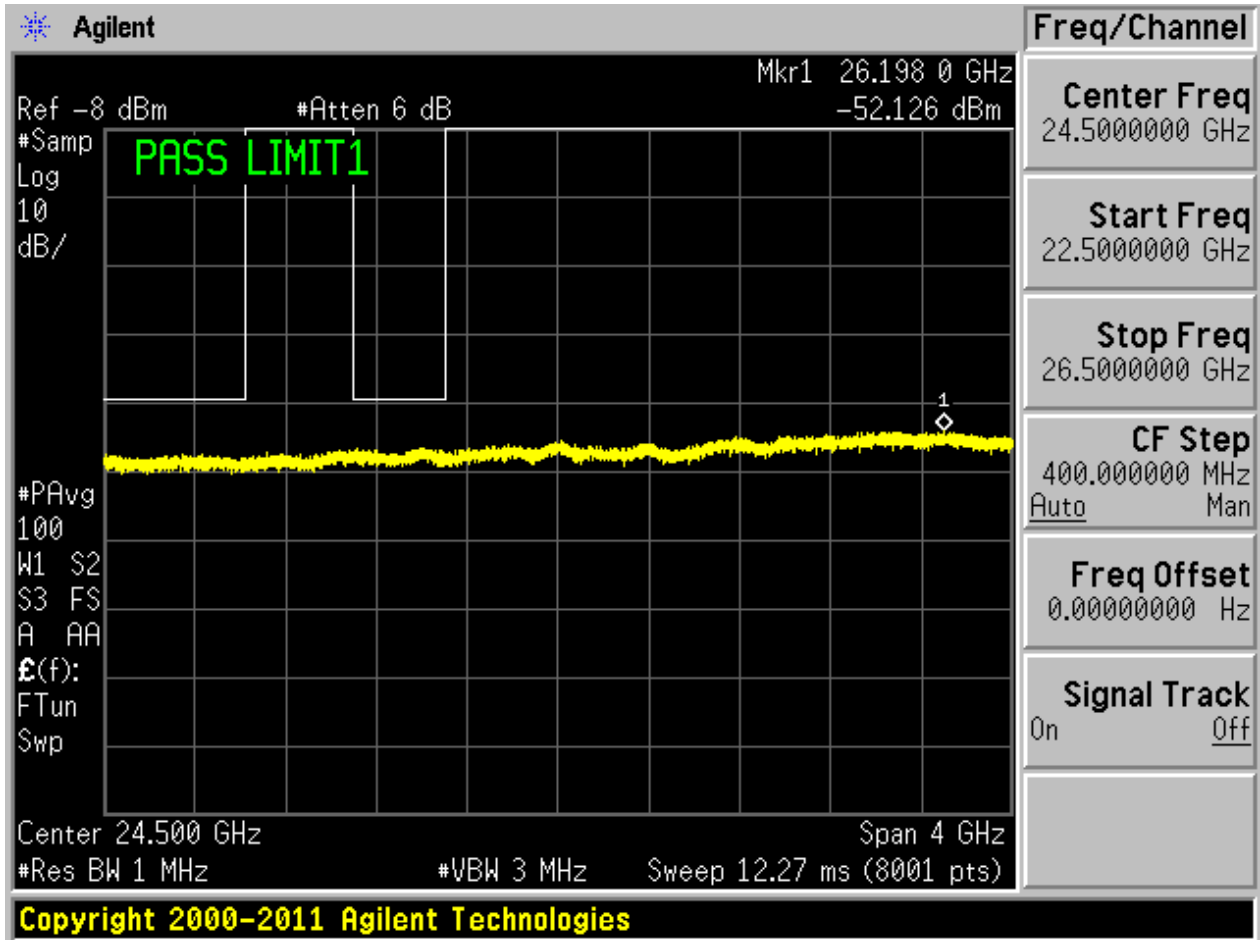
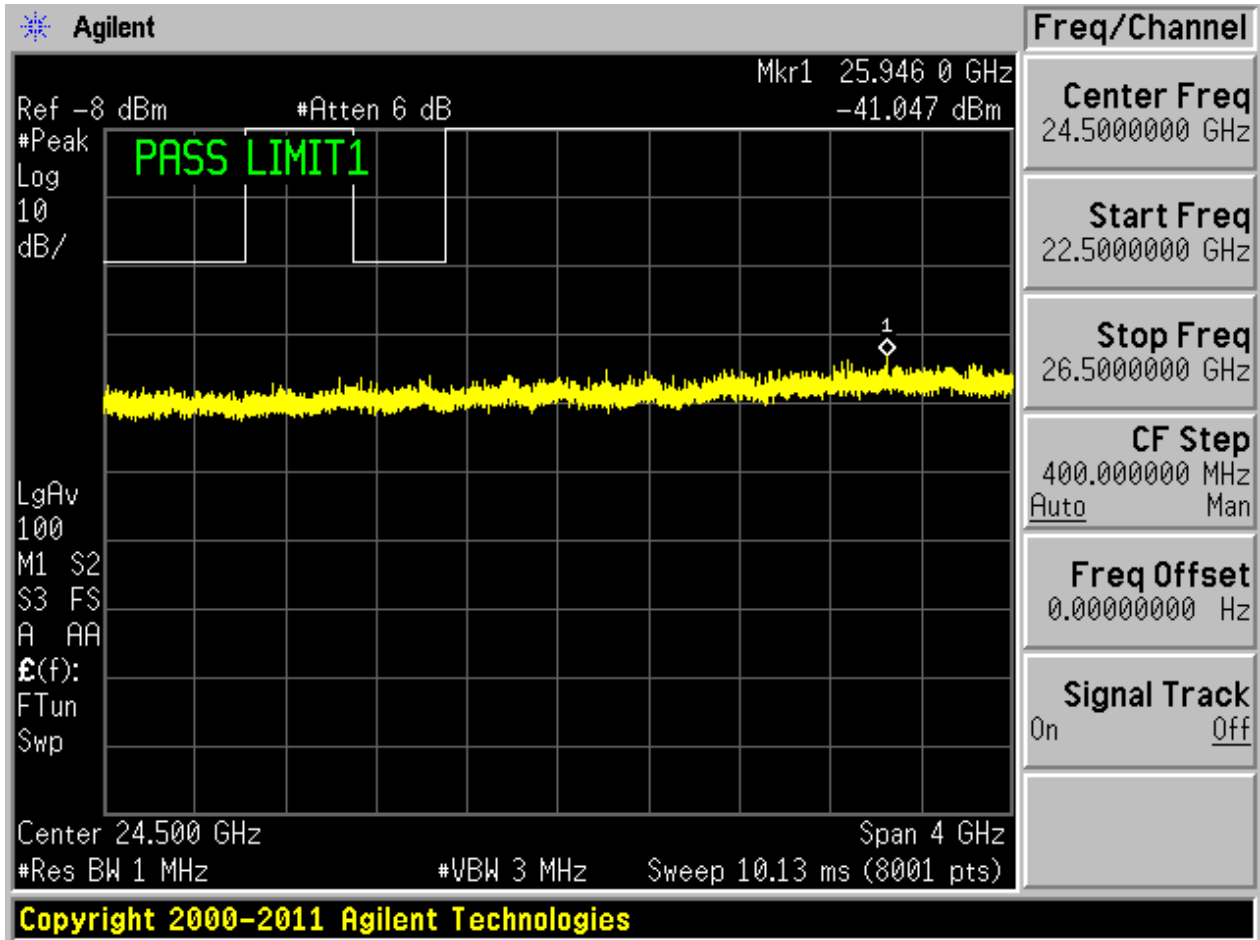


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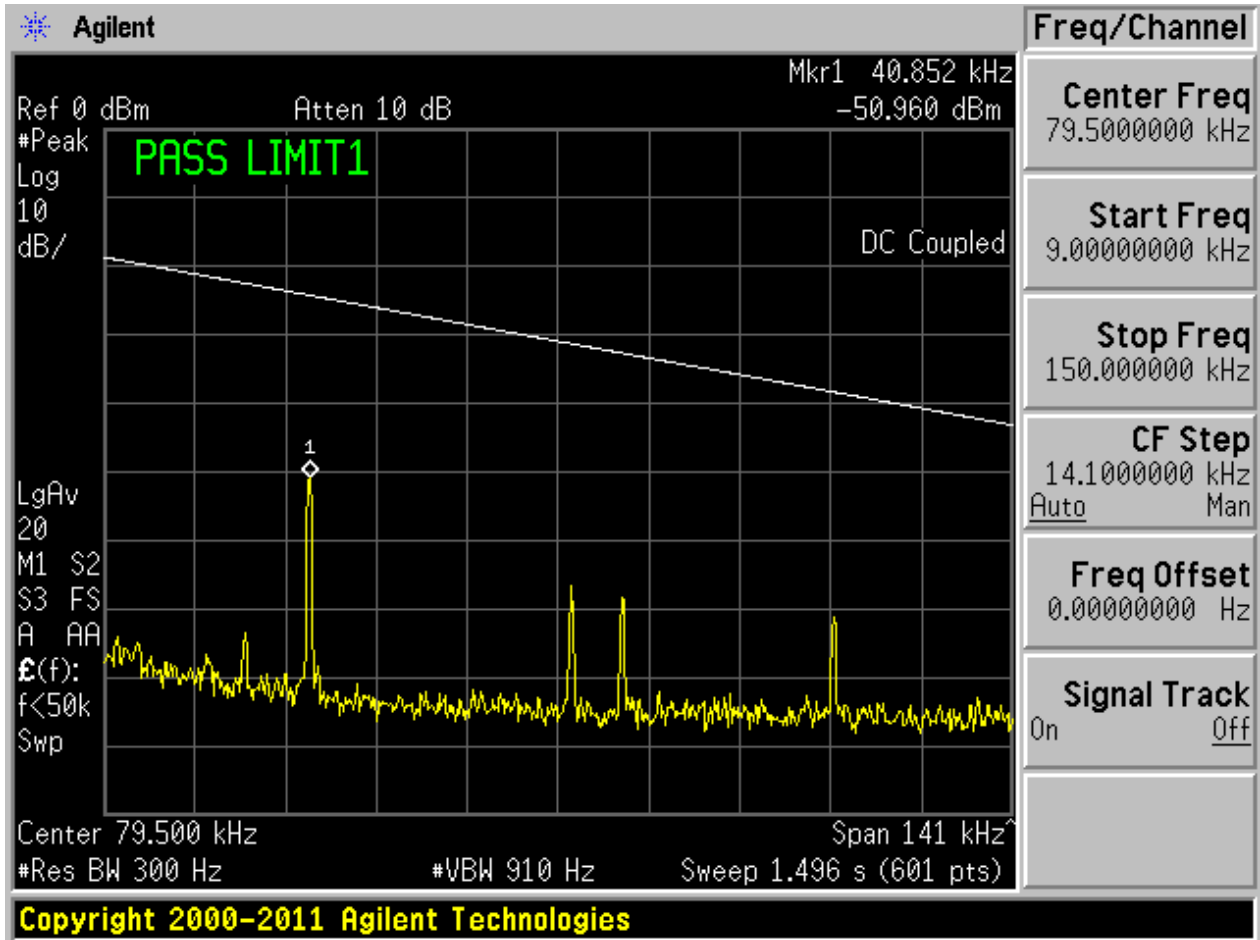


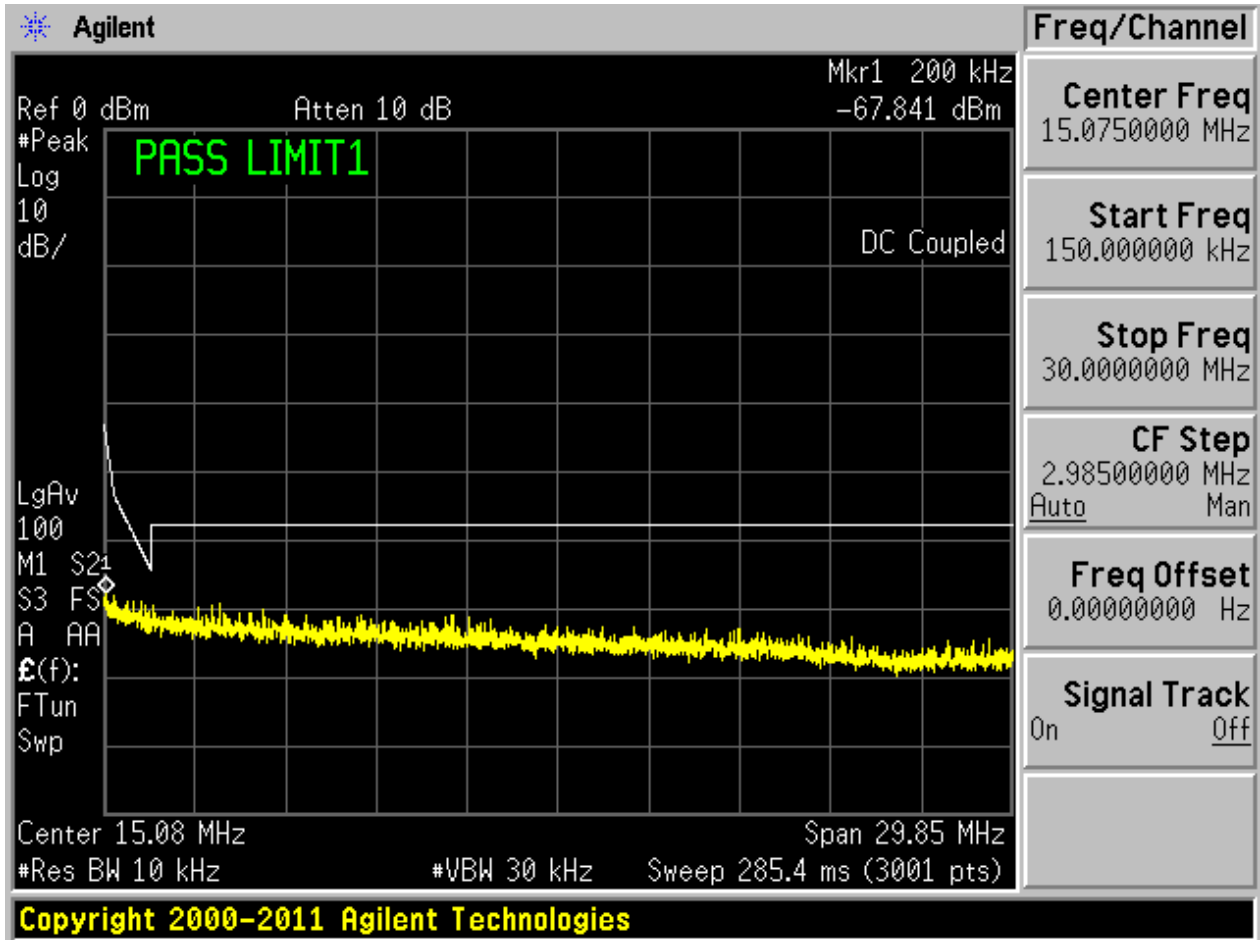
2.23.3 Trace#sum (if needed for final judgment)

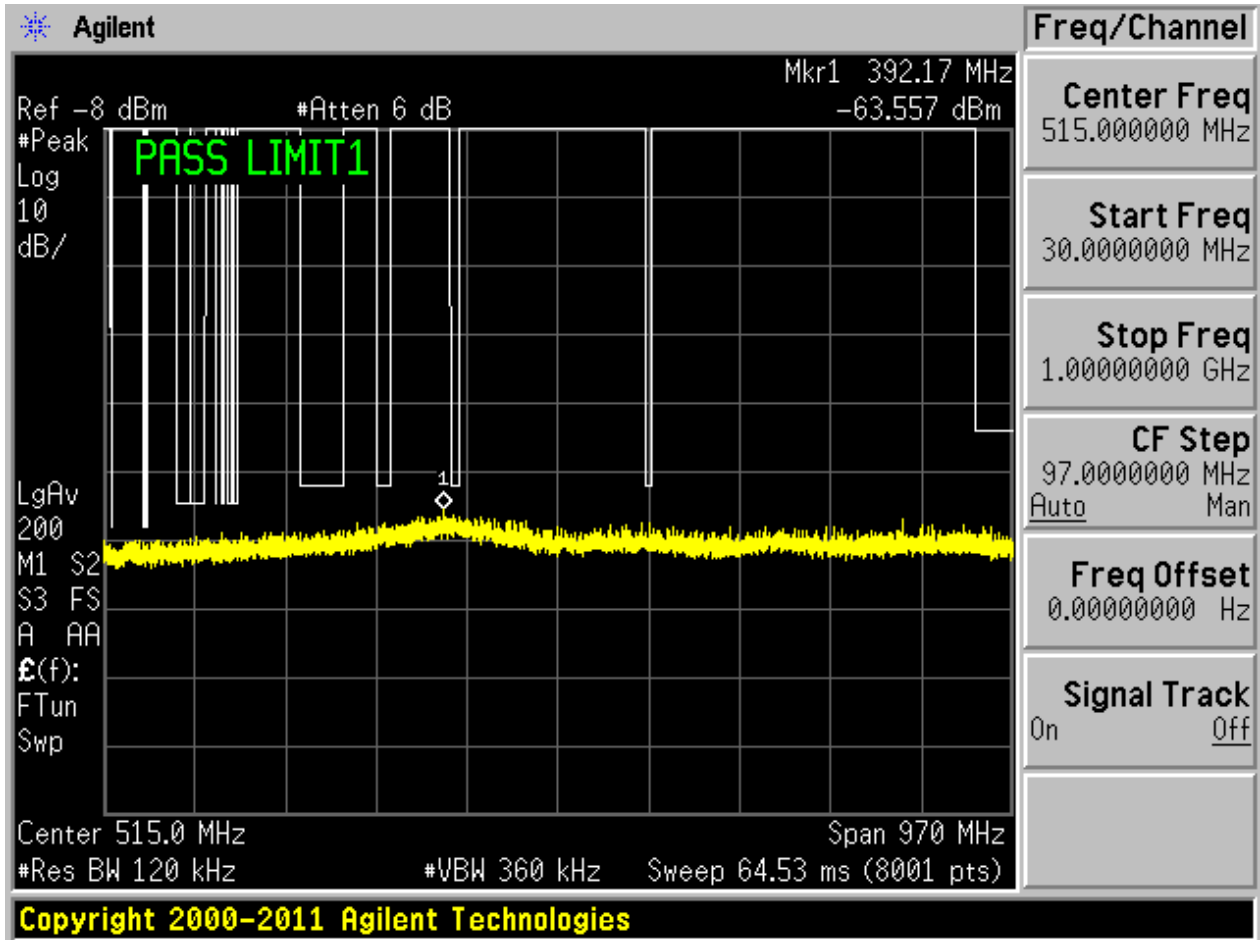
(Not applicable)

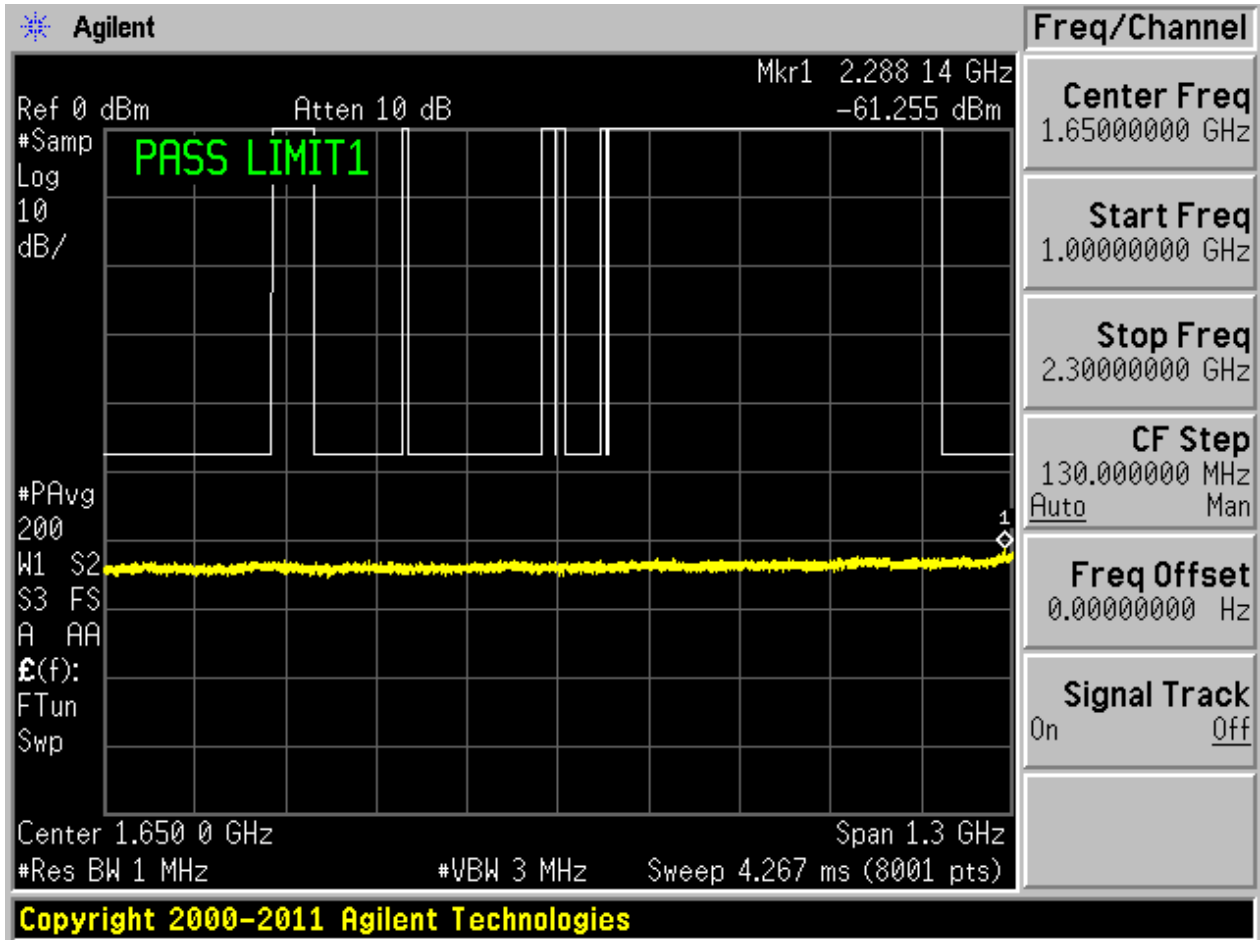
2.2411N20m/8_T@1+2

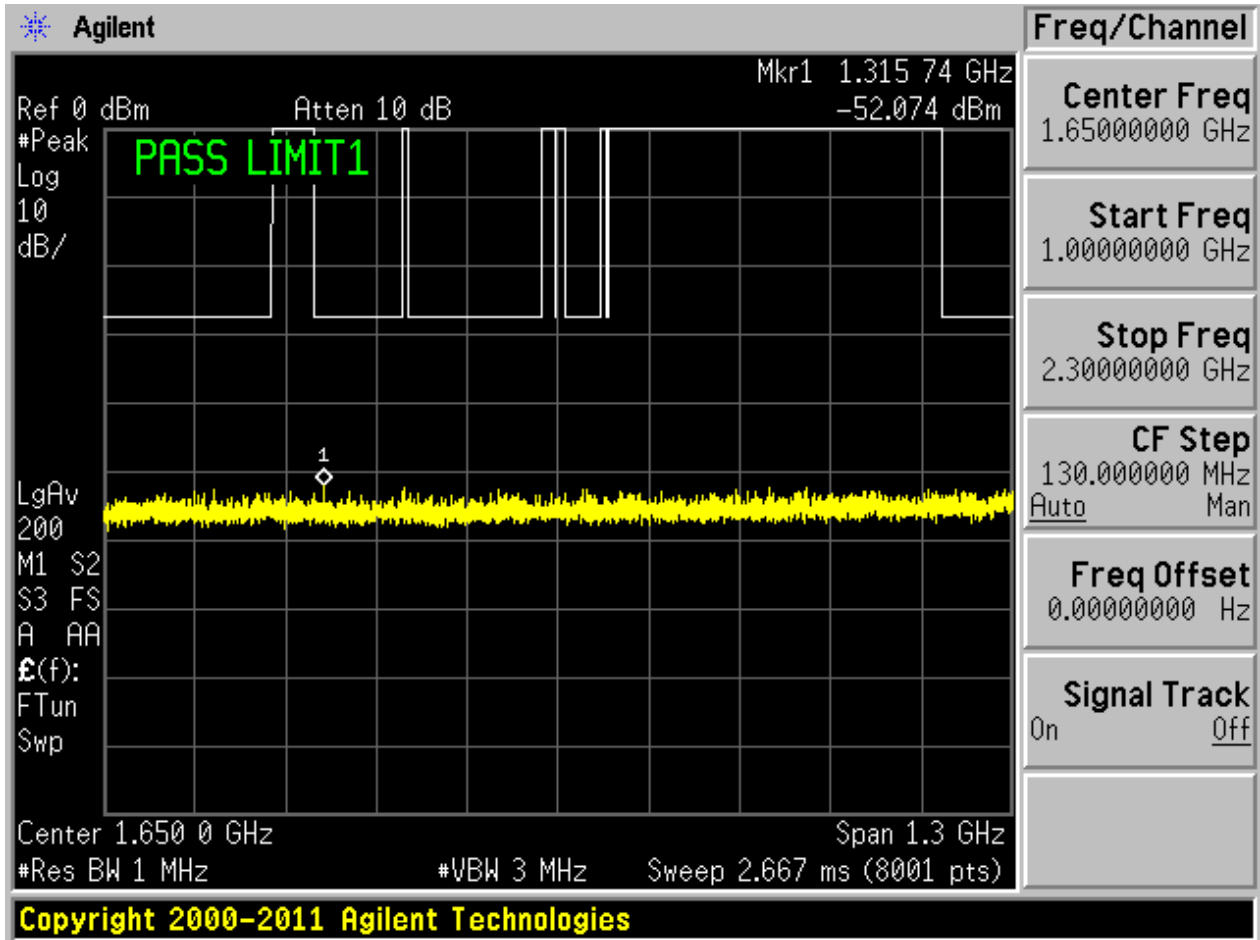
2.24.1 Ant 1 (Trace#1)

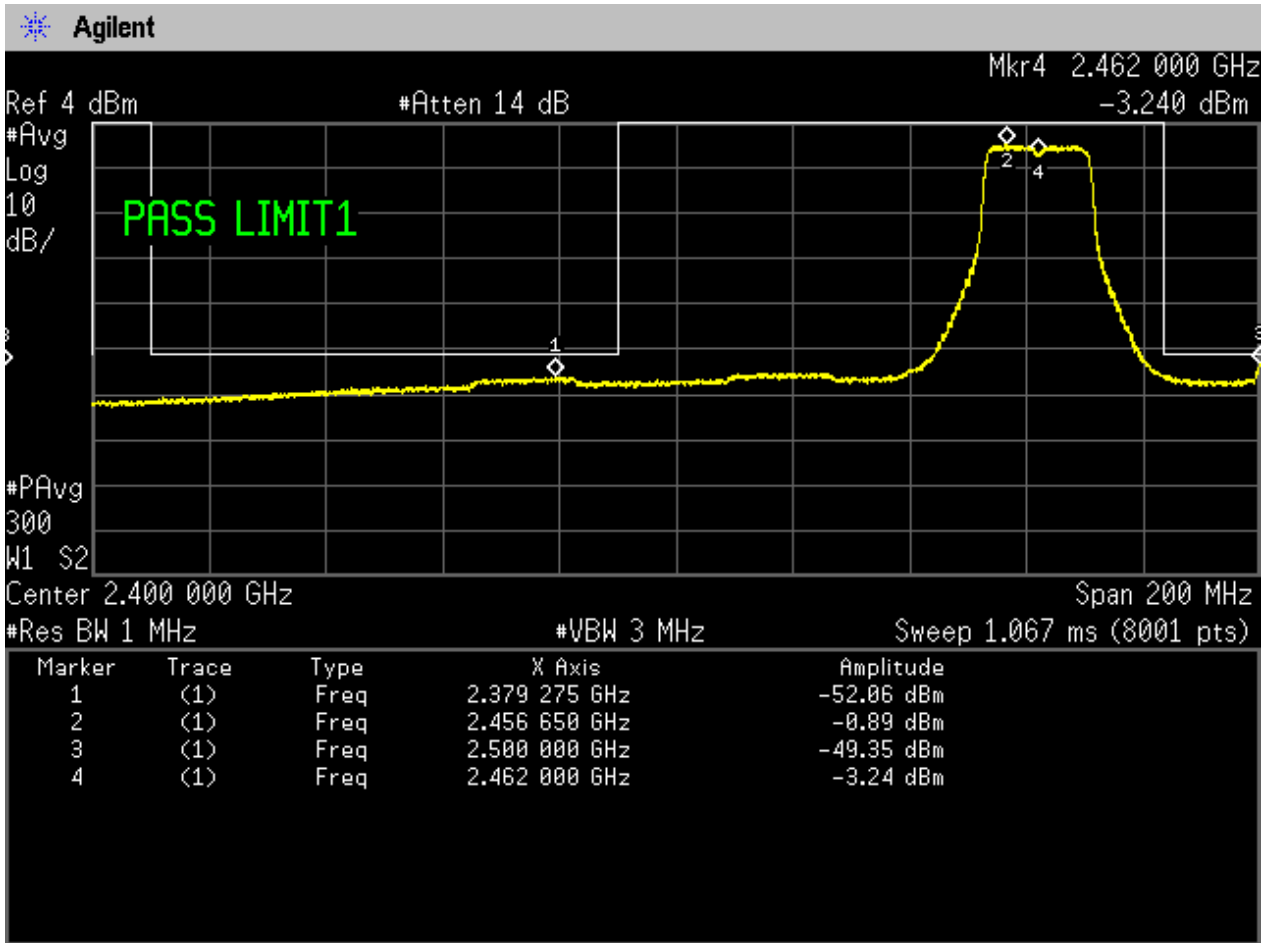


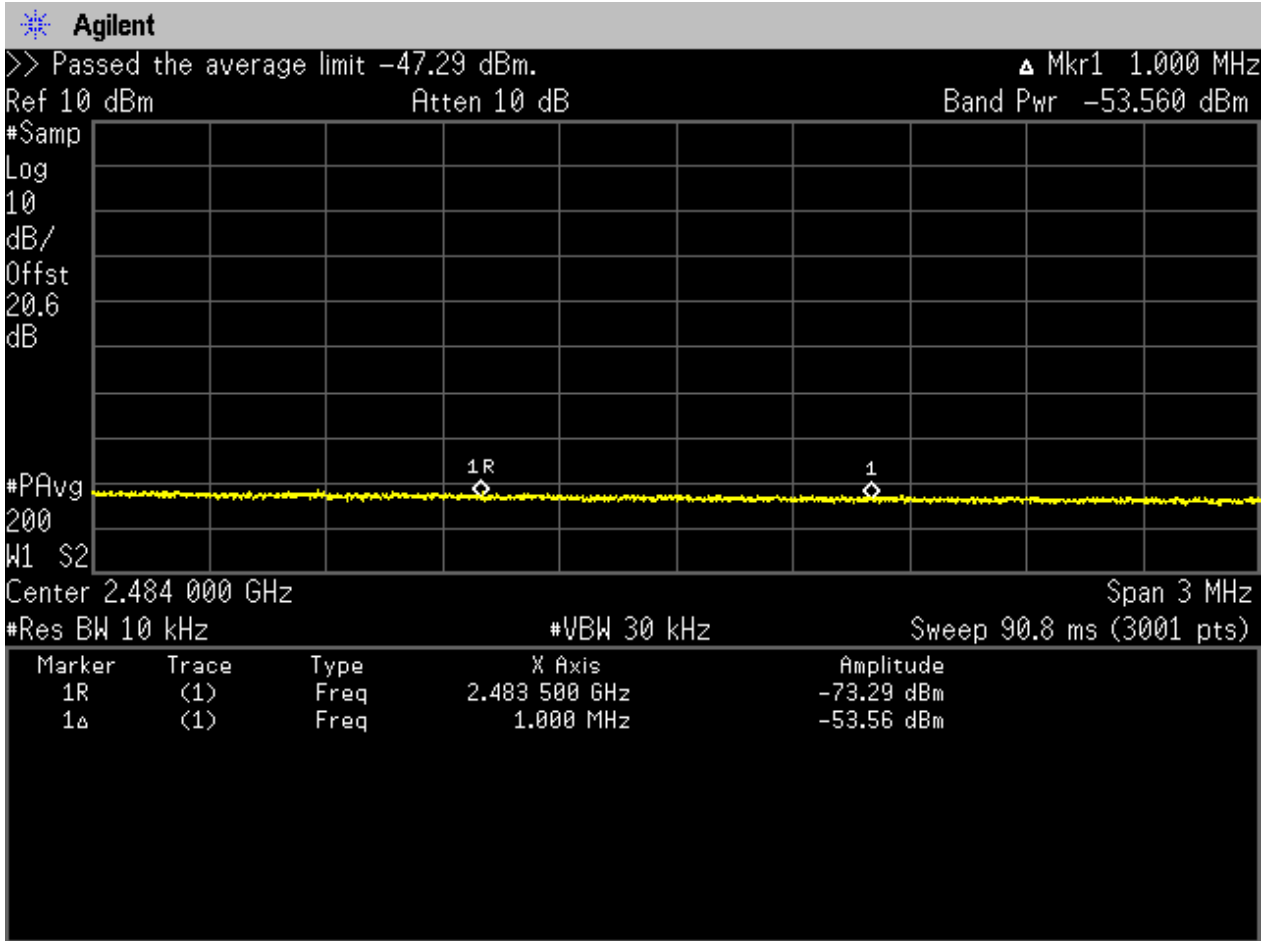


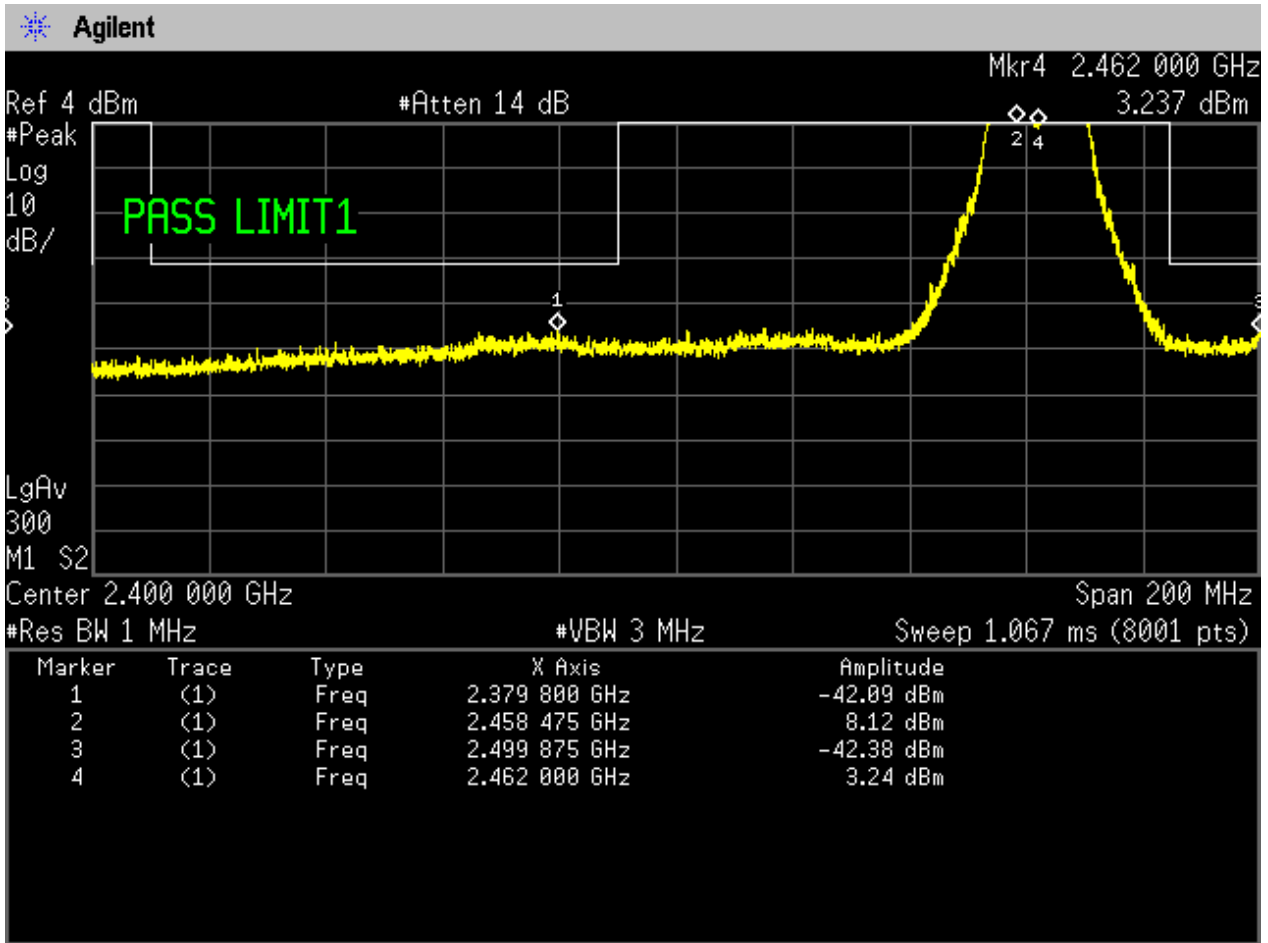


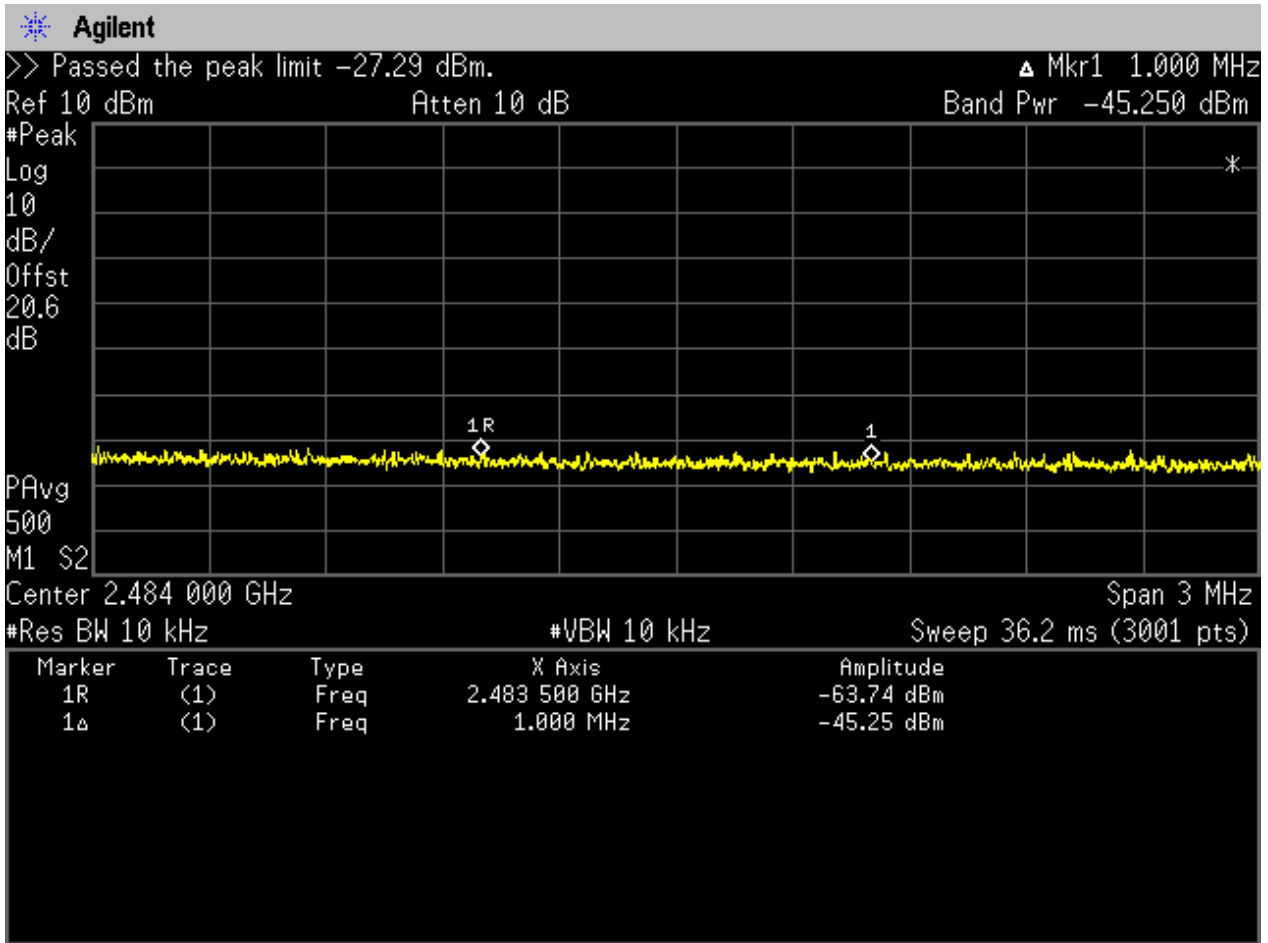


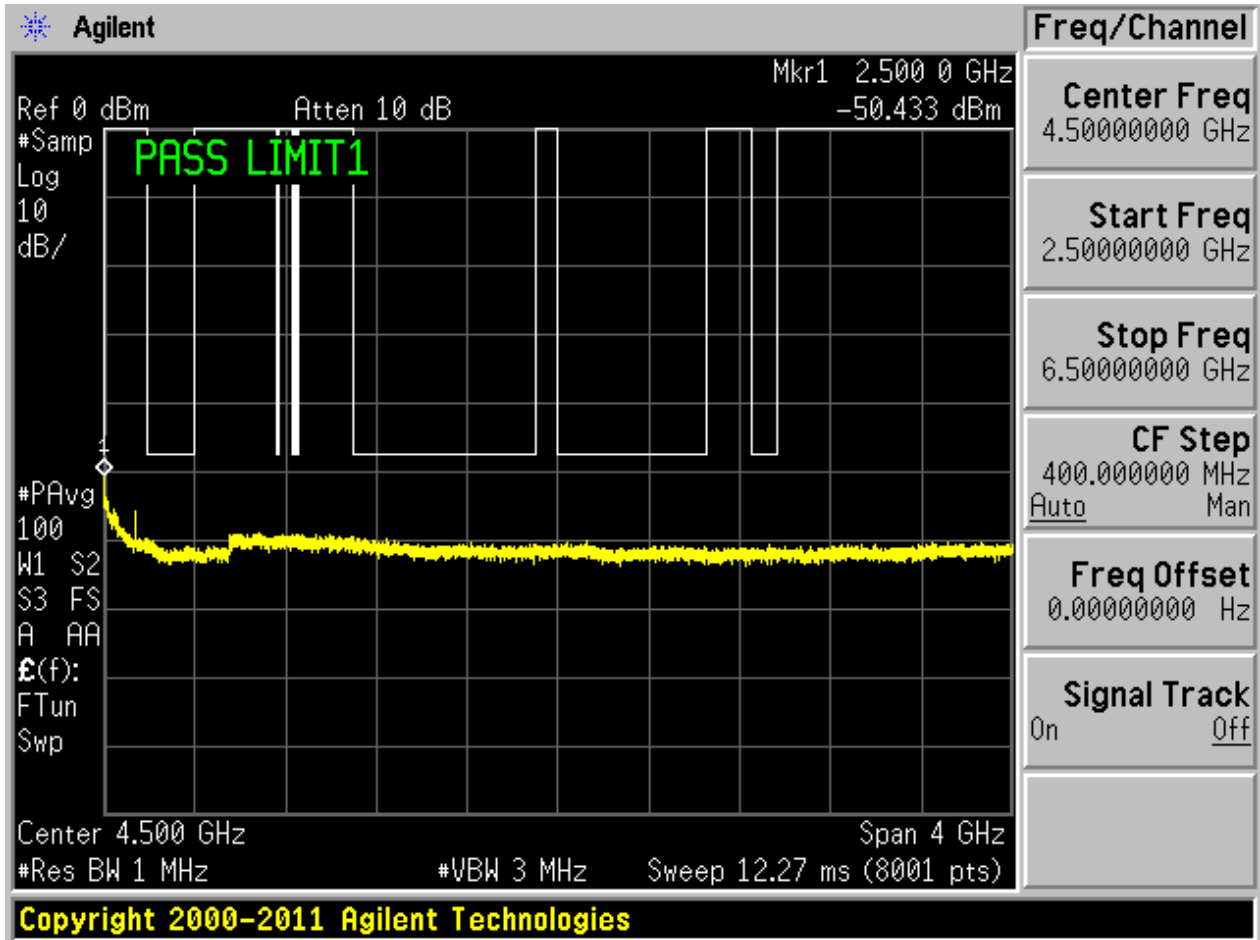


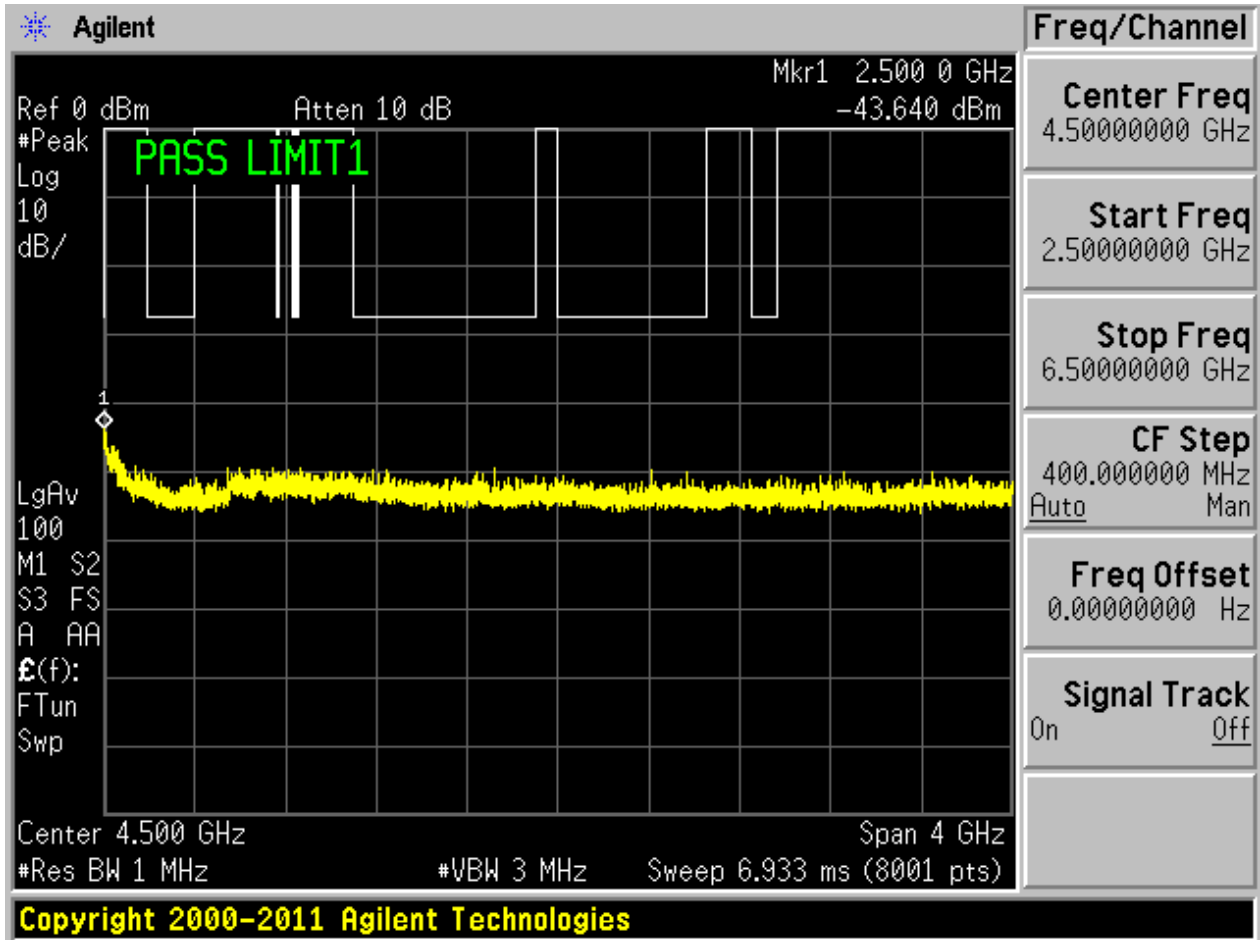


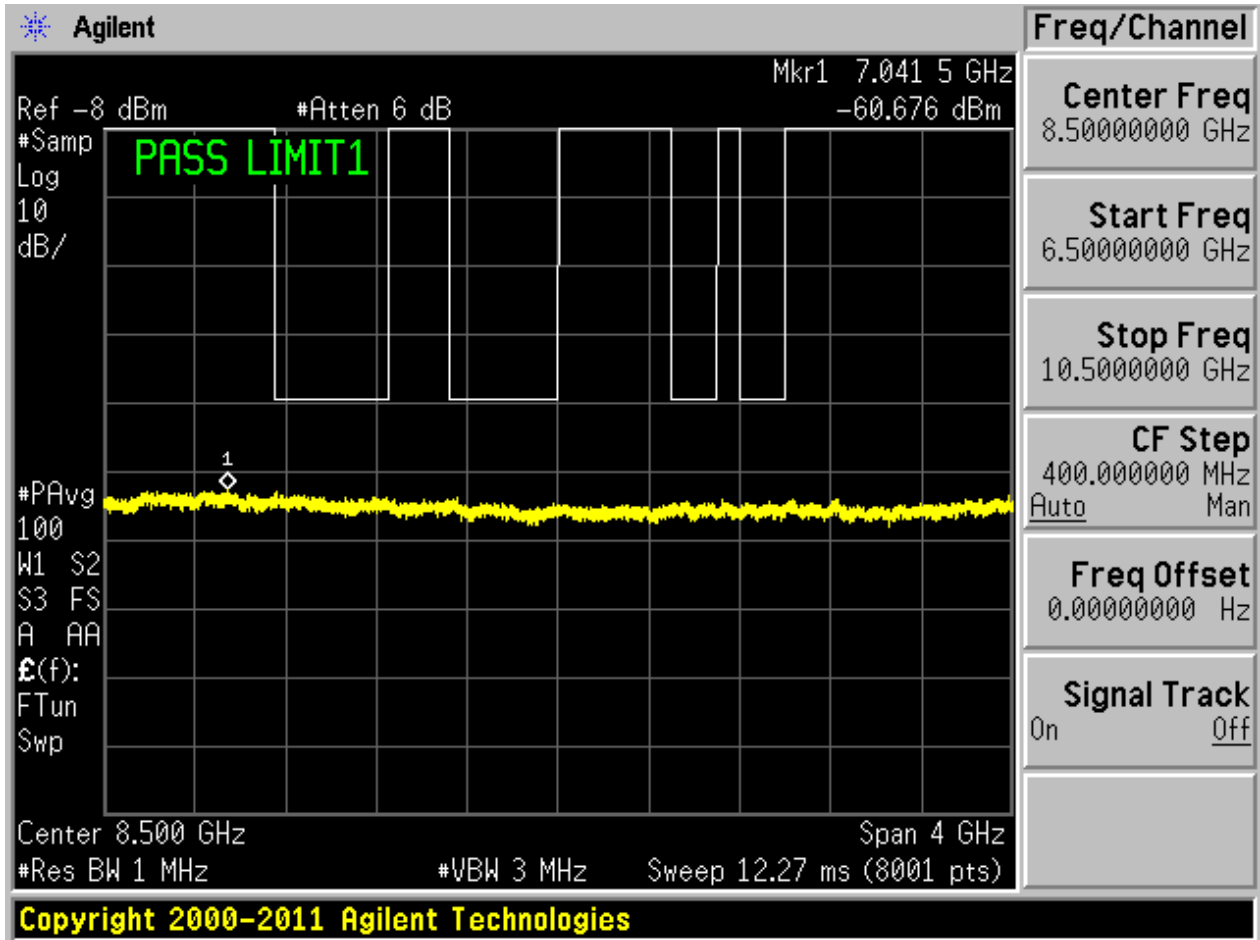


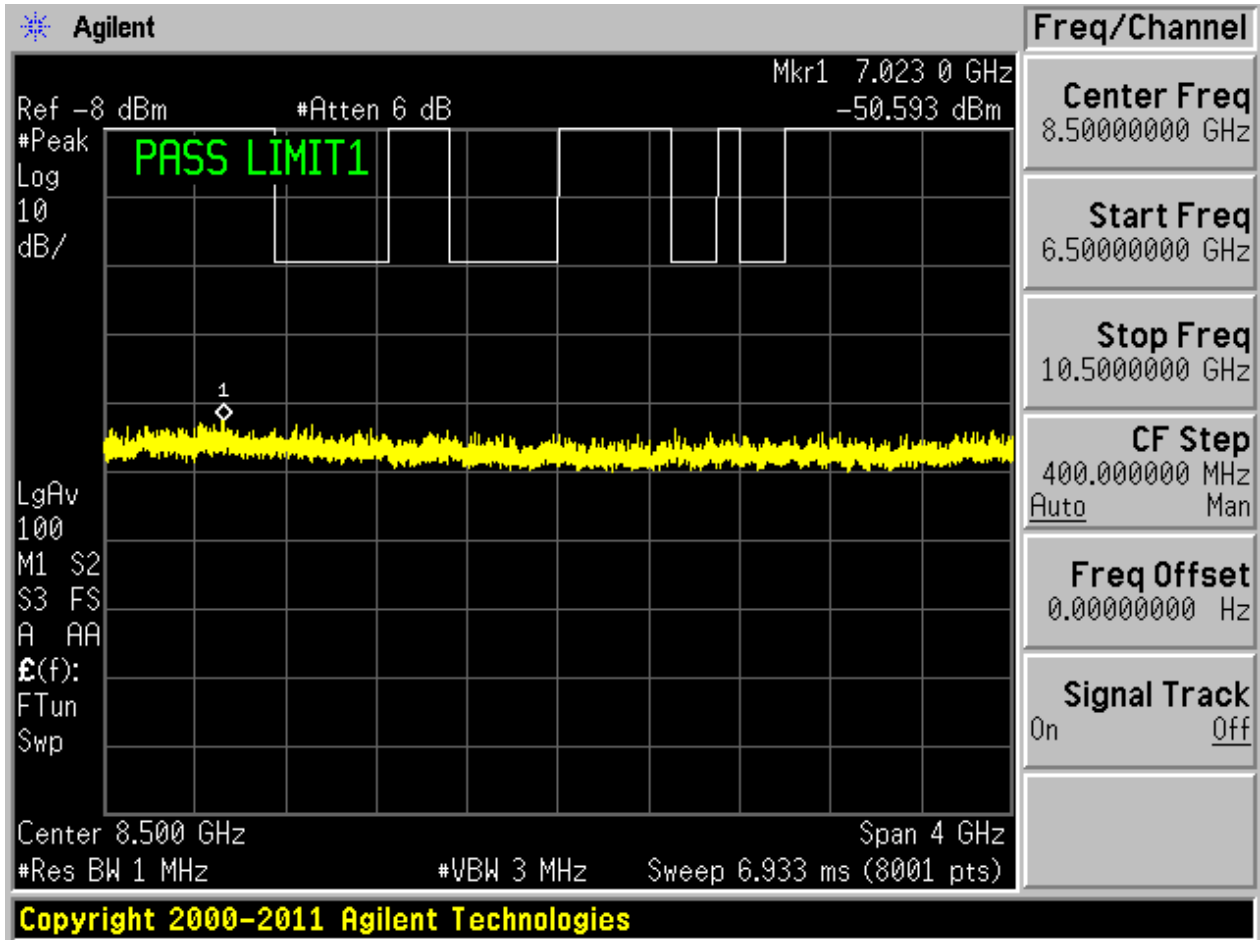


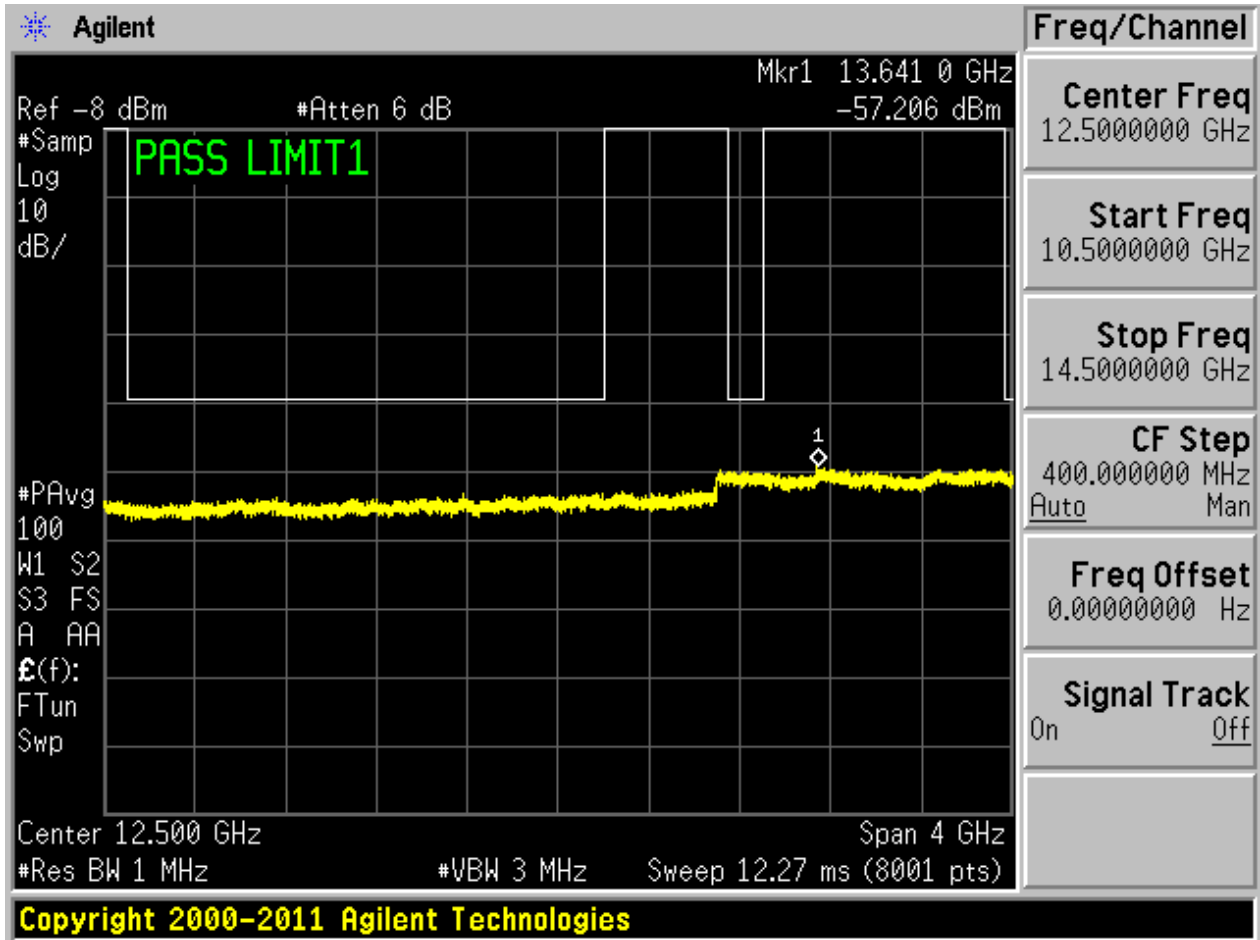


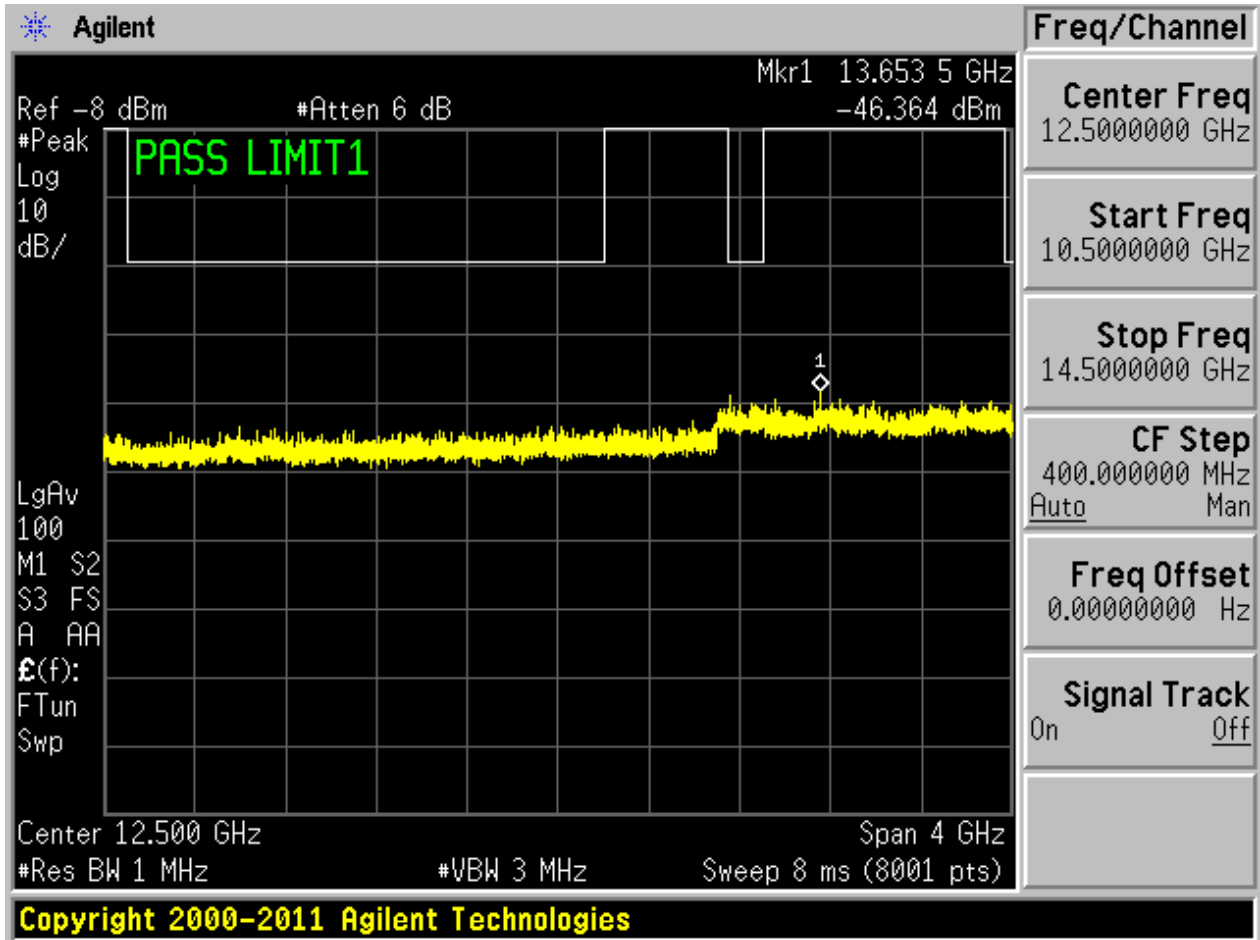


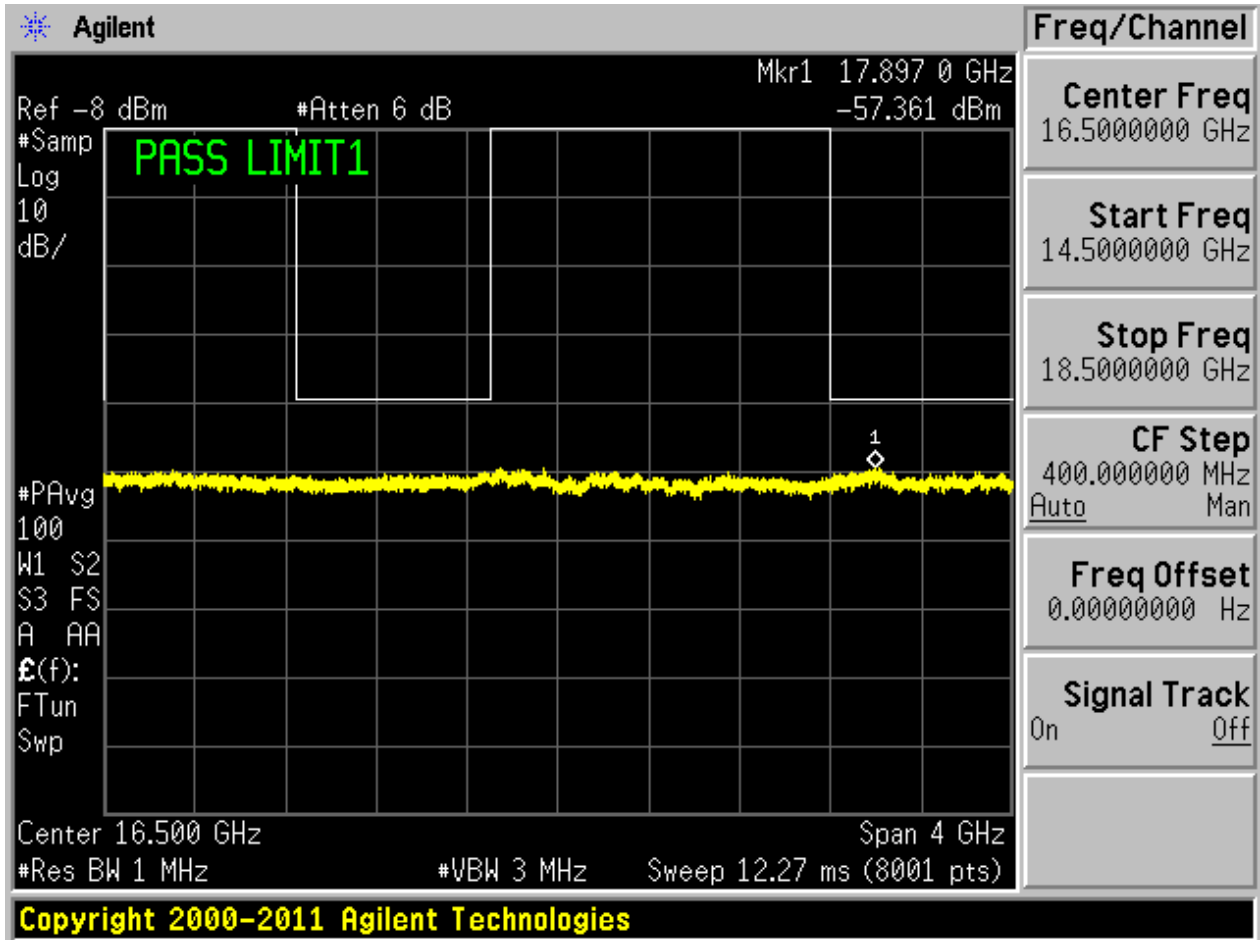


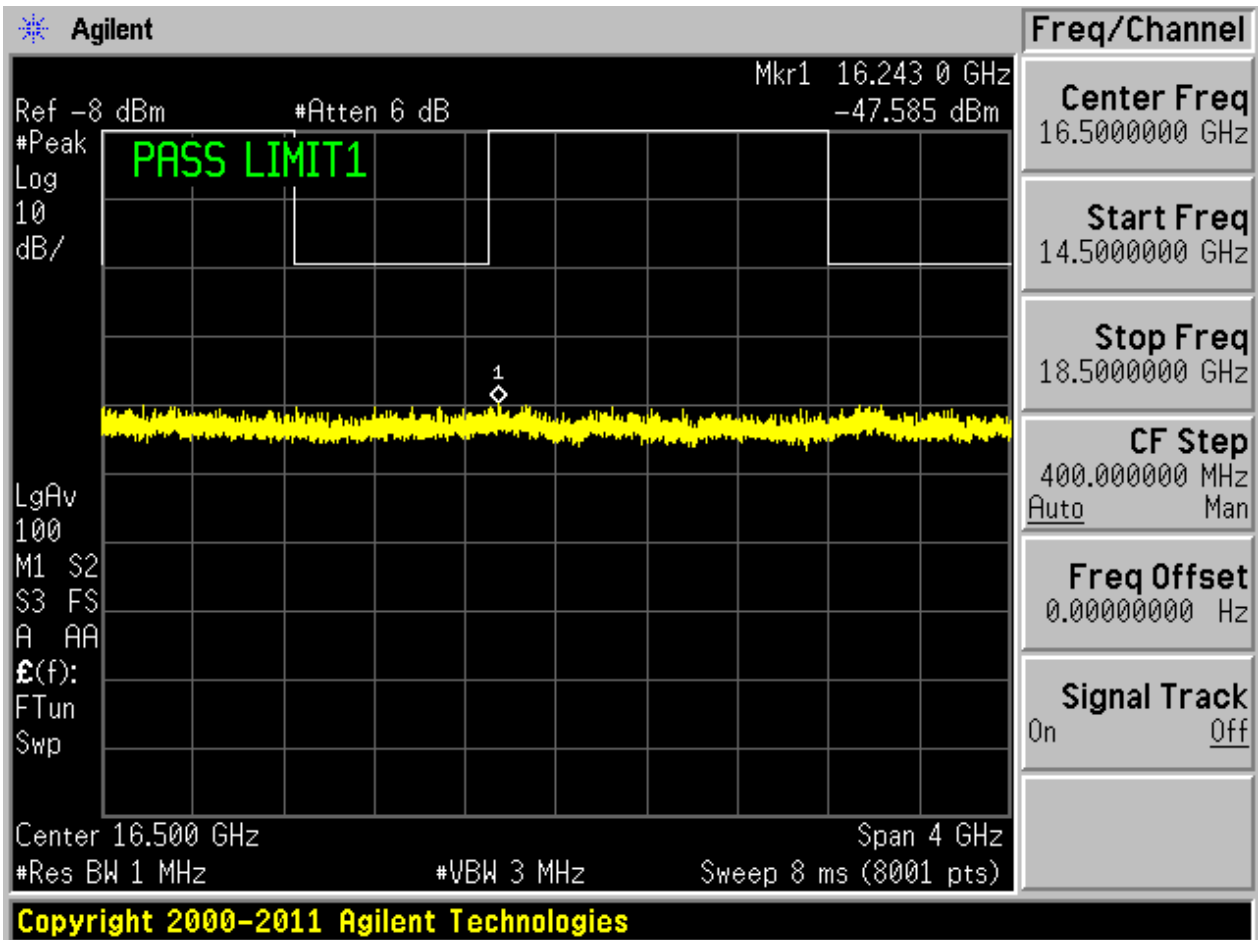


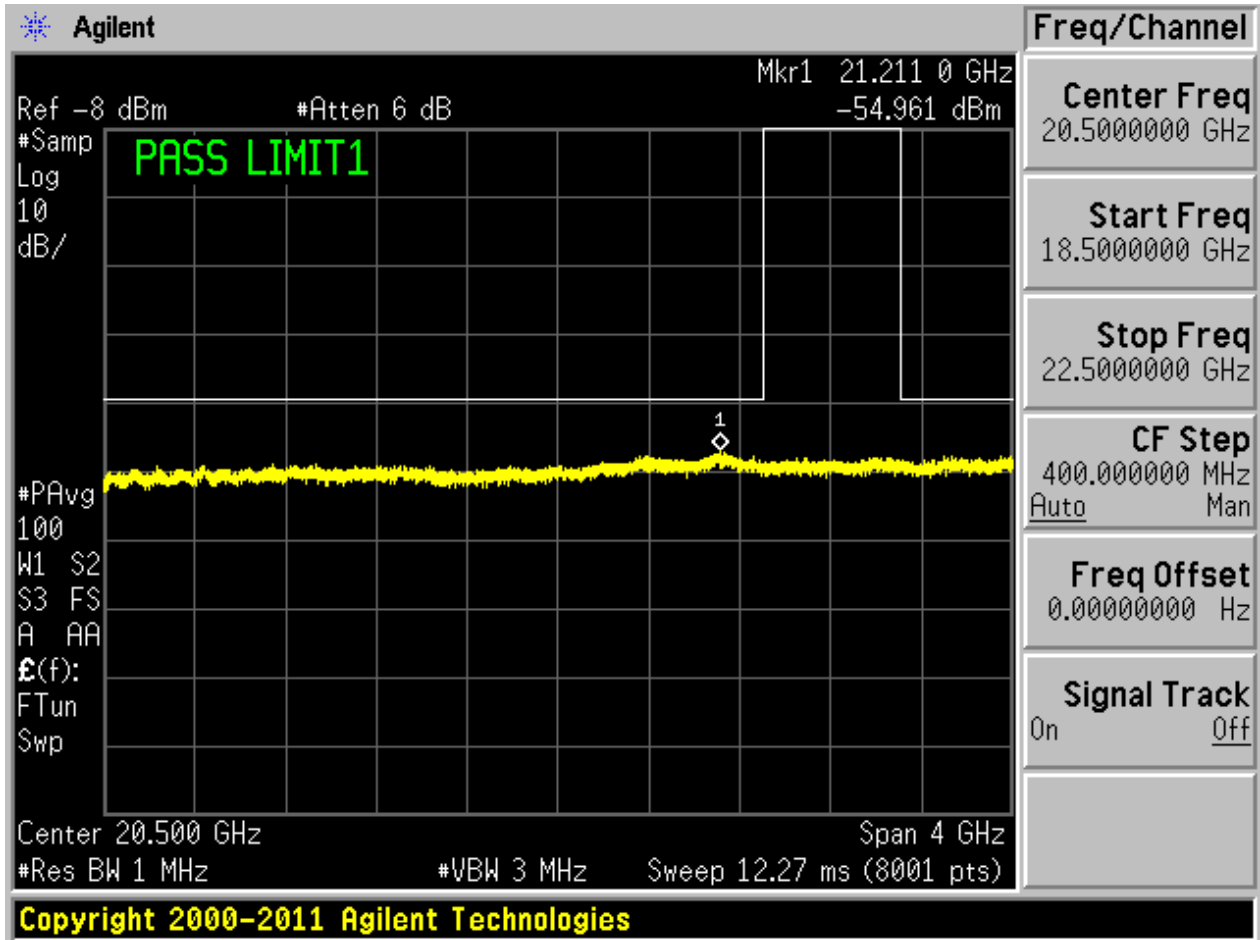


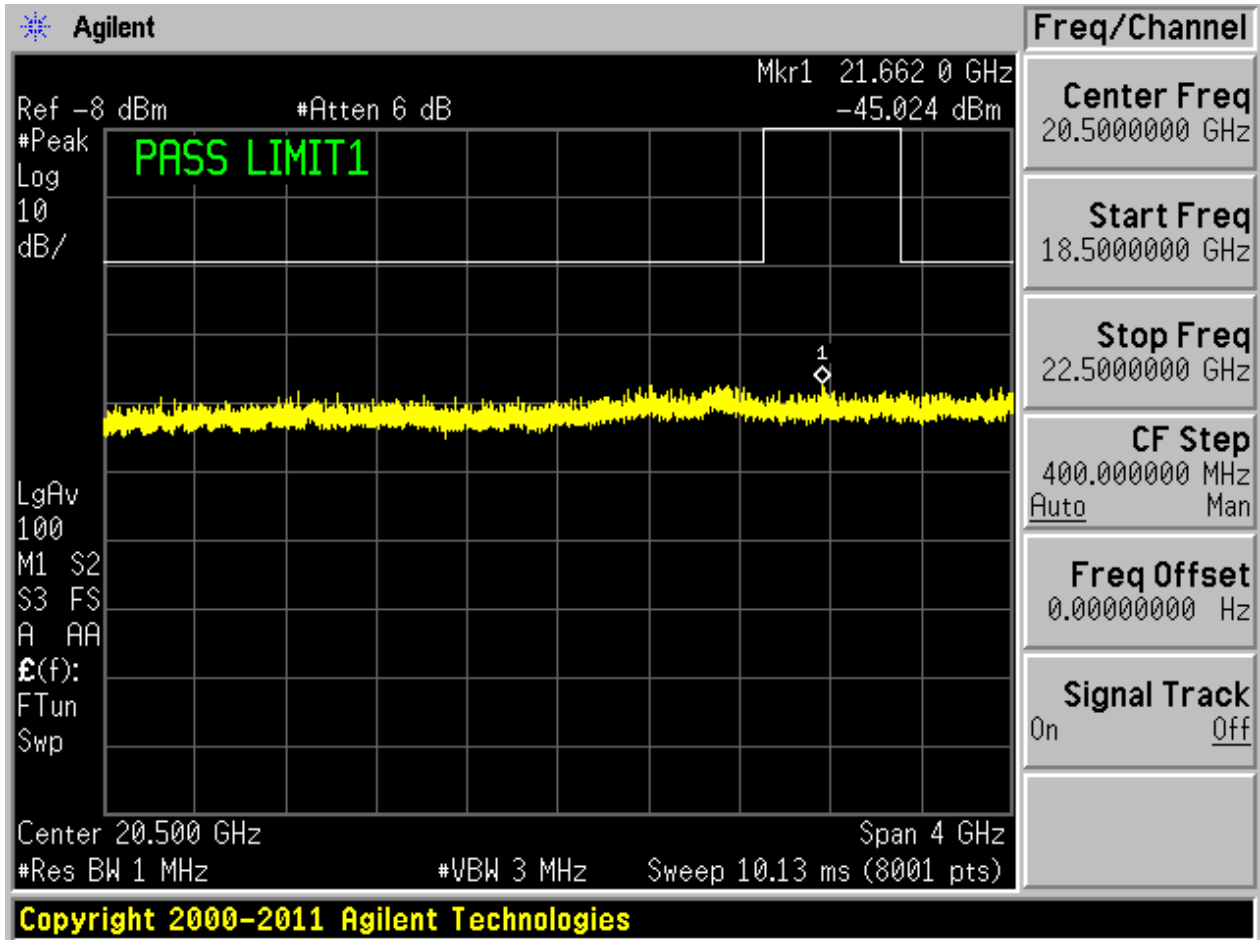


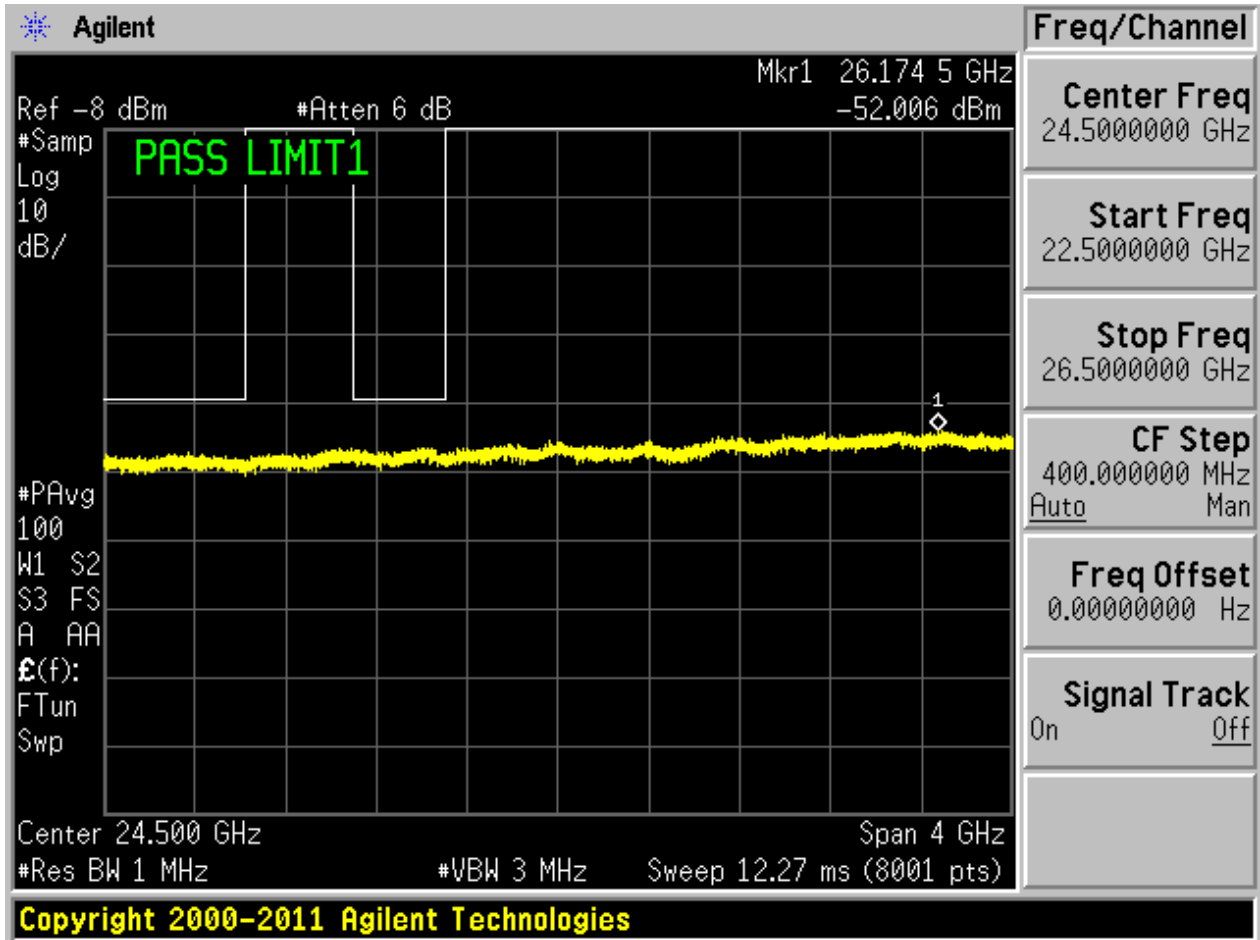


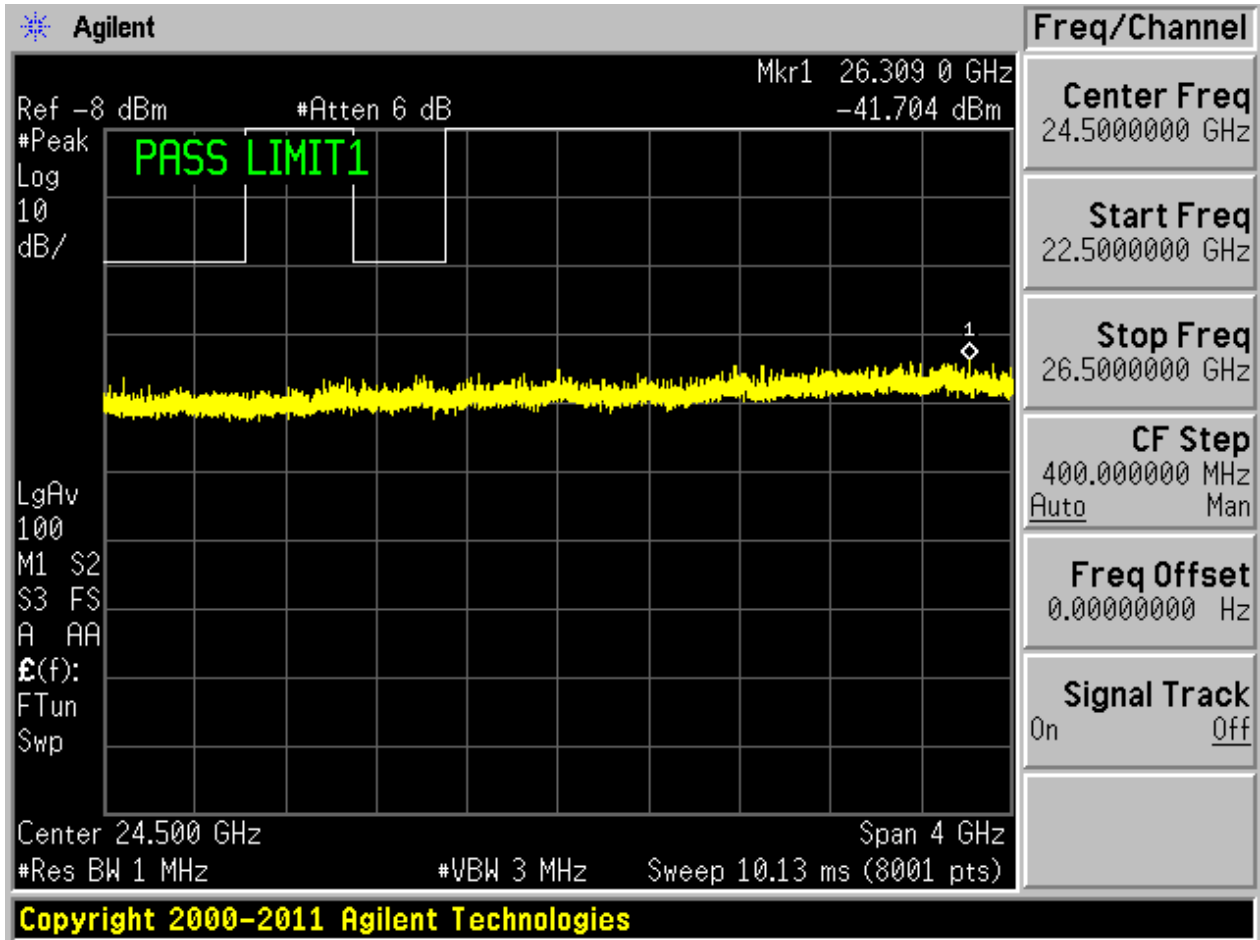




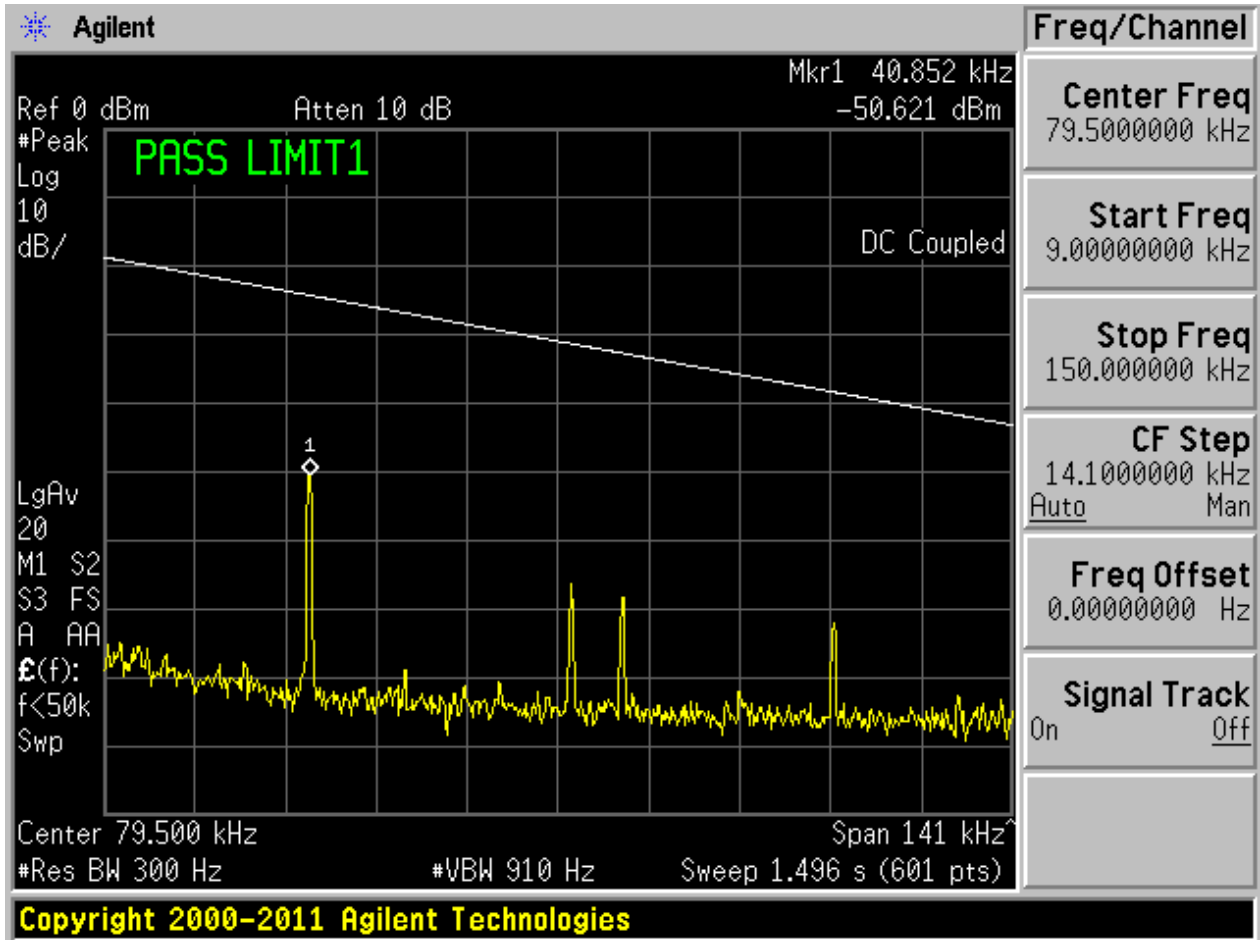


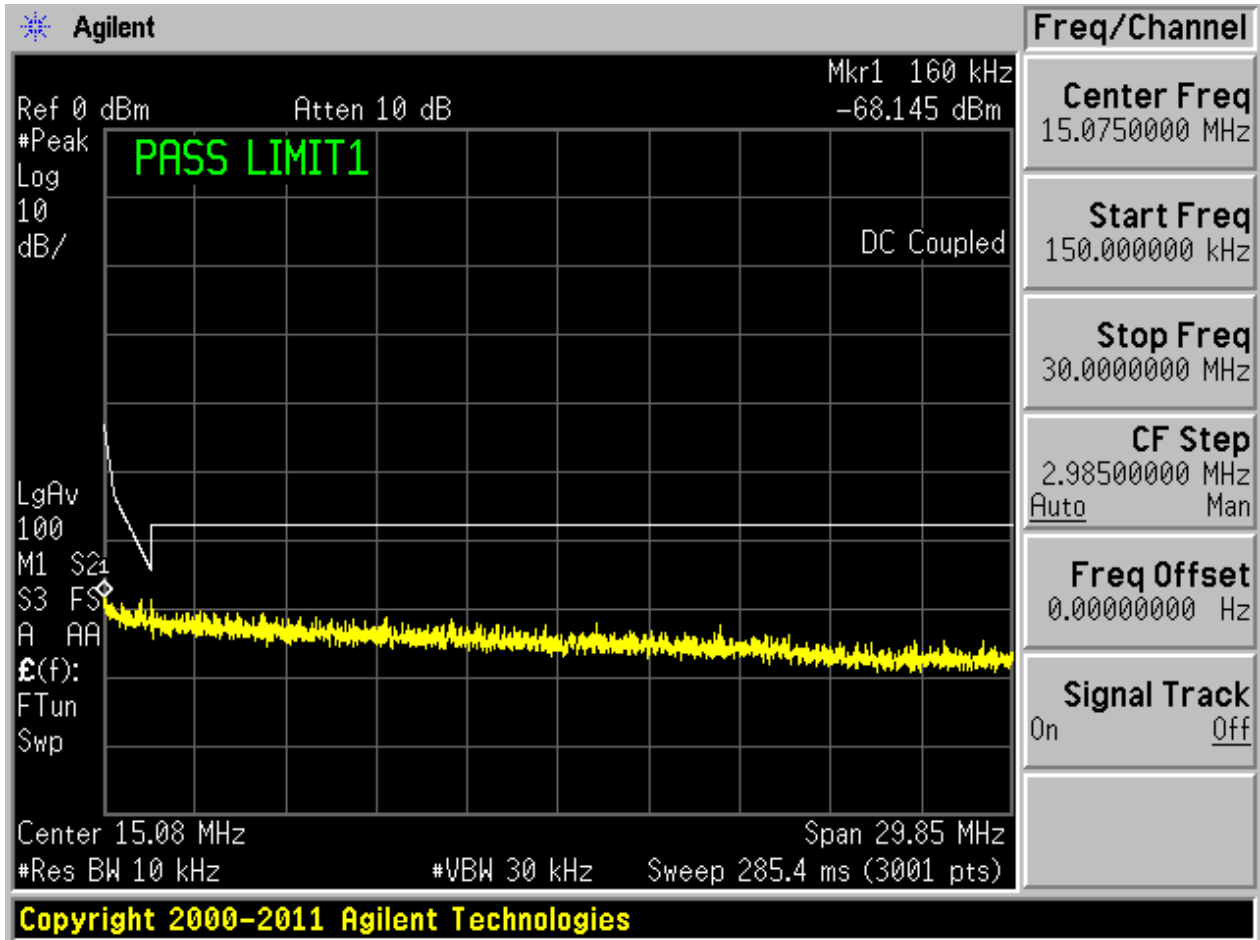


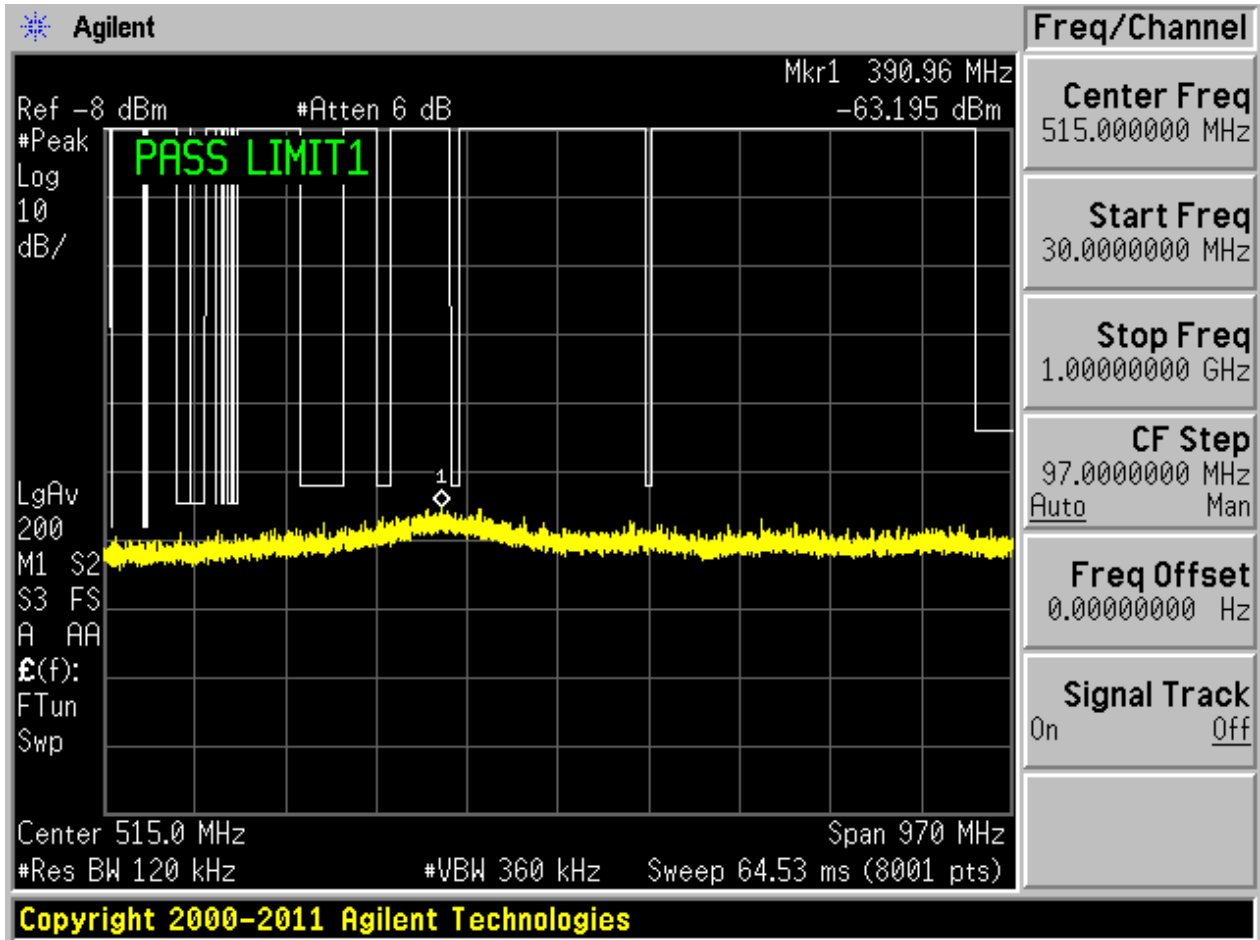


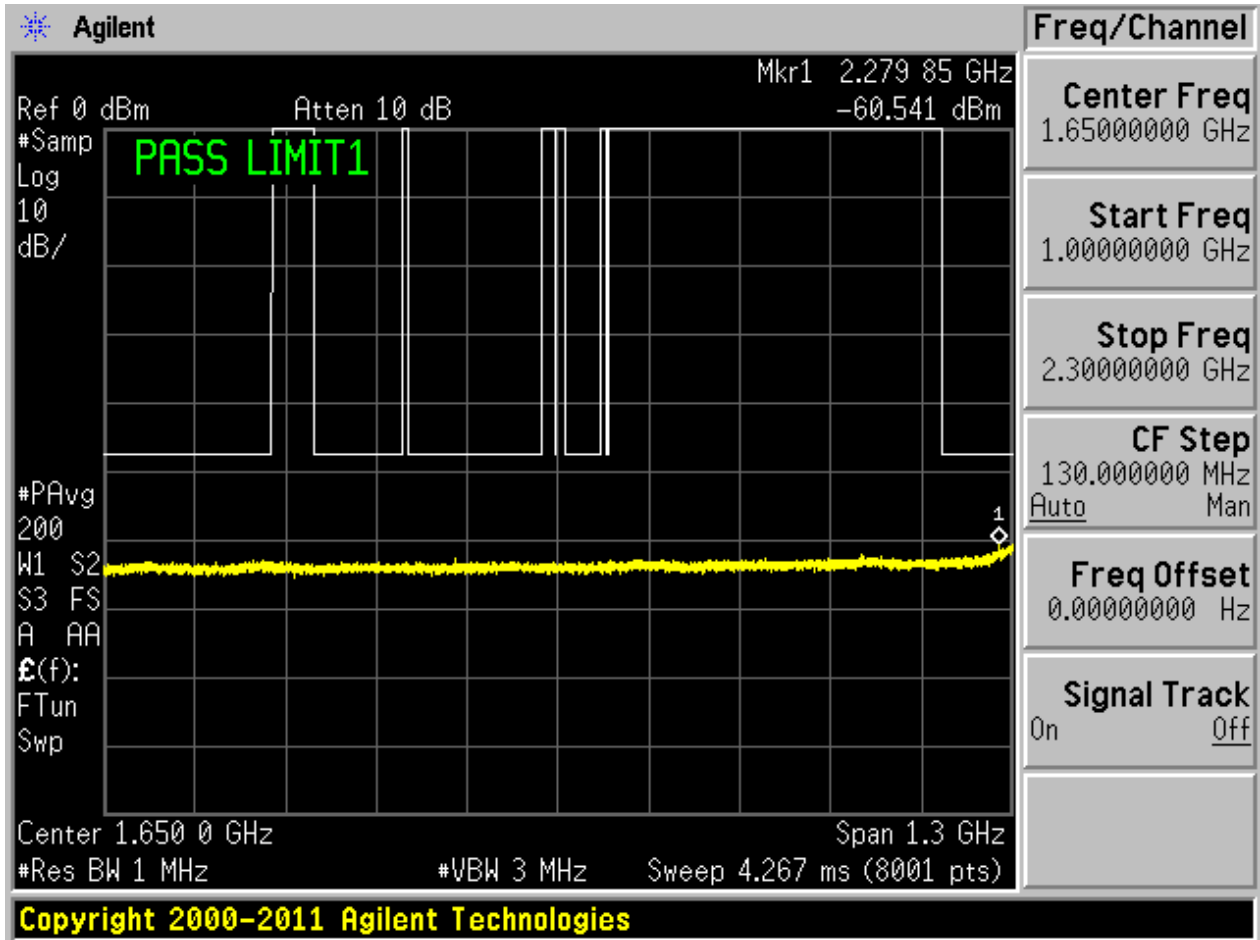


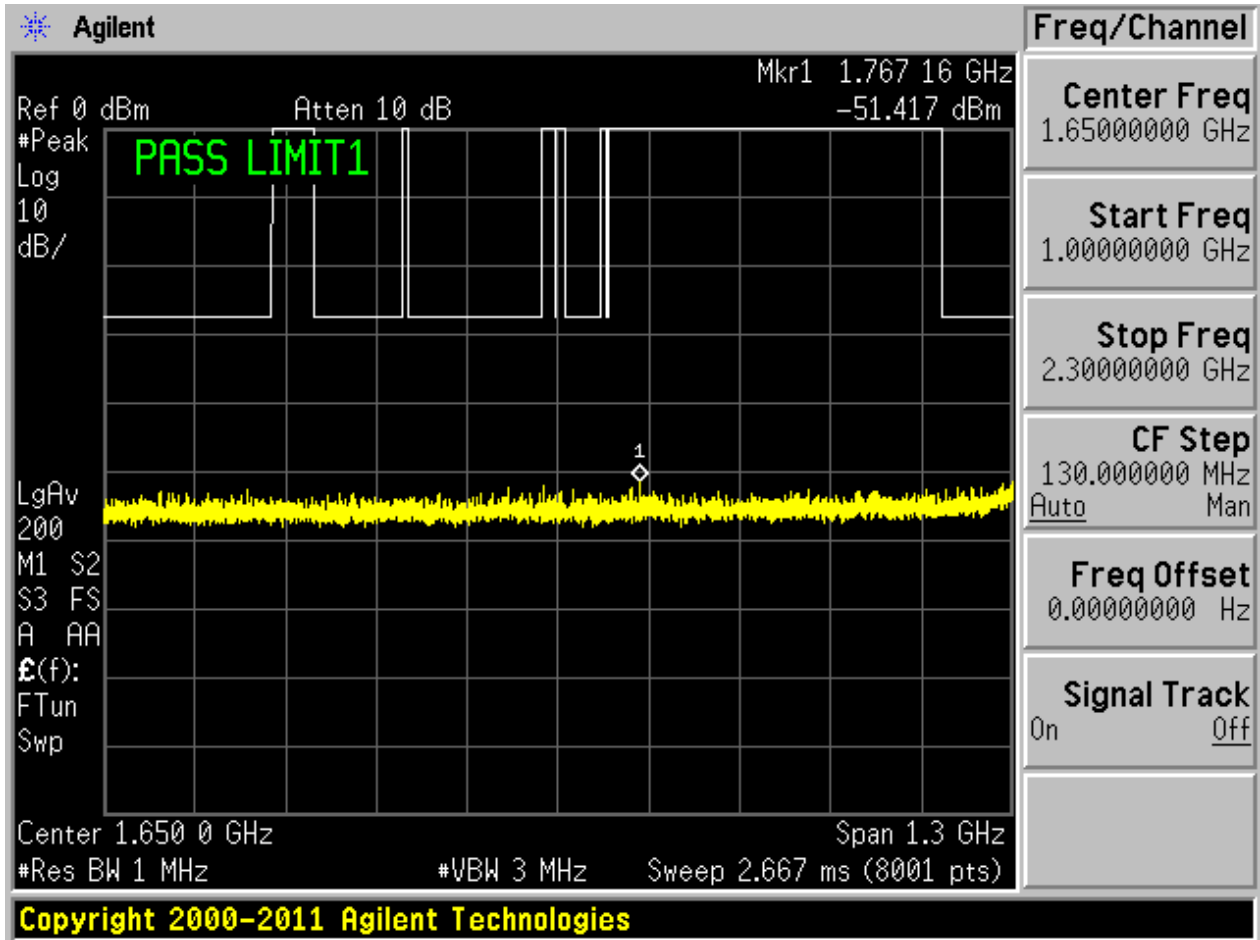
2.24.2 Ant 2 (Trace#2)

