



Appendix for Test report



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.

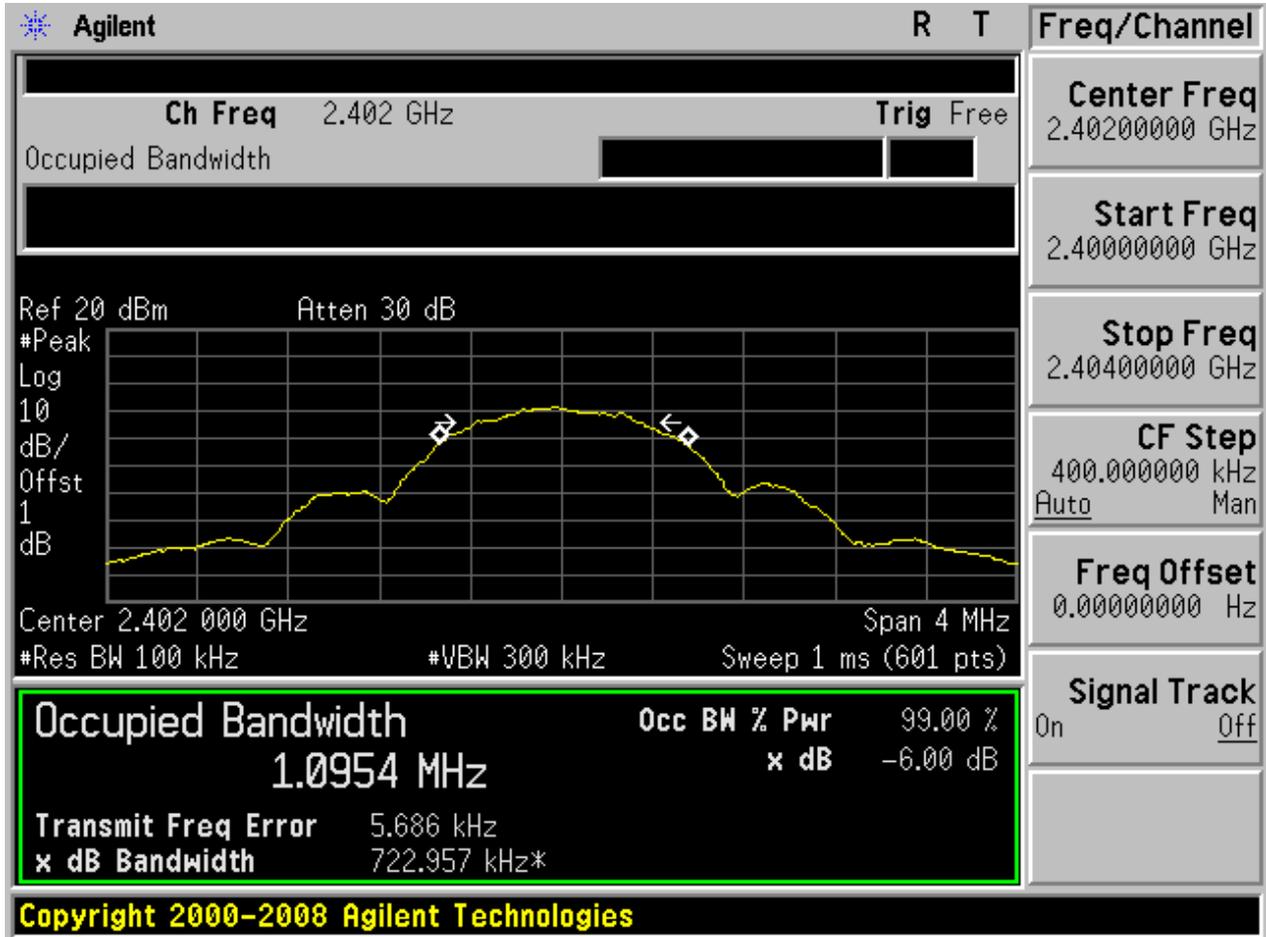
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	DTS6dBBW[MHz]	Verdict
TM1_Ch0	L	2402	0.72	pass
TM1_Ch19	M	2440	0.71	pass
TM1_Ch39	H	2480	0.69	pass



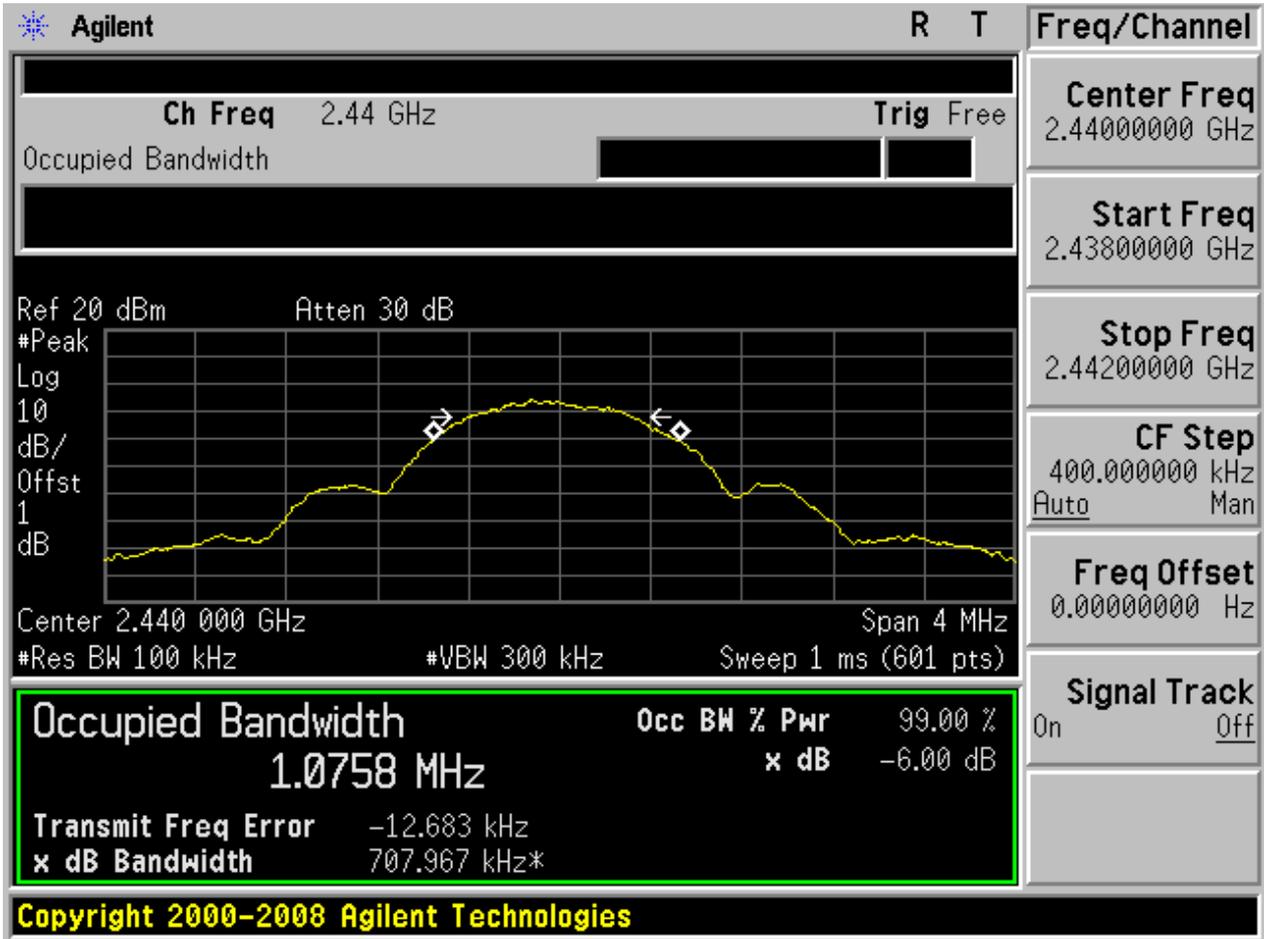
Part II - Test Plots

2.1 TM1_Ch0



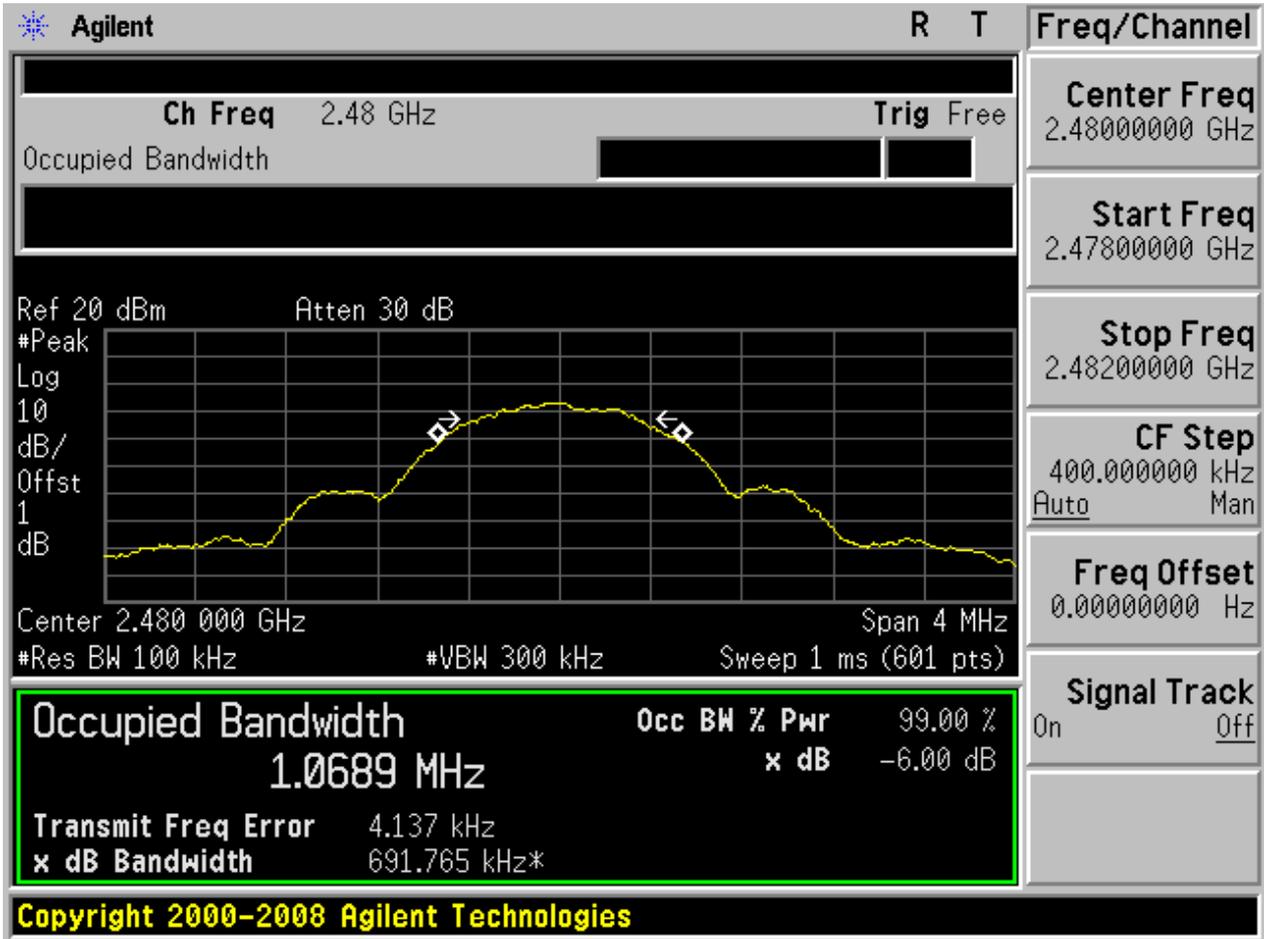


2.2 TM1_Ch19





2.3 TM1_Ch39





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]	Occupied Bandwidth [MHz]	Verdict
TM1_Ch0	L	2402	1.06	pass
TM1_Ch19	M	2440	1.06	pass
TM1_Ch39	H	2480	1.06	pass



Part II - Test Plots

2.1 TM1_Ch0





2.2 TM1_Ch19

Agilent R T

Ch Freq 2.44 GHz **Trig** Free

Occupied Bandwidth Averages: 100

Ref 20 dBm Atten 30 dB

#Peak
Log
10
dB/
Offst
1
dB

Center 2.440 000 GHz Span 4 MHz

#Res BW 20 kHz #VBW 62 kHz Sweep 9.56 ms (601 pts)

Occupied Bandwidth	Occ BW % Pwr 99.00 %
1.0553 MHz	x dB -26.00 dB
Transmit Freq Error 4.160 kHz	
x dB Bandwidth 1.290 MHz*	

