Appendix A: 20dB Emission Bandwidth (EBW)

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1 Result Table

EUT Conf.	EBW [MHz]	Verdict
TM1_DH5_Ch0	1.019	Pass
TM1_DH5_Ch39	1.018	Pass
TM1_DH5_Ch78	1.021	Pass
TM2_2DH5_Ch0	1.339	Pass
TM2_2DH5_Ch39	1.339	Pass
TM2_2DH5_Ch78	1.338	Pass
TM3_3DH5_Ch0	1.324	Pass
TM3_3DH5_Ch39	1.324	Pass
TM3_3DH5_Ch78	1.327	Pass

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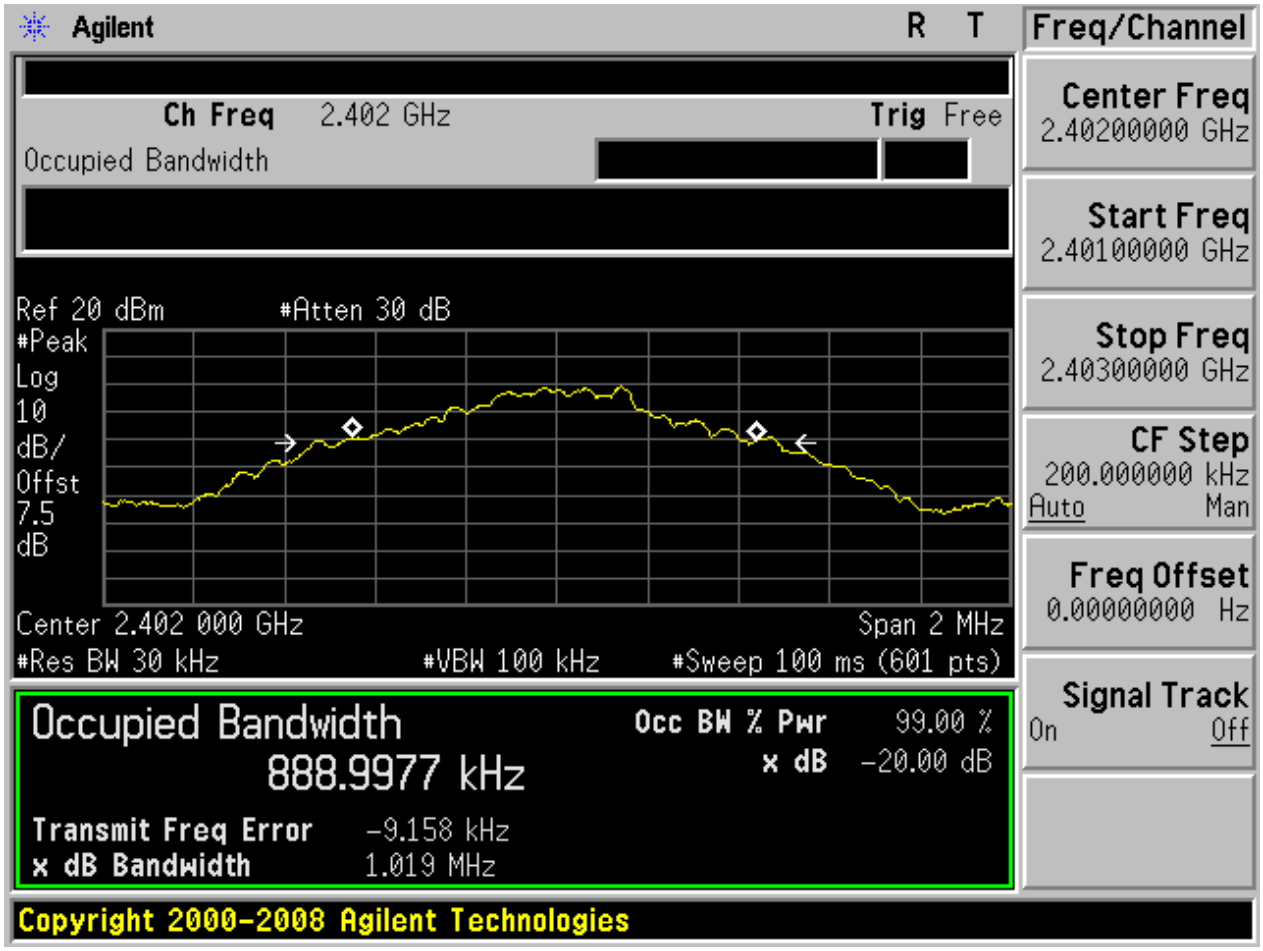
2 Test Plot

2.1 TM1_DH5_Ch0



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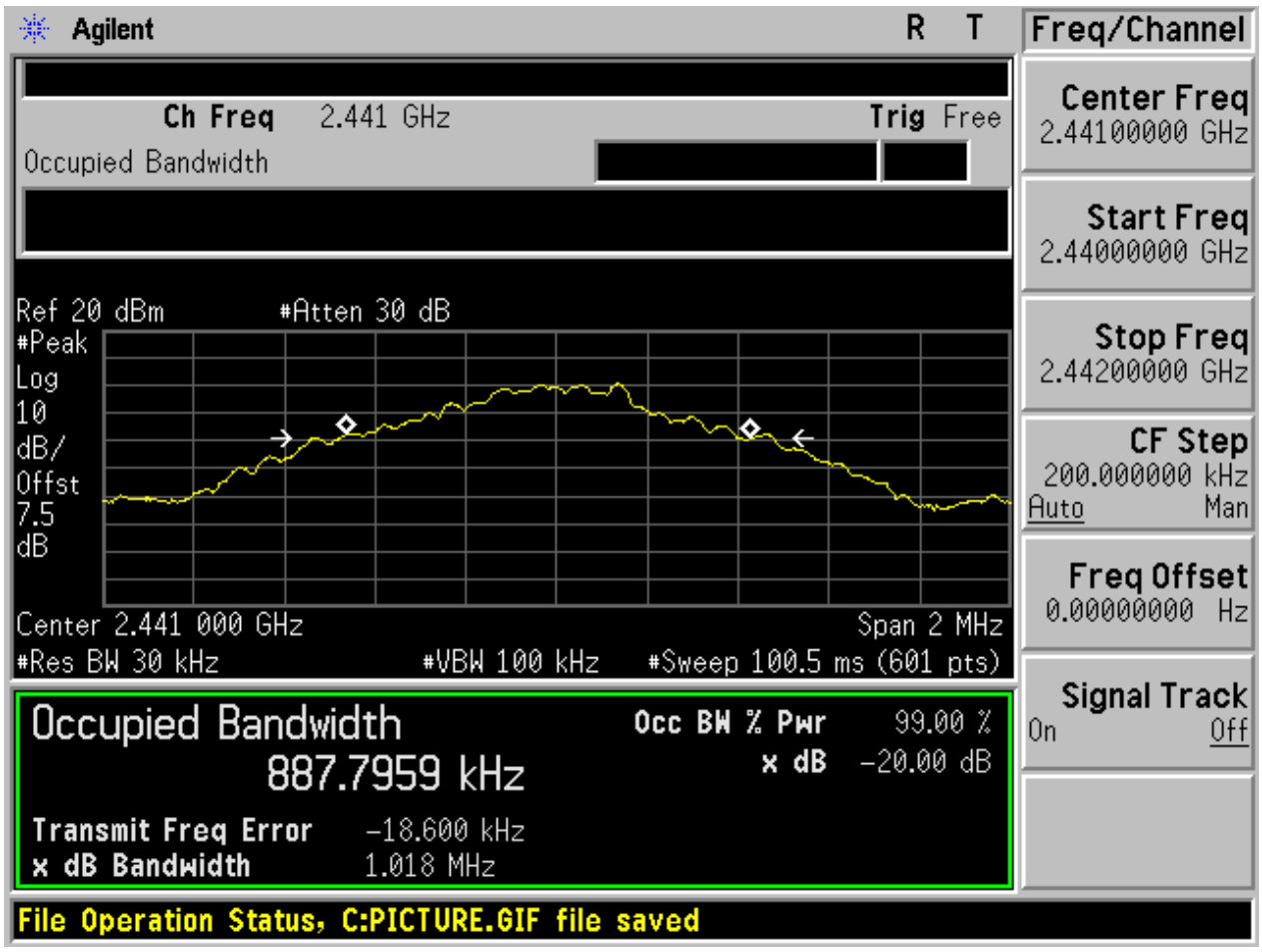
2.2 TM1_DH5_Ch39



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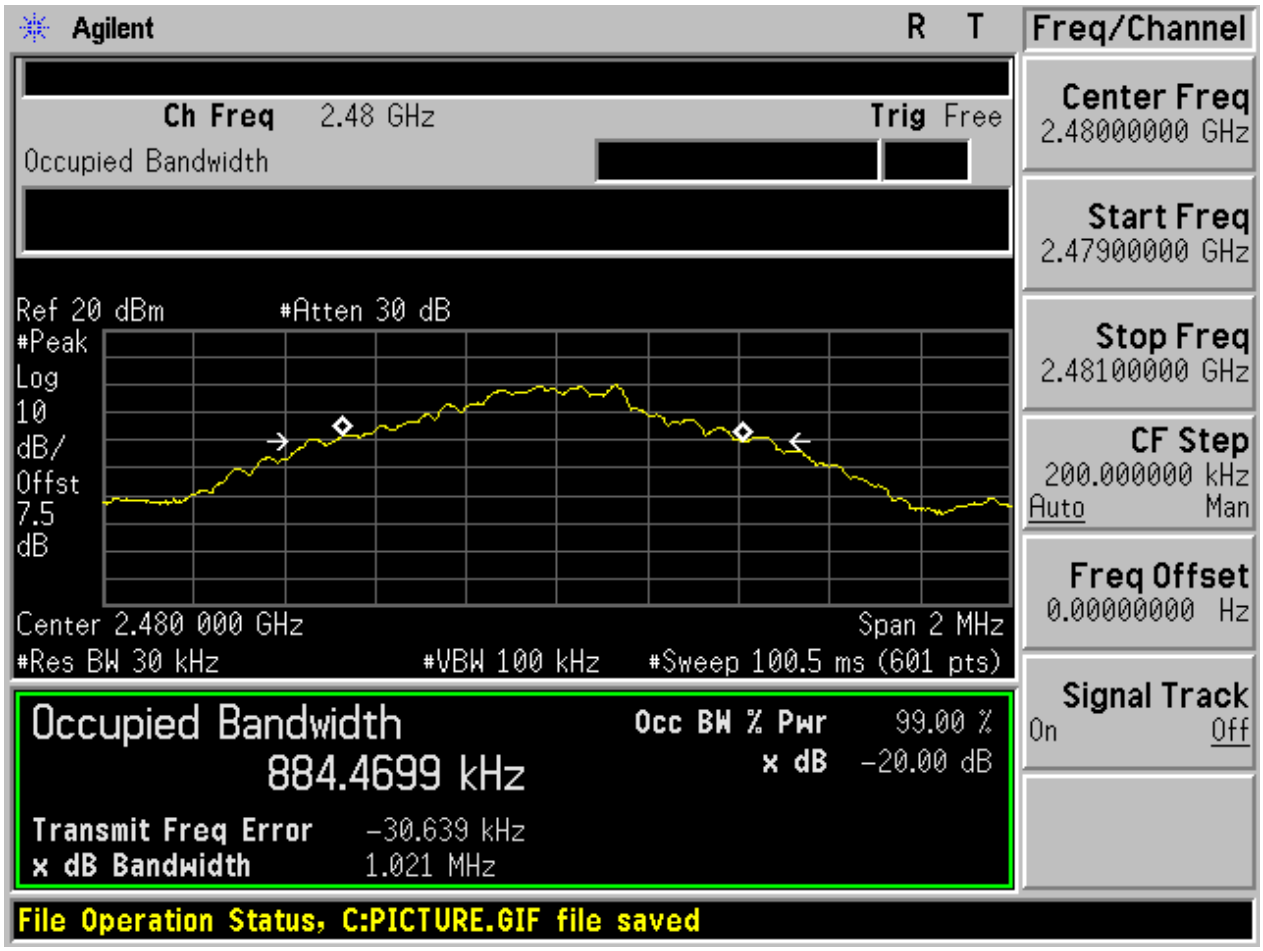
2.3 TM1_DH5_Ch78



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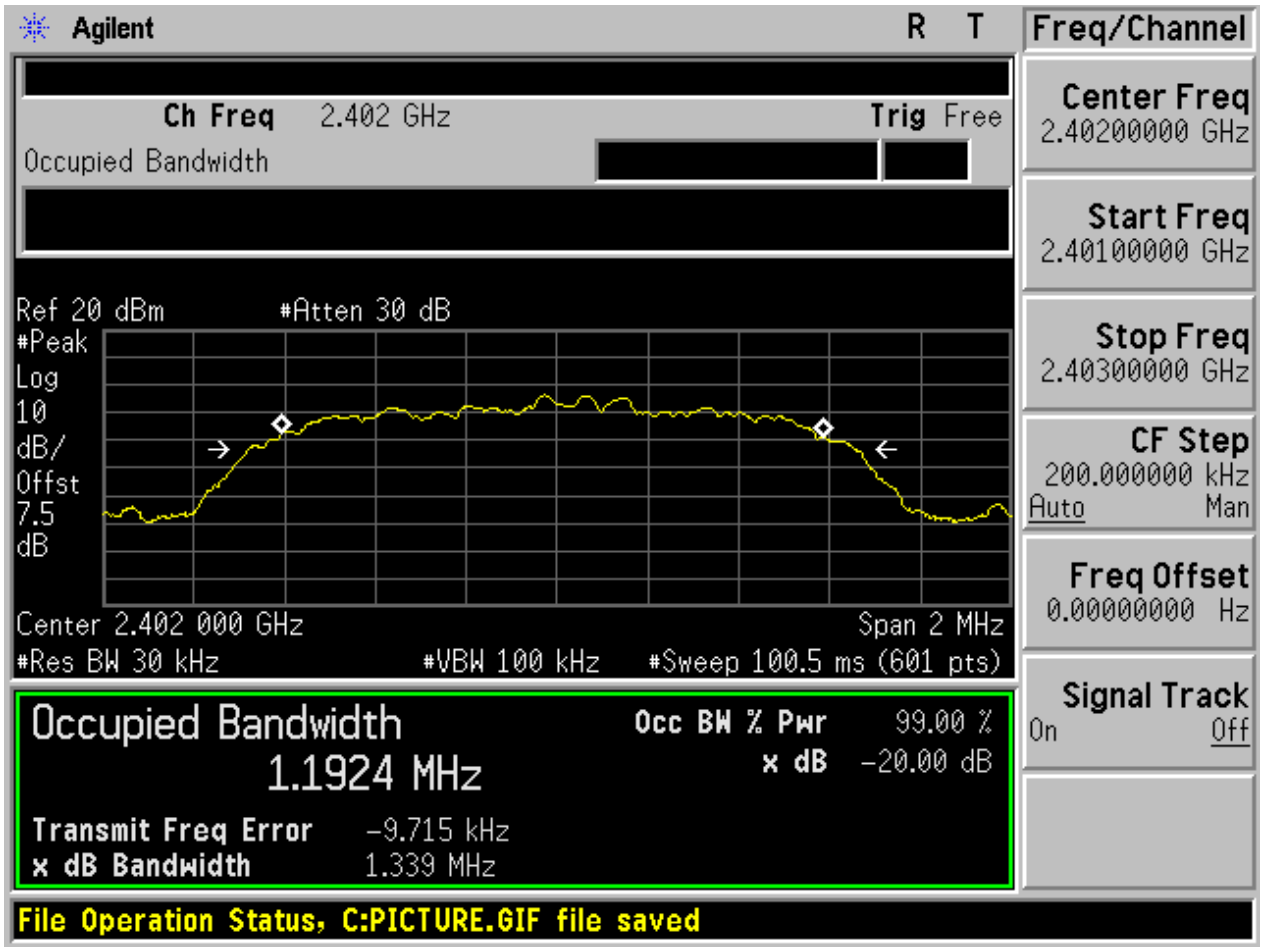
2.4 TM2_2DH5_Ch0



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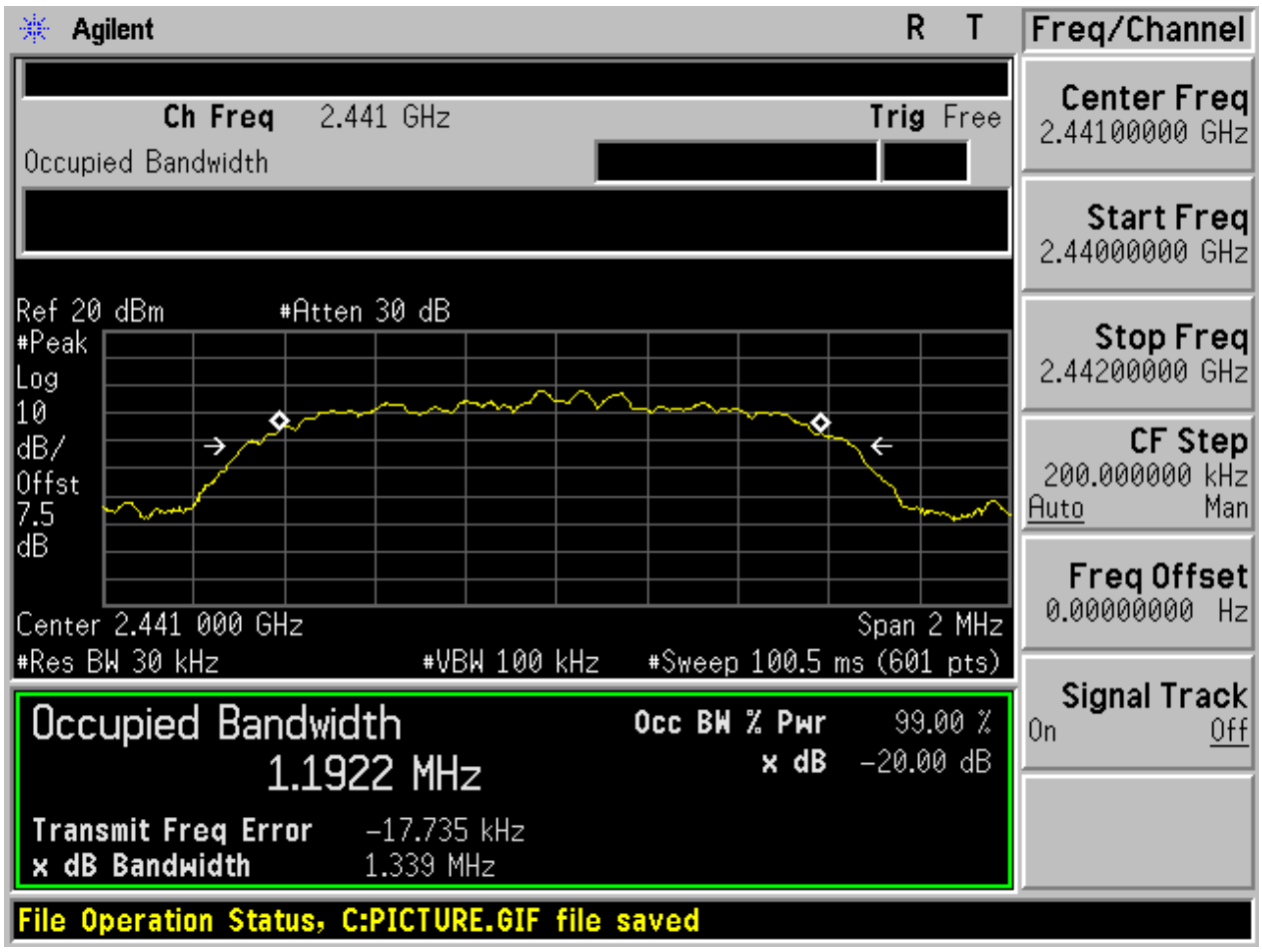
2.5 TM2_2DH5_Ch39



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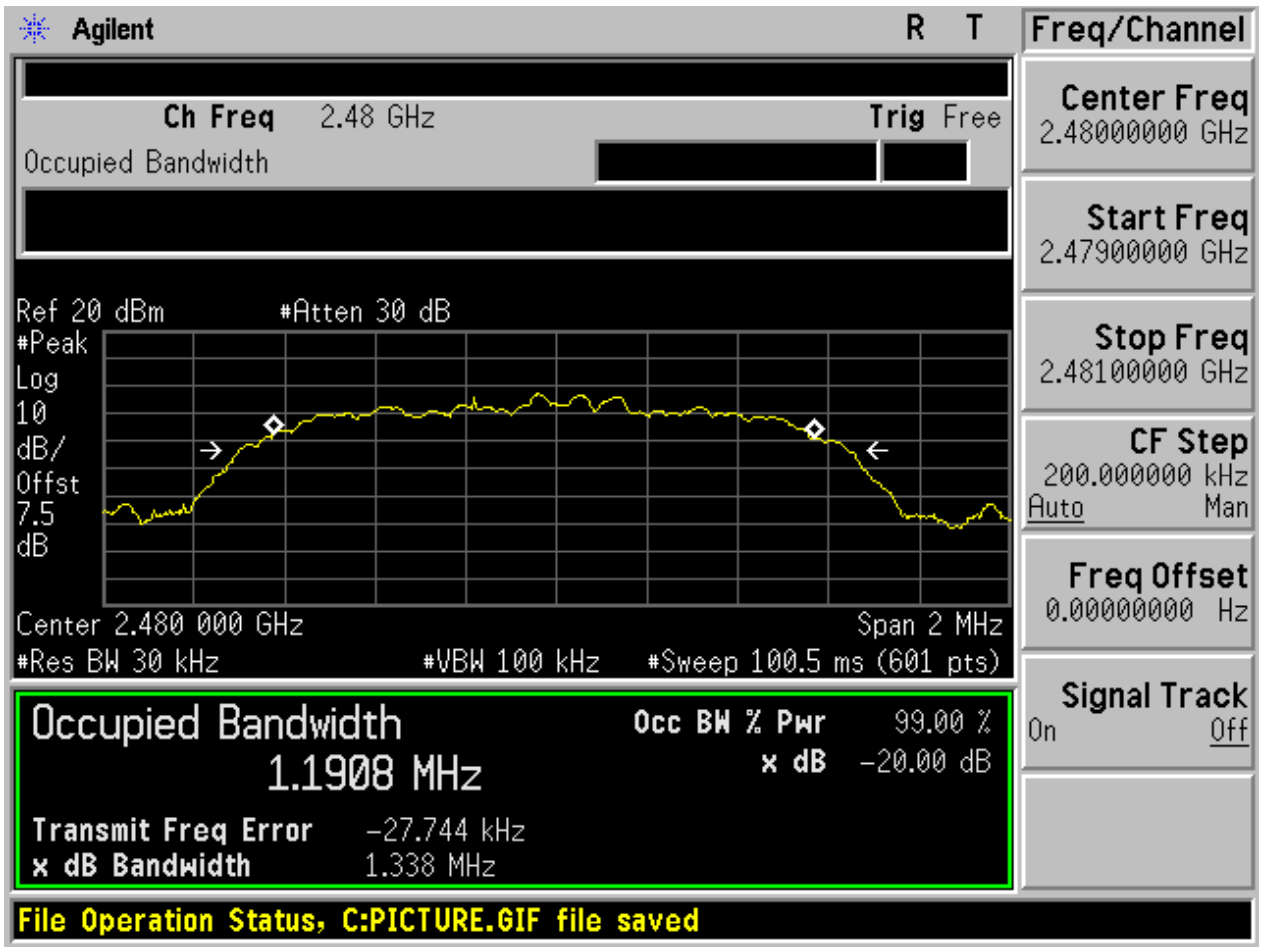
2.6 TM2_2DH5_Ch78



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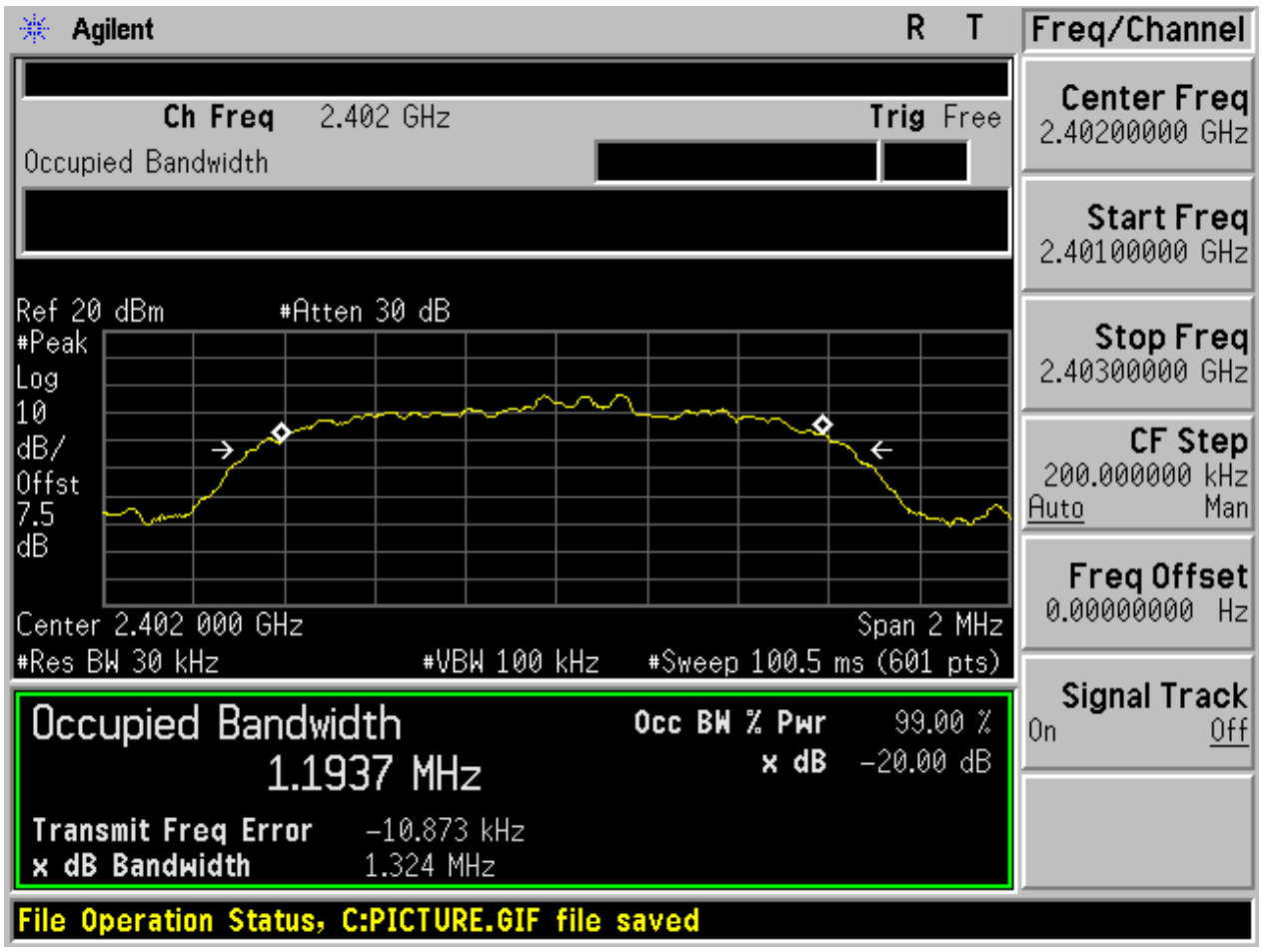
2.7 TM3_3DH5_Ch0



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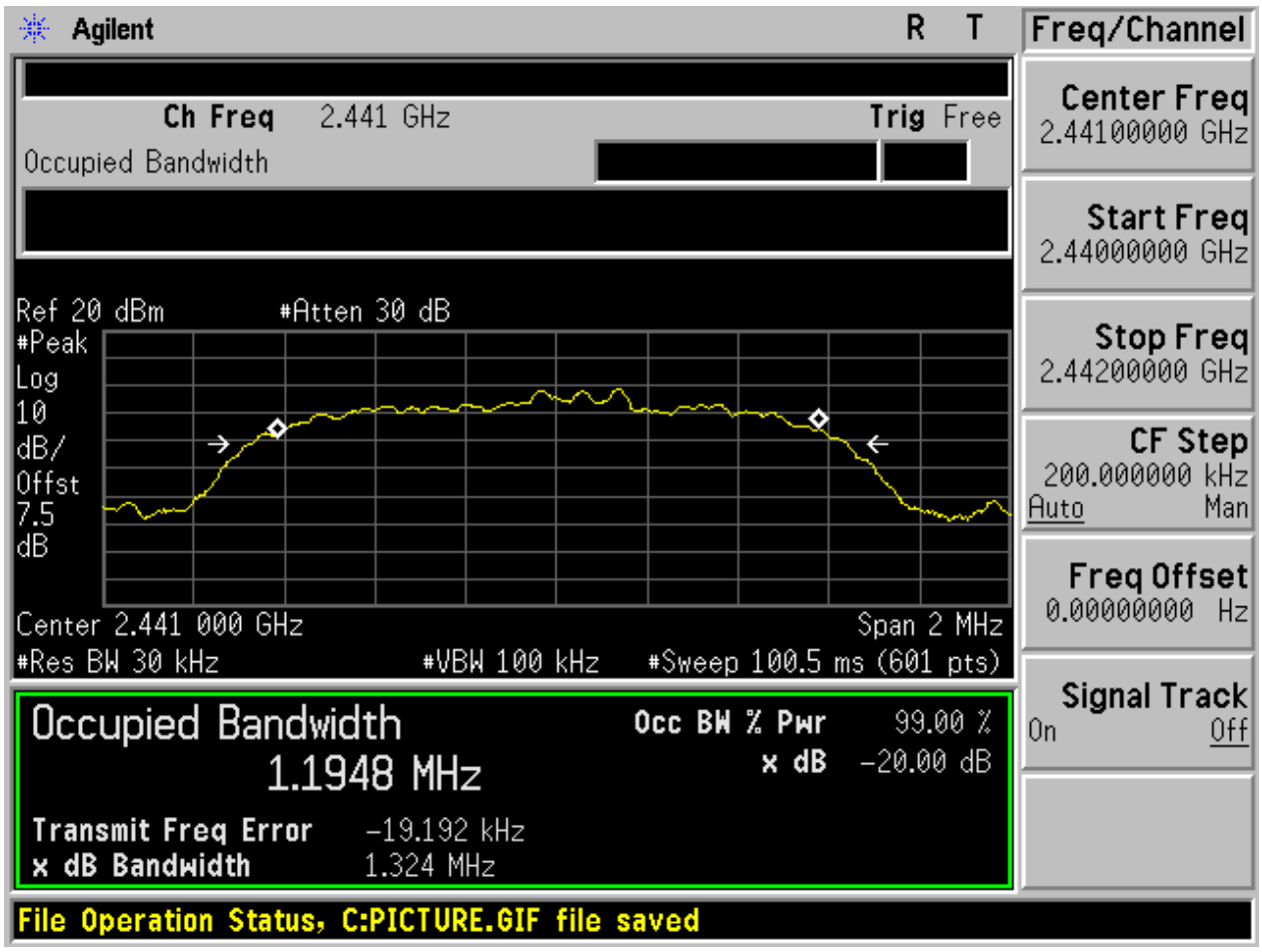
2.8 TM3_3DH5_Ch39



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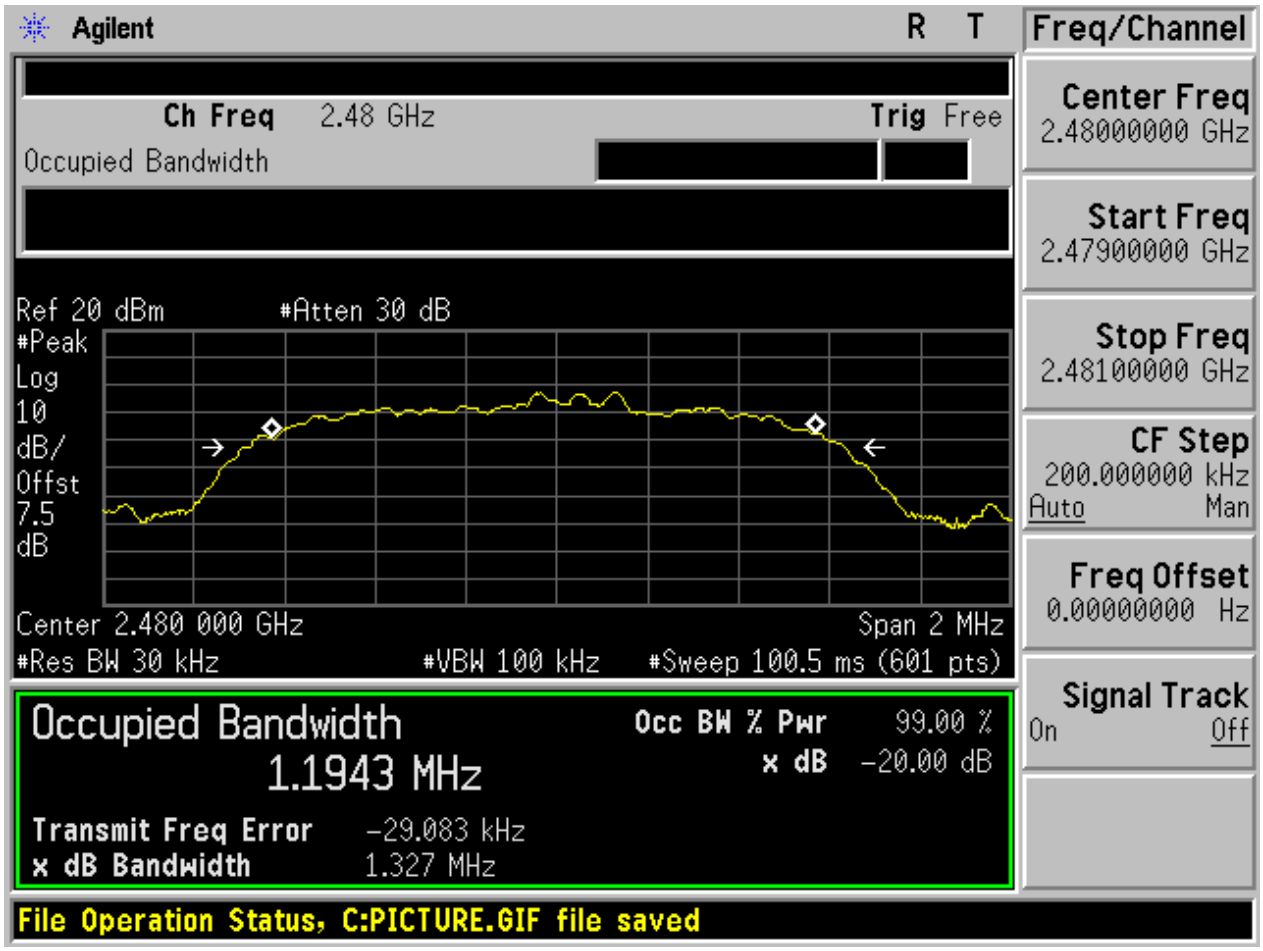
2.9 TM3_3DH5_Ch78



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Appendix B: Carrier Frequency Separation

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1 Result Table

EUT Conf.	Carrier Frequency Separation [MHz]	Verdict
TM1_DH5_Hop	0.900	Pass
TM2_2DH5_Hop	1.050	Pass
TM3_3DH5_Hop	1.200	Pass

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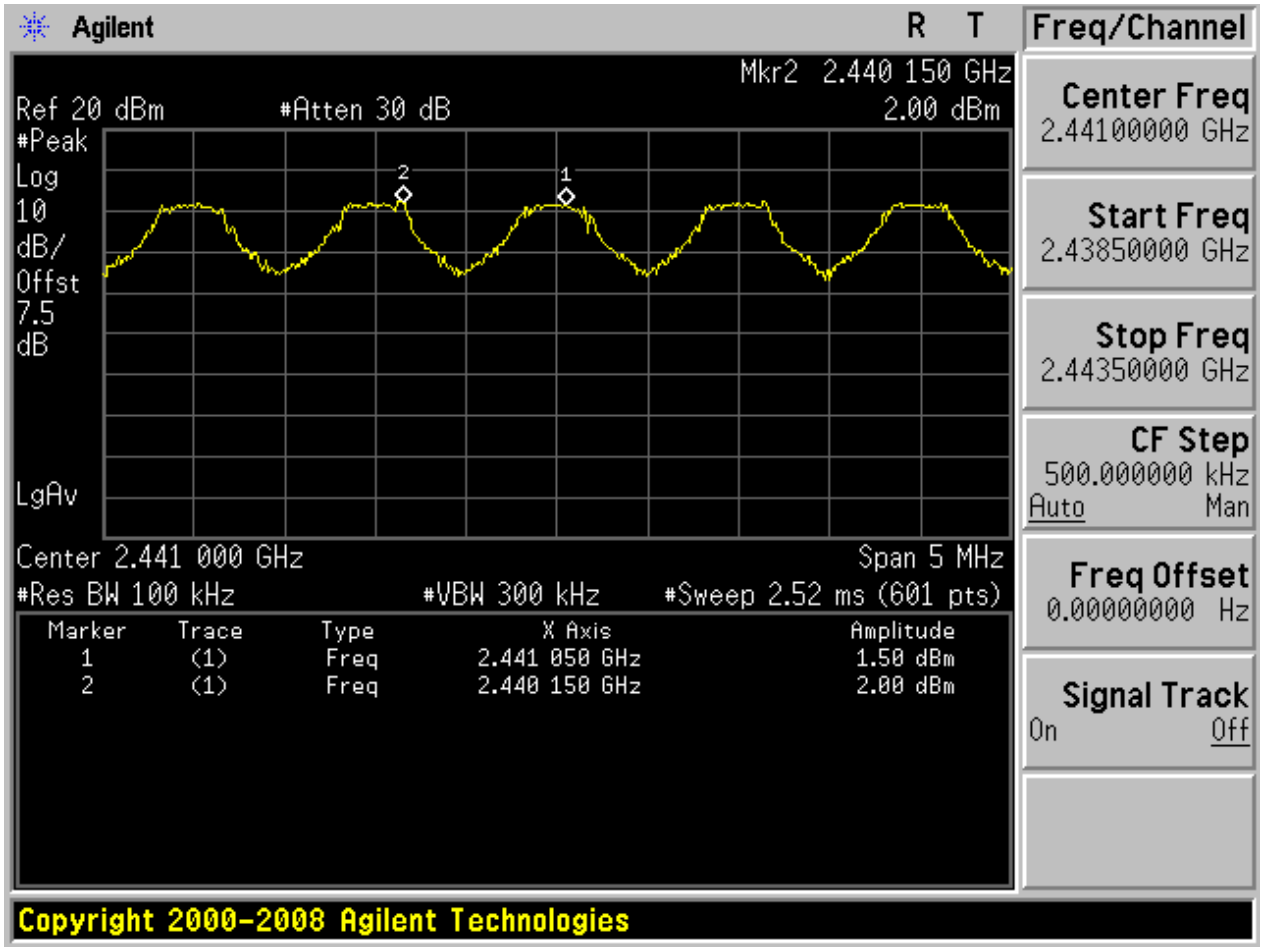
2 Test Plot

2.1 TM1_DH5_Hop



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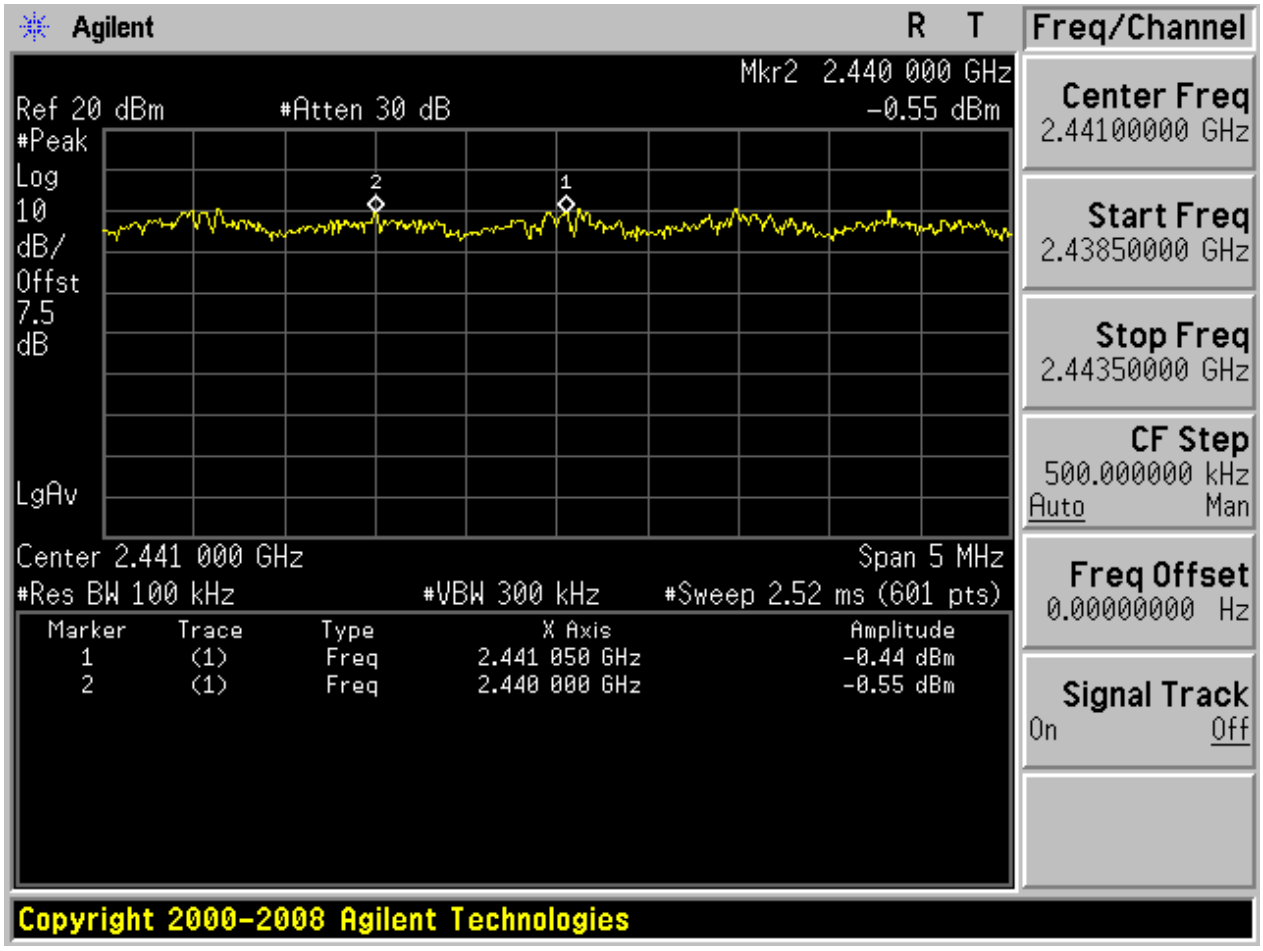
2.2 TM2_2DH5_Hop



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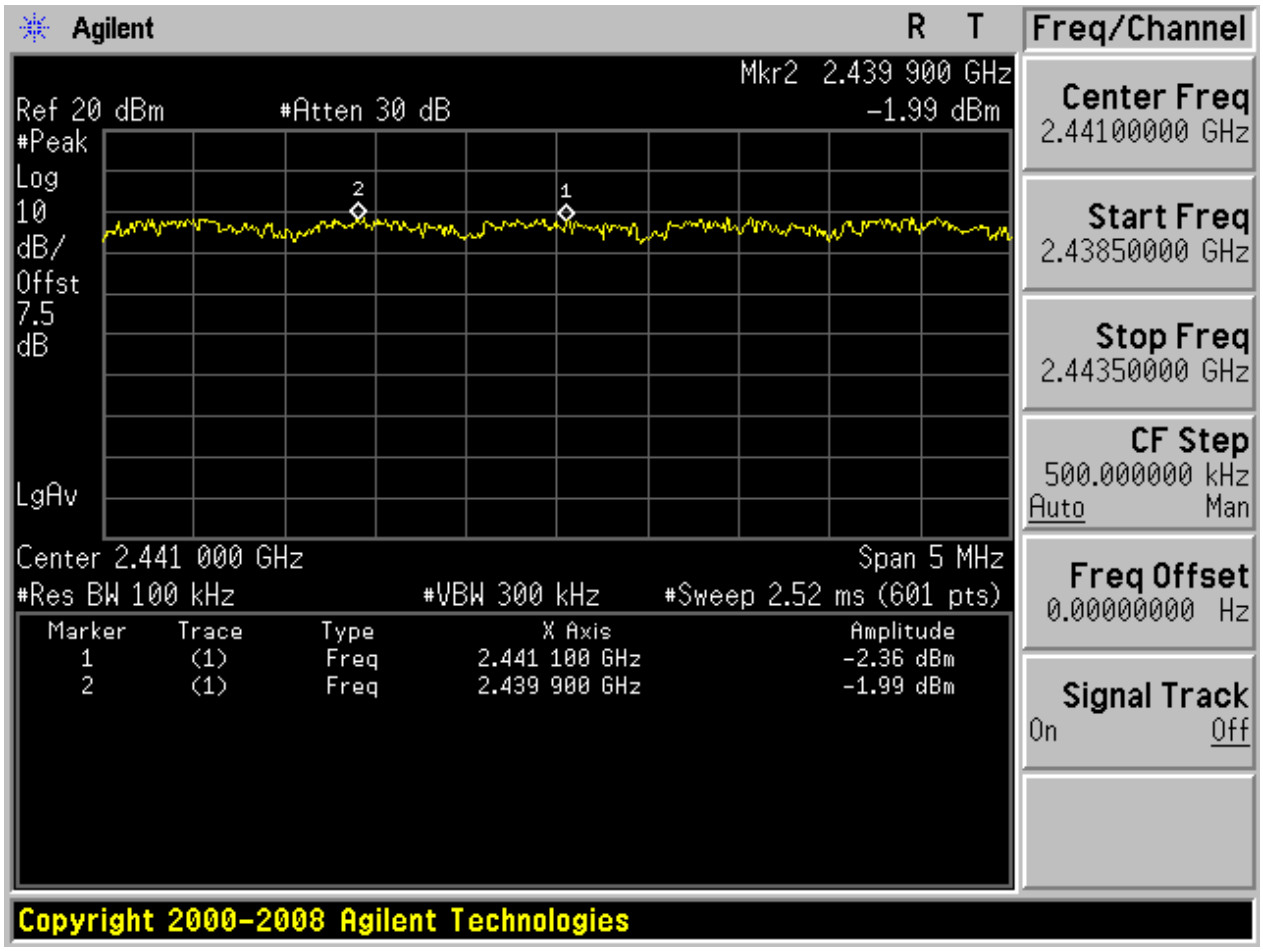
2.3 TM3_3DH5_Hop



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Appendix C: Number of Hopping Channel

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1 Result Table

EUT Conf.	Number of Hopping Channel	Verdict
TM1_DH5_Hop	79	Pass
TM2_2DH5_Hop	79	Pass
TM3_3DH5_Hop	79	Pass

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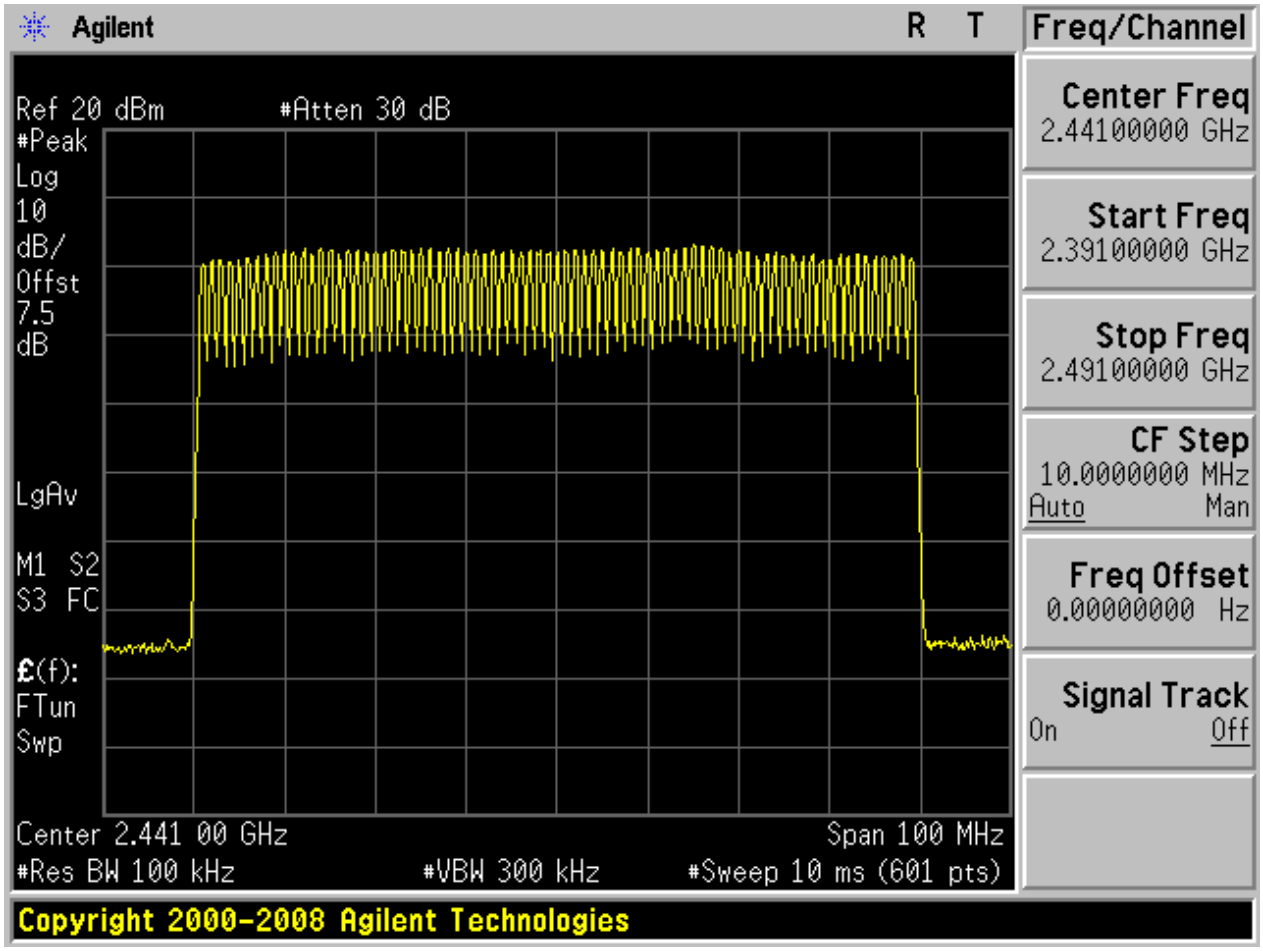
2 Test Plot

2.1 TM1_DH5_Hop



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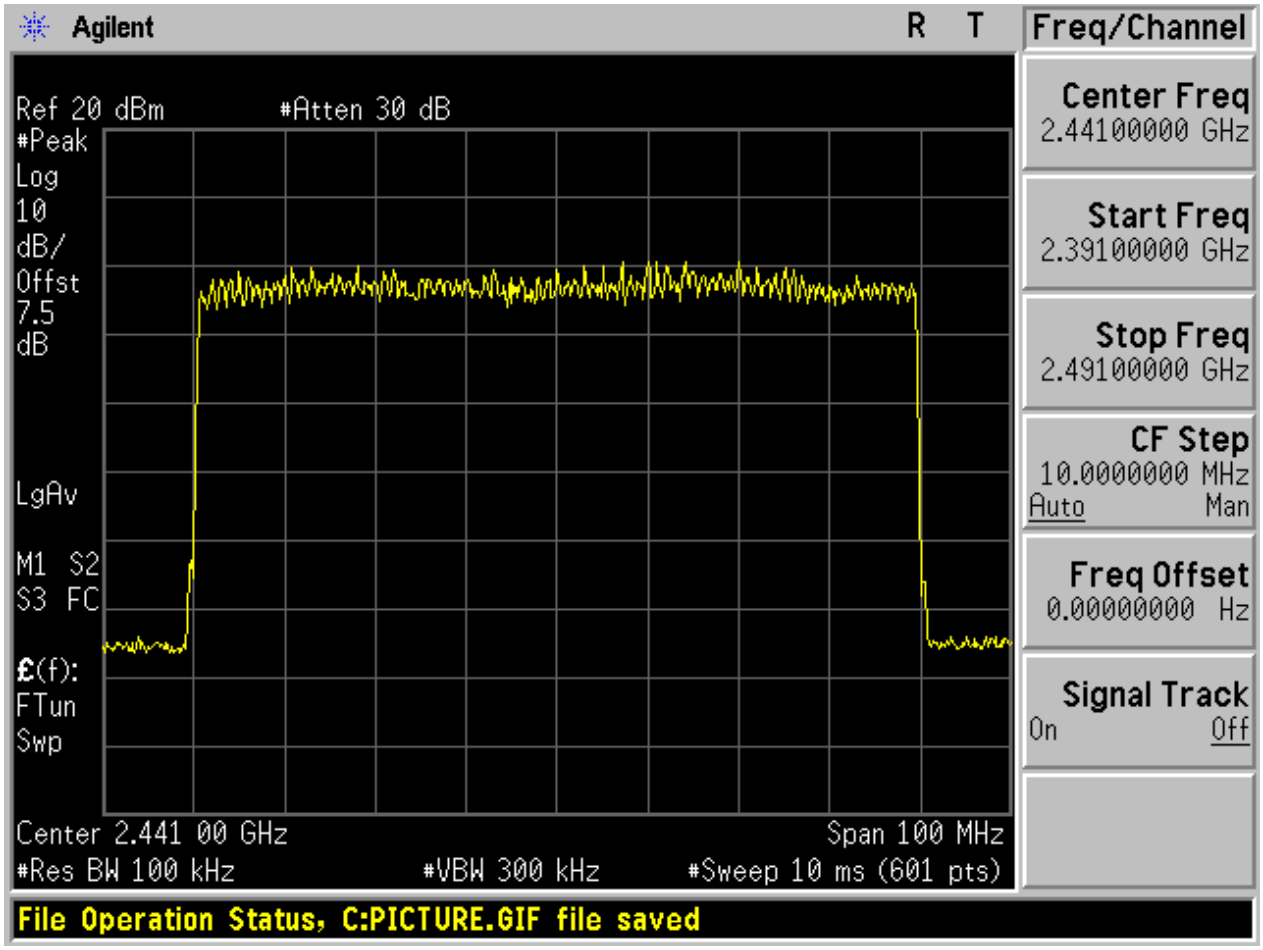
2.2 TM2_2DH5_Hop



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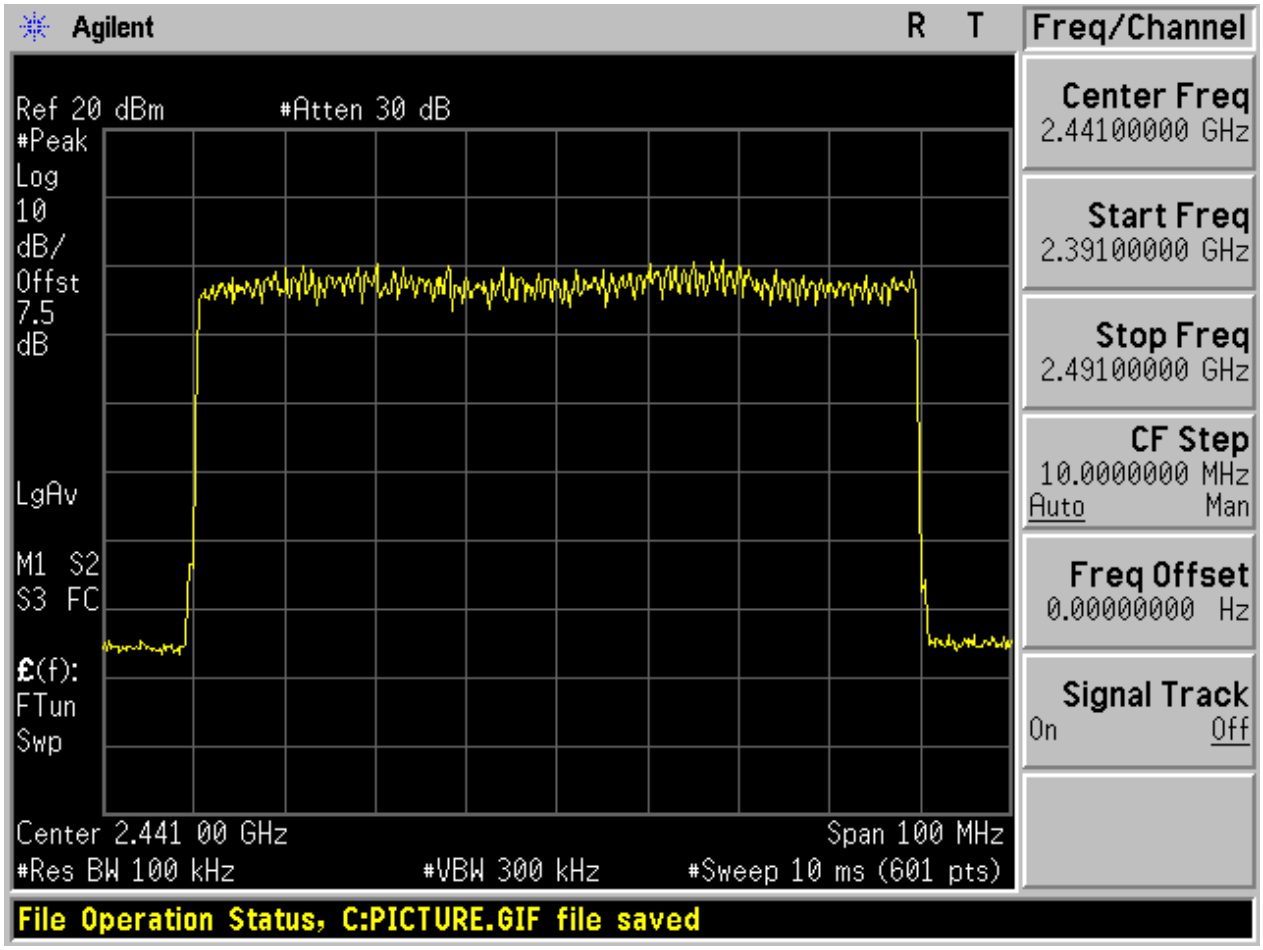
2.3 TM3_3DH5_Hop



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Appendix D: Time of Occupancy (Dwell Time)

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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 [s] * hopping number = 0.4 [s] * 79 [ch] = 31.6 [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 [ch*hop/s];
- The hops per second on one channel: 266.67 [ch*hop/s] / 79 [ch] =3.38 [hop/s];
- The total hops for all channels within the dwell time calculation duration: 3.38 [hop/s] * 31.6 [s*ch] = 106.67 [hop*ch];
- The dwell time for all channels hopping: 106.67 [hop*ch] * Burst Width [ms/hop/ch].

