



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.

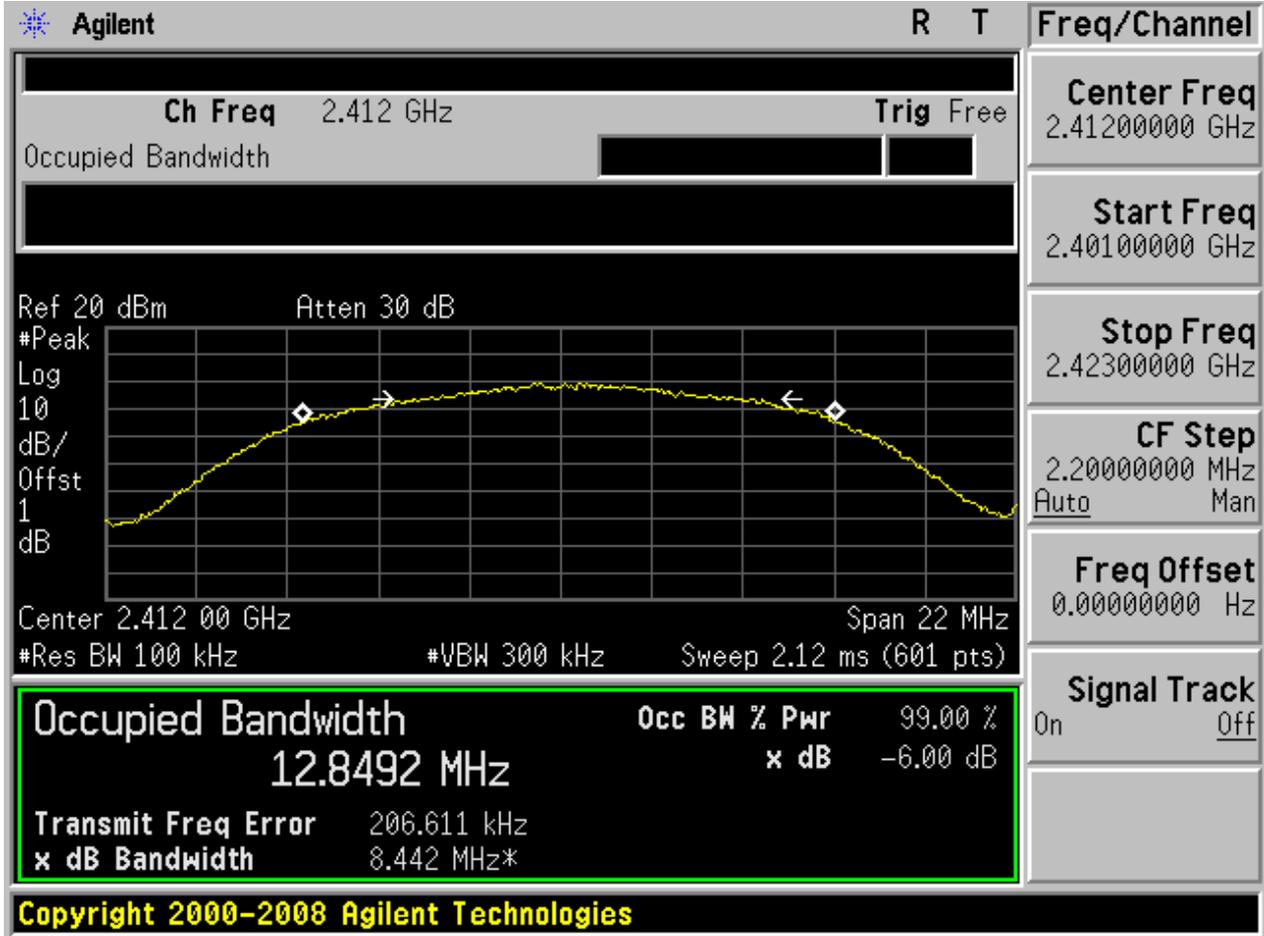
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
11B	L	2412	Ant 1	8.44	pass
11B	M	2437	Ant 1	8.41	pass
11B	H	2462	Ant 1	7.75	pass
11G	L	2412	Ant 1	16.44	pass
11G	M	2437	Ant 1	16.54	pass
11G	H	2462	Ant 1	16.52	pass
11N20	L	2412	Ant 1	16.76	pass
11N20	M	2437	Ant 1	17.69	pass
11N20	H	2462	Ant 1	17.67	pass



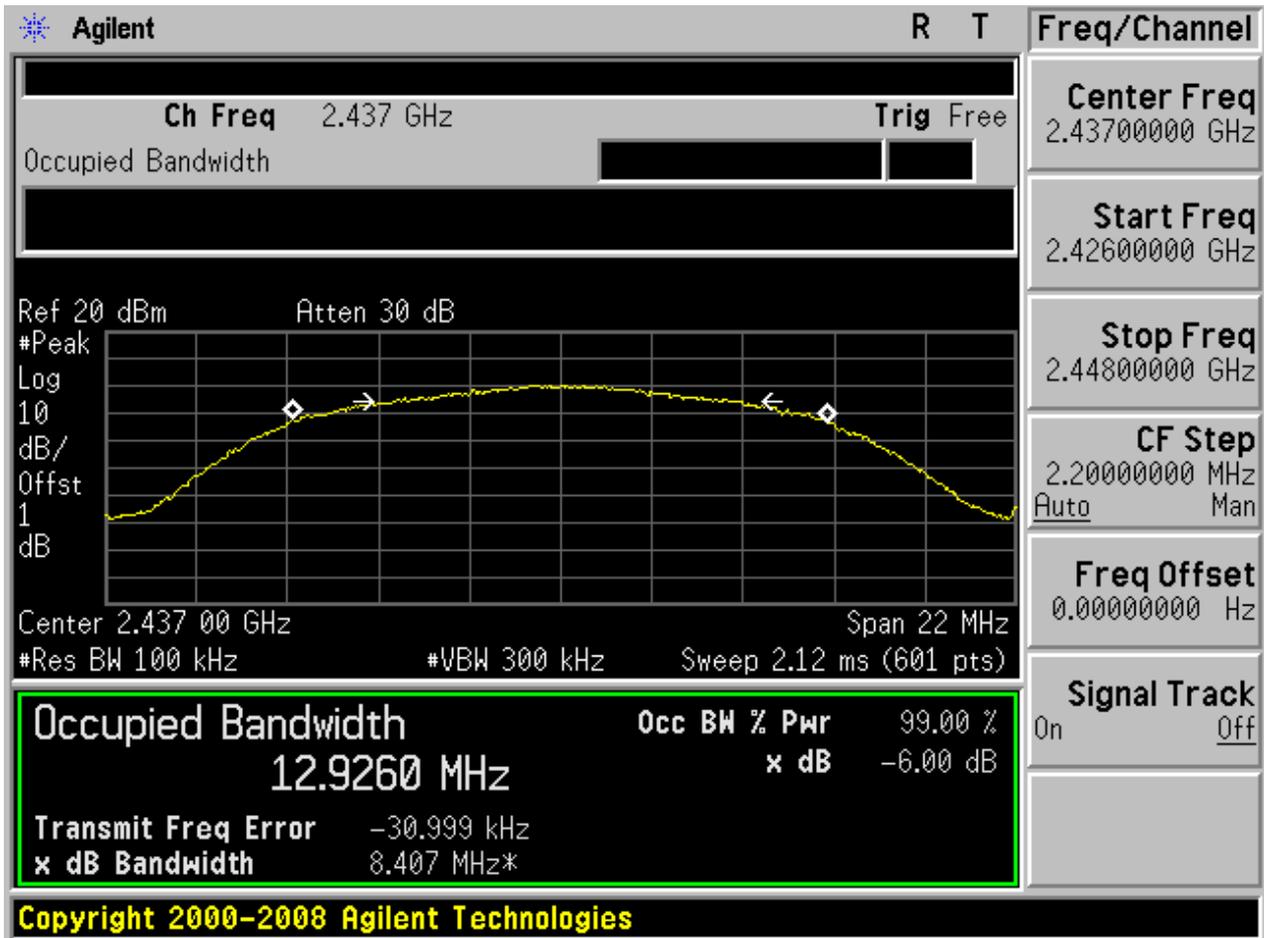
Part II - Test Plots

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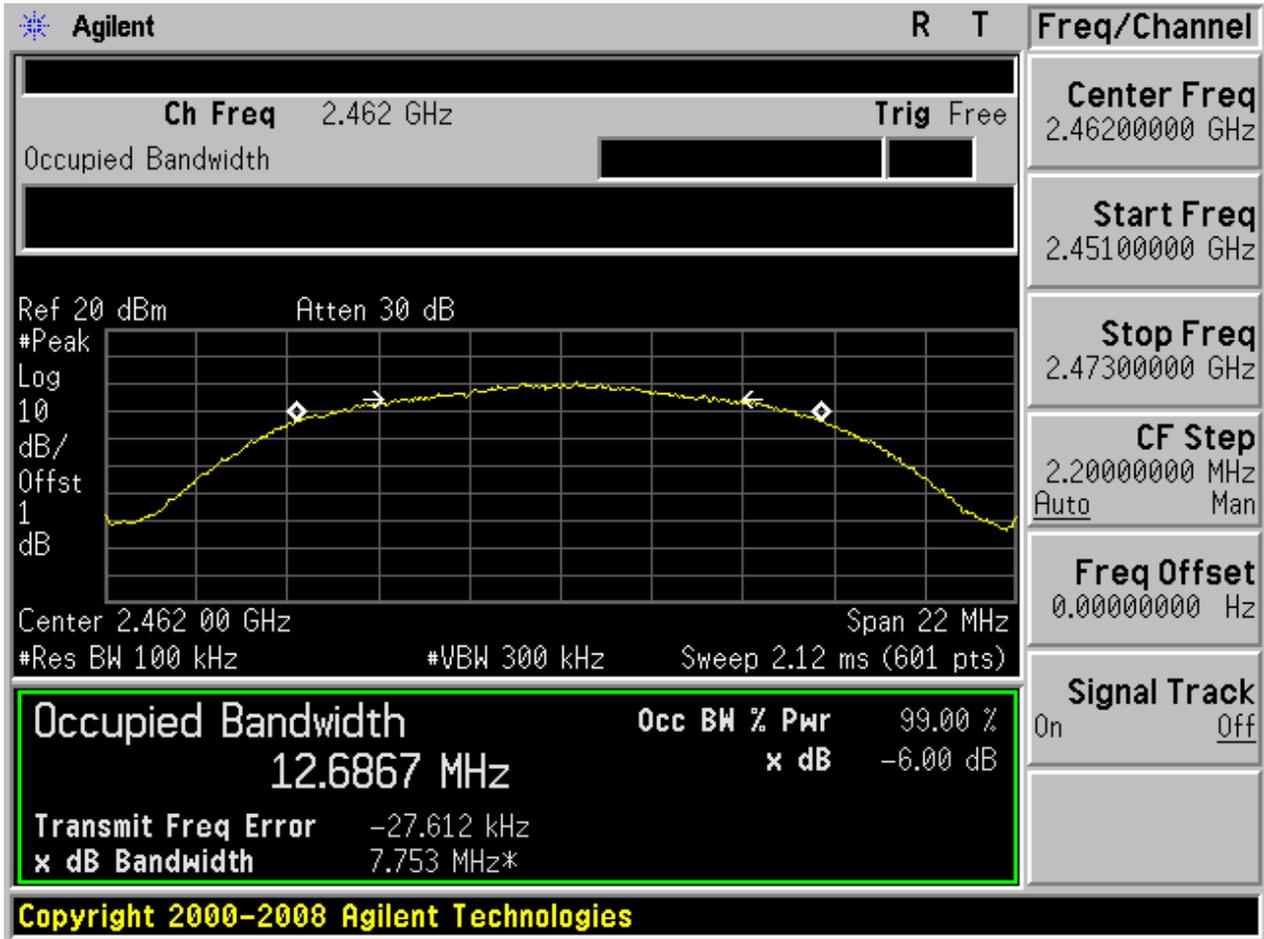


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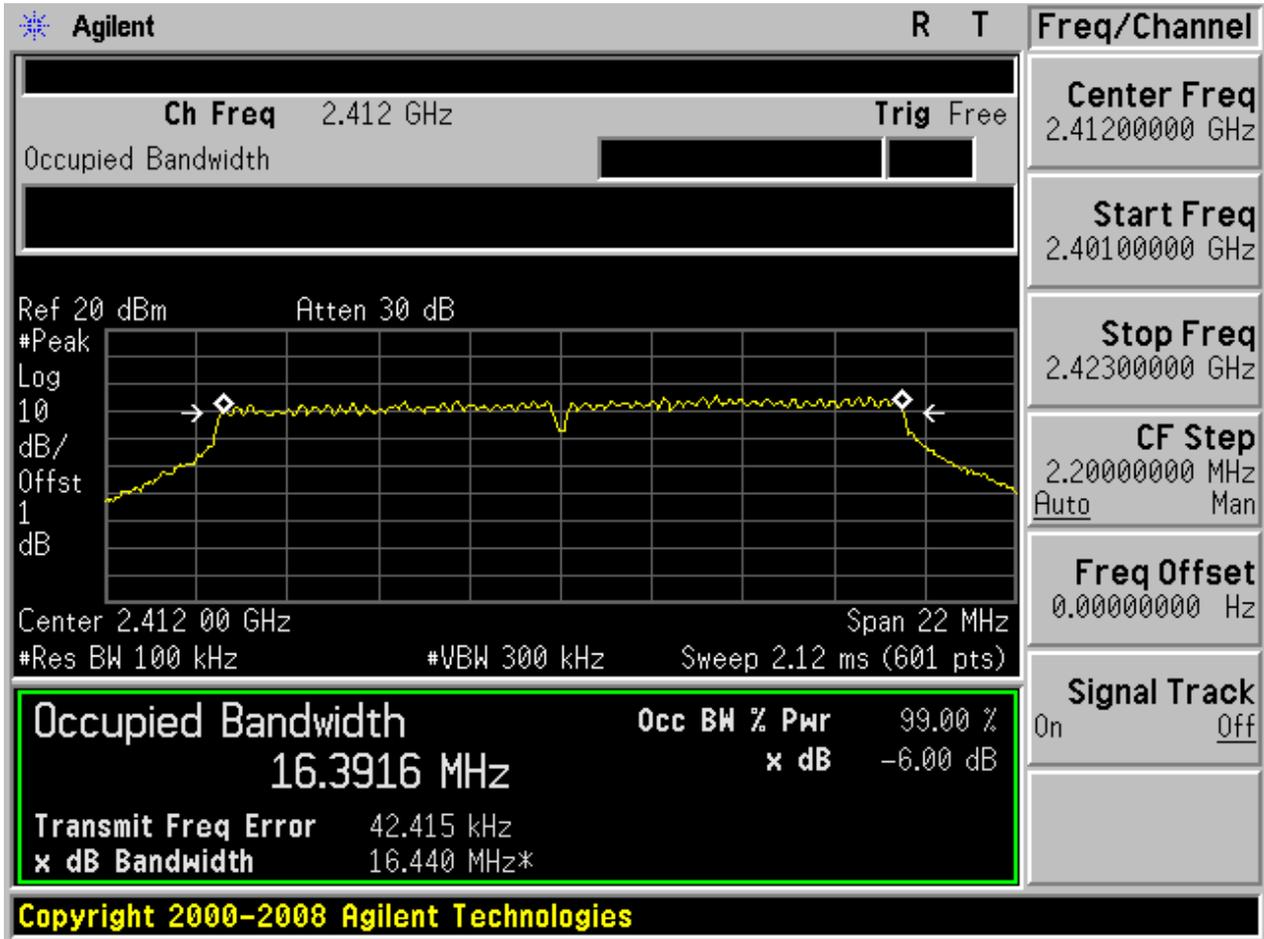


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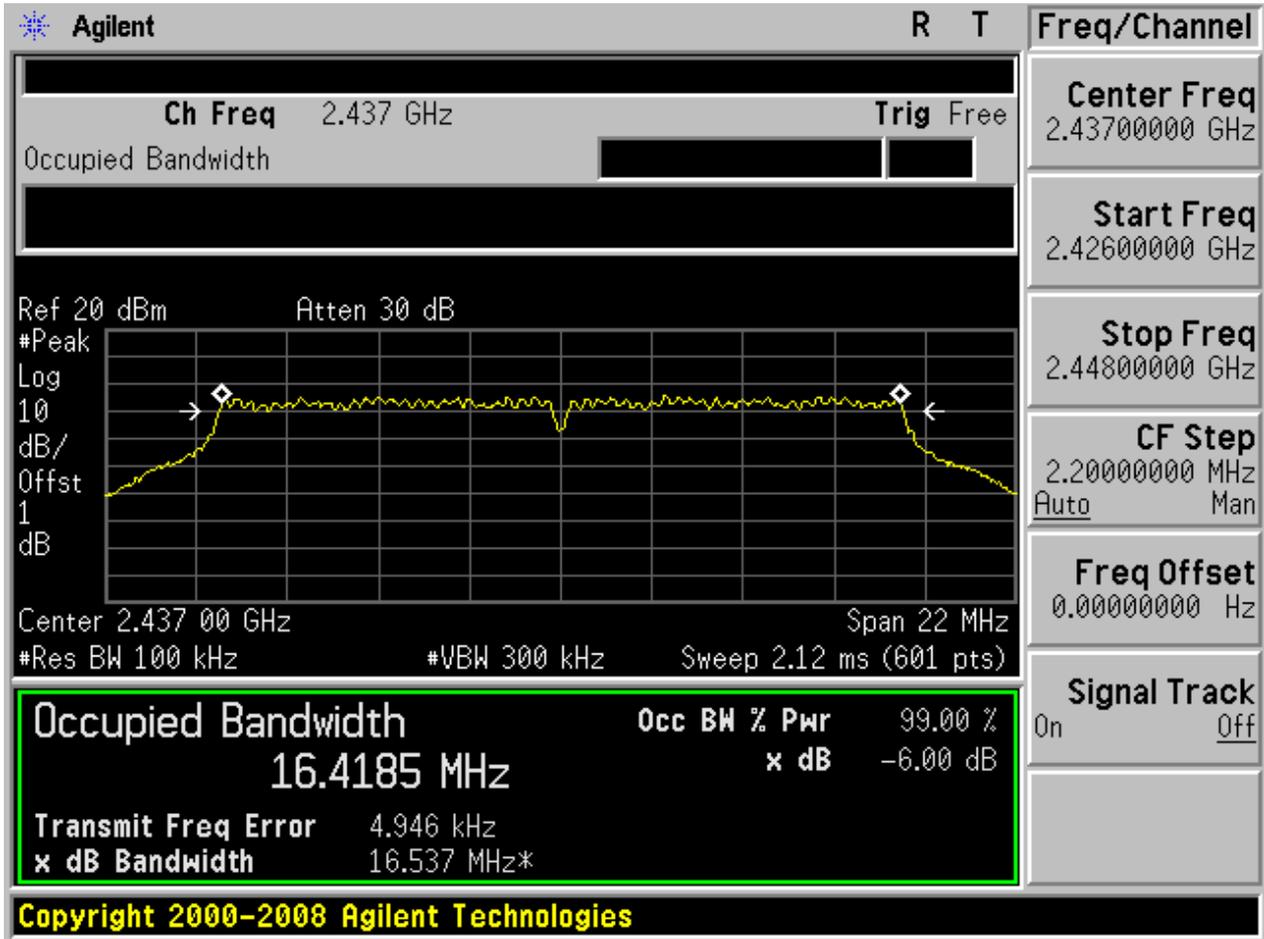


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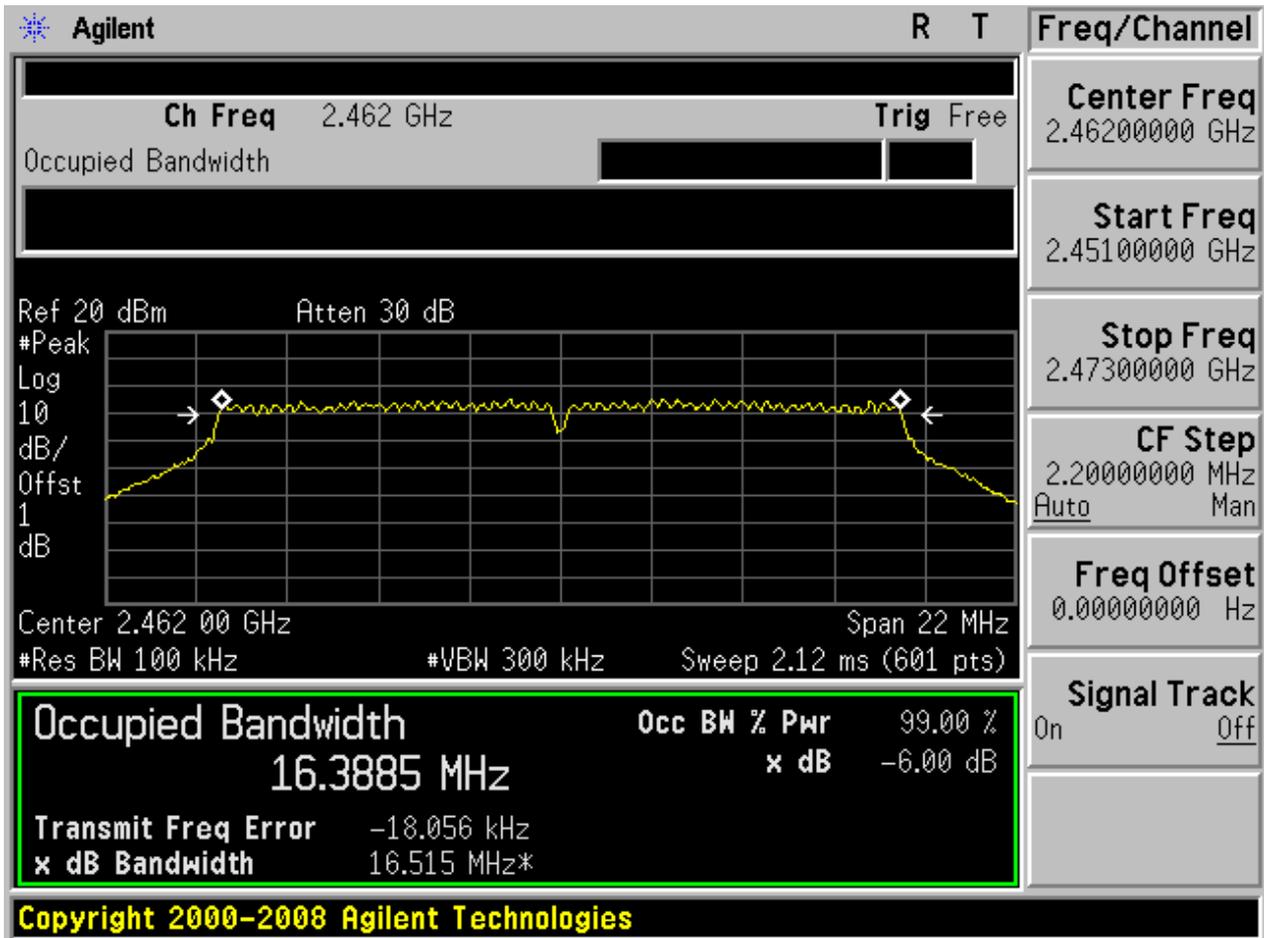


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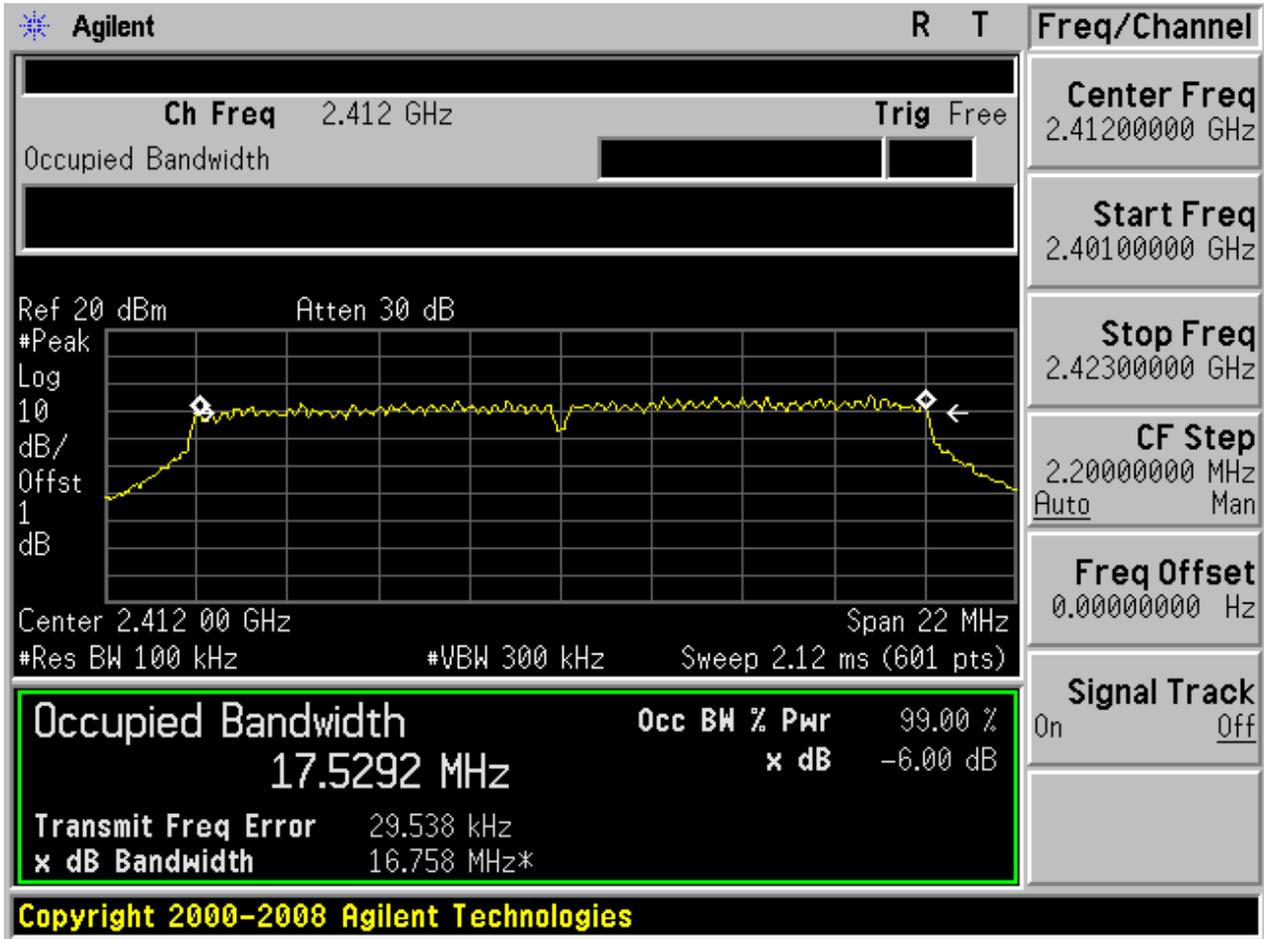


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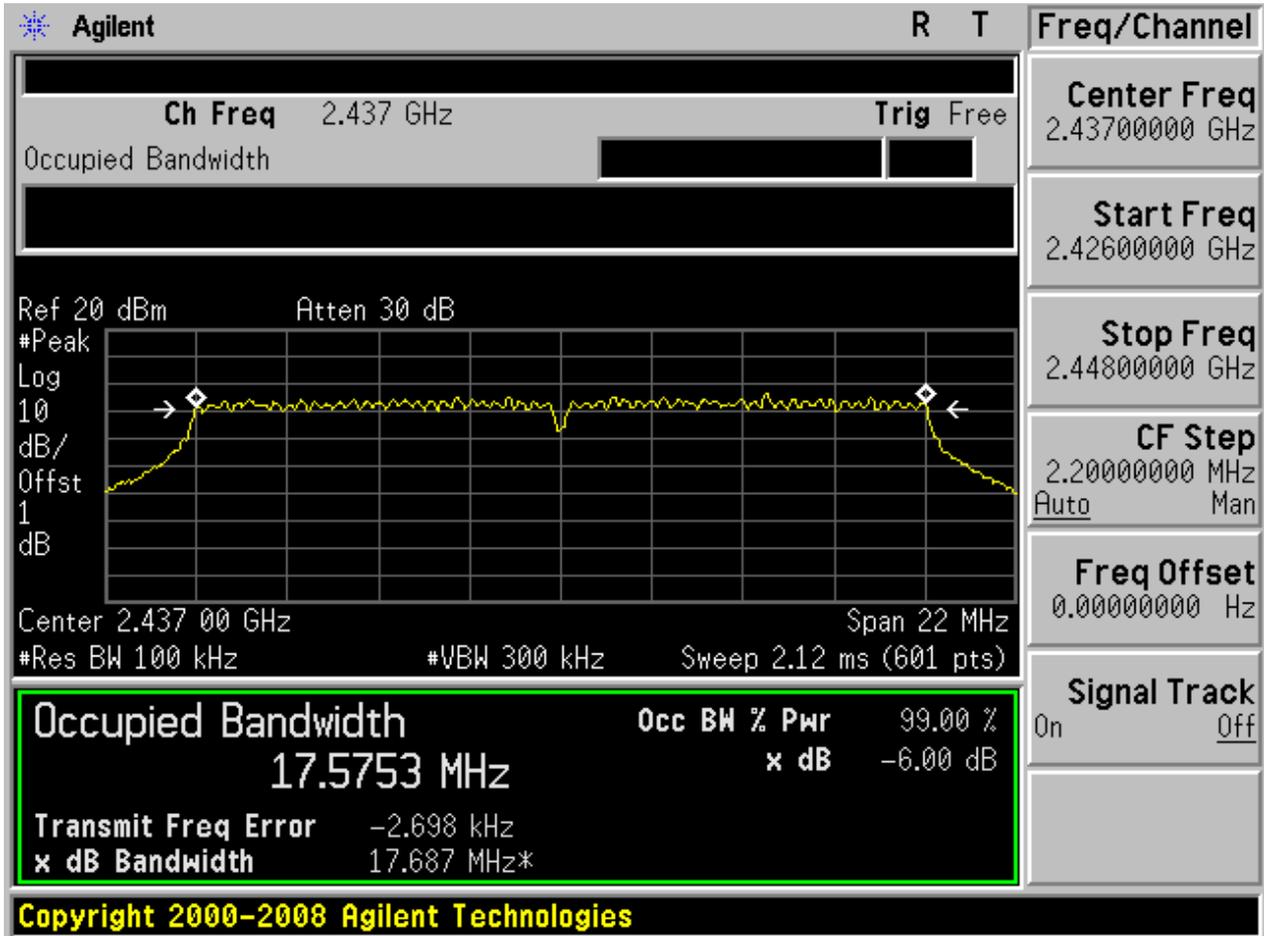


2.13 11N20_L@Ant 1



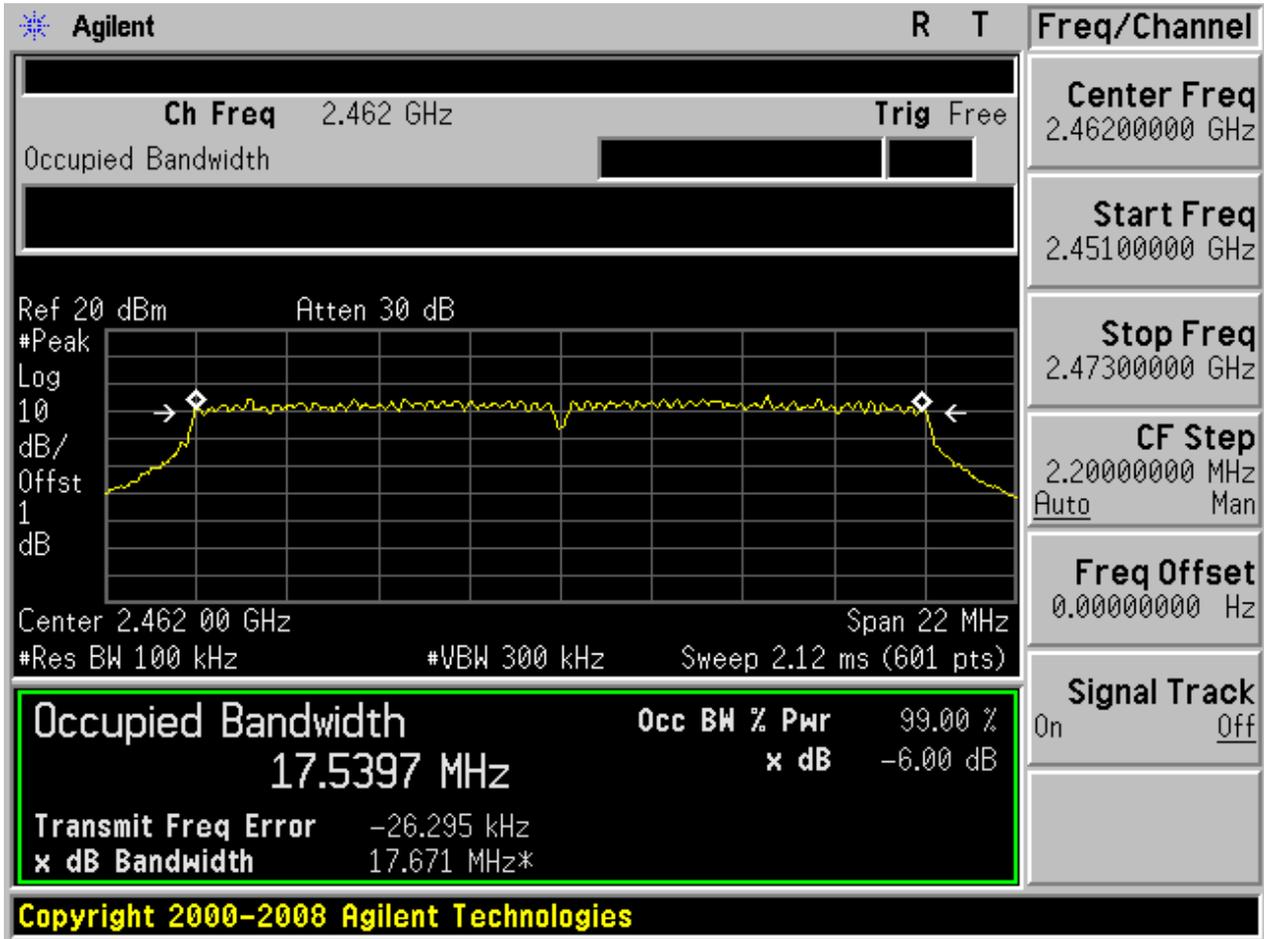


2.15 11N20_M@Ant 1





2.17 11N20_H@Ant 1





Appendix B: Maximum Peak Power

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Power[dBm]	Verdict
11B	L	2412	Ant 1	20.76	pass
11B	M	2437	Ant 1	22.05	pass
11B	H	2462	Ant 1	21.43	pass
11G	L	2412	Ant 1	22.57	pass
11G	M	2437	Ant 1	23.72	pass
11G	H	2462	Ant 1	23.12	pass
11N20	L	2412	Ant 1	22.44	pass
11N20	M	2437	Ant 1	23.49	pass
11N20	H	2462	Ant 1	22.87	pass



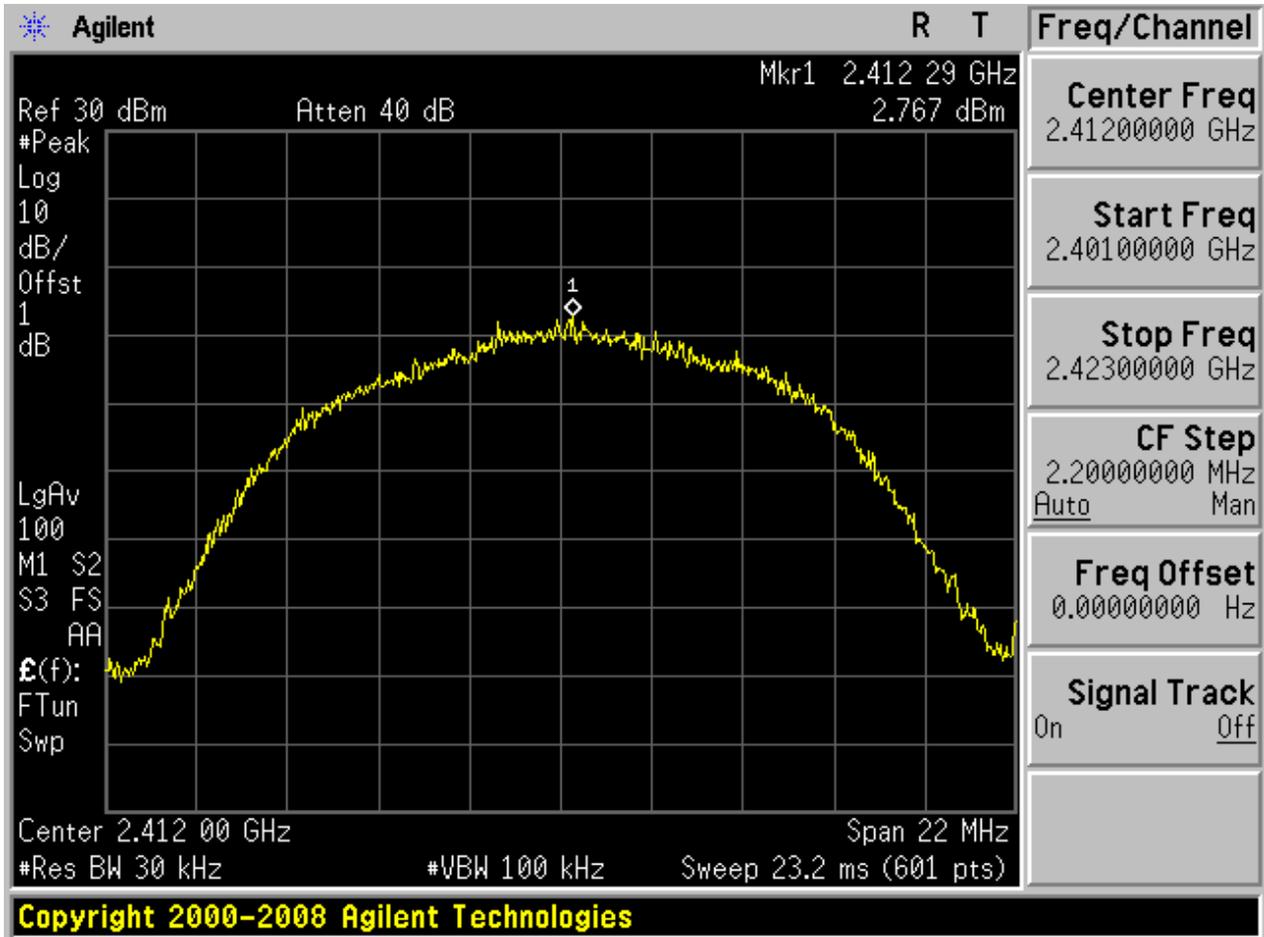
Appendix C: Maximum Power Spectral Density Level

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	PD[MHz]	Verdict
11B	L	2412	Ant 1	2.77	pass
11B	M	2437	Ant 1	3.57	pass
11B	H	2462	Ant 1	2.62	pass
11G	L	2412	Ant 1	-1.48	pass
11G	M	2437	Ant 1	-.47	pass
11G	H	2462	Ant 1	-1.56	pass
11N20	L	2412	Ant 1	-.86	pass
11N20	M	2437	Ant 1	-.40	pass
11N20	H	2462	Ant 1	-1.12	pass

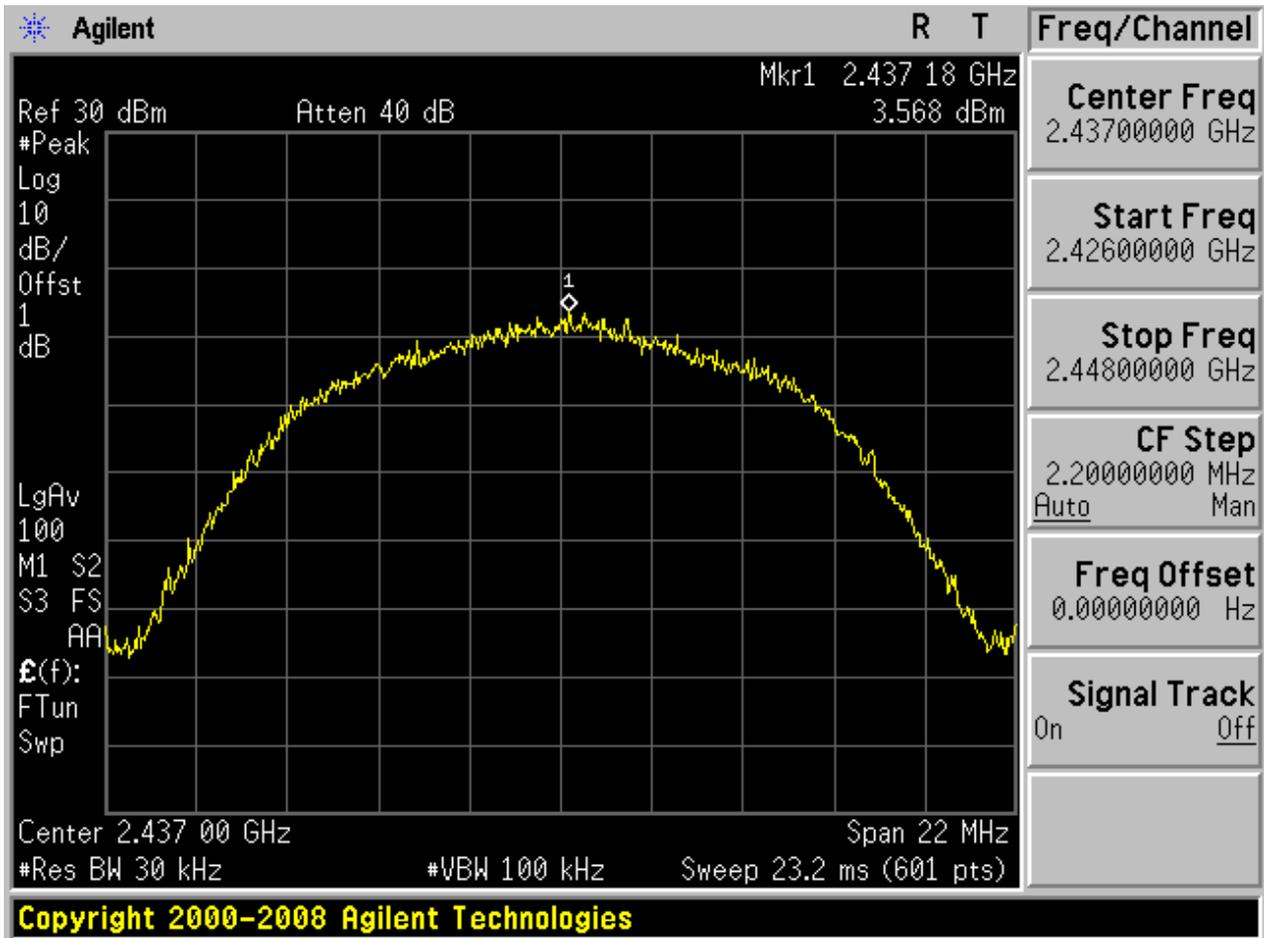
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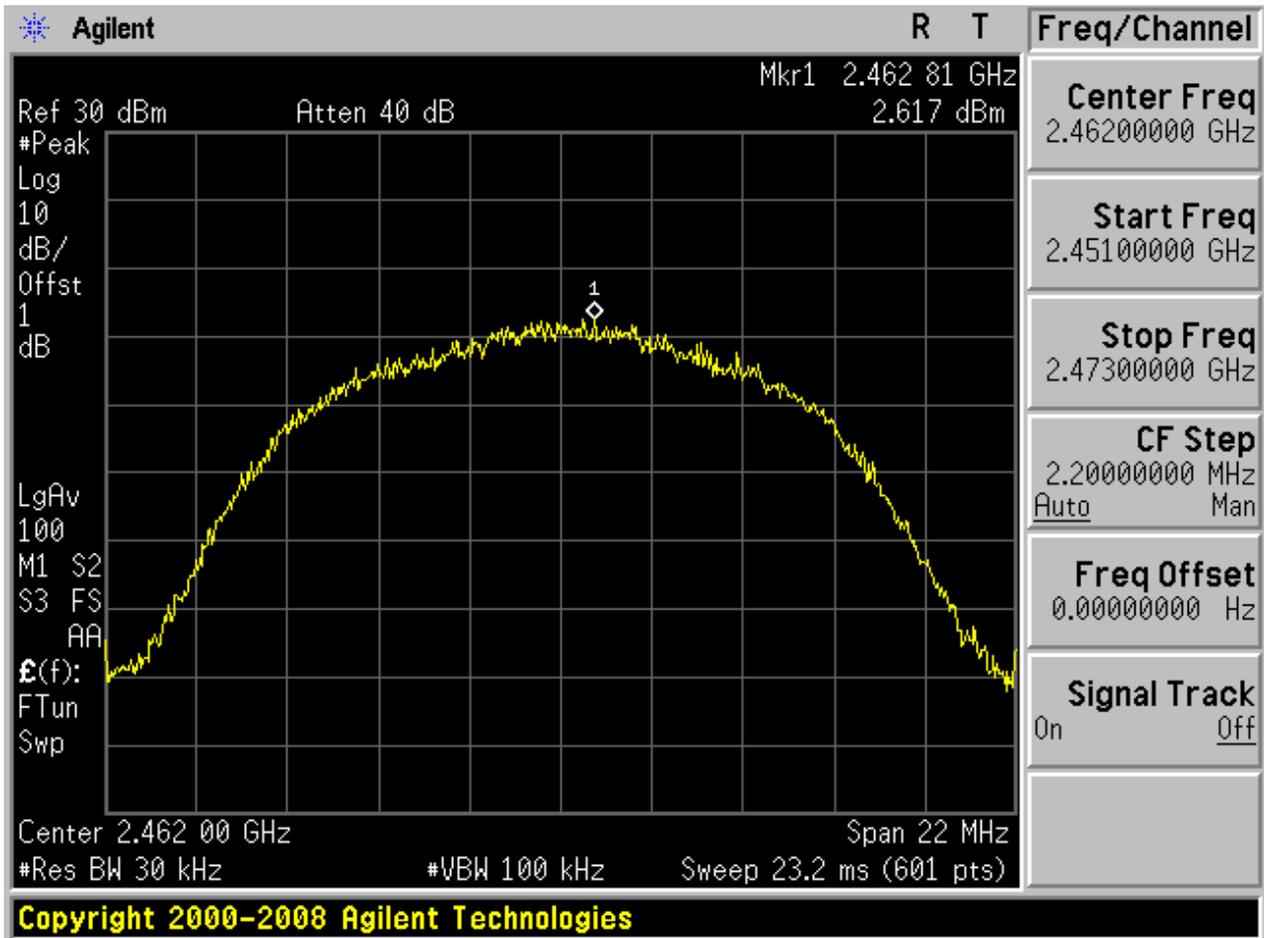




