Appendix for Test report

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Appendix A: DTS (6 dB) Bandwidth

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

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

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
BT4.0	L	2402	Ant 1	0.67	pass
BT4.0	M	2440	Ant 1	0.73	pass
BT4.0	H	2480	Ant 1	0.68	pass

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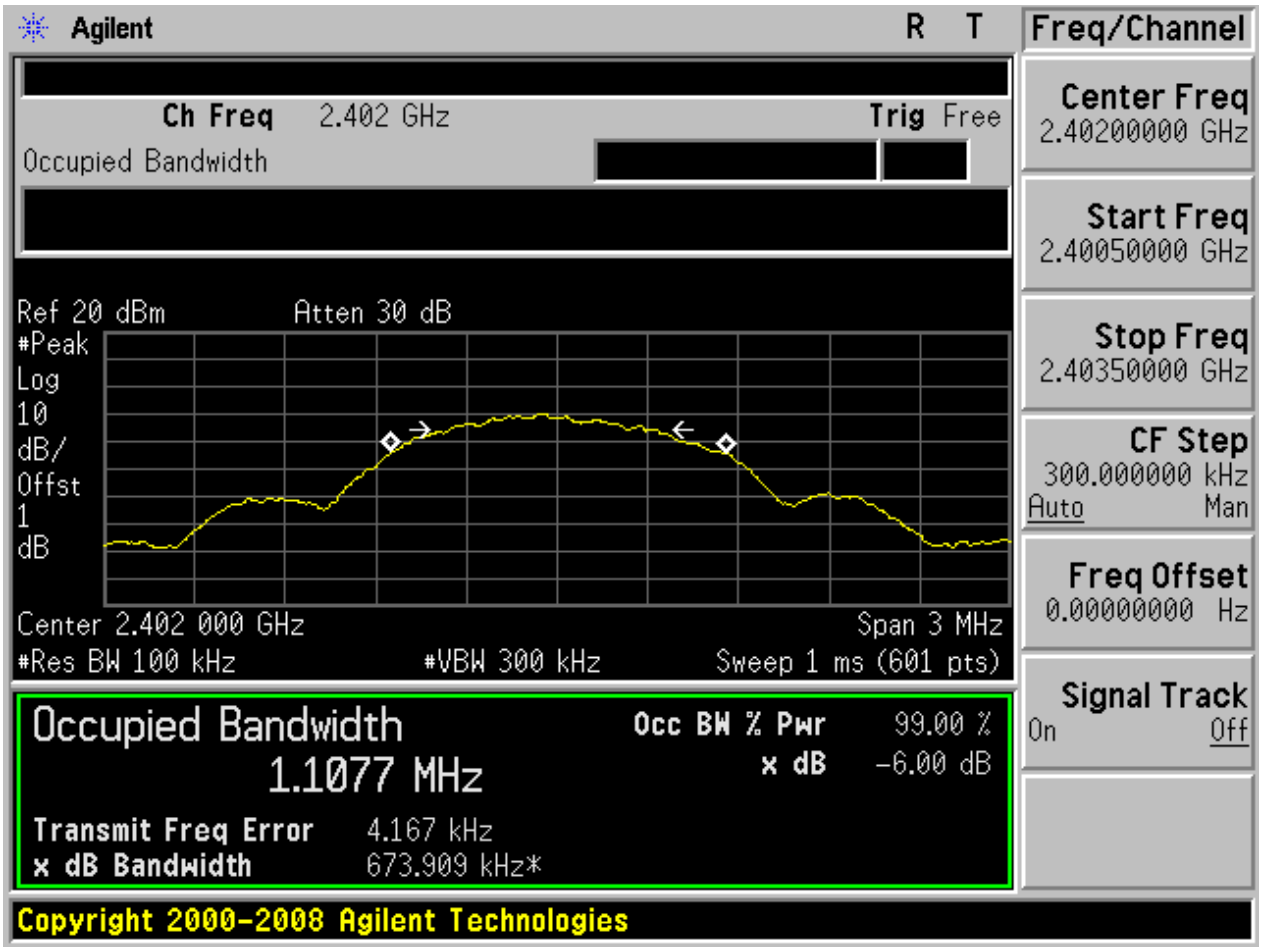
Part II - Test Plots

2.1 BT4.0_L@Ant 1



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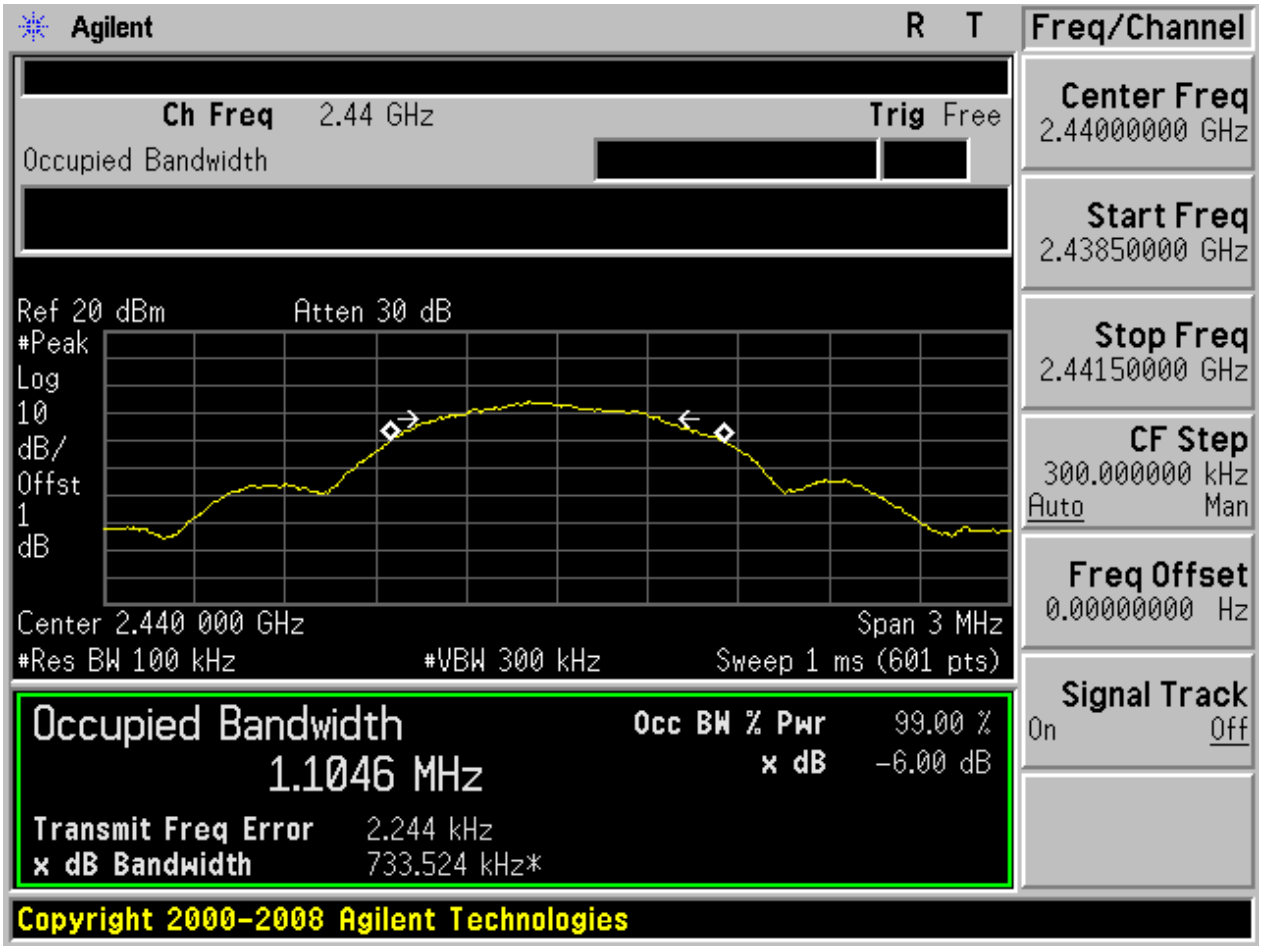
2.3 BT4.0_M@Ant 1



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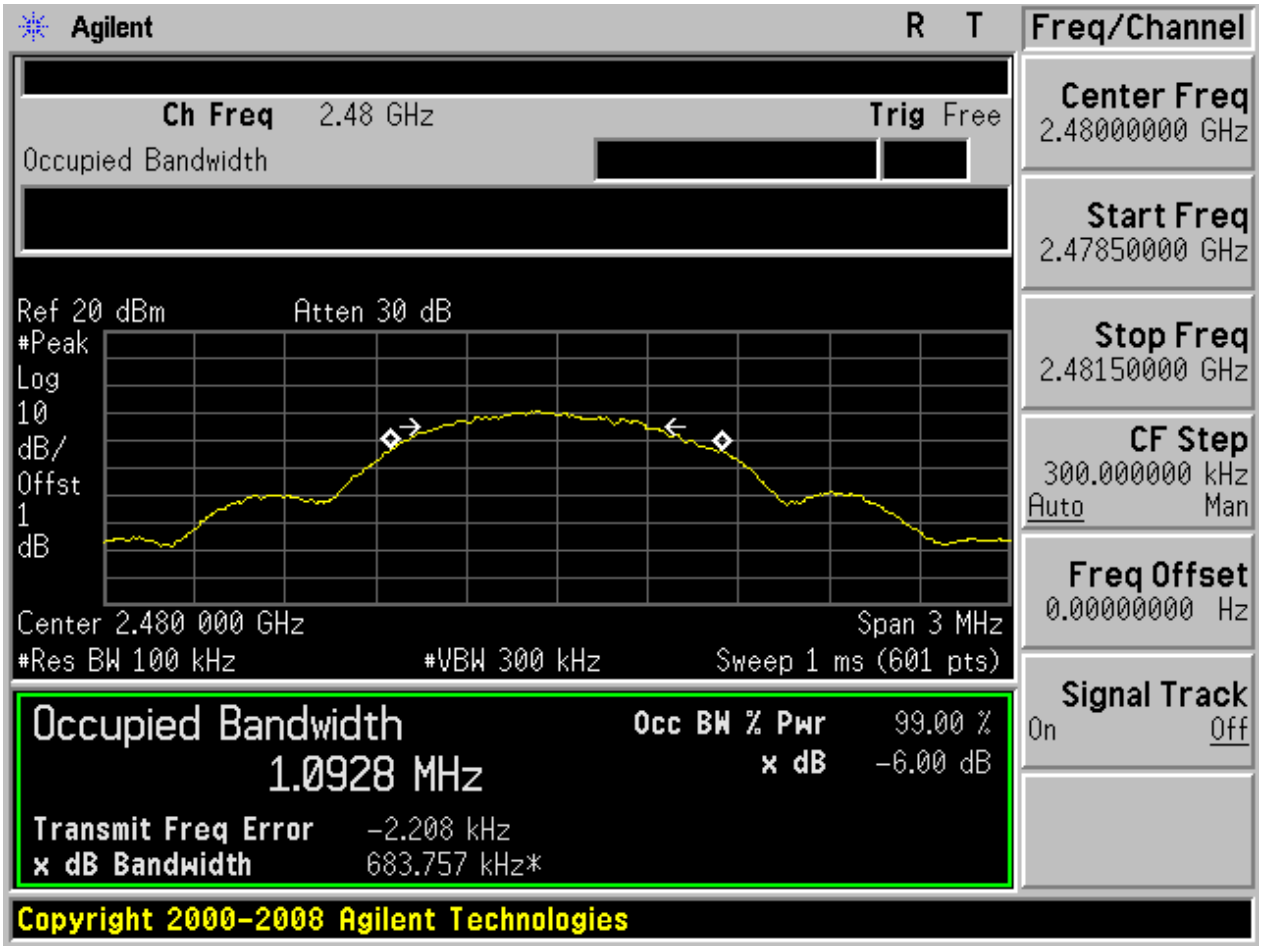
2.5 BT4.0_H@Ant 1



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Appendix B: Occupied Bandwidth

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

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Occupied Bandwidth [MHz]	Verdict
BT4.0	L	2402	Ant 1	1.06	pass
BT4.0	M	2440	Ant 1	1.05	pass
BT4.0	H	2480	Ant 1	1.05	pass

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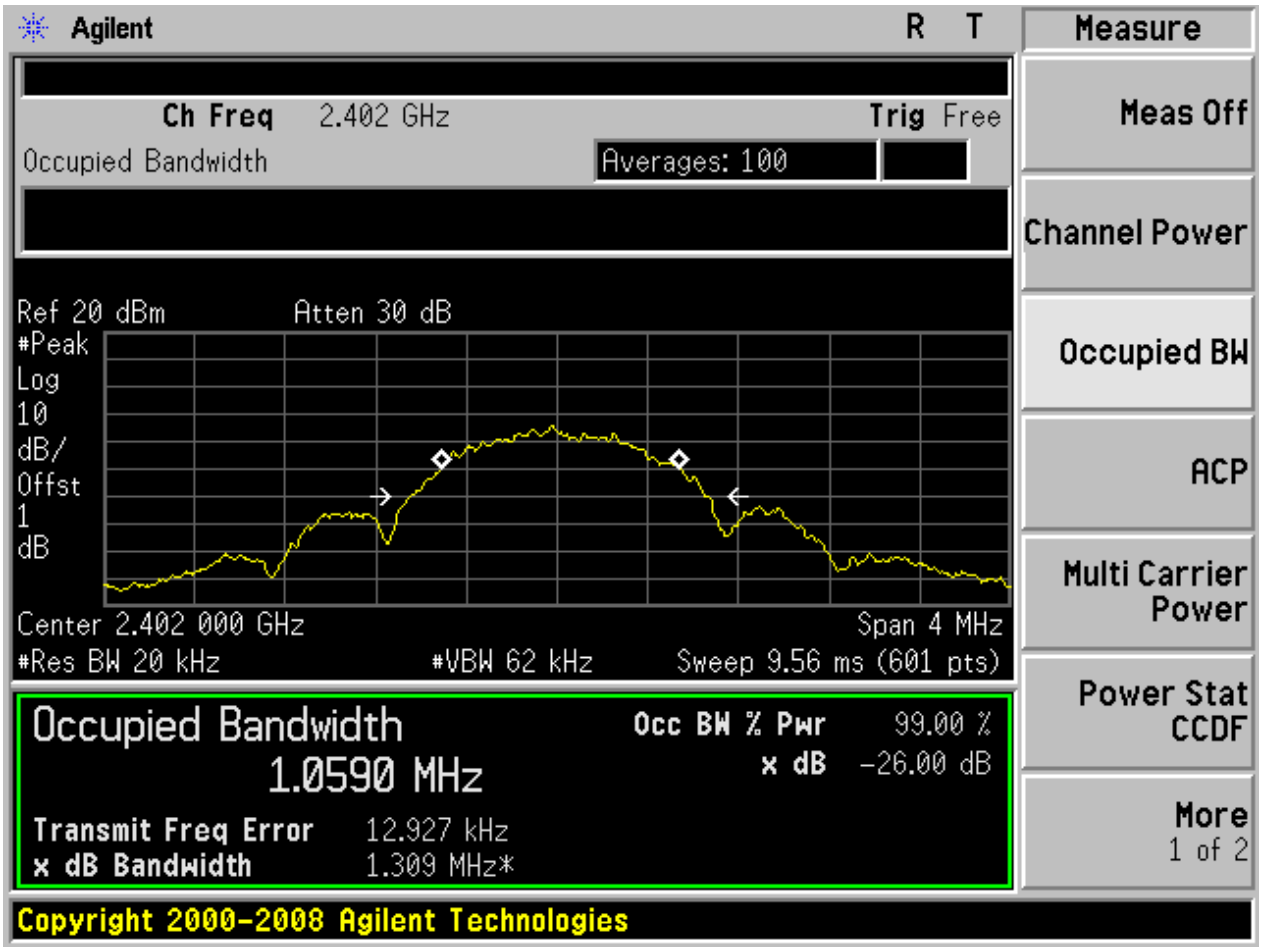
Part II - Test Plots

2.1 BT4.0_L@Ant 1



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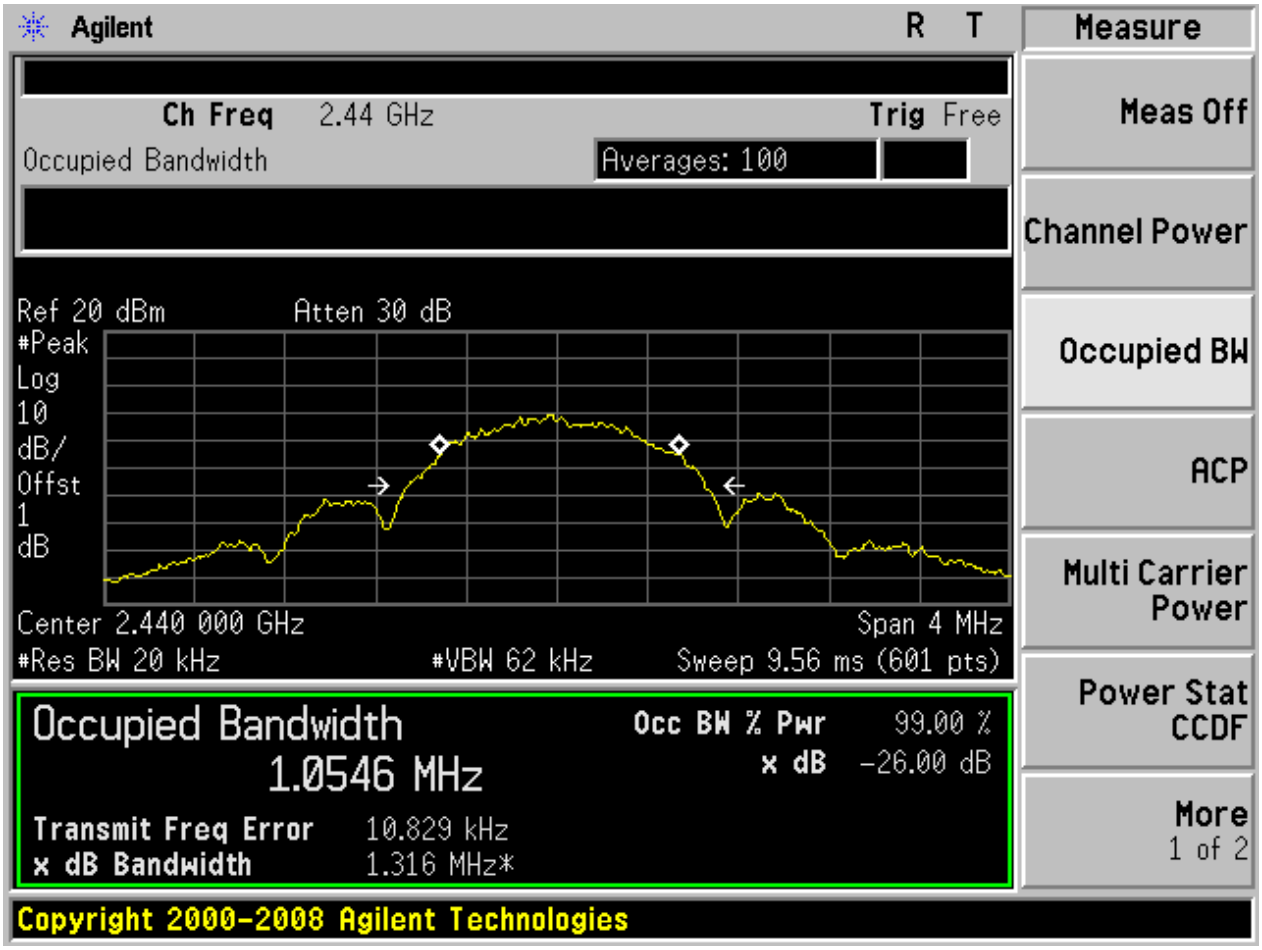
2.1 BT4.0_M@Ant 1



