



Appendix A: 20dB Emission Bandwidth (EBW)



1 Result Table

EUT Conf.	EBW [MHz]	Verdict
TM1_DH5_Ch0	1.023	Pass
TM1_DH5_Ch39	1.021	Pass
TM1_DH5_Ch78	1.025	Pass
TM2_2DH5_Ch0	1.348	Pass
TM2_2DH5_Ch39	1.349	Pass
TM2_2DH5_Ch78	1.337	Pass
TM3_3DH5_Ch0	1.325	Pass
TM3_3DH5_Ch39	1.329	Pass
TM3_3DH5_Ch78	1.329	Pass

2 Test Plot

2.1 TM1_DH5_Ch0



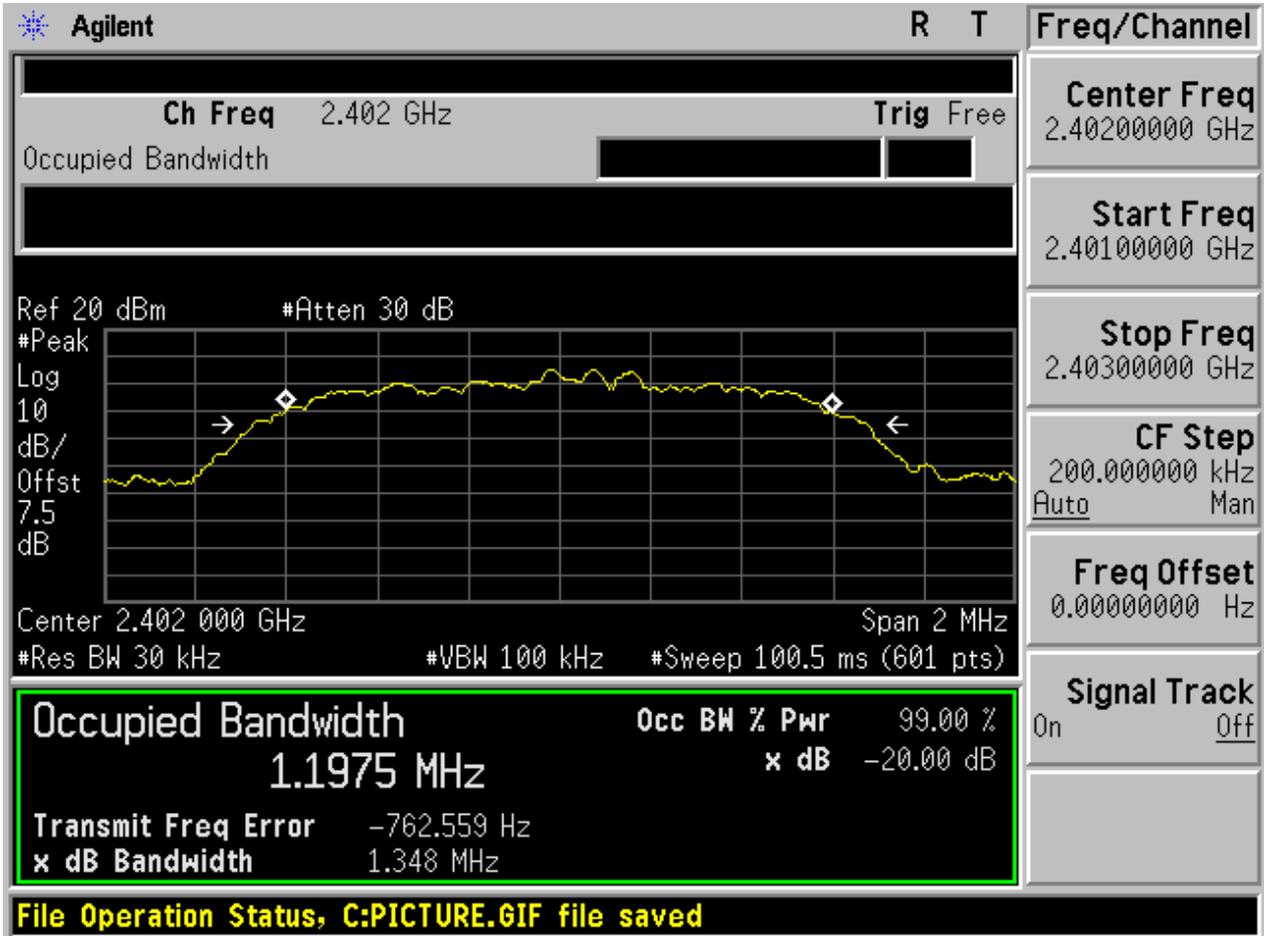
2.2 TM1_DH5_Ch39



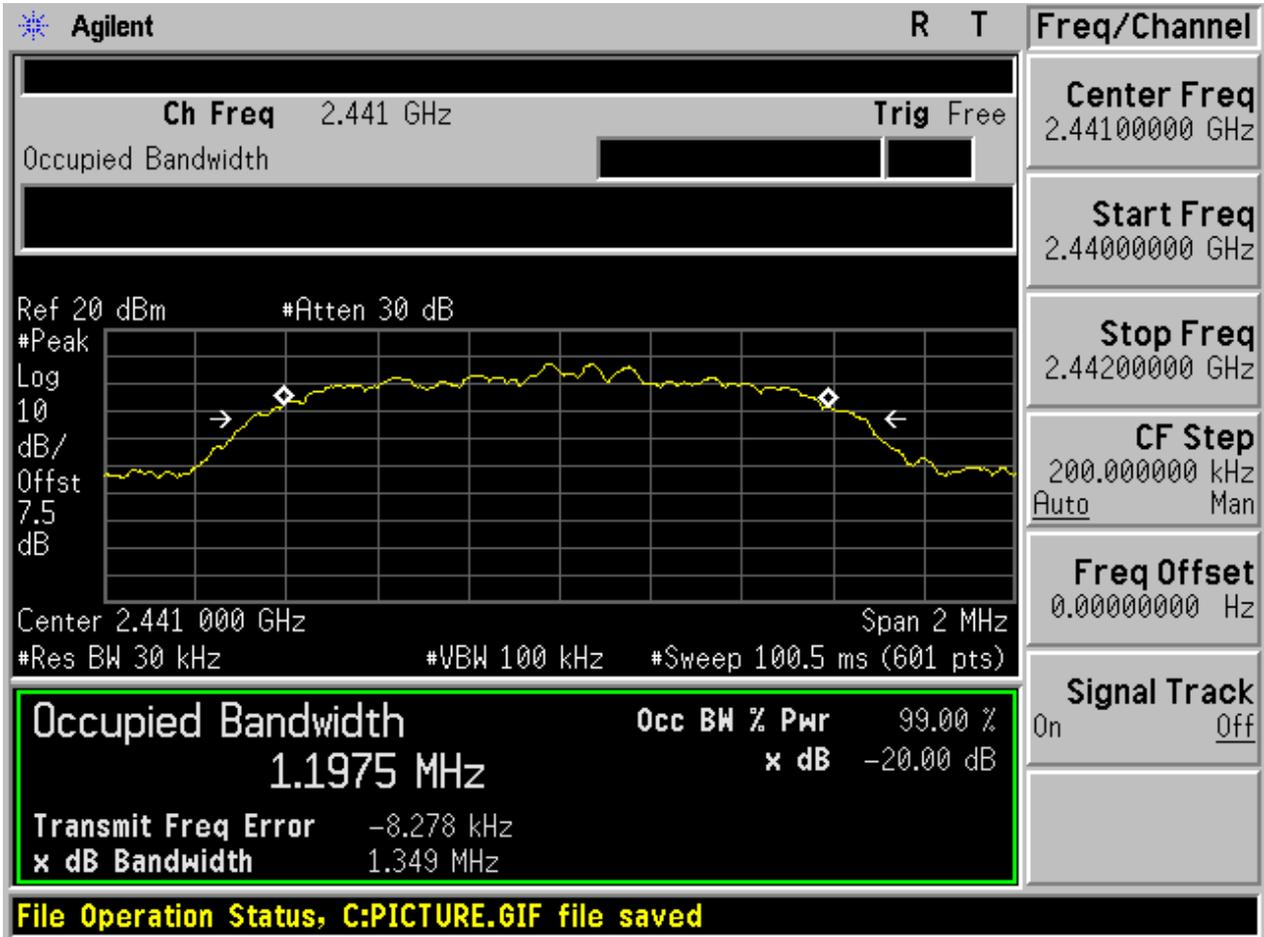
2.3 TM1_DH5_Ch78



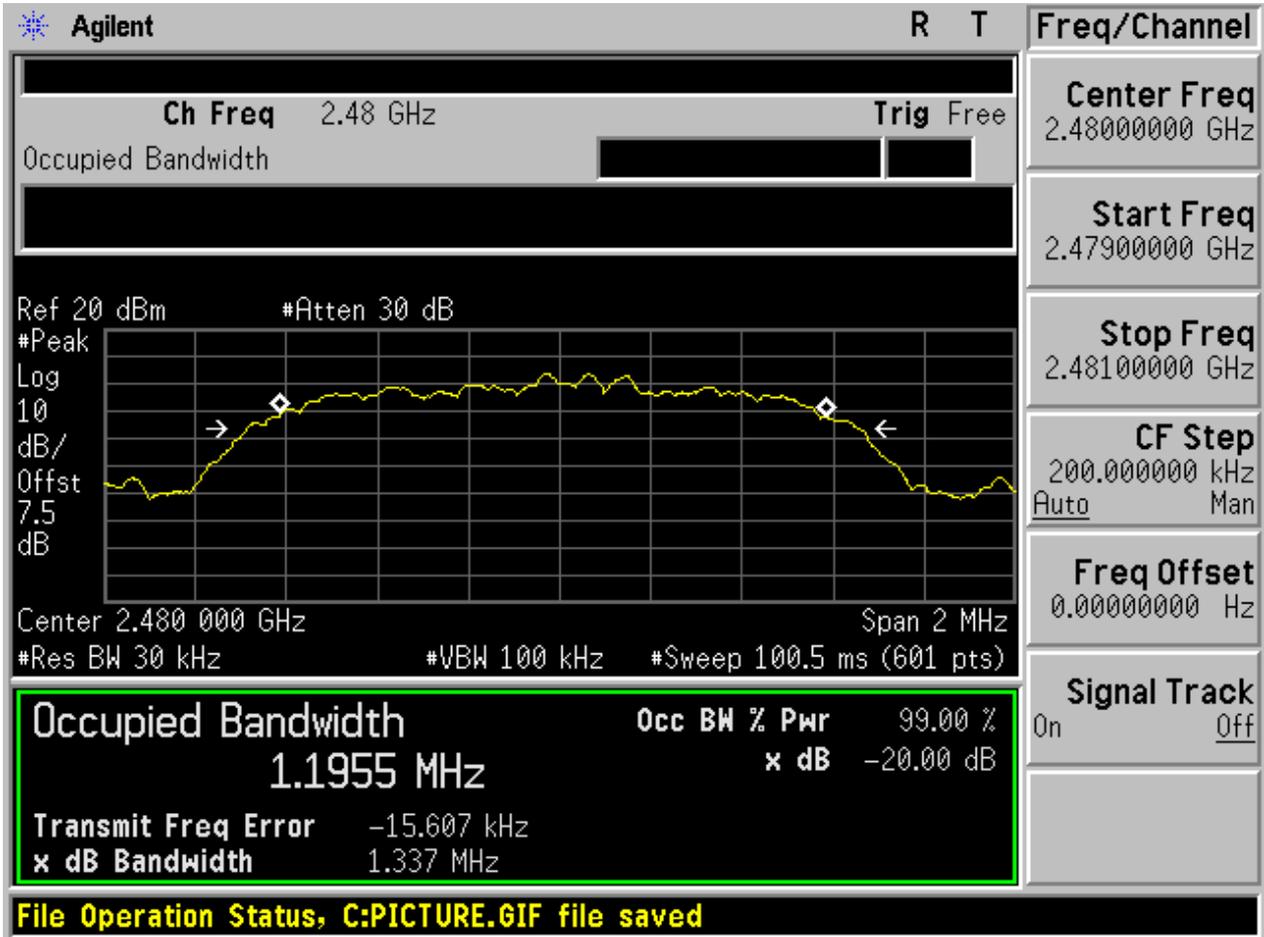
2.4 TM2_2DH5_Ch0



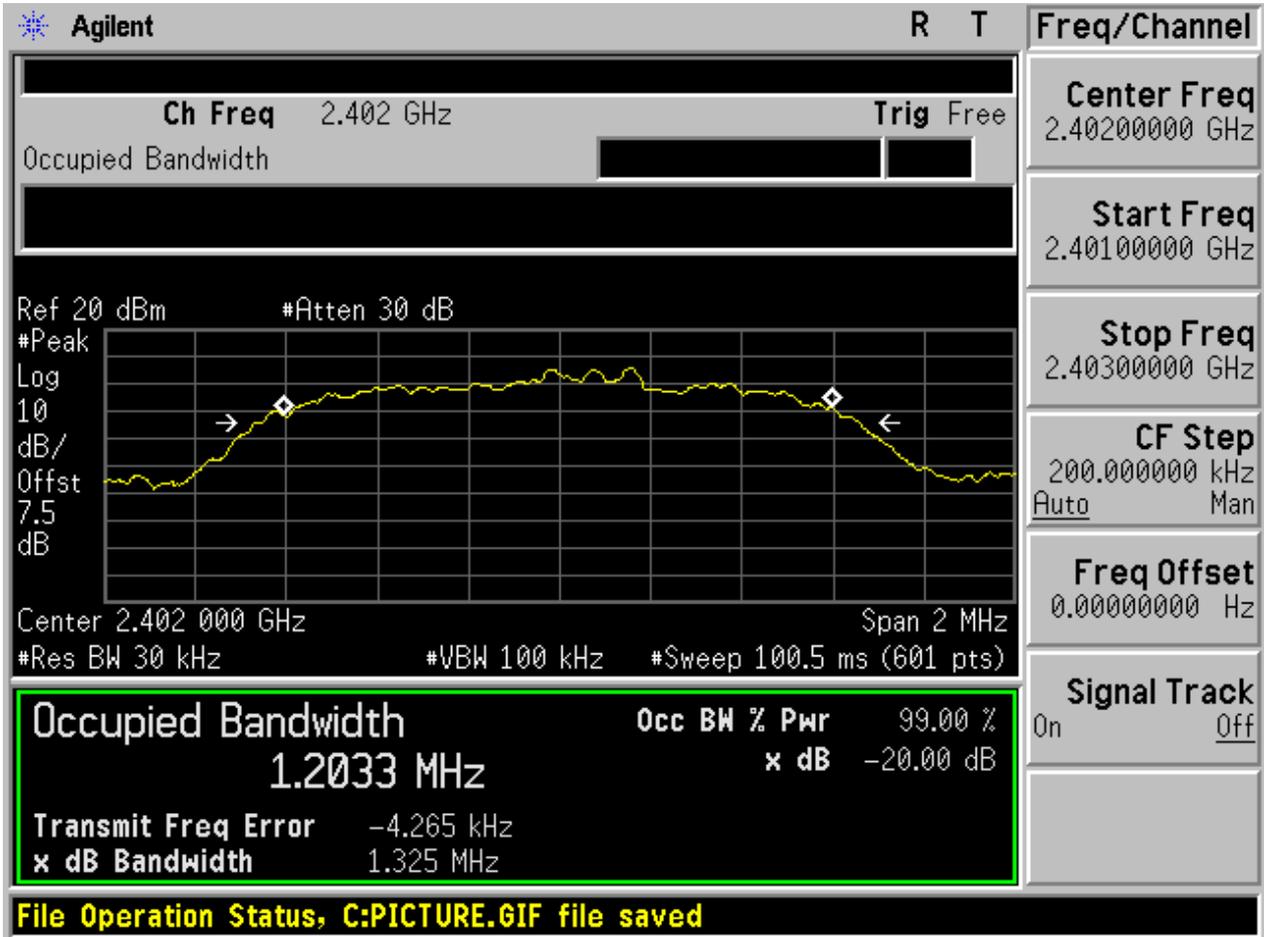
2.5 TM2_2DH5_Ch39



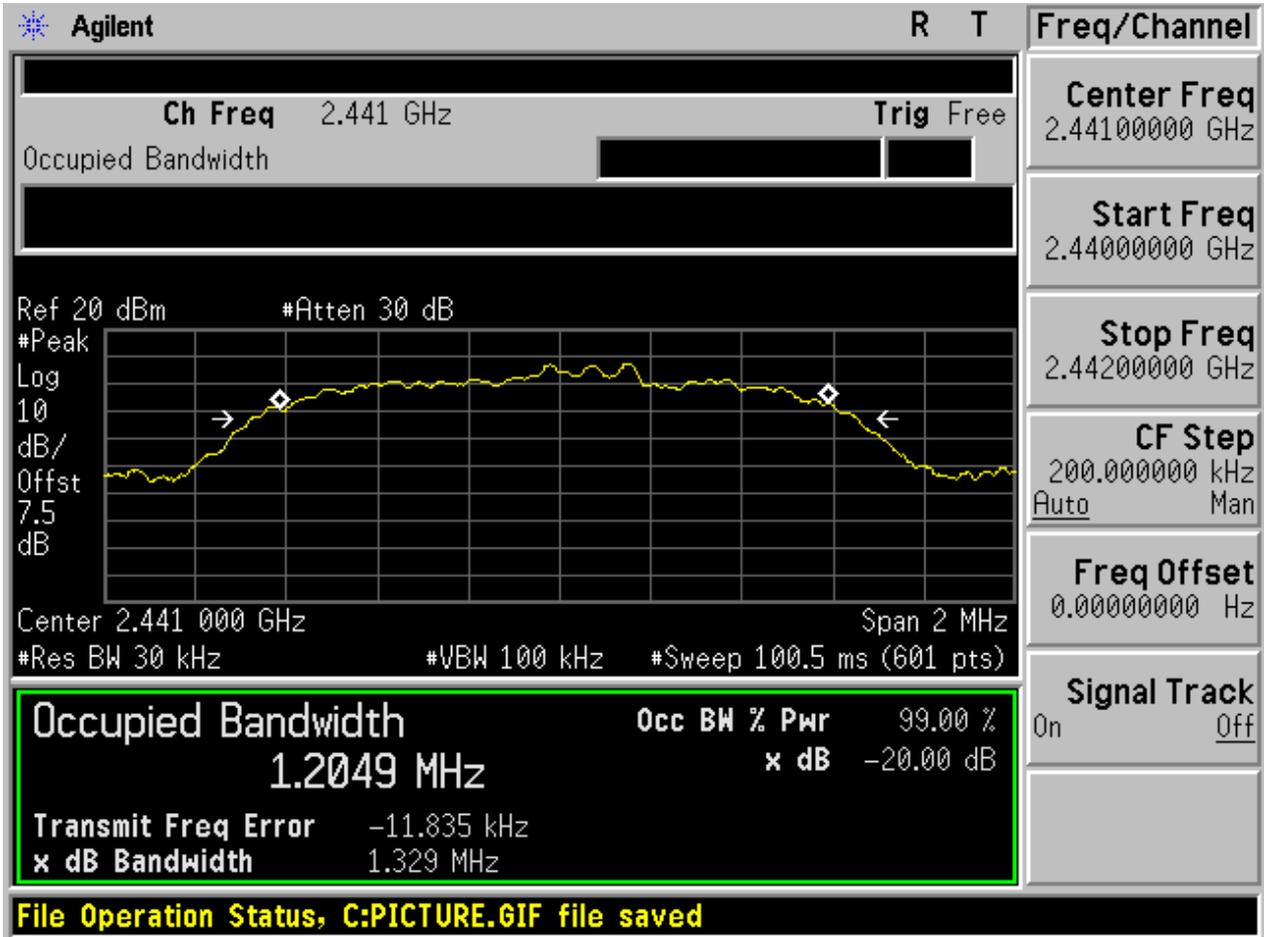
2.6 TM2_2DH5_Ch78



2.7 TM3_3DH5_Ch0



2.8 TM3_3DH5_Ch39



2.9 TM3_3DH5_Ch78

Agilent R T		Freq/Channel	
Ch Freq 2.48 GHz Trig Free		Center Freq 2.48000000 GHz	
Occupied Bandwidth [Progress Bar]		Start Freq 2.47900000 GHz	
Ref 20 dBm #Atten 30 dB		Stop Freq 2.48100000 GHz	
#Peak Log 10 dB/ Offst 7.5 dB		CF Step 200.000000 kHz Auto Man	
		Freq Offset 0.00000000 Hz	
Center 2.480 000 GHz Span 2 MHz		Signal Track On Off	
#Res BW 30 kHz #VBW 100 kHz #Sweep 100.5 ms (601 pts)			
Occupied Bandwidth		Occ BW % Pwr 99.00 %	
1.2011 MHz		x dB -20.00 dB	
Transmit Freq Error -18.397 kHz			
x dB Bandwidth 1.329 MHz			
File Operation Status, C:PICTURE.GIF file saved			



Appendix B: Carrier Frequency Separation

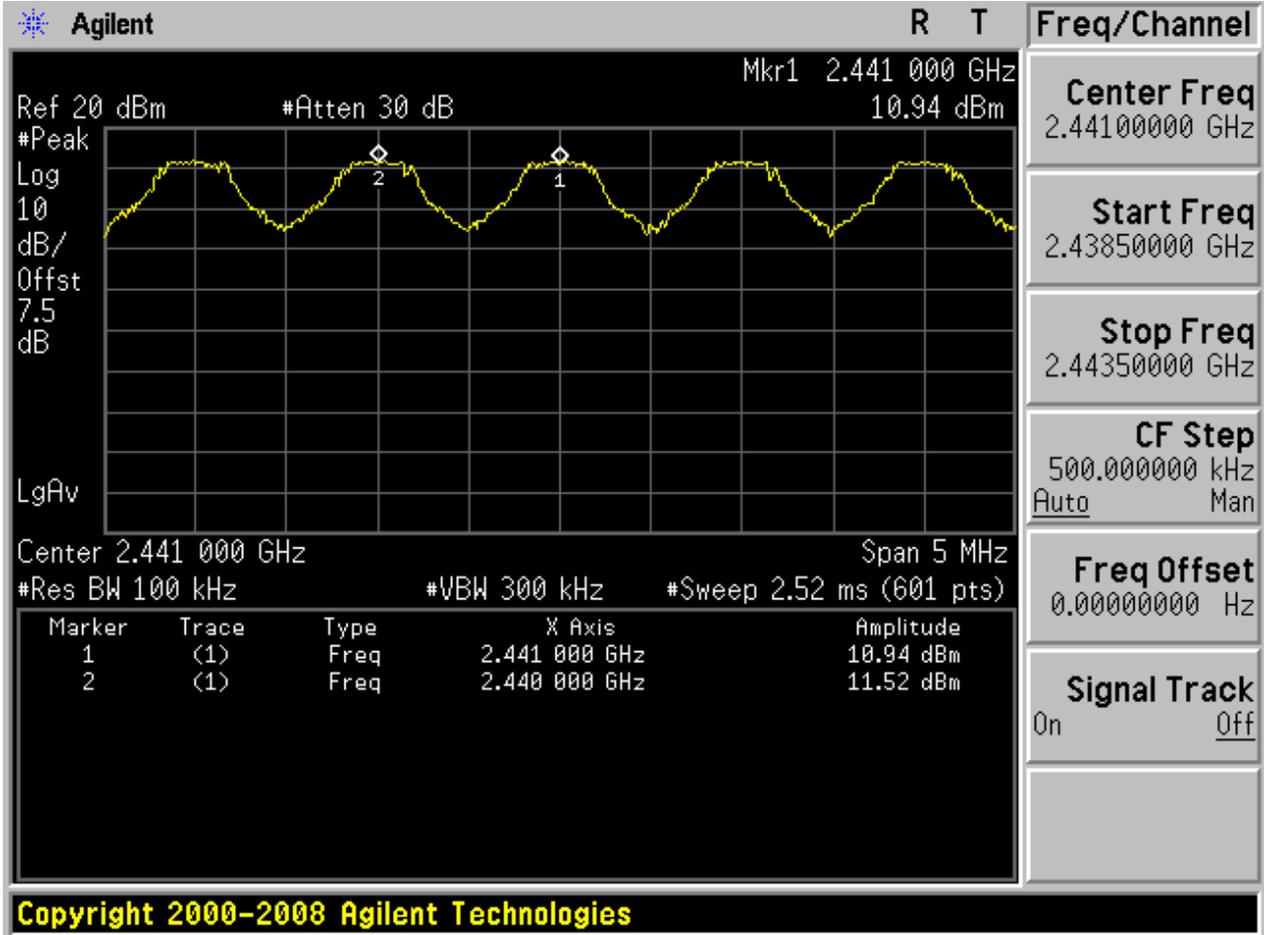


1 Result Table

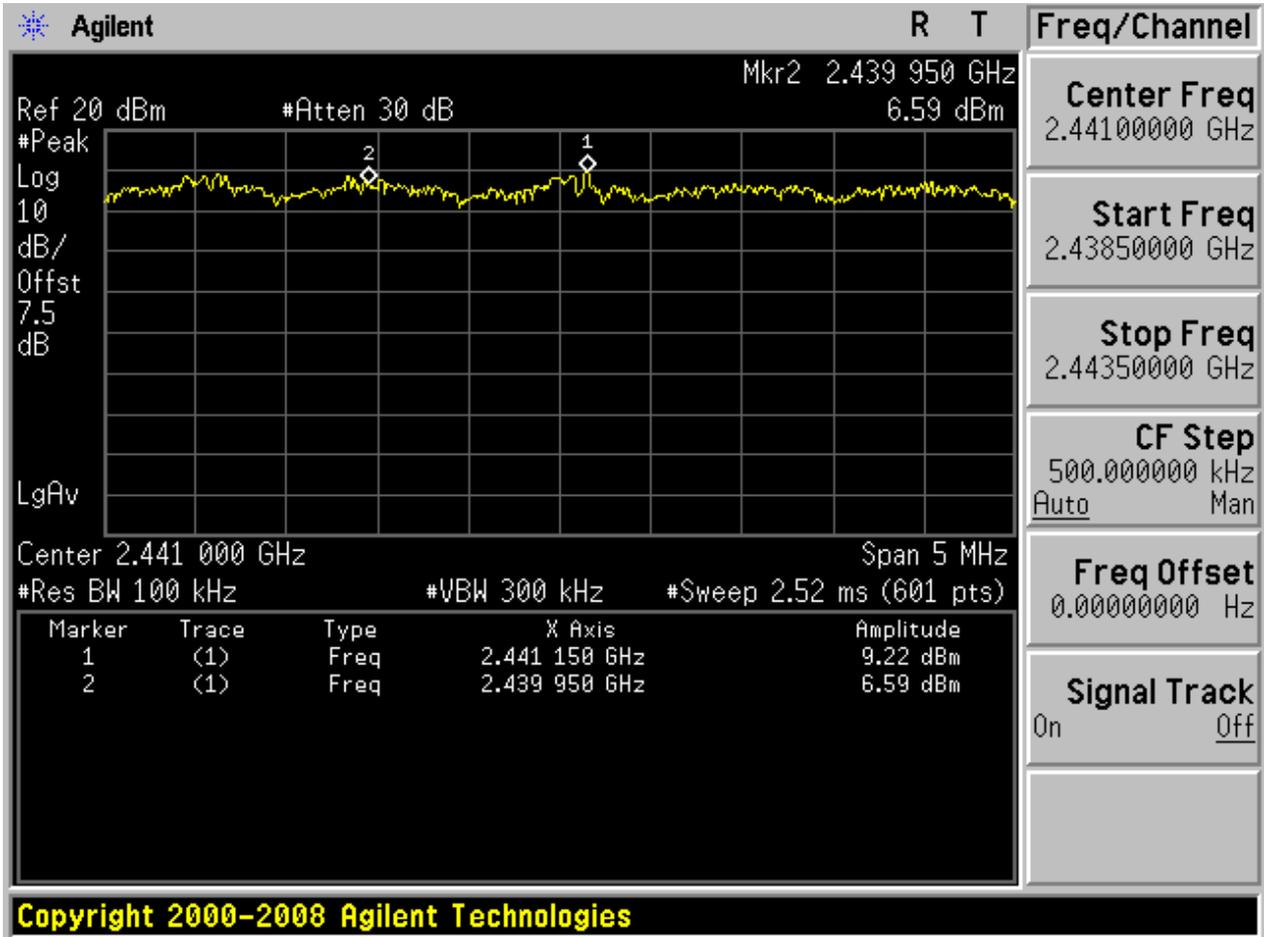
EUT Conf.	Carrier Frequency Separation [MHz]	Verdict
TM1_DH5_Hop	1.000	Pass
TM2_2DH5_Hop	1.200	Pass
TM3_3DH5_Hop	1.150	Pass

2 Test Plot

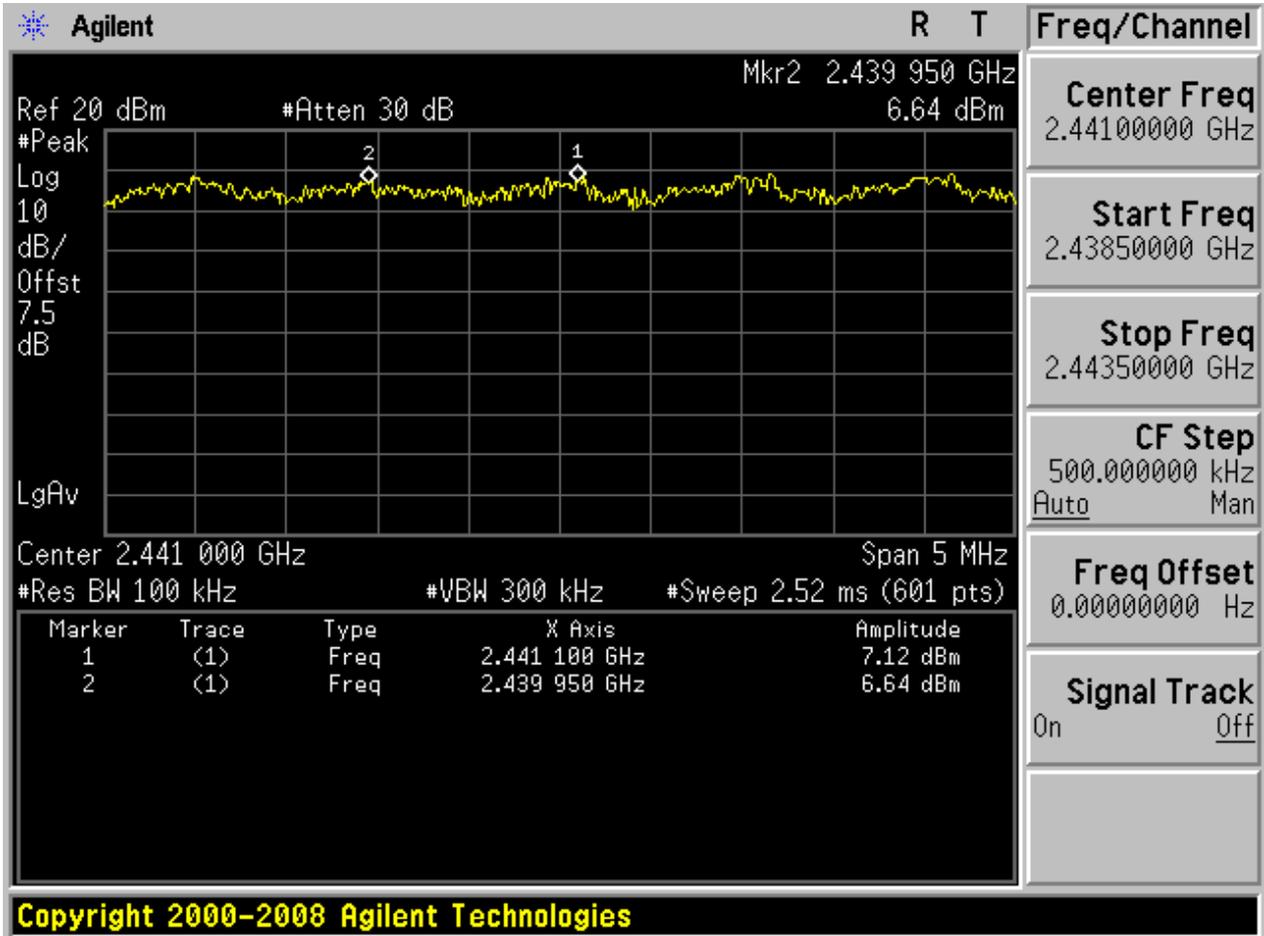
2.1 TM1_DH5_Hop



2.2 TM2_2DH5_Hop



2.3 TM3_3DH5_Hop





Appendix C: Number of Hopping Channel

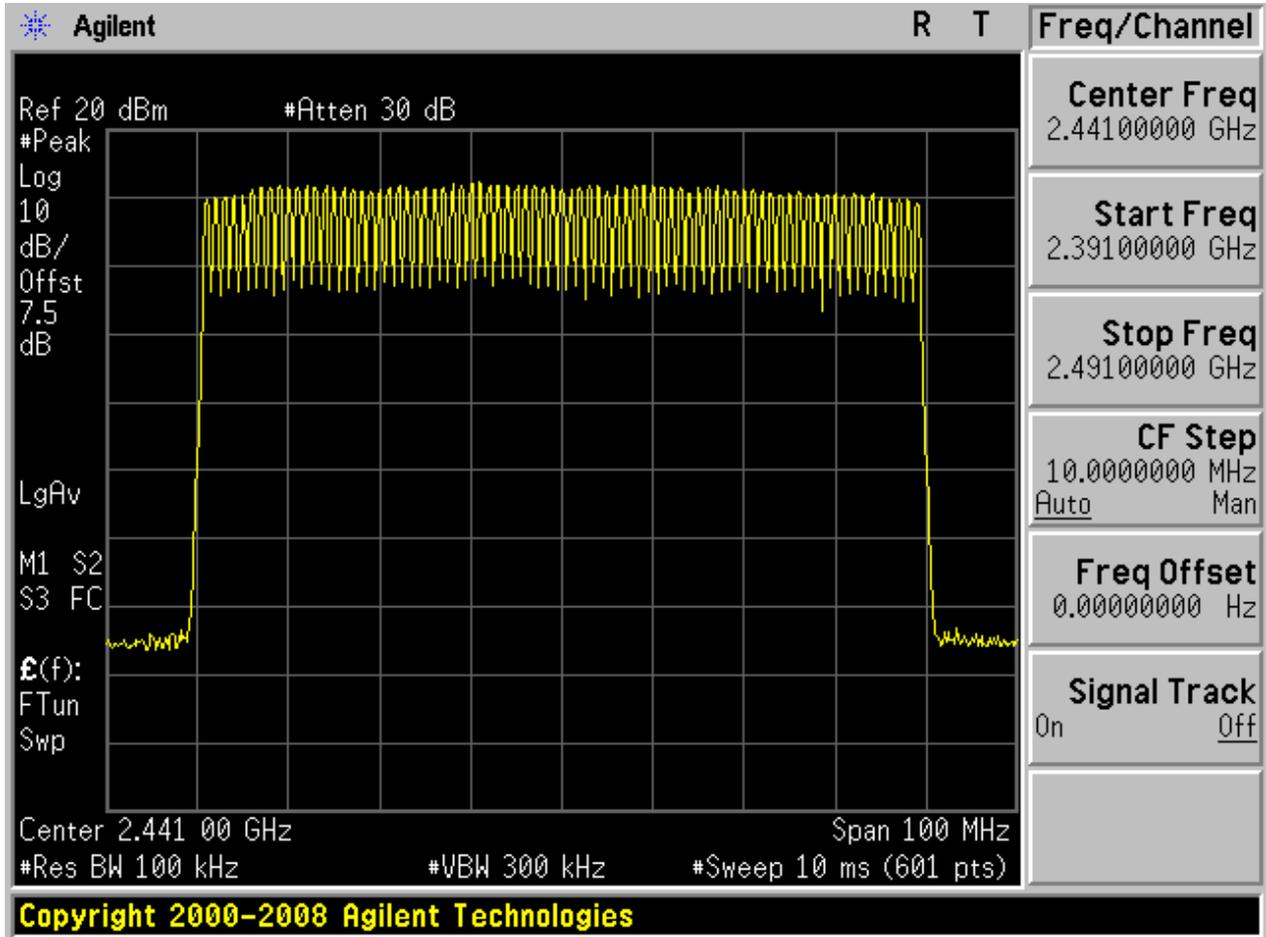


1 Result Table

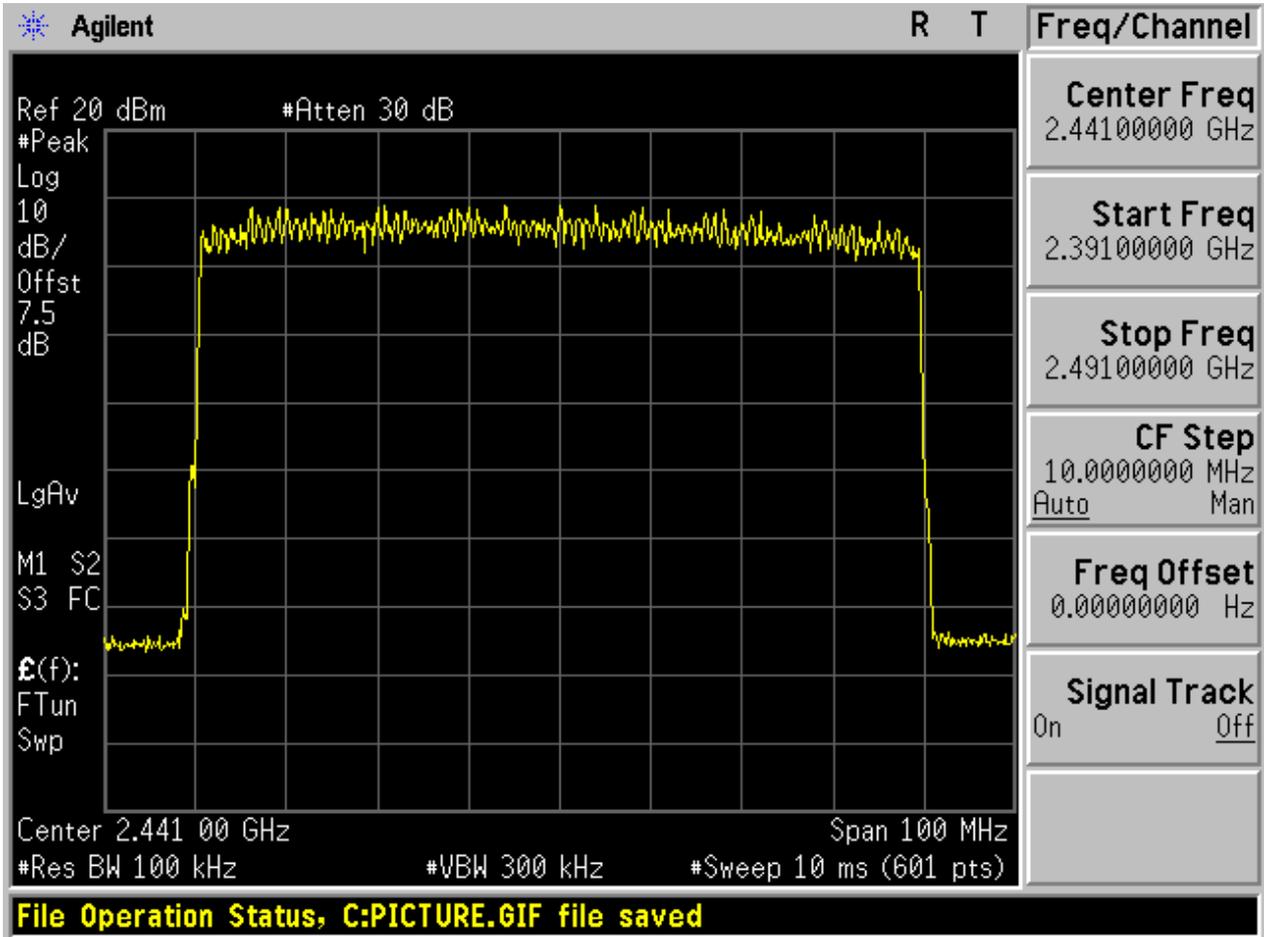
EUT Conf.	Number of Hopping Channel	Verdict
TM1_DH5_Hop	78	Pass
TM2_2DH5_Hop	78	Pass
TM3_3DH5_Hop	78	Pass

2 Test Plot

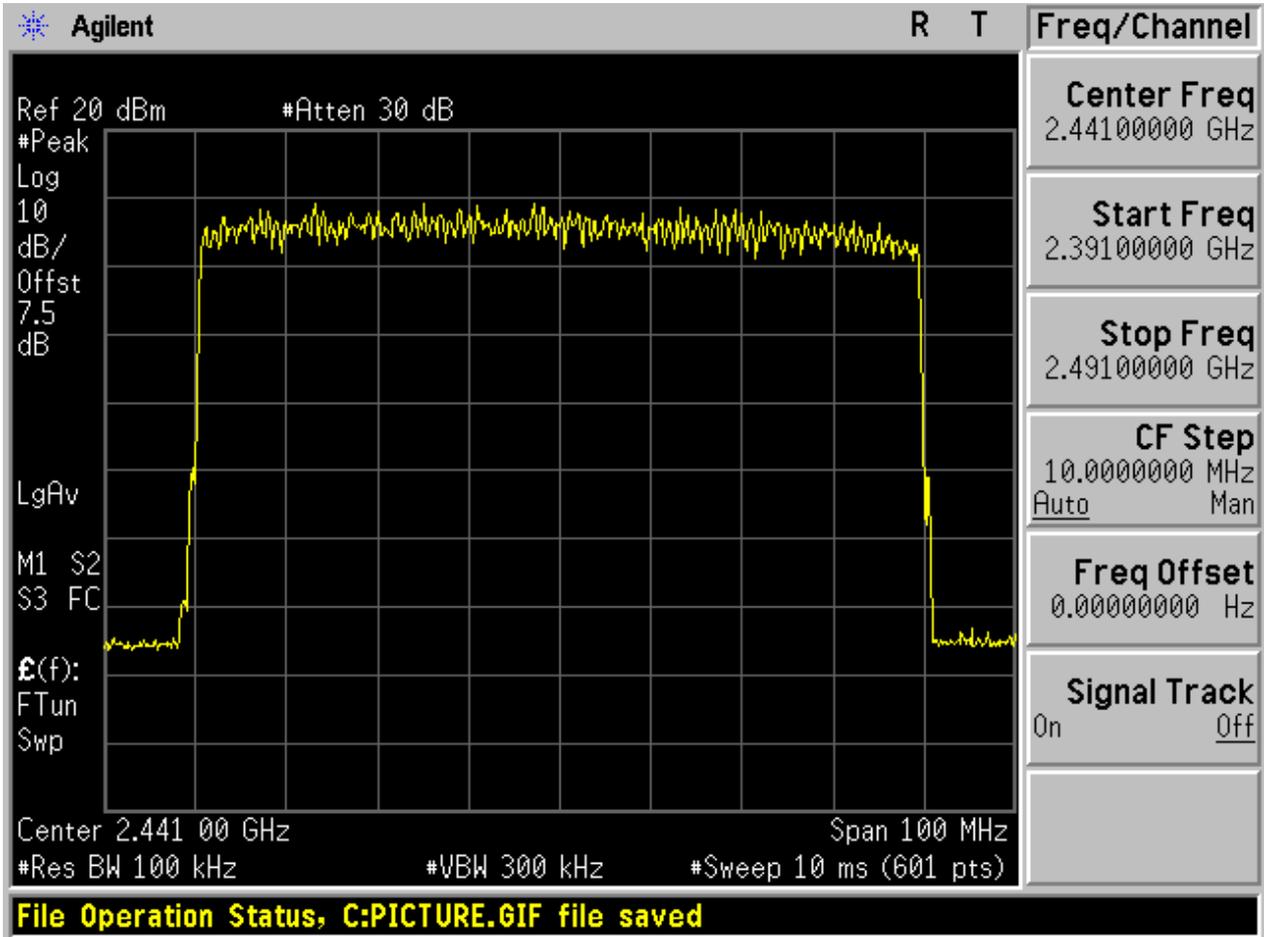
2.1 TM1_DH5_Hop



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:

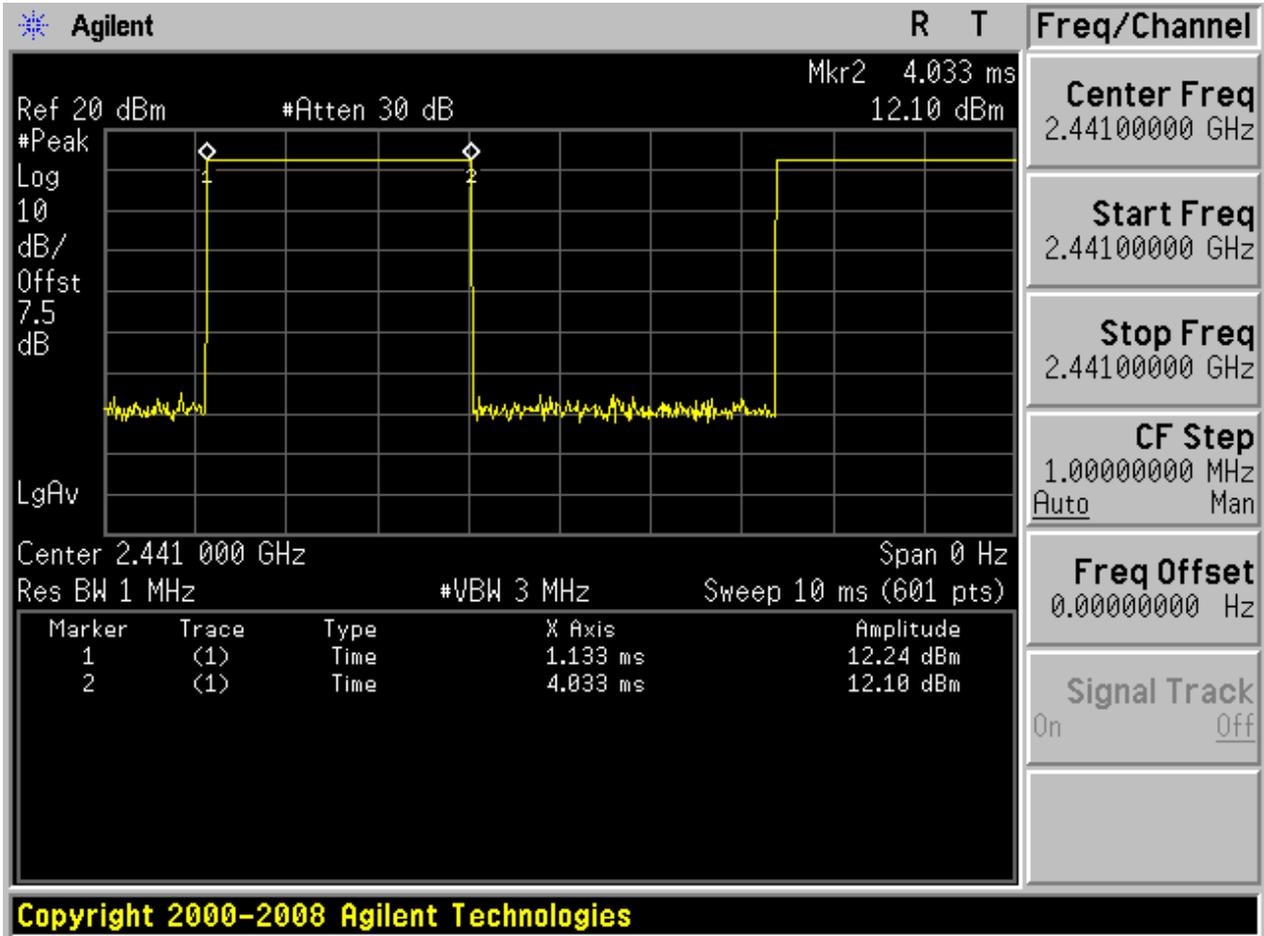
- The duration for dwell time calculation: $0.4 \text{ [s]} * \text{hopping number} = 0.4 \text{ [s]} * 79 \text{ [ch]} = 31.6 \text{ [s*ch]}$;
- The burst width [ms/hop/ch], which is directly measured, refers to the duration on one channel hop.
- The hops per second for all channels: The selected EUT 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	2.900	106.67	0.309	Pass
TM2_2DH5_Ch39	2.900	106.67	0.309	Pass
TM3_3DH5_Ch39	2.900	106.67	0.309	Pass