EUT Conf.	Burst Width [ms/hop/ch]	Total Hops [hop*ch]	Dwell Time [ms]	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

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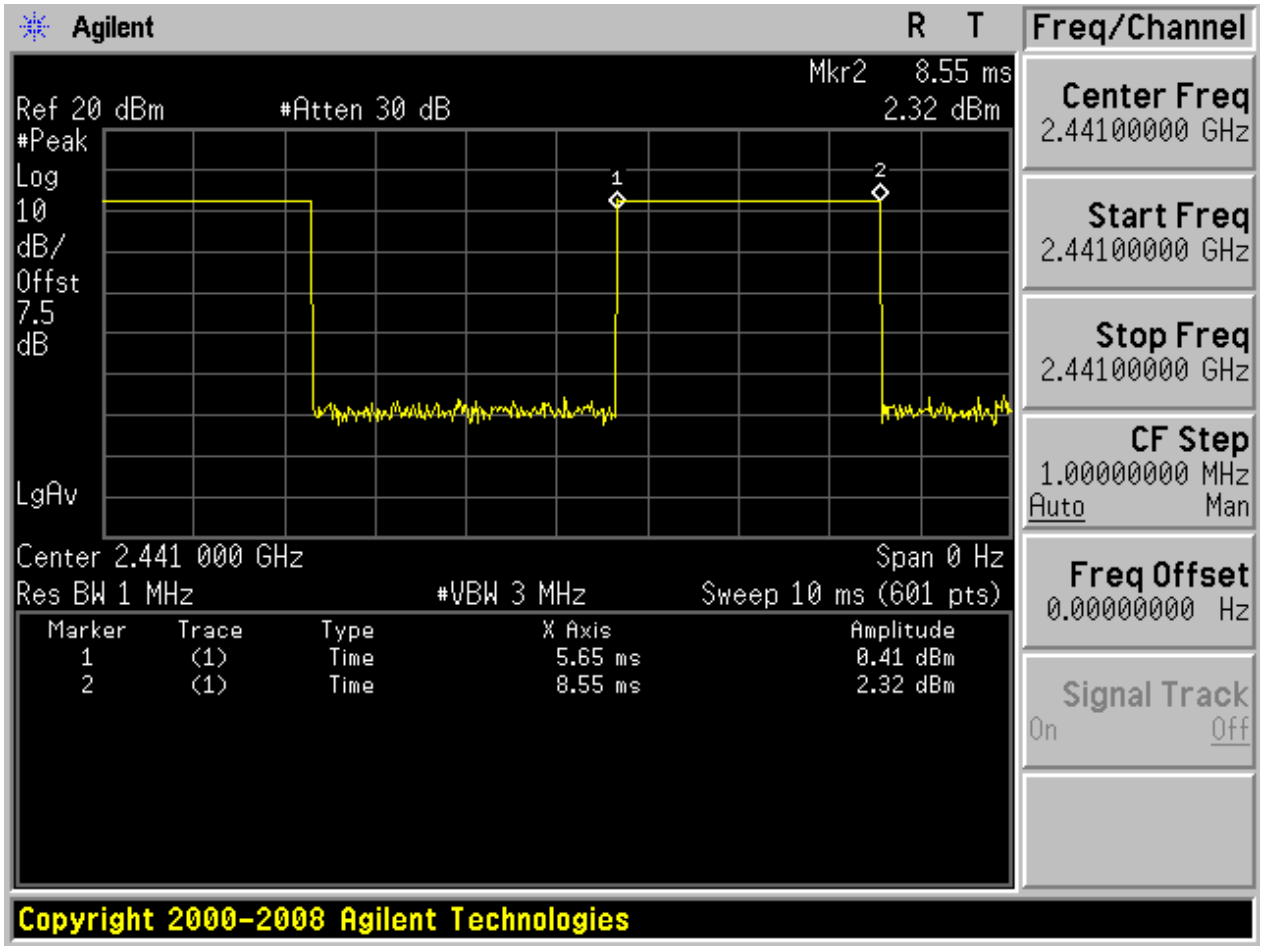
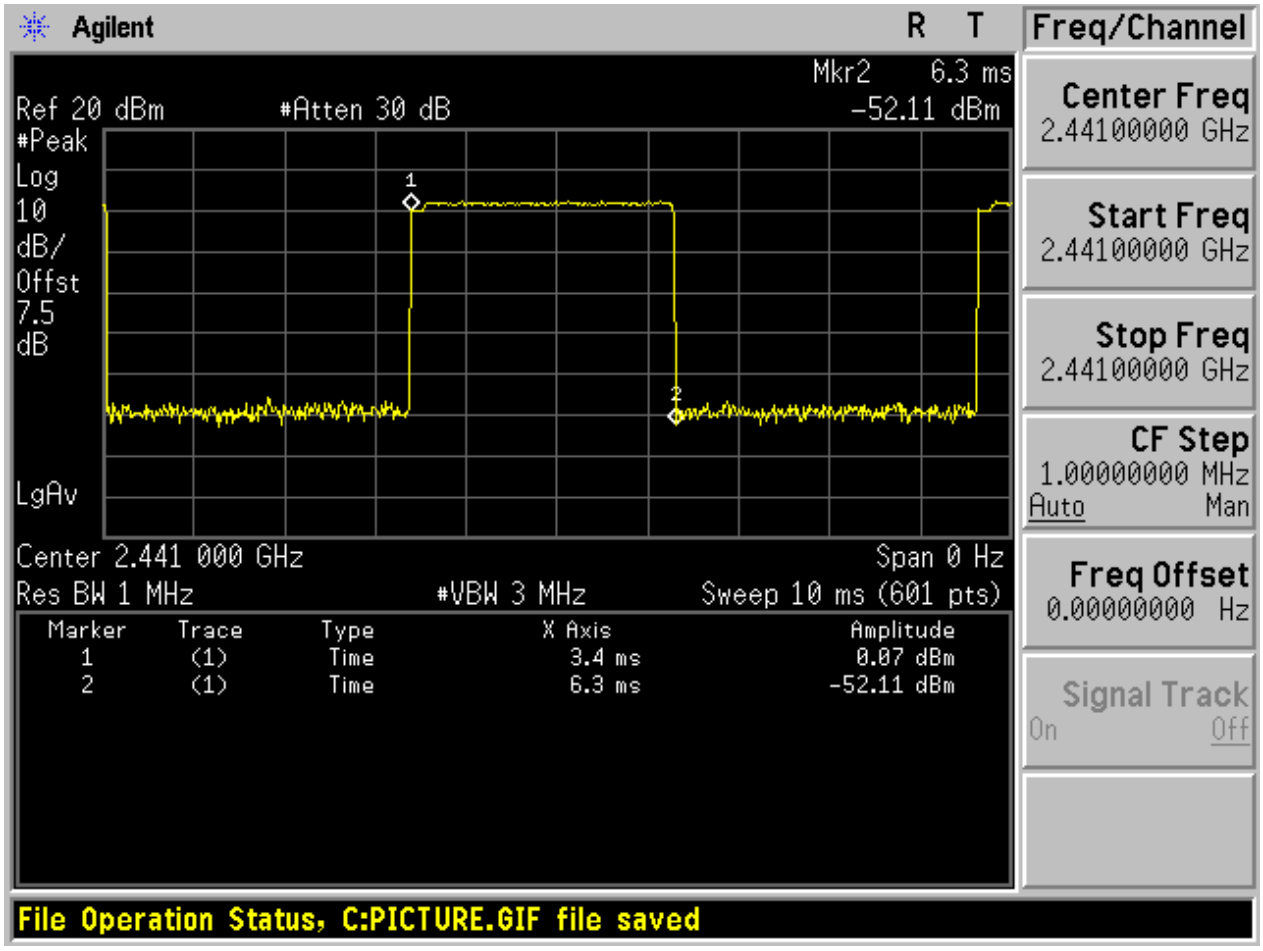
2 Test Plot

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

2.1 TM1_DH5_Ch39



2.2 TM2_2DH5_Ch39



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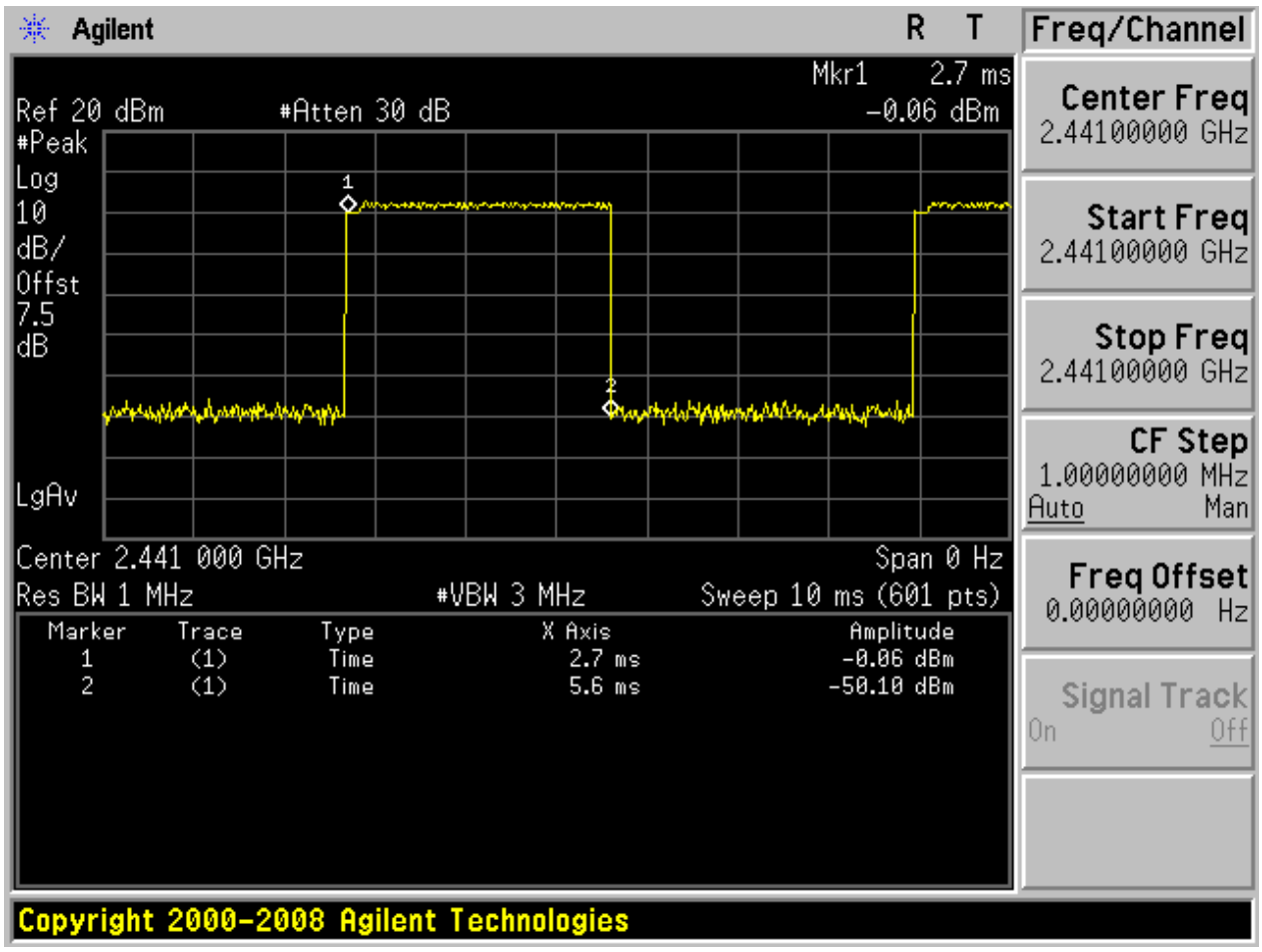
2.3 TM3_3DH5_Ch39



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Appendix E: Maximum Peak Conducted Output Power

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1 Result Table

EUT Conf.	Max. Peak Power [dBm]	Verdict
TM1_DH5_Ch0	1.22	Pass
TM1_DH5_Ch39	2.81	Pass
TM1_DH5_Ch78	2.04	Pass
TM2_2DH5_Ch0	1.04	Pass
TM2_2DH5_Ch39	2.6	Pass
TM2_2DH5_Ch78	1.86	Pass
TM3_3DH5_Ch0	1.48	Pass
TM3_3DH5_Ch39	3.06	Pass
TM3_3DH5_Ch78	2.31	Pass

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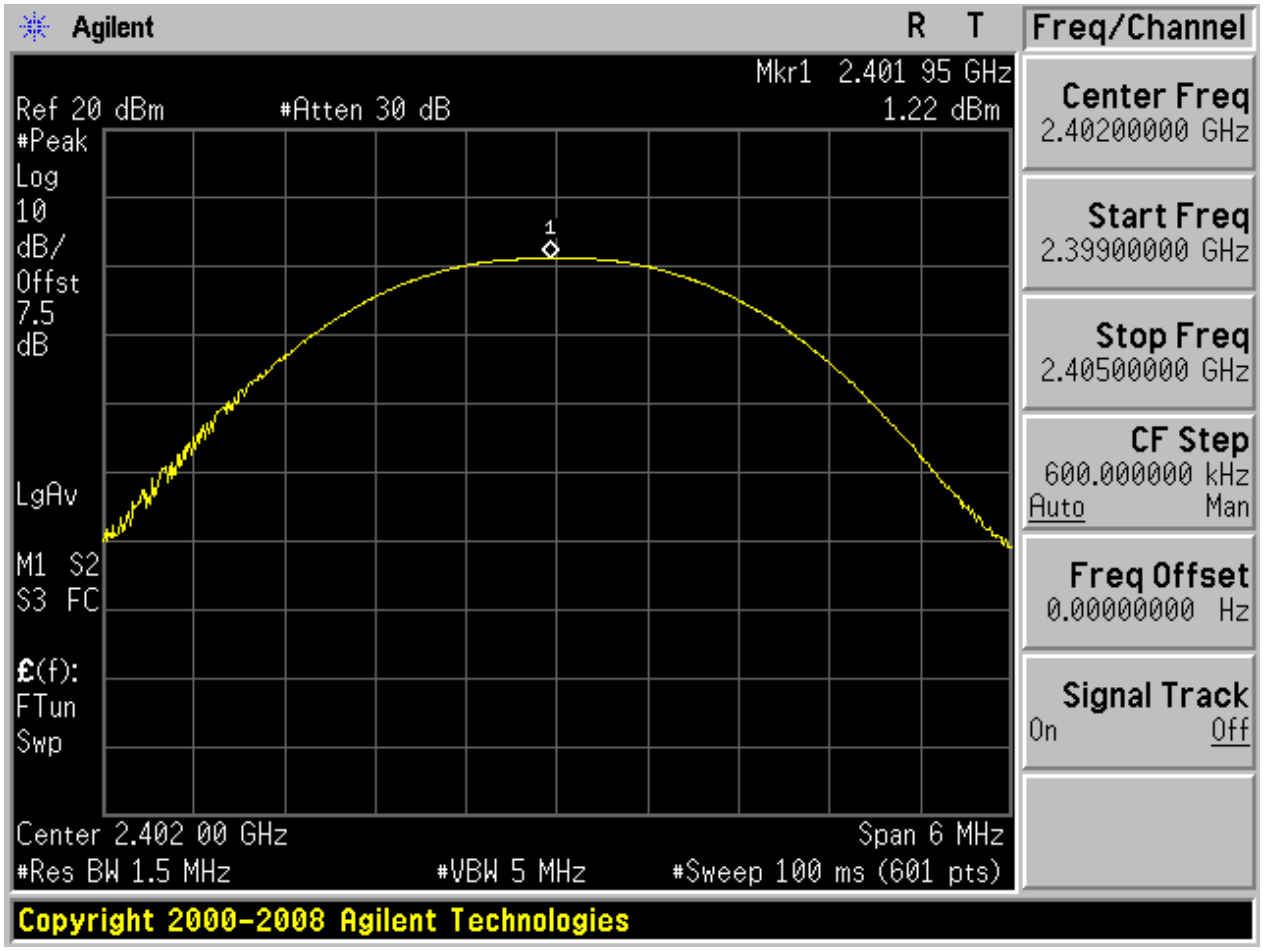
2 Test Plot

2.1 TM1_DH5_Ch0



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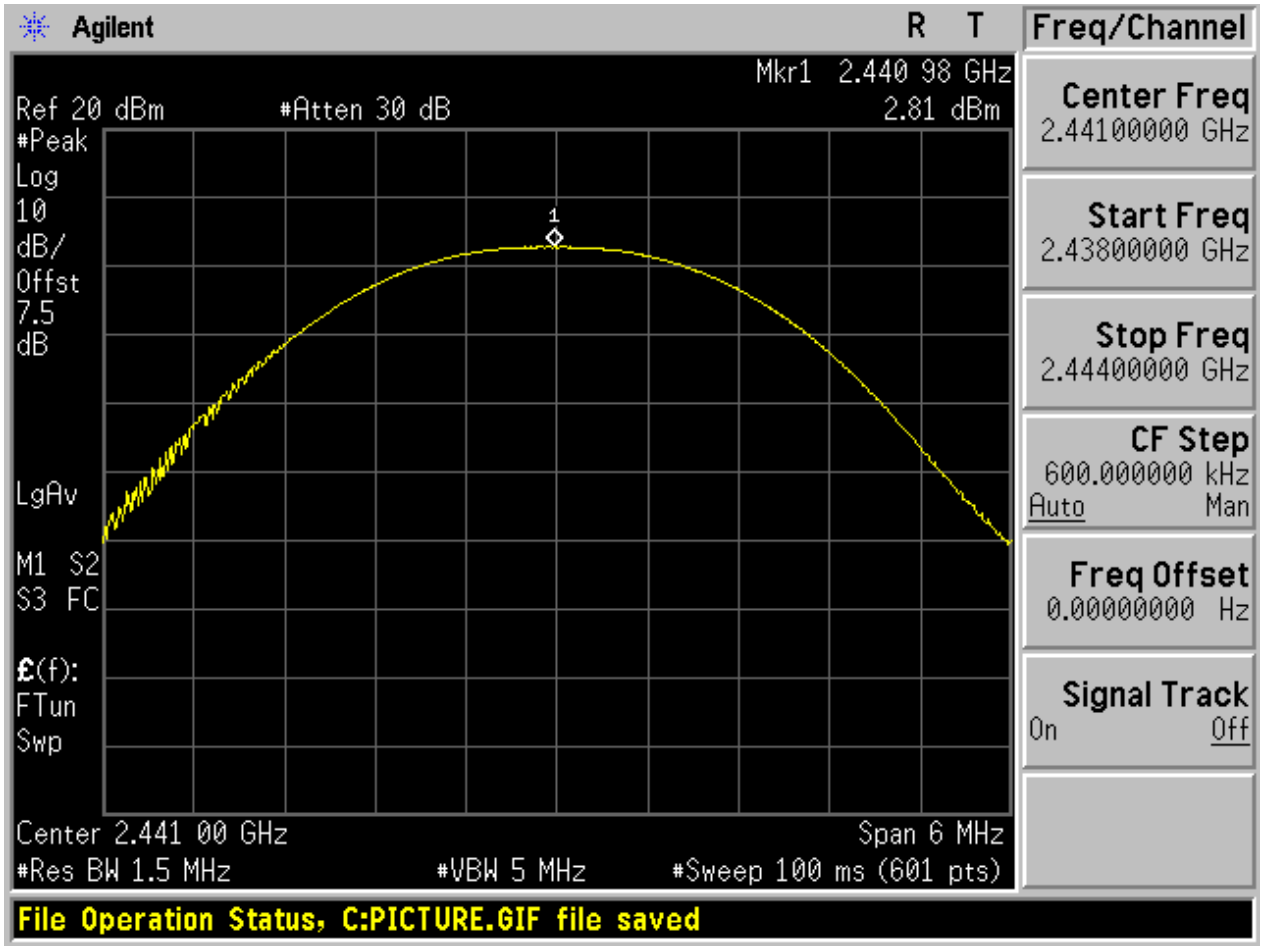
2.2 TM1_DH5_Ch39



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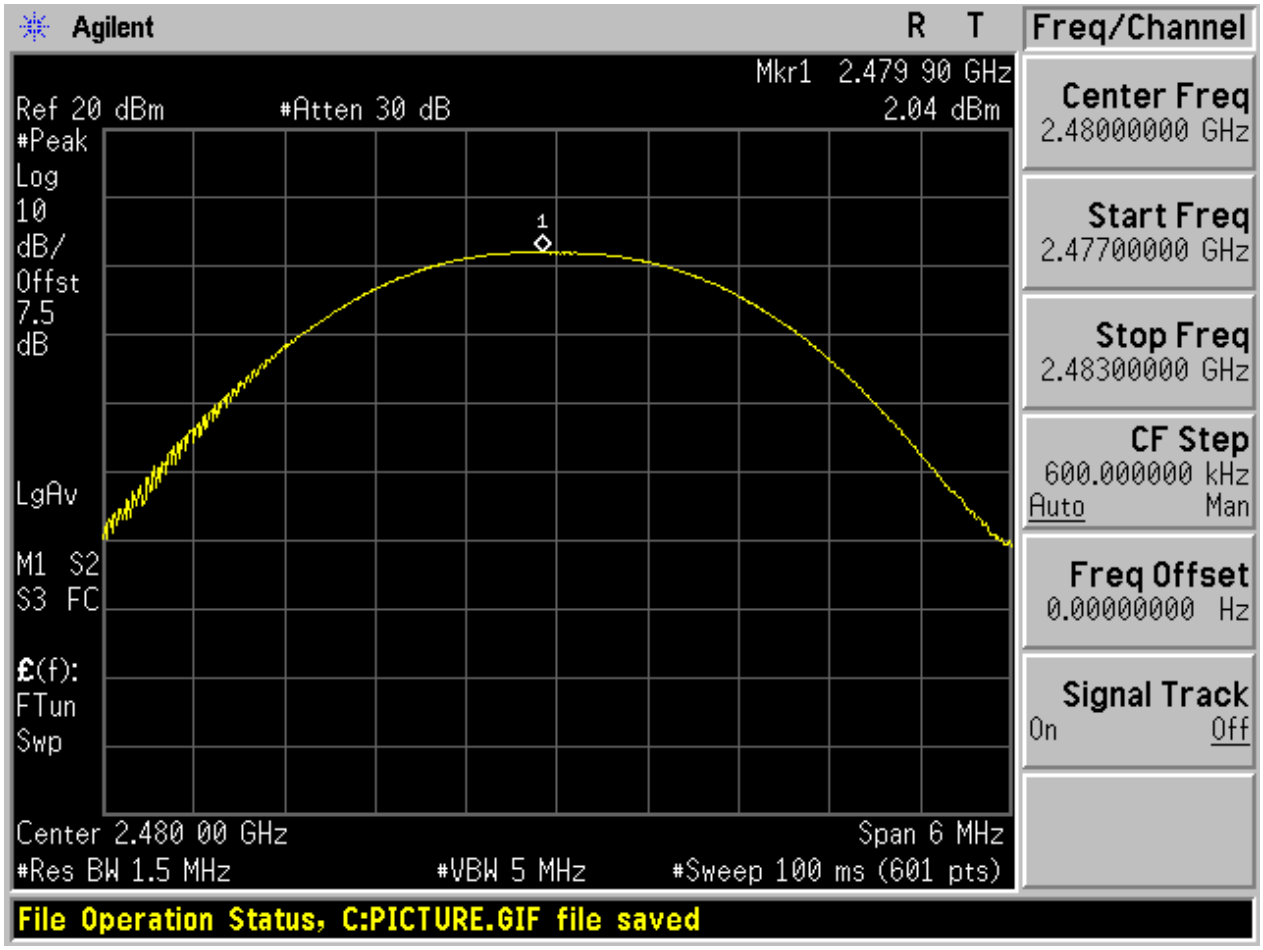
2.3 TM1_DH5_Ch78



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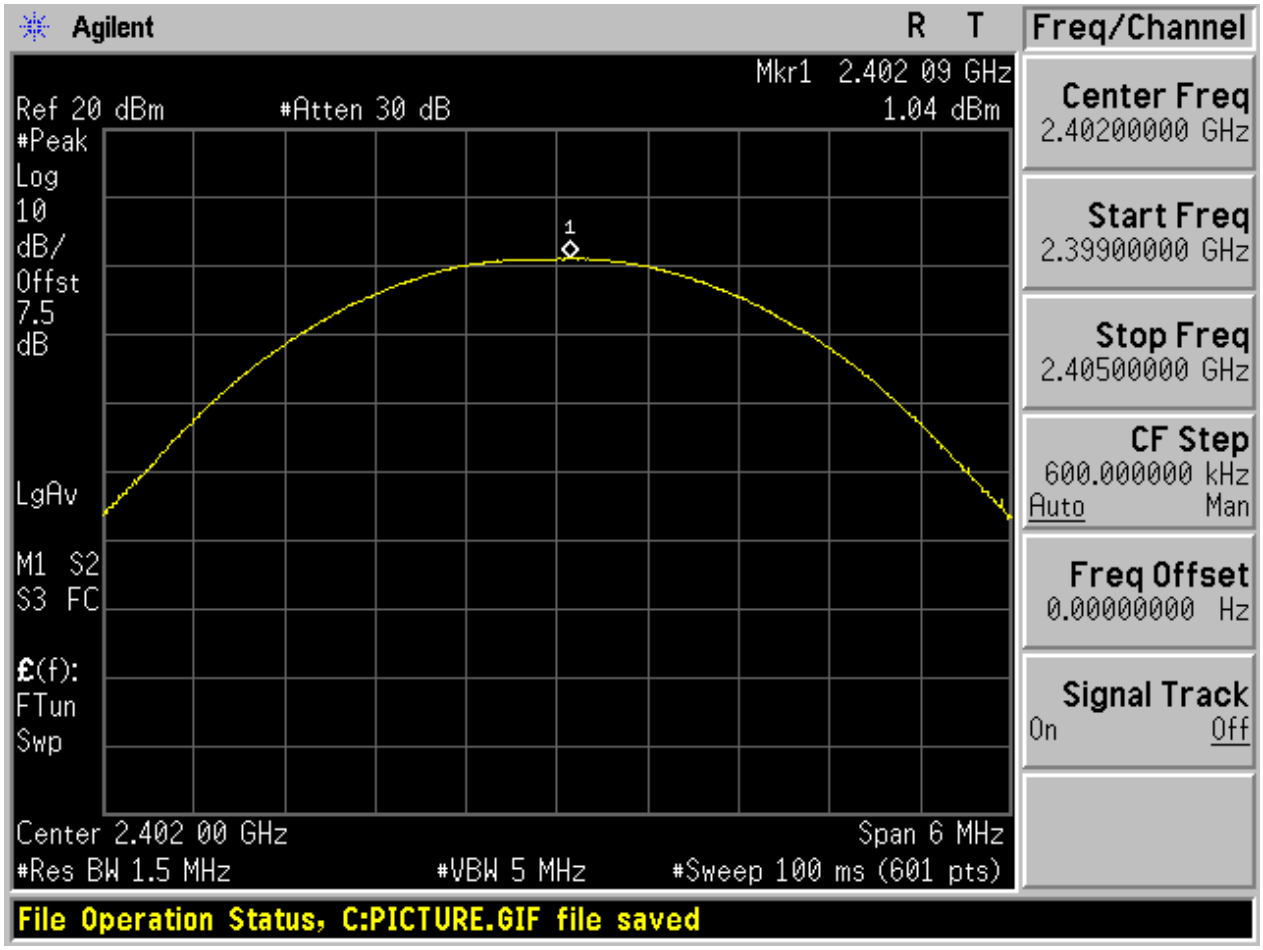
2.4 TM2_2DH5_Ch0



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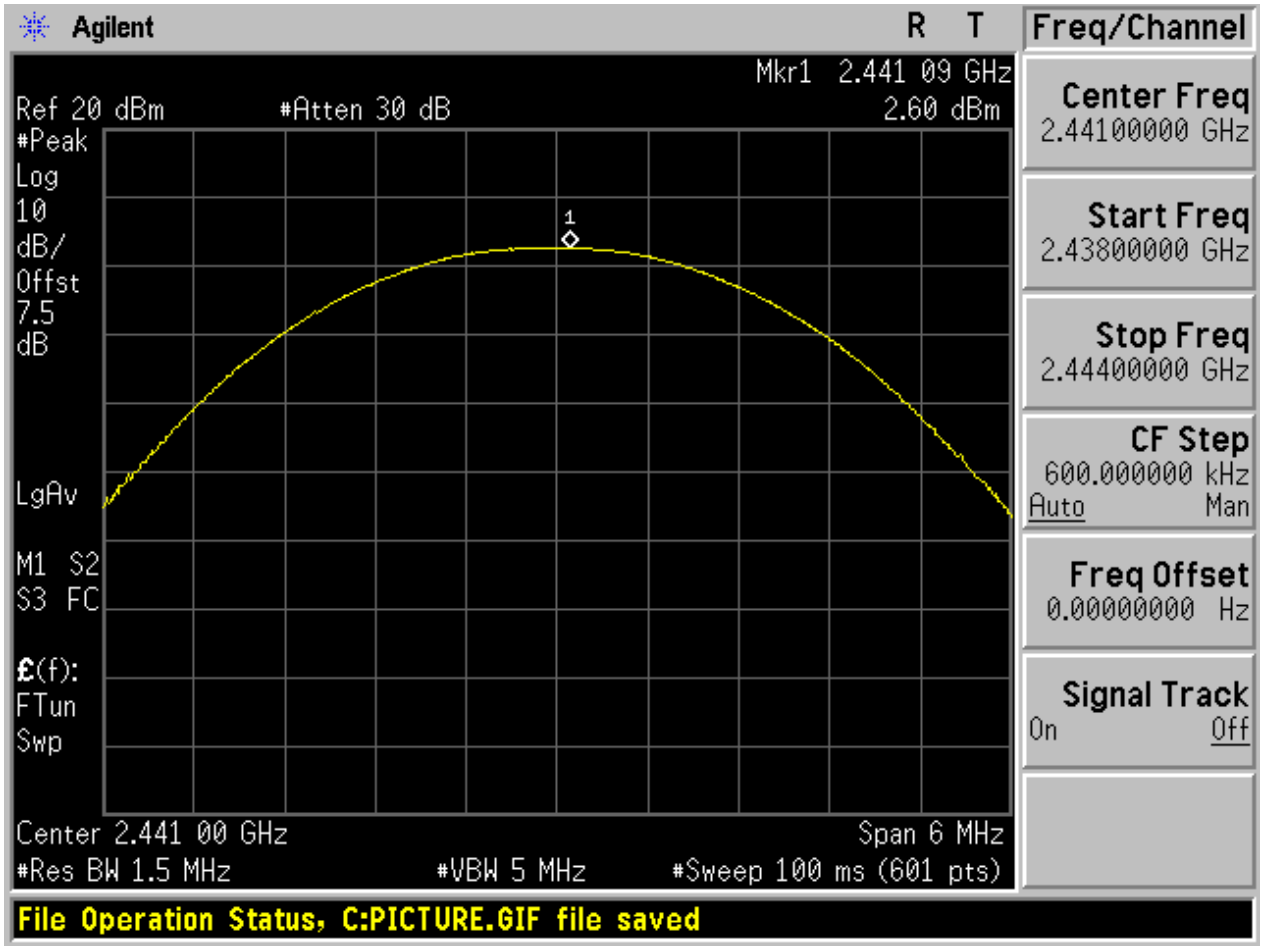
2.5 TM2_2DH5_Ch39



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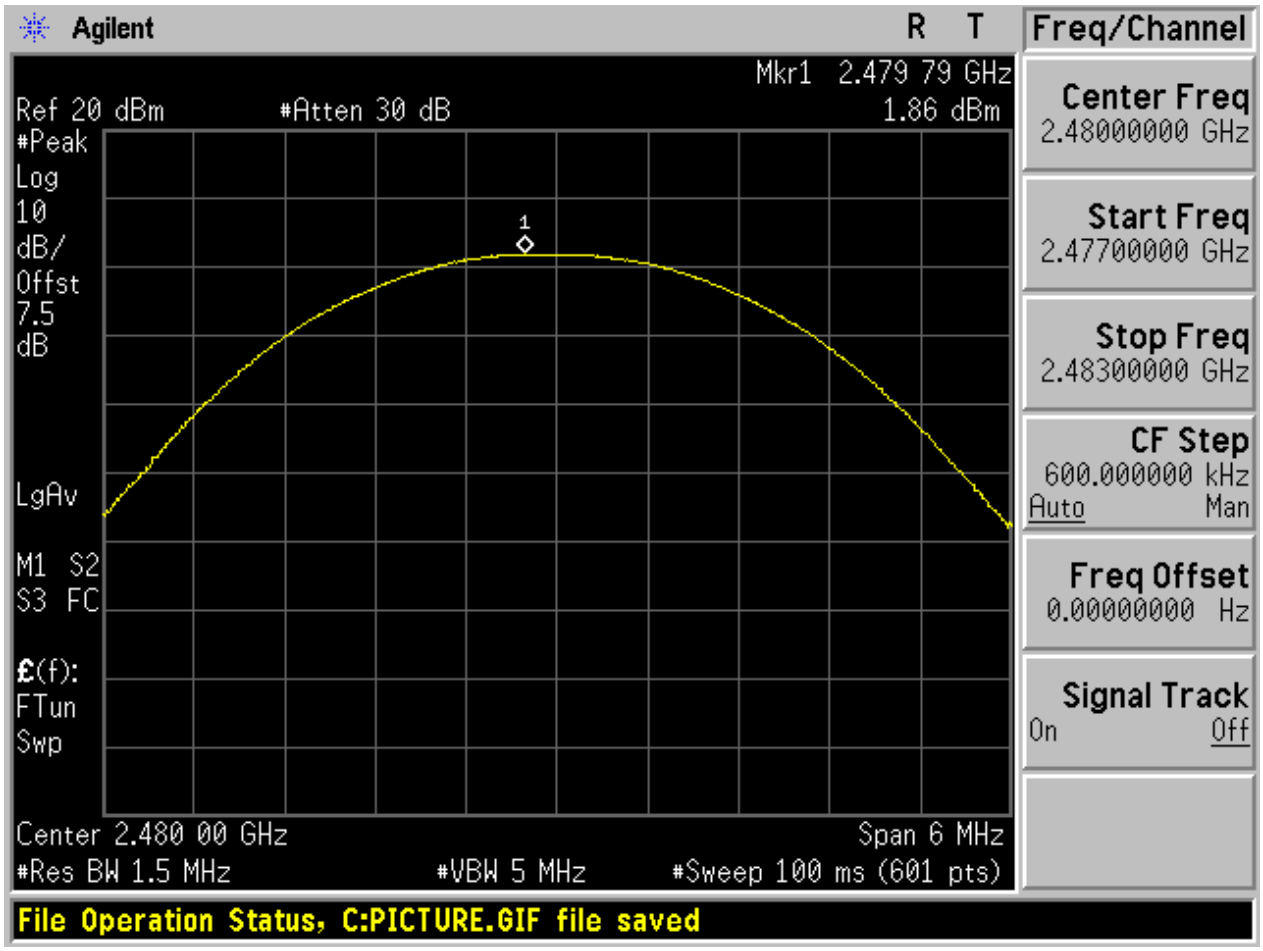
2.6 TM2_2DH5_Ch78



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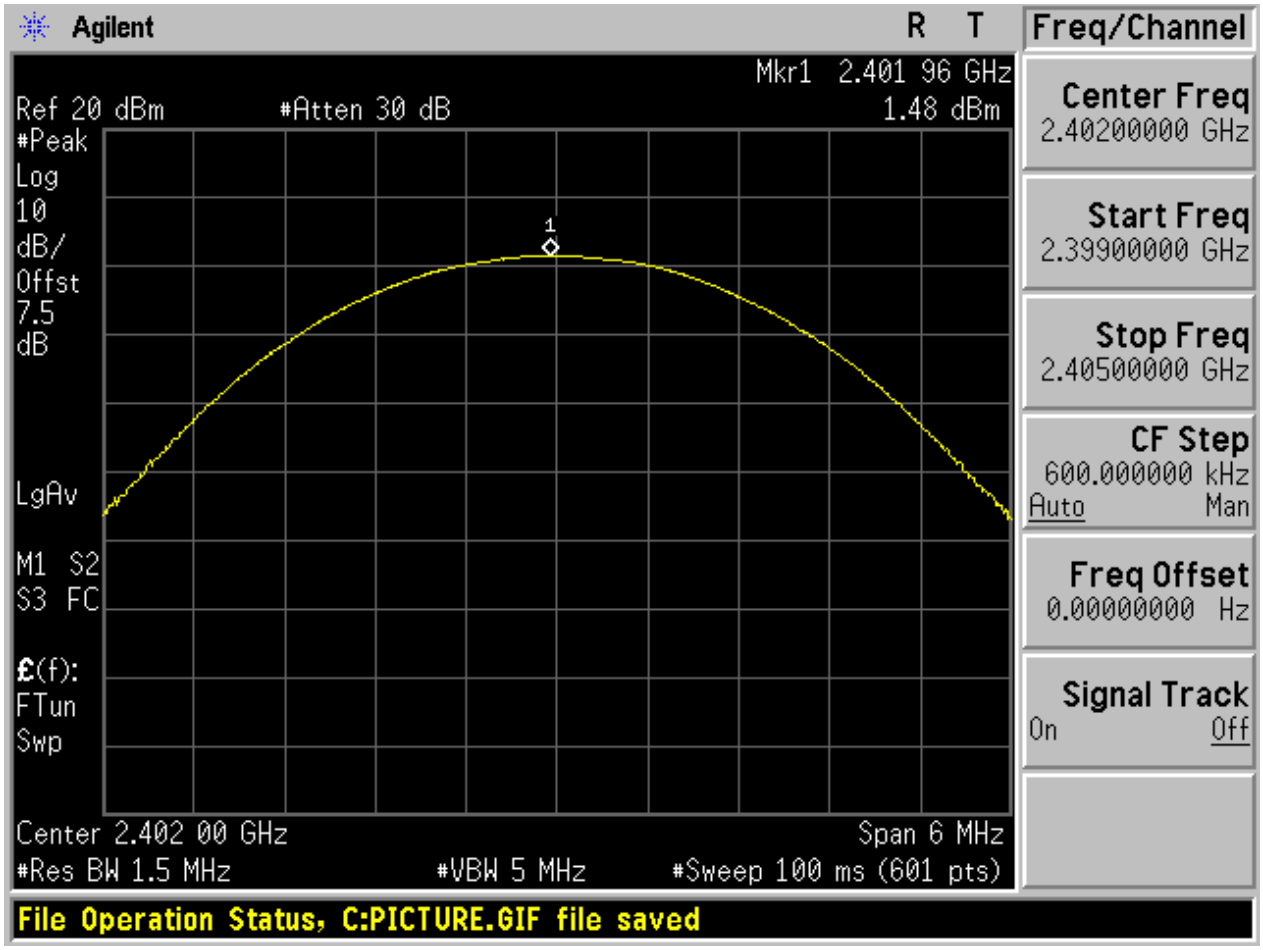
2.7 TM3_3DH5_Ch0



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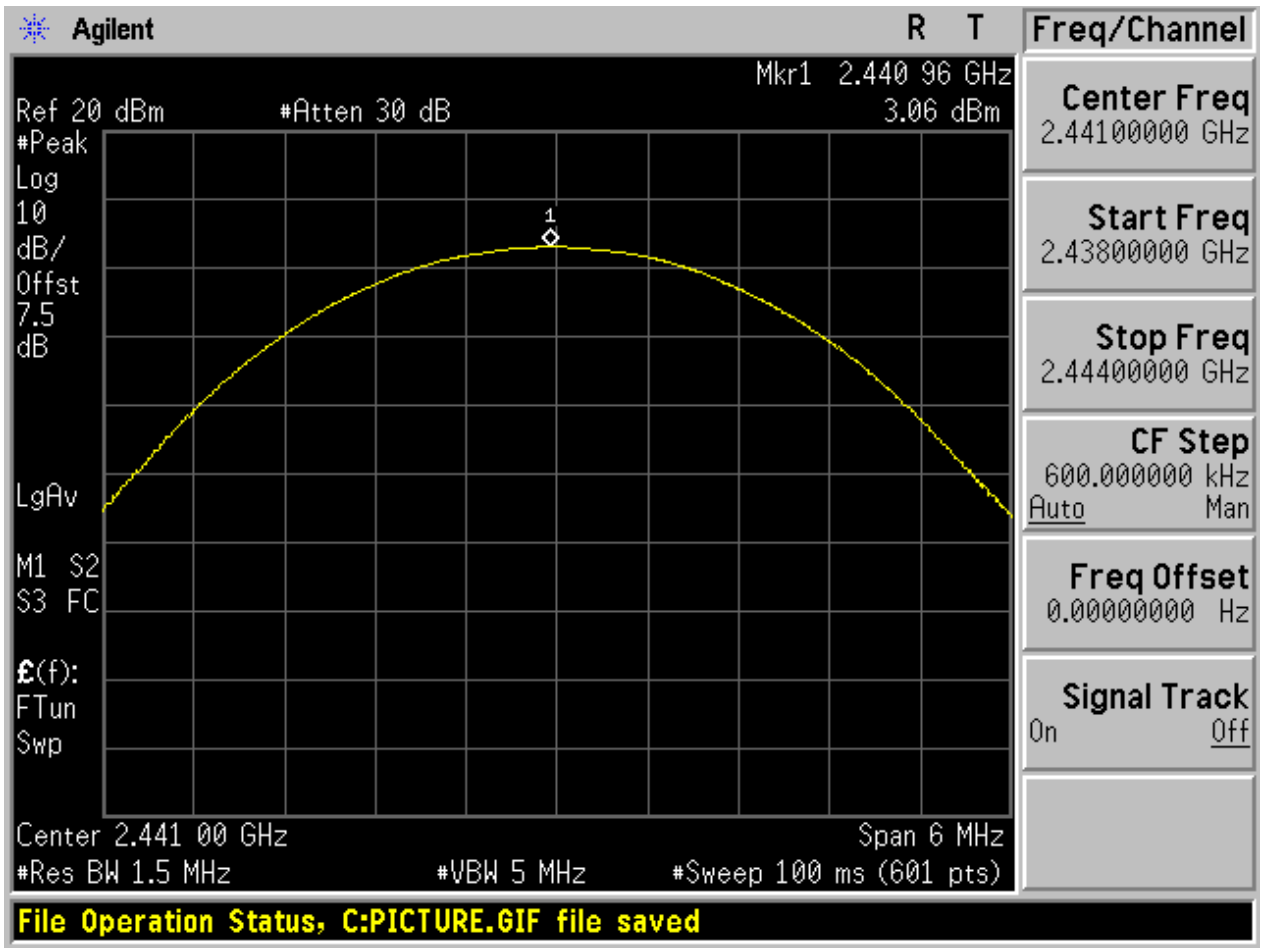
2.8 TM3_3DH5_Ch39