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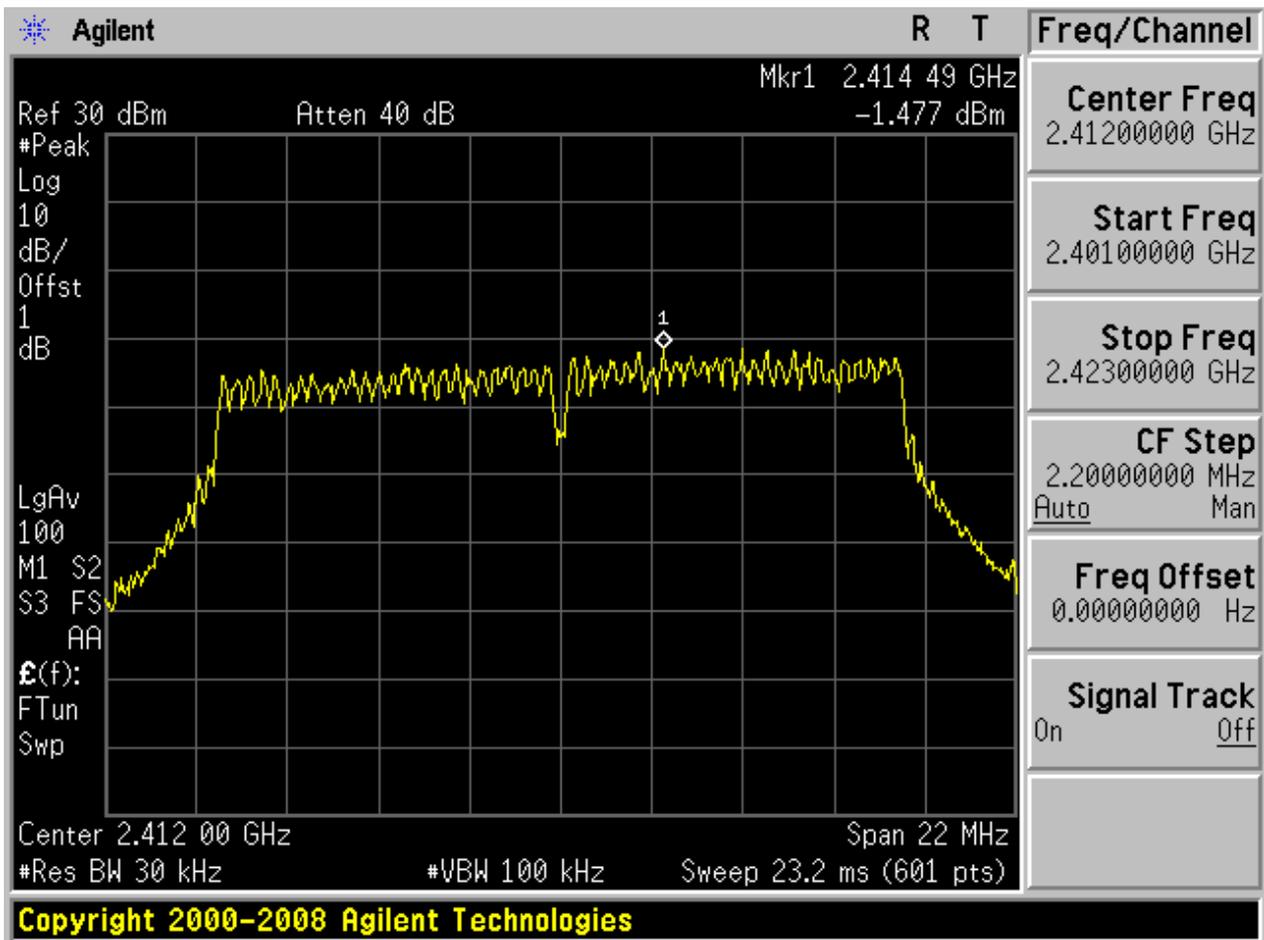


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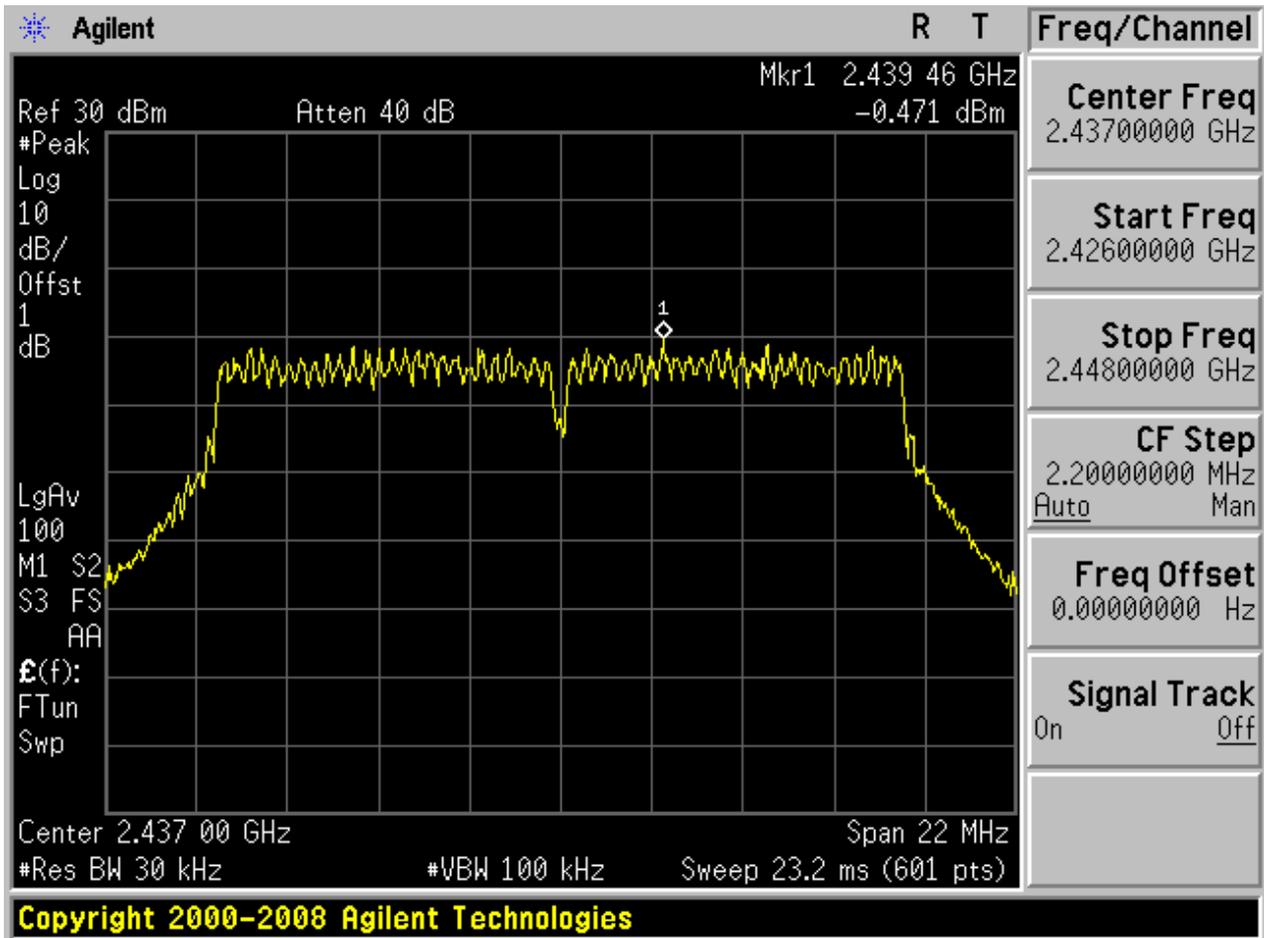


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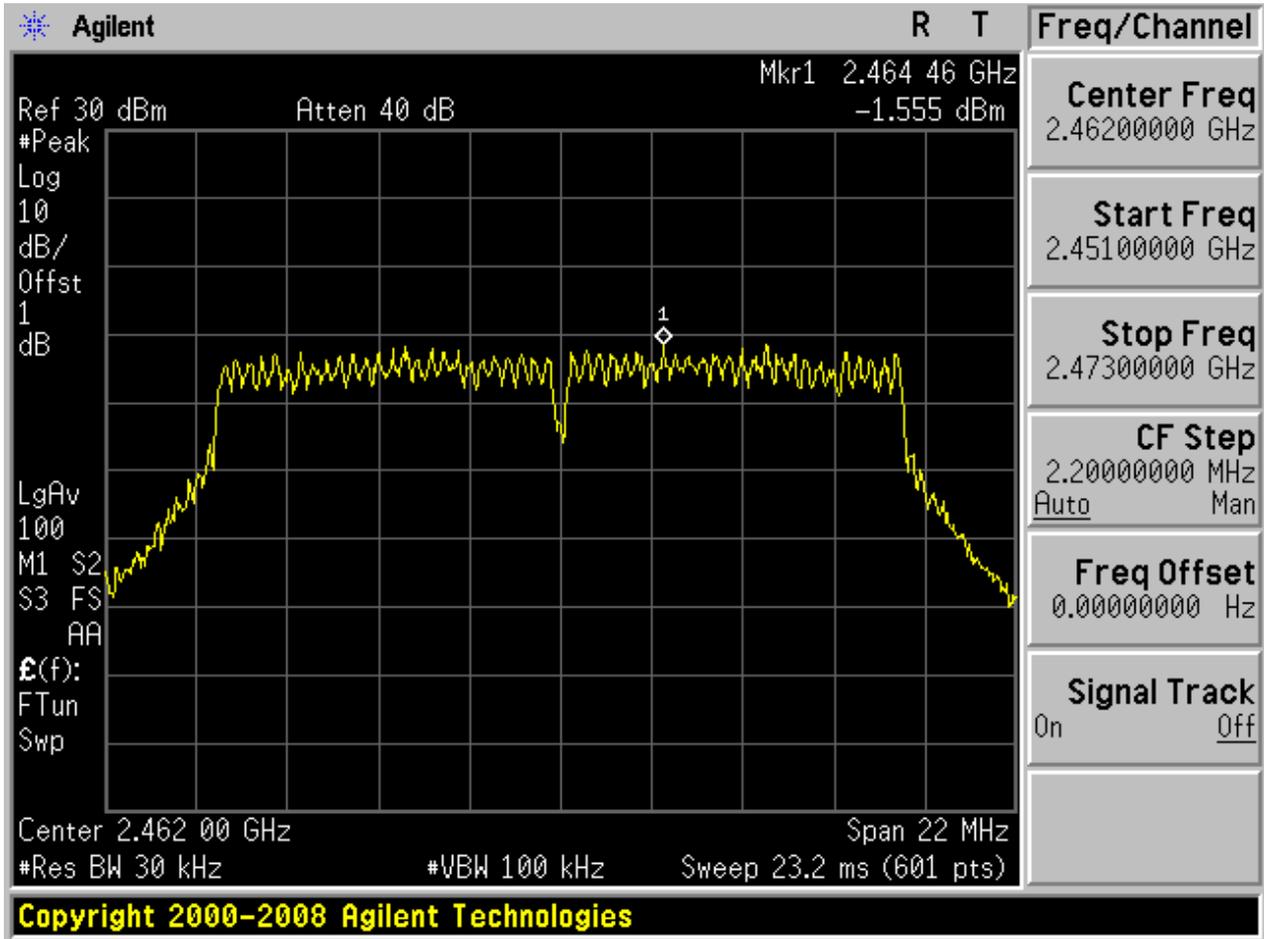


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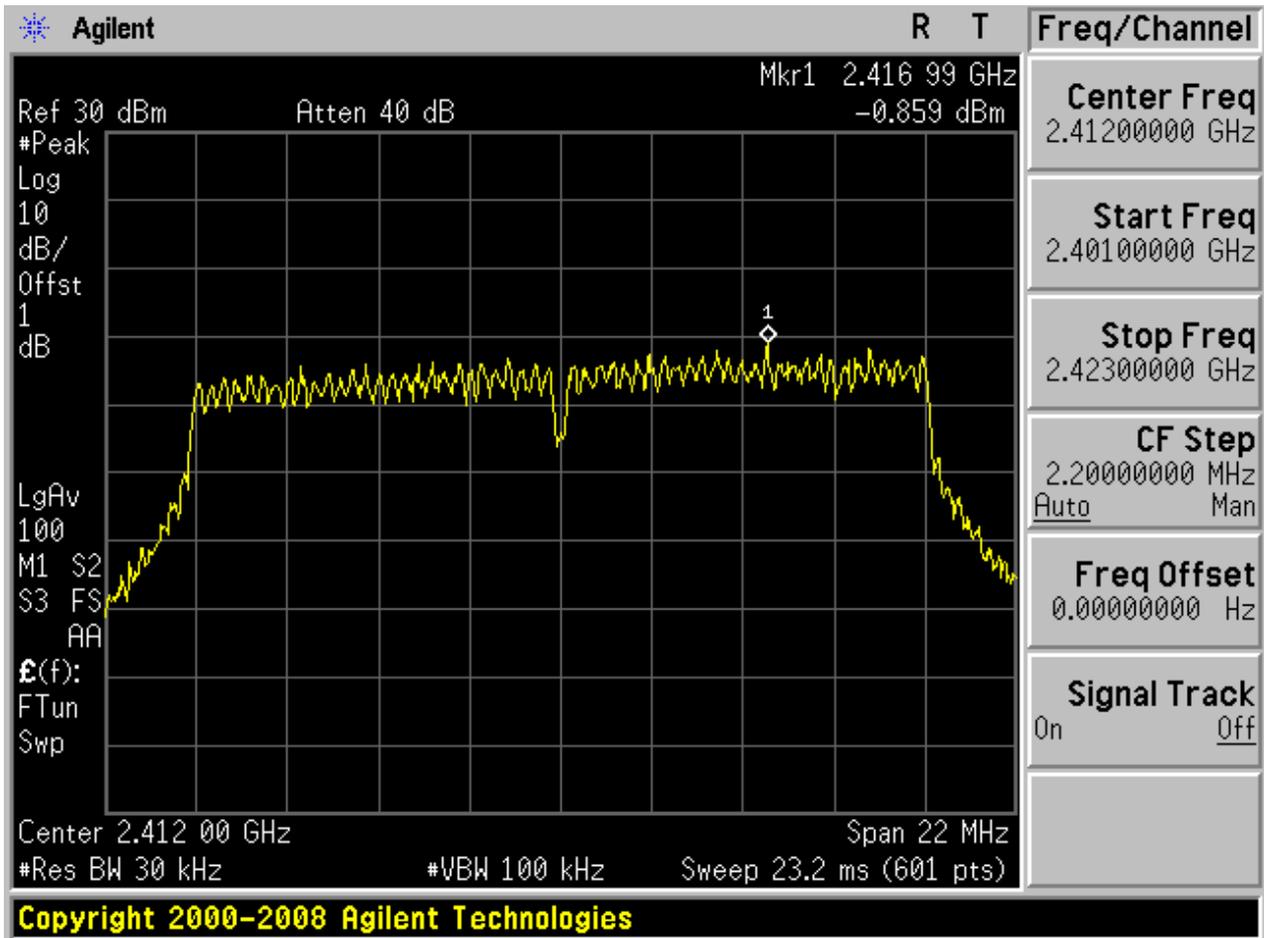


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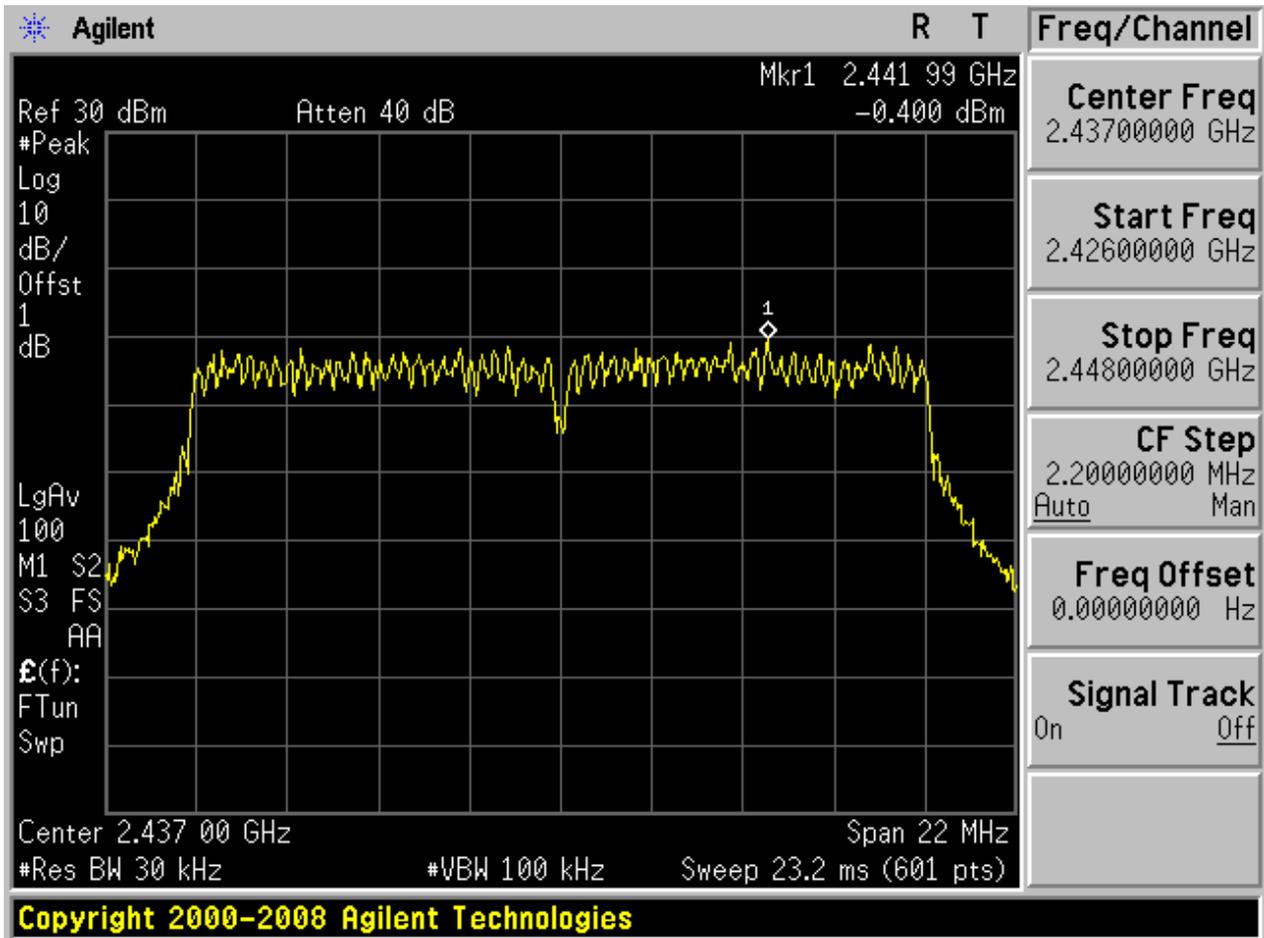


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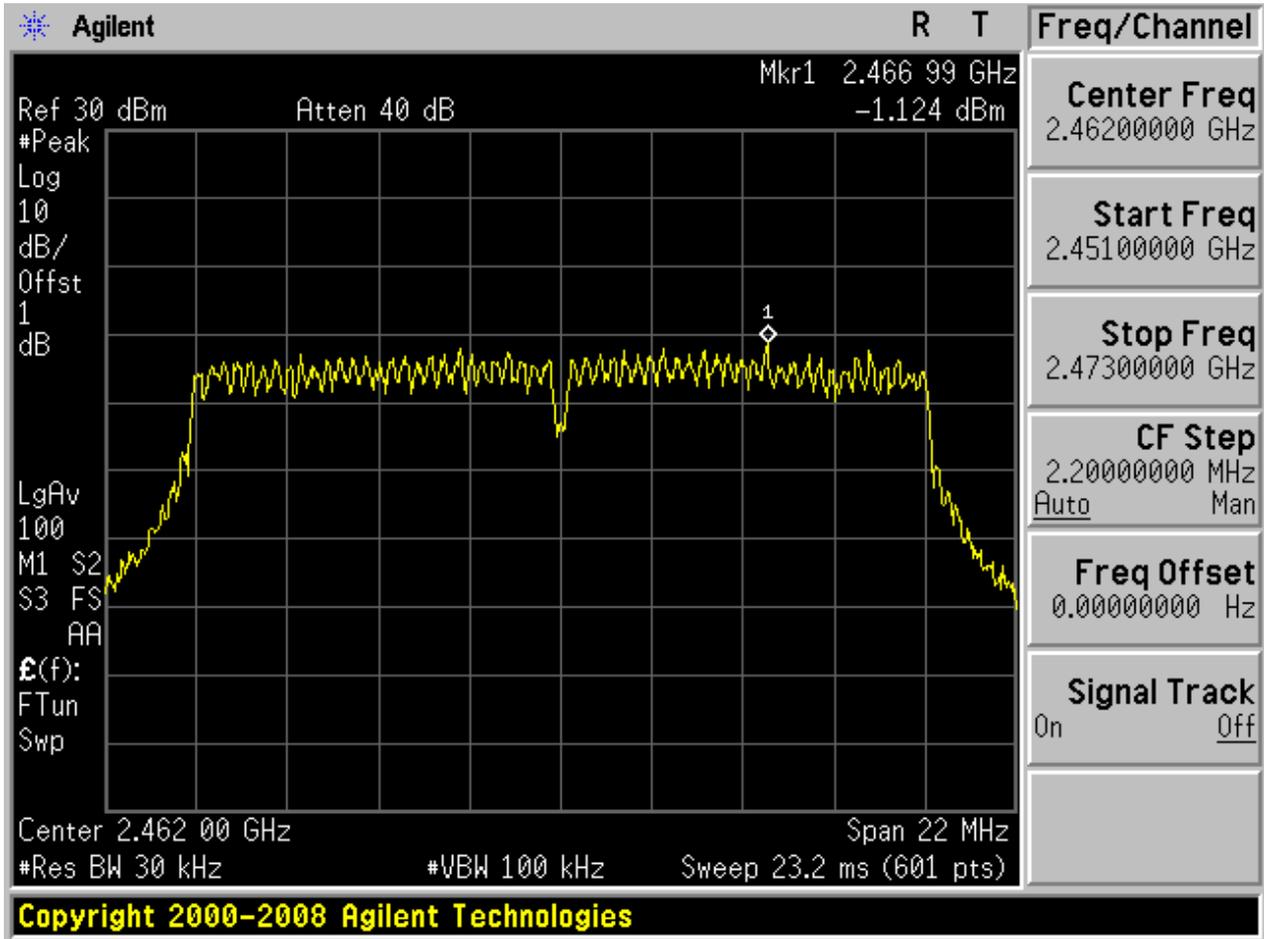


2.15 11N20_M@Ant 1





2.17 11N20_H@Ant 1





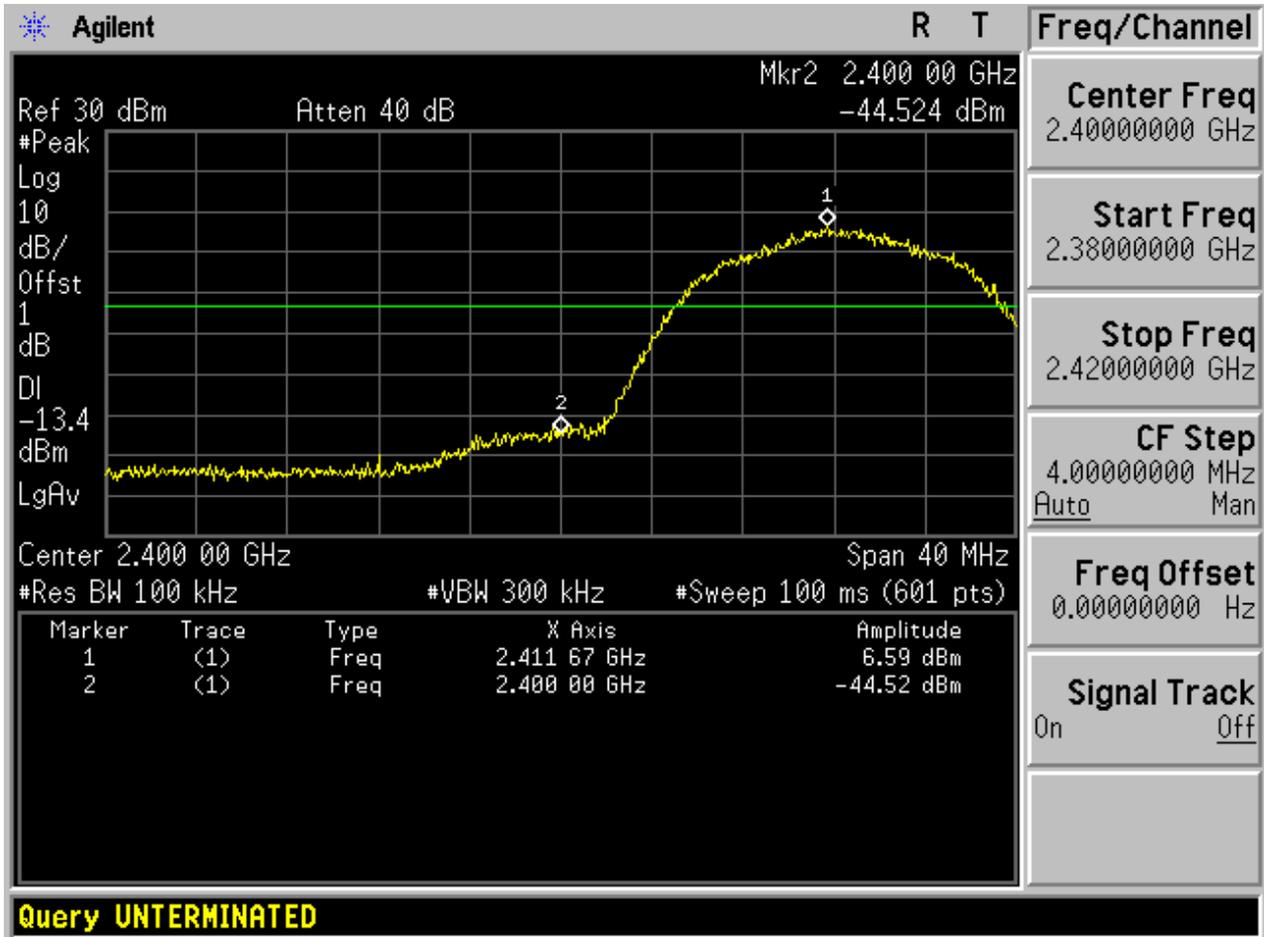
Appendix D: Band Edges Compliance

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
11B	L	2412	Ant 1	6.59	-44.52	pass
11B	H	2462	Ant 1	7.56	-51.86	pass
11G	L	2412	Ant 1	3.15	-36.62	pass
11G	H	2462	Ant 1	2.81	-48.44	pass
11N20	L	2412	Ant 1	2.85	-38.00	pass
11N20	H	2462	Ant 1	2.80	-45.57	pass

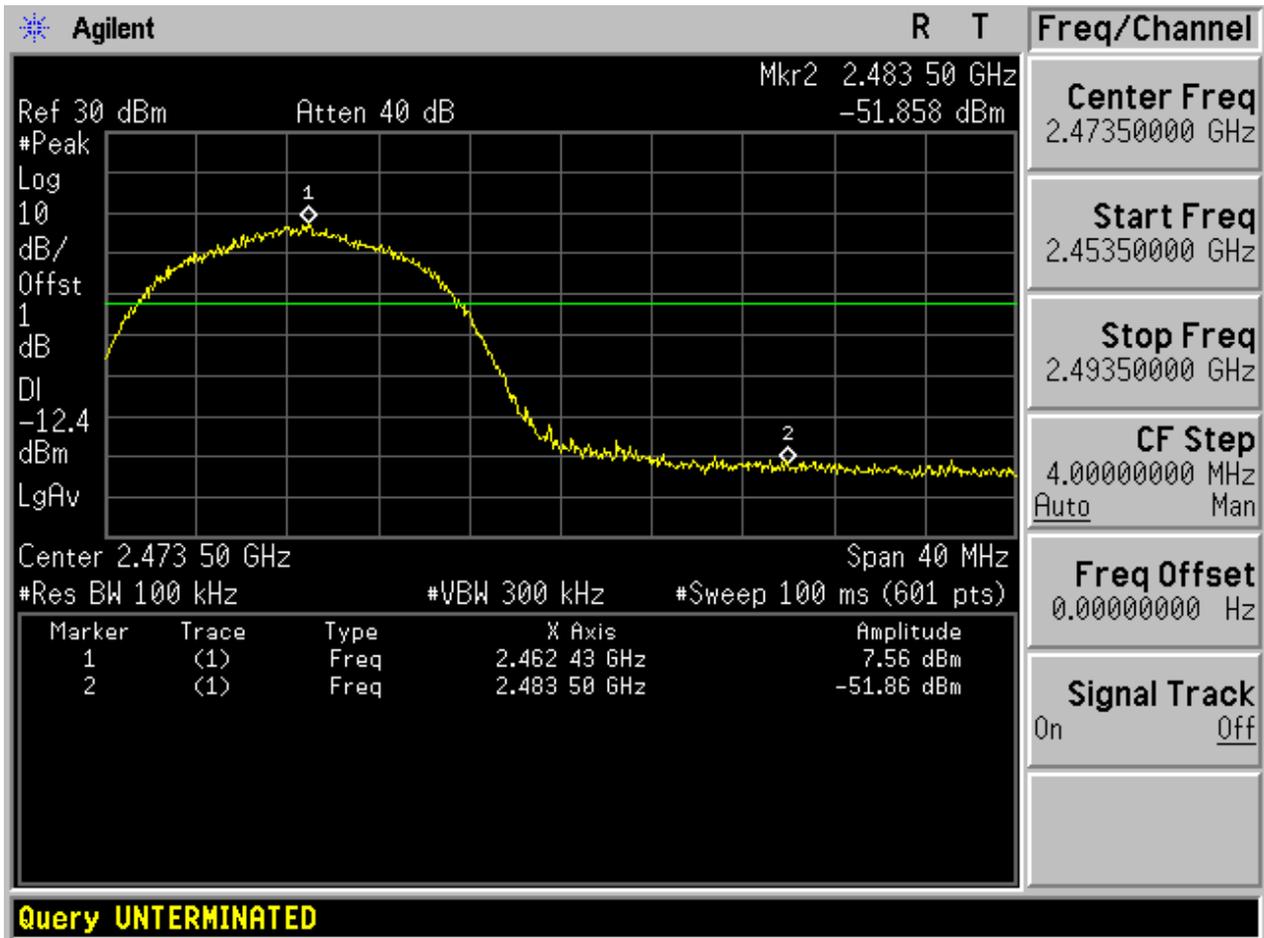
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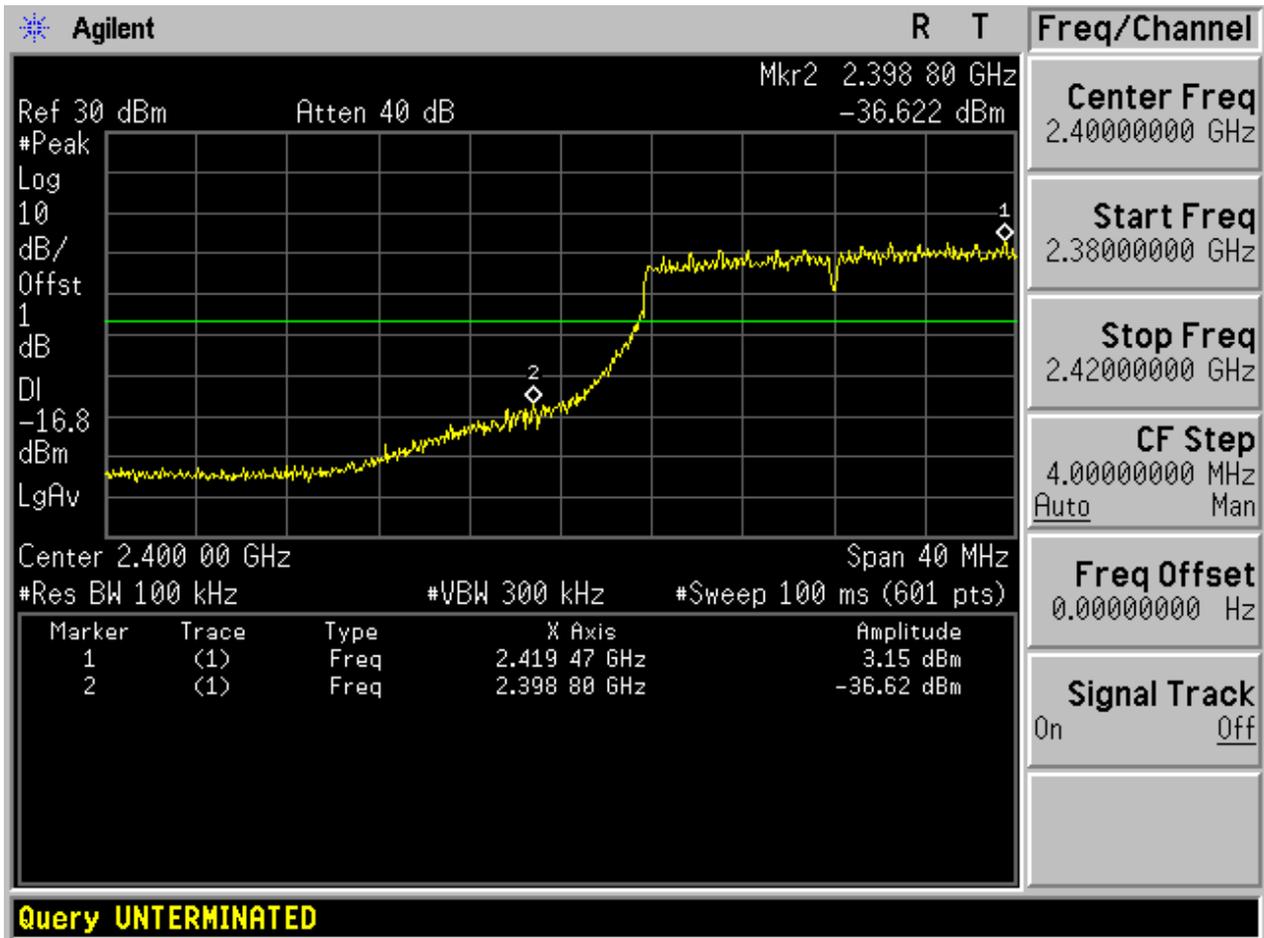


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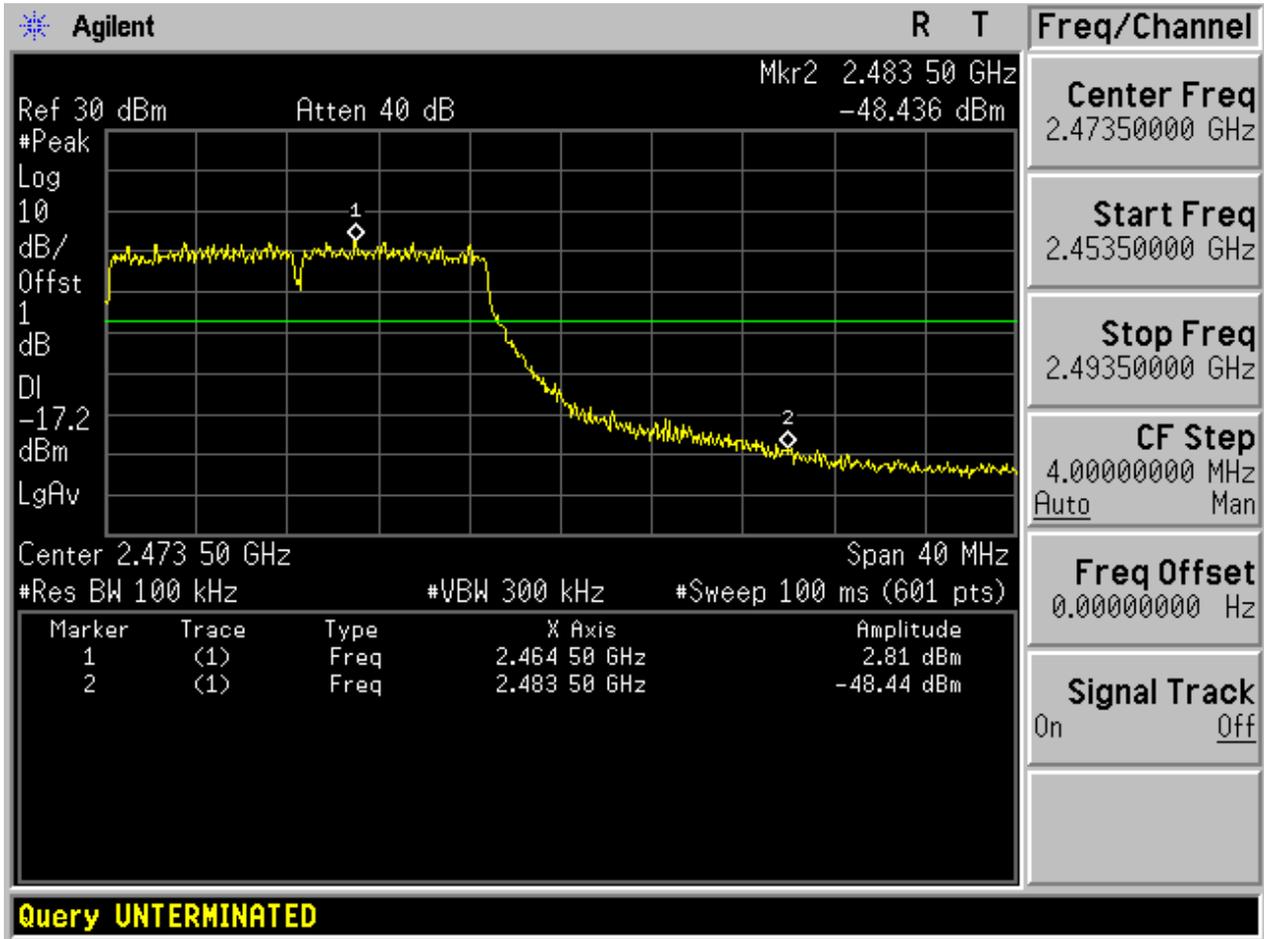


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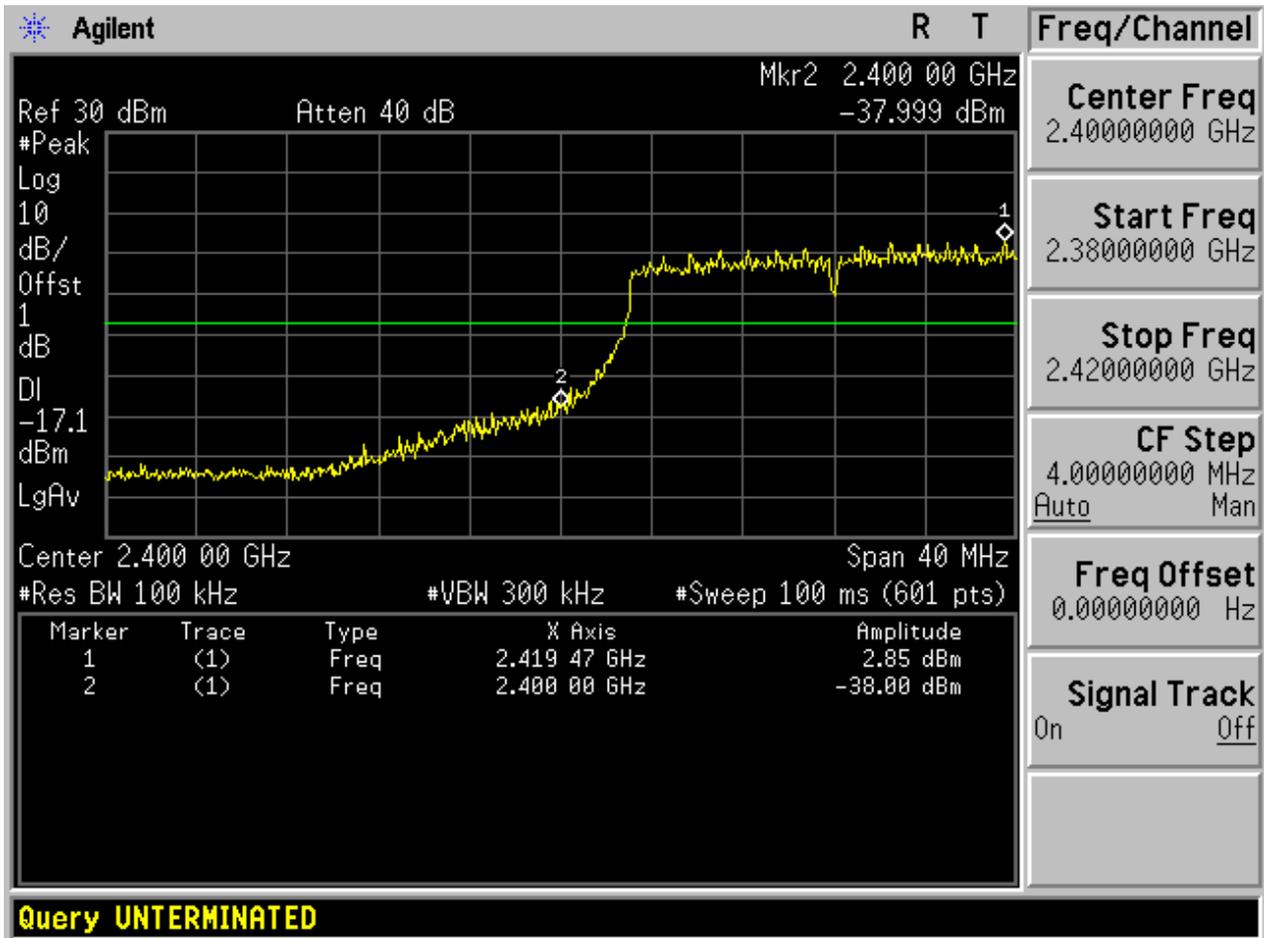