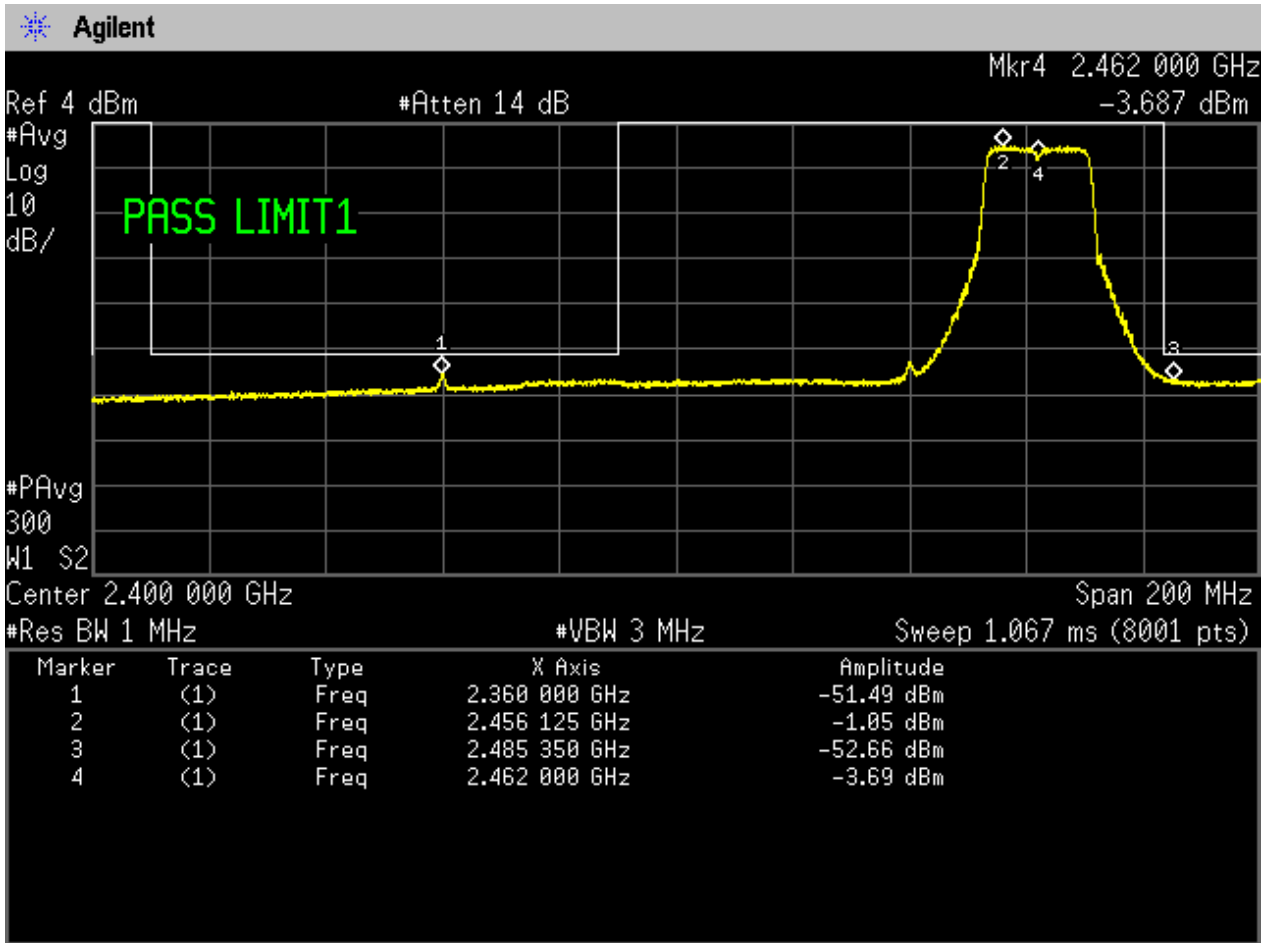


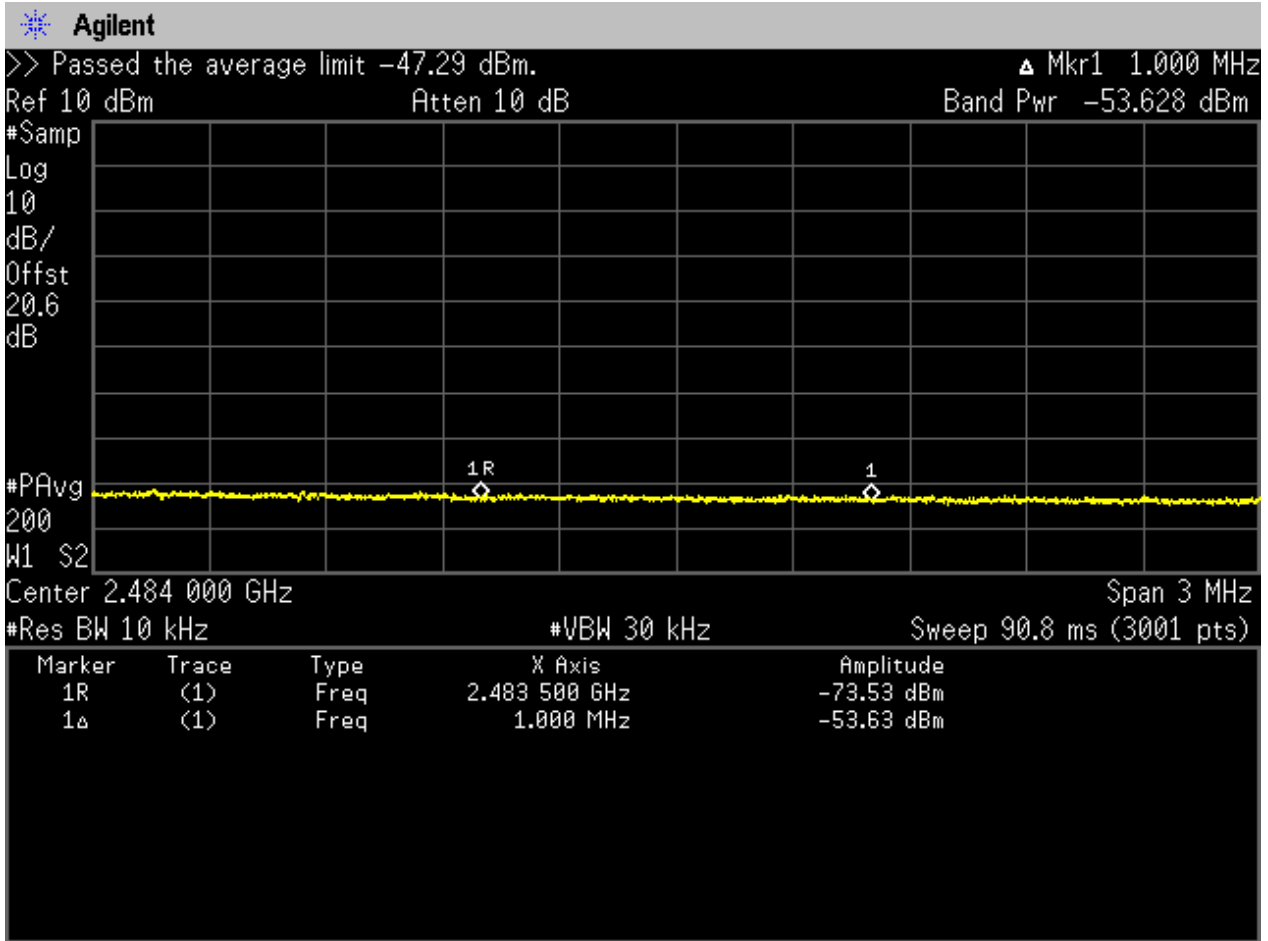


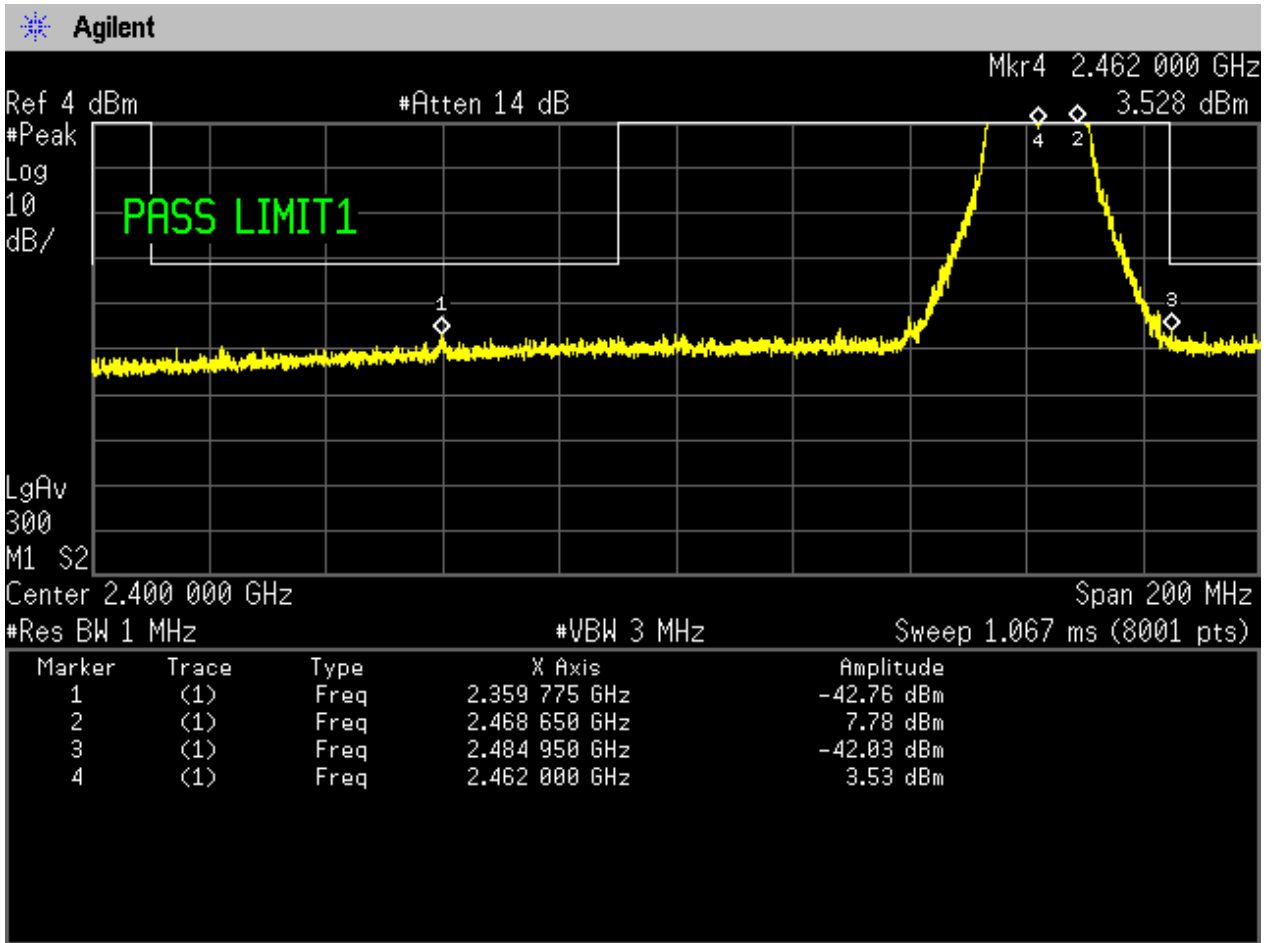


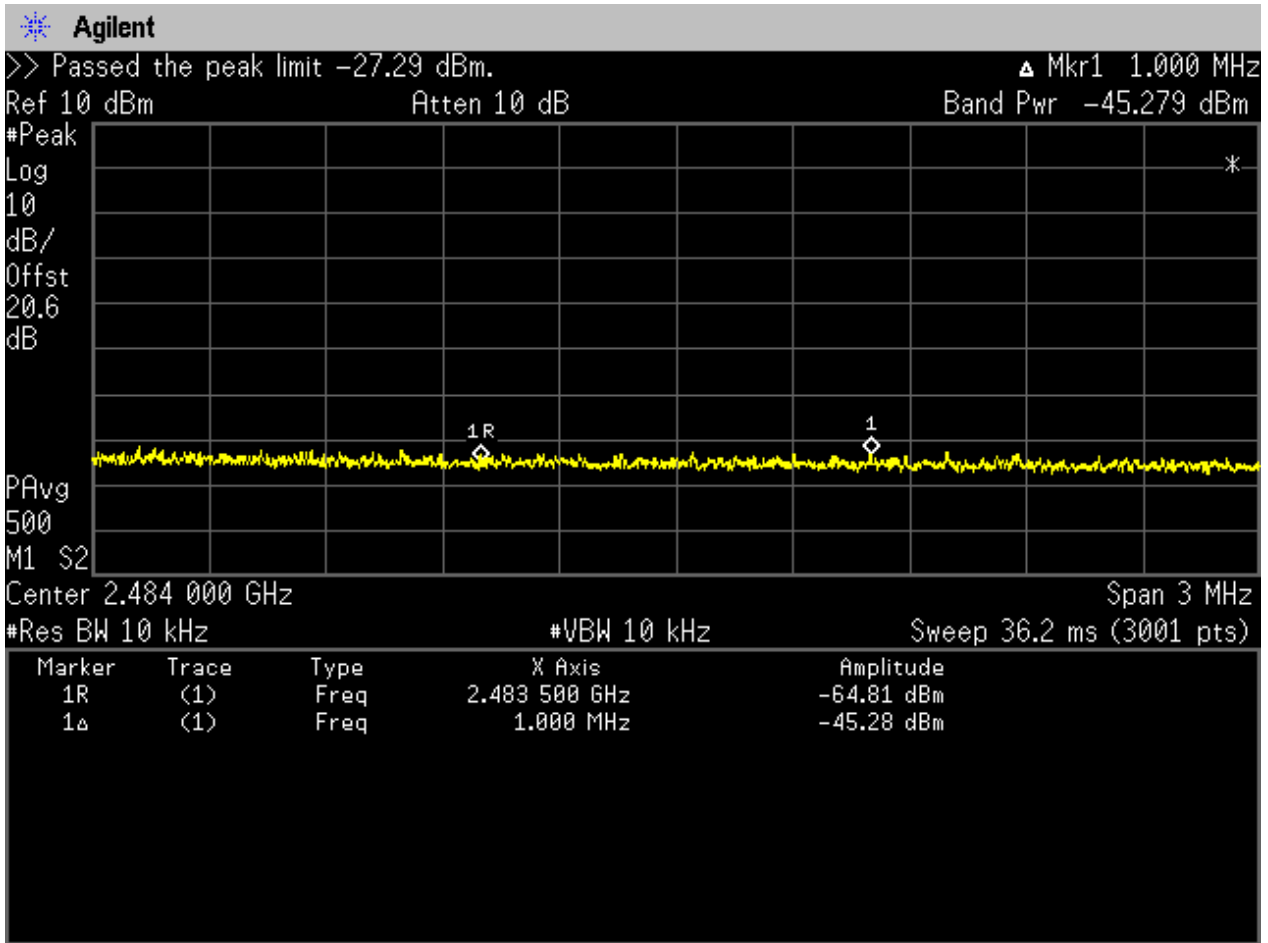


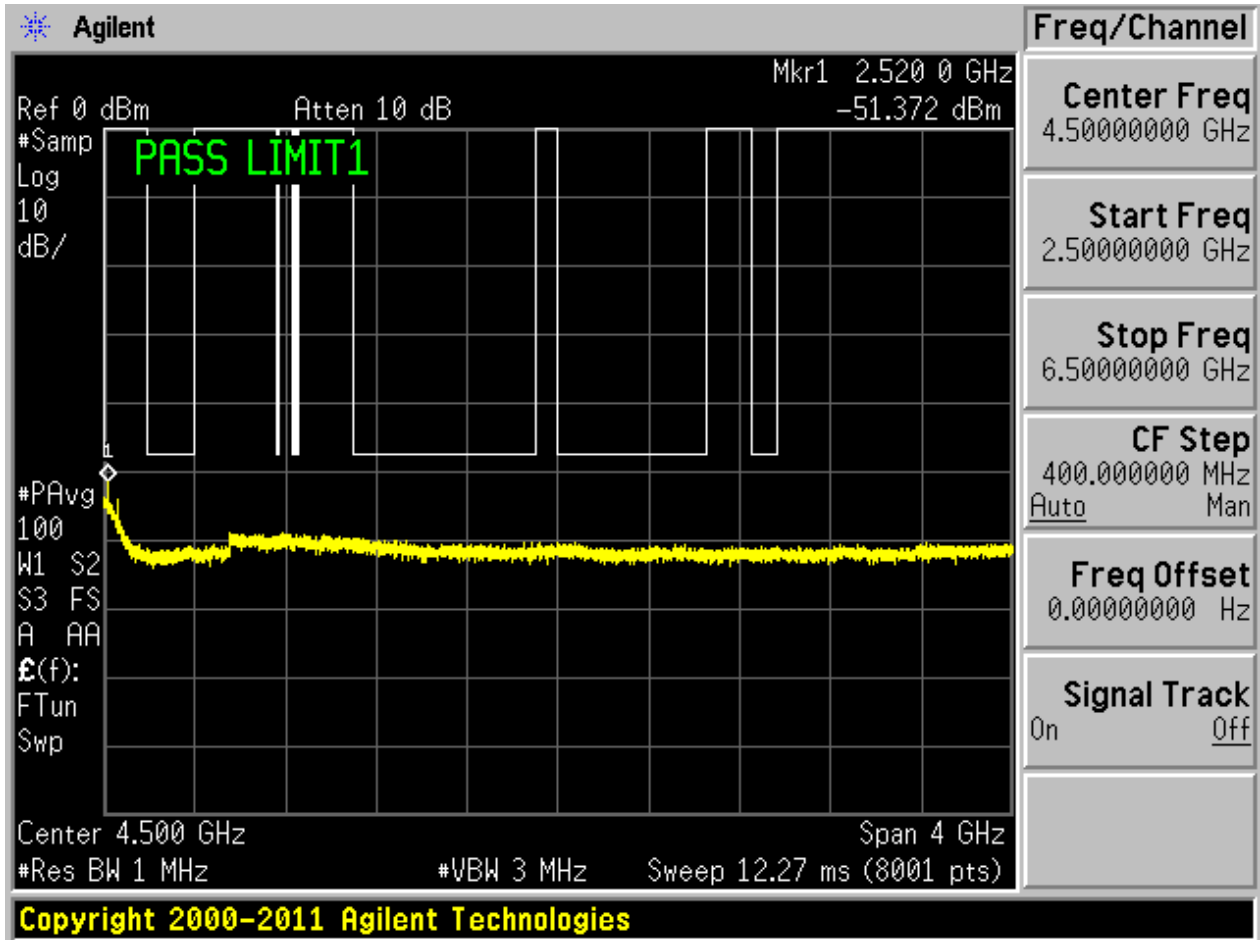


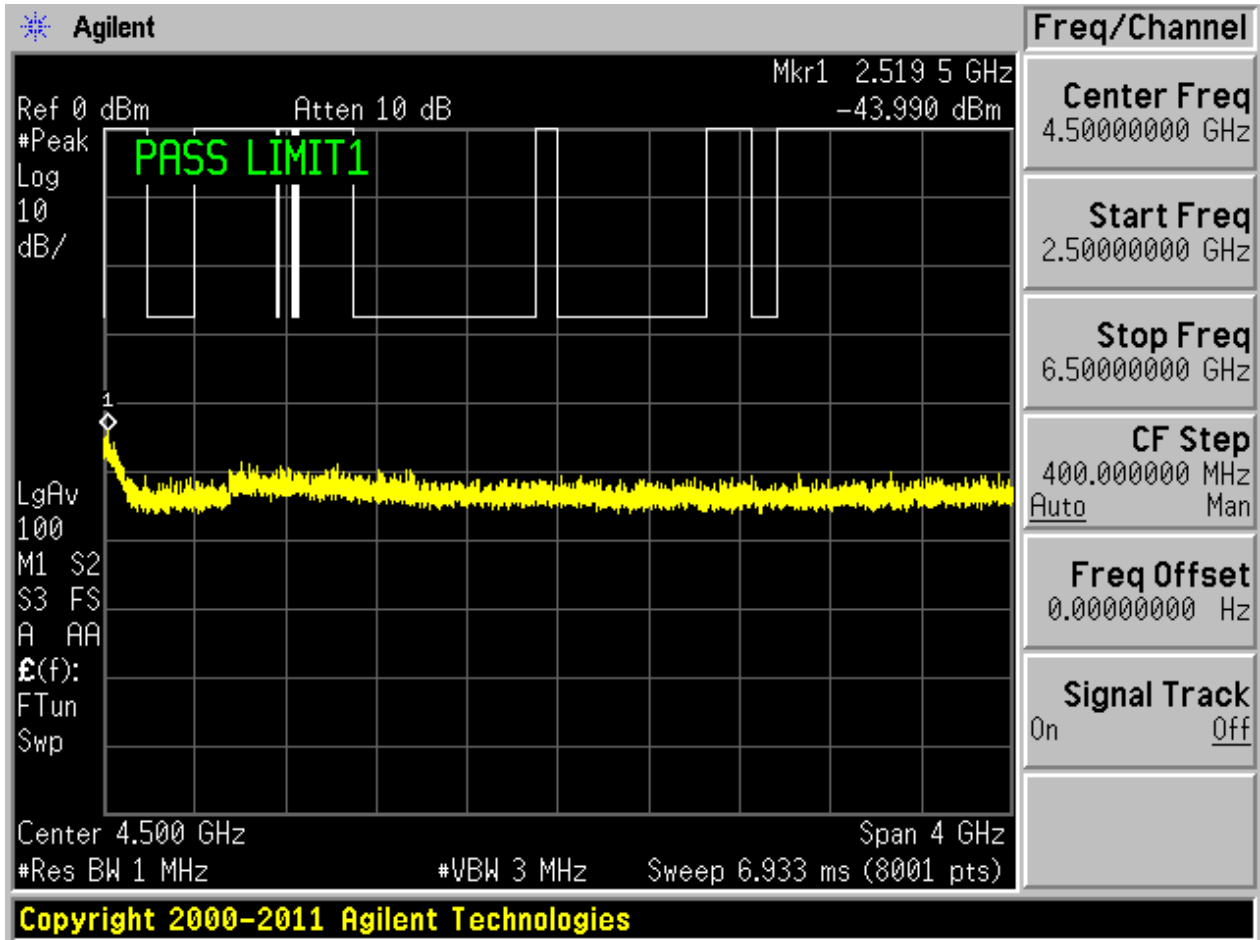


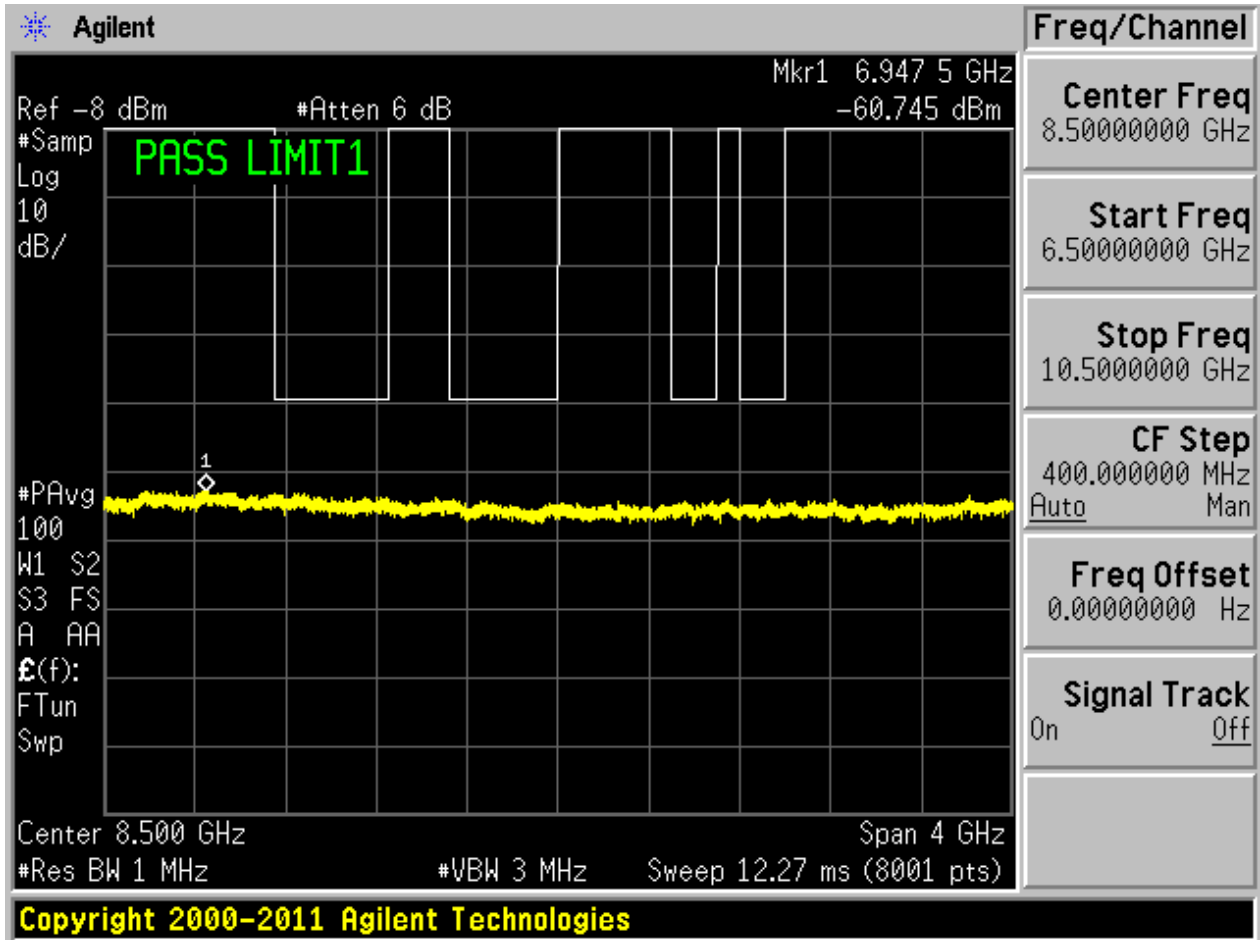


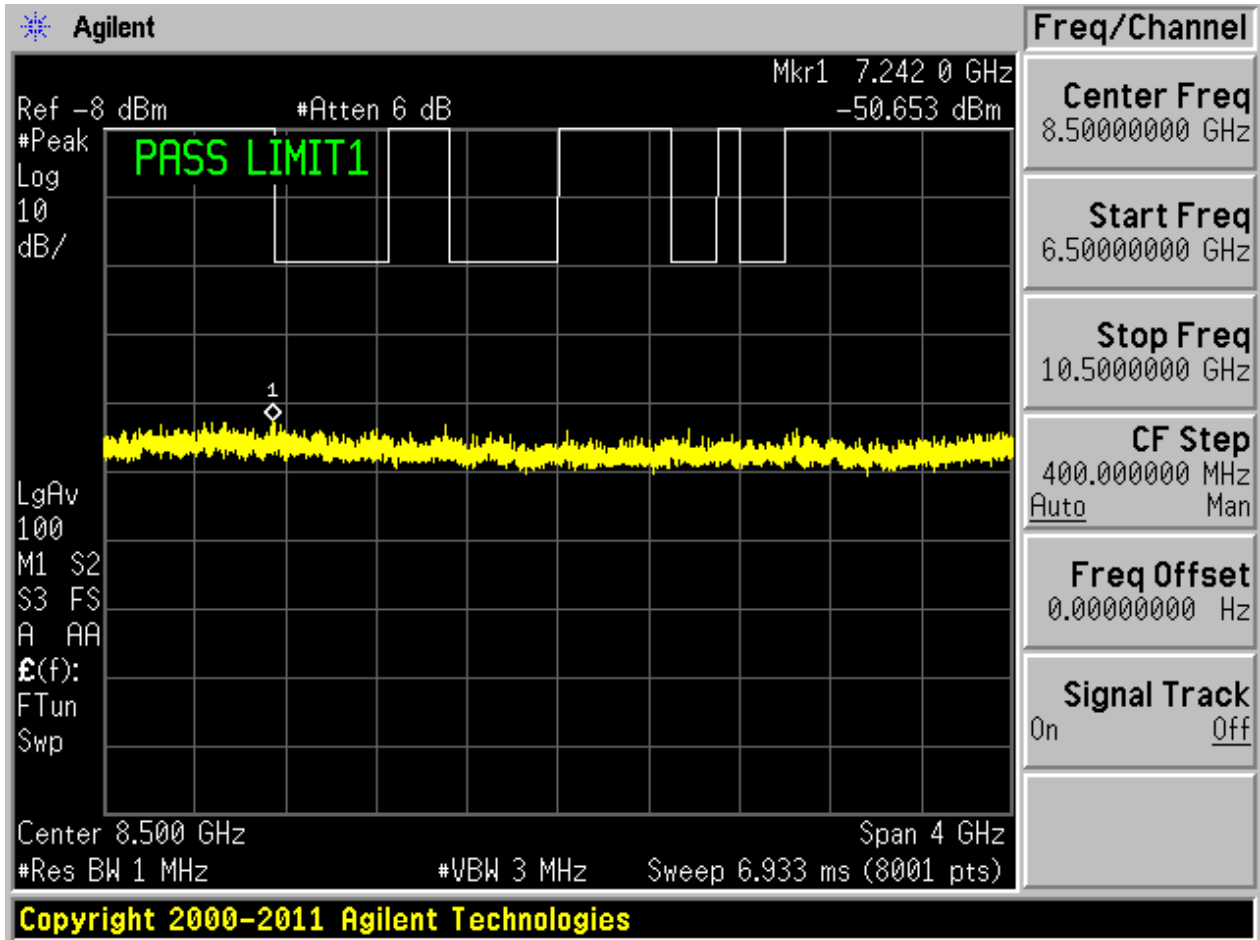


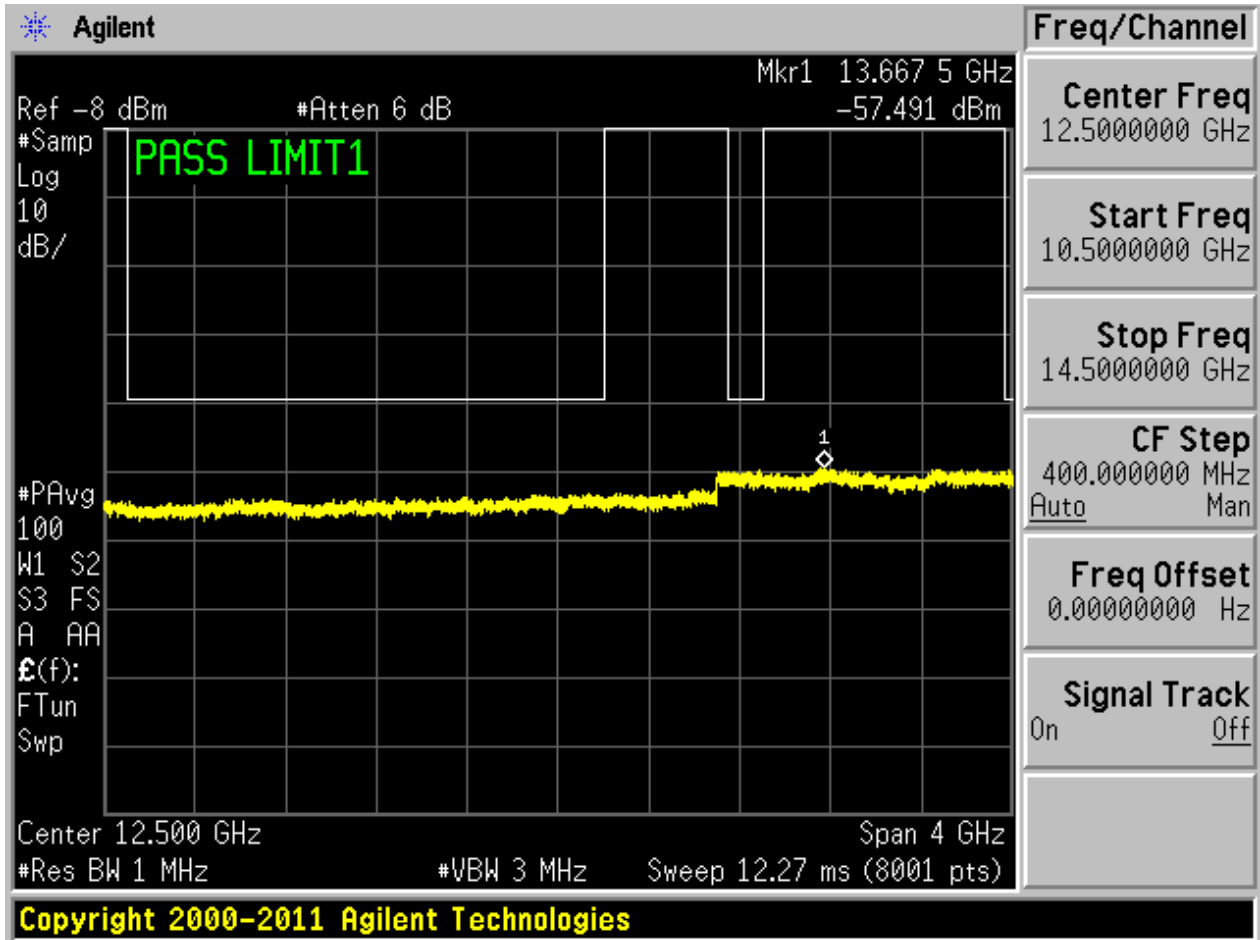


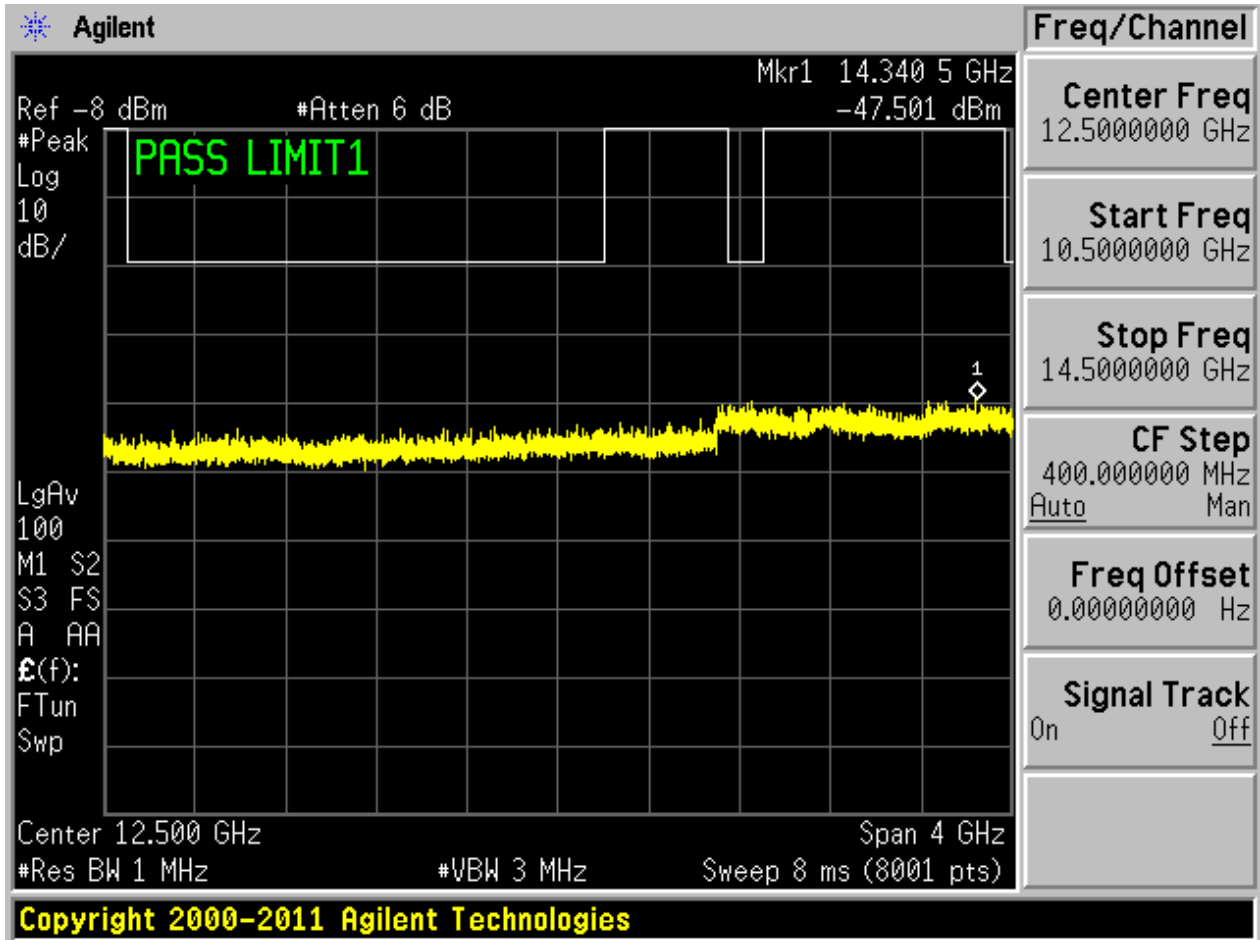


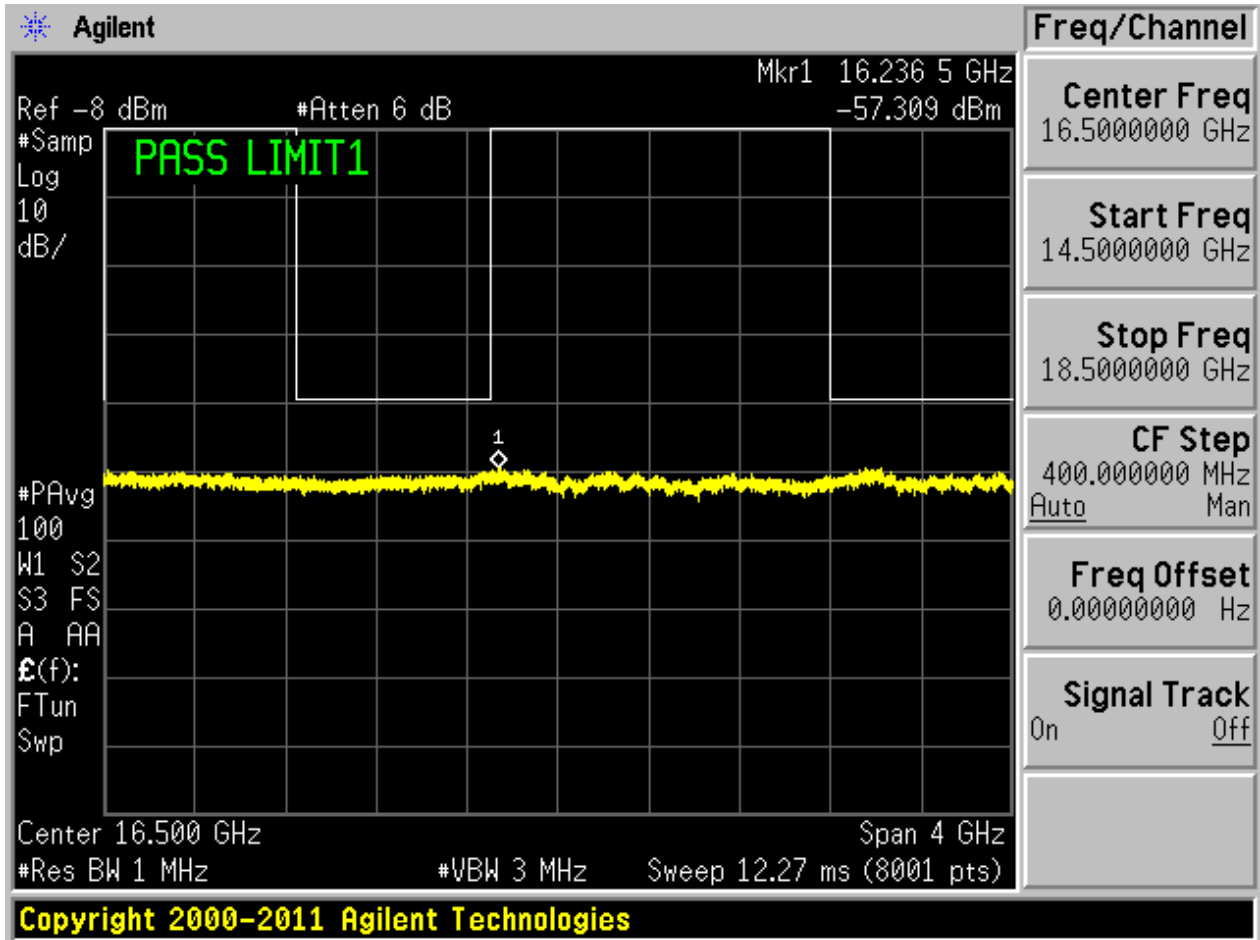


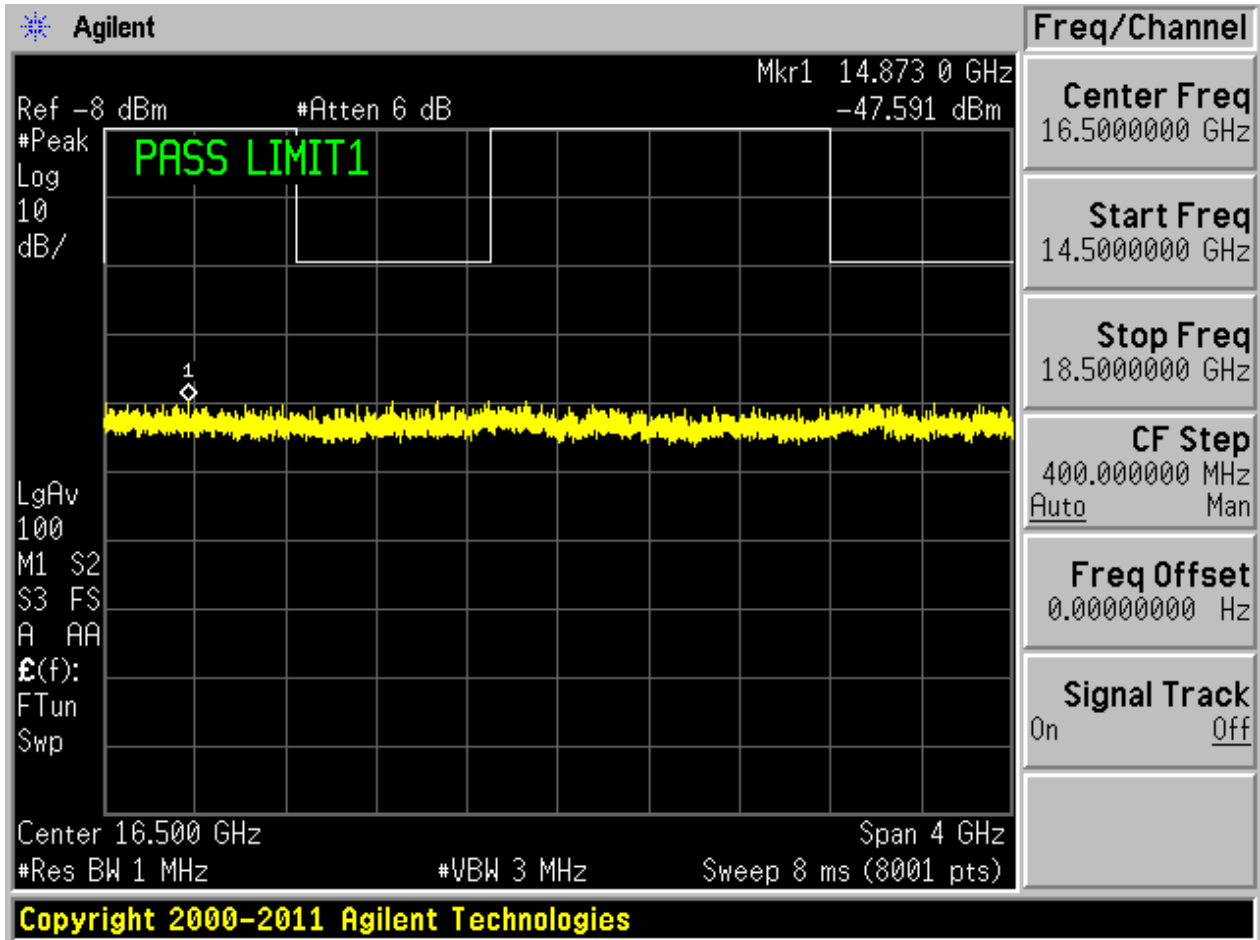


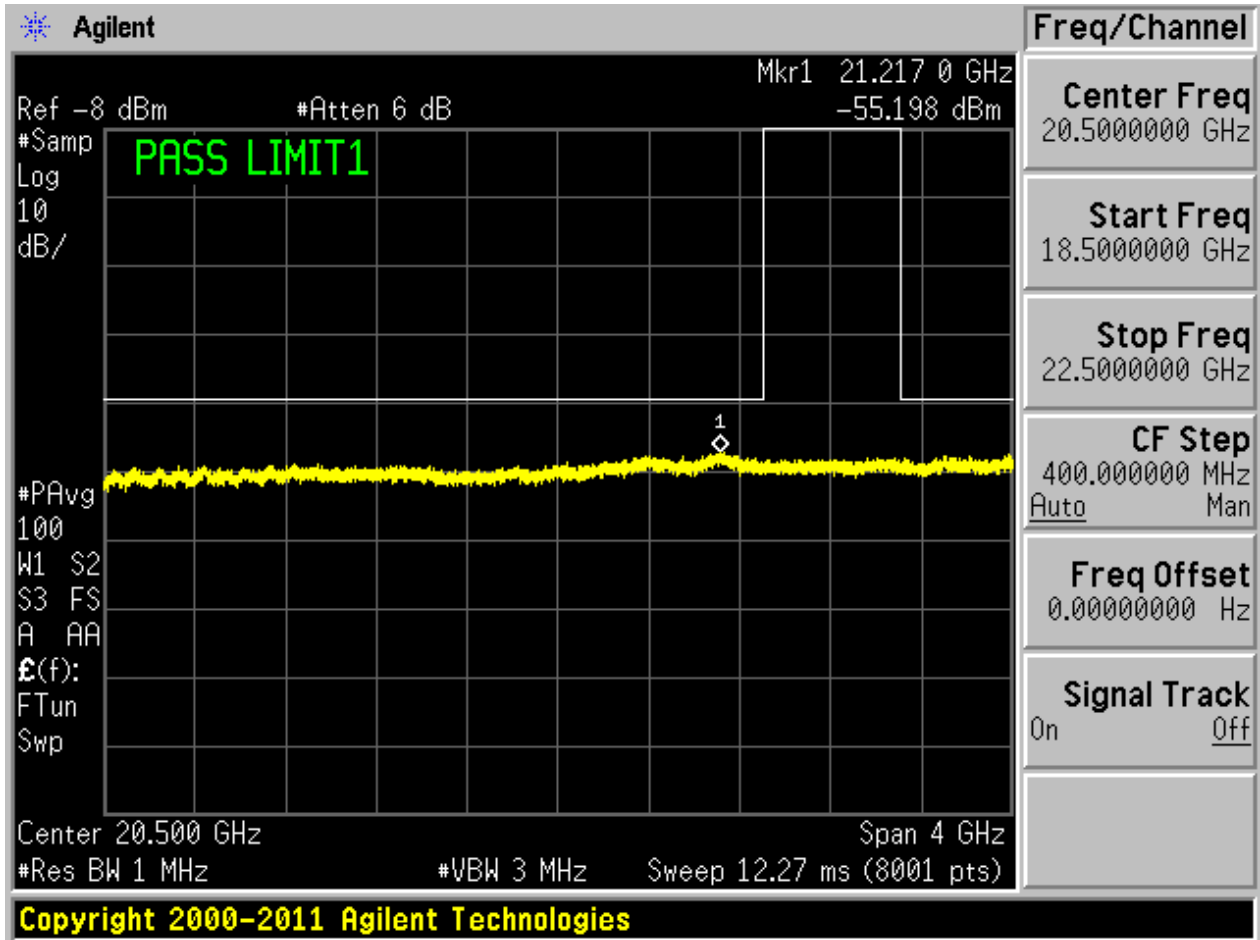


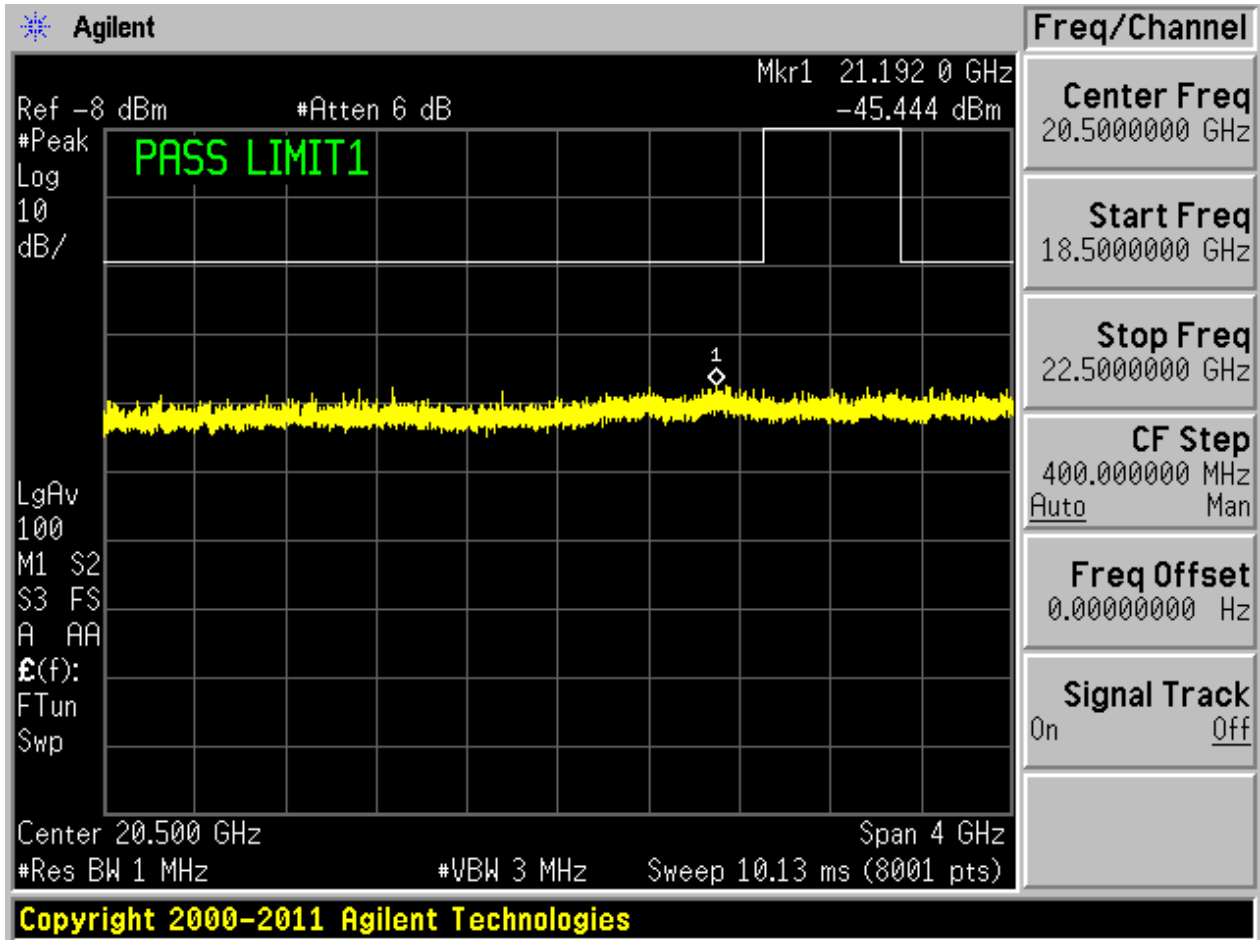


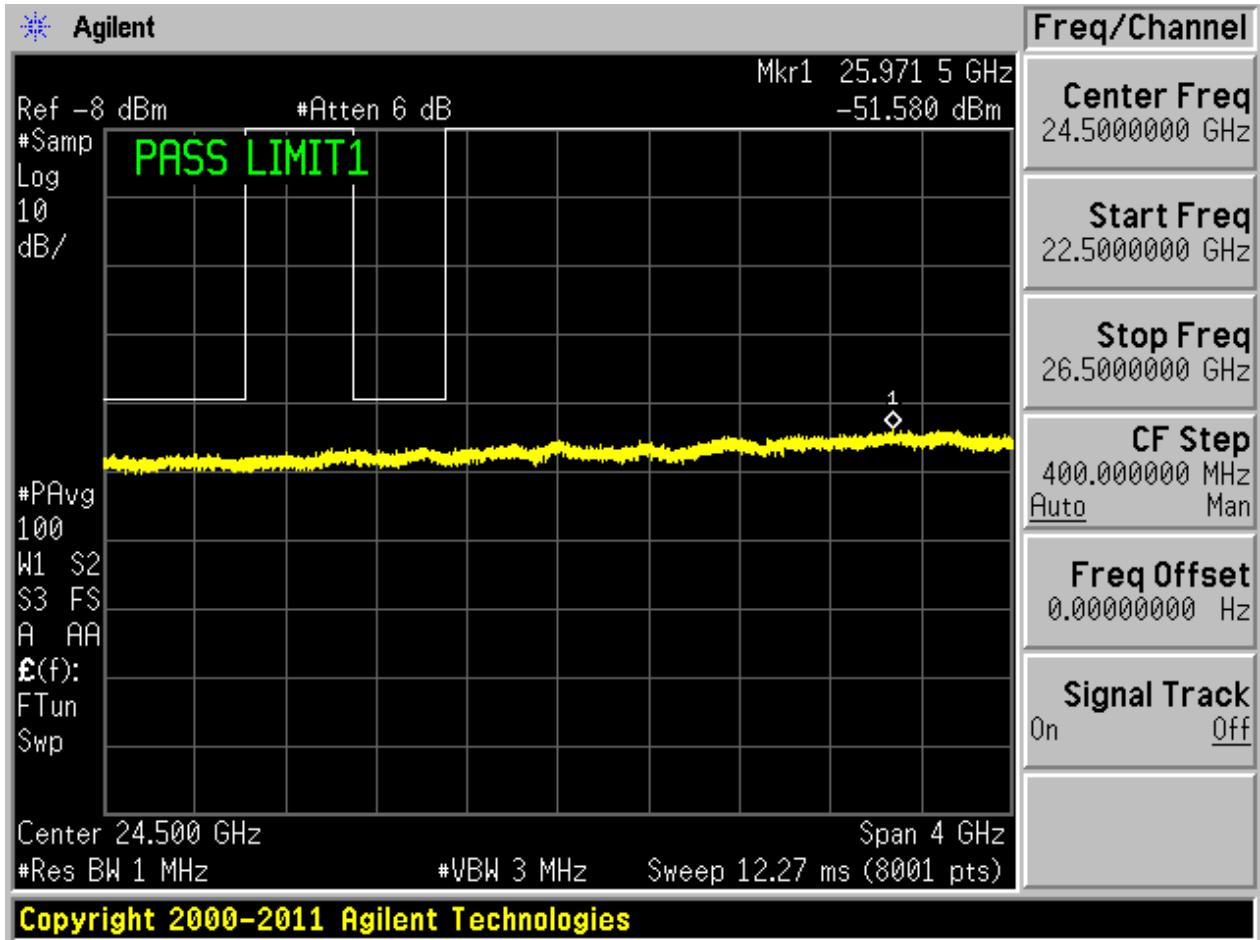


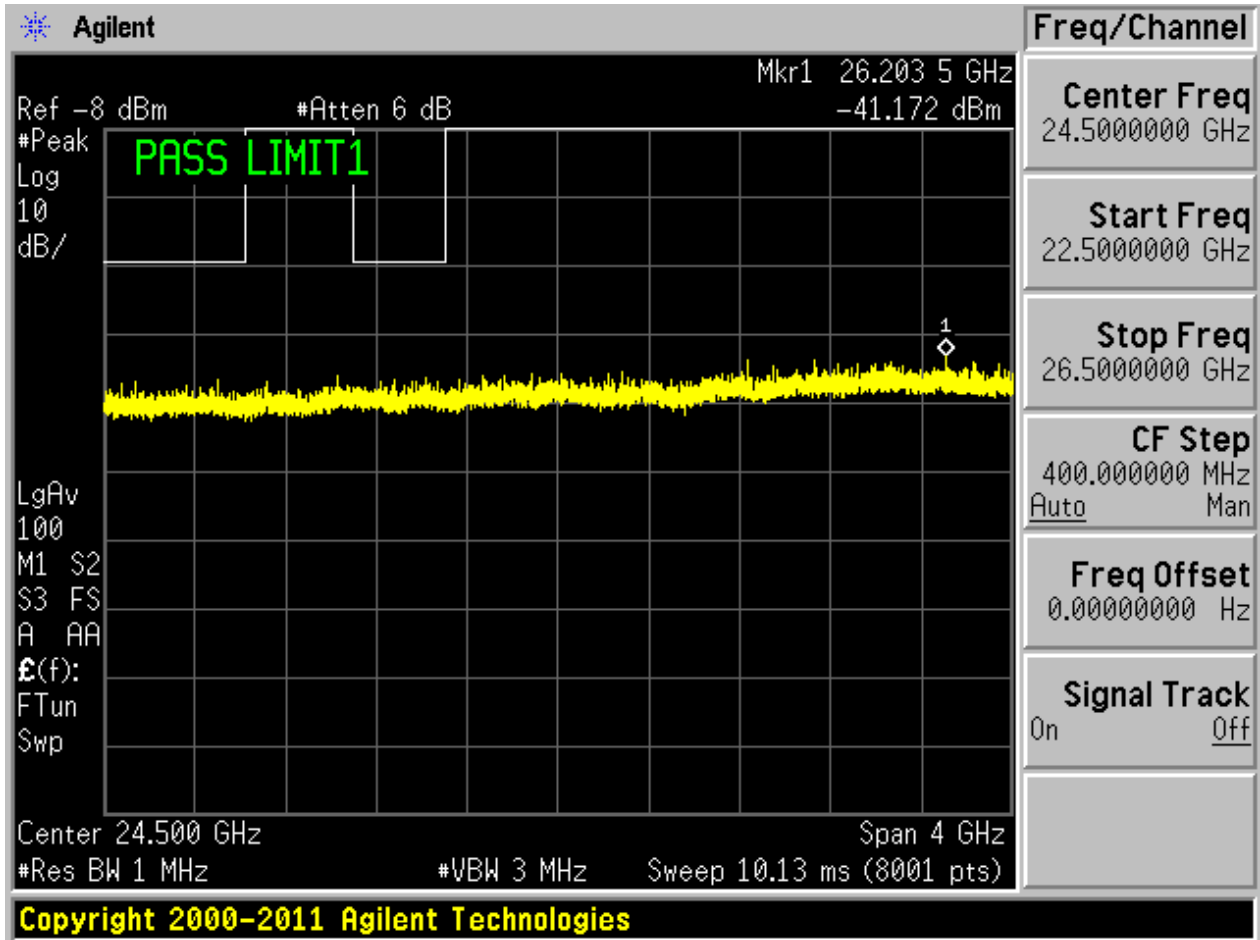










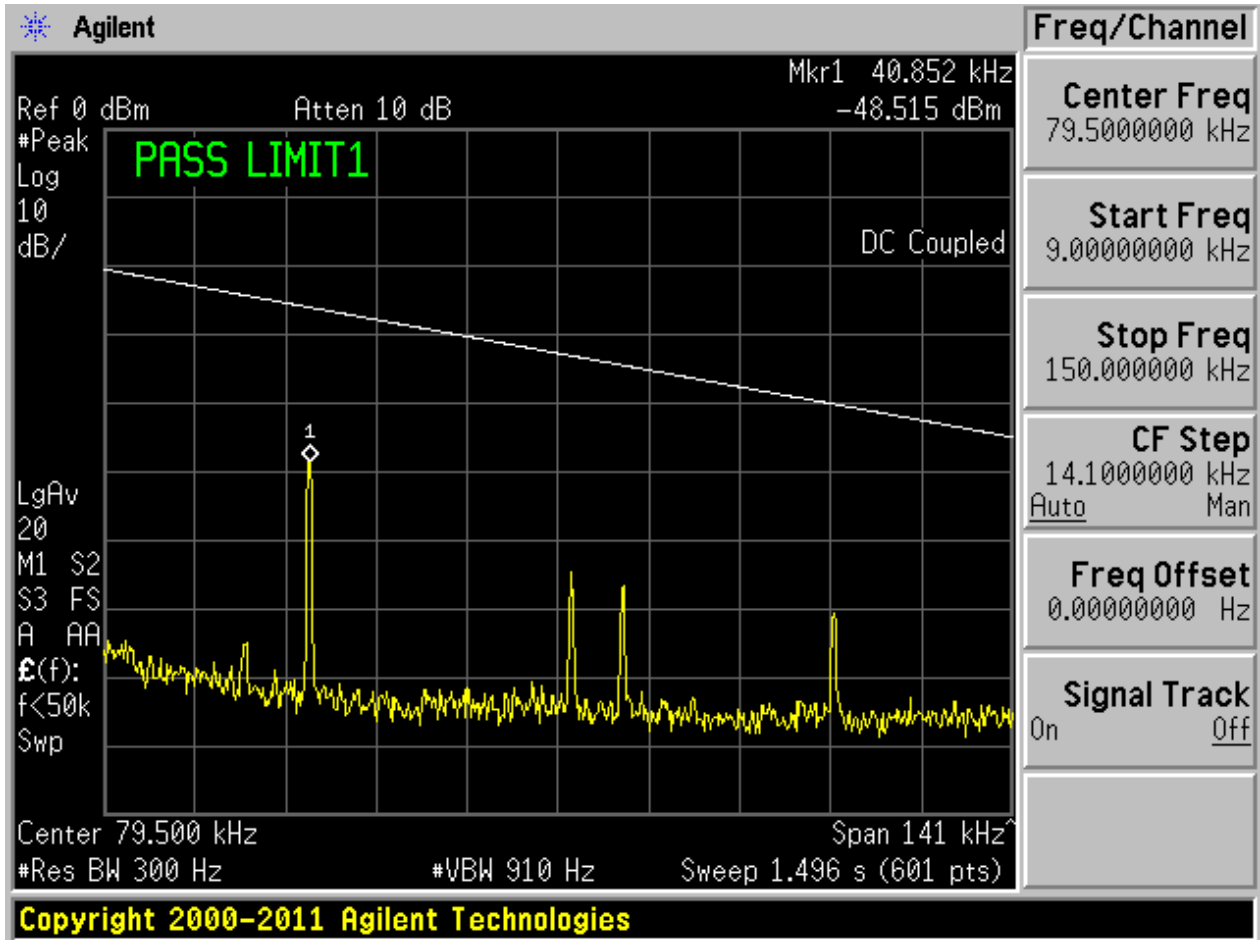


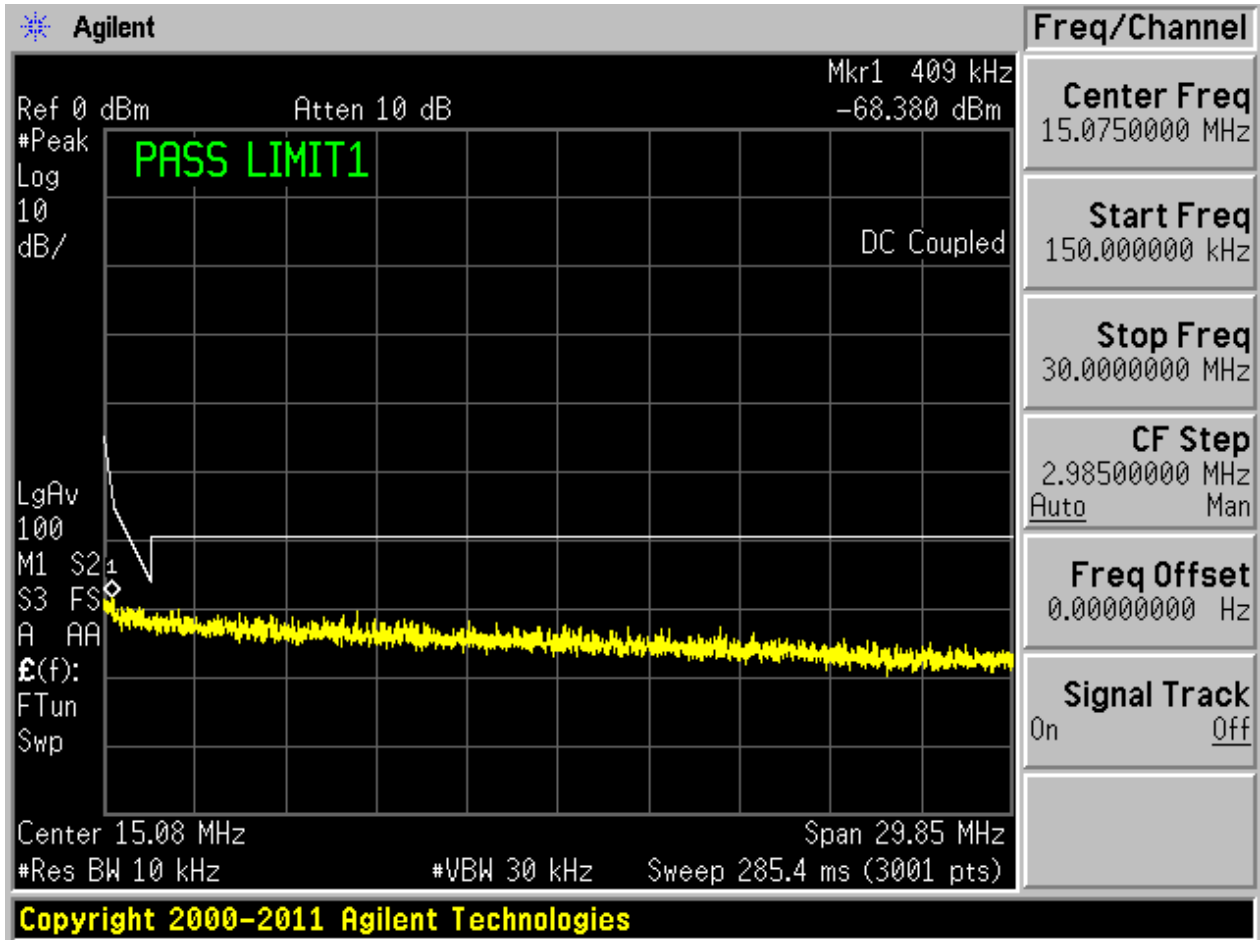
2.24.3 Trace#sum (if needed for final judgment)

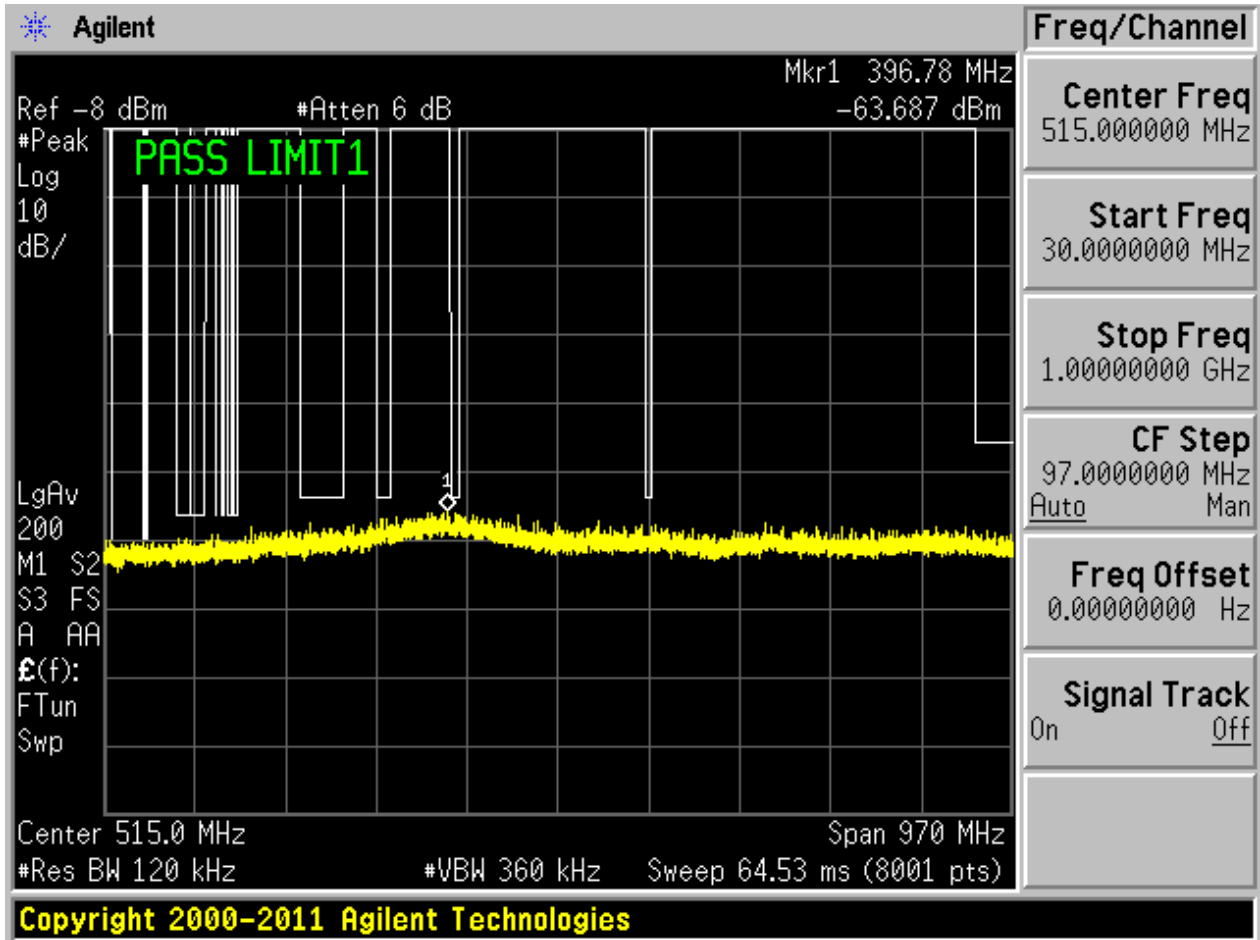
(Not applicable)

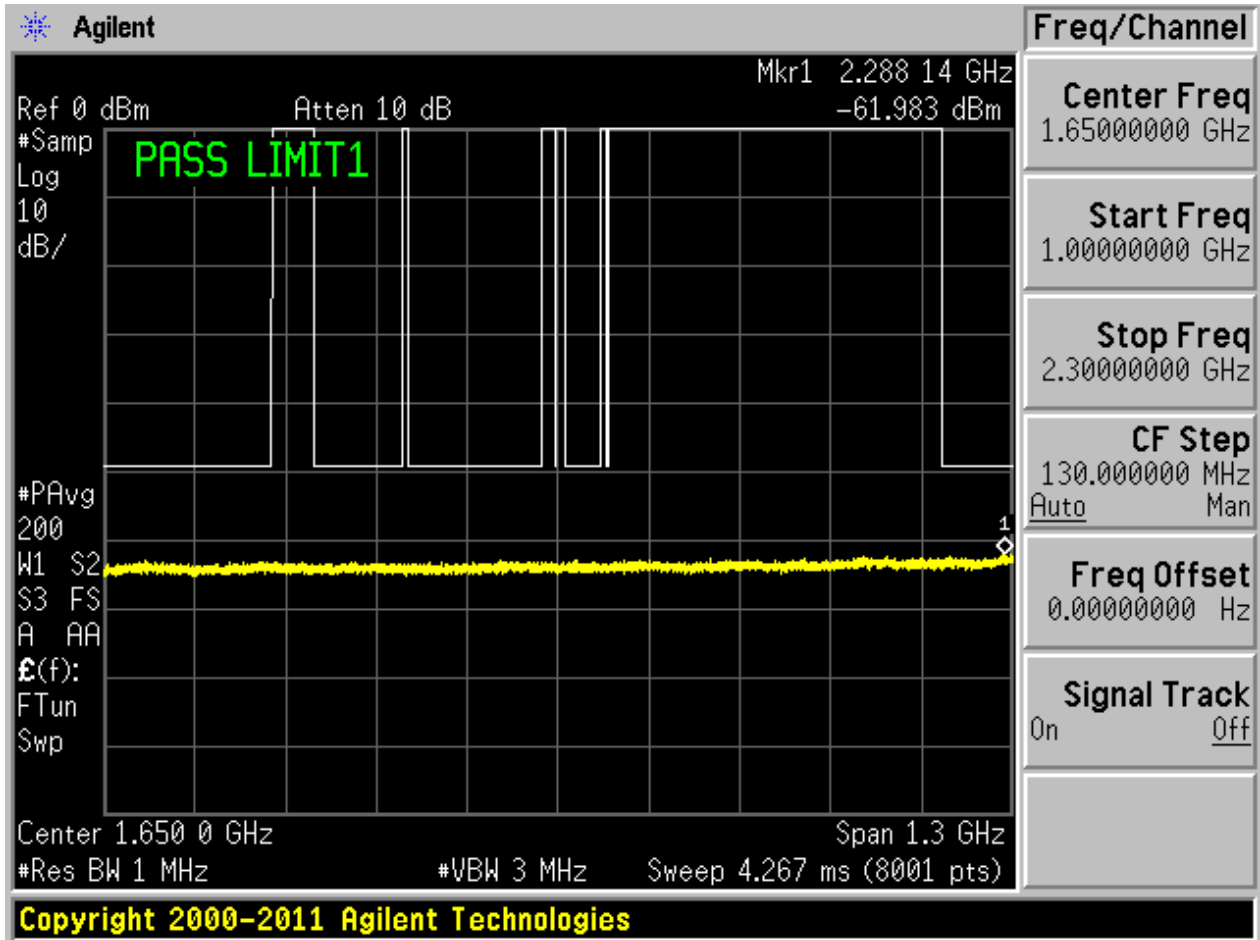
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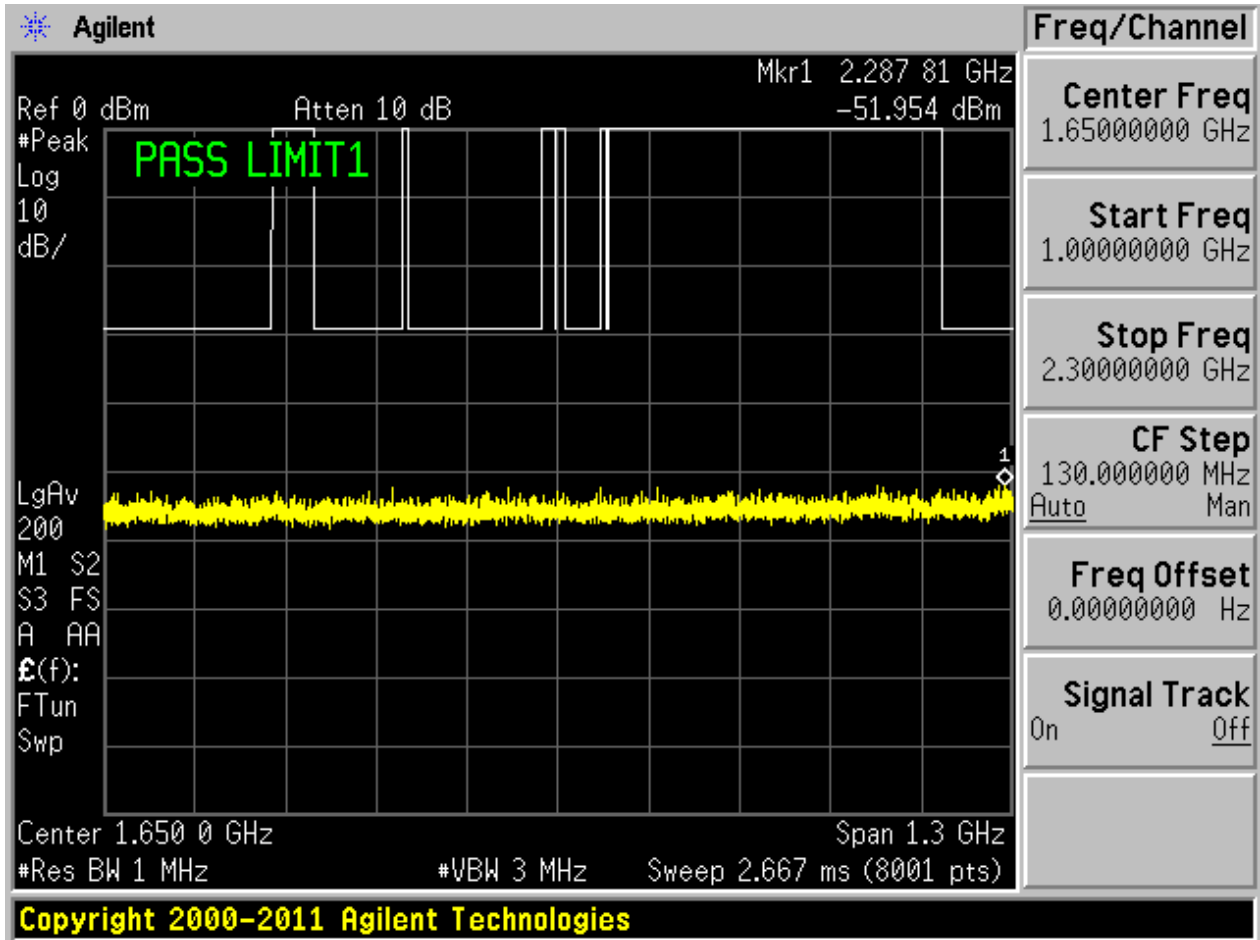
2.25.1 Ant 1 (Trace#1)

