



# 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.

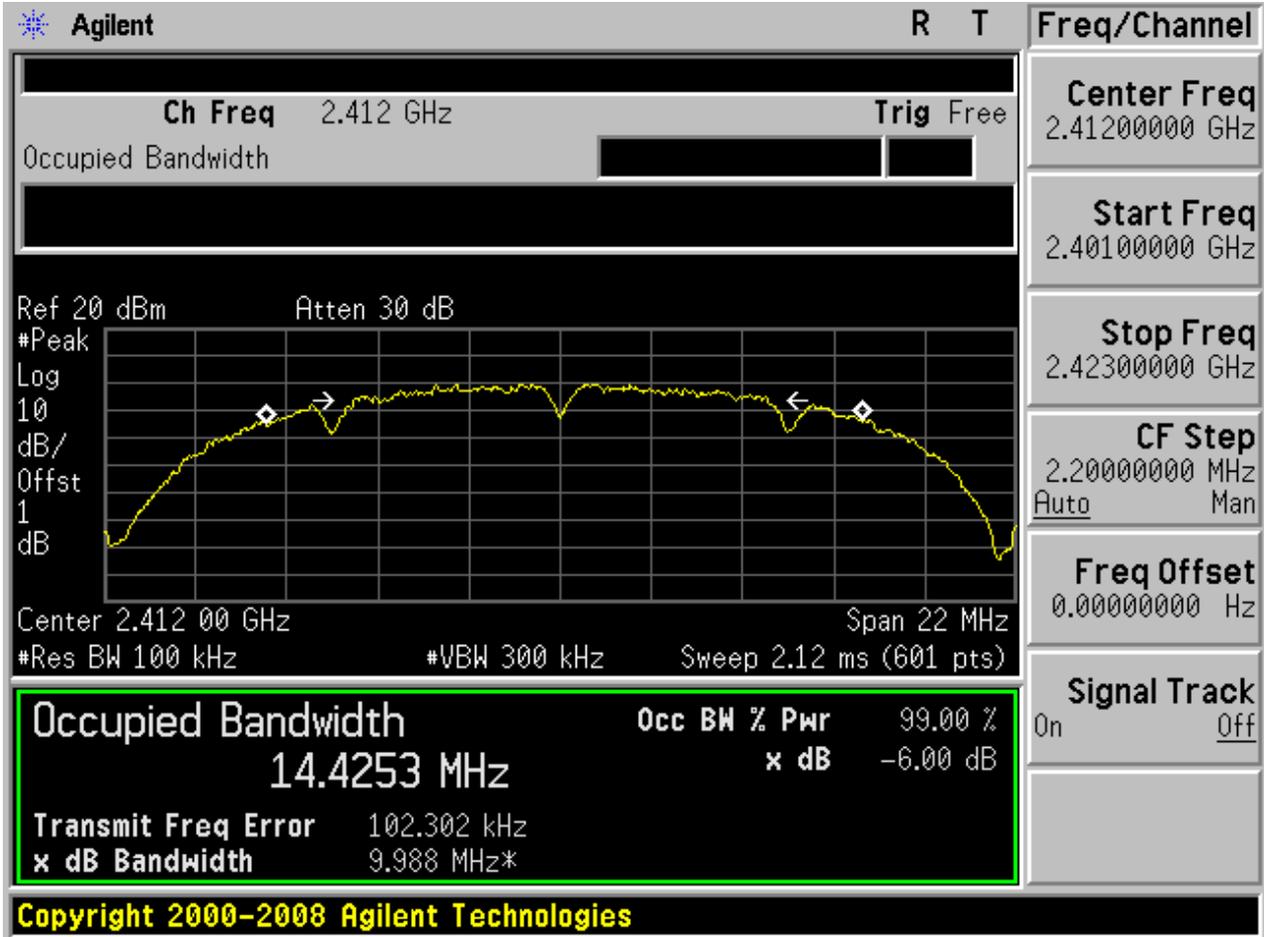
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

### Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
11B	L	2412	Ant 1	9.99	pass
11B	M	2437	Ant 1	9.94	pass
11B	H	2462	Ant 1	9.97	pass
11G	L	2412	Ant 1	15.41	pass
11G	M	2437	Ant 1	15.47	pass
11G	H	2462	Ant 1	14.74	pass
11N20_SISO	L	2412	Ant 1	17.28	pass
11N20_SISO	M	2437	Ant 1	15.99	pass
11N20_SISO	H	2462	Ant 1	15.06	pass

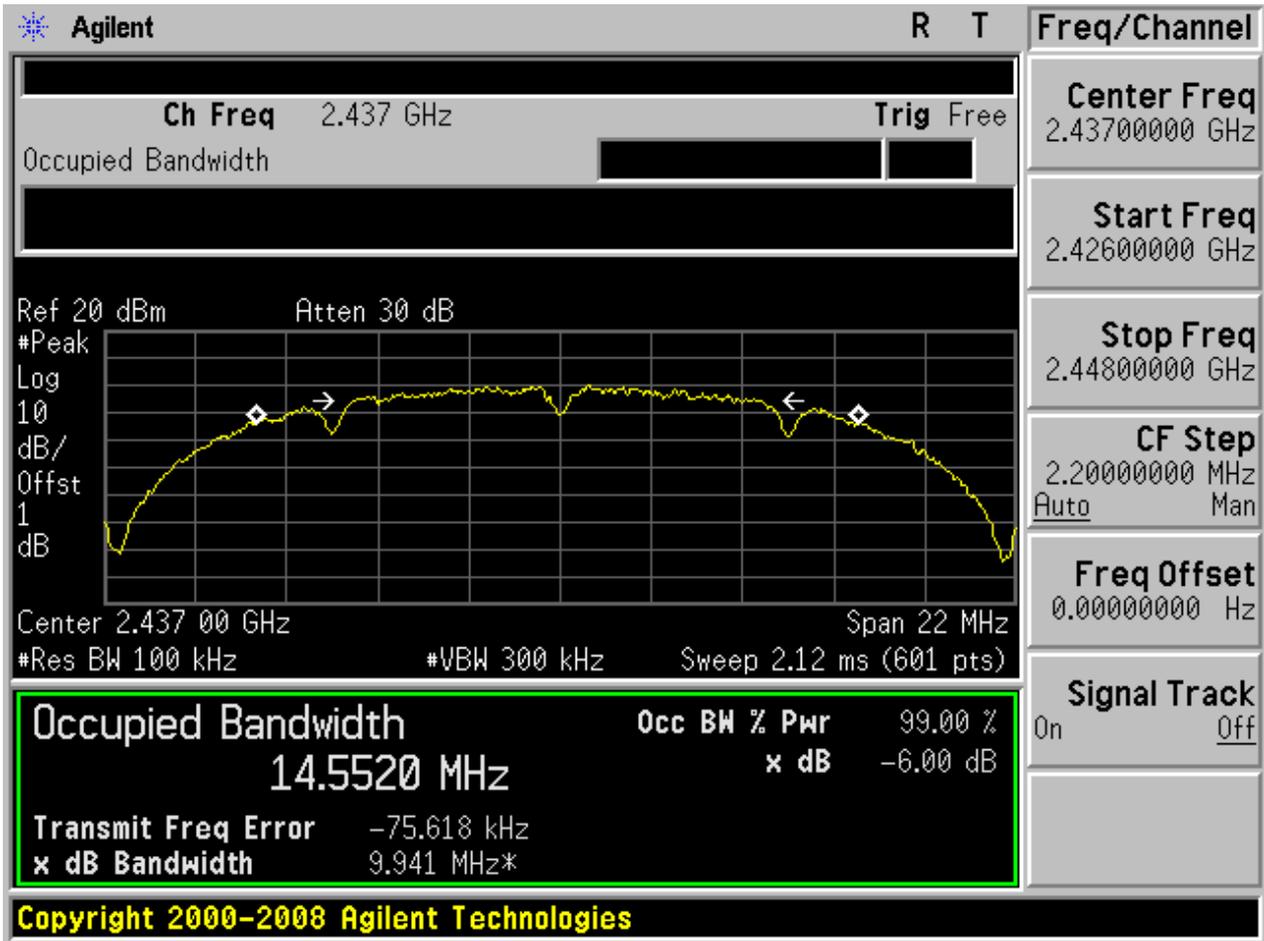
## Part II - Test Plots

### 2.1 11B\_L



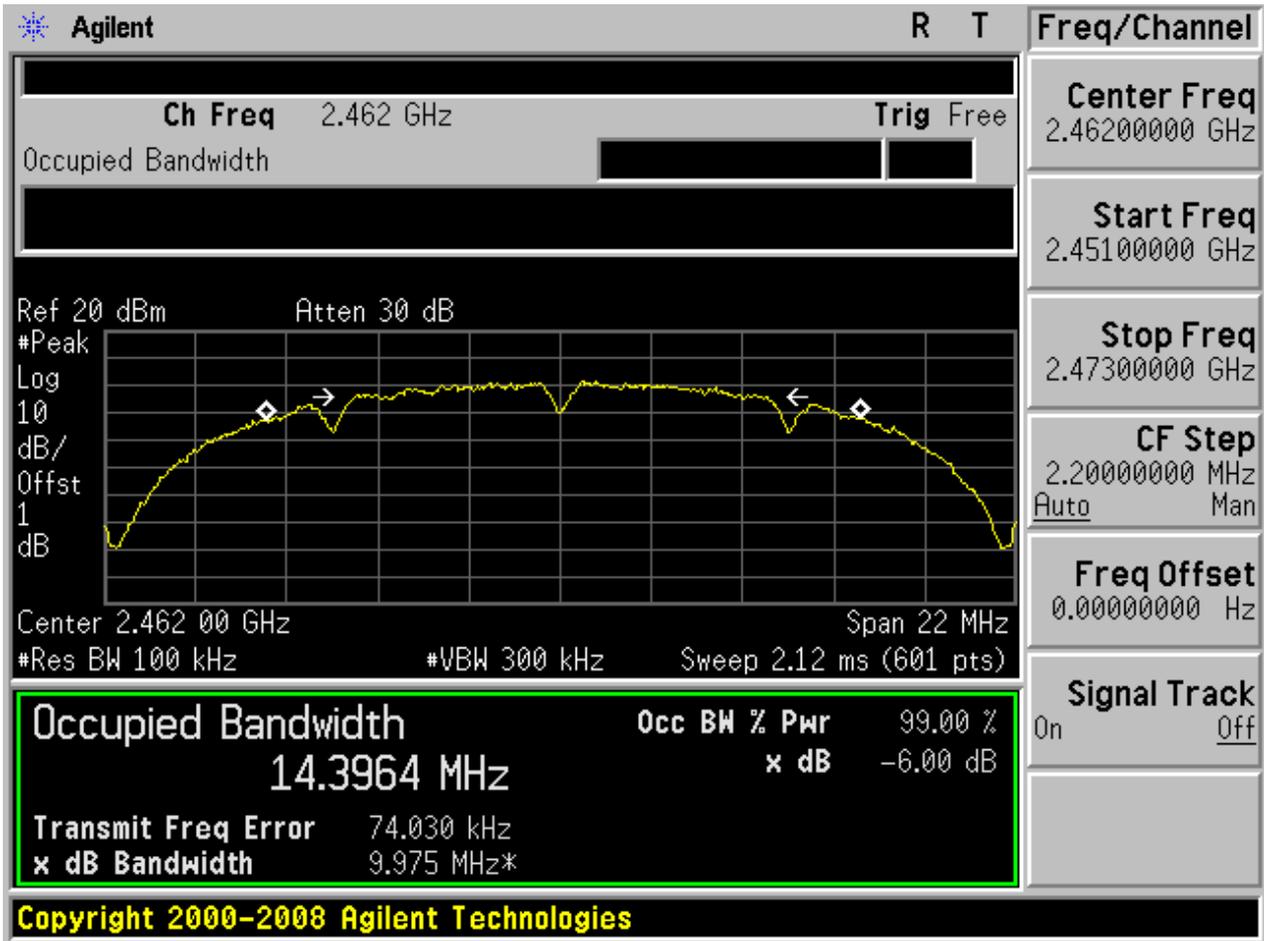


### 2.2 11B\_M



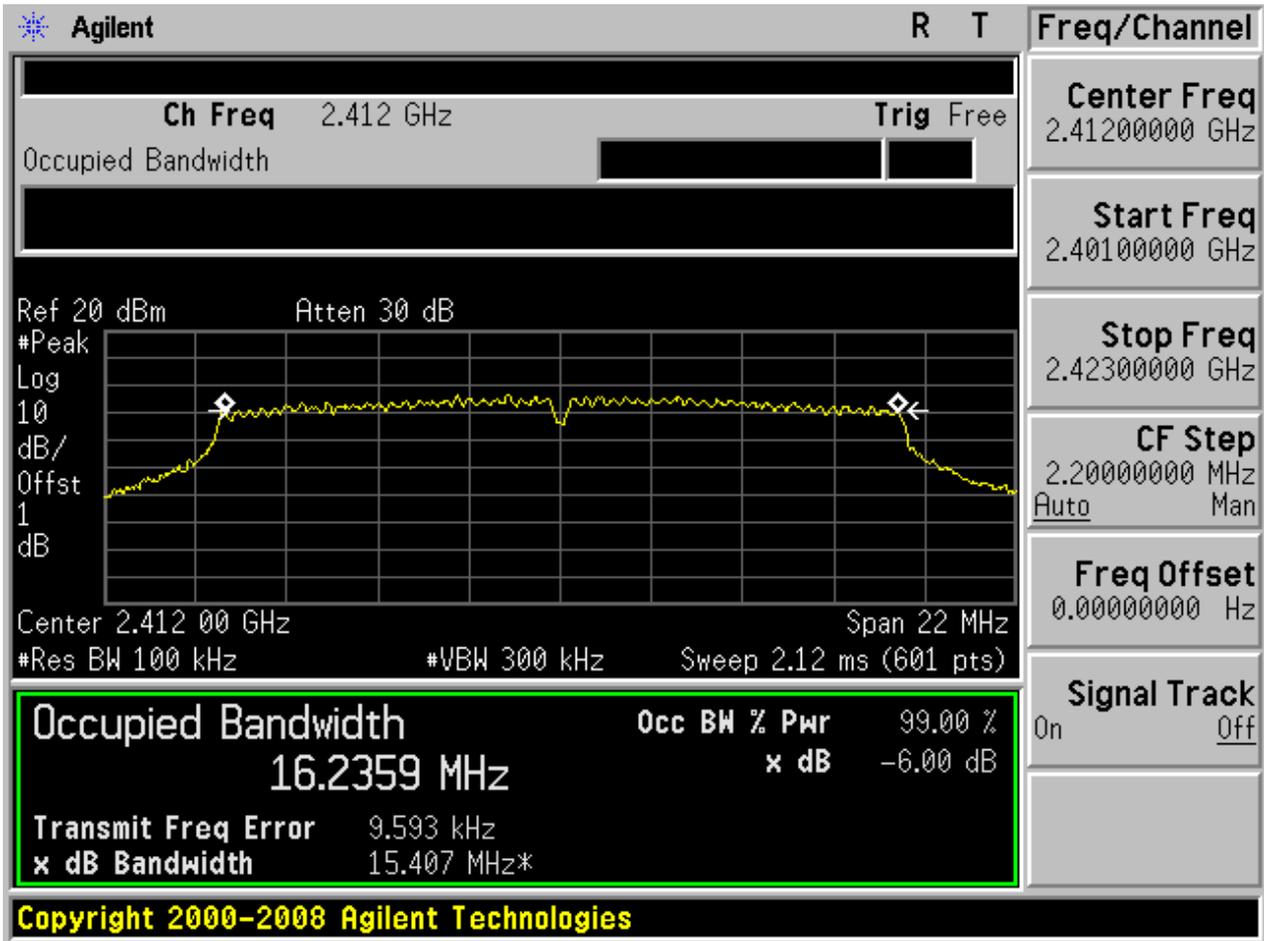


### 2.3 11B\_H



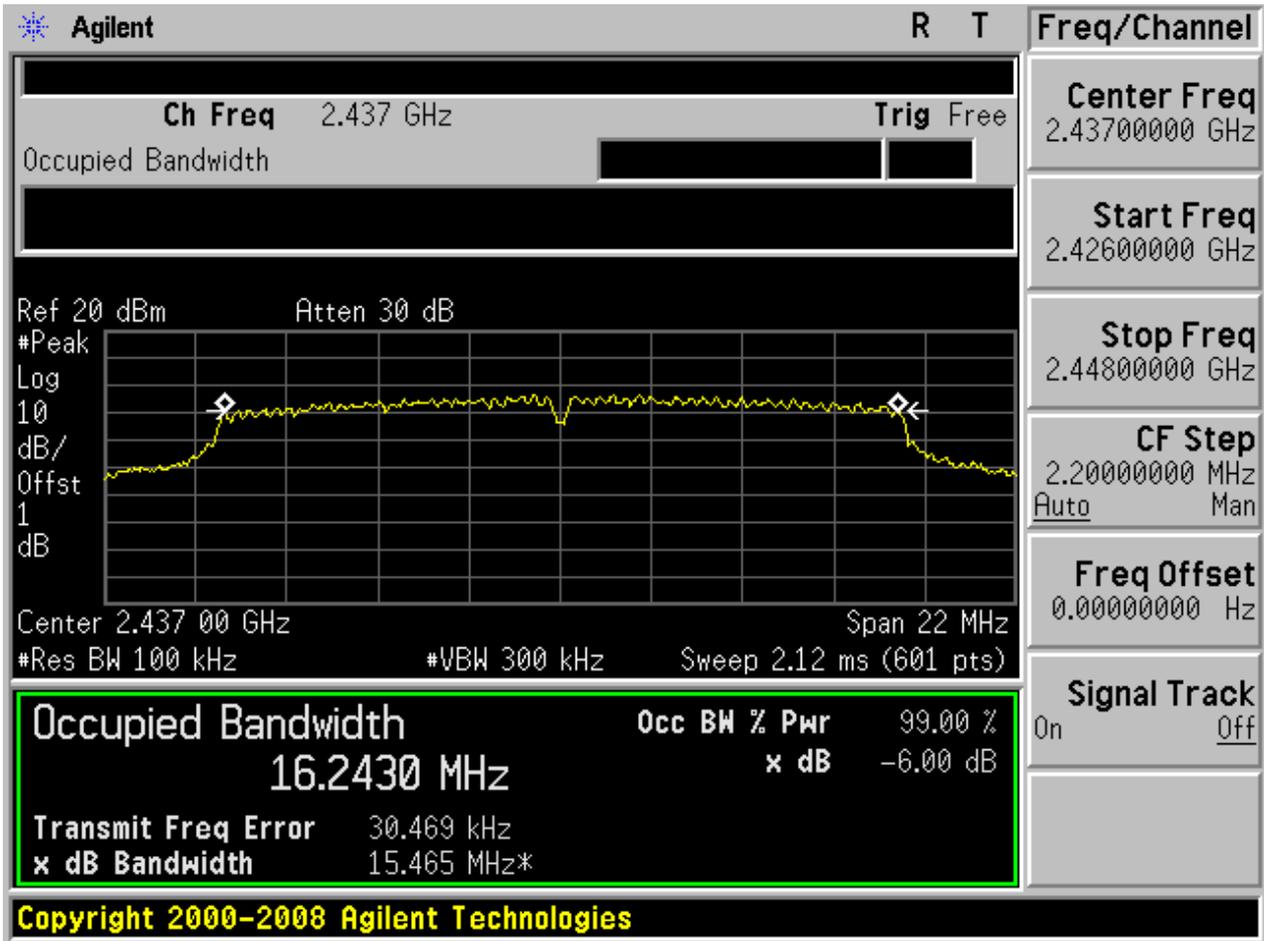


### 2.4 11G\_L



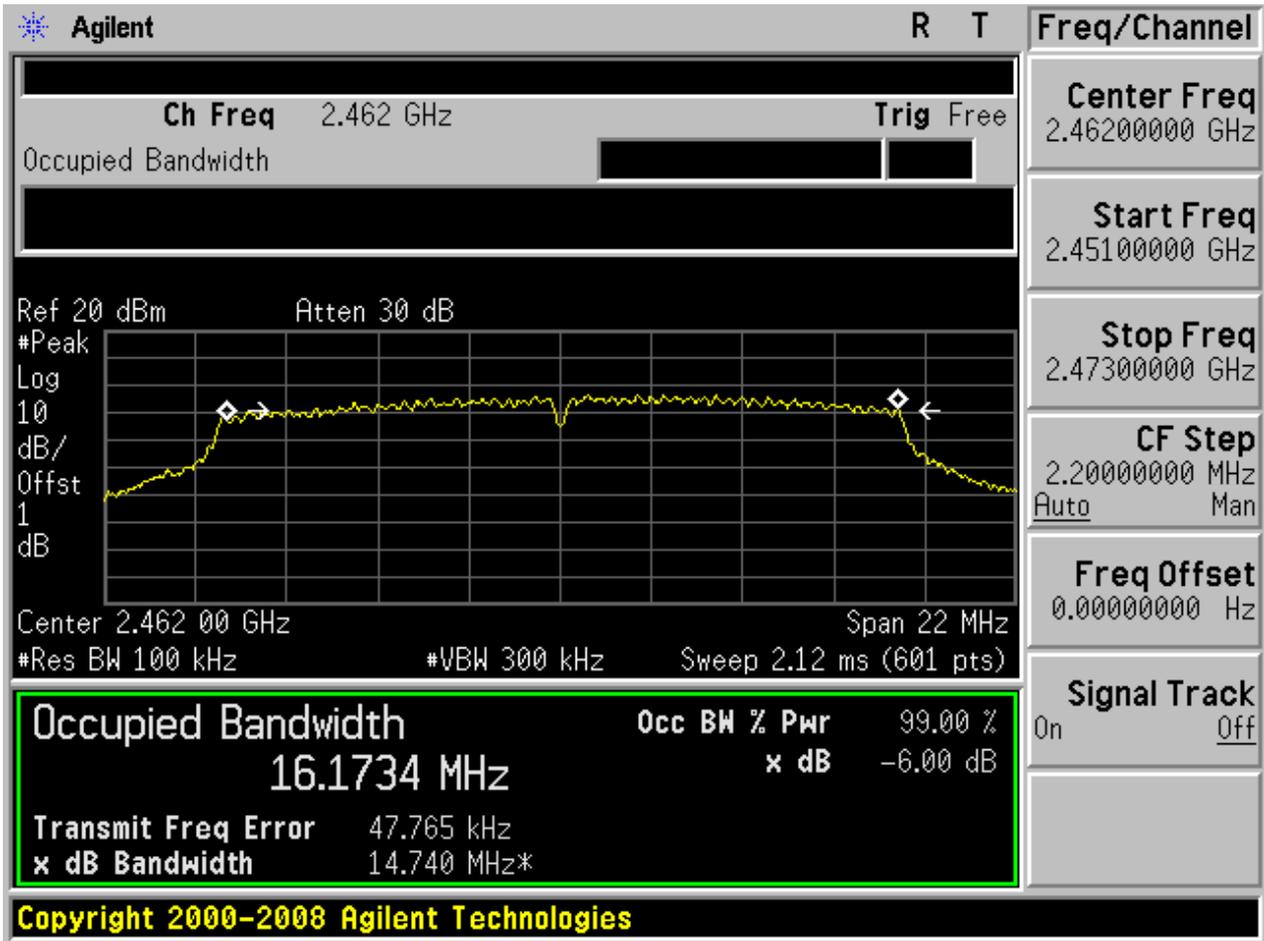


### 2.5 11G\_M



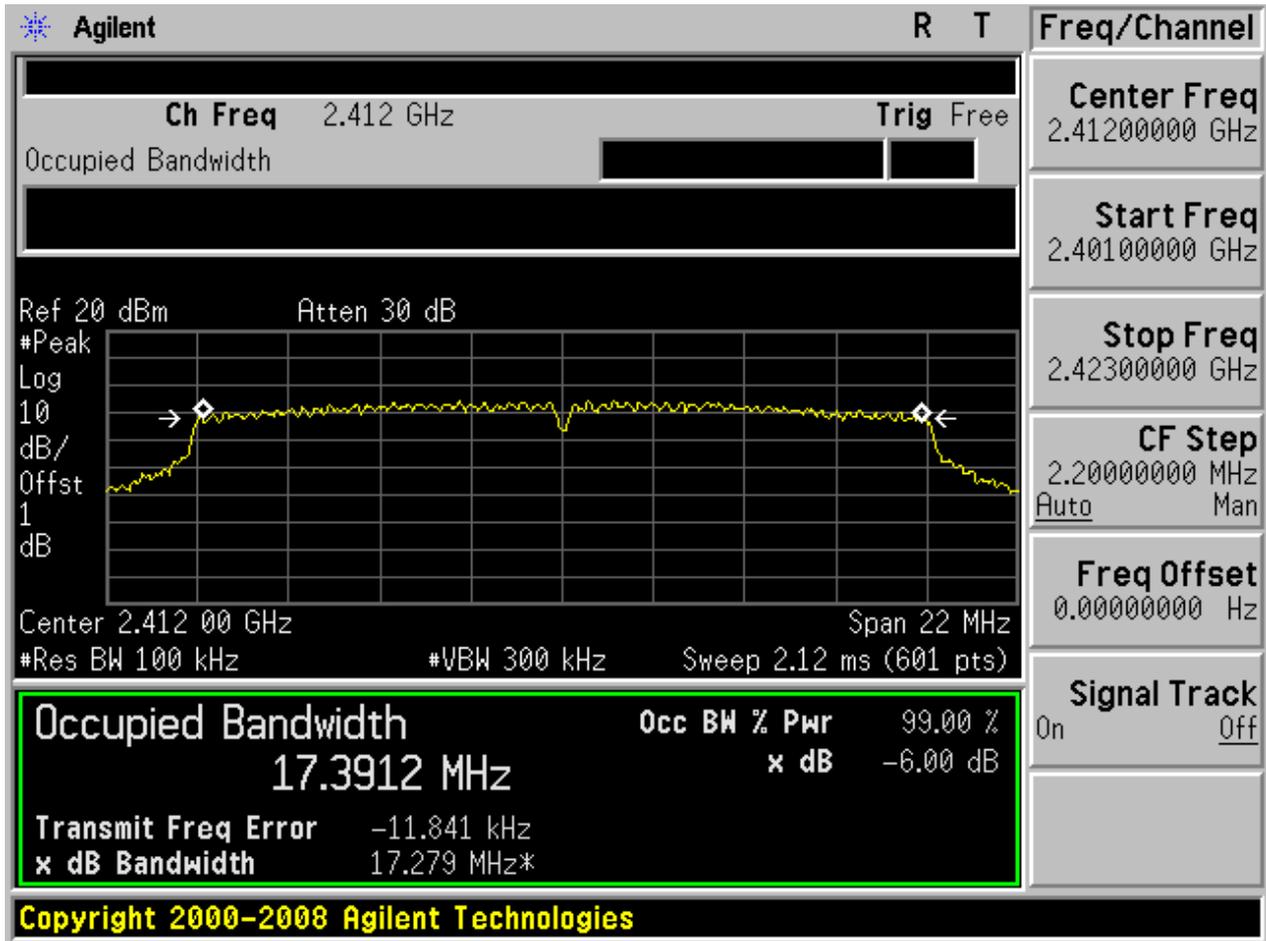


### 2.6 11G\_H



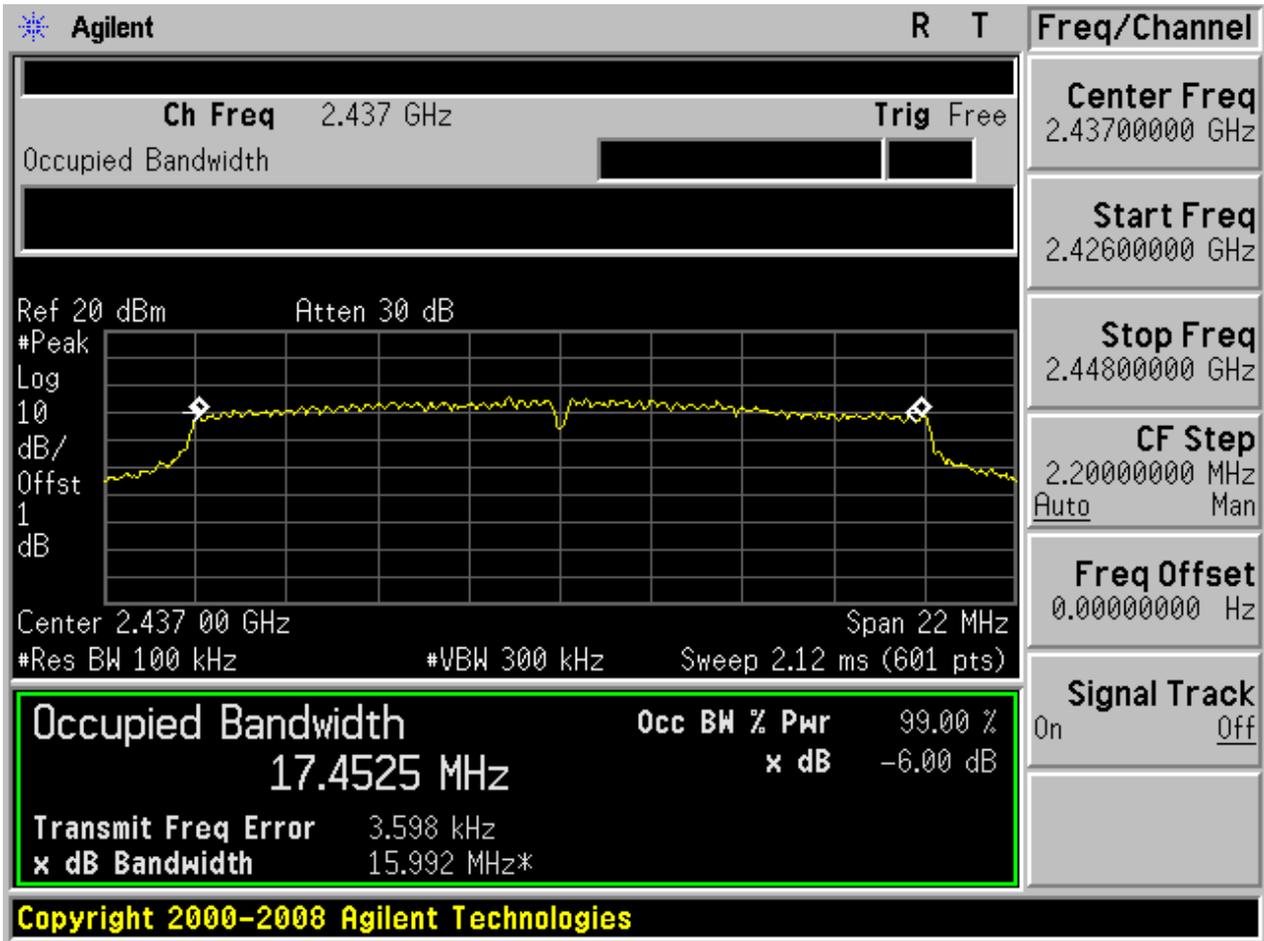


### 2.7 11N20\_SISO\_L



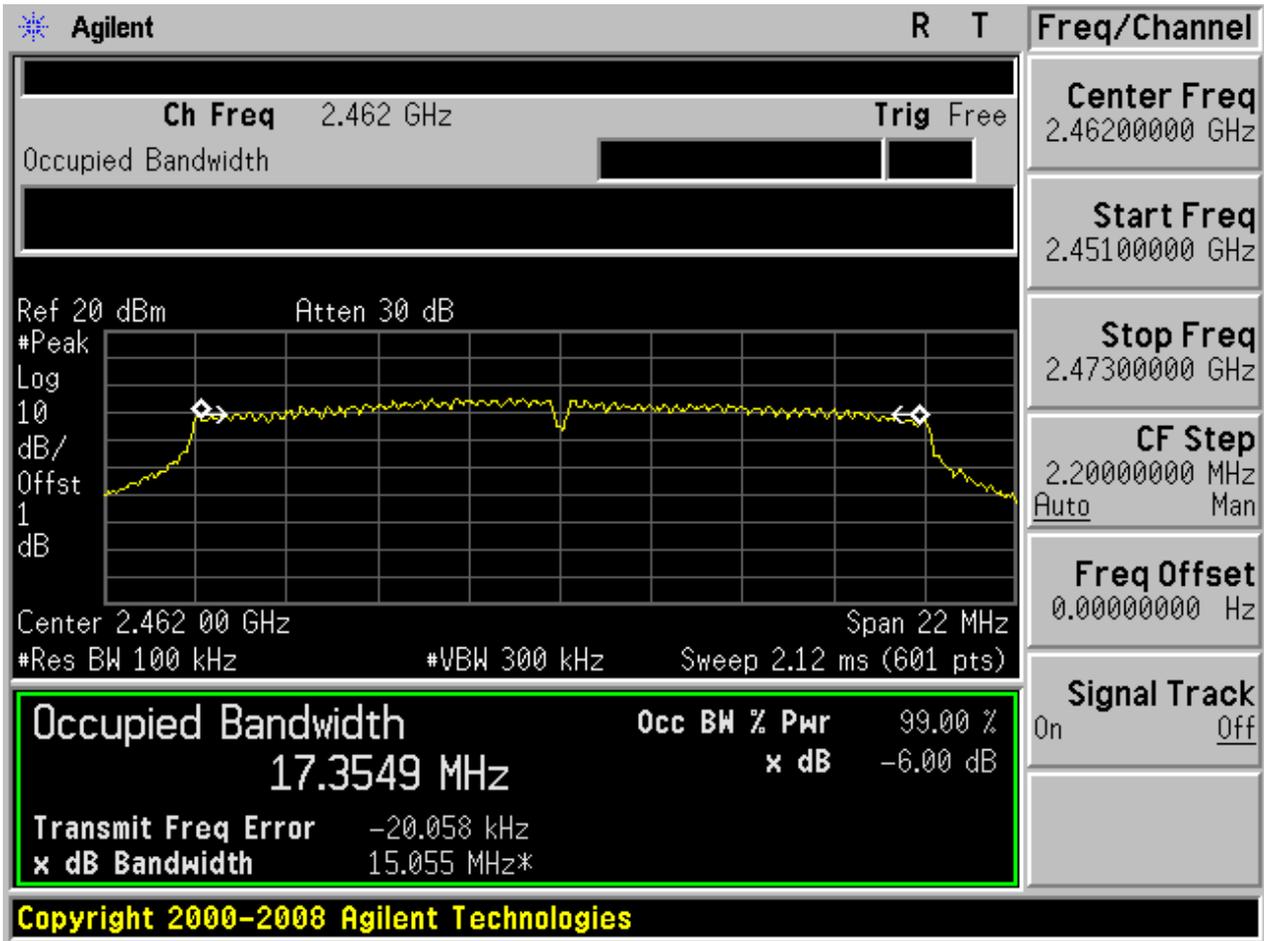


### 2.8 11N20\_SISO\_M





### 2.9 11N20\_SISO\_H





## Appendix B: Maximum Peak Conducted Output Power

### Part I - Test Results

EUT Conf.	Channel	Fc [MHz]	PEAK	Verdict
11B	L	2412	19.23	pass
11B	M	2437	19.38	pass
11B	H	2462	19.39	pass
11G	L	2412	22.36	pass
11G	M	2437	22.69	pass
11G	H	2462	22.45	pass
11N20_SISO	L	2412	21.16	pass
11N20_SISO	M	2437	21.39	pass
11N20_SISO	H	2462	21.36	pass



## Appendix C: Maximum Power Spectral Density Level

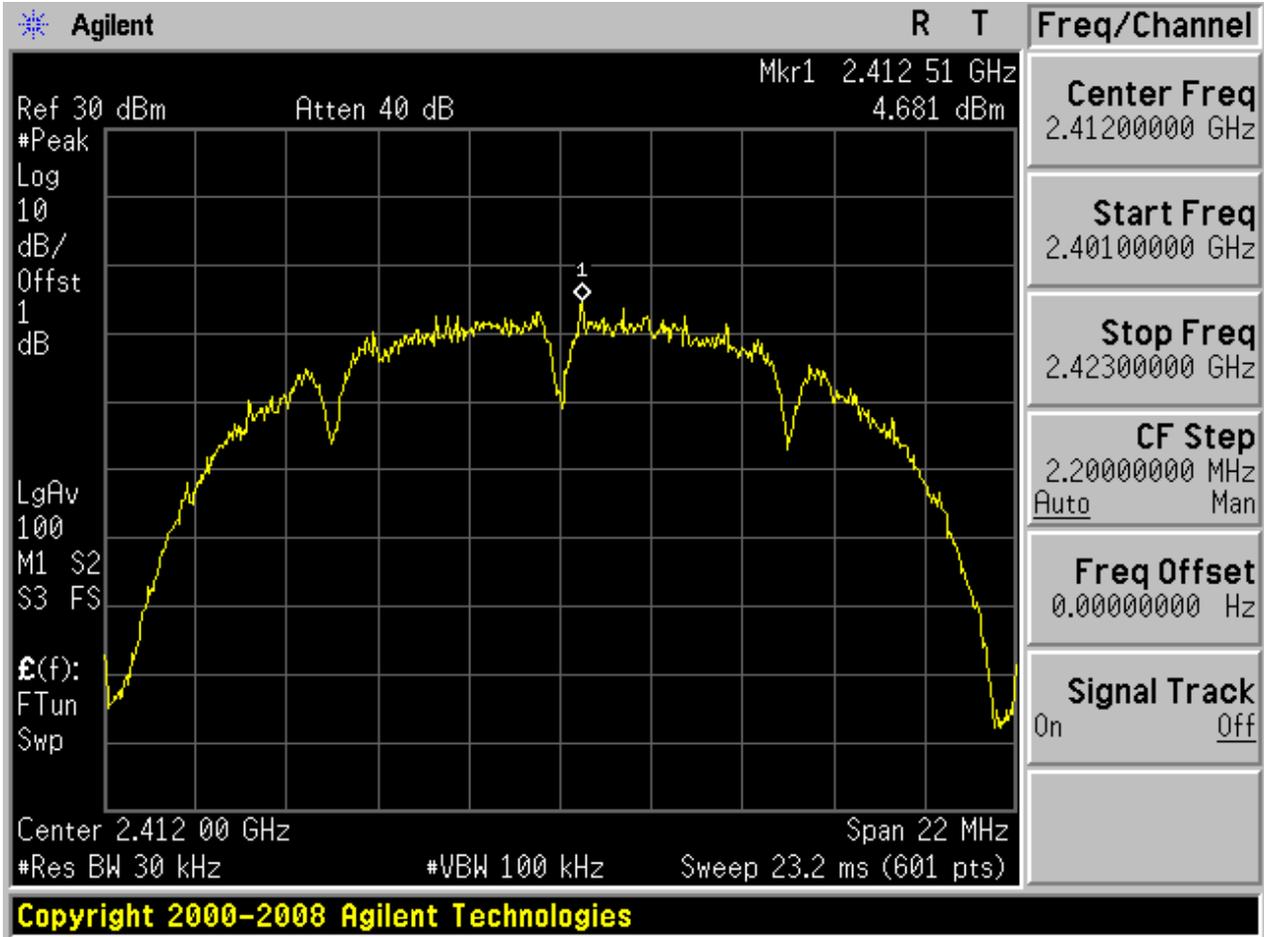
### Part I - Test Results

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11B	M	2437	Ant 1	4.88	pass
11B	H	2462	Ant 1	4.53	pass
11G	L	2412	Ant 1	0.09	pass
11G	M	2437	Ant 1	0.11	pass
11G	H	2462	Ant 1	0.18	pass
11N20_SISO	L	2412	Ant 1	-0.09	pass
11N20_SISO	M	2437	Ant 1	0.24	pass
11N20_SISO	H	2462	Ant 1	-1.09	pass