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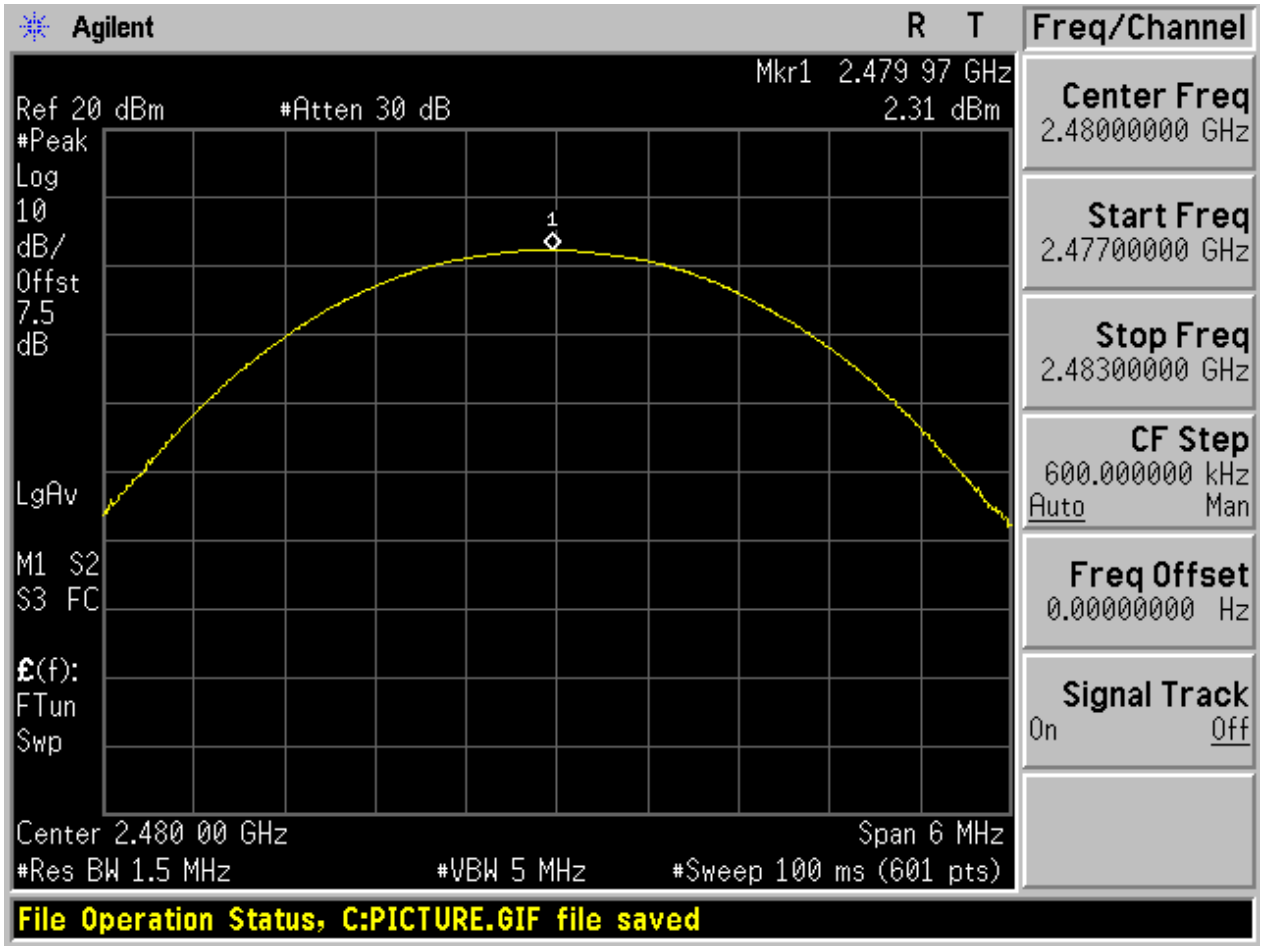
2.9 TM3_3DH5_Ch78



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Appendix F: Band edge spurious emission

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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	-54.02	Off	0.98	-19.02	Pass
	-	-	-54.65	On	1.40	-18.6	Pass
TM1_DH5_Ch78	78	2480	-54.37	Off	1.57	-18.43	Pass
	-	-	-54.55	On	1.26	-18.74	Pass
TM2_2DH5_Ch0	0	2402	-53.87	Off	-1.42	-21.42	Pass
	-	-	-54.81	On	-3.14	-23.14	Pass
TM2_2DH5_Ch78	78	2480	-53.94	Off	-0.93	-20.93	Pass
	-	-	-53.47	On	-1.13	-21.13	Pass
TM3_3DH5_Ch0	0	2402	-53.96	Off	-1.40	-21.4	Pass
	-	-	-54.65	On	-1.74	-21.74	Pass
TM3_3DH5_Ch78	78	2480	-53.43	Off	-0.89	-20.89	Pass
	-	-	-52.92	On	-0.80	-20.8	Pass

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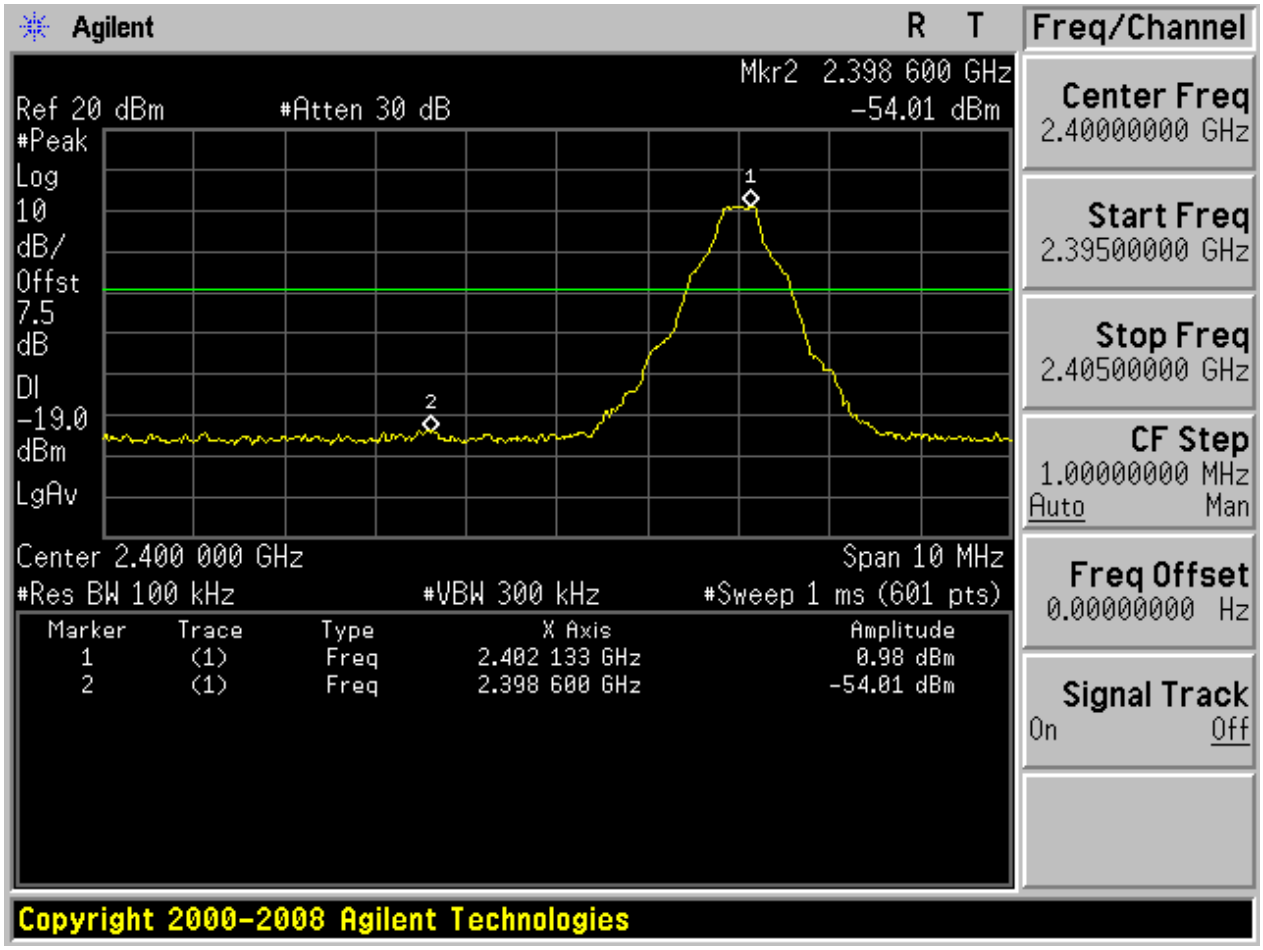
2 Test Plot

2.1 TM1_DH5_Ch0

No hopping



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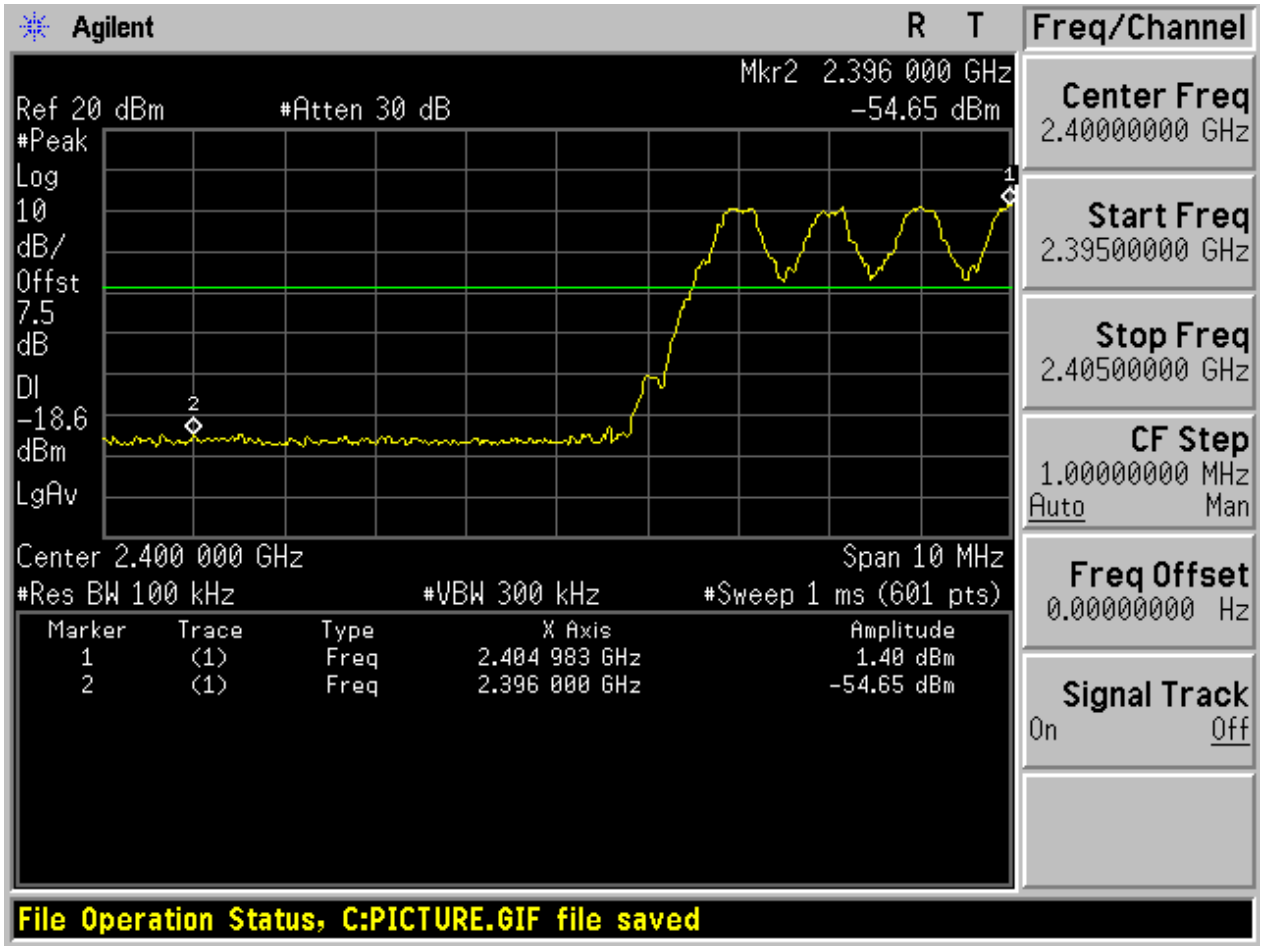
With hopping



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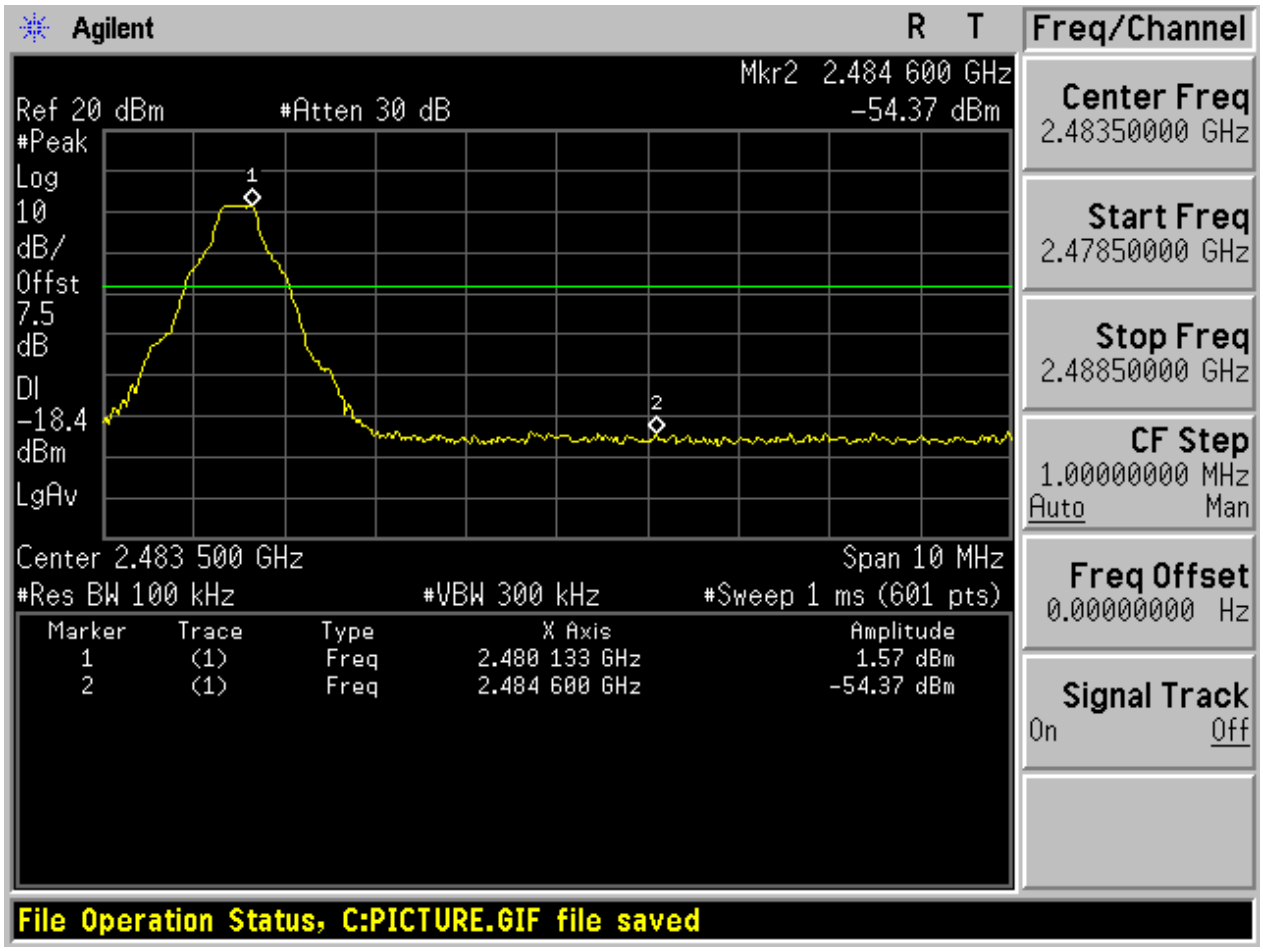
2.2 TM1_DH5_Ch78

No hopping



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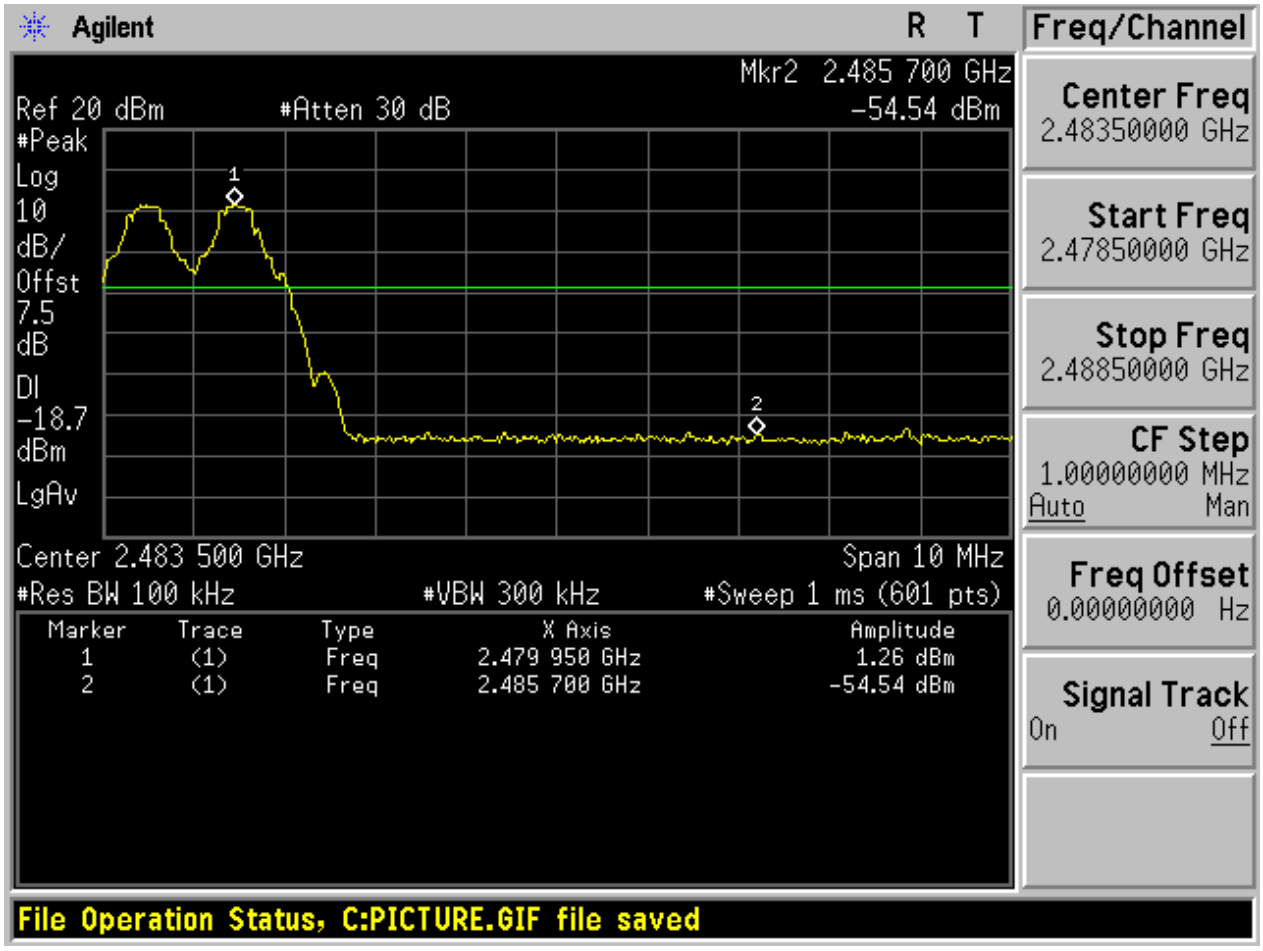
With hopping



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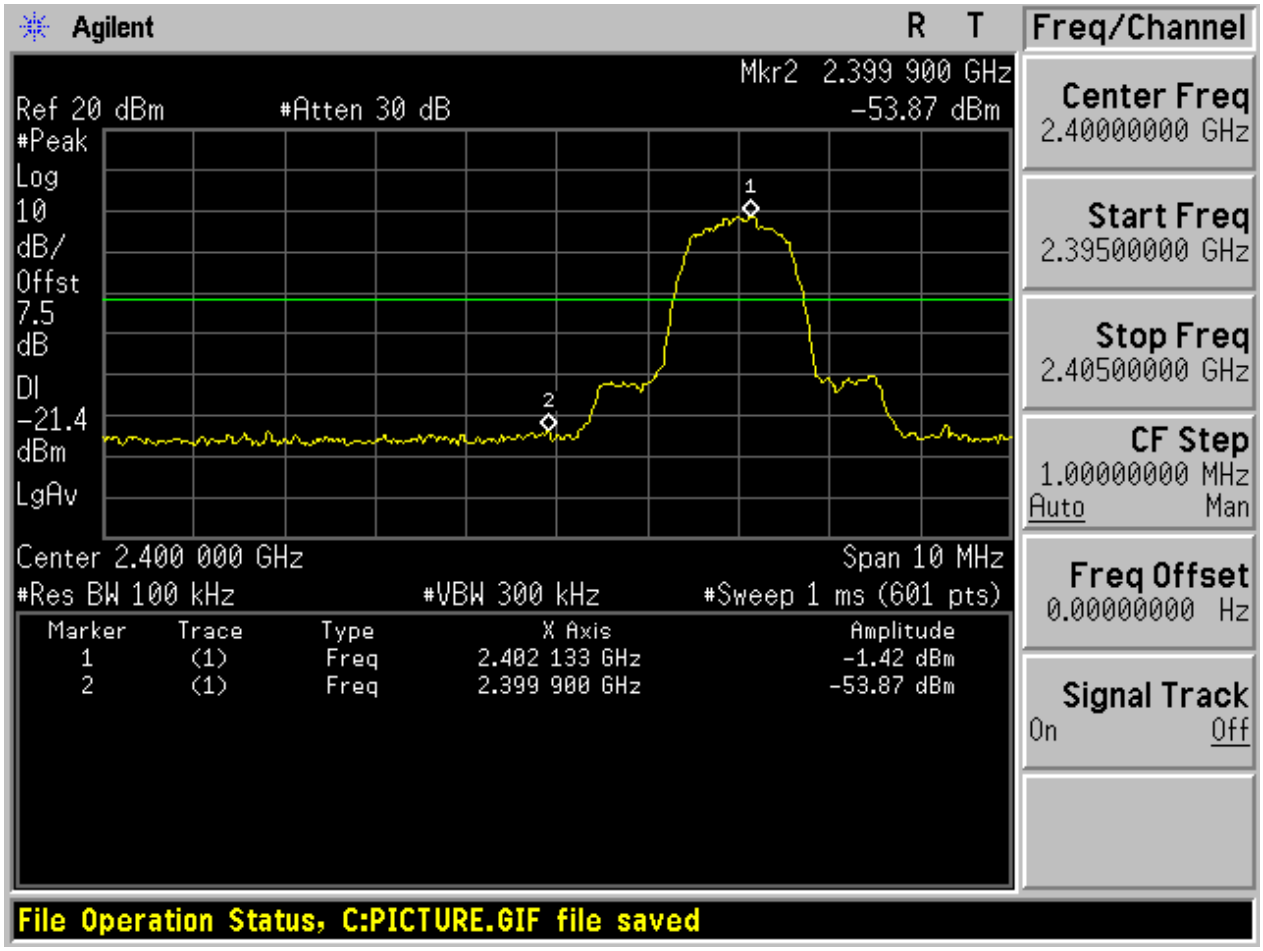
2.3 TM2_2DH5_Ch0

No hopping



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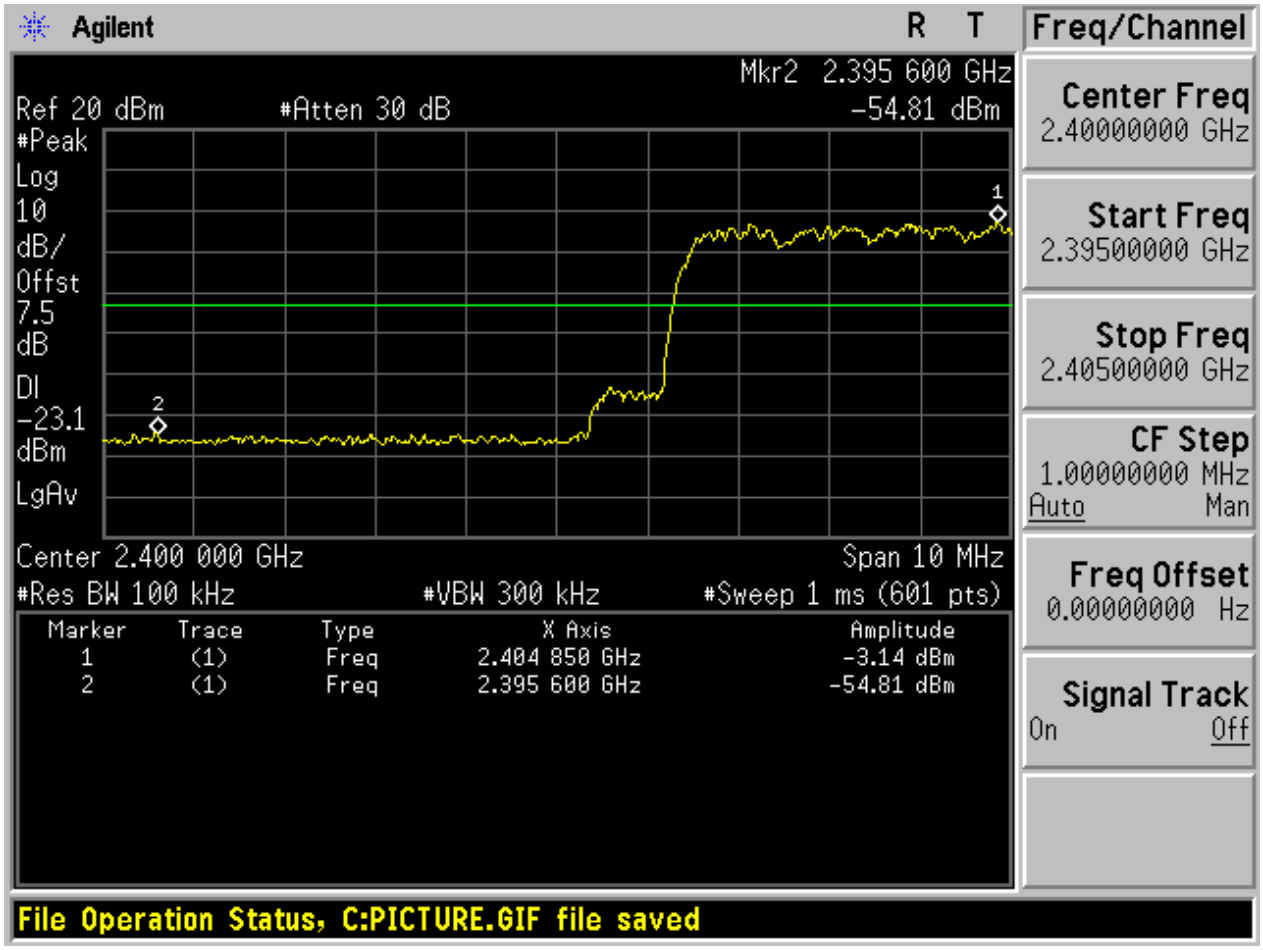
With hopping



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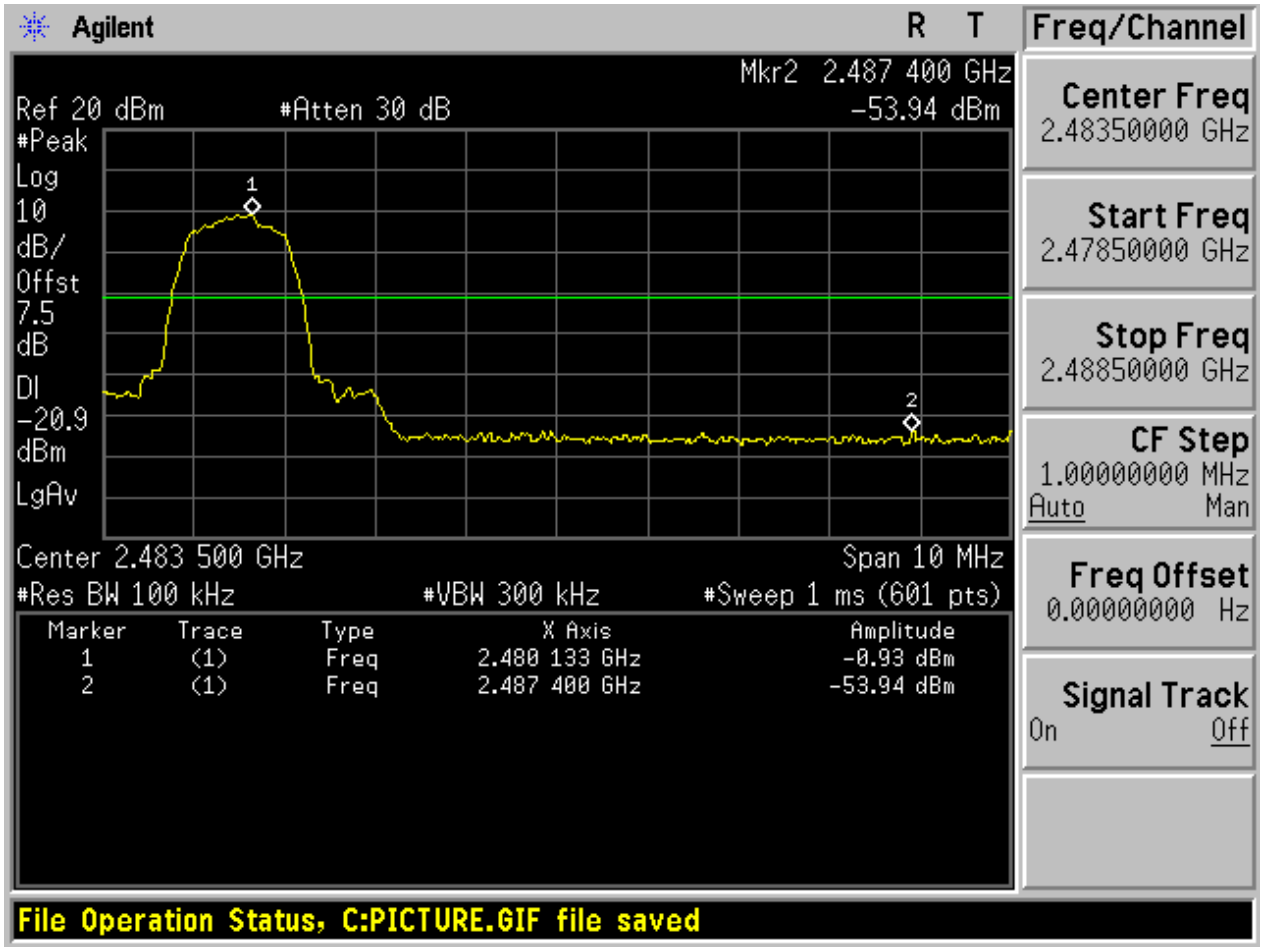
2.4 TM2_2DH5_Ch78

No hopping



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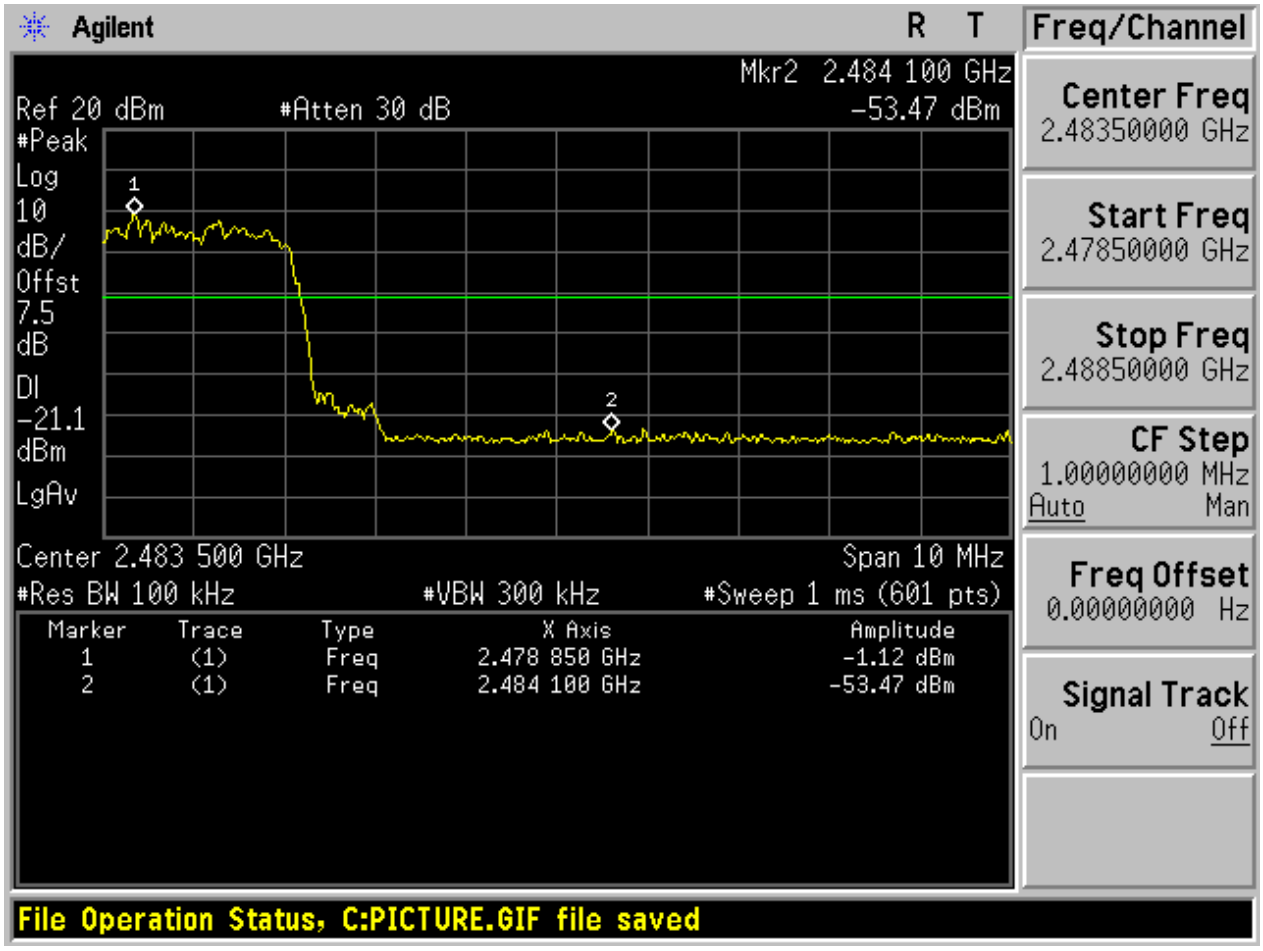
With hopping



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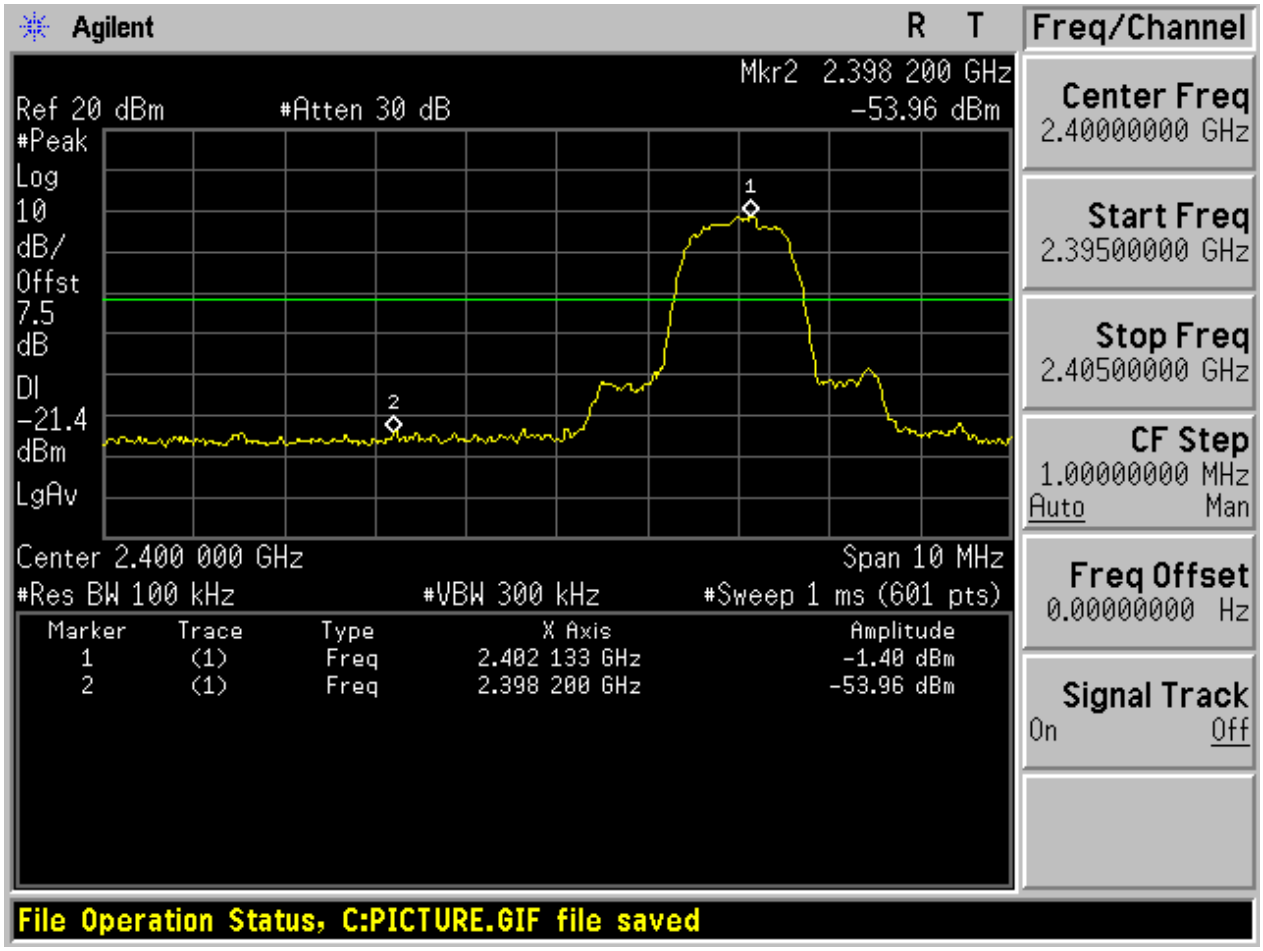
2.5 TM3_3DH5_Ch0

No hopping



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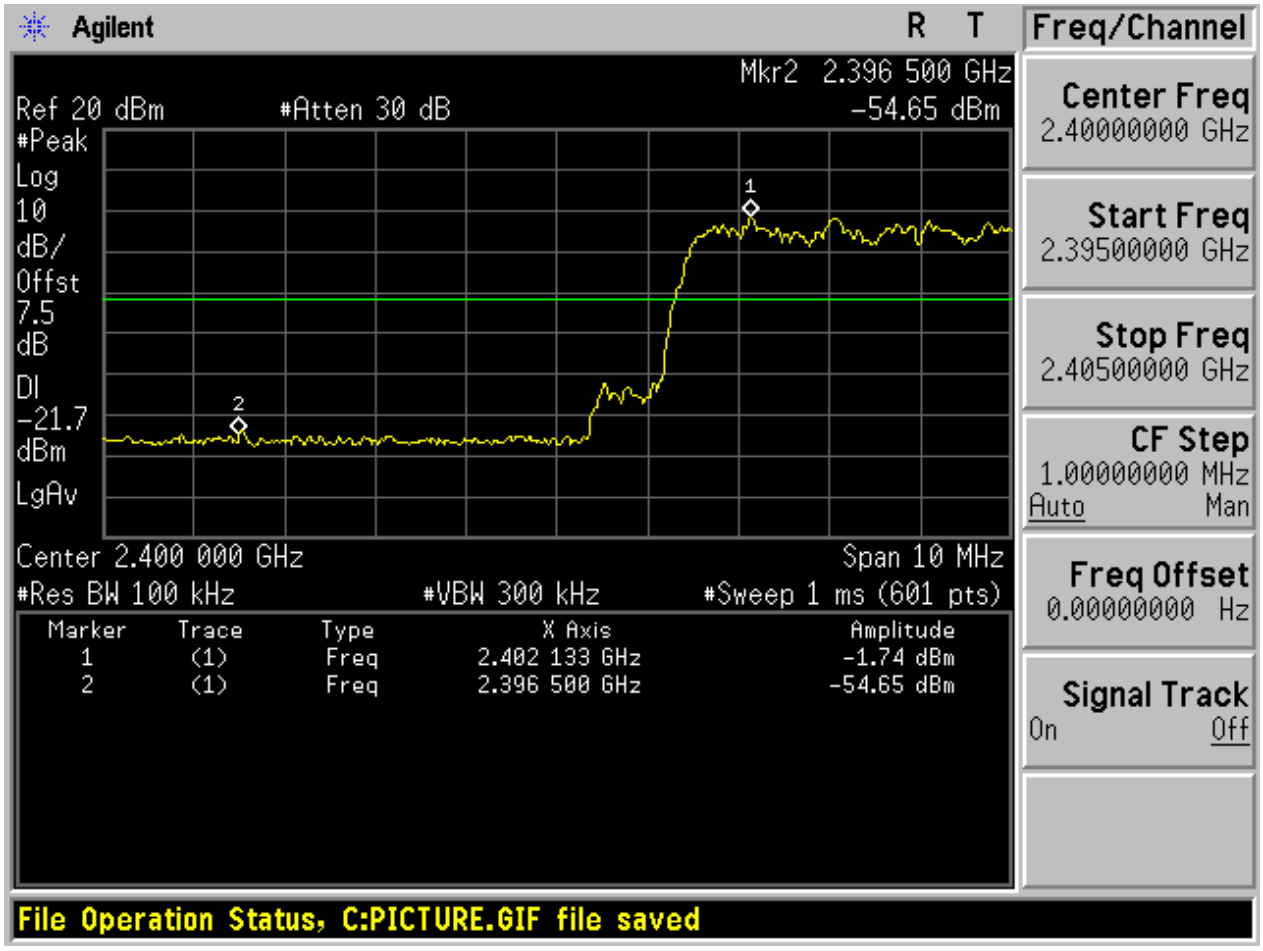
With hopping



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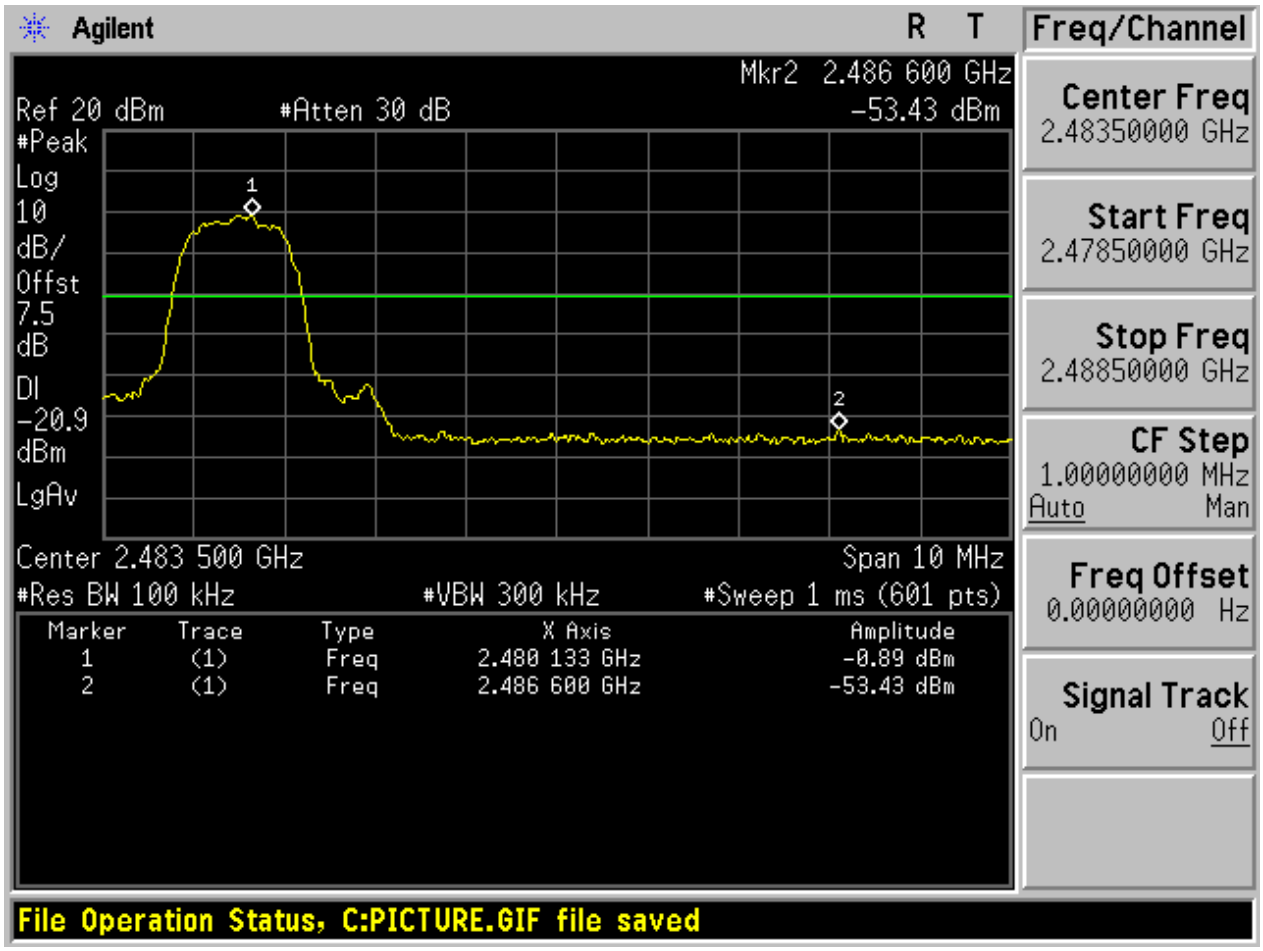
2.6 TM3_3DH5_Ch78

No hopping



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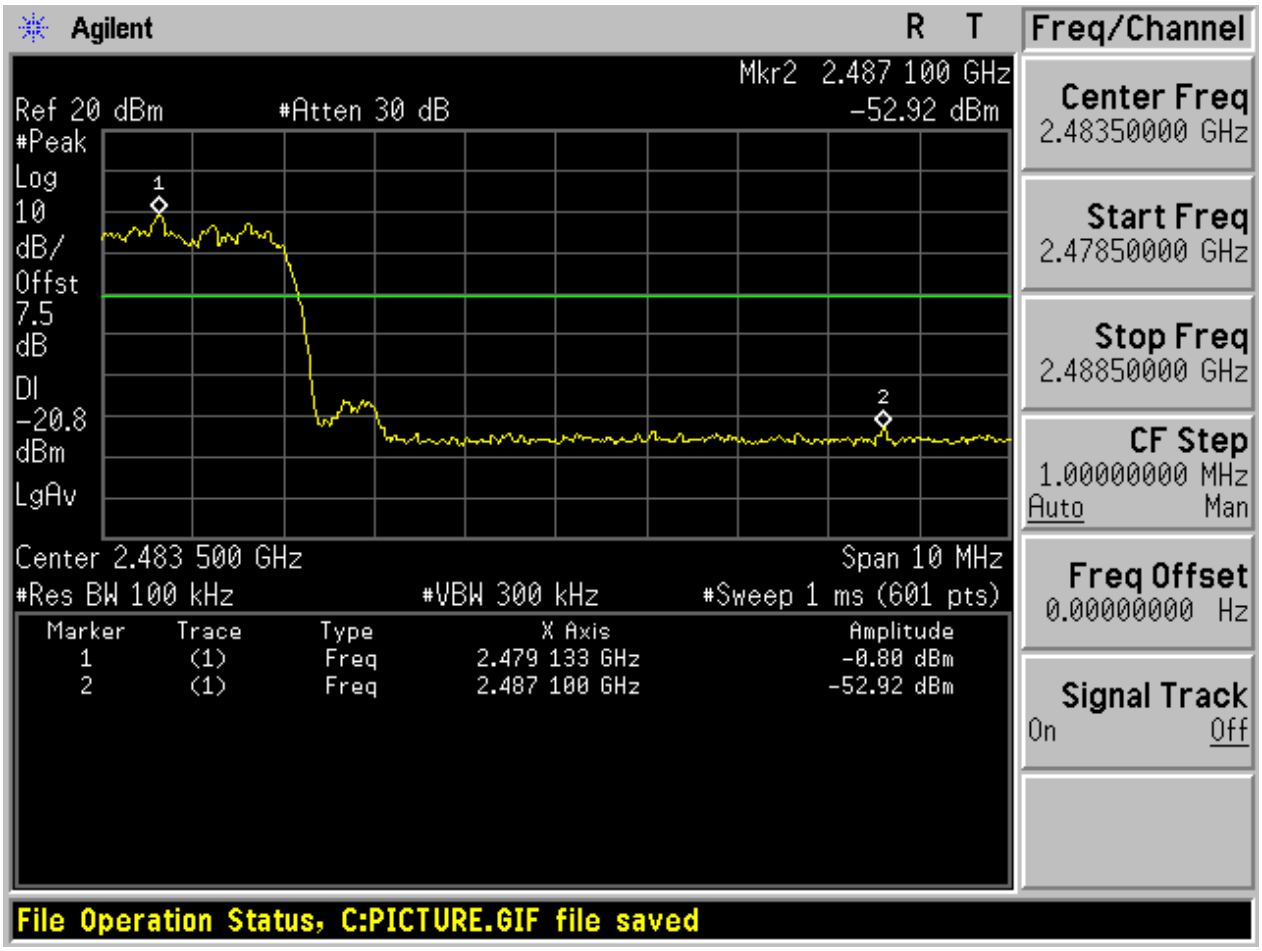
With hopping



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Appendix G: Conducted RF Spurious Emission

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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” referrers 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 x lg(100 [kHz]/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	0.86	< Limit	Pass
TM1_DH5_Ch39	2.25	< Limit	Pass
TM1_DH5_Ch78	1.61	< Limit	Pass
TM2_2DH5_Ch0	-1.45	< Limit	Pass
TM2_2DH5_Ch39	0.31	< Limit	Pass
TM2_2DH5_Ch78	-0.87	< Limit	Pass
TM3_3DH5_Ch0	-1.42	< Limit	Pass
TM3_3DH5_Ch39	-0.13	< Limit	Pass
TM3_3DH5_Ch78	-0.89	< Limit	Pass

