



# Appendix for Testreport



## Appendix A: DTS (6 dB) Bandwidth

In this document, the "DTS6dBBW" refers to the measured "DTS (6 dB) Bandwidth" value. In this Appendix, the "fc(DTS6dBBW)" refers to the centre of the measured "DTS6dBBW". The introduction of the "fc(DTS6dBBW)" is due to that other measurements use it as the spectrum analyzer setting.

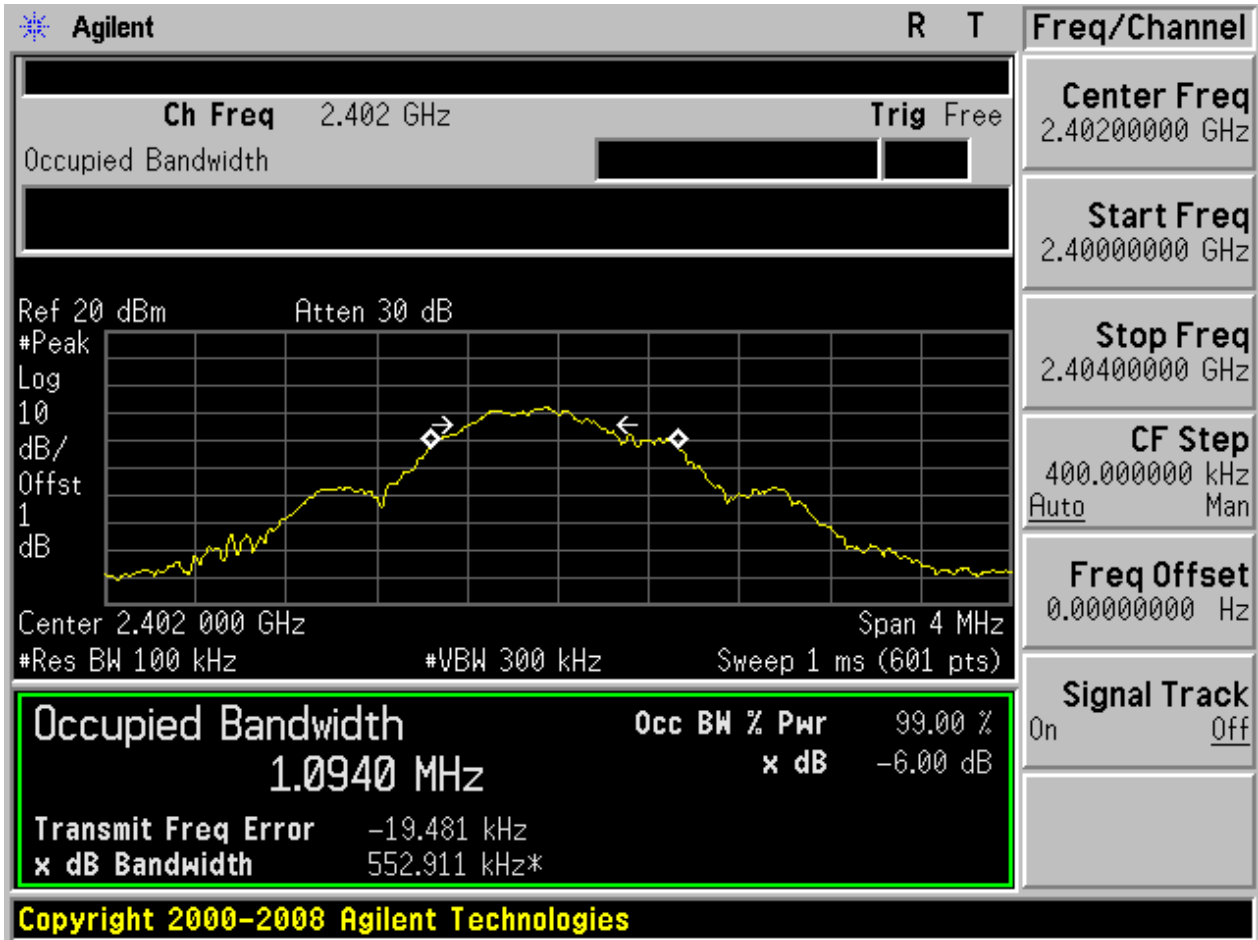
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

### Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
TM1 _Ch0	L	2402	Ant 1	0.55	pass
TM1 _Ch19	M	2440	Ant 1	0.44	pass
TM1 _Ch39	H	2480	Ant 1	0.51	pass

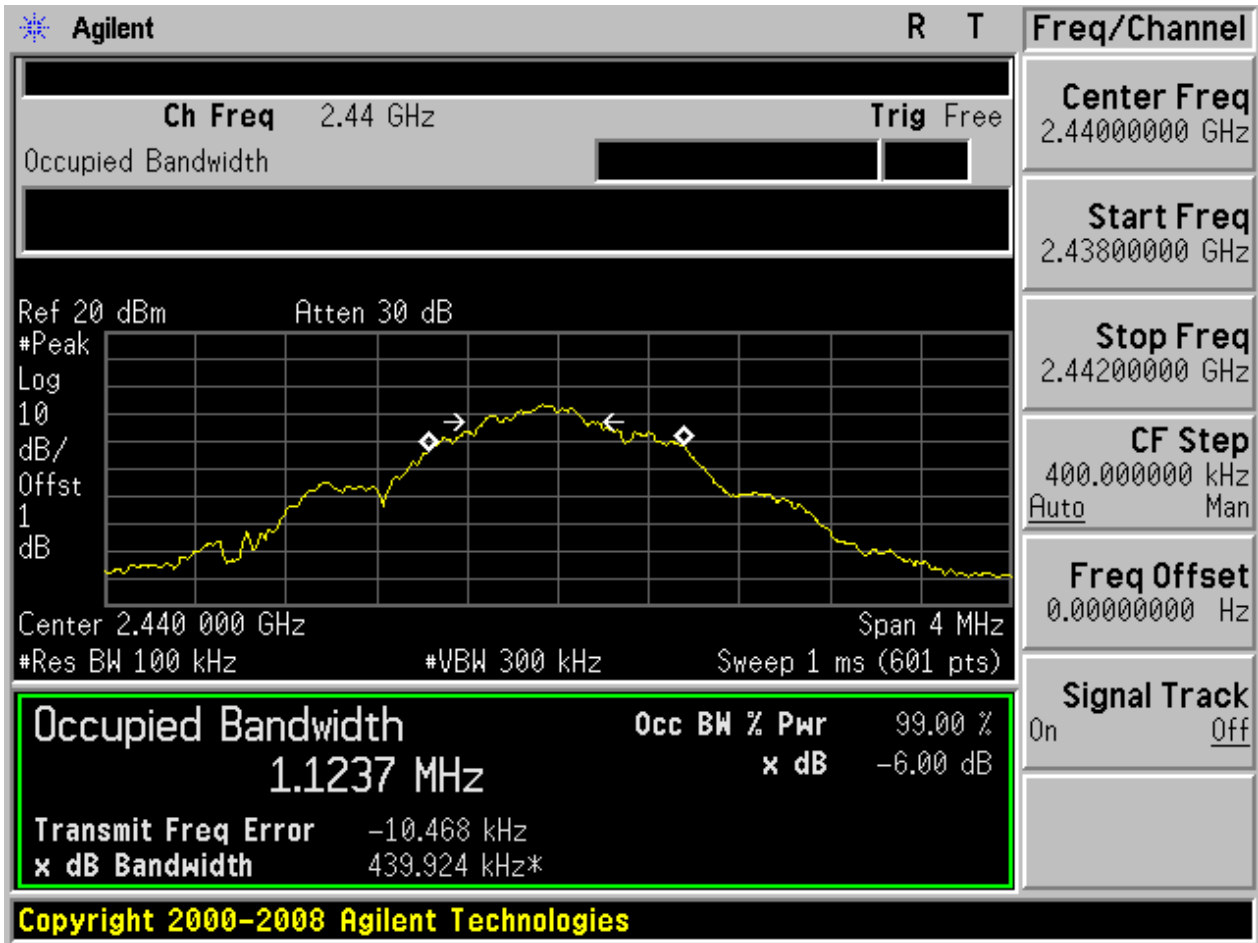
Part II - Test Plots

2.1 TM1\_Ch0\_L



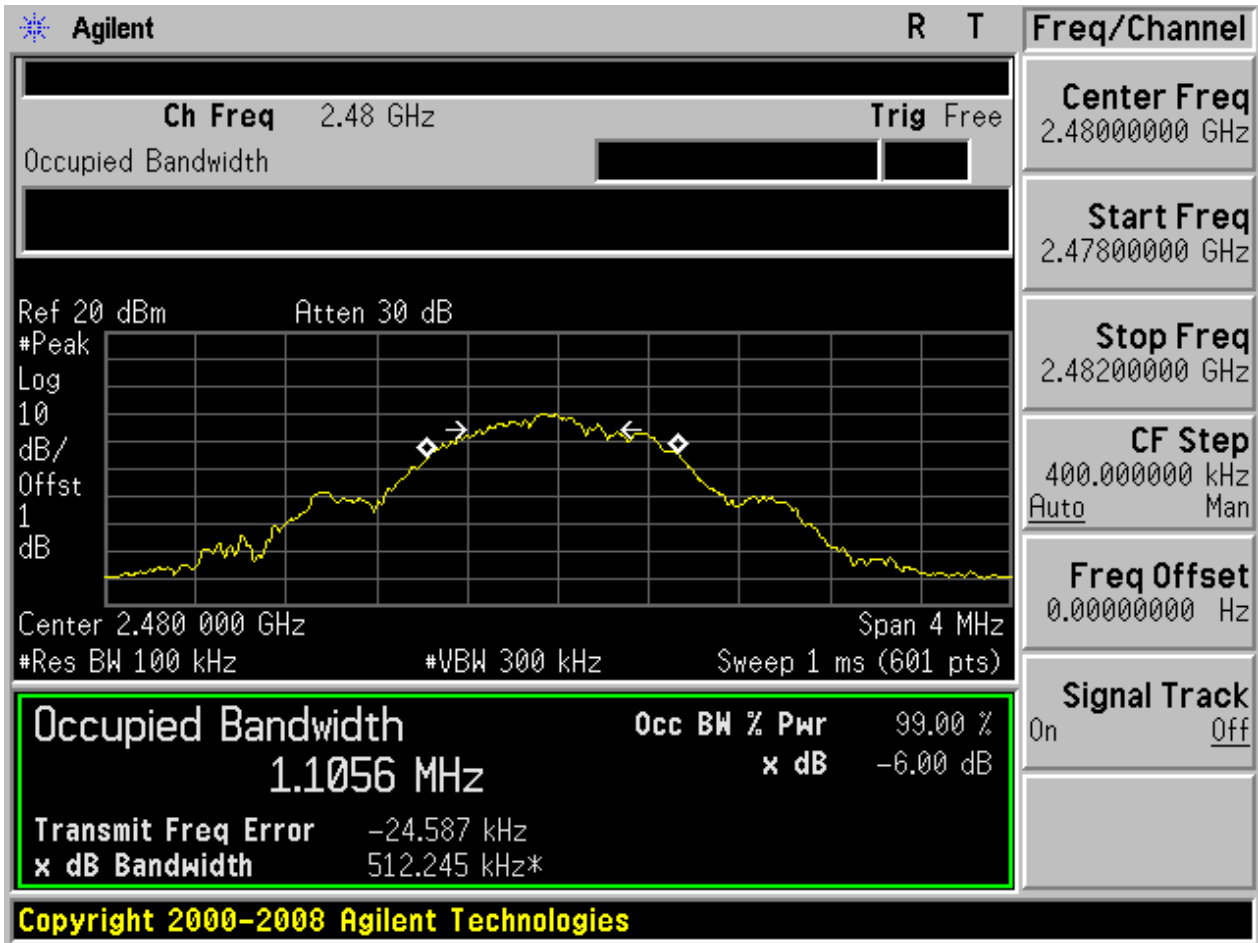


2.2 TM1\_Ch19\_M





2.3 TM1\_Ch39\_H





## Appendix B: Occupied Bandwidth

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

### Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Occupied Bandwidth [MHz]	Verdict
TM1 _Ch0	L	2402	Ant 1	1.03	pass
TM1 _Ch19	M	2440	Ant 1	1.03	pass
TM1 _Ch39	H	2480	Ant 1	1.04	pass

Part II - Test Plots

2.1 TM1\_Ch0\_L



2.2 TM1\_Ch19\_M



2.3 TM1\_Ch39\_H





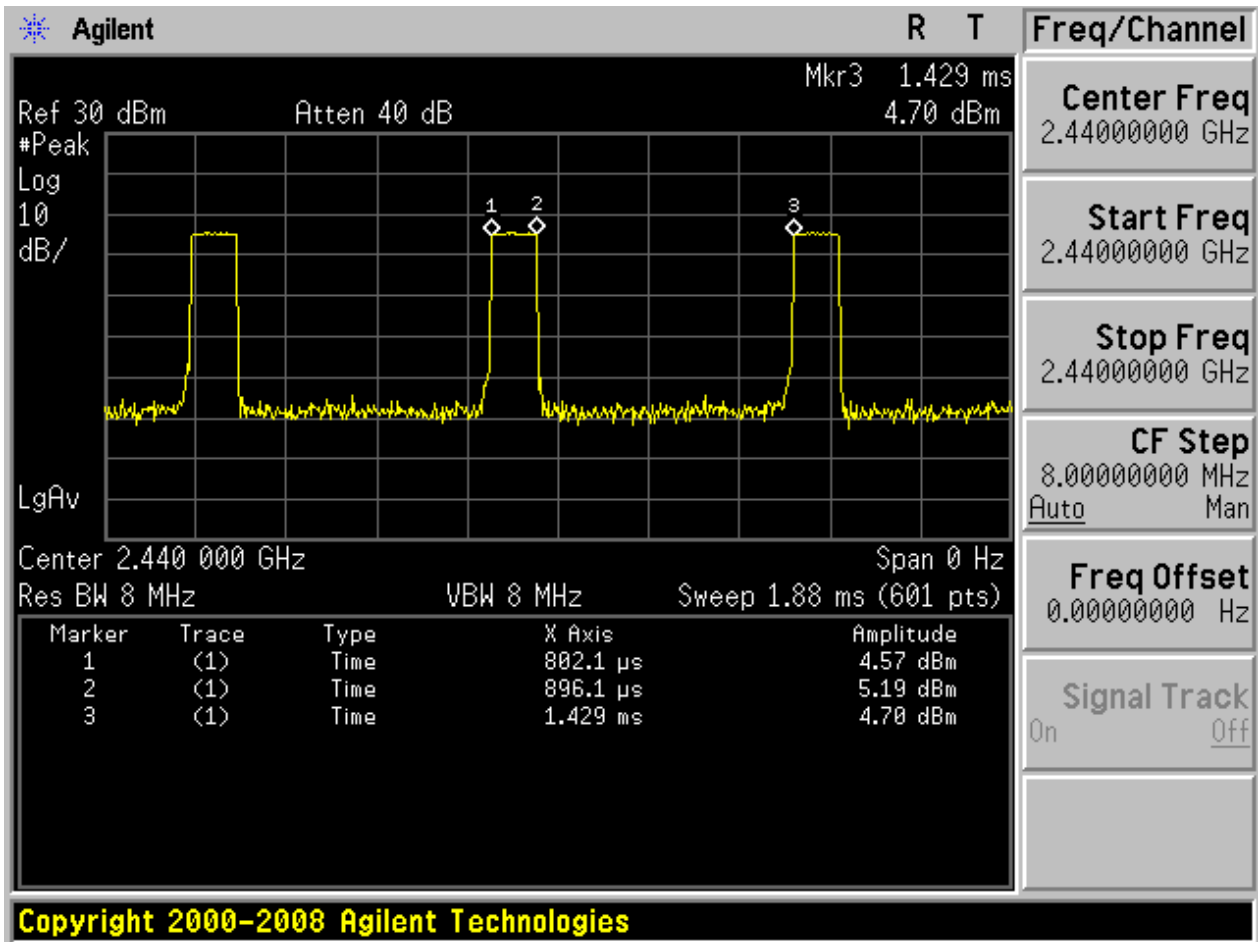
# Appendix C: Duty Cycle

## Part I - Test Results

Test Mode	TX Freq. [MHz]	Duty cycle [%]
TM1	CH0,CH19,CH39	15

## Part II - Test Plots

### 2.1 TM1\_Ch19



## Appendix D: Maximum Conducted Average Output Power

### Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Duty Cycle [%]	Power[dBm]	Verdict
TM1_Ch0	L	2402	15	5.28	pass
TM1_Ch19	M	2440	15	5.92	pass
TM1_Ch39	H	2480	15	3.31	pass

