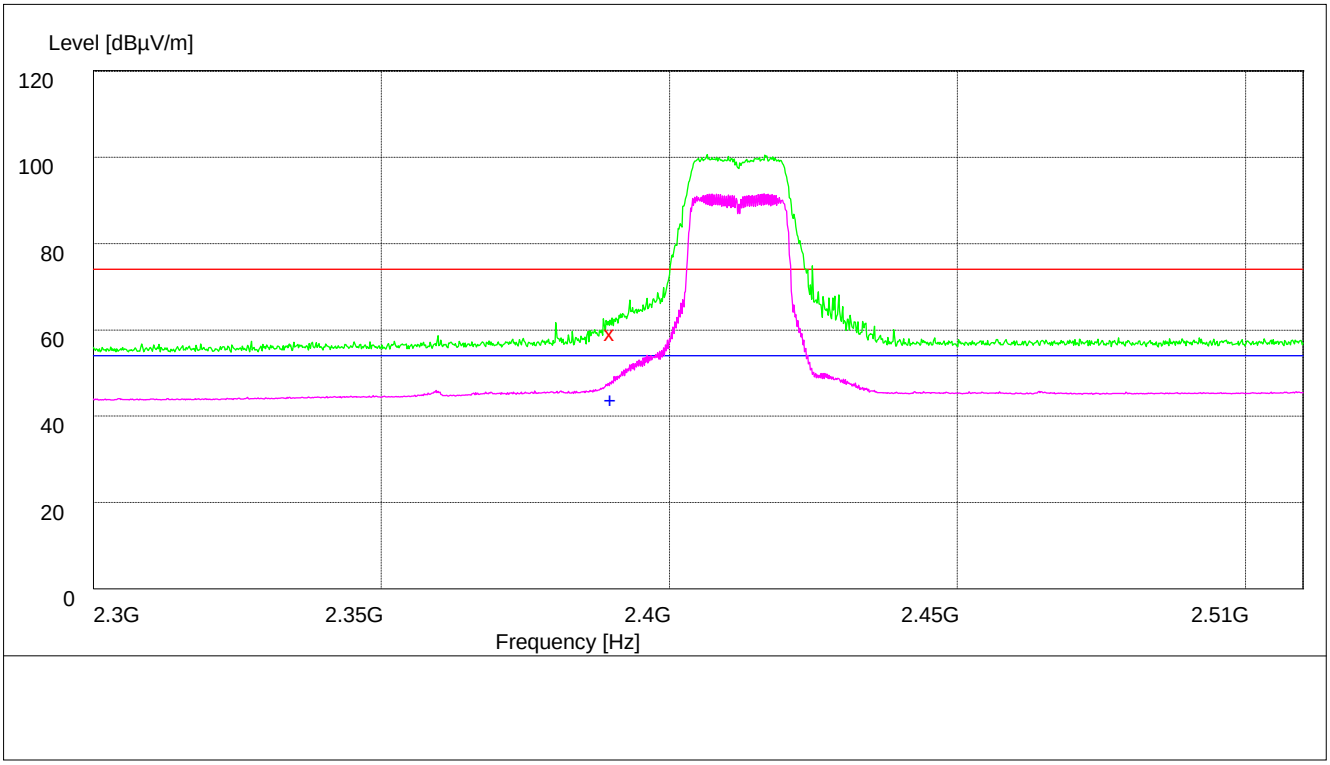
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2487.000000	52.40	35.0	74.0	21.6	186.0	0.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2483.500000	41.70	35.0	54.0	12.3	118.0	244.00	HORIZONTAL

