



# Appendix A: 20dB Emission Bandwidth (EBW)



## 1 Result Table

EUT Conf.	EBW [MHz]	Verdict
TM1_DH5_Ch0	0.945	Pass
TM1_DH5_Ch39	0.942	Pass
TM1_DH5_Ch78	0.943	Pass
TM2_2DH5_Ch0	1.244	Pass
TM2_2DH5_Ch39	1.245	Pass
TM2_2DH5_Ch78	1.245	Pass
TM3_3DH5_Ch0	1.263	Pass
TM3_3DH5_Ch39	1.262	Pass
TM3_3DH5_Ch78	1.261	Pass



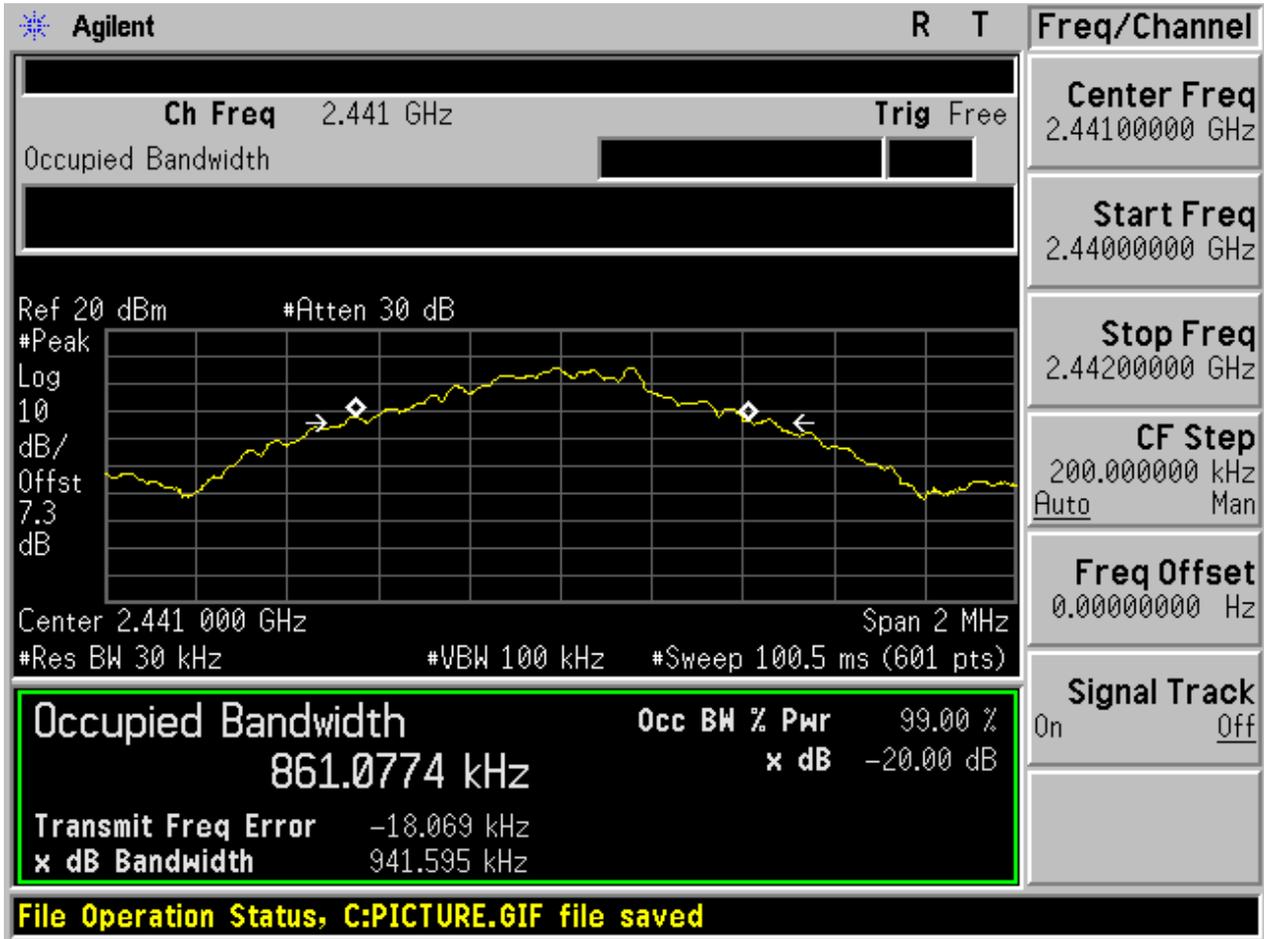
## 2 Test Plot

### 2.1 TM1\_DH5\_Ch0

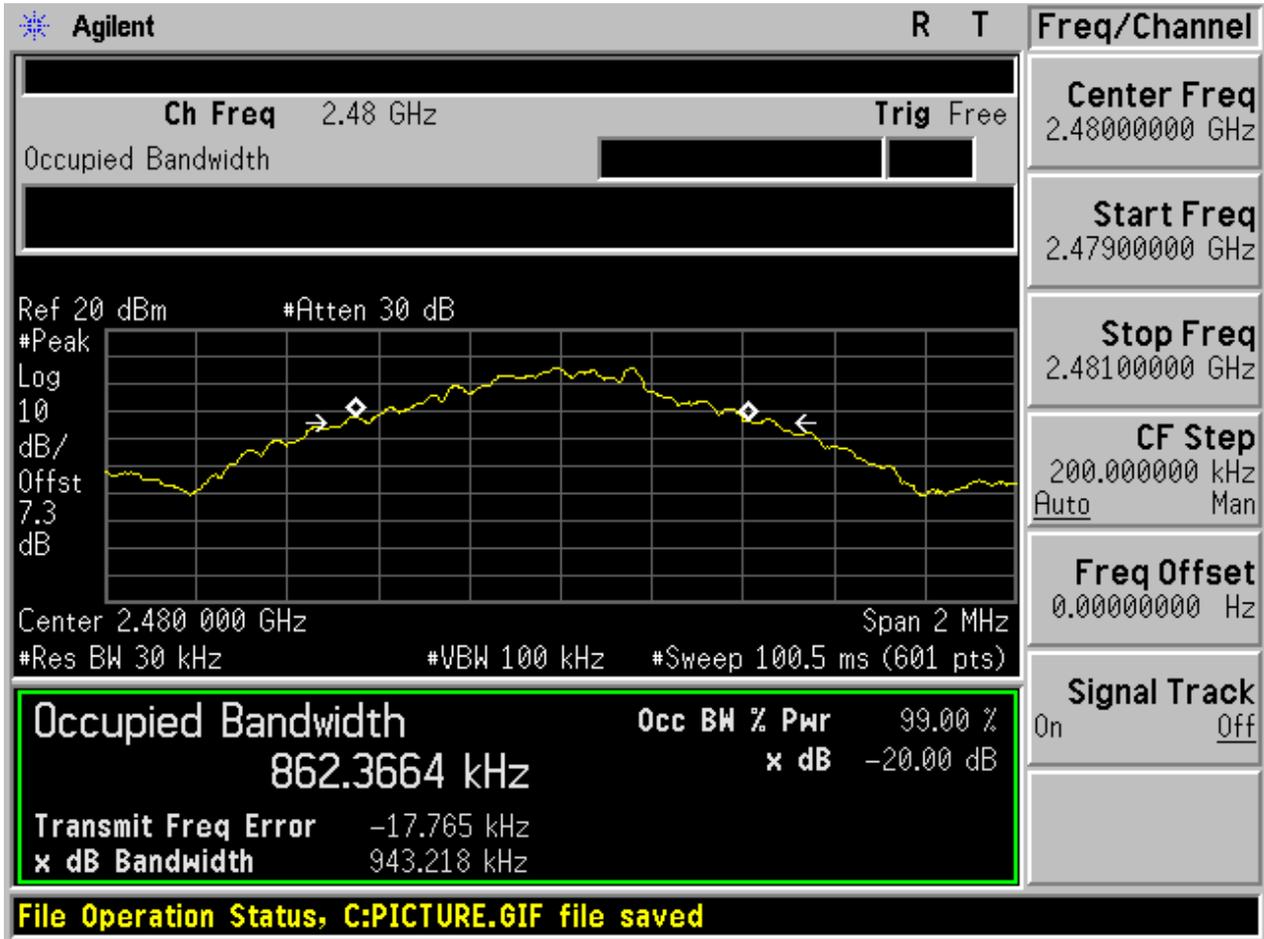




2.2 TM1\_DH5\_Ch39

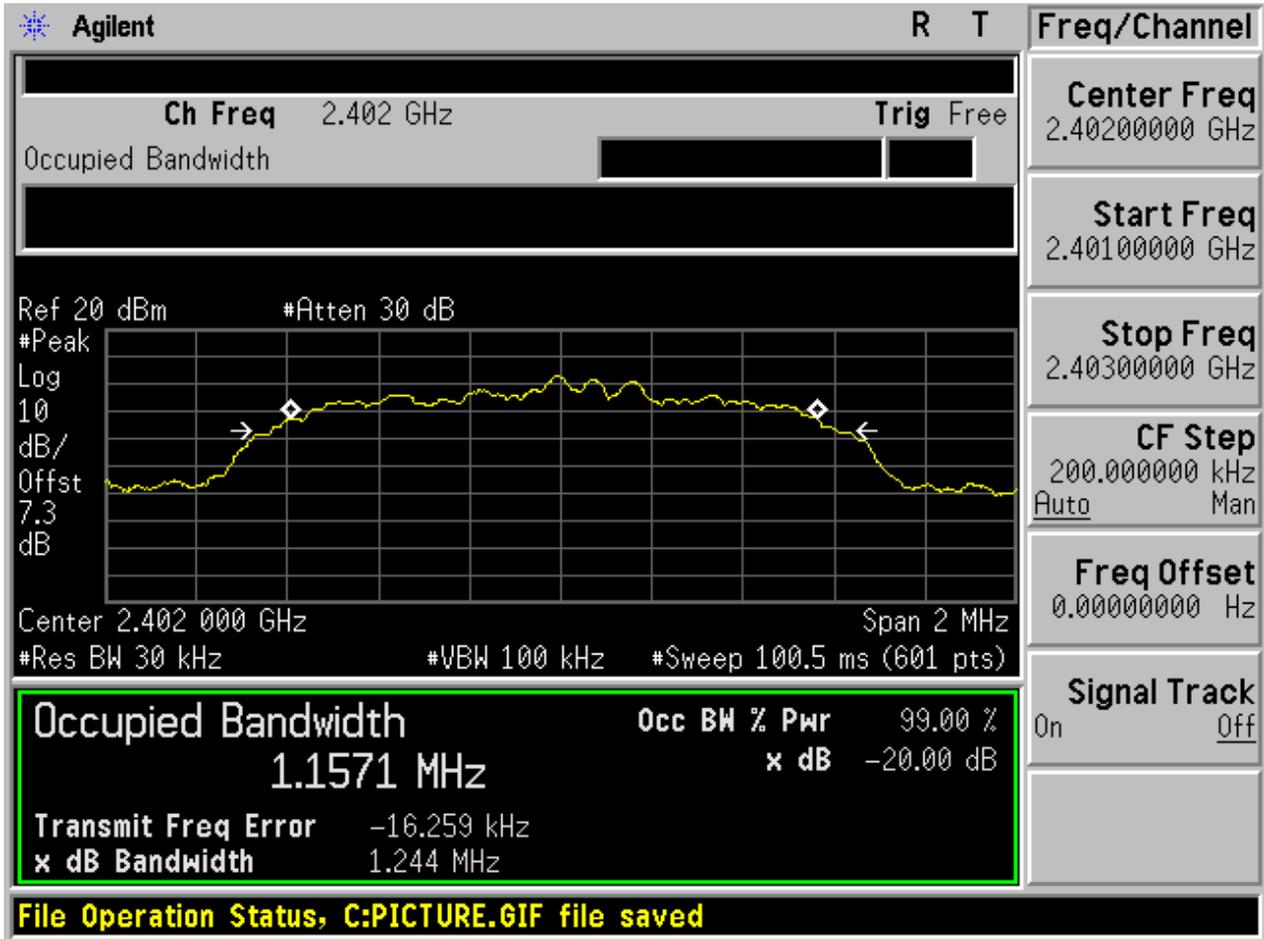


2.3 TM1\_DH5\_Ch78





2.4 TM2\_2DH5\_Ch0





2.5 TM2\_2DH5\_Ch39

Agilent R T **Freq/Channel**

**Ch Freq** 2.441 GHz **Trig** Free

Occupied Bandwidth

**Center Freq** 2.44100000 GHz

**Start Freq** 2.44000000 GHz

**Stop Freq** 2.44200000 GHz

**CF Step** 200.000000 kHz  
Auto Man

**Freq Offset** 0.00000000 Hz

**Signal Track** On Off

Ref 20 dBm #Atten 30 dB

#Peak  
Log  
10  
dB/  
Offst  
7.3  
dB

Center 2.441 000 GHz Span 2 MHz

#Res BW 30 kHz #VBW 100 kHz #Sweep 100.5 ms (601 pts)

<b>Occupied Bandwidth</b>	<b>Occ BW % Pwr</b>	99.00 %
<b>1.1573 MHz</b>	<b>x dB</b>	-20.00 dB
<b>Transmit Freq Error</b>	-18.495 kHz	
<b>x dB Bandwidth</b>	1.245 MHz	

**File Operation Status, C:PICTURE.GIF file saved**



2.6 TM2\_2DH5\_Ch78

Agilent R T Freq/Channel

Ch Freq 2.48 GHz Trig Free

Center Freq 2.48000000 GHz

Start Freq 2.47900000 GHz

Stop Freq 2.48100000 GHz

CF Step 200.000000 kHz Auto Man

Freq Offset 0.00000000 Hz

Signal Track On Off

Ref 20 dBm #Atten 30 dB

#Peak Log 10 dB/ Offst 7.3 dB

Center 2.480 000 GHz Span 2 MHz

#Res BW 30 kHz #VBW 100 kHz #Sweep 100.5 ms (601 pts)

**Occupied Bandwidth 1.1576 MHz**

Occ BW % Pwr 99.00 %

x dB -20.00 dB

Transmit Freq Error -17.977 kHz

x dB Bandwidth 1.245 MHz

**File Operation Status, C:PICTURE.GIF file saved**



2.7 TM3\_3DH5\_Ch0

Agilent R T **Freq/Channel**

**Ch Freq** 2.402 GHz **Trig** Free

Occupied Bandwidth 2.40200000 GHz

**Start Freq** 2.40100000 GHz

**Stop Freq** 2.40300000 GHz

**CF Step** 200.000000 kHz  
Auto Man

**Freq Offset** 0.00000000 Hz

**Signal Track** On Off

---

Ref 20 dBm #Atten 30 dB

#Peak  
Log  
10  
dB/  
Offst  
7.3  
dB

Center 2.402 000 GHz Span 2 MHz

#Res BW 30 kHz #VBW 100 kHz #Sweep 100.5 ms (601 pts)

<b>Occupied Bandwidth</b>	<b>Occ BW % Pwr</b>	99.00 %
<b>1.1618 MHz</b>	<b>x dB</b>	-20.00 dB
<b>Transmit Freq Error</b>		-13.343 kHz
<b>x dB Bandwidth</b>		1.263 MHz

**File Operation Status, C:PICTURE.GIF file saved**



2.8 TM3\_3DH5\_Ch39

Agilent R T Freq/Channel

Ch Freq 2.441 GHz Trig Free

Center Freq 2.44100000 GHz

Start Freq 2.44000000 GHz

Stop Freq 2.44200000 GHz

CF Step 200.000000 kHz Auto Man

Freq Offset 0.00000000 Hz

Signal Track On Off

Ref 20 dBm #Atten 30 dB

#Peak Log 10 dB/ Offst 7.3 dB

Center 2.441 000 GHz Span 2 MHz

#Res BW 30 kHz #VBW 100 kHz #Sweep 100.5 ms (601 pts)

**Occupied Bandwidth 1.1632 MHz**

Occ BW % Pwr 99.00 %

x dB -20.00 dB

Transmit Freq Error -15.137 kHz

x dB Bandwidth 1.262 MHz

**File Operation Status, C:PICTURE.GIF file saved**

2.9 TM3\_3DH5\_Ch78

Agilent
R T
Freq/Channel

**Ch Freq** 2.48 GHz **Trig** Free

Occupied Bandwidth [Progress Bar]

**Center Freq**  
2.48000000 GHz

**Start Freq**  
2.47900000 GHz

**Stop Freq**  
2.48100000 GHz

**CF Step**  
200.000000 kHz  
Auto Man

**Freq Offset**  
0.00000000 Hz

**Signal Track**  
On Off

Ref 20 dBm #Atten 30 dB

#Peak Log 10 dB/Offst 7.3 dB

Center 2.480 000 GHz Span 2 MHz

#Res BW 30 kHz #VBW 100 kHz #Sweep 100.5 ms (601 pts)

<b>Occupied Bandwidth</b>	<b>Occ BW % Pwr</b>	99.00 %
<b>1.1634 MHz</b>	<b>x dB</b>	-20.00 dB
<b>Transmit Freq Error</b>	-14.414 kHz	
<b>x dB Bandwidth</b>	1.261 MHz	

**File Operation Status, C:PICTURE.GIF file saved**



# Appendix B: Carrier Frequency Separation



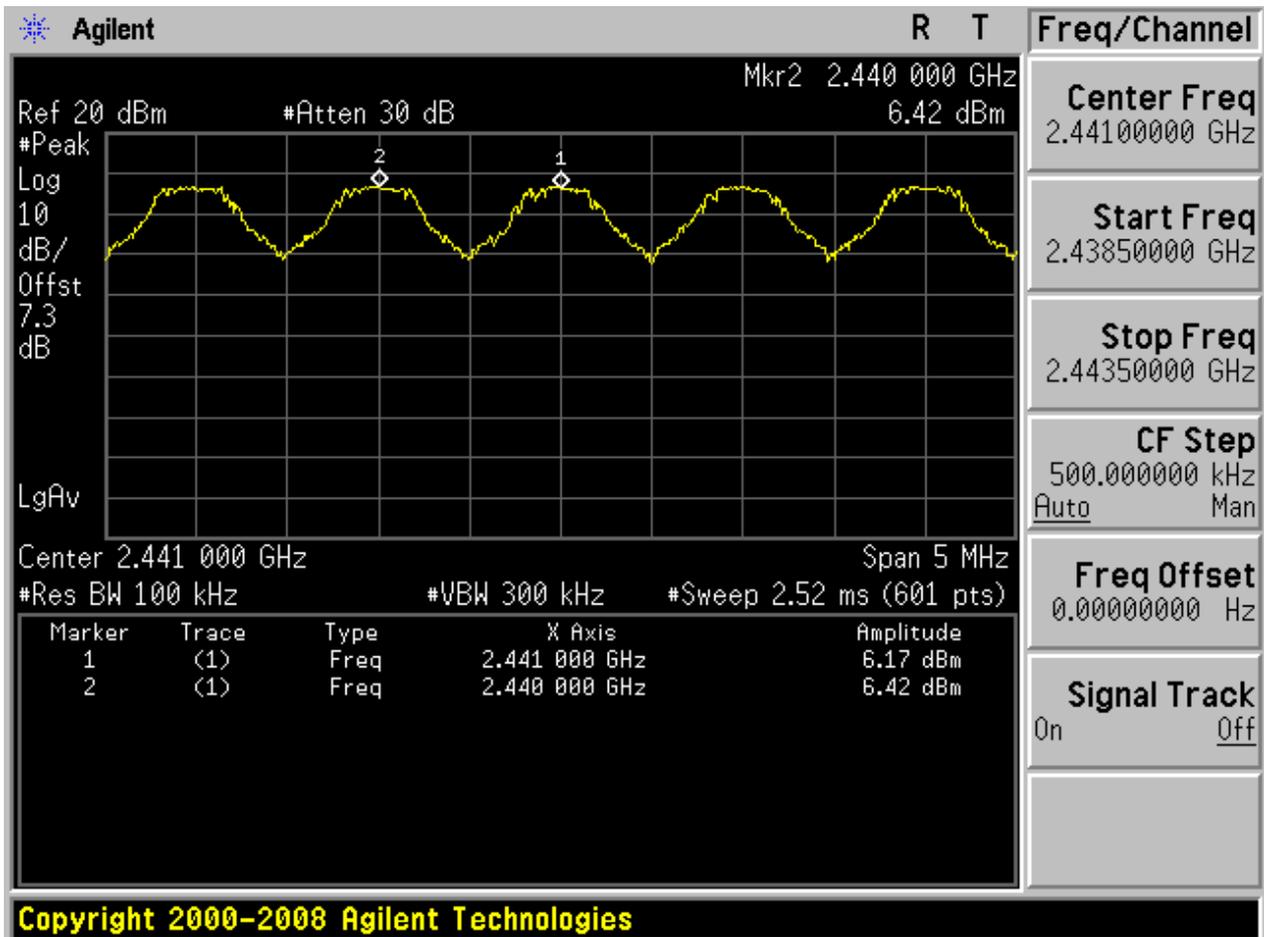
### 1 Result Table

EUT Conf.	Carrier Frequency Separation [MHz]	Verdict
TM1_DH5_Hop	1.000	Pass
TM2_2DH5_Hop	1.000	Pass
TM3_3DH5_Hop	1.250	Pass



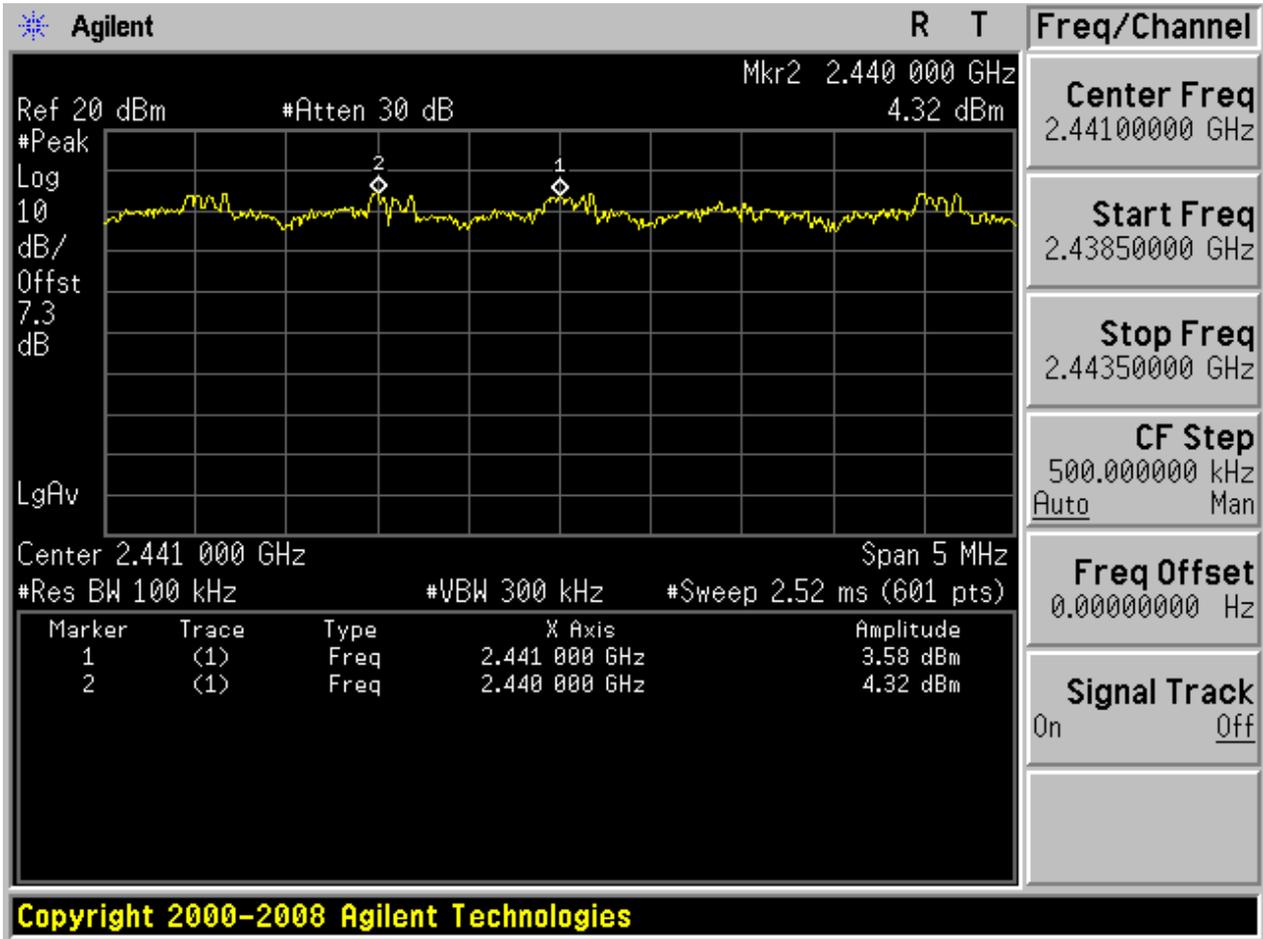
## 2 Test Plot

### 2.1 TM1\_DH5\_Hop



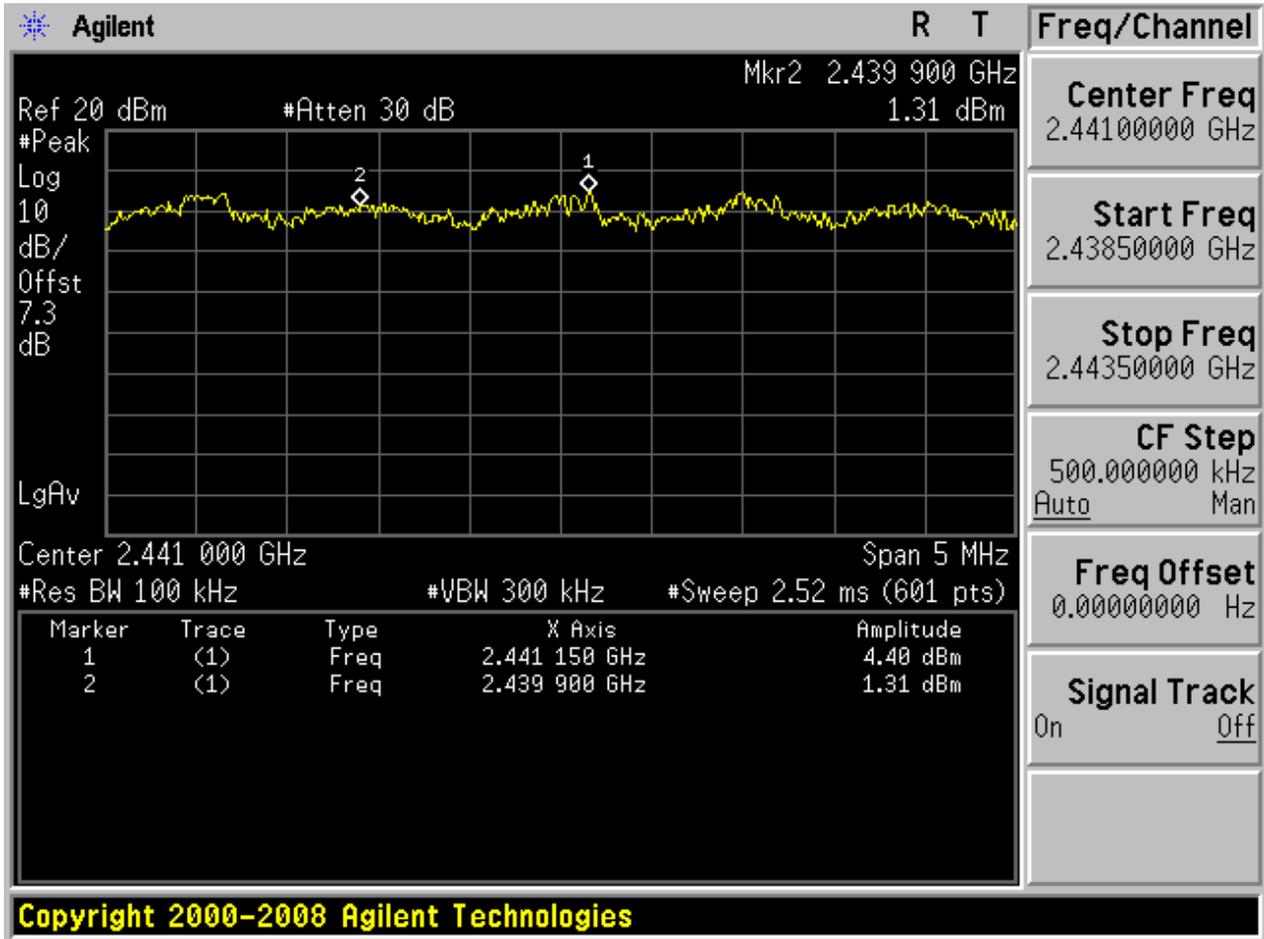


### 2.2 TM2\_2DH5\_Hop





### 2.3 TM3\_3DH5\_Hop





# Appendix C: Number of Hopping Channel



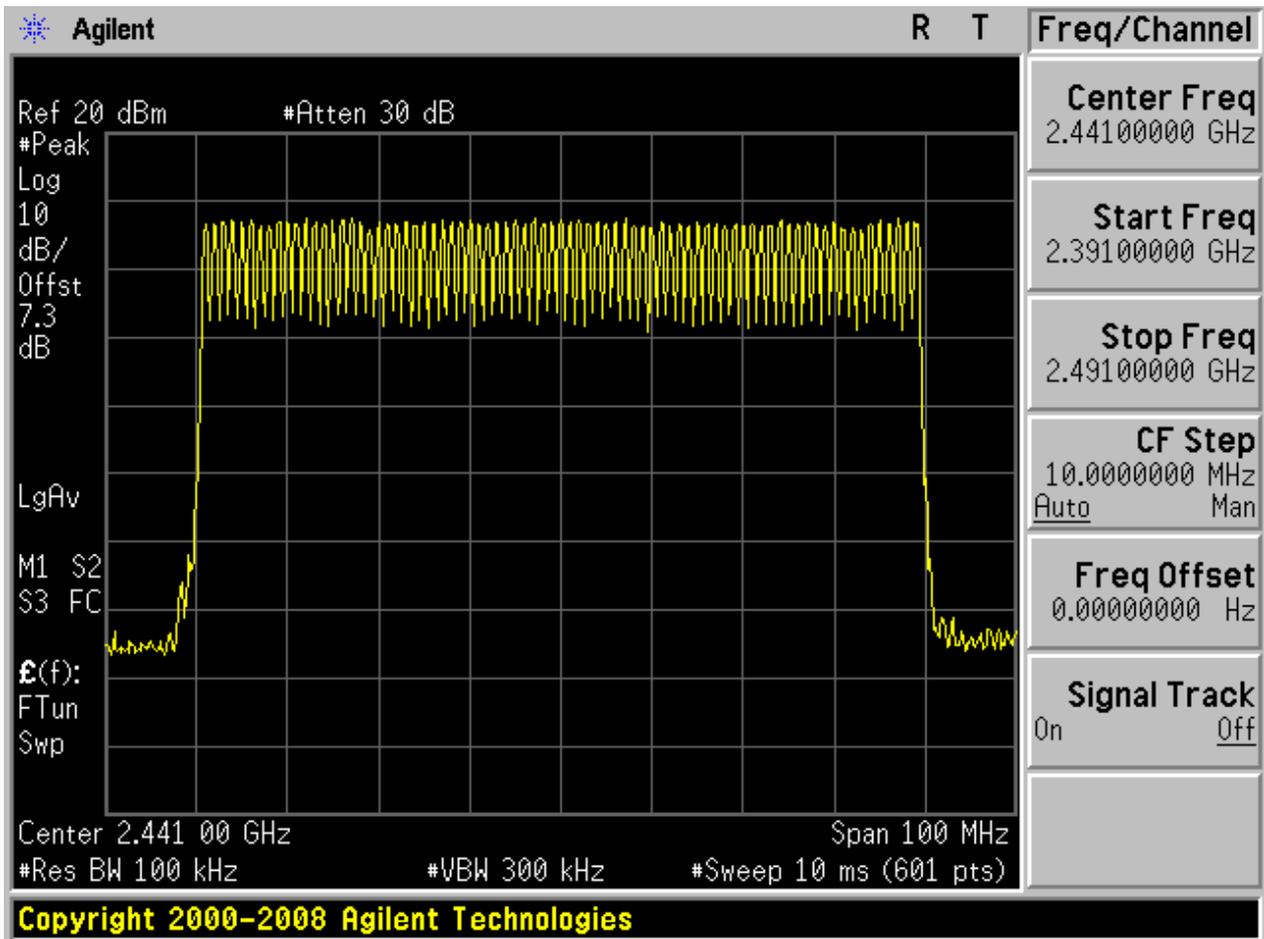
### 1 Result Table

EUT Conf.	Number of Hopping Channel	Verdict
TM1_DH5_Hop	78	Pass
TM2_2DH5_Hop	78	Pass
TM3_3DH5_Hop	78	Pass



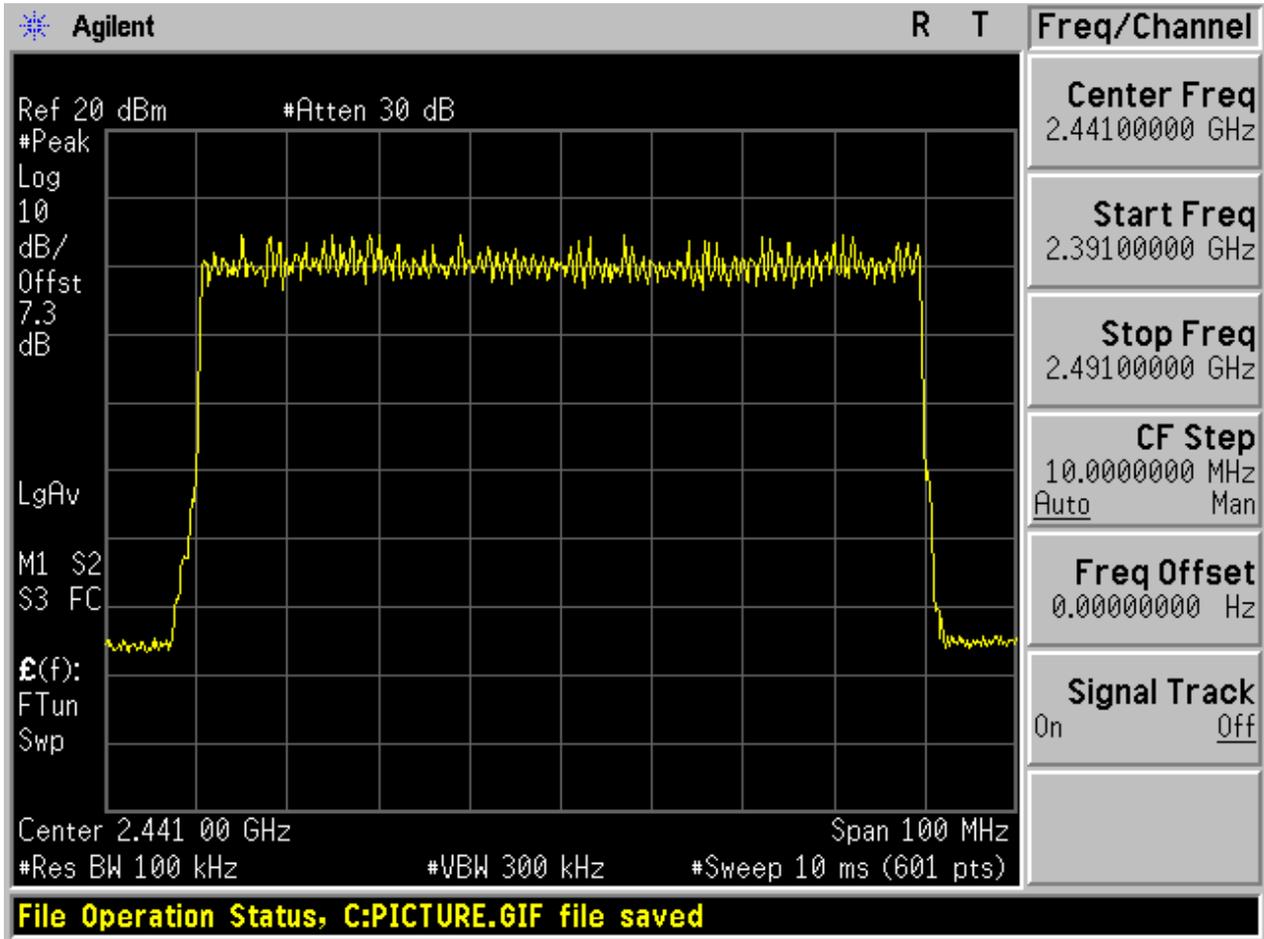
## 2 Test Plot

### 2.1 TM1\_DH5\_Hop



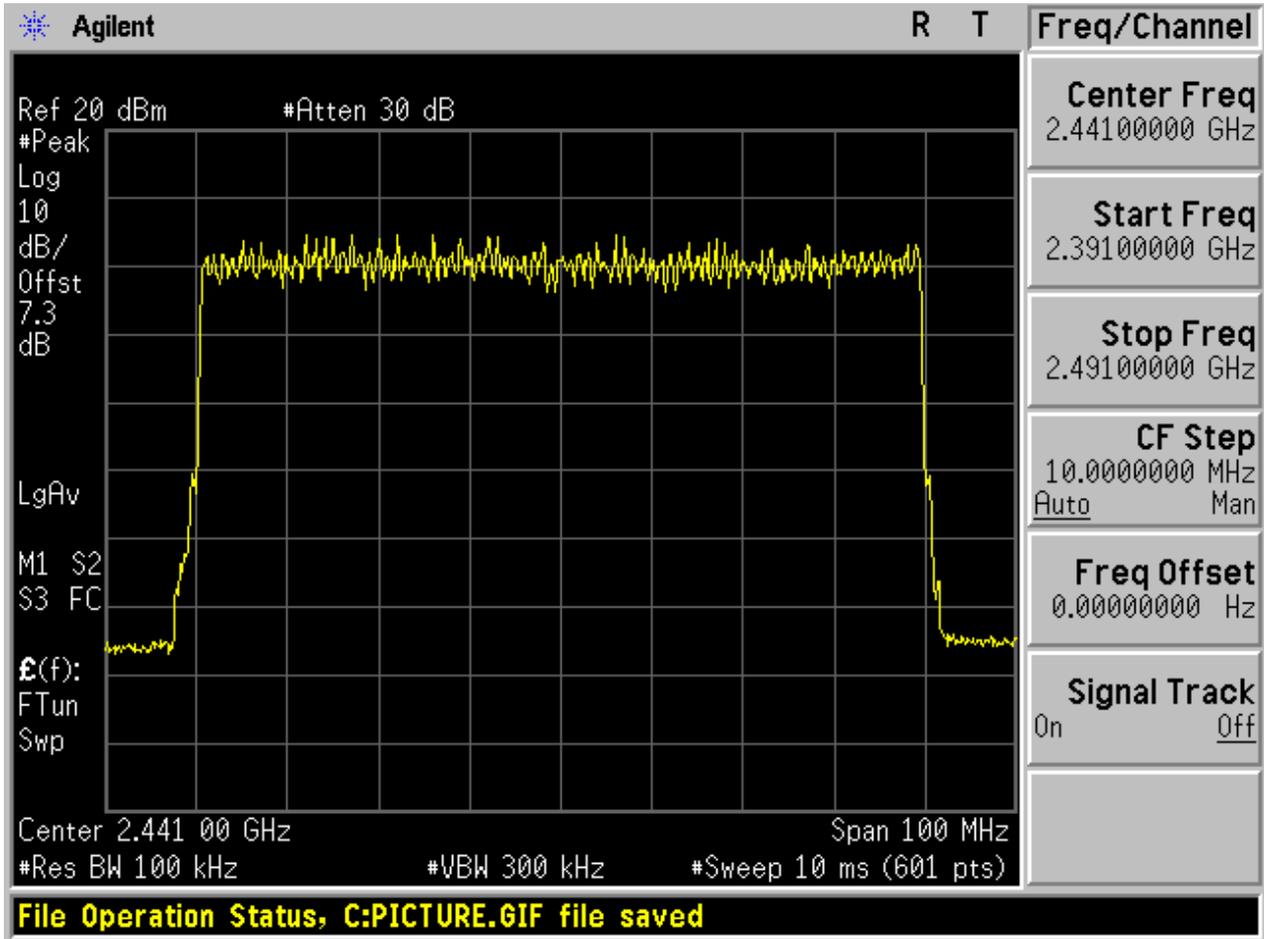


### 2.2 TM2\_2DH5\_Hop





### 2.3 TM3\_3DH5\_Hop





# Appendix D: Time of Occupancy (Dwell Time)

## 1 Result Table

The Dwell Time = Burst Width \* Total Hops. The detailed calculations are showed as follows:

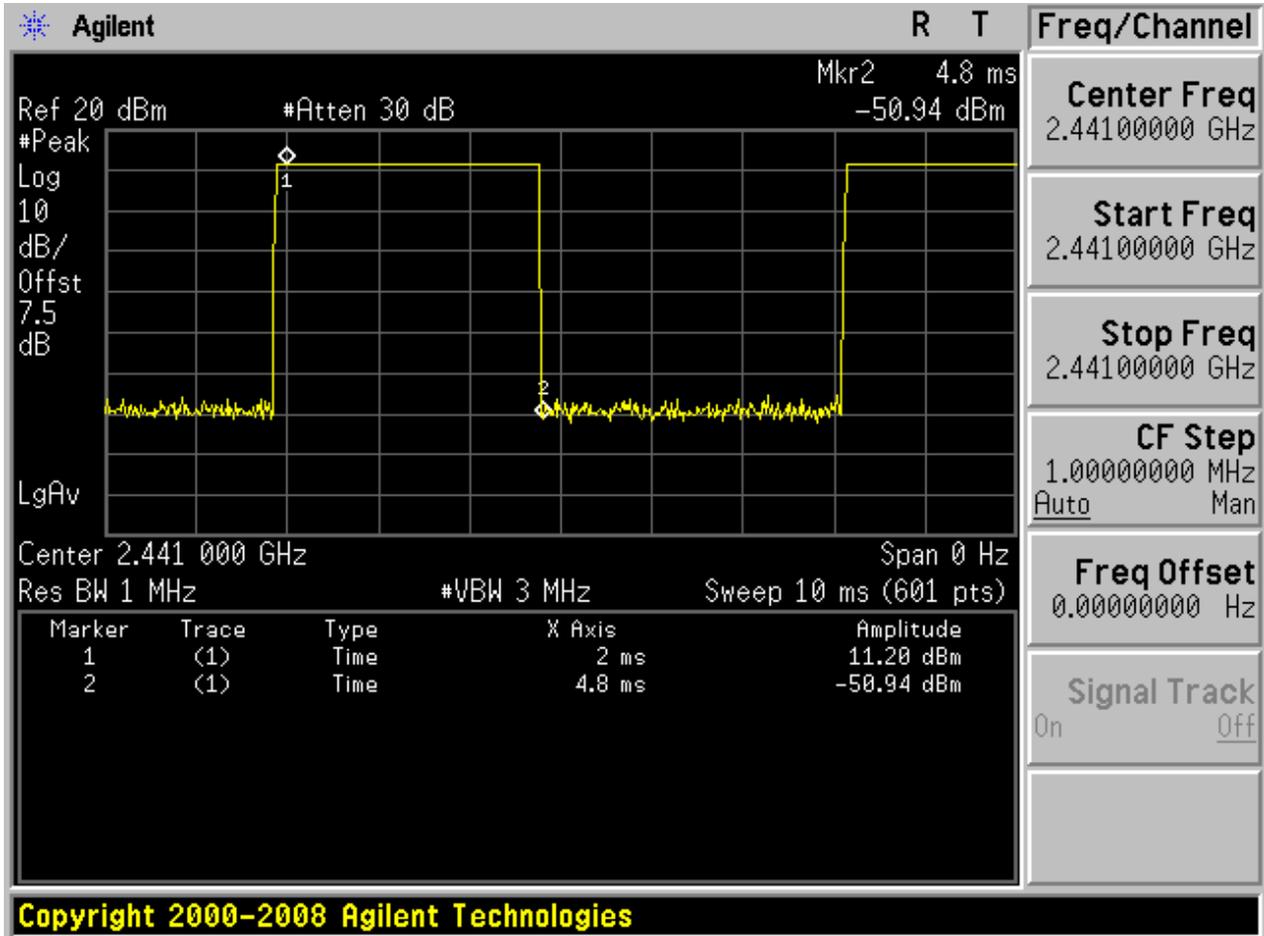
- The duration for dwell time calculation:  $0.4 \text{ [s]} * \text{hopping number} = 0.4 \text{ [s]} * 79 \text{ [ch]} = 31.6 \text{ [s*ch]}$ ;
- The burst width [ms/hop/ch], which is directly measured, refers to the duration on one channel hop.
- The hops per second for all channels: The selected EUT Conf uses a slot type of 5-Tx&1-Rx and a hopping rate of 1600 [ch\*hop/s] for all channels. So the final hopping rate for all channels is  $1600 / 6 = 266.67 \text{ [ch*hop/s]}$ ;
- The hops per second on one channel:  $266.67 \text{ [ch*hop/s]} / 79 \text{ [ch]} = 3.38 \text{ [hop/s]}$ ;
- The total hops for all channels within the dwell time calculation duration:  $3.38 \text{ [hop/s]} * 31.6 \text{ [s*ch]} = 106.67 \text{ [hop*ch]}$ ;
- The dwell time for all channels hopping:  $106.67 \text{ [hop*ch]} * \text{Burst Width [ms/hop/ch]}$ .

EUT Conf.	Burst Width [ms/hop/ch]	Total Hops [hop*ch]	Dwell Time [s]	Verdict
TM1_DH5_Ch39	2.800	106.67	0.299	Pass
TM2_2DH5_Ch39	2.900	106.67	0.309	Pass
TM3_3DH5_Ch39	2.900	106.67	0.309	Pass

## 2 Test Plot

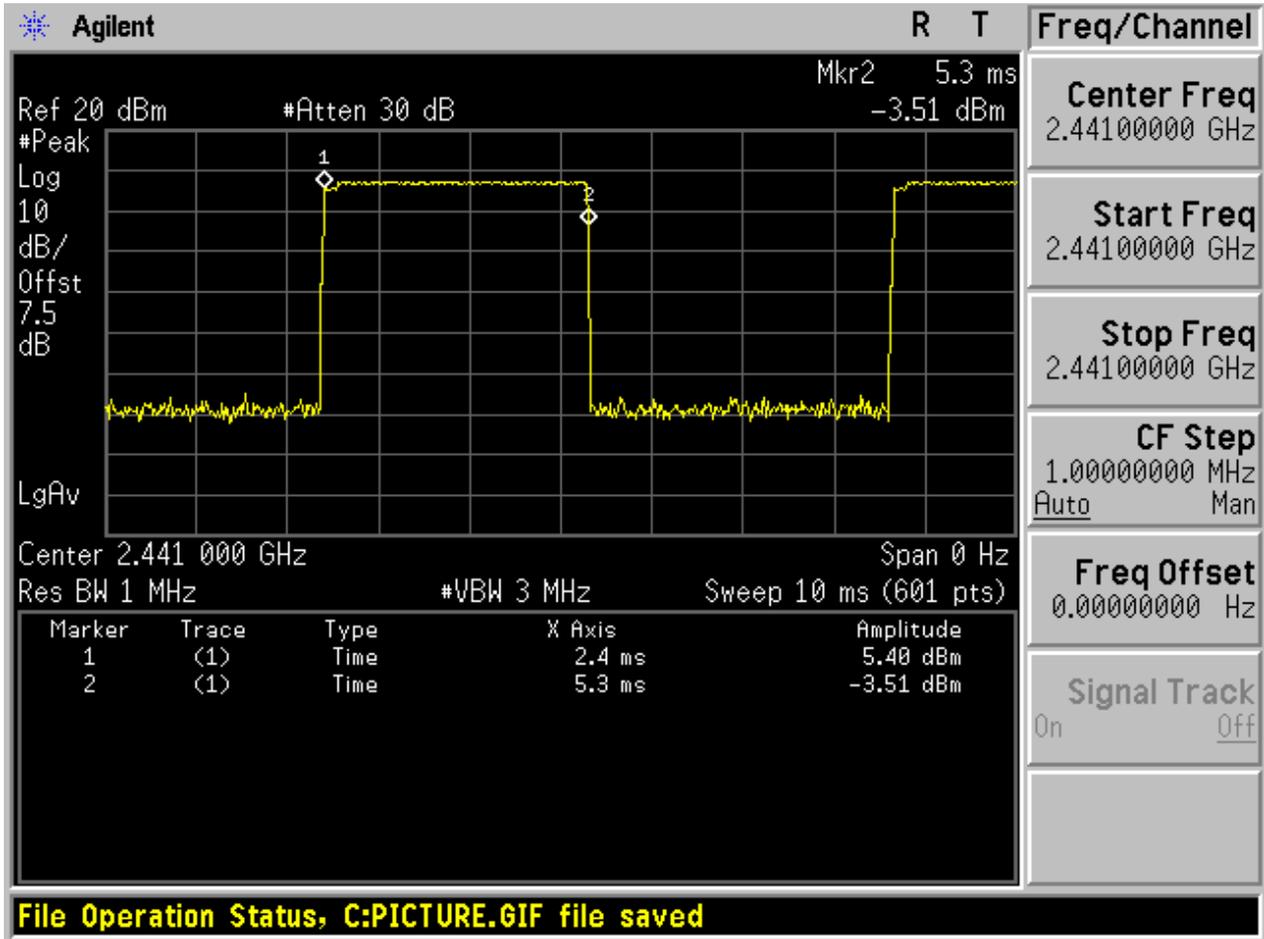
NOTE: The test plots are only for Burst Width measurements.