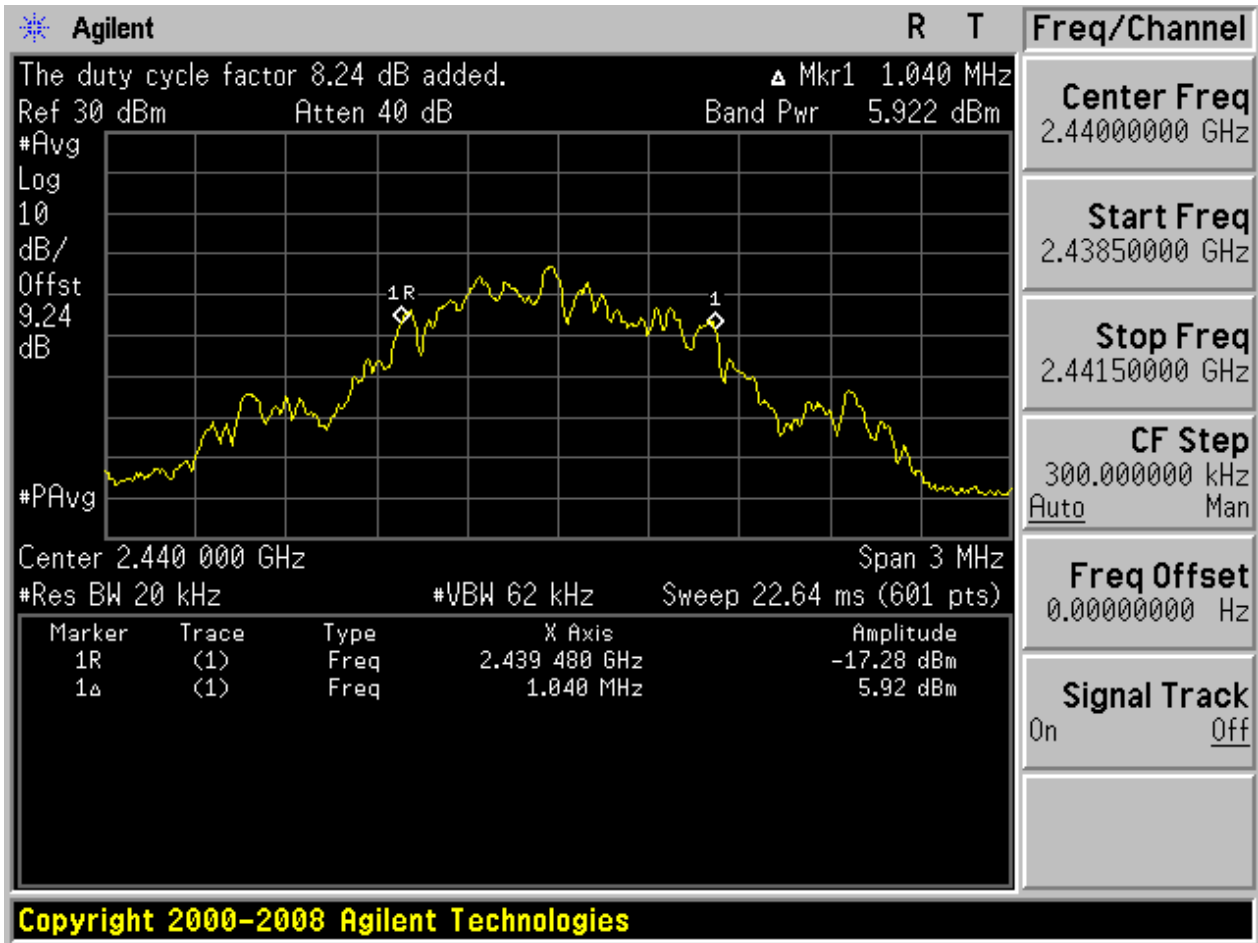
Part II - Test Plots

2.1 TM1\_Ch0\_L





2.2 TM1\_Ch19\_M



2.3 TM1\_Ch39\_H





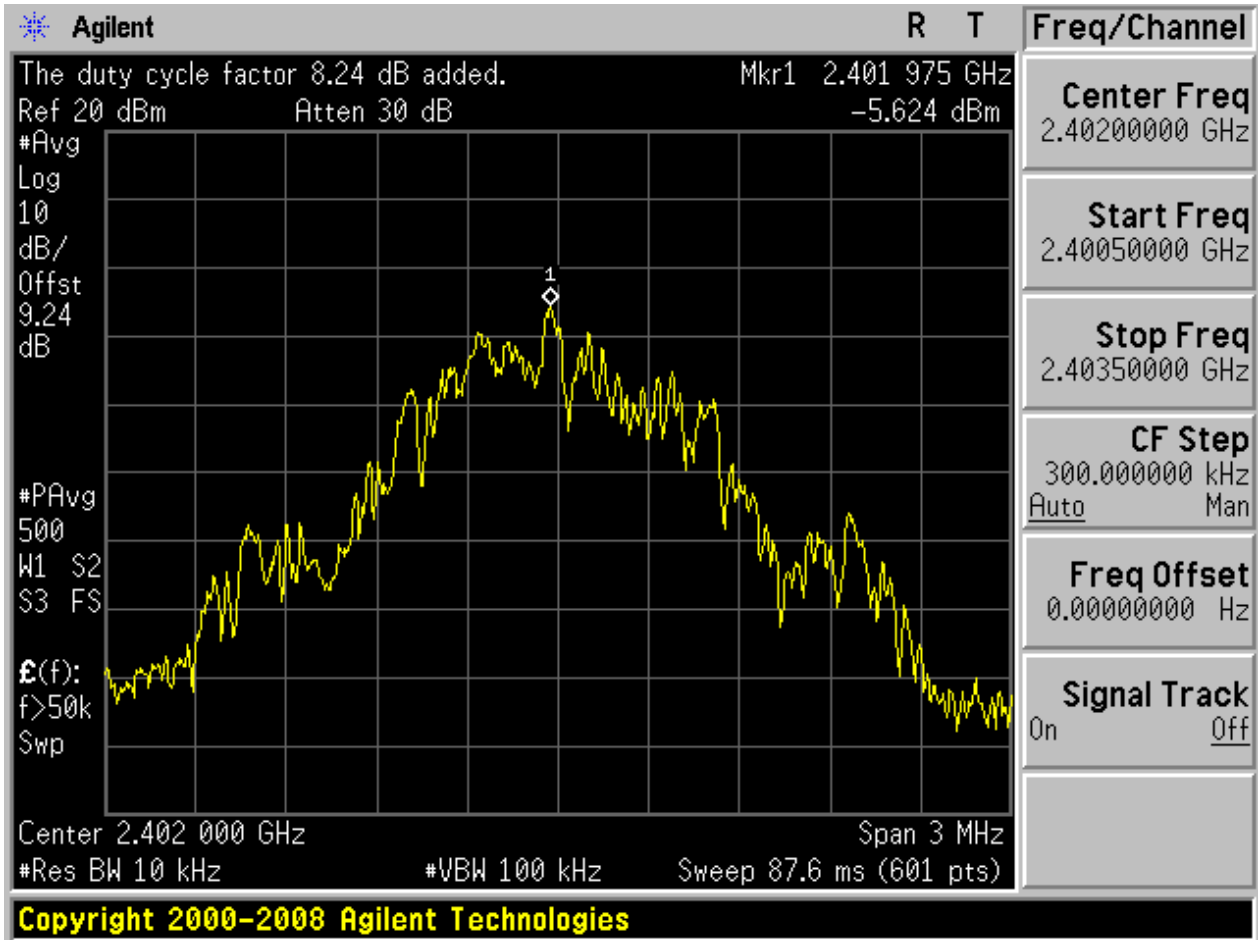
## Appendix E: Maximum Power Spectral Density Level

### Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Duty Cycle [%]	PD[MHz]	Verdict
TM1_Ch0	L	2402	15	-5.62	pass
TM1_Ch19	M	2440	15	-4.73	pass
TM1_Ch39	H	2480	15	-6.75	pass

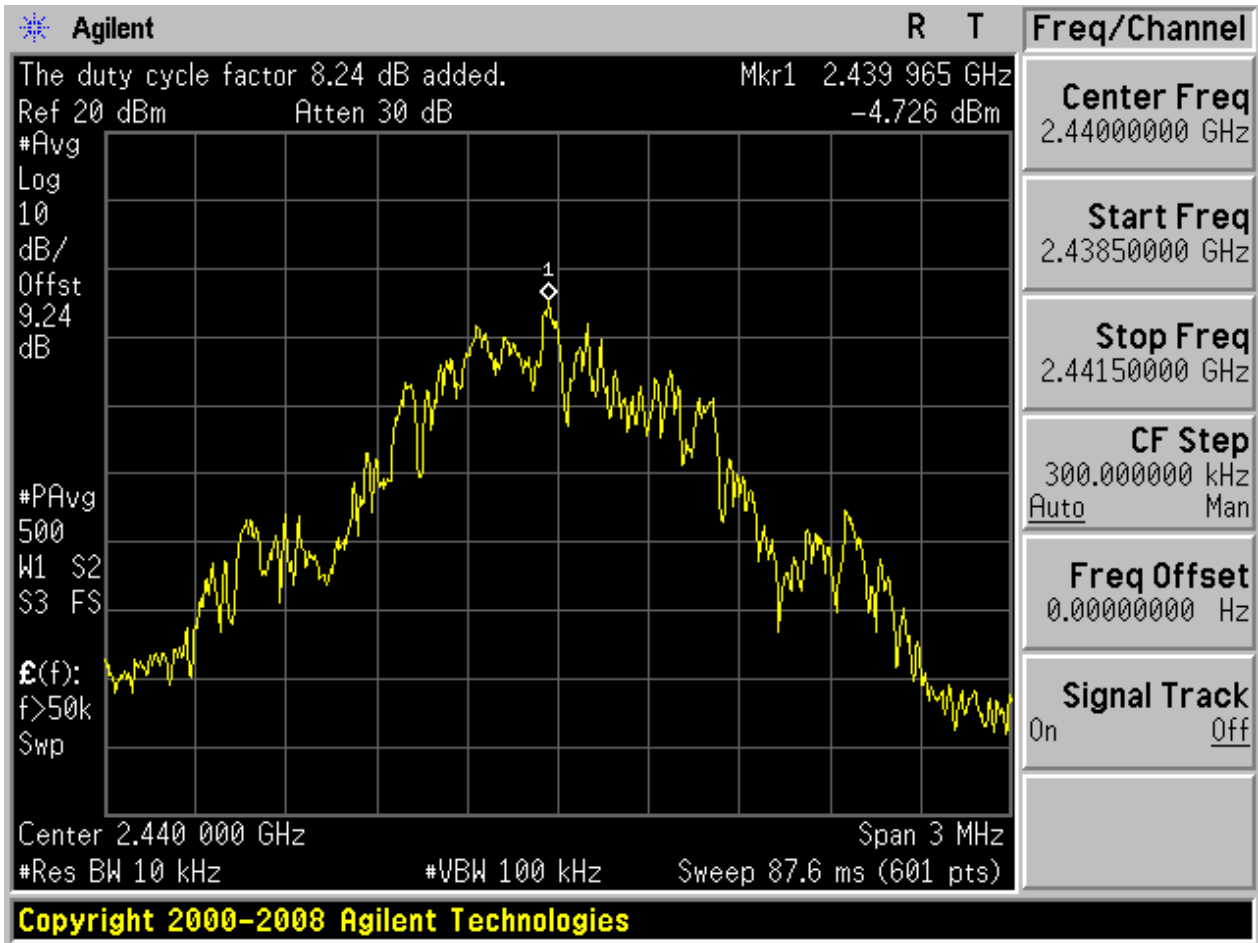
**Part II - Test Plots**

**2.1 TM1\_Ch0\_L**



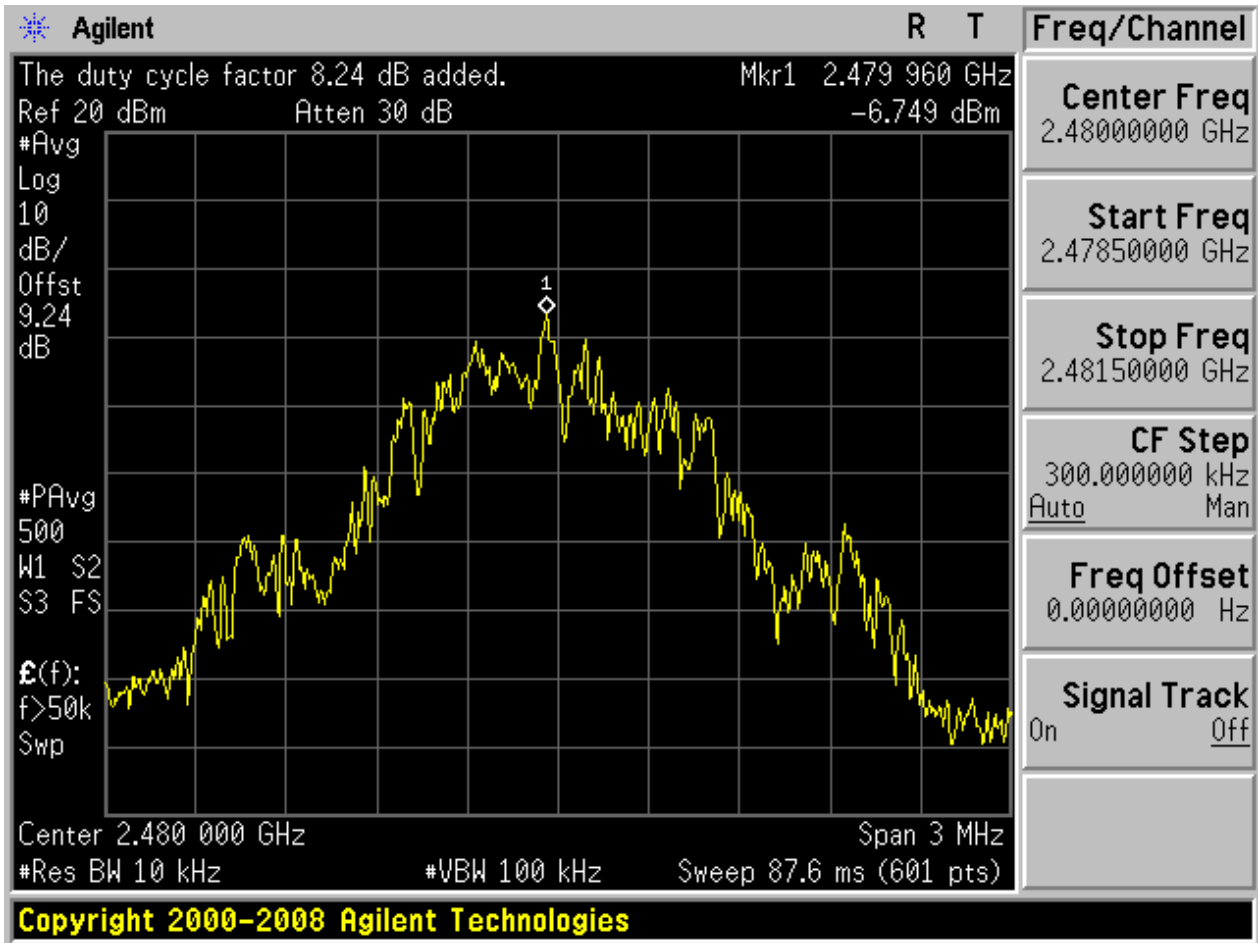


2.2 TM1\_Ch19\_M





2.3 TM1\_Ch39\_H

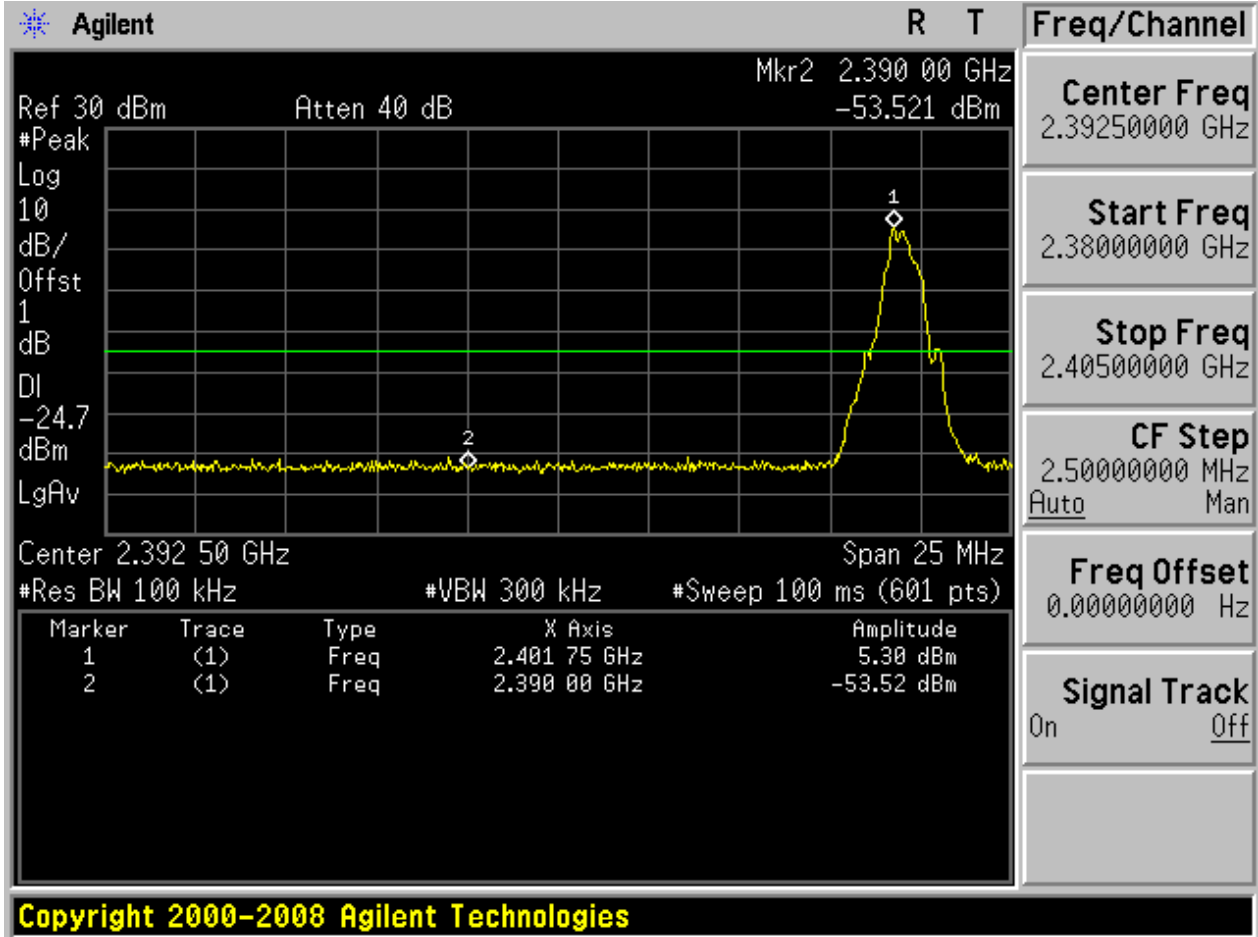




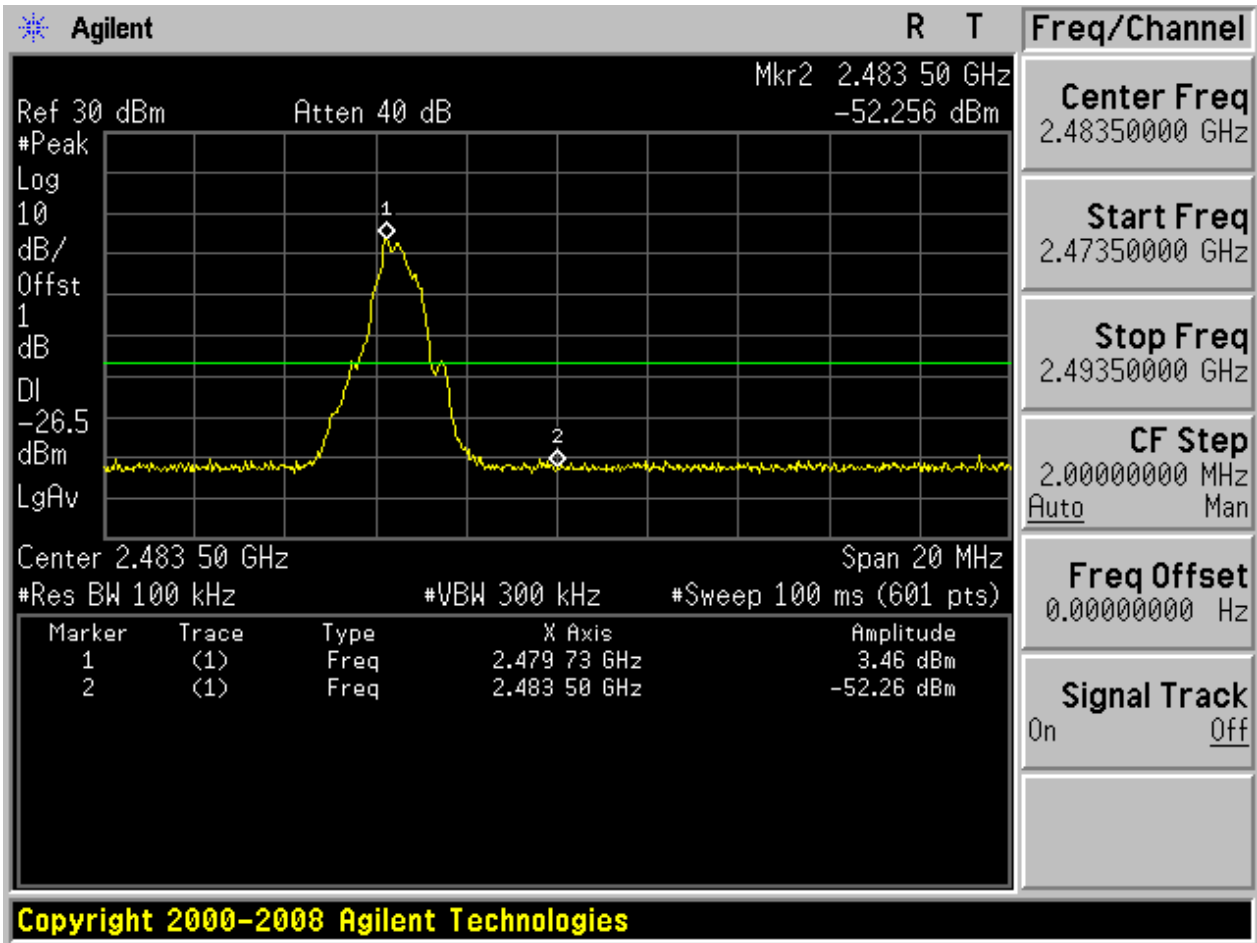
## Appendix F: Band Edges Compliance

### Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
TM1_Ch0	L	2402	5.30	-53.52	pass
TM1_Ch39	H	2480	3.46	-52.26	pass

**Part II - Test Plots**
**2.1 TM1\_Ch0\_L**


2.2 TM1\_Ch39\_H



## Appendix G: Unwanted Emissions into Non-Restricted Frequency

### Bands

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

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

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

In the result table, the "< Limit" denotes that "The Puw [dBm] is less than Pref[dBm]-30[dBm], see test plots for detailed".