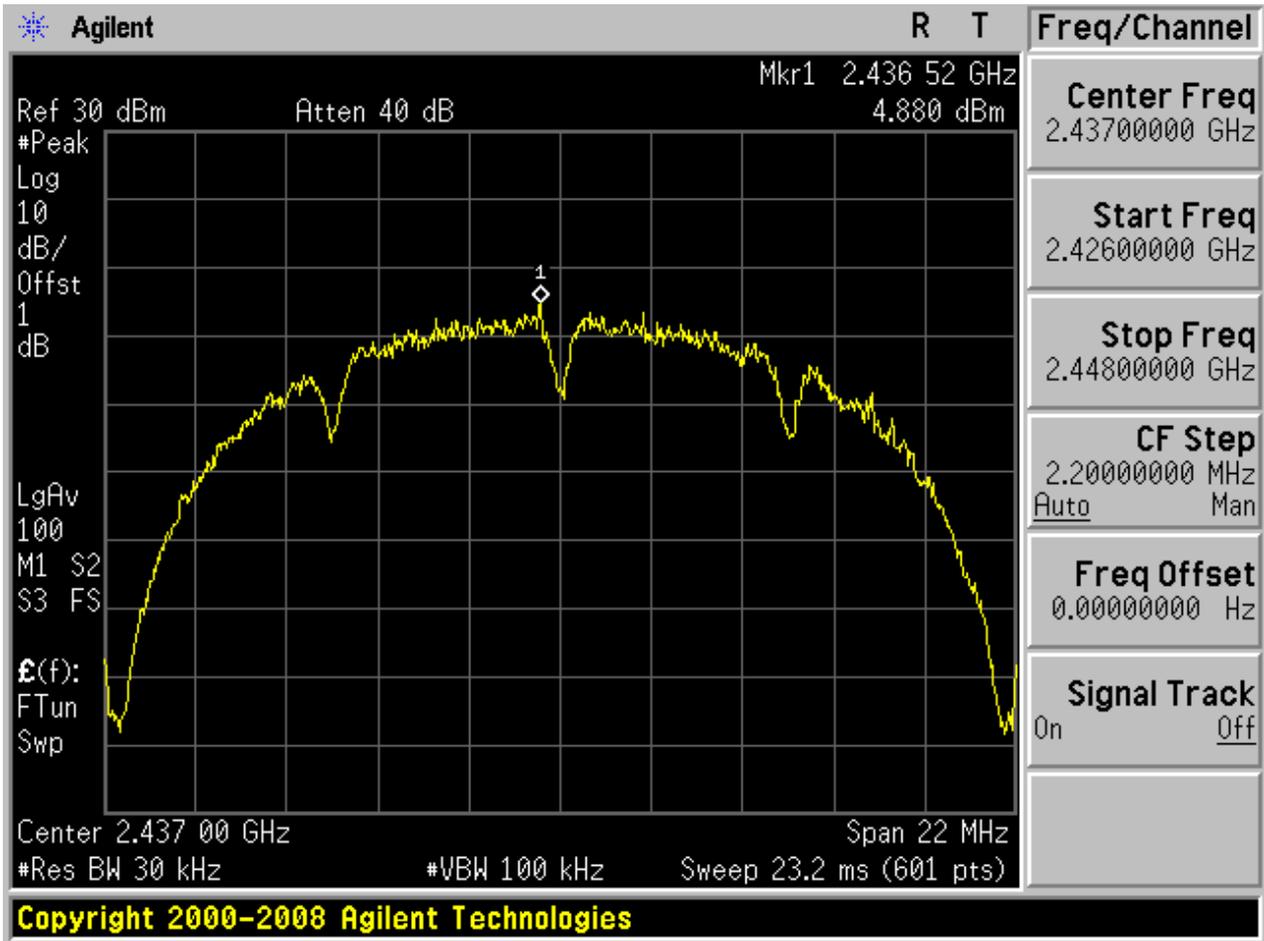
## Part II - Test Plots

### 2.1 11B\_L



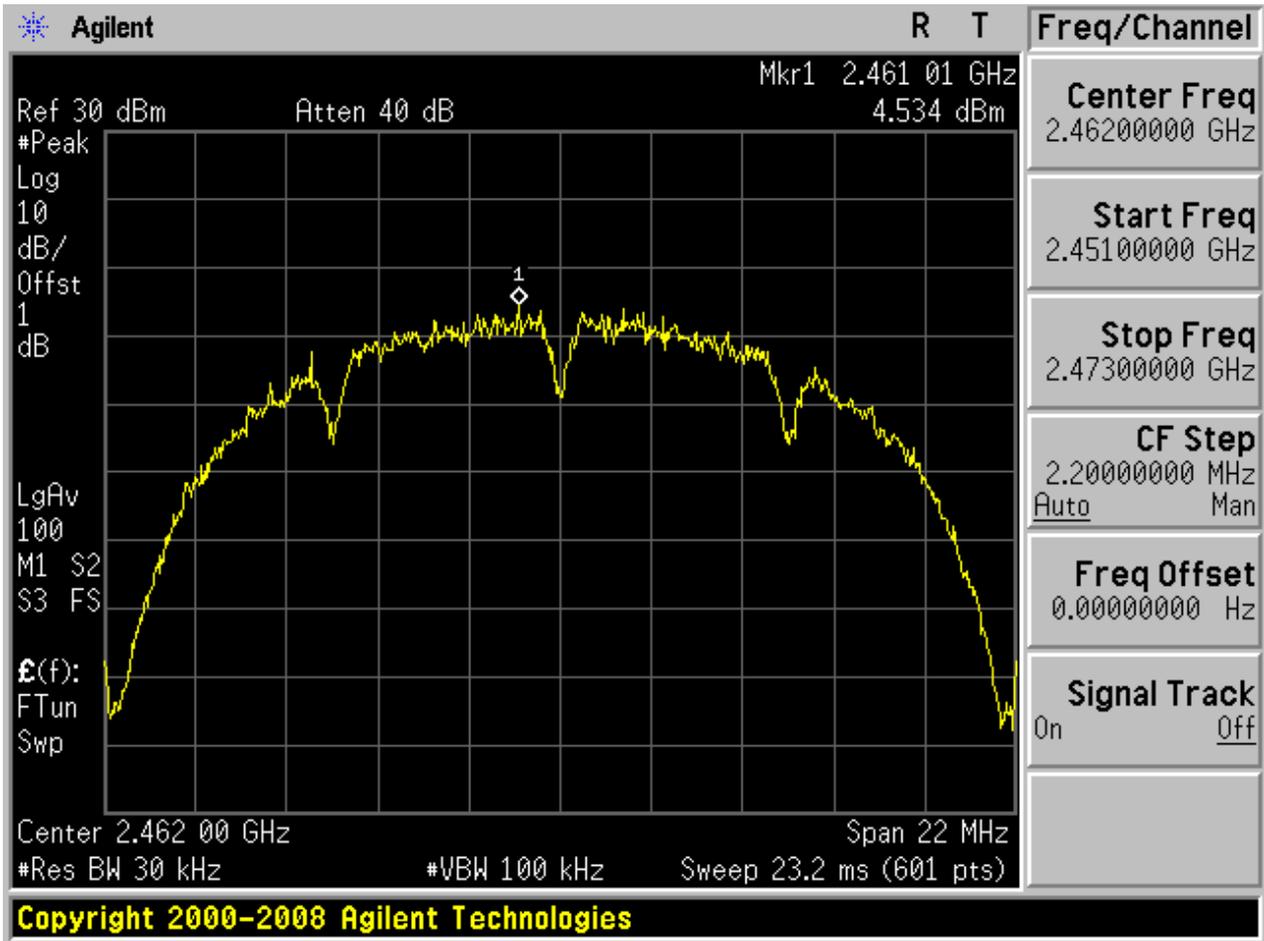


### 2.2 11B\_M



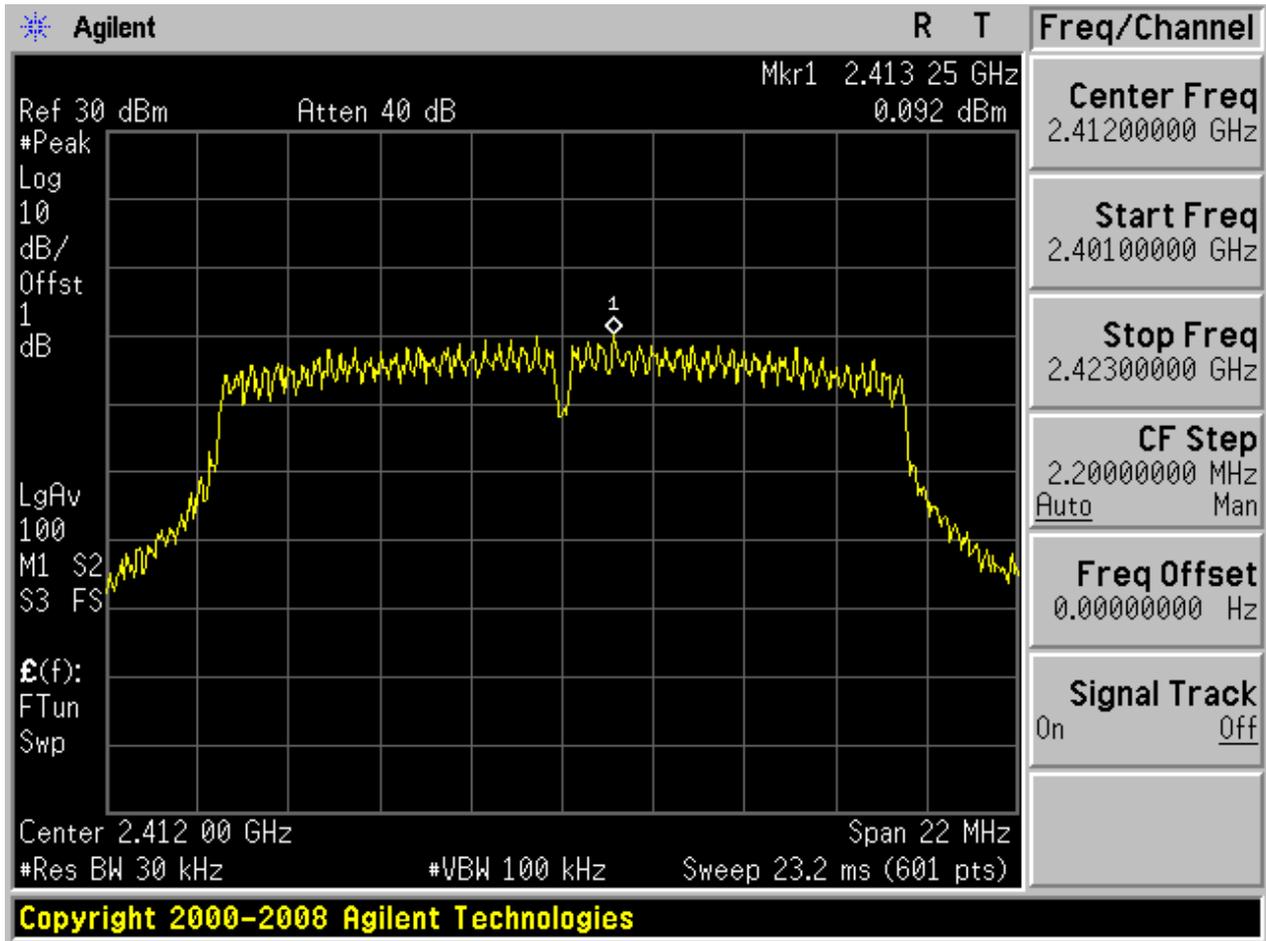


### 2.3 11B\_H



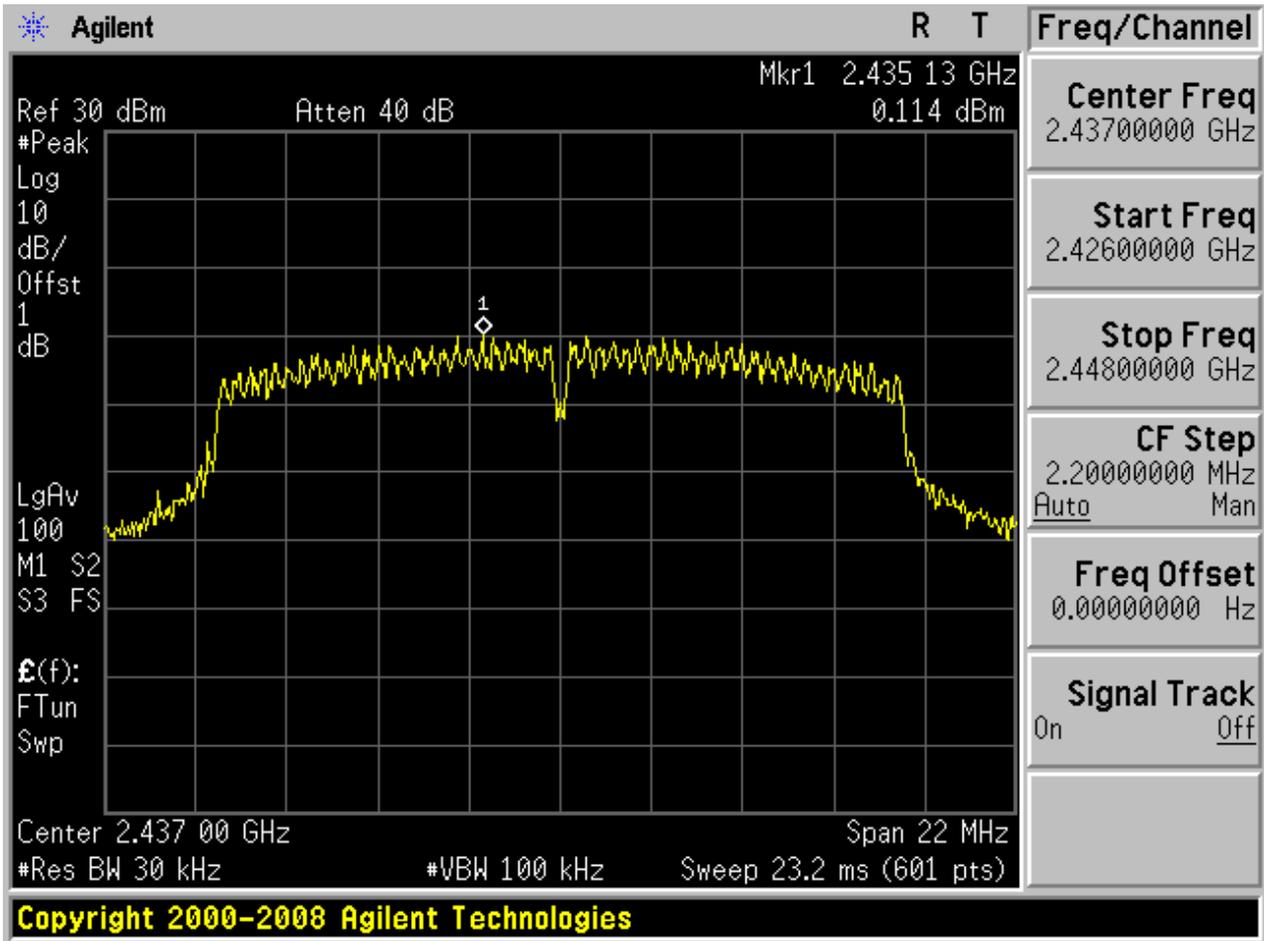


### 2.4 11G\_L



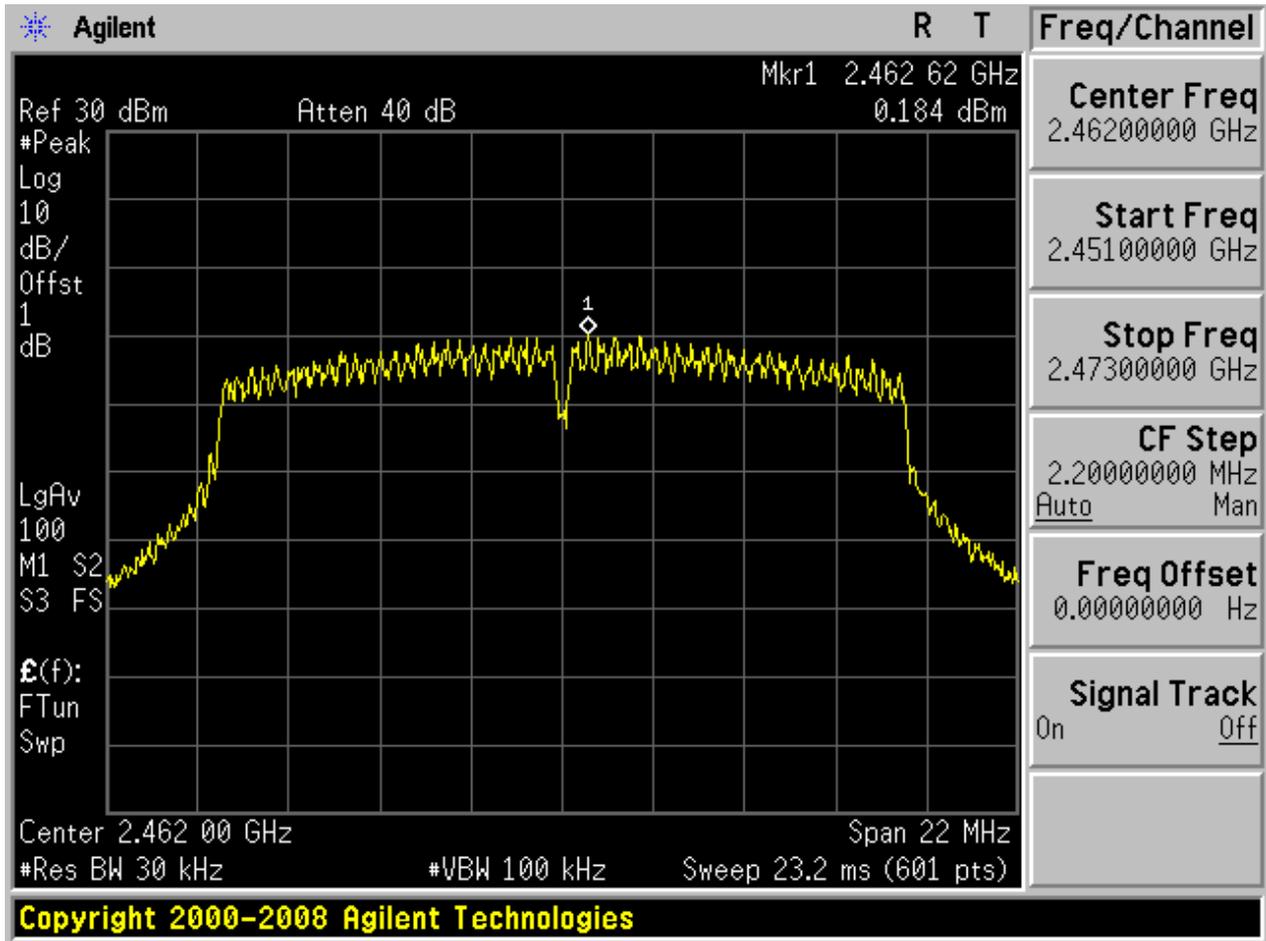


### 2.5 11G\_M



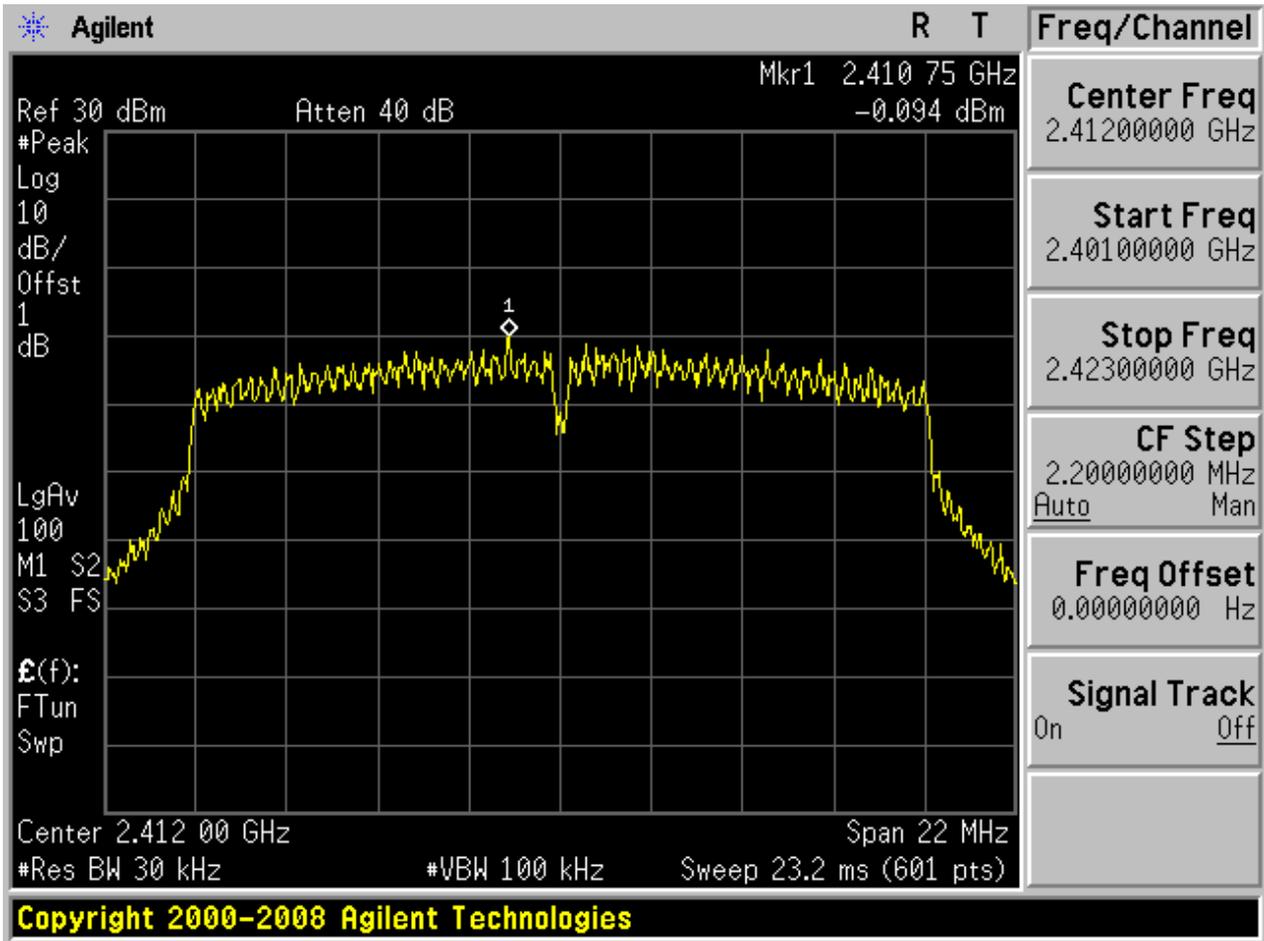


### 2.6 11G\_H



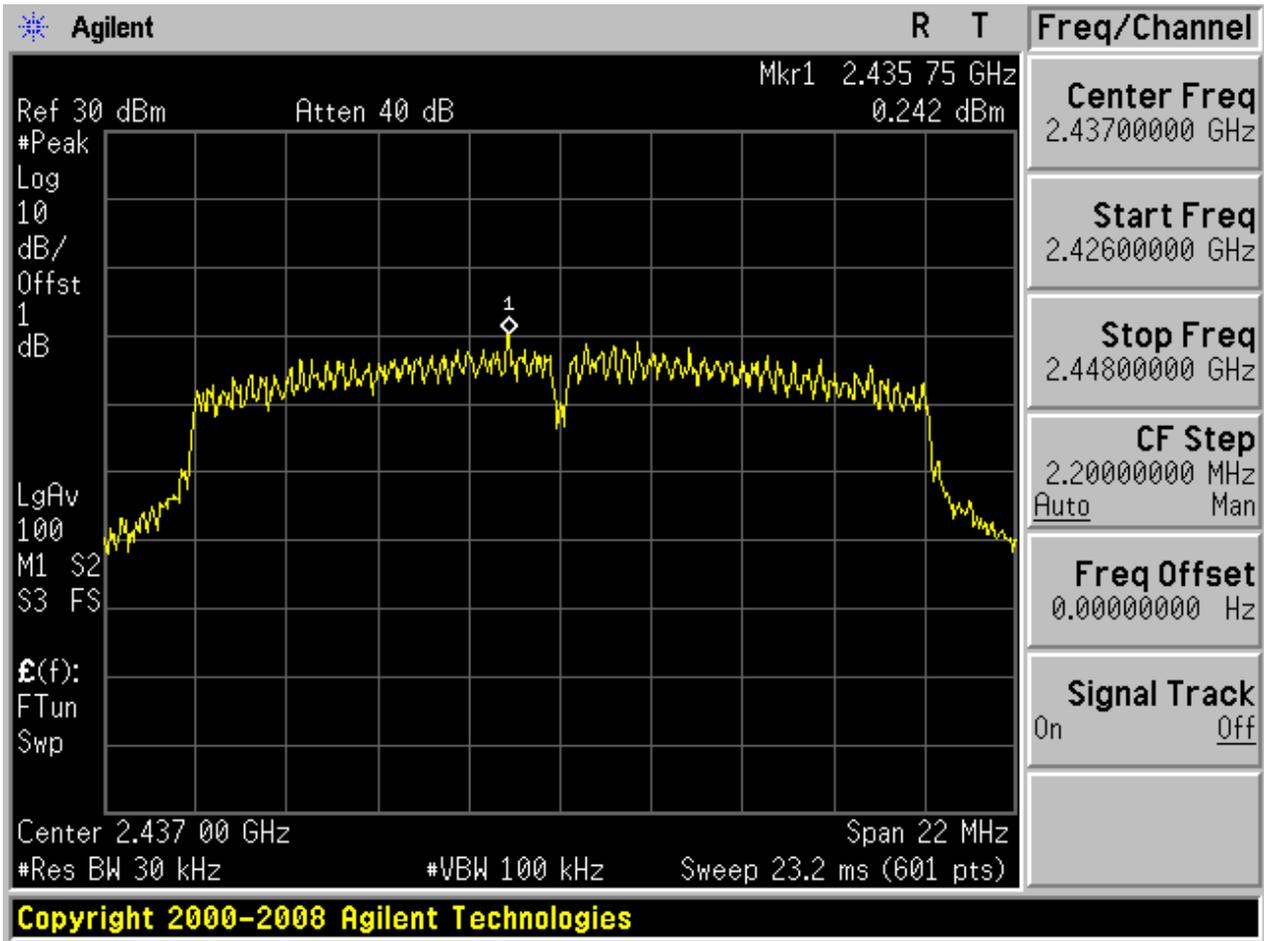


### 2.7 11N20\_SISO\_L



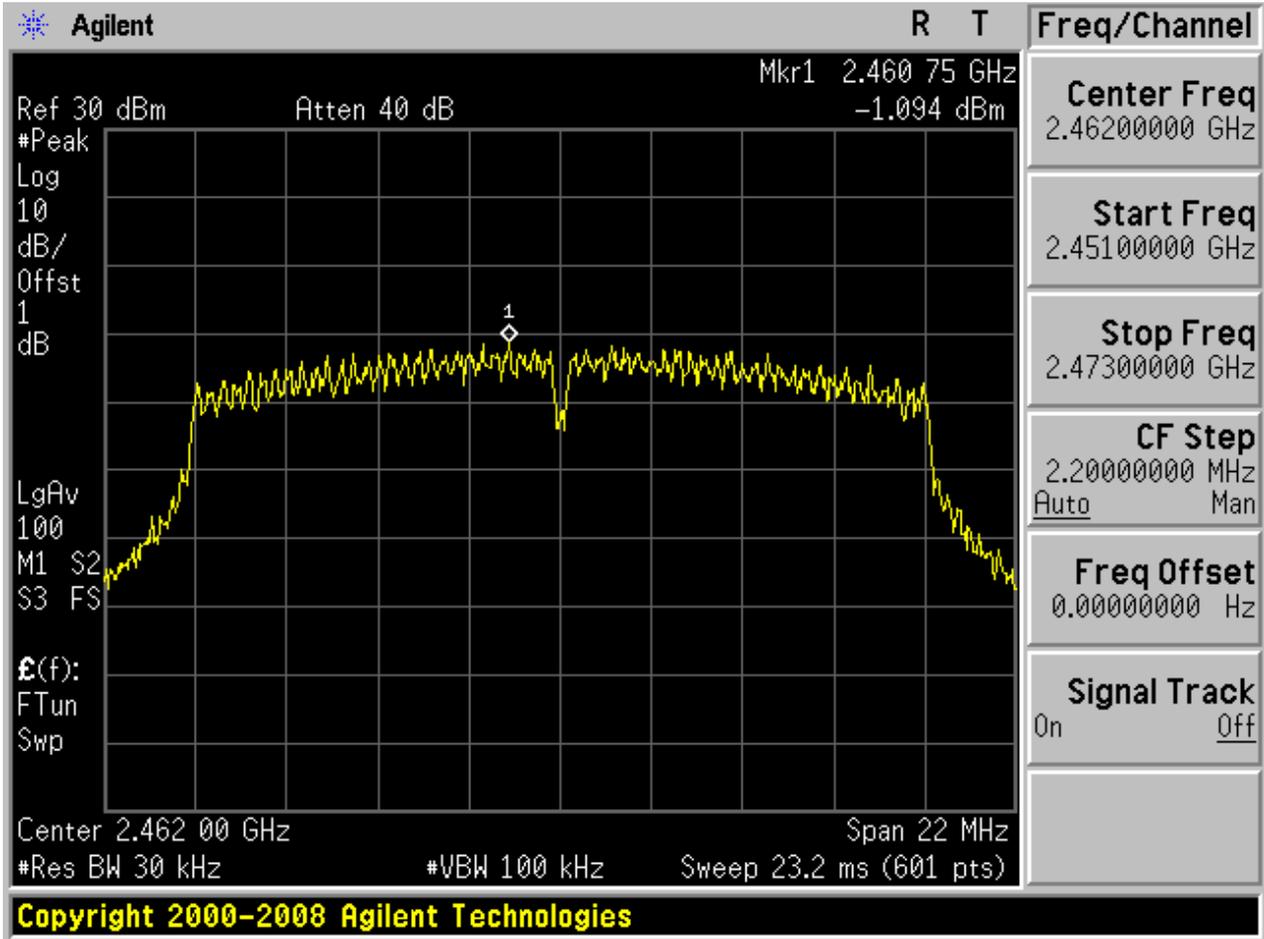


### 2.8 11N20\_SISO\_M





### 2.9 11N20\_SISO\_H



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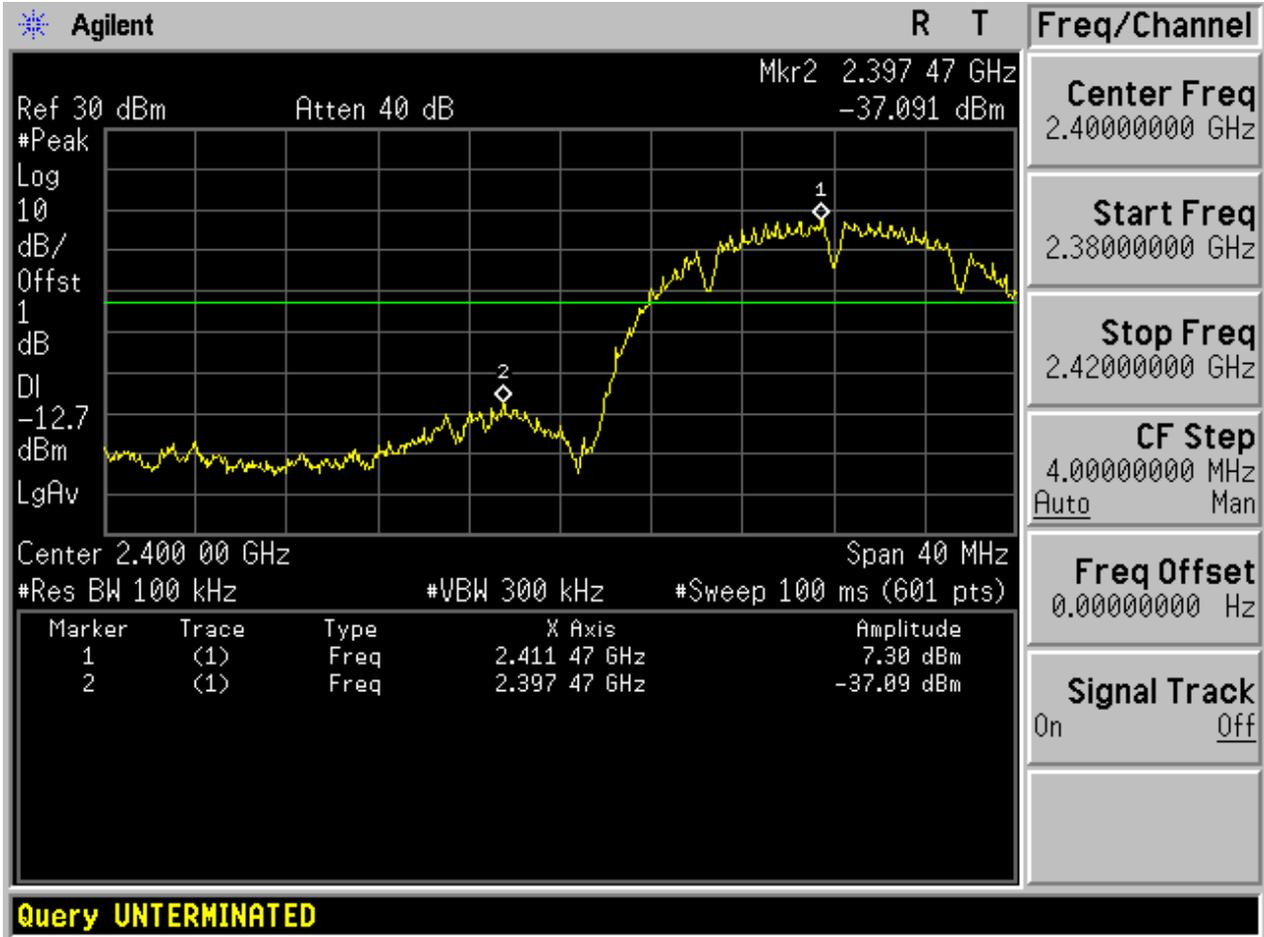
## Appendix D: Band Edges Compliance

### Part I - Test Results

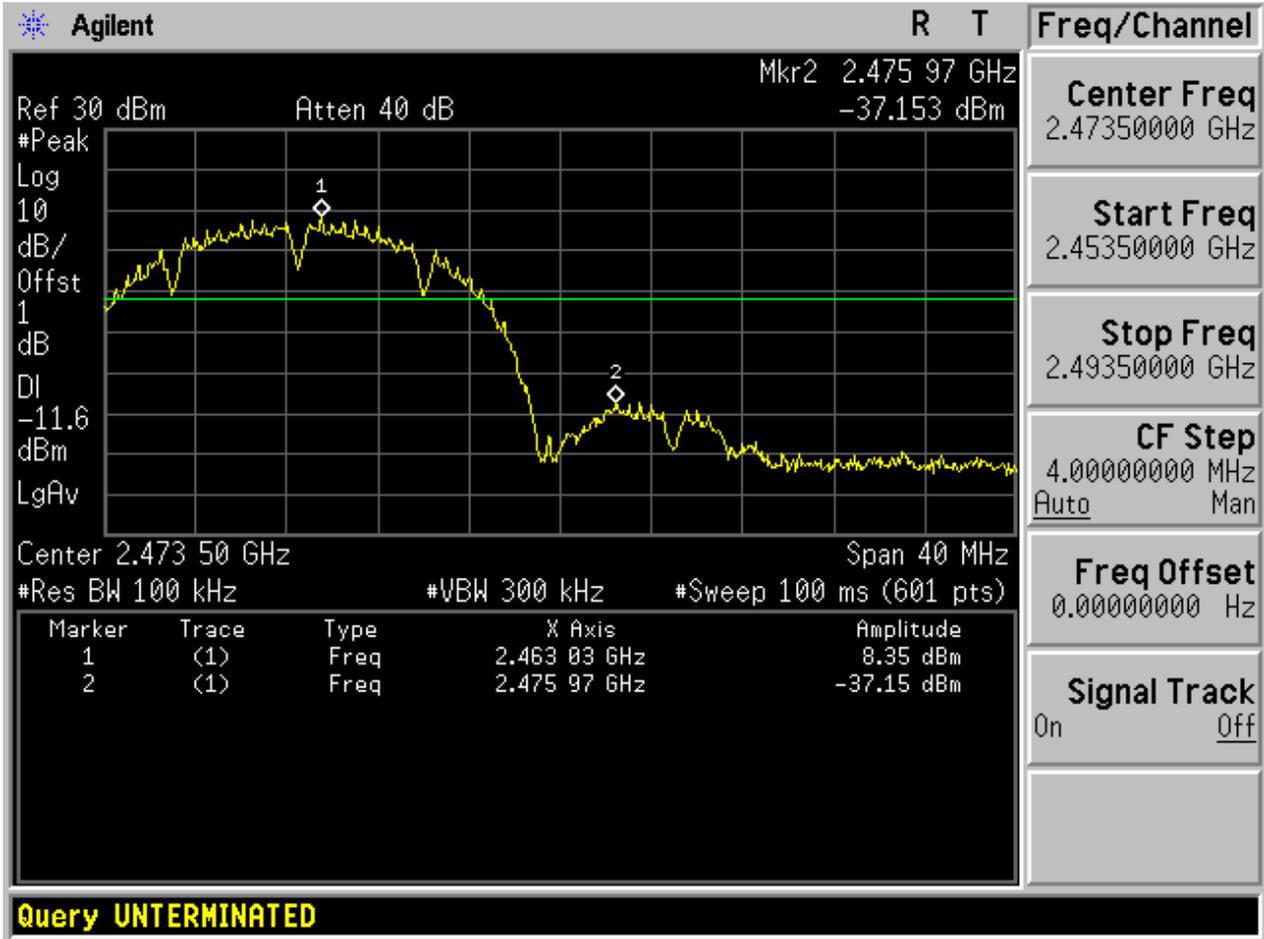
Test Mode	Test Channel	Frequency[MHz]	Ant	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
11B	L	2412	Ant 1	7.30	-37.09	pass
11B	H	2462	Ant 1	8.36	-37.15	pass
11G	L	2412	Ant 1	4.22	-29.75	pass
11G	H	2462	Ant 1	4.27	-31.87	pass
11N20_SISO	L	2412	Ant 1	3.14	-31.07	pass
11N20_SISO	H	2462	Ant 1	3.35	-34.14	pass