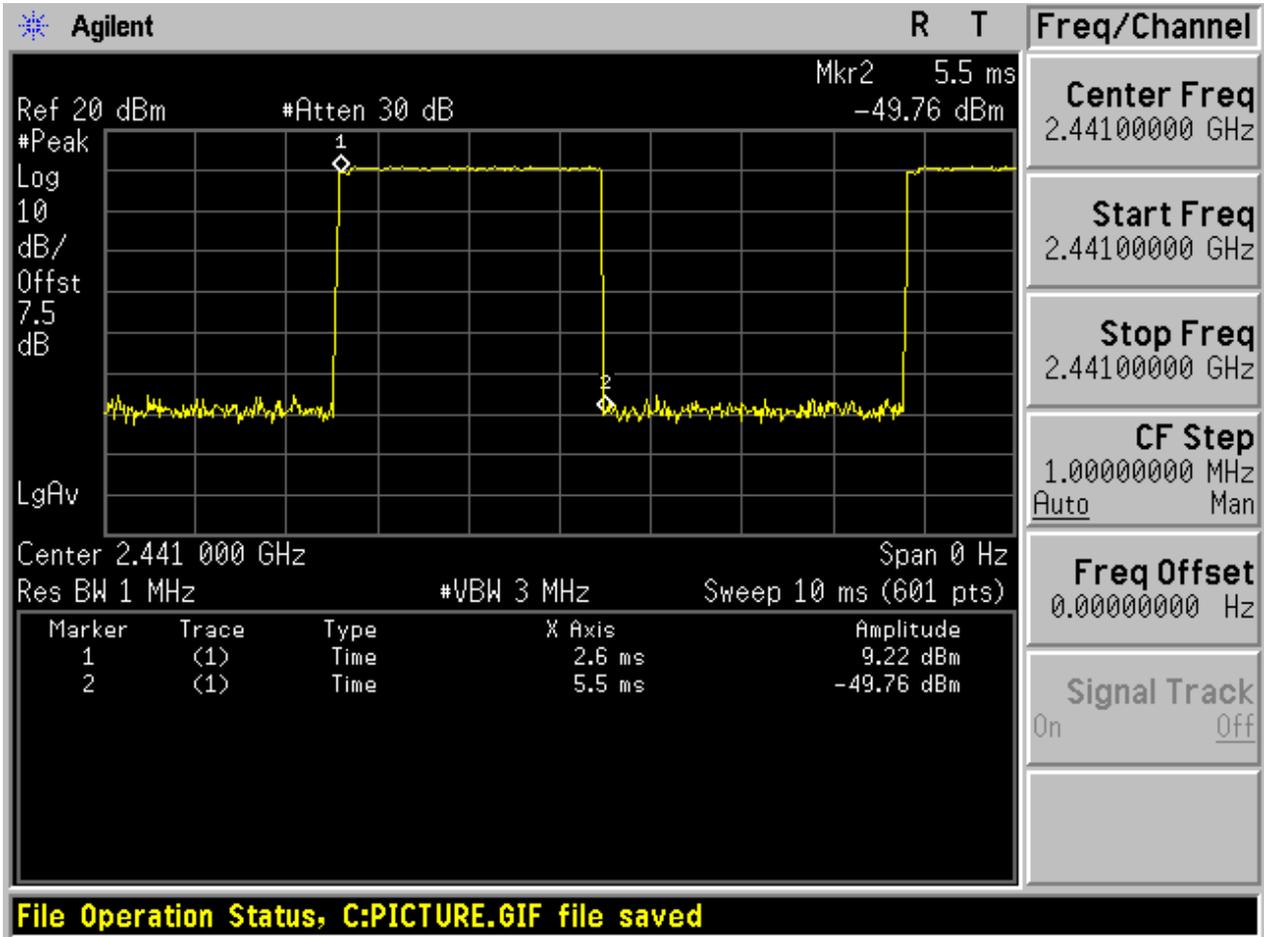
2 Test Plot

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

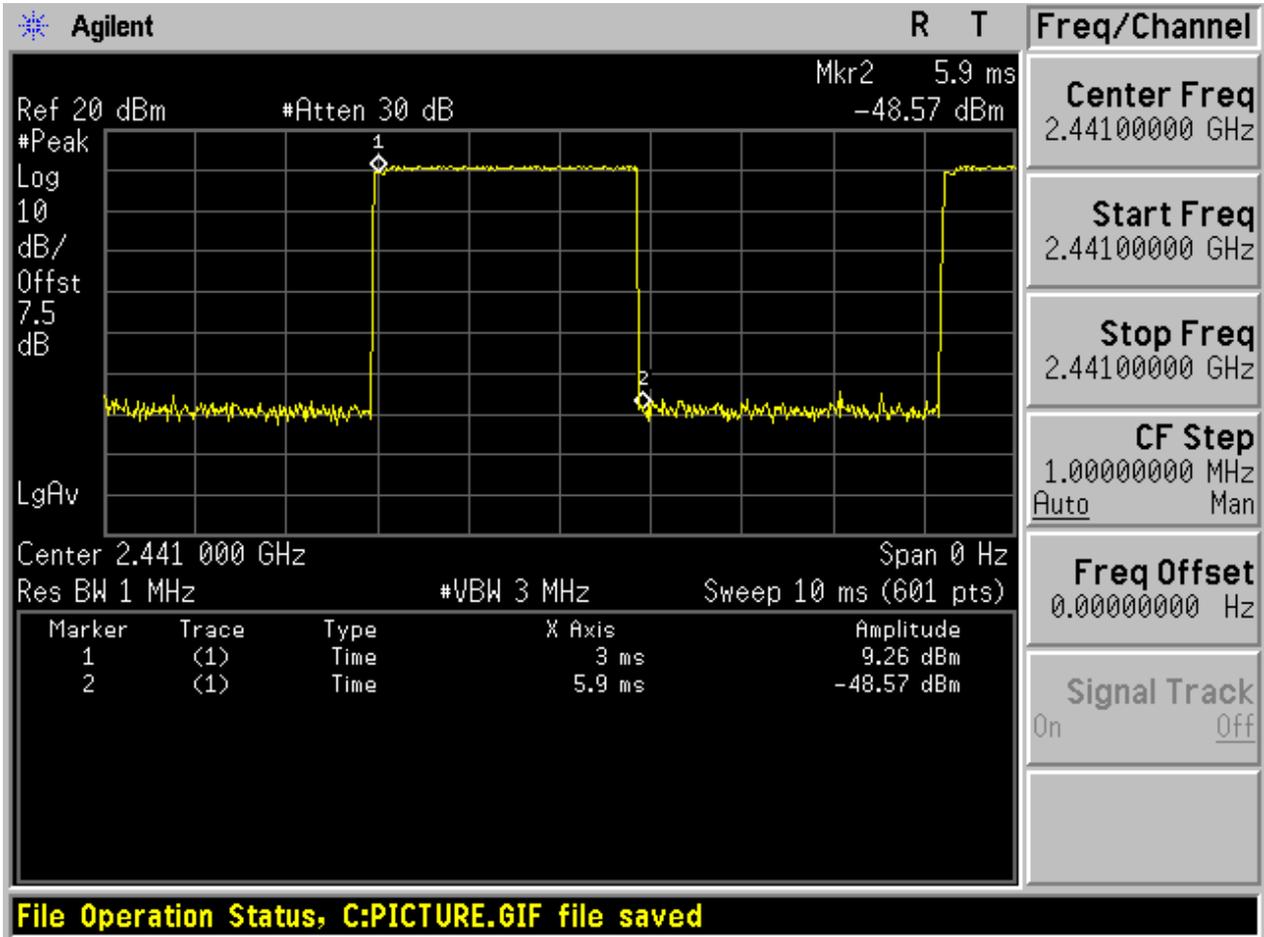
2.1 TM1_DH5_Ch39



2.2 TM2_2DH5_Ch39



2.3 TM3_3DH5_Ch39





Appendix E: Maximum Peak Conducted Output Power

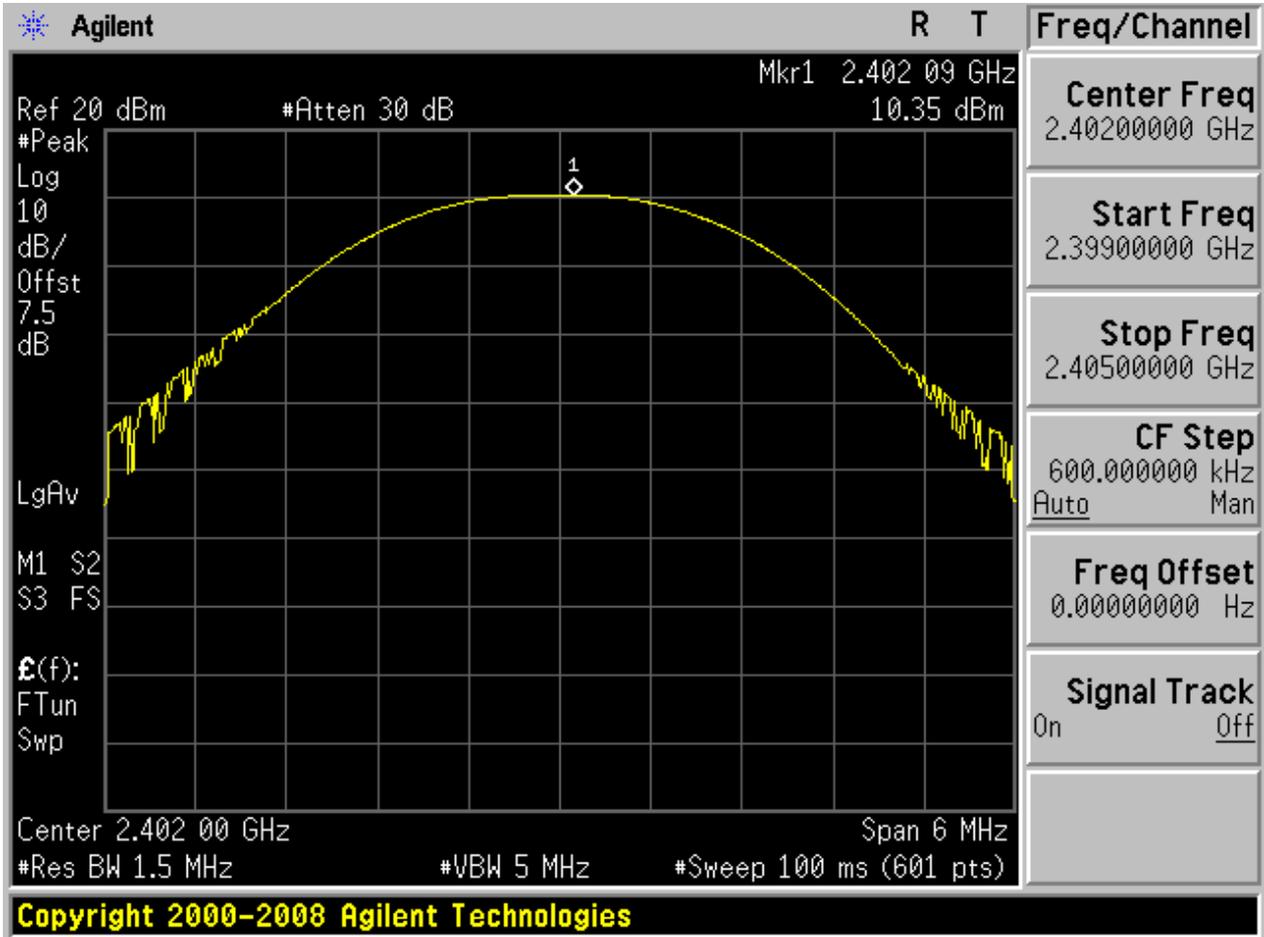


1 Result Table

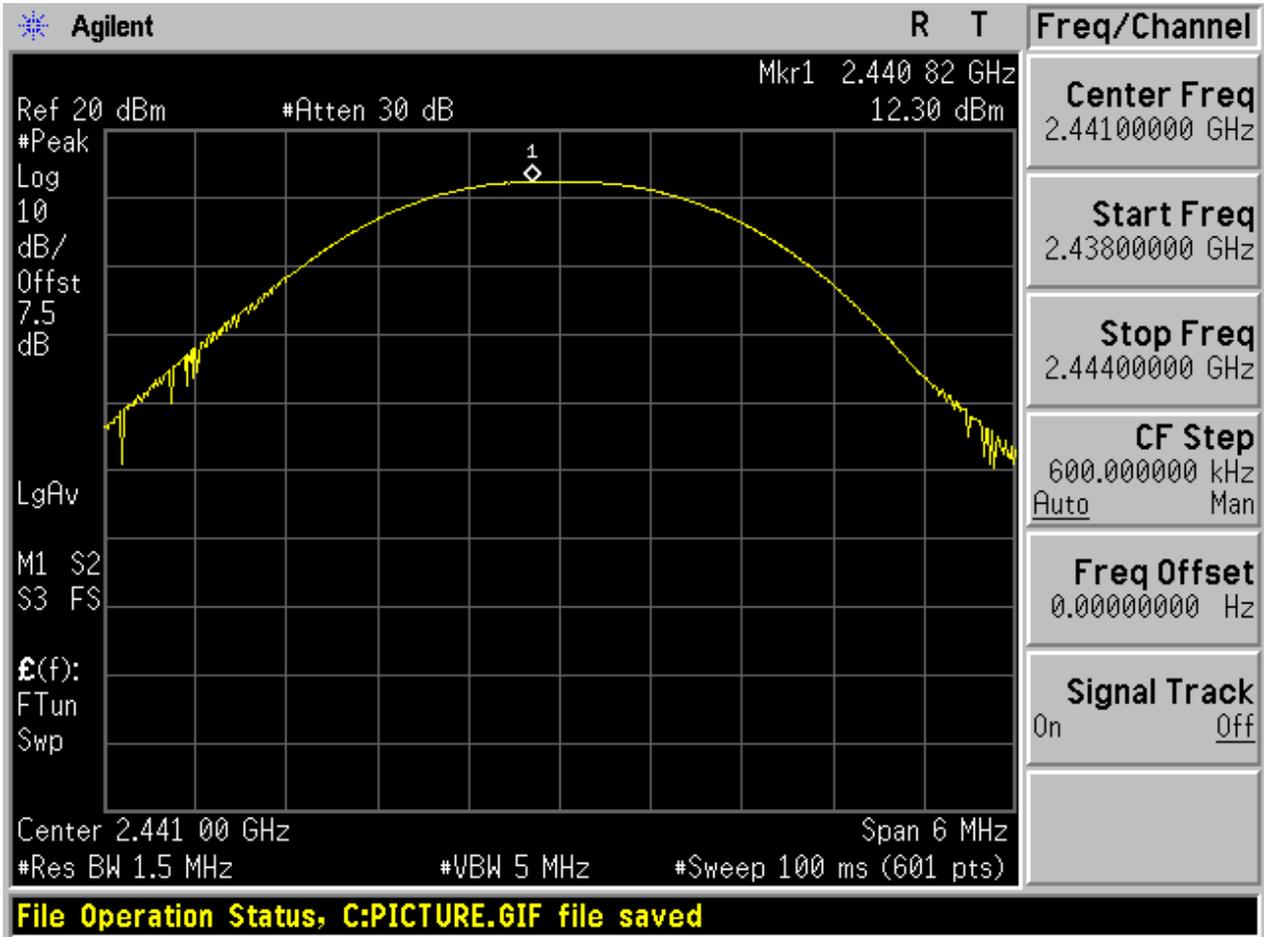
EUT Conf.	Max. Peak Power [dBm]	Verdict
TM1_DH5_Ch0	10.35	Pass
TM1_DH5_Ch39	12.3	Pass
TM1_DH5_Ch78	9.93	Pass
TM2_2DH5_Ch0	9.36	Pass
TM2_2DH5_Ch39	11.03	Pass
TM2_2DH5_Ch78	8.13	Pass
TM3_3DH5_Ch0	9.63	Pass
TM3_3DH5_Ch39	11.34	Pass
TM3_3DH5_Ch78	8.56	Pass

2 Test Plot

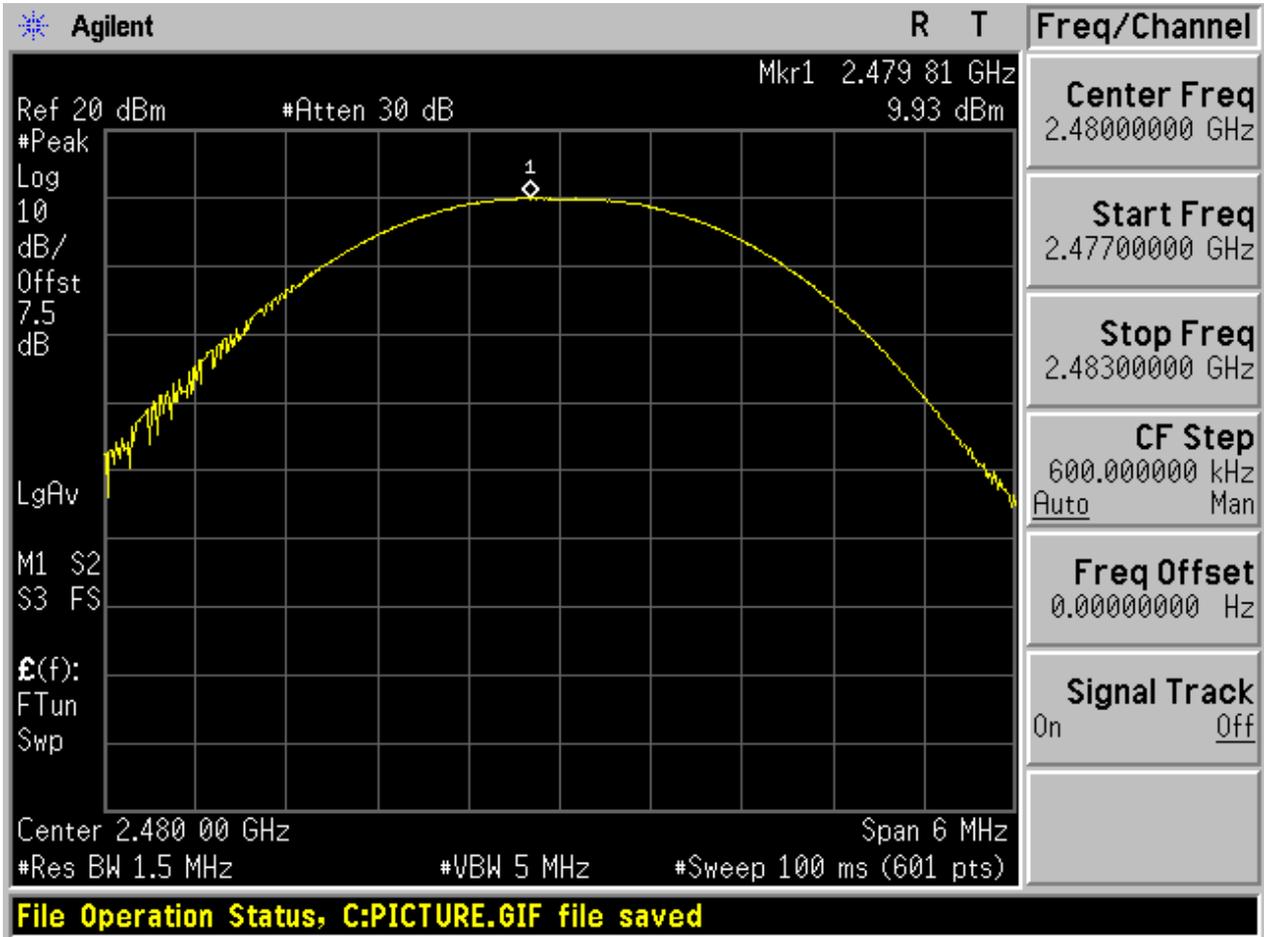
2.1 TM1_DH5_Ch0



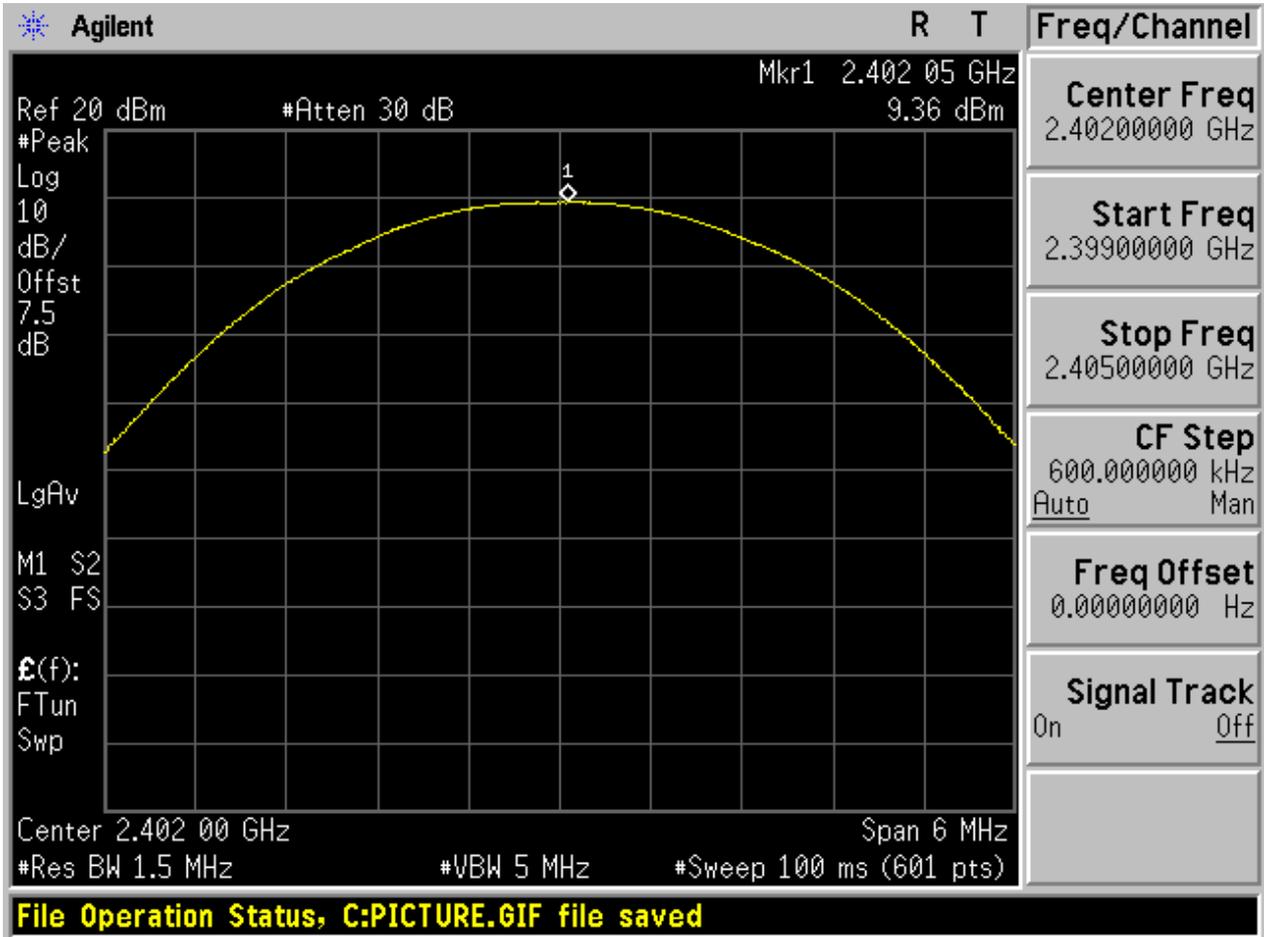
2.2 TM1_DH5_Ch39



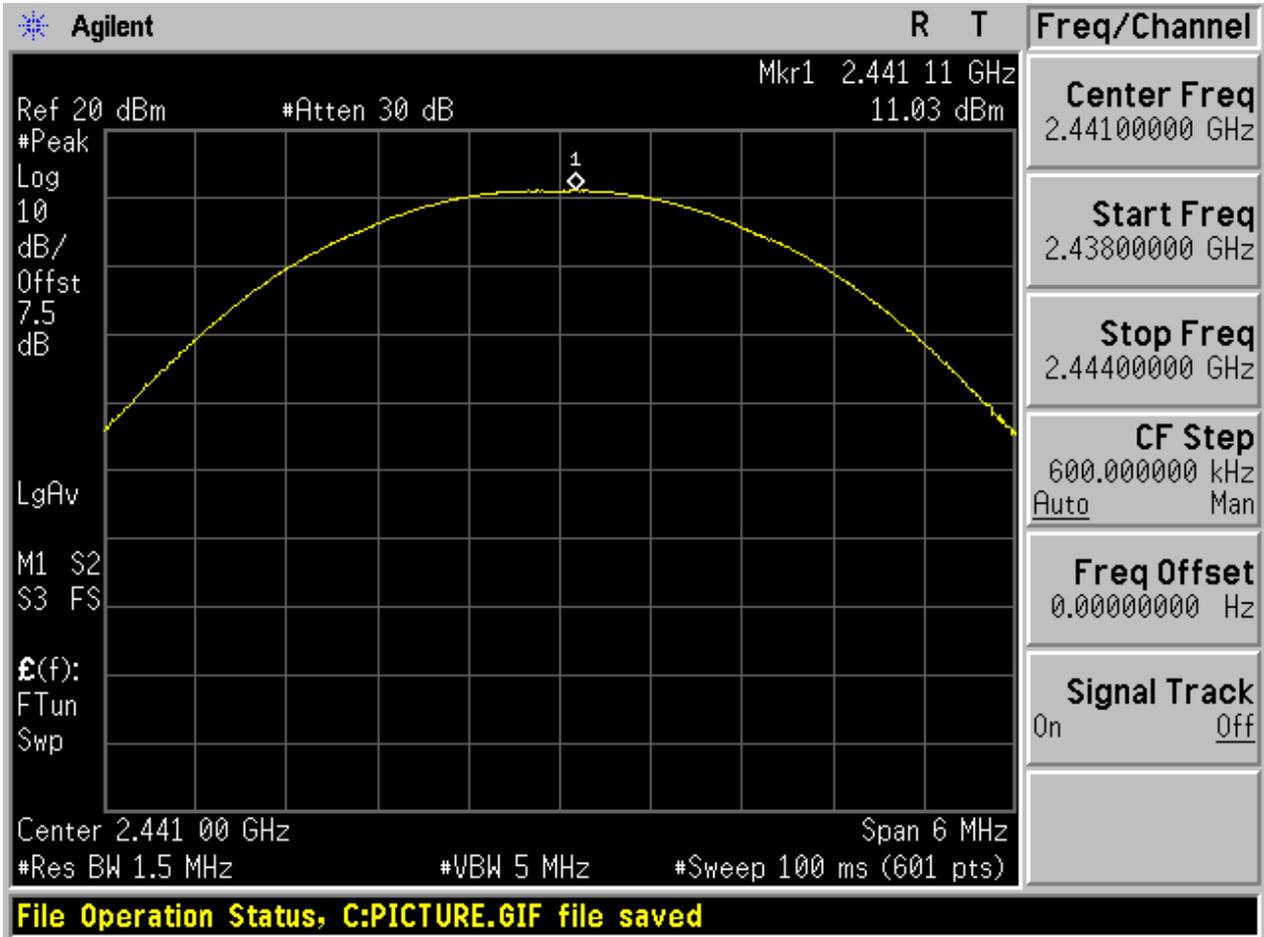
2.3 TM1_DH5_Ch78



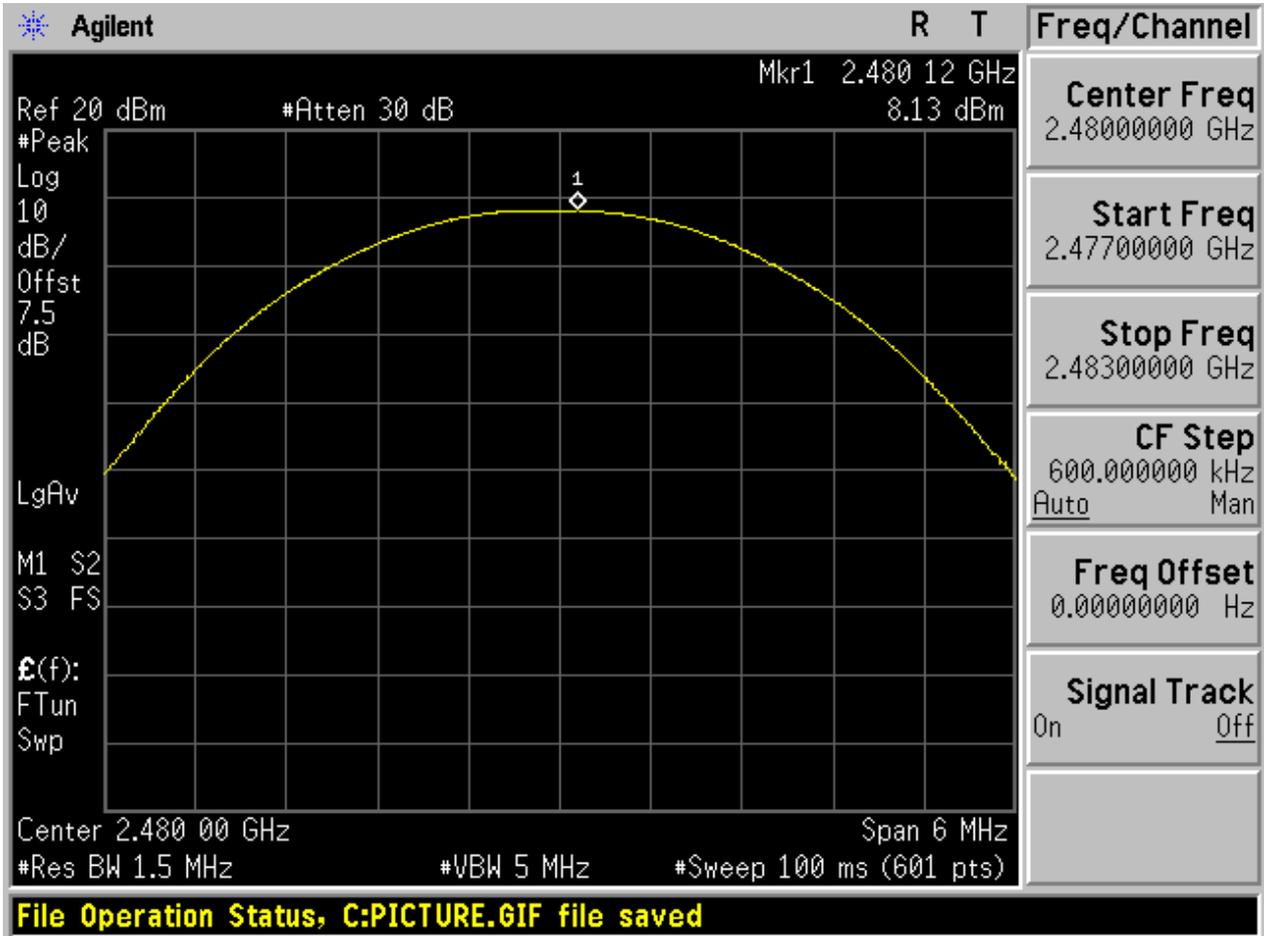
2.4 TM2_2DH5_Ch0



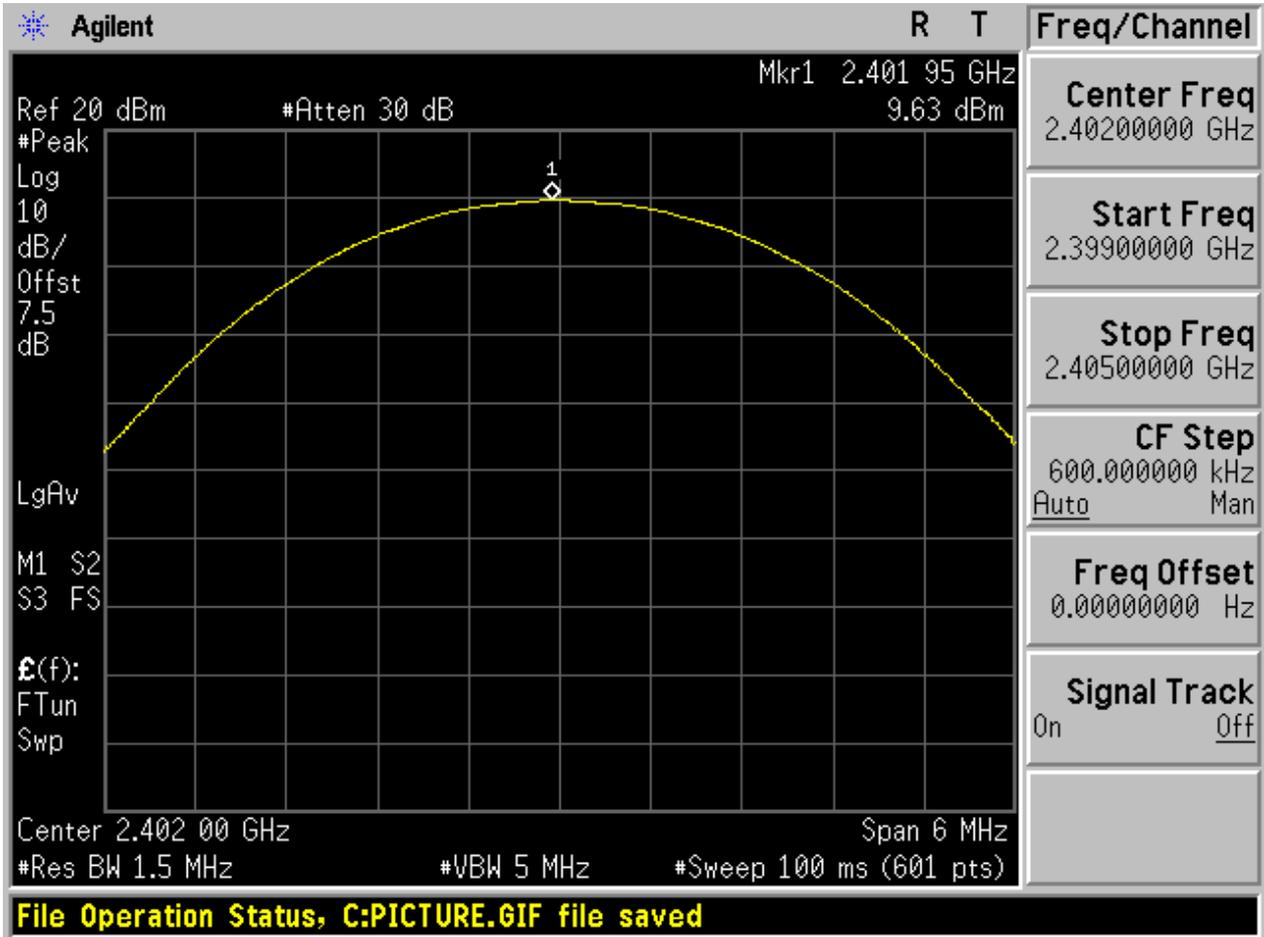
2.5 TM2_2DH5_Ch39



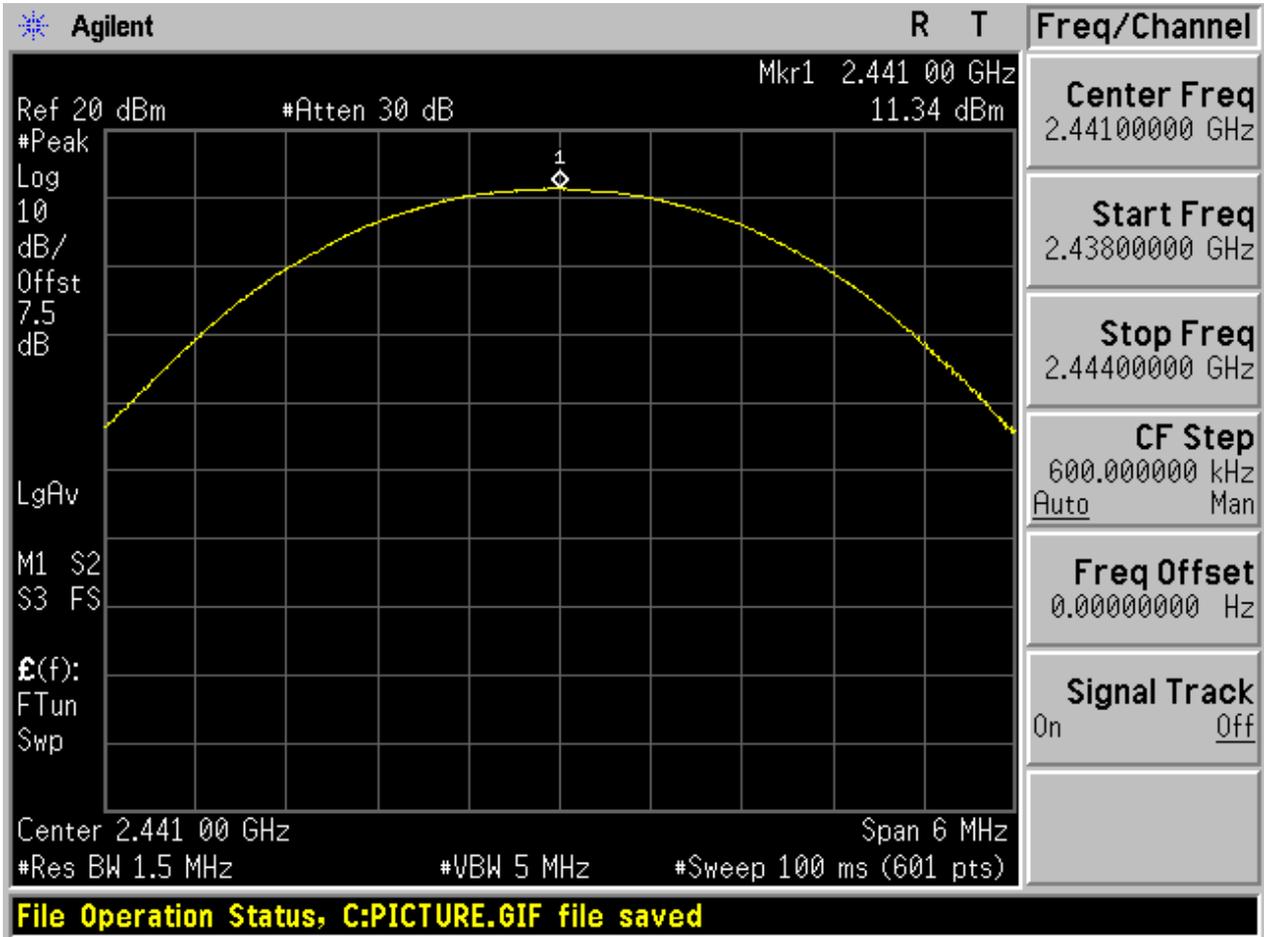
2.6 TM2_2DH5_Ch78



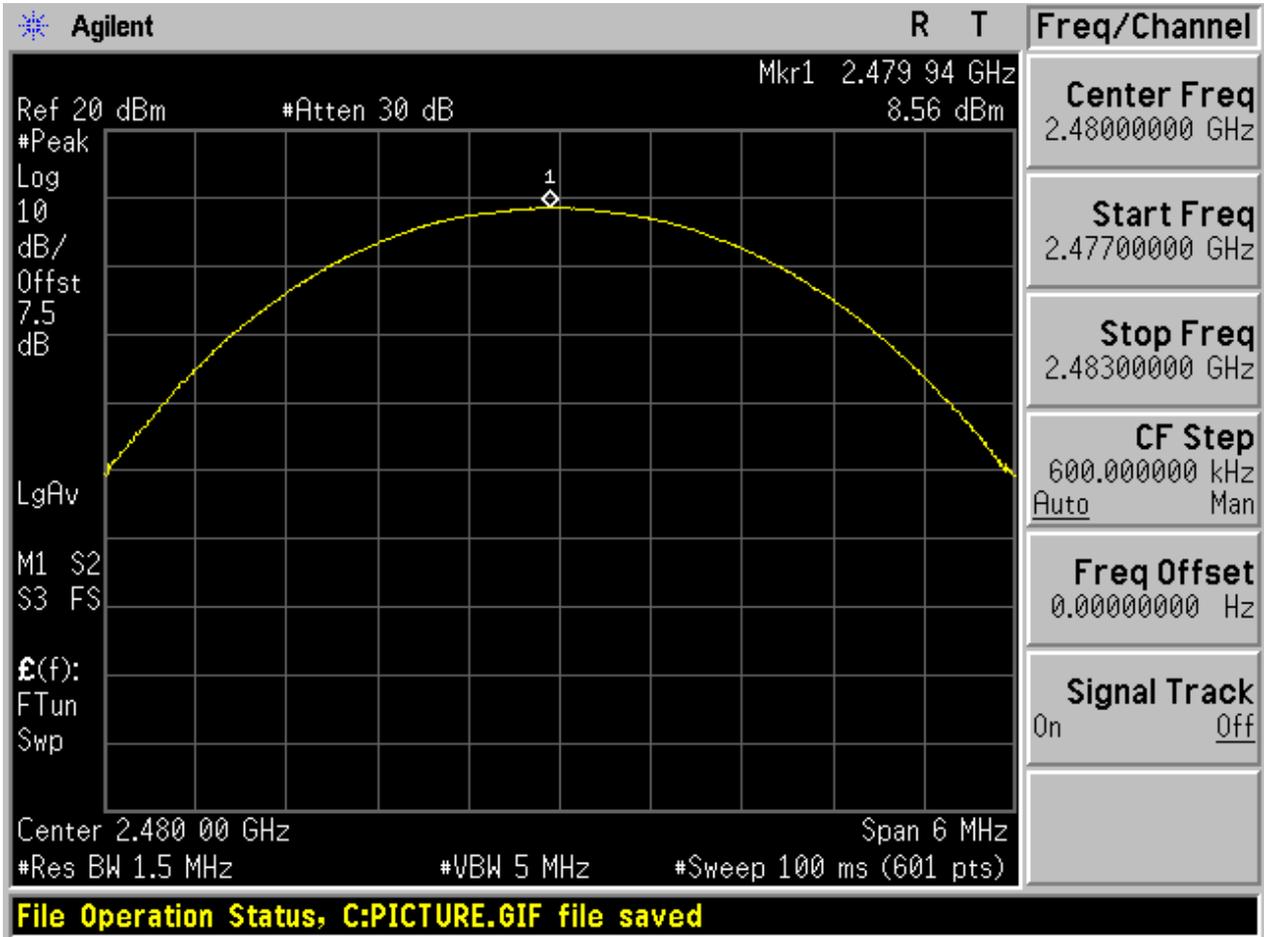
2.7 TM3_3DH5_Ch0



2.8 TM3_3DH5_Ch39



2.9 TM3_3DH5_Ch78





Appendix F: Band edge spurious emission

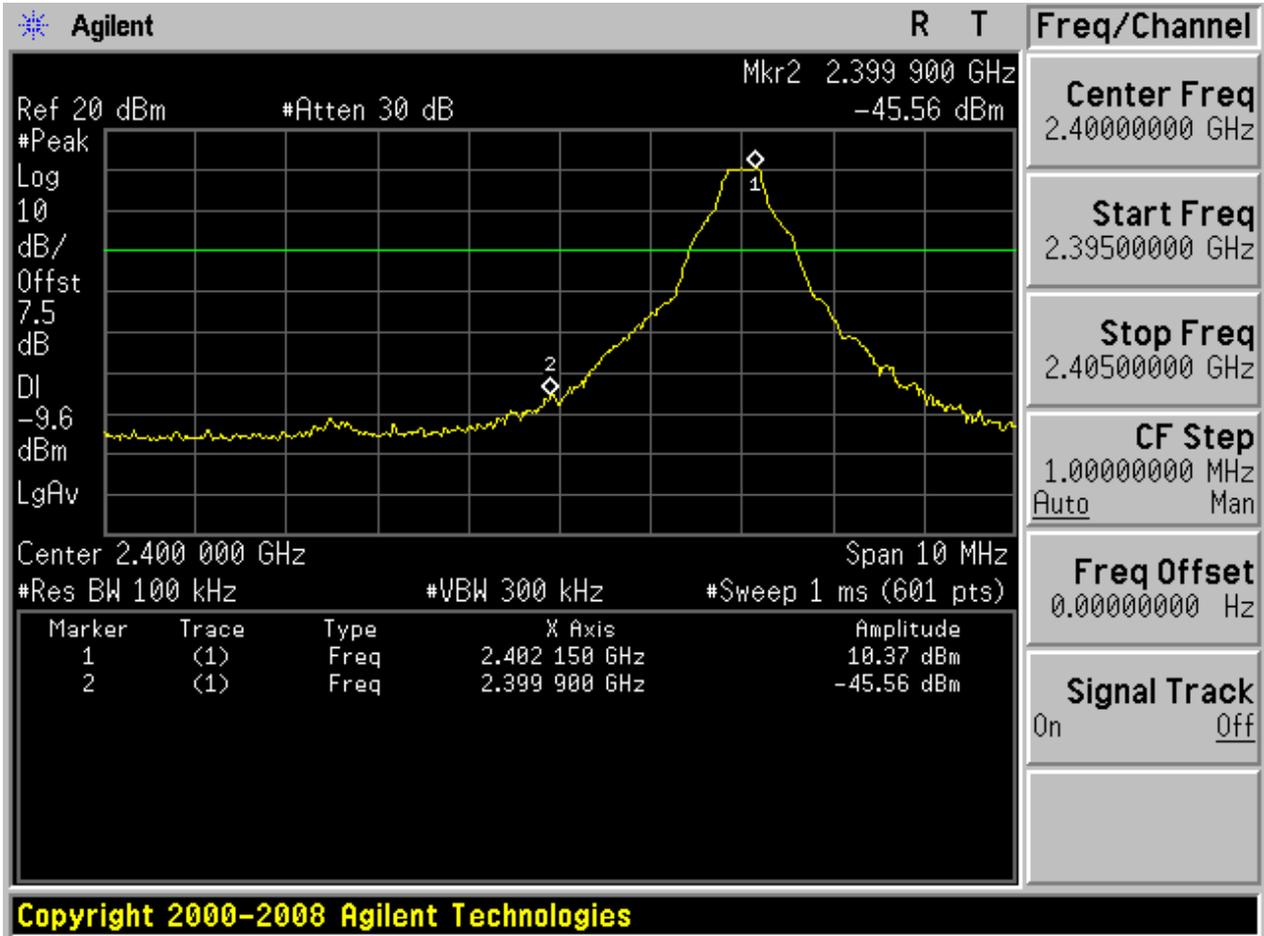
1 Result Table

EUT Conf.	Channel No.	Carrier Frequency [MHz]	Max. Spurious Level [dBm]	Frequency Hopping	Carrier Power [dBm]	Limit [dBm]	Result
TM1_DH5_Ch0	0	2402	-45.56	Off	10.37	-9.63	Pass
	-	-	-52.49	On	10.78	-9.22	Pass
TM1_DH5_Ch78	78	2480	-52.8	Off	9.72	-10.28	Pass
	-	-	-53.98	On	9.78	-10.22	Pass
TM2_2DH_5_Ch0	0	2402	-46.57	Off	7.93	-12.1	Pass
	-	-	-48.85	On	8.05	-11.9	Pass
TM2_2DH_5_Ch78	78	2480	-54.16	Off	5.70	-14.3	Pass
	-	-	-54.59	On	4.34	-15.66	Pass
TM3_3DH_5_Ch0	0	2402	-46.85	Off	8.10	-11.9	Pass
	-	-	-47.6	On	7.38	-12.6	Pass
TM3_3DH_5_Ch78	78	2480	-54.21	Off	5.75	-14.25	Pass
	-	-	-54.36	On	4.04	-15.96	Pass