### 2.1 TM1\_DH5\_Ch39



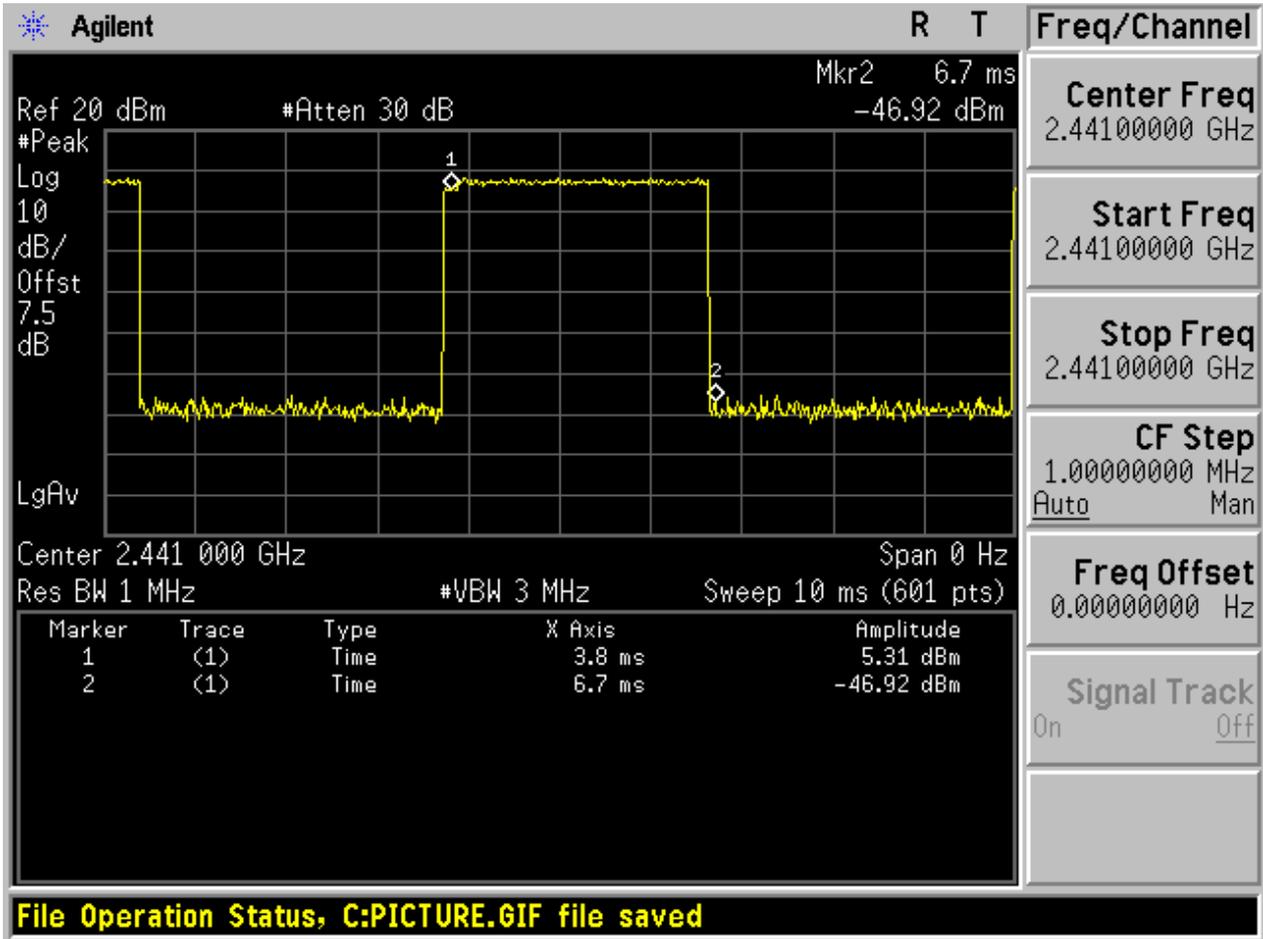


2.2 TM2\_2DH5\_Ch39





2.3 TM3\_3DH5\_Ch39





# Appendix E: Maximum Peak Conducted Output Power



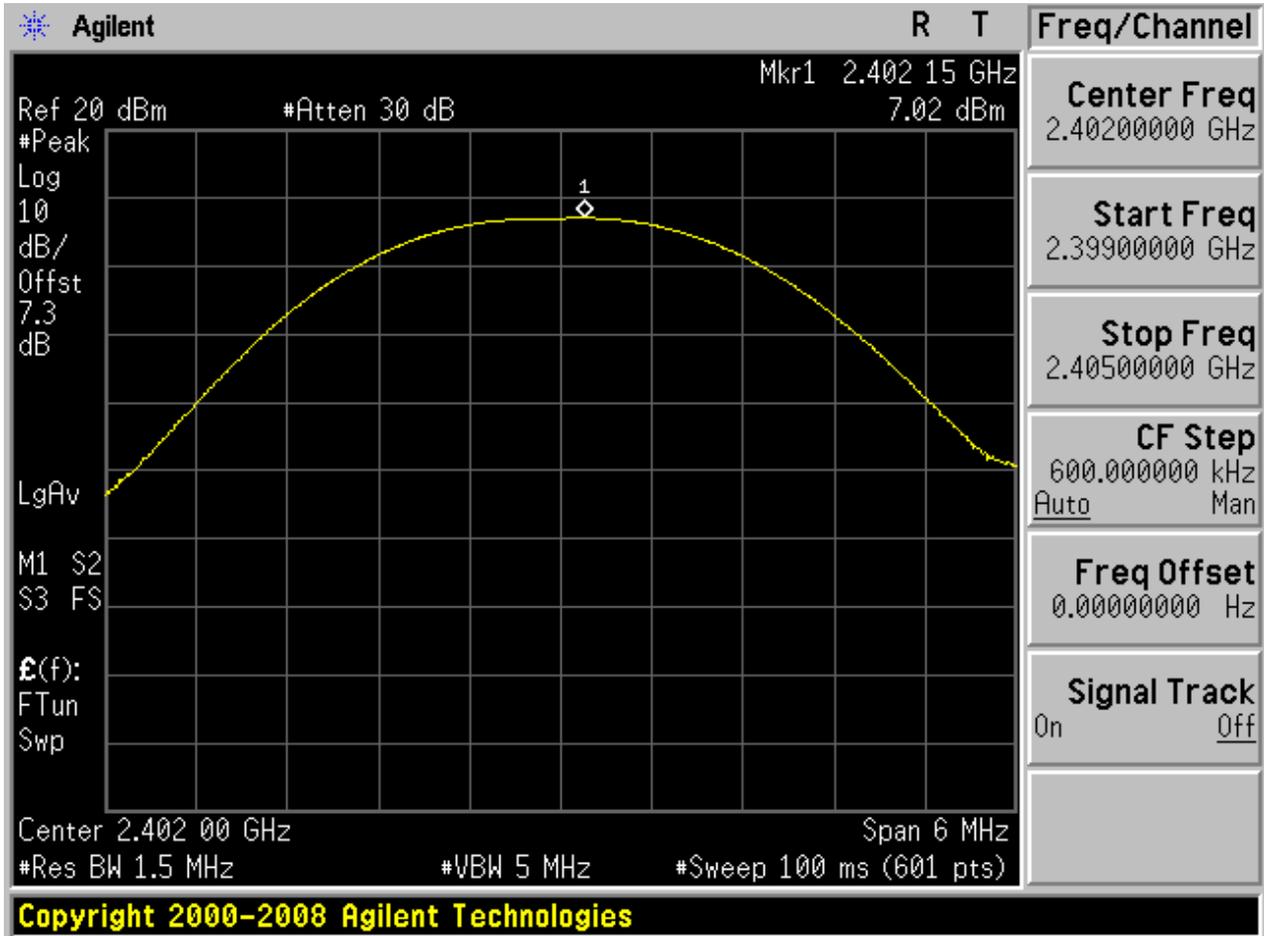
**1 Result Table**

EUT Conf.	Max. Peak Power [dBm]	Verdict
TM1_DH5_Ch0	7.02	Pass
TM1_DH5_Ch39	7.41	Pass
TM1_DH5_Ch78	7.44	Pass
TM2_2DH5_Ch0	5.05	Pass
TM2_2DH5_Ch39	5.66	Pass
TM2_2DH5_Ch78	5.74	Pass
TM3_3DH5_Ch0	5.43	Pass
TM3_3DH5_Ch39	6	Pass
TM3_3DH5_Ch78	6.05	Pass



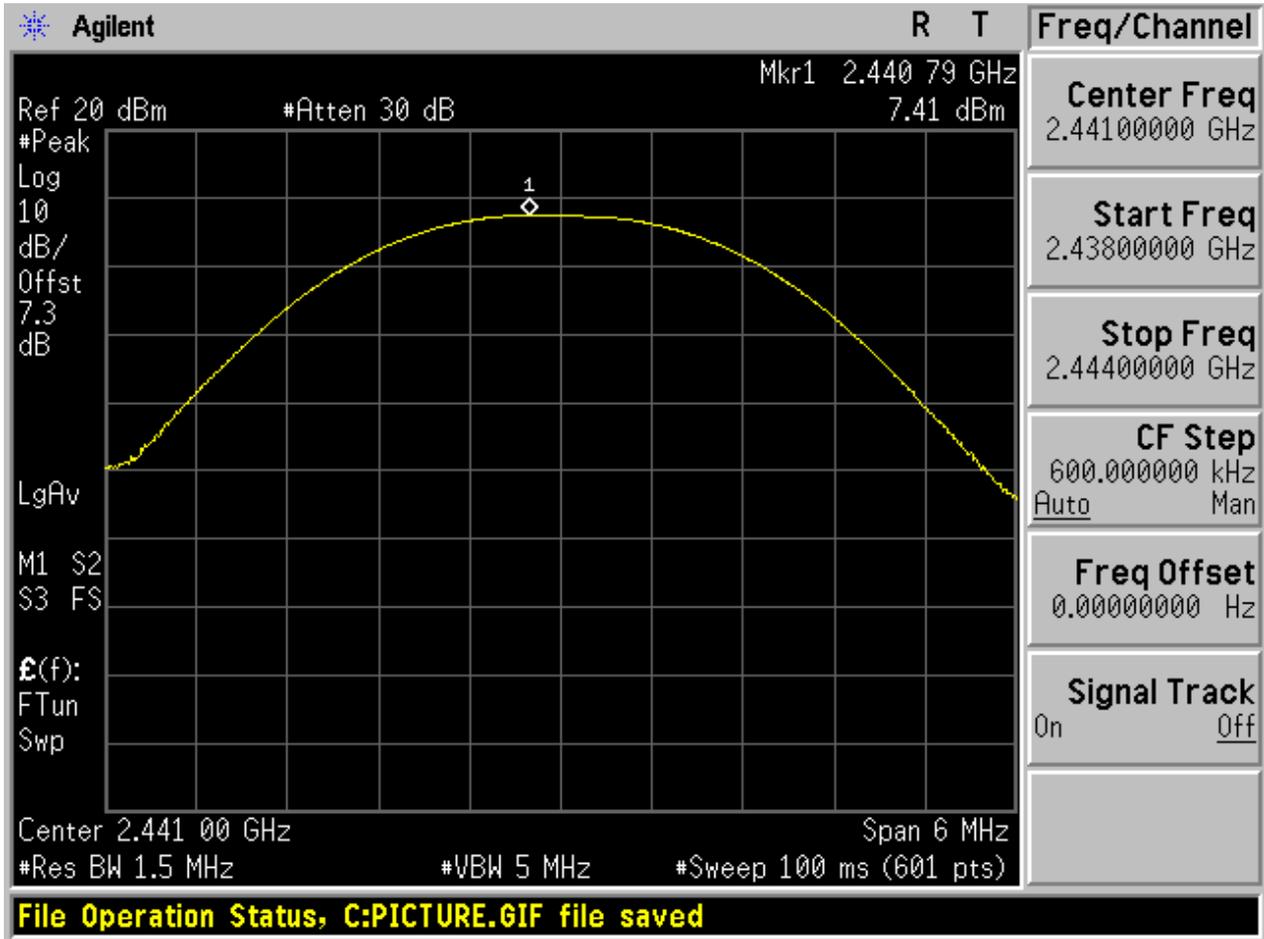
## 2 Test Plot

### 2.1 TM1\_DH5\_Ch0

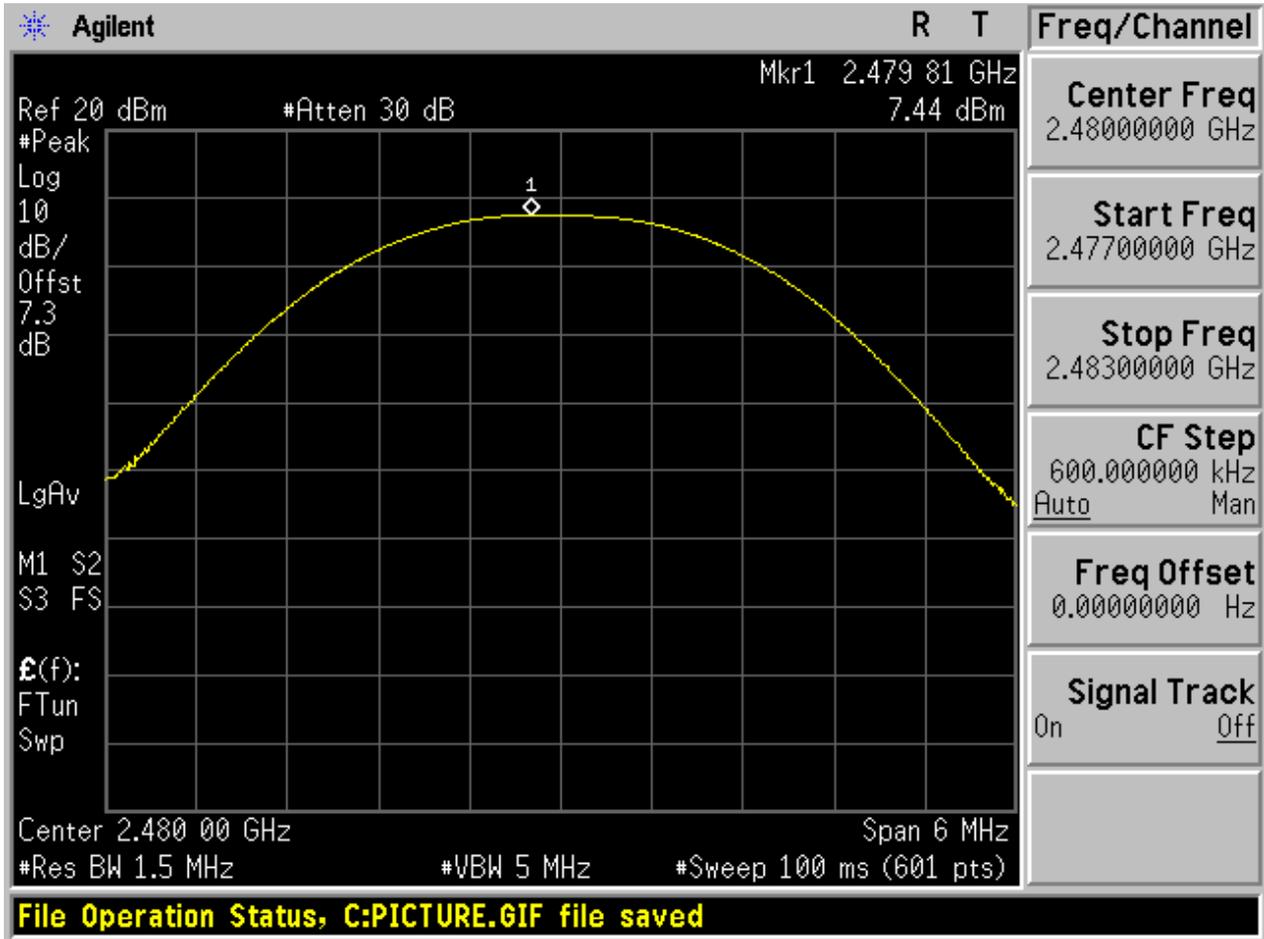




### 2.2 TM1\_DH5\_Ch39

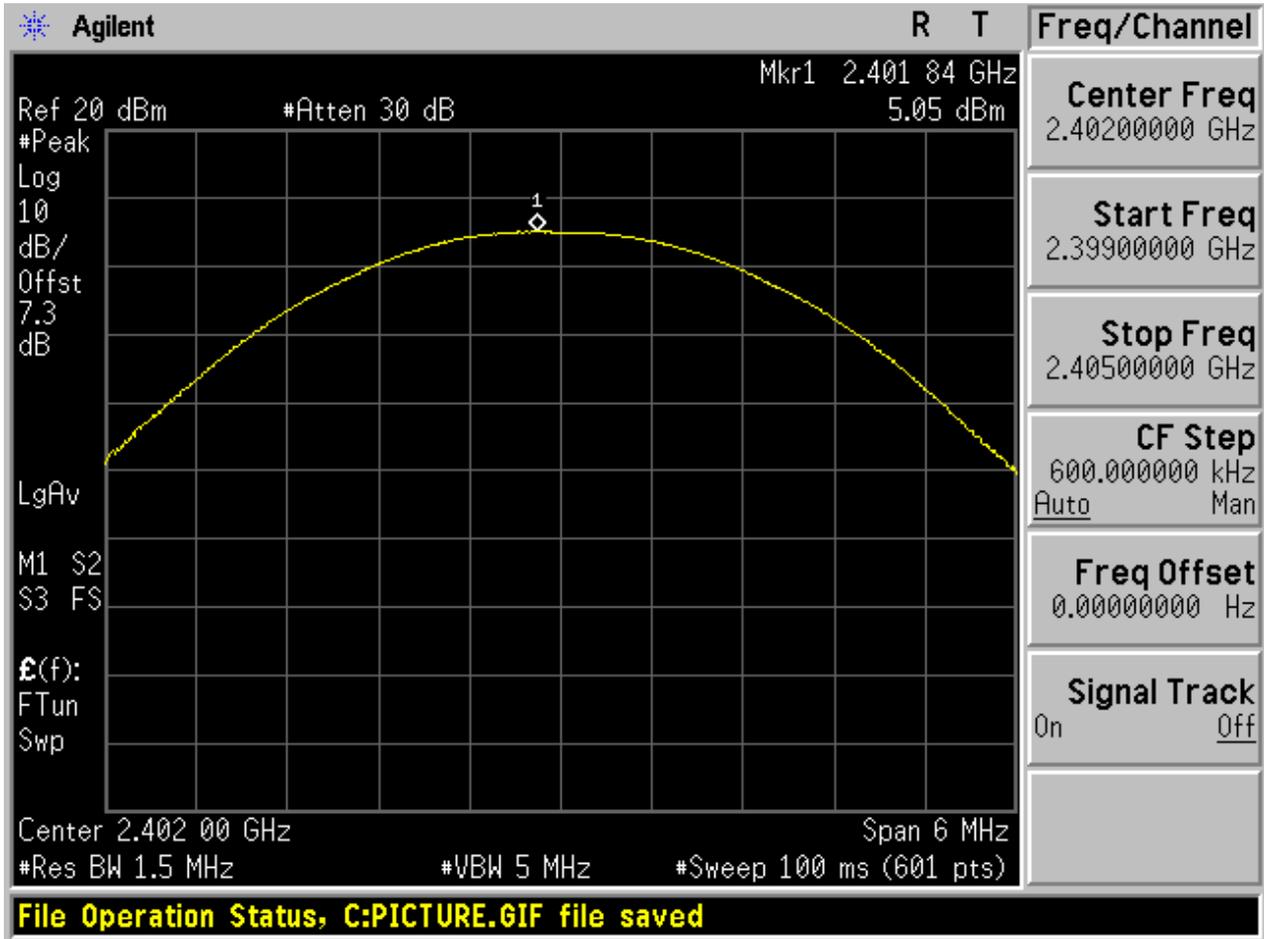


2.3 TM1\_DH5\_Ch78



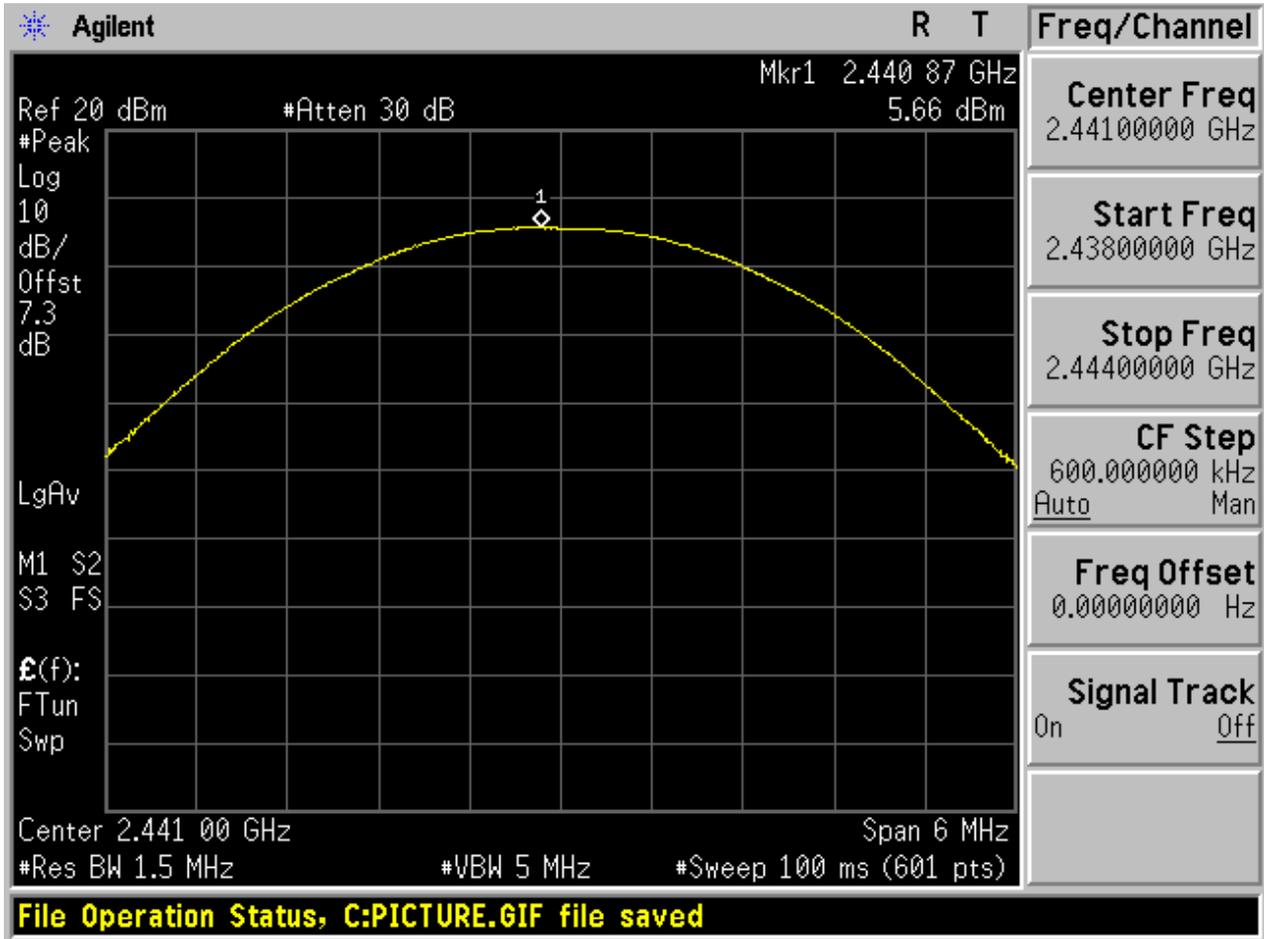


### 2.4 TM2\_2DH5\_Ch0



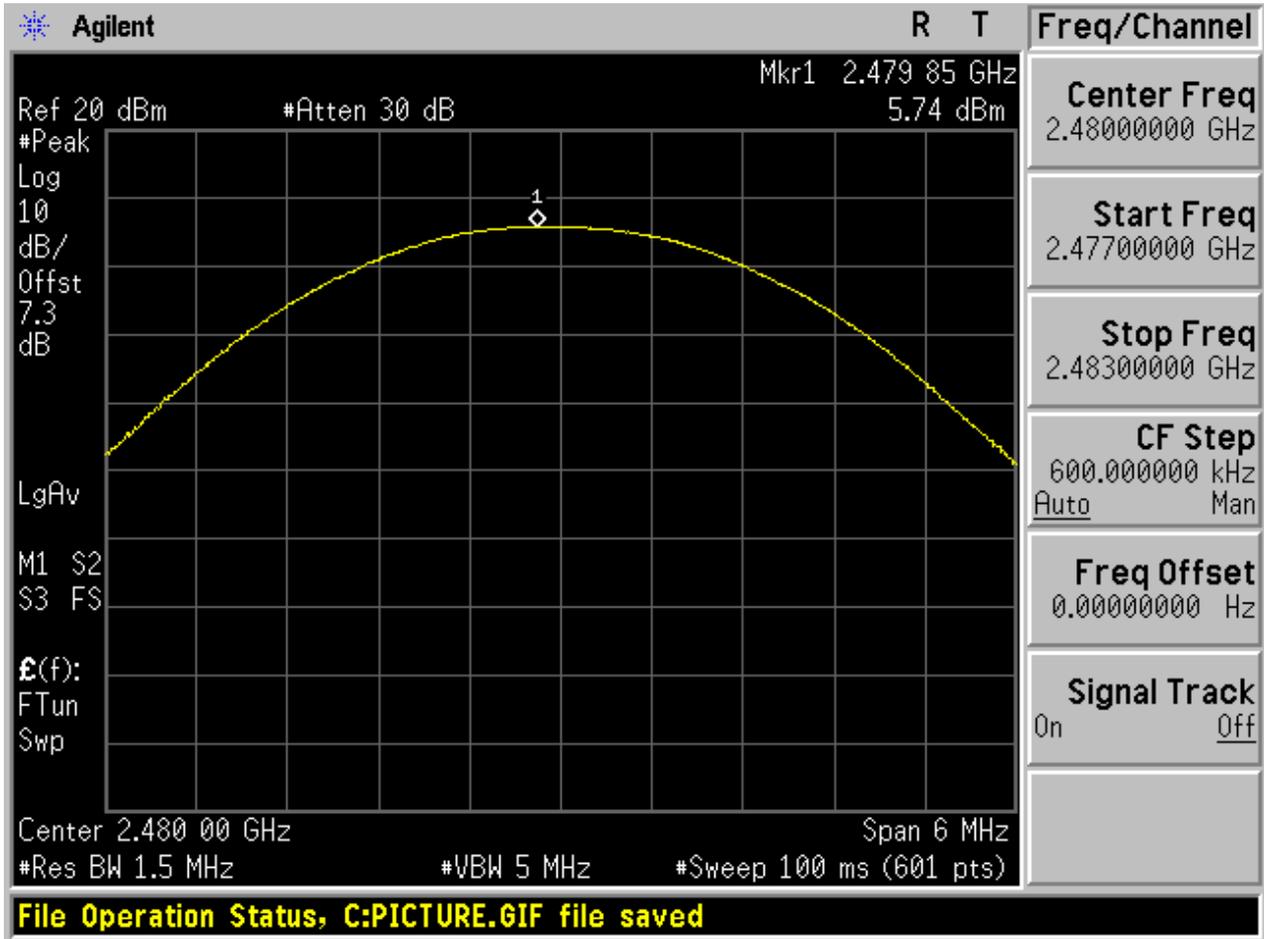


### 2.5 TM2\_2DH5\_Ch39



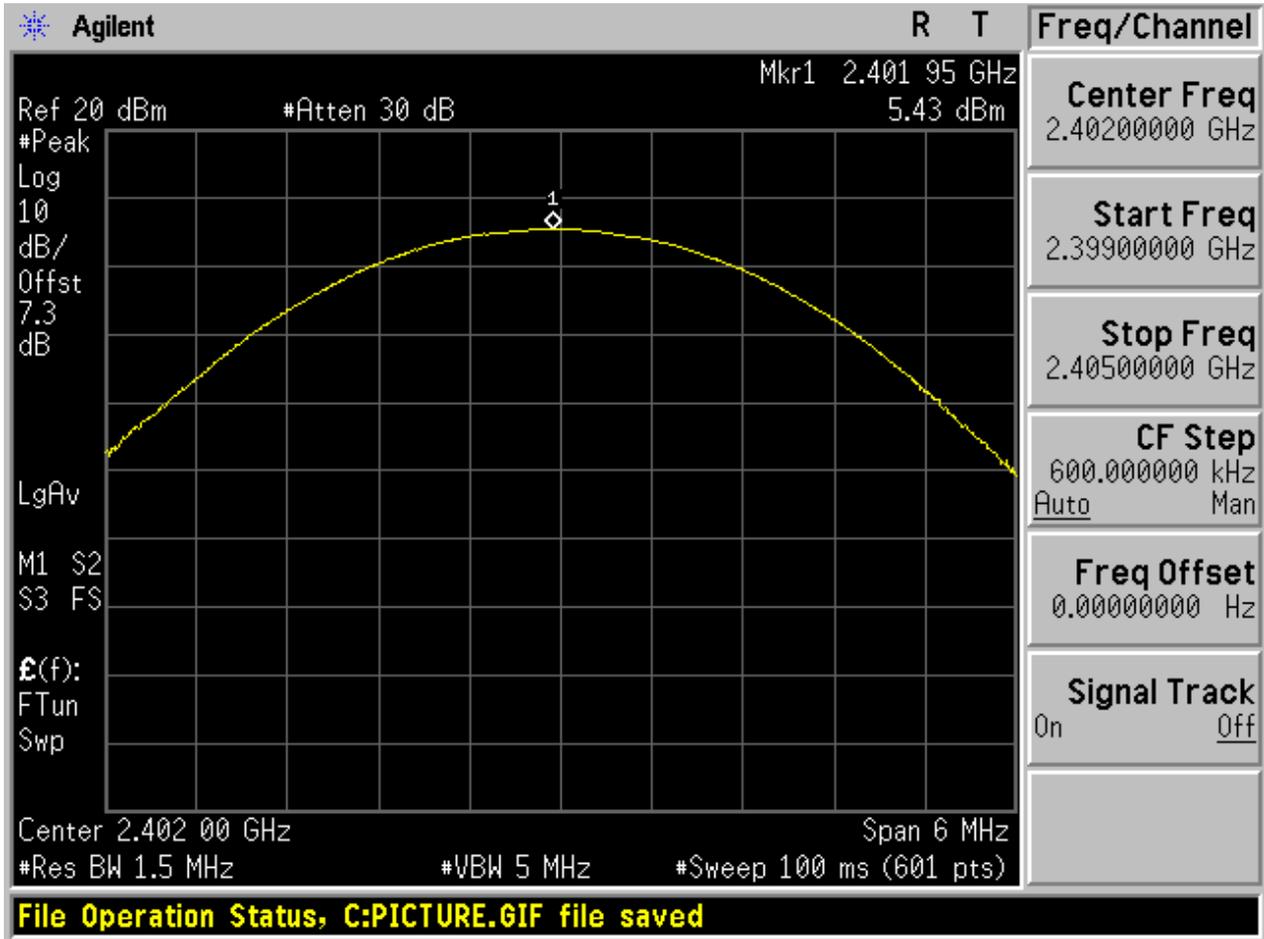


2.6 TM2\_2DH5\_Ch78



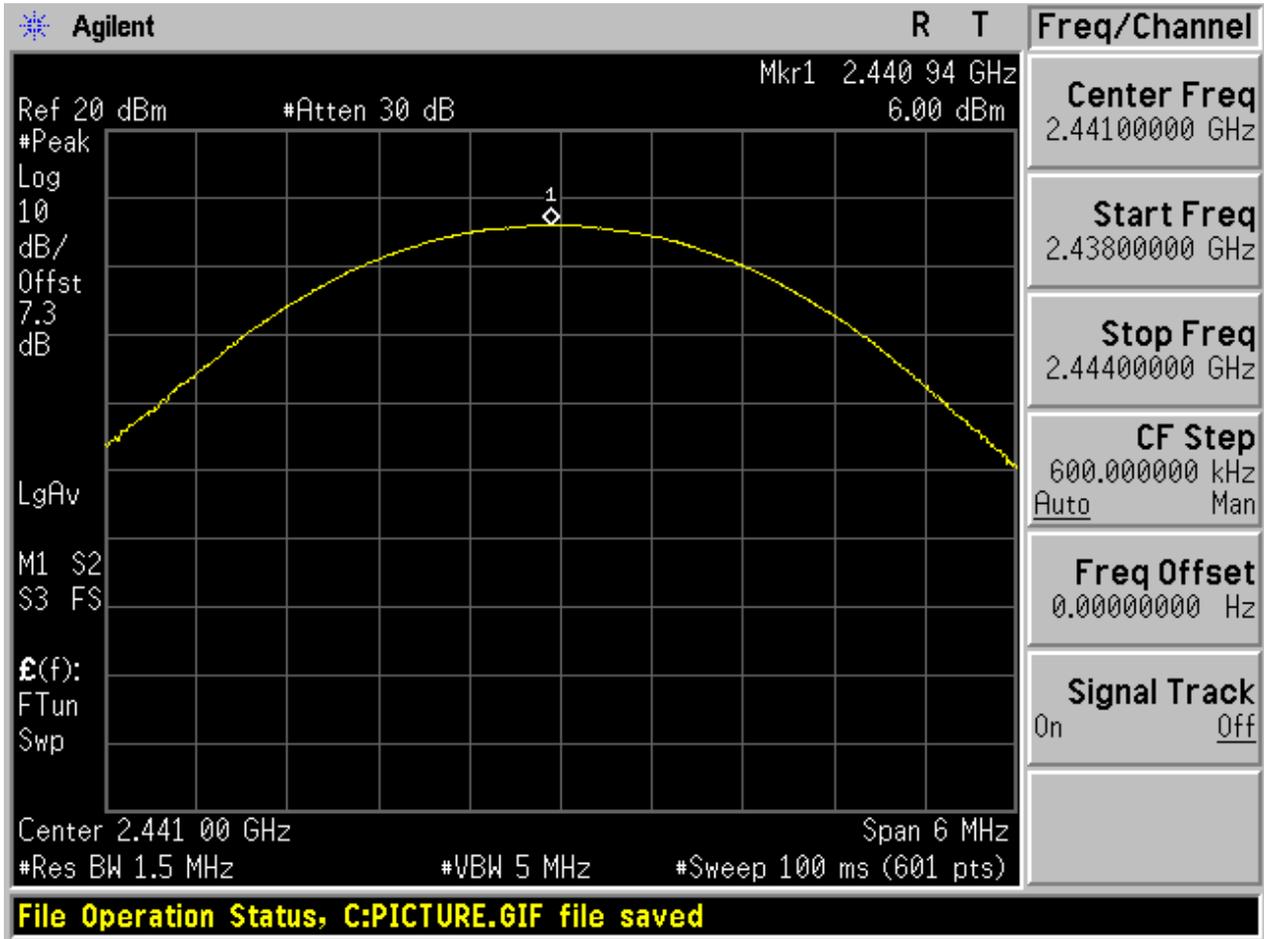


### 2.7 TM3\_3DH5\_Ch0



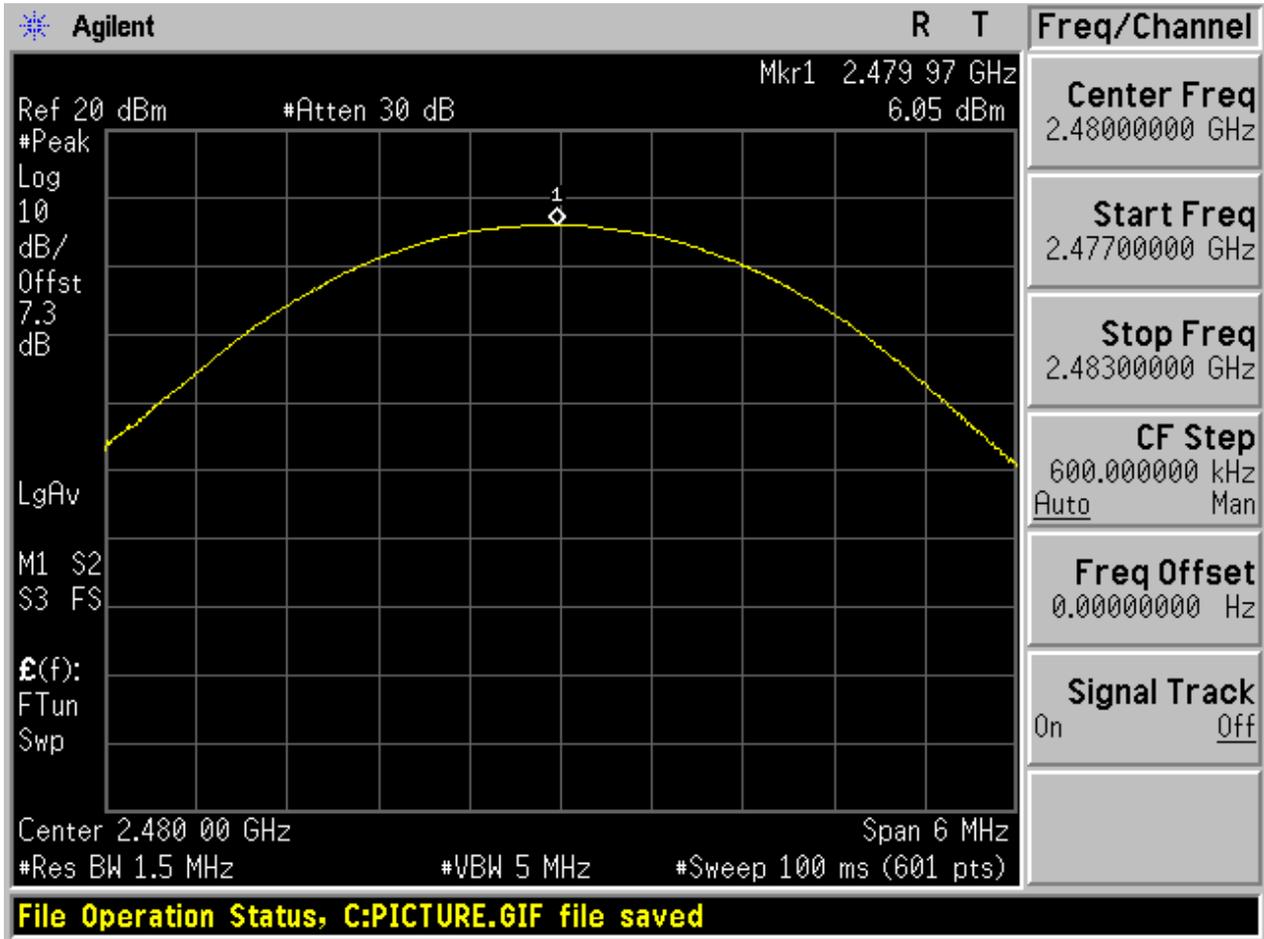


2.8 TM3\_3DH5\_Ch39





### 2.9 TM3\_3DH5\_Ch78





# Appendix F: Band edge spurious emission

**1 Result Table**

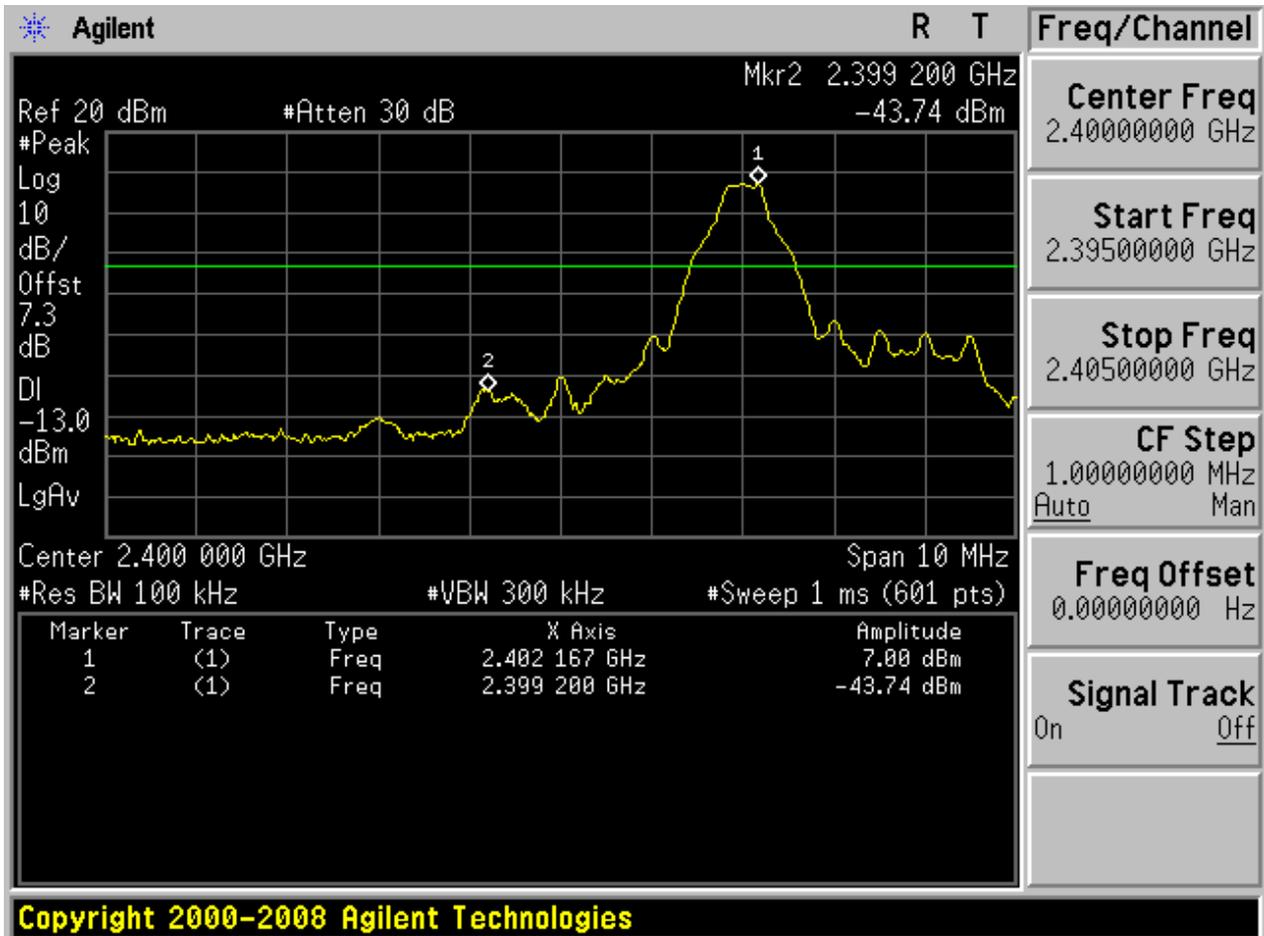
EUT Conf.	Channel No.	Carrier Frequency [MHz]	Max. Spurious Level [dBm]	Frequency Hopping	Carrier Power [dBm]	Limit [dBm]	Result
TM1_DH5_Ch0	0	2402	-43.73	Off	7.00	-13	Pass
	-	-	-46.29	On	7.04	-12.96	Pass
TM1_DH5_Ch78	78	2480	-49.48	Off	7.28	-12.72	Pass
	-	-	-52.73	On	6.91	-13.09	Pass
TM2_2DH5_Ch0	0	2402	-36.22	Off	3.91	-16.09	Pass
	-	-	-41.8	On	2.37	-17.63	Pass
TM2_2DH5_Ch78	78	2480	-52.49	Off	4.65	-15.35	Pass
	-	-	-53.63	On	4.62	-15.38	Pass
TM3_3DH5_Ch0	0	2402	-35.81	Off	3.94	-16.06	Pass
	-	-	-42.03	On	2.22	-17.78	Pass
TM3_3DH5_Ch78	78	2480	-52.77	Off	4.67	-15.33	Pass
	-	-	-53.34	On	4.61	-15.39	Pass