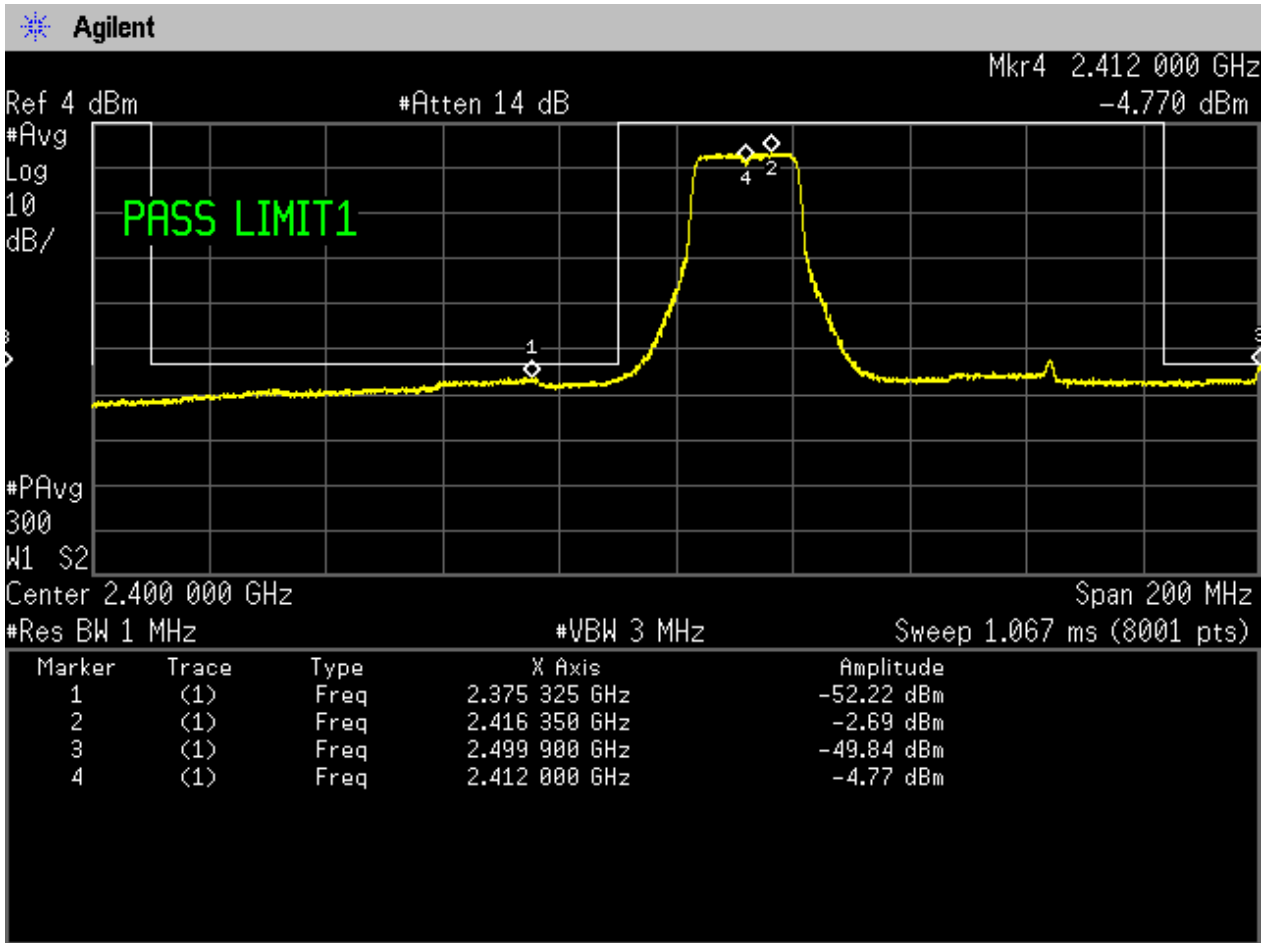


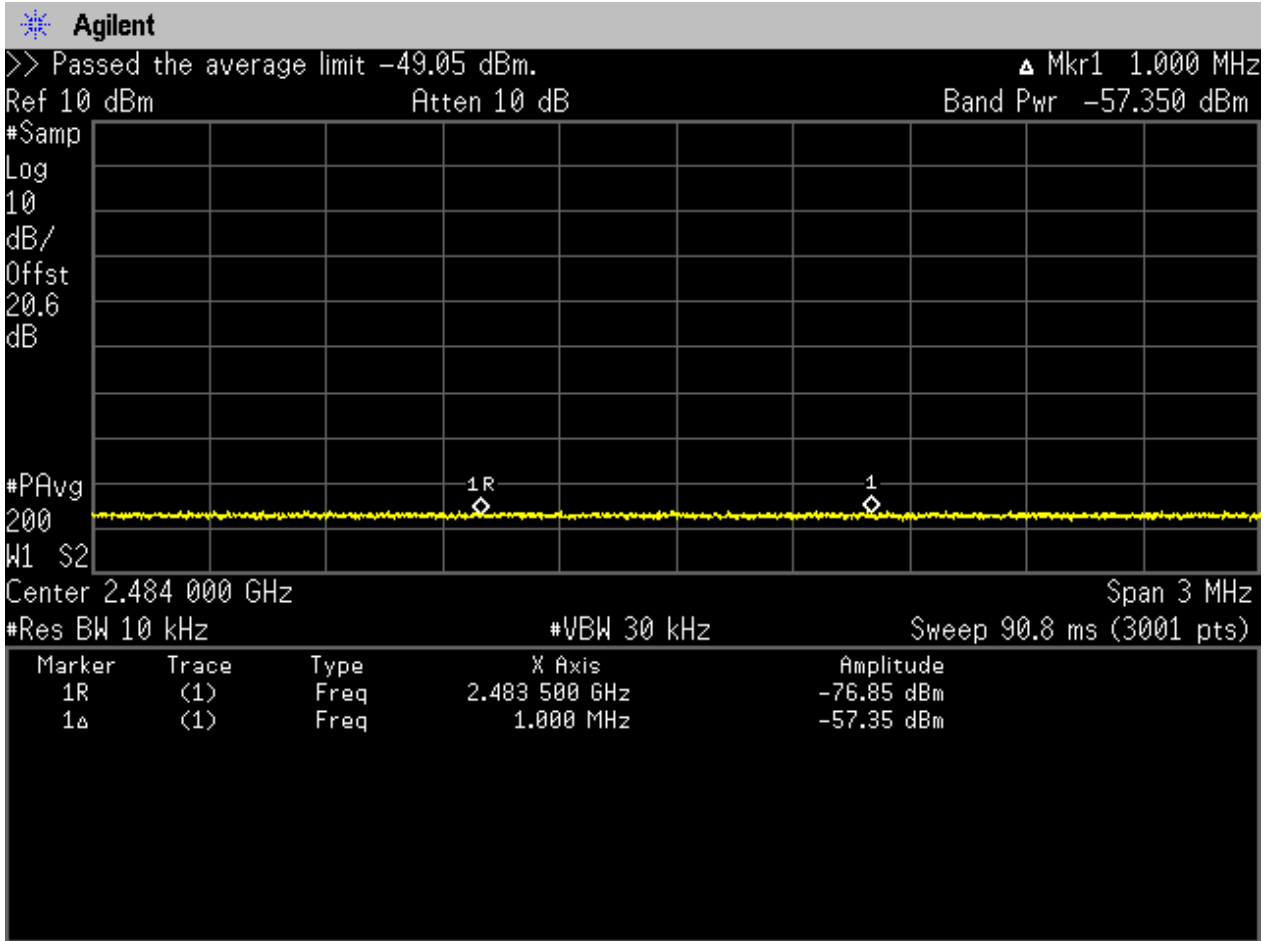


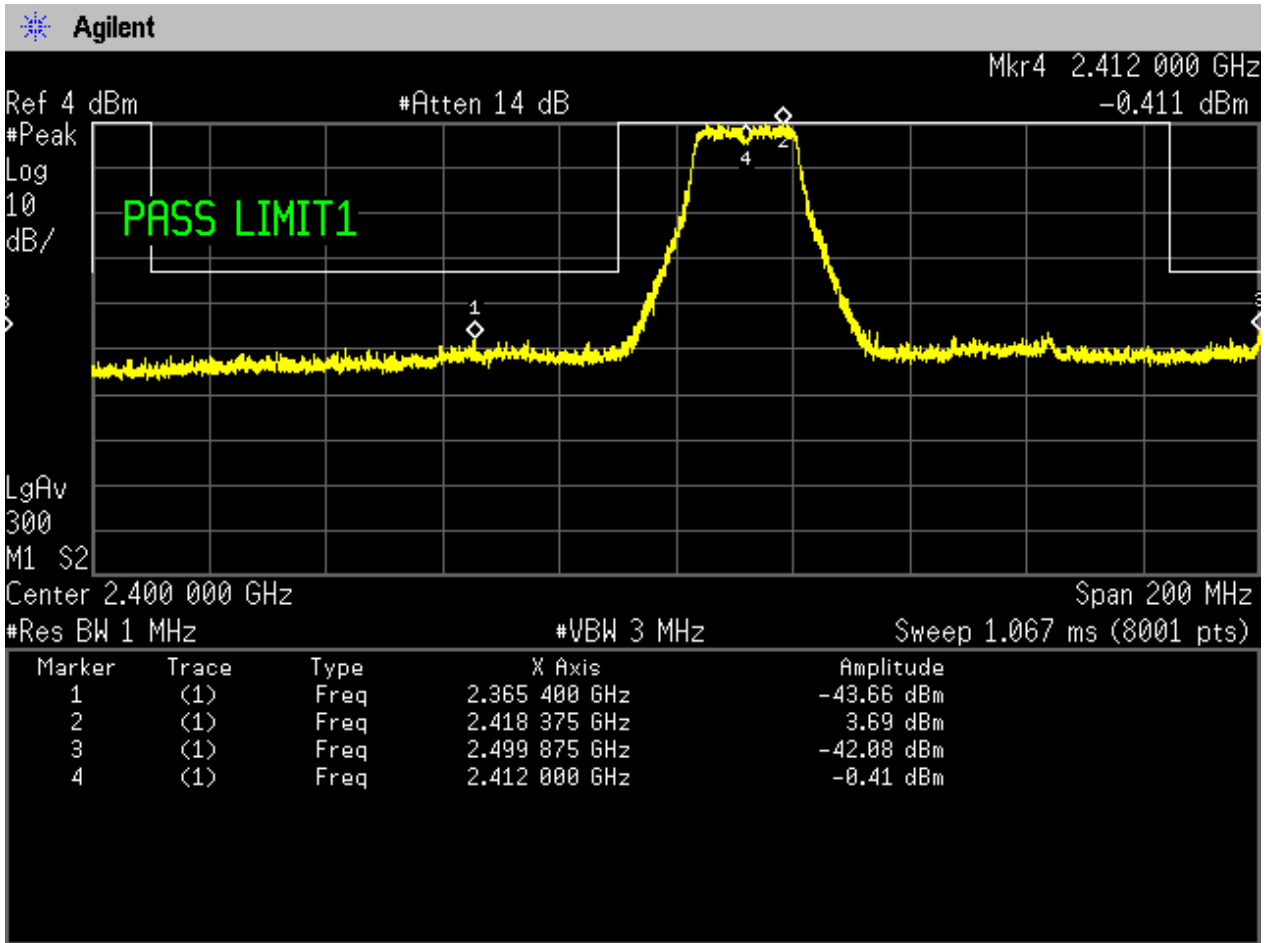


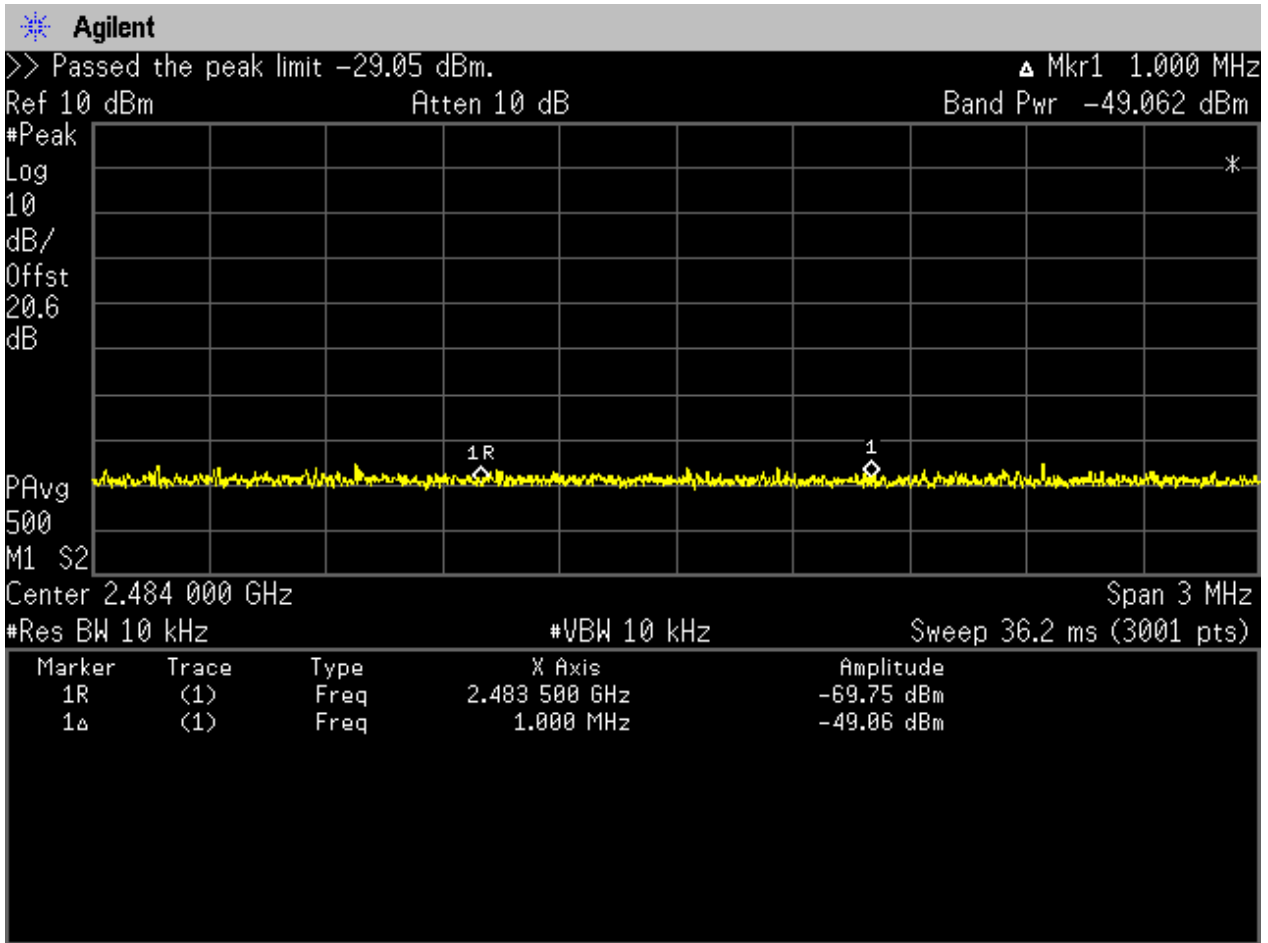


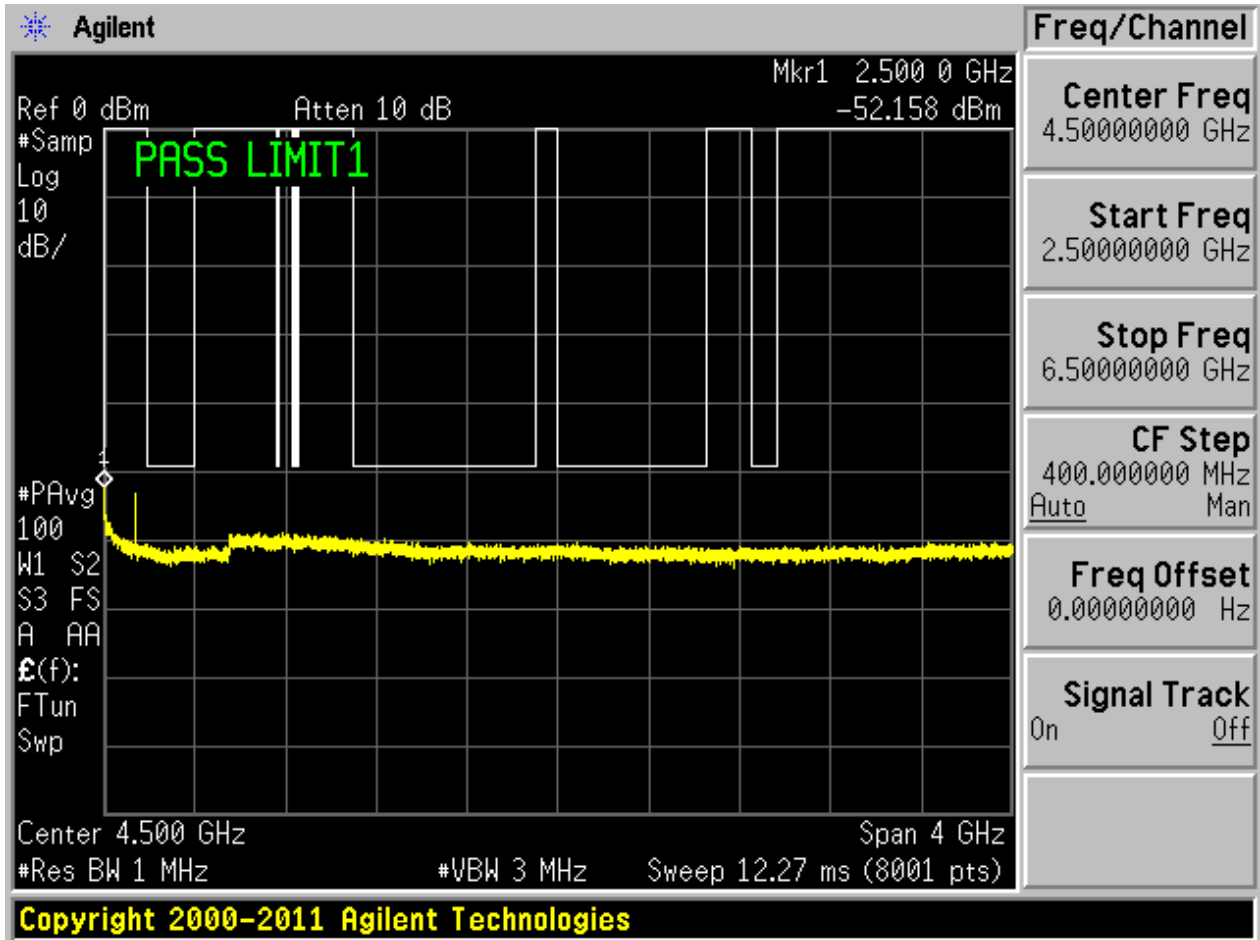


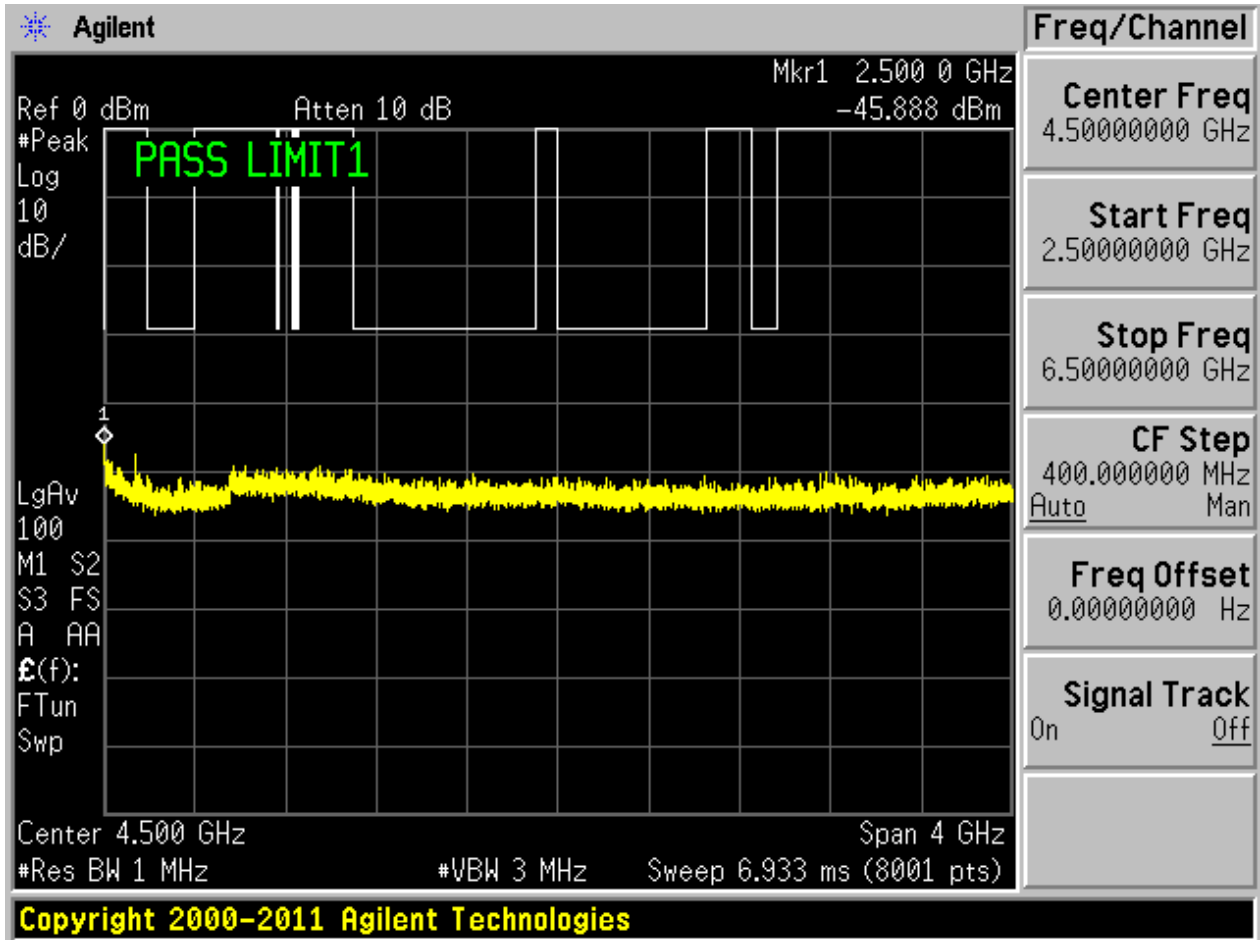


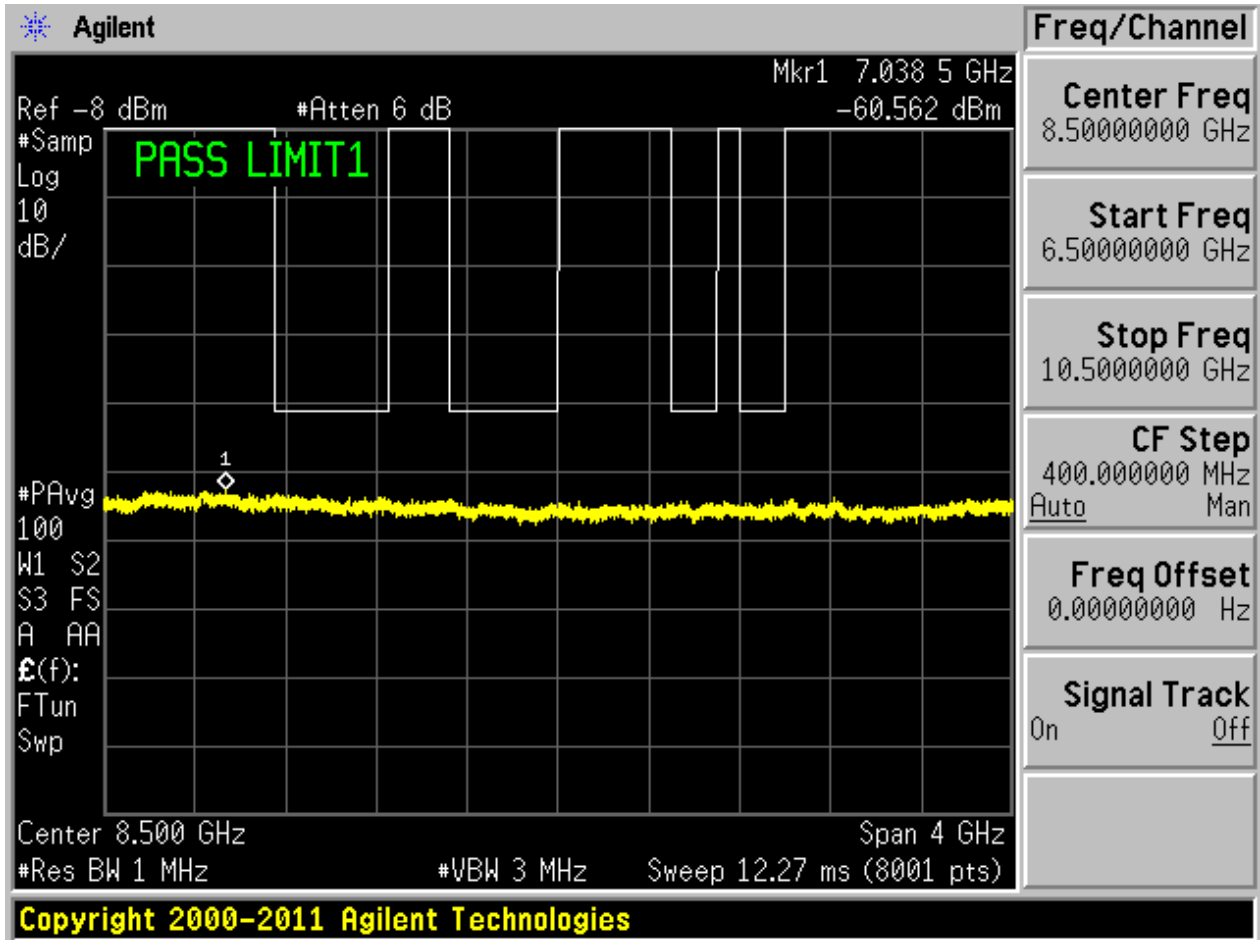


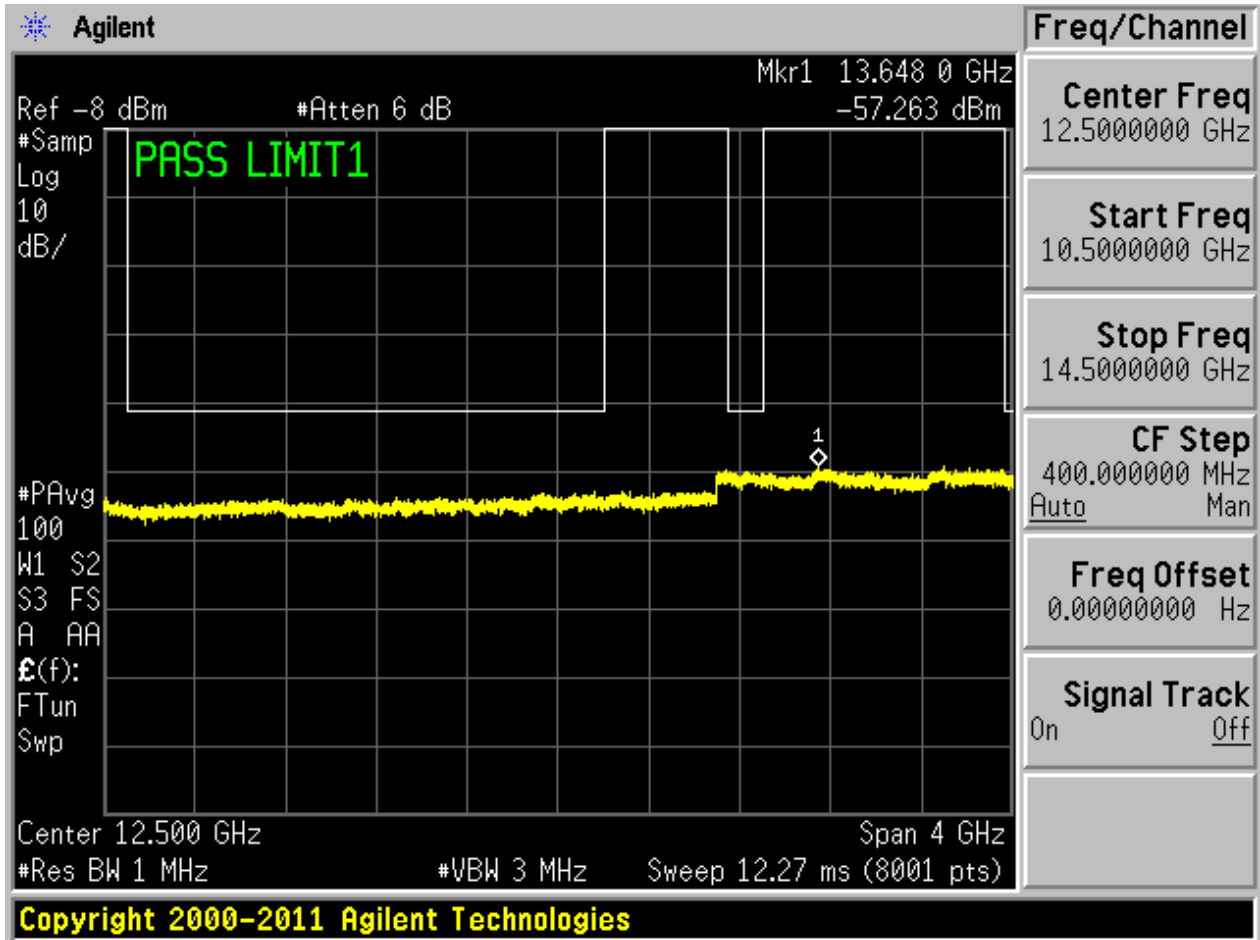


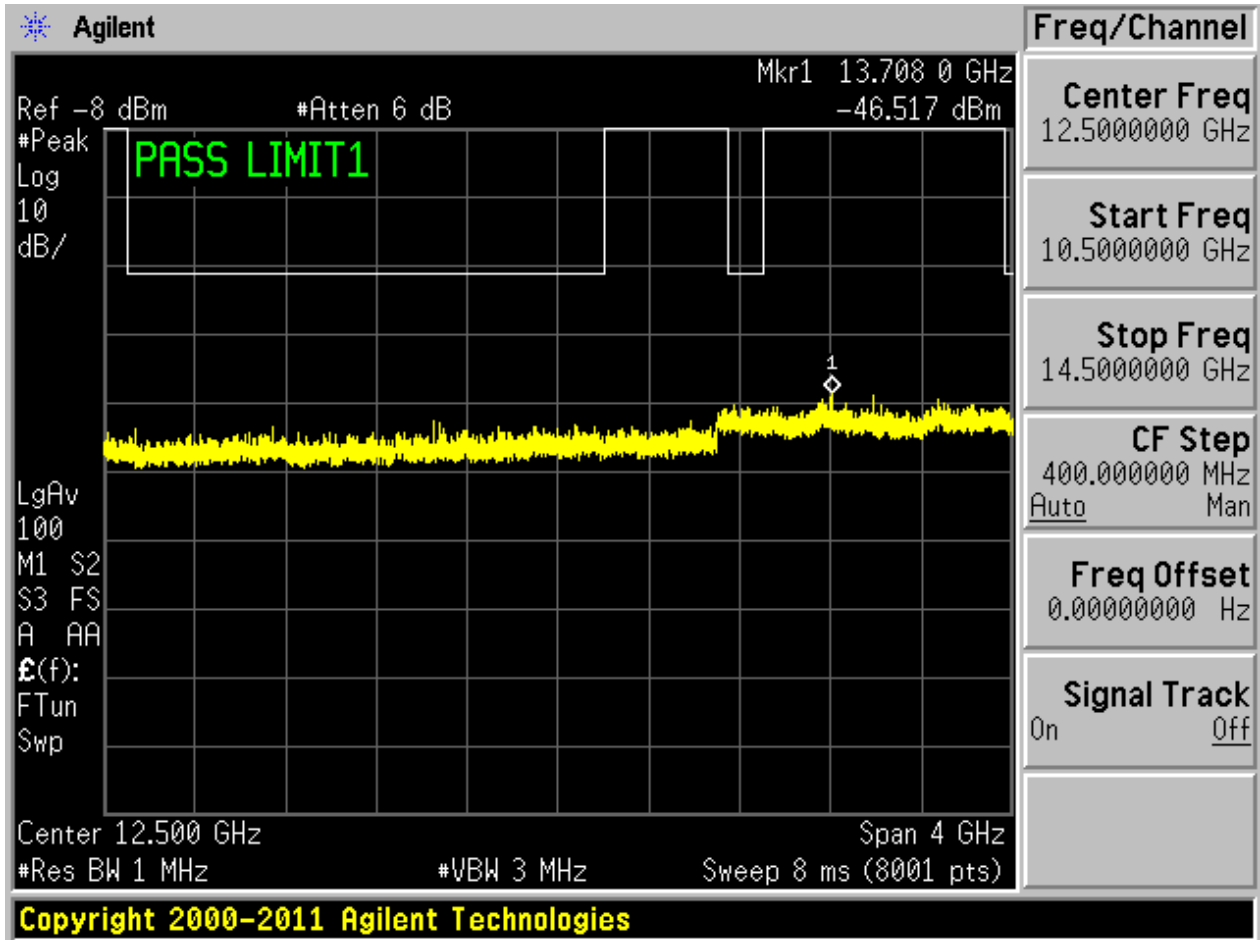




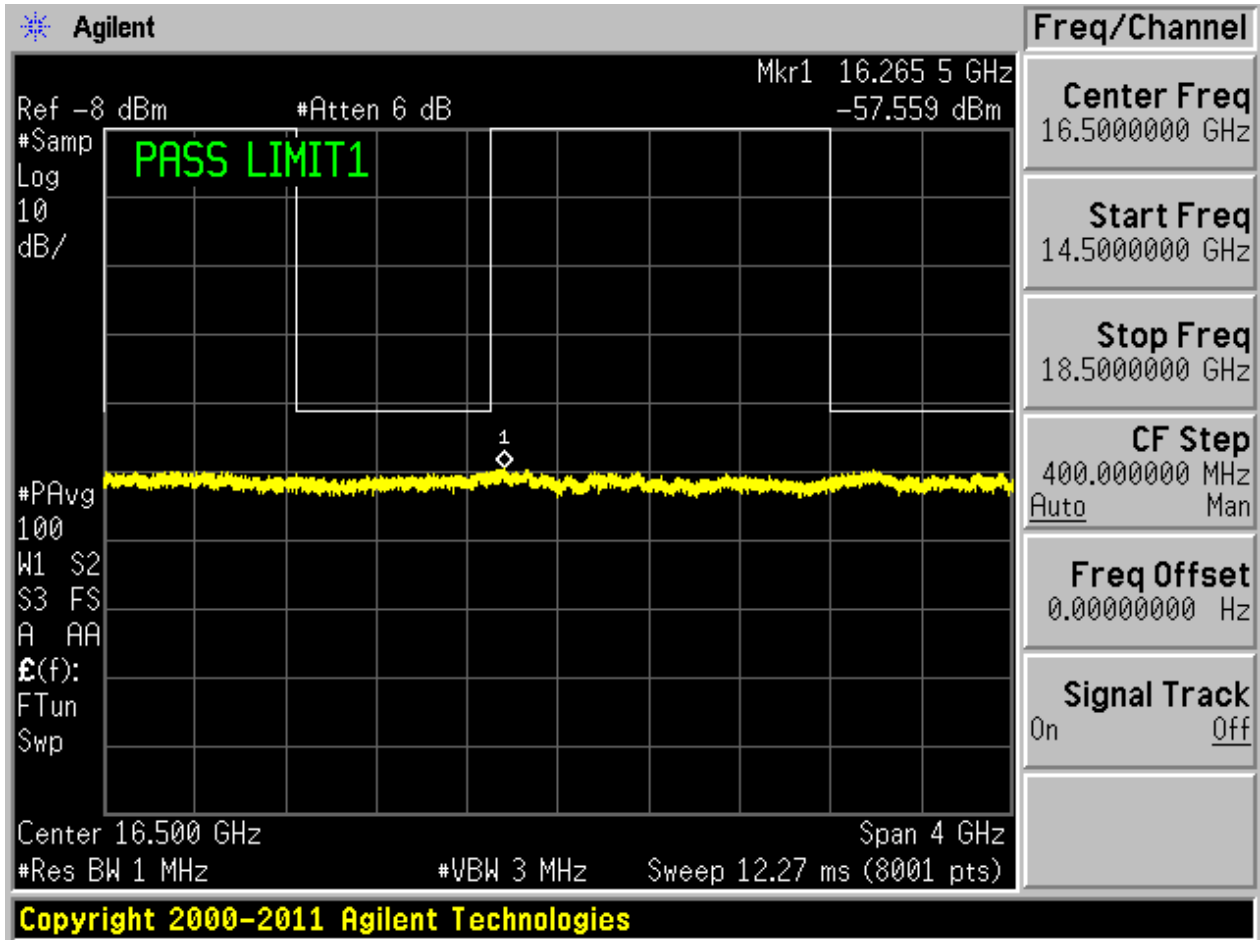


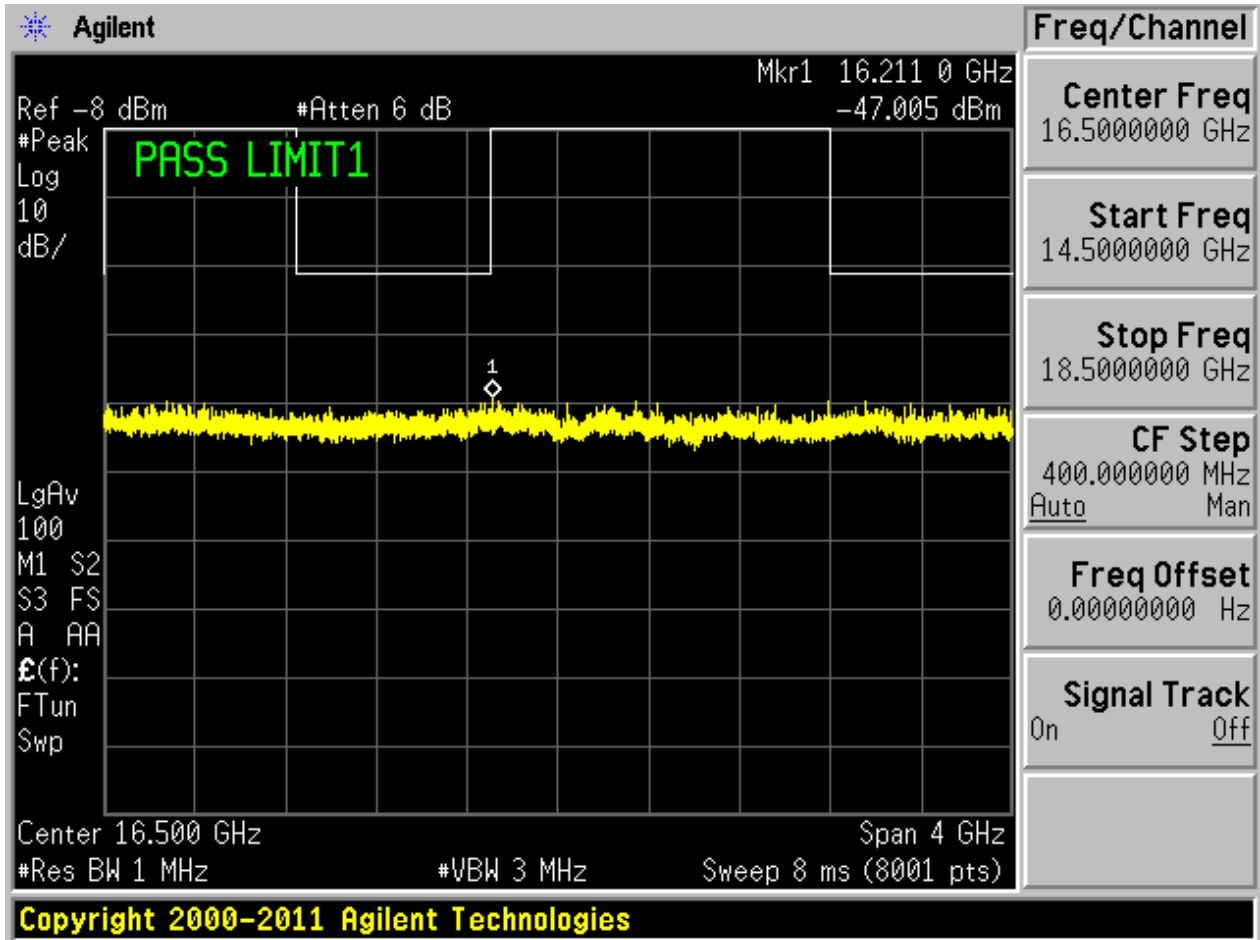


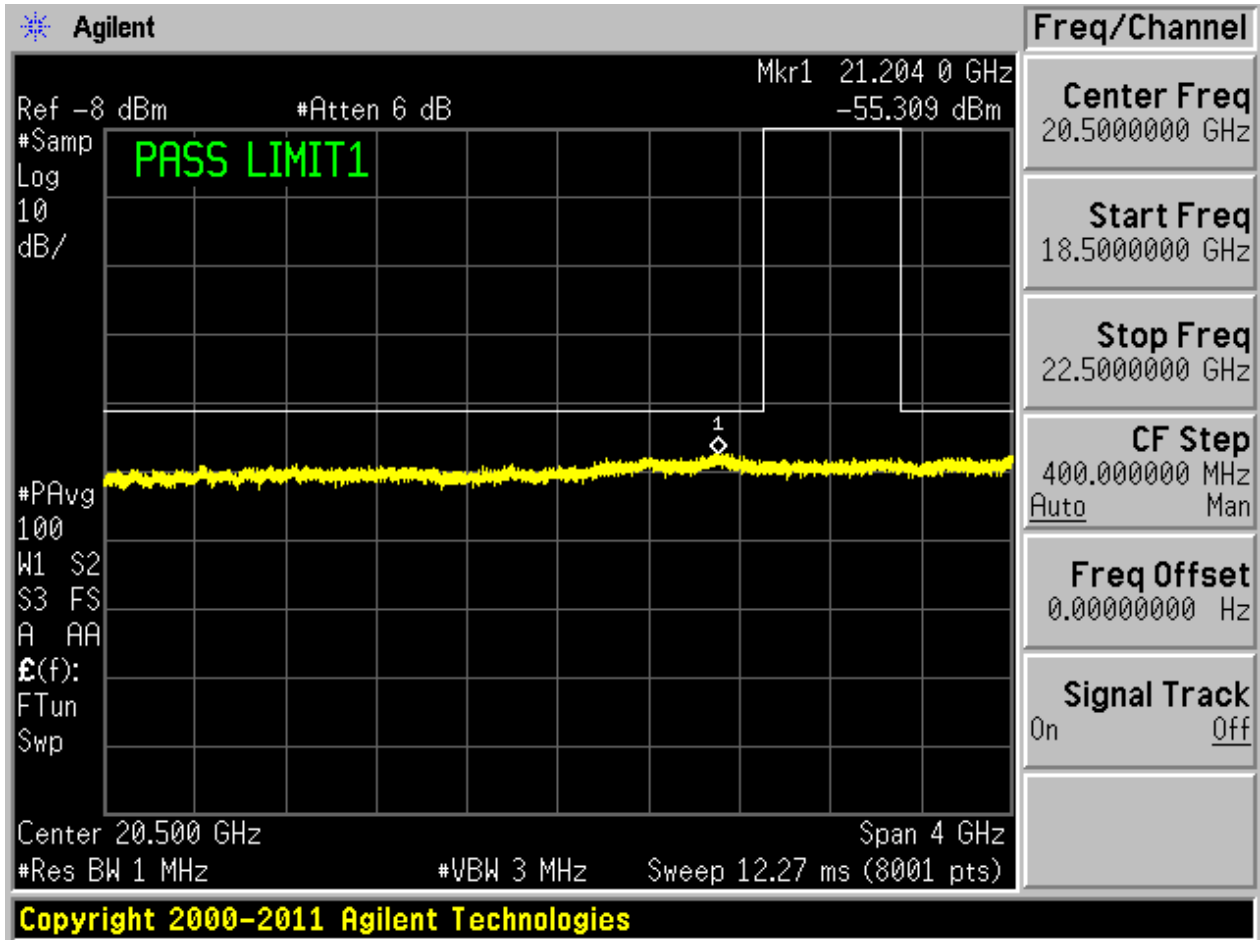


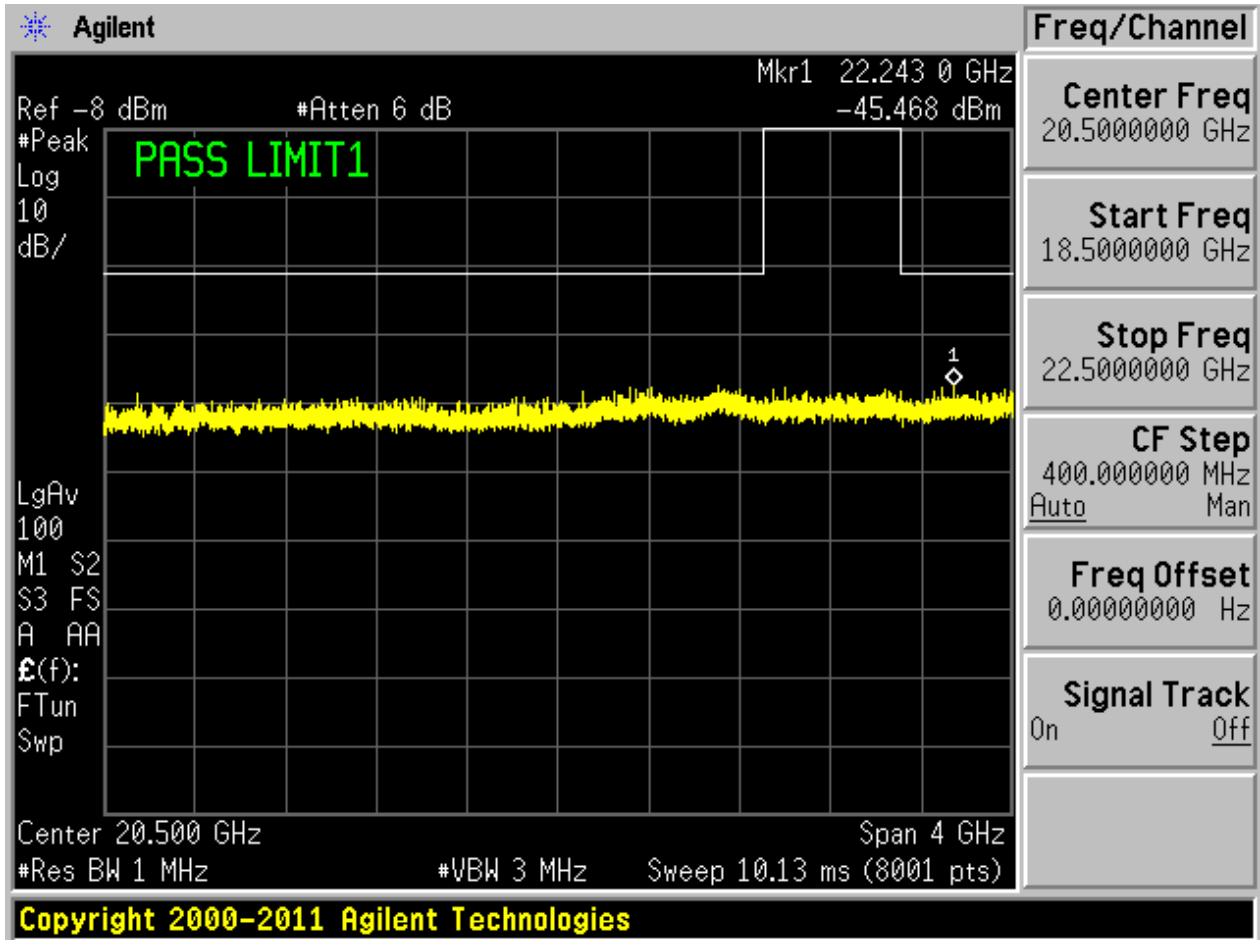


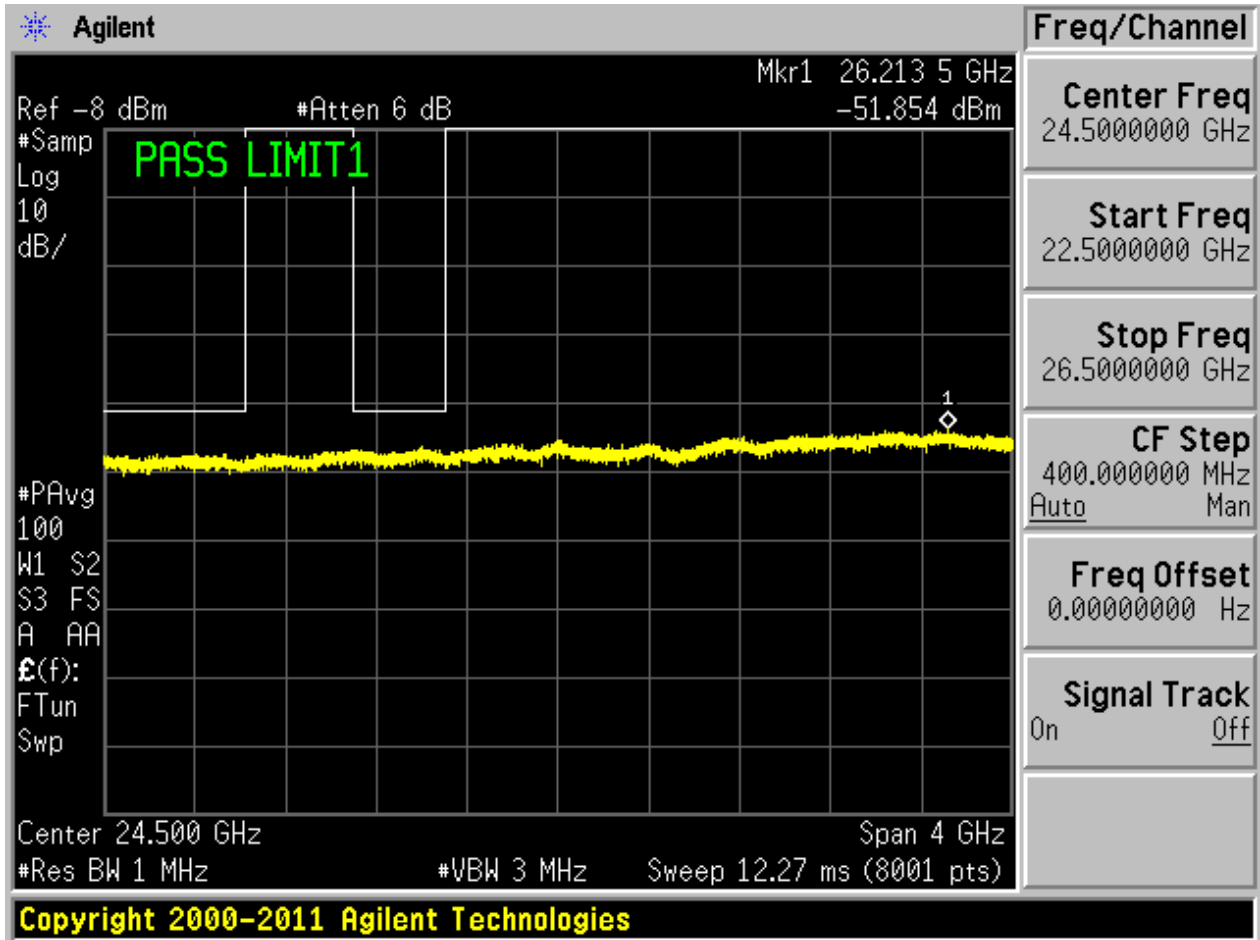
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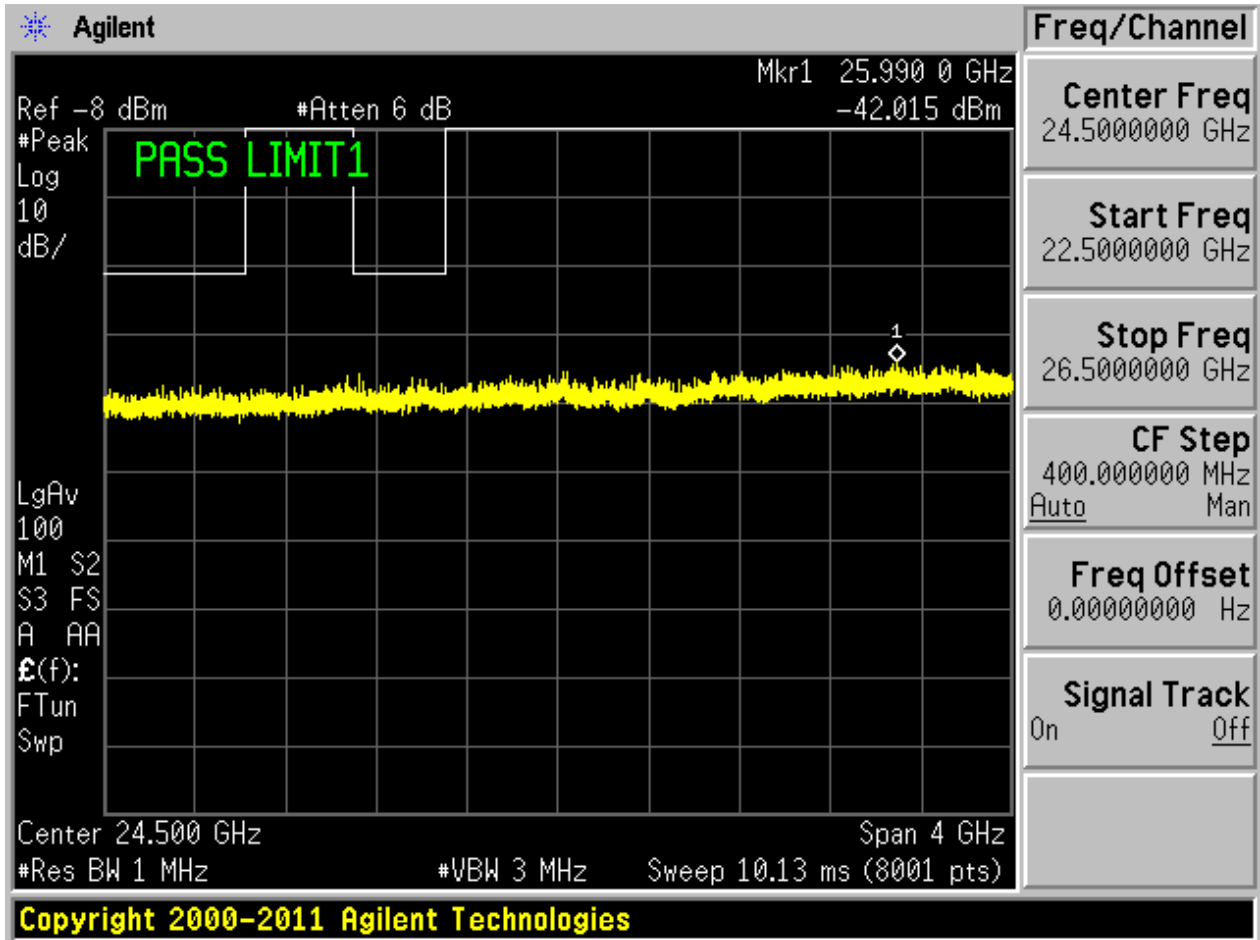




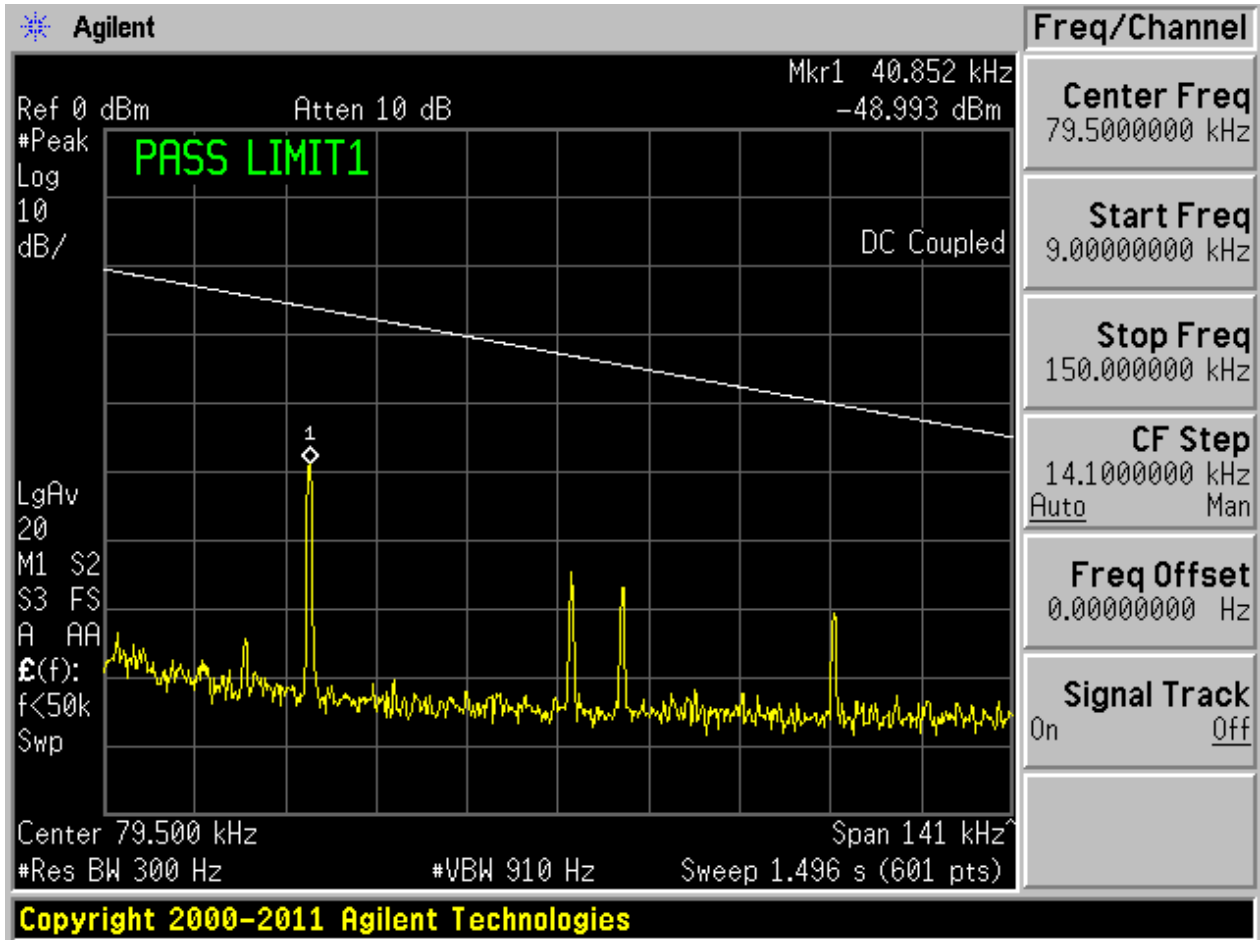


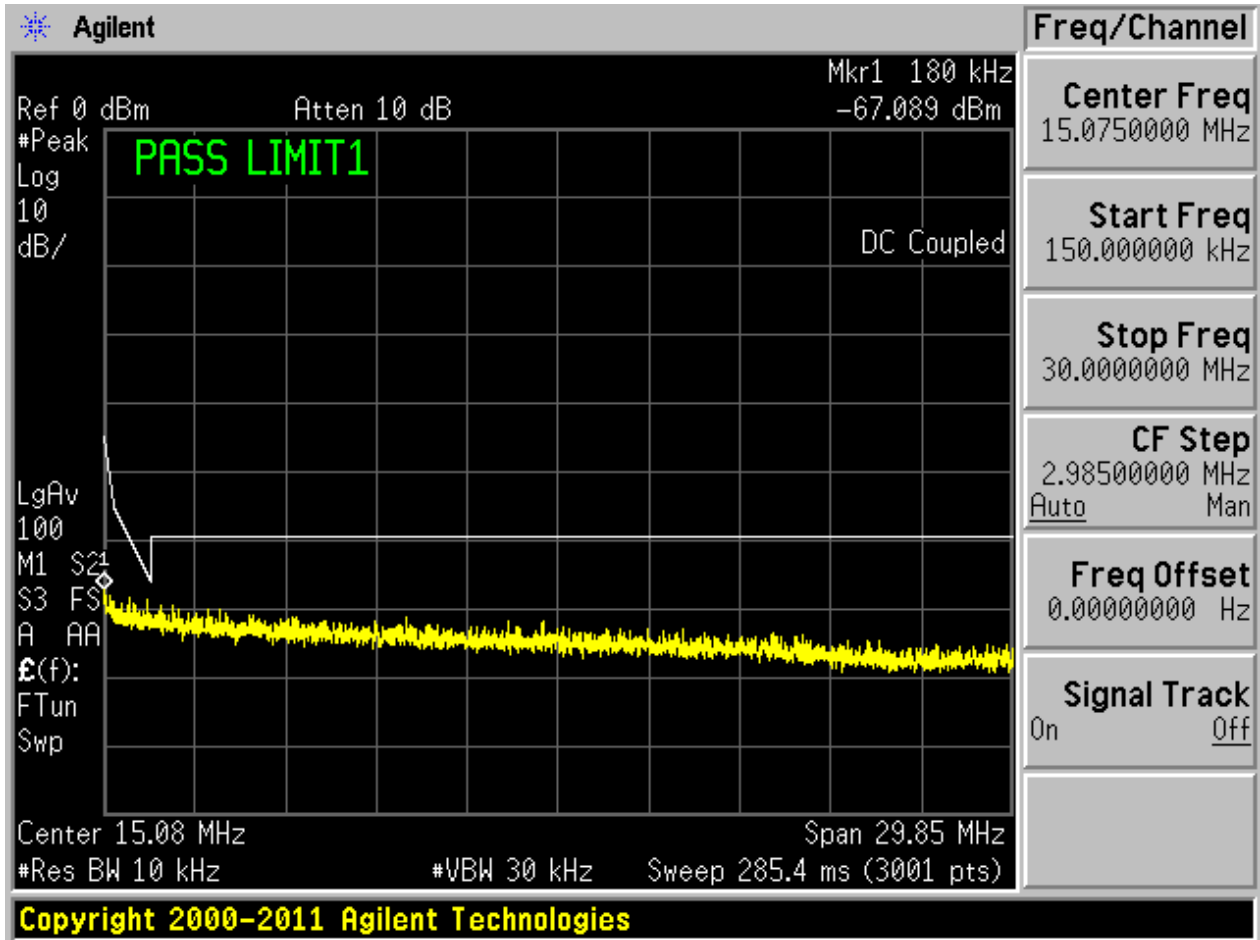


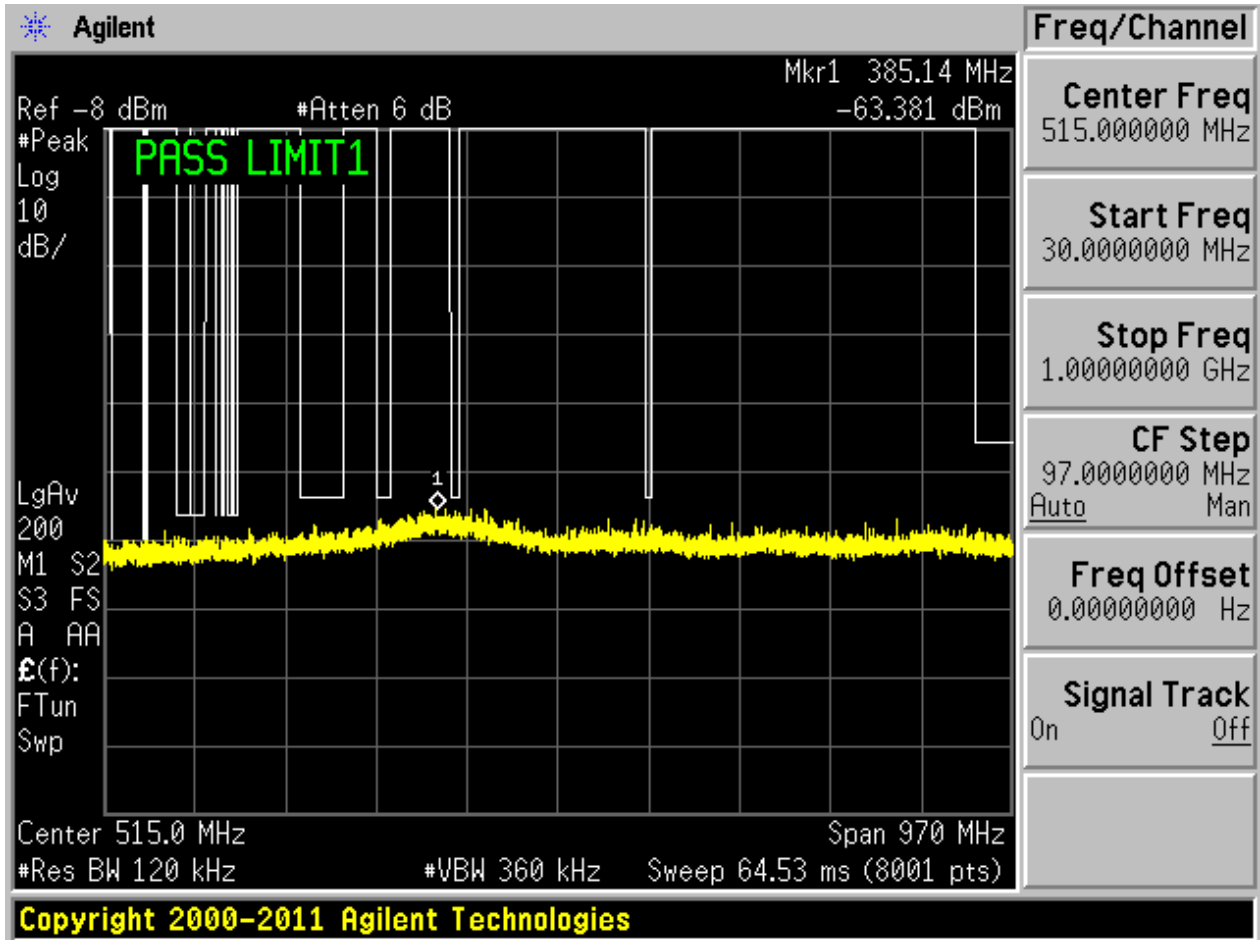


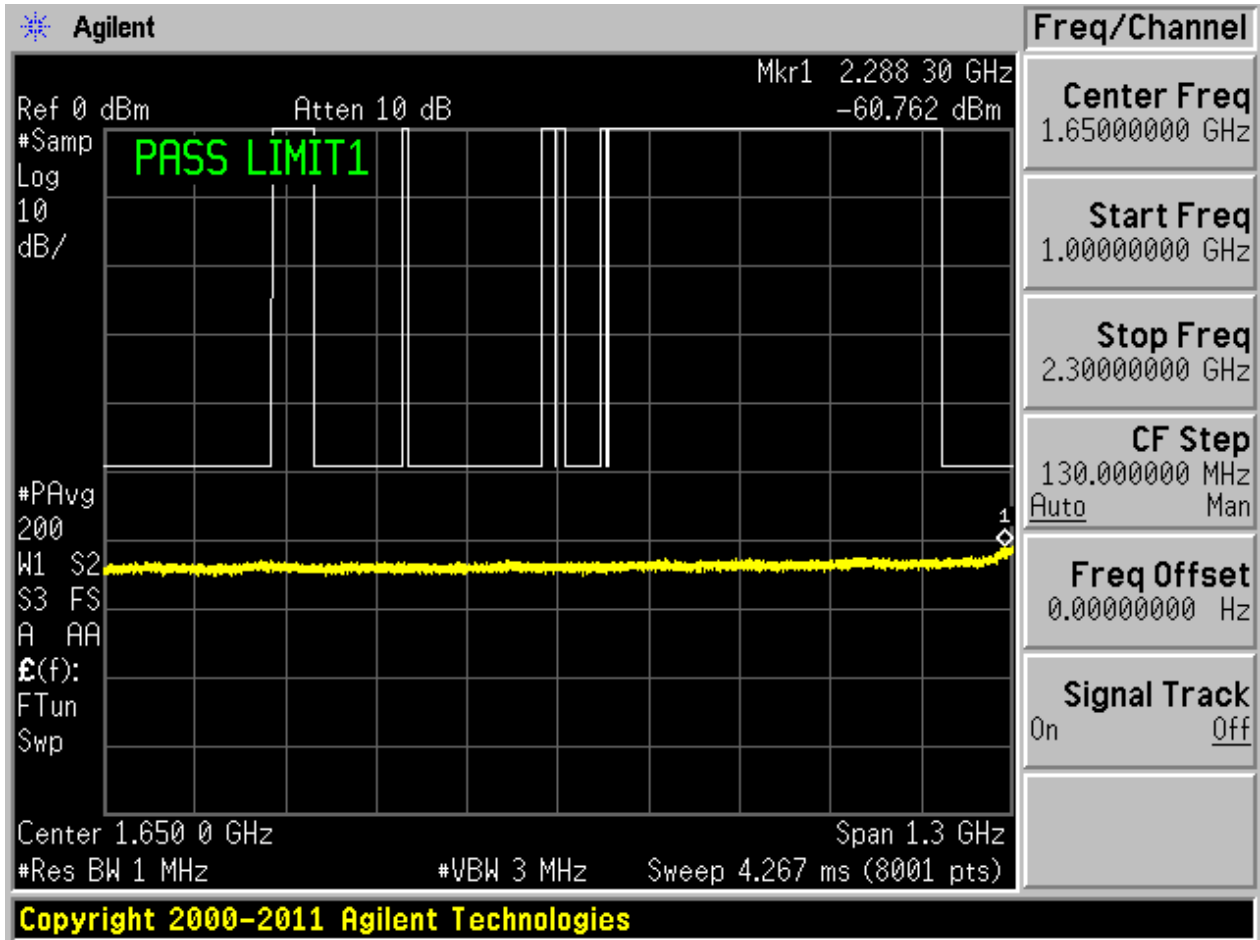


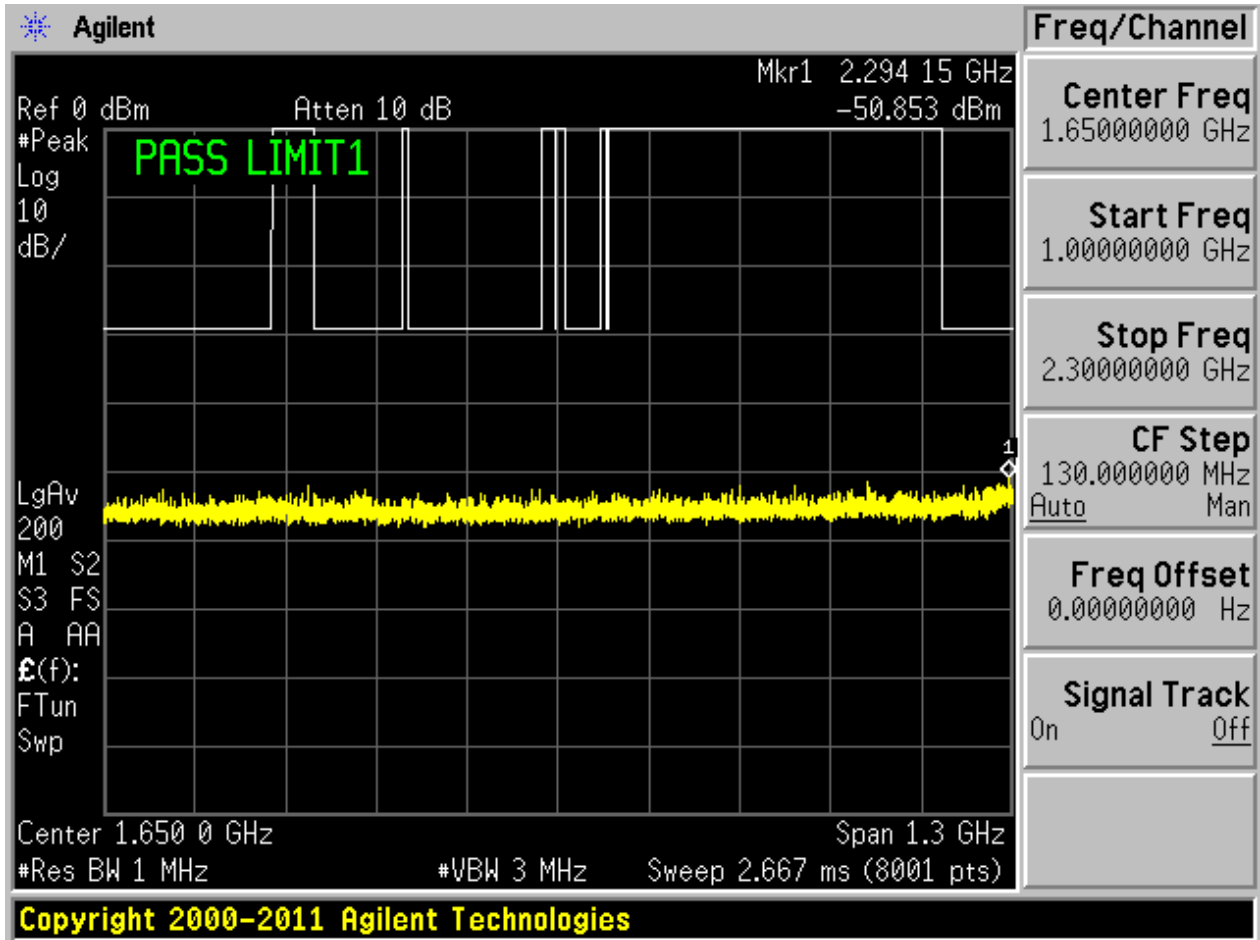
2.25.2 Ant 2 (Trace#2)