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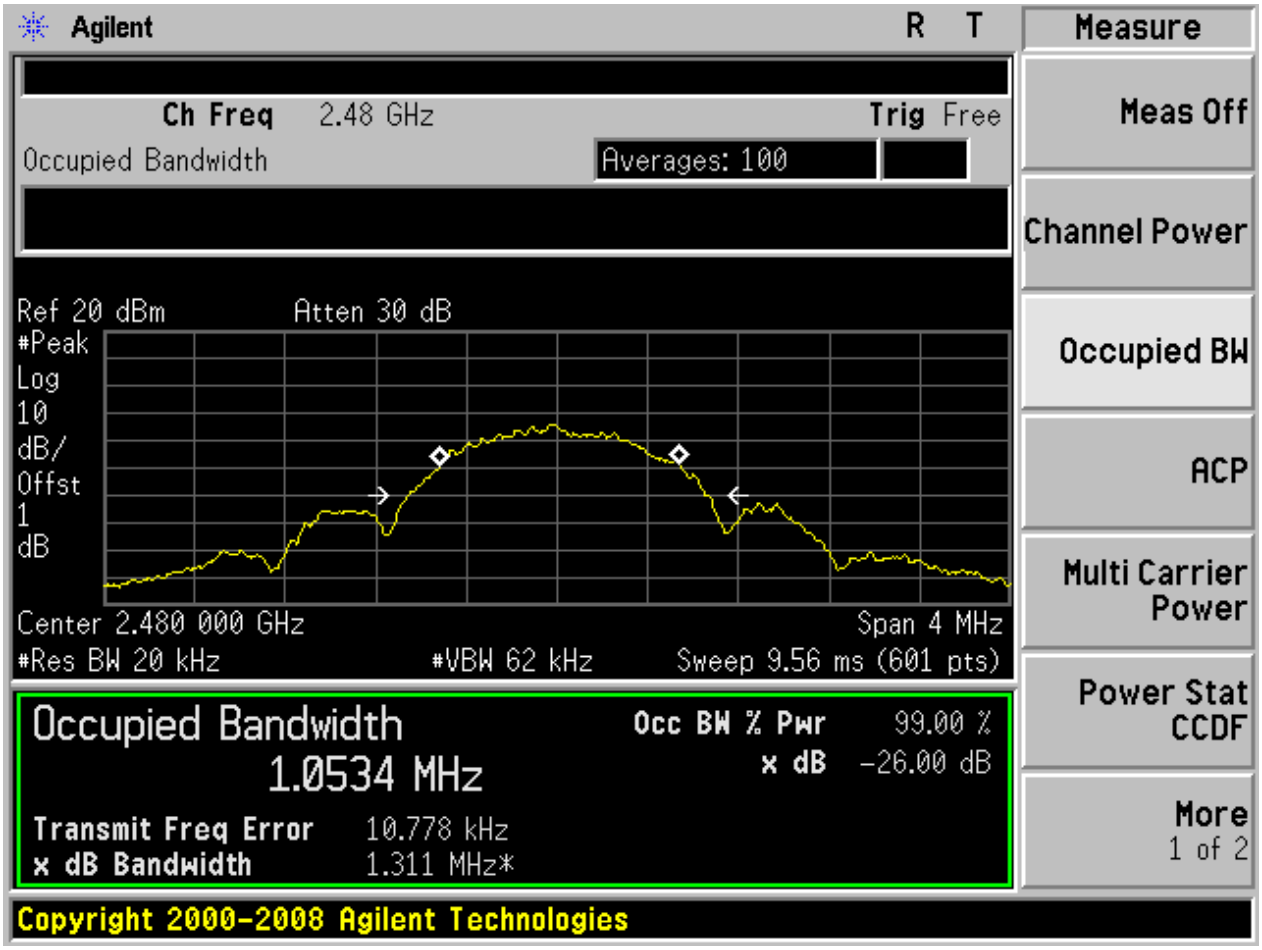
2.1 BT4.0_H@Ant 1



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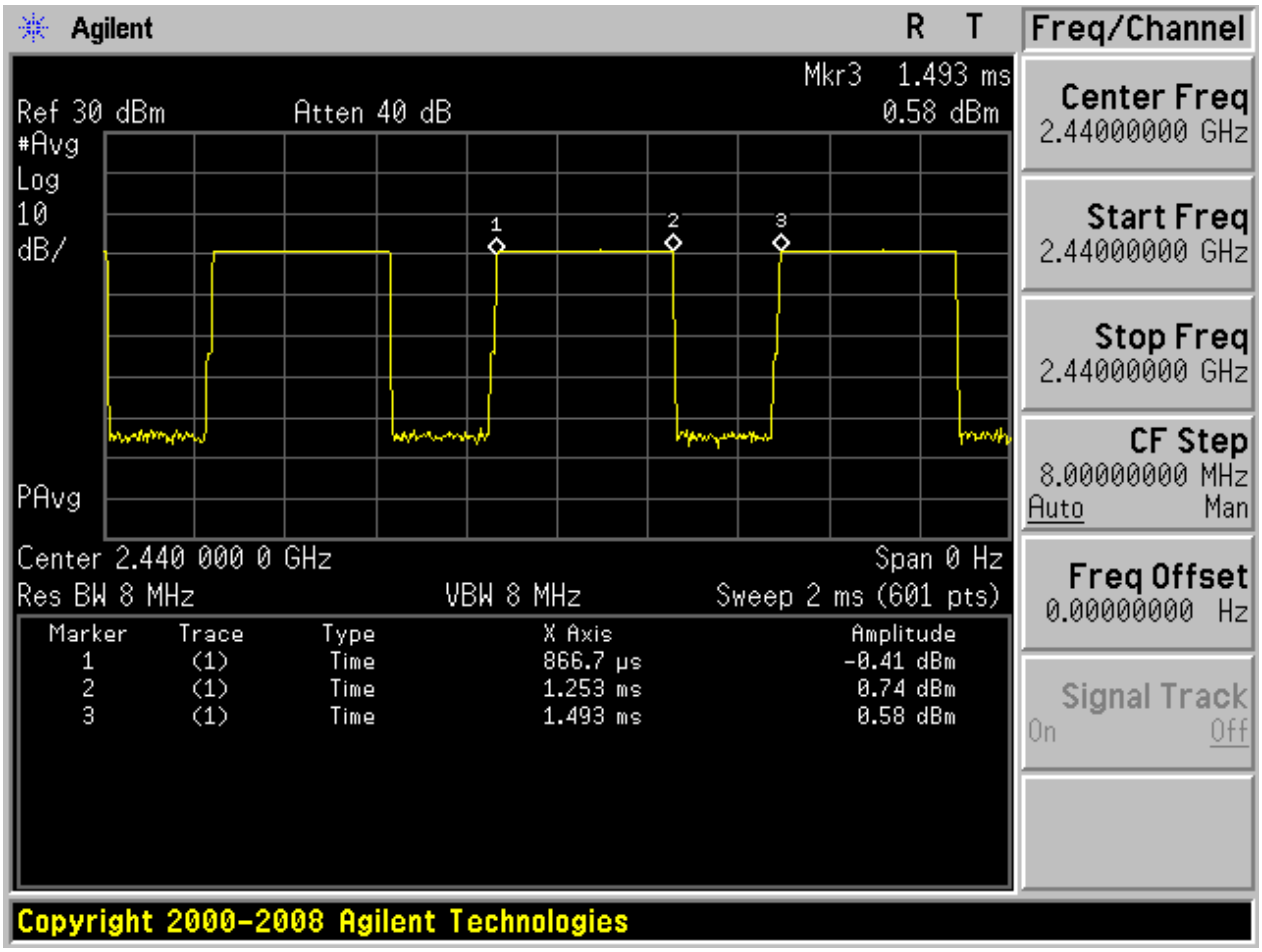
Appendix C: Duty Cycle

Part I - Test Results

Test Mode	TX Freq. [MHz]	Duty cycle [%]
BT4.0	Ant 1: 2440 MHz	62.2

Part II - Test Plots

2.1 BT4.0_L@Ant 1



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Appendix D: Maximum Conducted Average Output Power

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Power[dBm]	Verdict
BT4.0	L	2402	Ant 1	-2.52	pass
BT4.0	M	2440	Ant 1	1.64	pass
BT4.0	H	2480	Ant 1	-1.88	pass

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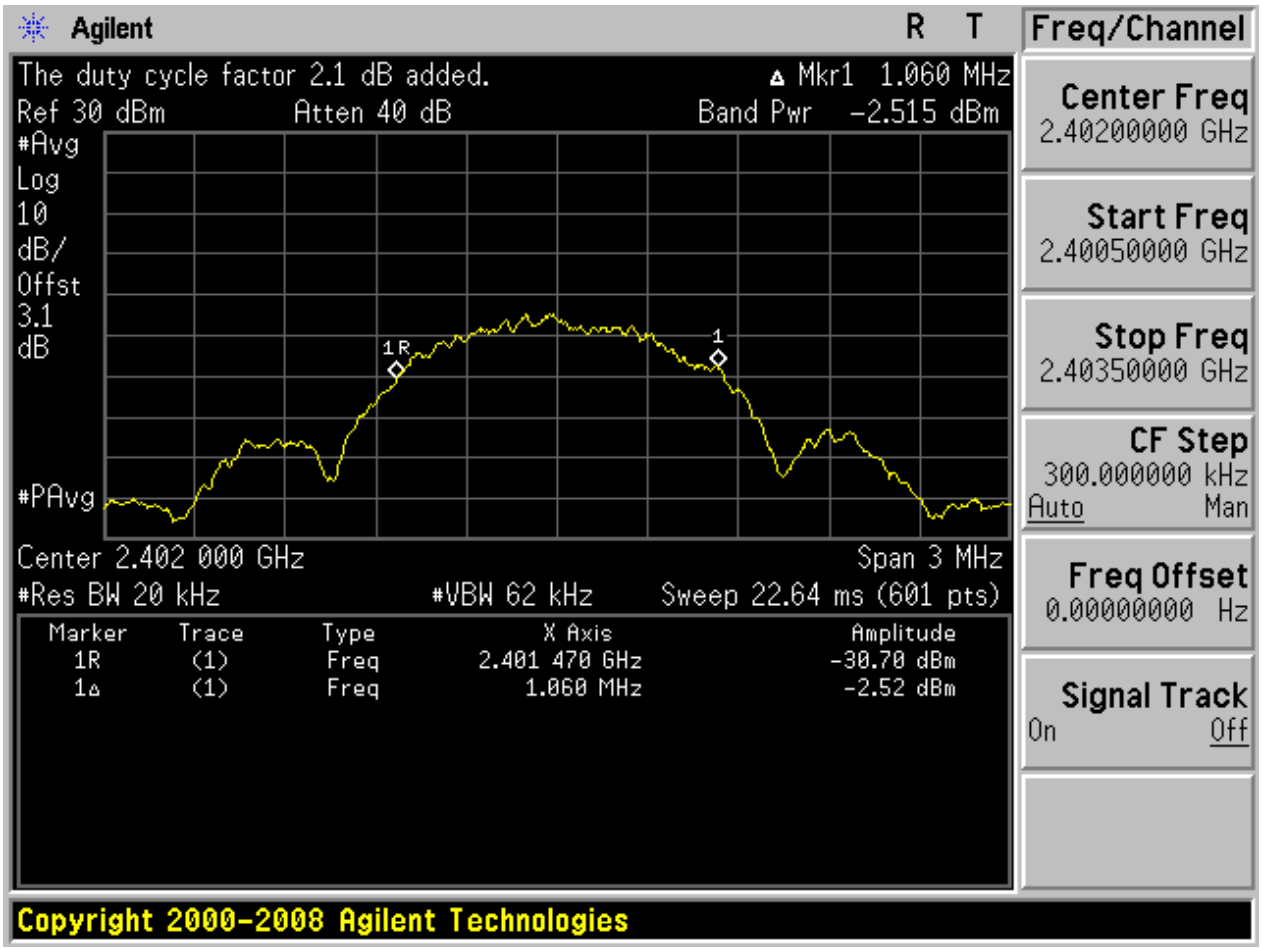
Part II - Test Plots

2.1 BT4.0_L@Ant 1



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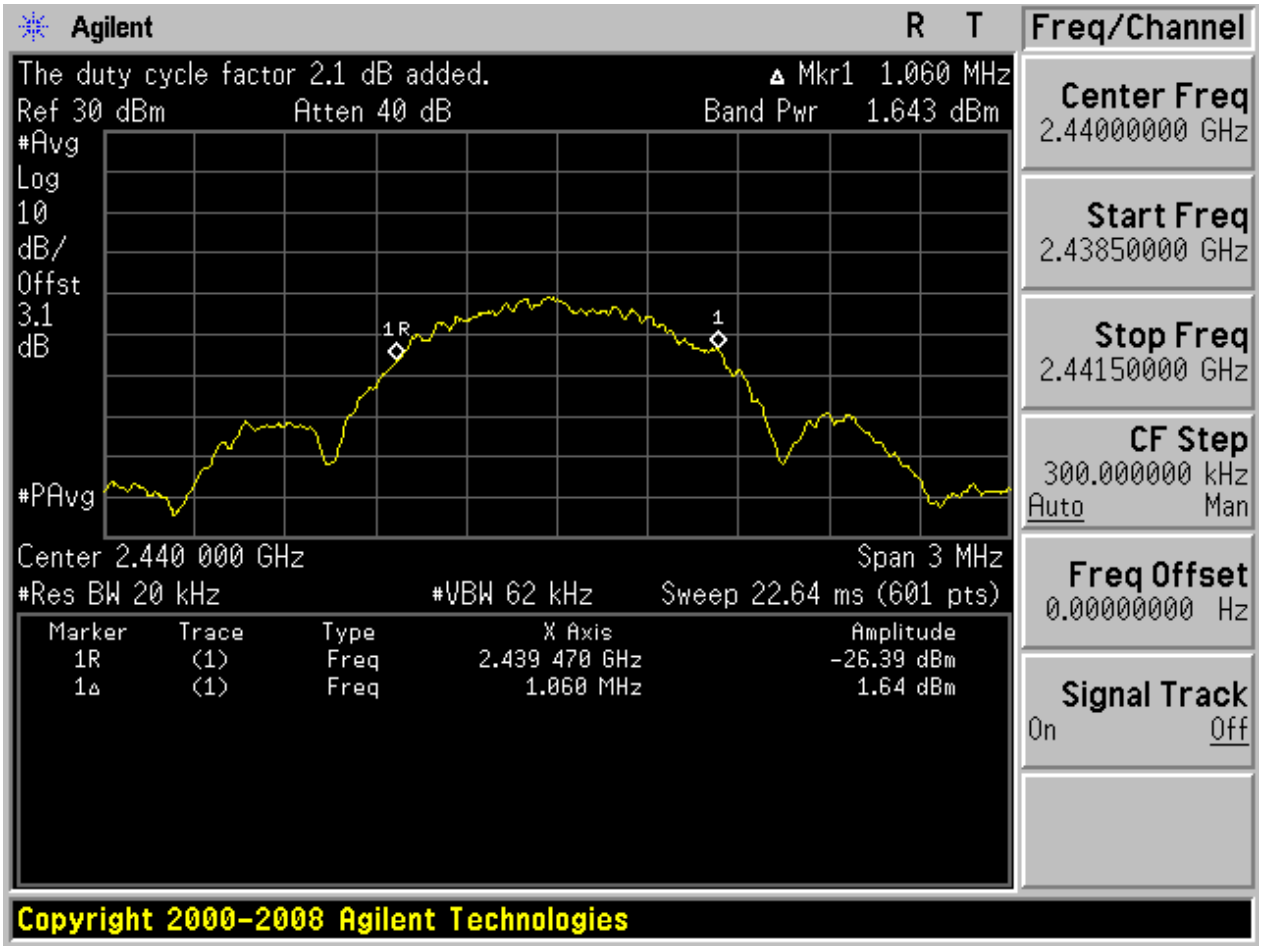
2.3 BT4.0_M@Ant 1



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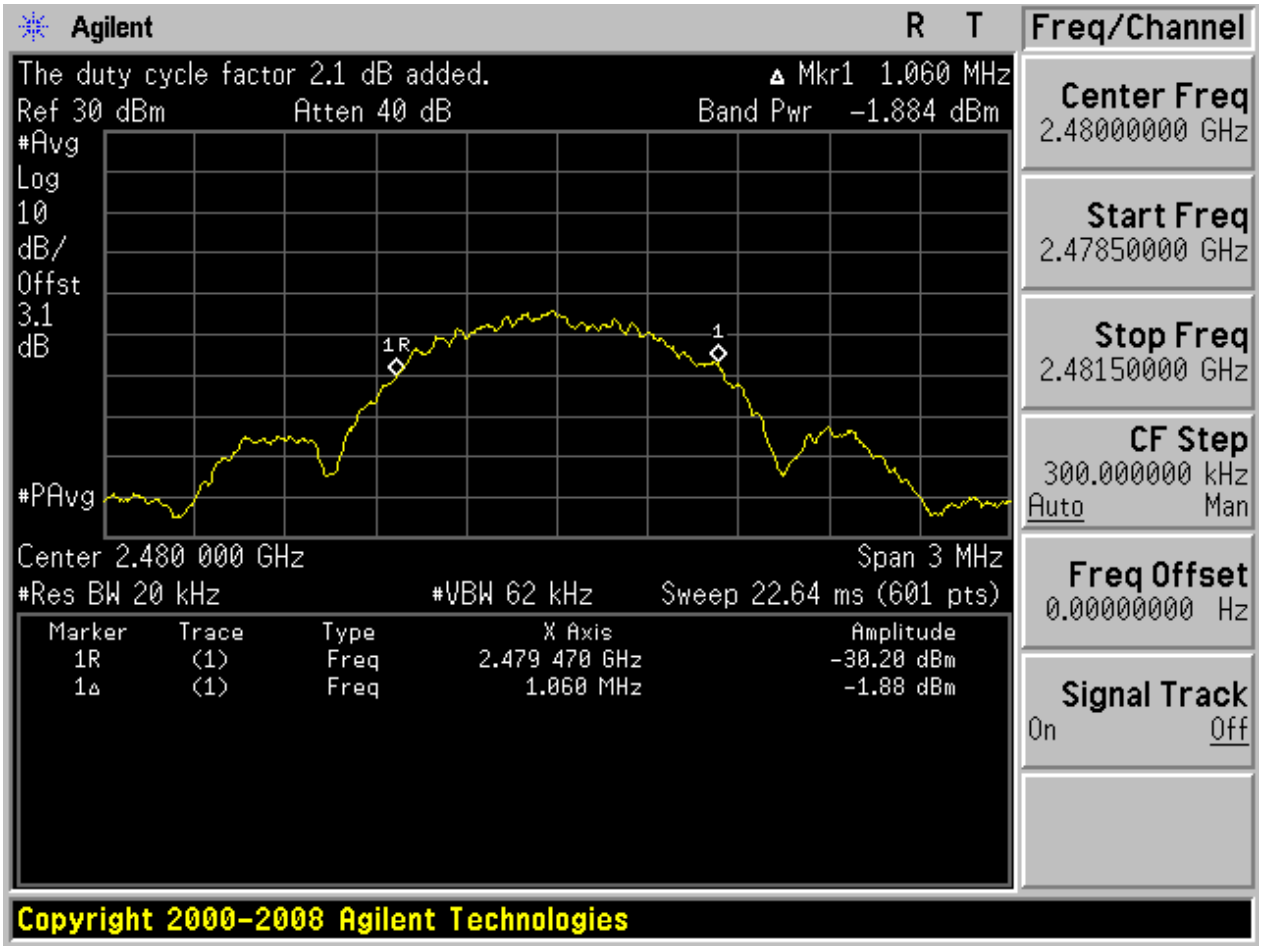
2.5 BT4.0_H@Ant 1