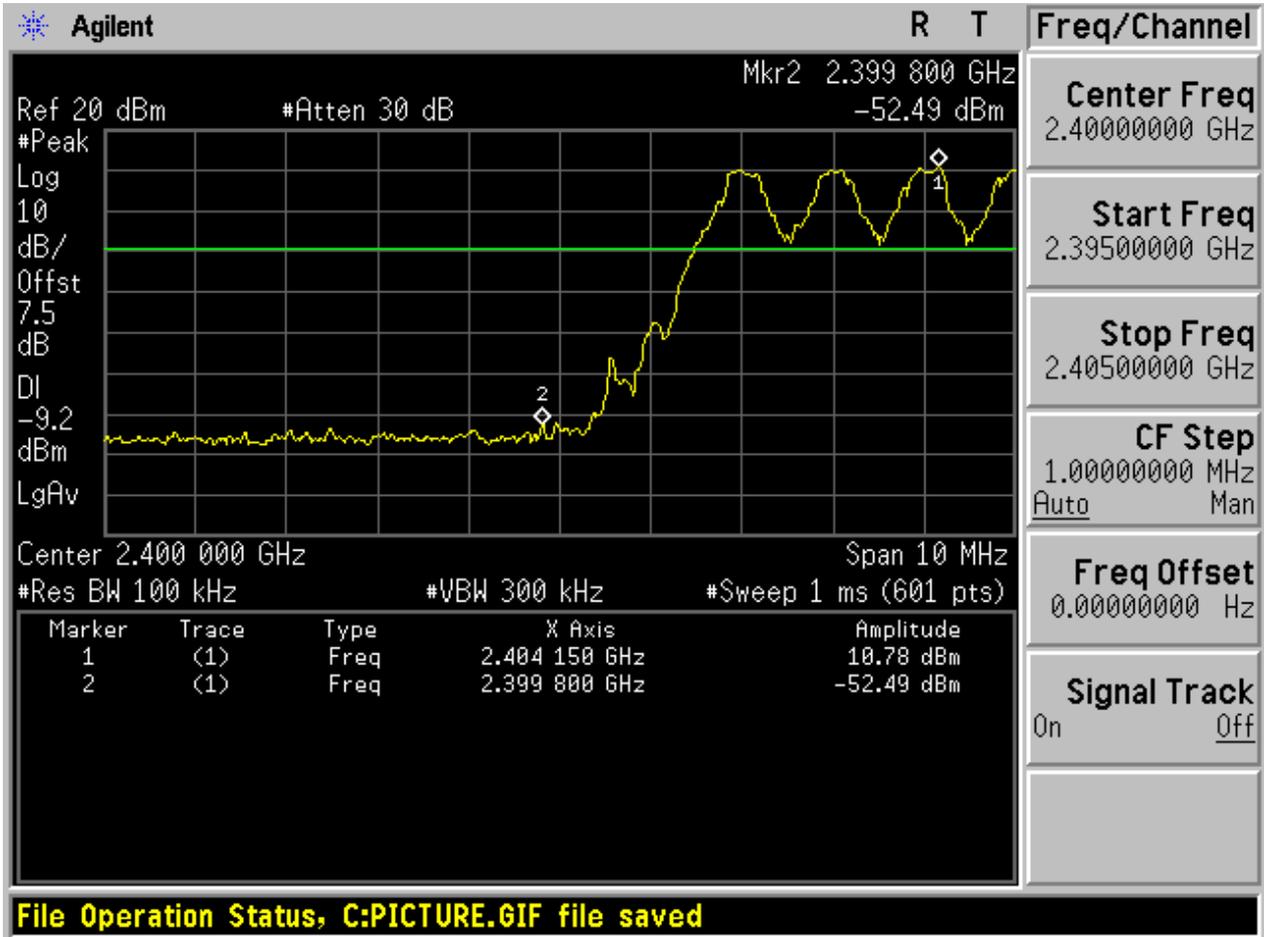
2 Test Plot

2.1 TM1_DH5_Ch0

No hopping

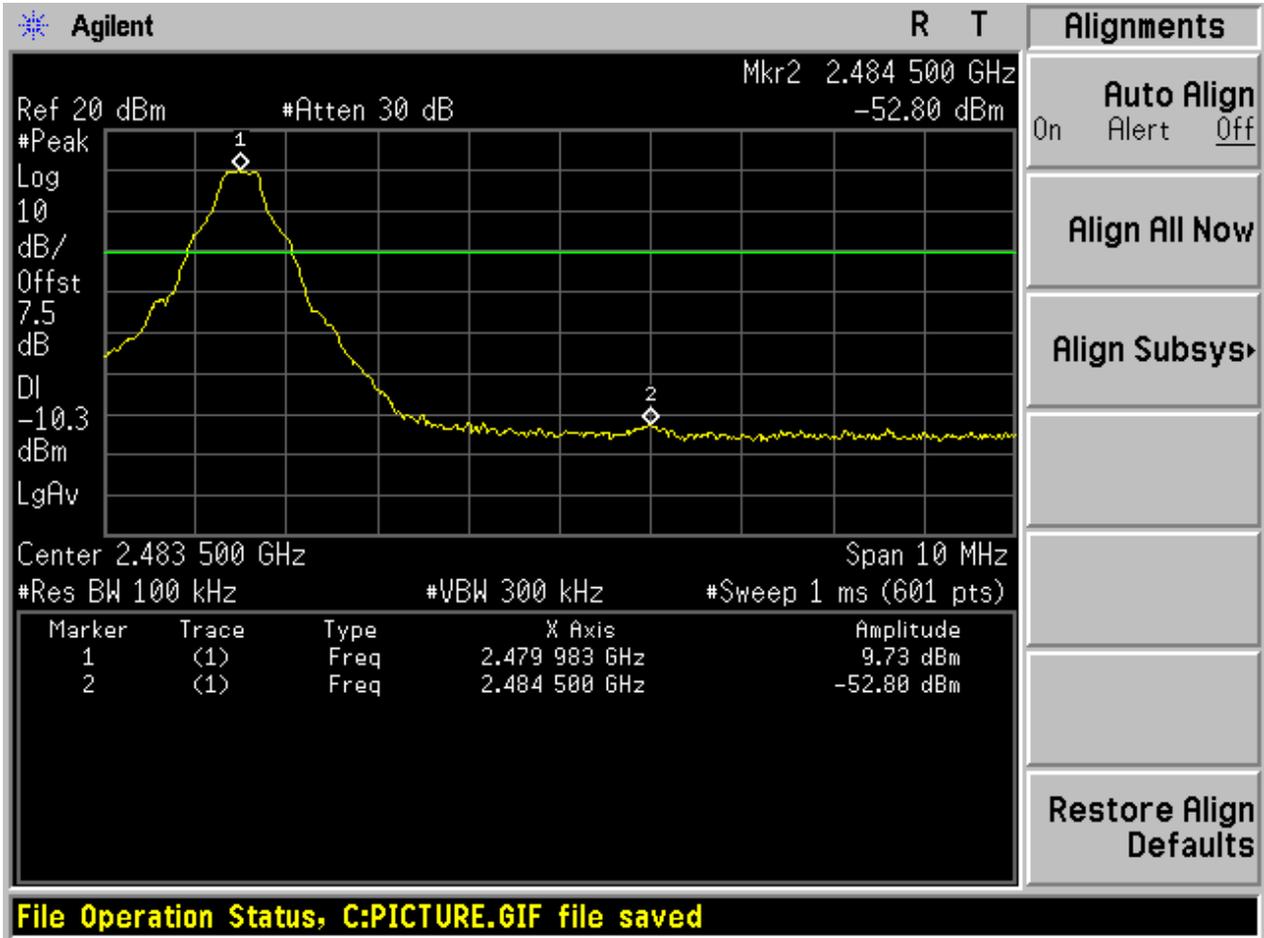


With hopping

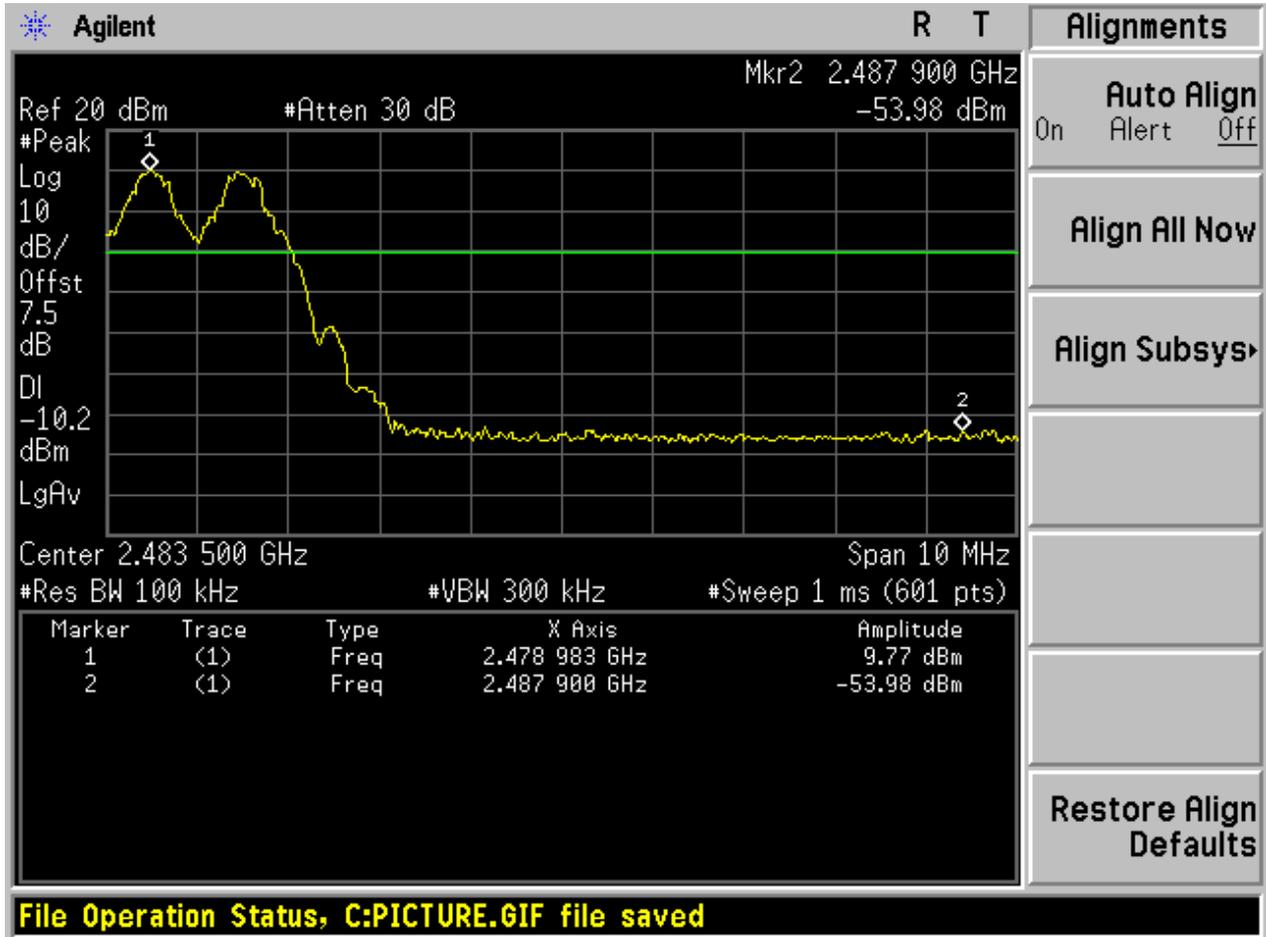


2.2 TM1_DH5_Ch78

No hopping

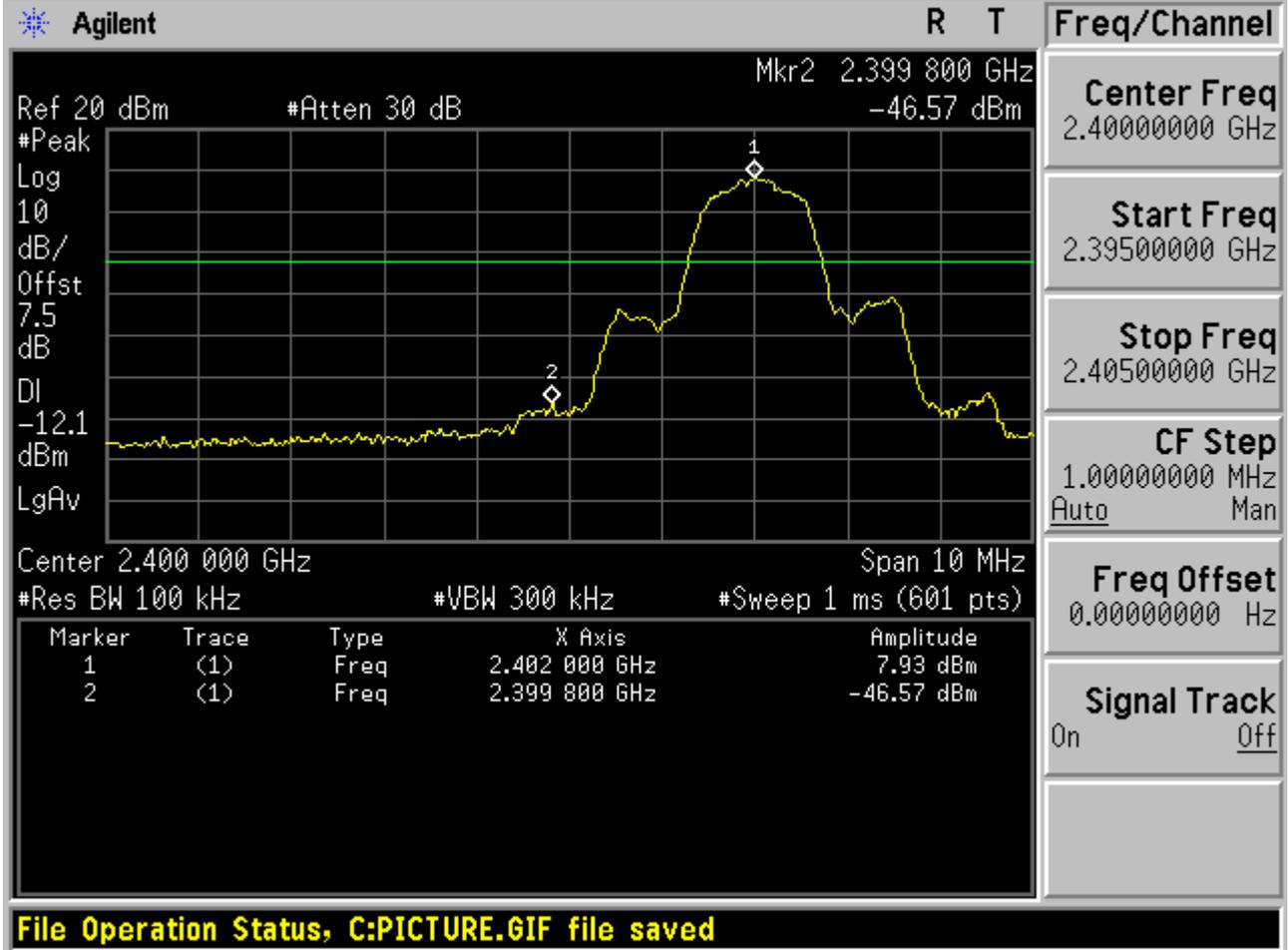


With hopping

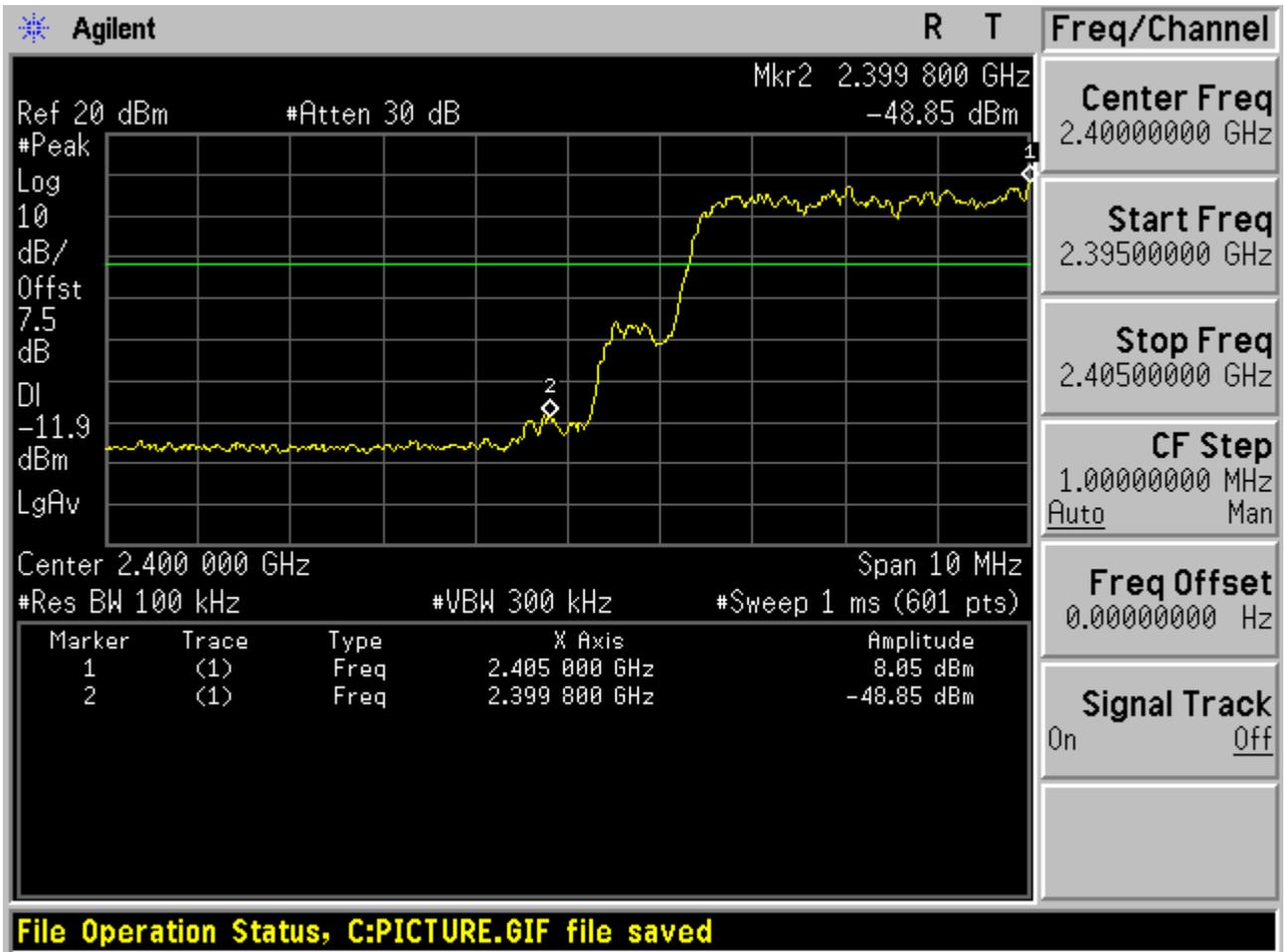


2.3 TM2_2DH5_Ch0

No hopping

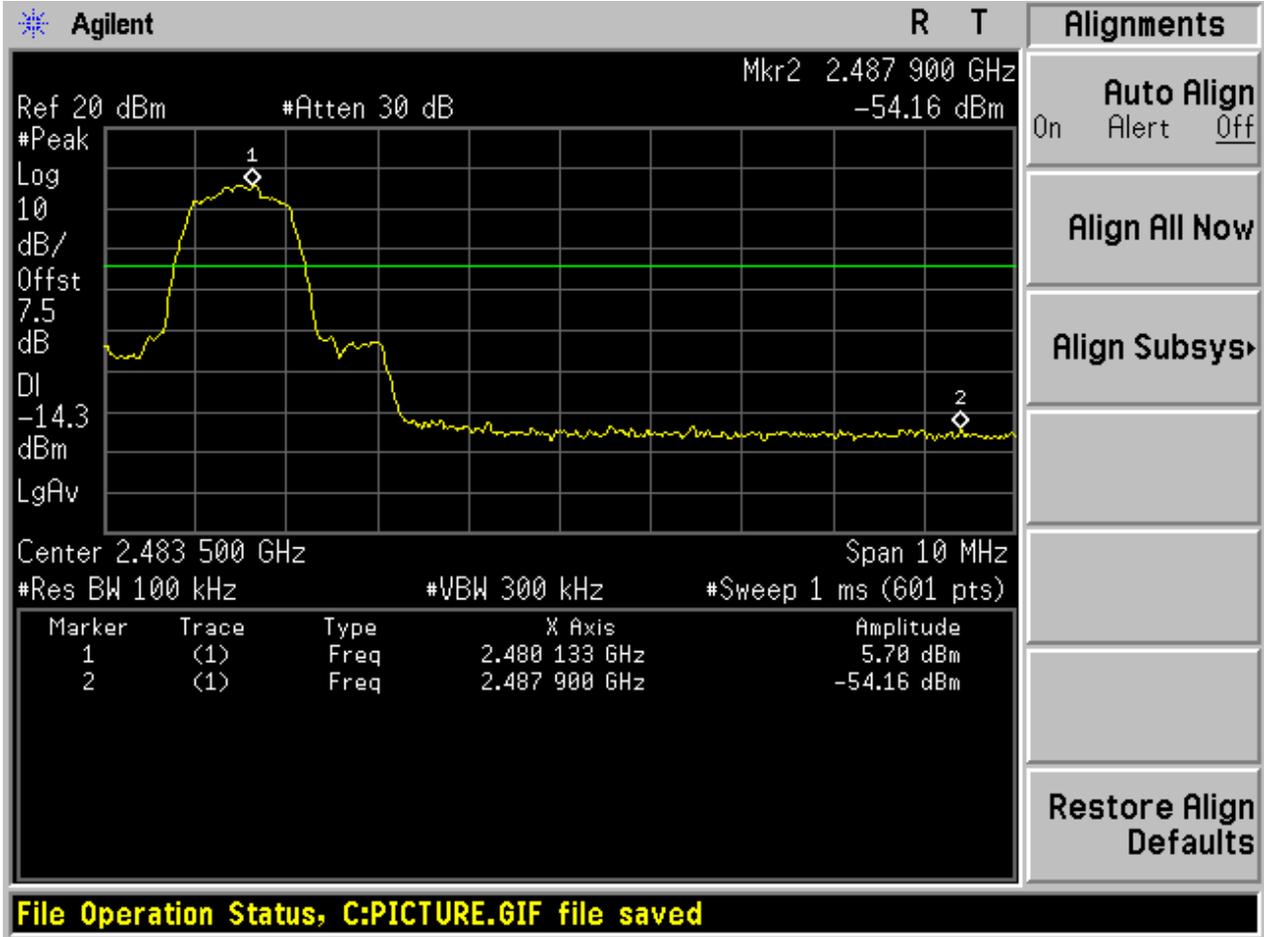


With hopping

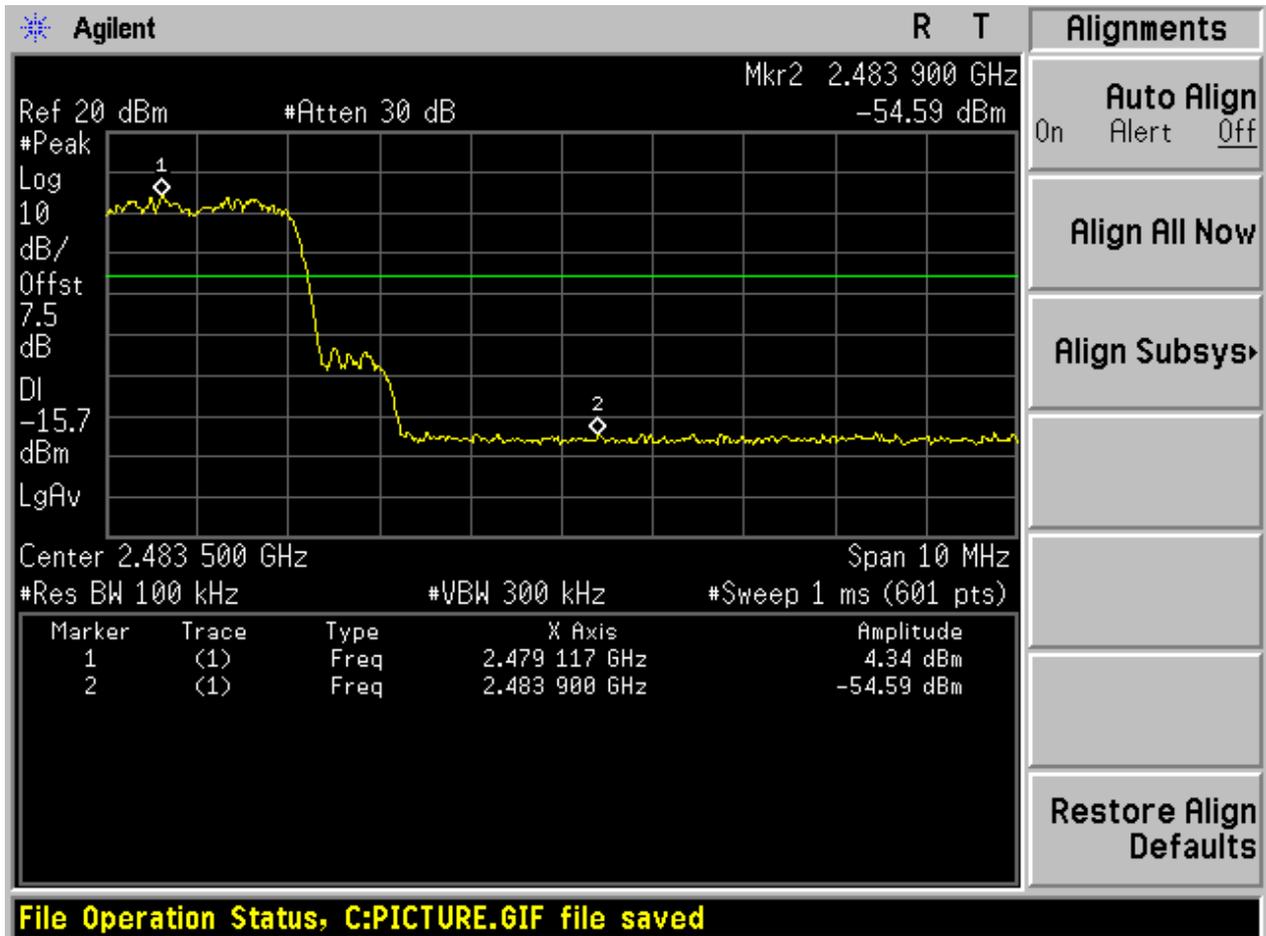


2.4 TM2_2DH5_Ch78

No hopping

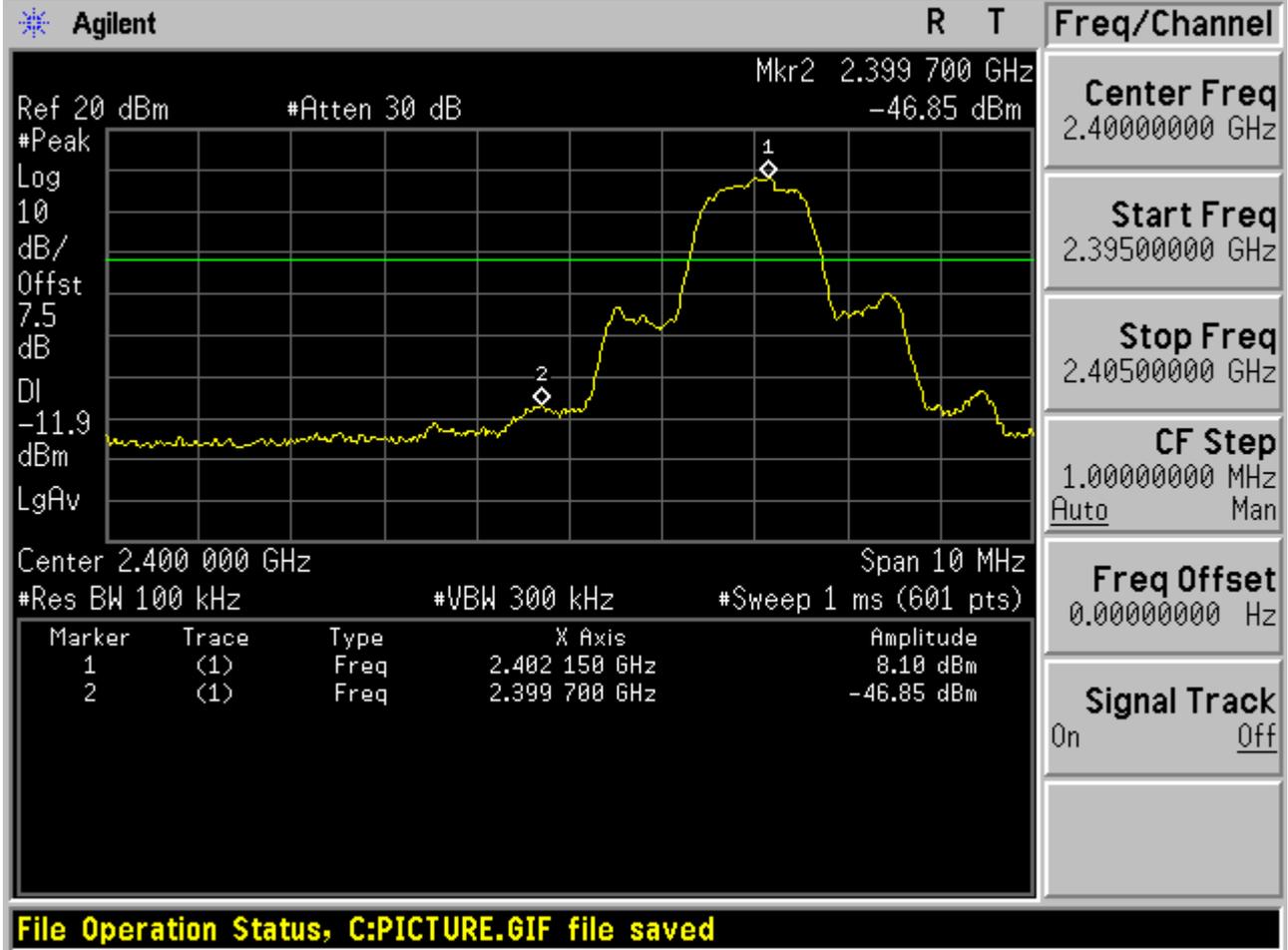


With hopping

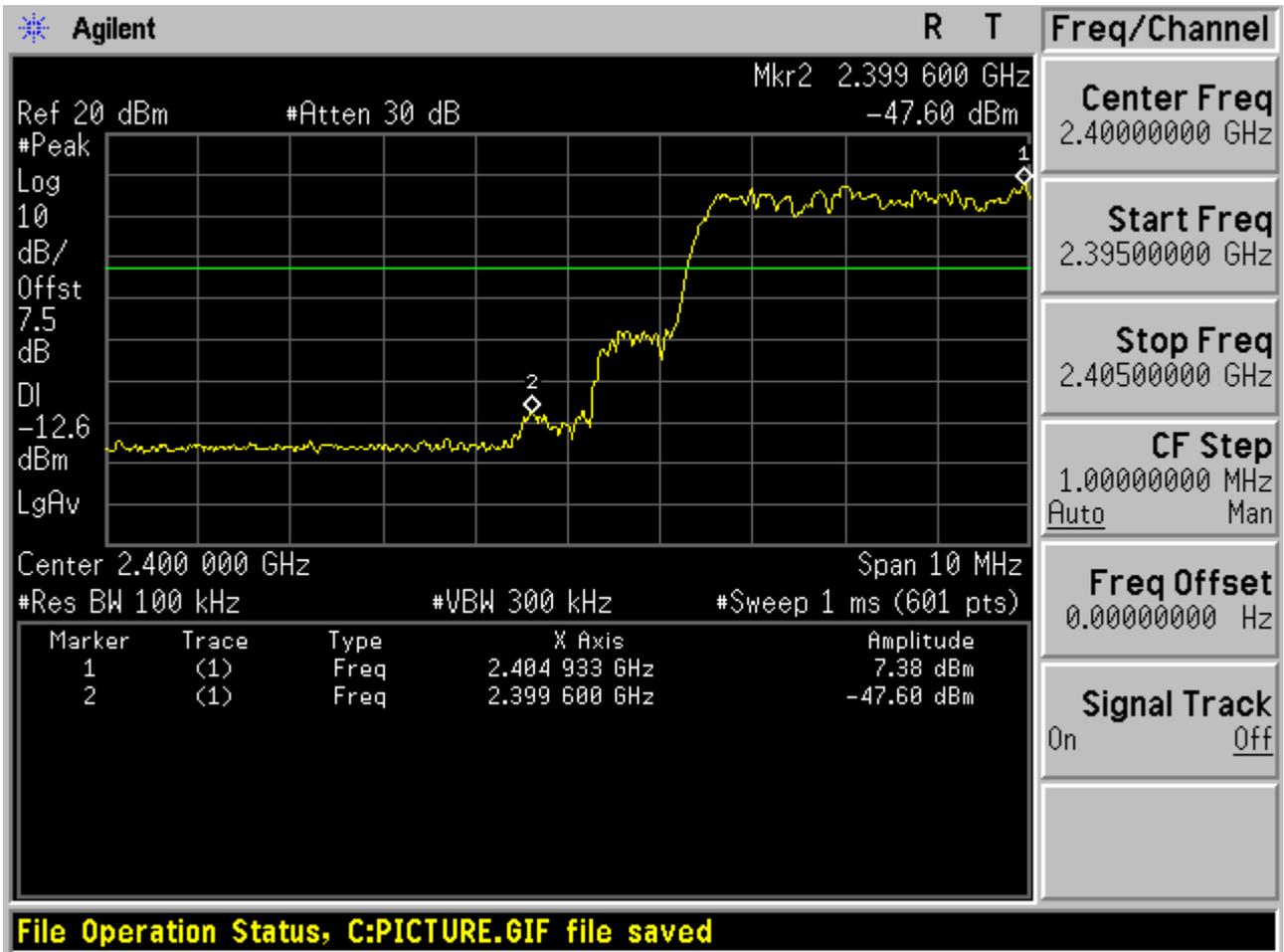


2.5 TM3_3DH5_Ch0

No hopping

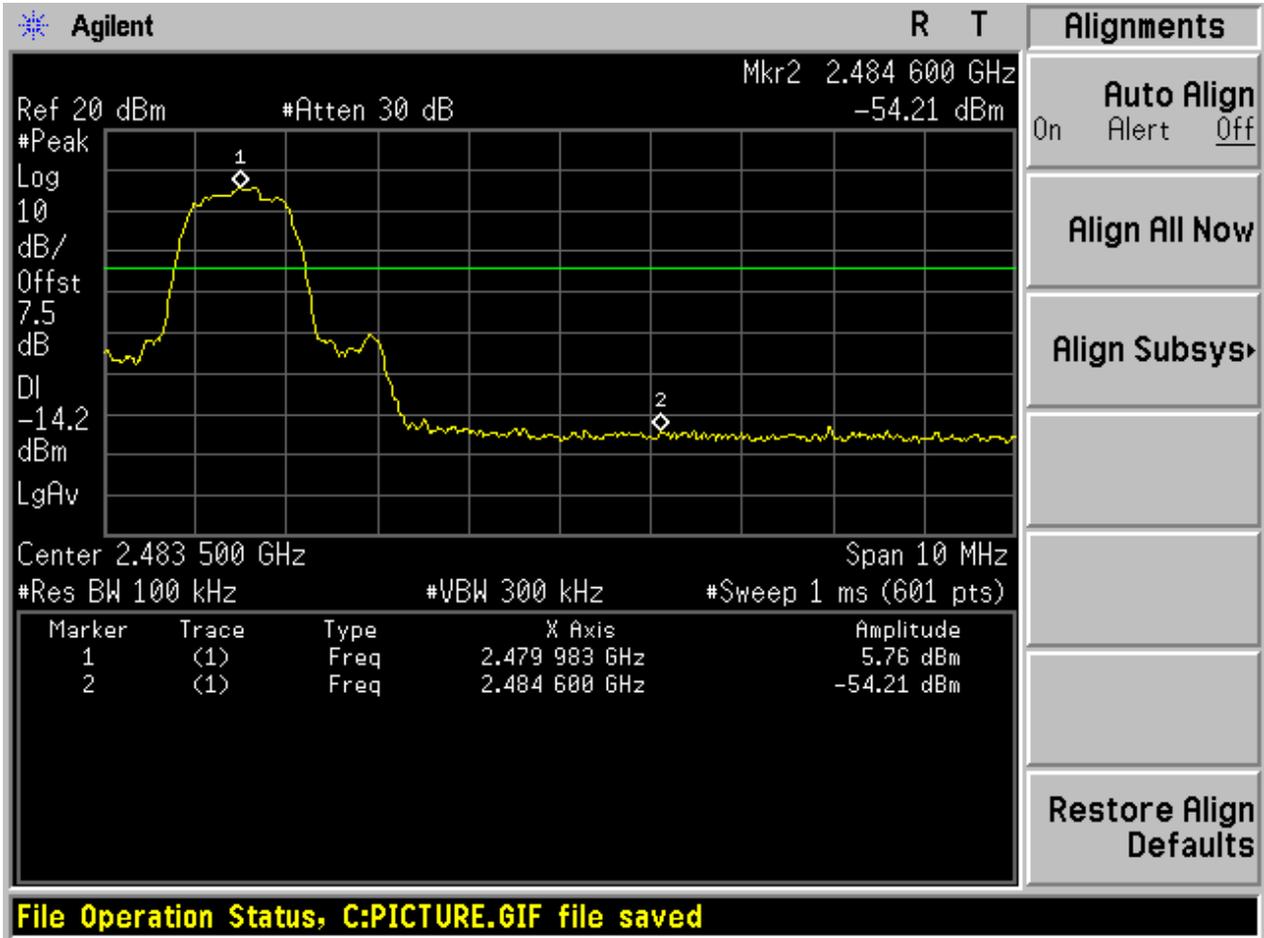


With hopping

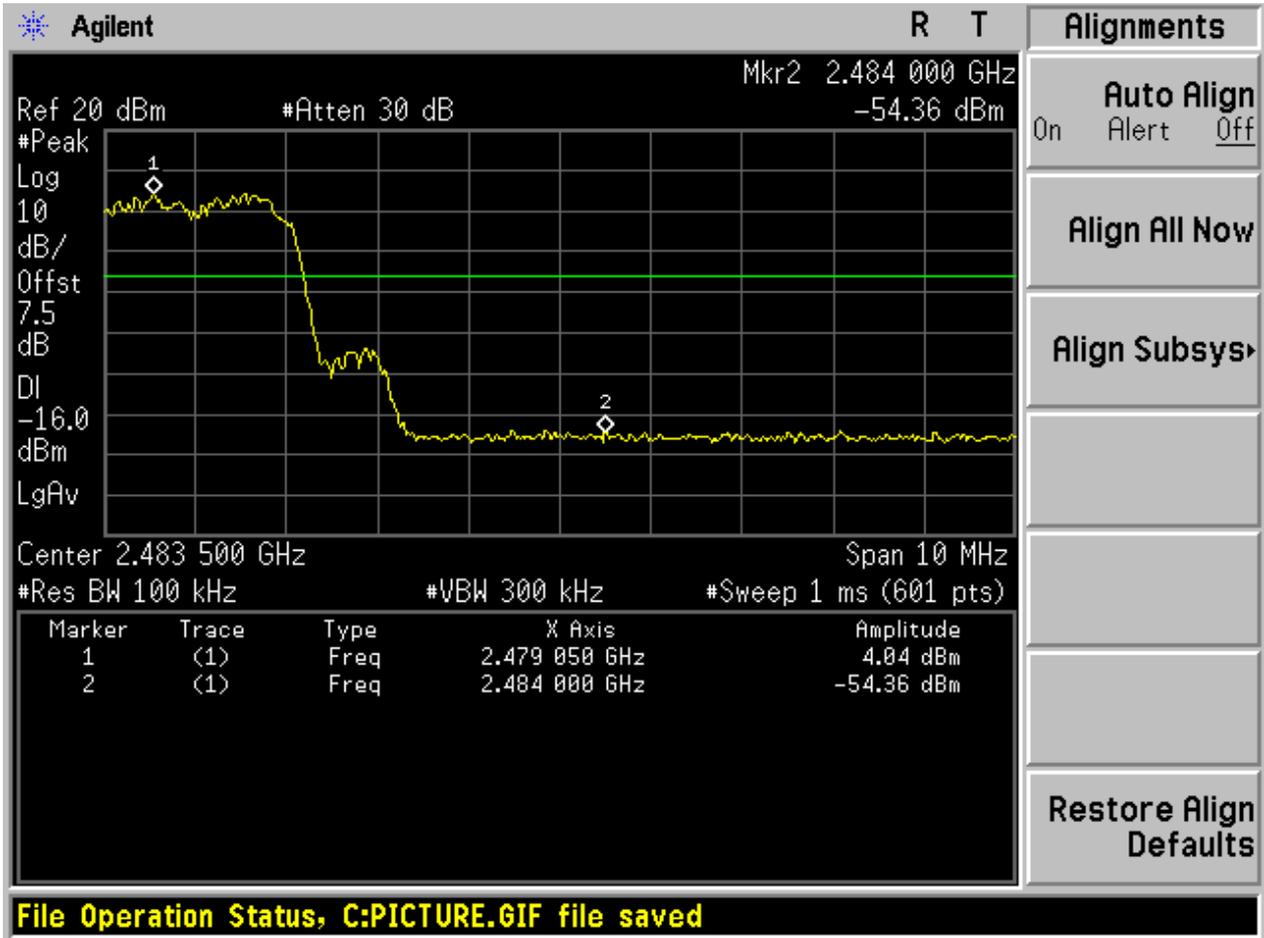


2.6 TM3_3DH5_Ch78

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”.