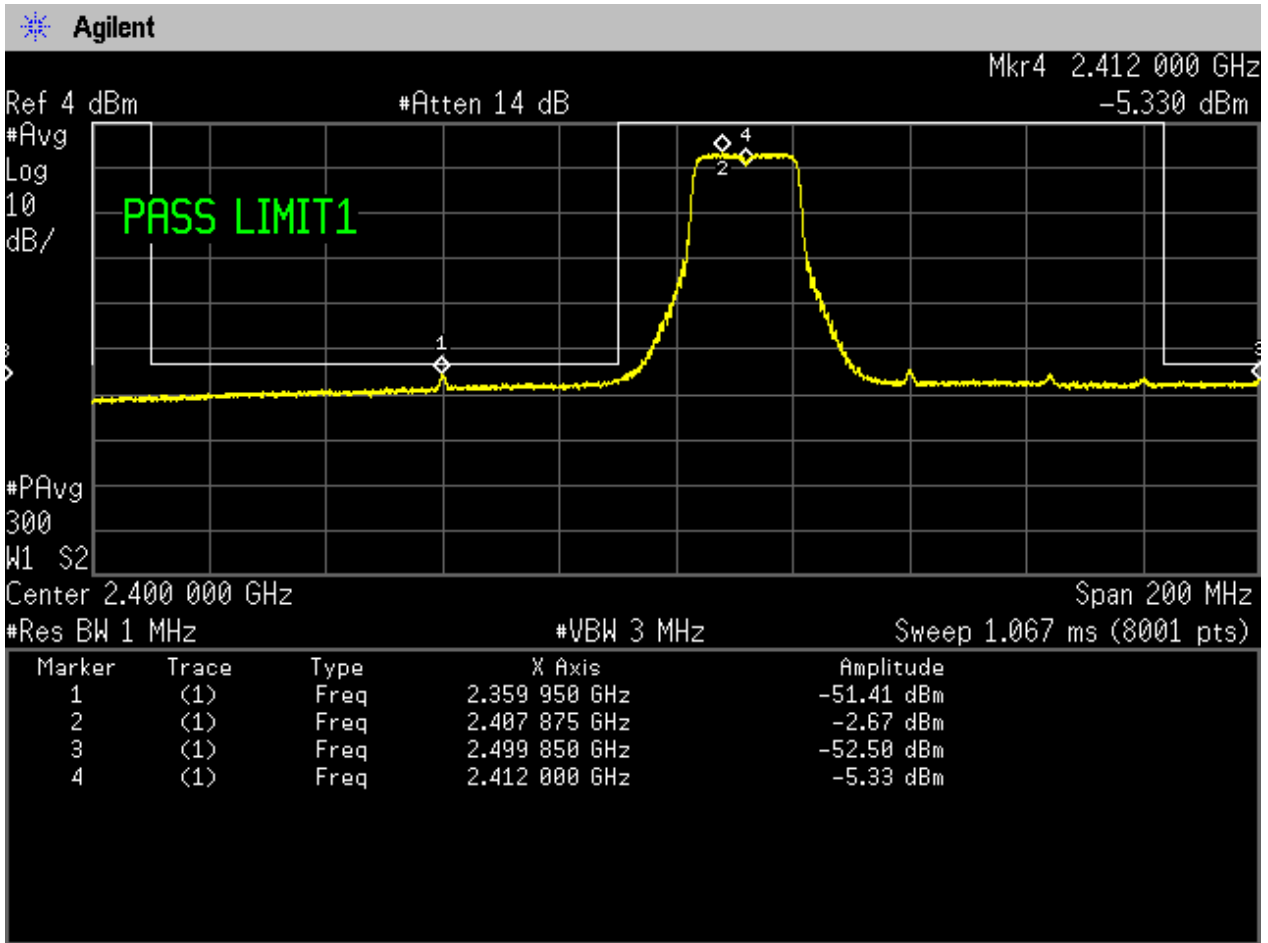


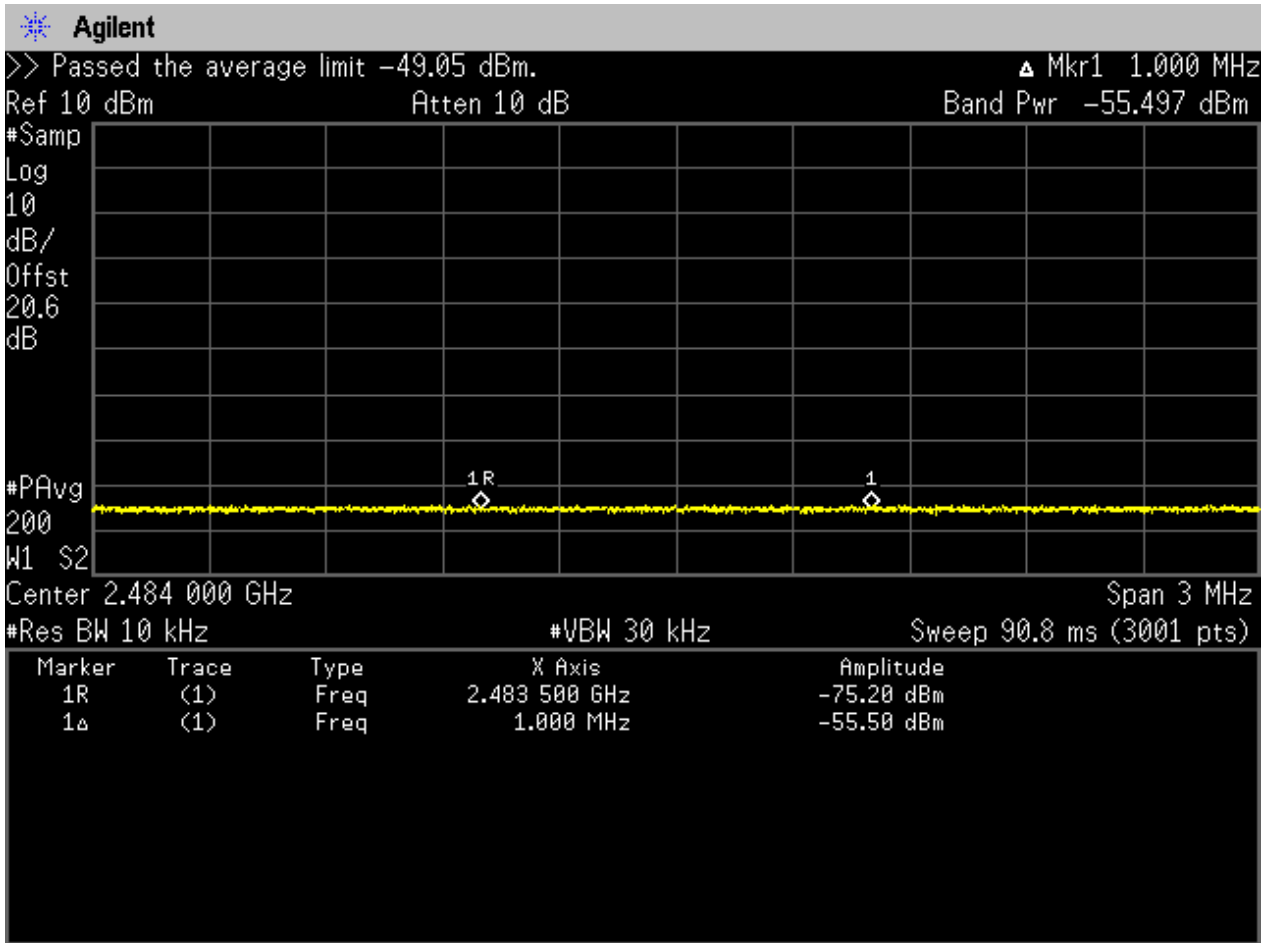


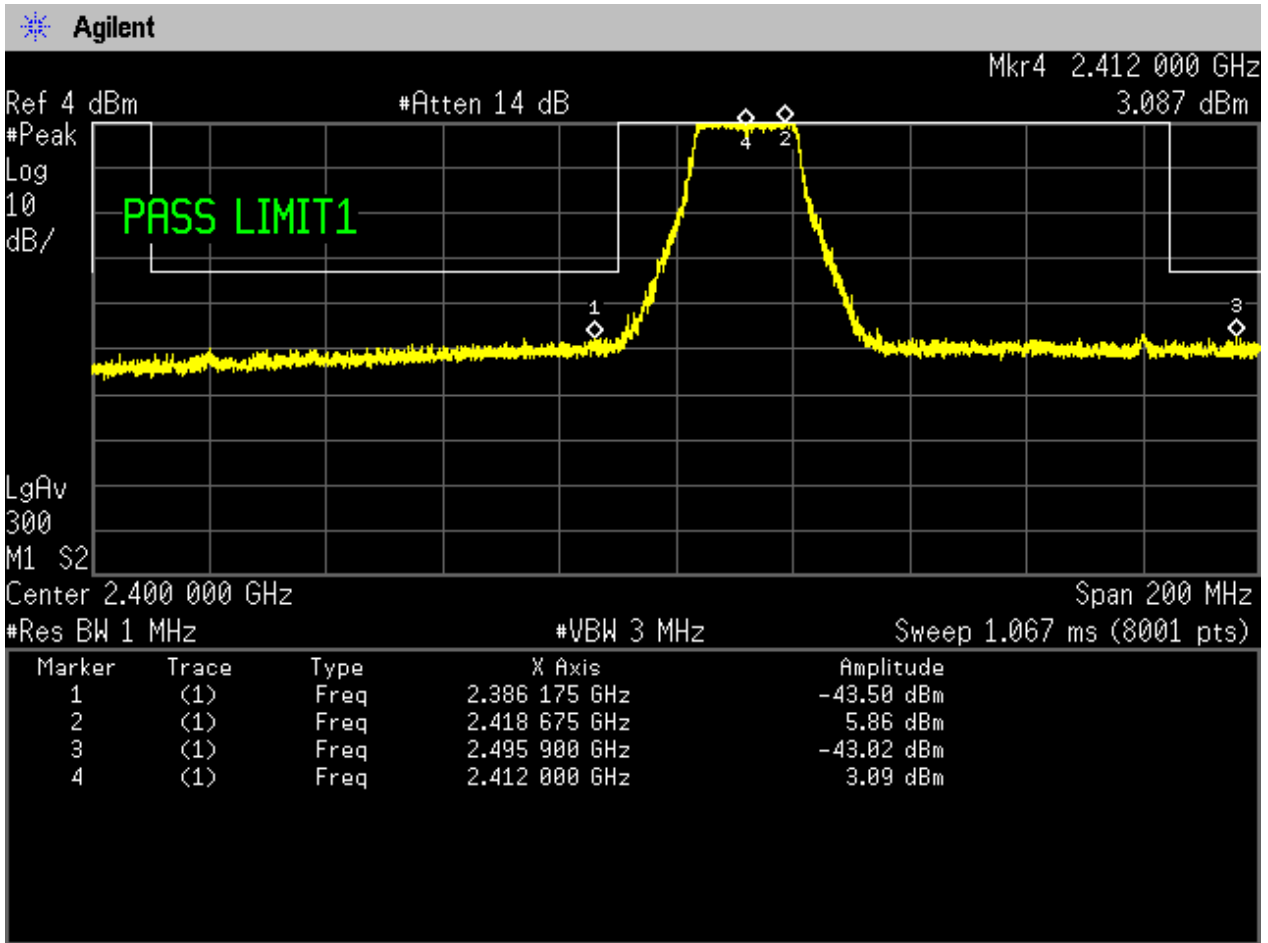


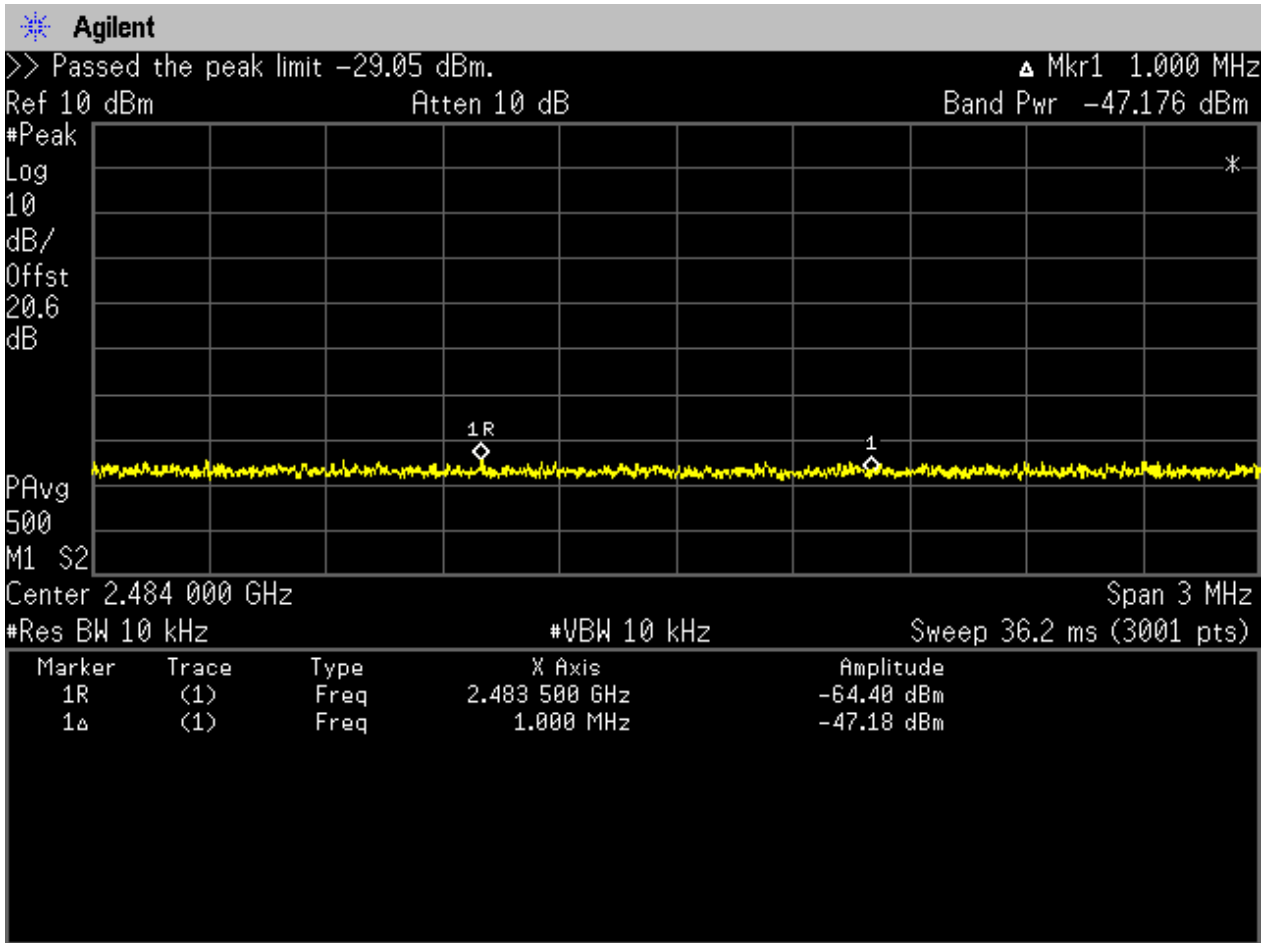


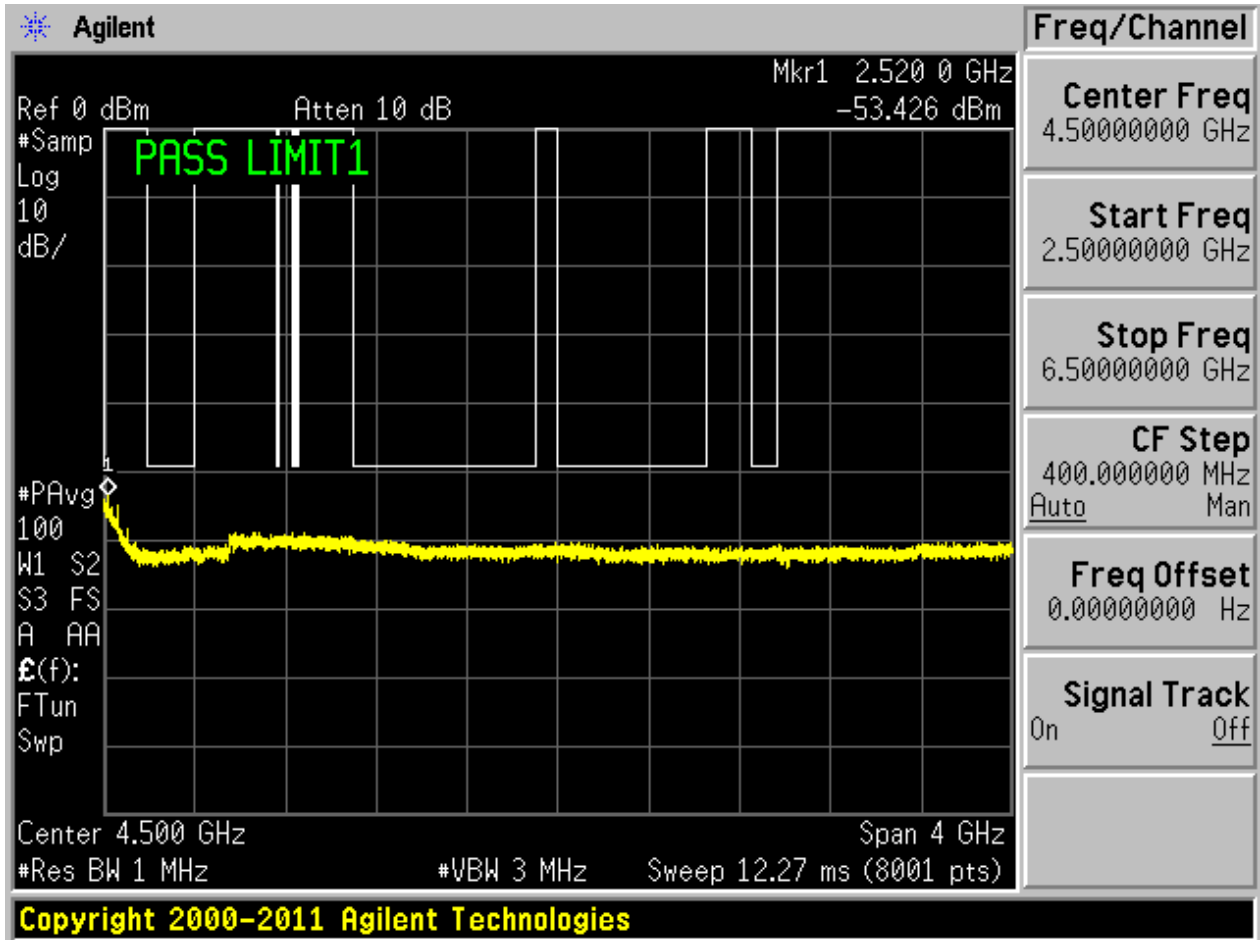


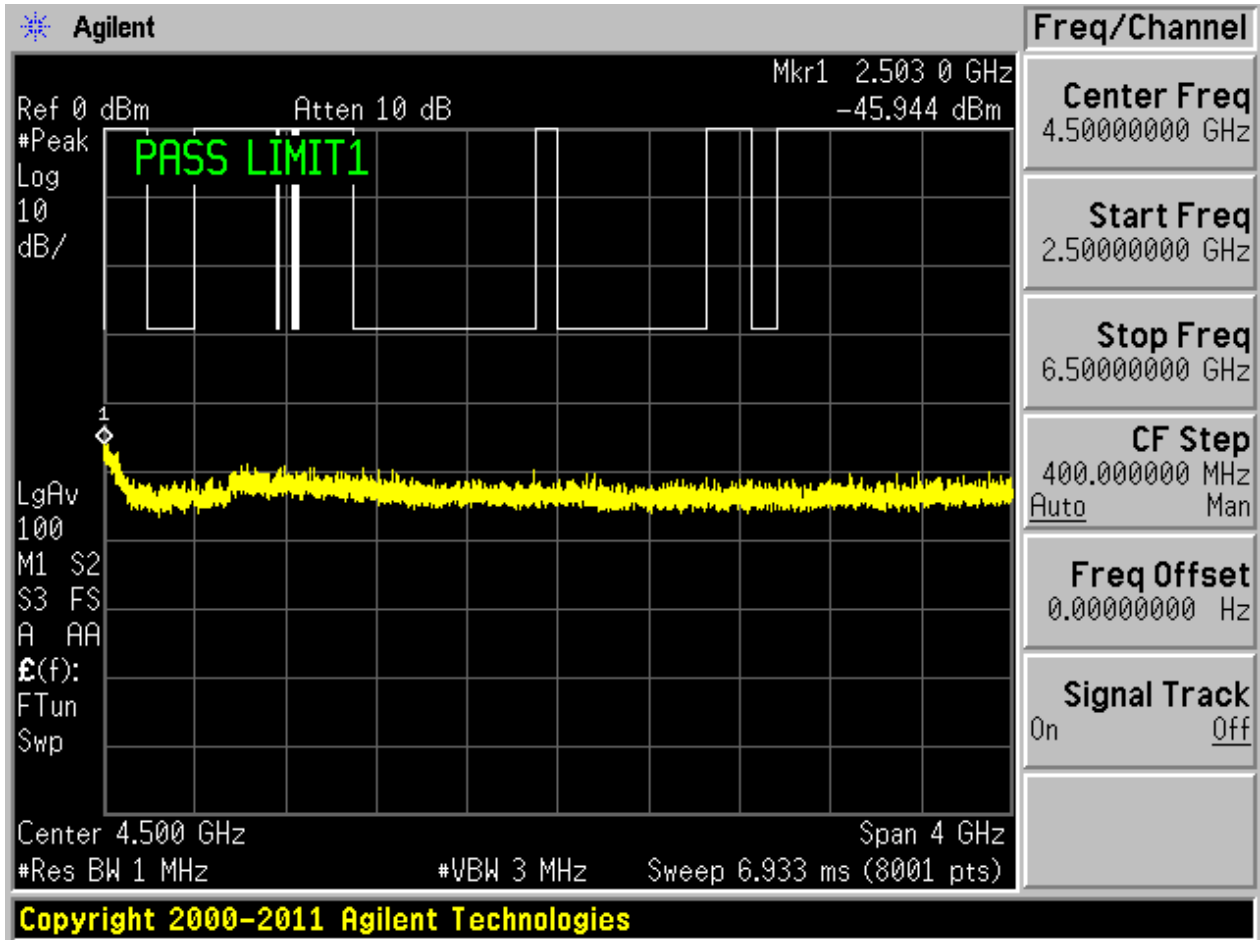


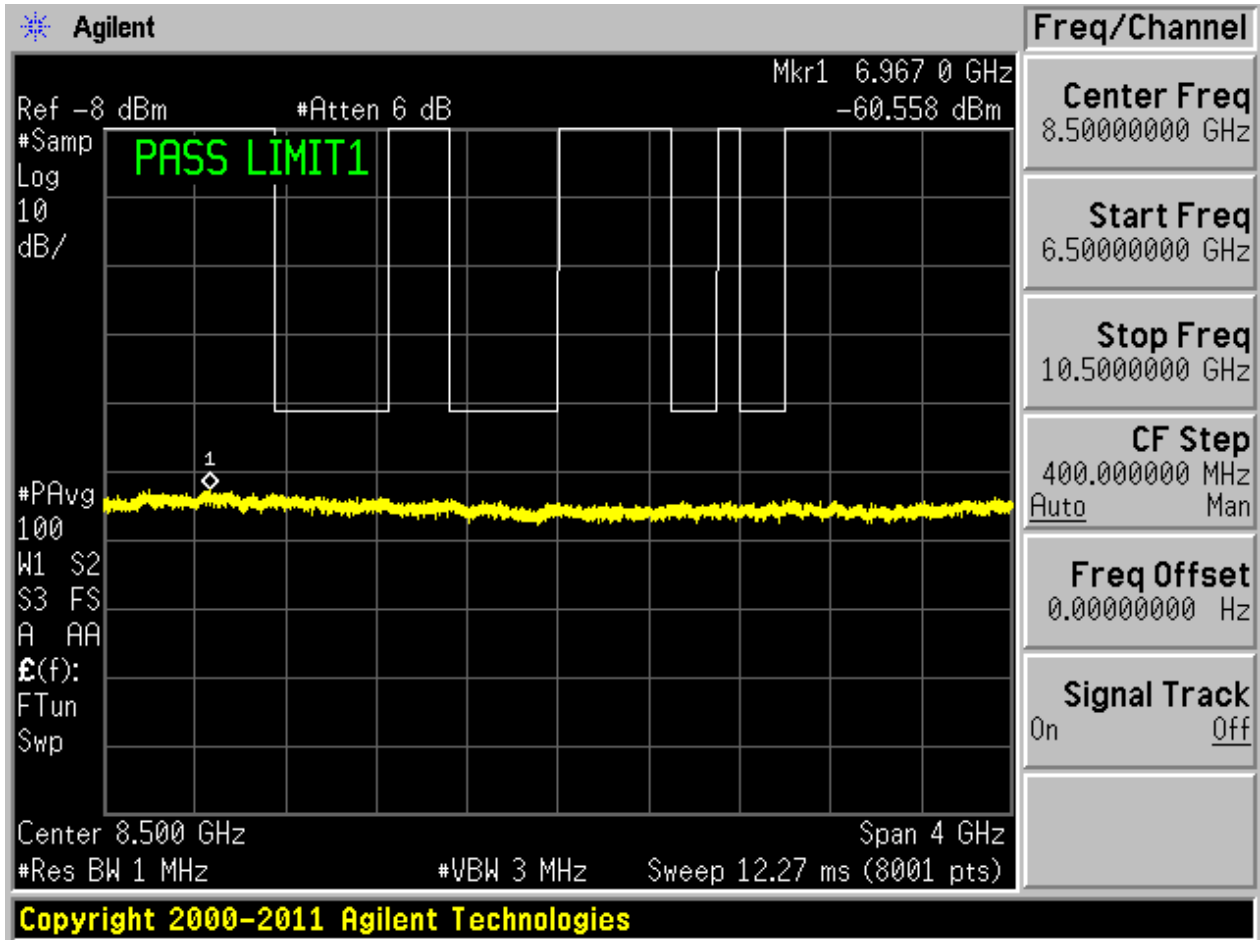


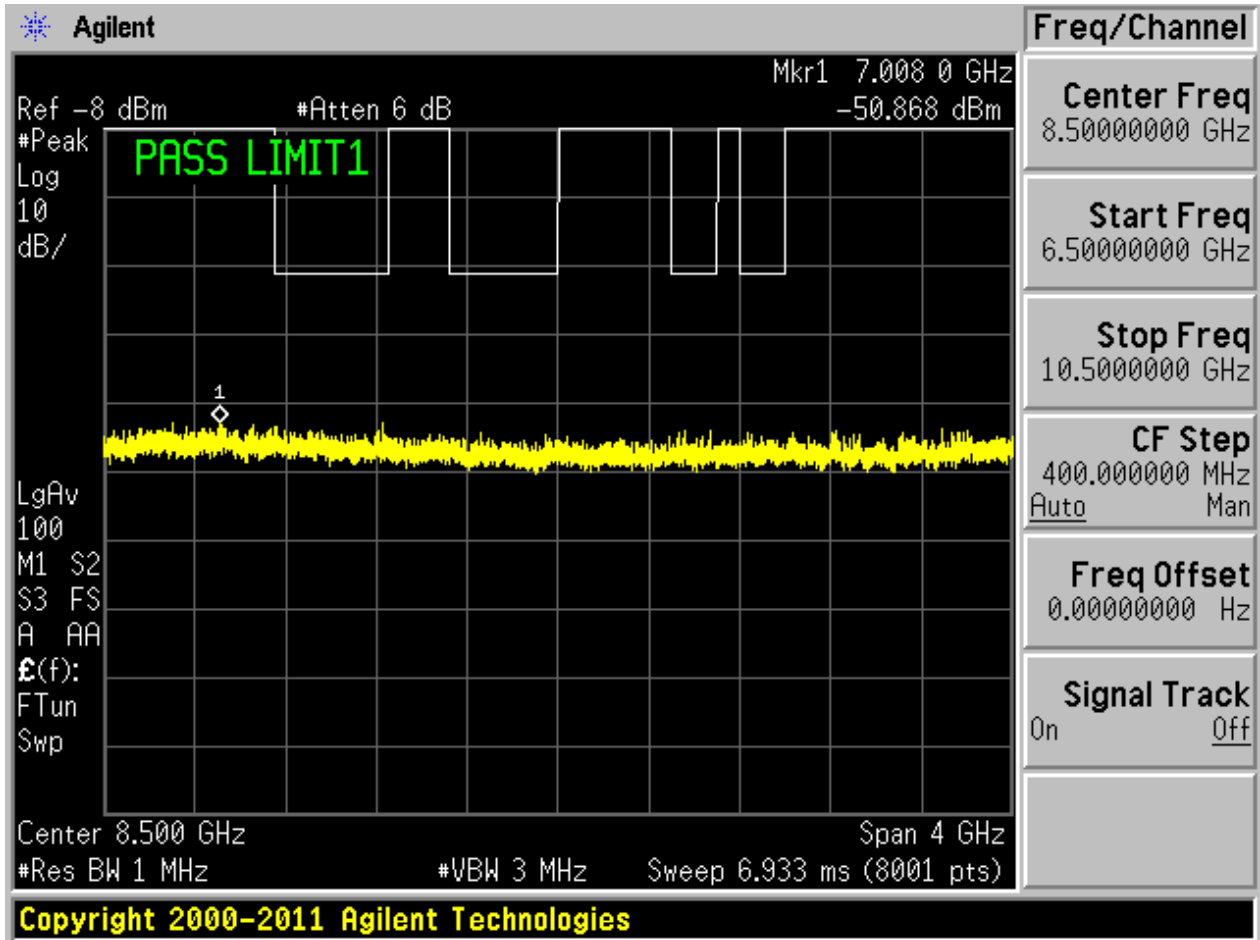


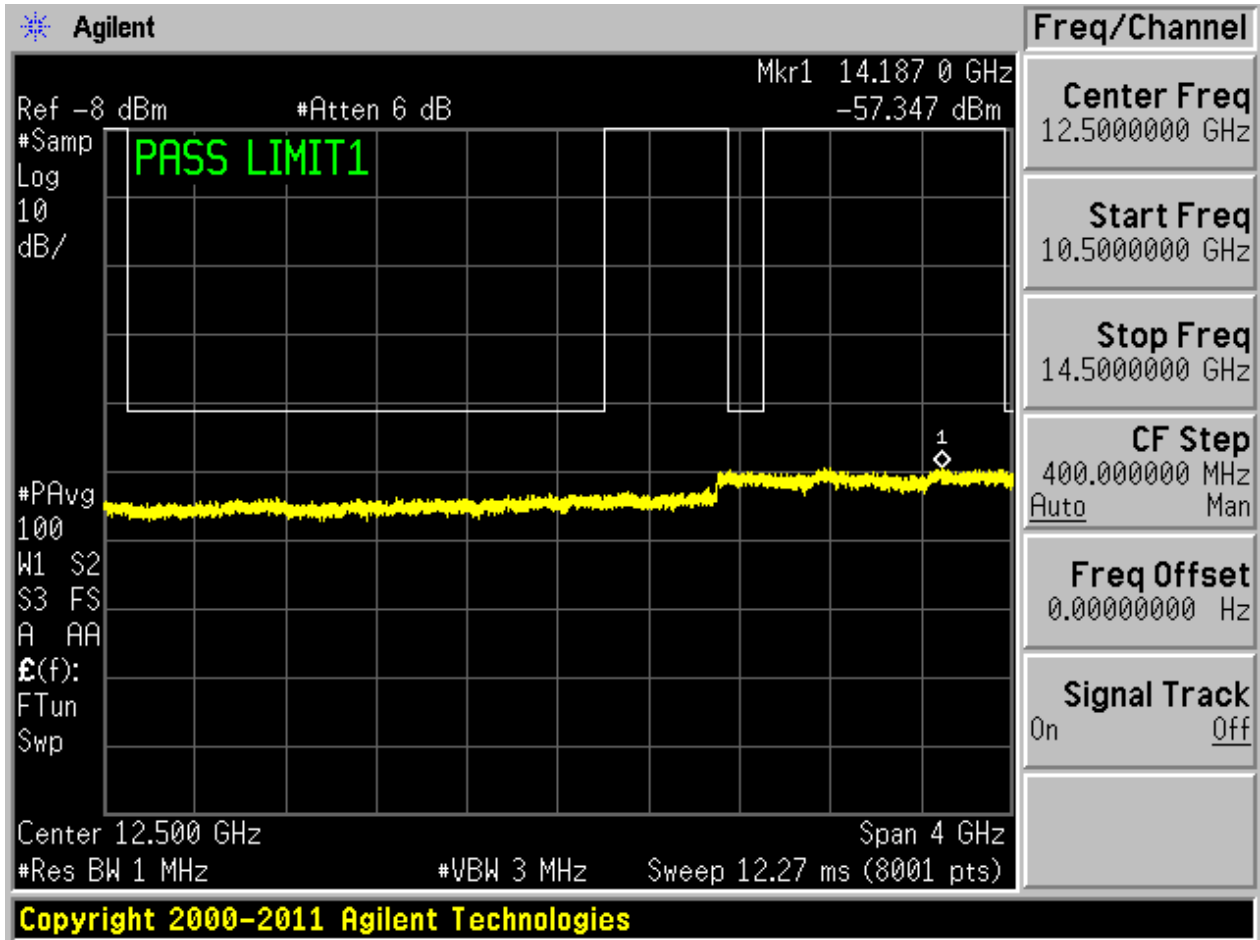


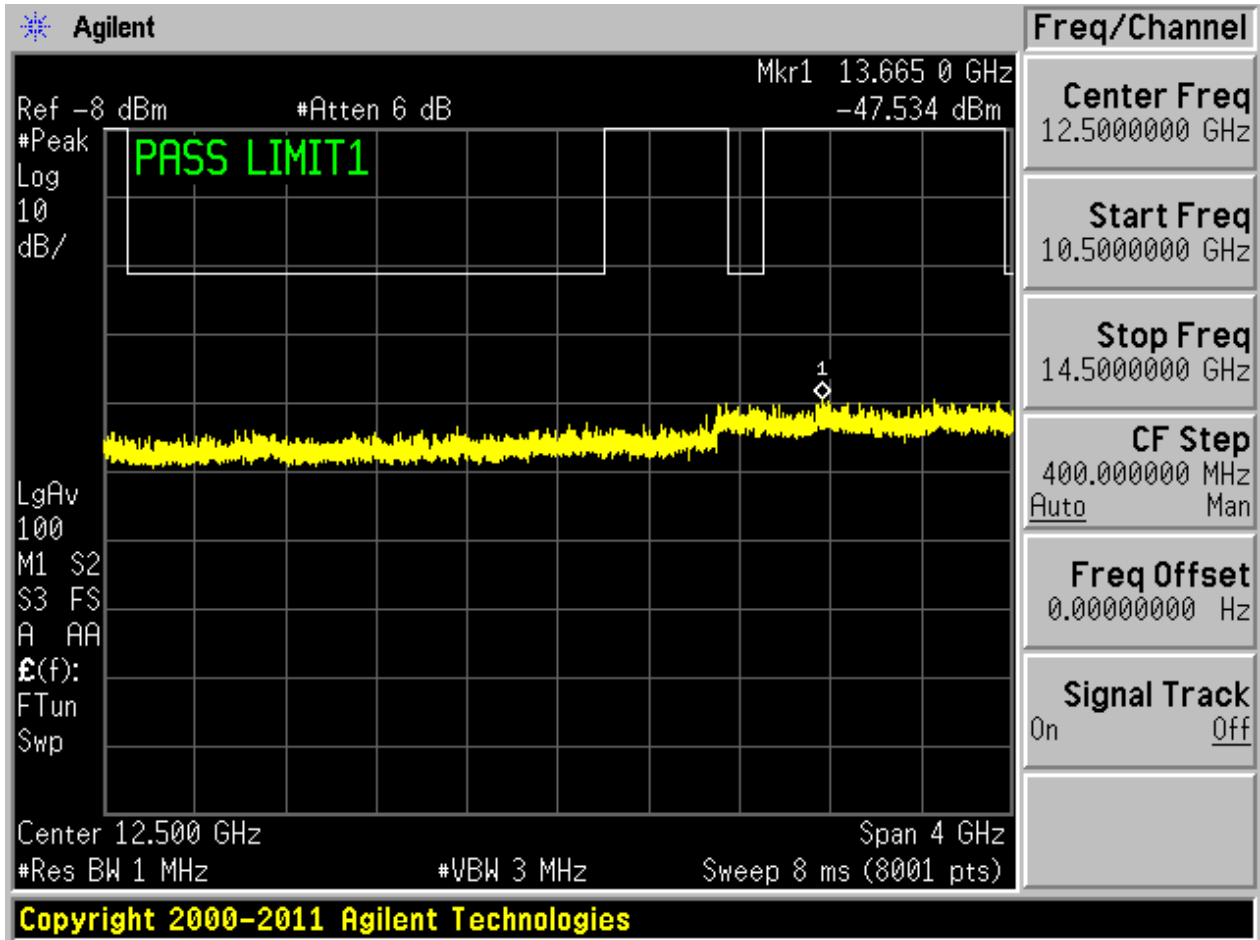


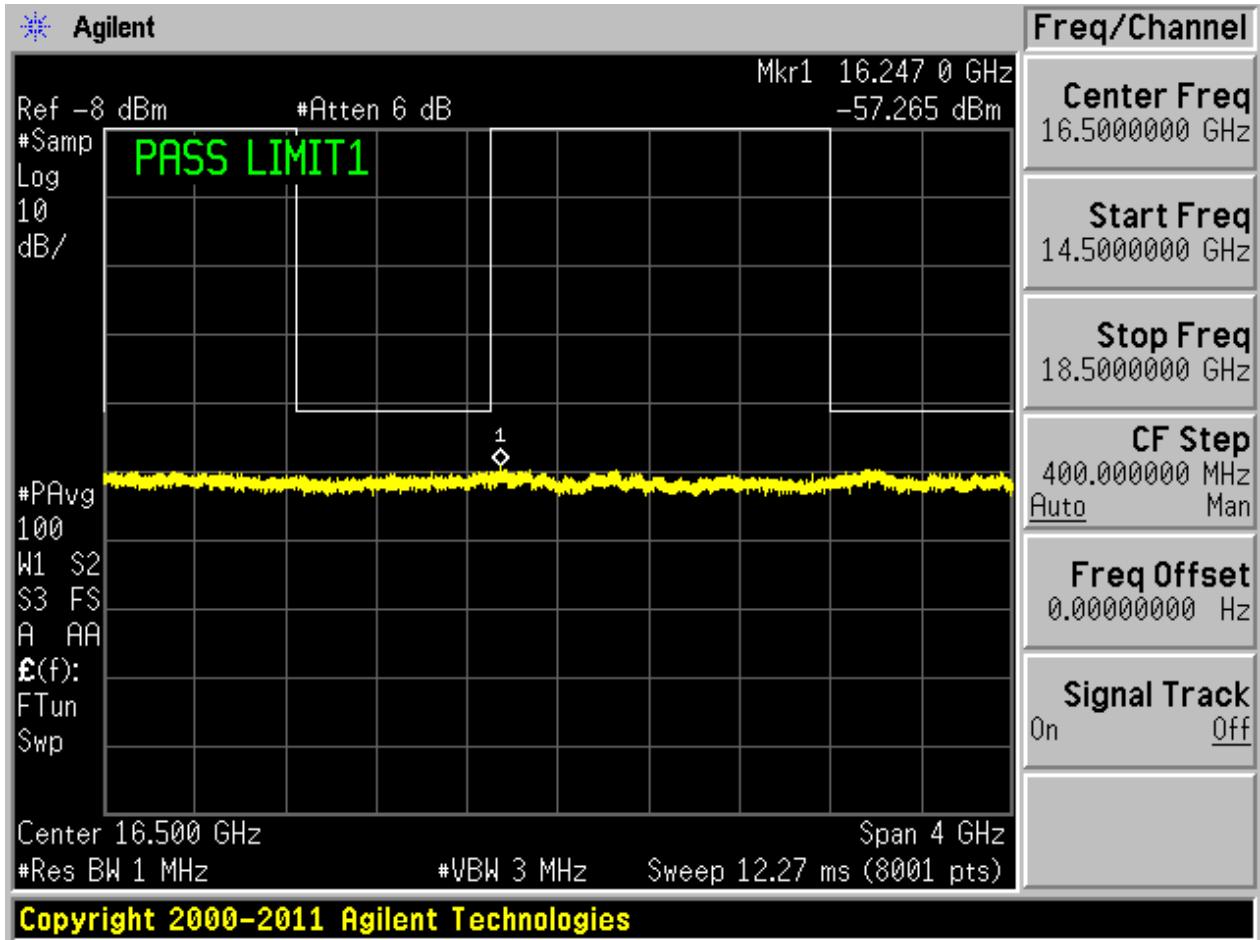


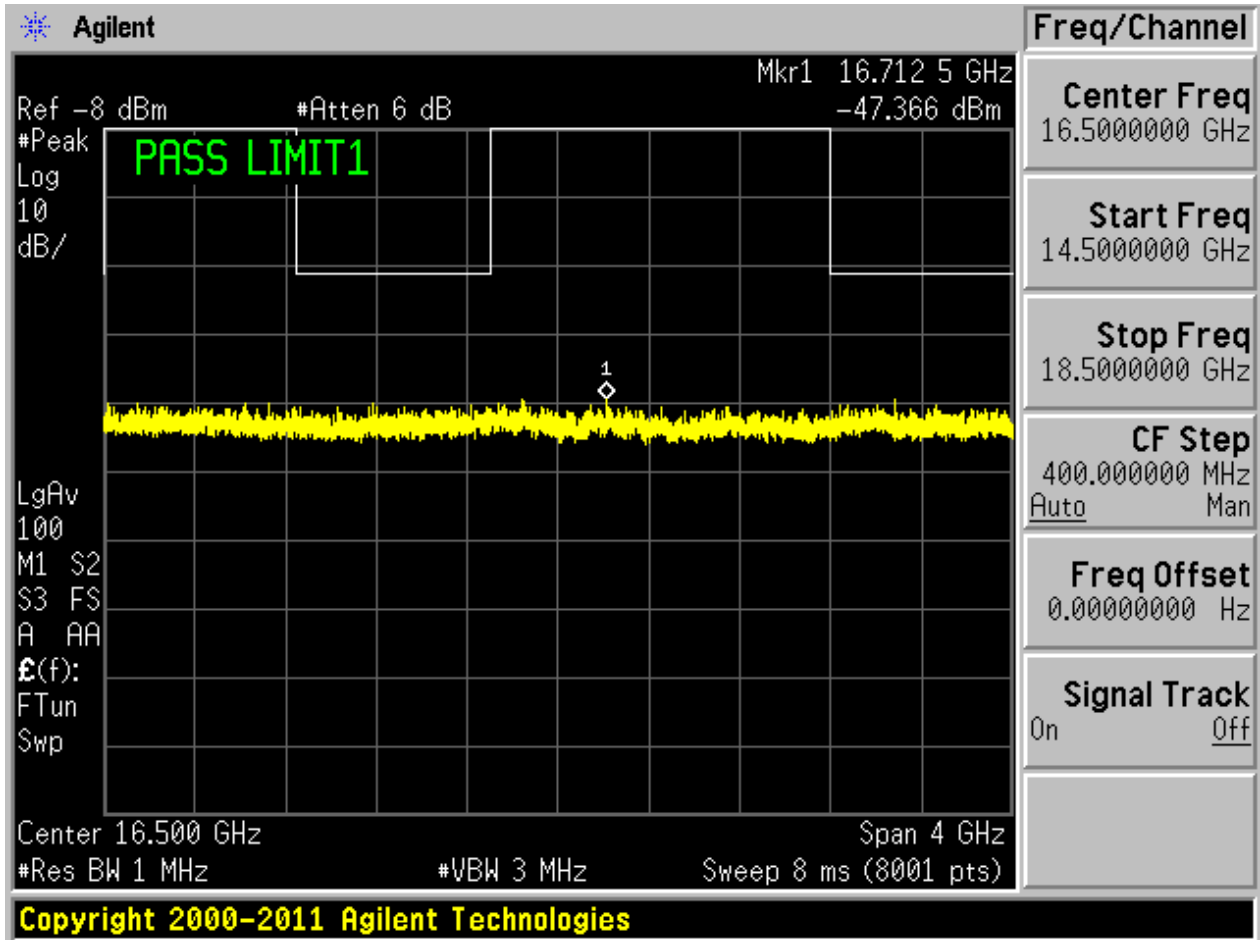


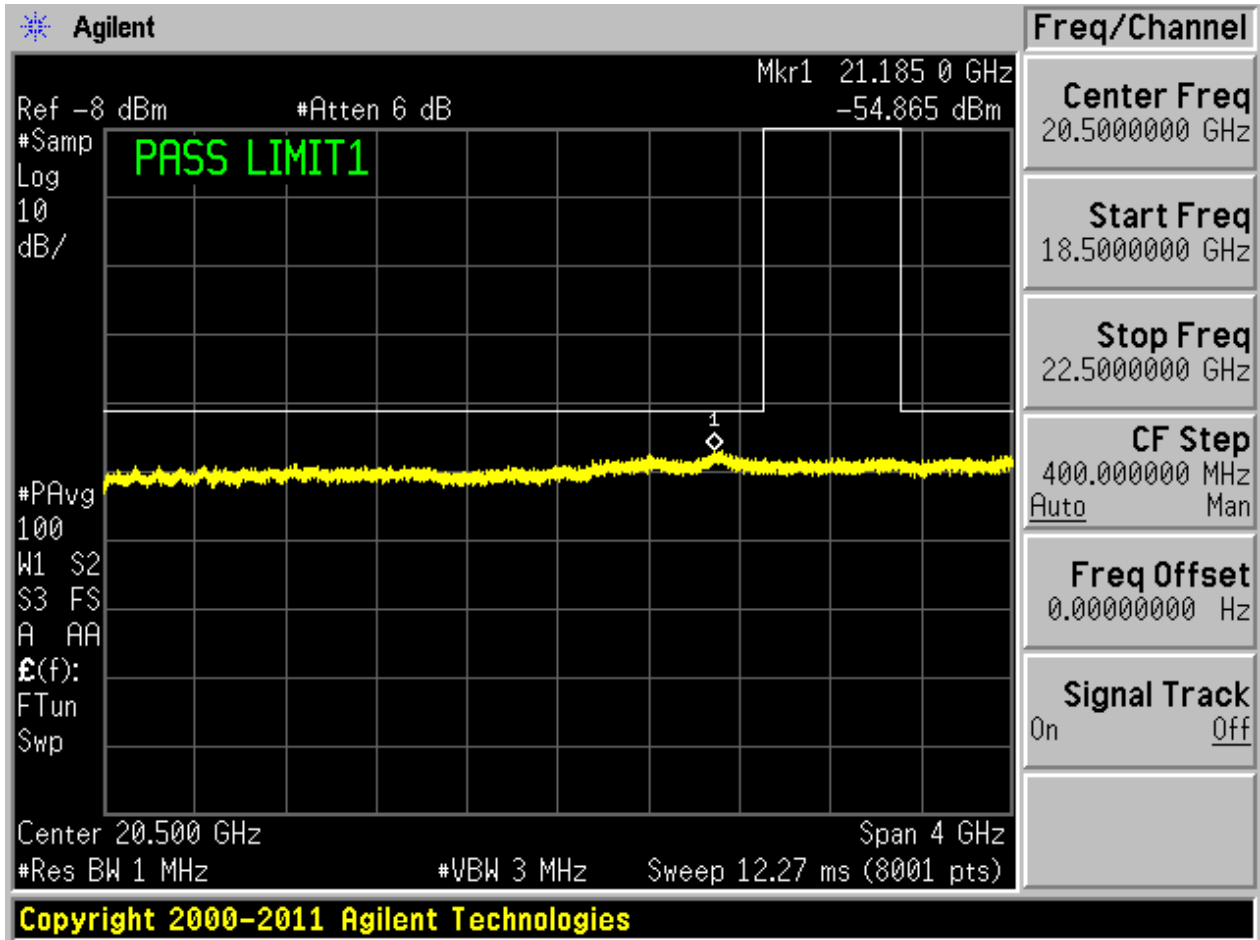


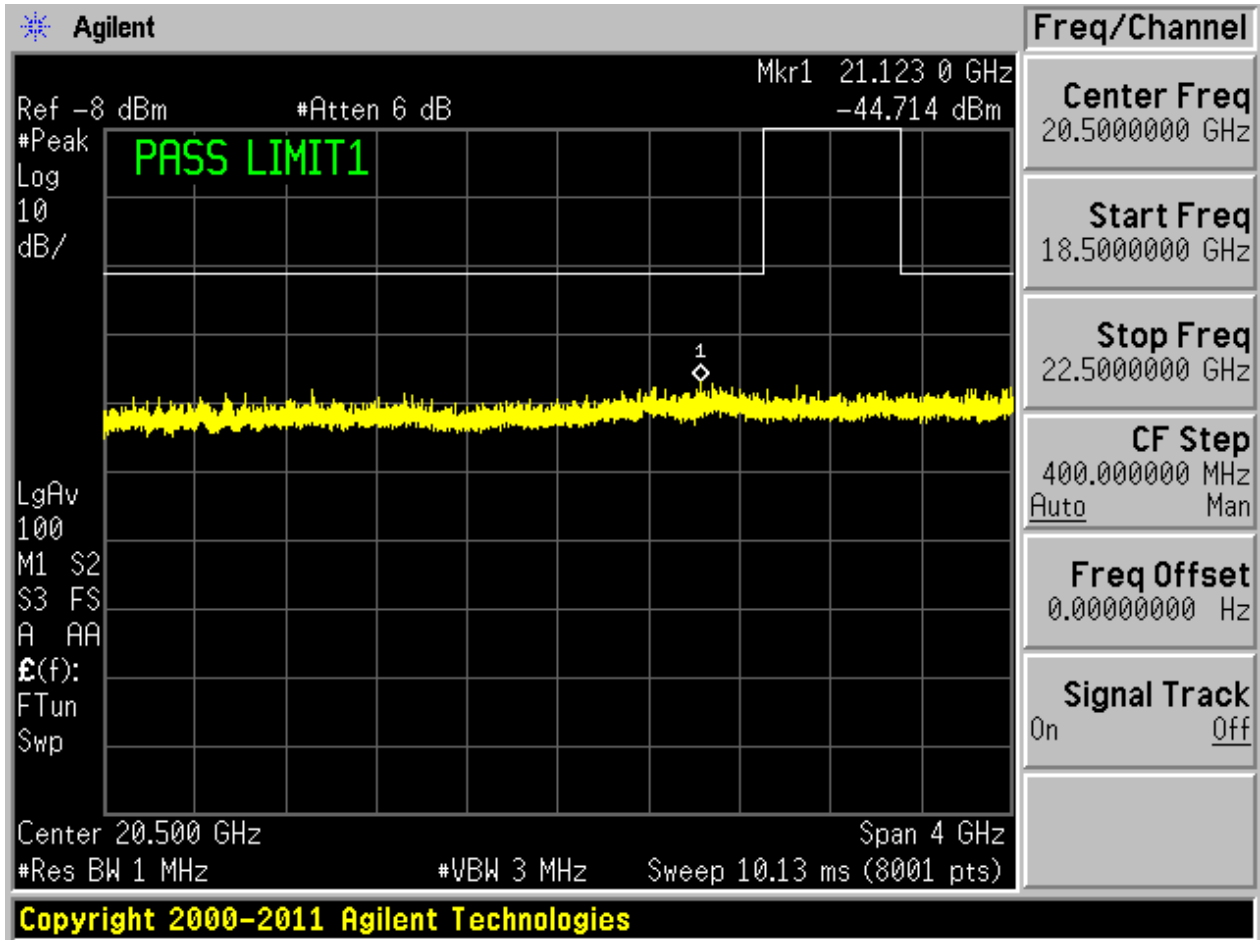


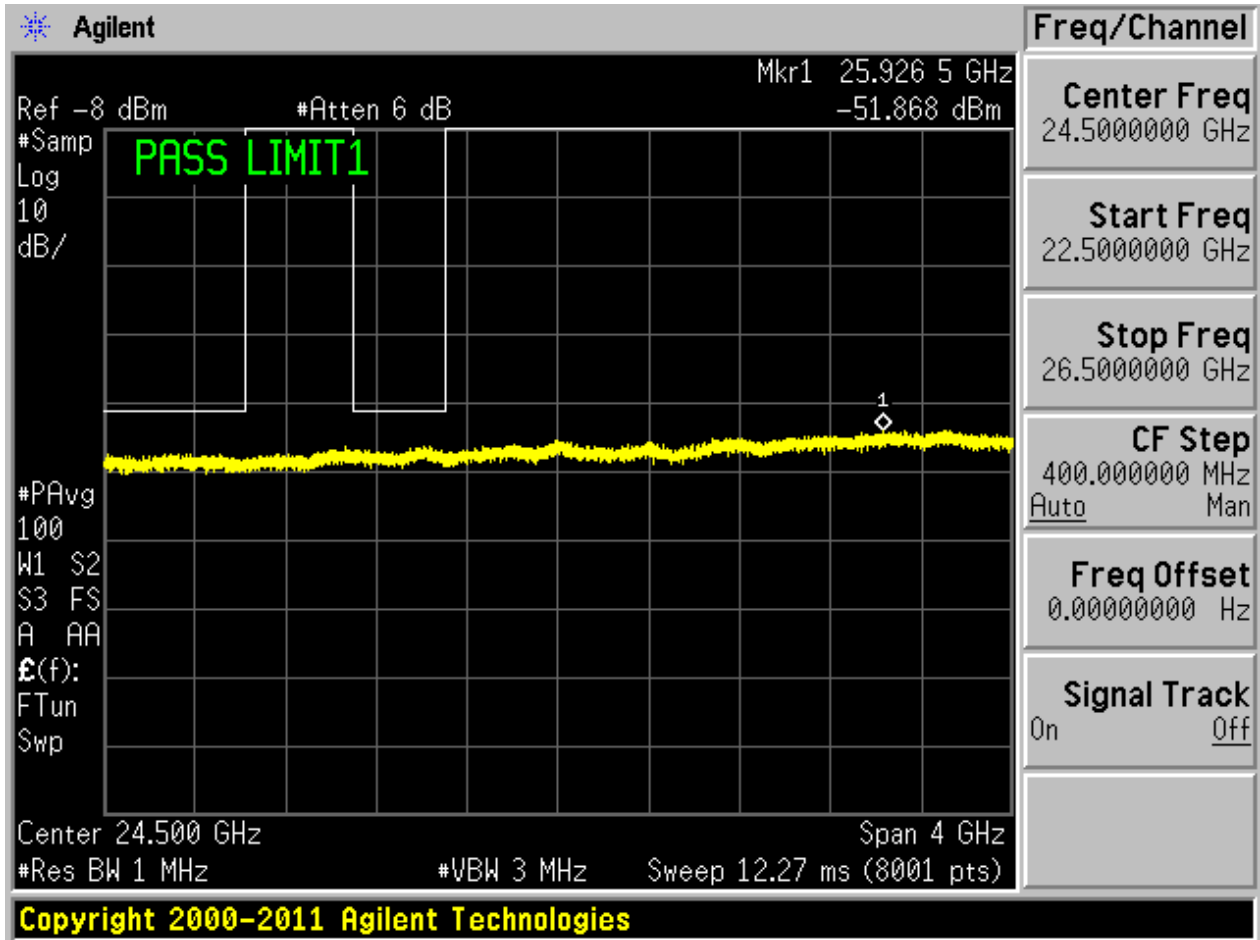


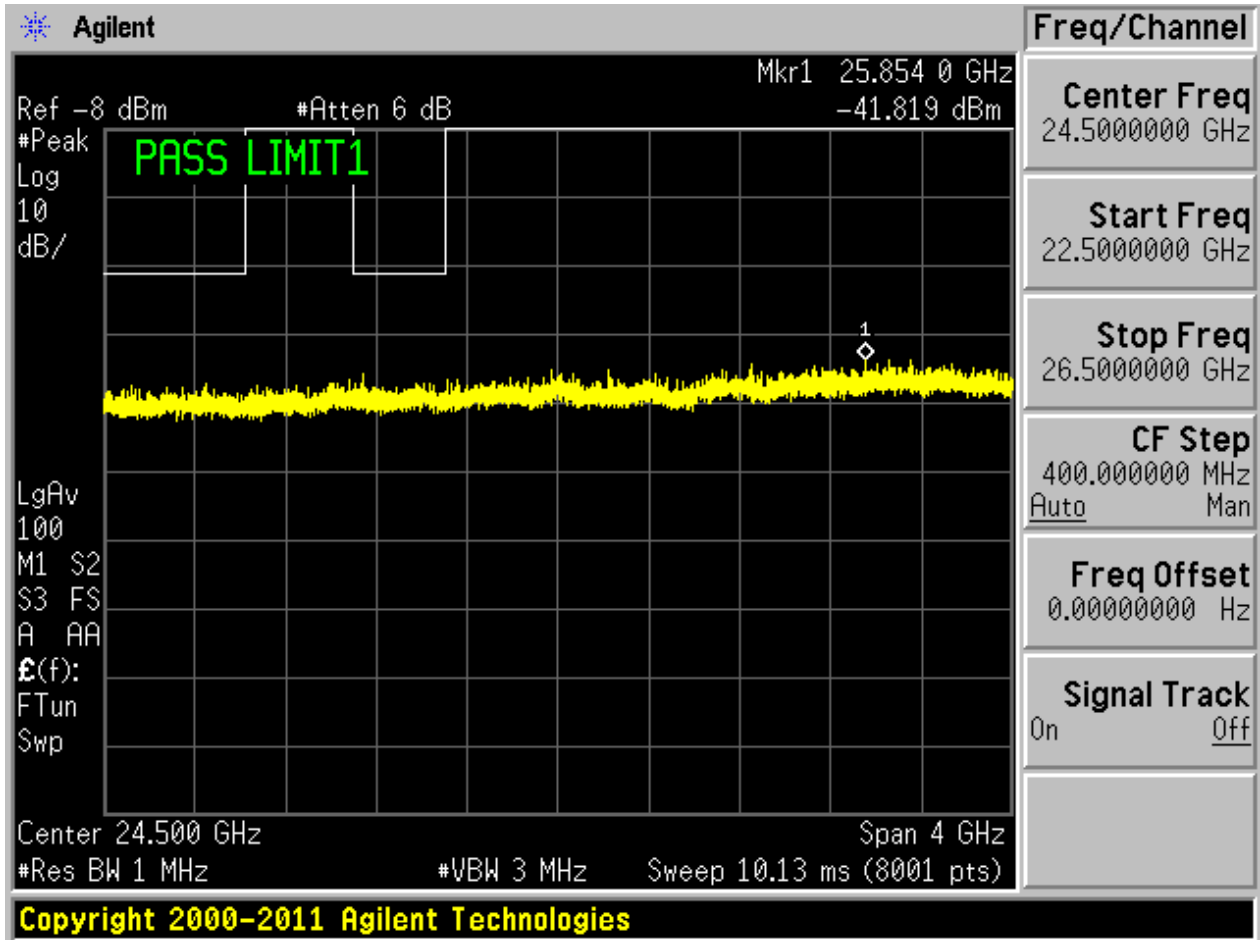




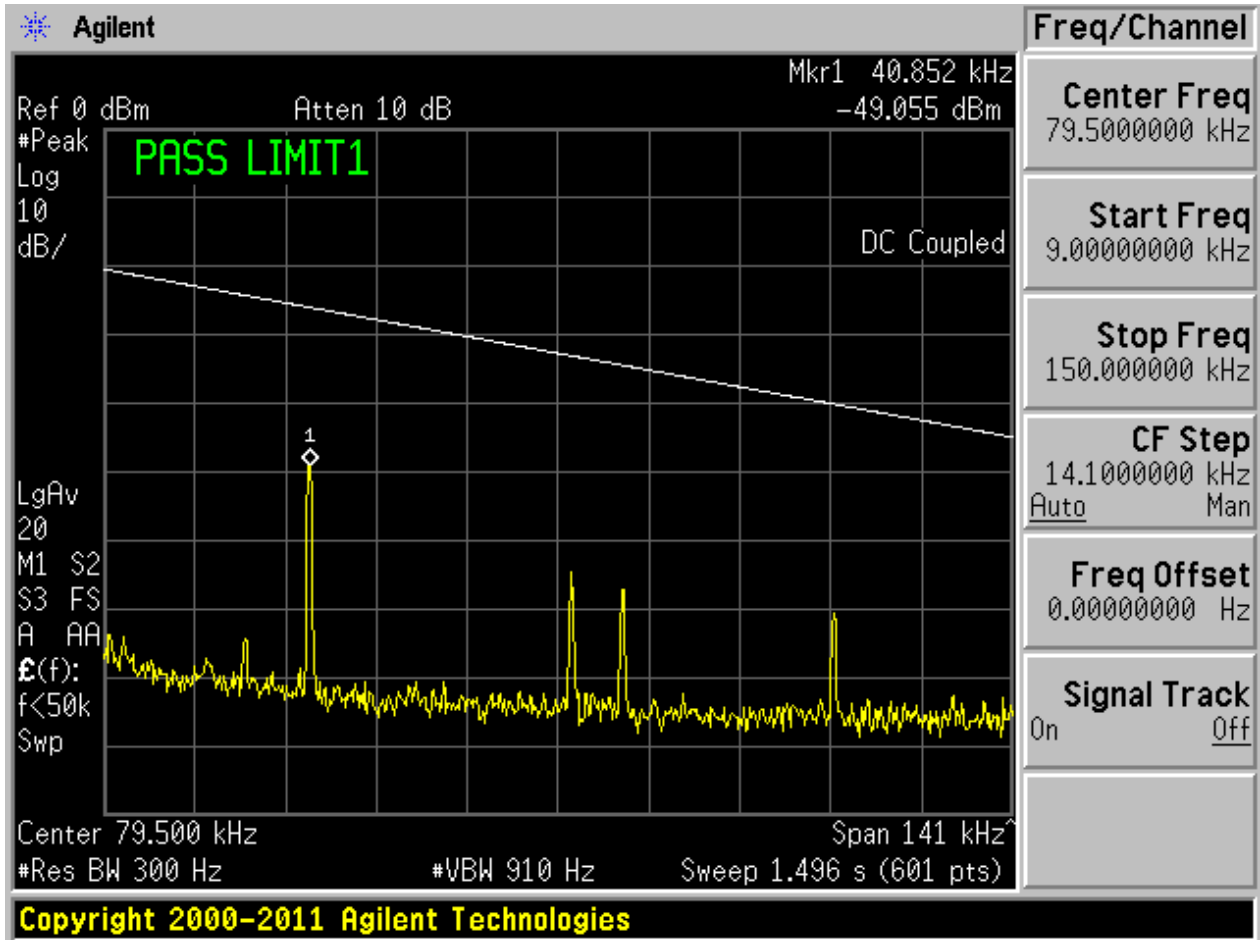


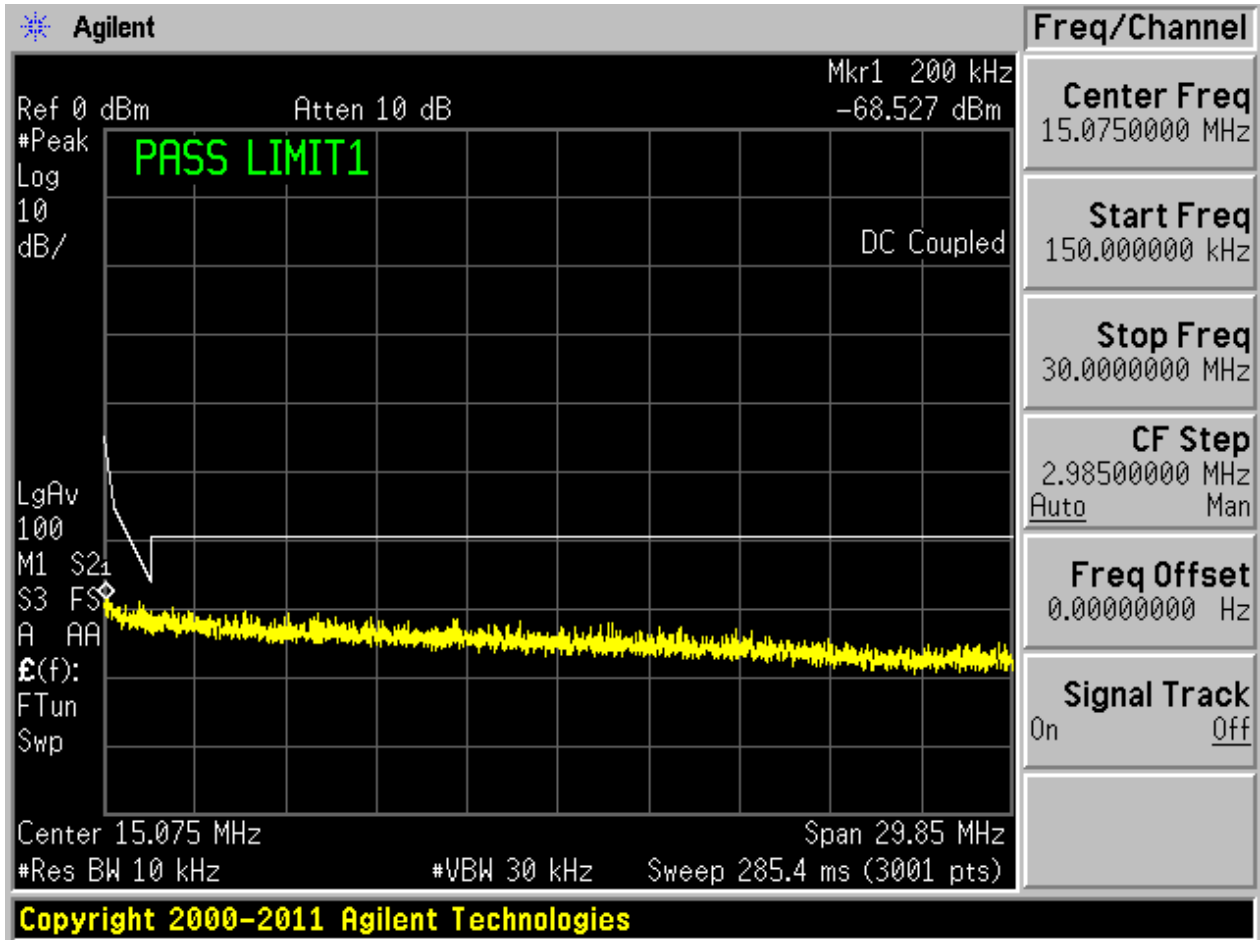


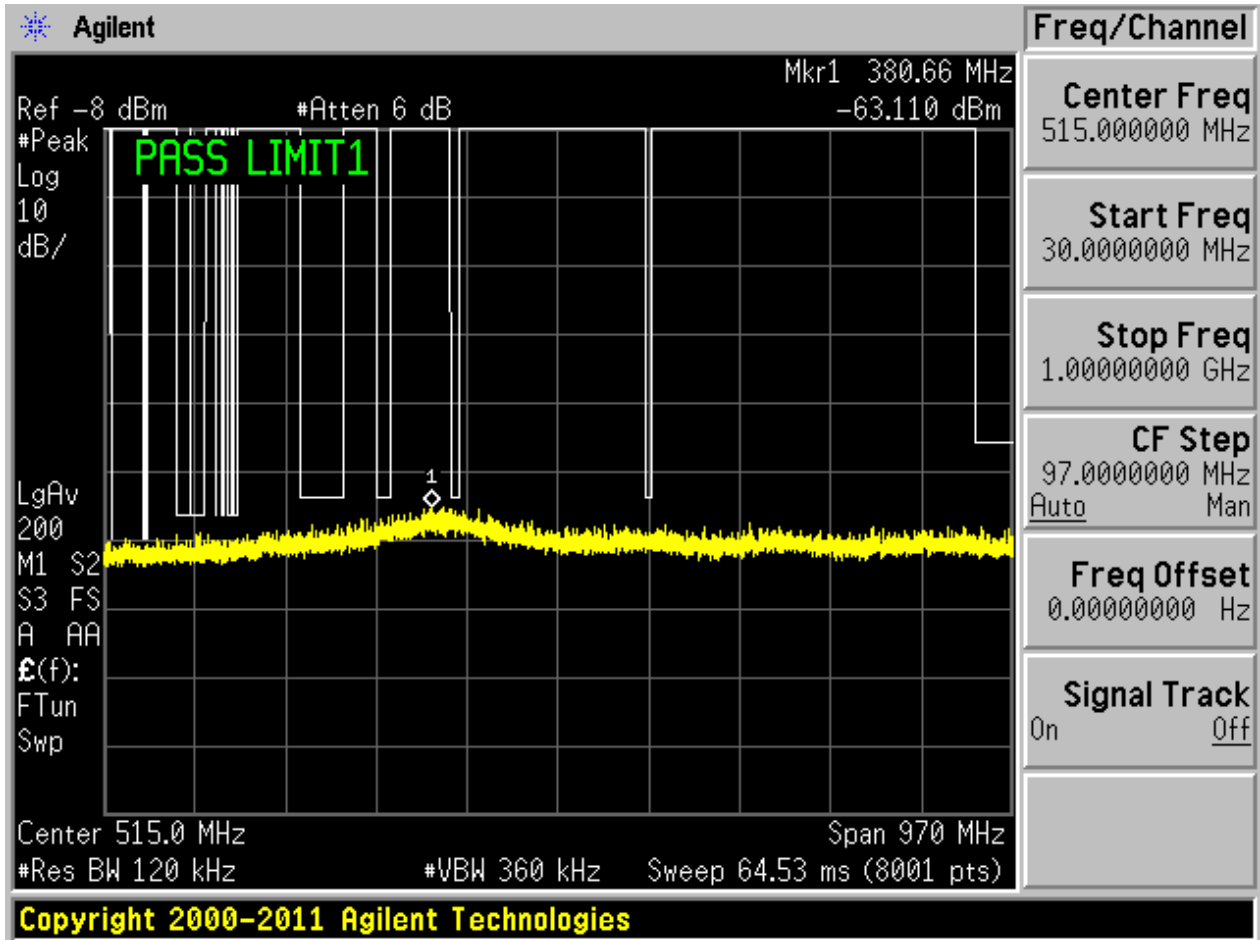


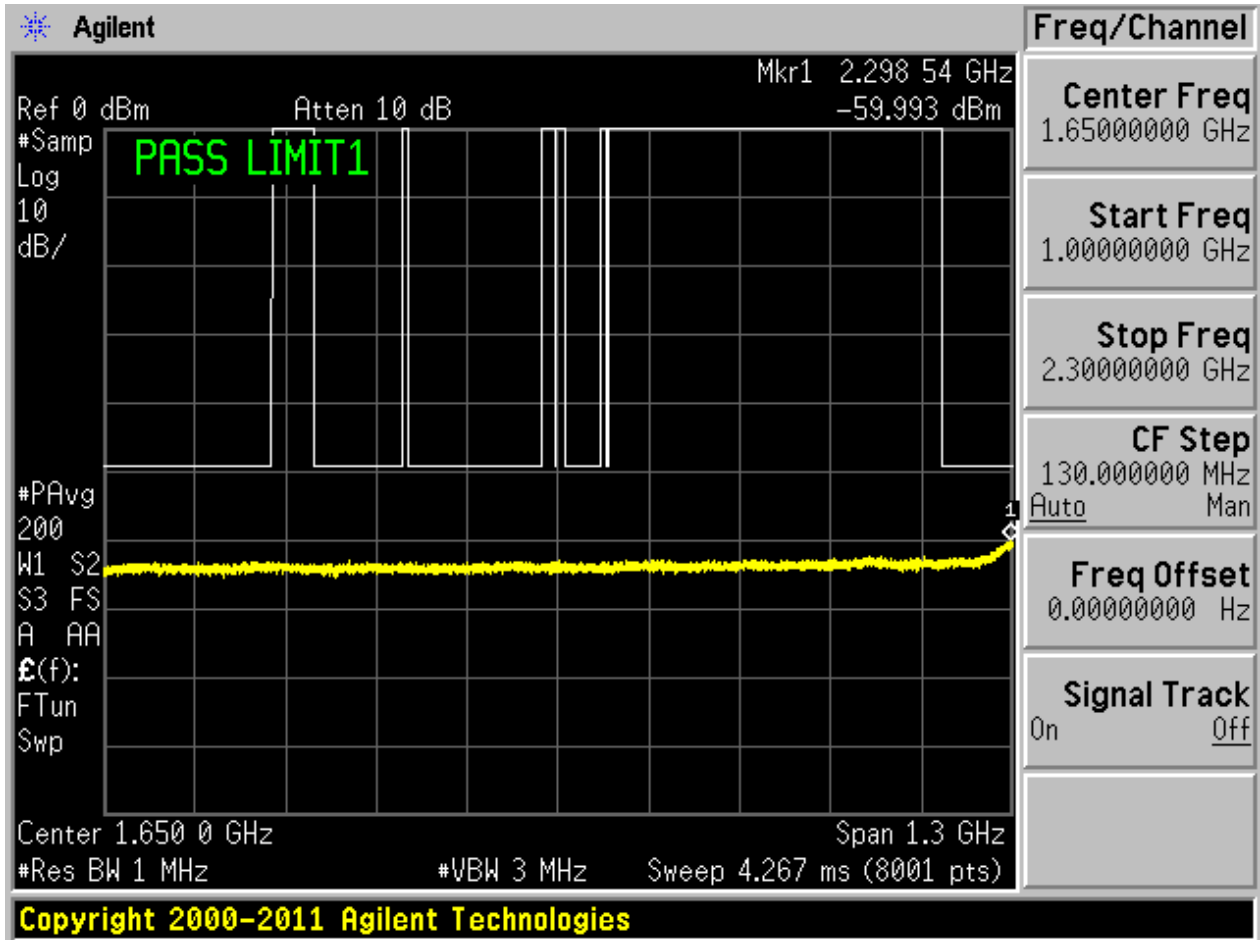


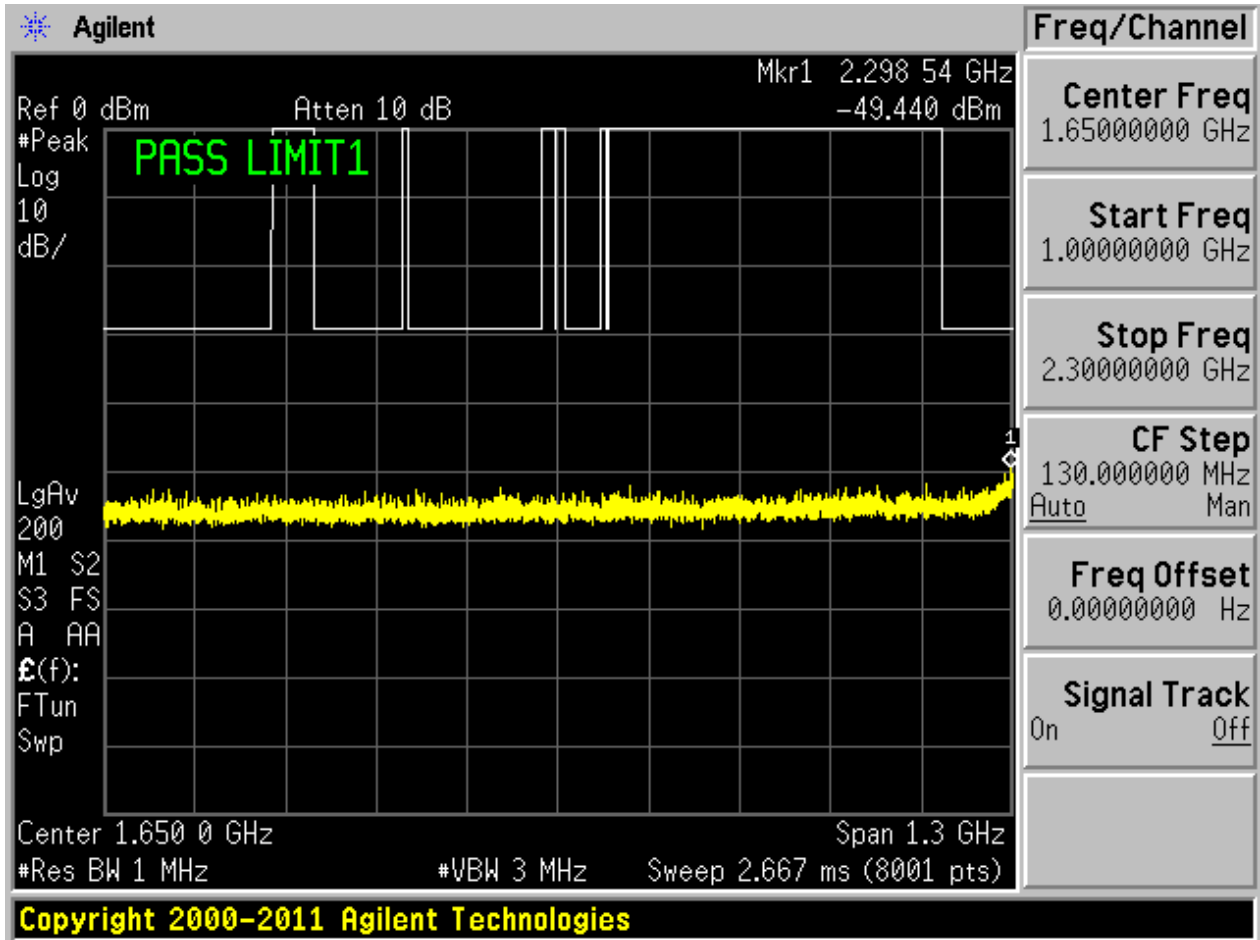
2.25.3 Ant 3 (Trace#3)