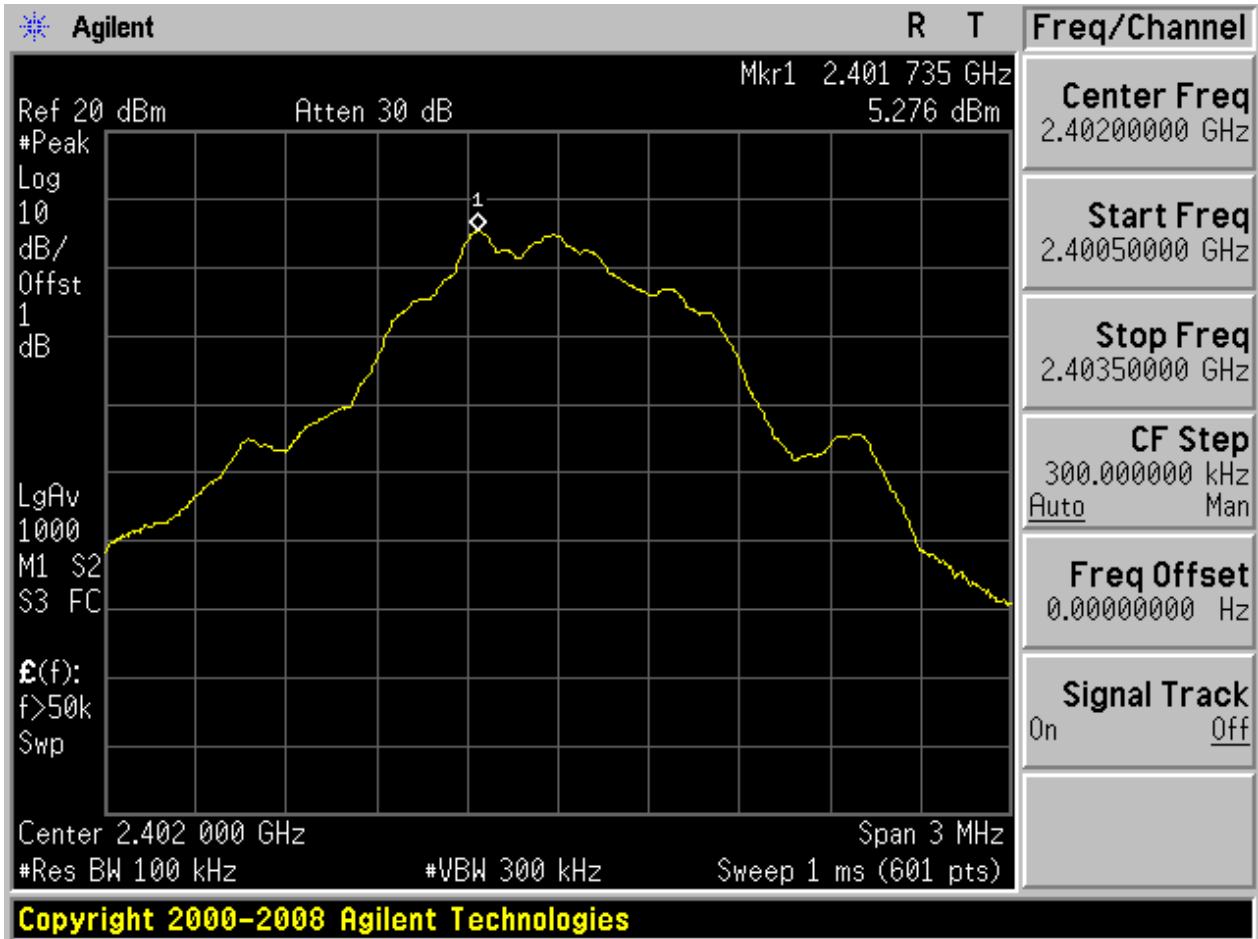
### Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Pref[dBm]	Puw[dBm]	Verdict
TM1_Ch0	L	2402	5.28	<limit	pass
TM1_Ch19	M	2440	6.11	<limit	pass
TM1_Ch39	H	2480	3.48	<limit	pass

**Part II - Test Plots**

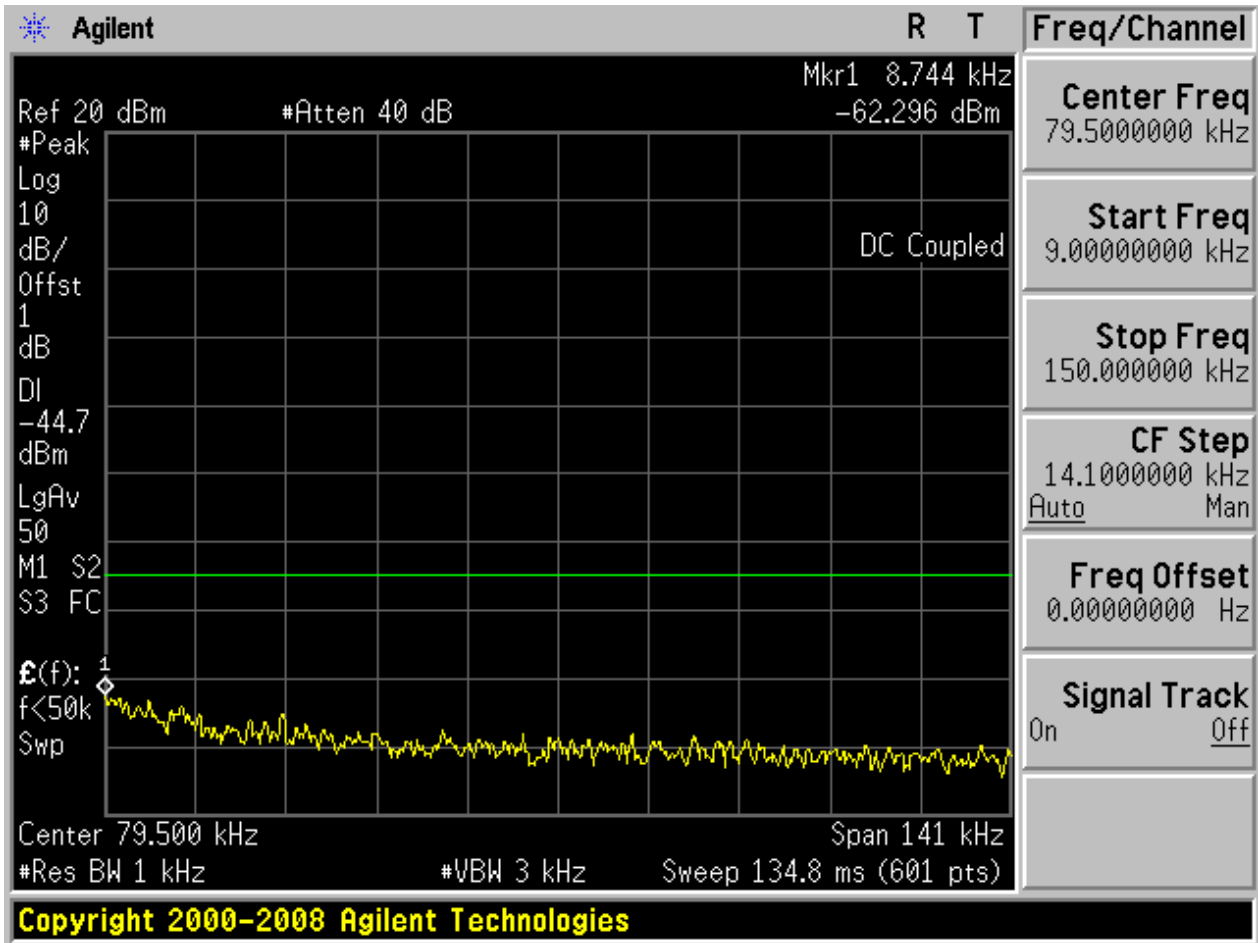
**2.1 TM1\_Ch0\_L**

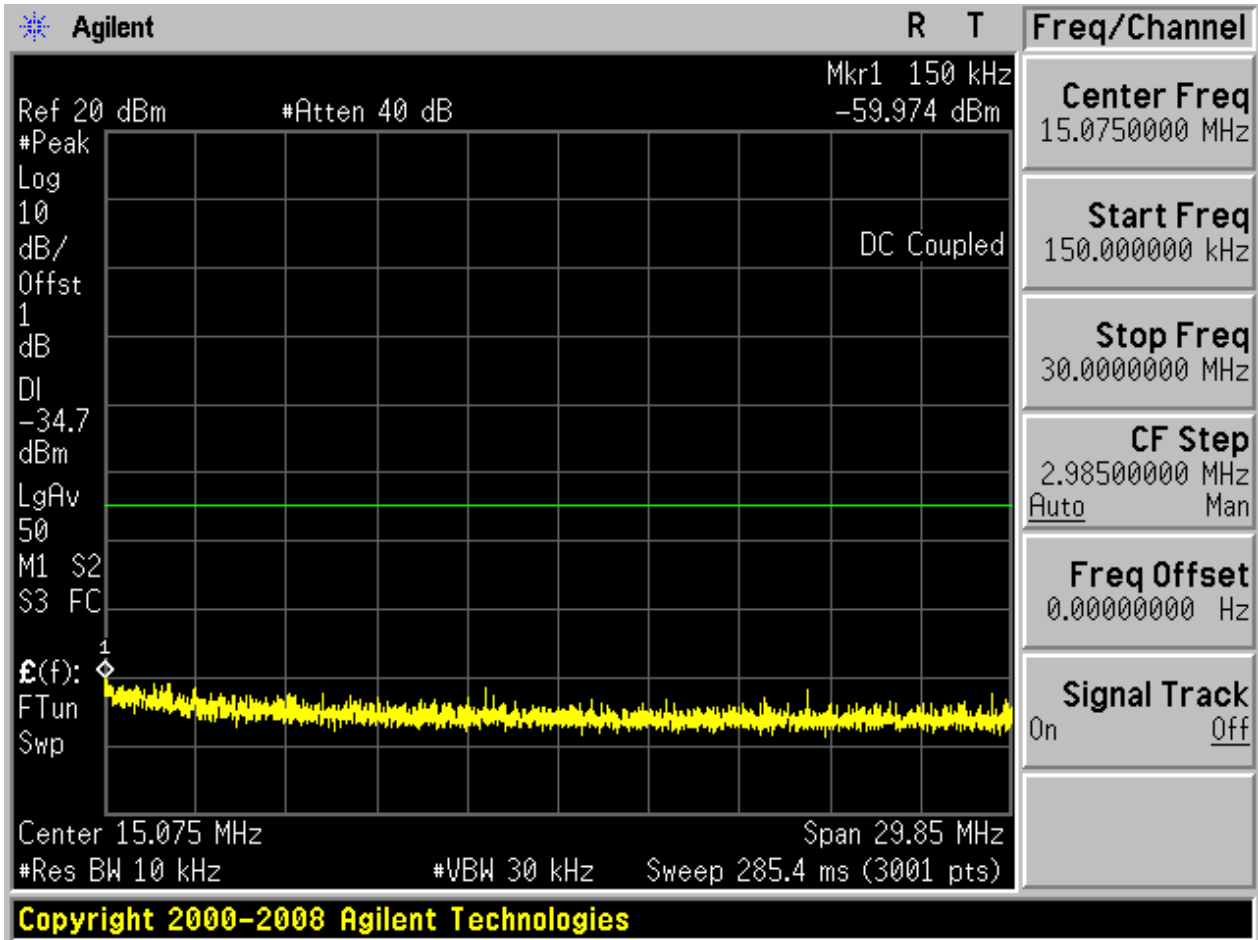
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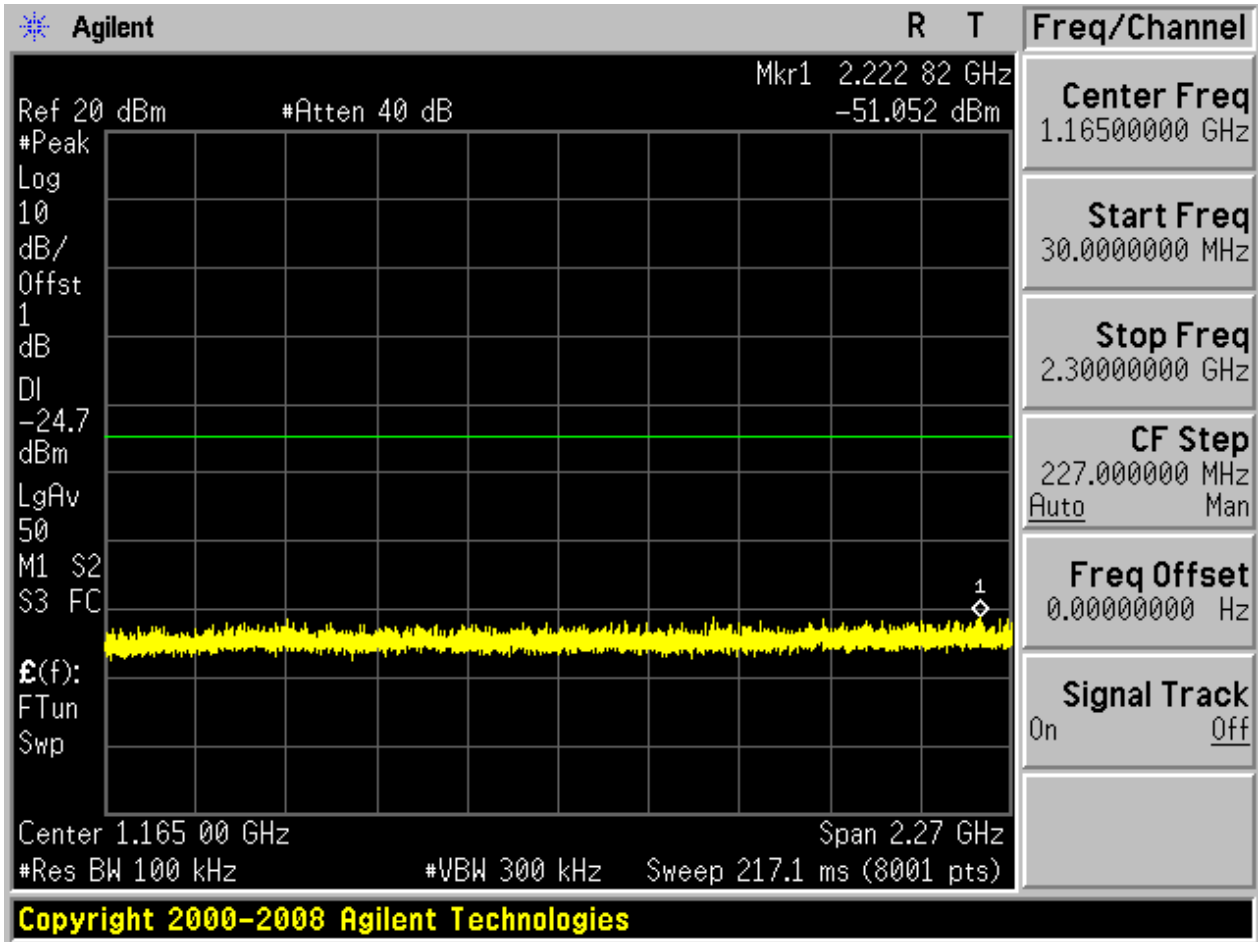