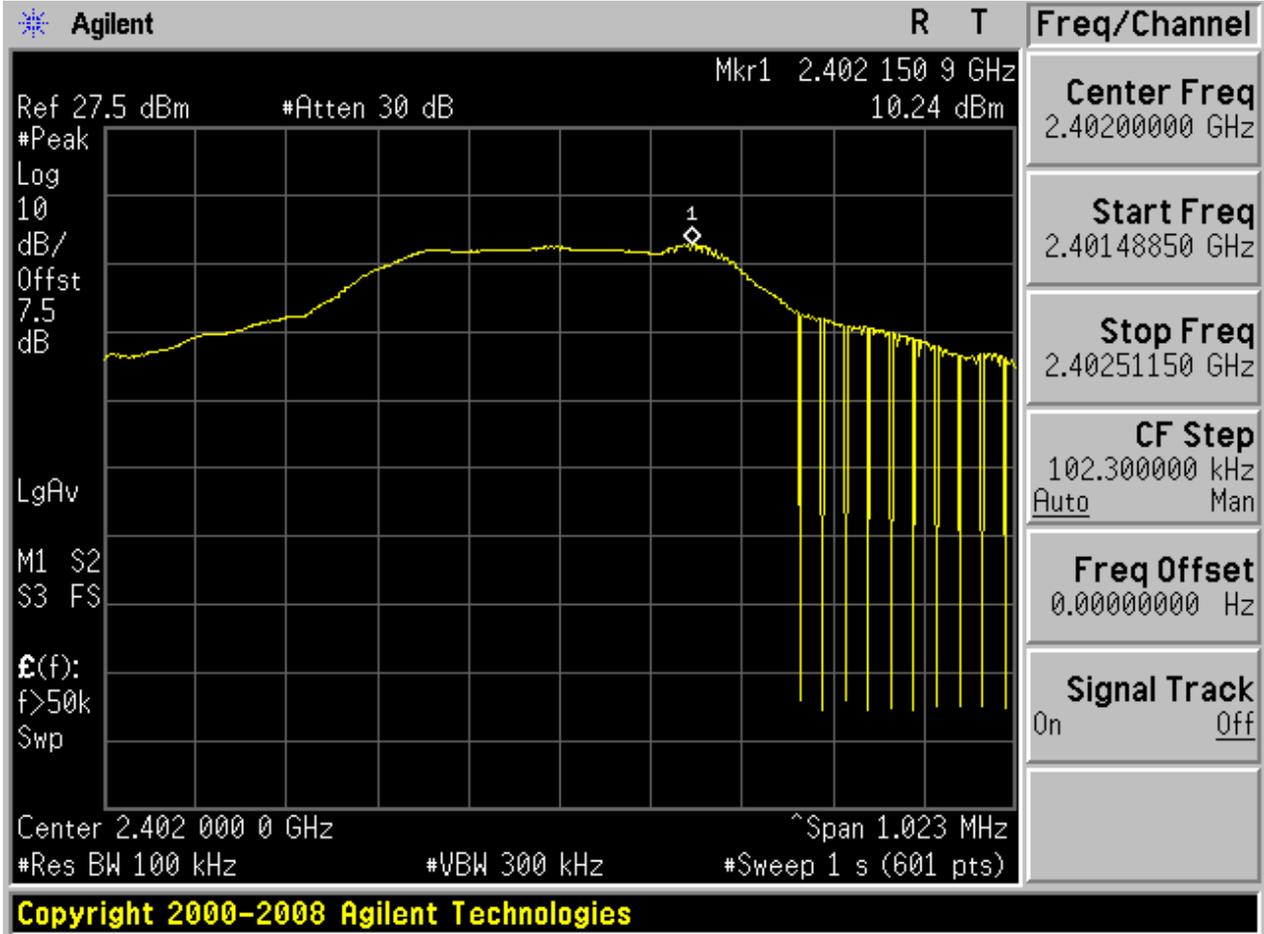
EUT Conf.	Pref [dBm/100 kHz]	Puw [dBm/100 kHz]	Verdict
TM1_DH5_Ch0	10.24	< Limit	Pass
TM1_DH5_Ch39	12.19	< Limit	Pass
TM1_DH5_Ch78	9.75	< Limit	Pass
TM2_2DH5_Ch0	7.25	< Limit	Pass
TM2_2DH5_Ch39	9.24	< Limit	Pass
TM2_2DH5_Ch78	5.64	< Limit	Pass
TM3_3DH5_Ch0	7.33	< Limit	Pass
TM3_3DH5_Ch39	9.01	< Limit	Pass
TM3_3DH5_Ch78	5.86	< Limit	Pass