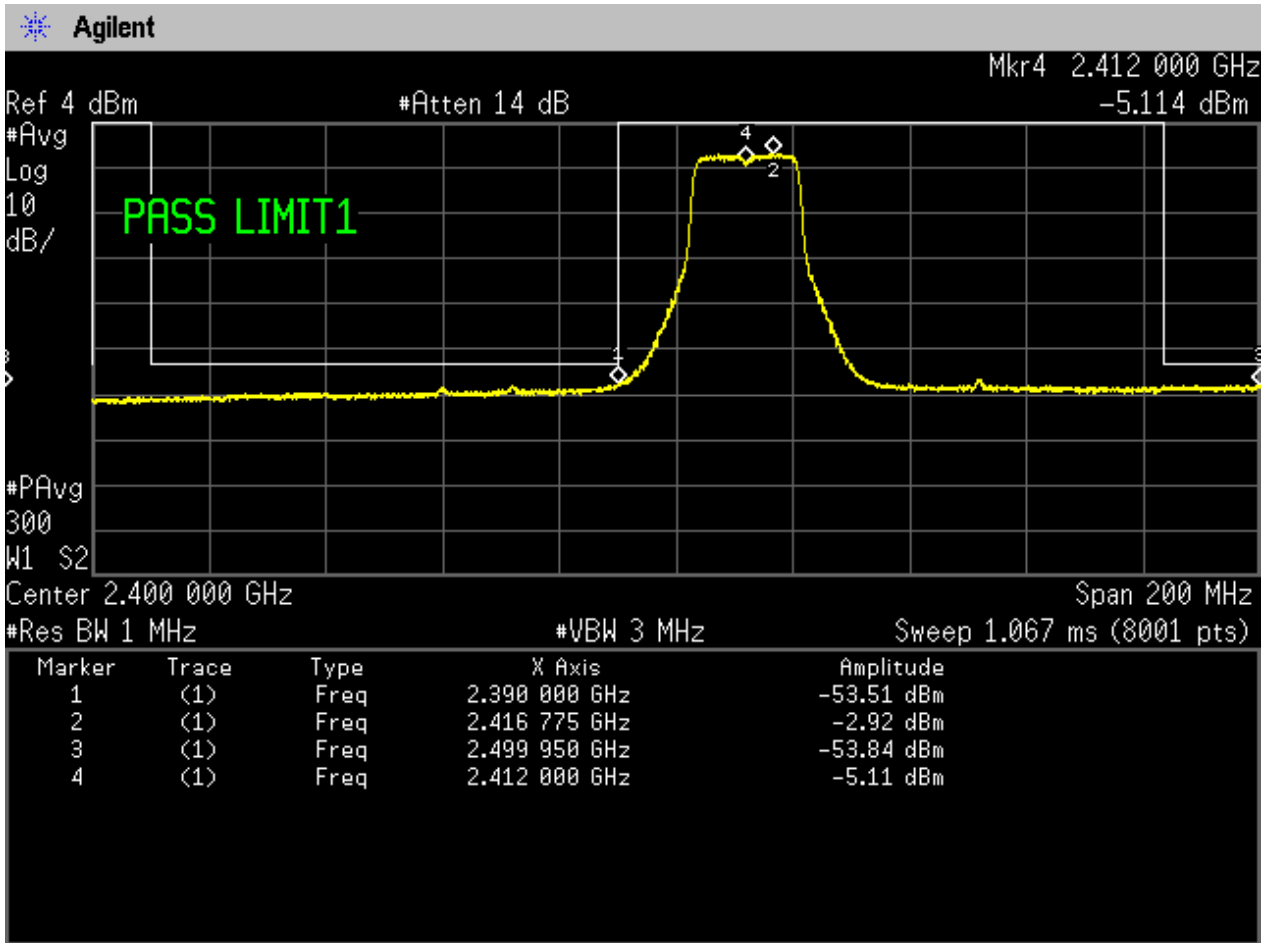


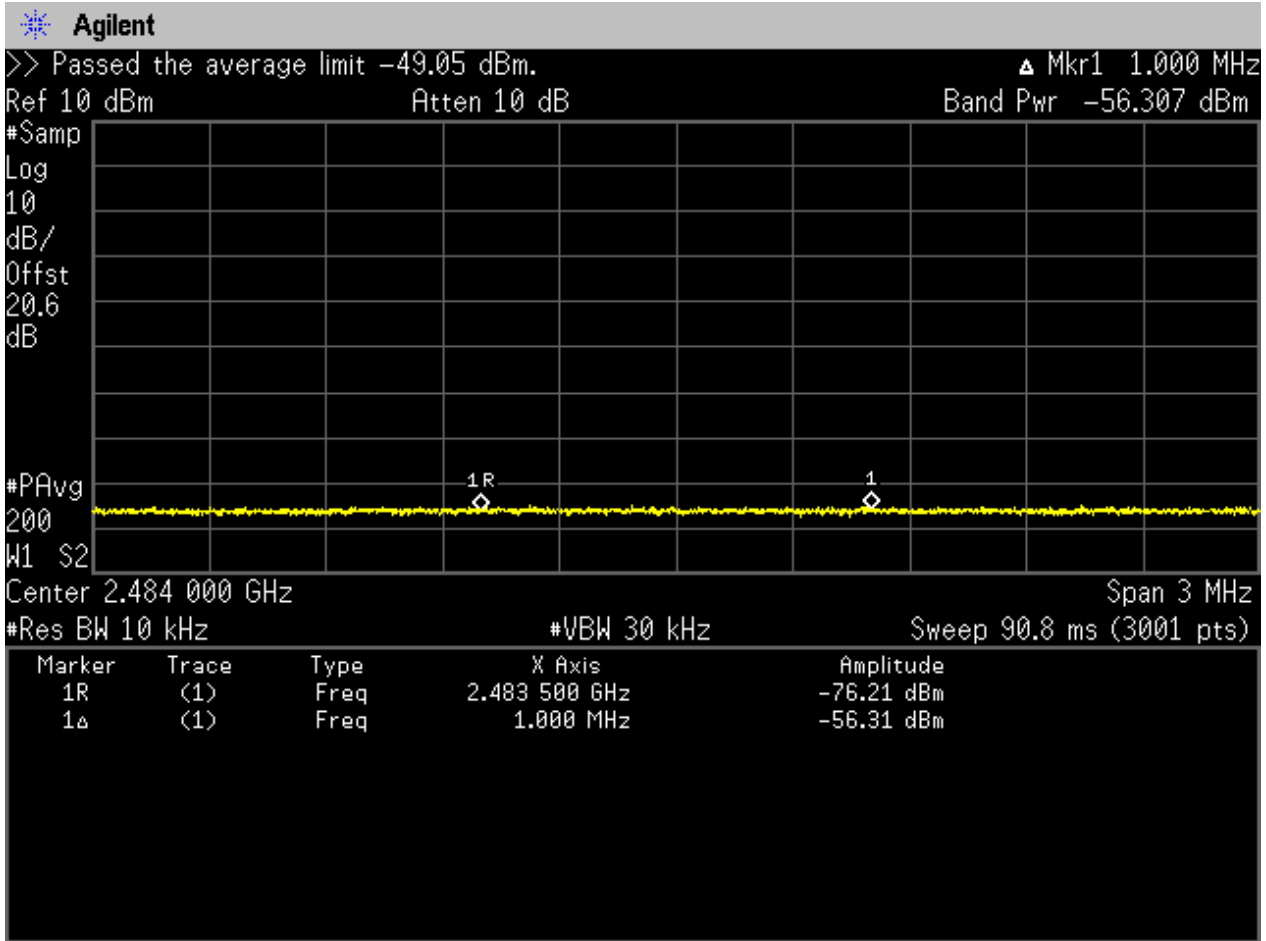


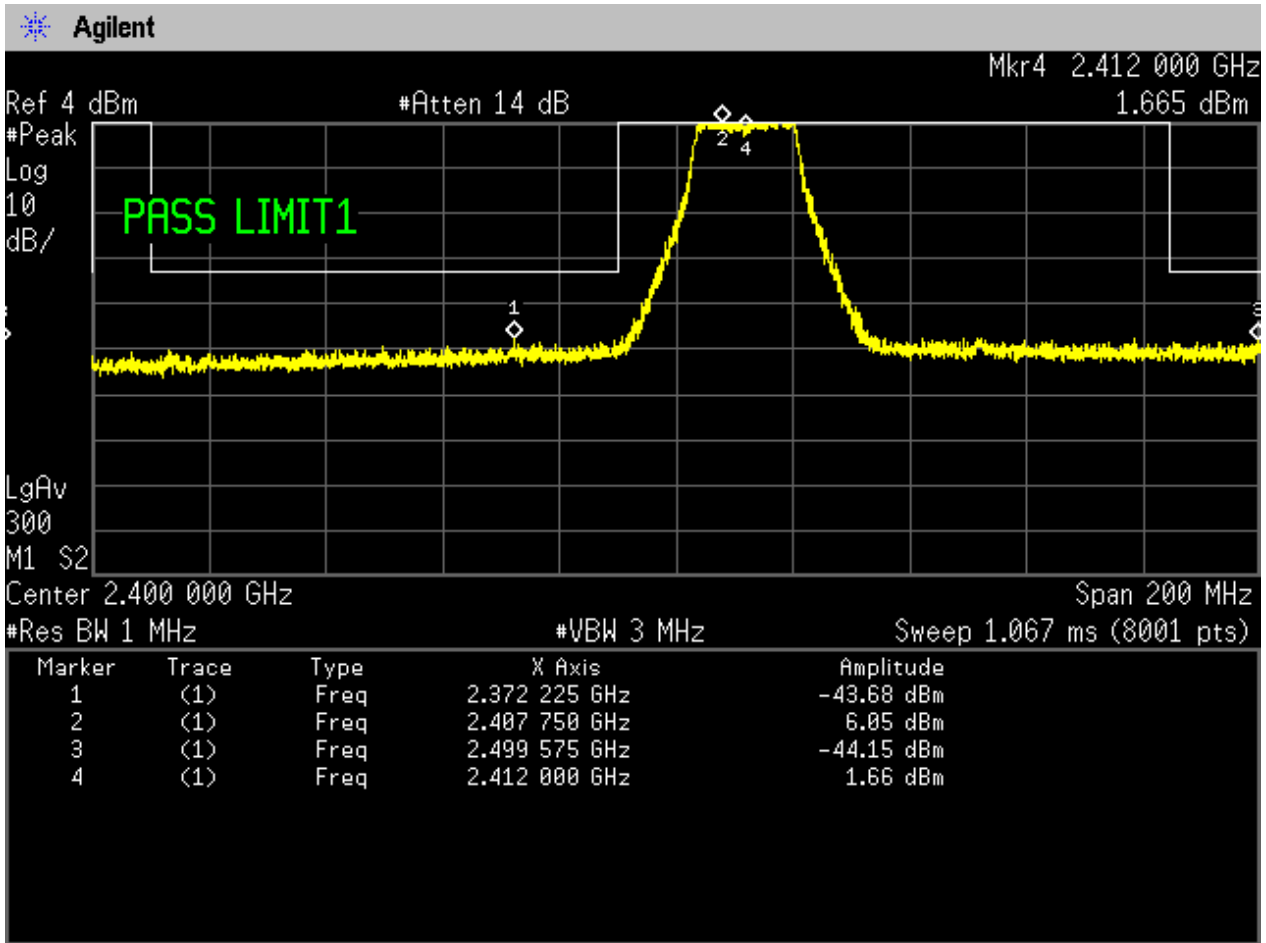


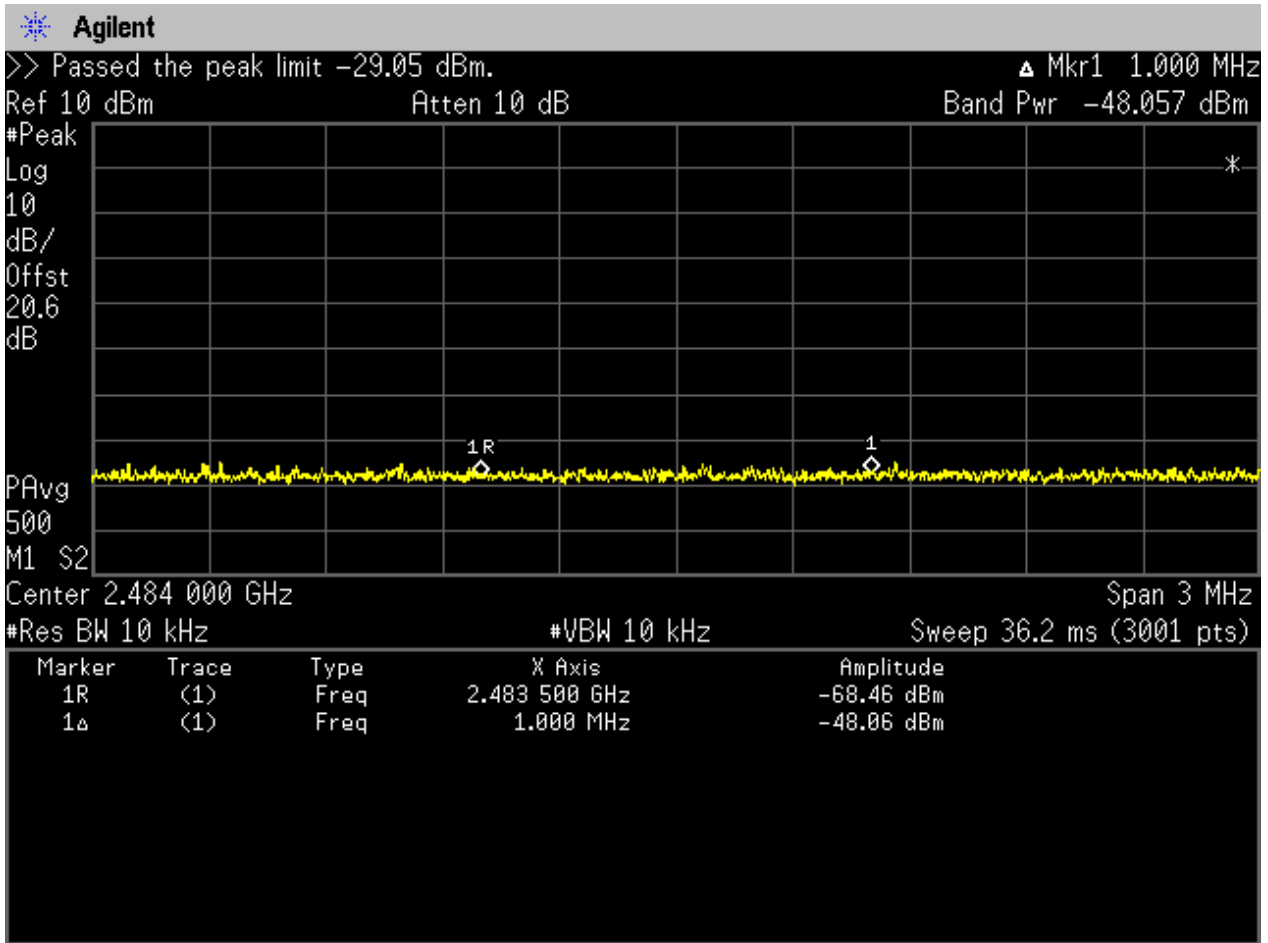


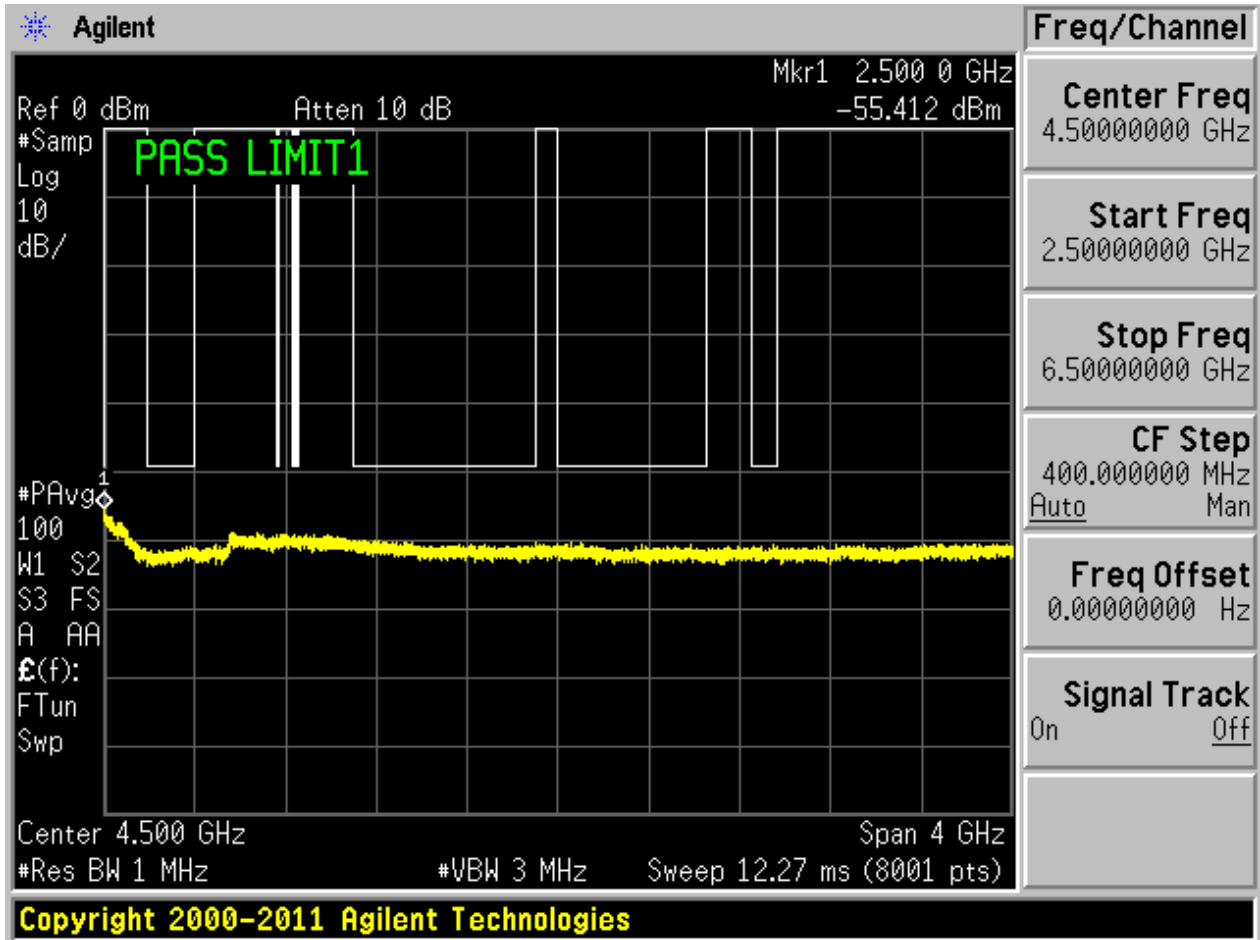


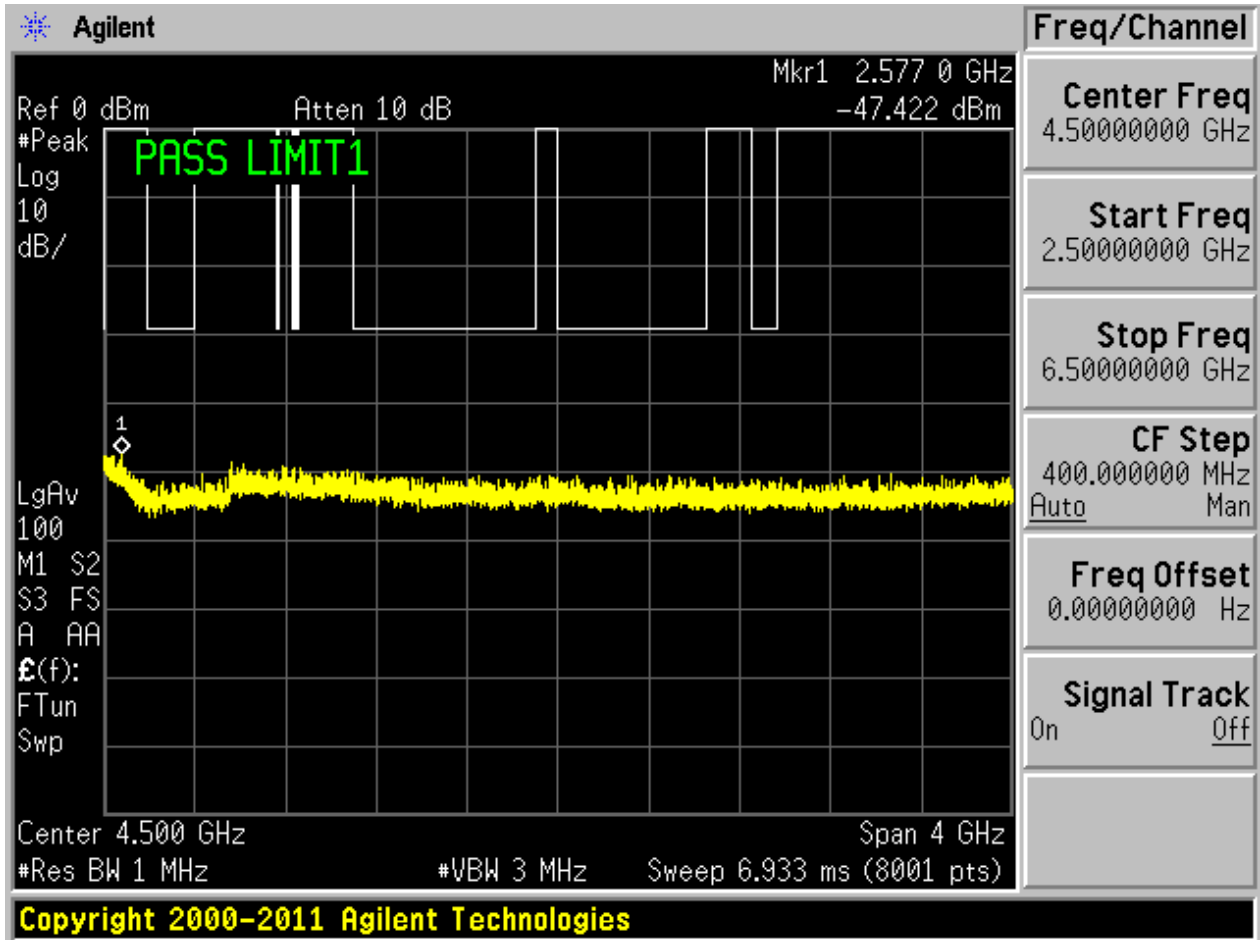


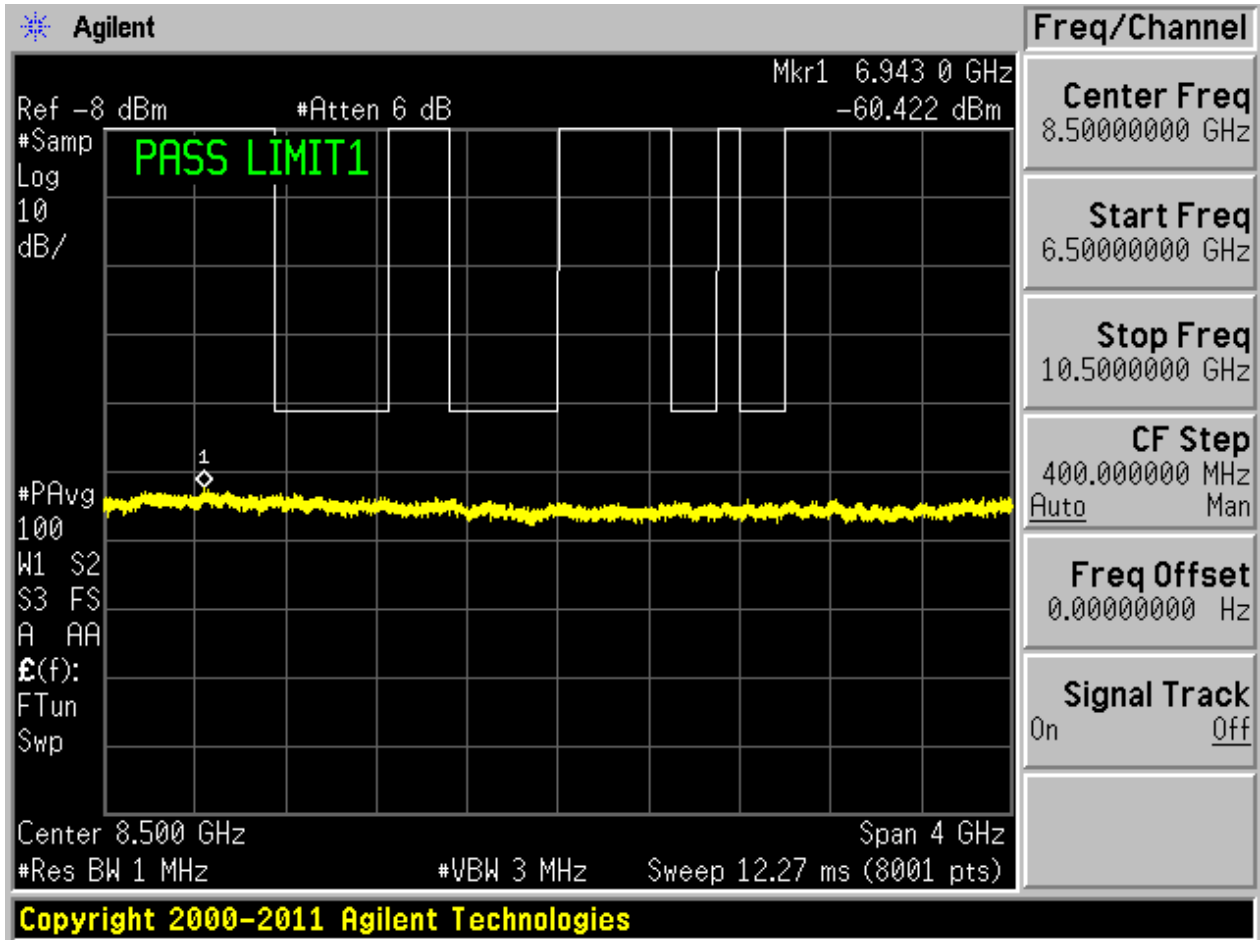


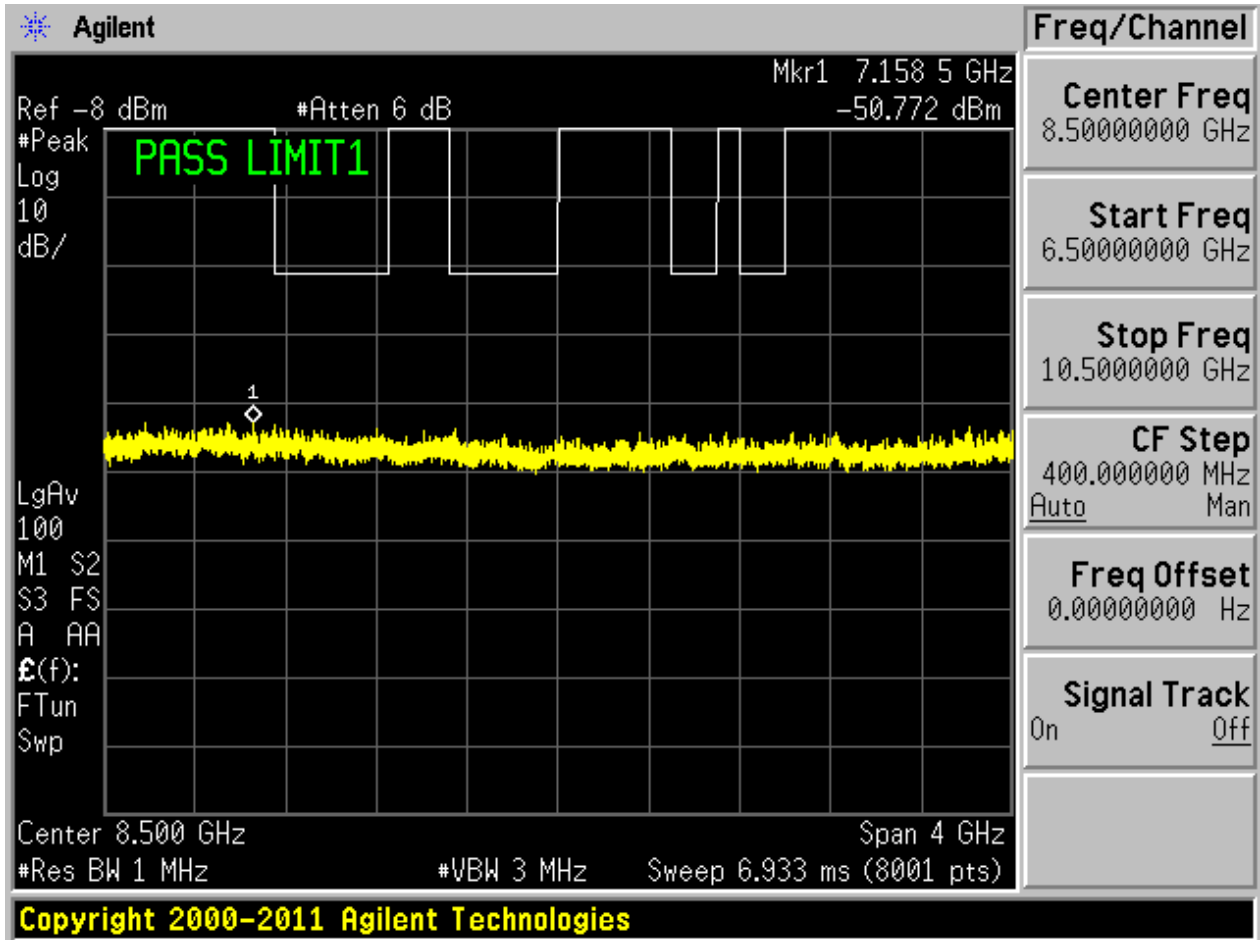


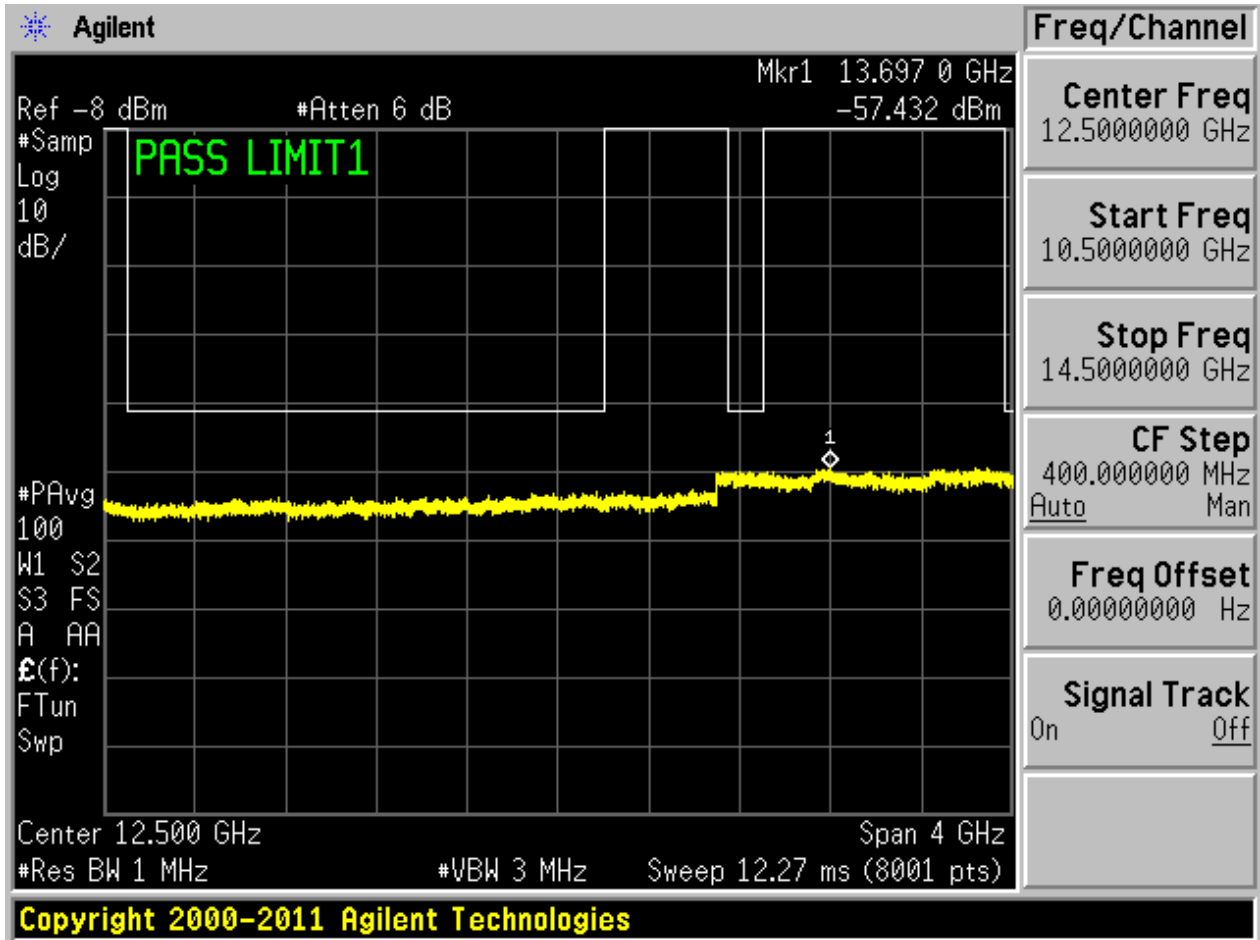


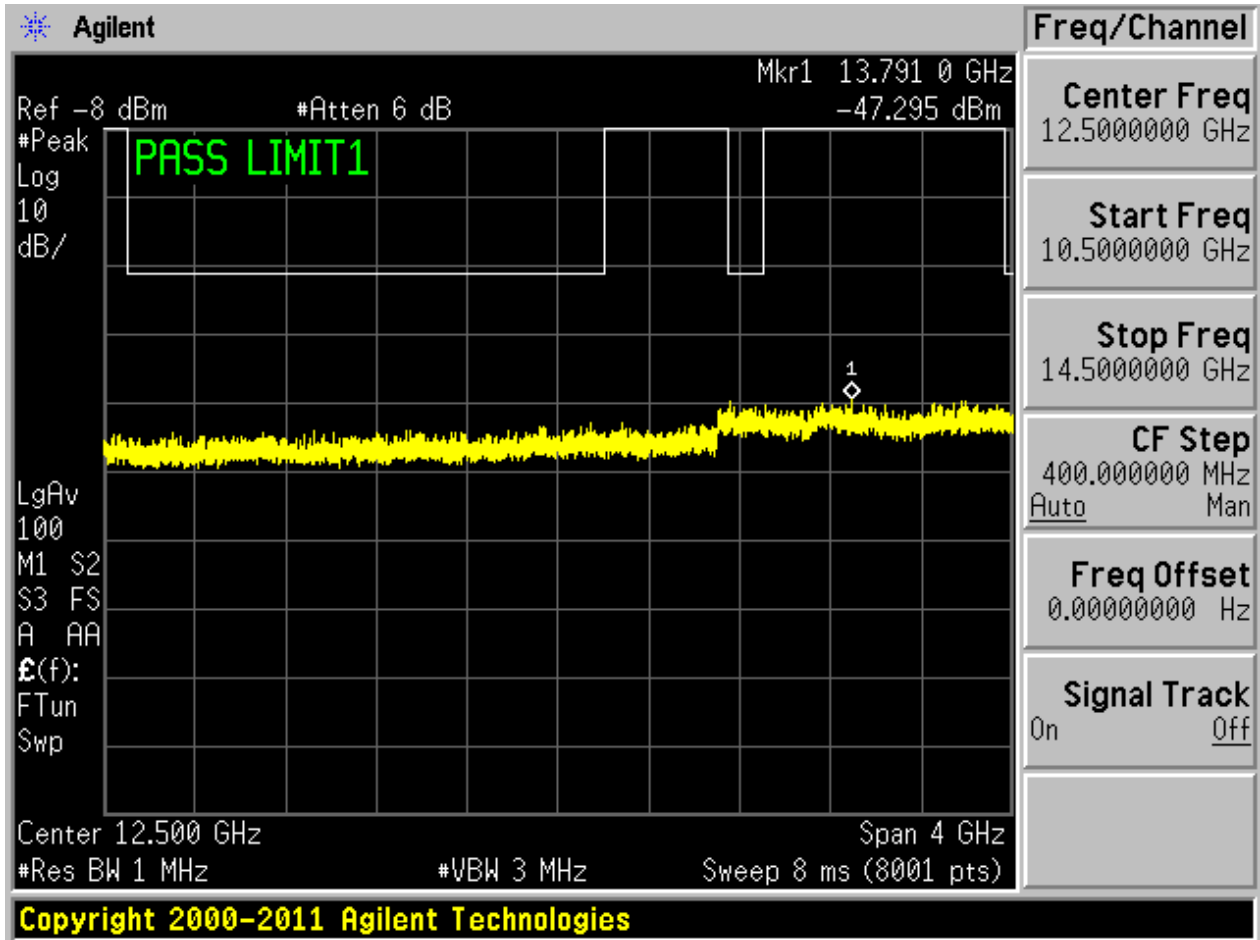


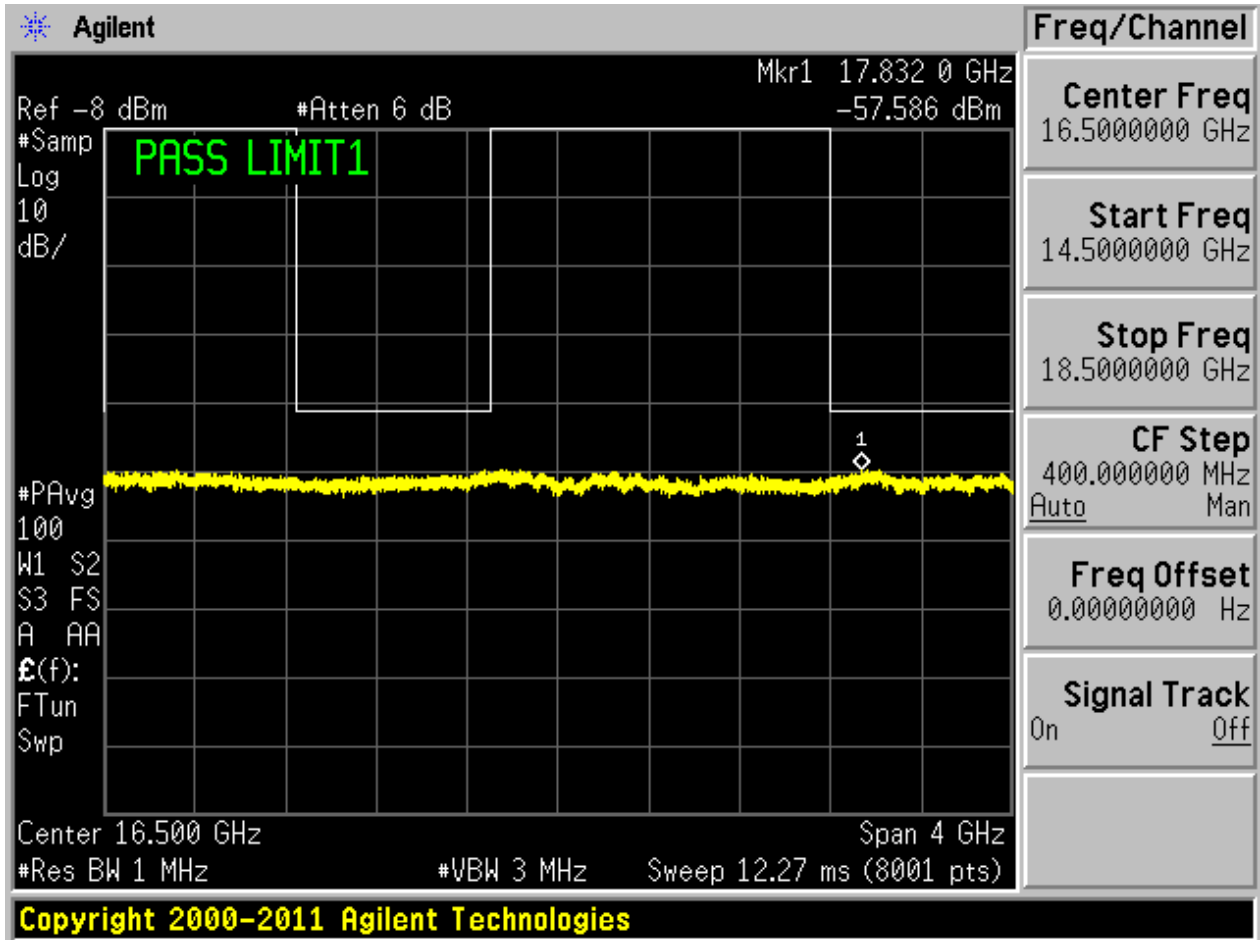


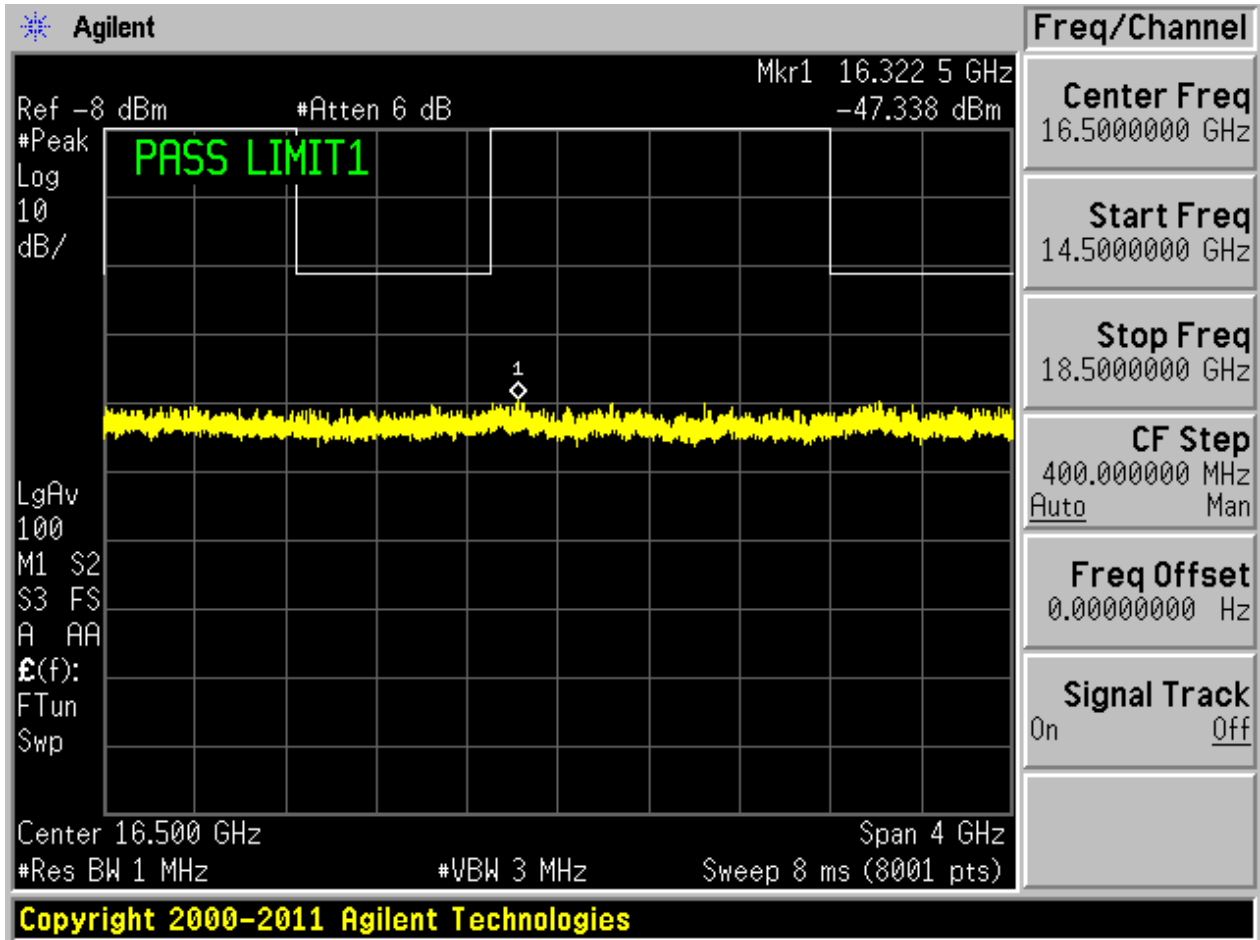


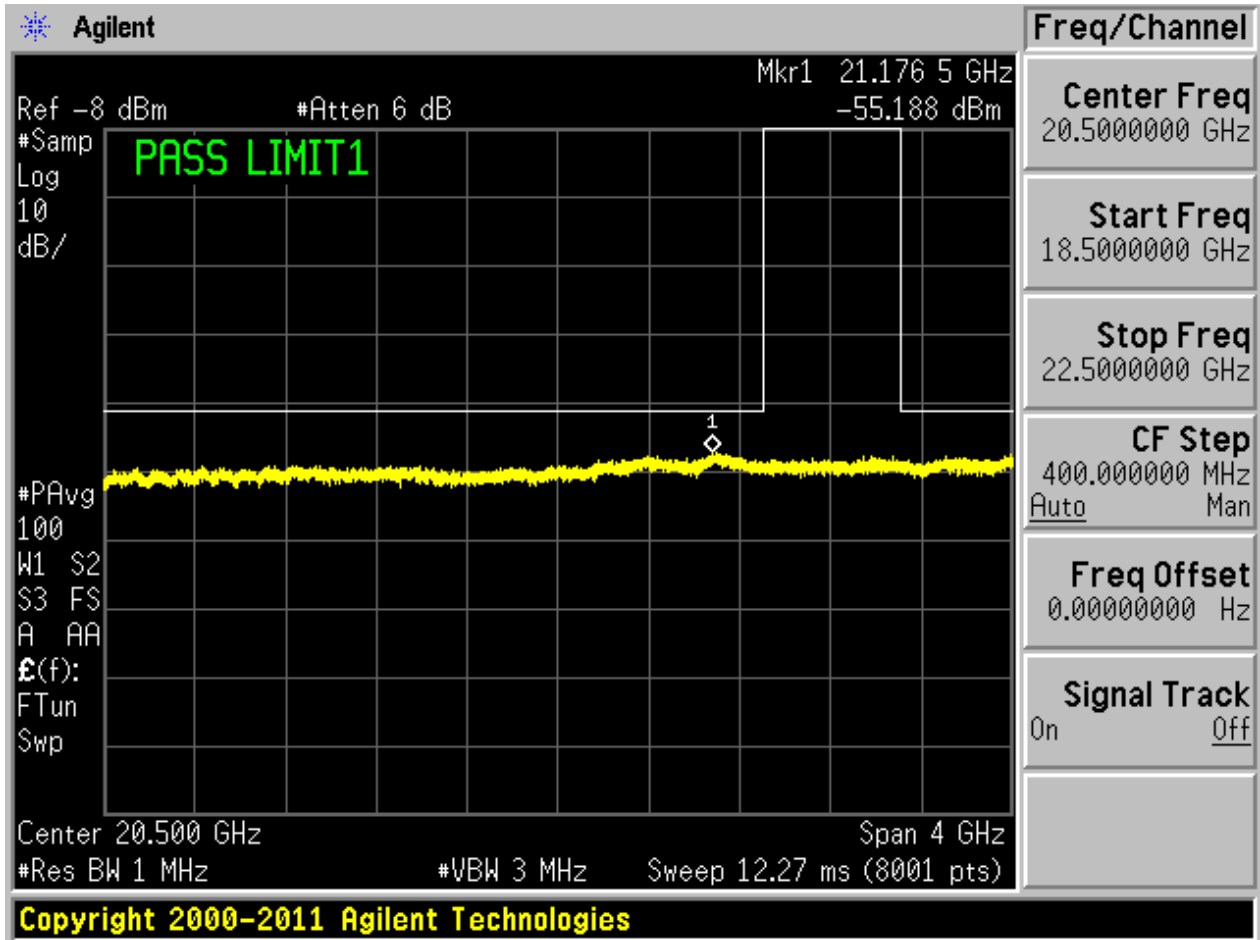


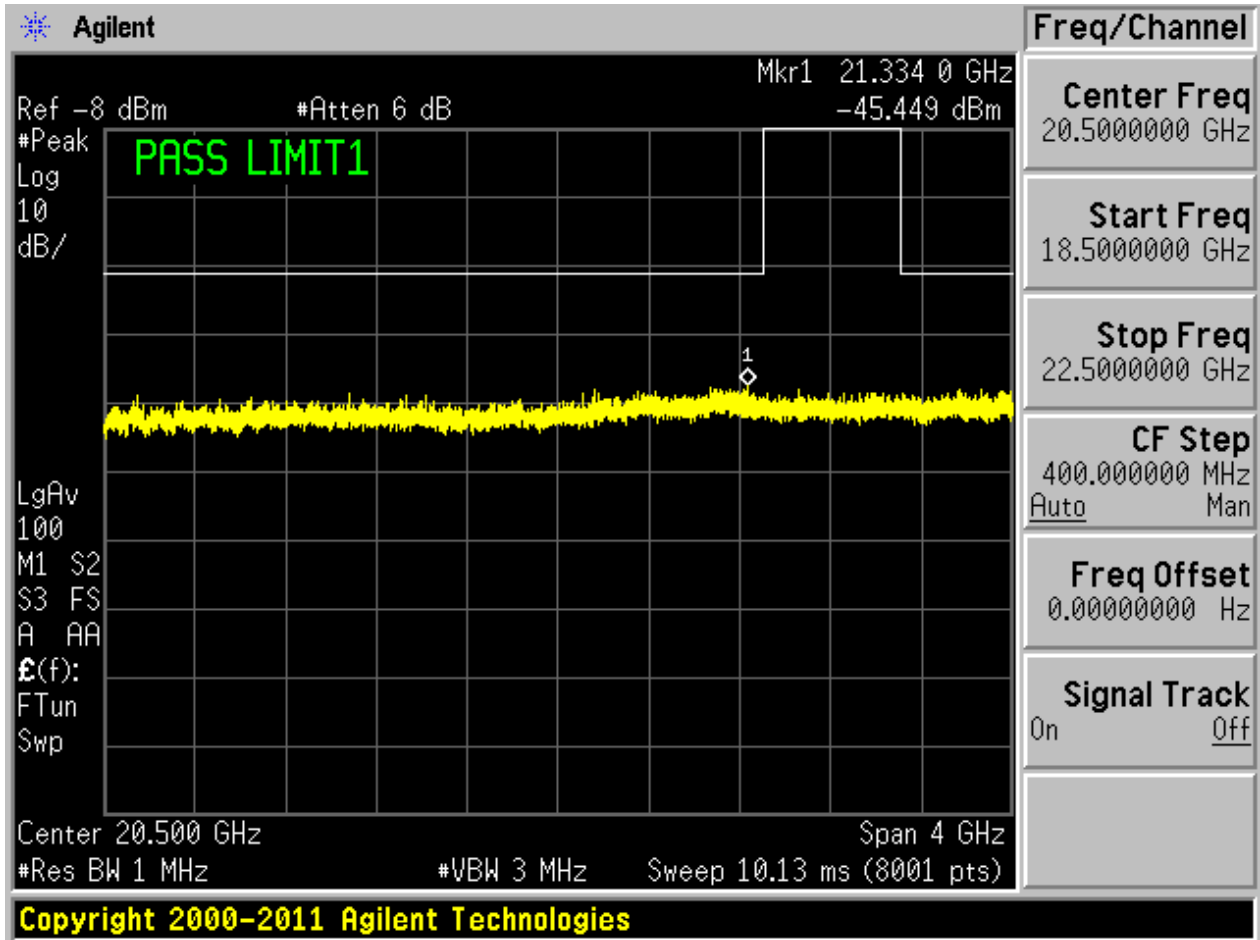


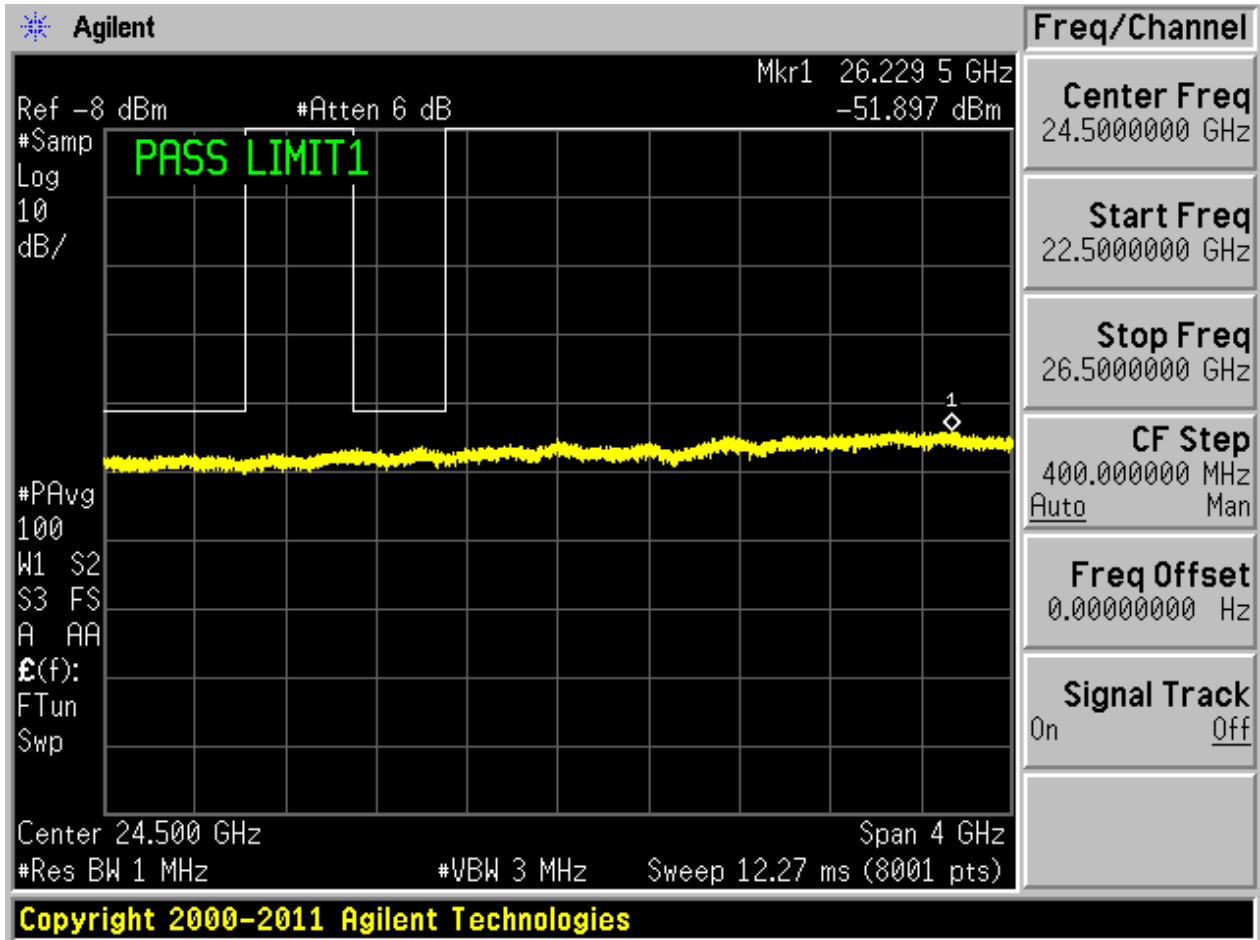


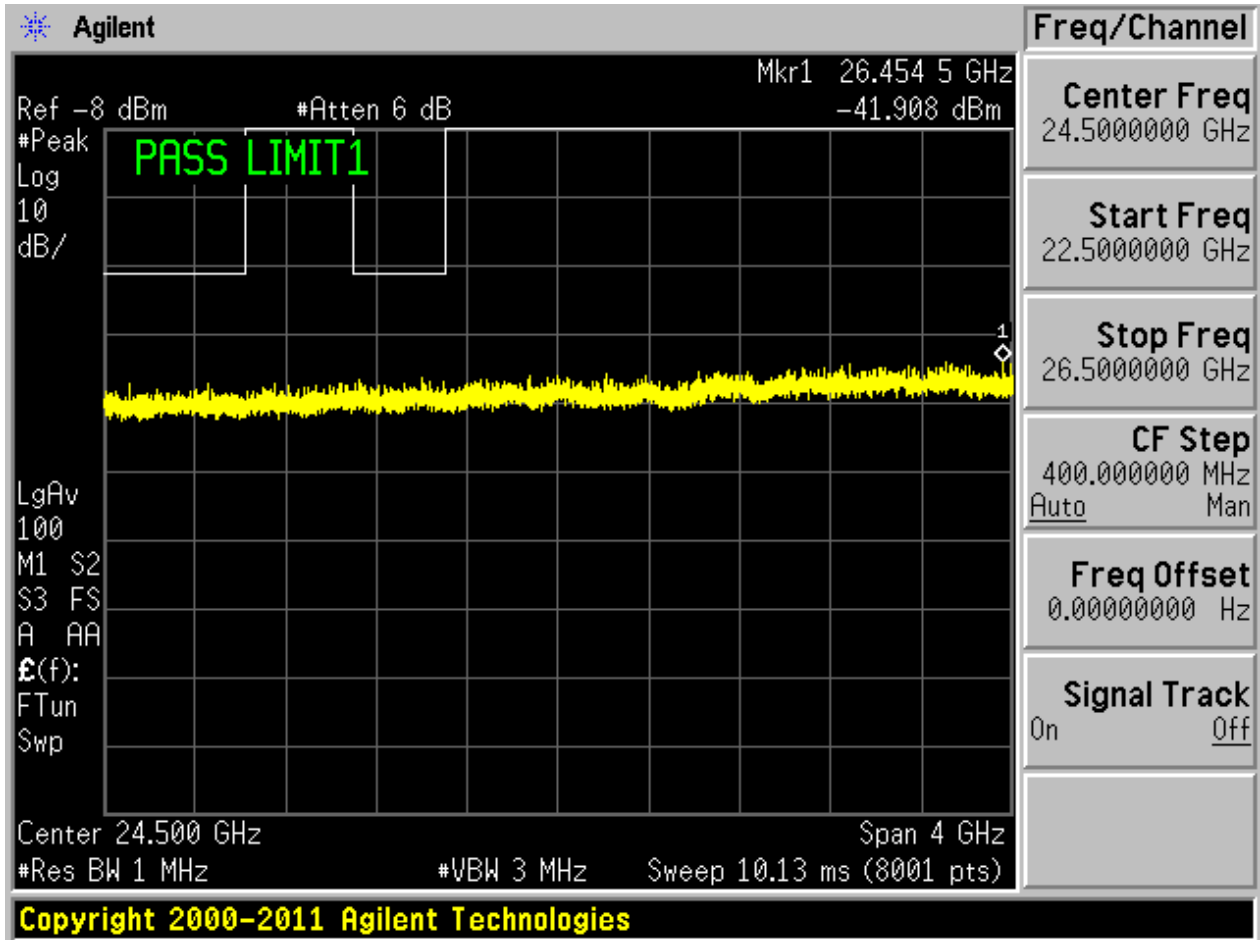










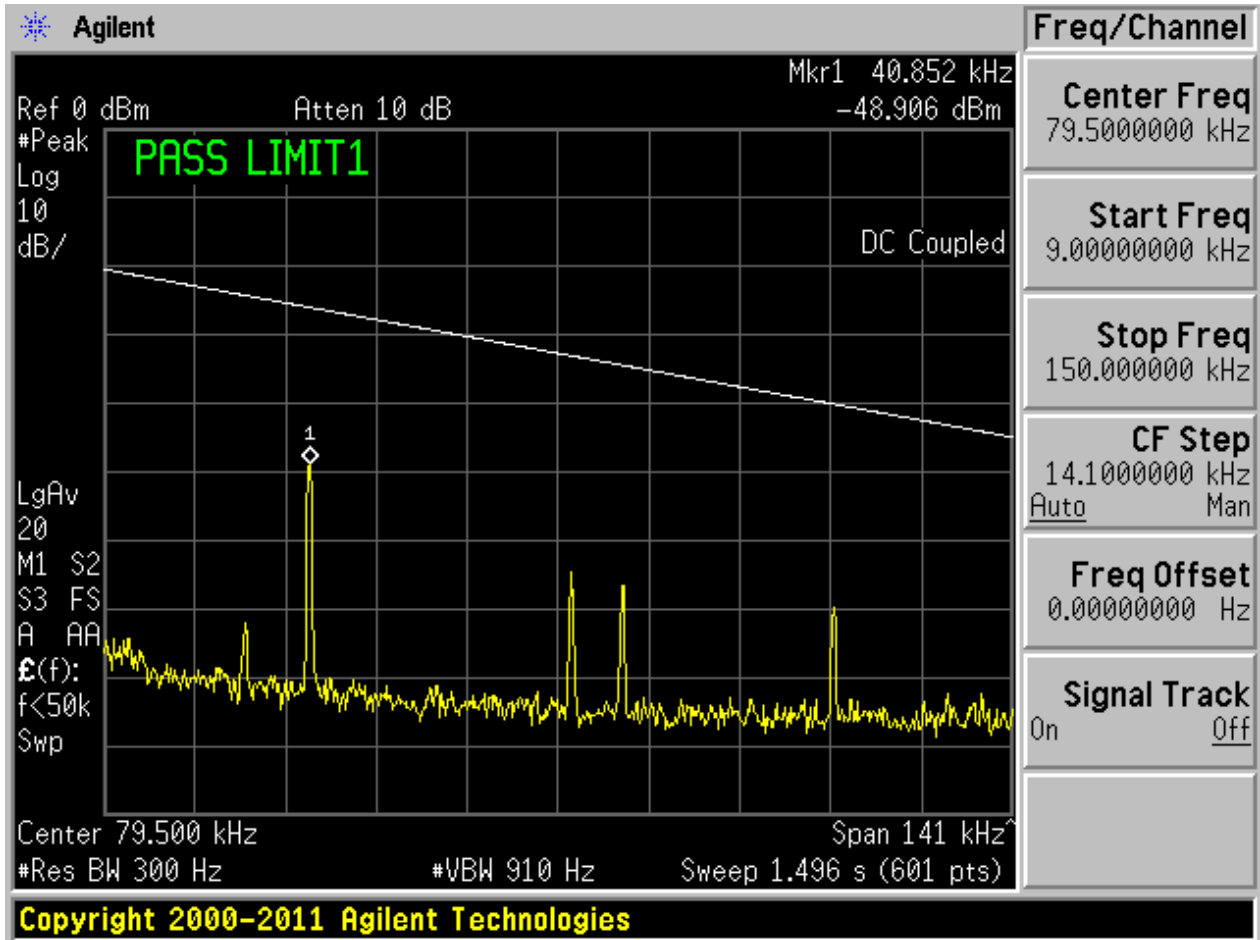


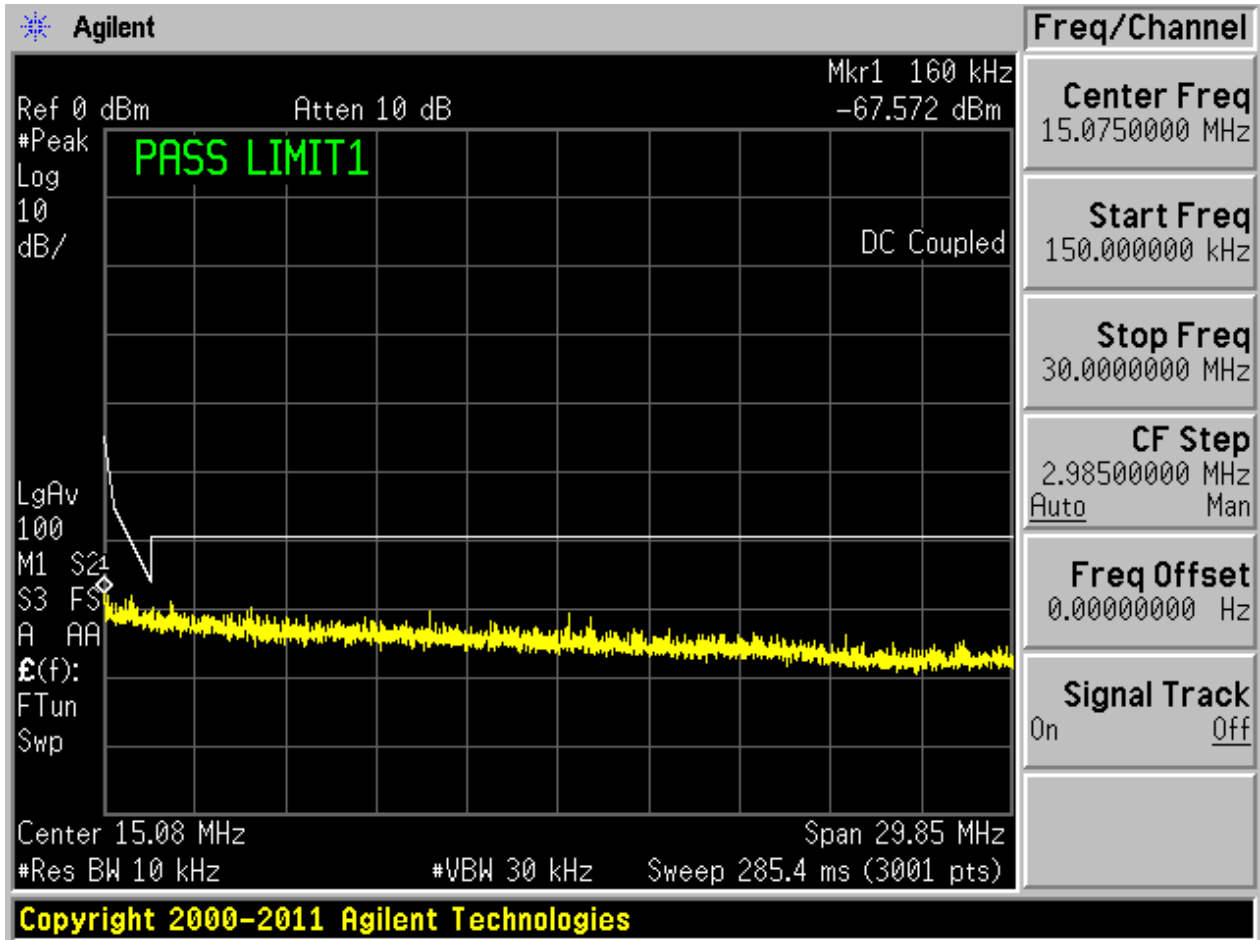
2.25.4 Trace#sum (if needed for final judgment)

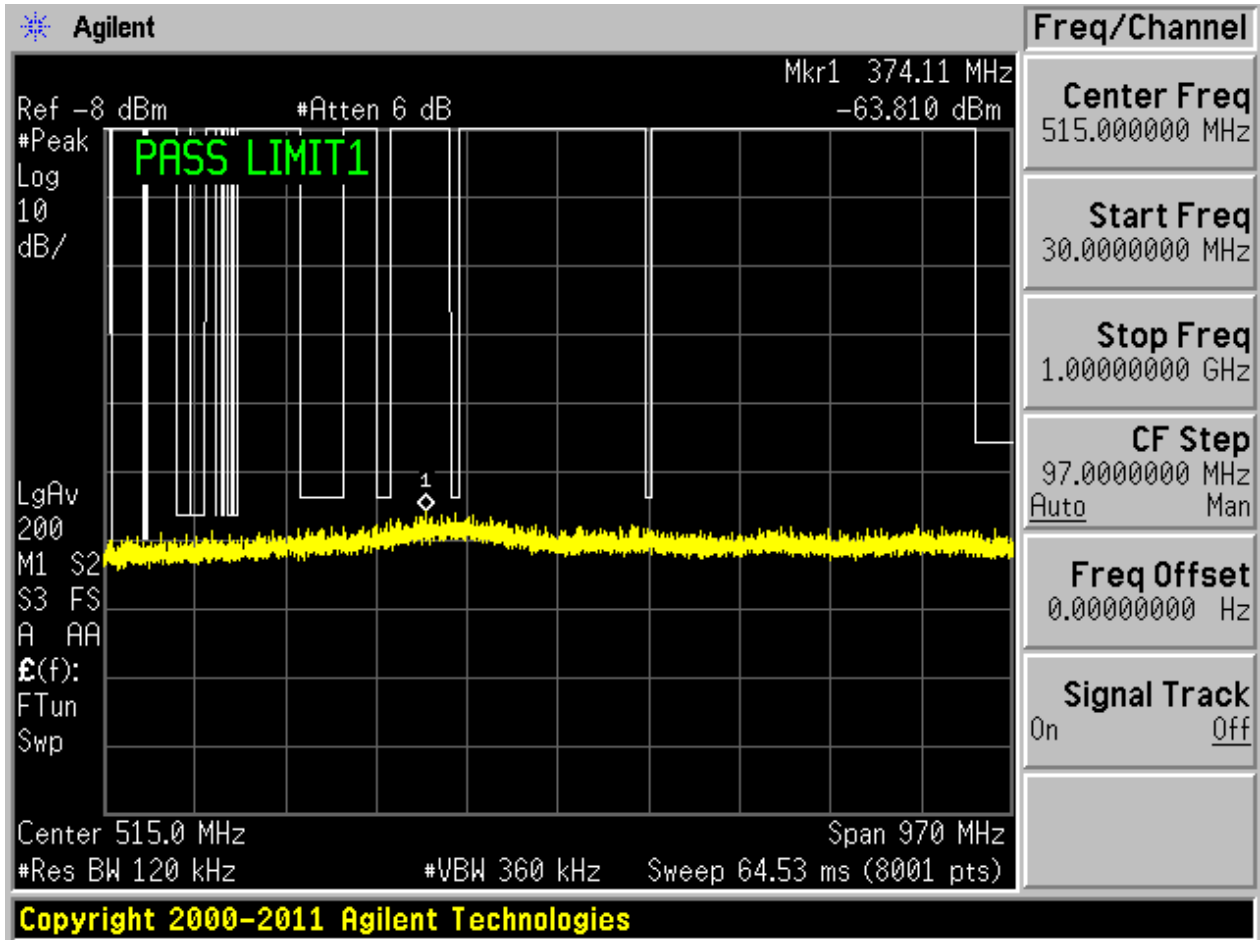
(Not applicable)

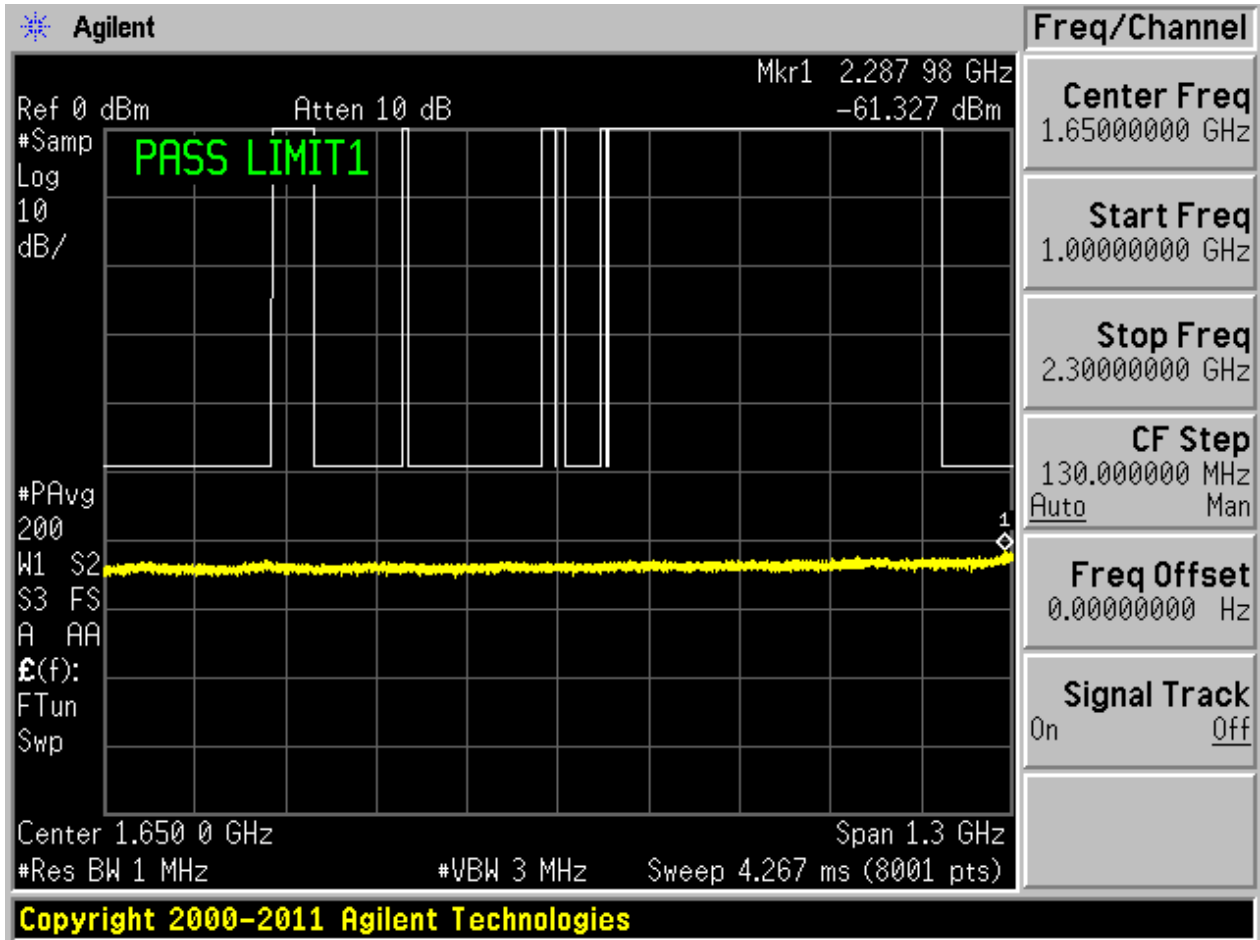
2.2611N20m/16_M@1+2+3

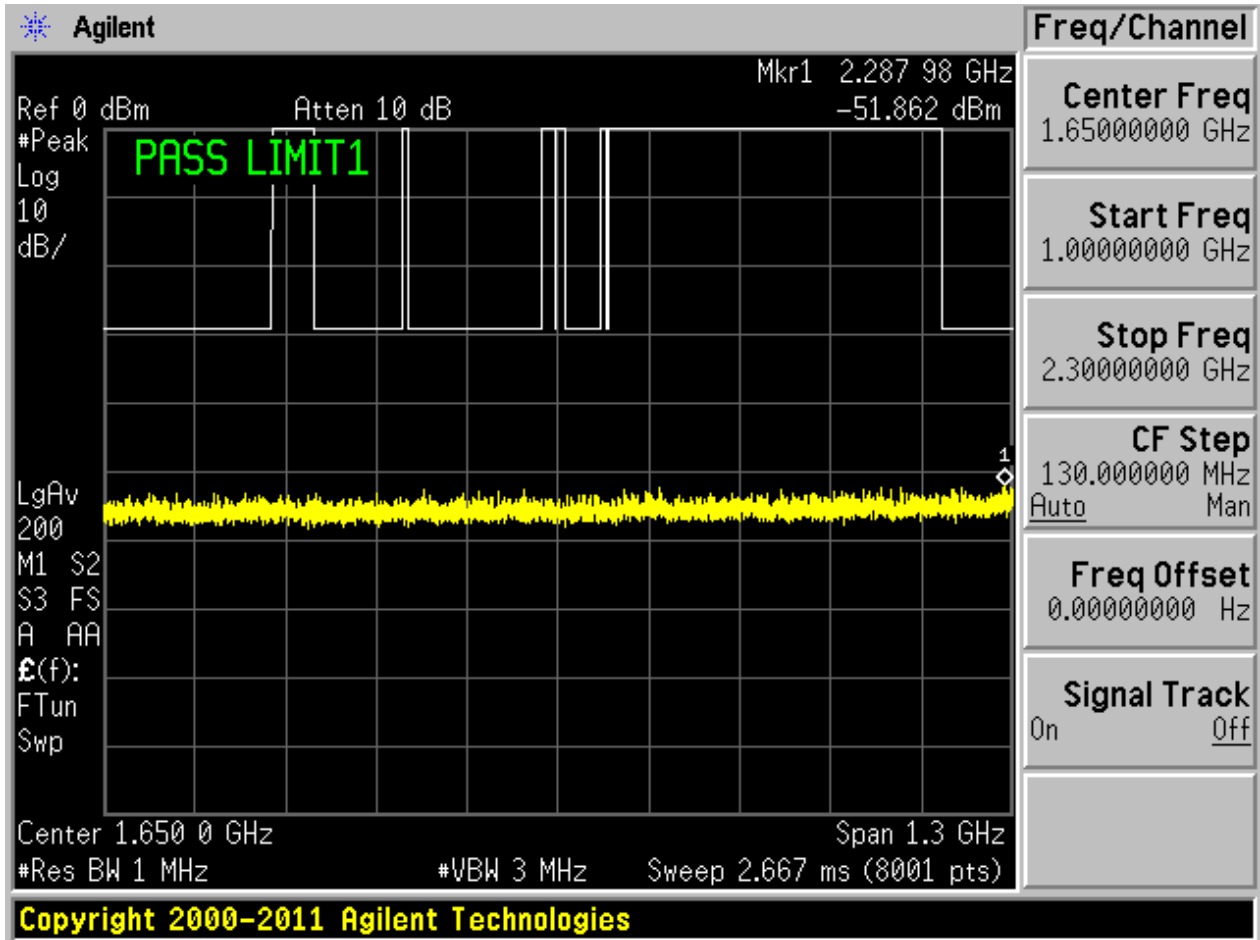
2.26.1 Ant 1 (Trace#1)