## Part II - Test Plots

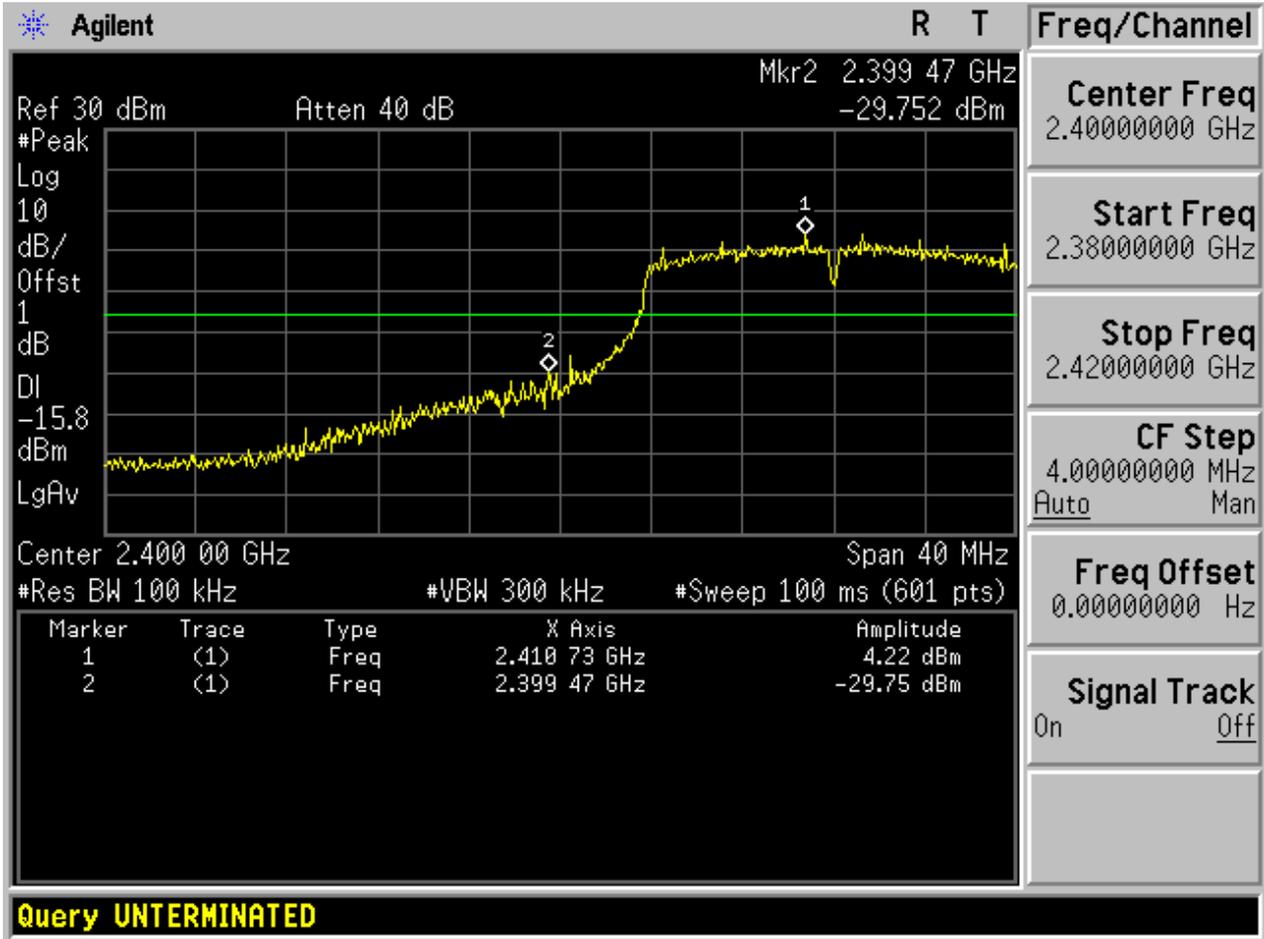
### 2.1 11B\_L



## 2.2 11B\_H

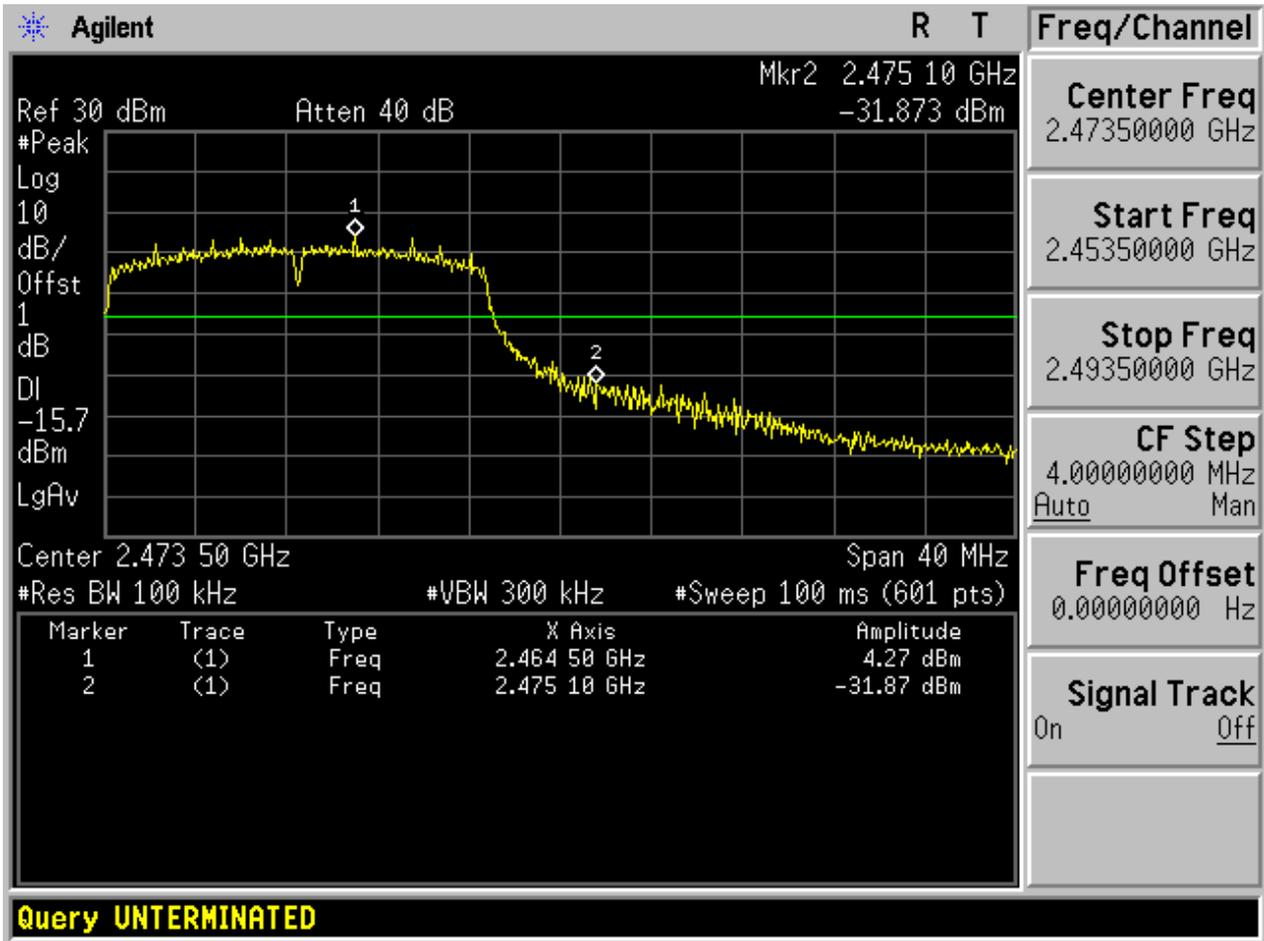


### 2.3 11G\_L

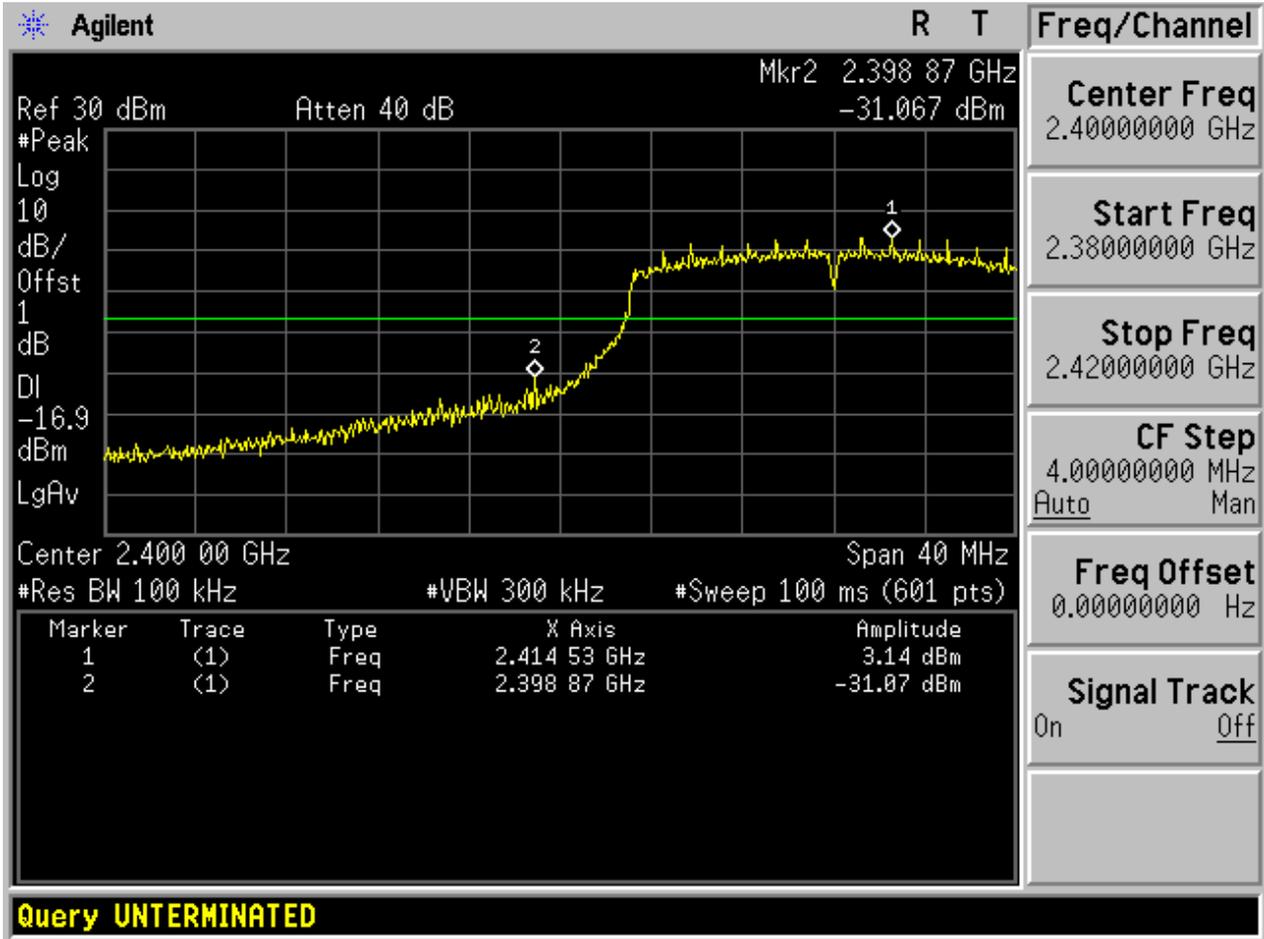




### 2.4 11G\_H

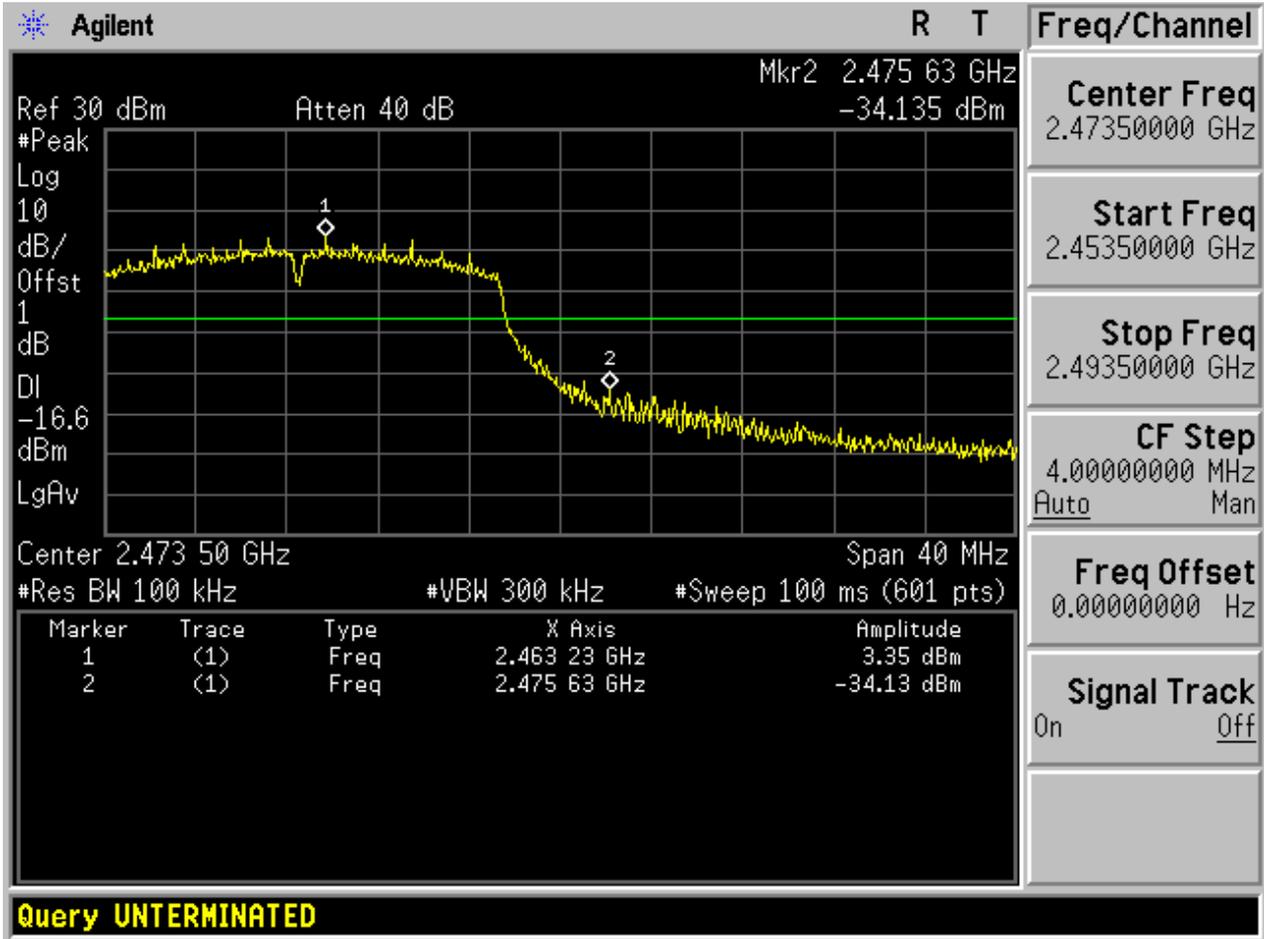


2.5 11N20\_SISO\_L





### 2.6 11N20\_SISO\_H



## 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

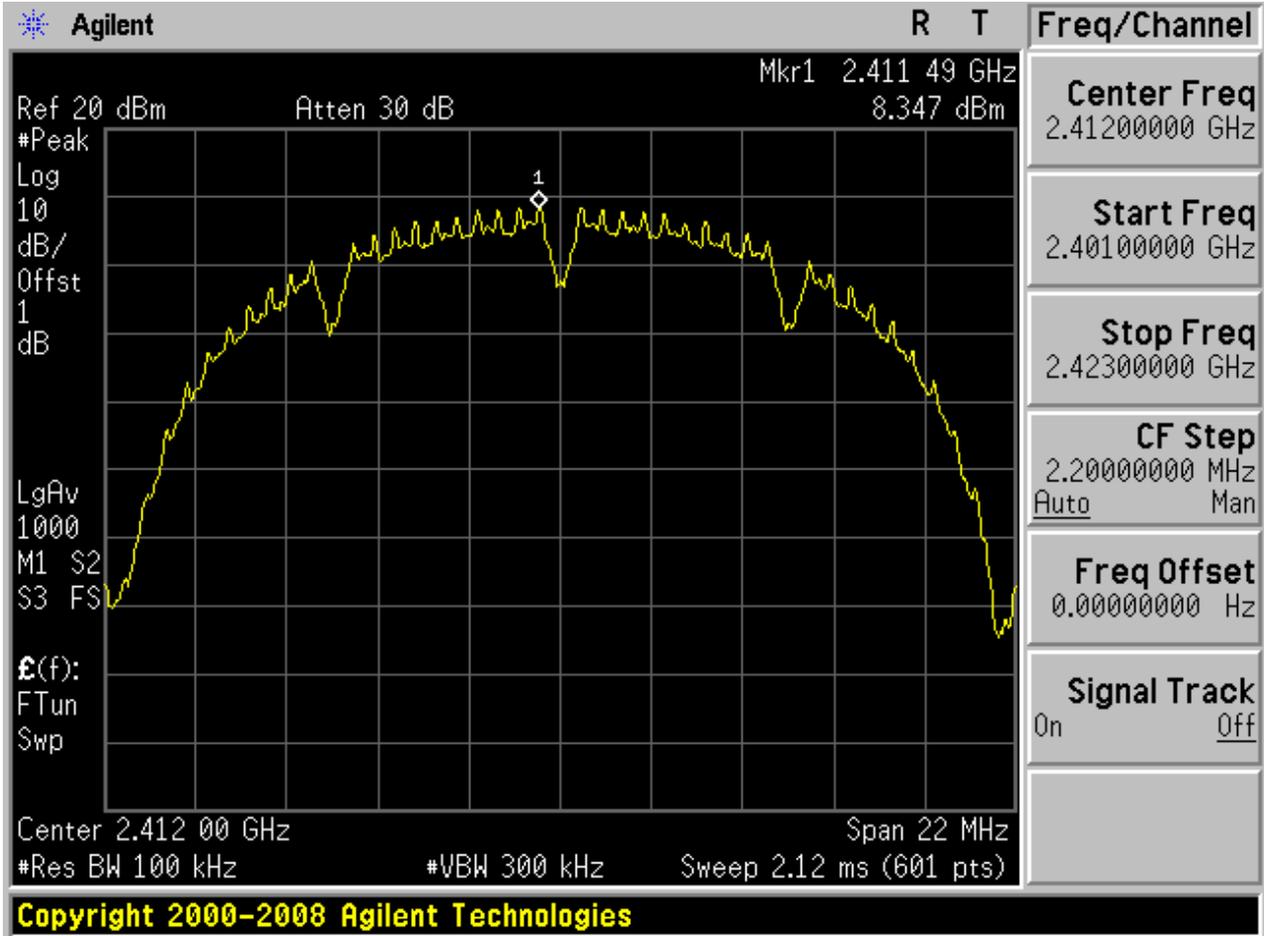
Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]	Verdict
11B	L	2412	Ant 1	8.35	<limit	pass
11B	M	2437	Ant 1	8.37	<limit	pass
11B	H	2462	Ant 1	8.84	<limit	pass
11G	L	2412	Ant 1	4.86	<limit	pass
11G	M	2437	Ant 1	5.69	<limit	pass
11G	H	2462	Ant 1	5.33	<limit	pass
11N20_SISO	L	2412	Ant 1	4.07	<limit	pass
11N20_SISO	M	2437	Ant 1	4.68	<limit	pass
11N20_SISO	H	2462	Ant 1	4.30	<limit	pass



## Part II - Test Plots

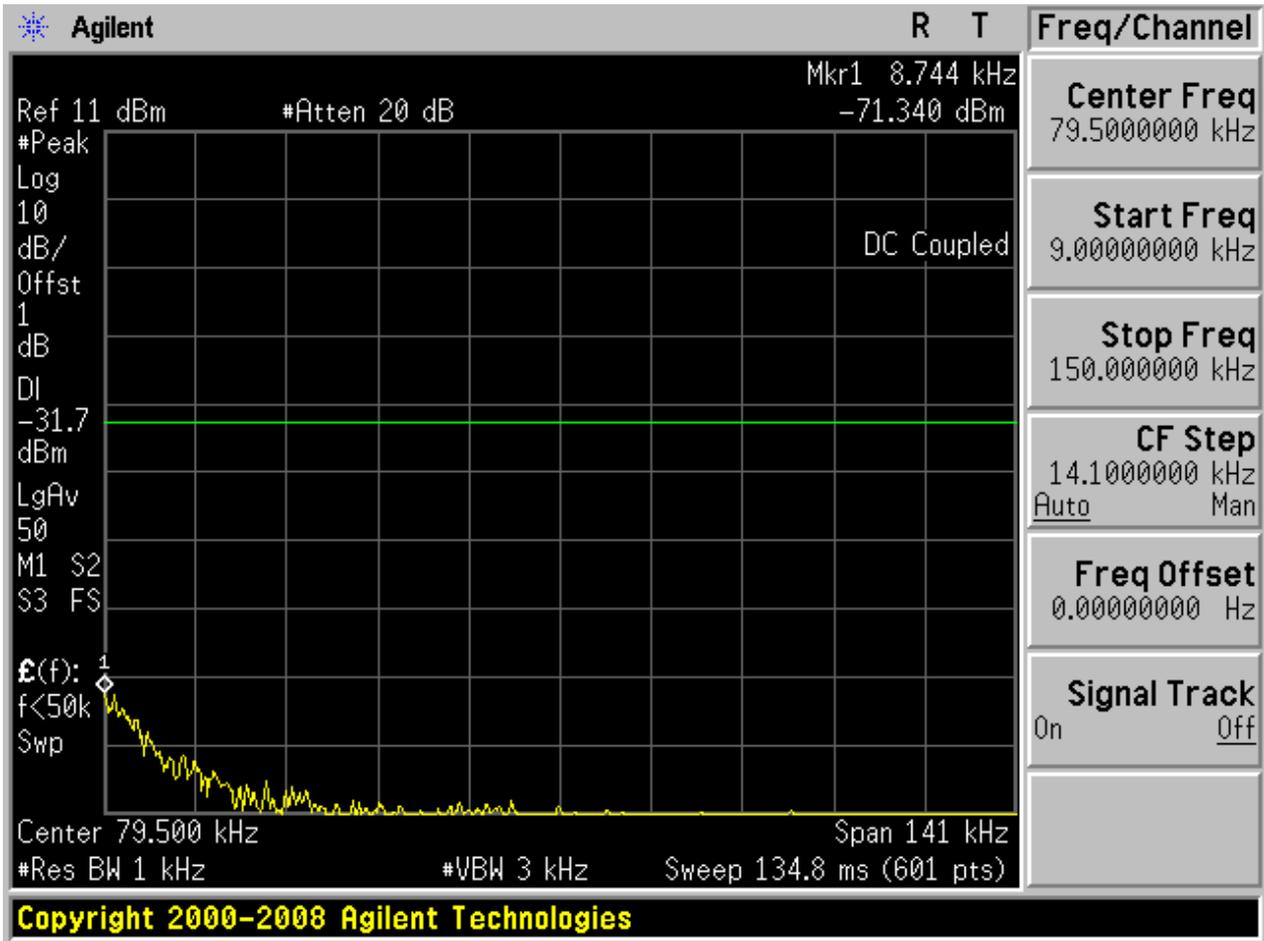
### 2.1 11B\_L

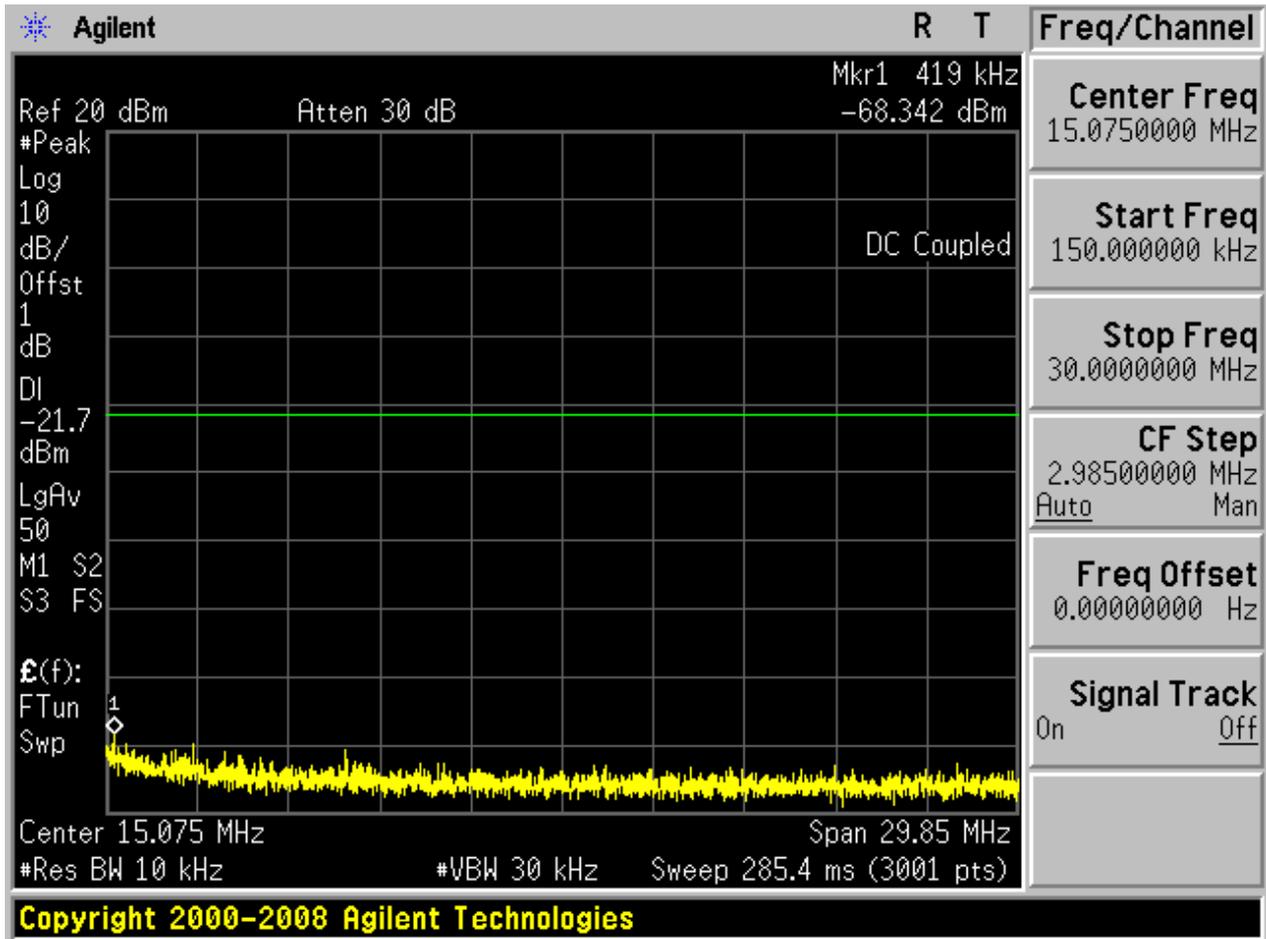
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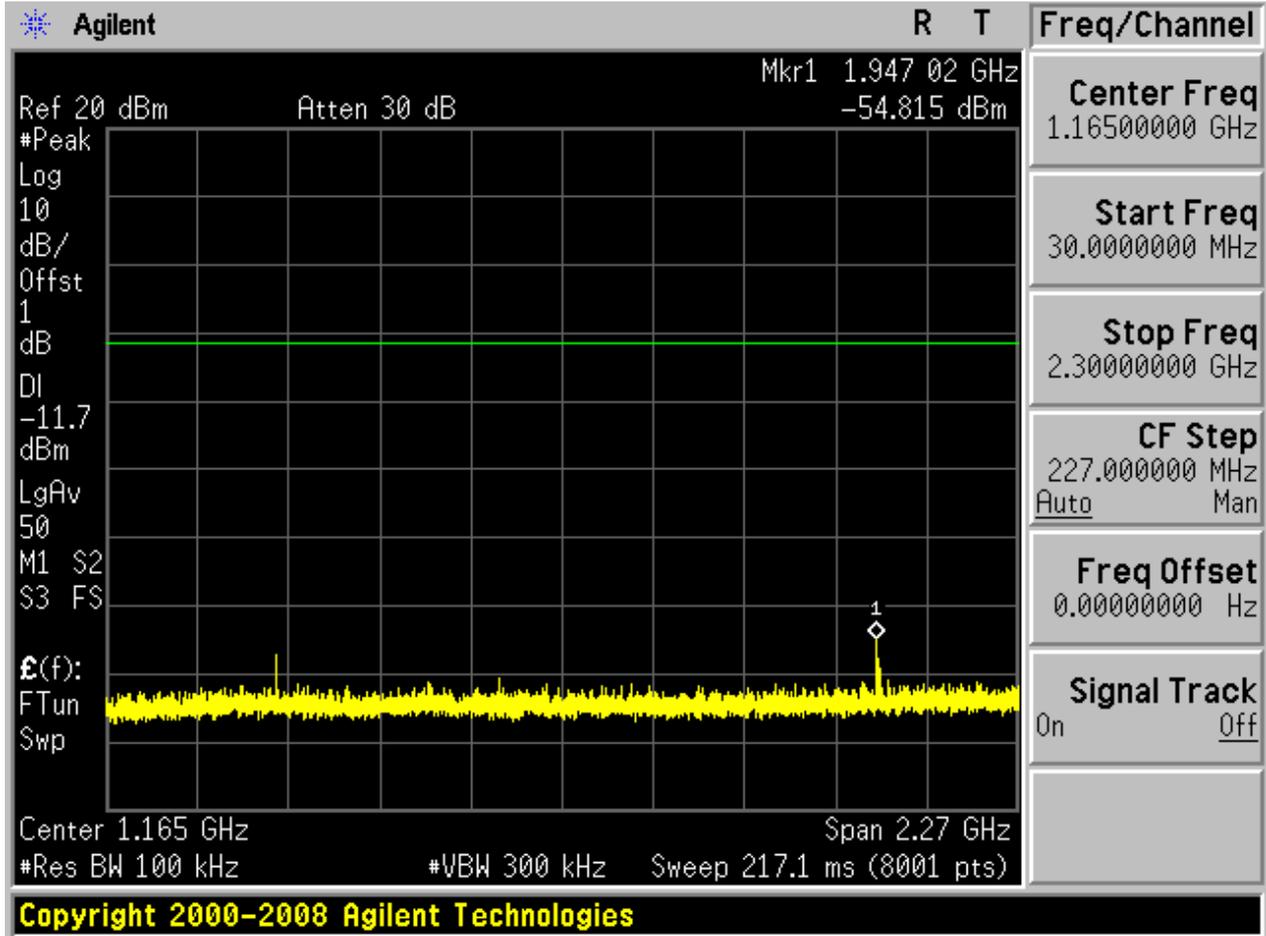


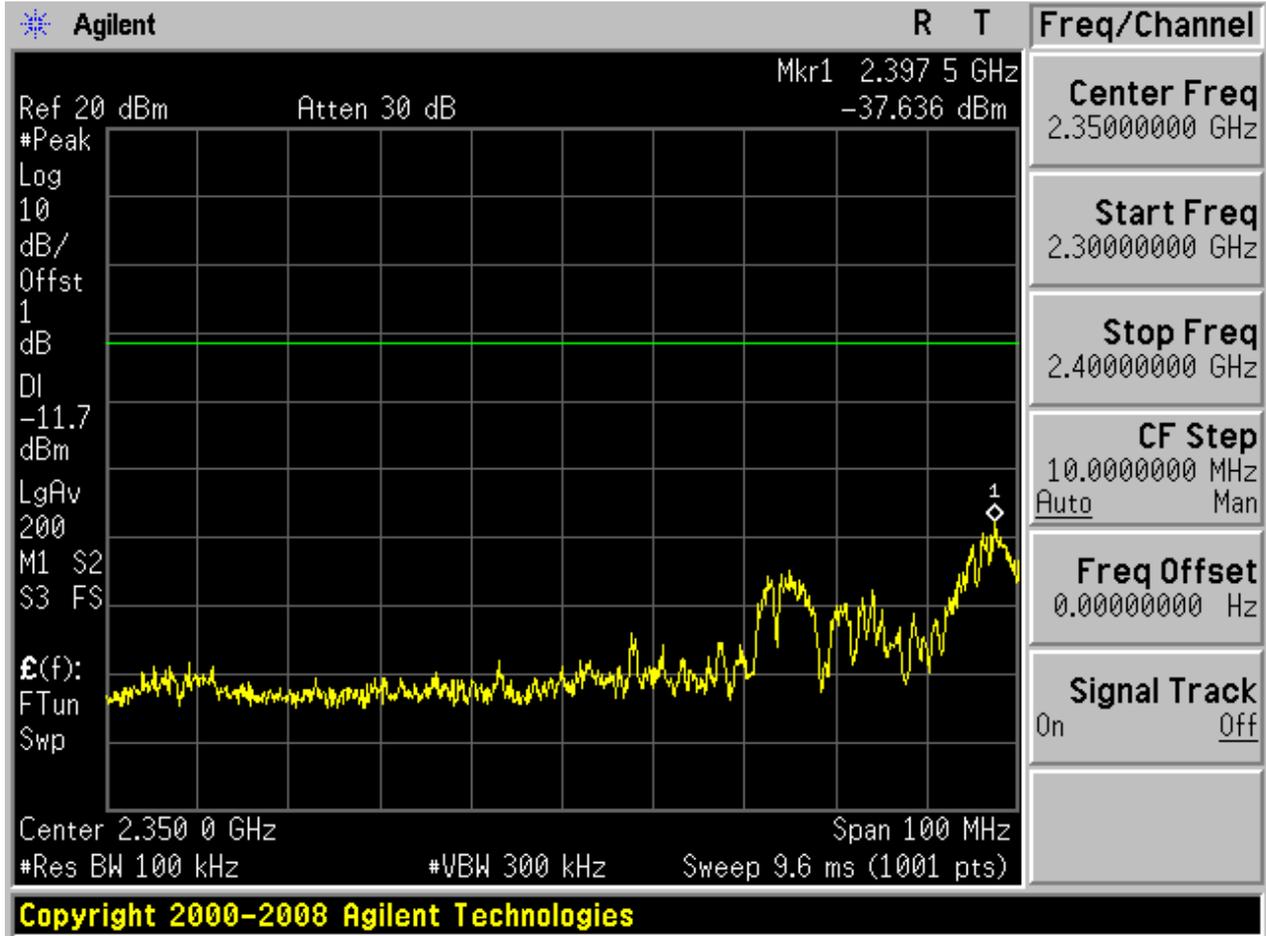


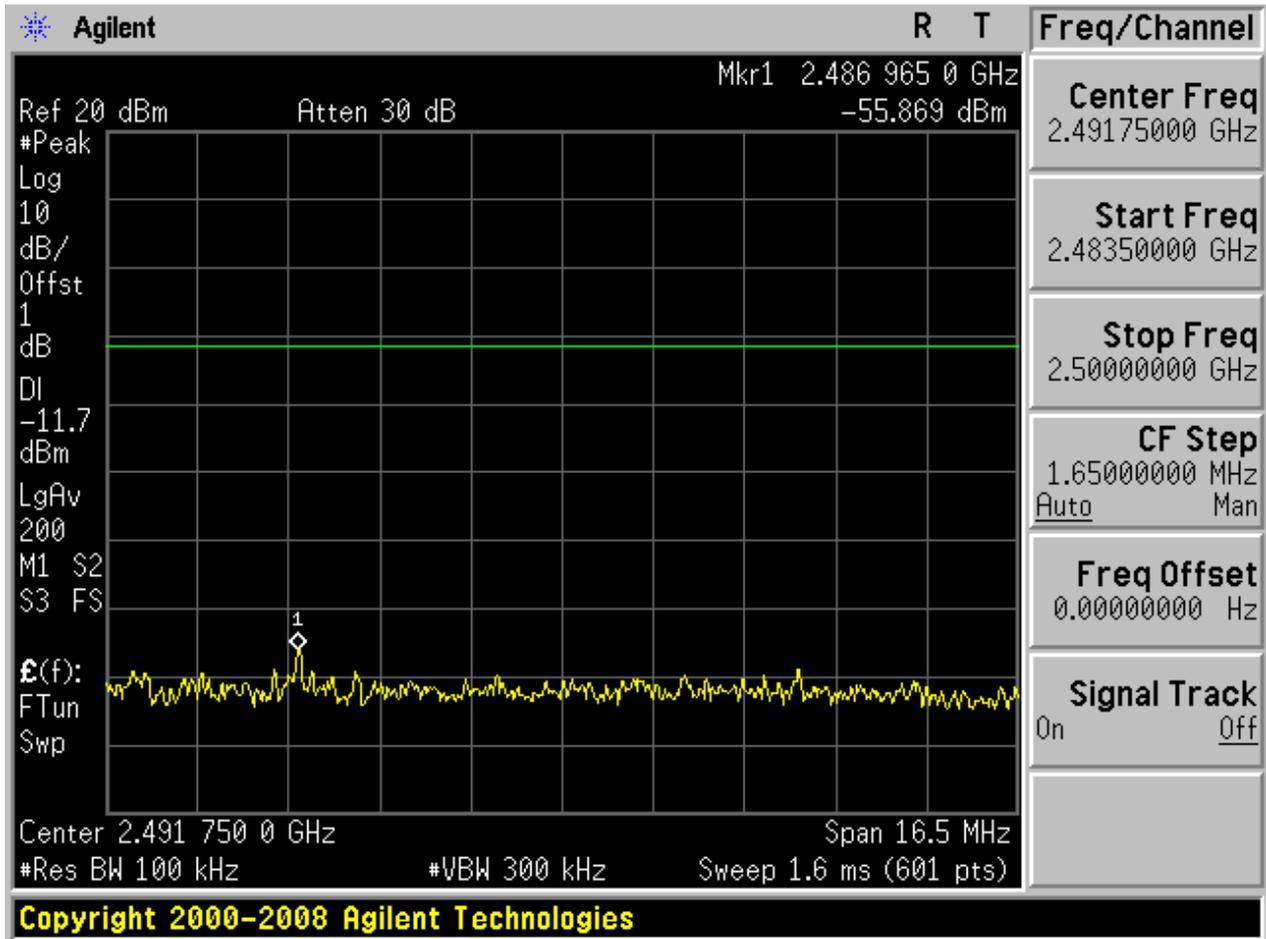
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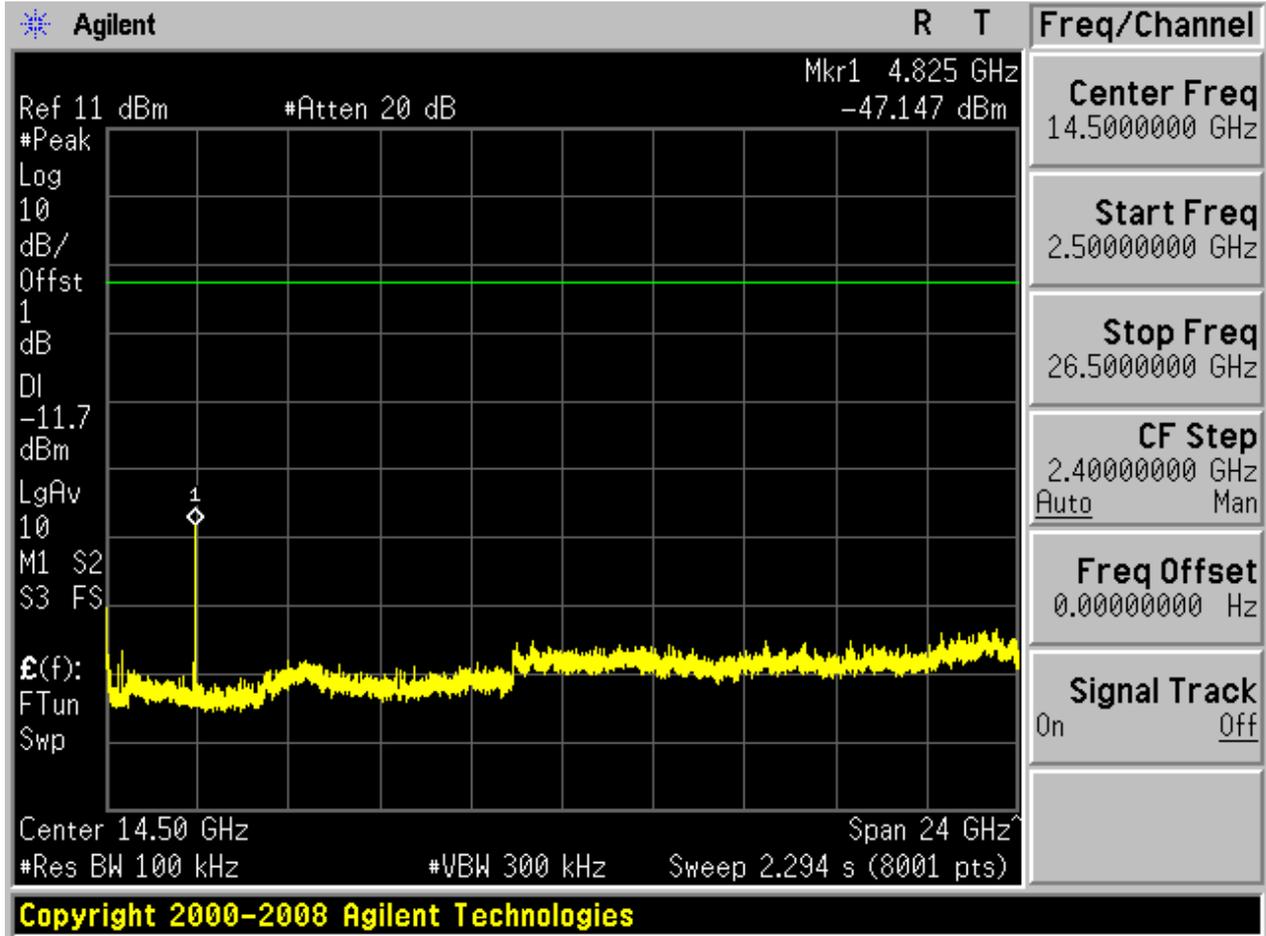








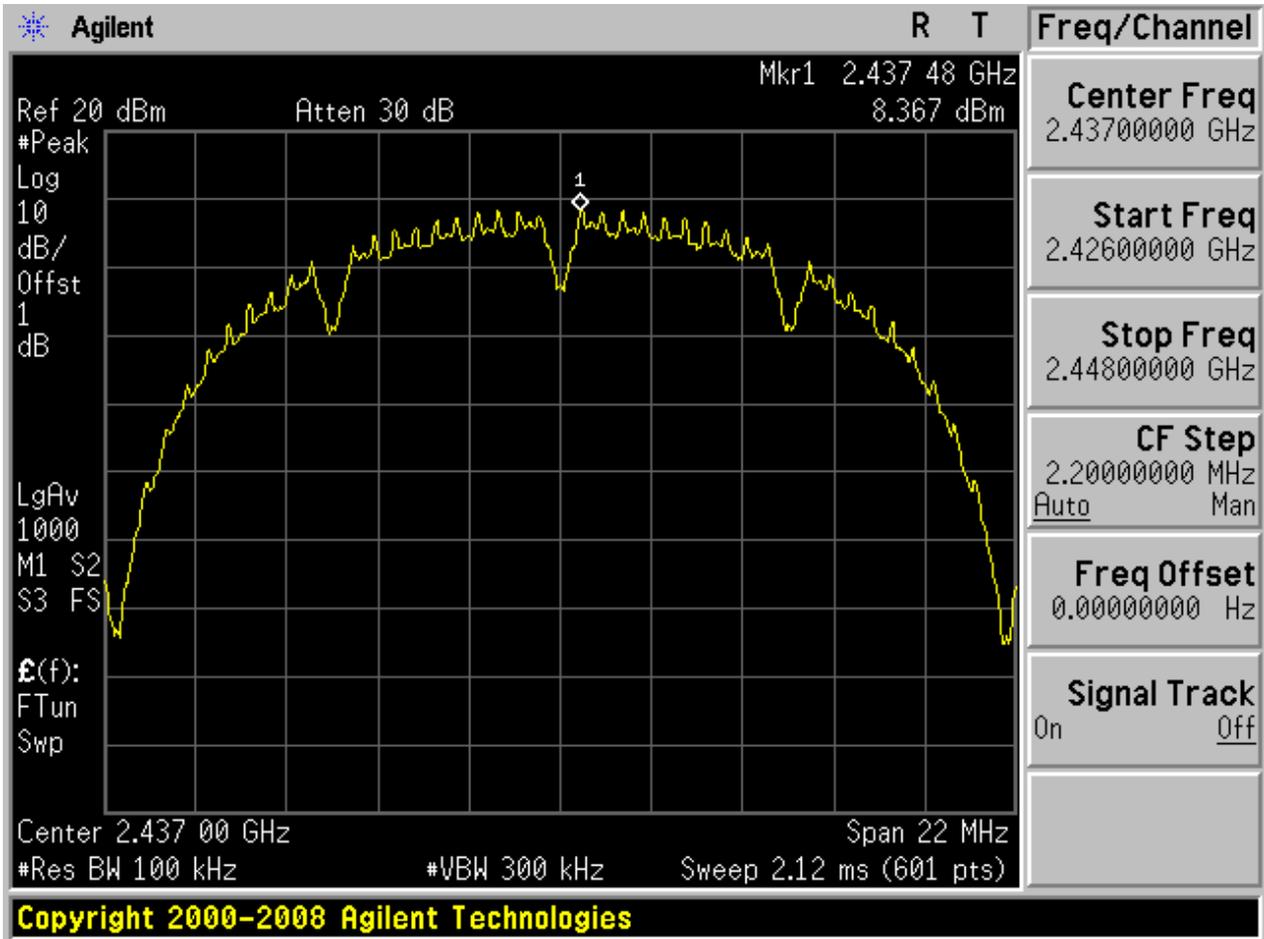






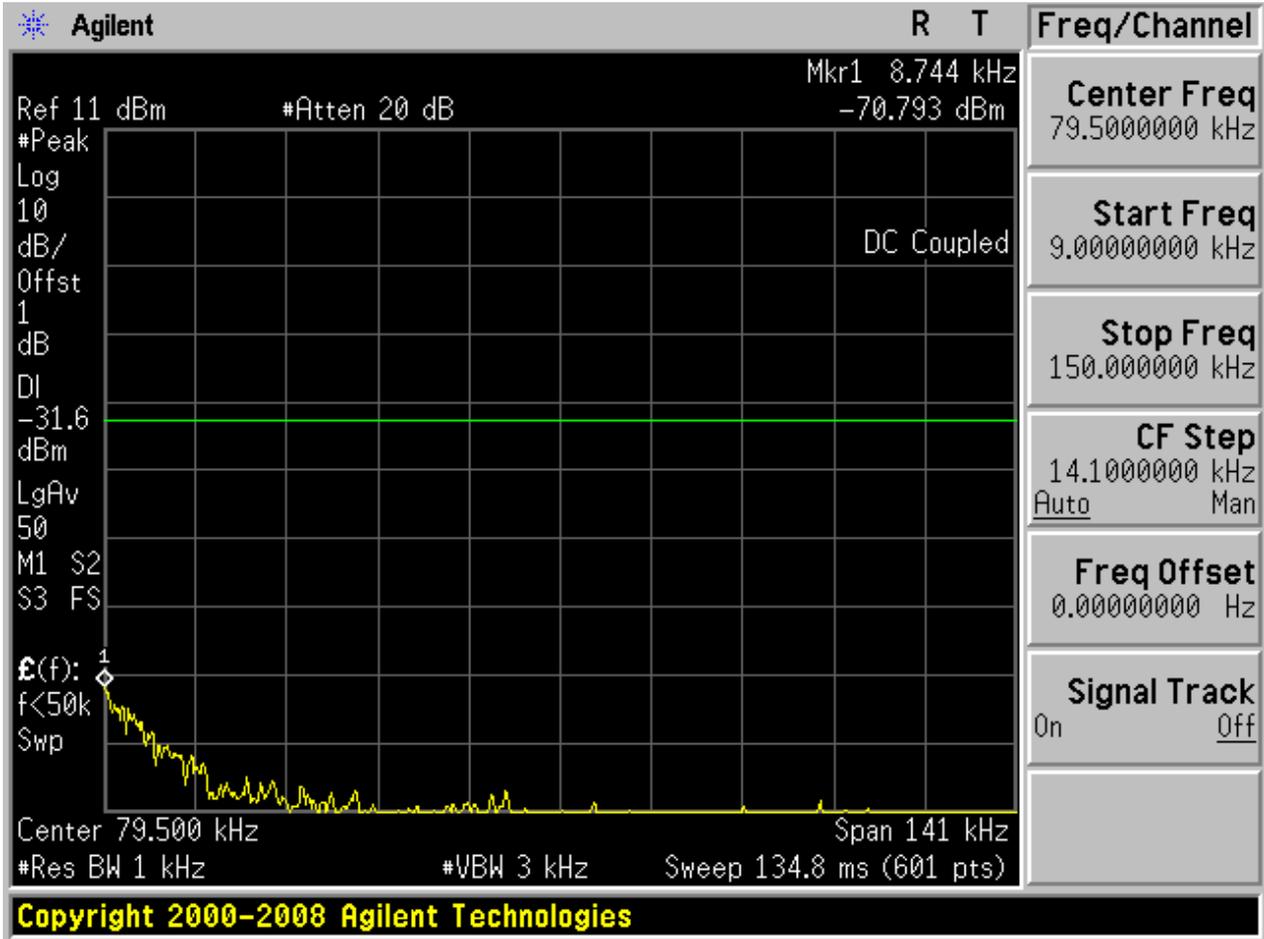
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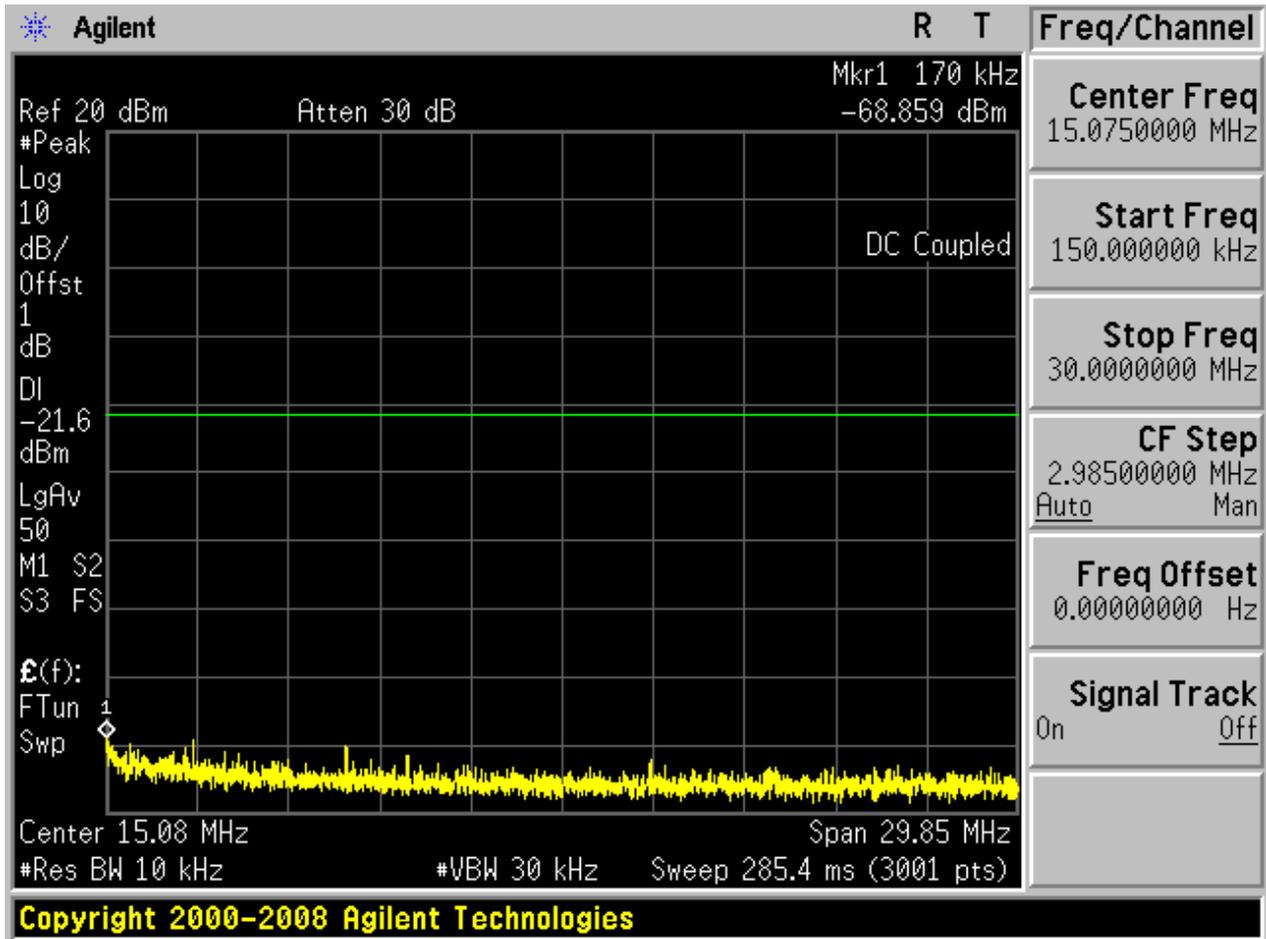
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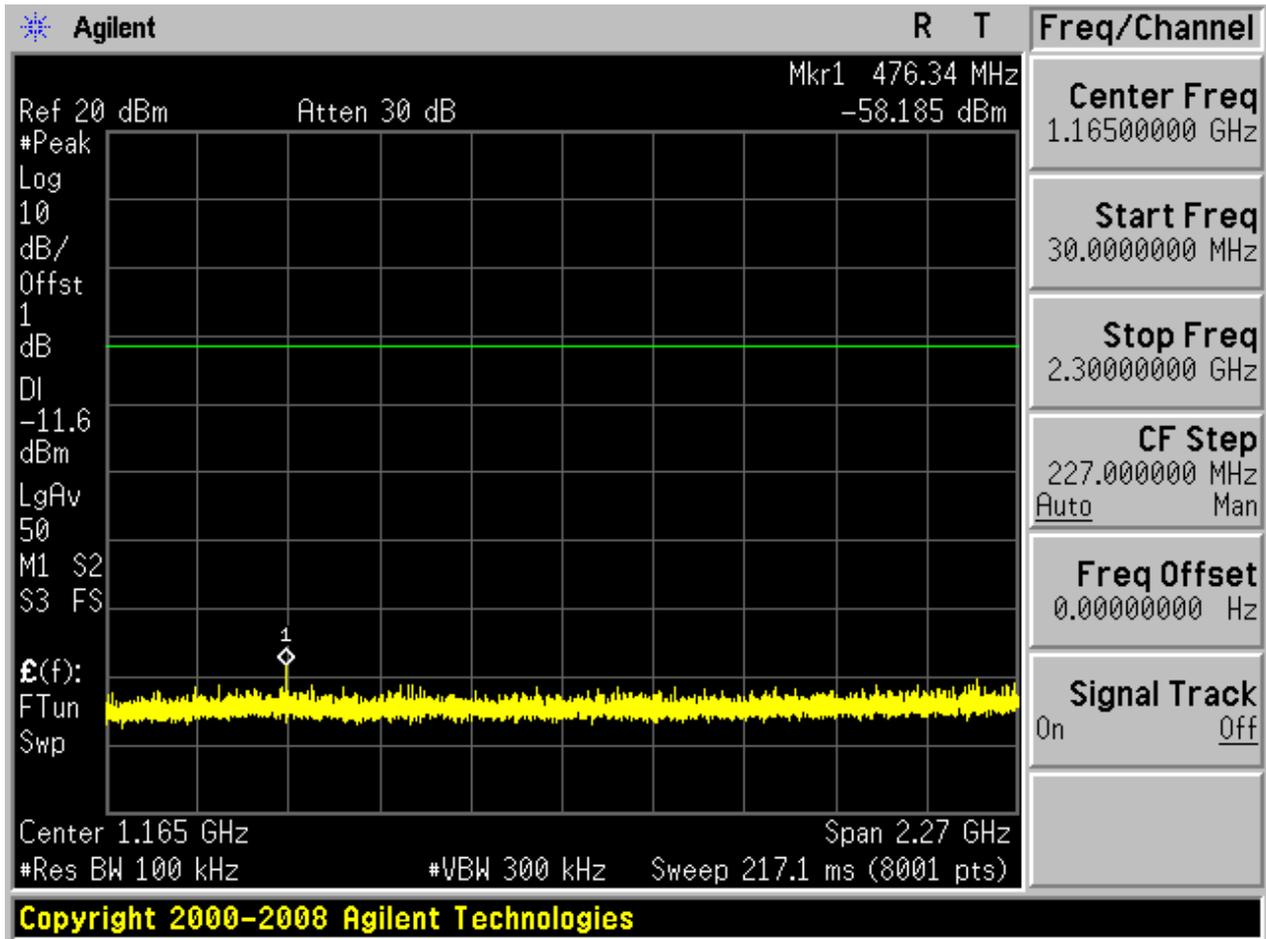