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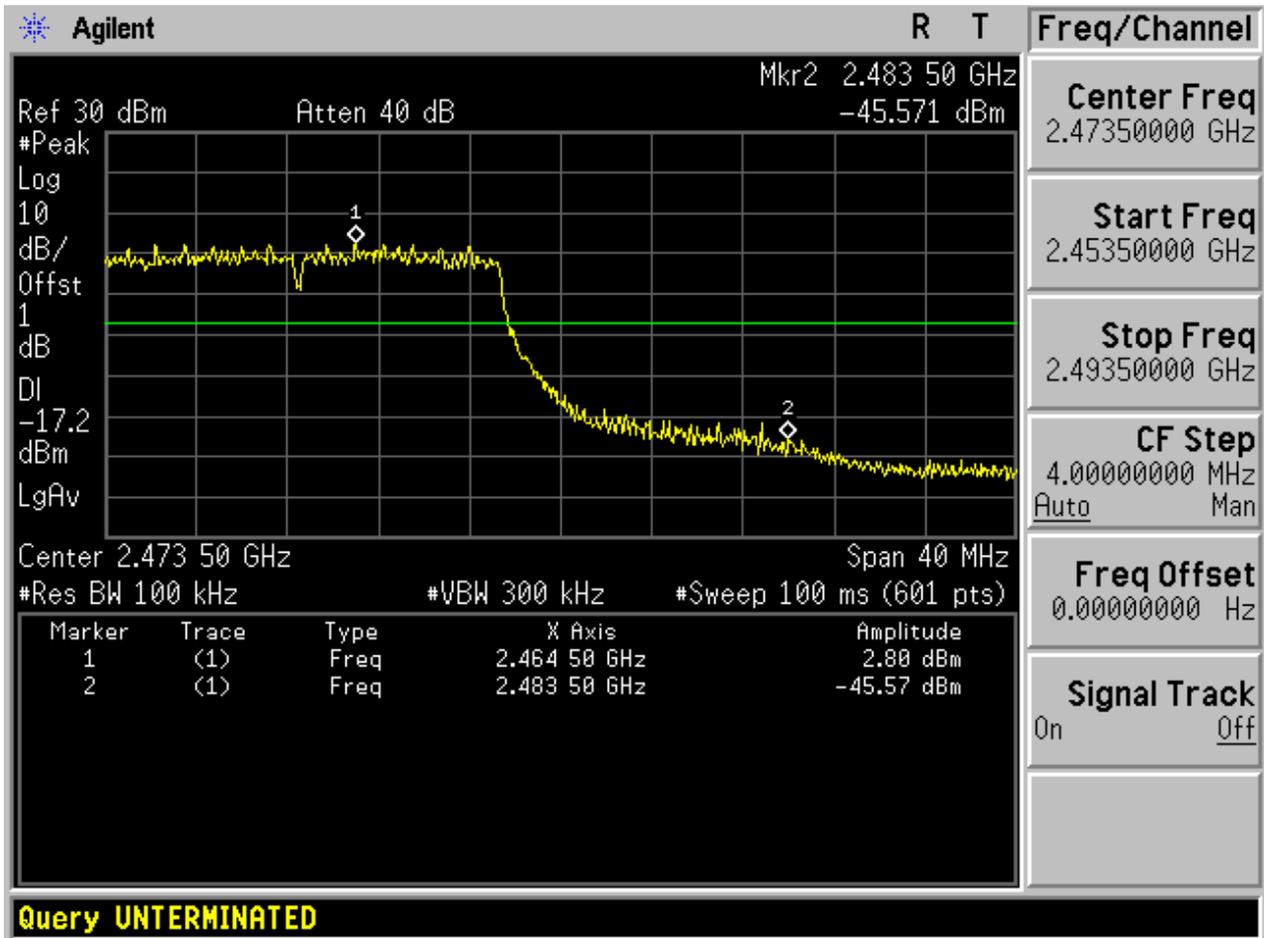


2.9 11N20_L@Ant 1





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" 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

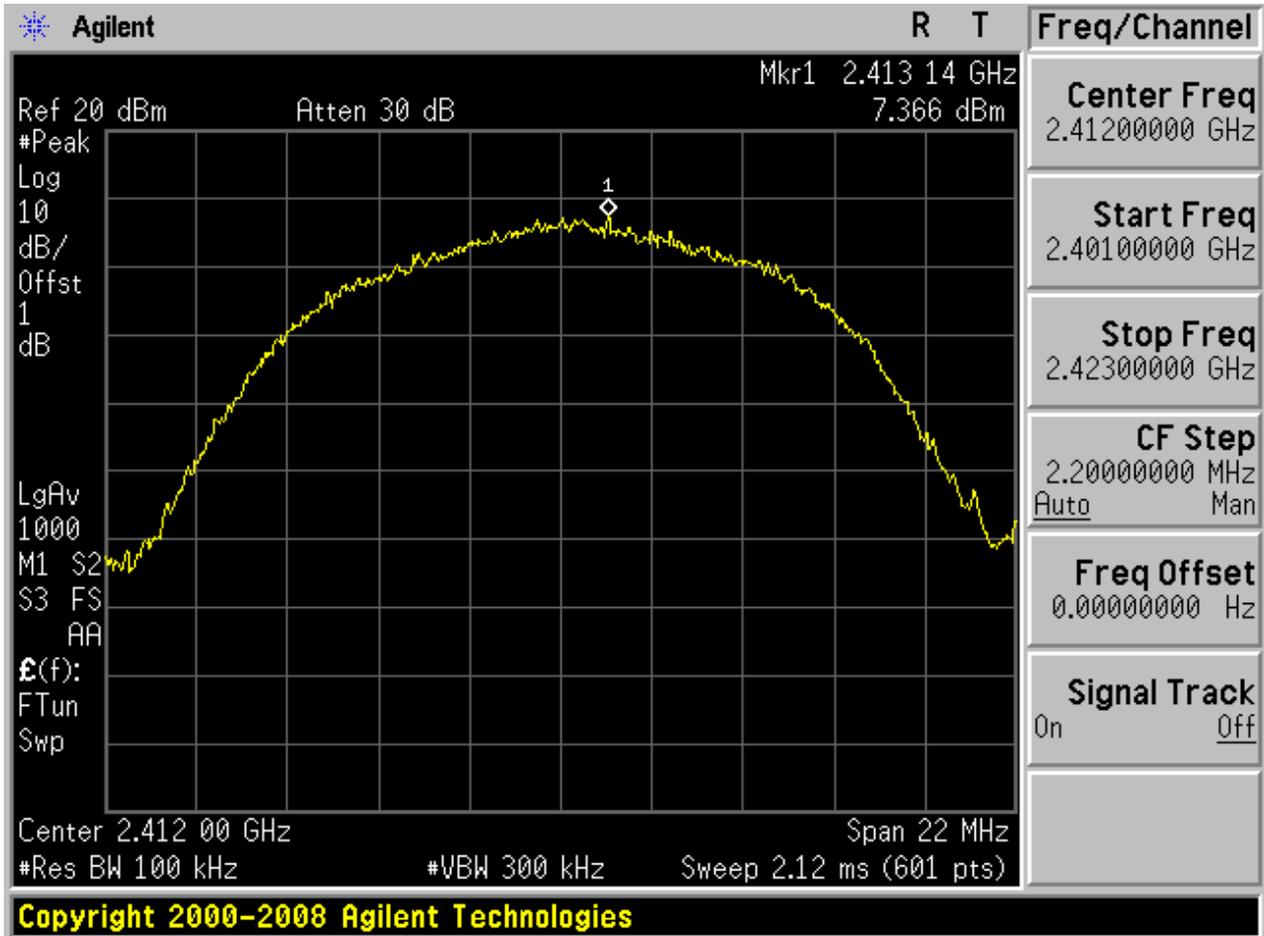
Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]	Verdict
11B	L	2412	Ant 1	7.37	<limit	pass
11B	M	2437	Ant 1	8.61	<limit	pass
11B	H	2462	Ant 1	8.22	<limit	pass
11G	L	2412	Ant 1	3.44	<limit	pass
11G	M	2437	Ant 1	3.63	<limit	pass
11G	H	2462	Ant 1	2.98	<limit	pass
11N20	L	2412	Ant 1	3.10	<limit	pass
11N20	M	2437	Ant 1	3.58	<limit	pass
11N20	H	2462	Ant 1	3.00	<limit	pass



Part II - Test Plots

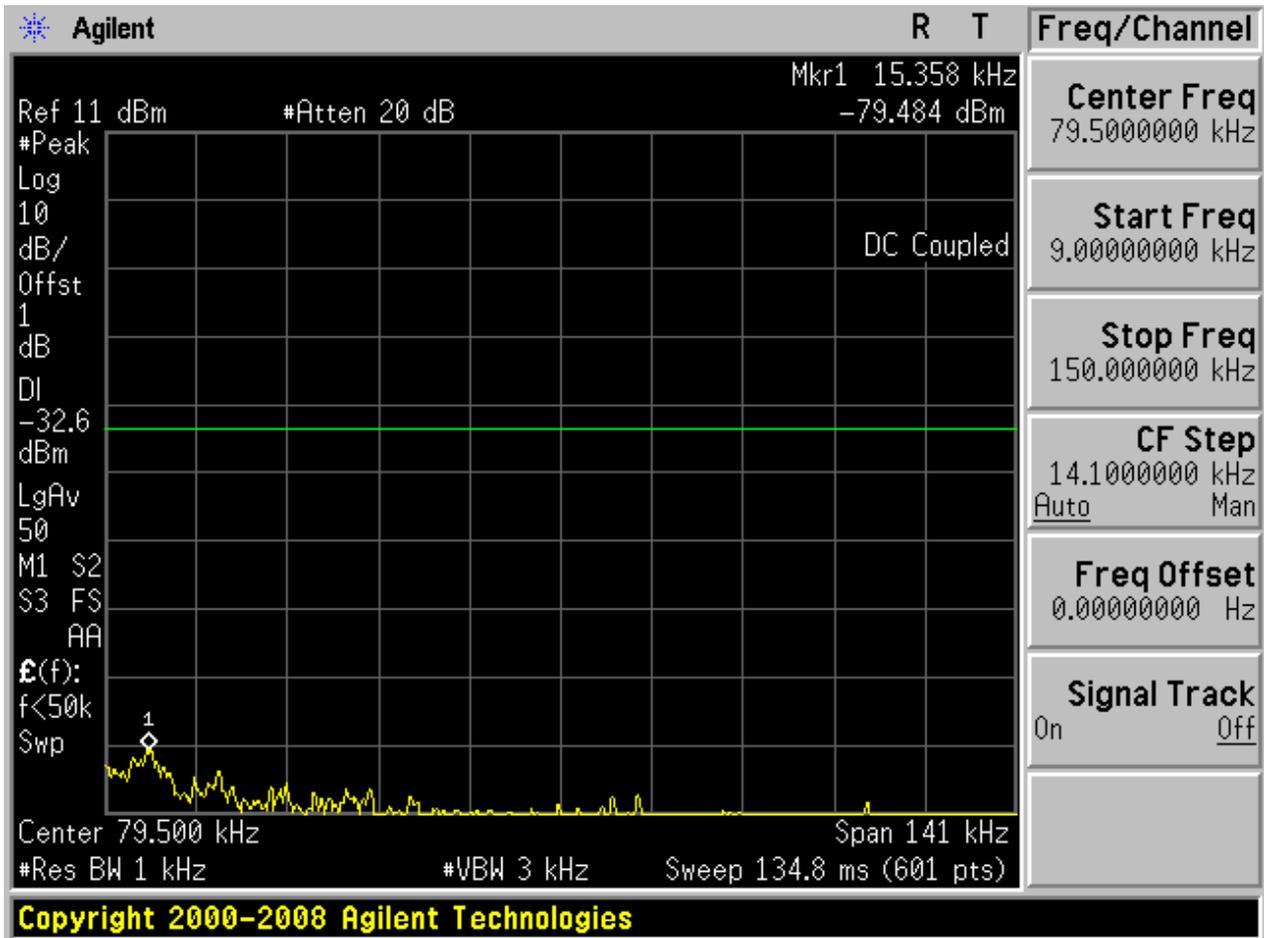
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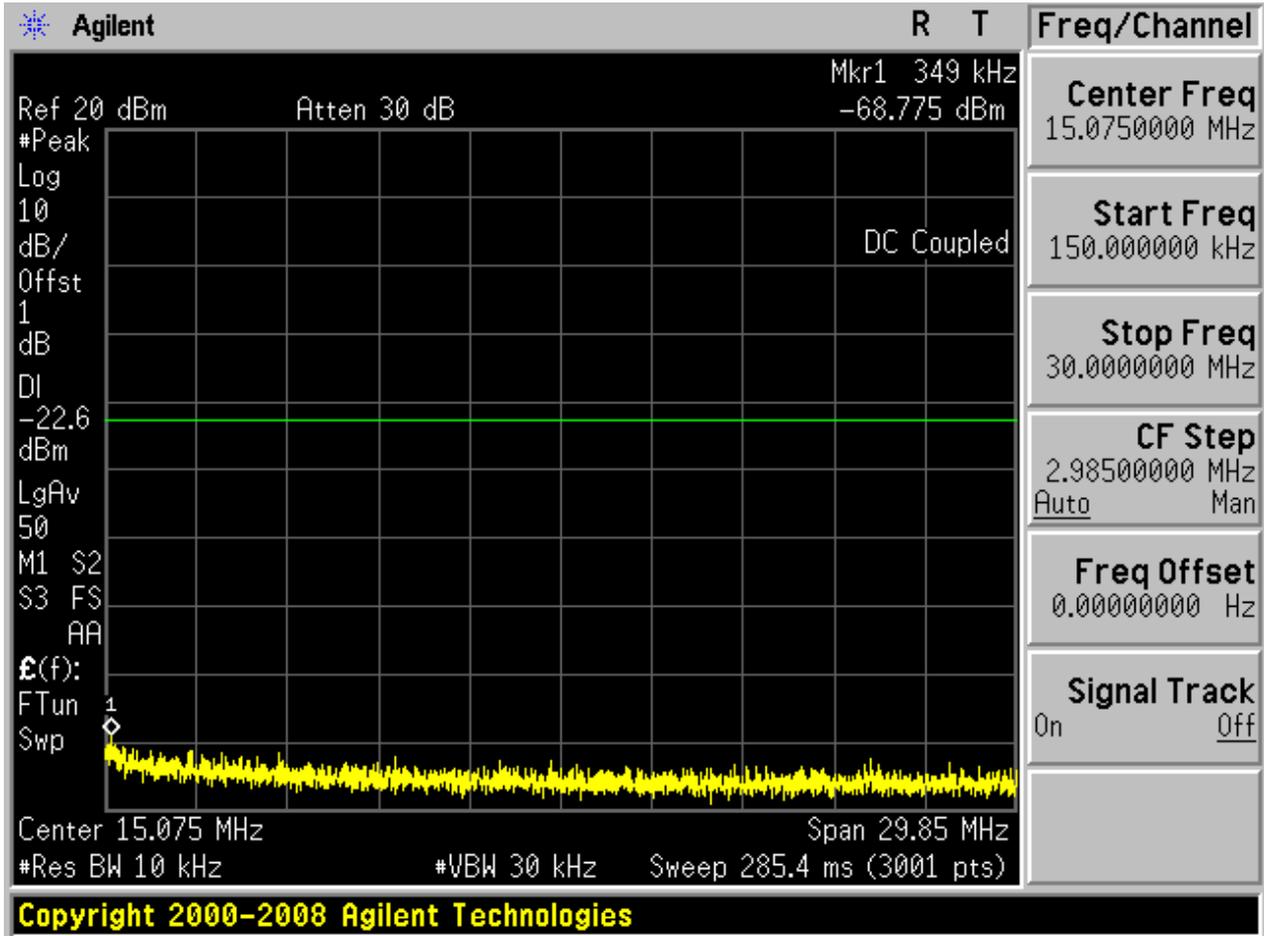
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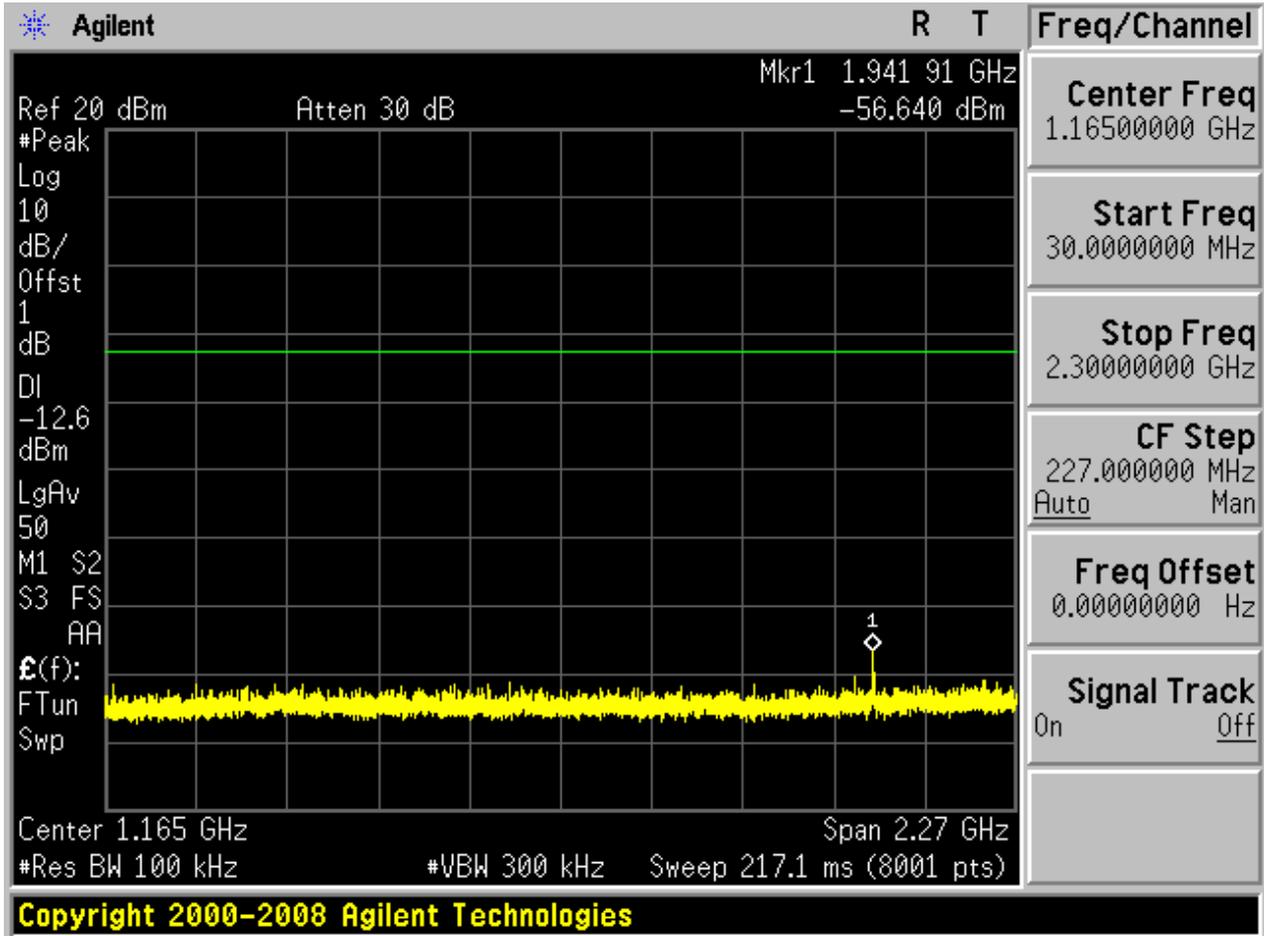


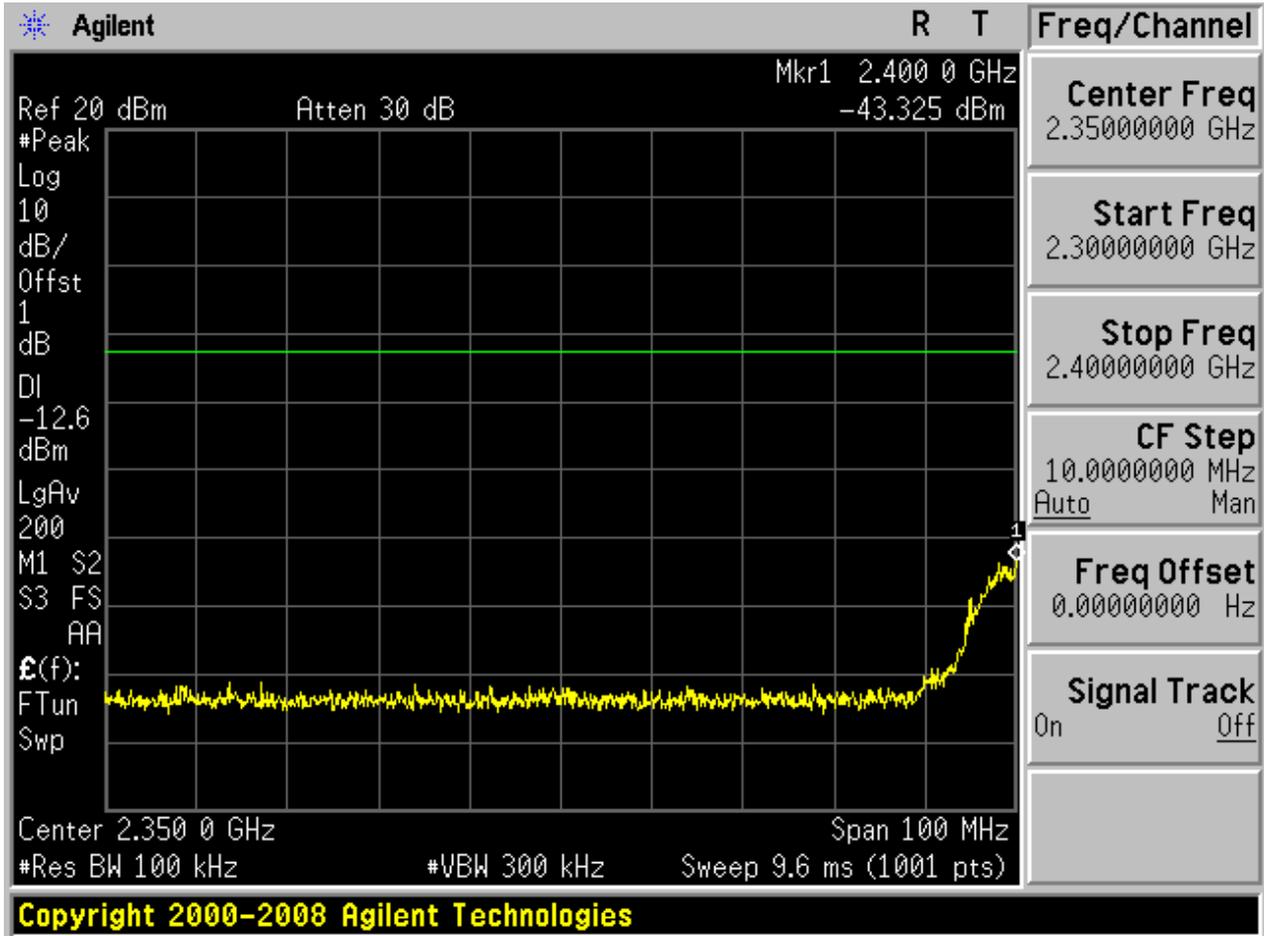


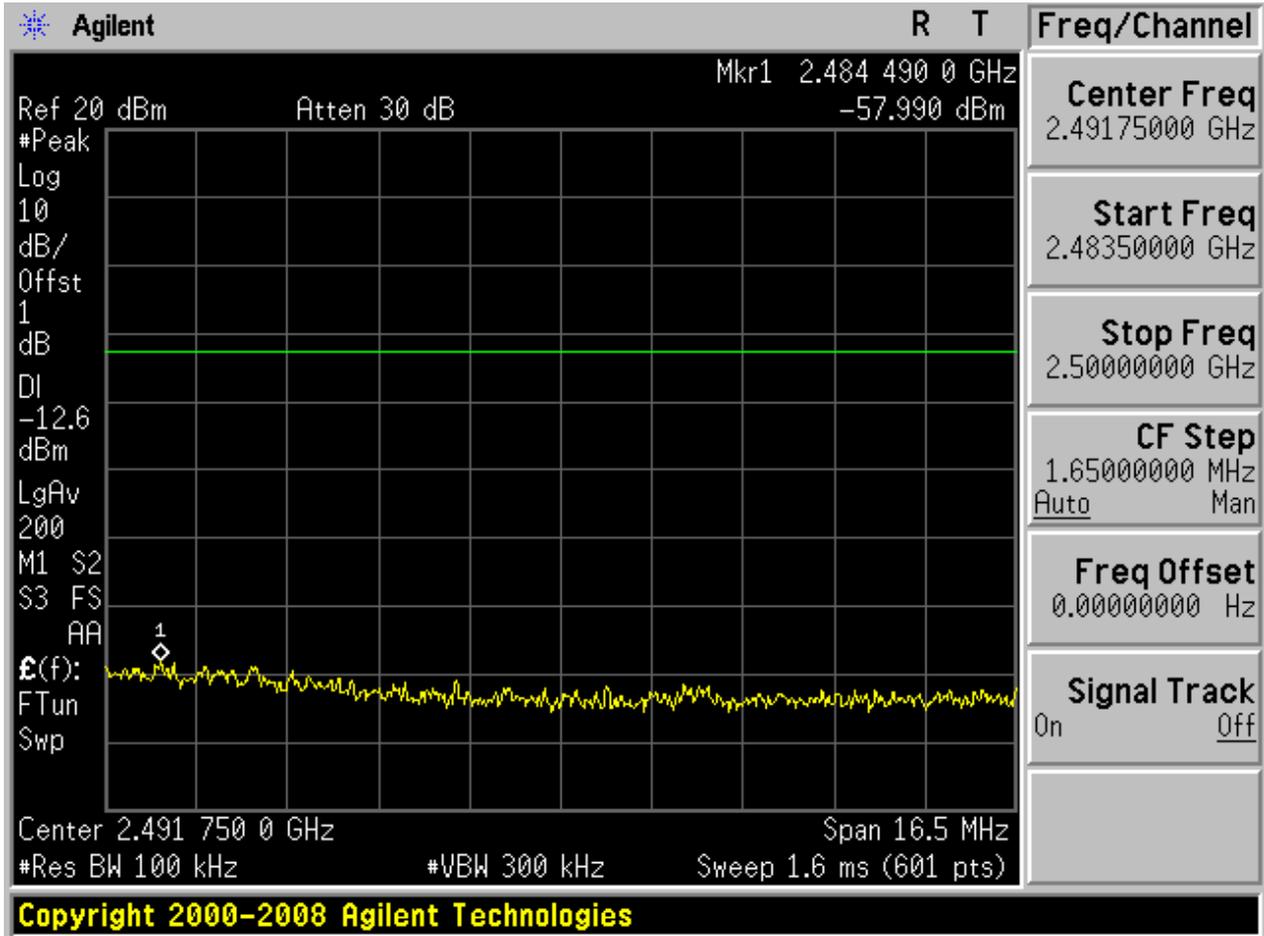
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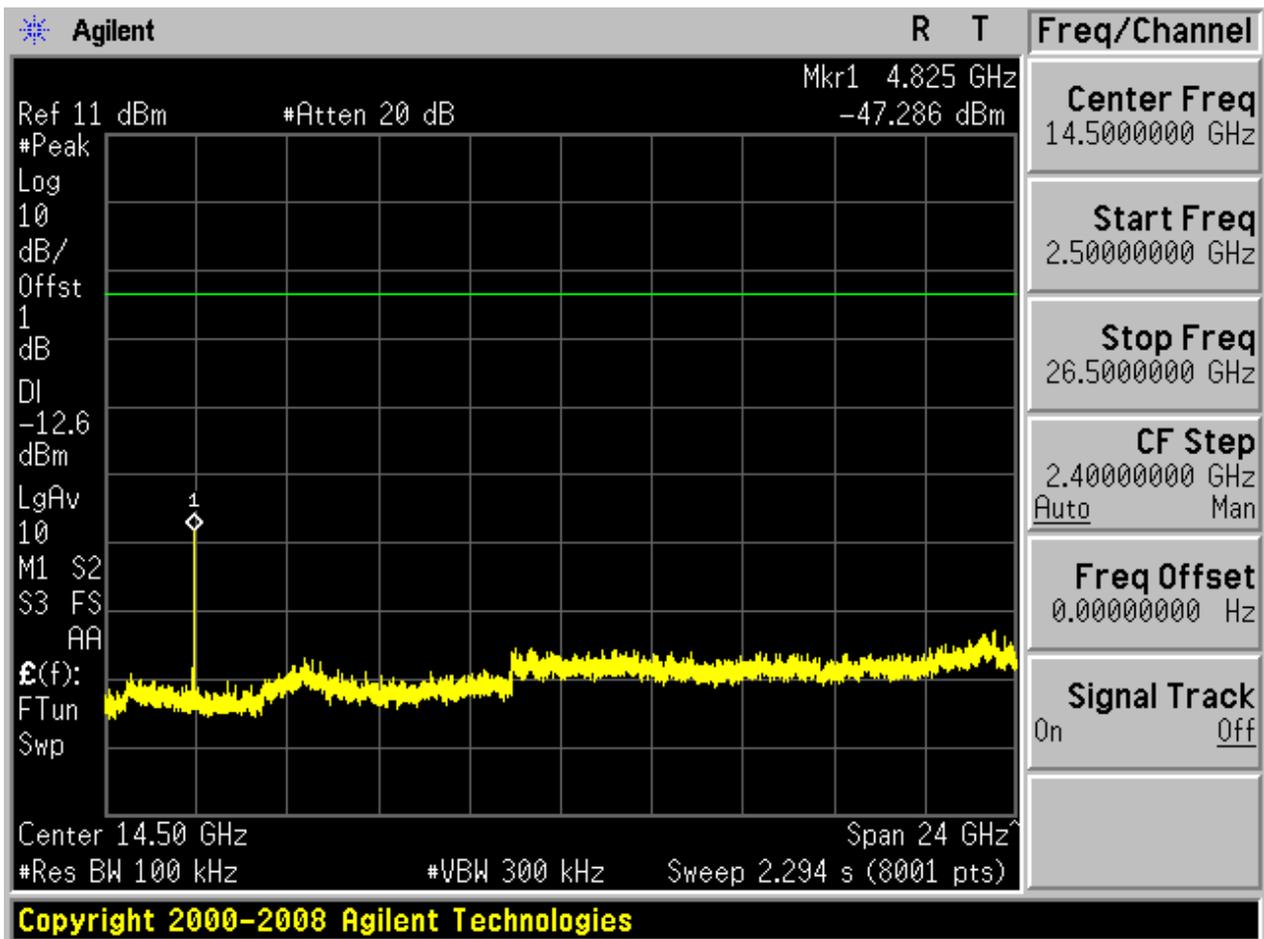






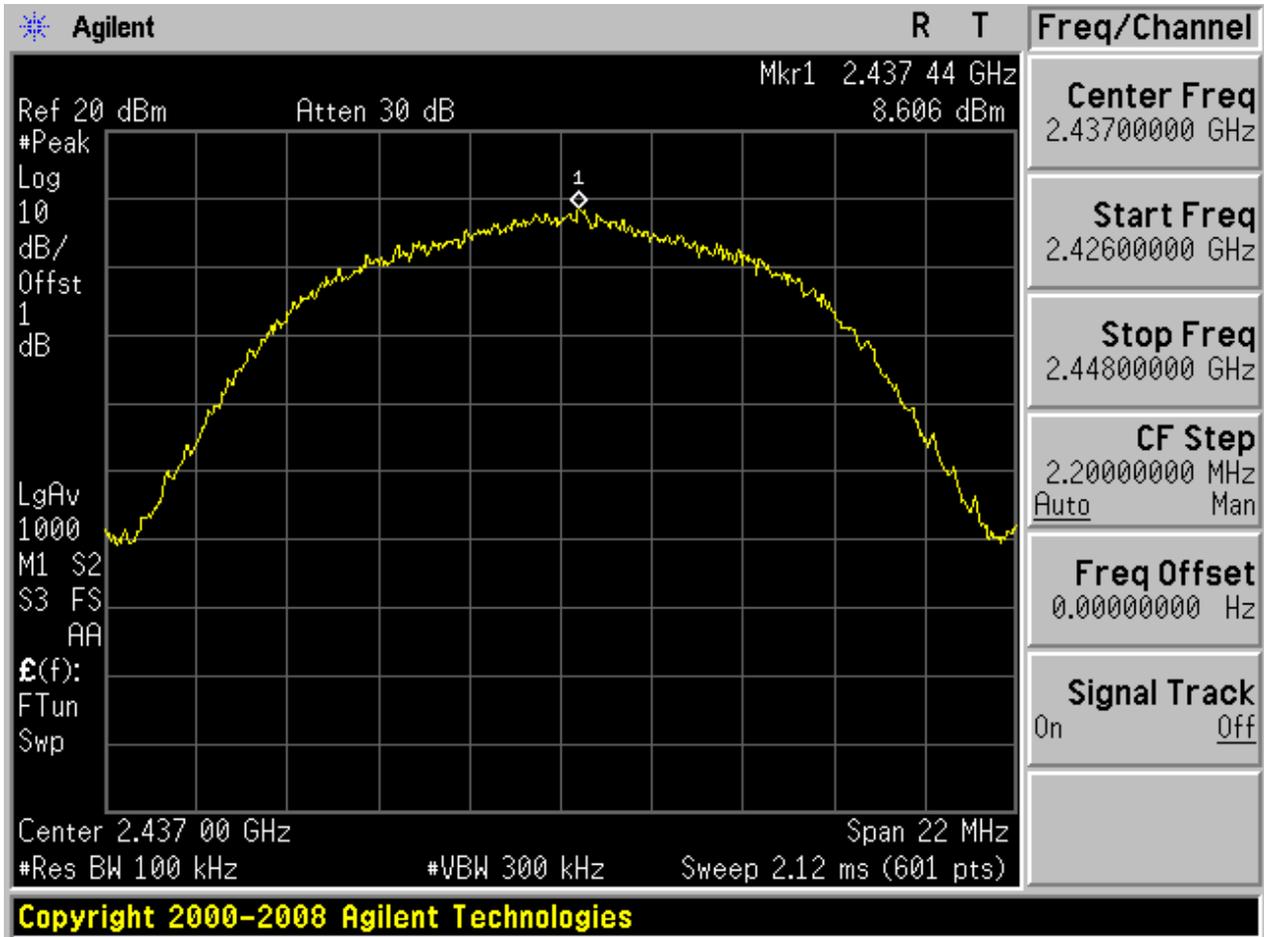






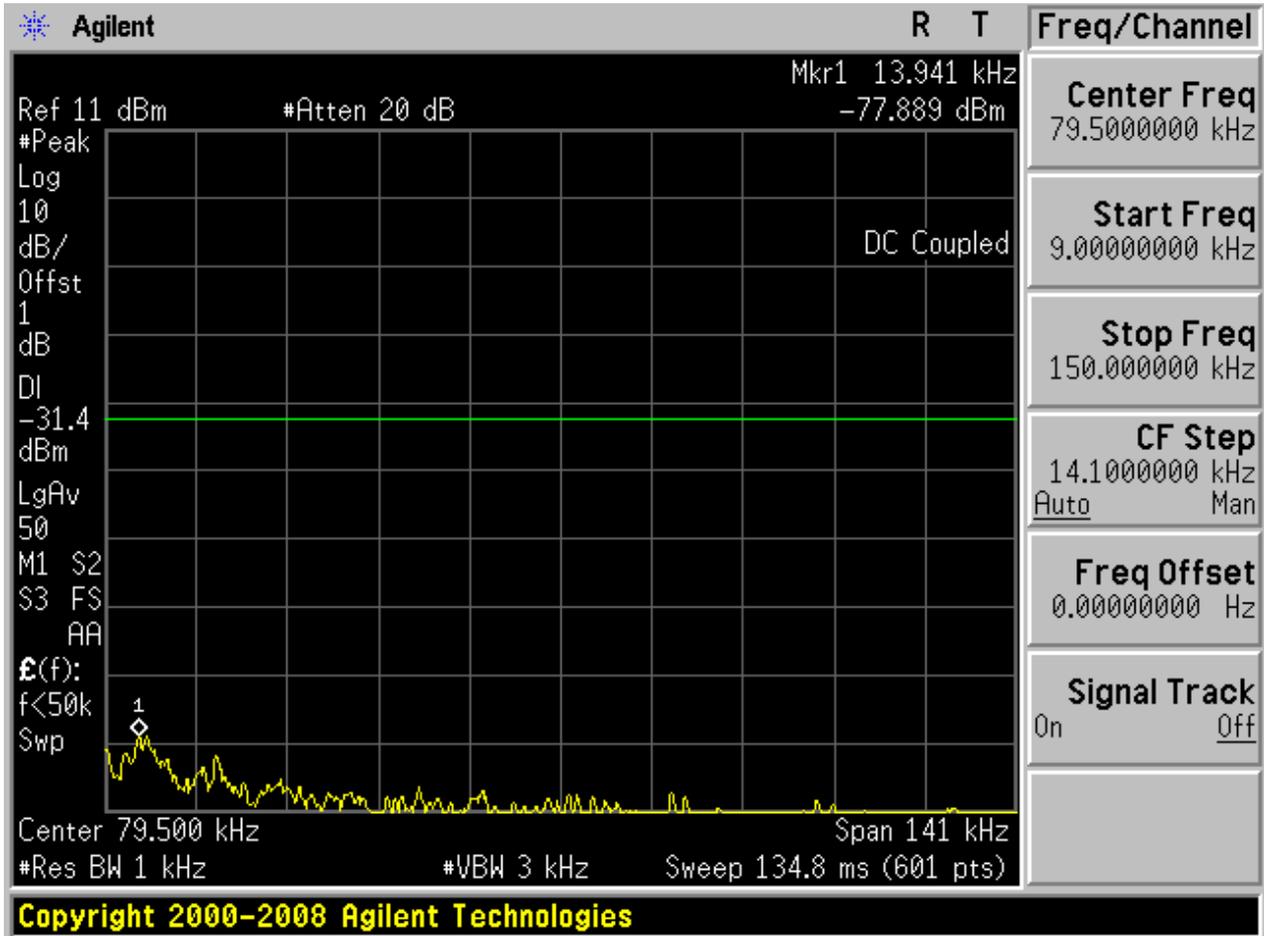
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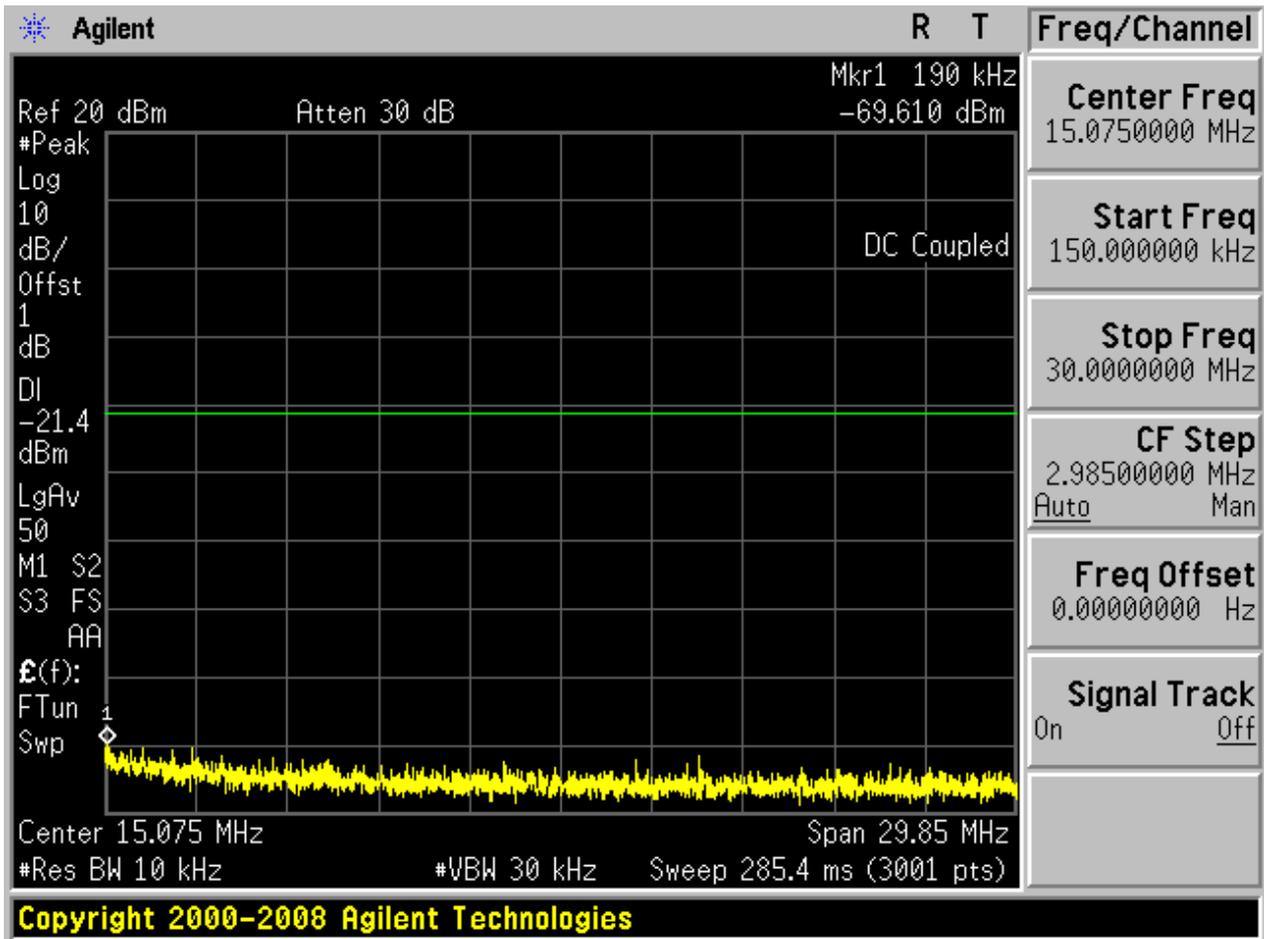
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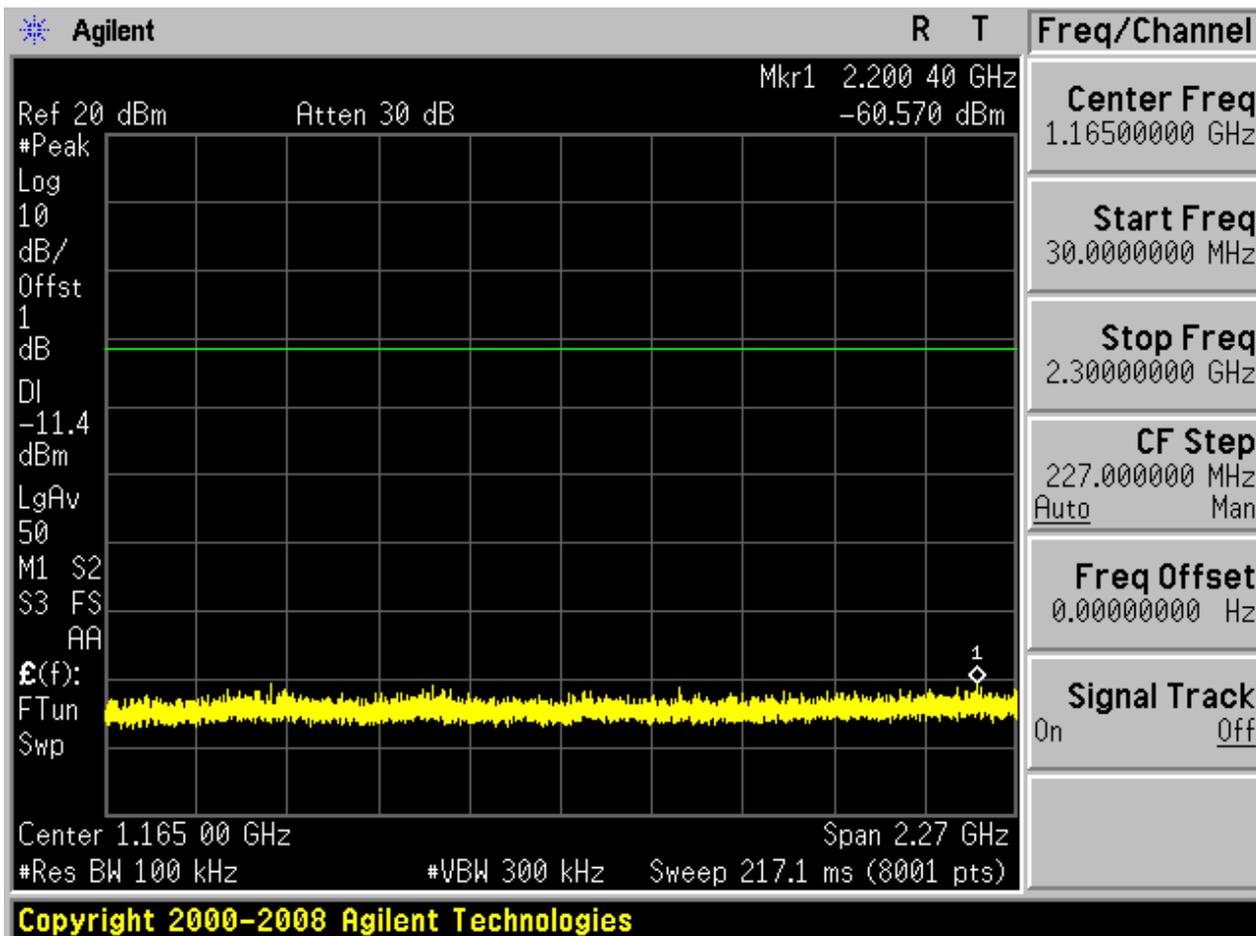