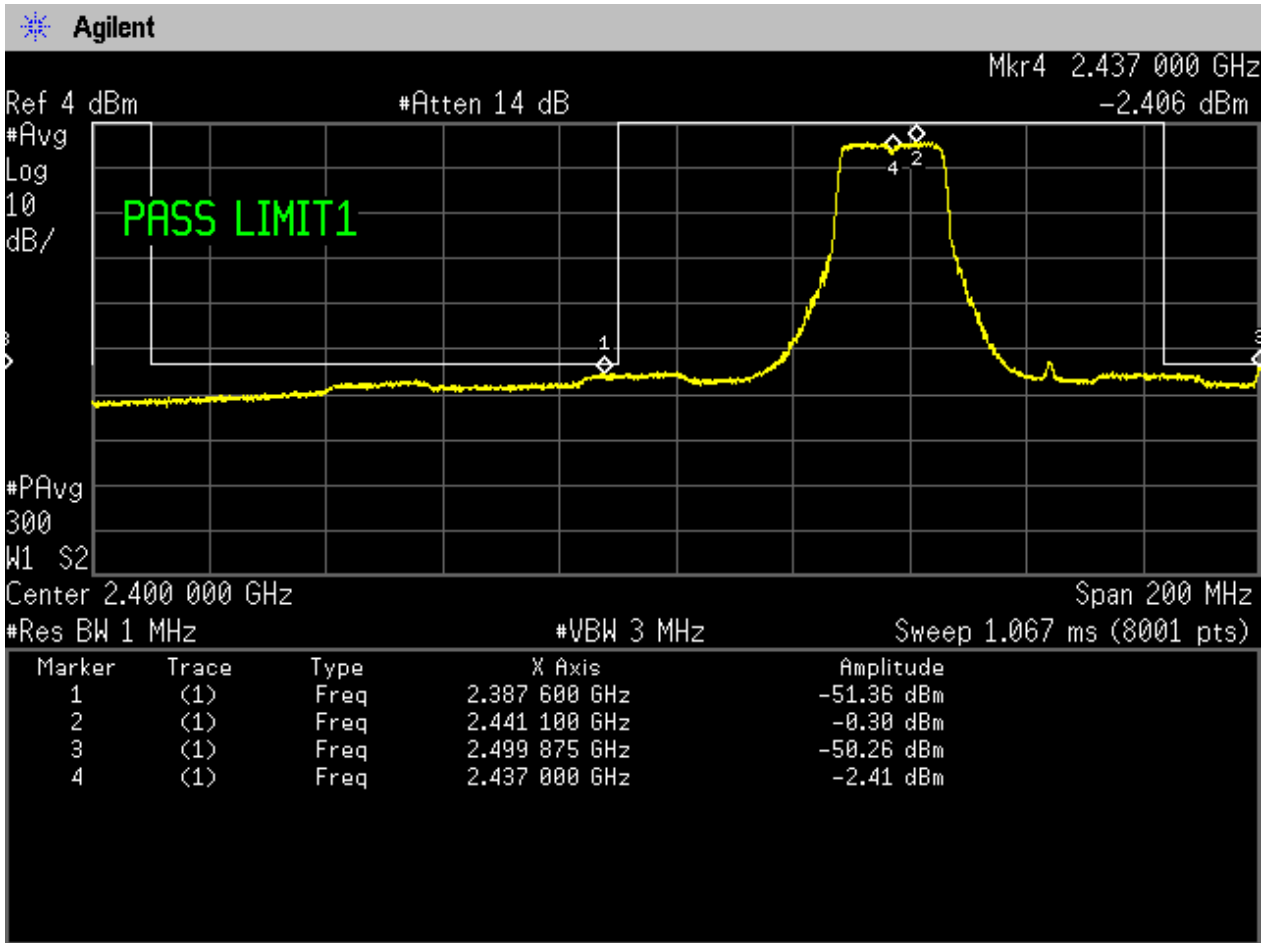


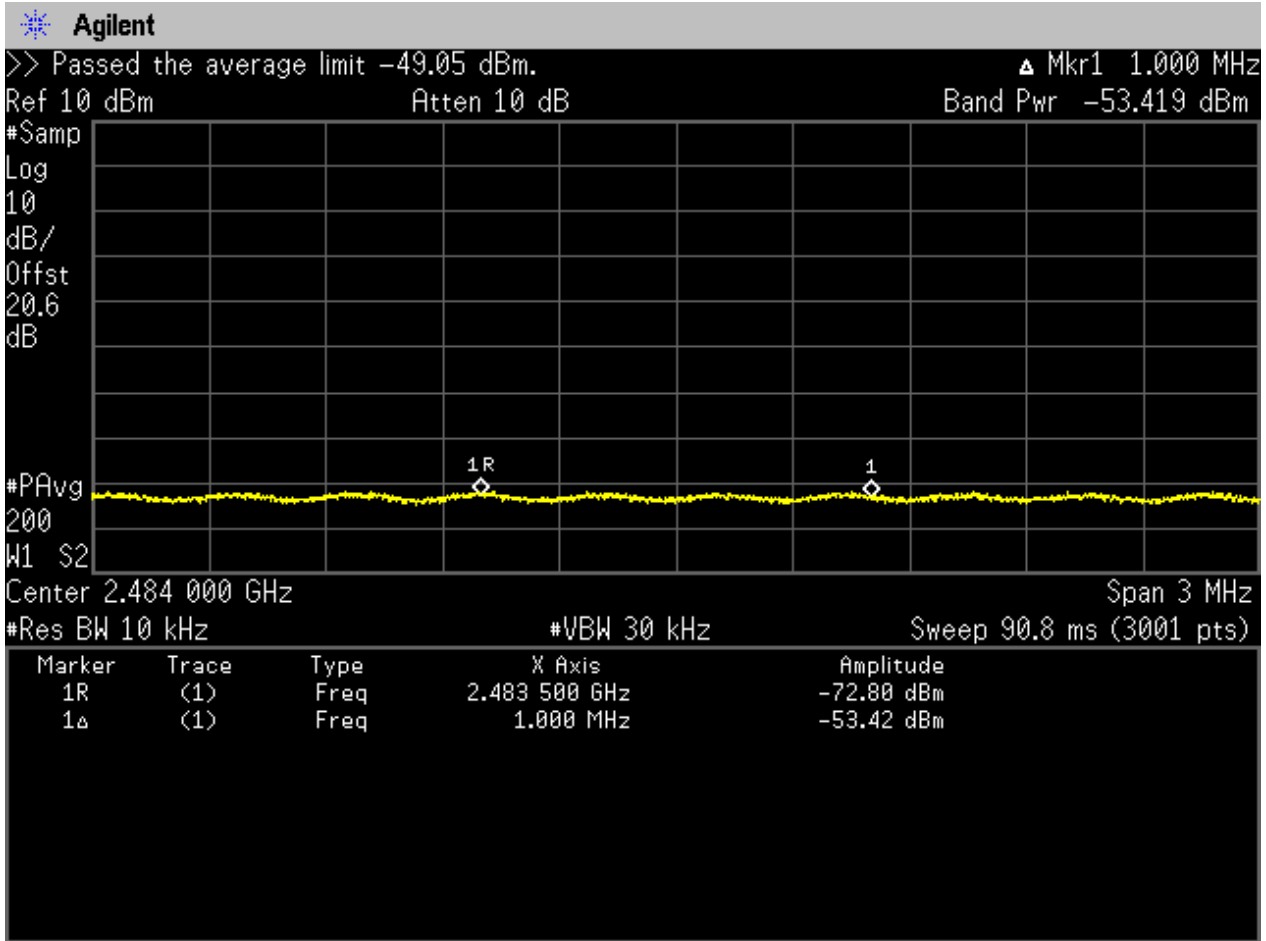


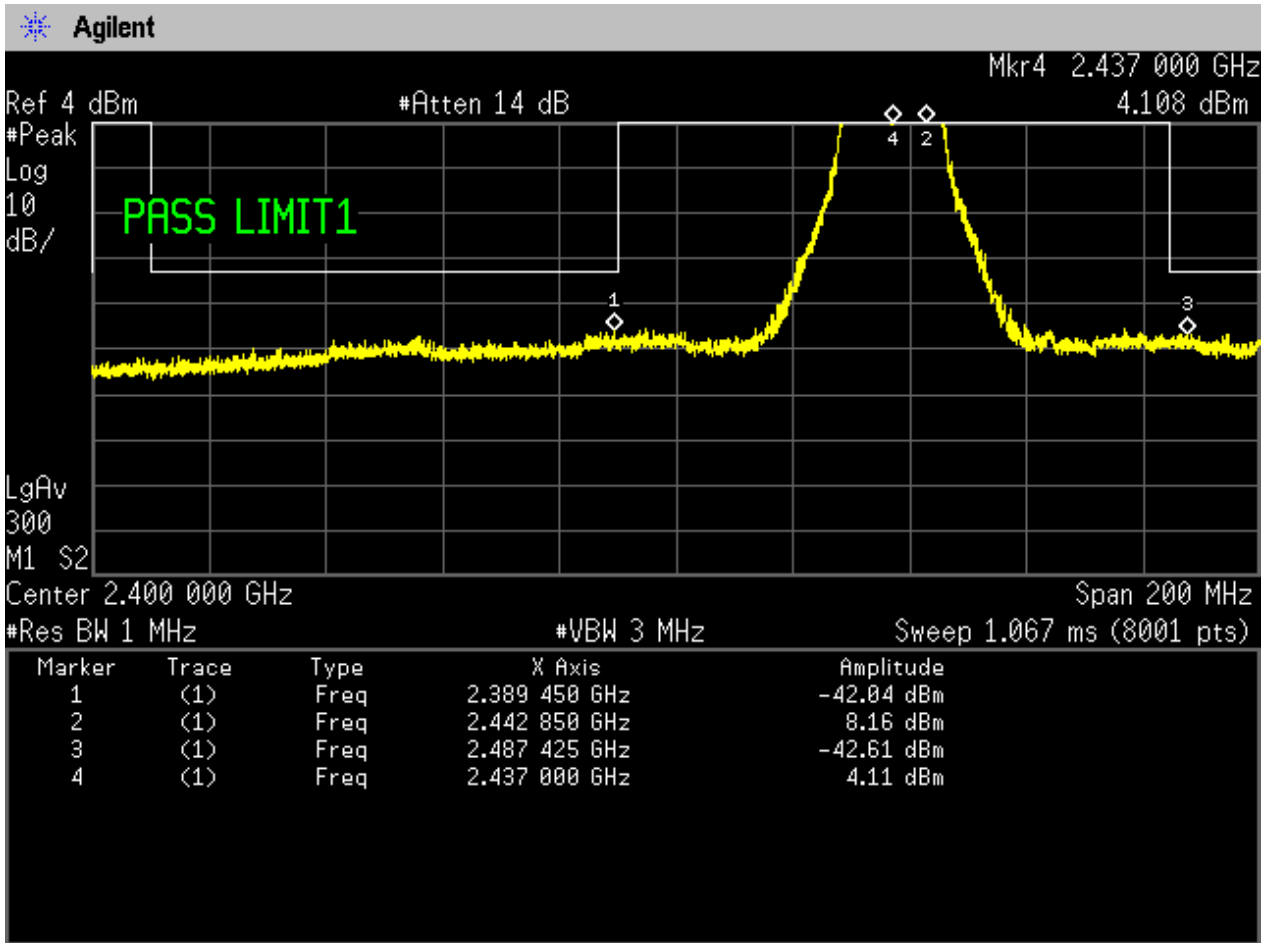


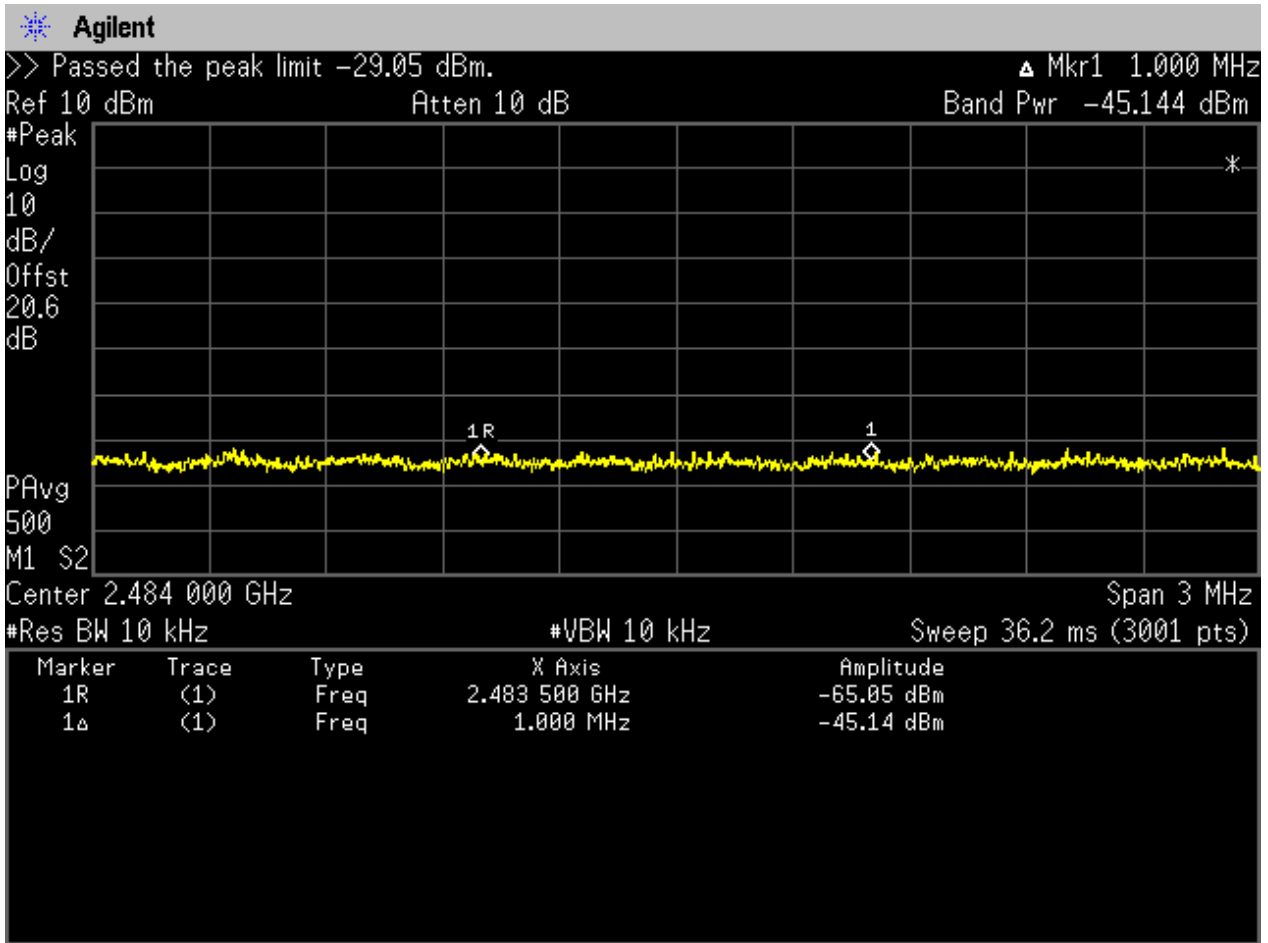


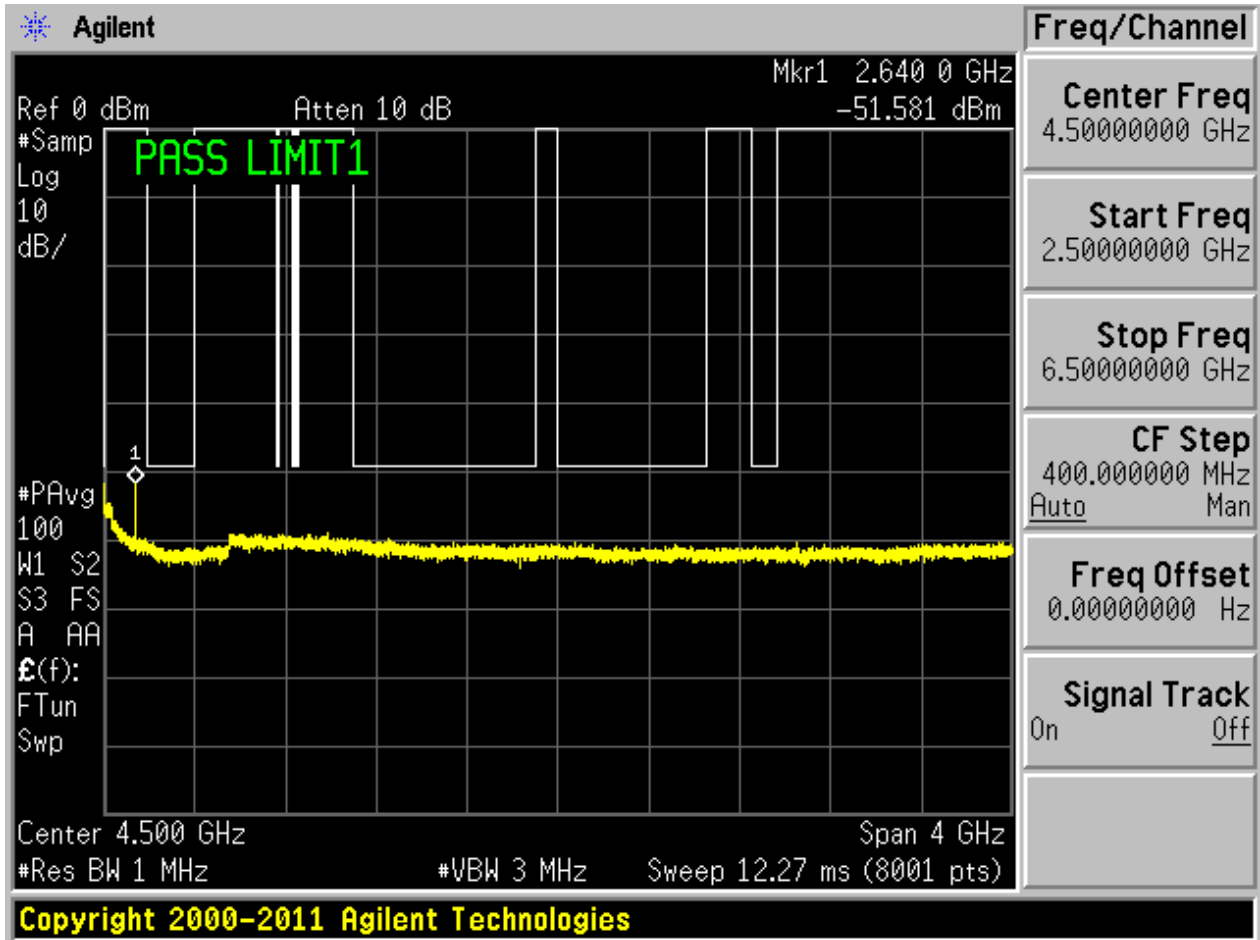


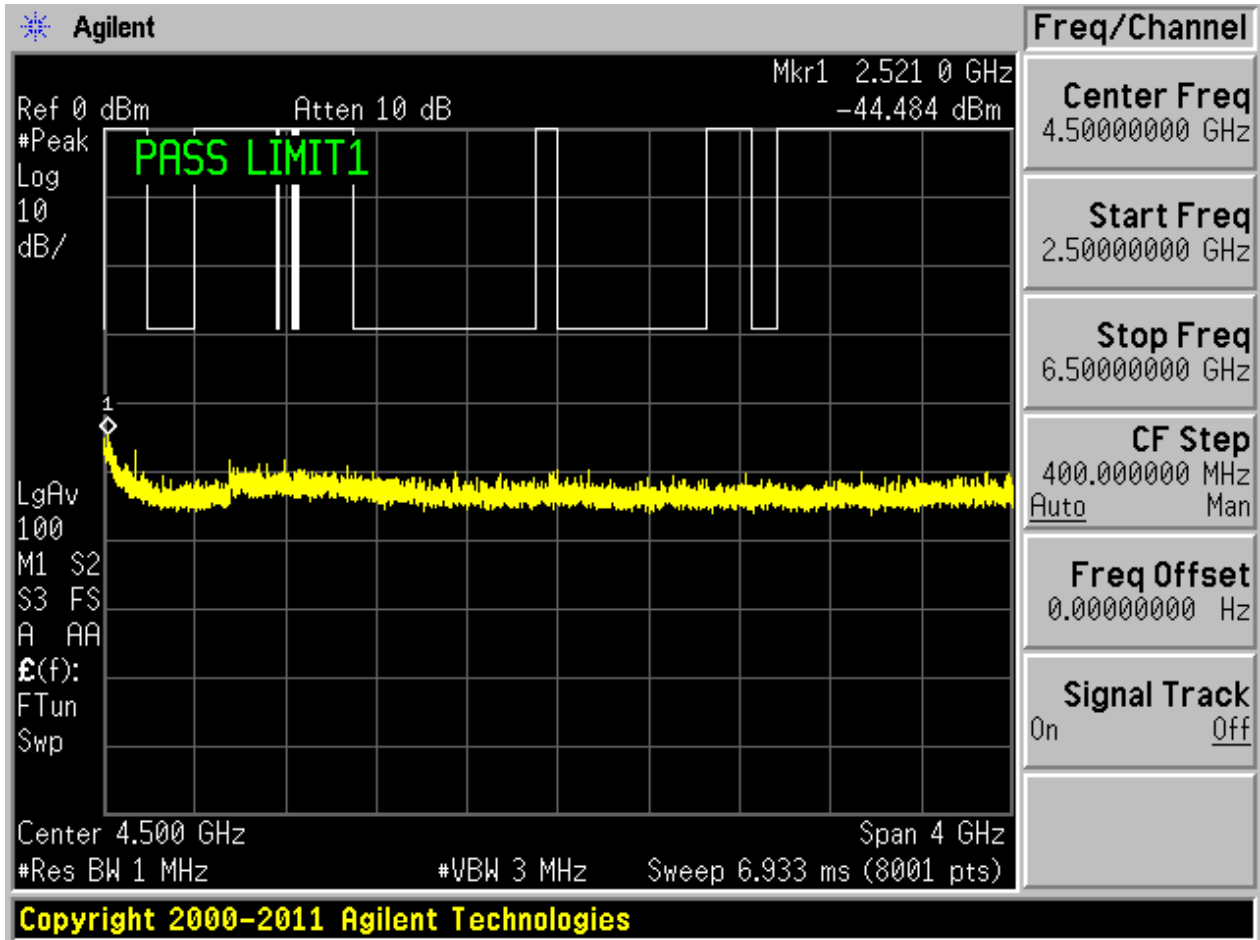


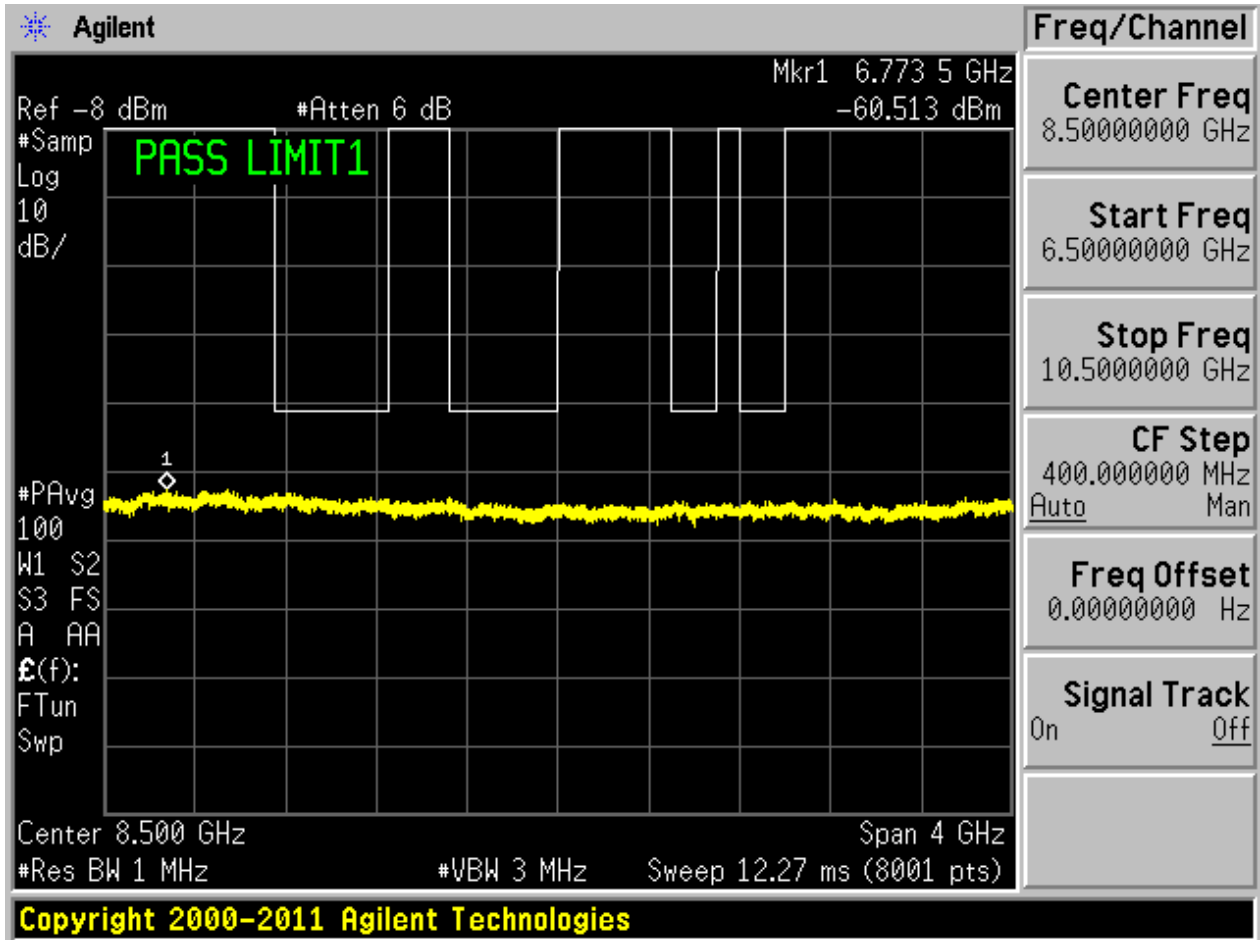


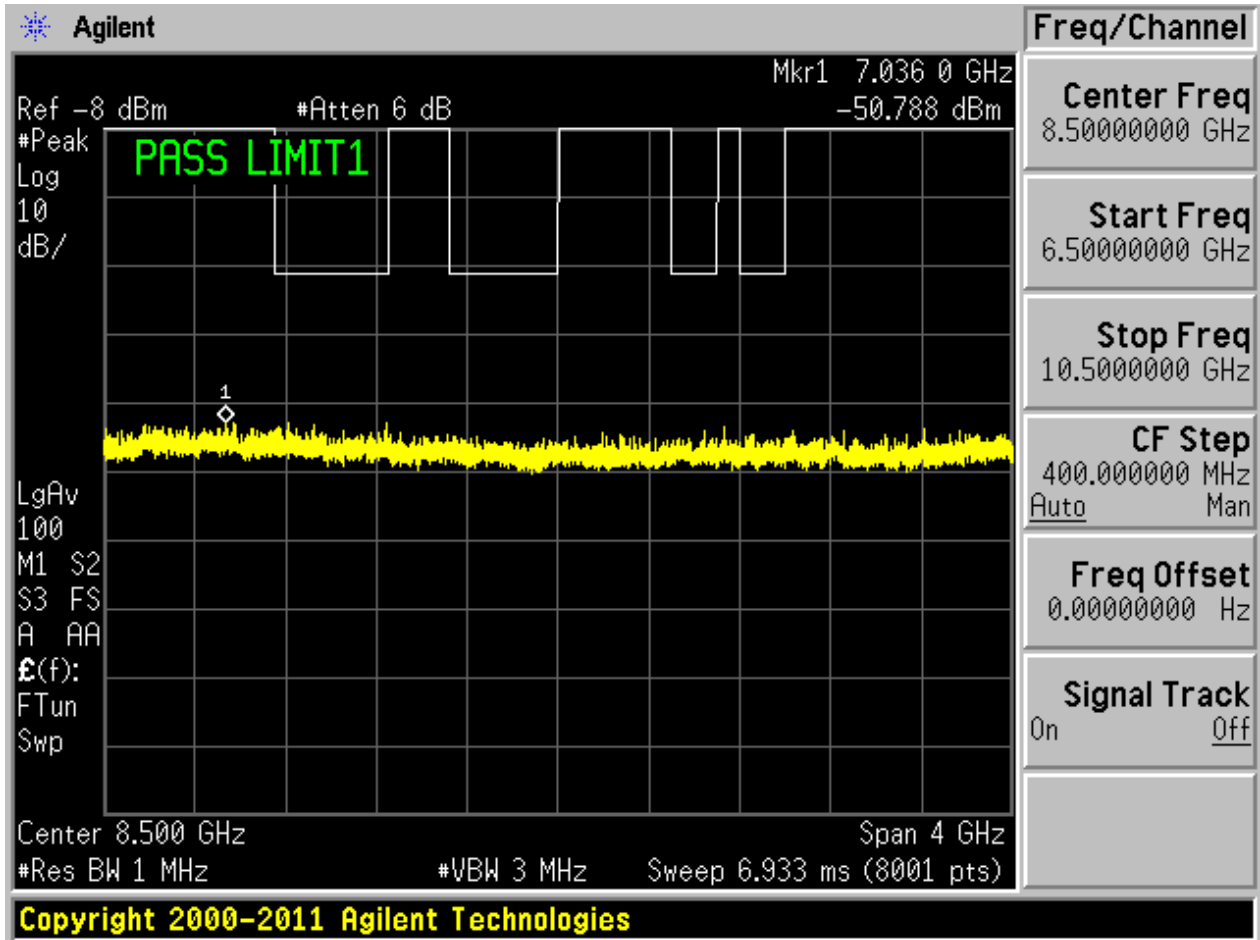


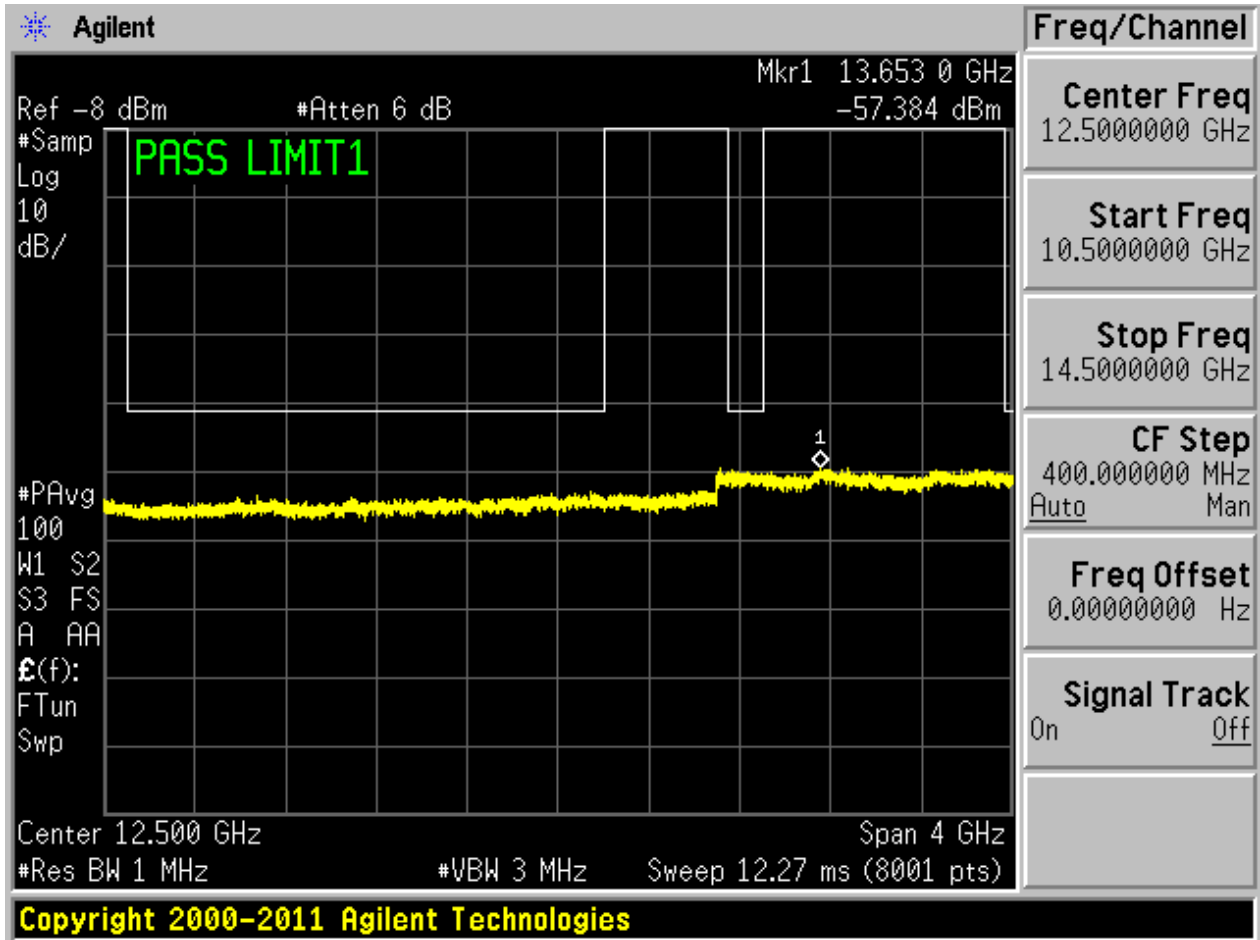


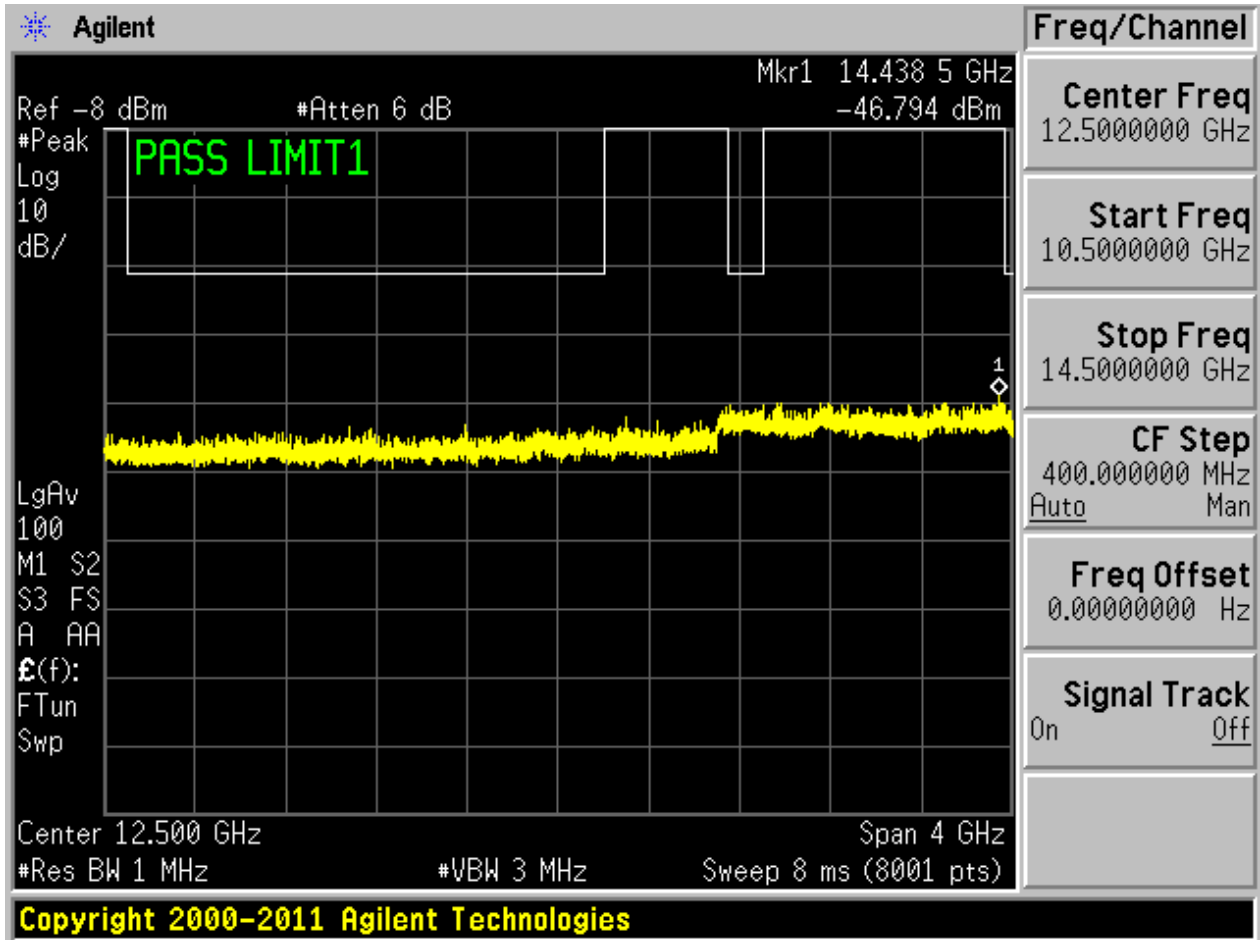


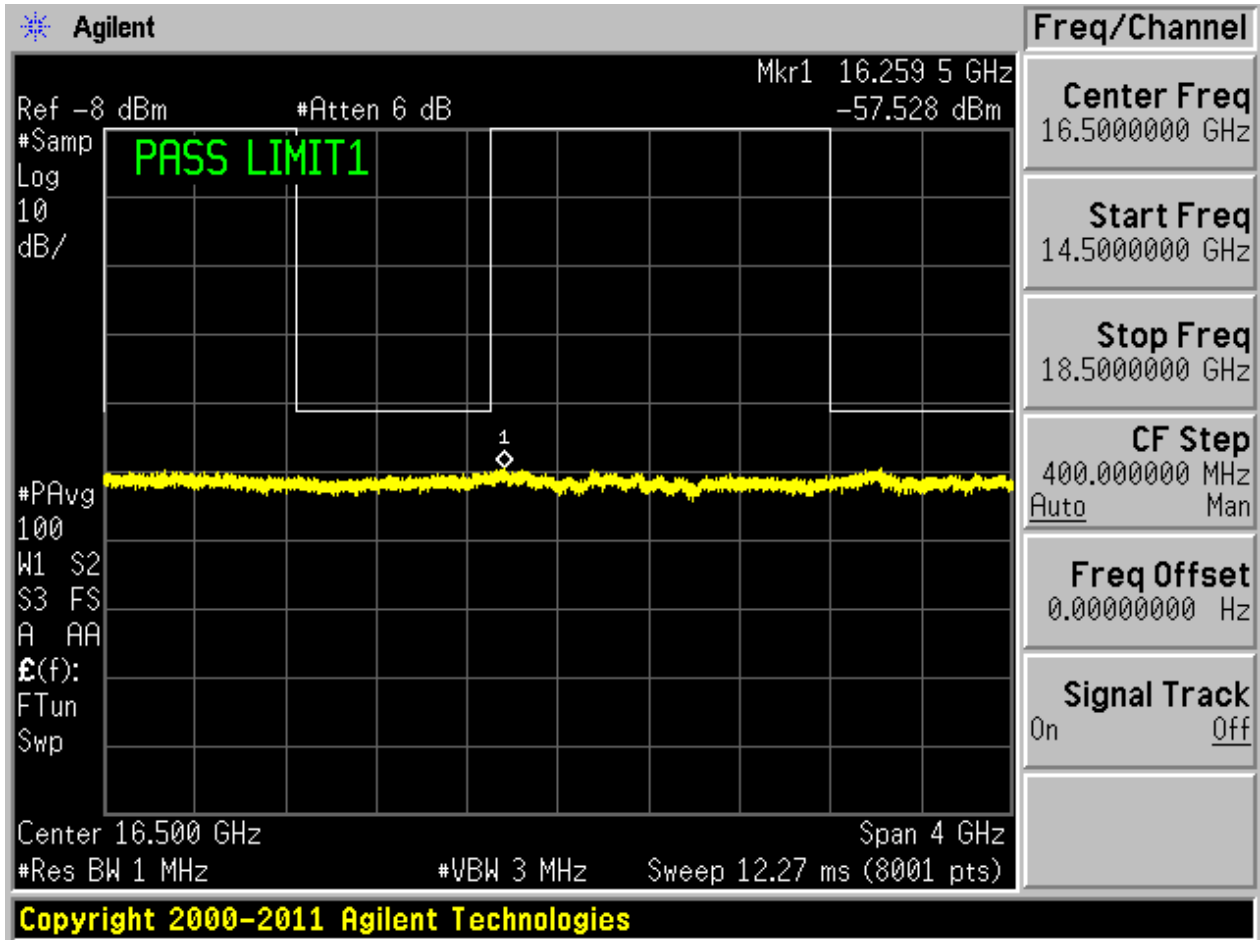


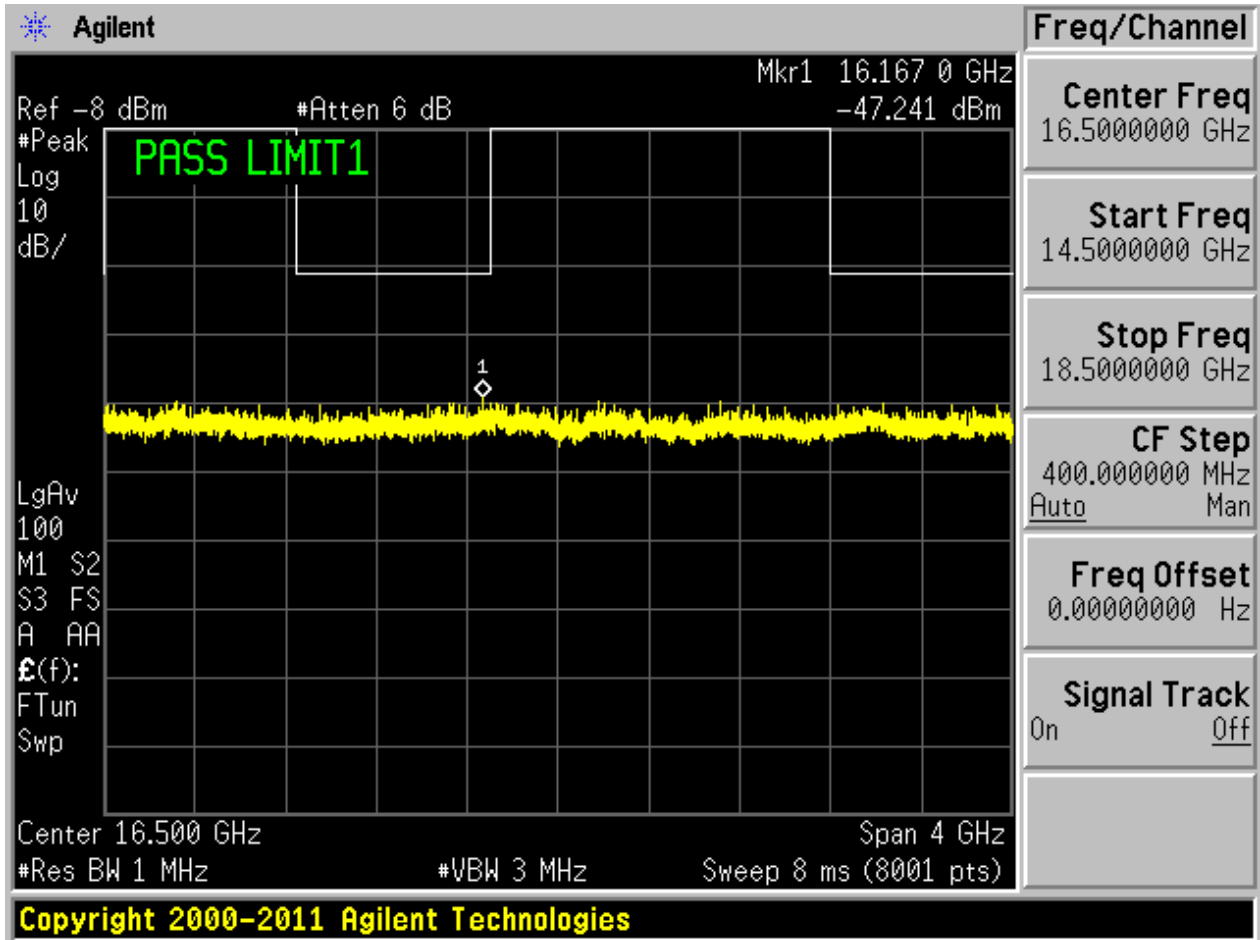


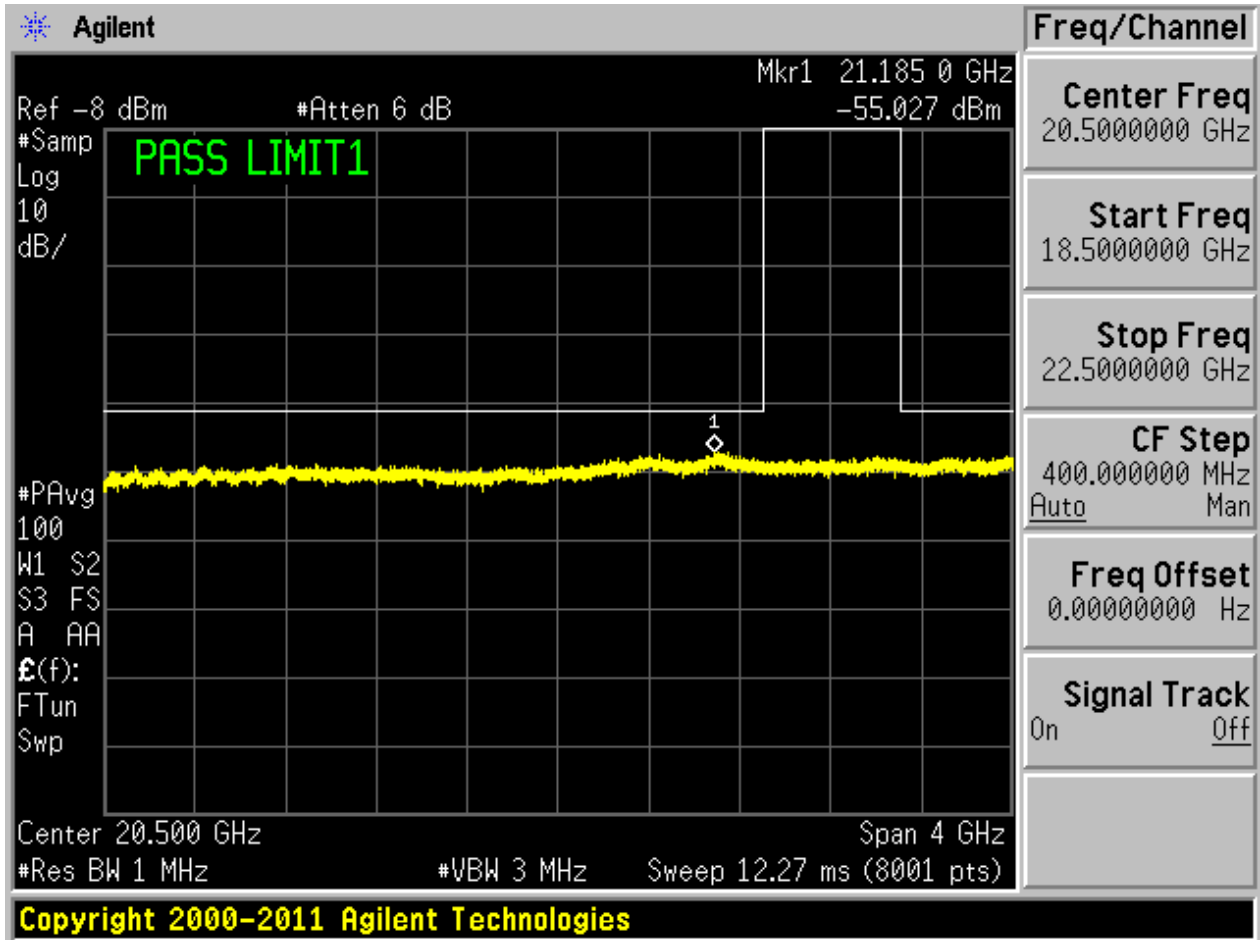


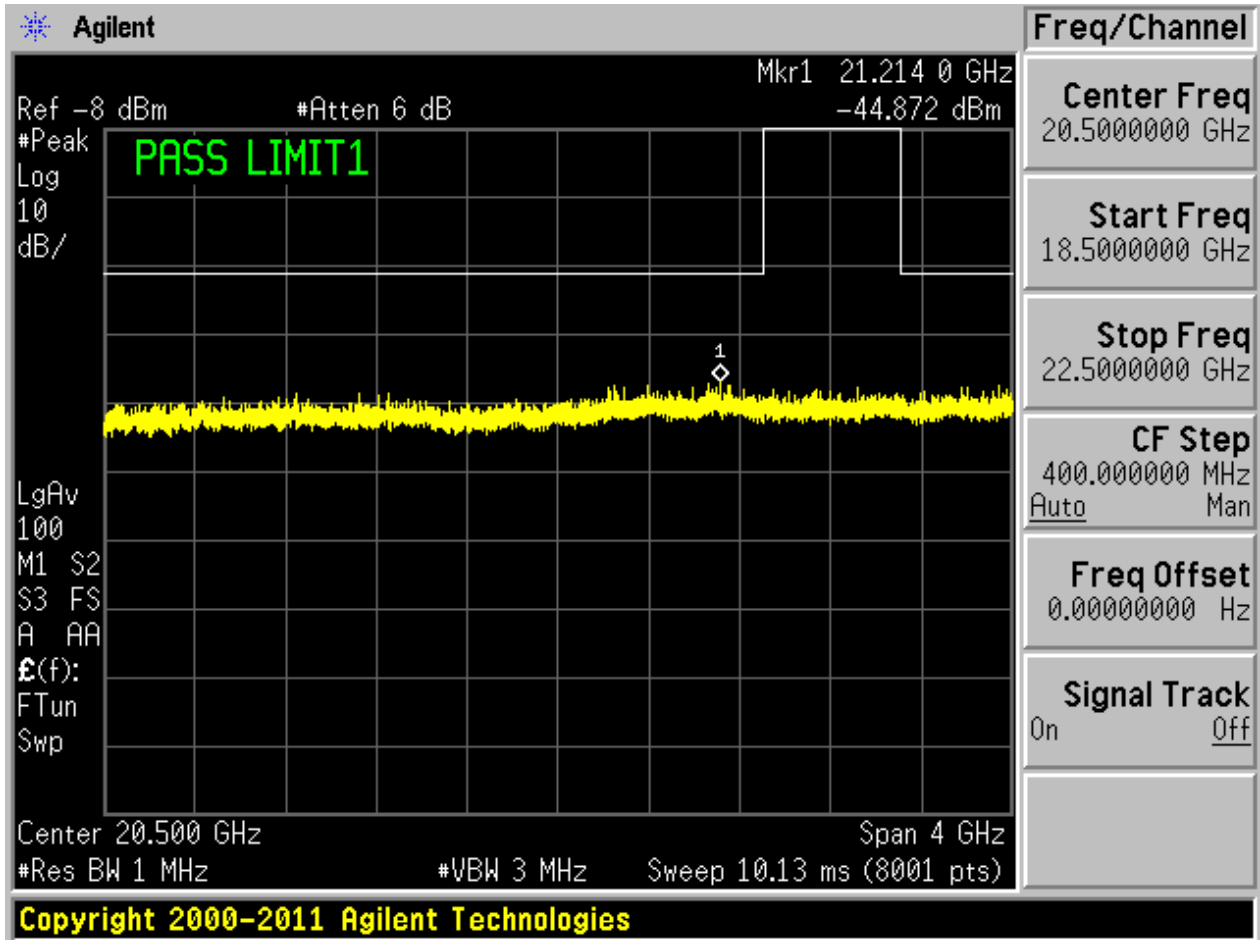


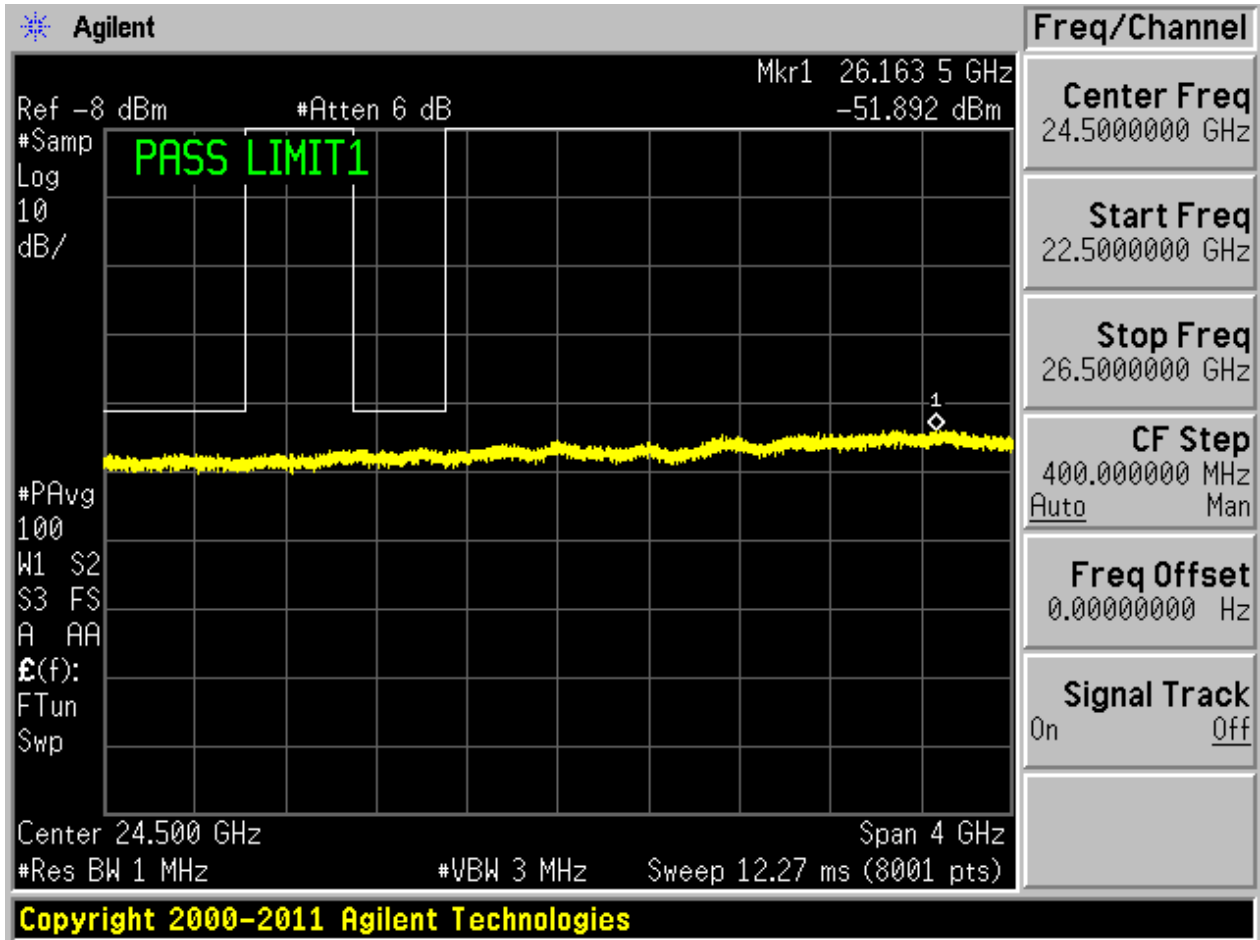


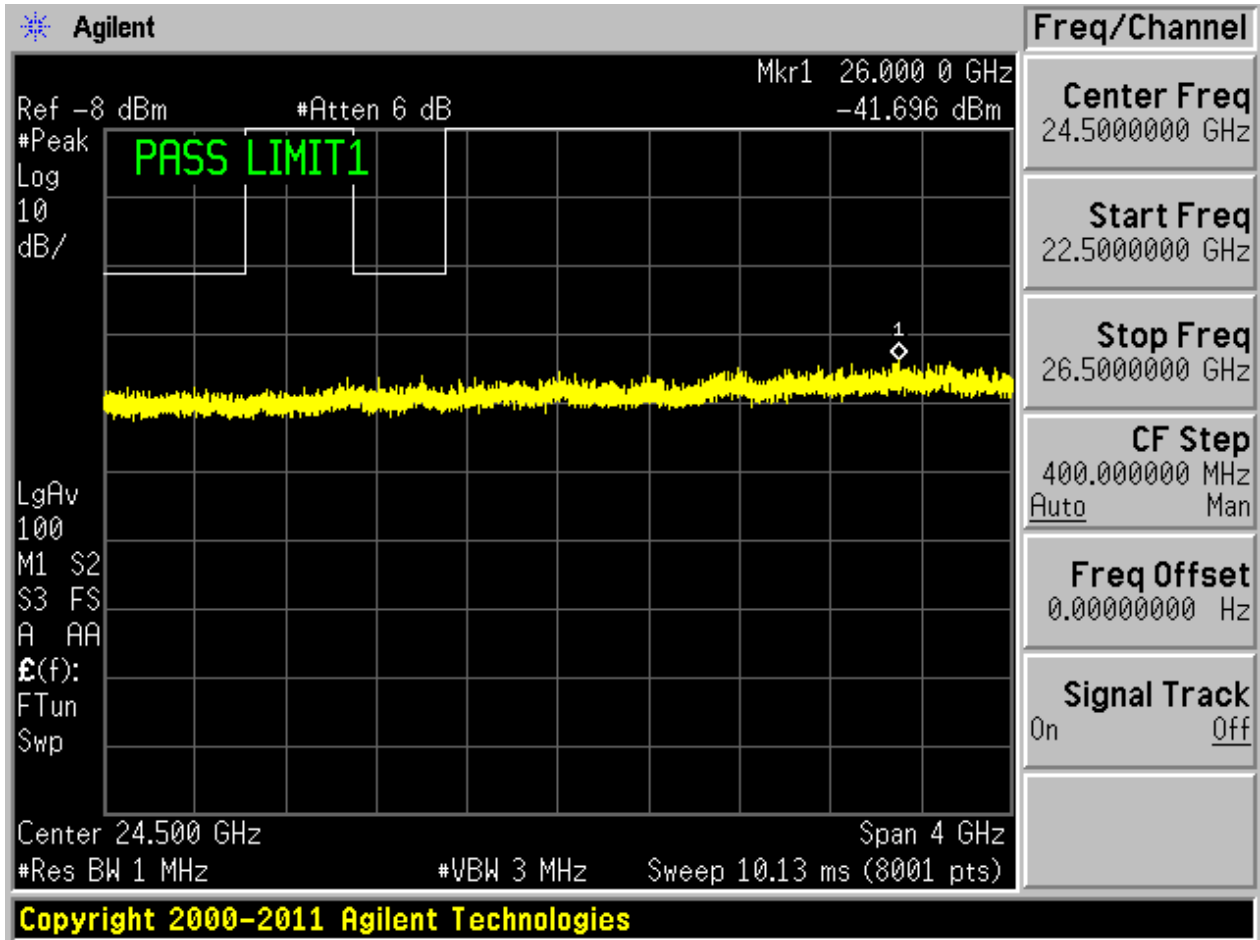




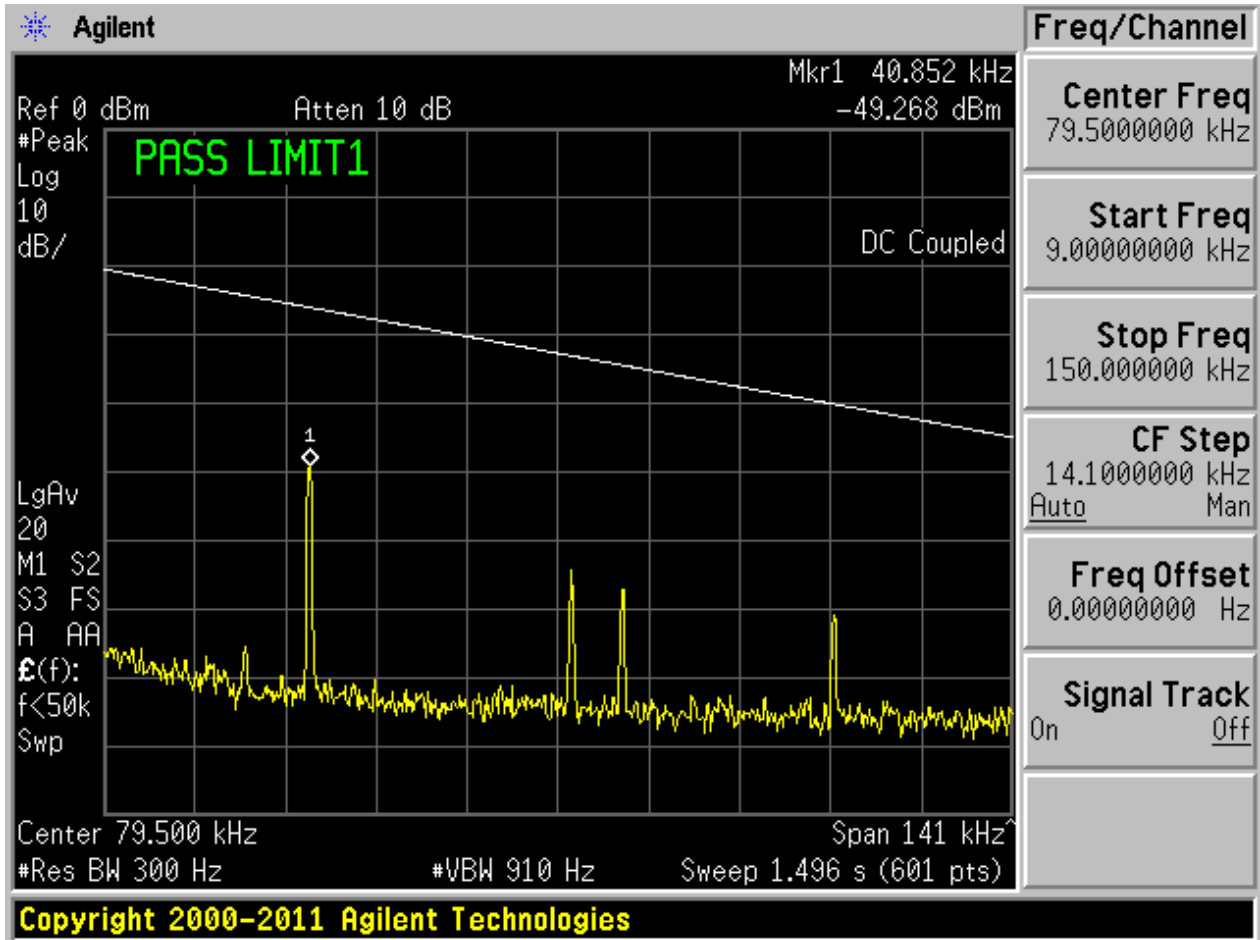


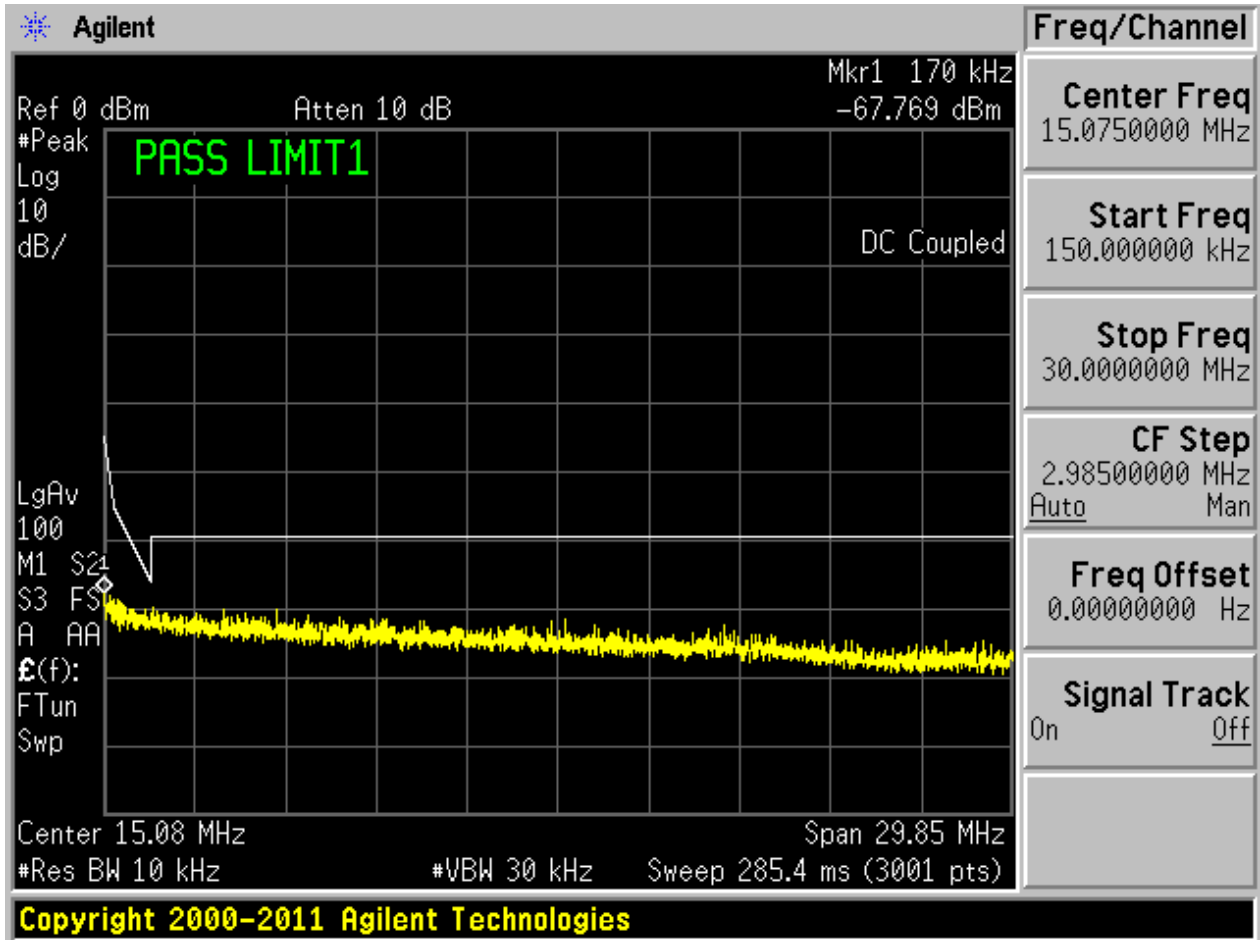


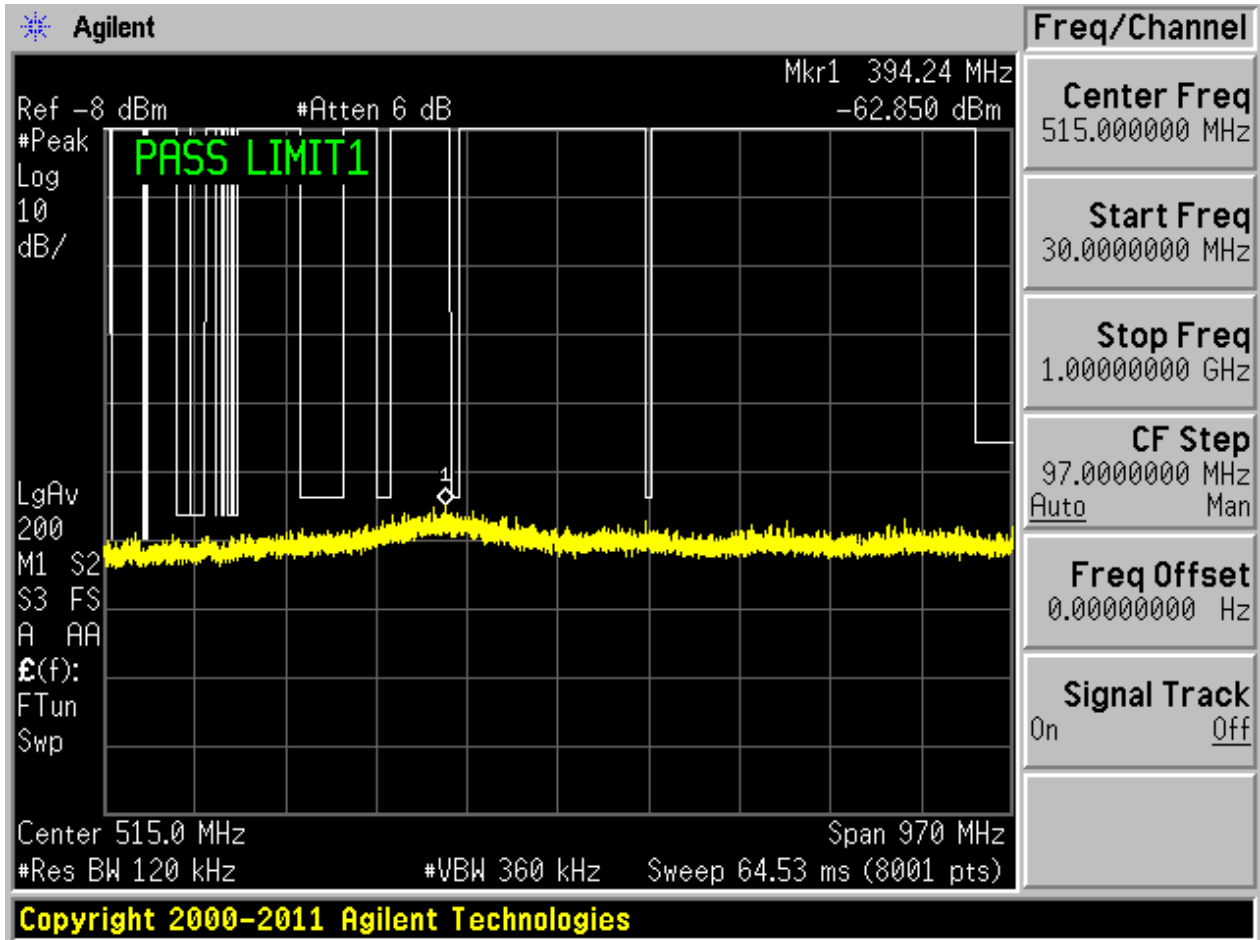


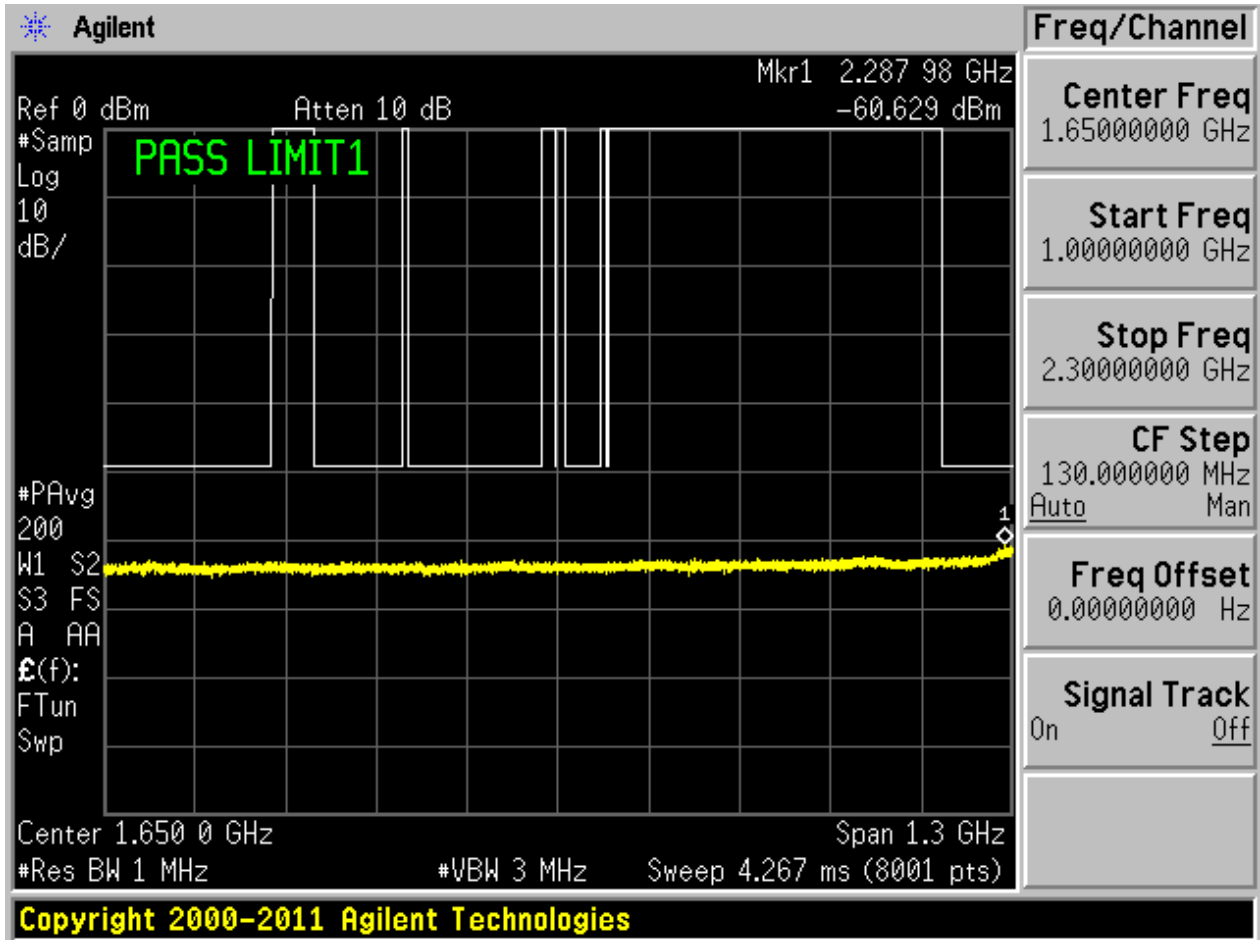


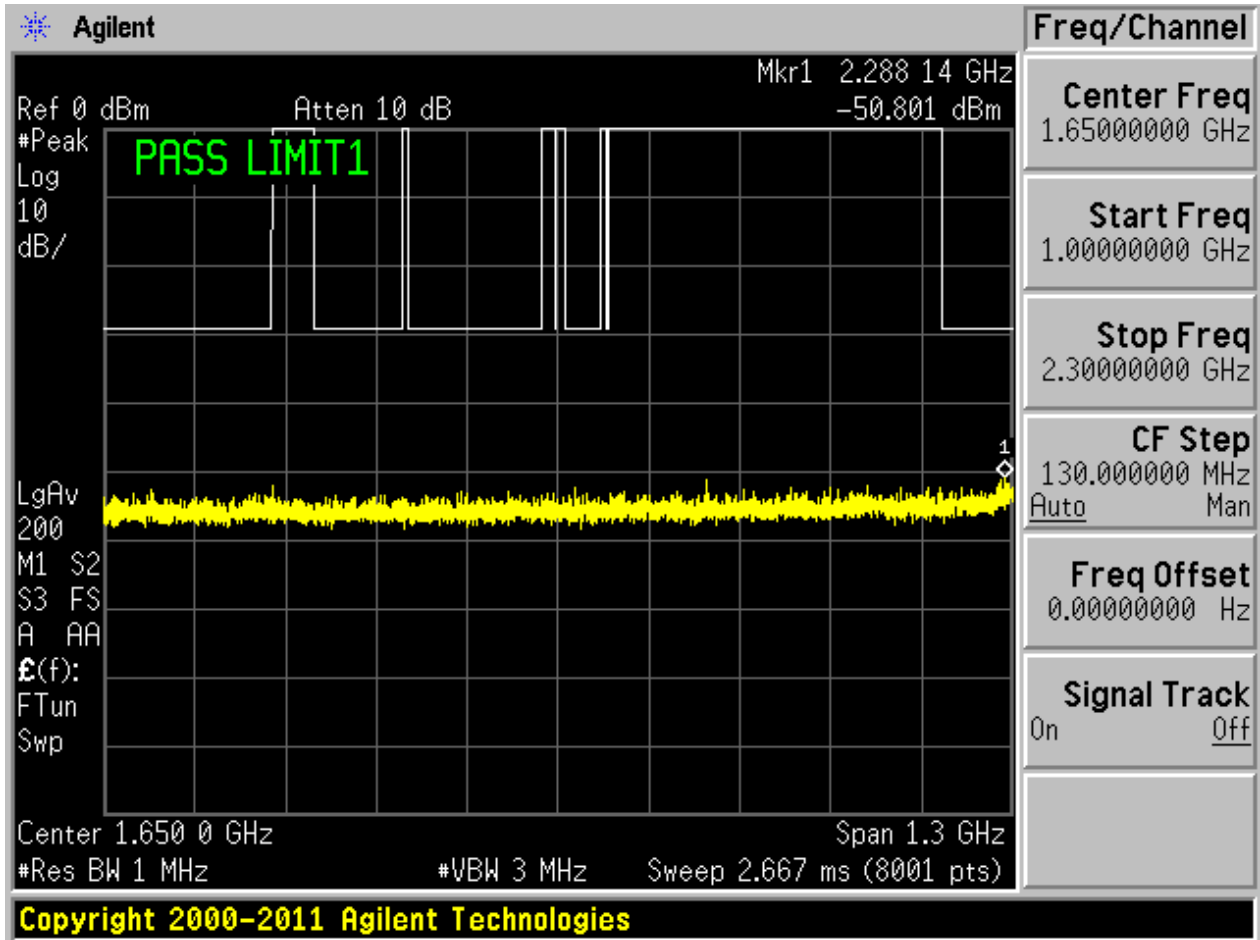
2.26.2 Ant 2 (Trace#2)