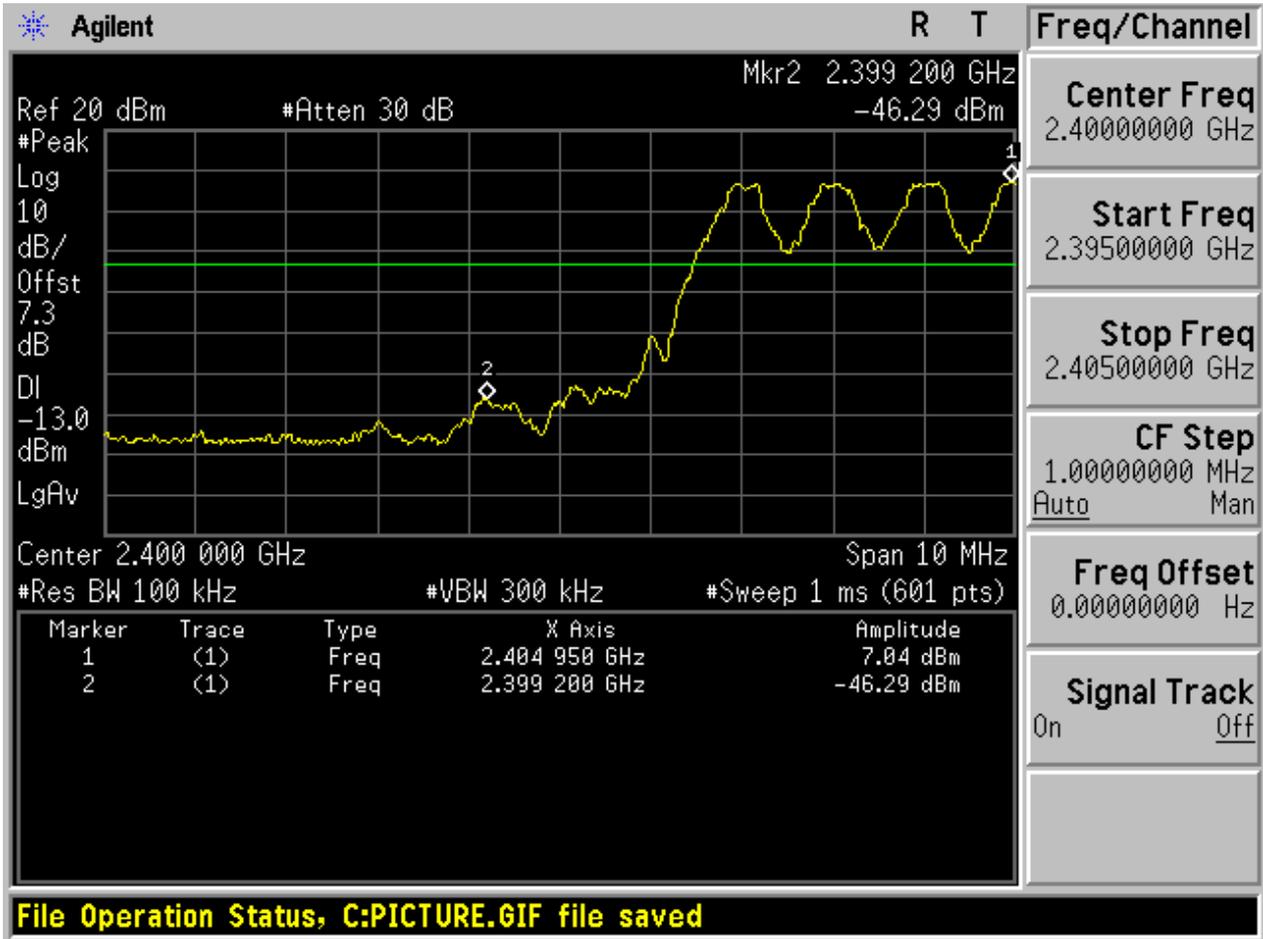
## 2 Test Plot

### 2.1 TM1\_DH5\_Ch0

No hopping

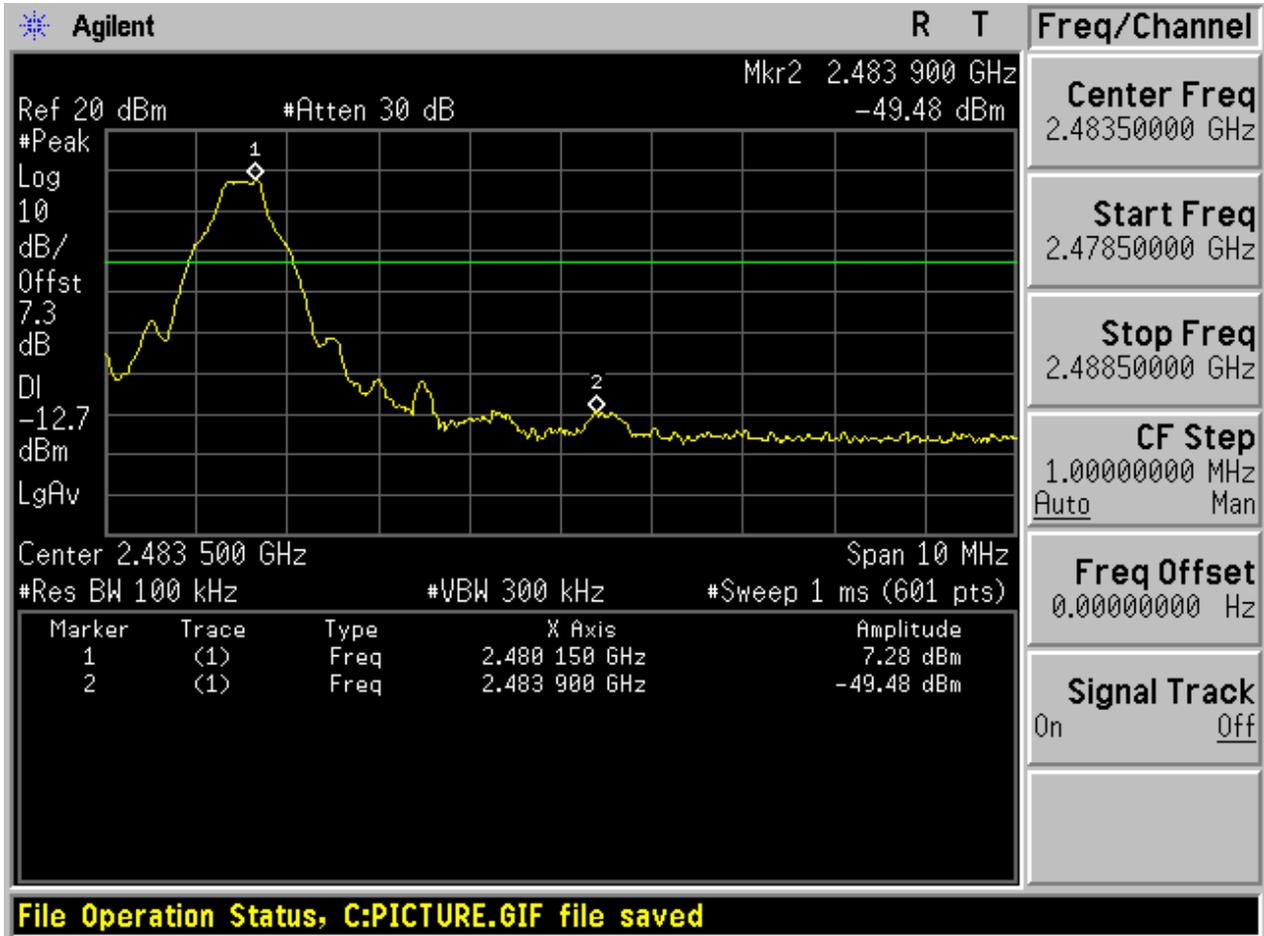


With hopping



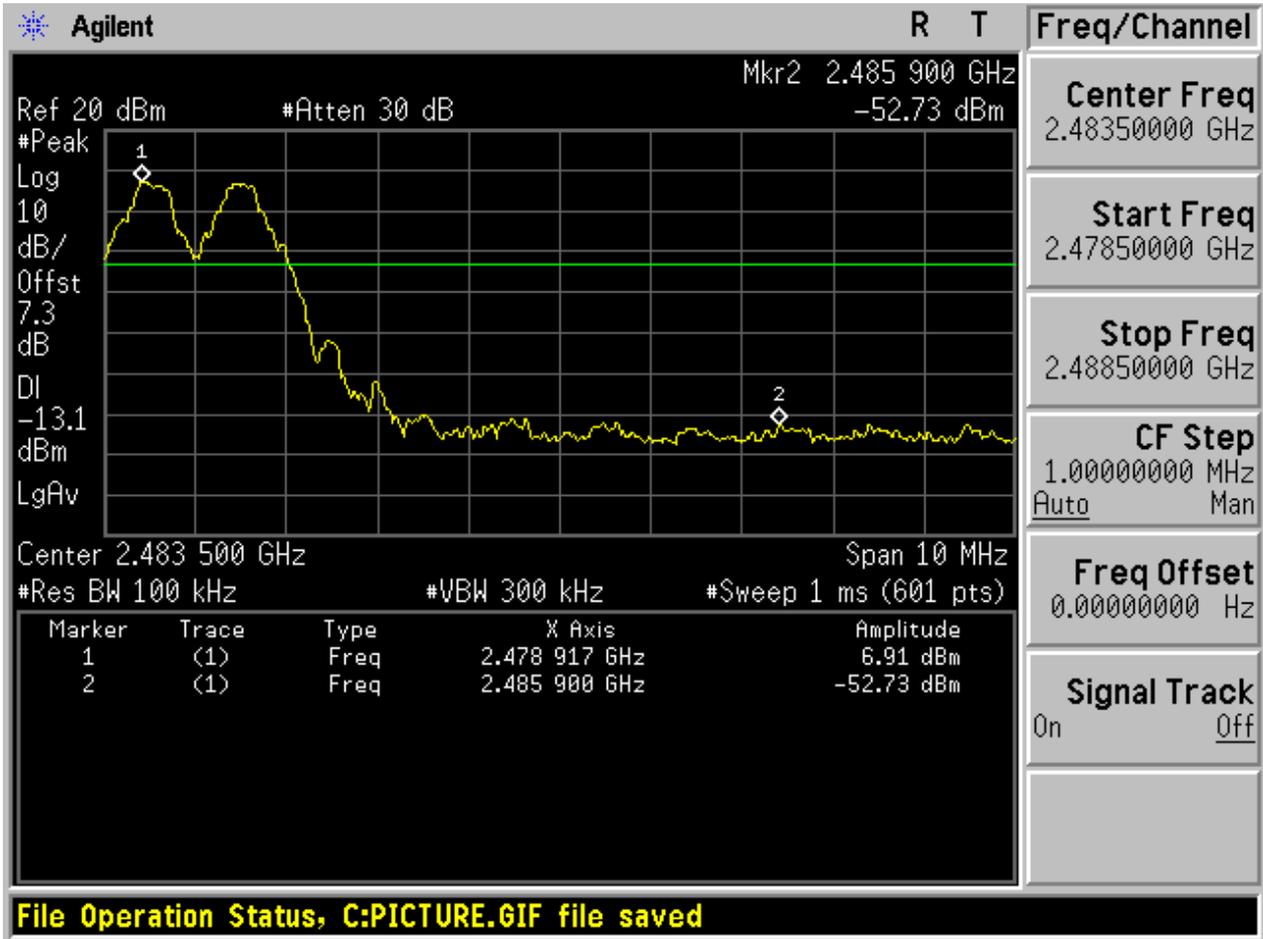
## 2.2 TM1\_DH5\_Ch78

No hopping



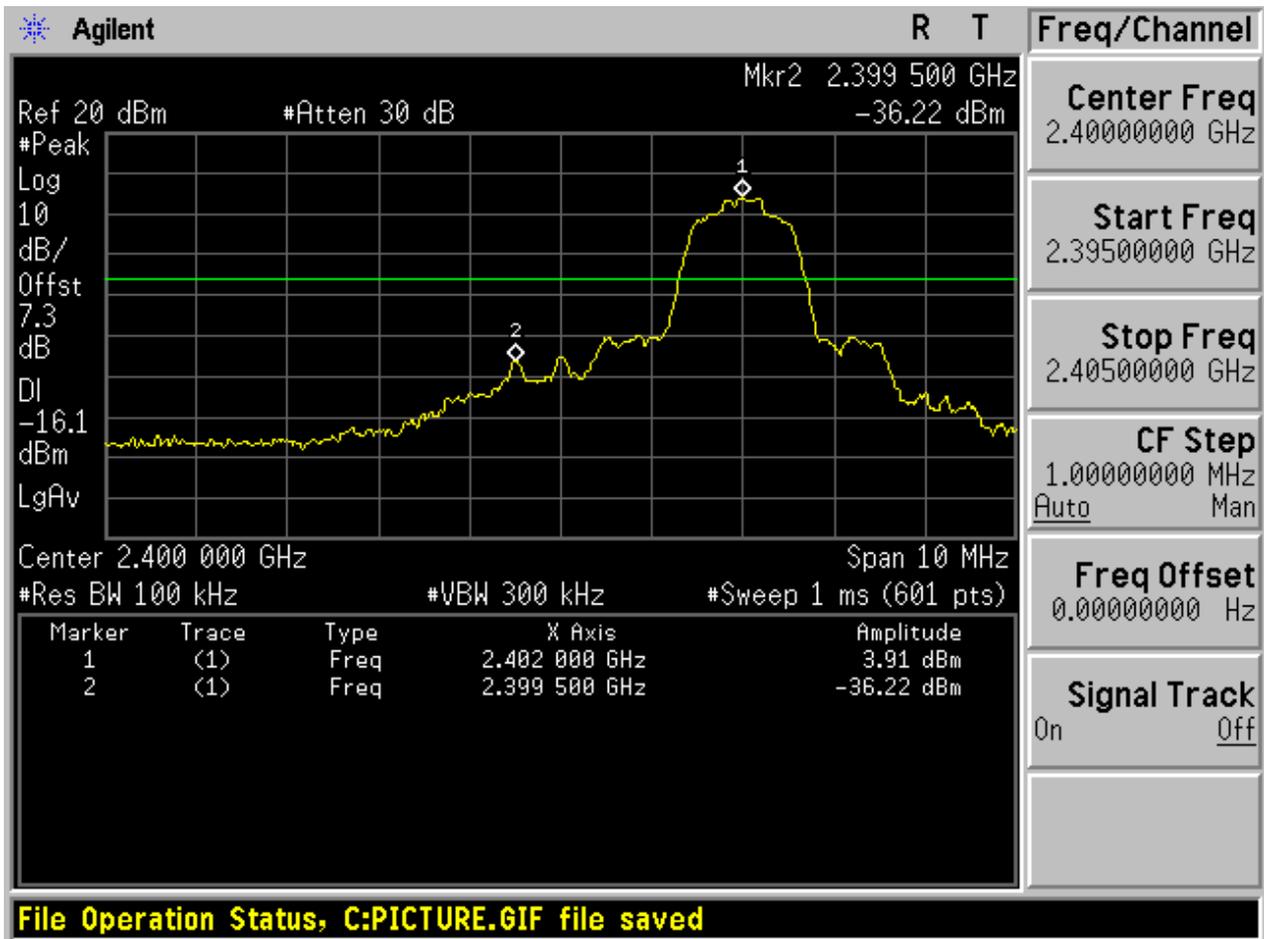


With hopping

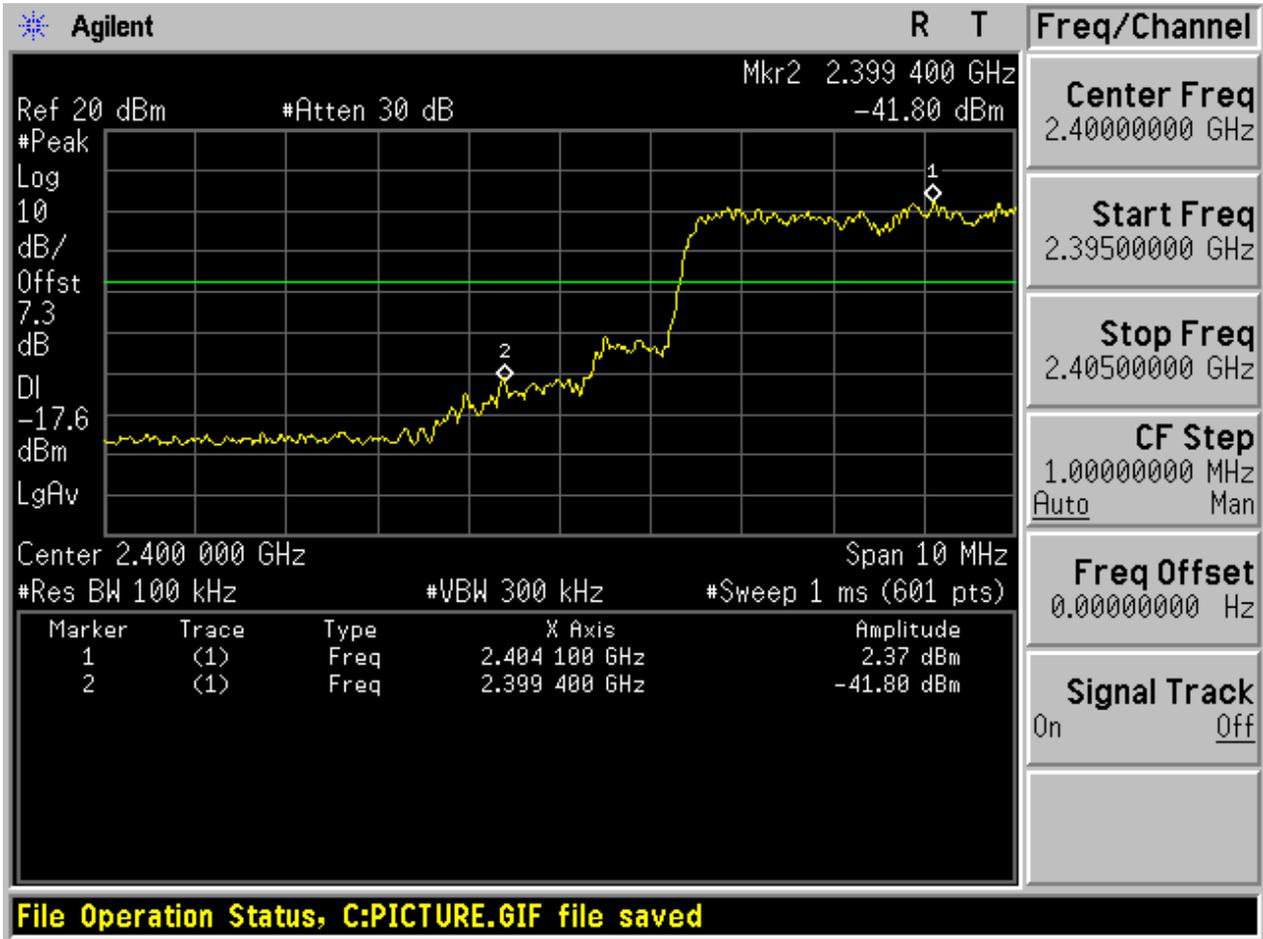


### 2.3 TM2\_2DH5\_Ch0

No hopping



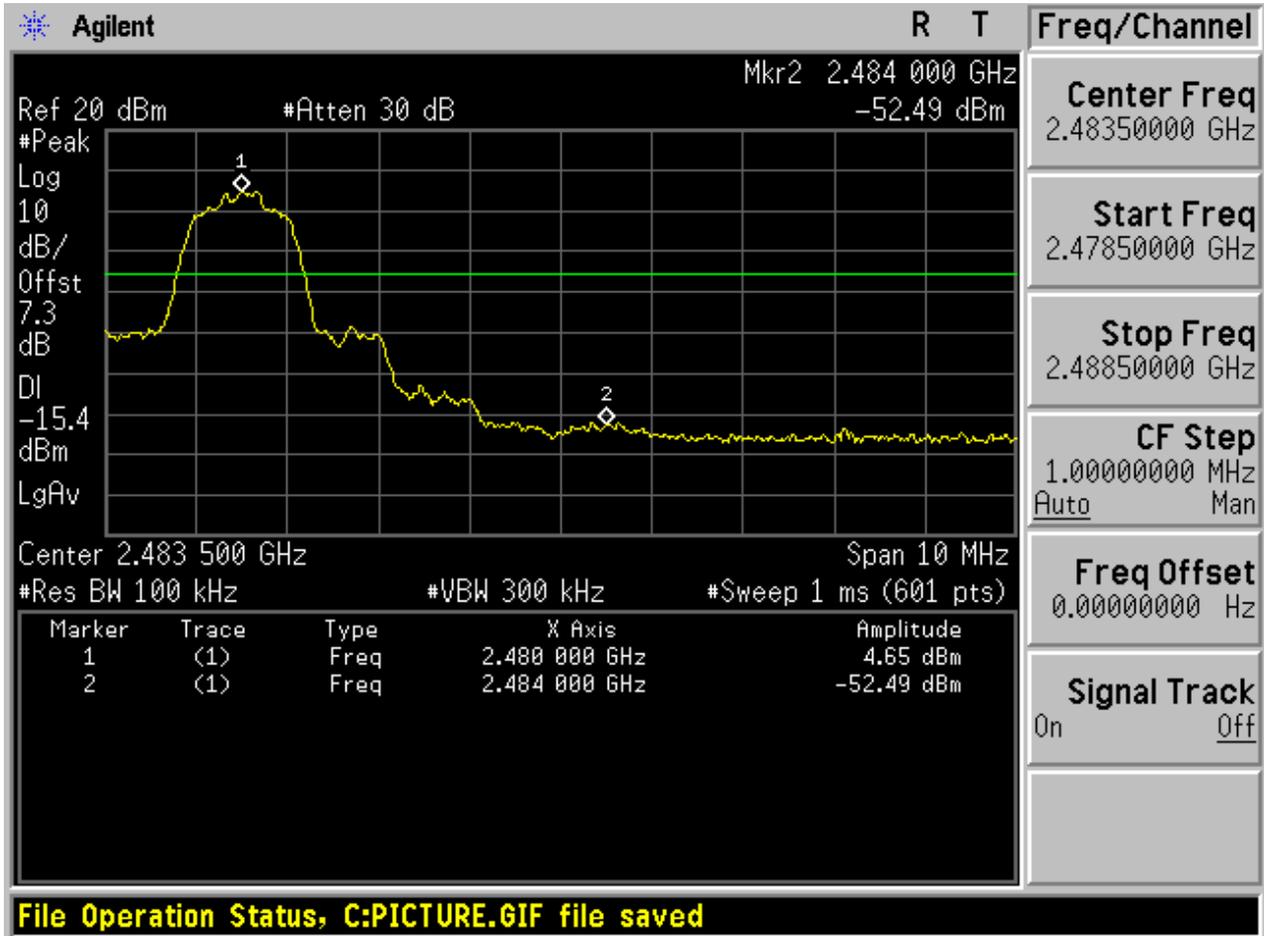
With hopping





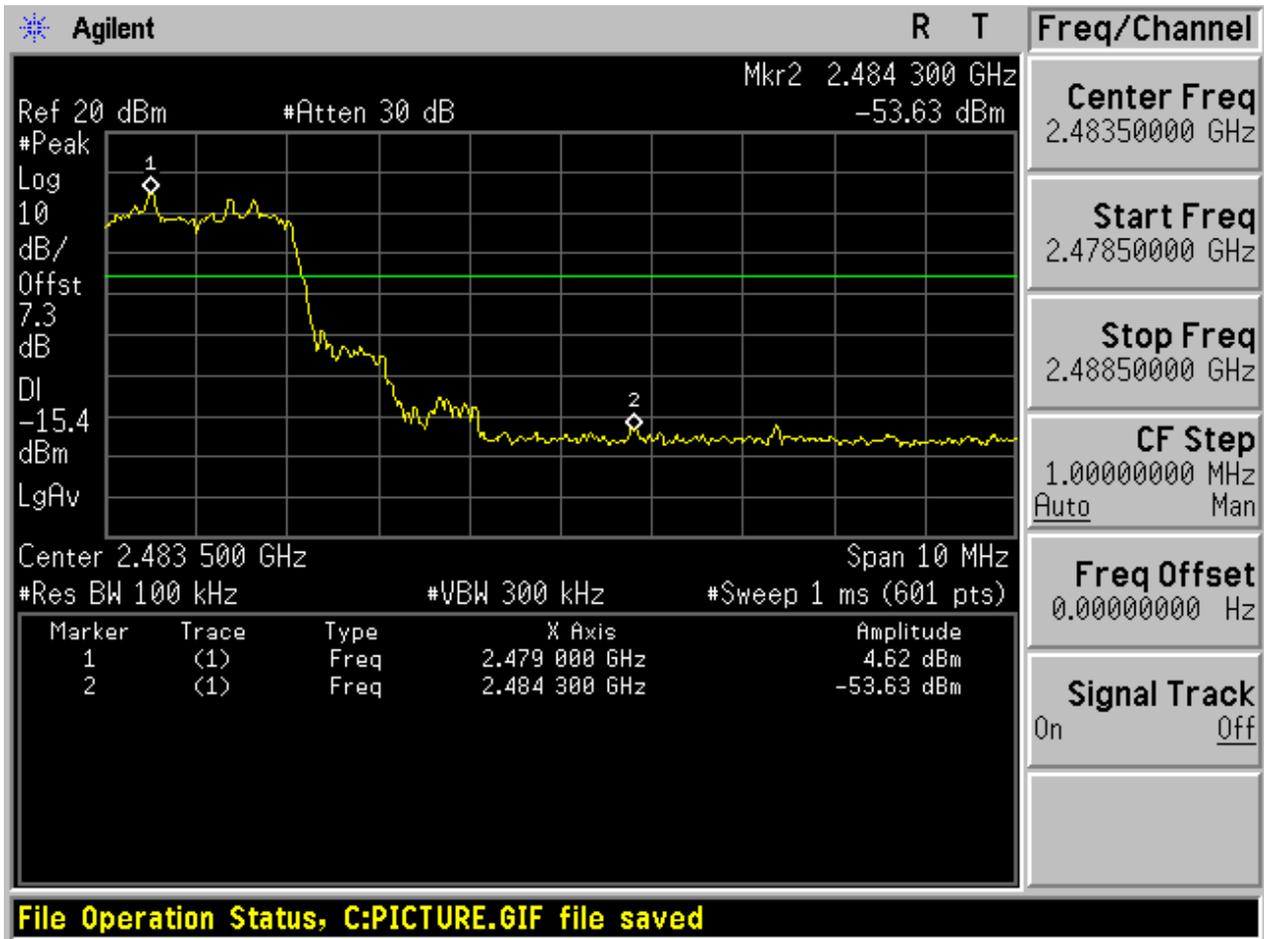
### 2.4 TM2\_2DH5\_Ch78

No hopping



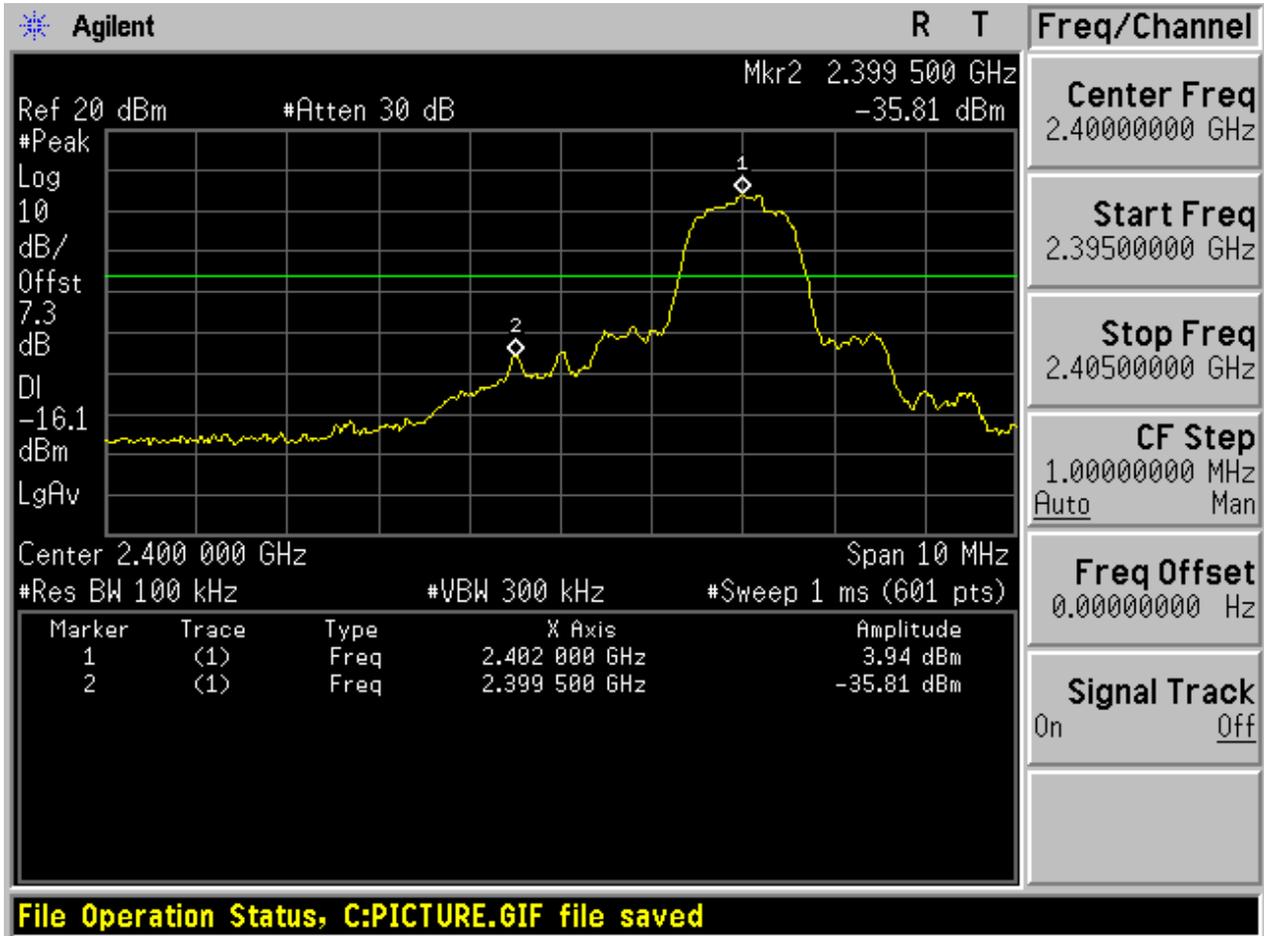


With hopping

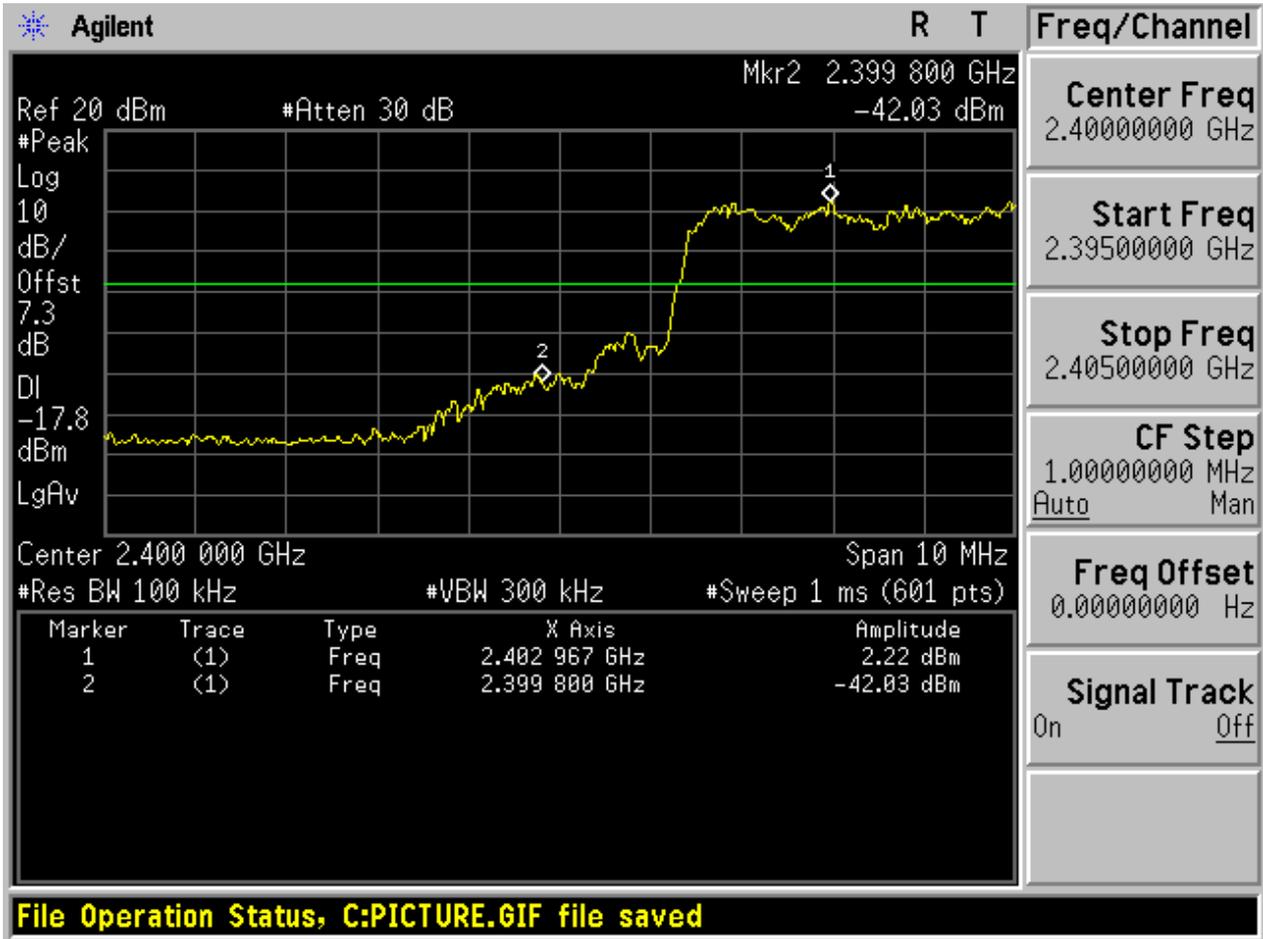


2.5 TM3\_3DH5\_Ch0

No hopping



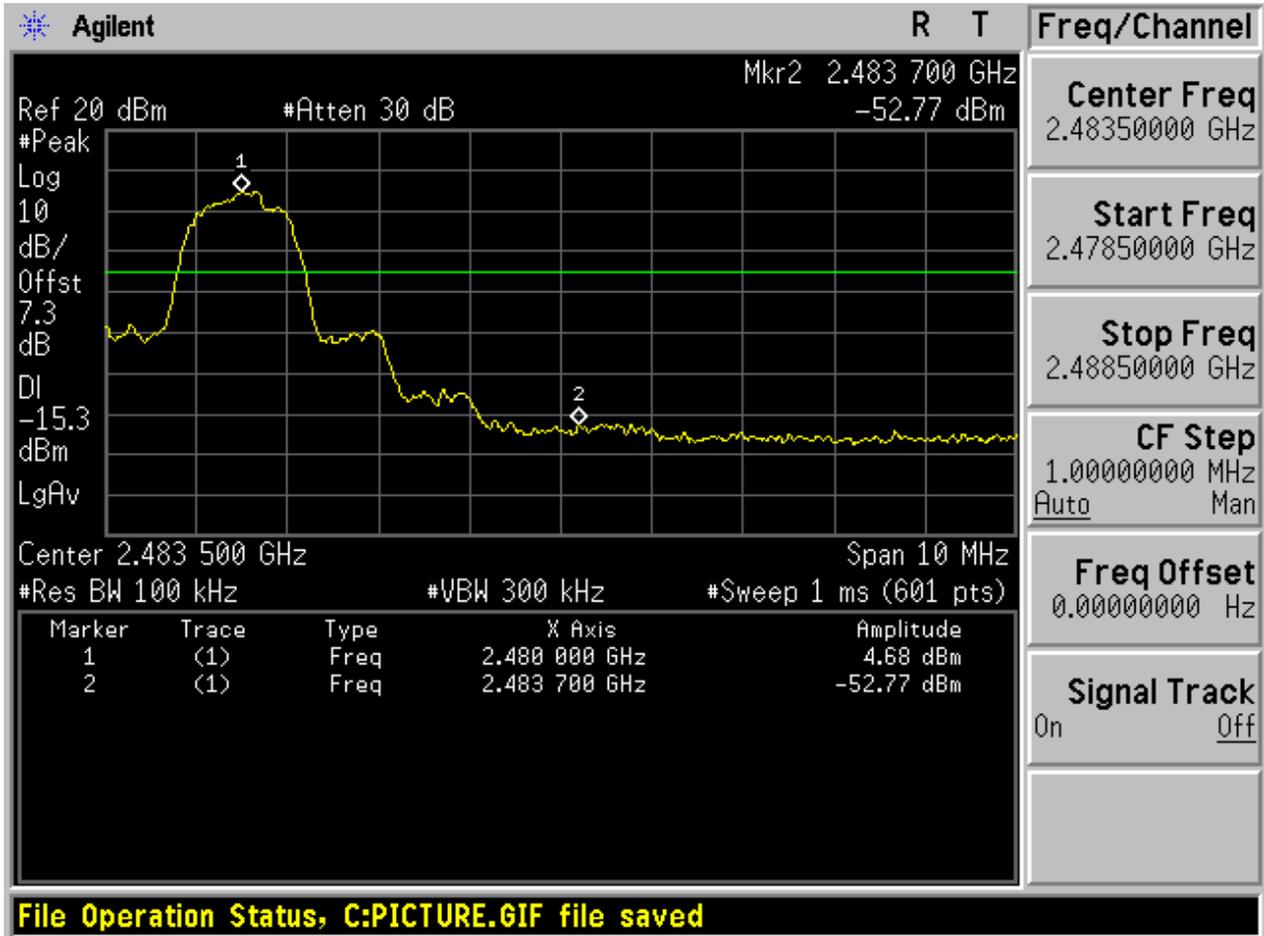
With hopping





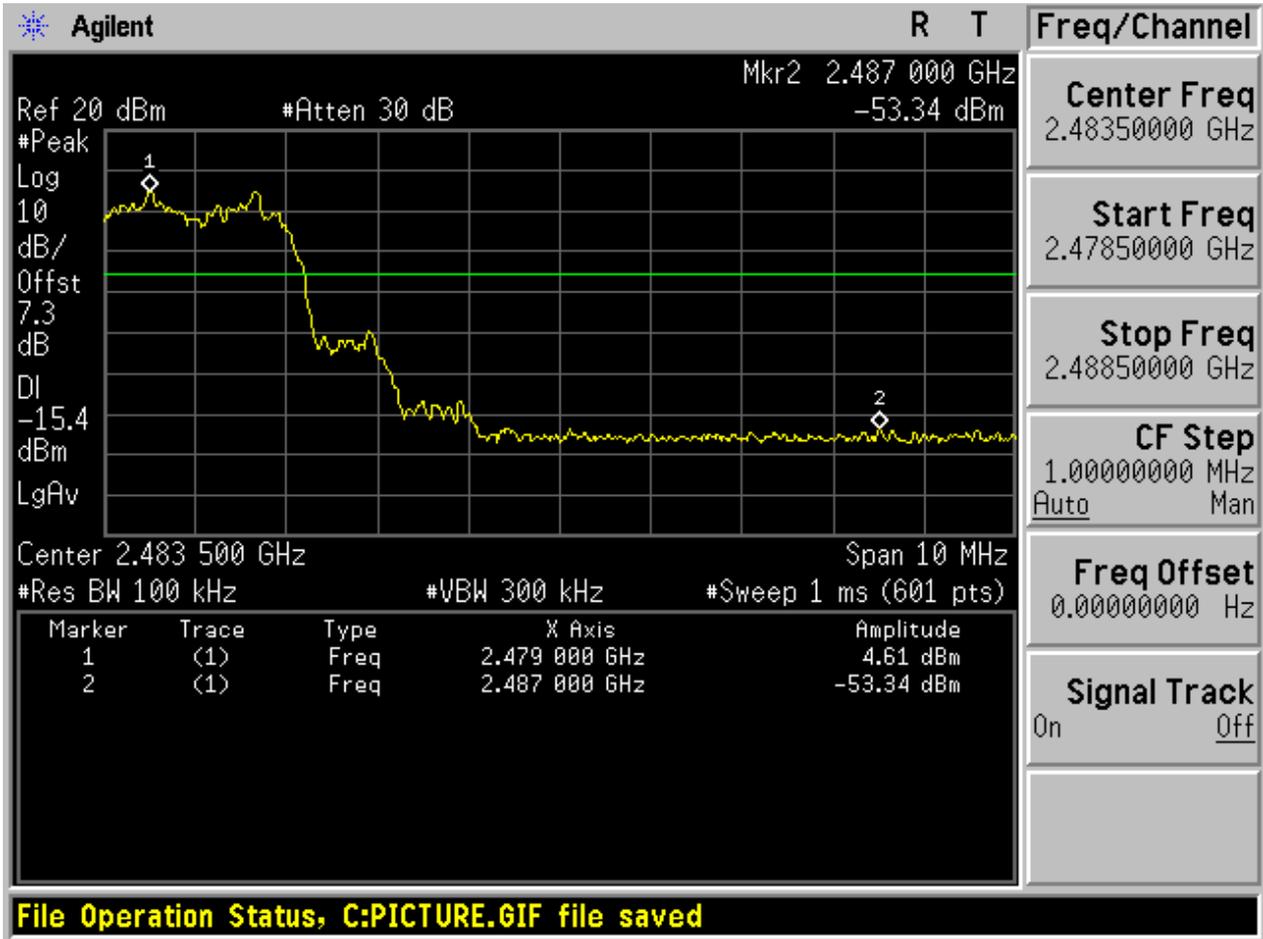
### 2.6 TM3\_3DH5\_Ch78

No hopping





With hopping





# Appendix G: Conducted RF Spurious Emission



## 1 Result Table

In this Appendix, the “Pref” refers to the peak power level in any 100 kHz bandwidth within the fundamental emission which is used as the reference level, 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.

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

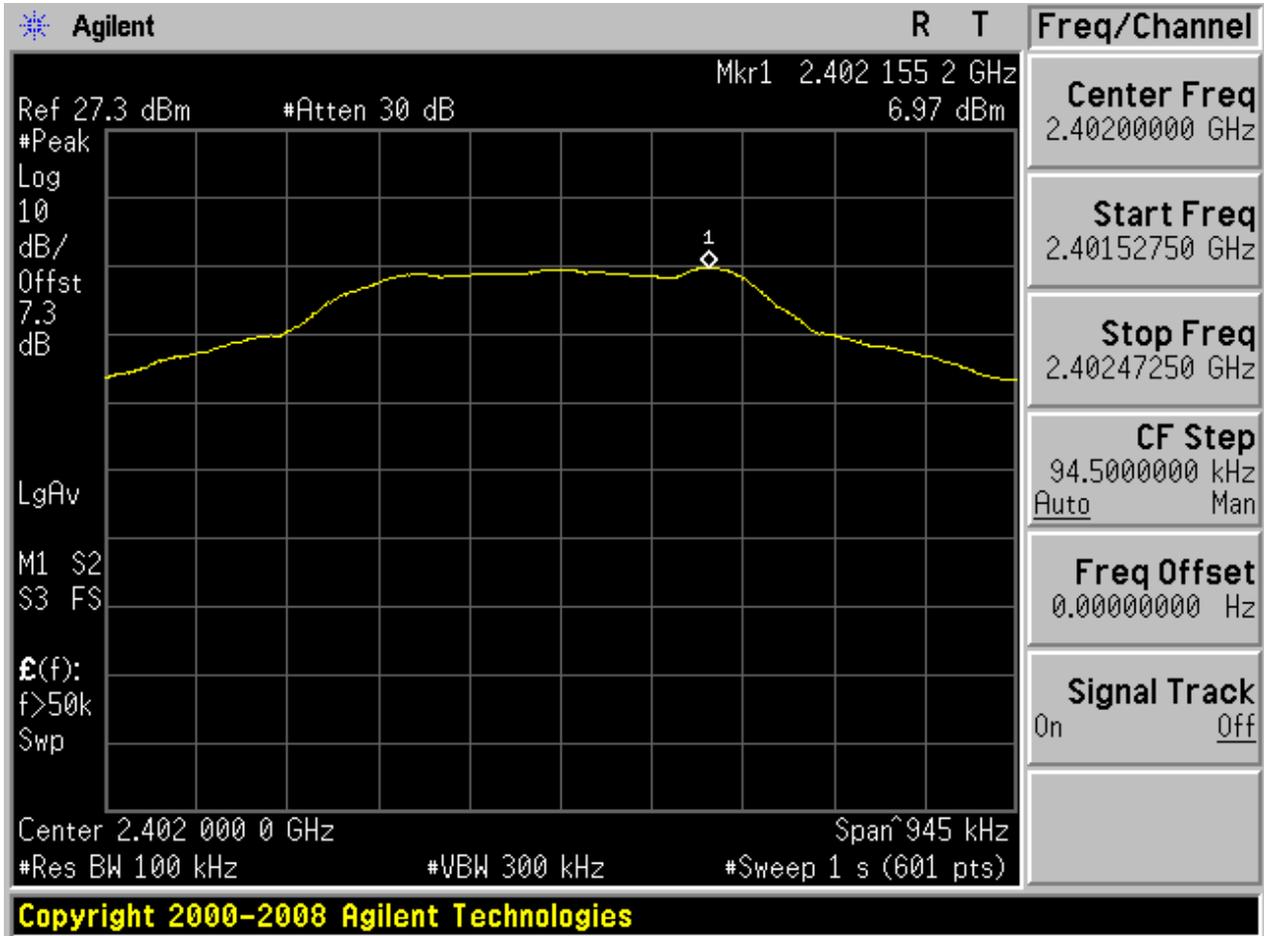
EUT Conf.	Pref [dBm/100 kHz]	Puw [dBm/100 kHz]	Verdict
TM1_DH5_Ch0	6.97	< Limit	Pass
TM1_DH5_Ch39	7.20	< Limit	Pass
TM1_DH5_Ch78	7.24	< Limit	Pass
TM2_2DH5_Ch0	3.88	< Limit	Pass
TM2_2DH5_Ch39	4.42	< Limit	Pass
TM2_2DH5_Ch78	4.55	< Limit	Pass
TM3_3DH5_Ch0	3.85	< Limit	Pass
TM3_3DH5_Ch39	4.42	< Limit	Pass
TM3_3DH5_Ch78	4.54	< Limit	Pass