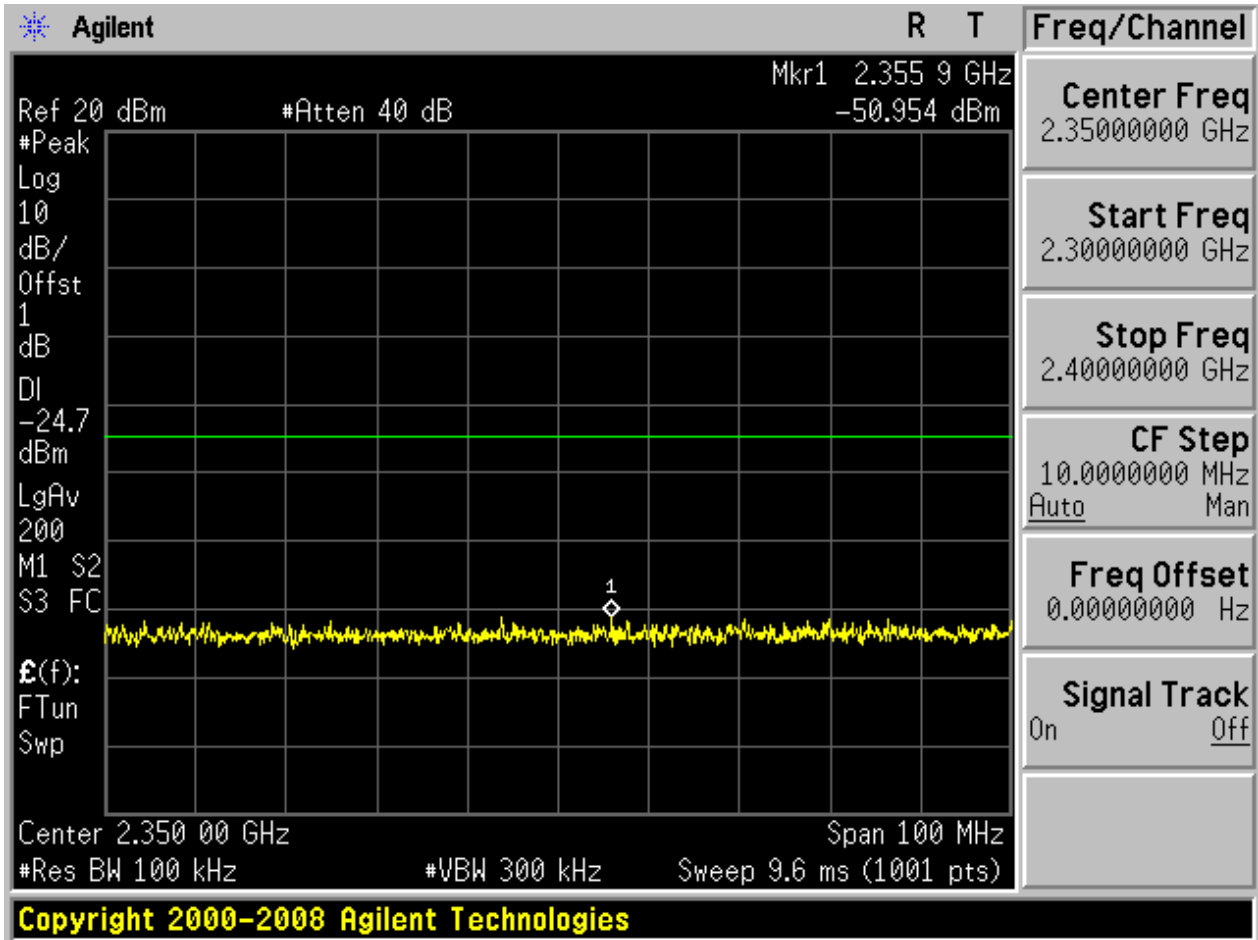


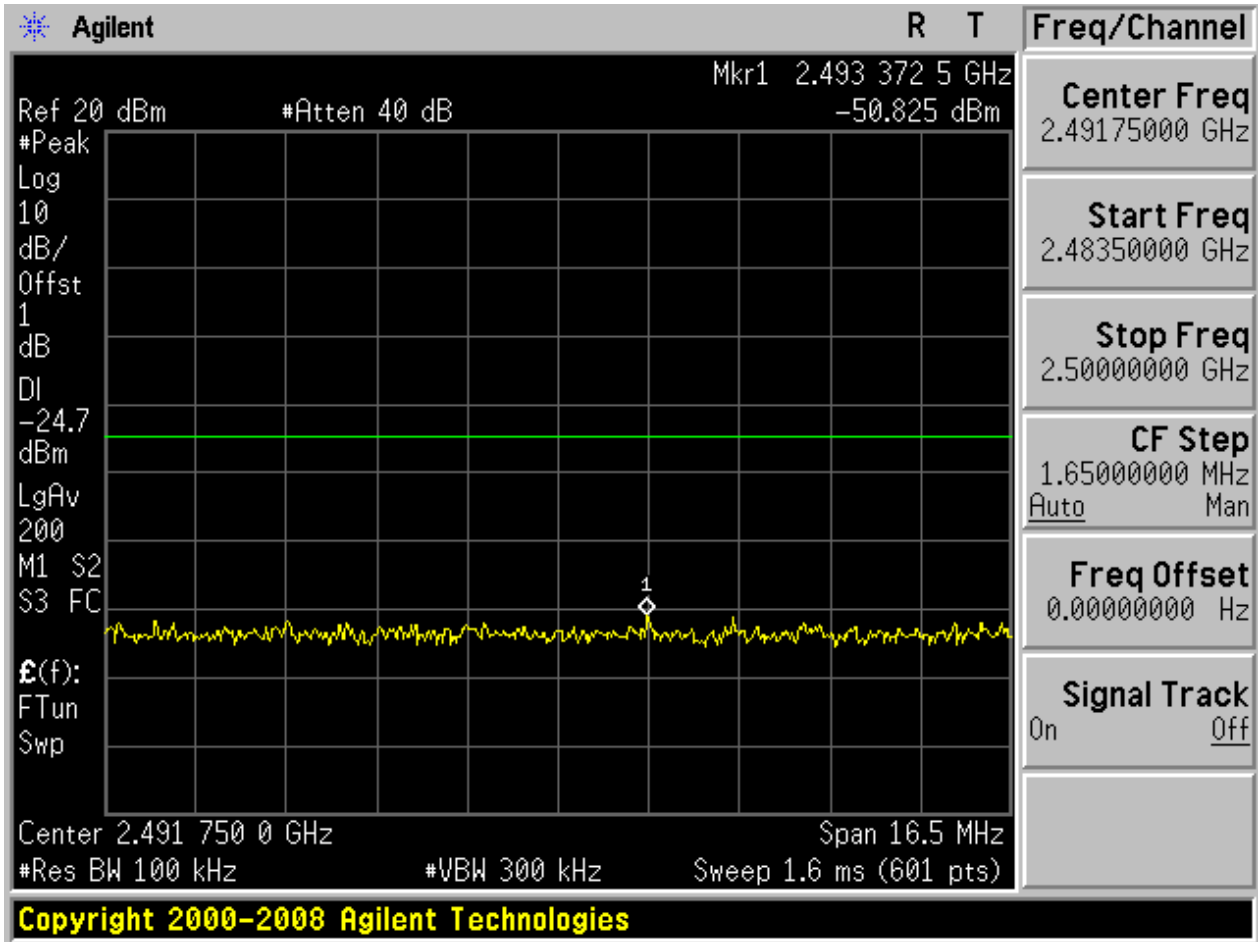
Puw:

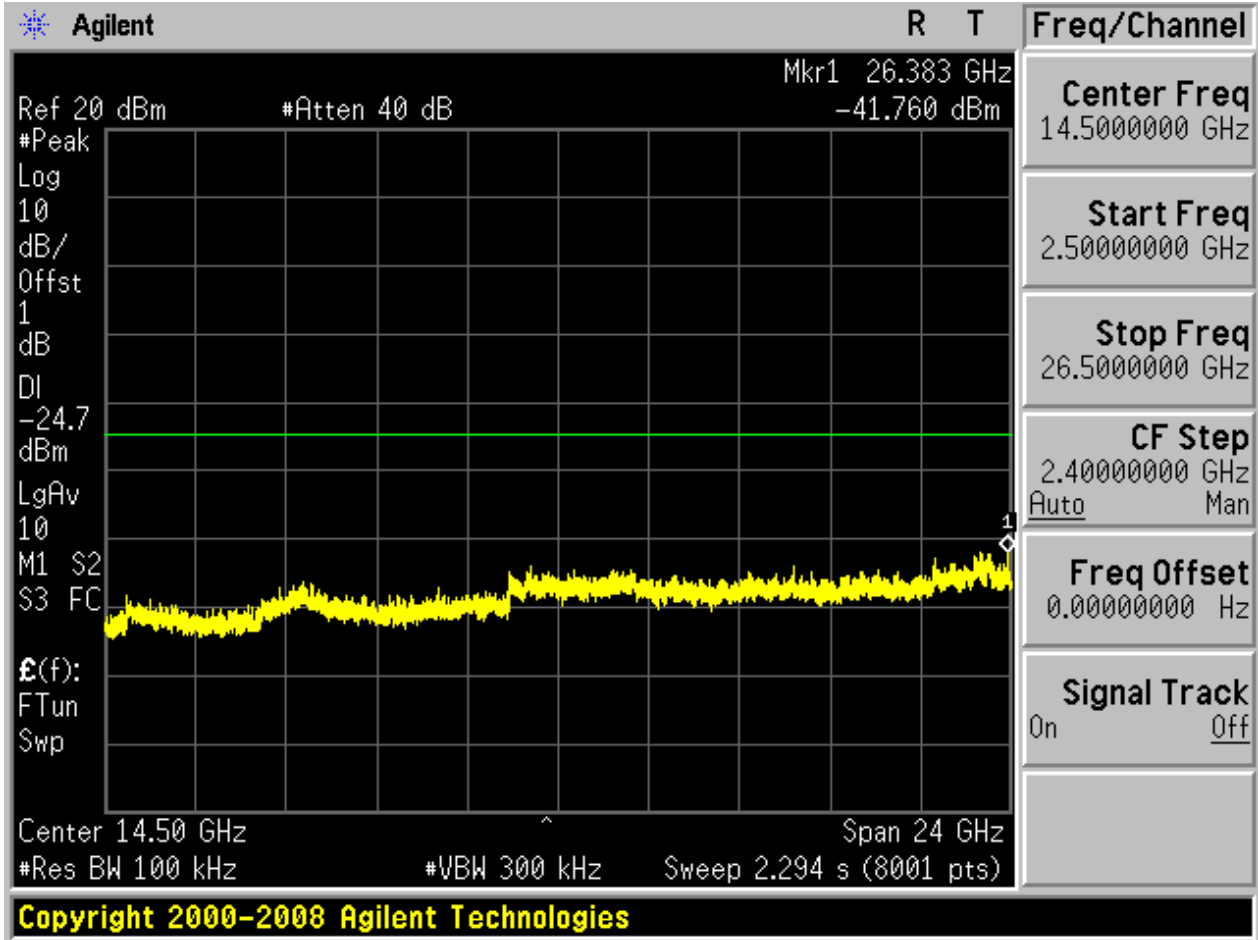






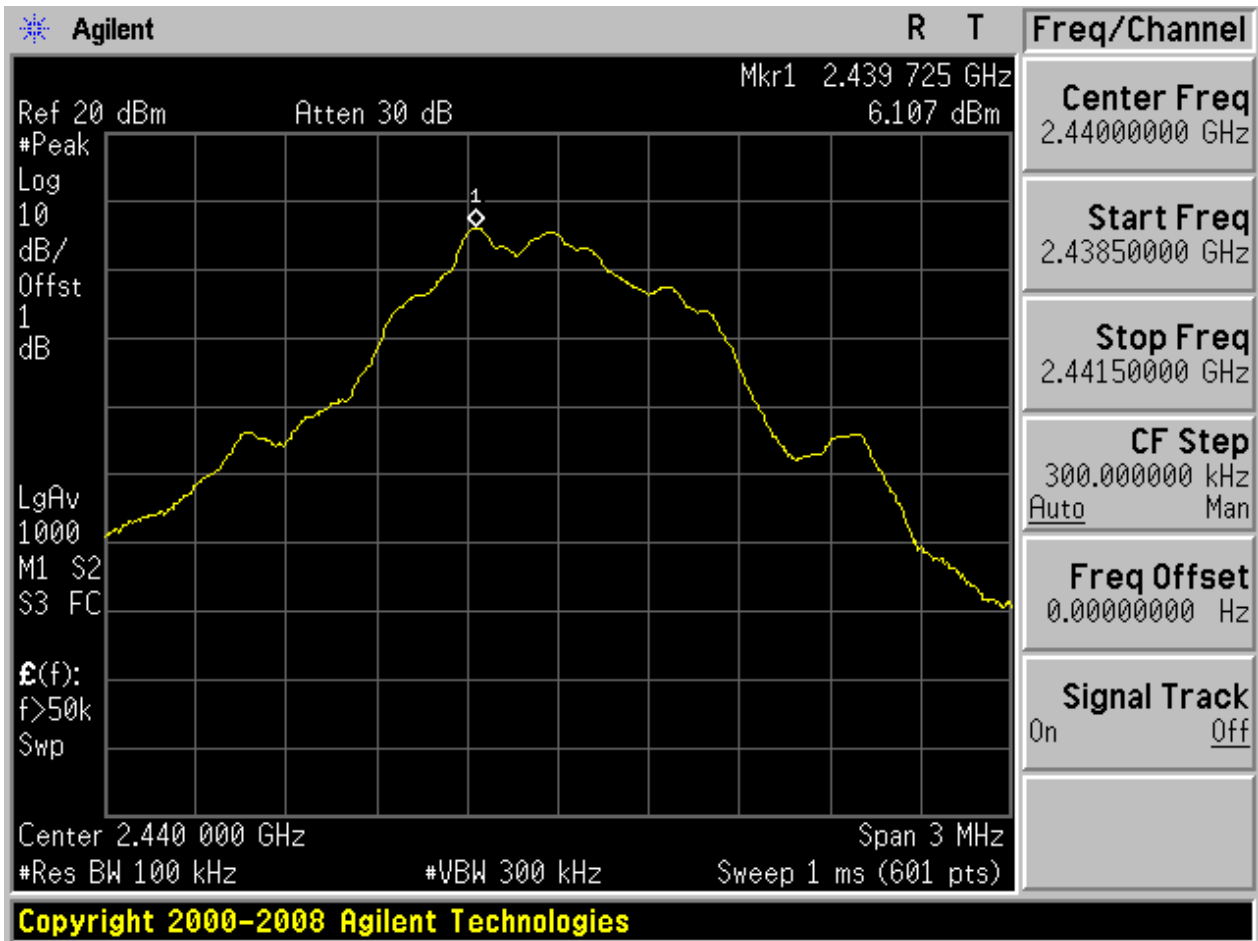






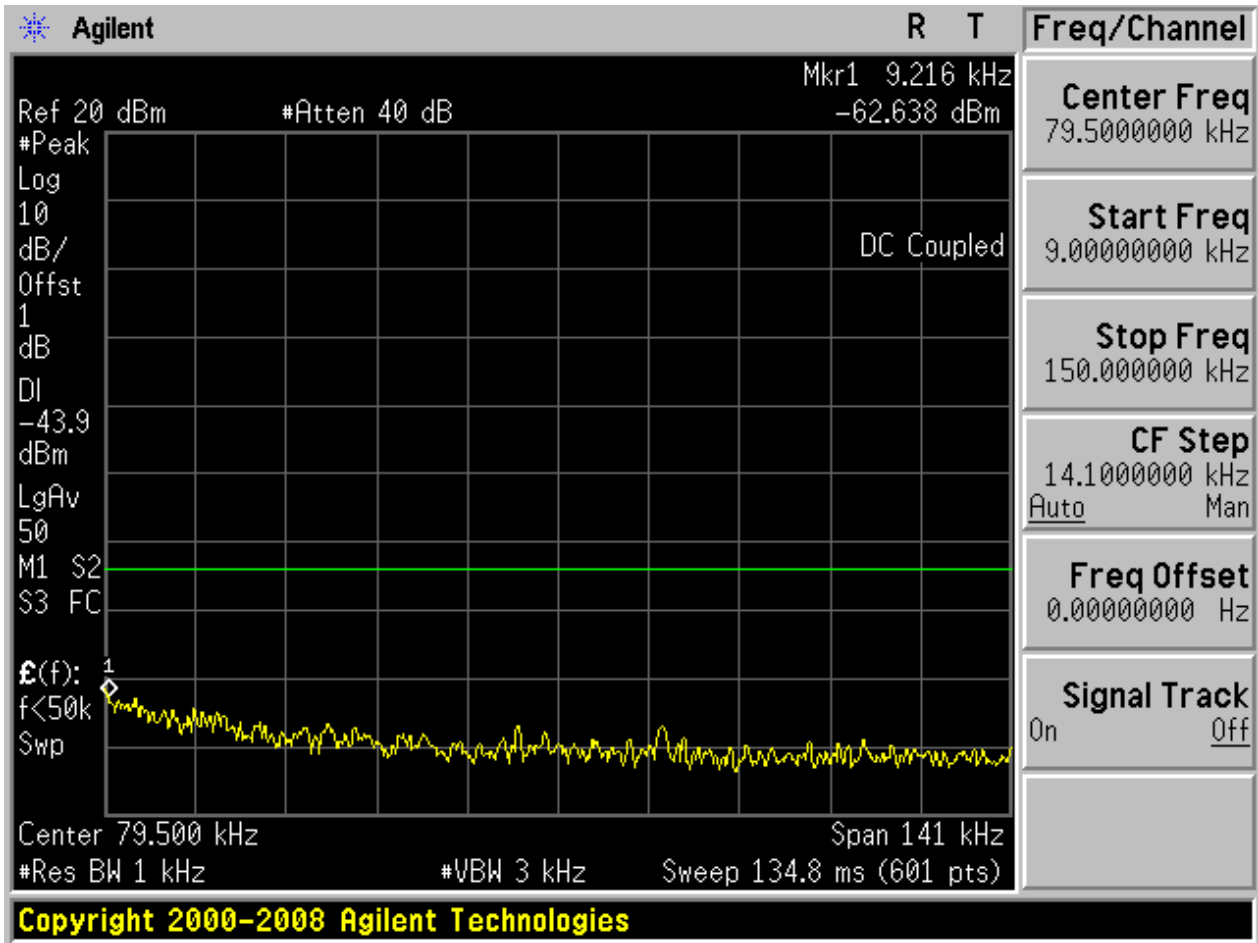
2.2 TM1\_Ch19\_M

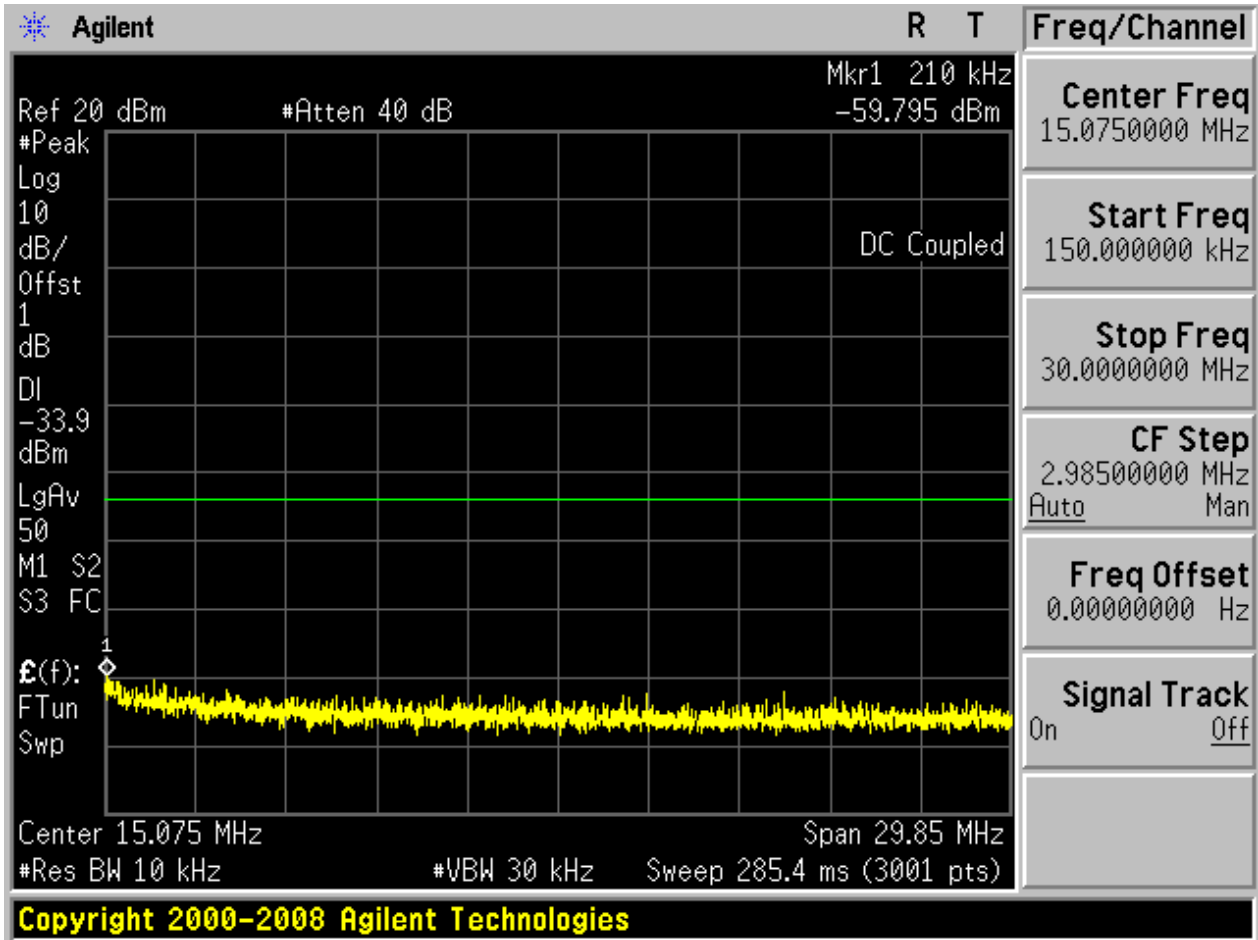
Pref:

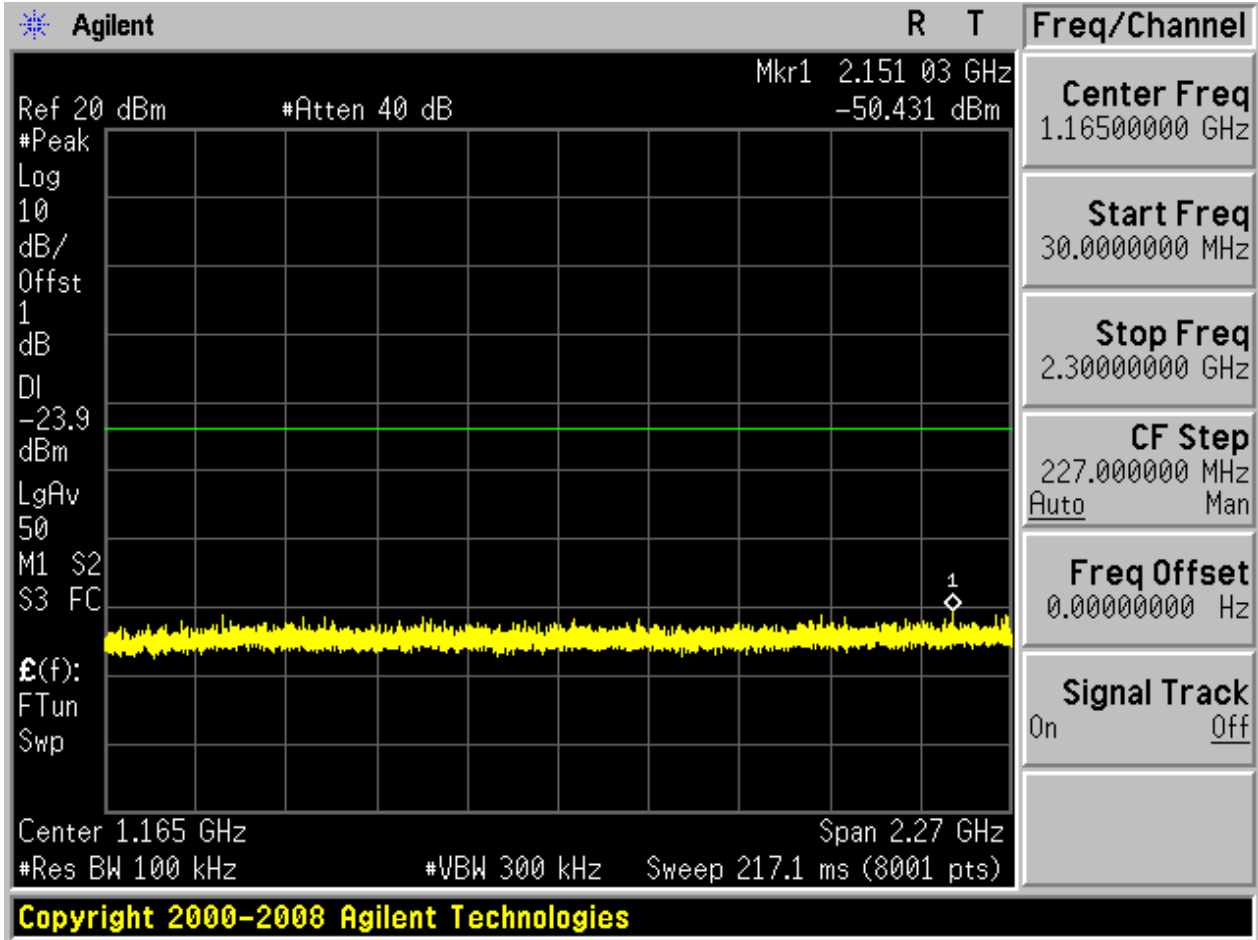


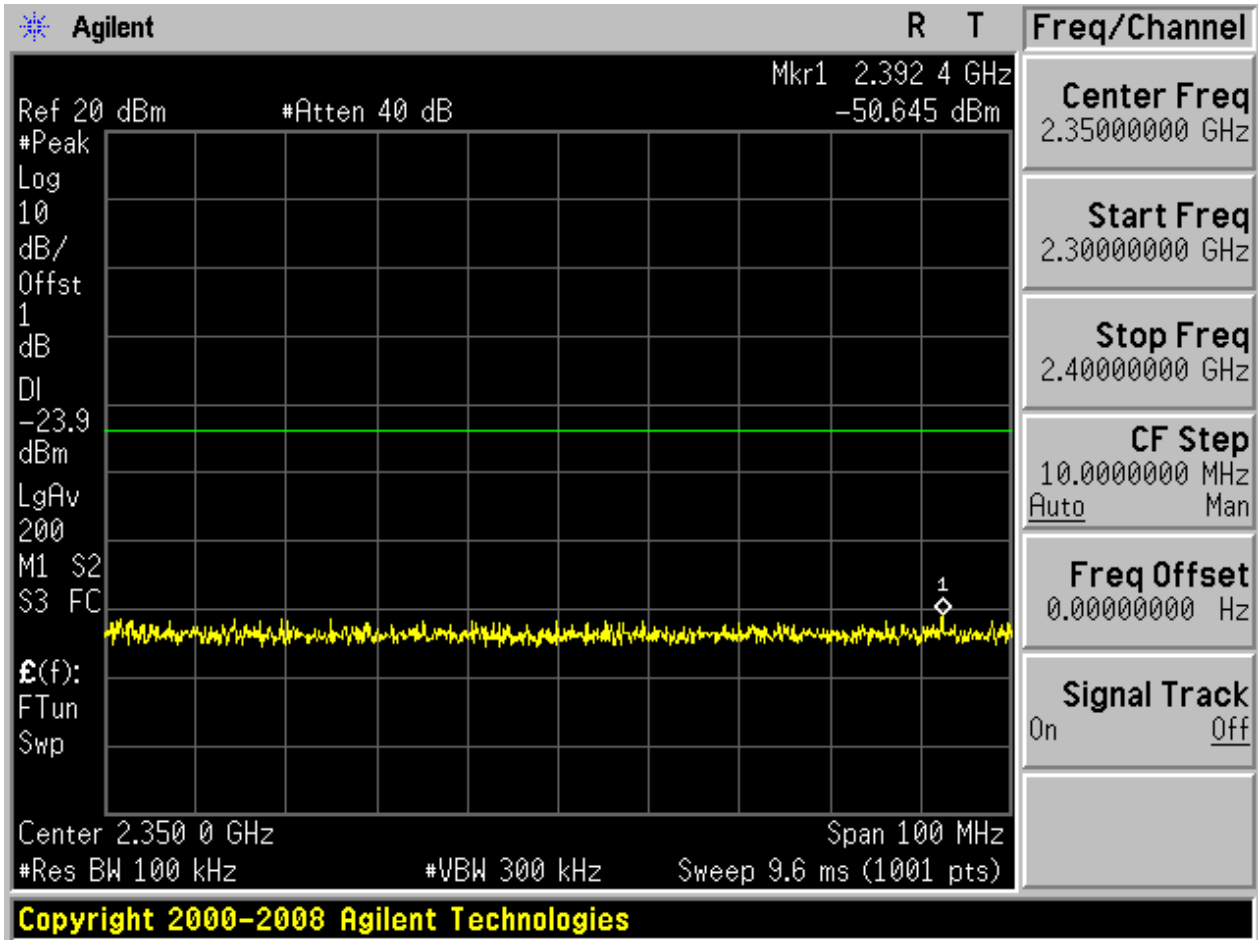


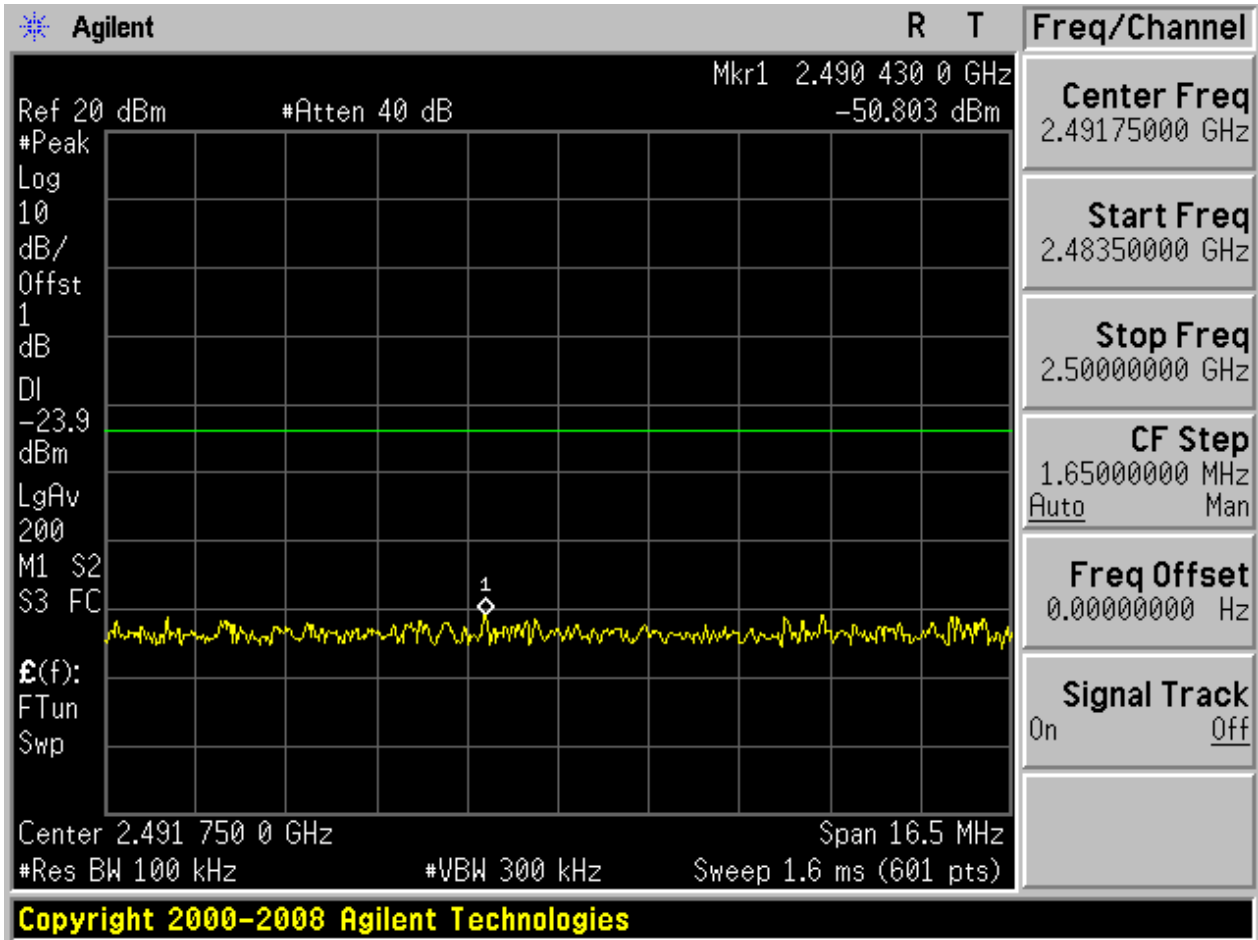
Puw:

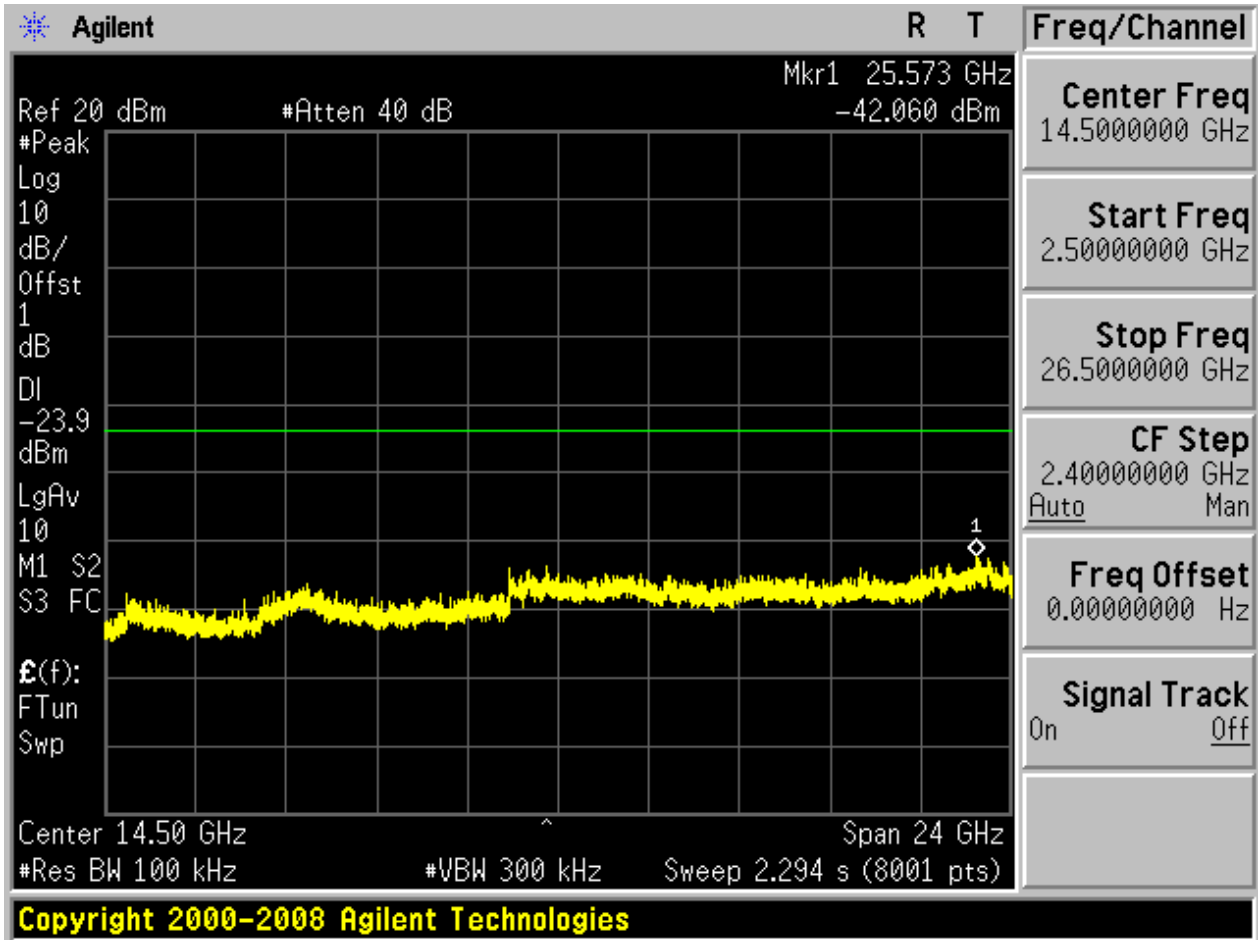








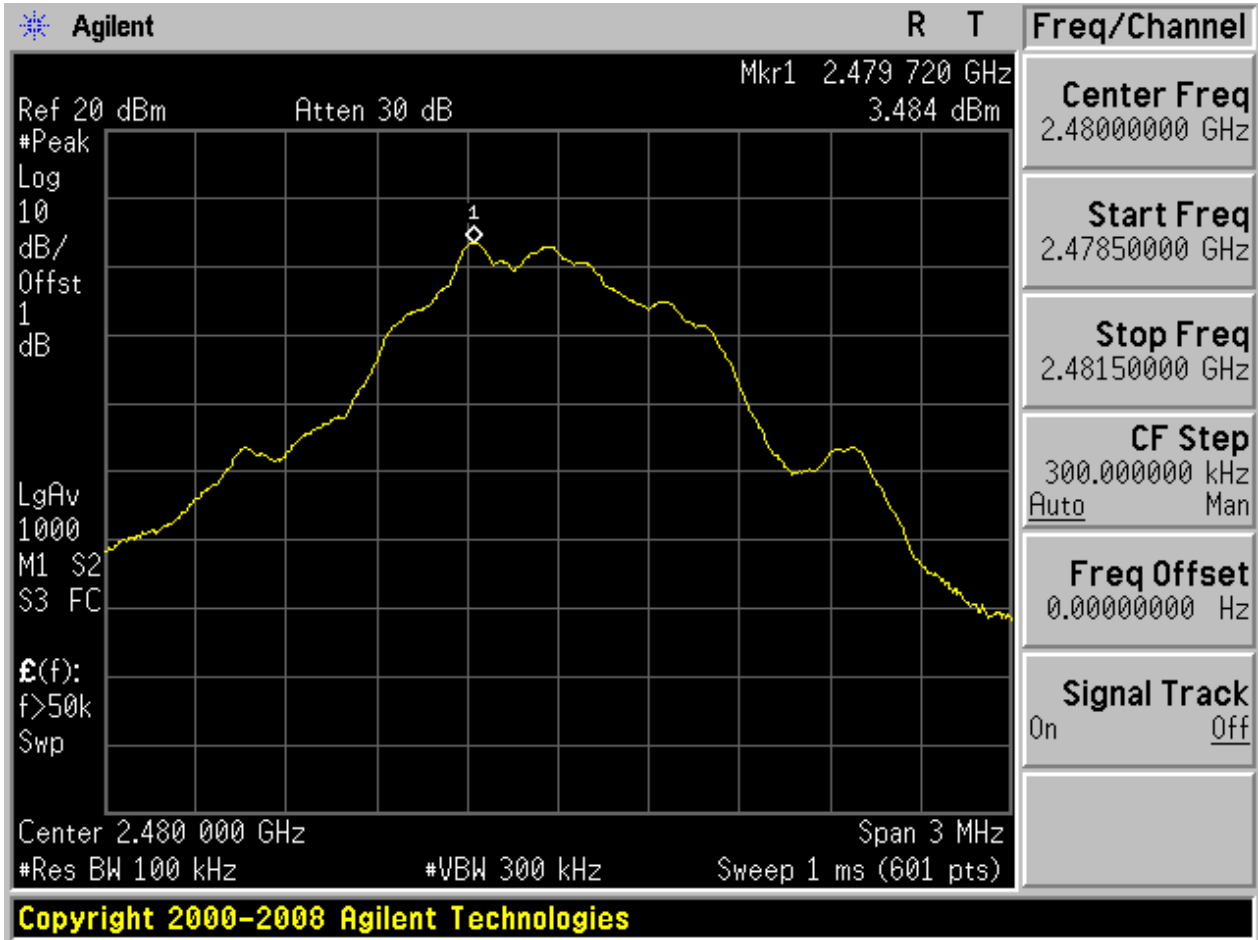






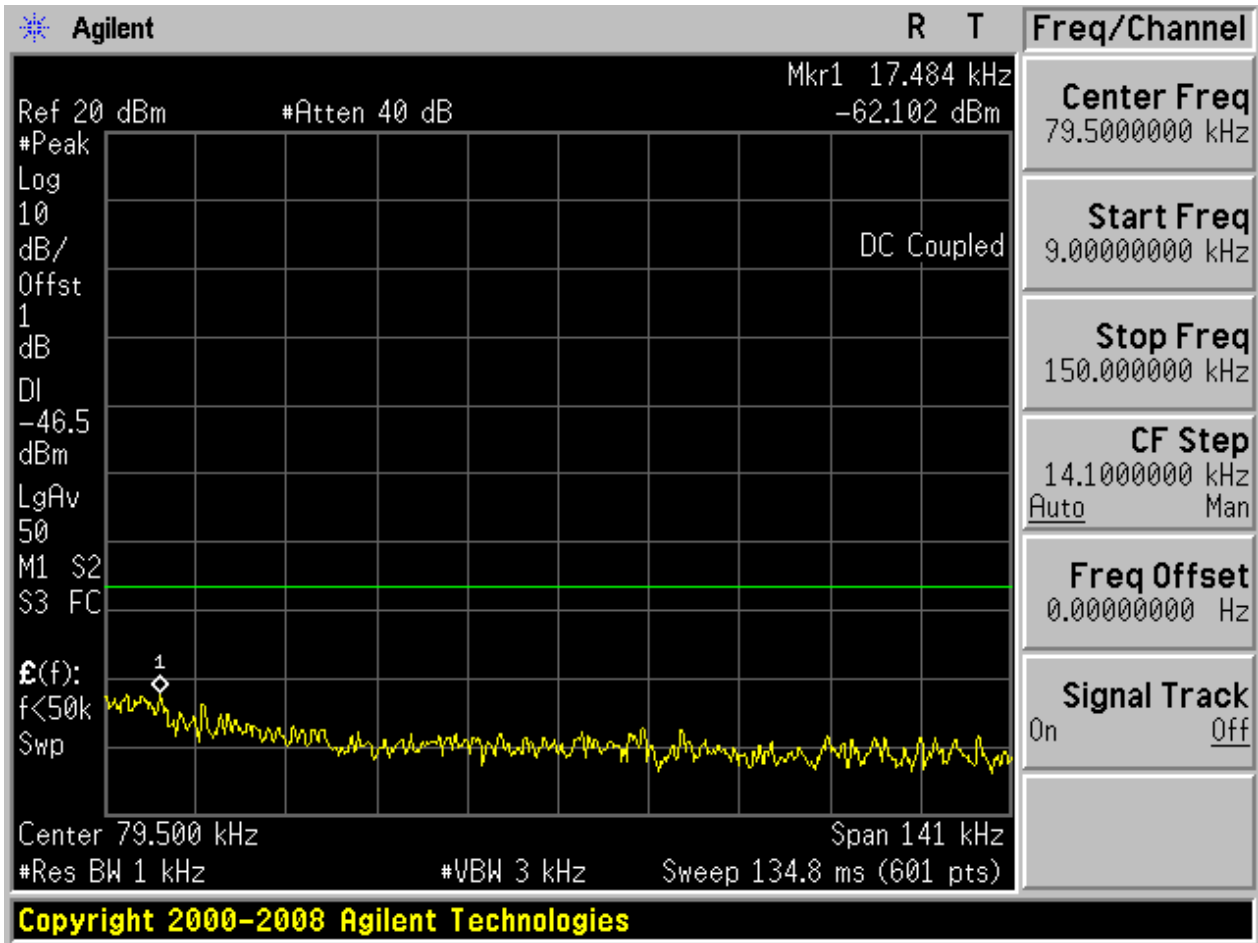
### 2.3 TM1\_Ch39\_H

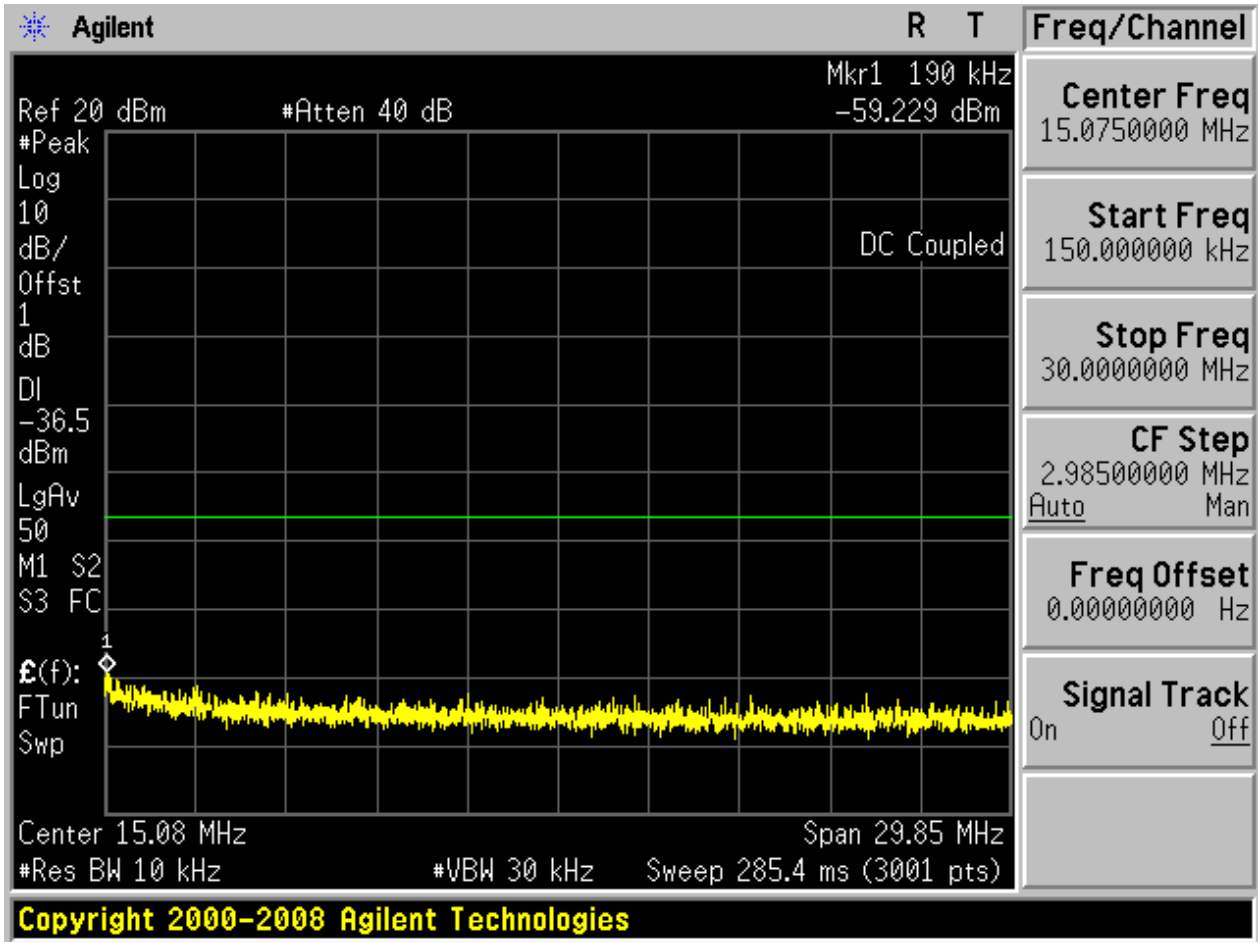
Pref:

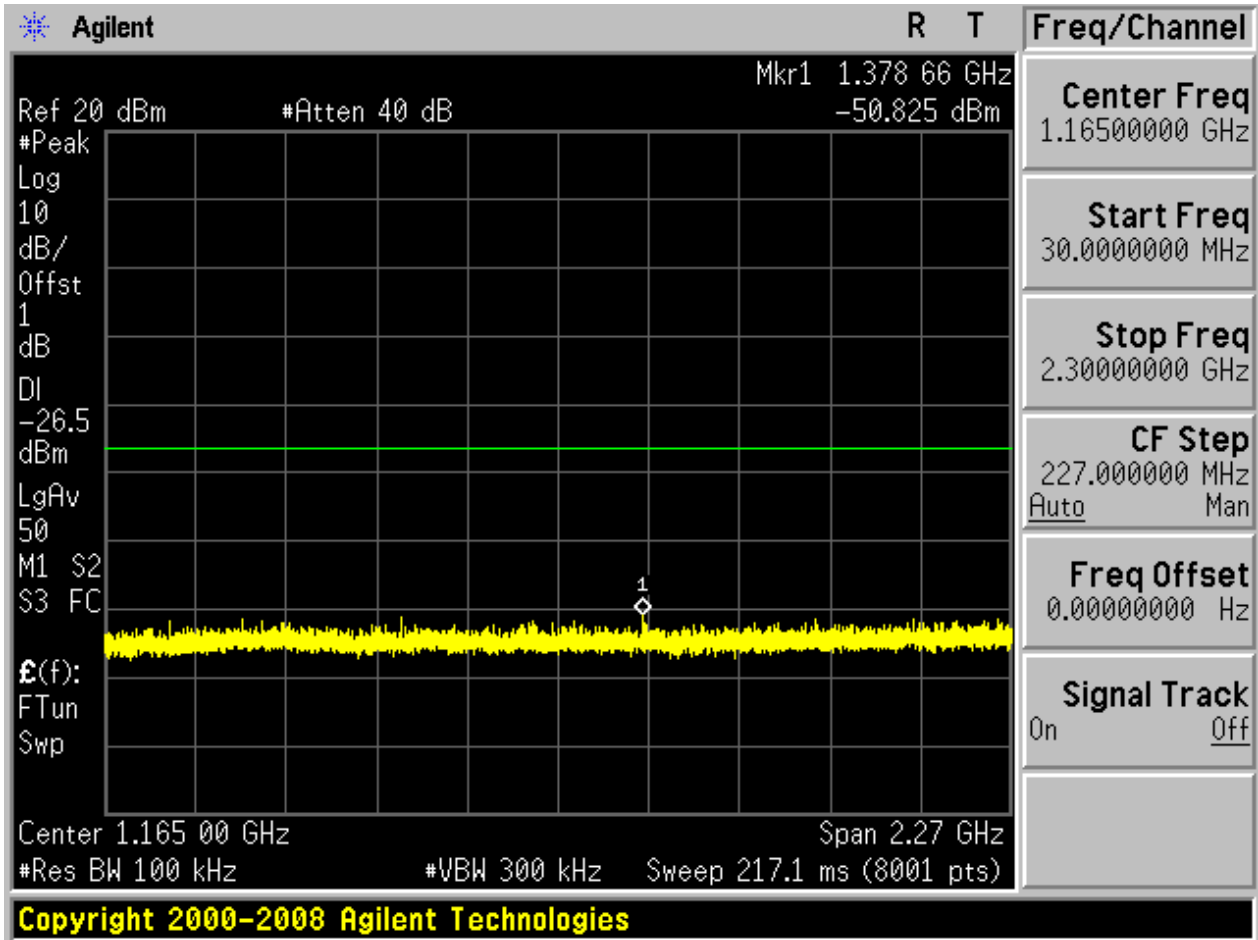


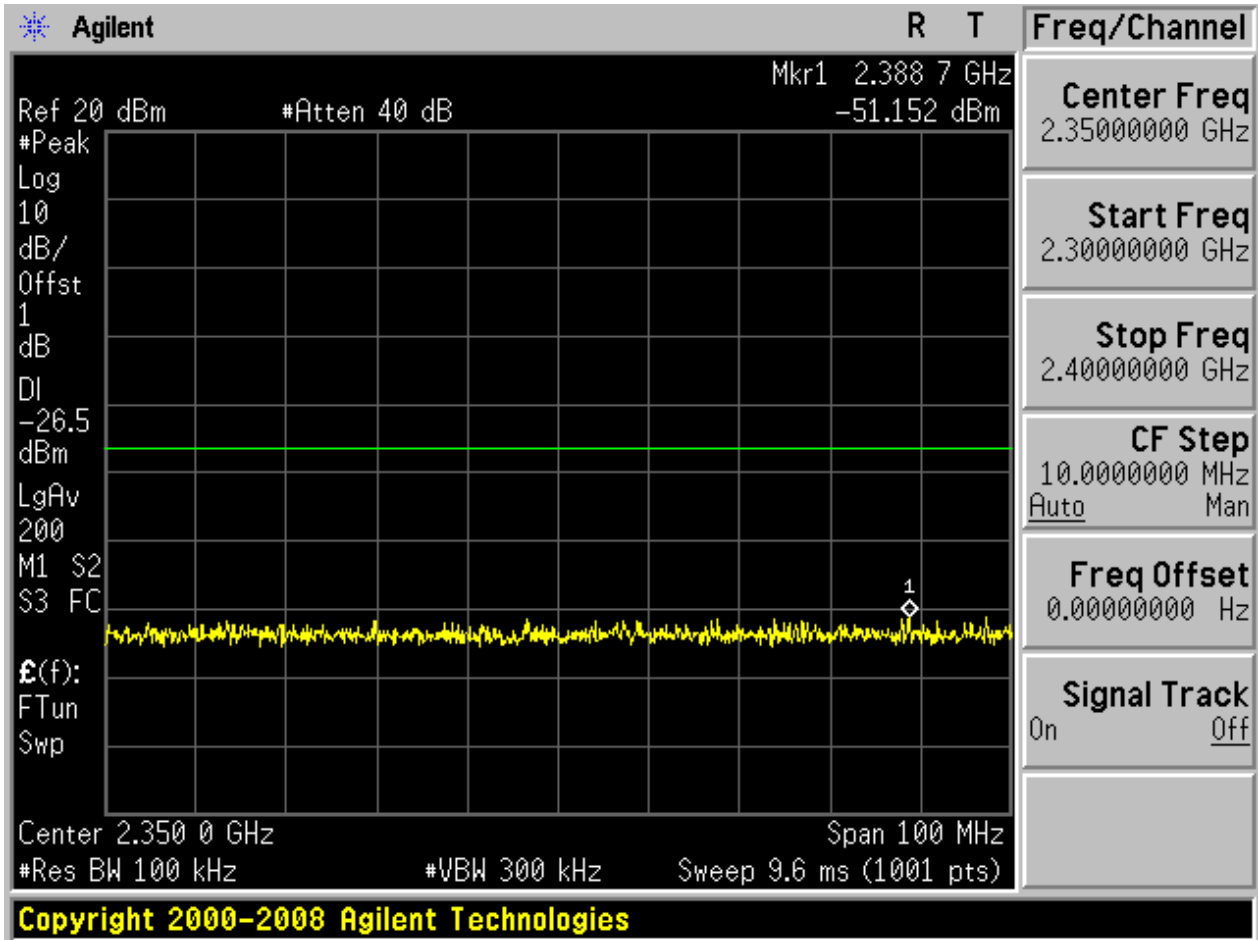


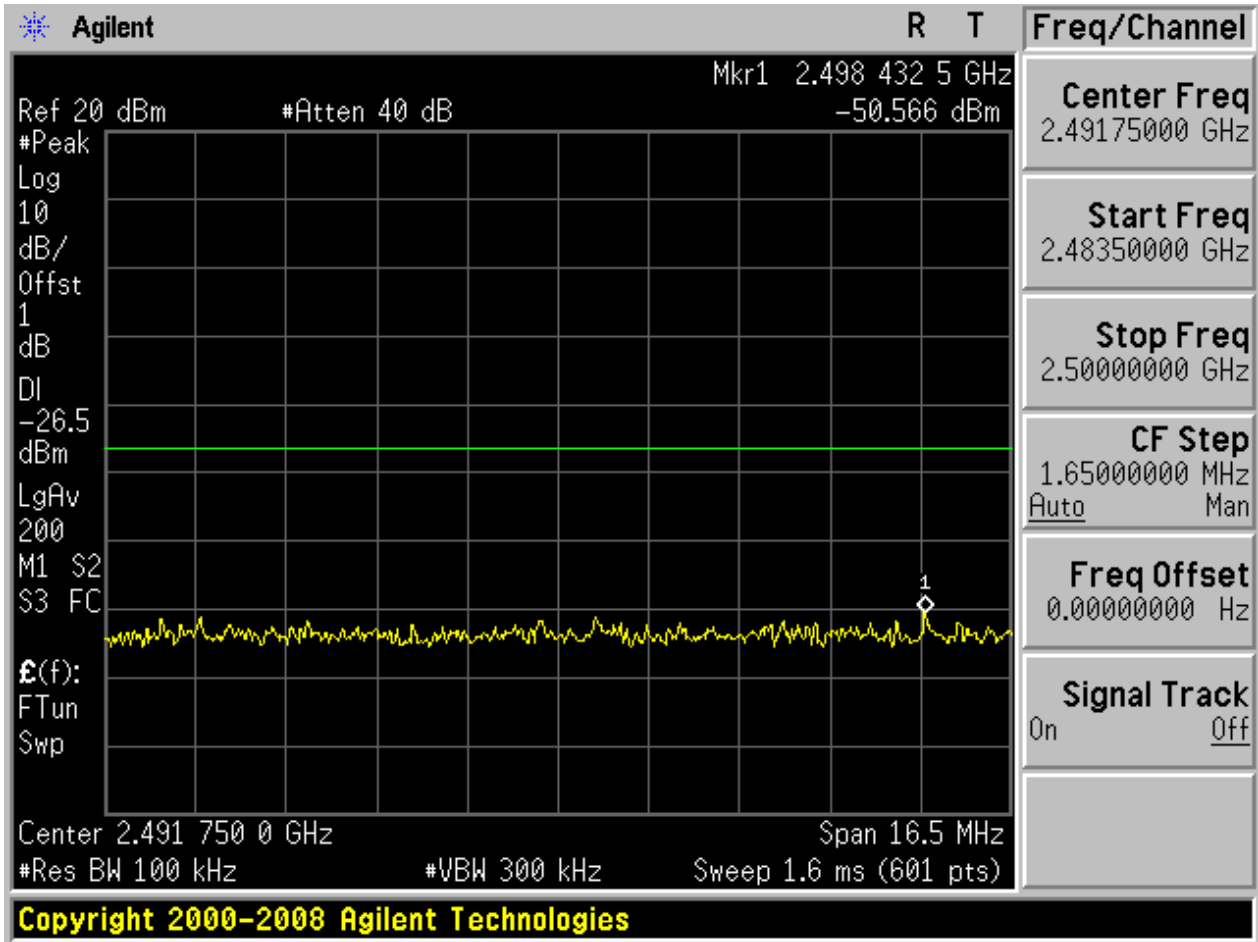
Puw:

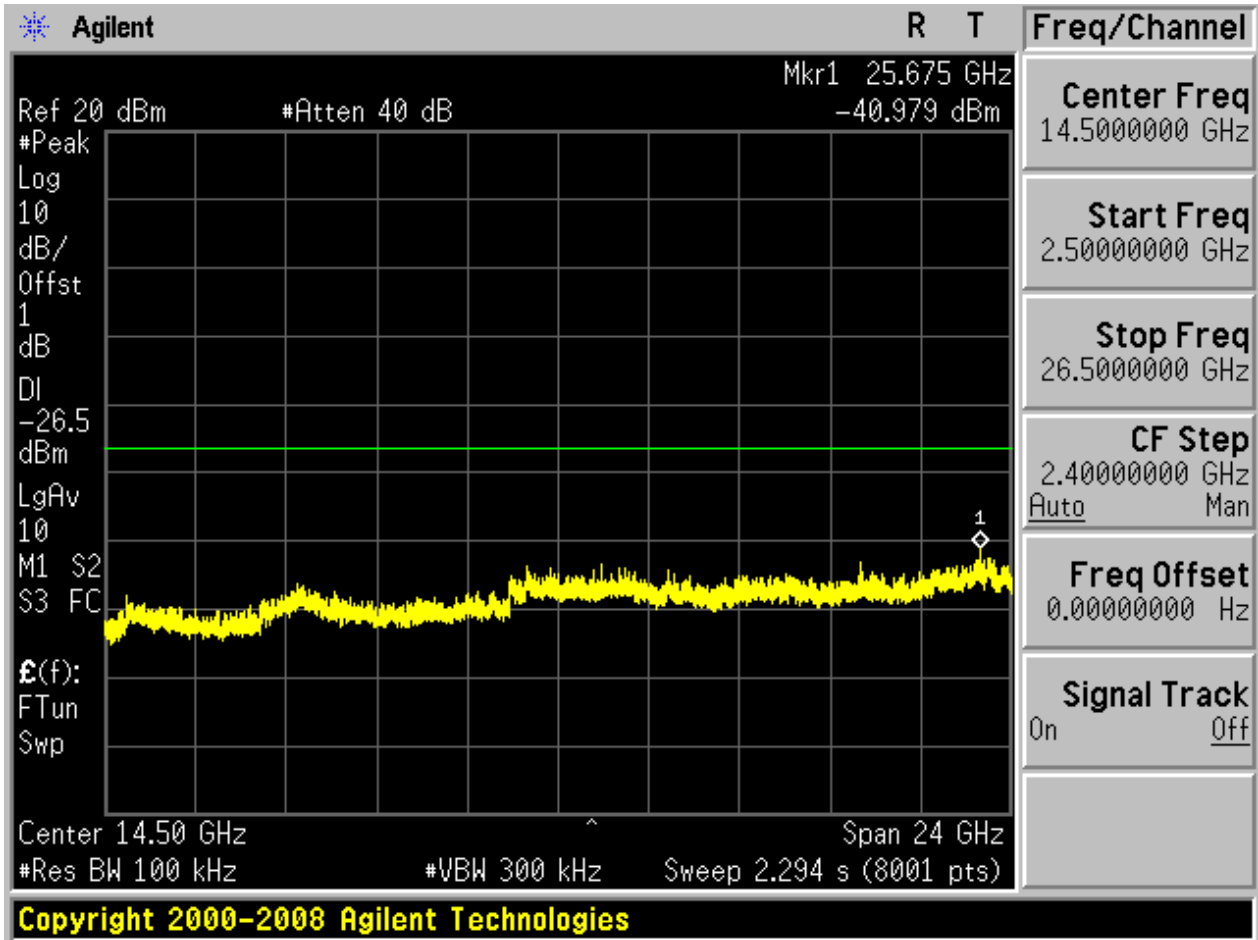














## **Appendix H: Radiated Spurious Emission & Spurious in Restricted Band**

Note: We tested all modes, but the data presented below is the worst case. Below

1GHz, RBW = 100 kHz, VBW = 300 kHz.