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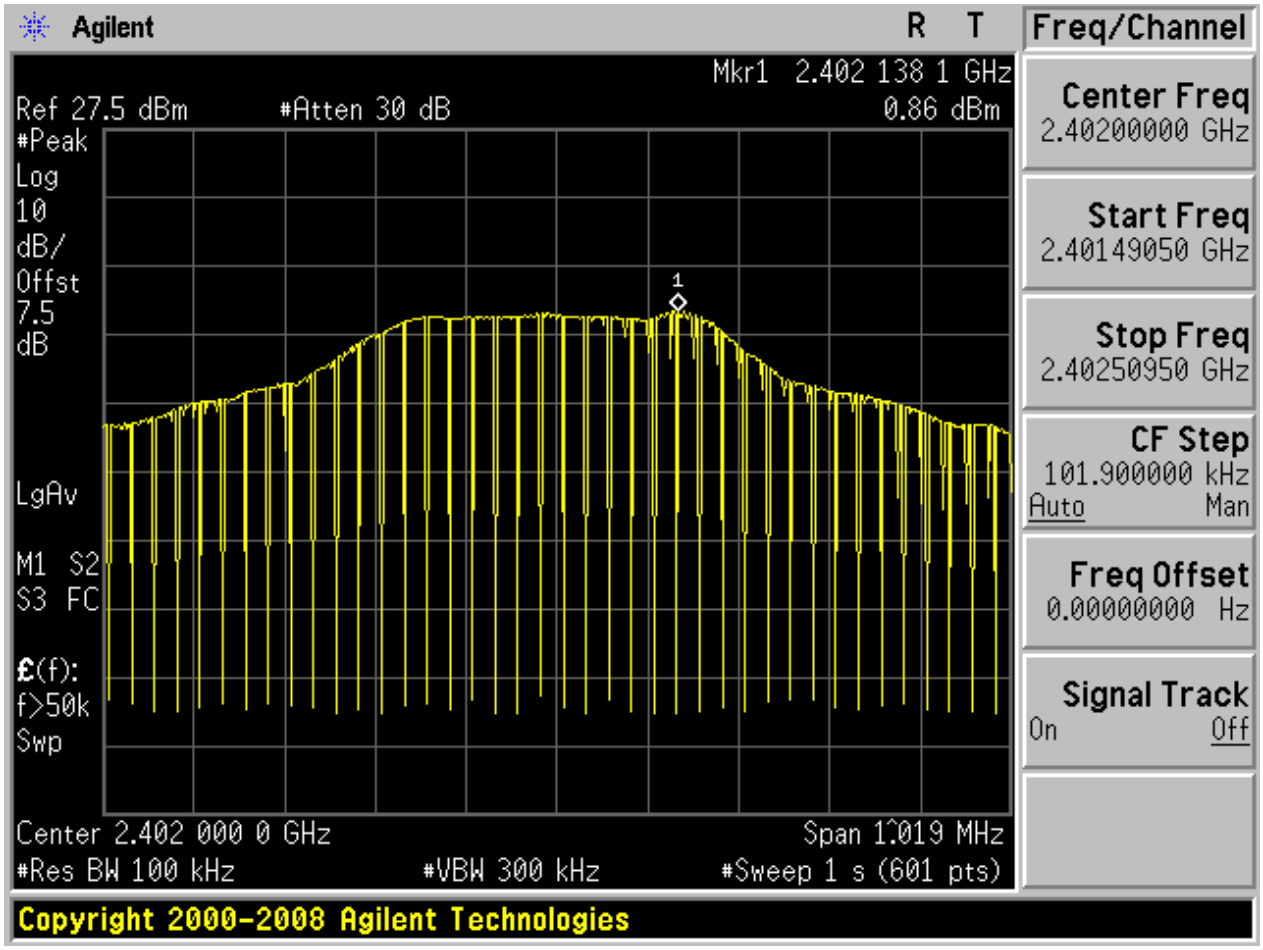
2 Test Plot

2.1 TM1_DH5_Ch0

2.1.1 Pref



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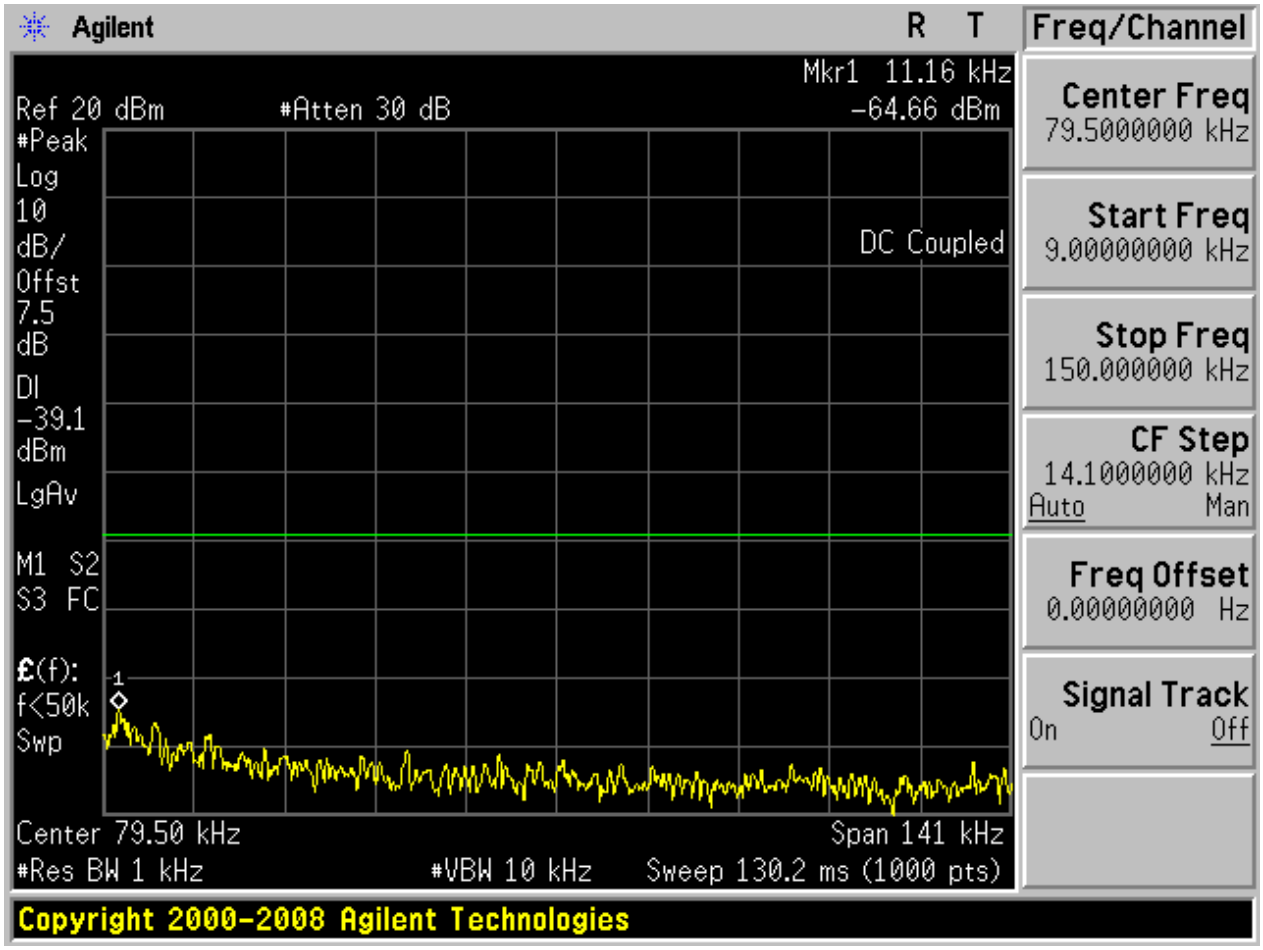
2.1.2 Puw



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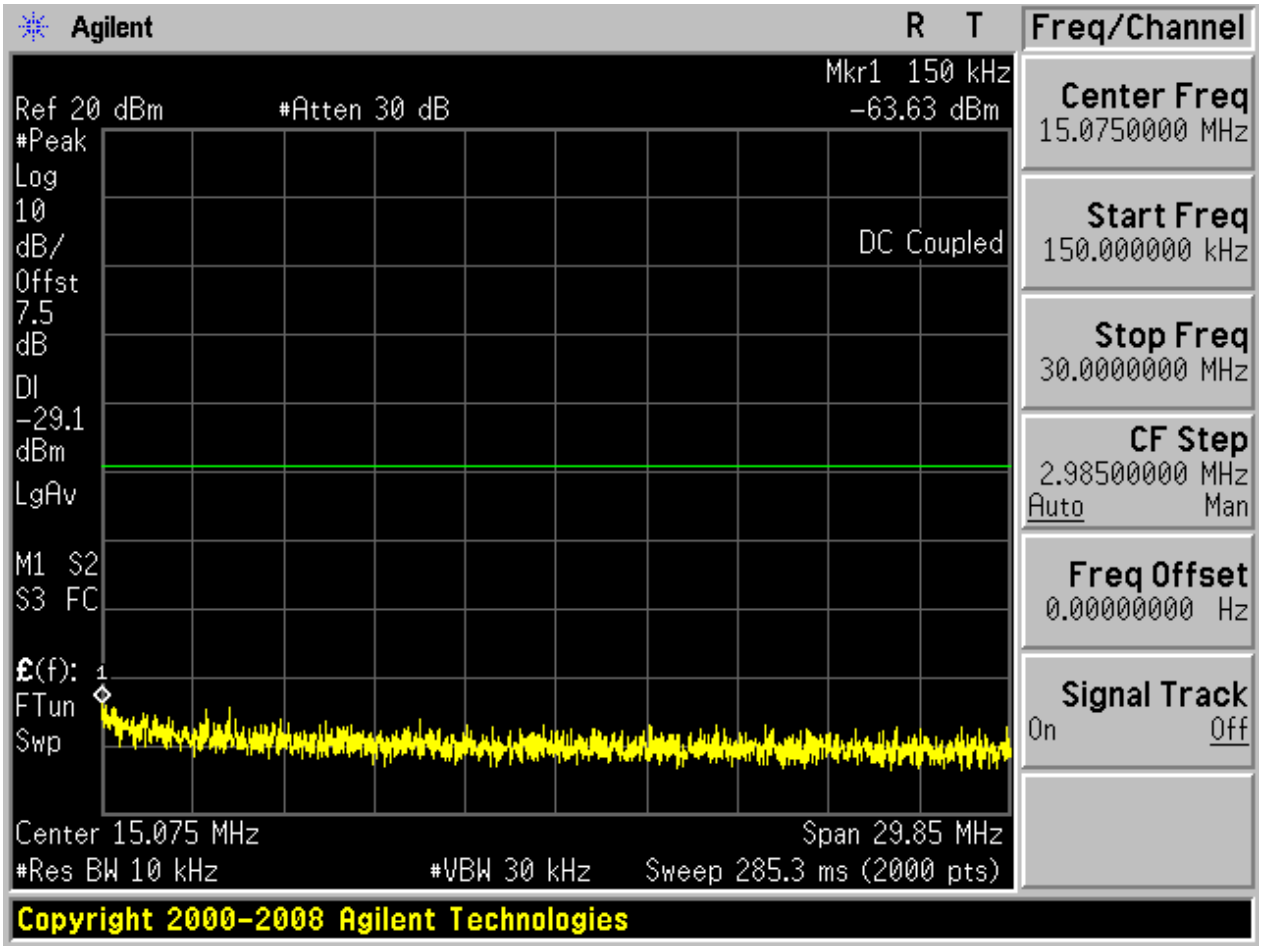
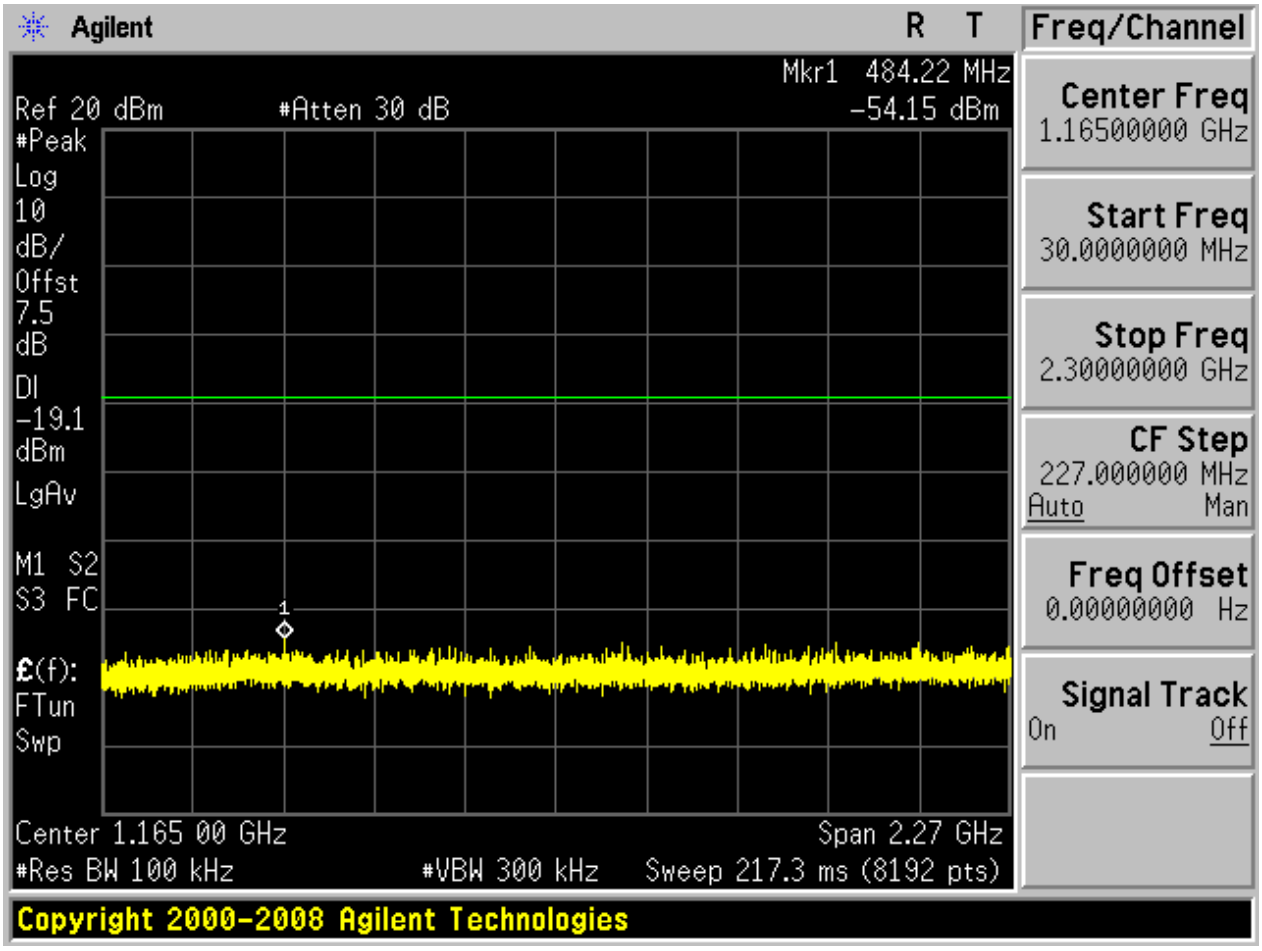

Agilent
R T
Freq/Channel
Mkr1 150 kHz
Ref 20 dBm
#Atten 30 dB
-63.63 dBm
#Peak
Log
10
dB/
Offst
7.5
dB
Dl
-29.1
dBm
LgAv
DC Coupled
M1 S2
S3 FC
£(f): 1
FTun
Swp
Center 15.075 MHz
Span 29.85 MHz
#Res BW 10 kHz
#VBW 30 kHz
Sweep 285.3 ms (2000 pts)
Center Freq
15.0750000 MHz
Start Freq
150.000000 kHz
Stop Freq
30.0000000 MHz
CF Step
2.98500000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2008 Agilent Technologies



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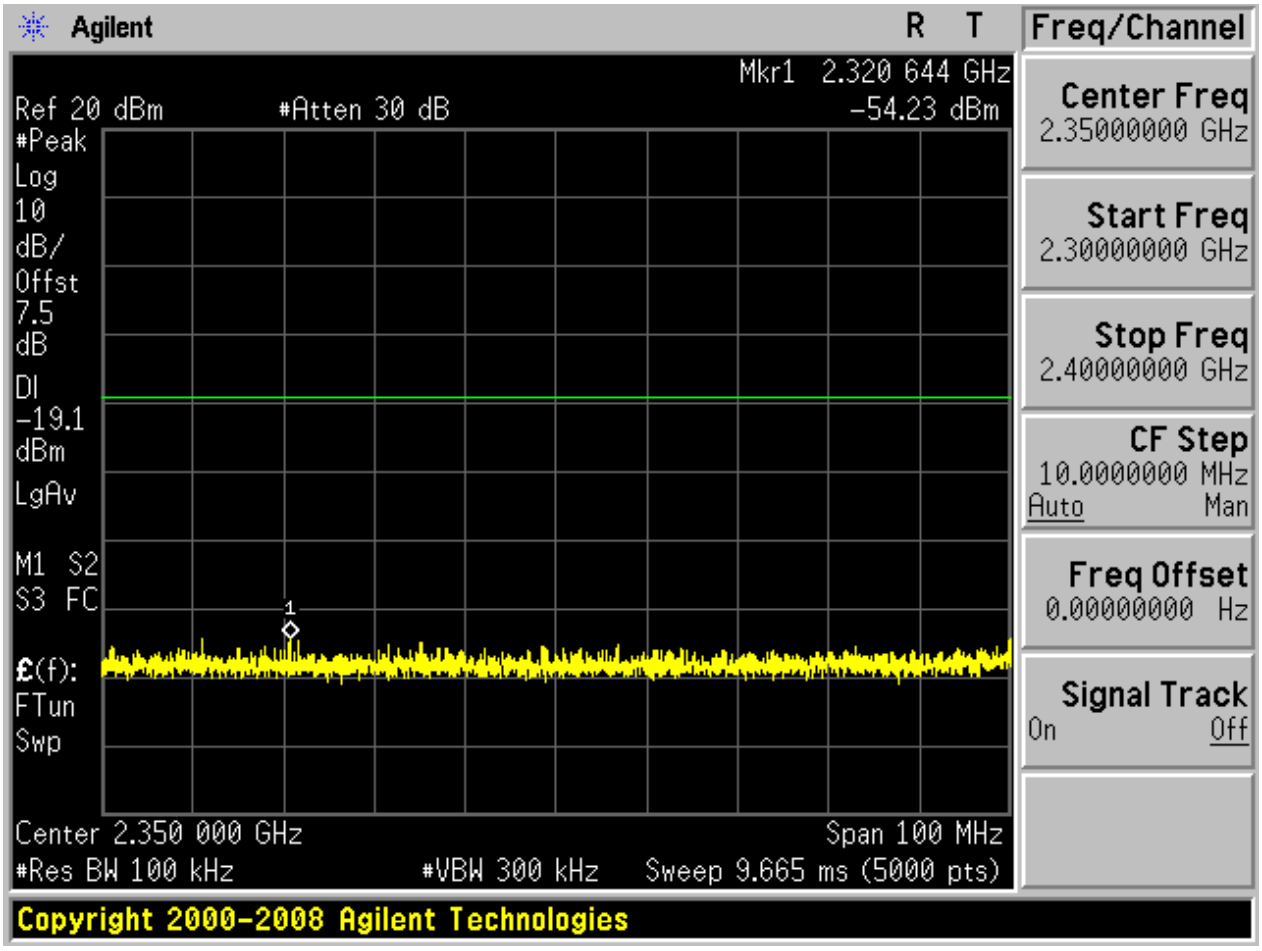

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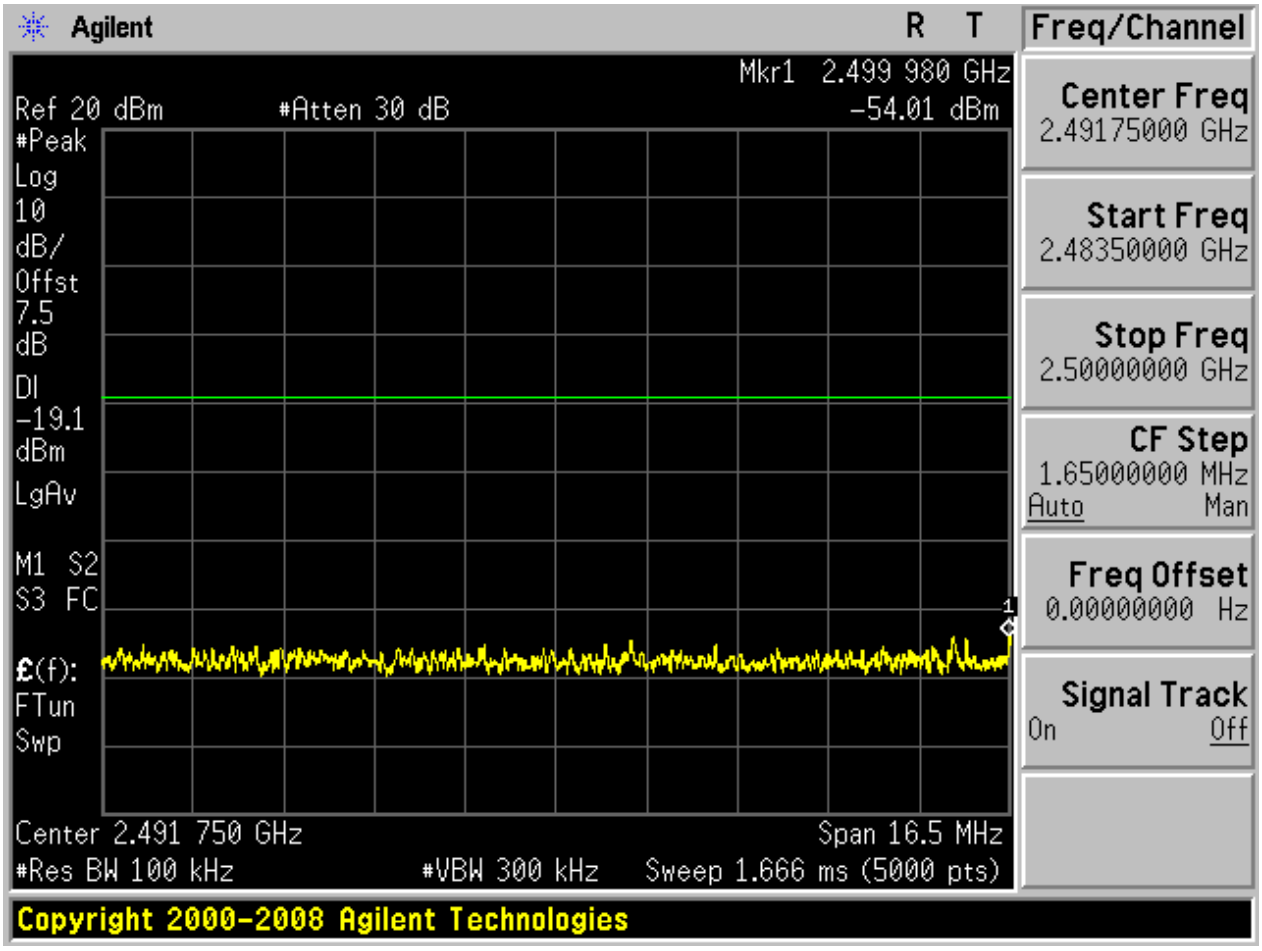

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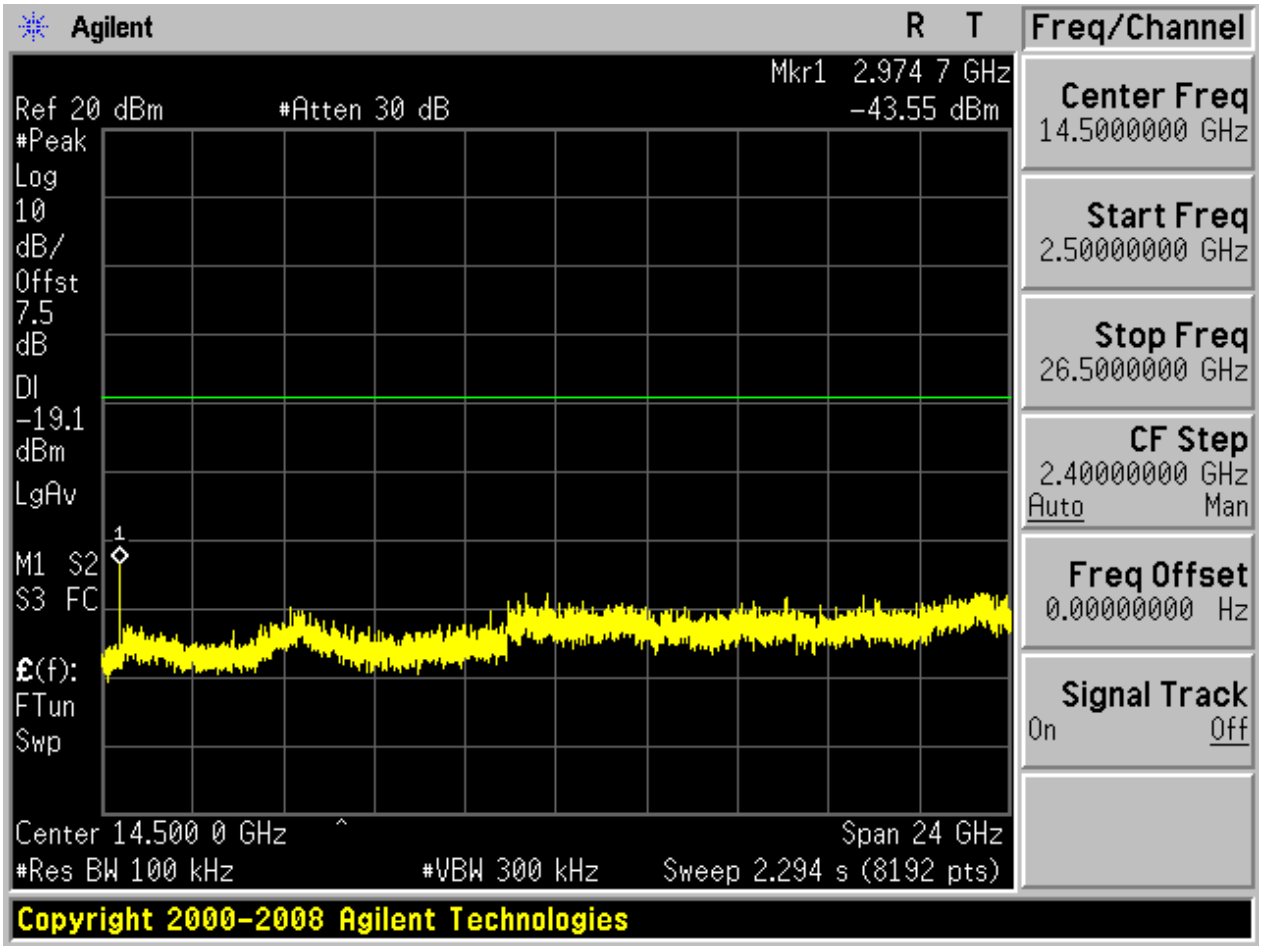

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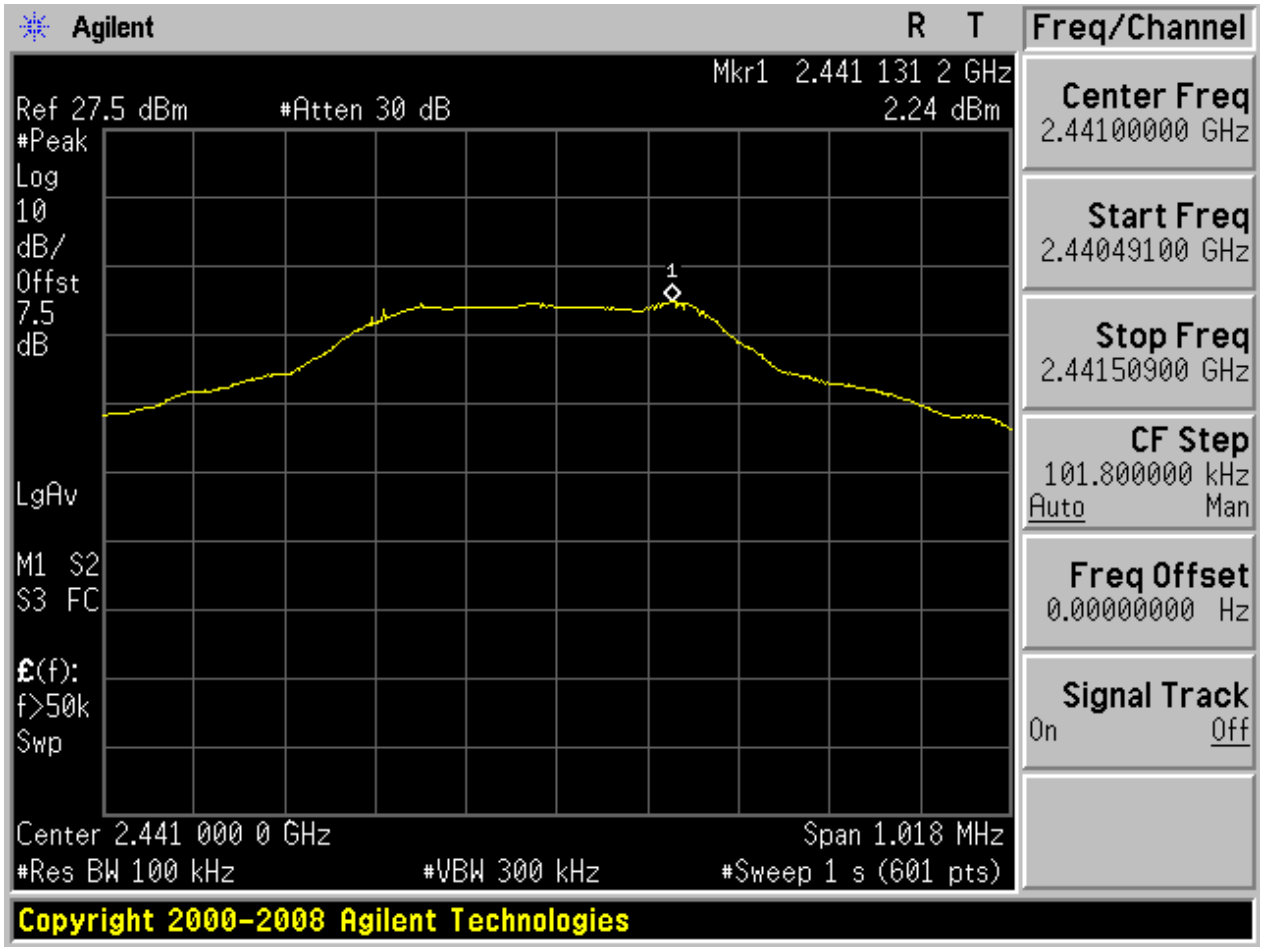
2.2 TM1_DH5_Ch39

2.2.1 Pref



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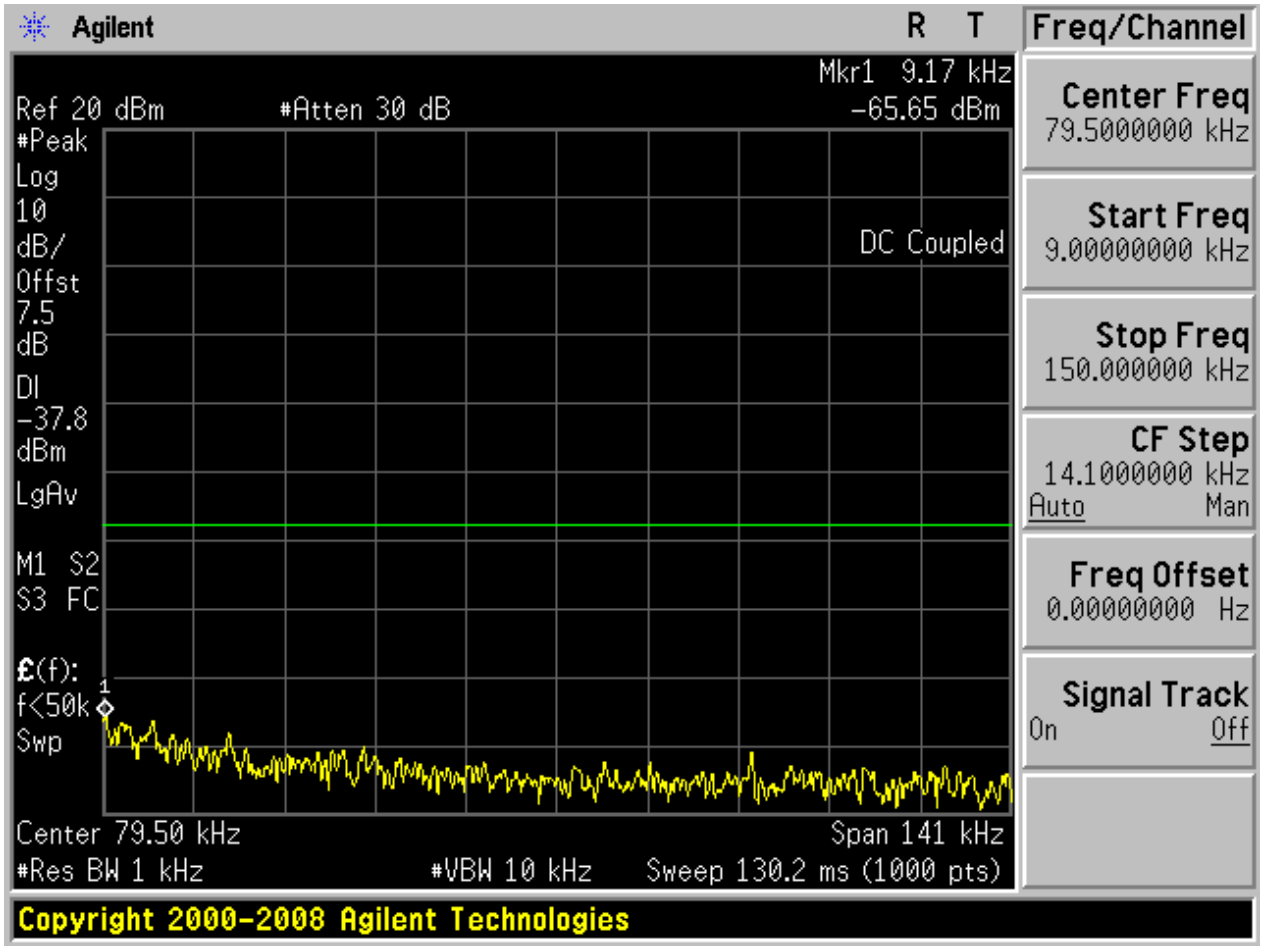
2.2.2 Puw



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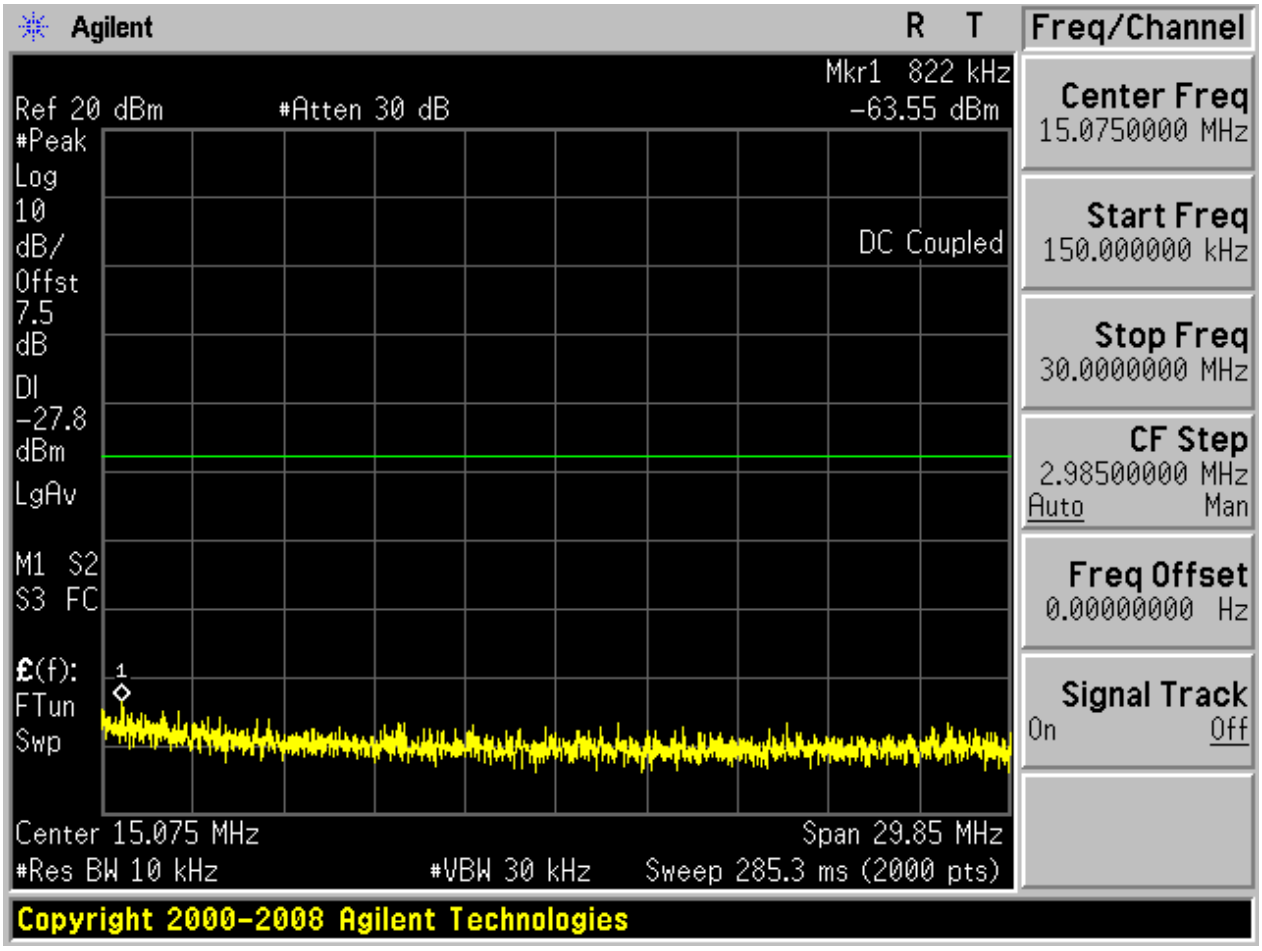

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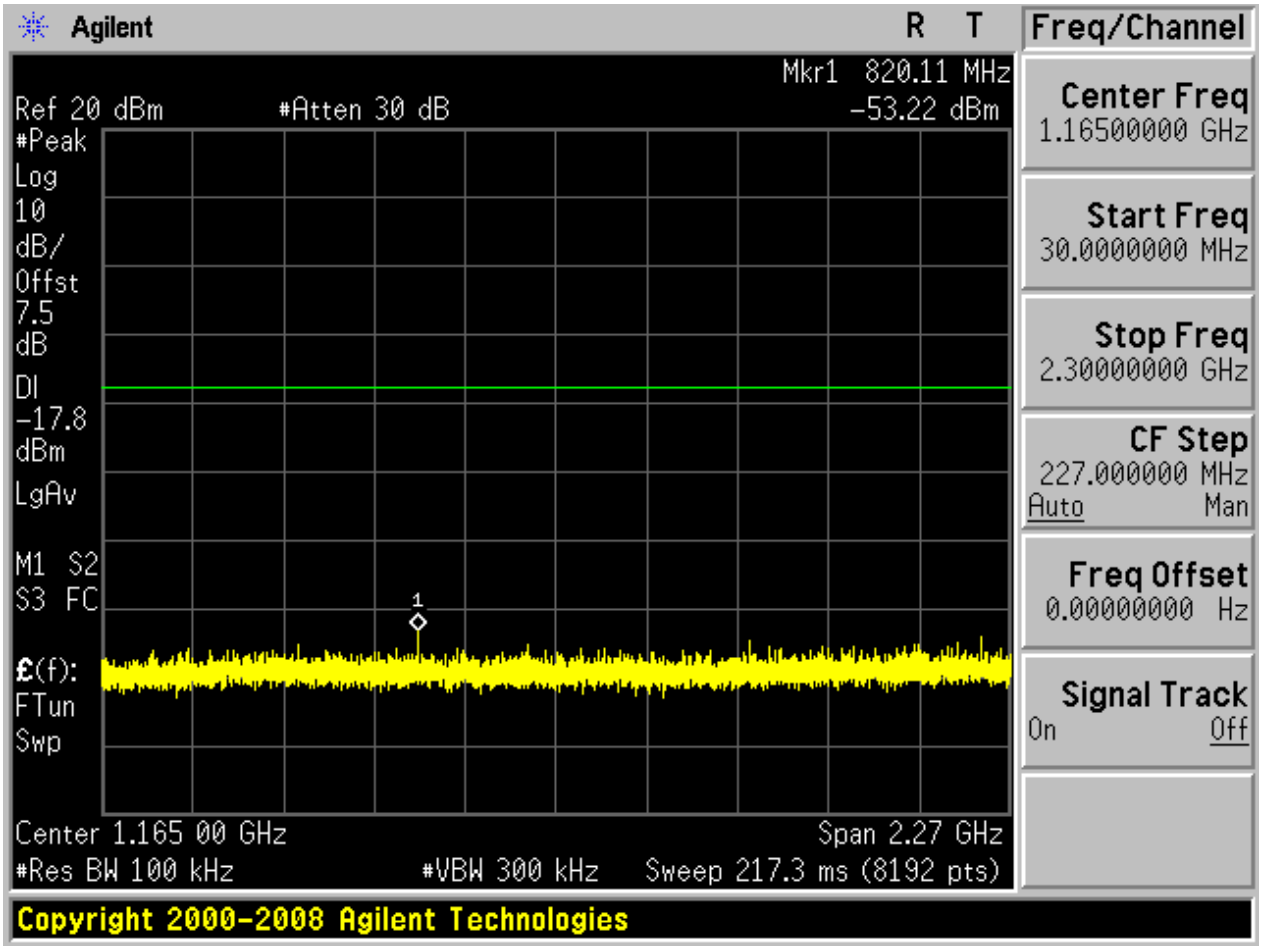

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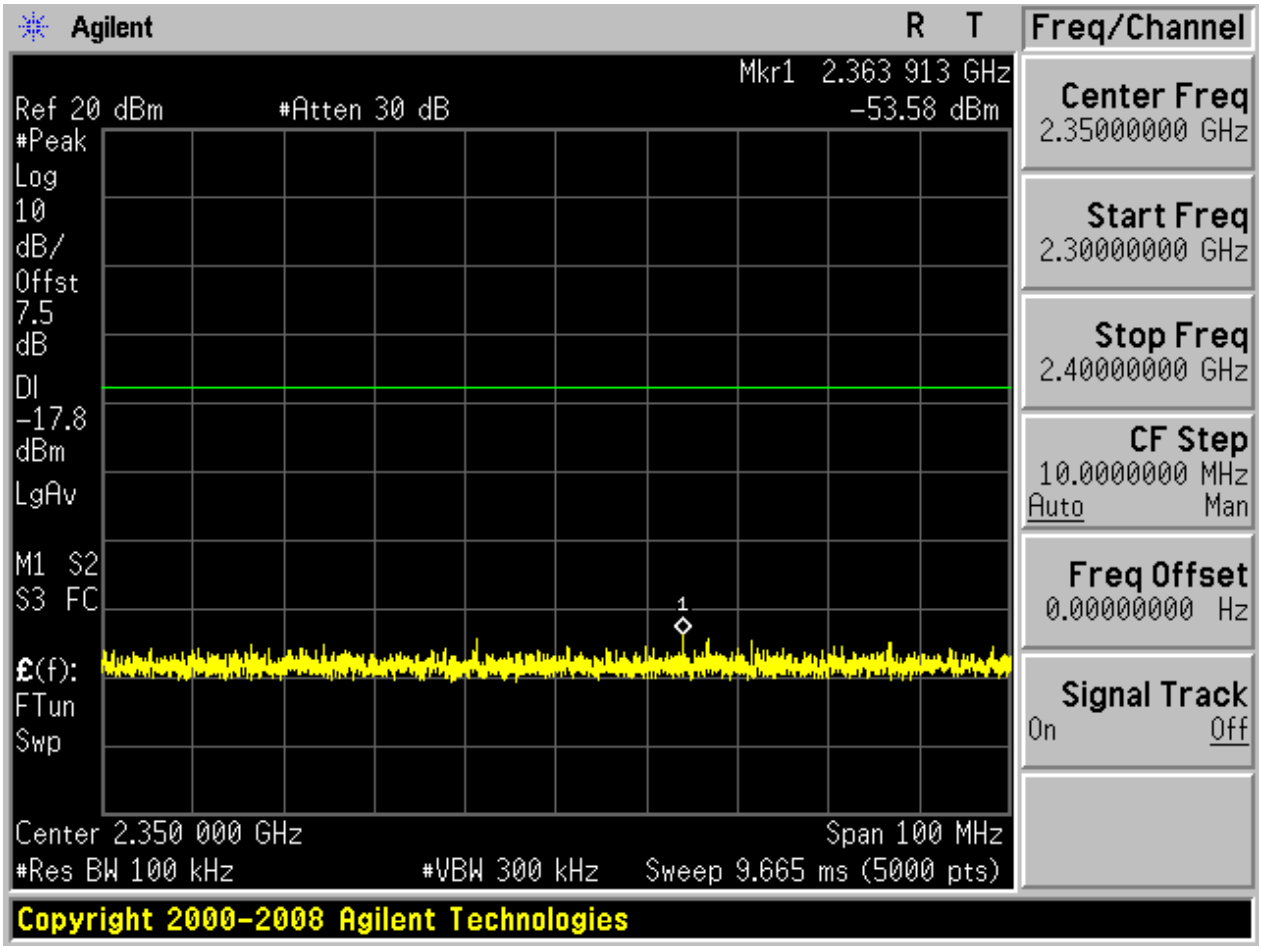

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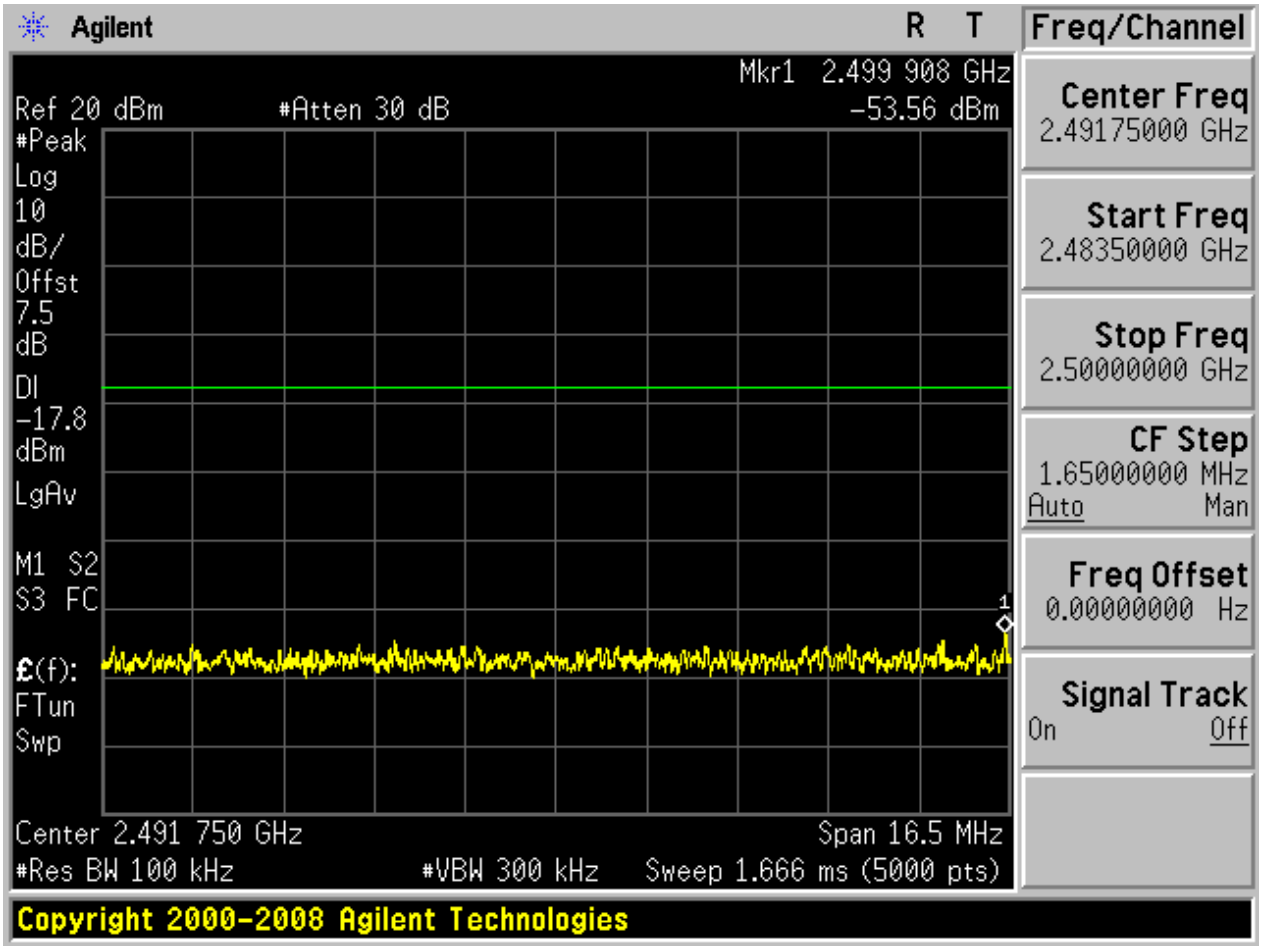

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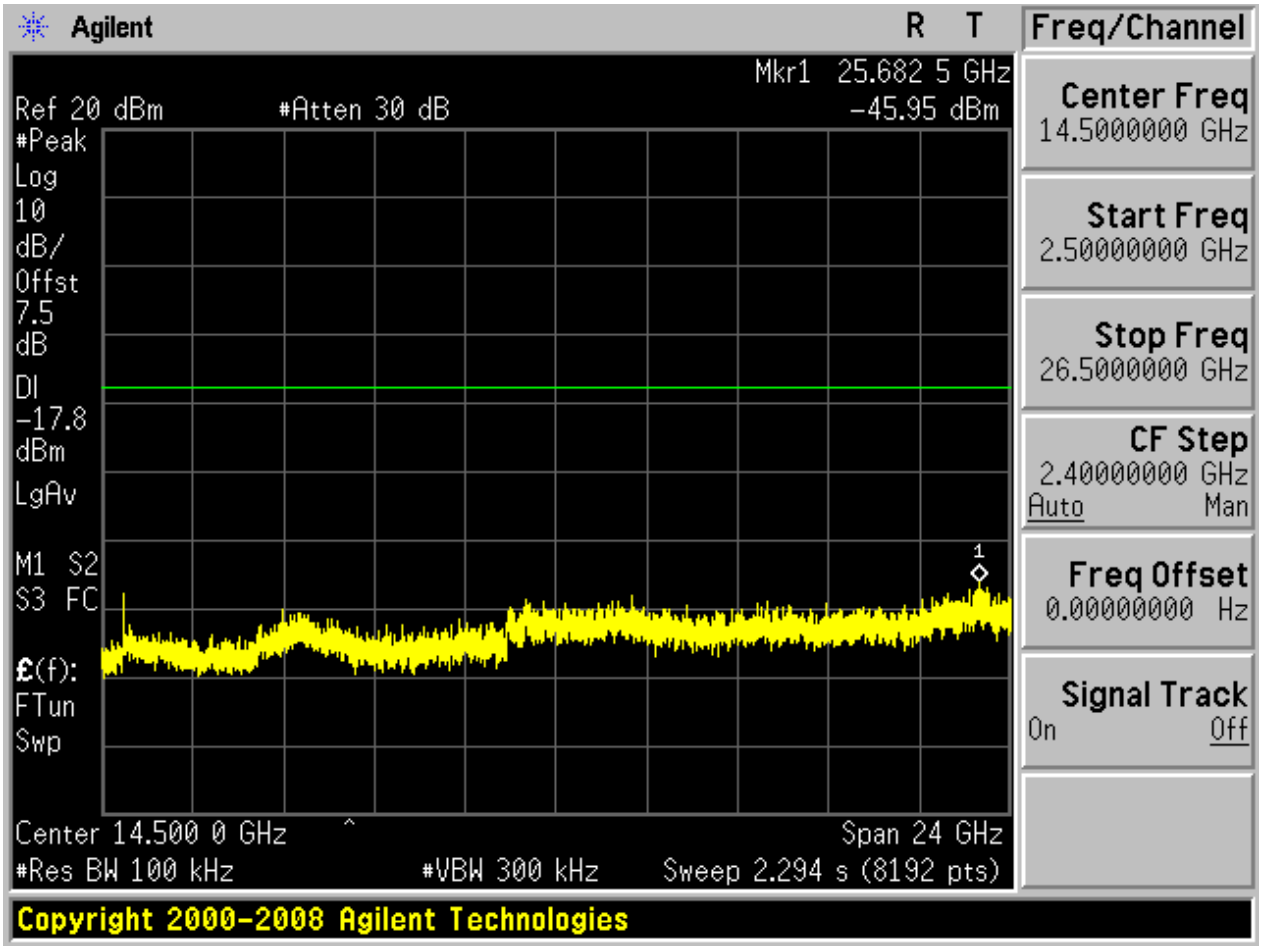