## 2 Test Plot

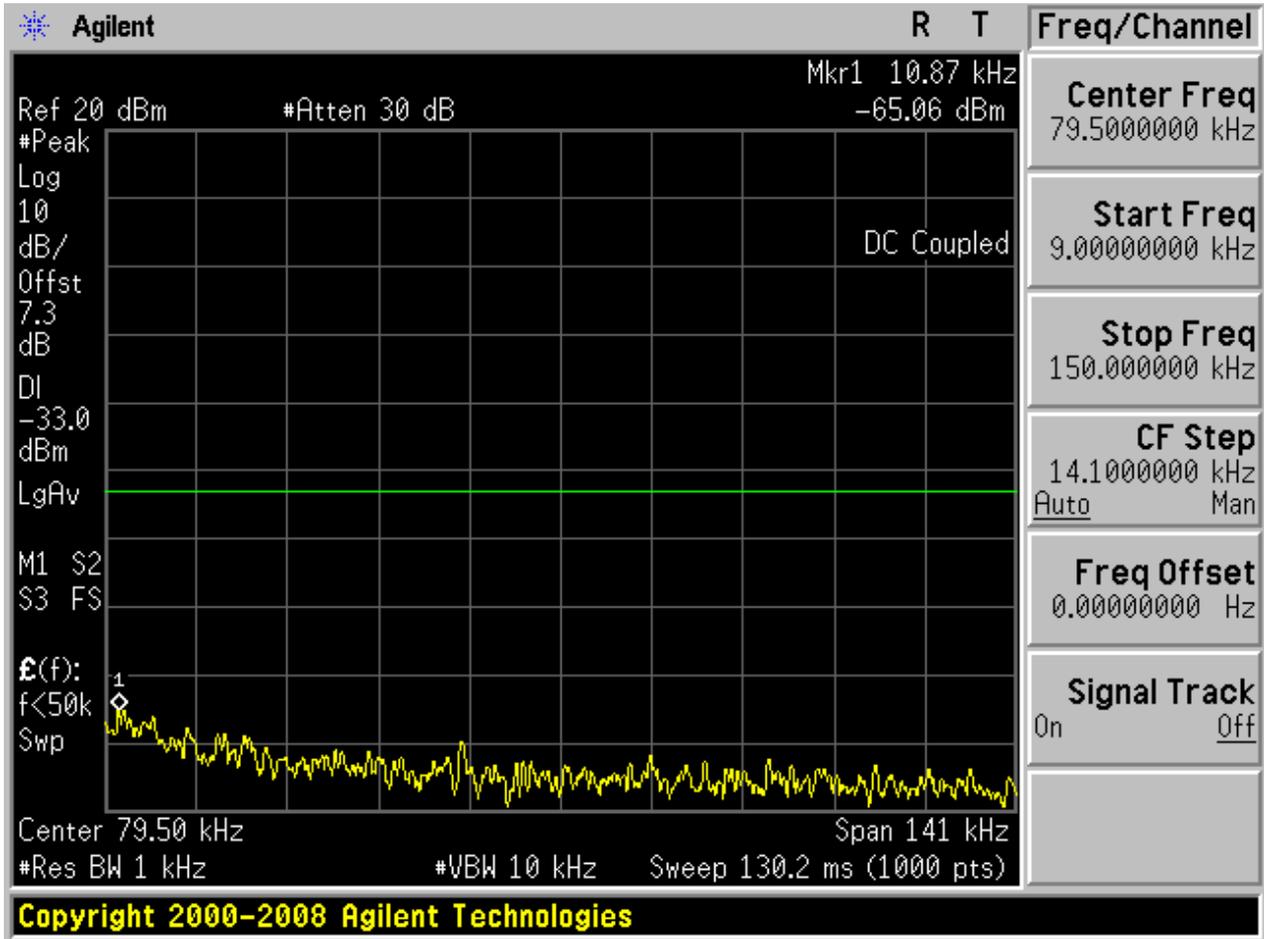
### 2.1 TM1\_DH5\_Ch0

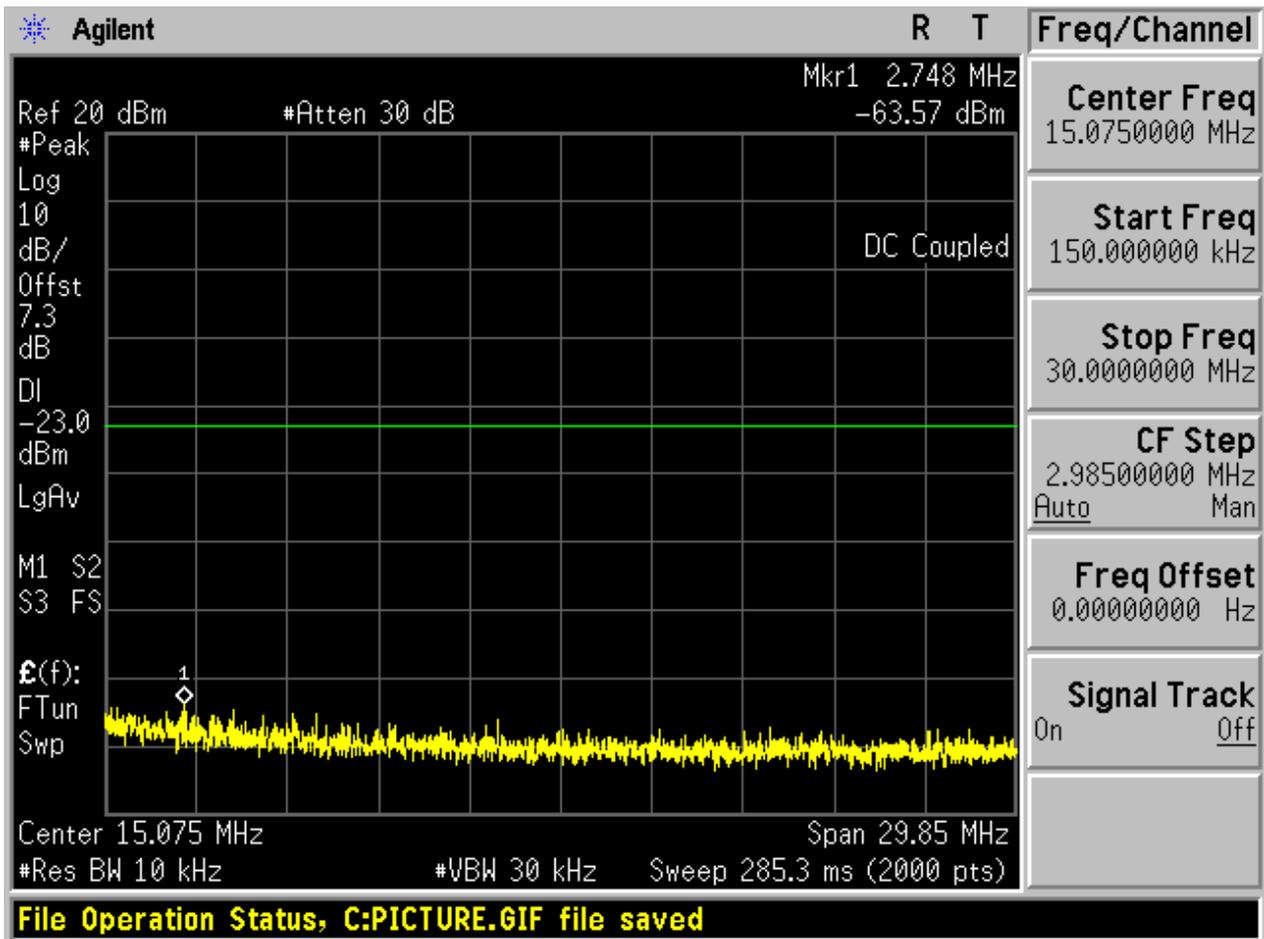
#### 2.1.1 Pref

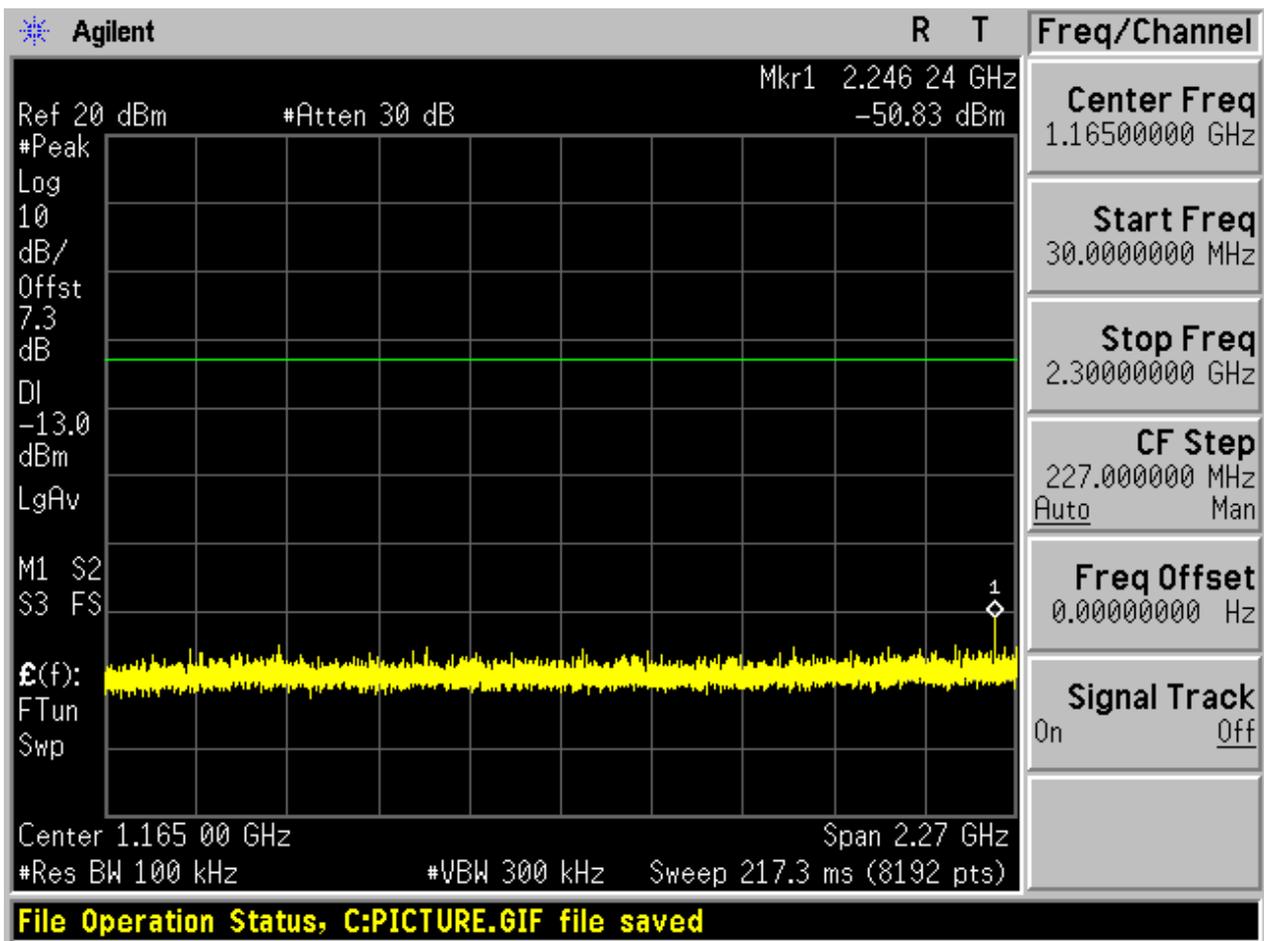


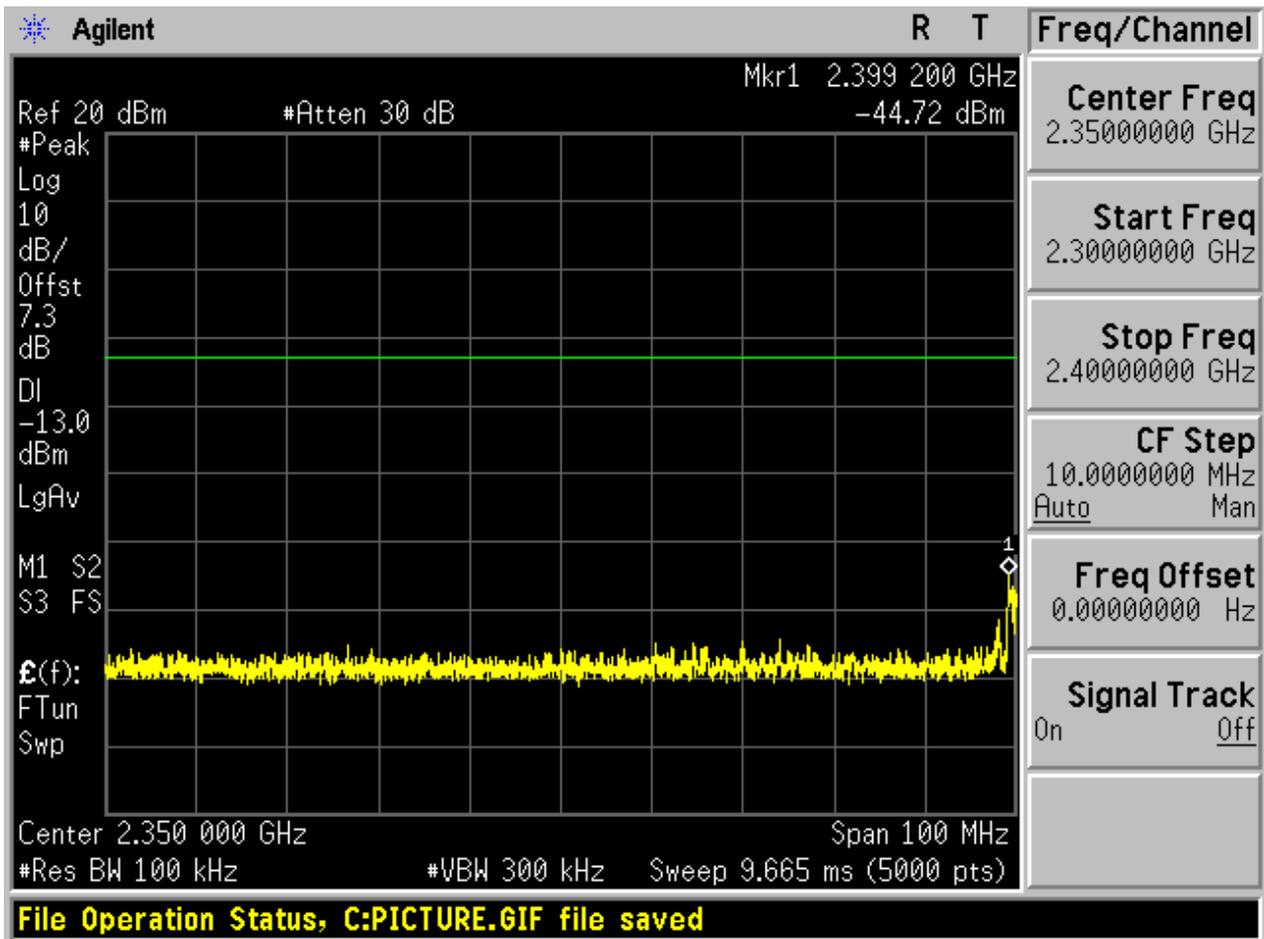


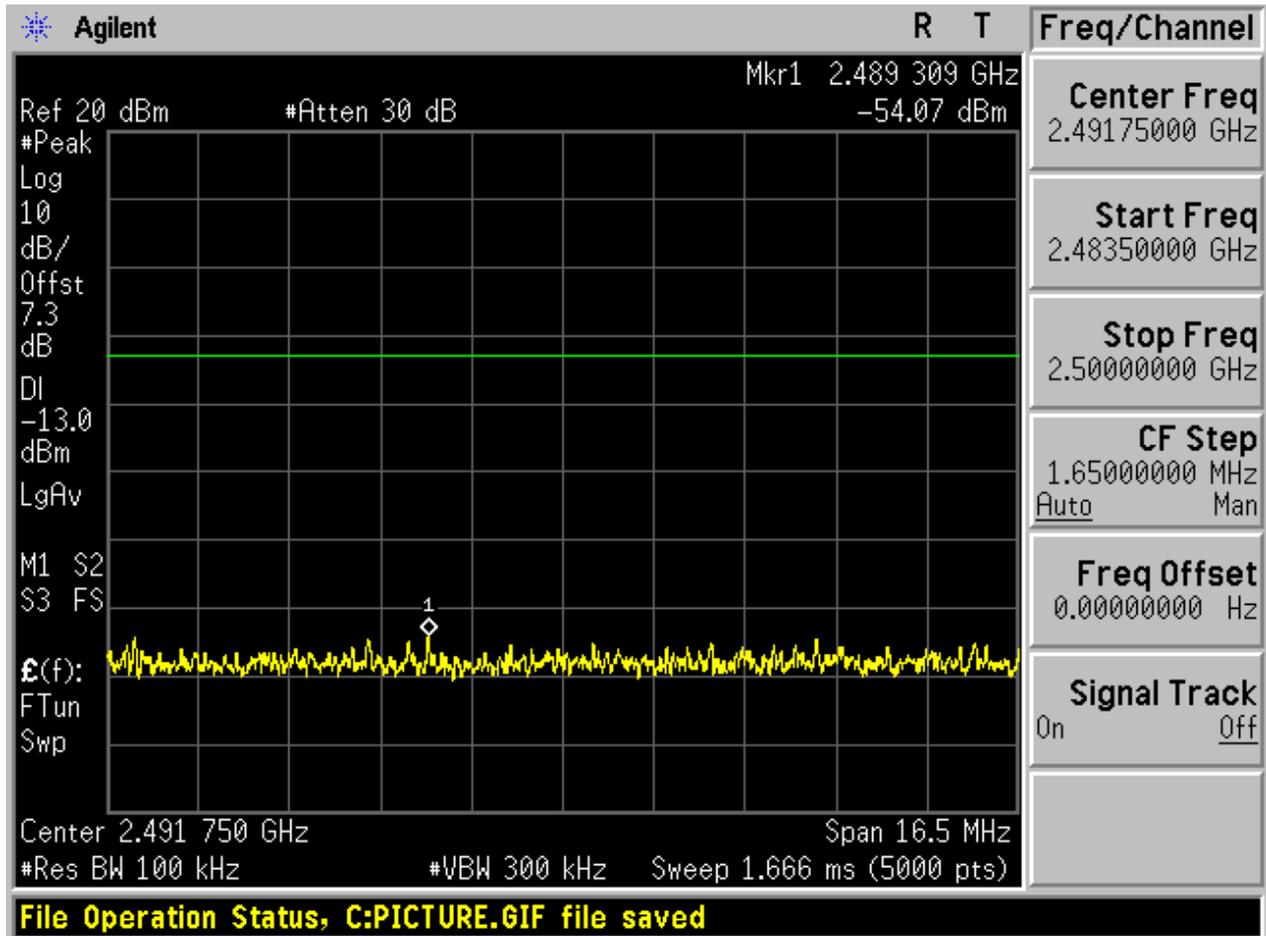
2.1.2 Puw

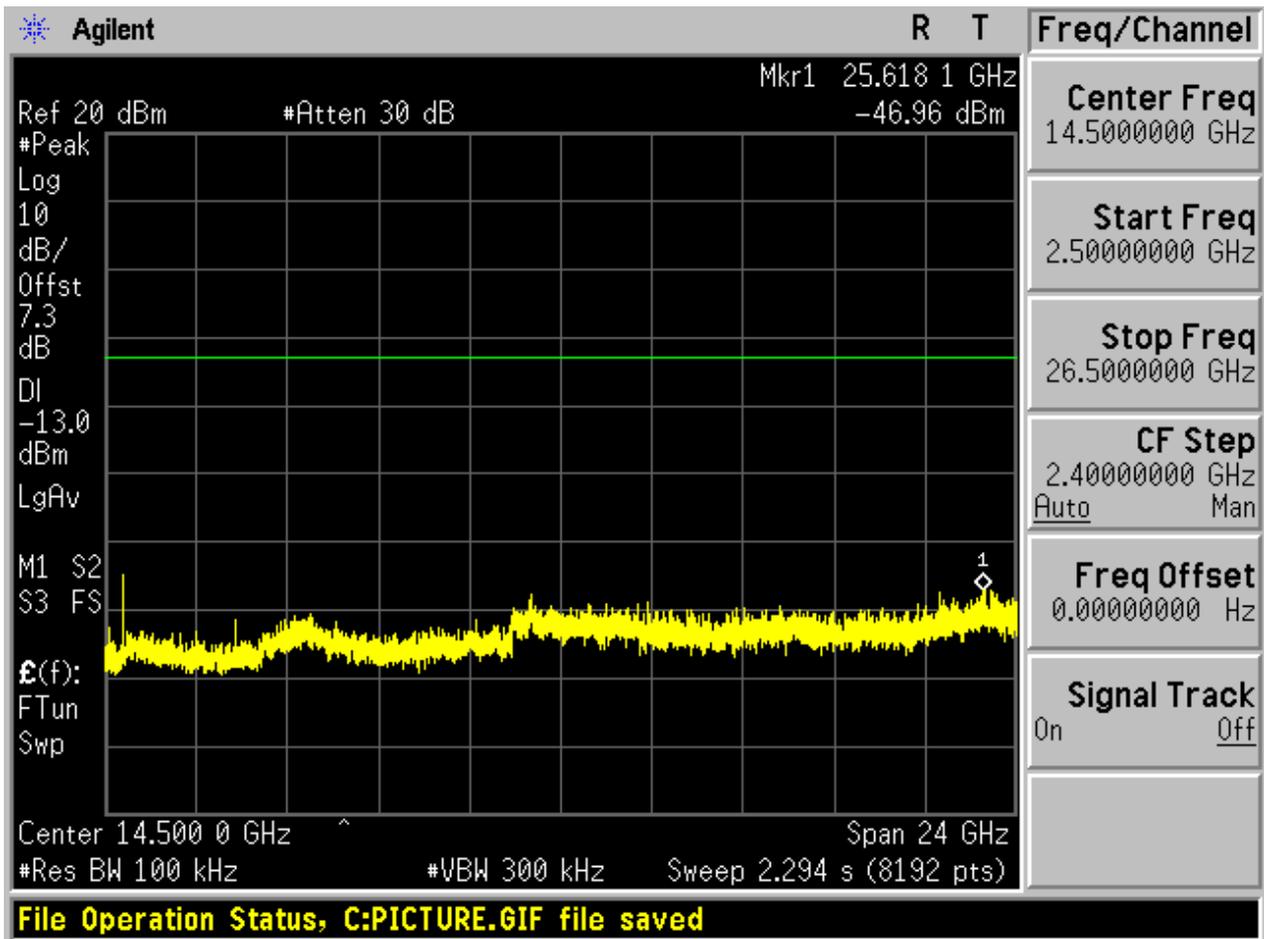








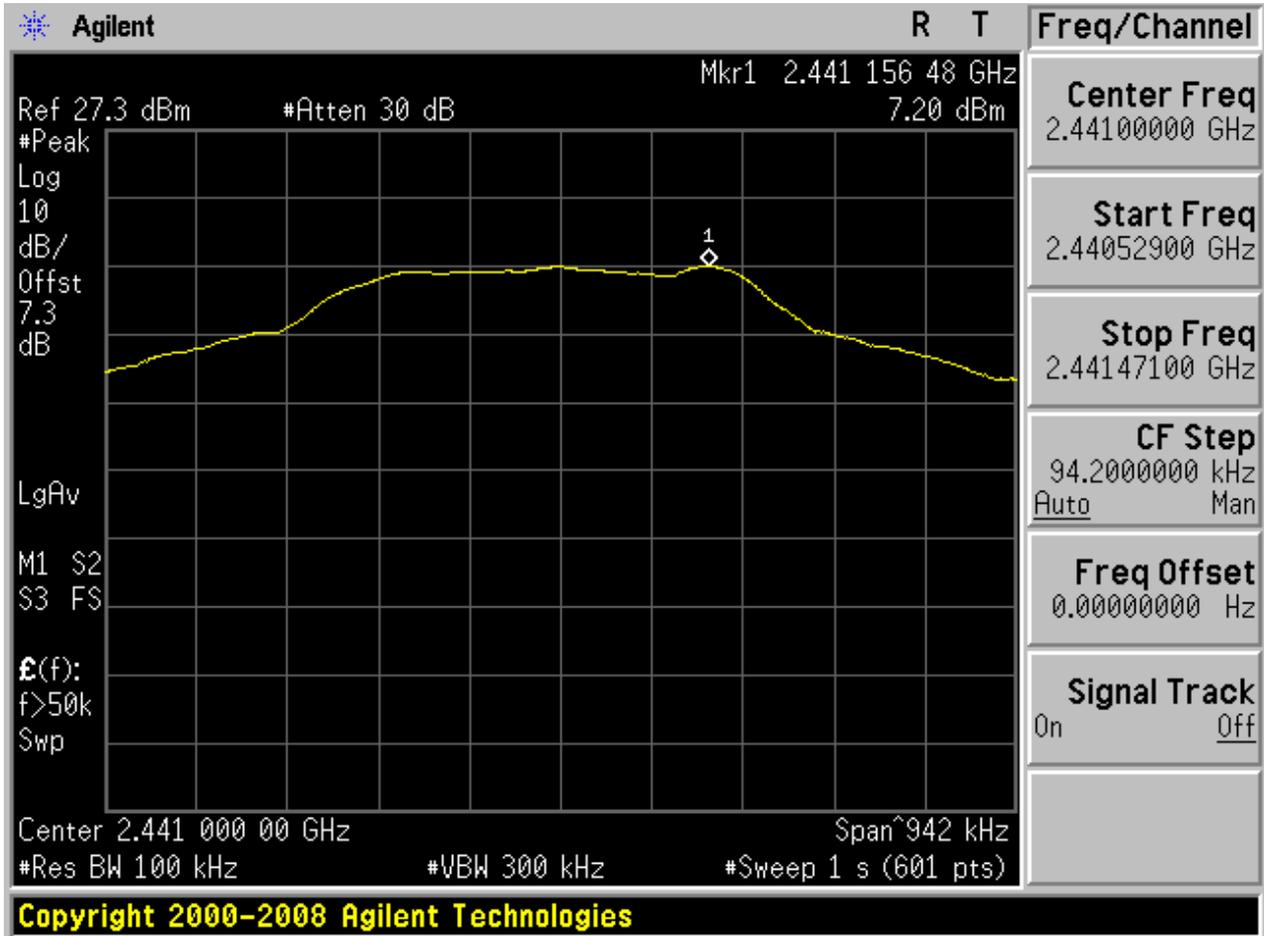






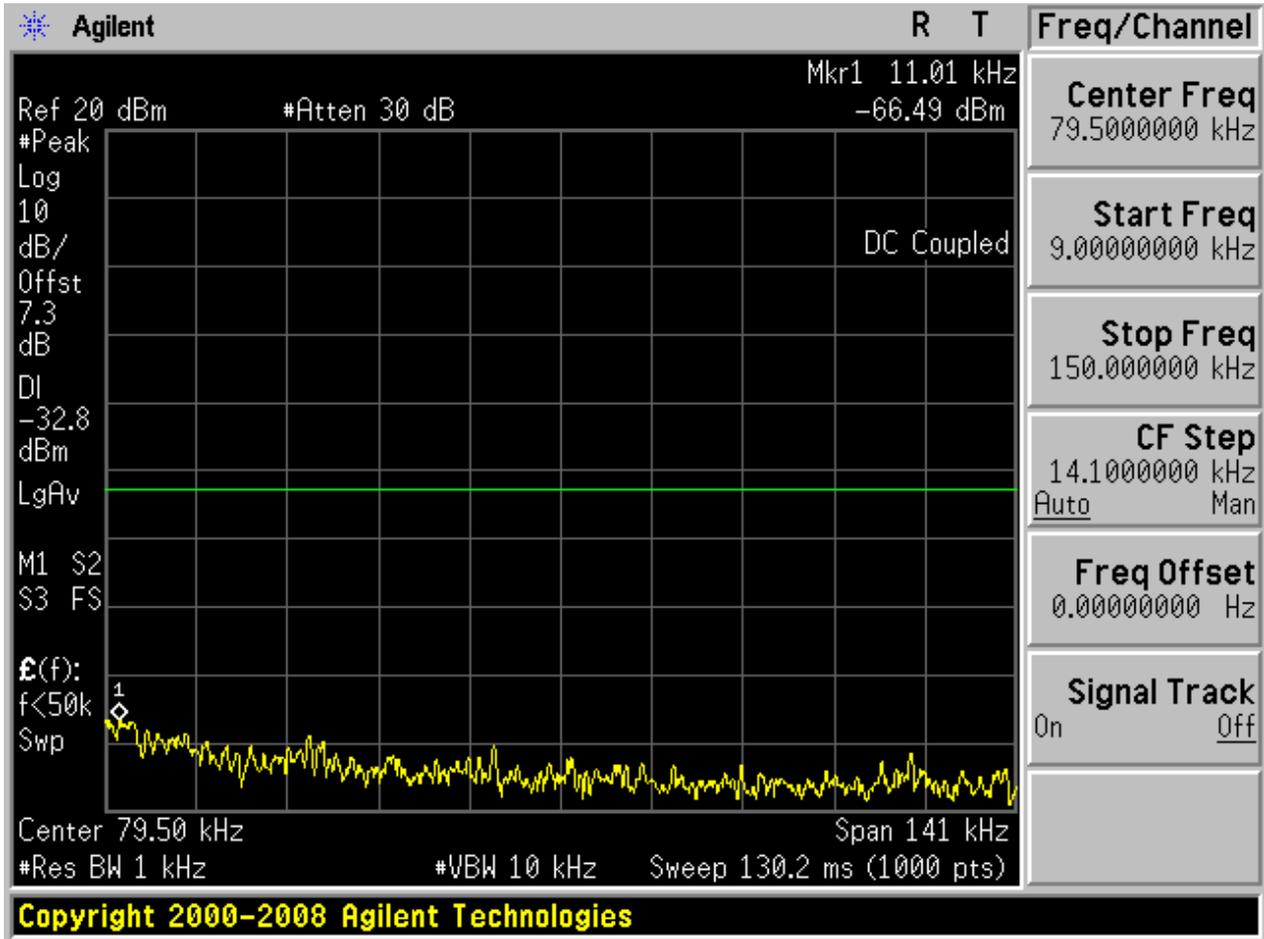
## 2.2 TM1\_DH5\_Ch39

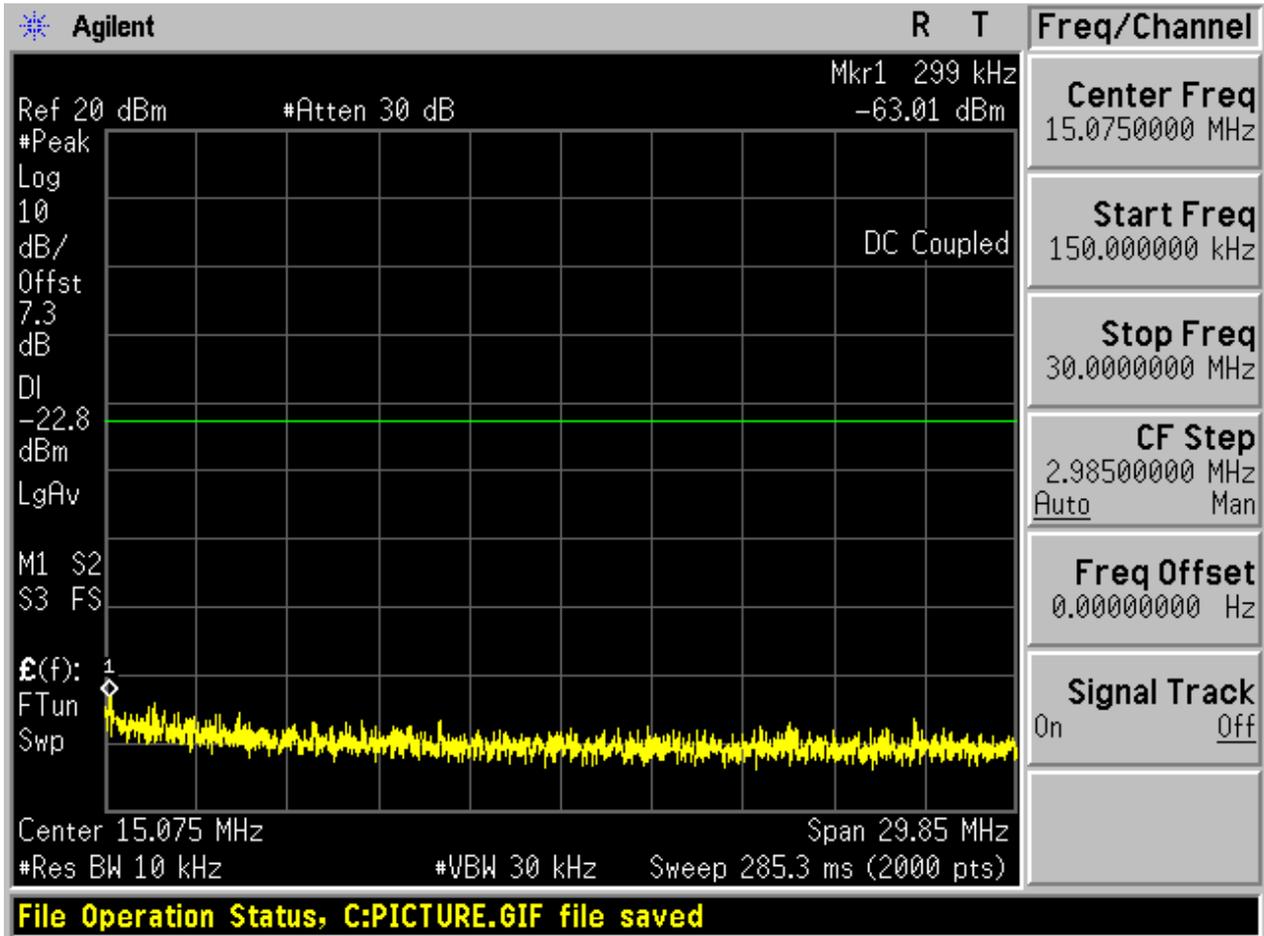
### 2.2.1 Pref

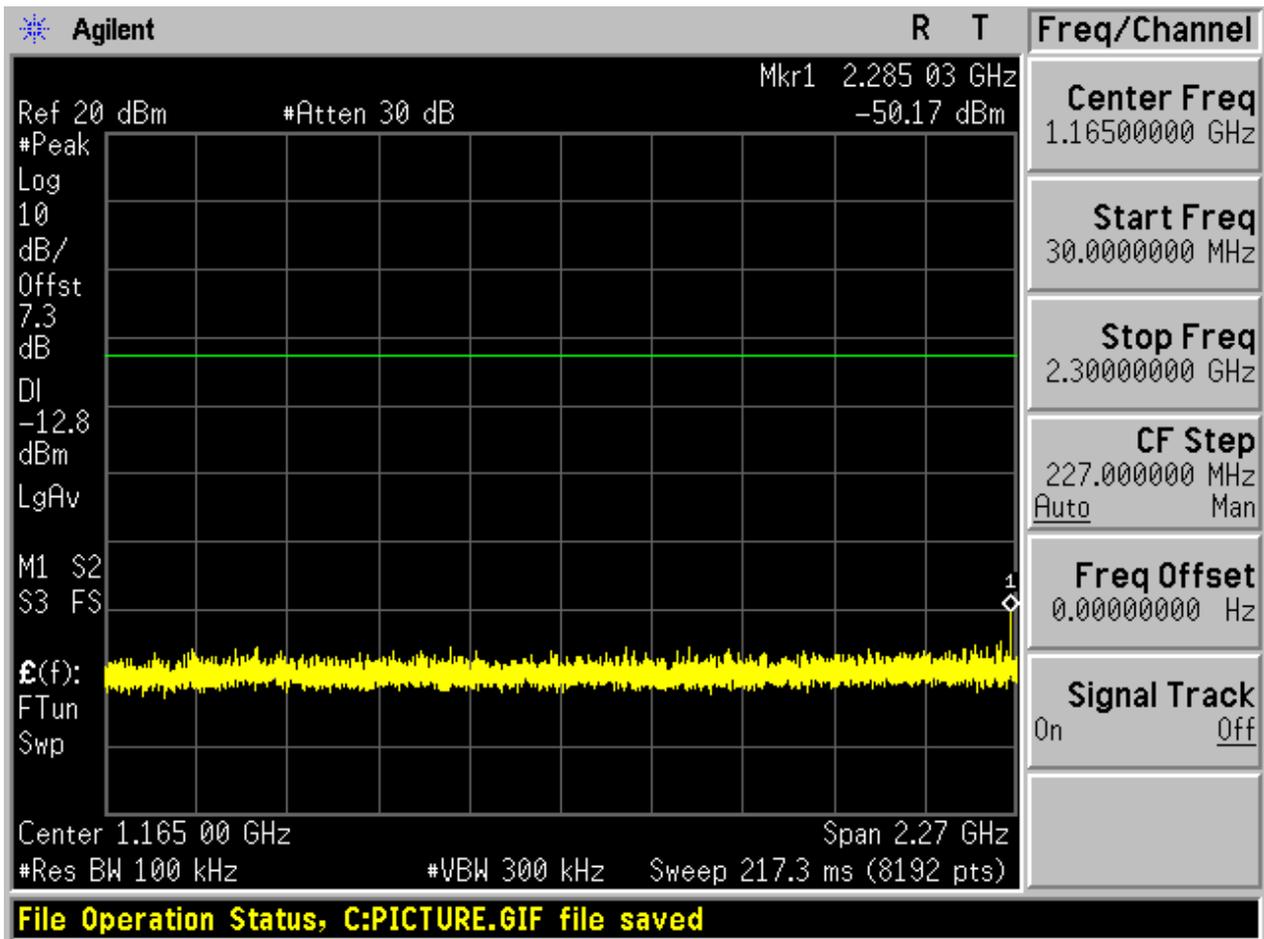


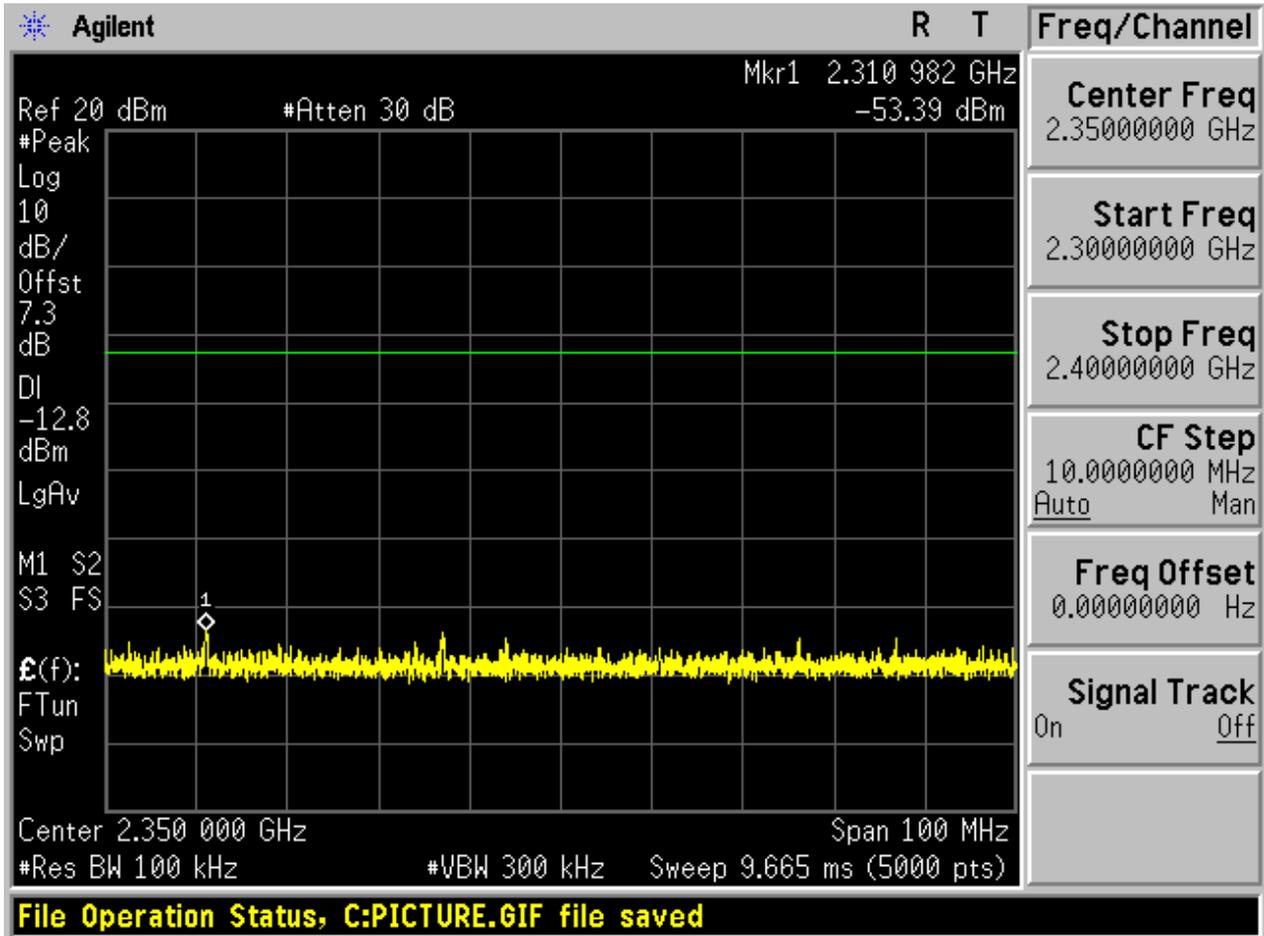


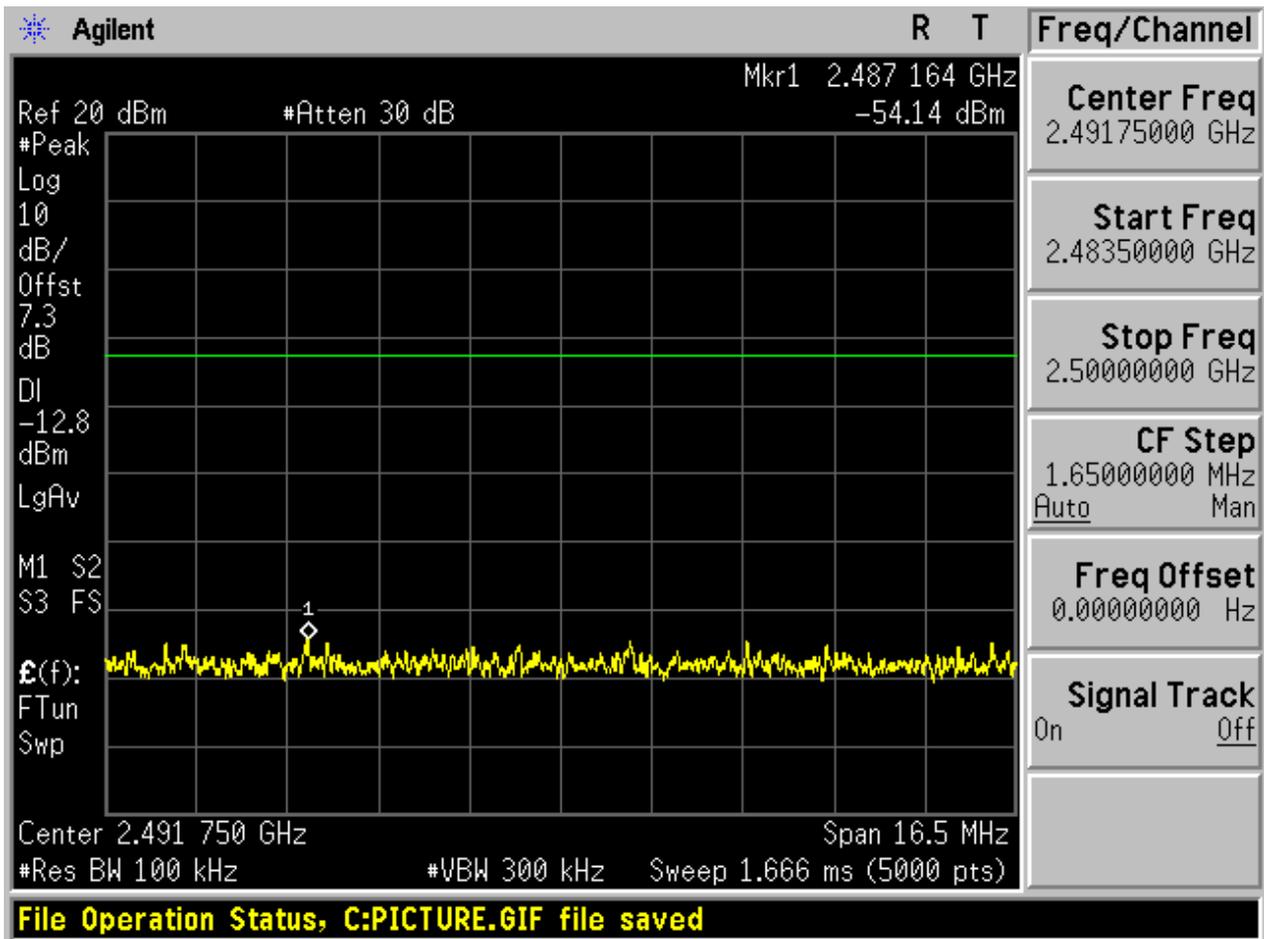
2.2.2 Puw

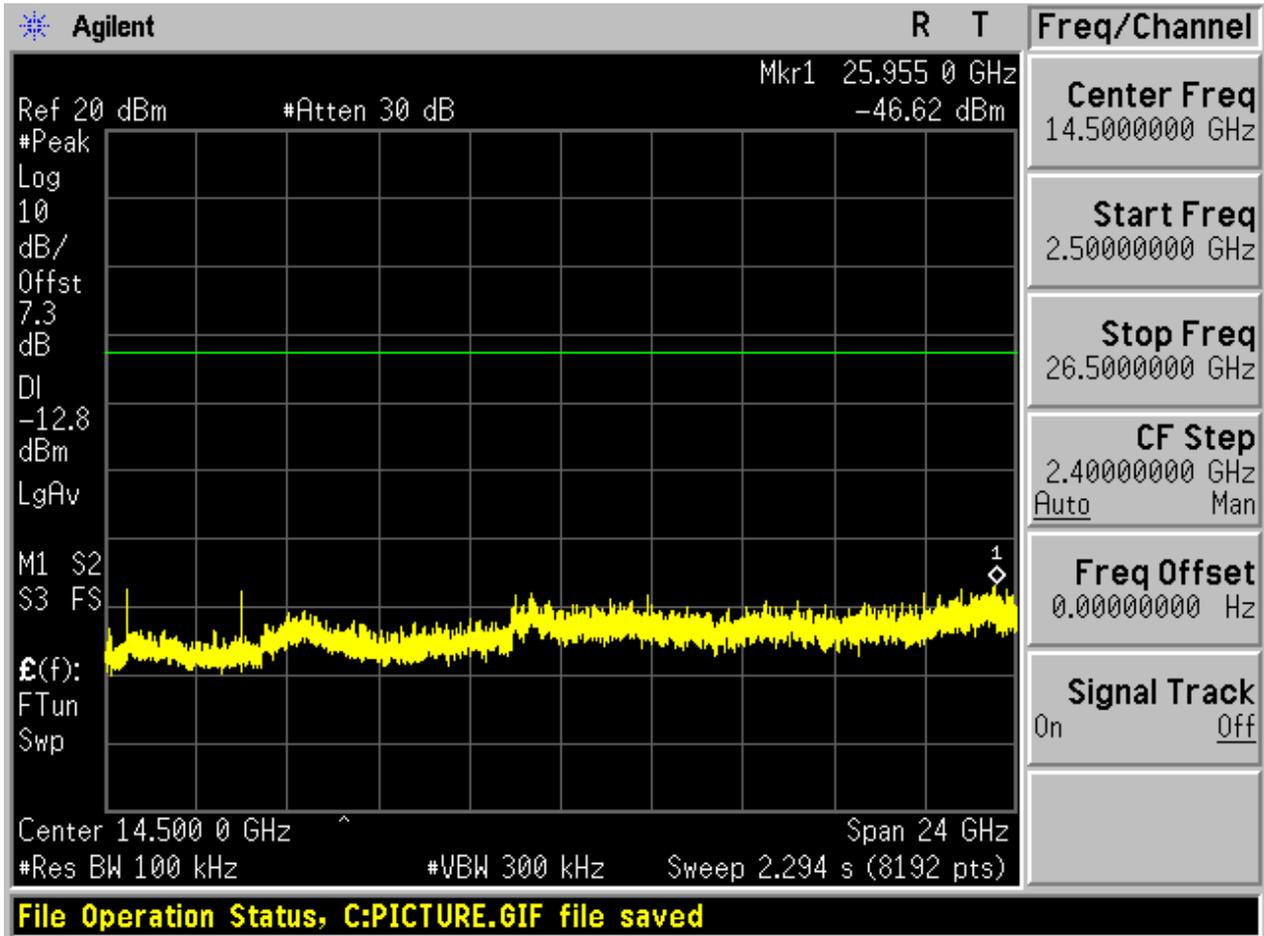








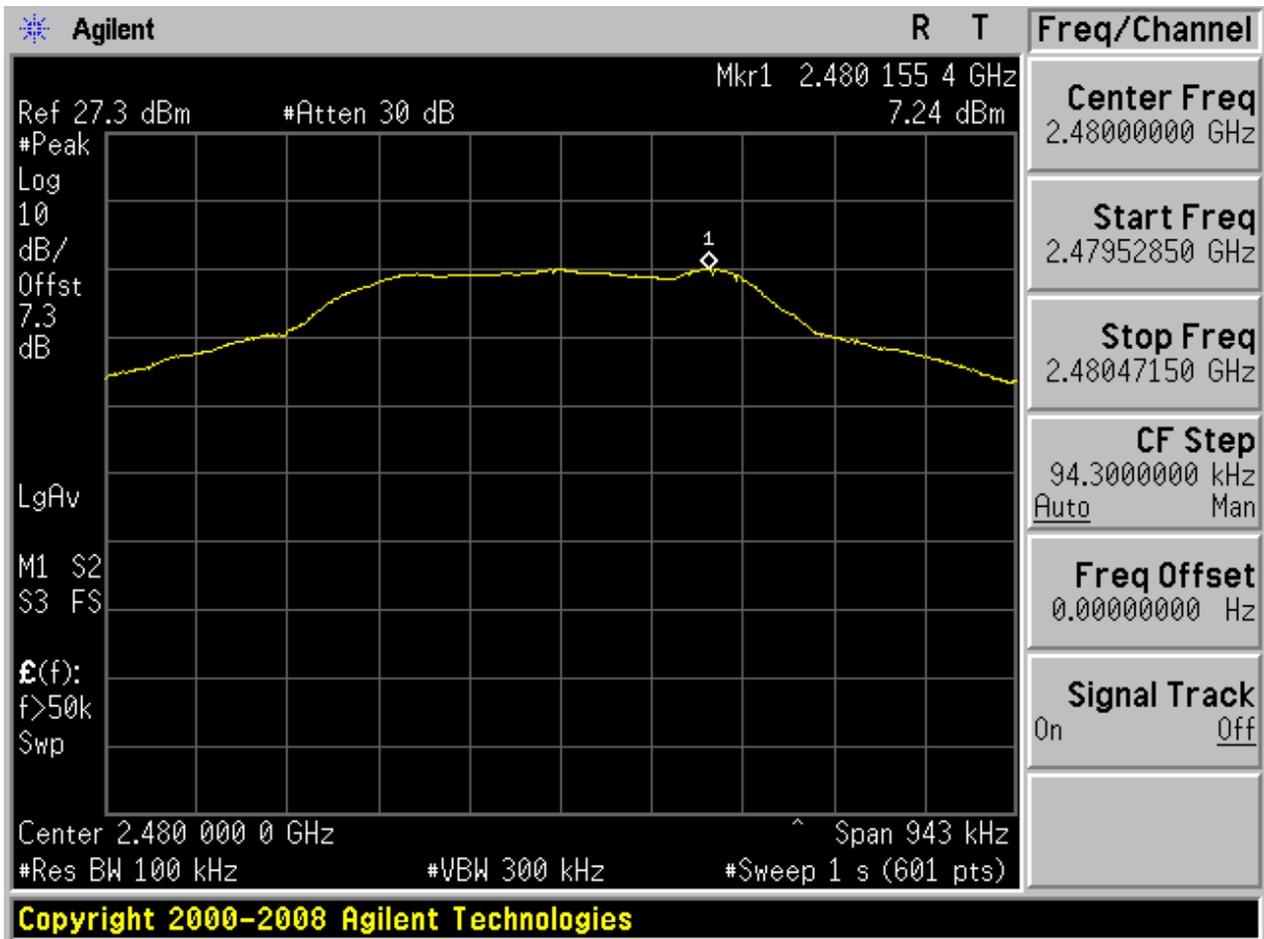






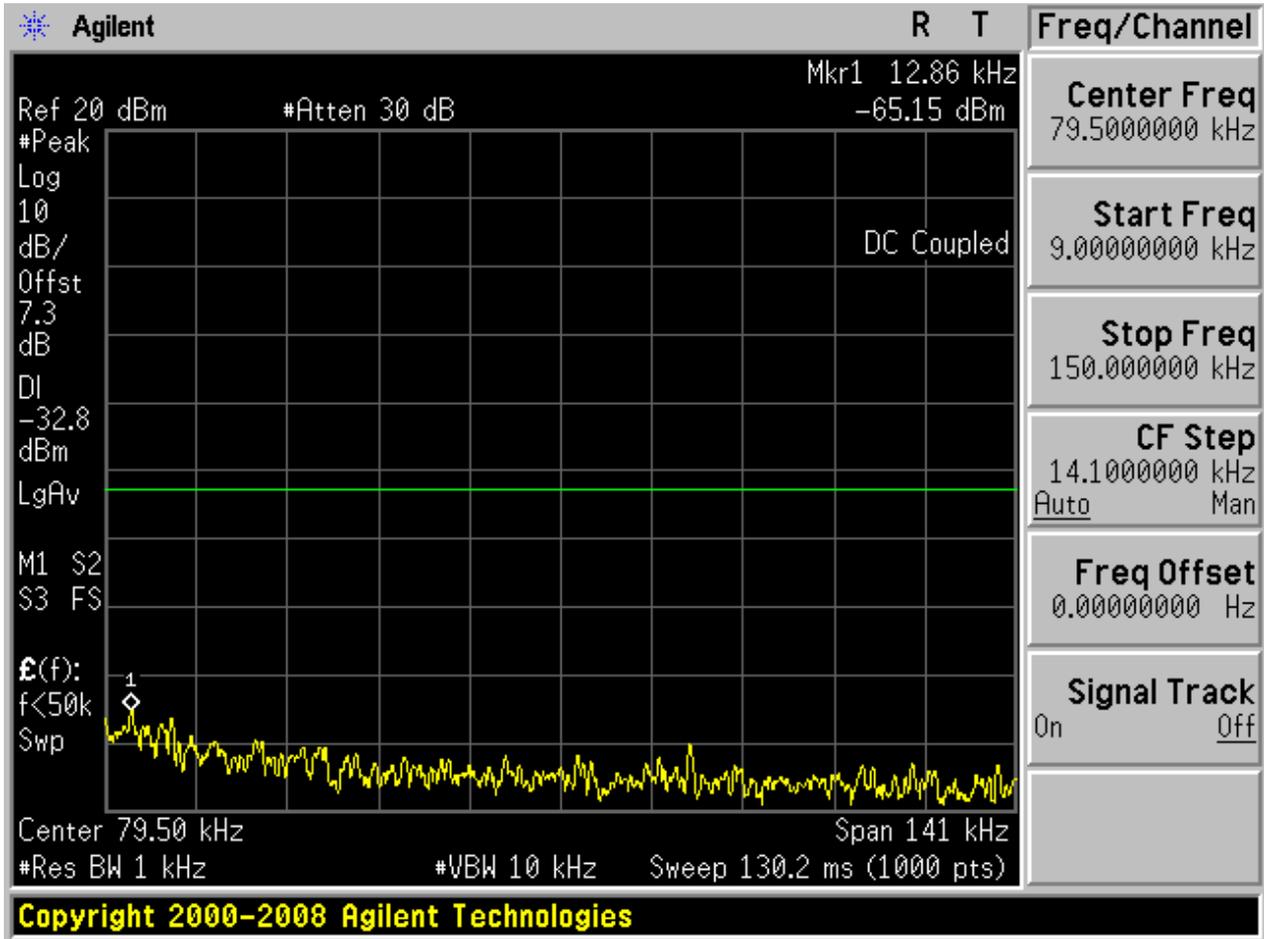
### 2.3 TM1\_DH5\_Ch78

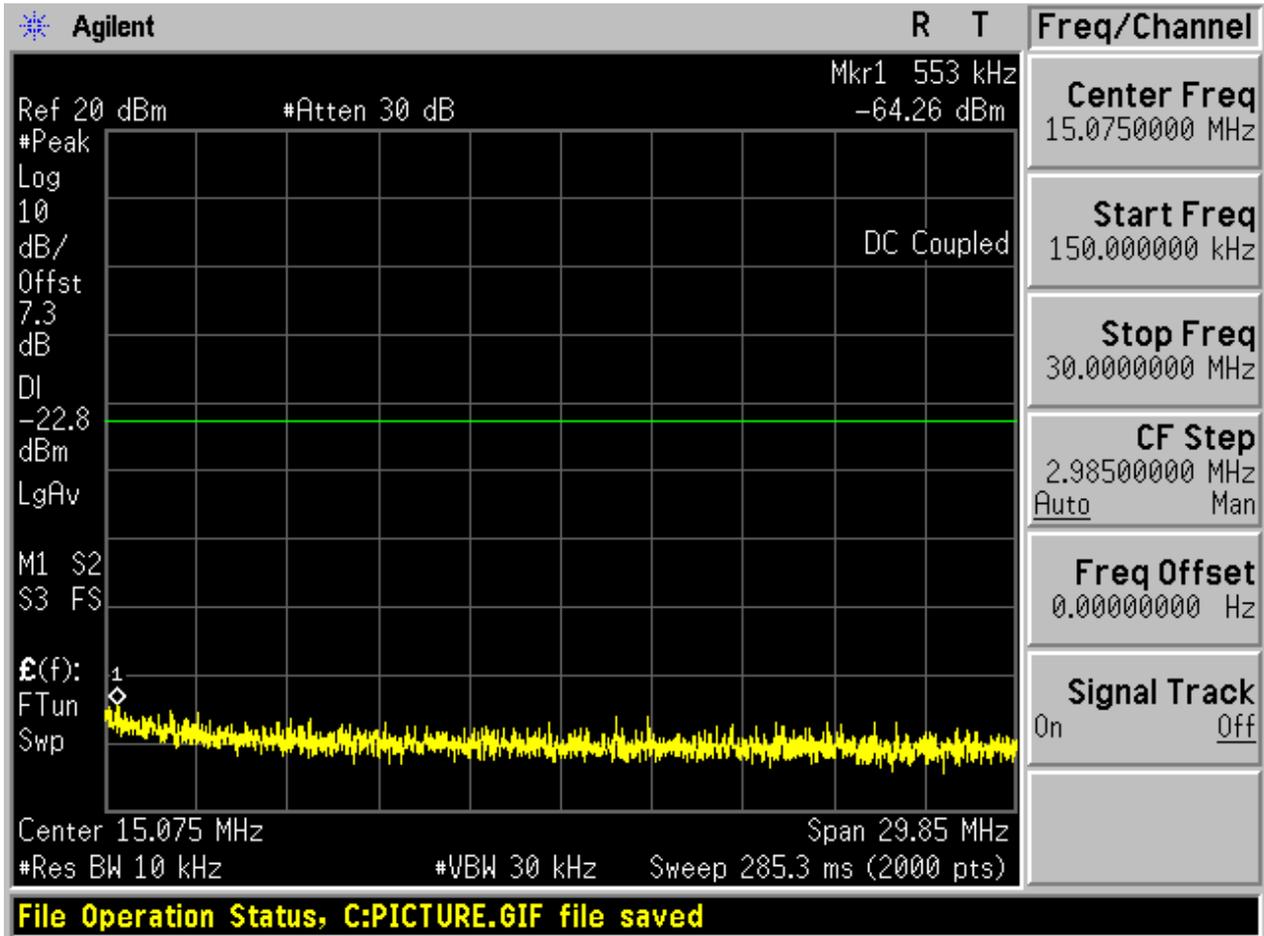
#### 2.3.1 Pref

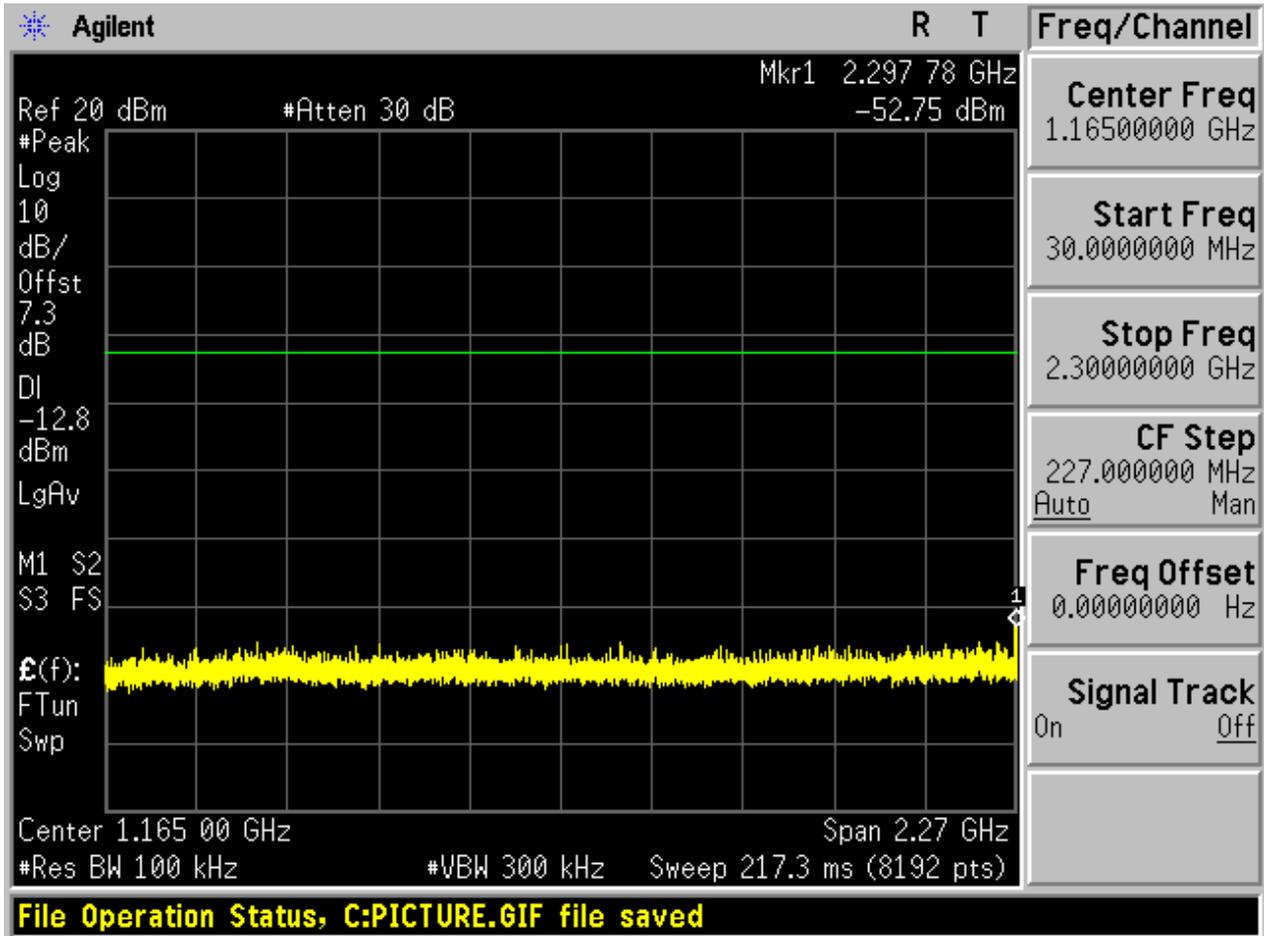


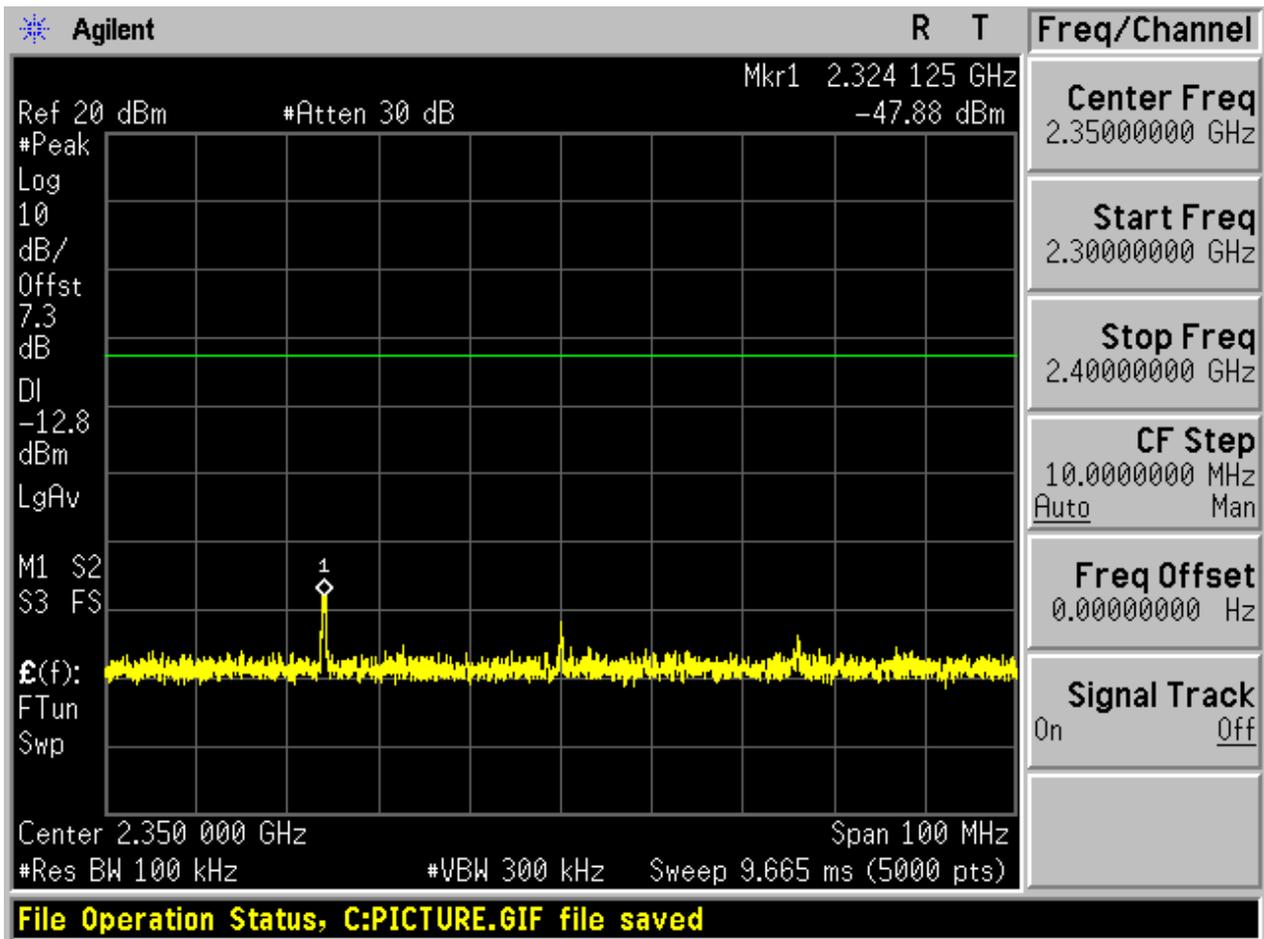


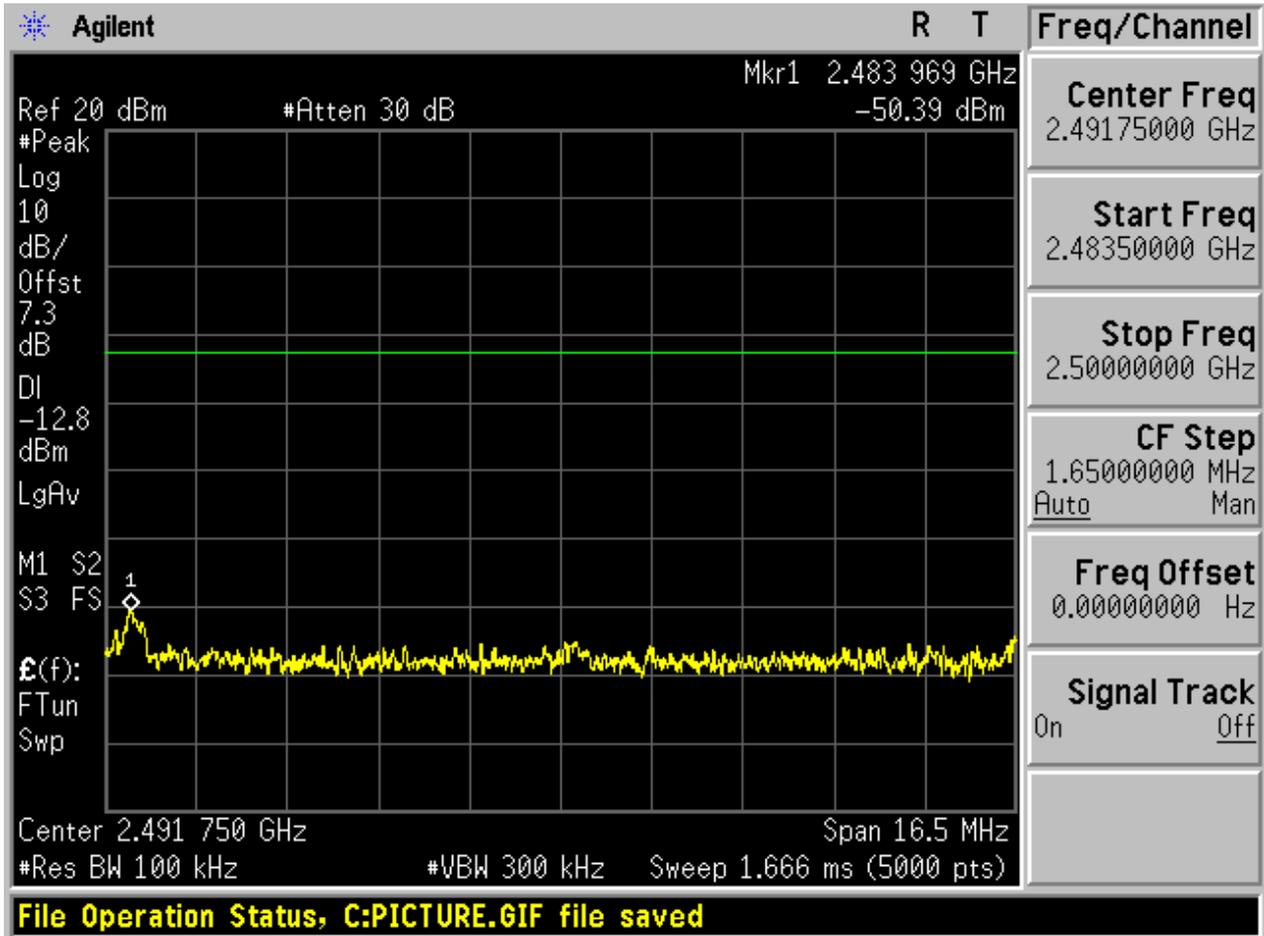
2.3.2 Puw

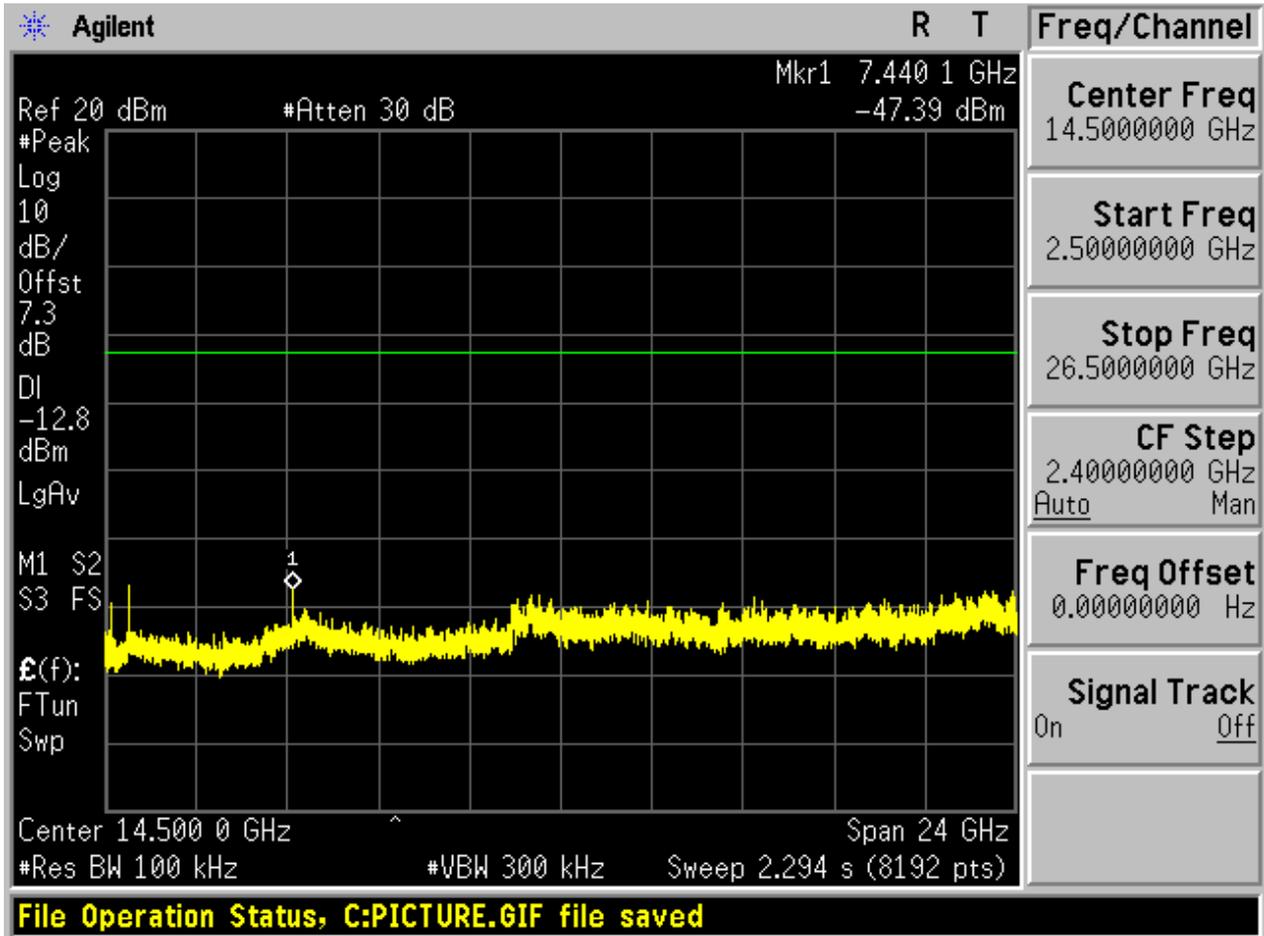








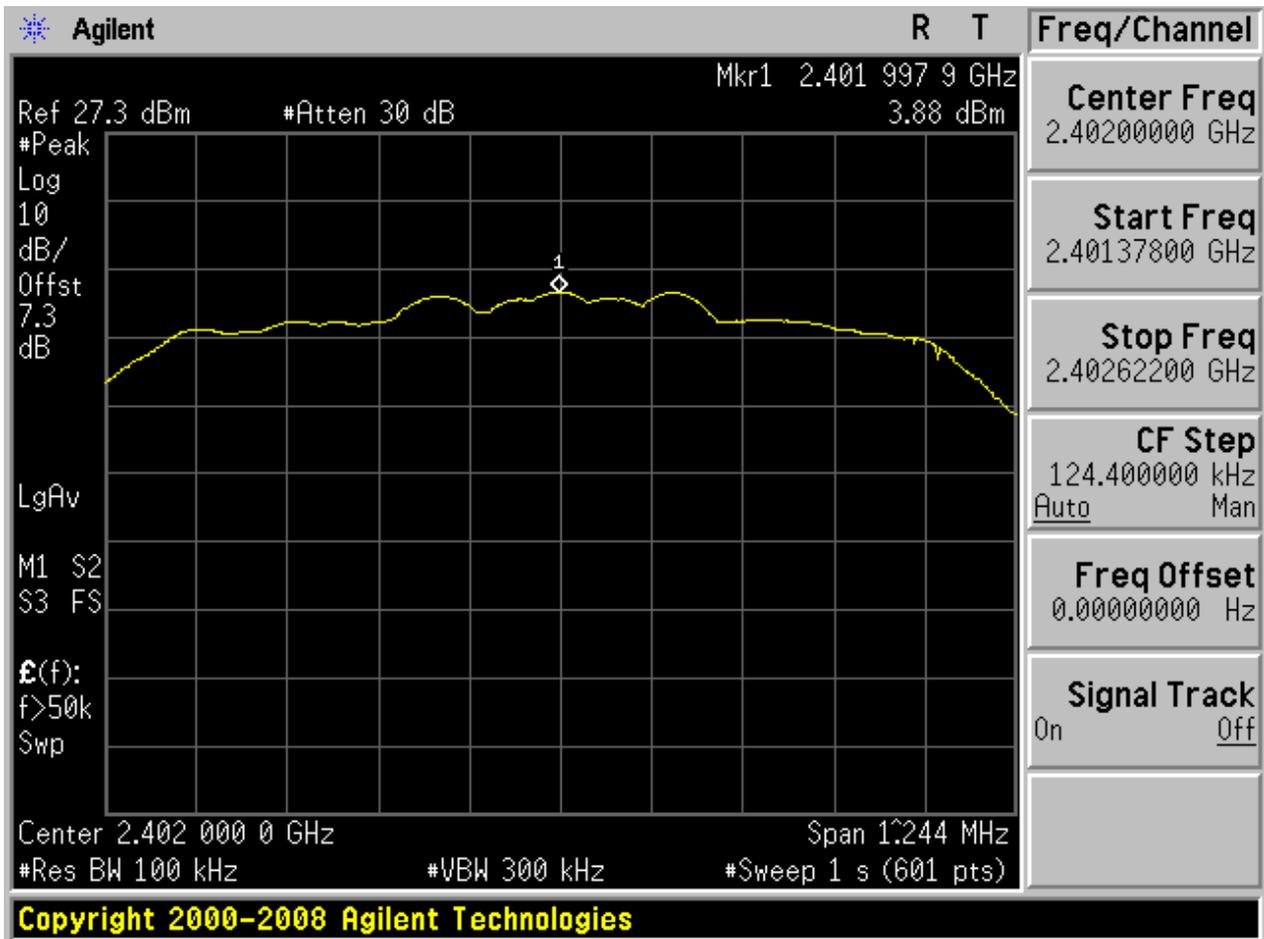






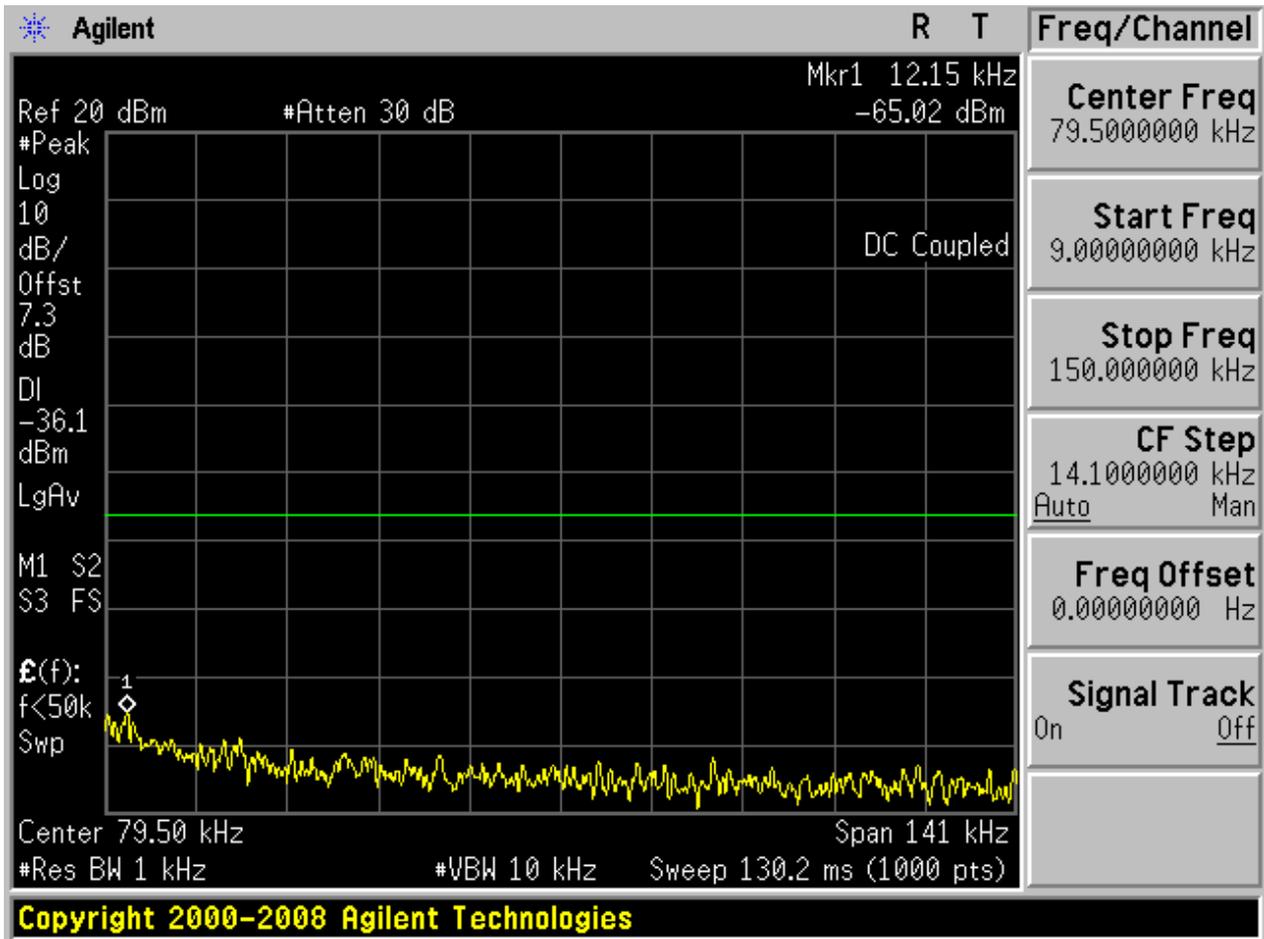
### 2.4 TM2\_2DH5\_Ch0

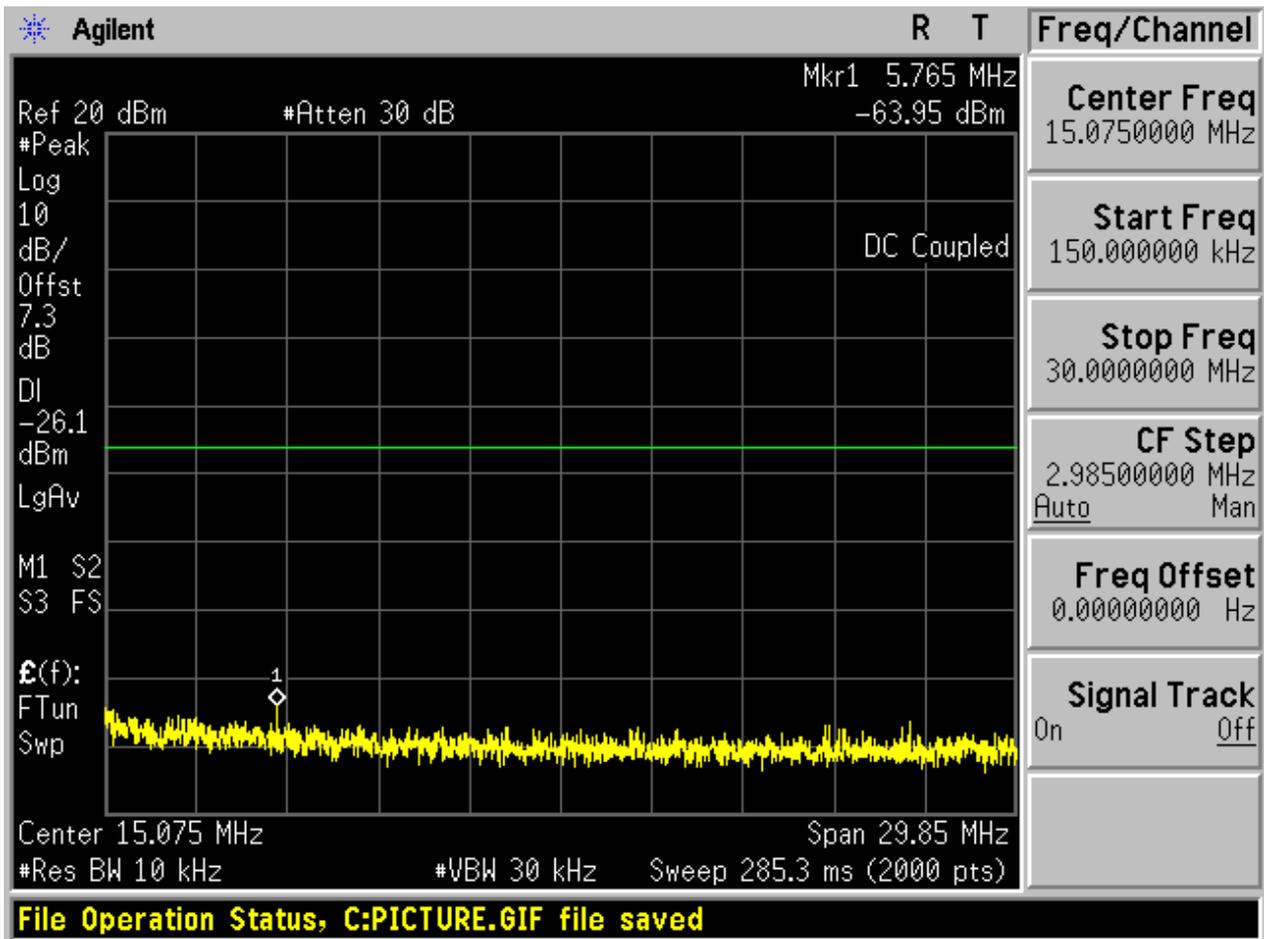
#### 2.4.1 Pref

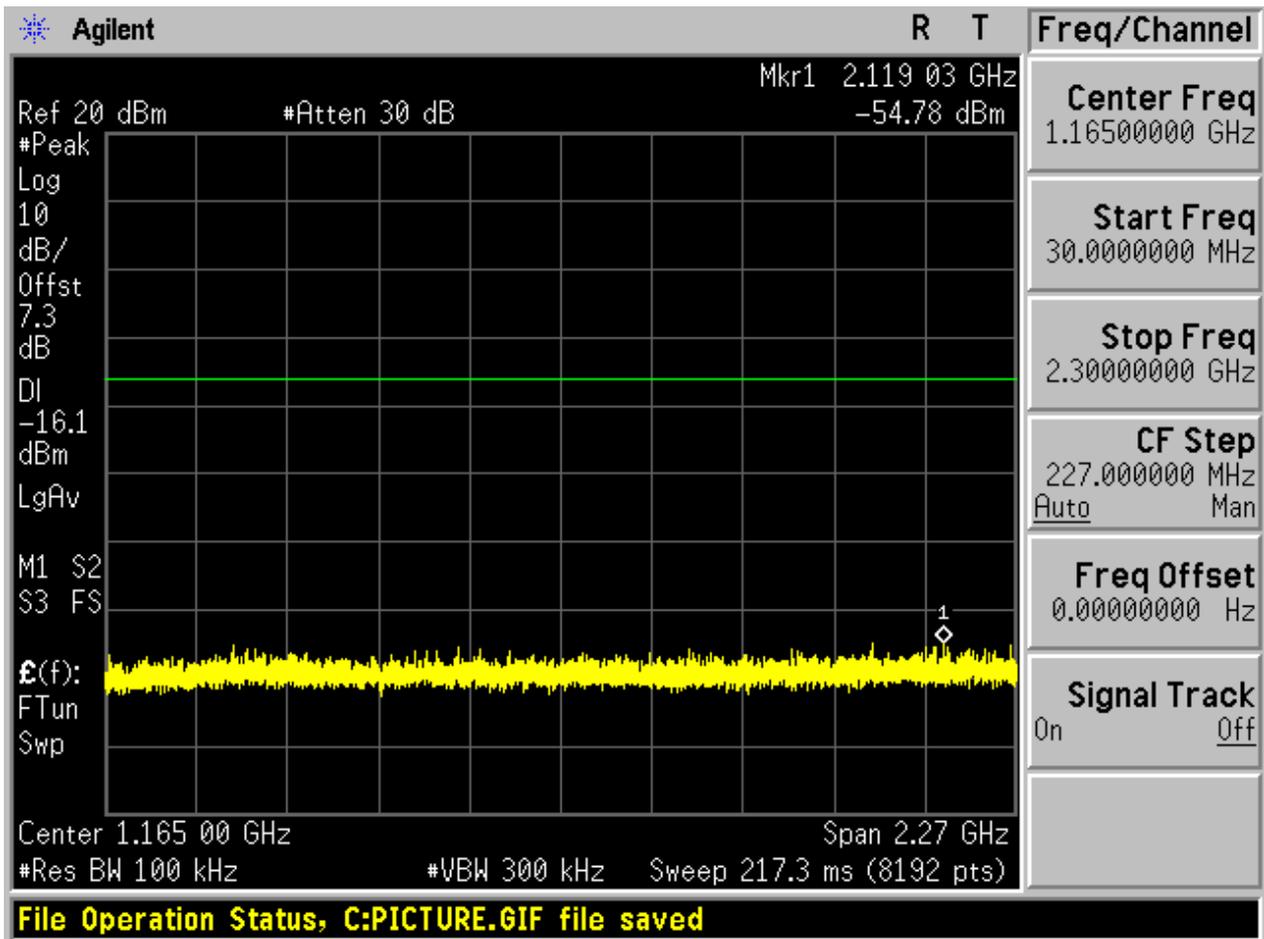


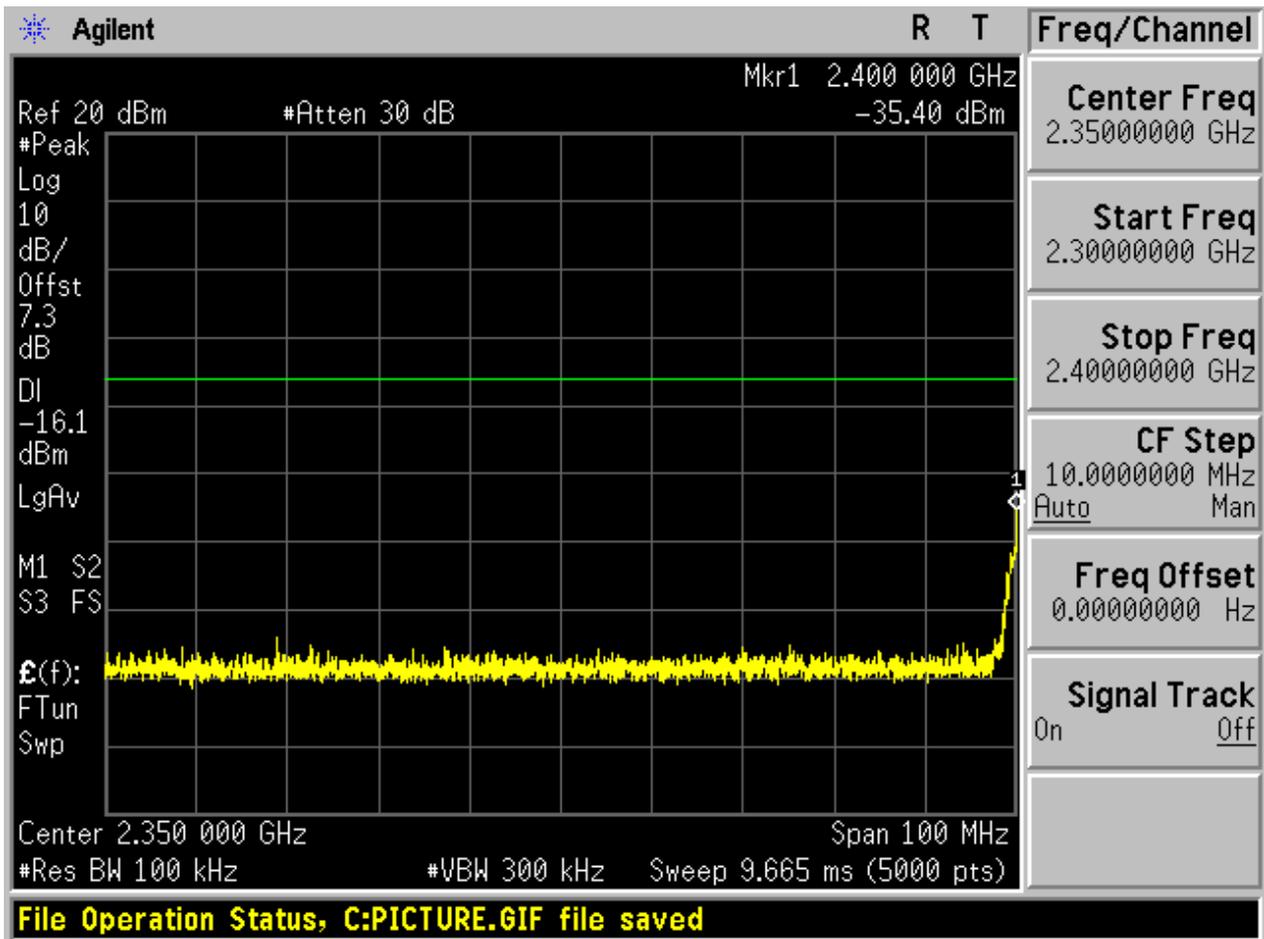