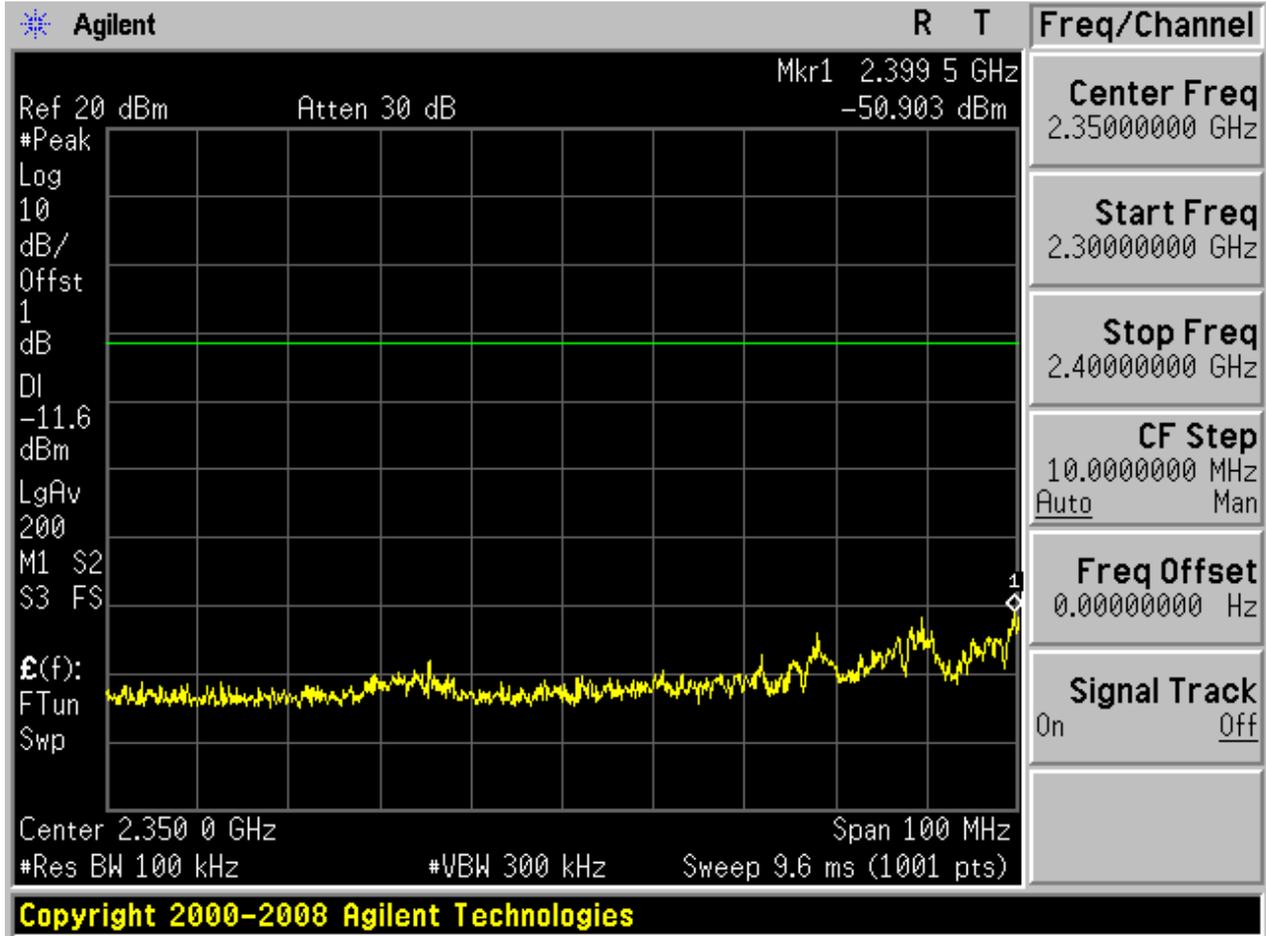


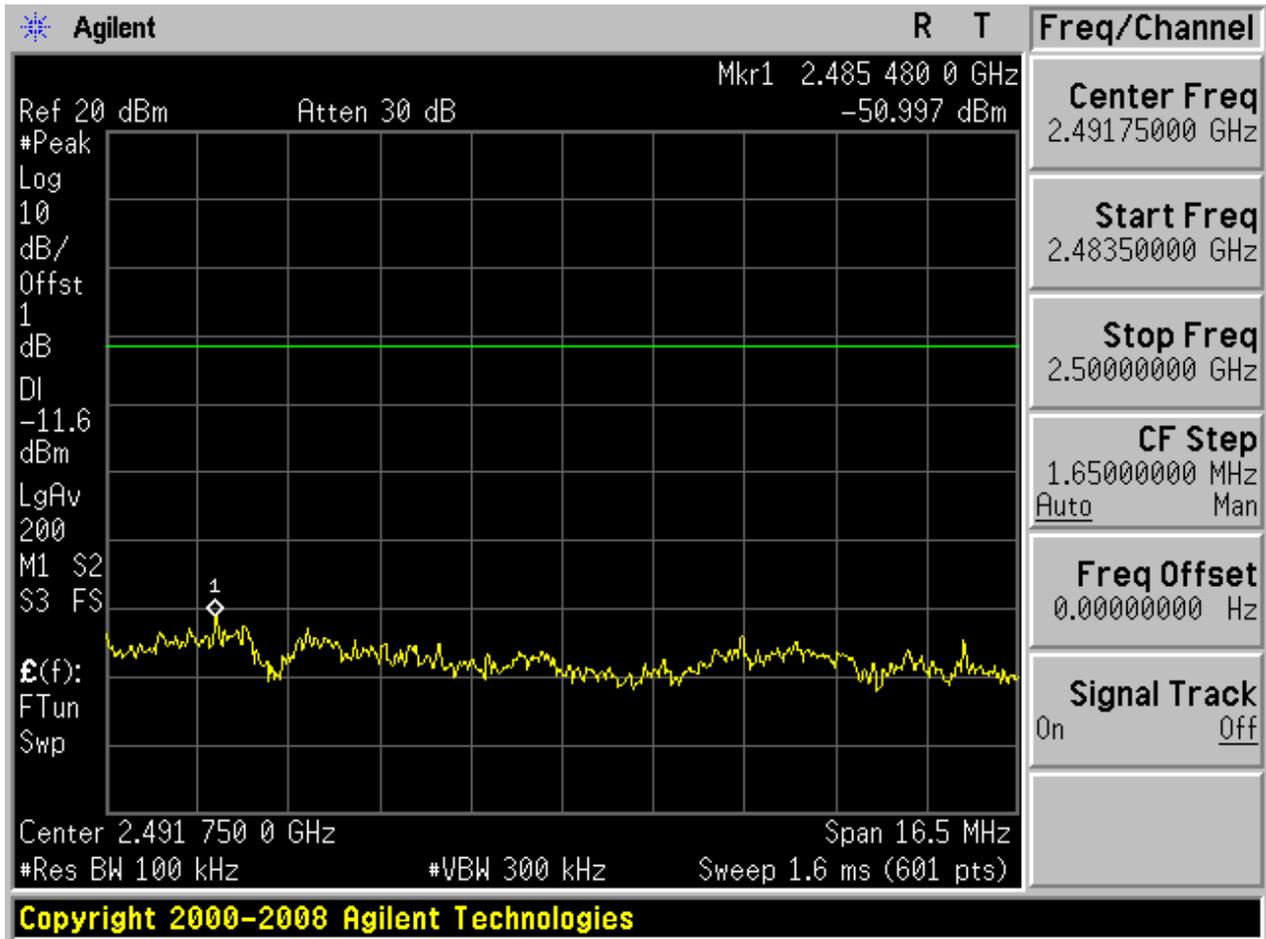
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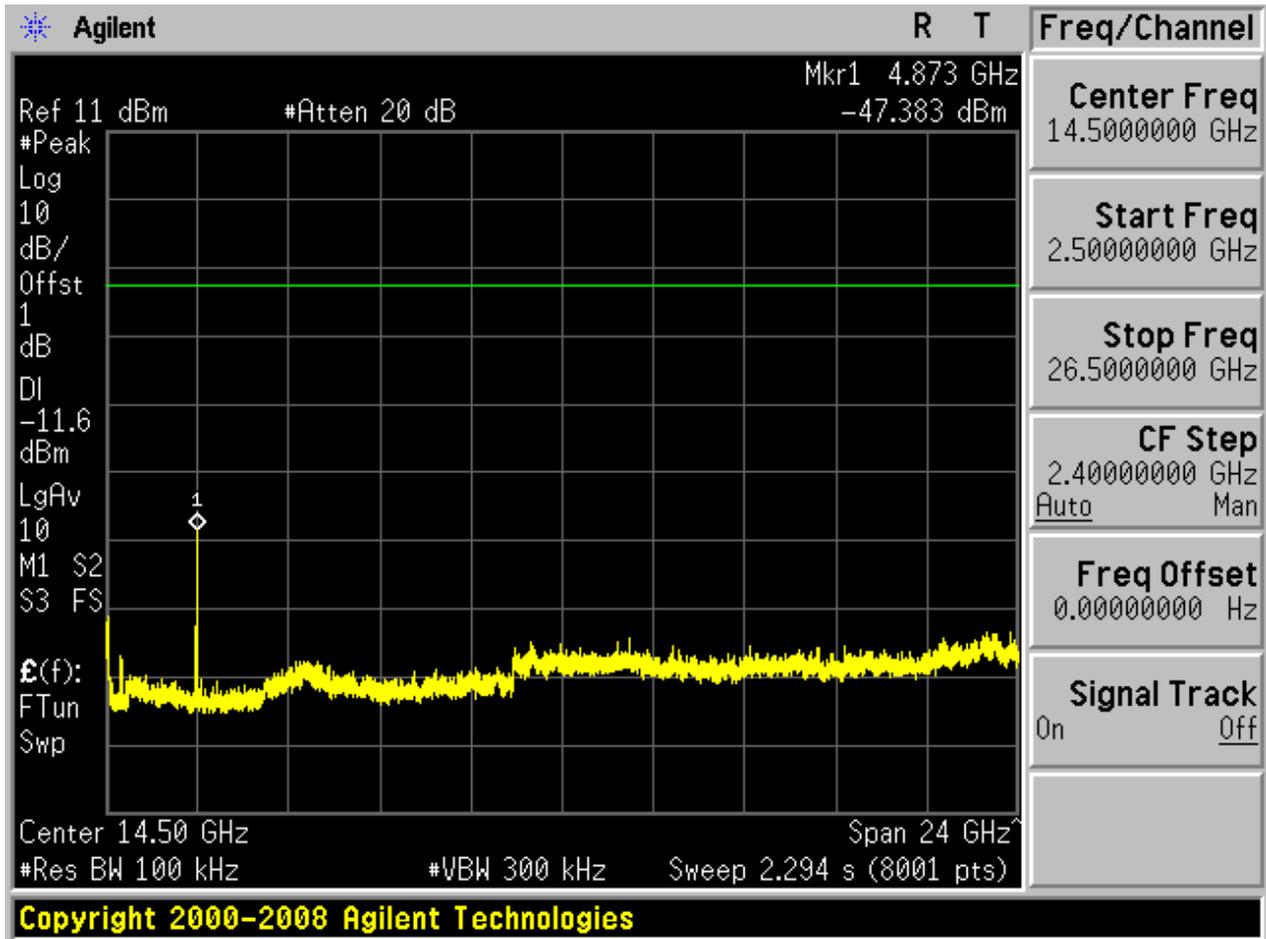








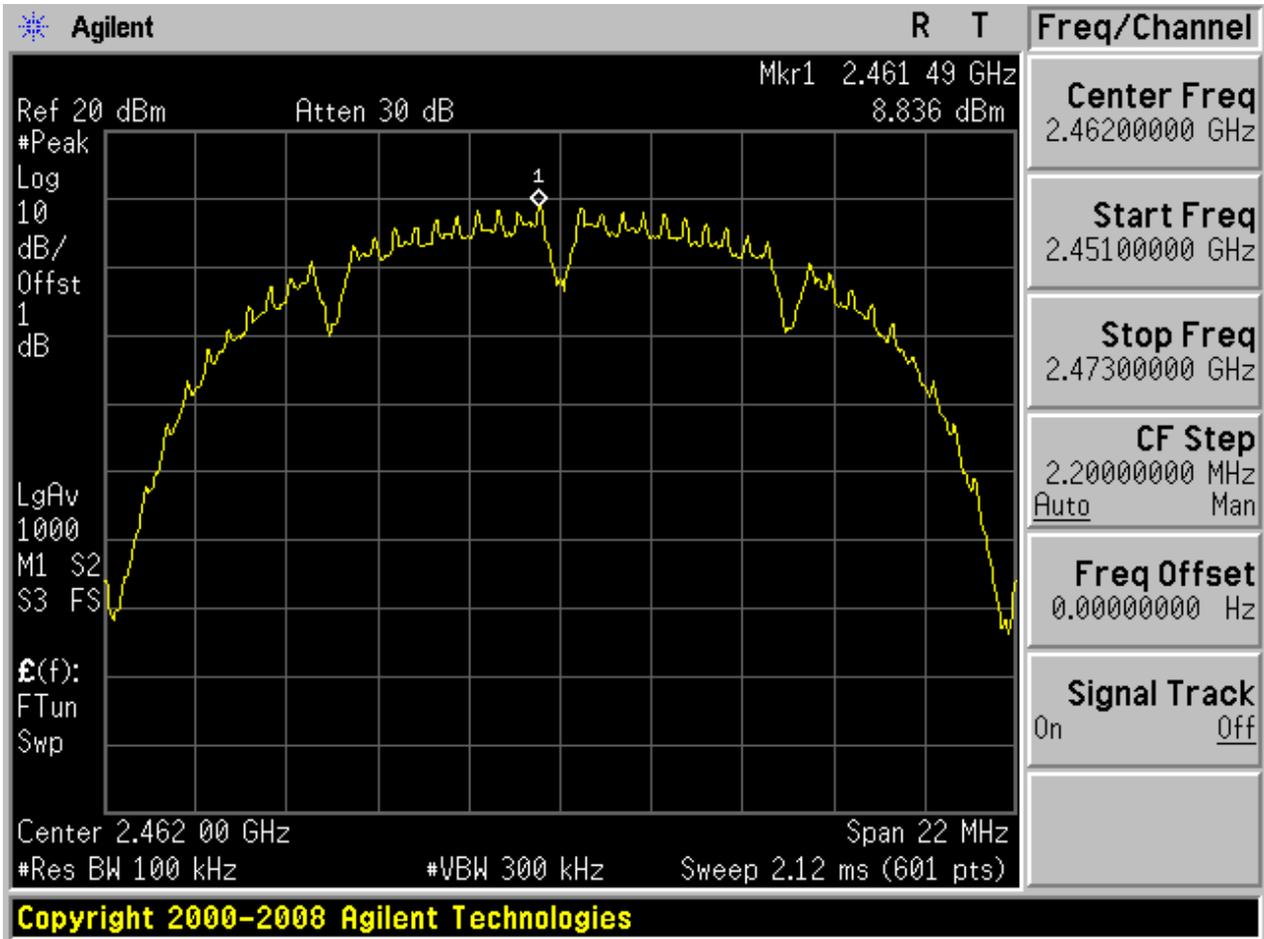






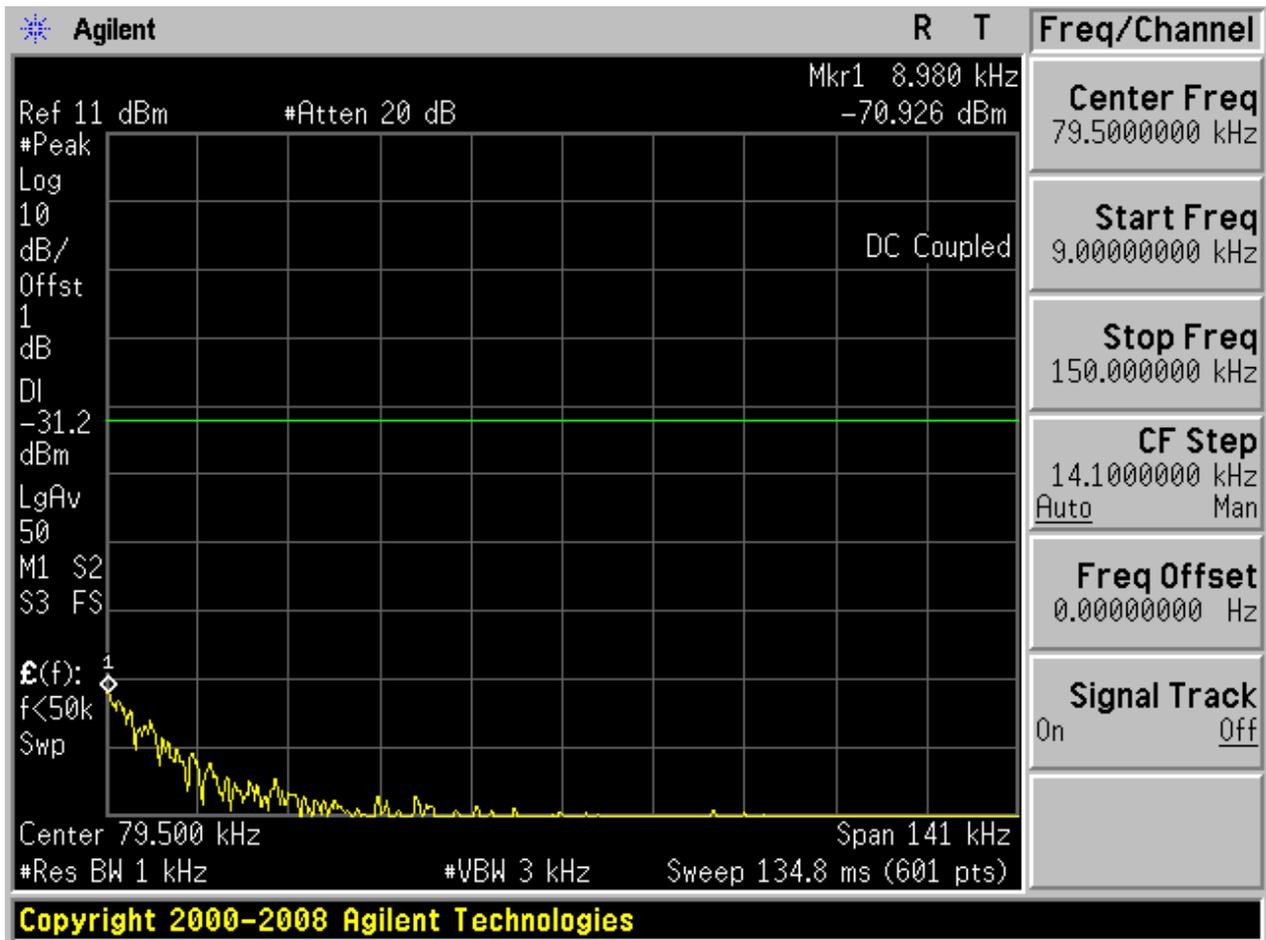
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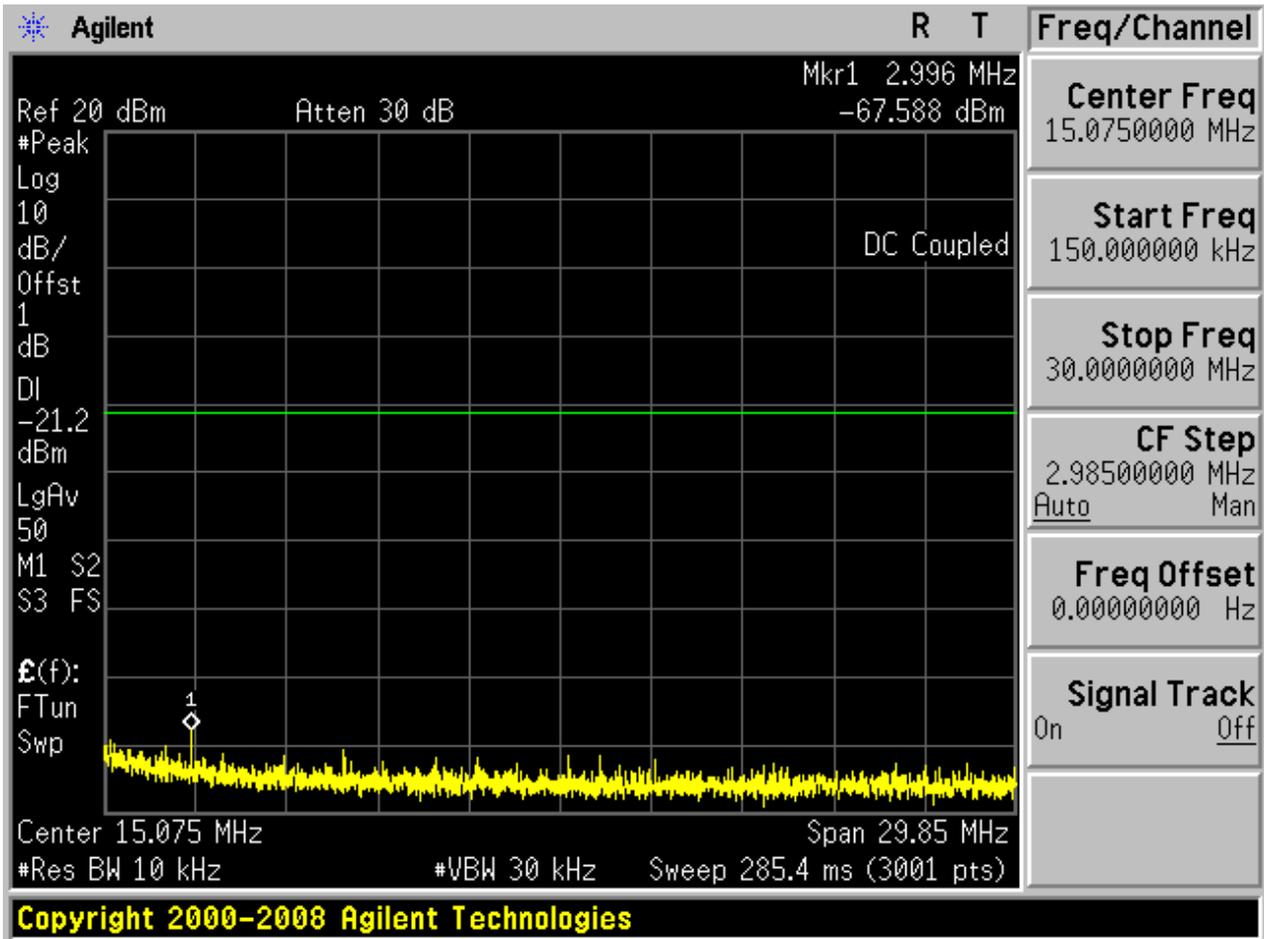
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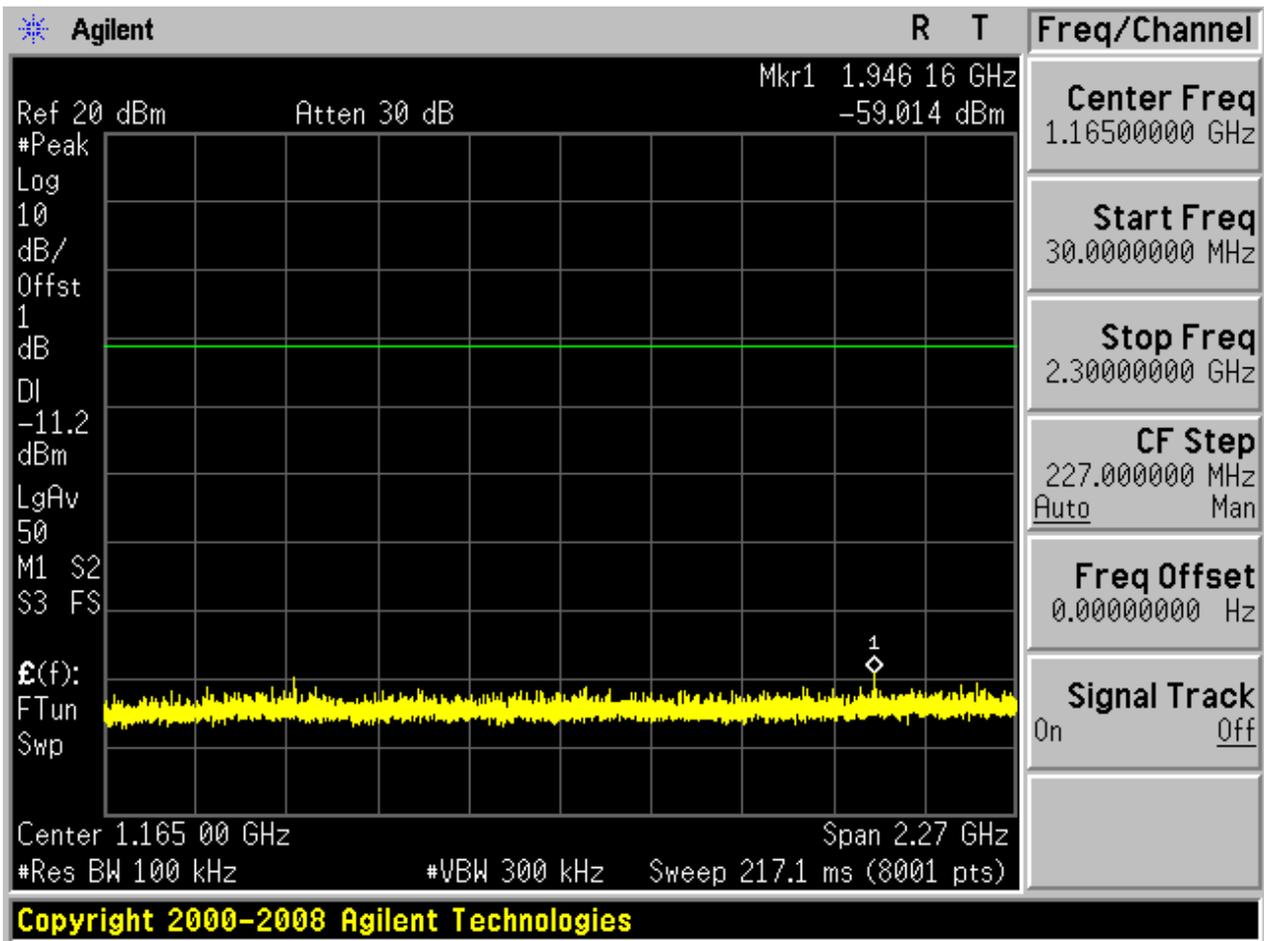


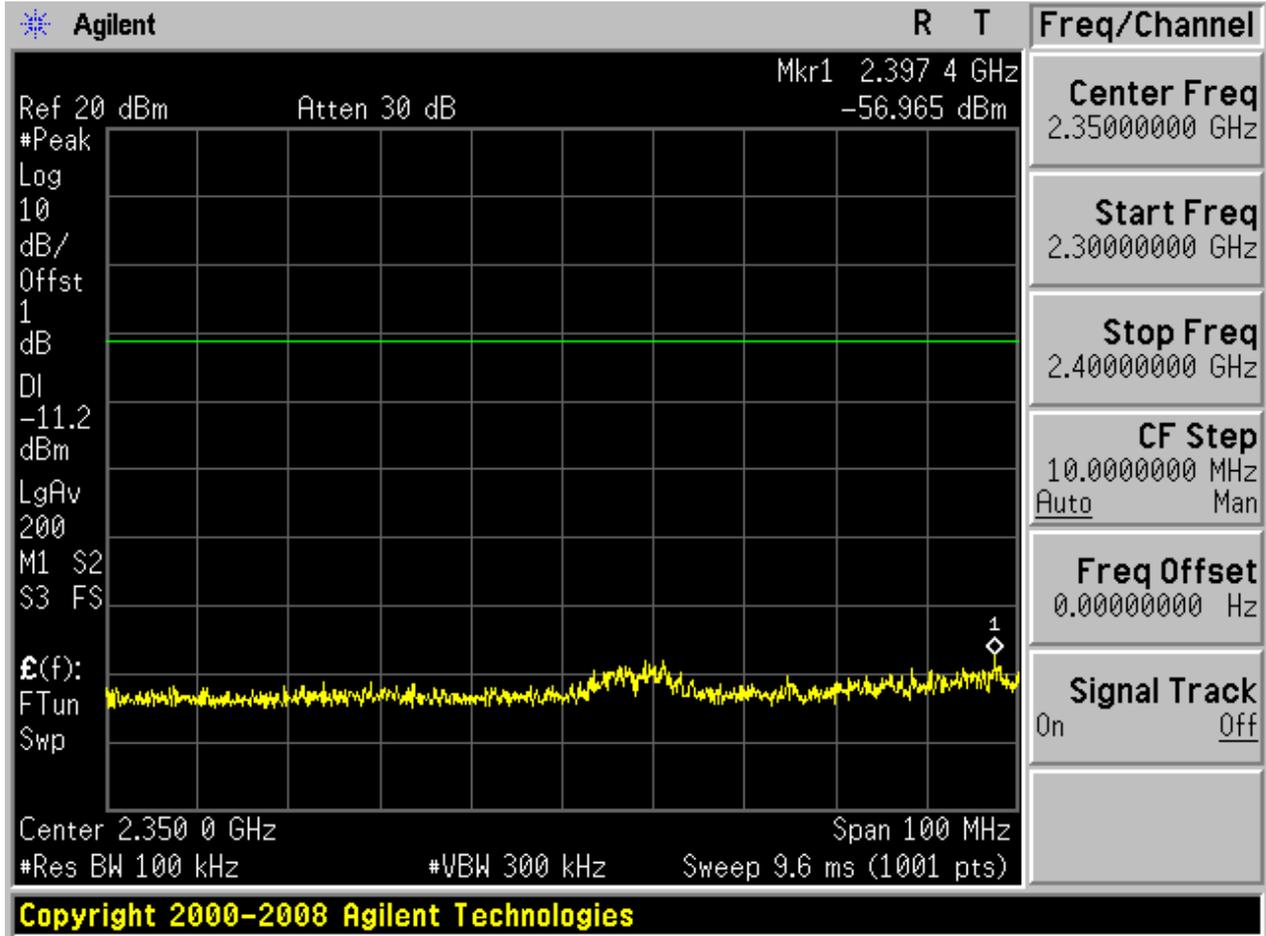


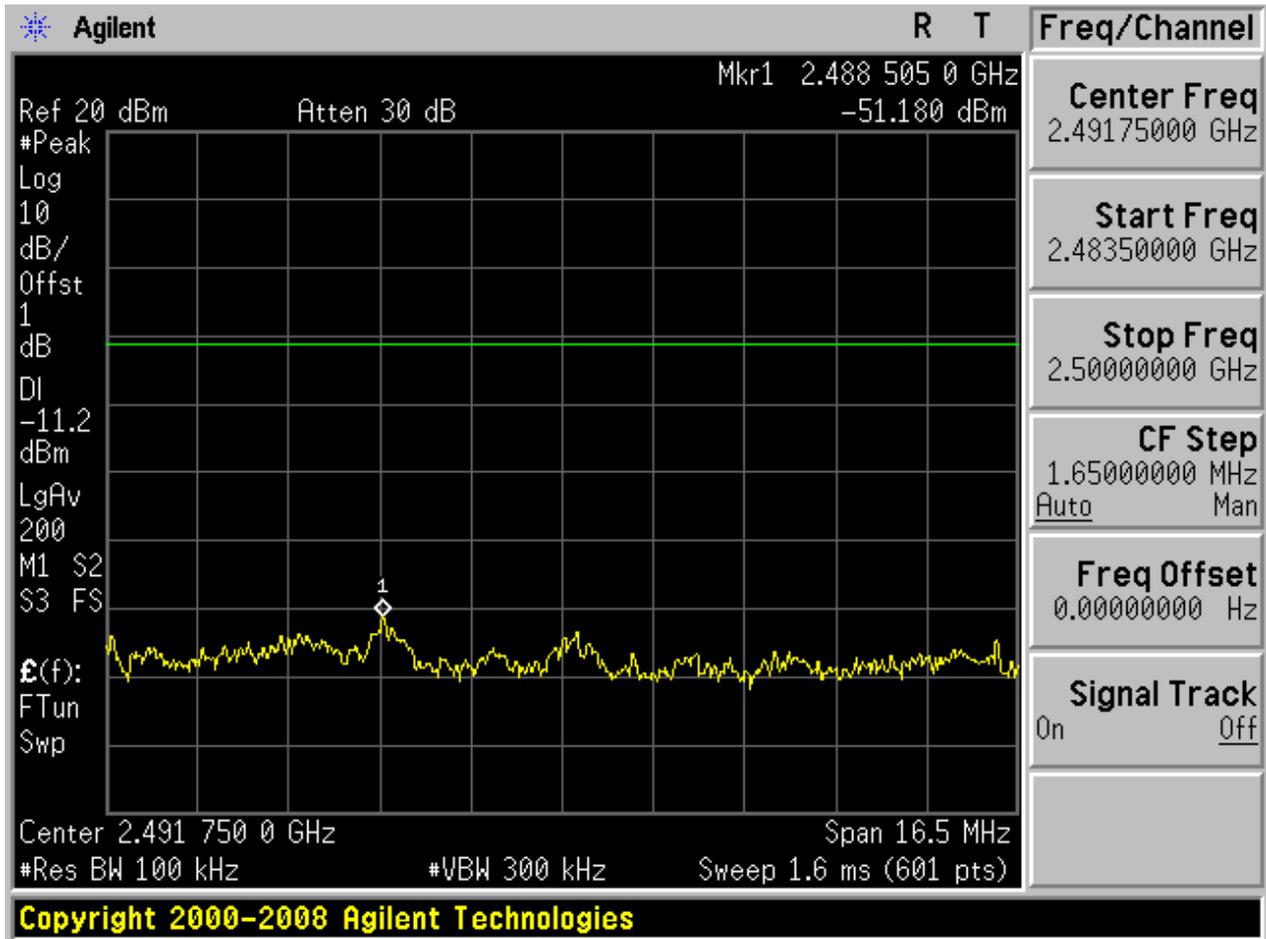
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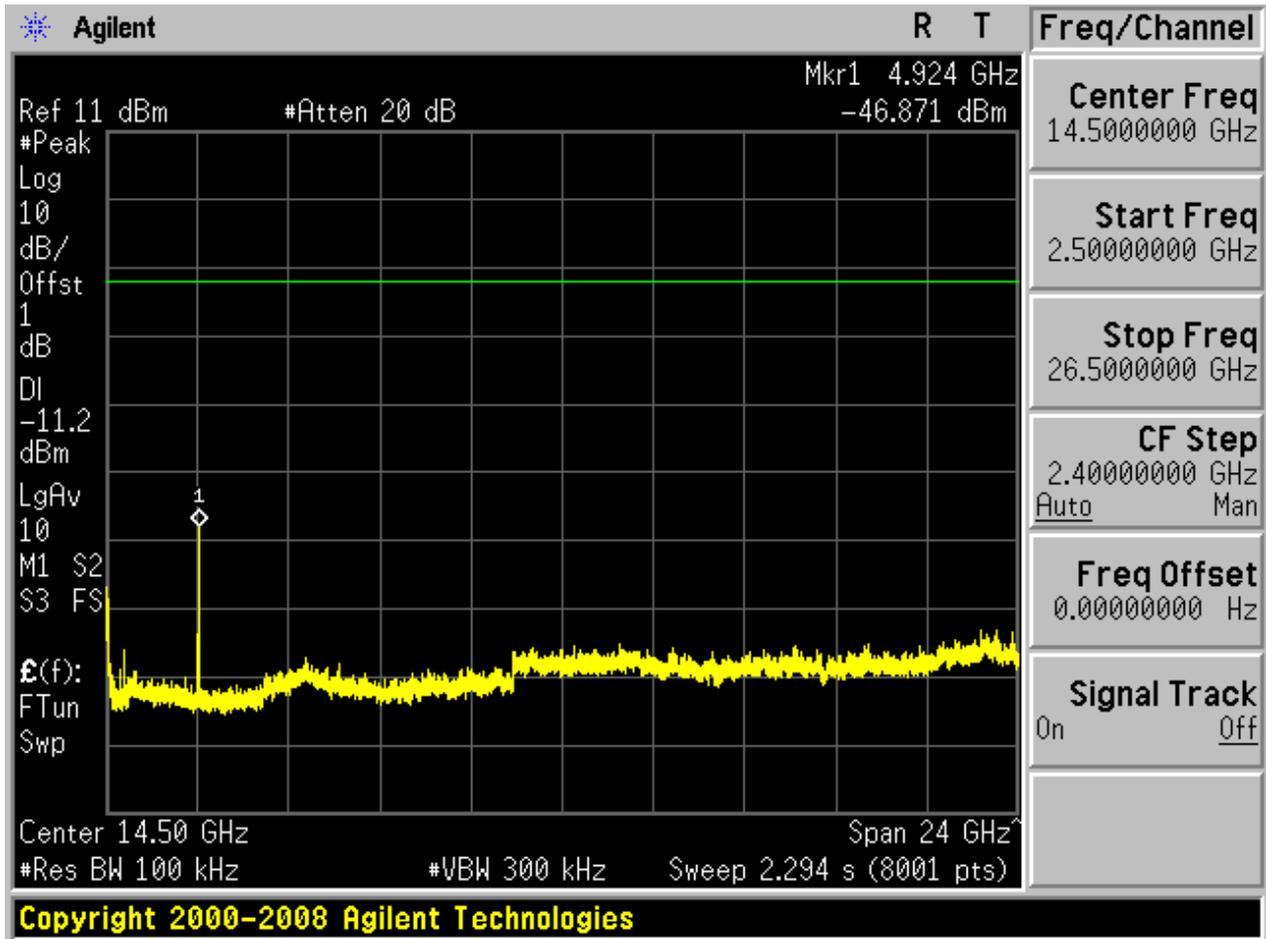