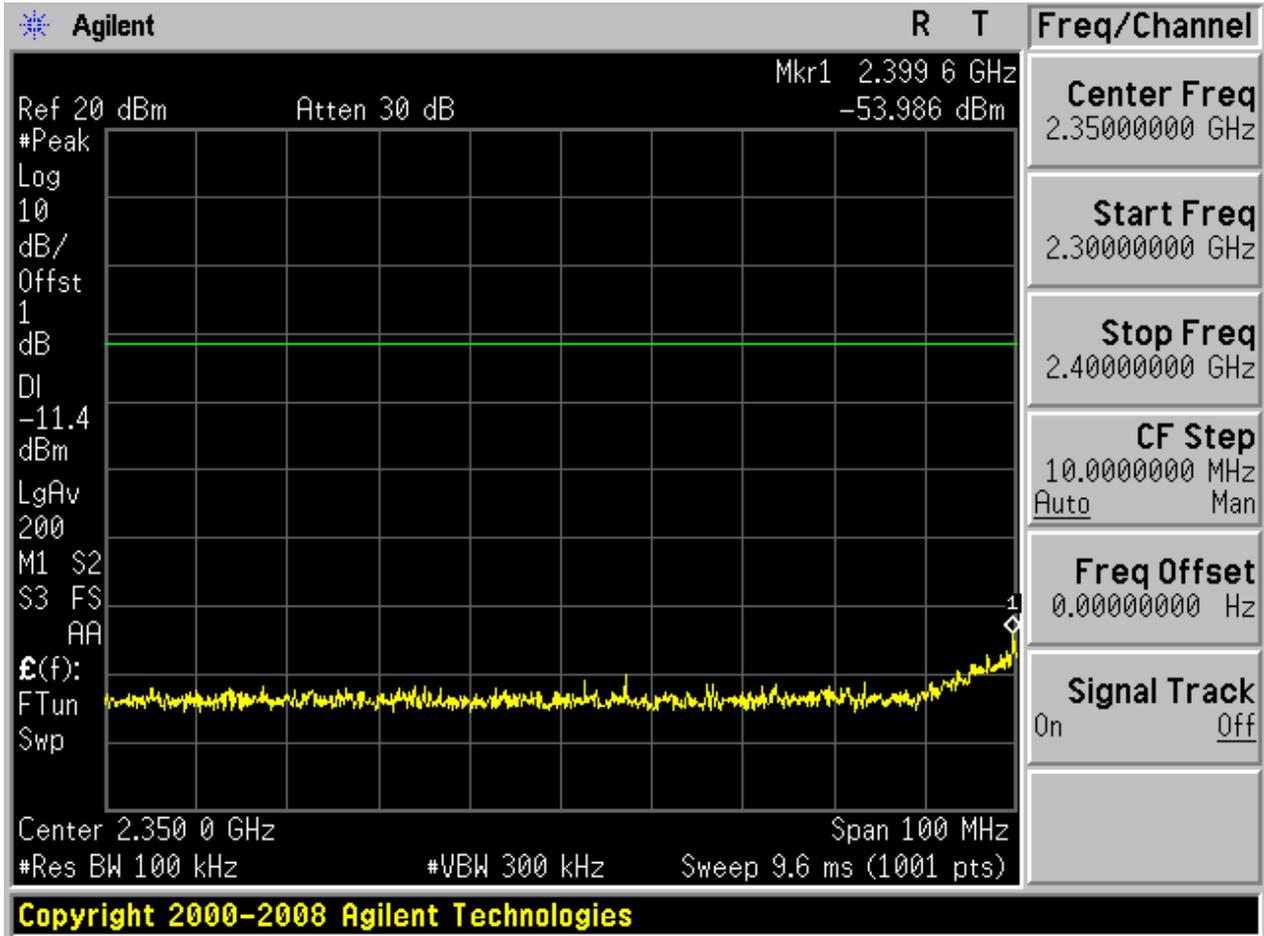


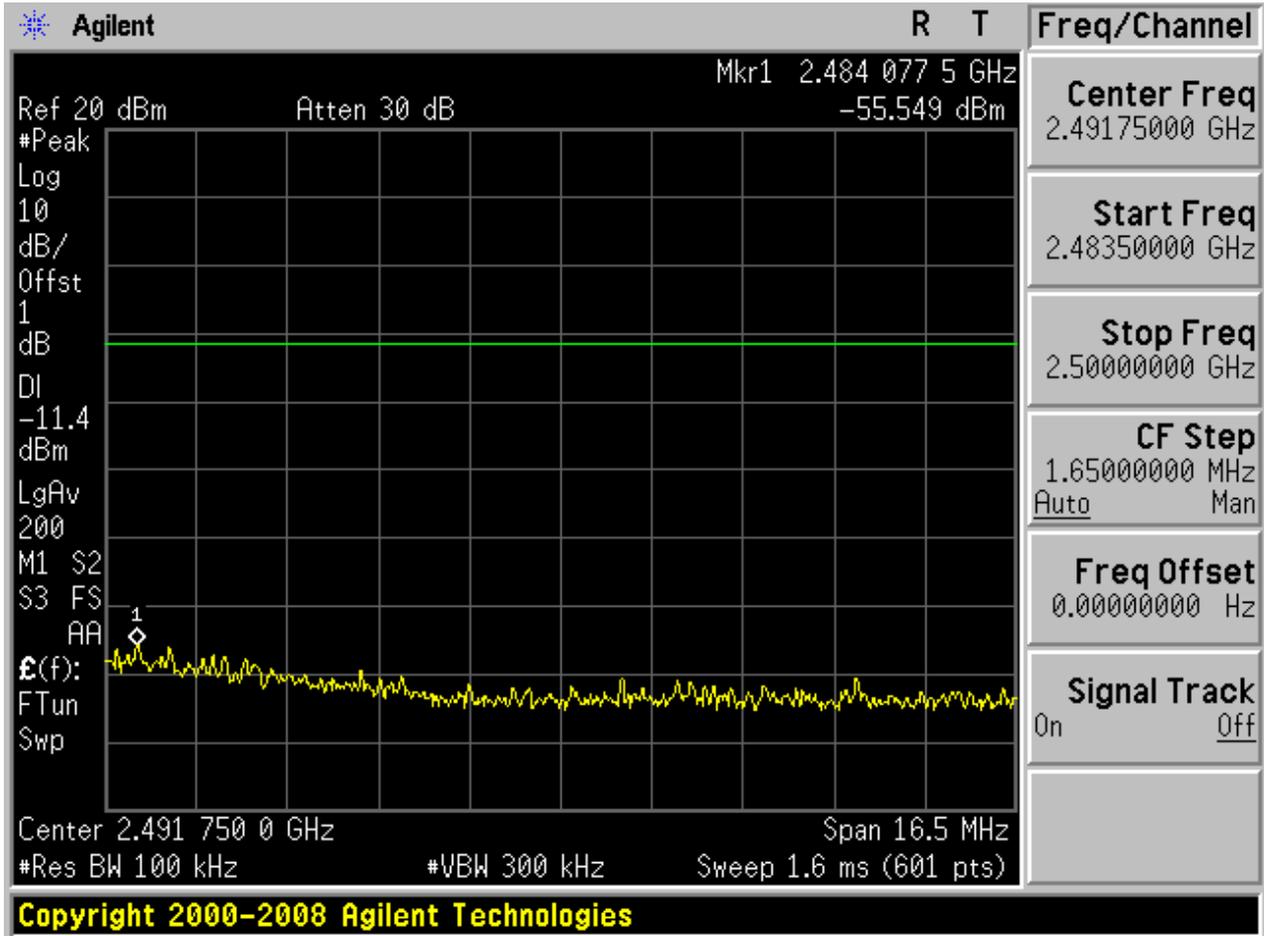
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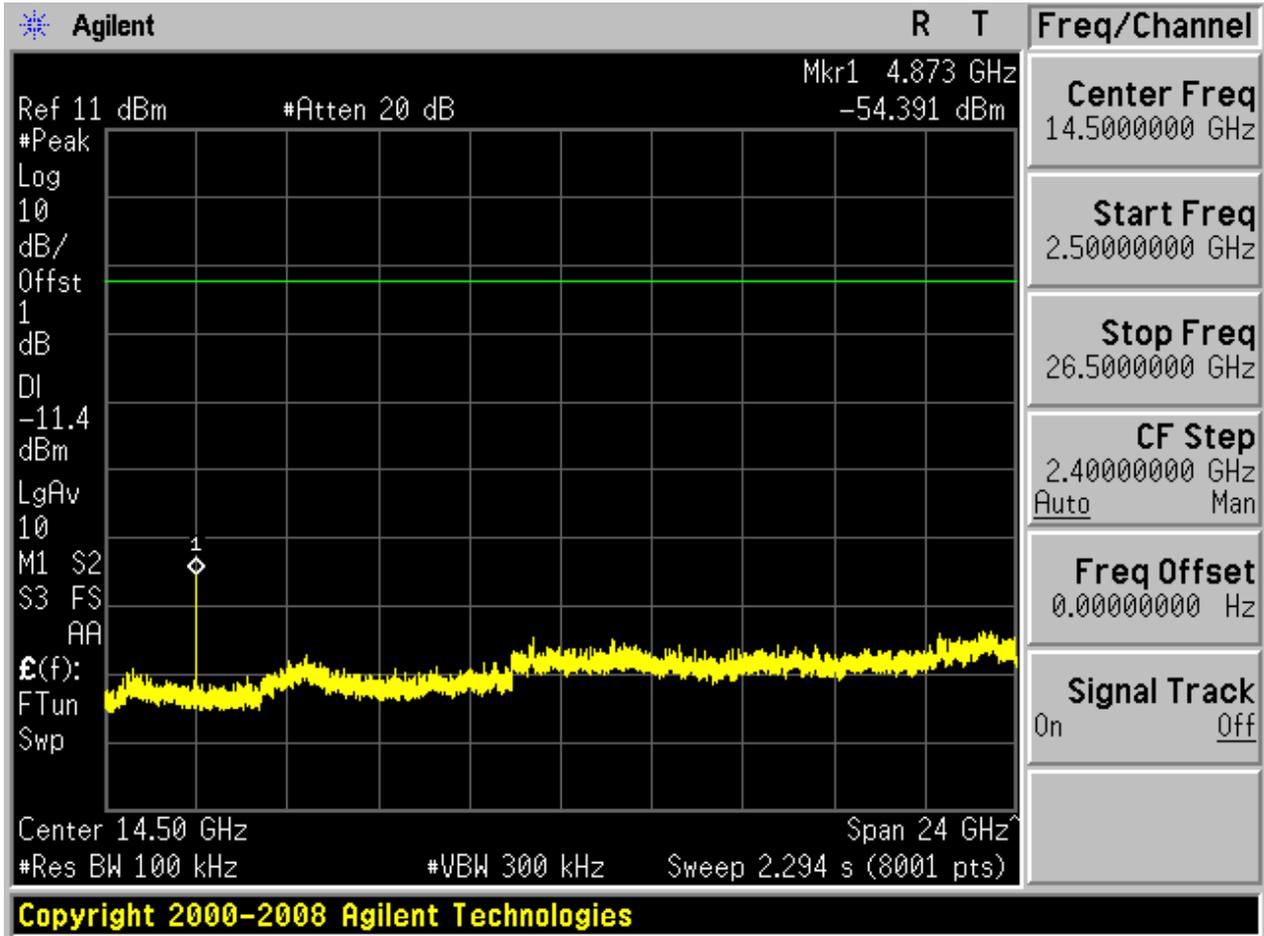








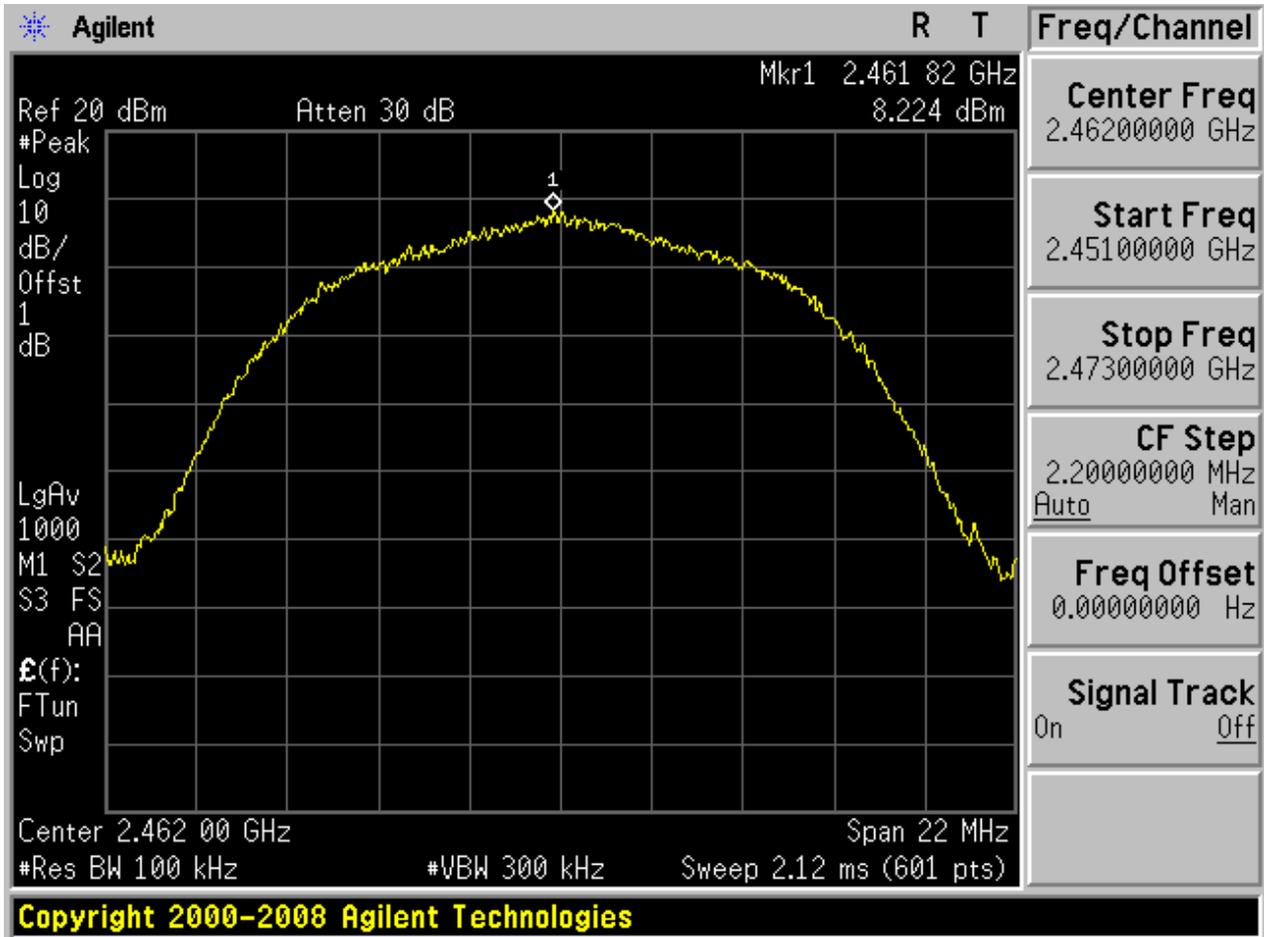






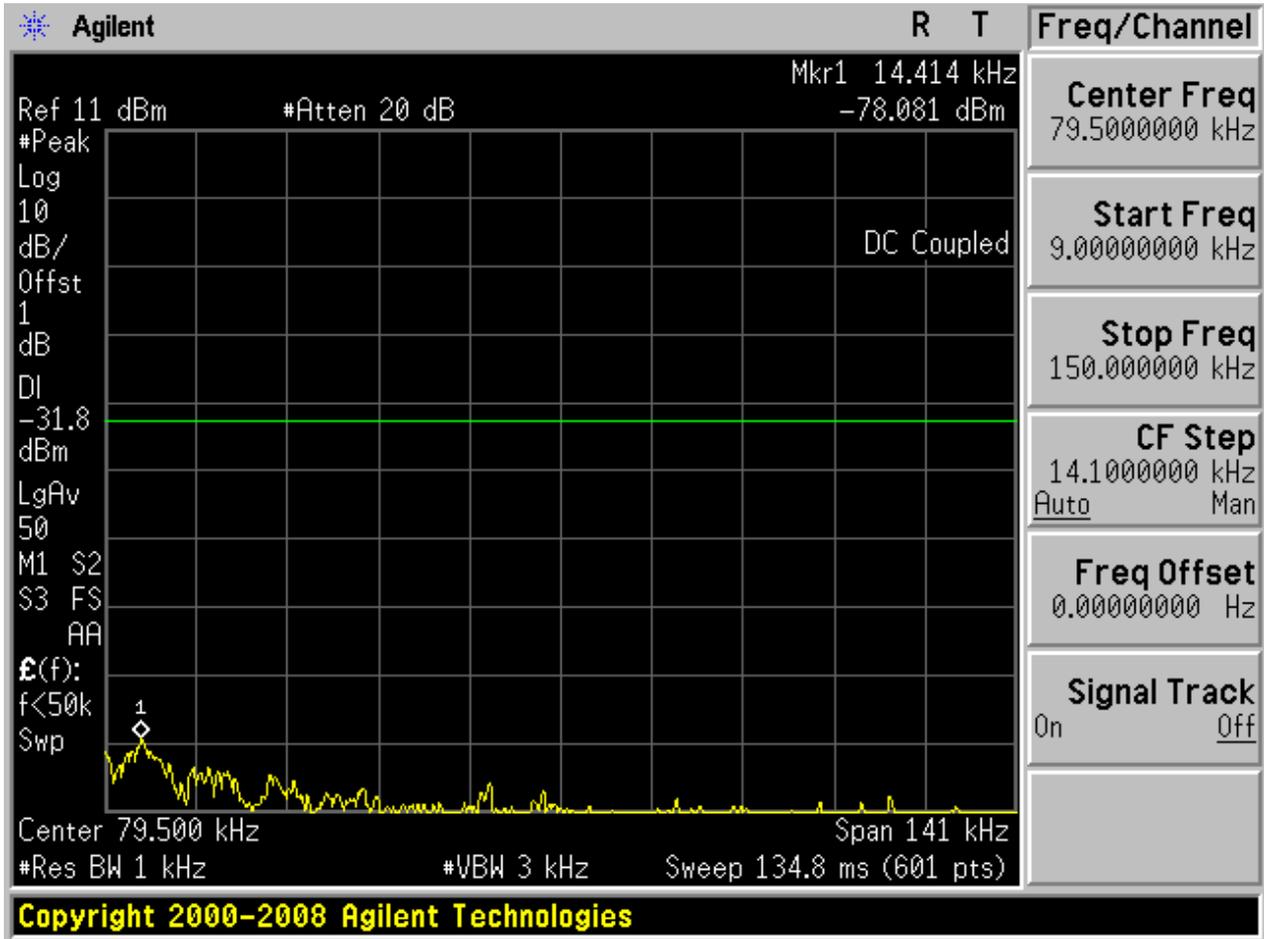
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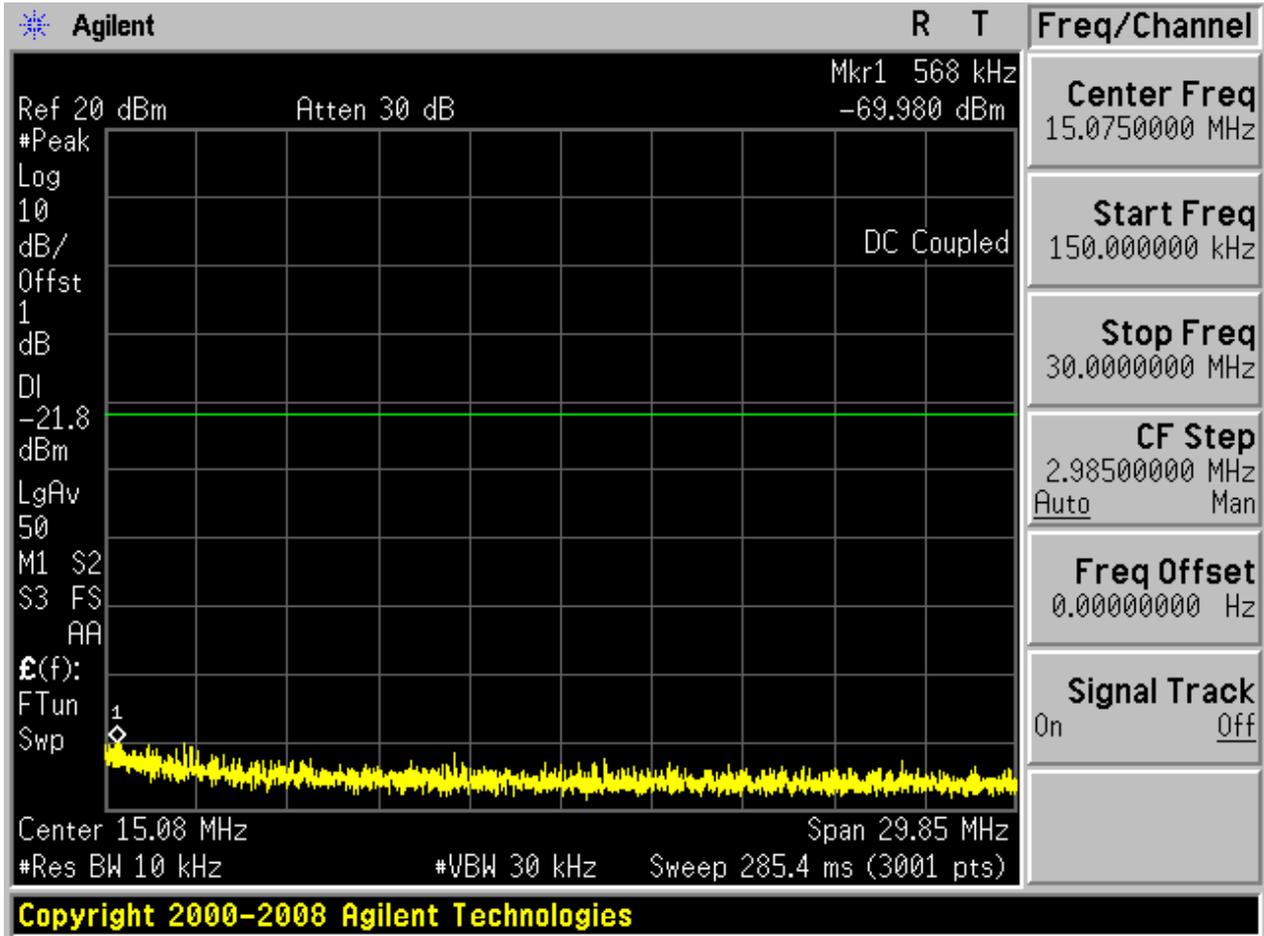
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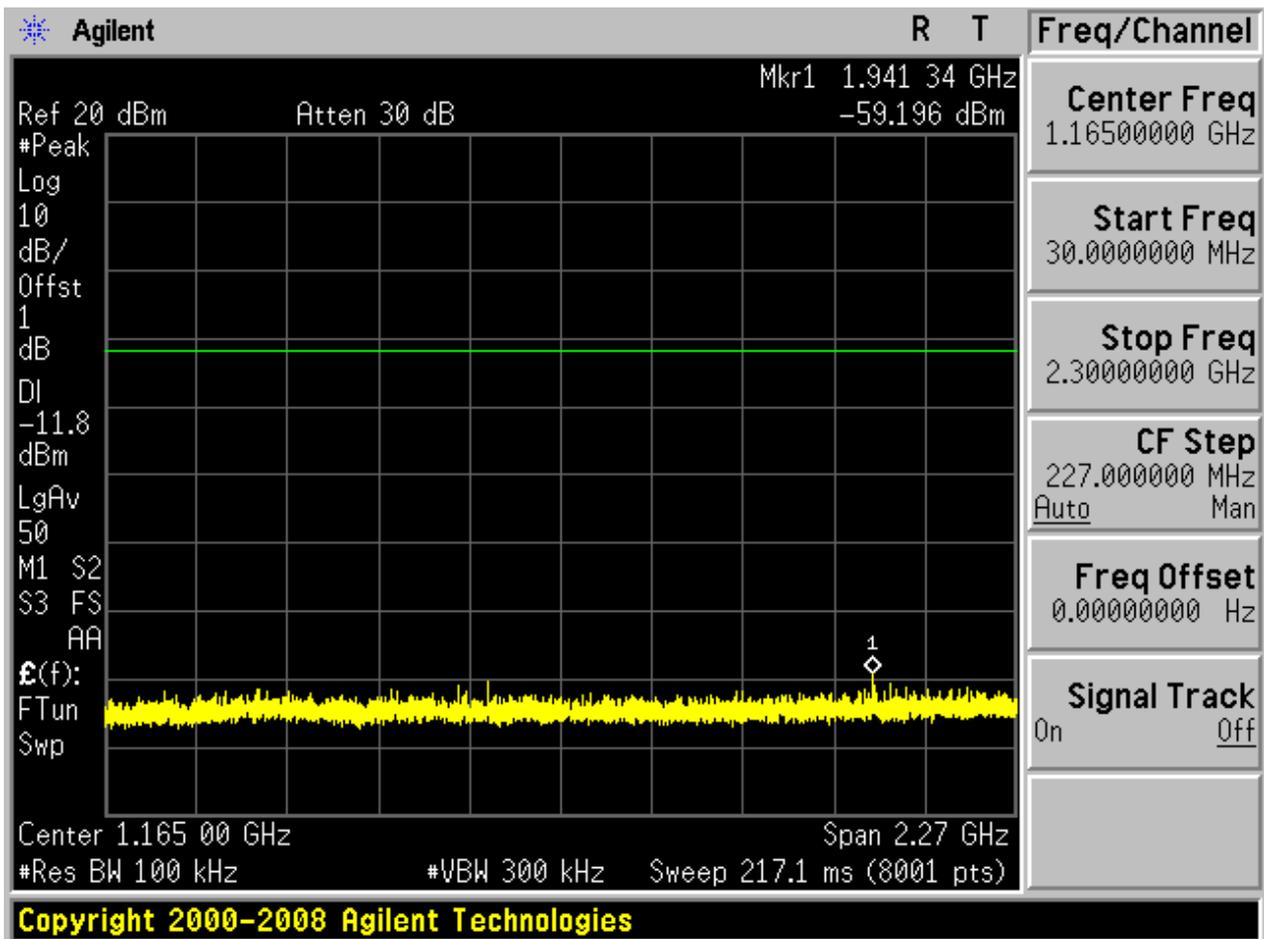


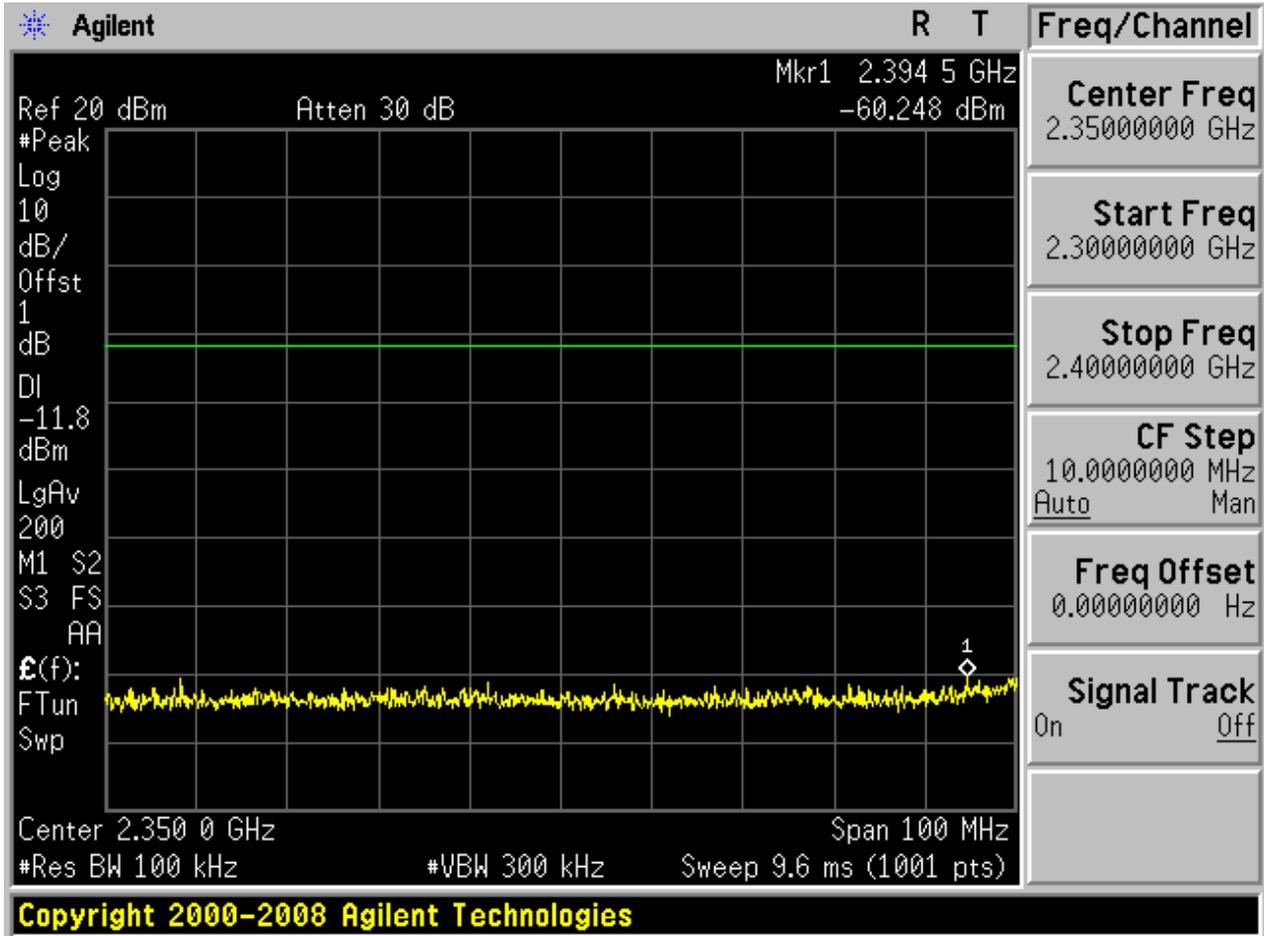


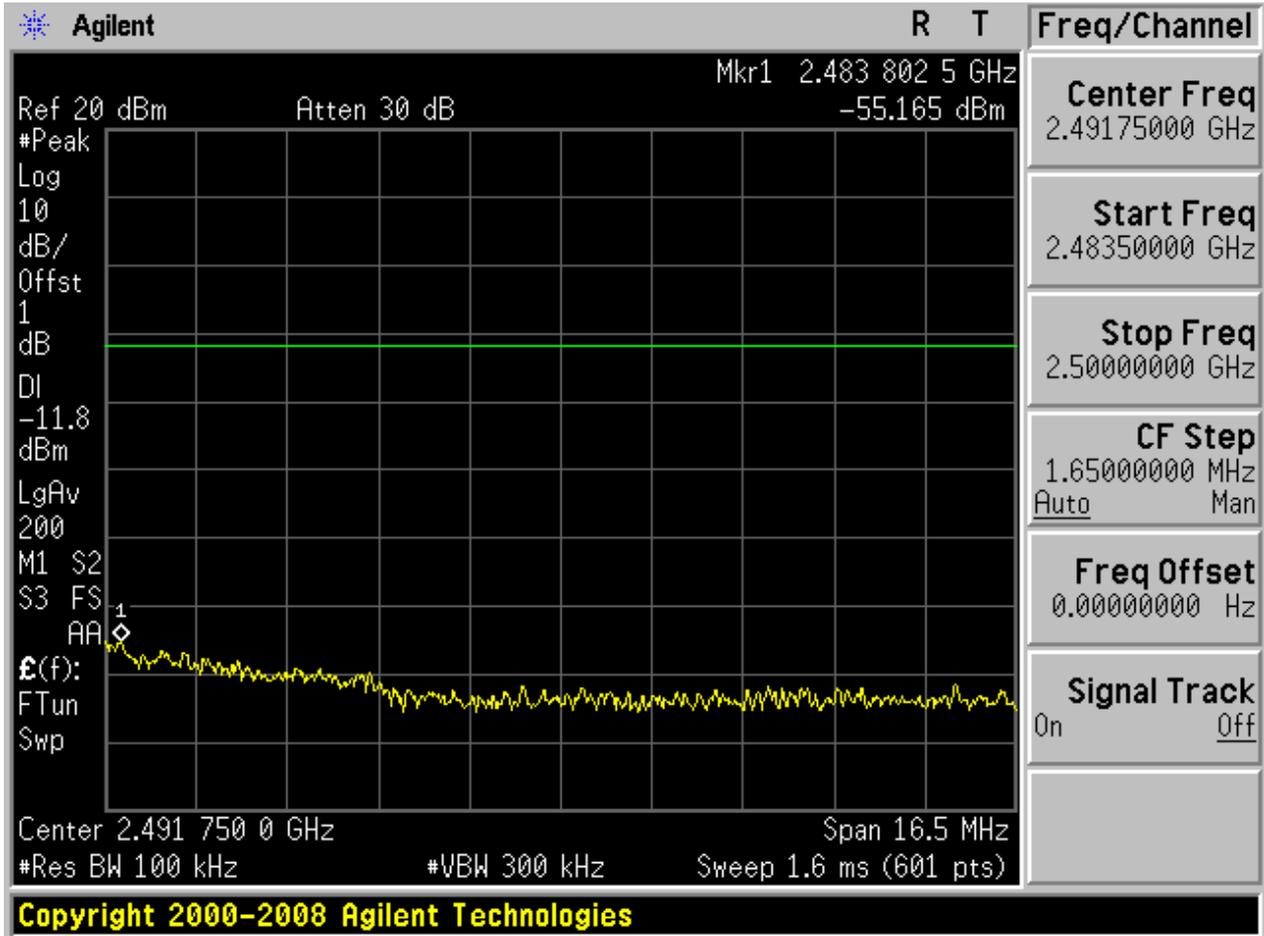
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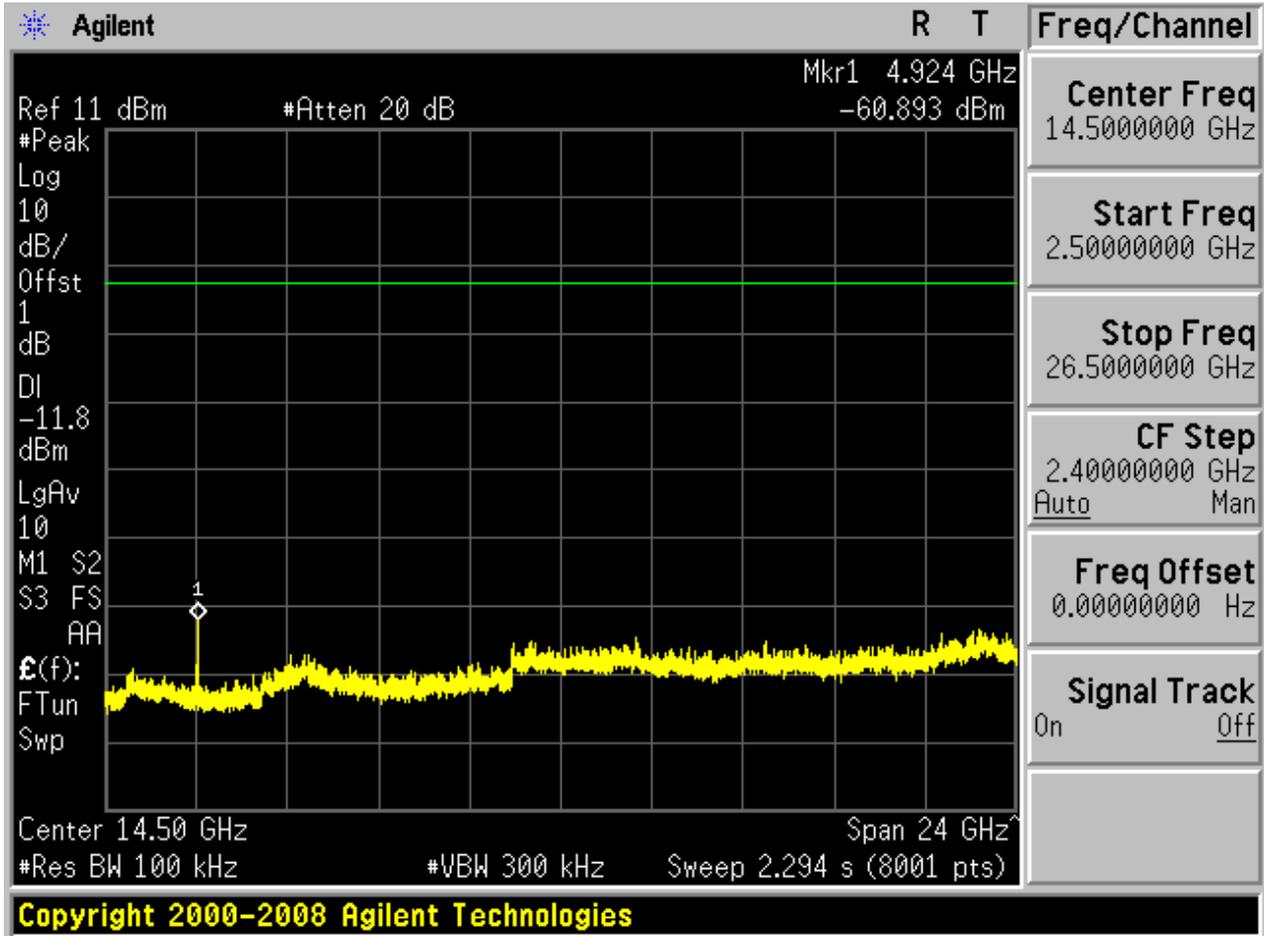