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

The simultaneous transmission has been considered

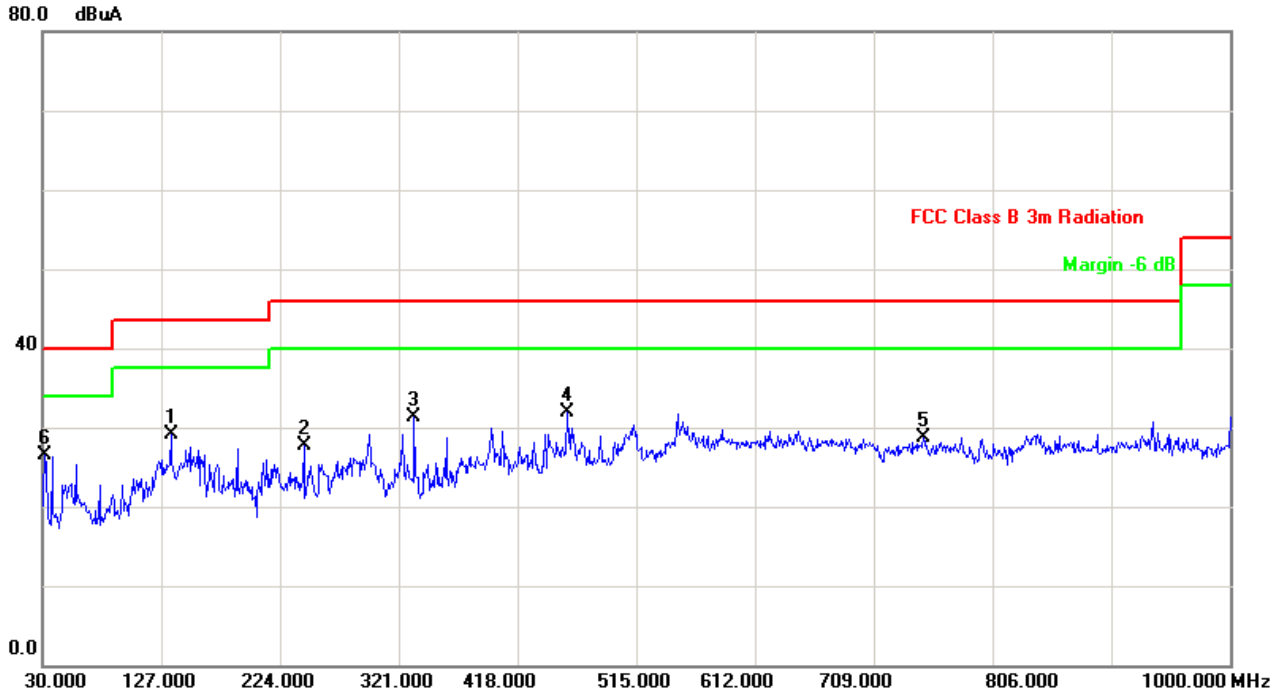
**Part 1: Testing Range of “9 kHz to 30MHz”**

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

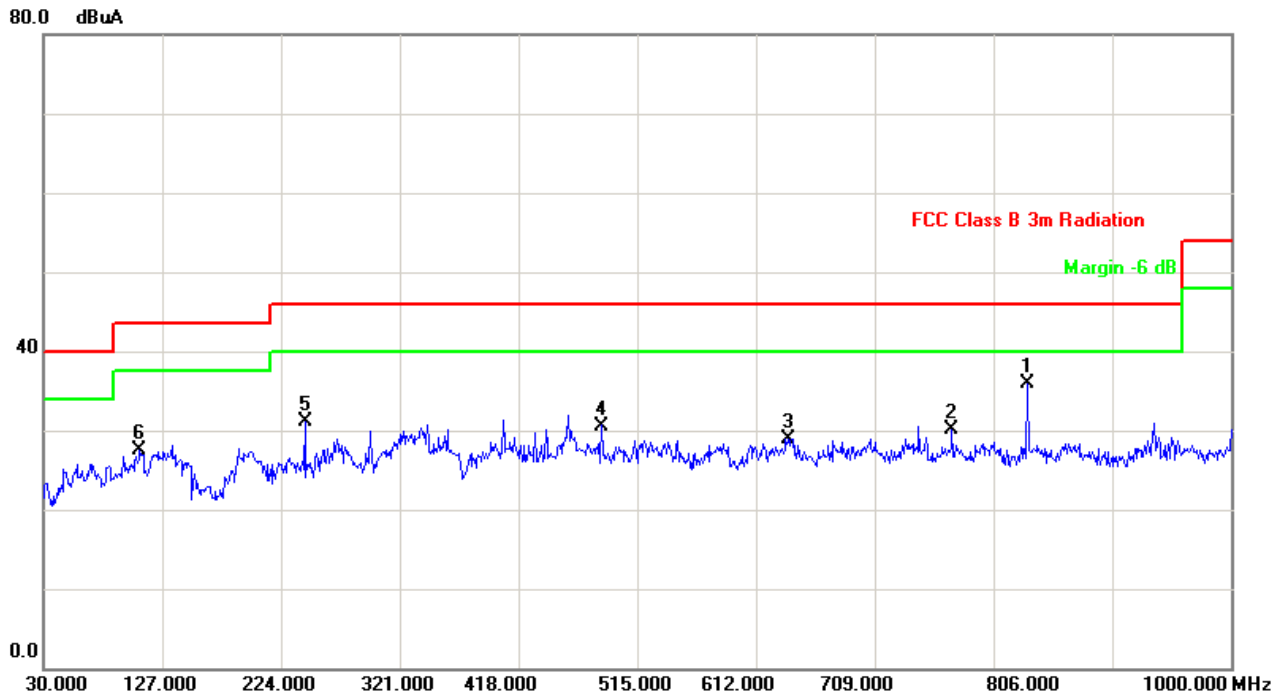
**Part 2: Testing Range of “30 MHz to 1 GHz”**

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

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

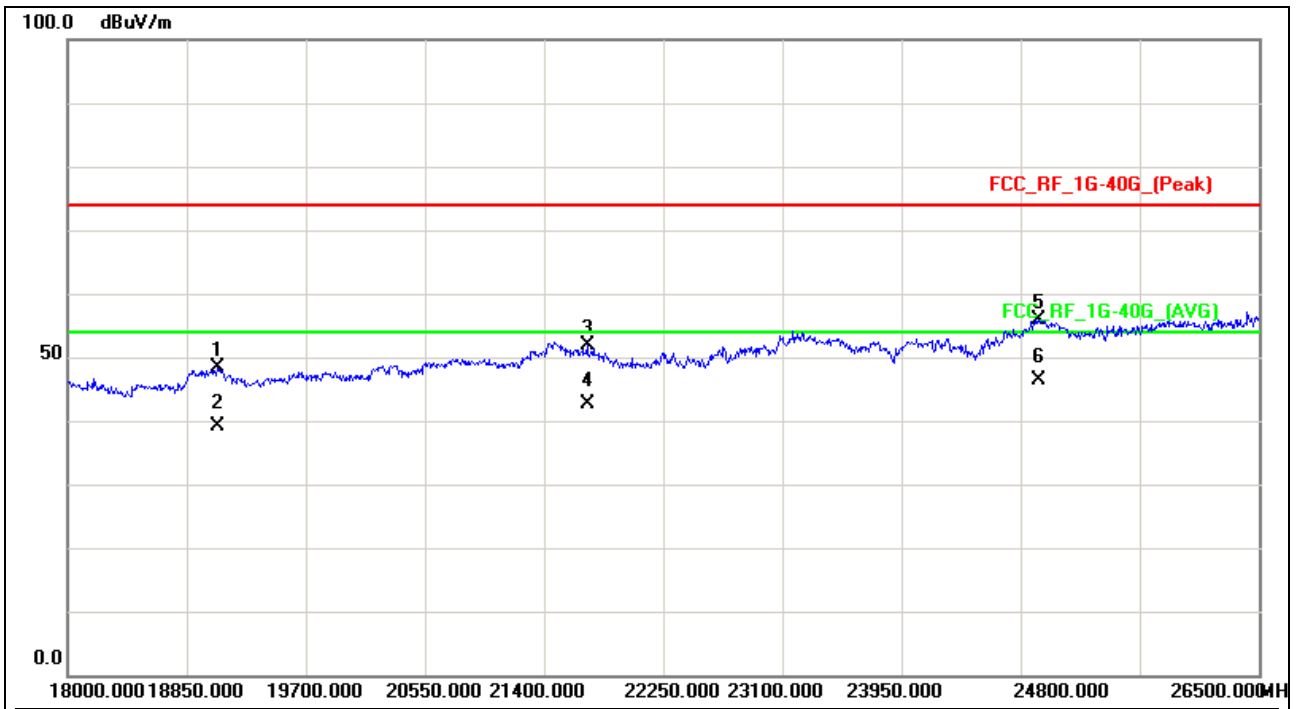


No.	Mk.	Freq. MHz	Reading Level dBuA	Correct Factor dB	Measure- ment dBuA	Limit dBuA	Margin dB	Plarization
1		134.7600	29.07	0.00	29.07	43.50	-14.43	VERTICAL
2		243.4000	27.61	0.00	27.61	46.00	-18.39	VERTICAL
3		333.6100	31.37	0.00	31.37	46.00	-14.63	VERTICAL
4		458.7400	31.84	0.00	31.84	46.00	-14.16	VERTICAL
5		749.7400	28.63	0.00	28.63	46.00	-17.37	VERTICAL
6	*	31.9400	26.45	0.00	26.45	40.00	-13.55	VERTICAL

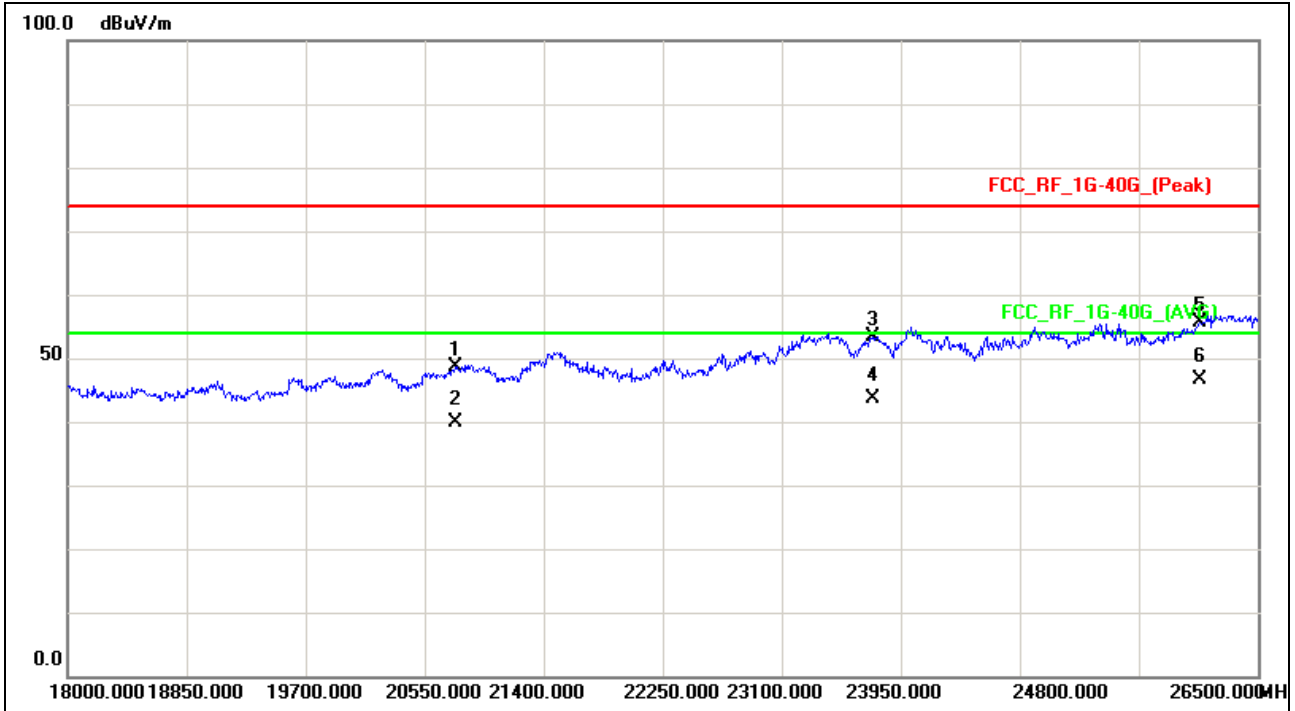


No.	Mk.	Freq. MHz	Reading Level dBuA	Correct Factor dB	Measure- ment dBuA	Limit dBuA	Margin dB	Comment
1	*	833.1600	35.84	0.00	35.84	46.00	-10.16	HORIZONTAL
2		772.0500	30.06	0.00	30.06	46.00	-15.94	HORIZONTAL
3		638.1900	28.94	0.00	28.94	46.00	-17.06	HORIZONTAL
4		485.9000	30.60	0.00	30.60	46.00	-15.40	HORIZONTAL
5		243.4000	31.05	0.00	31.05	46.00	-14.95	HORIZONTAL
6		108.5700	27.48	0.00	27.48	43.50	-16.02	HORIZONTAL

**Part 3: Testing Range of “18 GHz to 26.5 GHz”**



Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
19066.750	V	26.86	21.61	48.47	74.00	-25.53	
19066.750	V	17.56	21.61	39.17	54.00	-14.83	
21706.000	V	29.69	22.14	51.83	74.00	-22.17	
21706.000	V	20.54	22.14	42.68	54.00	-11.32	
24931.750	V	30.12	25.76	55.88	74.00	-18.12	
24931.750	V	20.67	25.76	46.43	54.00	-7.57	



Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)
20766.750	H	27.46	21.23	48.69	74.00	-25.31
20766.750	H	18.67	21.23	39.90	54.00	-14.10
23750.250	H	28.60	24.78	53.38	74.00	-20.62
23750.250	H	18.86	24.78	43.64	54.00	-10.36
26087.750	H	29.41	26.24	55.65	74.00	-18.35
26087.750	H	20.27	26.24	46.51	54.00	-7.49

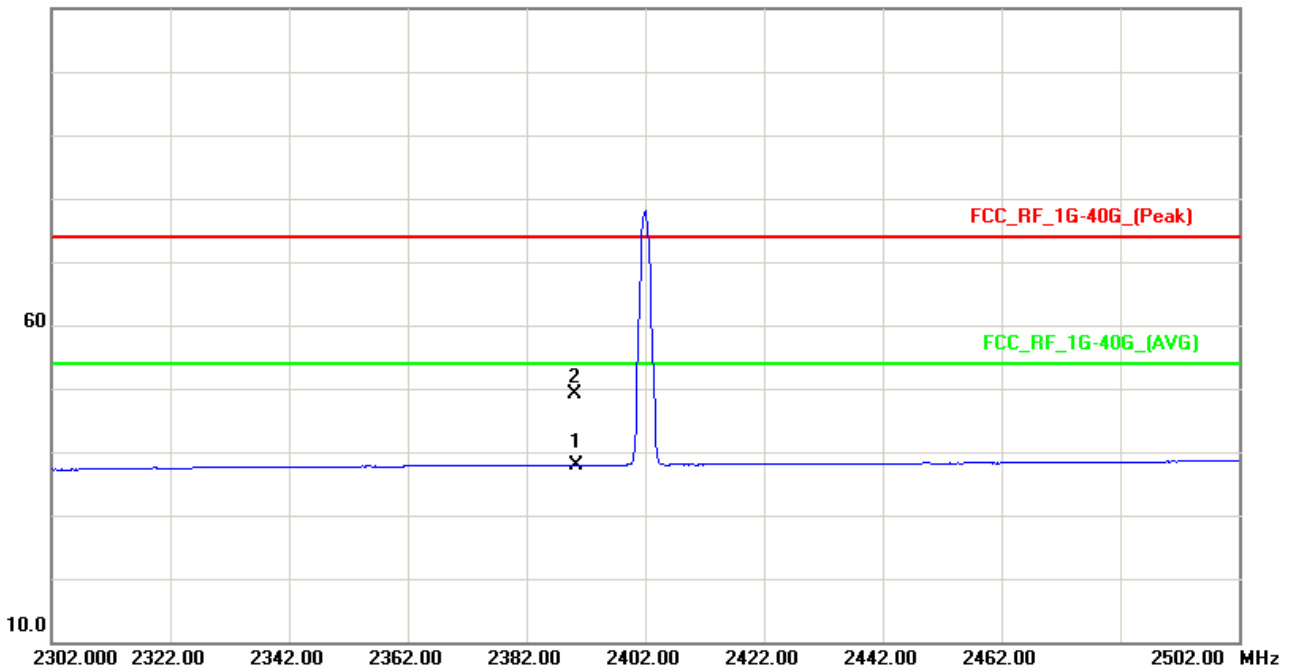
**Part 4: Testing Range of “2.3GHz to 2.5GHz”**

- Note 1: The testing range of “2.3 GHz to 2.5 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.
- Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBμV/m) and Average Limit (54 dBμV/m).
- Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

**Channel 0**

**Vertical**

110.0 dBuV/m

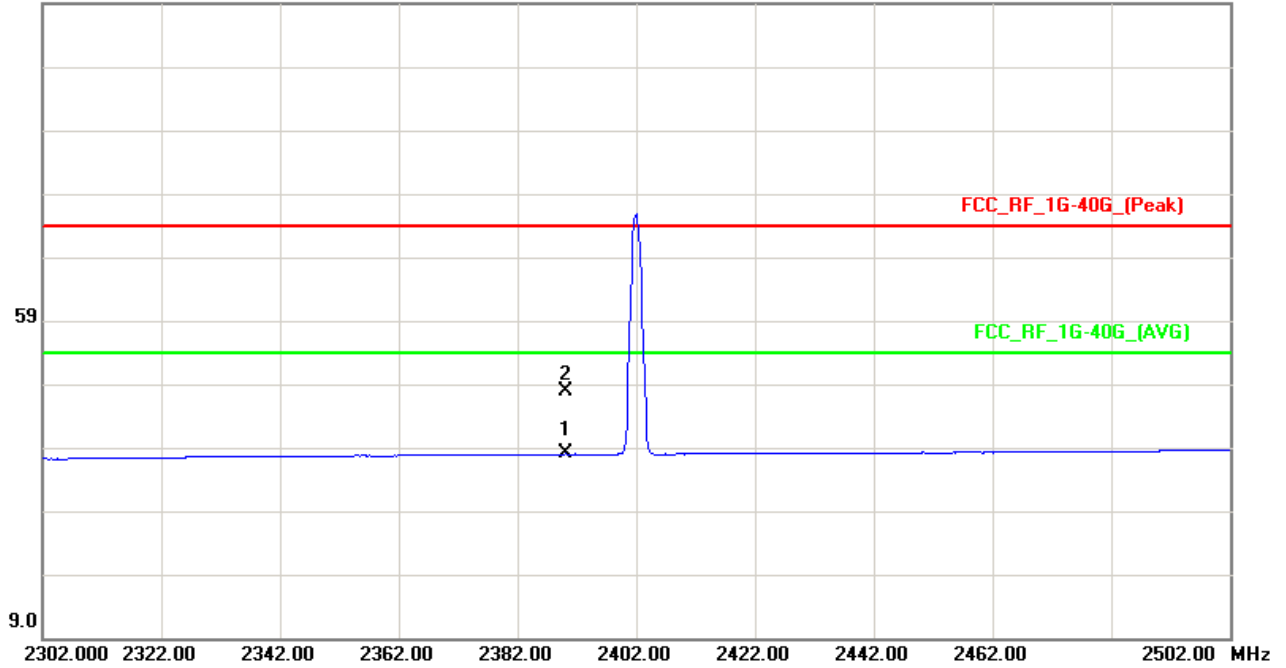


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	2390.000	2.10	35.88	37.98	54.00	-16.02	AVG	VERTICAL
2		2390.000	13.22	35.88	49.10	74.00	-24.90	peak	VERTICAL