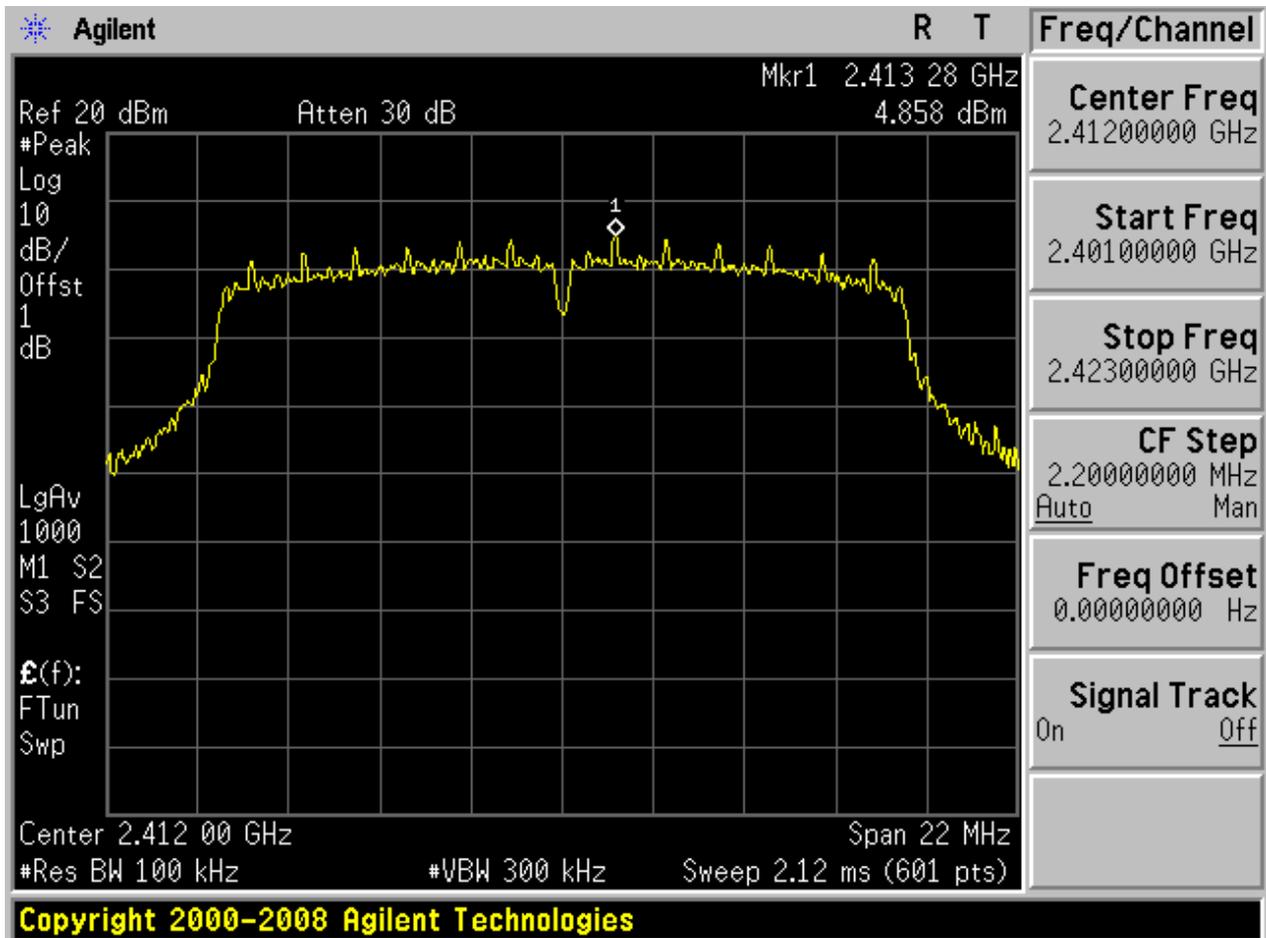






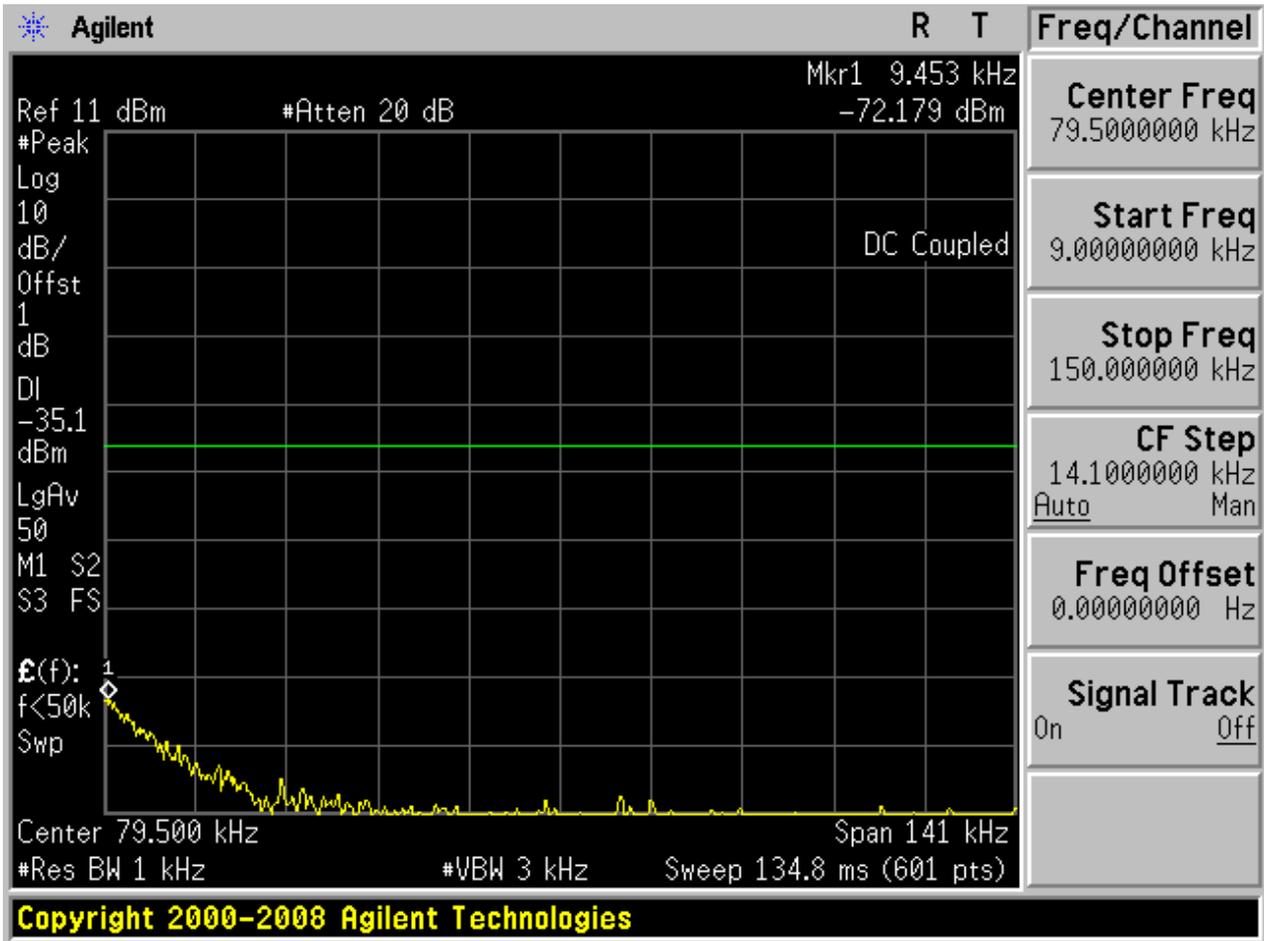
## 2.4 11G\_L

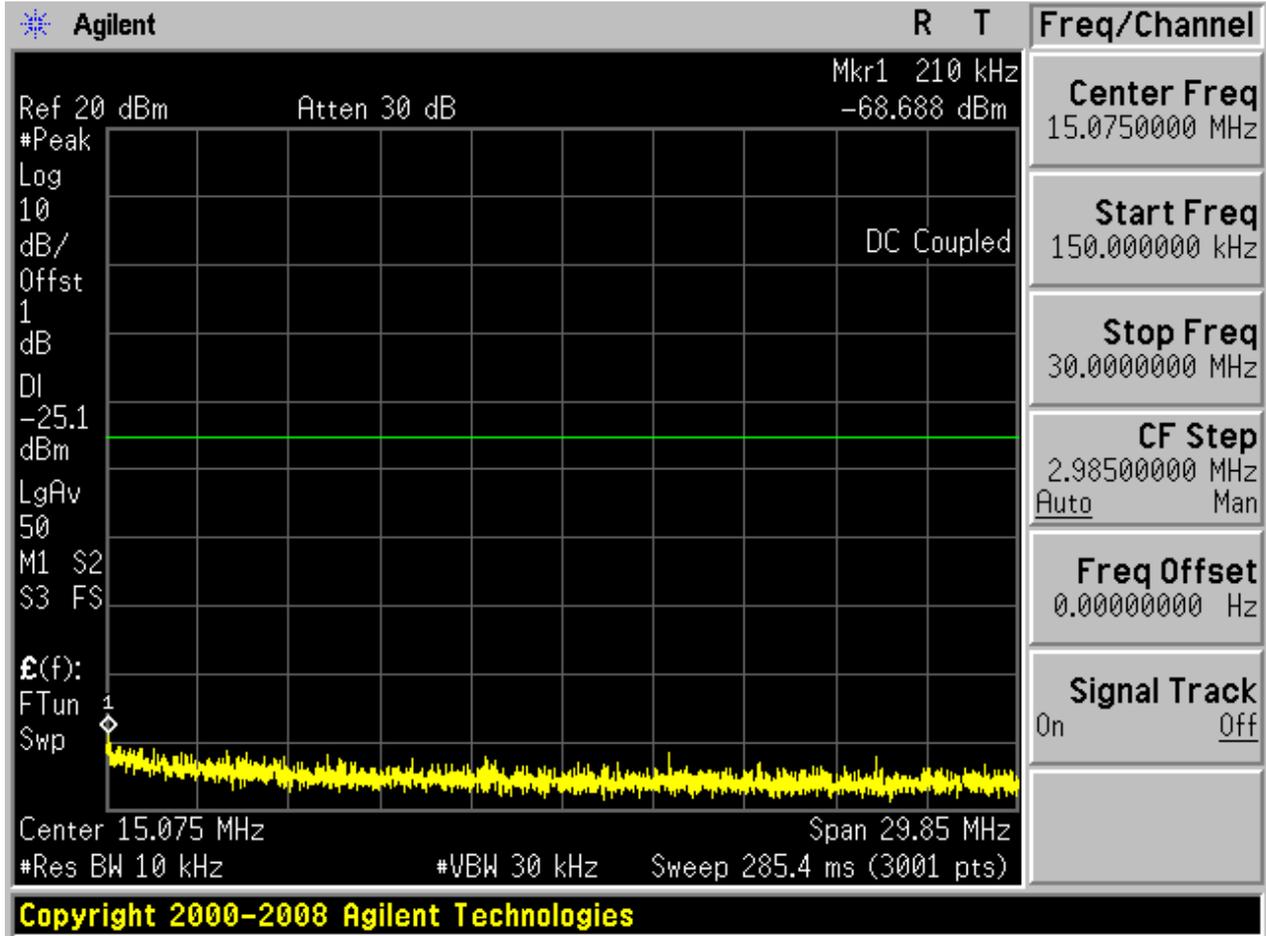
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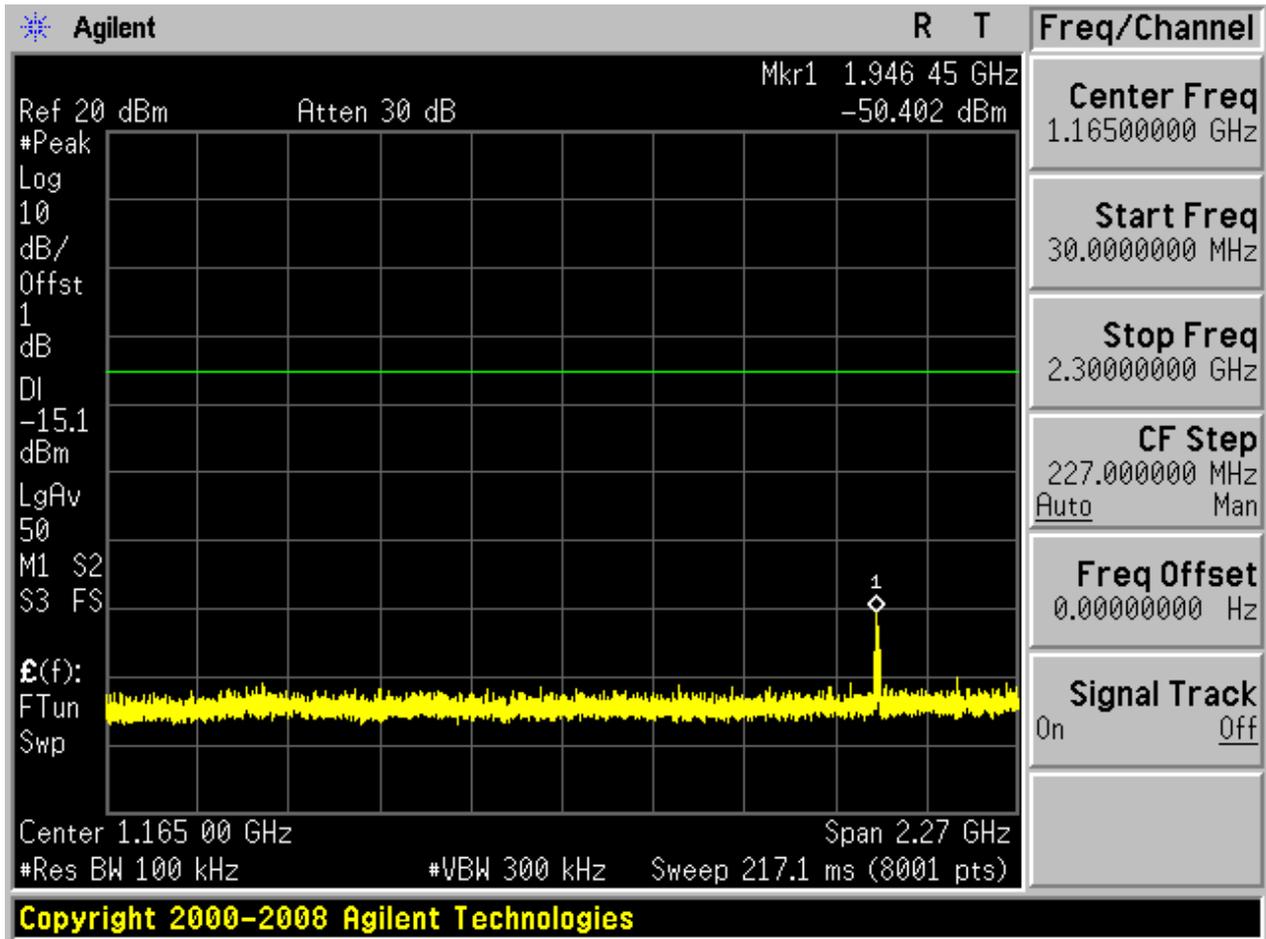


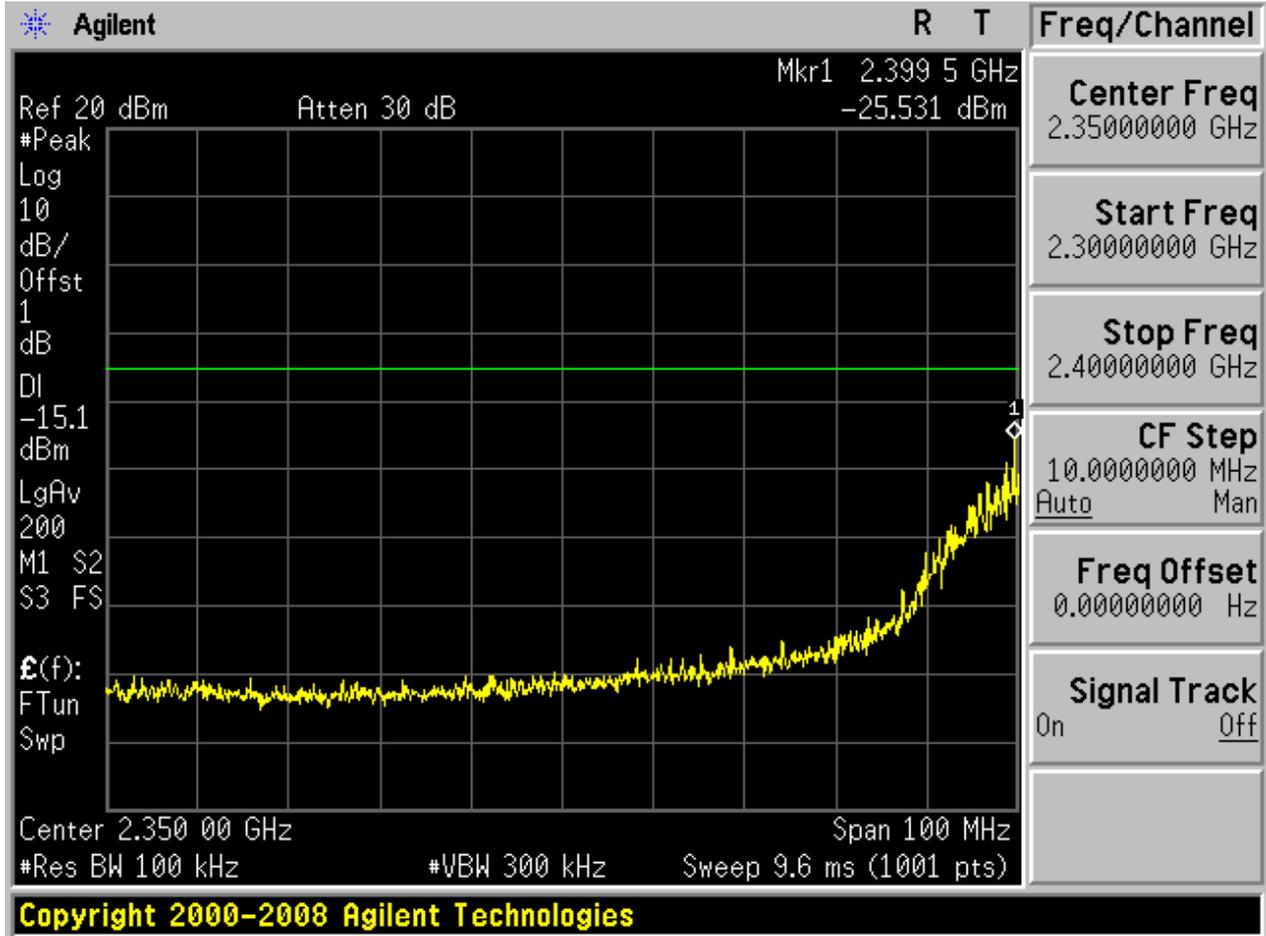


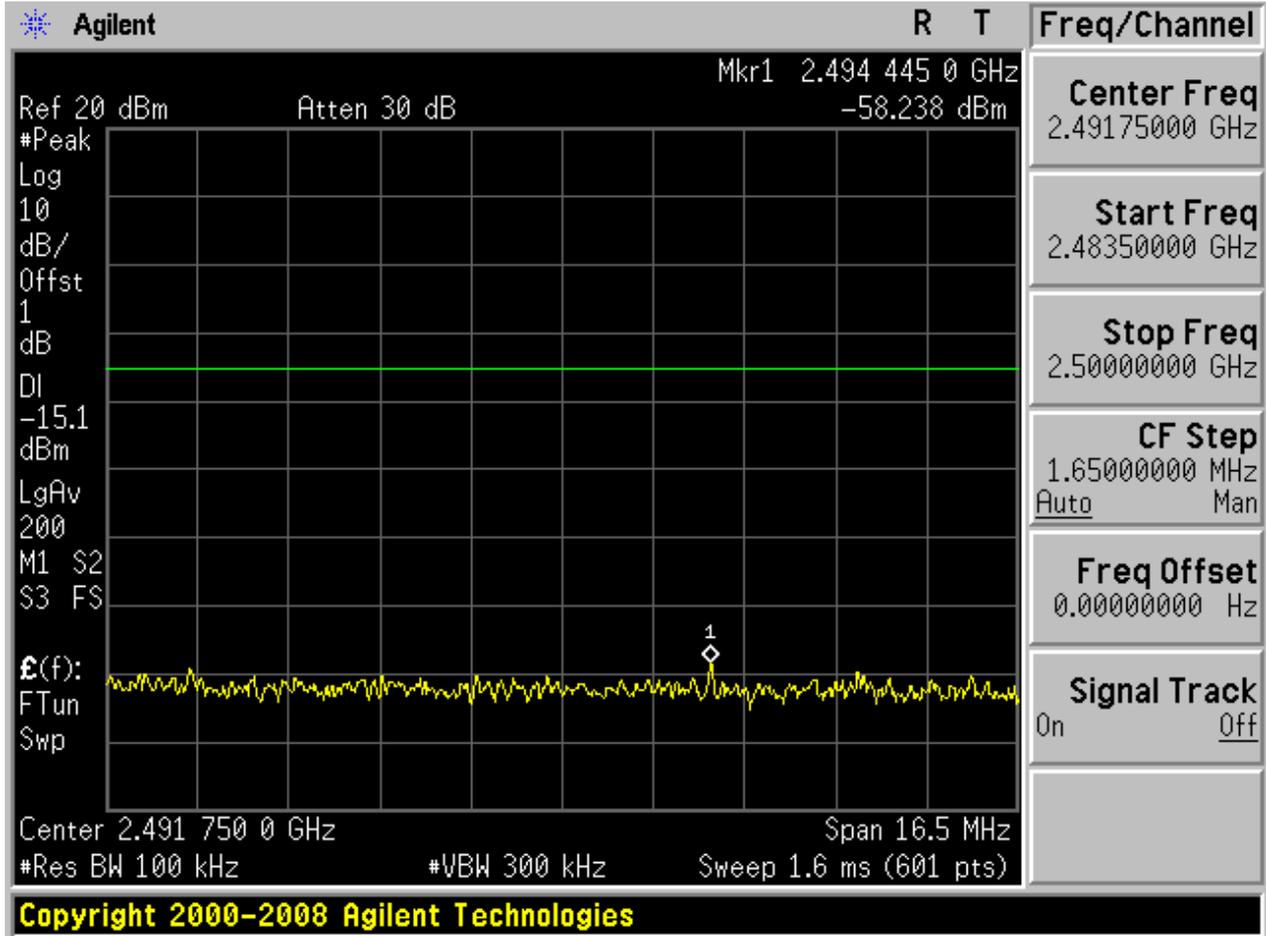
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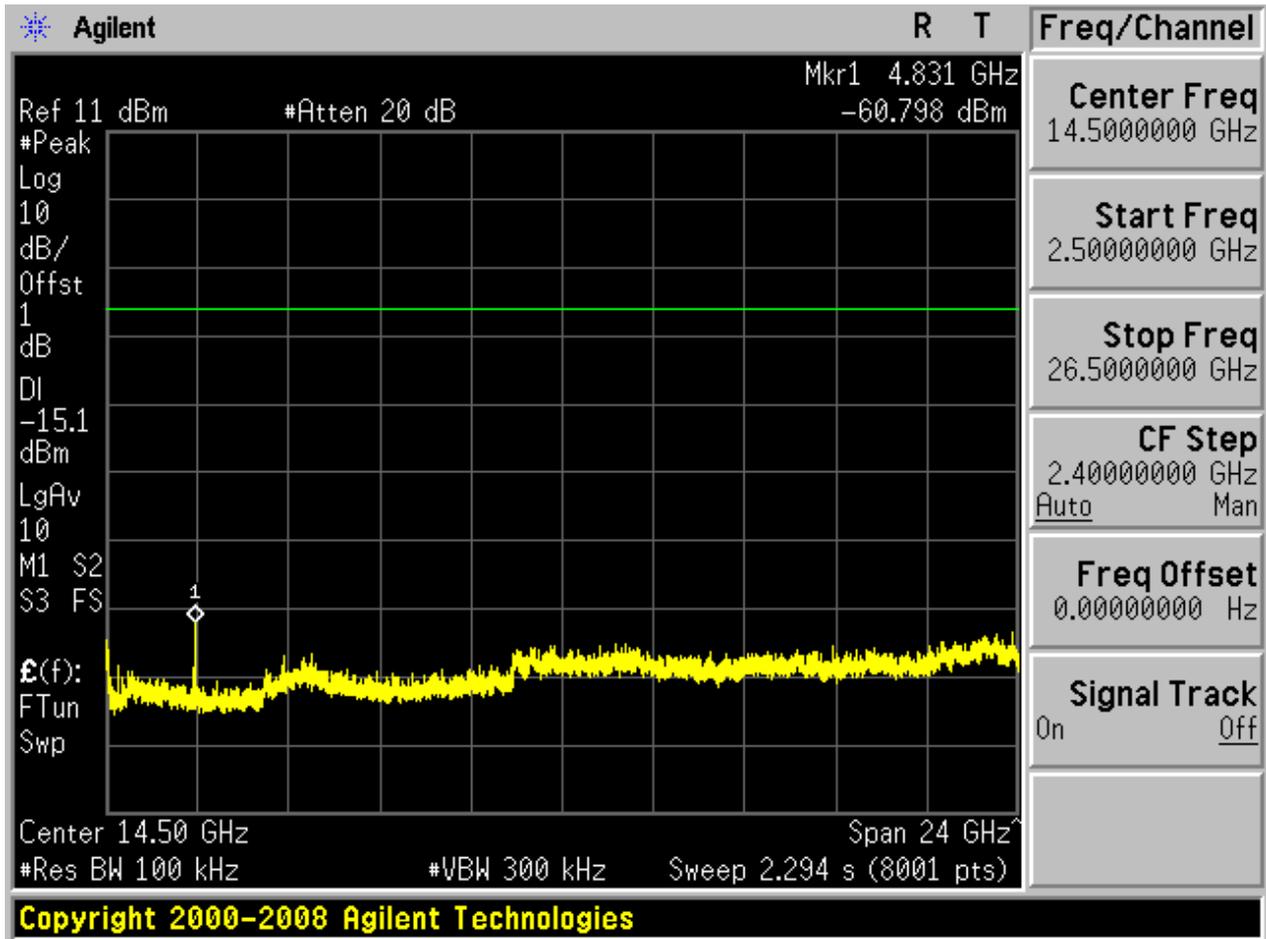








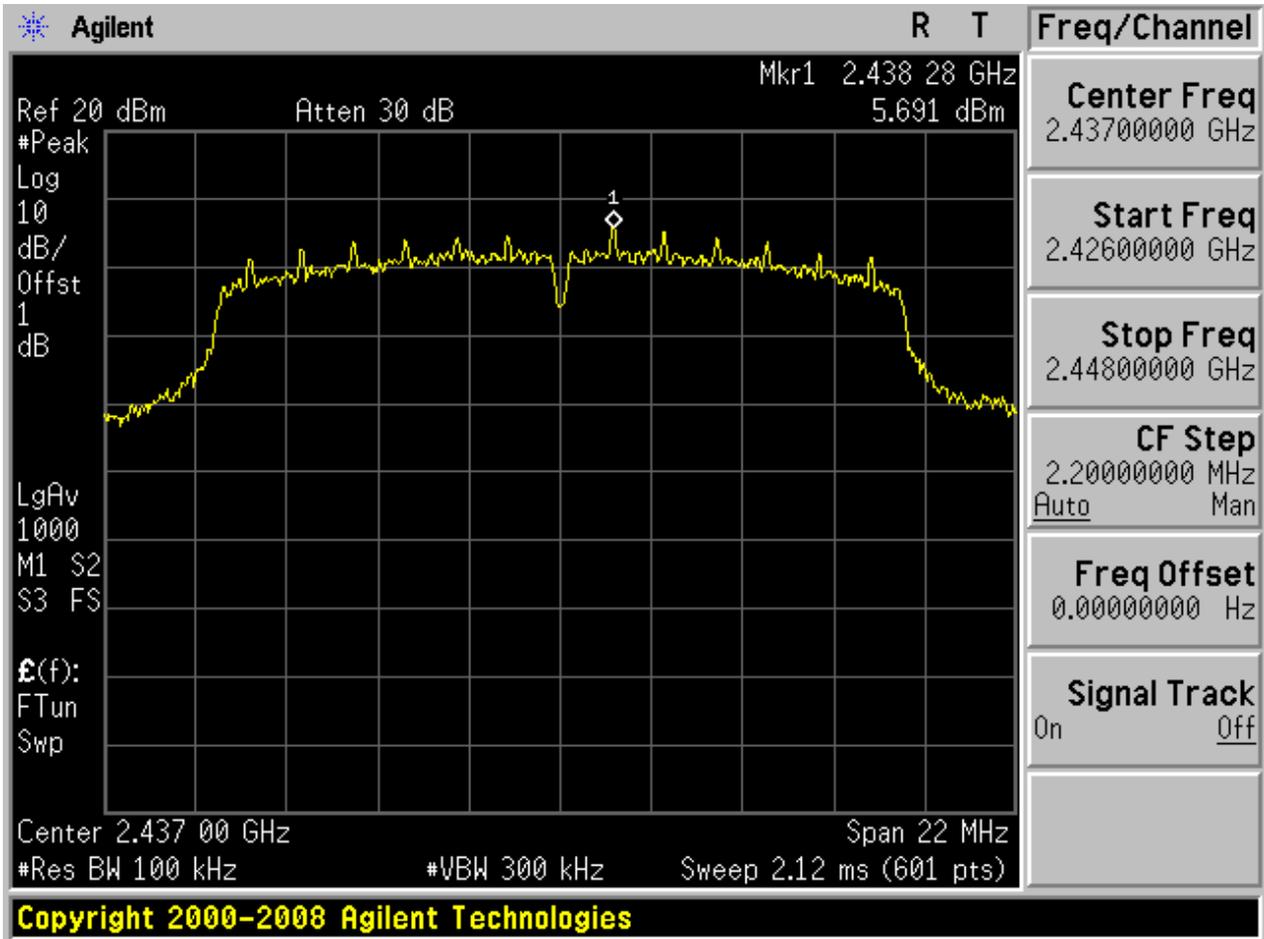






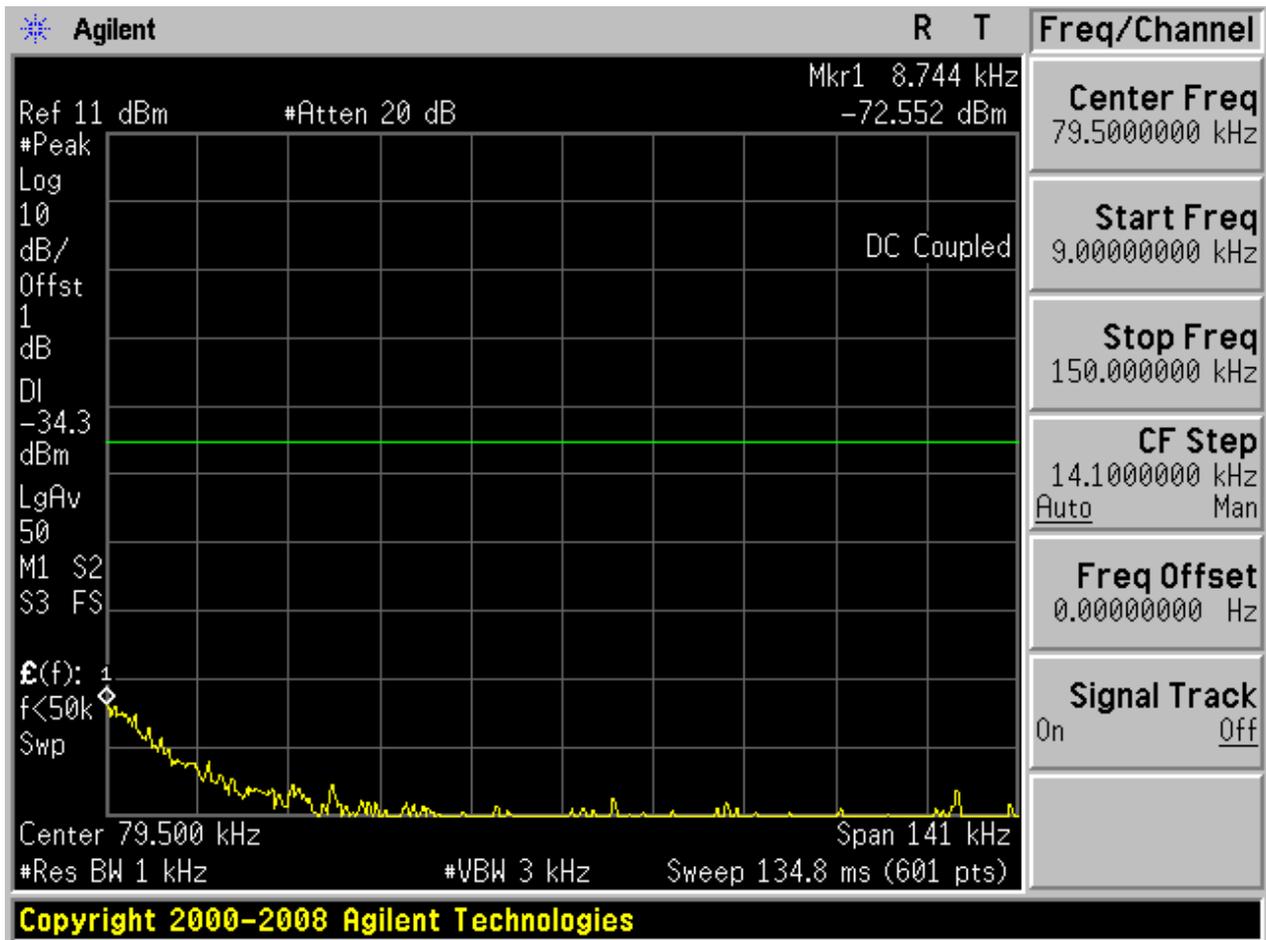
## 2.5 11G\_M

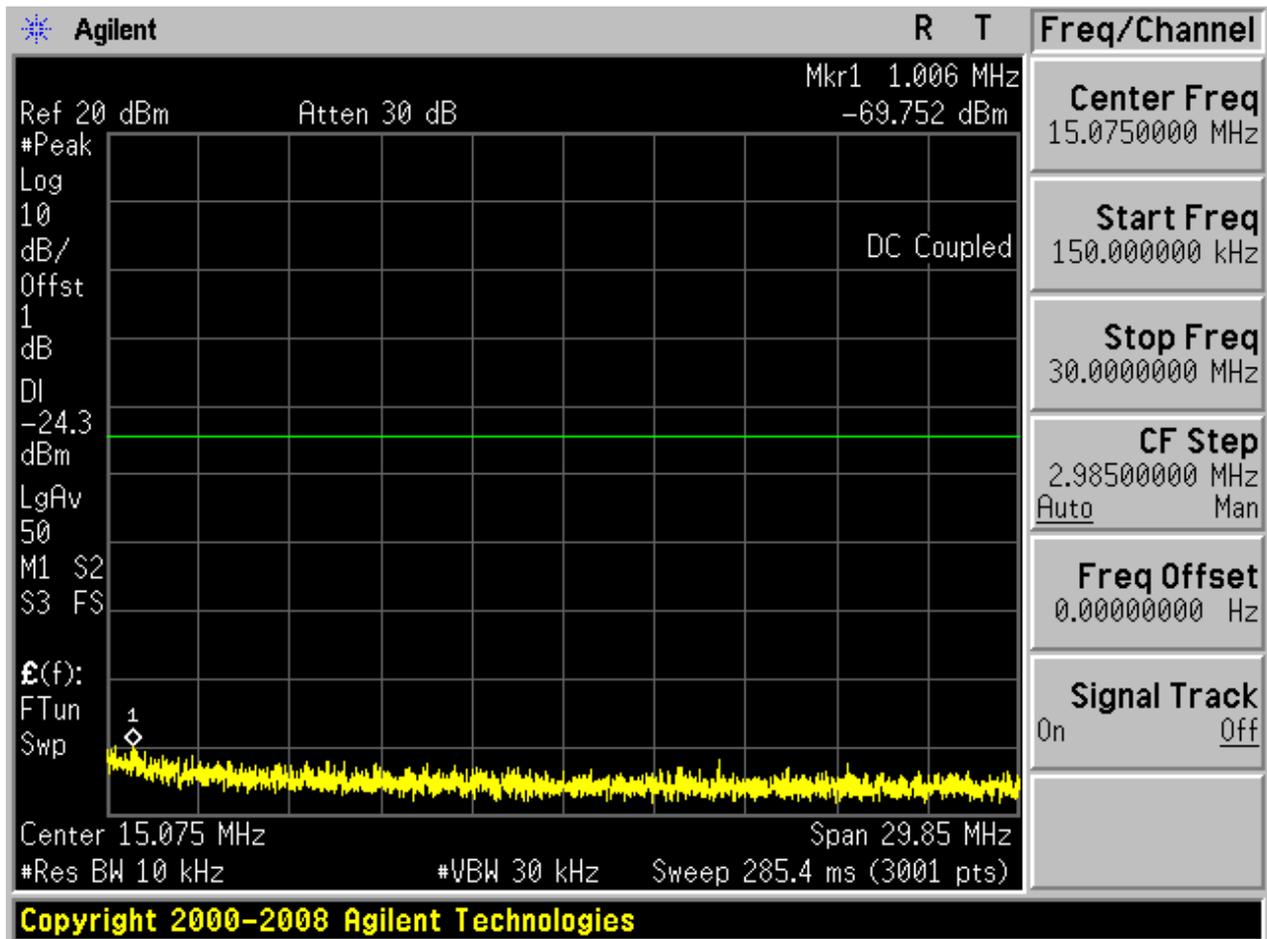
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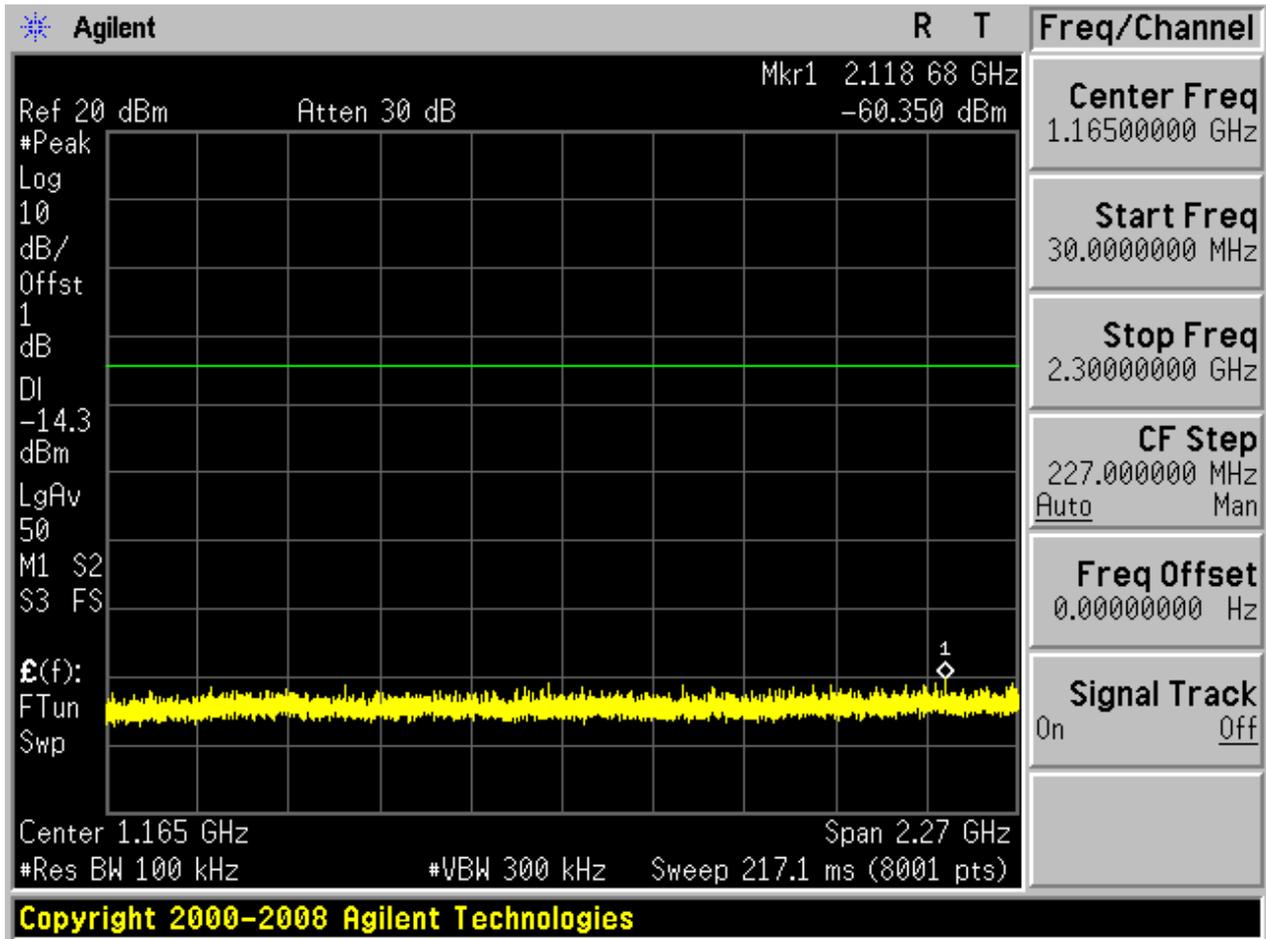


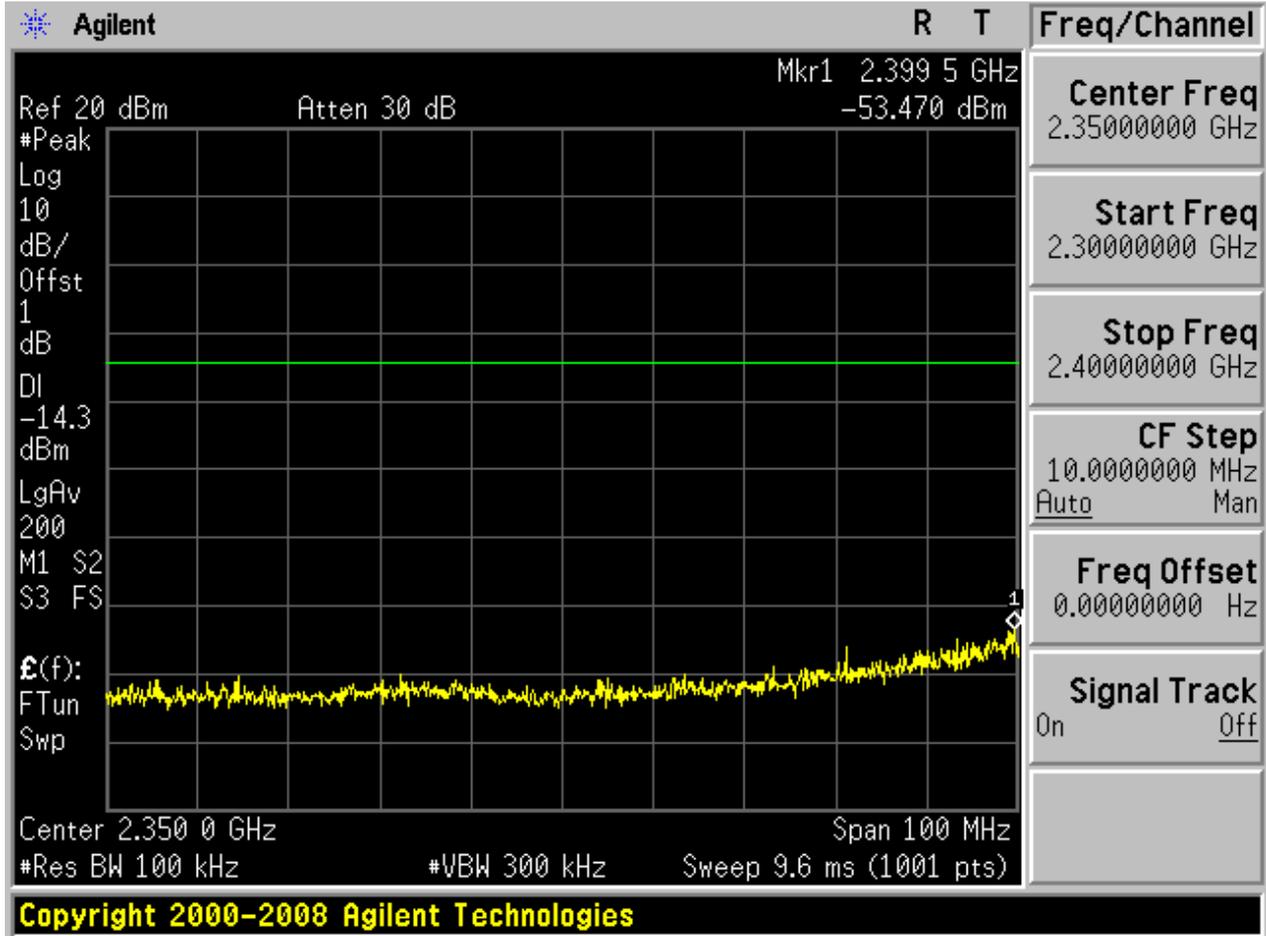


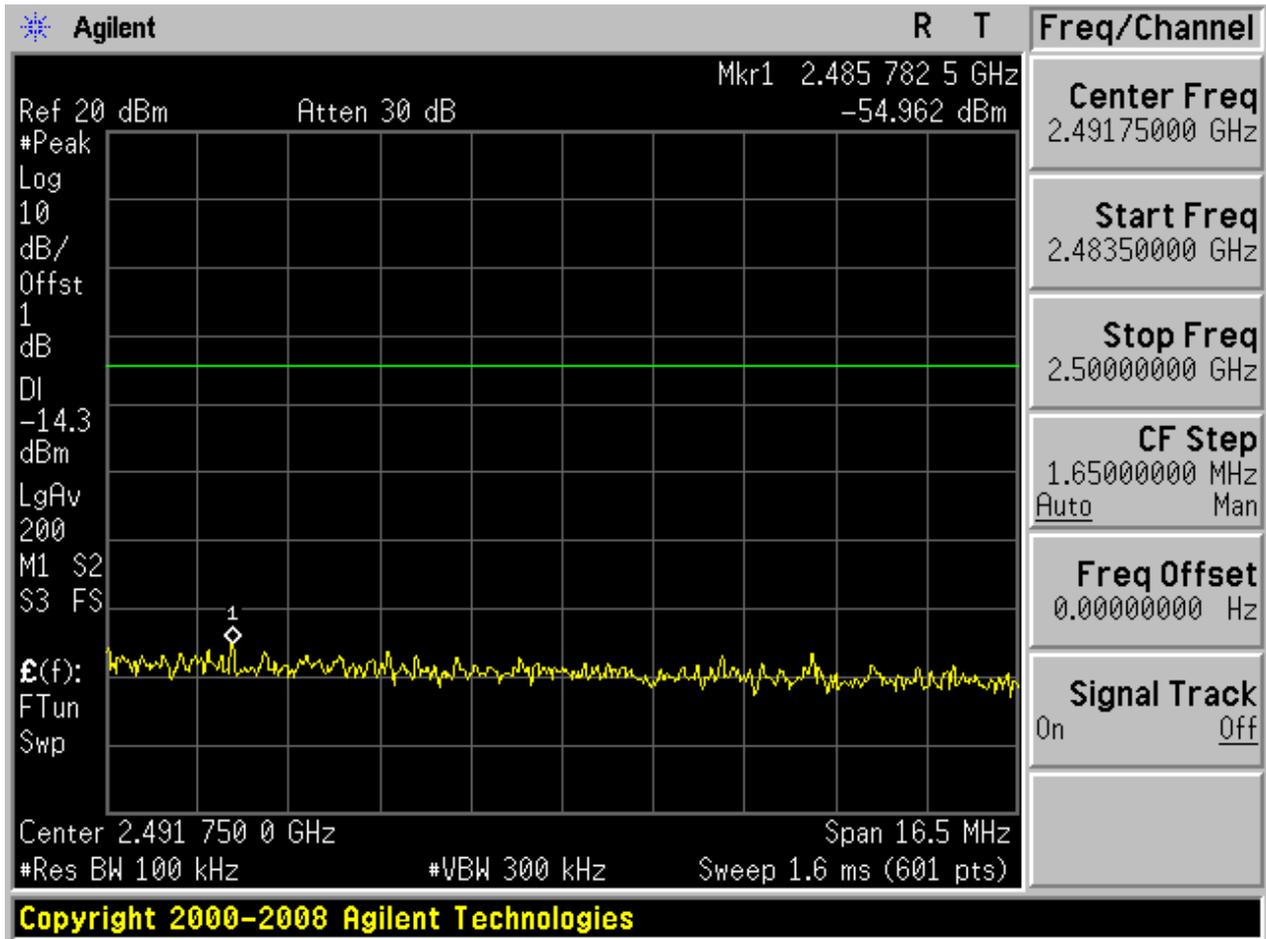
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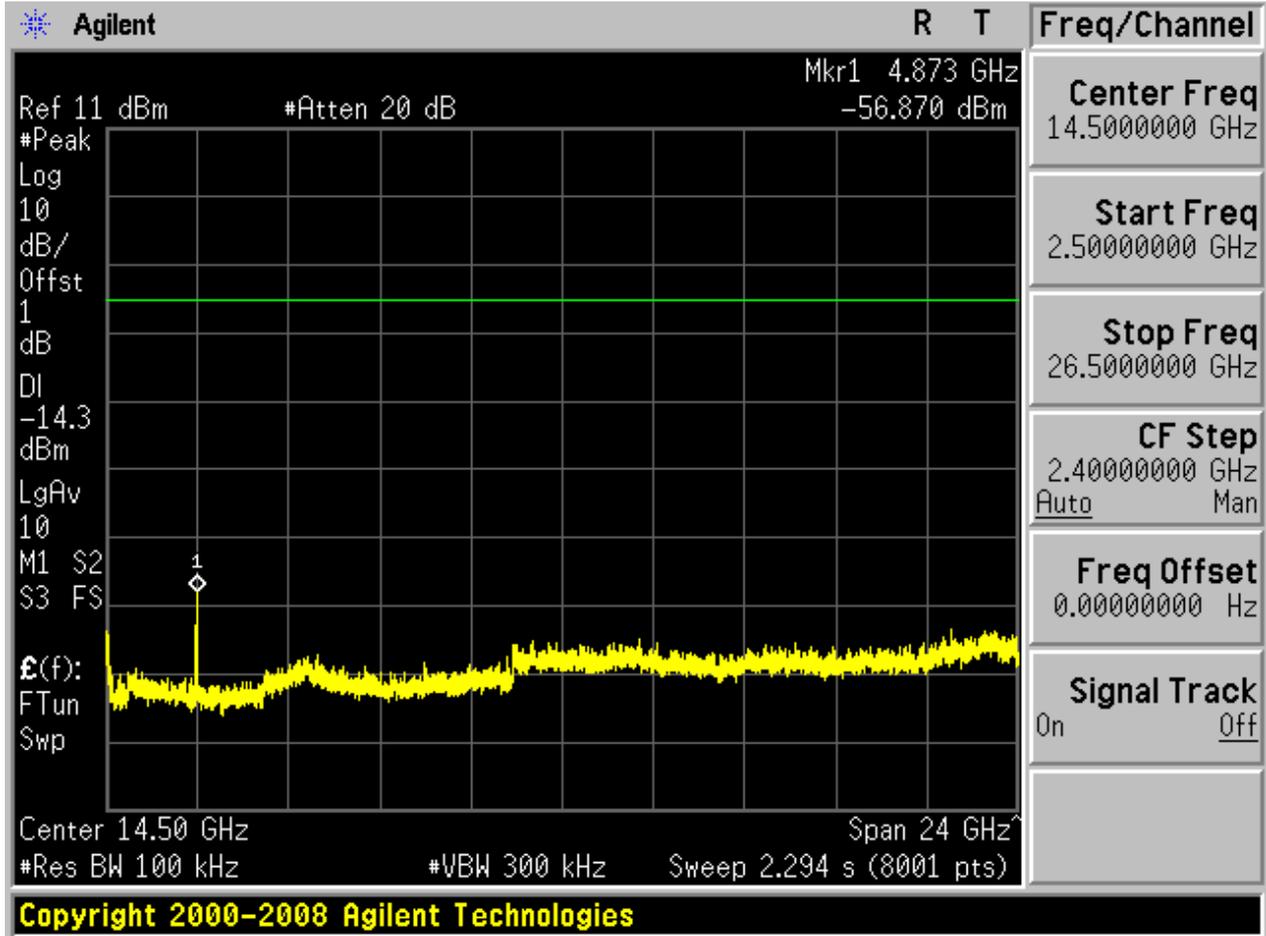