Test Mode: 11g

Channel 01



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

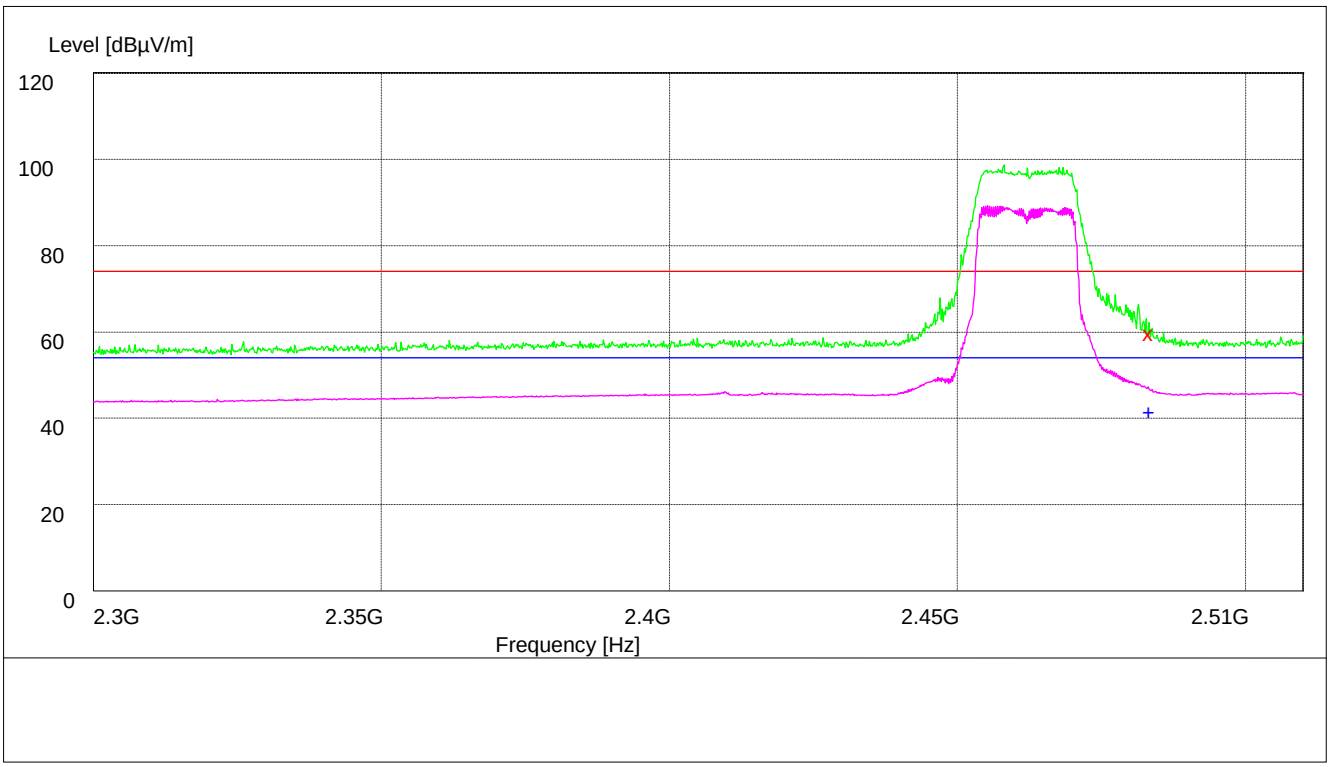
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	61.40	34.7	74.0	12.6	101.0	348.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	45.80	34.7	54.0	8.2	122.0	247.00	HORIZONTAL