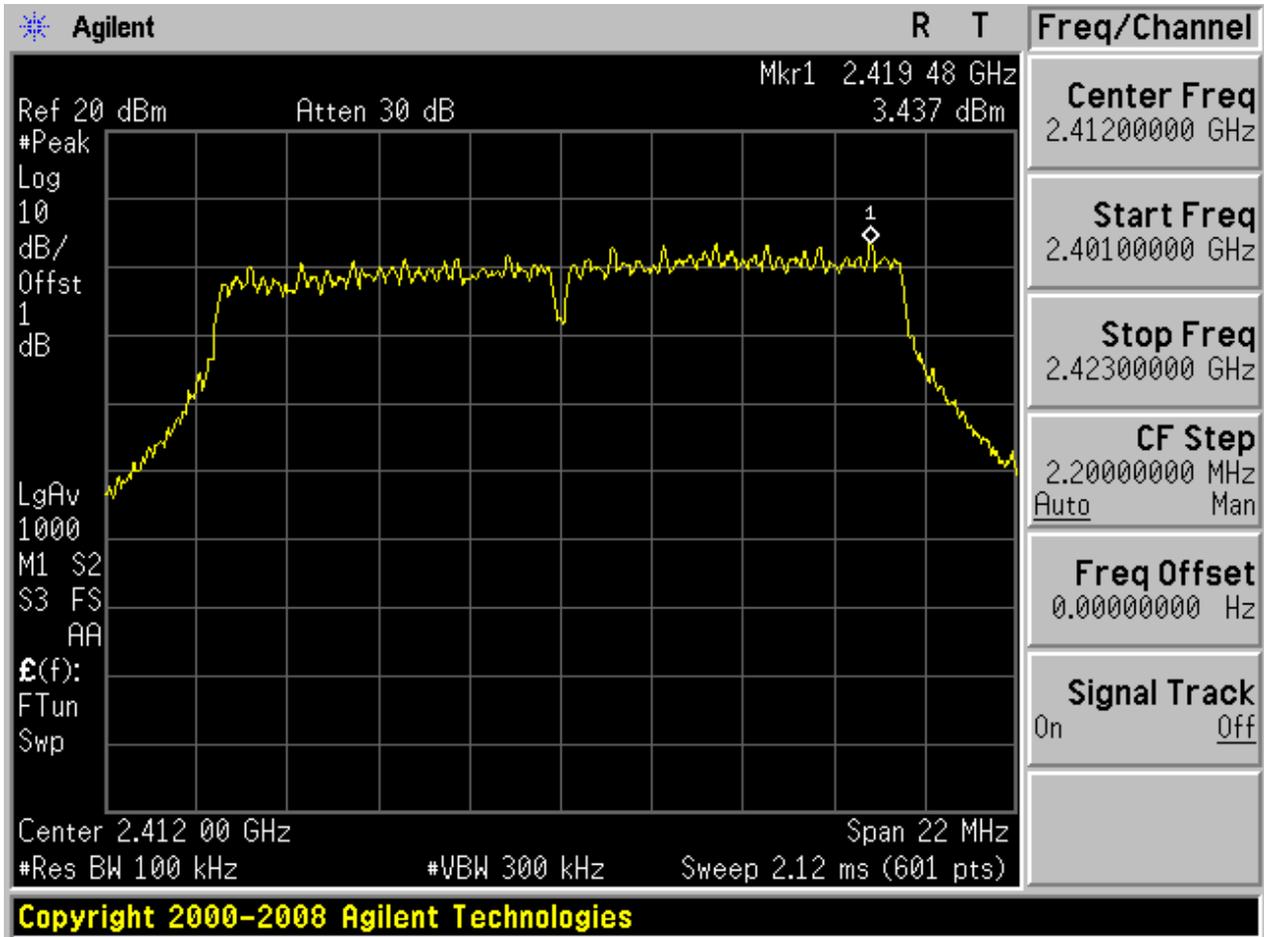






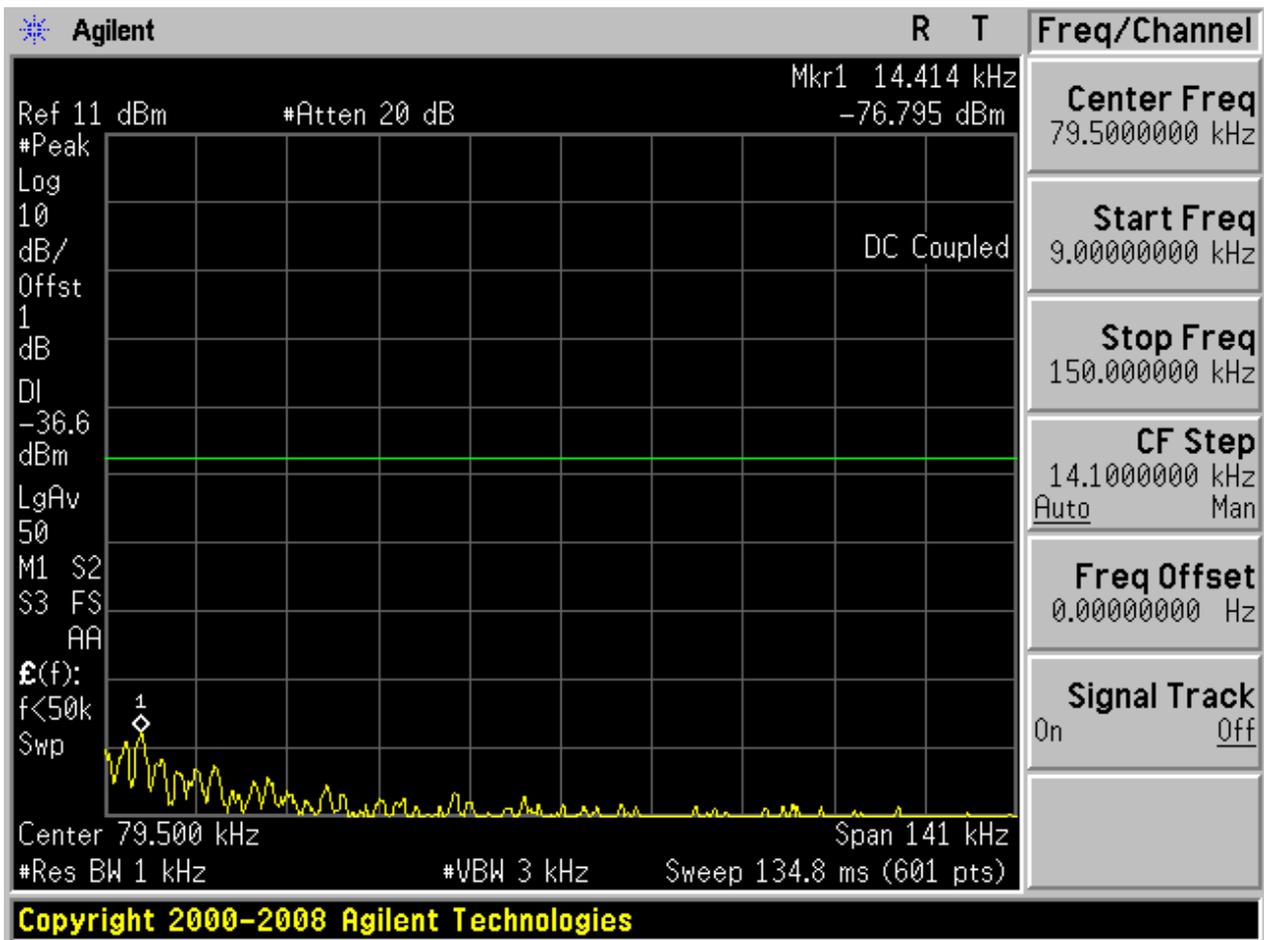
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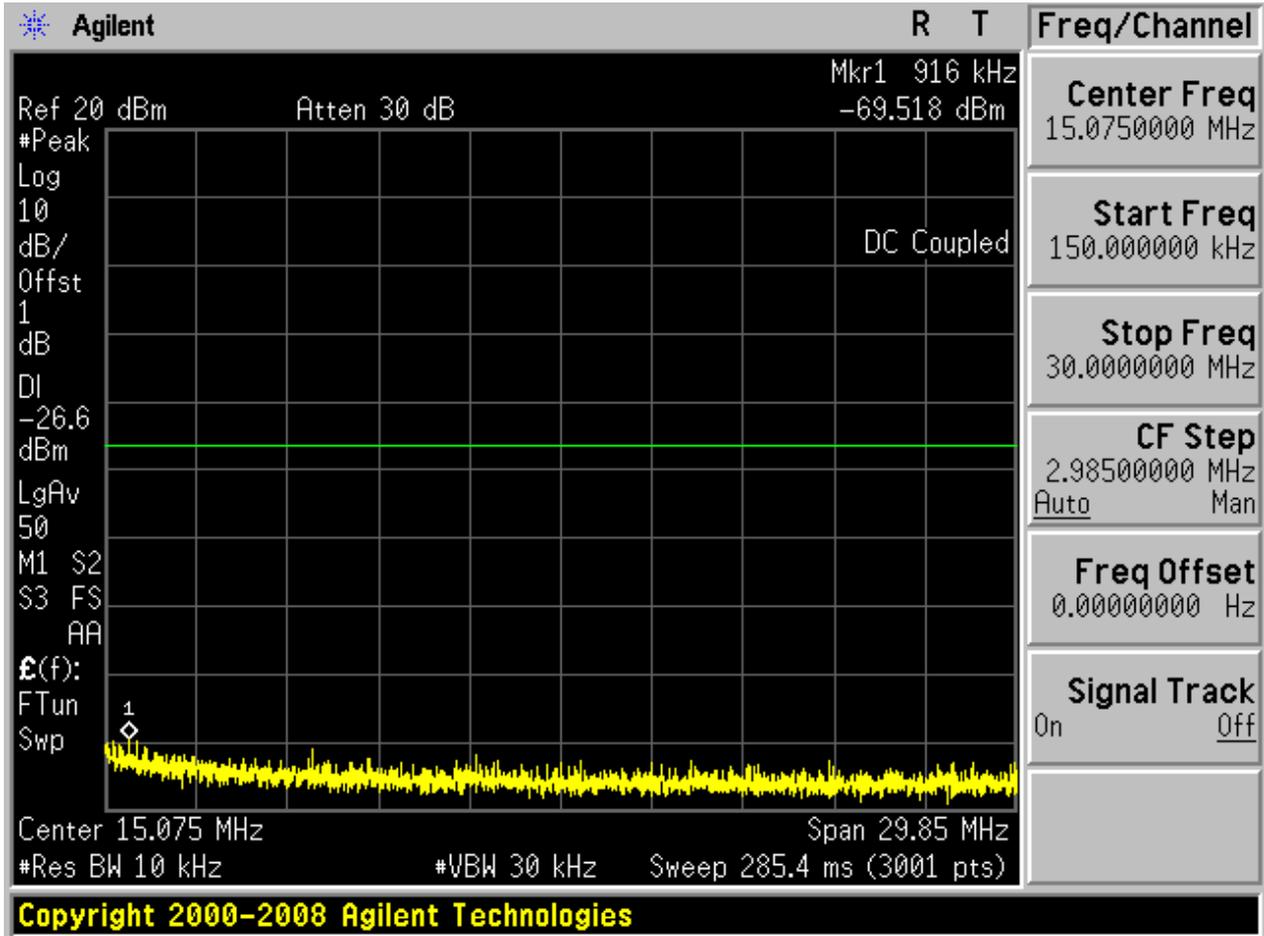
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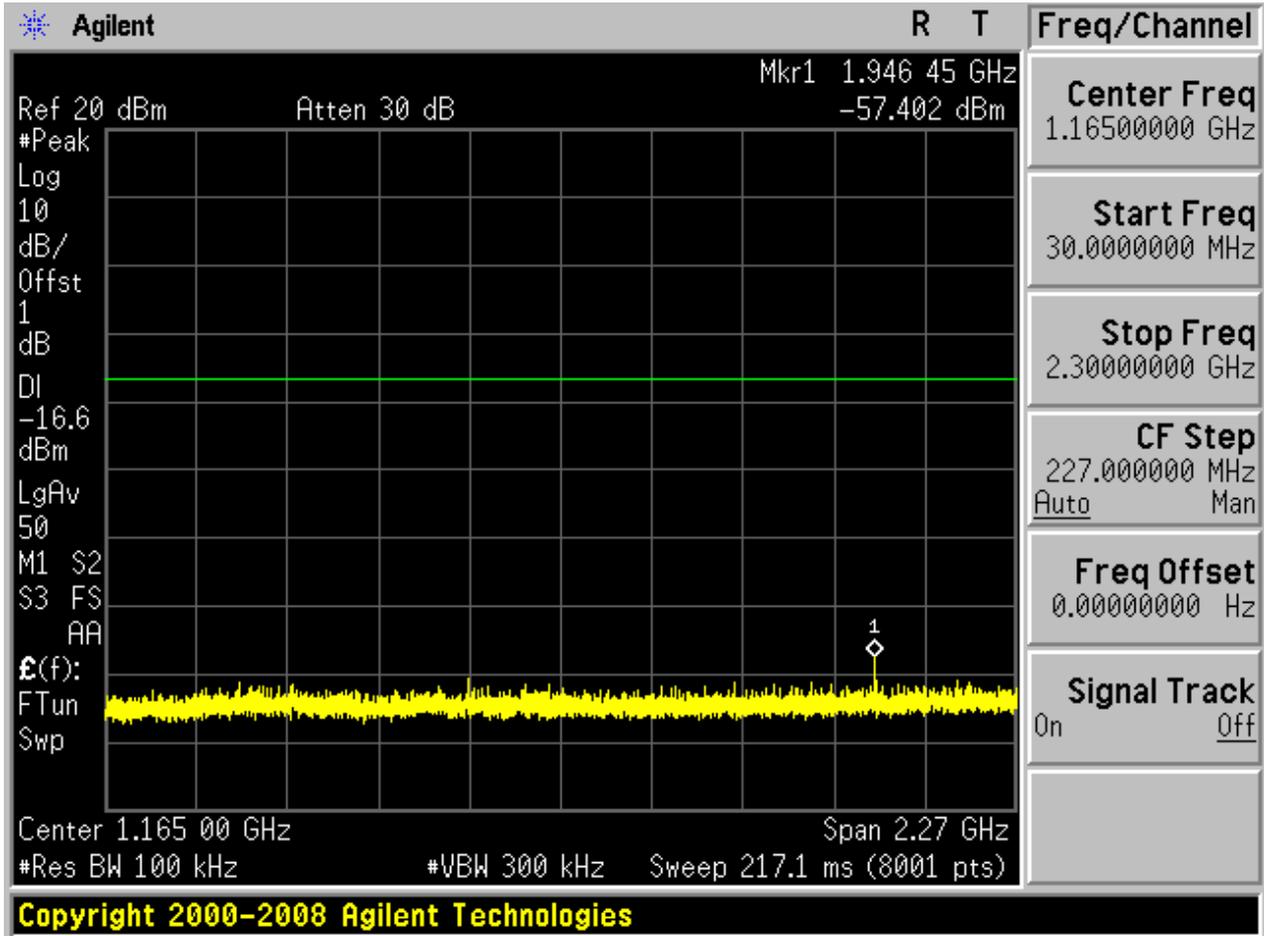


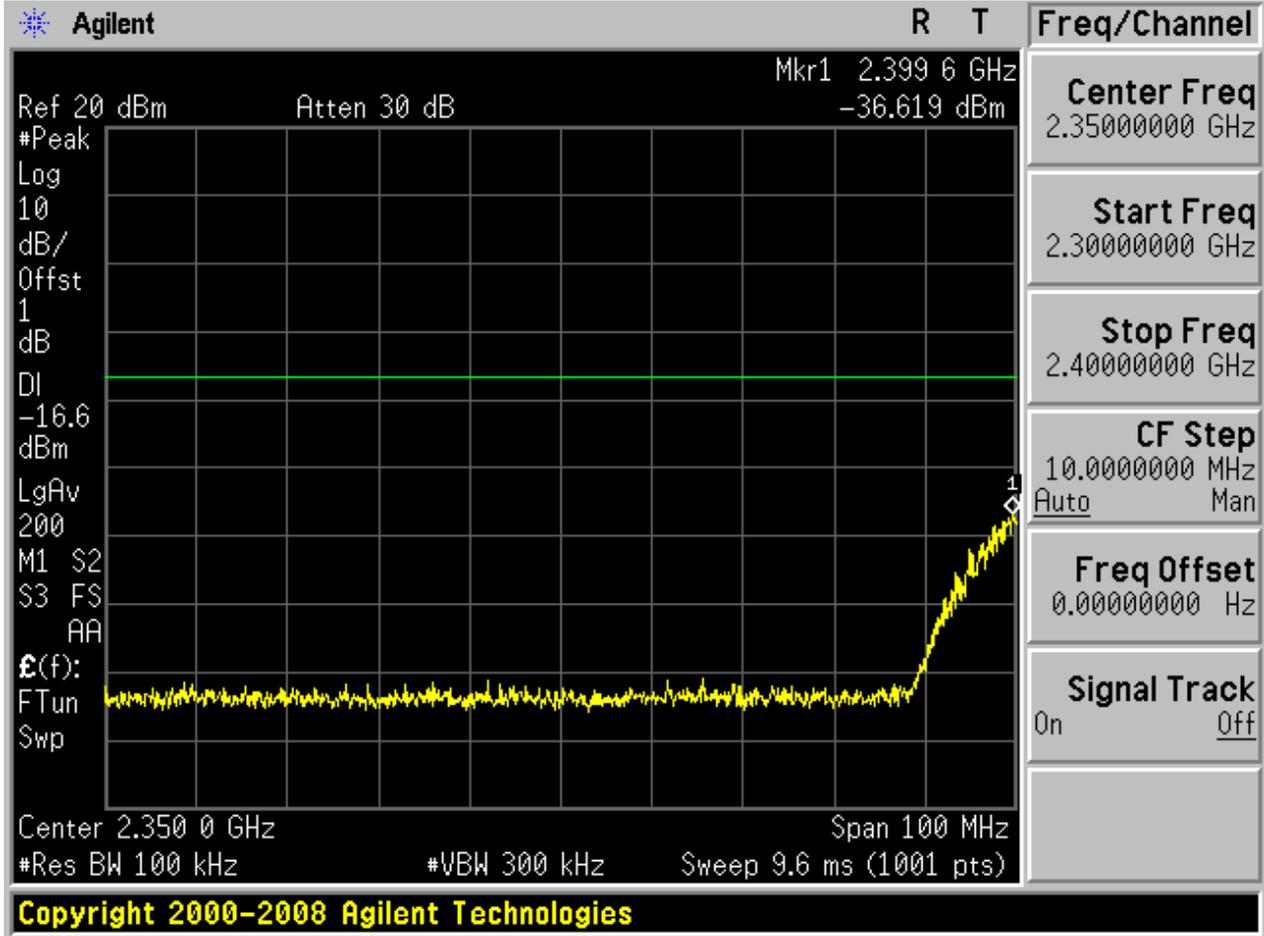


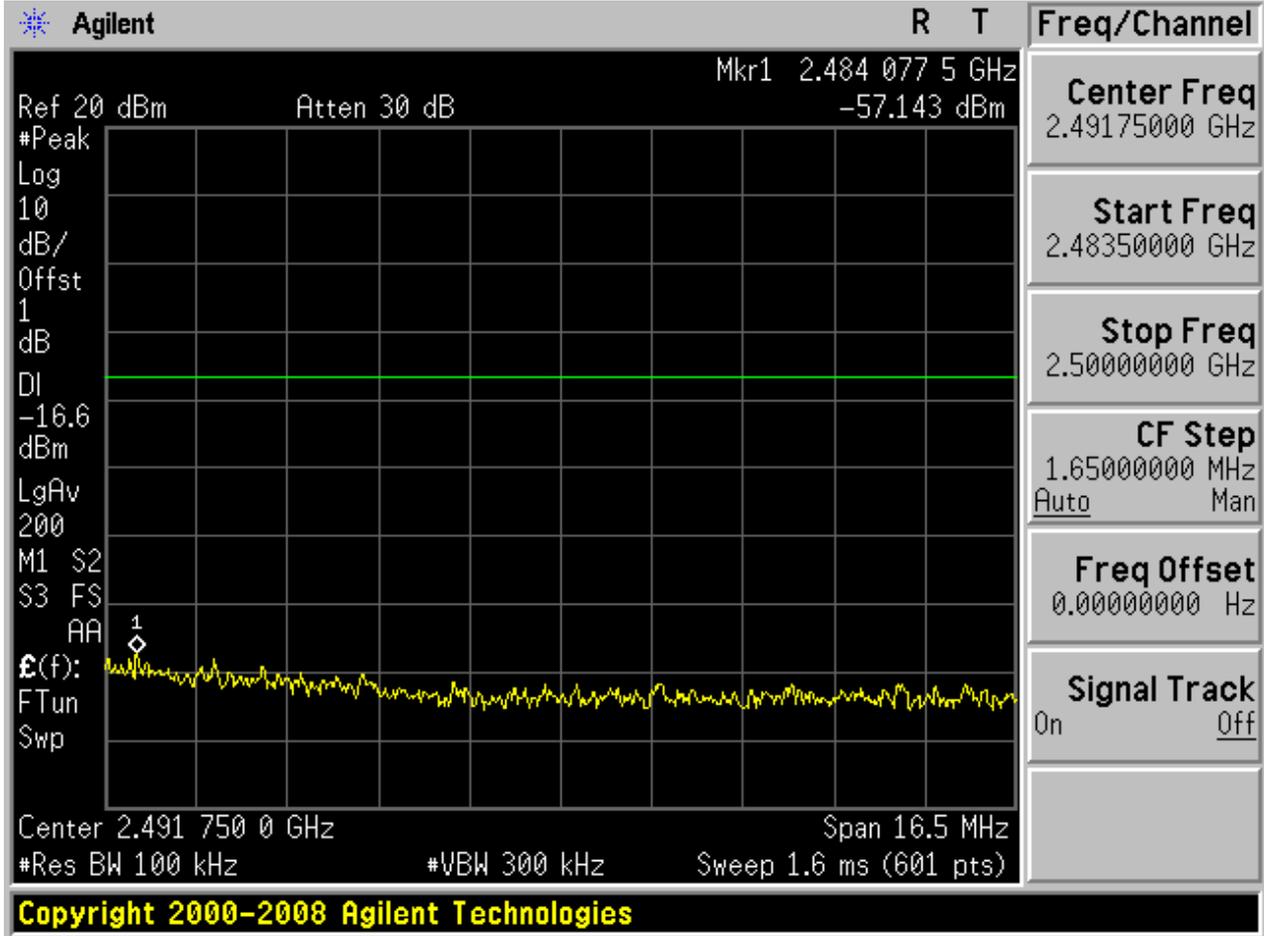
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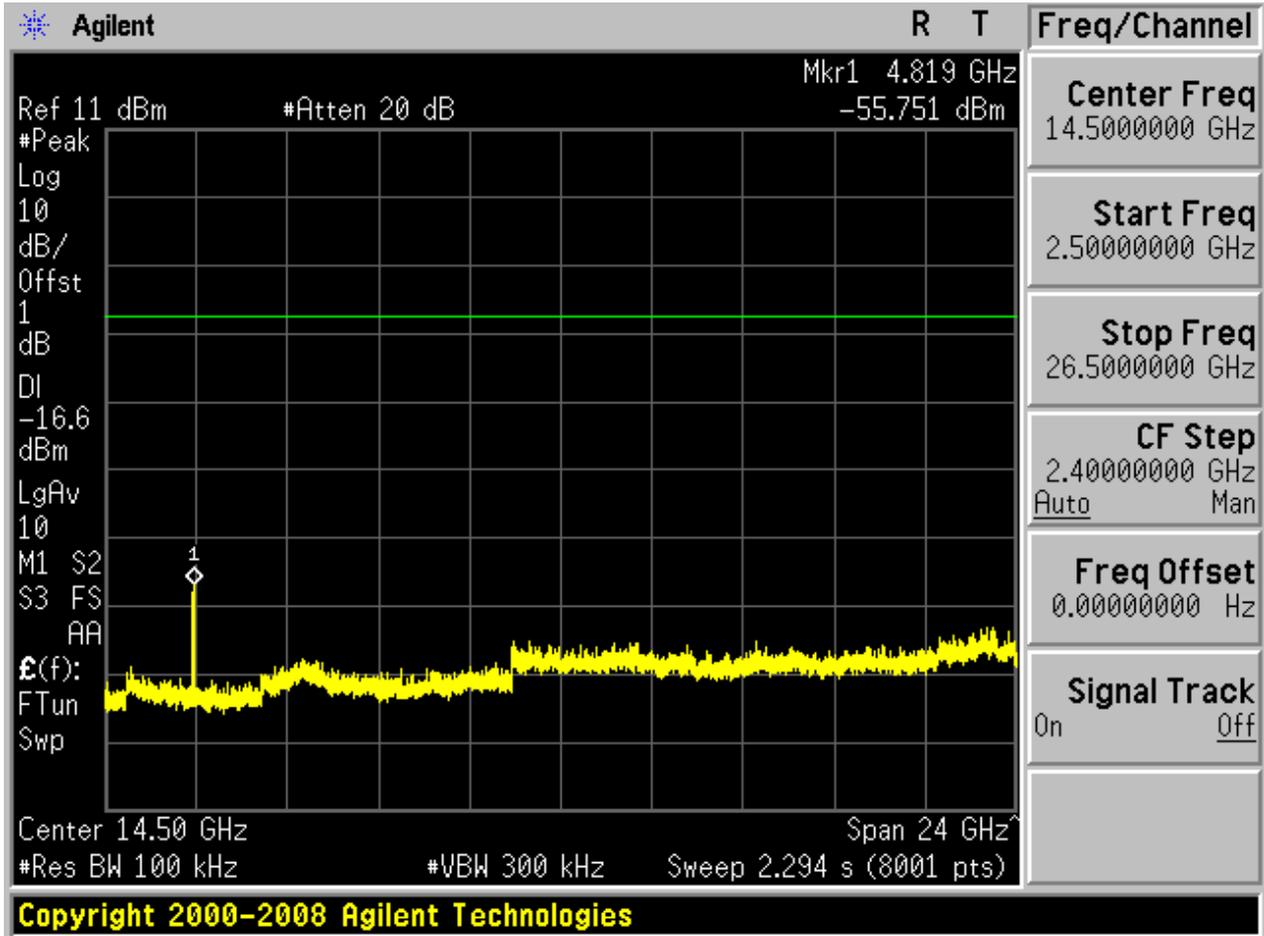








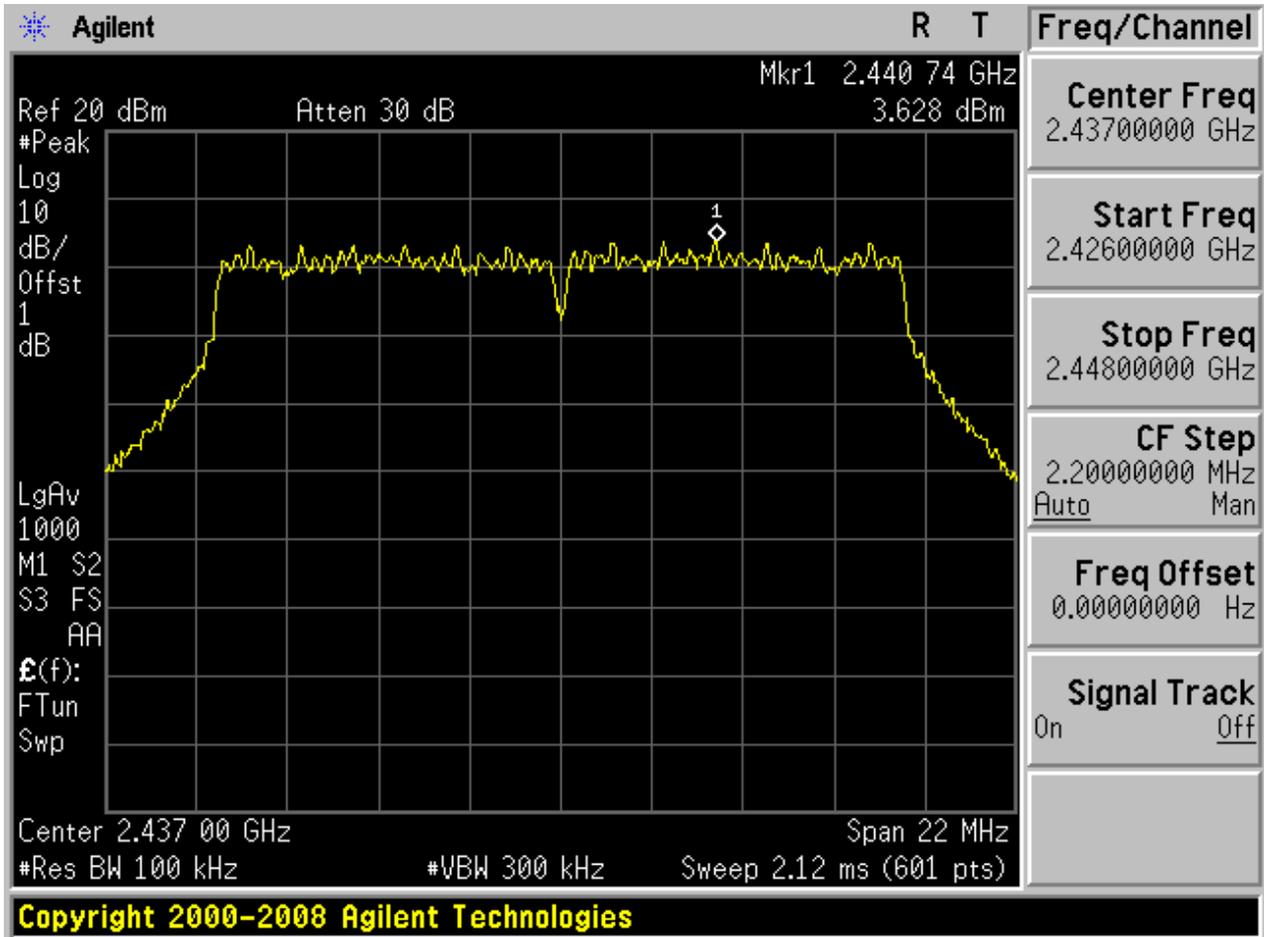






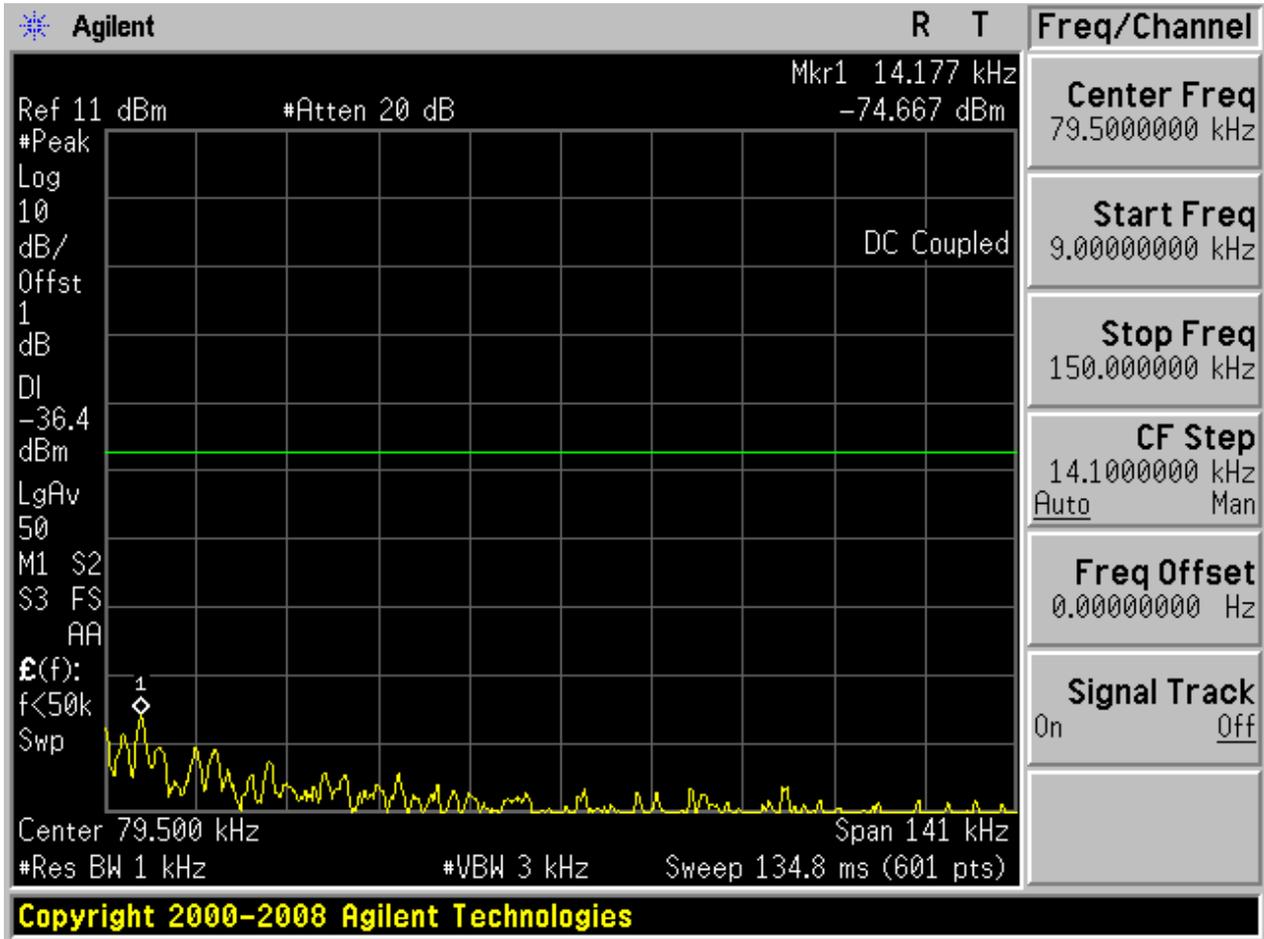
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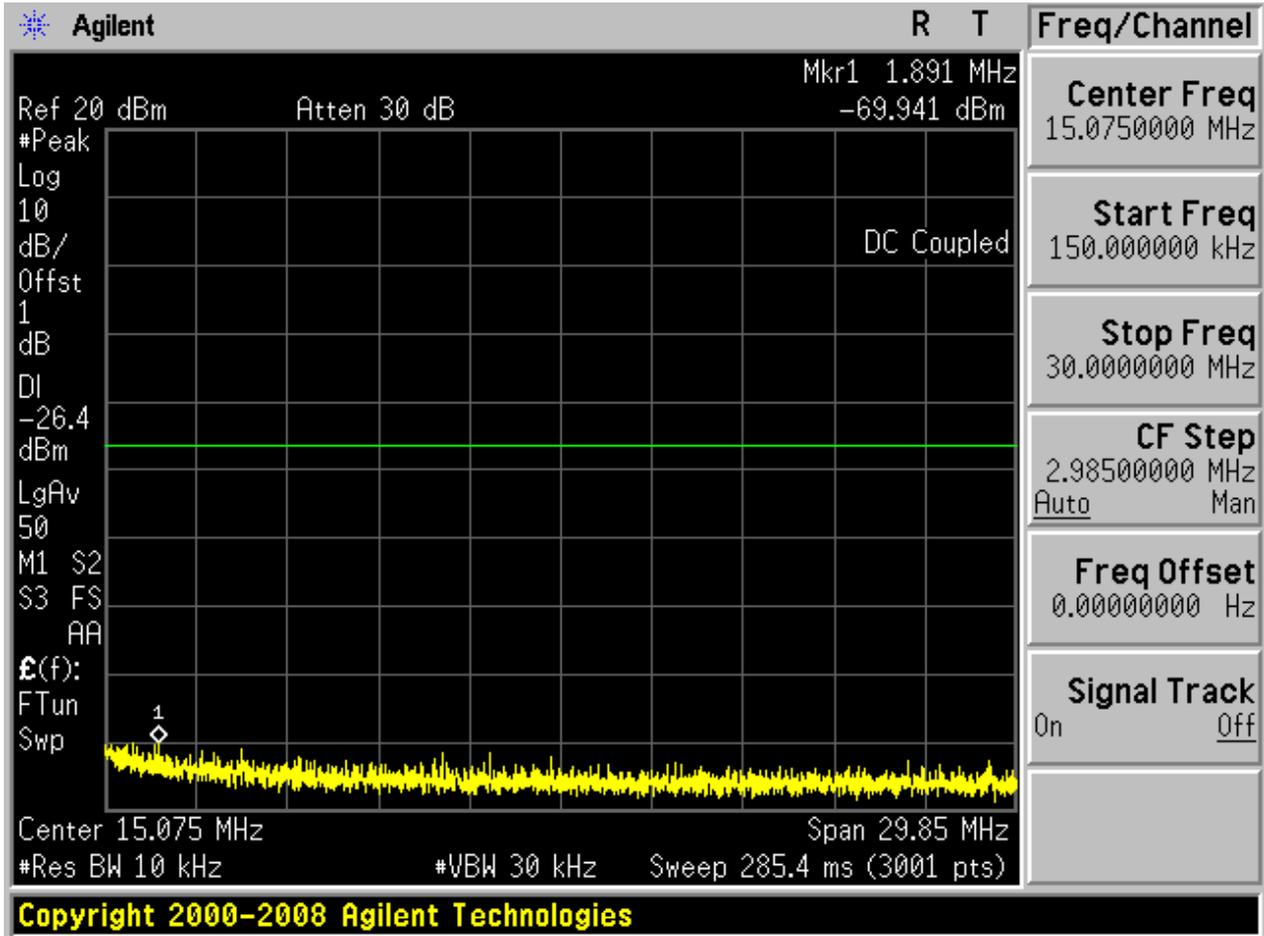
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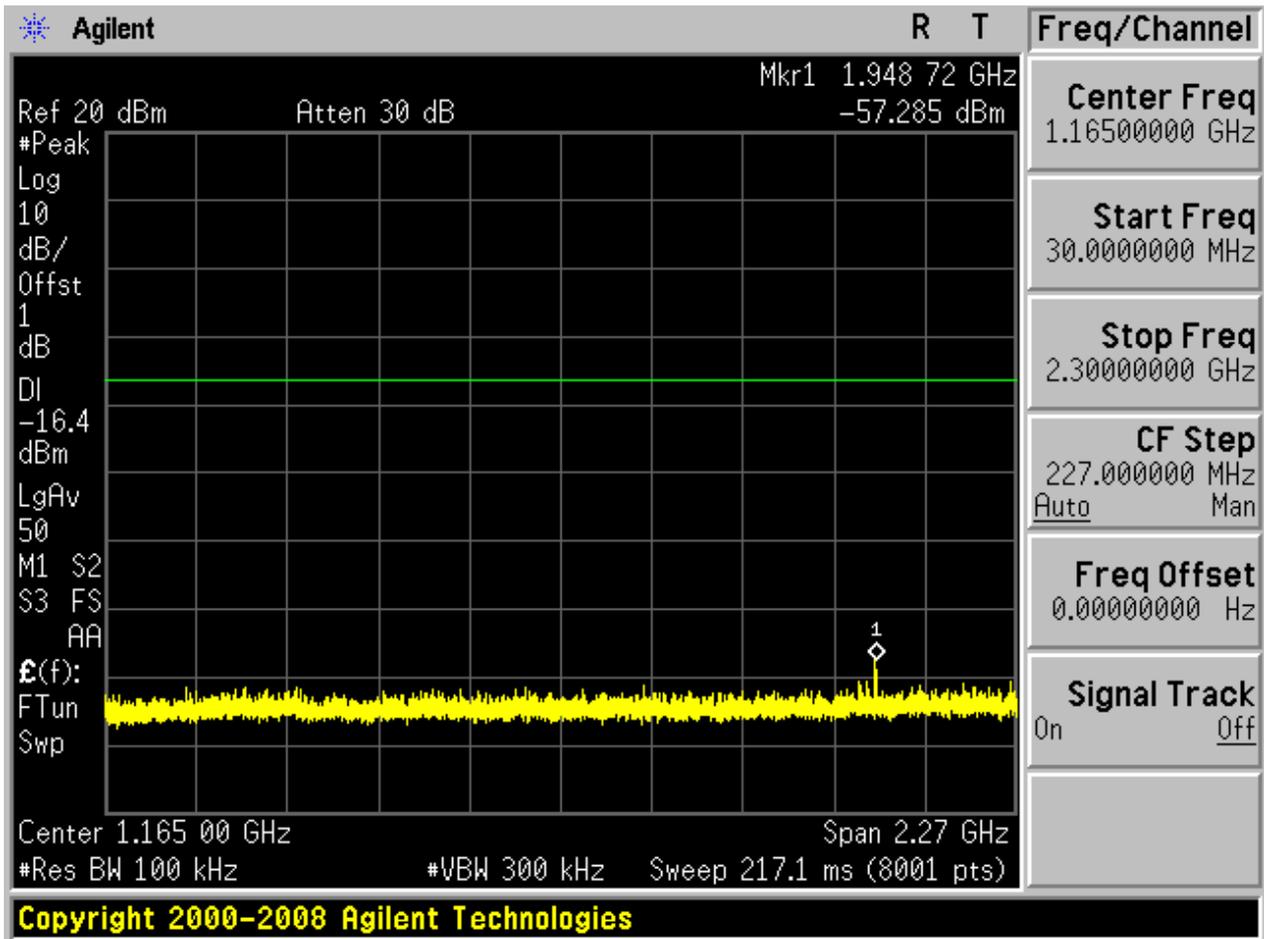


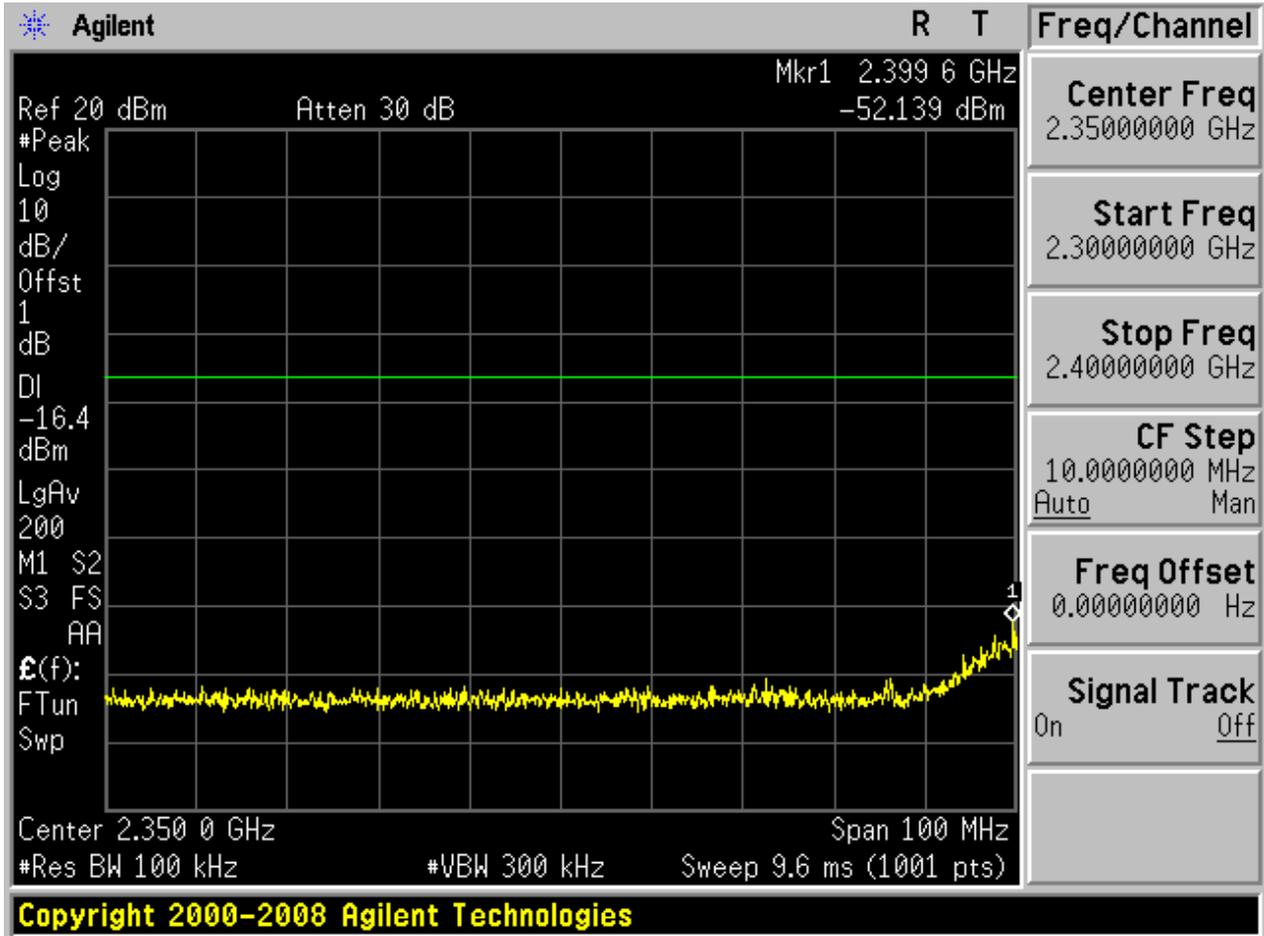


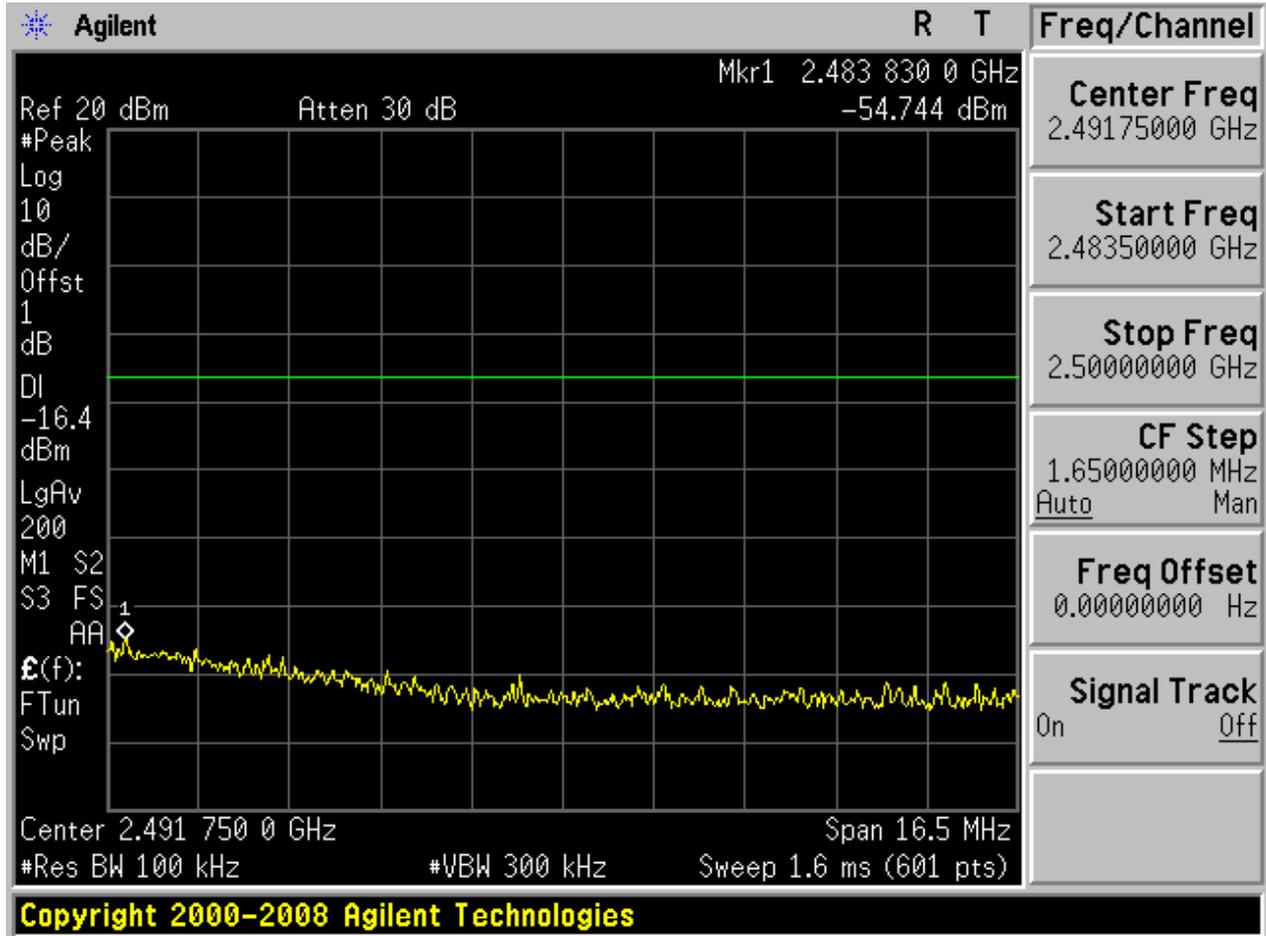
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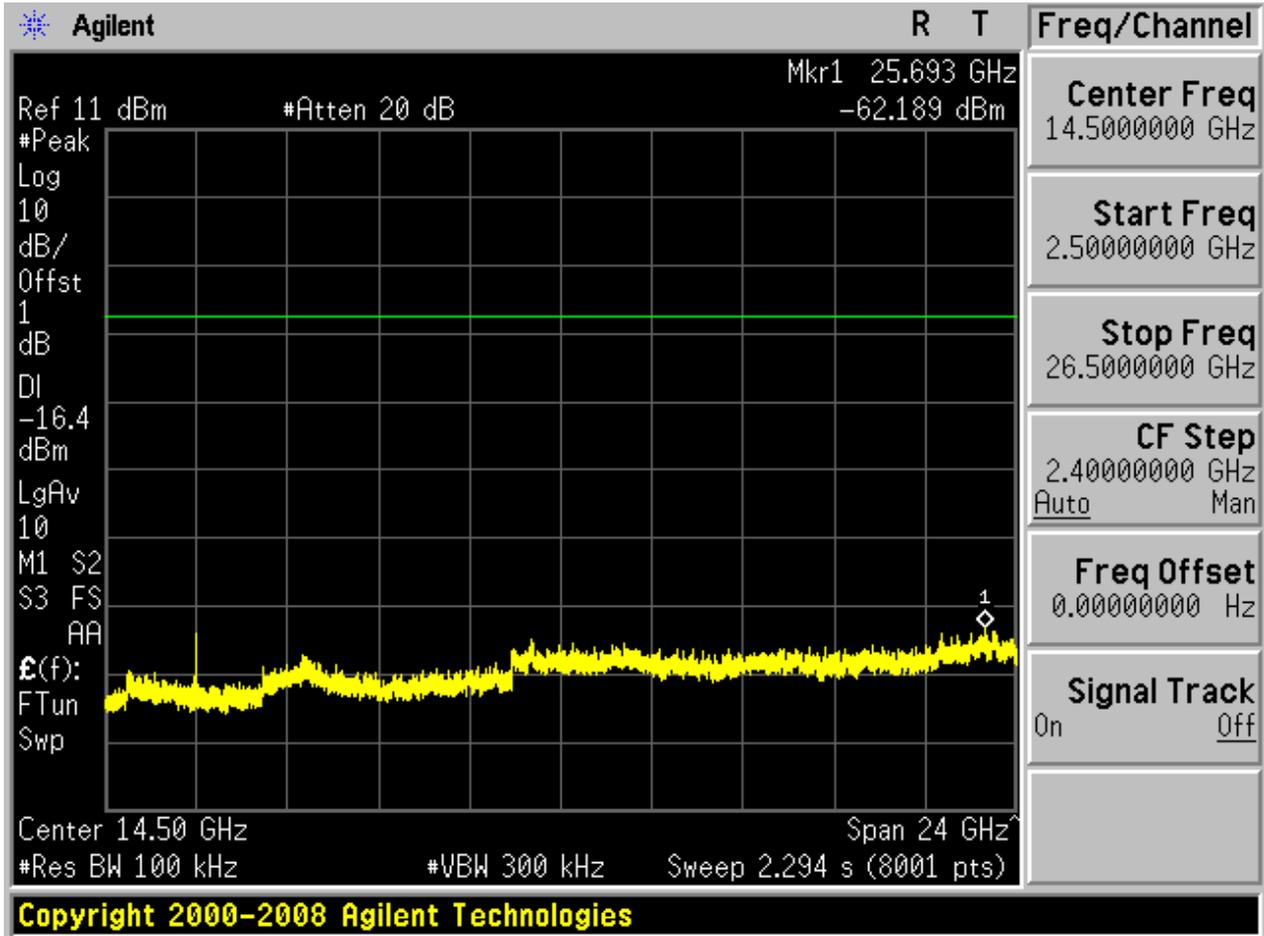