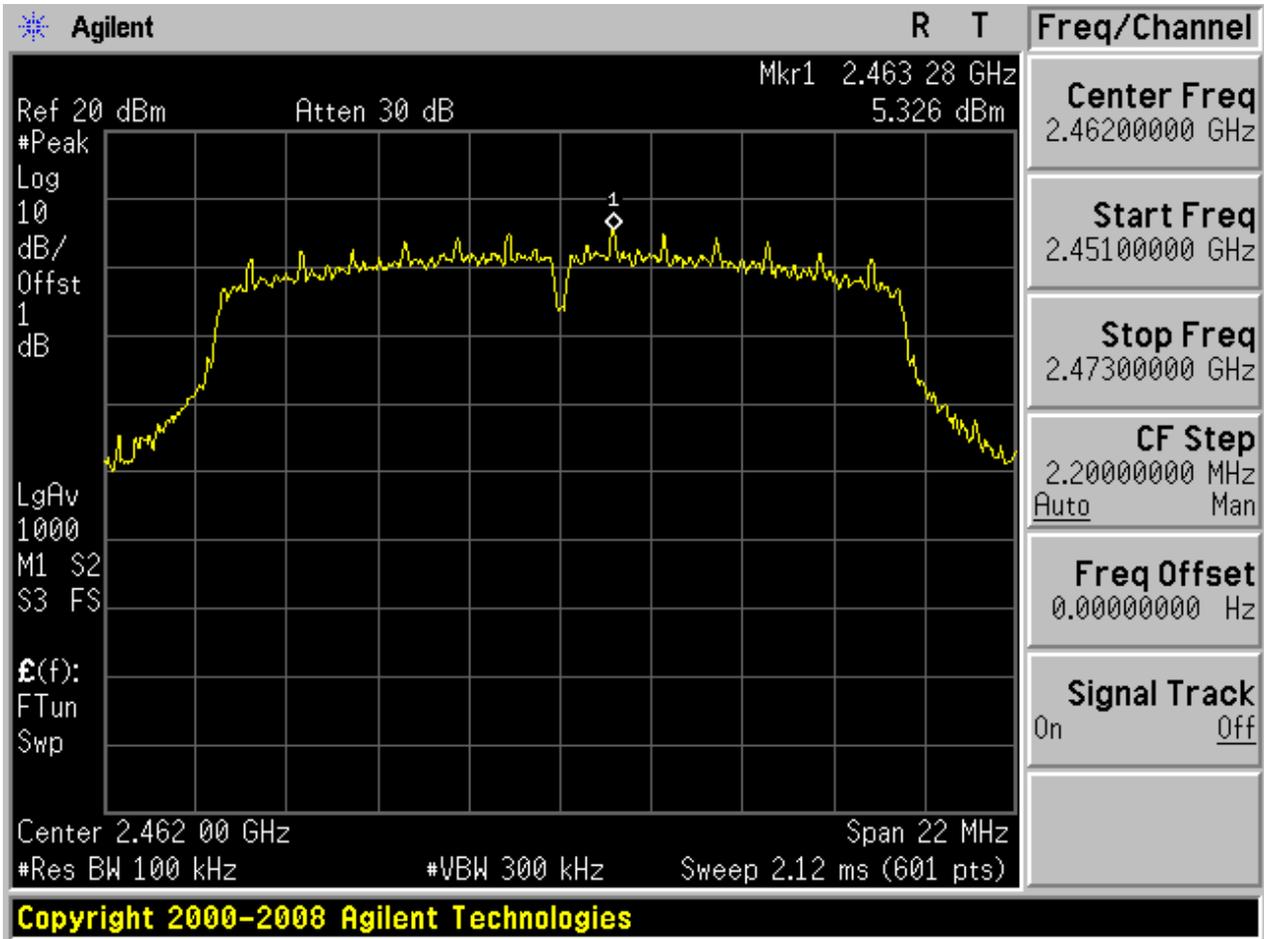






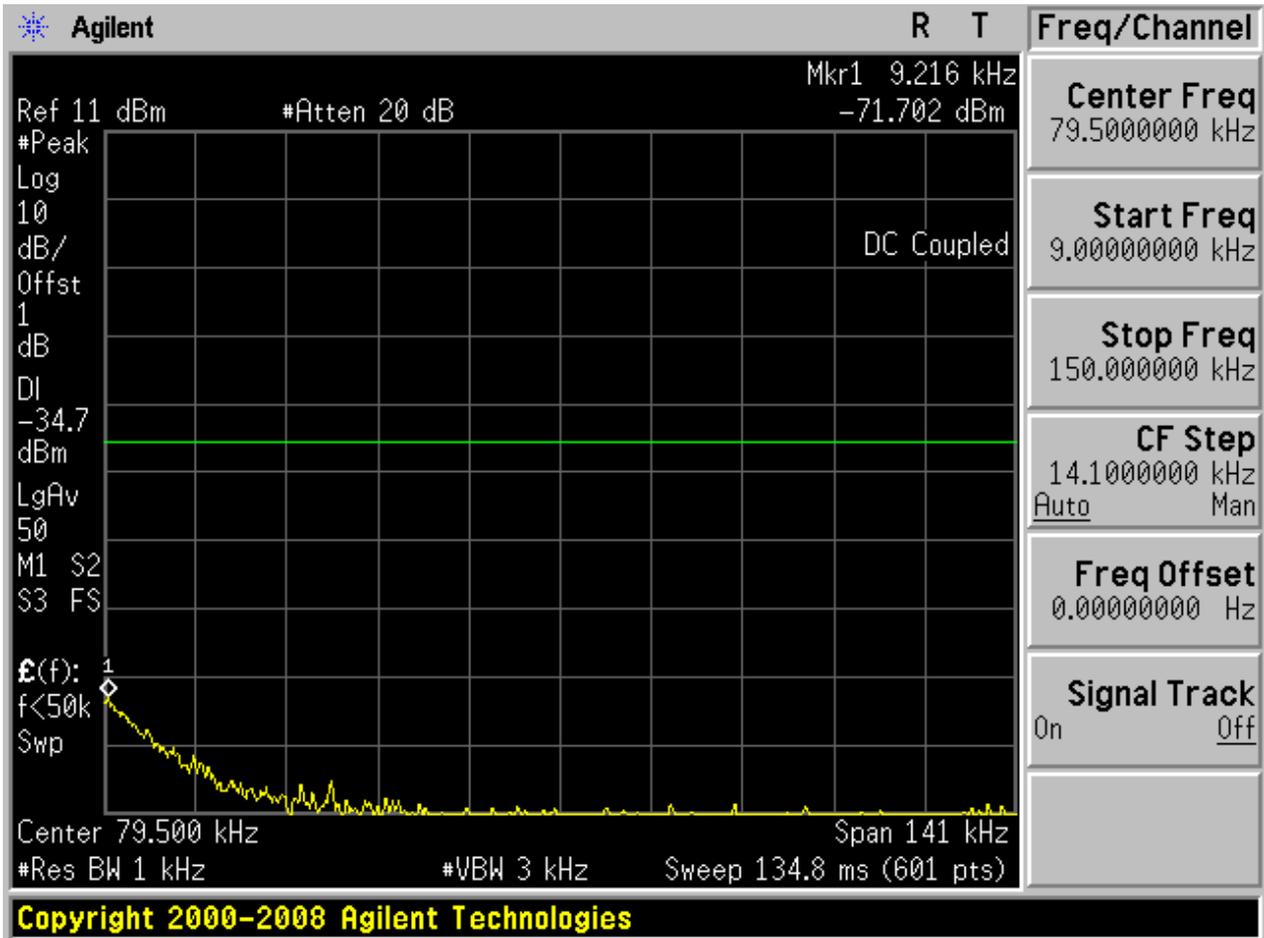
## 2.6 11G\_H

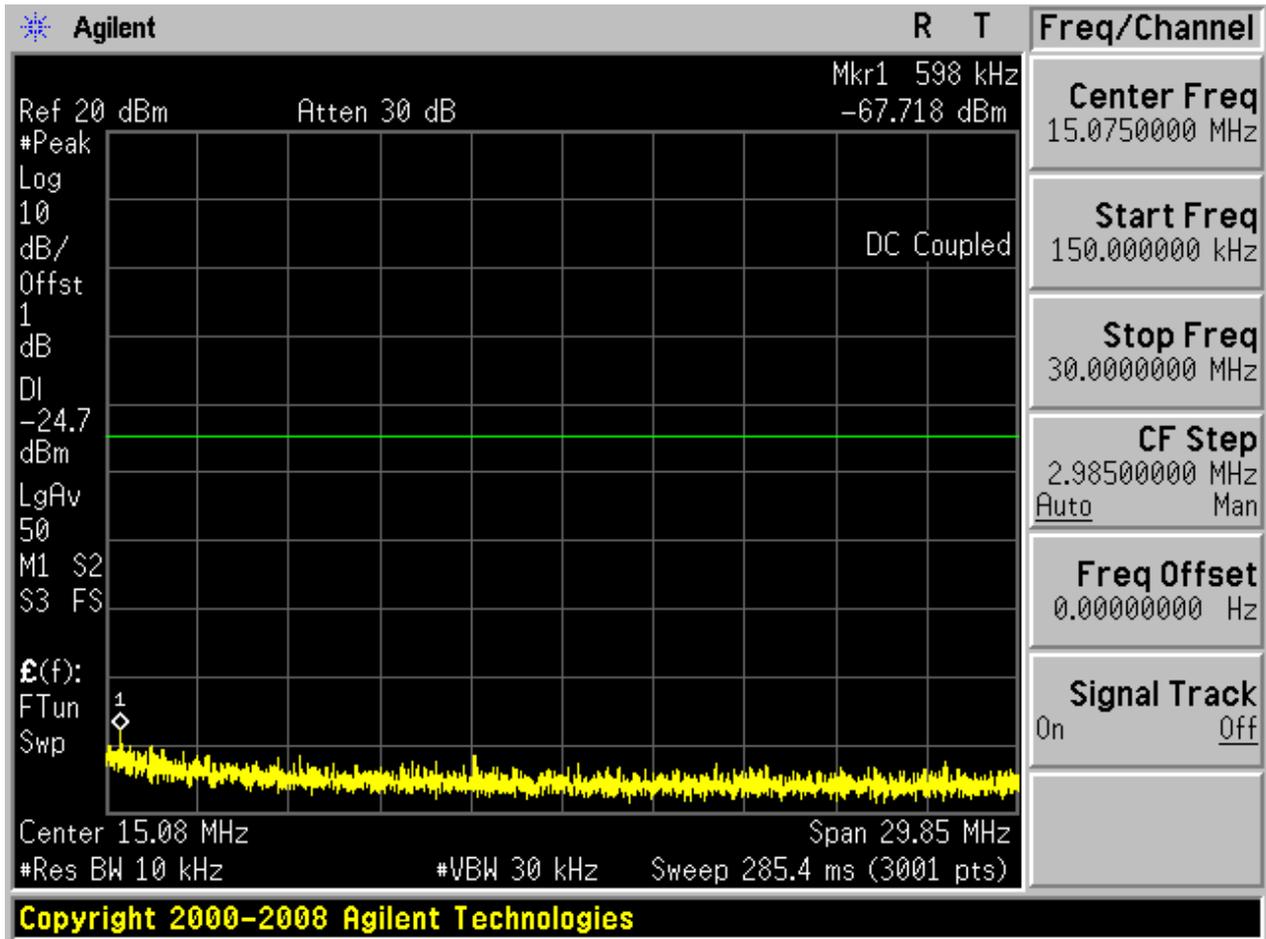
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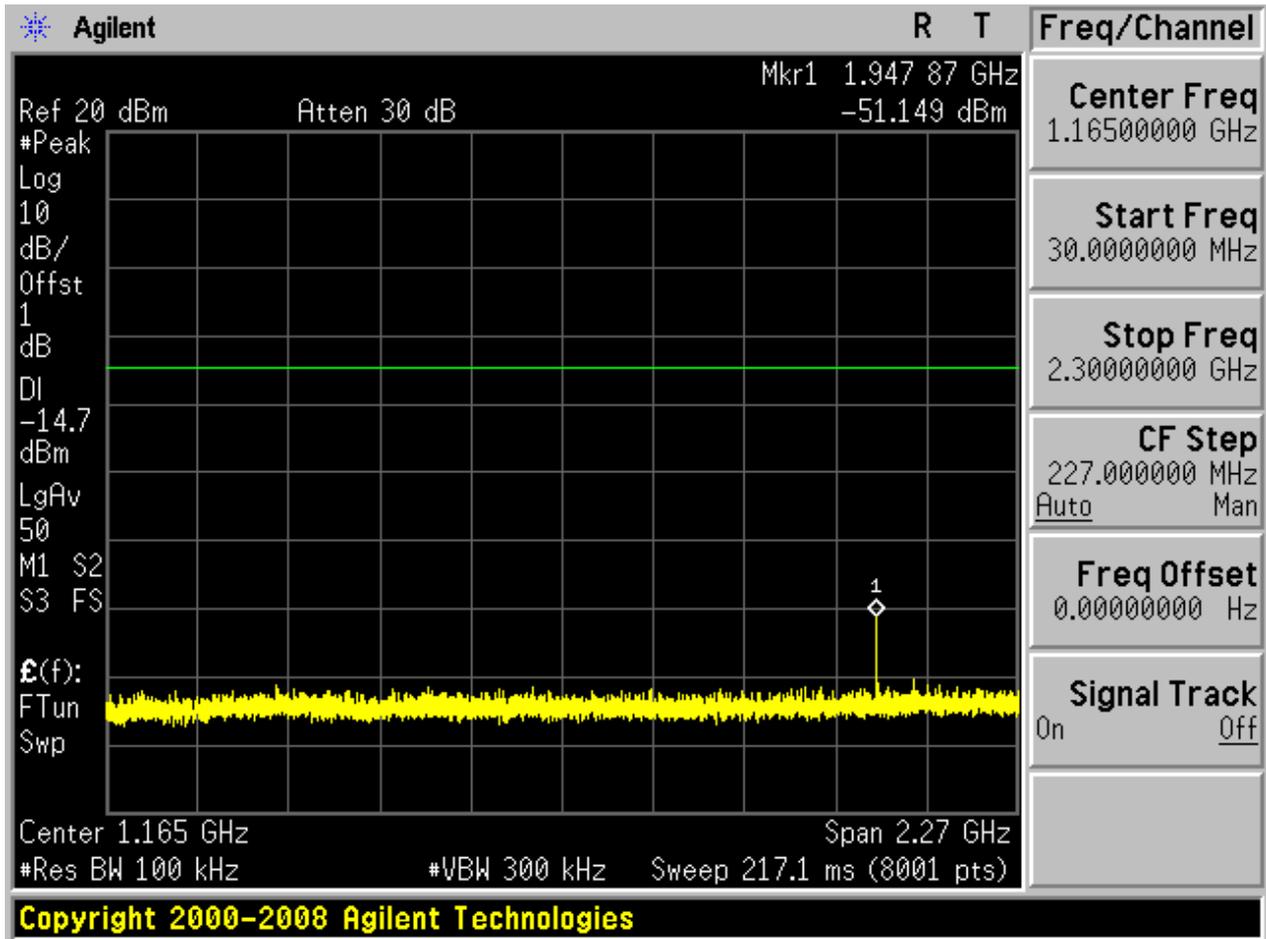


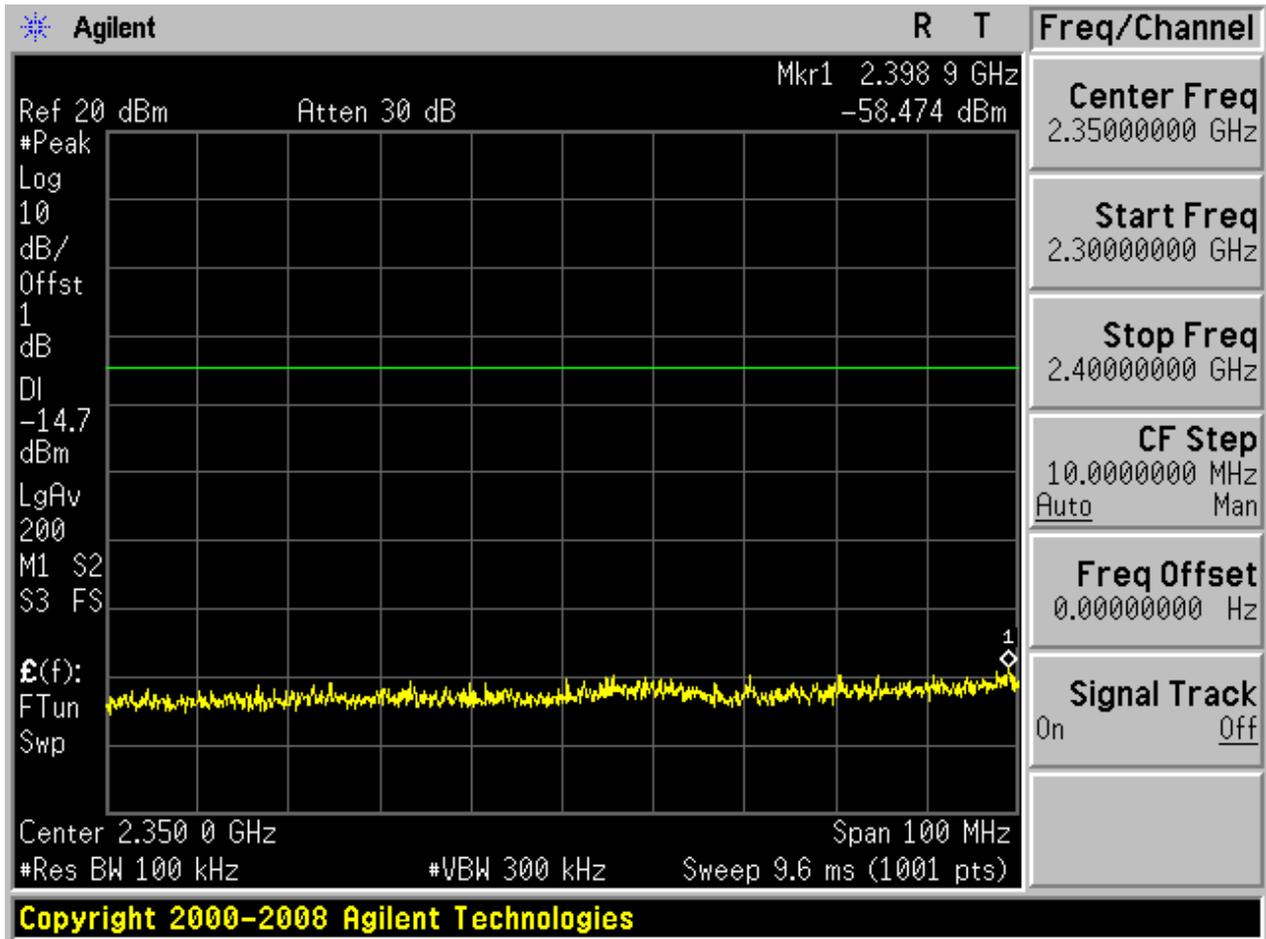


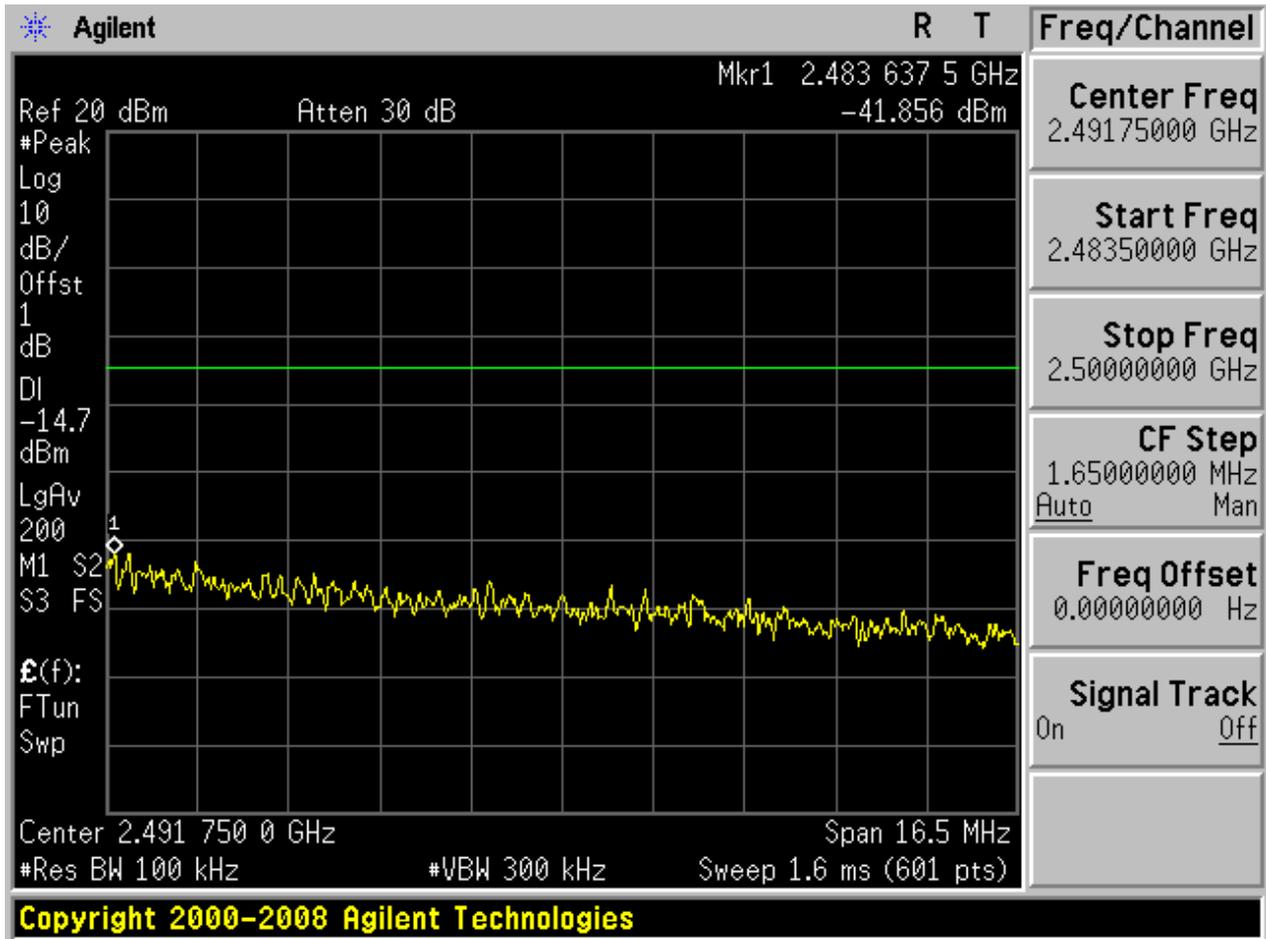
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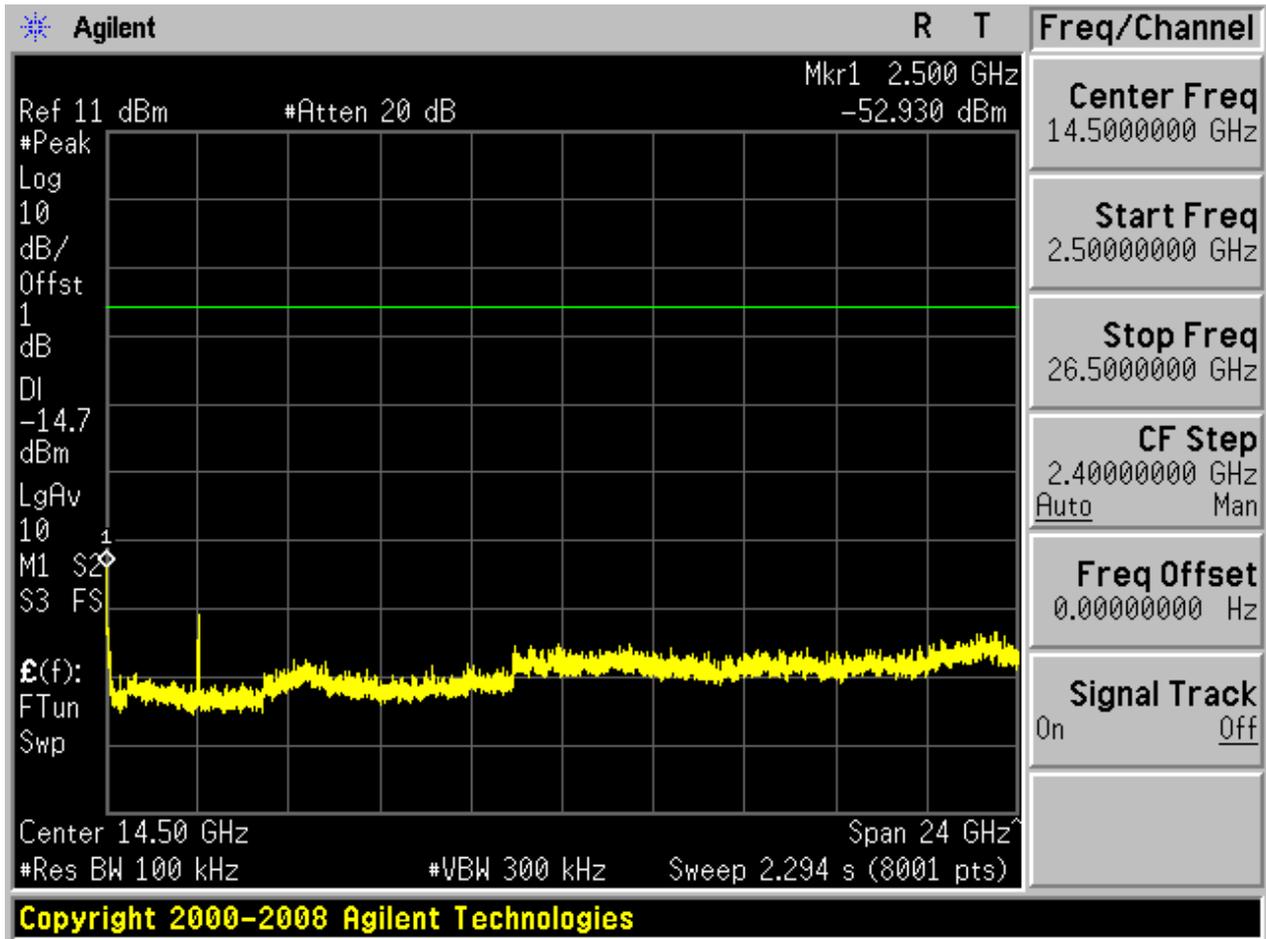








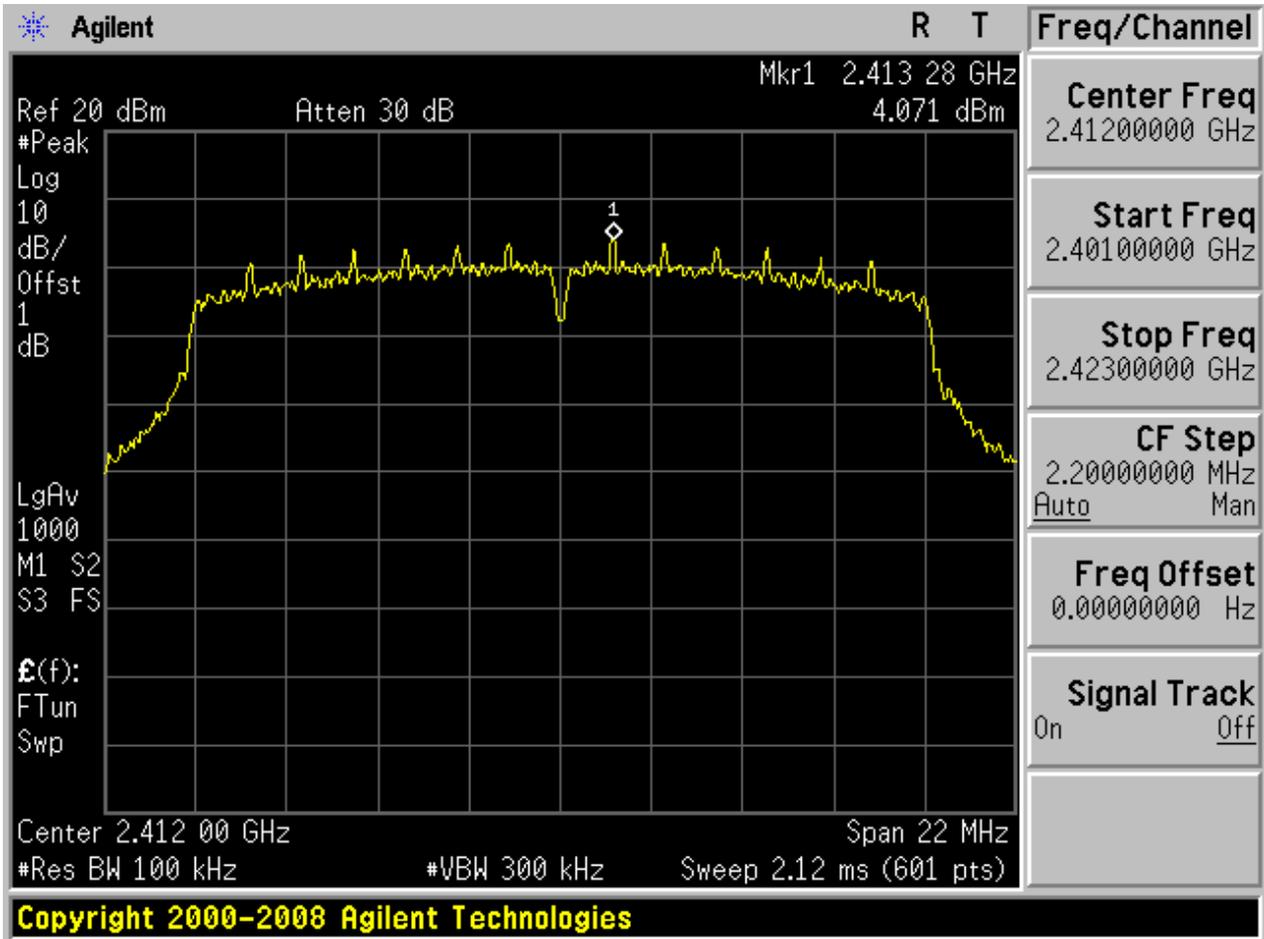






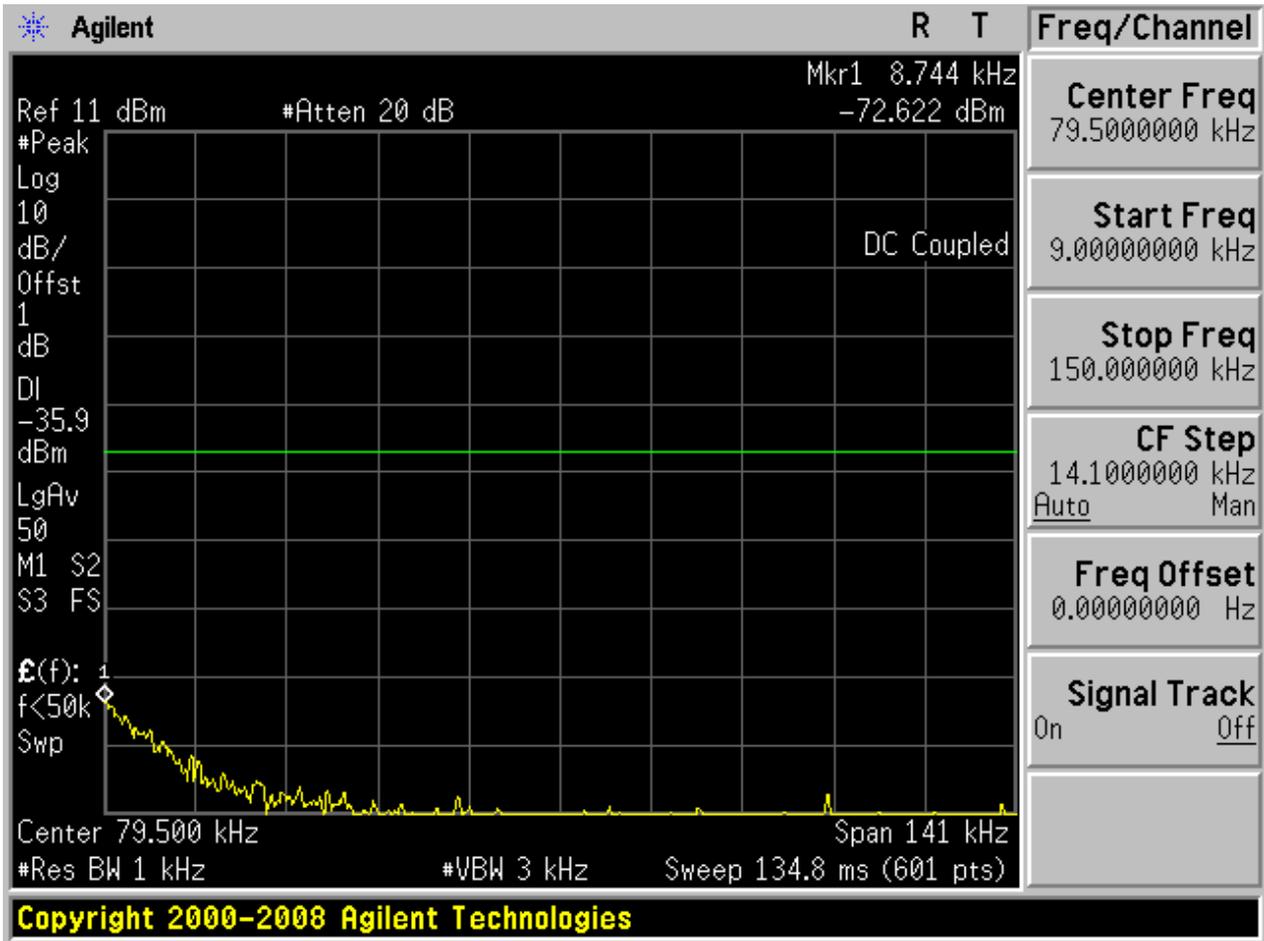
### 2.7 11N20\_SISO\_L

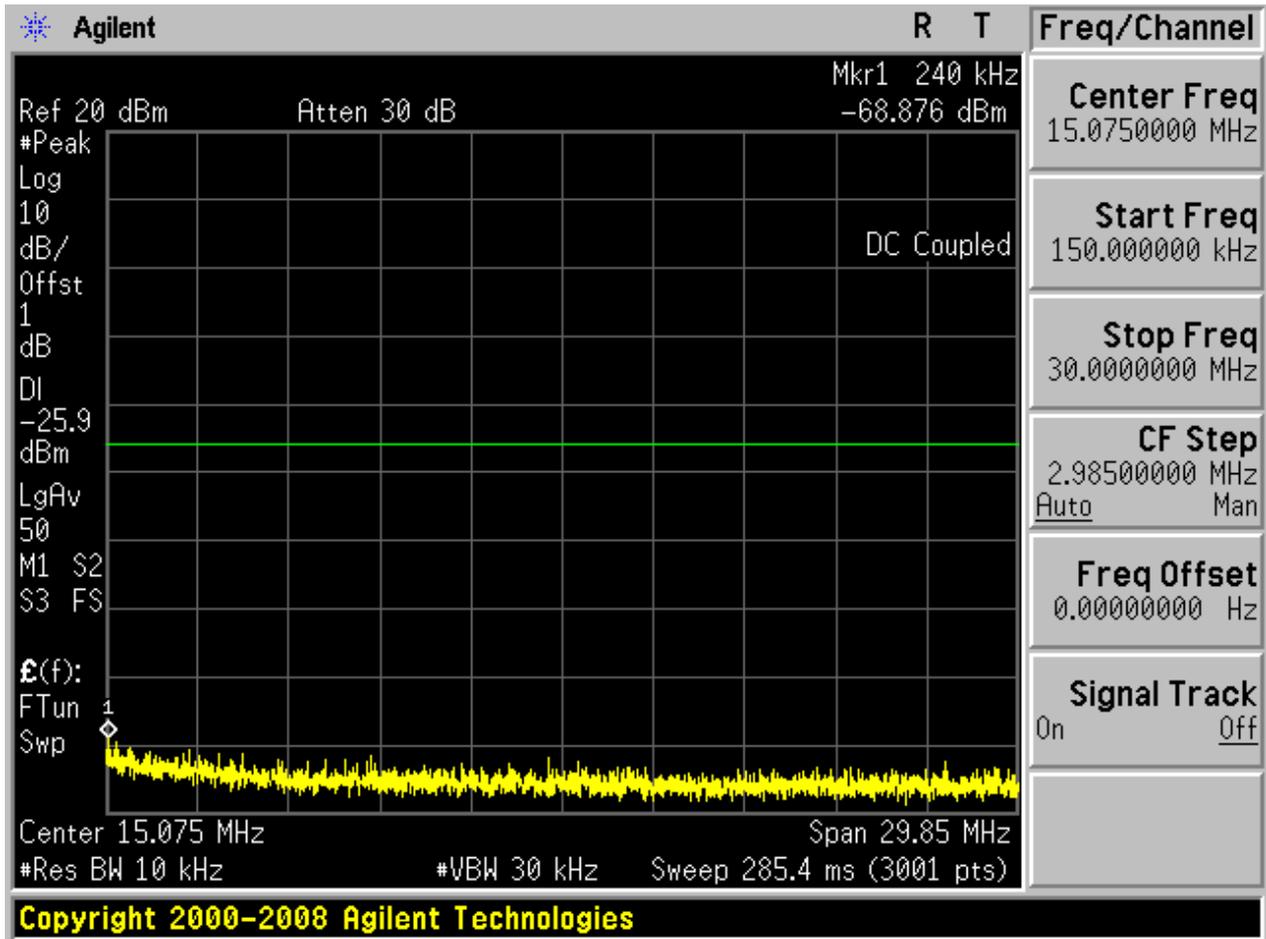
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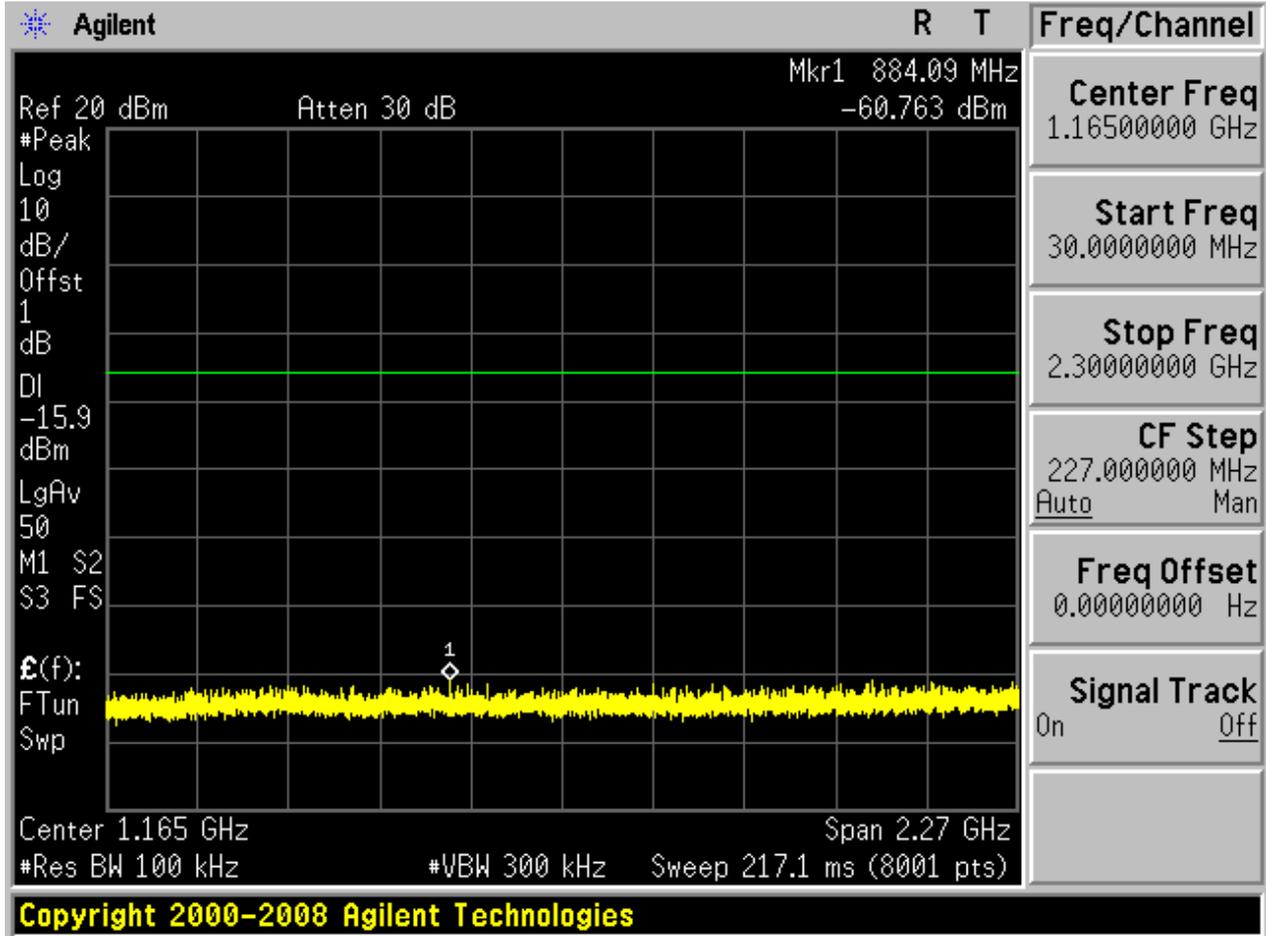