Channel 11



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

MEASUREMENT RESULT: PK Detector

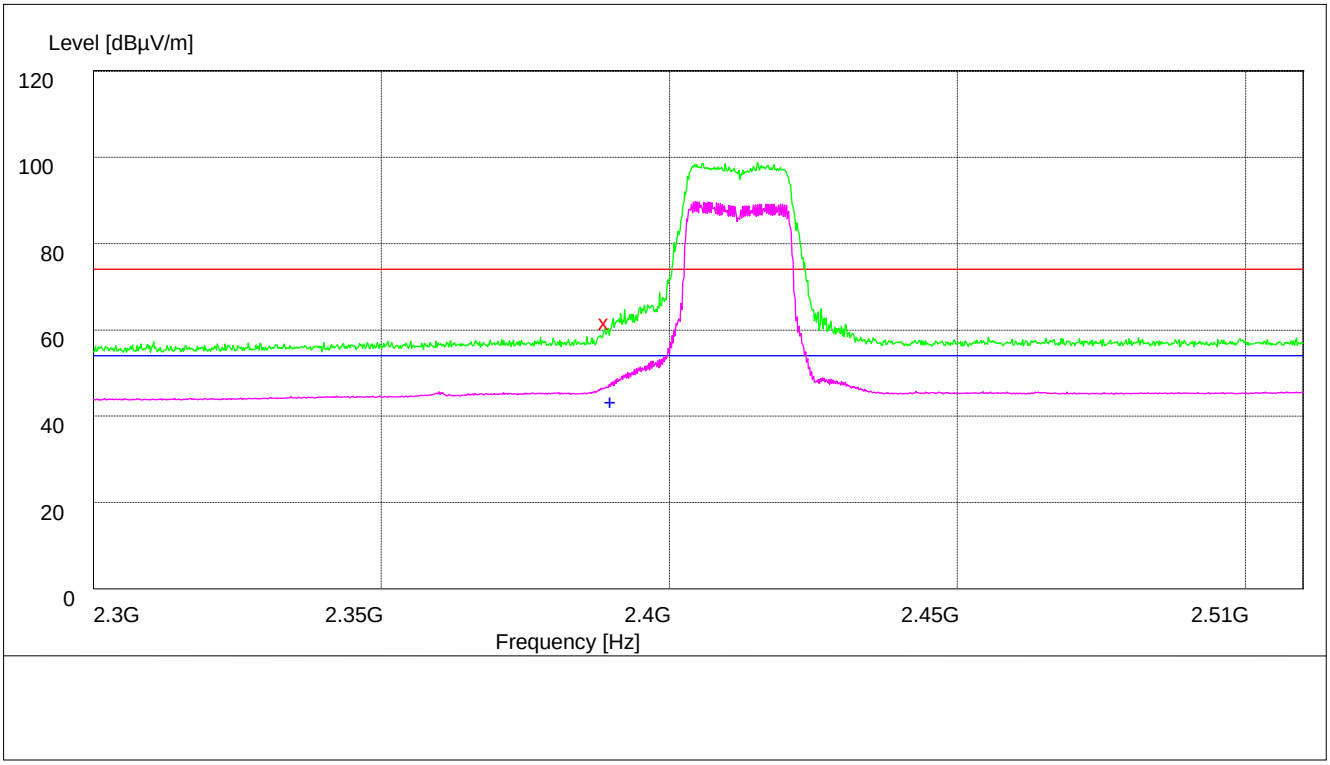
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2483.500000	61.80	35.0	74.0	12.2	107.0	92.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2483.500000	43.60	35.0	54.0	10.4	100.0	231.00	HORIZONTAL

Test Mode: 11n

Channel 01



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

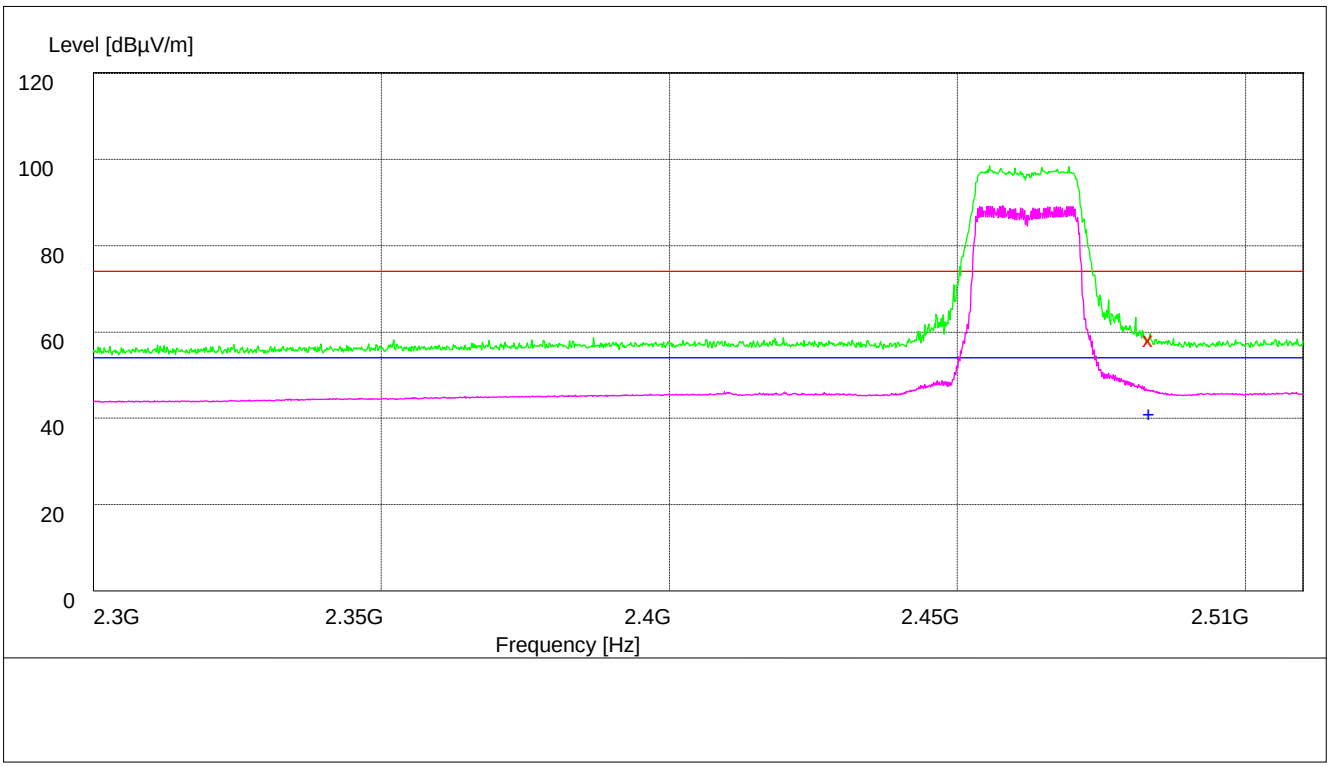
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2389.000000	63.90	34.7	74.0	10.1	100.0	245.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	45.40	34.7	54.0	8.6	100.0	247.00	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
2483.500000	60.60	35.0	74.0	13.4	100.0	244.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