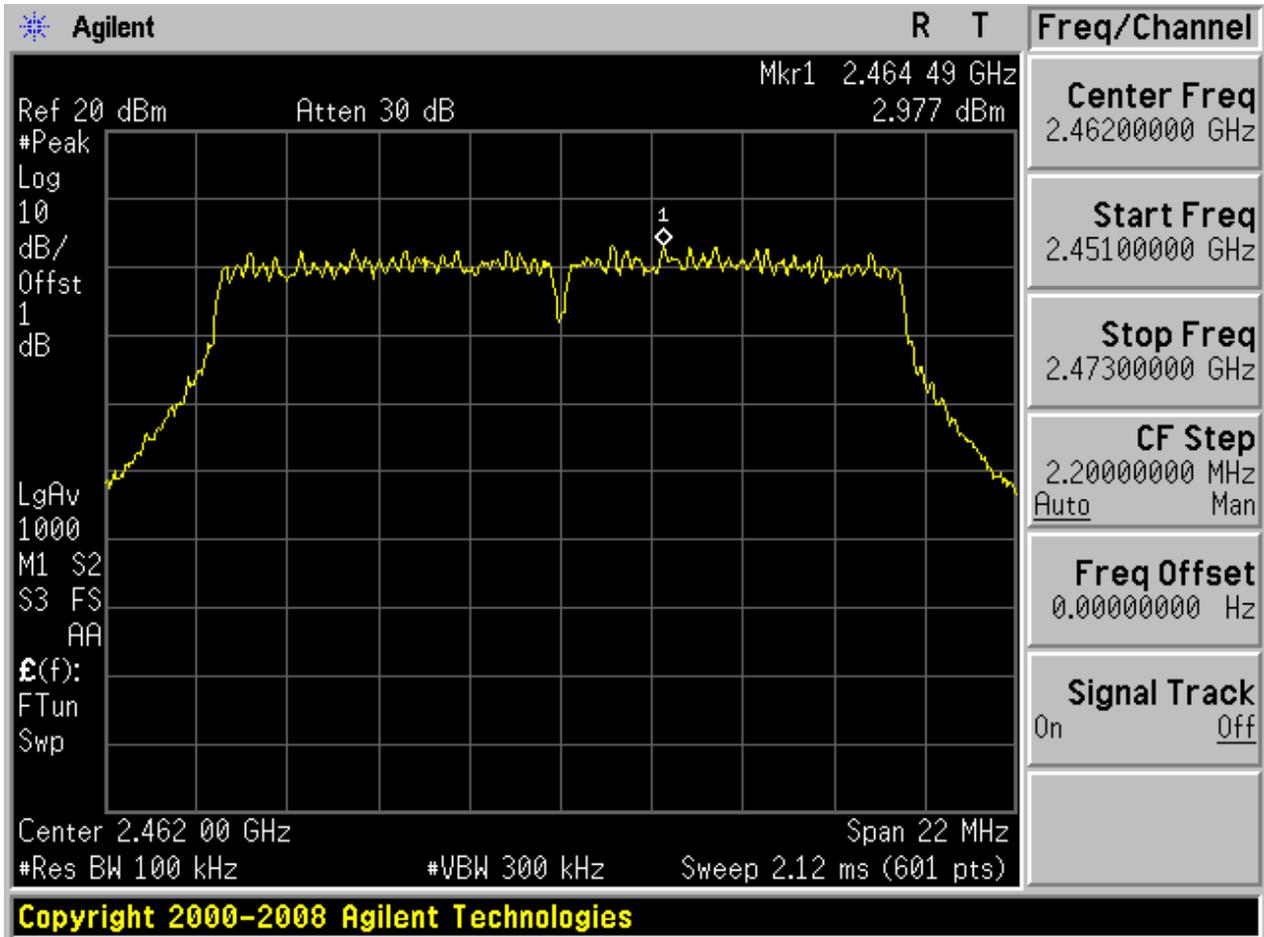






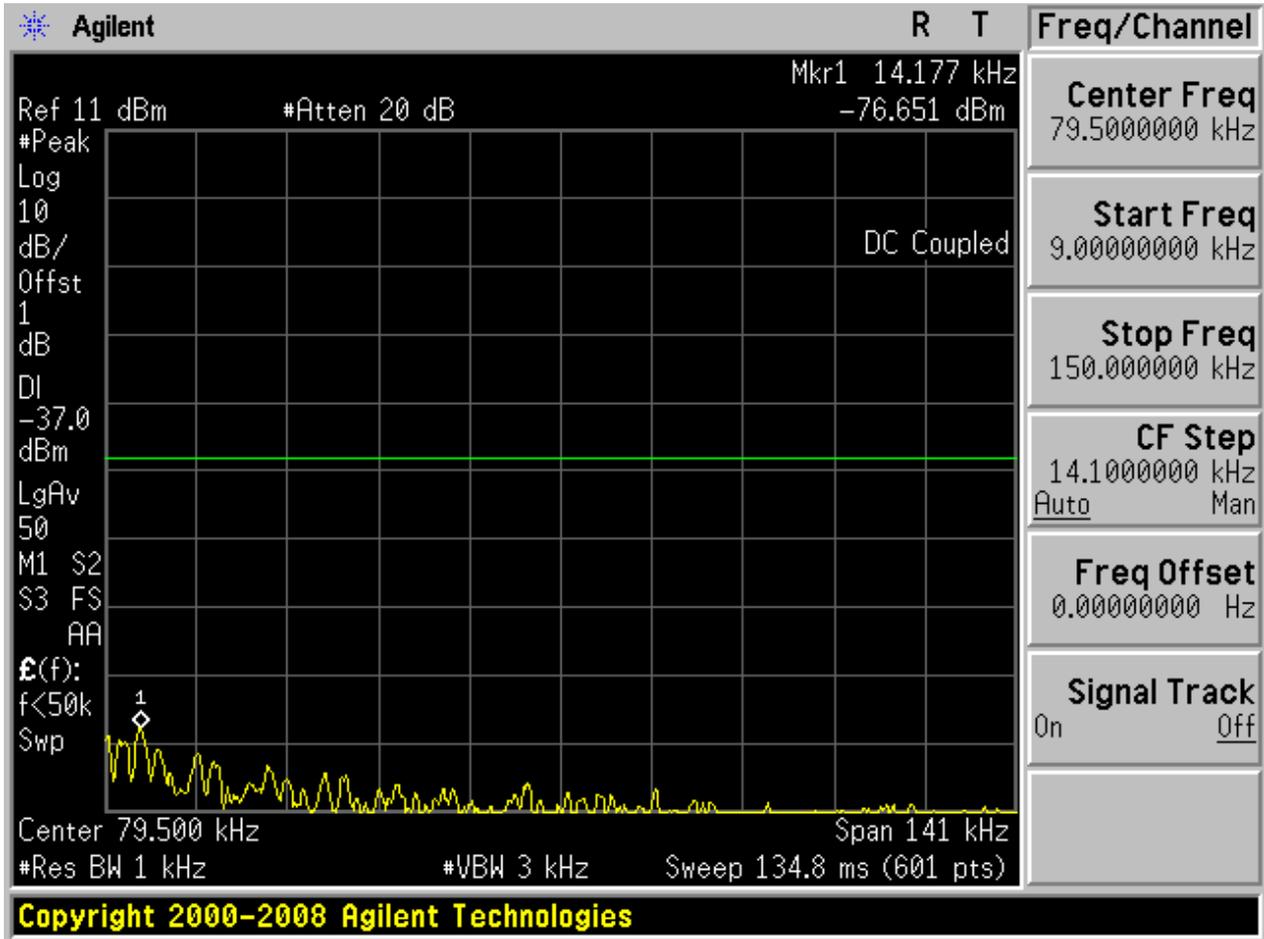
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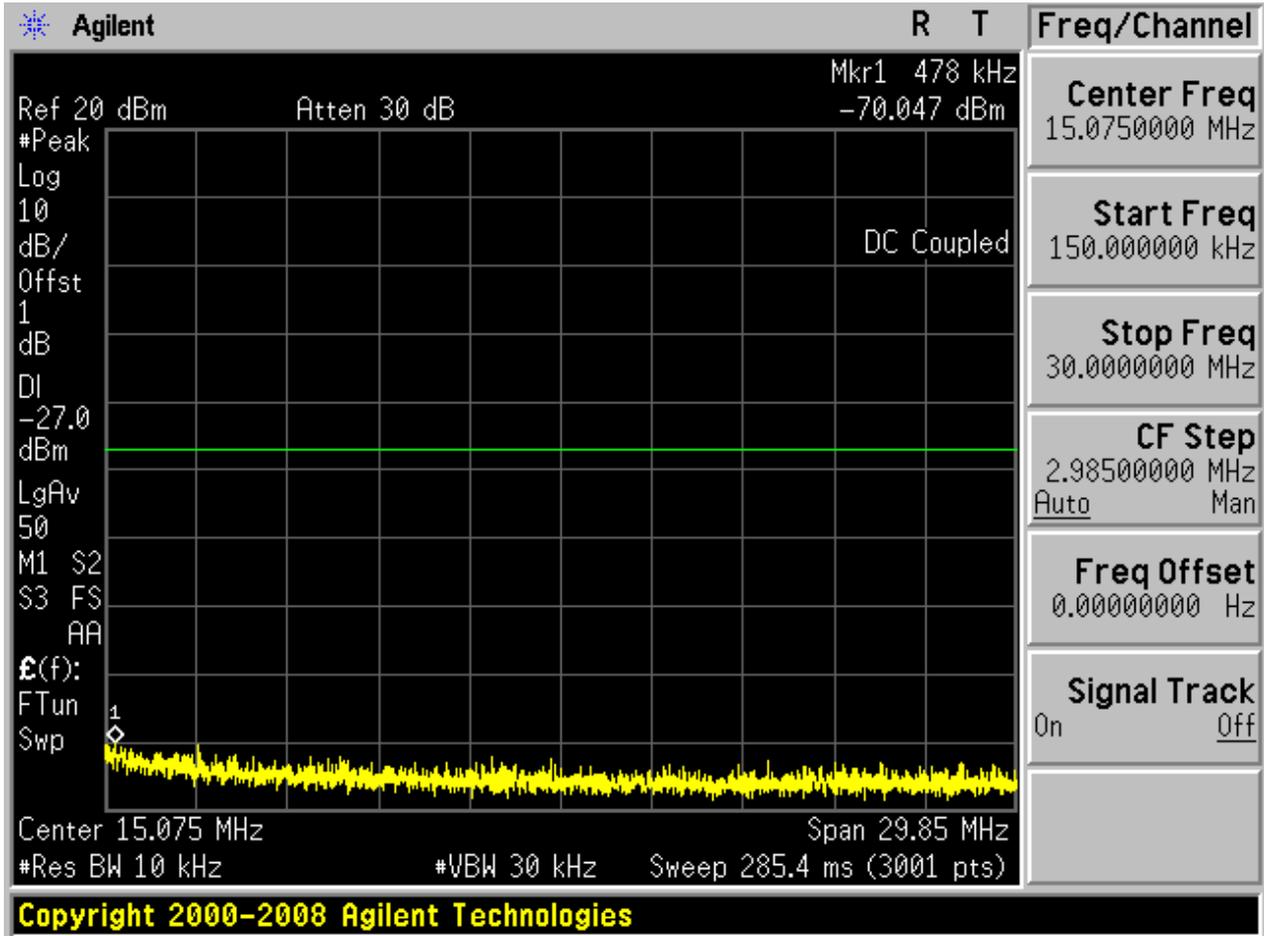
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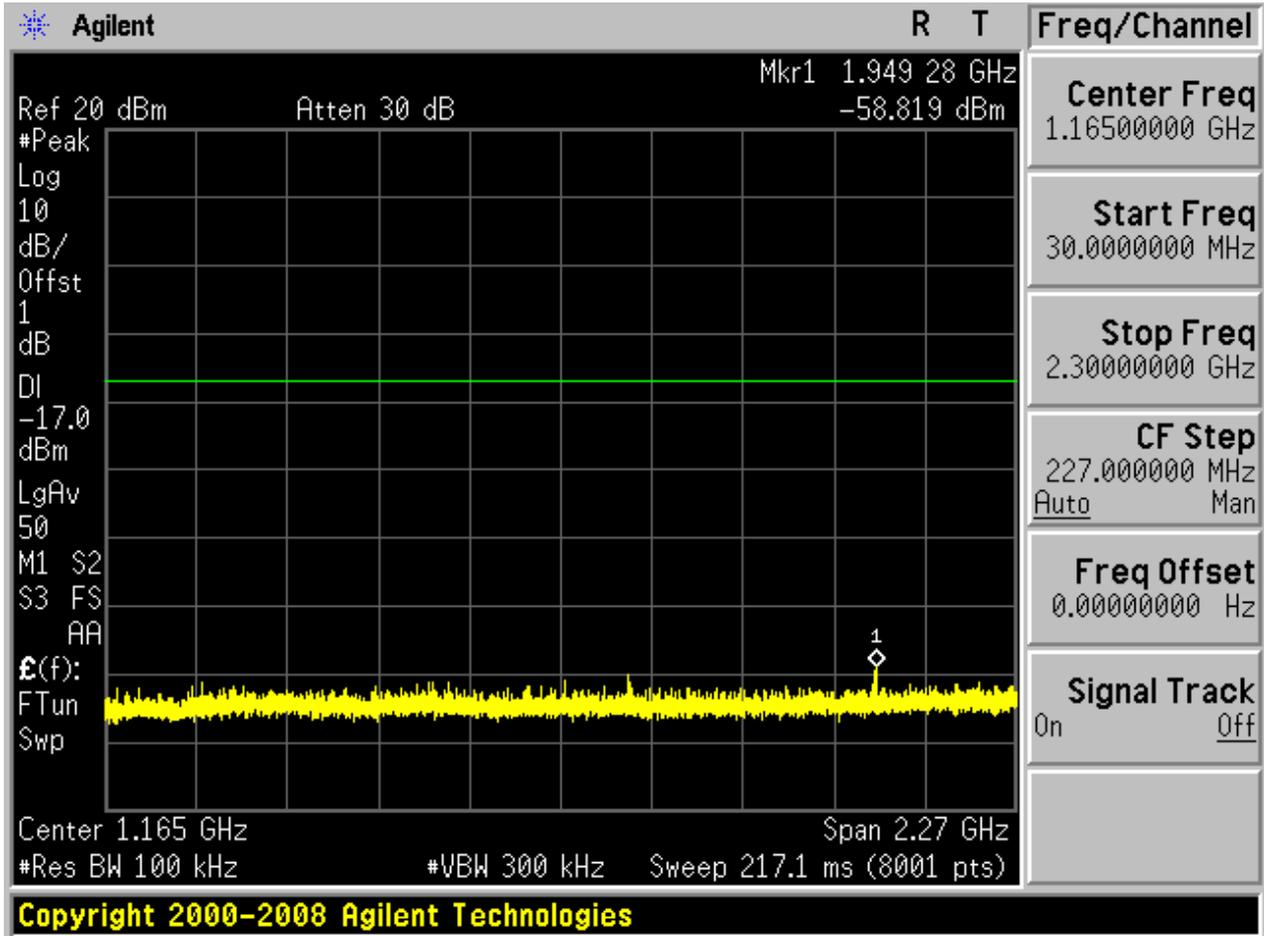


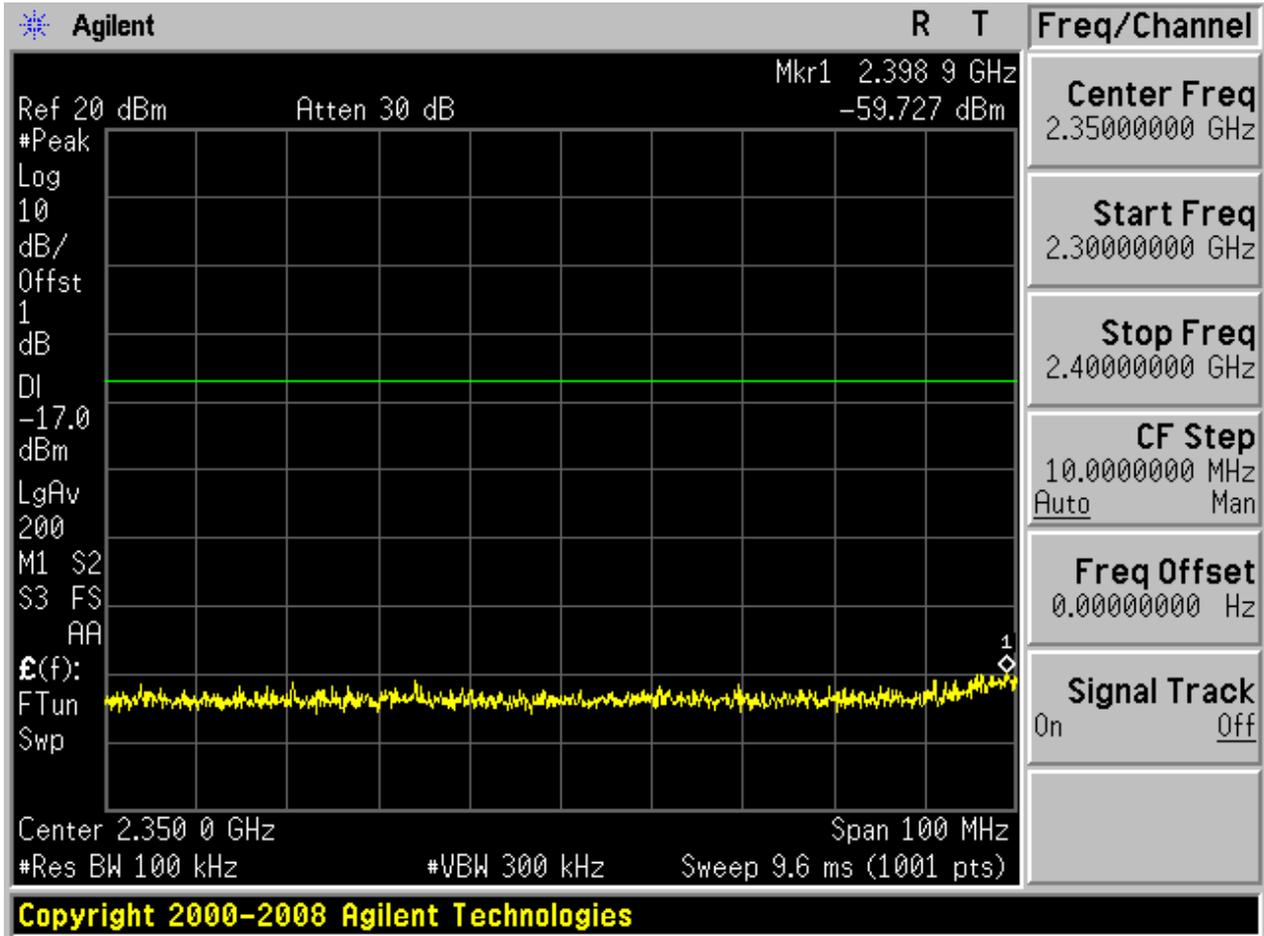


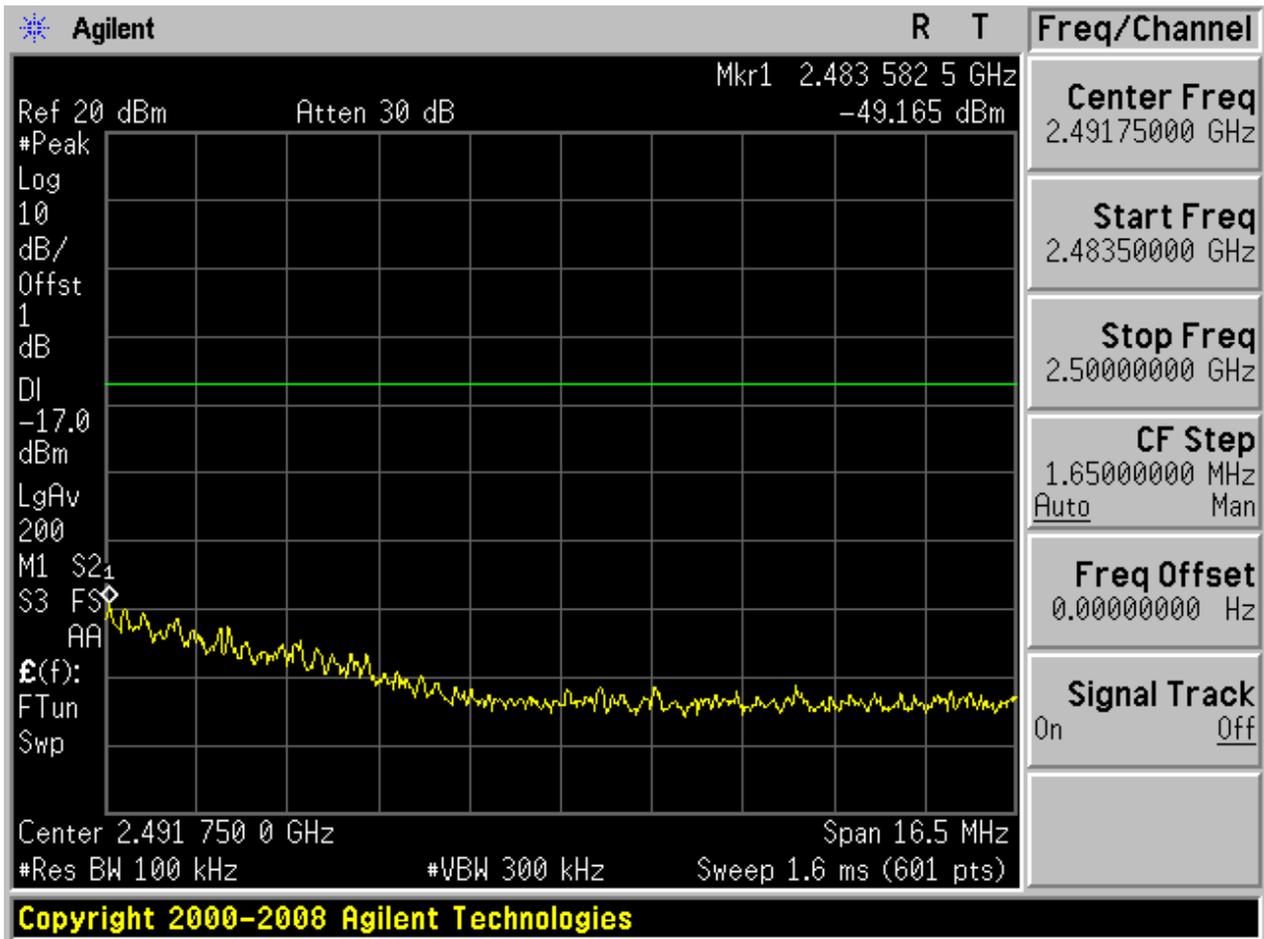
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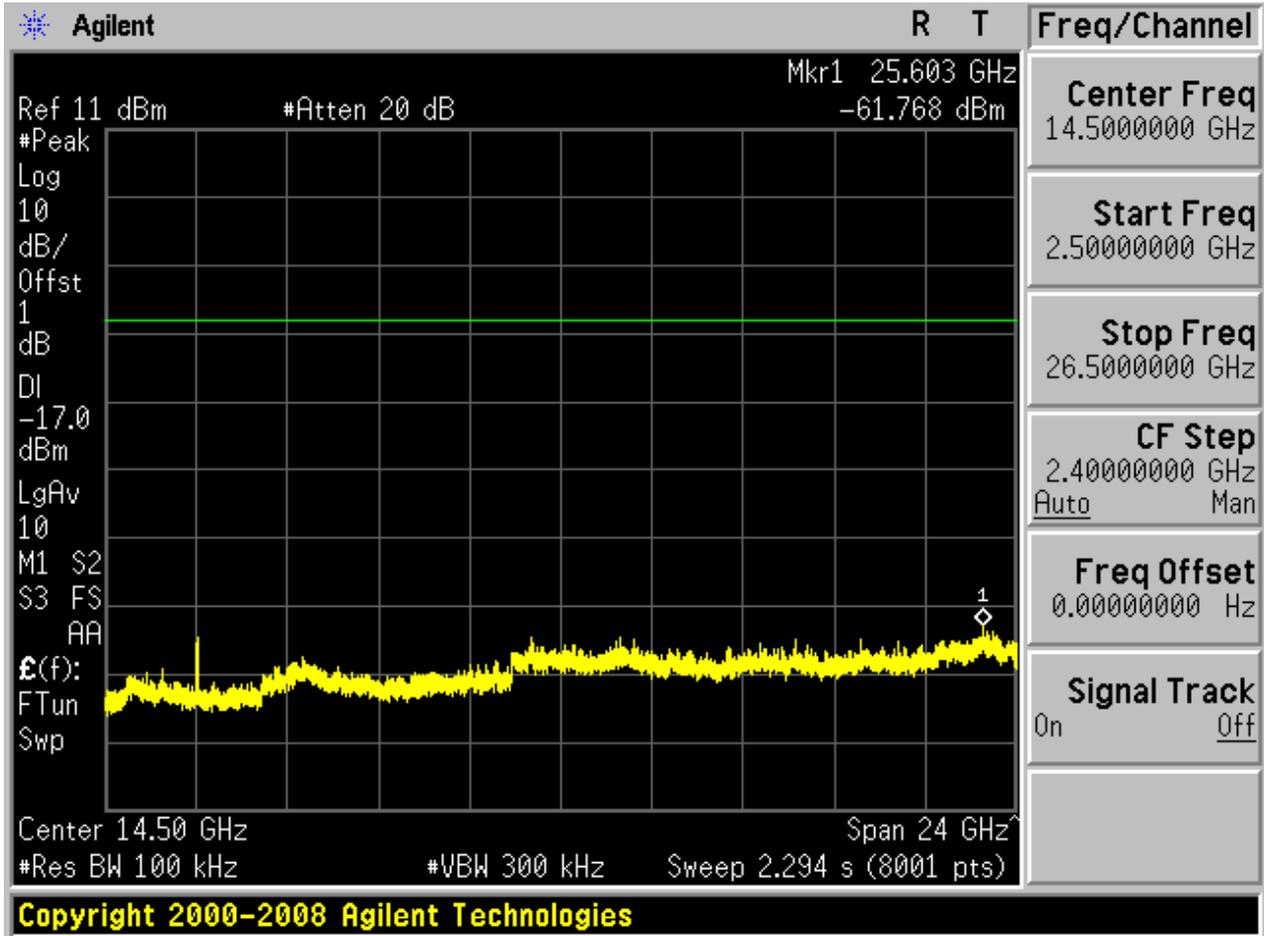








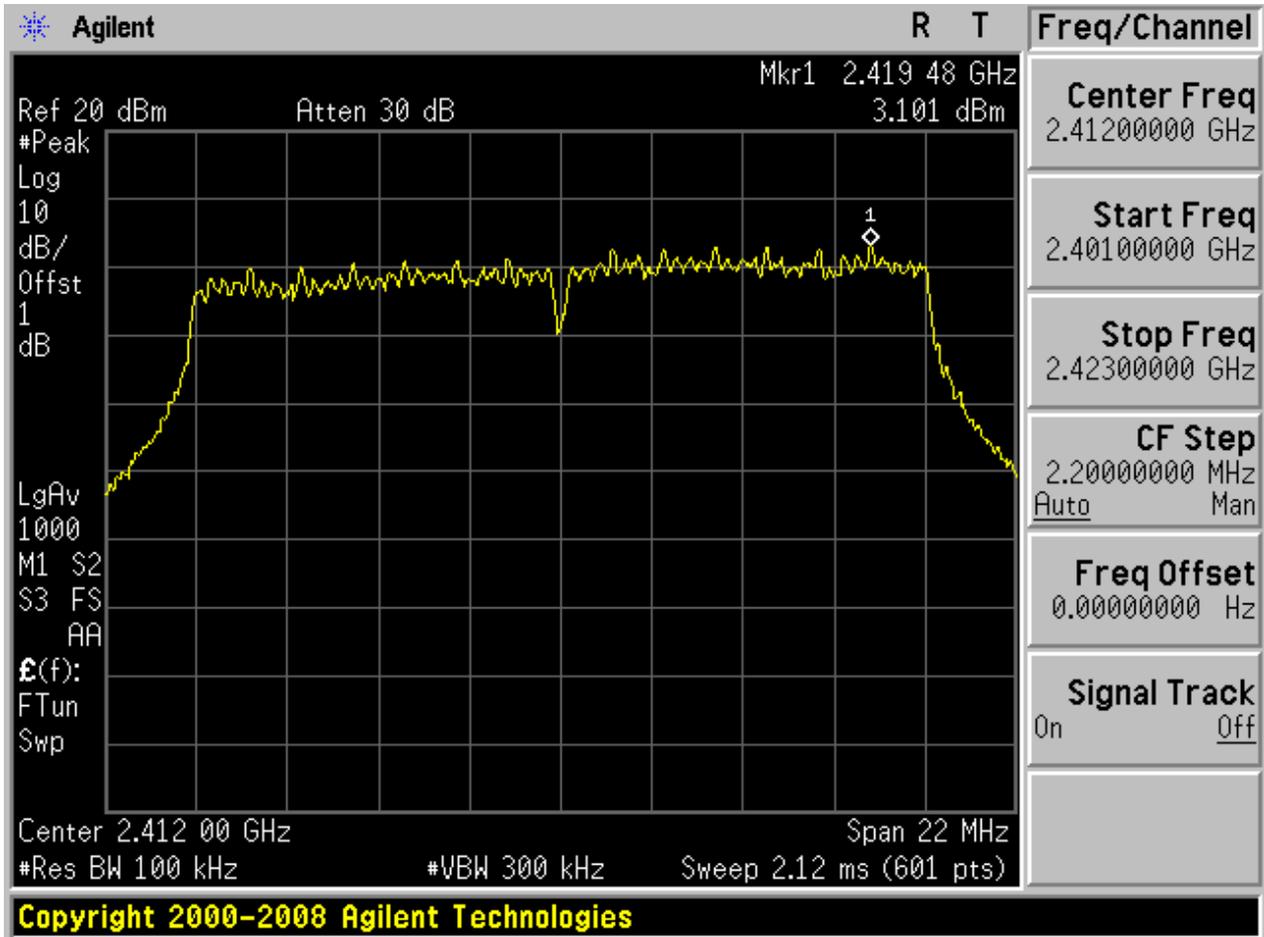






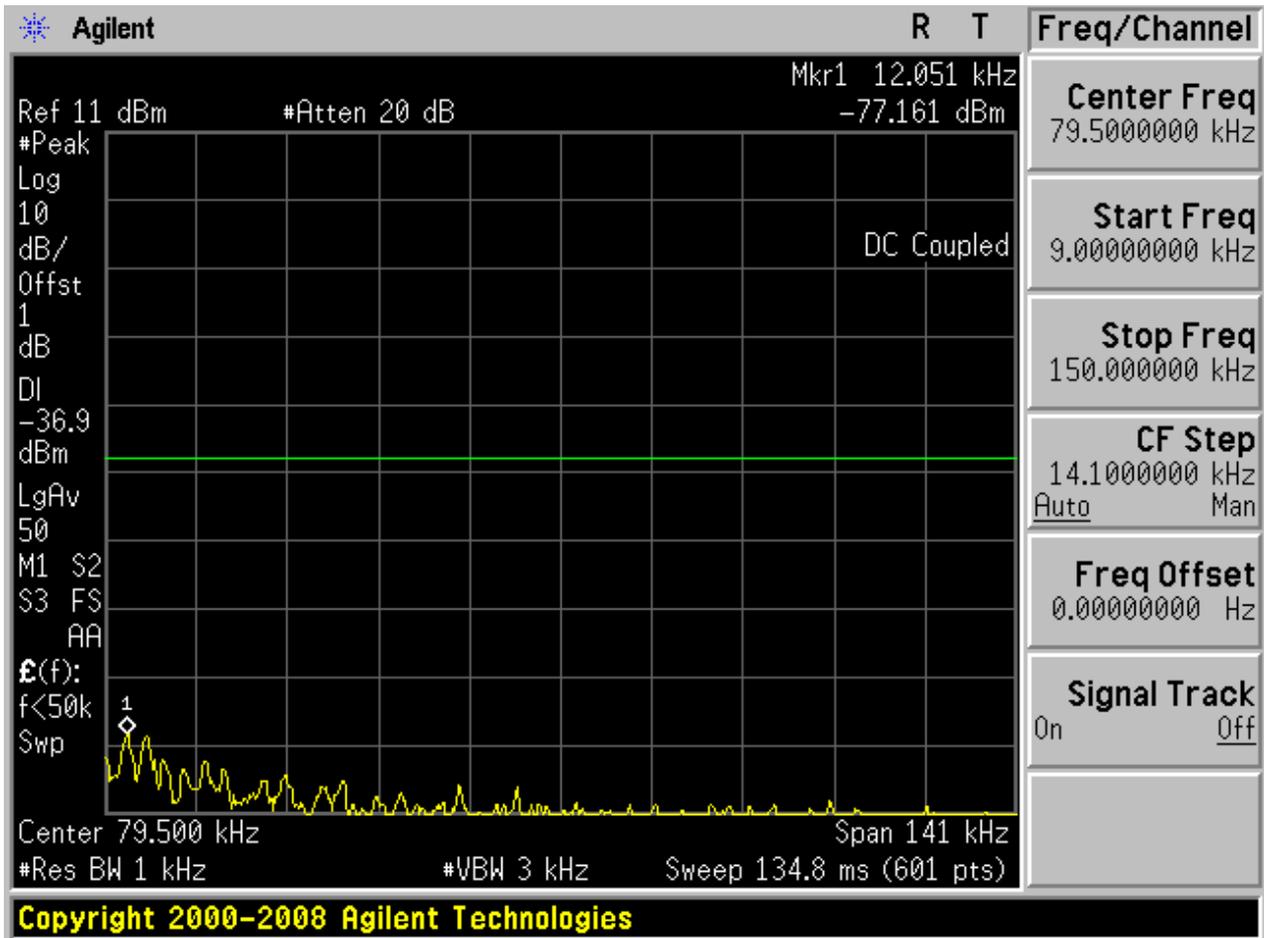
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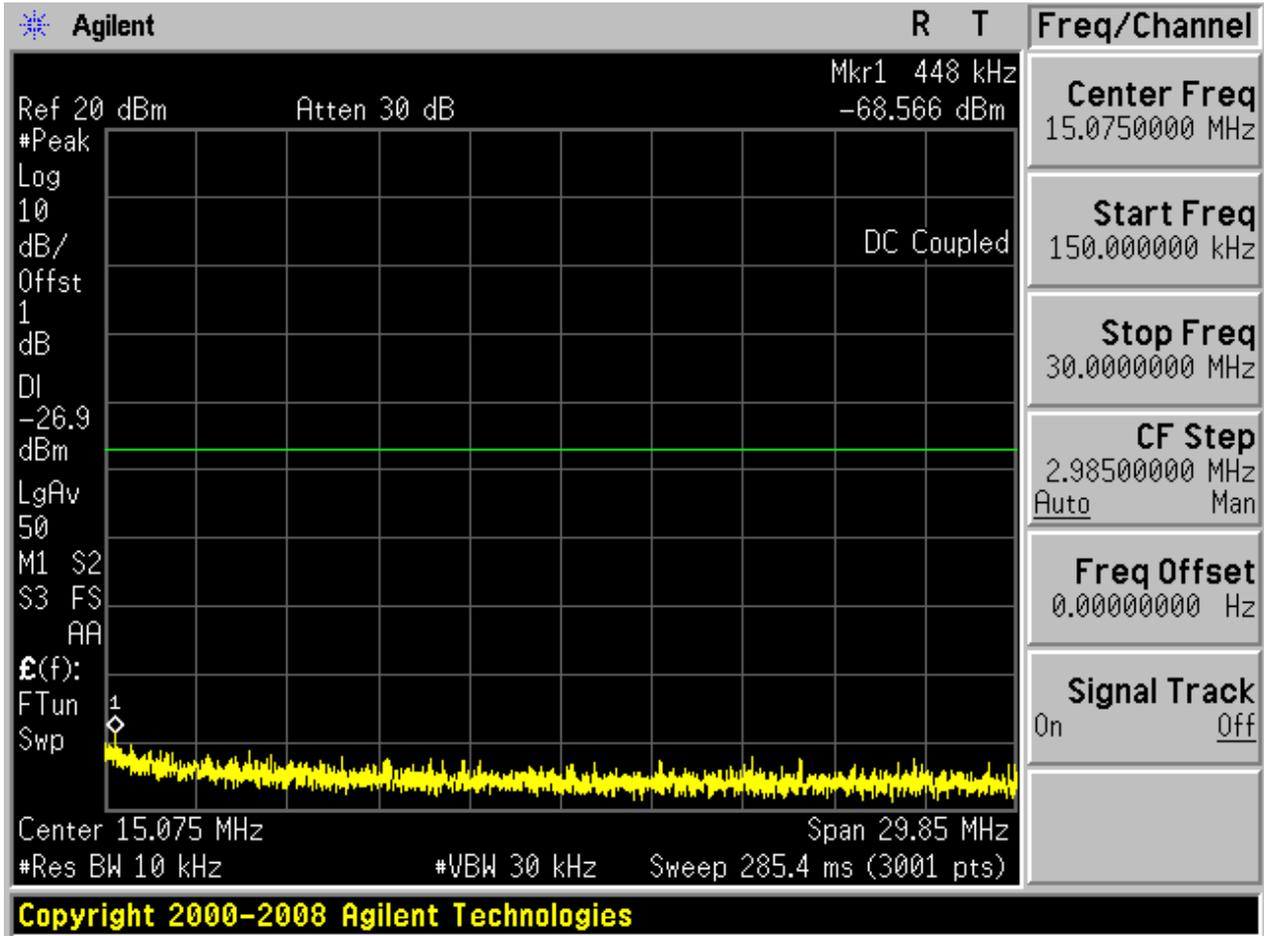
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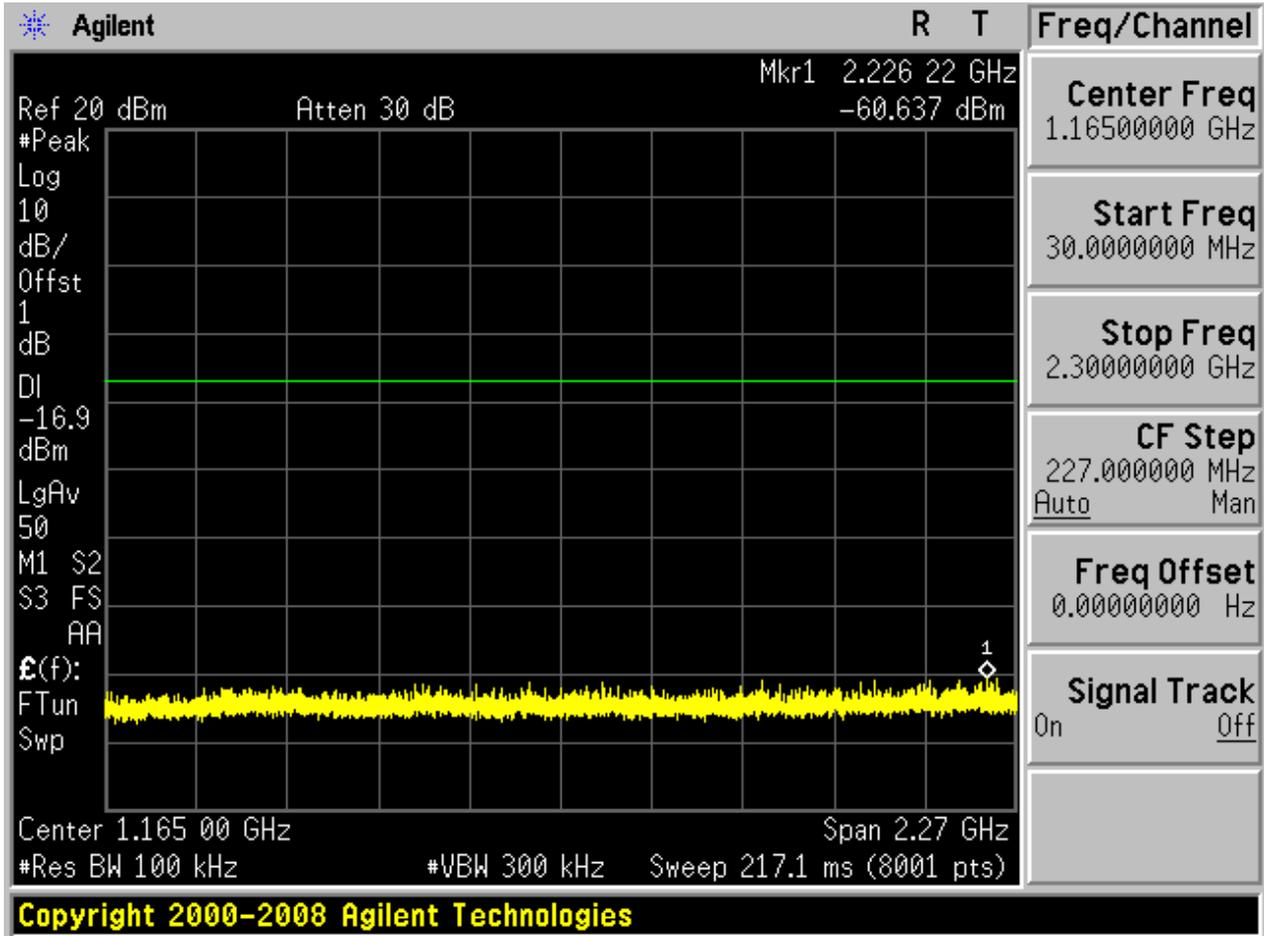


