



# 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.

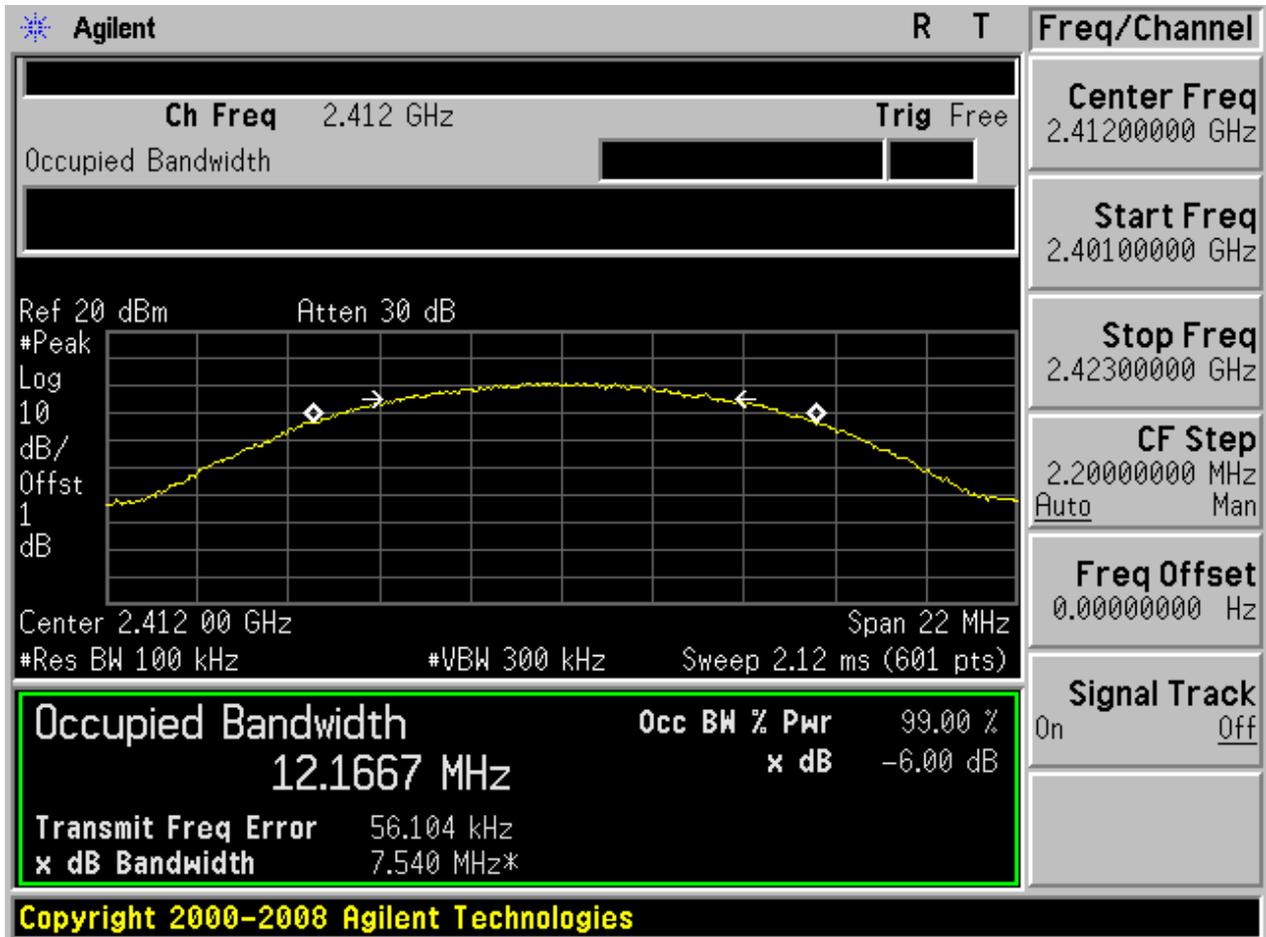
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

### Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	DTS6dBBW[MHz]	Verdict
11B	L	2412	7.54	pass
11B	M	2437	7.99	pass
11B	H	2462	7.77	pass
11G	L	2412	16.50	pass
11G	M	2437	16.49	pass
11G	H	2462	16.54	pass
11N20	L	2412	17.73	pass
11N20	M	2437	17.67	pass
11N20	H	2462	17.73	pass

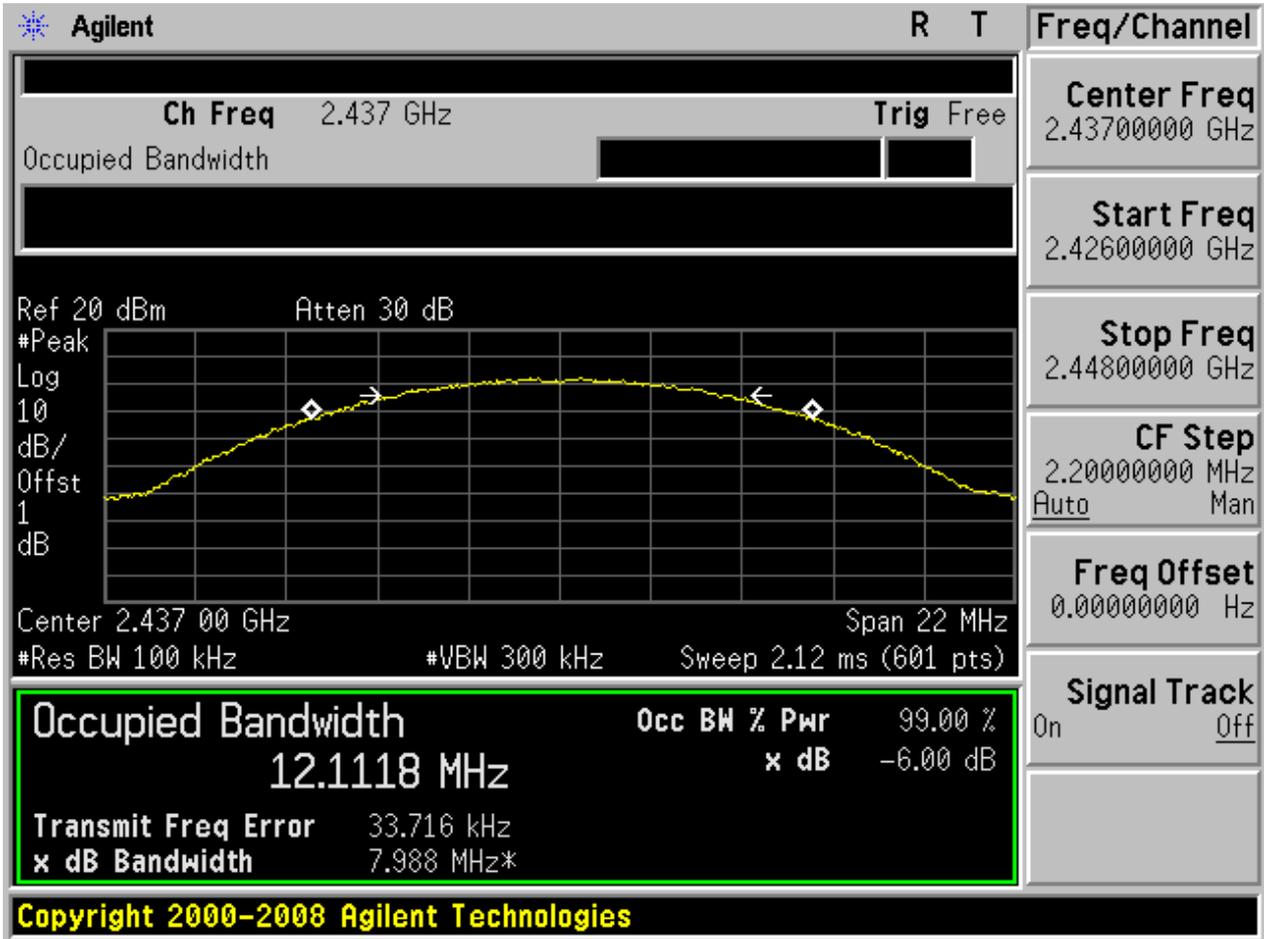
## Part II - Test Plots

### 2.1 11B\_L



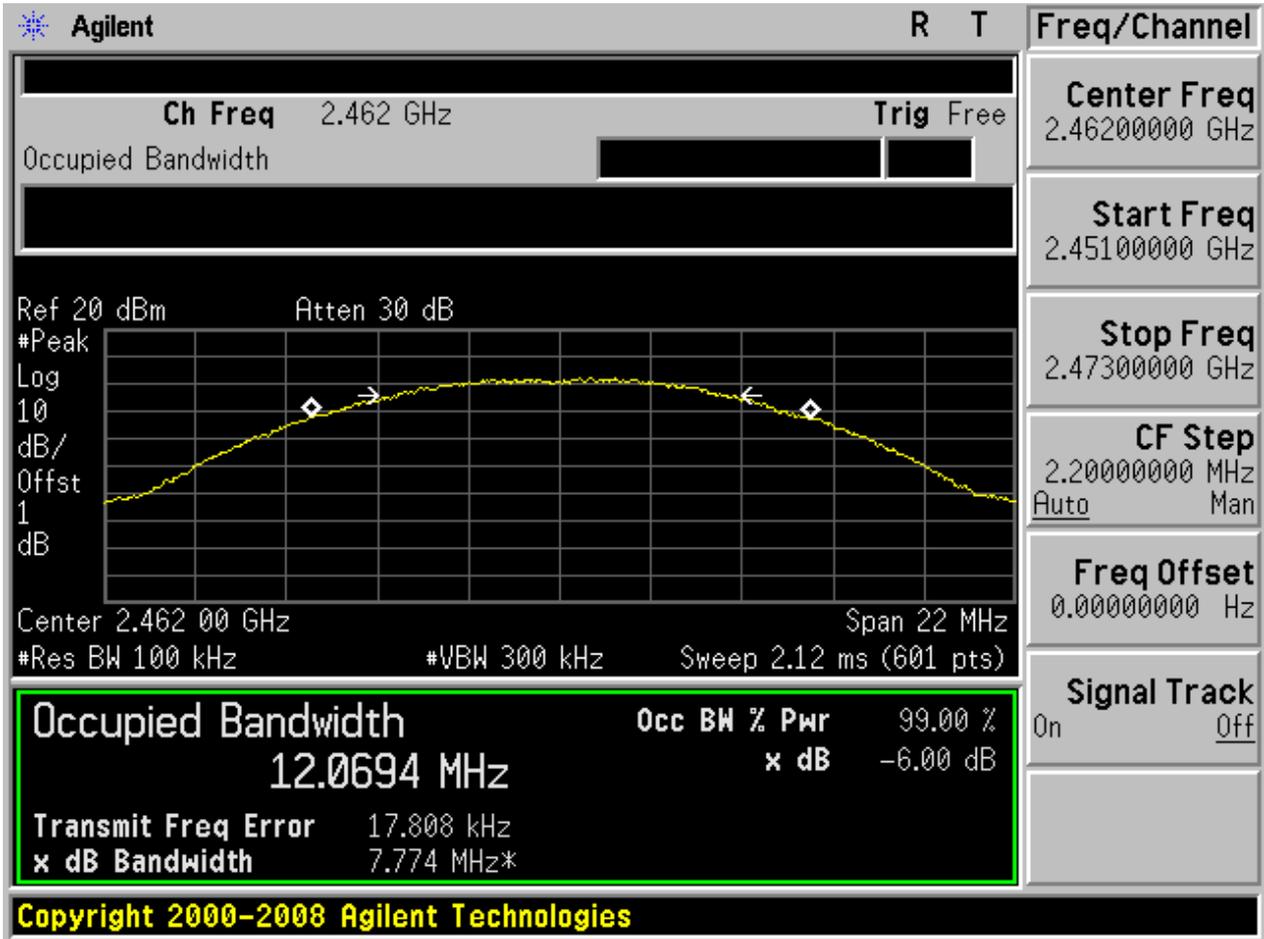


### 2.2 11B\_M



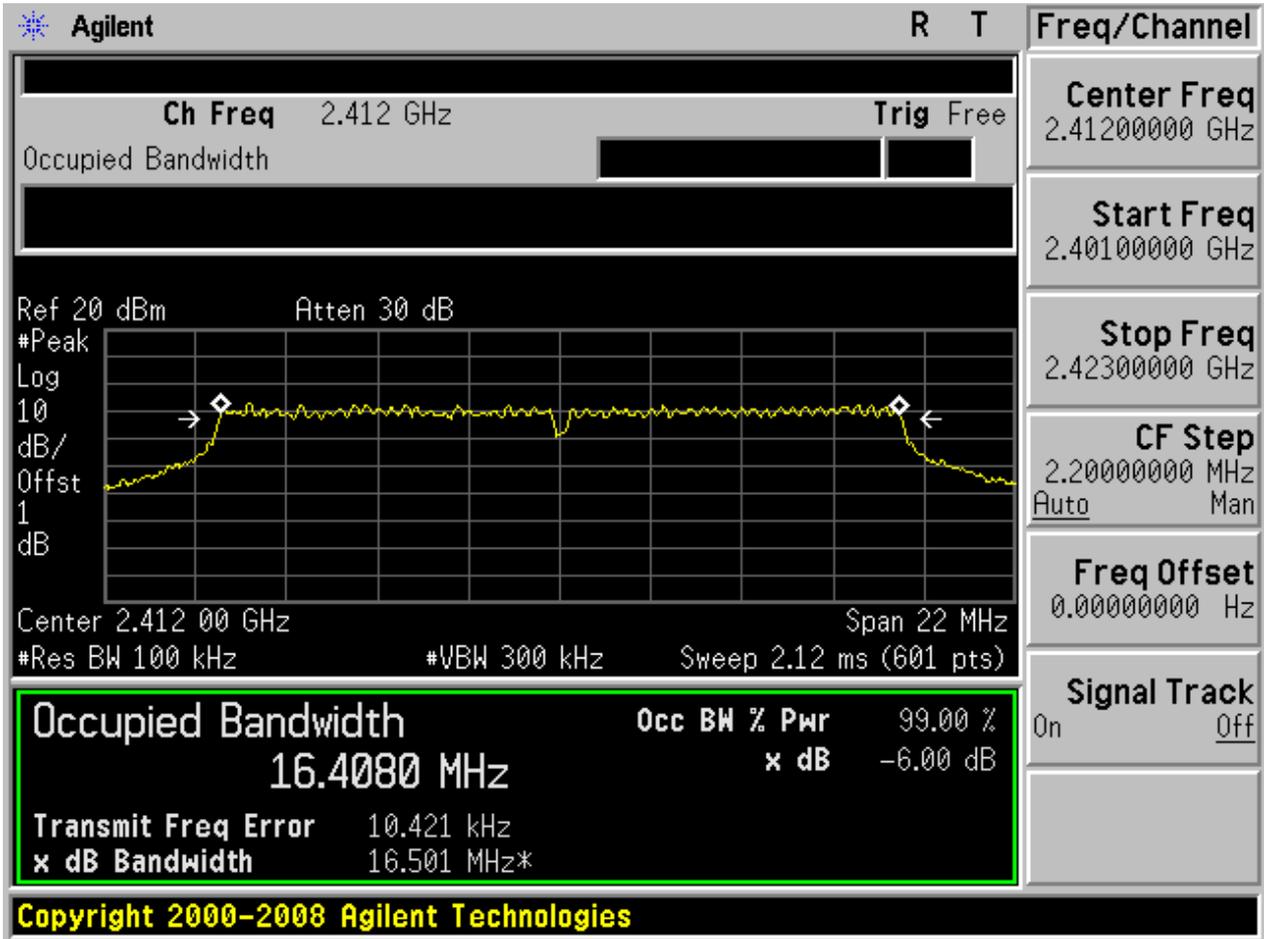


### 2.3 11B\_H



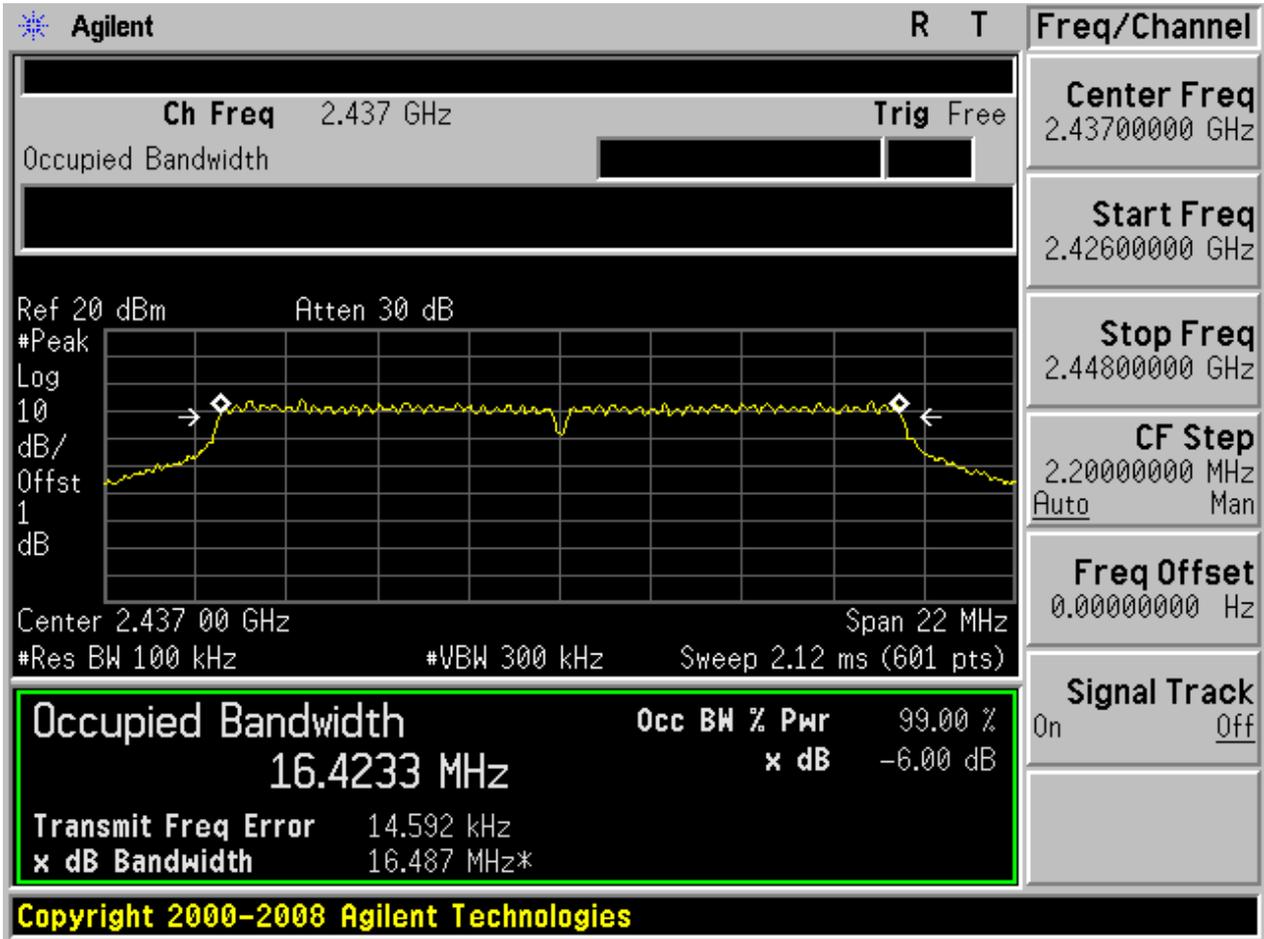


### 2.4 11G\_L



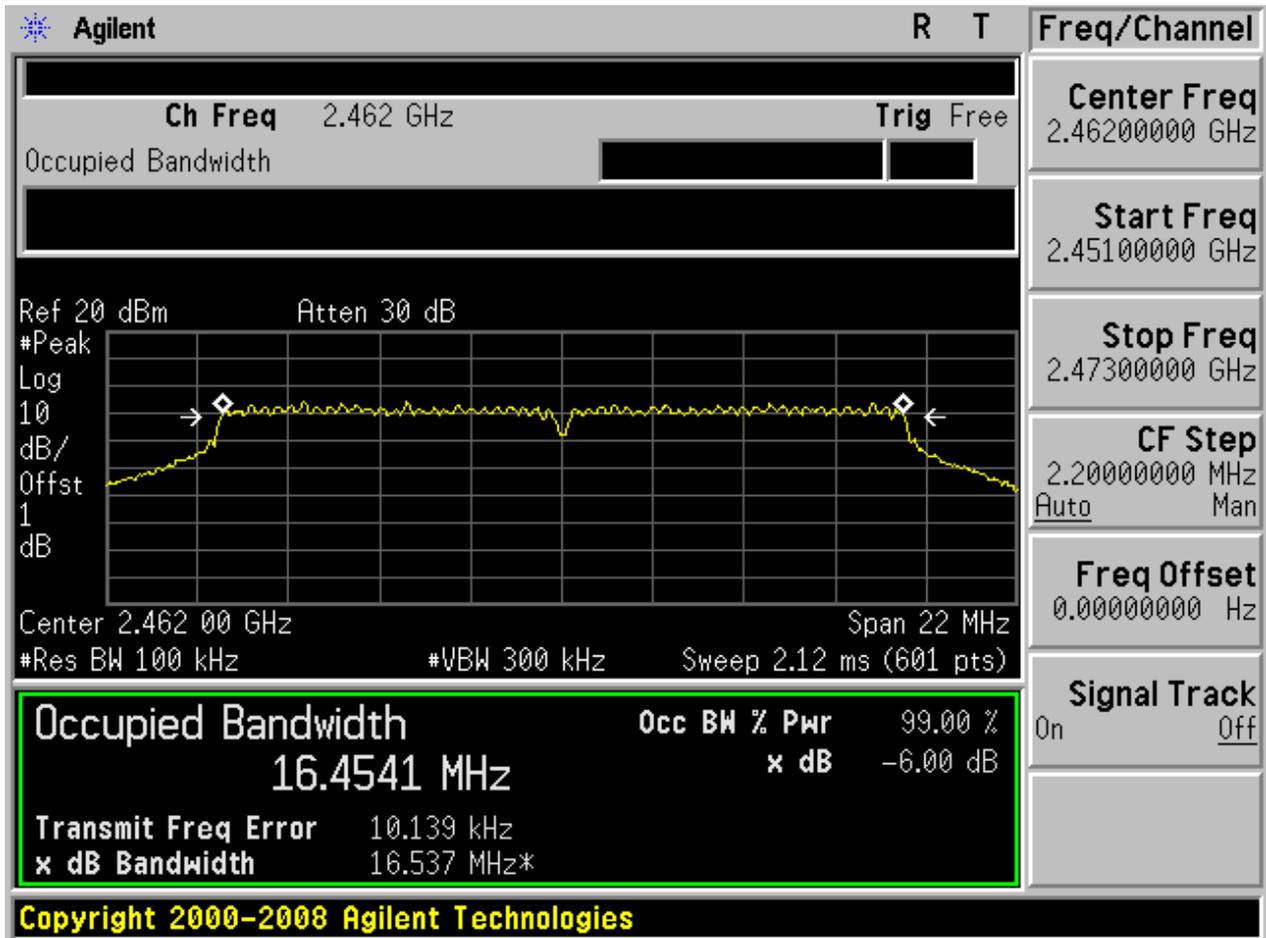


### 2.5 11G\_M



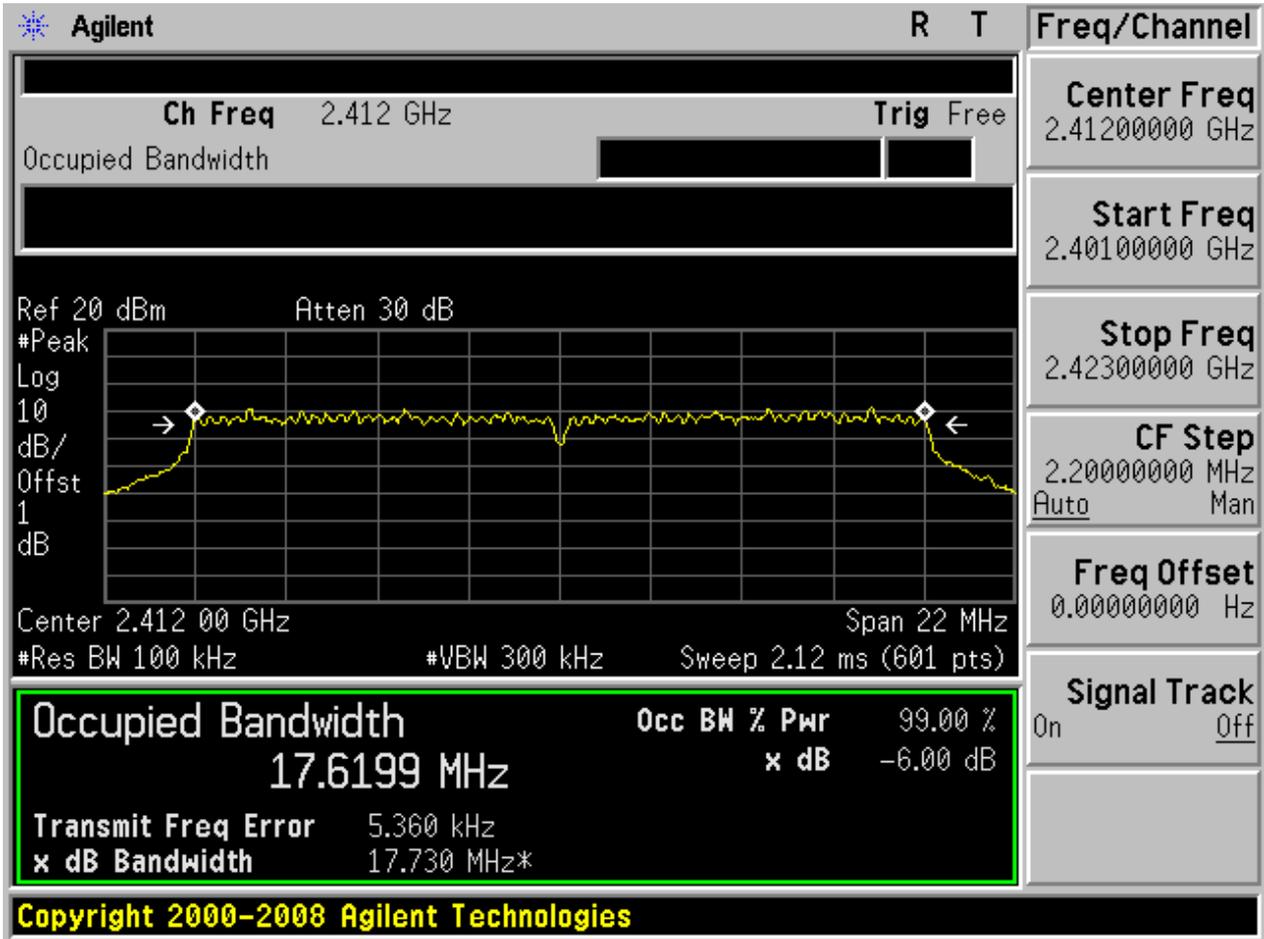


### 2.6 11G\_H



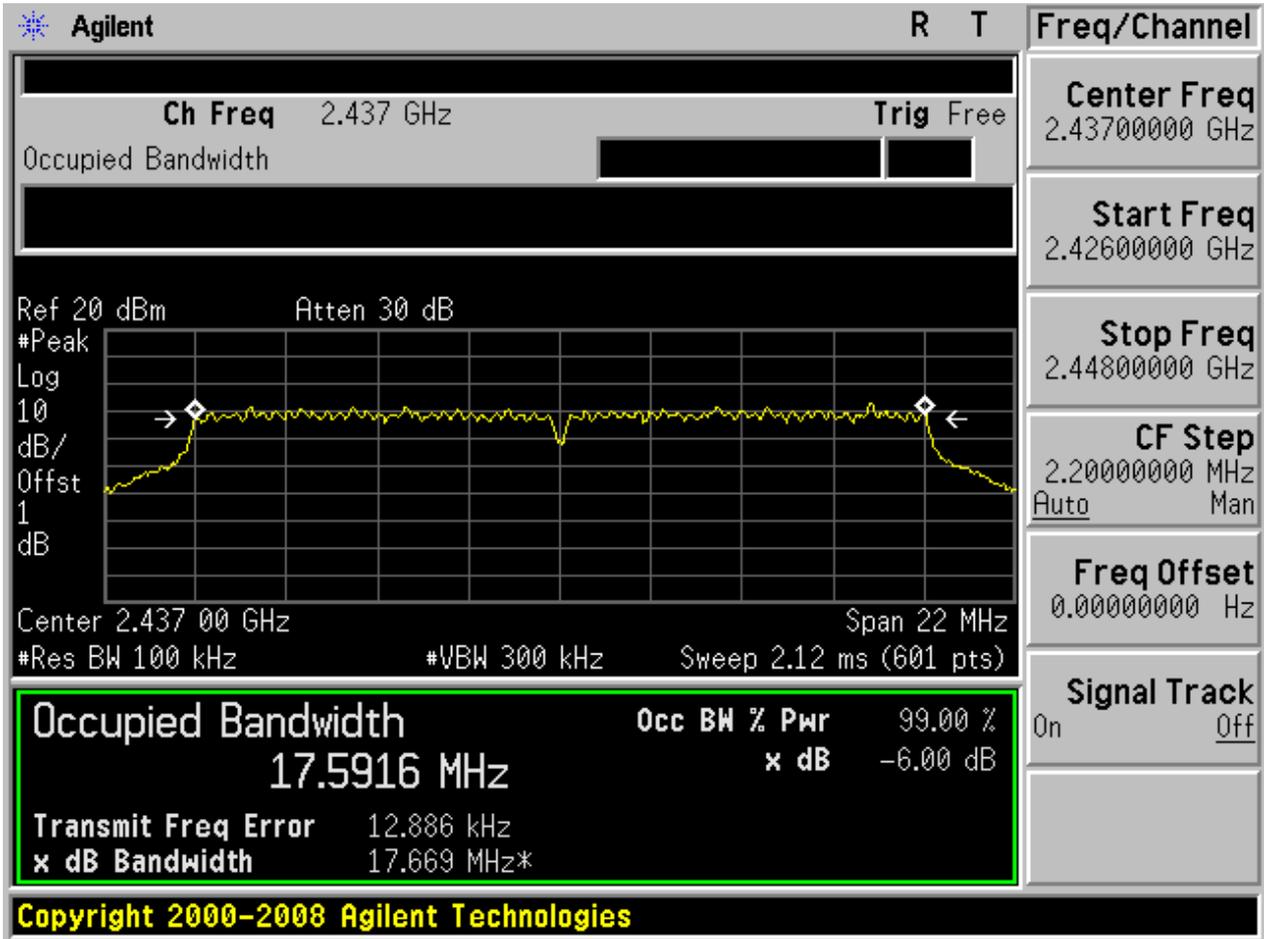


### 2.7 11N20\_L

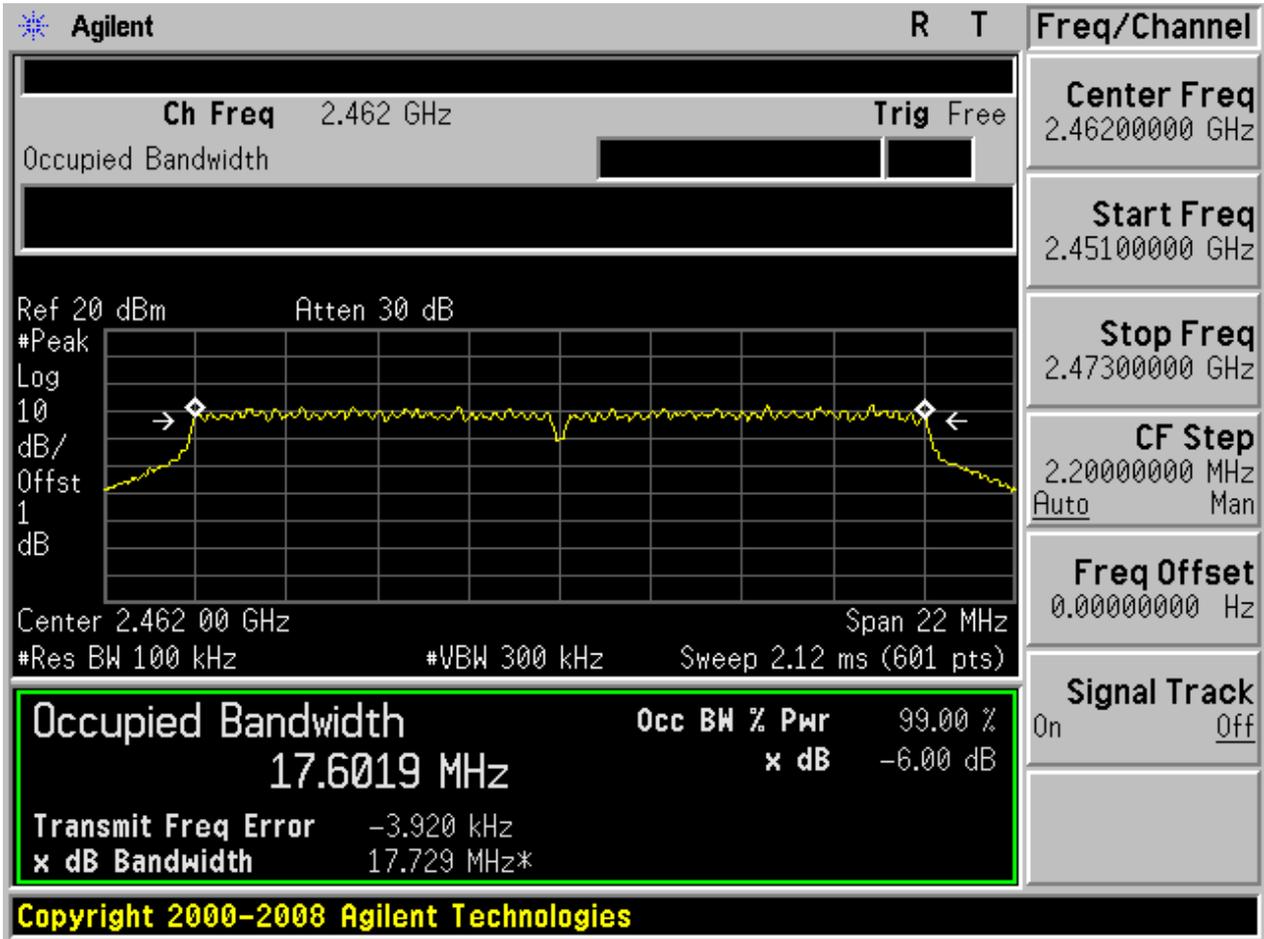




### 2.8 11N20\_M

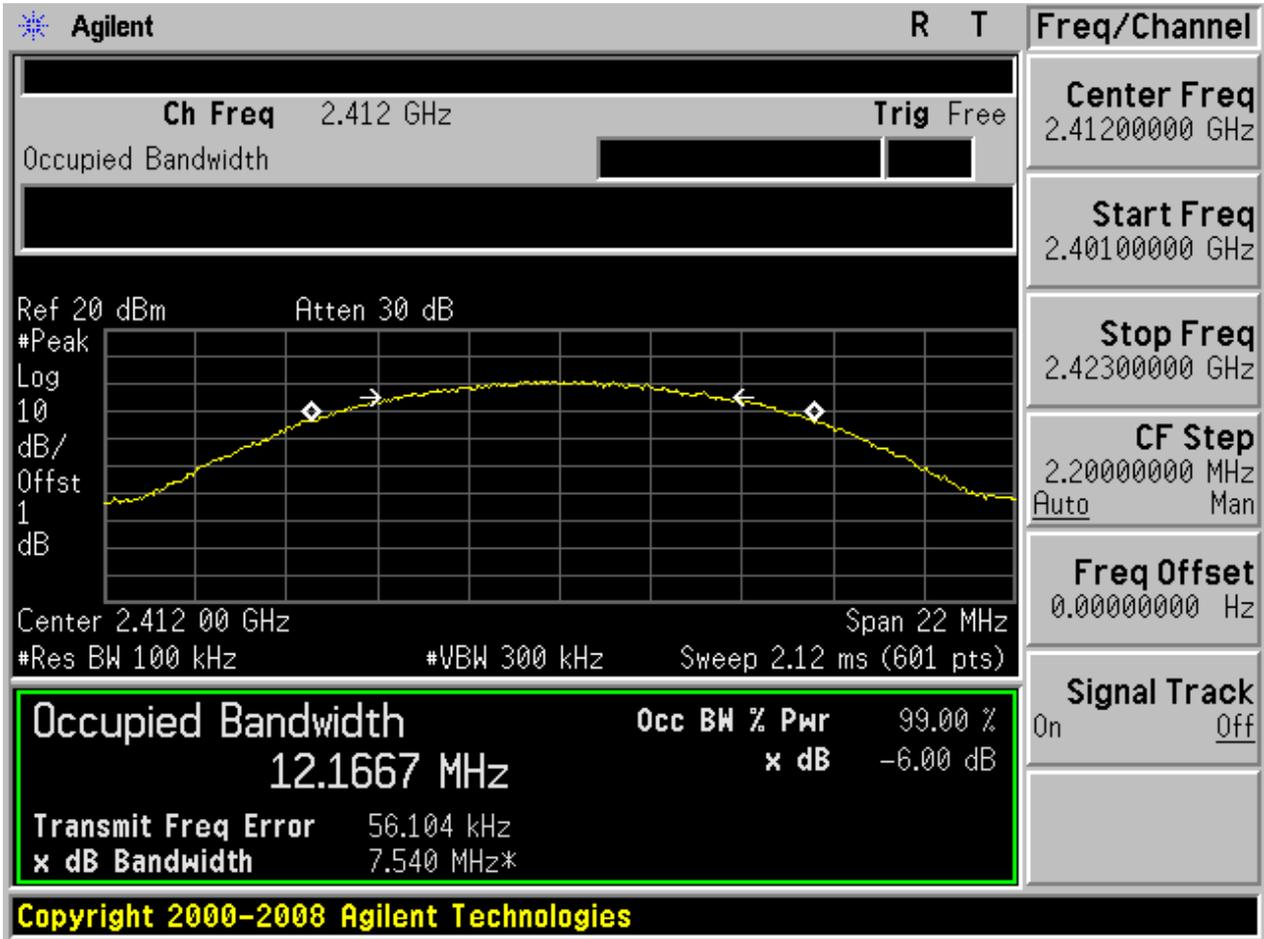


2.9 11N20\_H





### 2.10 11B\_L



## 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	23.55	pass
11B	M	2437	24.73	pass
11B	H	2462	24.96	pass
11G	L	2412	21.71	pass
11G	M	2437	22.84	pass
11G	H	2462	23.11	pass
11N20	L	2412	19.74	pass
11N20	M	2437	20.83	pass
11N20	H	2462	21.01	pass



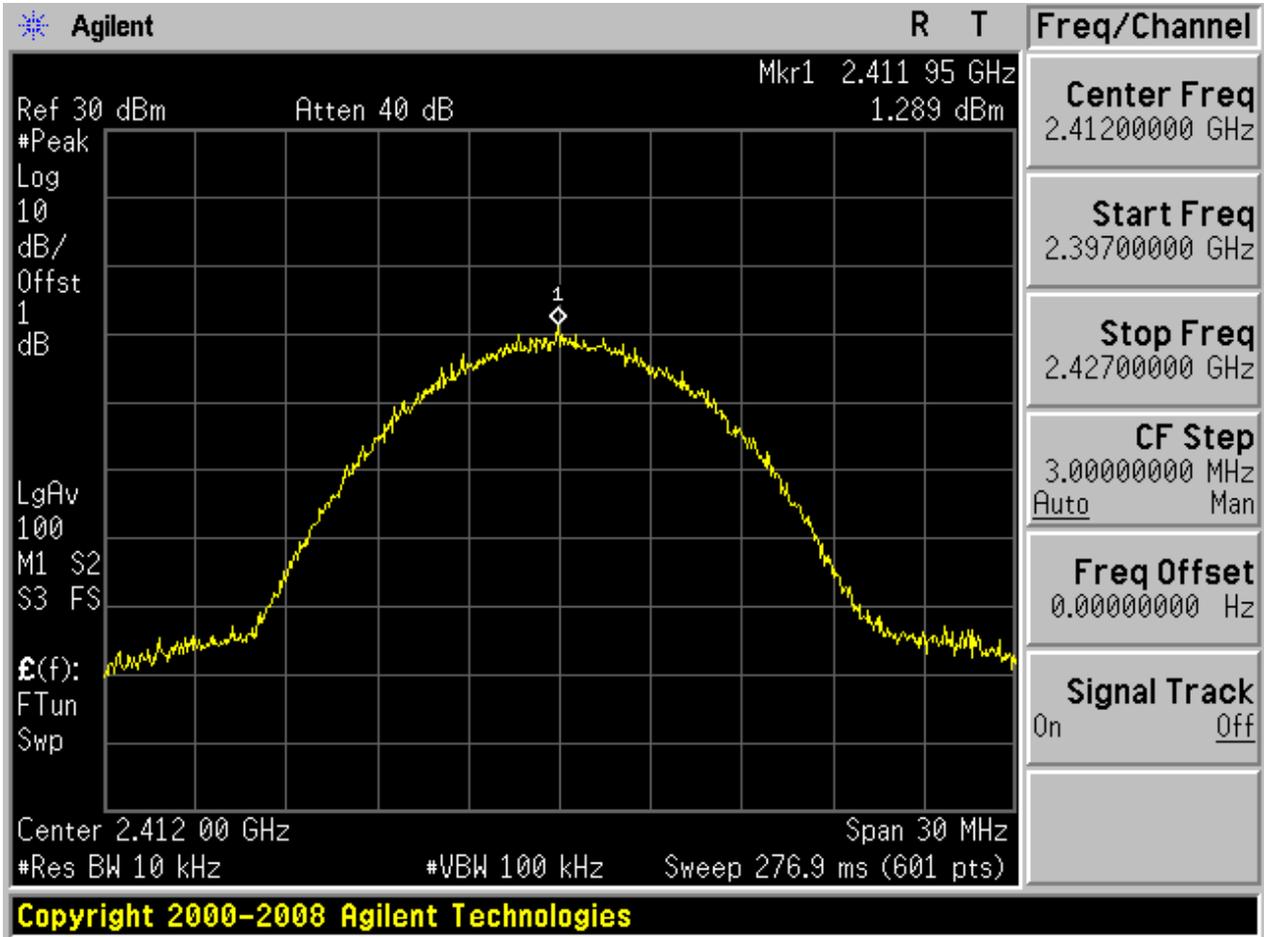
## Appendix C: Maximum Power Spectral Density Level

### Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	PD[MHz]	Verdict
11B	L	2412	1.29	pass
11B	M	2437	0.97	pass
11B	H	2462	1.90	pass
11G	L	2412	-6.69	pass
11G	M	2437	-5.50	pass
11G	H	2462	-4.69	pass
11N20	L	2412	-7.71	pass
11N20	M	2437	-7.16	pass
11N20	H	2462	-7.08	pass