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Appendix E: Maximum Power Spectral Density Level

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	PD[MHz]	Verdict
BT4.0	L	2402	Ant 1	-17.15	pass
BT4.0	M	2440	Ant 1	-13.39	pass
BT4.0	H	2480	Ant 1	-16.25	pass

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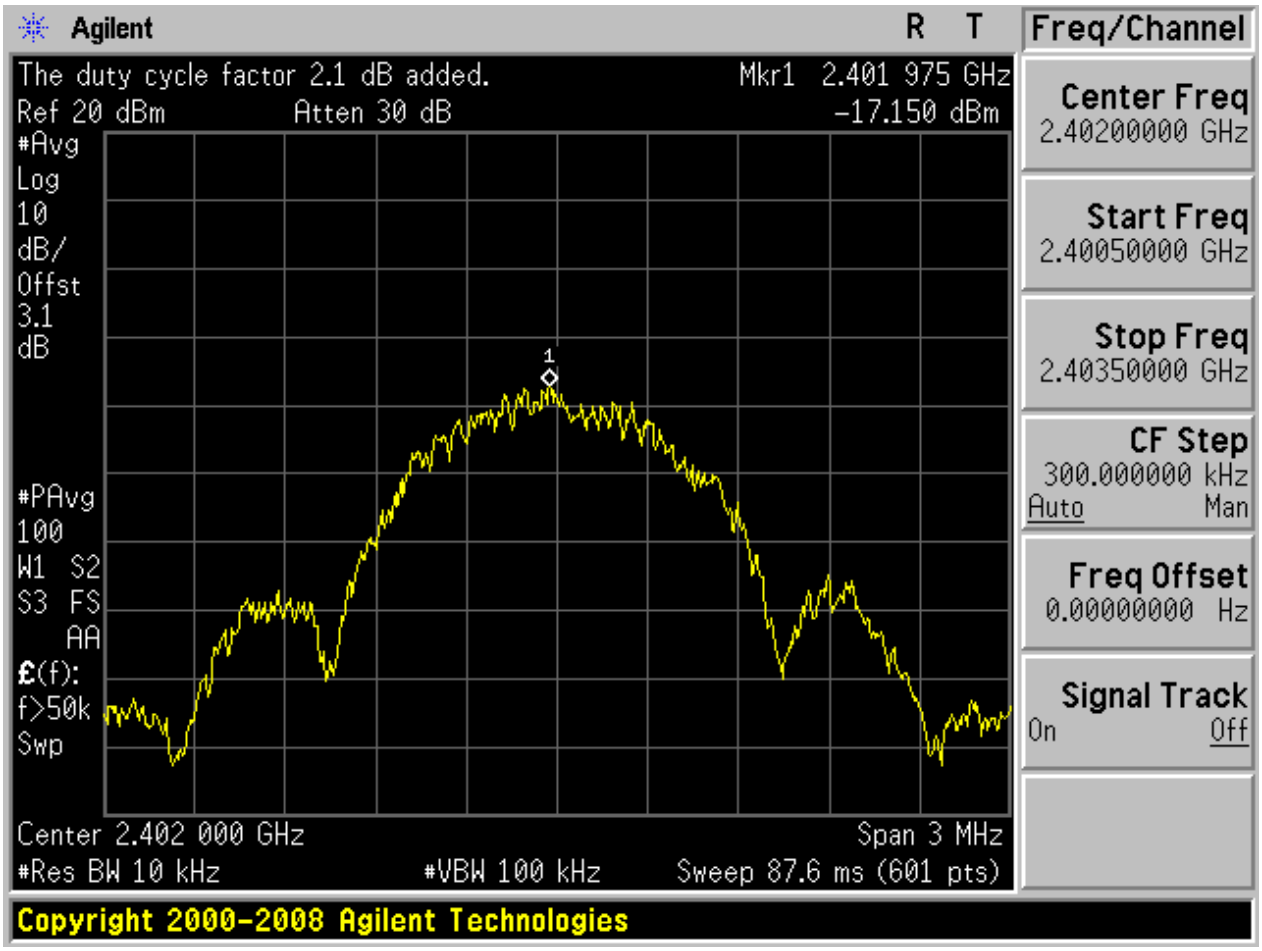
Part II - Test Plots

2.1 BT4.0_L@Ant 1



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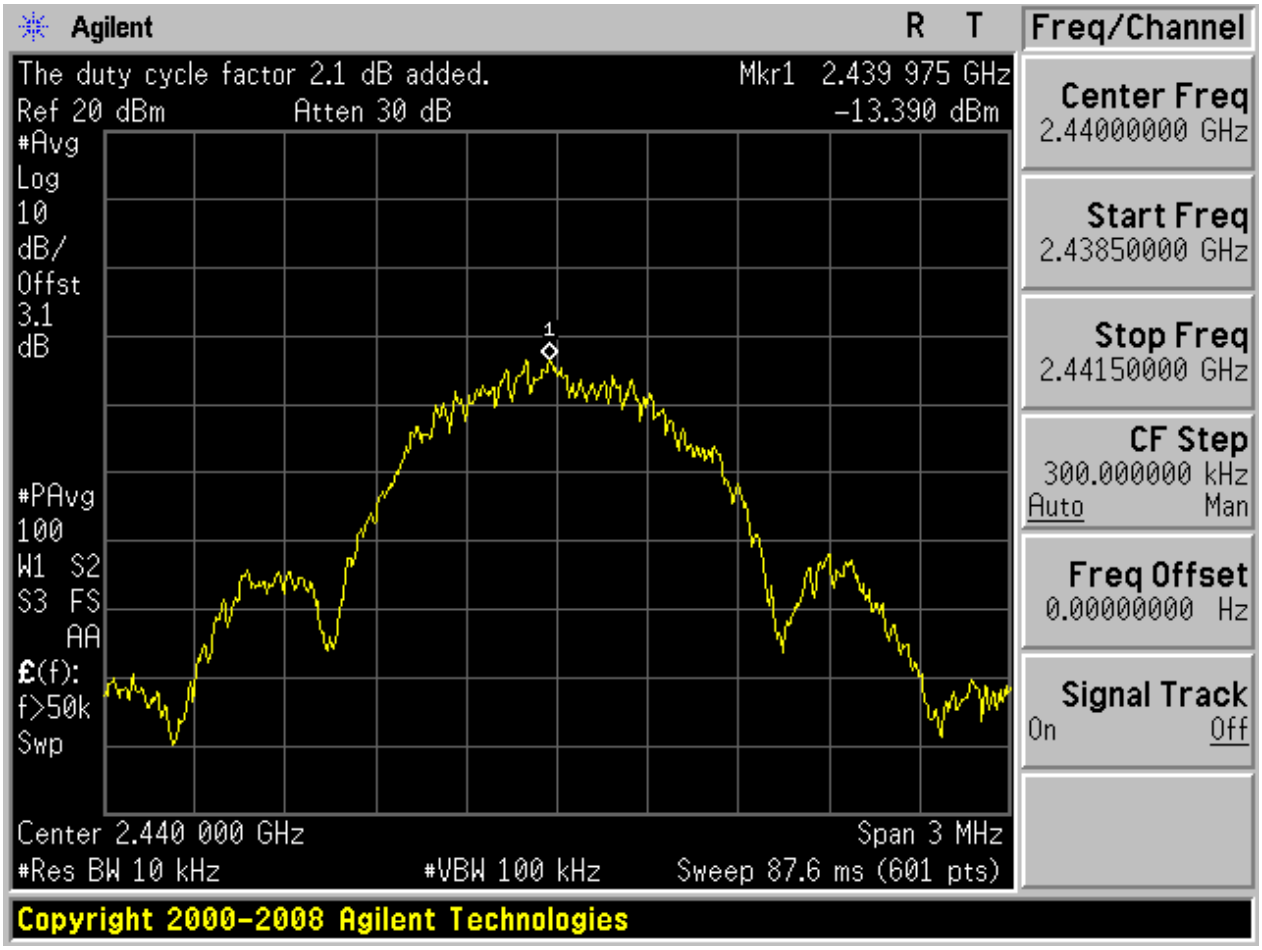
2.3 BT4.0_M@Ant 1



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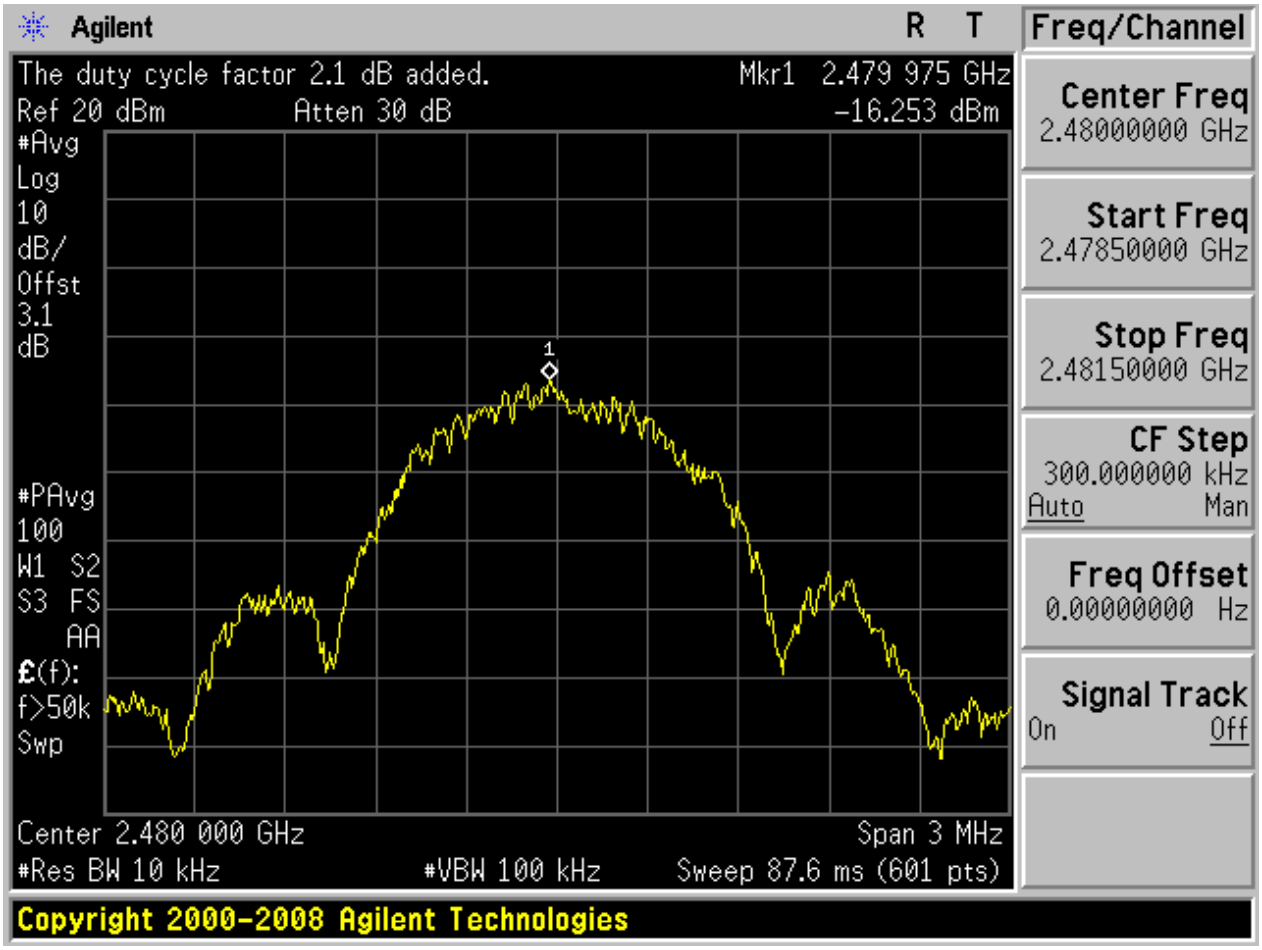
2.5 BT4.0_H@Ant 1



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Appendix F: Band Edges Compliance

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
BT4.0	L	2402	Ant 1	-1.44	-51.79	pass
BT4.0	H	2480	Ant 1	-1.20	-49.43	pass

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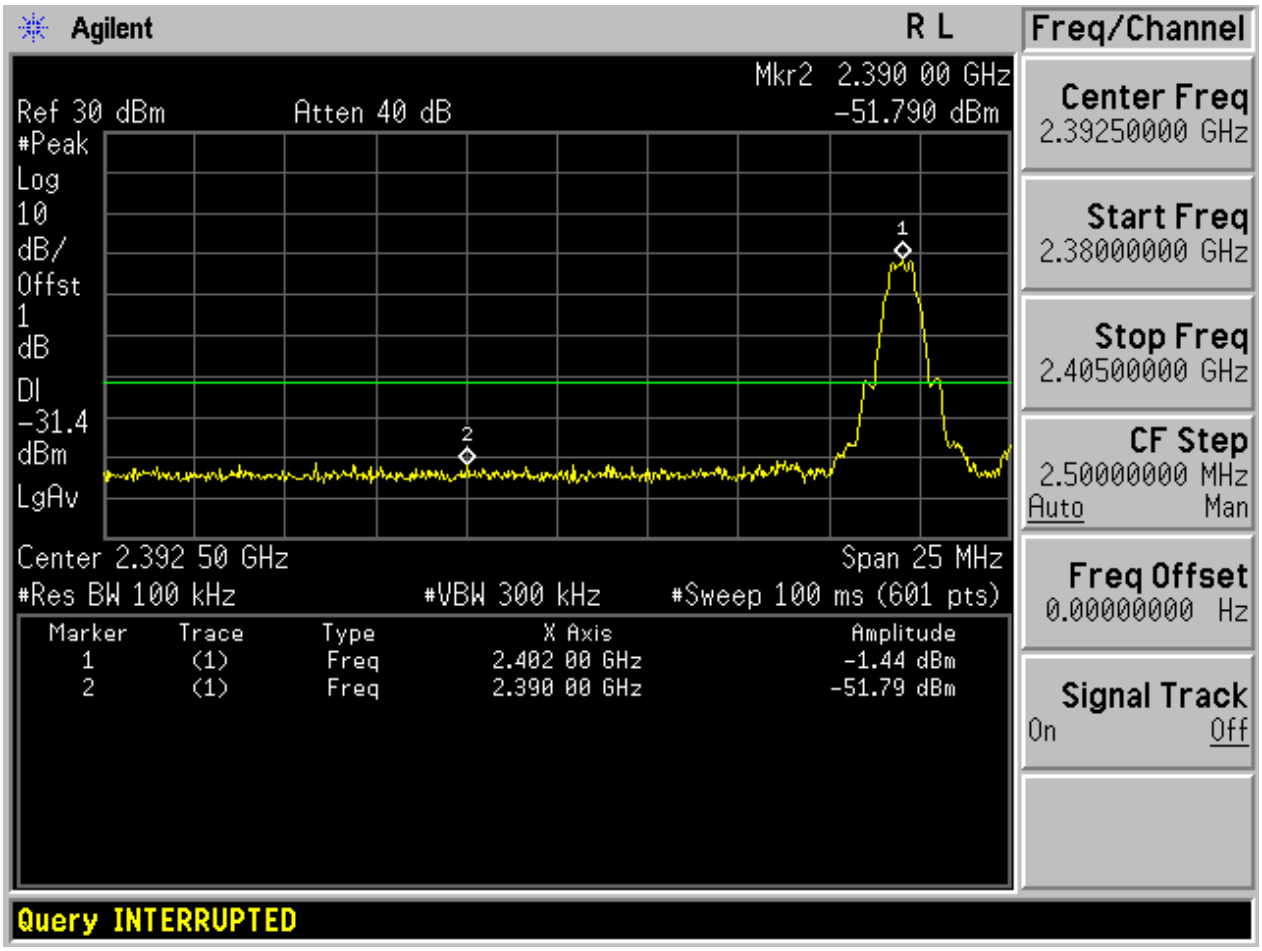
Part II - Test Plots

2.1 BT4.0_L@Ant 1



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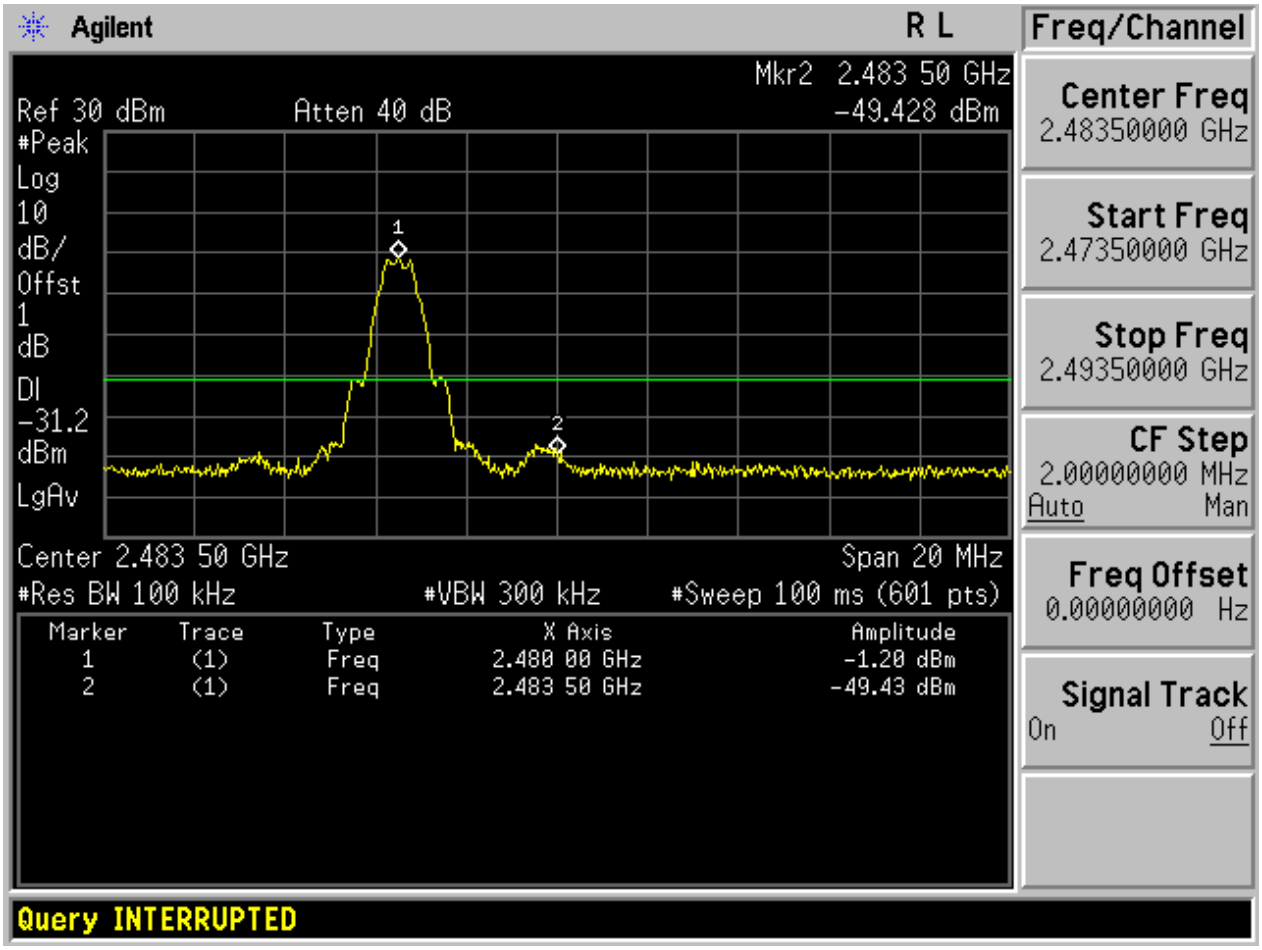
2.3 BT4.0_H@Ant 1