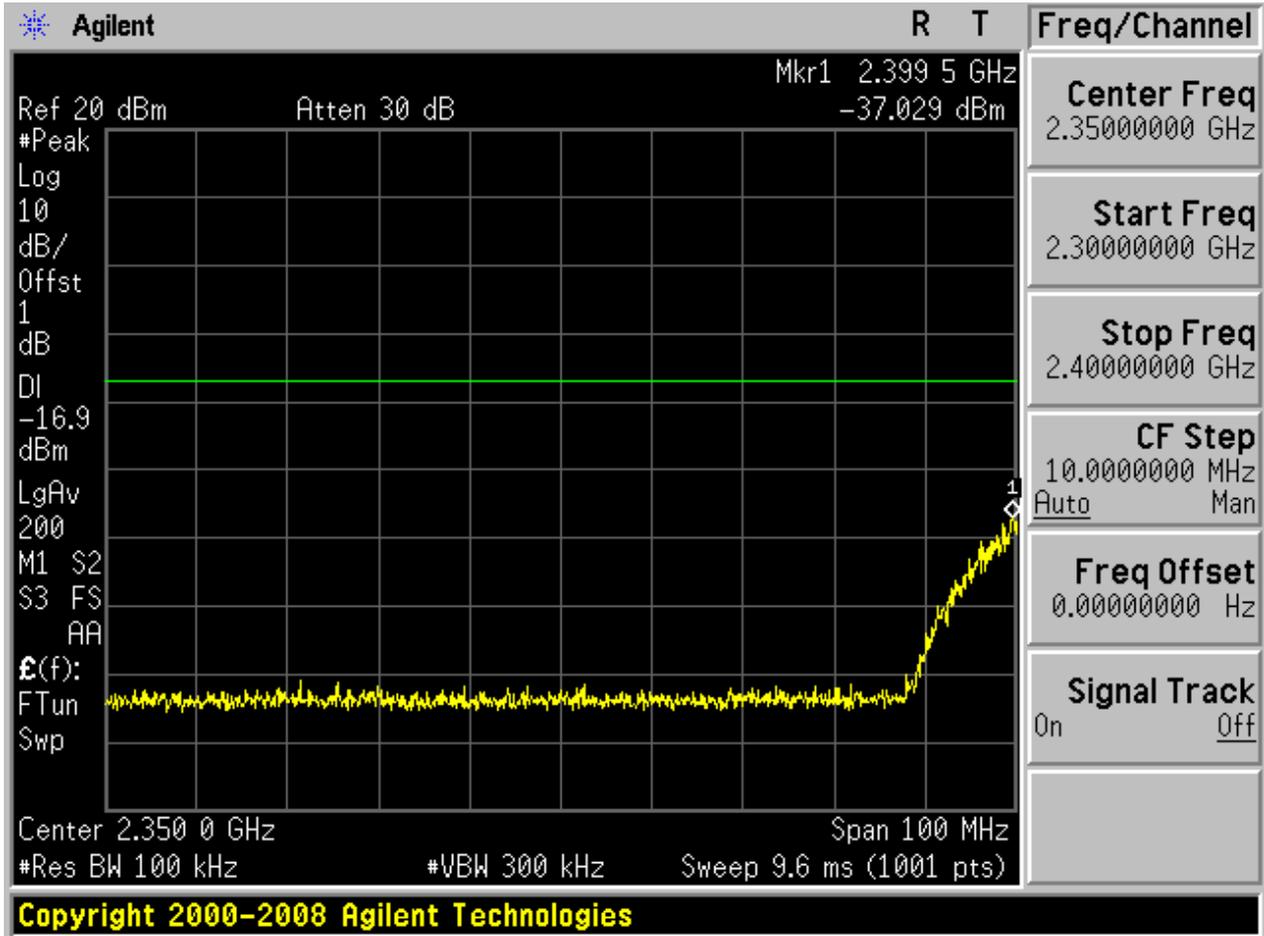


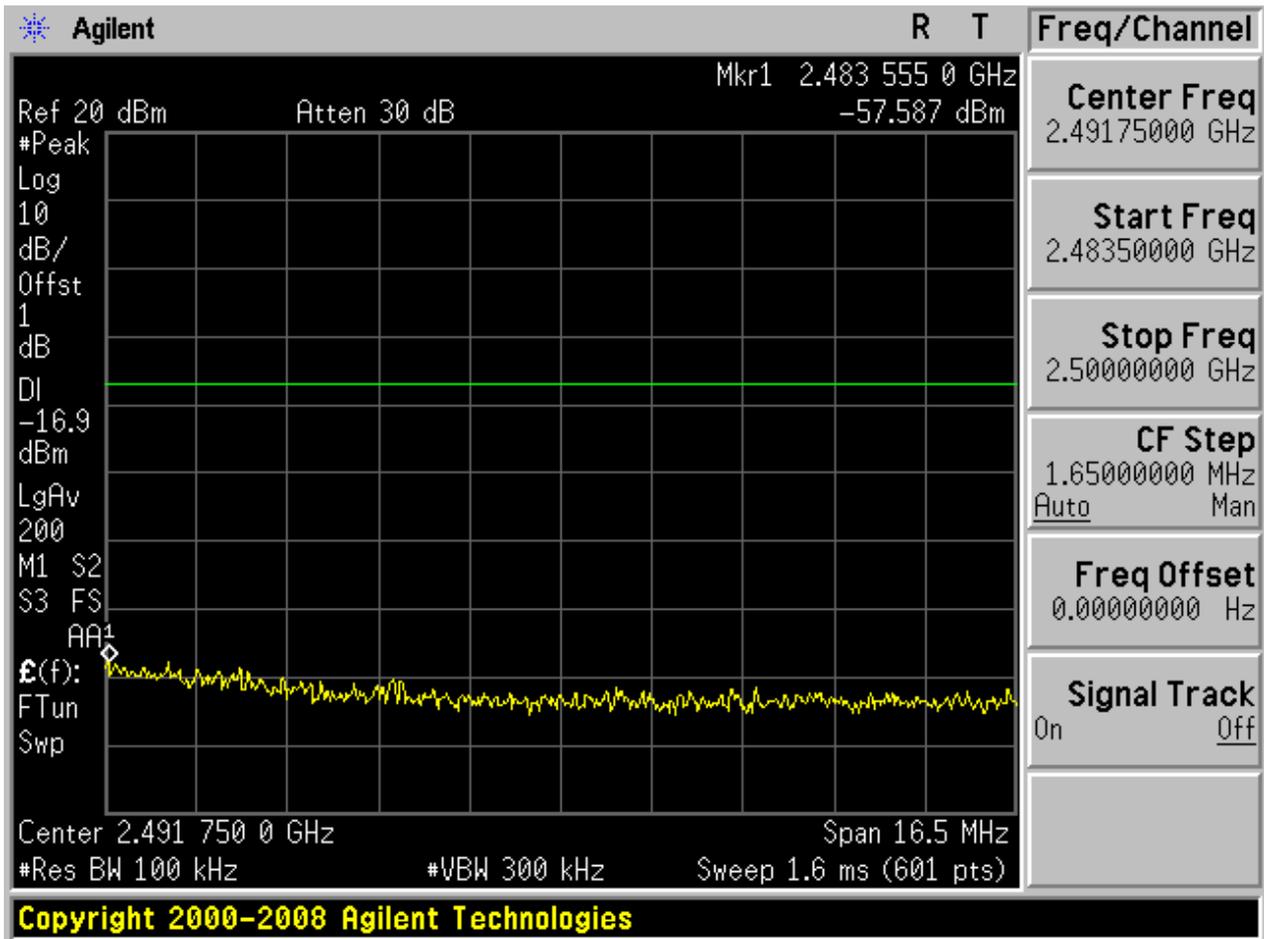
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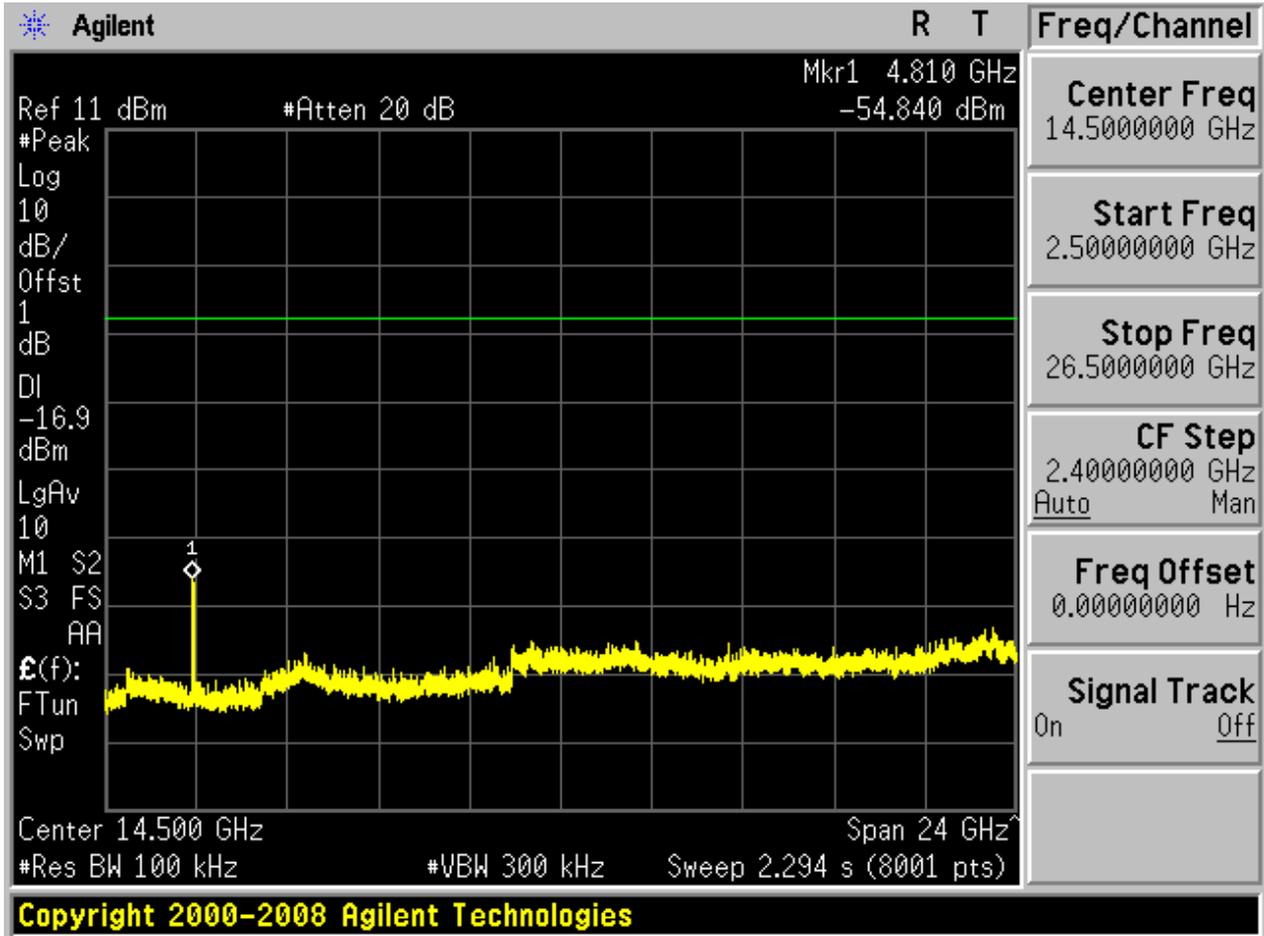






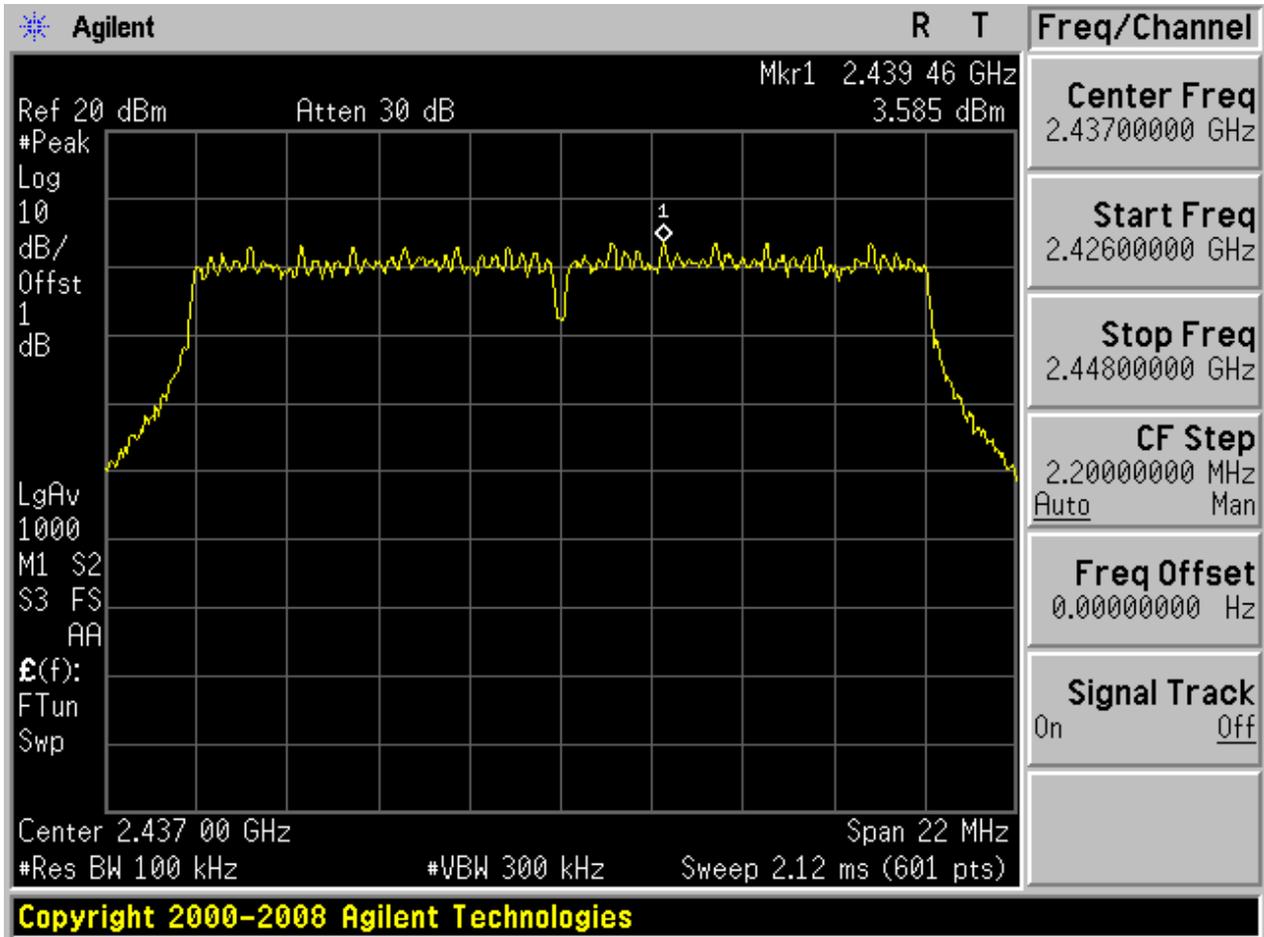






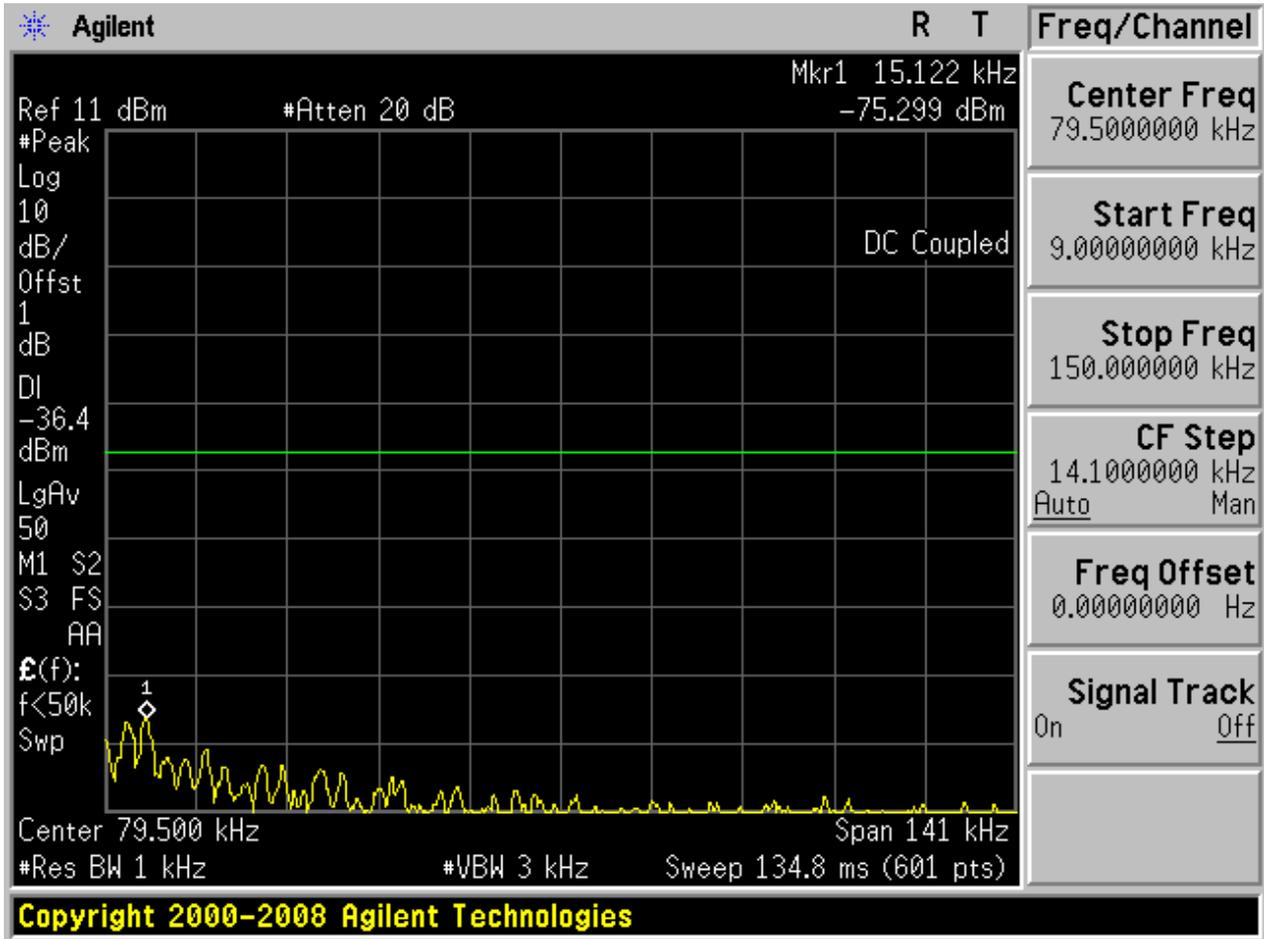
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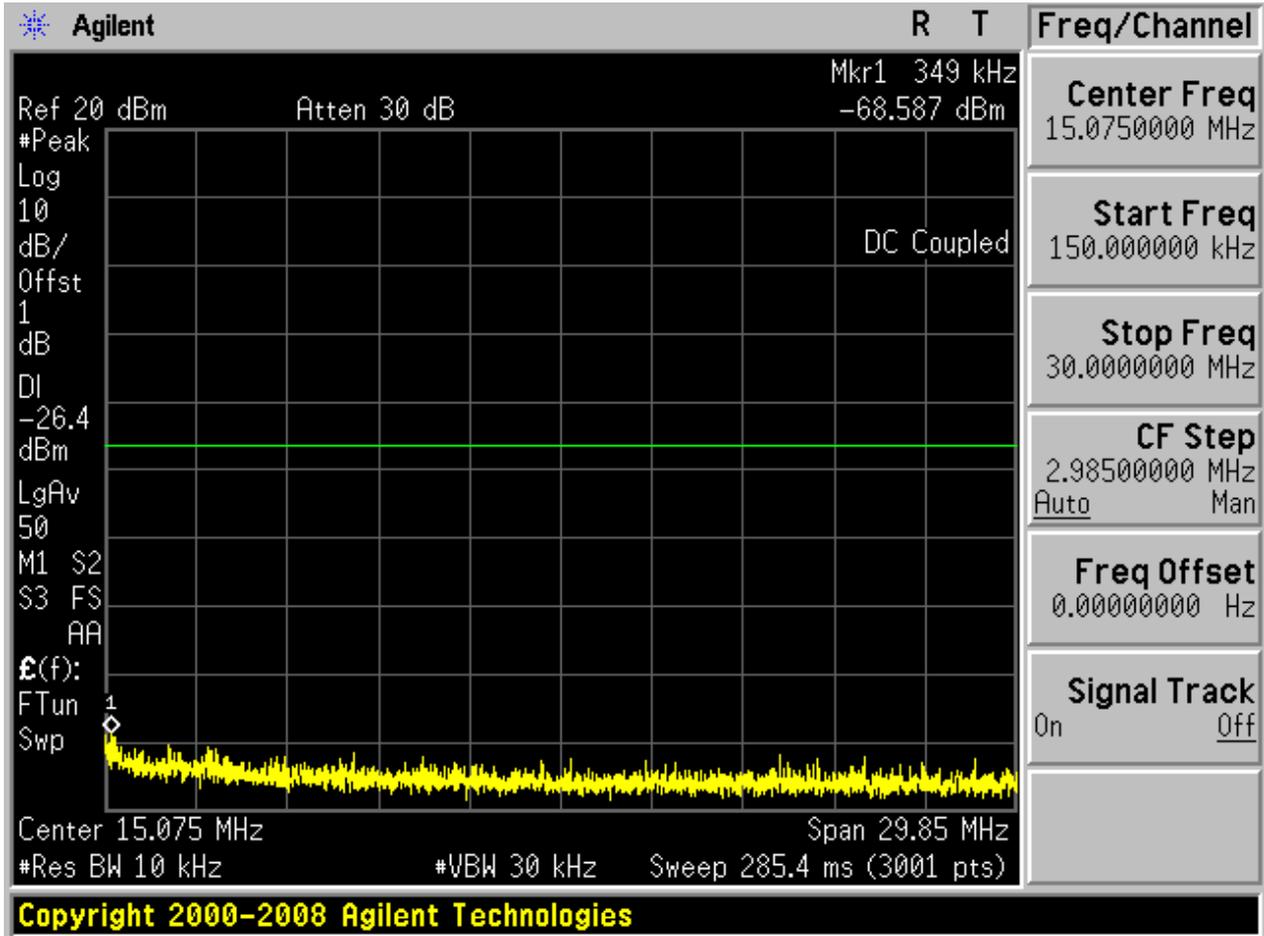
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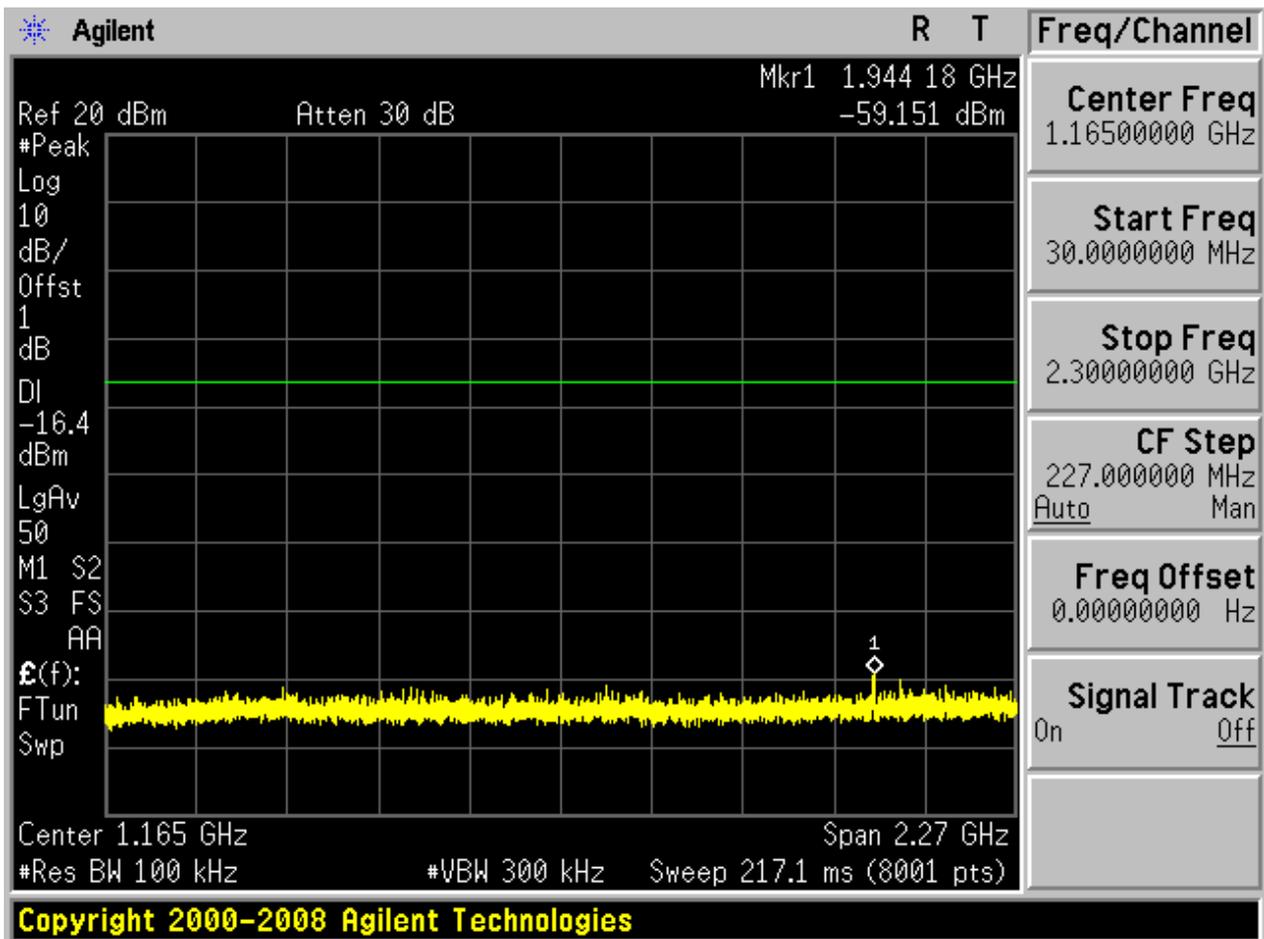


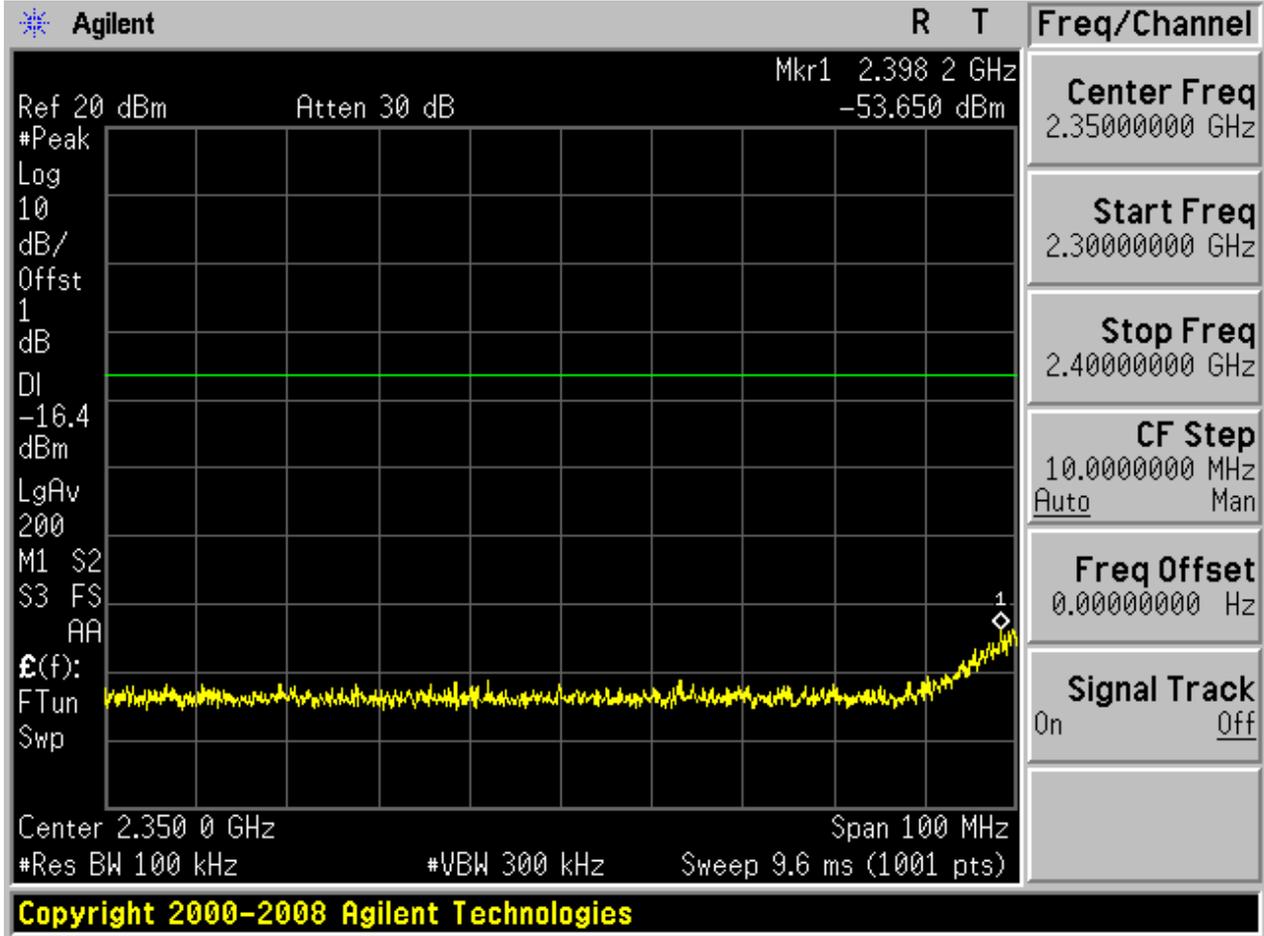


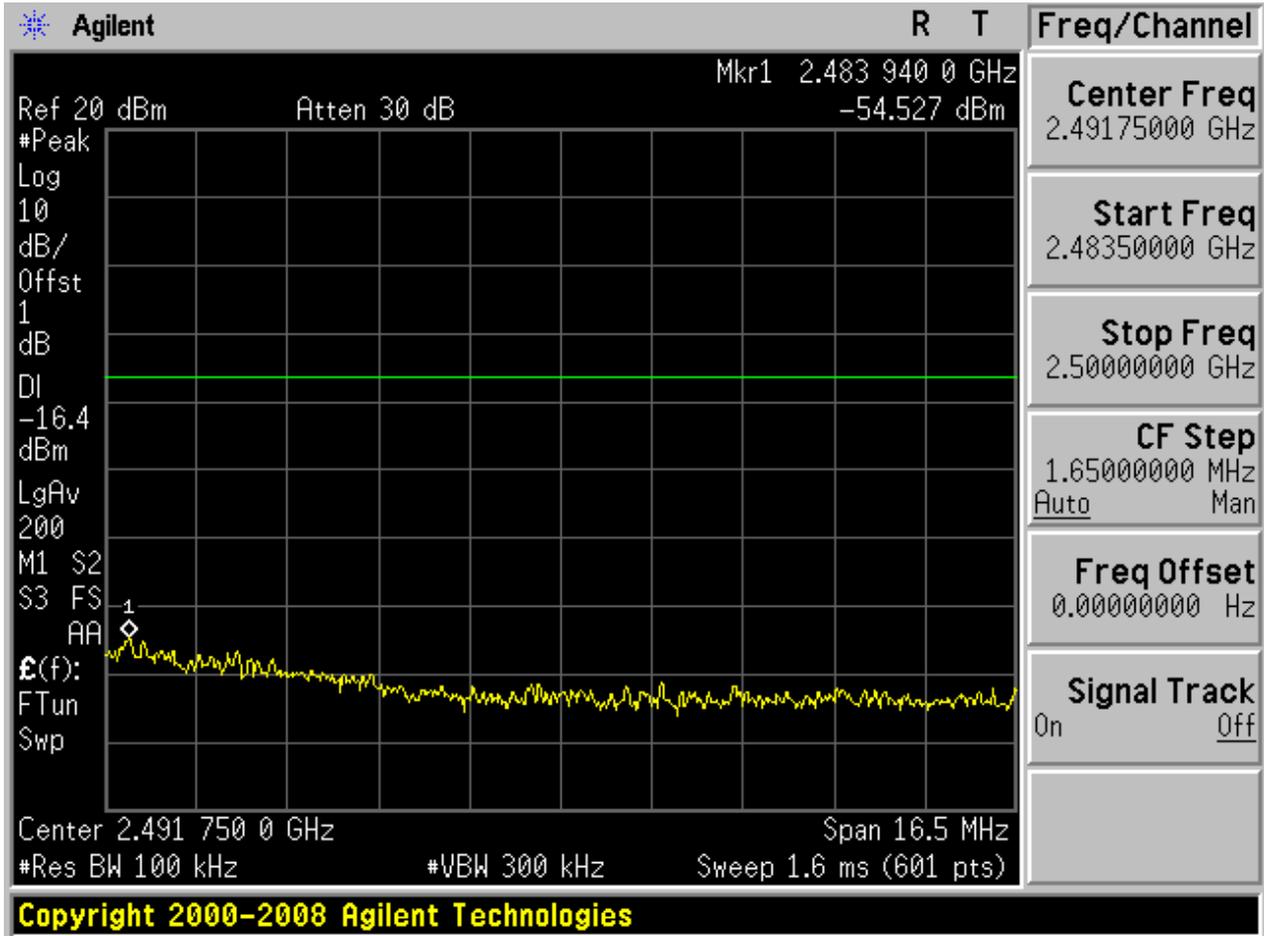
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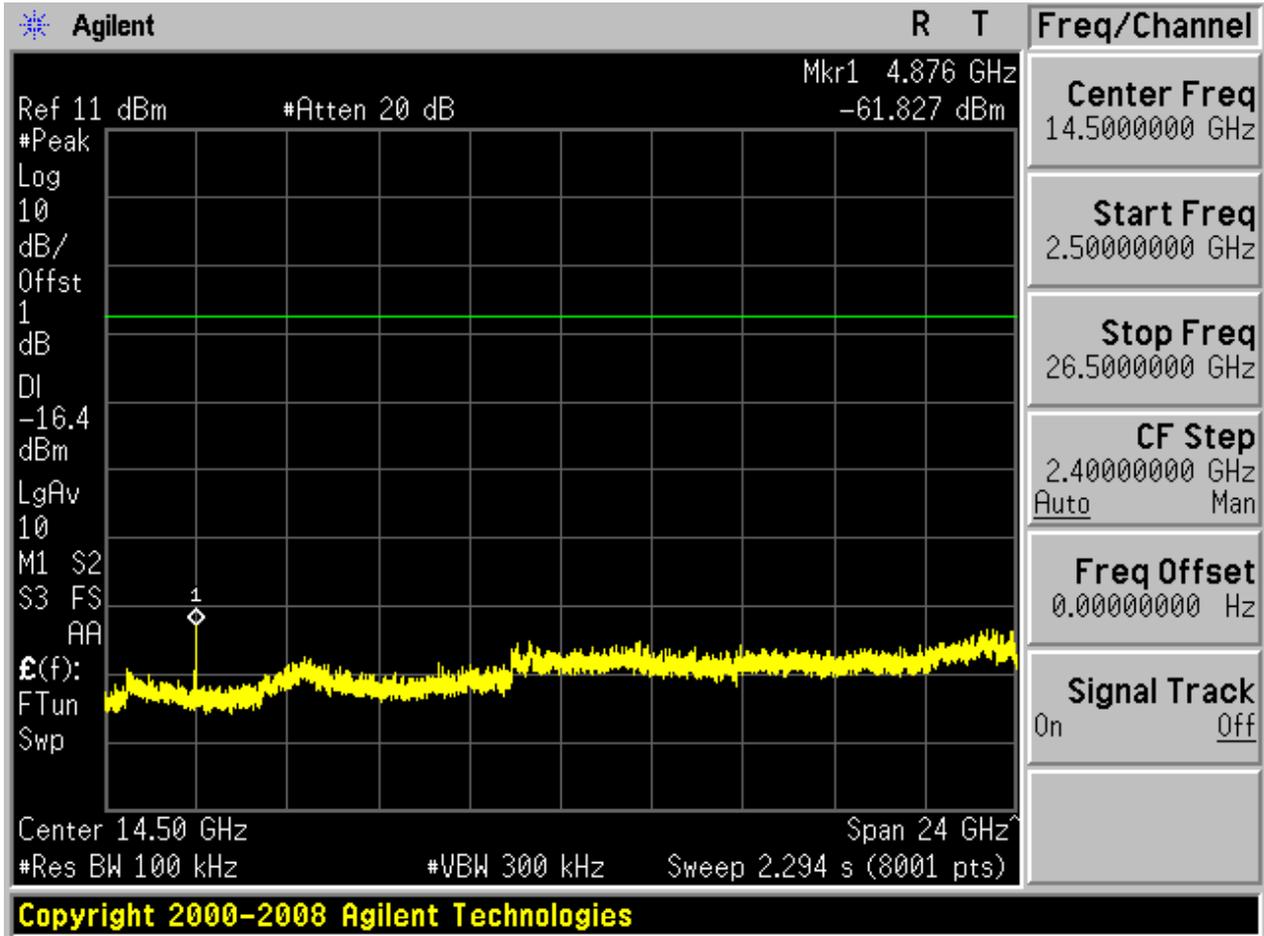








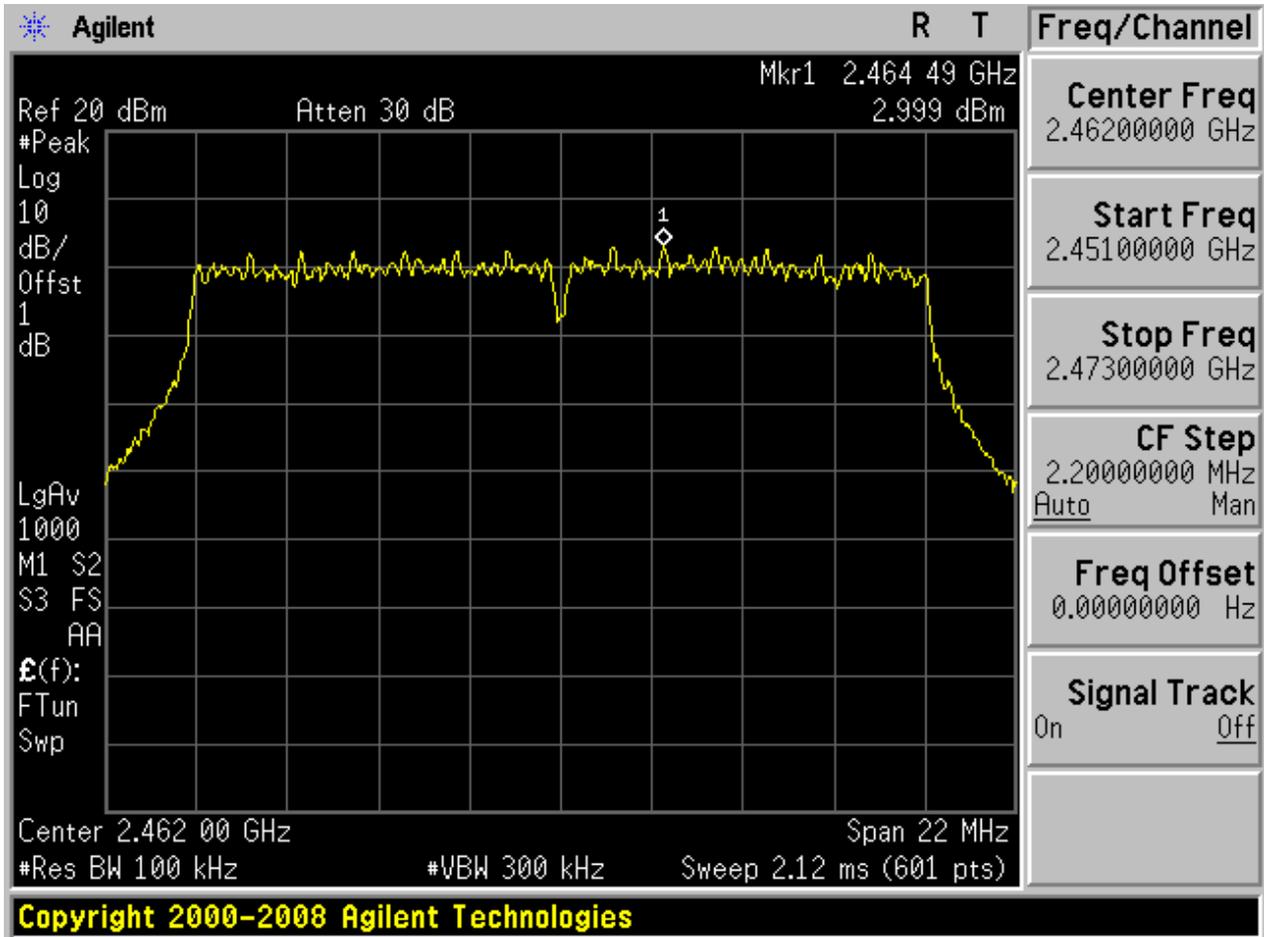






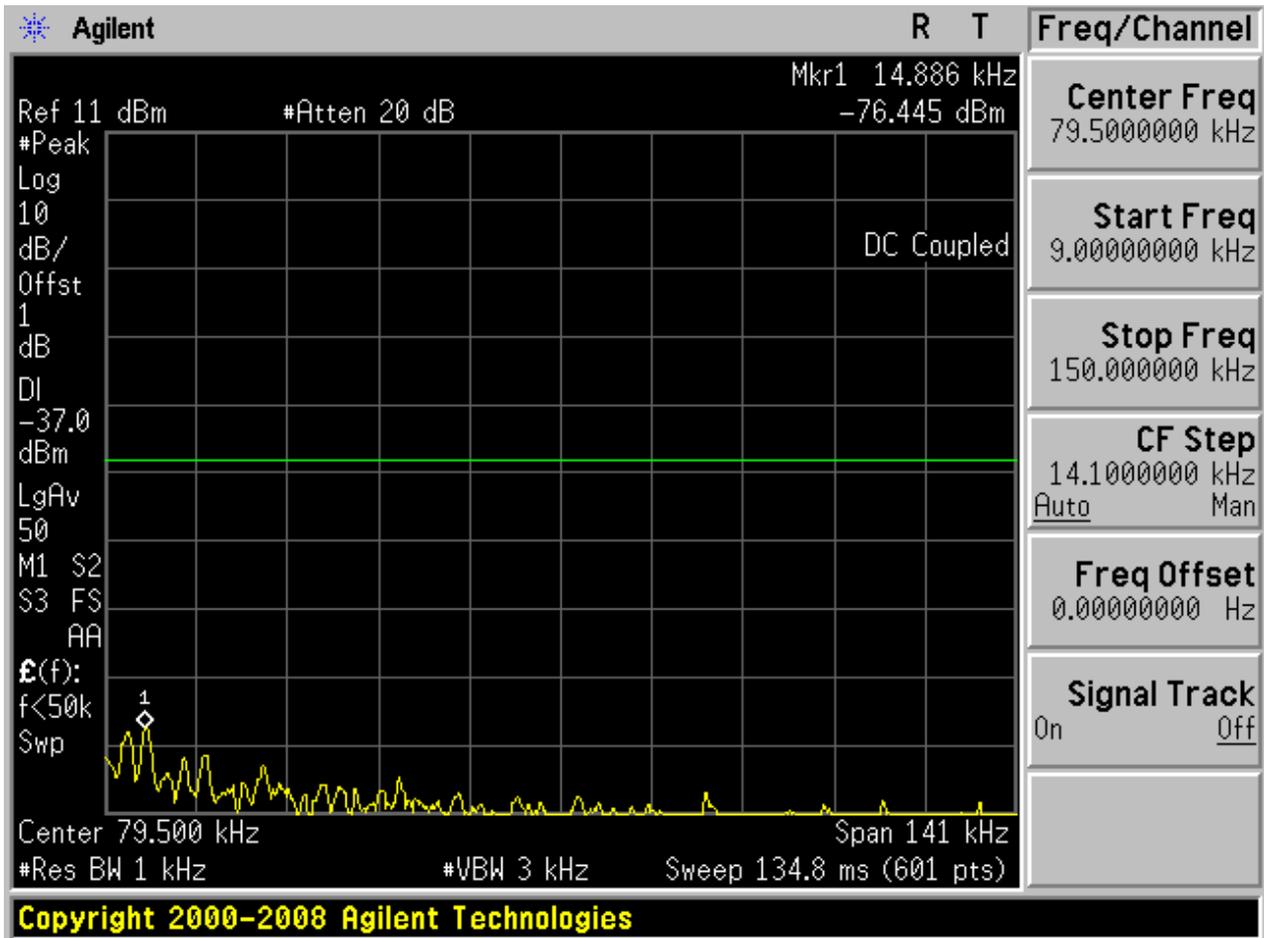
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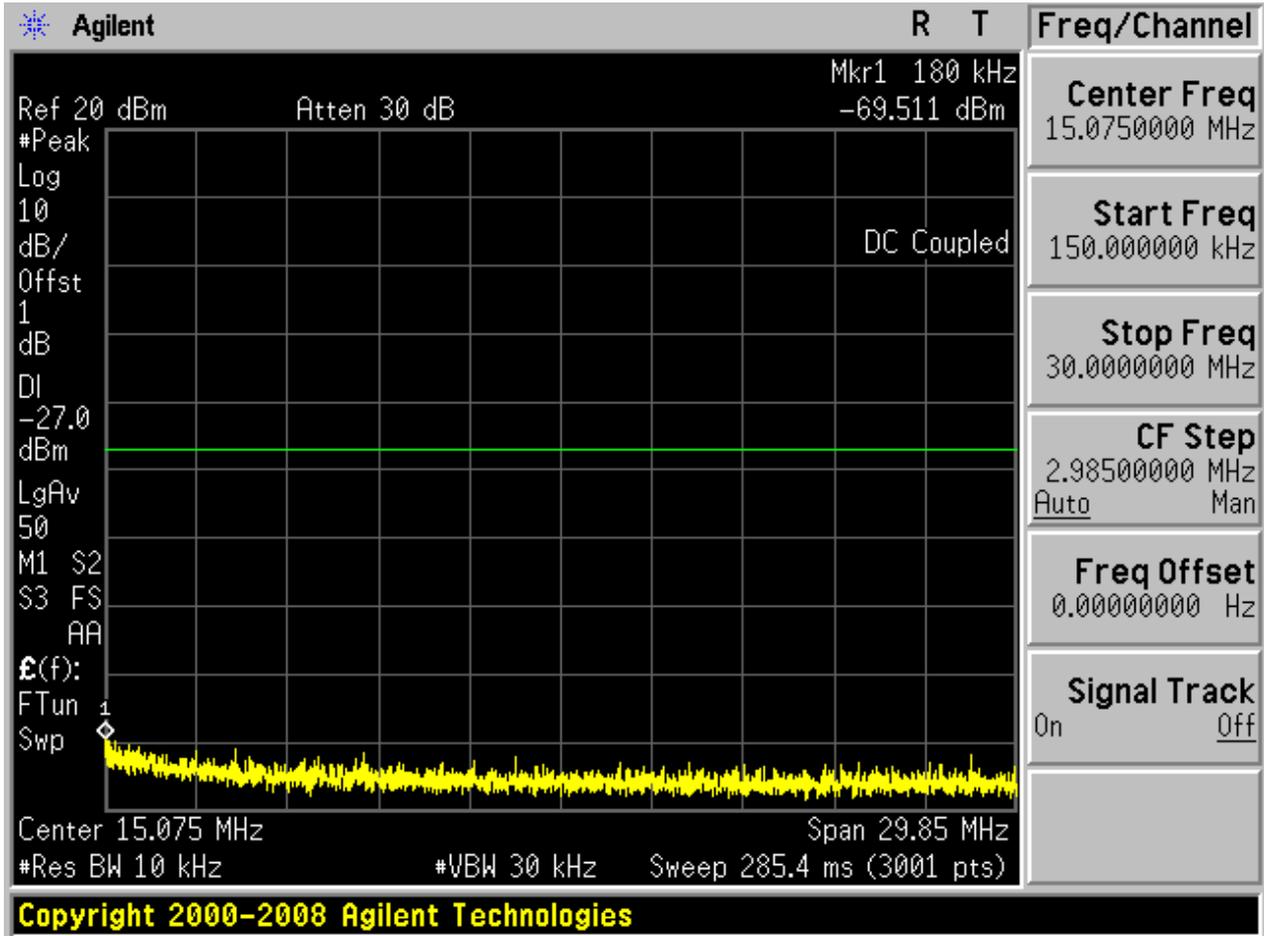
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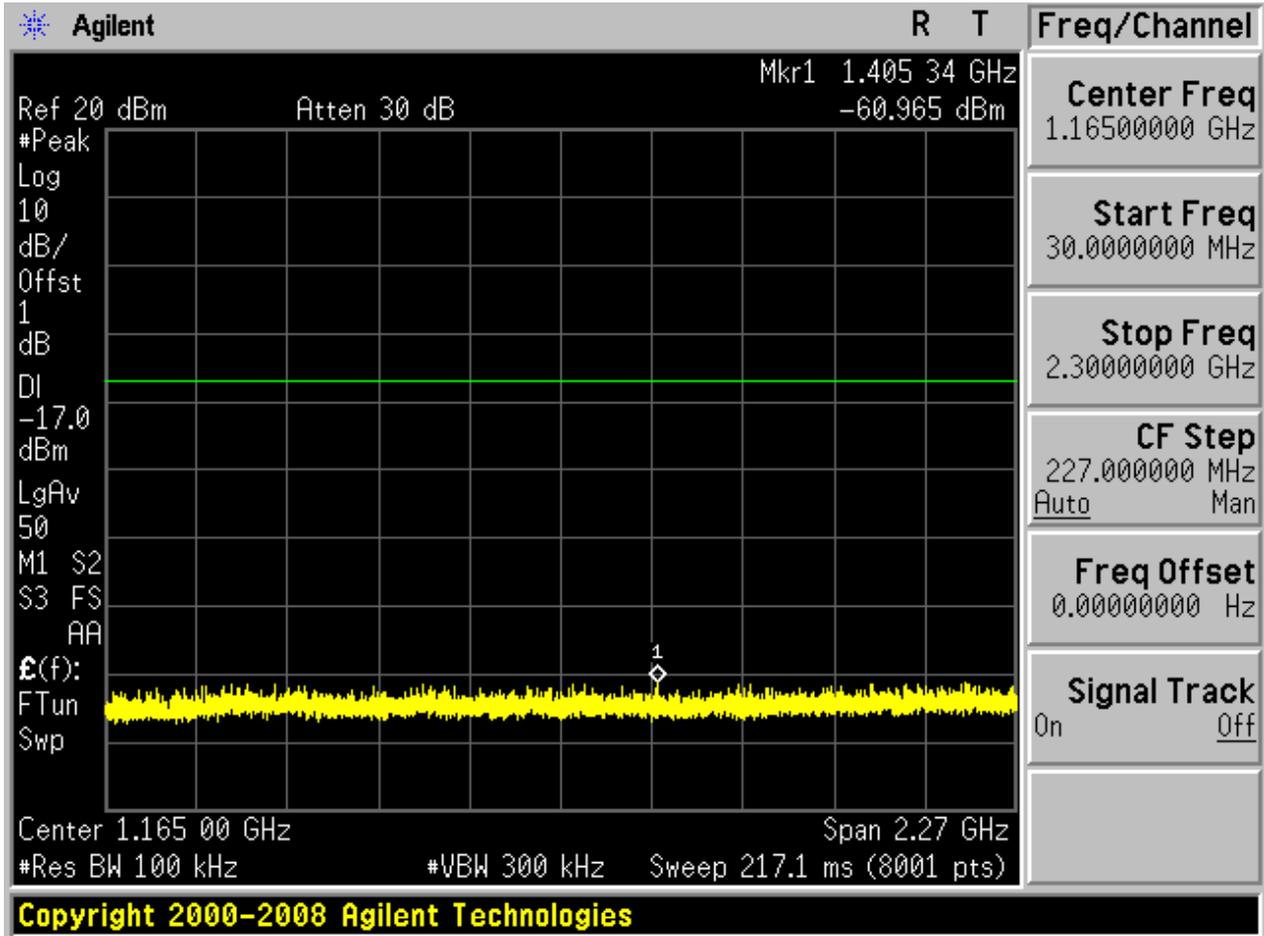