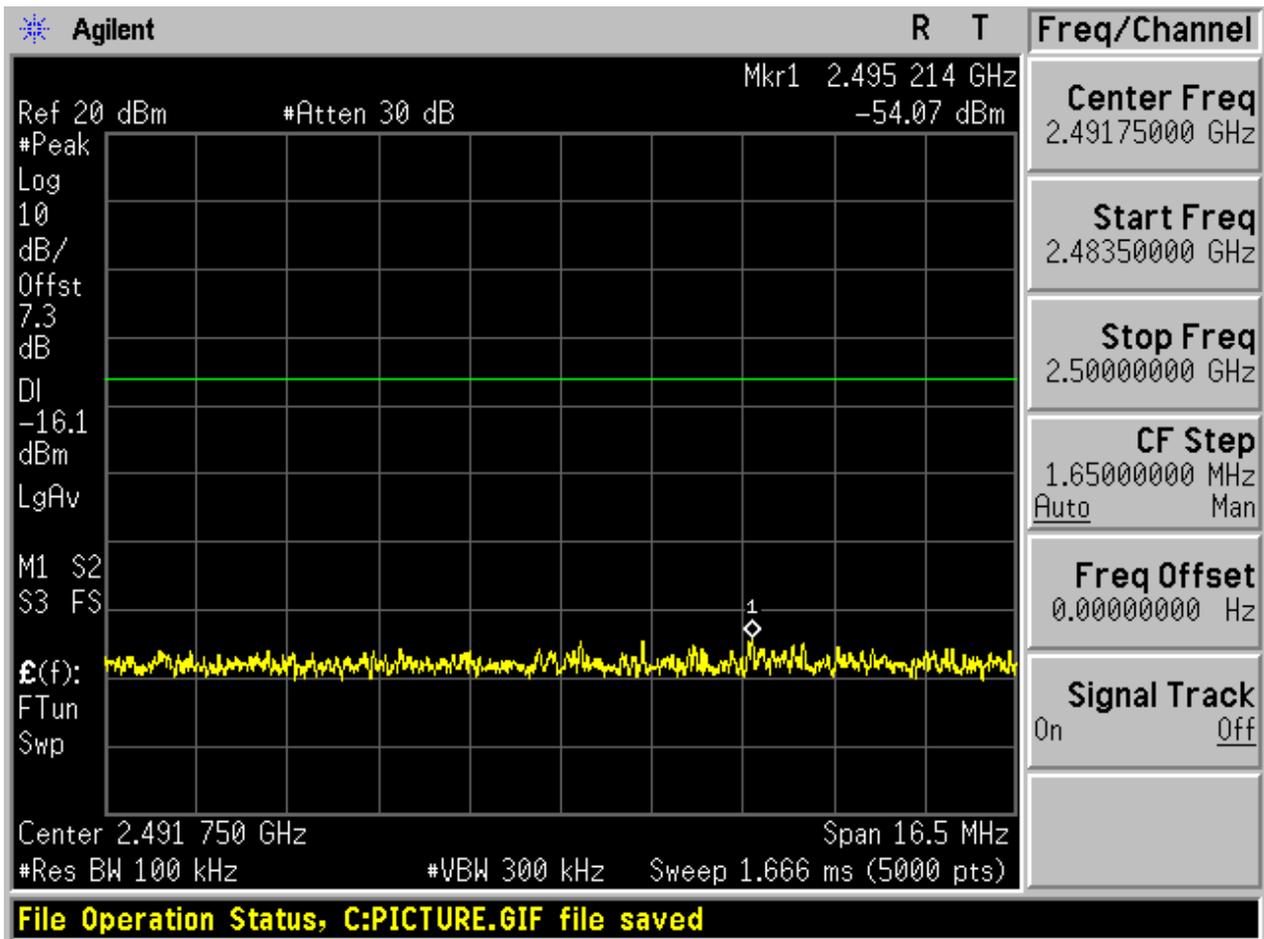
2.4.2 Puw

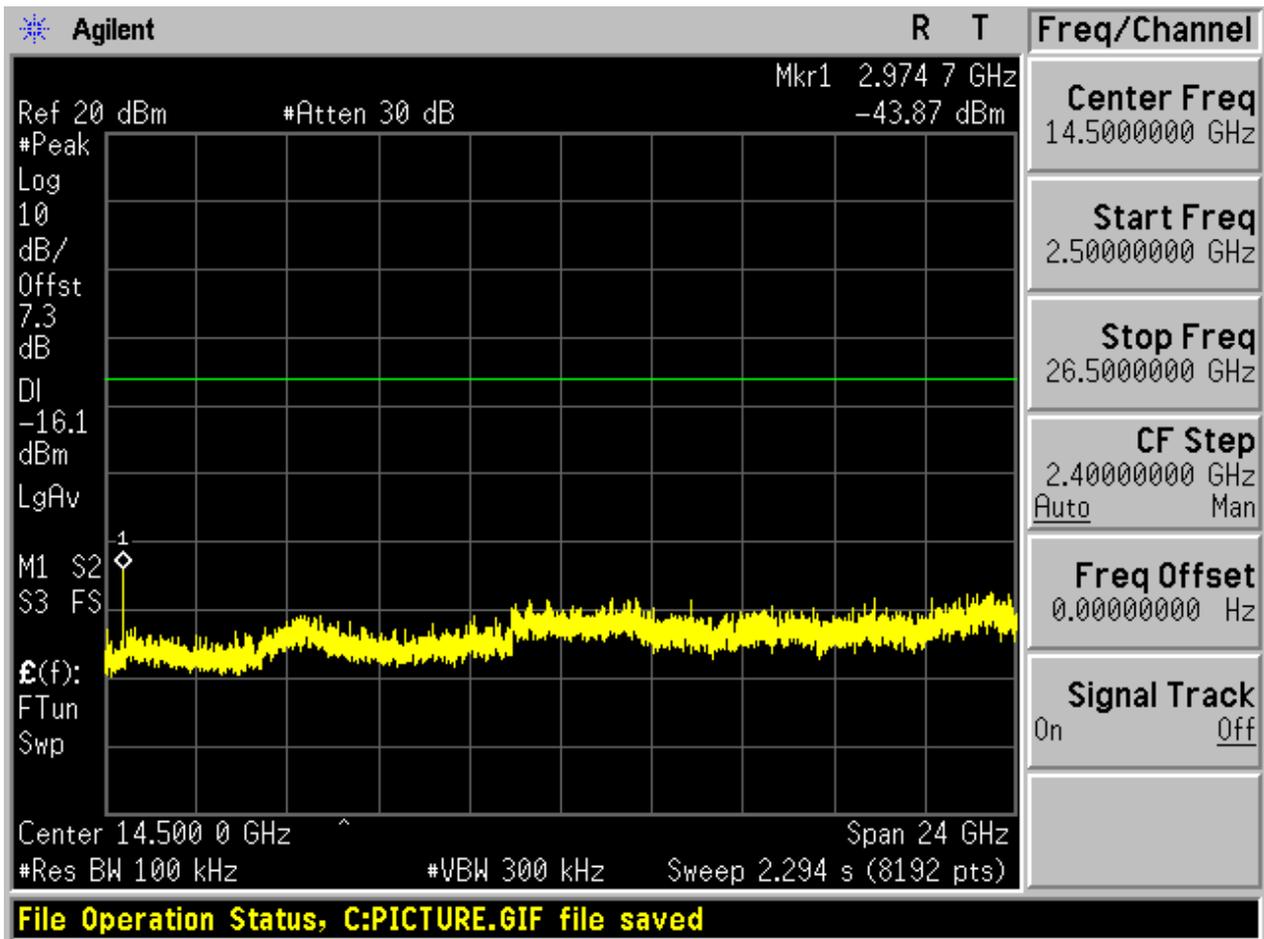








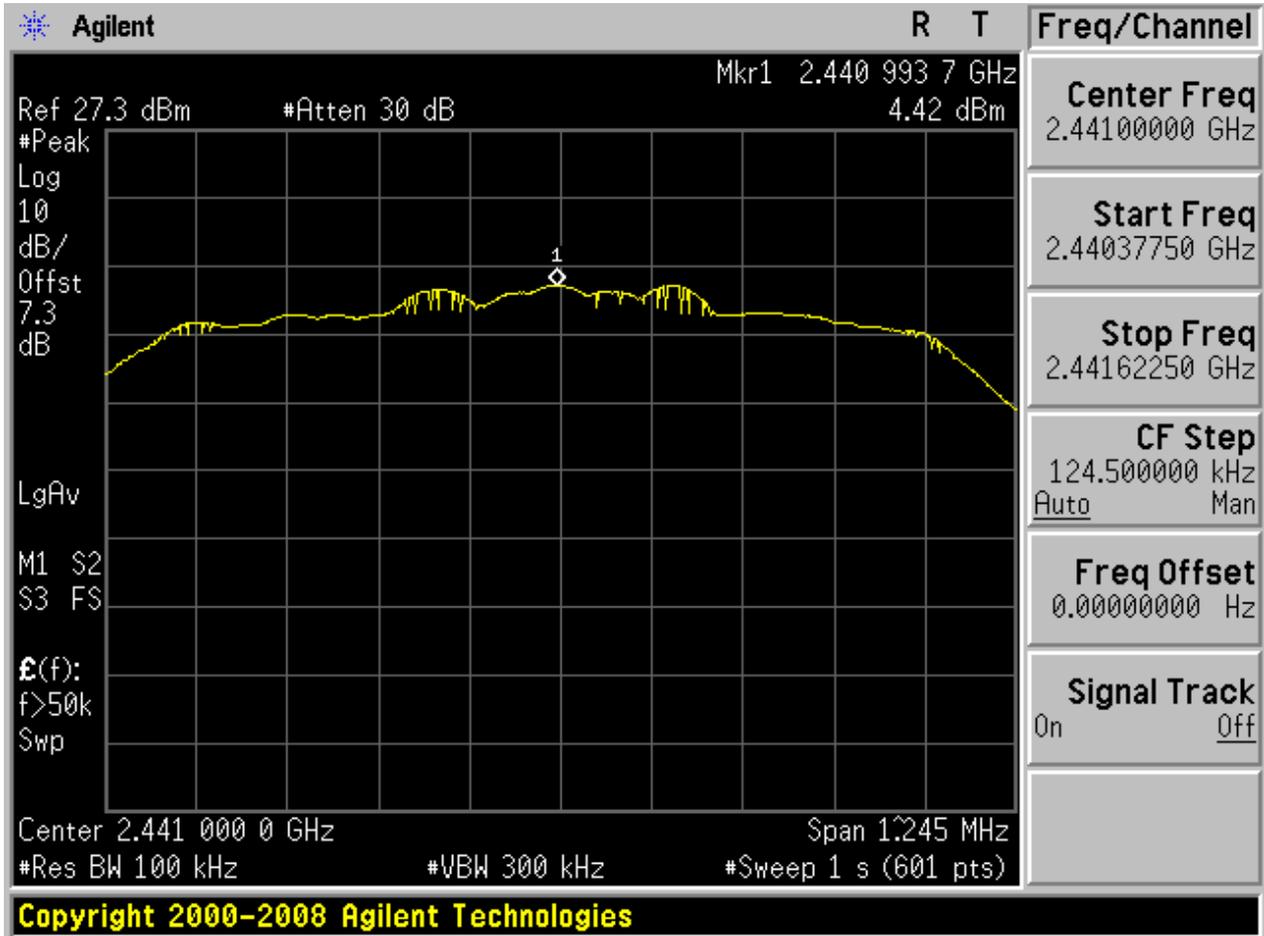






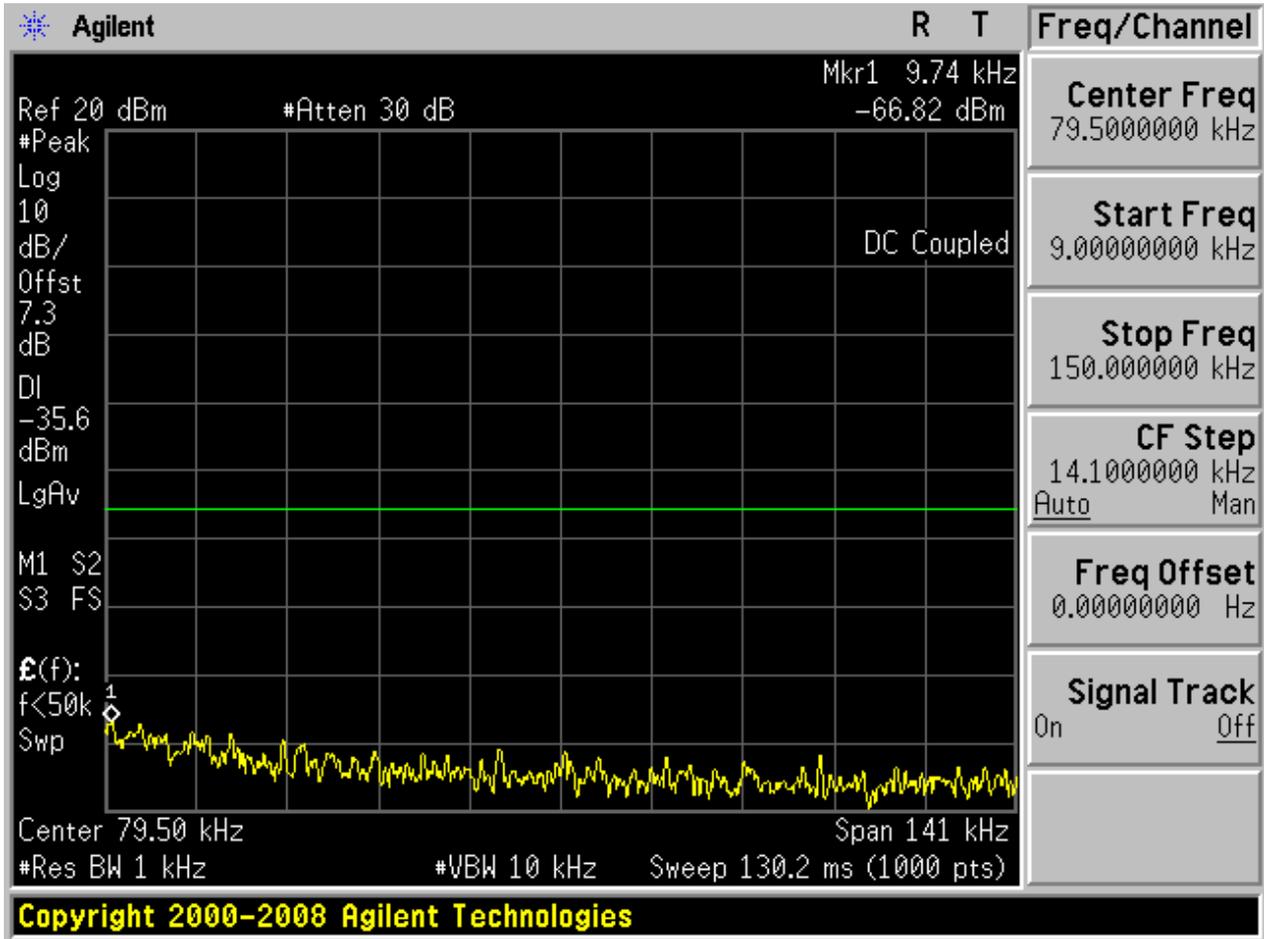
### 2.5 TM2\_2DH5\_Ch39

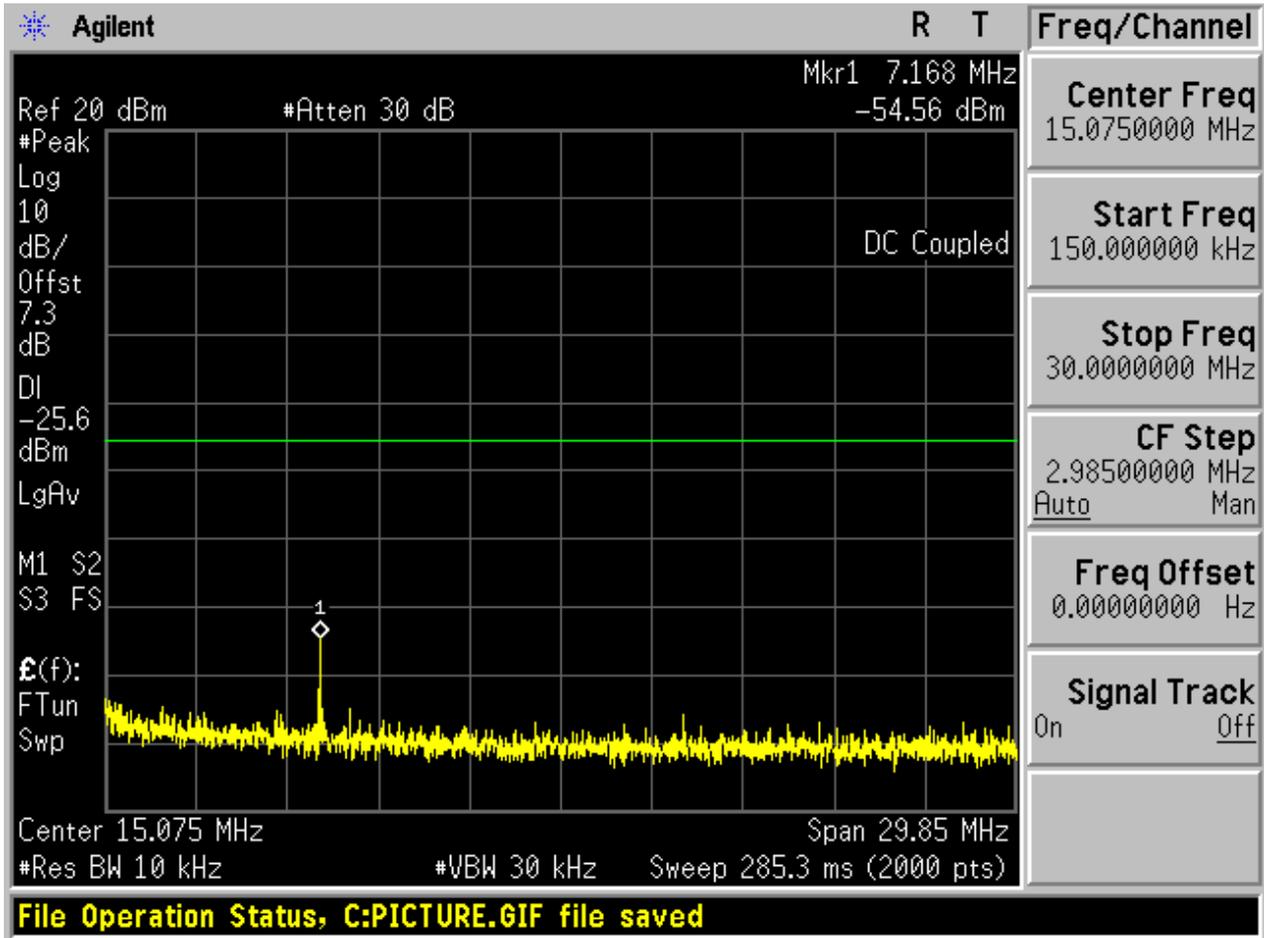
#### 2.5.1 Pref

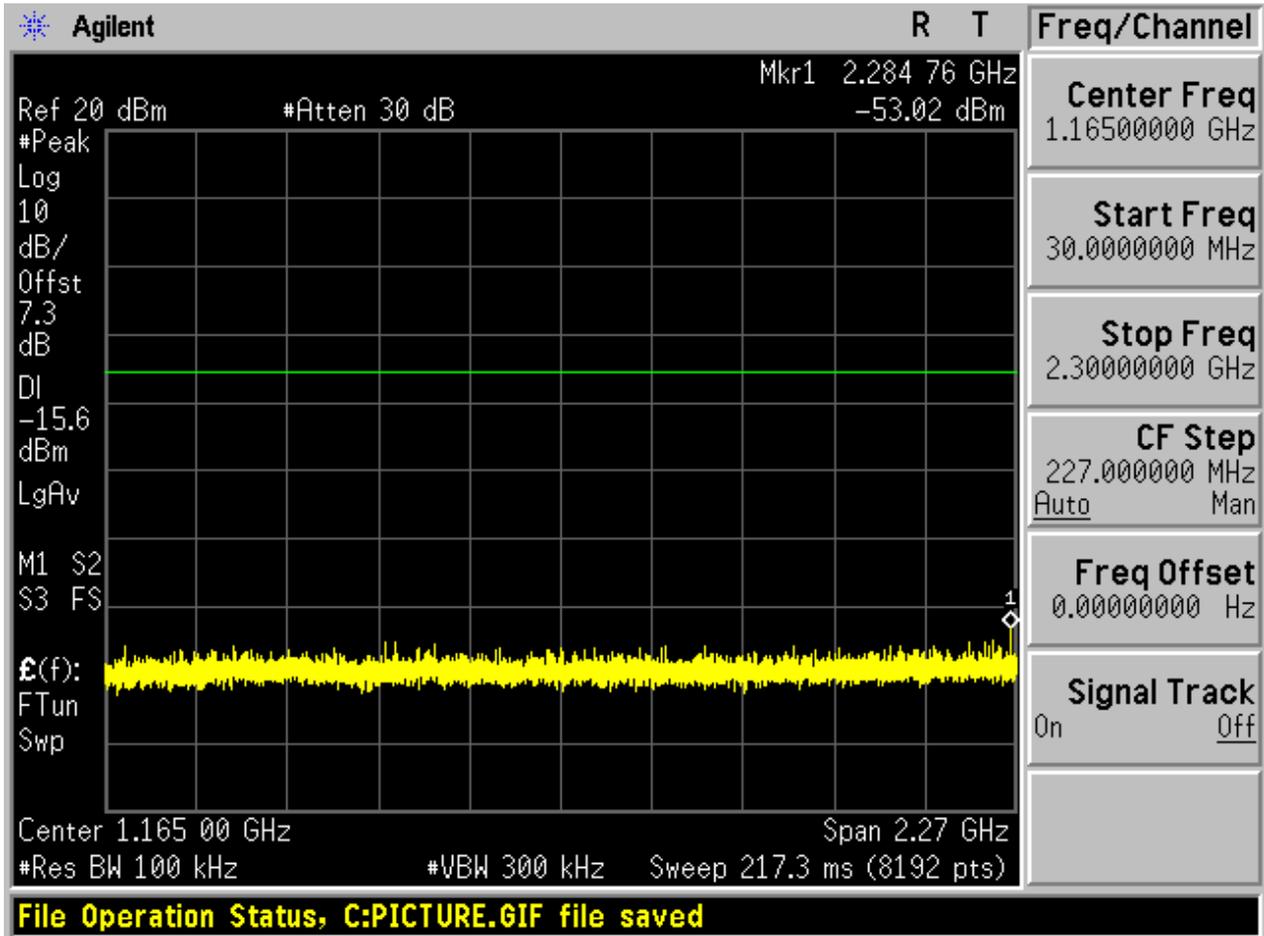


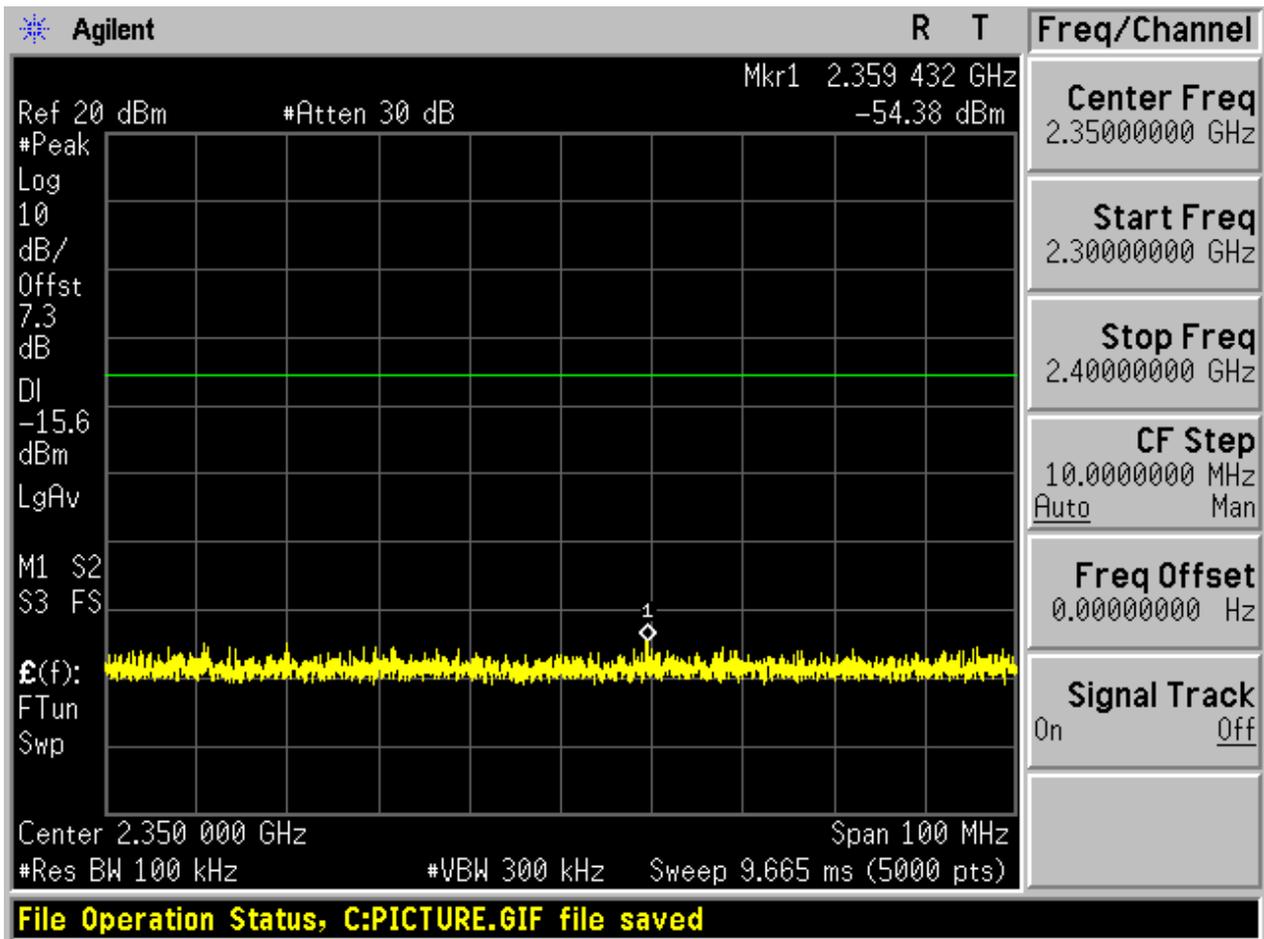


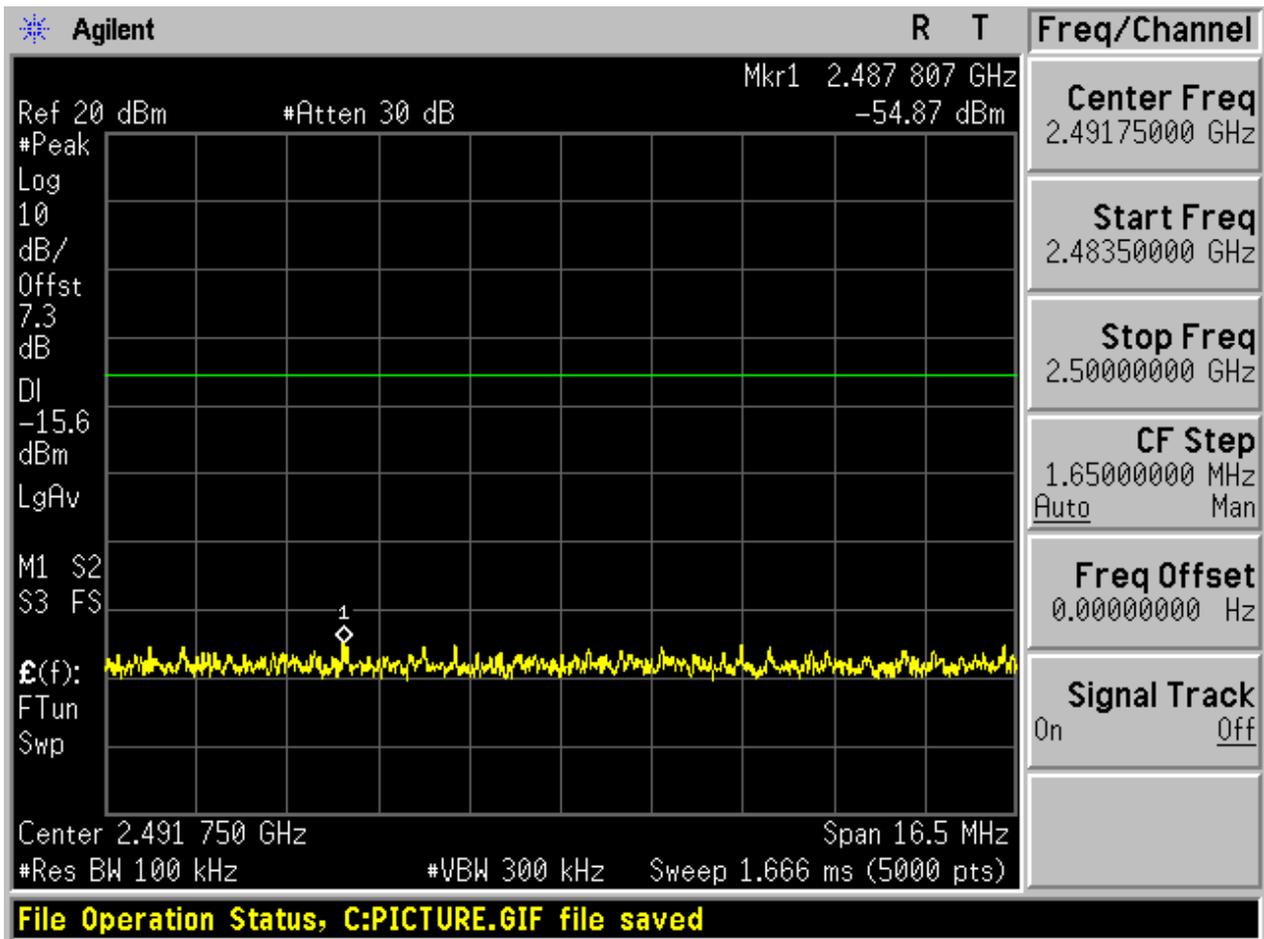
2.5.2 Puw

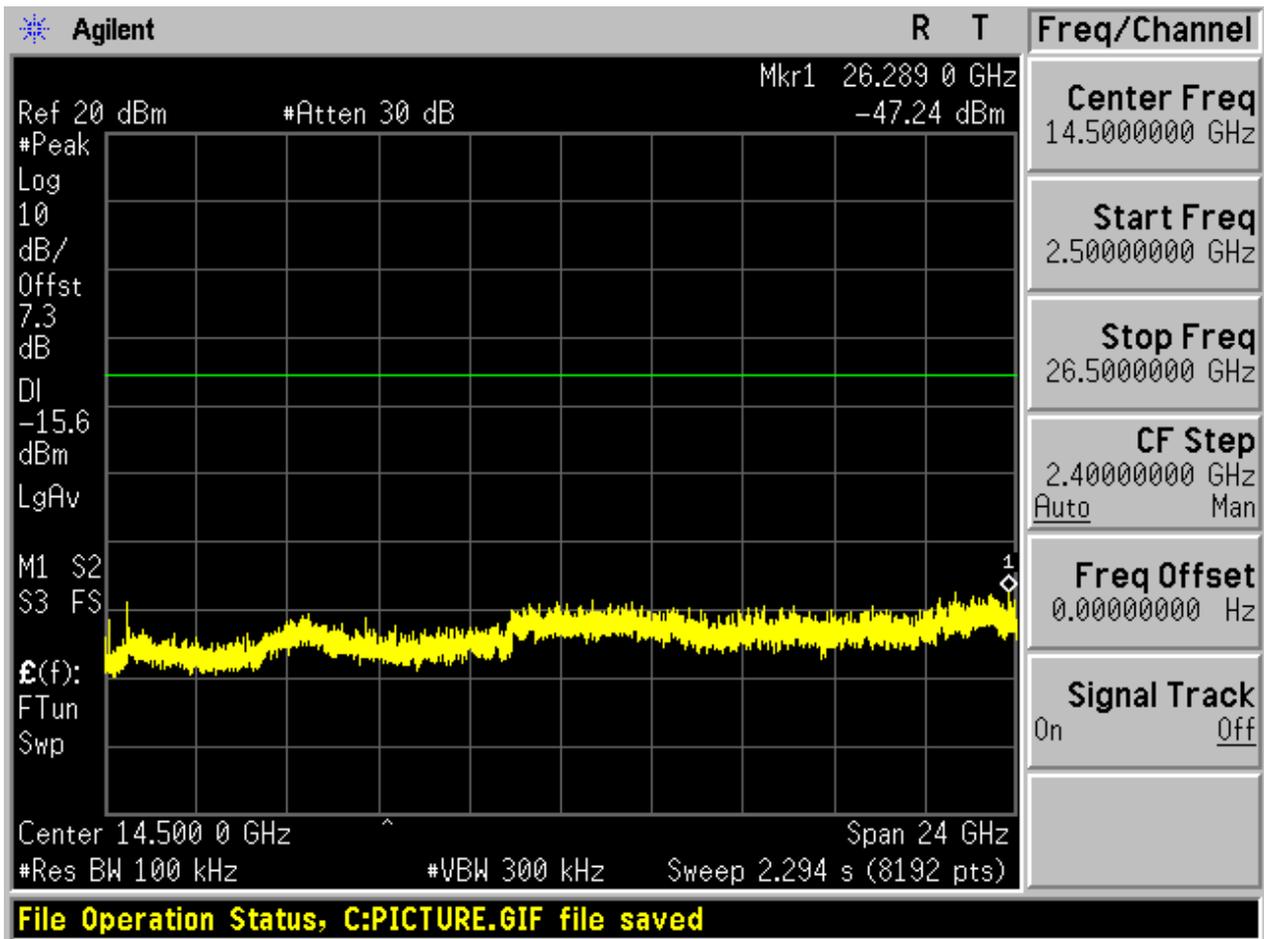








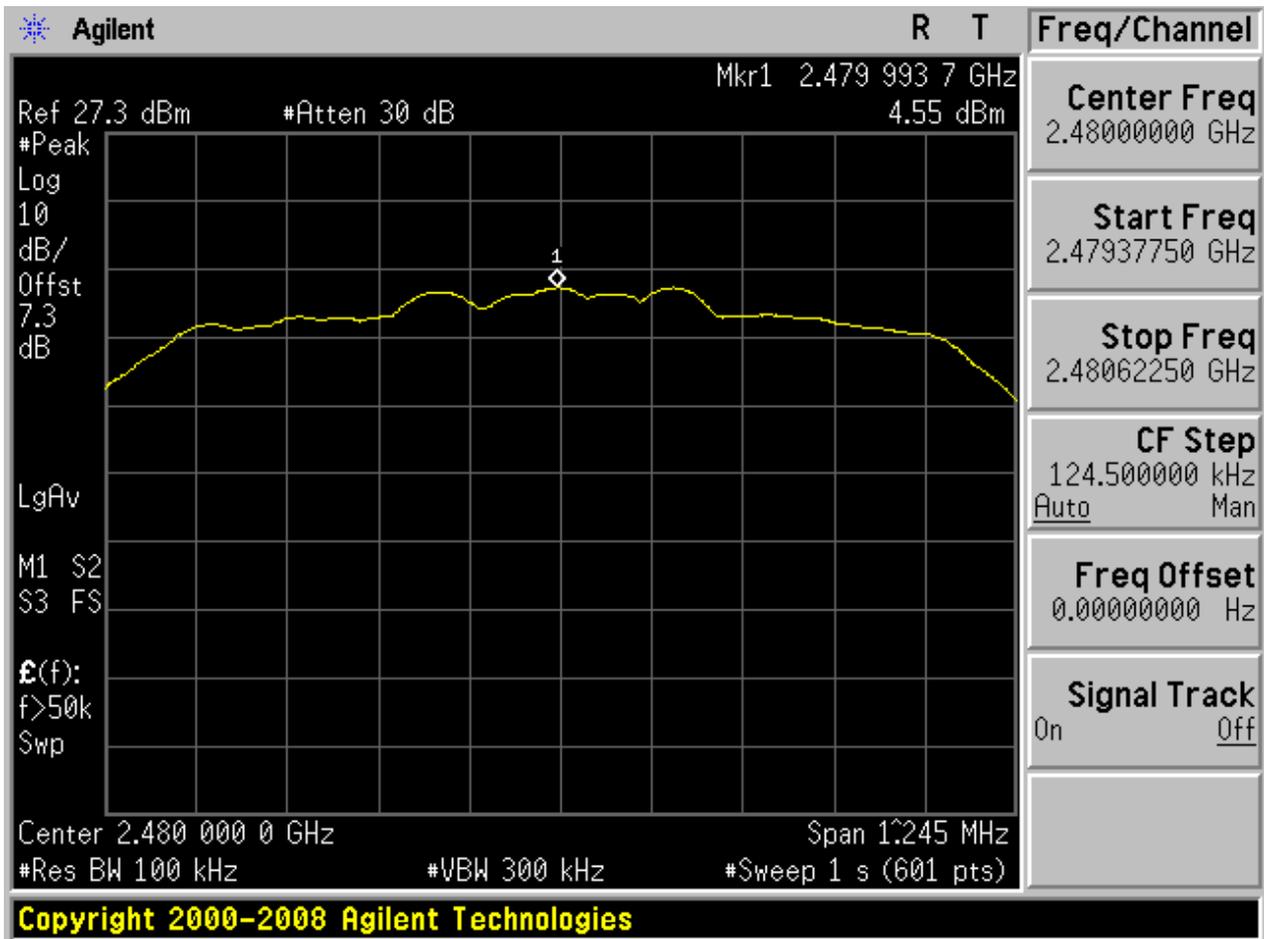






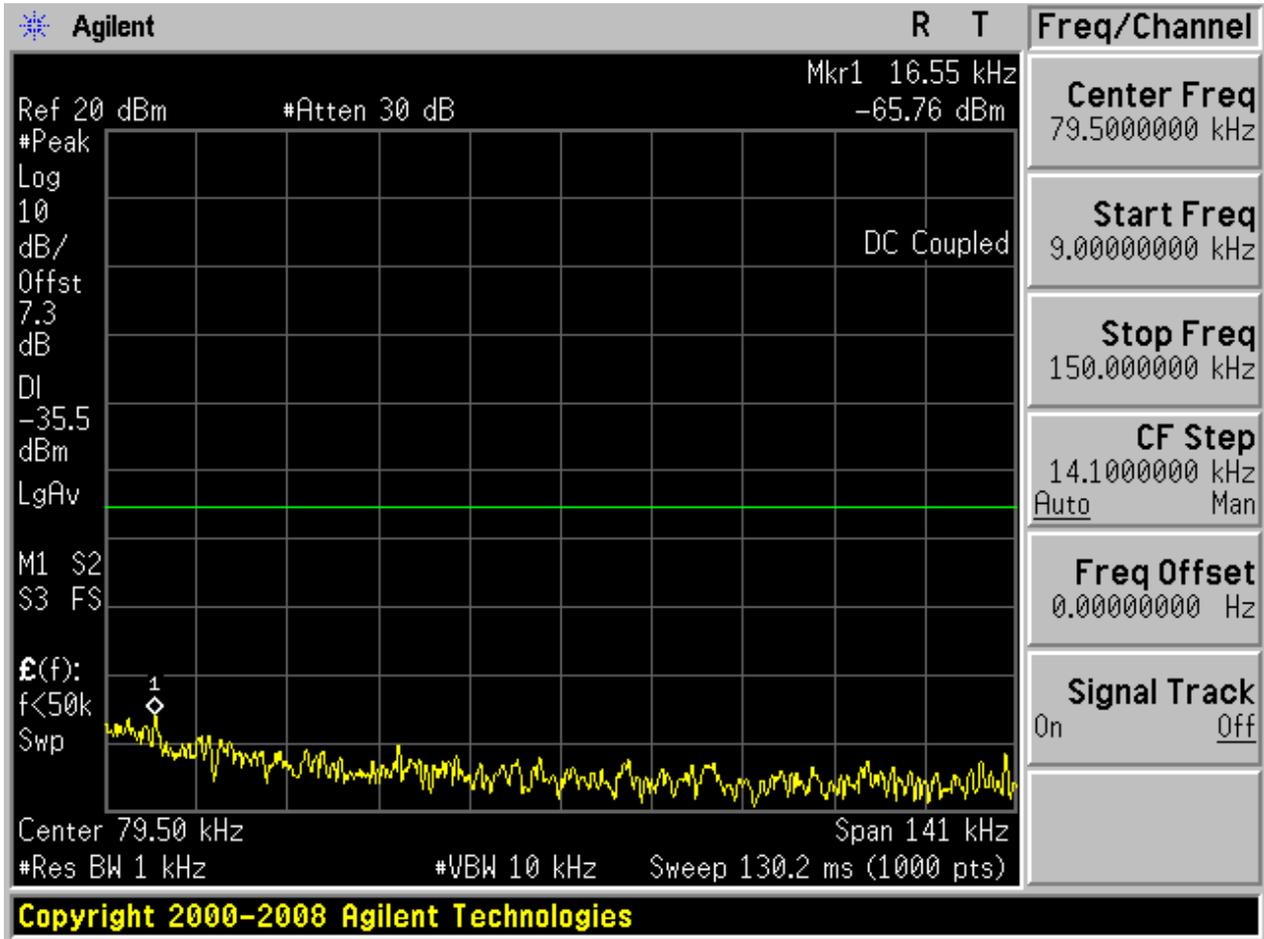
## 2.6 TM2\_2DH5\_Ch78

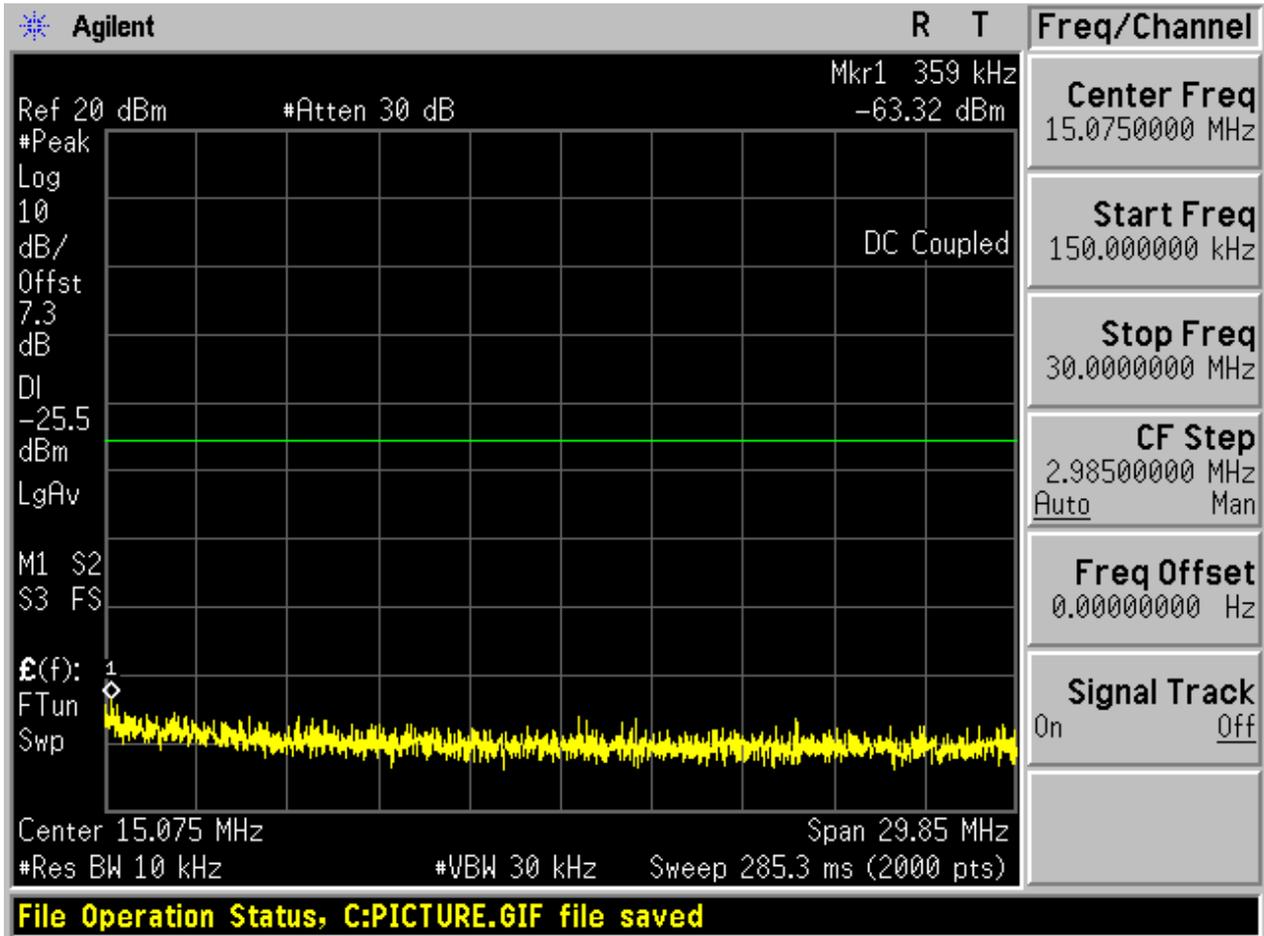
### 2.6.1 Pref

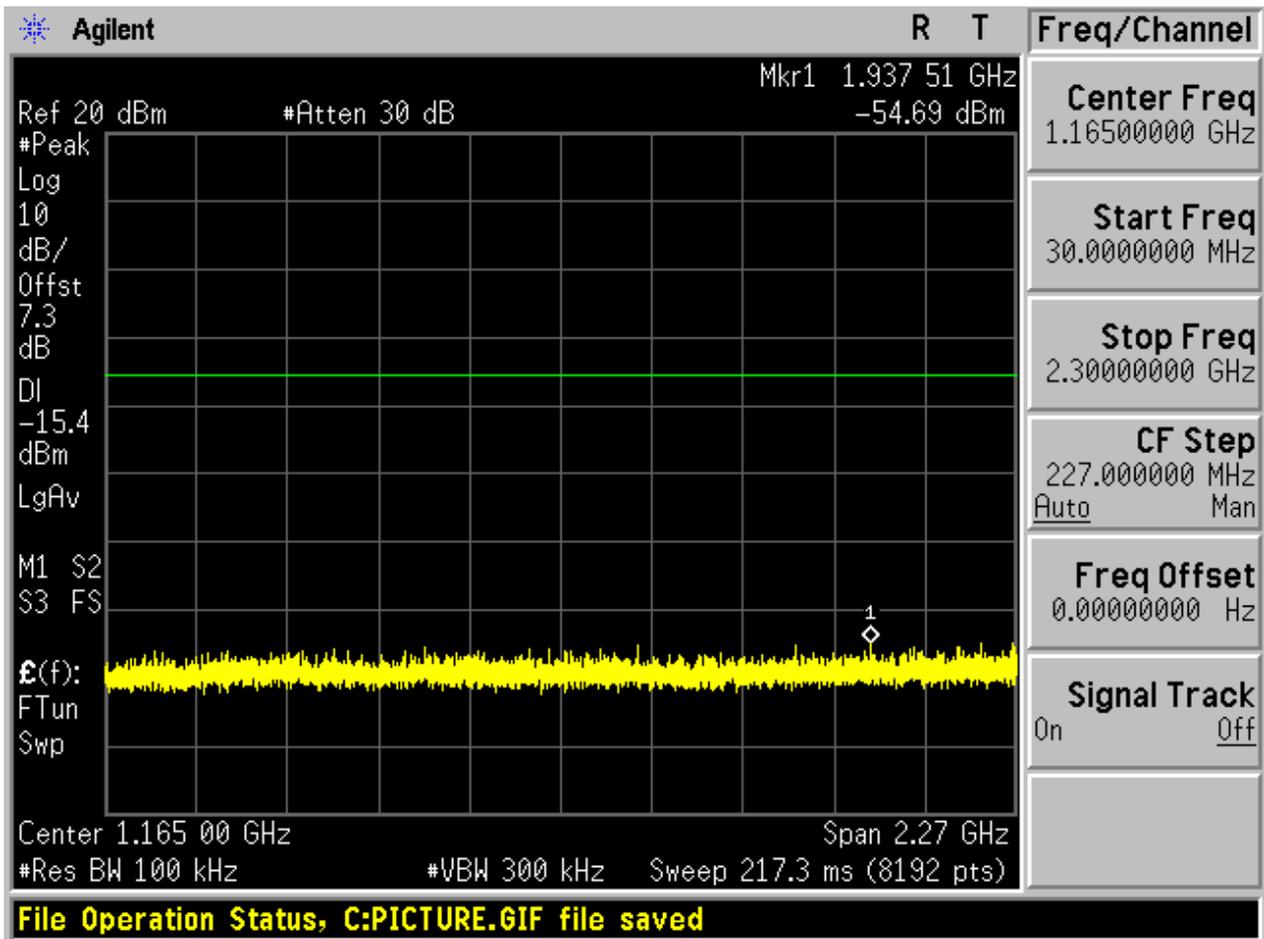


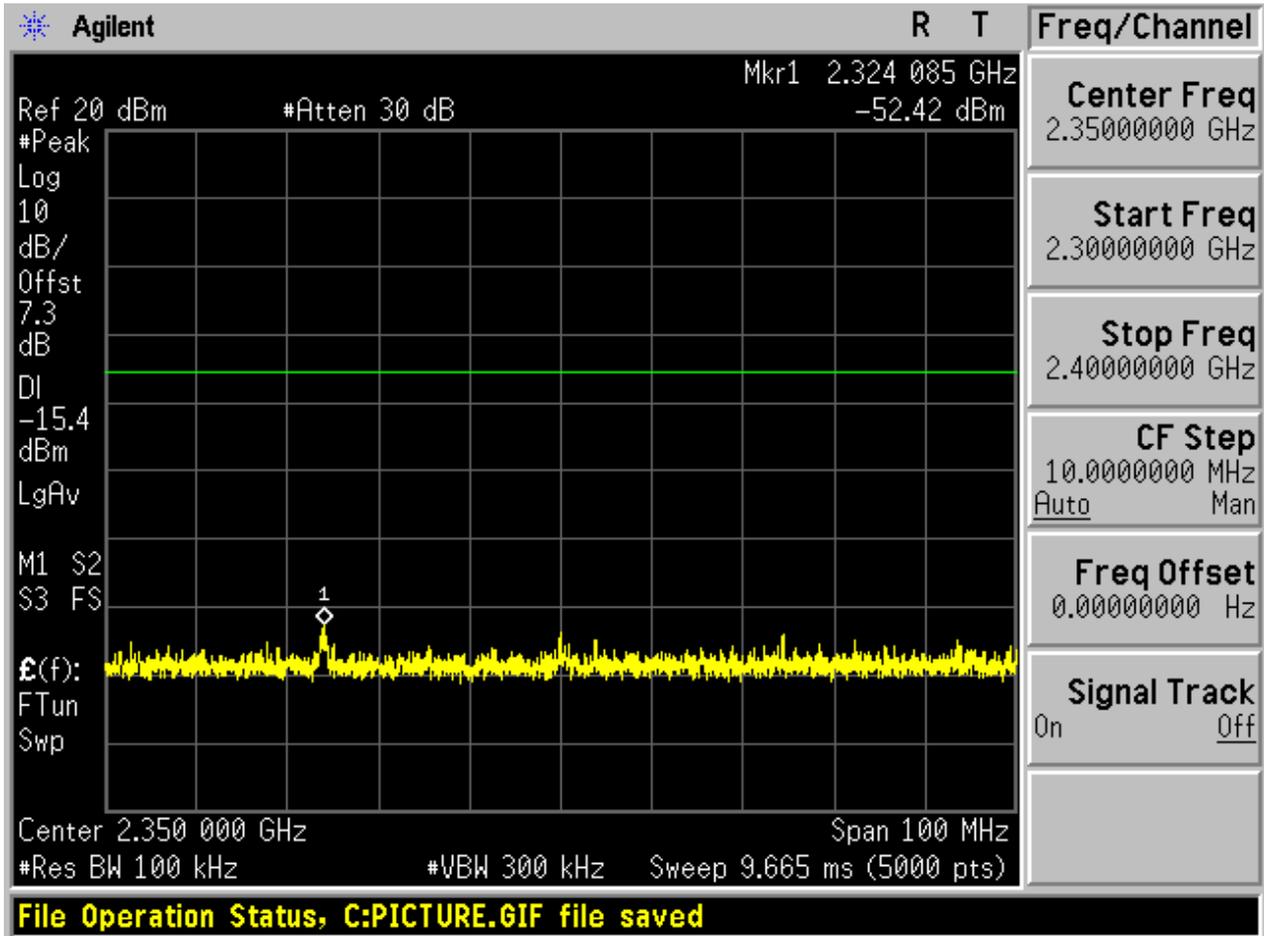


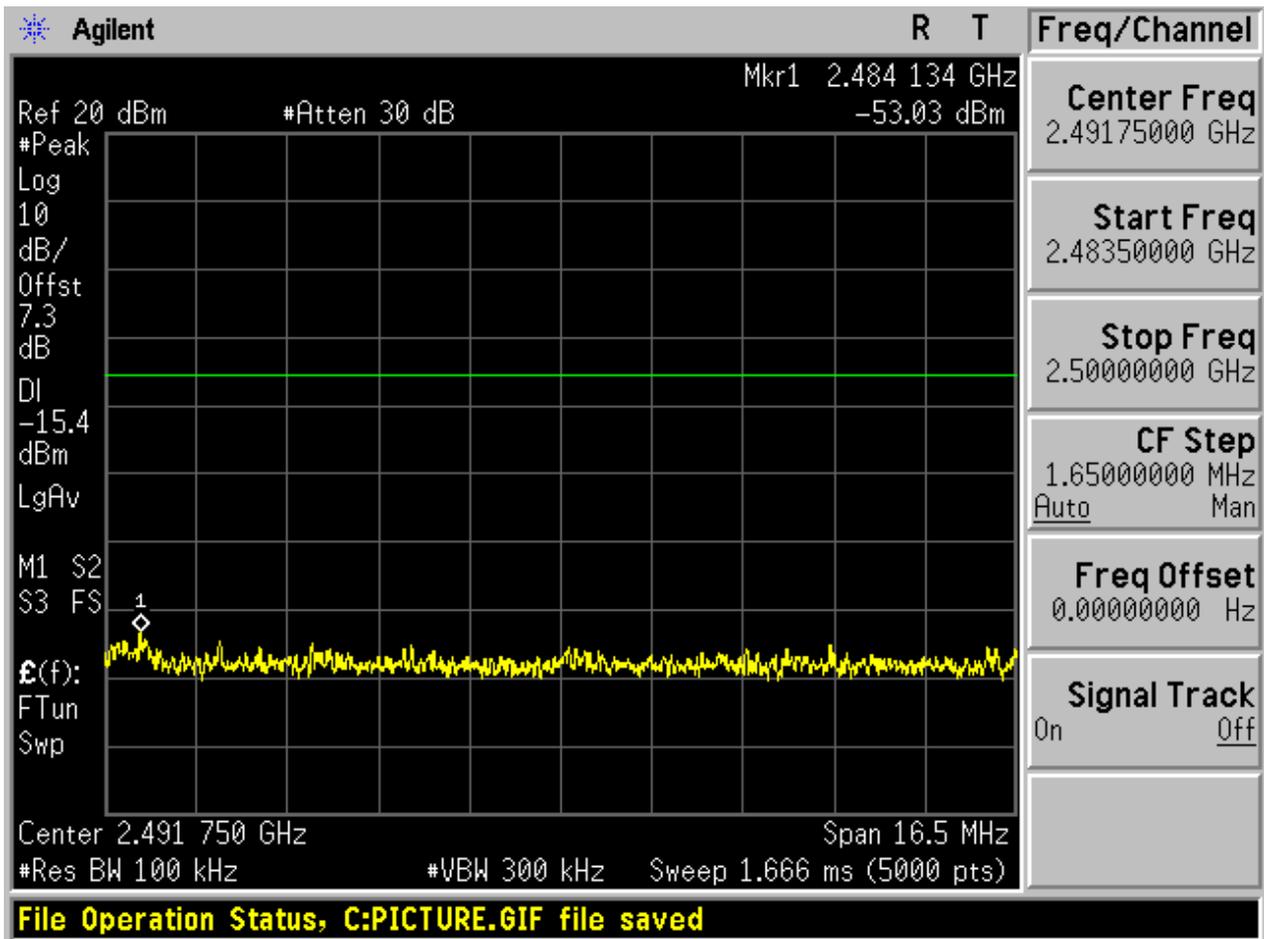
2.6.2 Puw

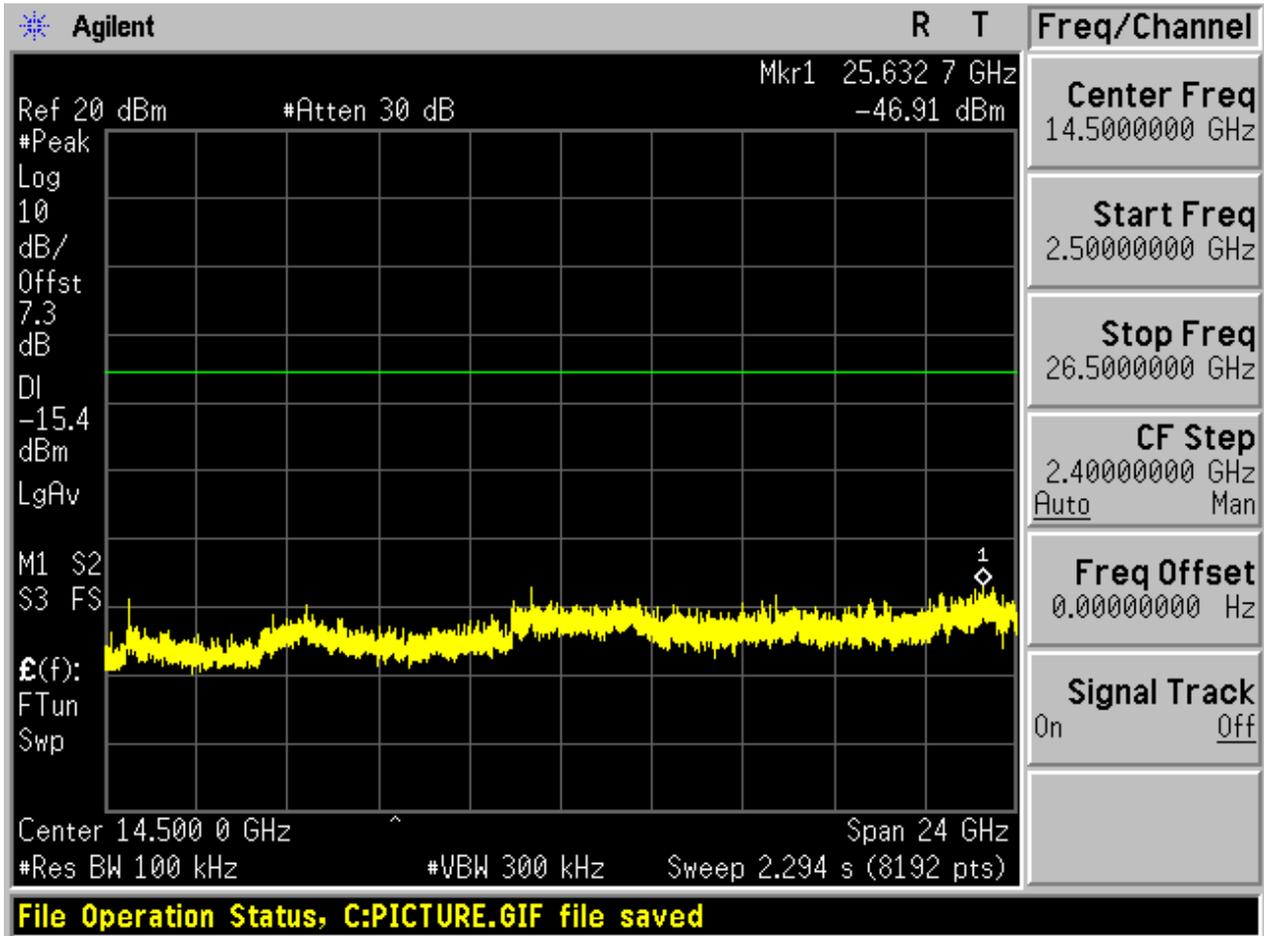








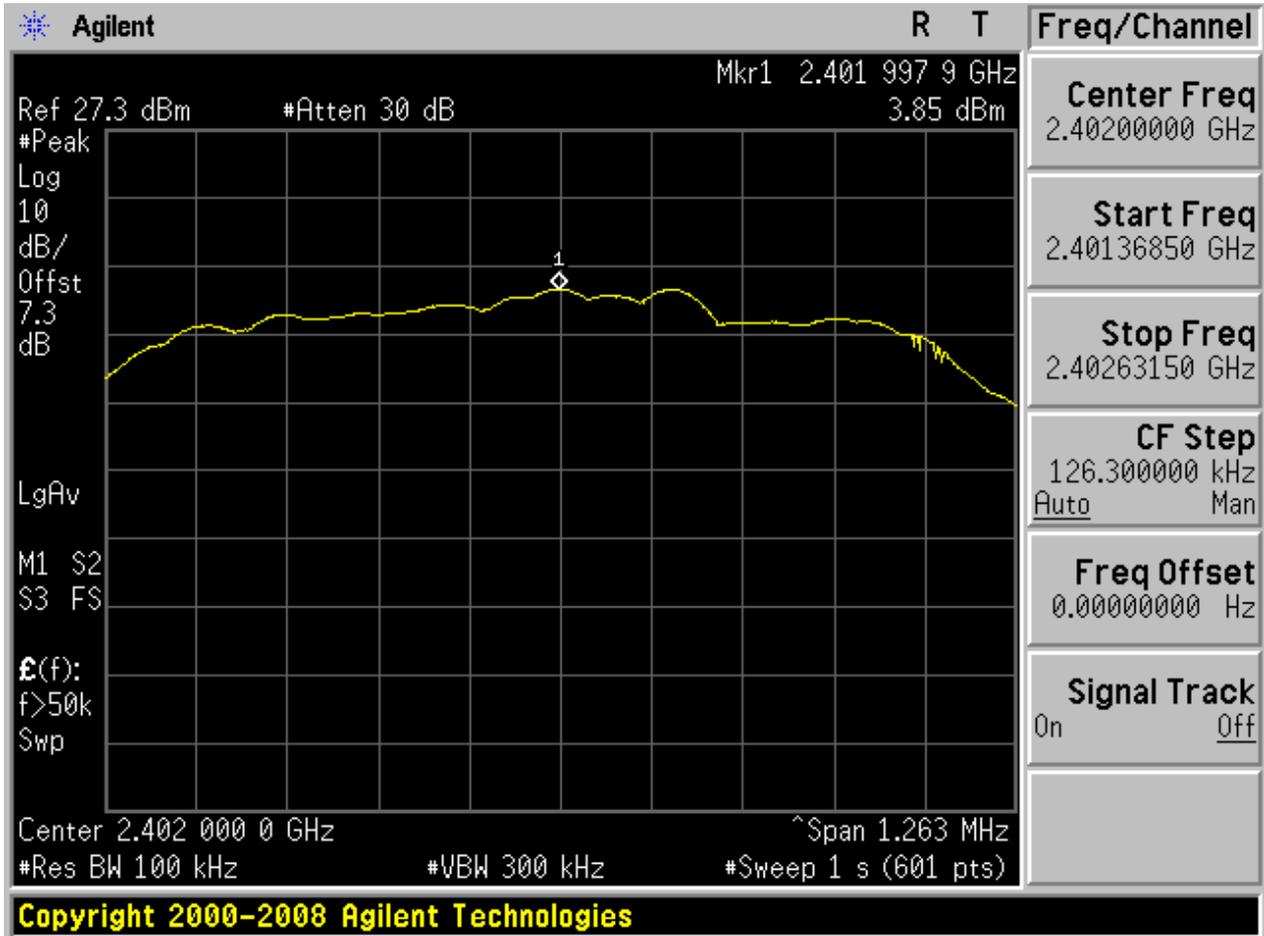




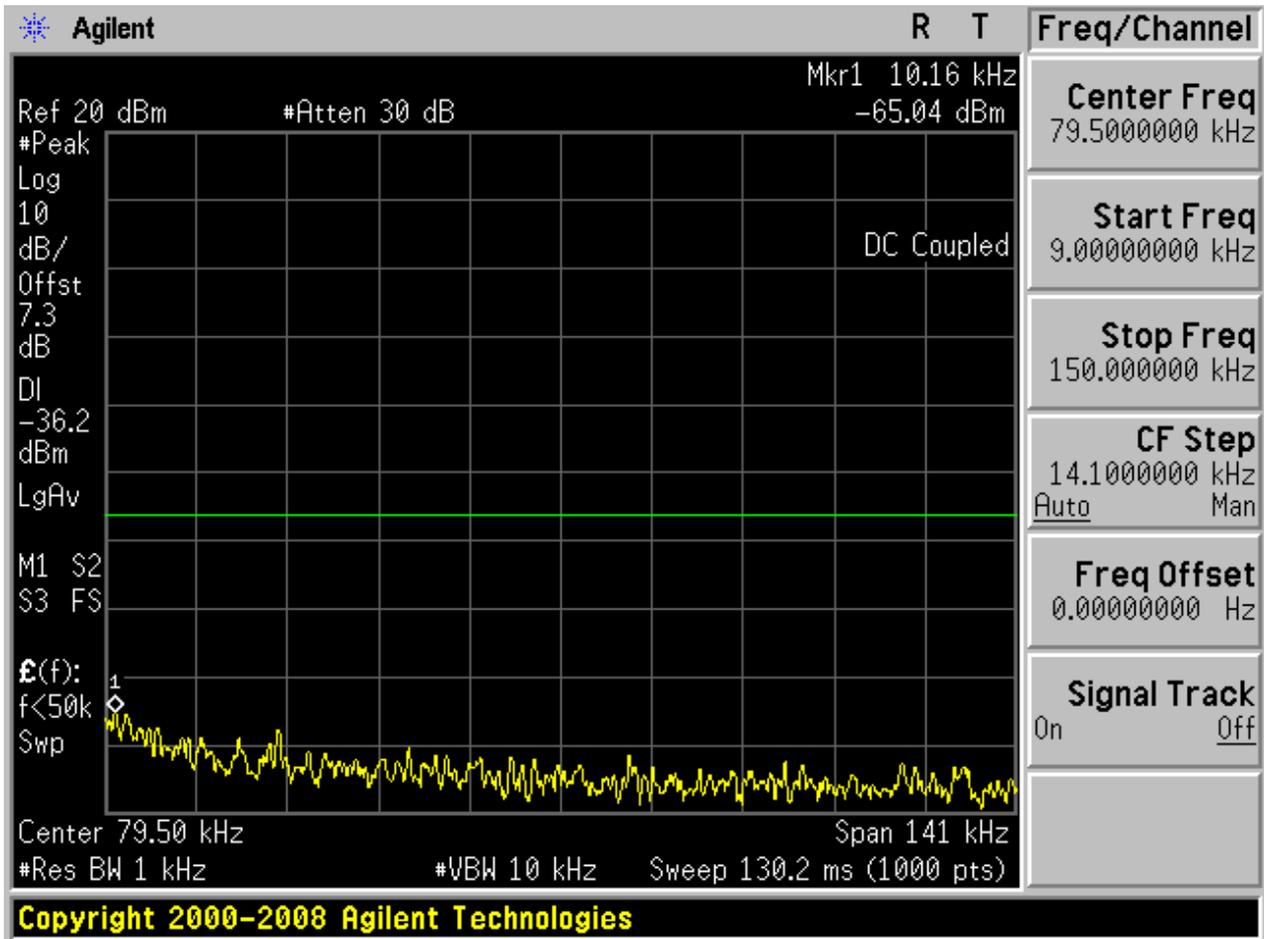


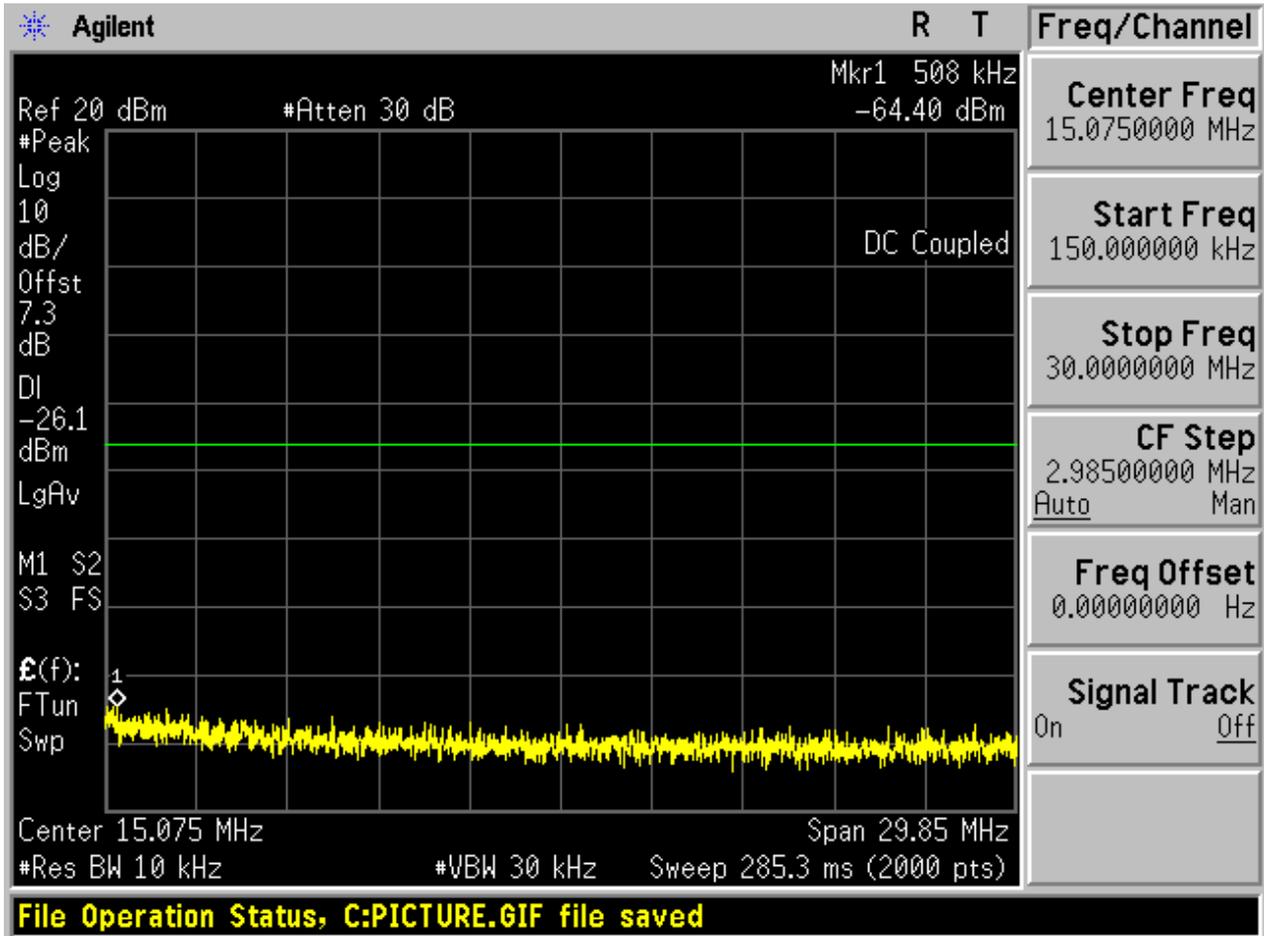
### 2.7 TM3\_3DH5\_Ch0

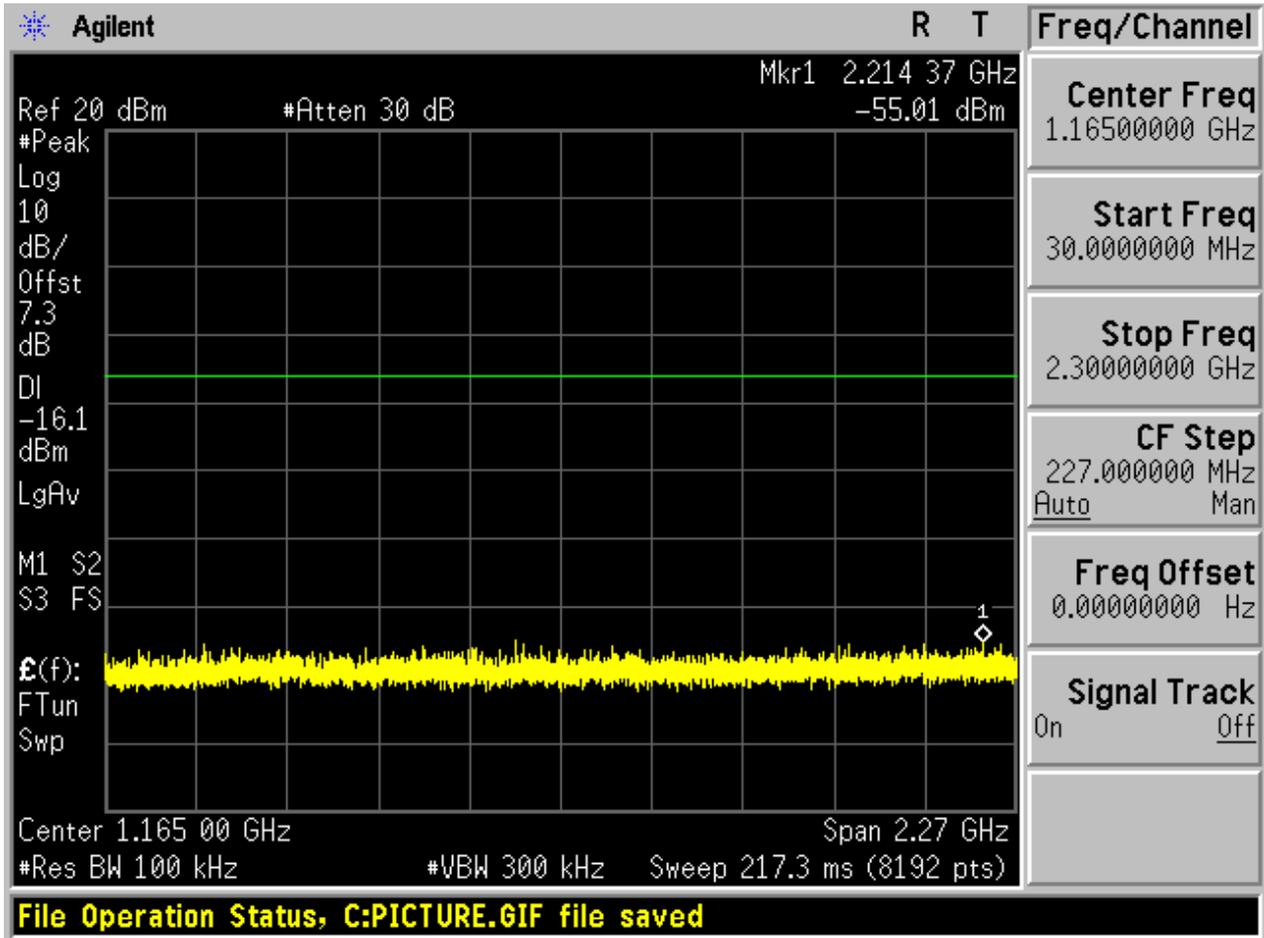
#### 2.7.1 Pref

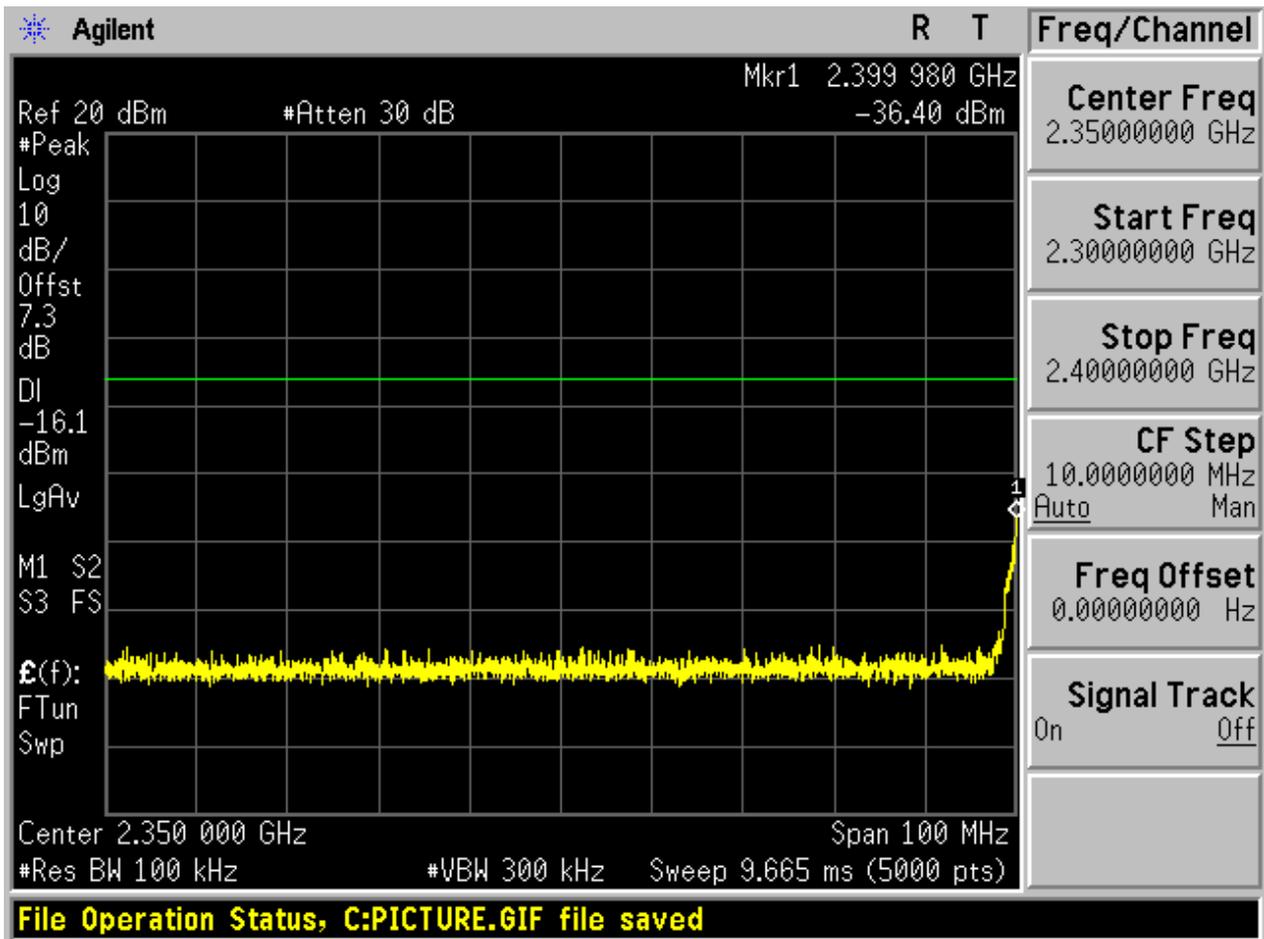


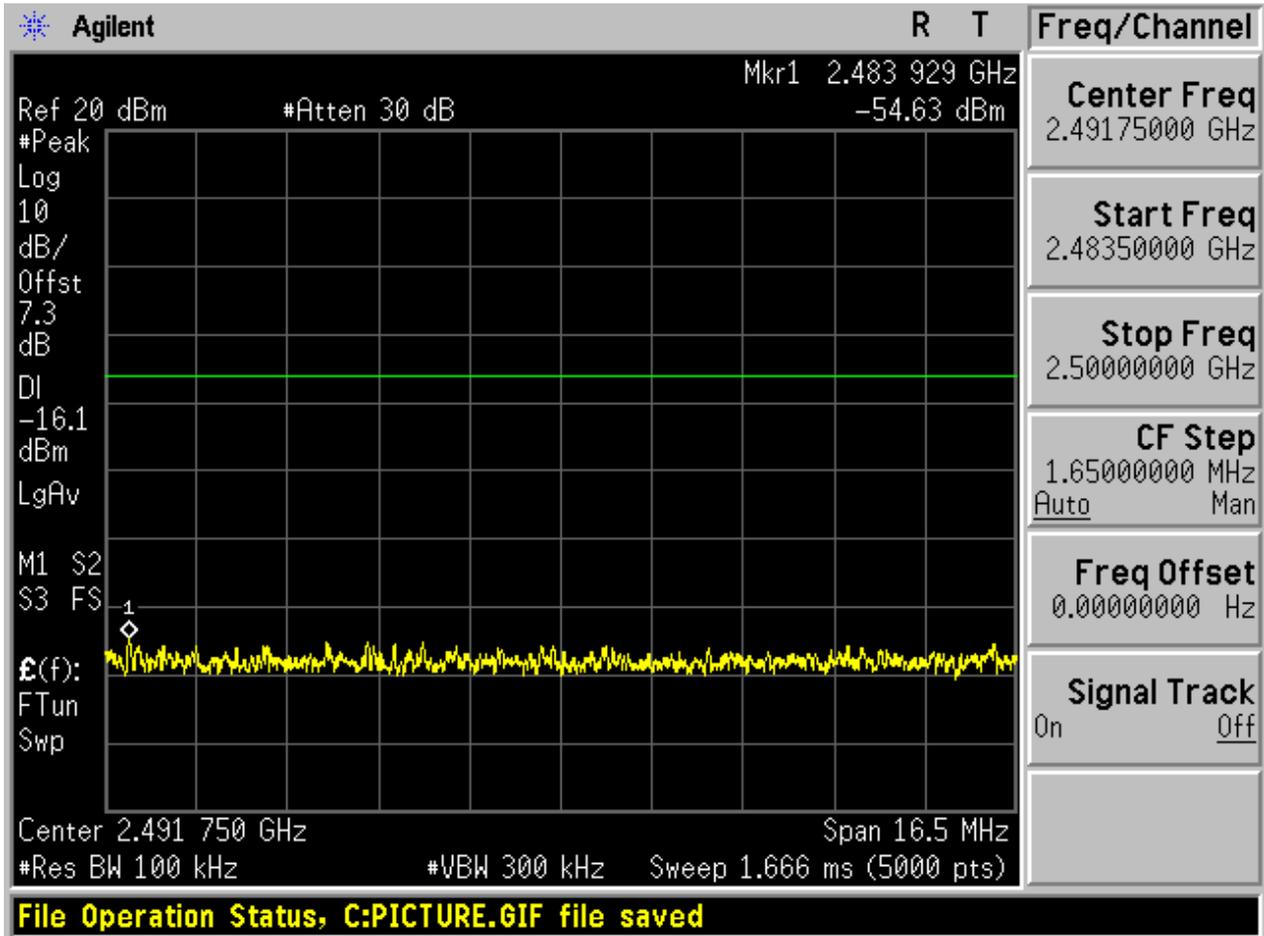
## 2.7.2 Puw

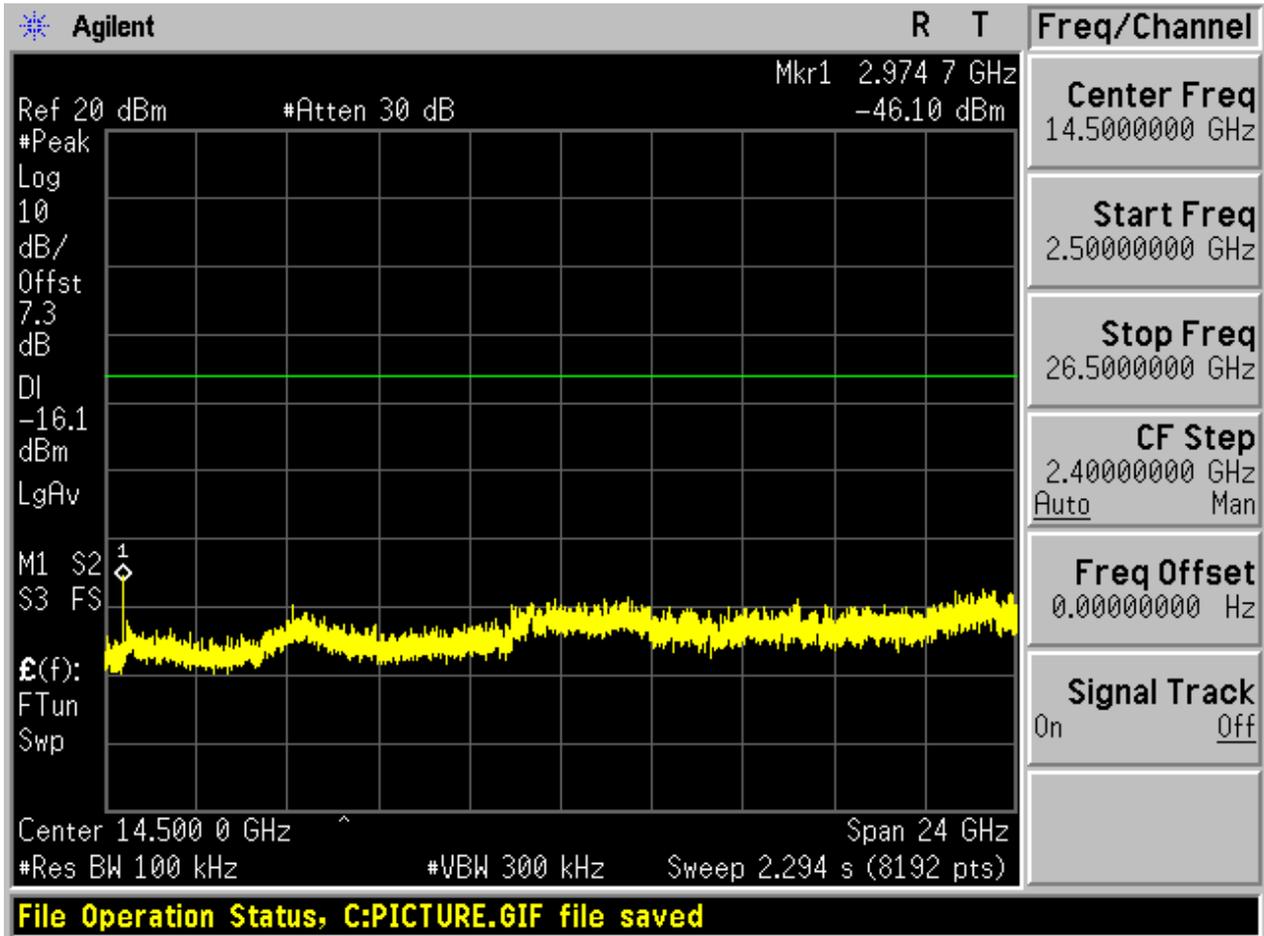








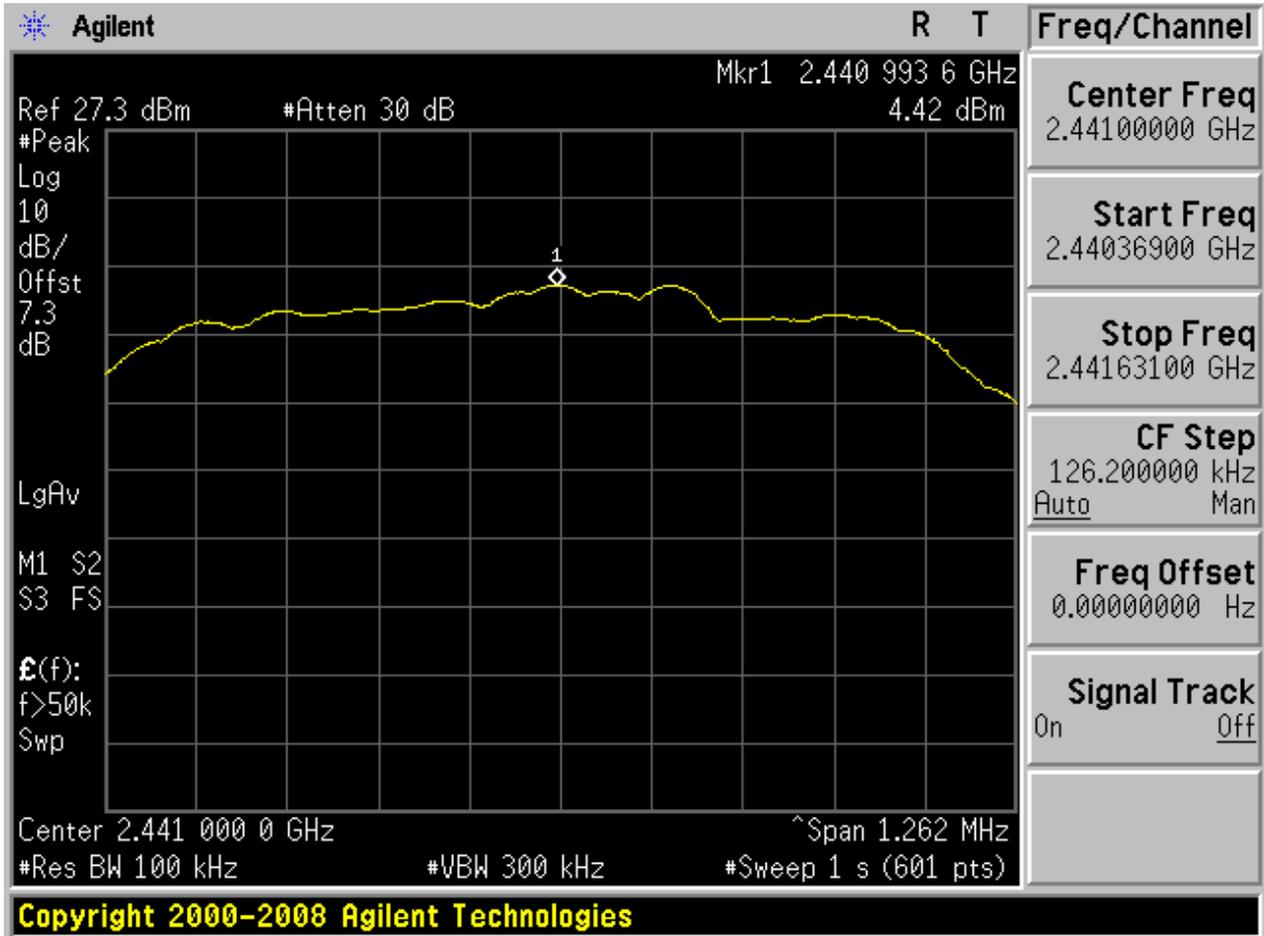






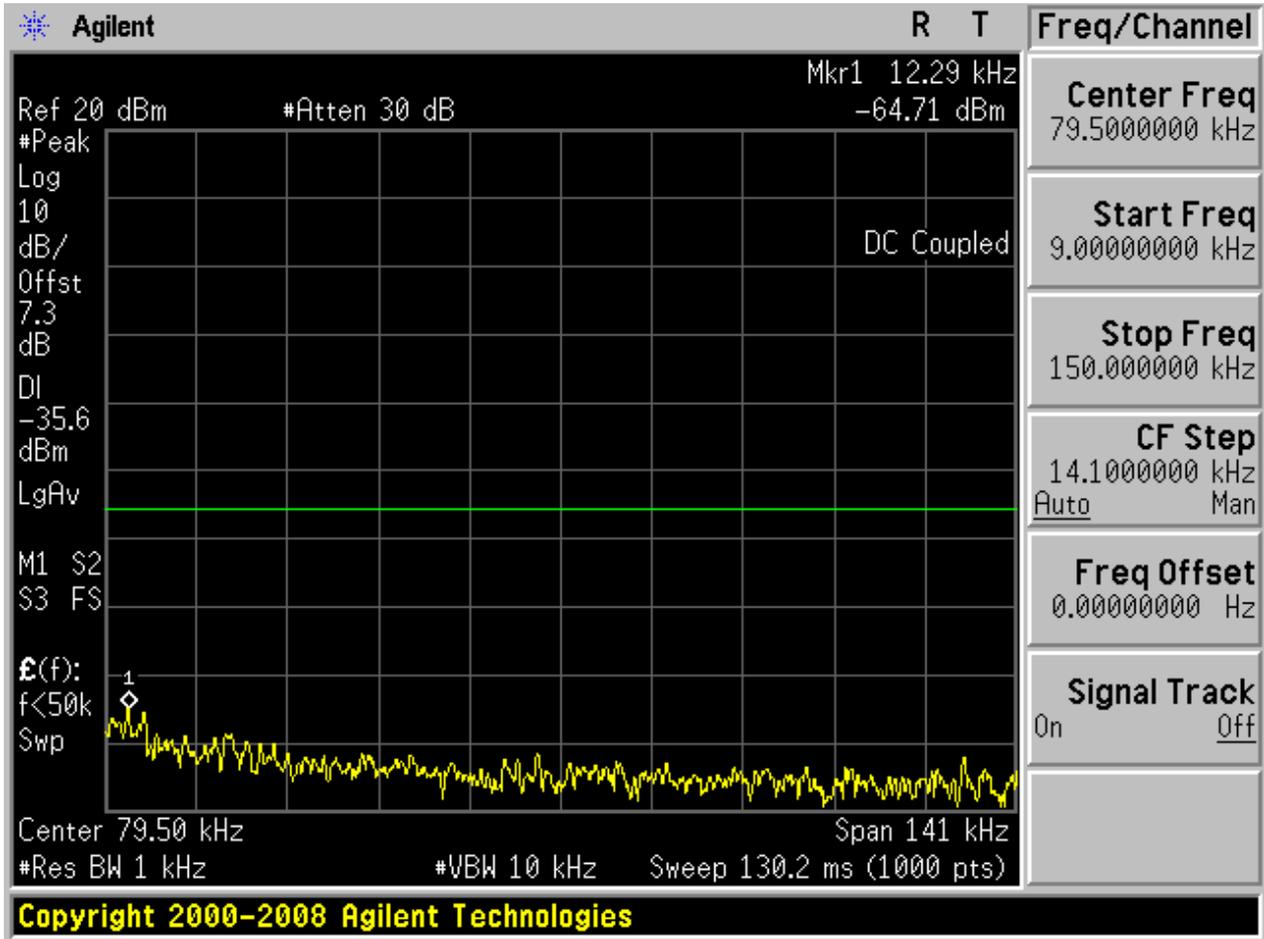
### 2.8 TM3\_3DH5\_Ch39

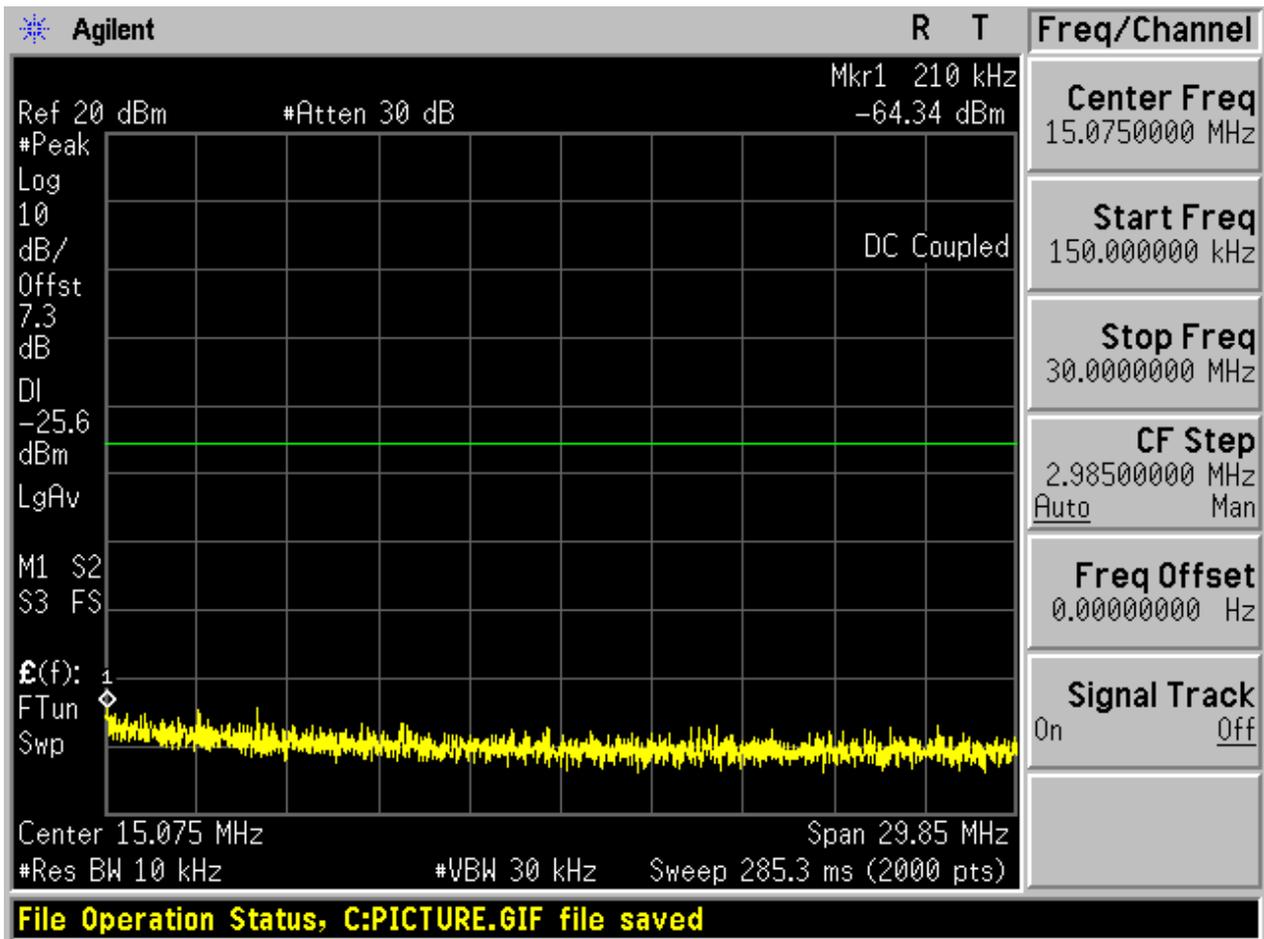