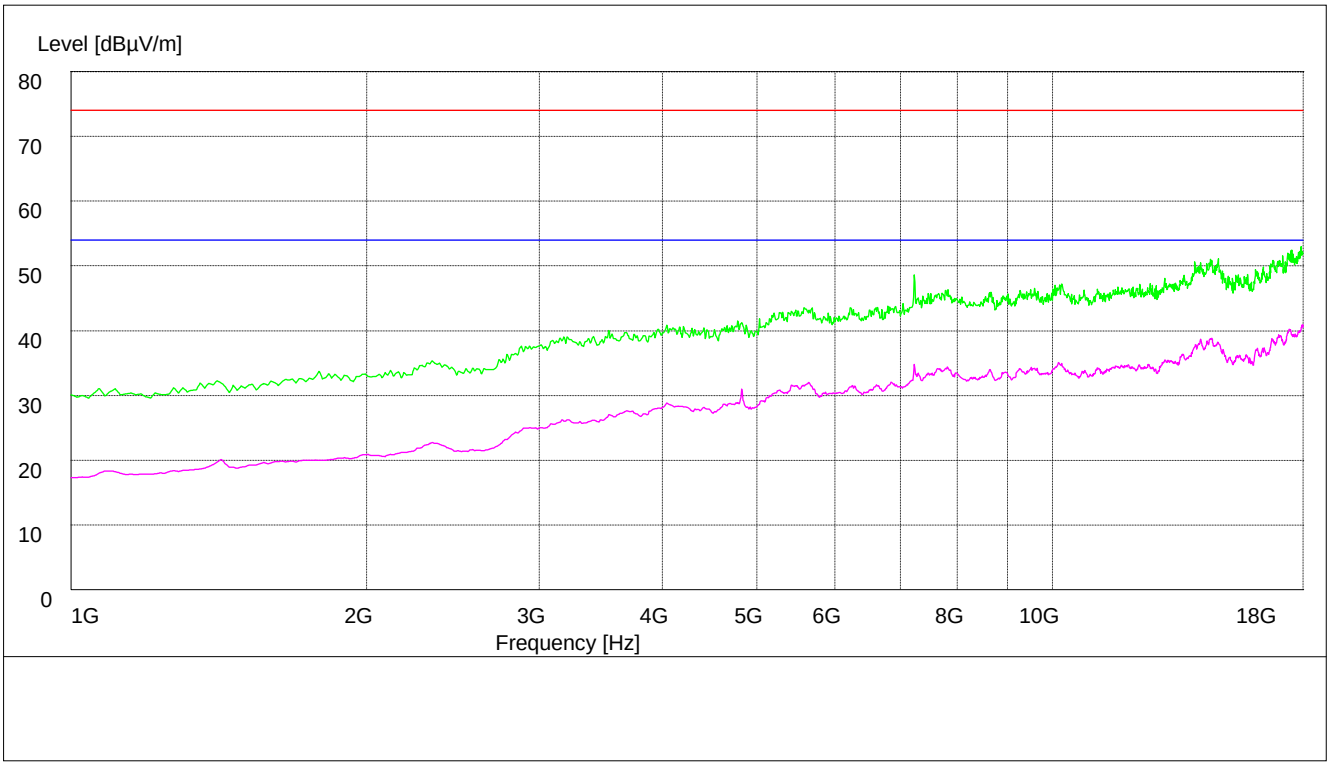
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2483.500000	43.20	35.0	54.0	10.8	100.0	250.00	HORIZONTAL