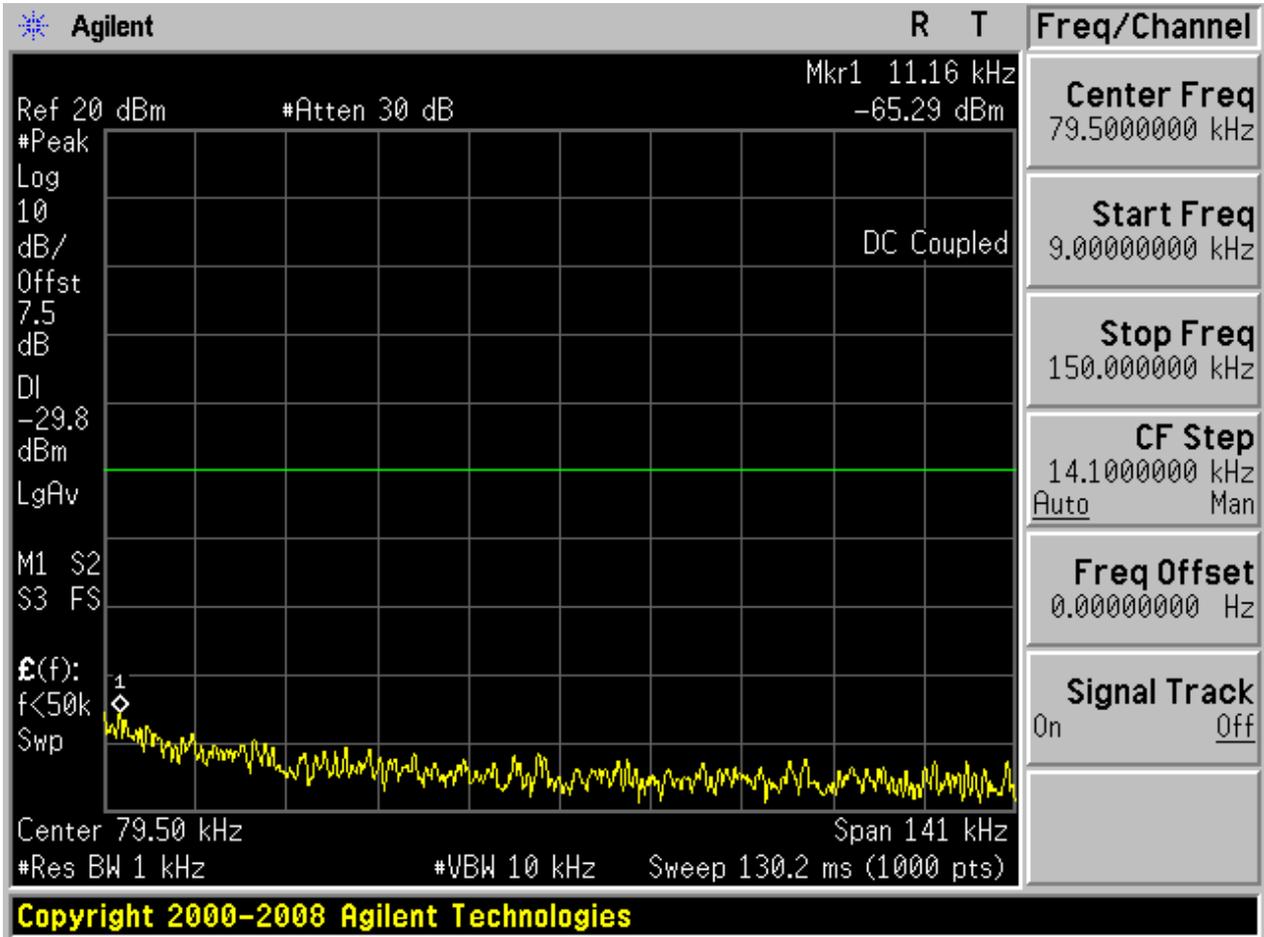
2 Test Plot

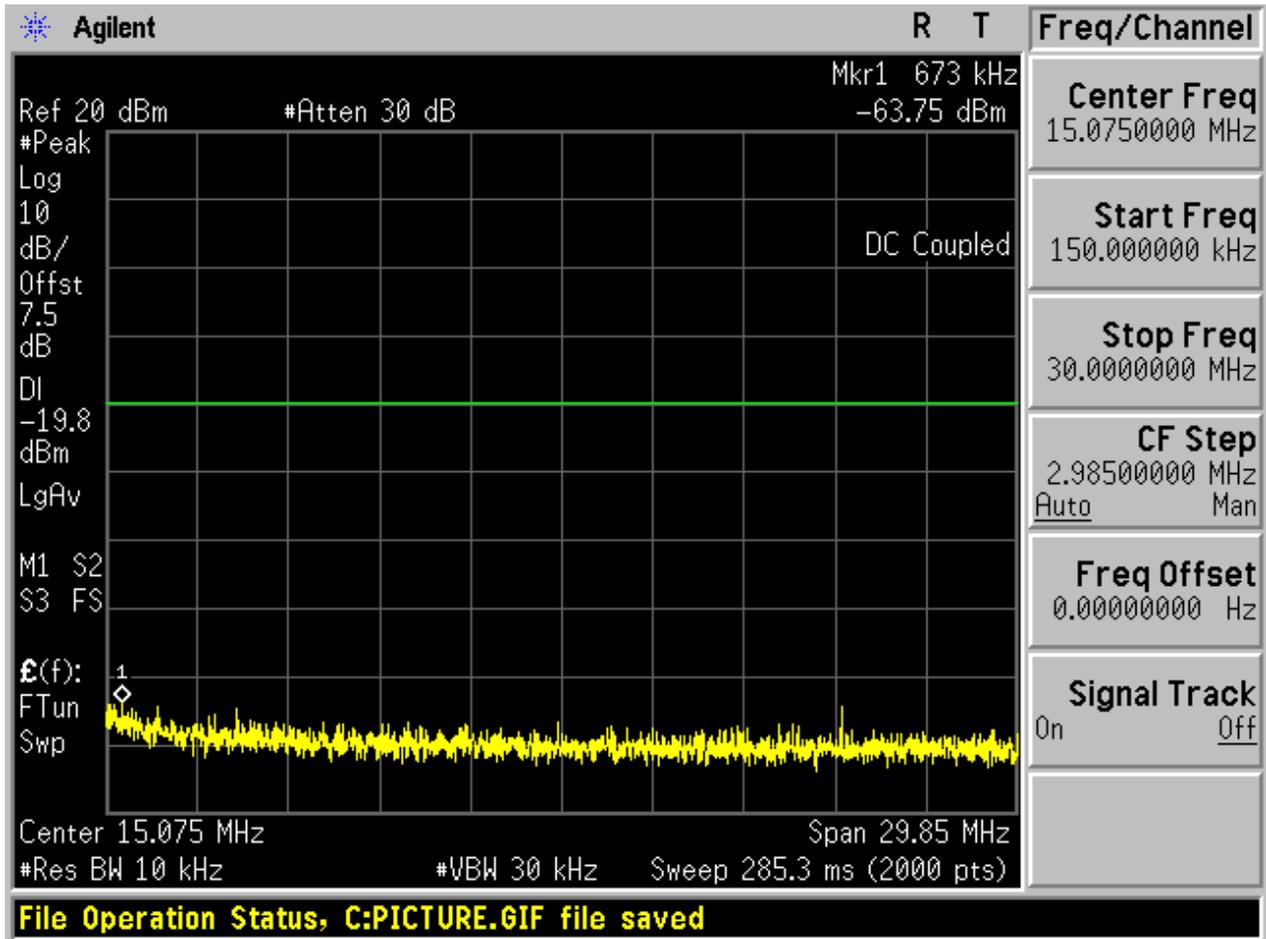
2.1 TM1_DH5_Ch0

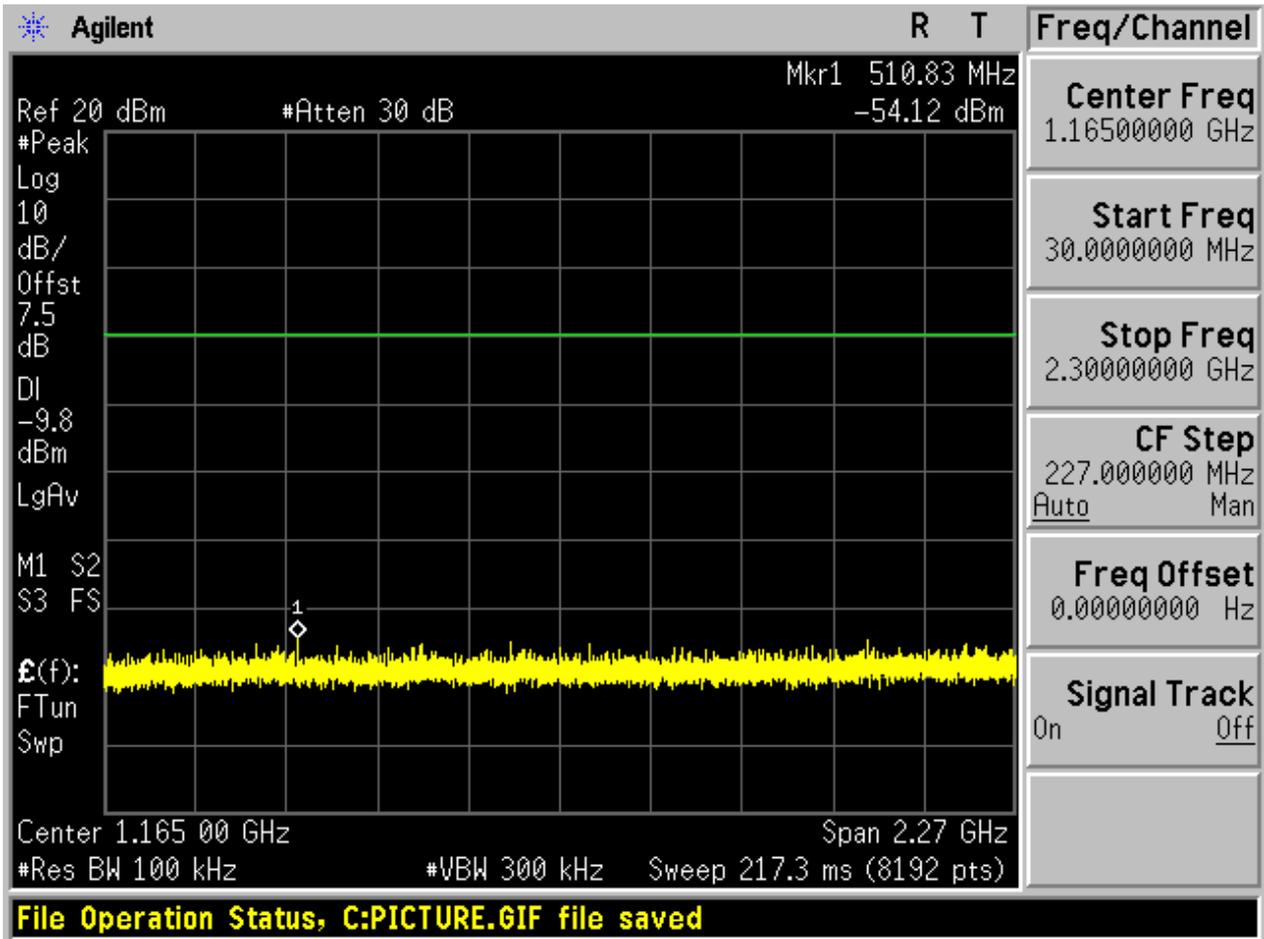
2.1.1 Pref

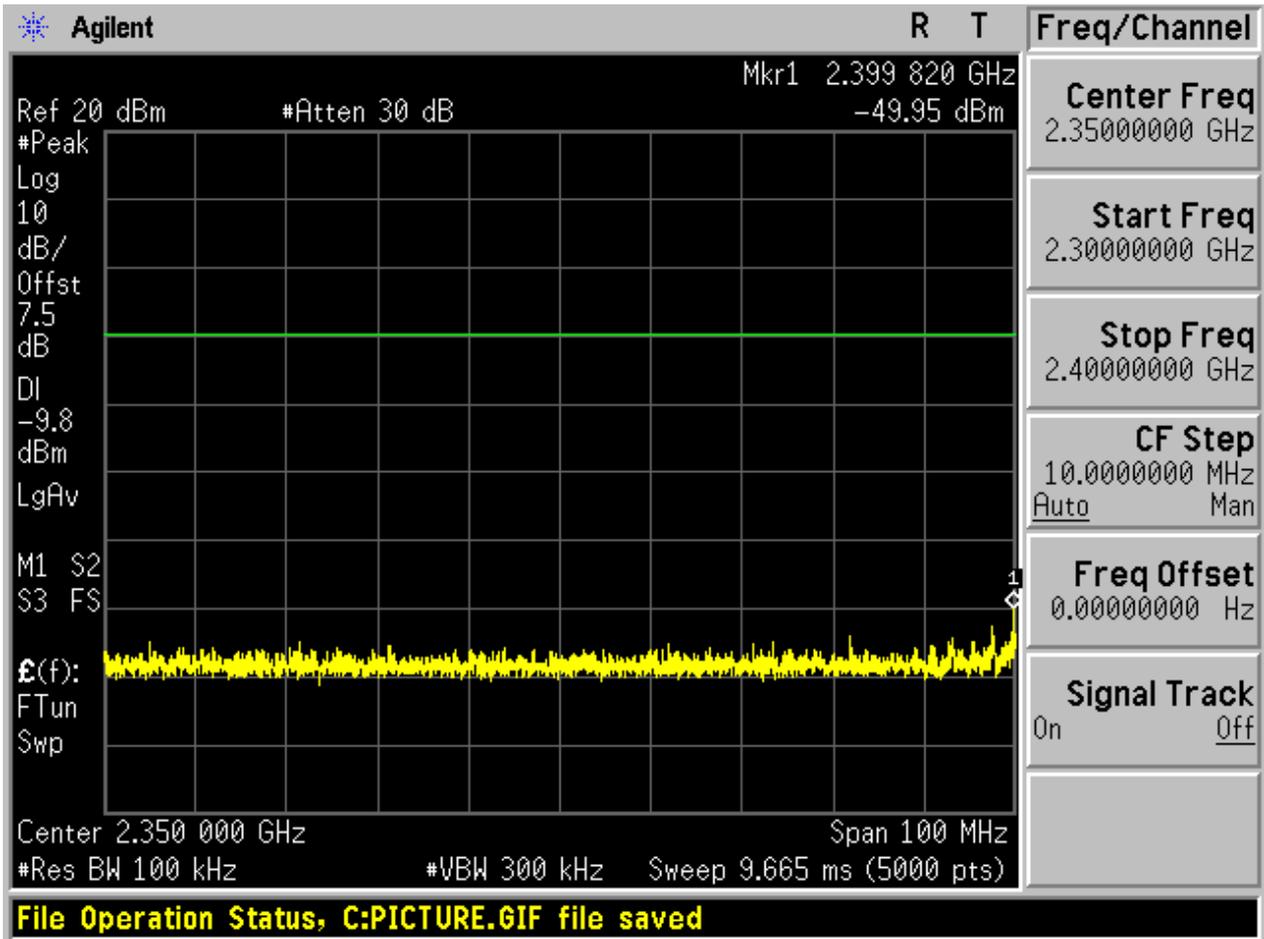


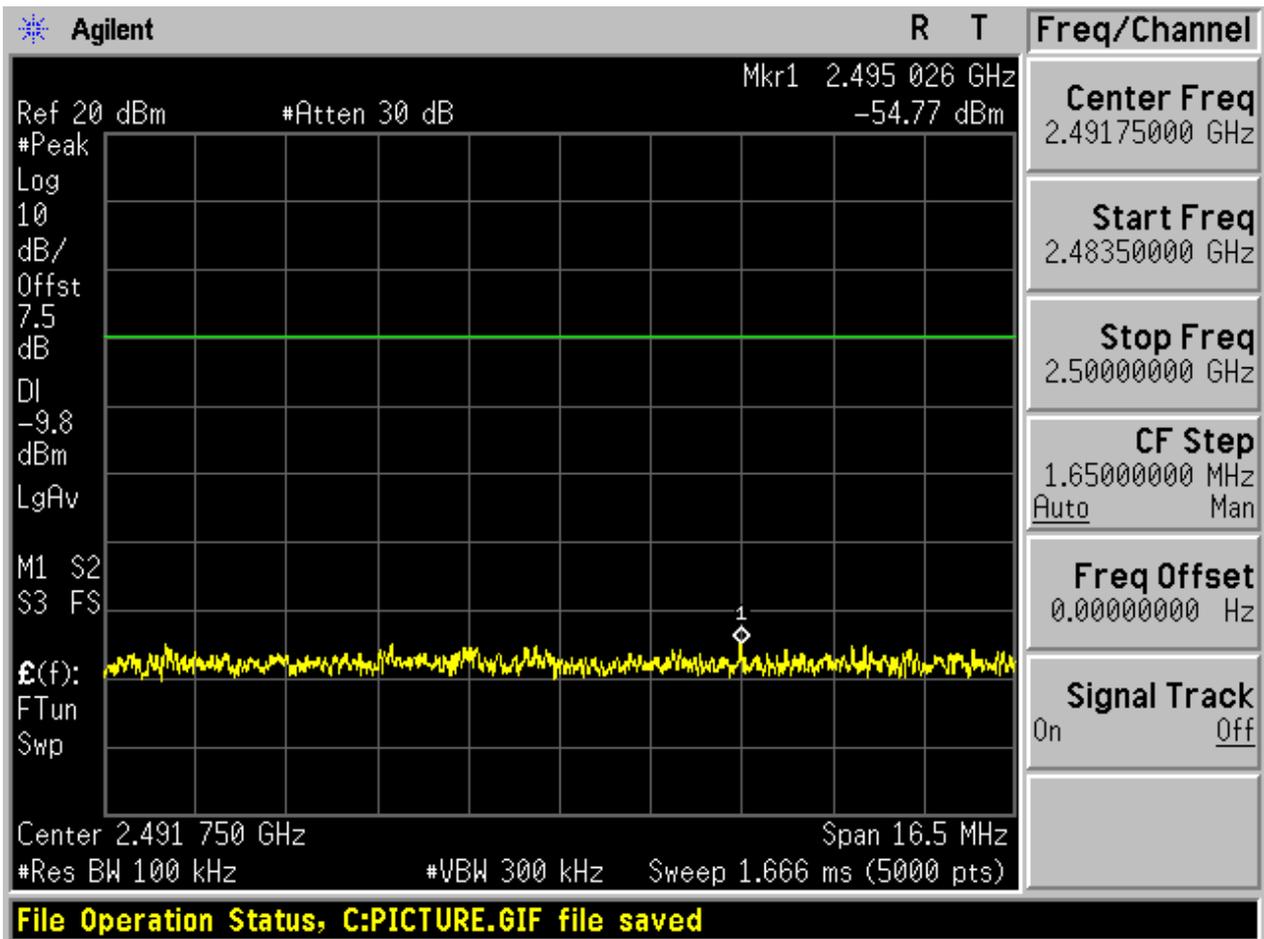
2.1.2 P_{uw}

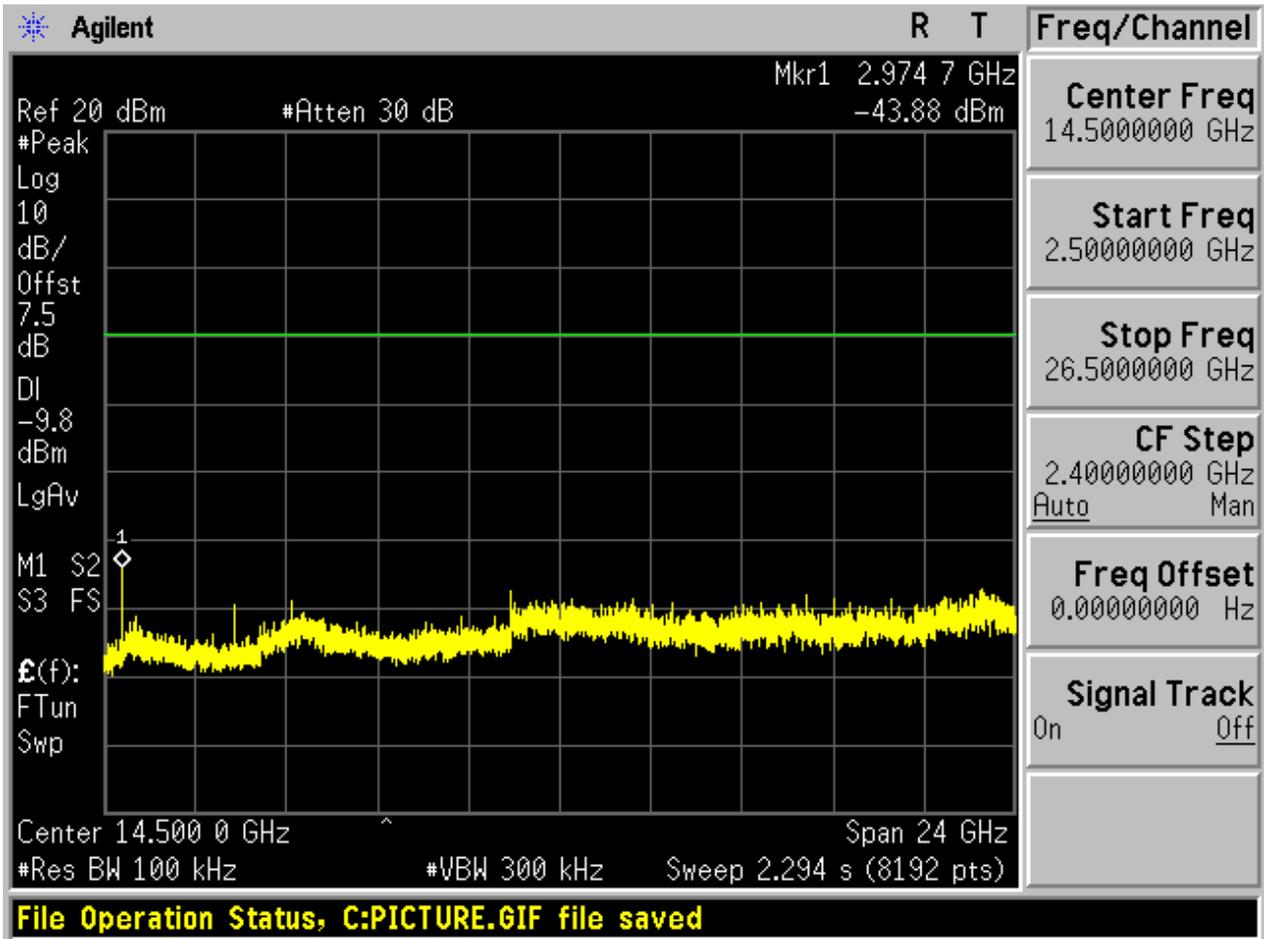








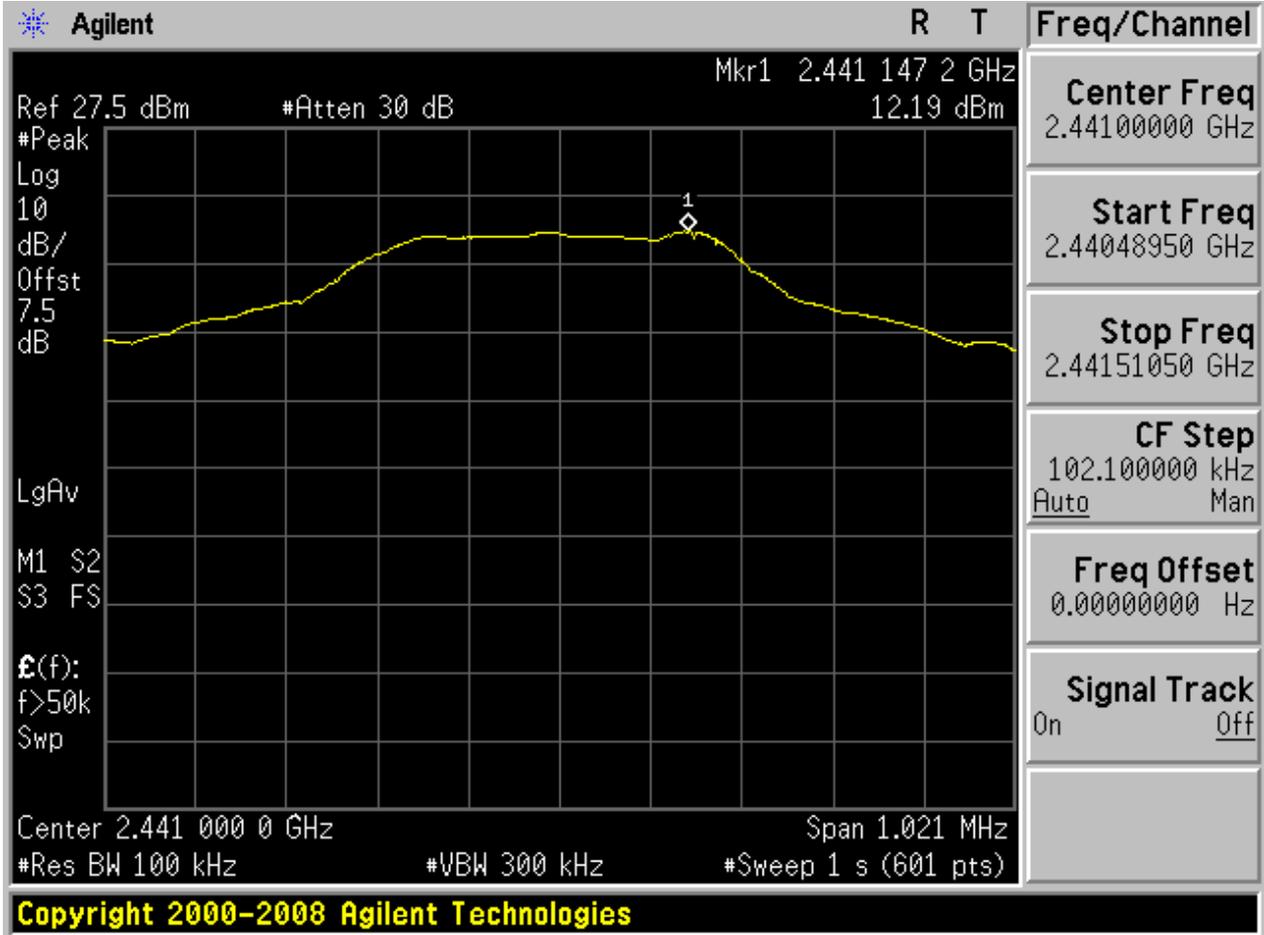




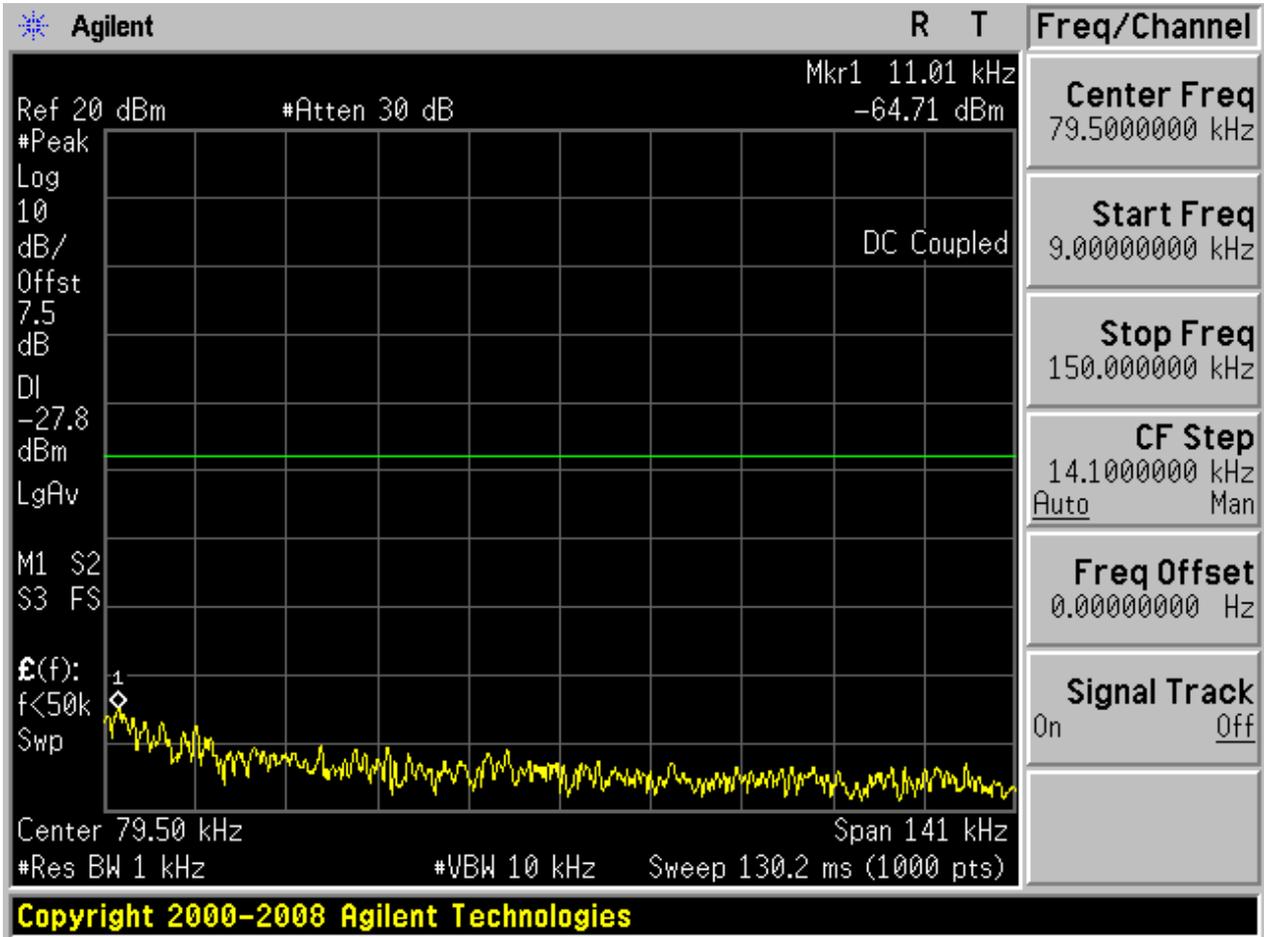


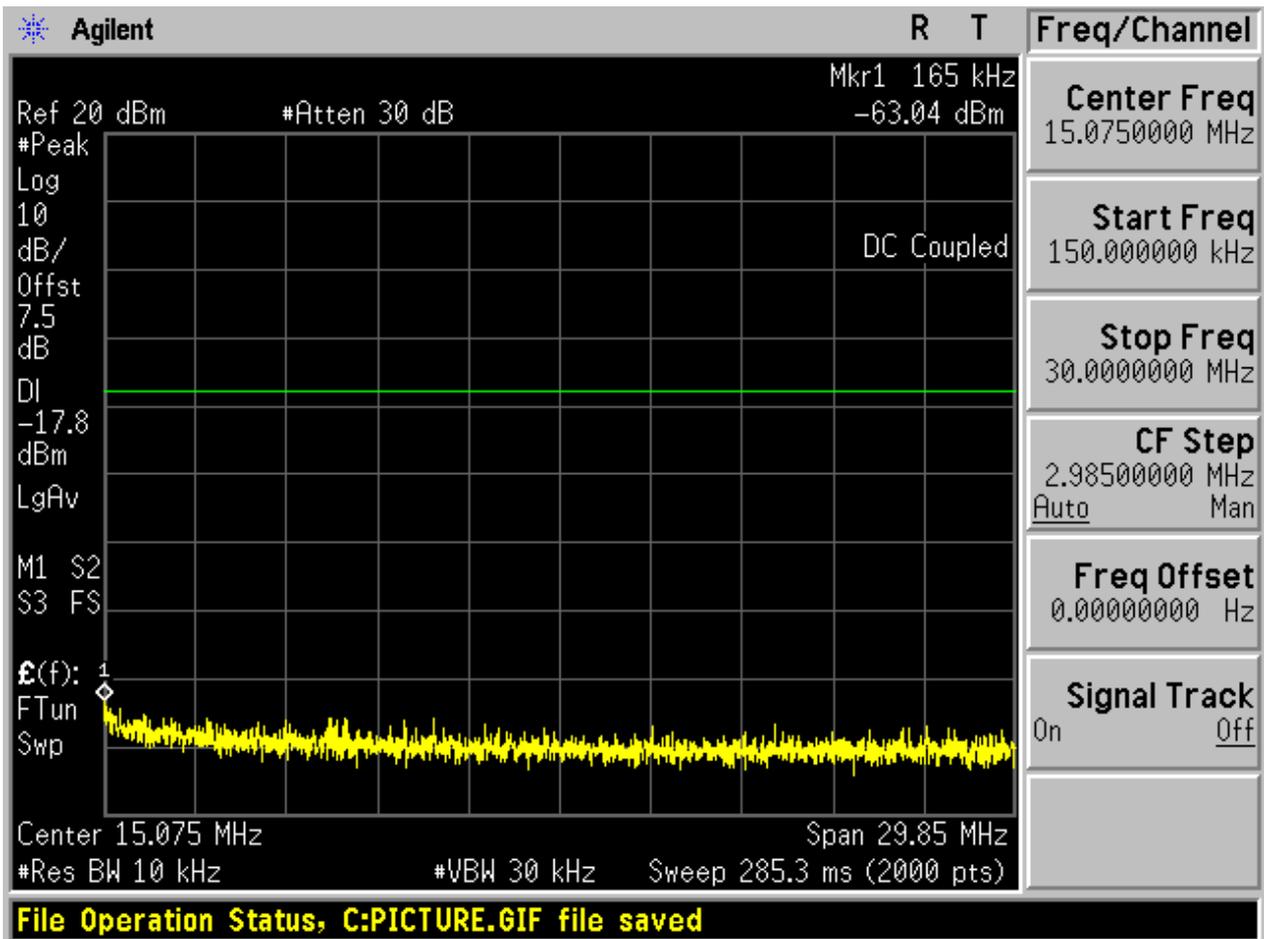
2.2 TM1_DH5_Ch39

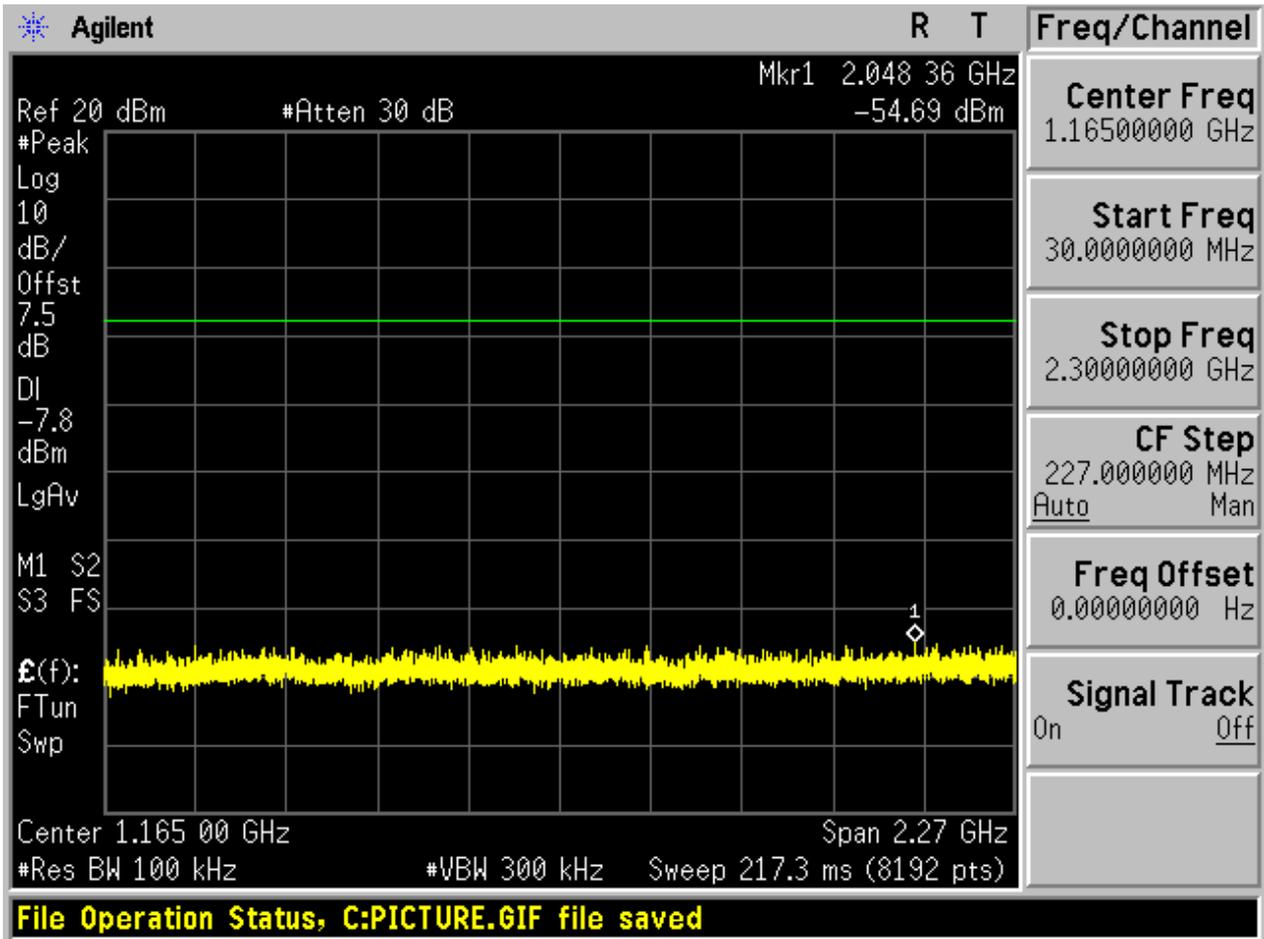
2.2.1 Pref

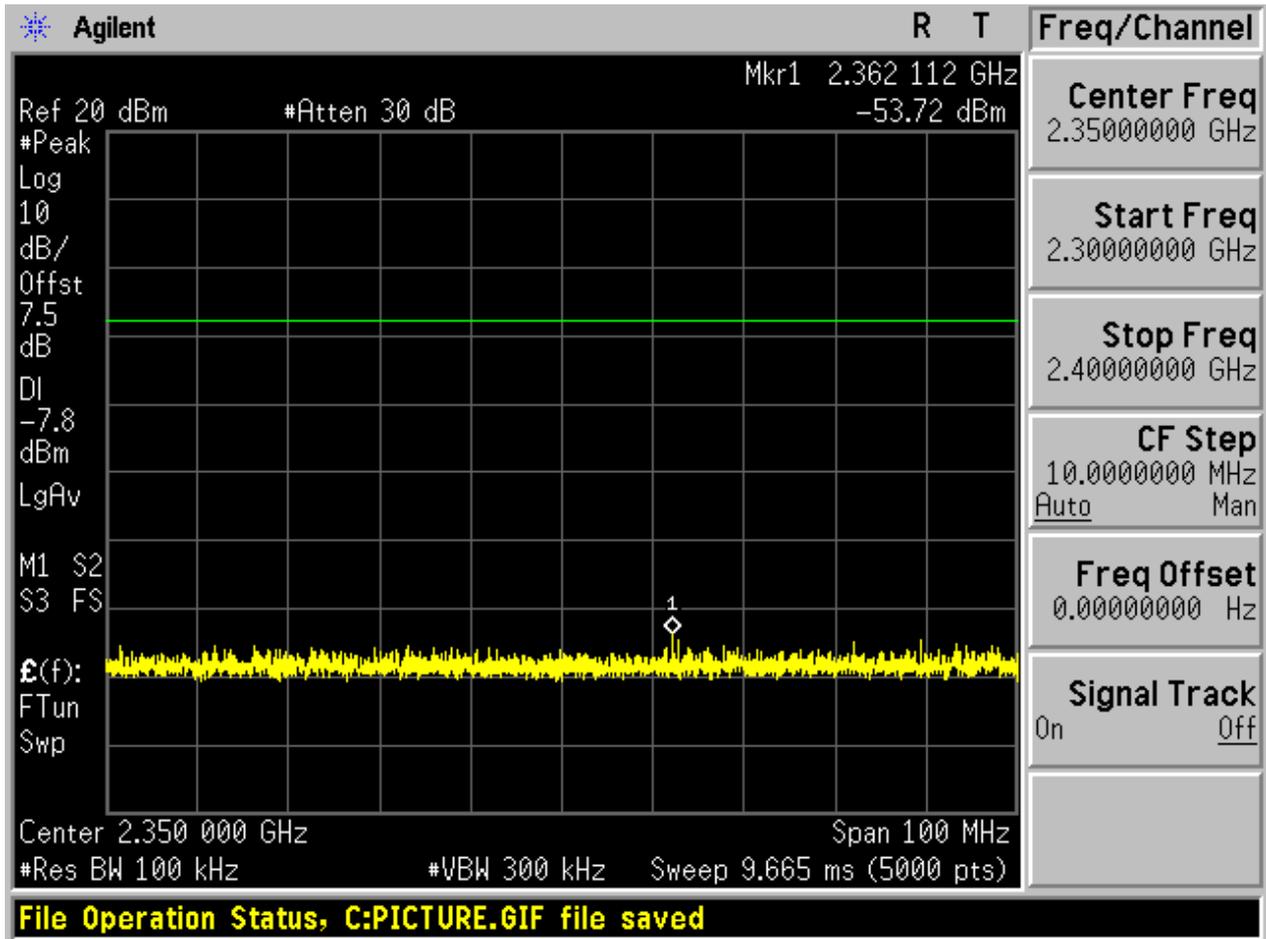


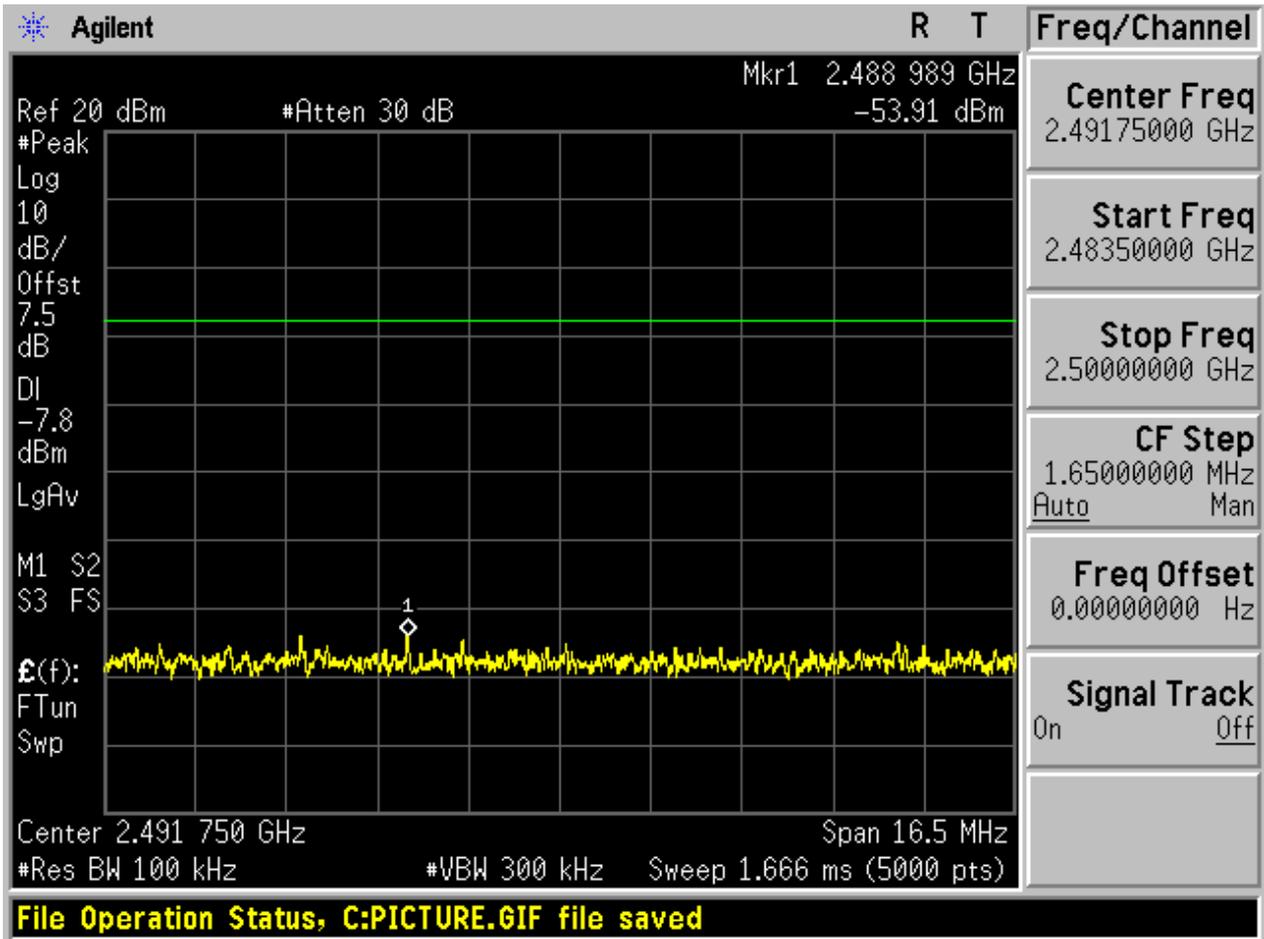
2.2.2 Puw

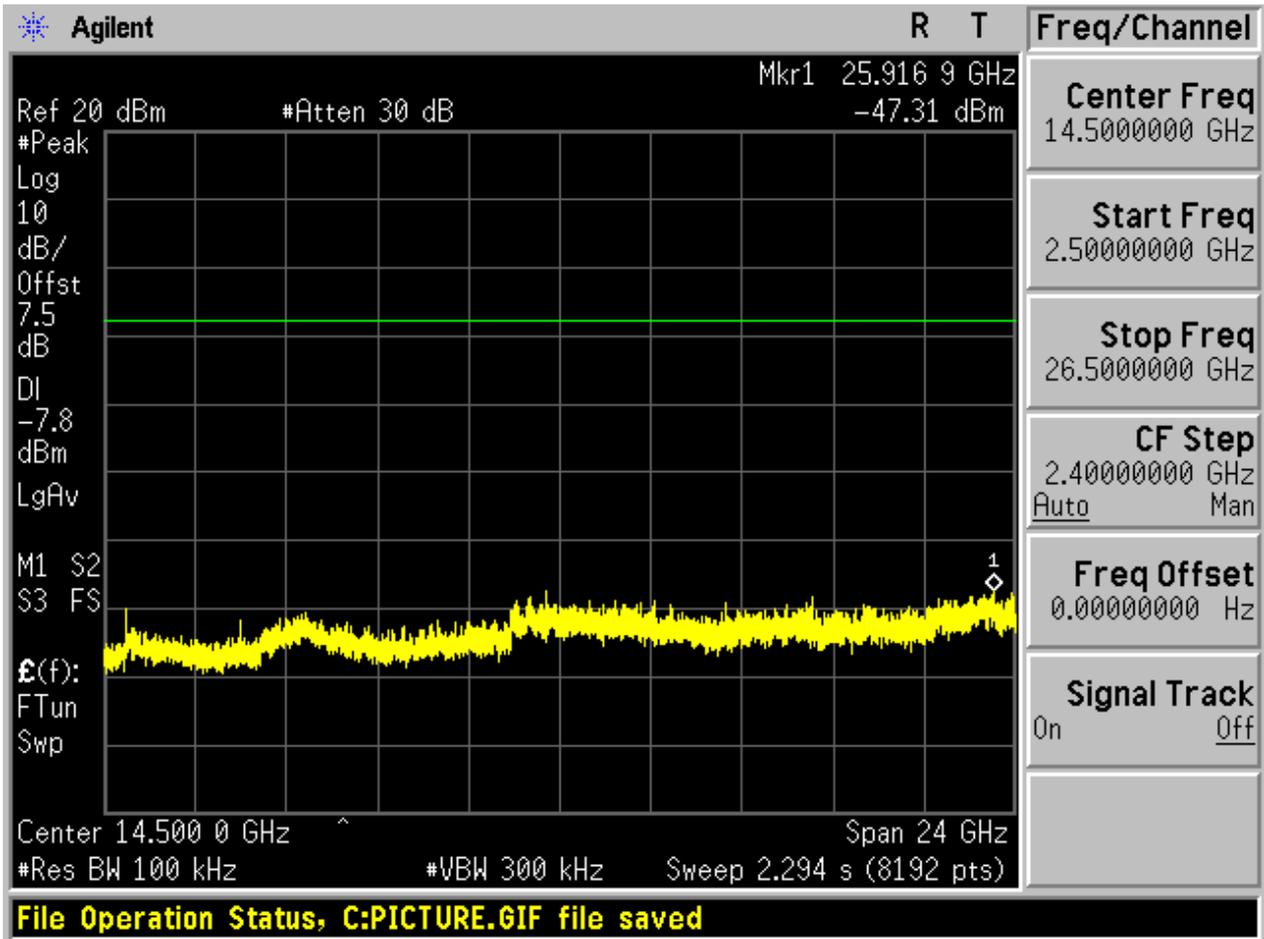








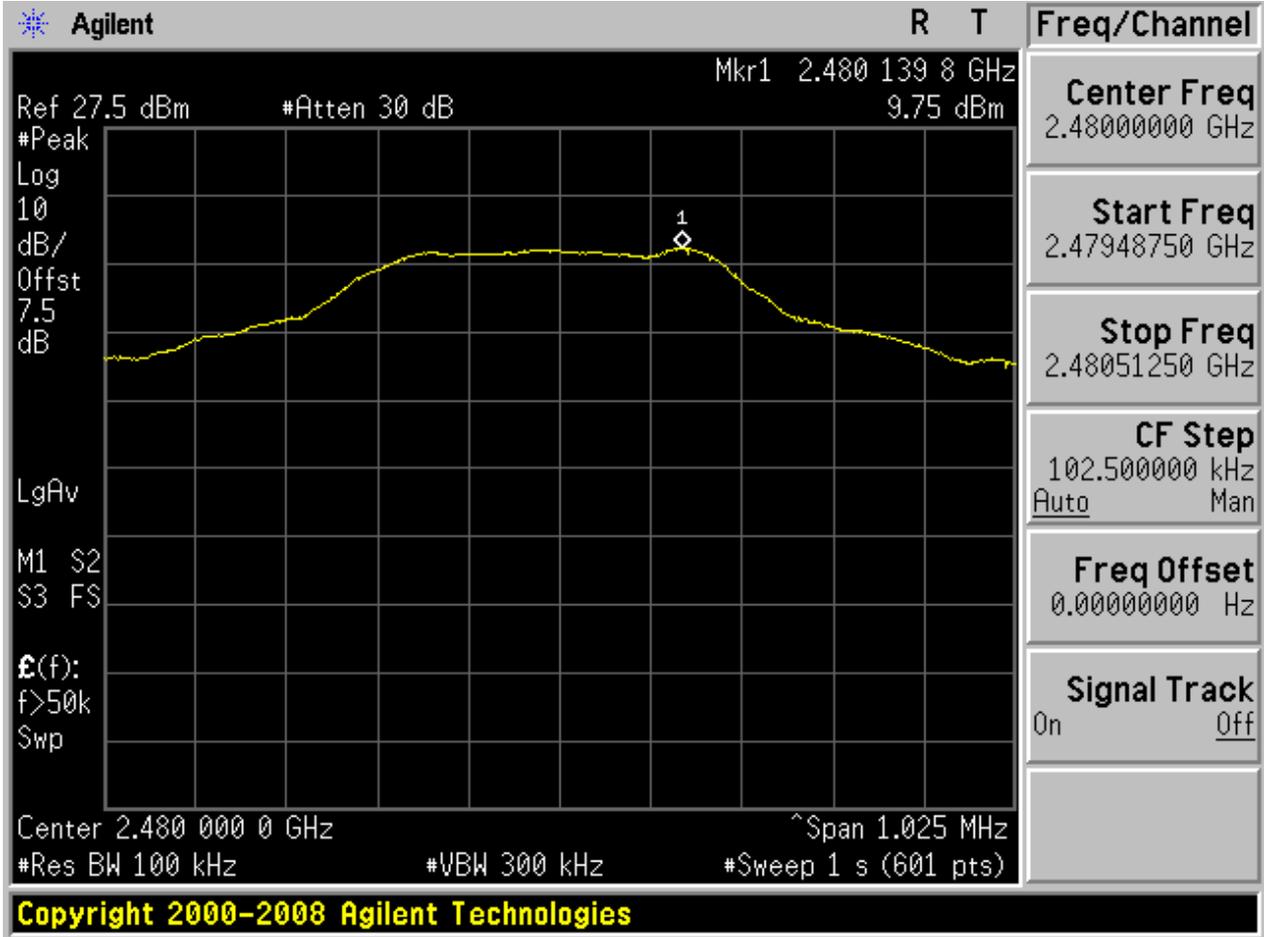




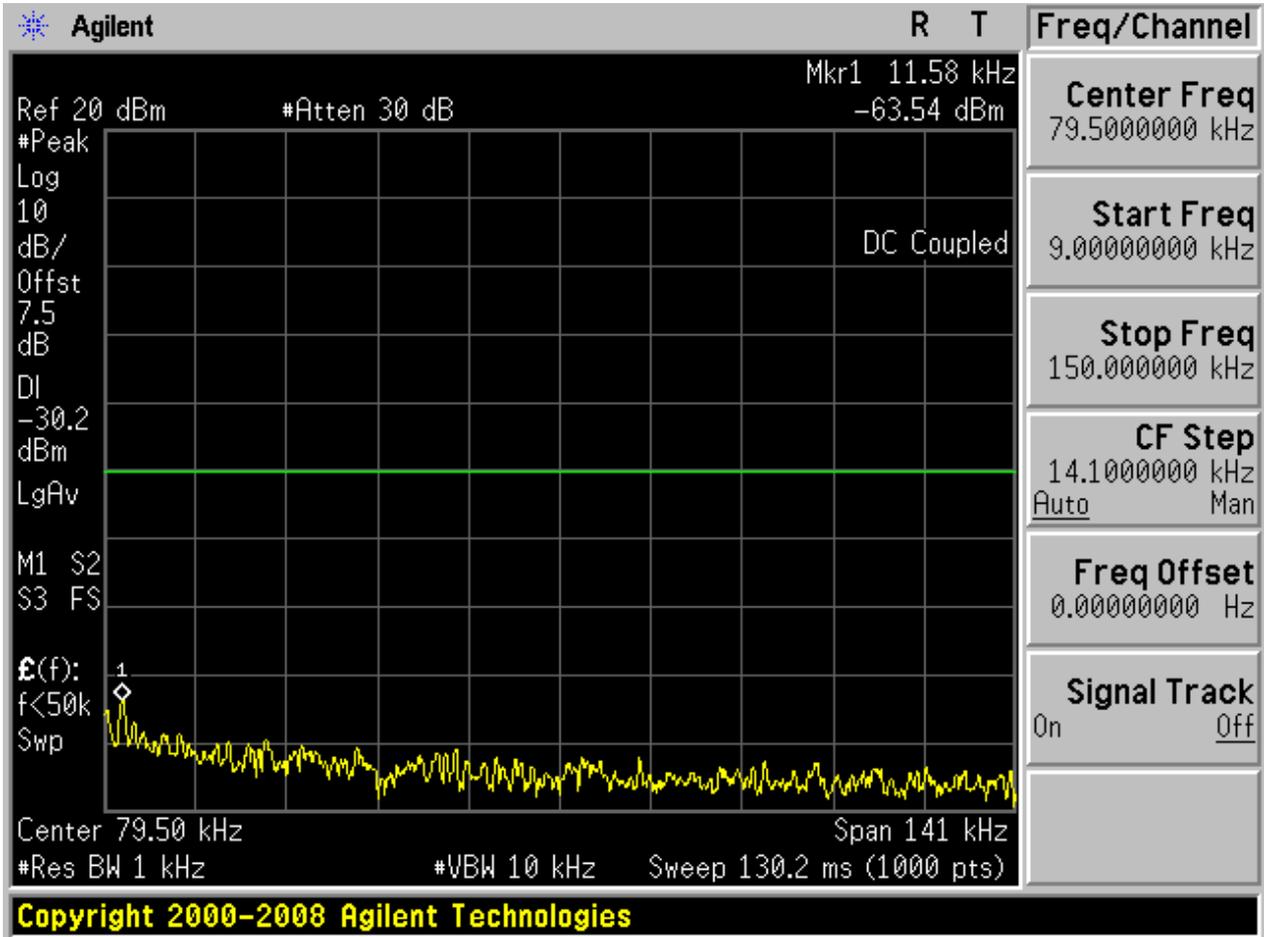


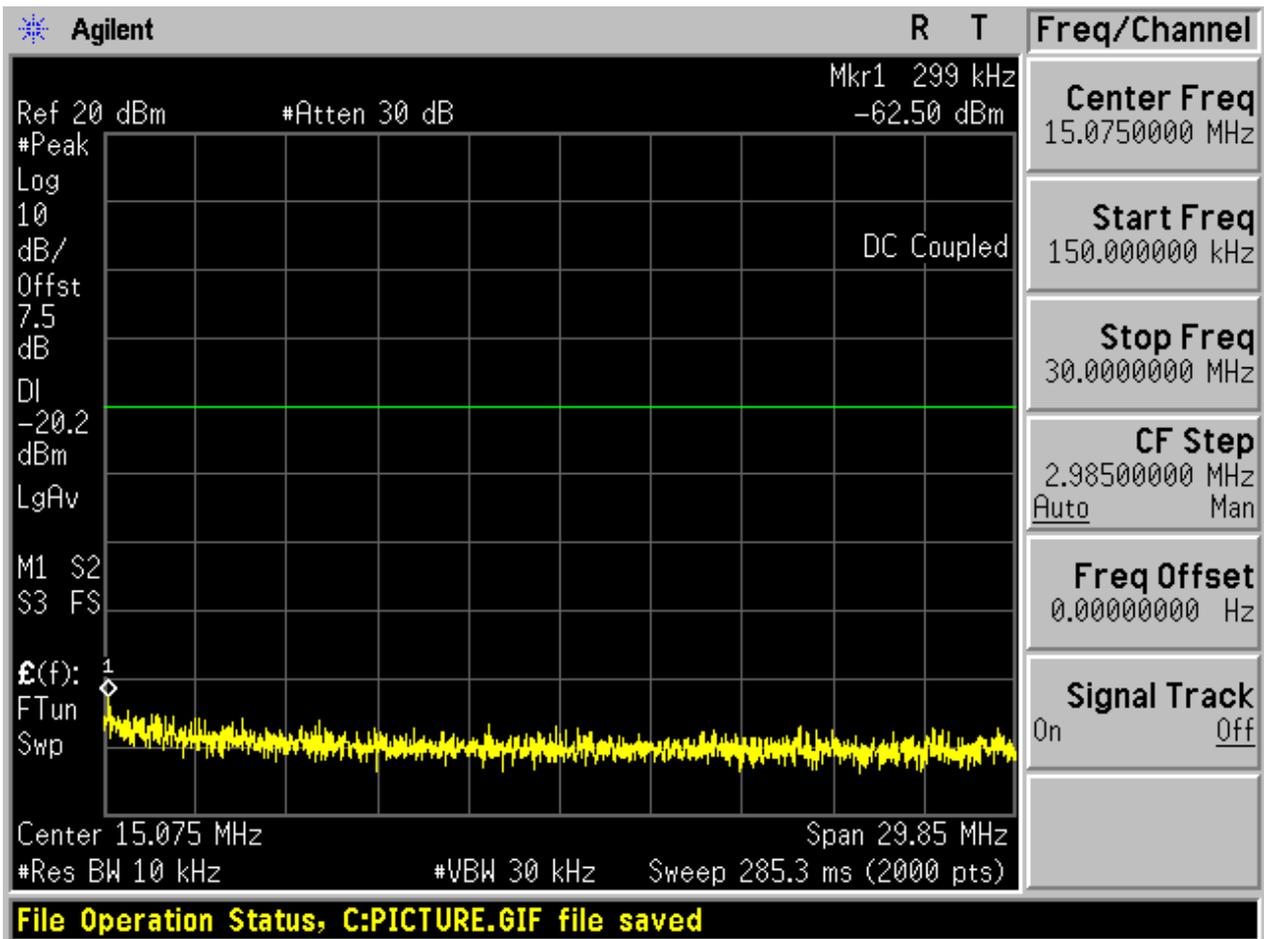
2.3 TM1_DH5_Ch78

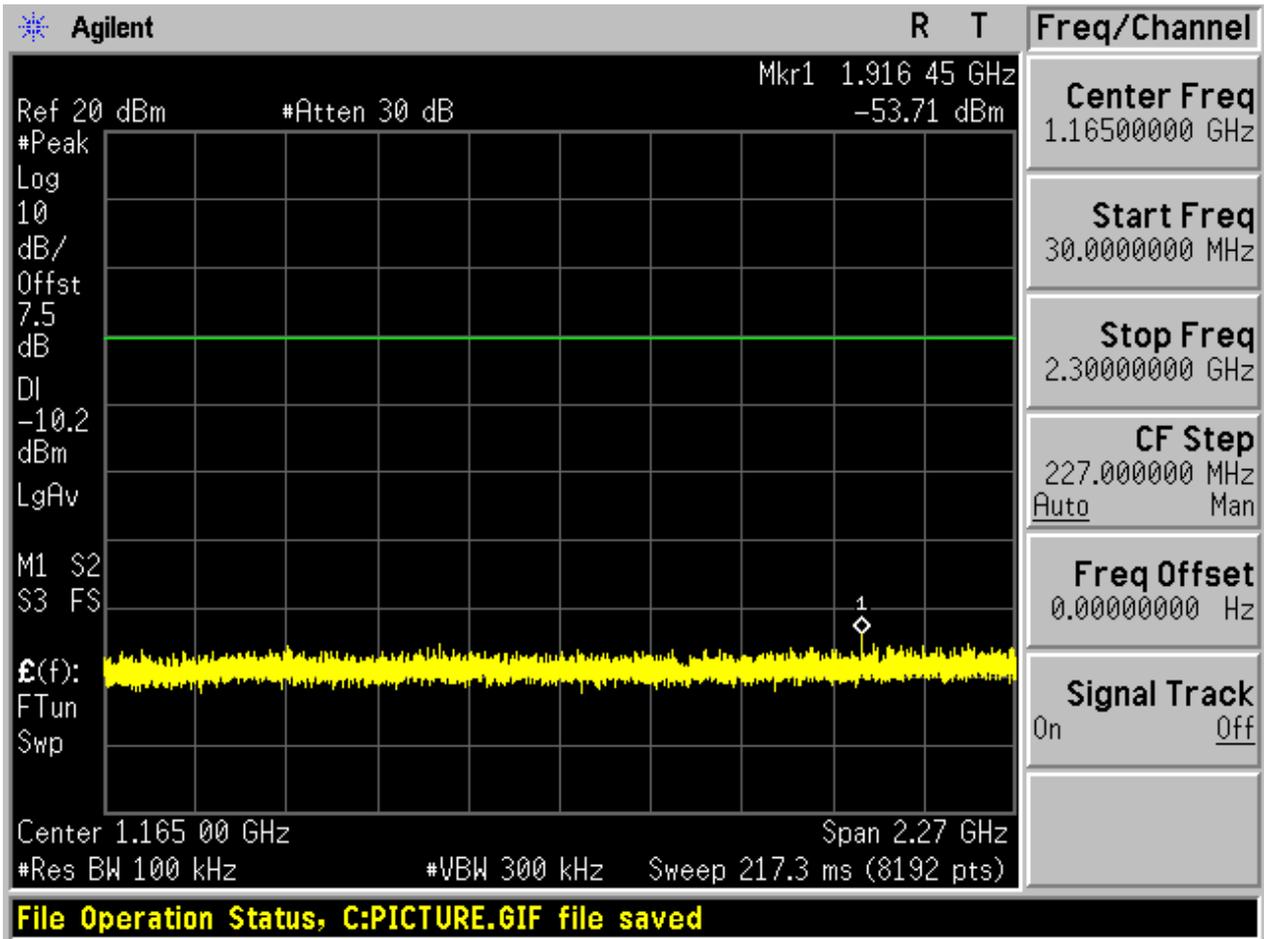
2.3.1 Pref

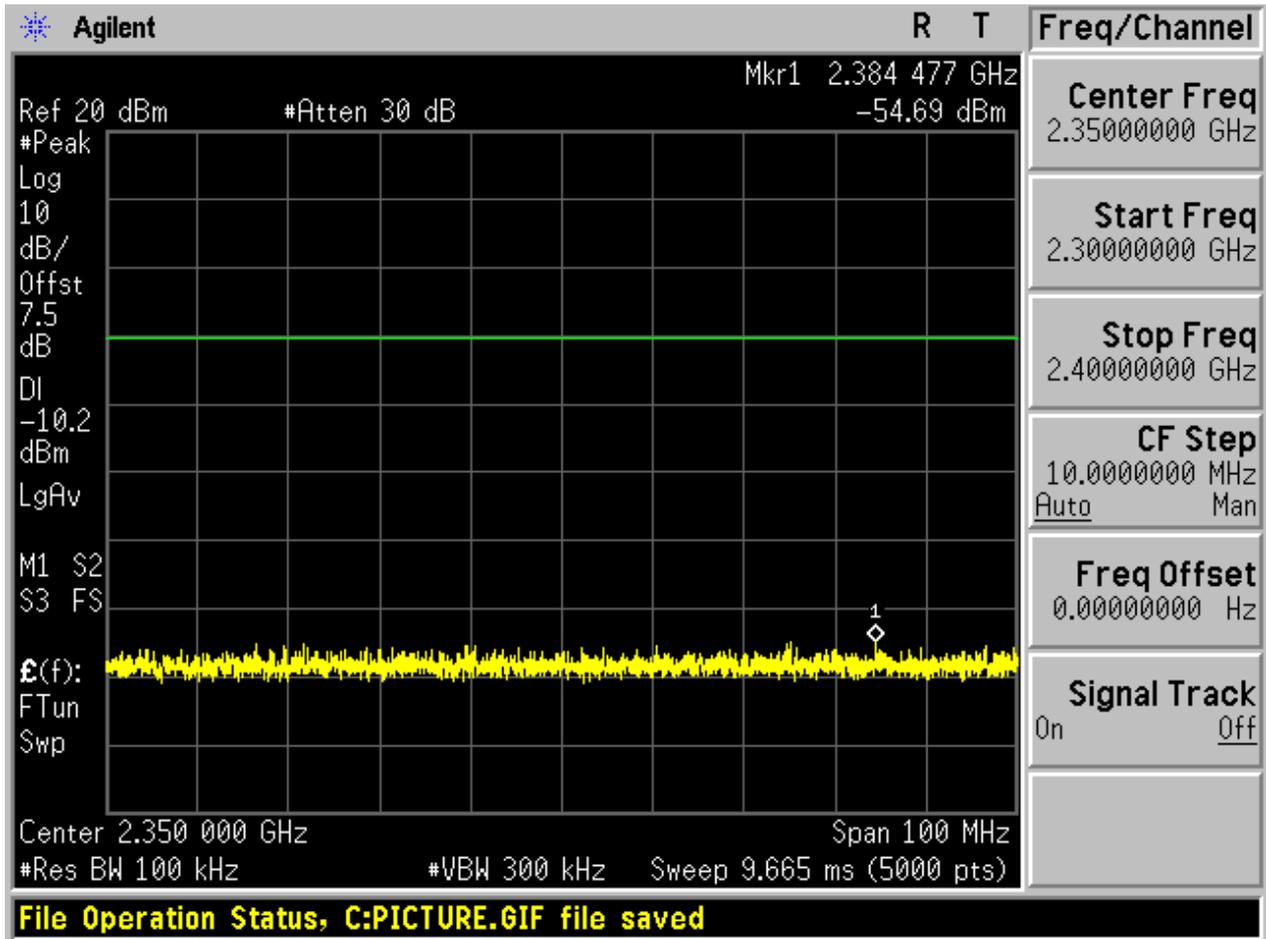


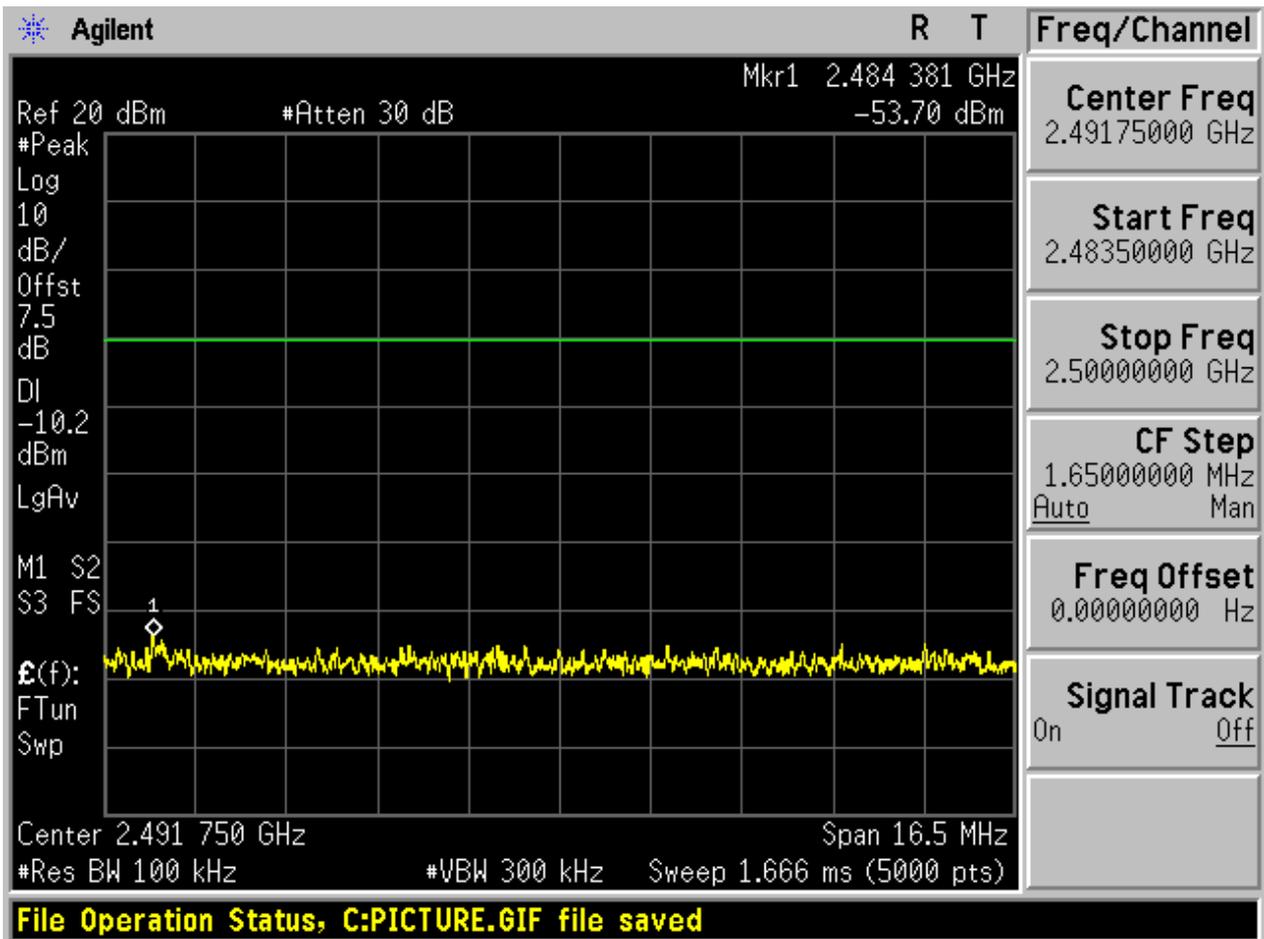
2.3.2 P_{uw}

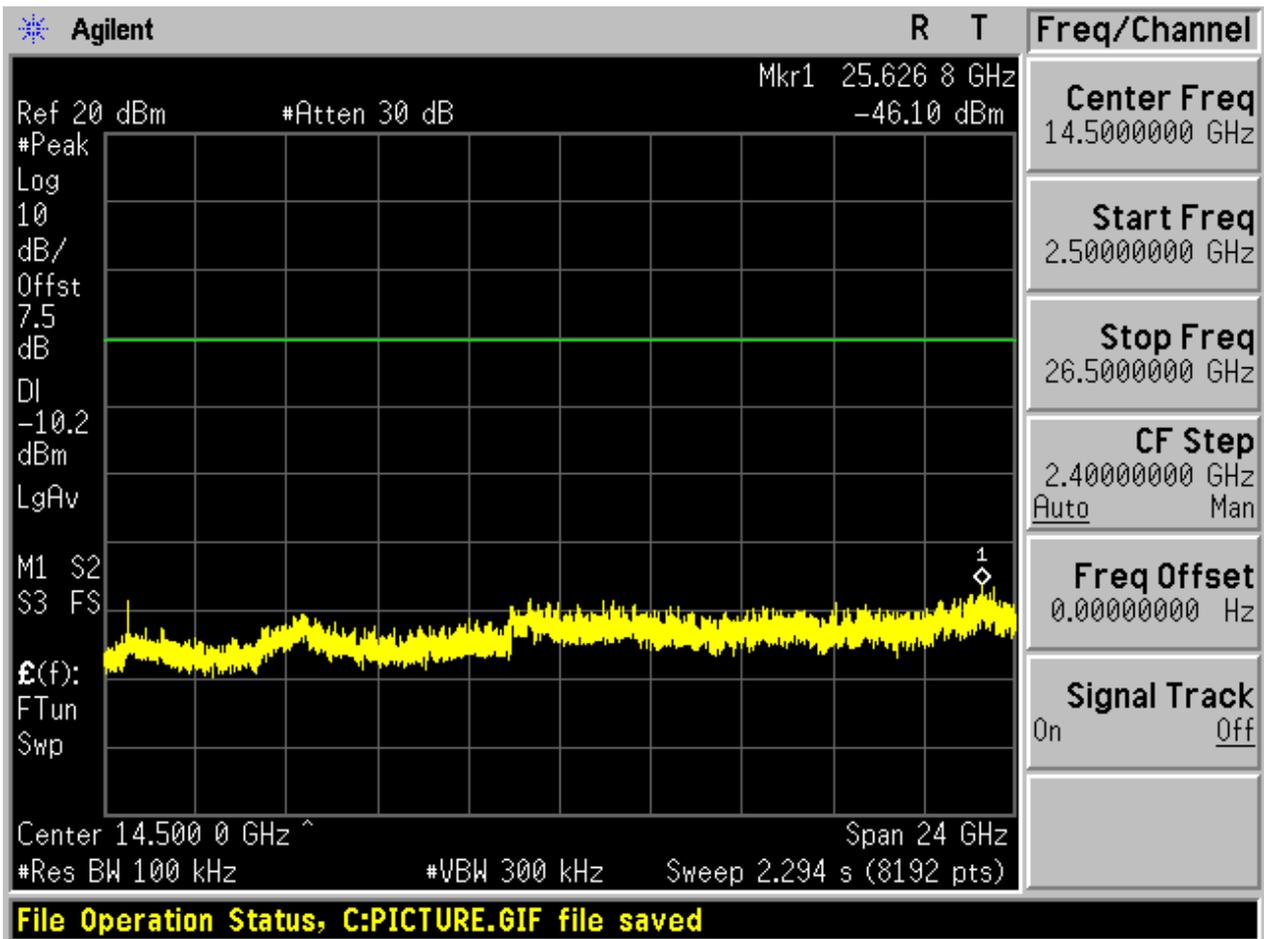