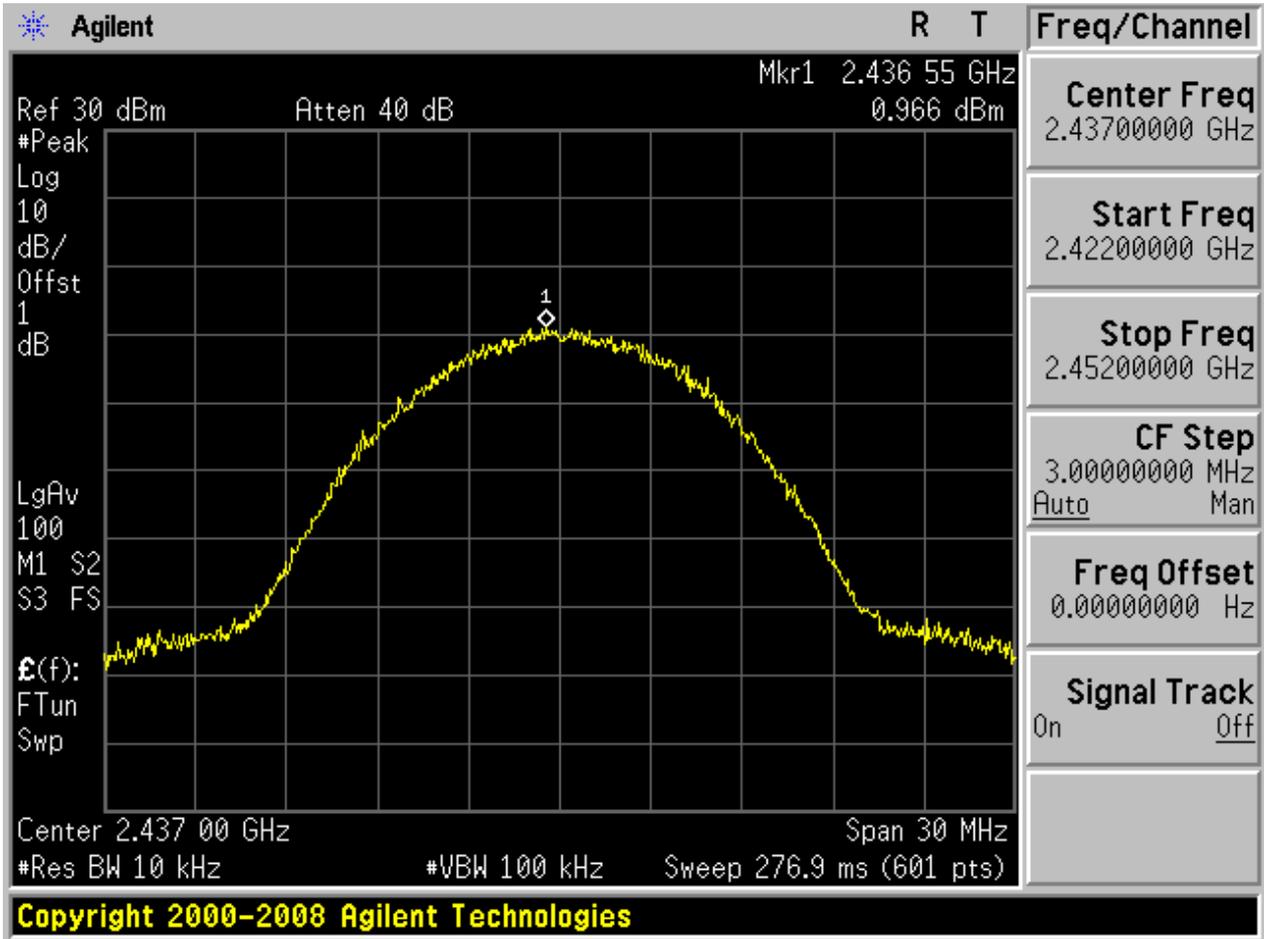
## Part II - Test Plots

### 2.1 11B\_L

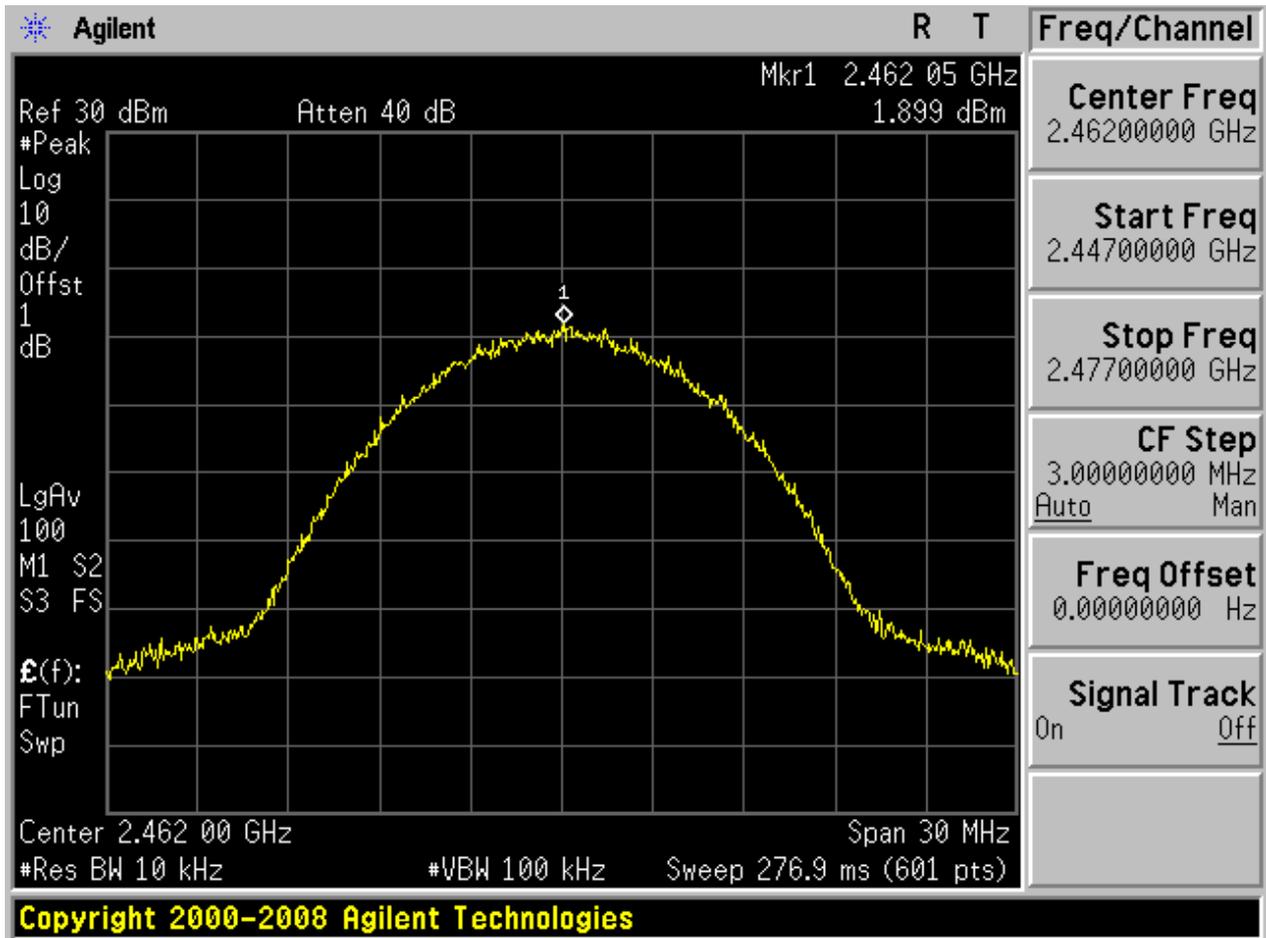




### 2.2 11B\_M

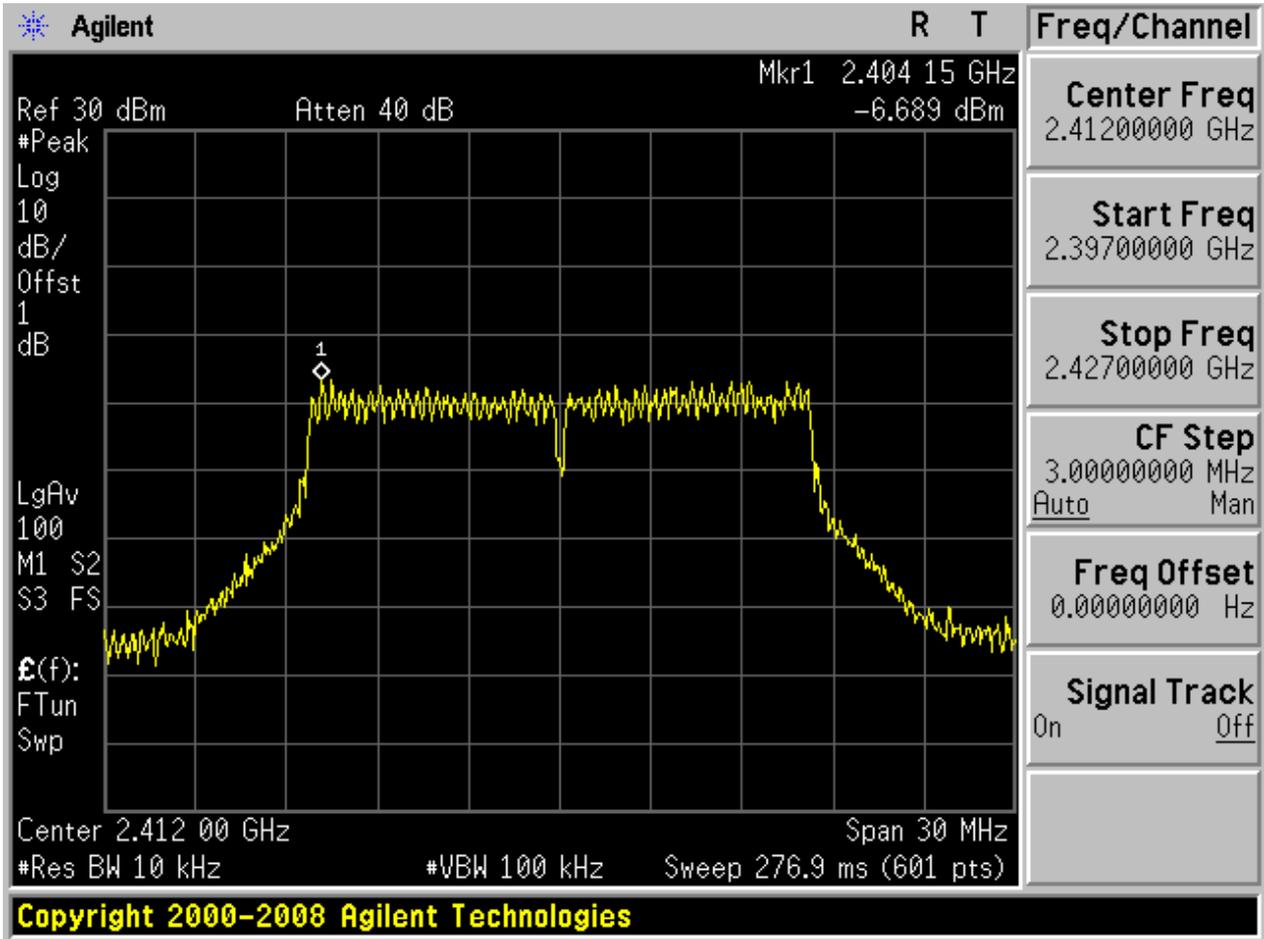


### 2.3 11B\_H



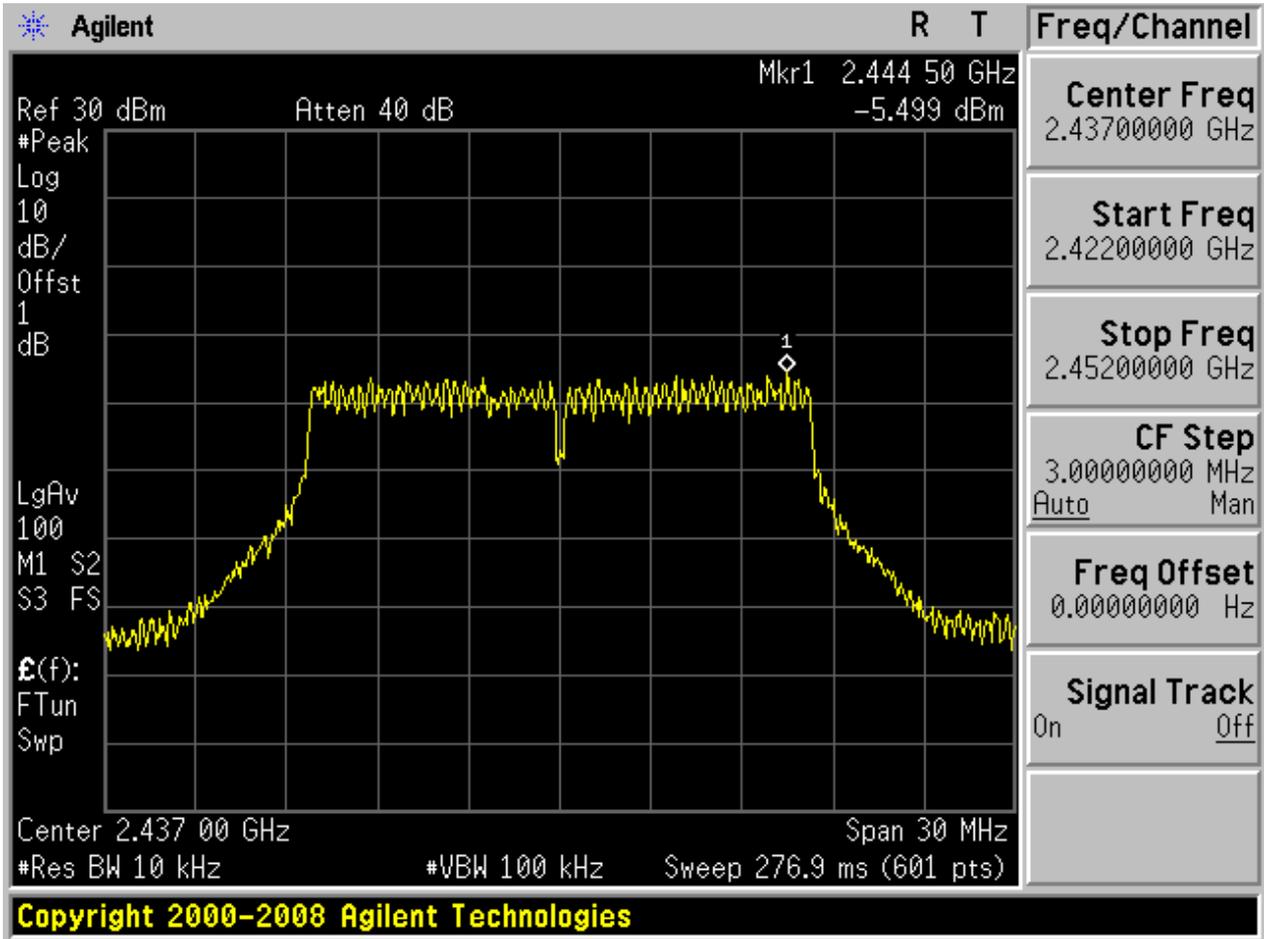


### 2.4 11G\_L



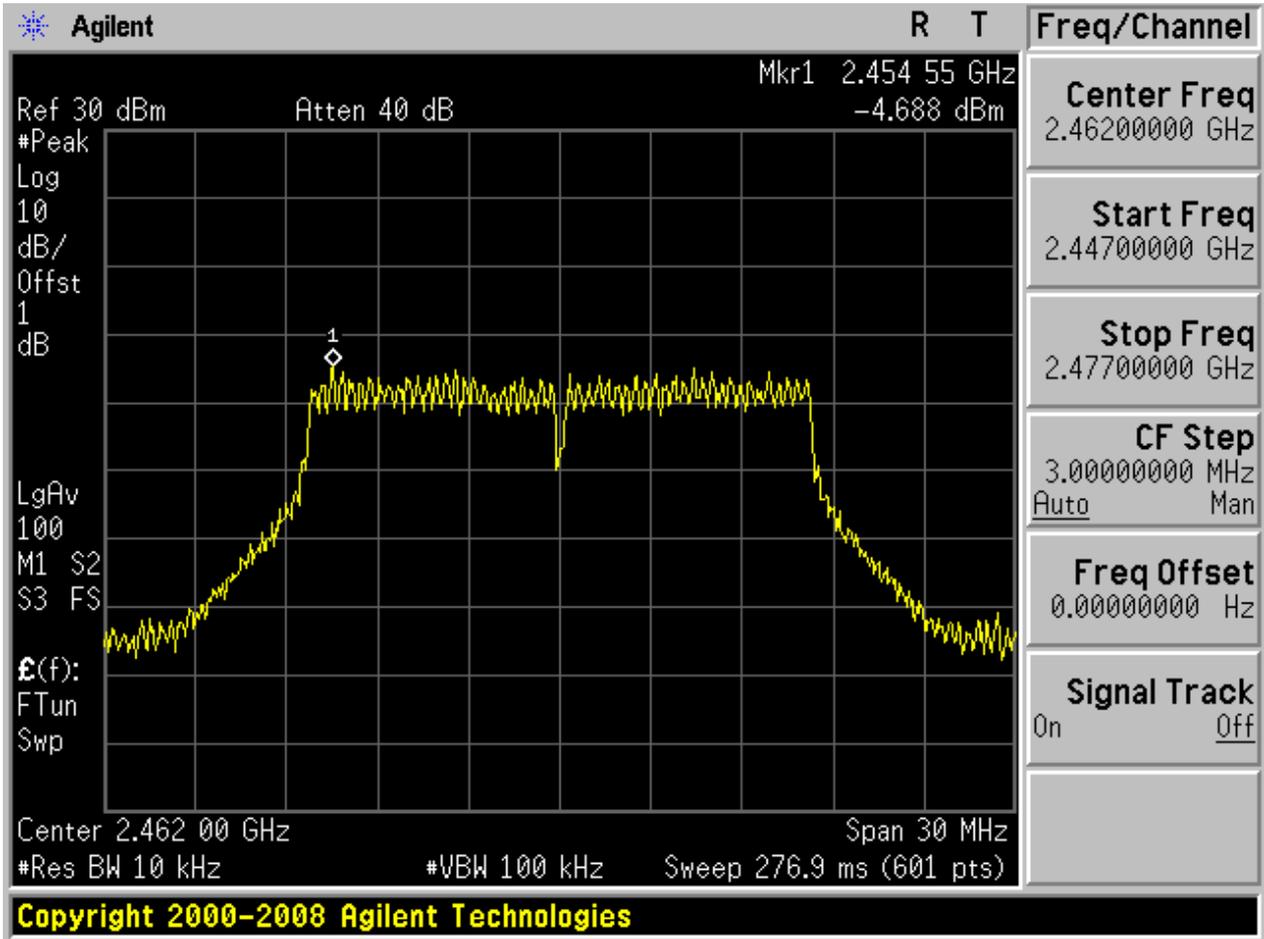


### 2.5 11G\_M



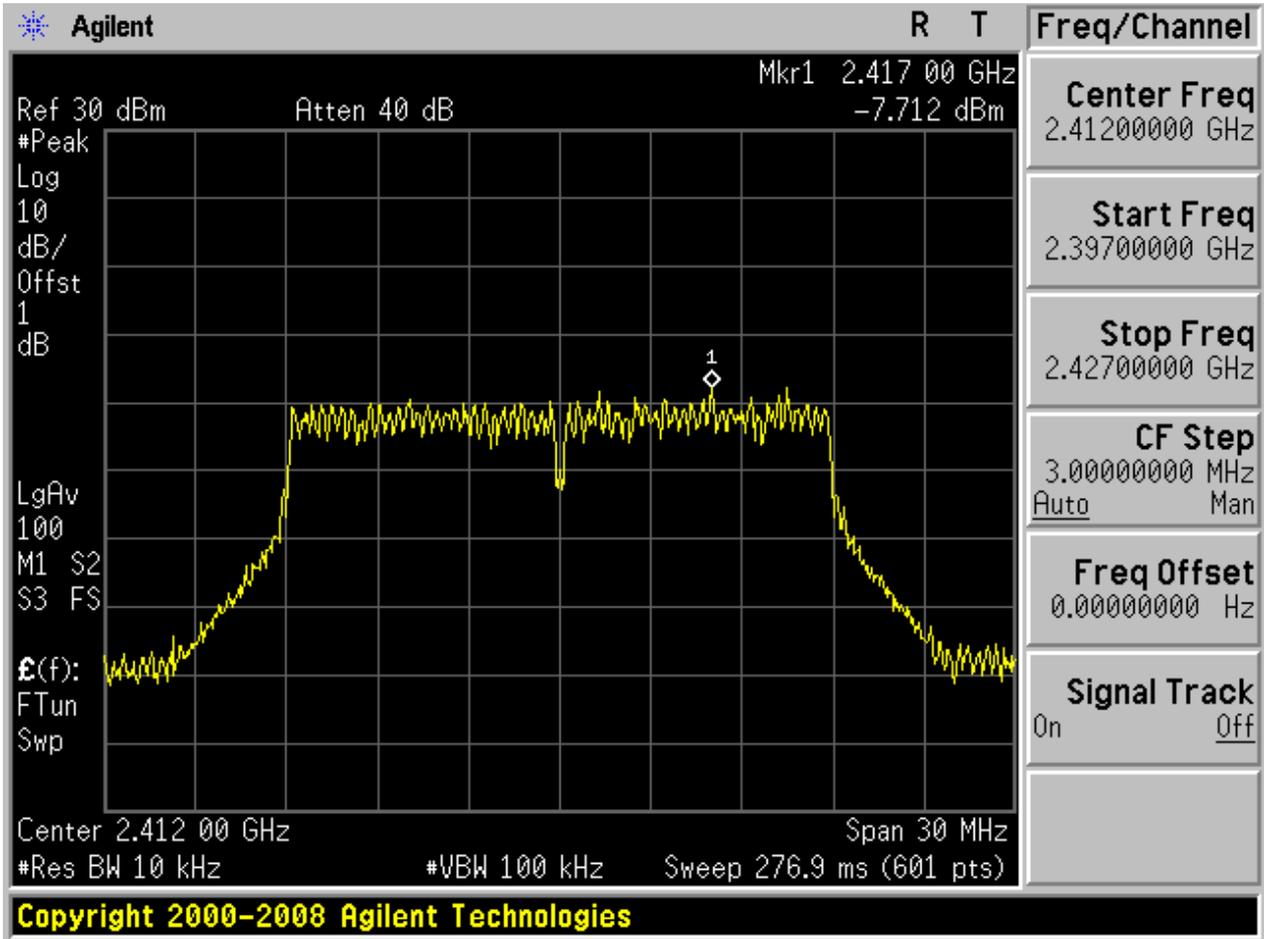


### 2.6 11G\_H



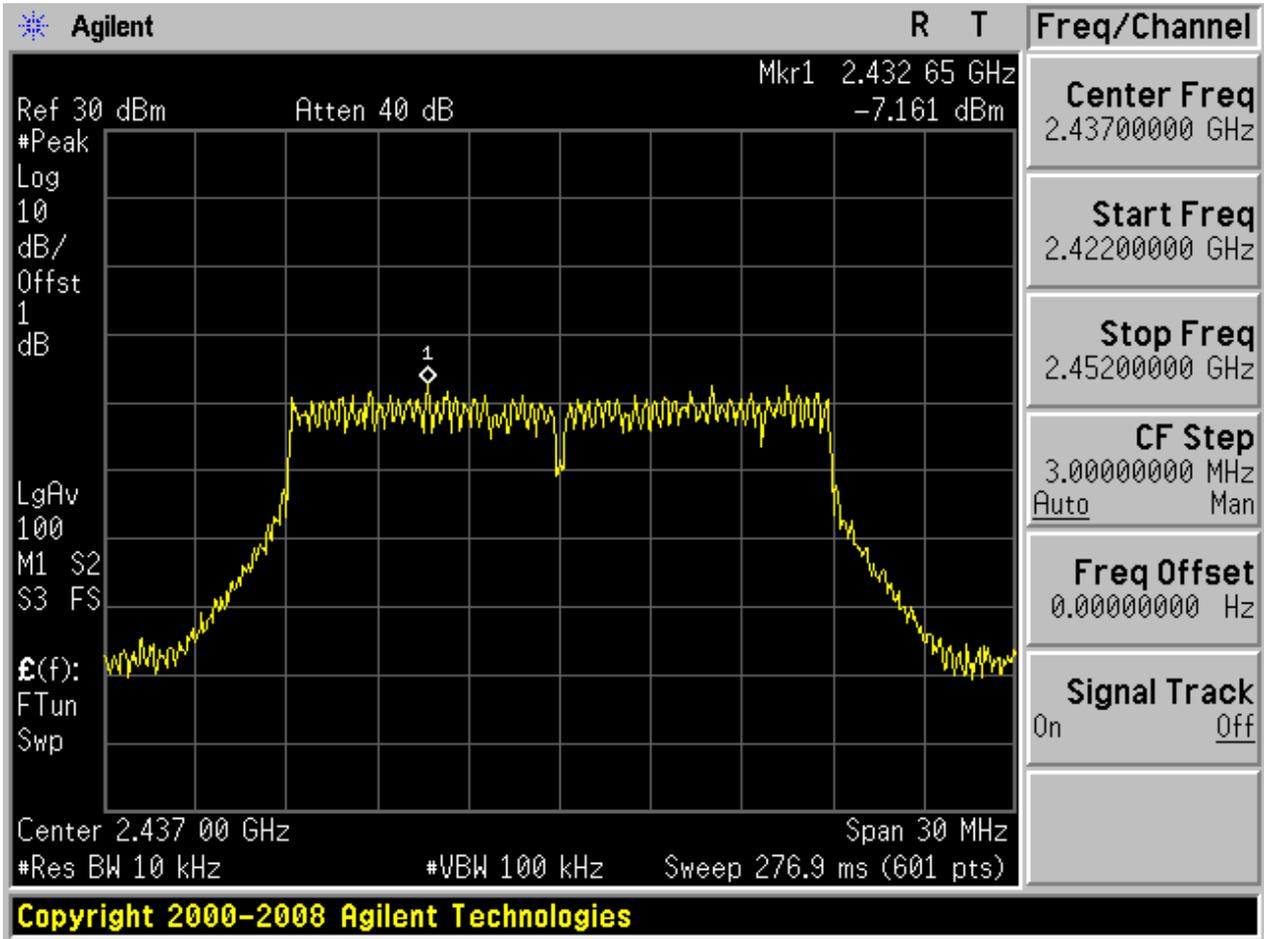


2.7 11N20\_L



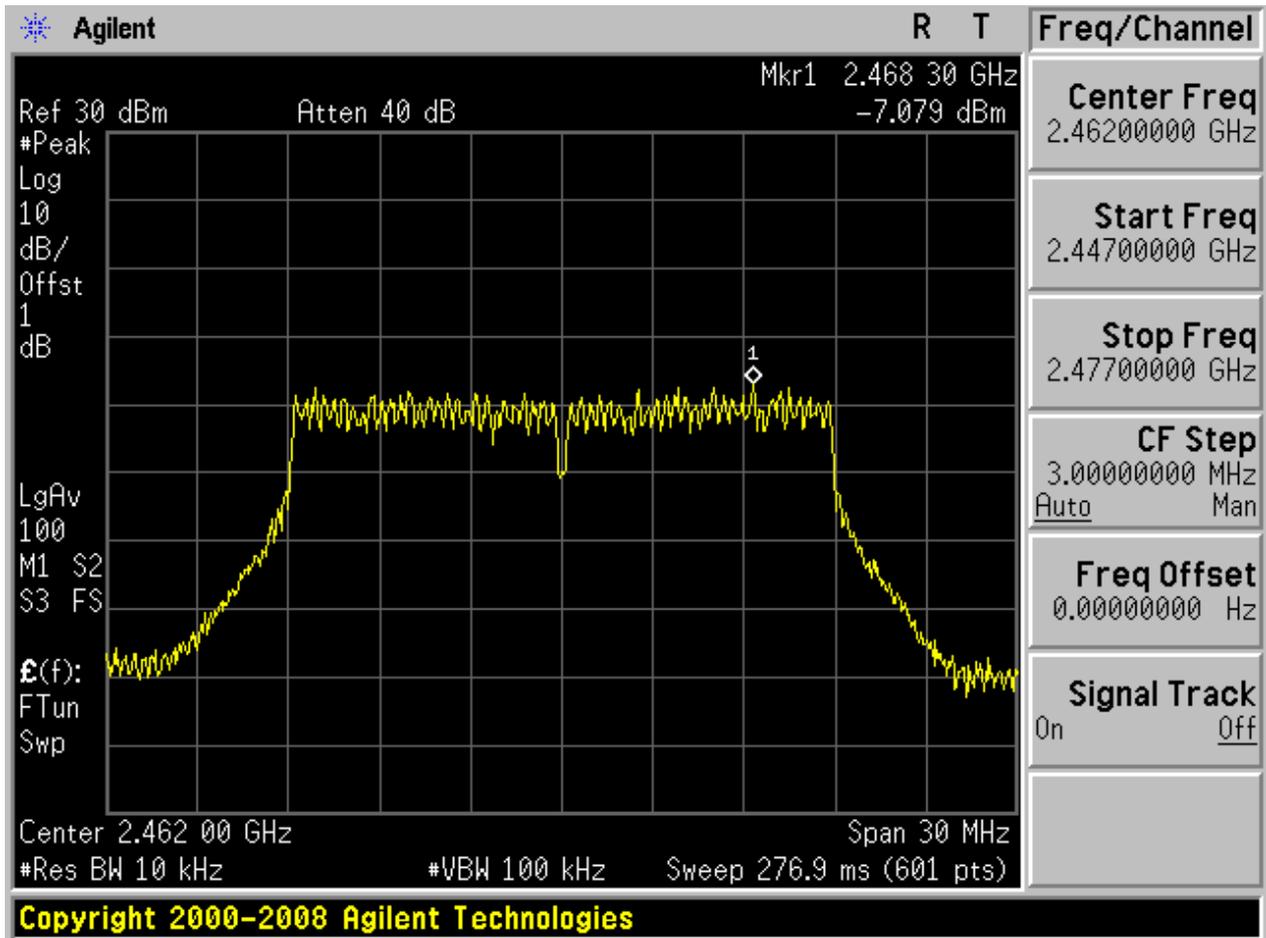


### 2.8 11N20\_M





### 2.9 11N20\_H



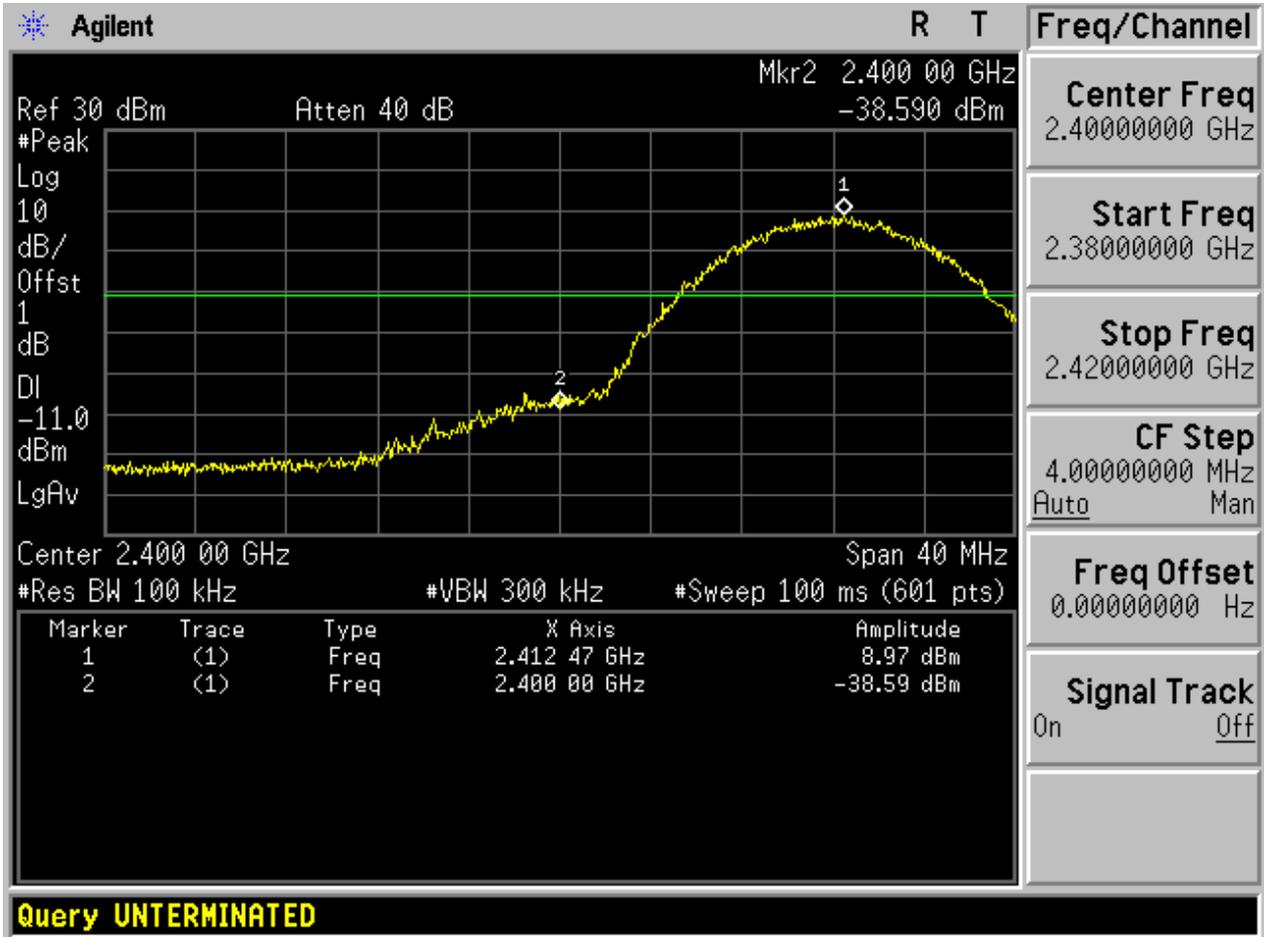
## Appendix D: Band Edges Compliance

### Part I - Test Results

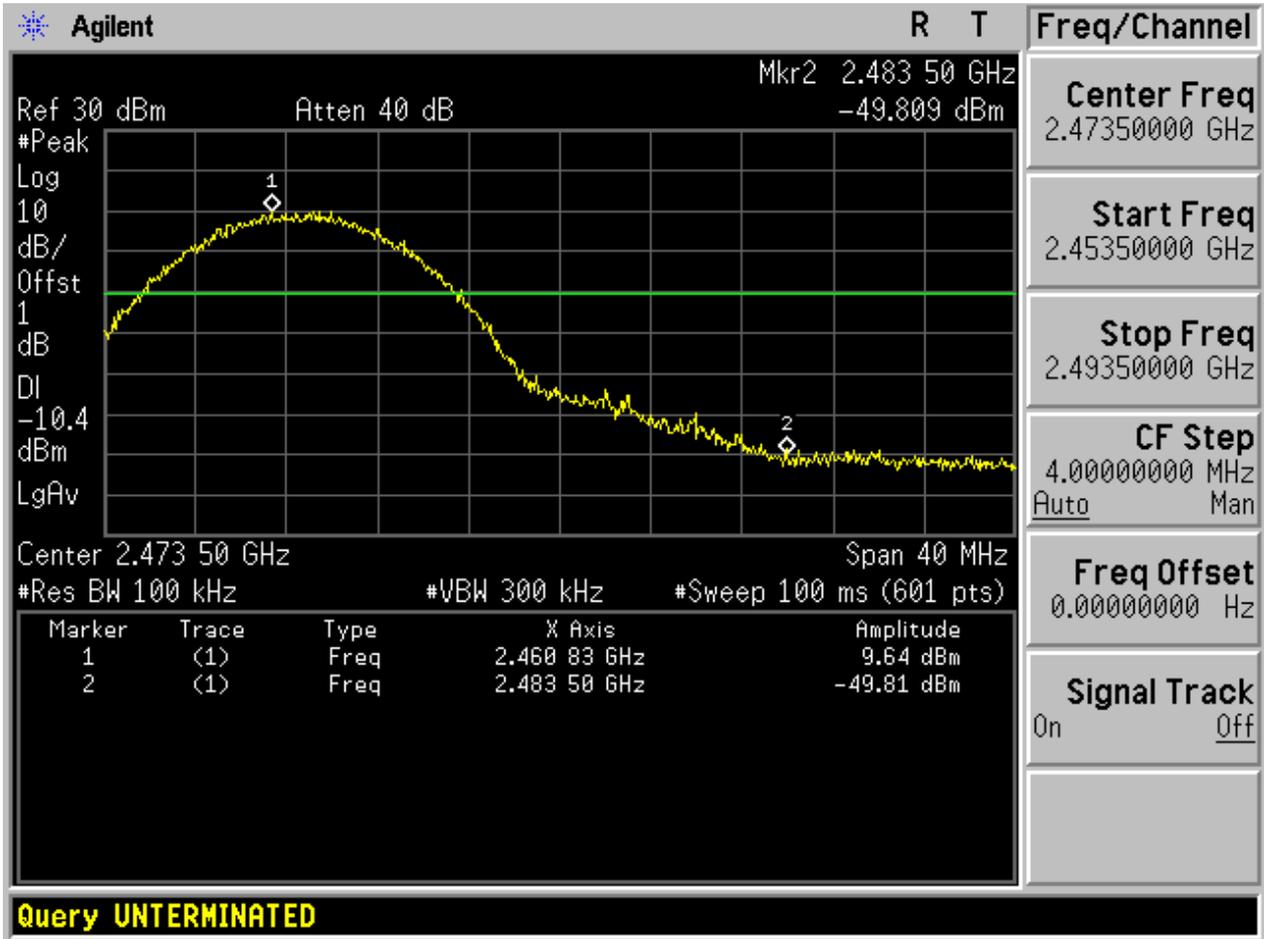
Test Mode	Test Channel	Frequency[MHz]	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
11B	L	2412	8.97	-38.59	pass
11B	H	2462	9.64	-49.81	pass
11G	L	2412	2.14	-37.52	pass
11G	H	2462	3.32	-46.24	pass
11N20	L	2412	0.07	-37.83	pass
11N20	H	2462	1.27	-47.20	pass

## Part II - Test Plots

### 2.1 11B\_L

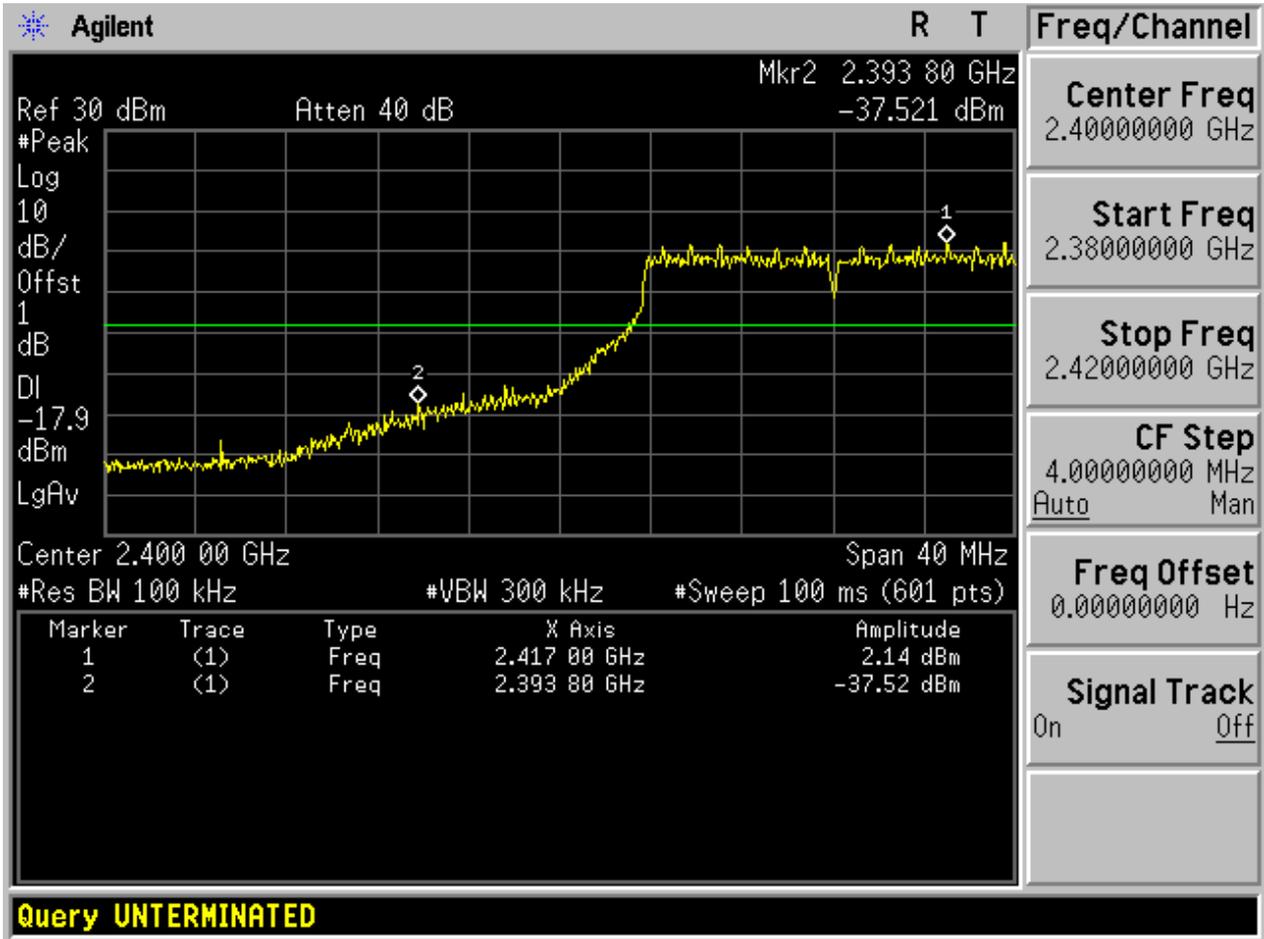


2.2 11B\_H



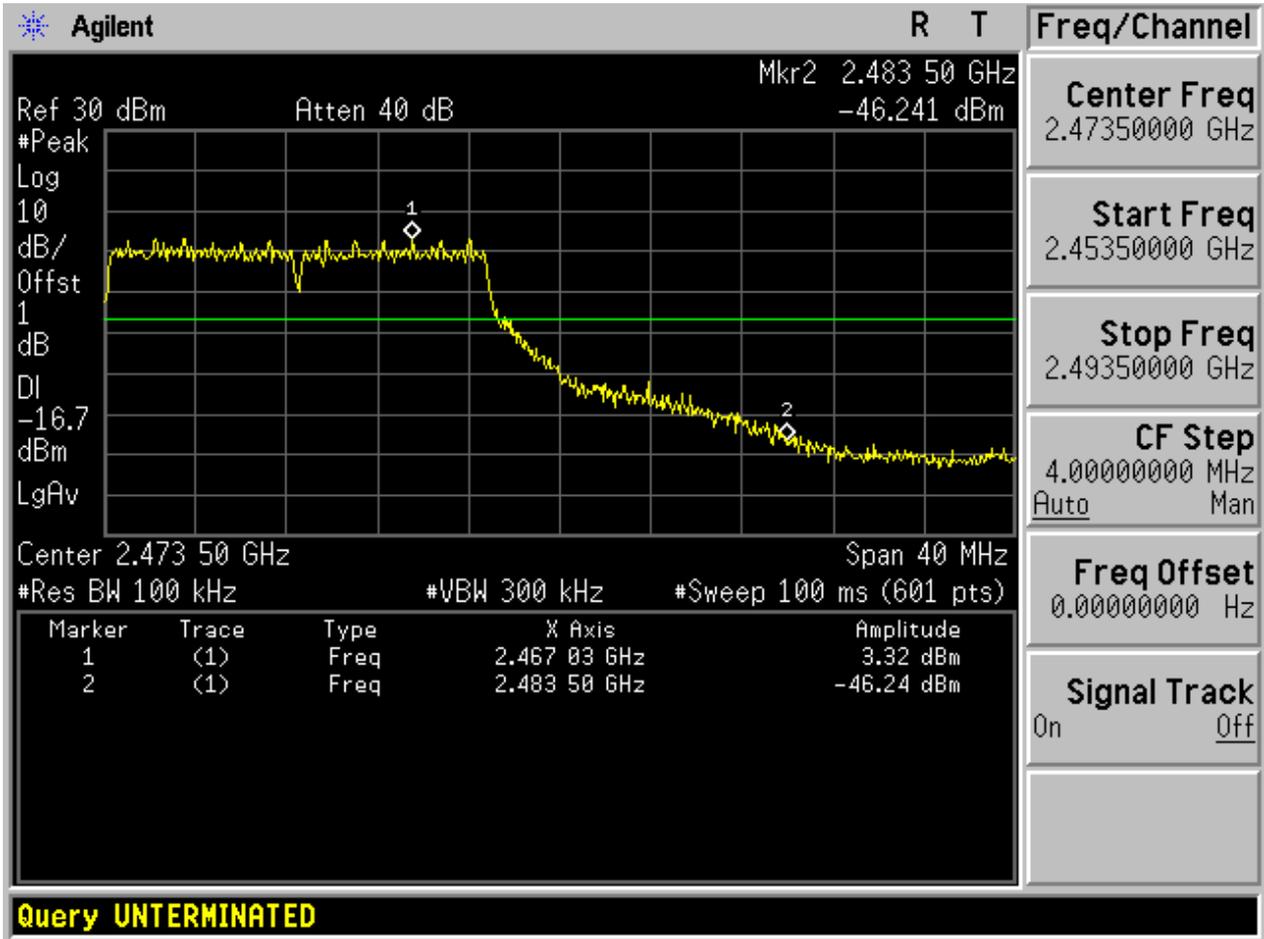


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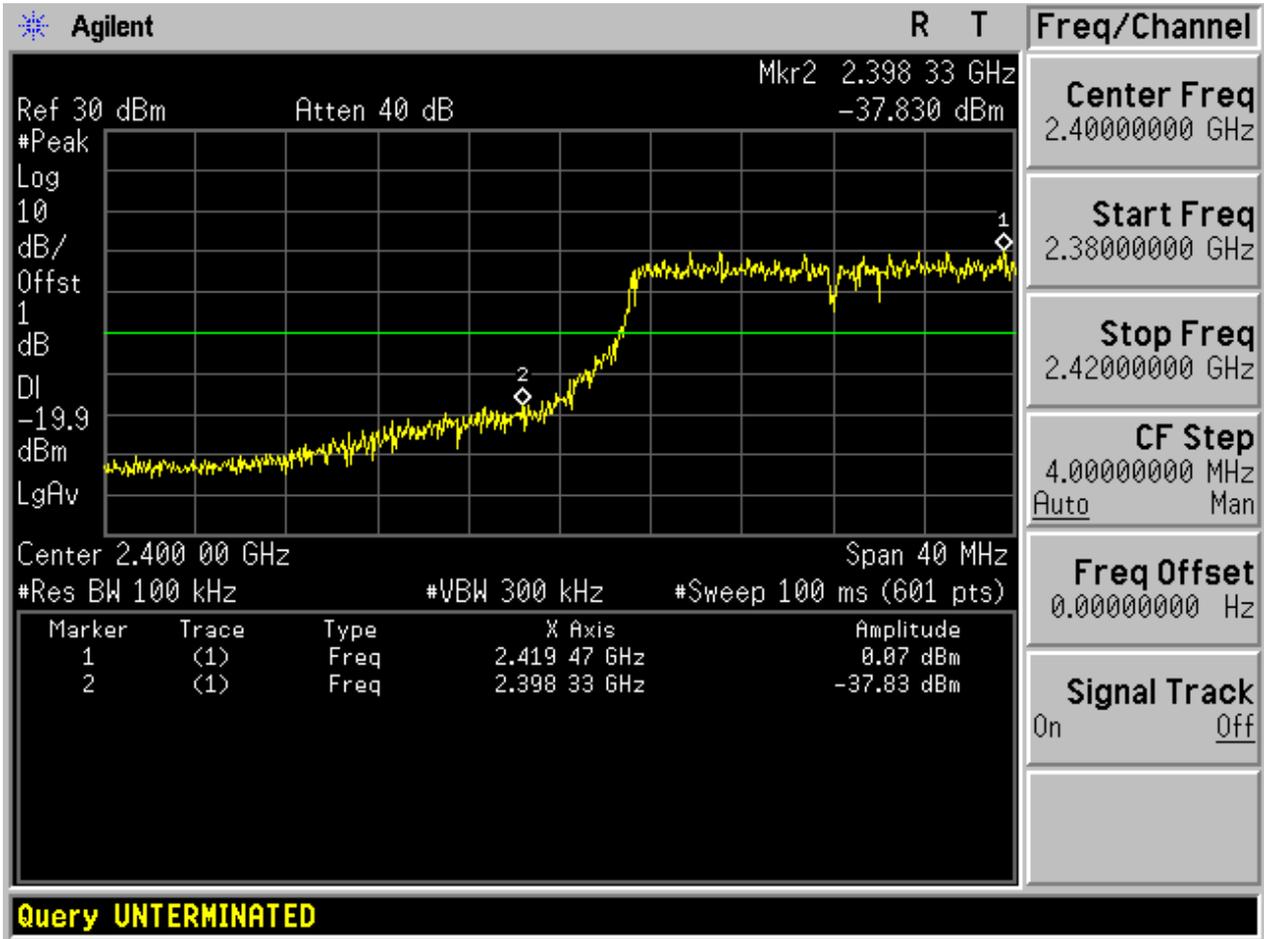


### 2.4 11G\_H

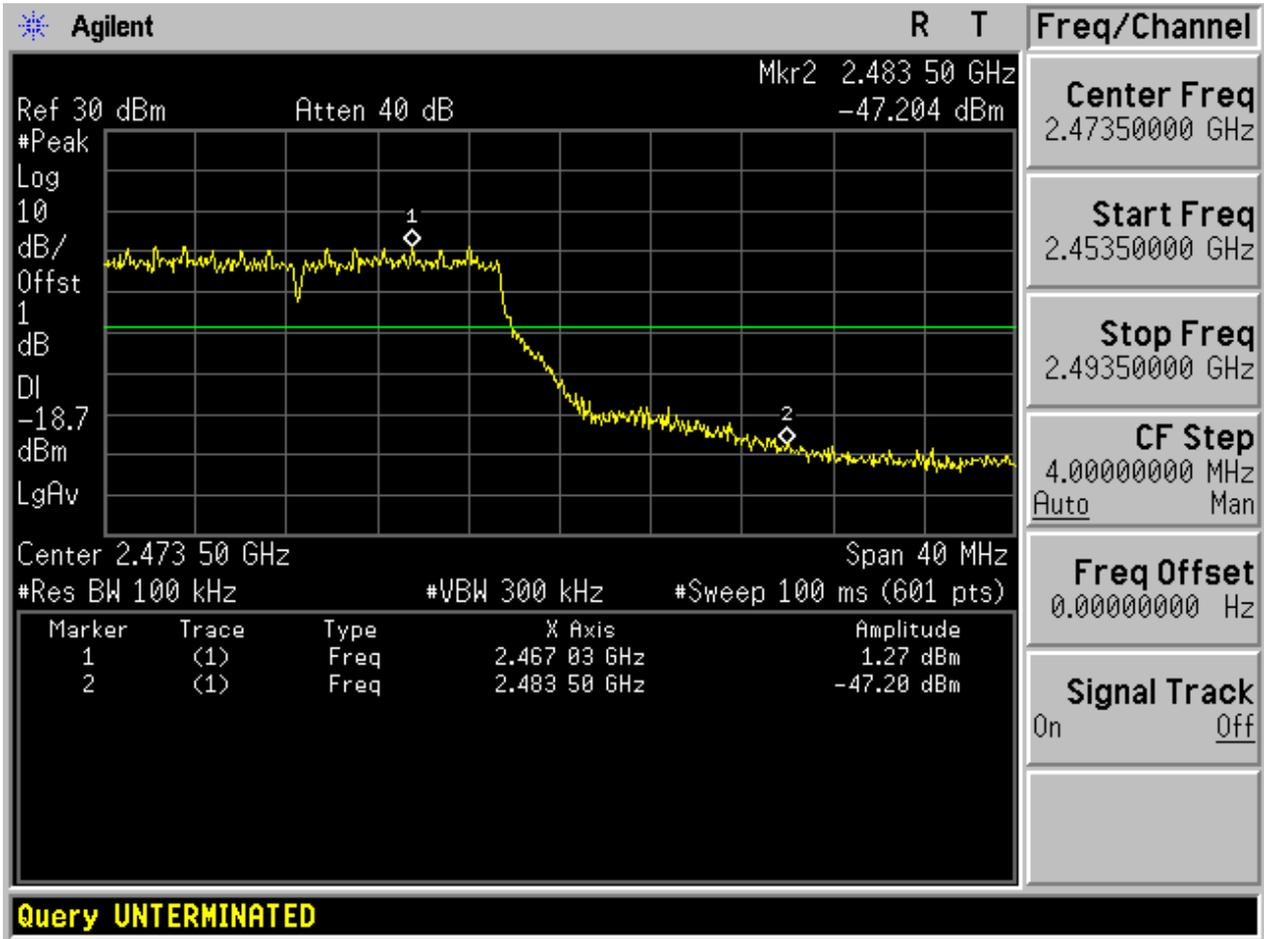




### 2.5 11N20\_L



2.6 11N20\_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".