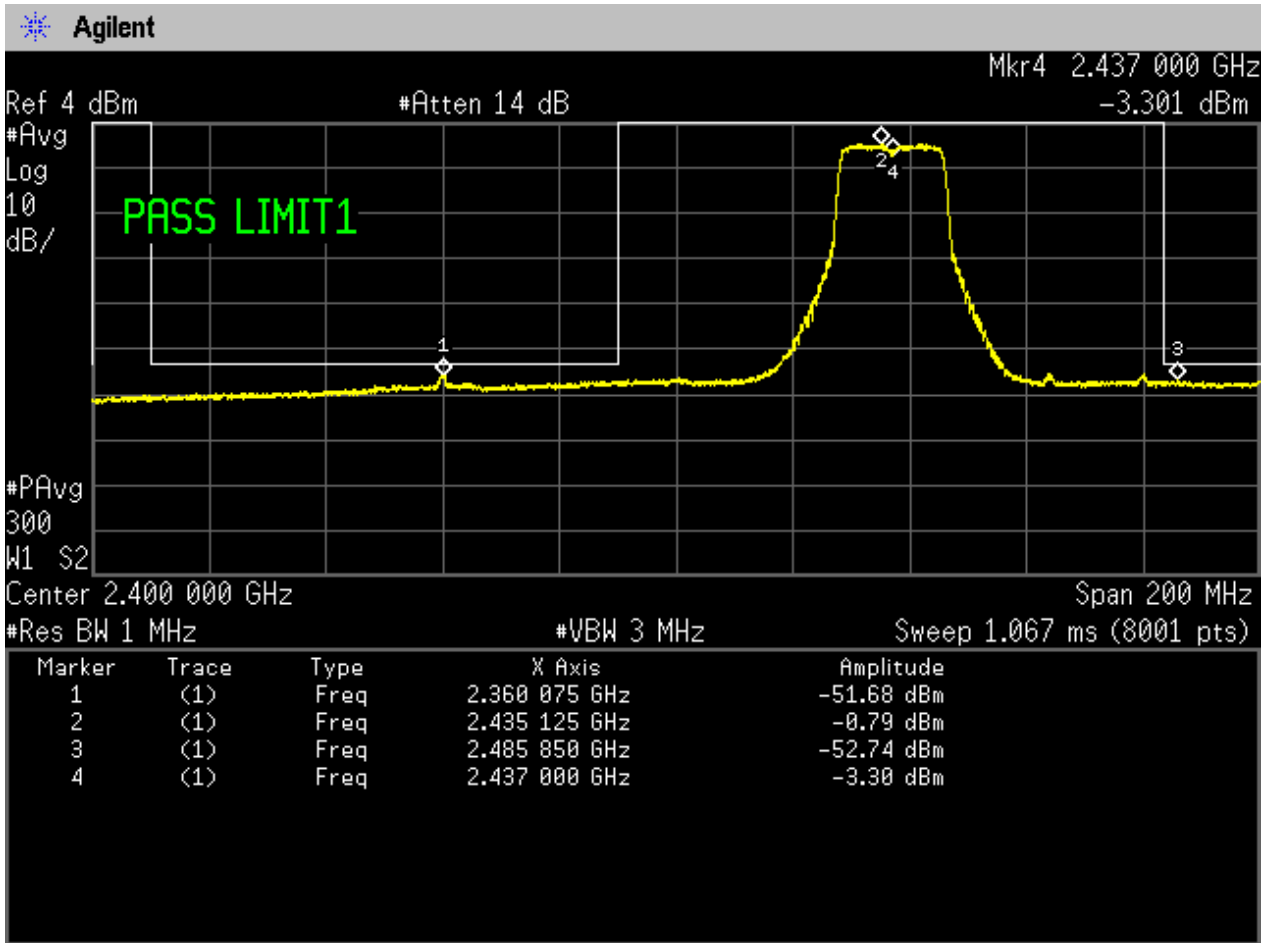


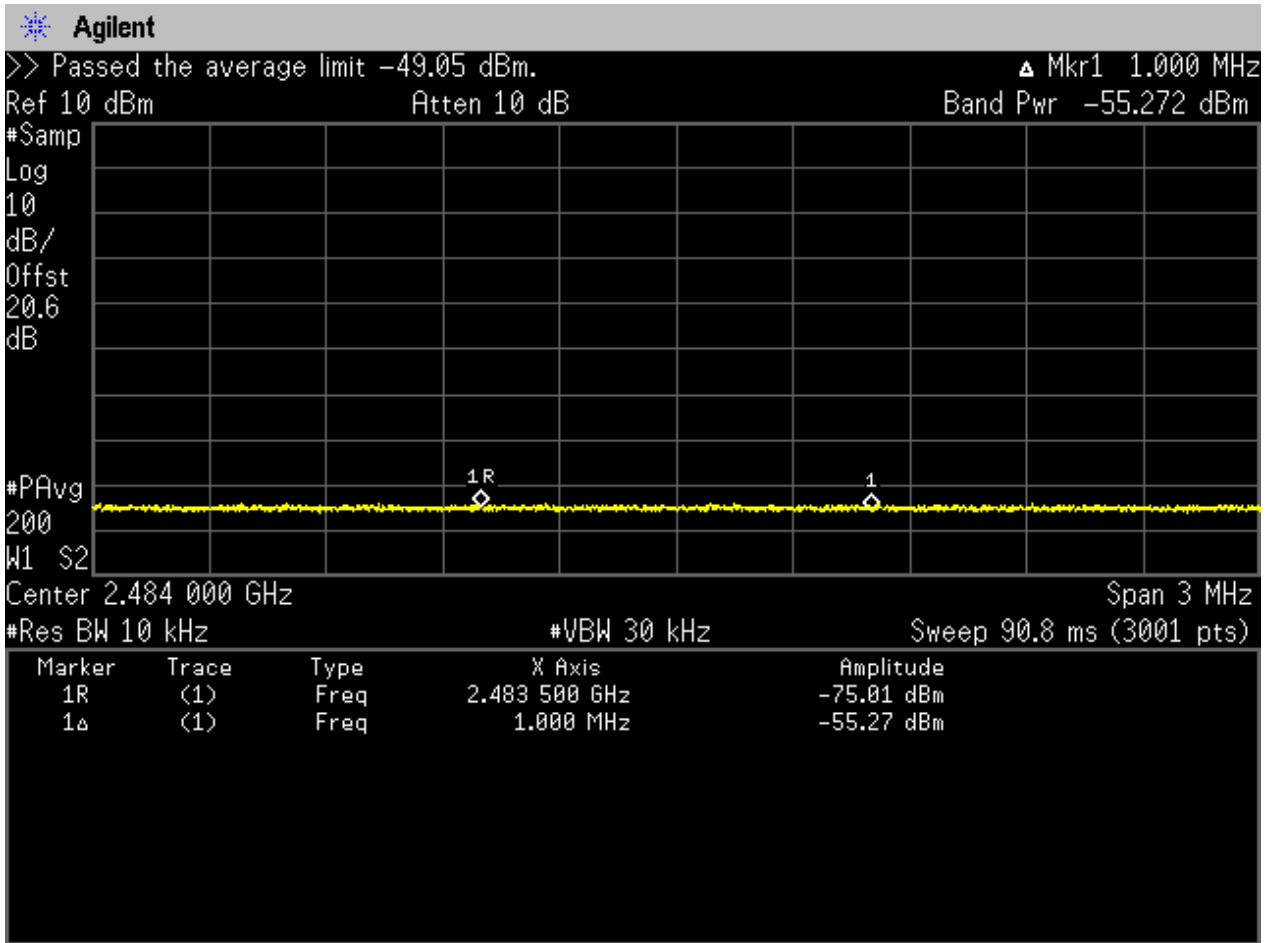


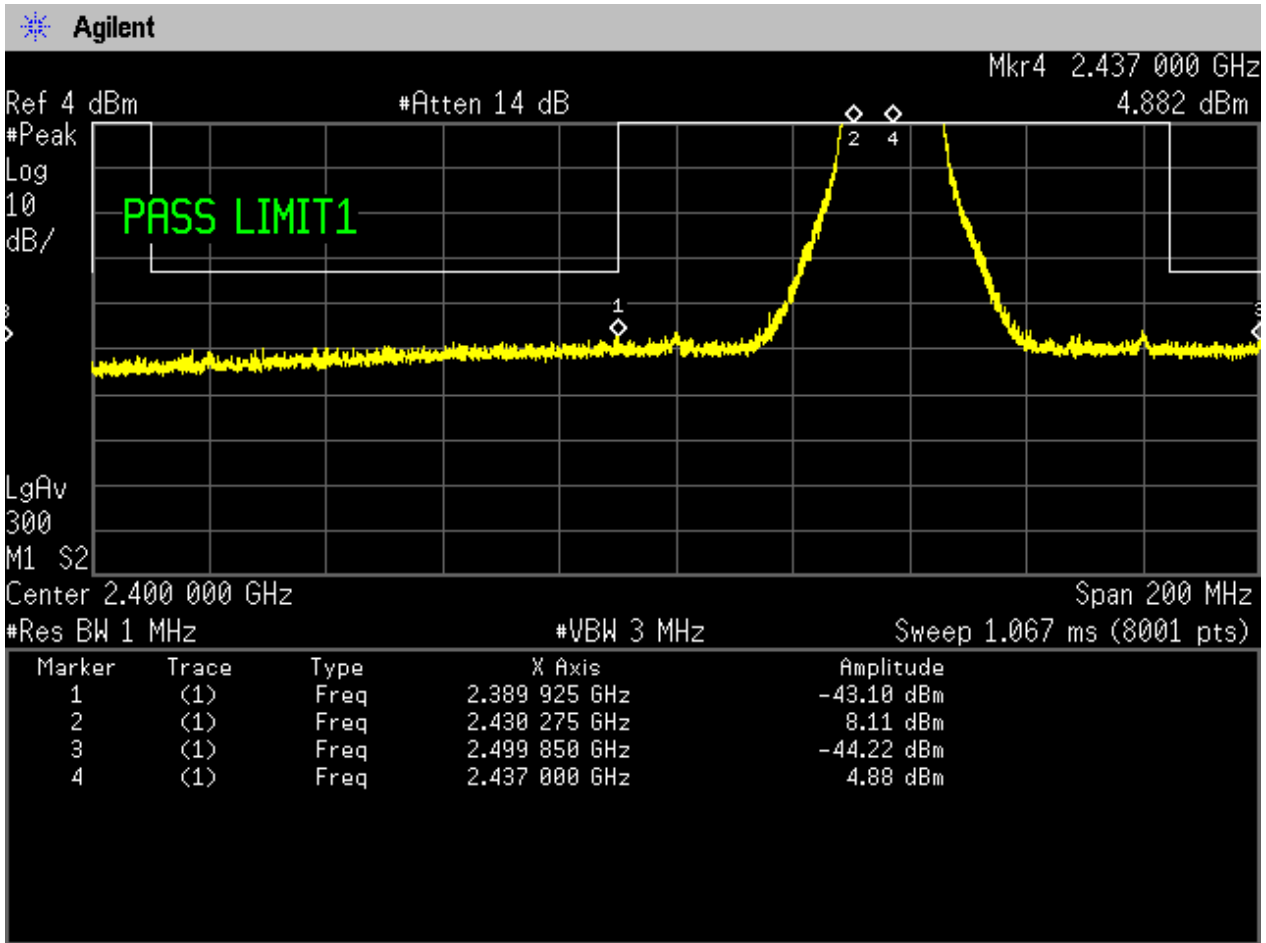


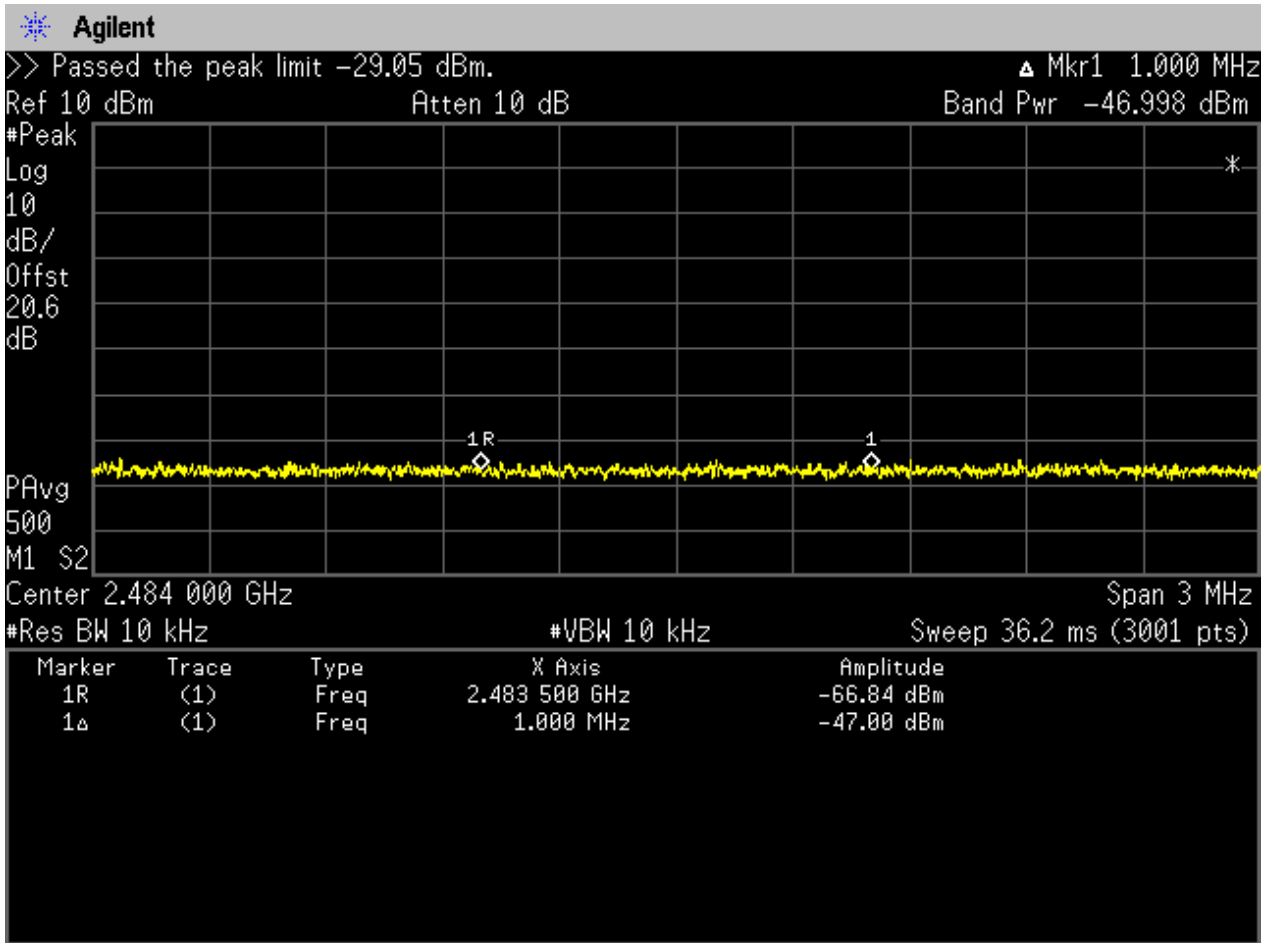


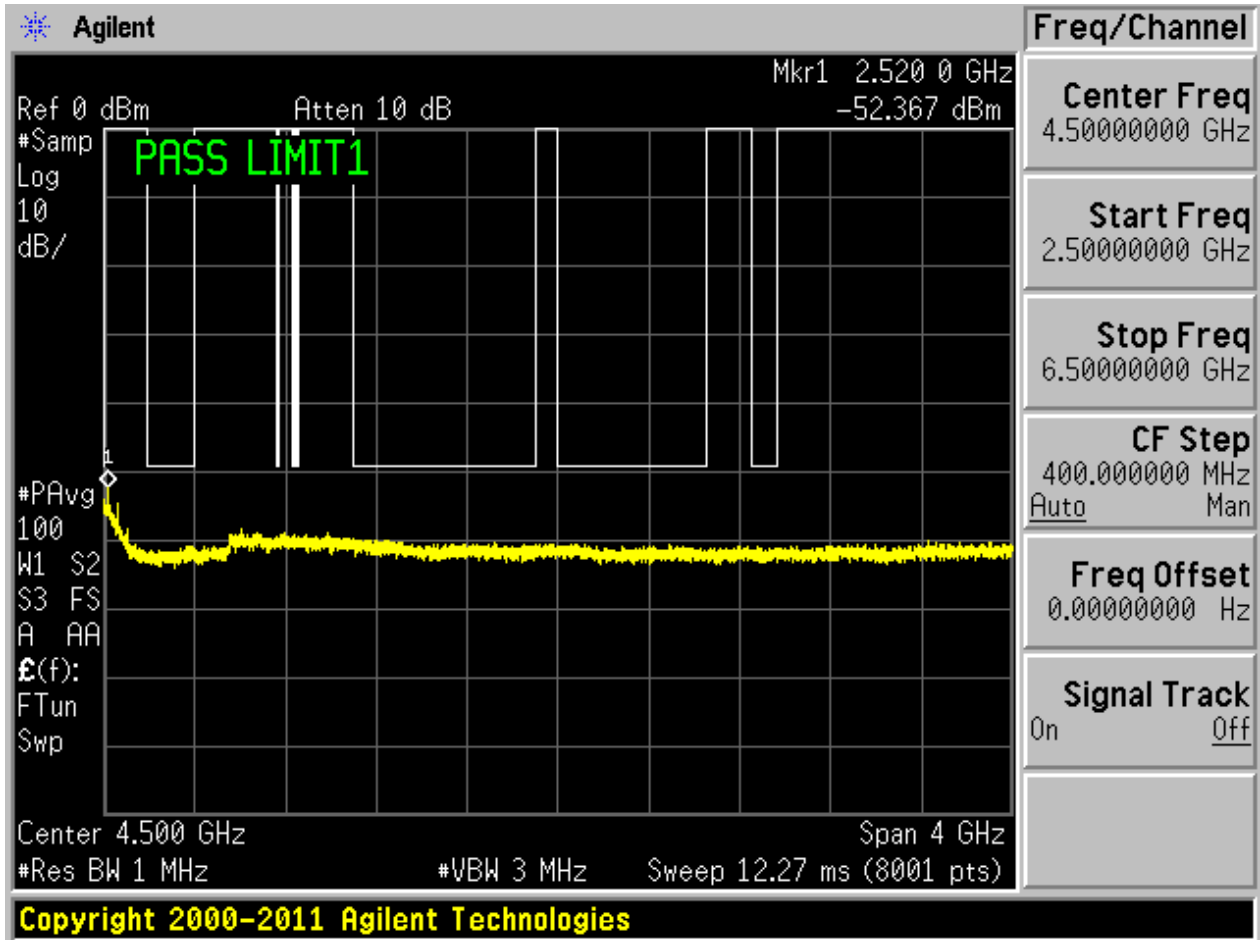


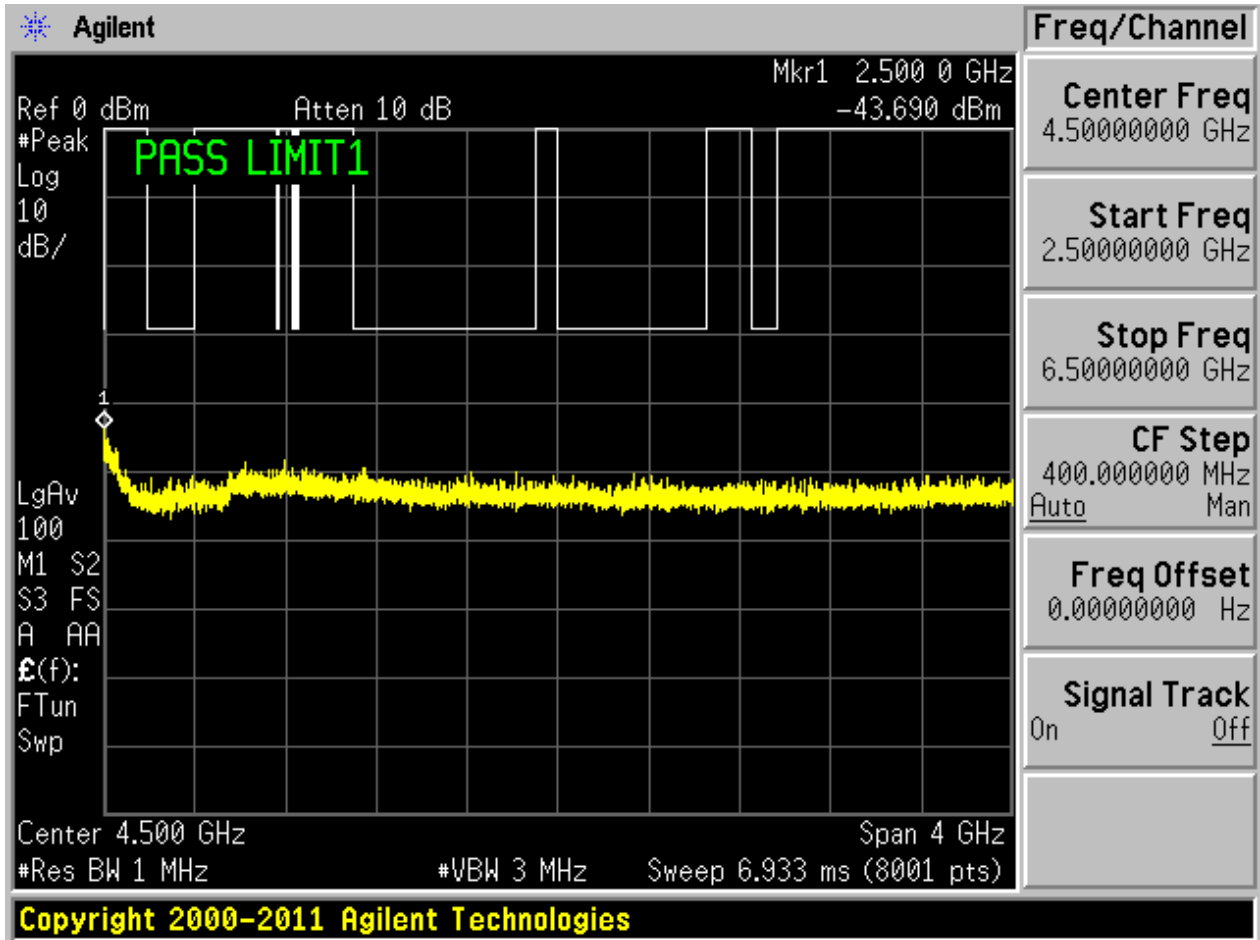


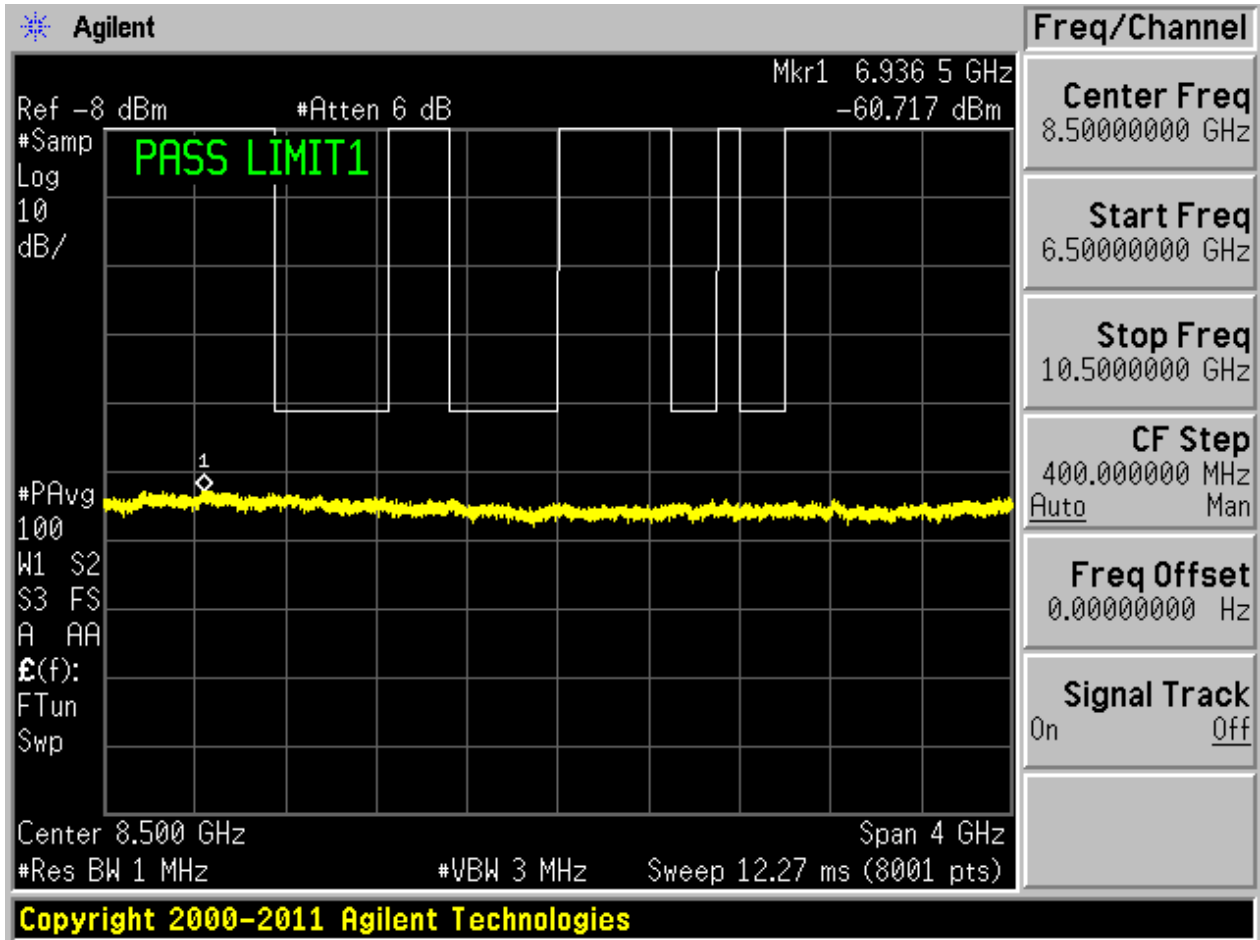


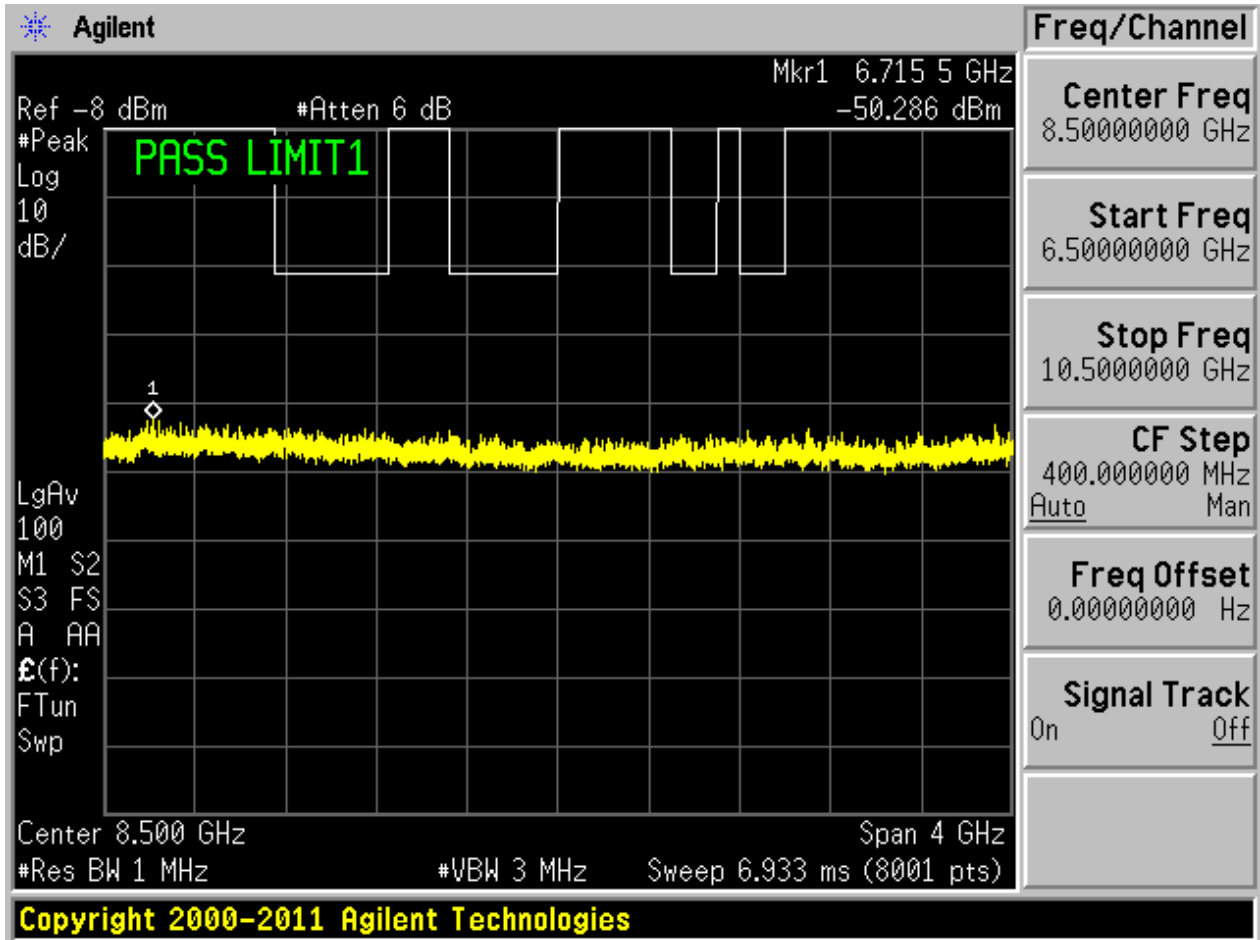


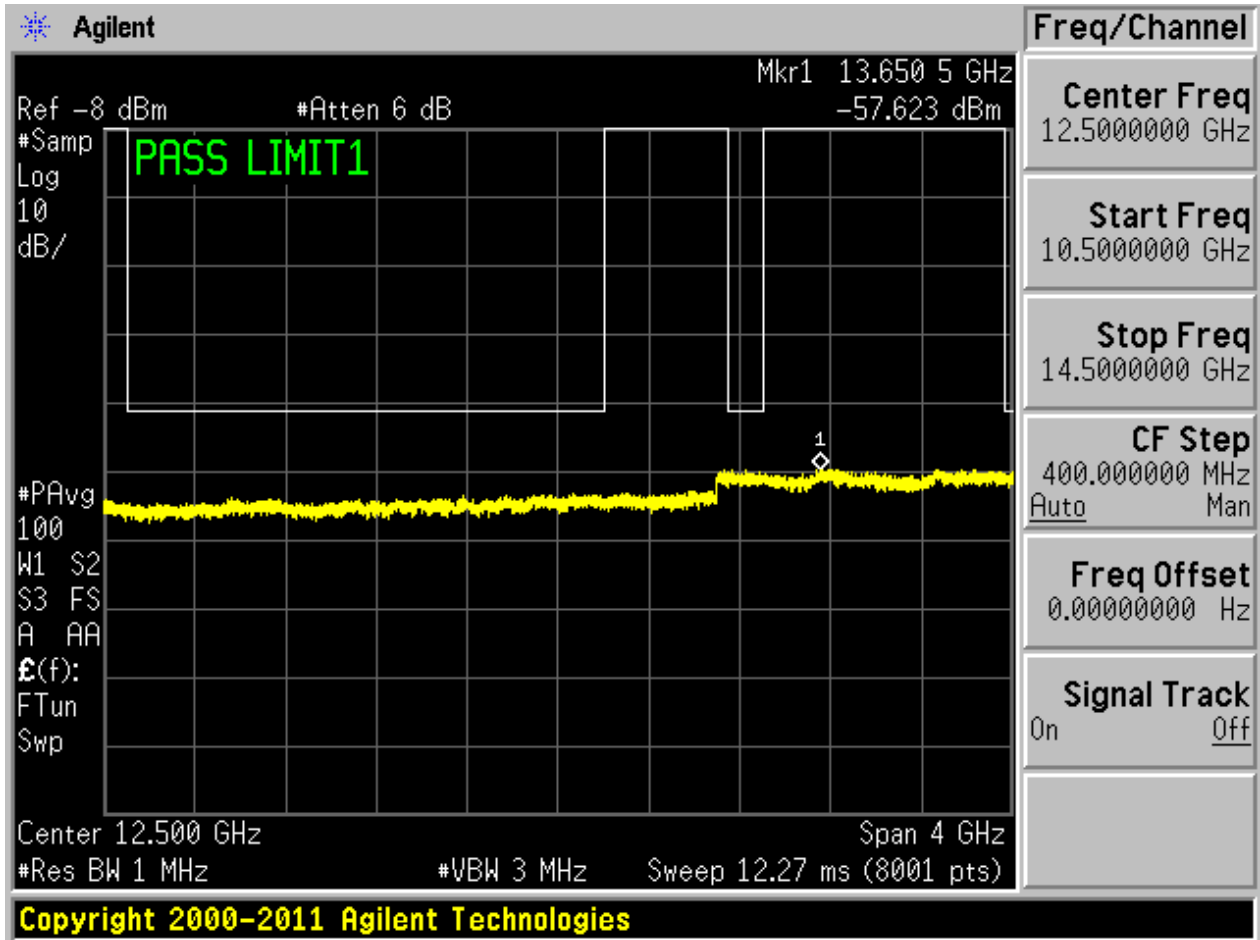


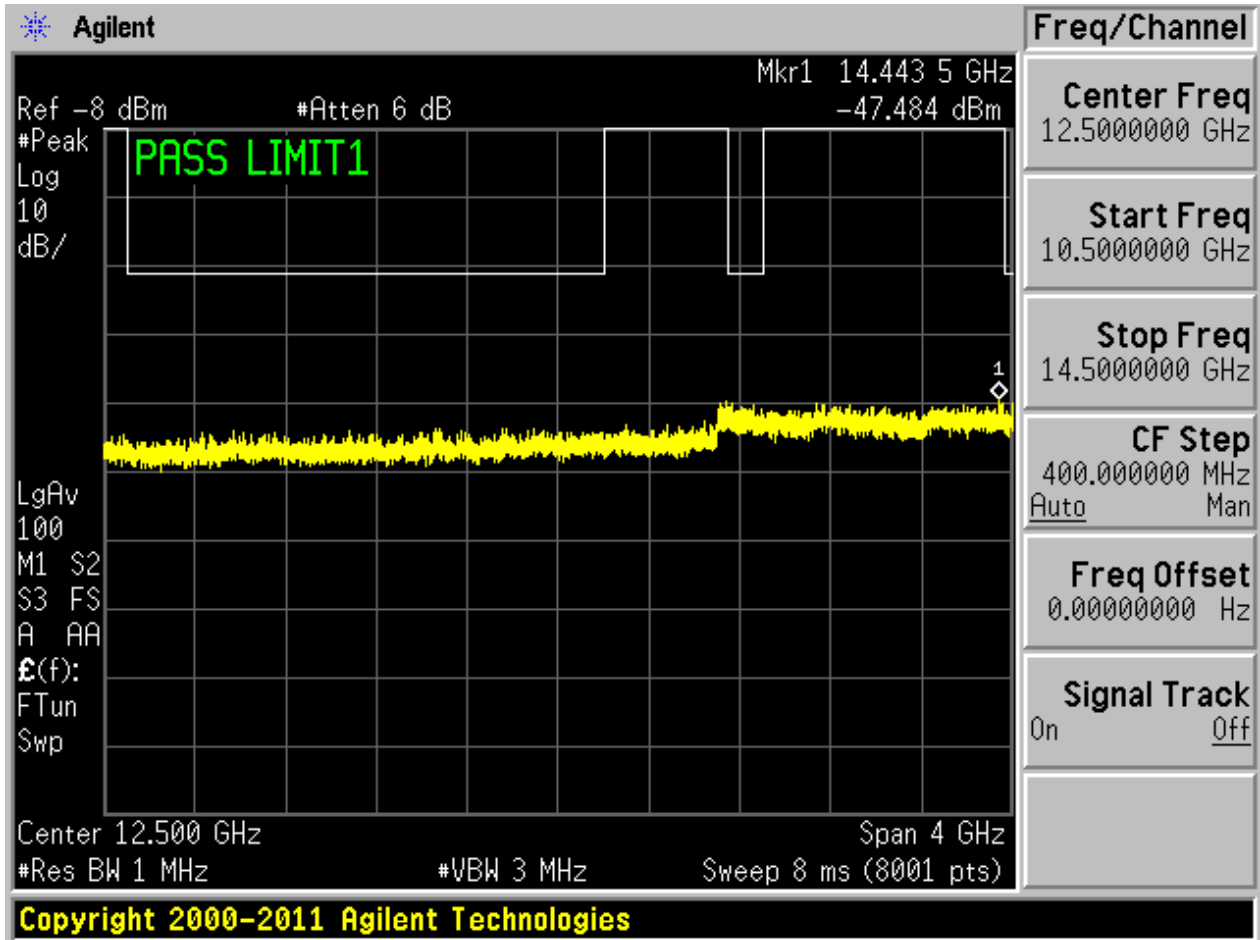


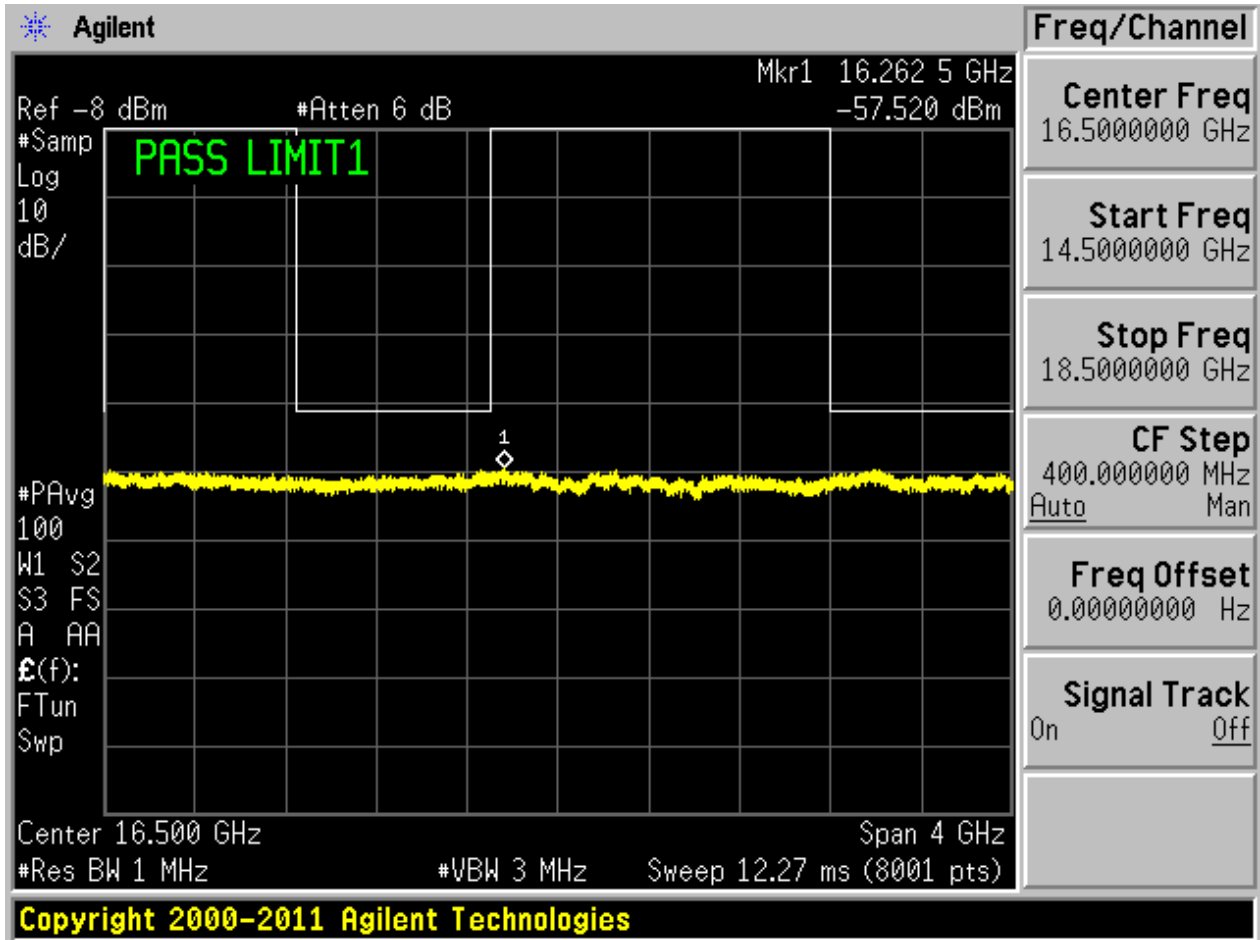


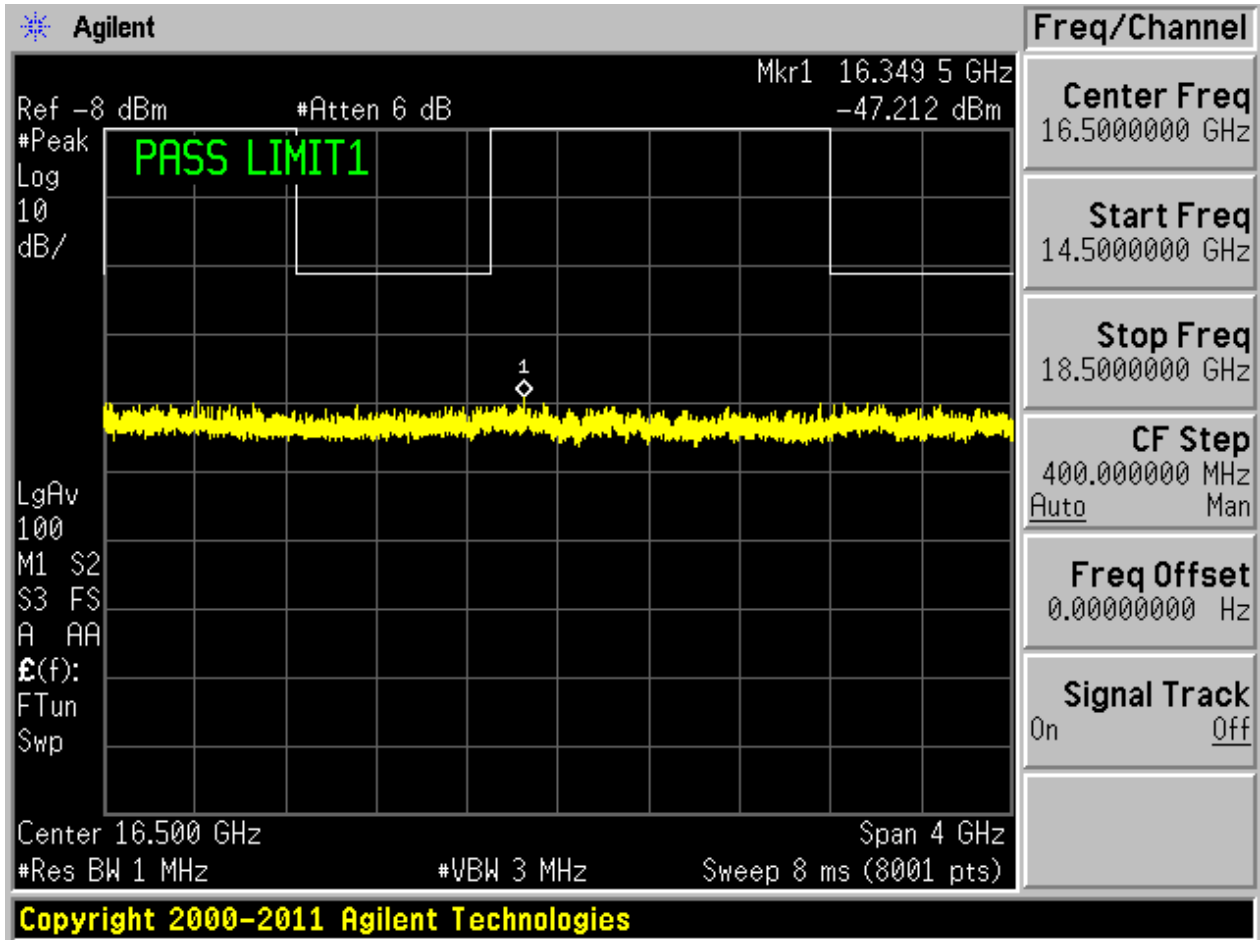


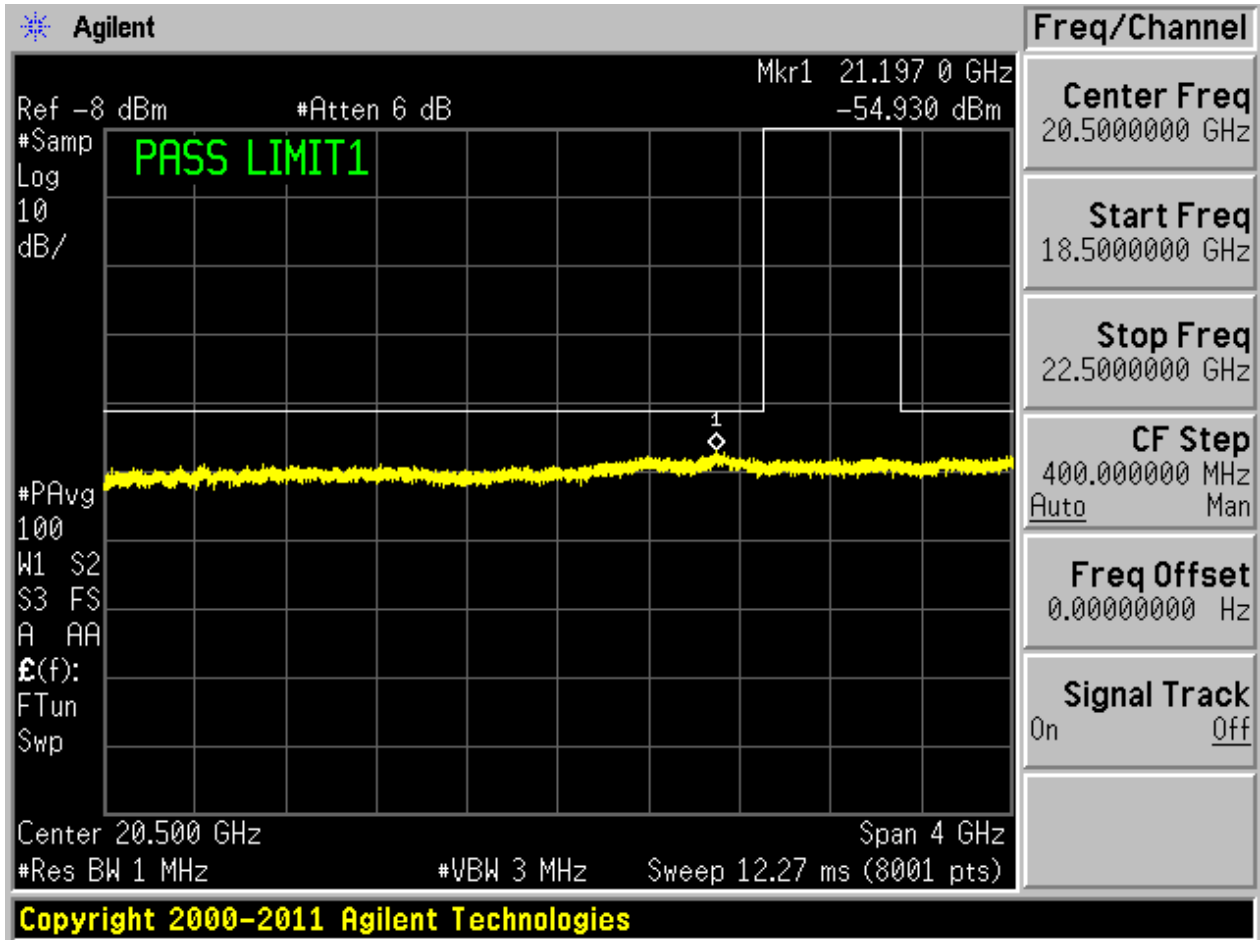


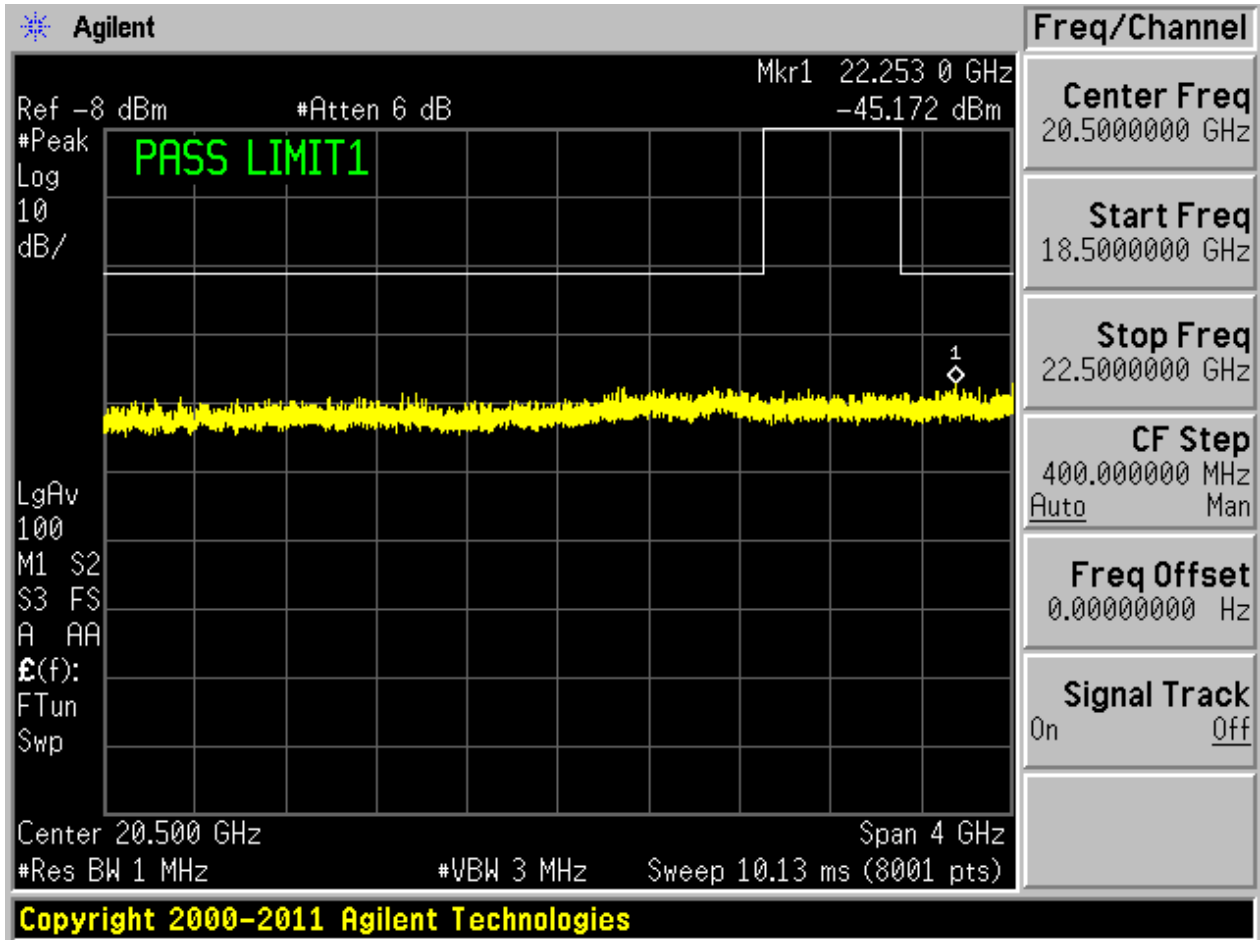


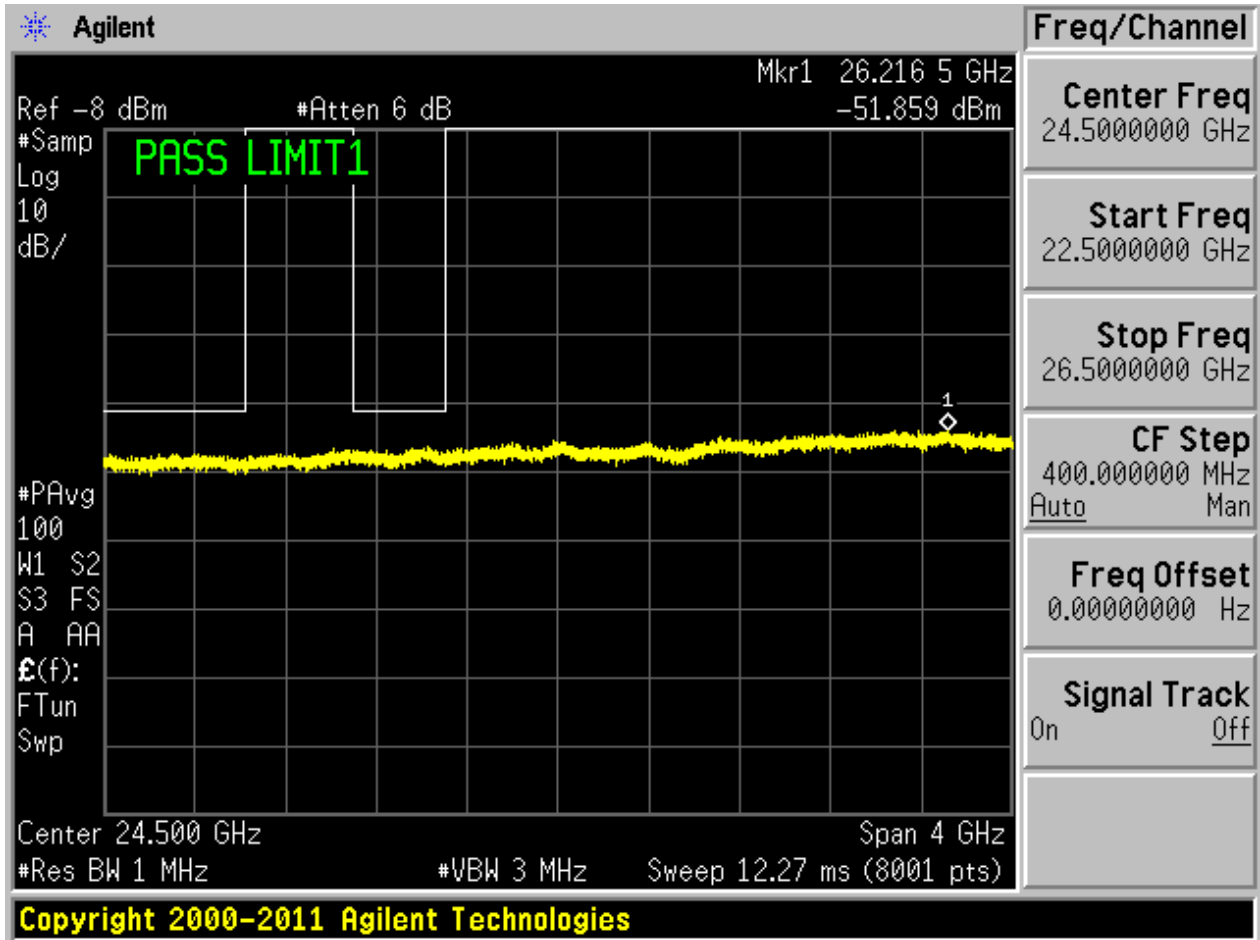


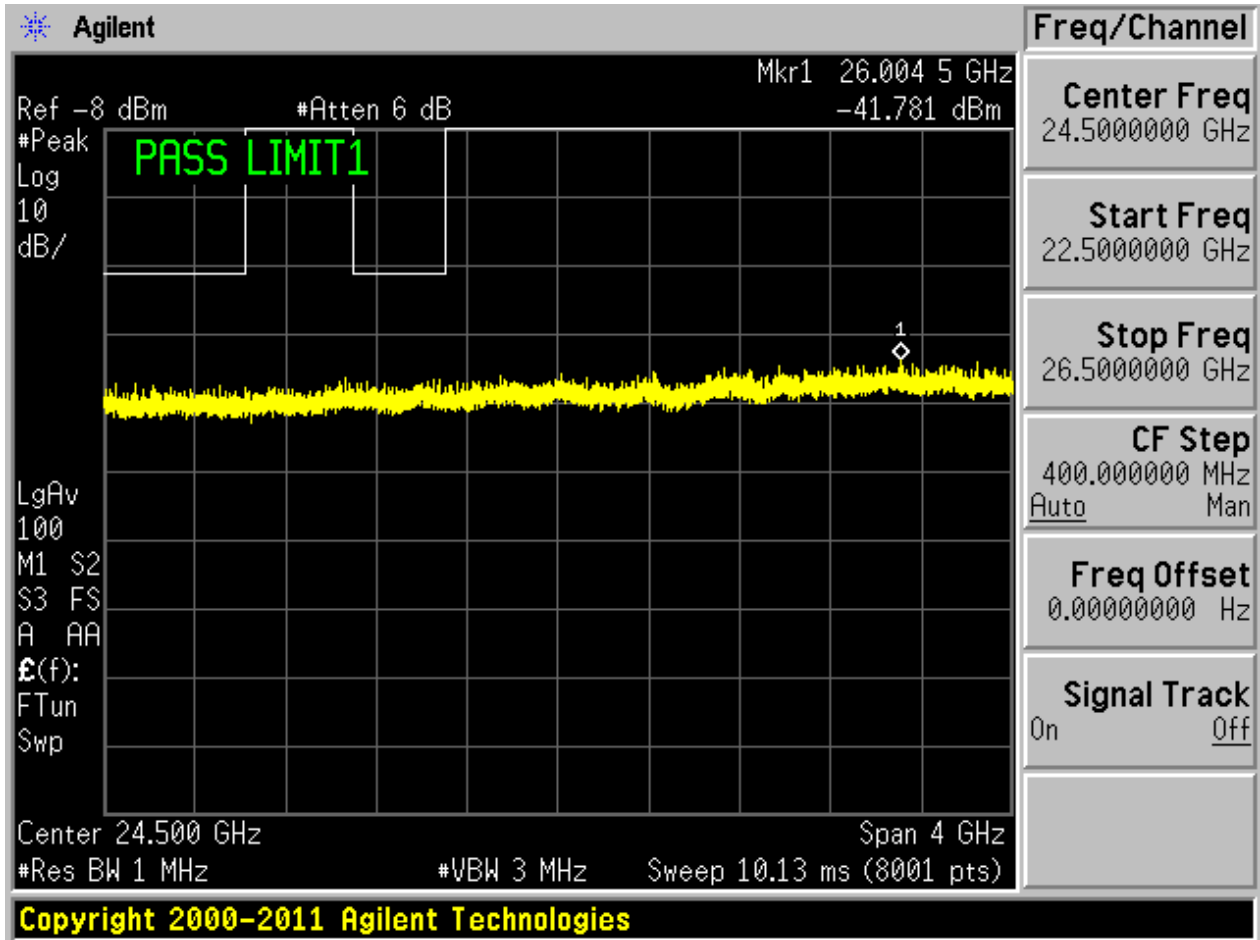




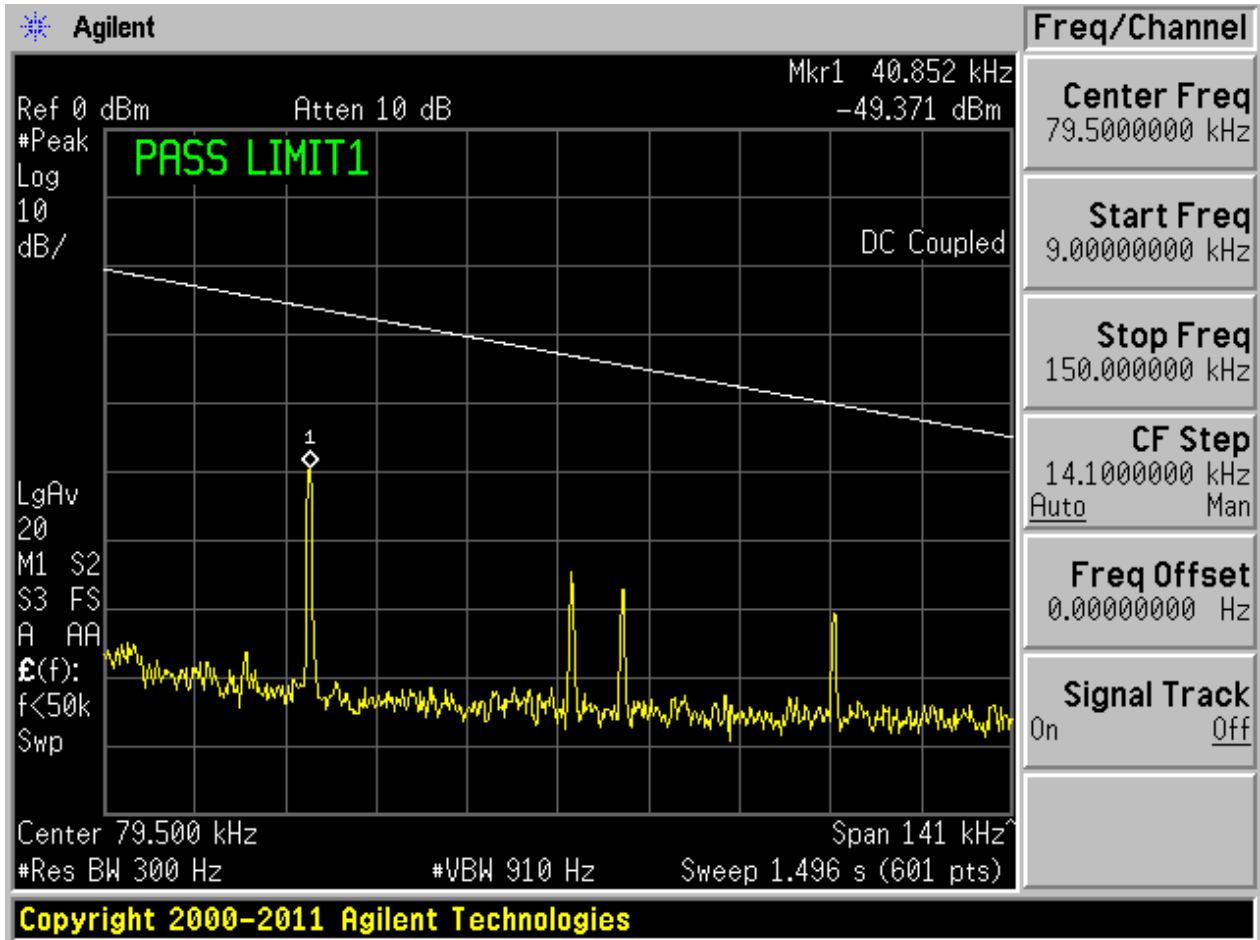


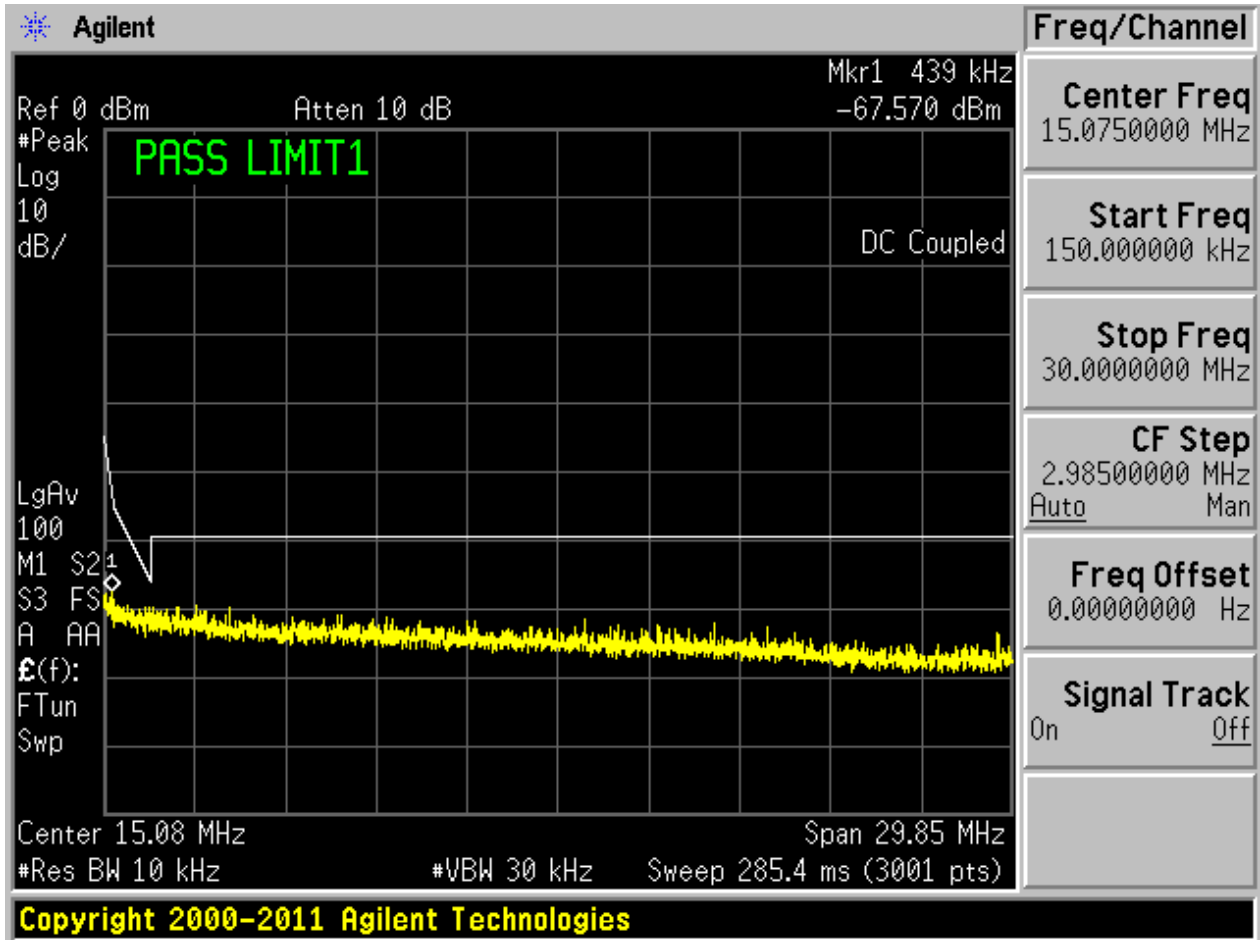


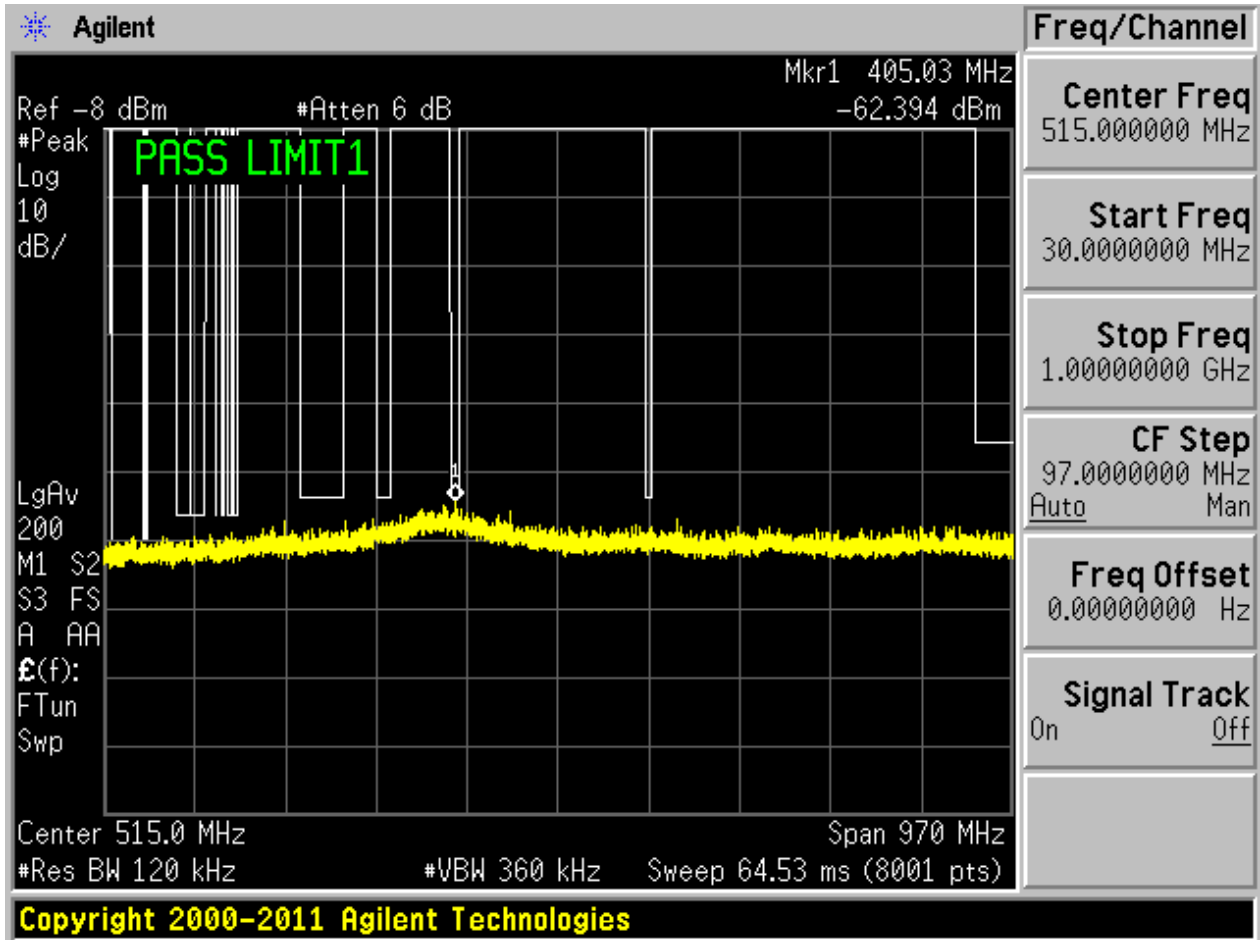


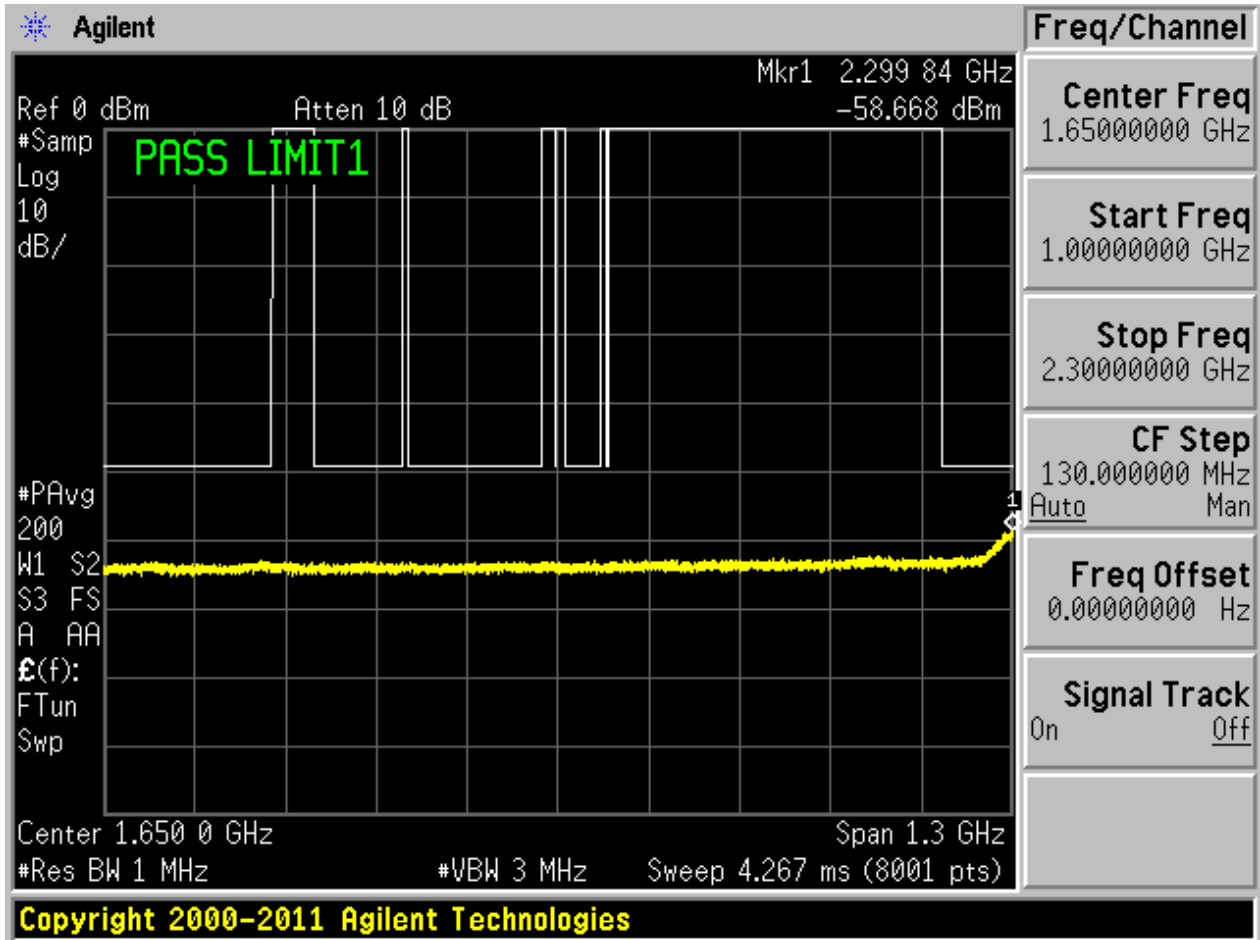


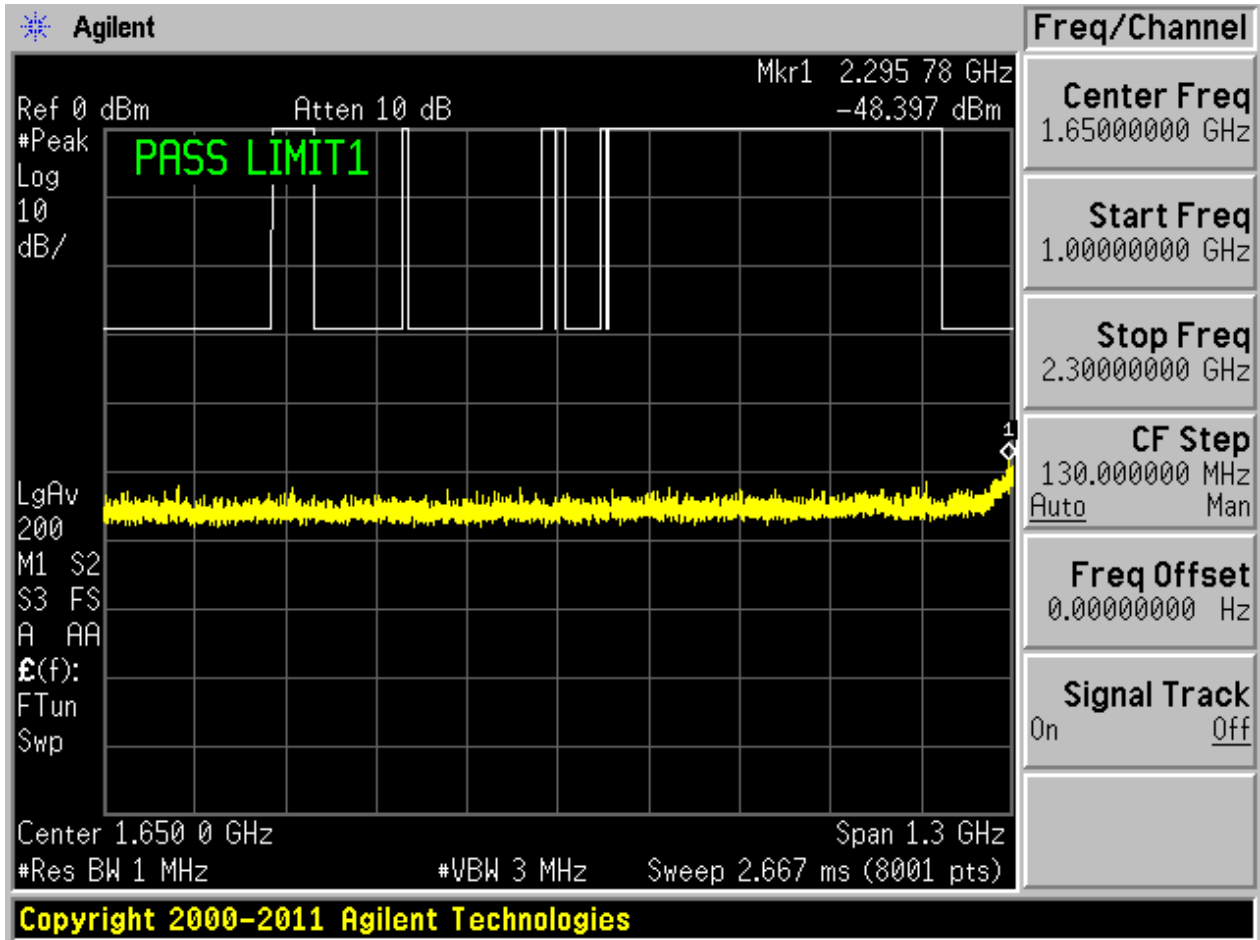
2.26.3 Ant 3 (Trace#3)

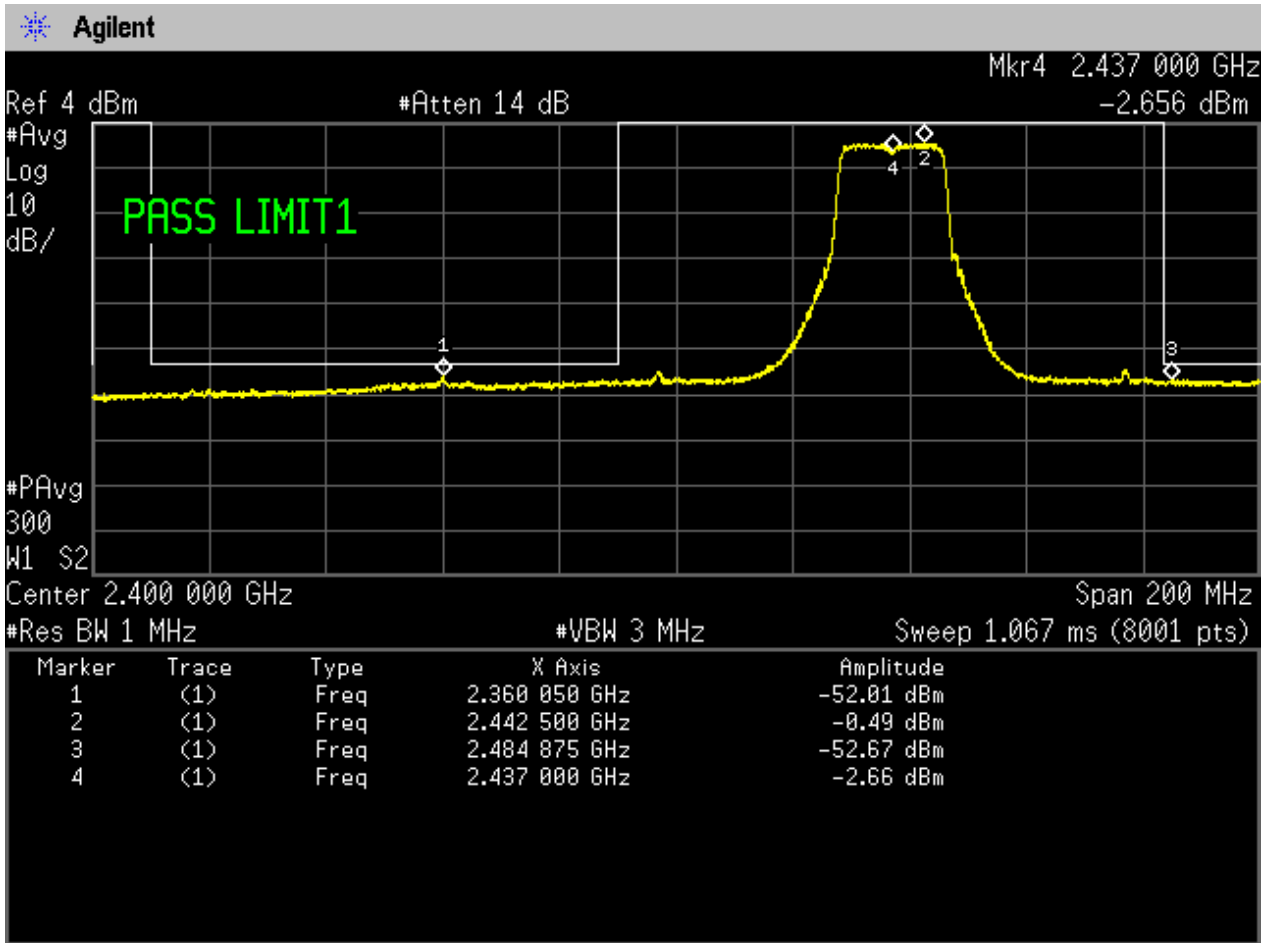


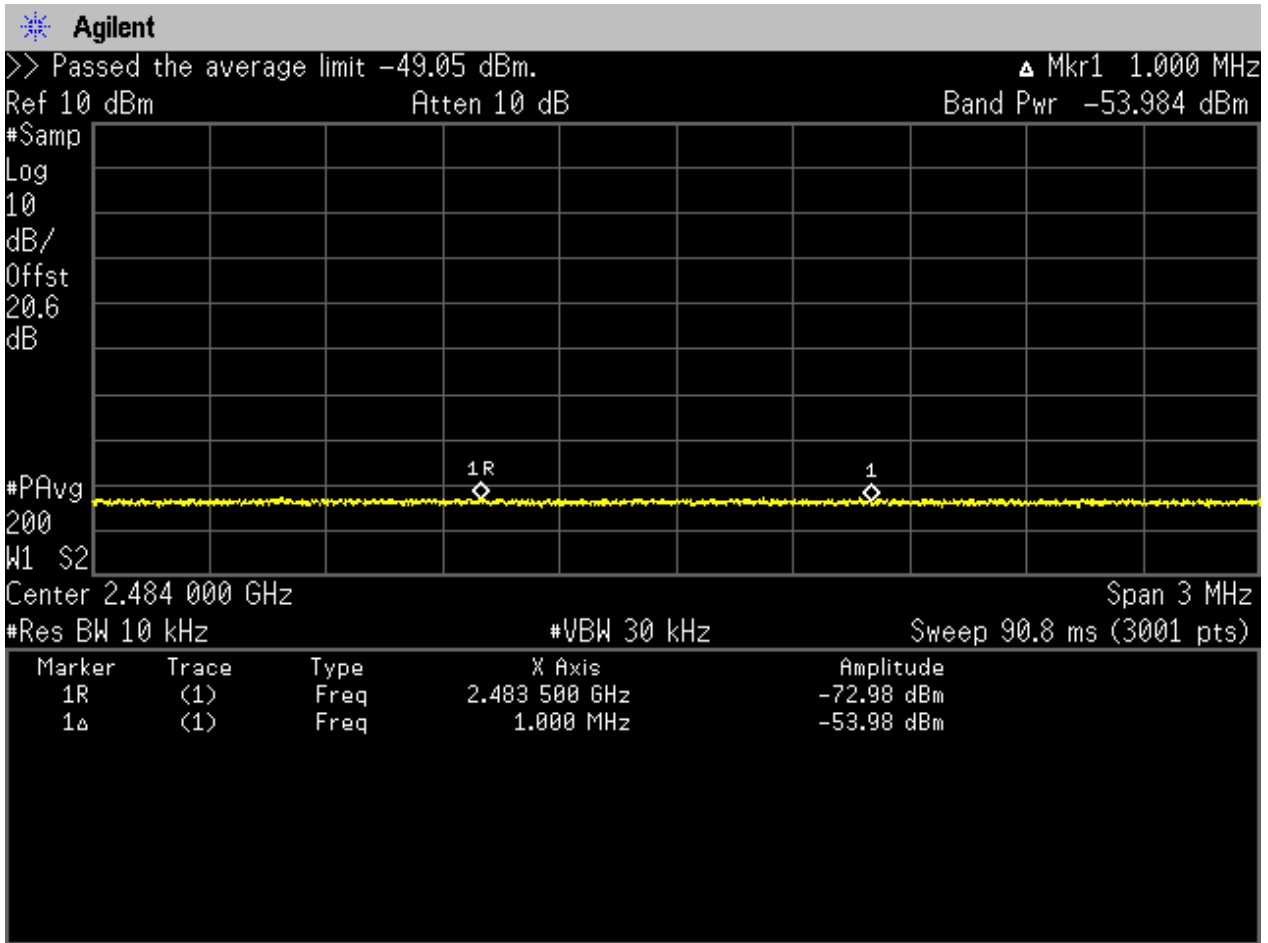


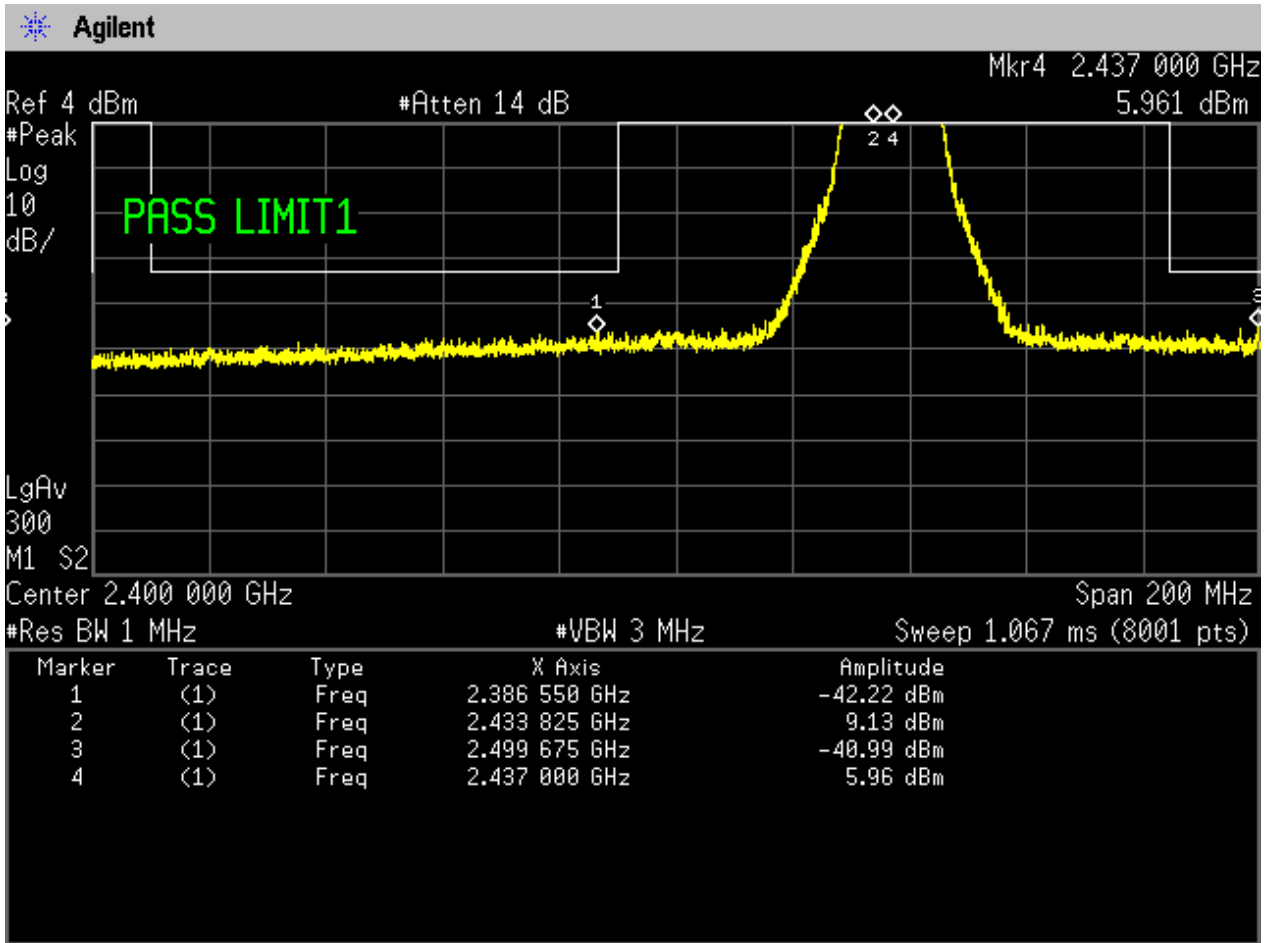


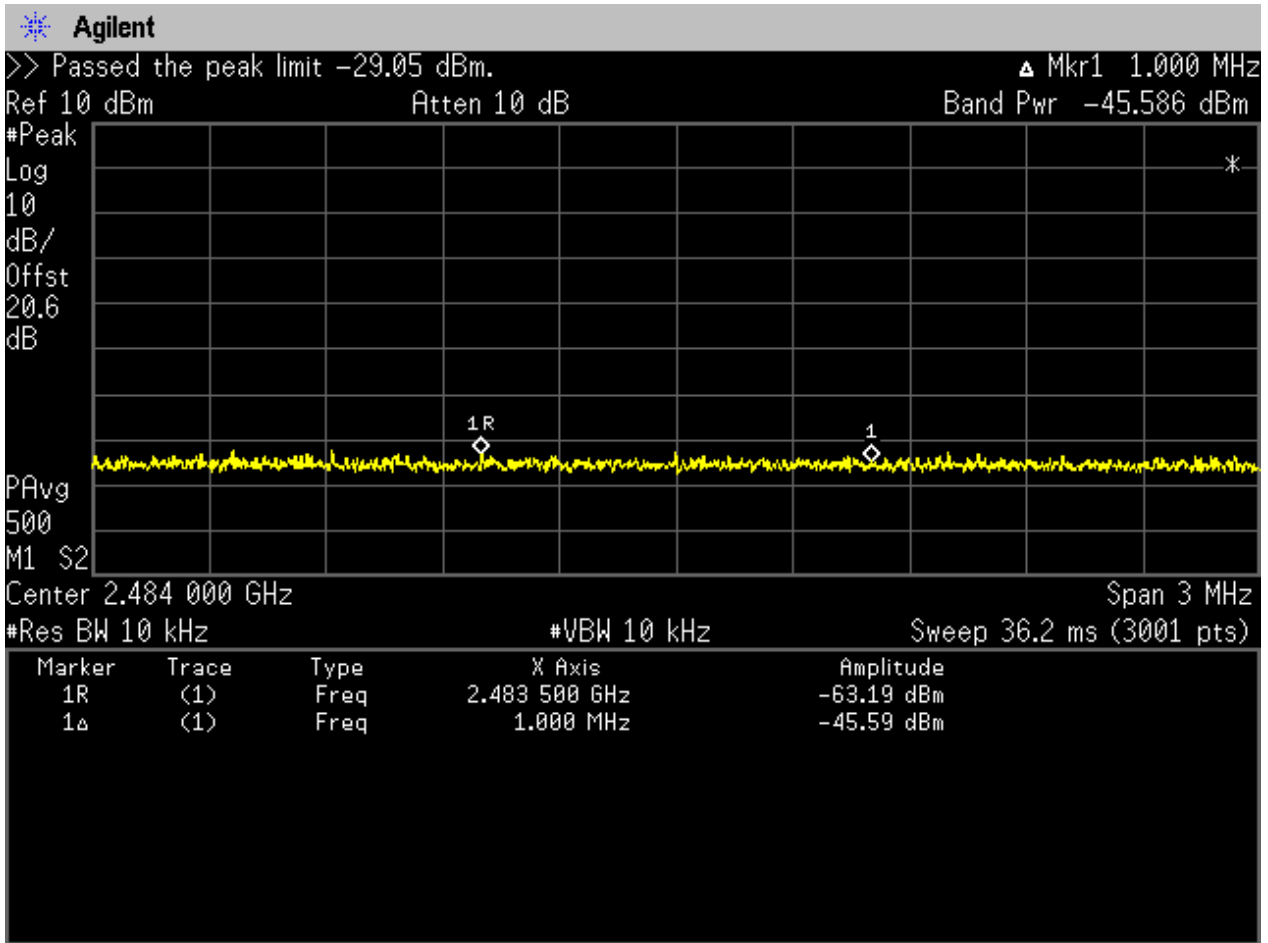


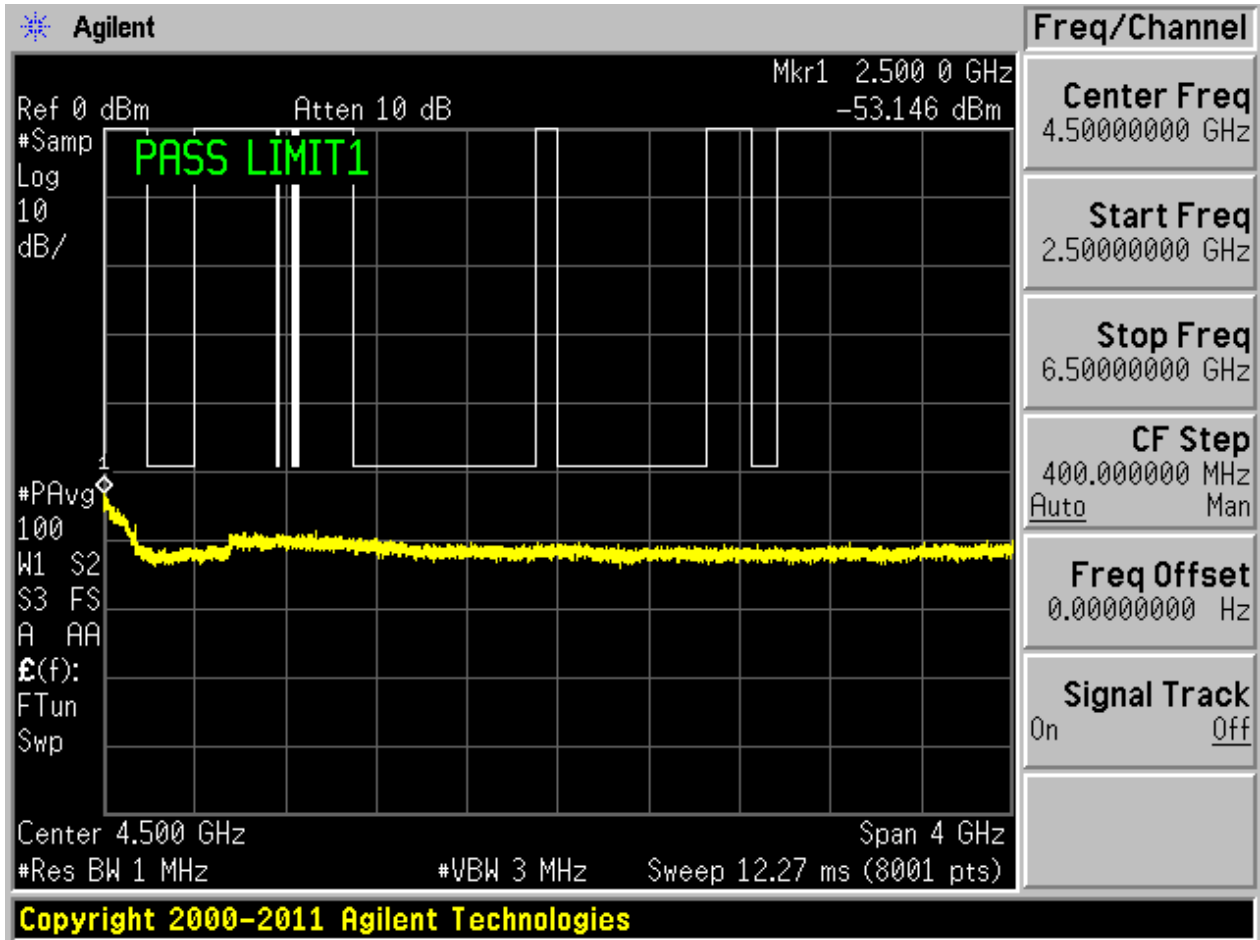


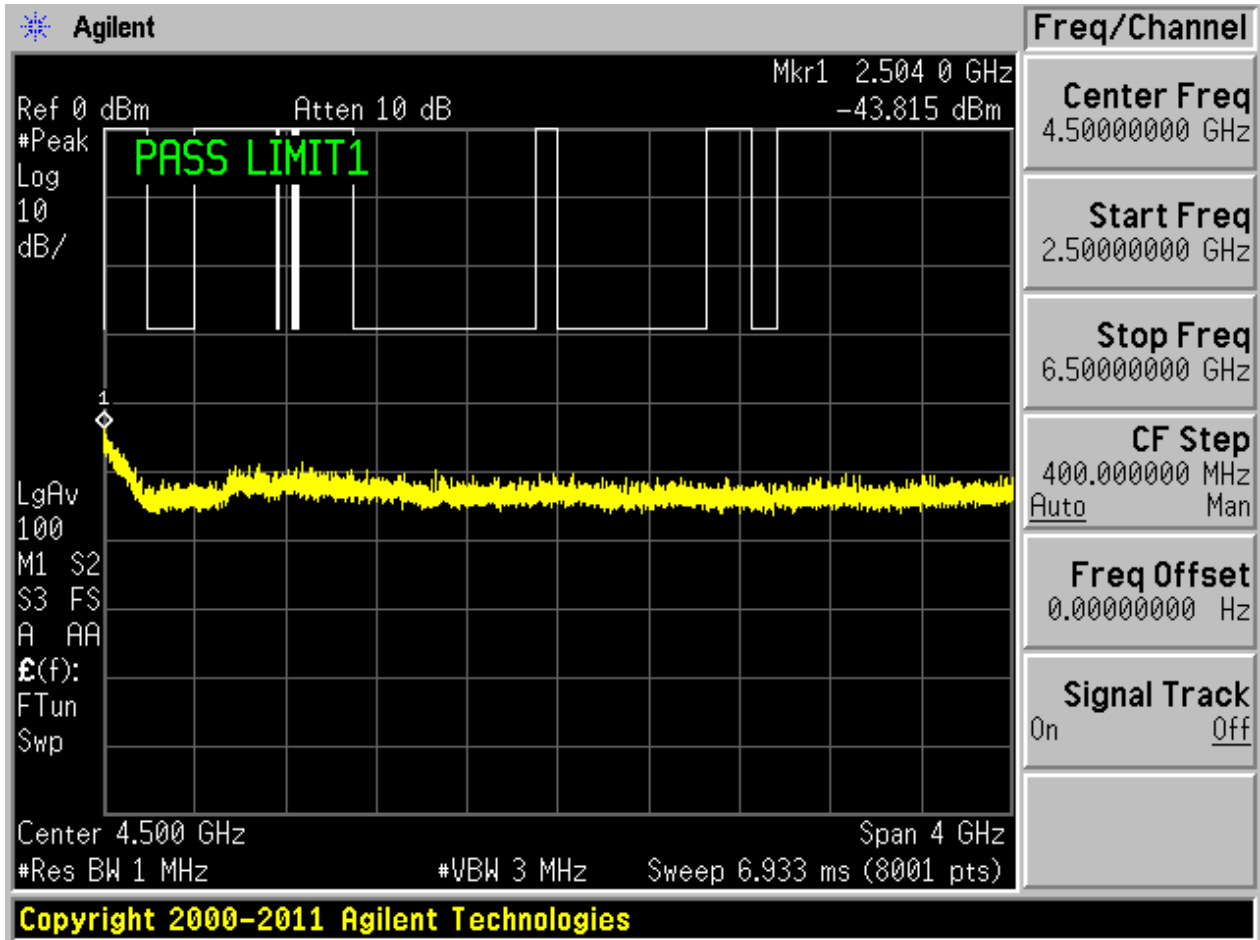


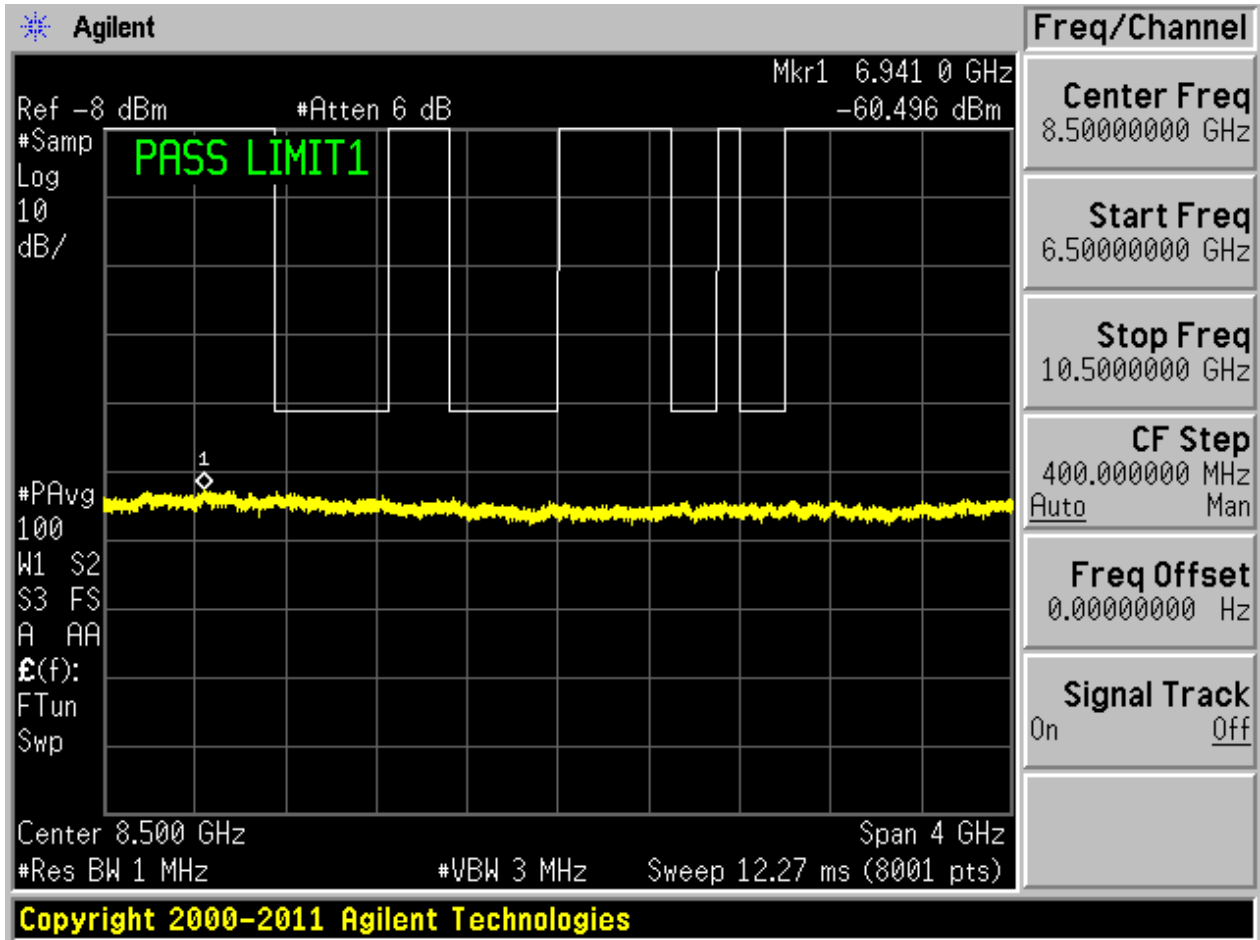


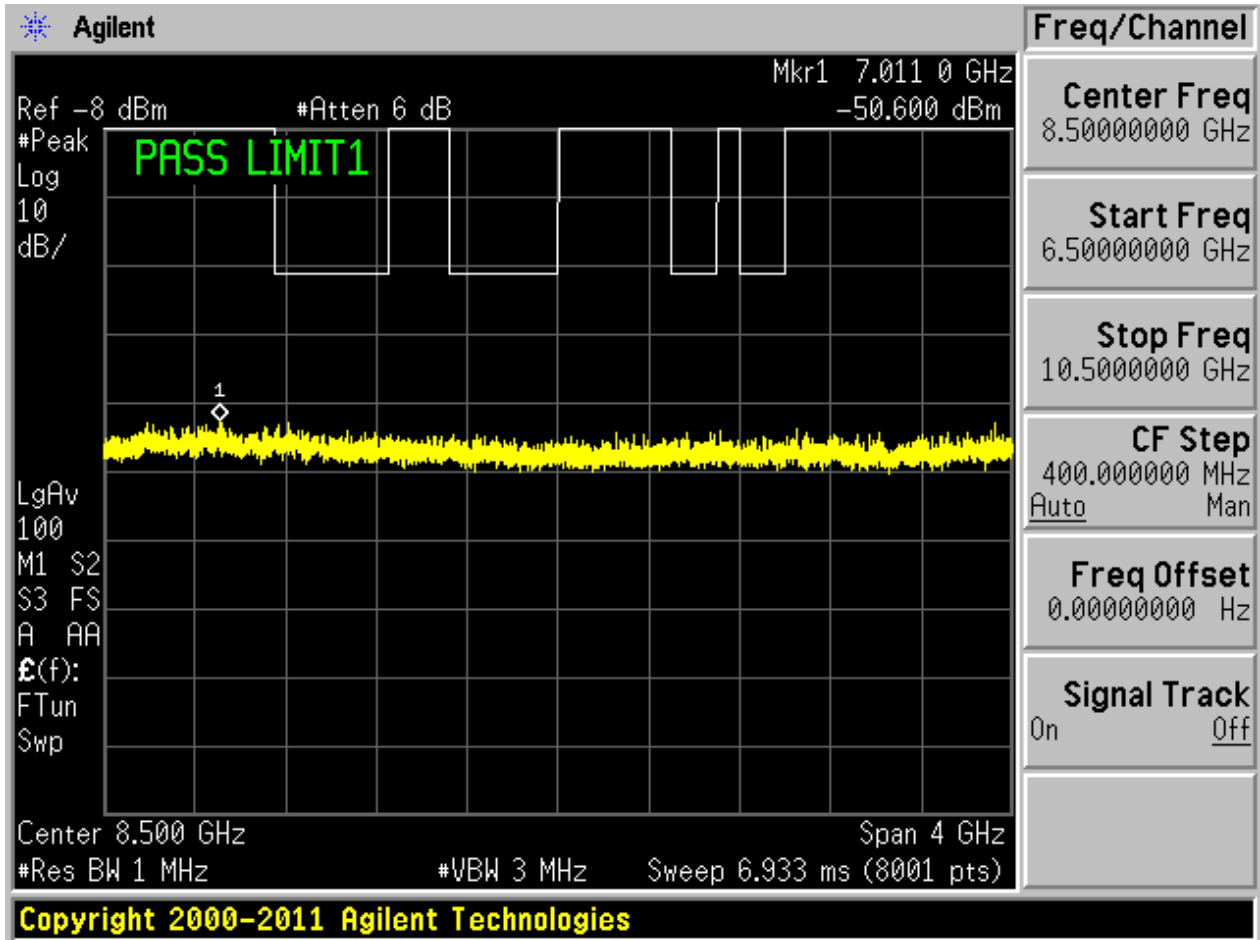


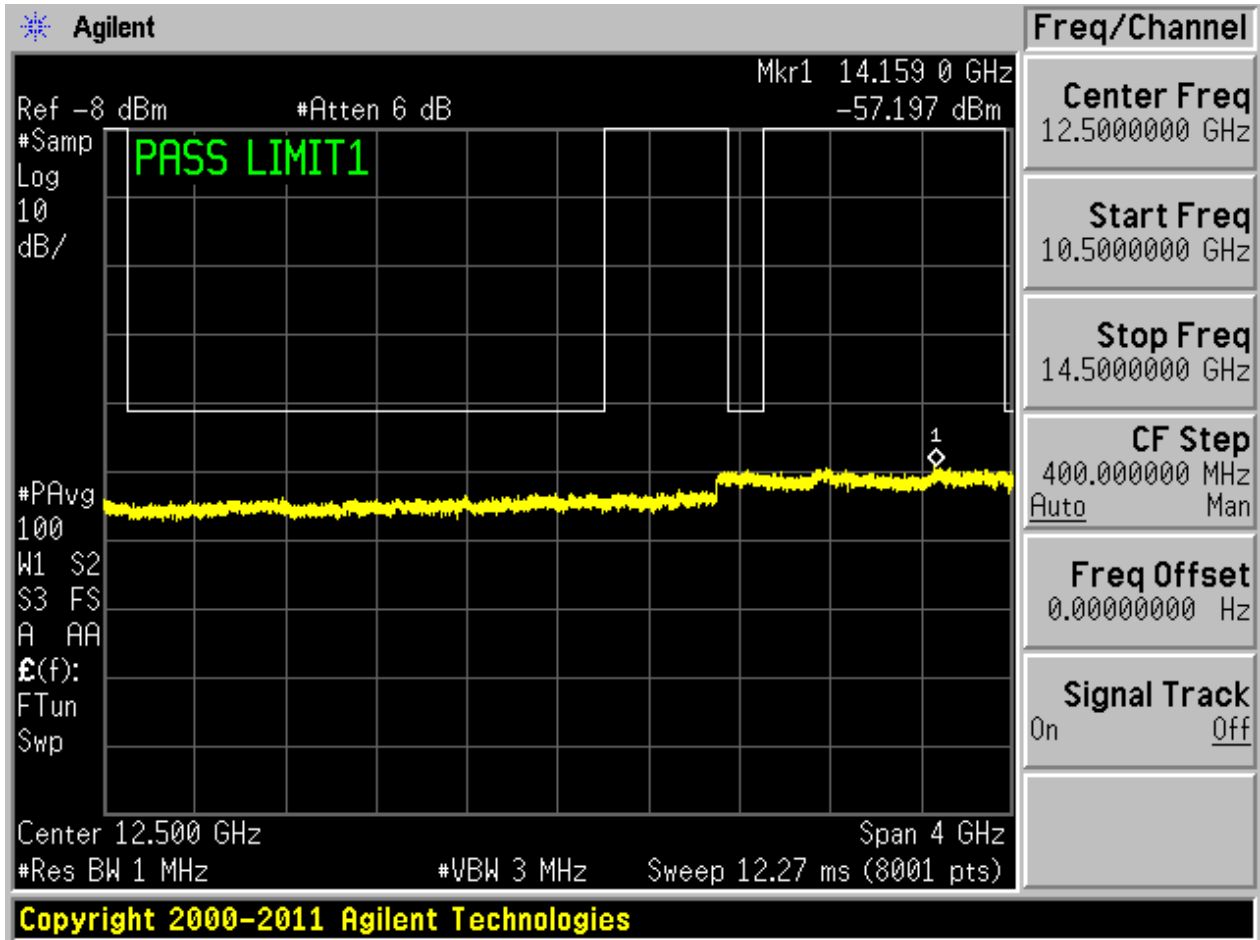


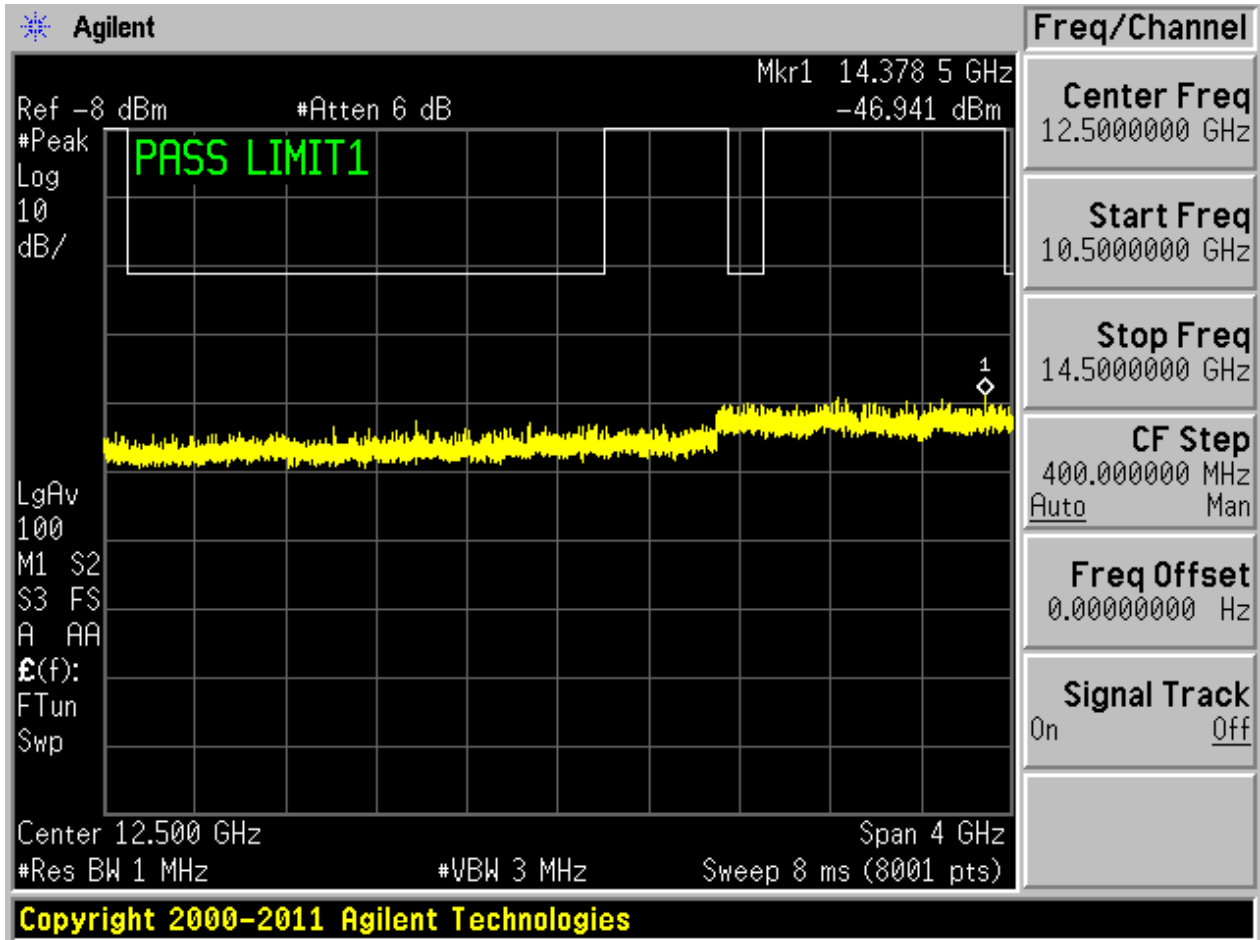


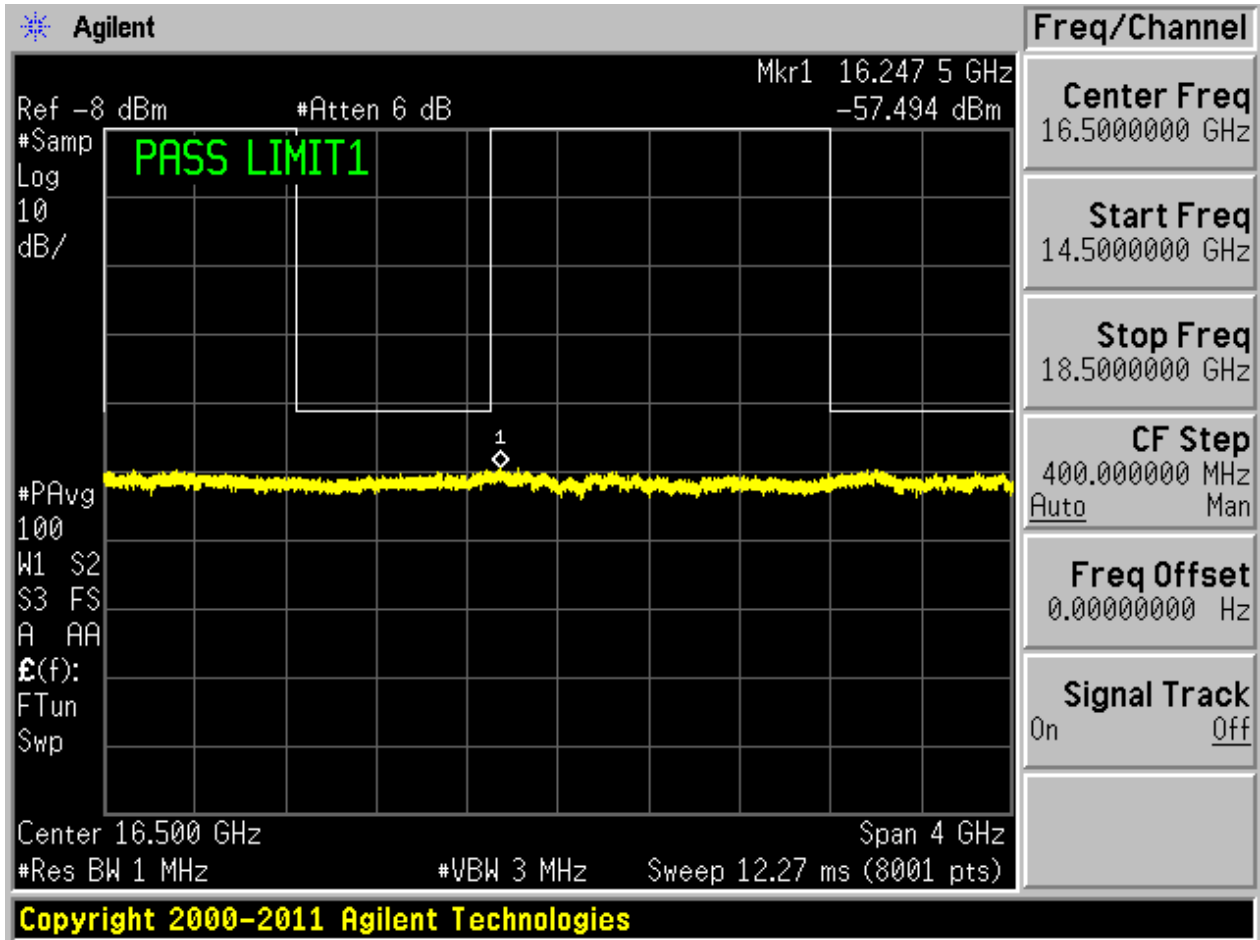


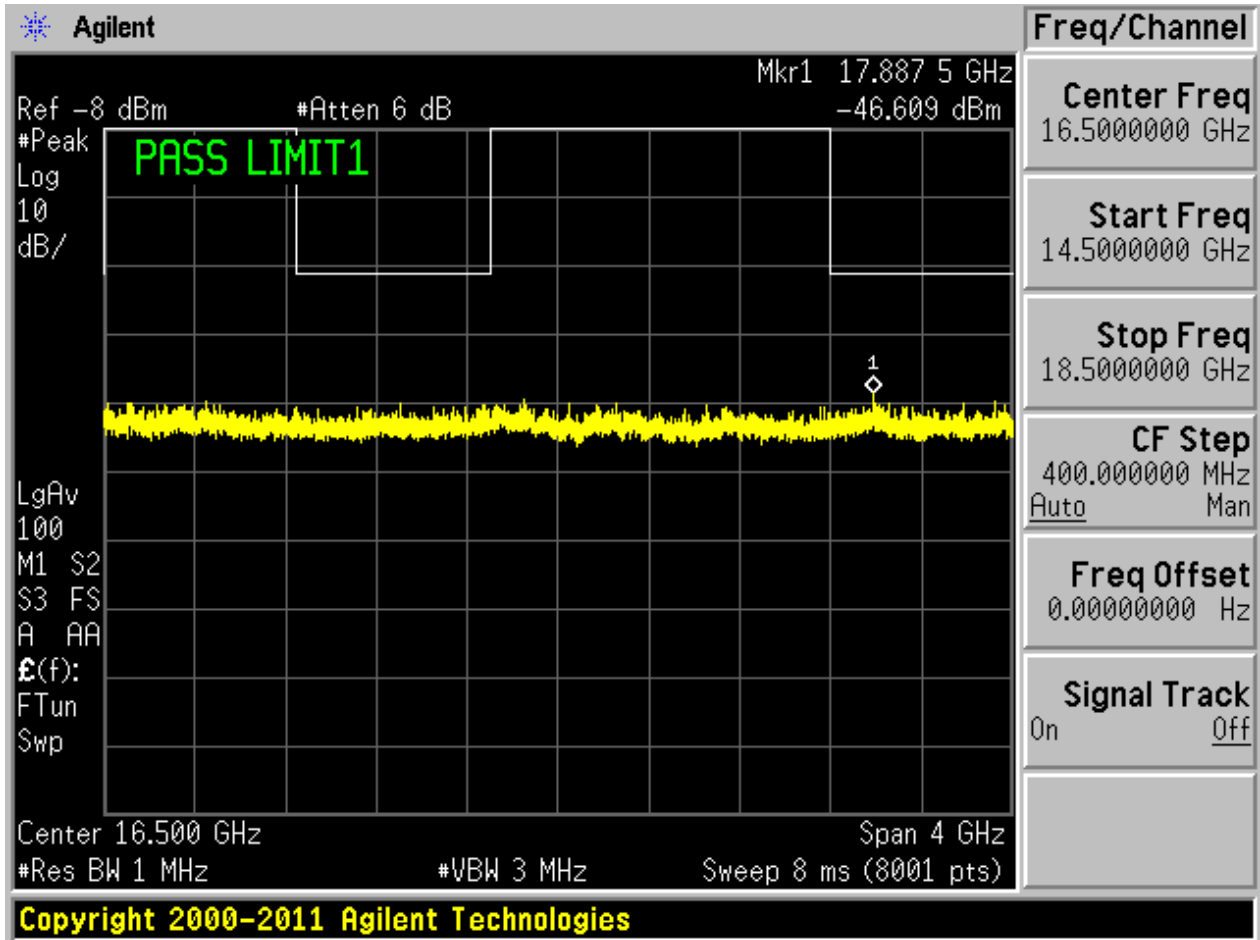


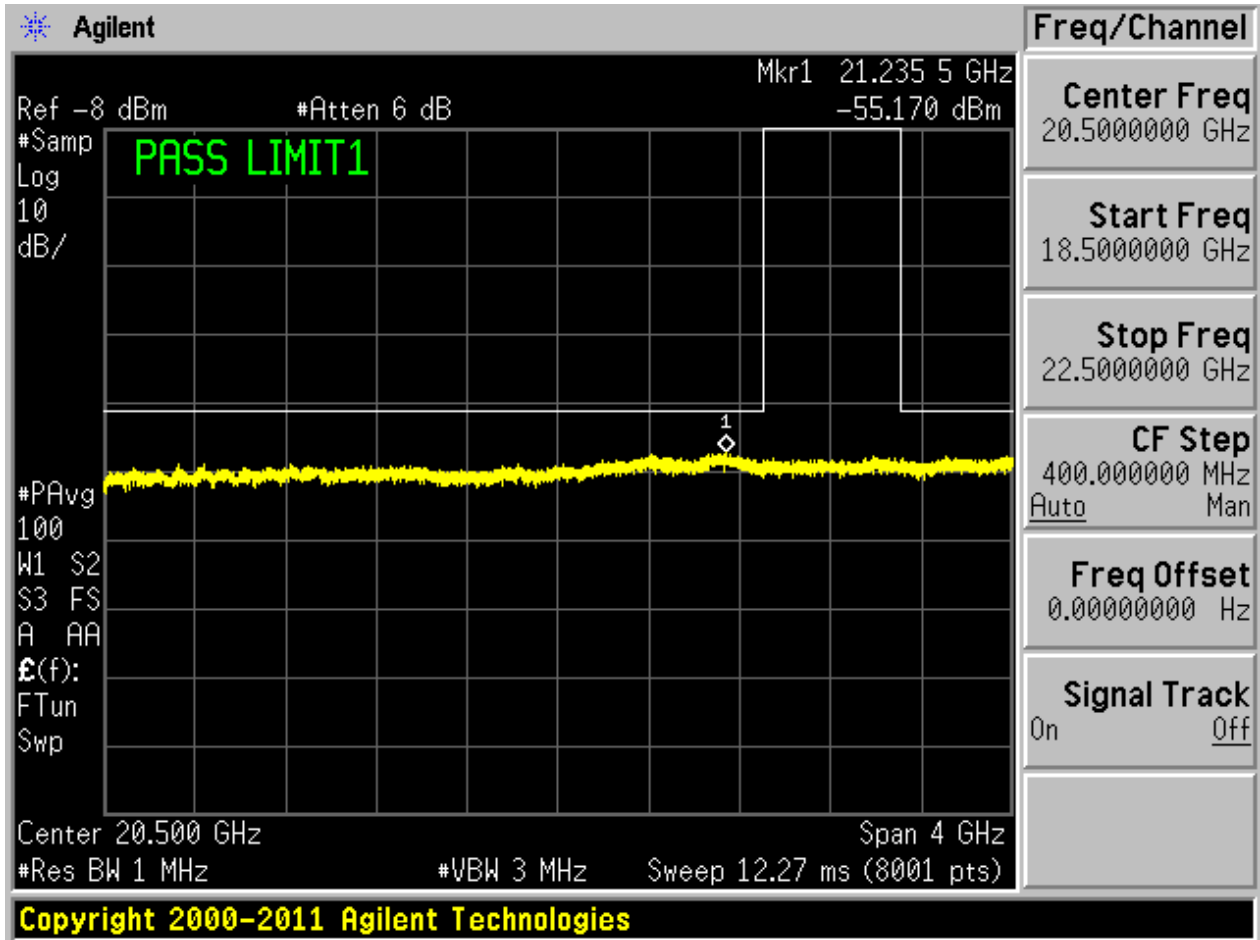


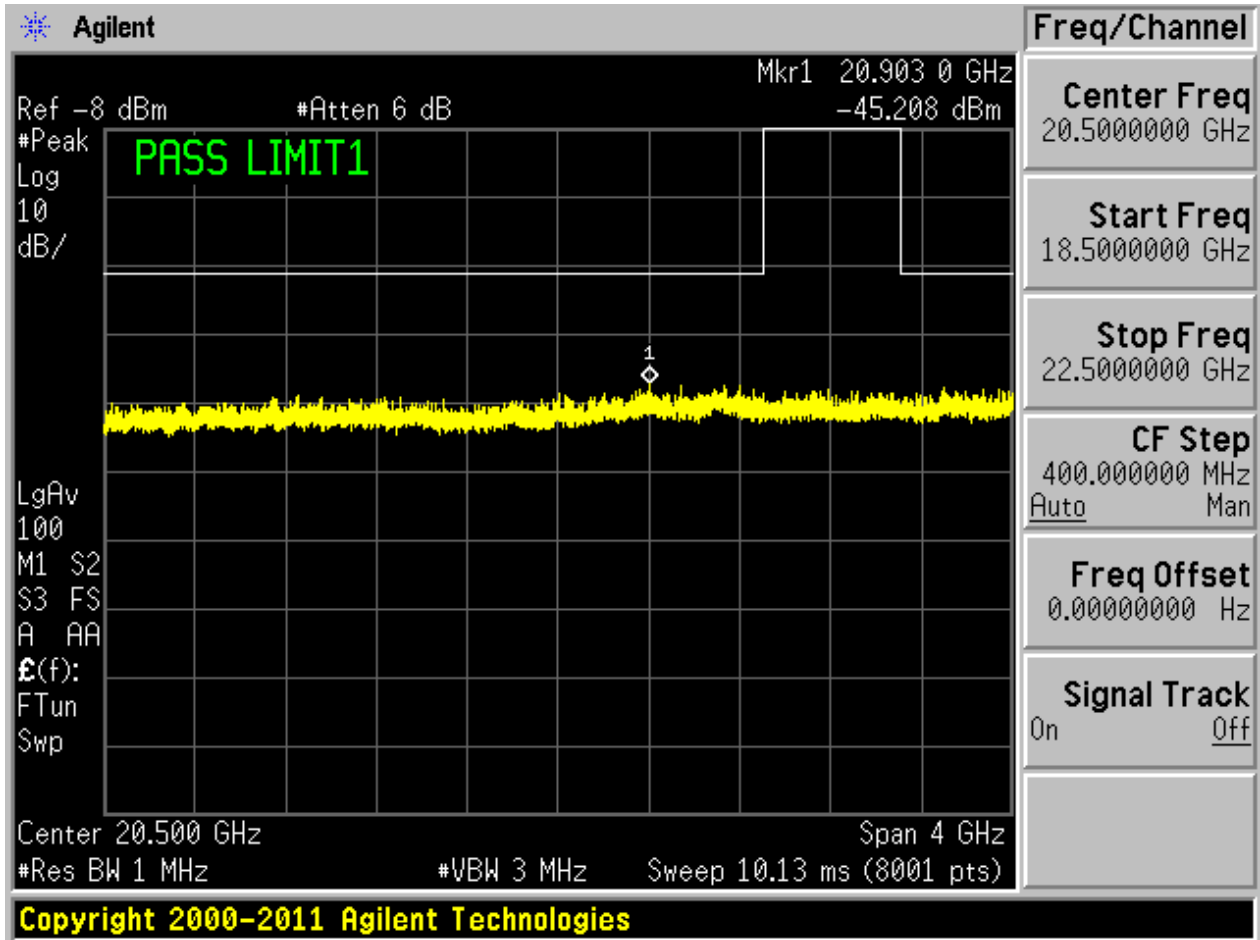


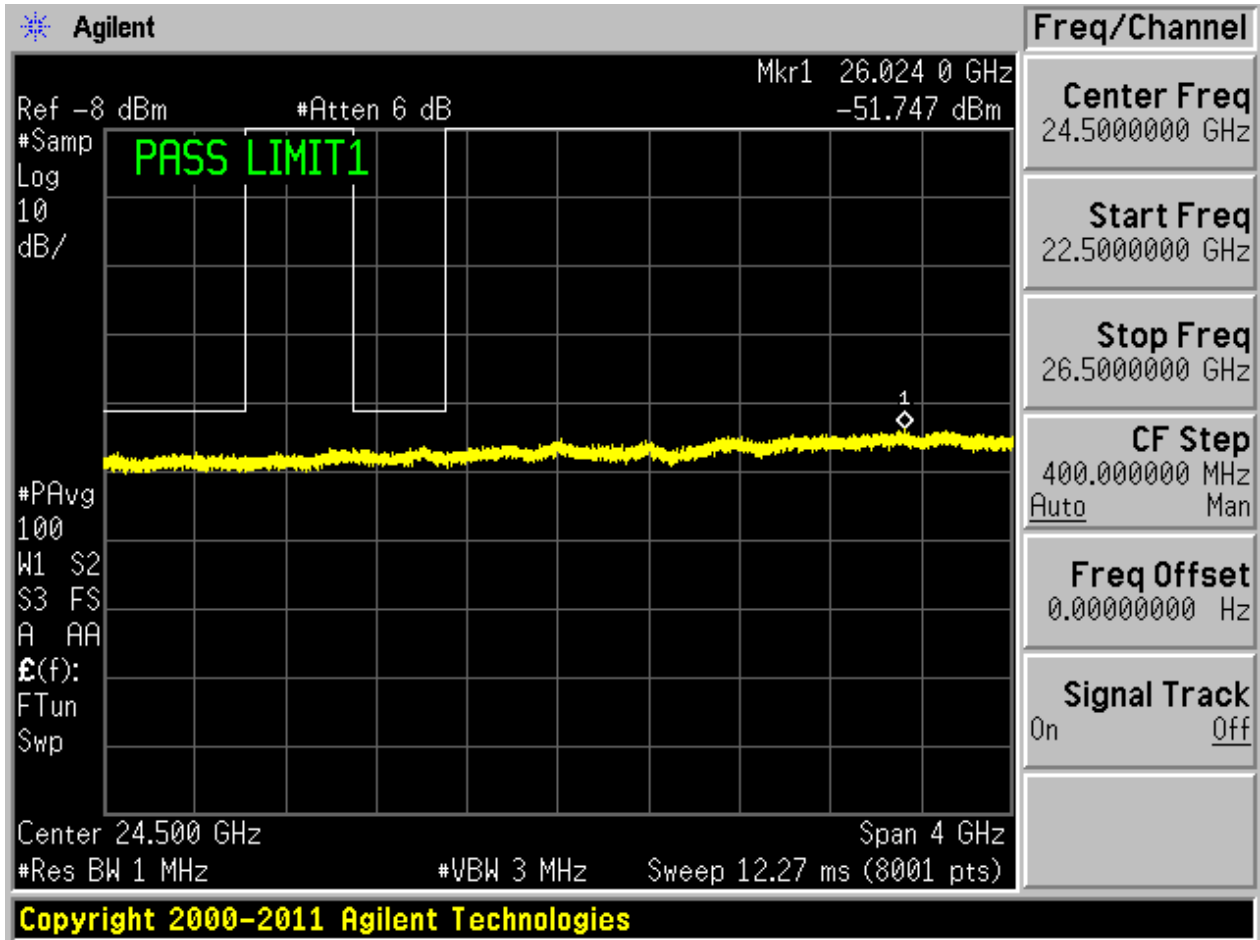


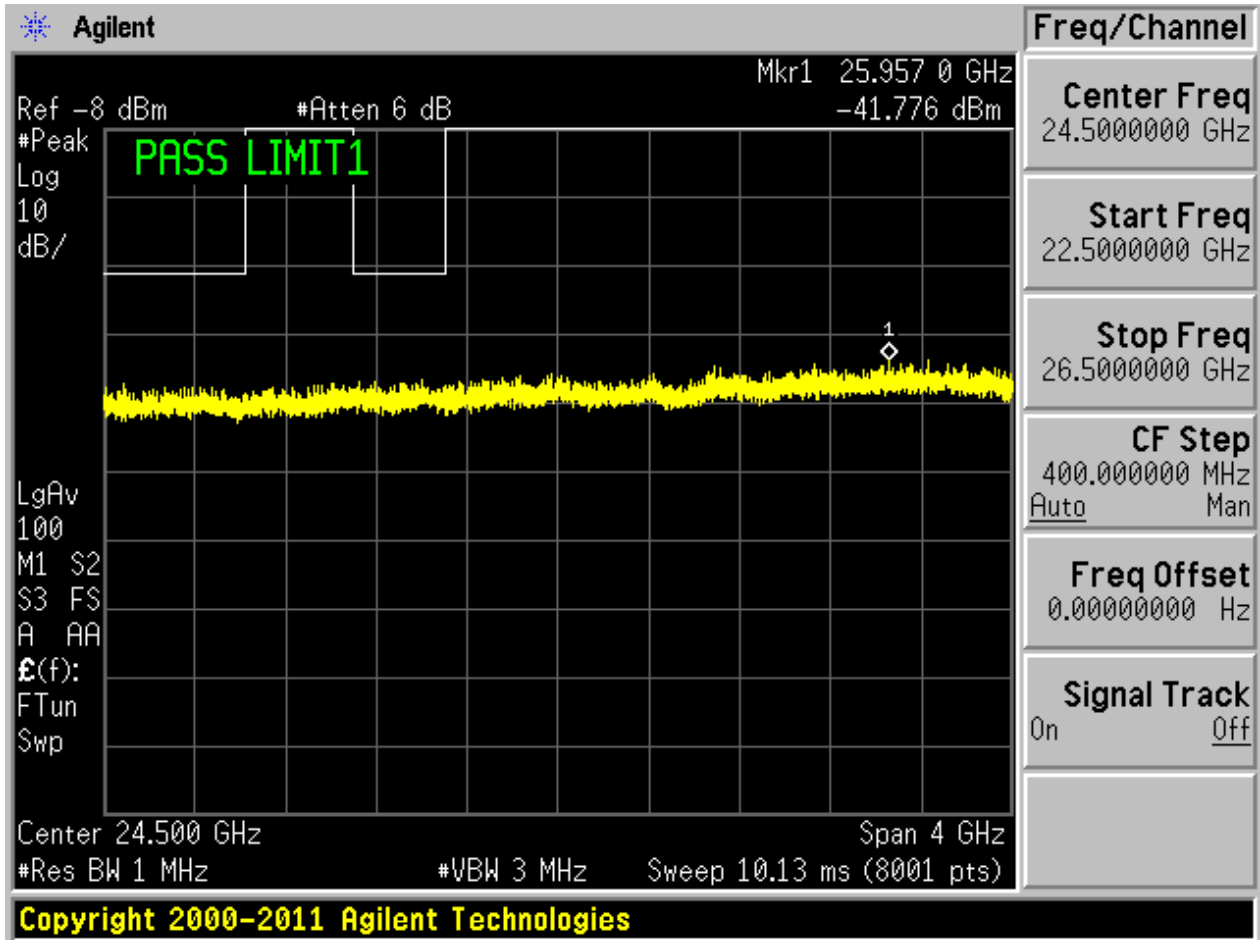










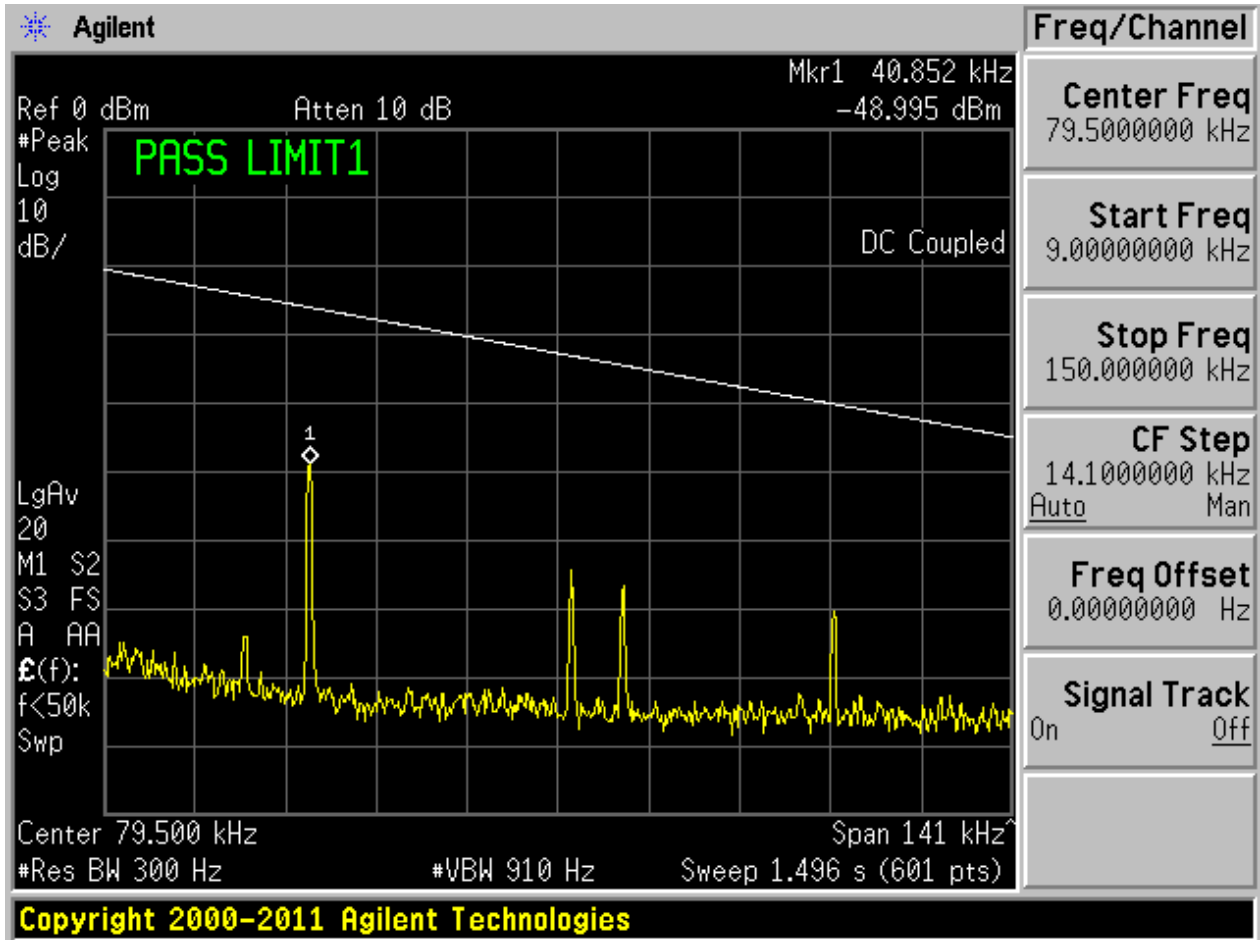


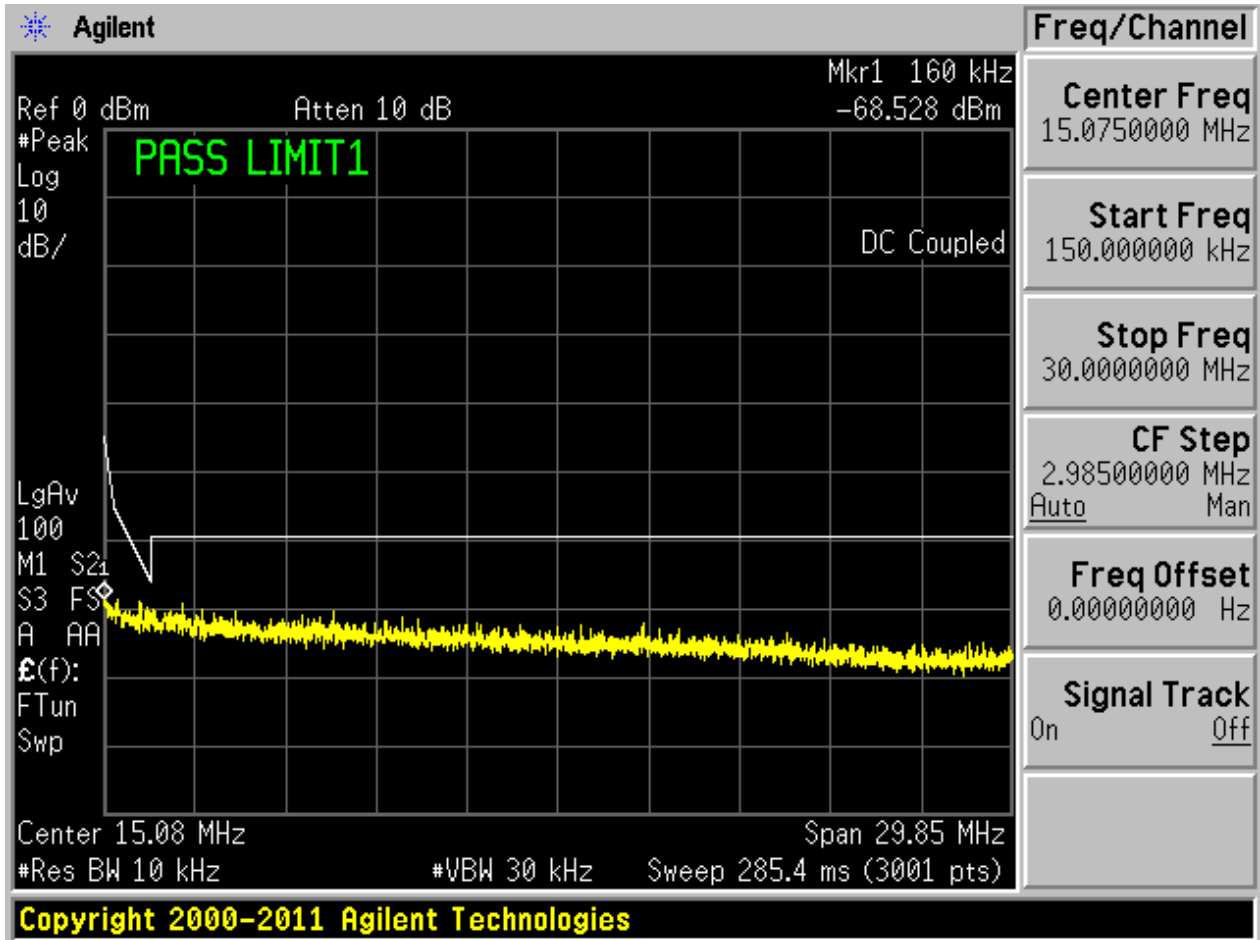
2.26.4 Trace#sum (if needed for final judgment)

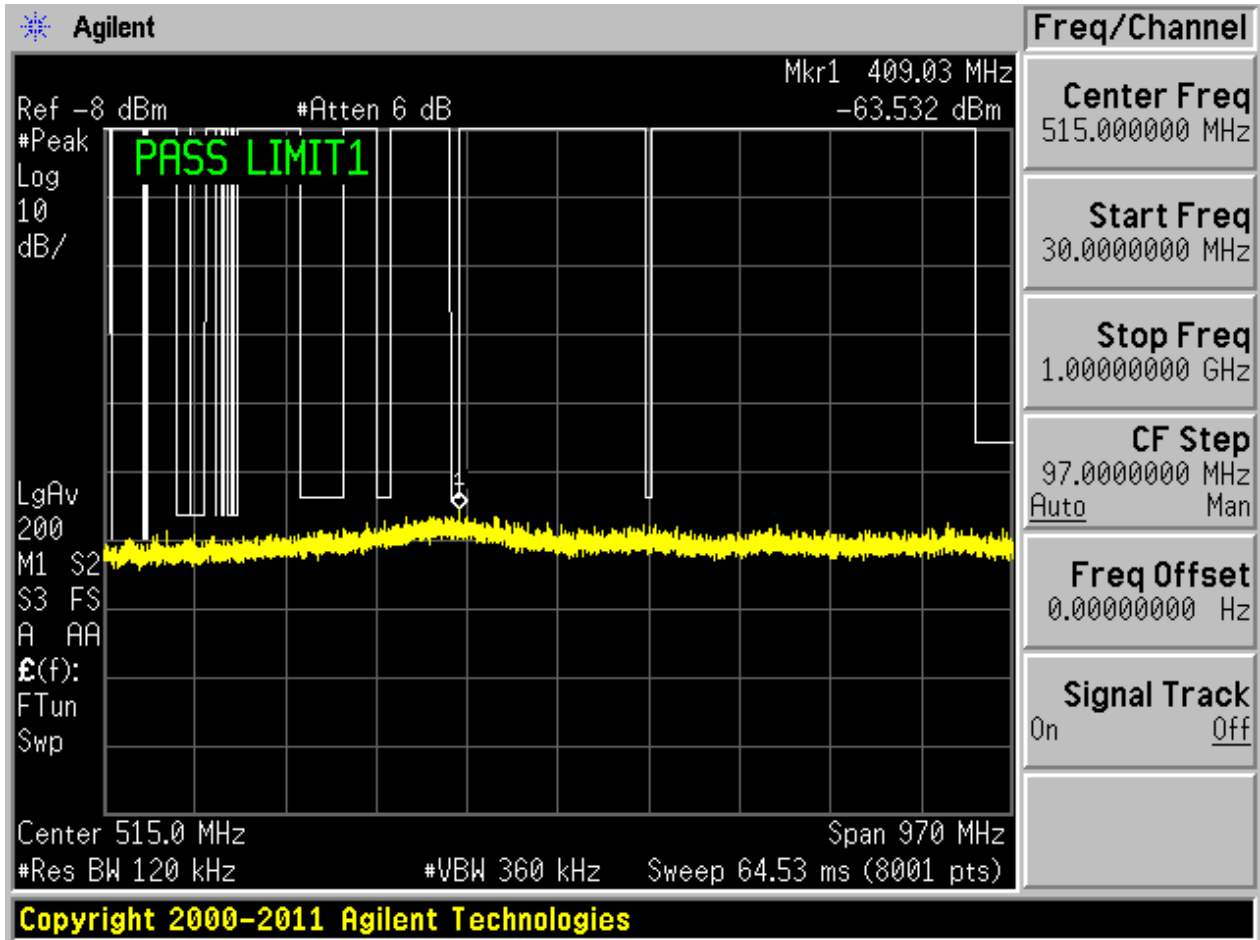
(Not applicable)

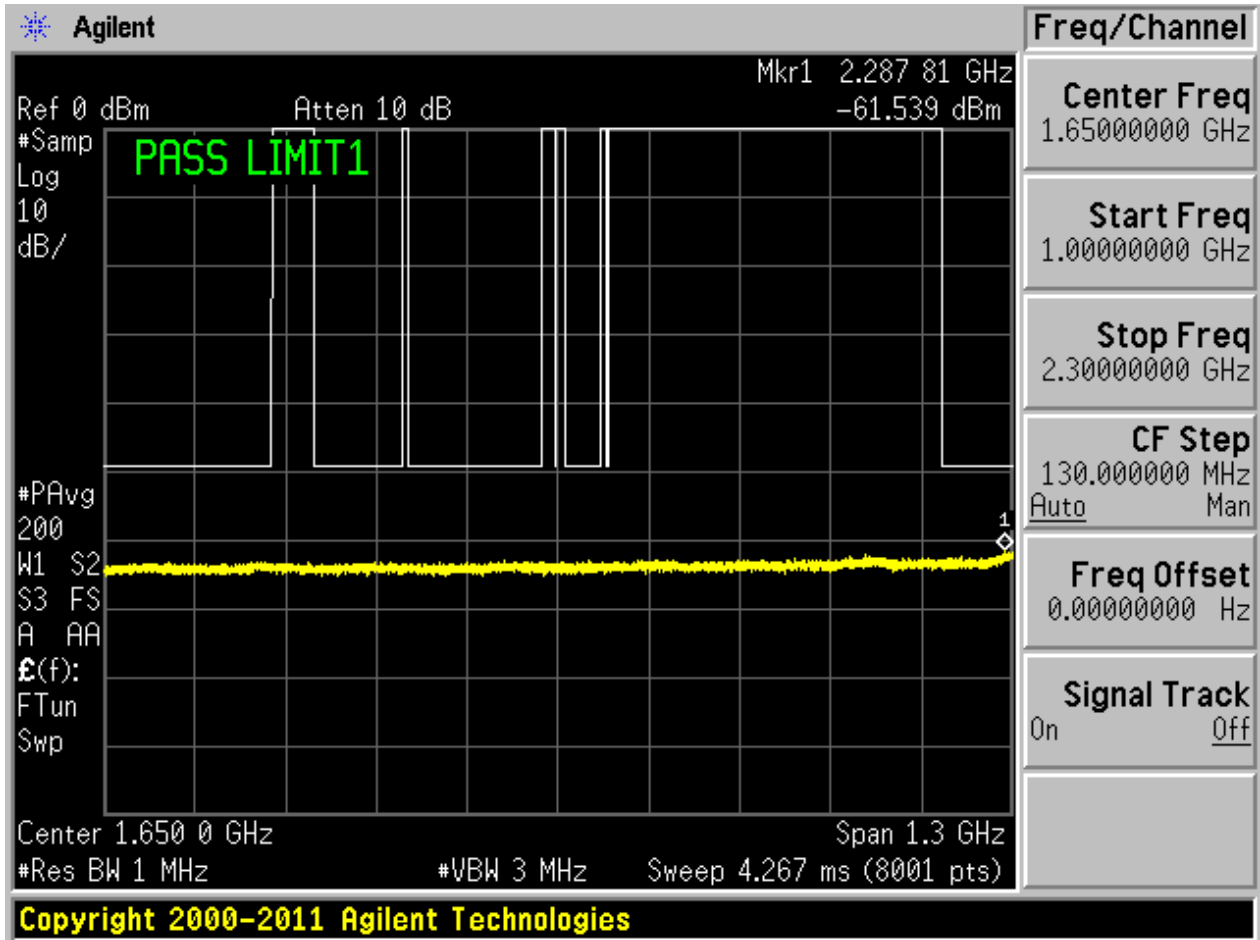
2.2711N20m/16_T@1+2+3

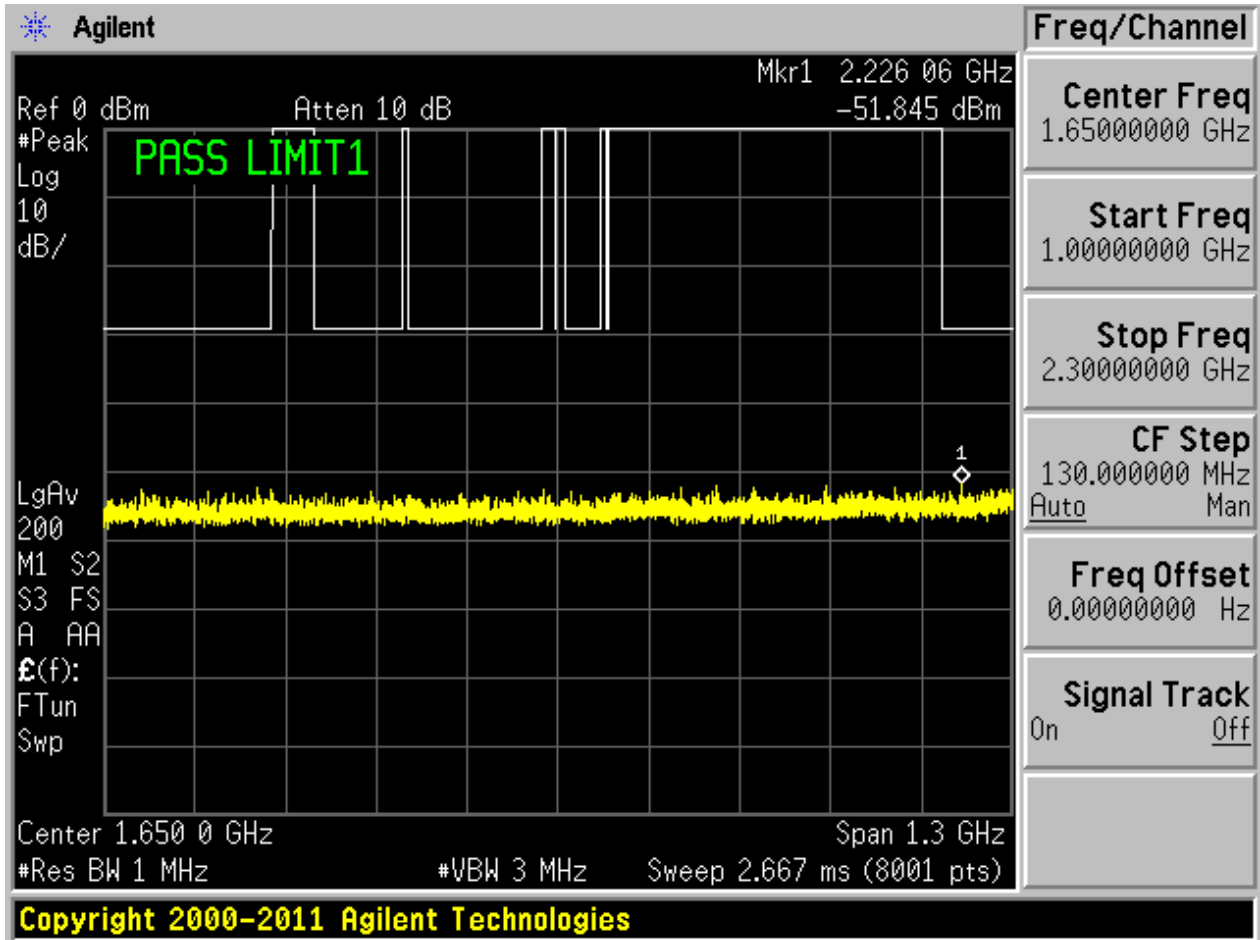
2.27.1 Ant 1 (Trace#1)