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Appendix G: Unwanted Emissions into Non-Restricted Frequency Bands

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

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

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

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]	Verdict
BT4.0	L	2402	Ant 1	-2.69	<limit	pass
BT4.0	M	2440	Ant 1	1.80	<limit	pass
BT4.0	H	2480	Ant 1	-.62	<limit	pass

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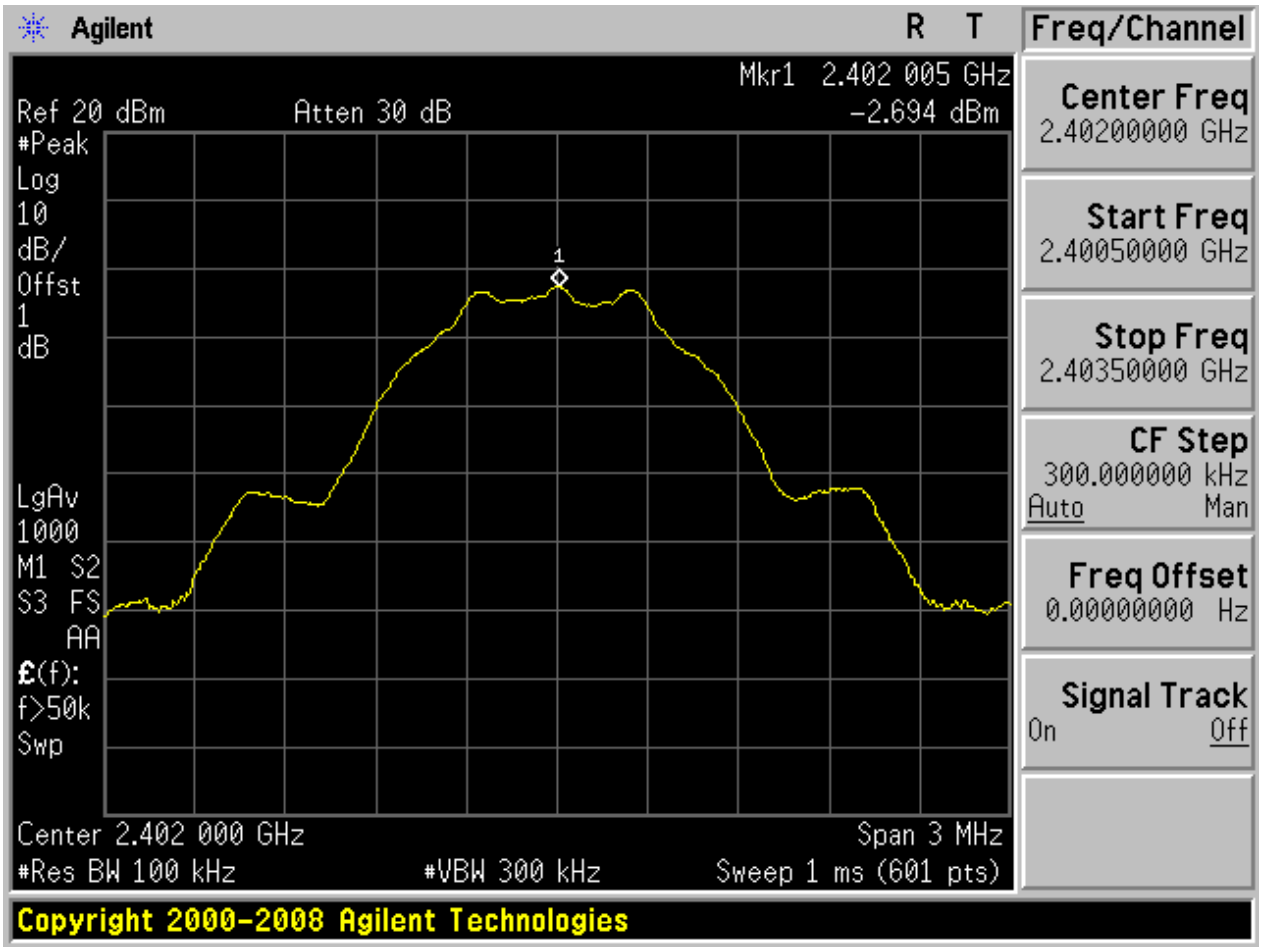
Part II - Test Plots

2.1 BT4.0_L@Ant 1

Pref:



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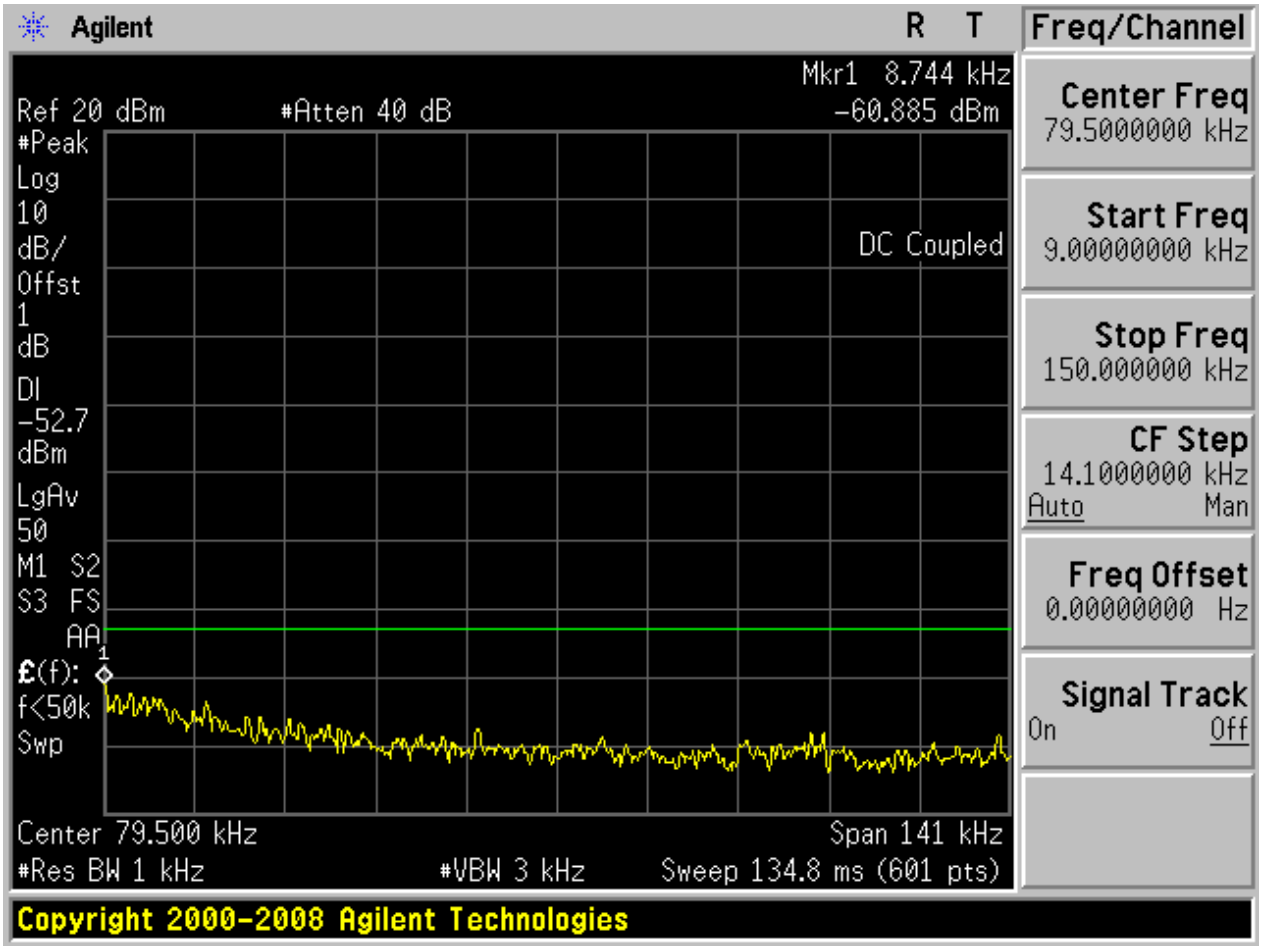
Puw:



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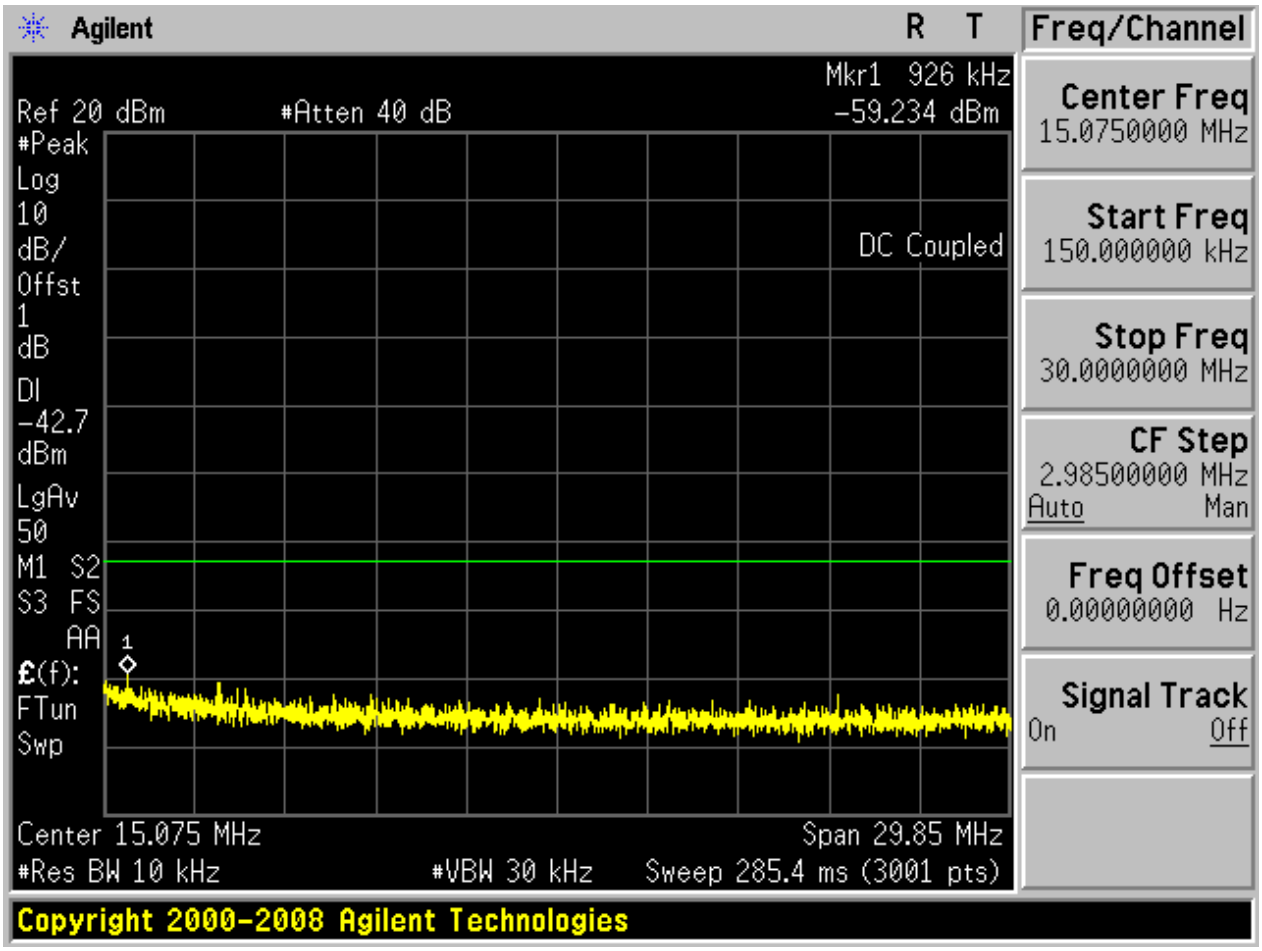
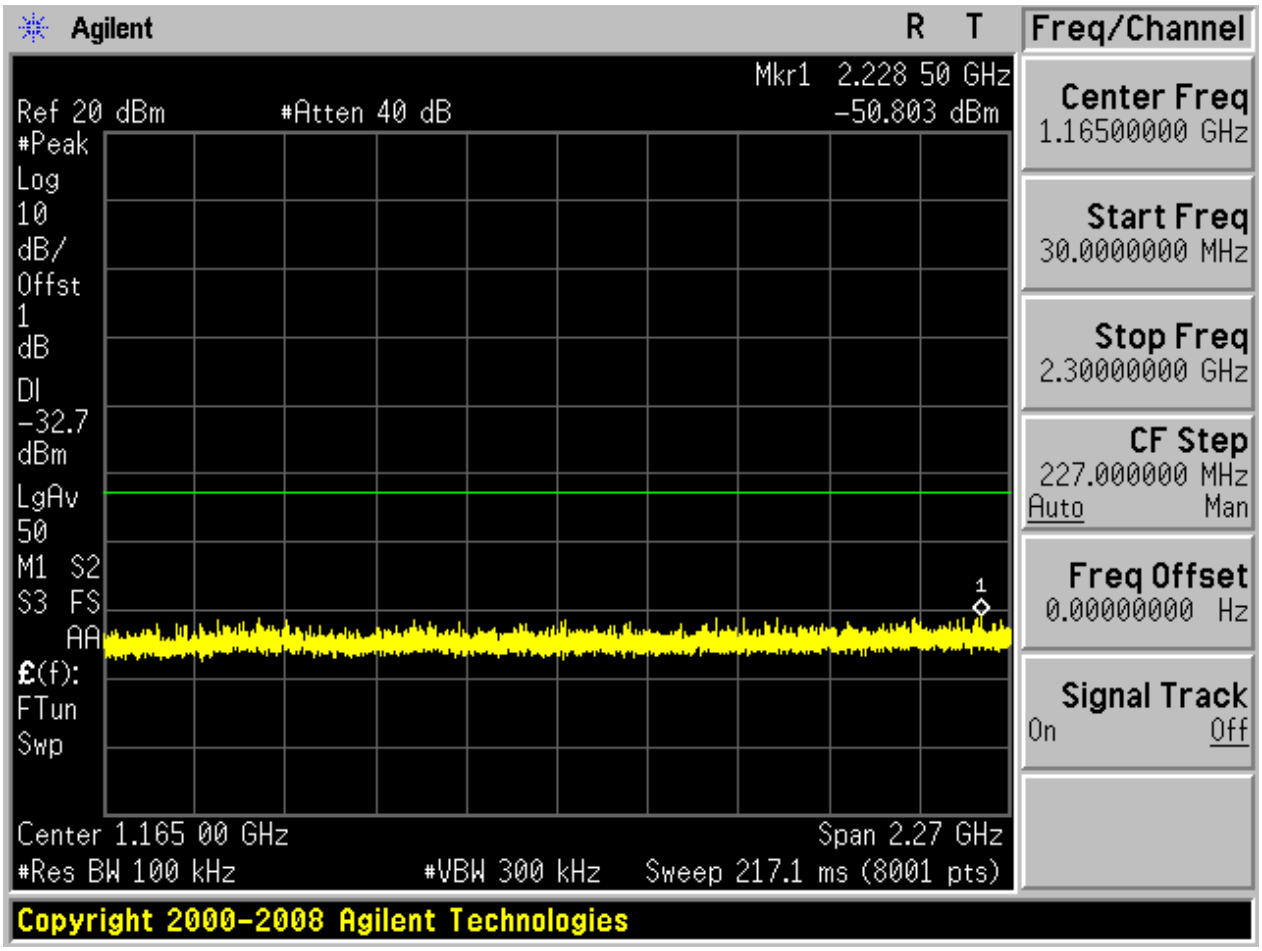

Agilent
R T
Freq/Channel
Mkr1 926 kHz
Ref 20 dBm
#Atten 40 dB
-59.234 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-42.7
dBm
LgAv
50
M1 S2
S3 FS
AA
£(f):
FTun
Swp
DC Coupled
Center Freq
15.0750000 MHz
Start Freq
150.000000 kHz
Stop Freq
30.0000000 MHz
CF Step
2.98500000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Center 15.075 MHz
Span 29.85 MHz
#Res BW 10 kHz
#VBW 30 kHz
Sweep 285.4 ms (3001 pts)
Copyright 2000-2008 Agilent Technologies