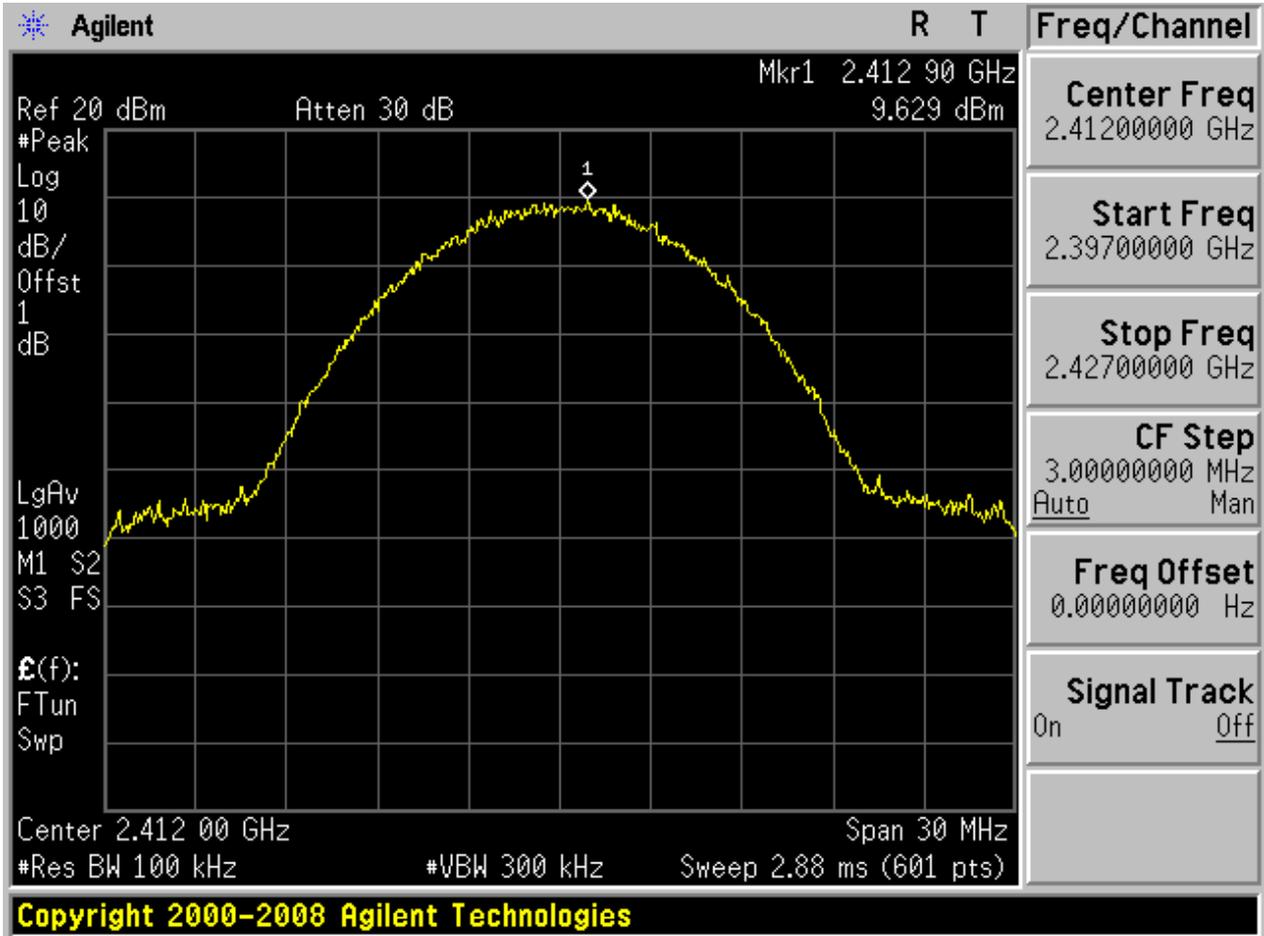
### Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Pref[dBm]	Puw[dBm]	Verdict
11B	L	2412	9.63	<limit	pass
11B	M	2437	10.50	<limit	pass
11B	H	2462	10.38	<limit	pass
11G	L	2412	2.31	<limit	pass
11G	M	2437	3.28	<limit	pass
11G	H	2462	3.32	<limit	pass
11N20	L	2412	.39	<limit	pass
11N20	M	2437	1.29	<limit	pass
11N20	H	2462	1.32	<limit	pass

## Part II - Test Plots

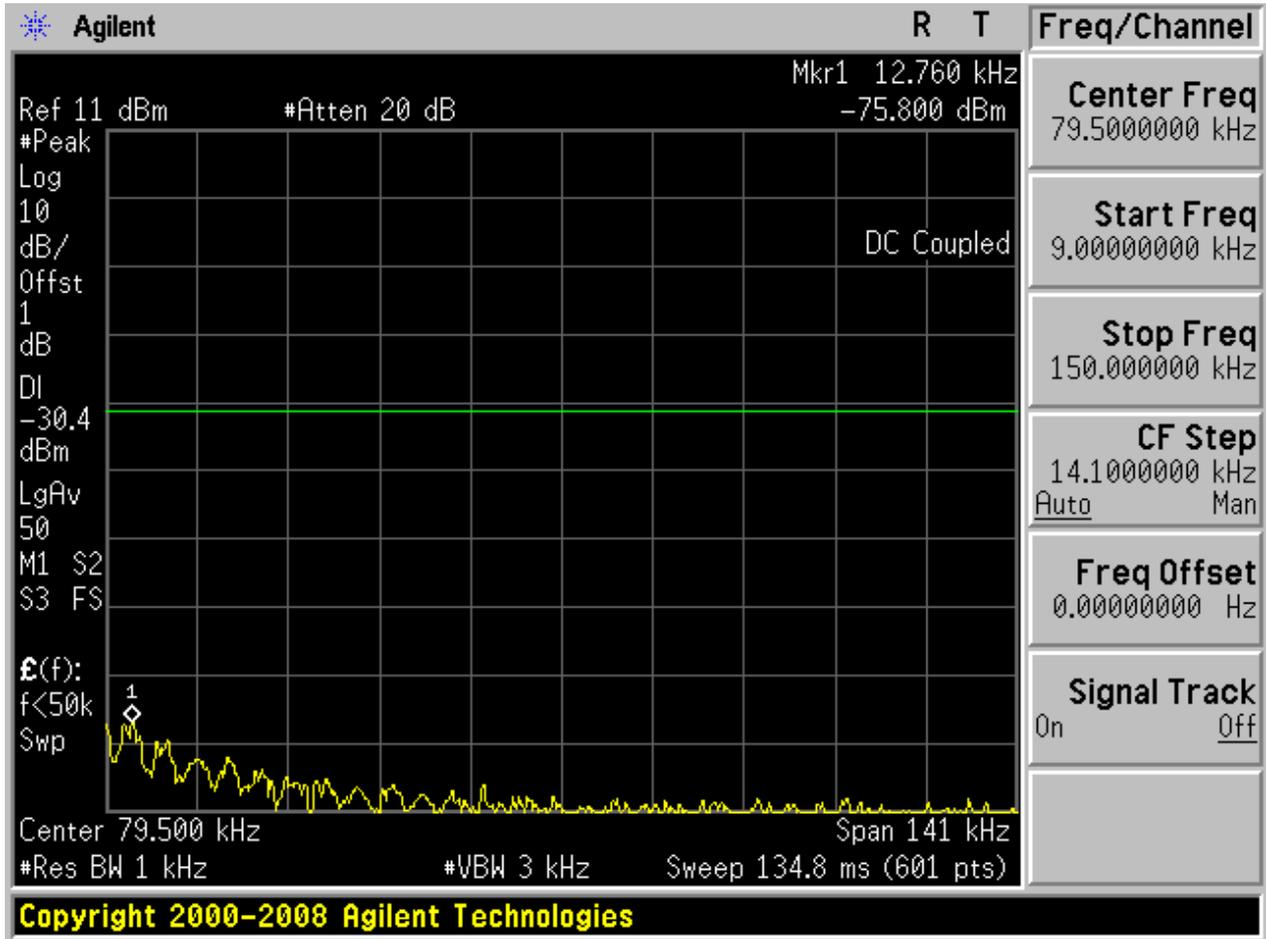
### 2.1 11B\_L

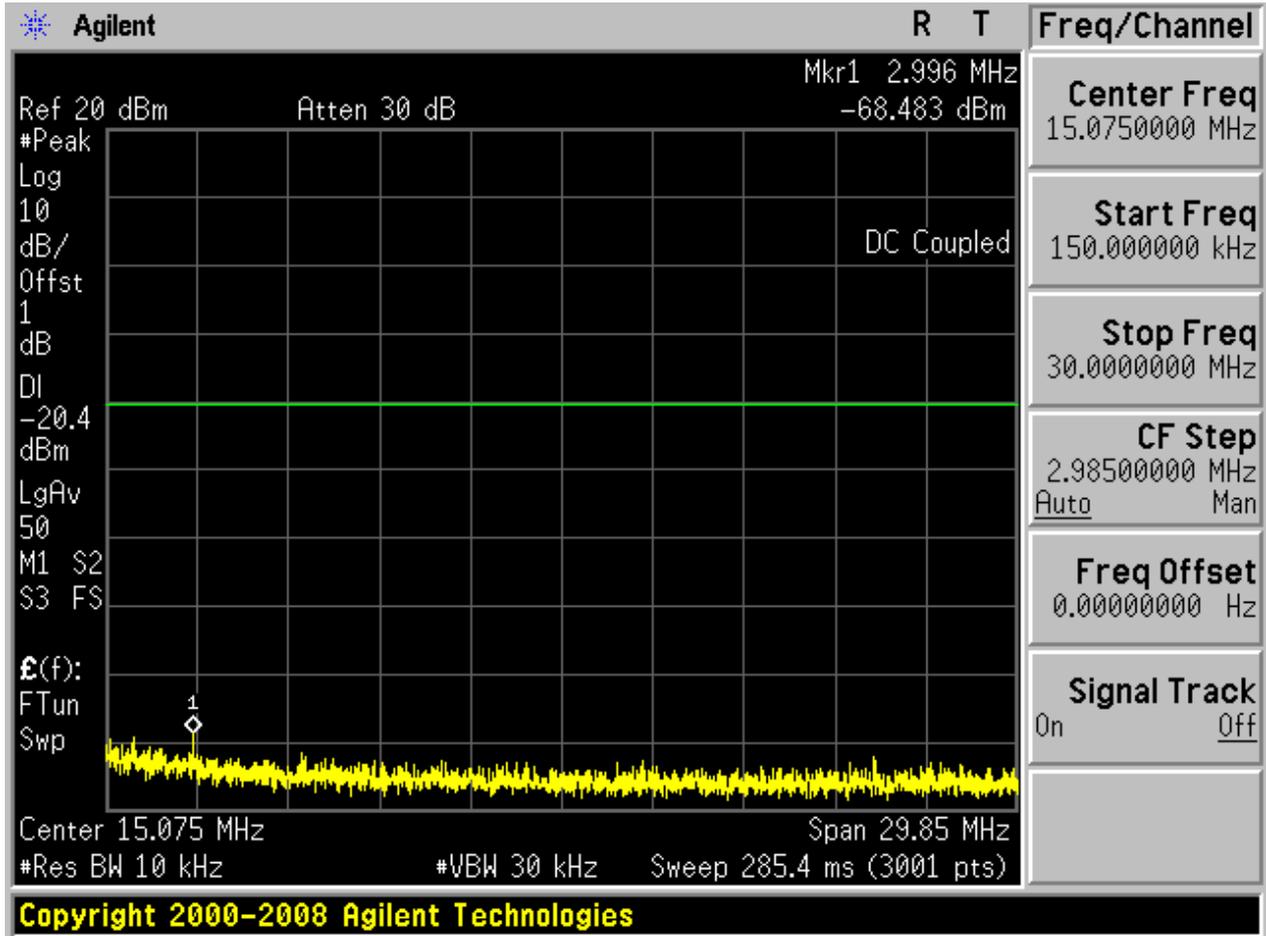
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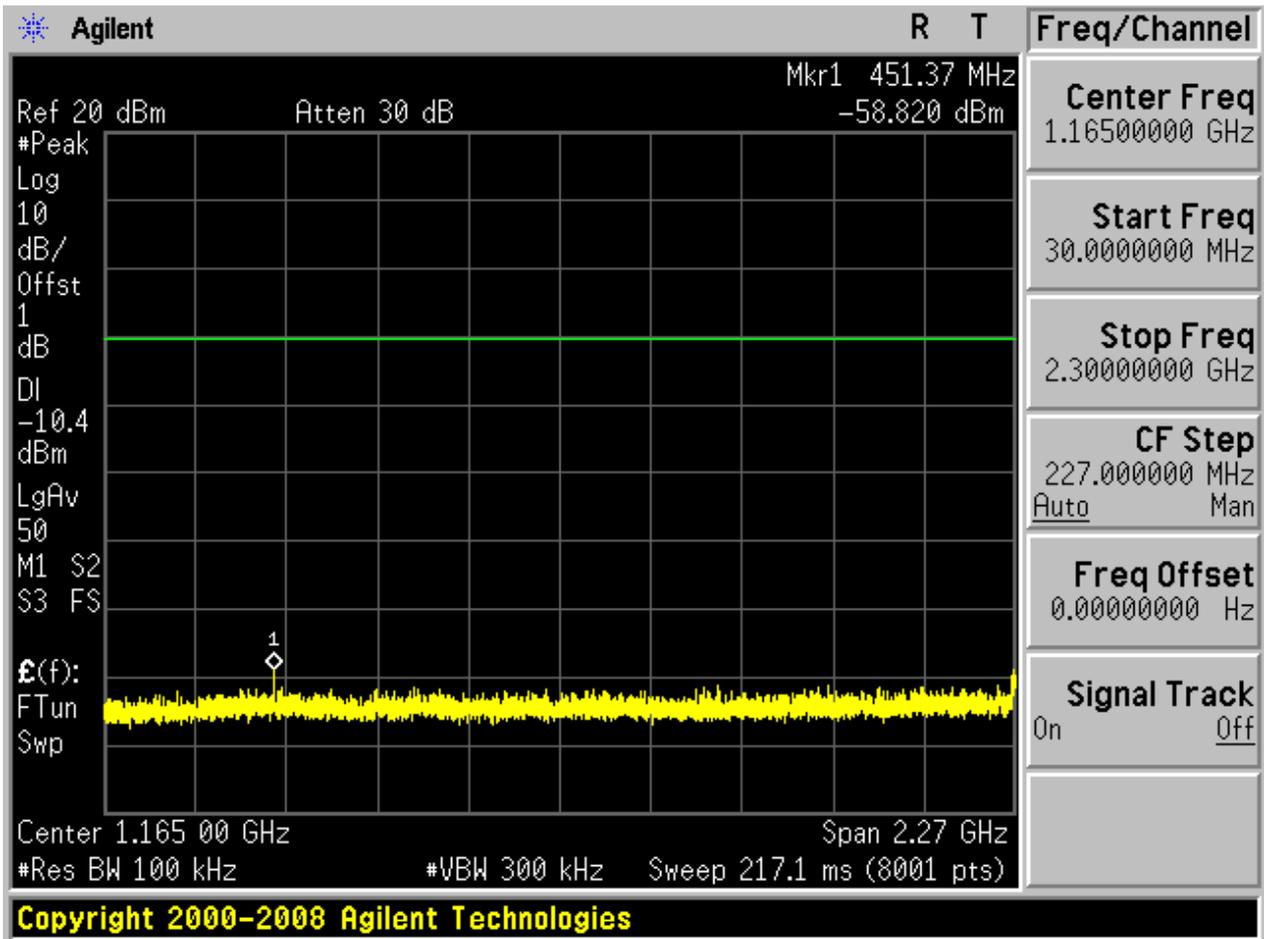


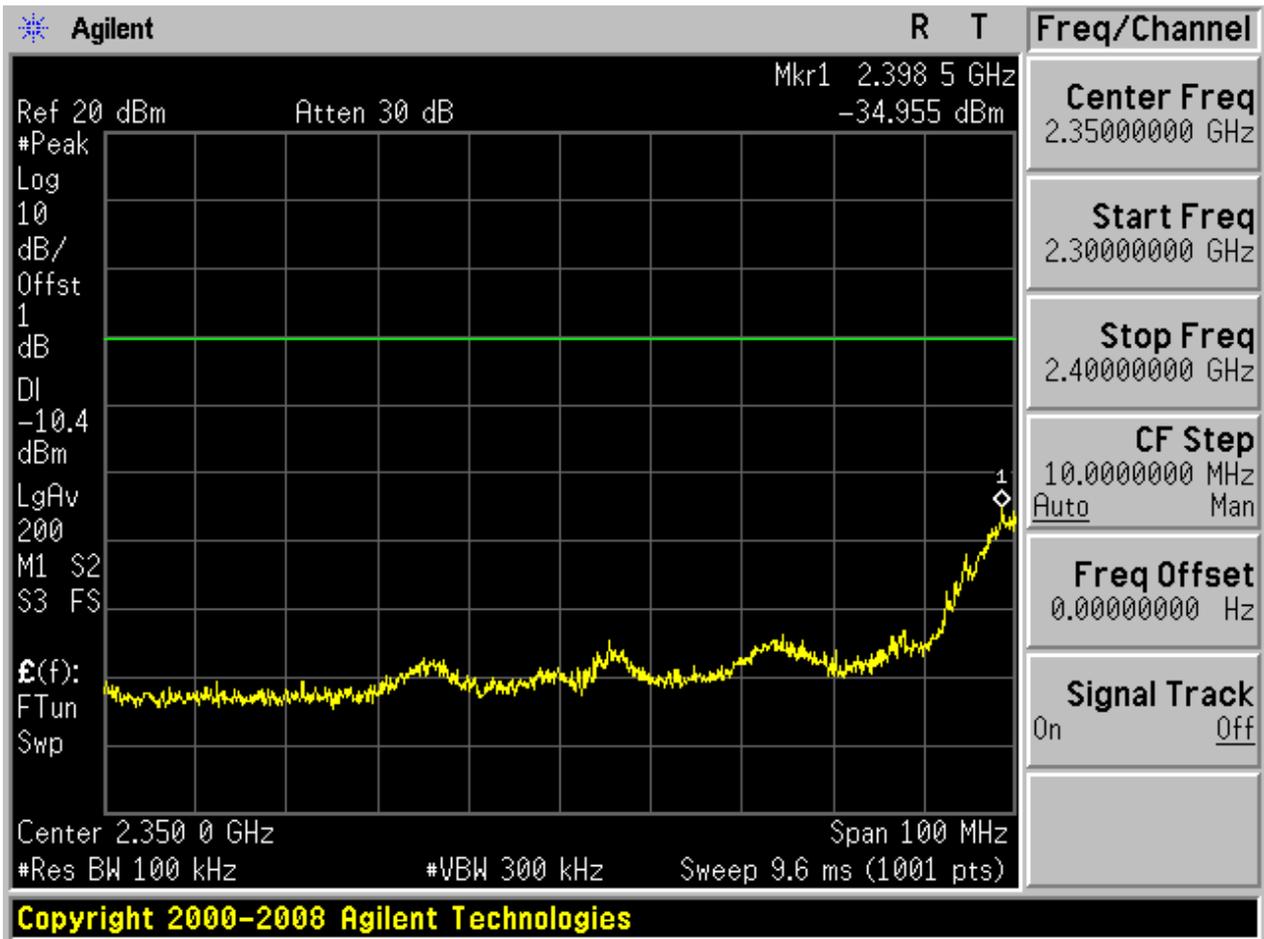


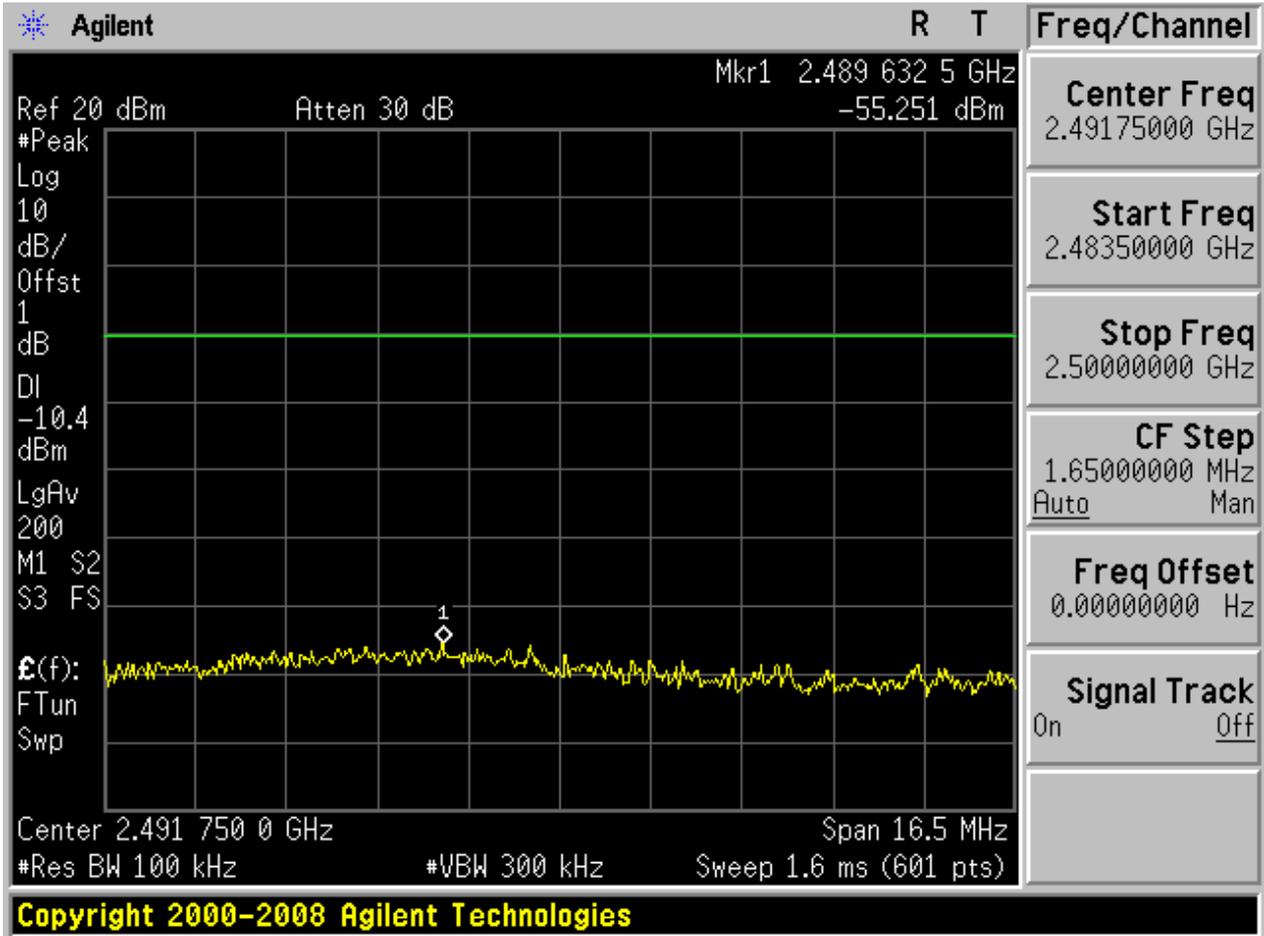
Puw:

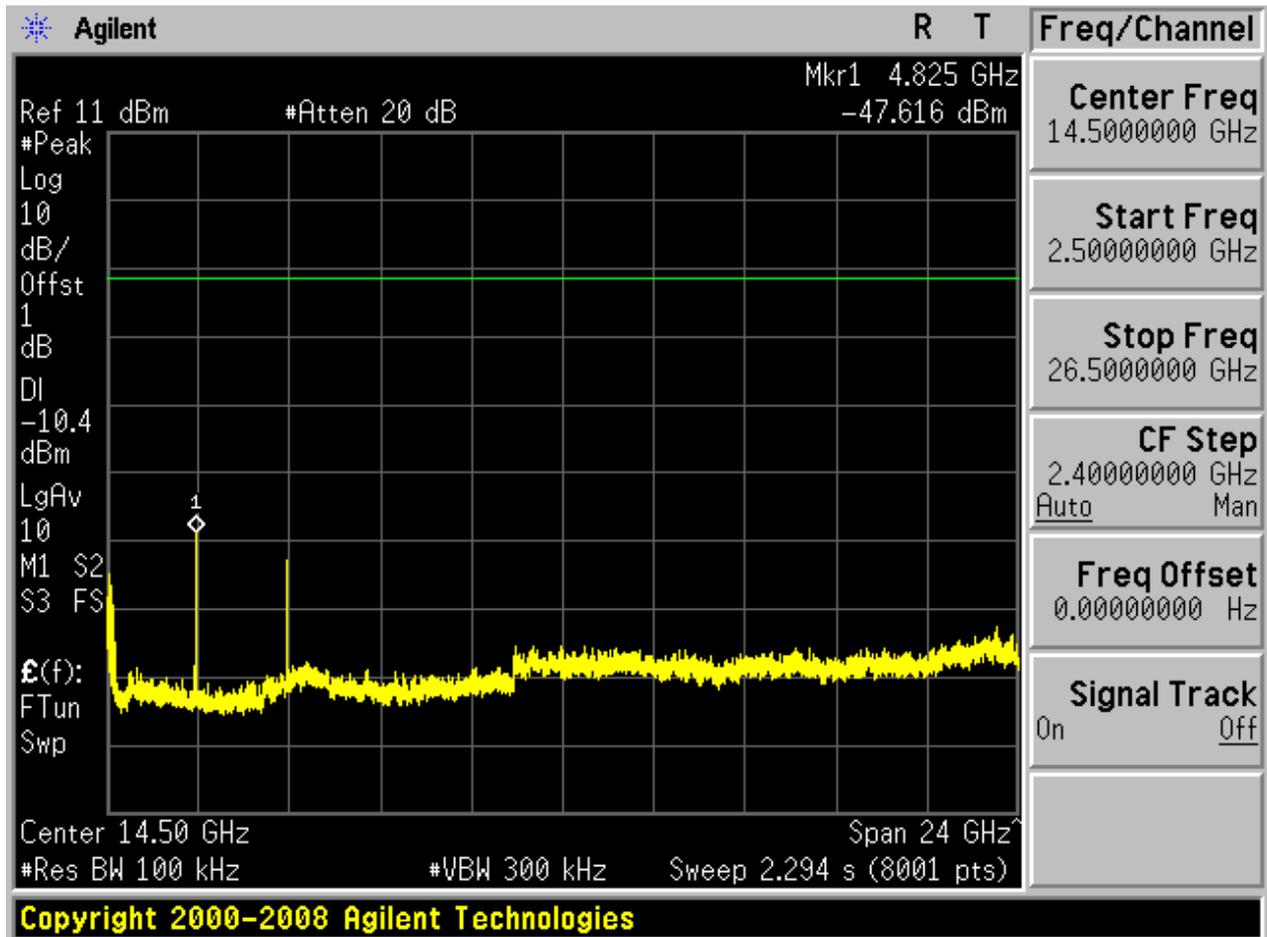








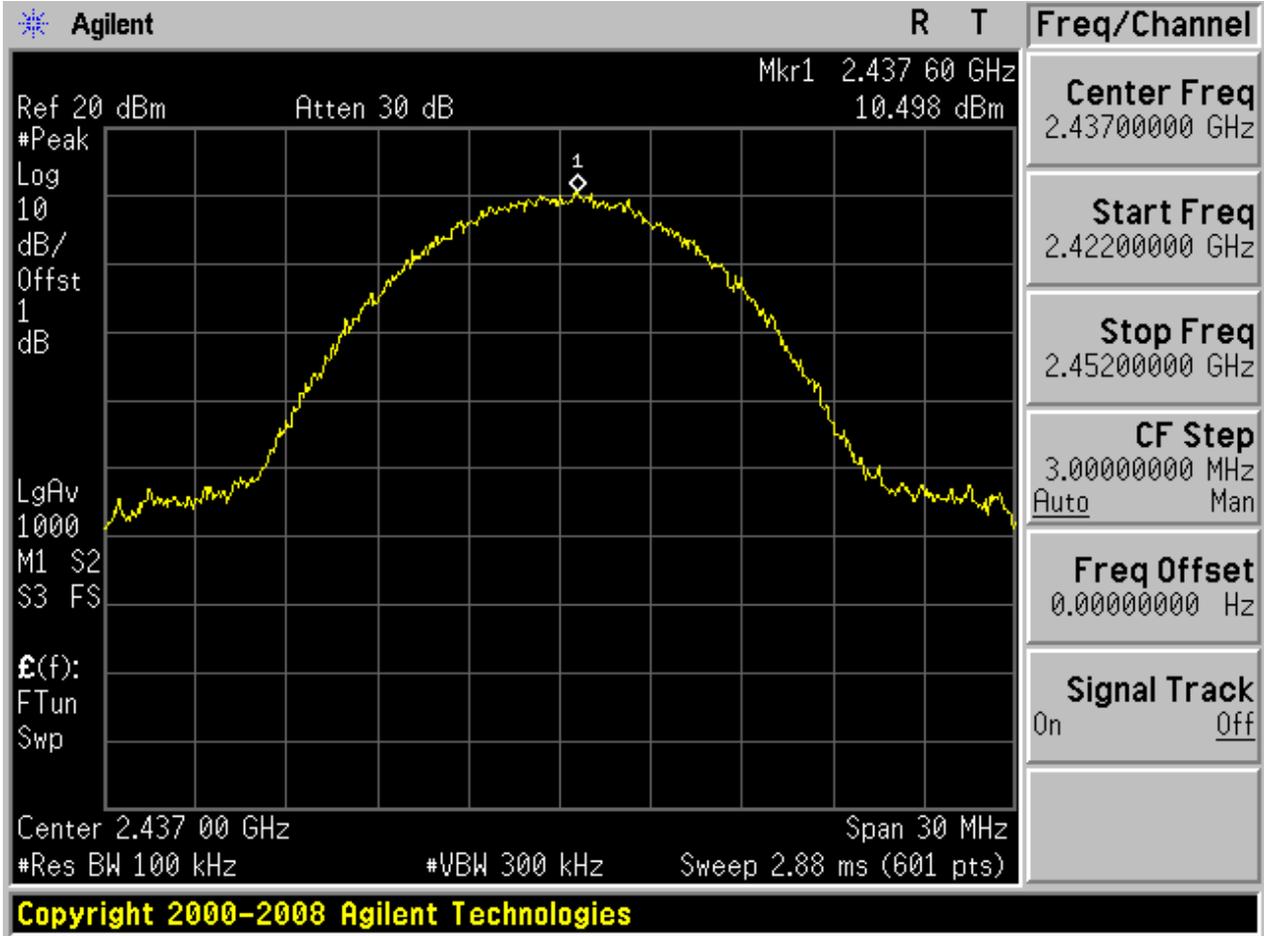






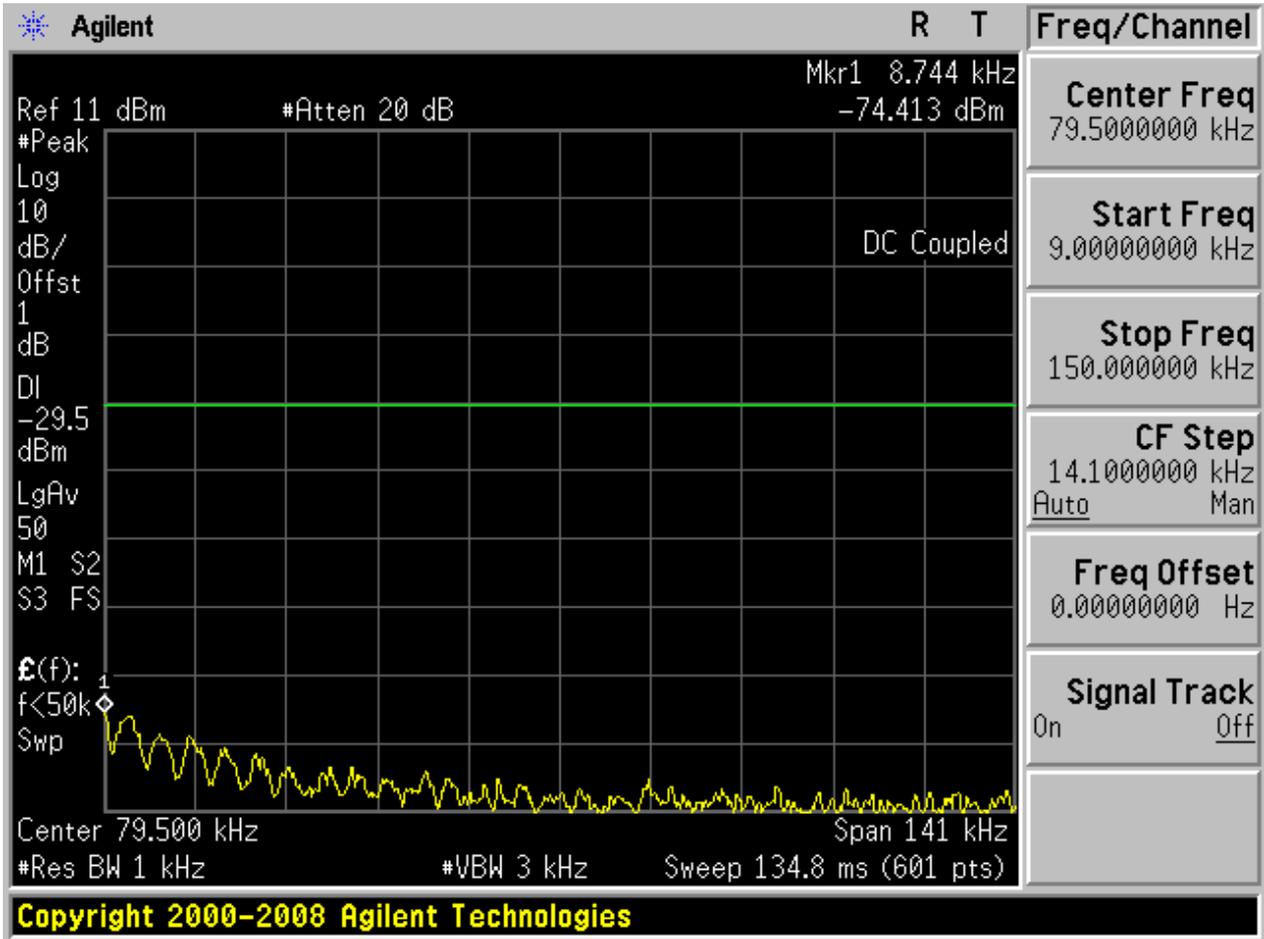
## 2.2 11B\_M

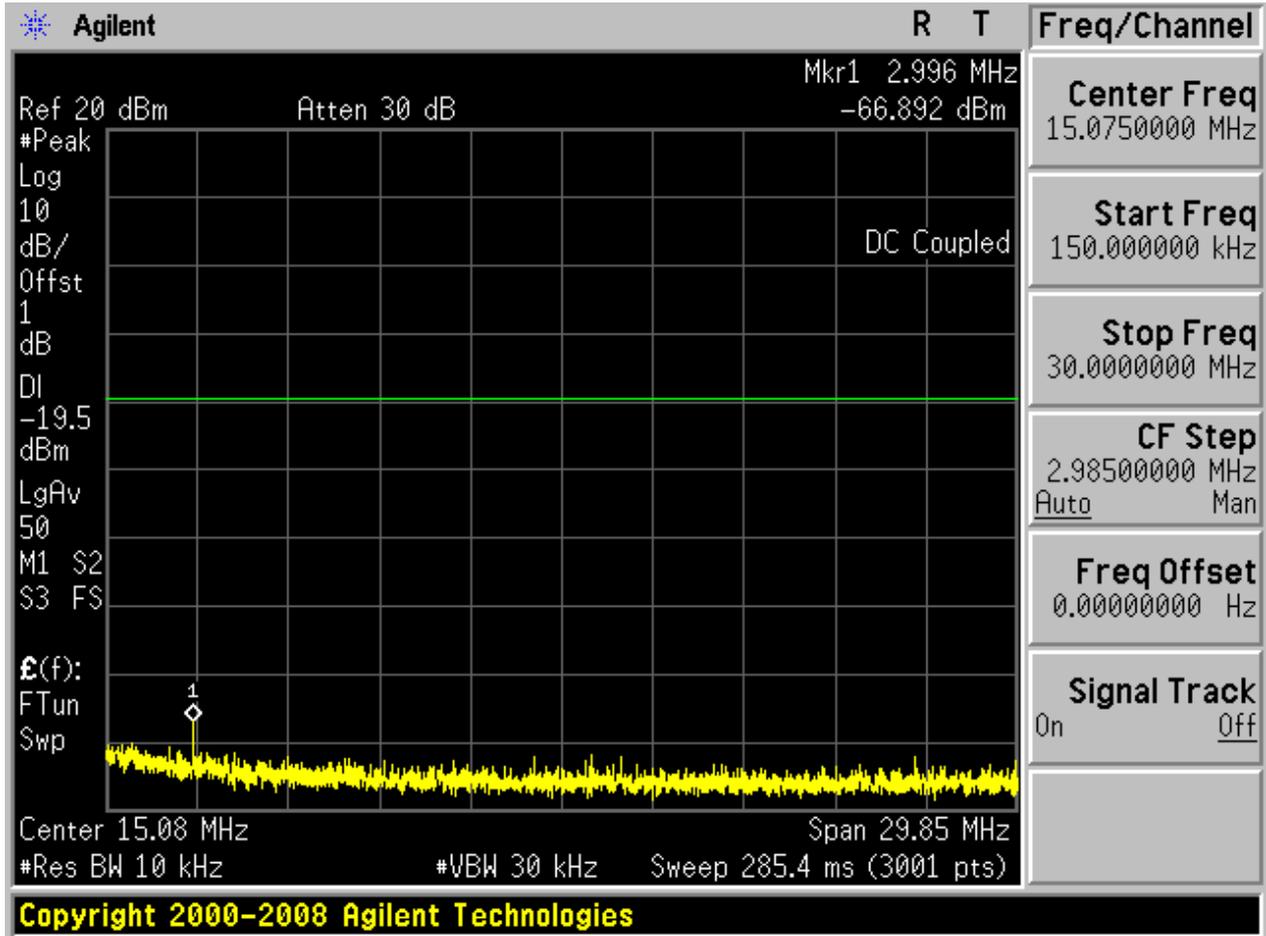
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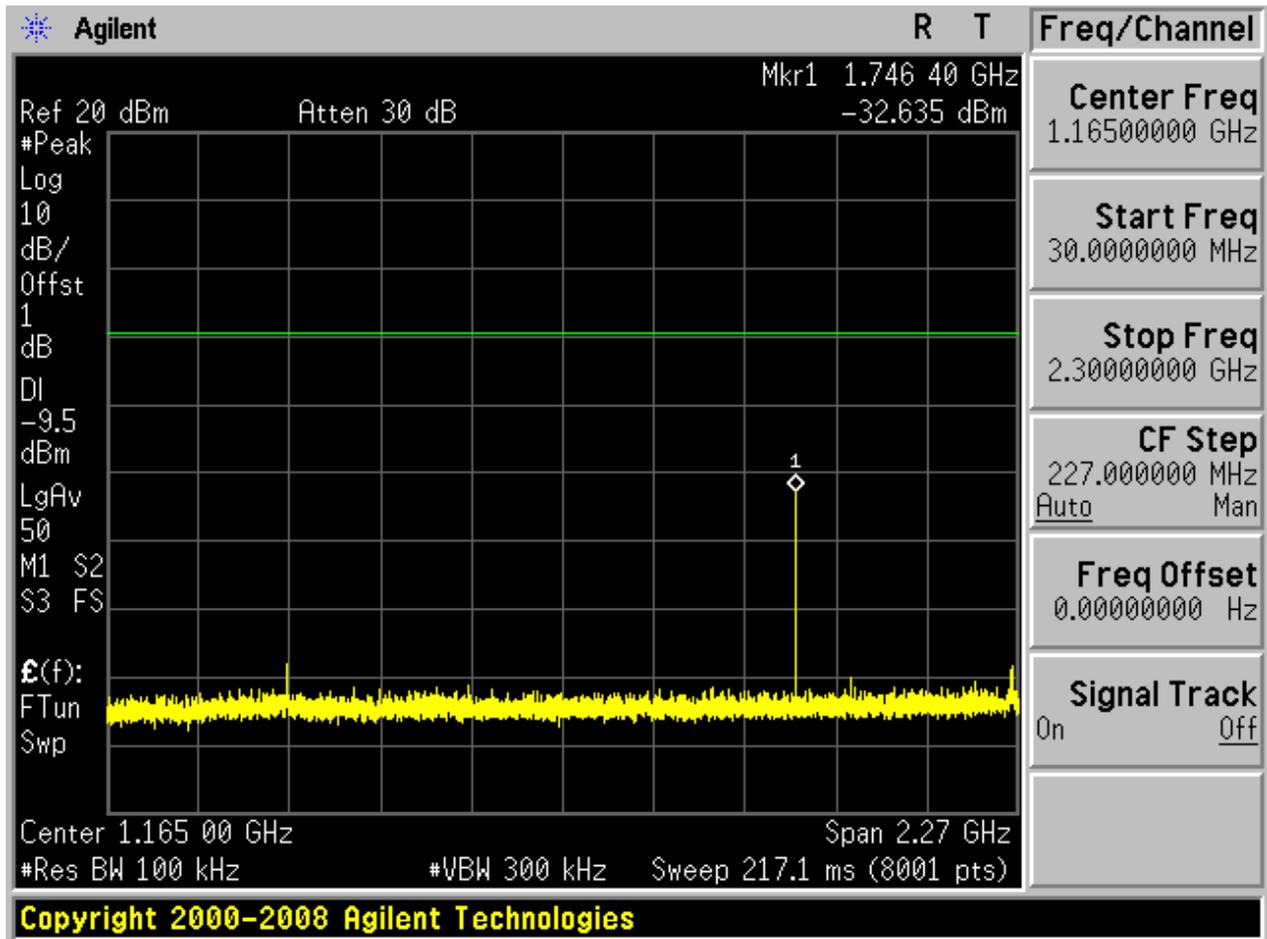