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2.3 TM1_DH5_Ch78

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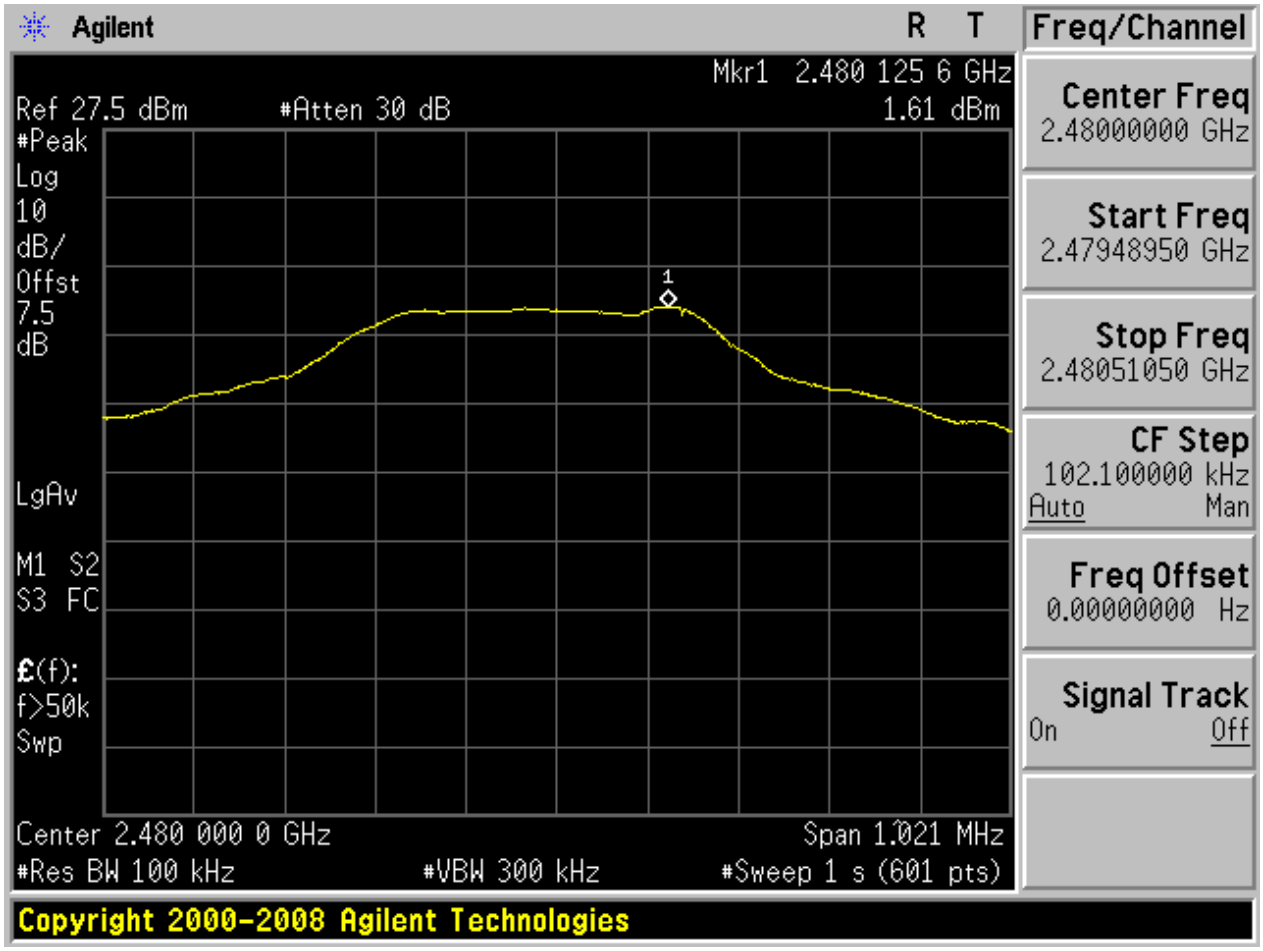

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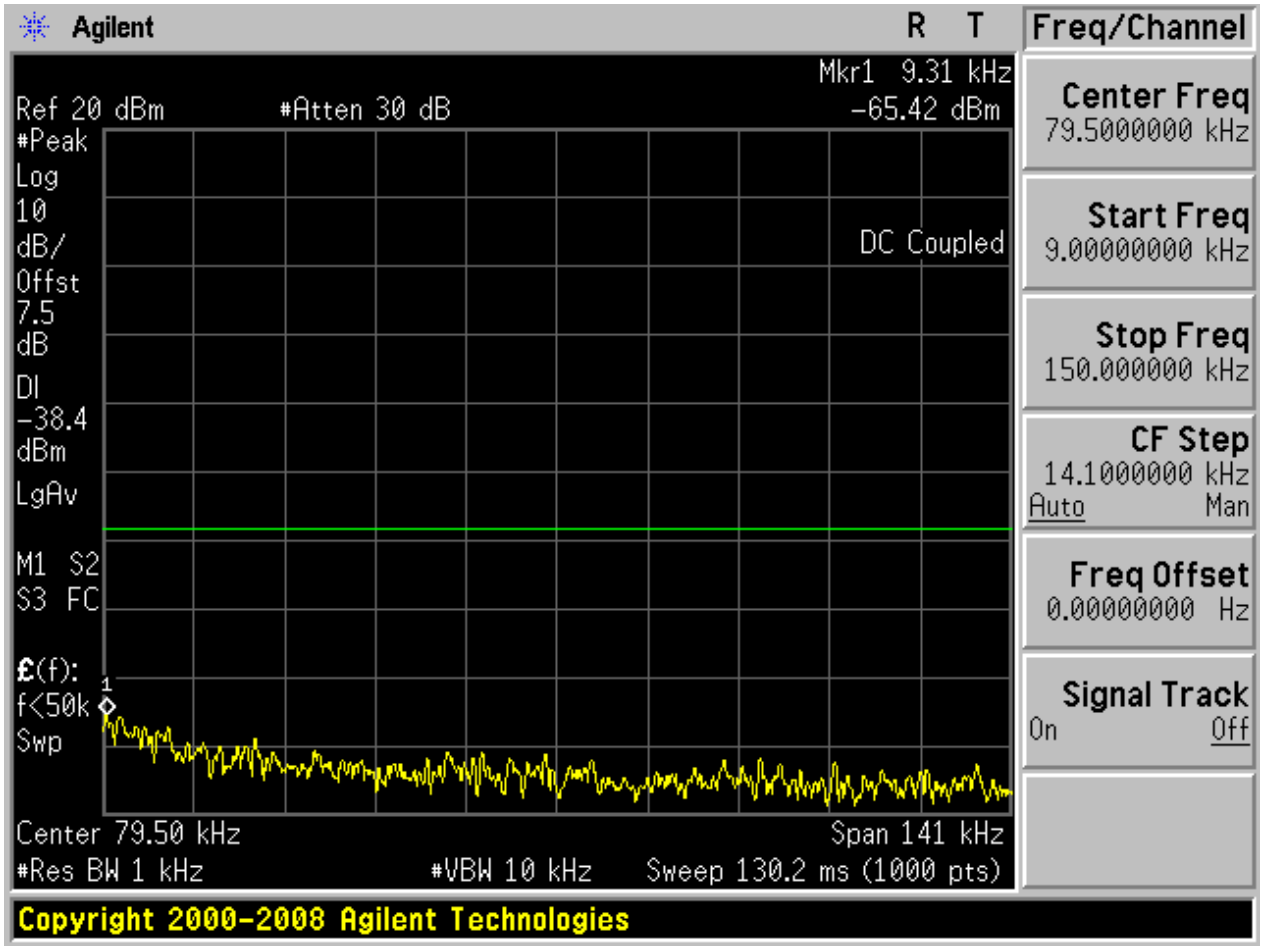

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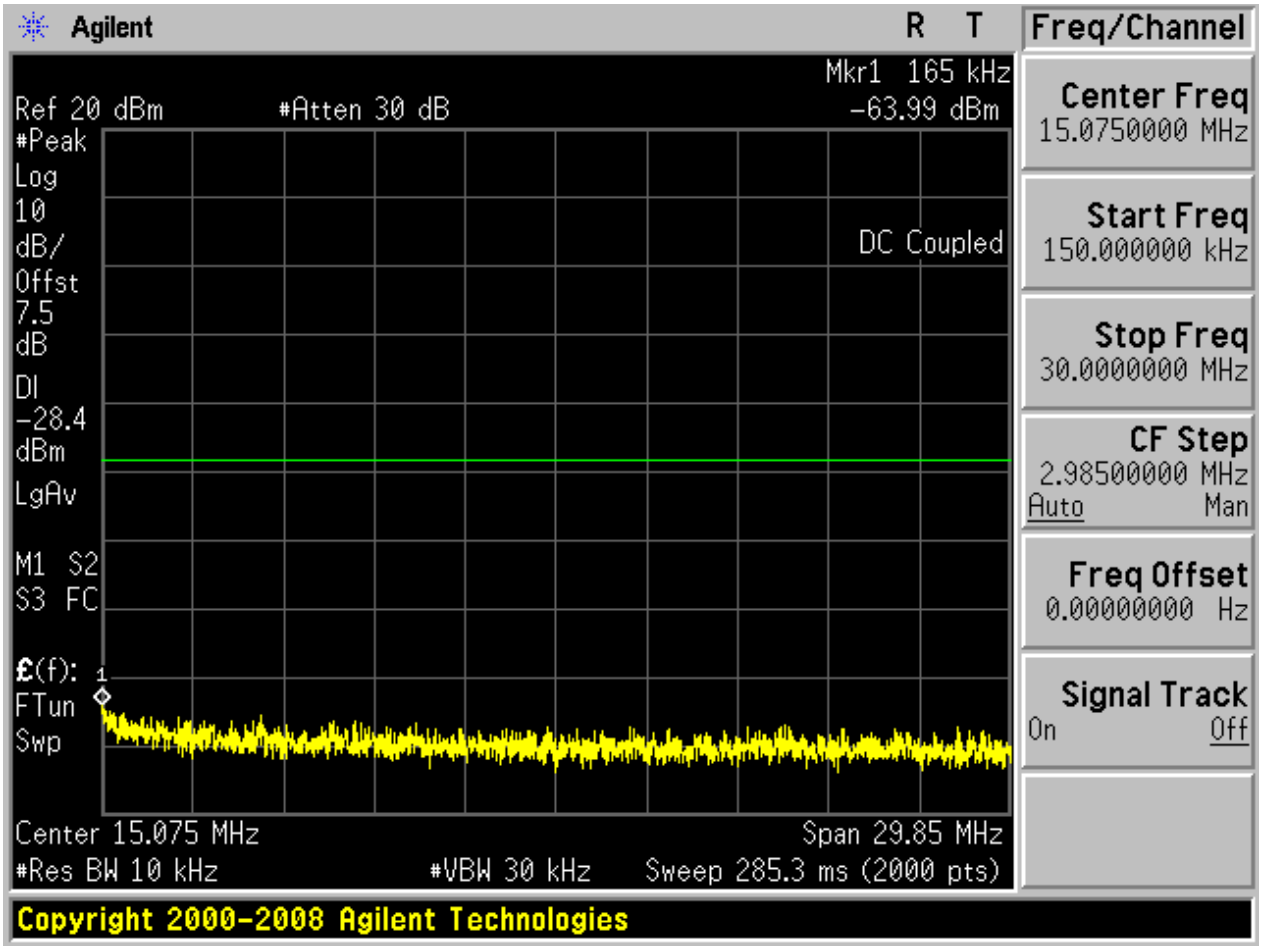

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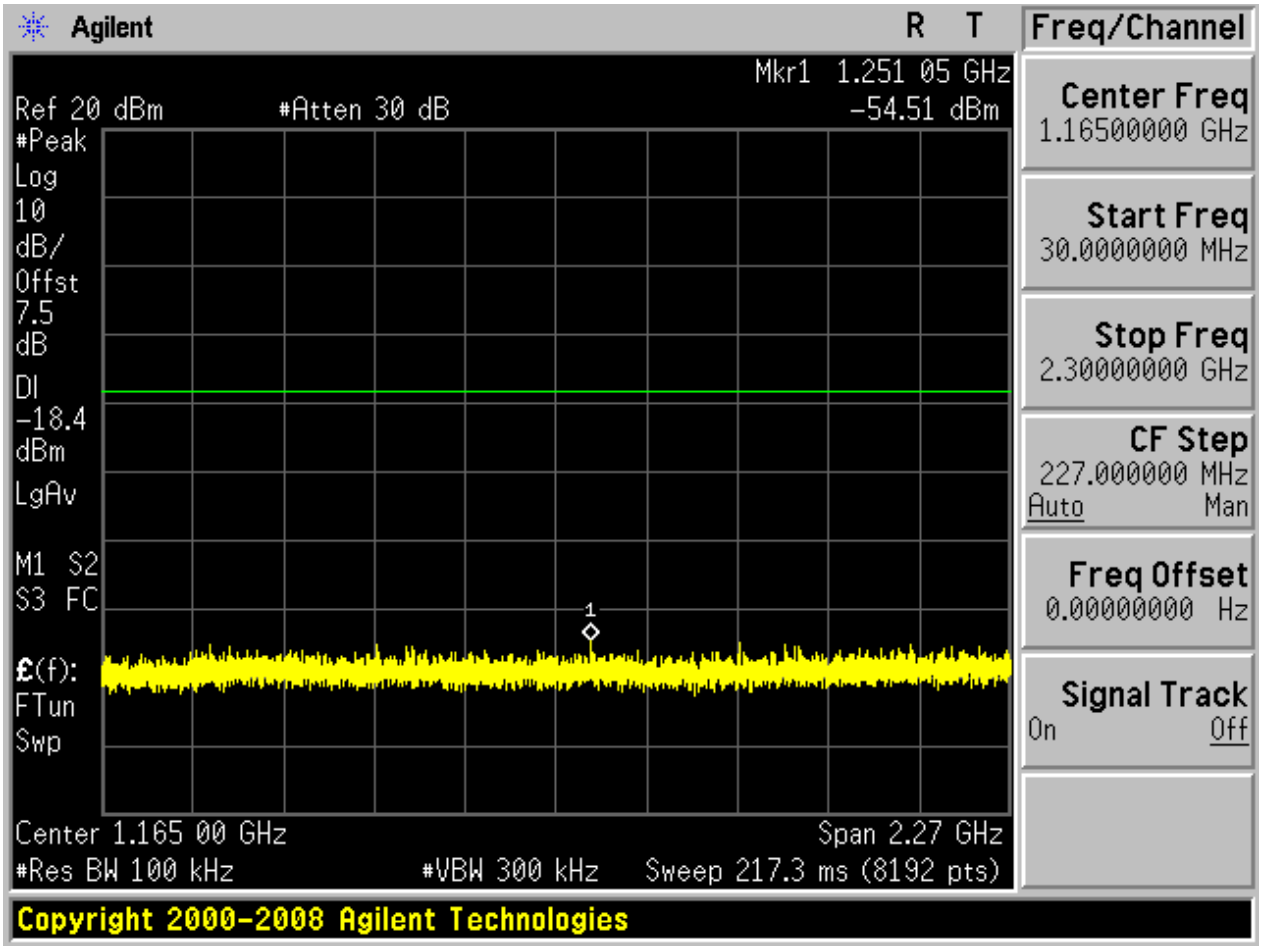

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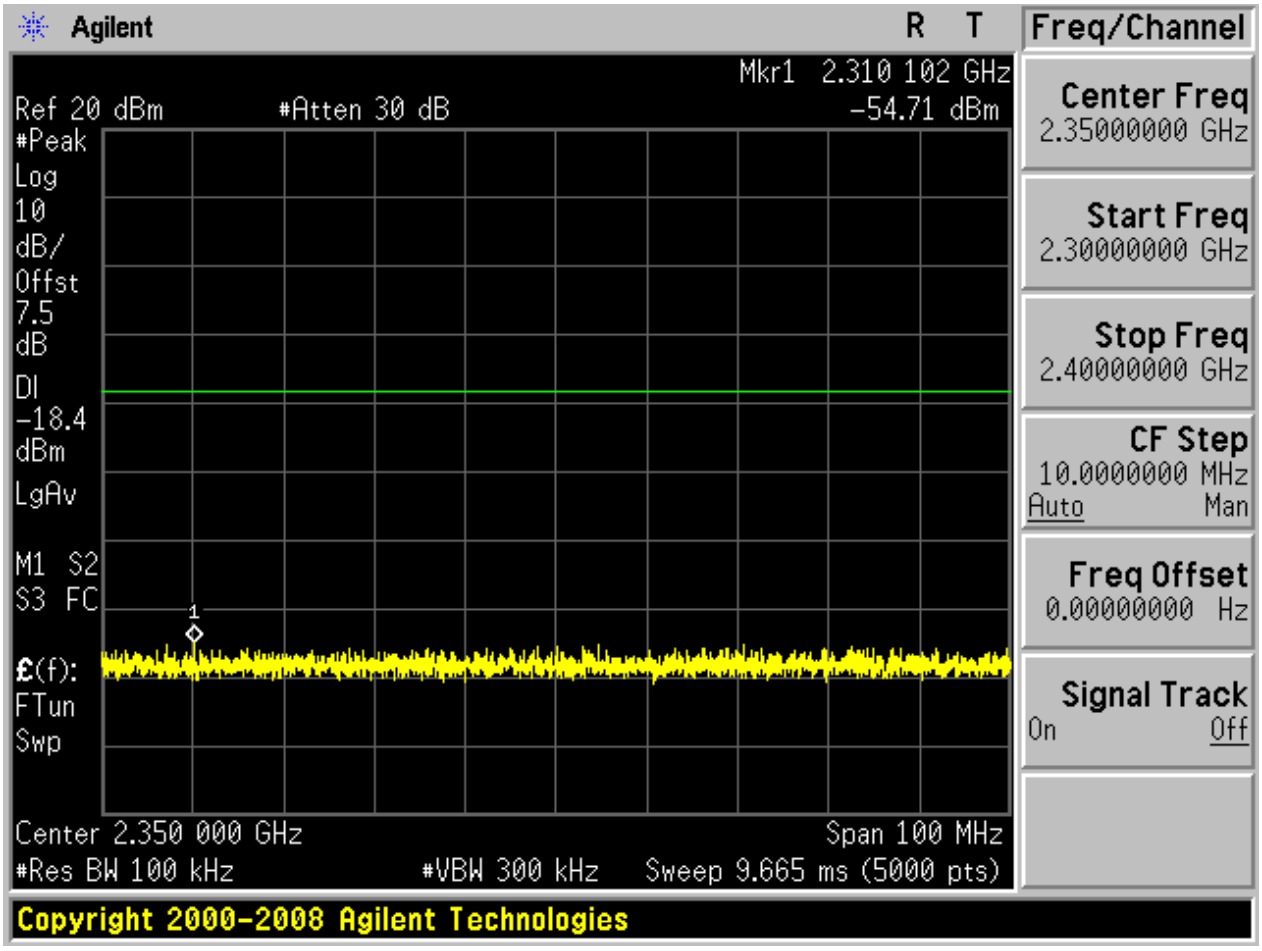

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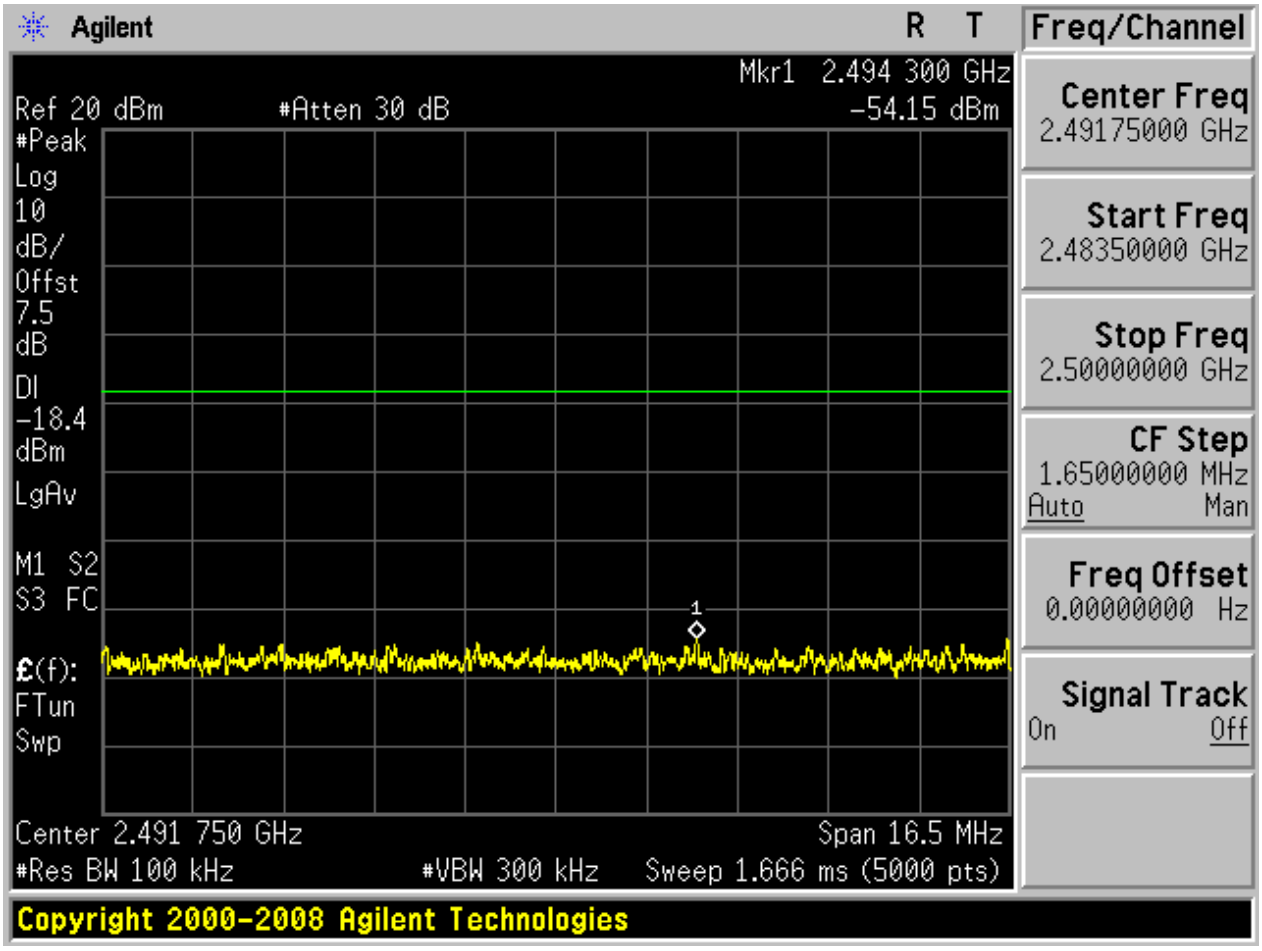

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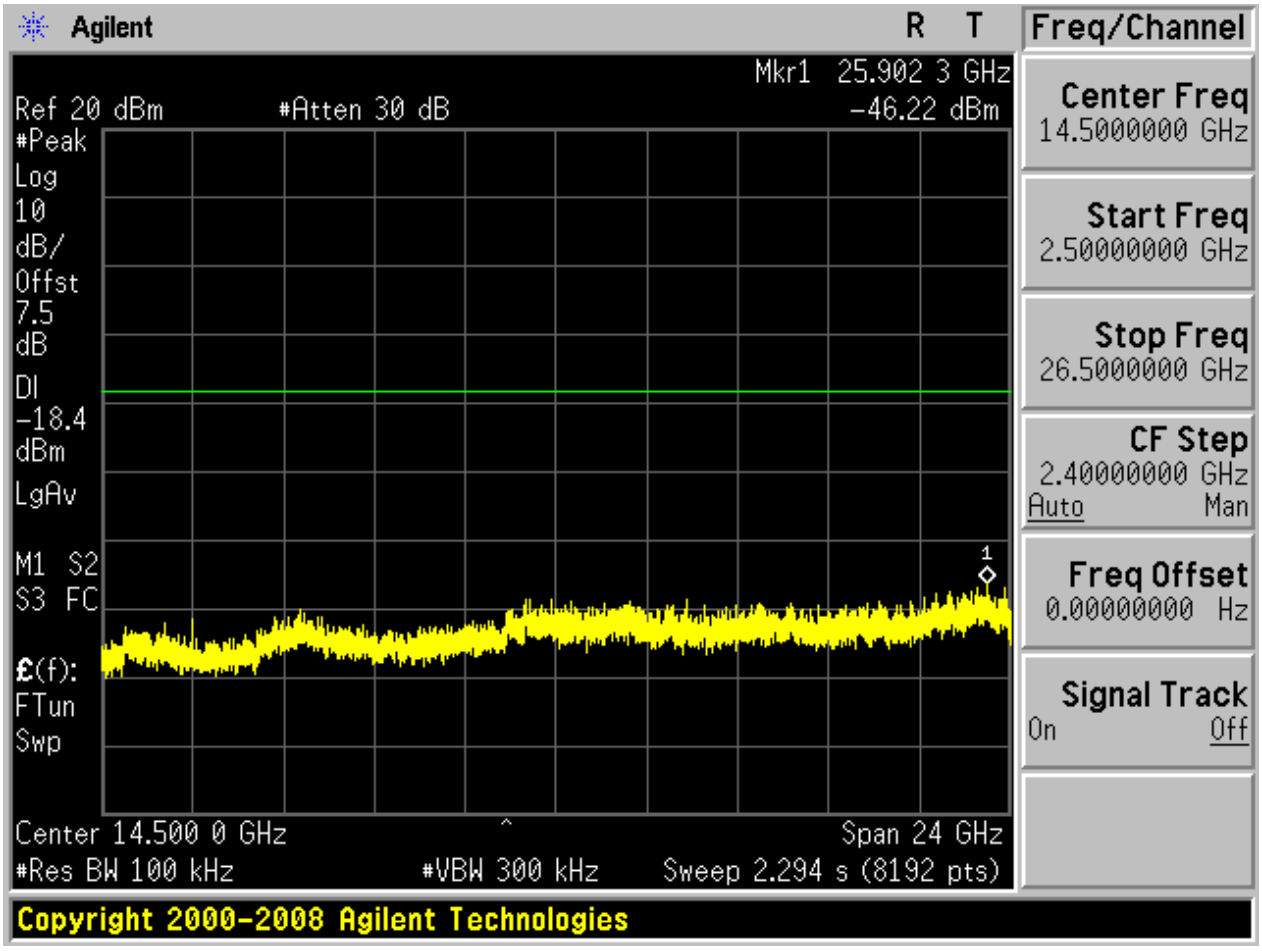

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2.4 TM2_2DH5_Ch0

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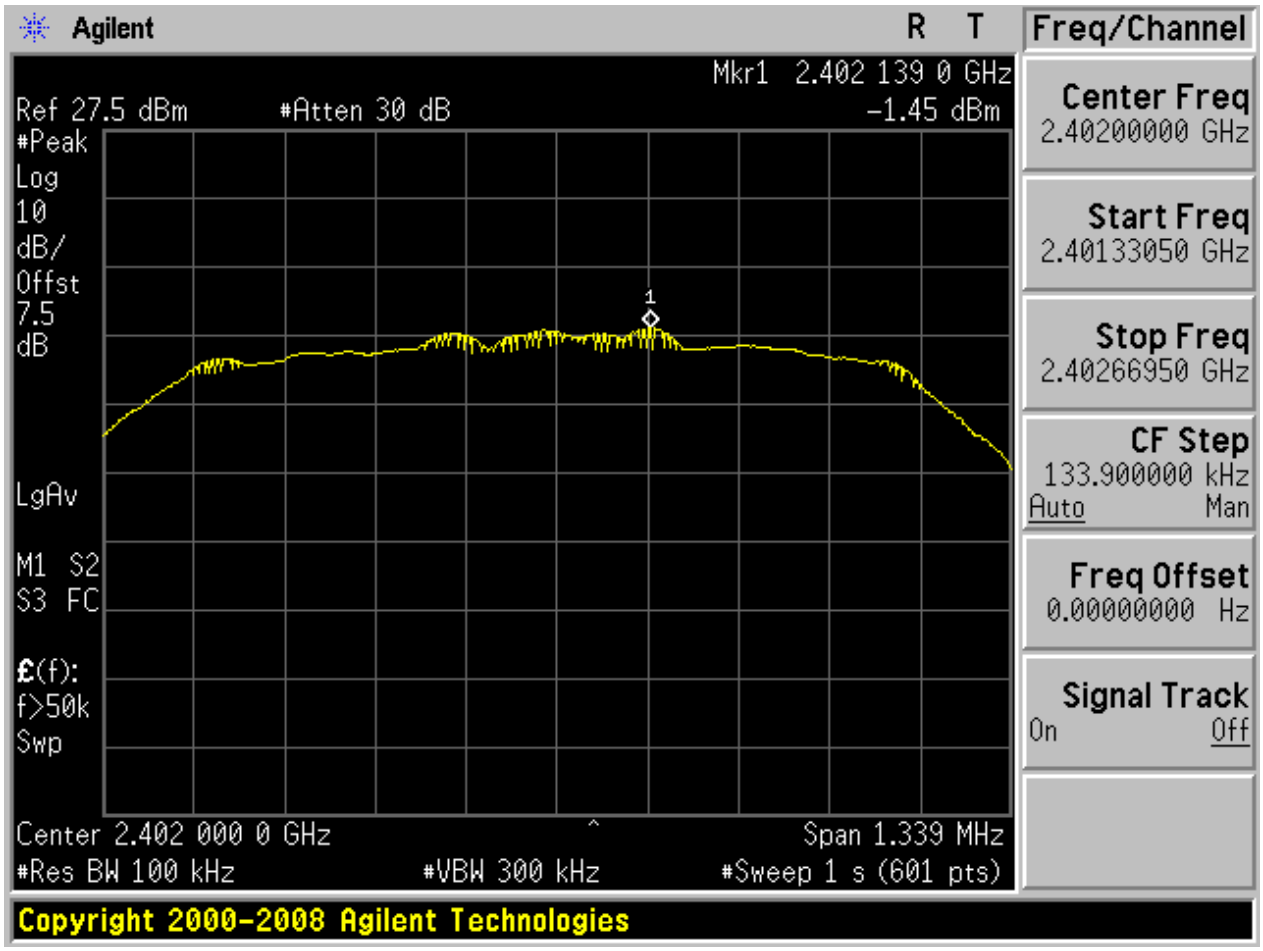

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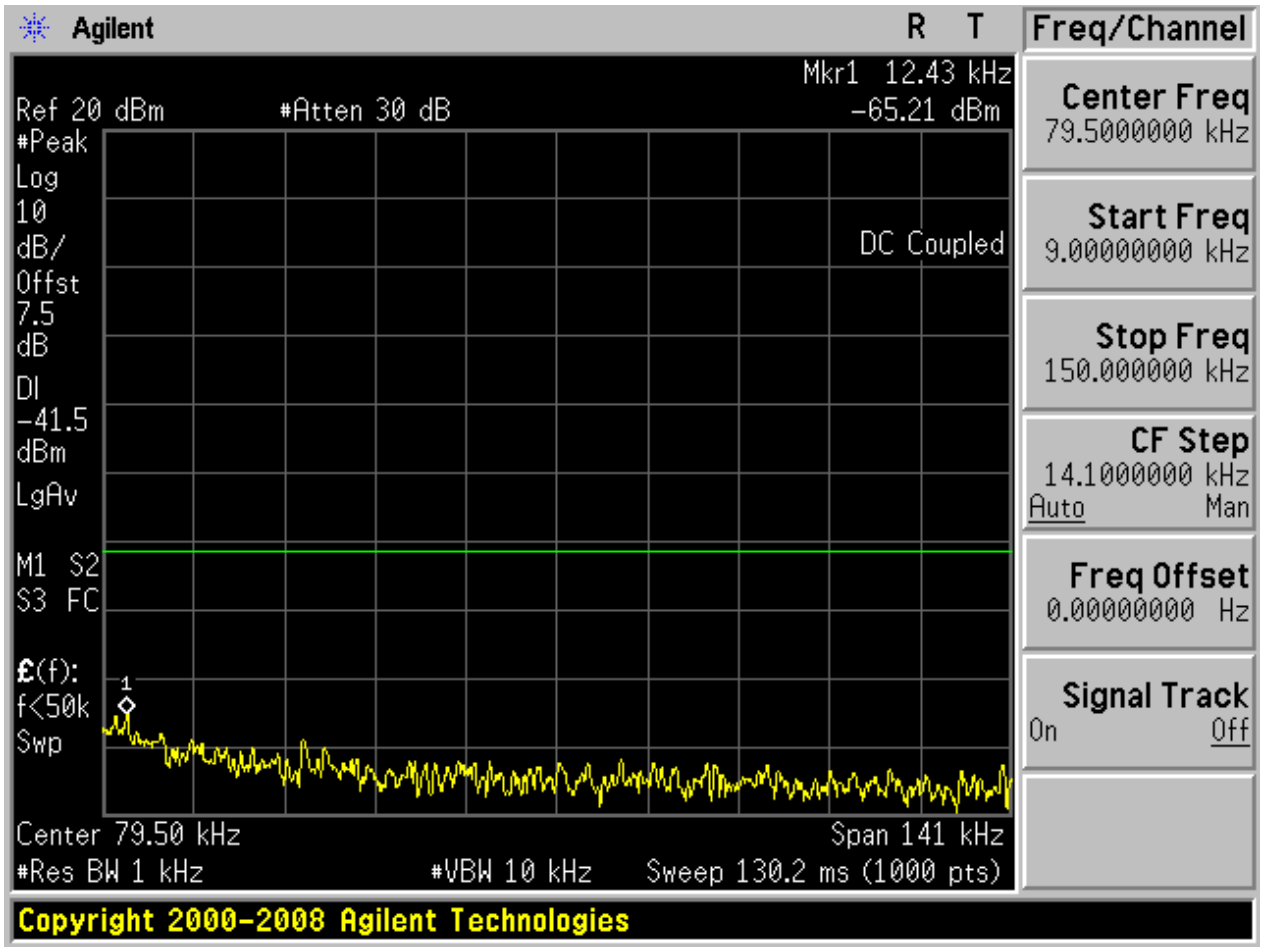

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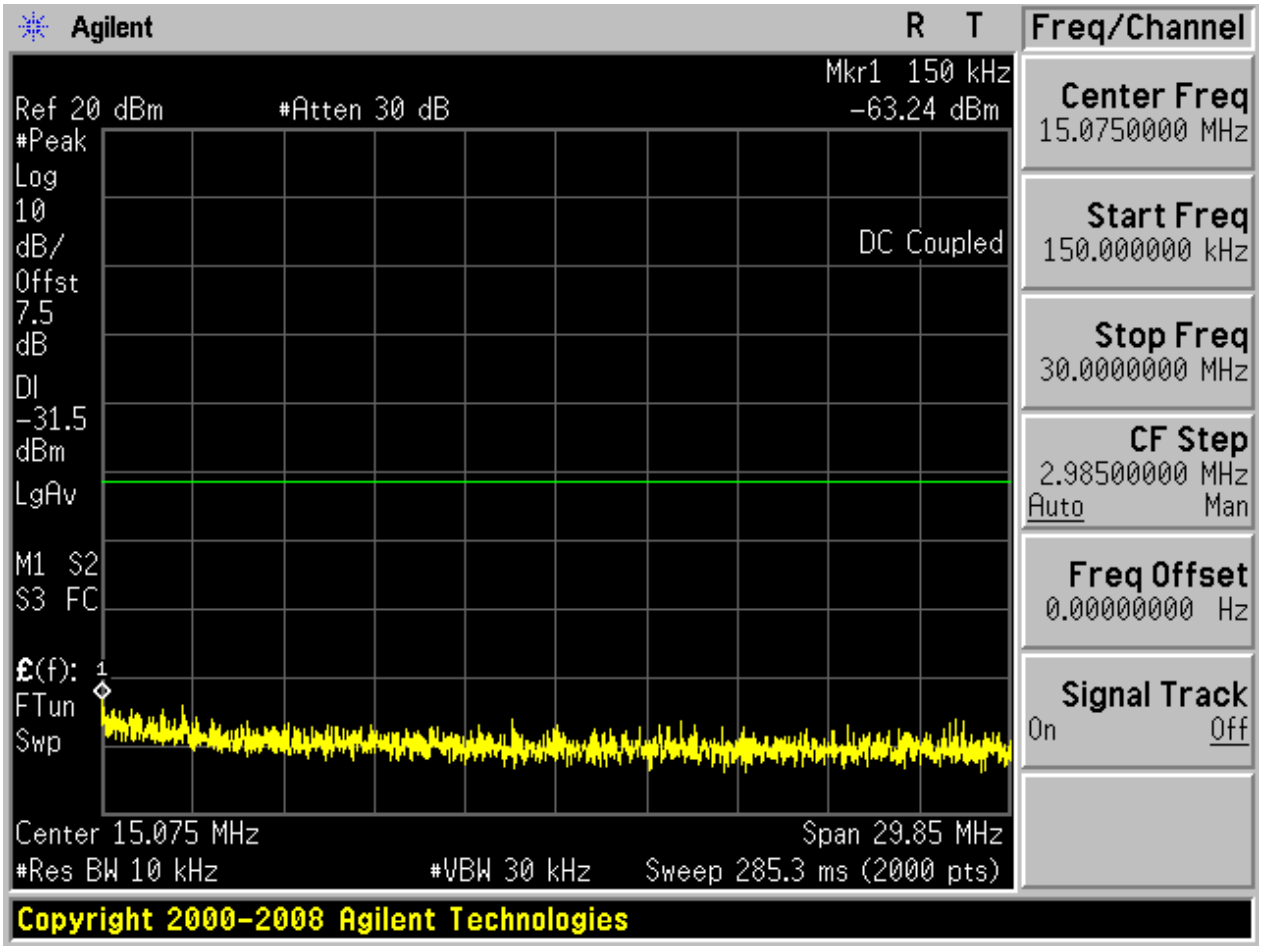

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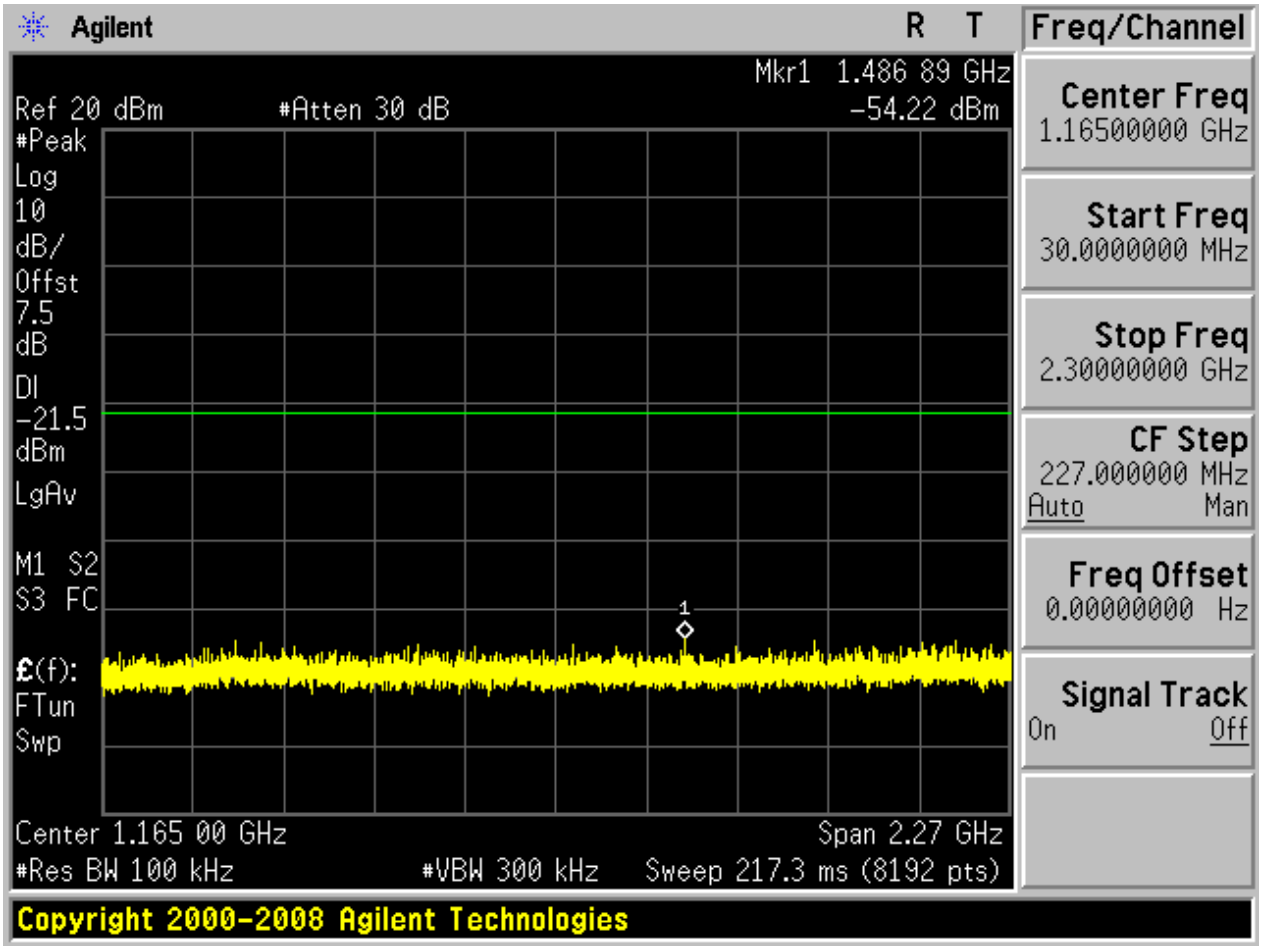

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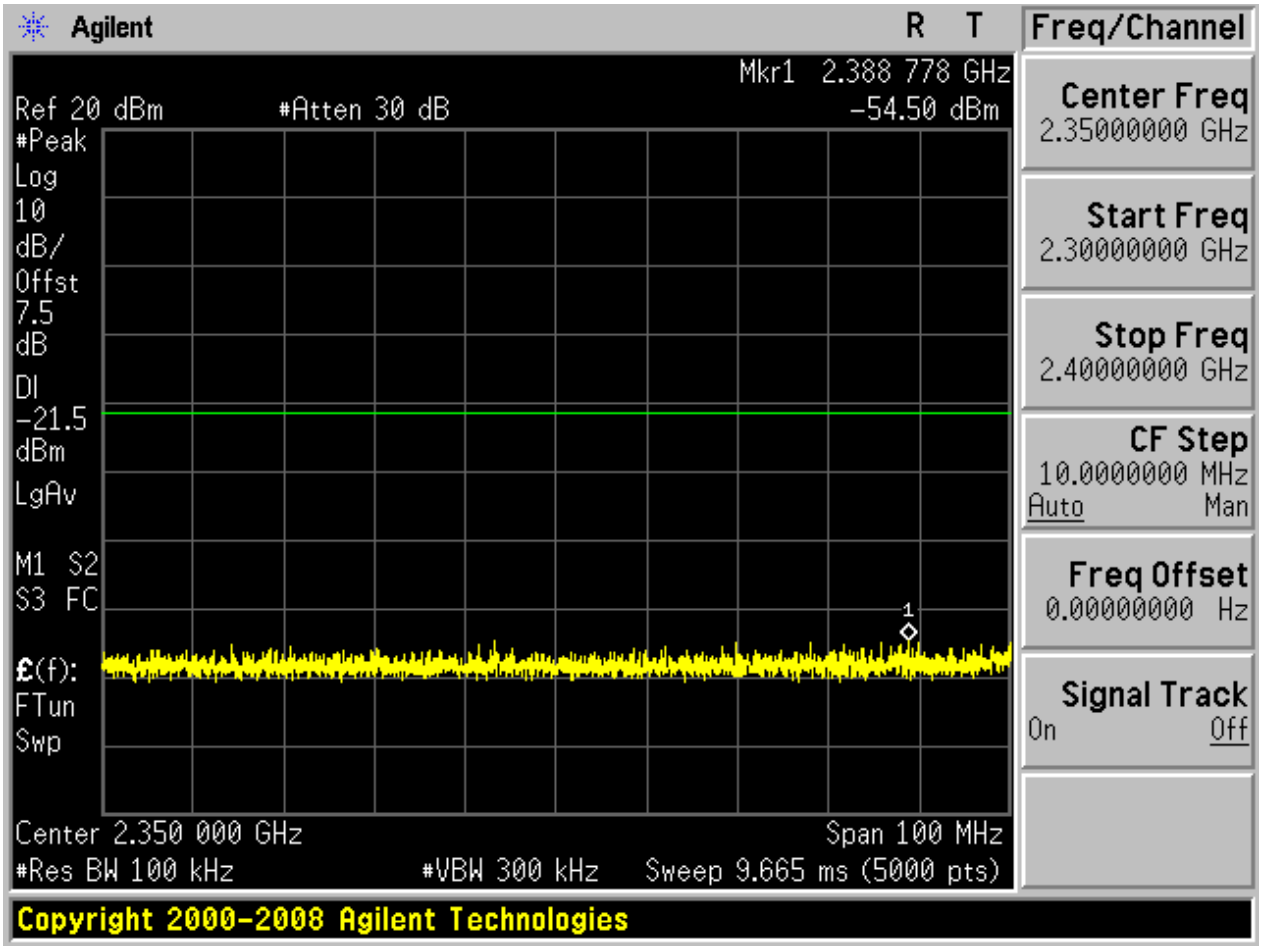

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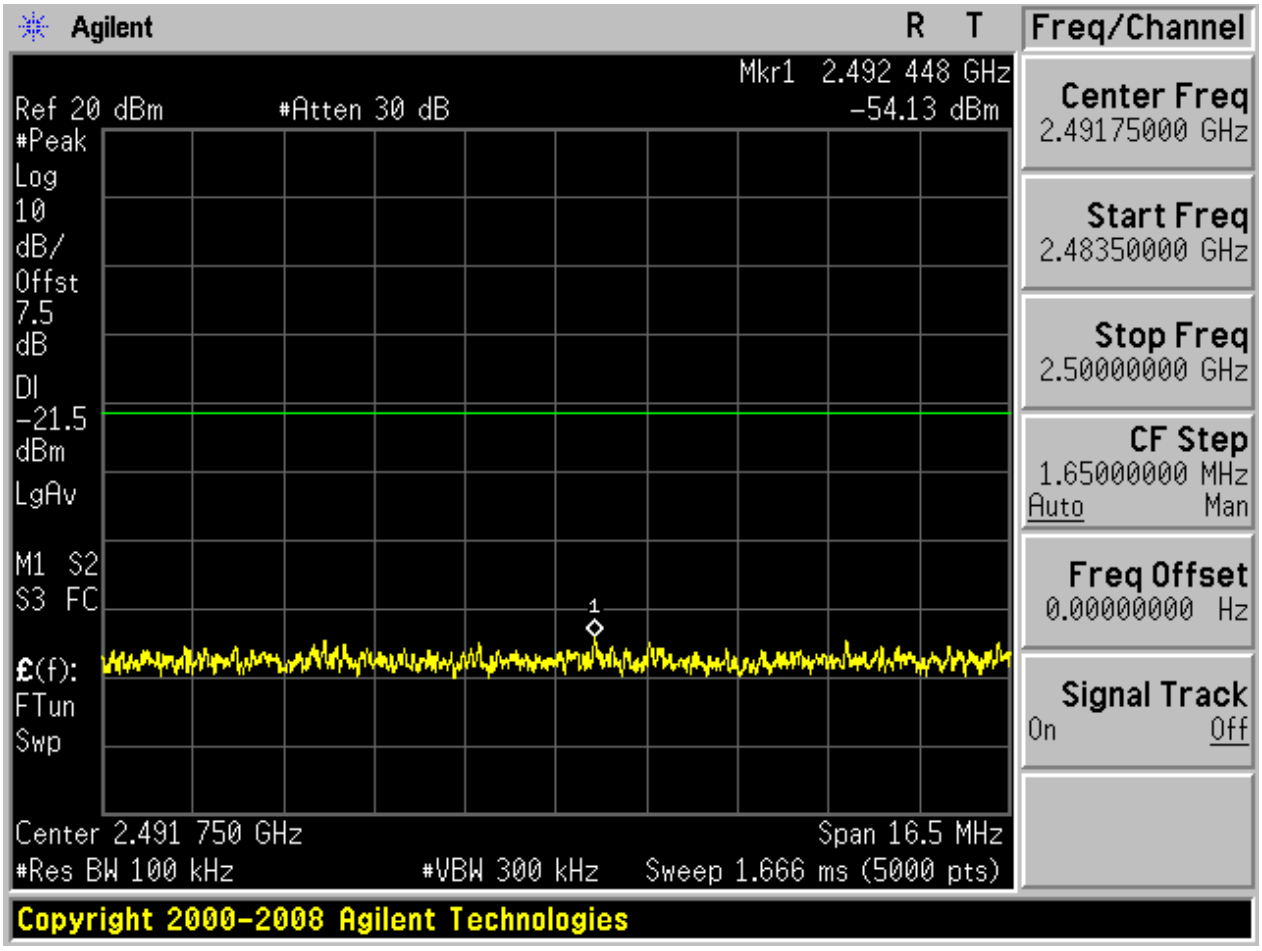