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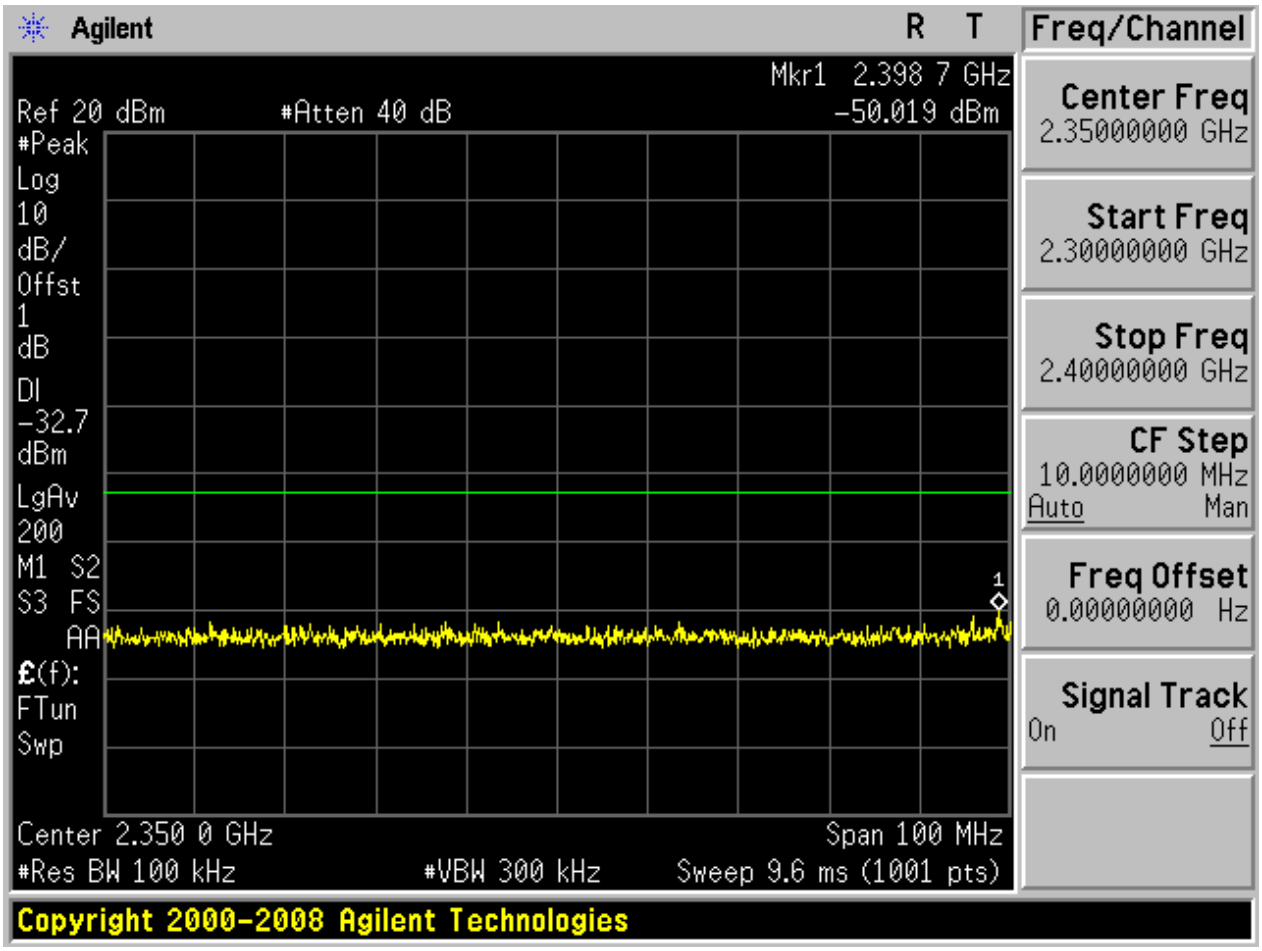
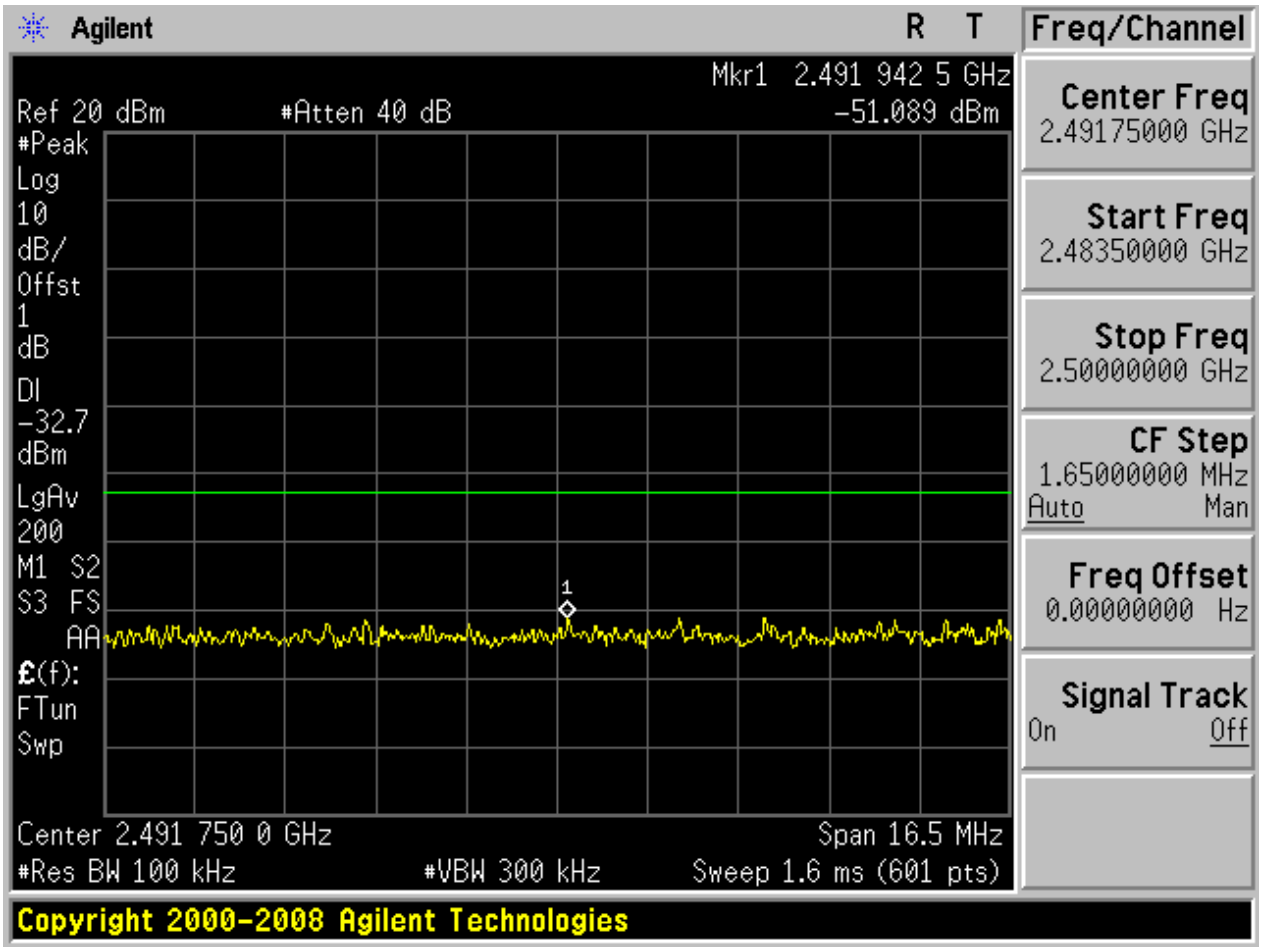


Copyright © Huawei Technologies Co., Ltd.



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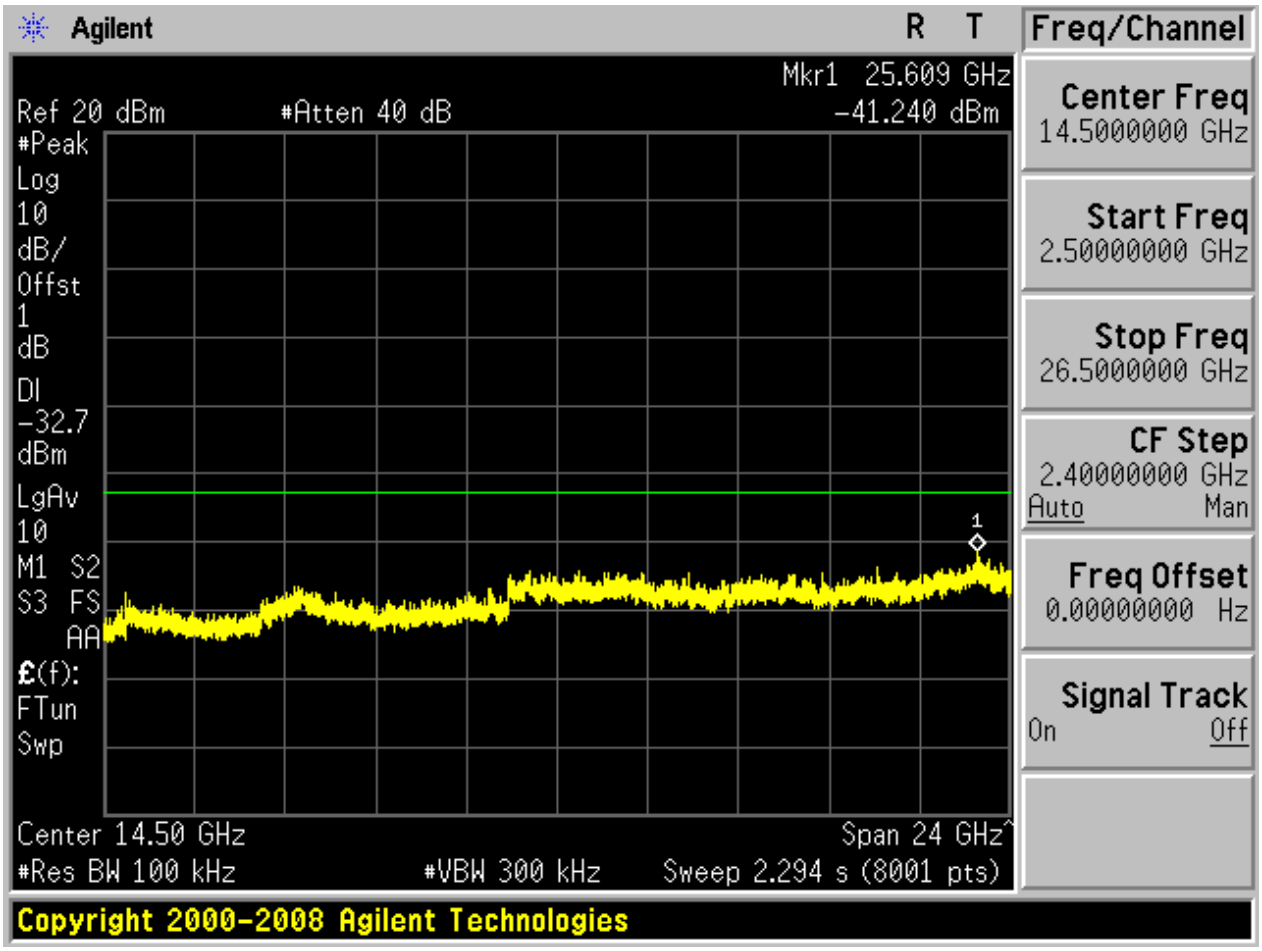

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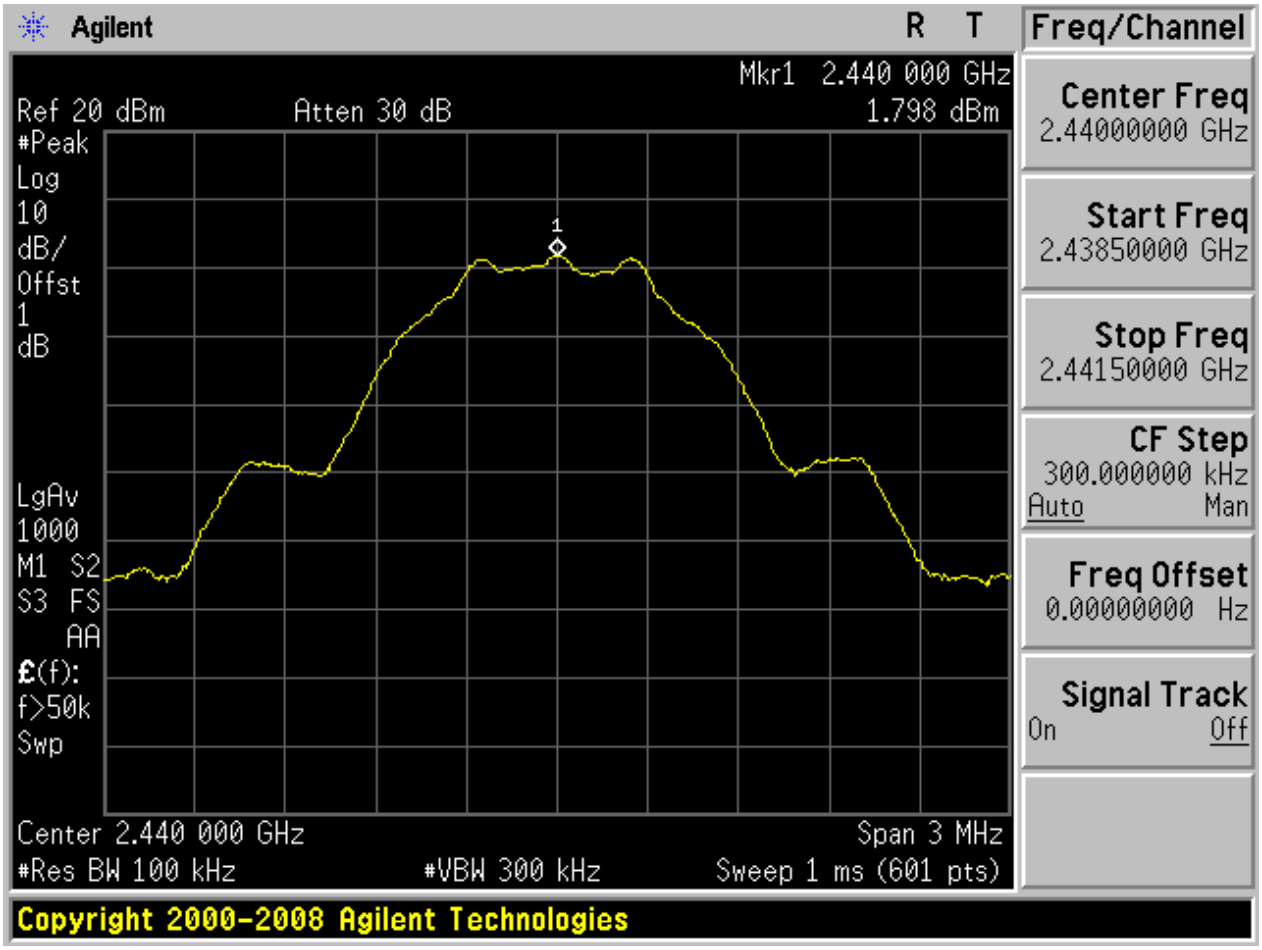
2.3 BT4.0_M@Ant 1

Pref:



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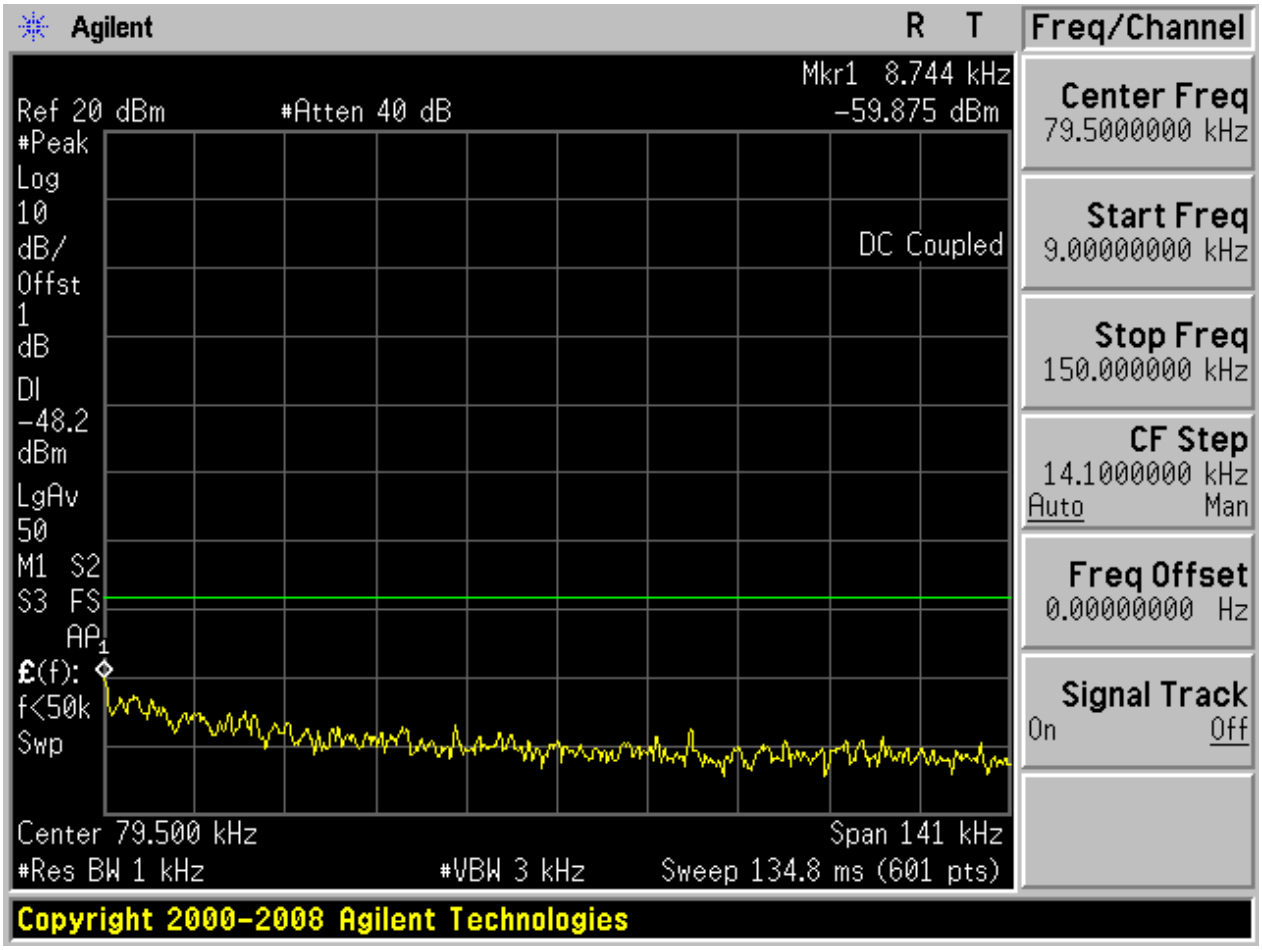
Puw:



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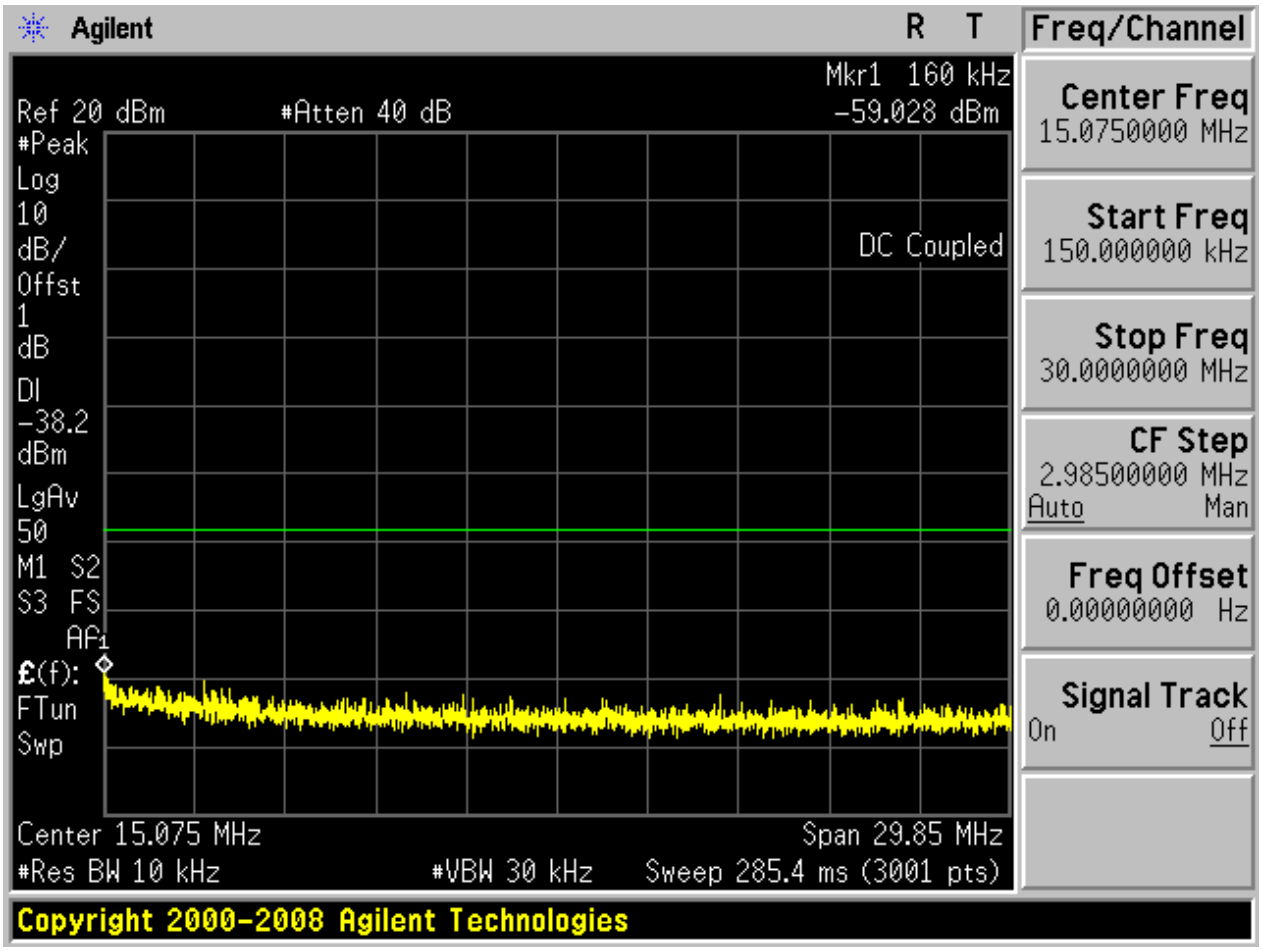