#### 2.8.1 Pref

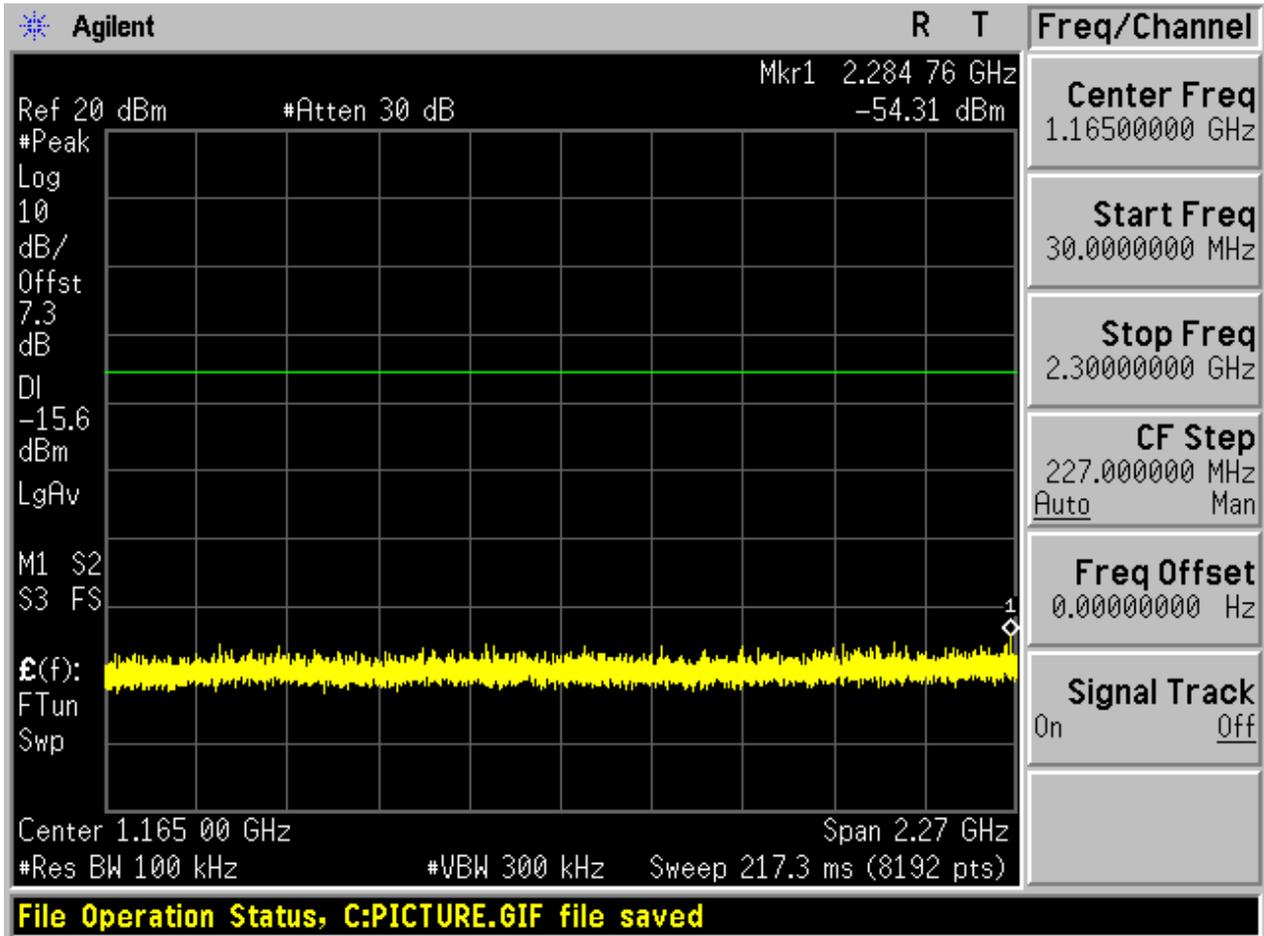


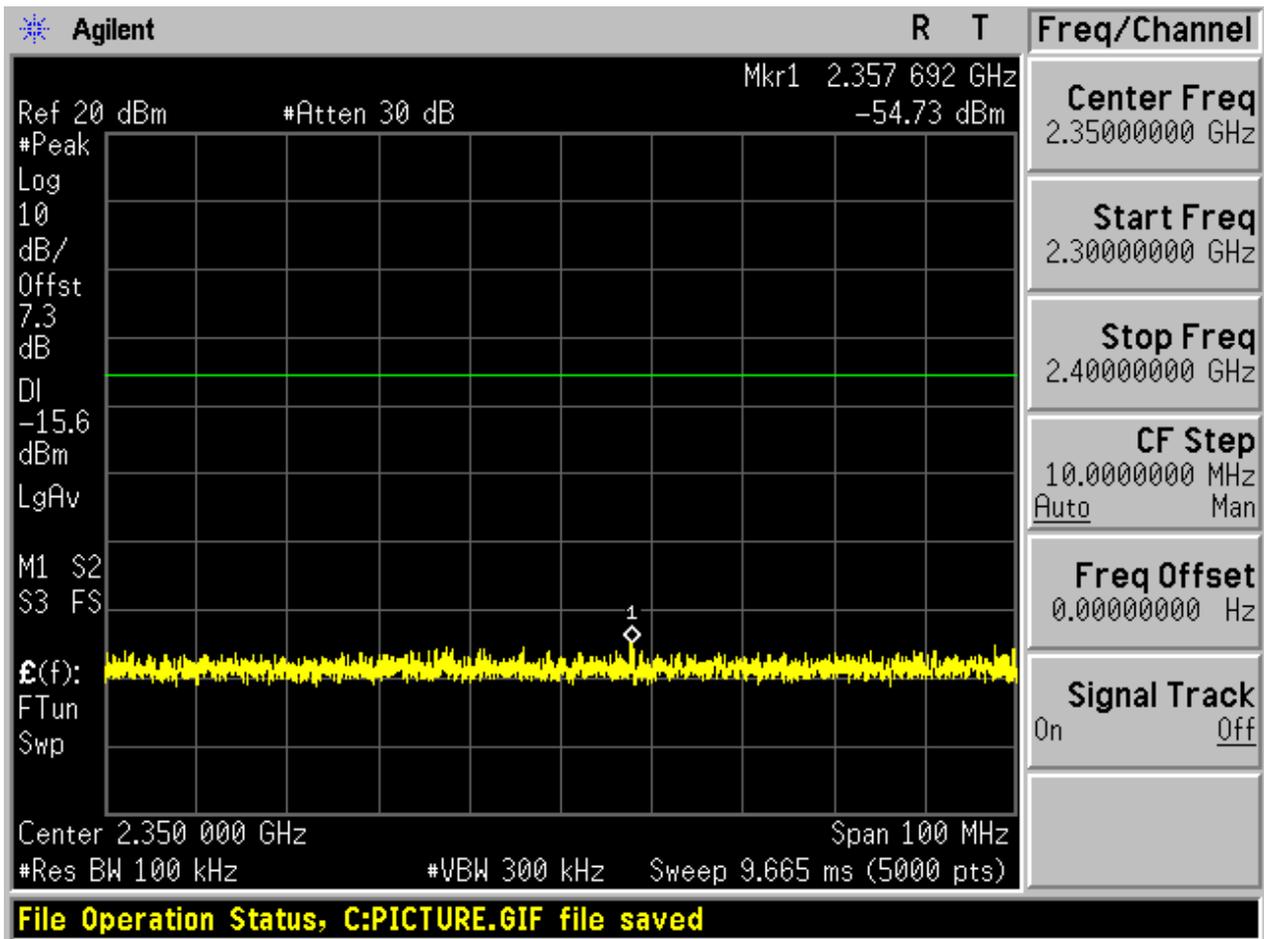


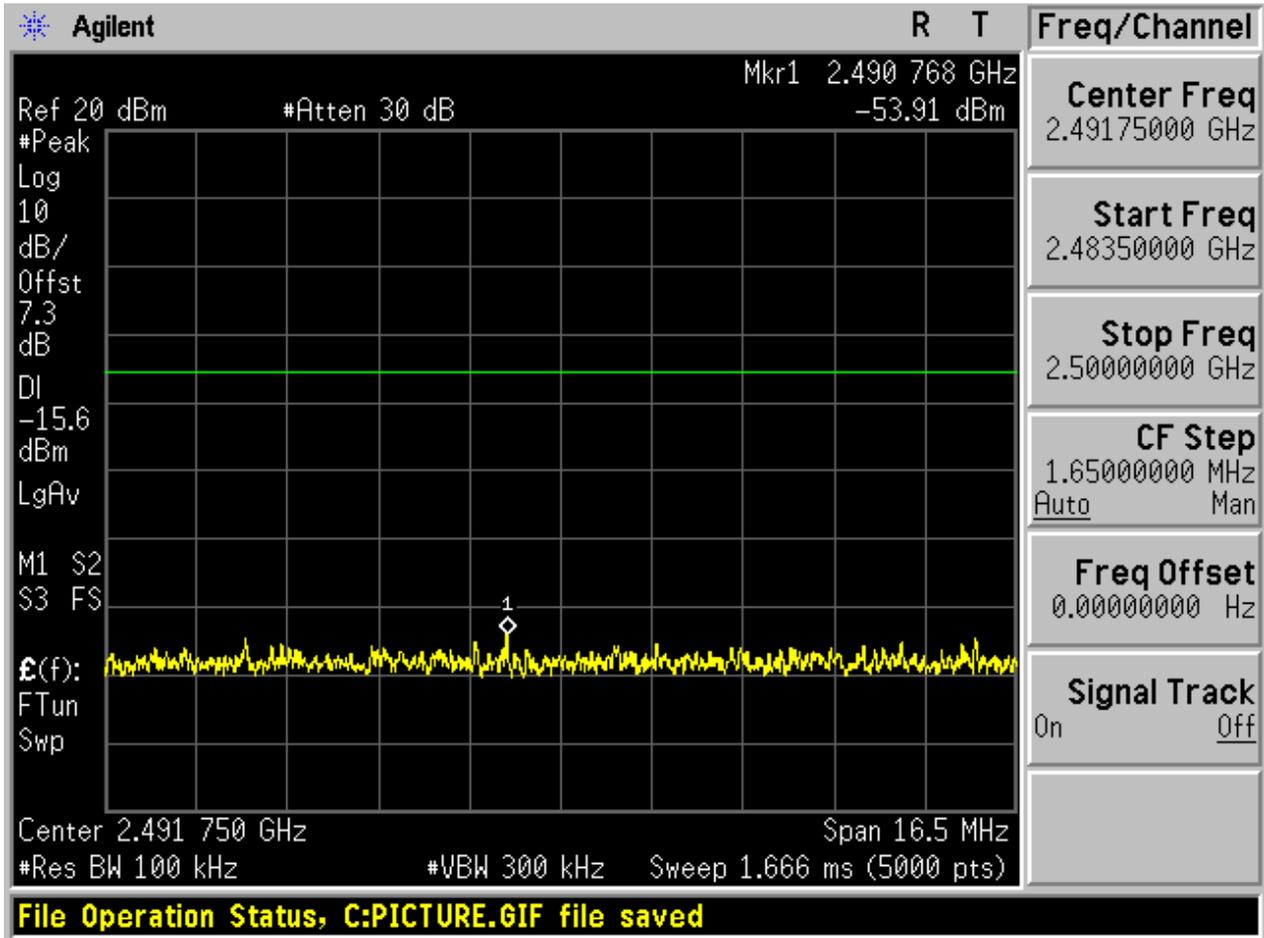
2.8.2 Puw

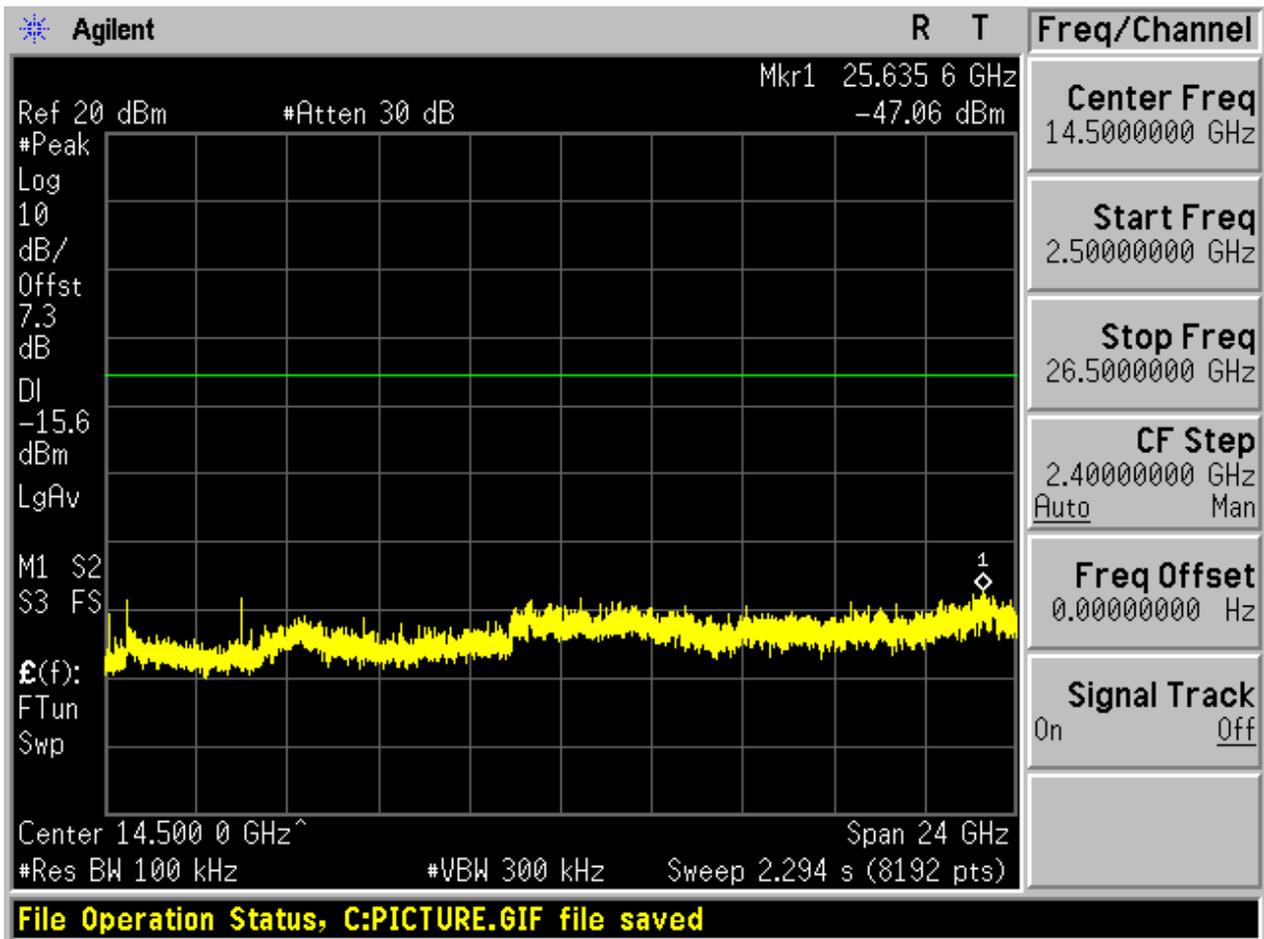








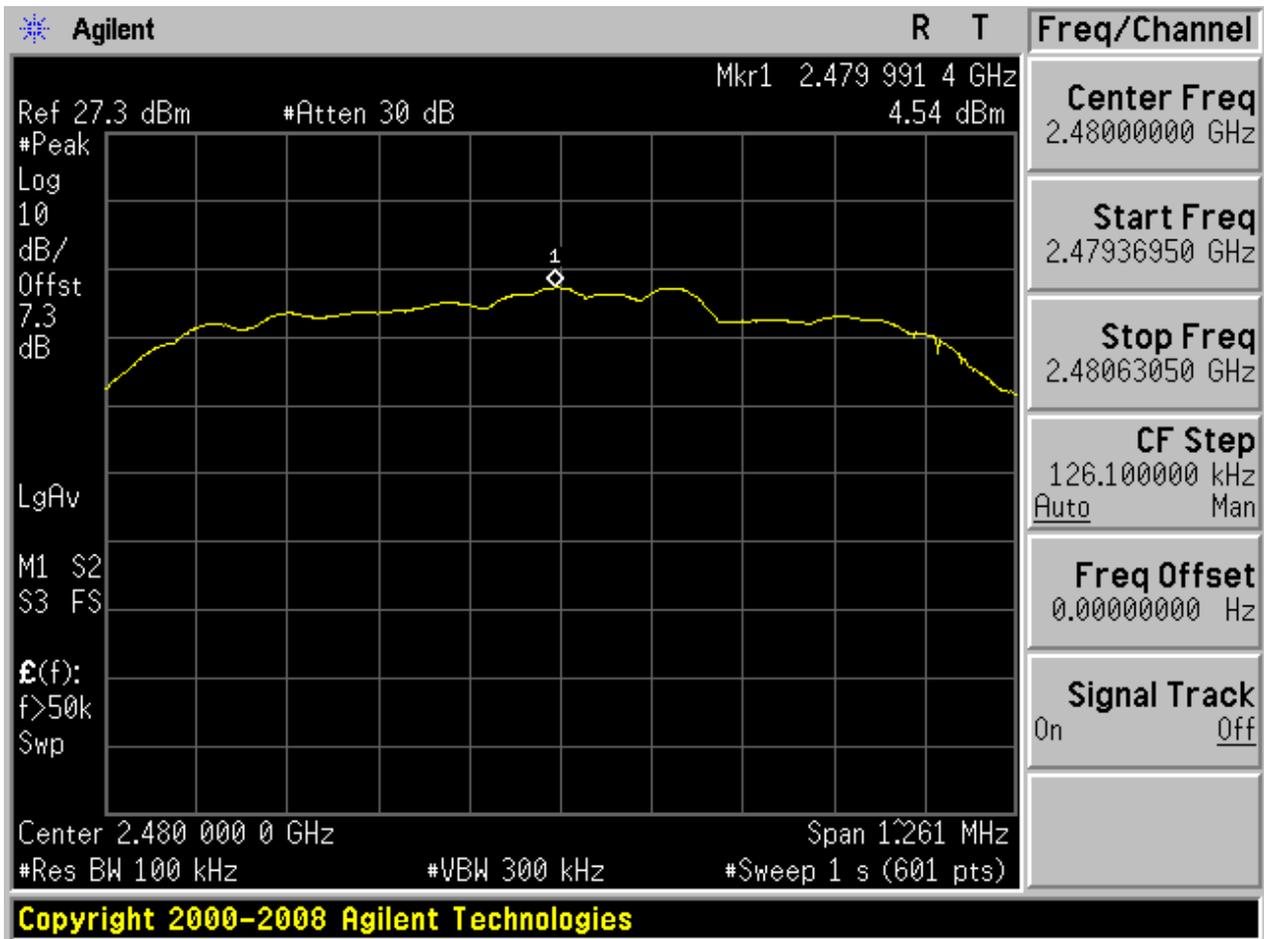






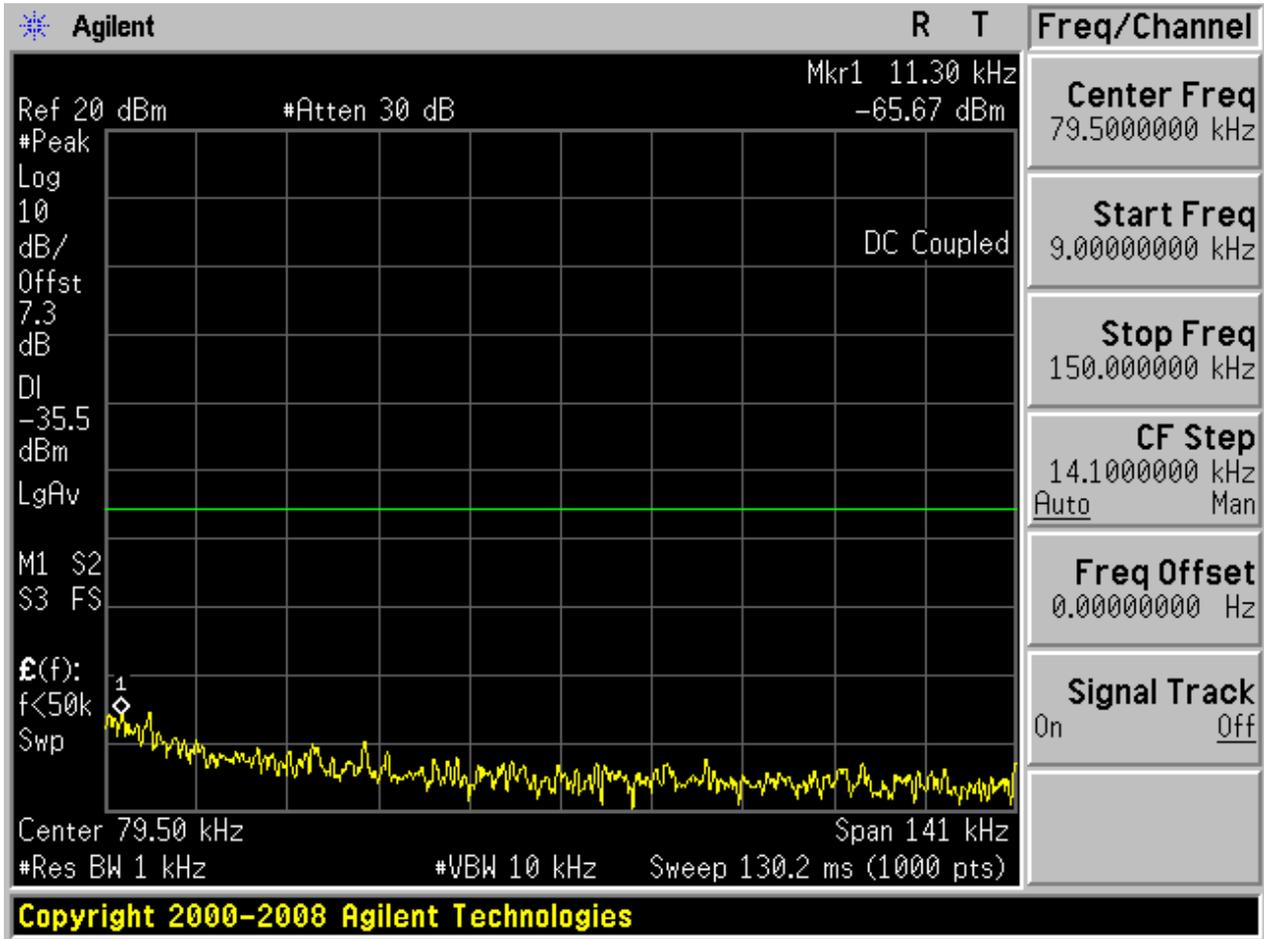
## 2.9 TM3\_3DH5\_Ch78

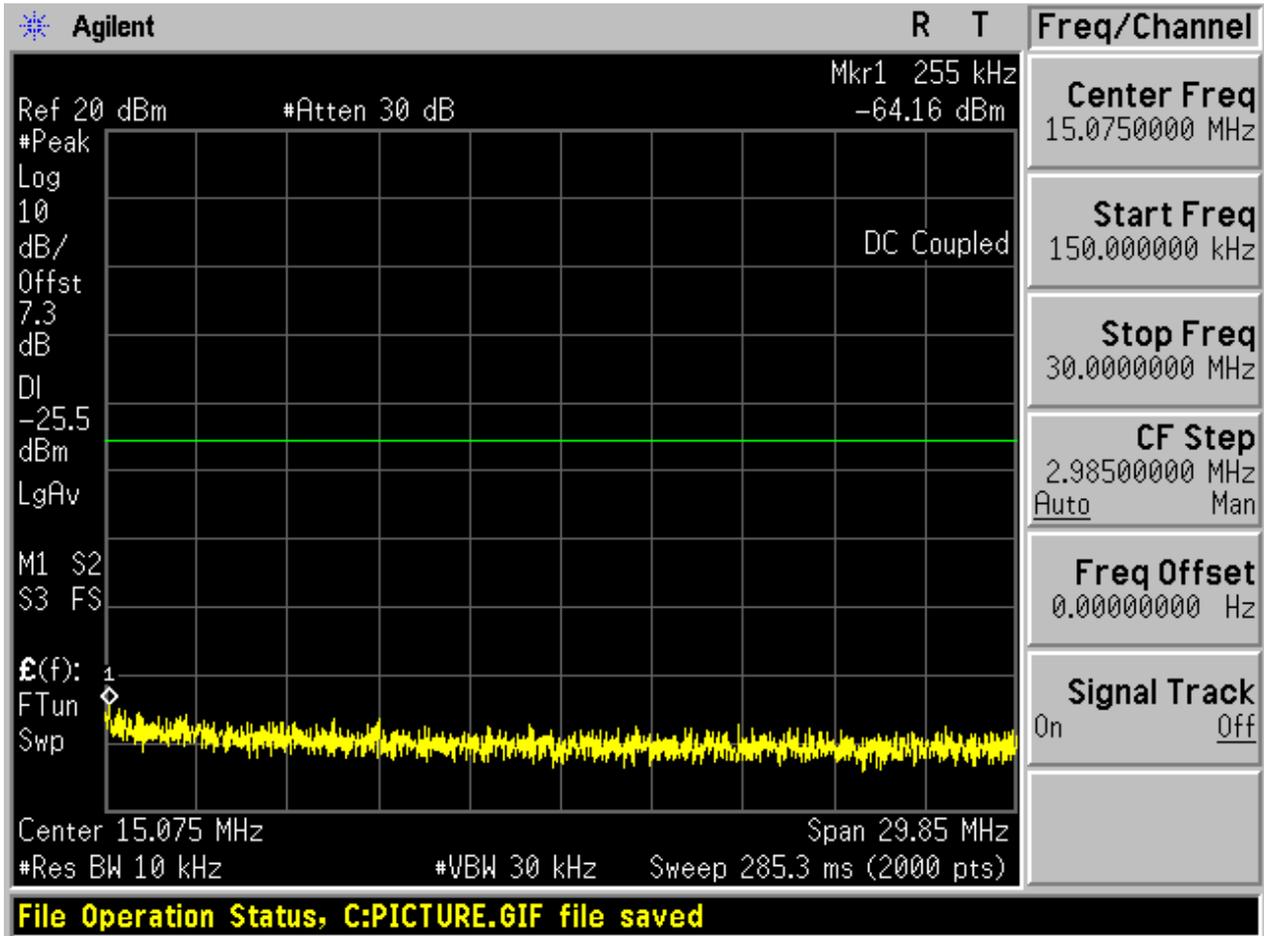
### 2.9.1 Pref

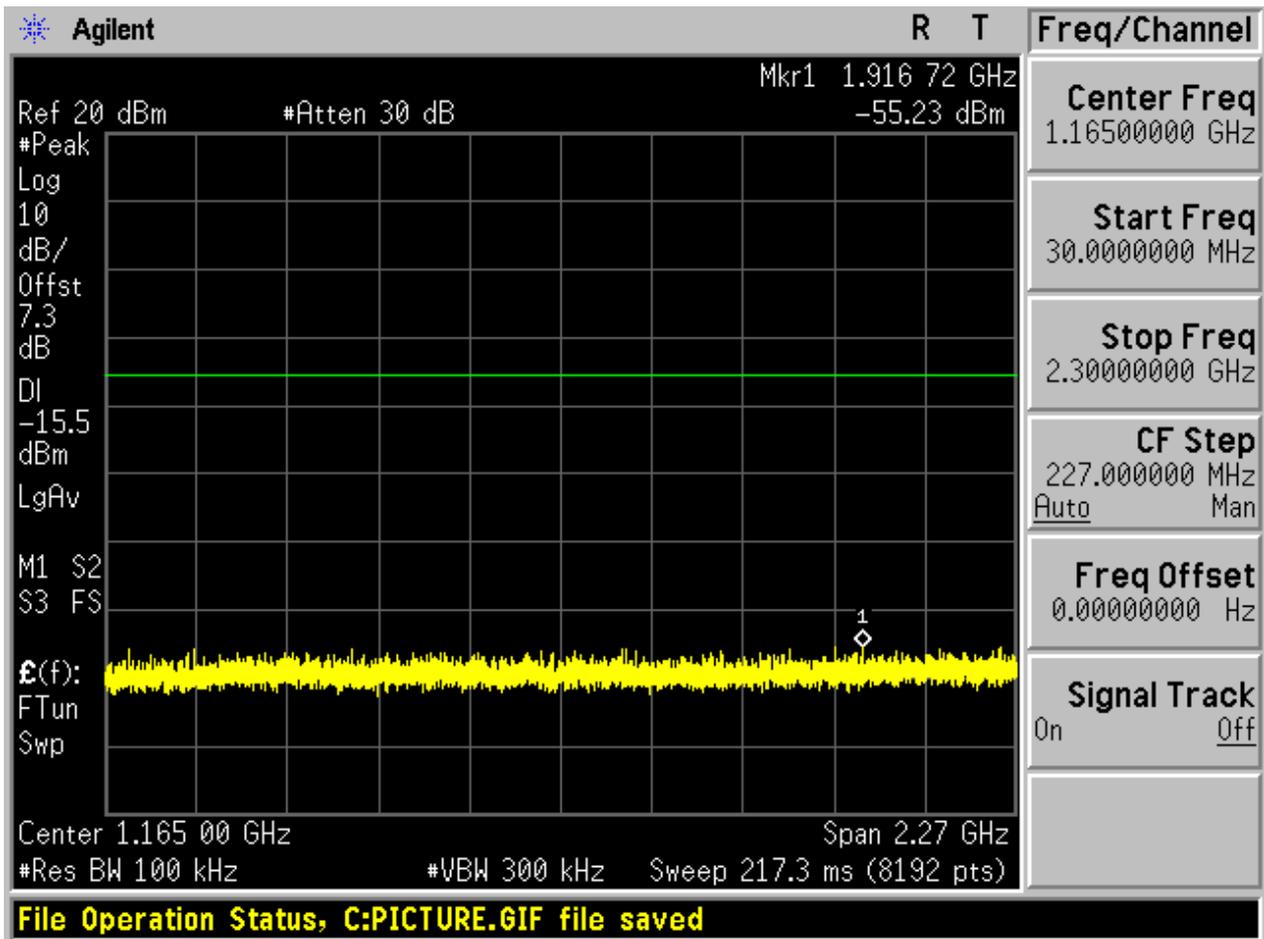


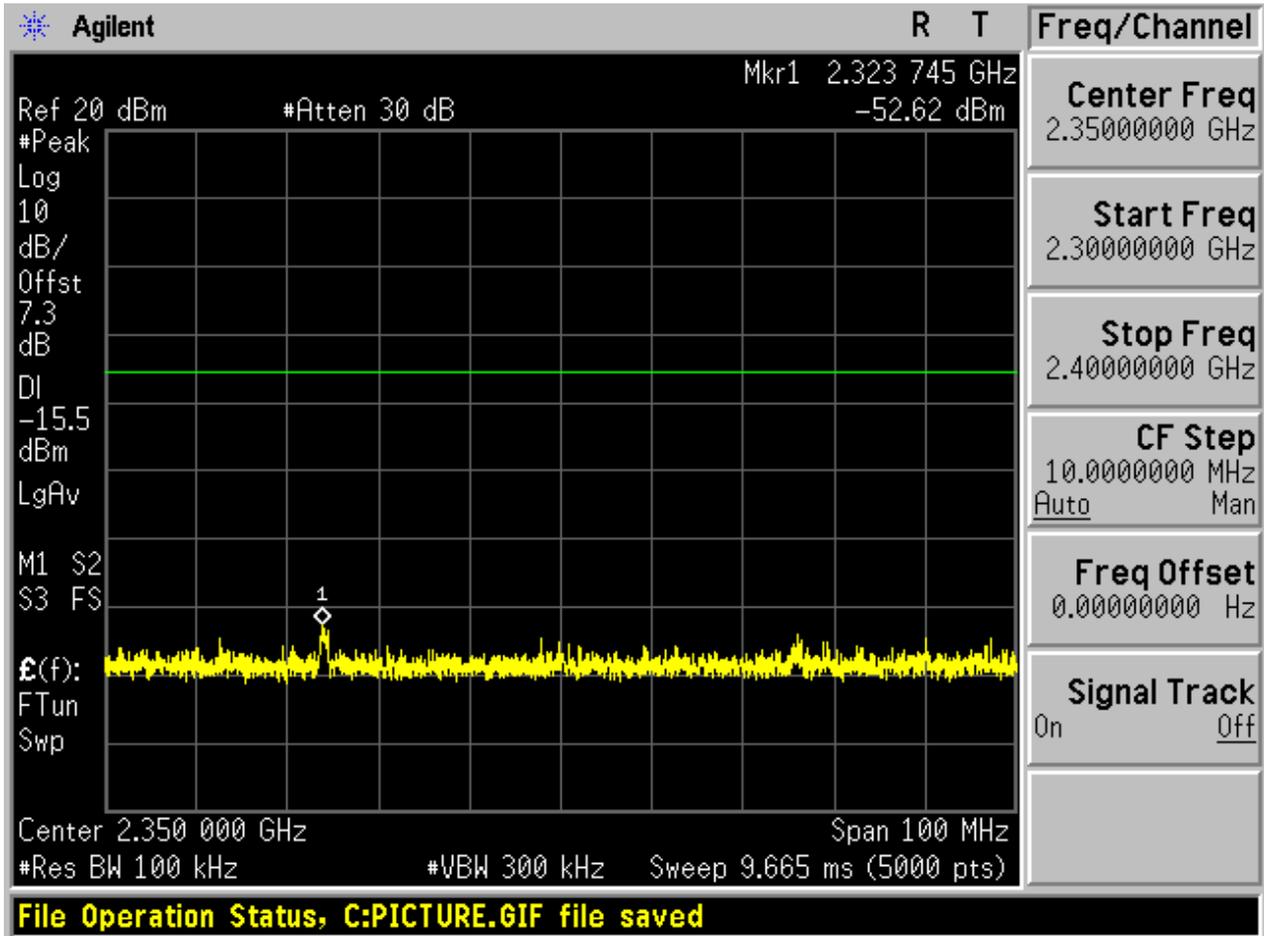


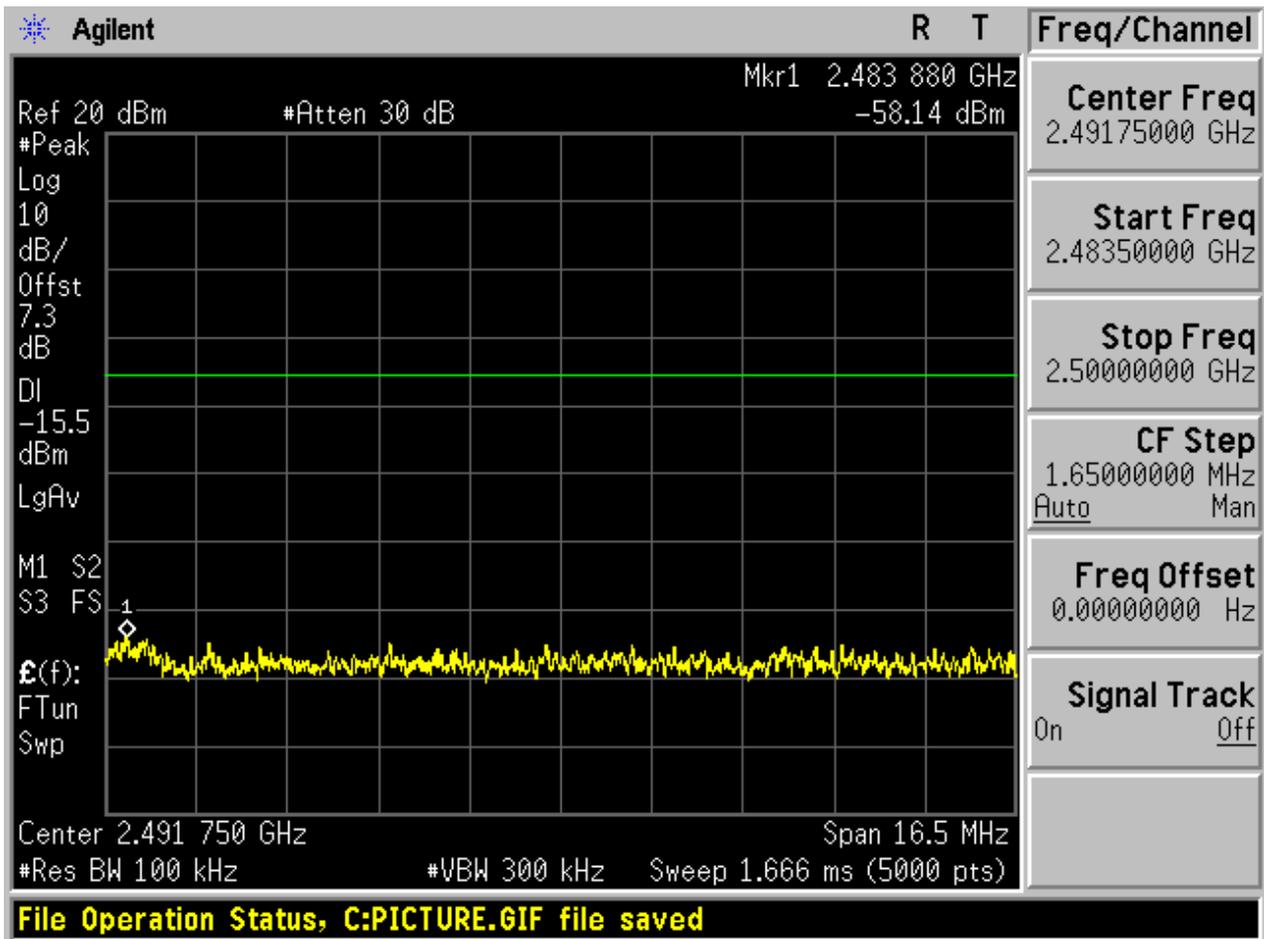
2.9.2 Puw

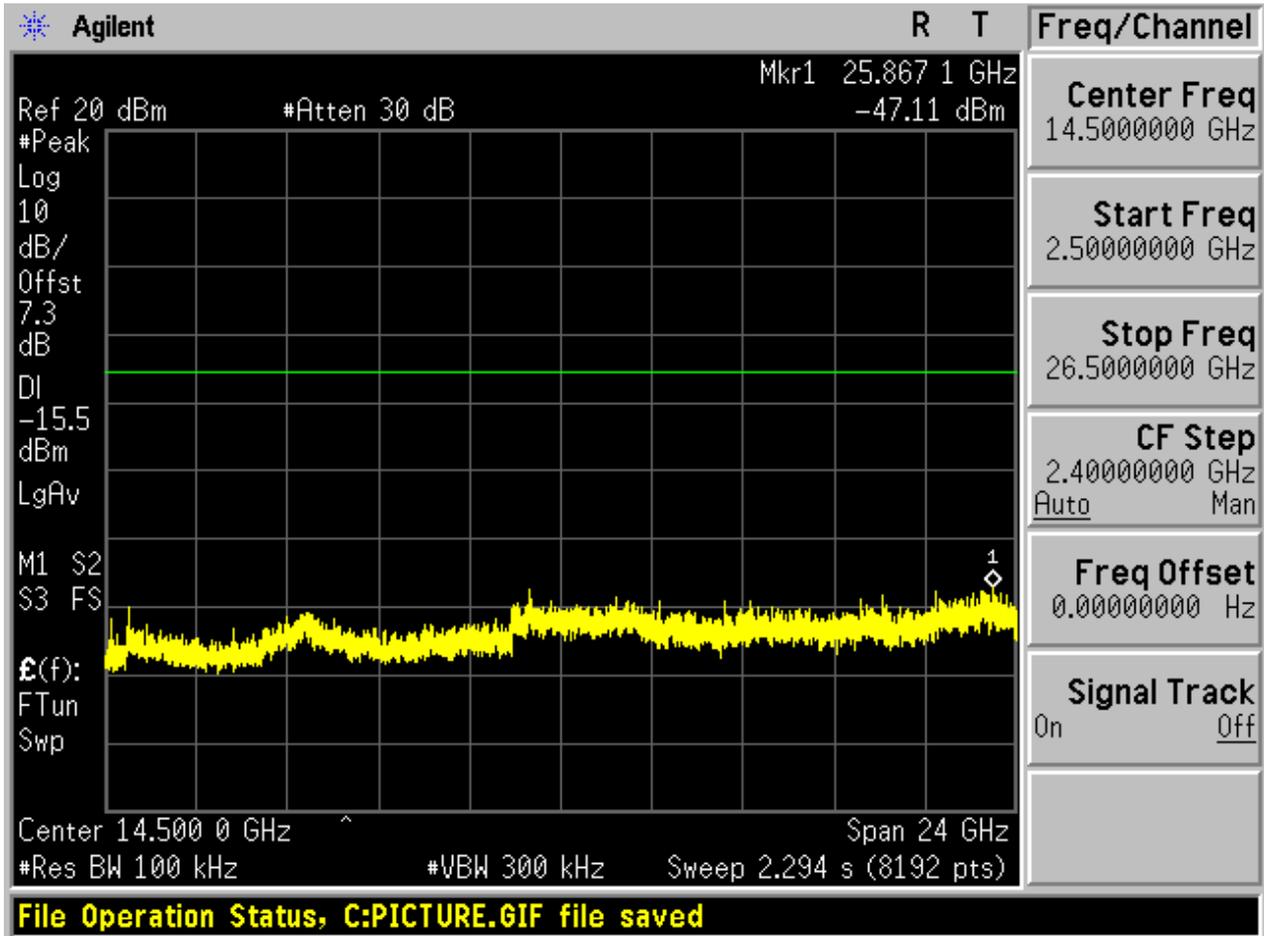














# Appendix H: Radiated Emissions in the Restricted Bands

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



### 3 Result Table

The whole testing range is from “30 MHz to 26.5 GHz (10th harmonics)” is divided into 4 parts according to the test site settings, which are:

- (Part 1): Test range of “9 KHz to 30 MHz”,
- (Part 2): Test range of “30 MHz to 1 GHz”,
- (Part 3): Test range of “1 GHz to 3 GHz”.
- (Part 4): Test range of “3 GHz to 18 GHz”,
- (Part 5): Test range of “18 GHz to 26.5 GHz”.

In this Appendix, only the test results and plots under the worst case can be reported. In the result table, the “< Limit” denotes that “Not found obvious spikes or see marked spikes on plots and listed emissions records”.