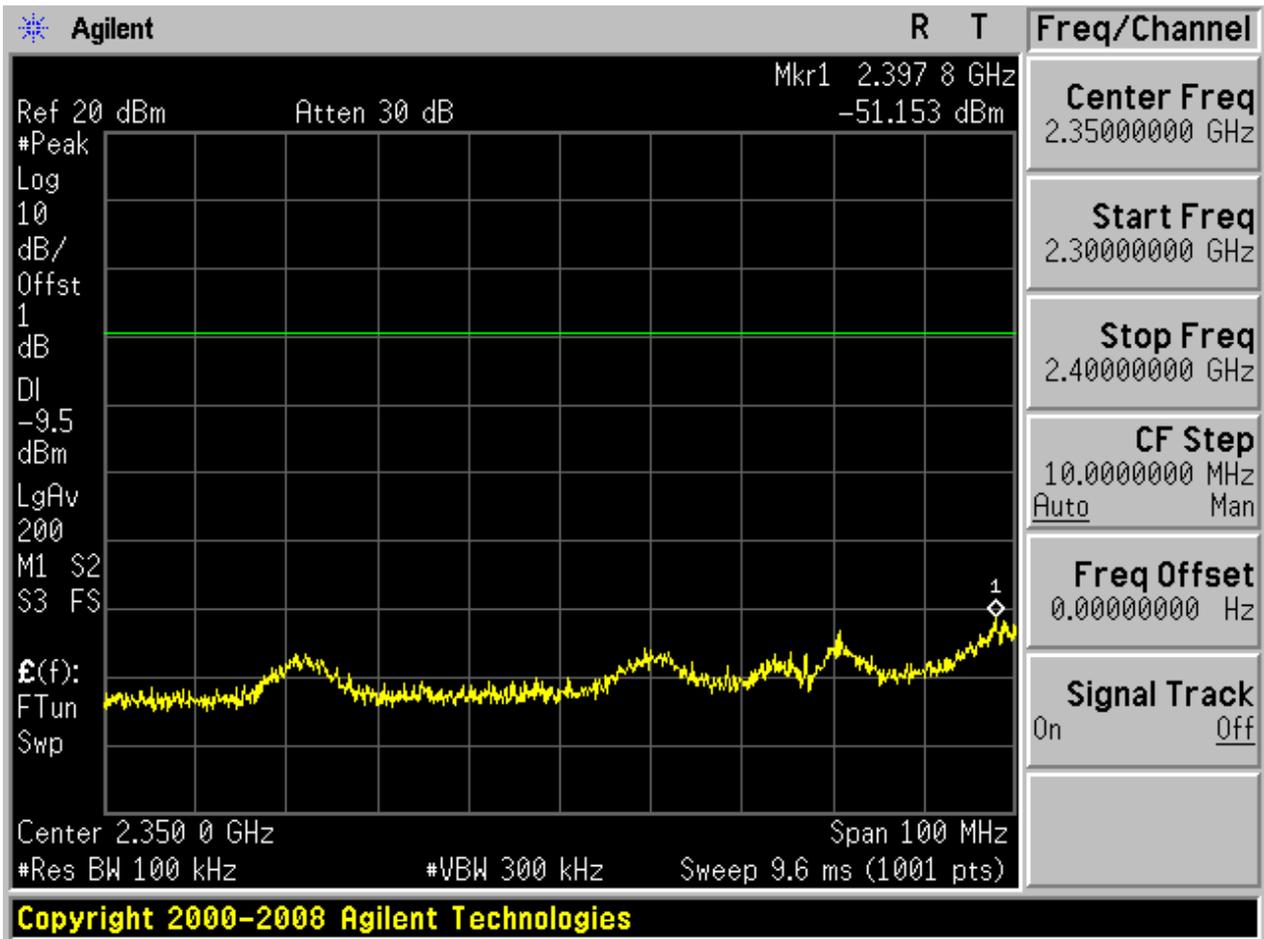


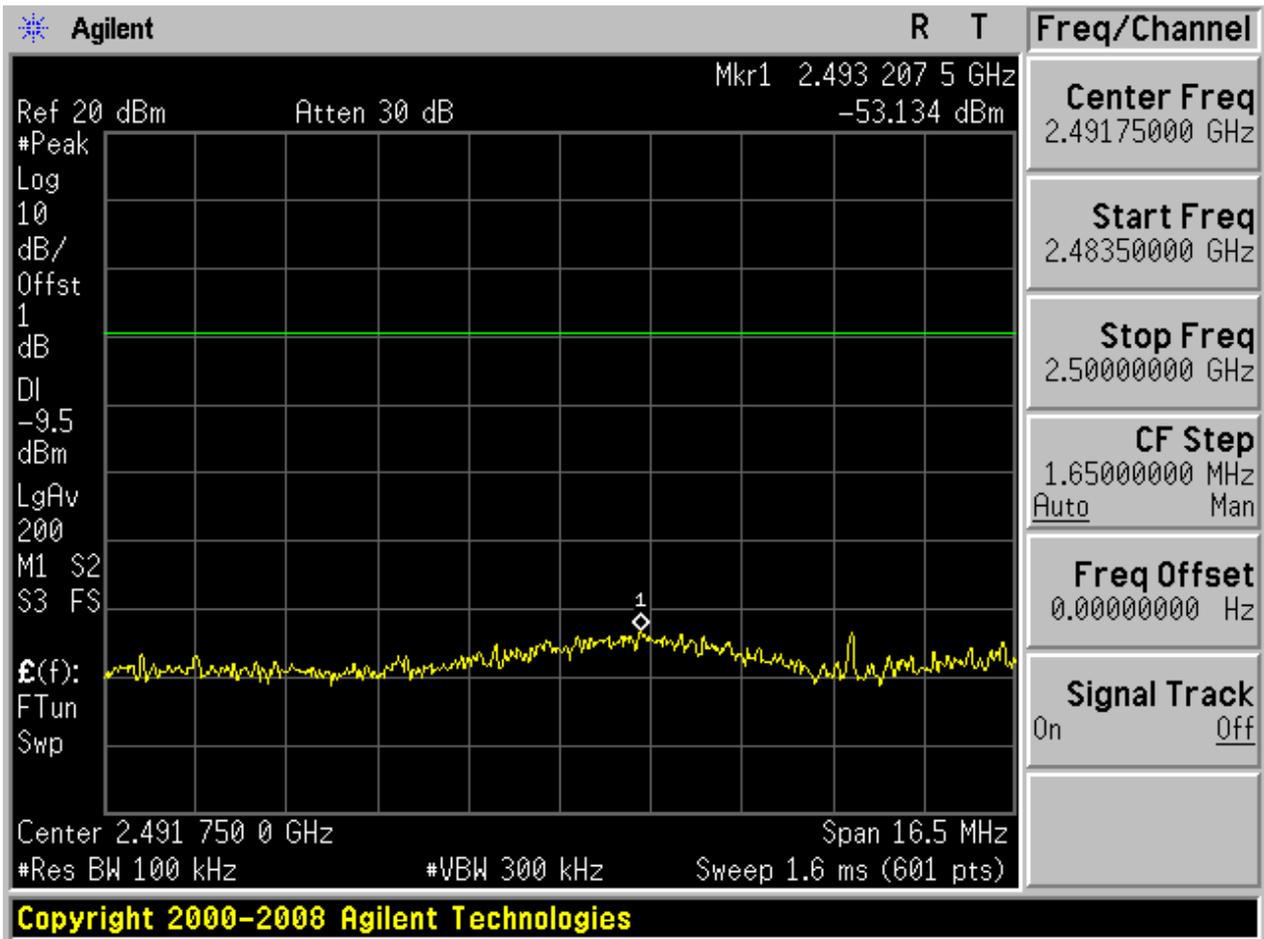
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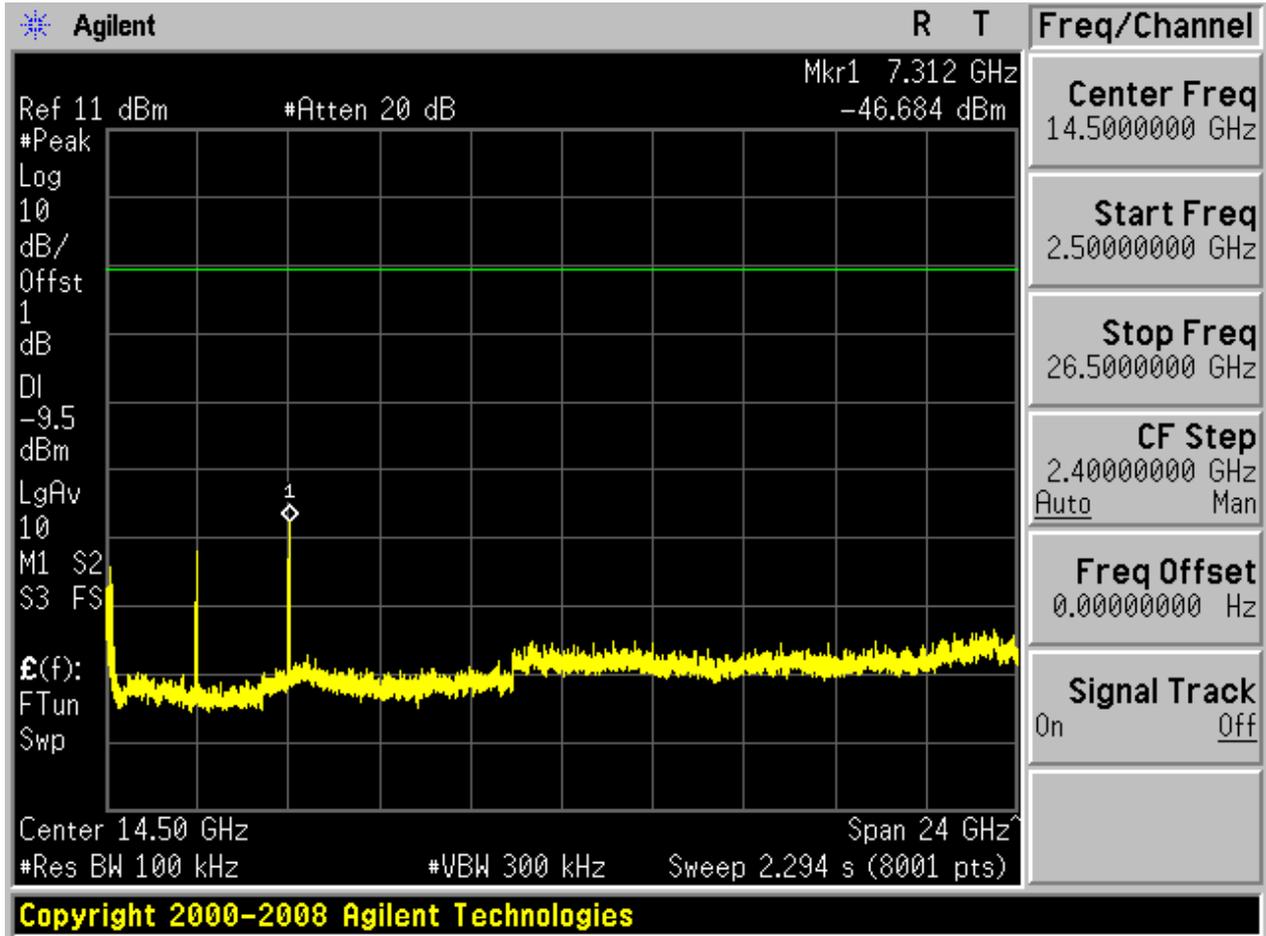








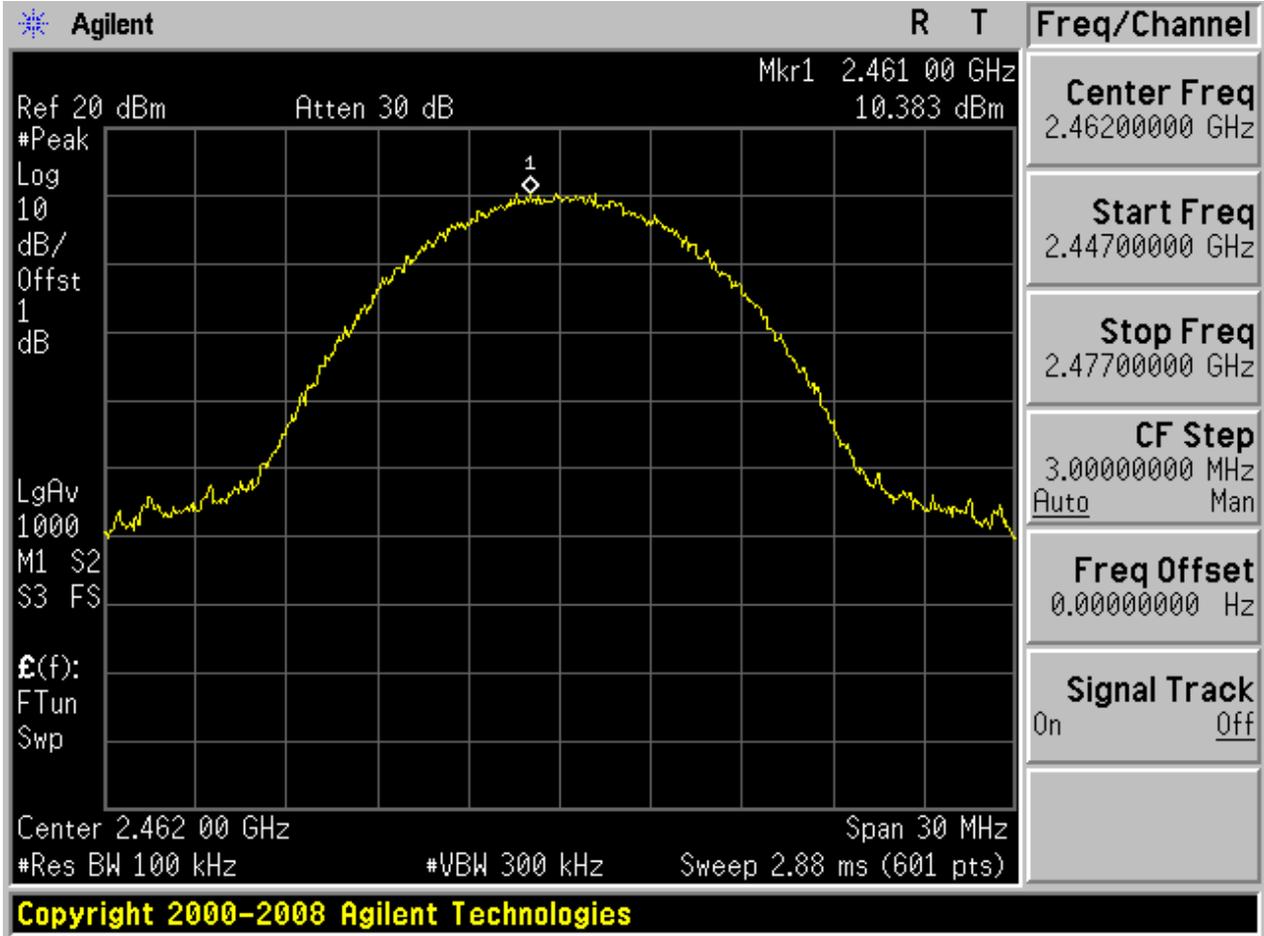






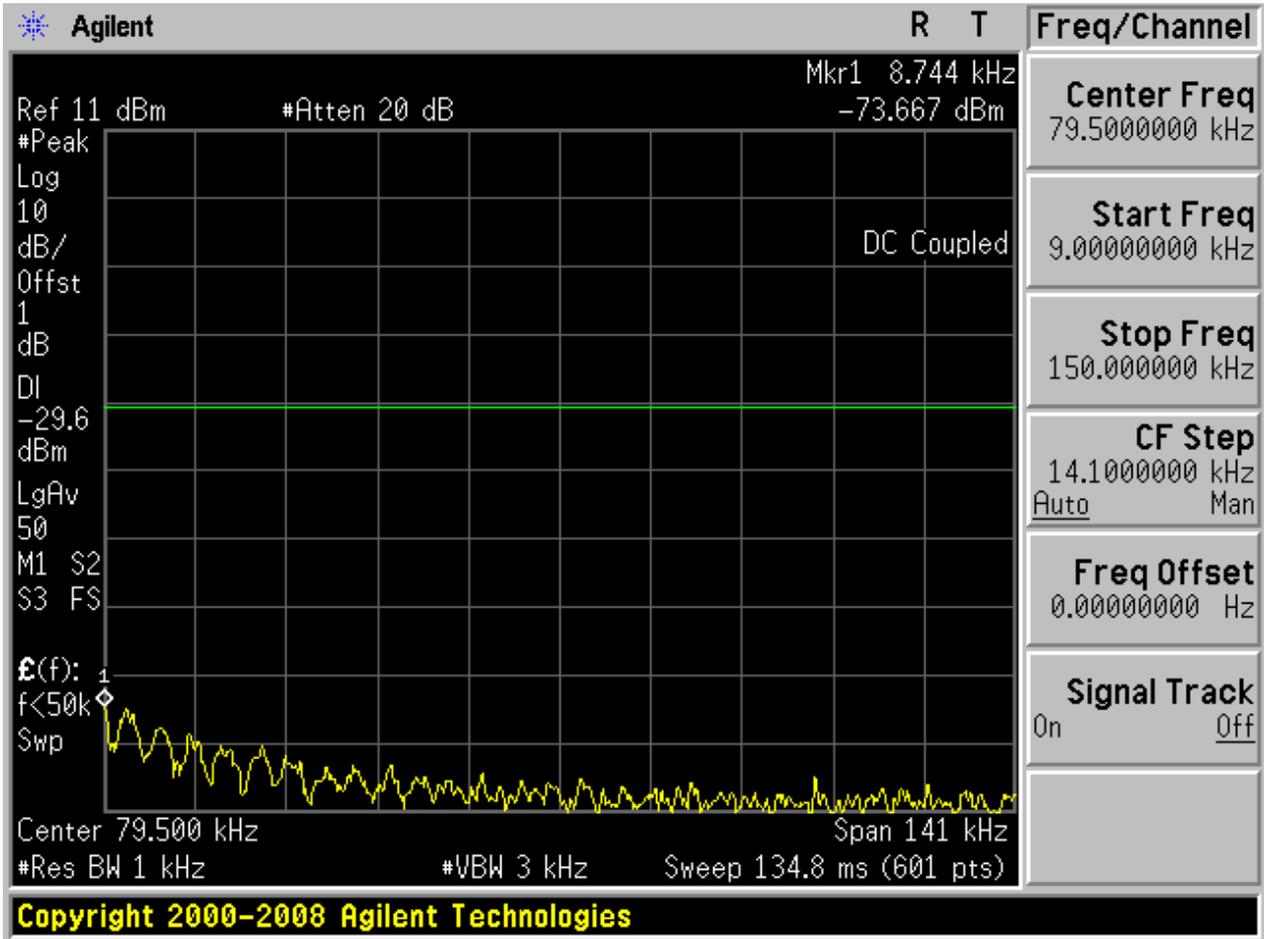
### 2.3 11B\_H

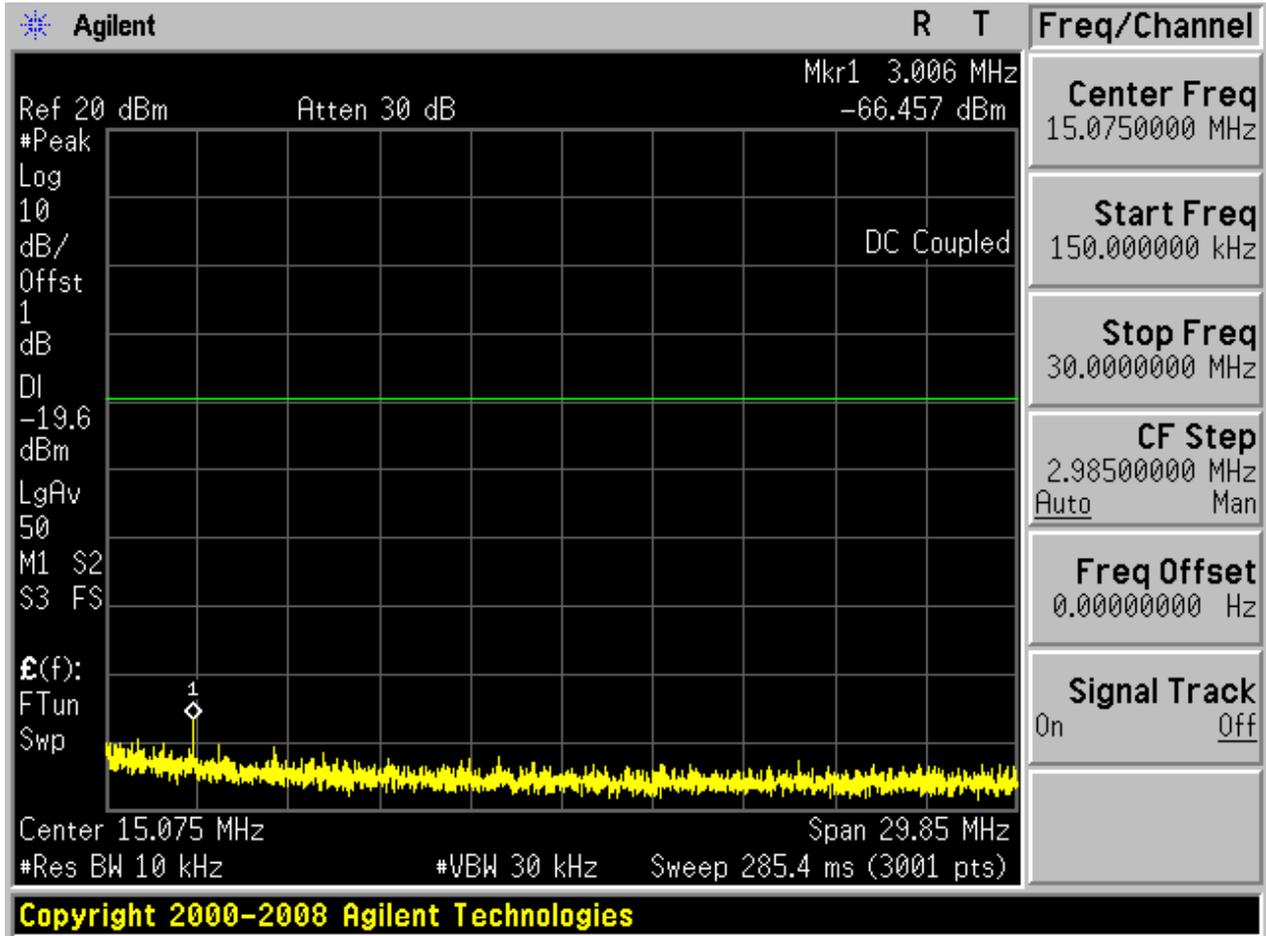
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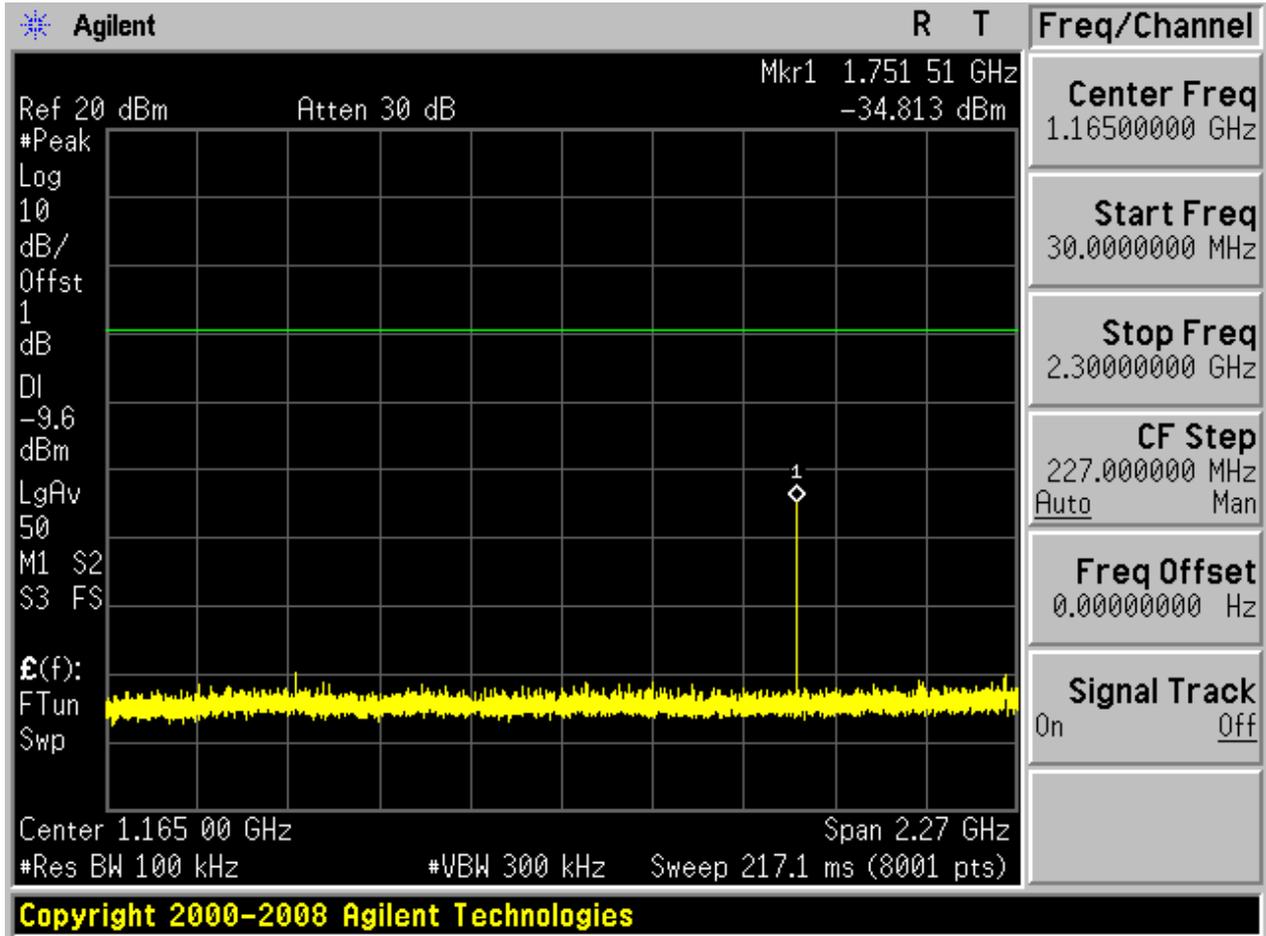


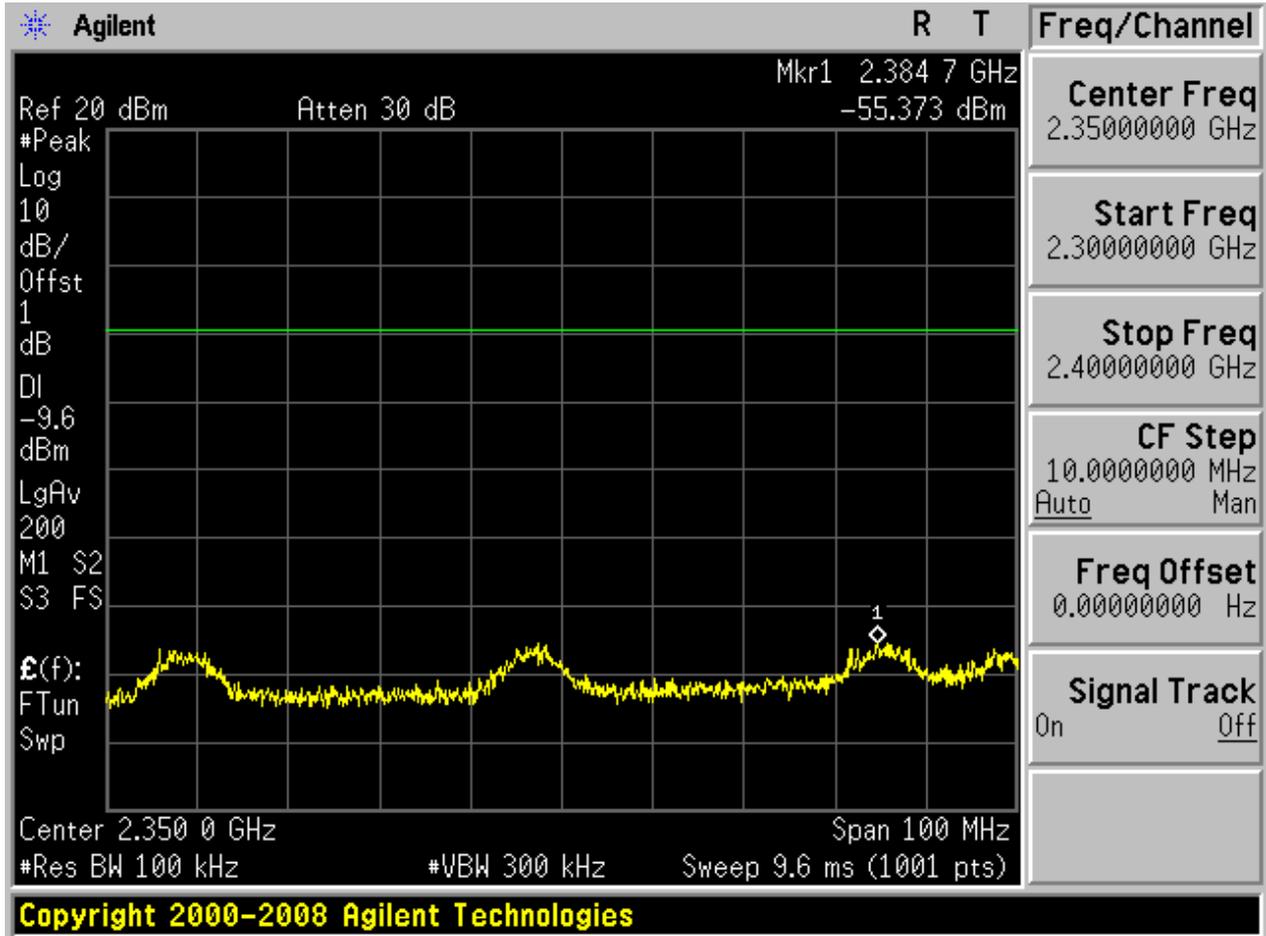


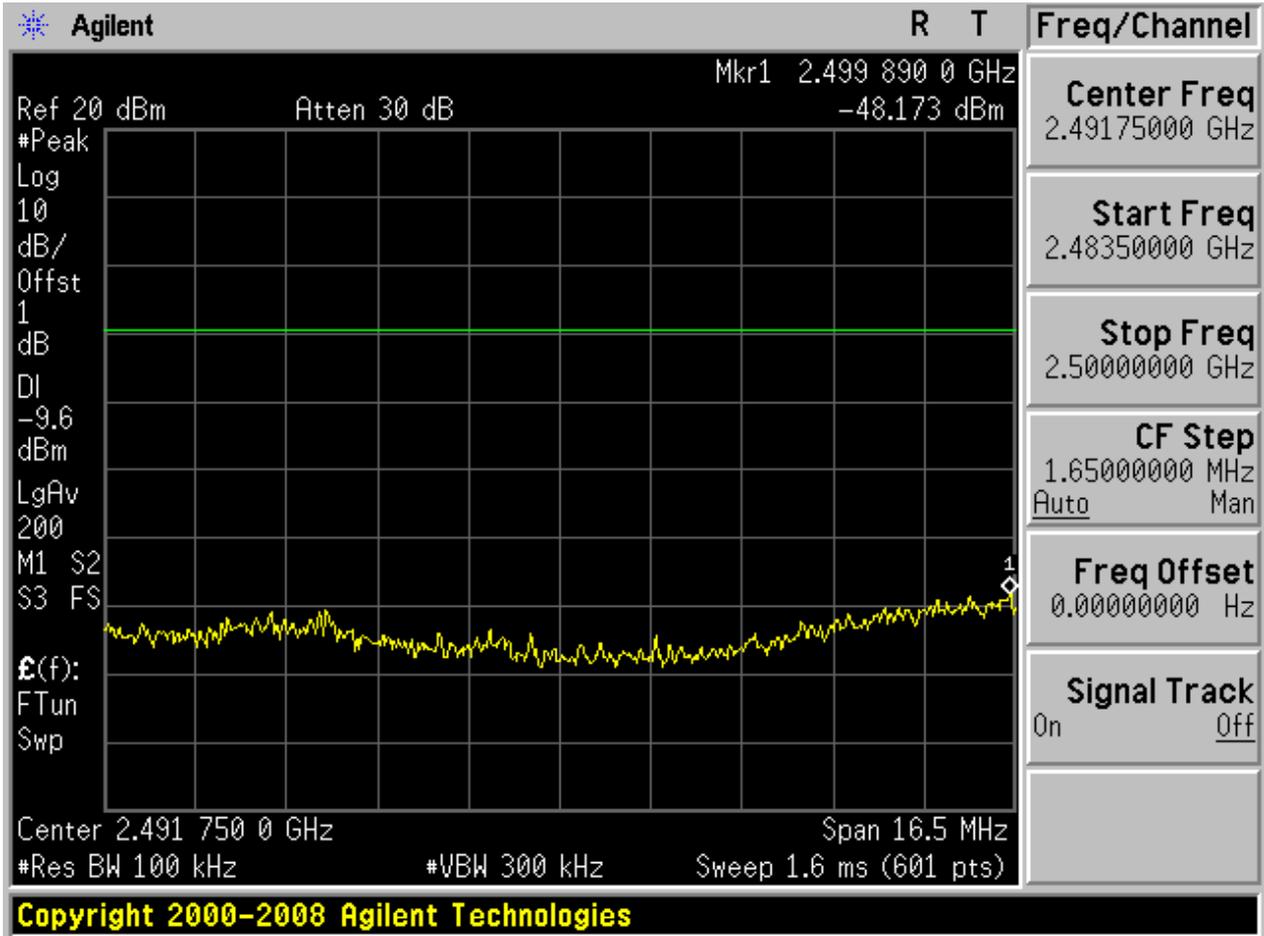
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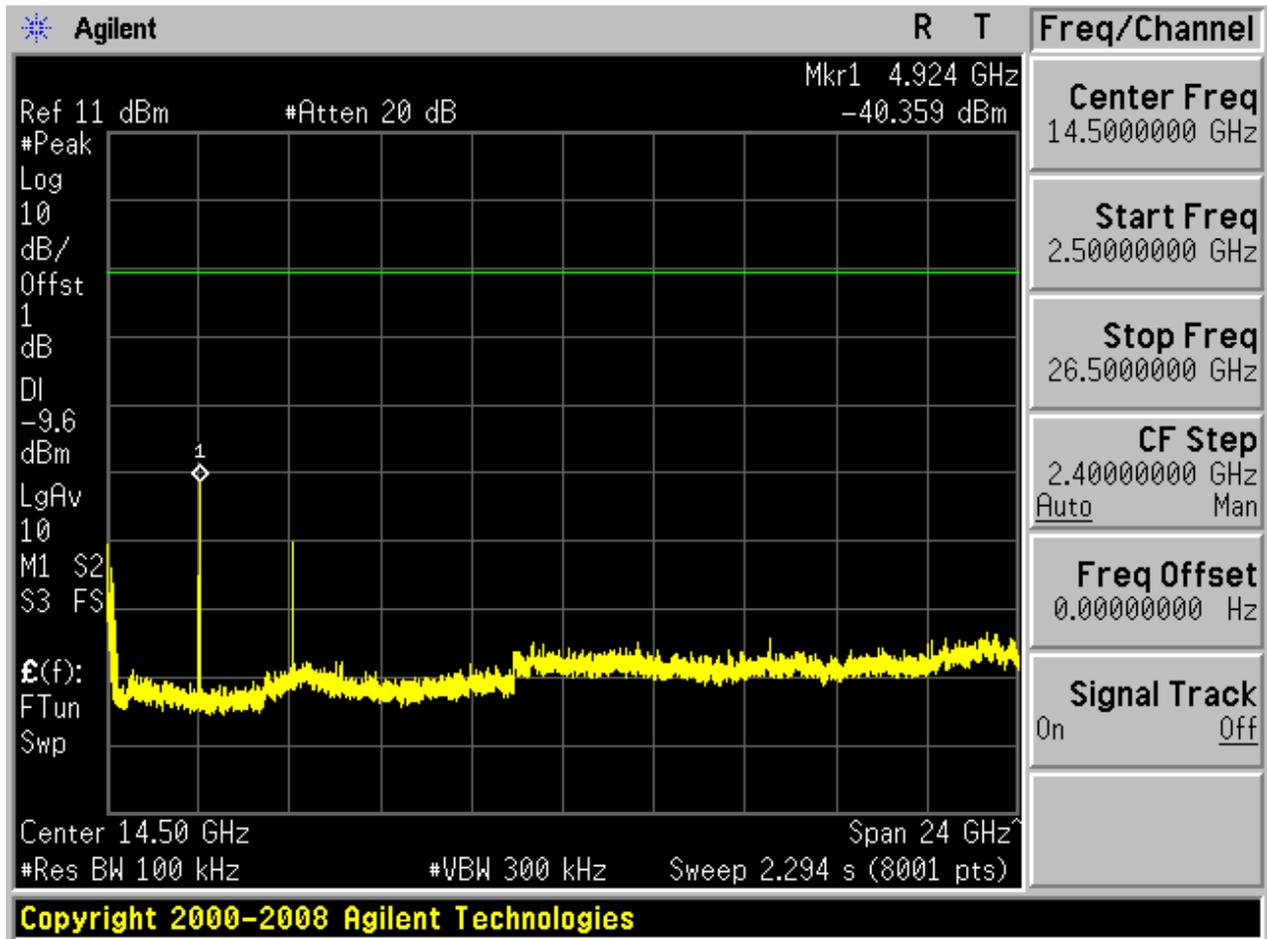