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Measure

Meas Off

Channel Power

Occupied BW

ACP

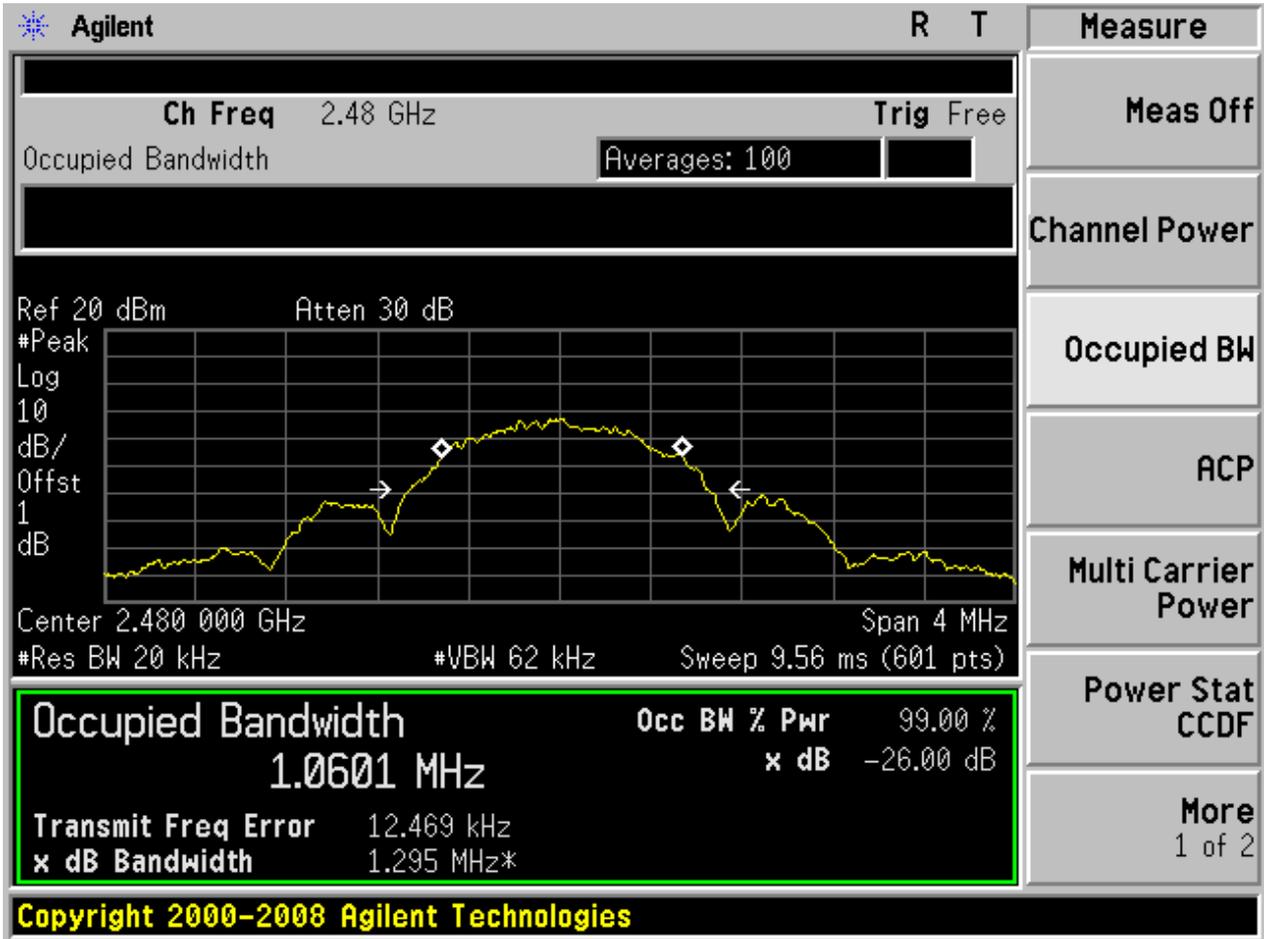
Multi Carrier Power

Power Stat CCDF

More
1 of 2



2.3 TM1_Ch39





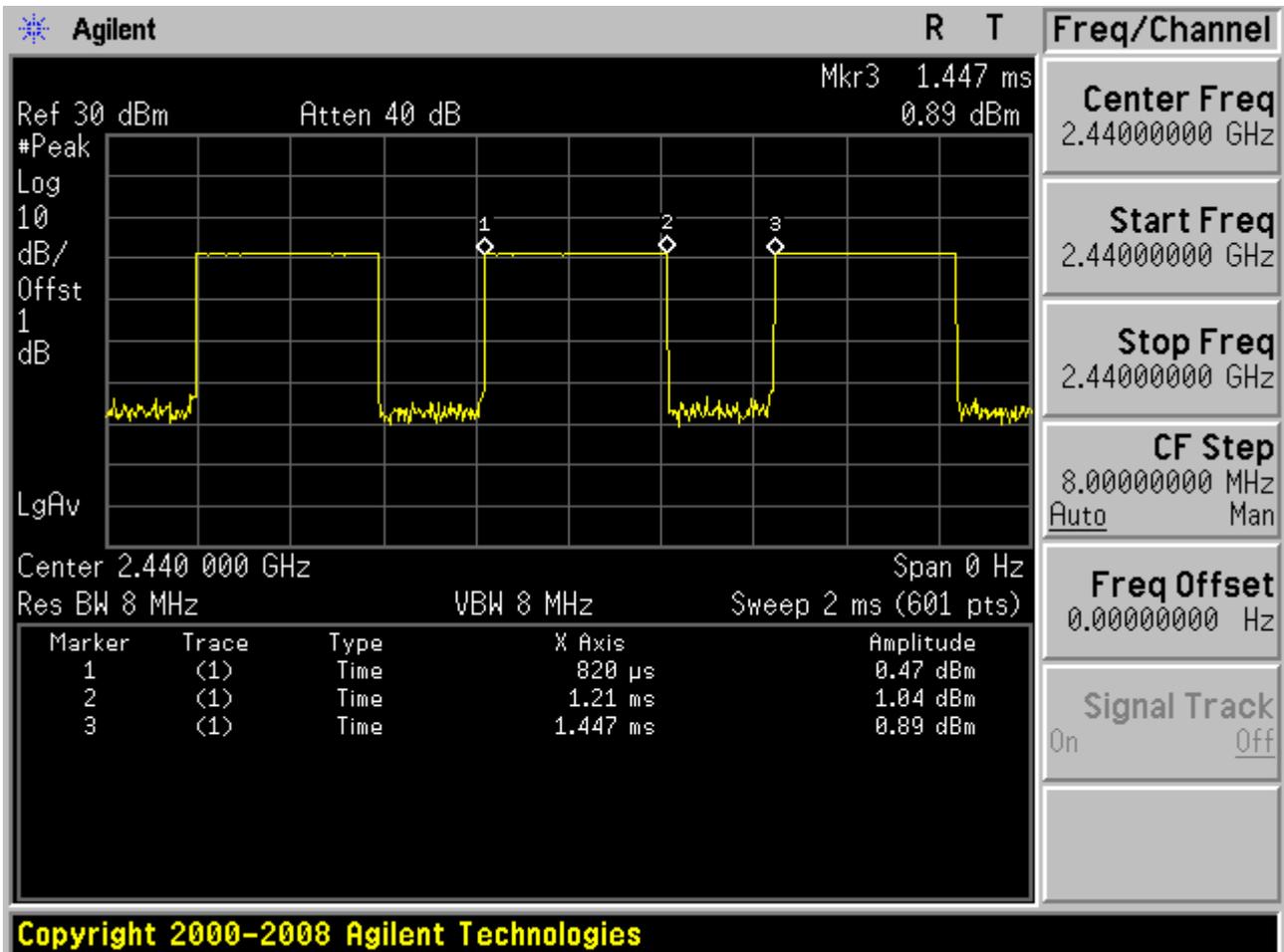
Appendix C: Duty Cycle

Part I - Test Results

Test Mode	TX Freq. [MHz]	Duty cycle [%]
TM1	CH0,CH19,CH39	62

Part II - Test Plots

2.1 TM1_Ch0





Appendix D: Maximum Conducted Average Output Power

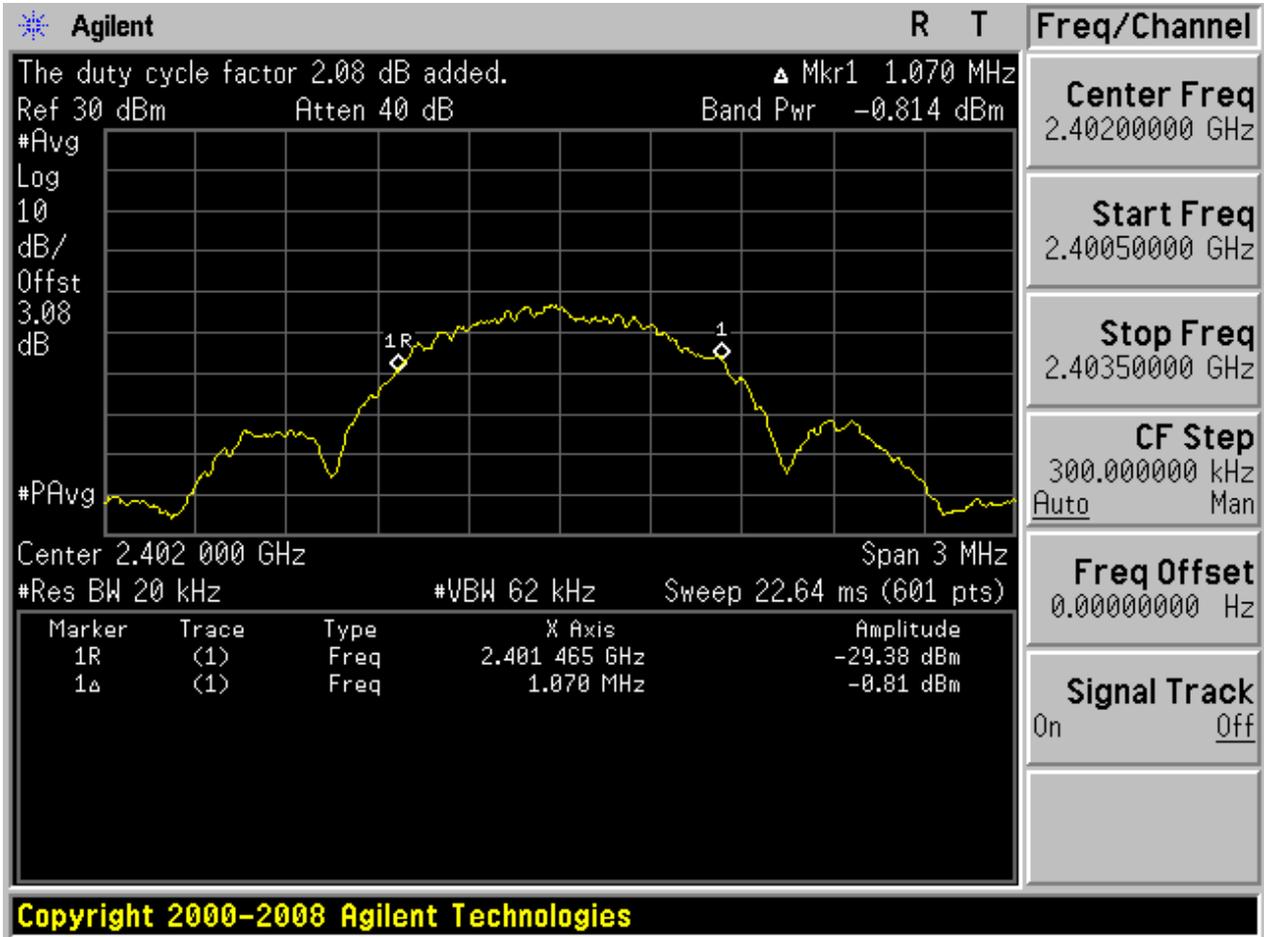
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Power[dBm]	Verdict
TM1_Ch0	L	2402	-0.81	pass
TM1_Ch19	M	2440	0.85	pass
TM1_Ch39	H	2480	-0.23	pass



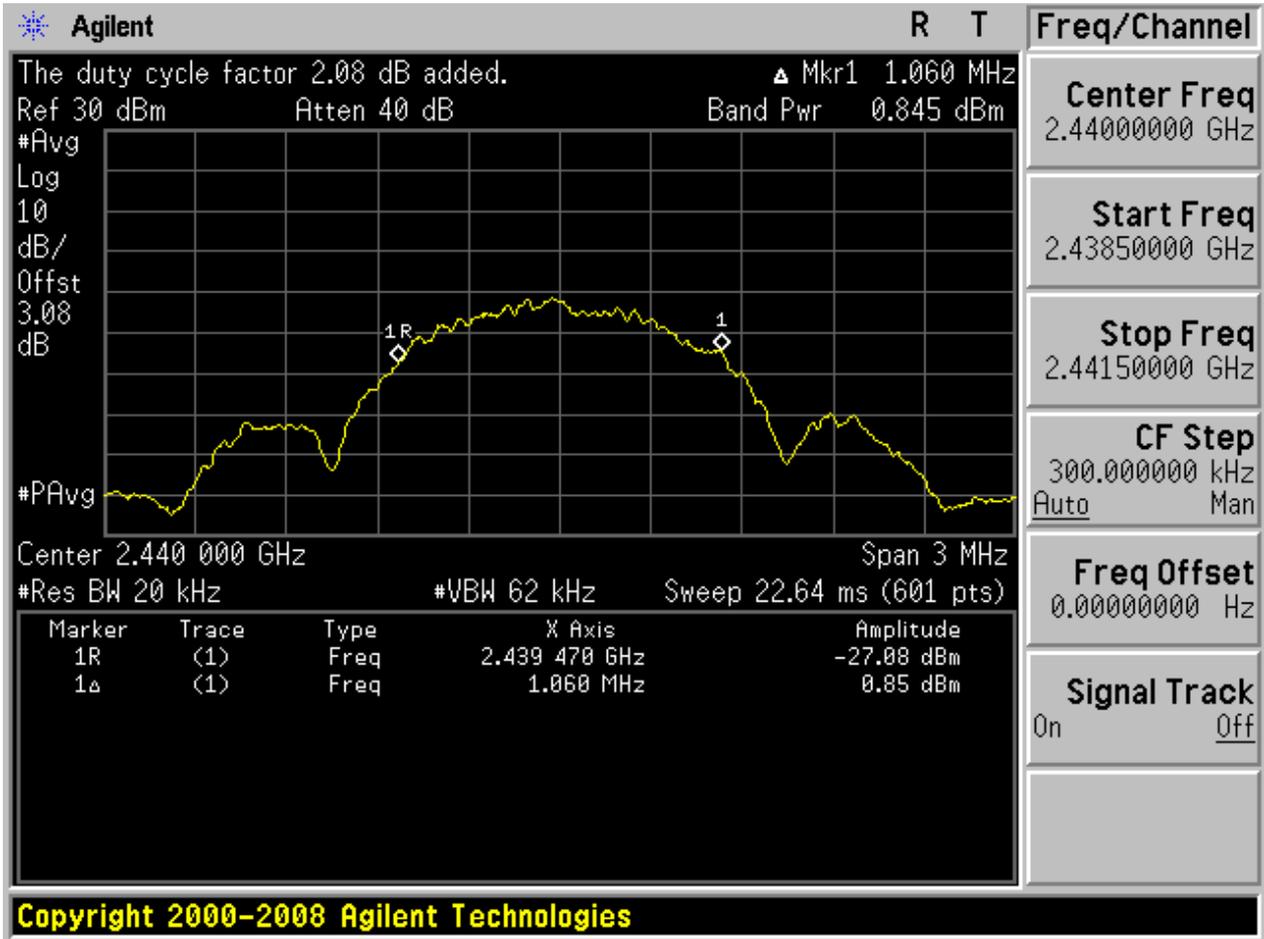
Part II - Test Plots

2.1 TM1_Ch0





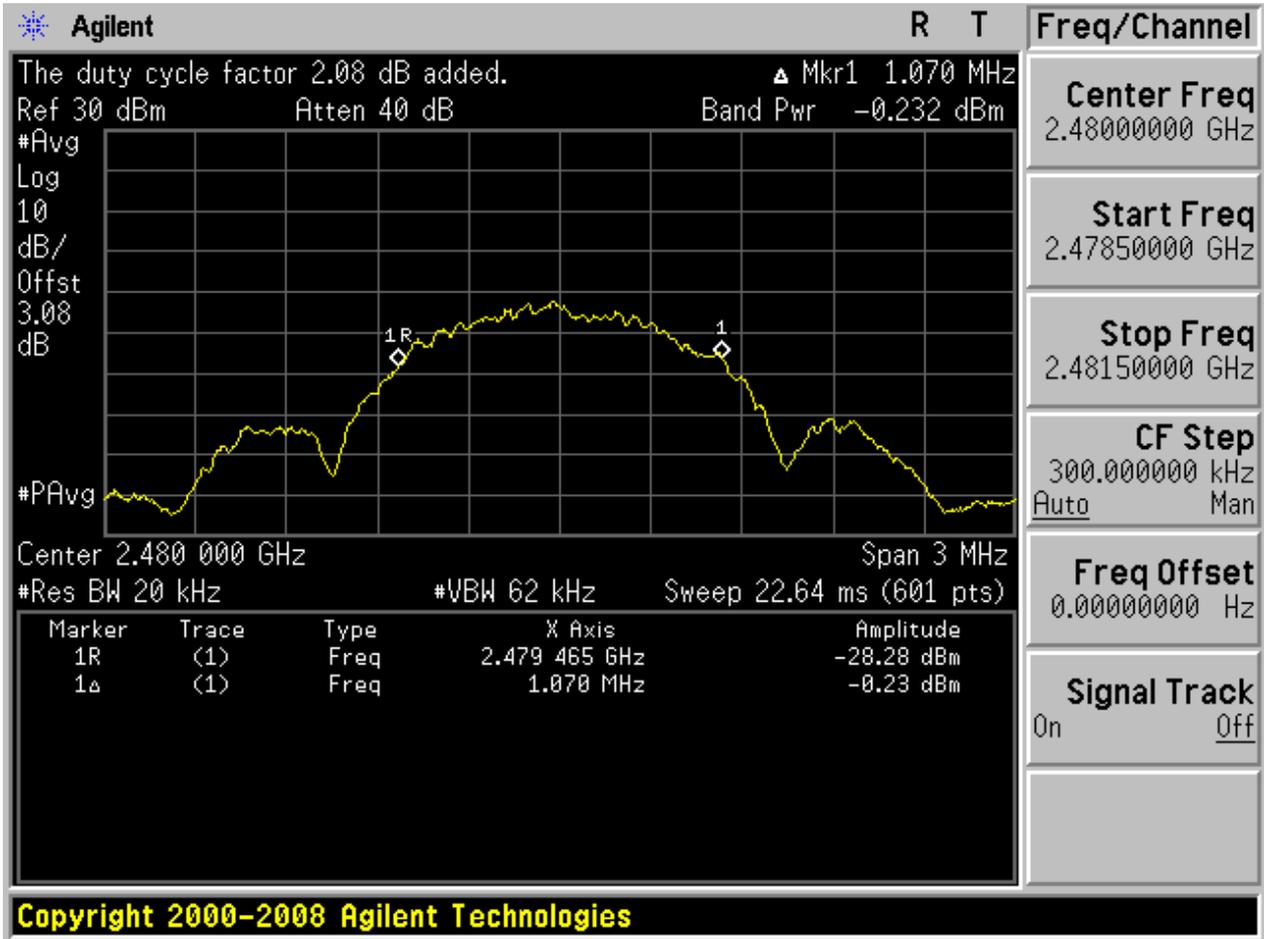
2.2 TM1_Ch19



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2.3 TM1_Ch39



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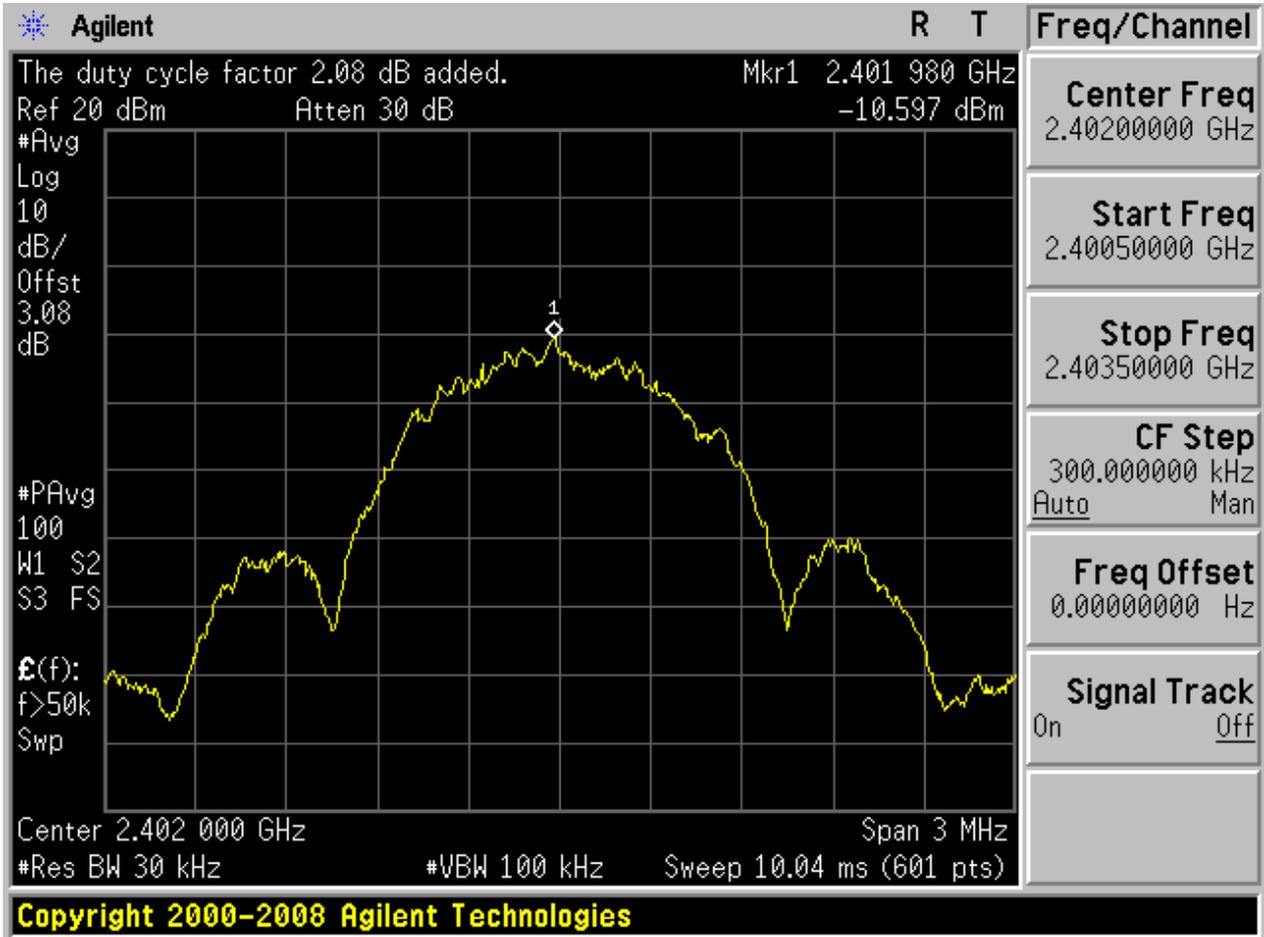
Appendix E: Maximum Power Spectral Density Level

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	PD[MHz]	Verdict
TM1_Ch0	L	2402	-10.60	pass
TM1_Ch19	M	2440	-9.14	pass
TM1_Ch39	H	2480	-10.83	pass