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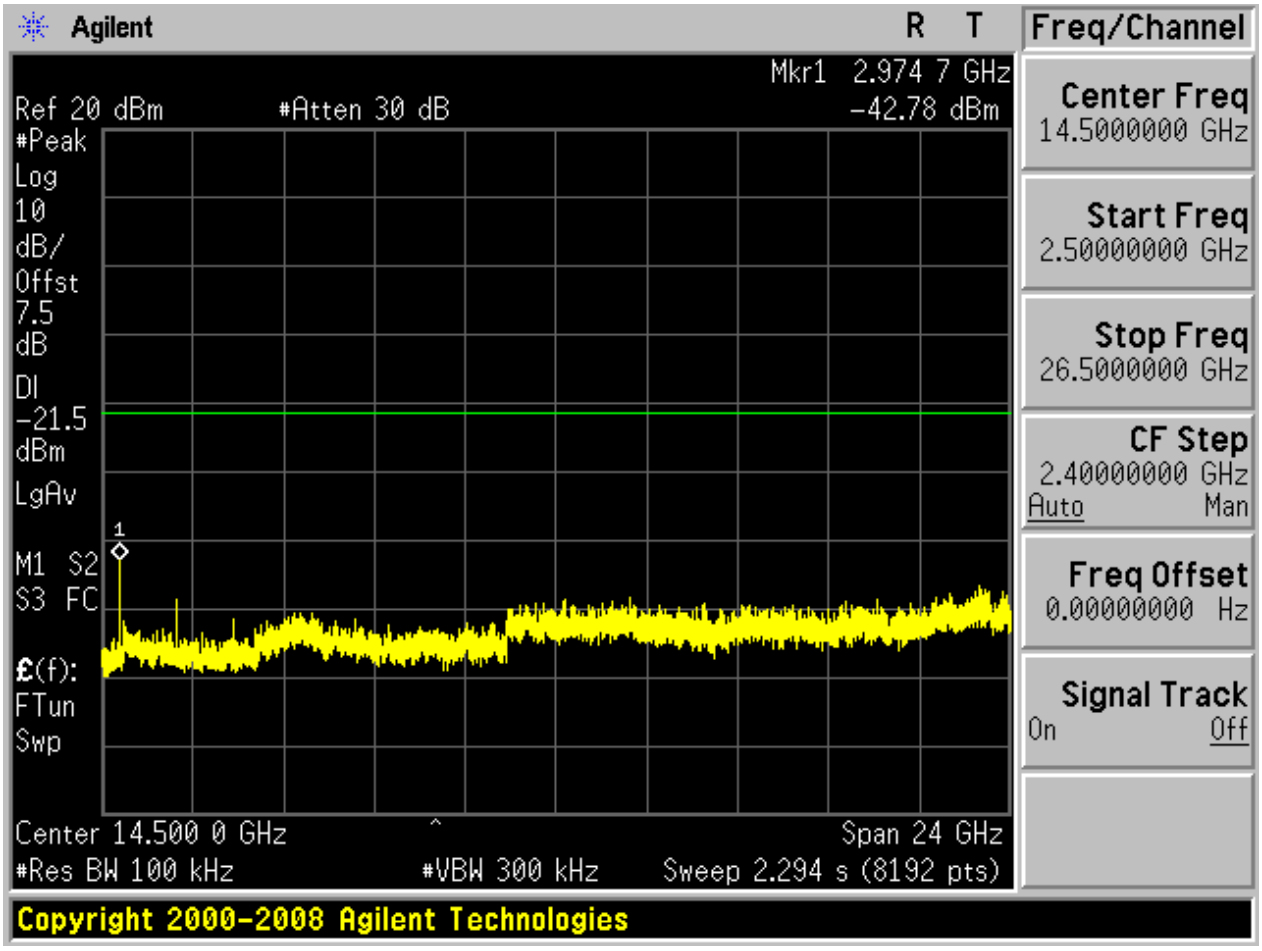

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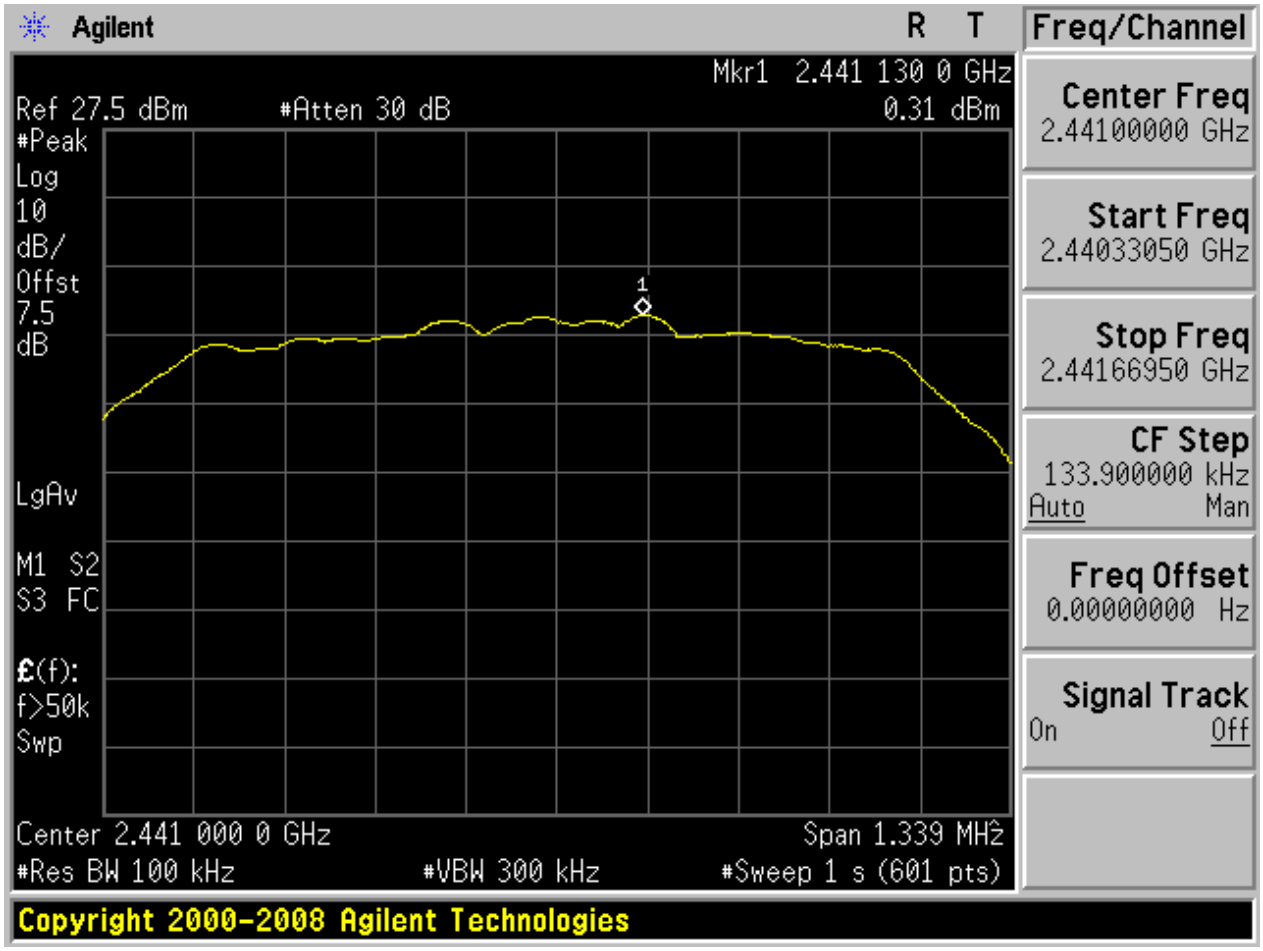
2.5 TM2_2DH5_Ch39

2.5.1 Pref



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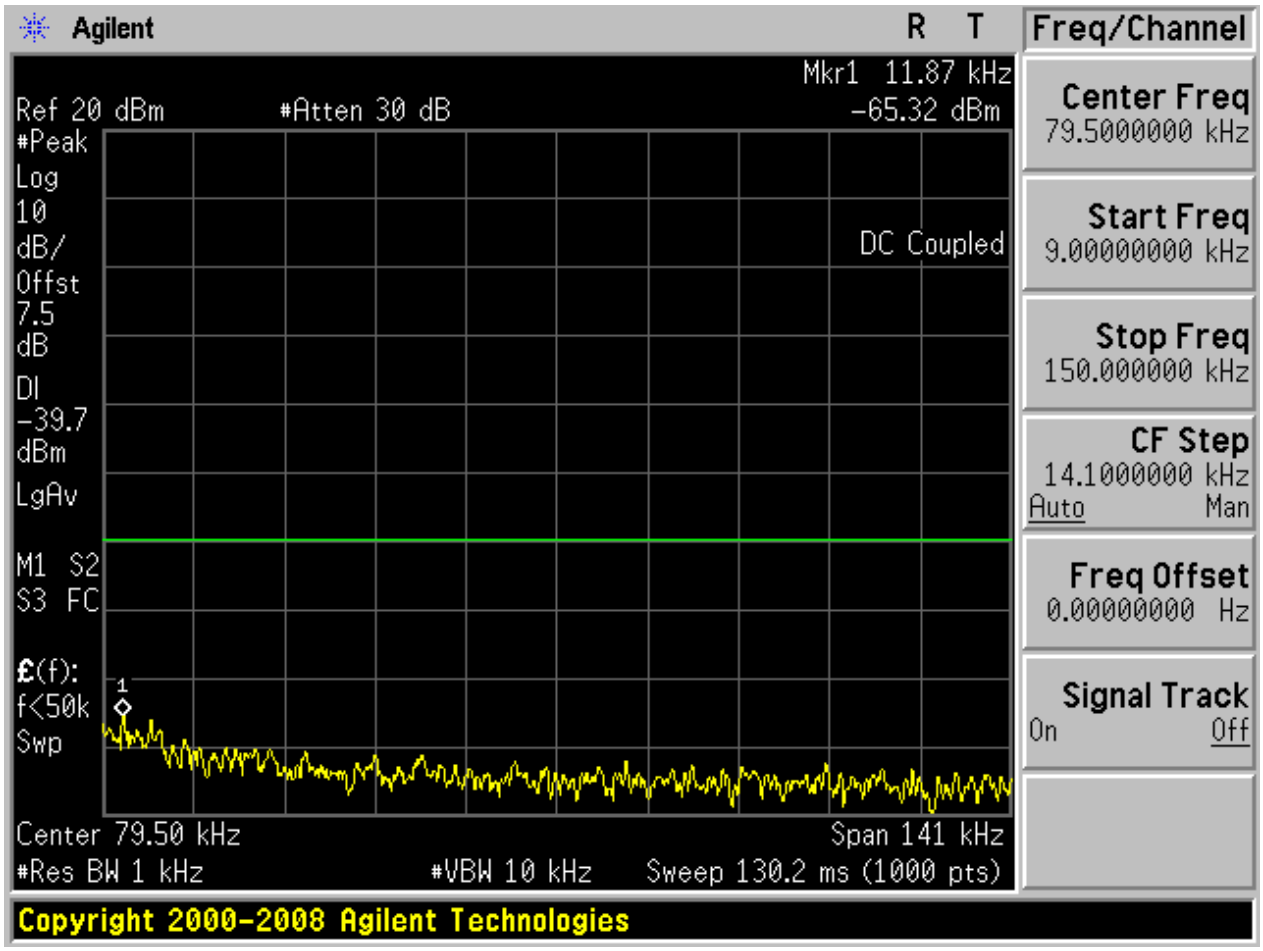

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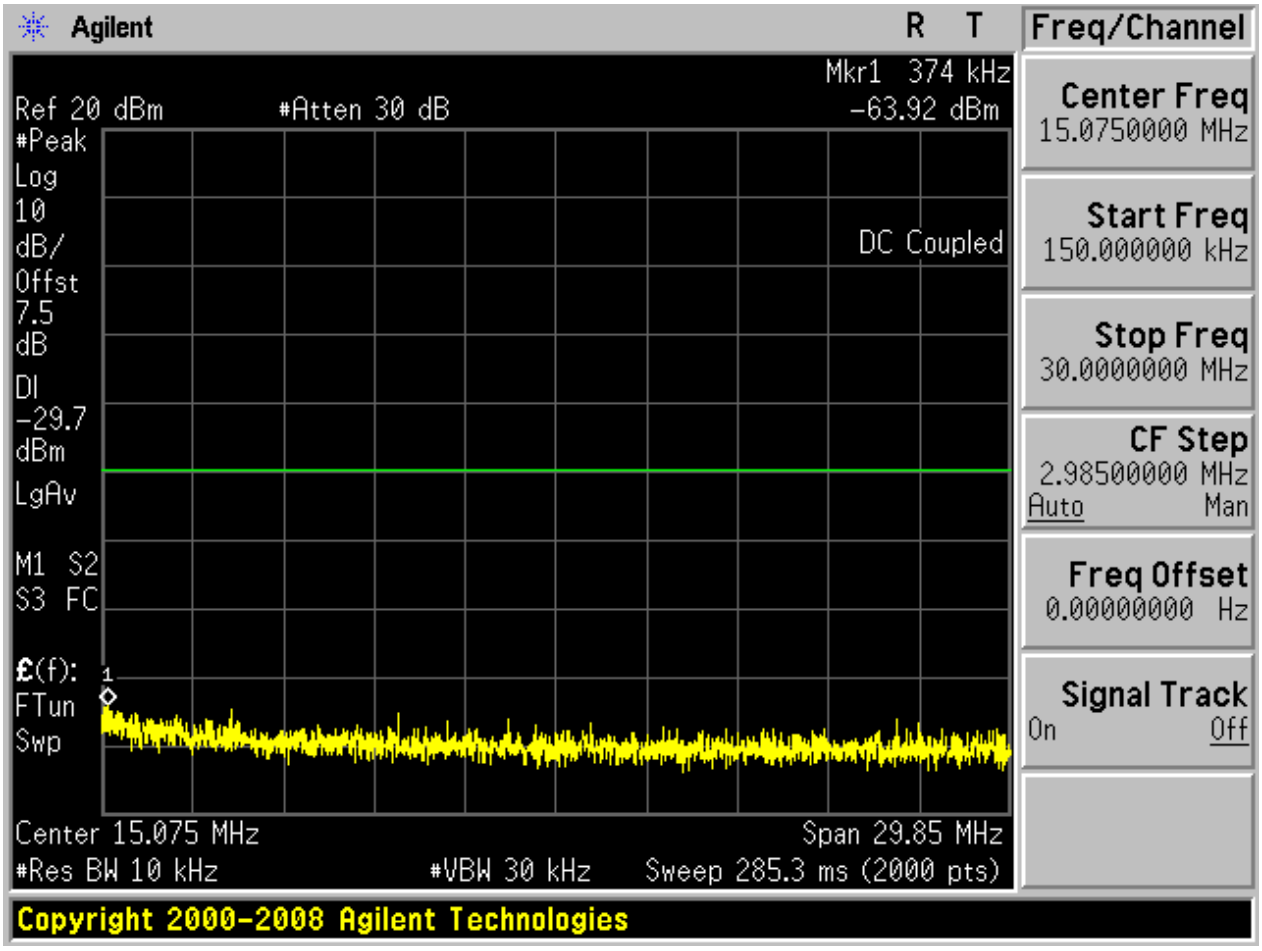

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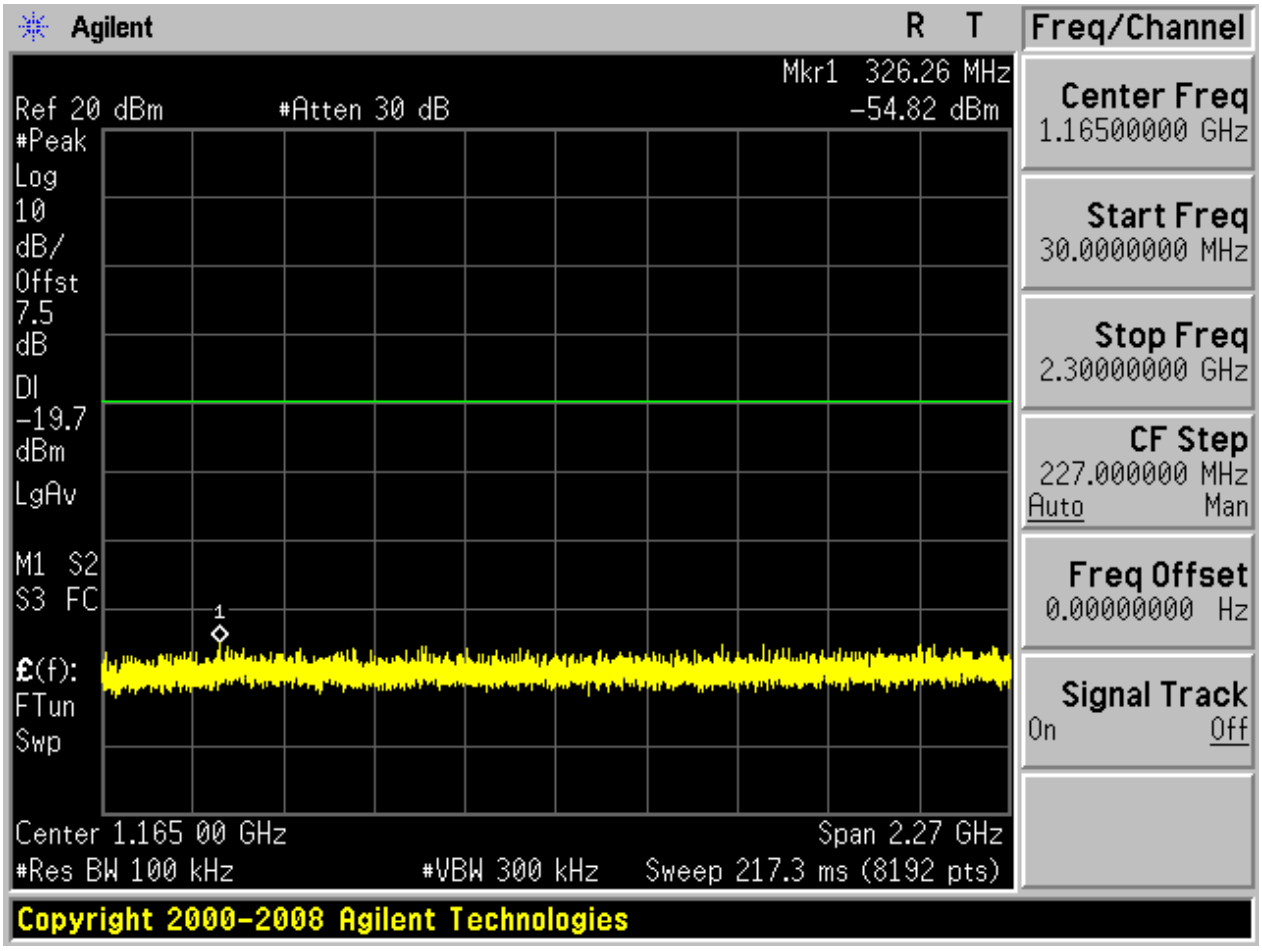

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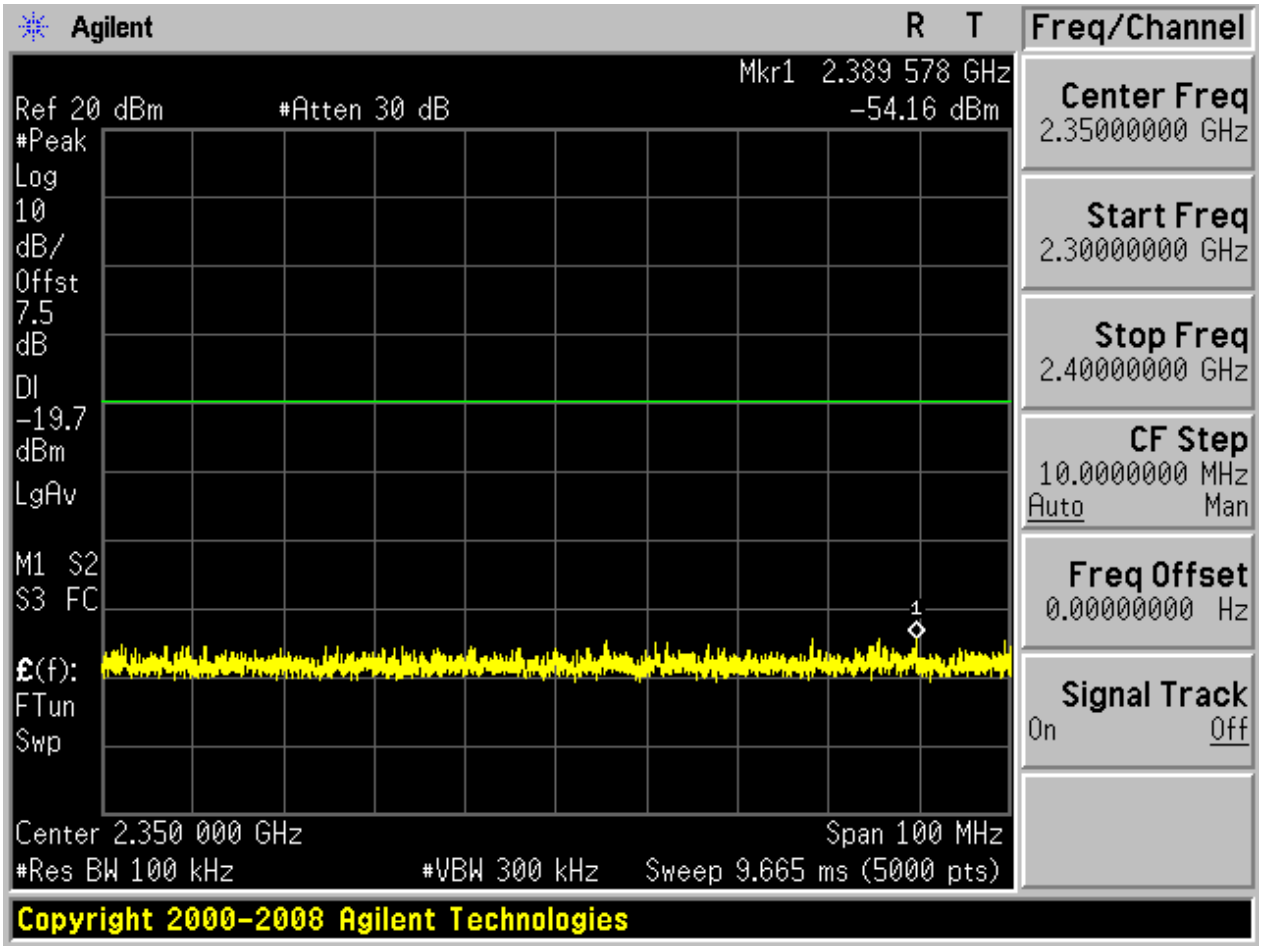

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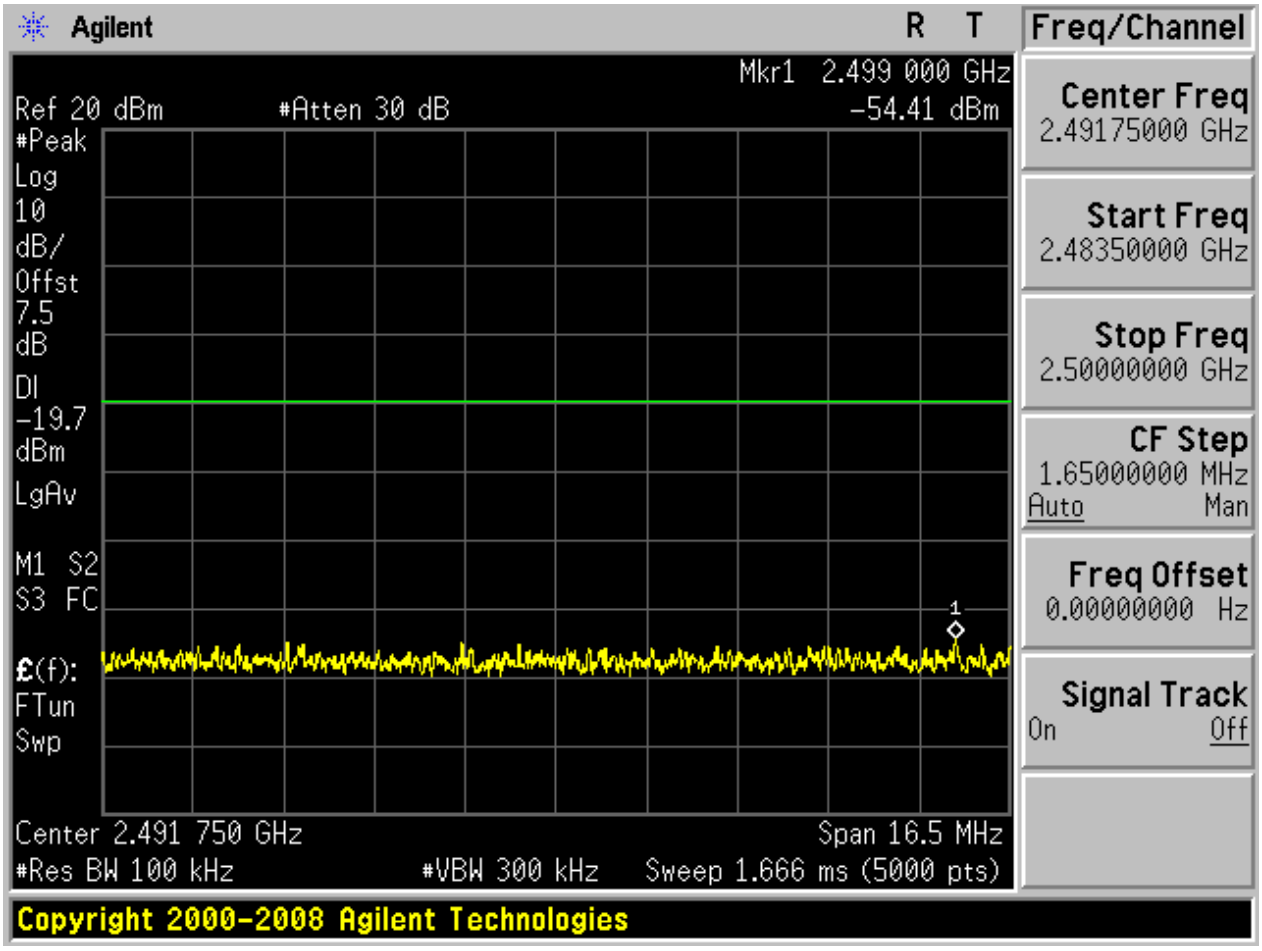

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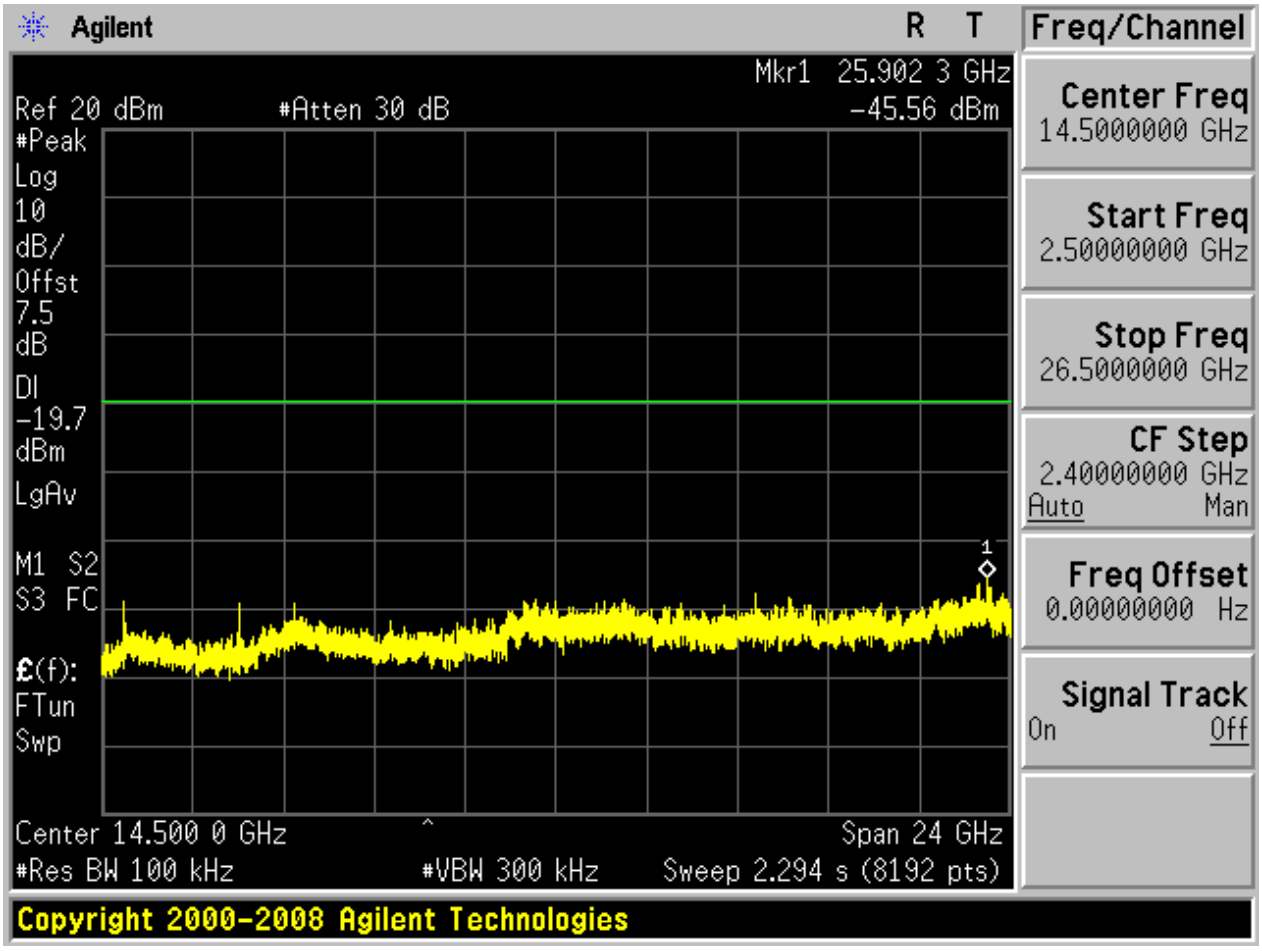

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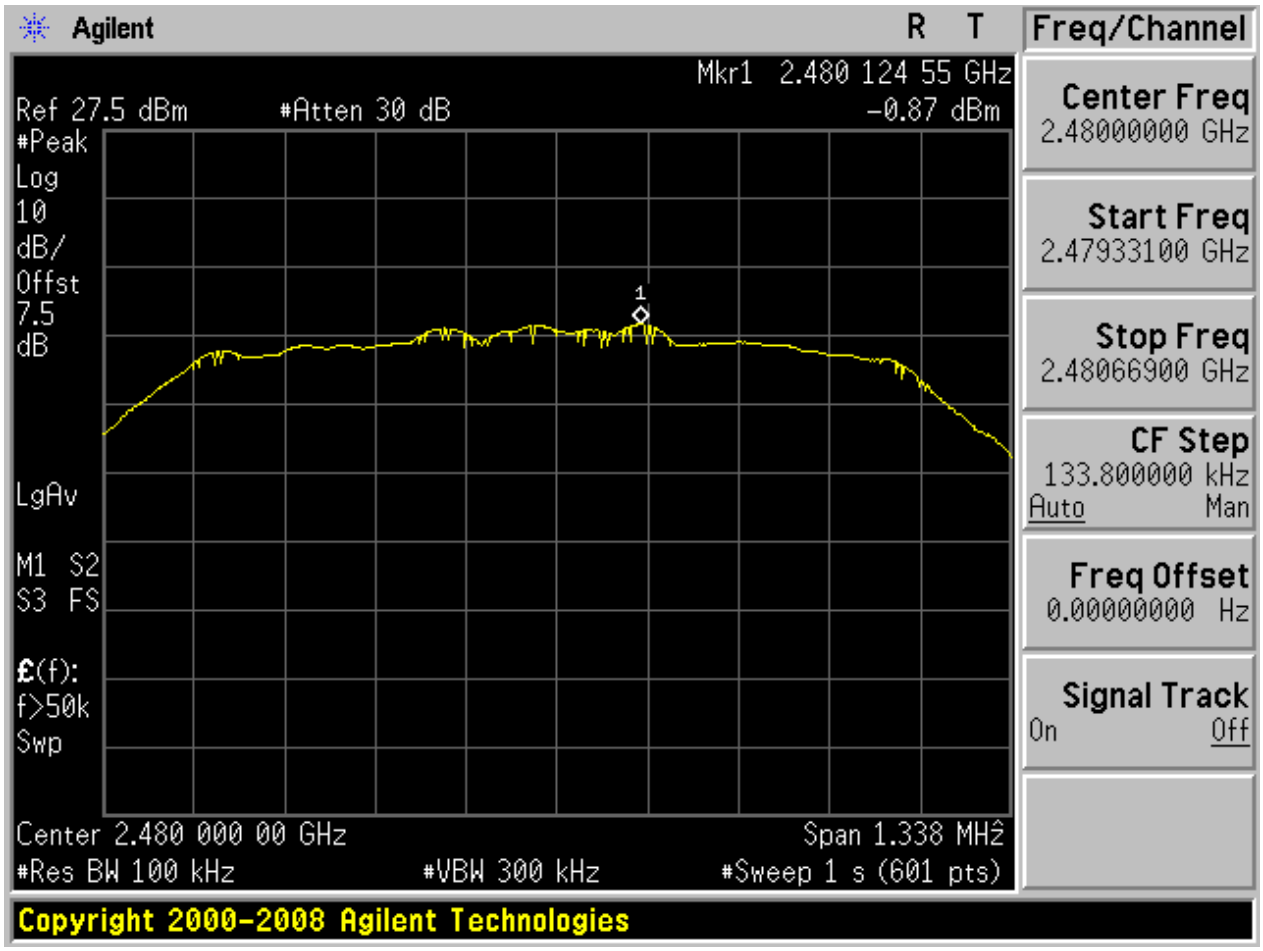
2.6 TM2_2DH5_Ch78

2.6.1 Pref



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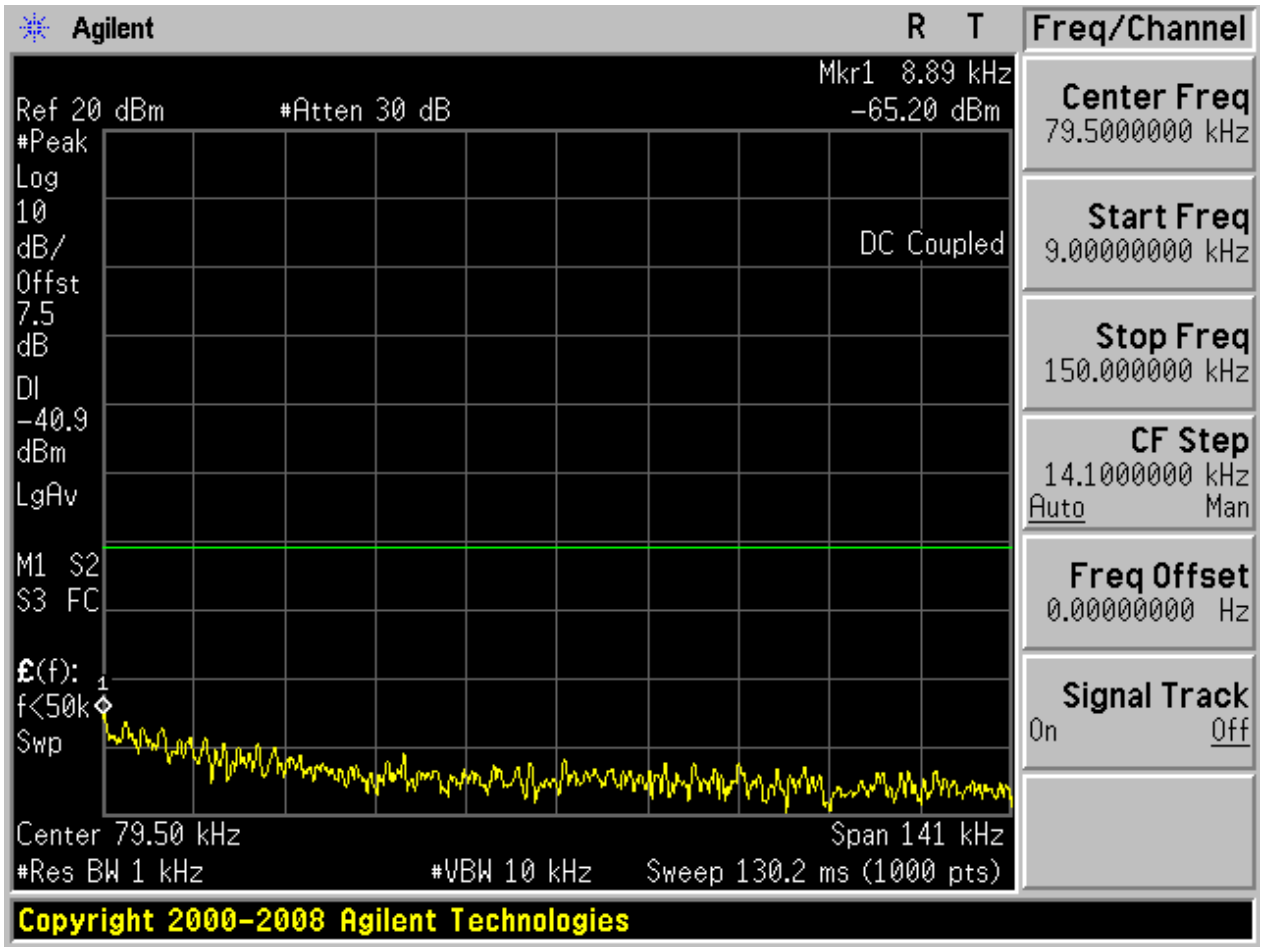
2.6.2 Puw



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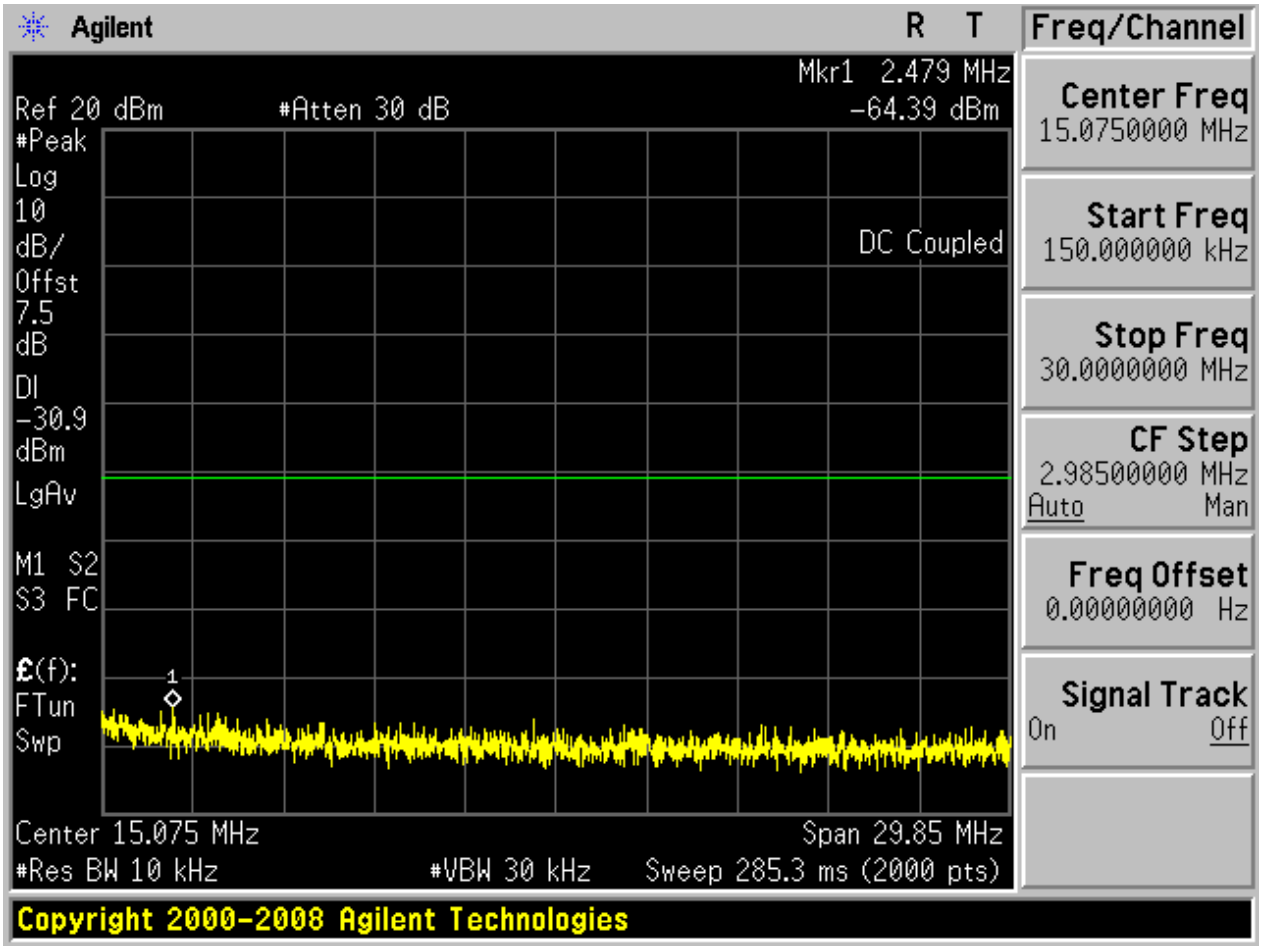

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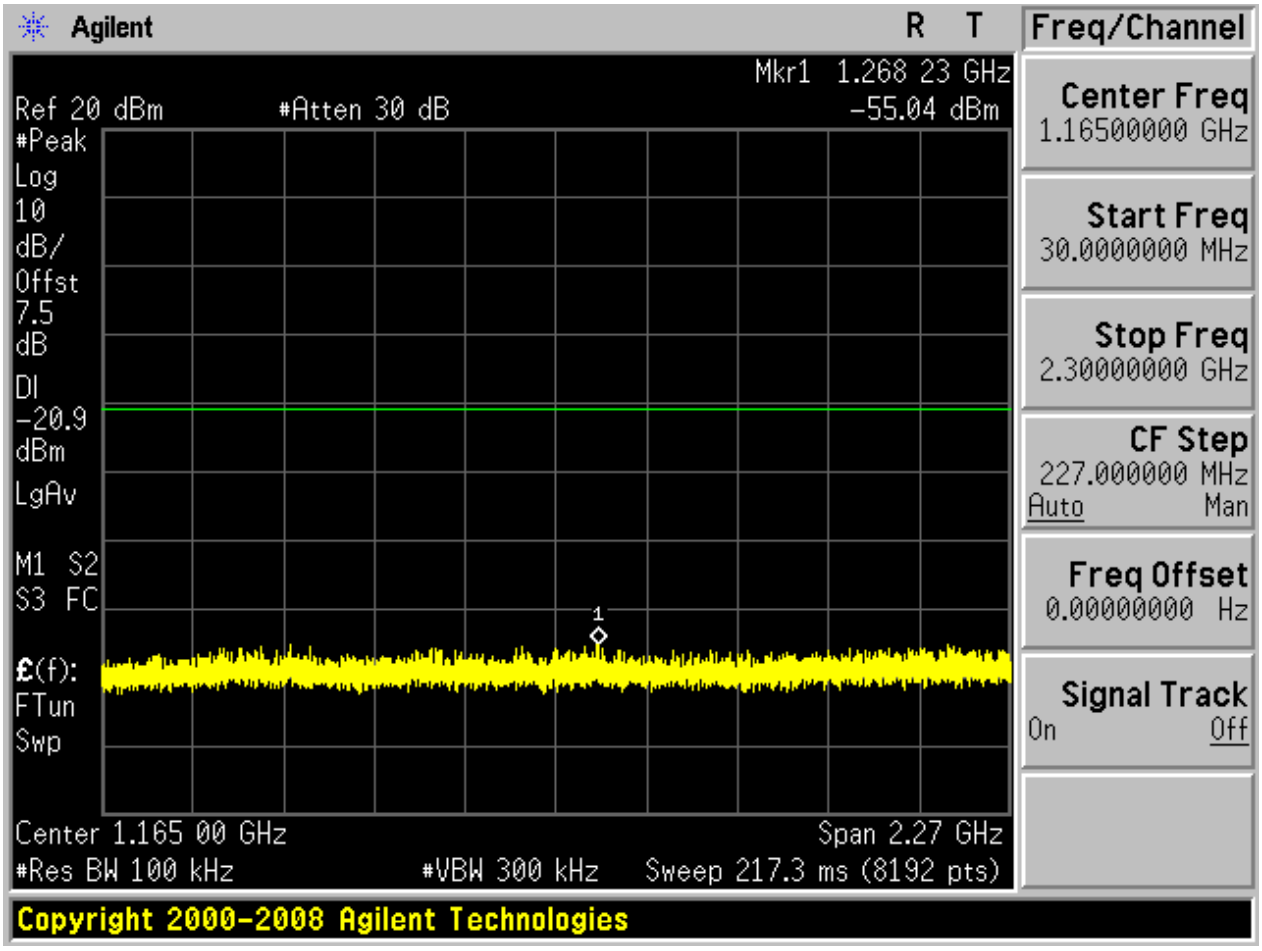

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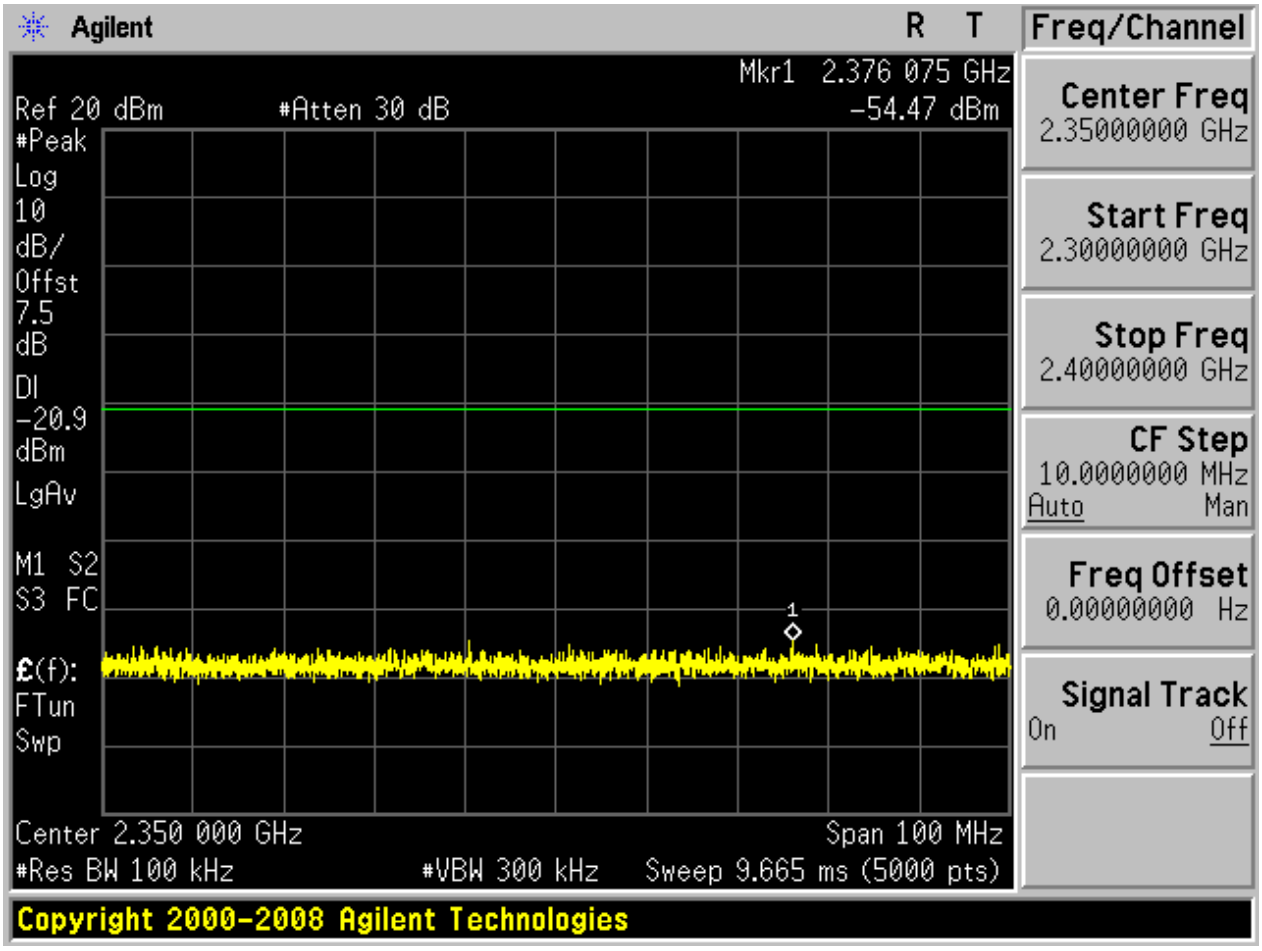