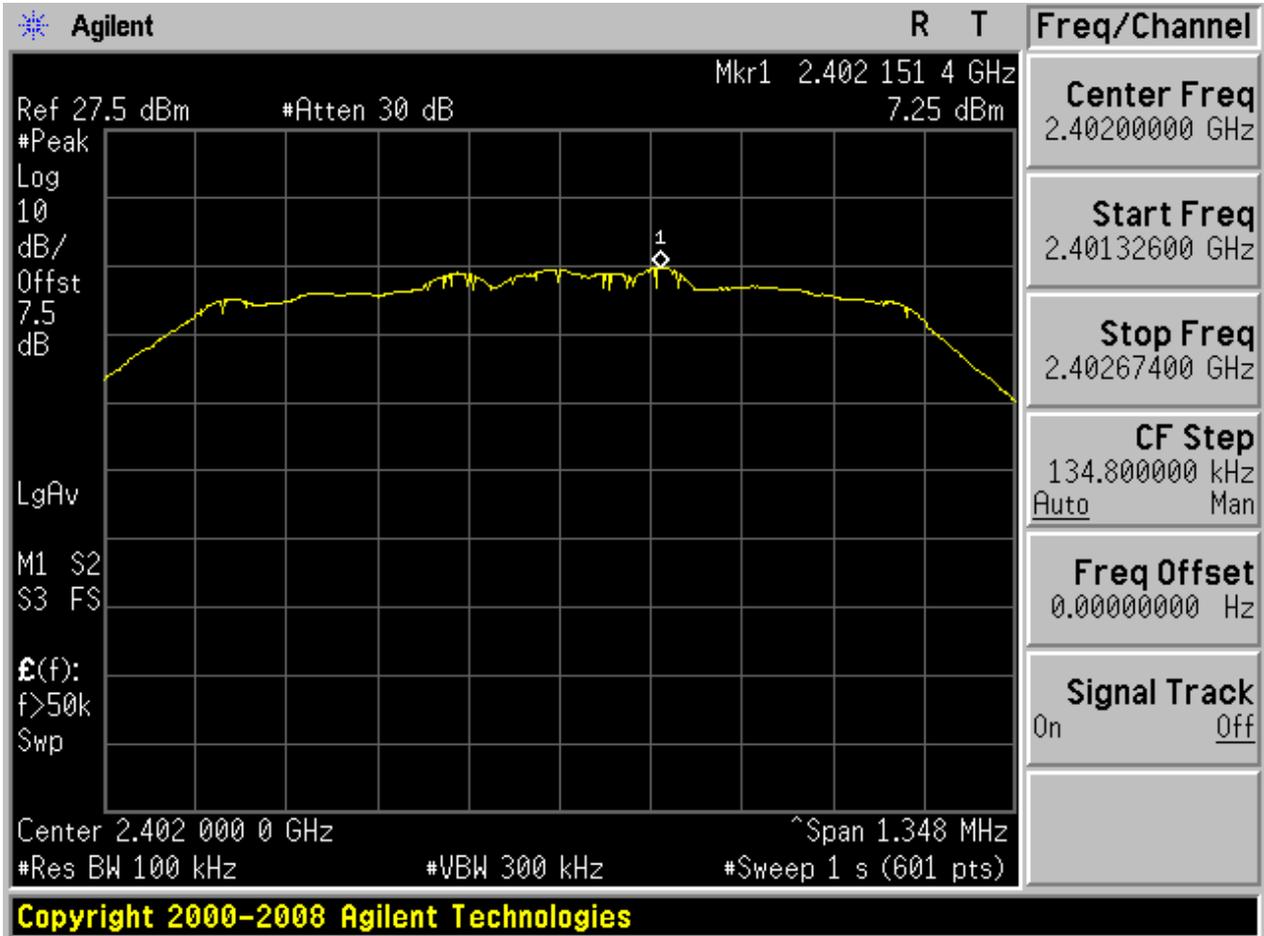




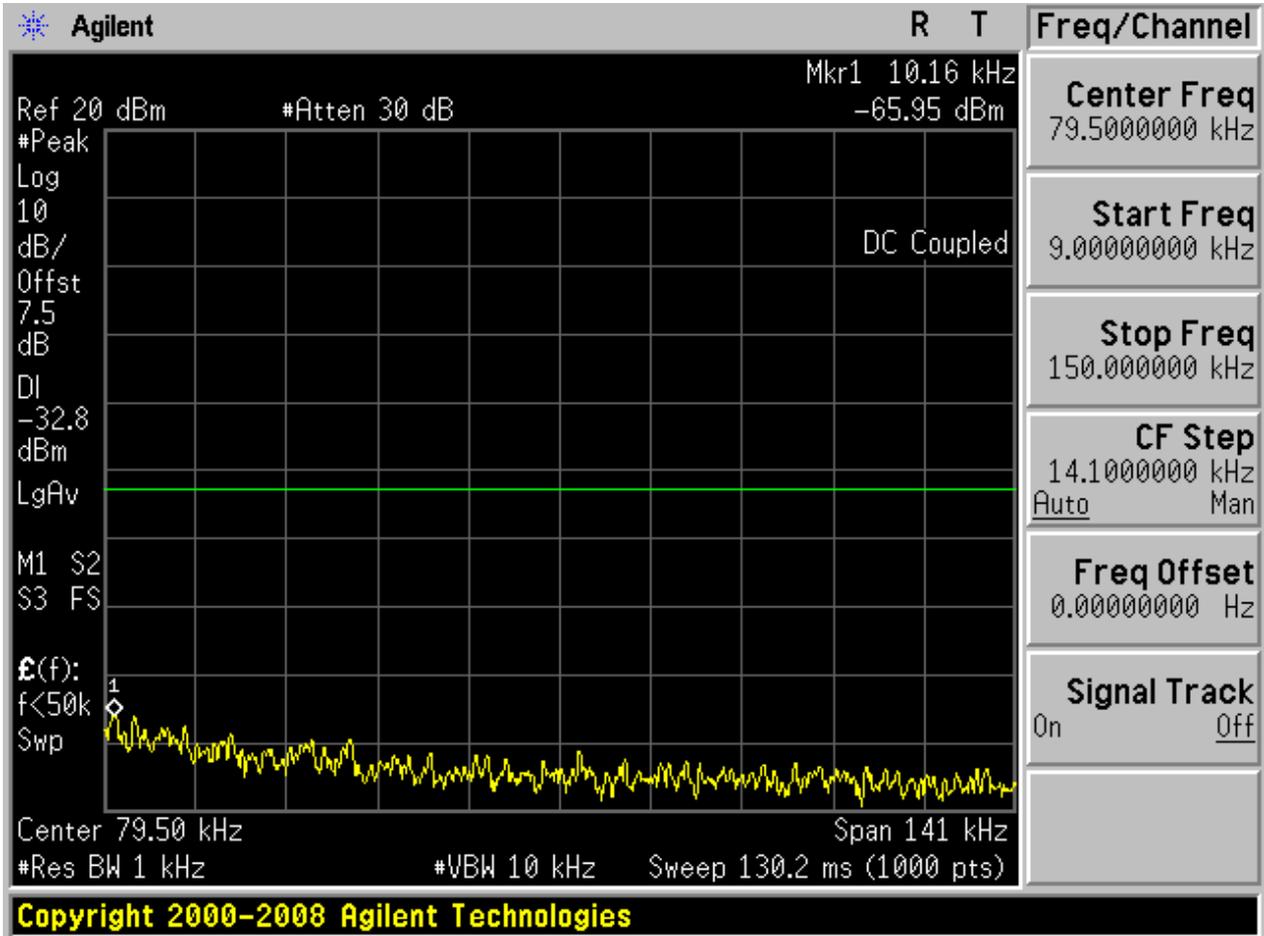


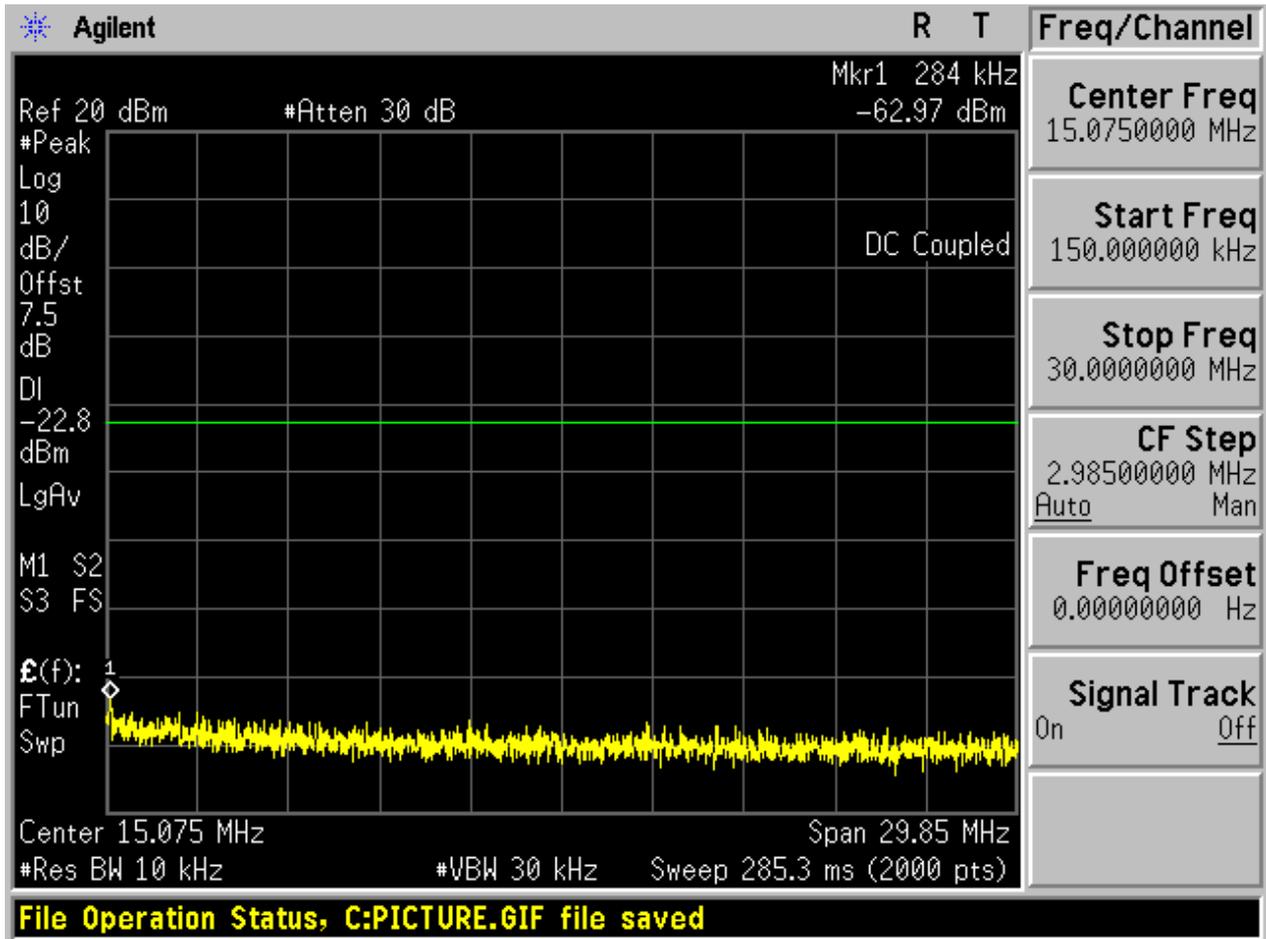
2.4 TM2_2DH5_Ch0

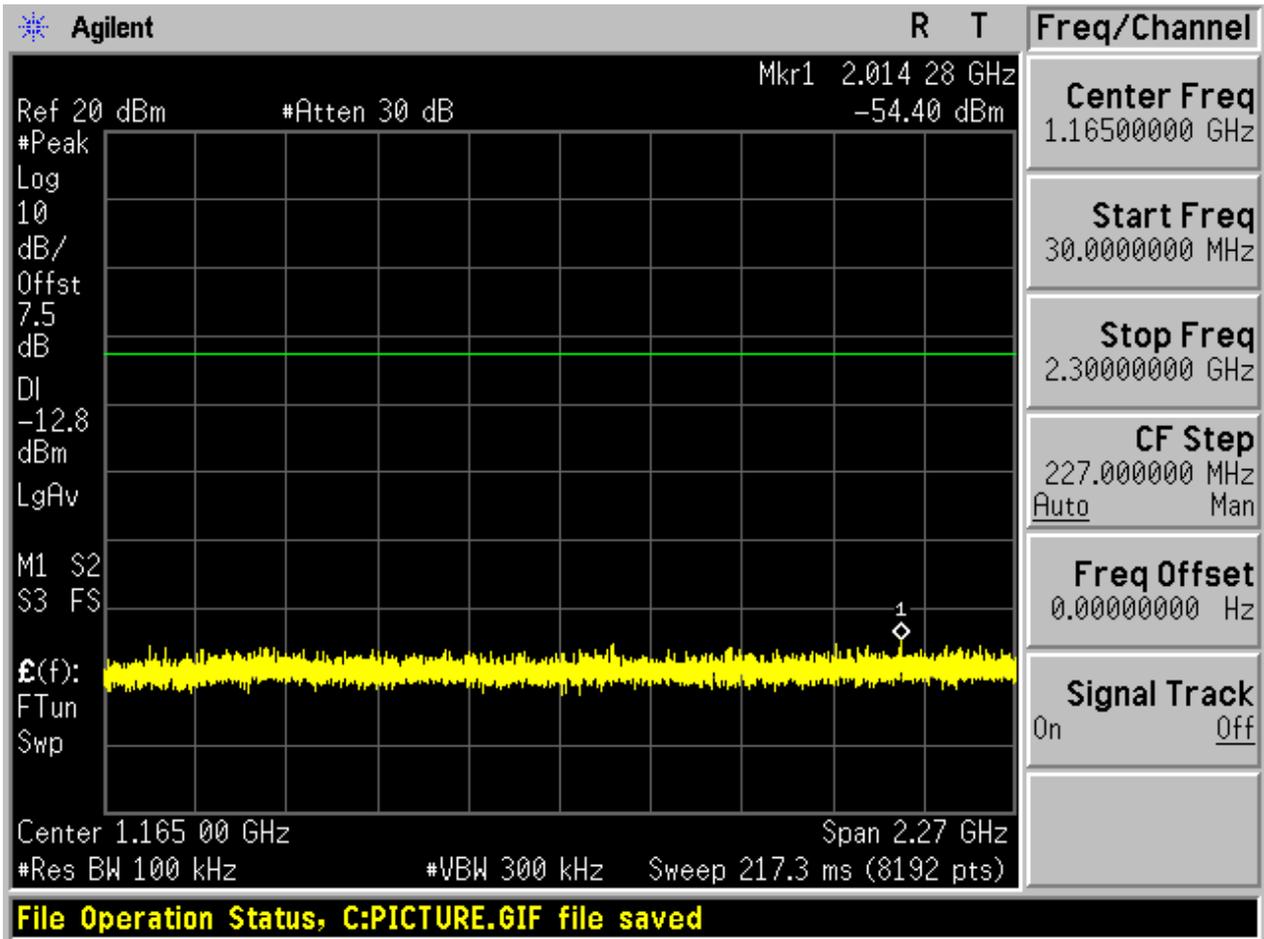
2.4.1 Pref

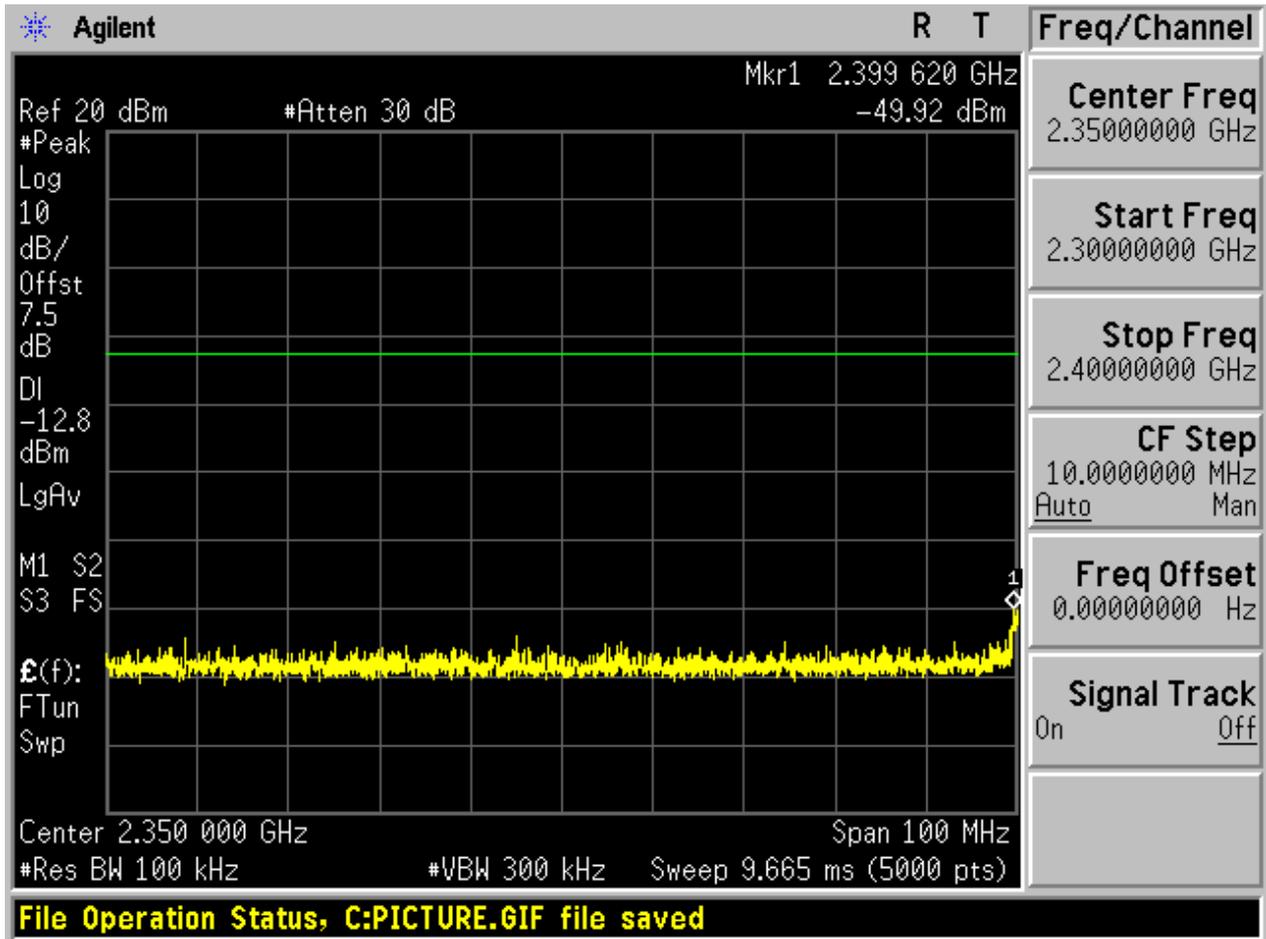


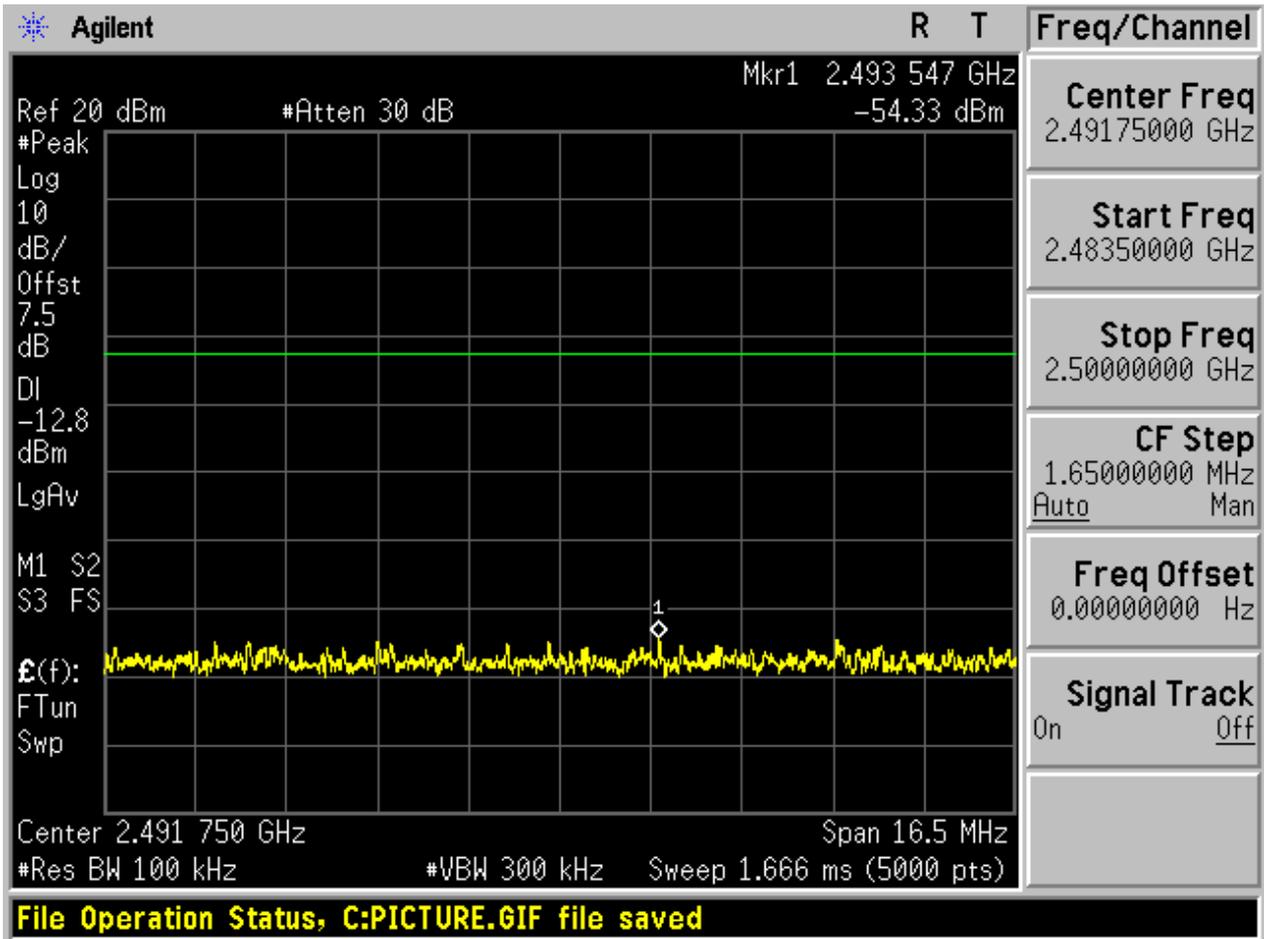
2.4.2 P_{uw}

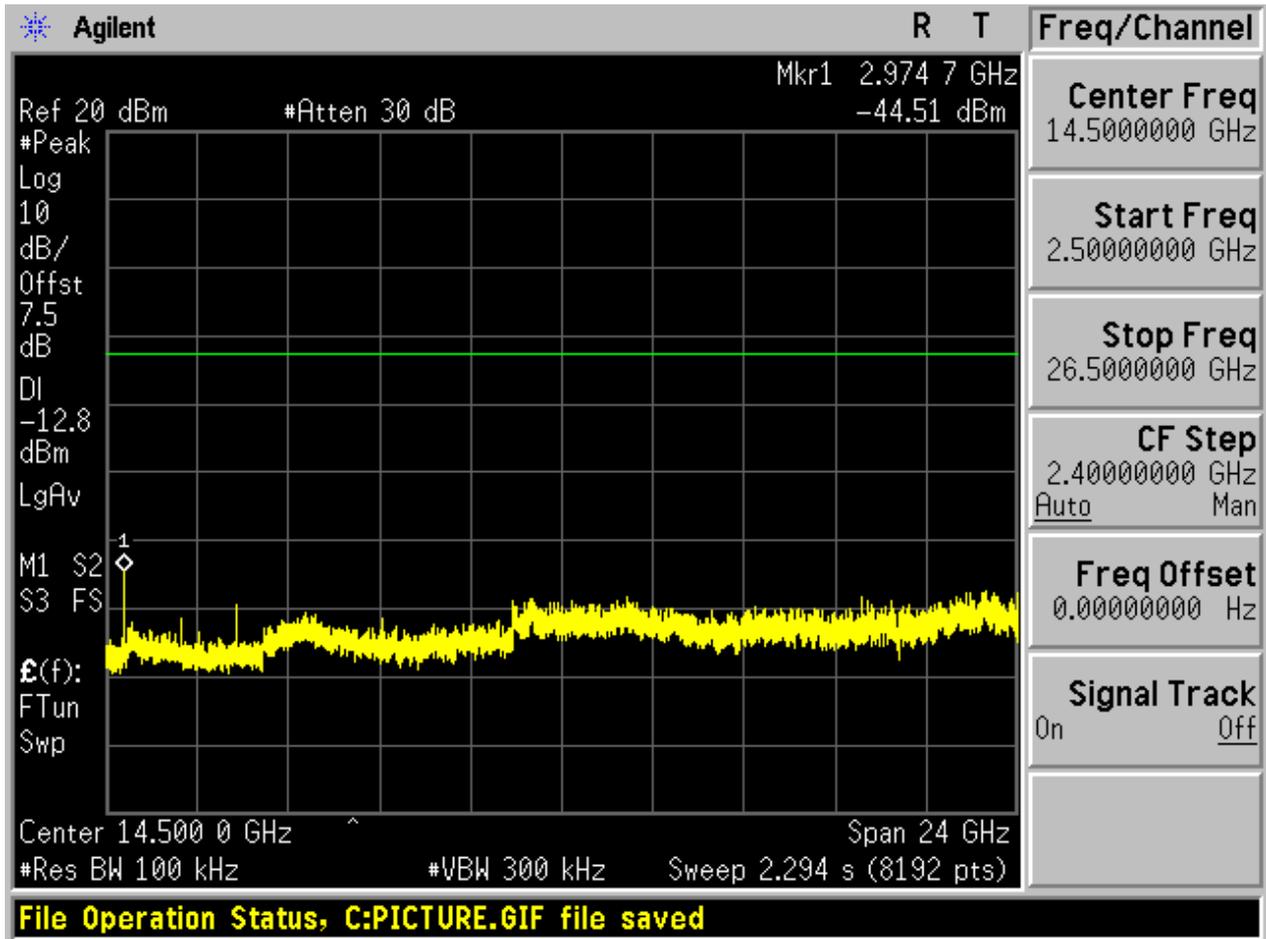








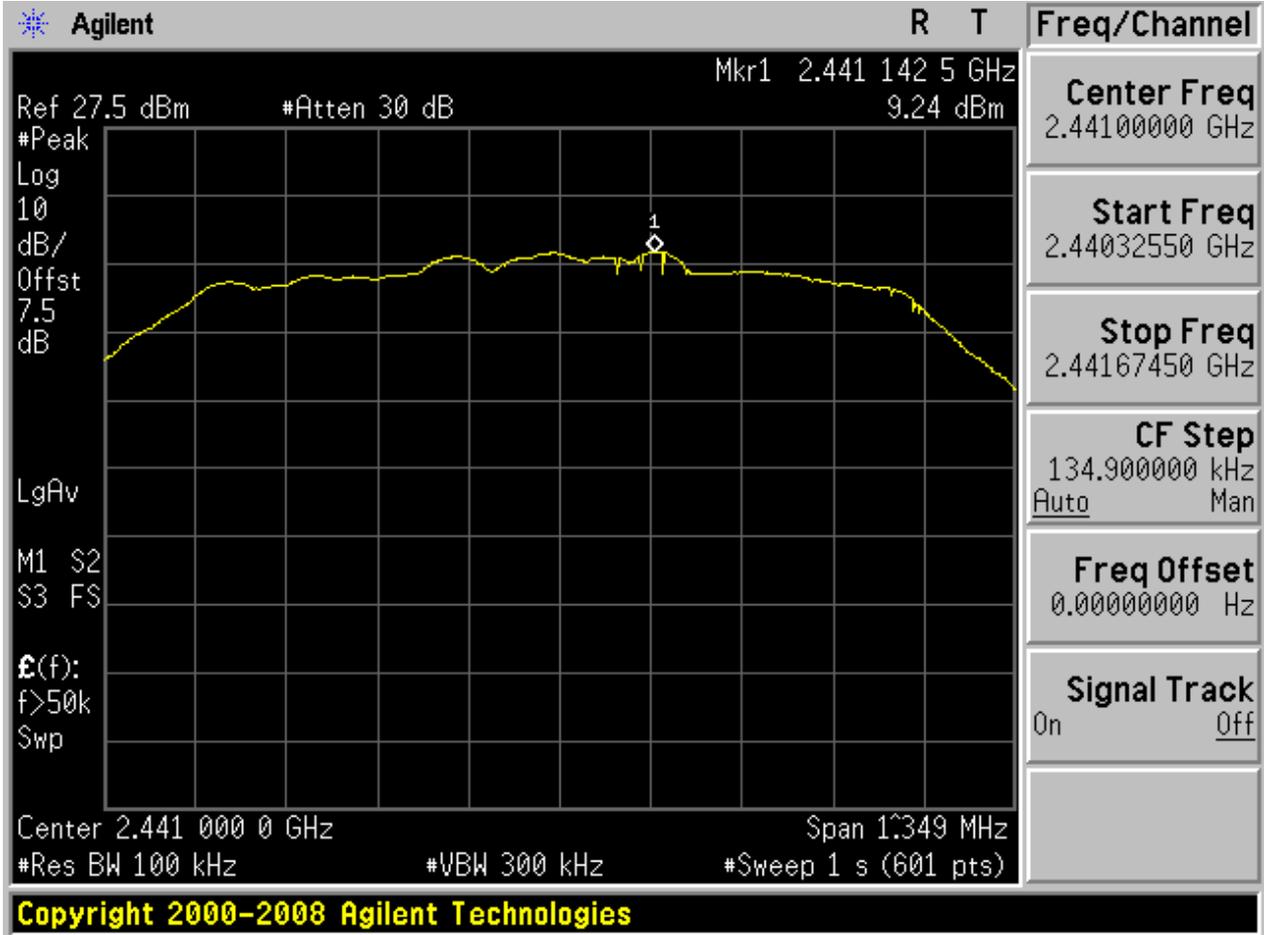




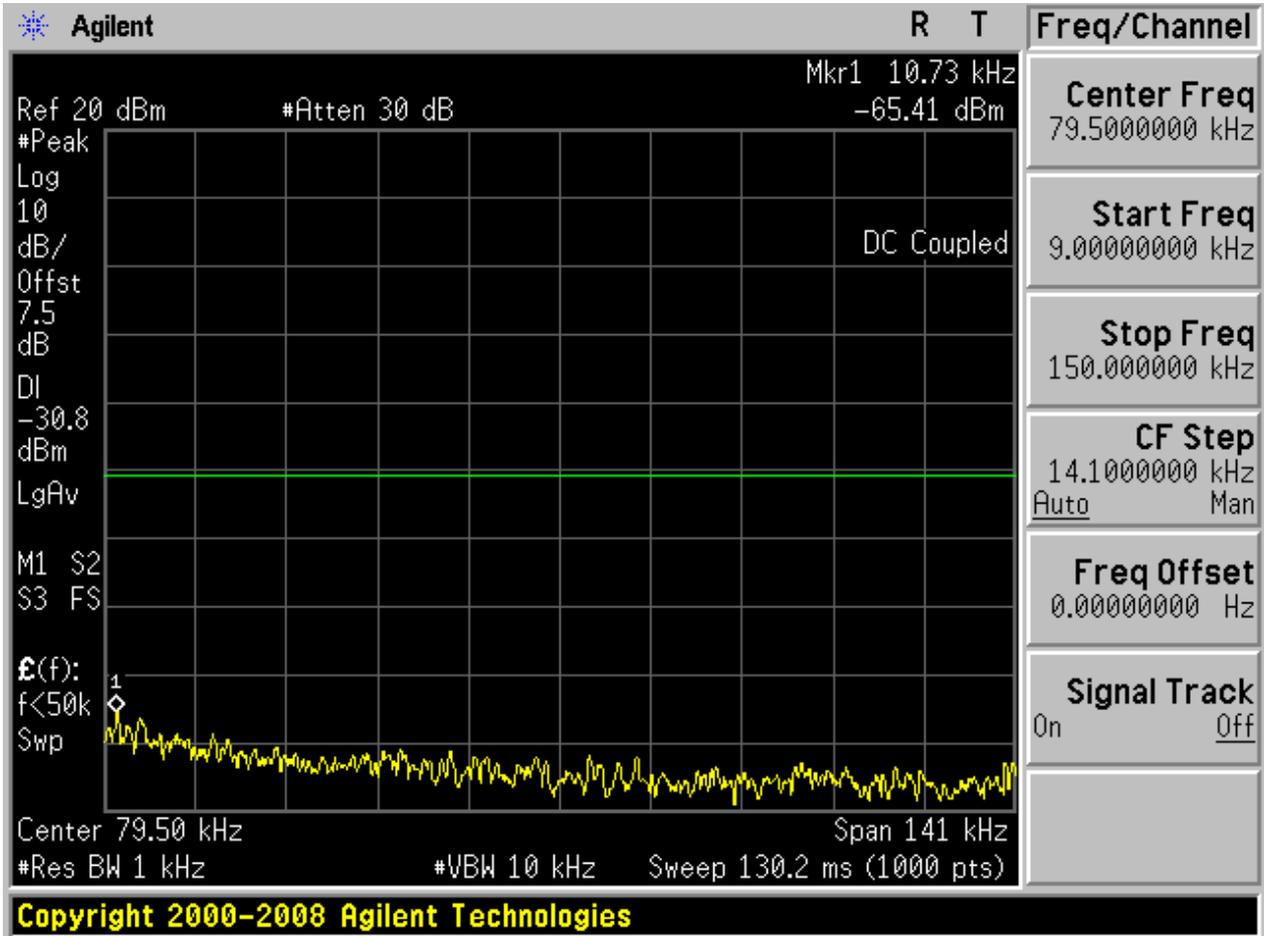


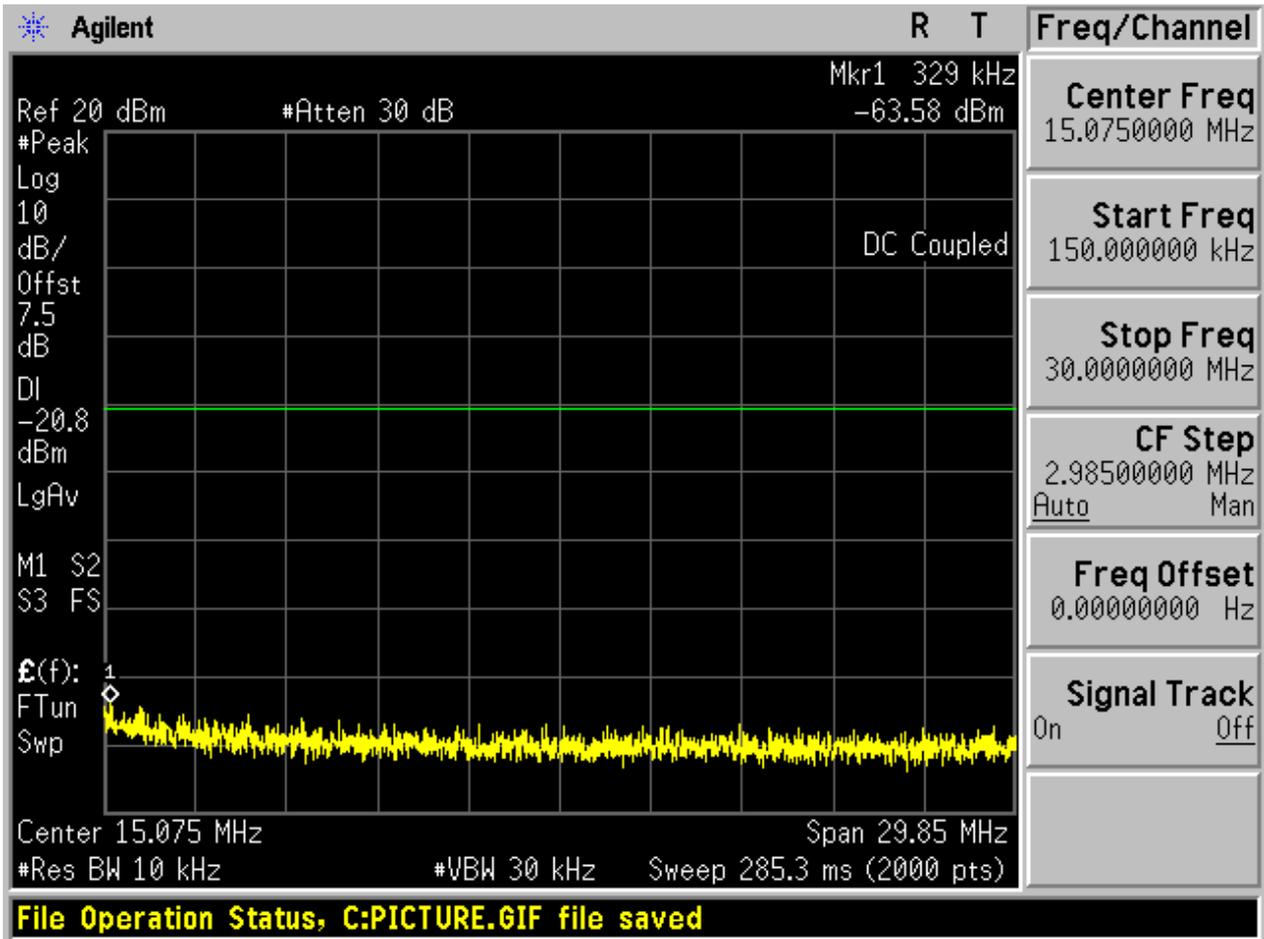
2.5 TM2_2DH5_Ch39

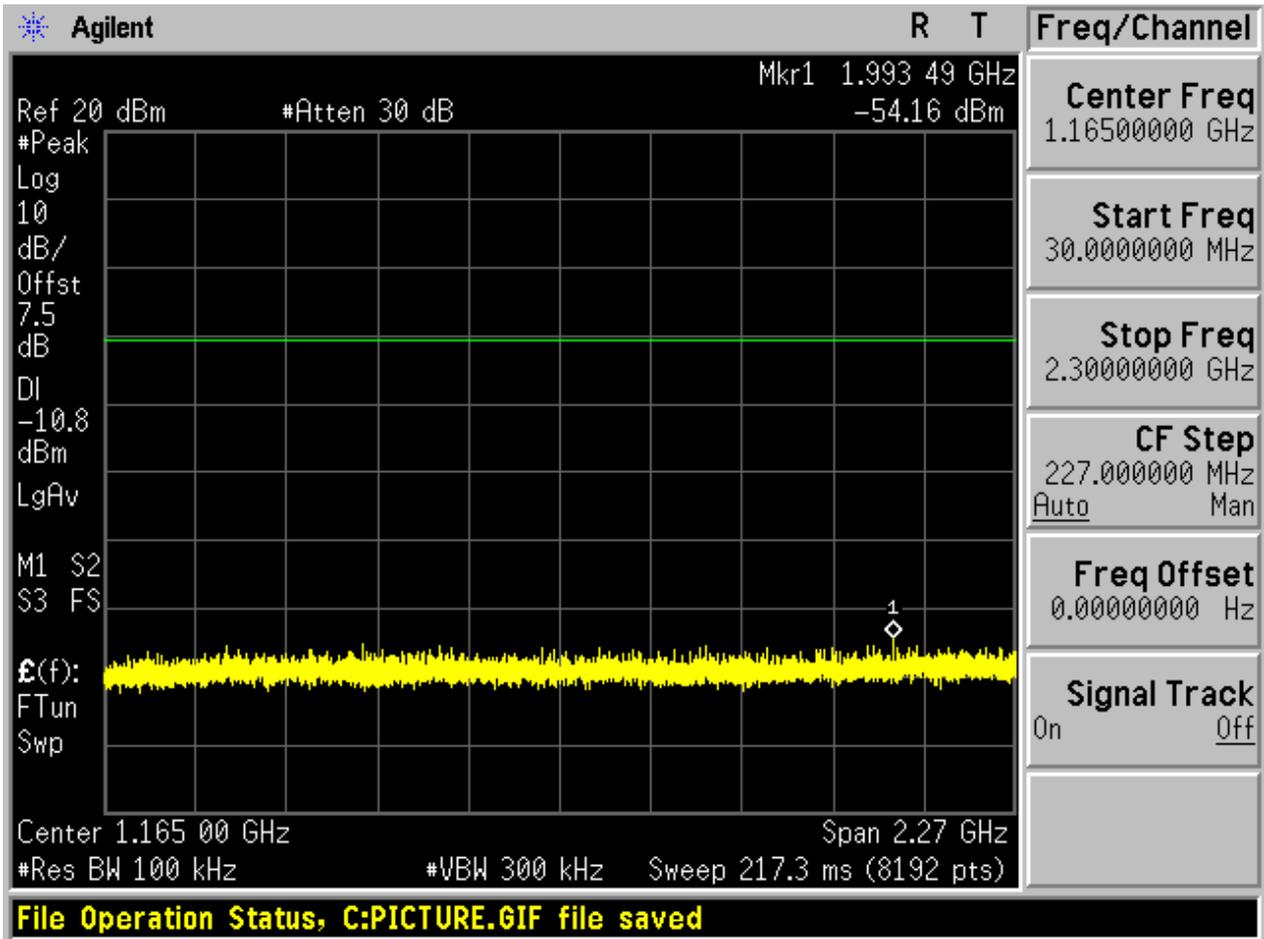
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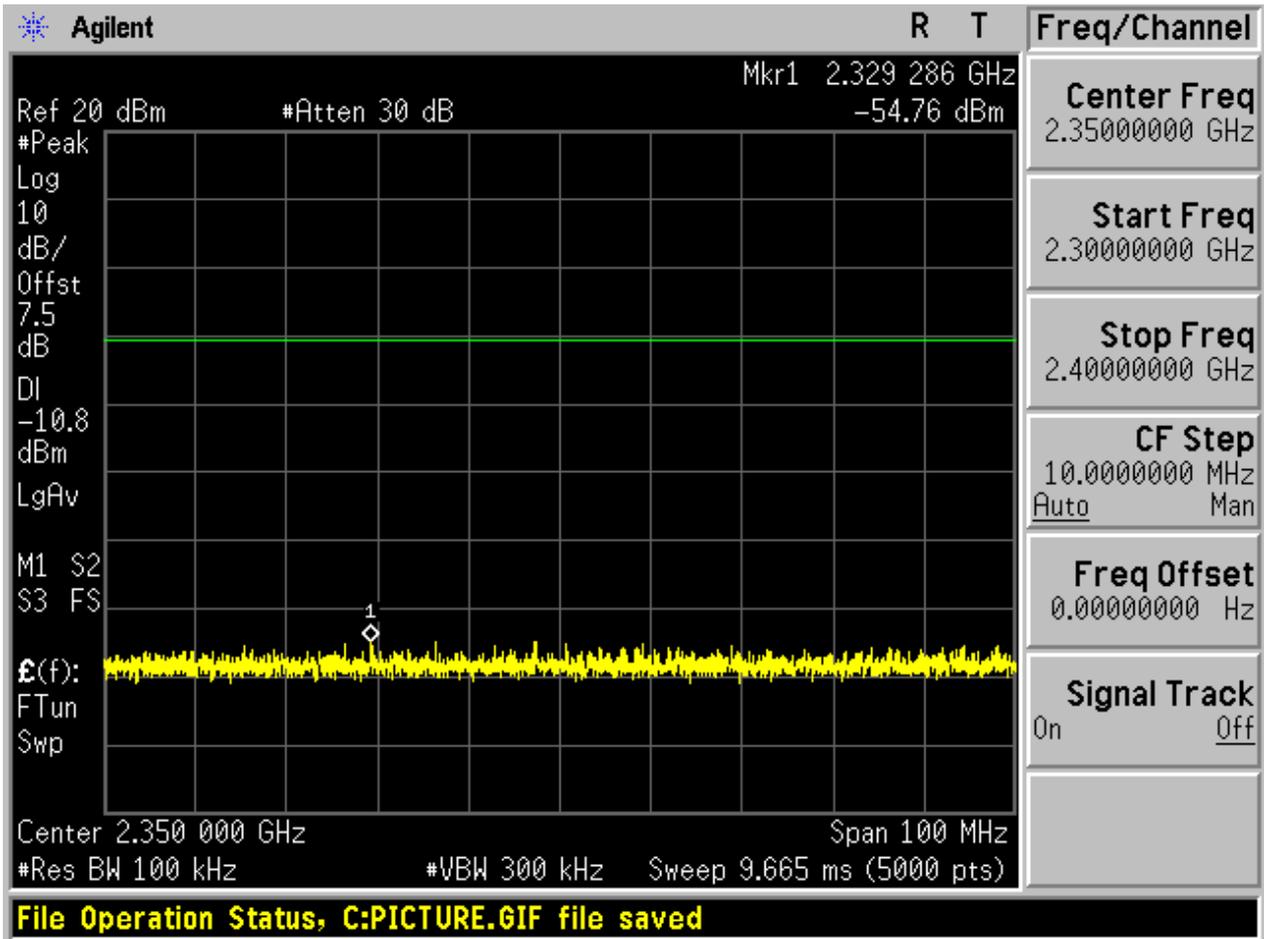


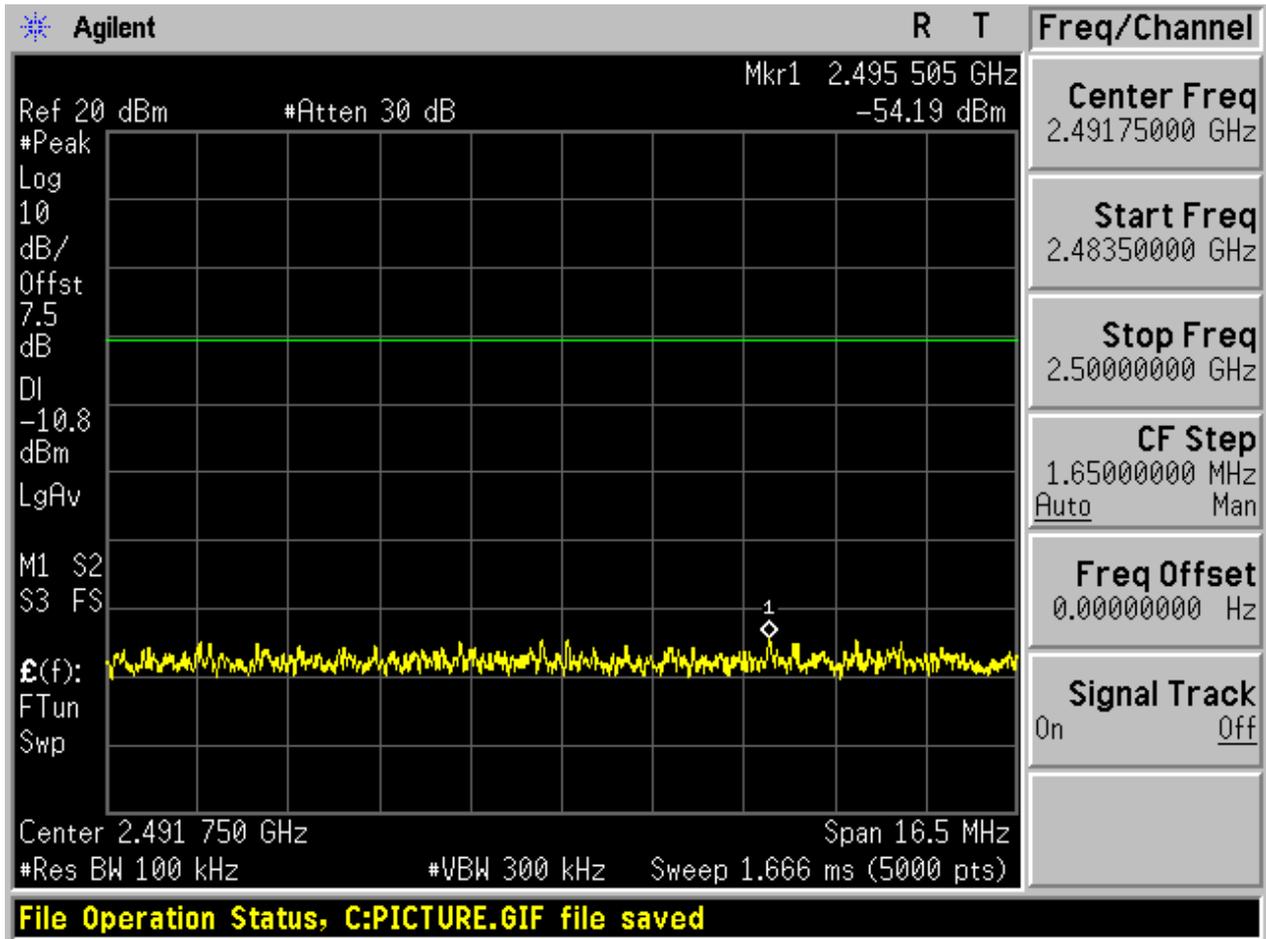
2.5.2 P_{uw}

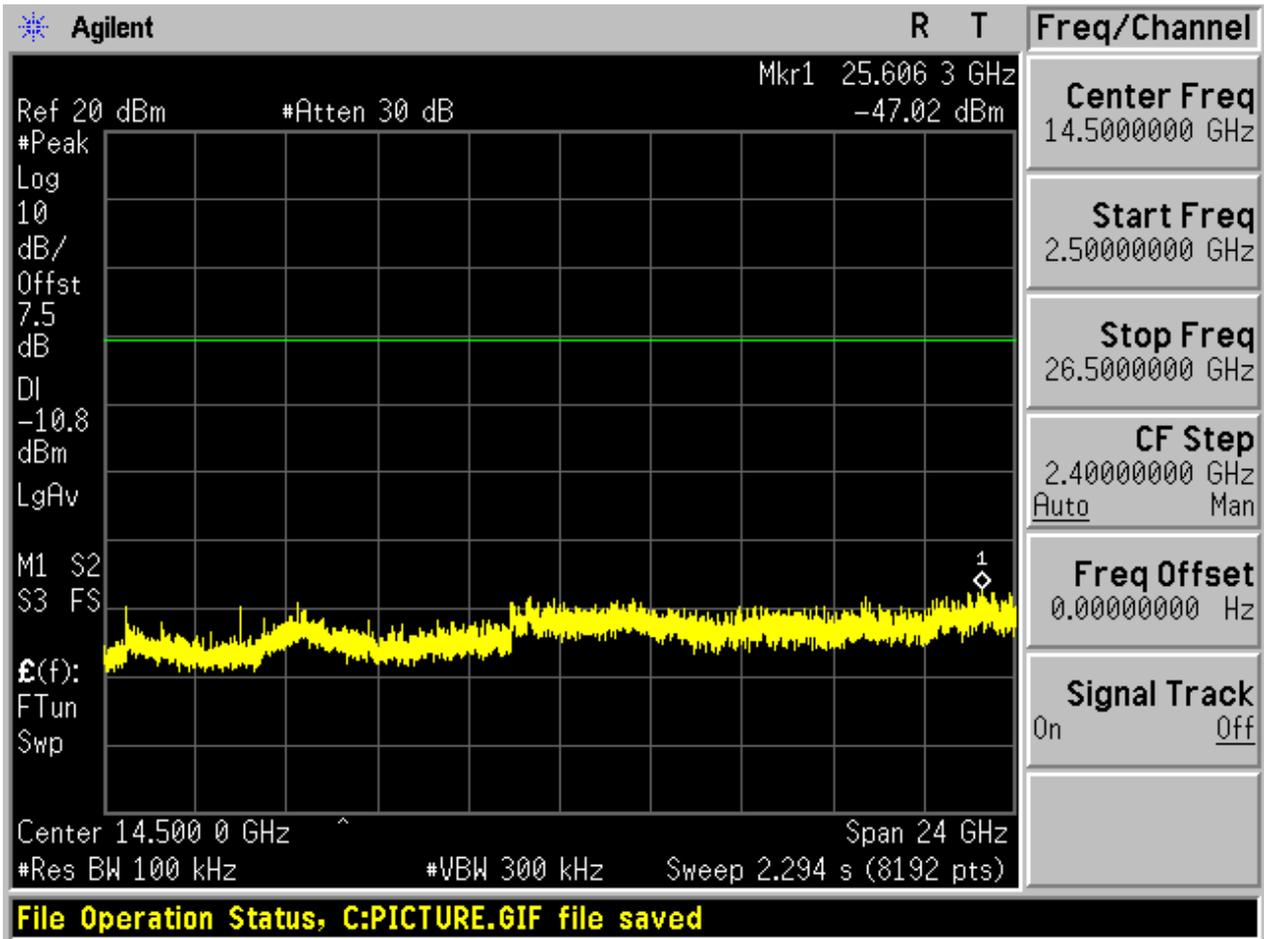








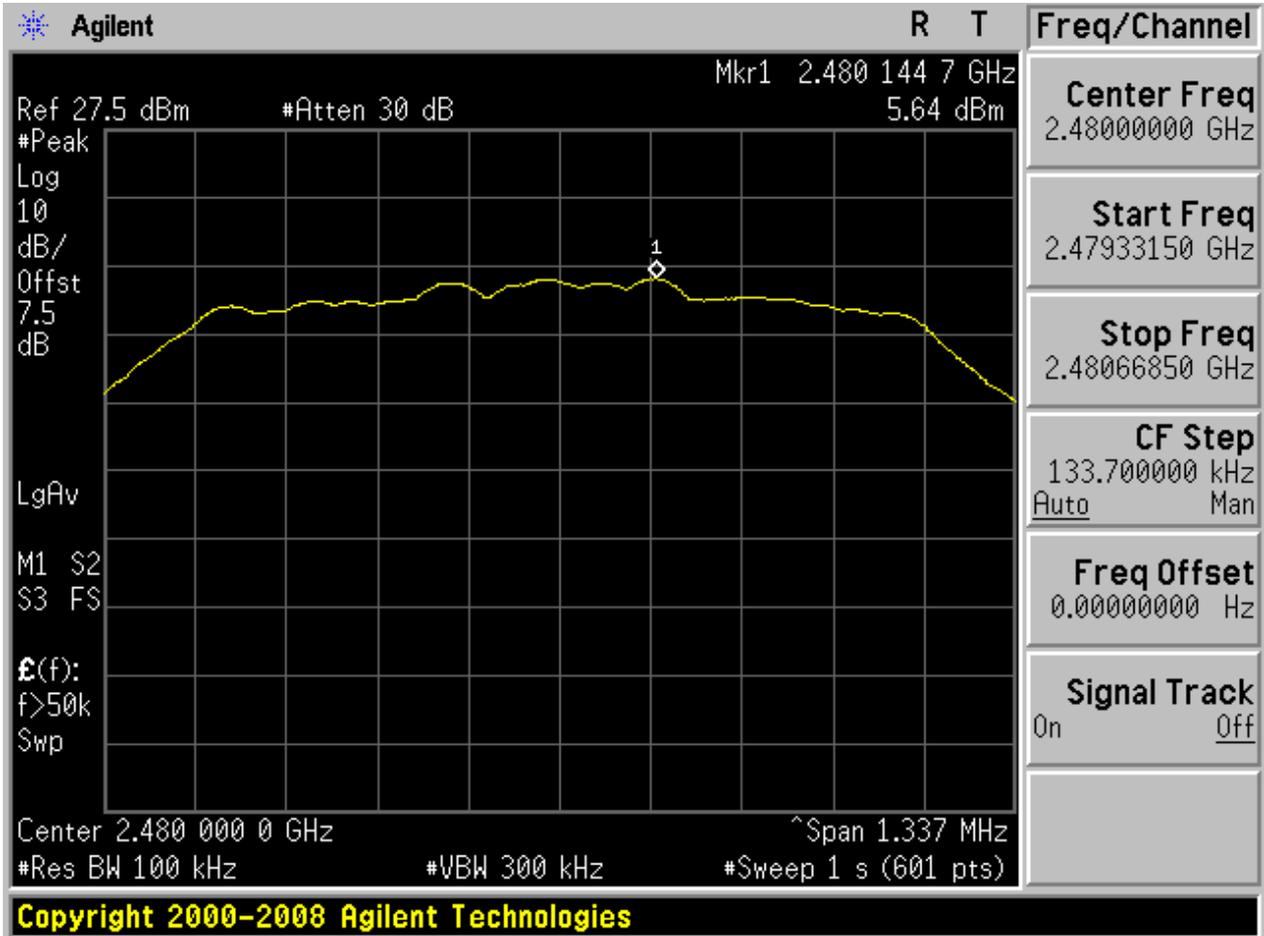




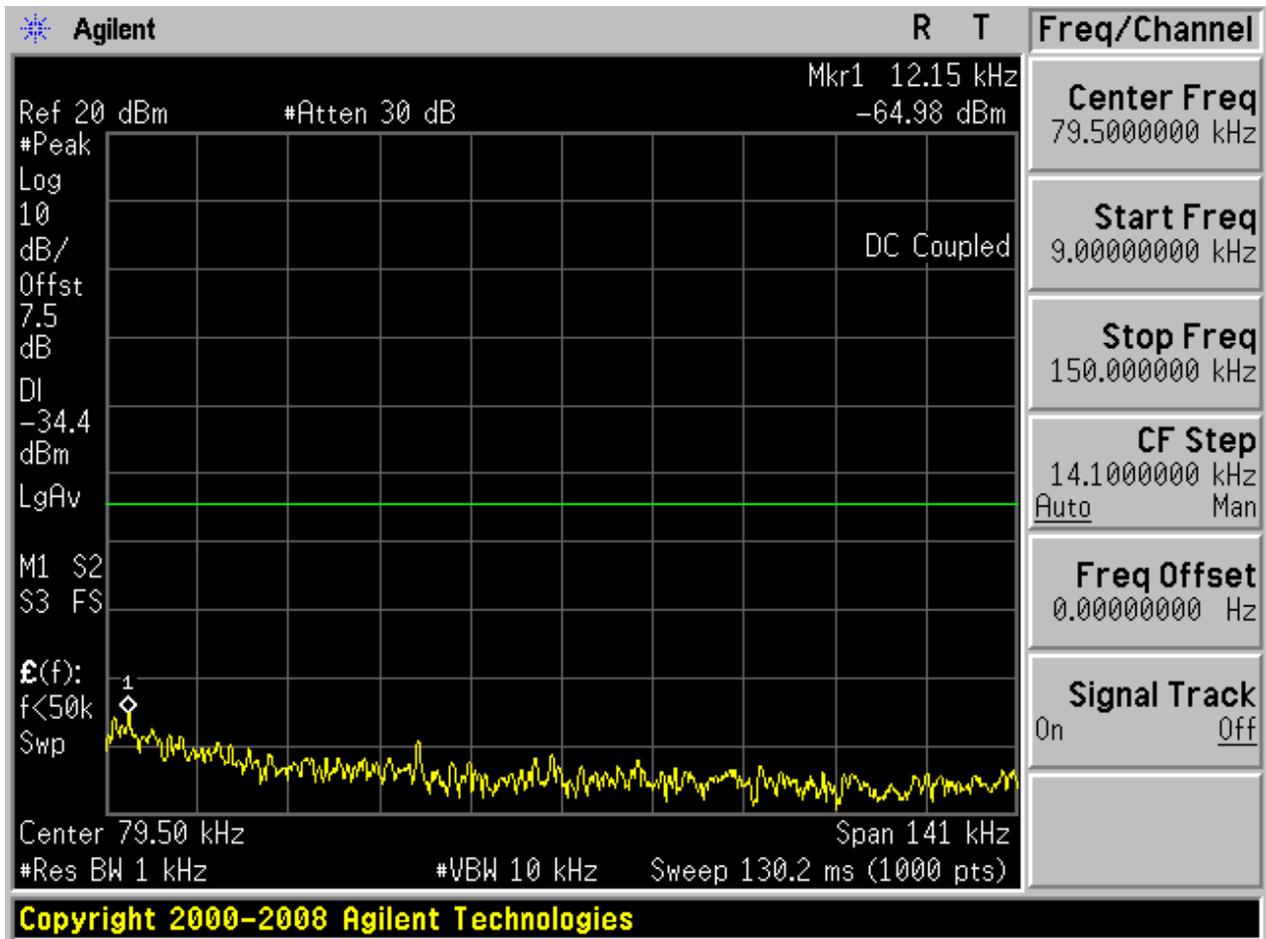


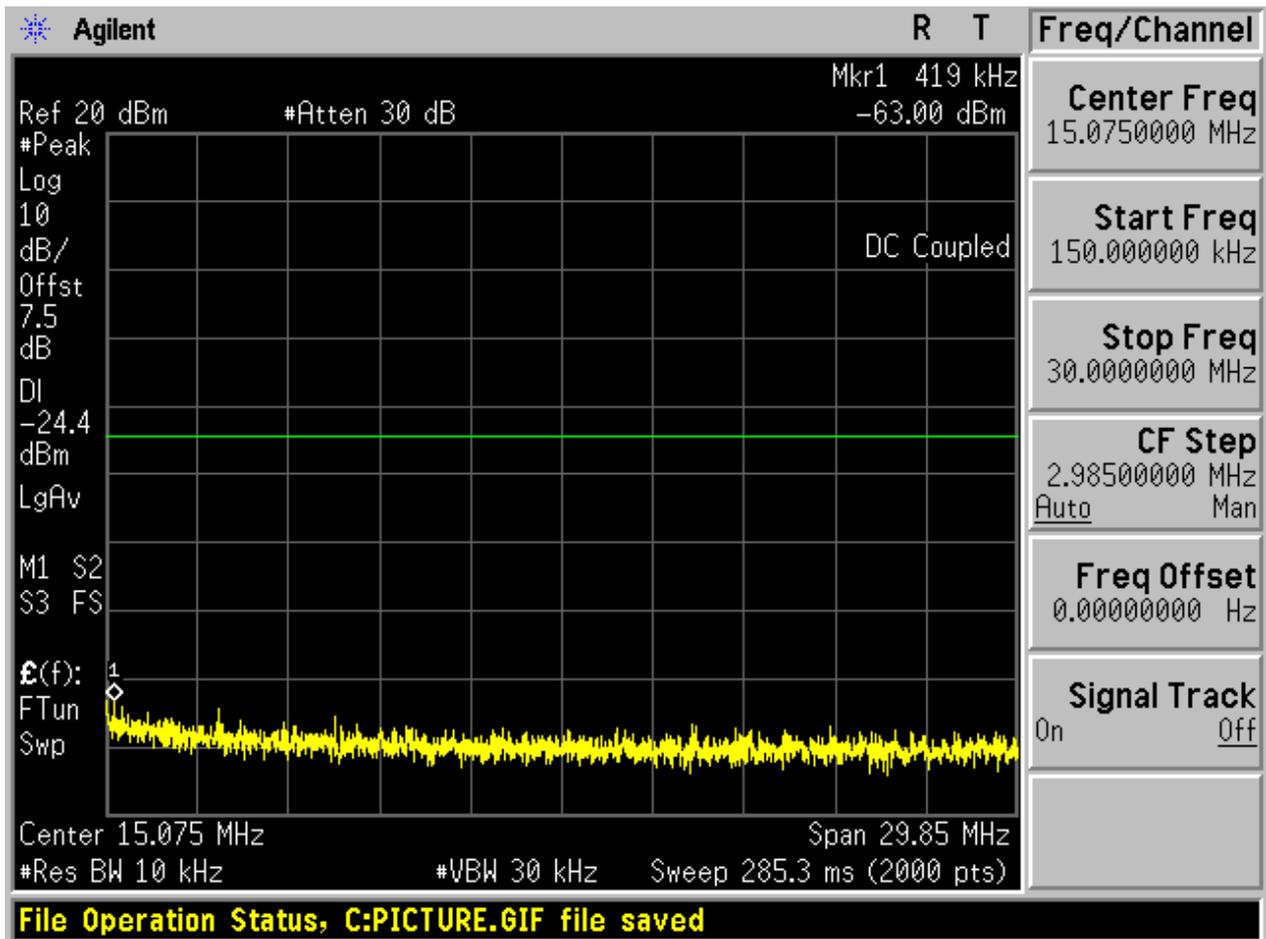
2.6 TM2_2DH5_Ch78

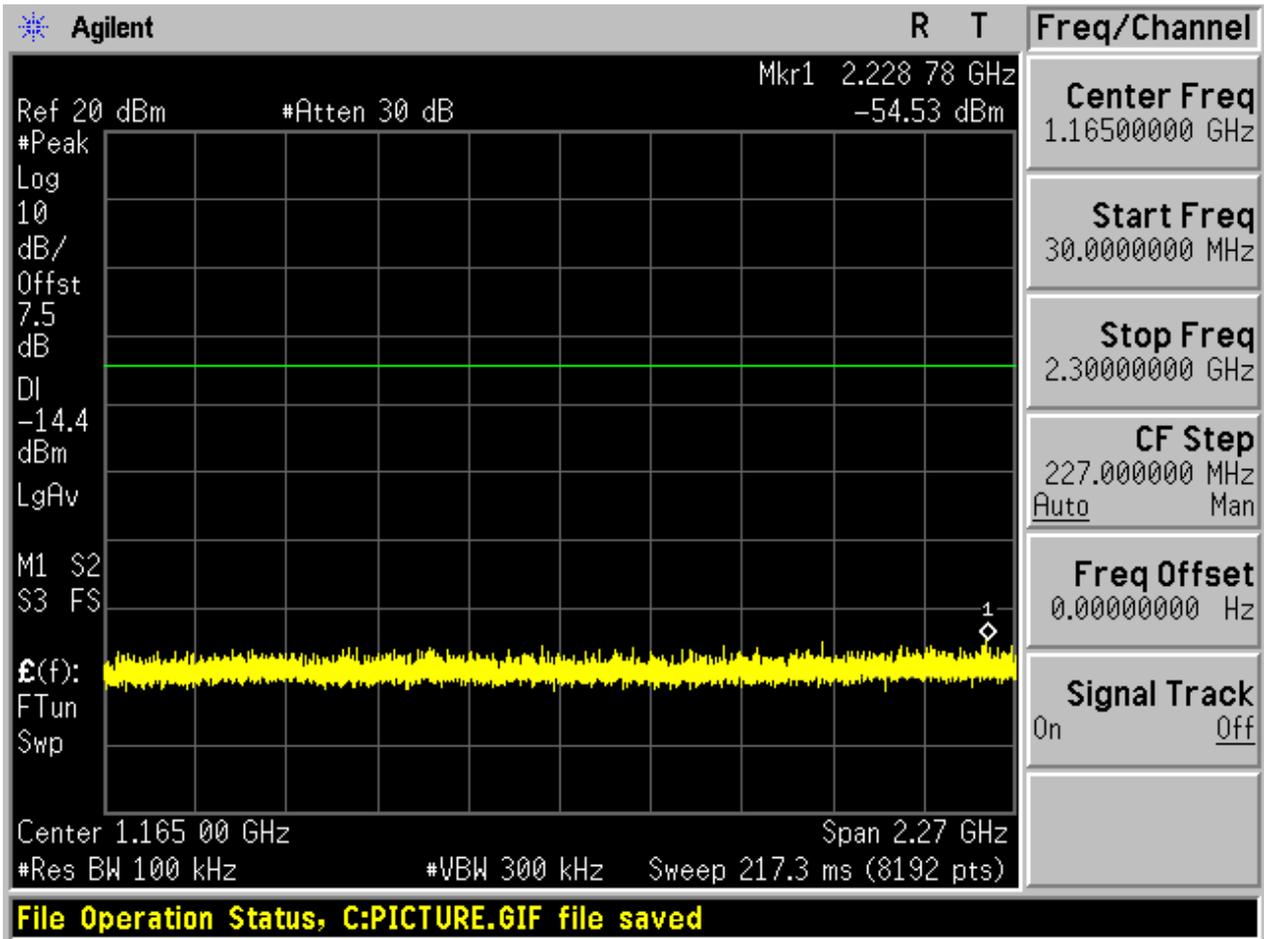
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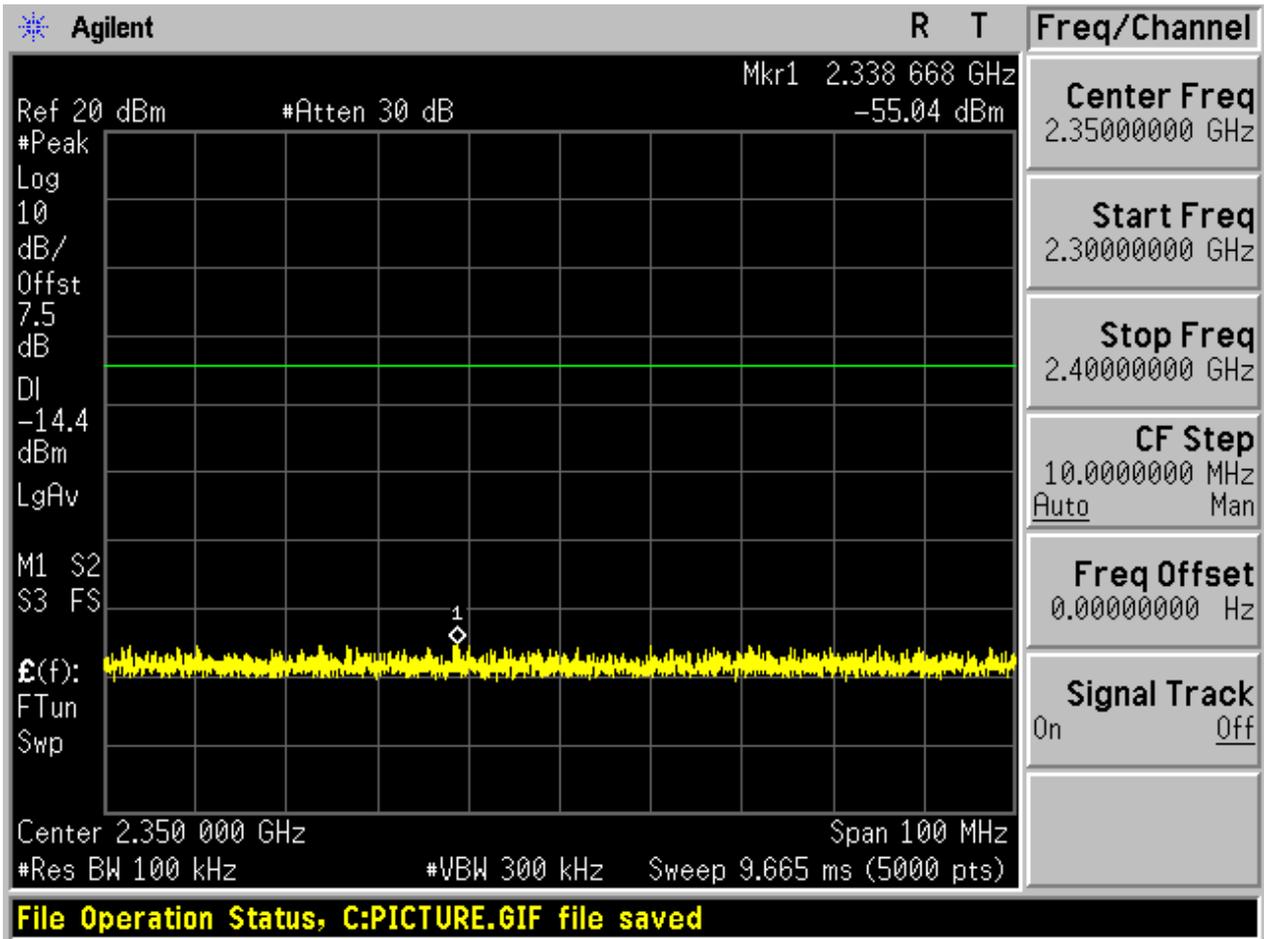