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.

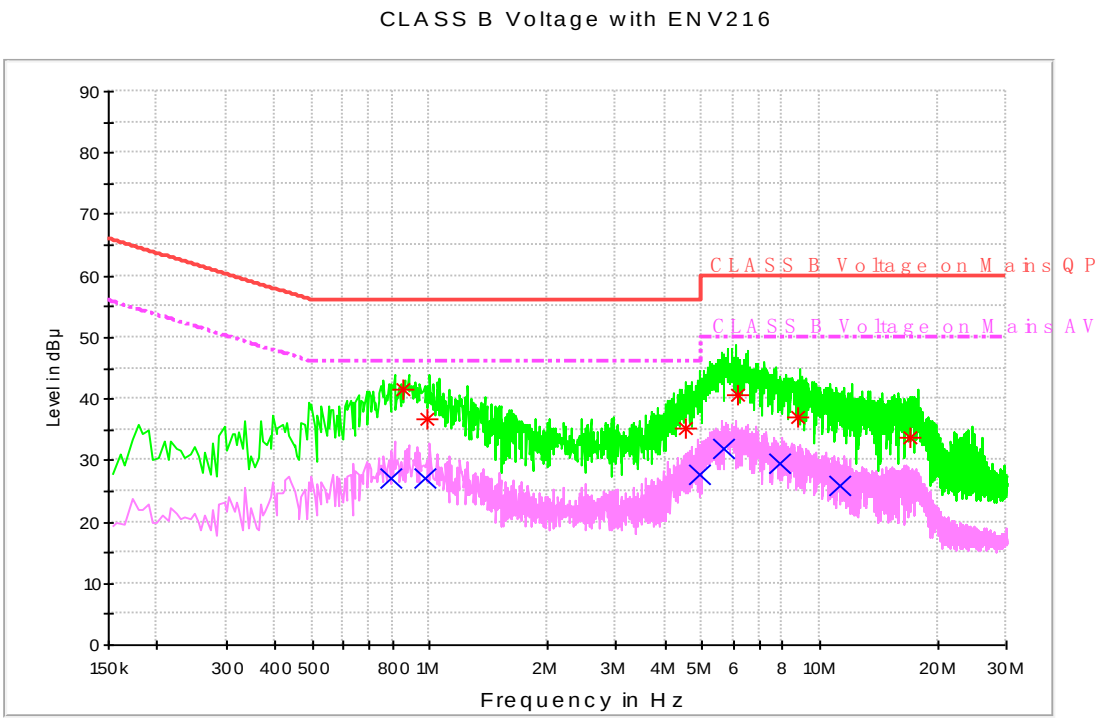
Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).



Appendix G: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz

Channel 6



MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.850426	41.5	9.7	56.0	14.5	N	FLO
0.989134	36.7	9.7	56.0	19.3	N	FLO
4.529651	35.1	9.8	56.0	20.9	N	FLO
6.125756	40.5	9.8	60.0	19.5	N	FLO
8.758002	36.9	9.9	60.0	23.1	N	FLO
16.961775	33.8	10.1	60.0	26.2	N	FLO

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.794333	27.1	9.7	46.0	18.9	N	FLO
0.966435	27.1	9.7	46.0	18.9	N	FLO
4.924204	27.8	9.8	46.0	18.2	N	FLO
5.648625	31.9	9.8	50.0	18.1	N	FLO
7.871576	29.5	9.9	50.0	20.5	N	FLO
11.270262	25.9	10.0	50.0	24.1	N	FLO

END