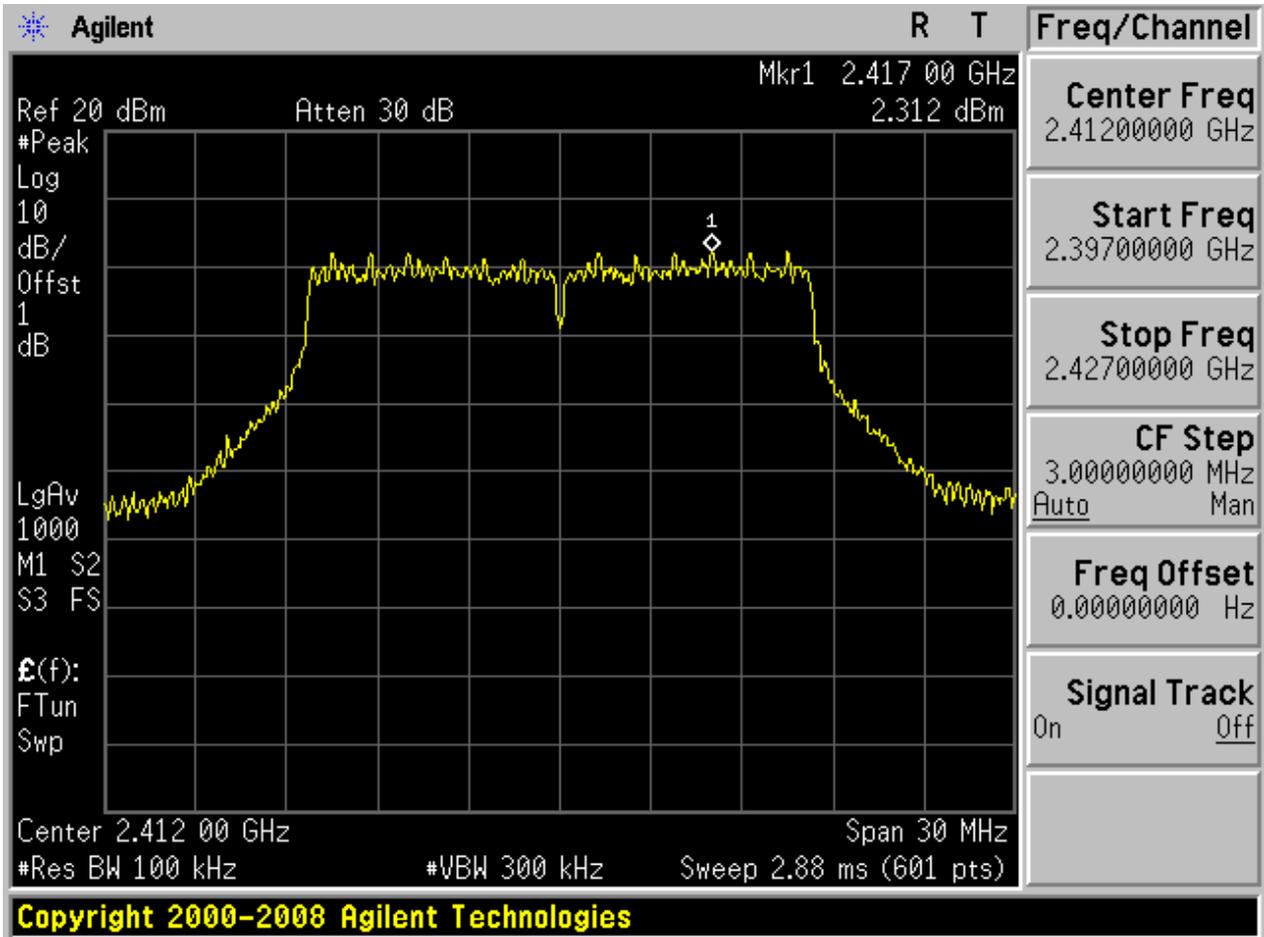






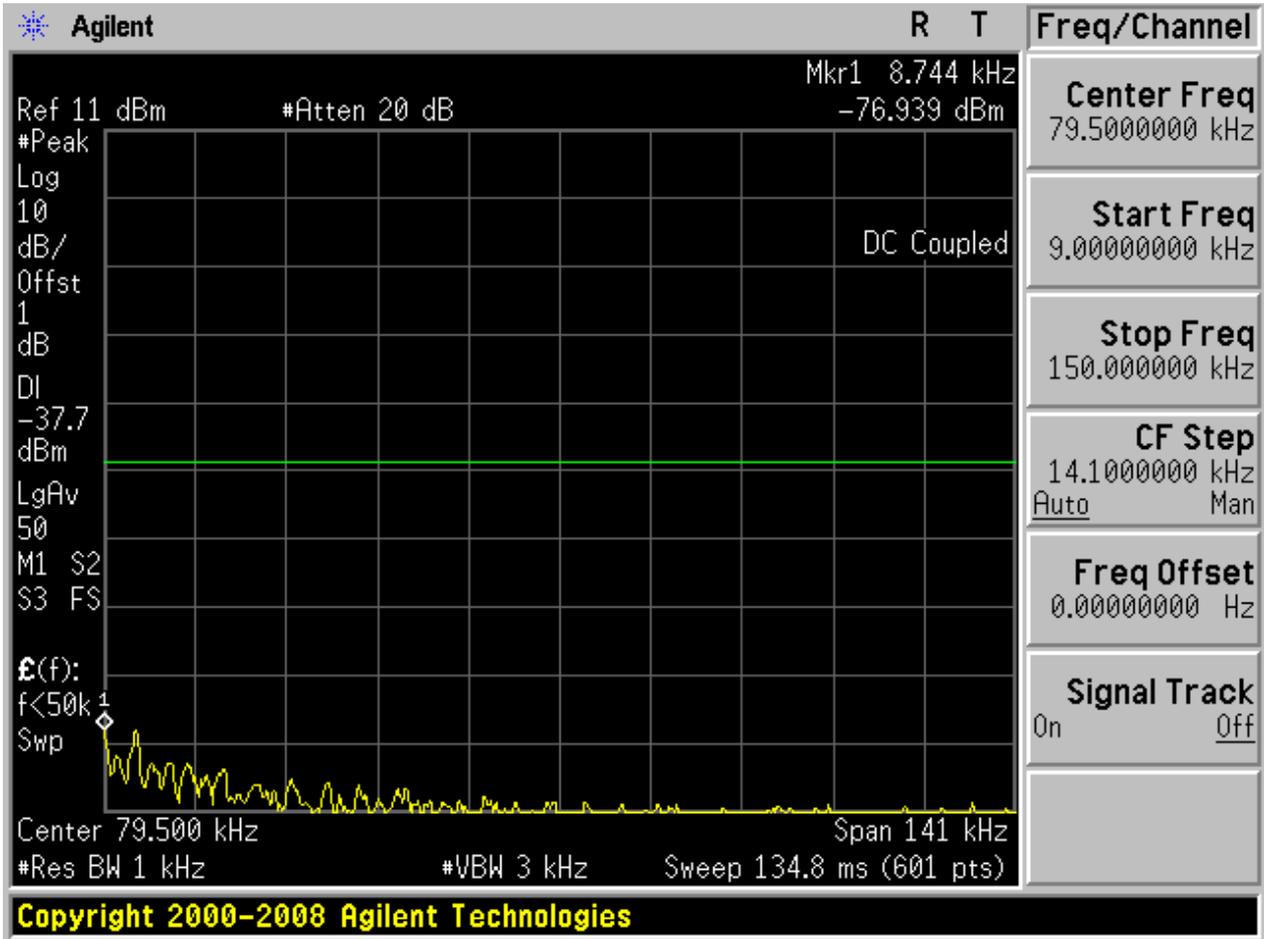
### 2.4 11G\_L

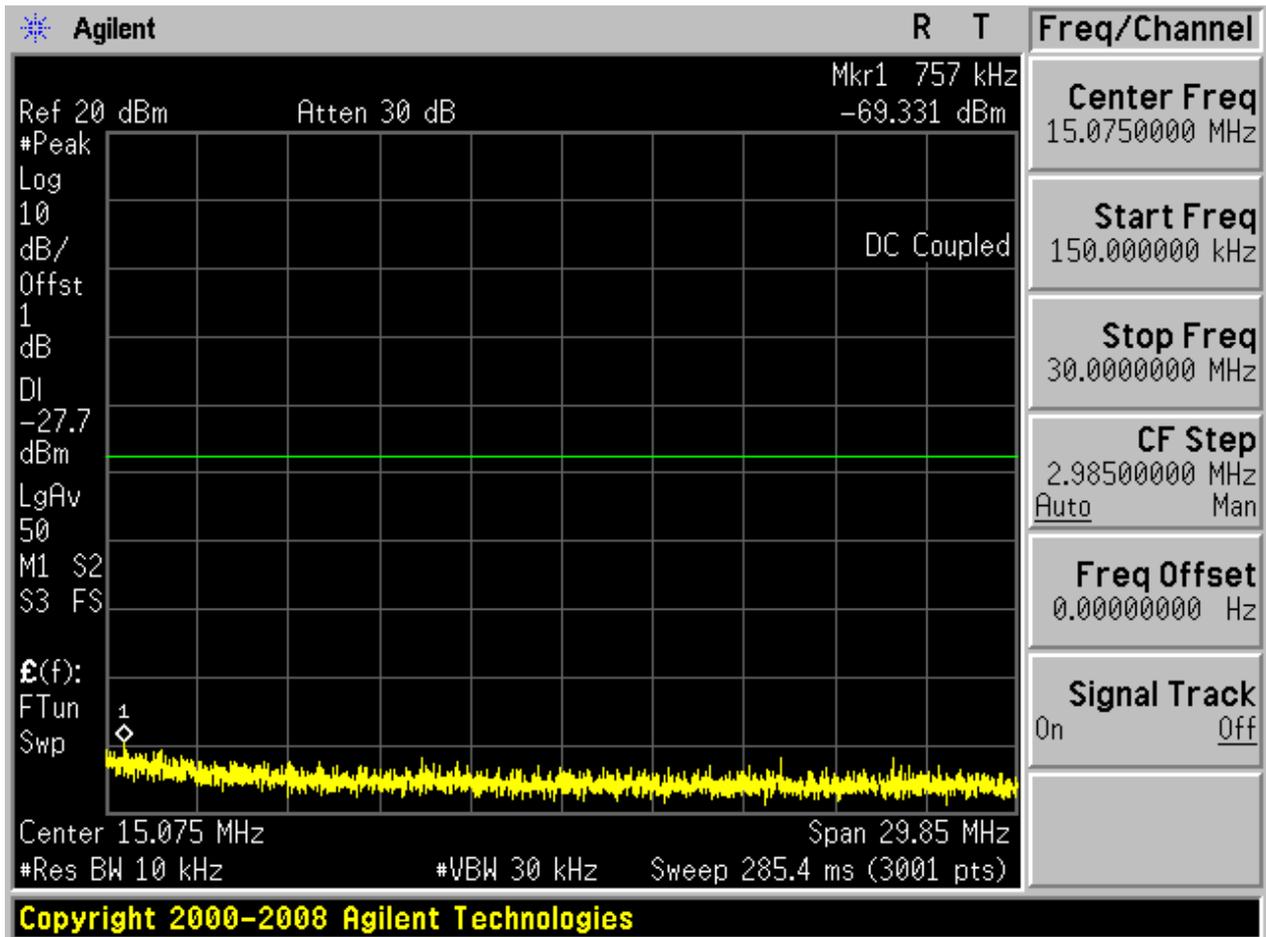
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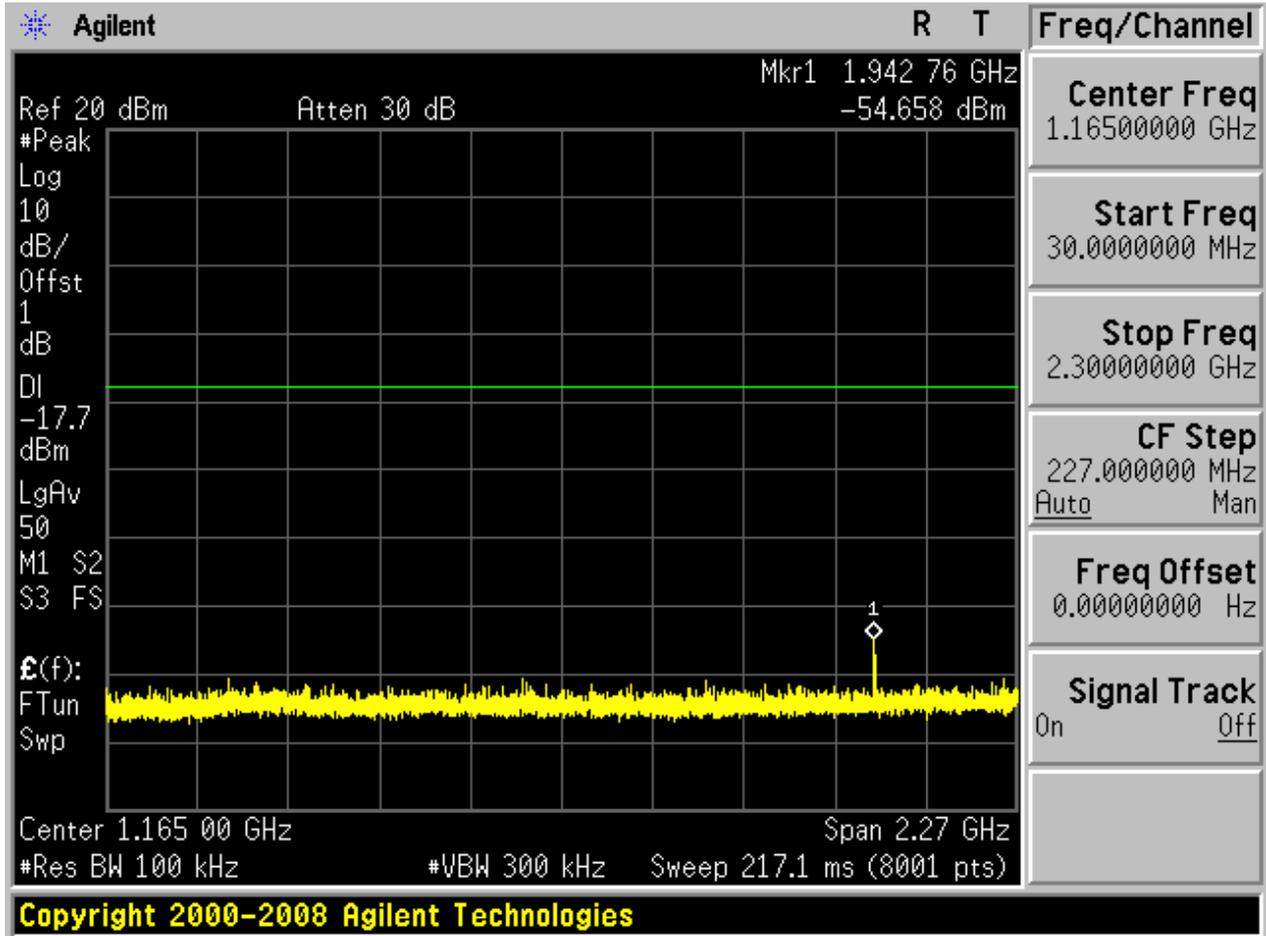


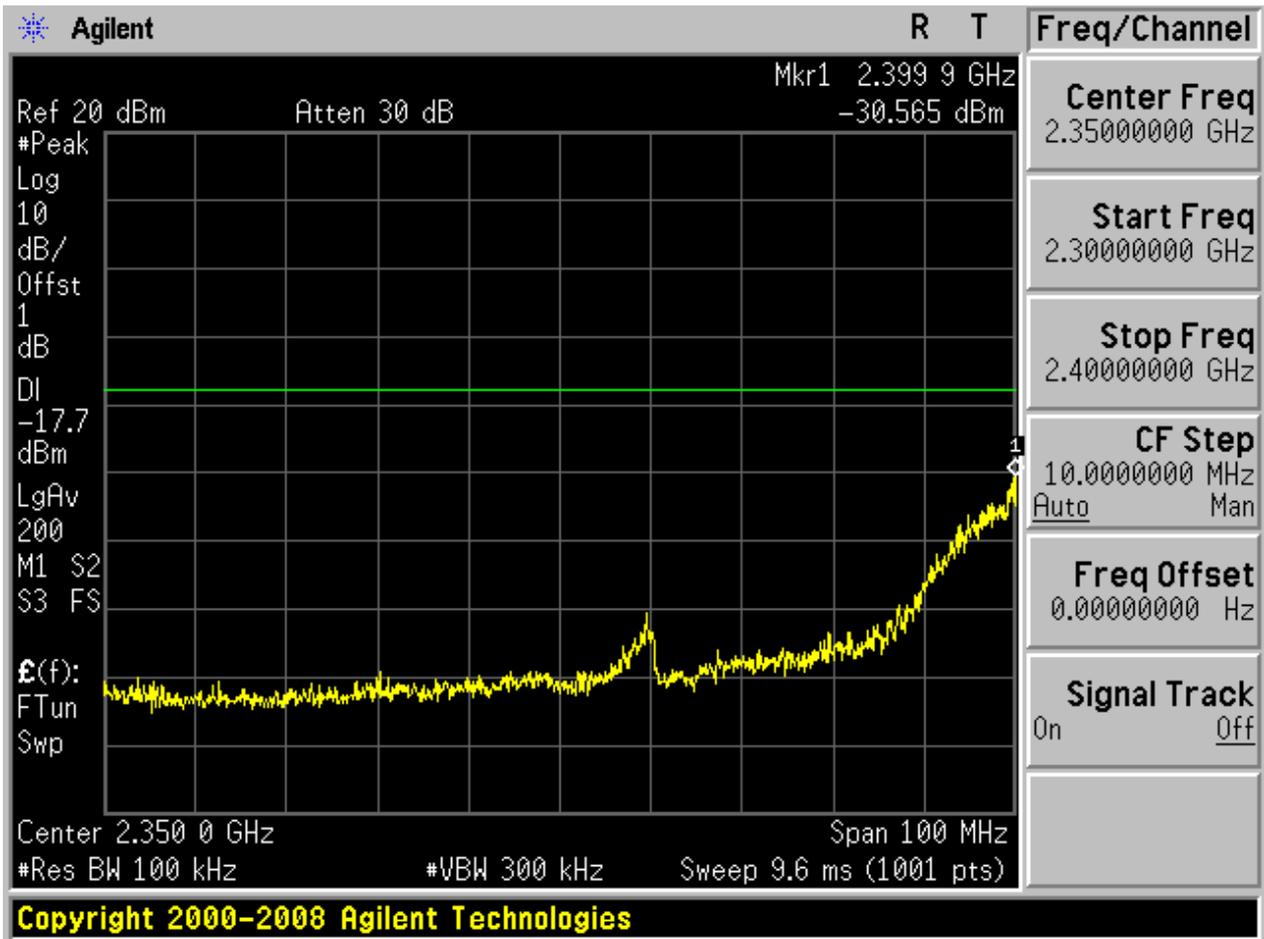


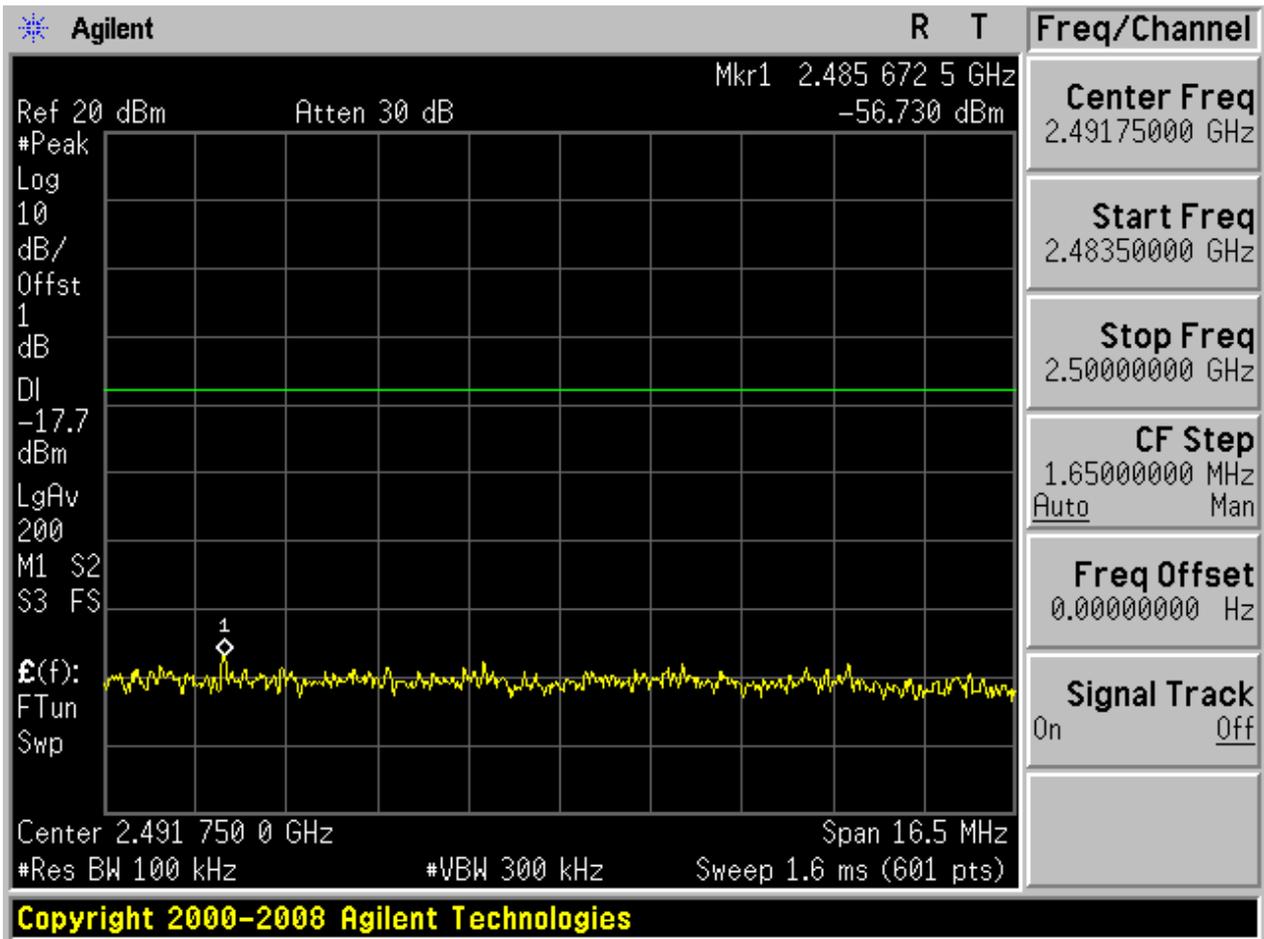
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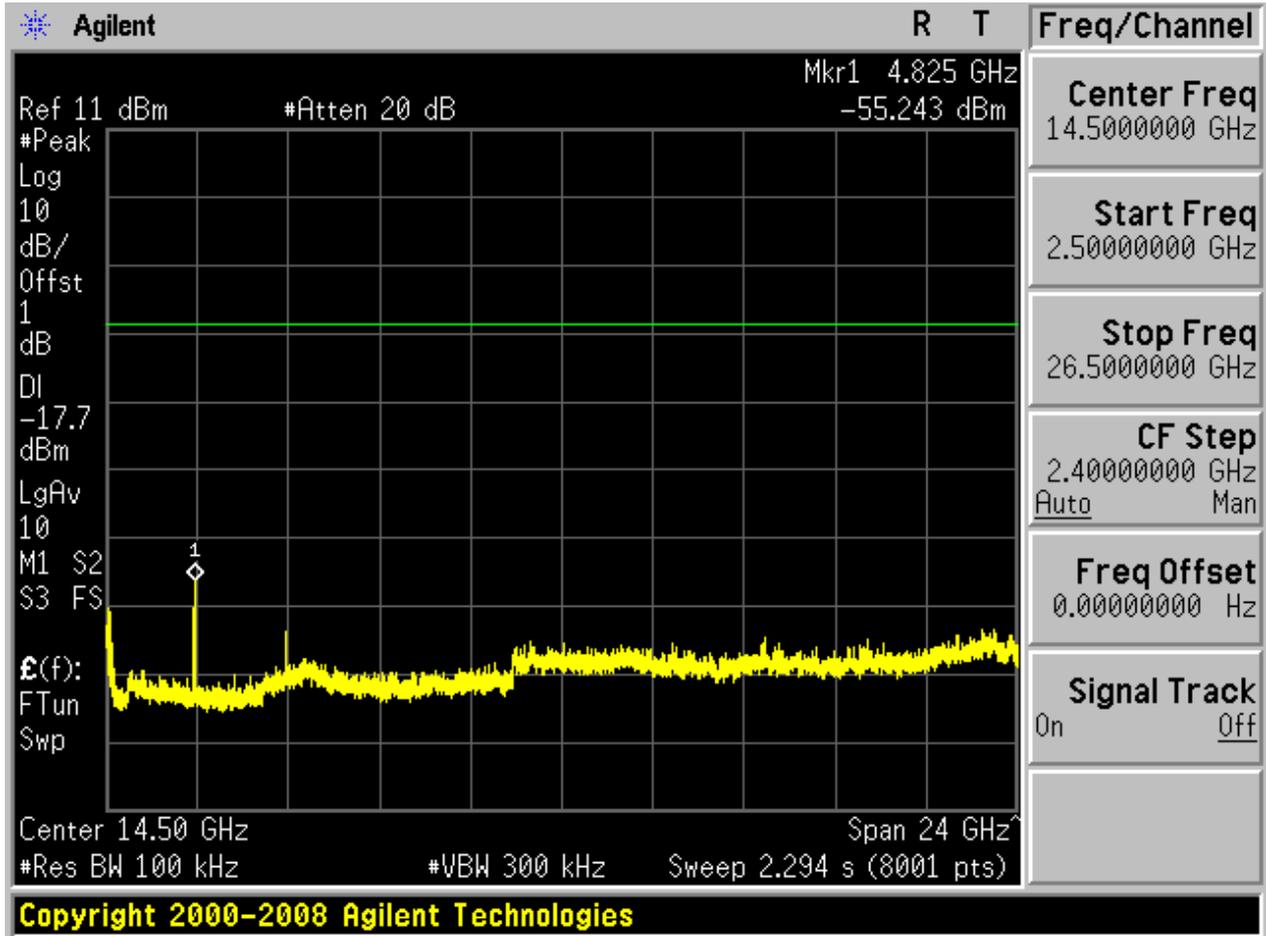








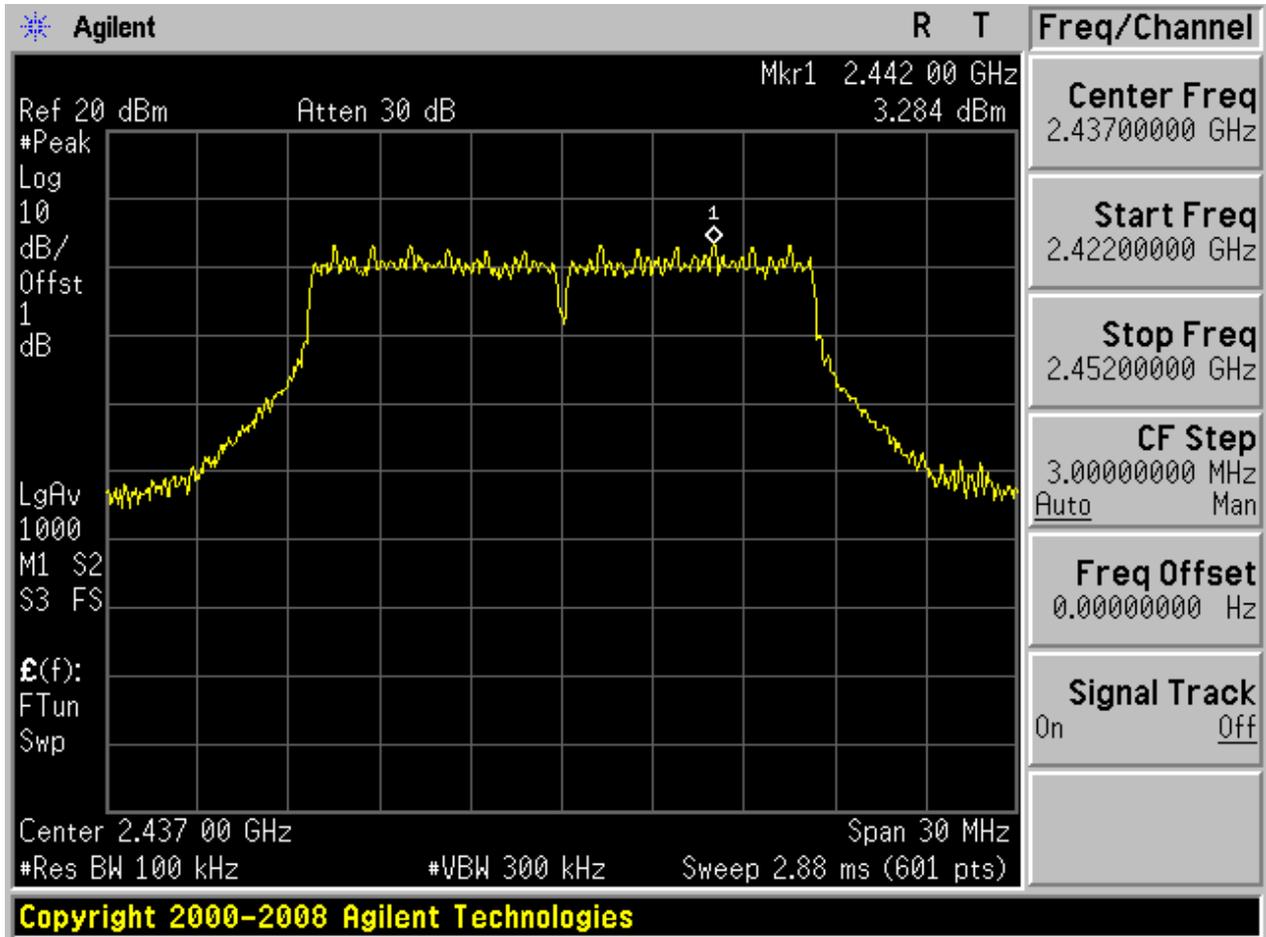






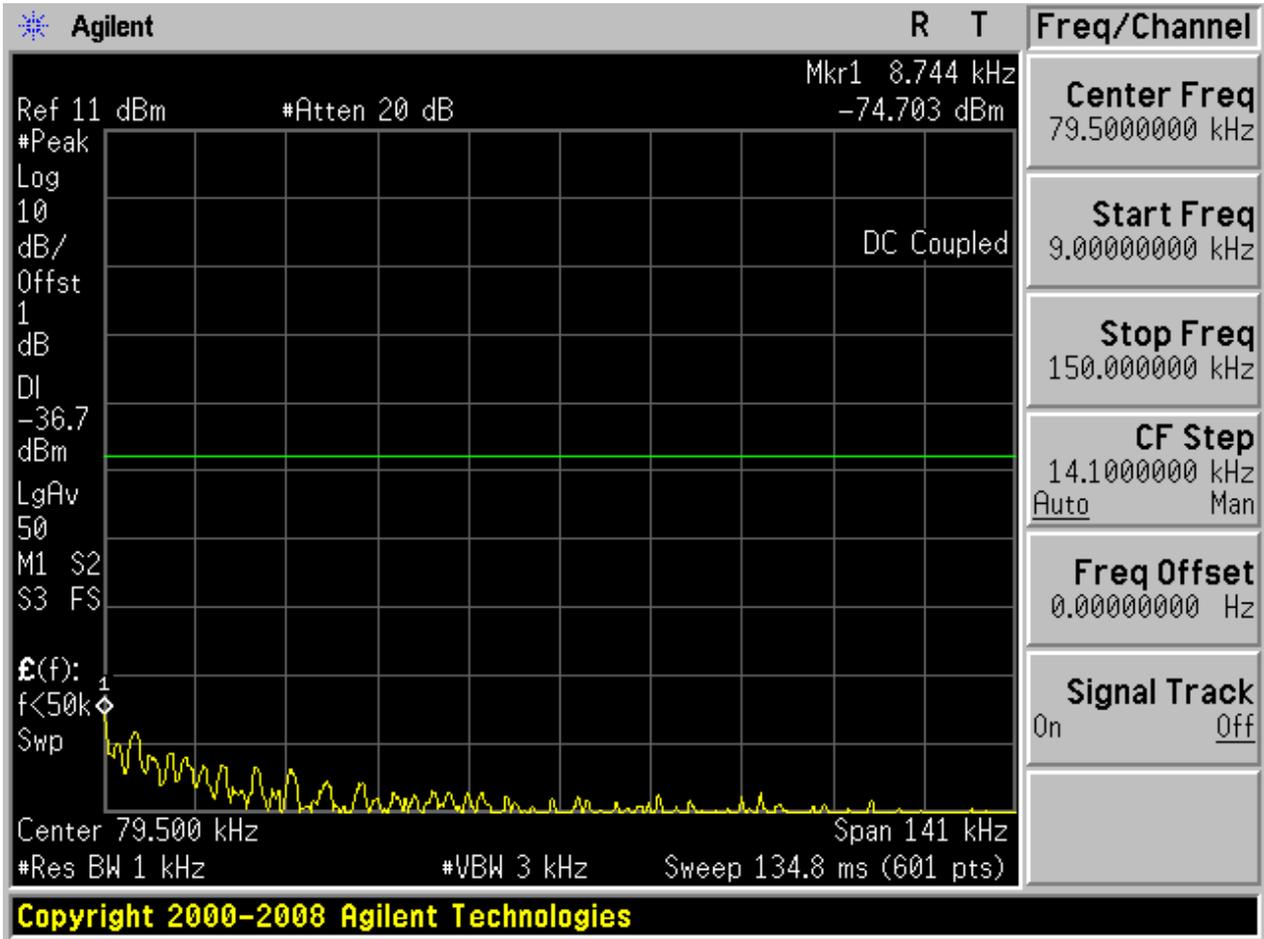
## 2.5 11G\_M

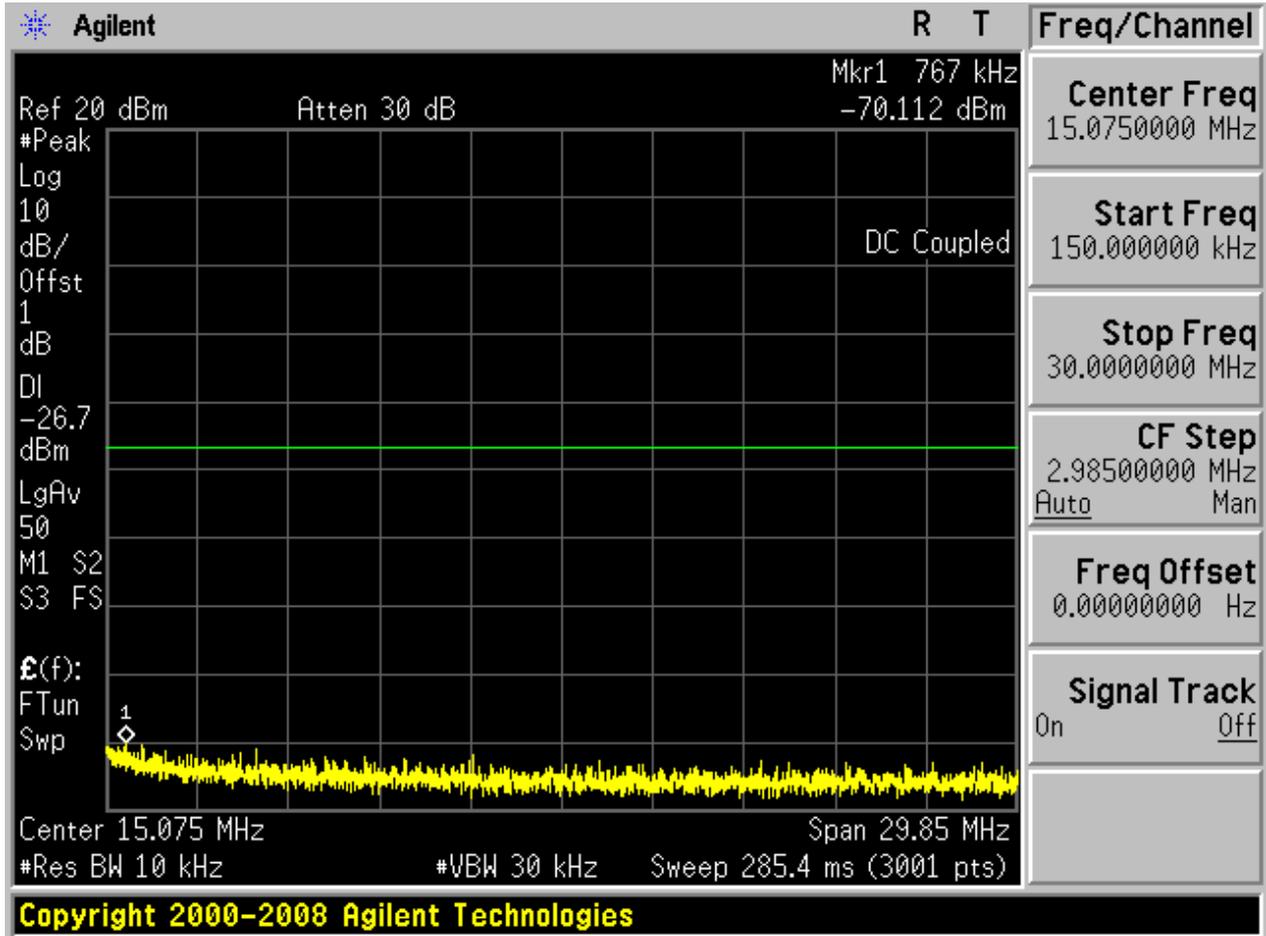
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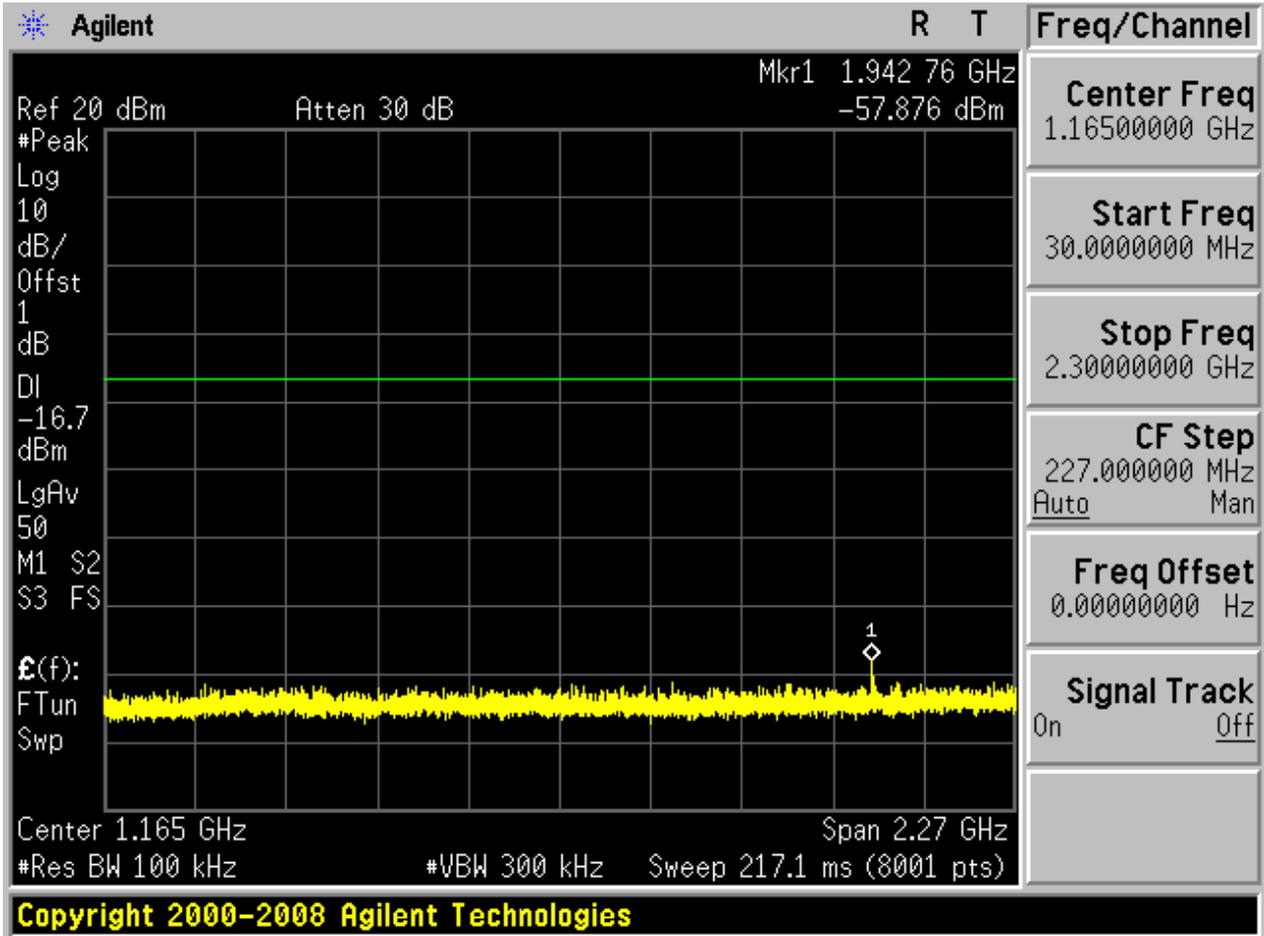


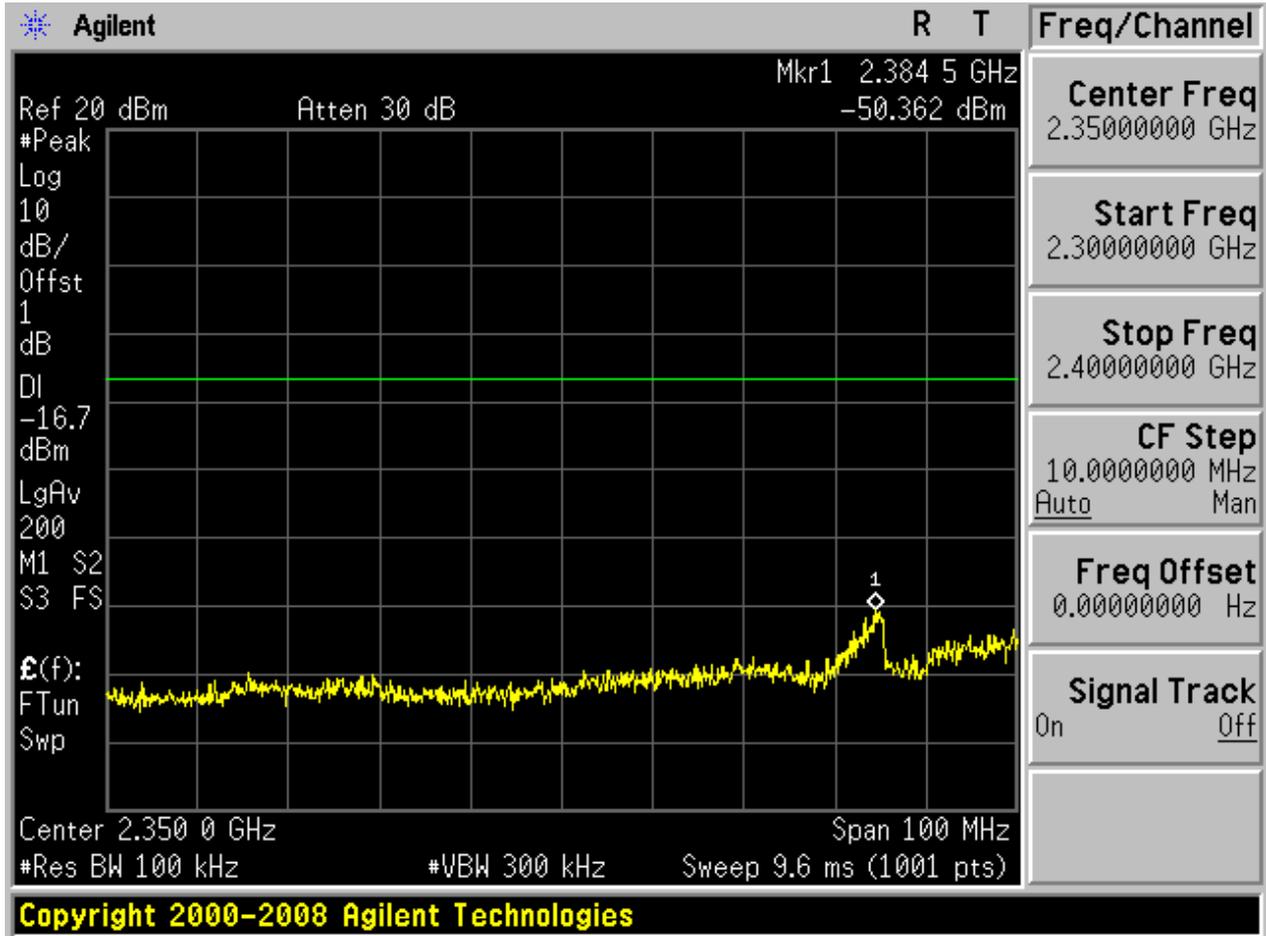


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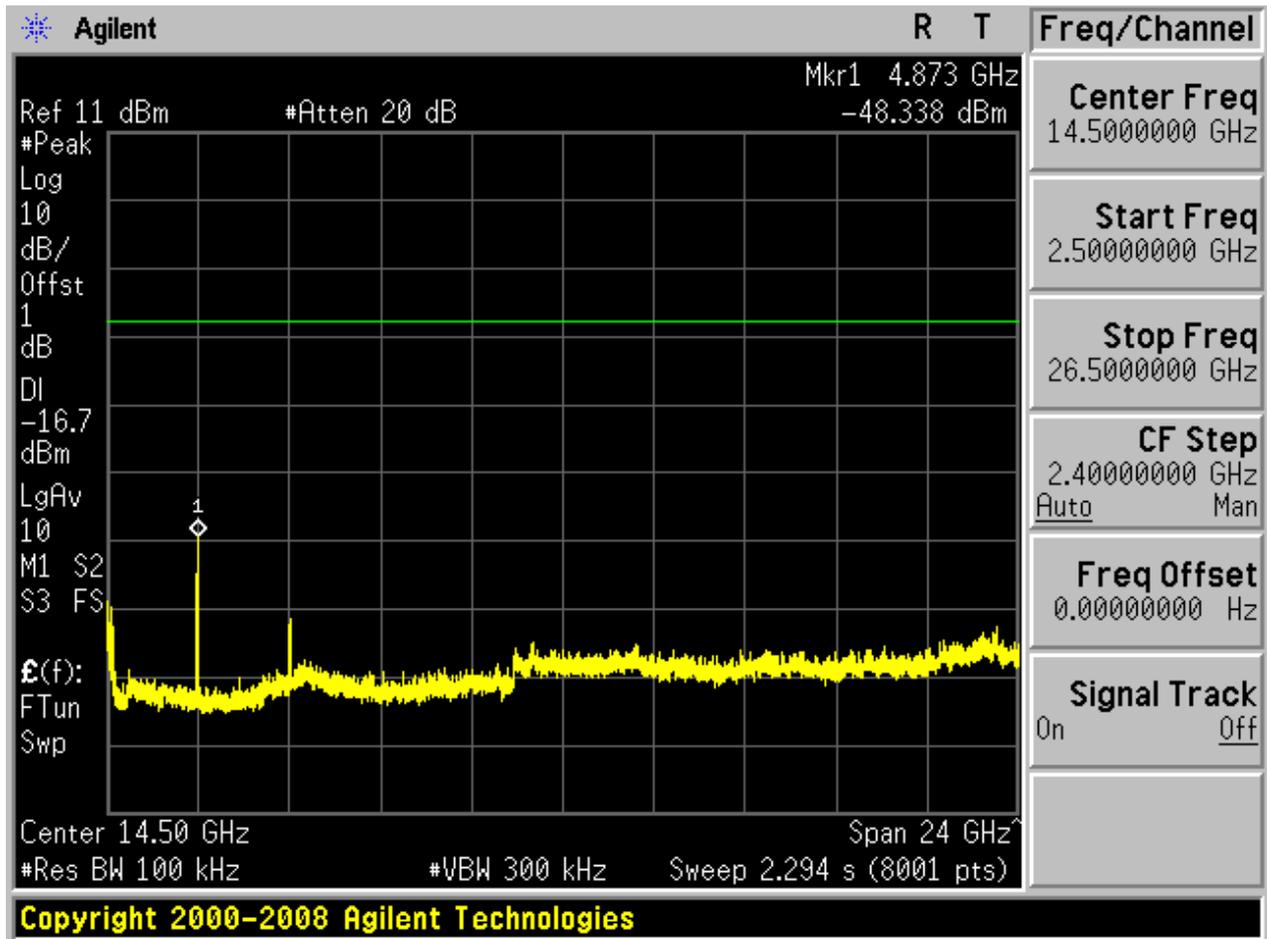