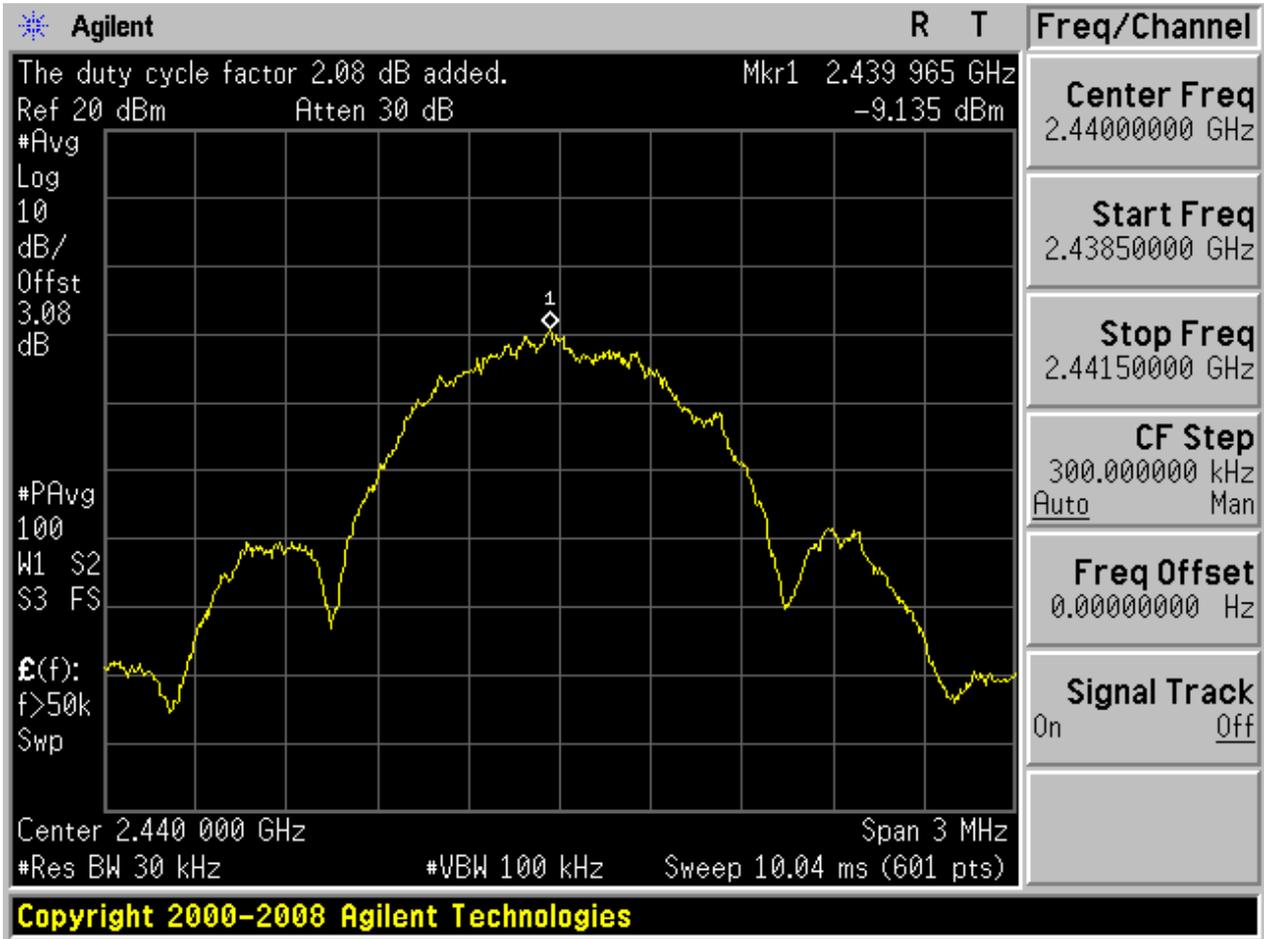
Part II - Test Plots

2.1 TM1_Ch0



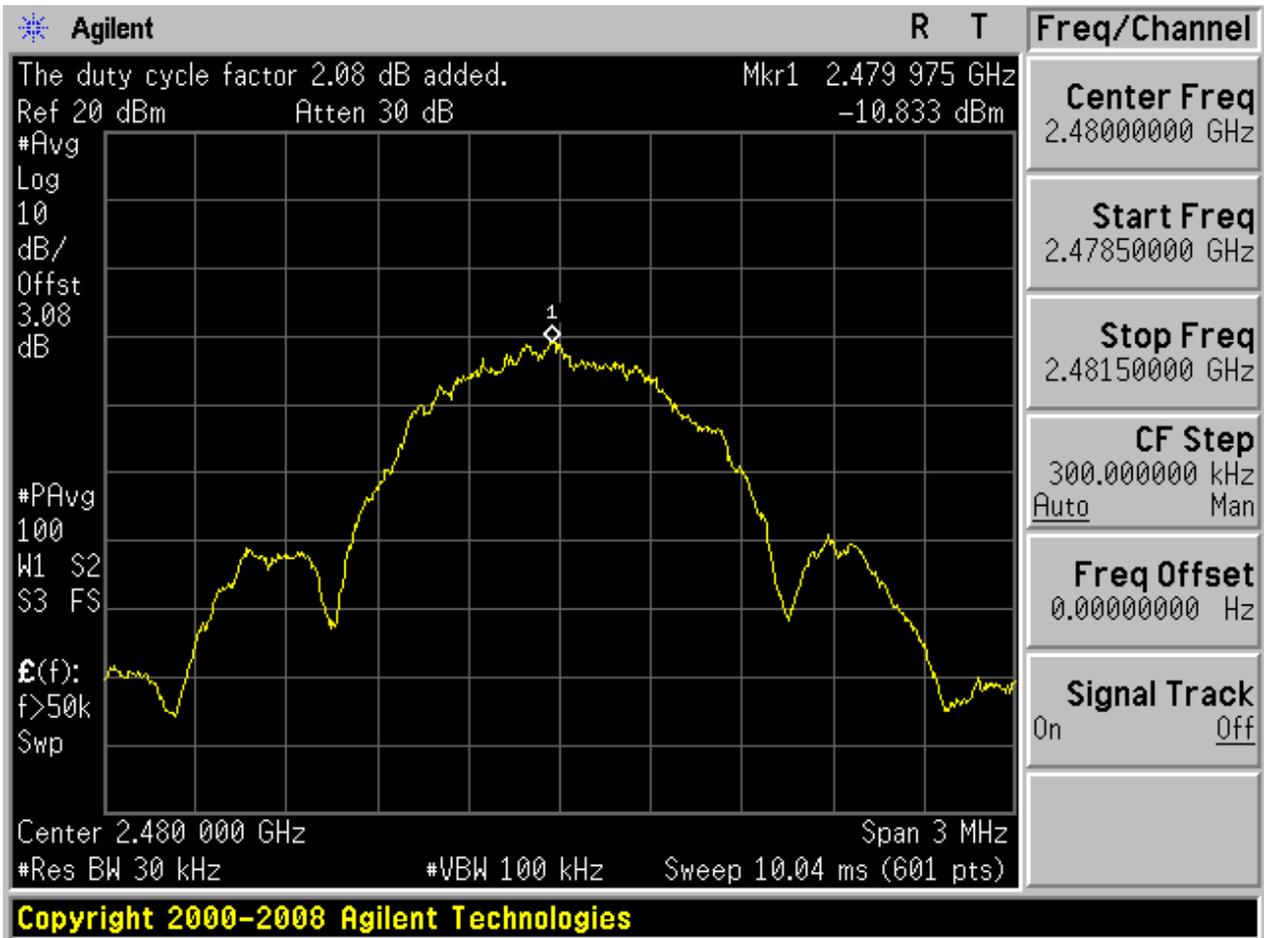


2.2 TM1_Ch19





2.3 TM1_Ch39





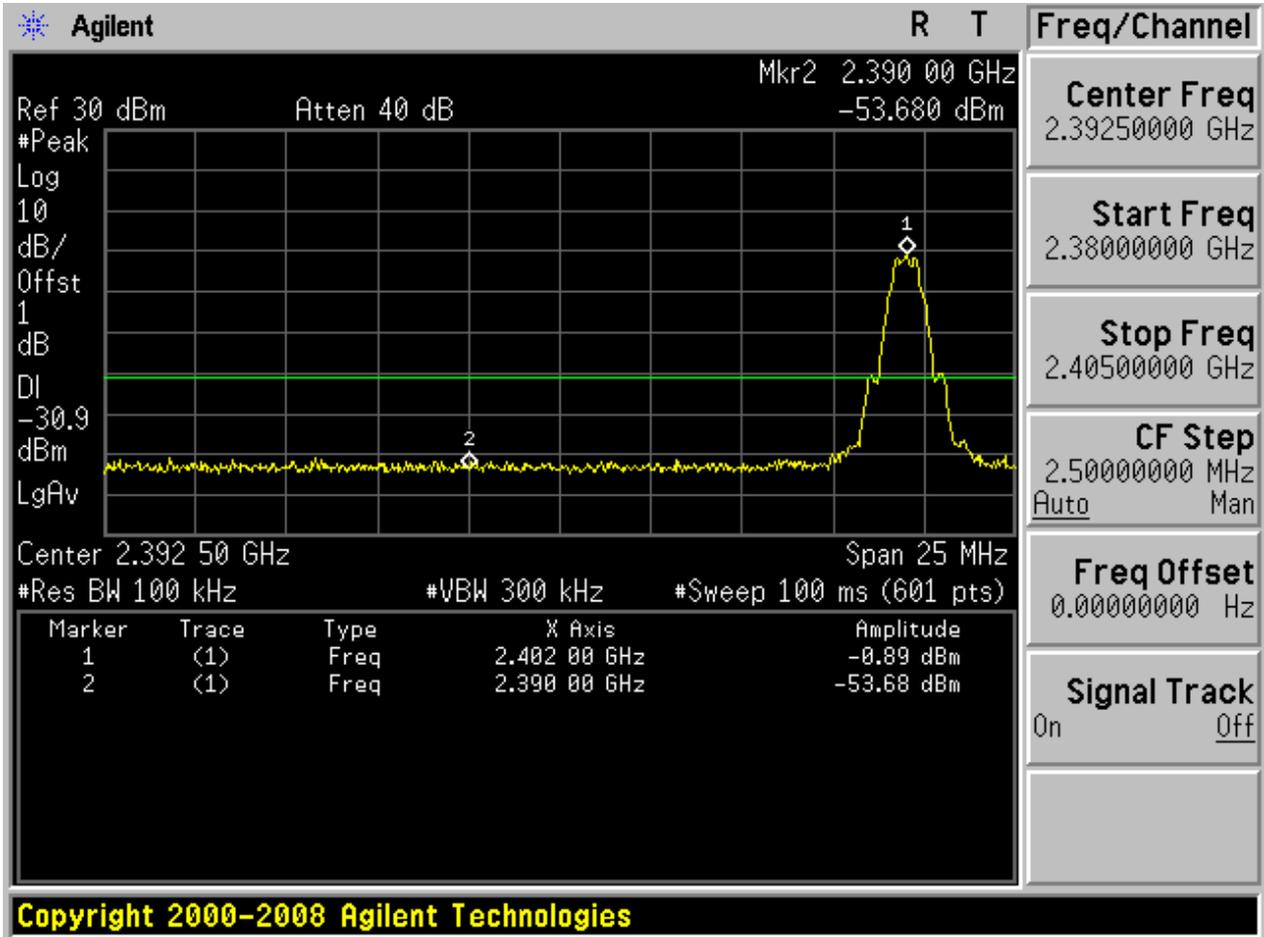
Appendix F: Band Edges Compliance

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
TM1_Ch0	L	2402	-0.90	-53.68	pass
TM1_Ch39	H	2480	-0.31	-52.28	pass

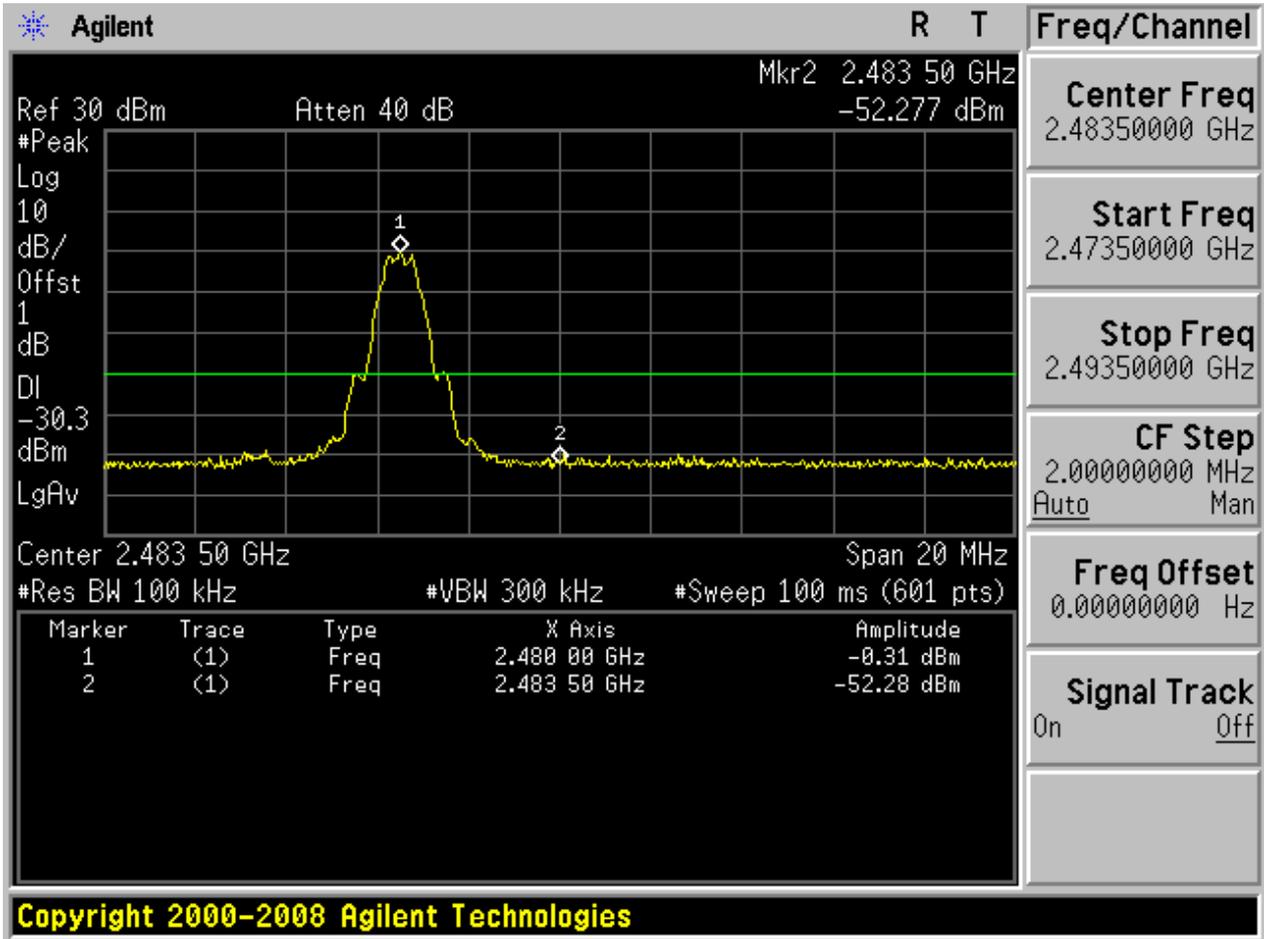
Part II - Test Plots

2.1 TM1_Ch0





2.2 TM1_Ch39



Appendix G: Unwanted Emissions into Non-Restricted Frequency

Bands

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

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

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

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

Part I - Test Results

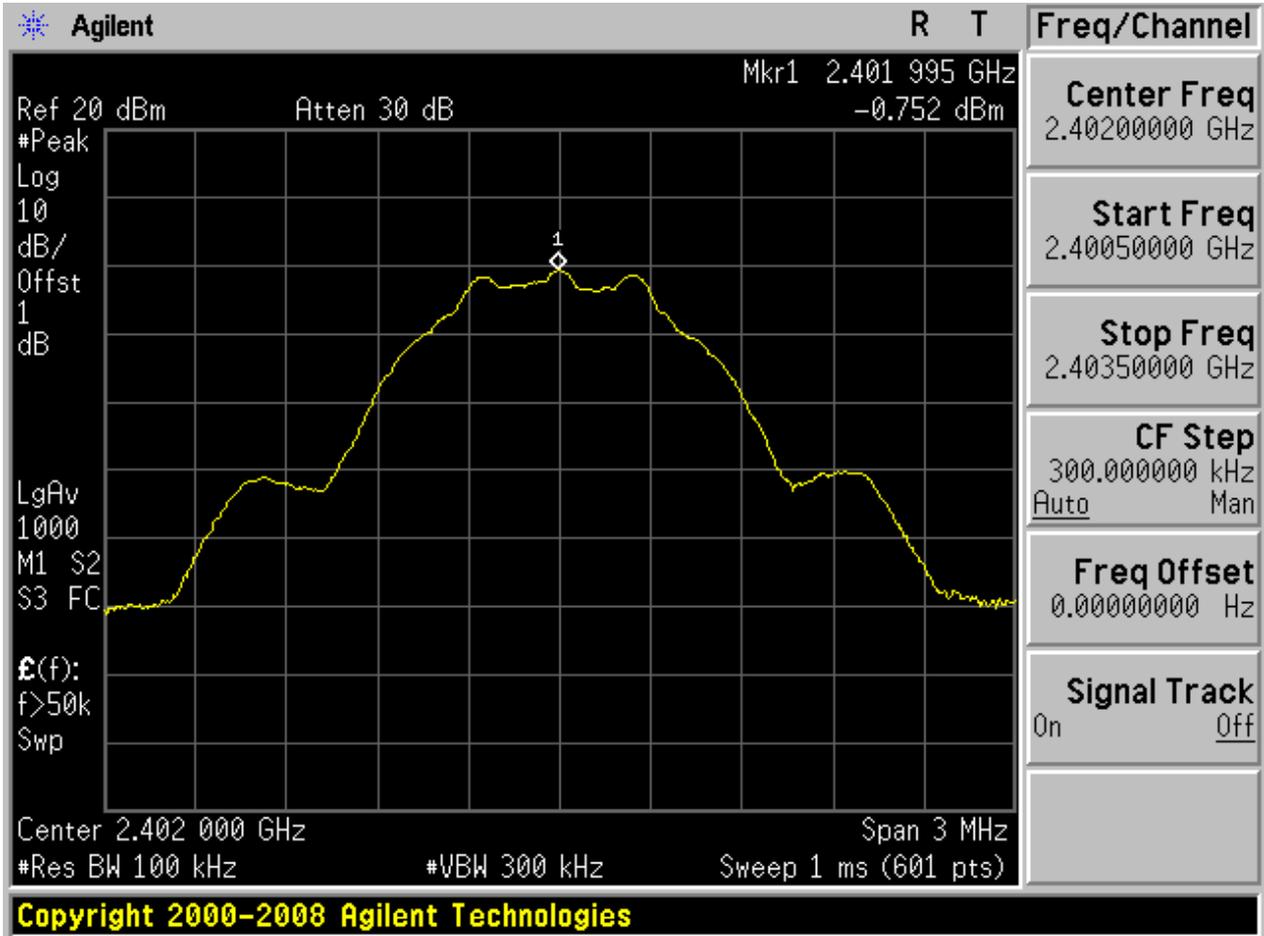
Test Mode	Test Channel	Frequency[MHz]	Pref[dBm]	Puw[dBm]	Verdict
TM1_Ch0	L	2402	-0.75	<limit	pass
TM1_Ch19	M	2440	0.91	<limit	pass
TM1_Ch39	H	2480	-0.21	<limit	pass



Part II - Test Plots

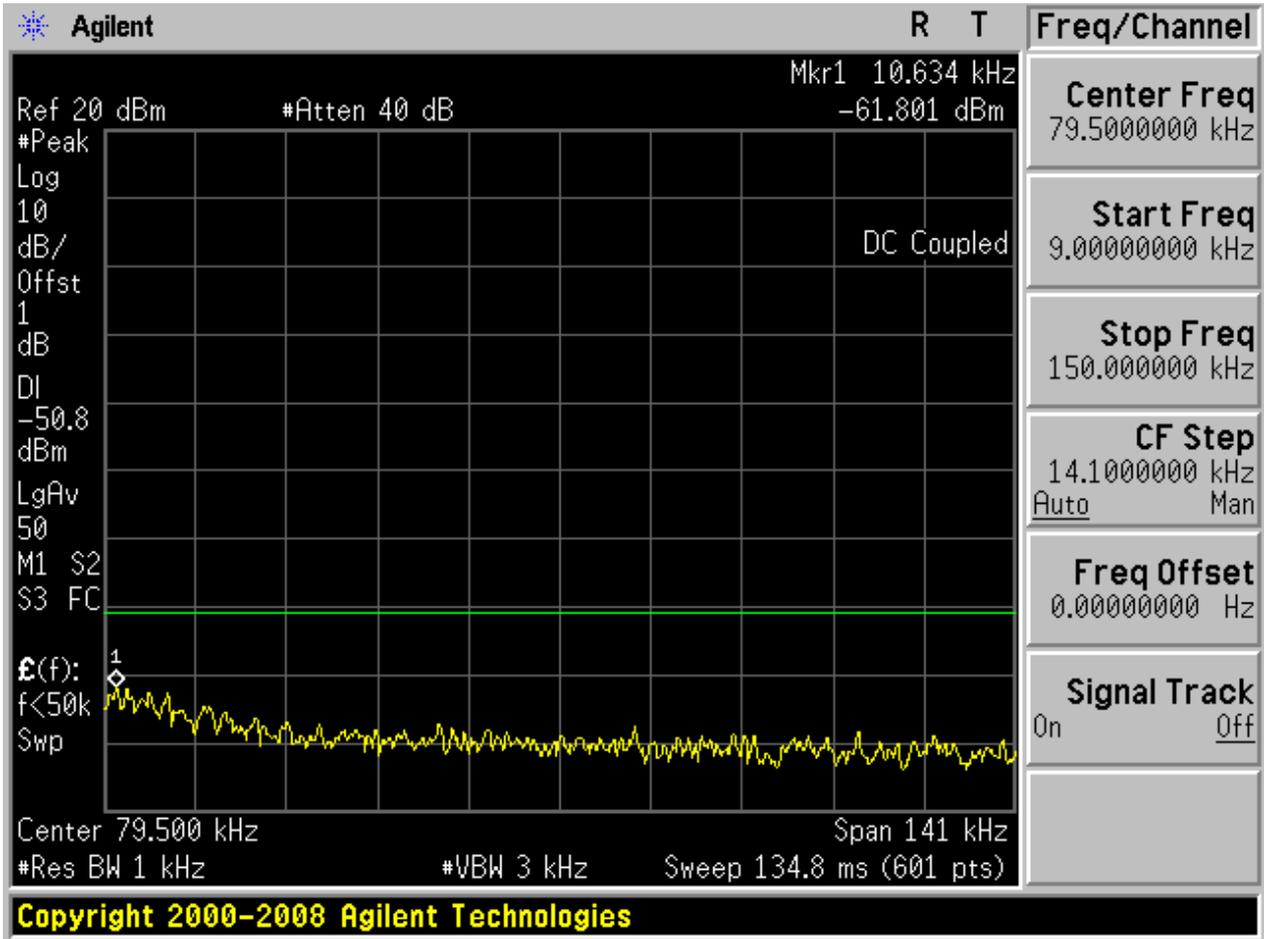
2.1 TM1_Ch0

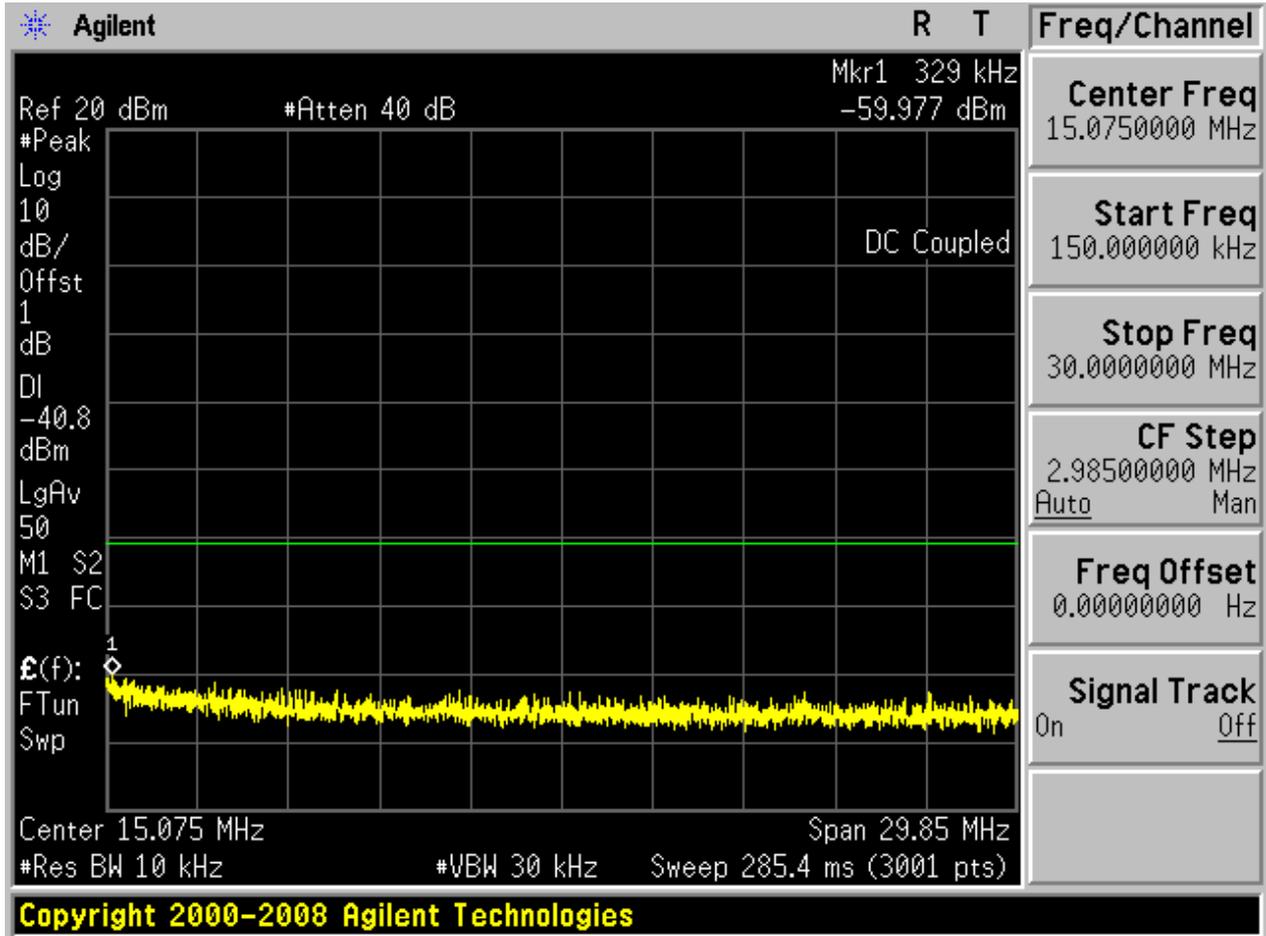
Pref:

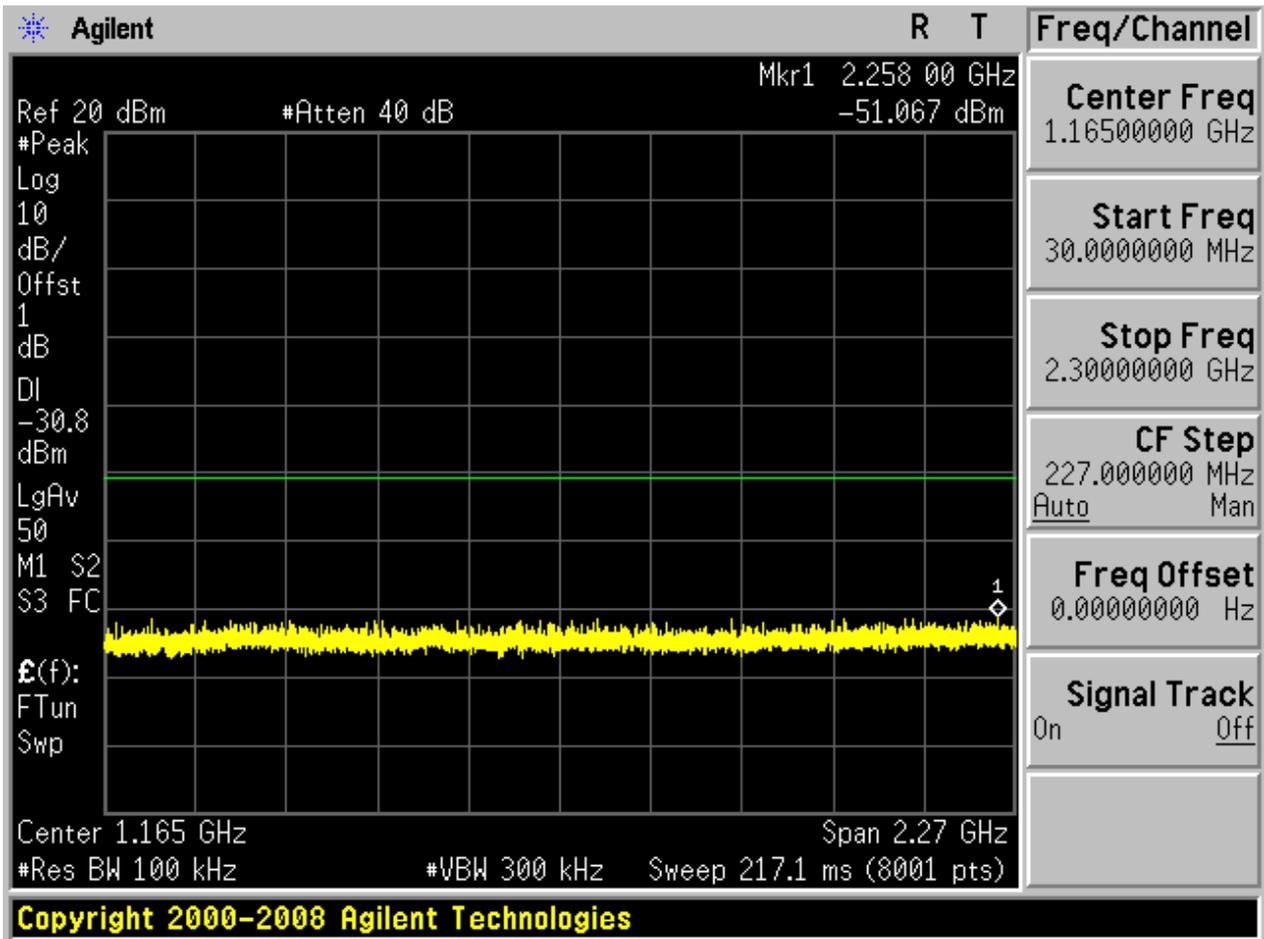


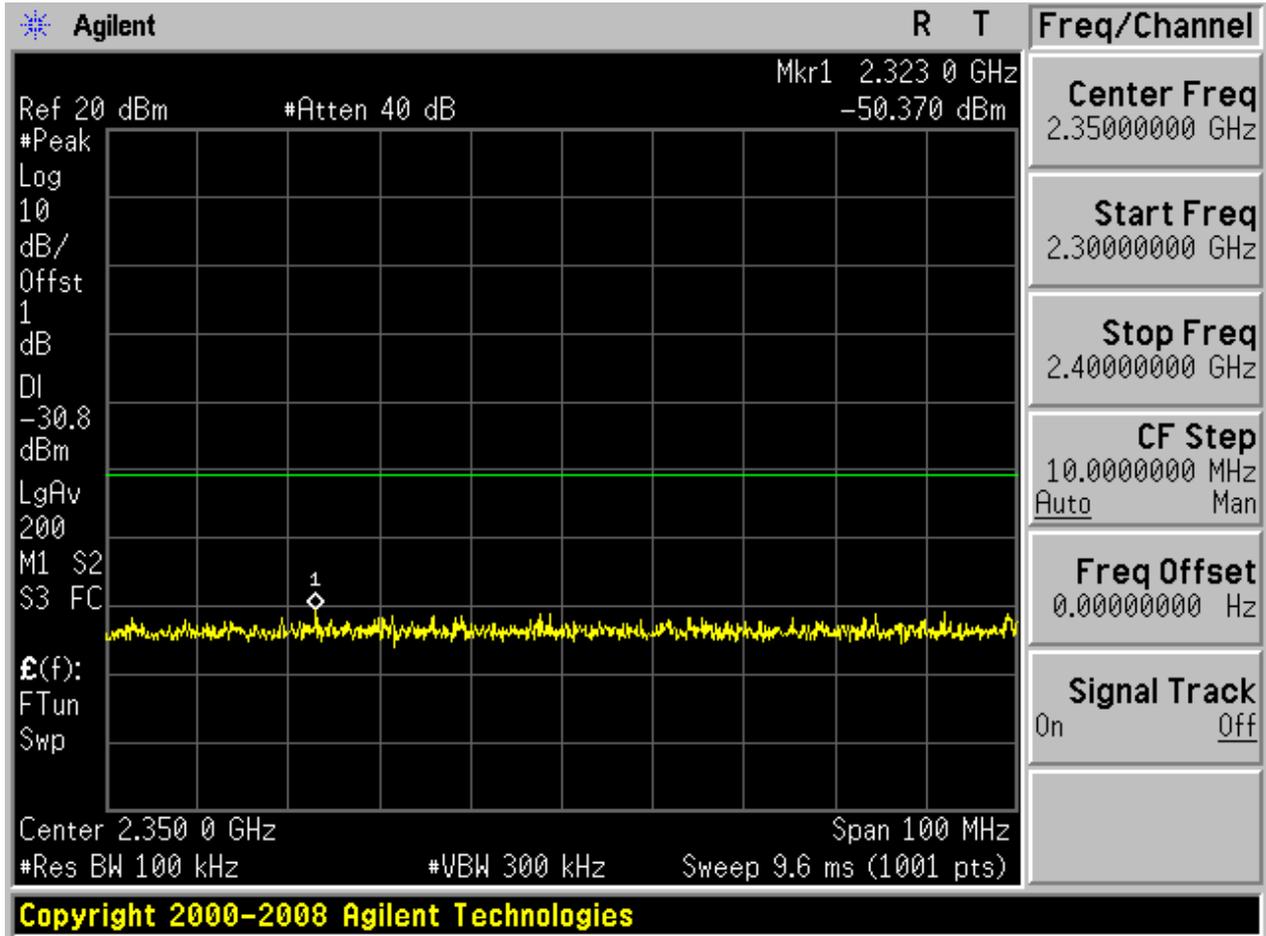


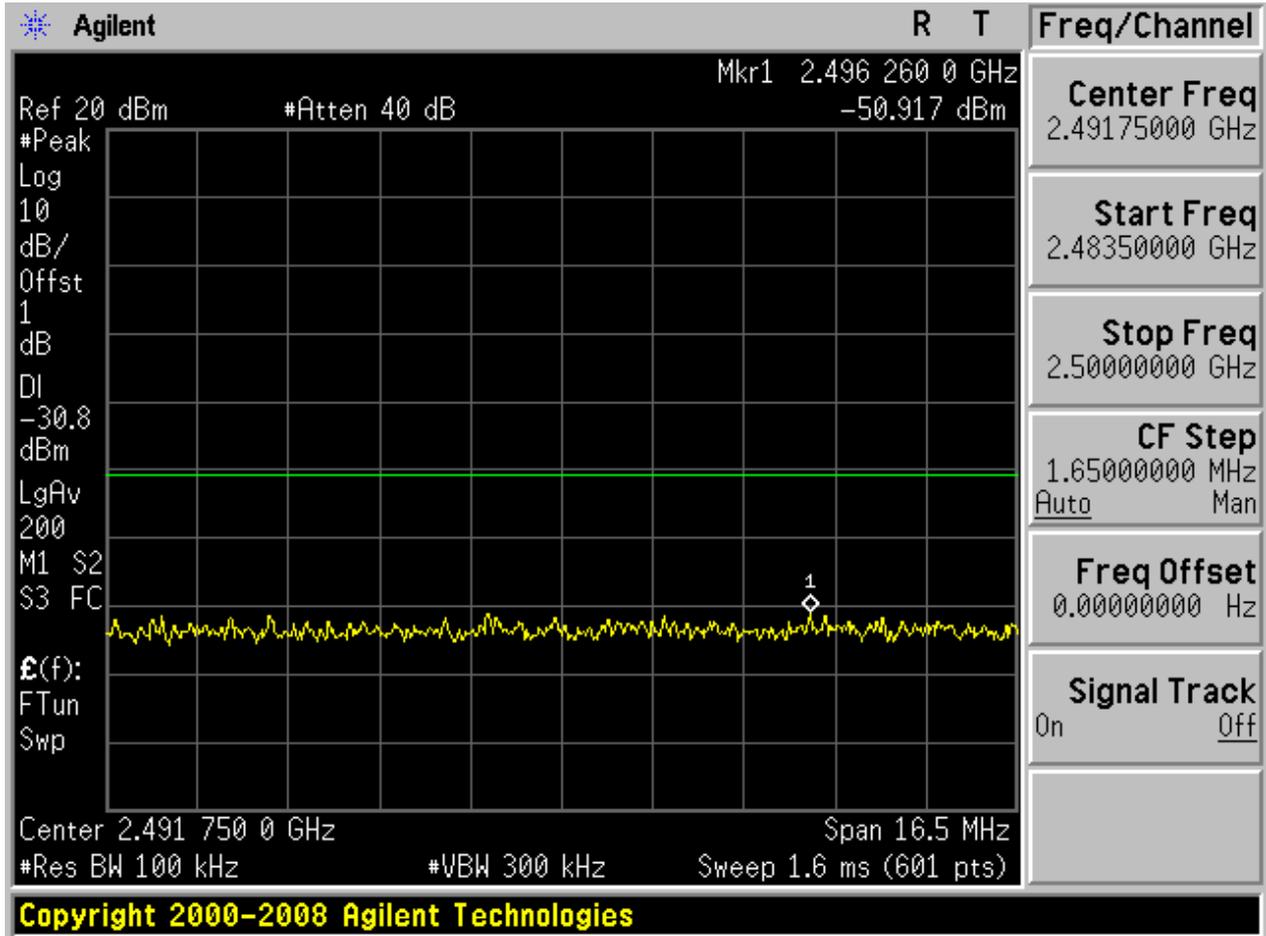
Puw:

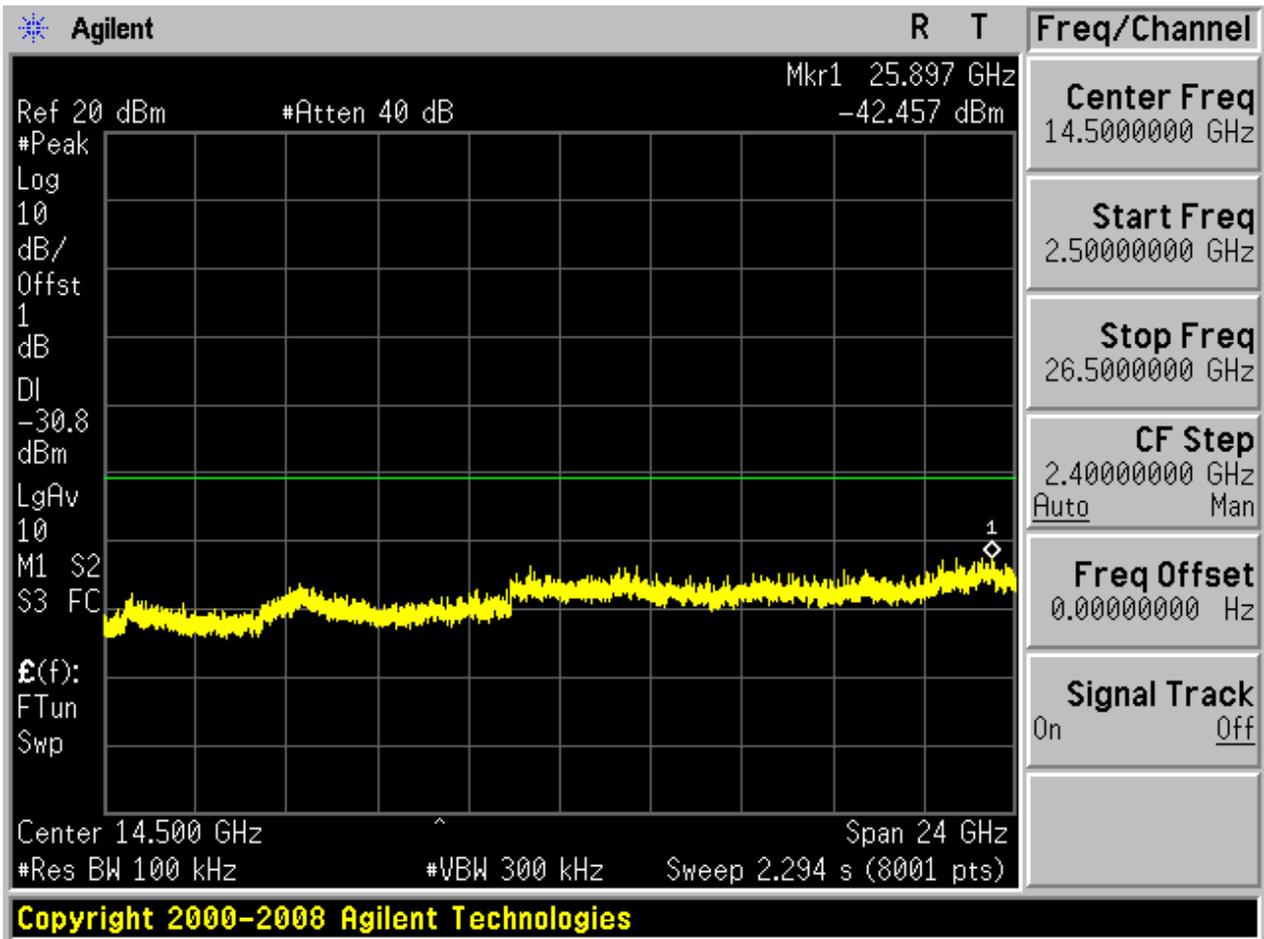








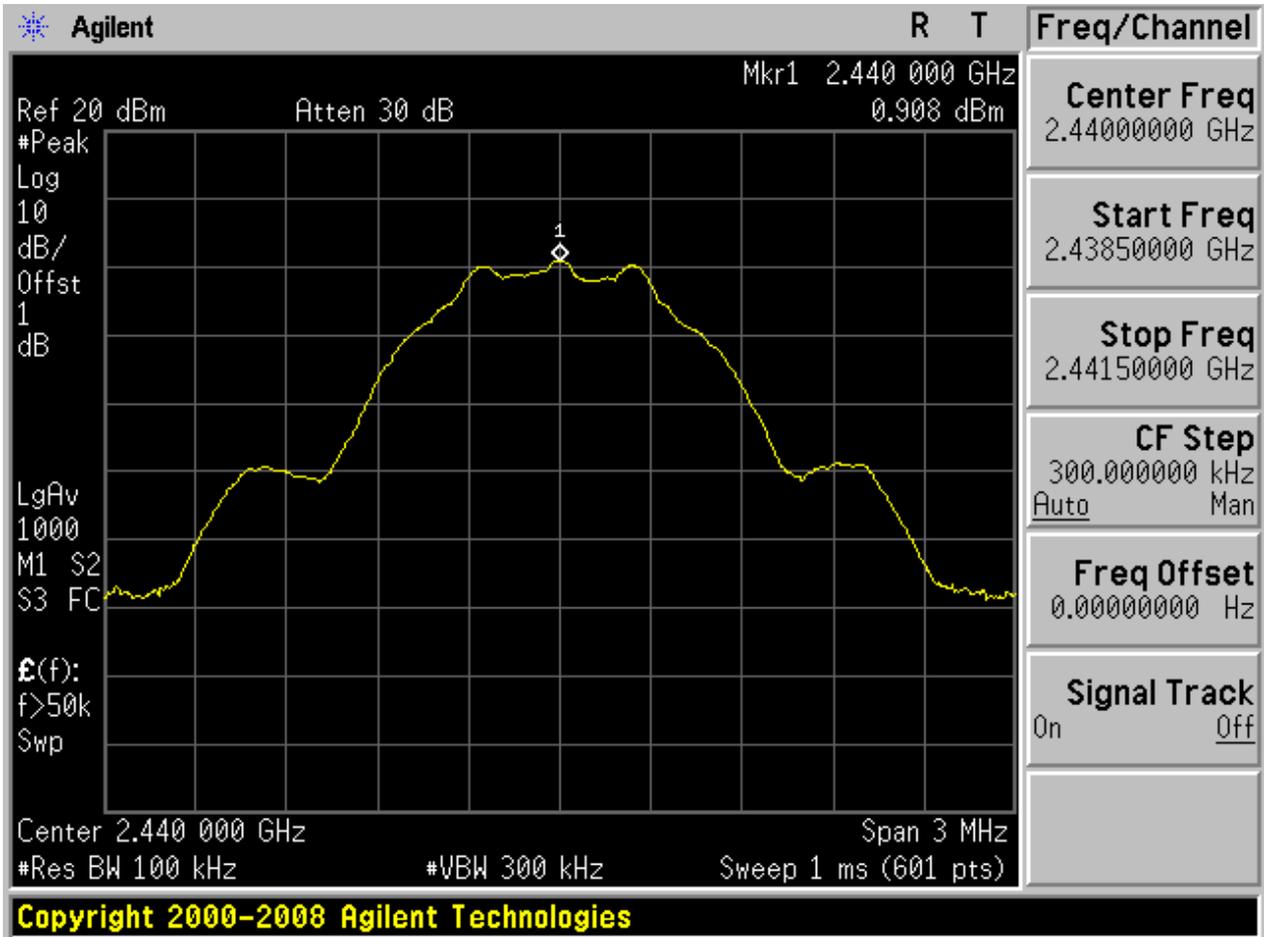






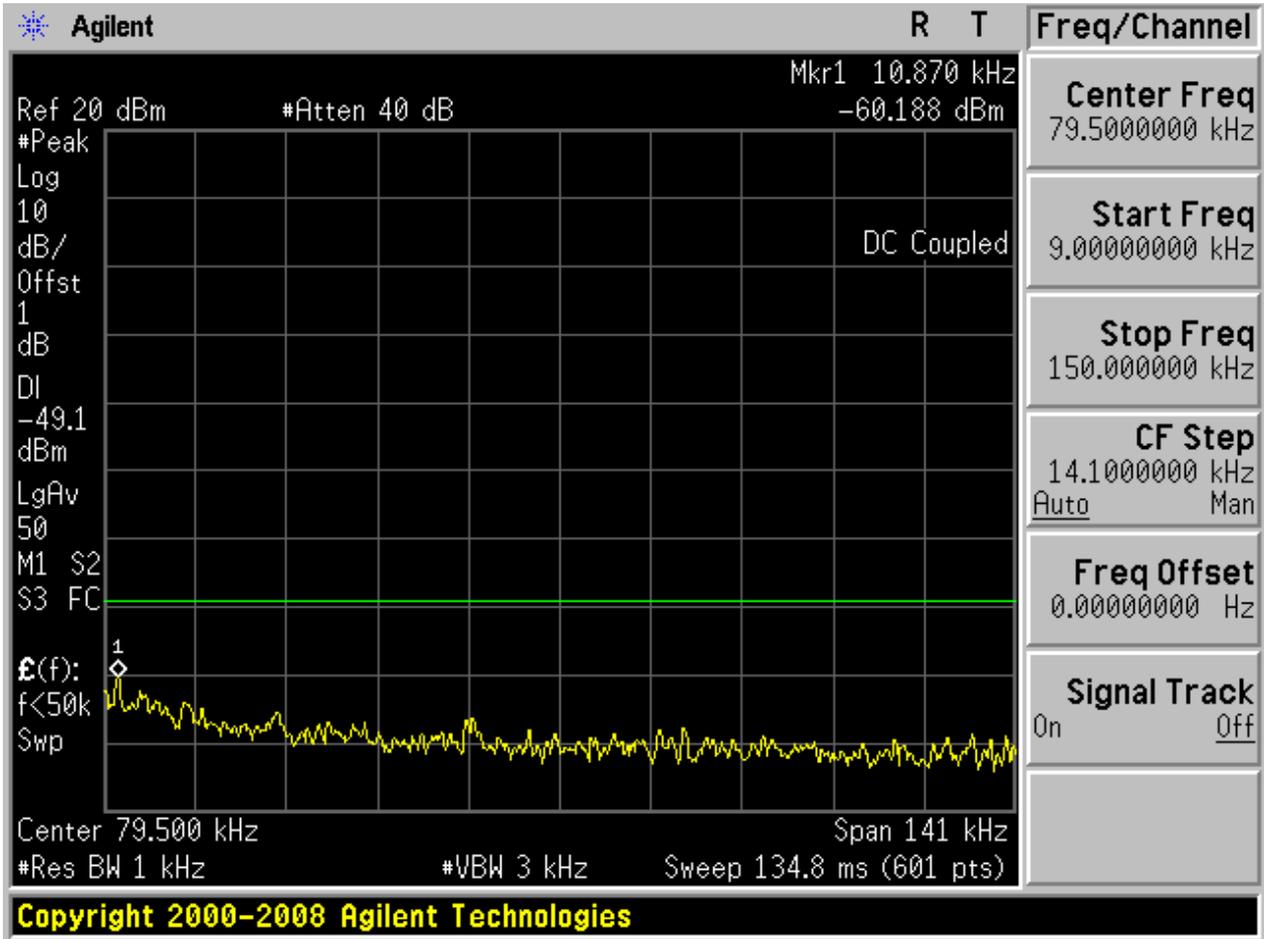
2.2 TM1_Ch19

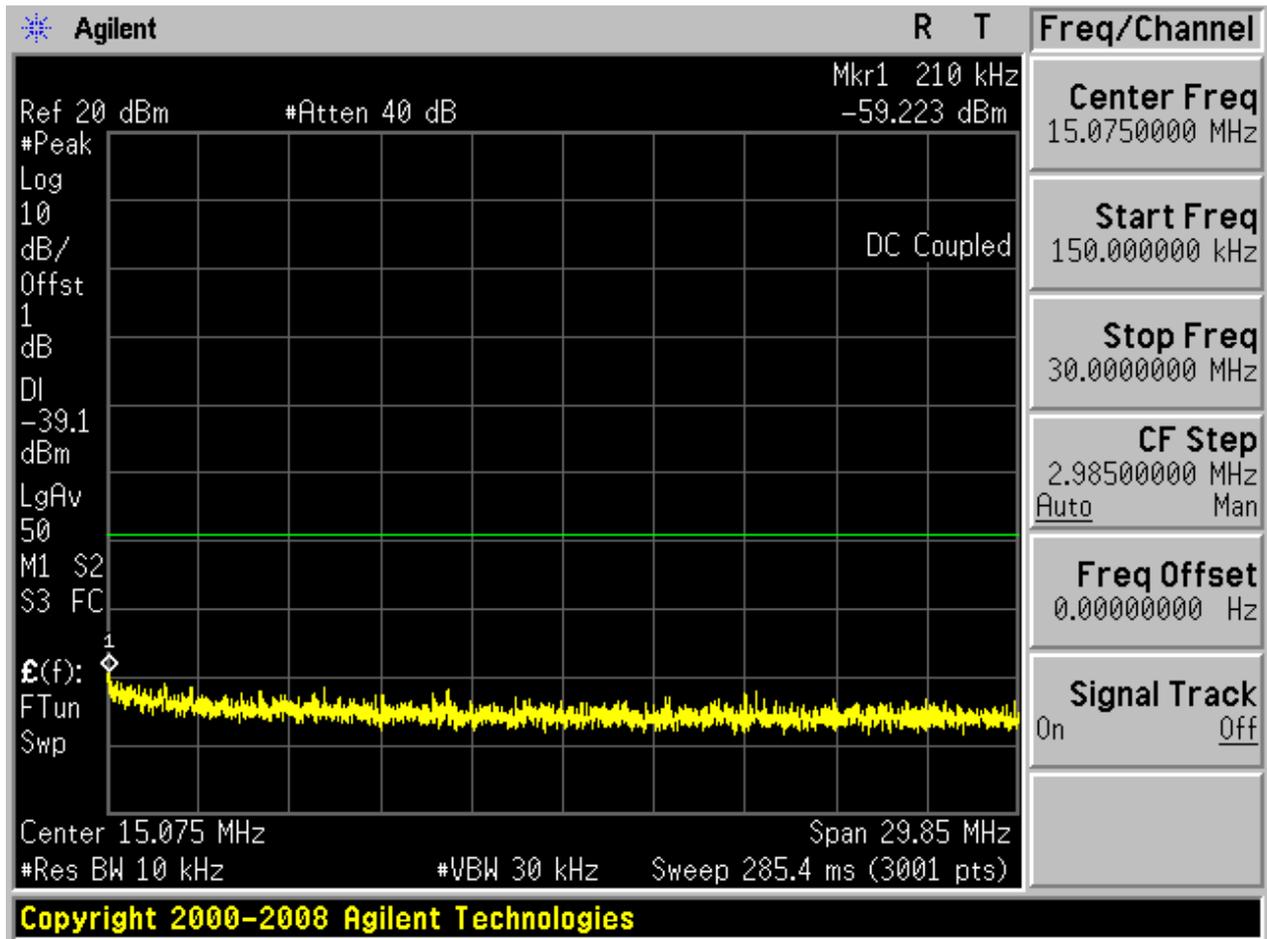
Pref:

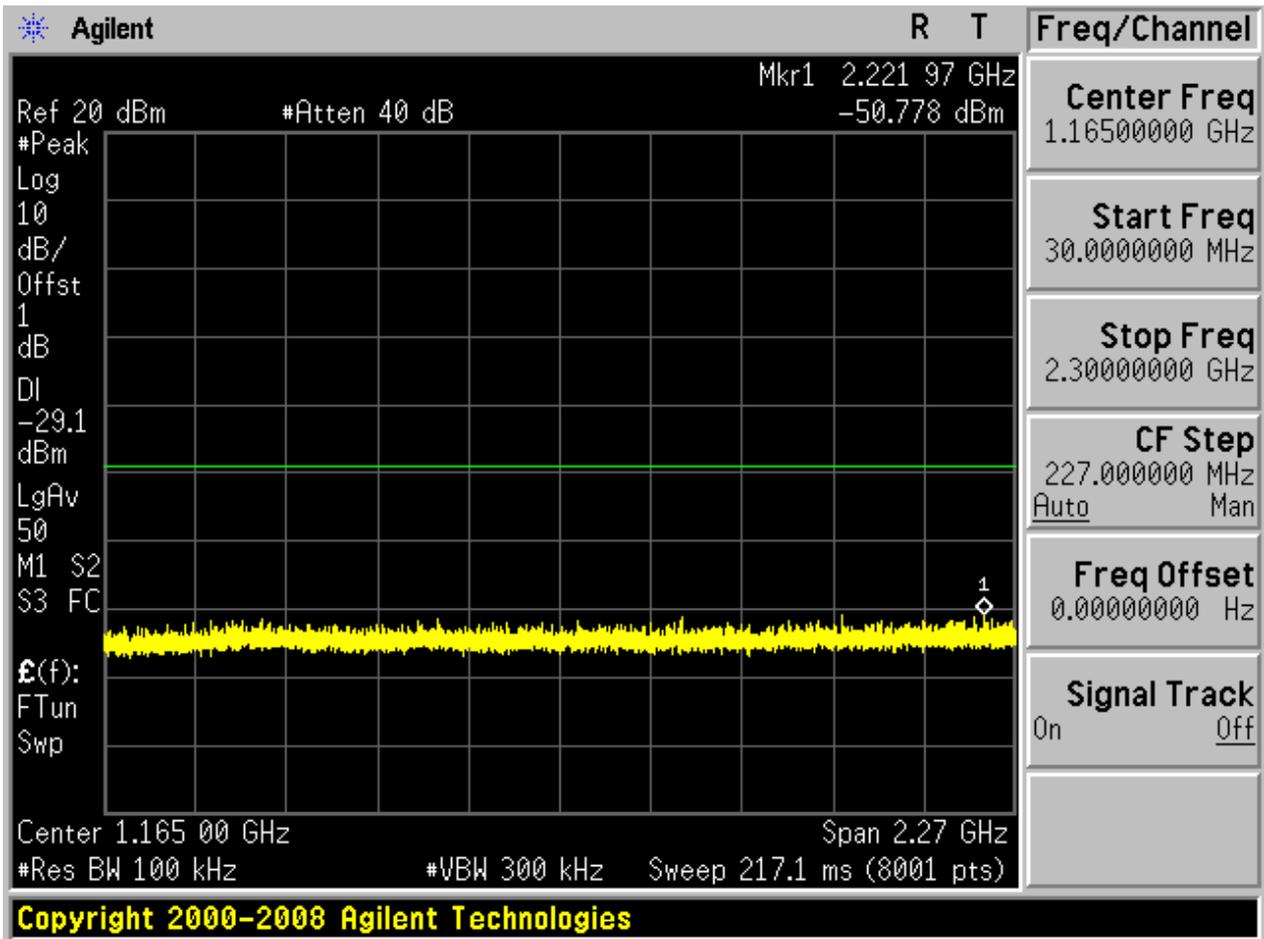


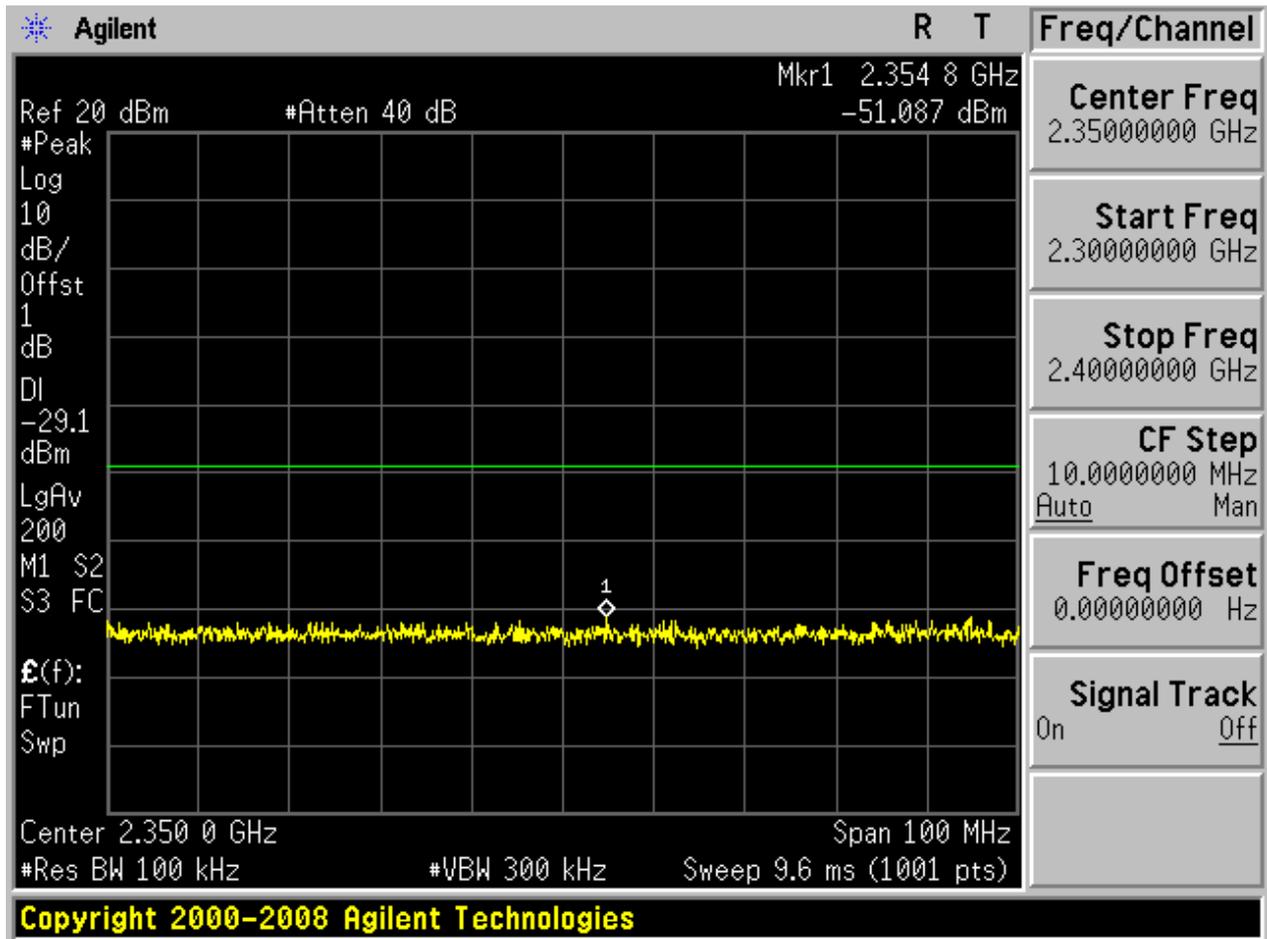


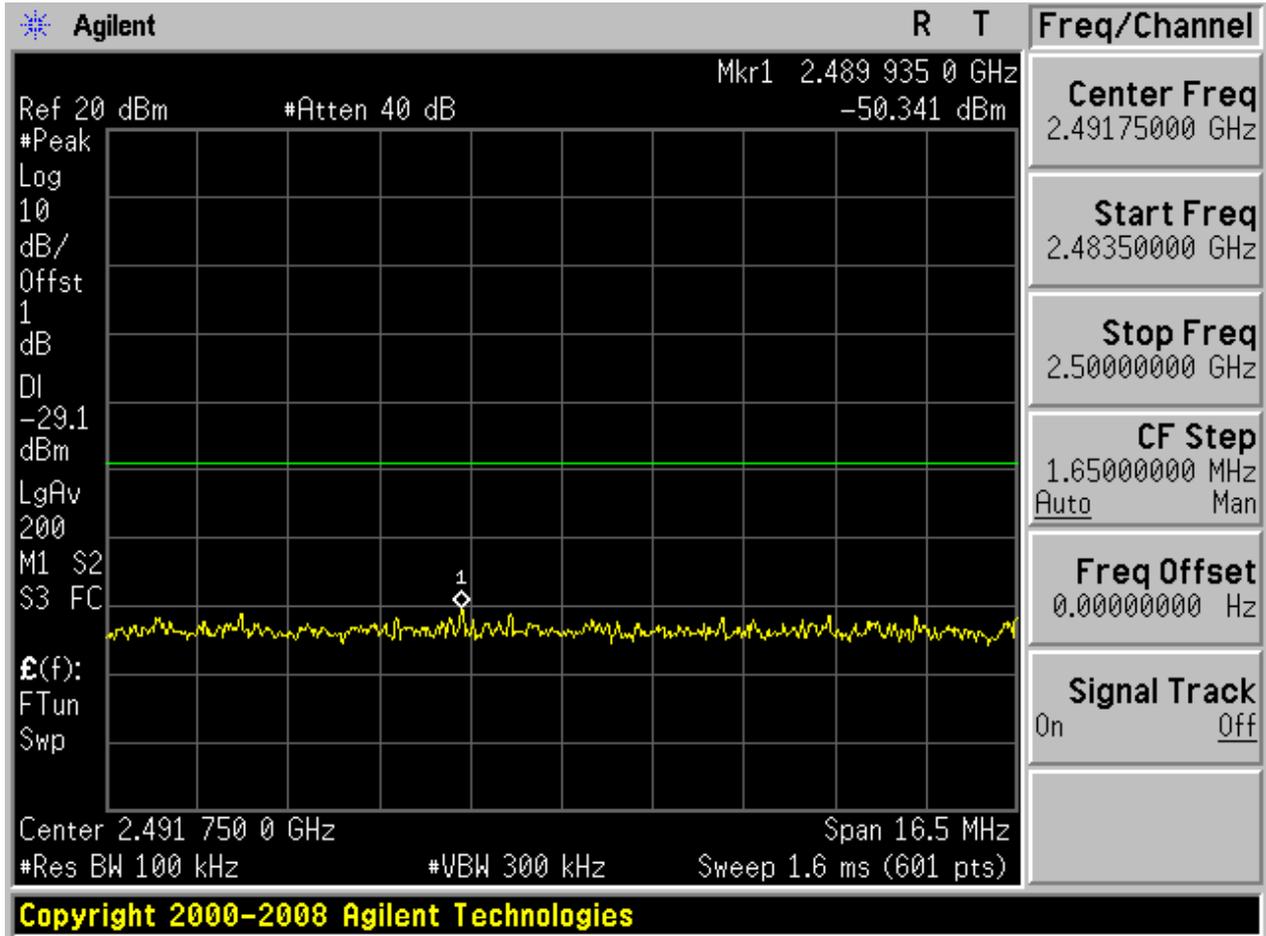
Puw:

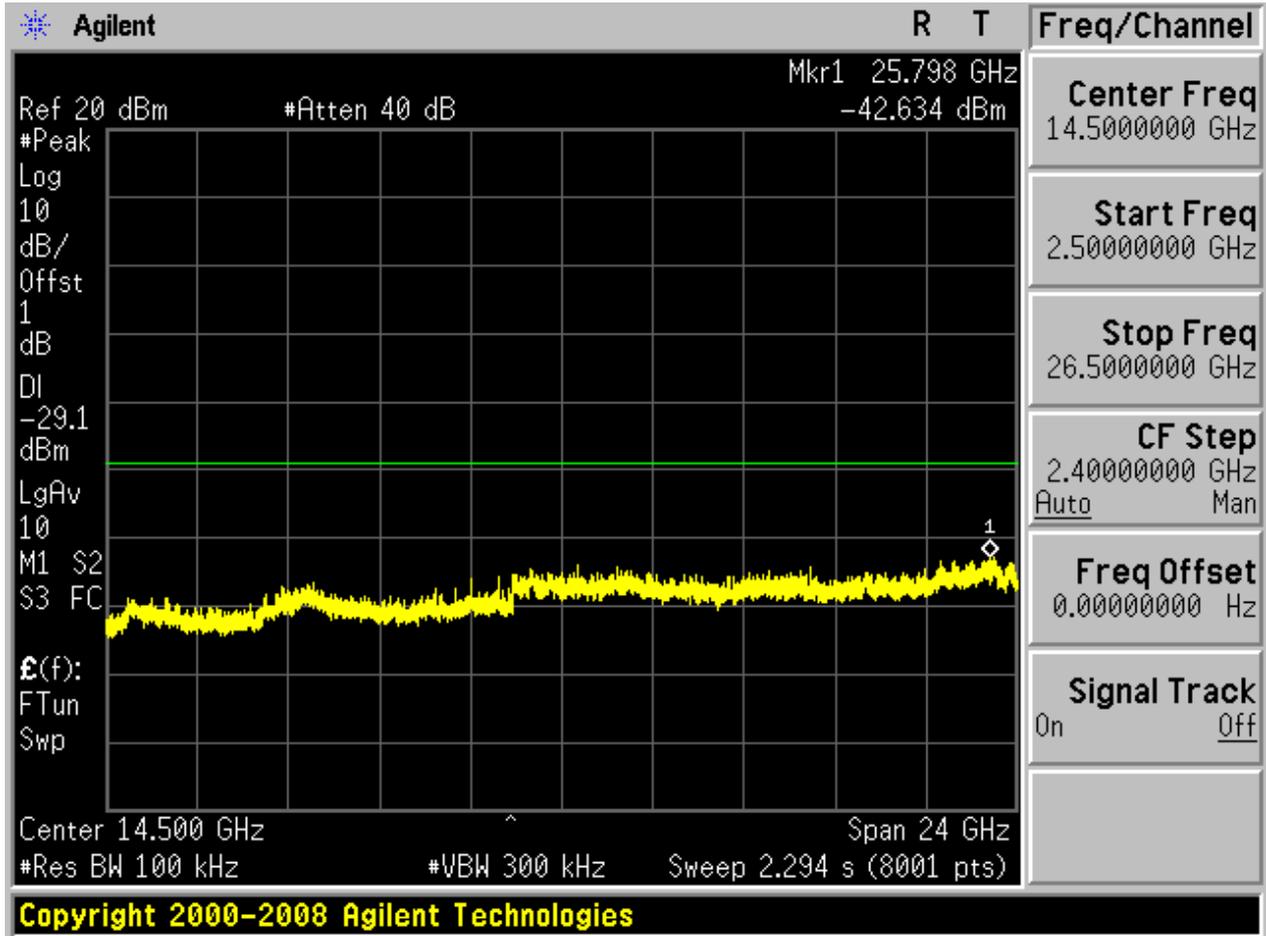








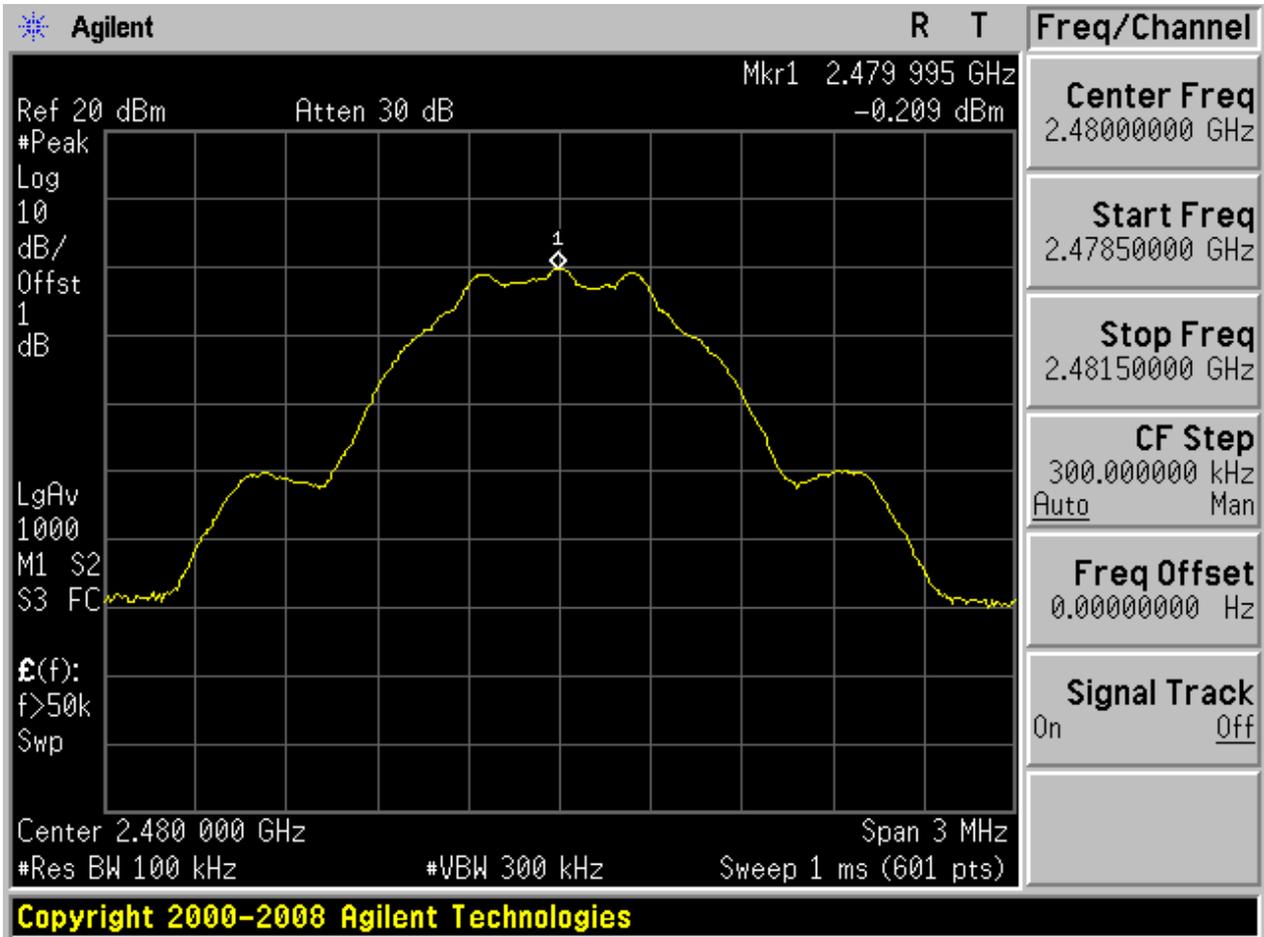






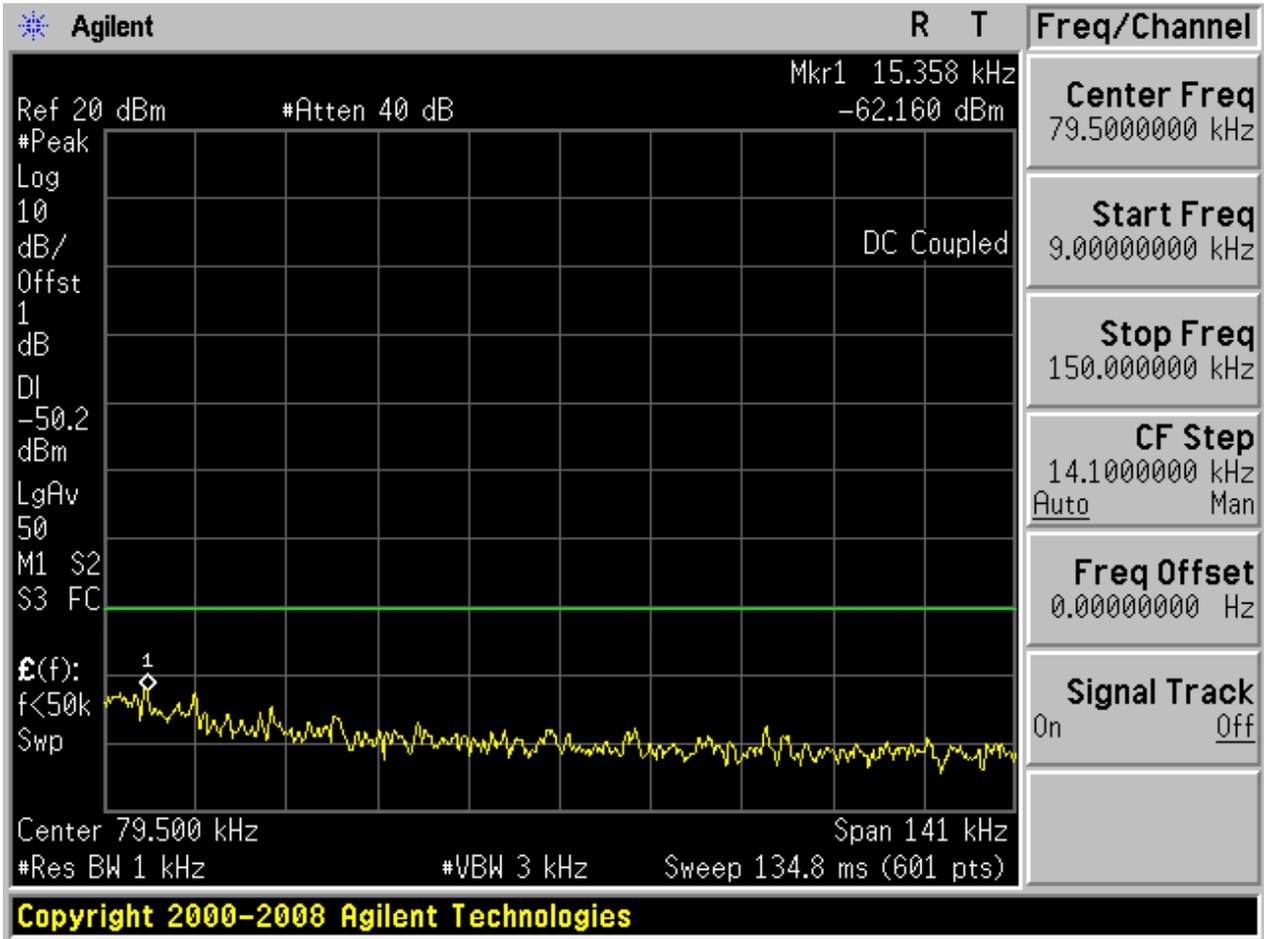
2.3 TM1_Ch39

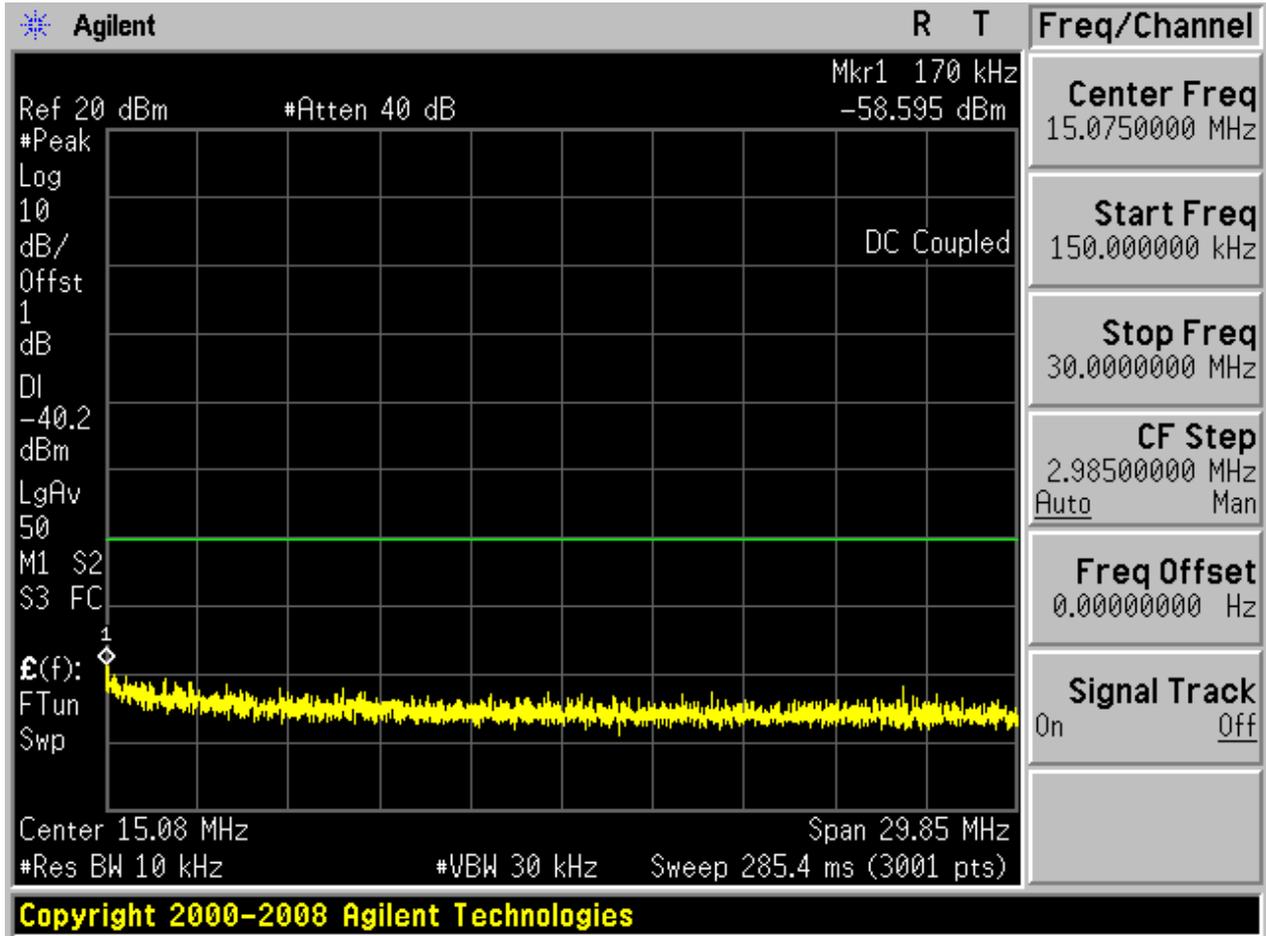
Pref:

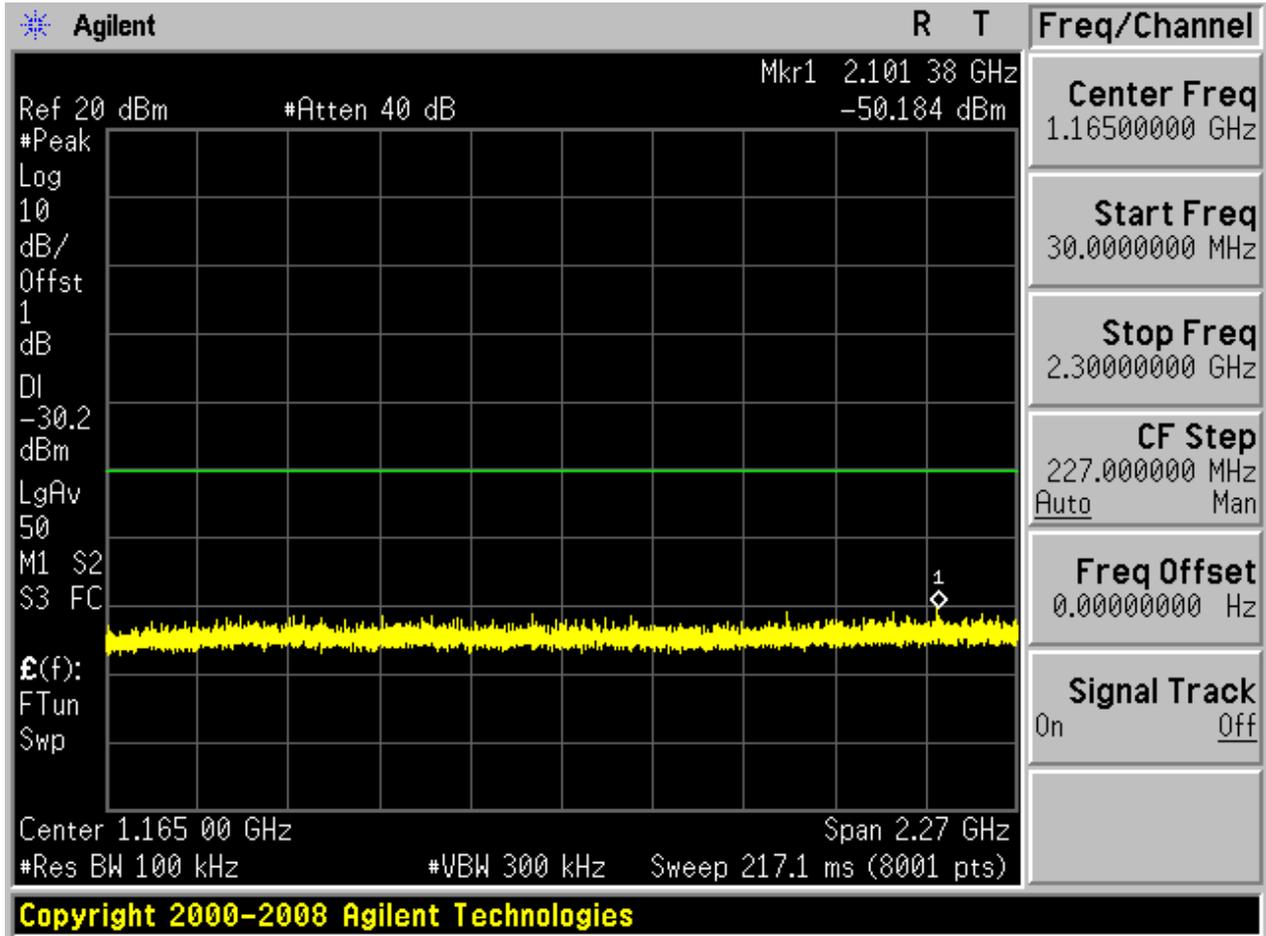


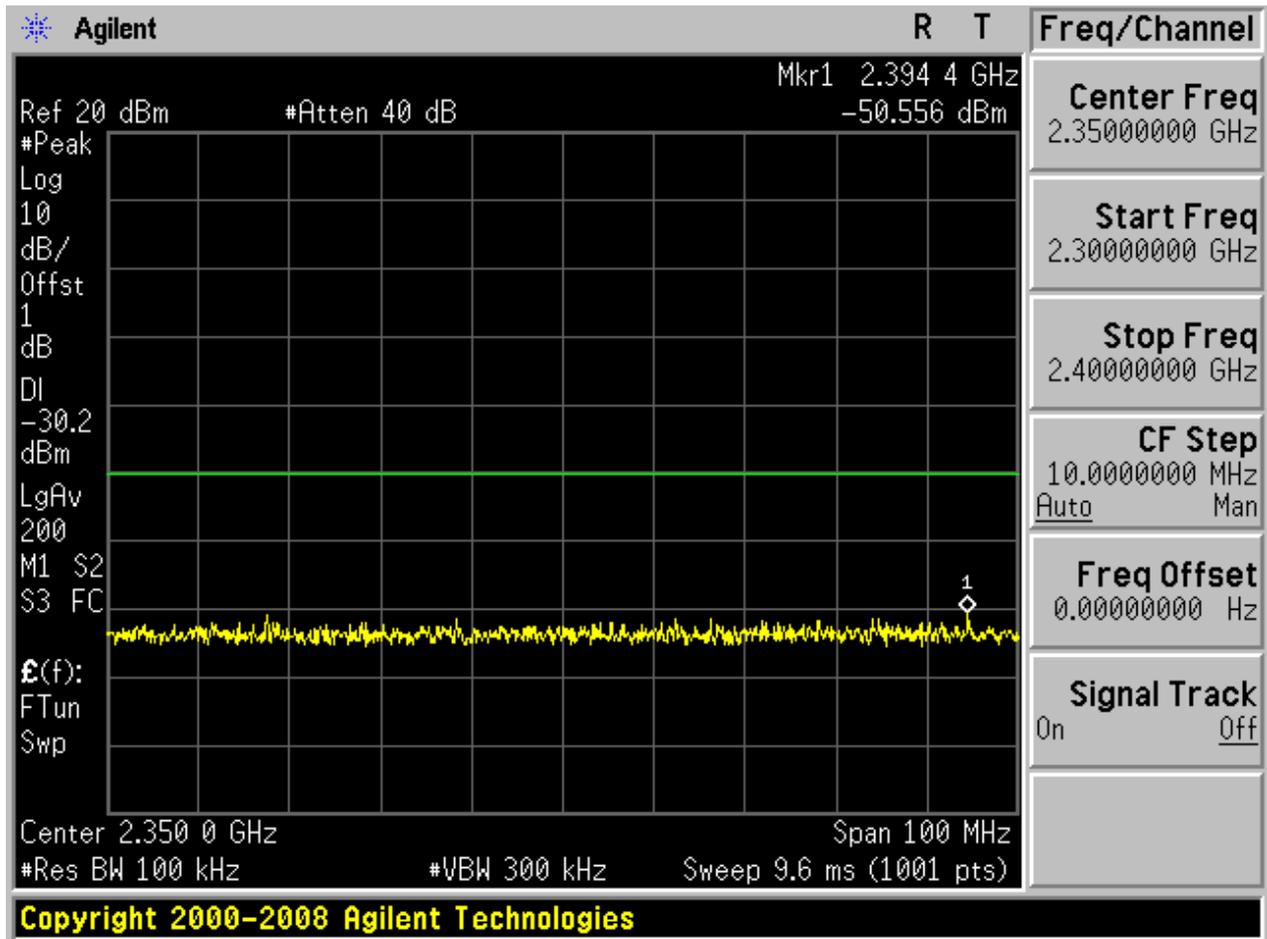


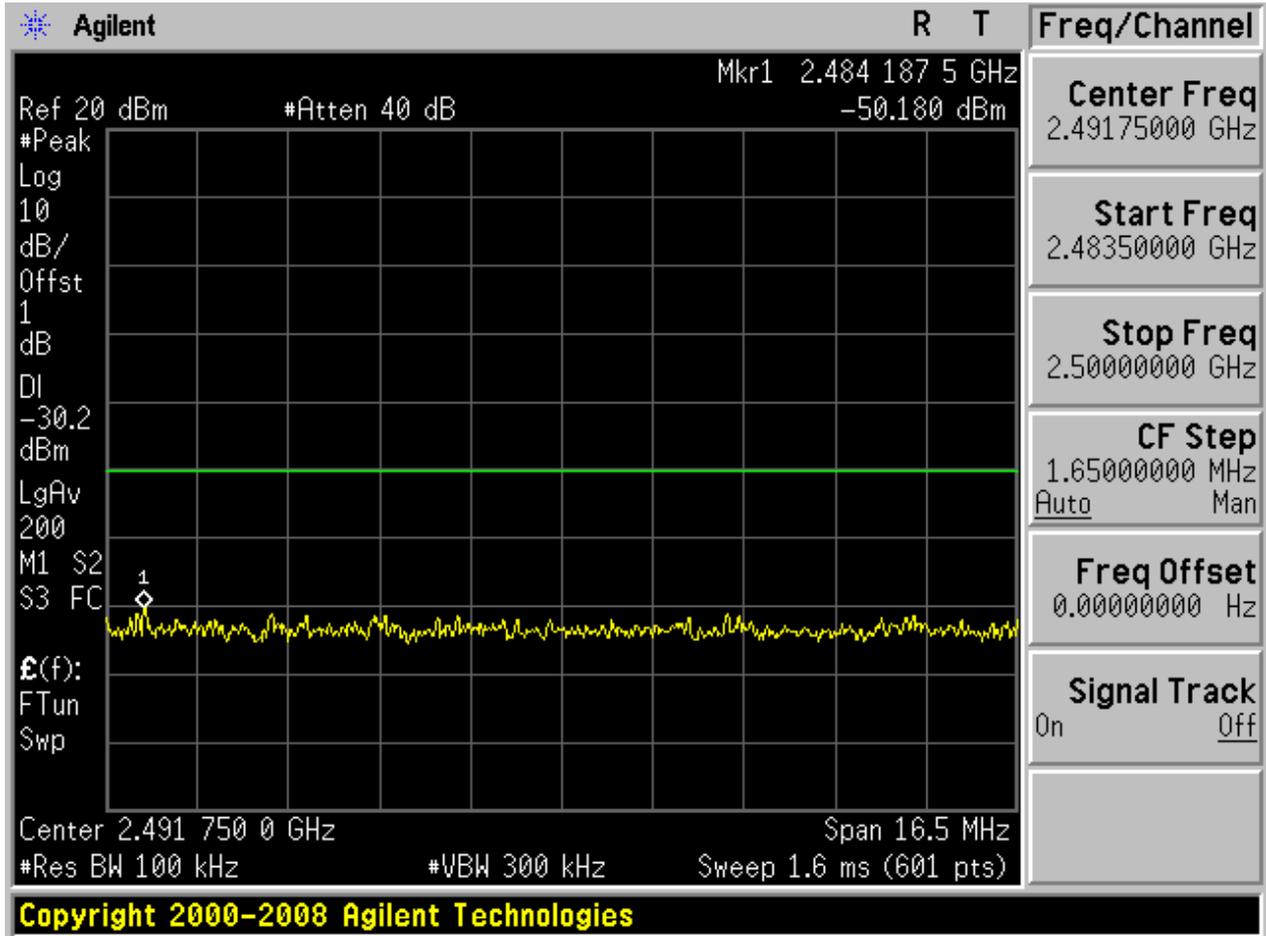
Puw:

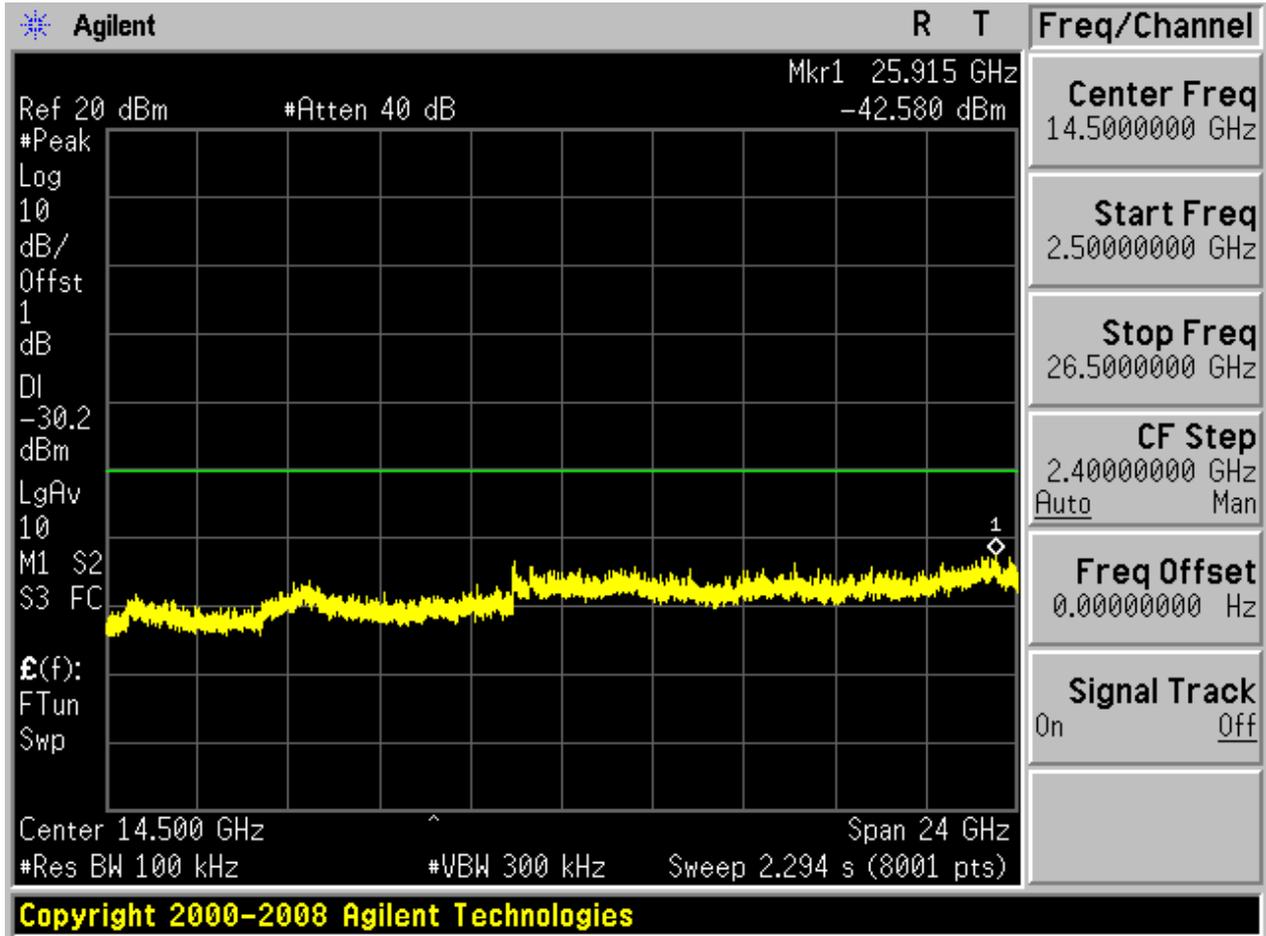














Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

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

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

The simultaneous transmission has been considered



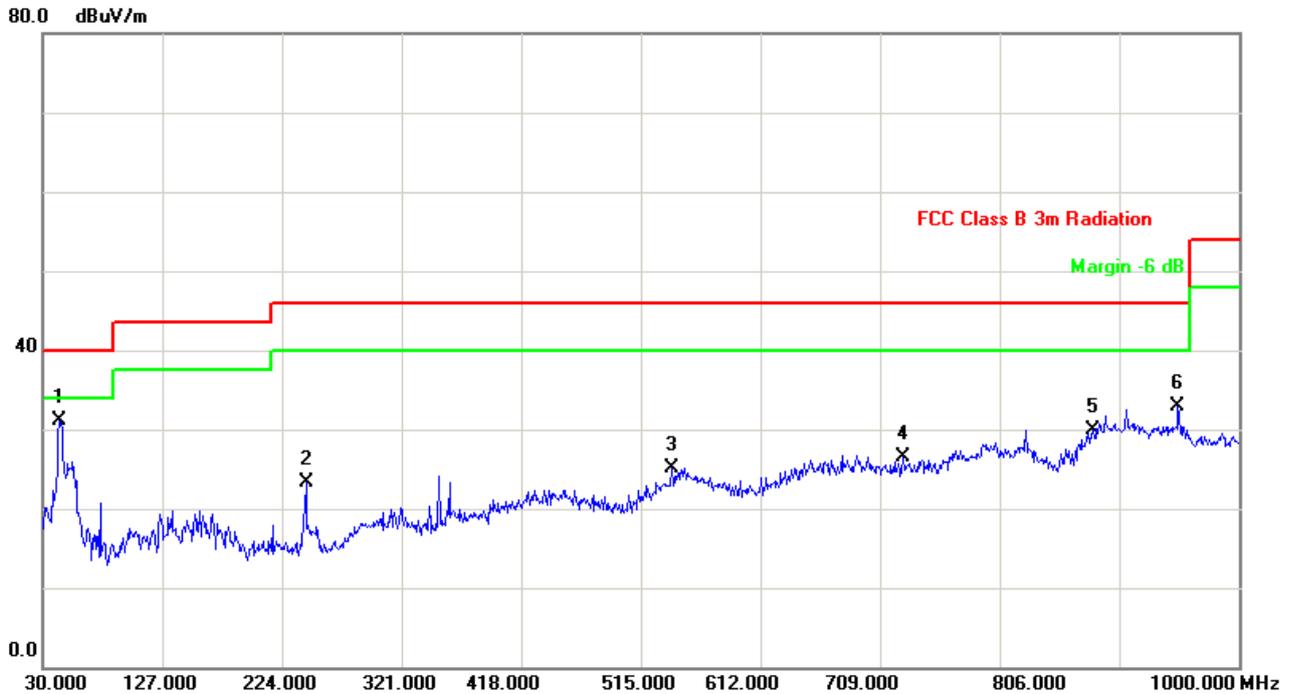
Part 1: Testing Range of “9 kHz to 30MHz”

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

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

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

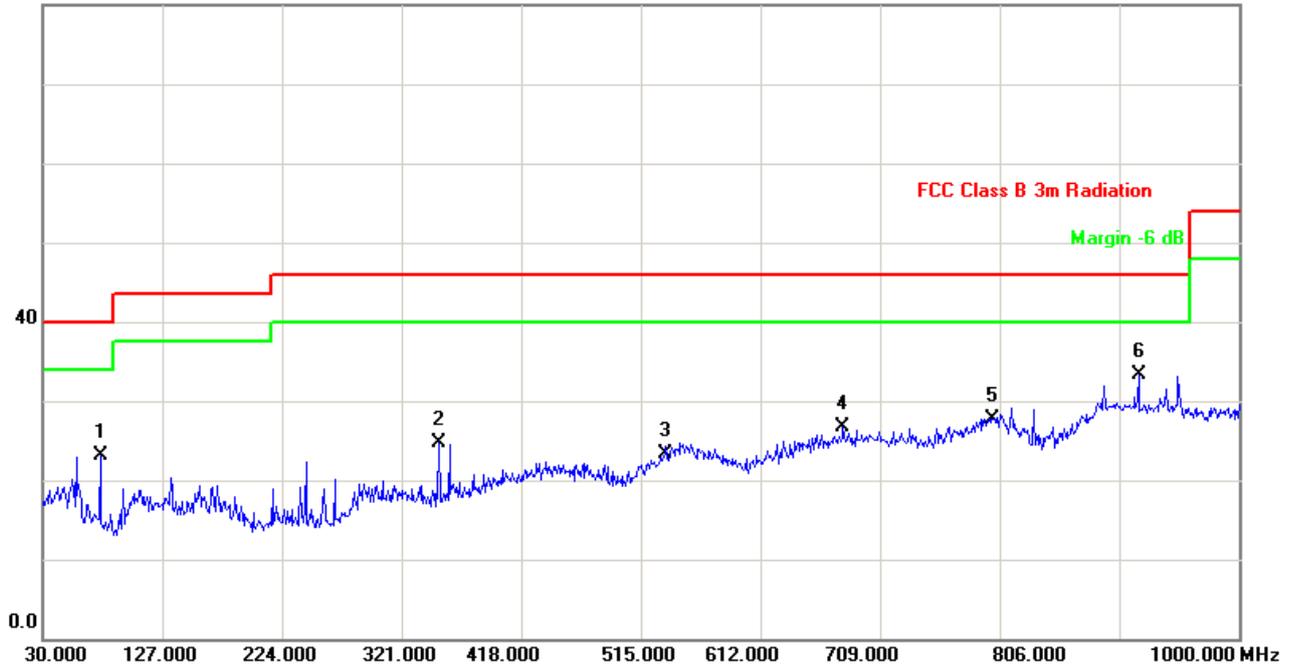
Note 2: The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).



Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)
43.5800	V	43.23	-12.08	31.15	40.00	-8.85
243.4000	V	36.42	-13.10	23.32	46.00	-22.68
540.2200	V	28.95	-3.79	25.16	46.00	-20.84
727.4300	V	27.53	-1.00	26.53	46.00	-19.47
881.6600	V	27.71	2.25	29.96	46.00	-16.04
950.5300	V	30.12	2.69	32.81	46.00	-13.19



80.0 dBuV/m

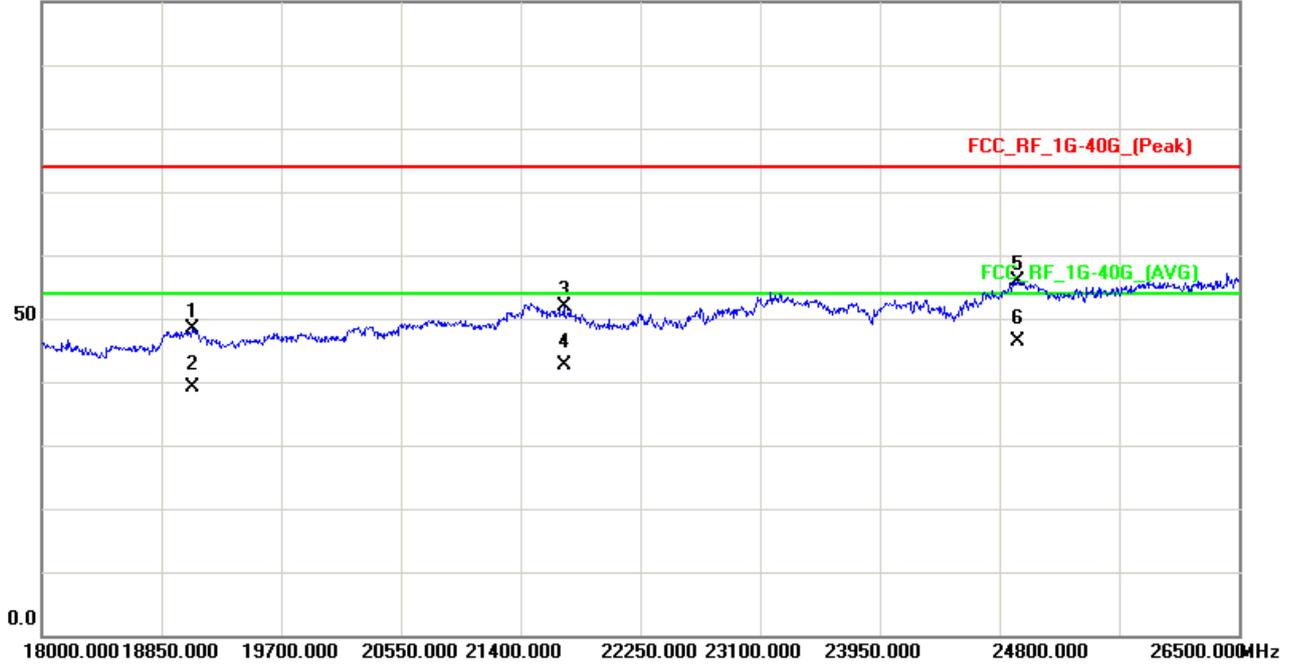


Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)
76.5600	H	37.86	-14.79	23.07	40.00	-16.93
351.0700	H	34.64	-9.97	24.67	46.00	-21.33
534.4000	H	27.66	-4.33	23.33	46.00	-22.67
678.9300	H	27.88	-1.26	26.62	46.00	-19.38
800.1800	H	25.92	1.83	27.75	46.00	-18.25
918.5200	H	29.90	3.46	33.36	46.00	-12.64



Part 3 Testing Range of "18 GHz to 26.5 GHz"

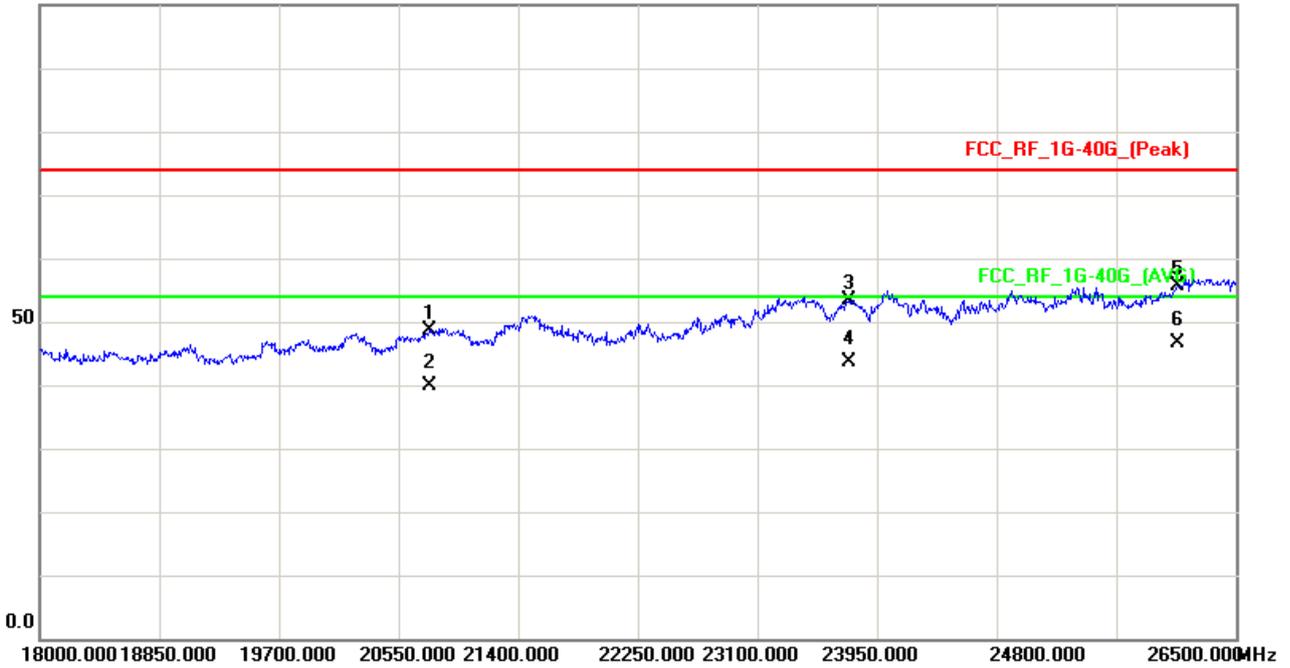
100.0 dBuV/m



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



100.0 dBuV/m



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

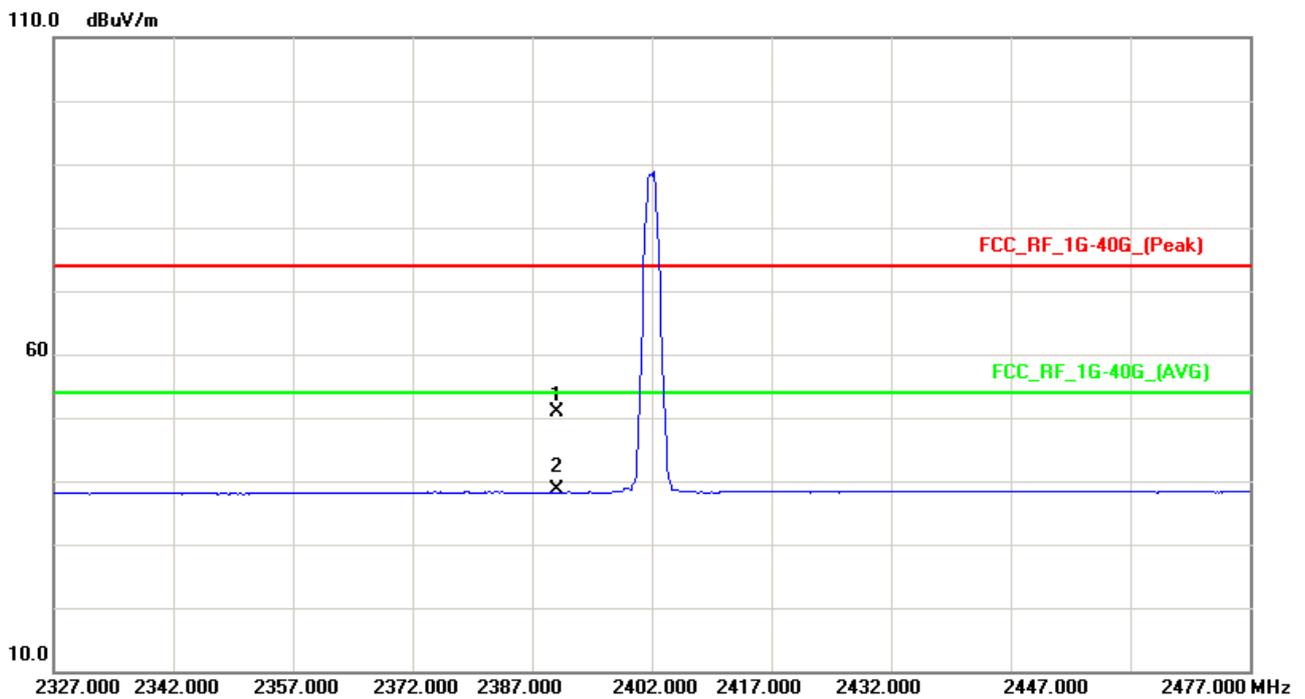


Part 4: Testing Range of “2.3GHz to 2.5GHz”

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

Test Mode:

Channel 0



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

MEASUREMENT RESULT: PK Detector

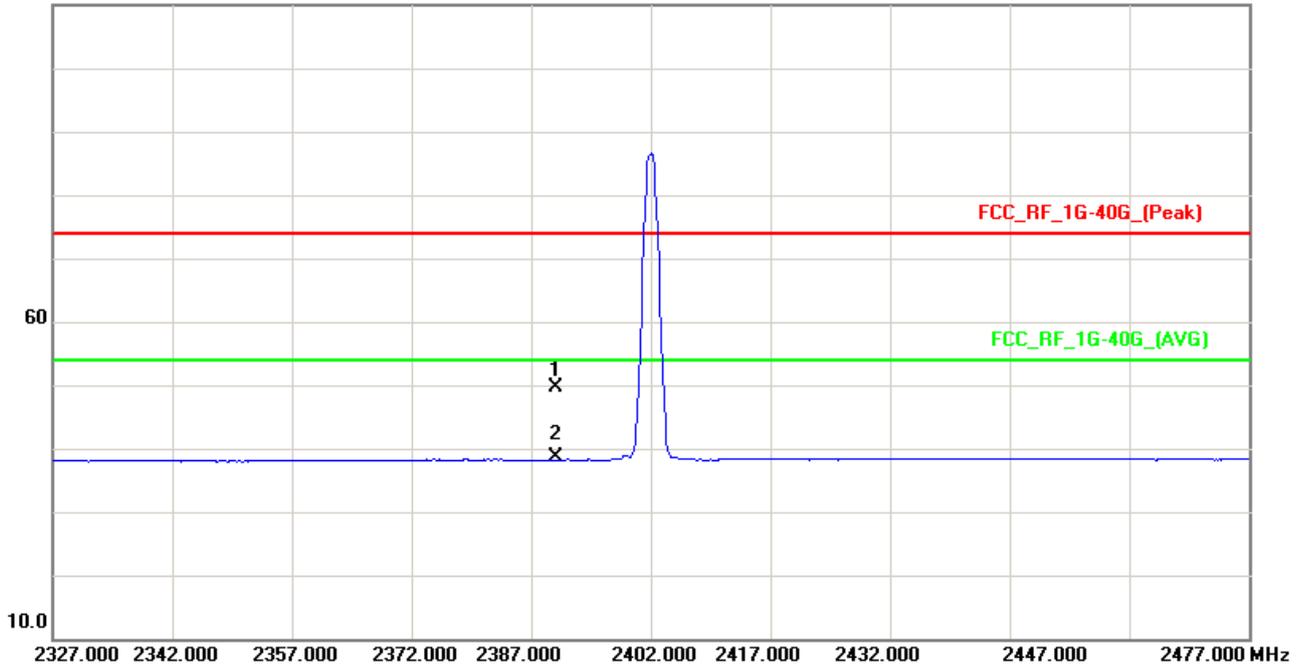
Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)
2390.000	V	16.73	34.17	50.90	74.00	-23.10

MEASUREMENT RESULT: AV Detector

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)
2390.000	V	4.35	34.17	38.52	54.00	-15.48



110.0 dBuV/m



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

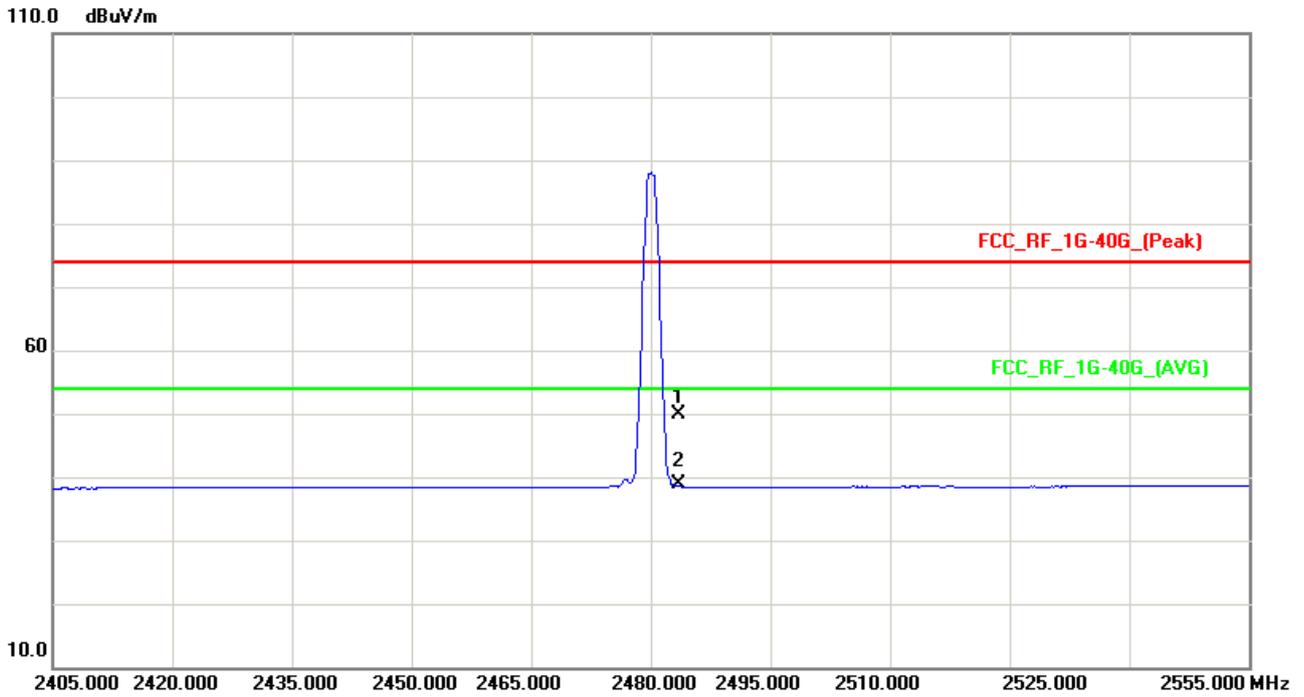
MEASUREMENT RESULT: PK Detector

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)
2390.000	H	15.57	34.17	49.74	74.00	-24.26

MEASUREMENT RESULT: AV Detector

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)
2390.000	H	4.37	34.17	38.54	54.00	-15.46

Channel 39



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

MEASUREMENT RESULT: PK Detector

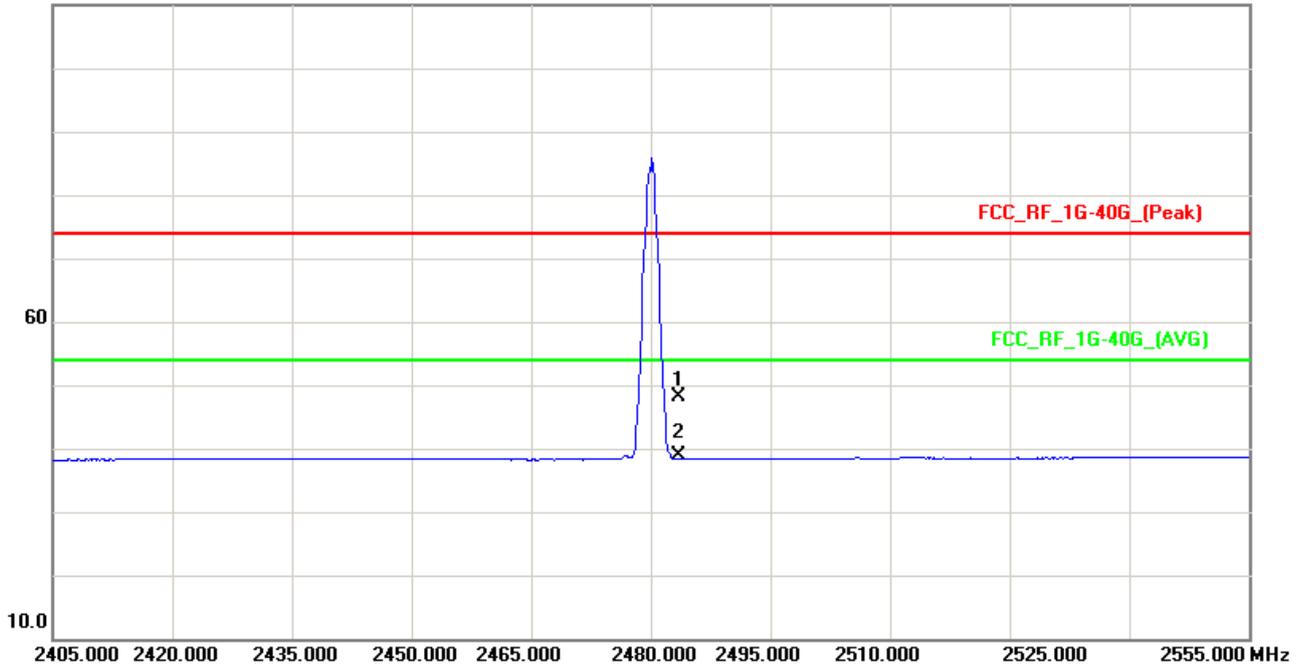
Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)
2483.500	H	15.42	34.43	49.85	74.00	-24.15

MEASUREMENT RESULT: AV Detector

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)
2483.500	H	4.34	34.43	38.77	54.00	-15.23



110.0 dBuV/m



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

MEASUREMENT RESULT: PK Detector

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)
2483.500	V	13.68	34.43	48.11	74.00	-25.89

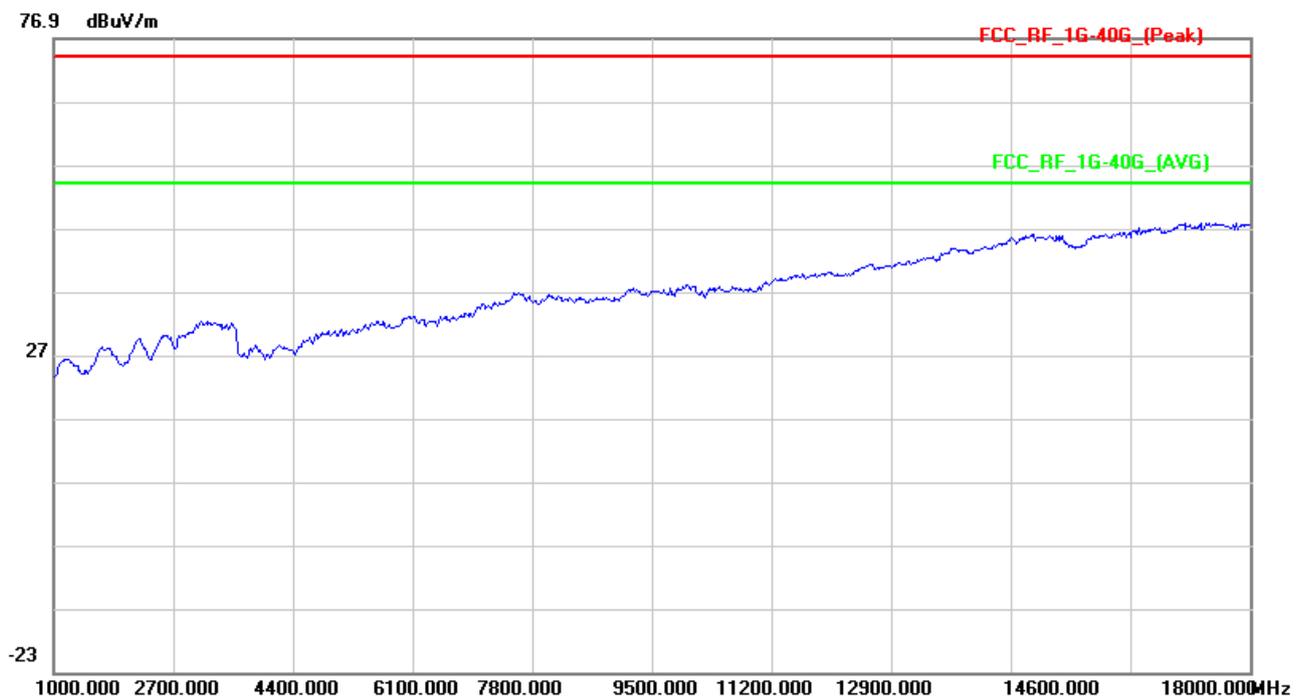
MEASUREMENT RESULT: AV Detector

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)
2483.500	V	4.35	34.43	38.78	54.00	-15.22

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

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

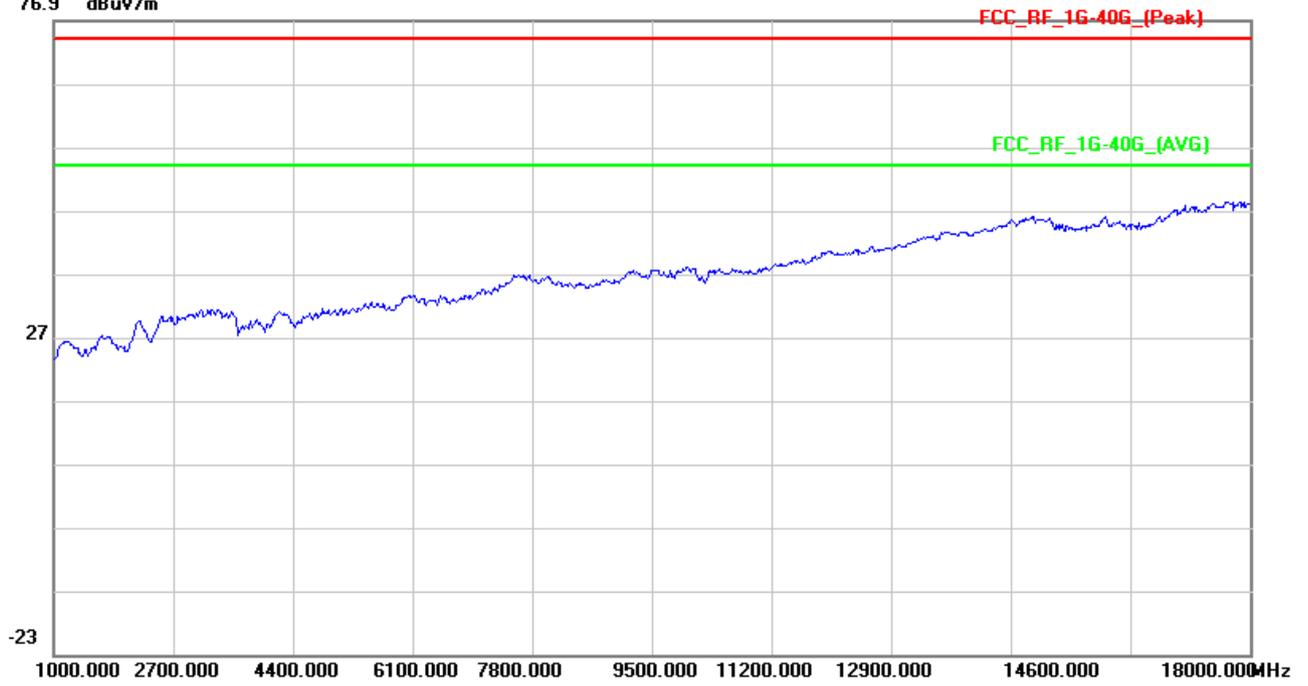
Polarization: H





Polarization: V

76.9 dBuV/m





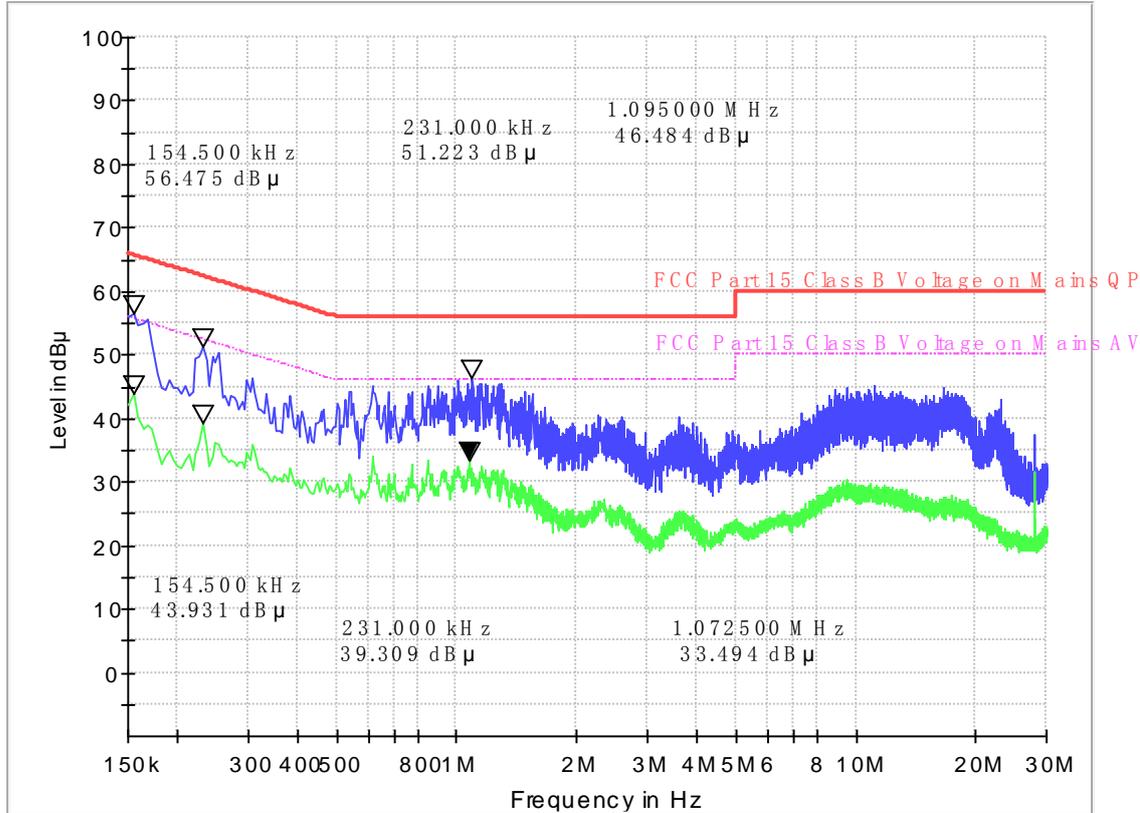
Appendix I: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz

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.

Channel 39

FCC Part 15 Class B Voltage Test



(Plot A:L Phase)

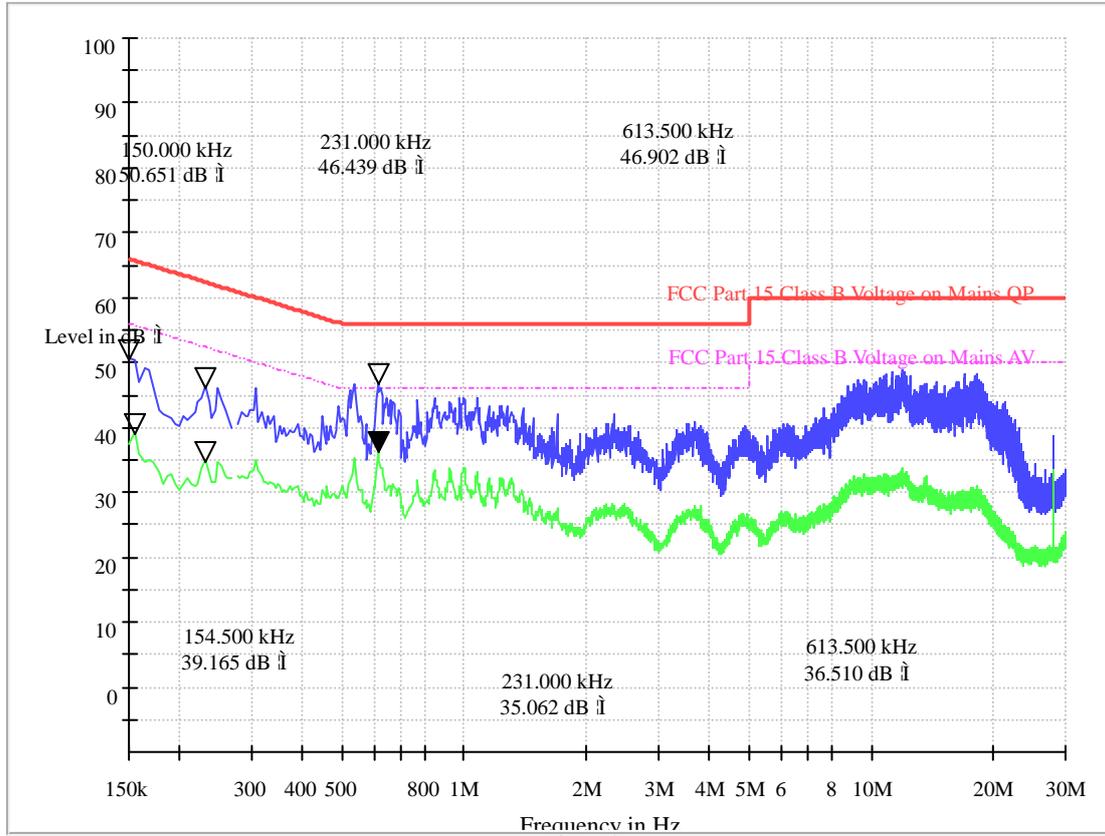
MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	PE
0.1545	54.57	9.7	65.8	-11.23	FLO
0.2310	49.96	9.7	63.1	-13.14	FLO
1.0950	44.78	9.8	56	-11.22	FLO

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	PE
0.1545	41.66	9.7	55.8	-14.14	FLO
0.2310	37.38	9.7	53.1	-15.72	FLO
1.0950	31.55	9.8	46	-14.45	FLO

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(Plot B:N Phase)

MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	PE
0.1500	48.72	9.6	66.0	-17.28	FLO
0.2310	44.32	9.7	63.1	-18.78	FLO
0.6135	44.23	9.7	56.0	-11.77	FLO

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	PE
0.1500	37.25	9.6	56.0	-18.75	FLO
0.2310	33.22	9.7	53.1	-19.88	FLO
0.6135	34.83	9.7	46.0	-11.17	FLO

END