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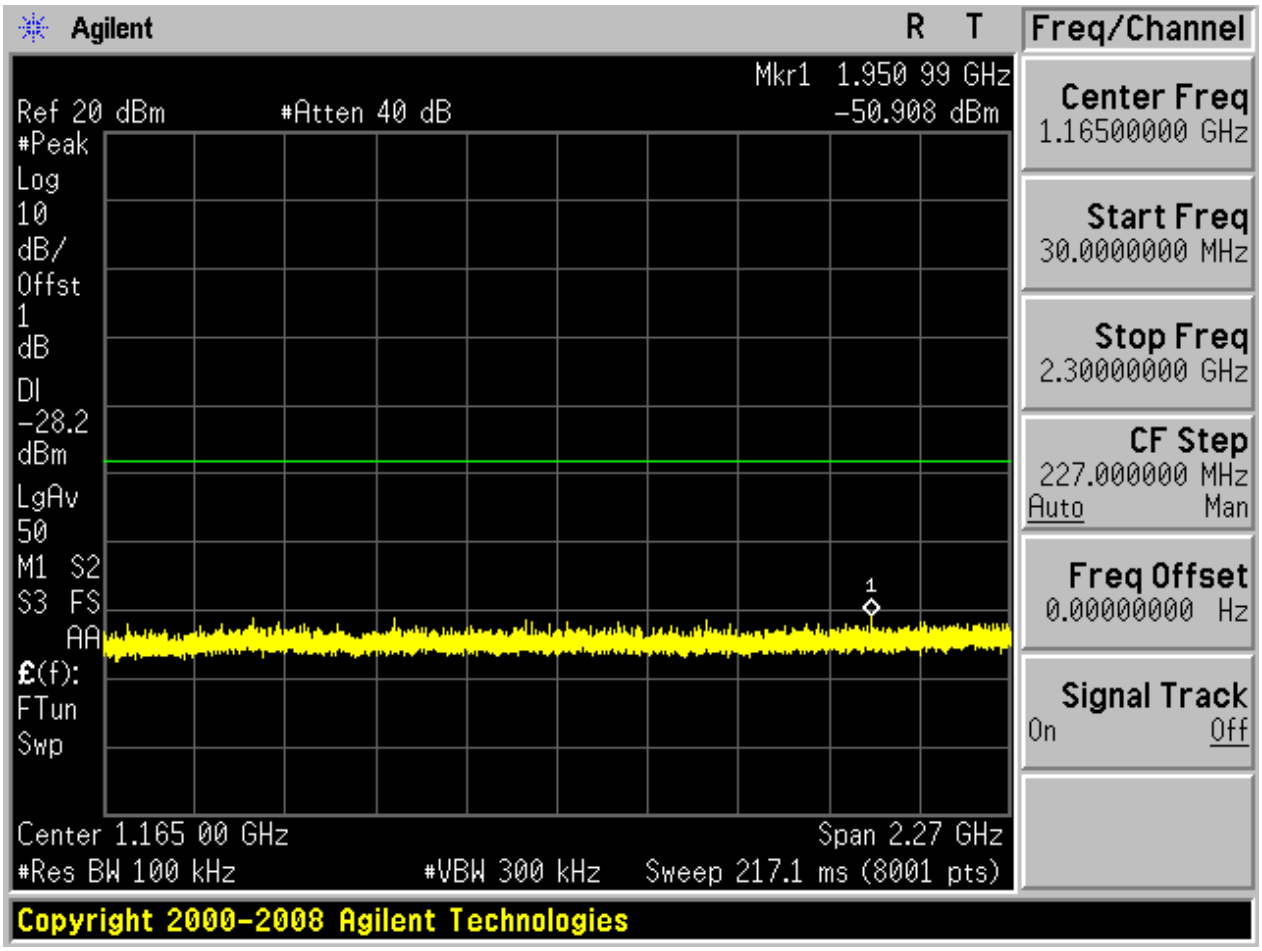

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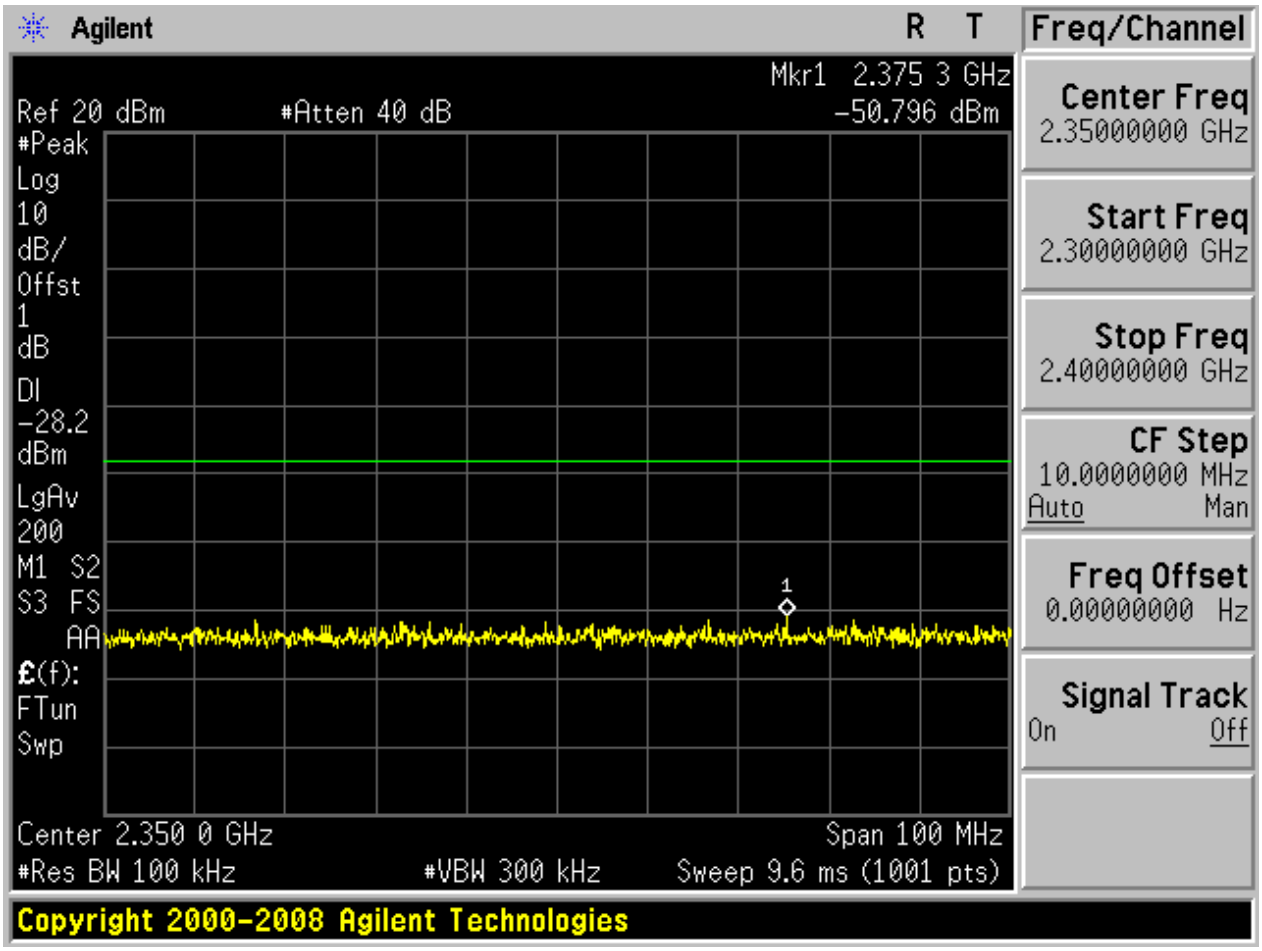

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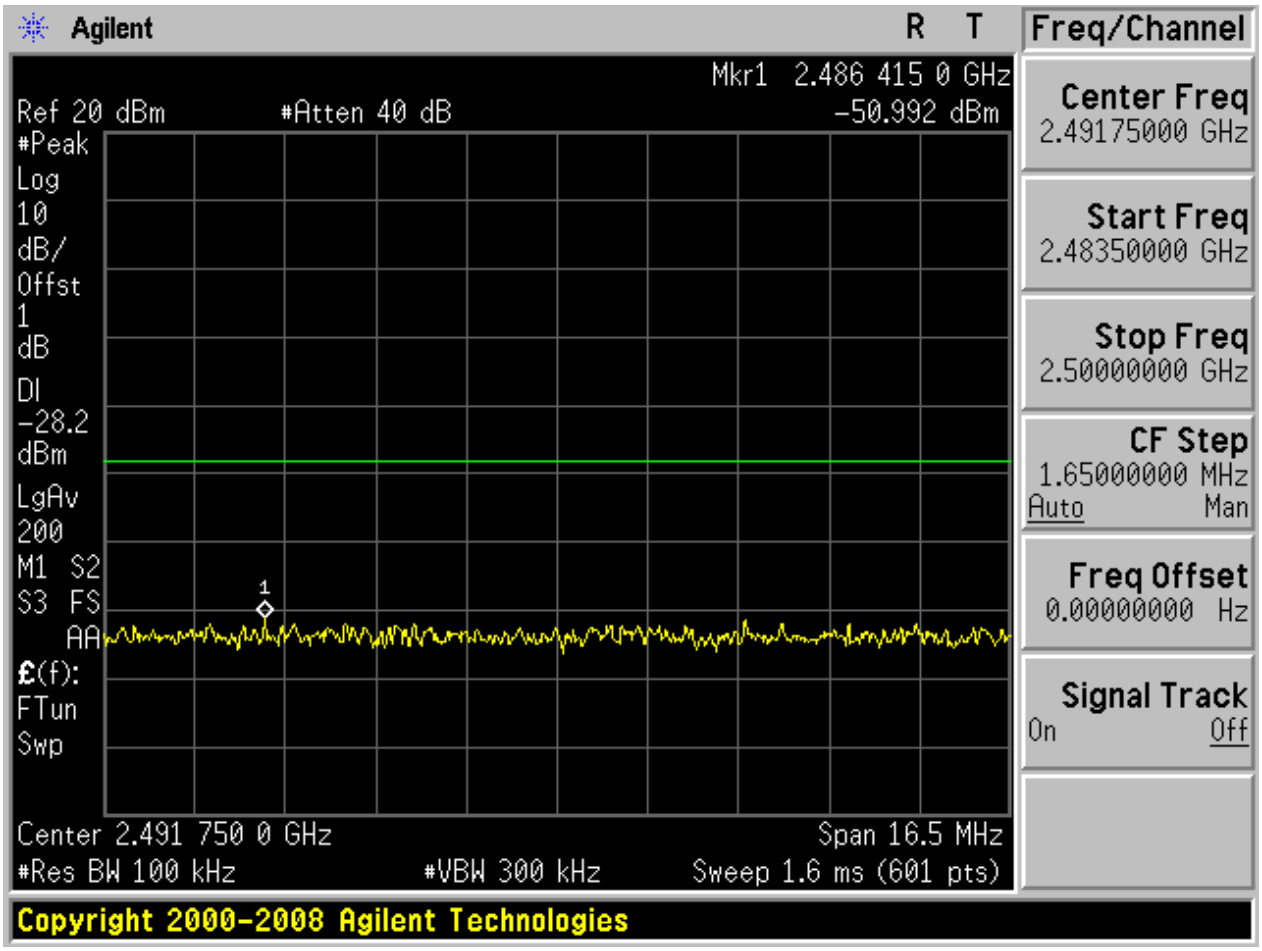

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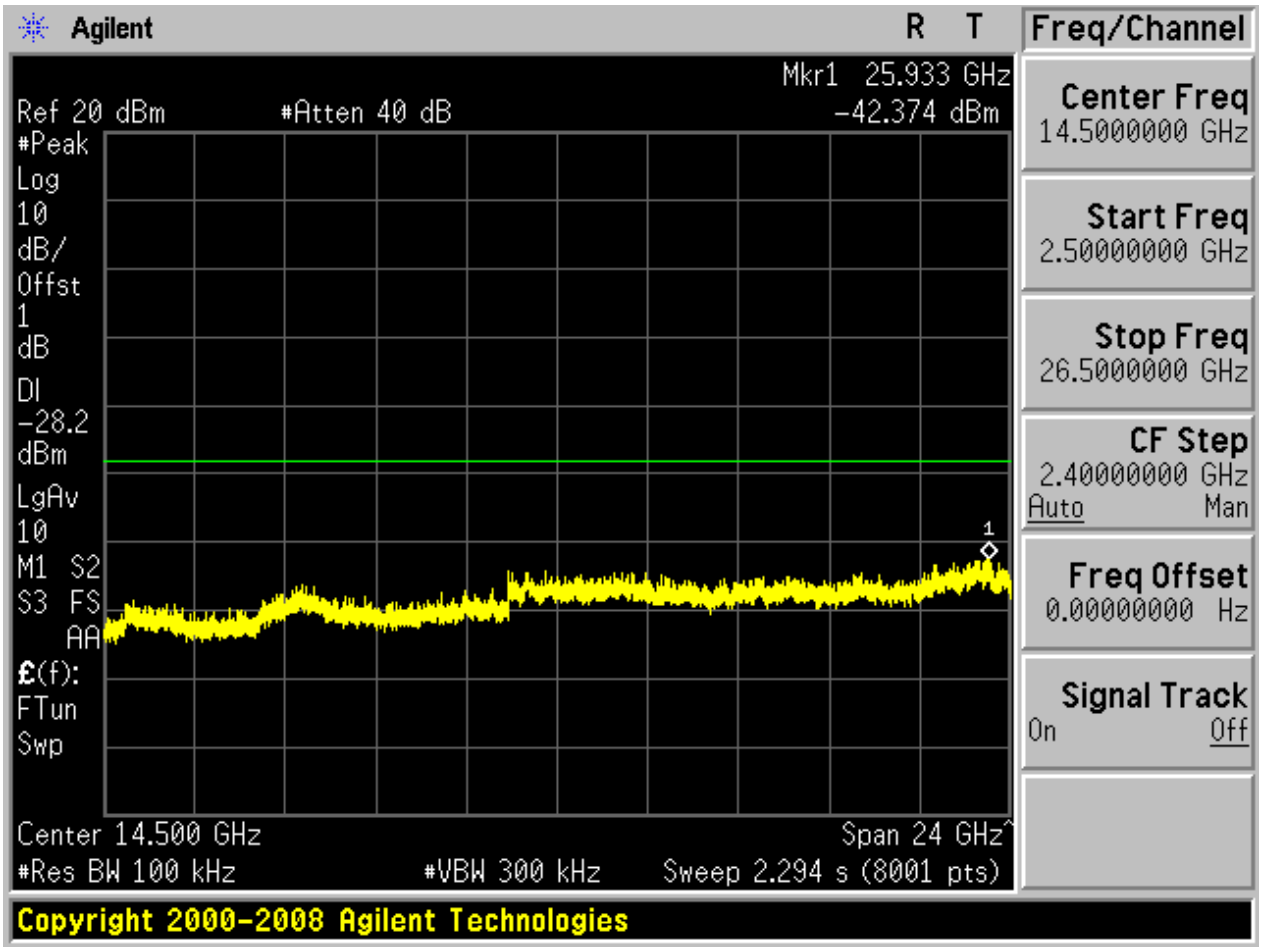

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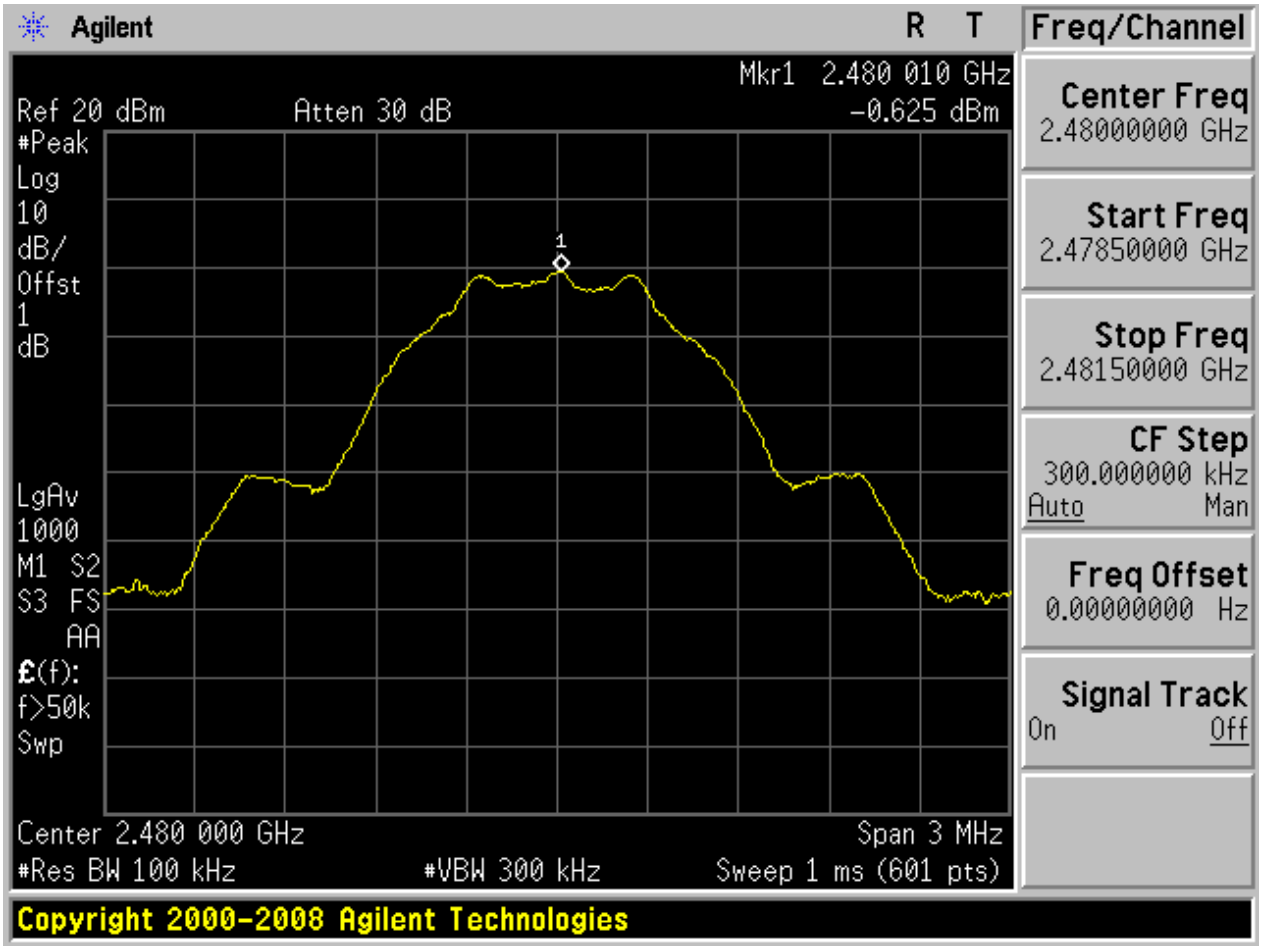
2.5 BT4.0_H@Ant 1

Pref:



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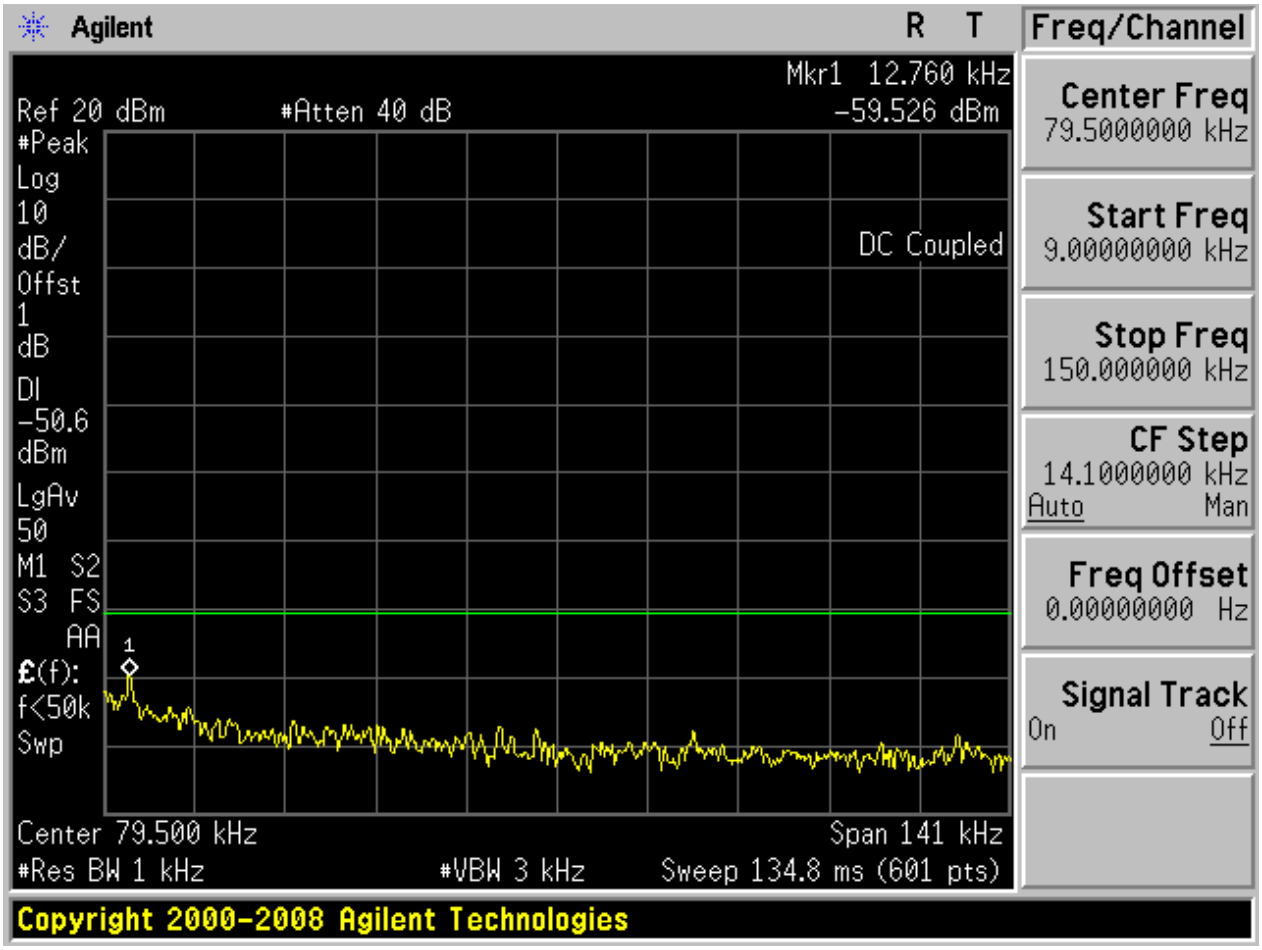
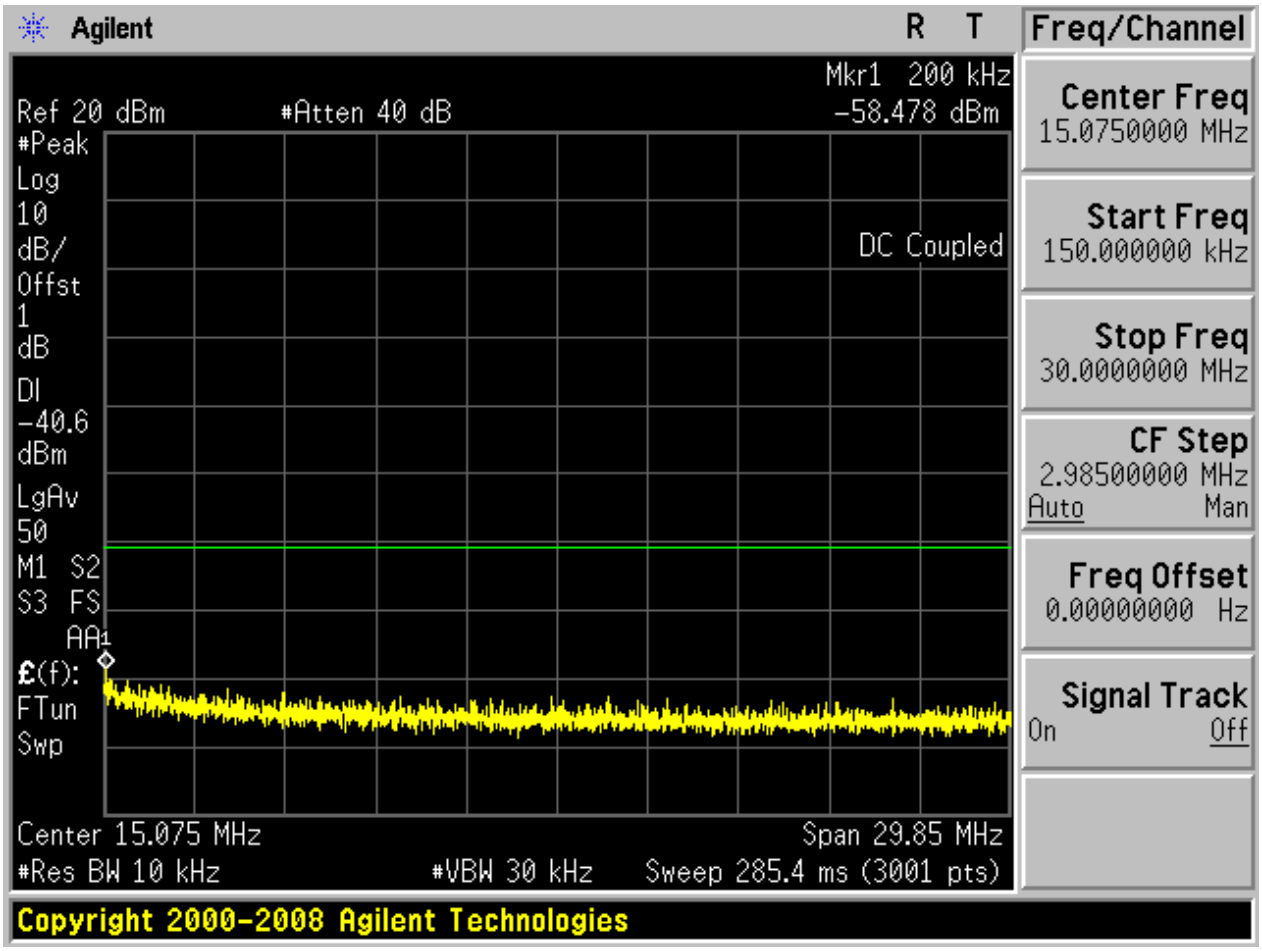
Puw:


Agilent
R T
Freq/Channel
Mkr1 12.760 kHz
Ref 20 dBm
#Atten 40 dB
-59.526 dBm
#Peak
Log
10
dB/
Offst
1
dB
Dl
-50.6
dBm
LgAv
50
M1 S2
S3 FS
AA
£(f):
f<50k
Swp
DC Coupled
Center Freq
79.5000000 kHz
Start Freq
9.000000000 kHz
Stop Freq
150.000000 kHz
CF Step
14.1000000 kHz
Auto Man
Freq Offset
0.000000000 Hz
Signal Track
On Off
Center 79.500 kHz
Span 141 kHz
#Res BW 1 kHz
#VBW 3 kHz
Sweep 134.8 ms (601 pts)
Copyright 2000-2008 Agilent Technologies



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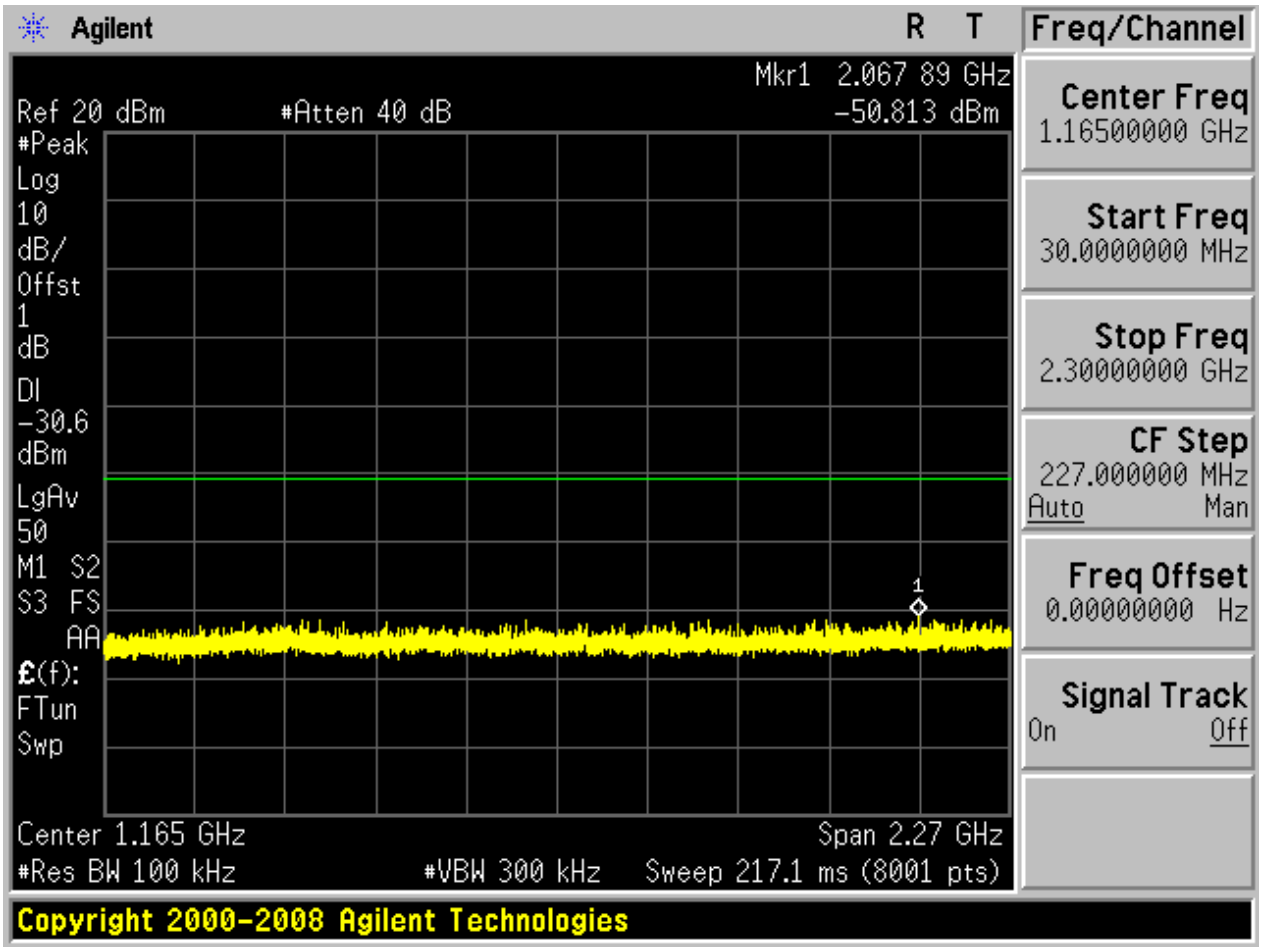

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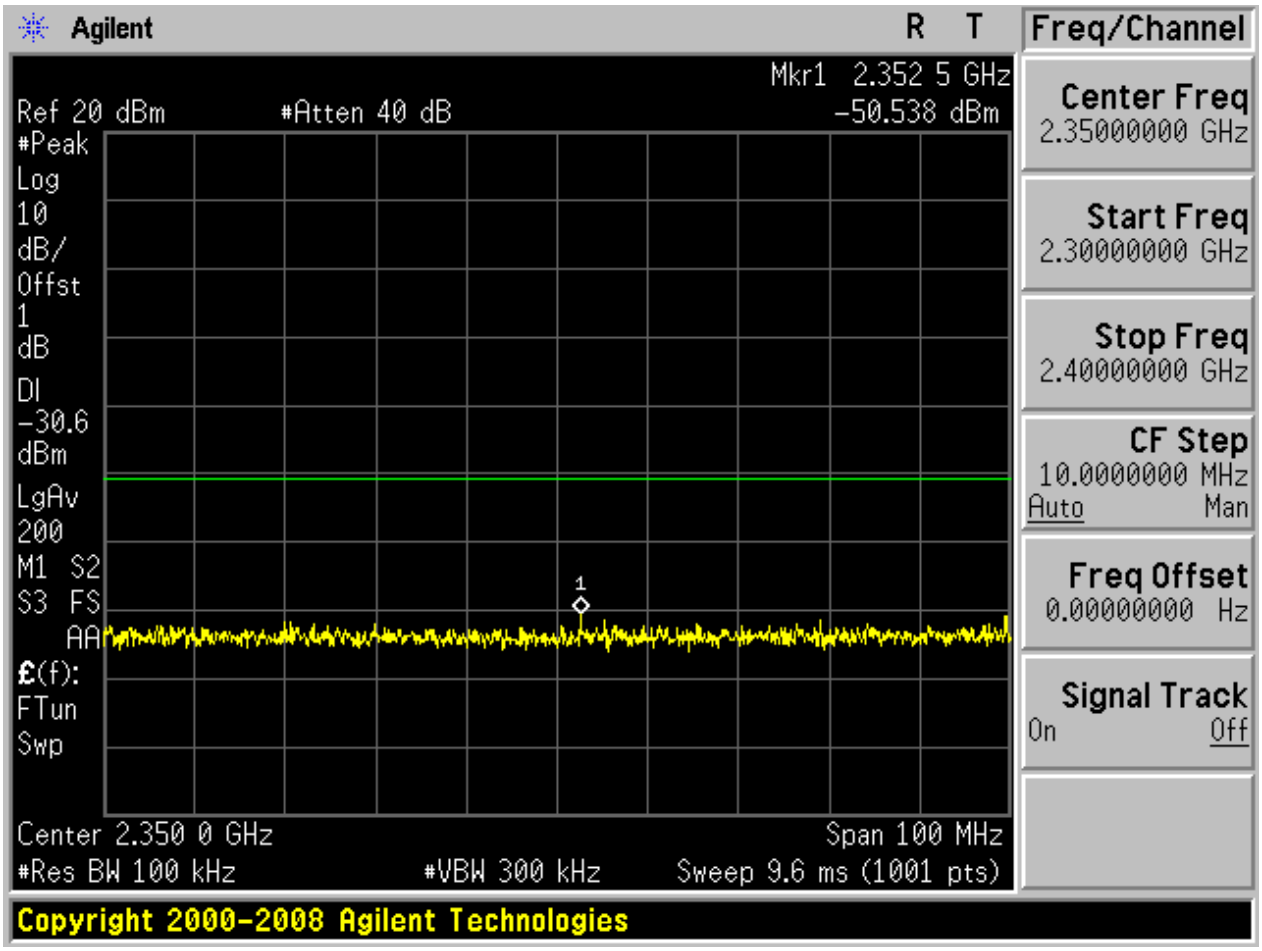

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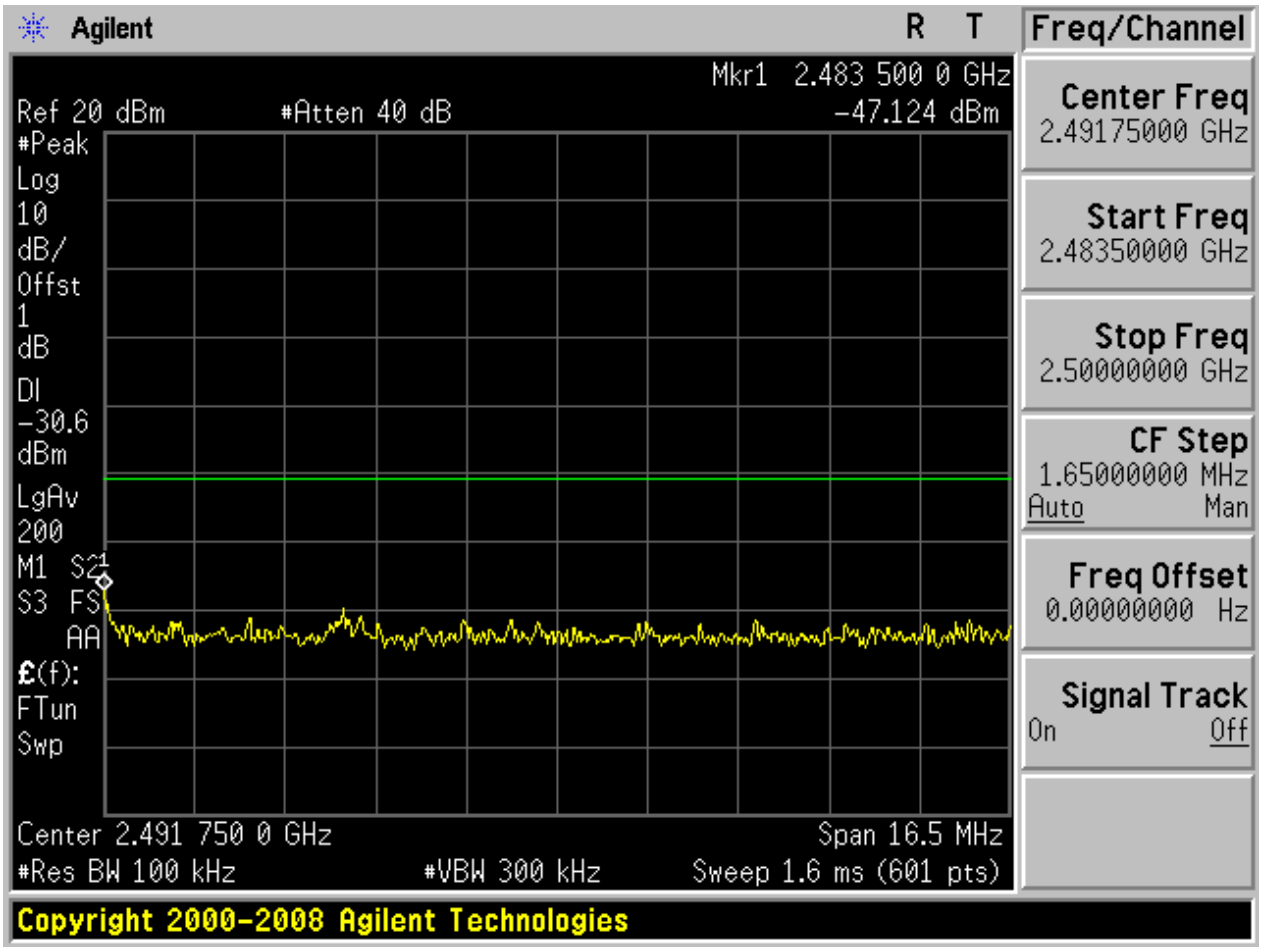