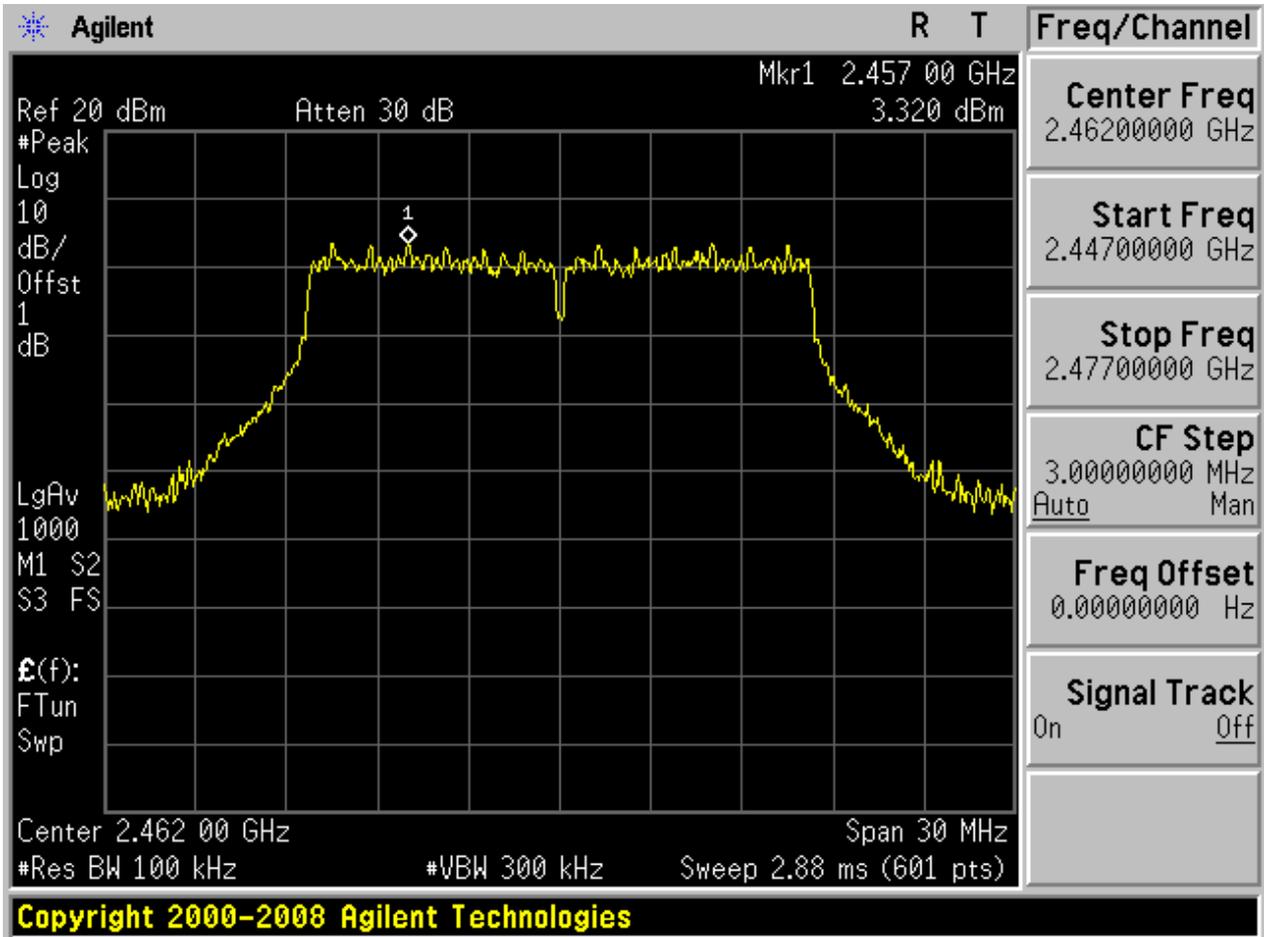






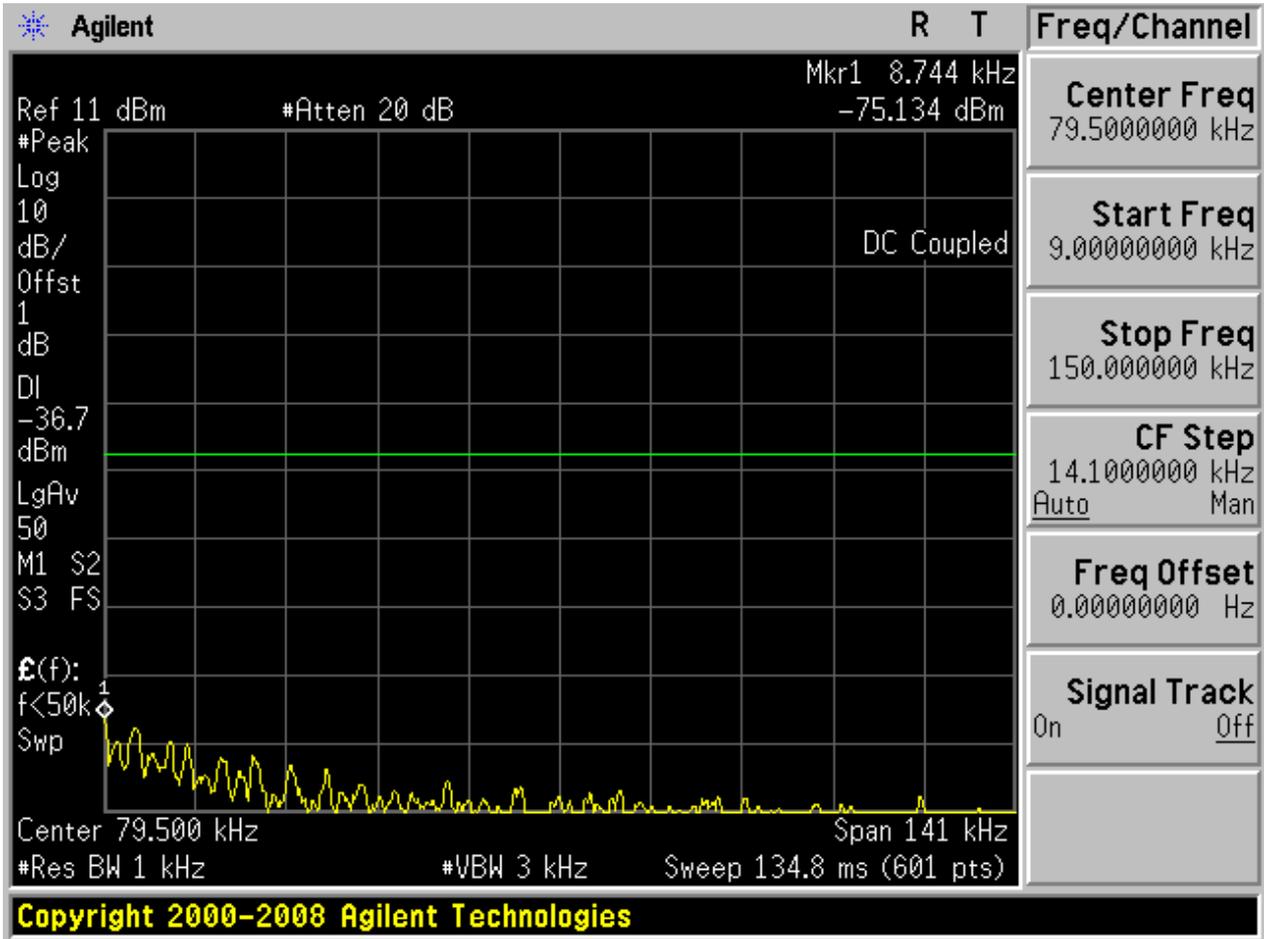
## 2.6 11G\_H

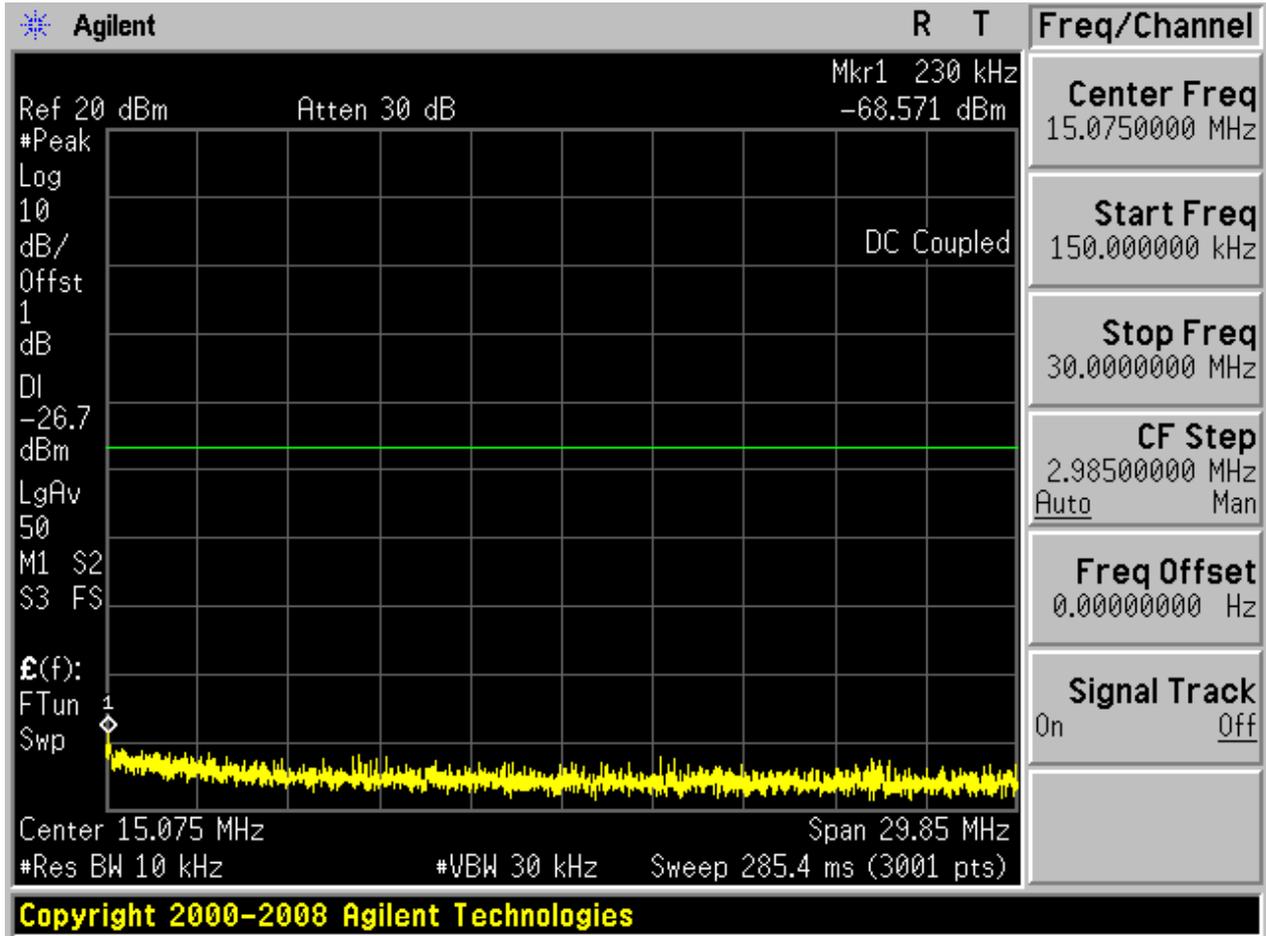
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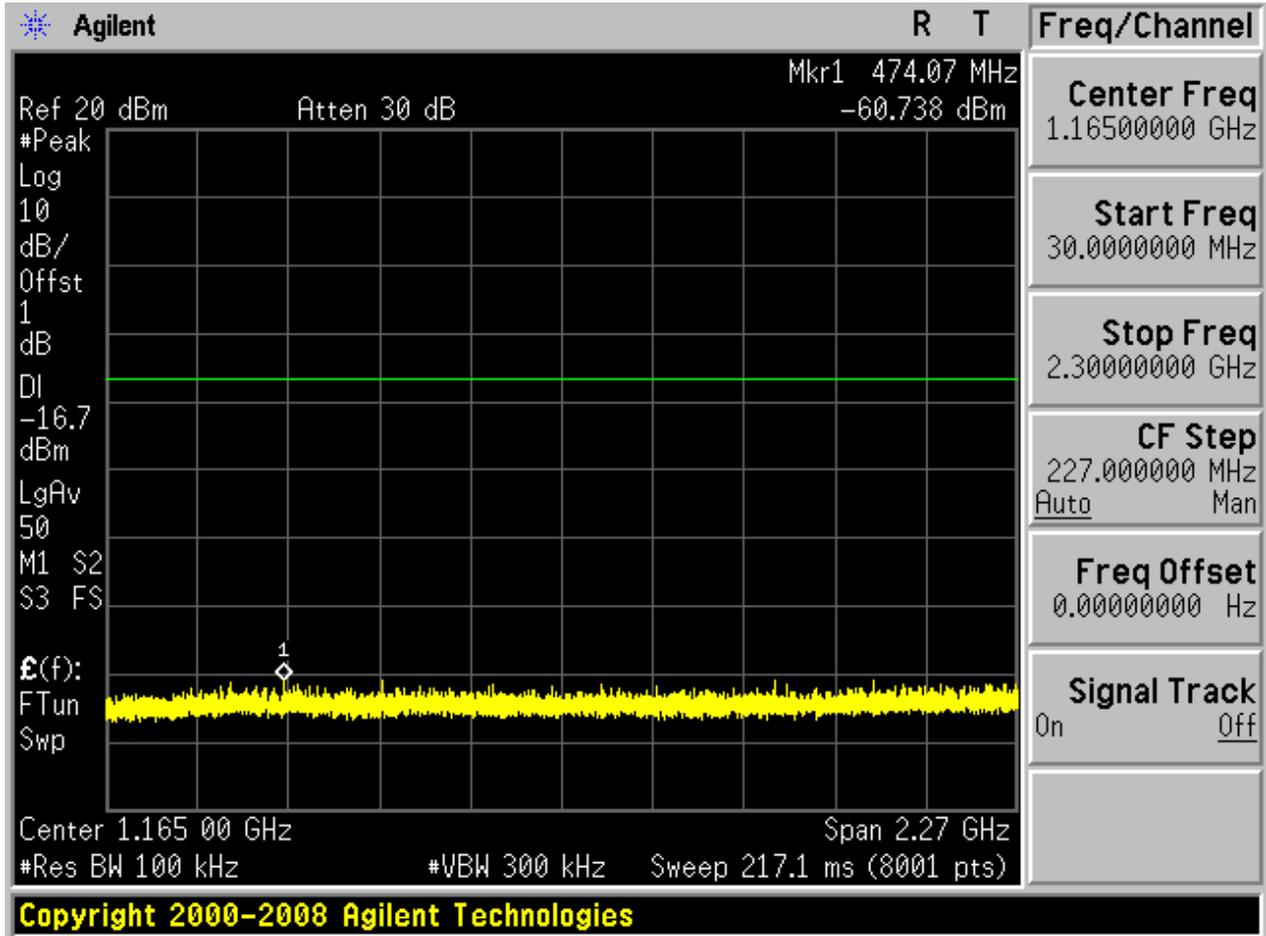


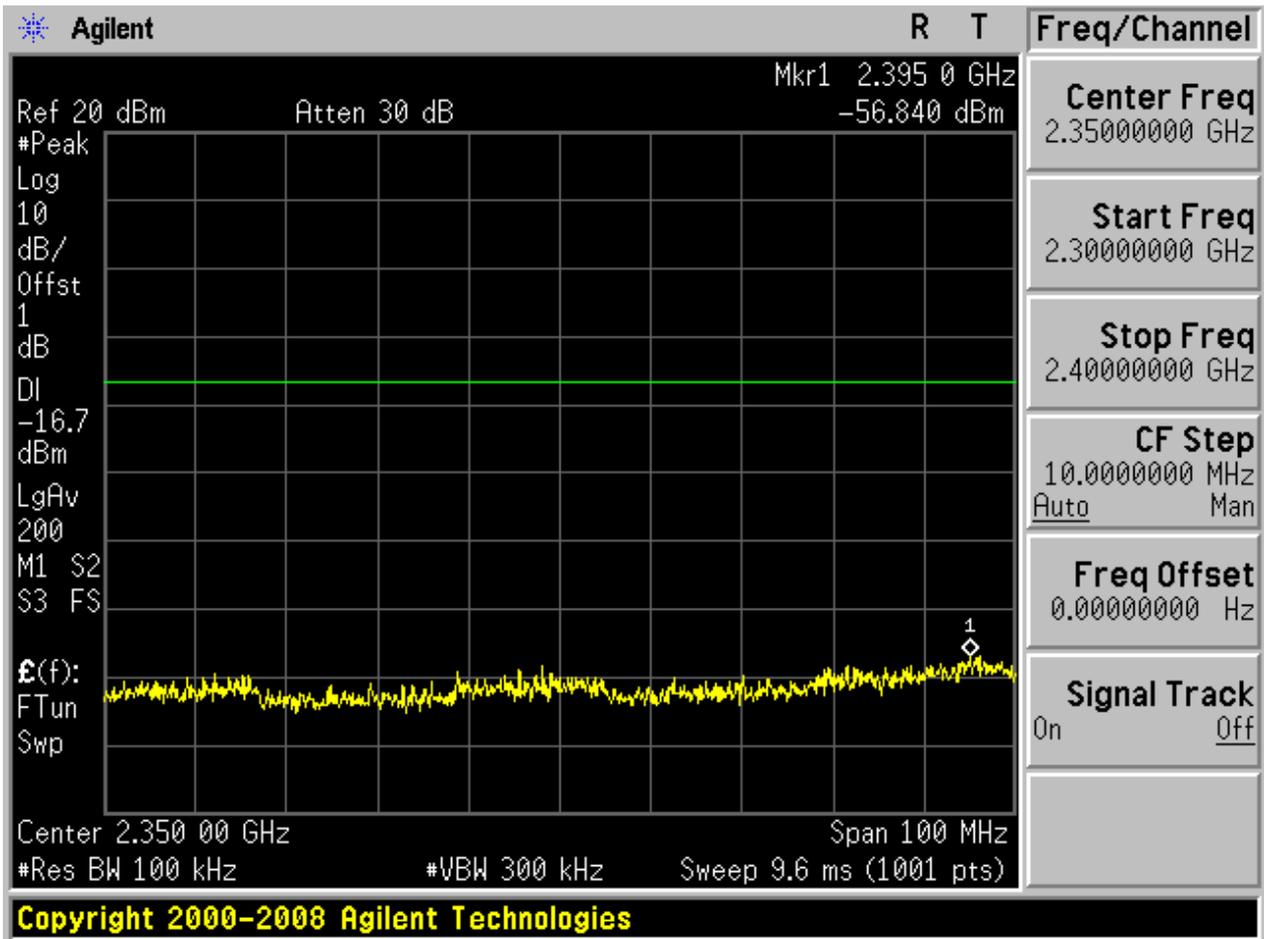


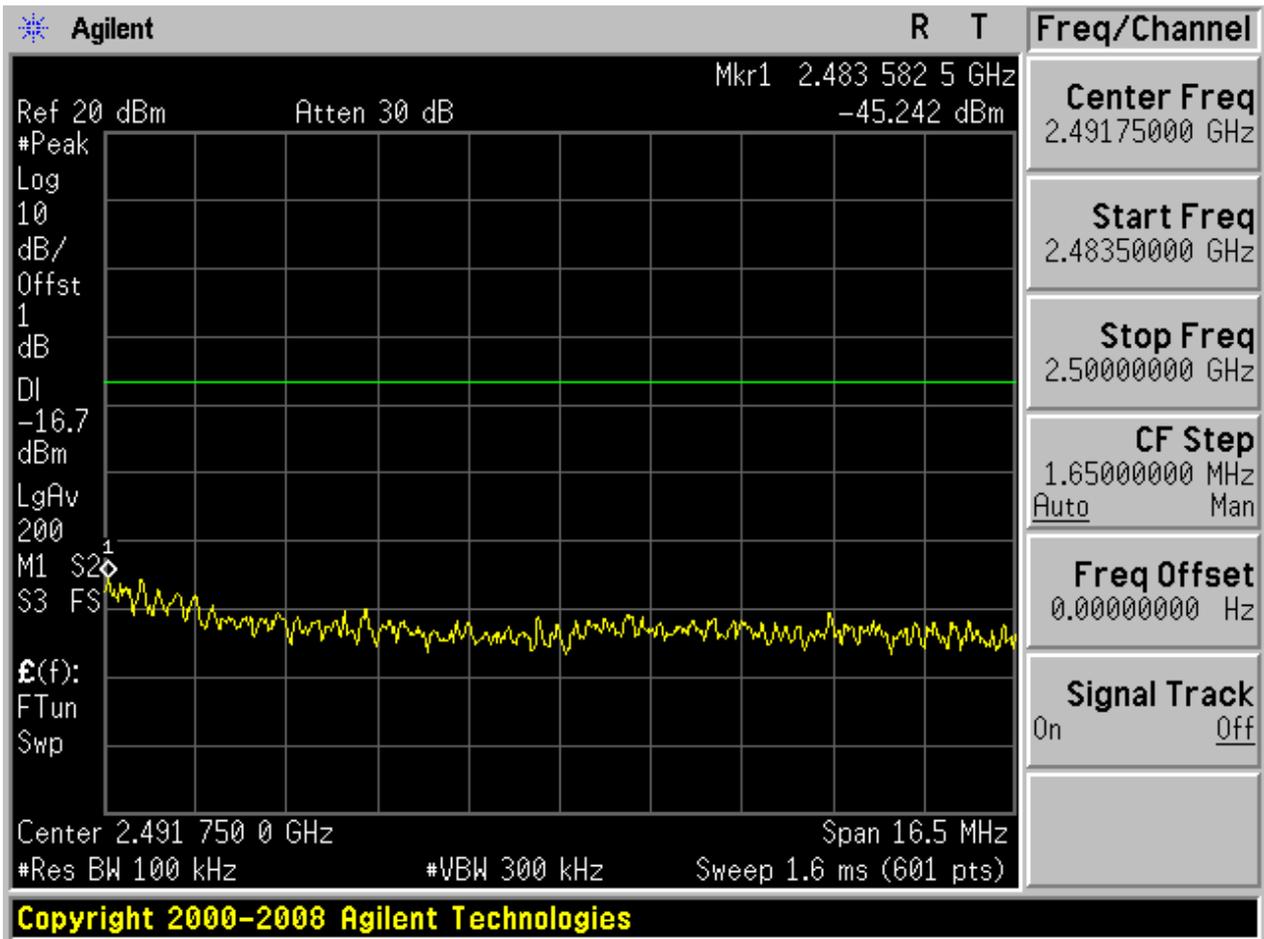
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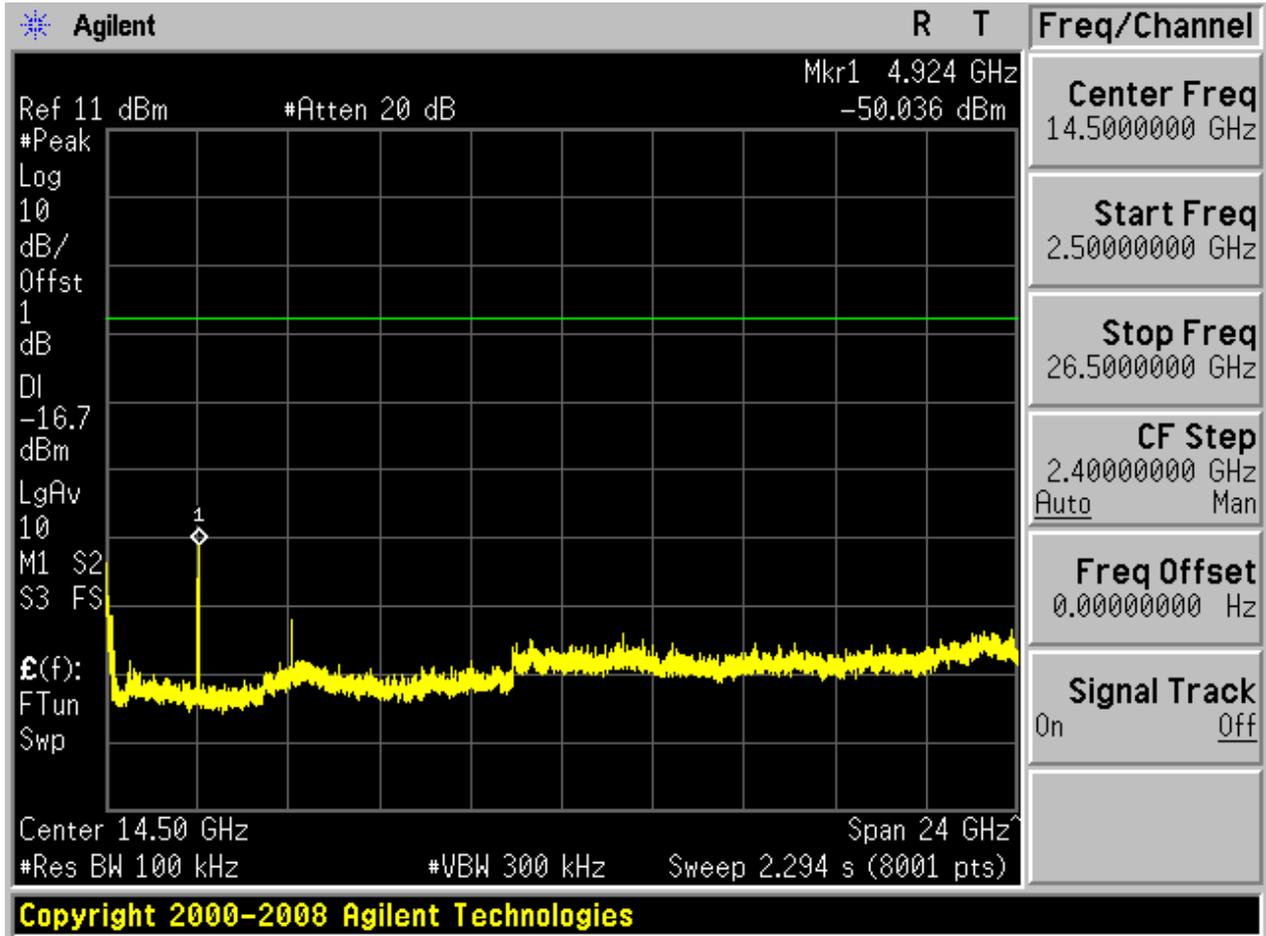






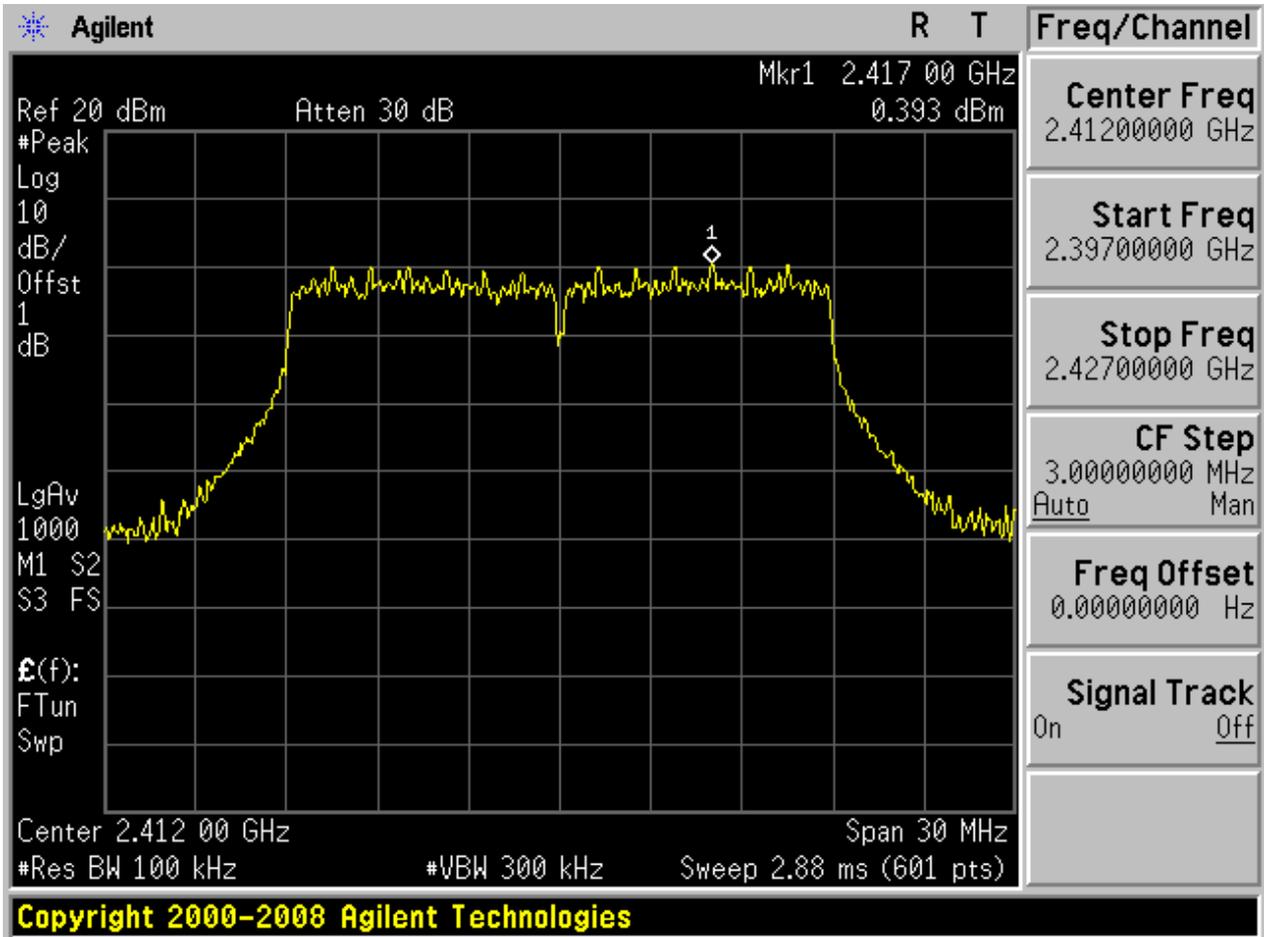






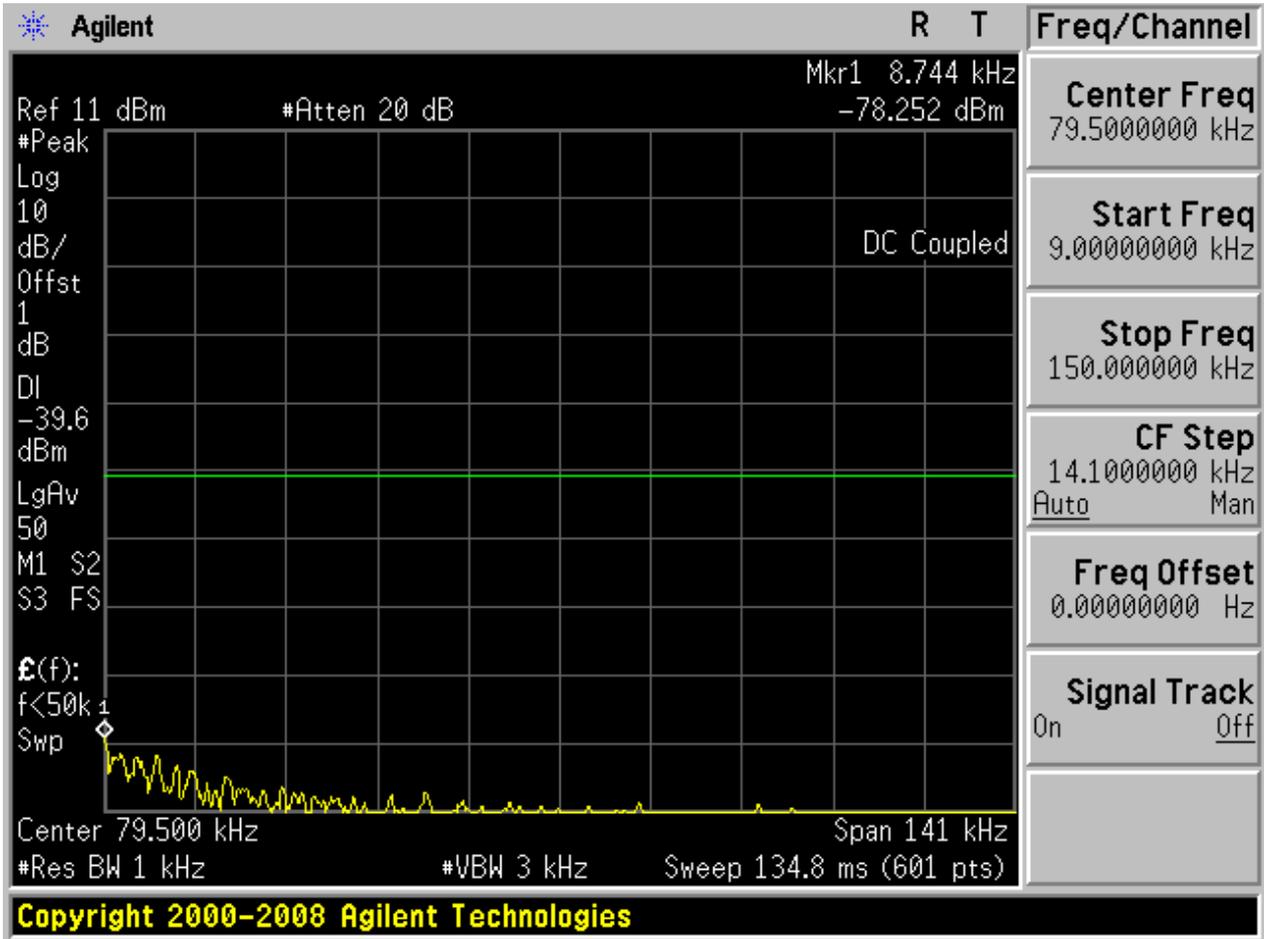
## 2.7 11N20\_L

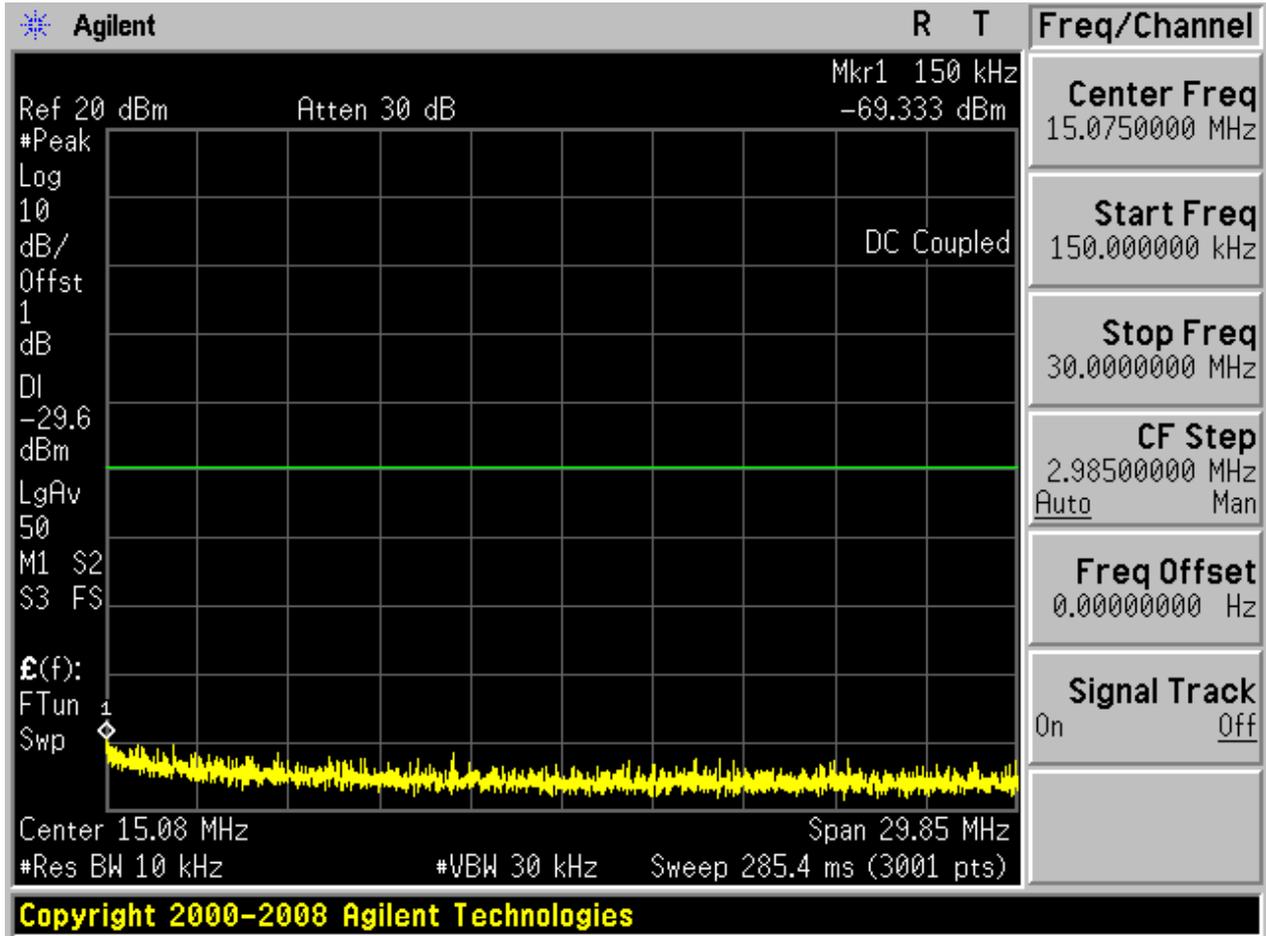
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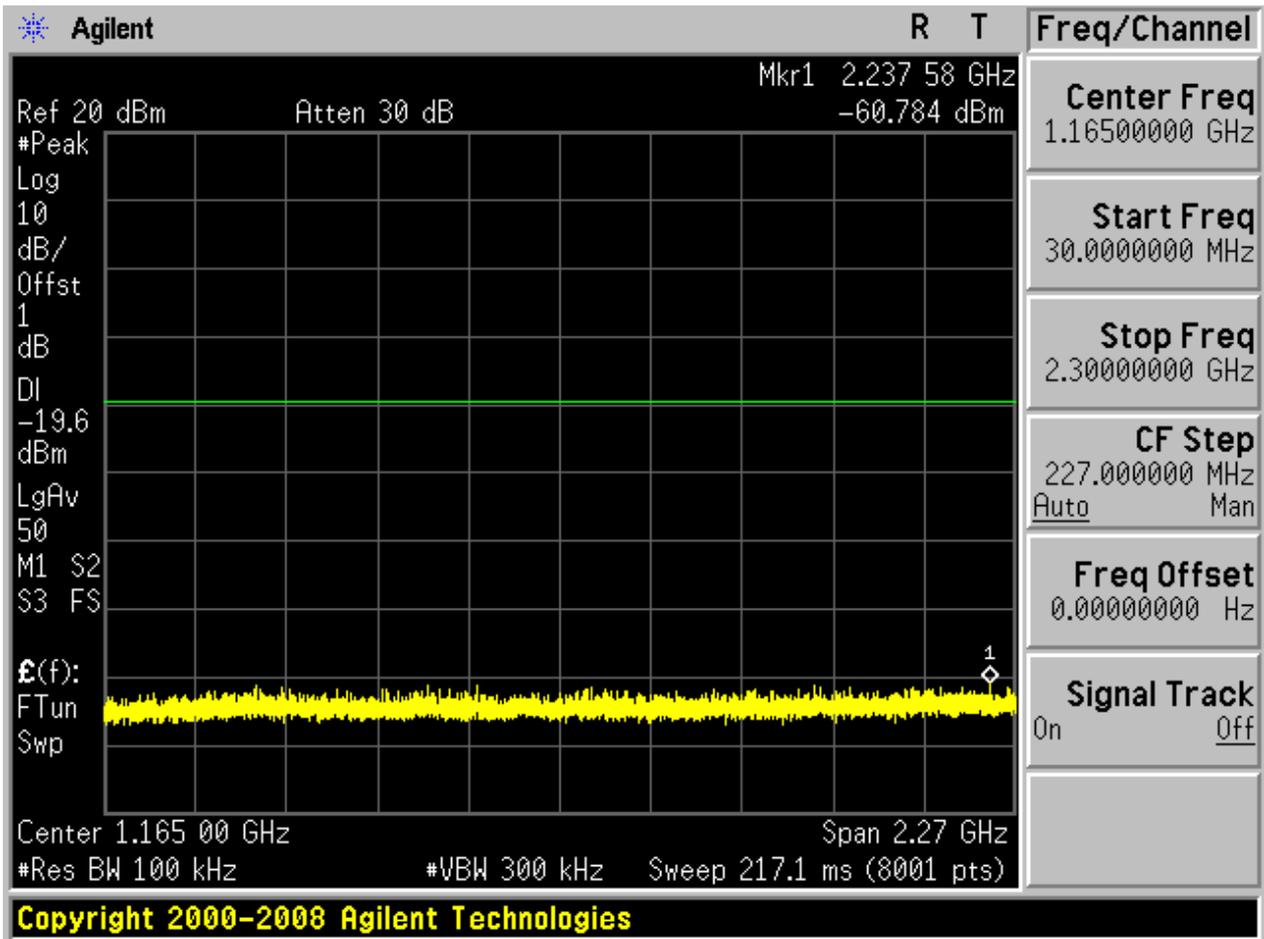


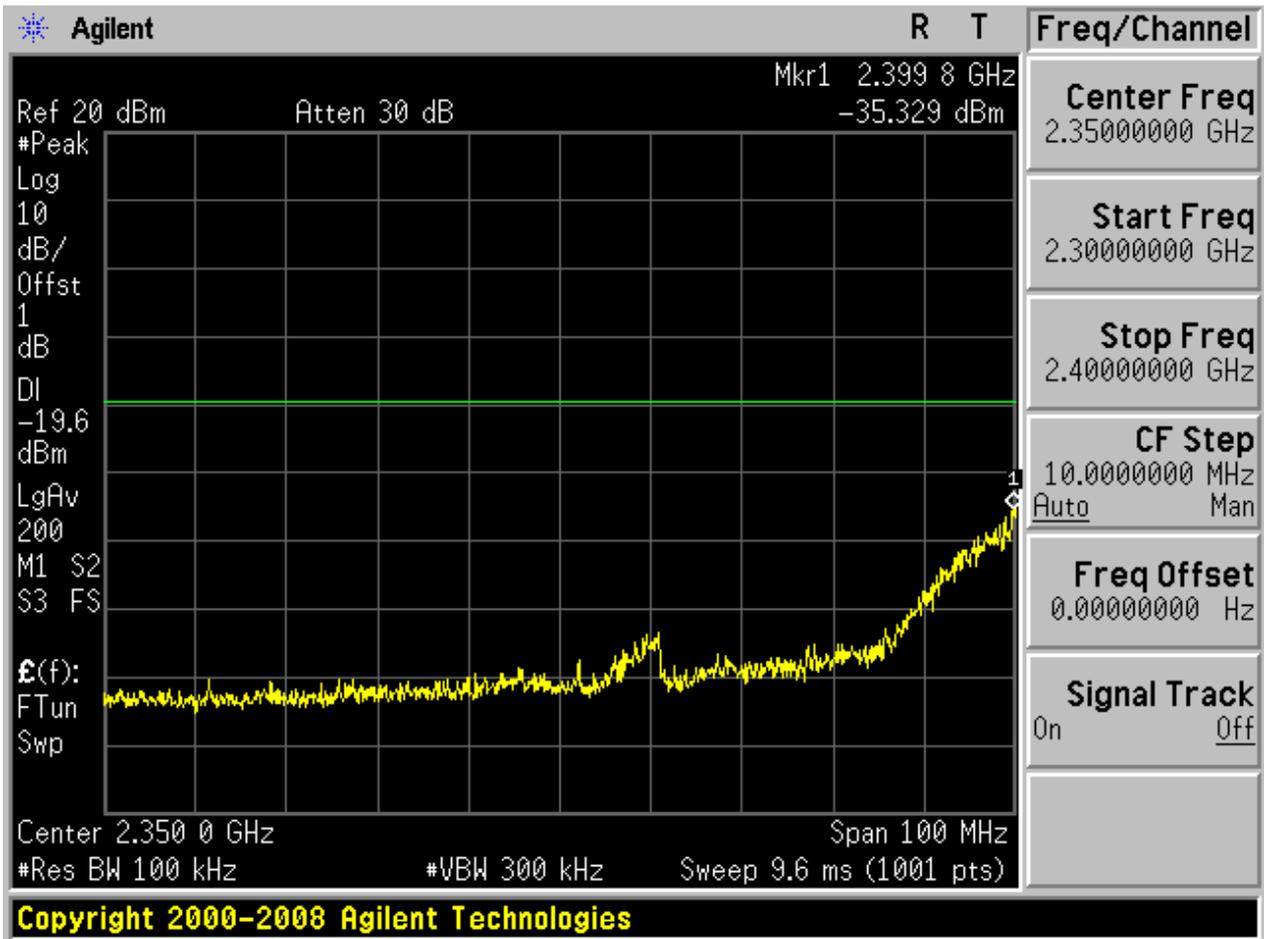


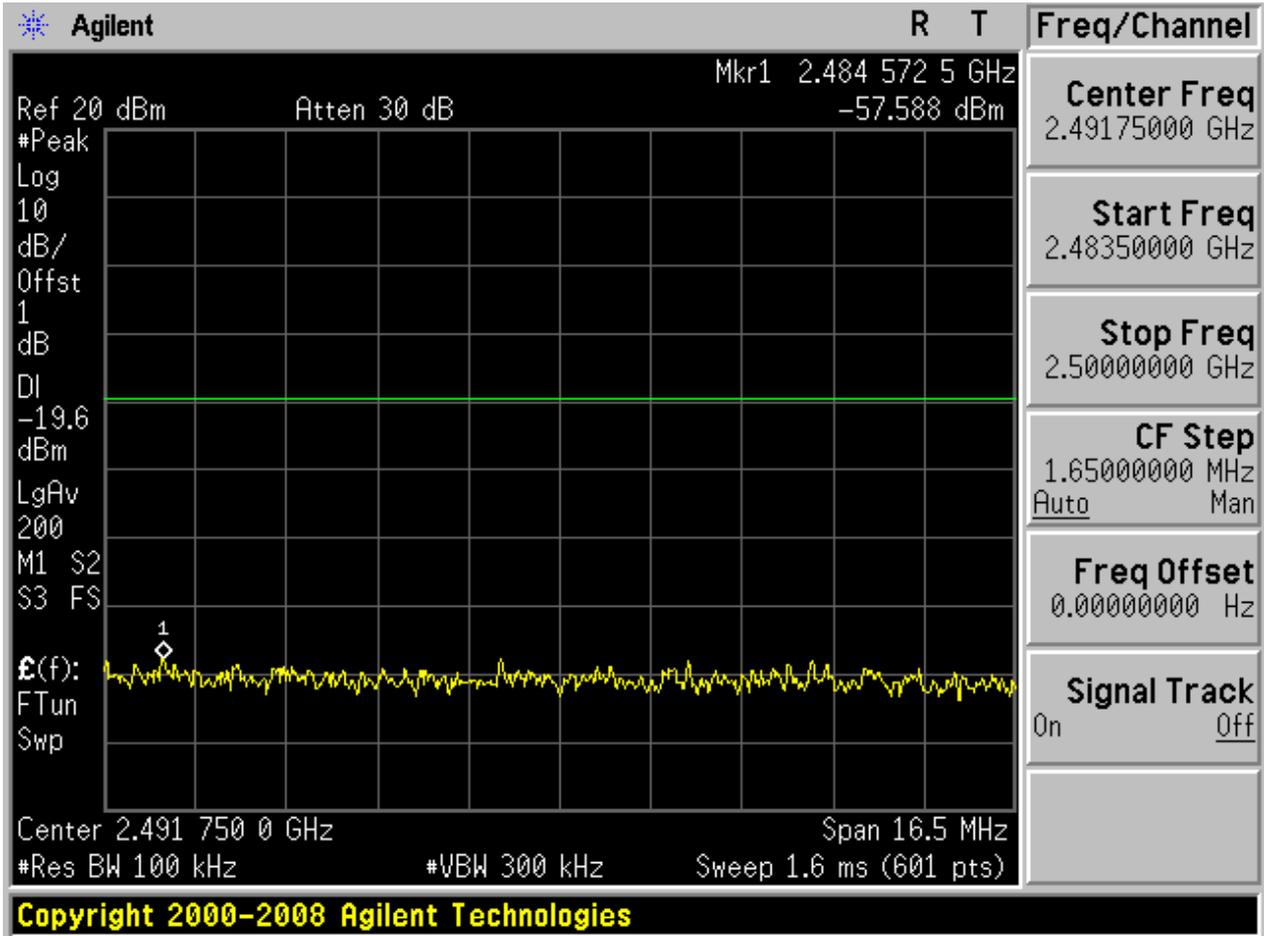
Puw:

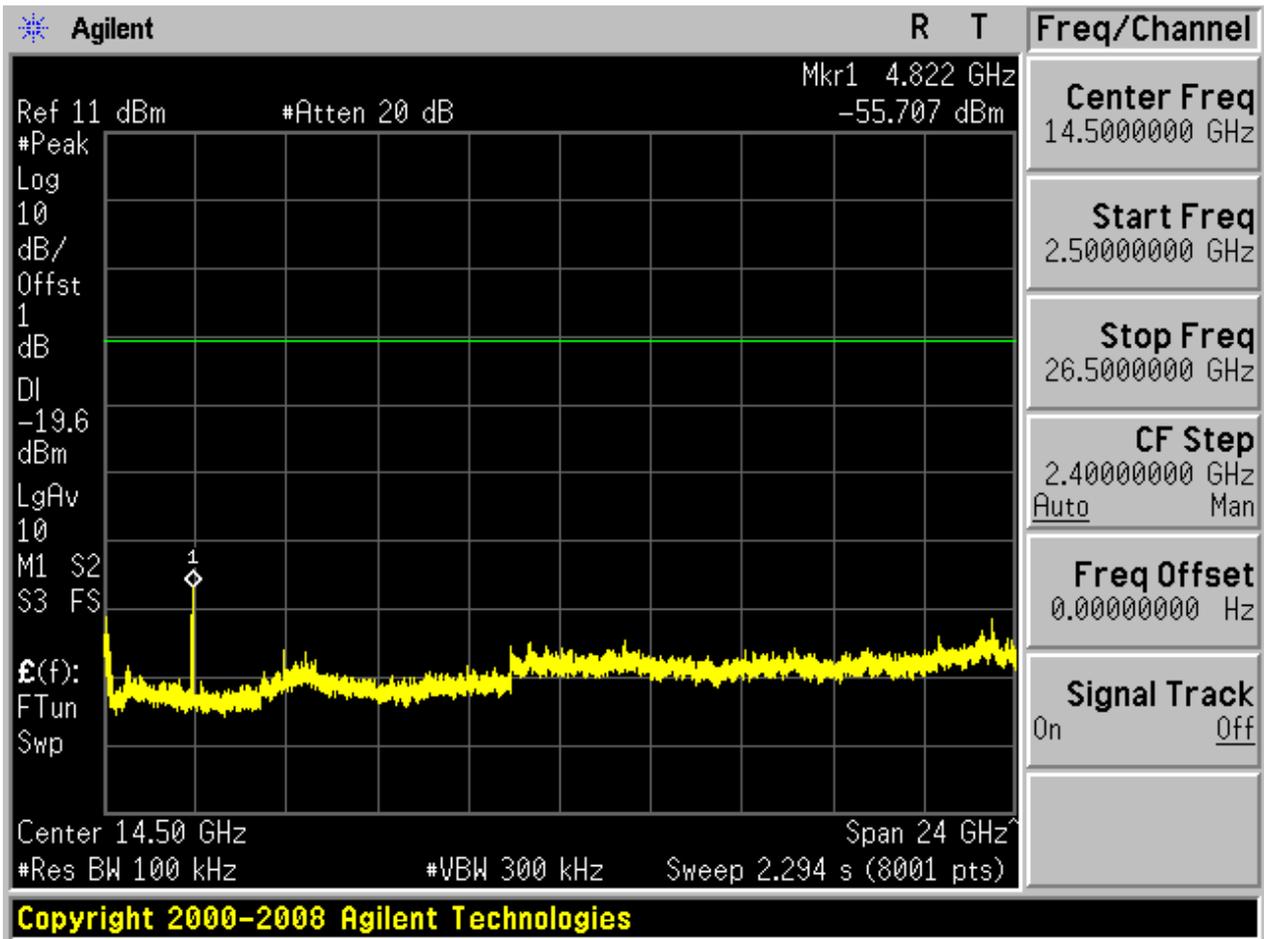








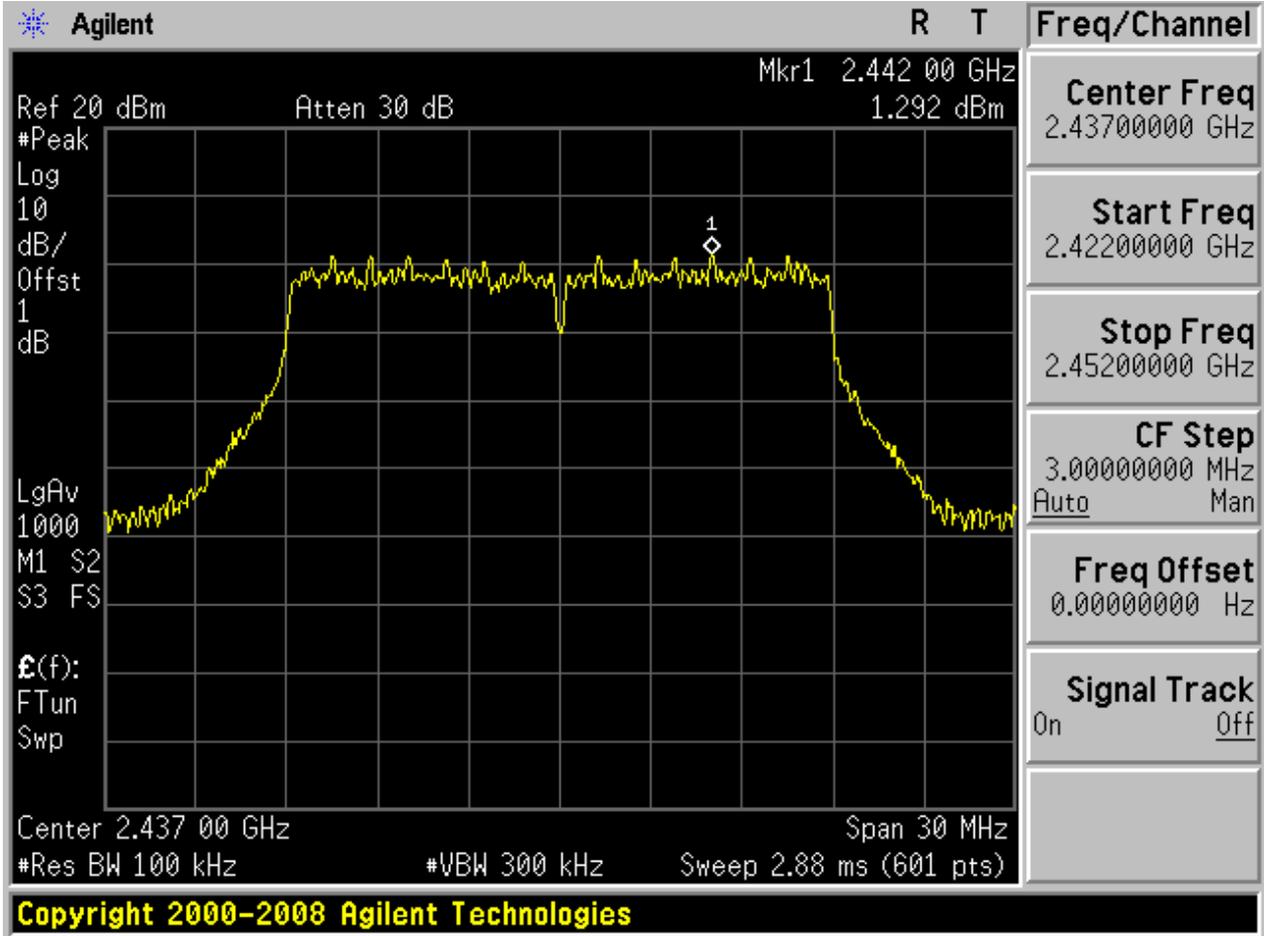






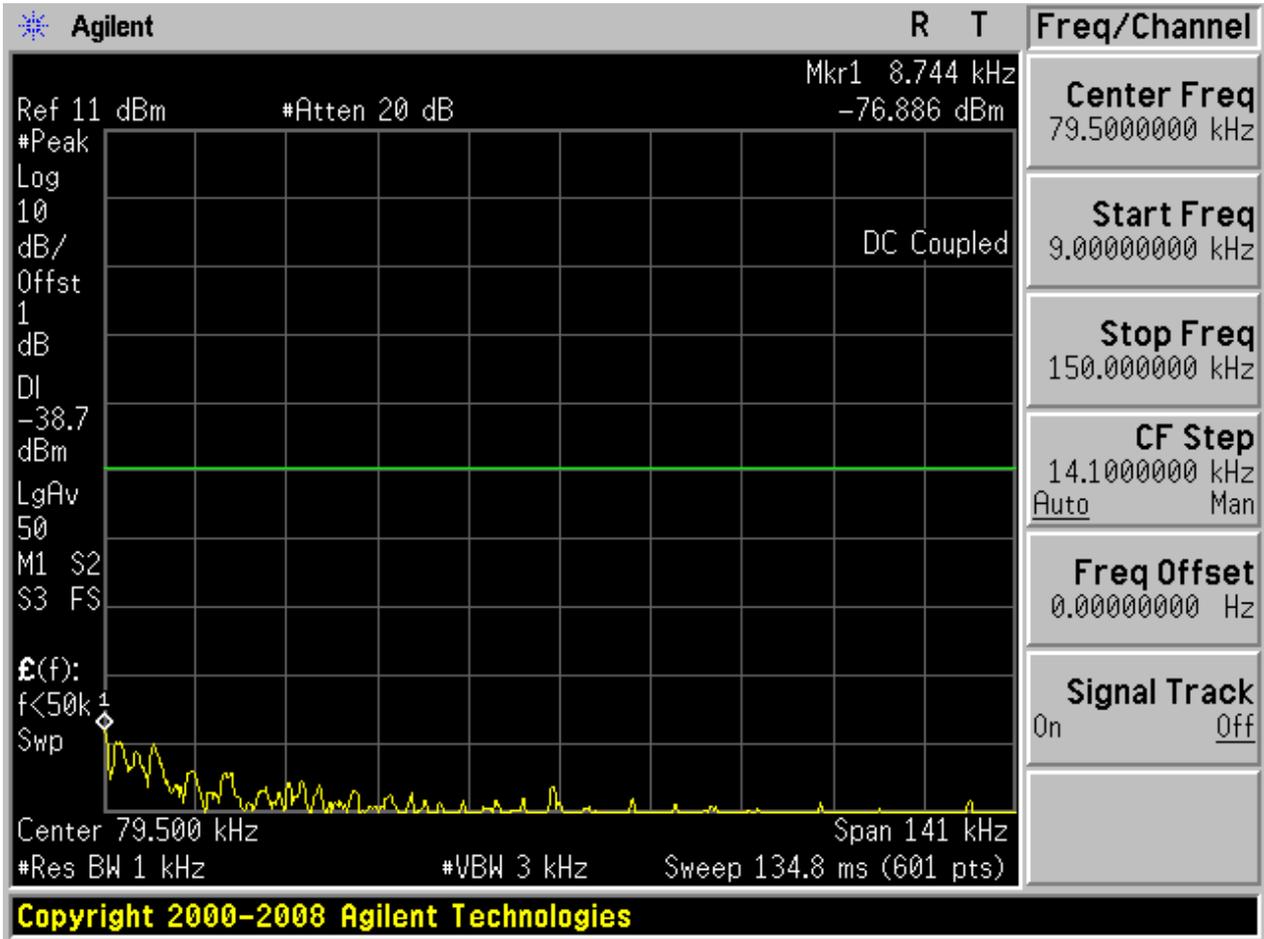
### 2.8 11N20\_M

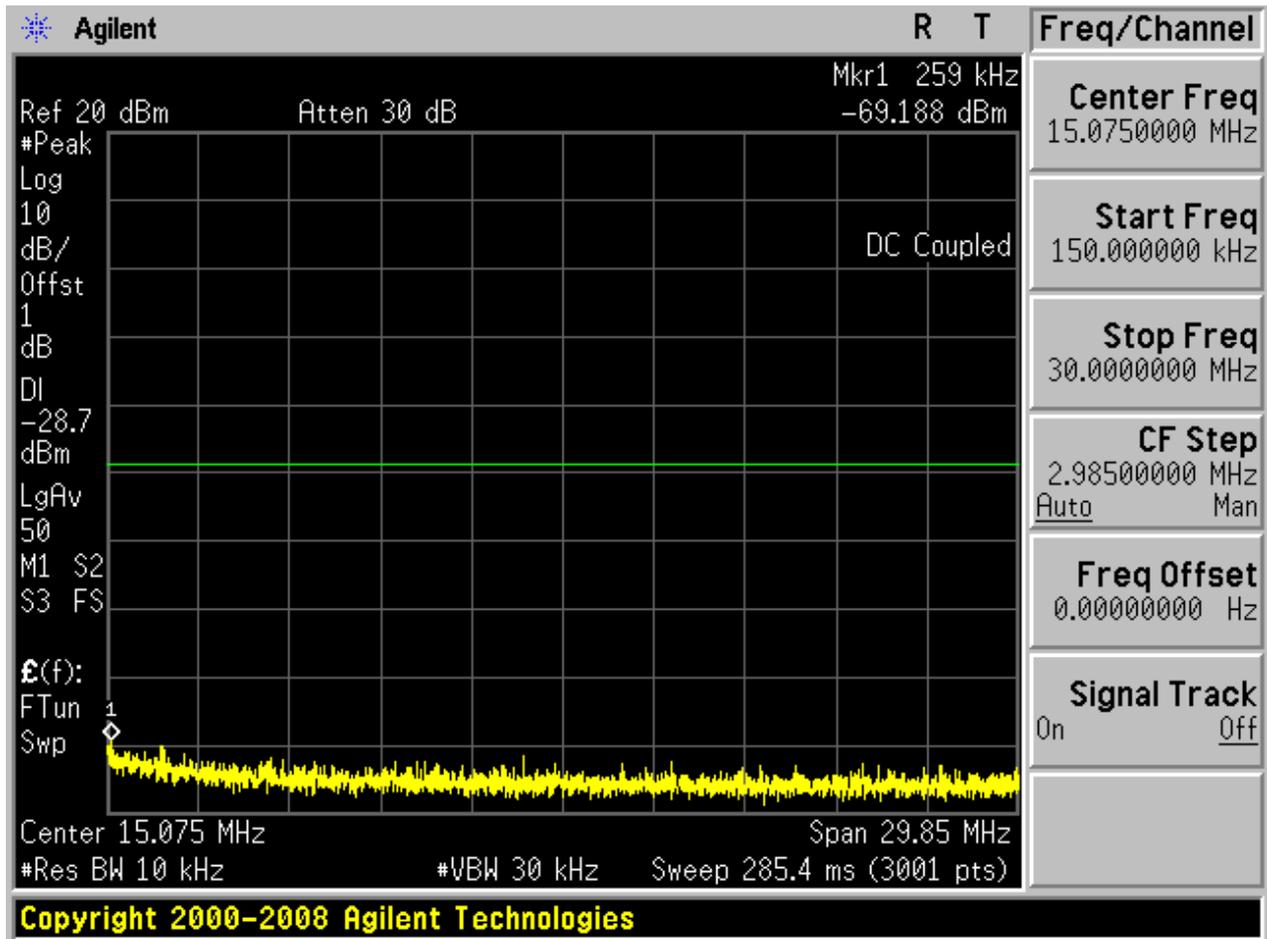
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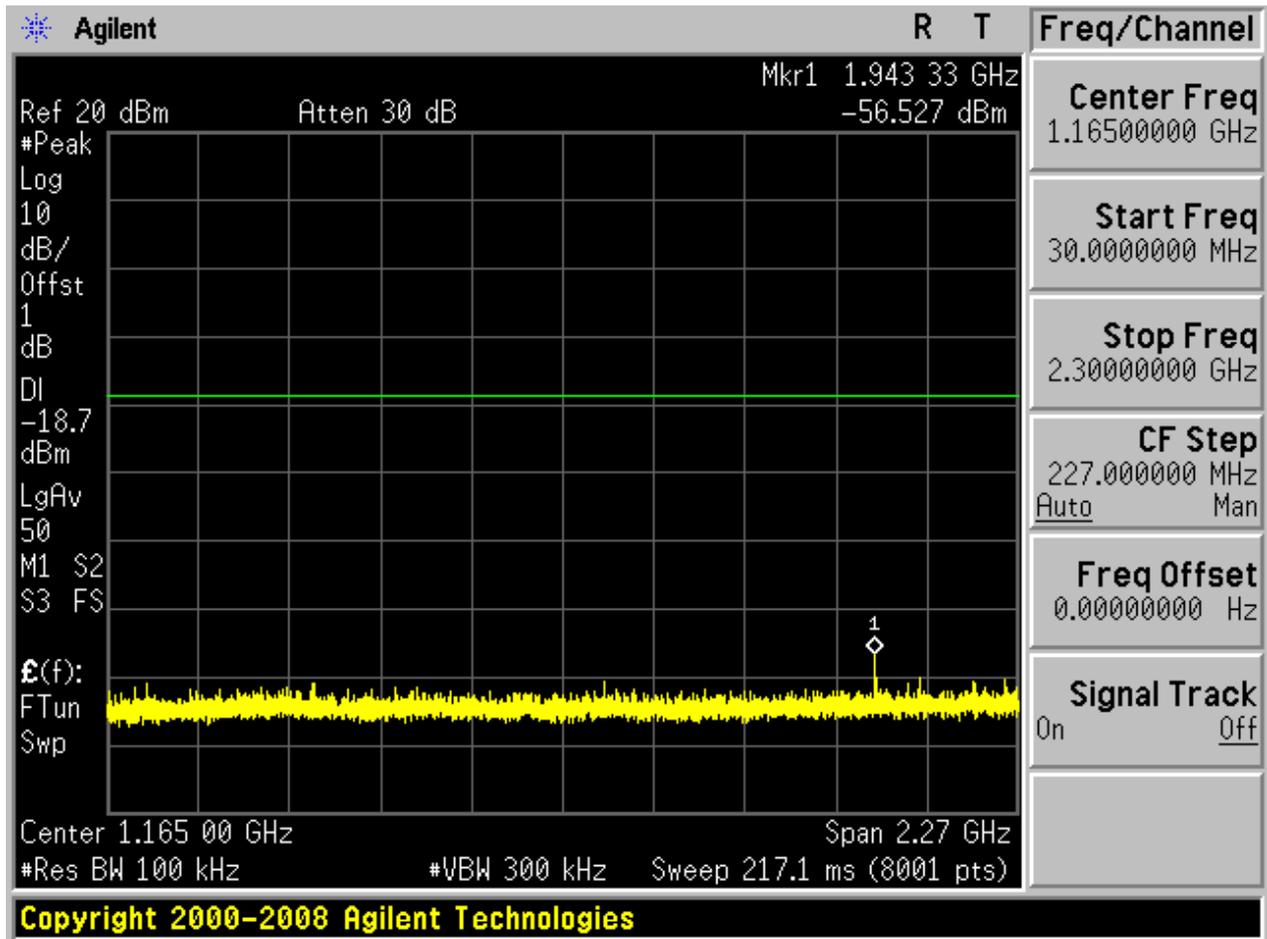


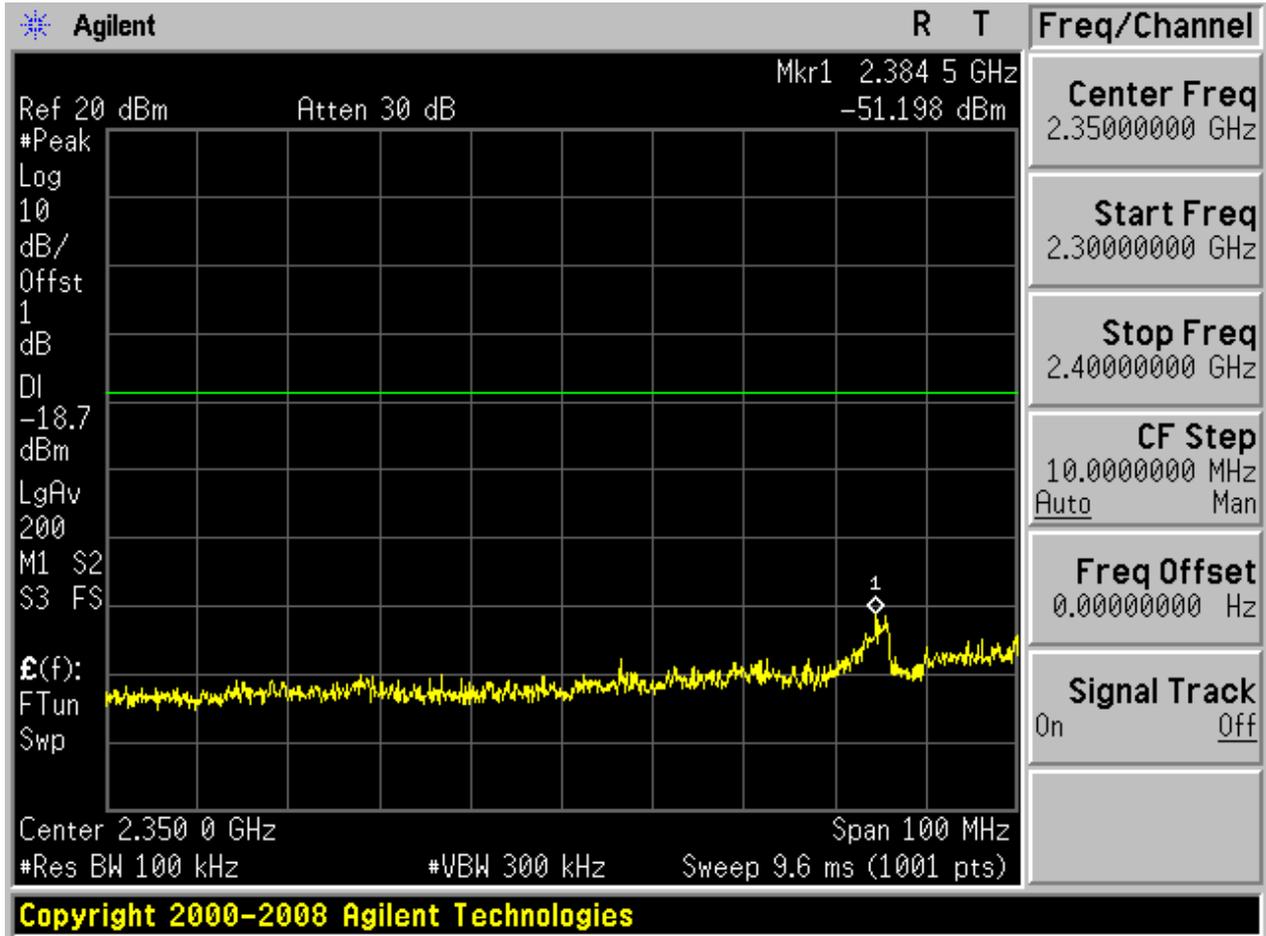


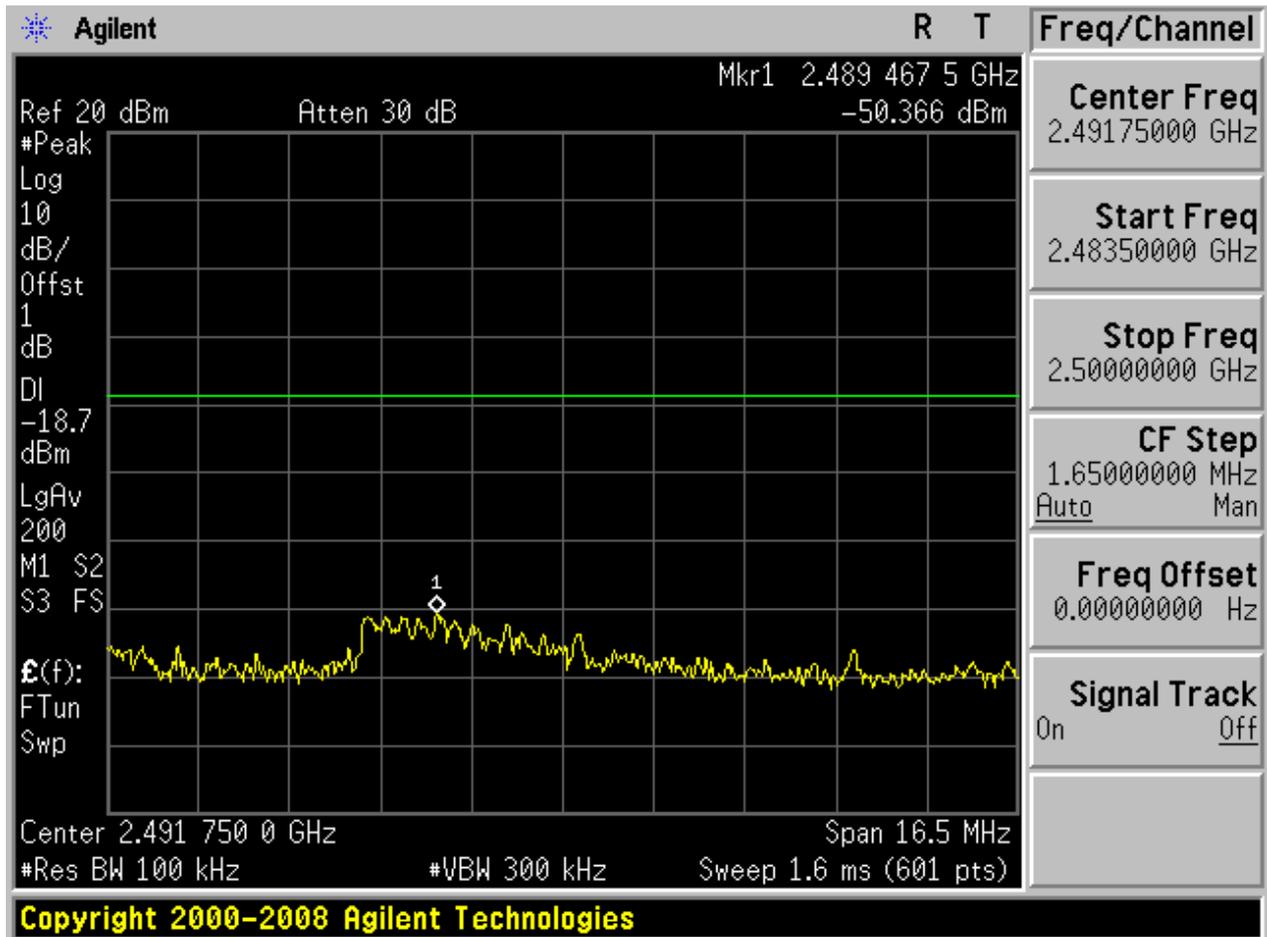
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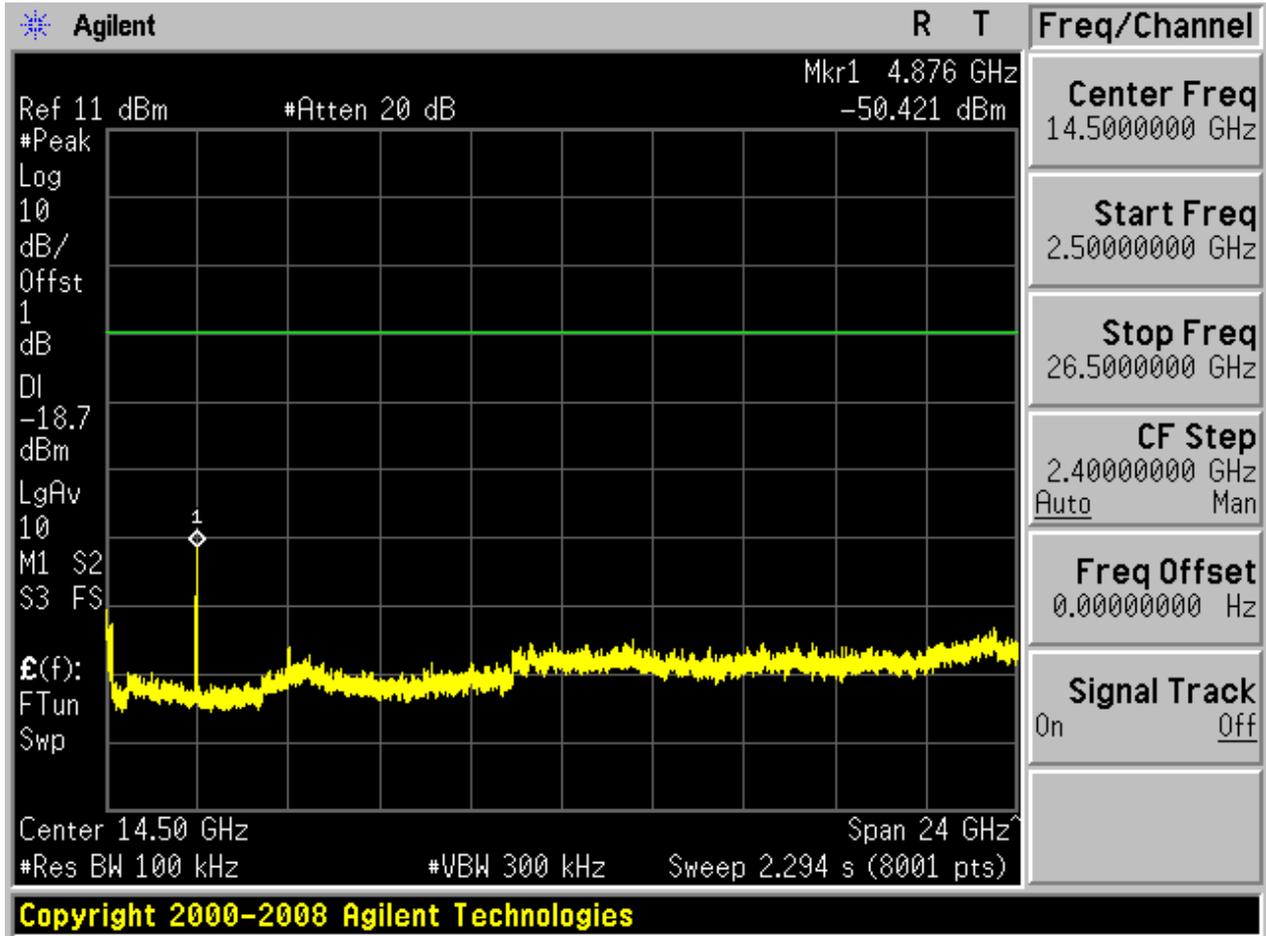






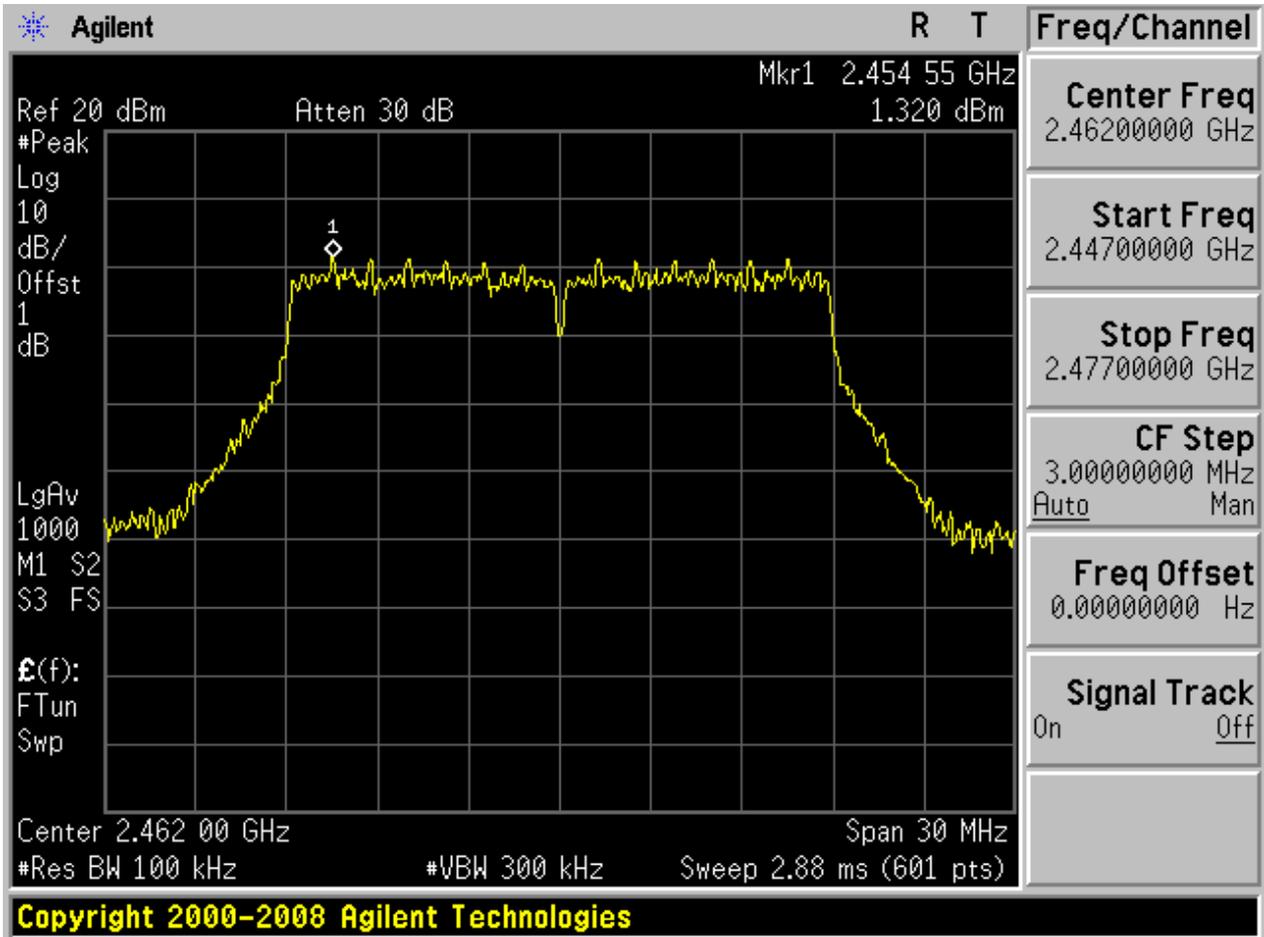






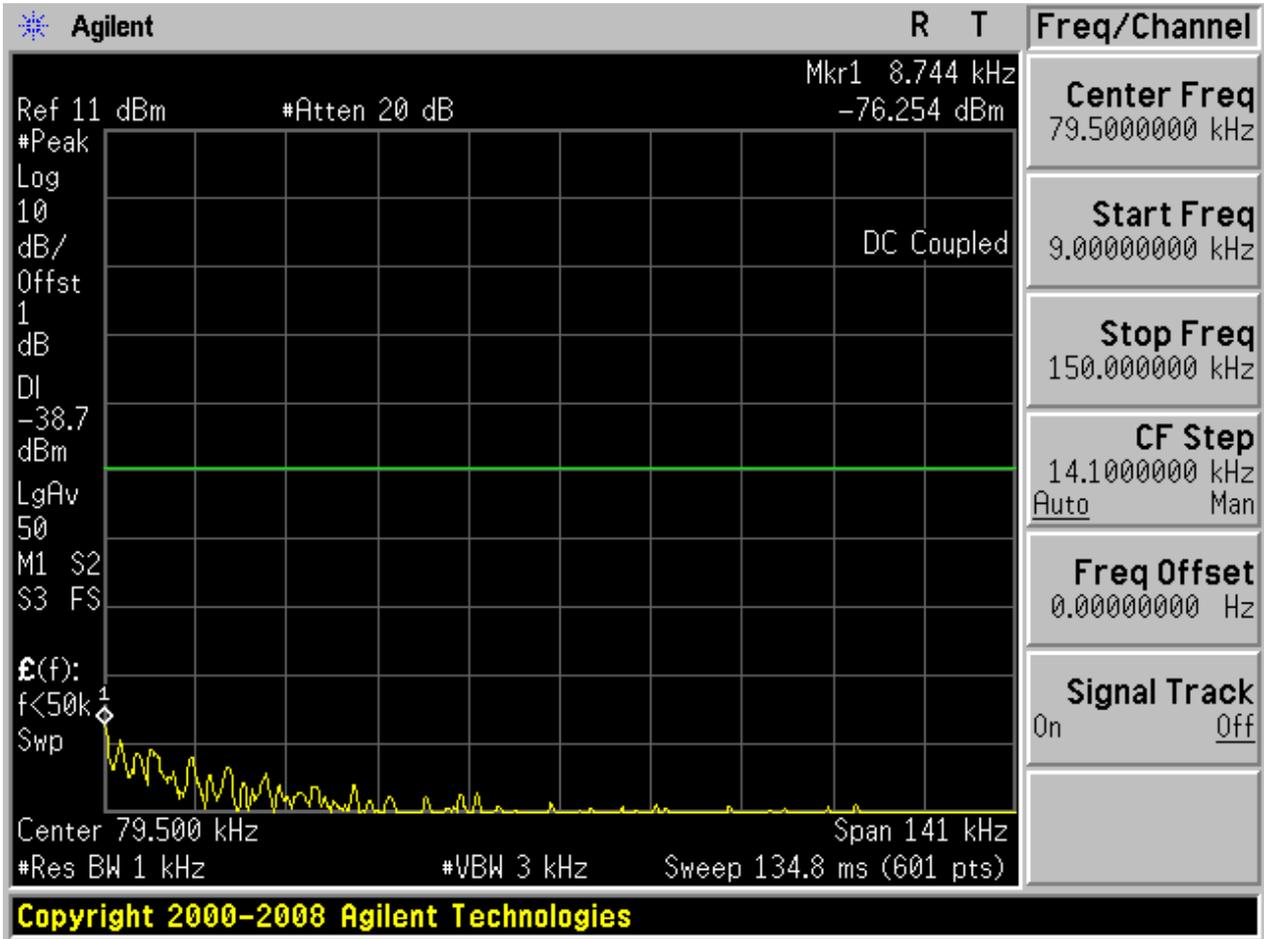
## 2.9 11N20\_H

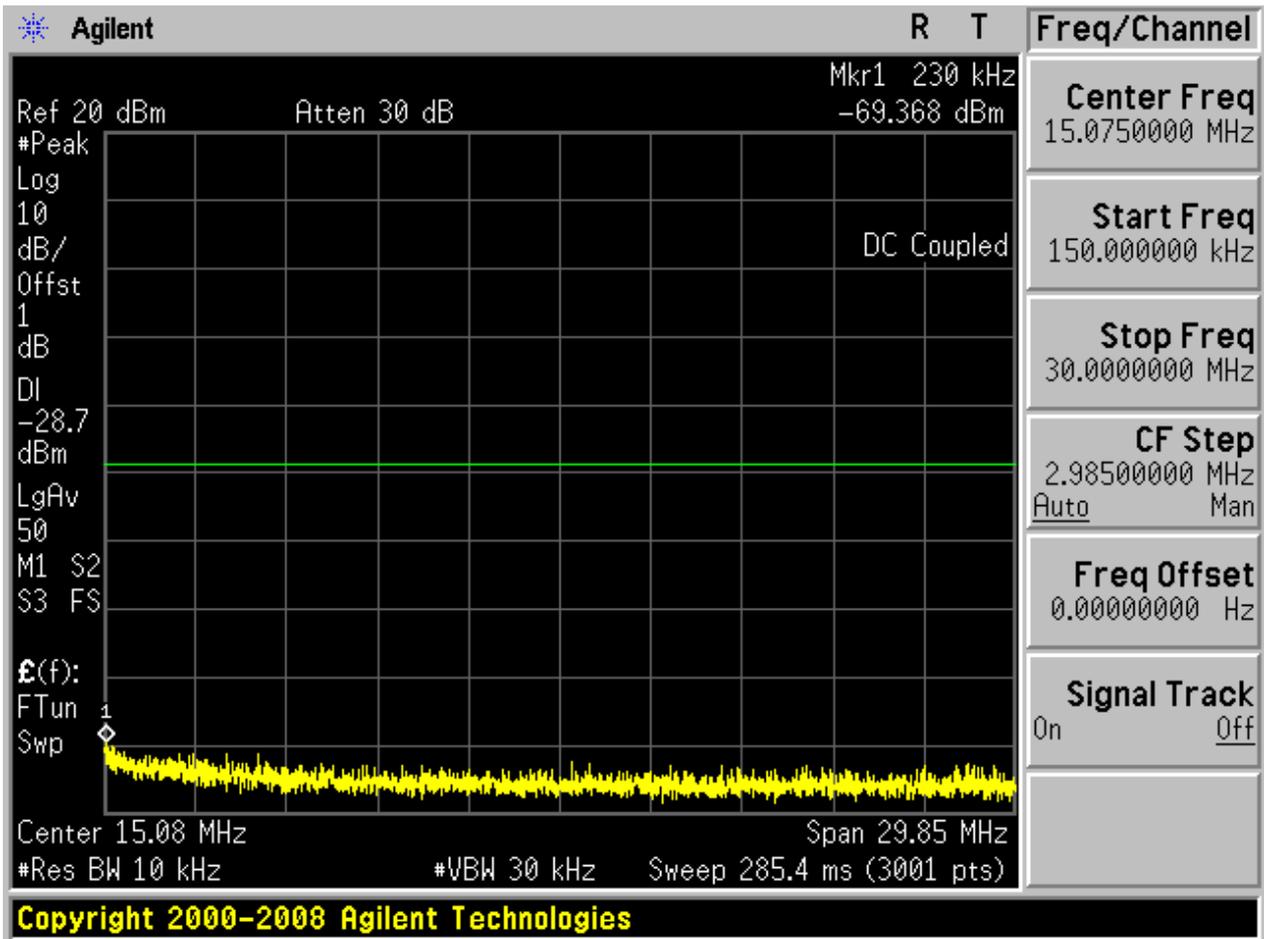
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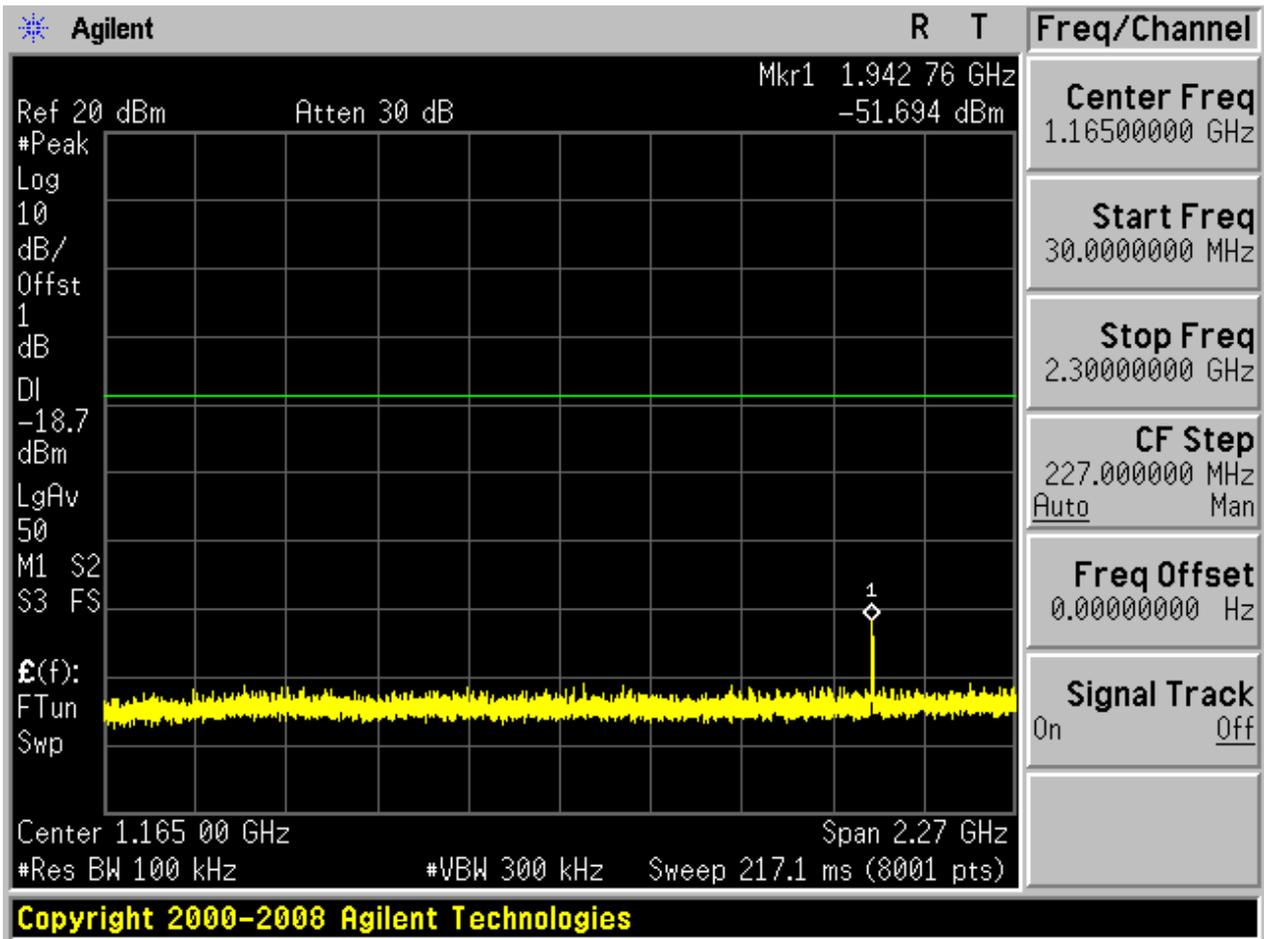