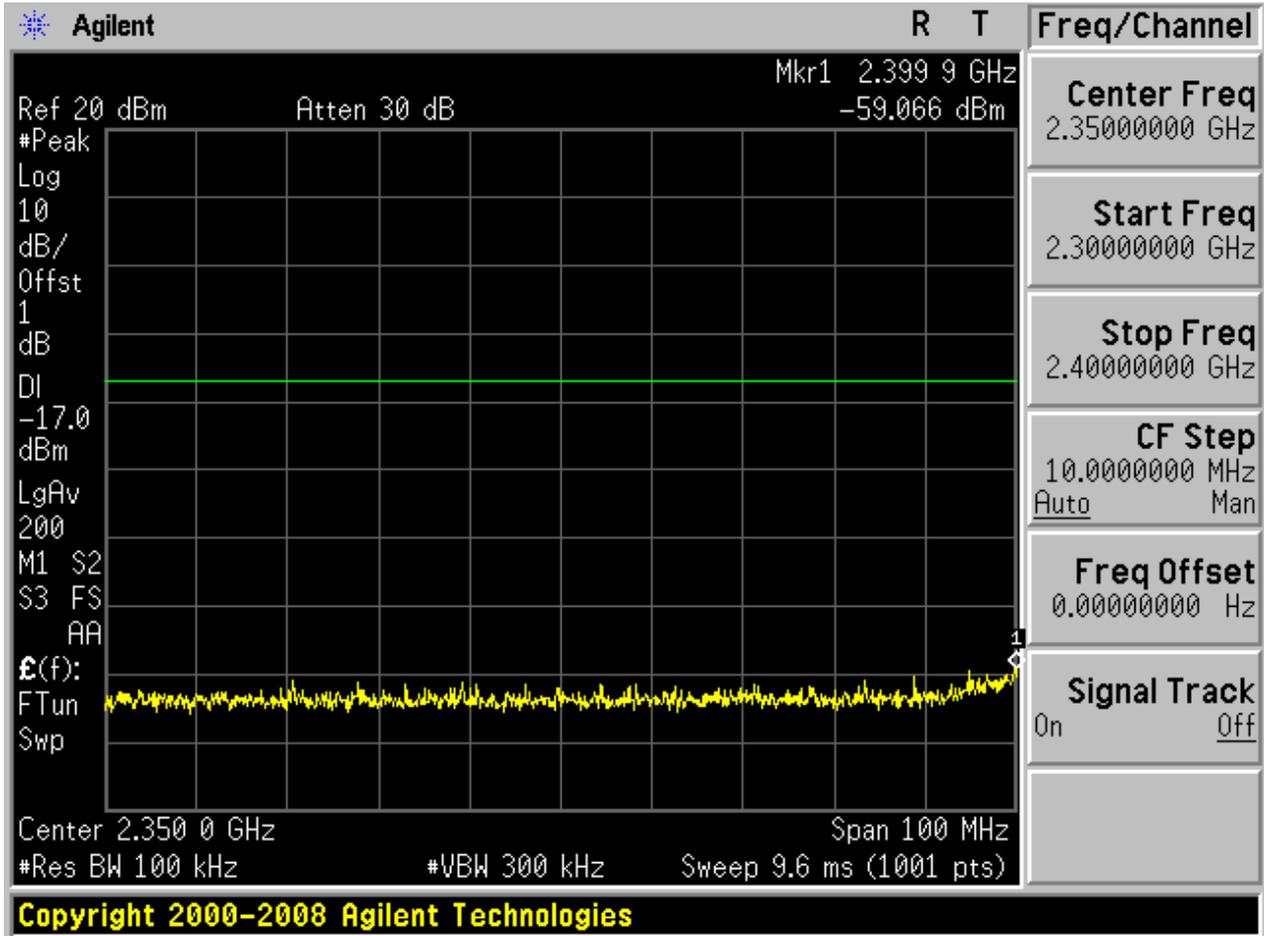


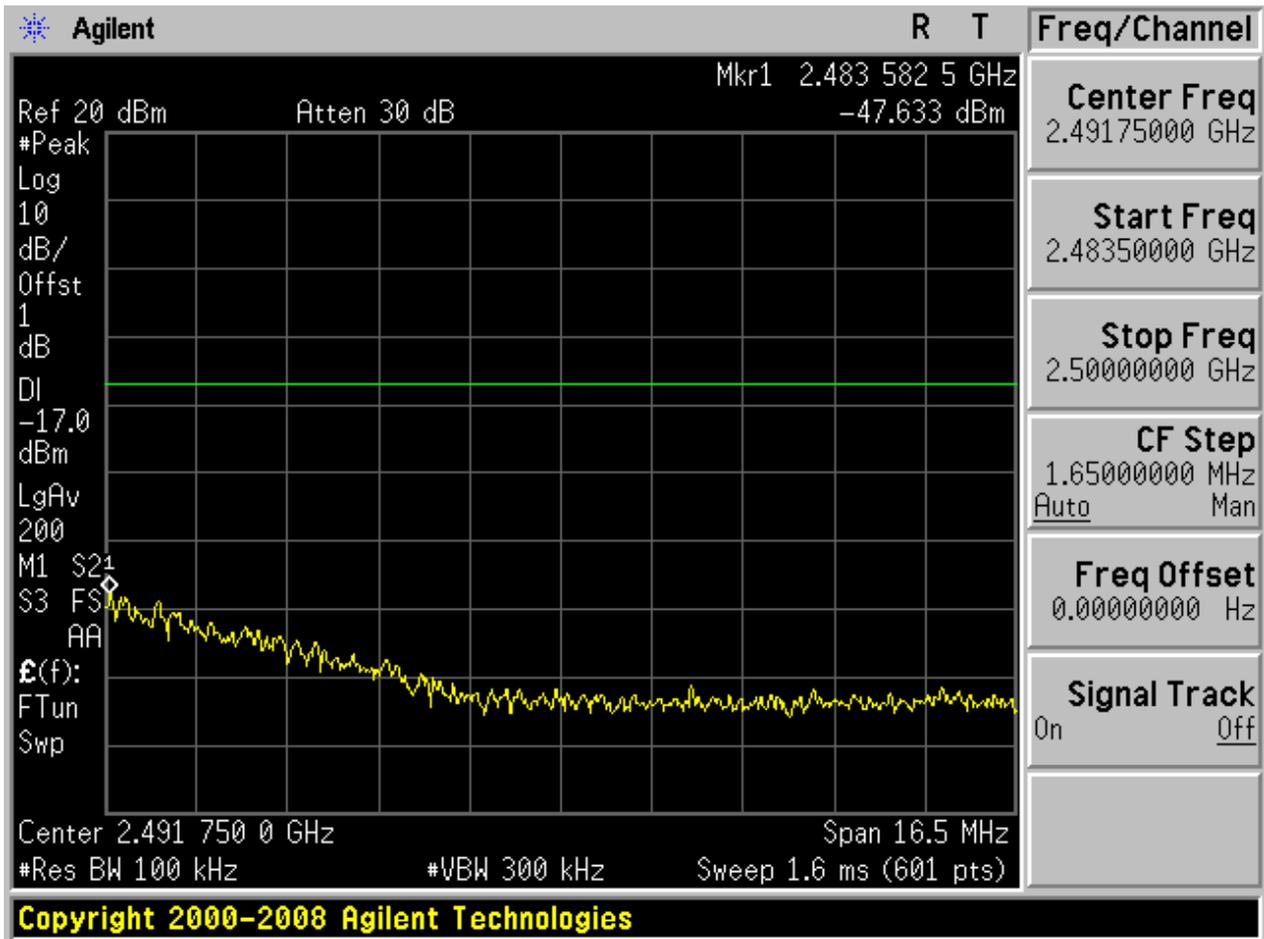
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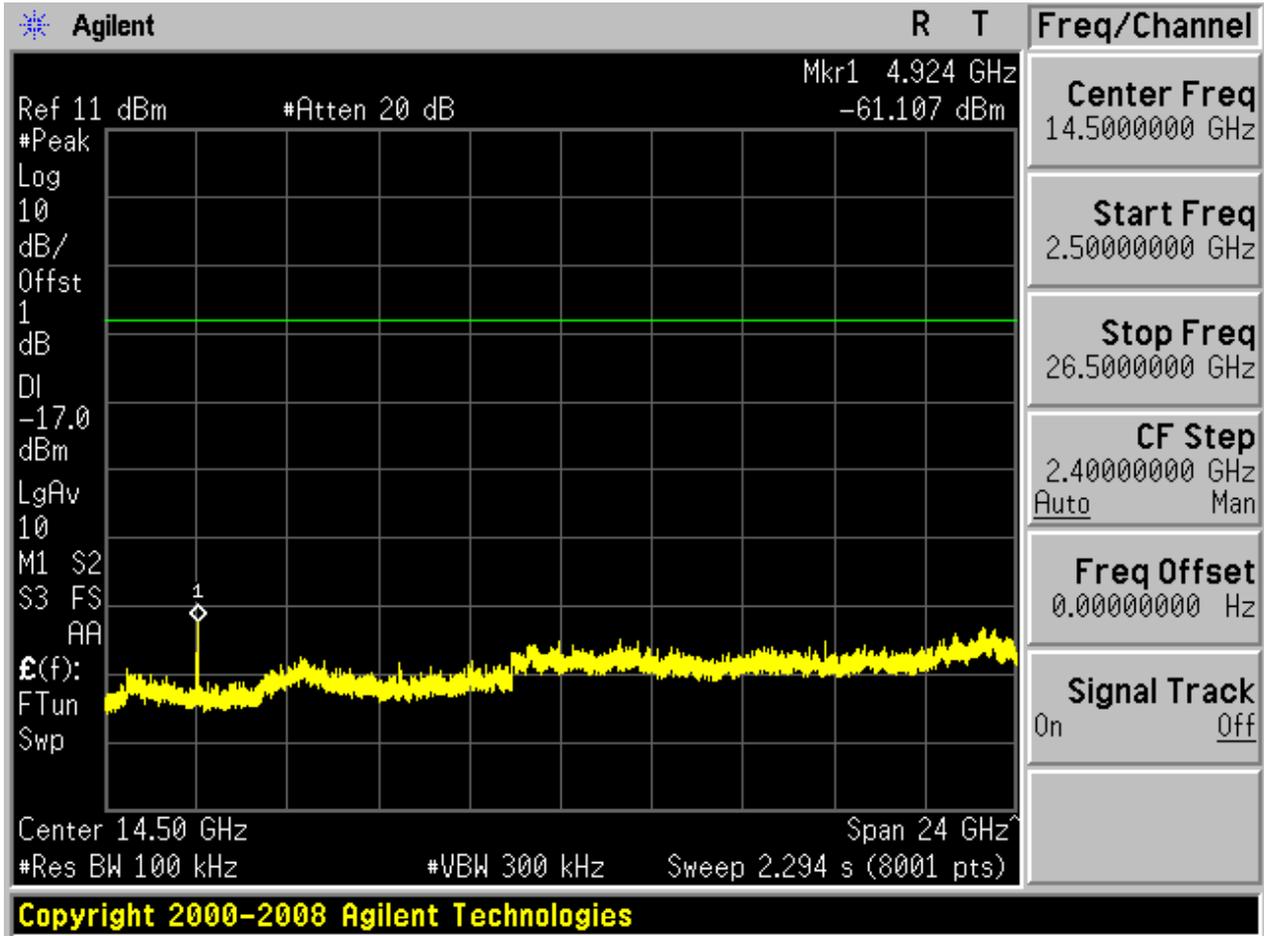












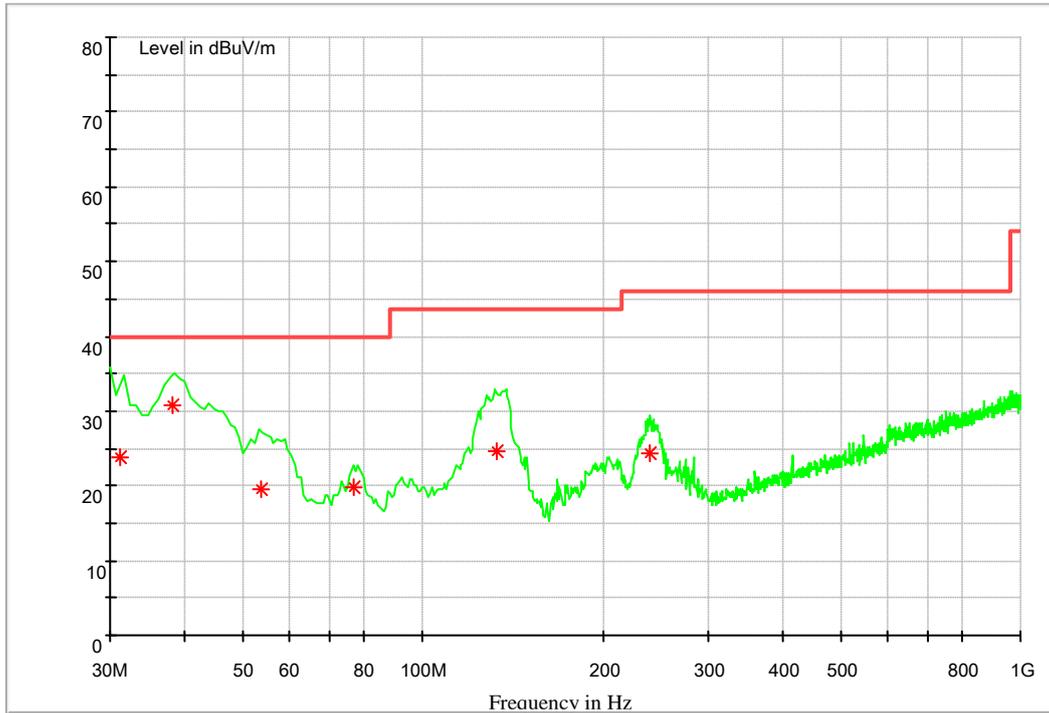


Appendix F

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

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

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



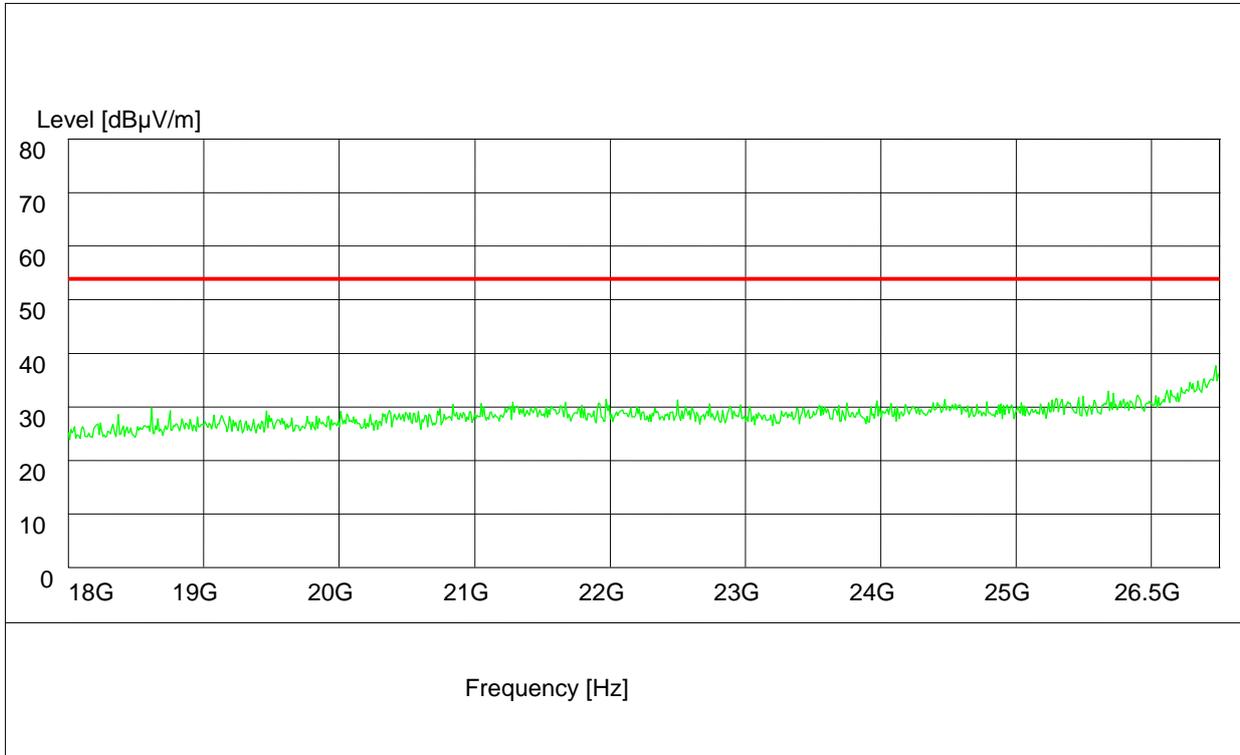
MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBuV/m	Transducer dB	Limit dBuV/m	Margin dB	Height cm	Azimuth deg	Polarisation
31.140480	23.8	14.0	40.0	16.2	100.0	48.0	VERTICAL
38.090240	30.9	15.0	40.0	9.1	122.0	332.0	VERTICAL
53.681280	19.4	14.7	40.0	20.6	114.0	185.0	VERTICAL
76.717440	19.9	10.7	40.0	20.1	244.0	118.0	HORIZONTAL
133.330560	24.6	10.7	43.5	18.9	100.0	55.0	VERTICAL
239.245760	24.3	14.1	46.0	21.7	122.0	55.0	HORIZONTAL



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

Note: No peak found in pre- test.

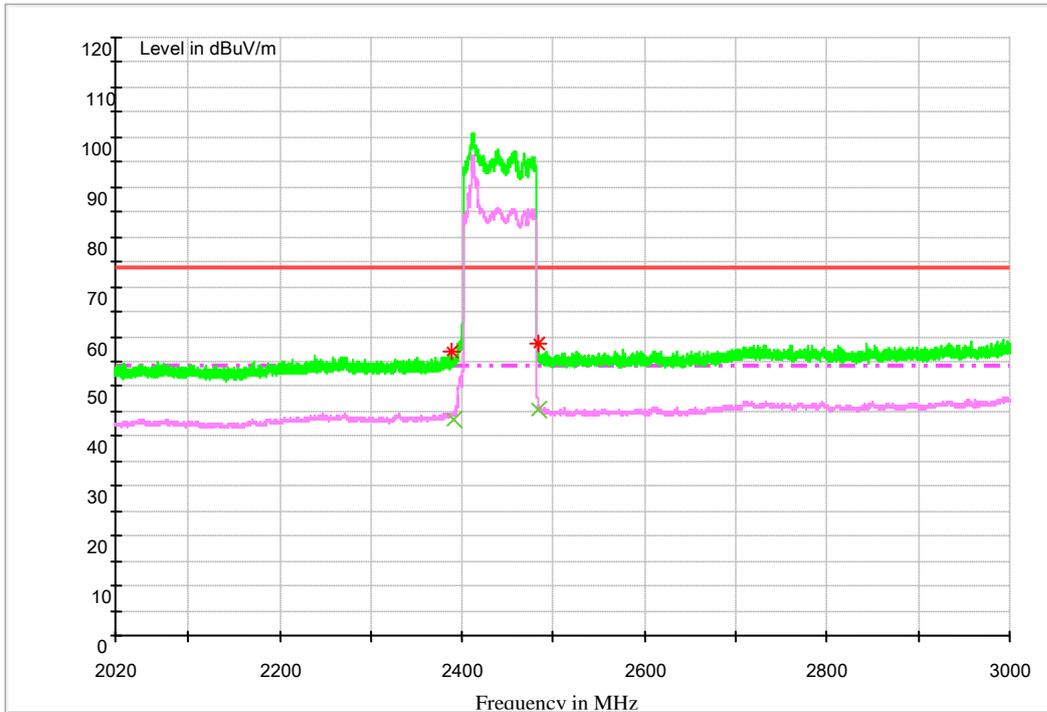


Part 3: Testing Range of “2.3GHz to 2.5GHz”

- 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 dB μ V/m) and Average Limit (54 dB μ V/m).
- Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

Test Mode: 11b

Channel 01



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

MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	57.1	38.3	74.0	16.9	121.0	335.0	HORIZONTAL
2483.500000	58.6	40.2	74.0	15.4	100.0	349.0	HORIZONTAL

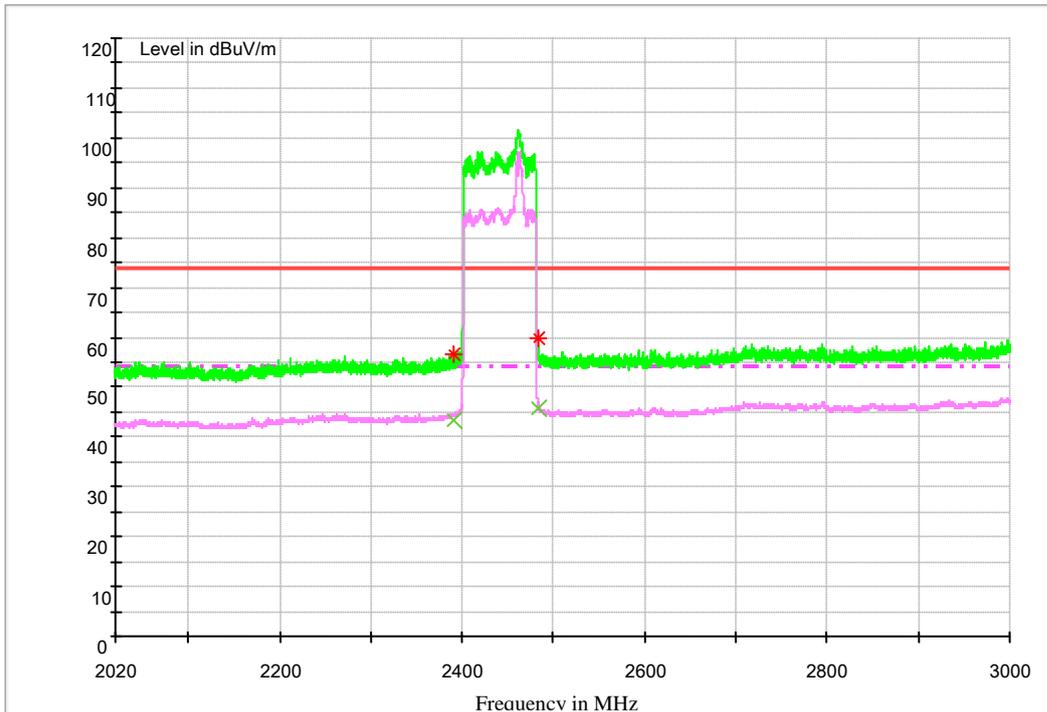
MEASUREMENT RESULT: AV Detector

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



2390.000000	43.2	38.3	54.0	10.8	100.0	237.0	VERTICAL
2483.500000	45.2	40.7	54.0	8.8	100.0	25.0	HORIZONTAL

Channel 11



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

MEASUREMENT RESULT: PK Detector

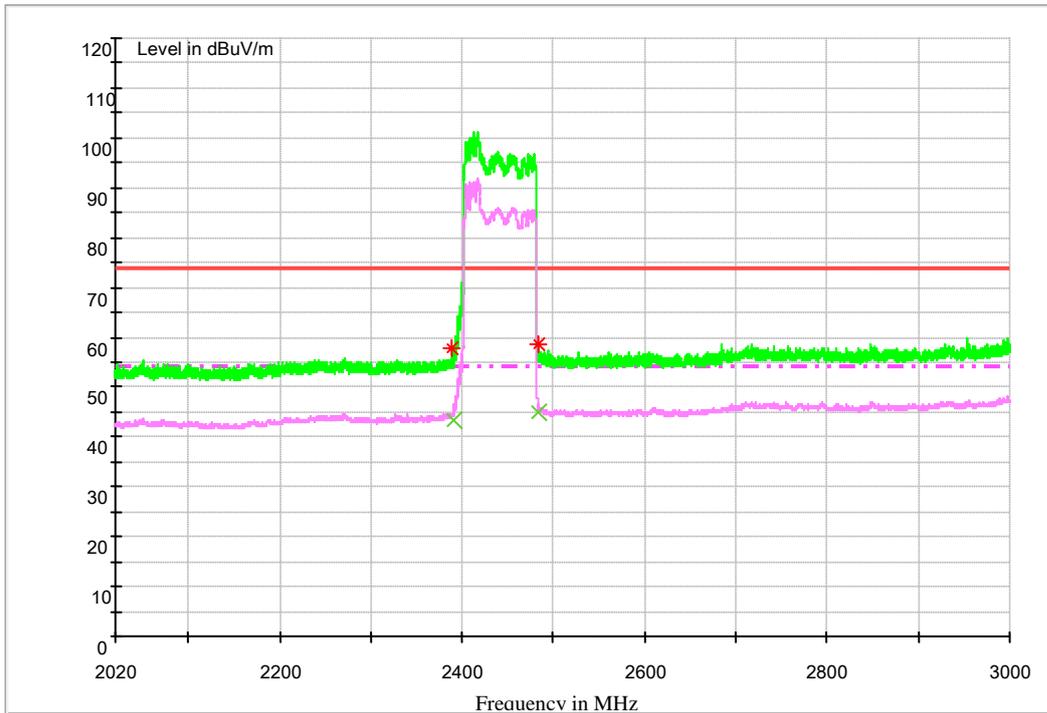
Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	56.4	38.3	74.0	17.6	100.0	252.0	VERTICAL
2483.500000	59.8	40.6	74.0	14.2	100.0	221.0	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.2	38.3	54.0	10.8	100.0	297.0	VERTICAL
2483.500000	45.6	40.8	54.0	8.4	100.0	221.0	HORIZONTAL

Test Mode: 11g

Channel 01



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

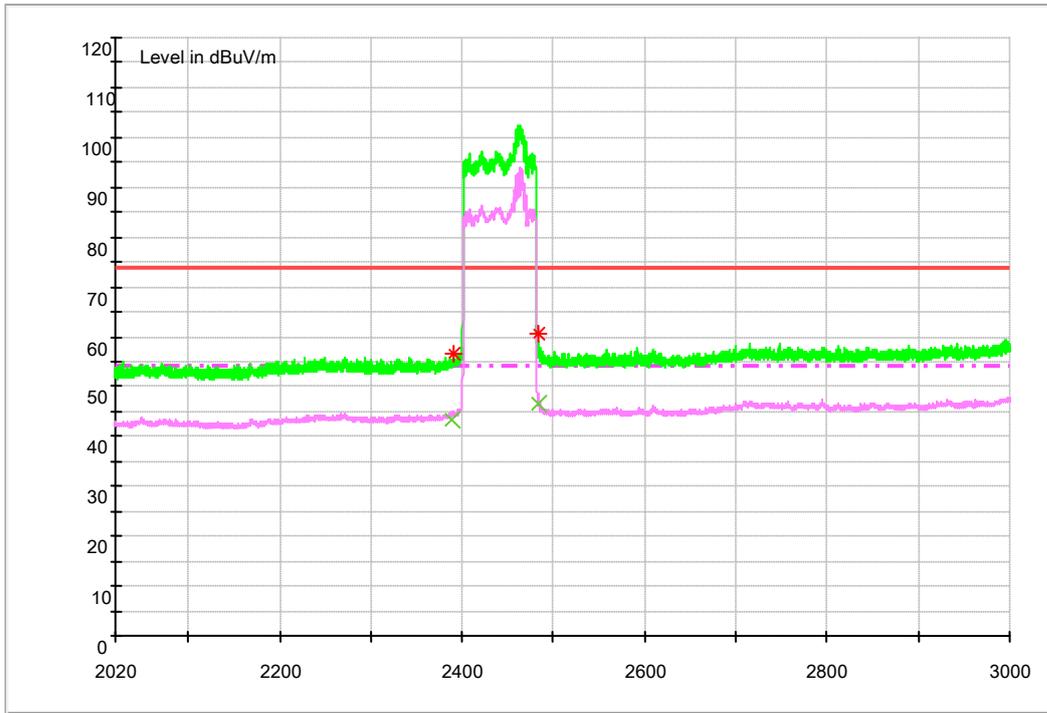
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	57.7	38.3	74.0	16.3	113.0	34.0	HORIZONTAL
2483.500000	58.6	40.7	74.0	15.4	113.0	274.0	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.3	38.3	54.0	10.7	100.0	0.0	HORIZONTAL
2483.500000	45.1	40.7	54.0	8.9	104.0	274.0	VERTICAL

Channel 11



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

MEASUREMENT RESULT: PK Detector

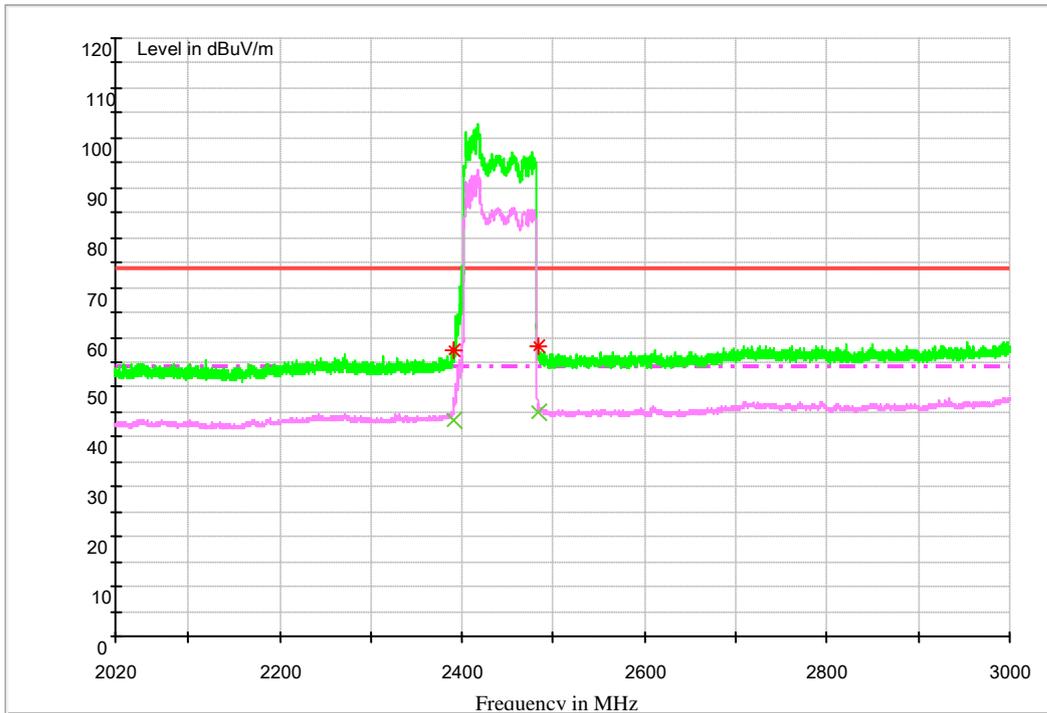
Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	56.8	38.3	74.0	17.2	100.0	281.0	VERTICAL
2483.500000	60.5	40.5	74.0	13.5	177.0	192.0	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.1	38.3	54.0	10.9	100.0	62.0	HORIZONTAL
2483.500000	46.7	40.7	54.0	7.3	100.0	206.0	HORIZONTAL

Test Mode: 11n

Channel 01



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

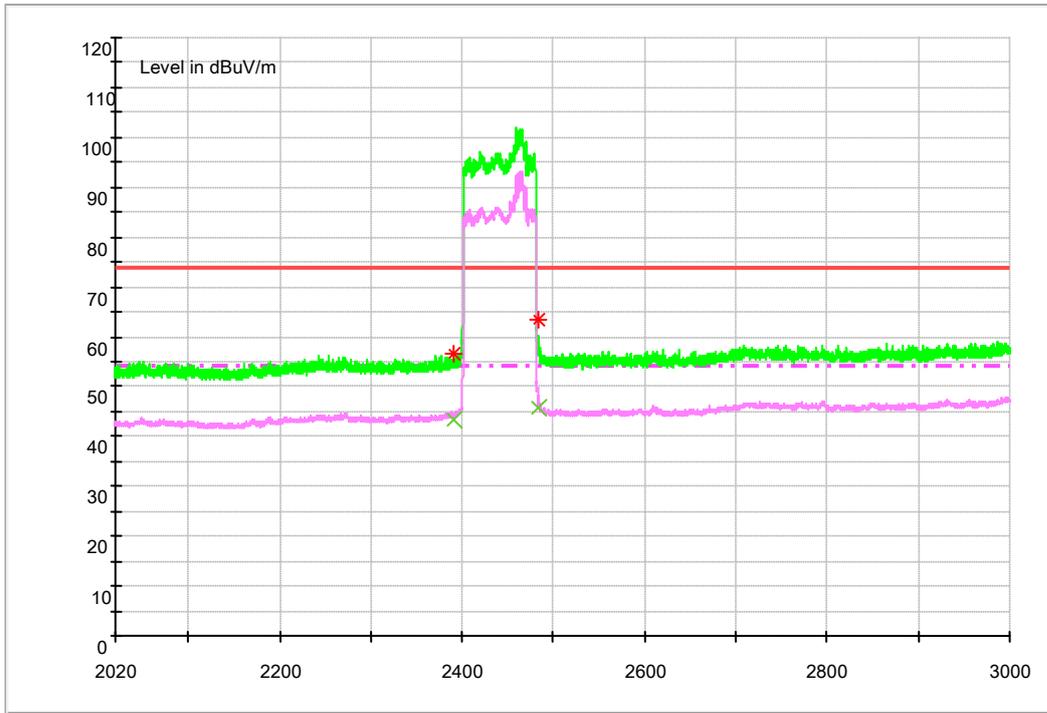
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	57.5	38.3	74.0	16.5	100.0	95.0	VERTICAL
2483.500000	58.1	40.2	74.0	15.9	113.0	319.0	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.5	38.3	54.0	10.5	100.0	122.0	VERTICAL
2483.500000	44.9	40.5	54.0	9.1	100.0	288.0	VERTICAL

Channel 11



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

MEASUREMENT RESULT: PK Detector

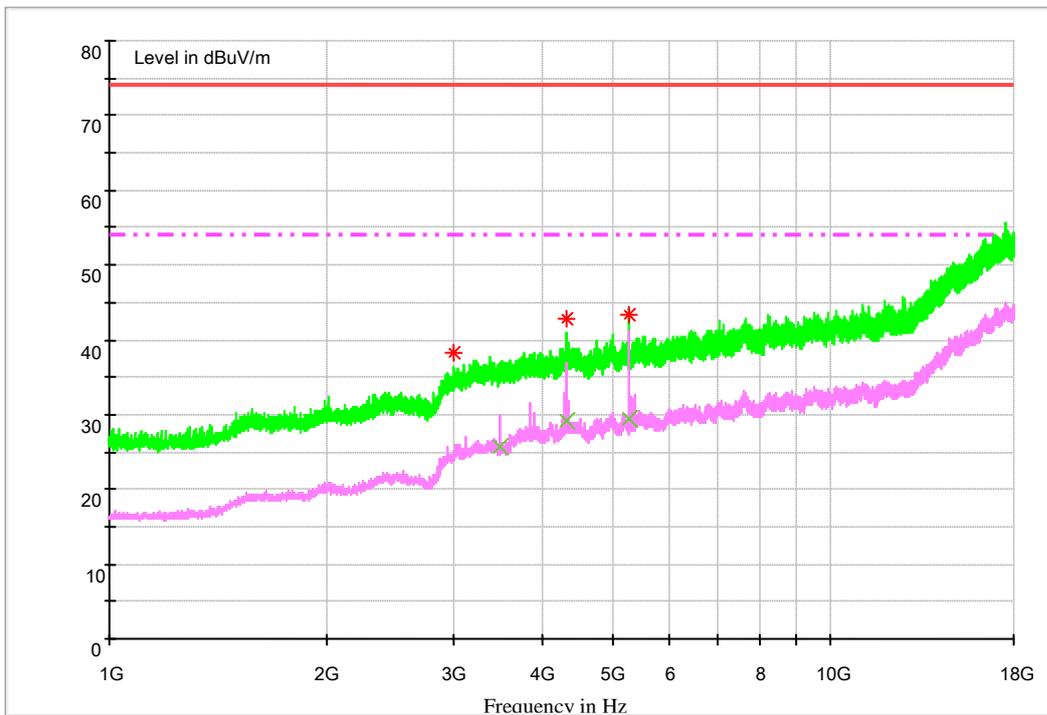
Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	56.6	38.3	74.0	17.4	100.0	8.0	HORIZONTAL
2483.500000	63.4	40.4	74.0	10.6	100.0	195.0	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.2	38.3	54.0	10.8	100.0	335.0	VERTICAL
2483.500000	45.7	40.7	54.0	8.3	100.0	186.0	HORIZONTAL

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

- Note 1: The test results and plot for testing range of “1 GHz to 18 GHz” showed as below is **the WORST case for all Test Modes and Channels**. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of “1 GHz to 18 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.
- Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB μ V/m) and Average Limit (54 dB μ V/m).



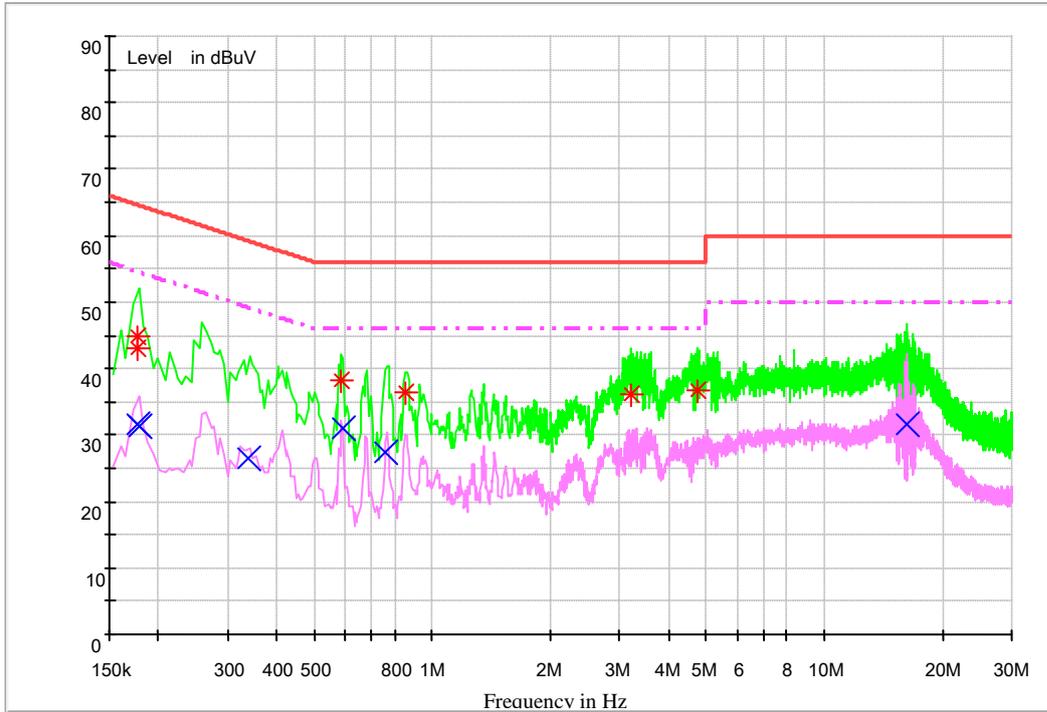


Appendix G

Conducted Emission at Power Port

According to FCC Part 15.207

Channel 6



MEASUREMENT RESULT: QP Detector

Frequency	Level	Transducer	Limit	Margin	Line	PE
MHz	dB μ V	dB	dB μ V	dB		
0.176186	43.1	9.7	64.7	21.6	N	FLO
0.176936	44.8	9.7	64.6	19.8	L1	FLO
0.583219	38.1	9.7	56.0	17.9	N	FLO
0.856122	36.4	9.7	56.0	19.6	N	FLO
3.213732	36.0	9.7	56.0	20.0	N	FLO
4.728233	36.7	9.8	56.0	19.3	L1	FLO

MEASUREMENT RESULT: AV Detector

Frequency	Level	Transducer	Limit	Margin	Line	PE
MHz	dB μ V	dB	dB μ V	dB		
0.177318	31.7	9.7	54.6	22.9	N	FLO
0.178509	31.3	9.7	54.6	23.3	L1	FLO
0.340174	26.5	9.7	49.2	22.7	N	FLO
0.590201	31.0	9.7	46.0	15.0	N	FLO
0.761768	27.5	9.7	46.0	18.5	N	FLO
16.139718	31.7	10.1	50.0	18.3	N	FLO

END