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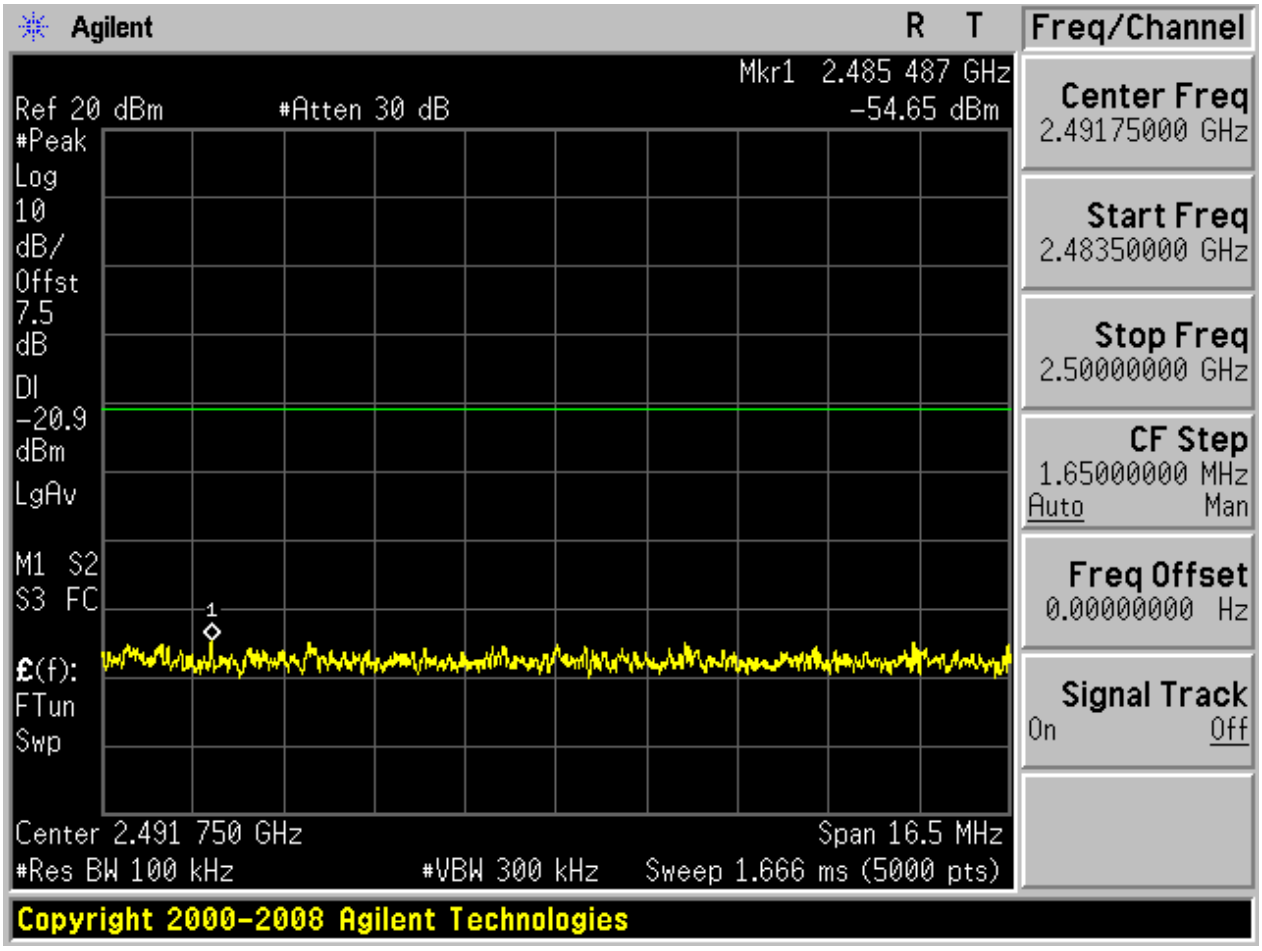
Agilent
R T
Freq/Channel
Mkr1 2.485 487 GHz
Ref 20 dBm
#Atten 30 dB
-54.65 dBm
#Peak
Log
10
dB/
Offst
7.5
dB
Dl
-20.9
dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 2.491 750 GHz
Span 16.5 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.666 ms (5000 pts)
Center Freq
2.49175000 GHz
Start Freq
2.48350000 GHz
Stop Freq
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CF Step
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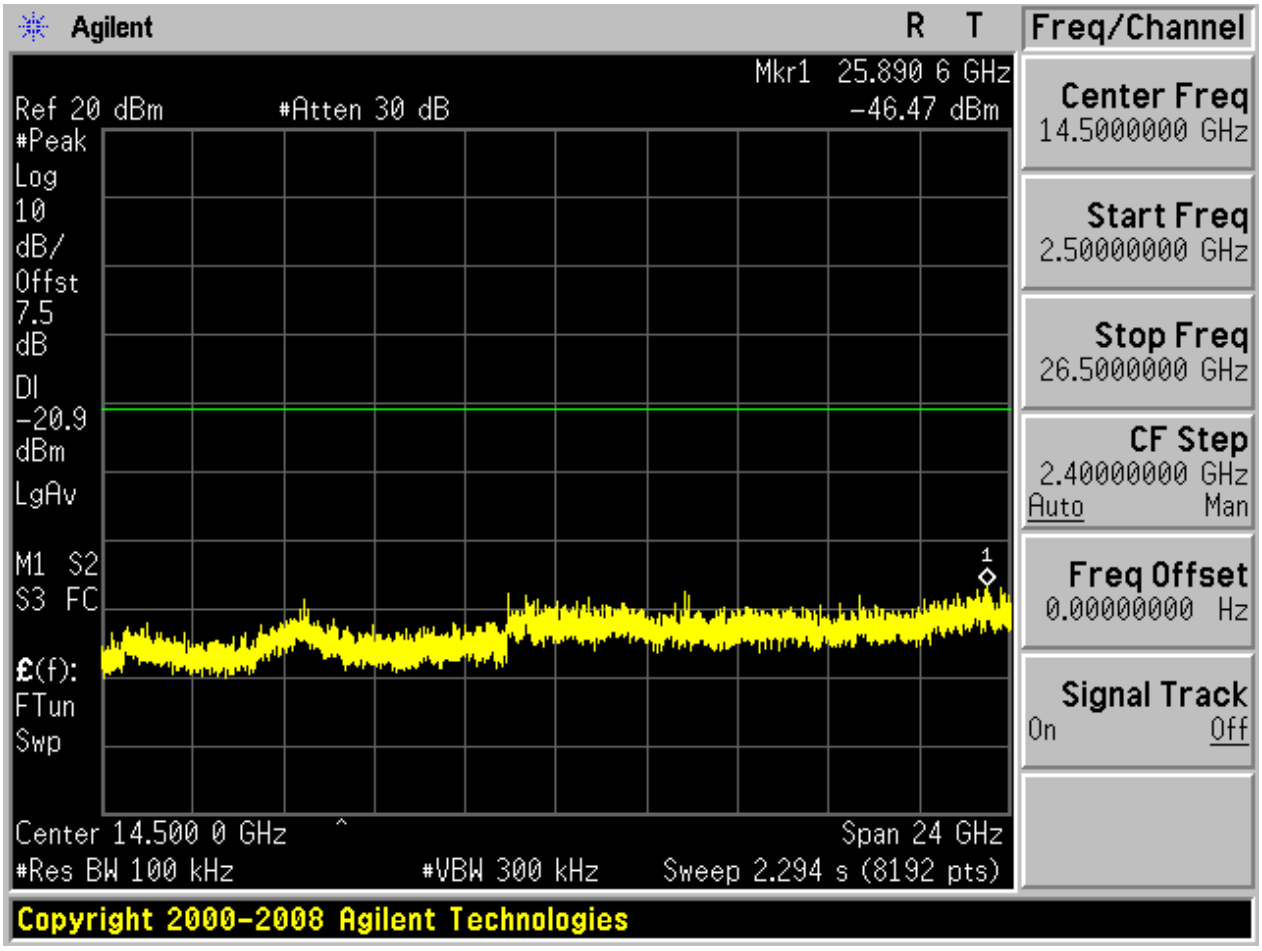
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2008 Agilent Technologies



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2.7 TM3_3DH5_Ch0

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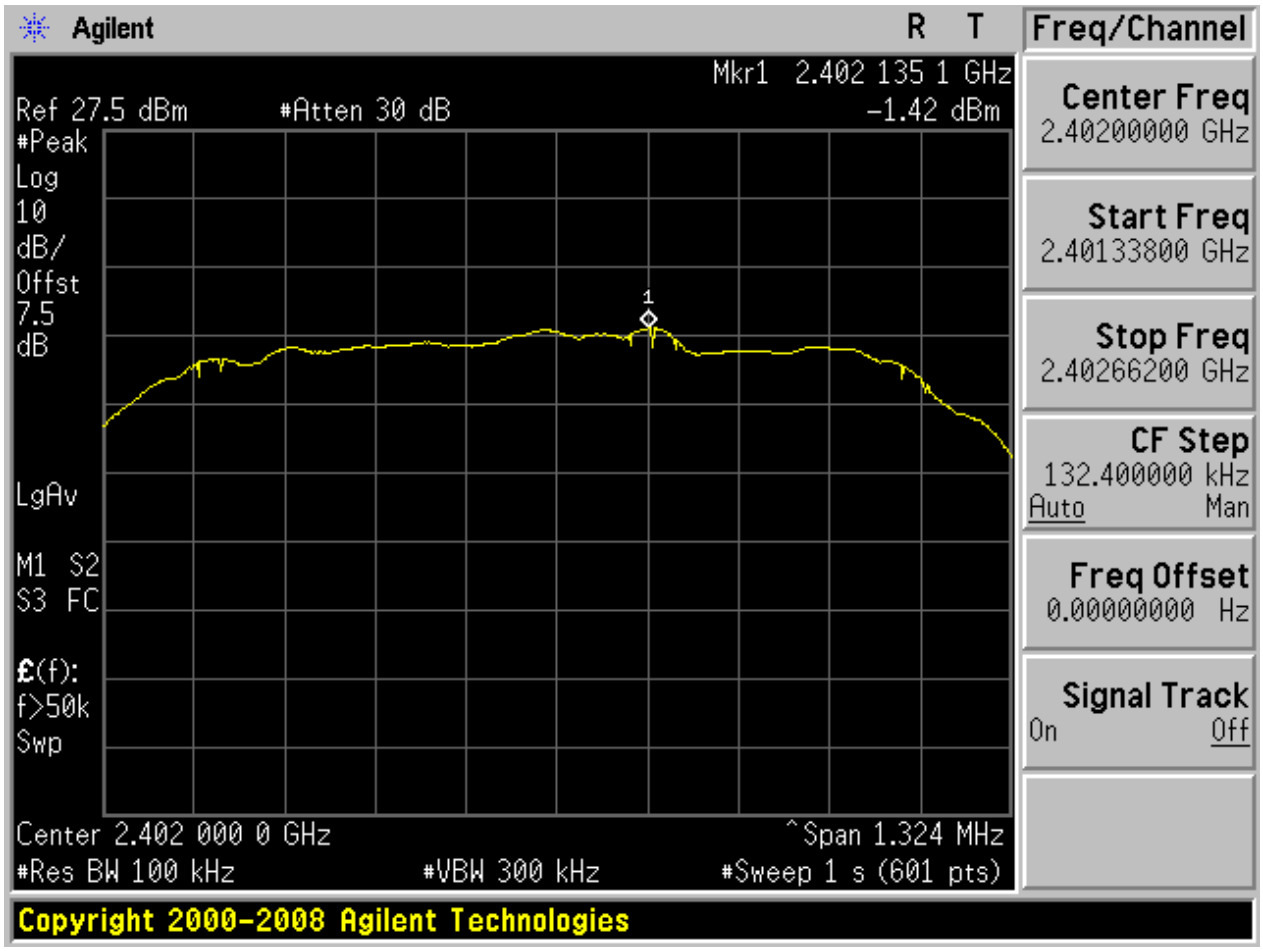

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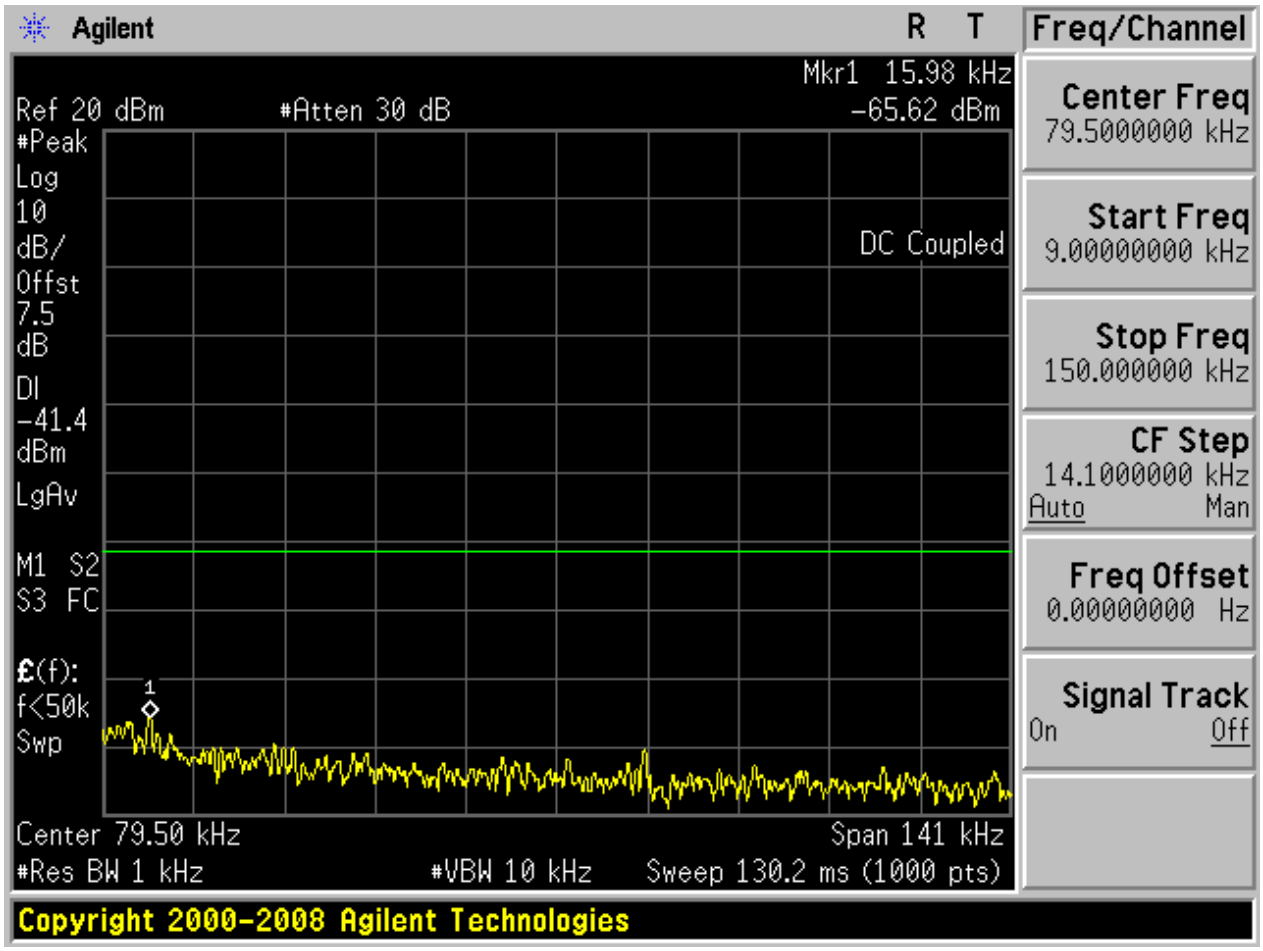

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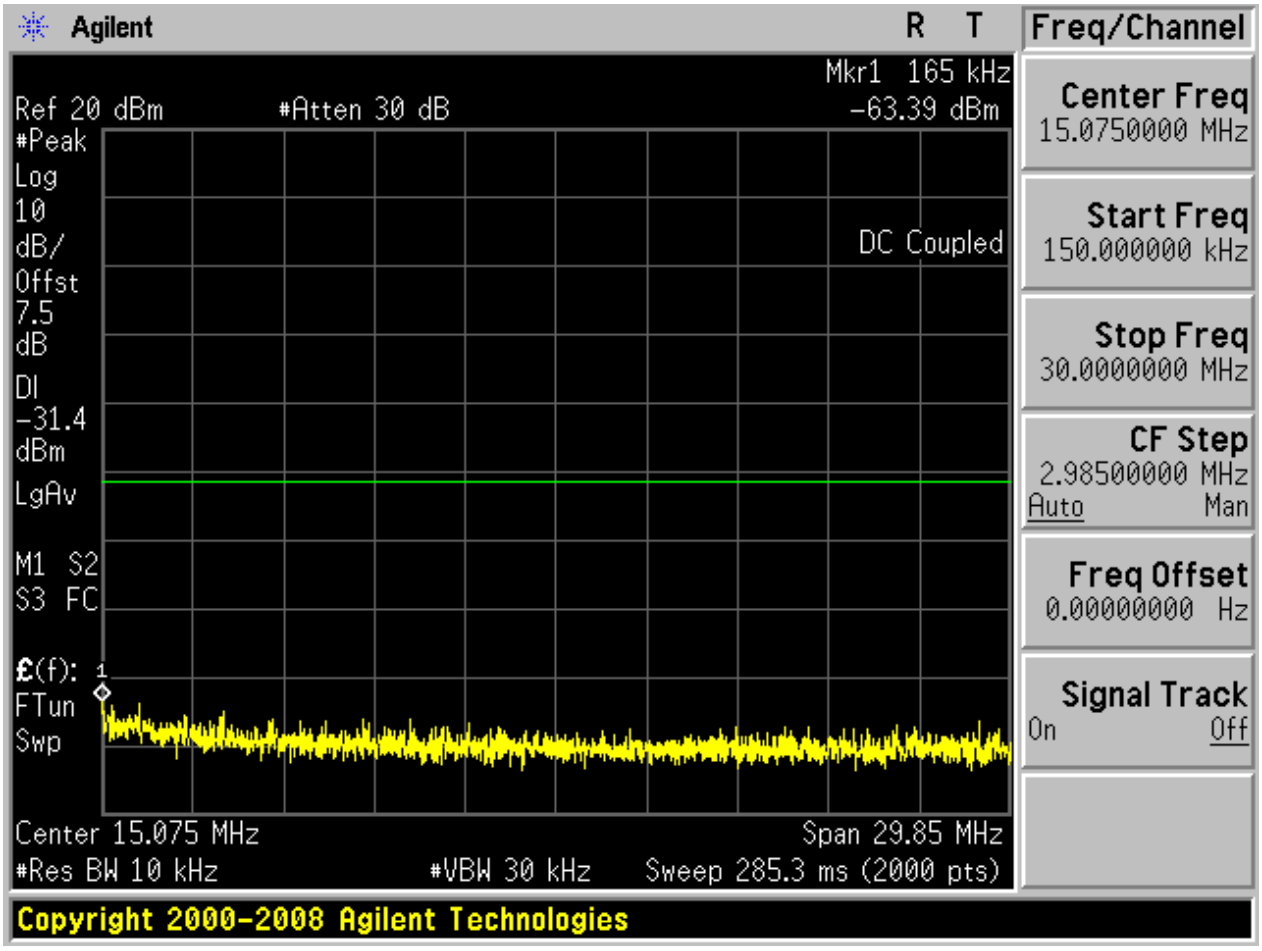

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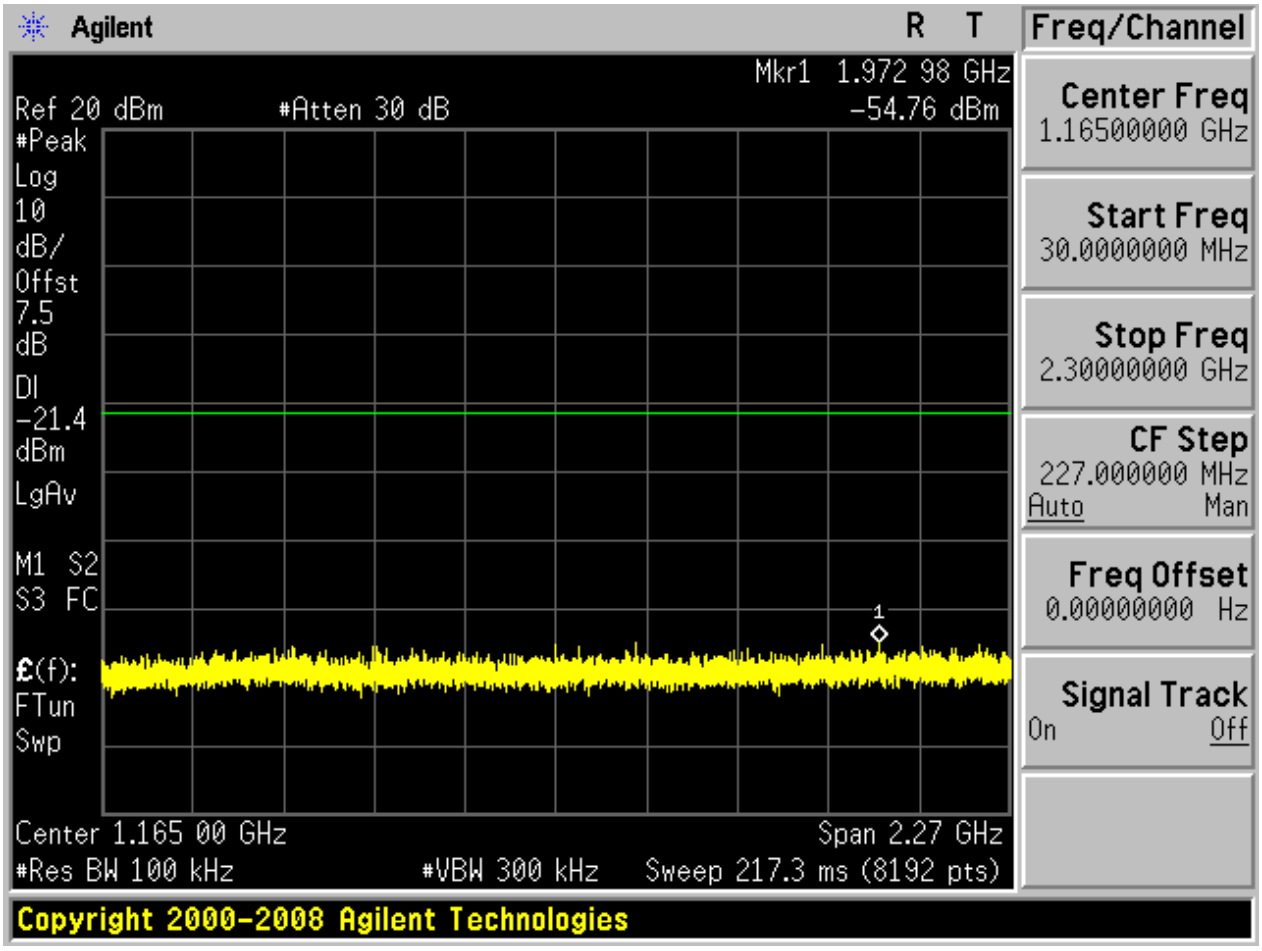

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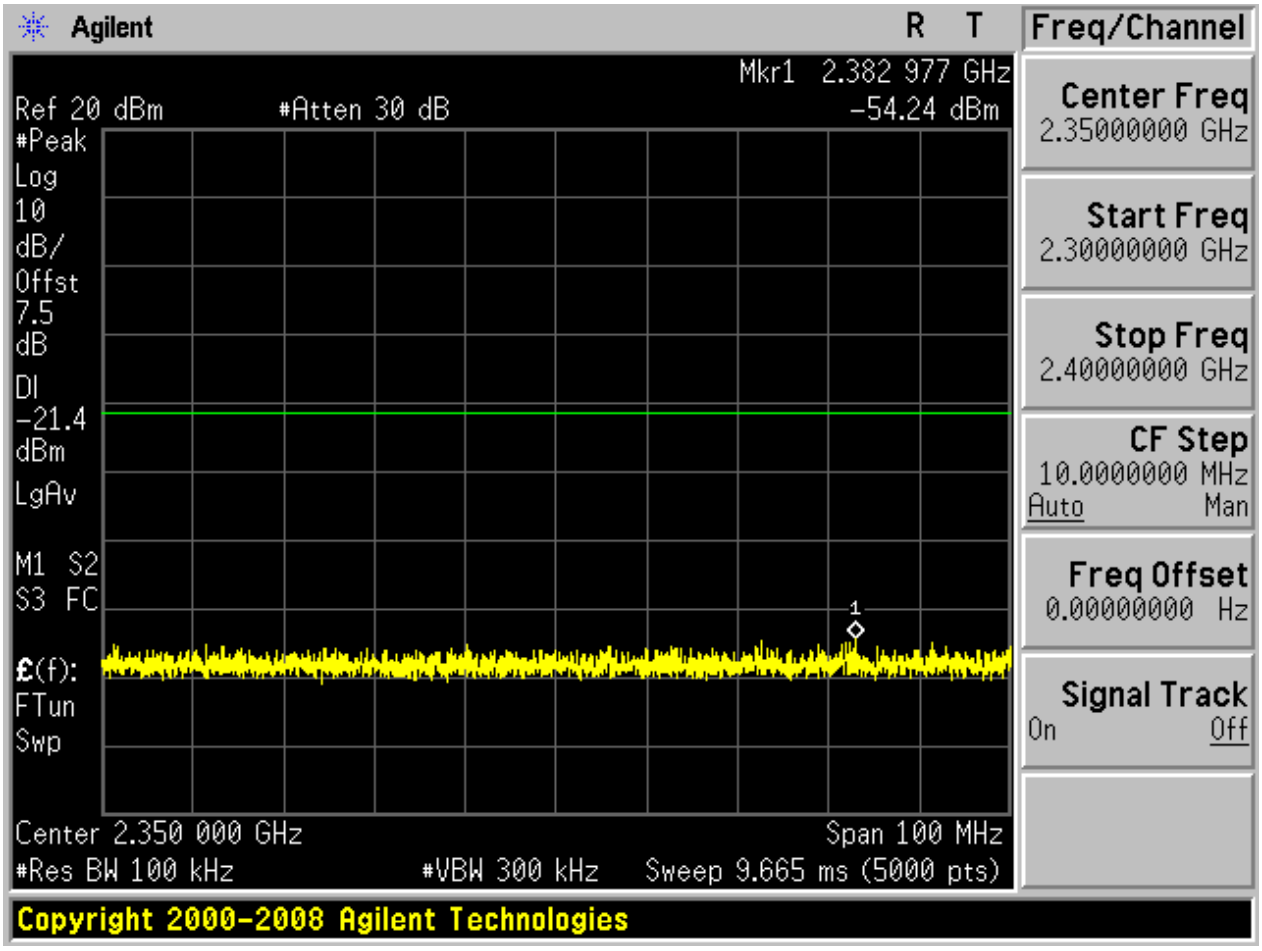

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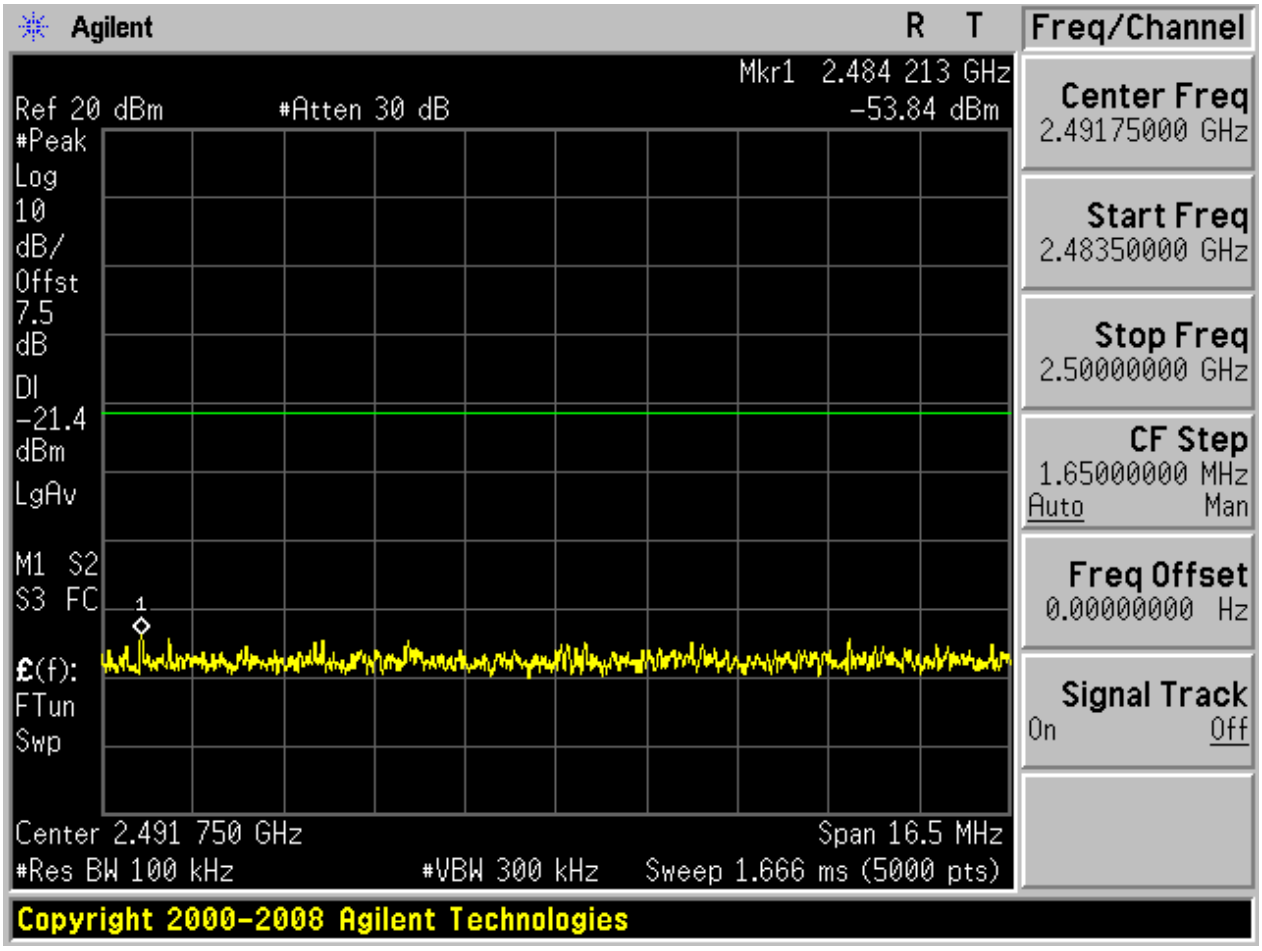

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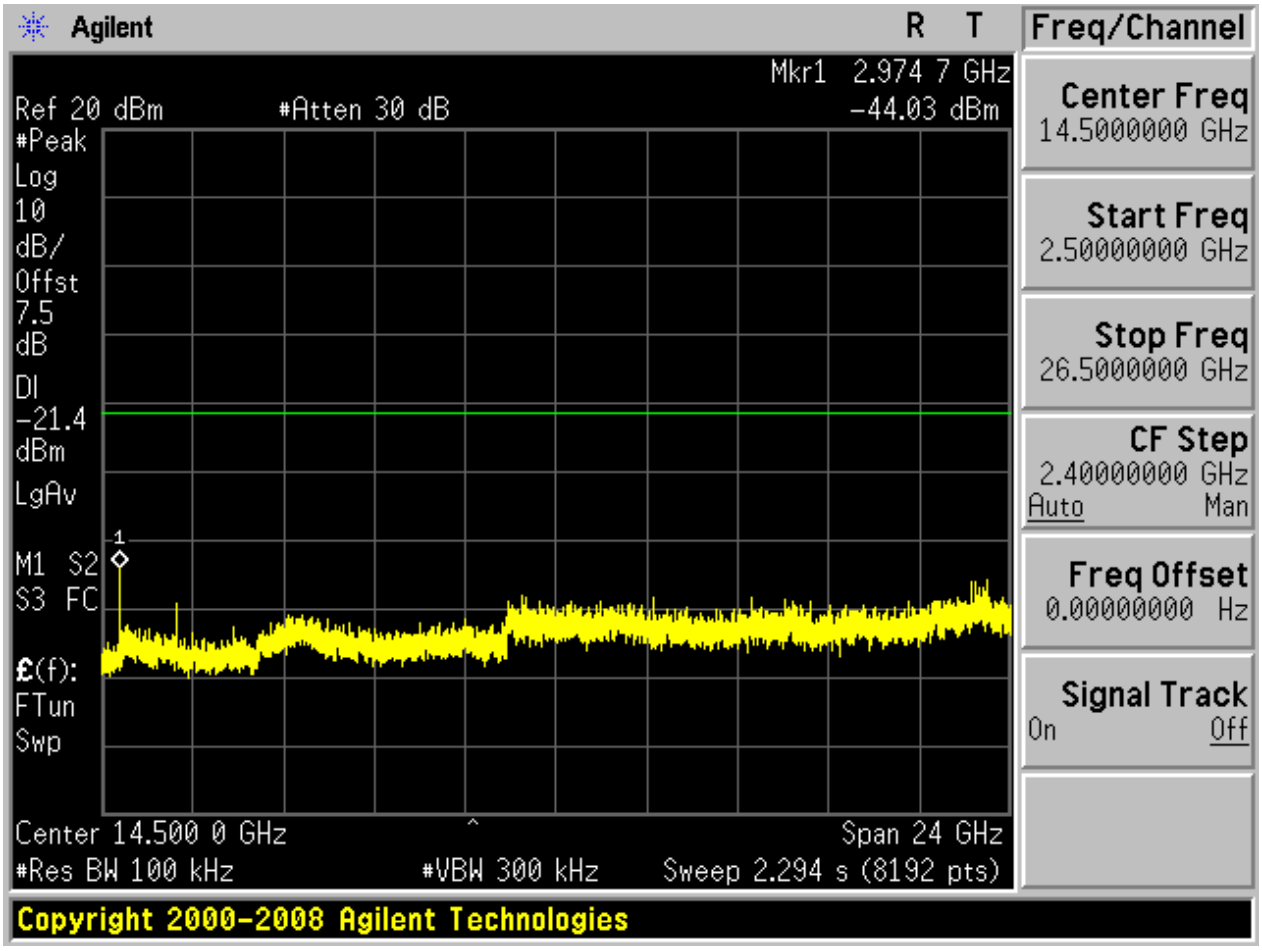

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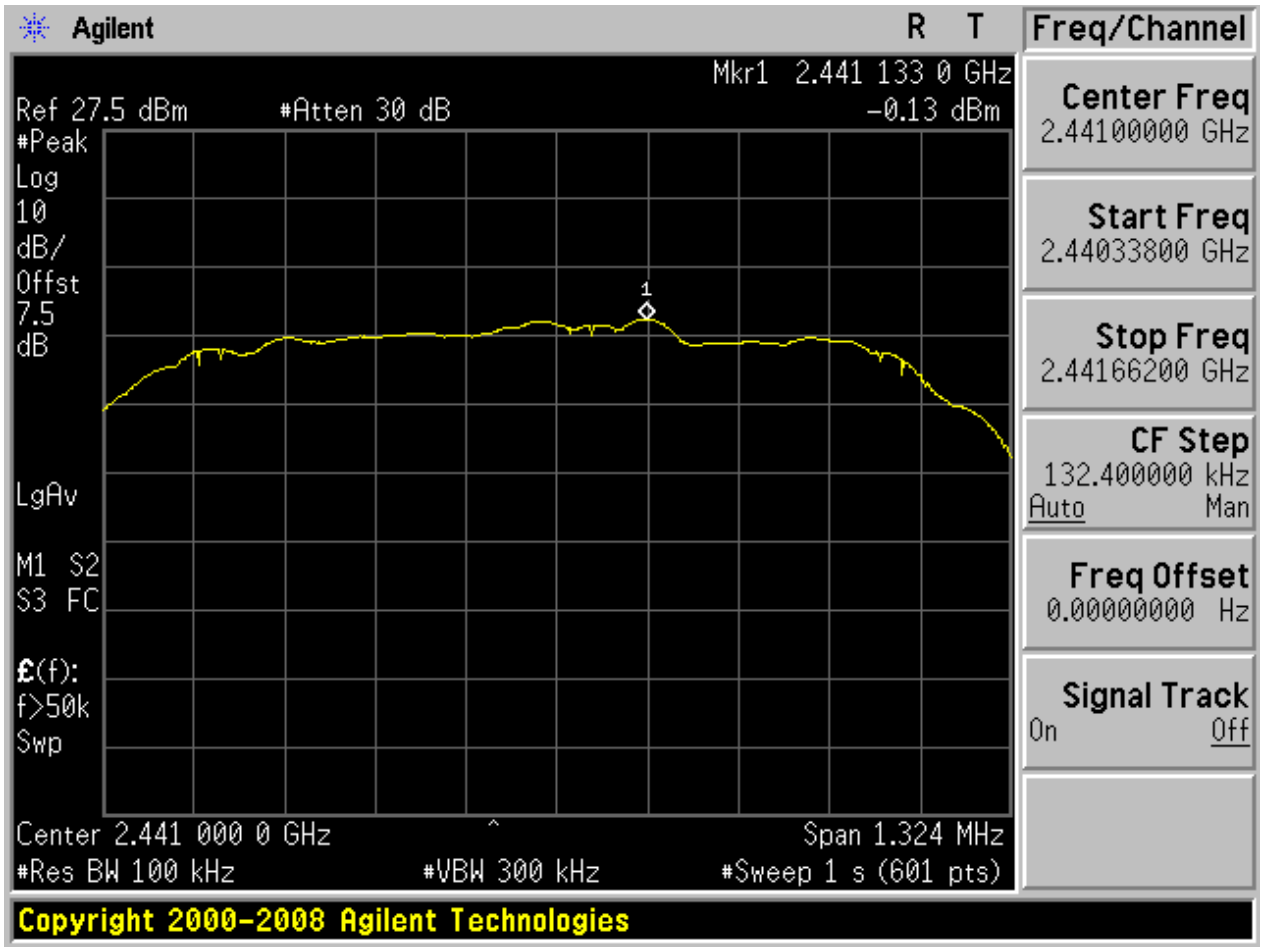
2.8 TM3_3DH5_Ch39

2.8.1 Pref



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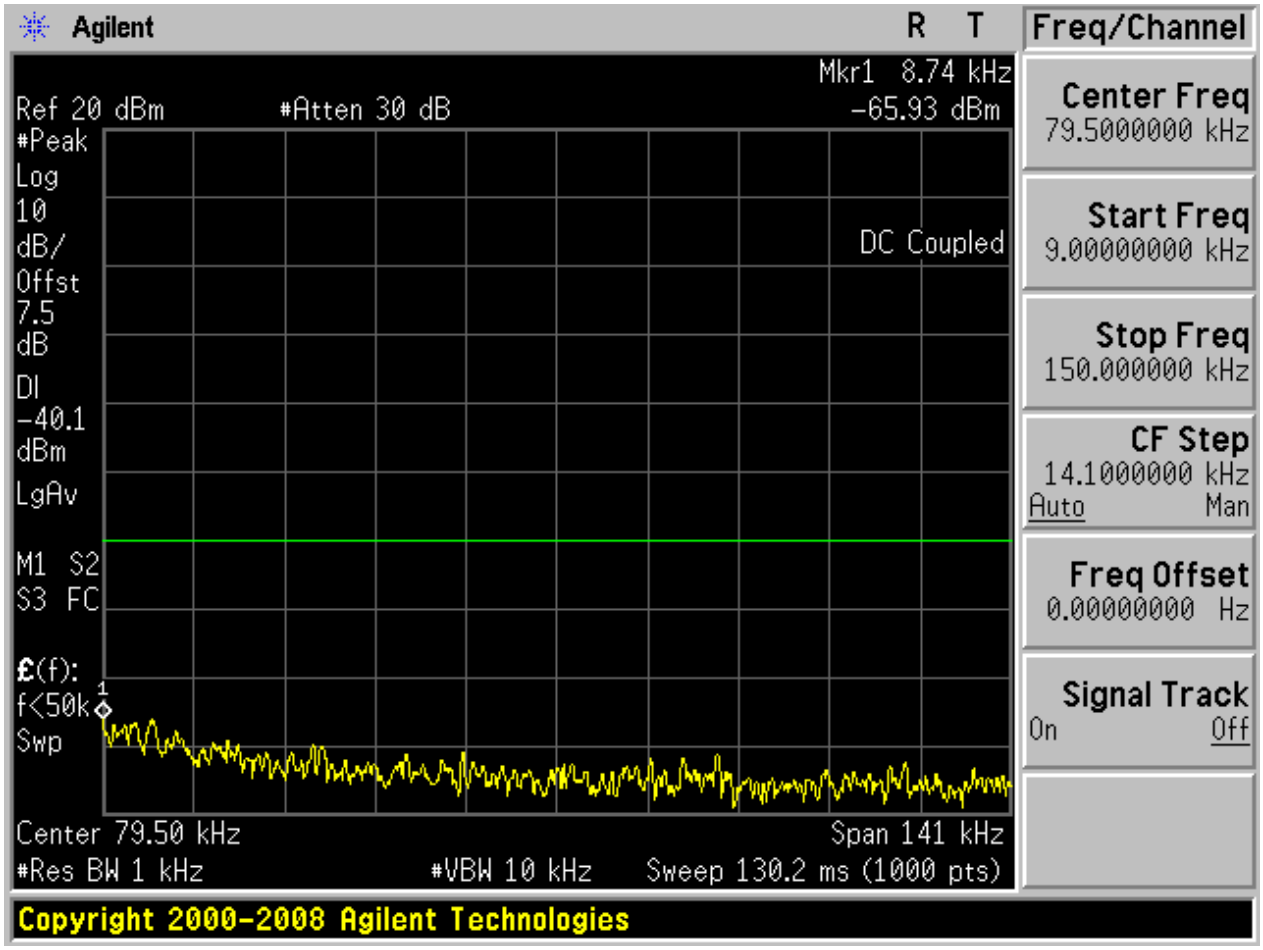
2.8.2 Puw



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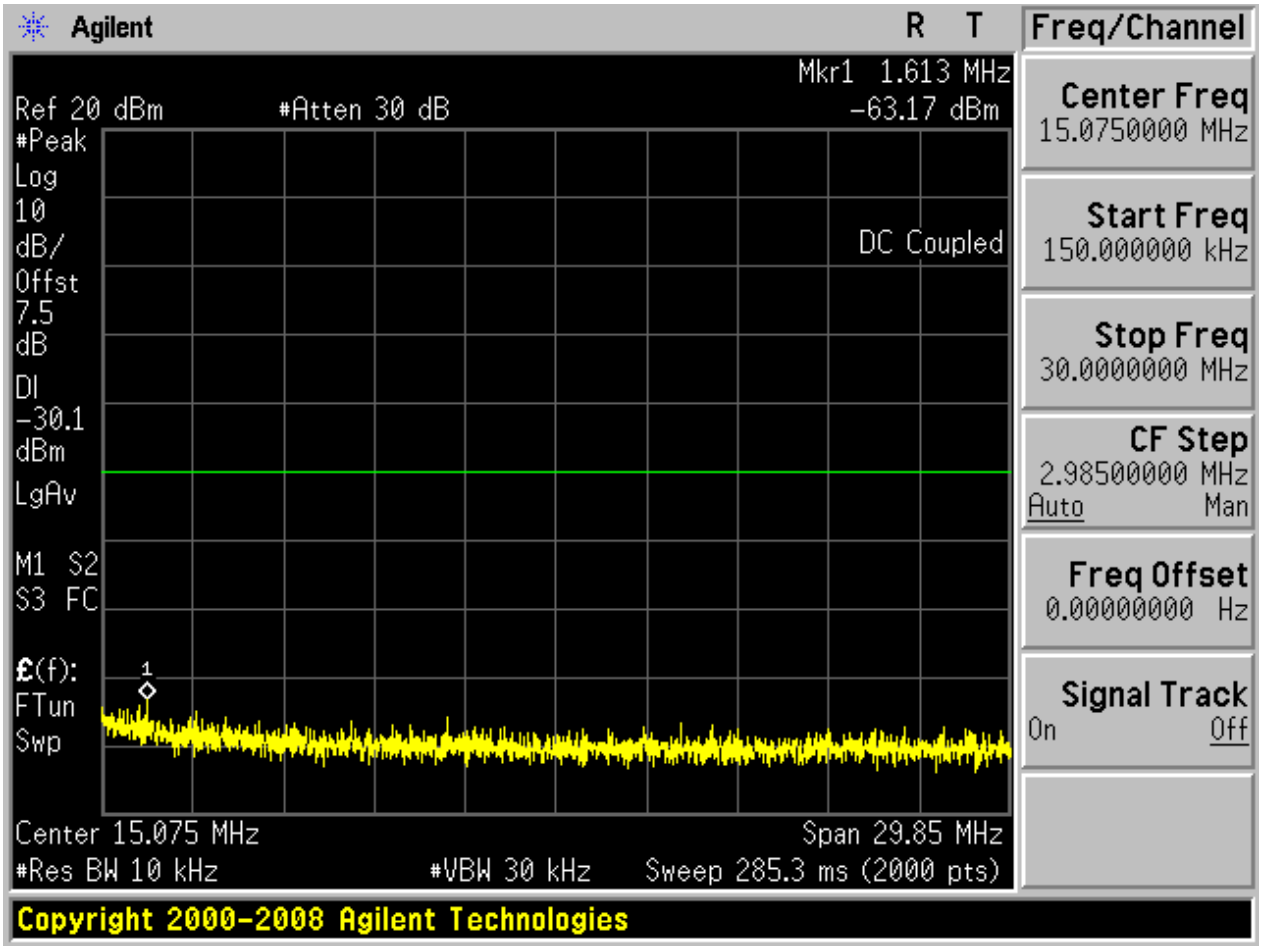

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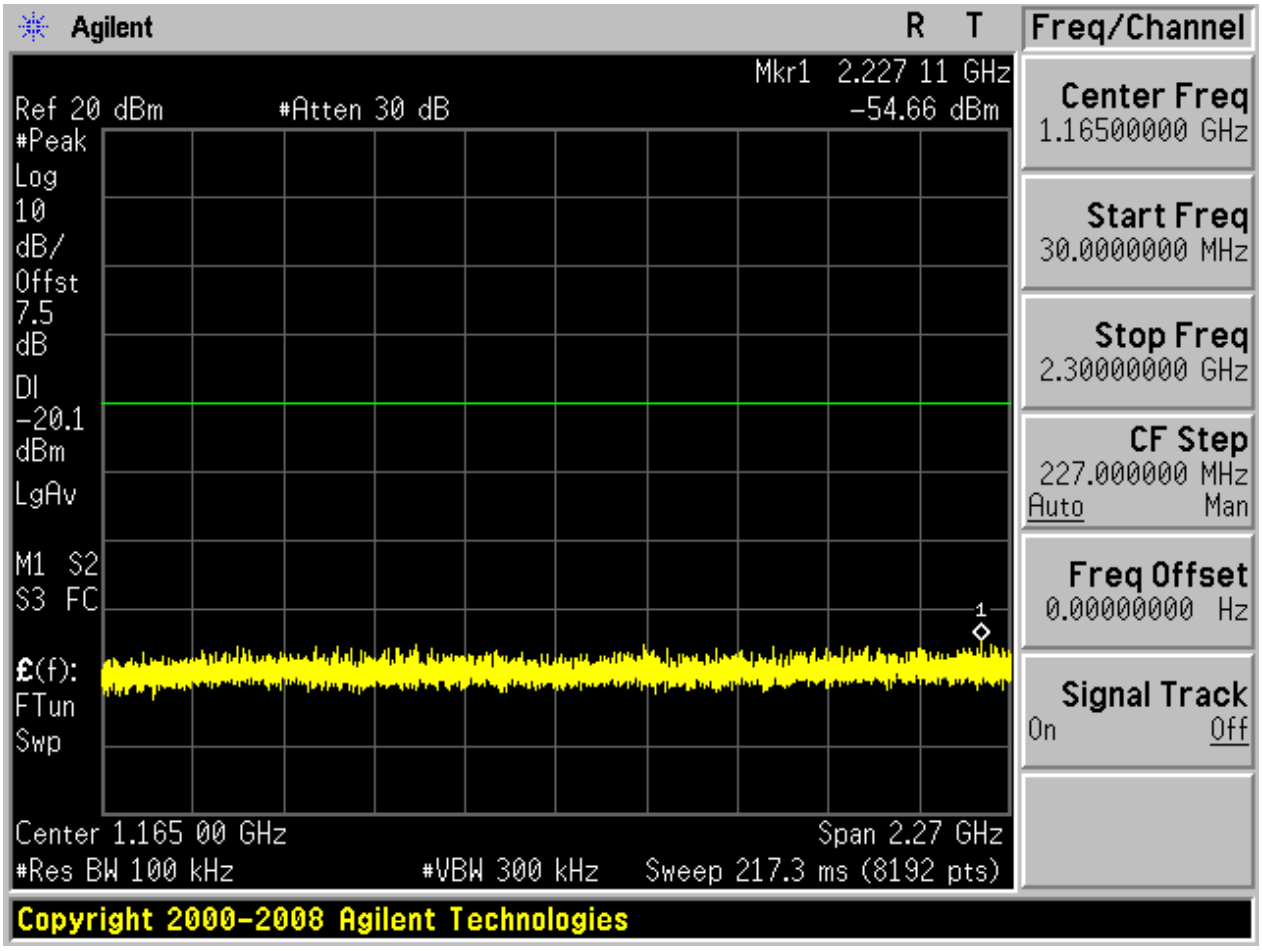

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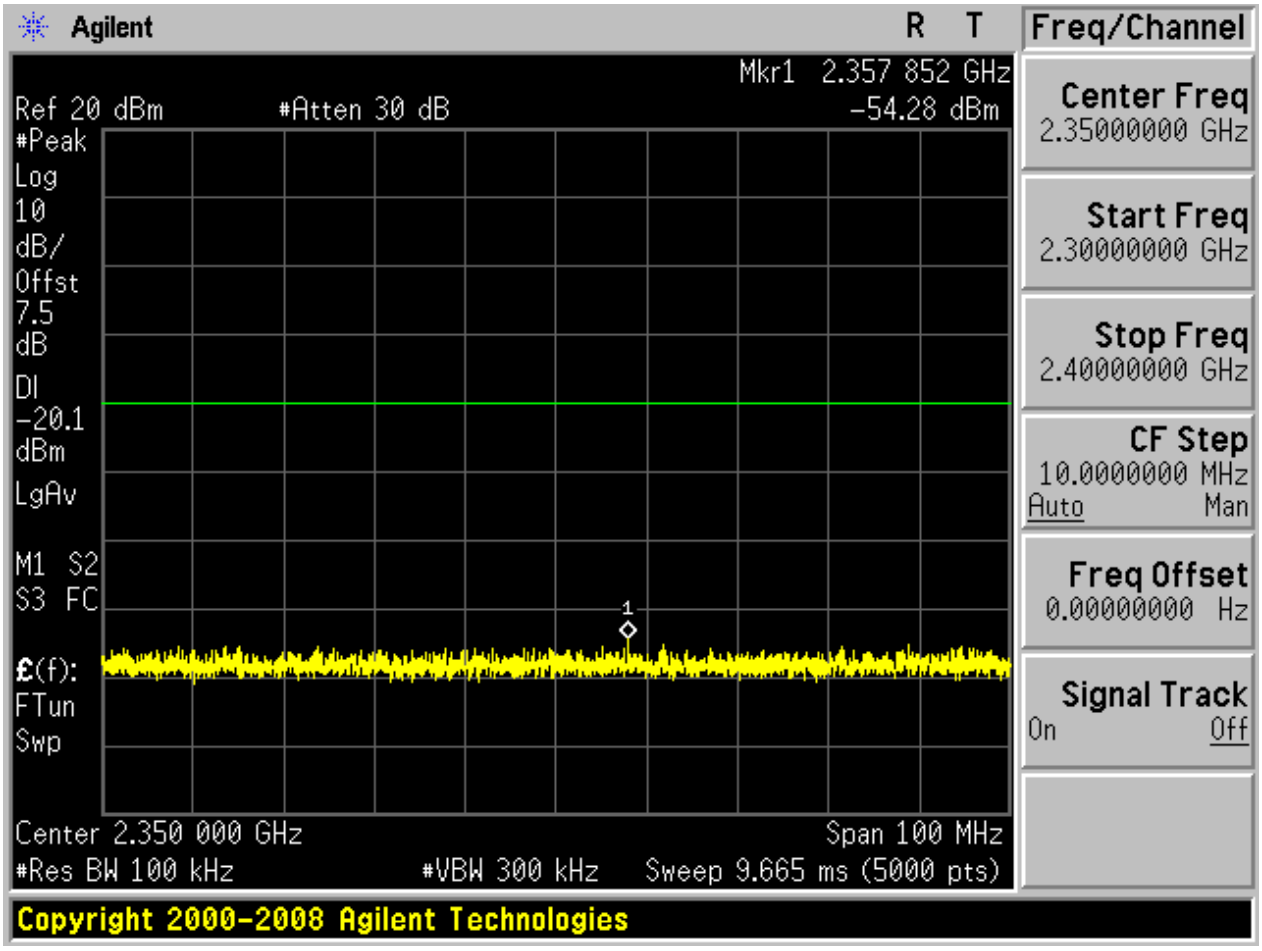