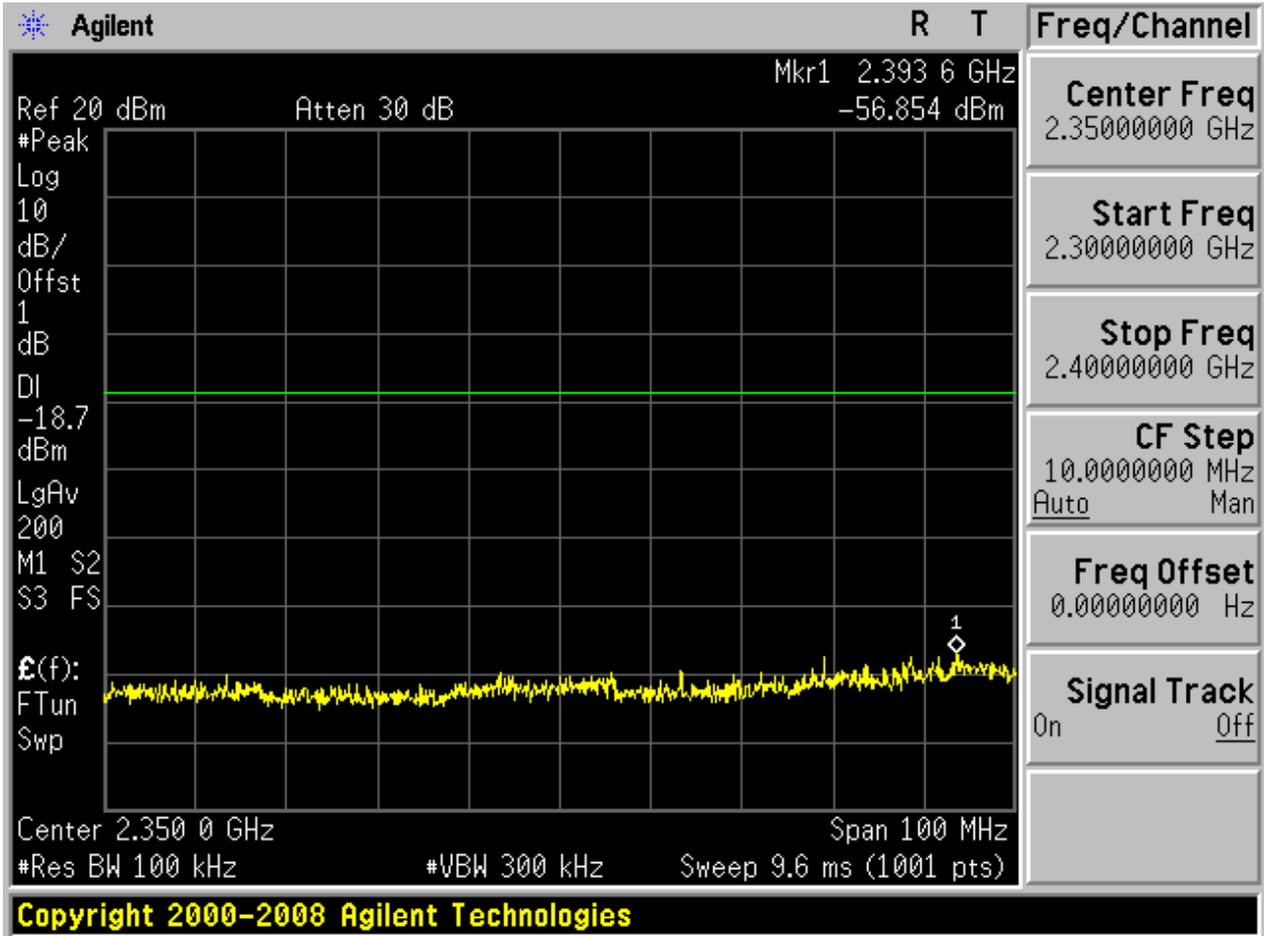


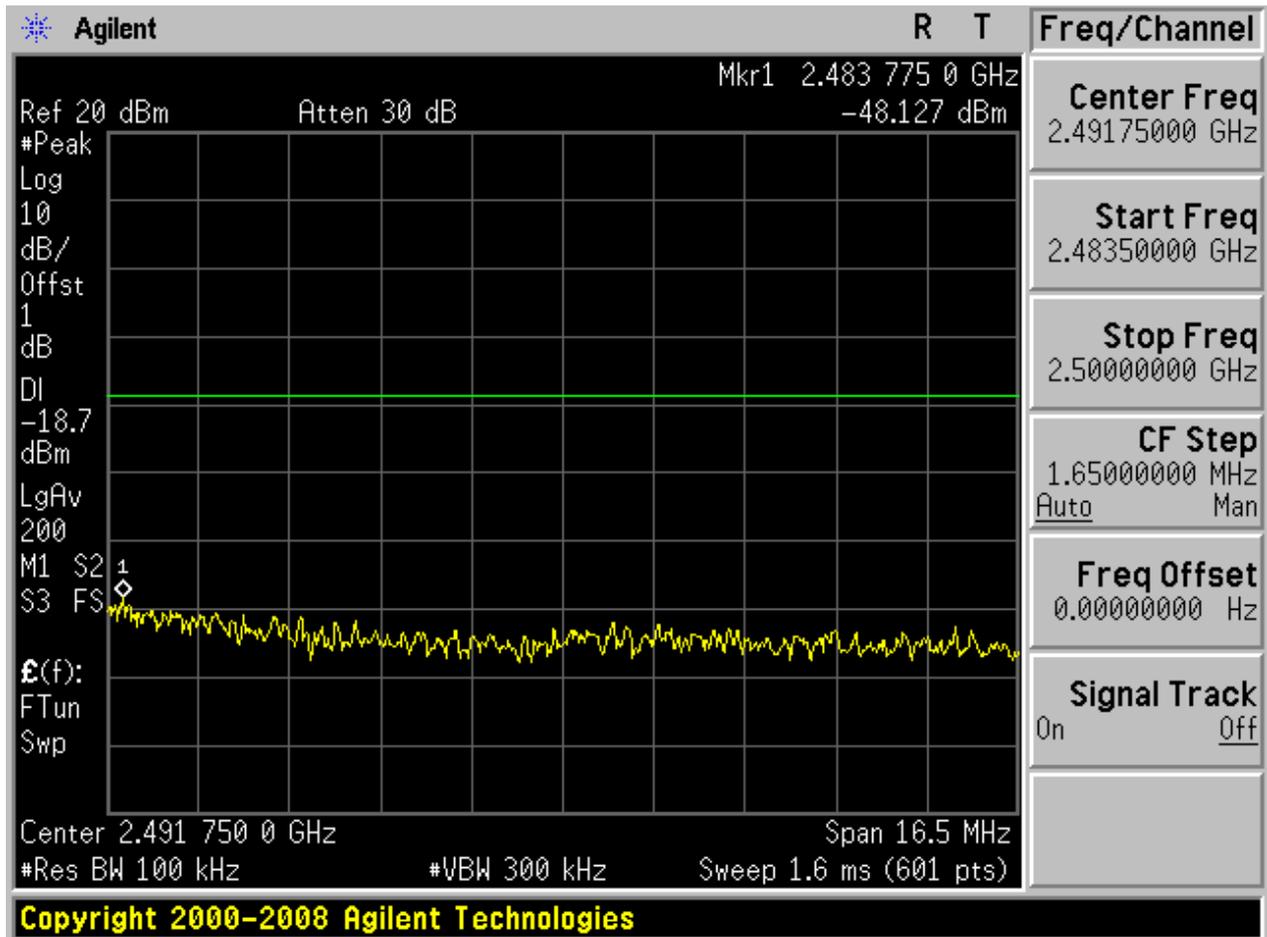
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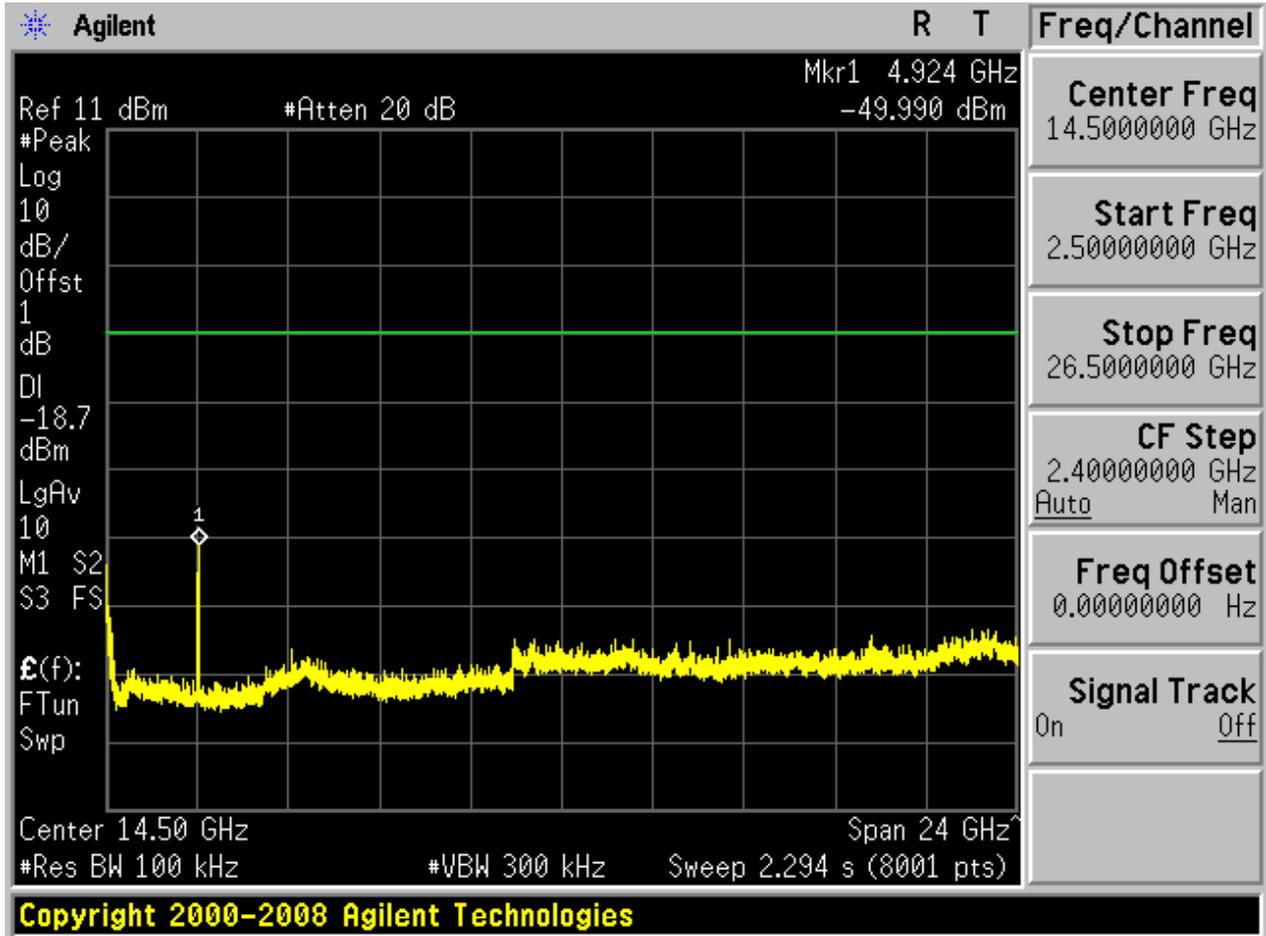












## Appendix F: Radiated Spurious Emission & Spurious in Restricted Band

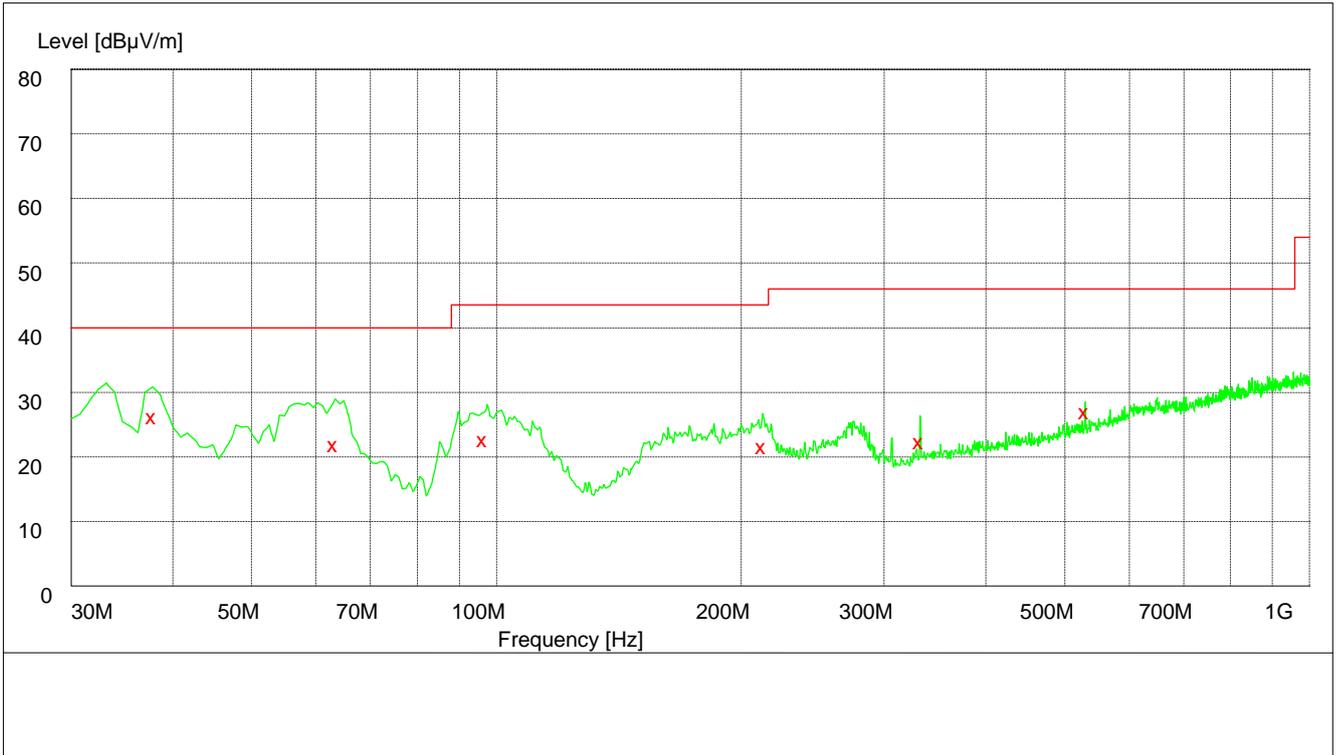
Note: Below 1GHz, RBW = 100 kHz, VBW = 300 kHz.

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

The simultaneous transmission has been considered

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

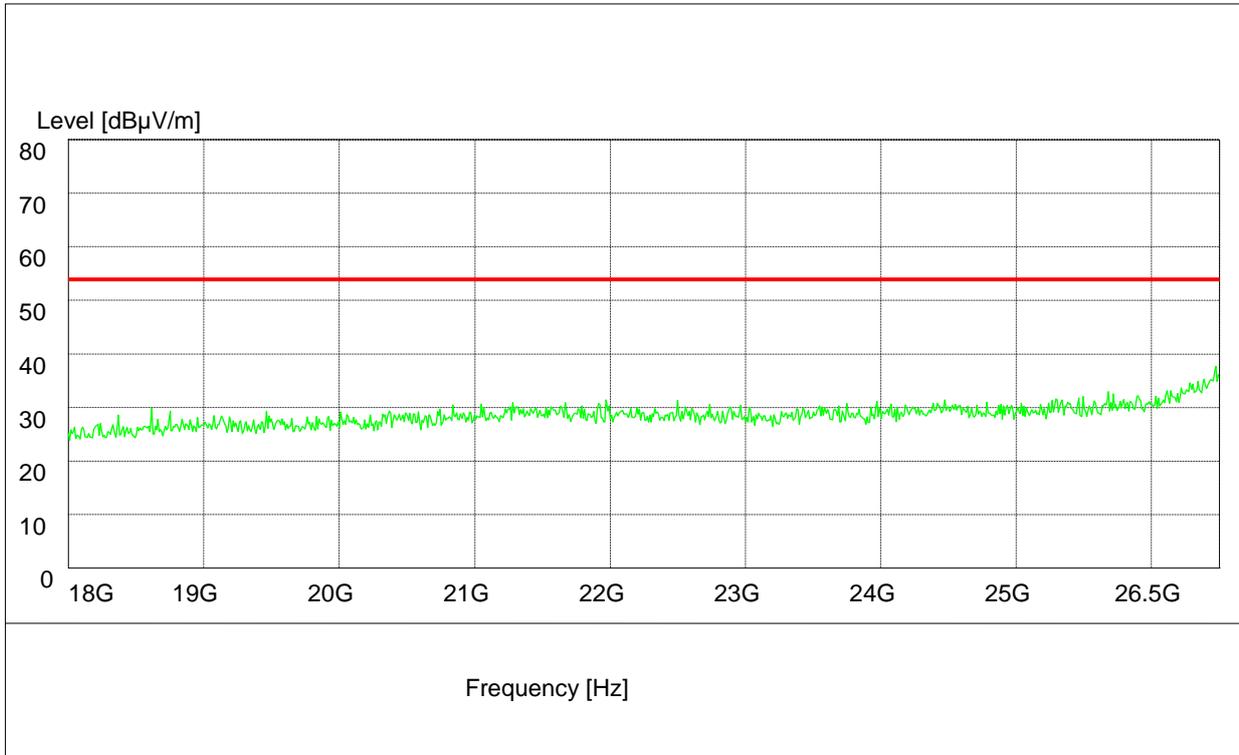
- Note 1: The test results and plot for testing range of “30 MHz to 1 GHz” showed as below is **the WORST case for all Test Modes and Channels**. This range will not be presented for each Test Mode and each Channel.
- Note 2: **The emissions in this range are mainly from the Platform Device (Notepad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



Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Plarization
37.920000	27.70	12.6	40.0	12.3	100.0	88.00	VERTICAL
63.300000	23.40	11.1	40.0	16.6	100.0	88.00	VERTICAL
96.720000	24.20	12.9	43.5	19.3	100.0	97.00	VERTICAL
212.820000	23.10	12.7	43.5	20.4	154.0	335.00	HORIZONTAL
332.760000	23.90	16.6	46.0	22.1	128.0	29.00	HORIZONTAL
530.940000	28.50	21.1	46.0	17.5	112.0	42.00	VERTICAL

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

Note: No peak found in pre- test.

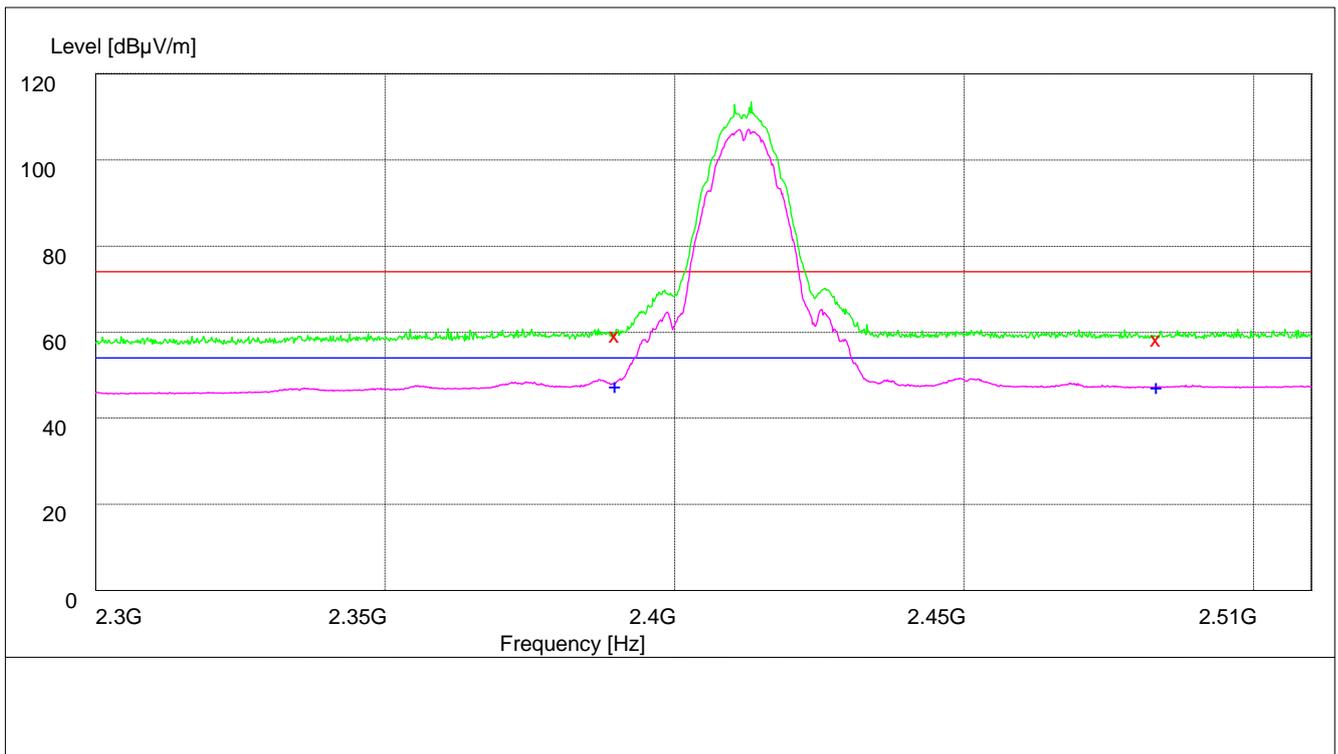


**Part 3: Testing Range of “2.3GHz to 2.5GHz”**

- 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 $\mu$ 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

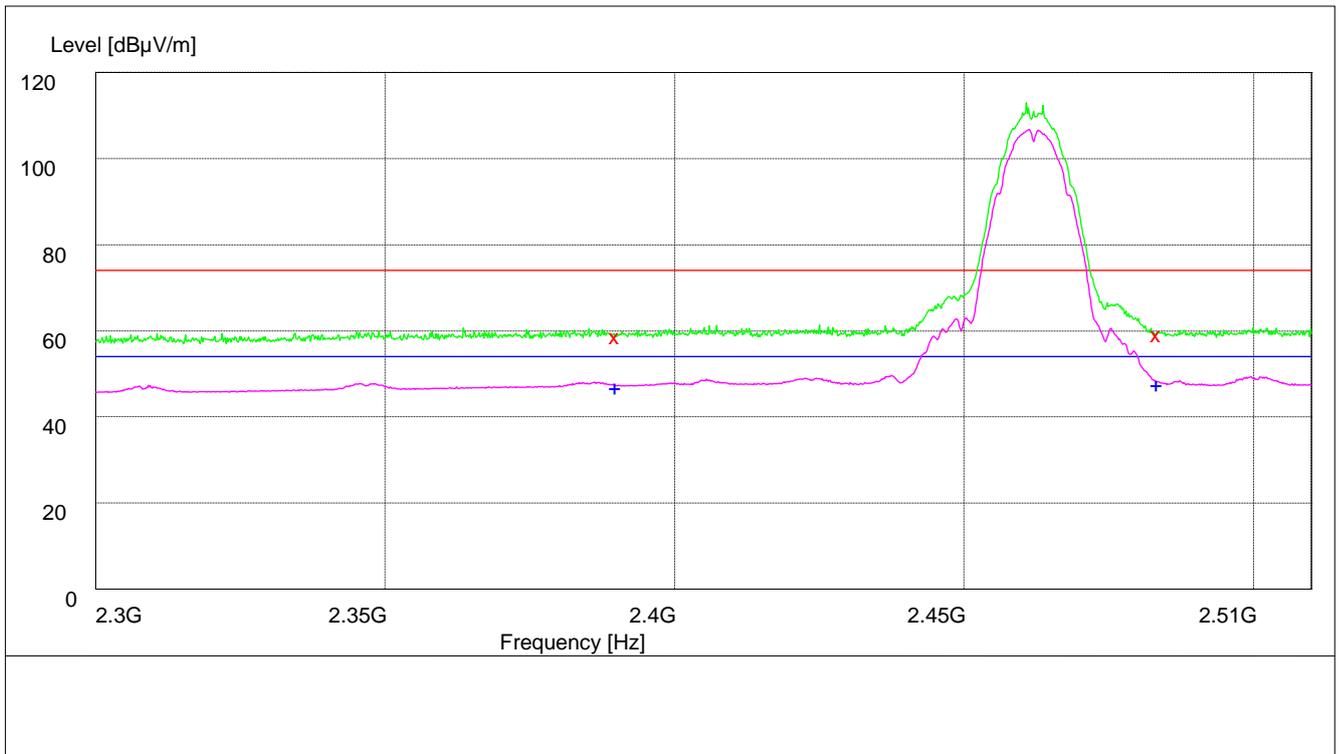
Frequency MHz	Level dB $\mu$ V/m	Transd dB	Limit dB $\mu$ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	59.70	34.7	74.0	14.3	100.0	360.00	HORIZONTAL
2483.500000	58.90	35.0	74.0	15.1	101.0	47.00	VERTICAL

MEASUREMENT RESULT: AV Detector



Frequency MHz	Level dB $\mu$ V/m	Transd dB	Limit dB $\mu$ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	48.10	34.7	54.0	5.9	103.0	235.00	HORIZONTAL
2483.500000	47.70	35.0	54.0	6.3	100.0	211.00	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	59.00	34.7	74.0	15.0	100.0	221.00	HORIZONTAL
2483.500000	59.40	35.0	74.0	14.6	100.0	26.00	VERTICAL

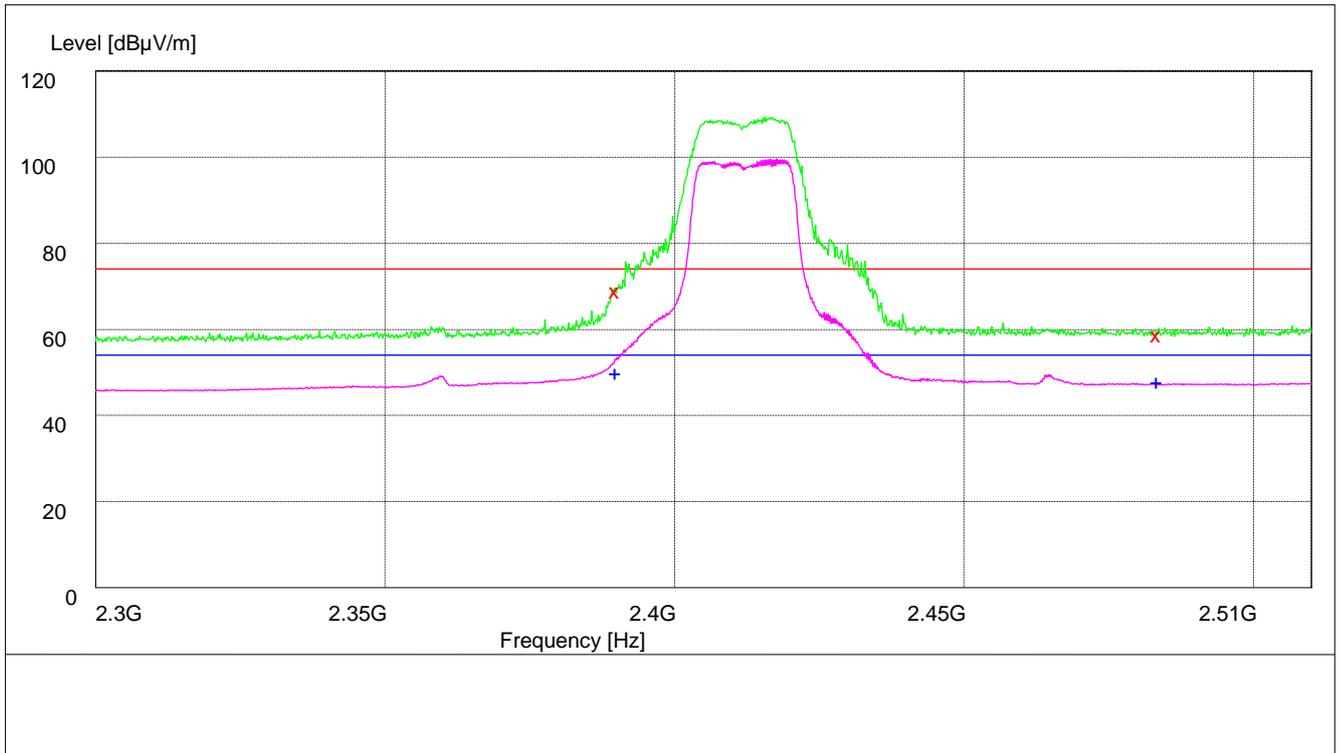
MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB $\mu$ V/m	Transd dB	Limit dB $\mu$ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	47.50	34.7	54.0	6.5	100.0	249.00	HORIZONTAL
2483.500000	48.10	35.0	54.0	5.9	100.0	211.00	HORIZONTAL



## Test Mode: 11g

### Channel 01



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

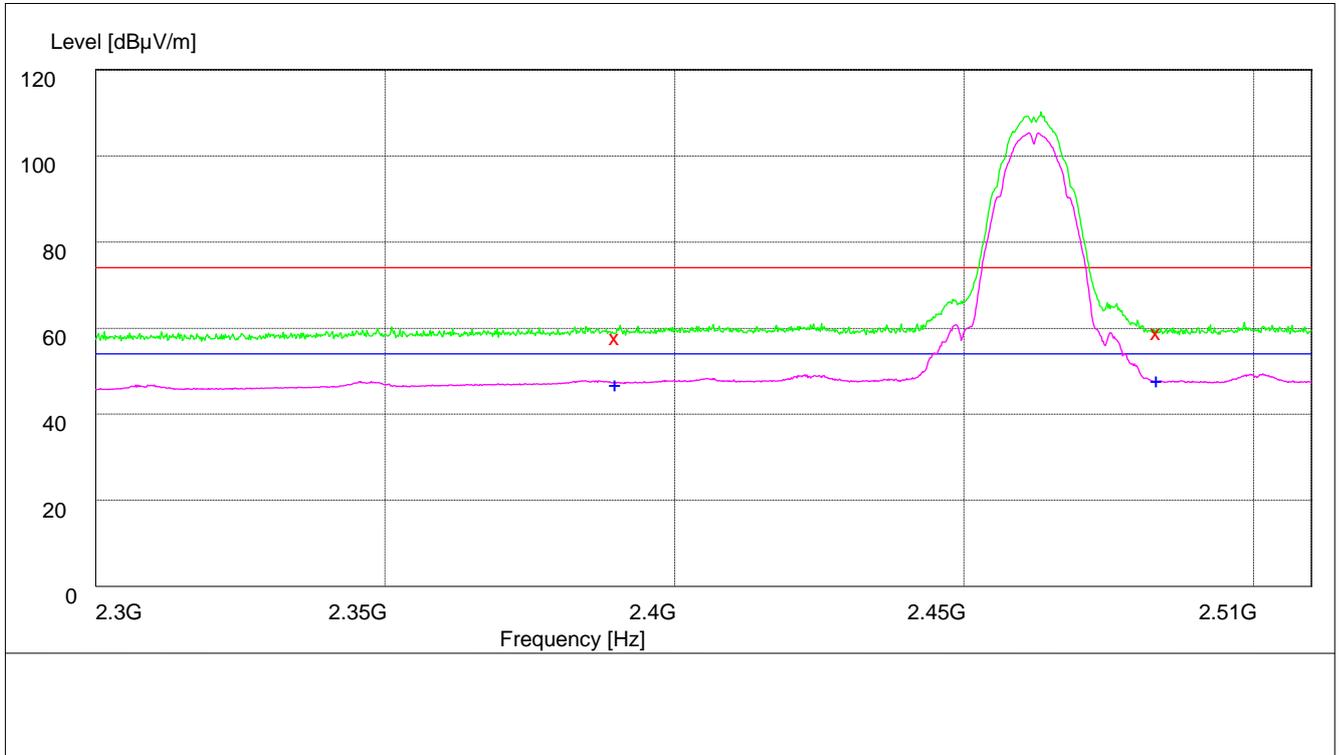
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	68.90	34.7	74.0	5.1	100.0	249.00	HORIZONTAL
2483.500000	58.70	35.1	74.0	15.3	105.0	142.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	50.00	34.7	54.0	4.0	100.0	243.00	HORIZONTAL
2483.500000	47.90	35.1	54.0	6.1	102.0	64.00	HORIZONTAL

## Channel 11



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

### MEASUREMENT RESULT: PK Detector

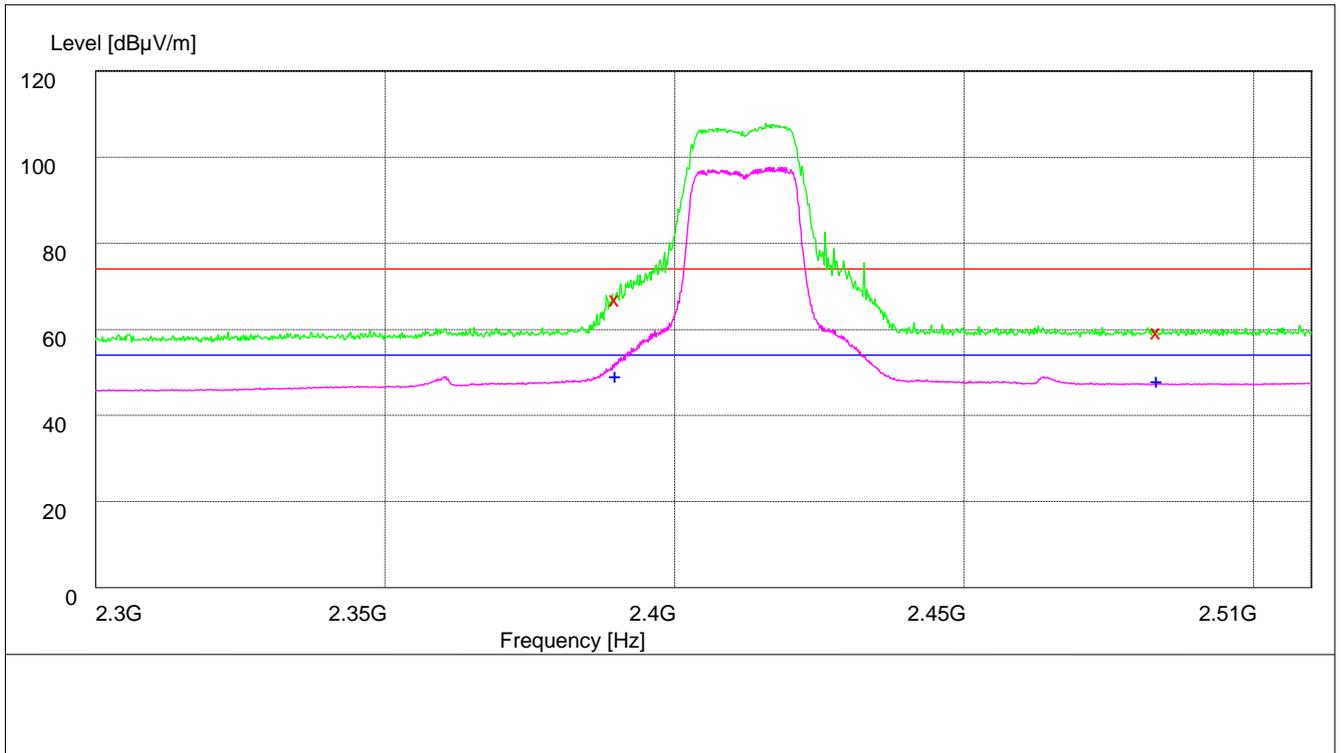
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	58.20	34.7	74.0	15.2	103.0	354.00	VERTICAL
2483.500000	59.40	35.1	74.0	14.6	100.0	240.00	HORIZONTAL

### MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	47.50	34.7	54.0	6.5	100.0	244.00	HORIZONTAL
2483.500000	48.20	35.0	54.0	5.8	107.0	220.00	HORIZONTAL

### Test Mode: 11n

### Channel 01



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

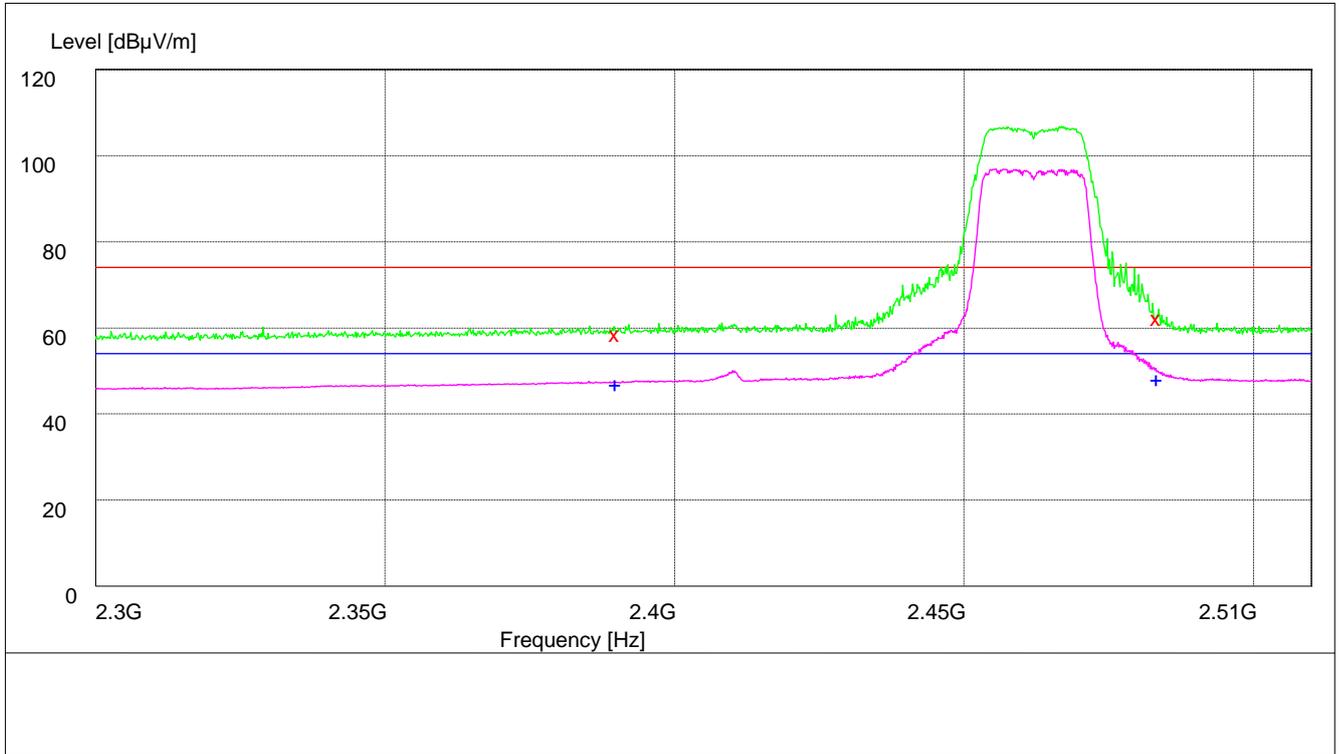
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	66.70	34.7	74.0	7.3	100.0	344.00	HORIZONTAL
2483.500000	58.90	35.1	74.0	15.1	100.0	18.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	48.80	34.7	54.0	5.2	100.0	237.00	HORIZONTAL
2483.500000	47.70	35.1	54.0	6.3	100.0	70.00	HORIZONTAL

## Channel 11



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

### MEASUREMENT RESULT: PK Detector

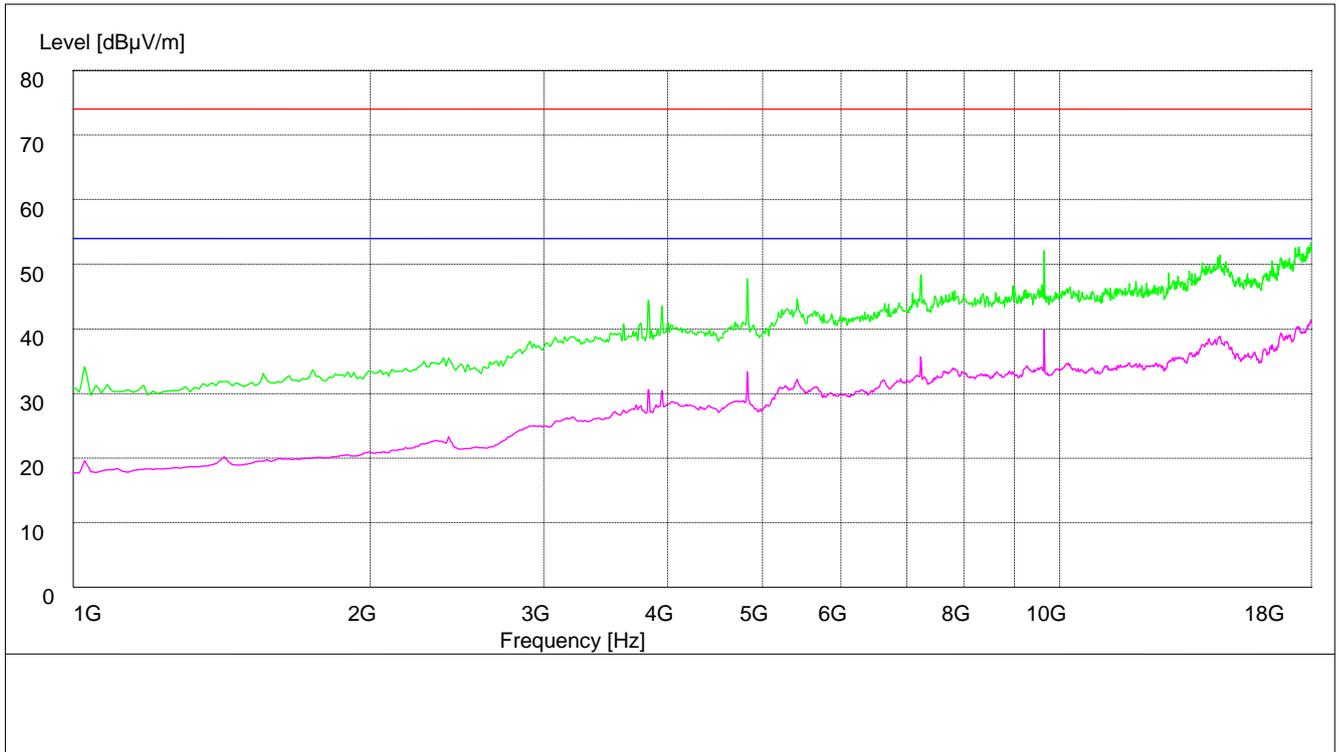
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	58.80	34.7	74.0	15.2	100.0	7.00	HORIZONTAL
2483.500000	62.70	35.1	74.0	11.3	103.0	67.00	HORIZONTAL

### MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	47.40	34.7	54.0	6.6	100.0	203.00	HORIZONTAL
2483.500000	48.60	35.0	54.0	5.4	101.0	221.00	HORIZONTAL

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

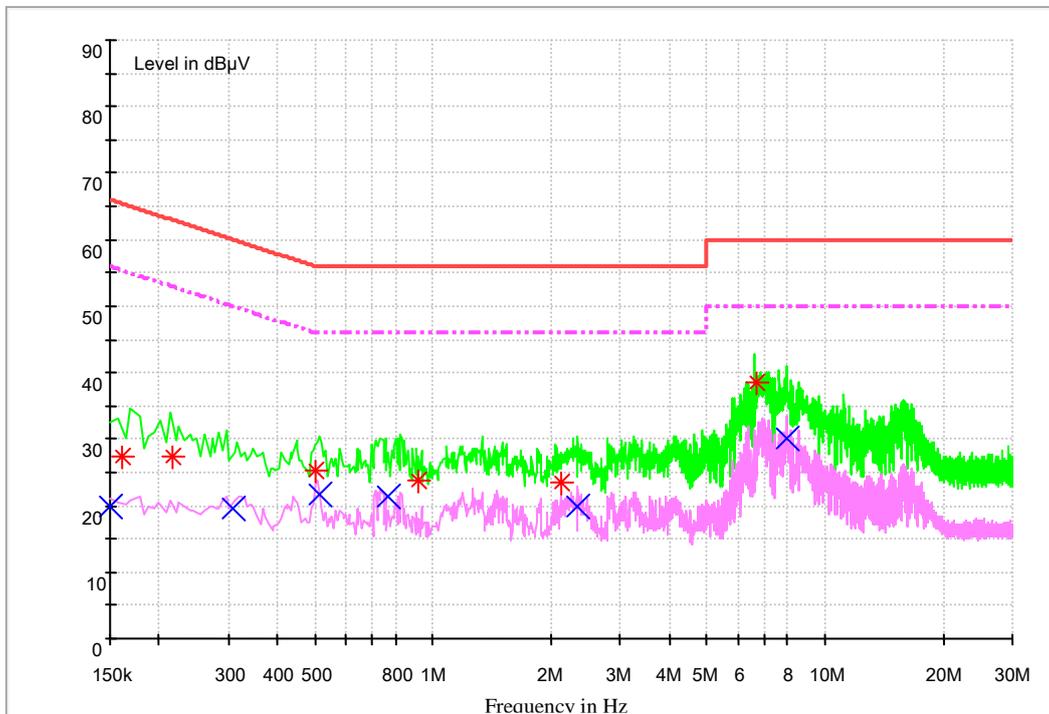
- Note 1: The test results and plot for testing range of “1 GHz to 18 GHz” showed as below is **the WORST case for all Test Modes and Channels**. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of “1 GHz to 18 GHz” is for checking radiated emissions located 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 dB $\mu$ V/m) and Average Limit (54 dB $\mu$ V/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	Line	Transd dB	Margin dB	Limit dBµV	PE
0.161181	27.5	N	9.7	37.9	65.4	FLO
0.217102	27.3	L1	9.7	35.6	62.9	FLO
0.500478	25.1	N	9.7	30.9	56.0	FLO
0.919474	23.8	N	9.7	32.2	56.0	FLO
2.118236	23.4	N	9.7	32.6	56.0	FLO
6.647212	38.7	N	9.8	21.3	60.0	FLO

#### MEASUREMENT RESULT: AV Detector



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Frequency MHz	Level dB $\mu$ V	Line	Transd dB	Margin dB	Limit dB $\mu$ V	PE
0.150633	19.9	N	9.7	36.1	56.0	FLO
0.308565	19.5	N	9.7	30.5	50.0	FLO
0.512816	21.7	N	9.7	24.3	46.0	FLO
0.763728	21.3	L1	9.7	24.7	46.0	FLO
2.321868	20.0	N	9.7	26.0	46.0	FLO
7.994891	30.1	N	9.9	19.9	50.0	FLO

---

END