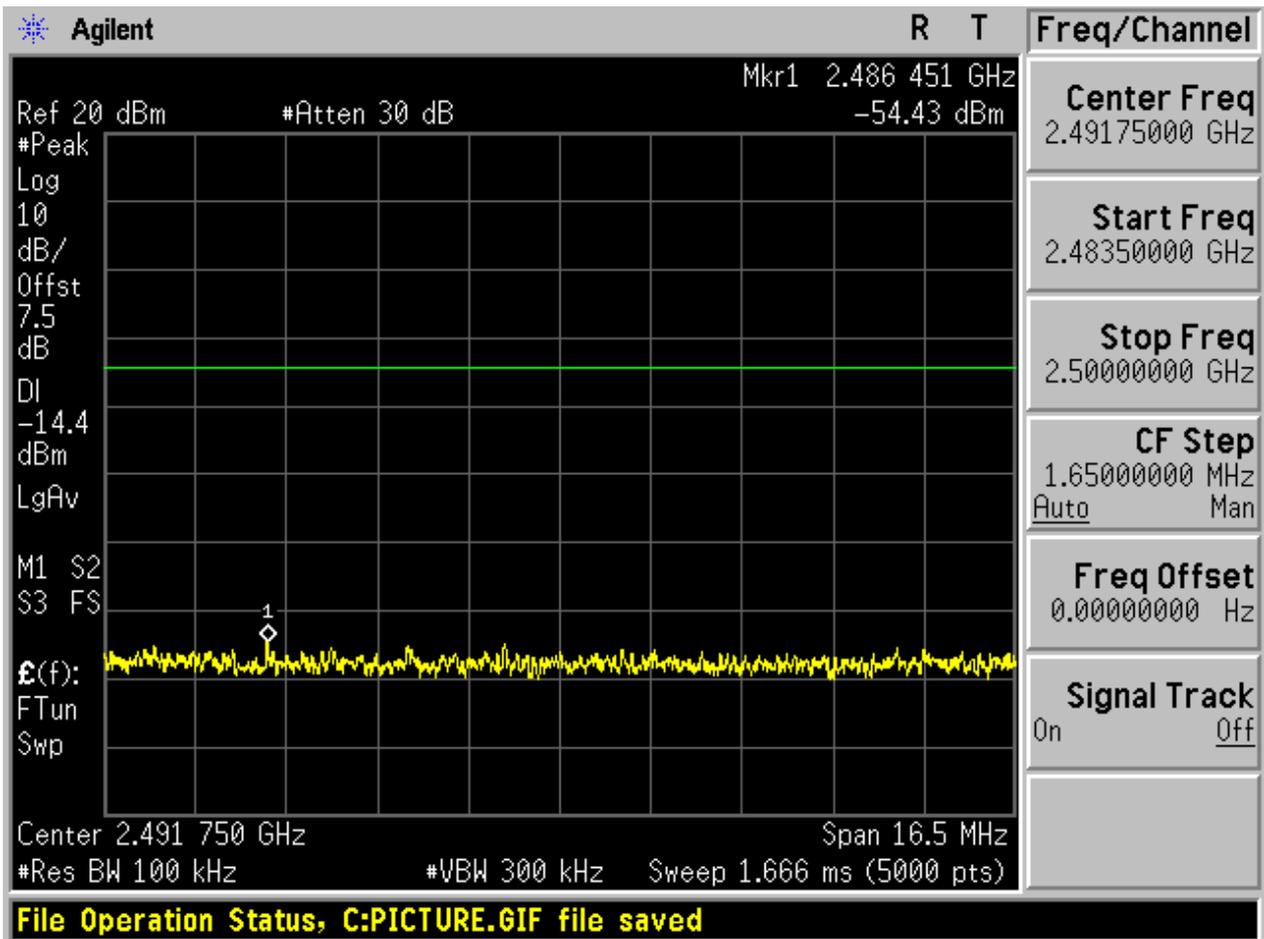
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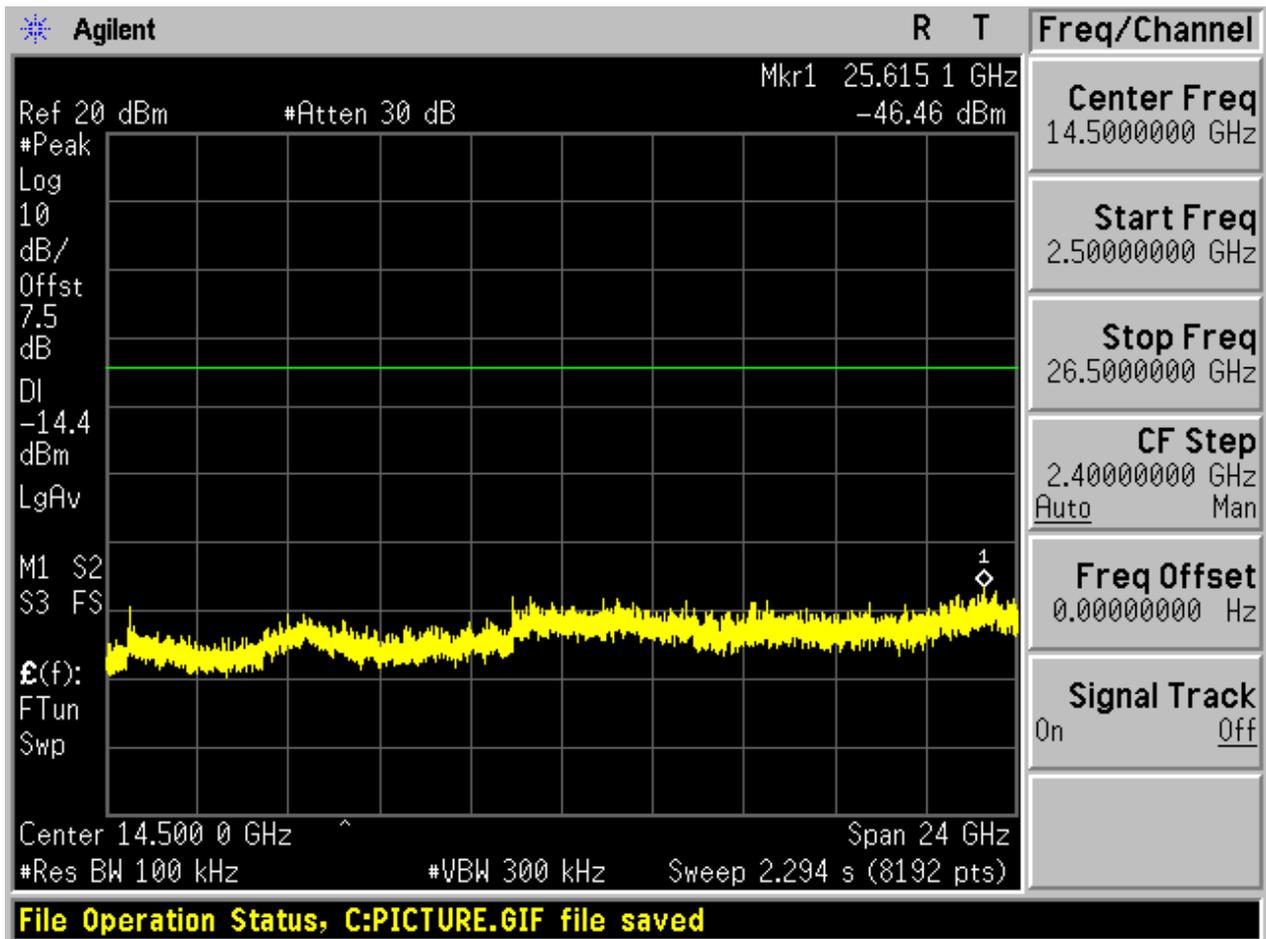