Test Range	EUT Conf.	Emissions	Verdict
30 MHz to 1 GHz	TM1_DH5_Ch0 (Worst Conf.)	< Limit	Pass
1 GHz to 3 GHz	TM1_DH5_Ch0 (Worst Conf.)	< Limit	Pass
	TM1_DH5_Ch78 (Worst Conf.)	< Limit	Pass
3 GHz to 18 GHz	TM1_DH5_Ch0 (Worse Conf.)	< Limit	Pass
18 GHz to 26.5 GHz	TM1_DH5_Ch0 (Worst Conf.)	< Limit	Pass

#### 4 Result Plot

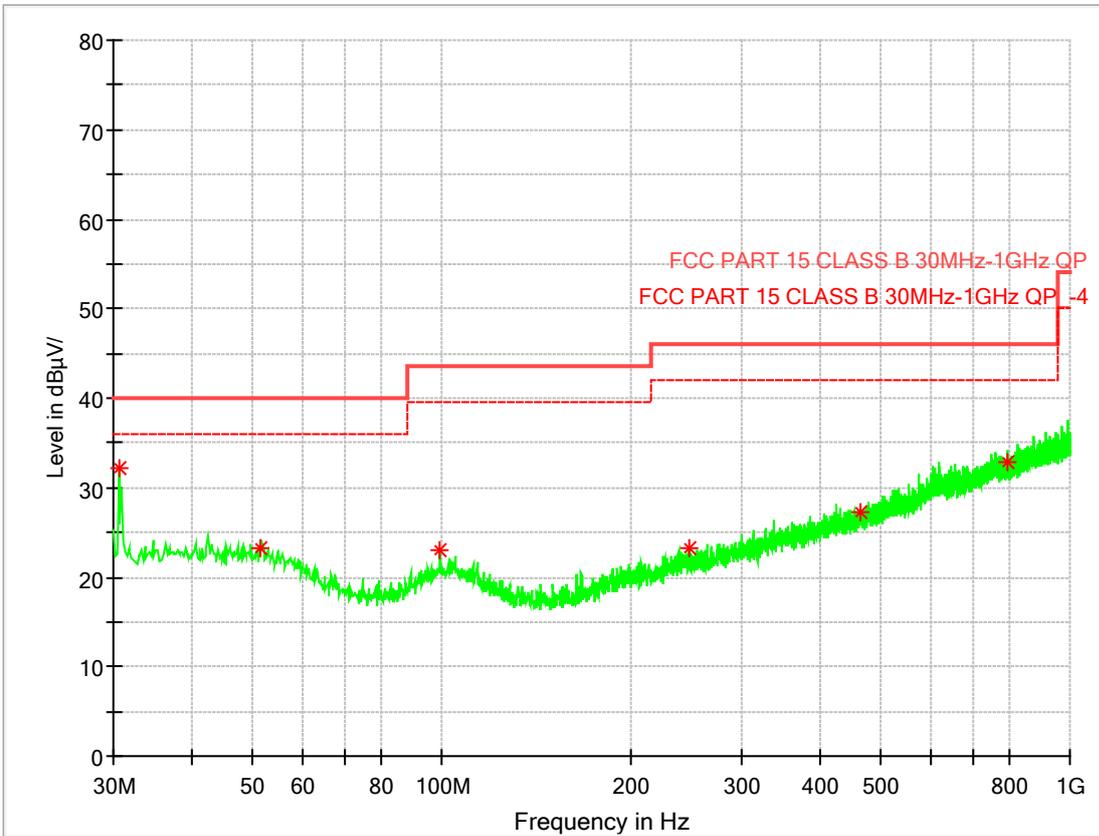
##### Part 1: Testing Range of “9 KHz to 30 MHz”

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).

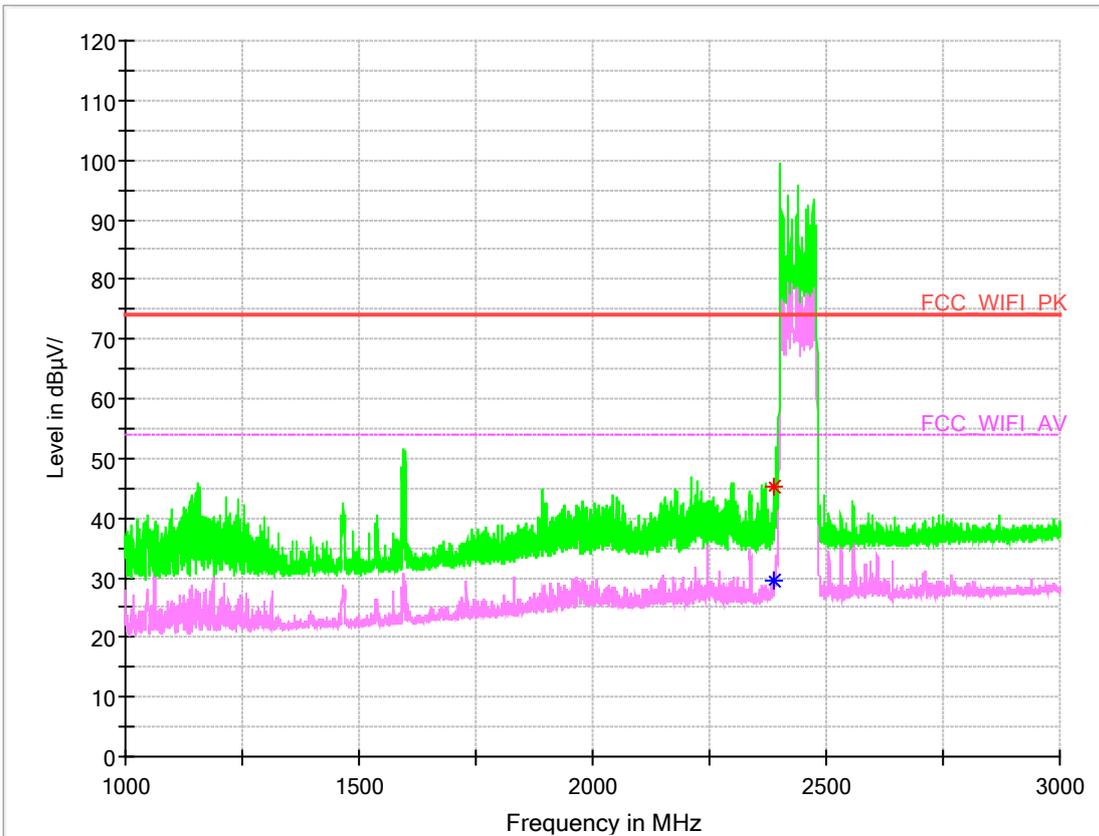


Frequency (MHz)	QuasiPeak (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.582	32.15	40	-7.85	100	V	216	14.5
51.534	23.18	40	-16.82	100	V	192	15
99.452	22.99	43.5	-20.51	100	H	148	13.6
247.862	23.17	46	-22.83	100	H	16	14.4
463.978	27.21	46	-18.79	100	H	172	18.9
796.494	32.8	46	-13.2	100	H	208	24.1

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

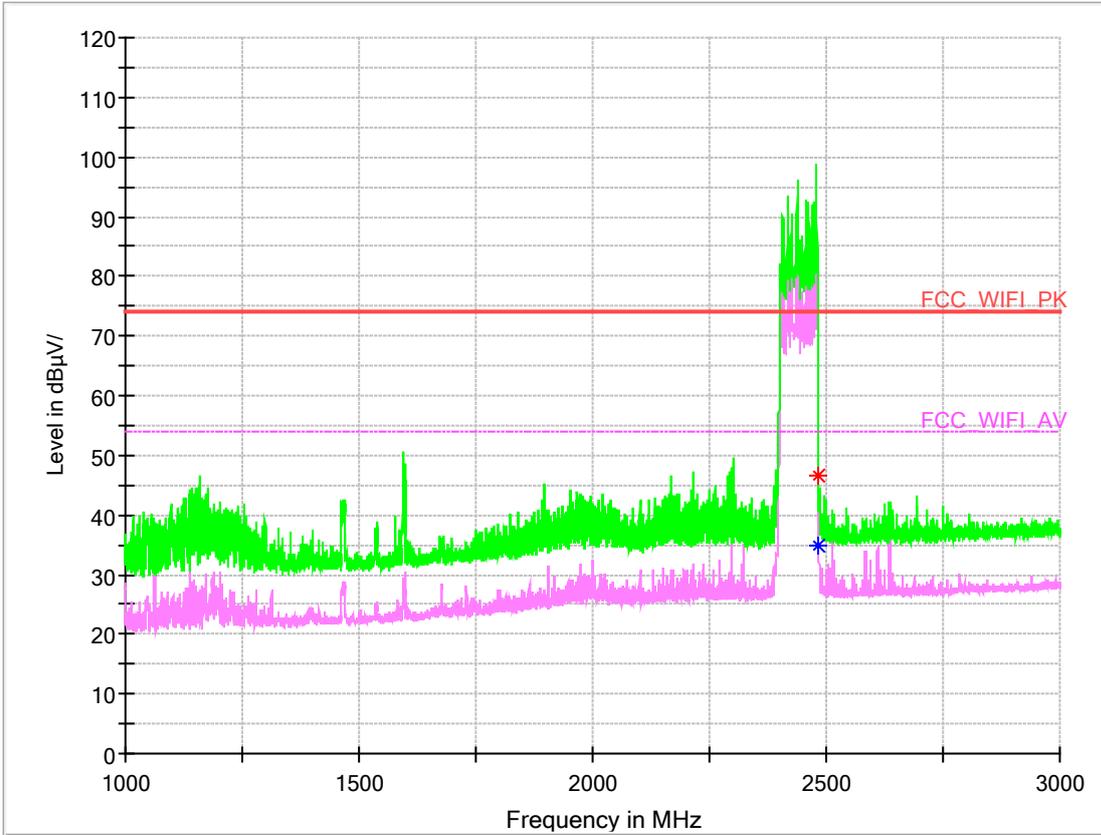
- Note 1: The testing range of “1 GHz to 3 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.
- Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB $\mu$ V/m) and Average Limit (54 dB $\mu$ V/m).
- Note 3: The peak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

#### Channel 0



Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2390	---	29.63	54	-24.37	100	V	2	-7.8