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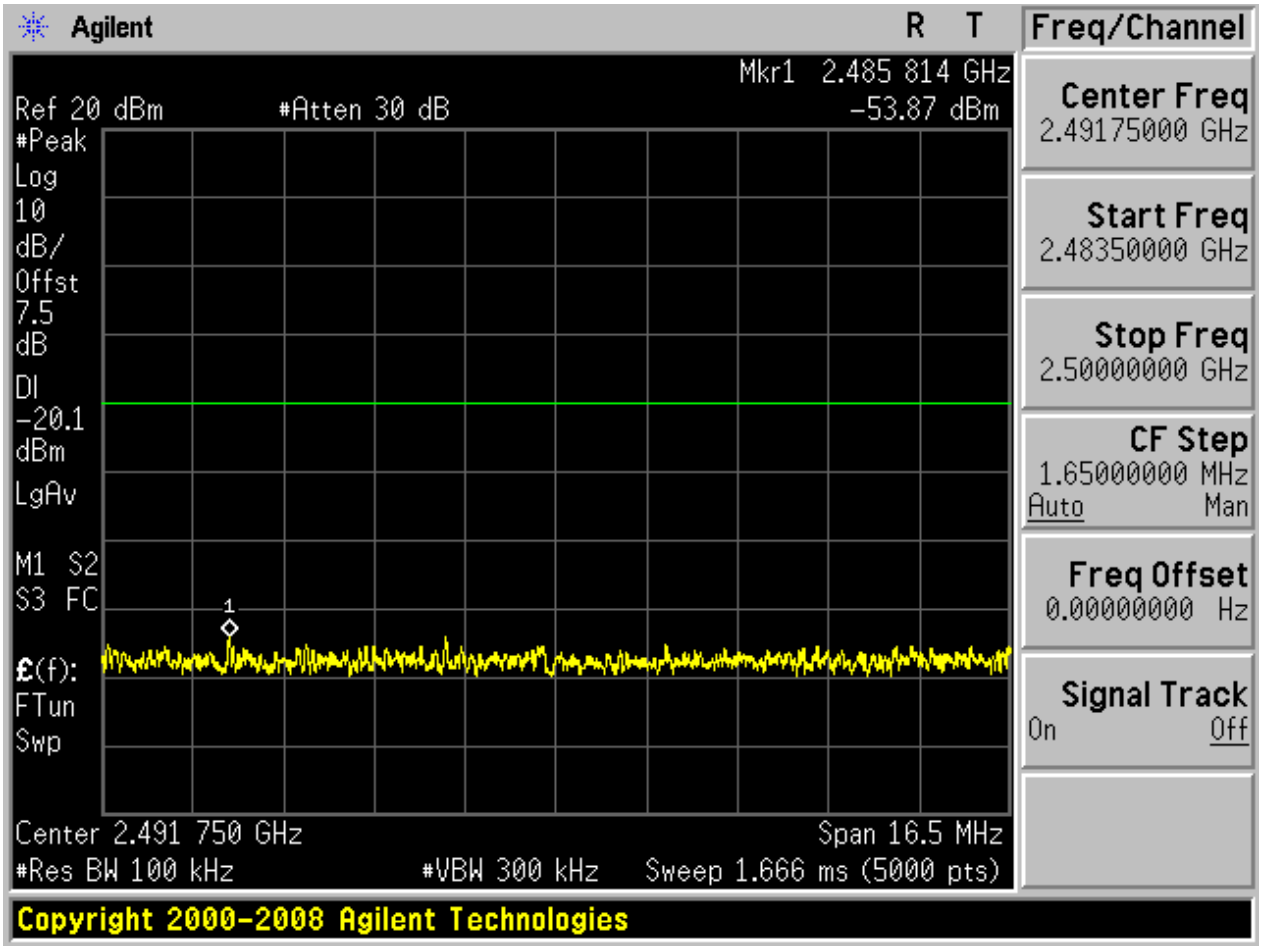

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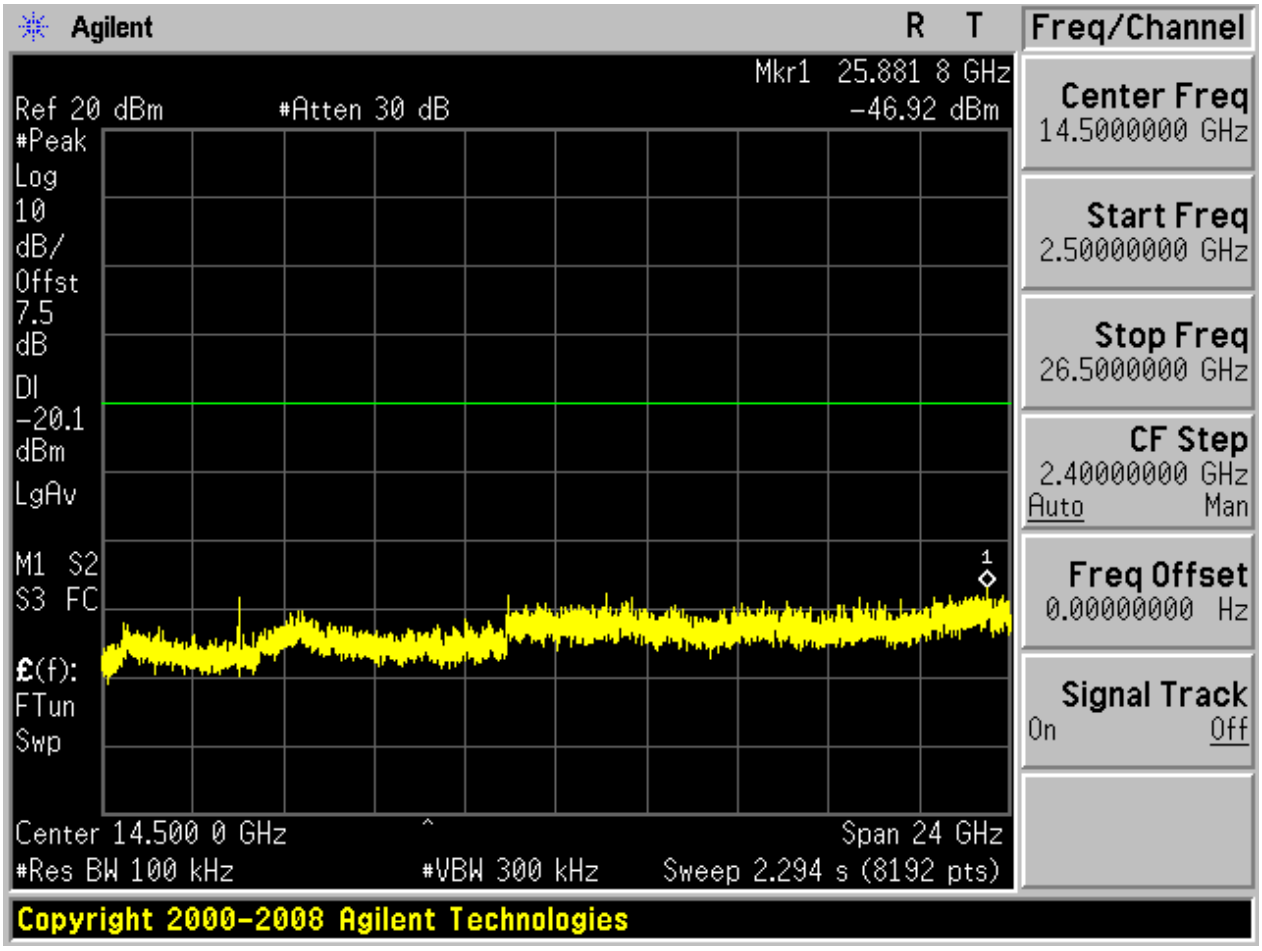

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2.9 TM3_3DH5_Ch78

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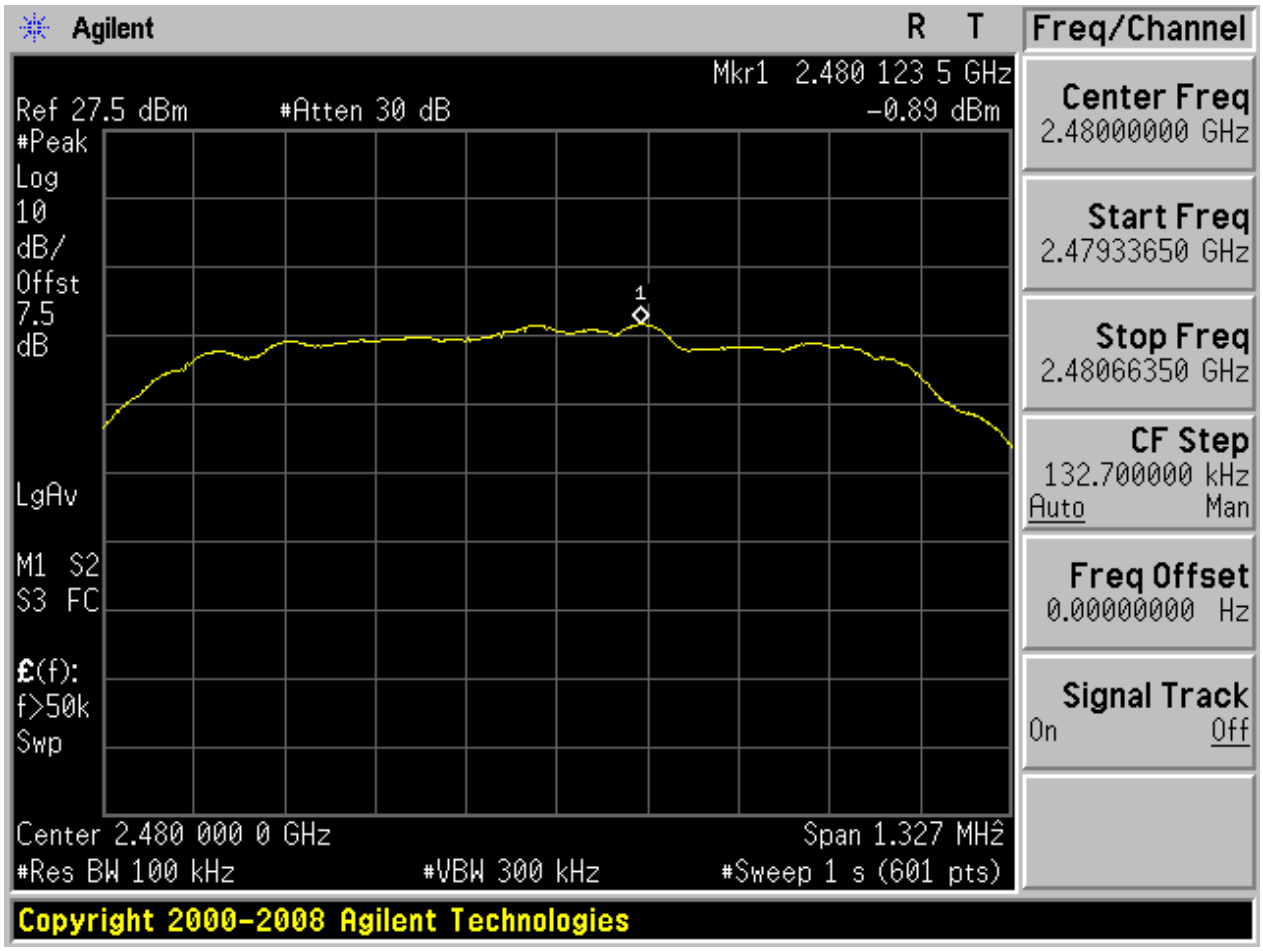

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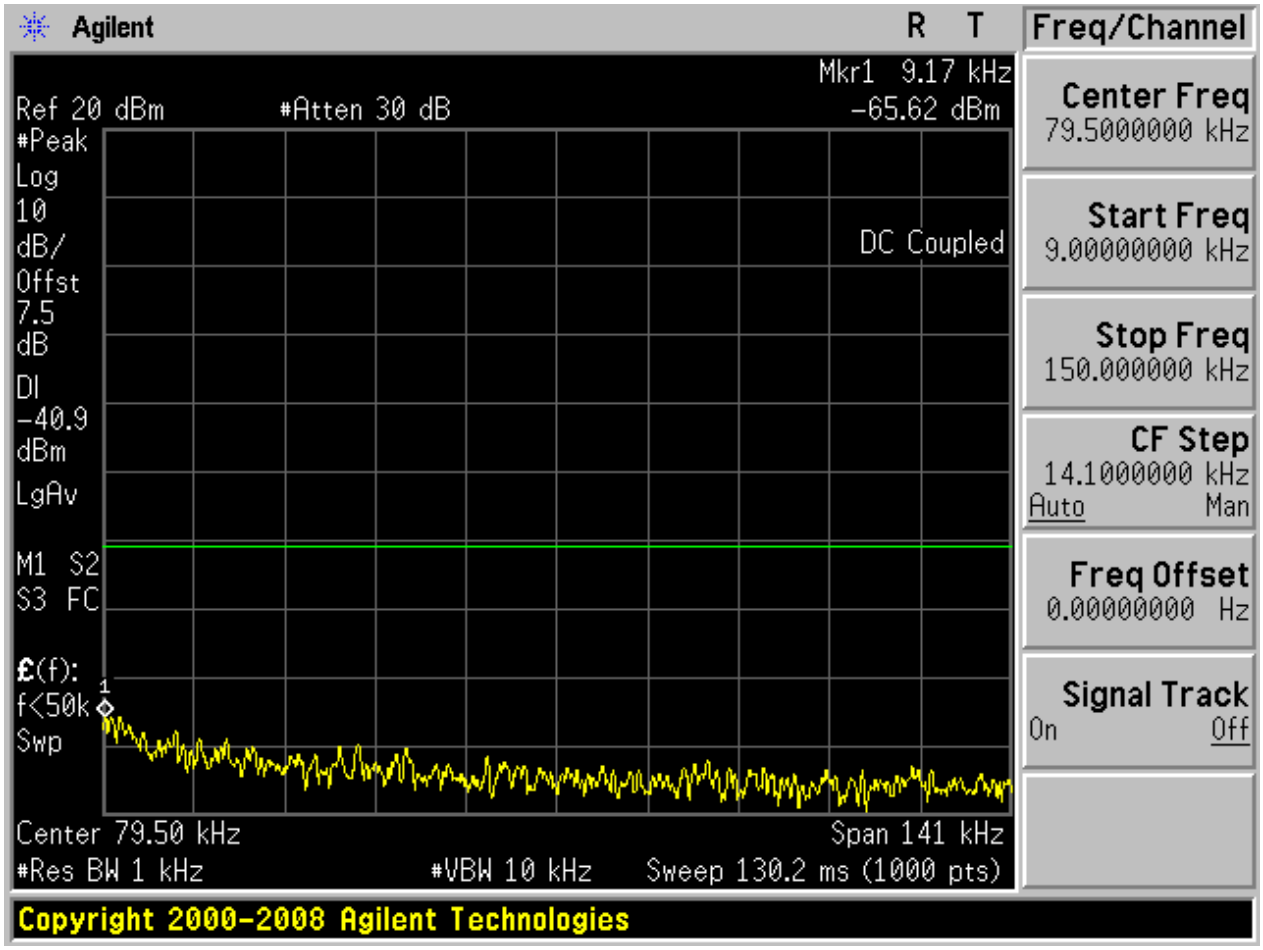
2.9.2 Puw



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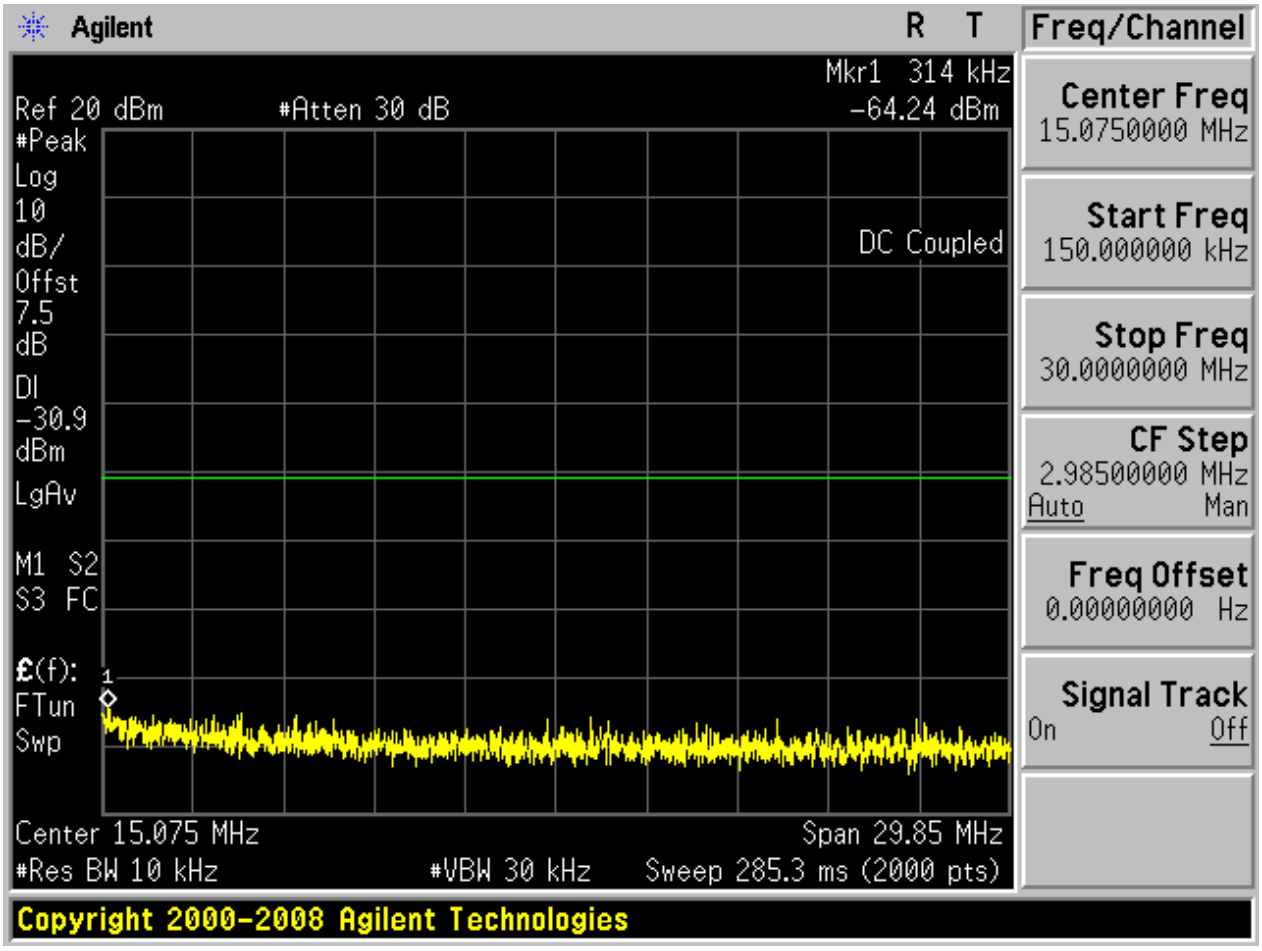

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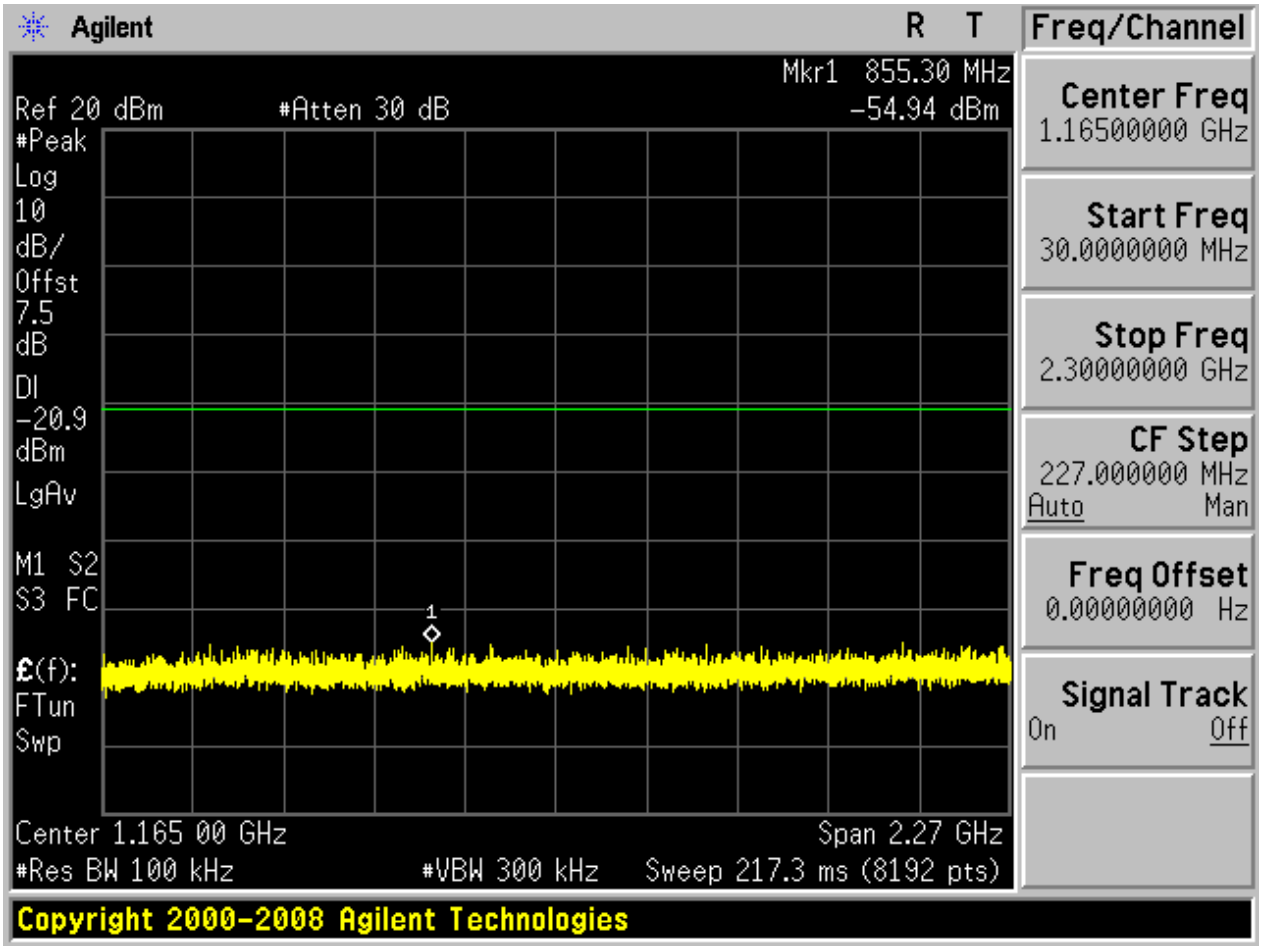

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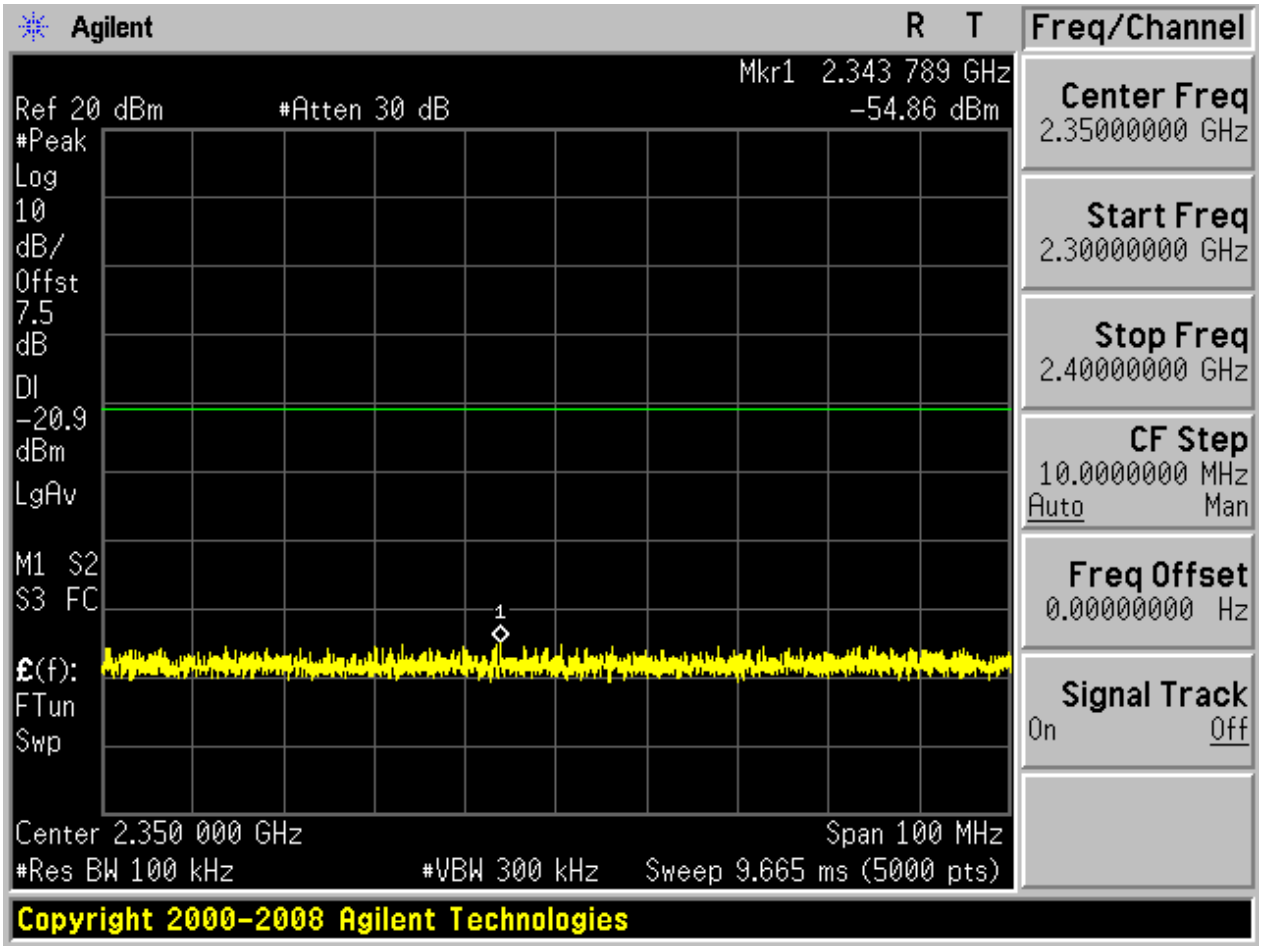

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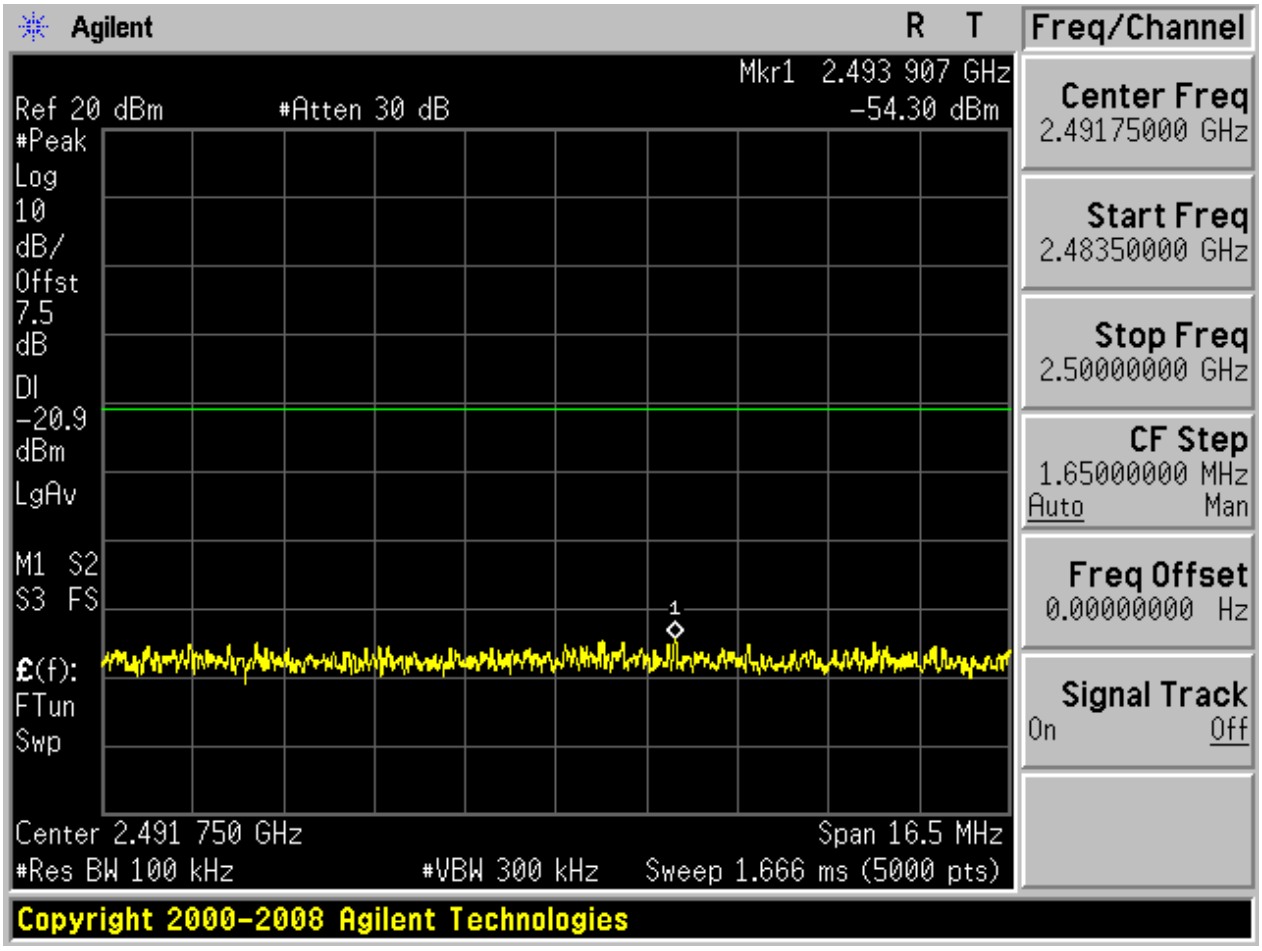

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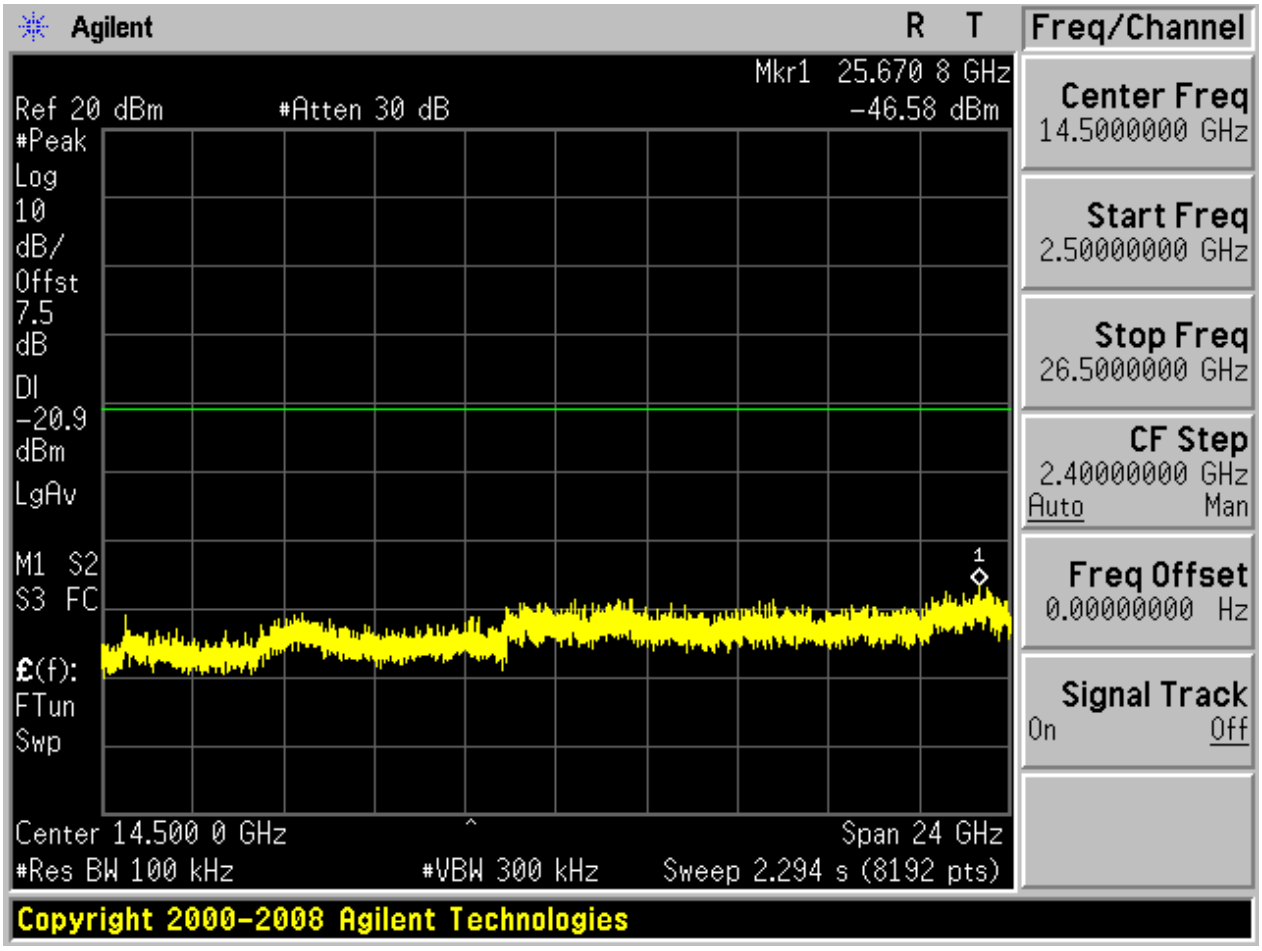

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Appendix H: Radiated Emissions in the Restricted Bands

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 “30 MHz to 1 GHz”,
- (Part 2): Test range of “18 GHz to 26.5 GHz”.
- (Part 3): Test range of “2.3 GHz to 2.5 GHz”, and
- (Part 4): Test range of “1 GHz to 18 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
2.3 GHz to 2.5 GHz	TM1_DH5_Ch0 (Worst Conf.)	< Limit	Pass
	TM1_DH5_Ch78 (Worst Conf.)	< Limit	Pass
1 GHz to 18 GHz	TM1_DH5_Ch0 (Worse Conf.)	< Limit	Pass
18 GHz to 26.5 GHz	TM1_DH5_Ch0 (Worst Conf.)	< Limit	Pass

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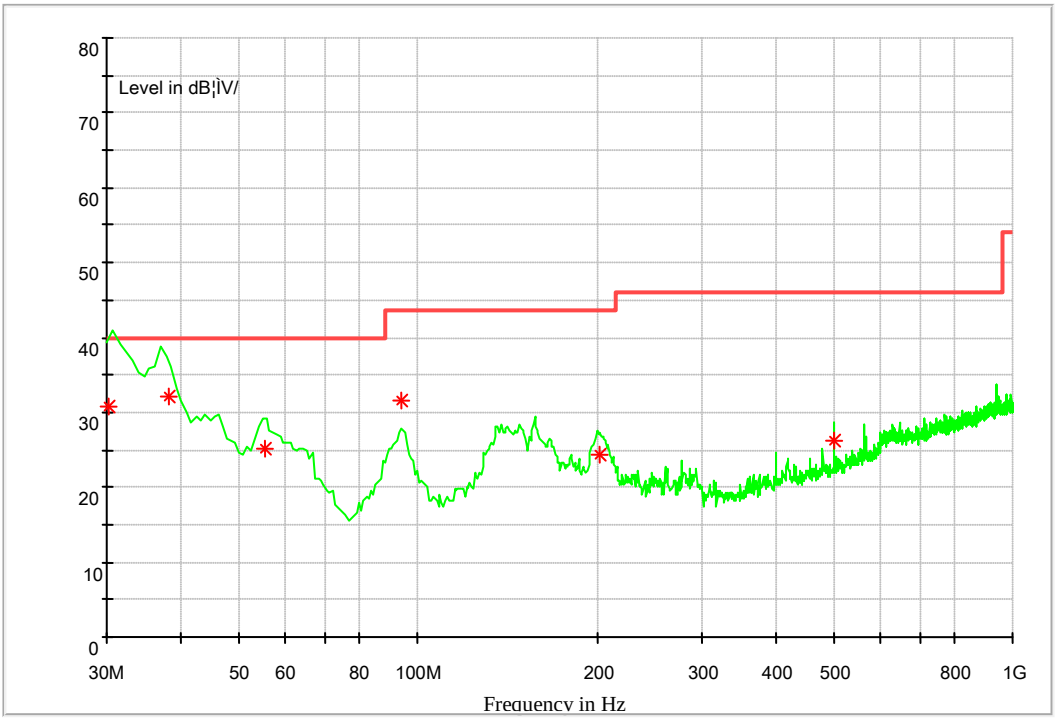
Part 1: Testing Range of "30 MHz to 1 GHz"

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

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



Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Plarization
30.219731	30.9	13.8	40.0	9.1	100.0	100.0	VERTICAL
38.049600	32.1	15.0	40.0	7.9	100.0	174.0	VERTICAL
55.413760	25.1	14.3	40.0	14.9	100.0	171.0	VERTICAL
94.115840	31.6	12.7	43.5	11.9	219.0	264.0	HORIZONTAL
202.370240	24.5	12.9	43.5	19.0	100.0	24.0	VERTICAL
500.042880	26.2	19.8	46.0	19.8	400.0	172.0	HORIZONTAL

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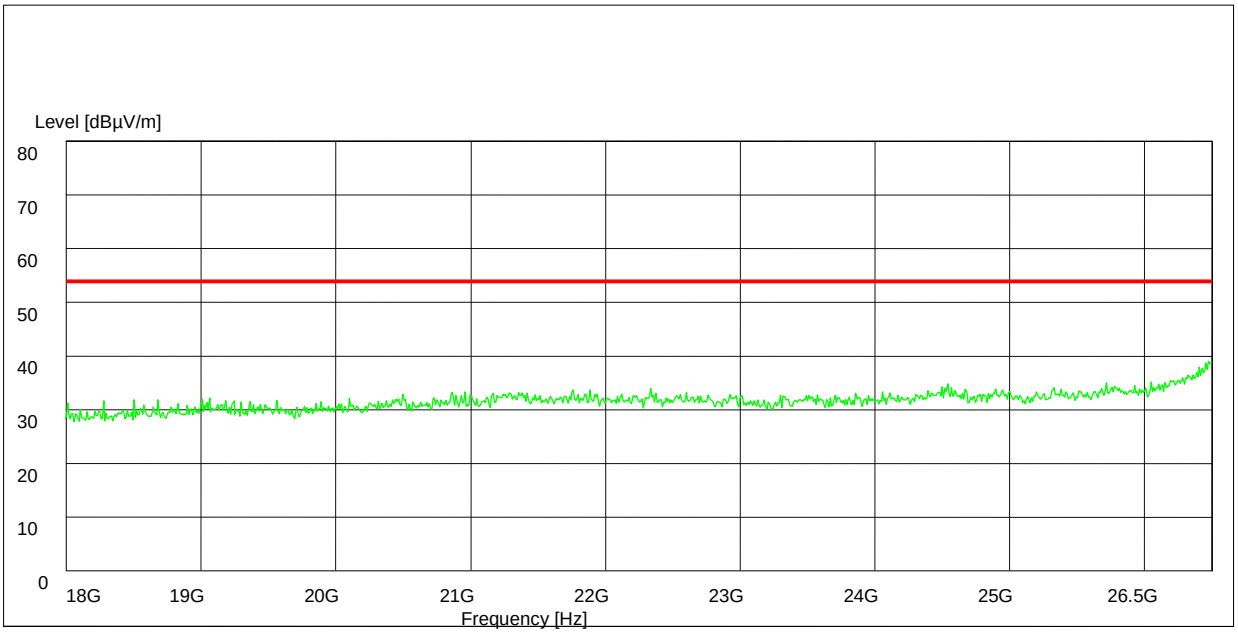
Part 2: Testing Range of “18 GHz to 26.5 GHz”

Note: No peak found in pre- test.



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Part 3: Testing Range of "2.3GHz to 2.5GHz"

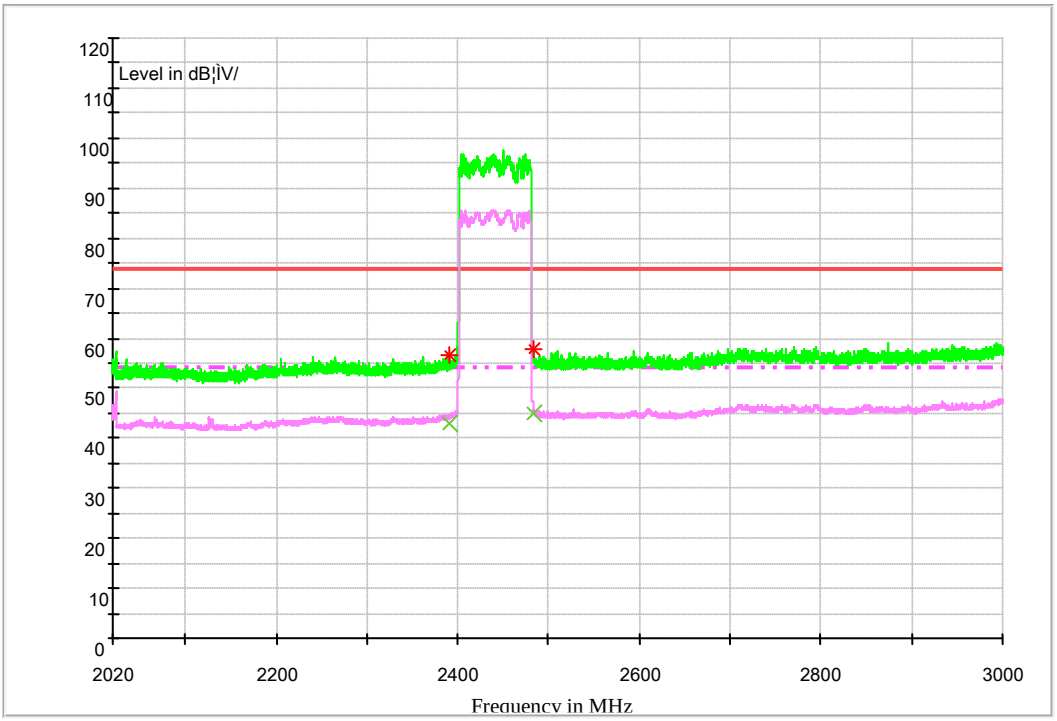
Note 1: The testing range of "2.3 GHz to 2.5 GHz" is for checking radiated emissions located in restricted bands near the EUT operating bands.

Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).

Note 3: The peak spike exceeds the limit line is EUT's operating frequency.

3 Test Mode:

3.1 Channel 0



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

MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	56.6	38.3	74.0	17.4	100.0	291.0	VERTICA
2483.500000	57.7	40.1	74.0	16.3	100.0	53.0	HORIZONTAL

MEASUREMENT RESULT: AVDetector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.1	38.3	54.0	10.9	100.0	45.0	HORIZONTAL
2483.500000	45.0	40.7	54.0	9.0	100.0	0.0	VERTICA

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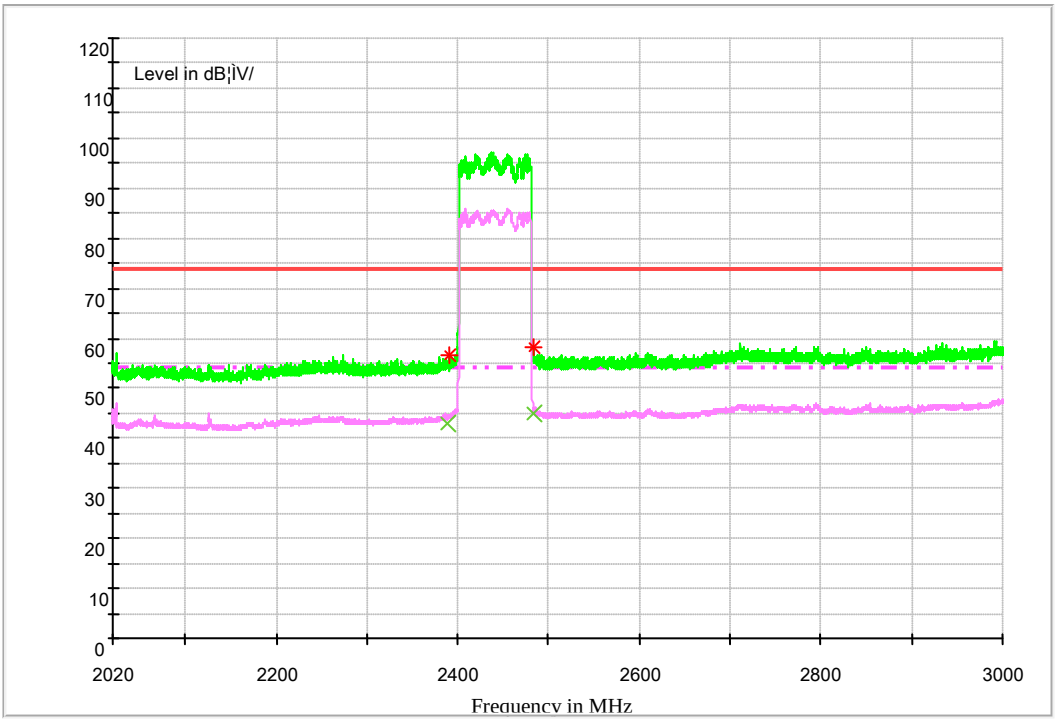
3.2 Channel 78



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

MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	56.4	38.3	74.0	17.6	100.0	-37.0	VERTICA
2483.500000	58.1	40.7	74.0	15.9	100.0	357.0	VERTICA

MEASUREMENT RESULT: AVDetector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	43.1	38.3	54.0	10.9	100.0	0.0	VERTICA
2483.500000	45.0	40.7	54.0	9.0	100.0	299.0	HORIZONTAL

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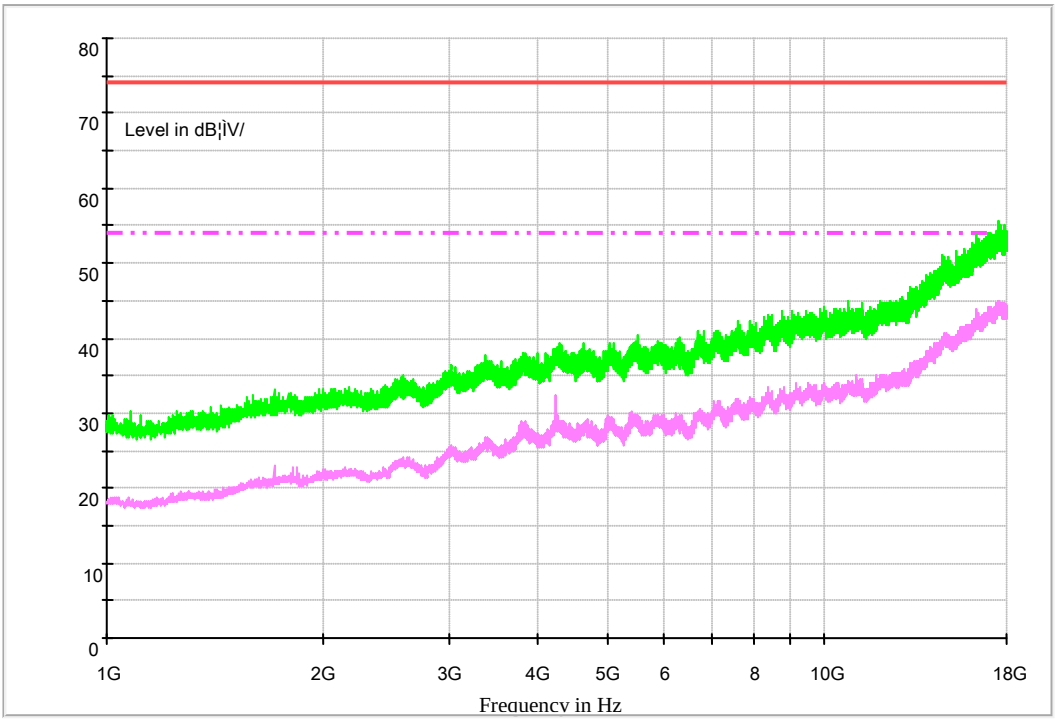
Part 4: Testing Range of "1 GHz to 18 GHz"

Note 1: The test results and plot for testing range of "1 GHz to 18 GHz" showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The testing range of "1 GHz to 18 GHz" is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).



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Appendix I: AC Power Line Conducted Emissions

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

EUT Conf.	Maximum Emissions	Verdict
TM1_DH5_Ch39	Not found obvious spikes or see marked spikes on plots and listed emissions records.	Pass

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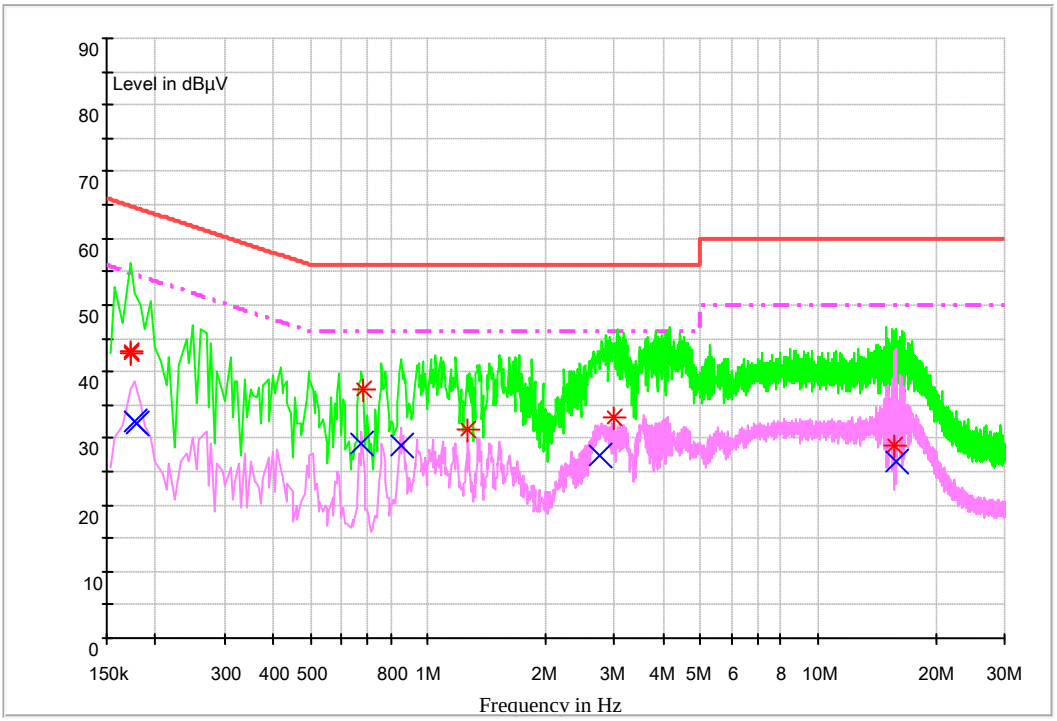
Channel 39



MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.173068	42.8	9.7	64.8	22.0	L1	FLO
0.173614	42.9	9.7	64.8	21.9	L1	FLO
0.678581	37.2	9.7	56.0	18.8	N	FLO
1.263368	31.2	9.7	56.0	24.8	L1	FLO
2.988004	33.2	9.7	56.0	22.8	N	FLO
15.669252	28.8	10.1	60.0	31.2	N	FLO

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.176954	32.5	9.7	54.6	22.1	N	FLO
0.179738	32.3	9.7	54.5	22.2	N	FLO
0.672281	29.1	9.7	46.0	16.9	N	FLO
0.849810	28.8	9.7	46.0	17.2	N	FLO
2.766728	27.3	9.7	46.0	18.7	N	FLO
15.759476	26.4	10.1	50.0	23.6	N	FLO

END

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