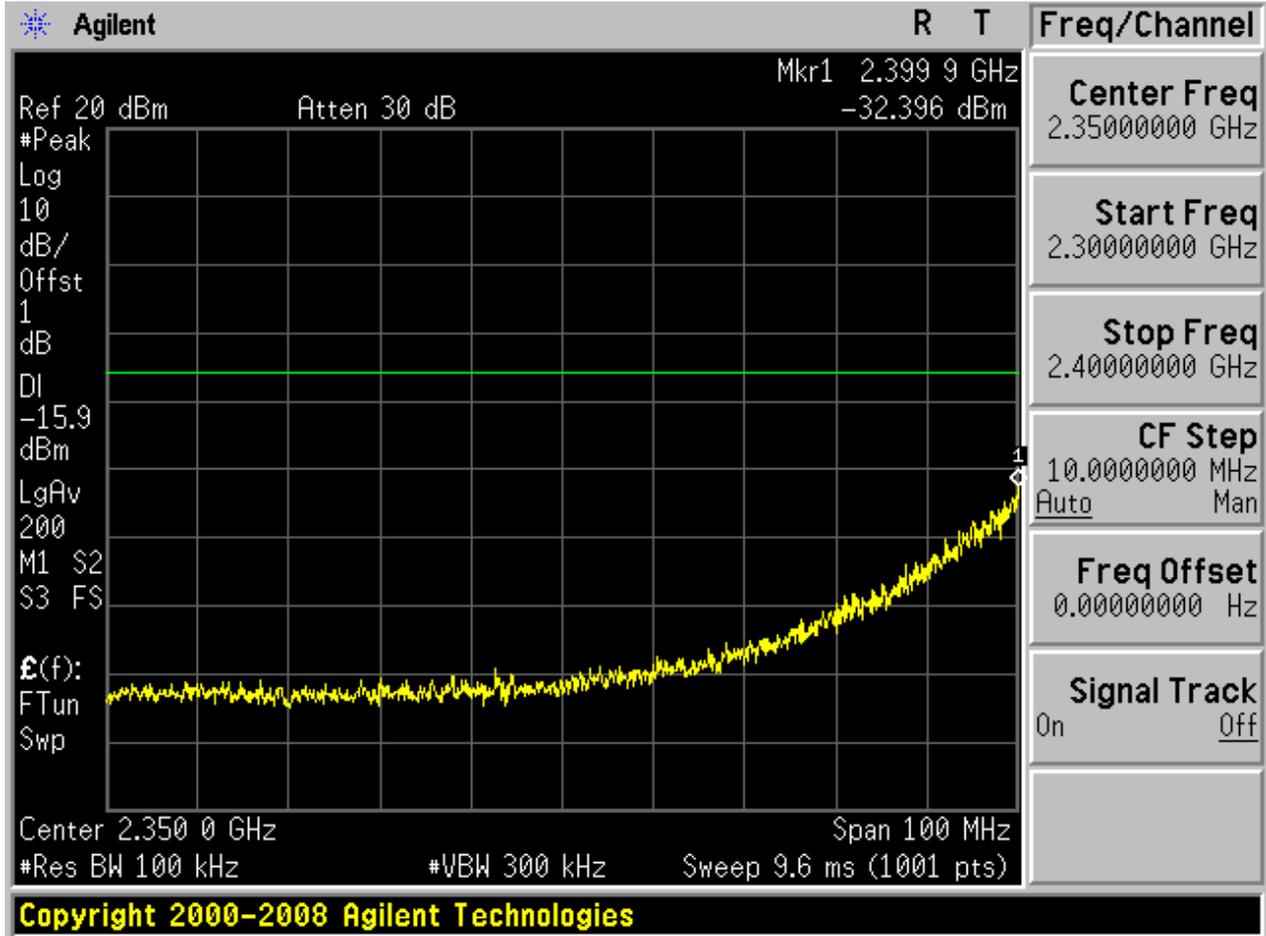


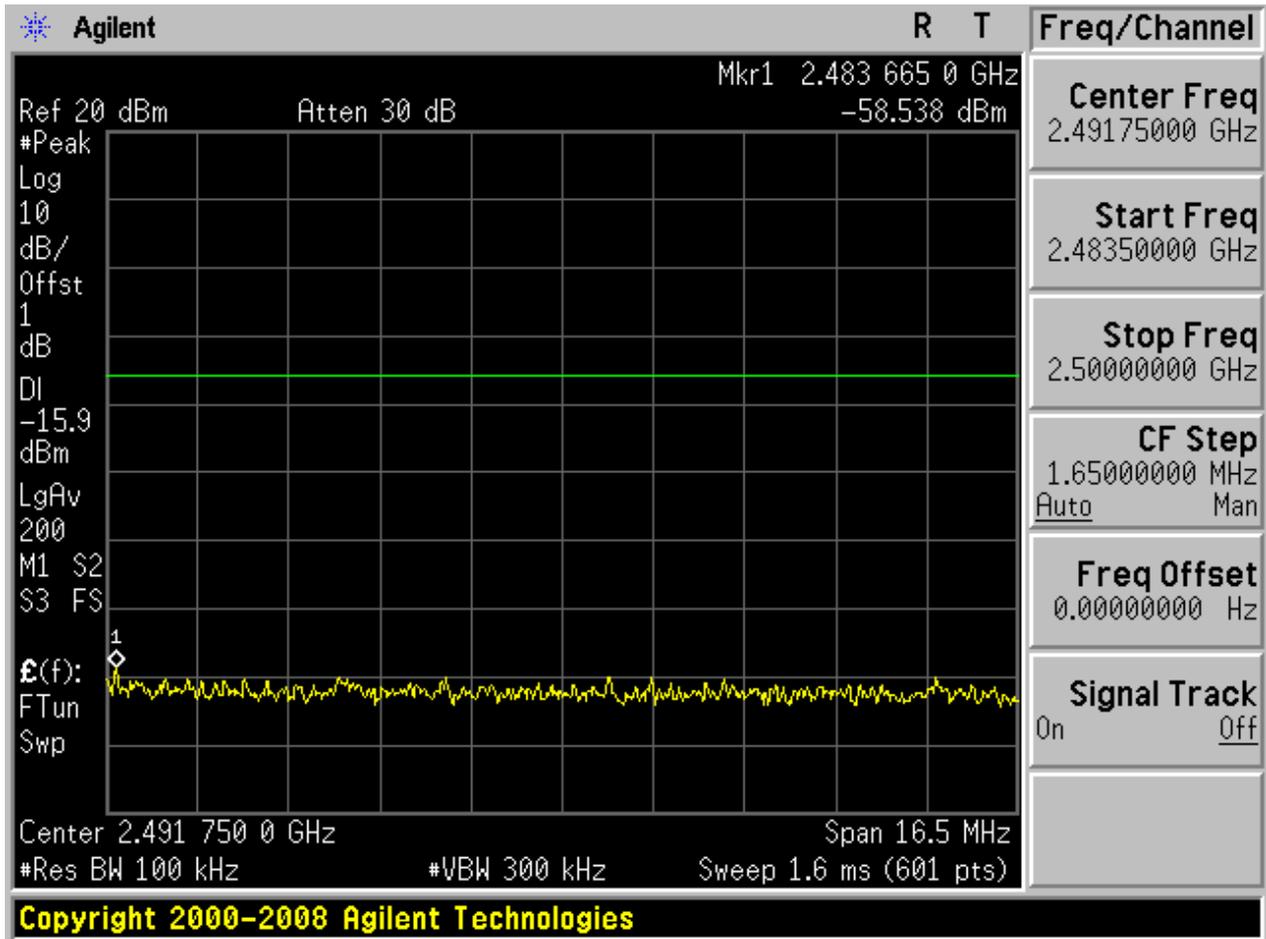
Puw:

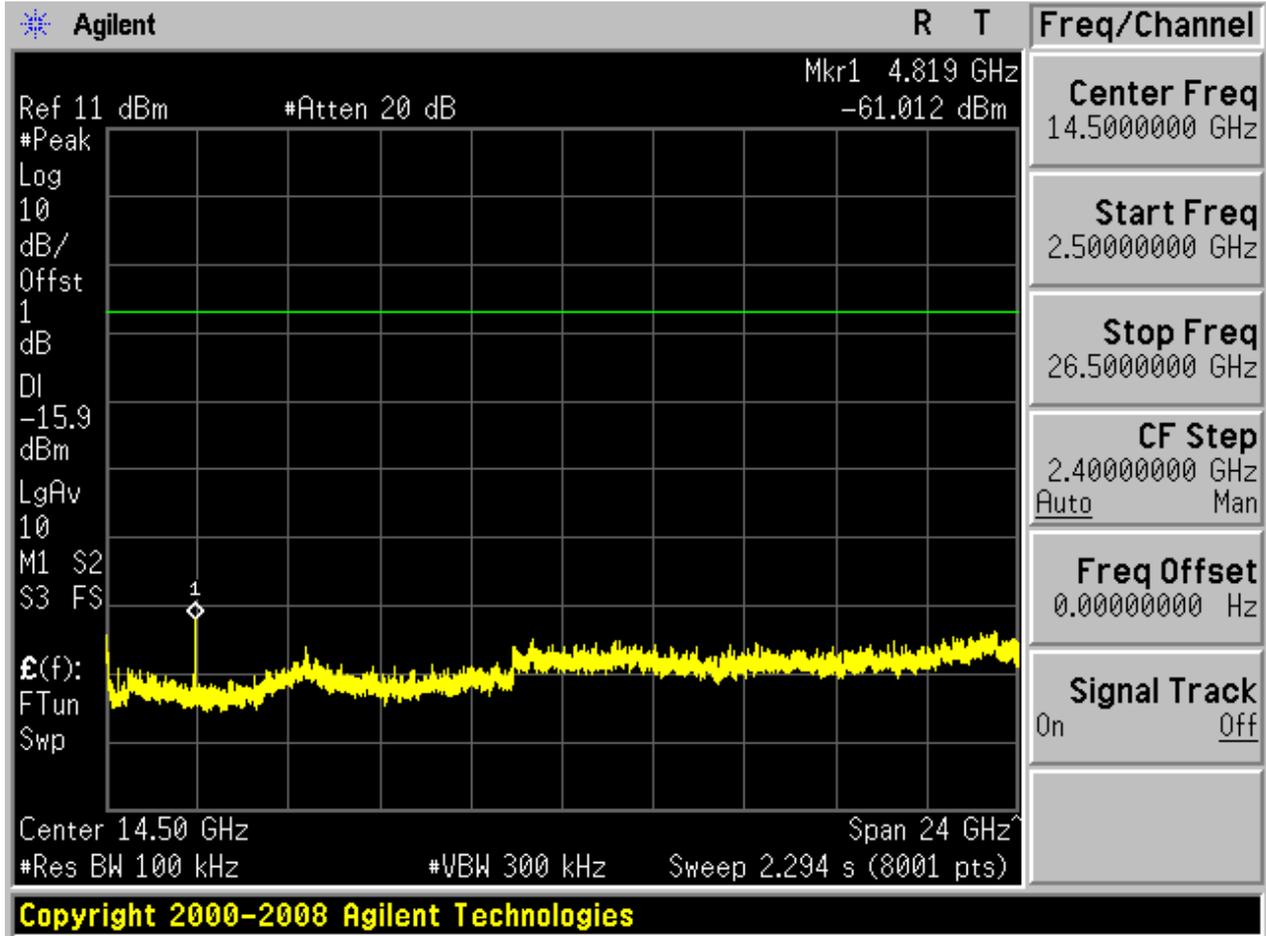








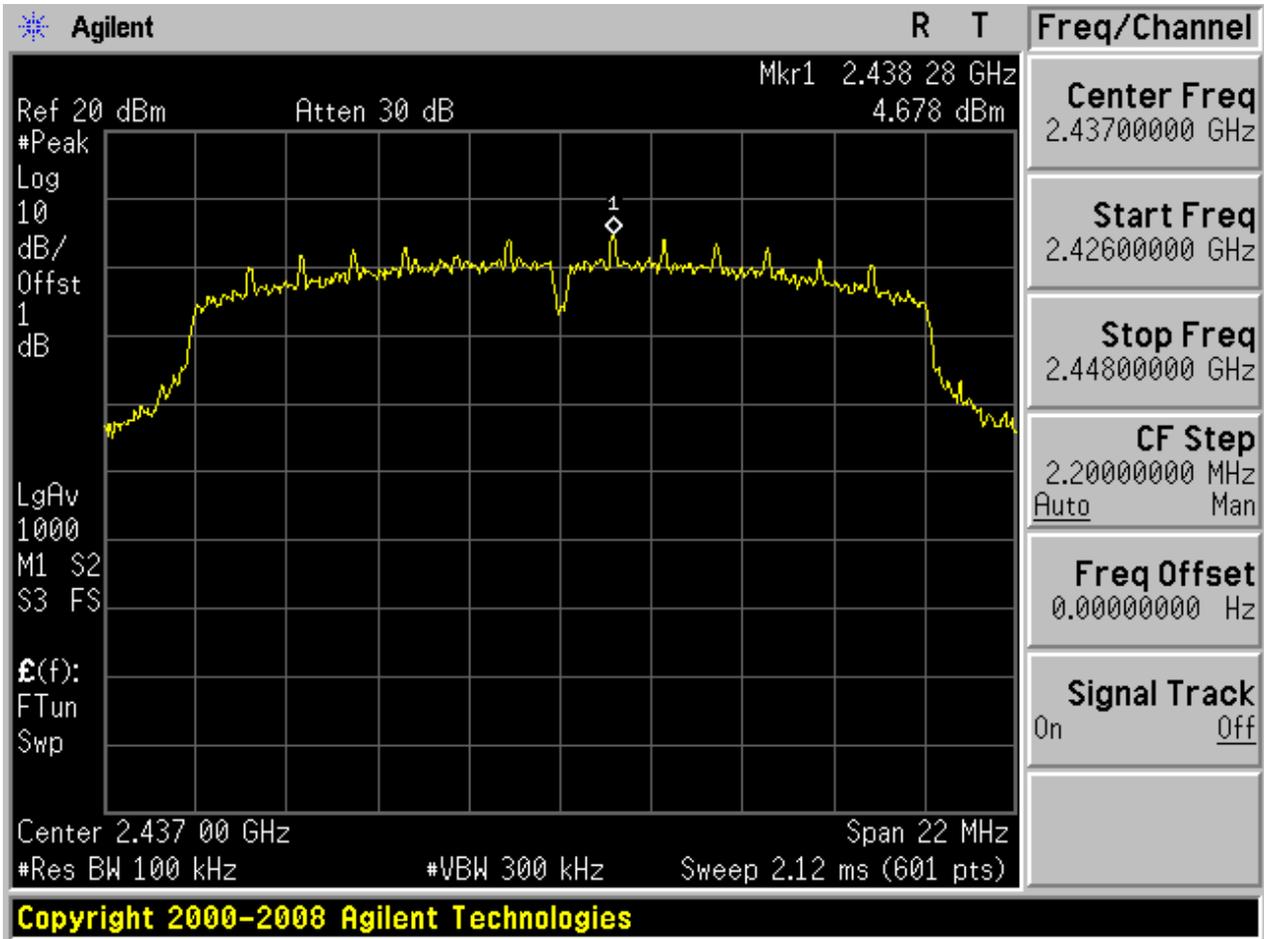






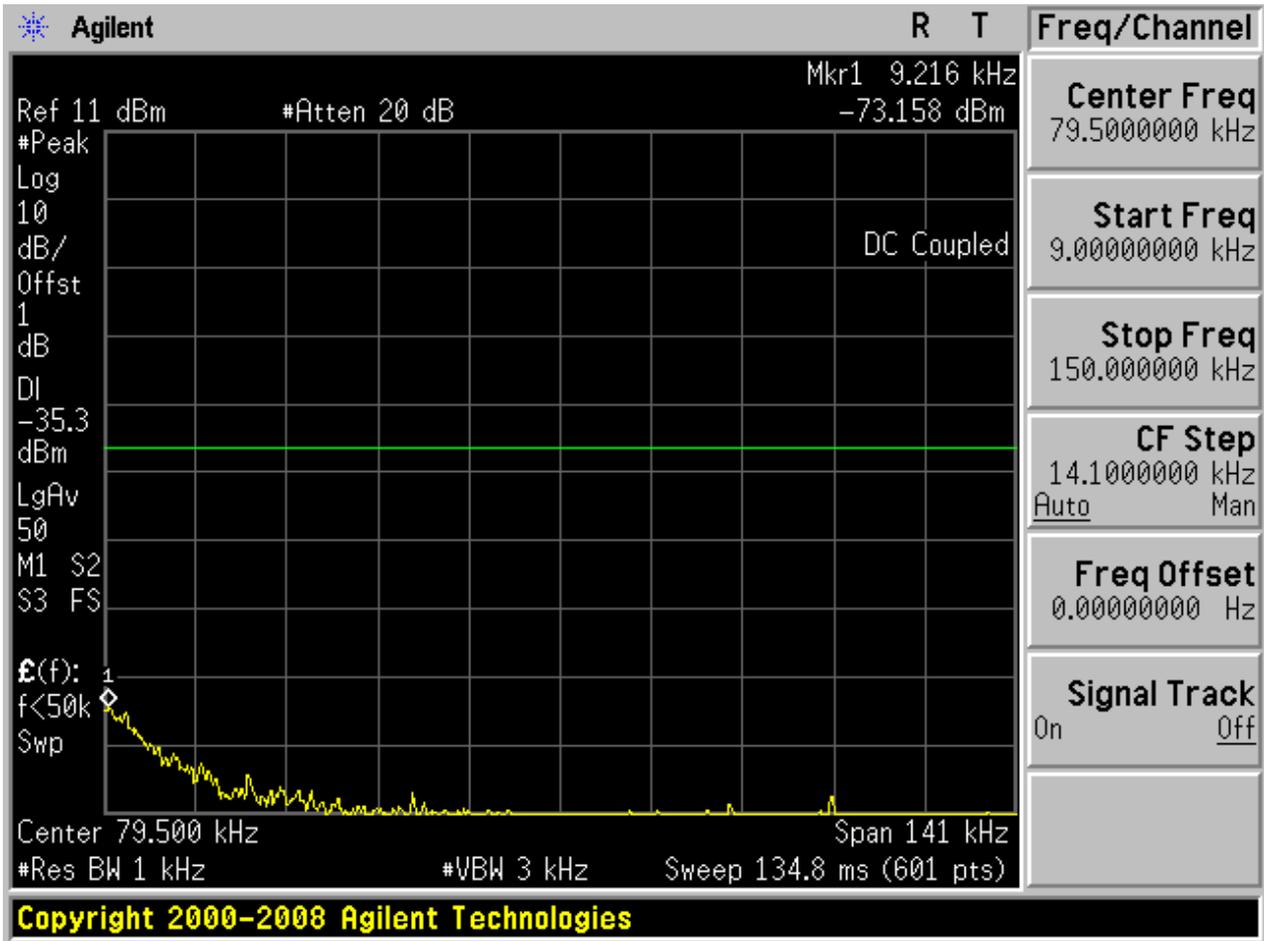
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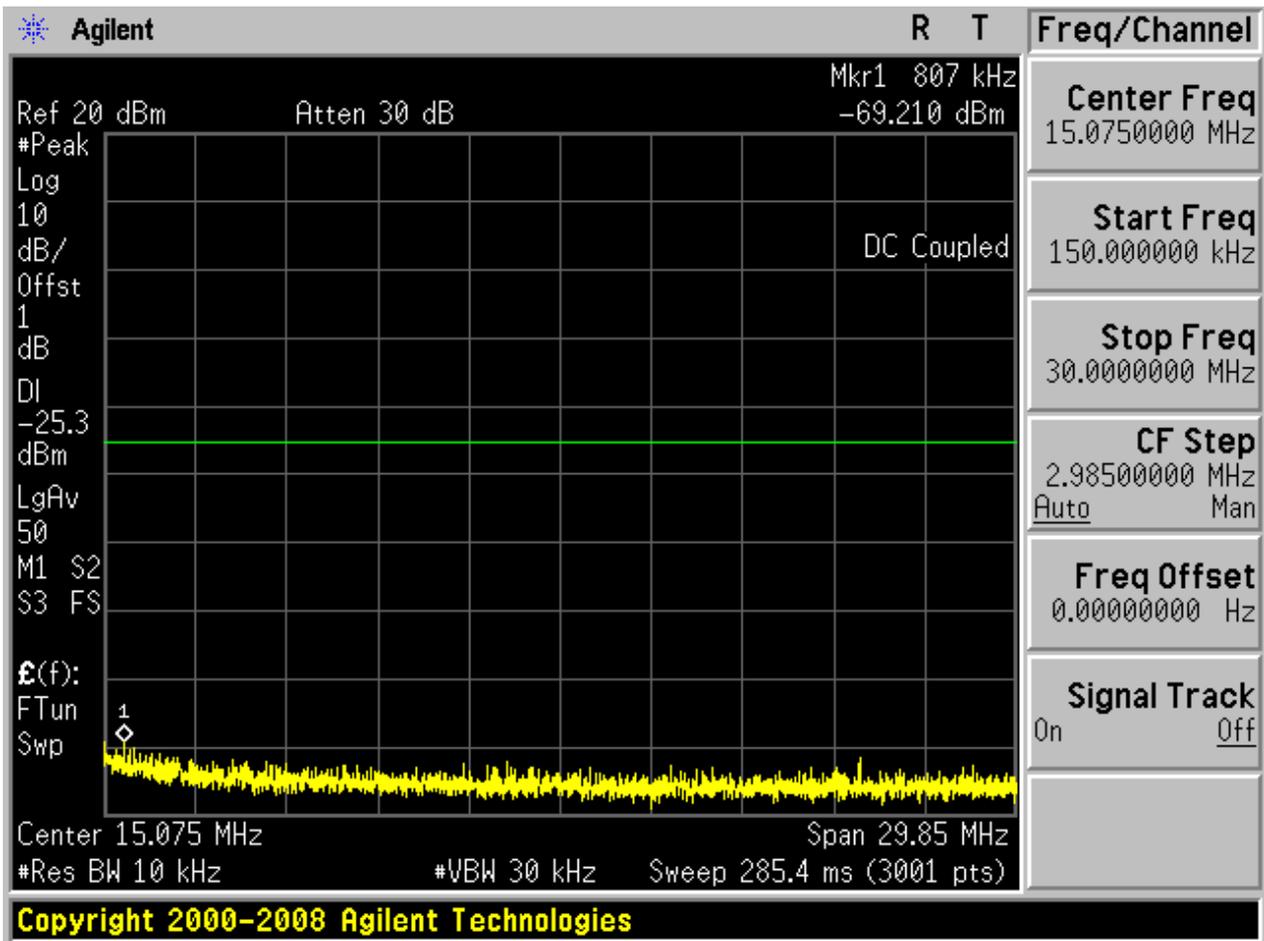
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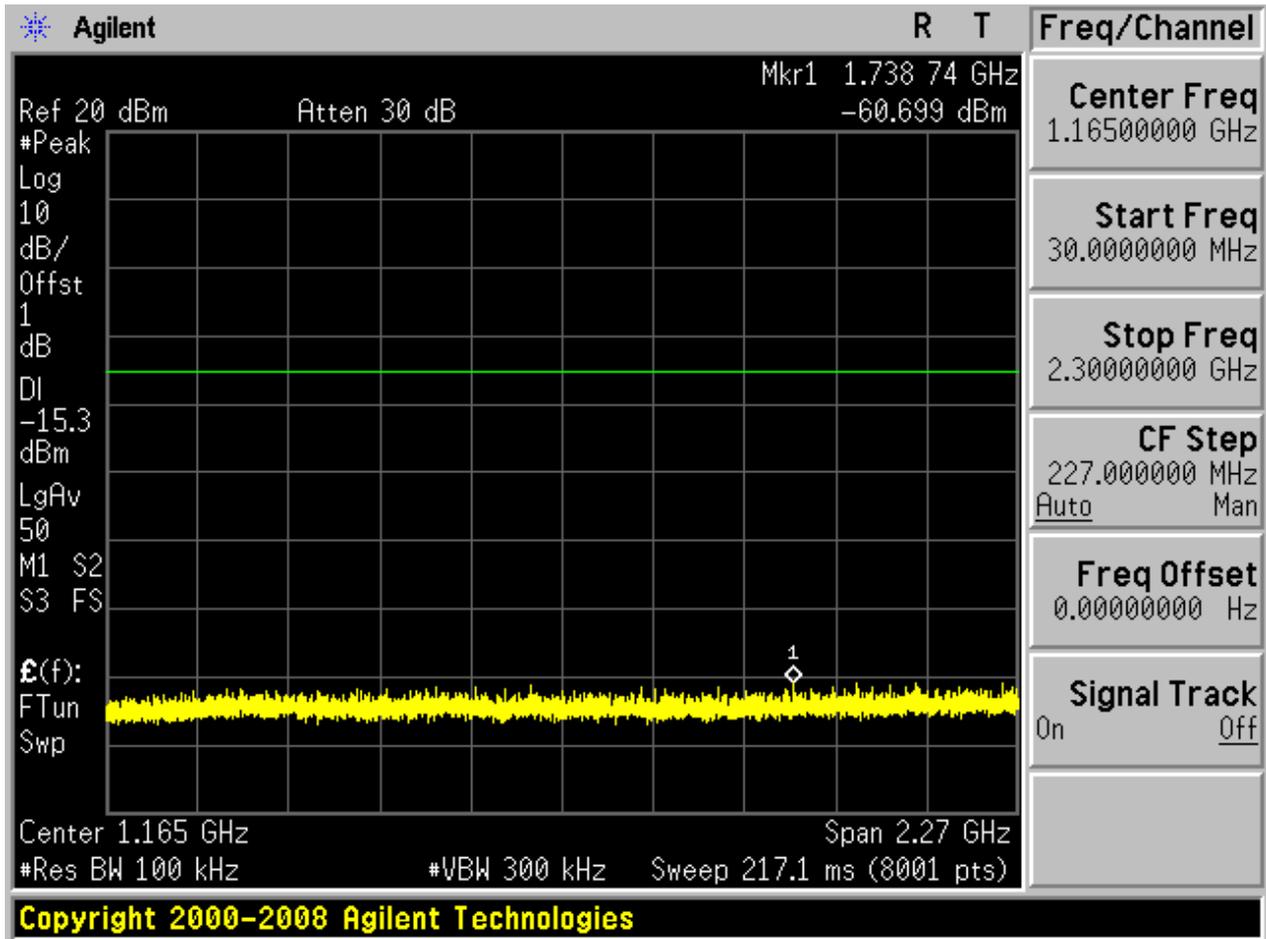


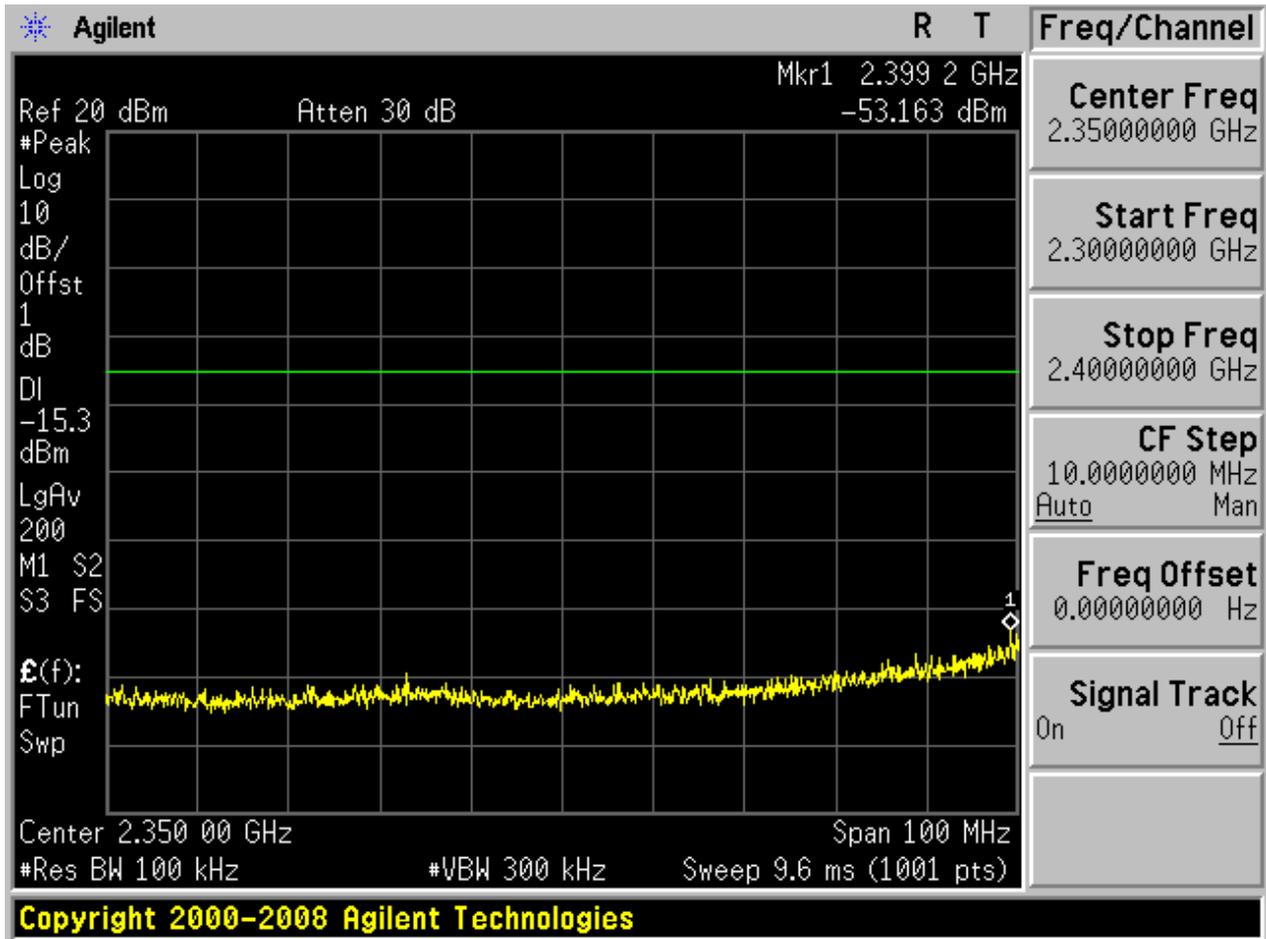


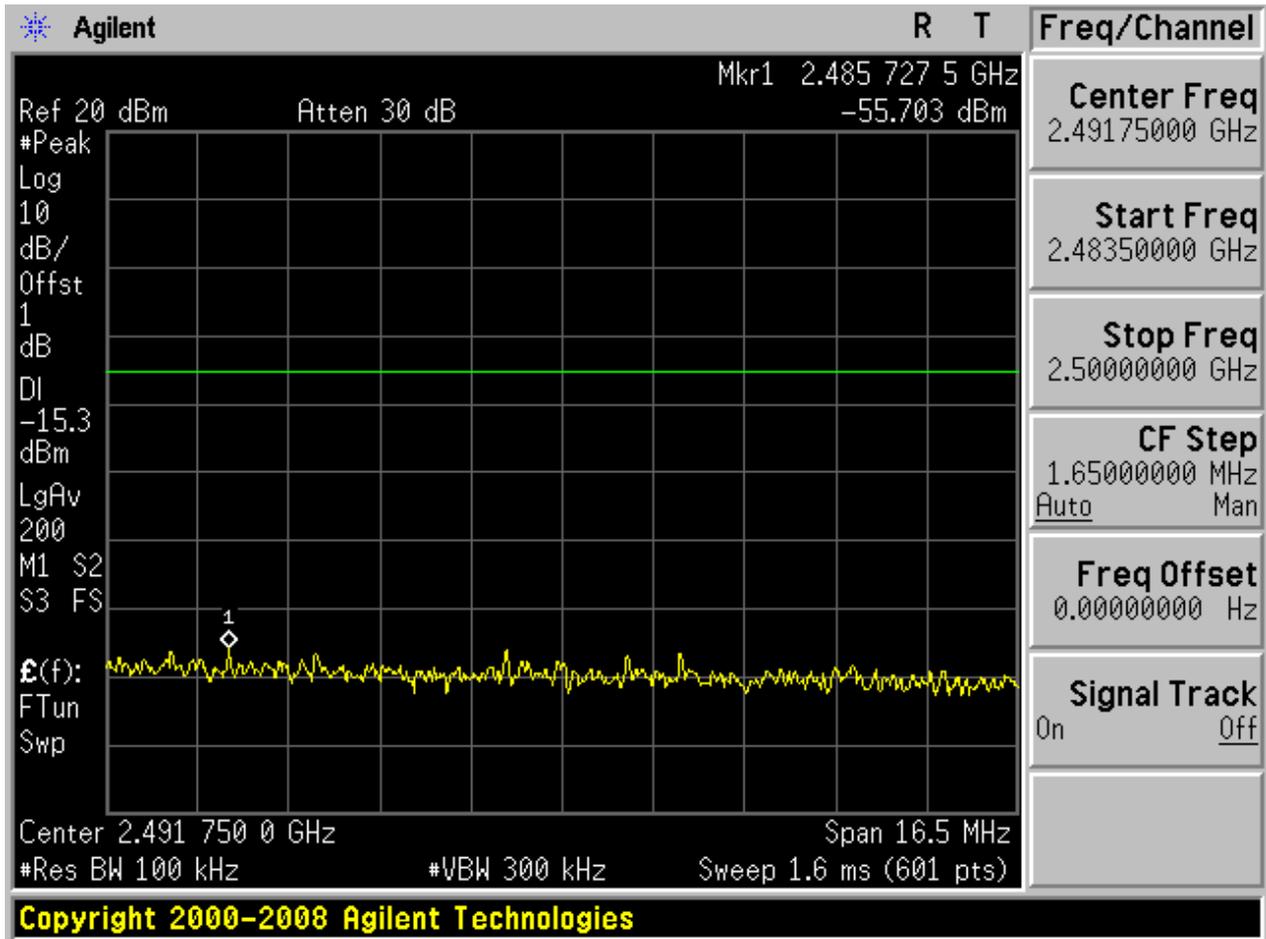
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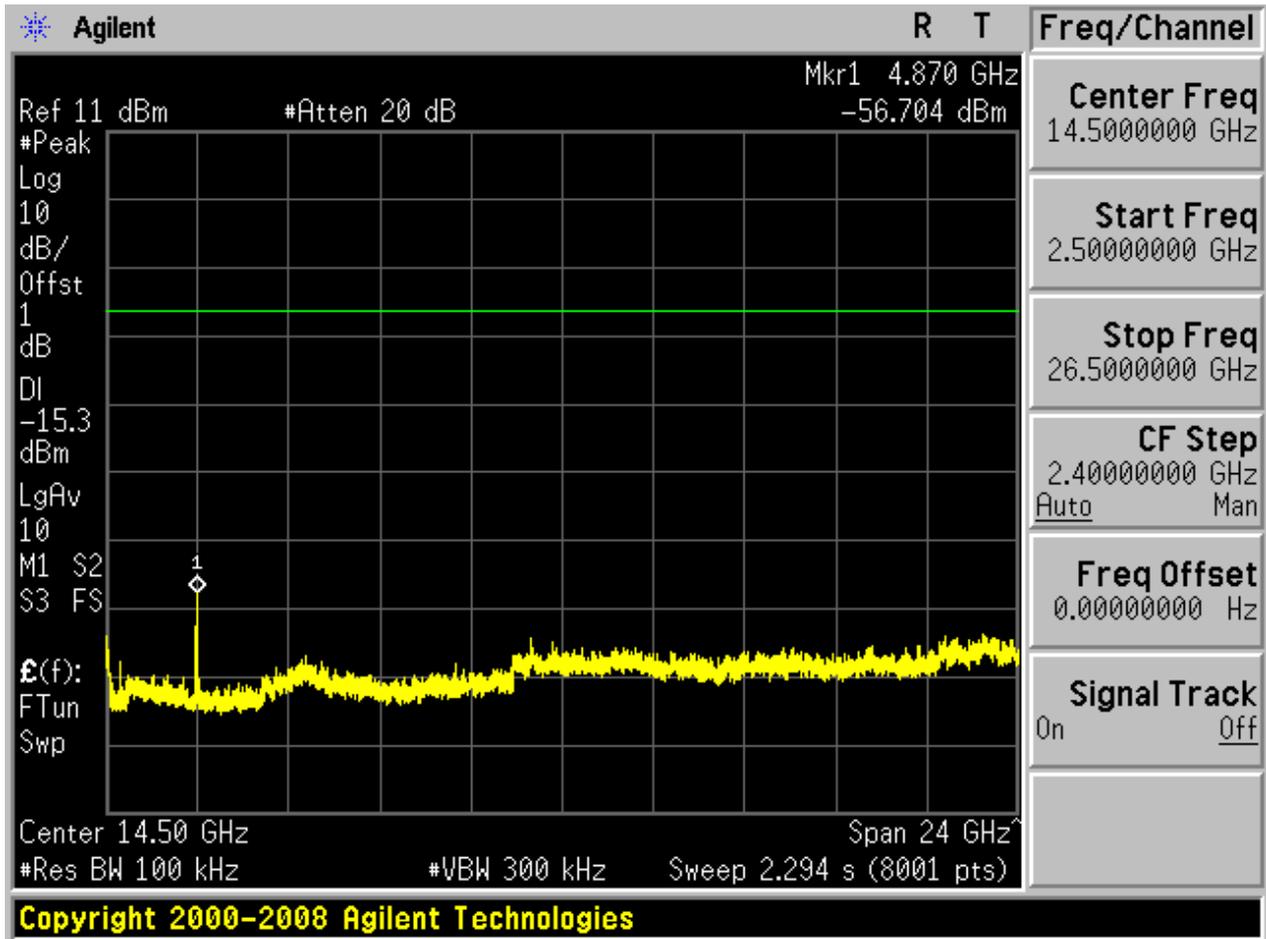








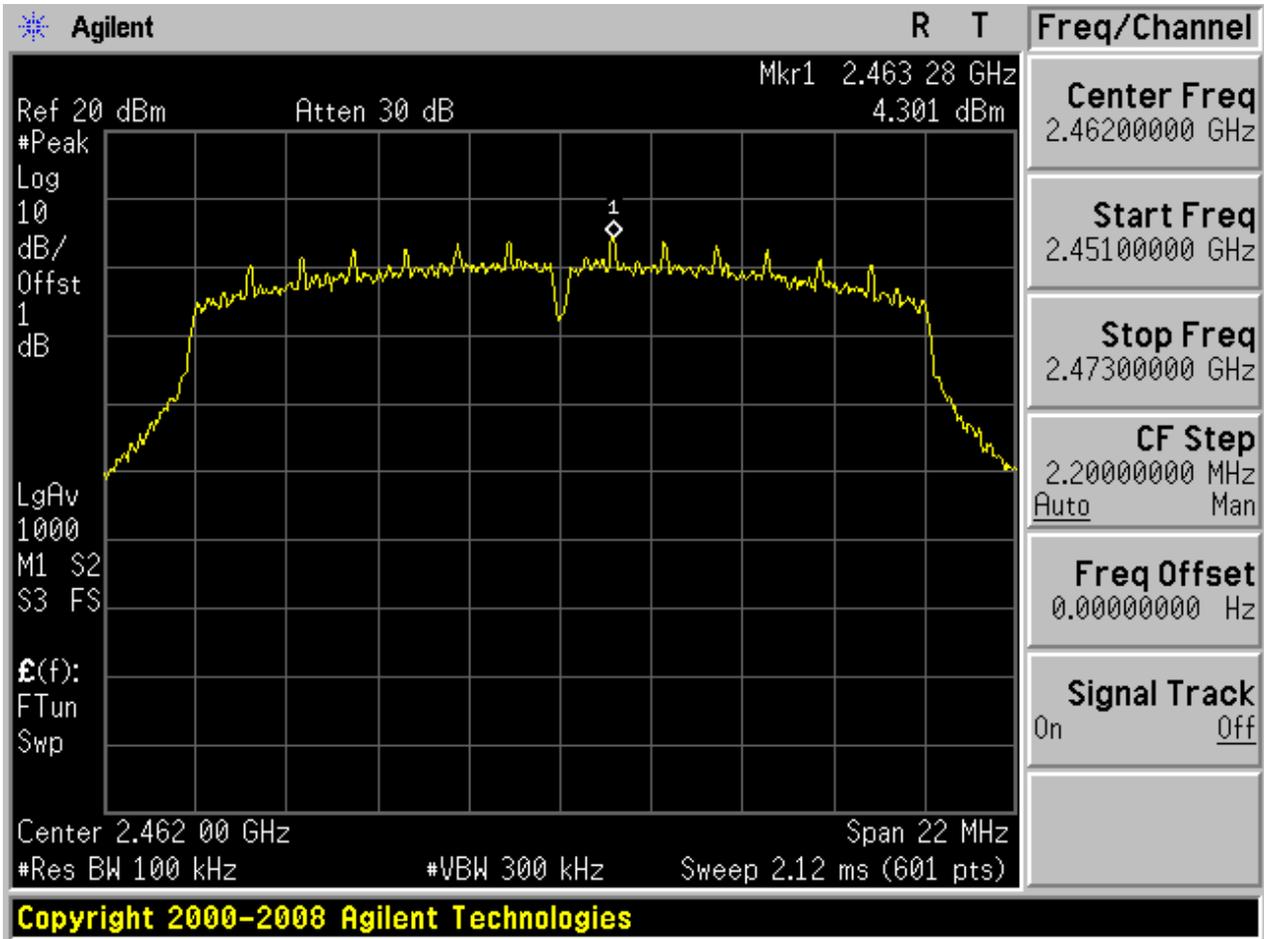






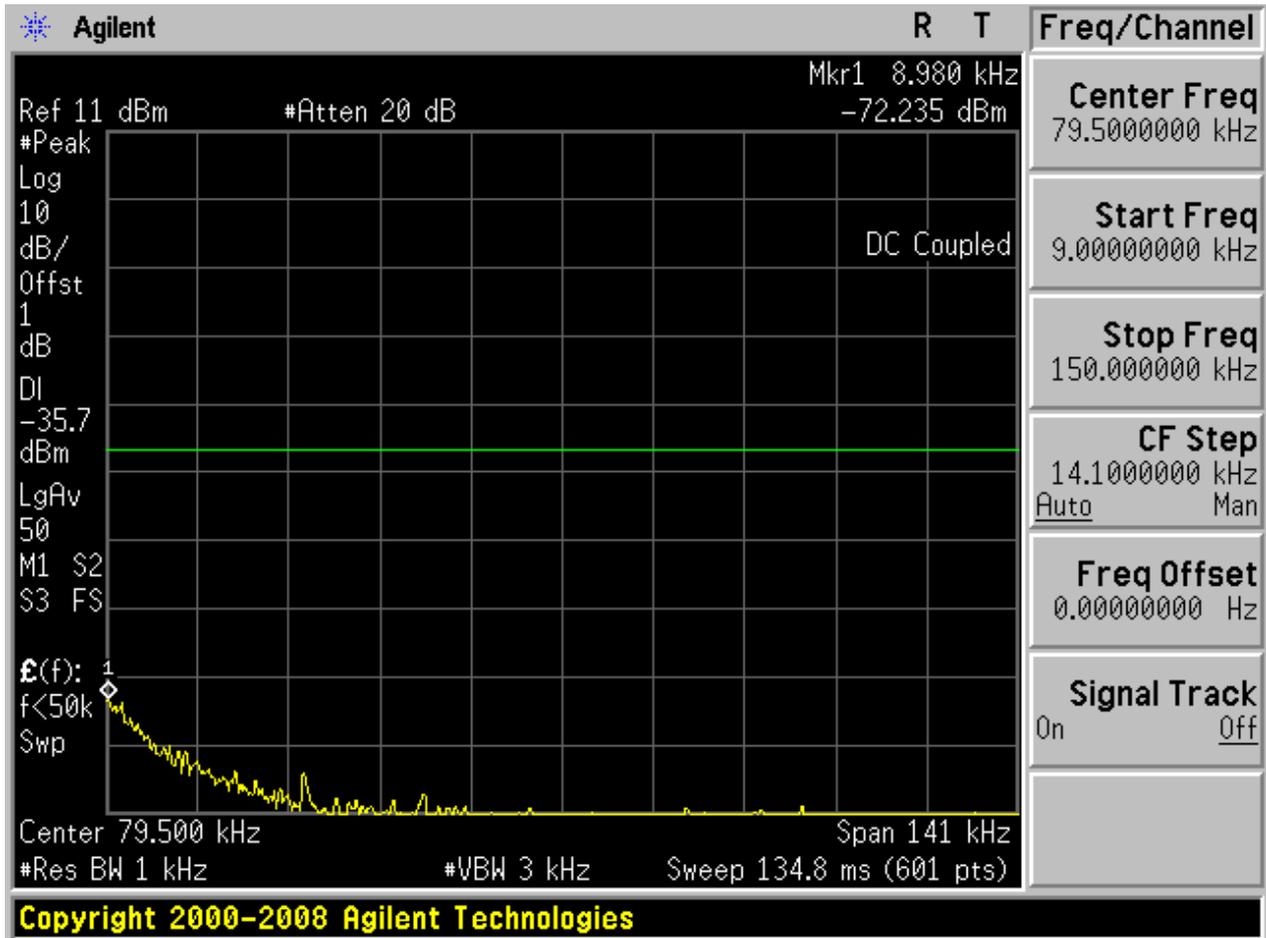
## 2.9 11N20\_SISO\_H

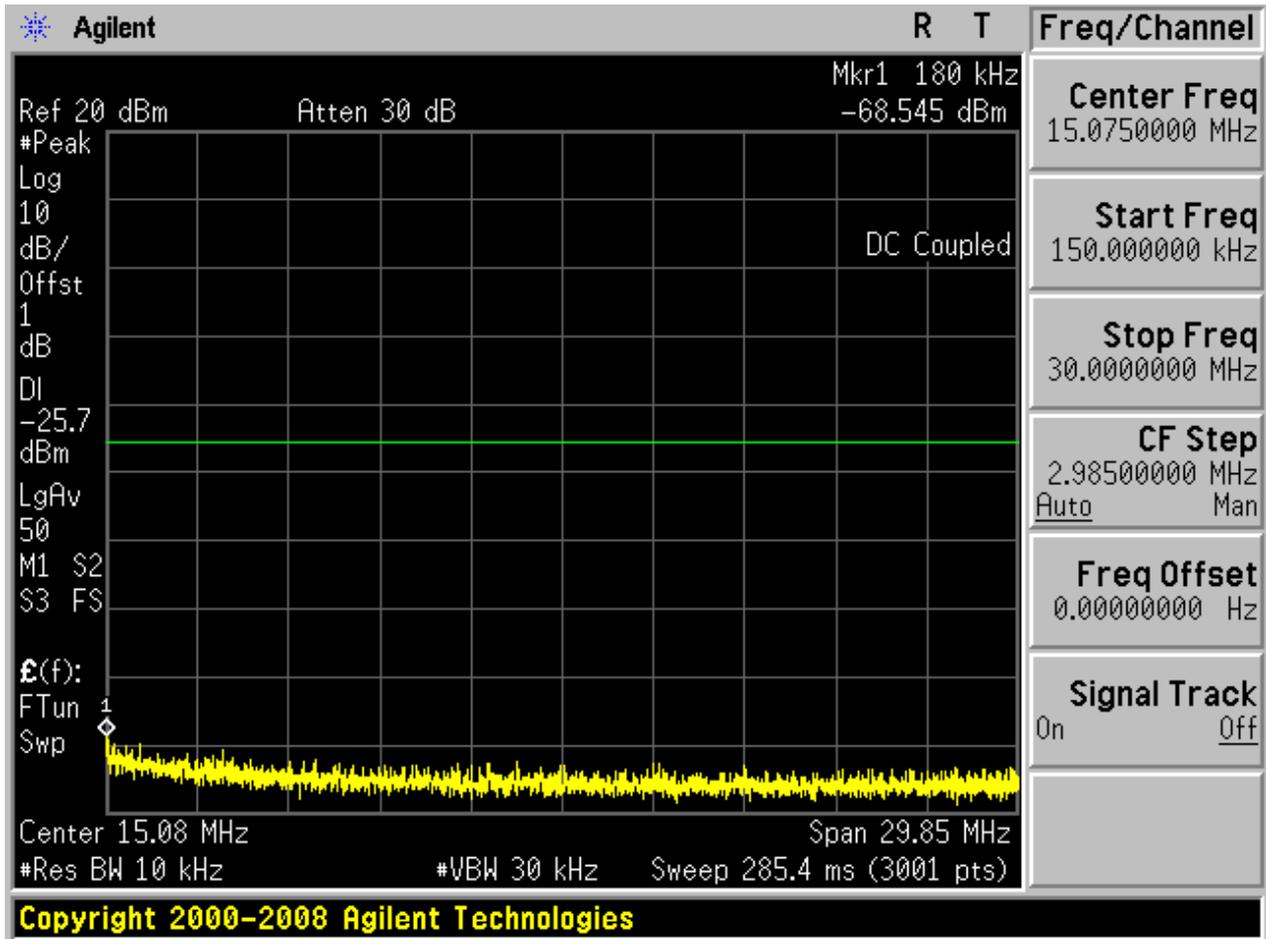
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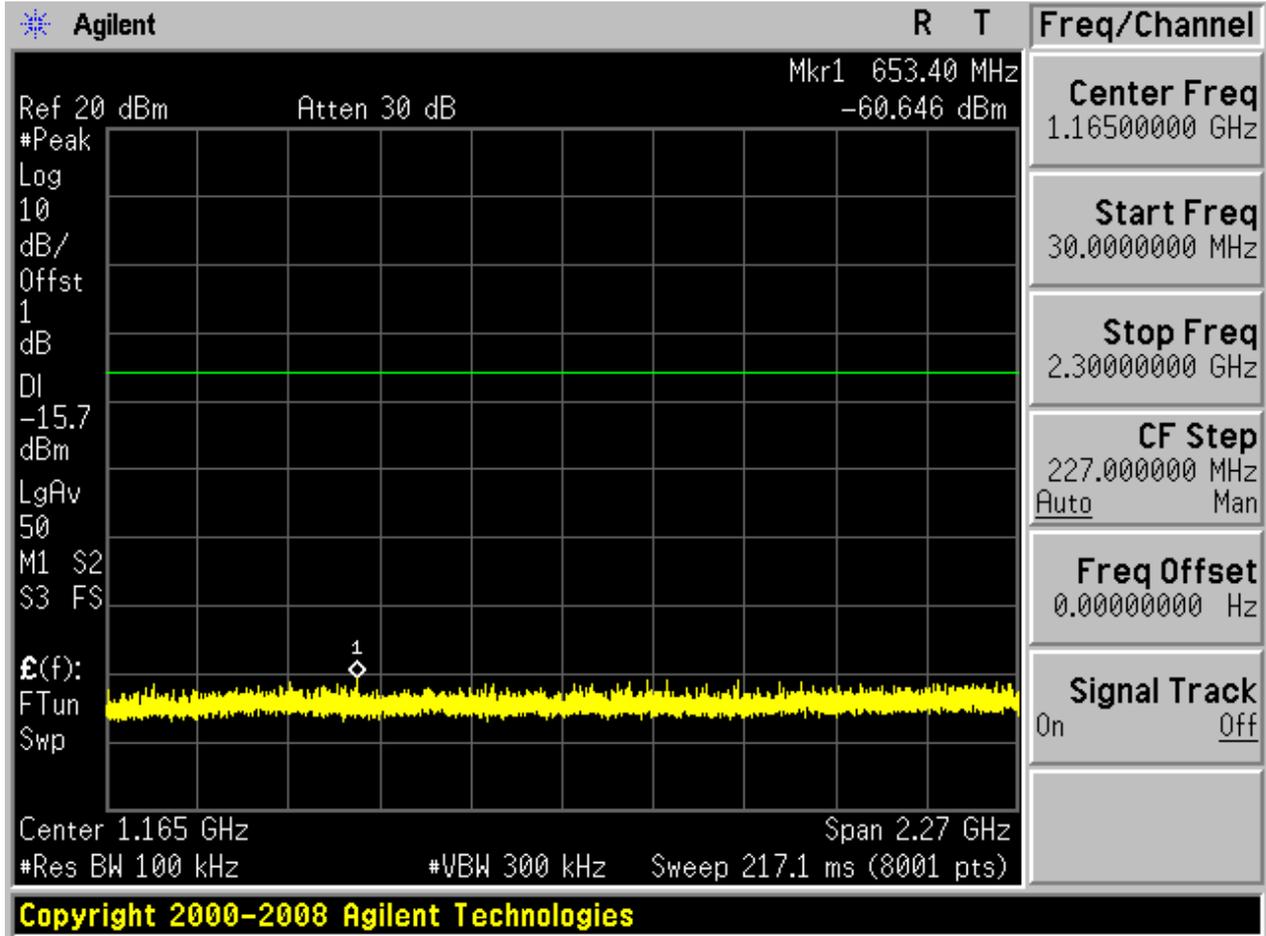