2390	45.1	---	74	-28.9	100	V	2	-7.8

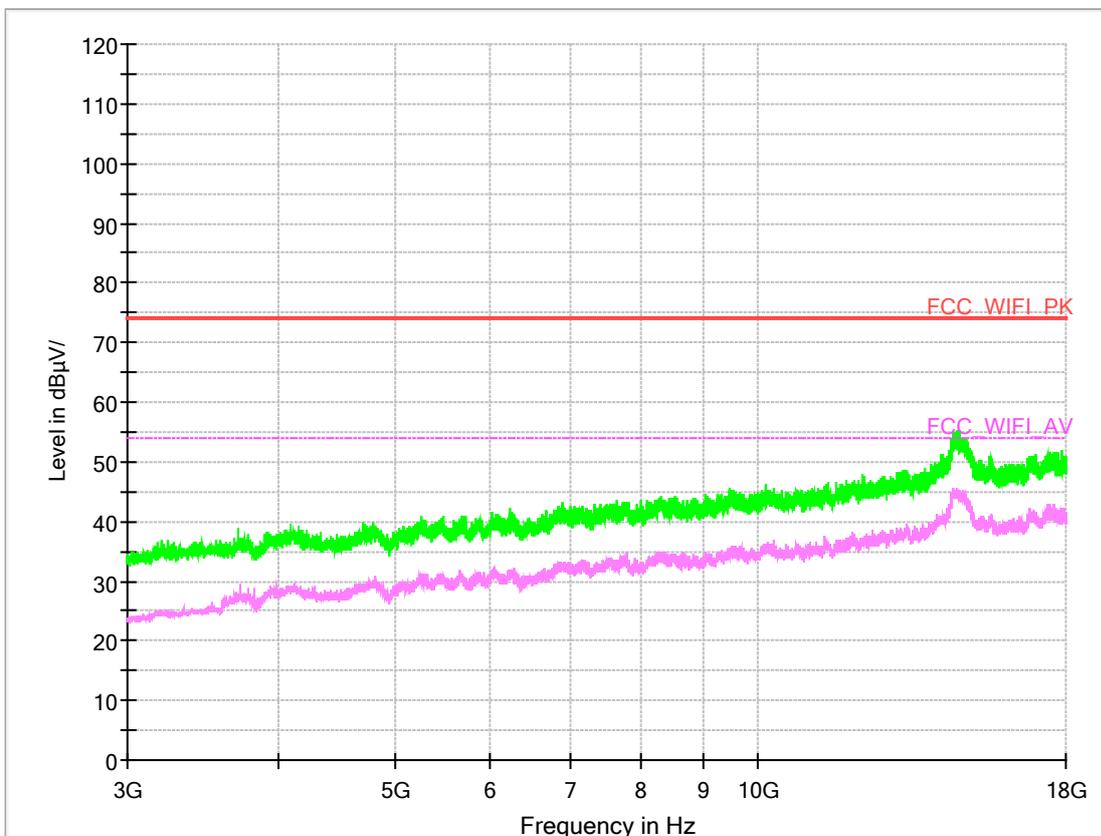
**Channel 78**



Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2483.5	---	35.01	54	-18.99	100	H	80	-0.4
2483.5	46.45	---	74	-27.55	100	H	80	-0.4

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

- Note 1: The test results and plot for testing range of “3 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 “3 GHz 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 3 GHz, that is Peak limit (74 dB $\mu$ V/m) and Average Limit (54 dB $\mu$ V/m).

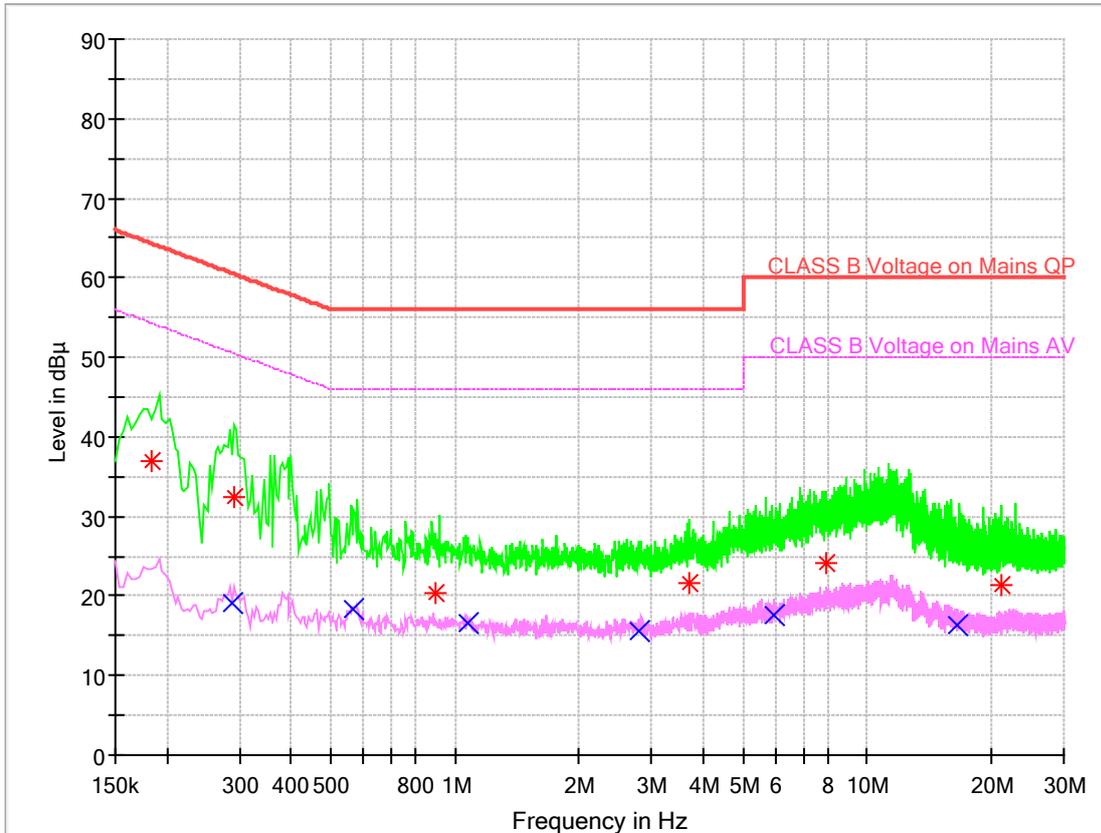


#### Part 5: Testing Range of “18 GHz to 26.5 GHz”

NOTE1: No peak found in the Test Range of “18 GHz to 26.5 GHz”



# Appendix I: AC Power Line Conducted Emissions



Frequency	QuasiPea	Averag	Limit	Margi	Line	Filter	Corr
0.184044	36.89	---	64.30	-27.41	N	ON	9.7
0.288416	---	19.07	50.57	-31.50	N	ON	9.7
0.291955	32.52	---	60.47	-27.94	N	ON	9.7
0.565662	---	18.25	46.00	-27.75	N	ON	9.7
0.894277	20.43	---	56.00	-35.57	L1	ON	9.7
1.078884	---	16.51	46.00	-29.49	L1	ON	9.7
2.806722	---	15.51	46.00	-30.49	N	ON	9.7
3.692459	21.58	---	56.00	-34.42	N	ON	9.7
5.952950	---	17.58	50.00	-32.42	N	ON	9.8
7.982500	24.09	---	60.00	-35.91	L1	ON	9.9
16.589796	---	16.35	50.00	-33.65	N	ON	10.1
21.231074	21.33	---	60.00	-38.67	L1	ON	10.1