**Horizontal**

109.0 dBuV/m



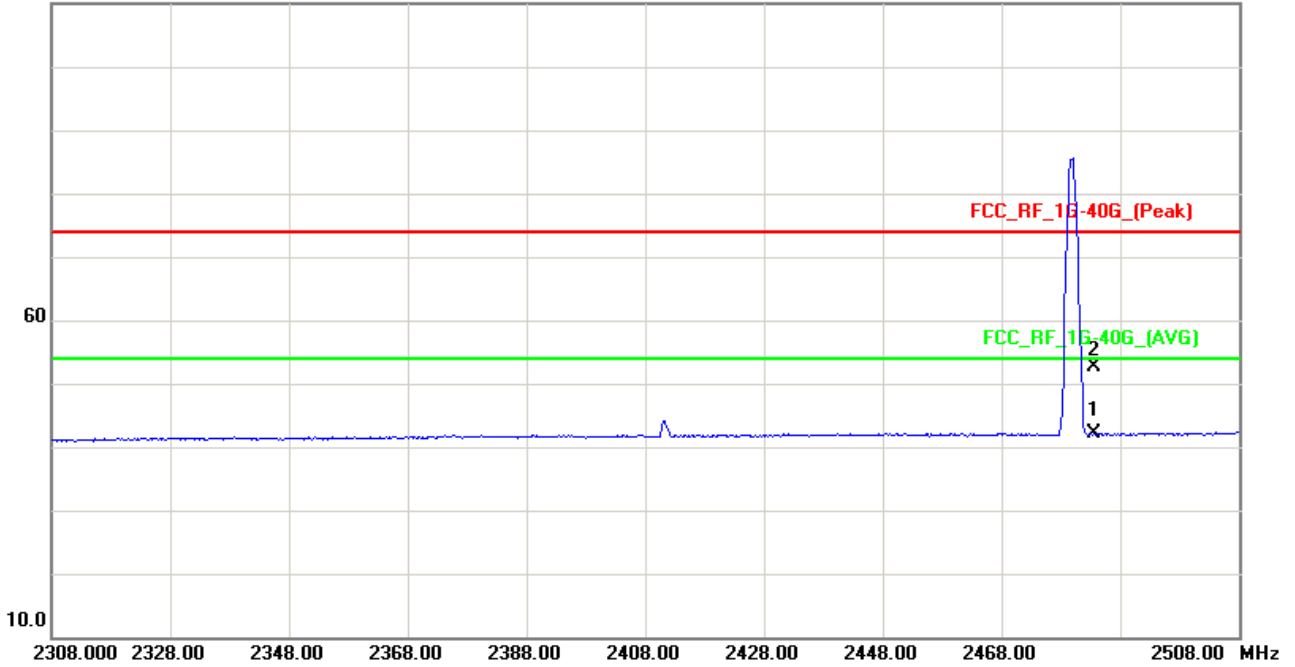
Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	2390.000	2.16	35.88	38.04	54.00	-15.96	AVG	HORIZONTAL
2		2390.000	12.05	35.88	47.93	74.00	-26.07	peak	HORIZONTAL

**Channel 39**

**Vertical**

110.0 dBuV/m

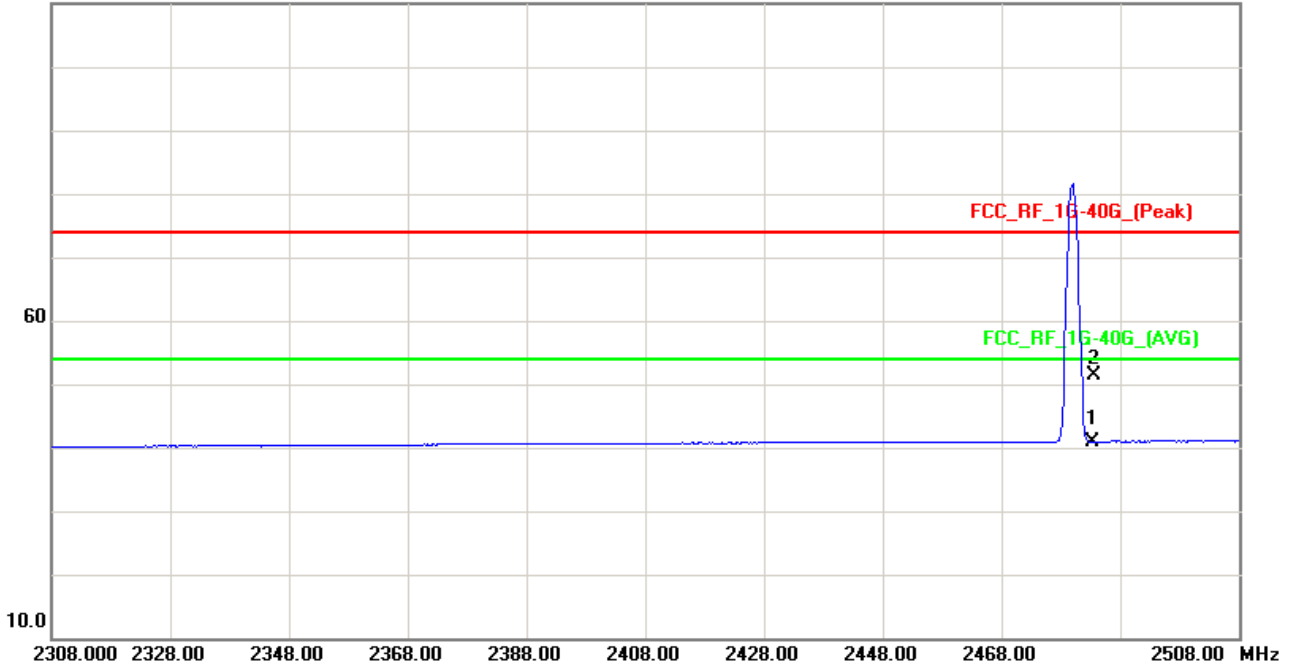


Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	2483.500	5.66	36.39	42.05	54.00	-11.95	AVG	VERTICAL
2		2483.500	16.31	36.39	52.70	74.00	-21.30	peak	VERTICAL

**Horizontal**

110.0 dBuV/m



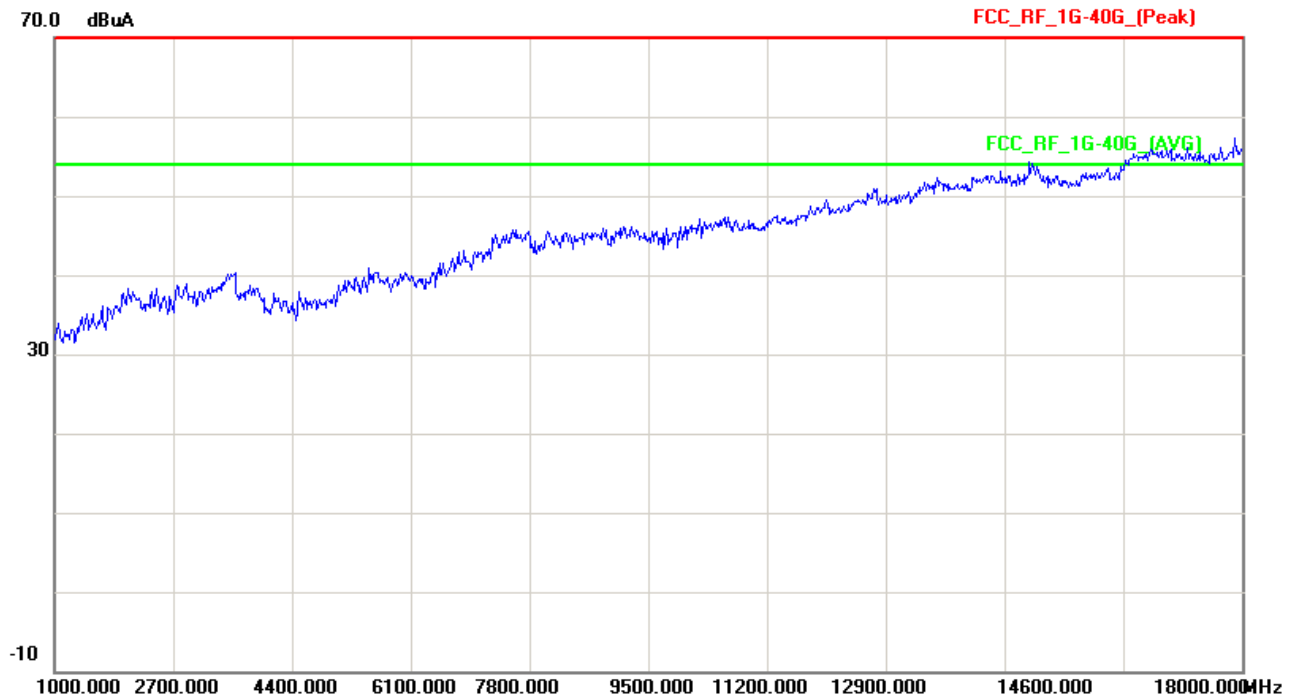
Note: The peak exceeds the limit line is carrier frequency.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Polarization
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	2483.500	4.56	36.39	40.95	54.00	-13.05	AVG	HORIZONTAL
2		2483.500	14.89	36.39	51.28	74.00	-22.72	peak	HORIZONTAL

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

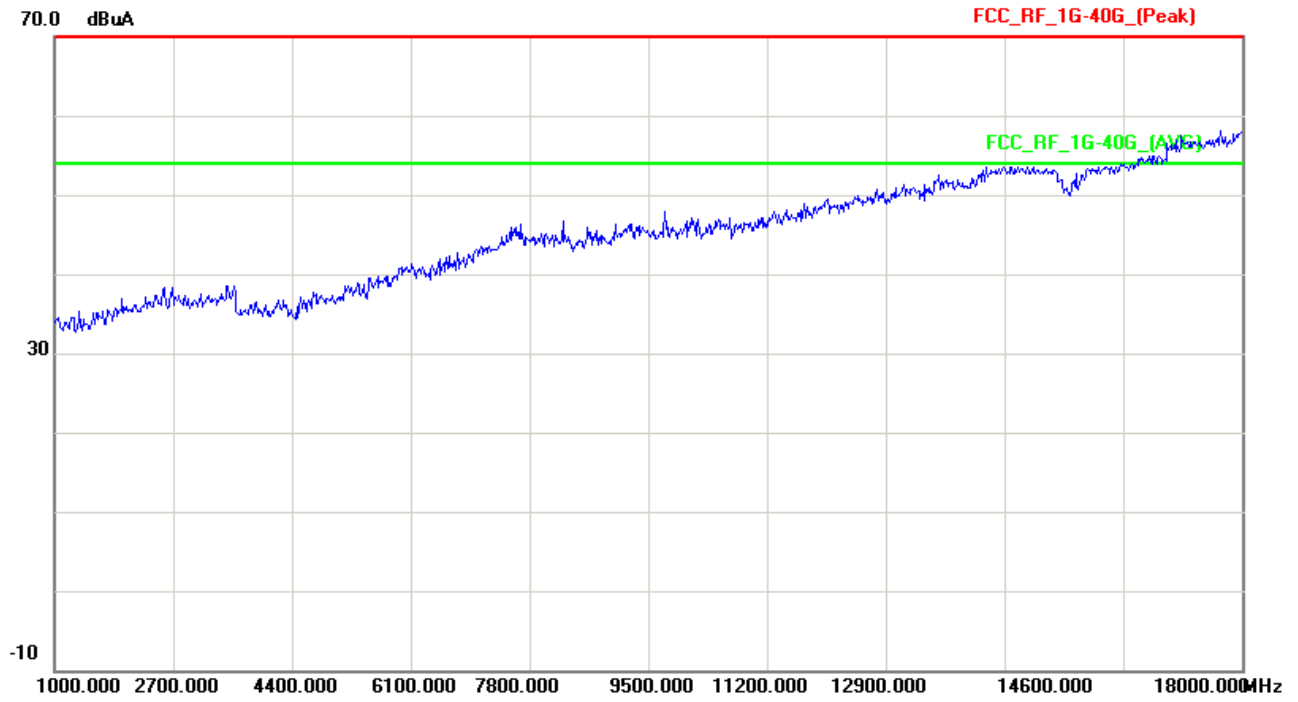
- Note 1: The test results and plot for testing range of “1 GHz to 18 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of “1 GHz to 18 GHz” is for checking radiated emissions located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

#### Vertical





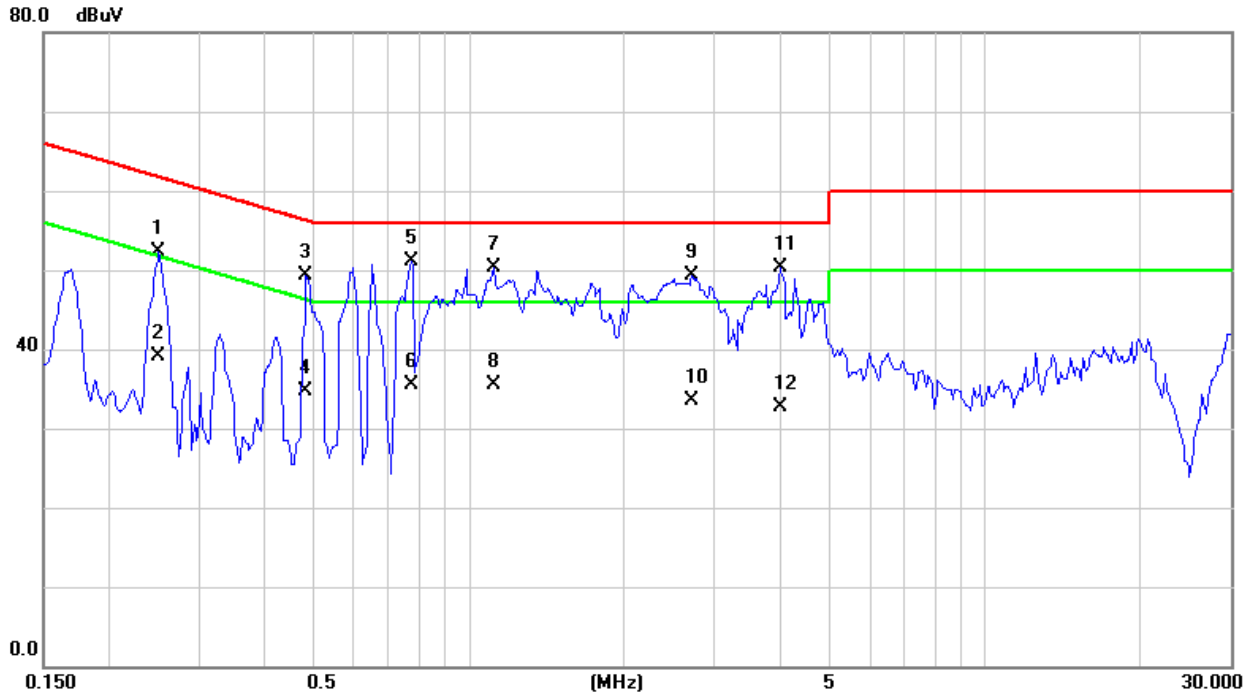
Horizontal



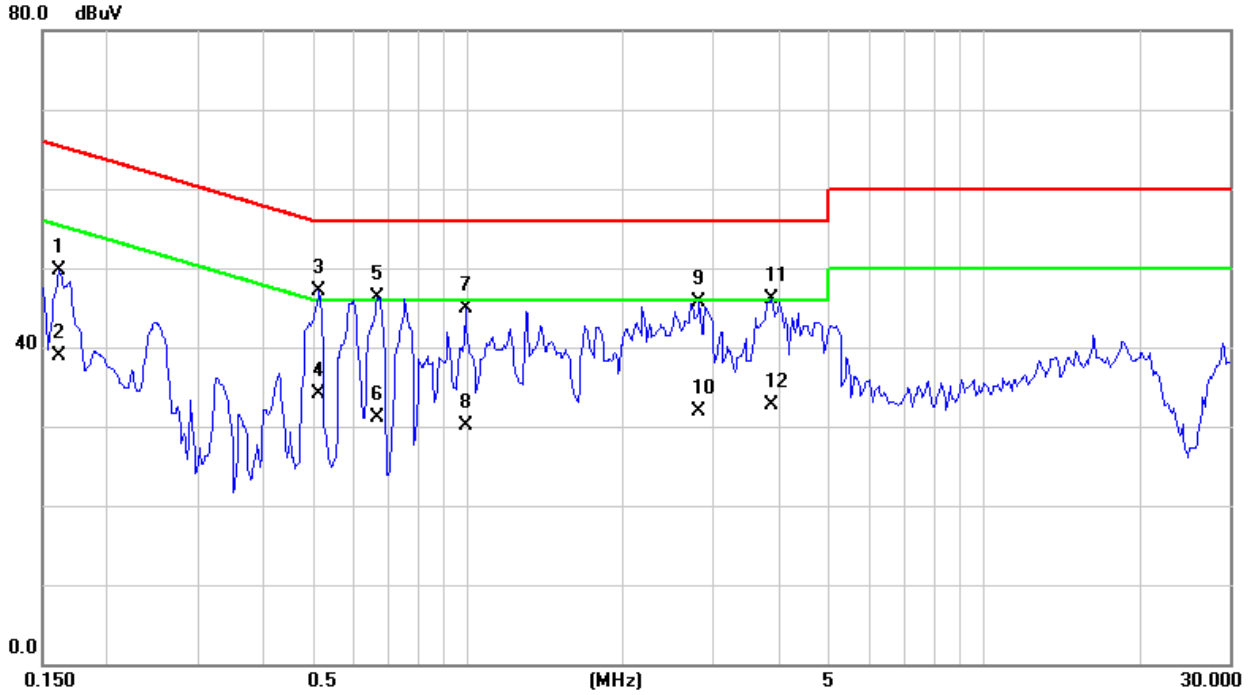
## 8 Appendix I: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz

### Channel 39



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Line
1		0.2516	42.56	9.67	52.23	61.70	-9.47	L1
2		0.2516	29.50	9.67	39.17	51.70	-12.53	L1
3		0.4860	39.47	9.75	49.22	56.24	-7.02	L1
4		0.4860	24.90	9.75	34.65	46.24	-11.59	L1
5	*	0.7790	41.37	9.81	51.18	56.00	-4.82	L1
6		0.7790	25.70	9.81	35.51	46.00	-10.49	L1
7		1.1227	40.47	9.84	50.31	56.00	-5.69	L1
8		1.1227	25.70	9.84	35.54	46.00	-10.46	L1
9		2.7125	39.62	9.67	49.29	56.00	-6.71	L1
10		2.7125	23.80	9.67	33.47	46.00	-12.53	L1
11		4.0156	40.68	9.56	50.24	56.00	-5.76	L1
12		4.0156	23.10	9.56	32.66	46.00	-13.34	L1



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Line
1		0.1617	40.12	9.54	49.66	65.38	-15.72	N
2		0.1617	29.40	9.54	38.94	55.38	-16.44	N
3	*	0.5172	37.49	9.58	47.07	56.00	-8.93	N
4		0.5172	24.60	9.58	34.18	46.00	-11.82	N
5		0.6695	36.63	9.59	46.22	56.00	-9.78	N
6		0.6695	21.60	9.59	31.19	46.00	-14.81	N
7		0.9898	35.28	9.63	44.91	56.00	-11.09	N
8		0.9898	20.50	9.63	30.13	46.00	-15.87	N
9		2.8102	36.18	9.60	45.78	56.00	-10.22	N
10		2.8102	22.30	9.60	31.90	46.00	-14.10	N
11		3.8828	36.35	9.67	46.02	56.00	-9.98	N
12		3.8828	23.10	9.67	32.77	46.00	-13.23	N

END