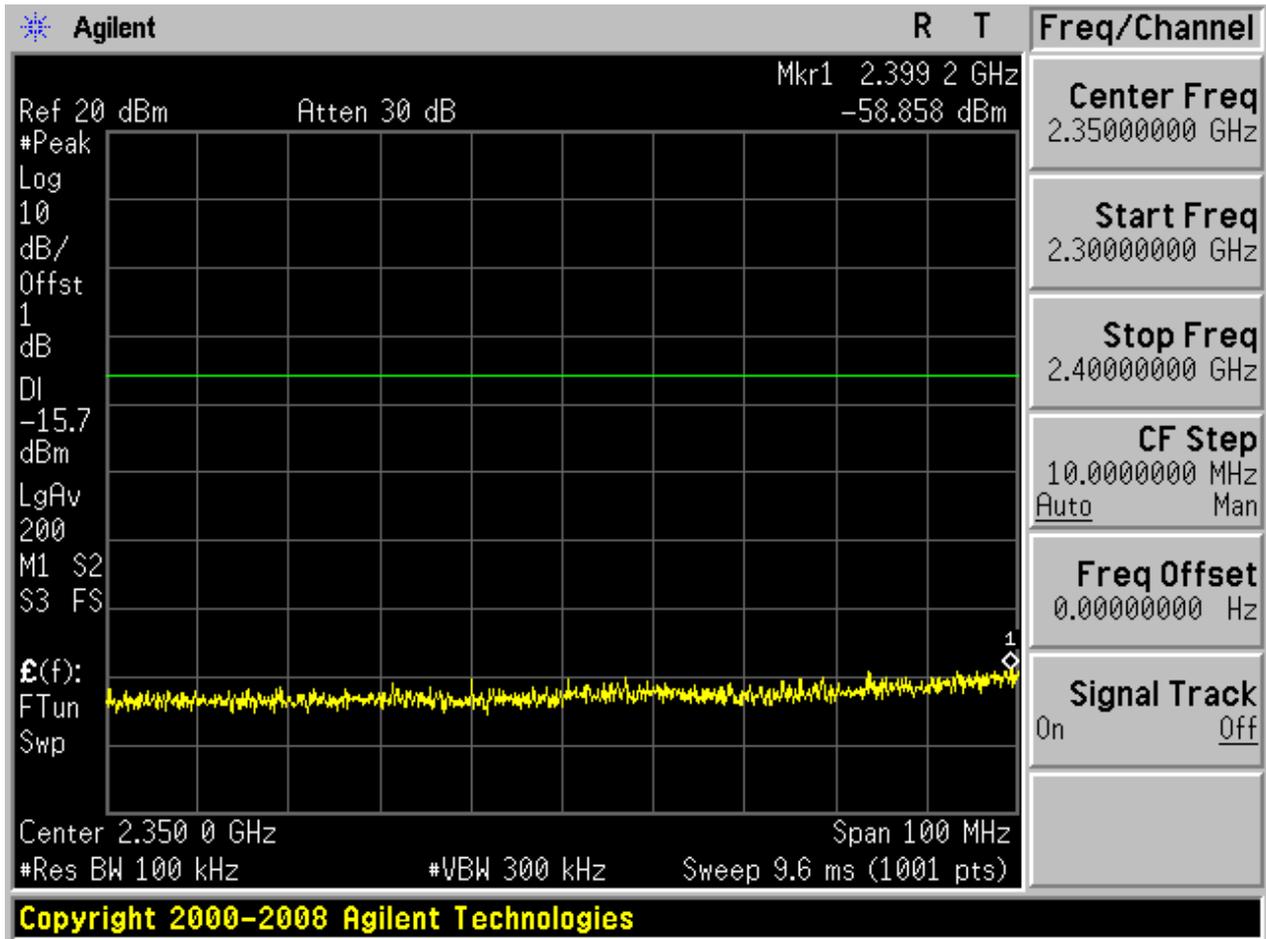


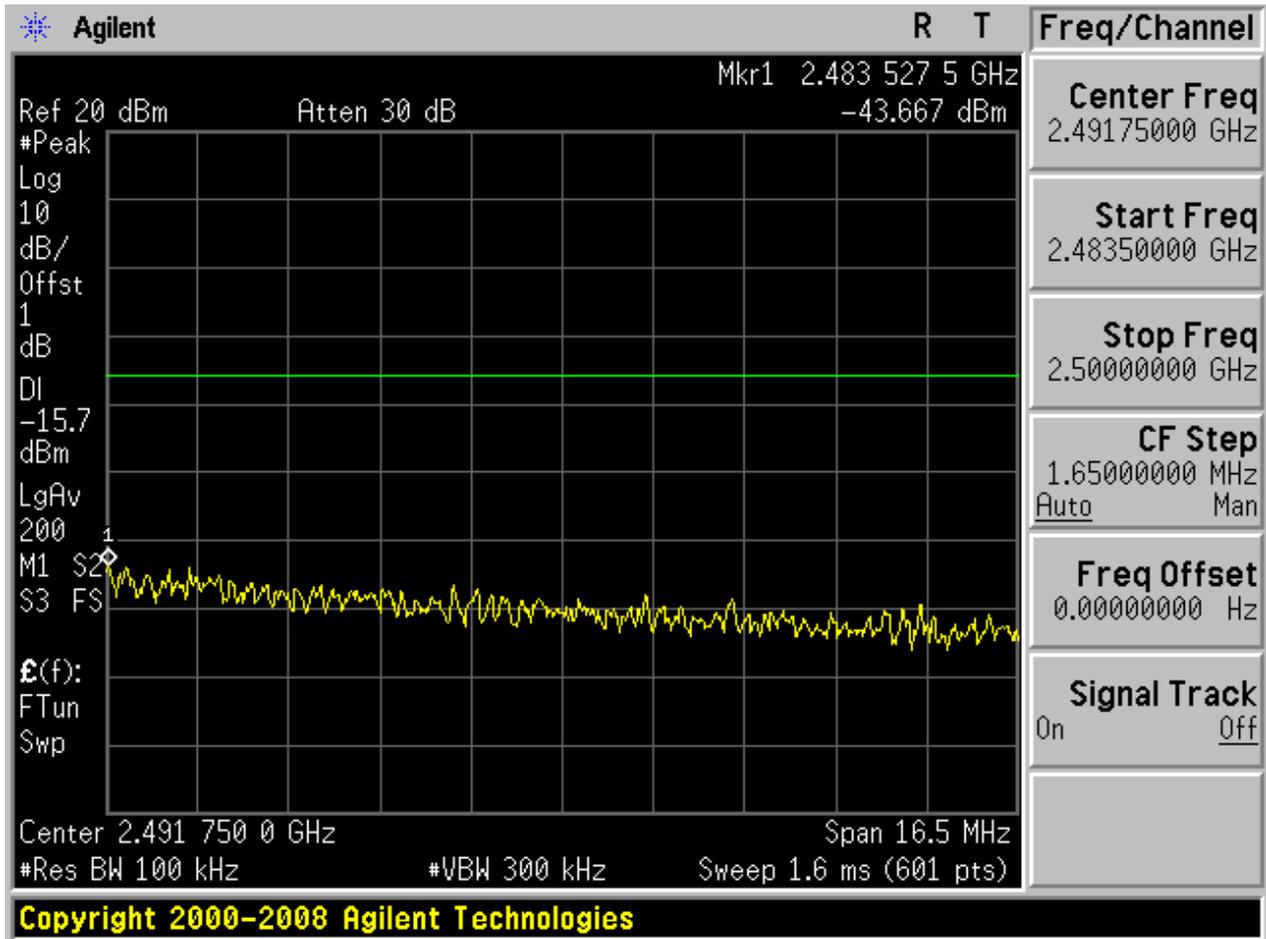
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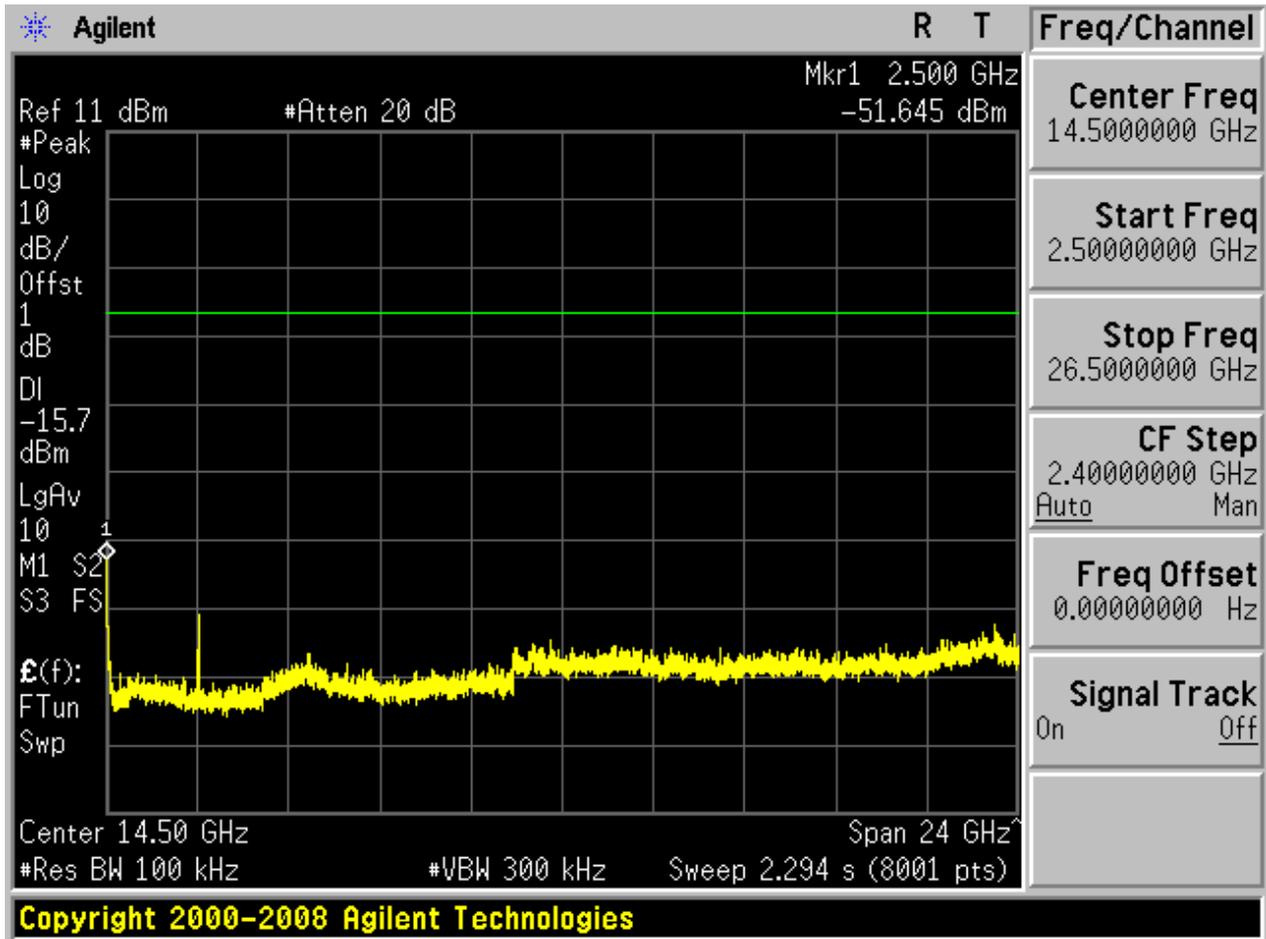










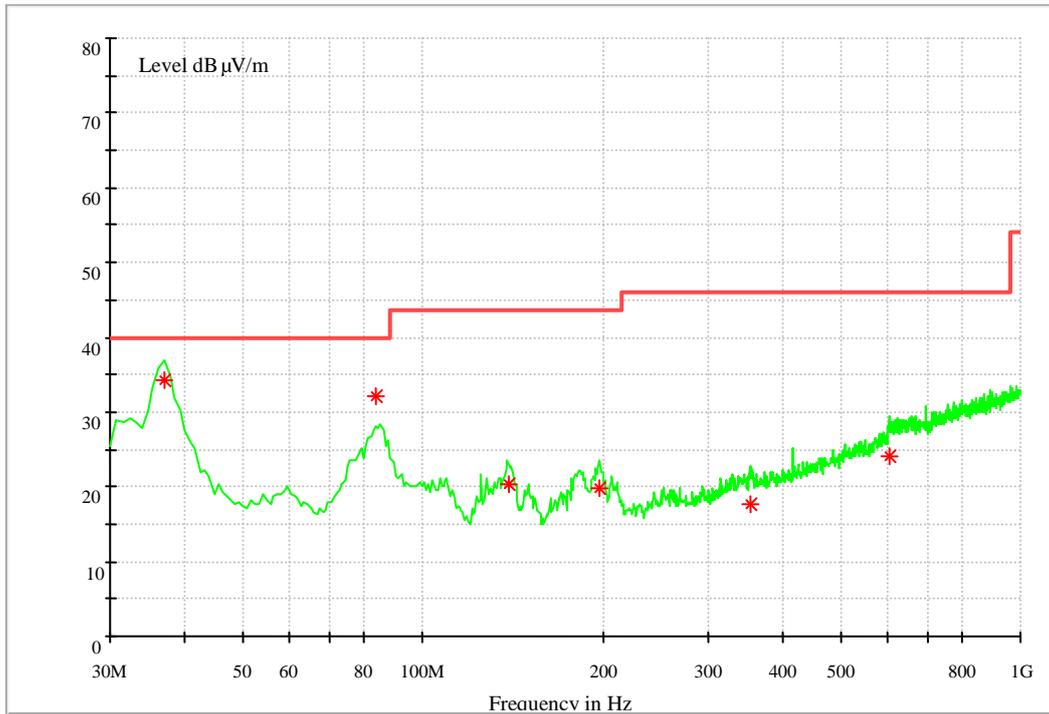




## **Appendix F: Radiated Spurious Emission & Spurious in Restricted Band**

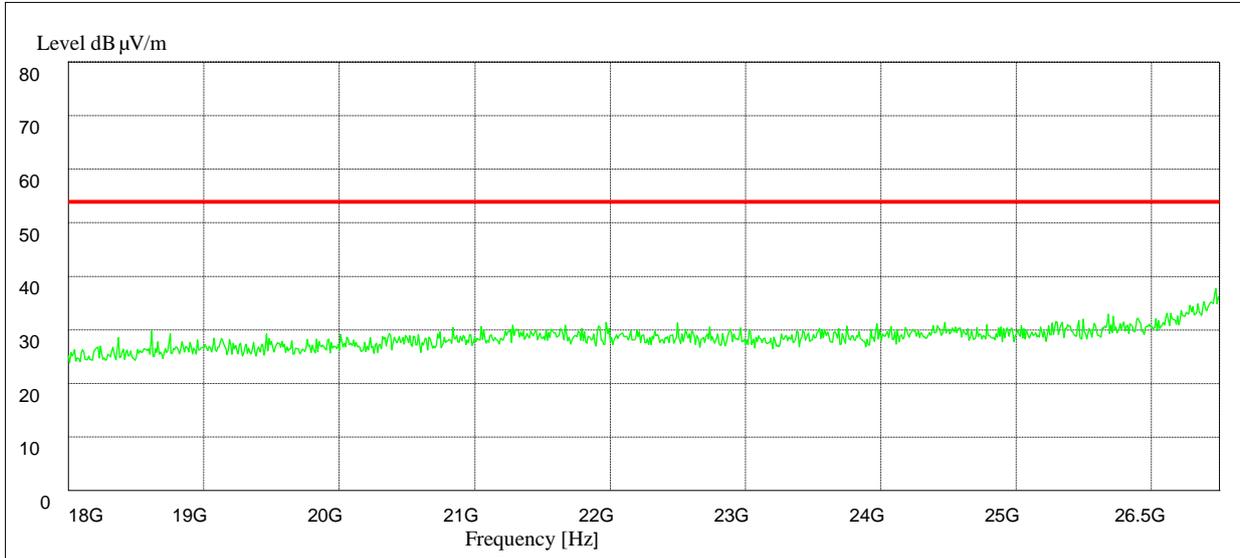
### Part 1: Testing Range of “30 MHz to 1 GHz”

- 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
37.106880	34.2	12.5	40.0	5.8	100.0	160.0	VERTICAL
83.779840	32.2	10.0	40.0	7.8	214.0	109.0	HORIZONTAL
139.198720	20.3	9.2	43.5	23.2	100.0	58.0	VERTICAL
196.922880	19.9	12.2	43.5	23.6	100.0	11.0	VERTICAL
352.414720	17.7	17.4	46.0	28.3	100.0	112.0	HORIZONTAL
604.356800	24.0	23.2	46.0	22.0	114.0	36.0	VERTICAL

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



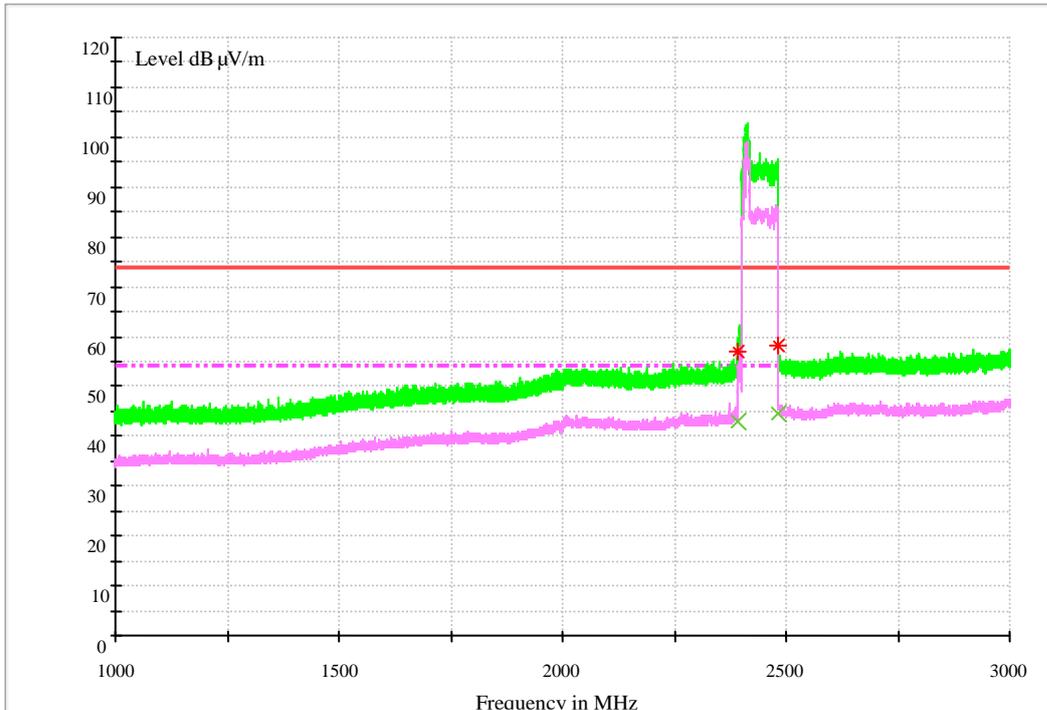
**Note: No peak found in pre- test.**

### Part 3: Testing Range of “1GHz to3GHz”

- Note 1: The testing range of “1GHz to 3 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 $\mu$ V/m) and Average Limit (54 dB $\mu$ 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.**

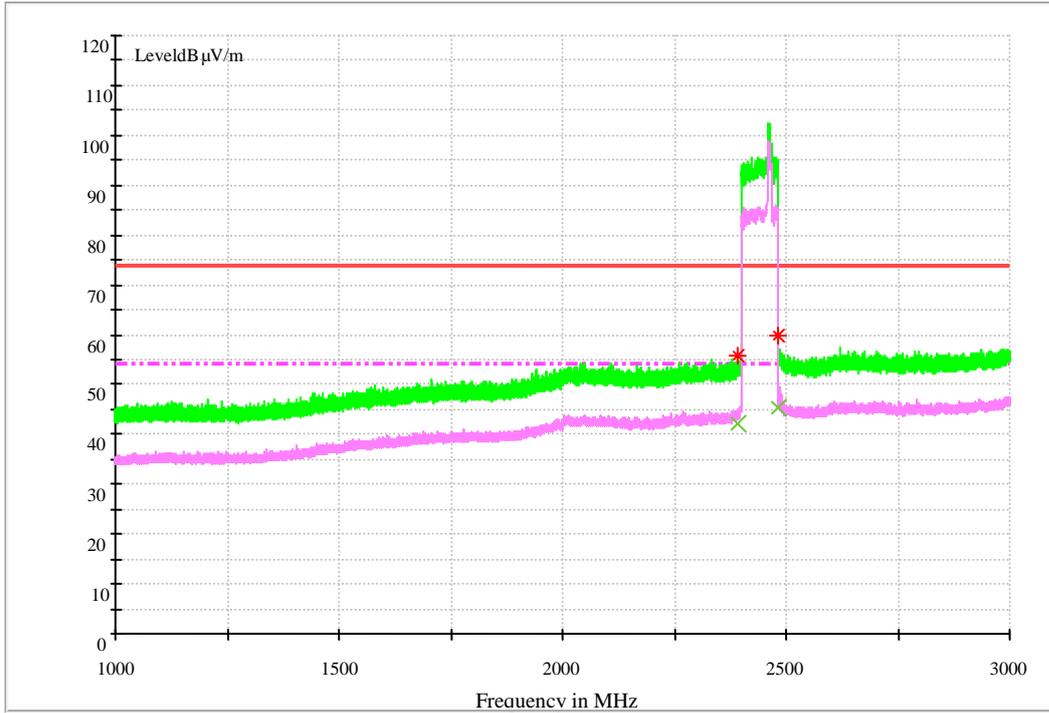
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dB $\mu$ V/m	Transd dB	Limit dB $\mu$ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	57.1	38.3	74.0	16.9	100.0	182.0	HORIZONTAL
2483.500000	58.2	40.7	74.0	15.8	100.0	254.0	VERTICAL

MEASUREMENT RESULT: AVDetector



Frequency MHz	Level dB $\mu$ V/m	Transd dB	Limit dB $\mu$ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	42.9	38.3	54.0	11.1	100.0	170.0	HORIZONTAL
2483.500000	44.7	40.7	54.0	9.3	100.0	234.0	HORIZONTAL

**Channel 11**

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

MEASUREMENT RESULT: PK Detector

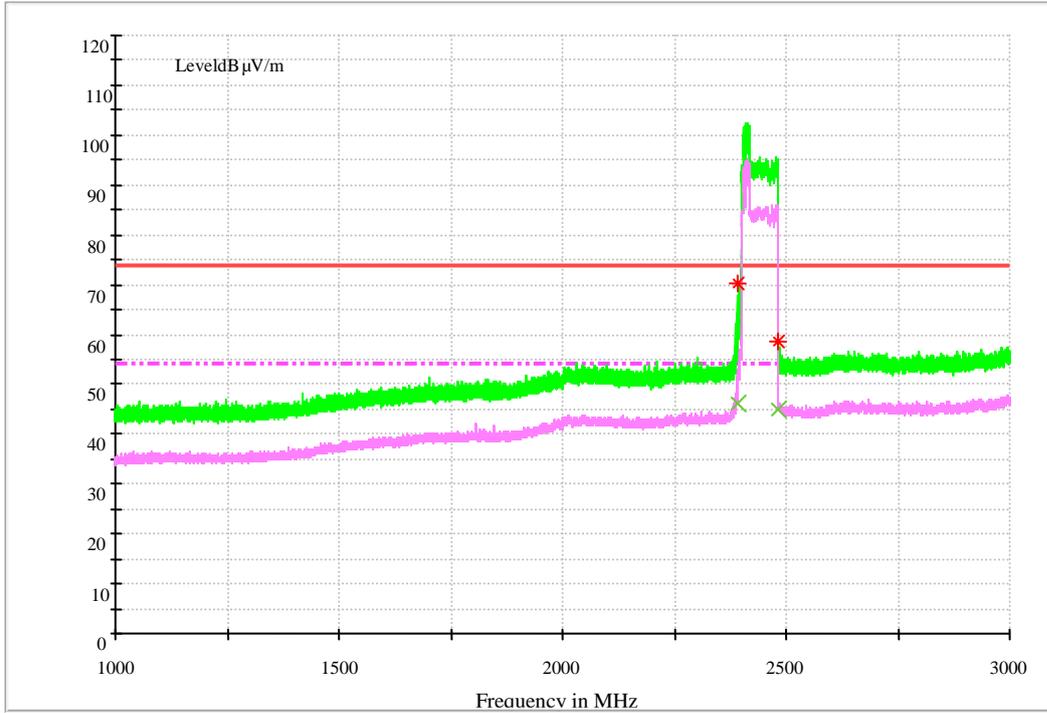
Frequency MHz	Level dB $\mu$ V/m	Transd dB	Limit dB $\mu$ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	55.8	38.3	74.0	18.2	100.0	263.0	HORIZONTAL
2483.500000	59.8	40.7	74.0	14.2	128.0	188.0	HORIZONTAL

MEASUREMENT RESULT: AVDetector

Frequency MHz	Level dB $\mu$ V/m	Transd dB	Limit dB $\mu$ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	42.1	38.3	54.0	11.9	100.0	218.0	HORIZONTAL
2483.500000	45.5	40.7	54.0	8.5	100.0	201.0	HORIZONTAL

### Test Mode: 11g

#### Channel 01



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

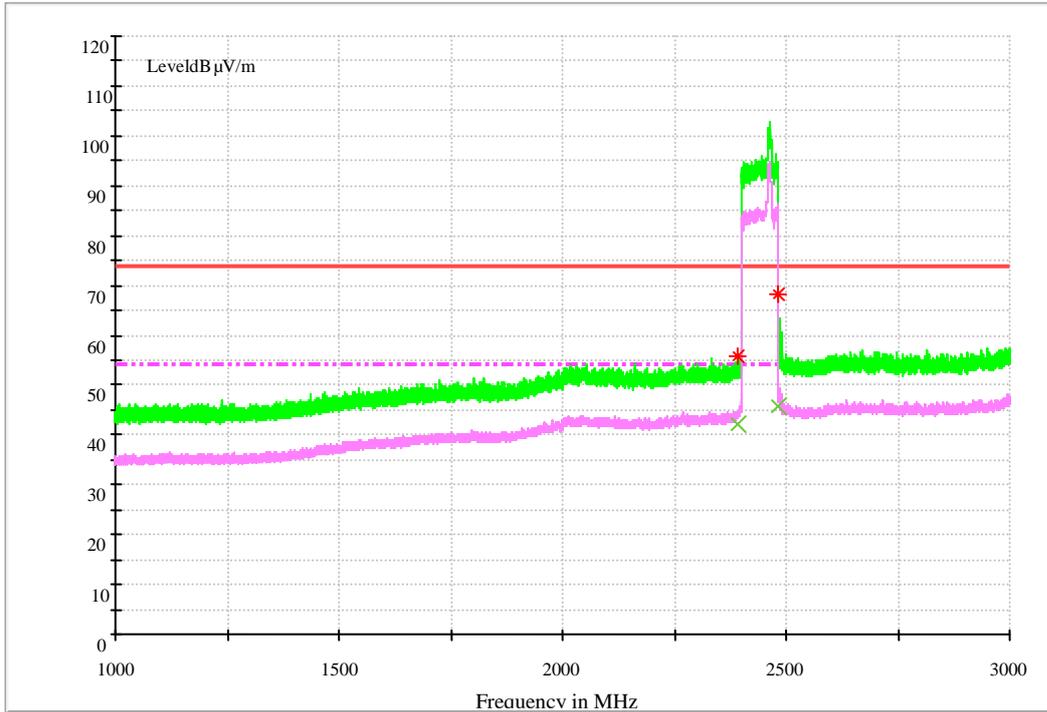
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	70.1	38.3	74.0	3.9	100.0	237.0	HORIZONTAL
2483.500000	58.7	40.7	74.0	15.3	100.0	-33.0	VERTICAL

MEASUREMENT RESULT: AVDetector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	46.2	38.3	54.0	7.8	100.0	237.0	HORIZONTAL
2483.500000	44.8	40.7	54.0	9.2	100.0	0.0	HORIZONTAL

#### Channel 11



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

MEASUREMENT RESULT: PK Detector

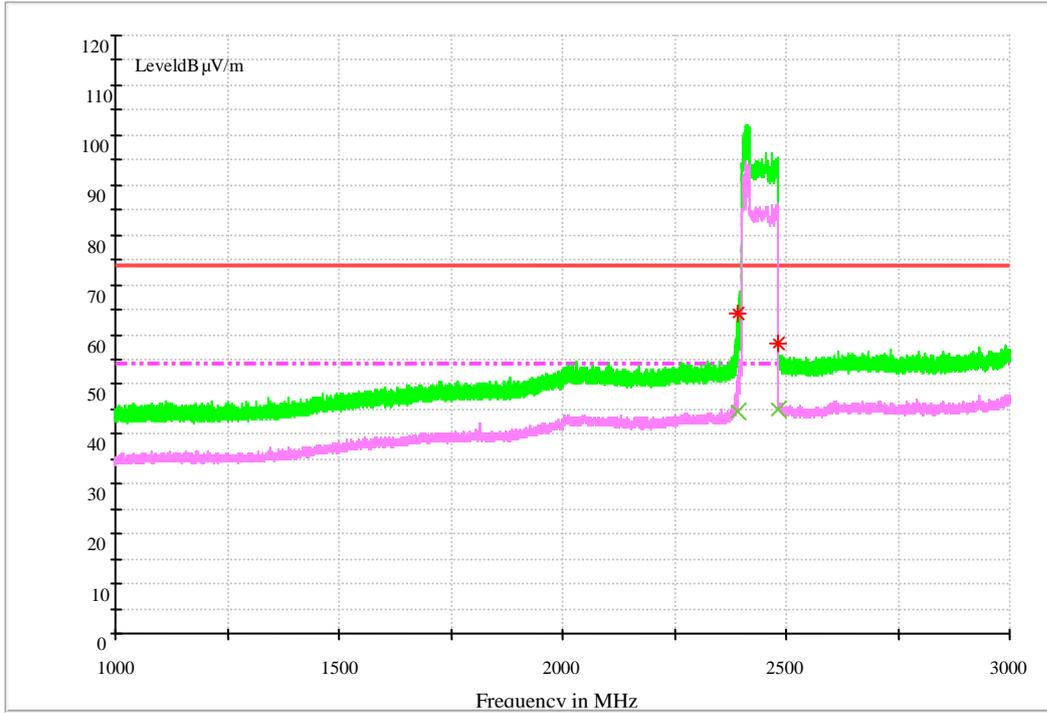
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	55.8	38.3	74.0	18.2	100.0	226.0	VERTICAL
2483.500000	68.0	40.7	74.0	6.0	120.0	194.0	HORIZONTAL

MEASUREMENT RESULT: AVDetector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	42.0	38.3	54.0	12.0	100.0	271.0	VERTICAL
2483.500000	45.6	40.7	54.0	8.4	100.0	152.0	HORIZONTAL

**Test Mode: 11n**

**Channel 01**



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

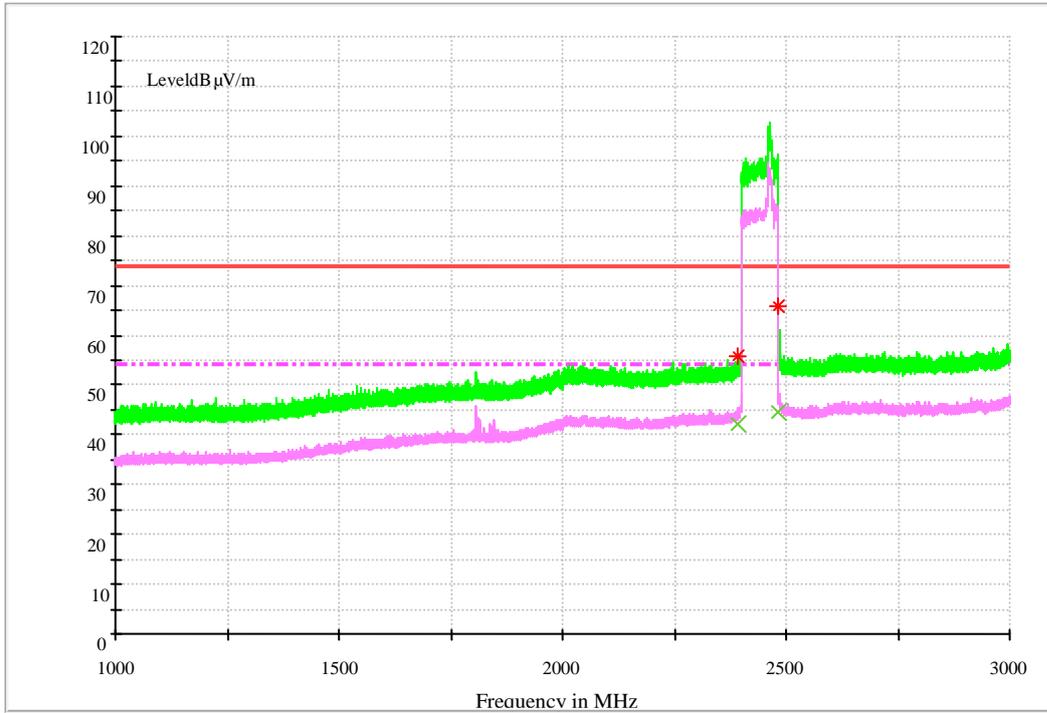
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	64.3	38.3	74.0	9.7	100.0	166.0	HORIZONTAL
2483.500000	58.3	40.7	74.0	15.7	100.0	0.0	HORIZONTAL

MEASUREMENT RESULT: AVDetector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	44.4	38.3	54.0	9.6	100.0	185.0	HORIZONTAL
2483.500000	44.9	40.7	54.0	9.1	100.0	89.0	VERTICAL

**Channel 11**



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

MEASUREMENT RESULT: PK Detector

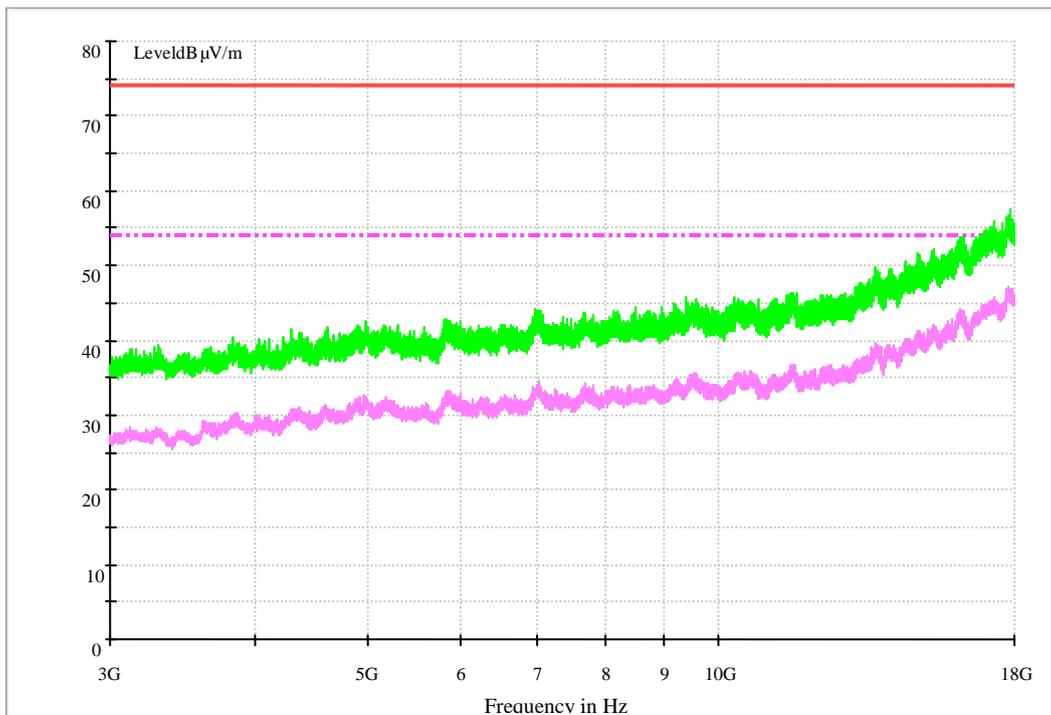
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	56.0	38.3	74.0	18.0	100.0	54.0	HORIZONTAL
2483.500000	65.7	40.7	74.0	8.3	100.0	250.0	HORIZONTAL

MEASUREMENT RESULT: AVDetector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	42.1	38.3	54.0	11.9	100.0	306.0	VERTICAL
2483.500000	44.7	40.7	54.0	9.3	100.0	354.0	VERTICAL

## Part 4: Testing Range of “3GHz to 18 GHz”

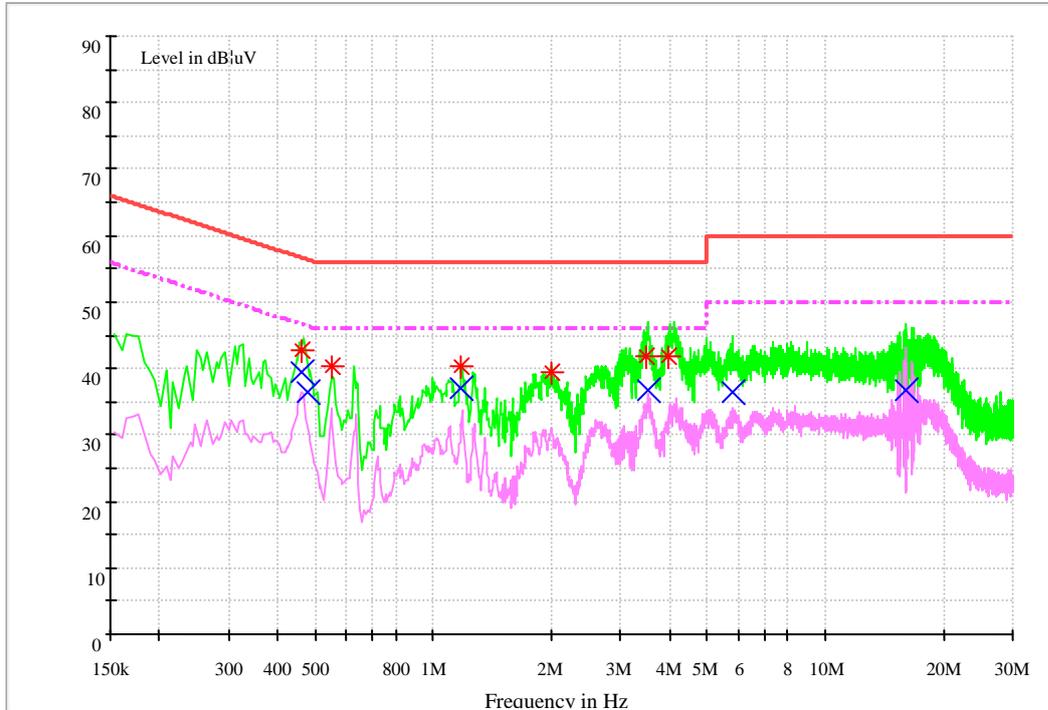
- Note 1: The test results and plot for testing range of “3GHz to 18 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of “3GHz to 18 GHz” is for checking radiated emissions located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





## Appendix G: Conducted Emission at Power Port

### Channel 6



#### MEASUREMENT RESULT: QP Detector

Frequency	Level	Transducer	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
0.462184	42.7	9.7	56.7	14.0	N	FLO
0.550628	40.3	9.7	56.0	15.7	N	FLO
1.181058	40.2	9.7	56.0	15.8	L1	FLO
1.997419	39.5	9.7	56.0	16.5	L1	FLO
3.491542	41.7	9.7	56.0	14.3	N	FLO
3.976695	41.9	9.8	56.0	14.1	L1	FLO

#### MEASUREMENT RESULT: AV Detector

Frequency	Level	Transducer	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
0.461108	39.5	9.7	46.7	7.2	N	FLO
0.479314	36.5	9.7	46.4	9.9	L1	FLO
1.178606	37.0	9.7	46.0	9.0	L1	FLO
3.507948	36.7	9.7	46.0	9.3	N	FLO
5.785954	36.4	9.8	50.0	13.6	L1	FLO
16.01047	36.6	10.0	50.0	13.4	L1	FLO

END