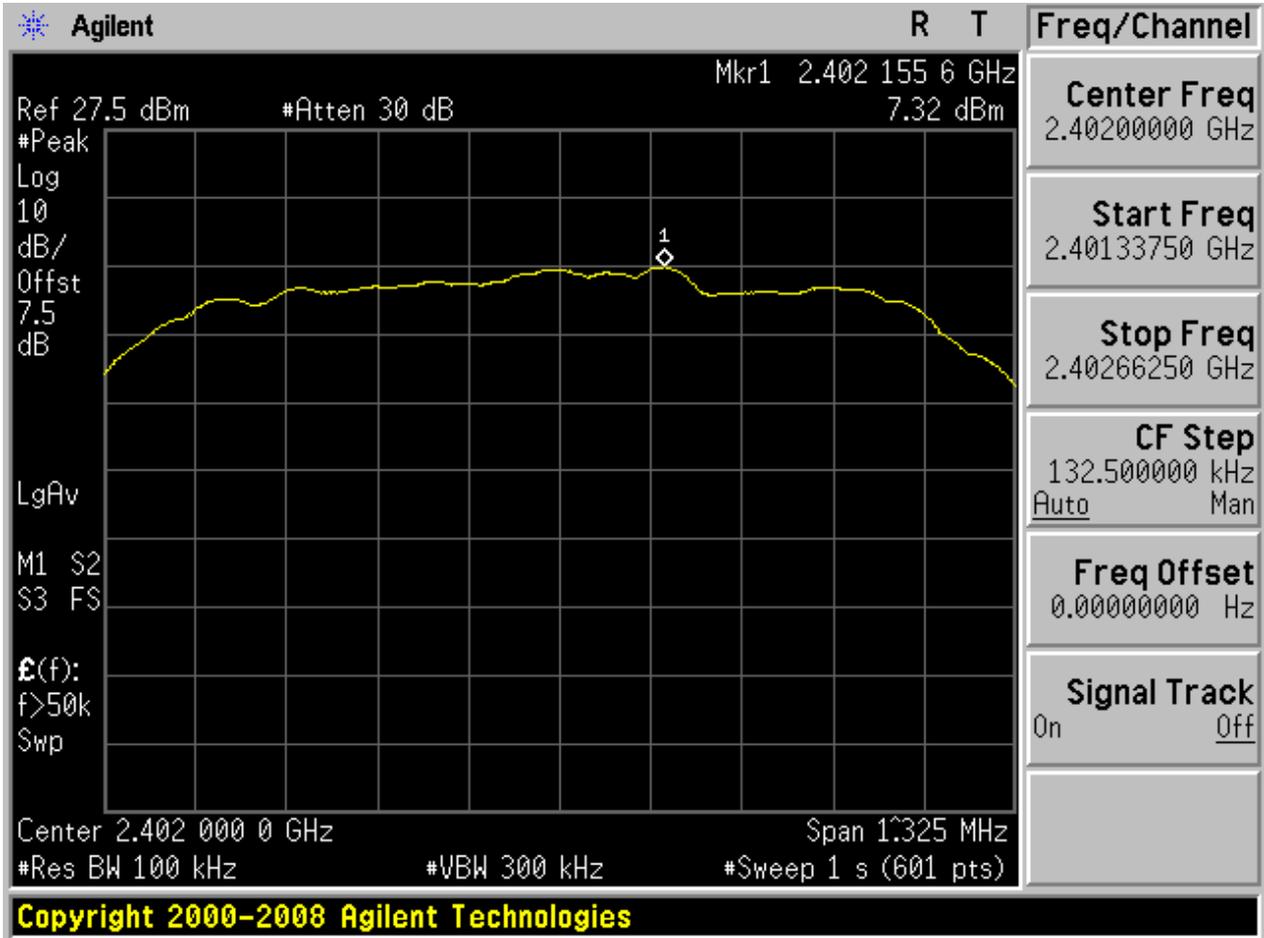




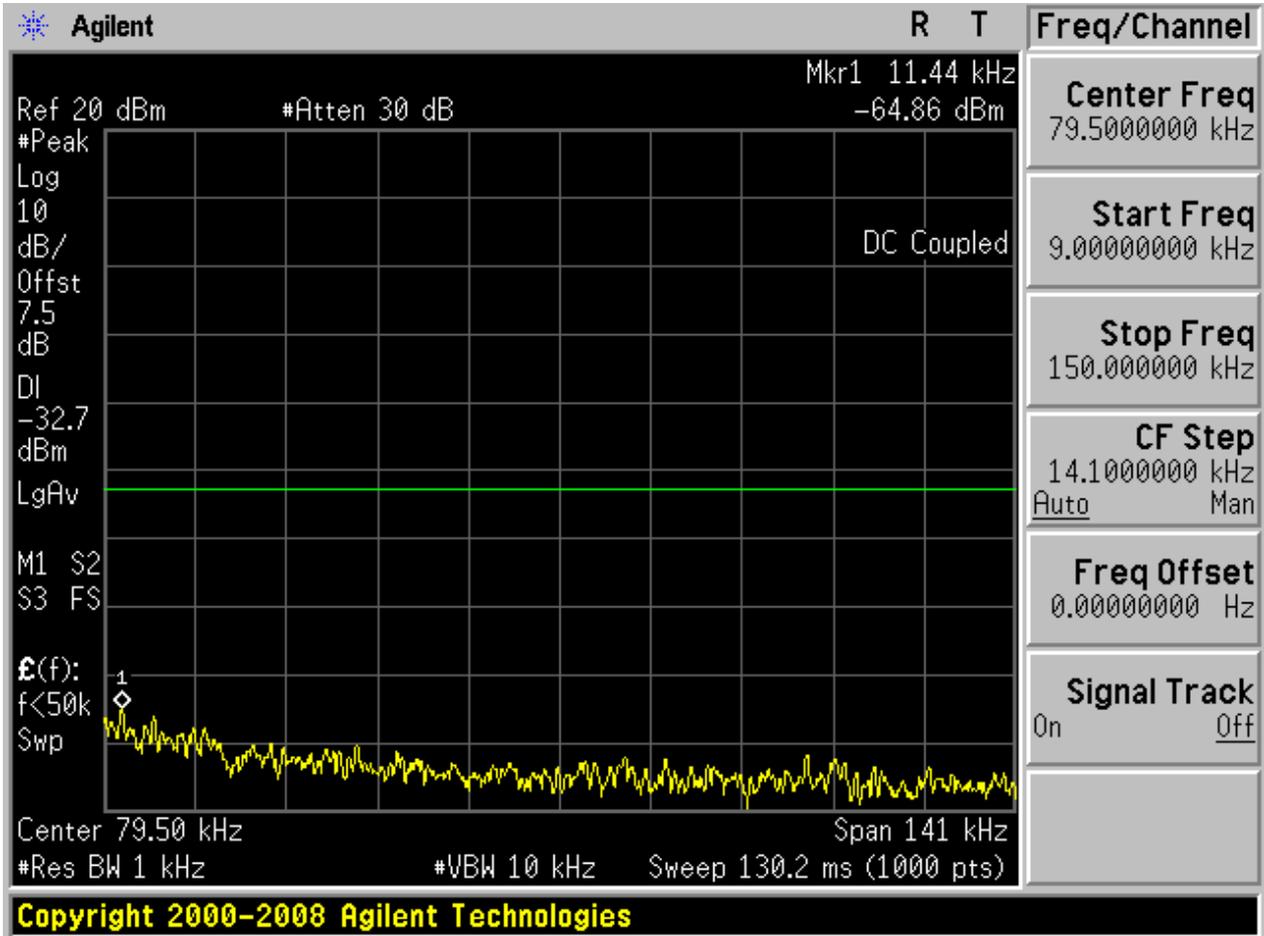


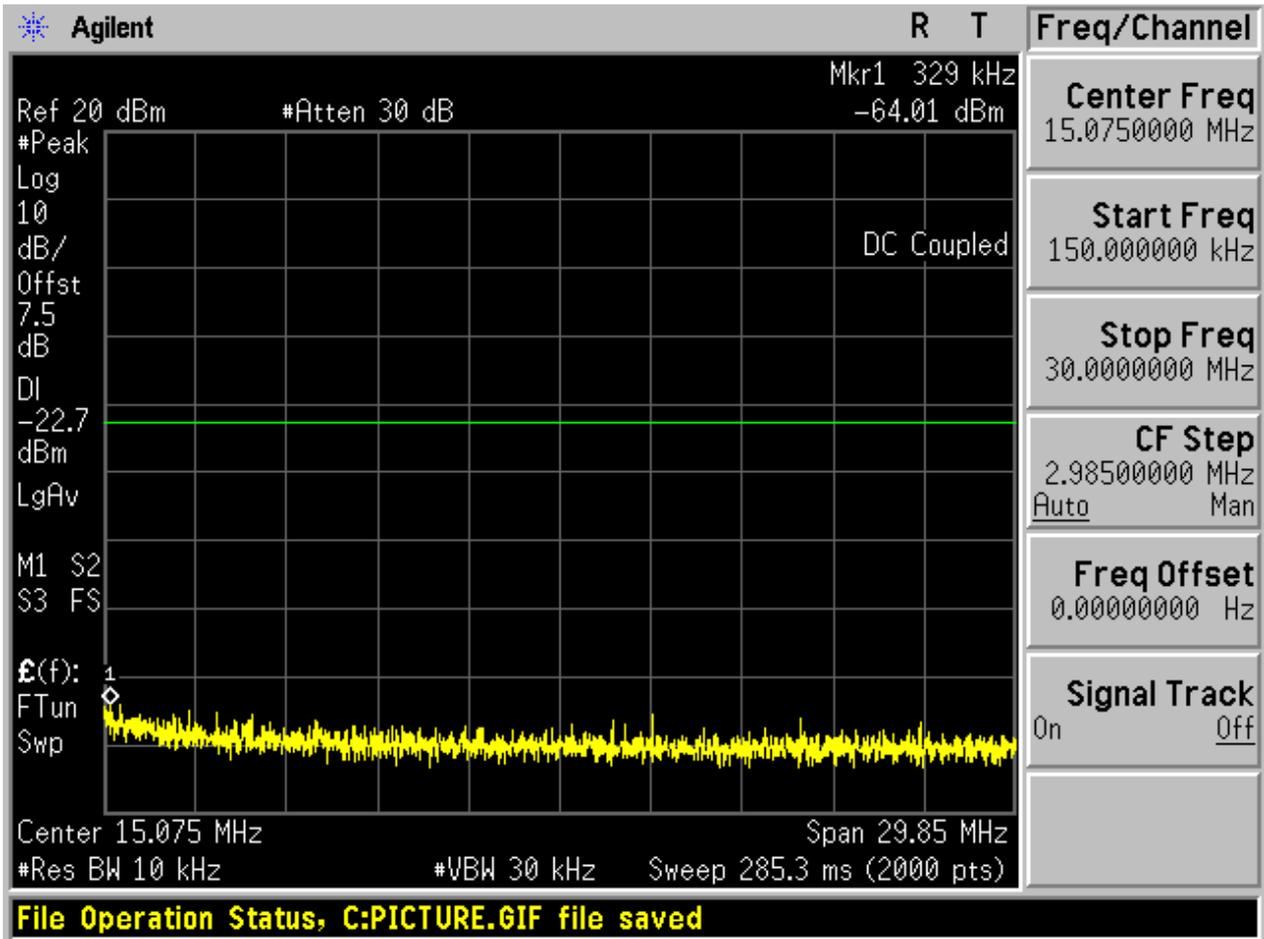
2.7 TM3_3DH5_Ch0

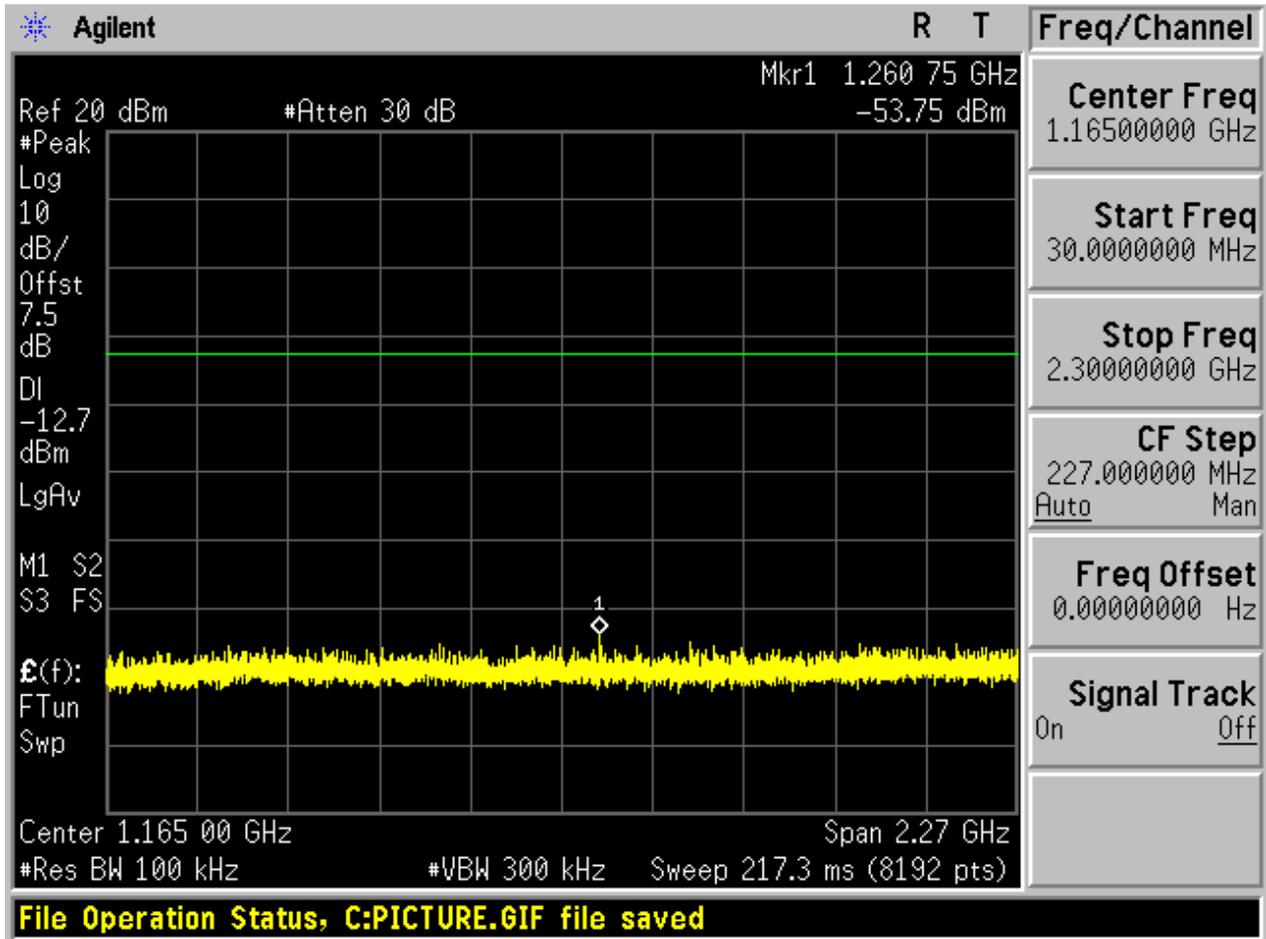
2.7.1 Pref

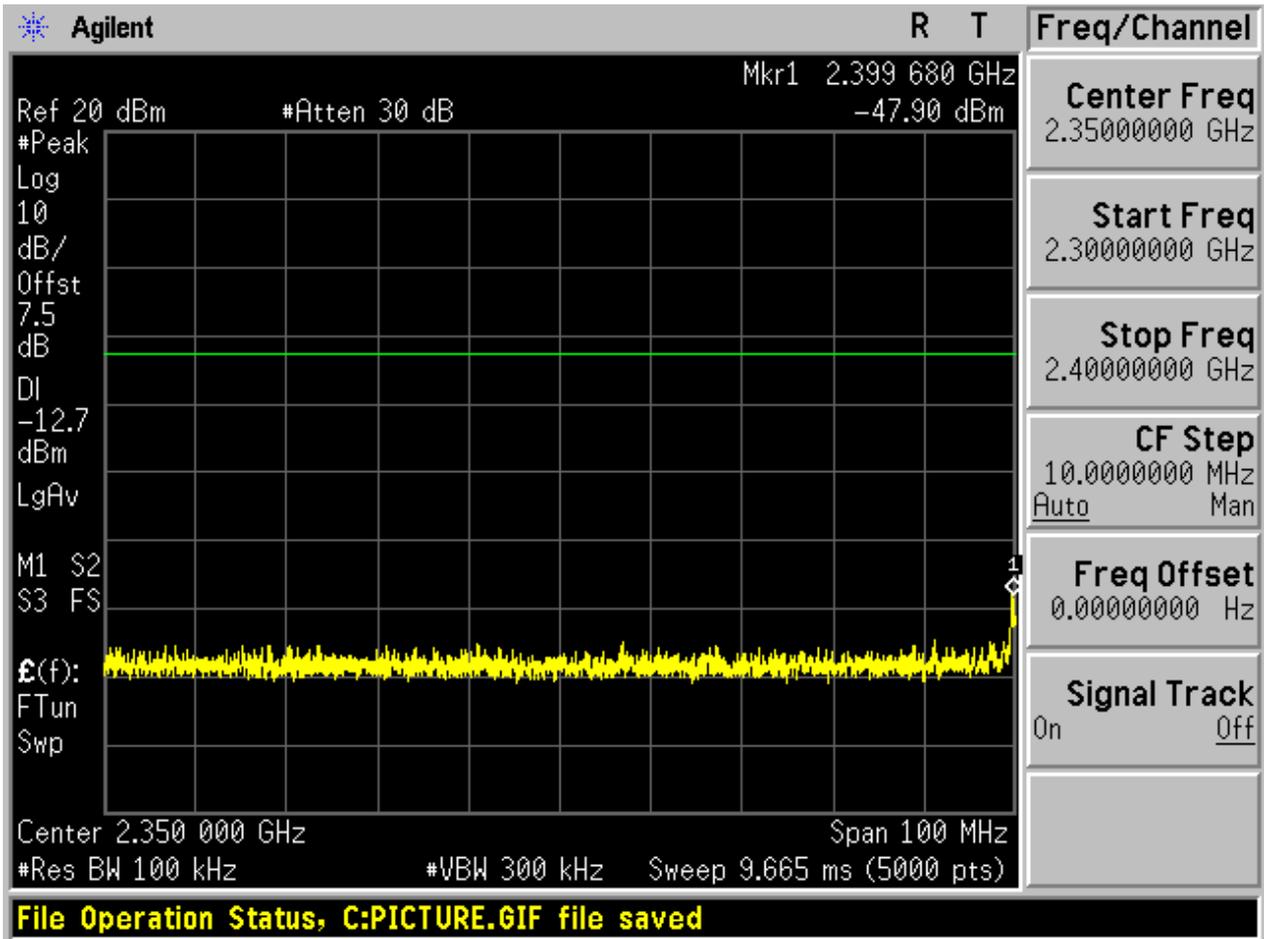


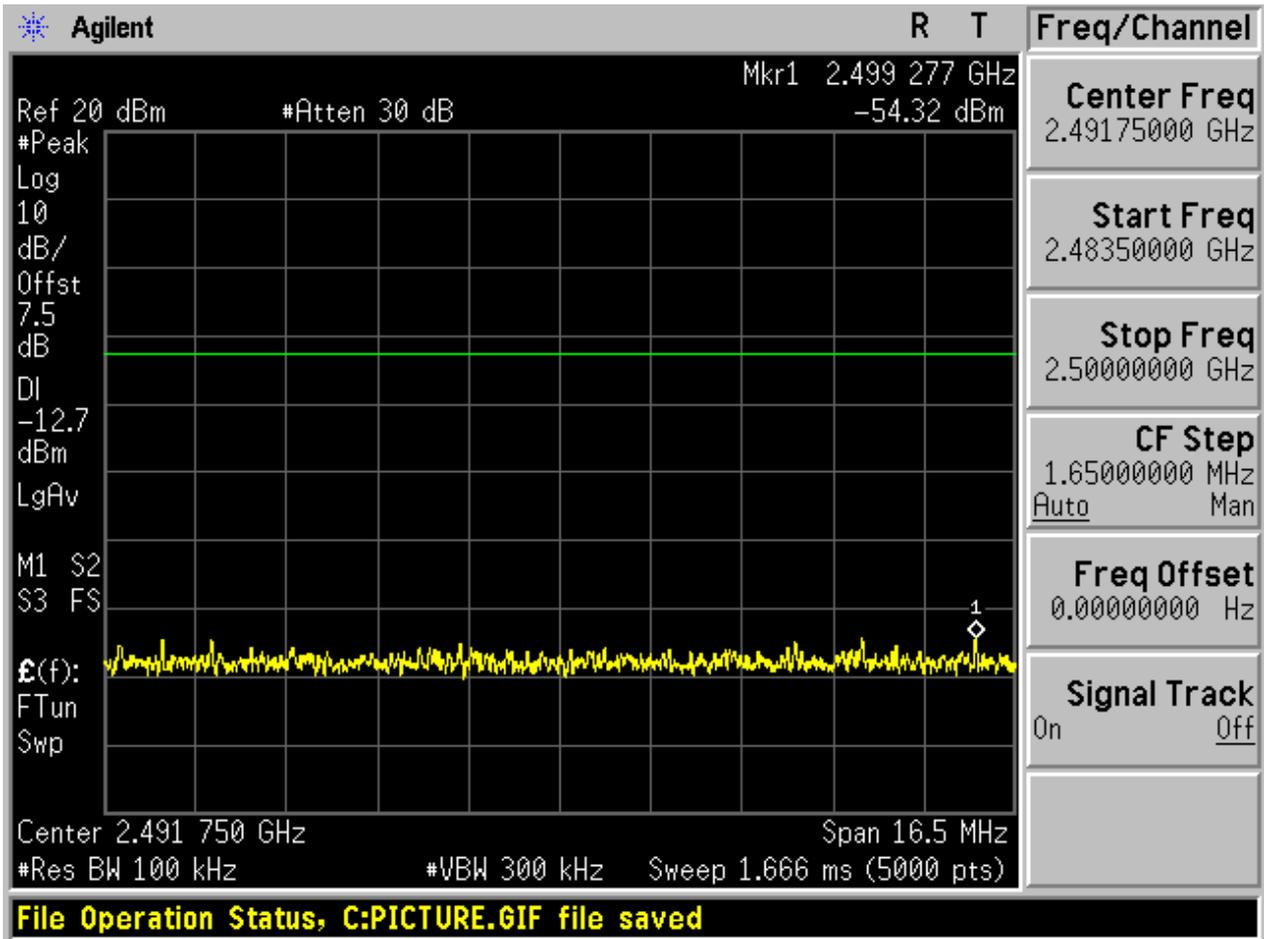
2.7.2 Puw

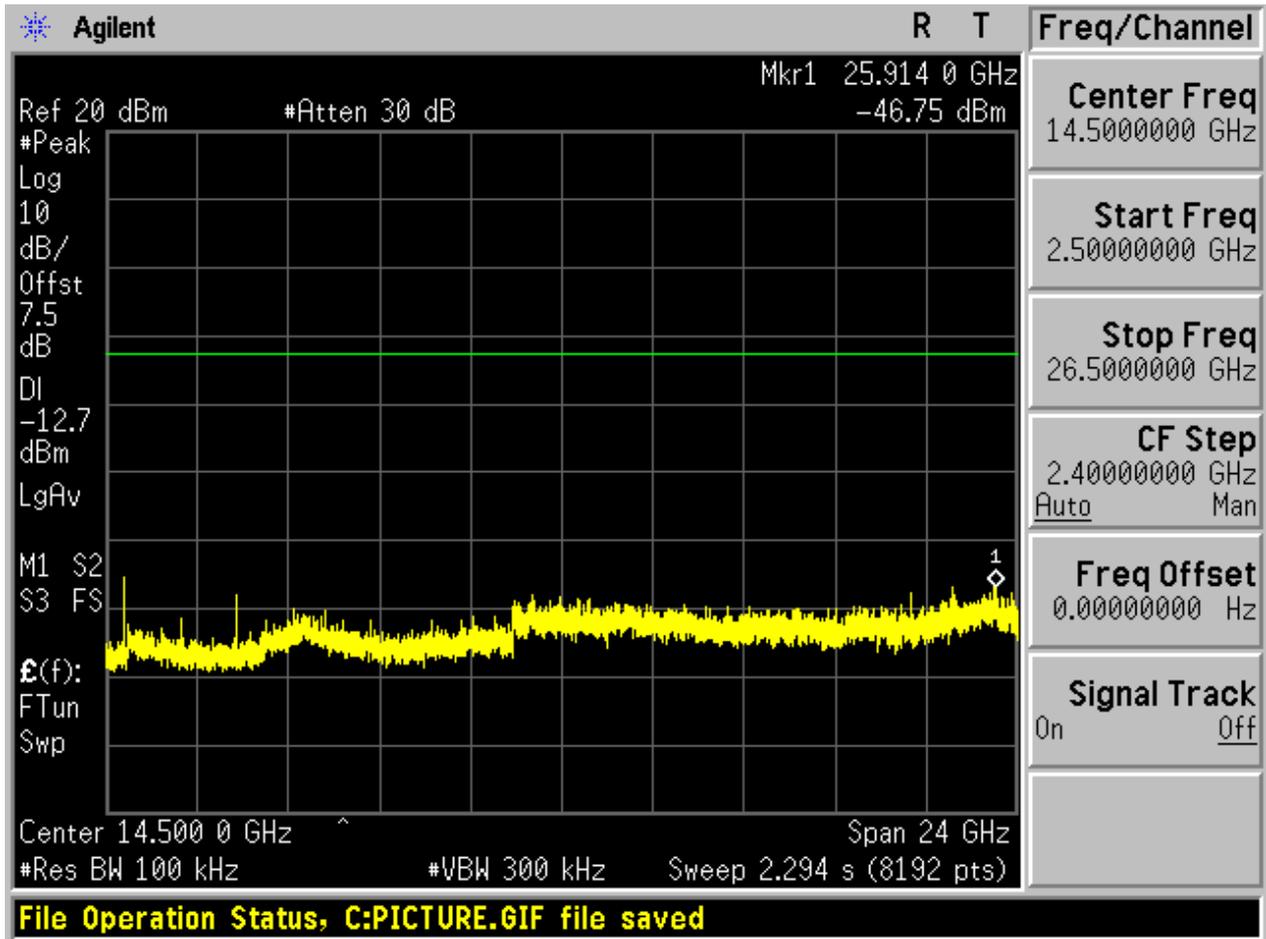








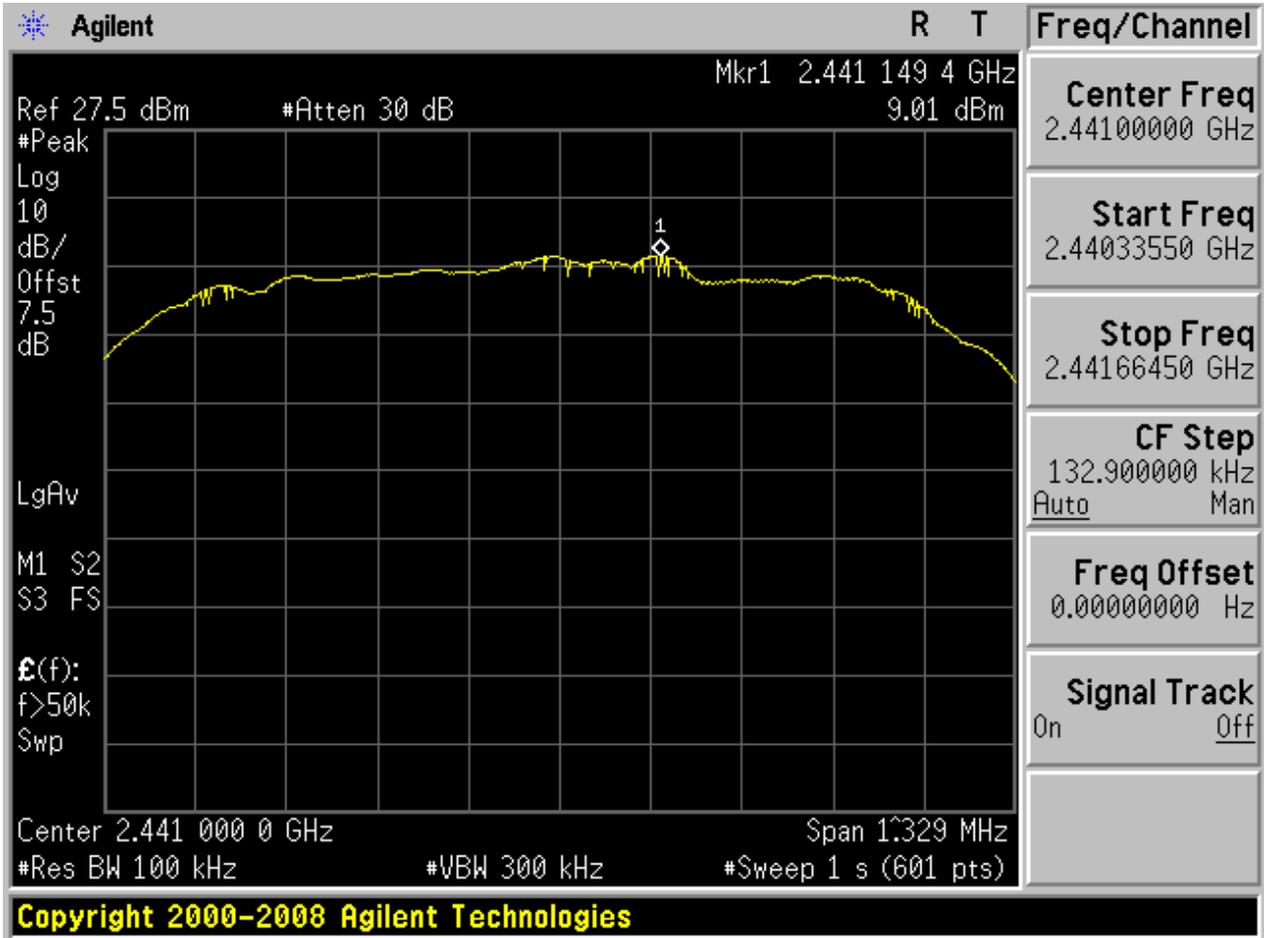




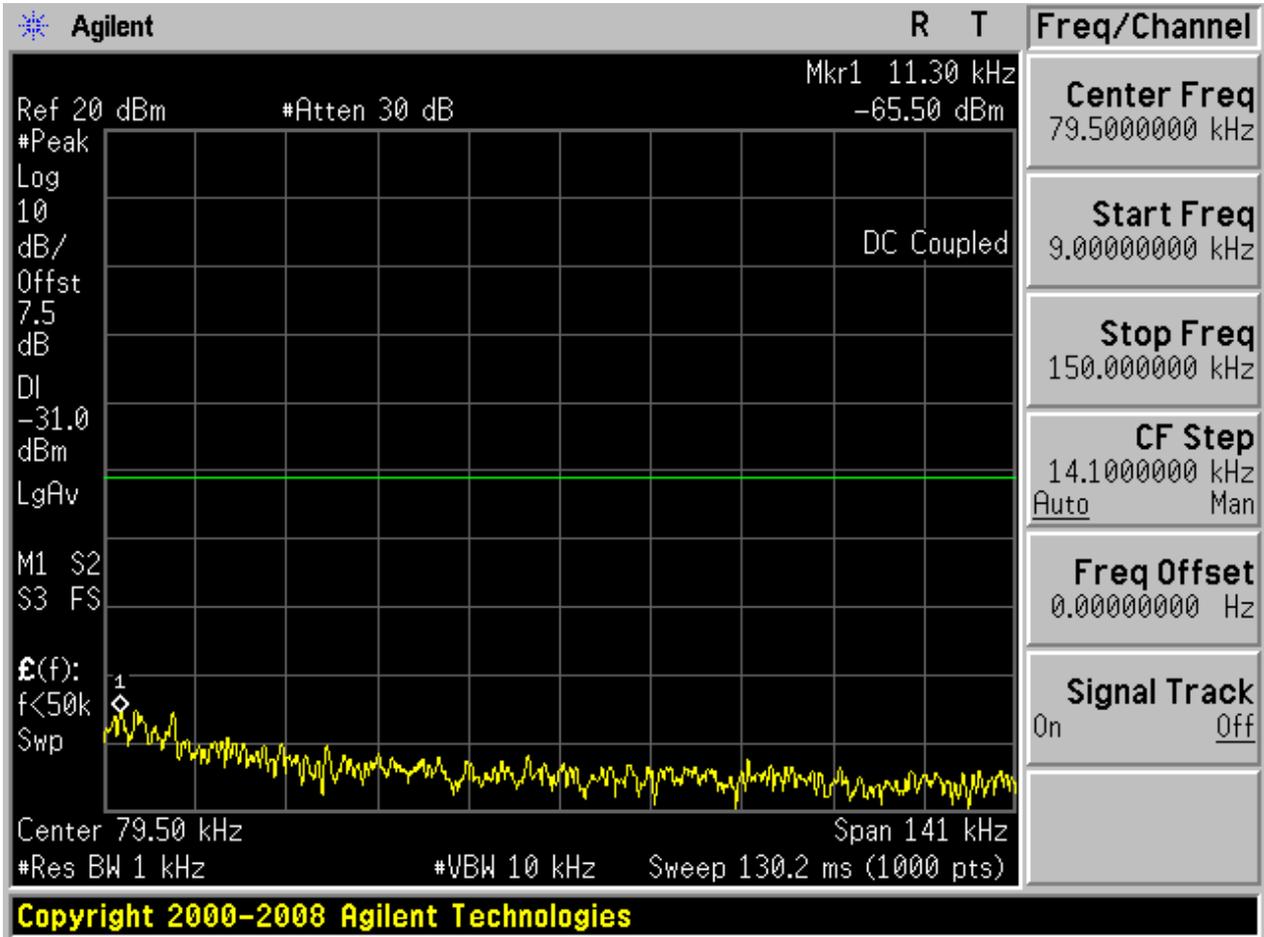


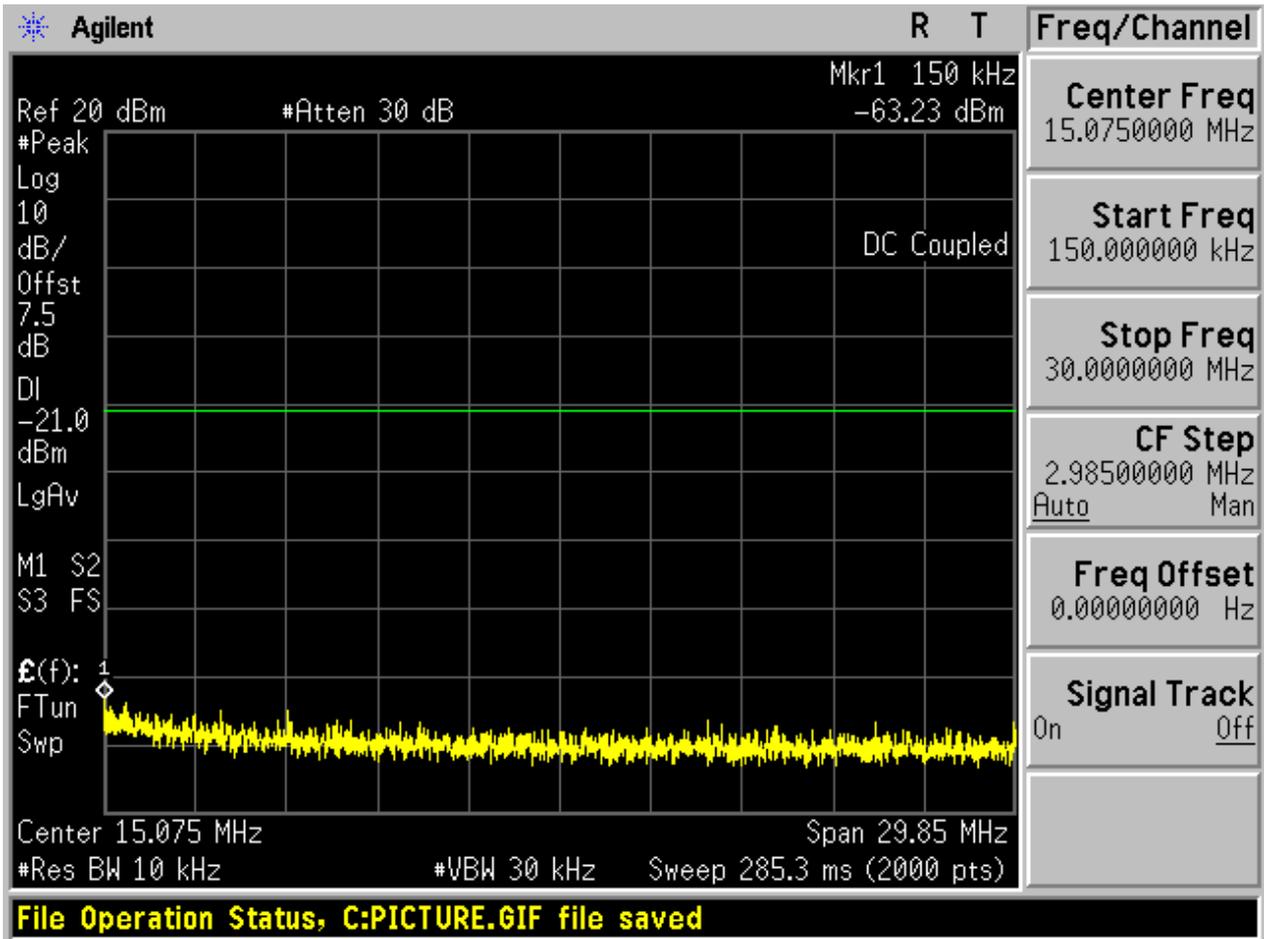
2.8 TM3_3DH5_Ch39

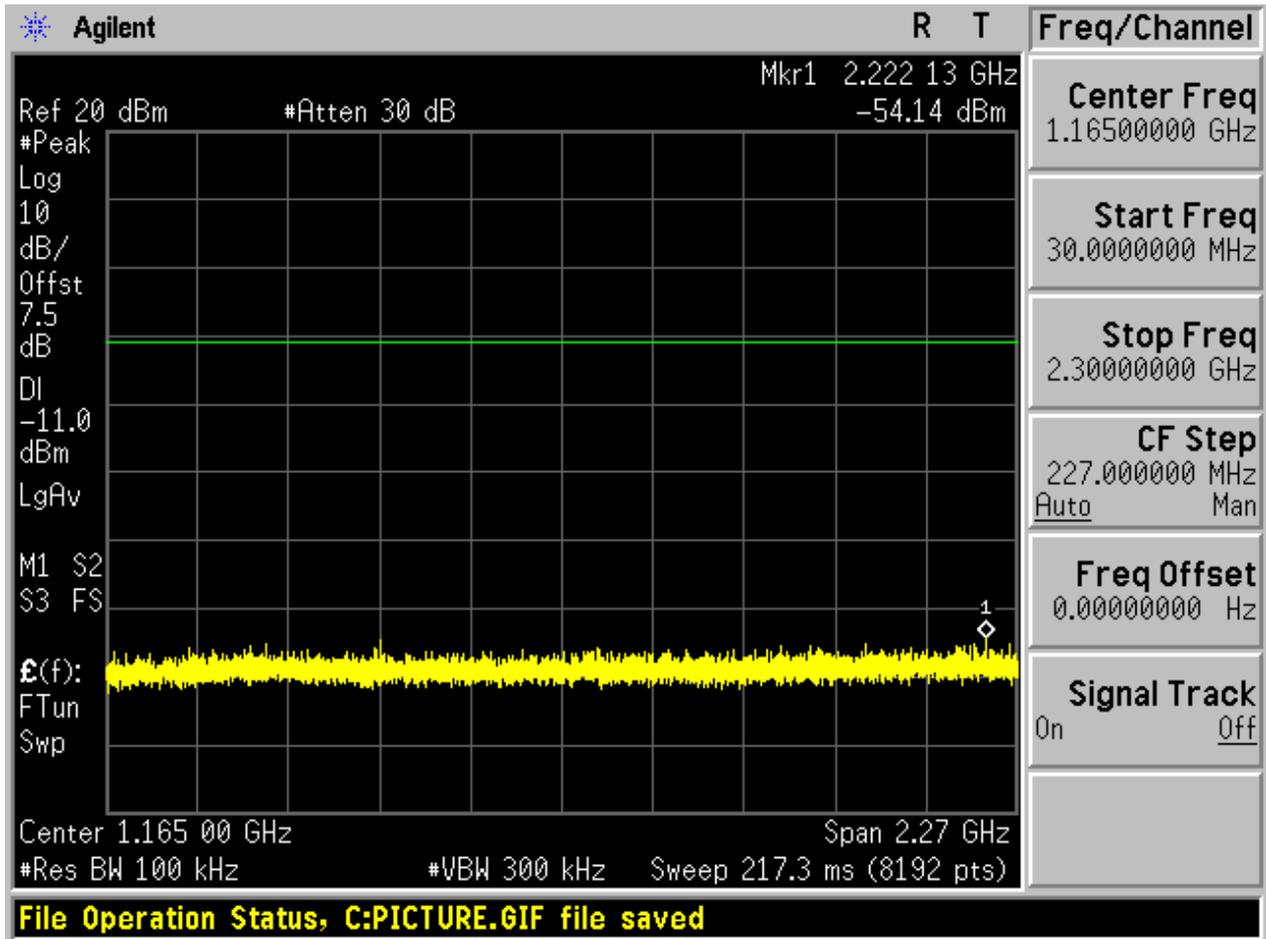
2.8.1 Pref

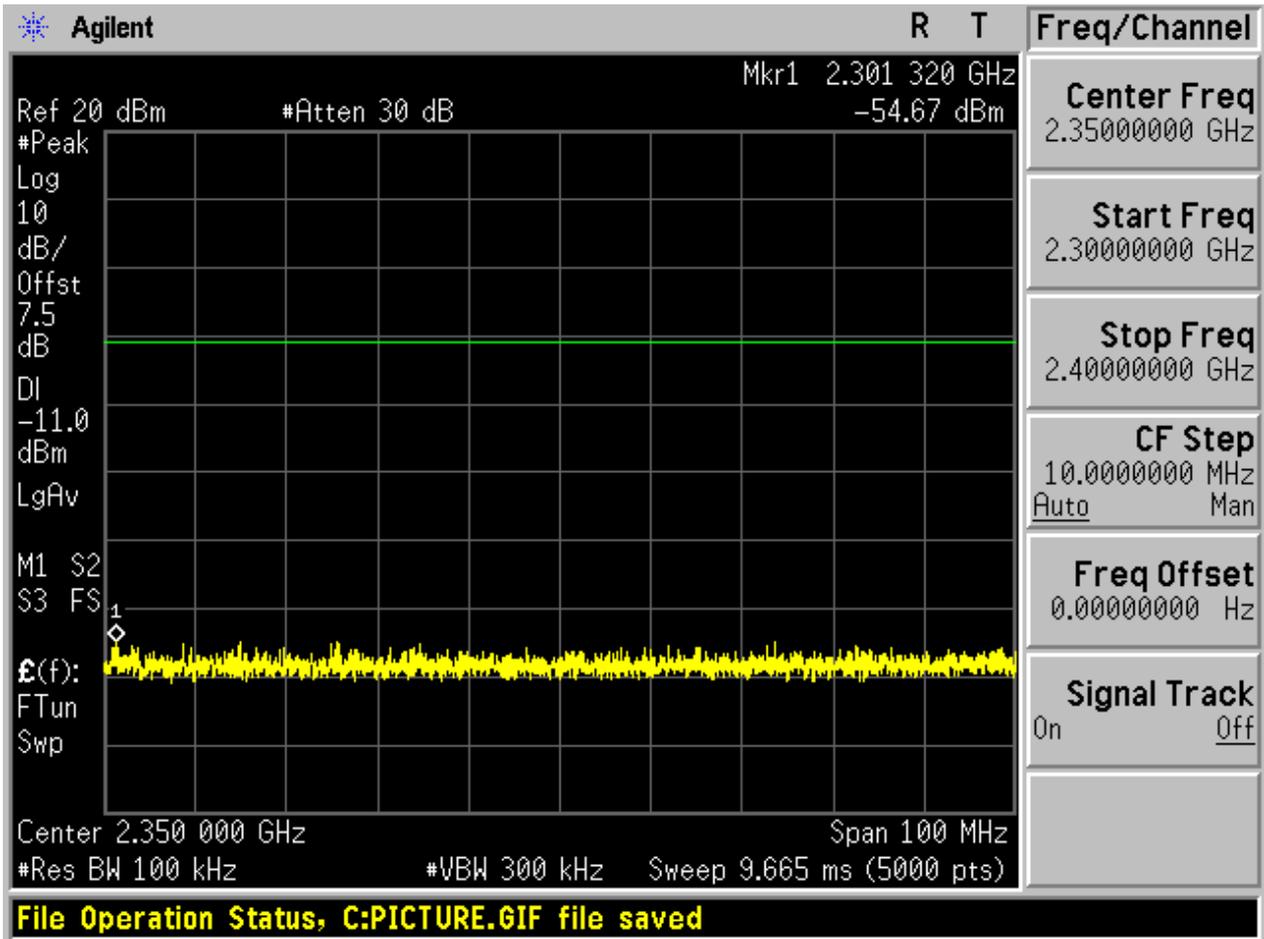


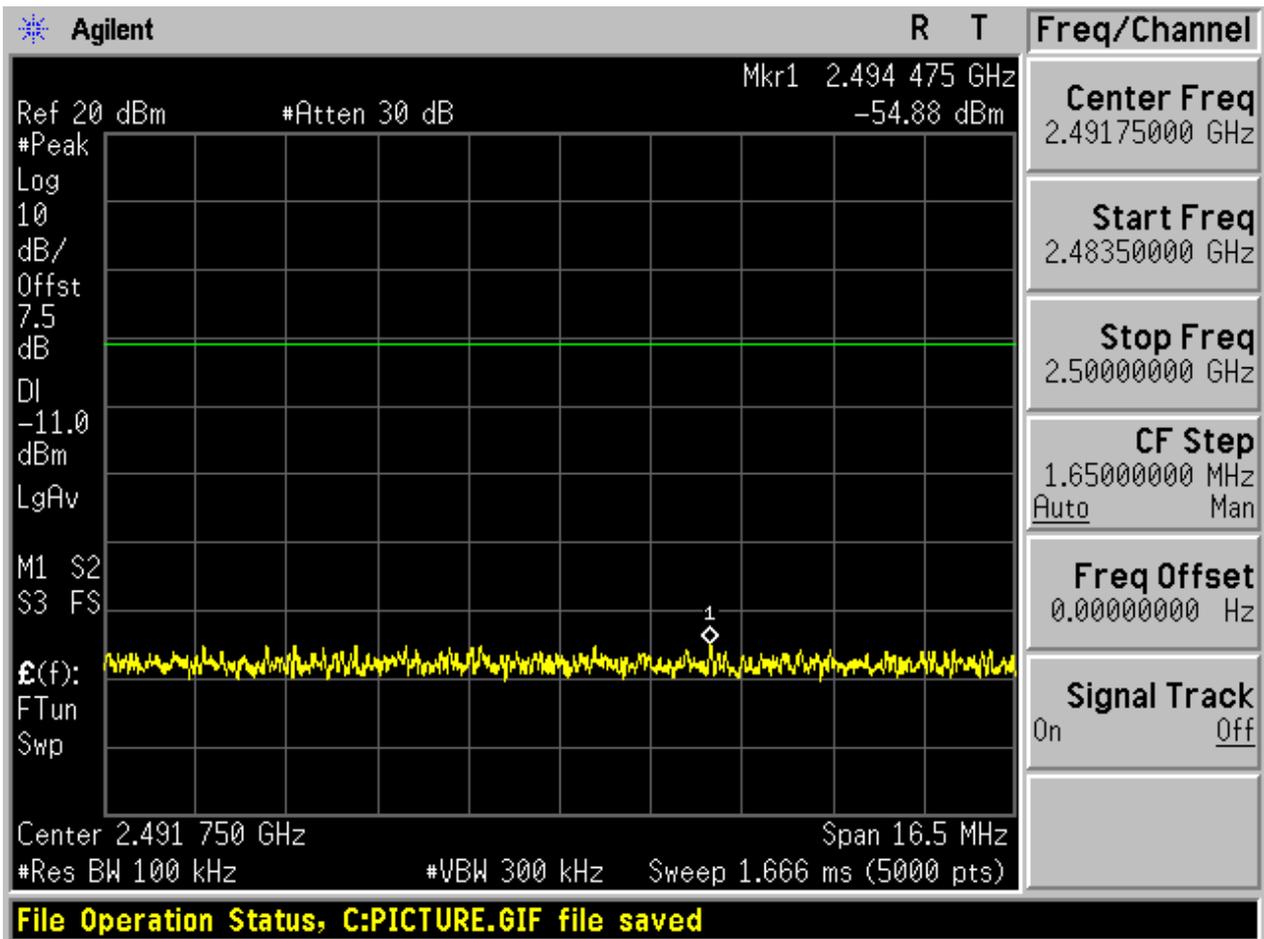
2.8.2 Puw

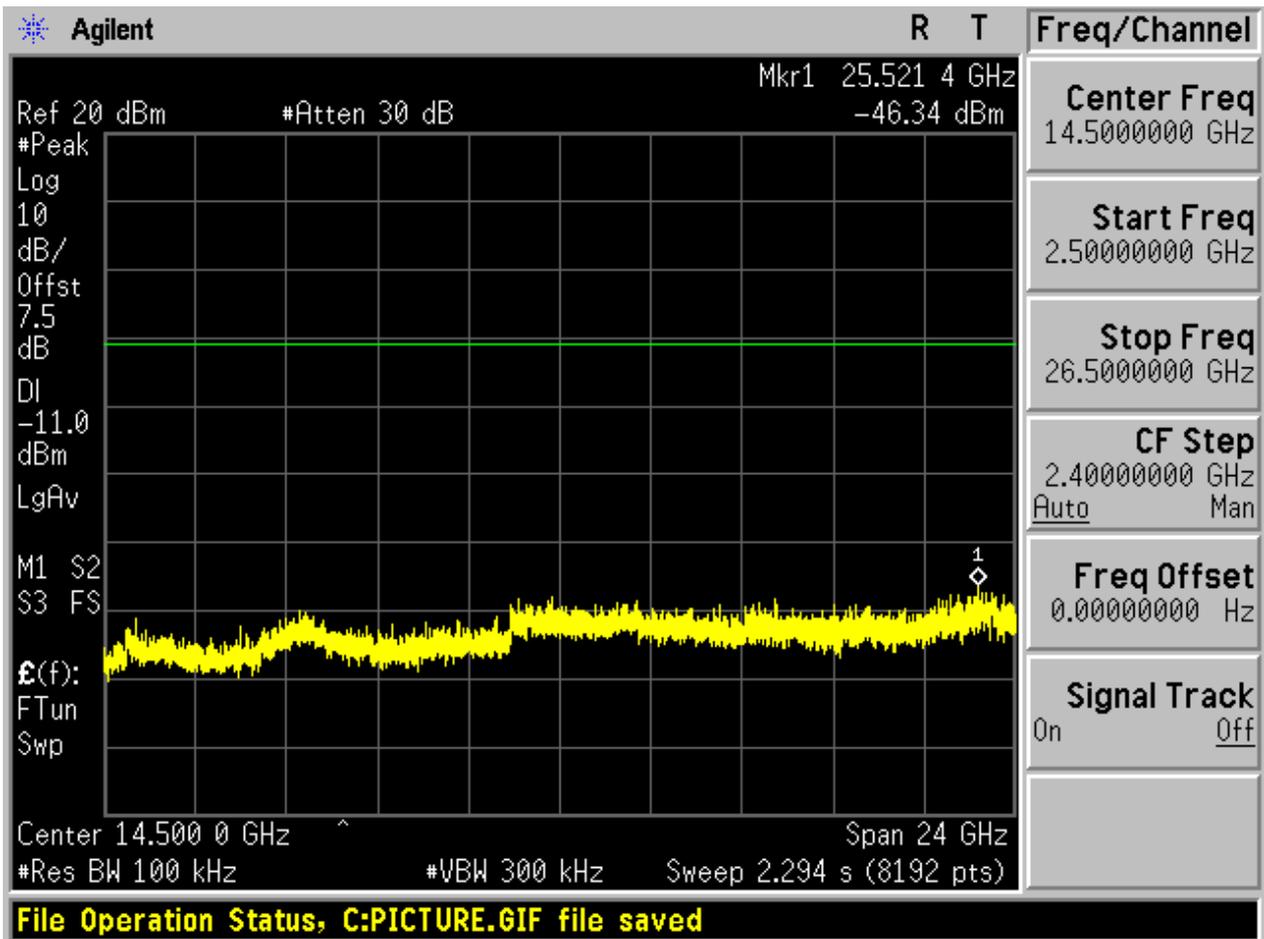








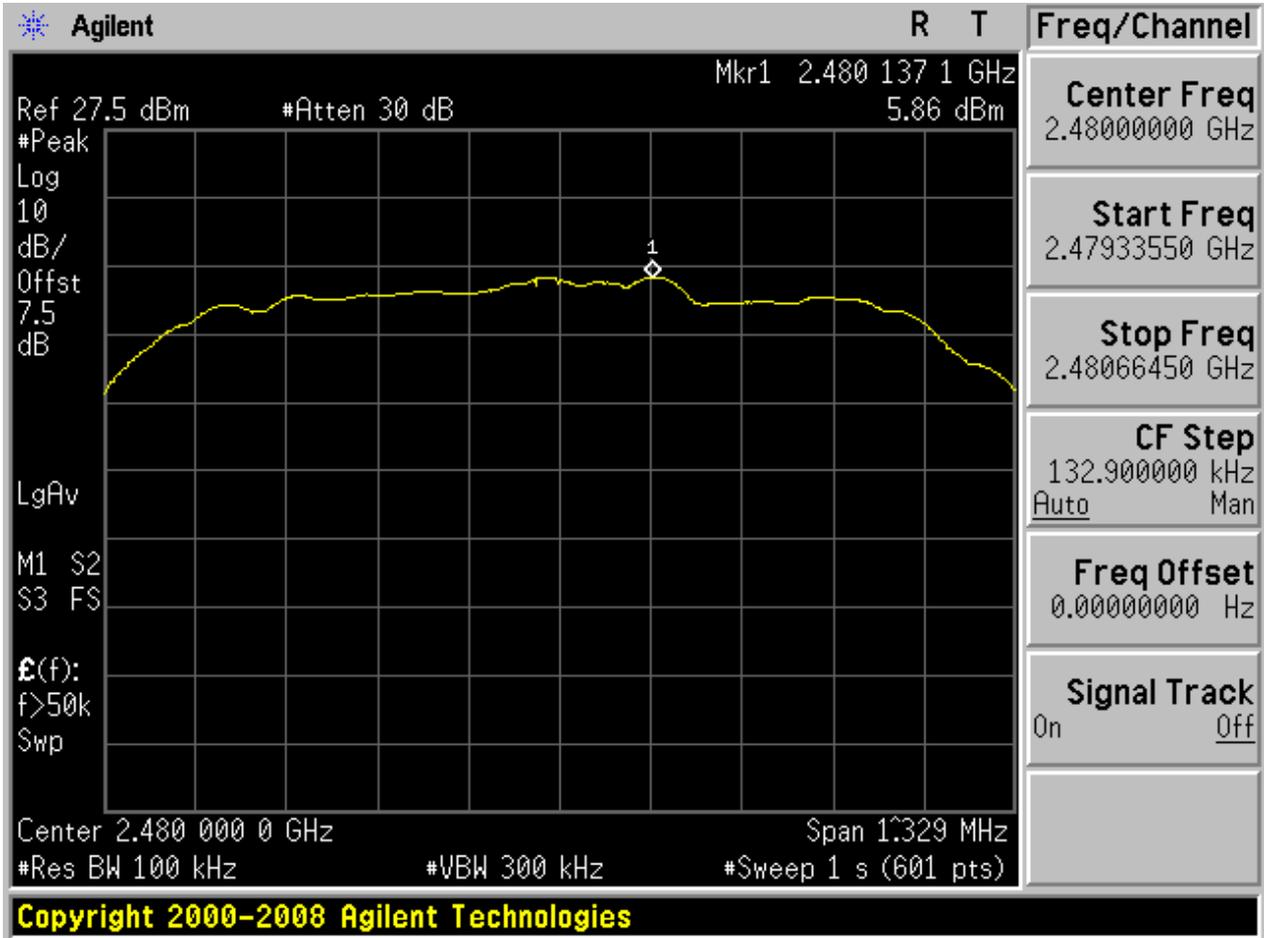




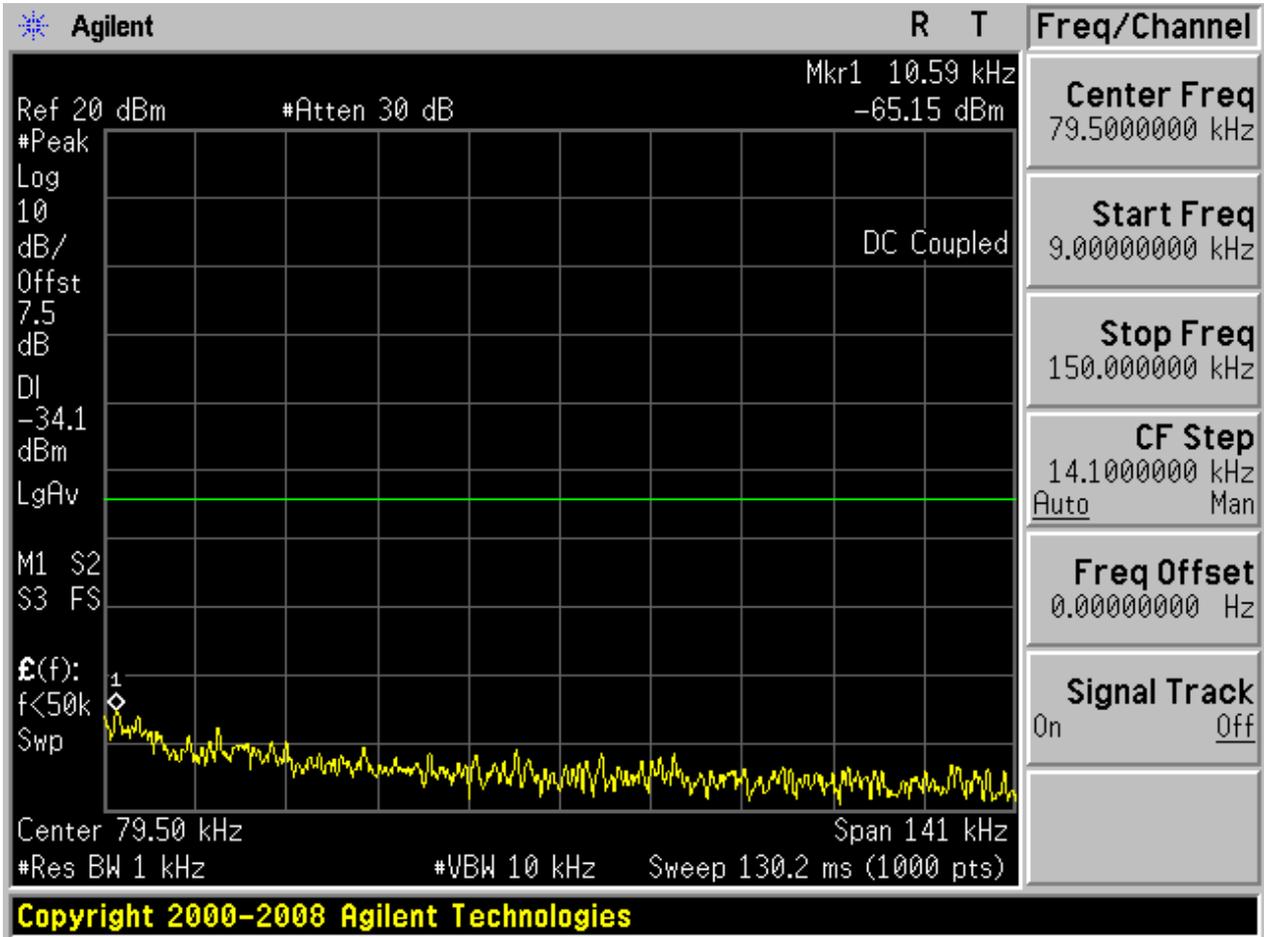


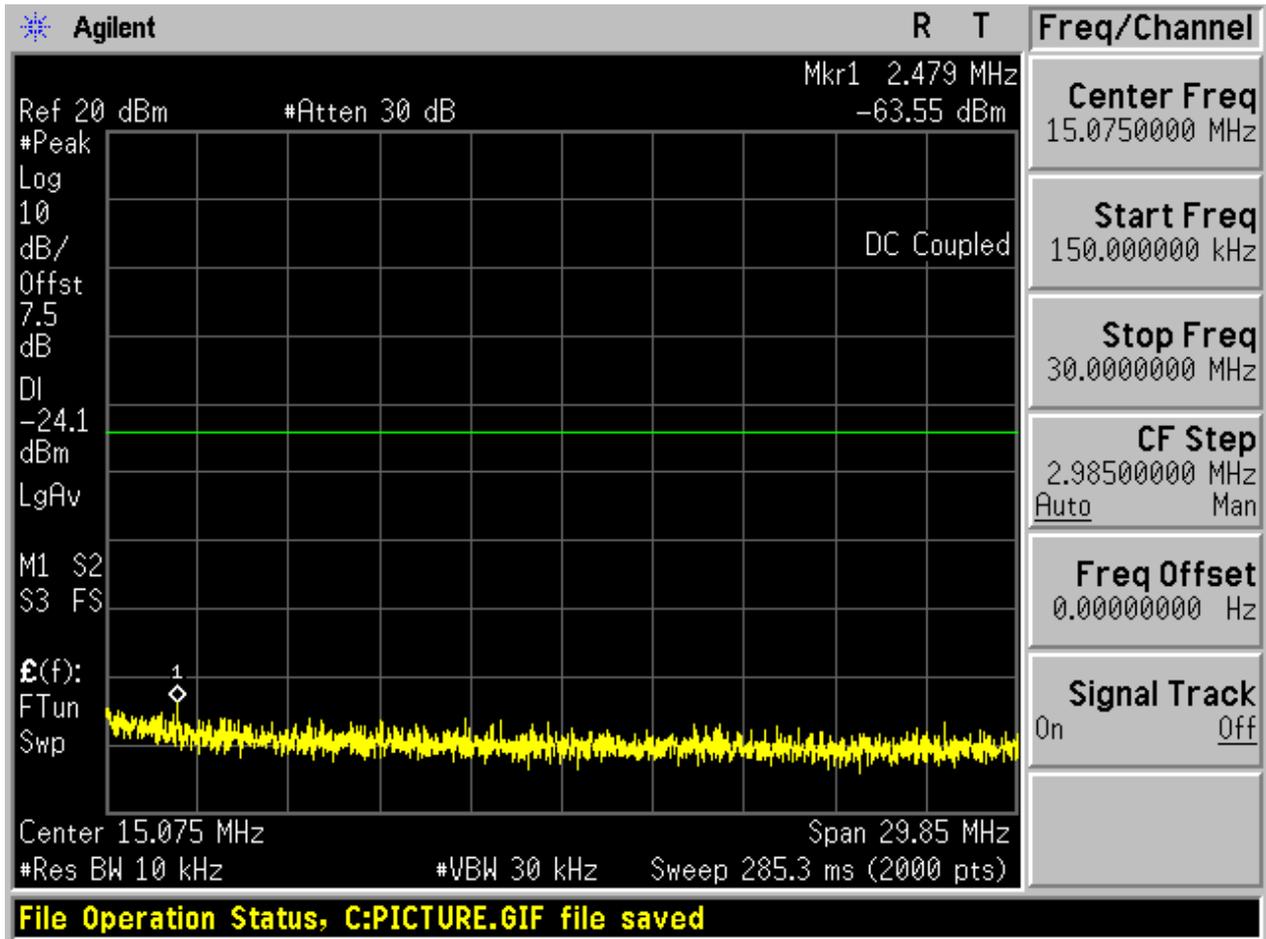
2.9 TM3_3DH5_Ch78

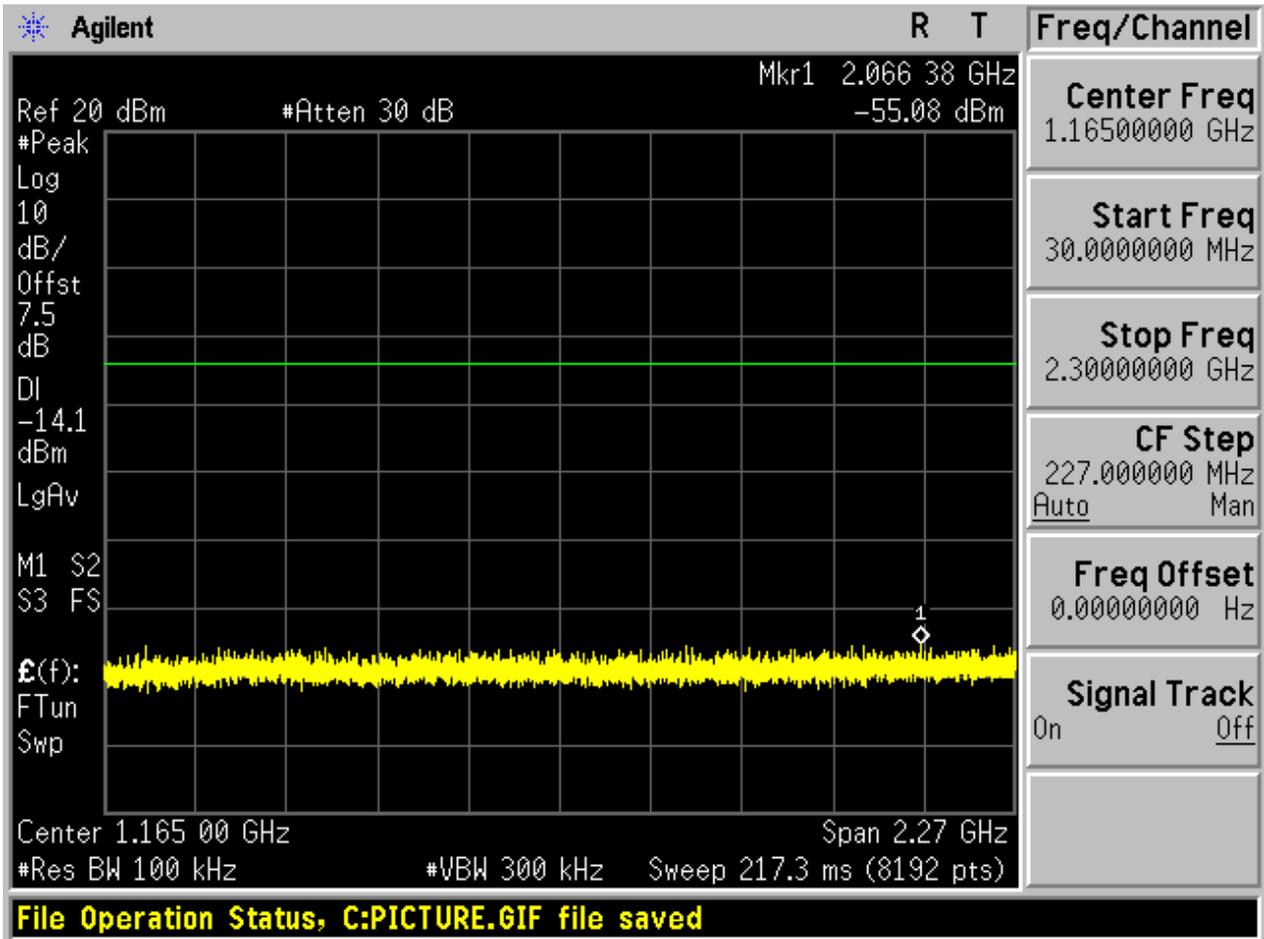
2.9.1 Pref

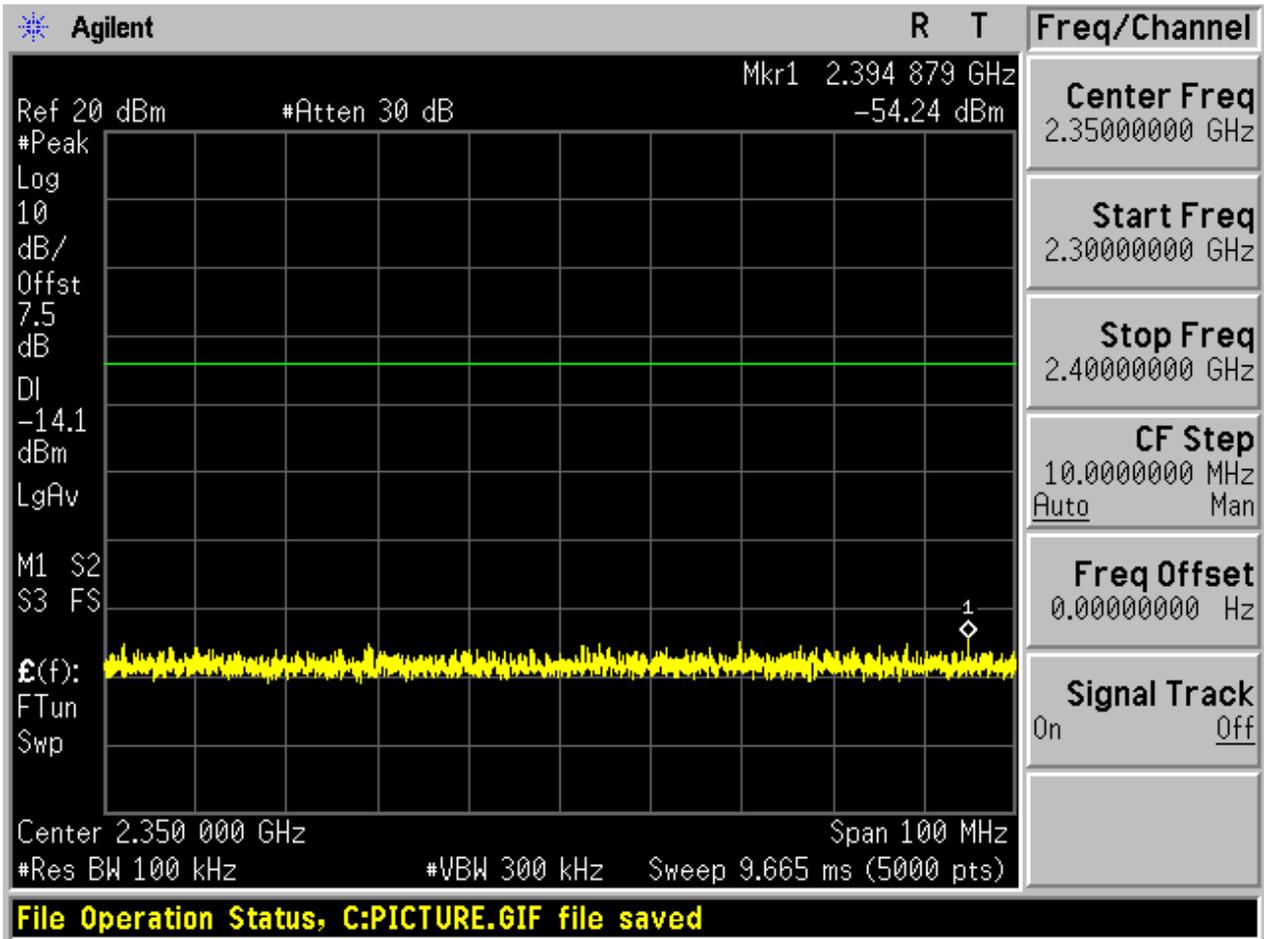


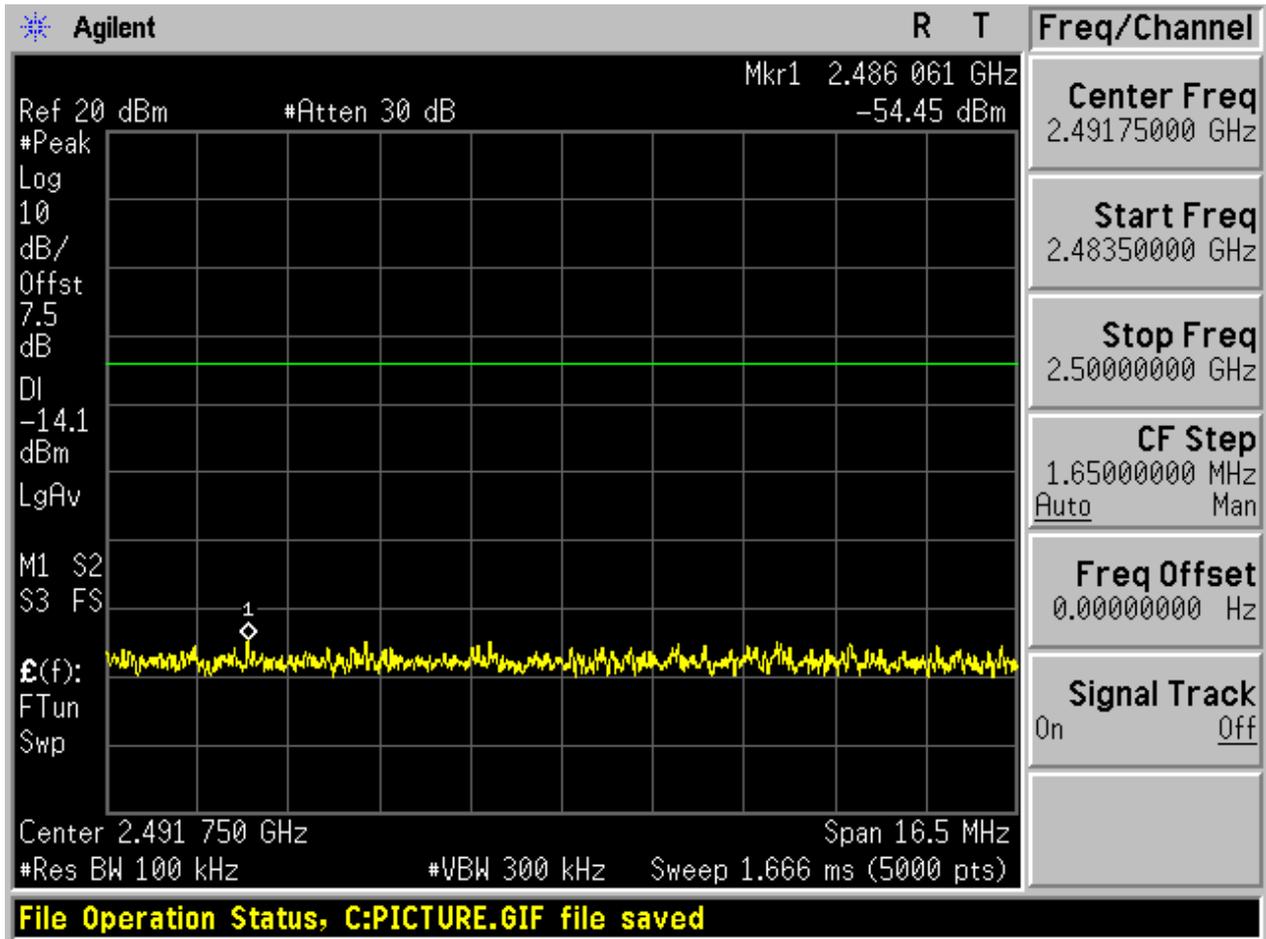
2.9.2 Puw

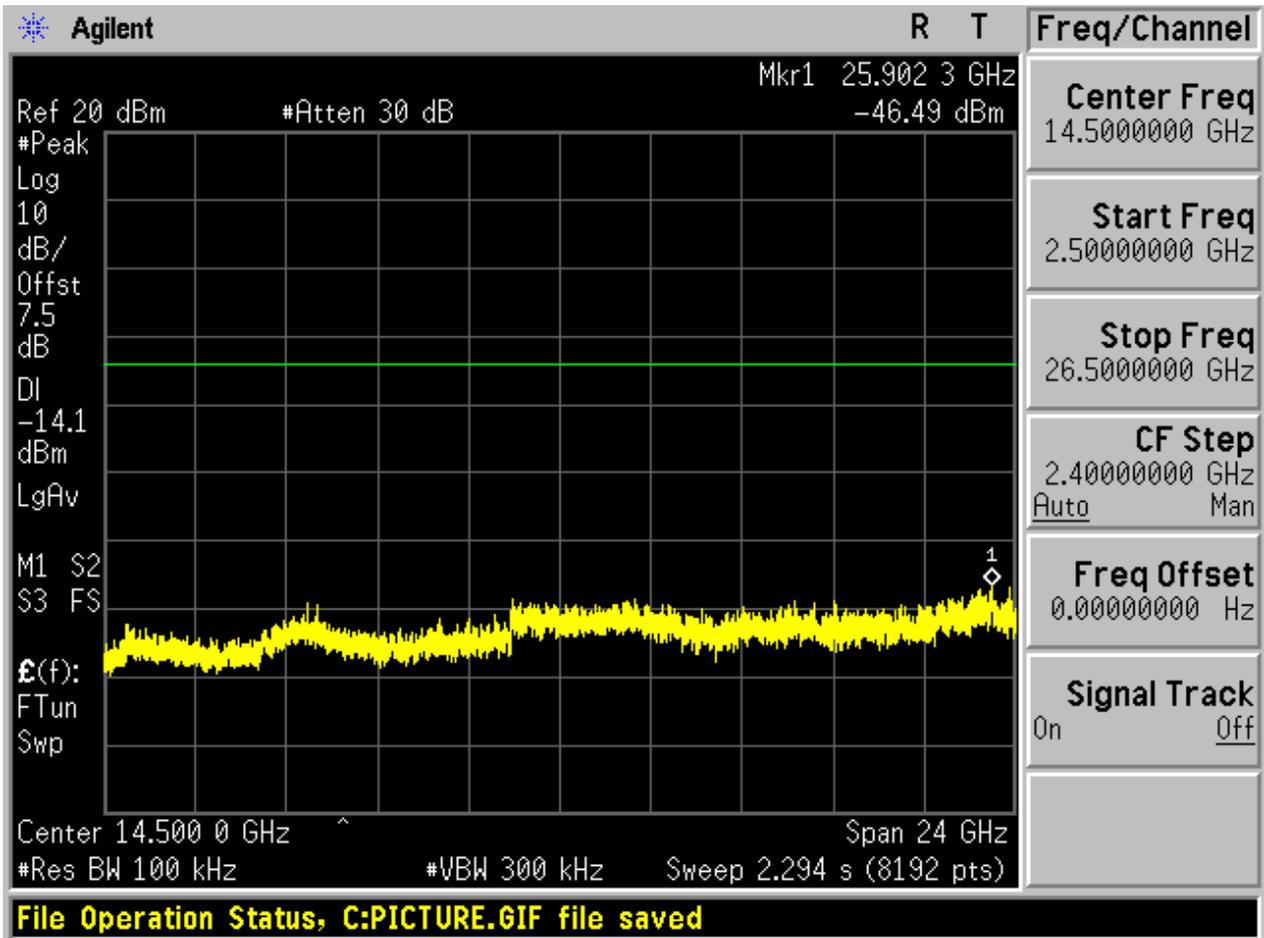














Appendix H: AC Power Line Conducted Emissions



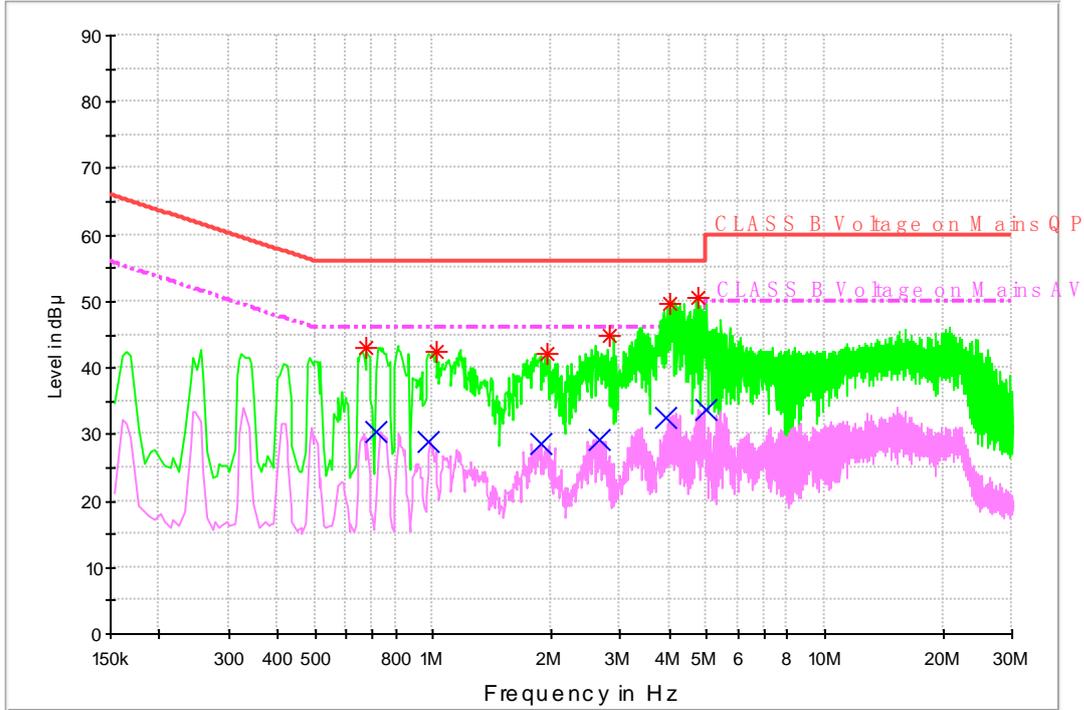
1 Result Table

In this Appendix, only the test results and plots under the worst case can be reported.

EUT Conf.	Maximum Emissions	Verdict
Worst Conf.	Not found obvious spikes or see marked spikes on plots and listed emissions records.	Pass

2 Result Plot

CLASS B Voltage with ENV216



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Correct Factor dB	Limit dBuV	Margin dB	Line
0.675694	43.0	9.7	56.0	13.0	L1
1.015755	42.3	9.7	56.0	13.7	L1
1.945459	42.0	9.7	56.0	14.0	L1
2.827110	44.7	9.7	56.0	11.3	L1
4.008514	49.6	9.8	56.0	6.4	L1
4.745284	50.6	9.8	56.0	5.4	L1



Final Result 2

Frequency (MHz)	Average (dB μ V)	Correct Factor dB	Limit dB μ V	Margin dB	Line
0.718395	30.5	9.7	46.0	15.5	L1
0.973766	29.0	9.7	46.0	17.0	L1
1.880456	28.5	9.7	46.0	17.5	L1
2.654779	29.2	9.7	46.0	16.8	L1
3.940332	32.6	9.8	46.0	13.4	L1
4.953236	33.7	9.8	46.0	12.6	L1

END