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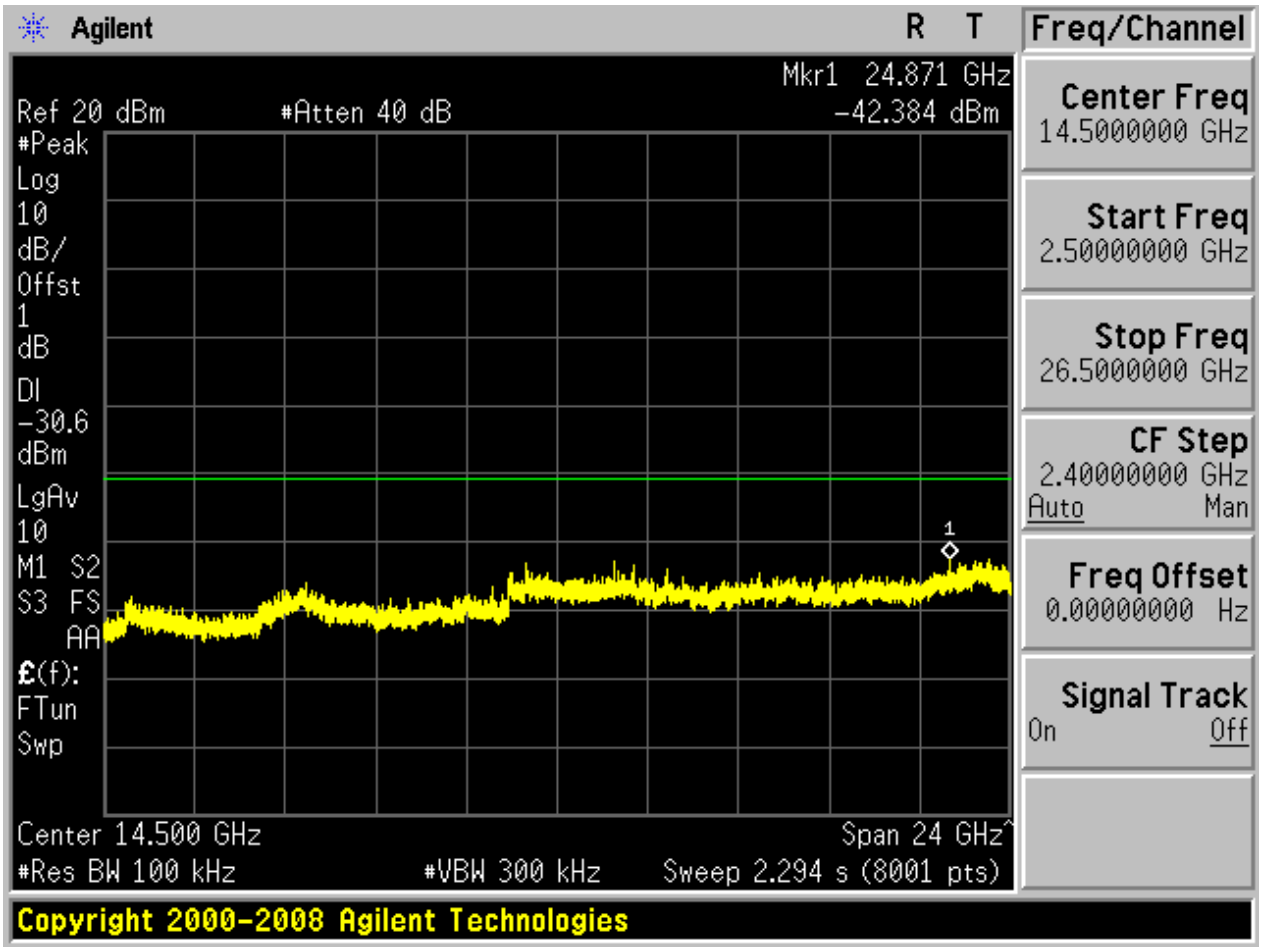

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Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

Note: We tested all modes, but the data presented below is the worst case.Below 1GHz, RBW = 100 kHz, VBW = 300 kHz.

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

The simultaneous transmission has been considered

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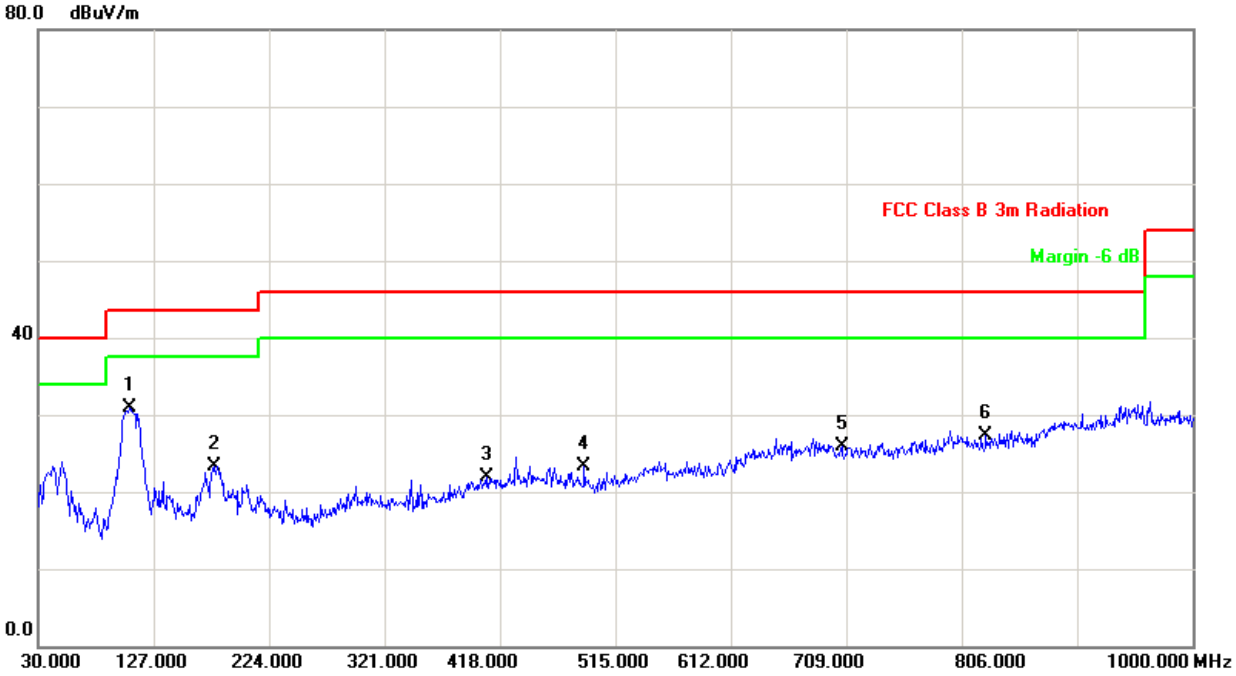
7.1Part 1: Testing Range of “9 kHz to 30MHz”

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

7.2Part 2: Testing Range of “30 MHz to 1 GHz”

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

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



NO.MK.	Frequency MHz	Reading Level dBµV	Correct Factor dB	Measurement dBµV/m	Limit dBµV/m	Margin dB	Detector
1	106.63	45	-14.1	30.9	43.5	-12.6	QP
2	178.41	34.77	-11.42	23.35	43.5	-20.15	QP
3	407.33	28.98	-7.07	21.91	46	-24.09	QP
4	488.81	30.32	-7.06	23.26	46	-22.74	QP
5	705.12	27.44	-1.46	25.98	46	-20.02	QP
6	826.37	27.2	0.14	27.34	46	-18.66	QP

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7.3Part 3: Testing Range of “18 GHz to 26.5 GHz”

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

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7.4Part 4: Testing Range of “2.3GHz to 2.5GHz”

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

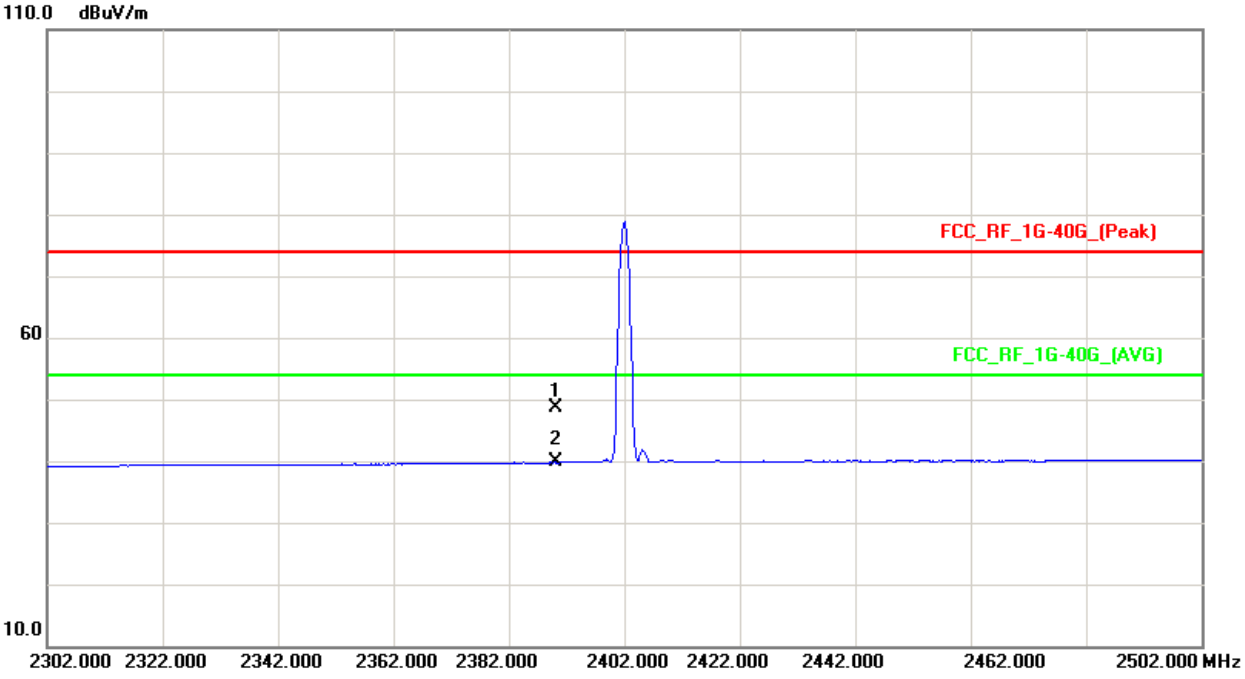
Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).

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

Test Mode:

7.4.1Test Mode:

7.4.1.1Channel 0



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

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Note
2390.000	V	12.73	35.88	48.61	74.00	-25.39	peak
2390.000	V	3.88	35.88	39.76	54.00	-14.24	AVG

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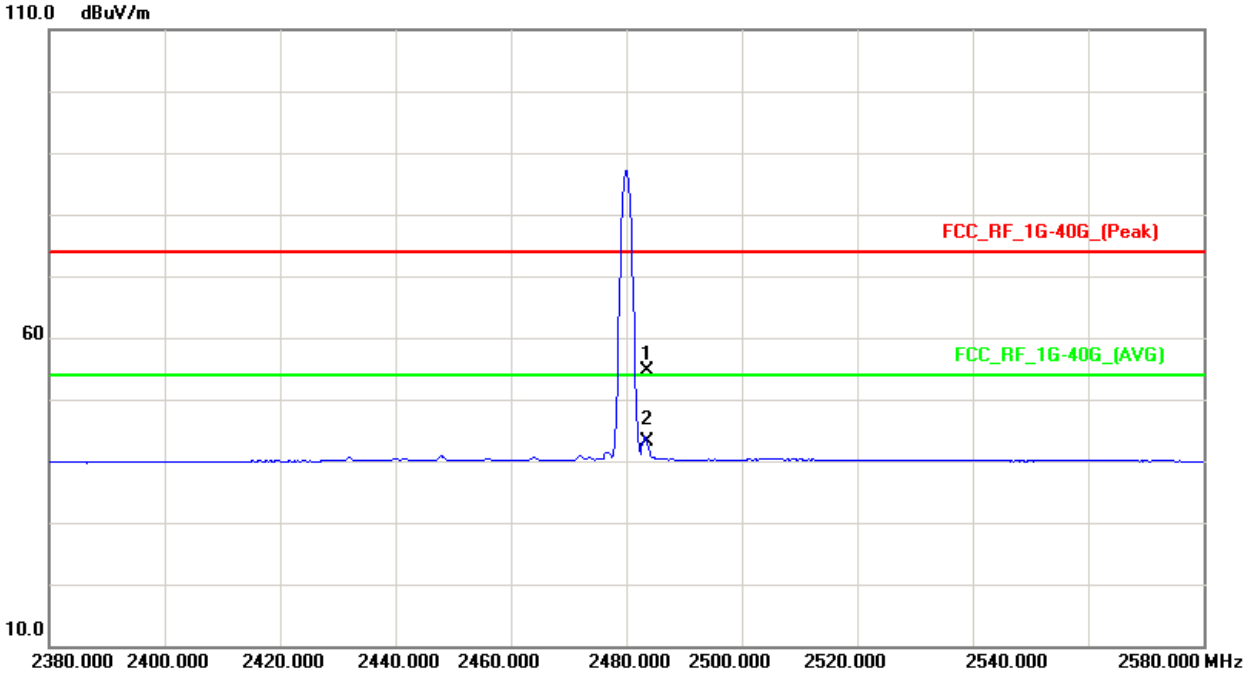
7.4.1.2 Channel 78



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

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Note
2483.500	H	18.17	36.39	54.56	74	-19.44	peak
2483.500	H	6.76	36.39	43.15	54	-10.85	AVG

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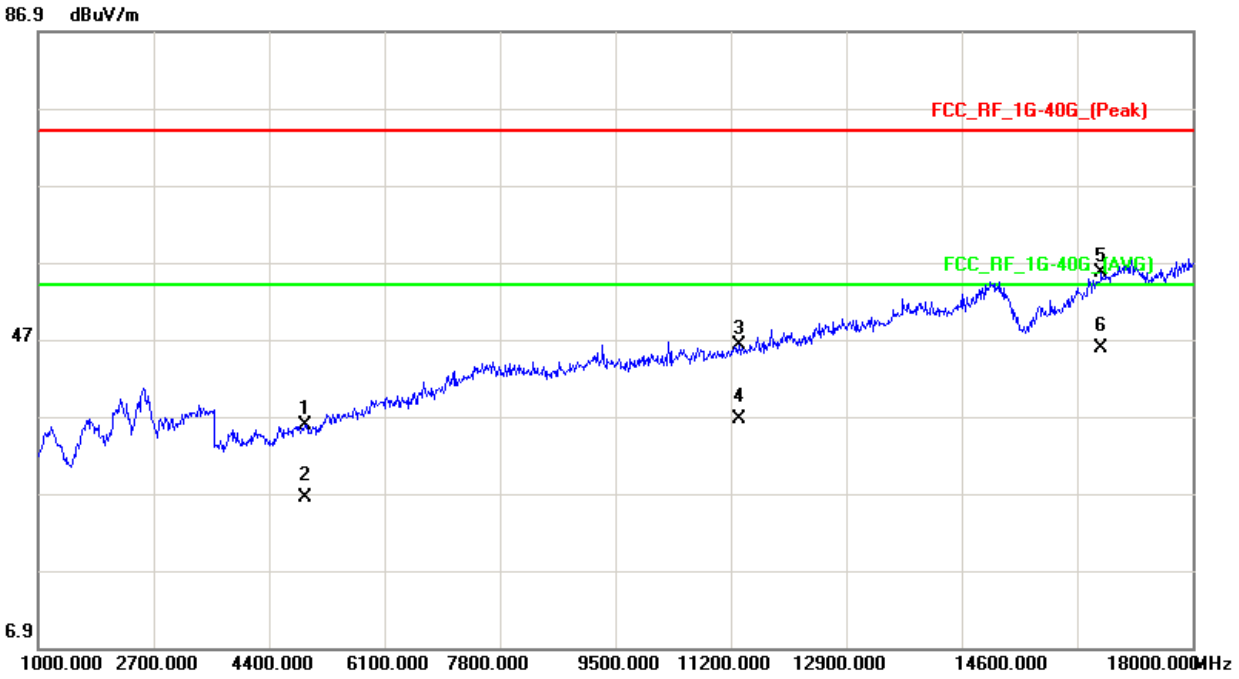
7.5Part 5: Testing Range of “1 GHz to 18 GHz”

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

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

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



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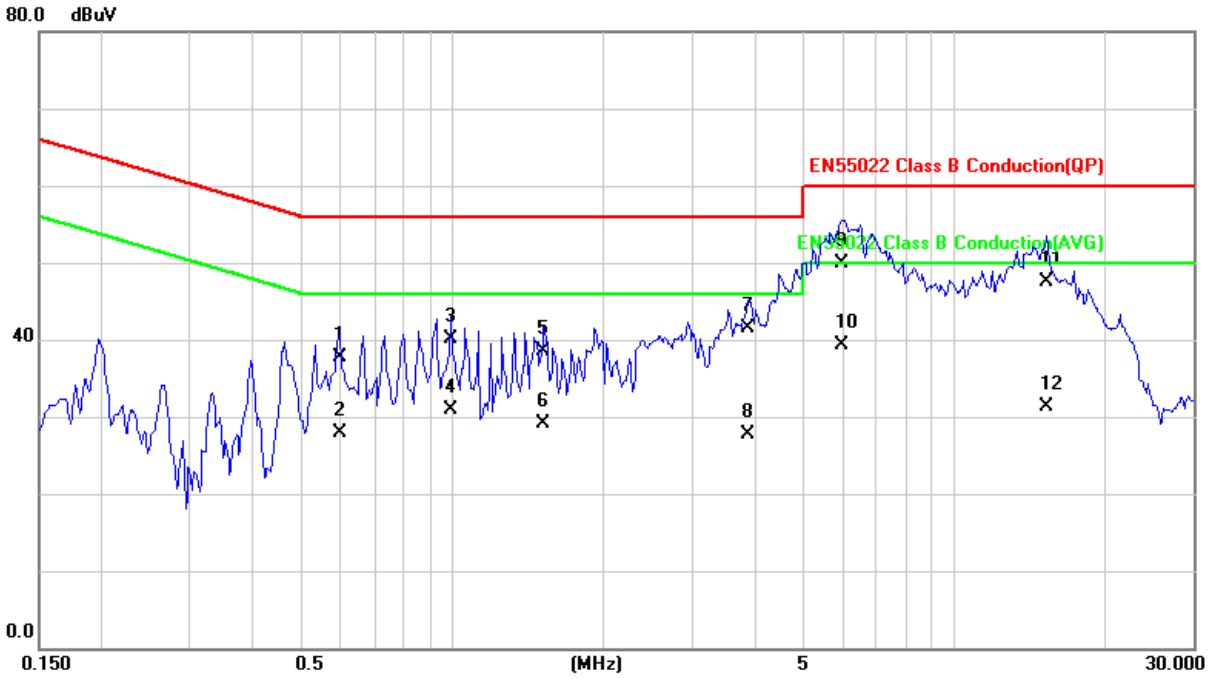
8 Appendix I: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz

Channel 39



NO.KR.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dBuV	Margin dB	Detector
1	0.5992	28.1	9.68	37.78	56	-18.22	QP
2	0.5992	18.2	9.68	27.88	46	-18.12	AVG
3	0.9977	30.4	9.79	40.19	56	-15.81	QP
4	0.9977	21.1	9.79	30.89	46	-15.11	AVG
5	1.525	28.6	9.83	38.43	56	-17.57	QP
6	1.525	19.3	9.83	29.13	46	-16.87	AVG
7	3.8867	31.6	9.96	41.56	56	-14.44	QP
8	3.8867	17.8	9.96	27.76	46	-18.24	AVG
9	5.9805	39.7	10.13	49.83	60	-10.17	QP
10	5.9805	29.2	10.13	39.33	50	-10.67	AVG
11	15.3438	37.3	10.27	47.57	60	-12.43	QP
12	15.3438	21.1	10.27	31.37	50	-18.63	AVG

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Note: Level= Reading level+ Transd (cable loss + correction factor).The reading level is used to calculate by software which is not shown in the sheet.

END

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