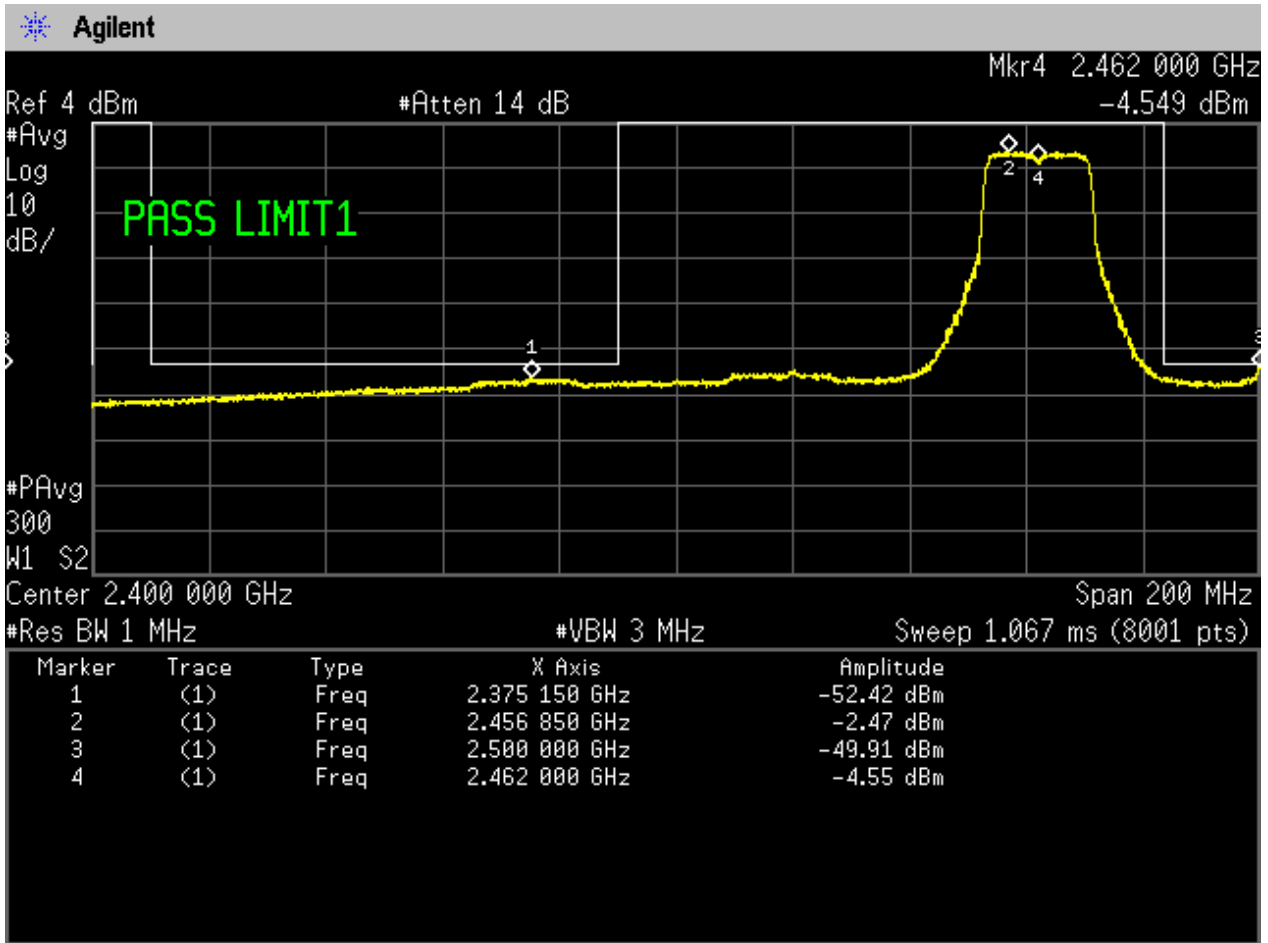


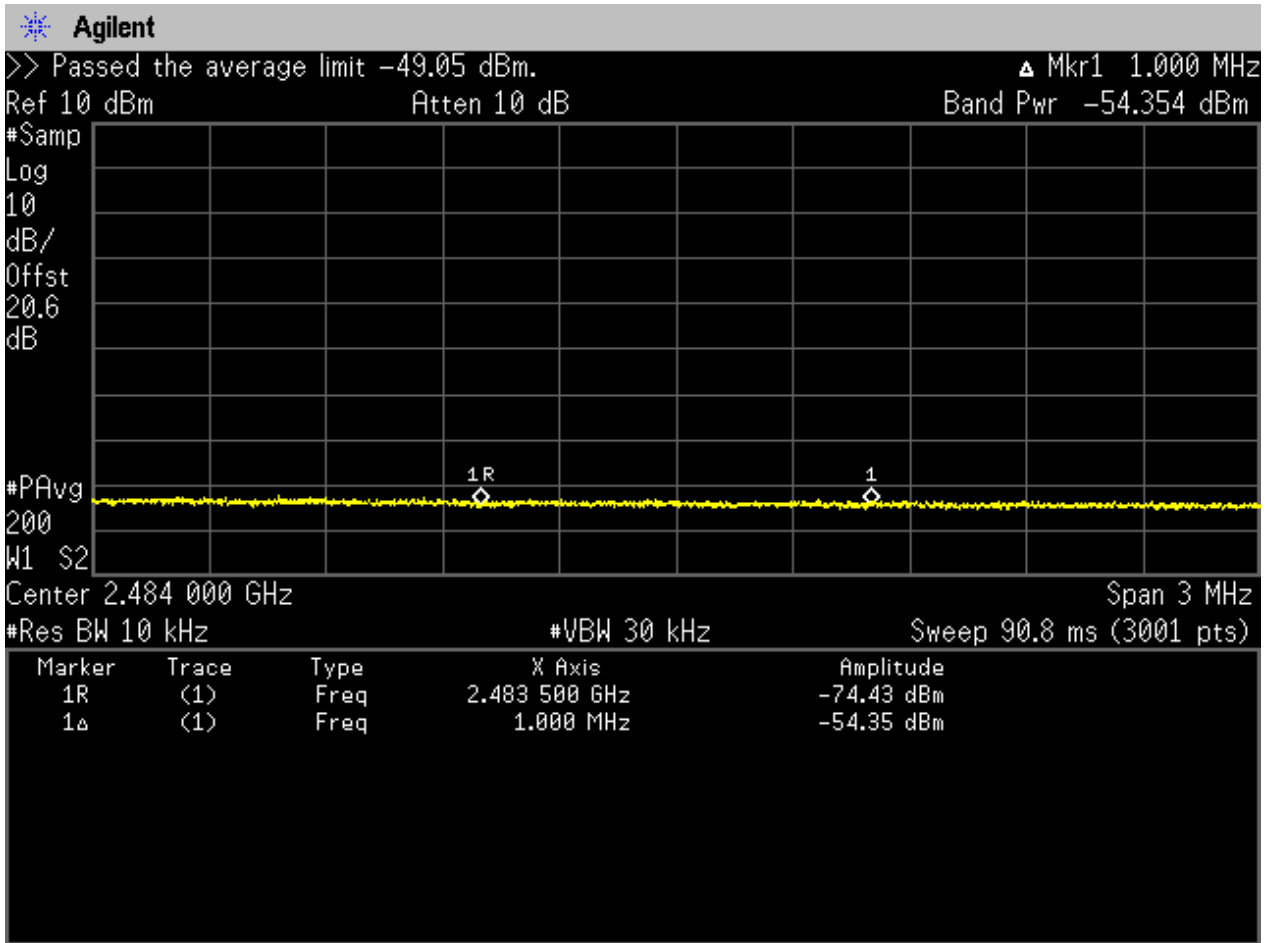


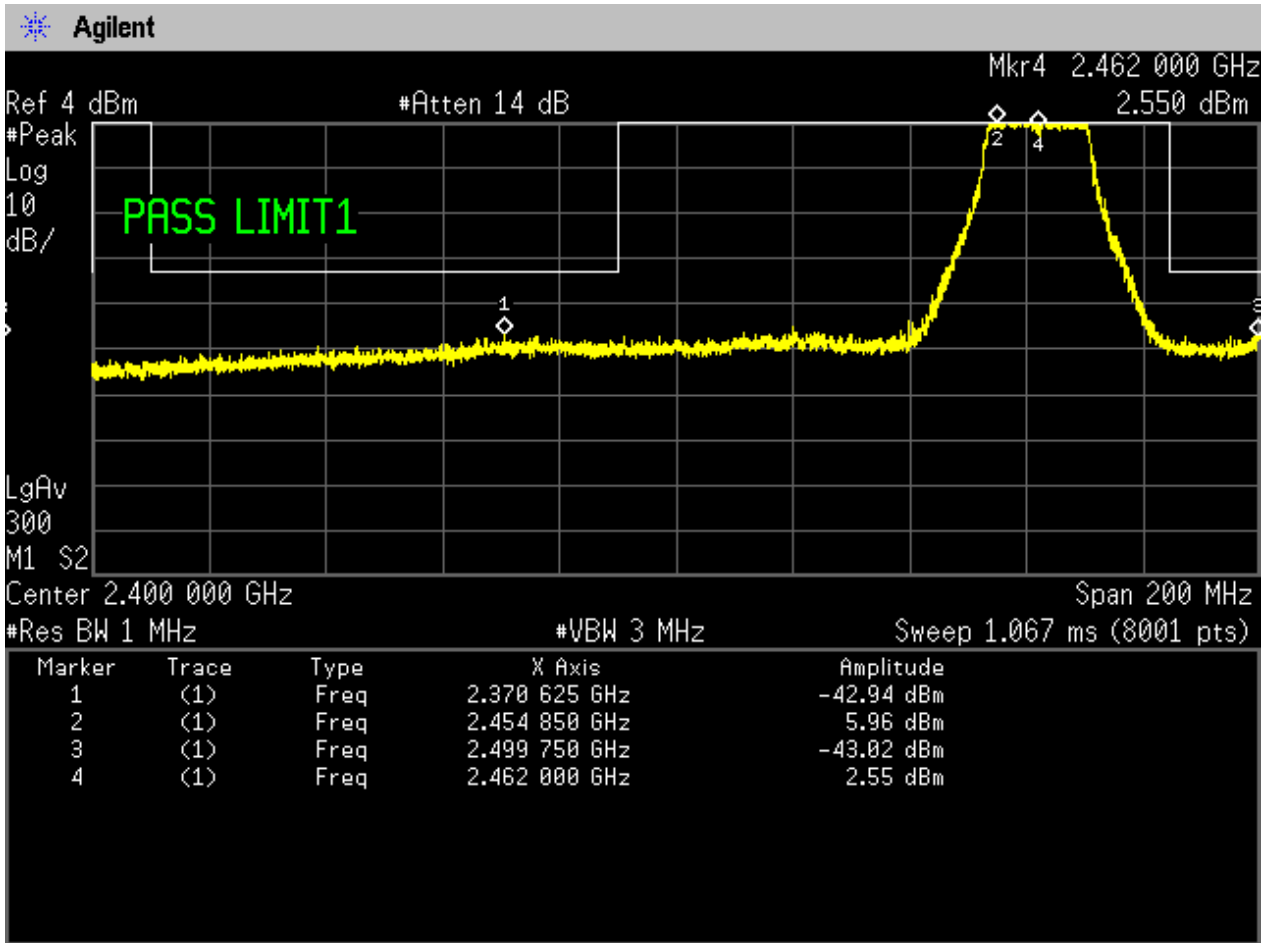


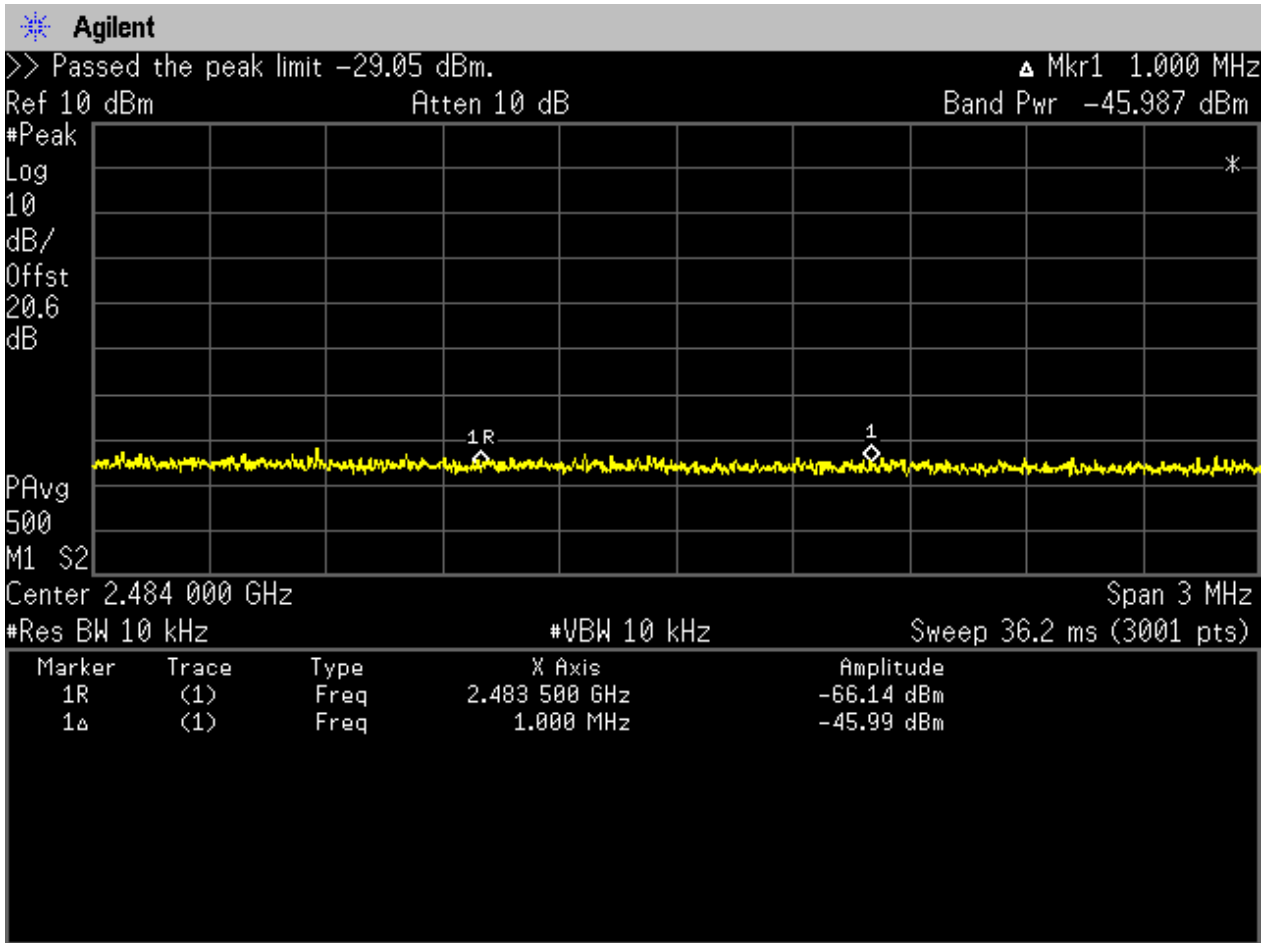


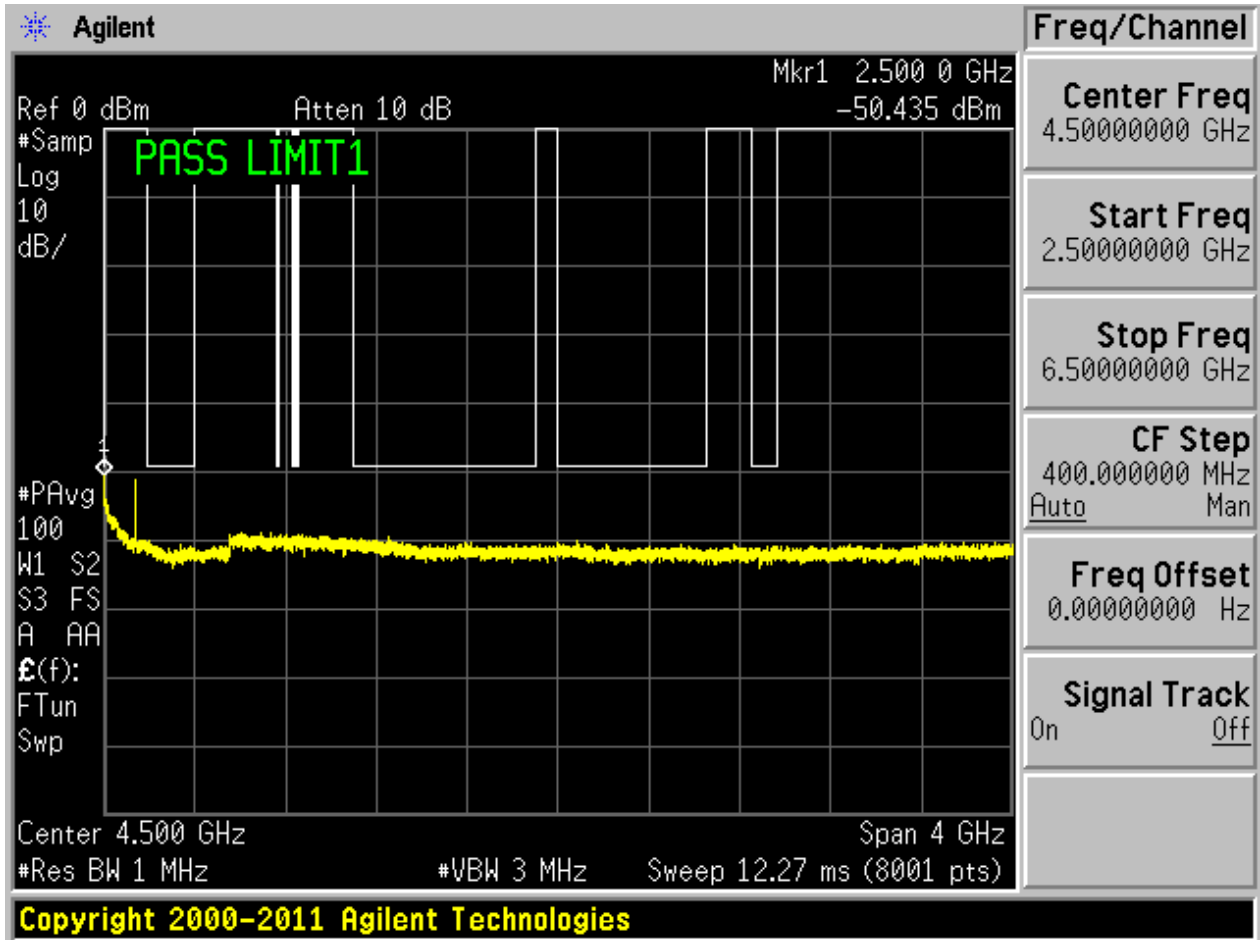


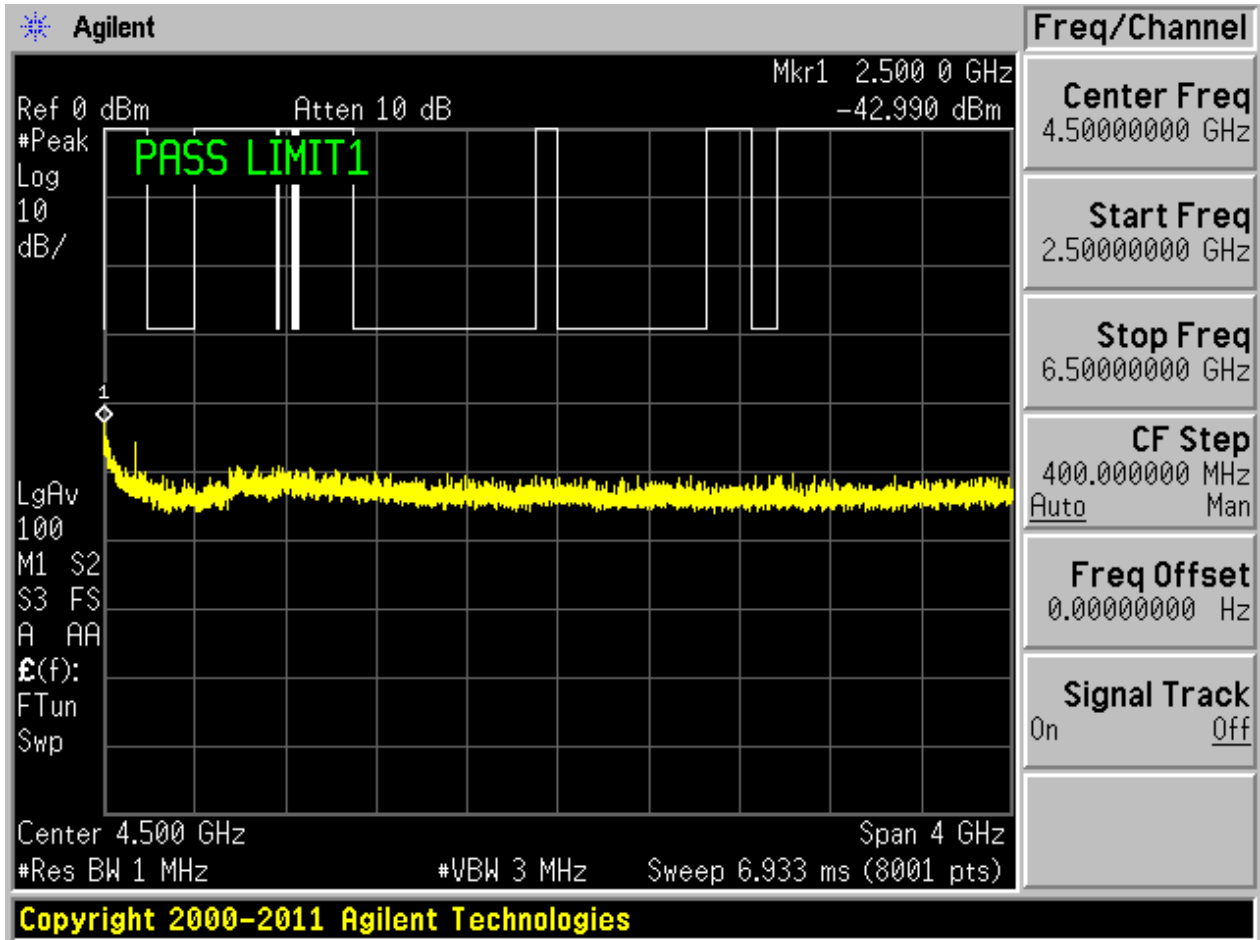


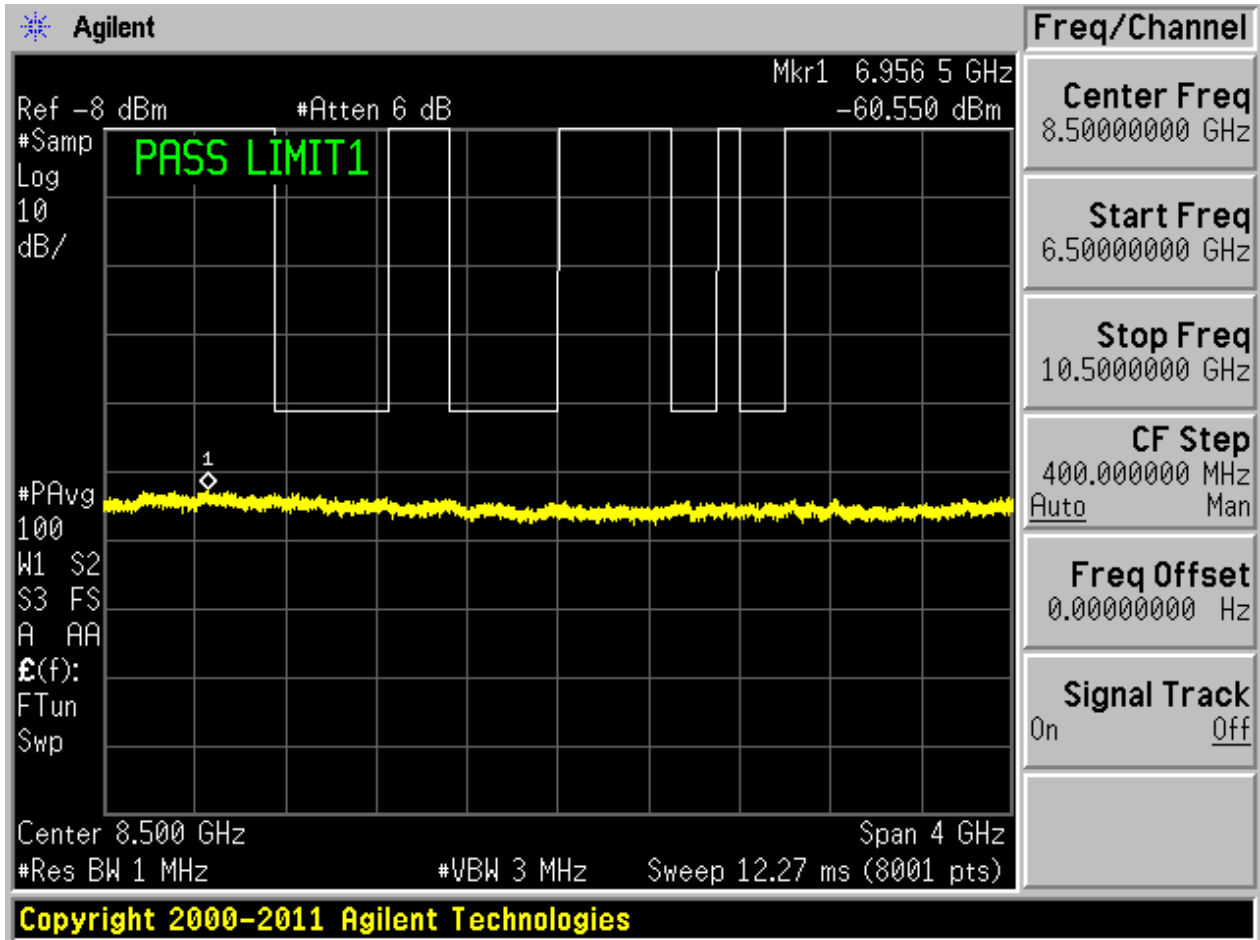


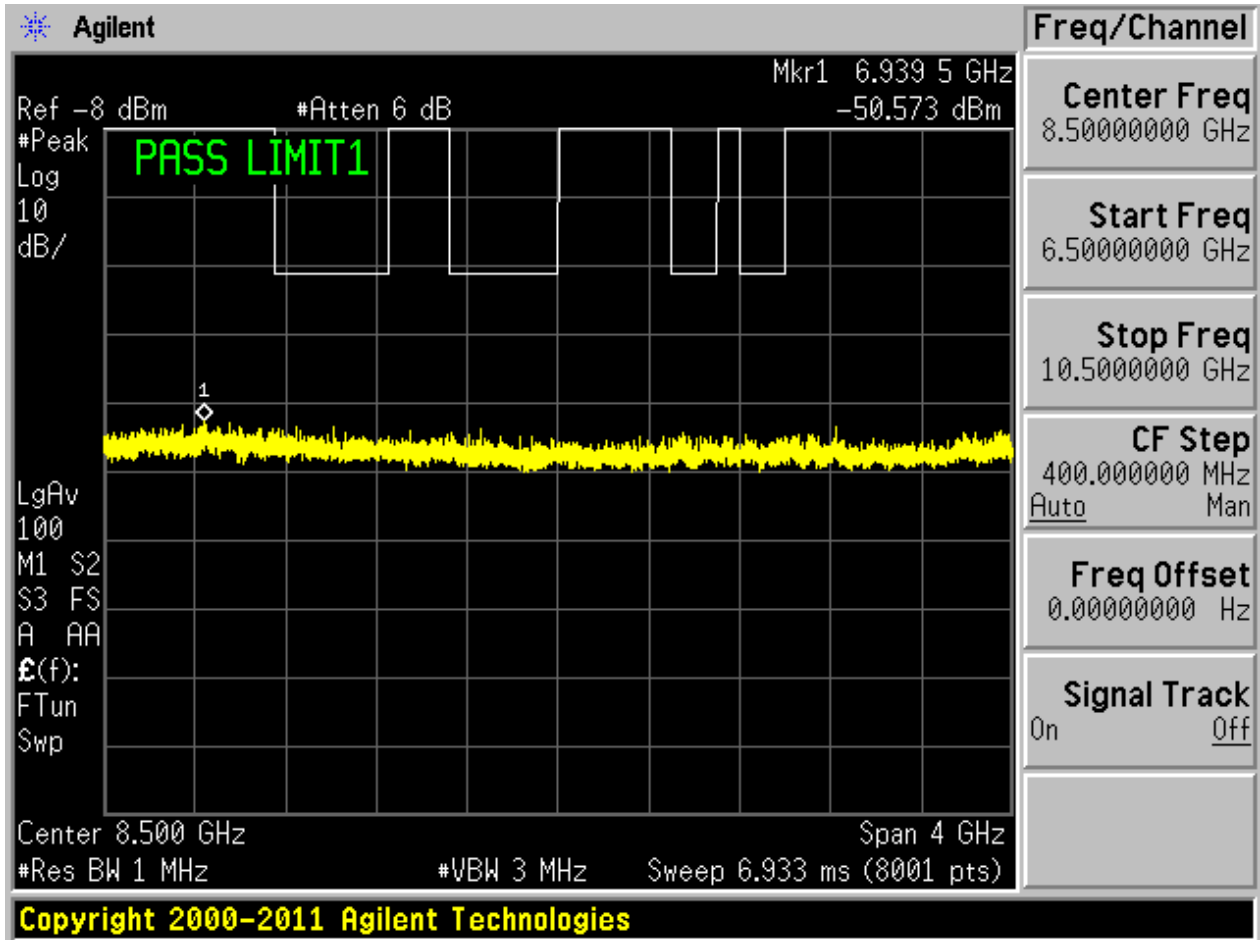


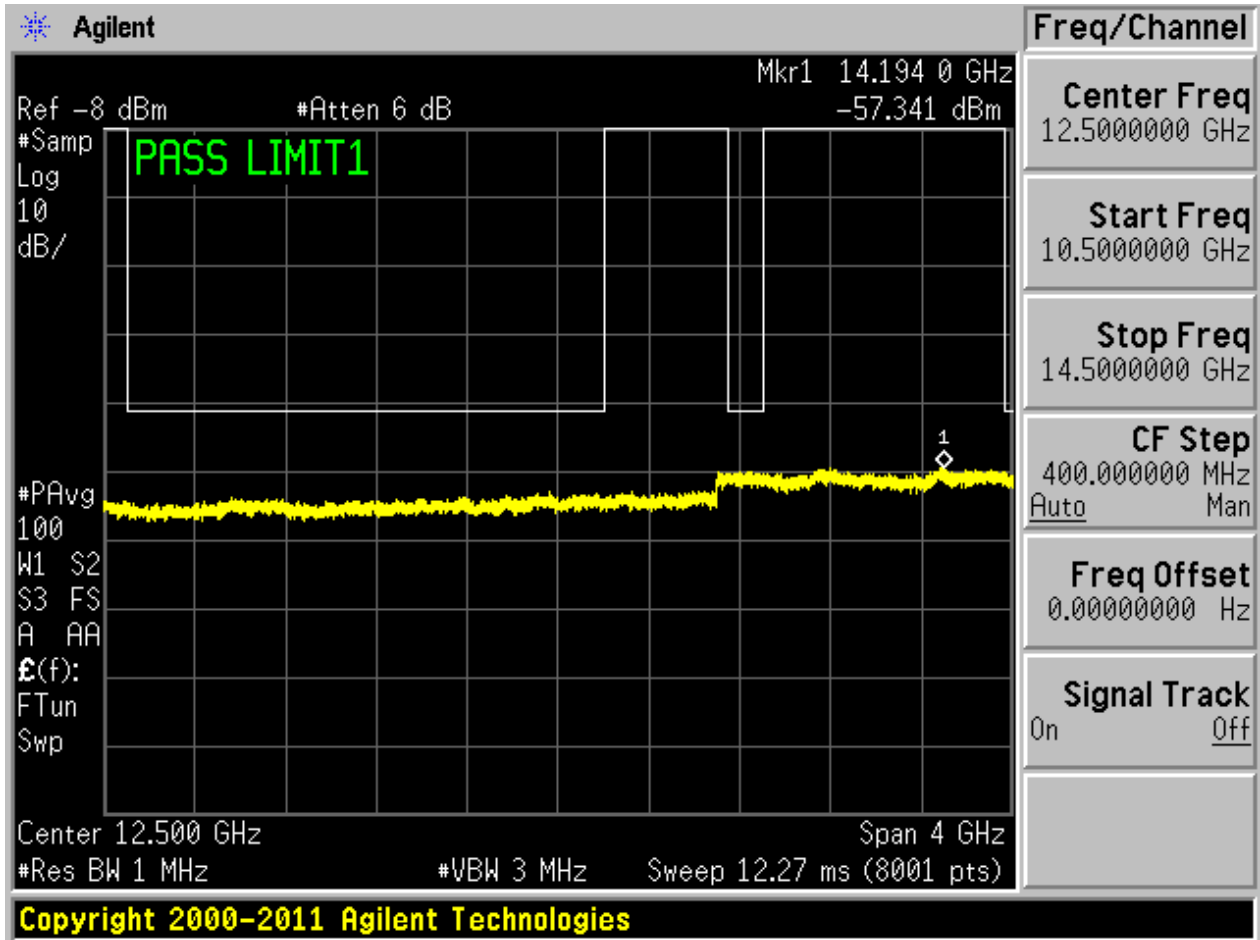


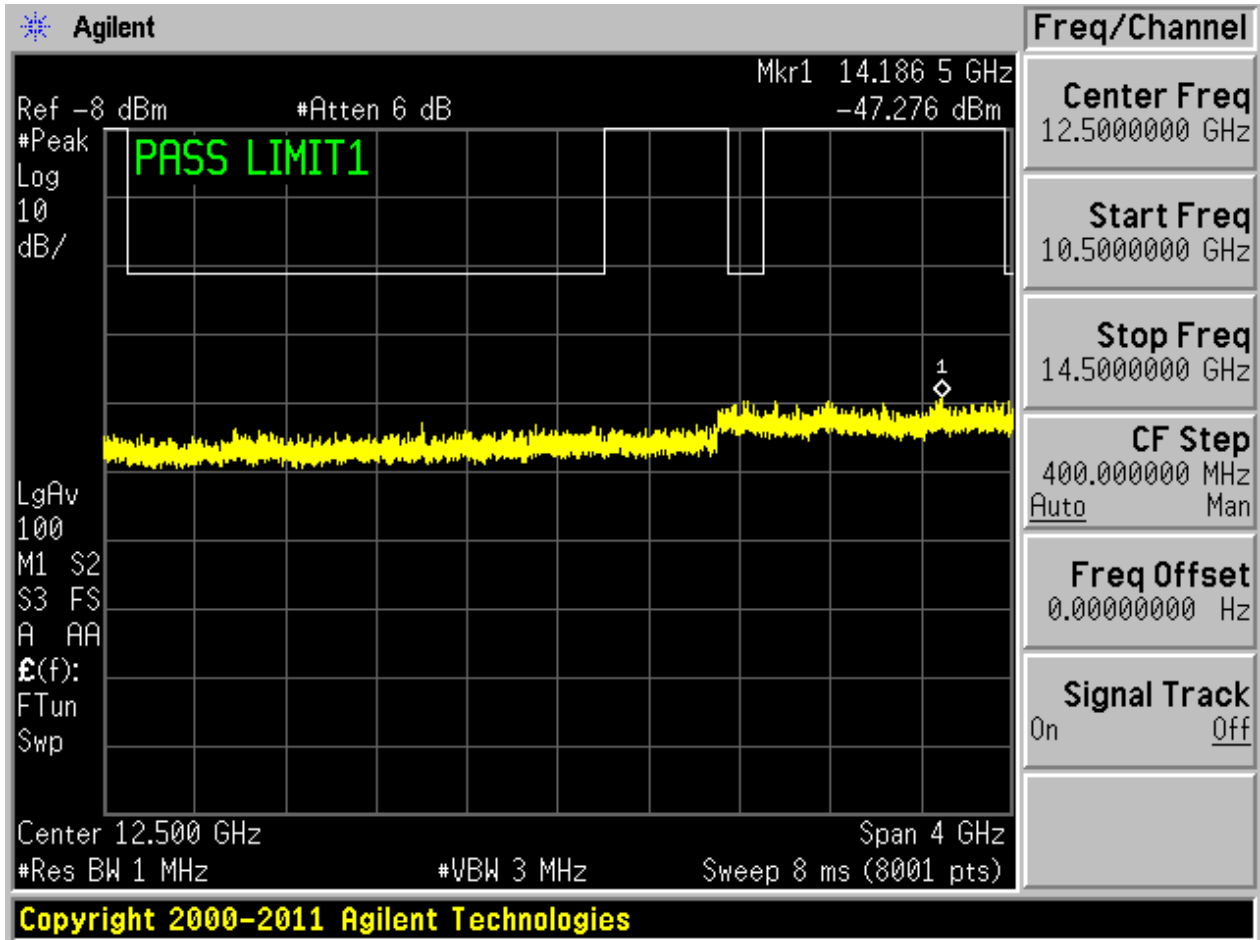


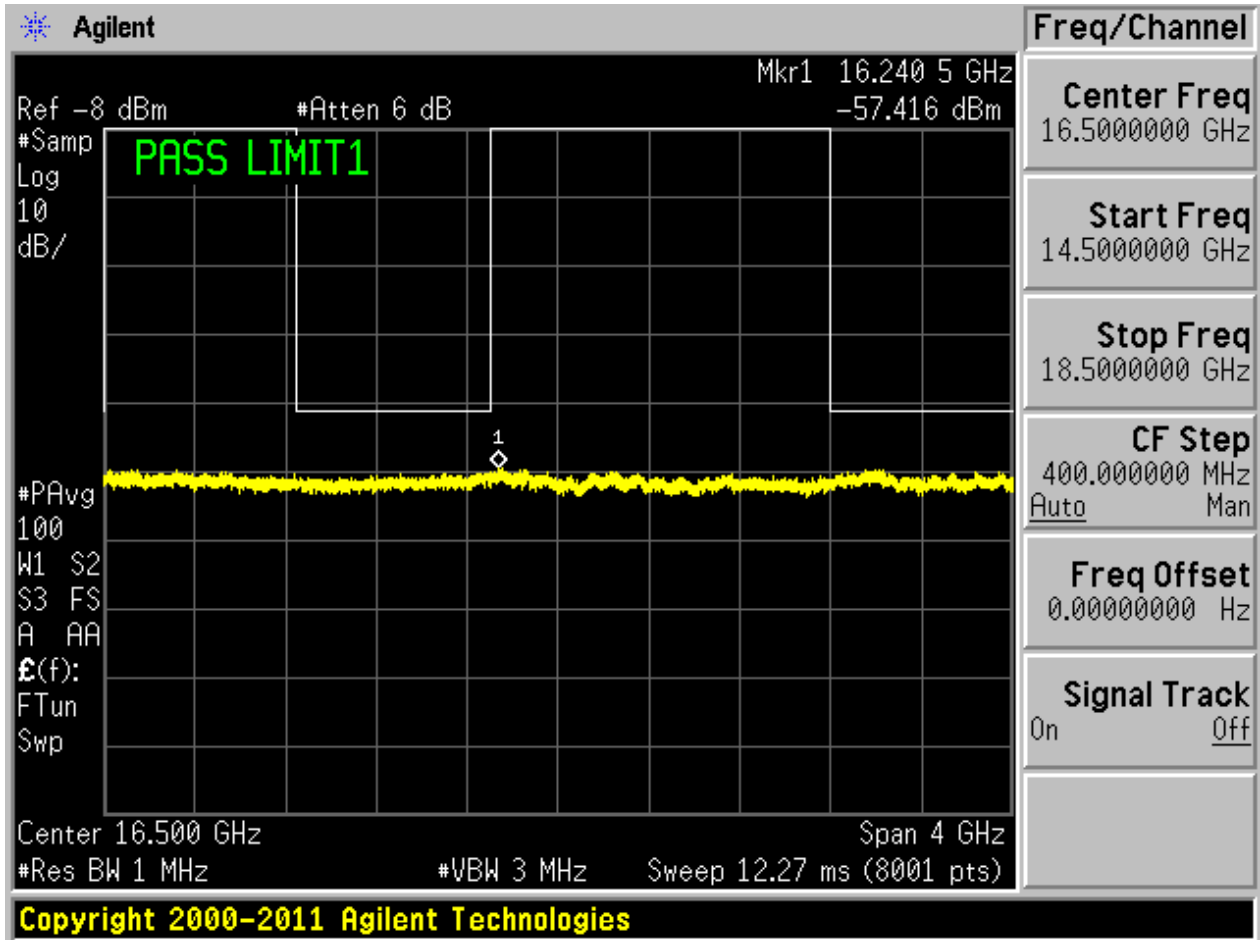


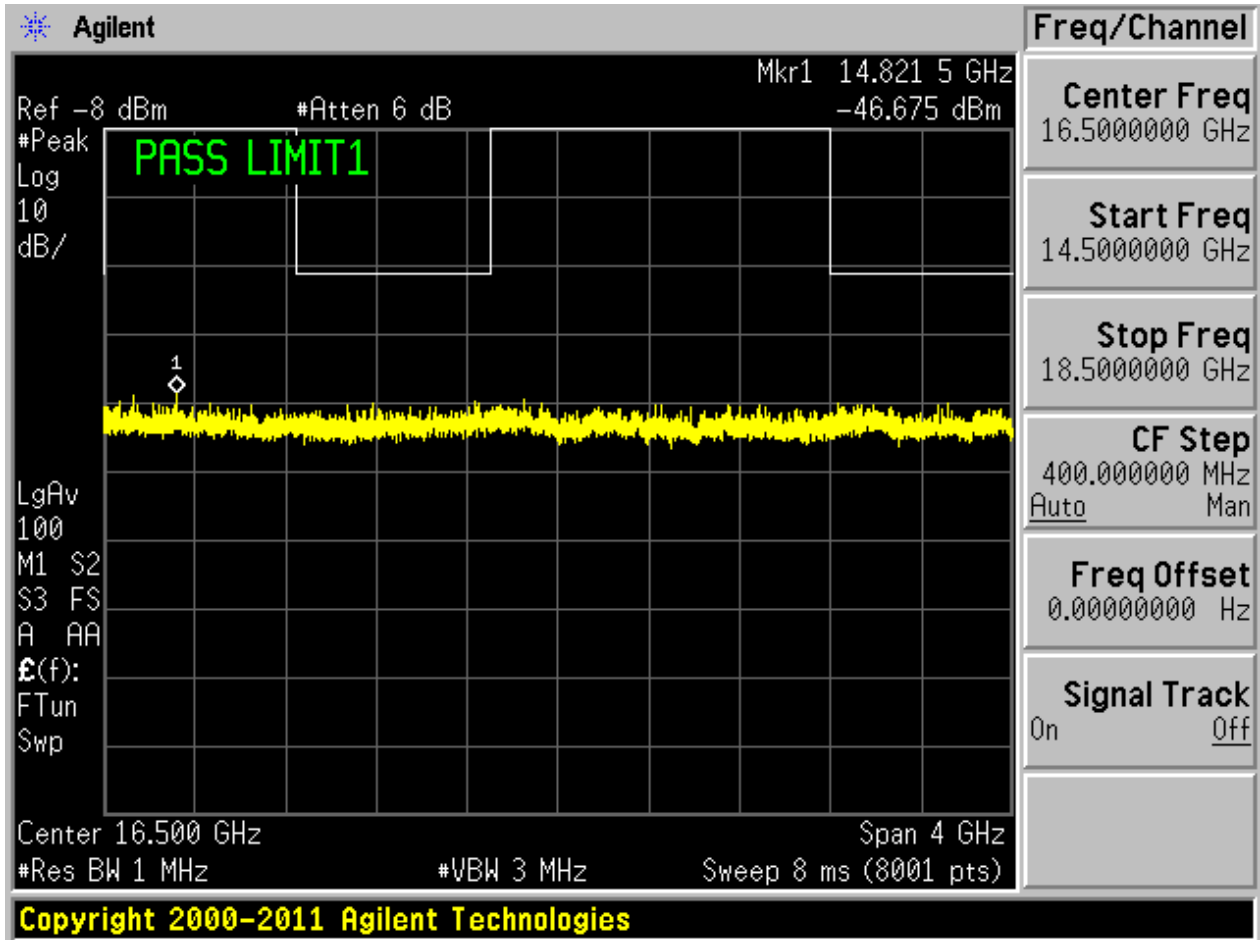


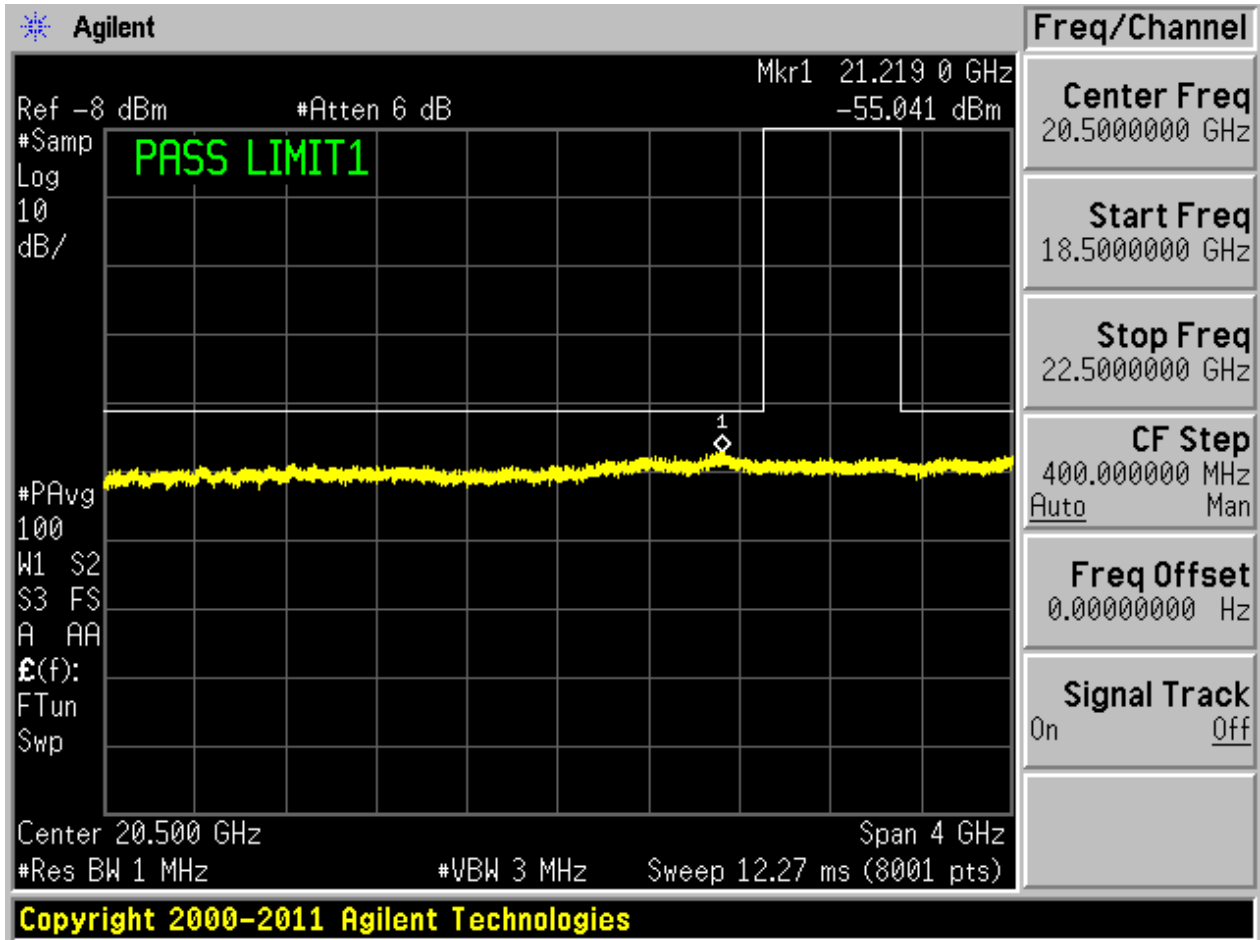


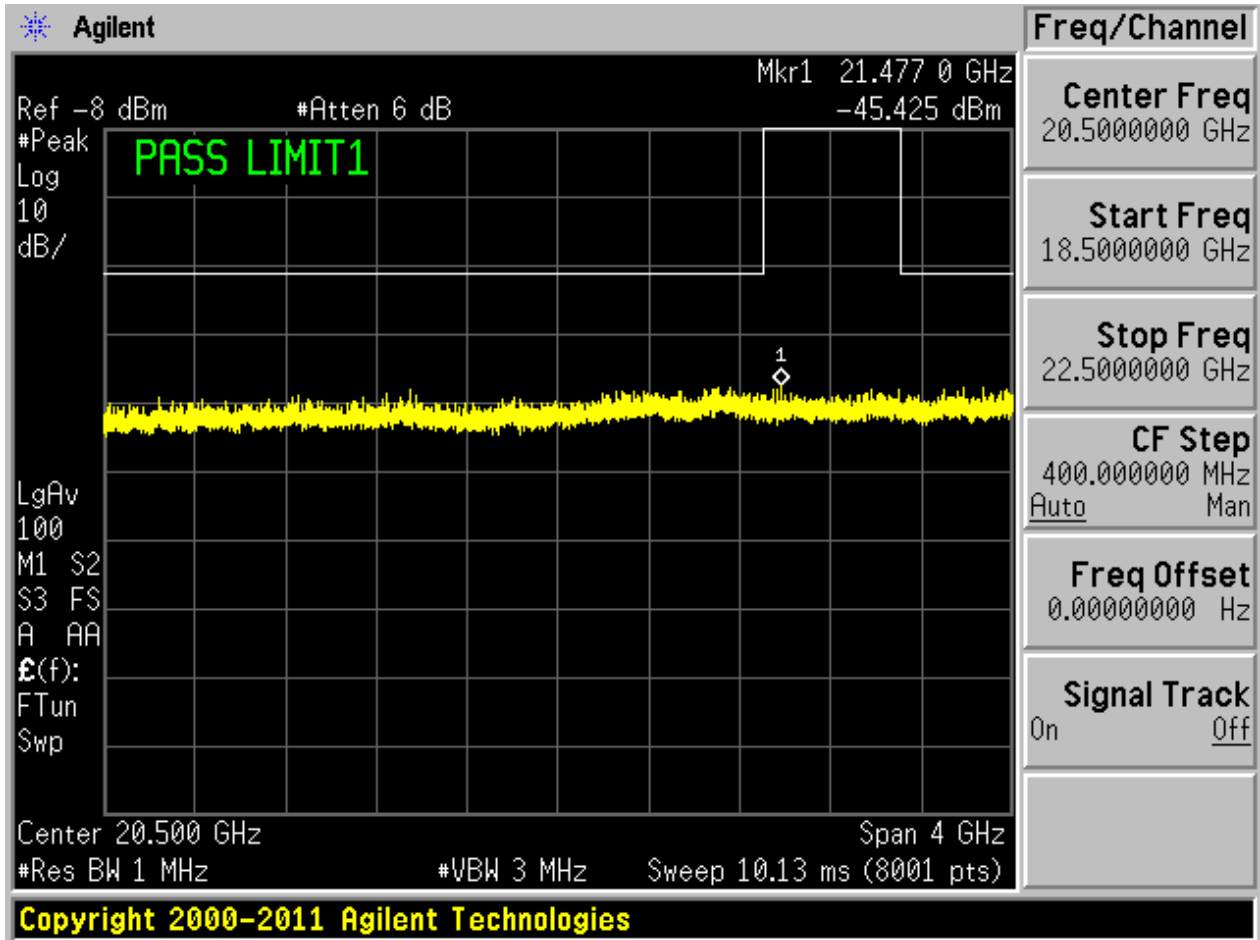


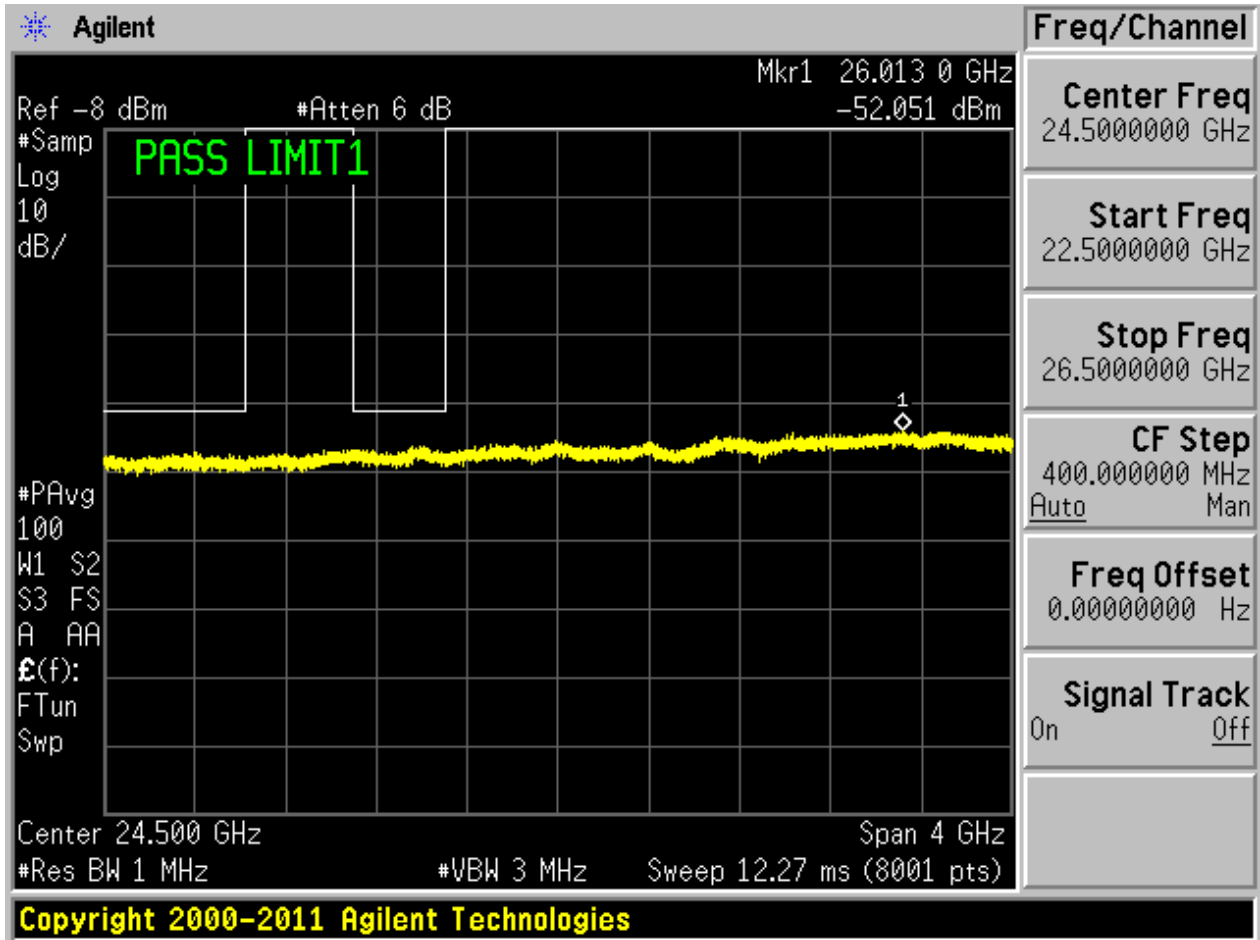


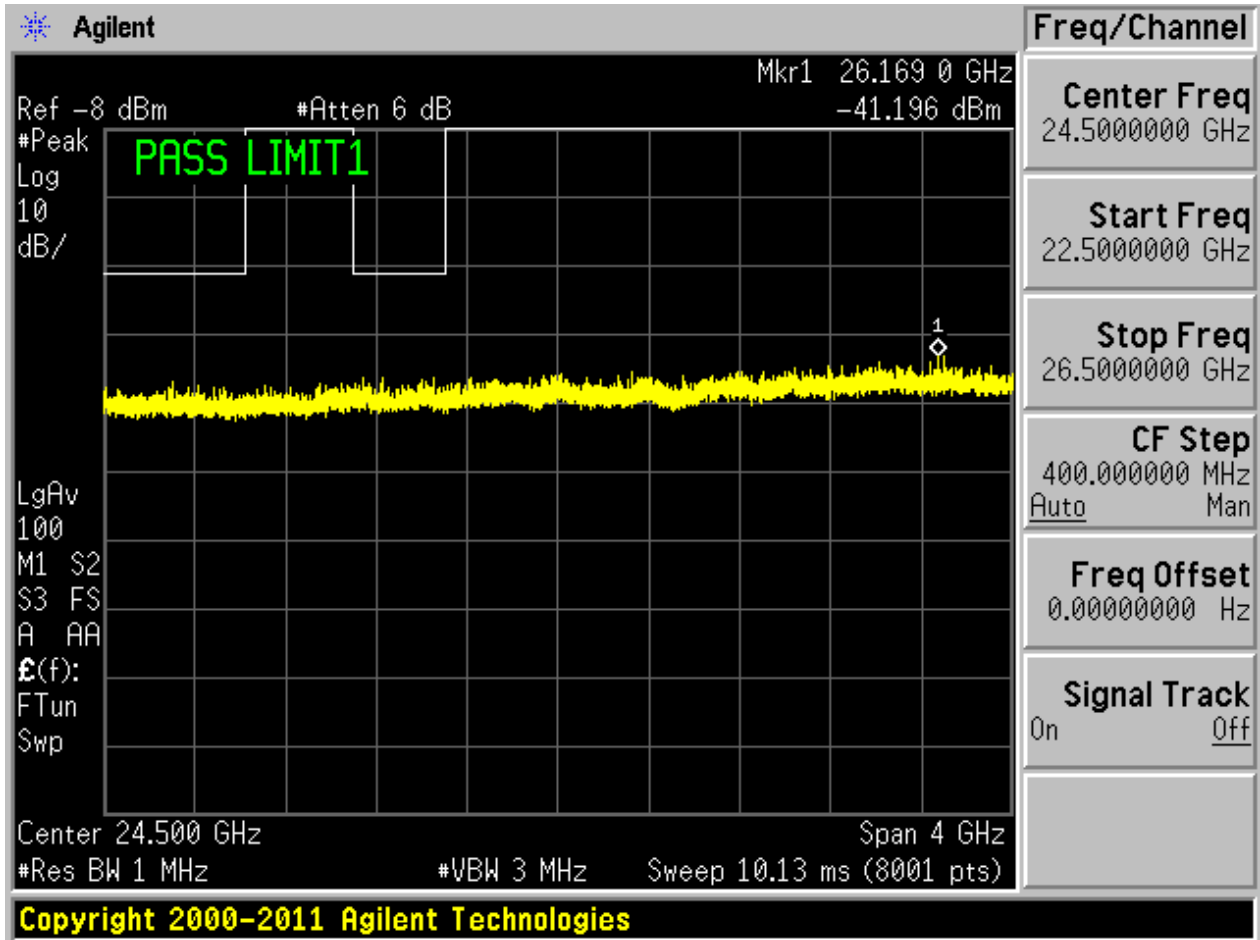




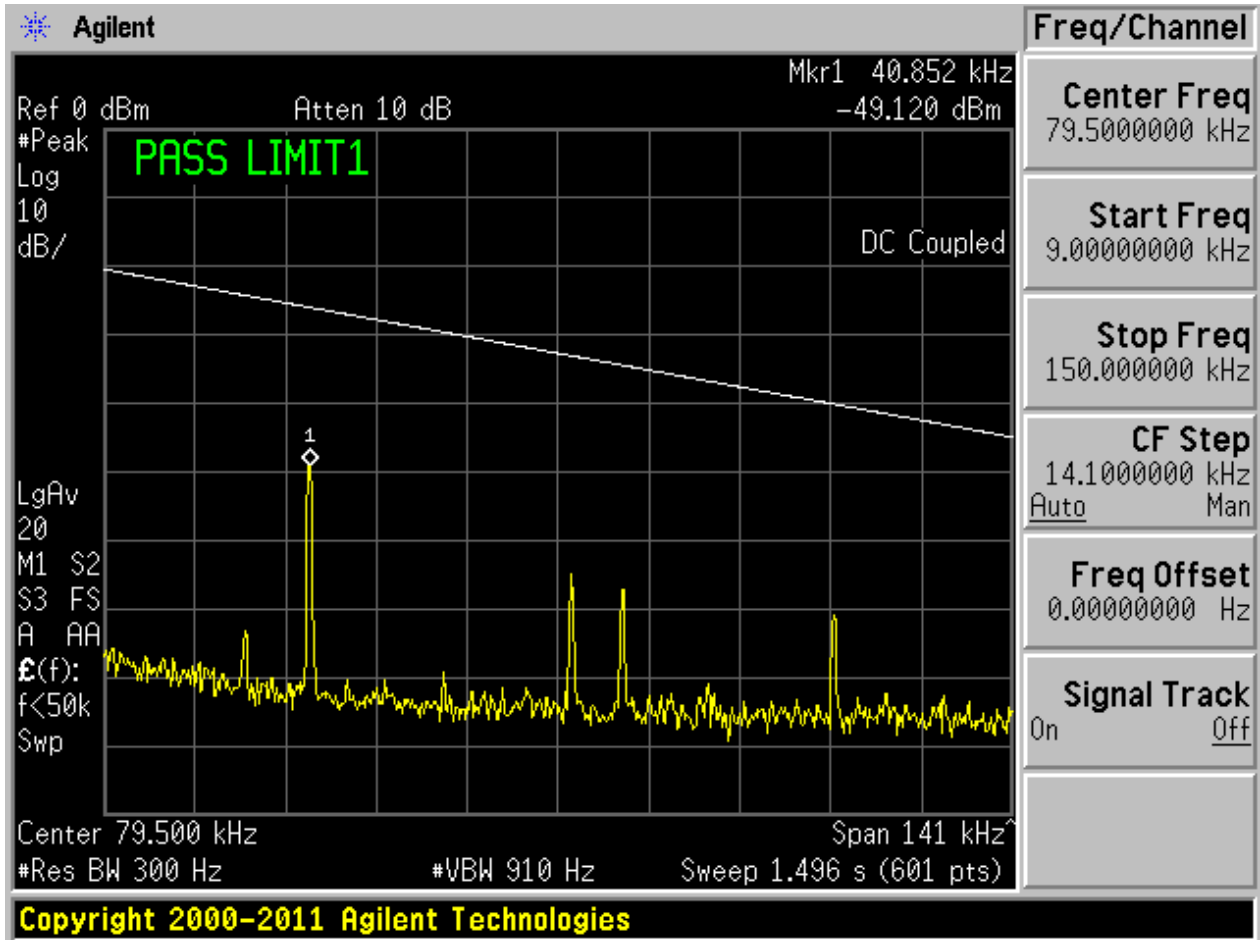


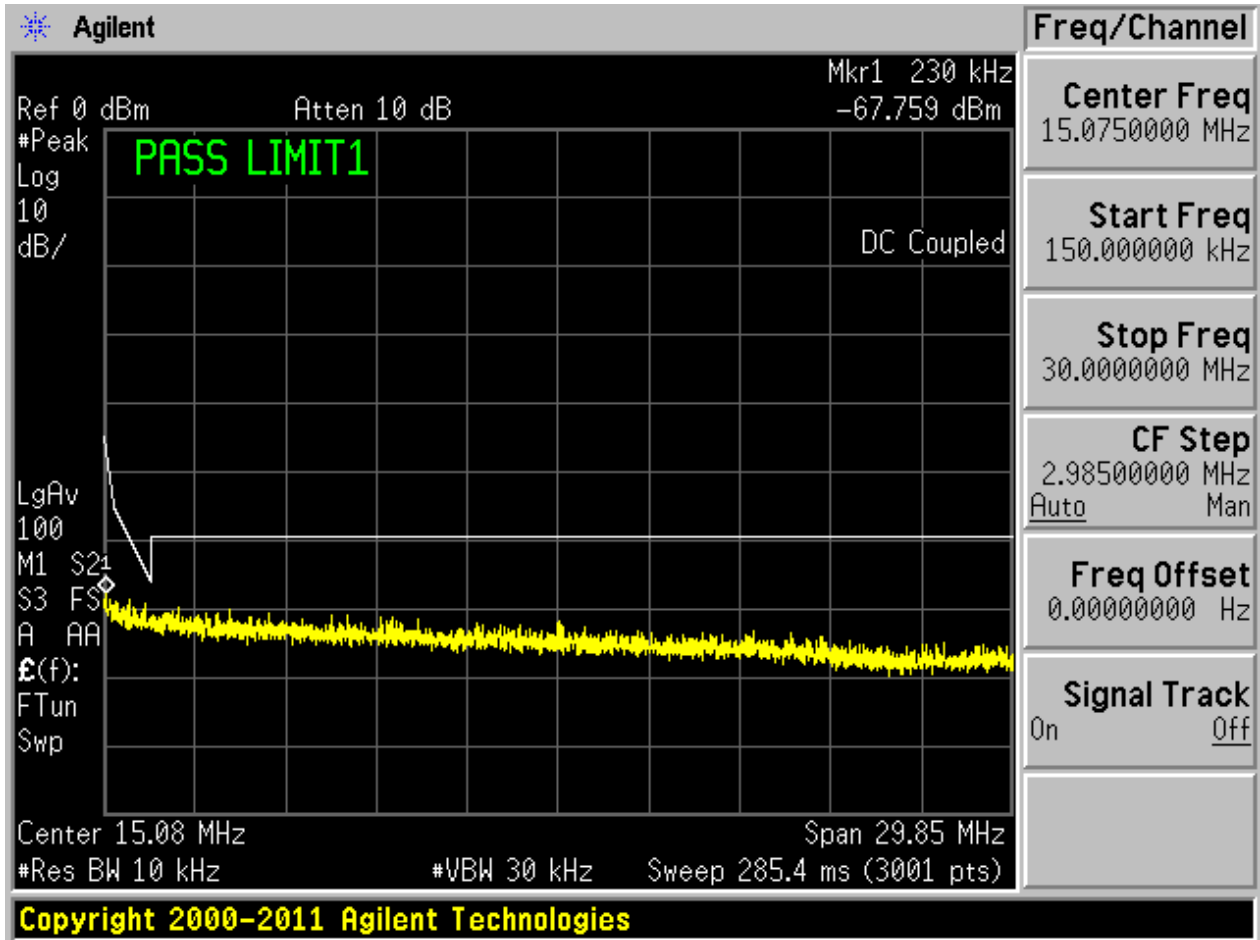


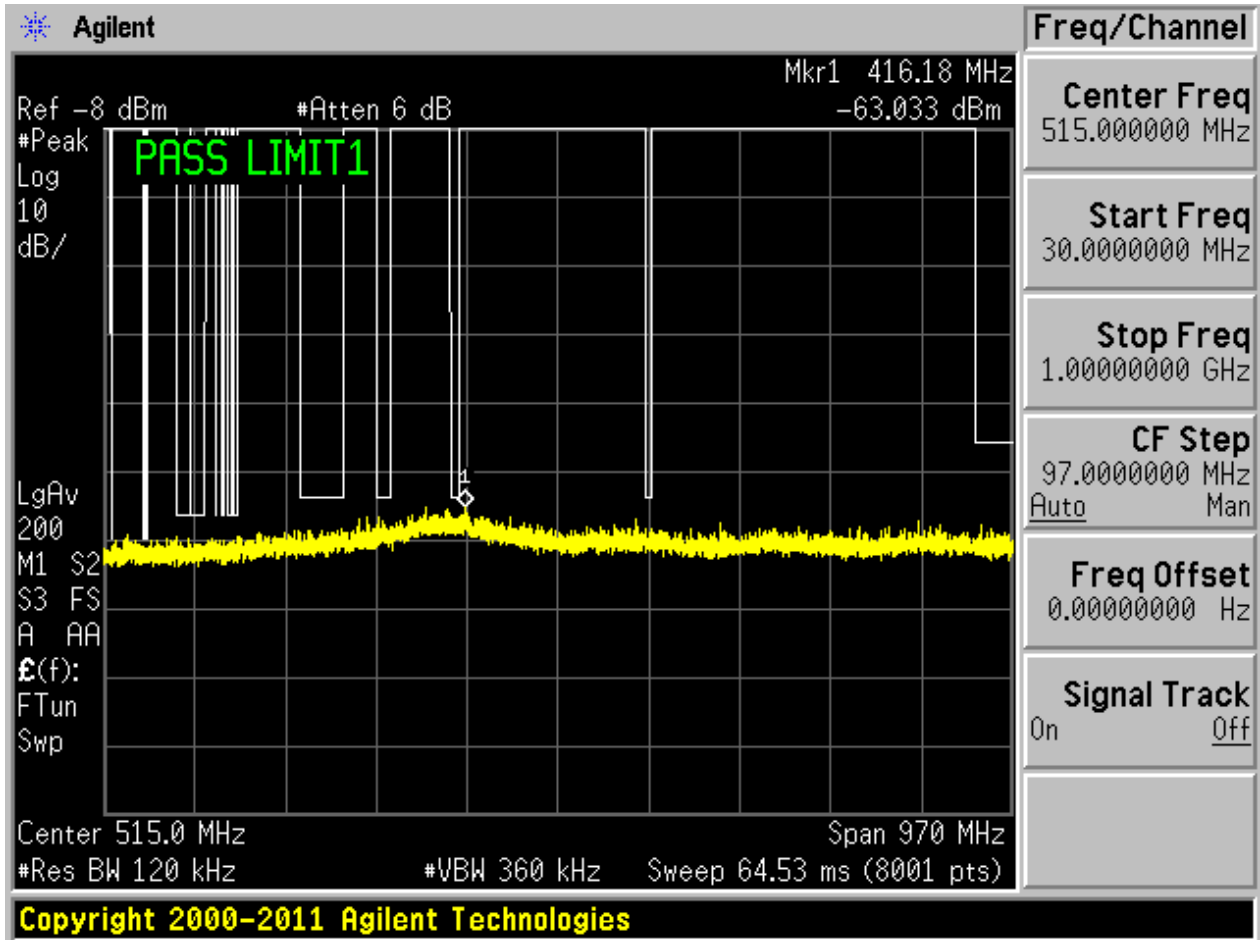


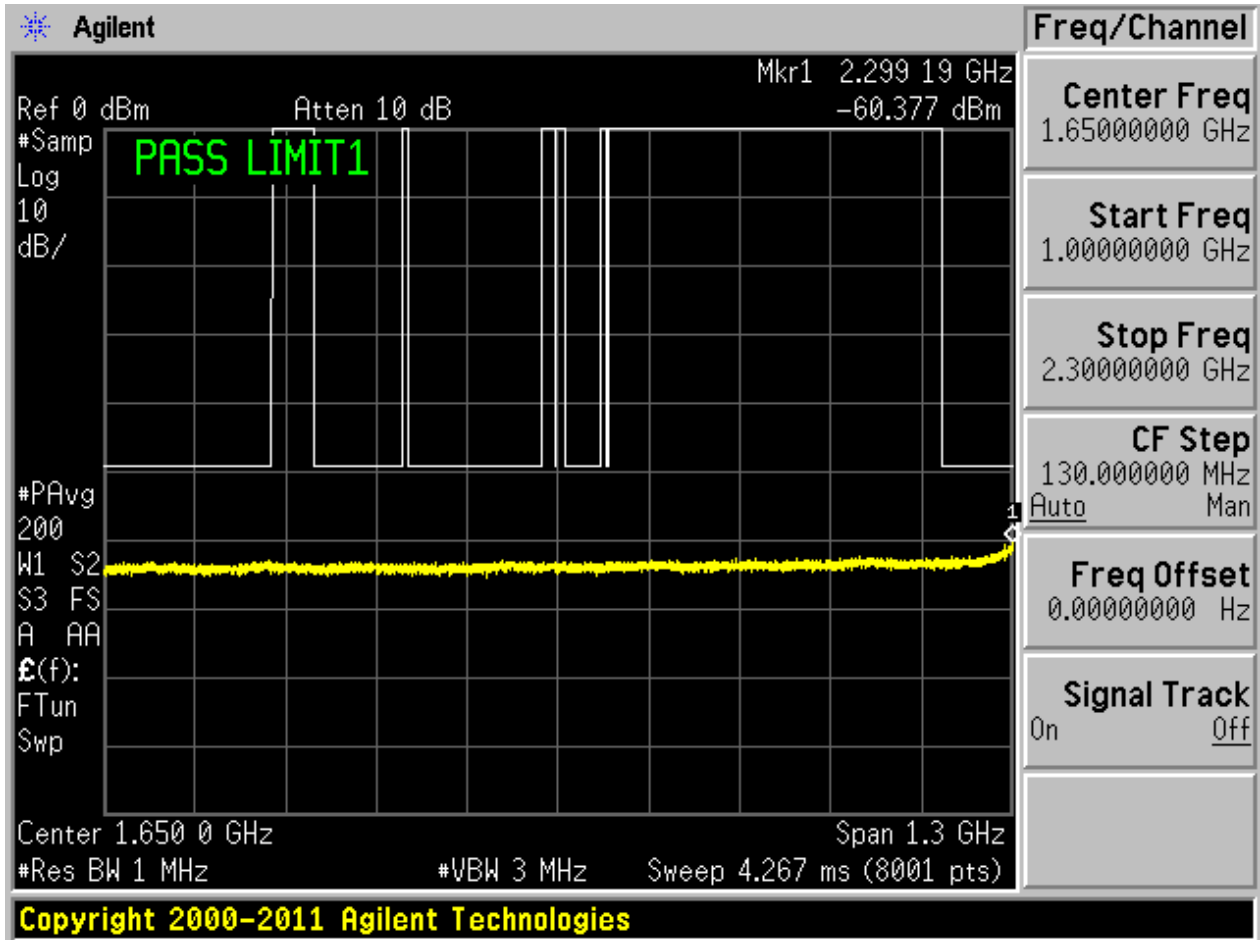


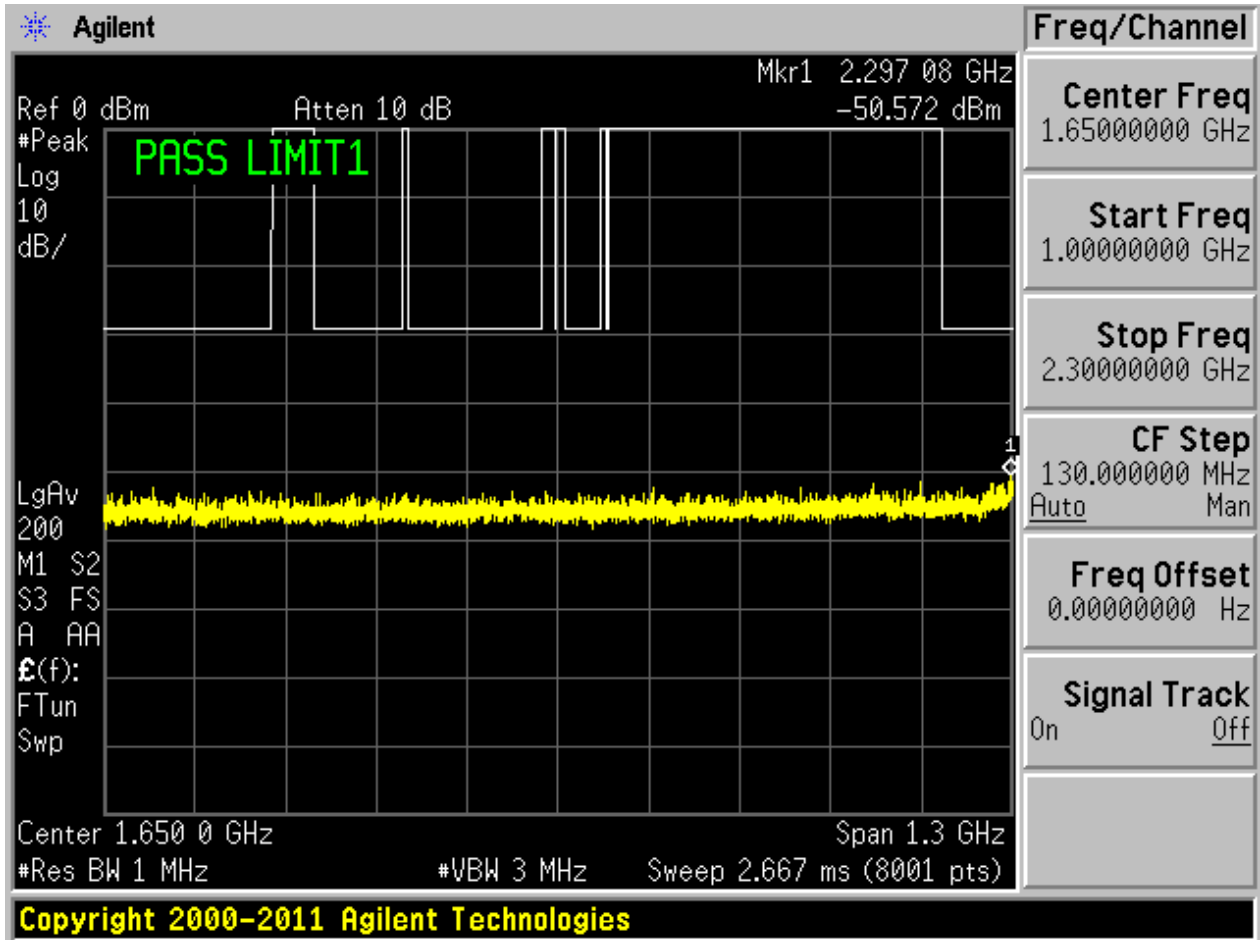
2.27.2 Ant 2 (Trace#2)

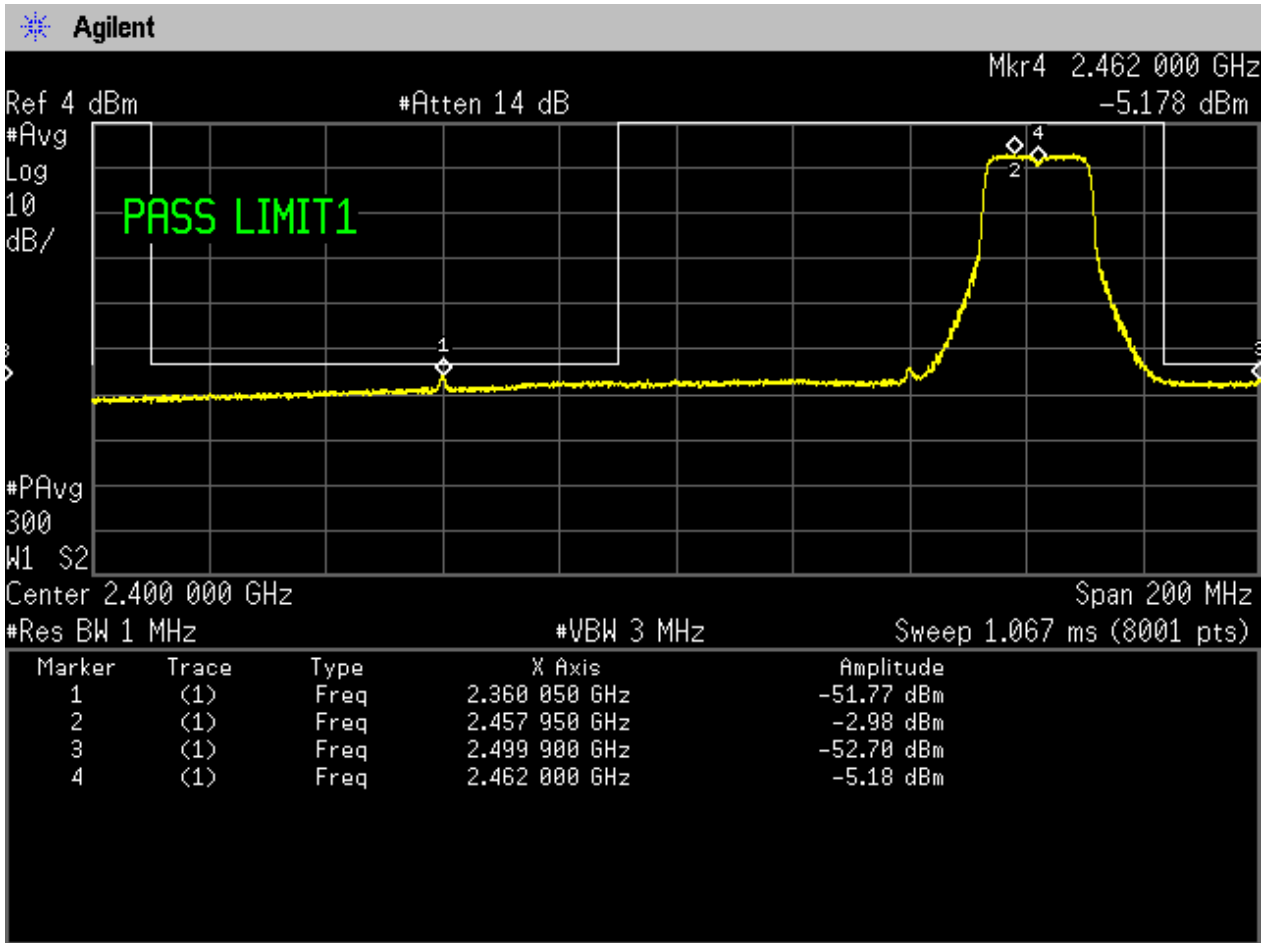


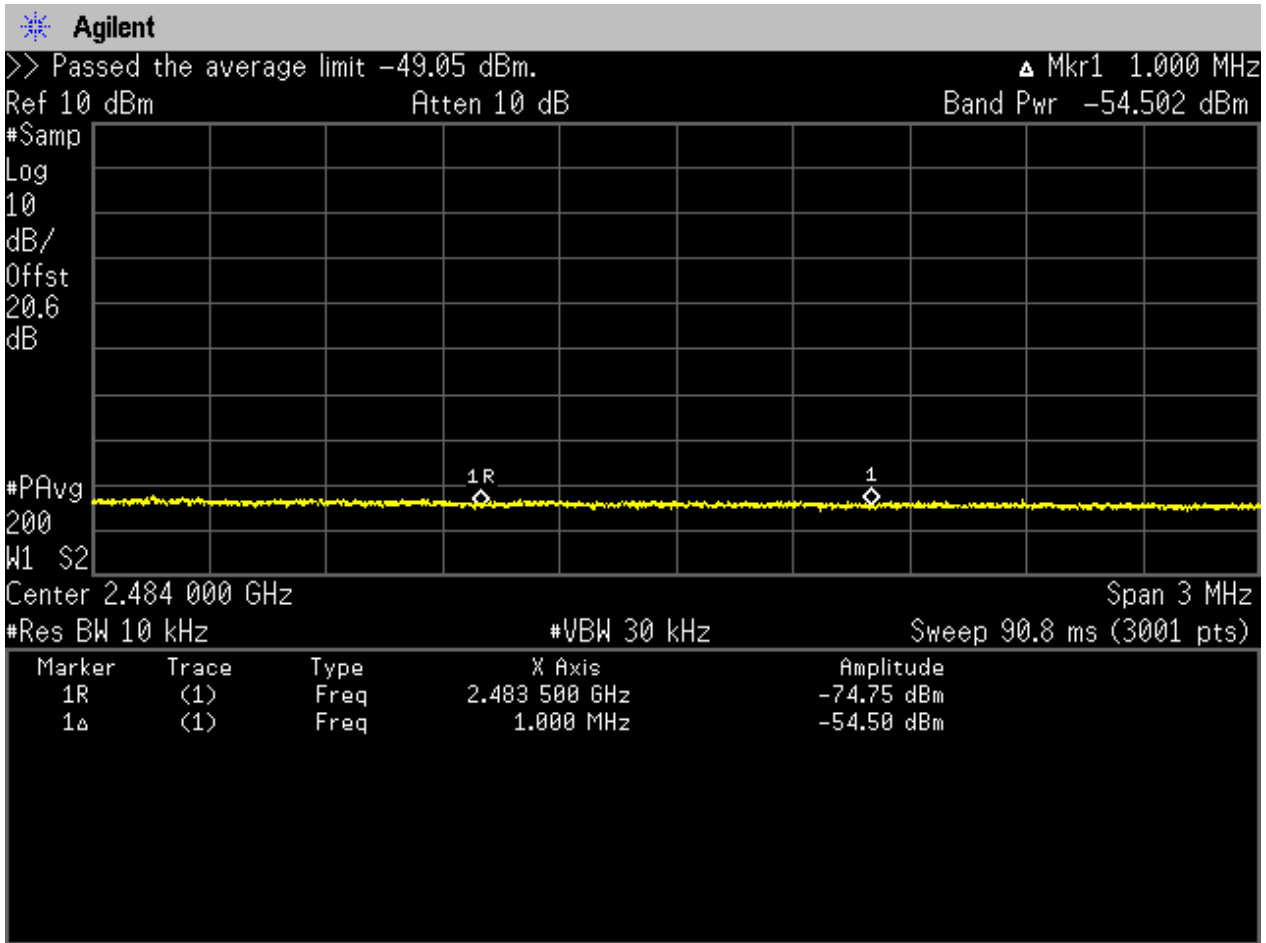


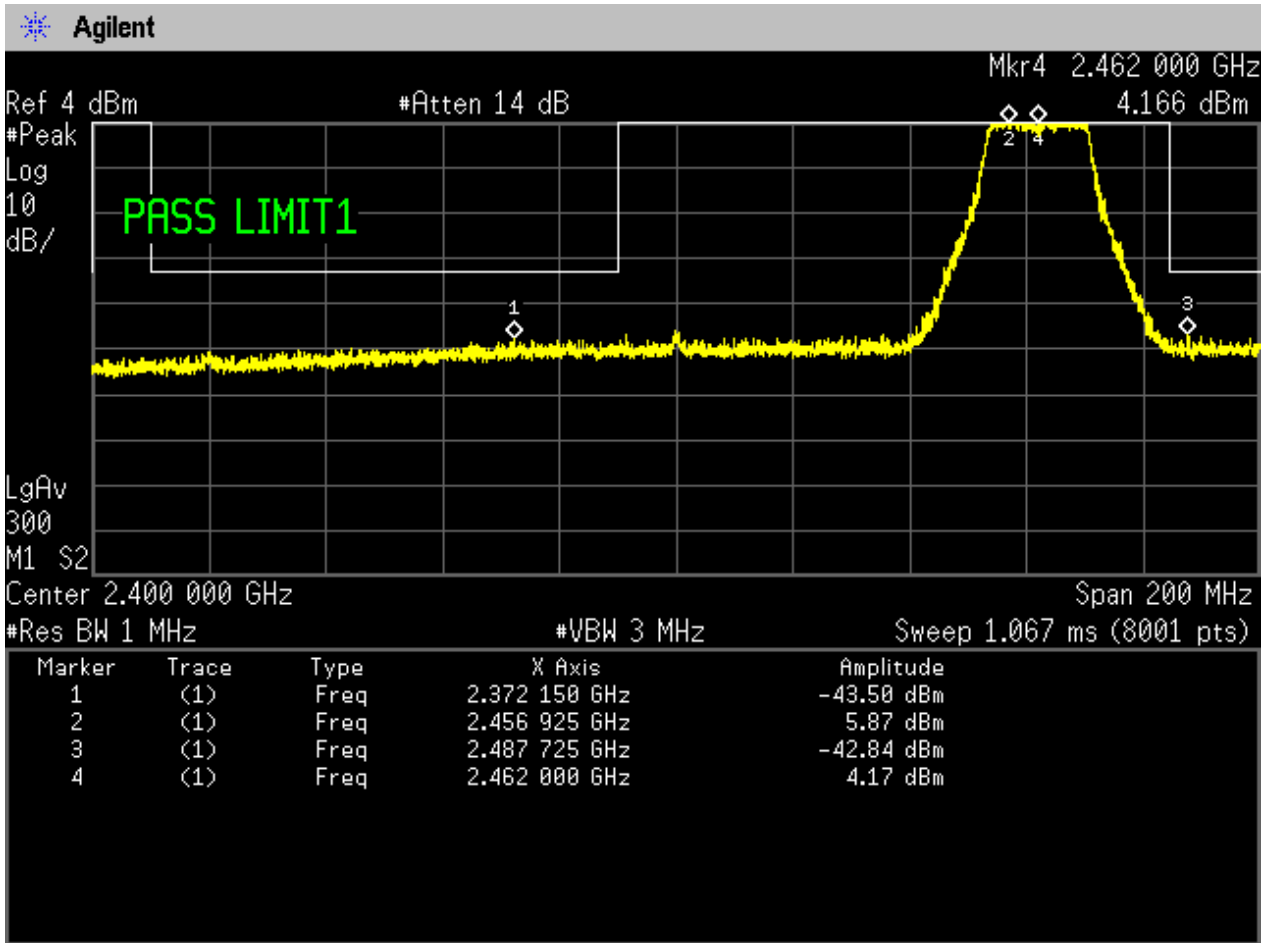


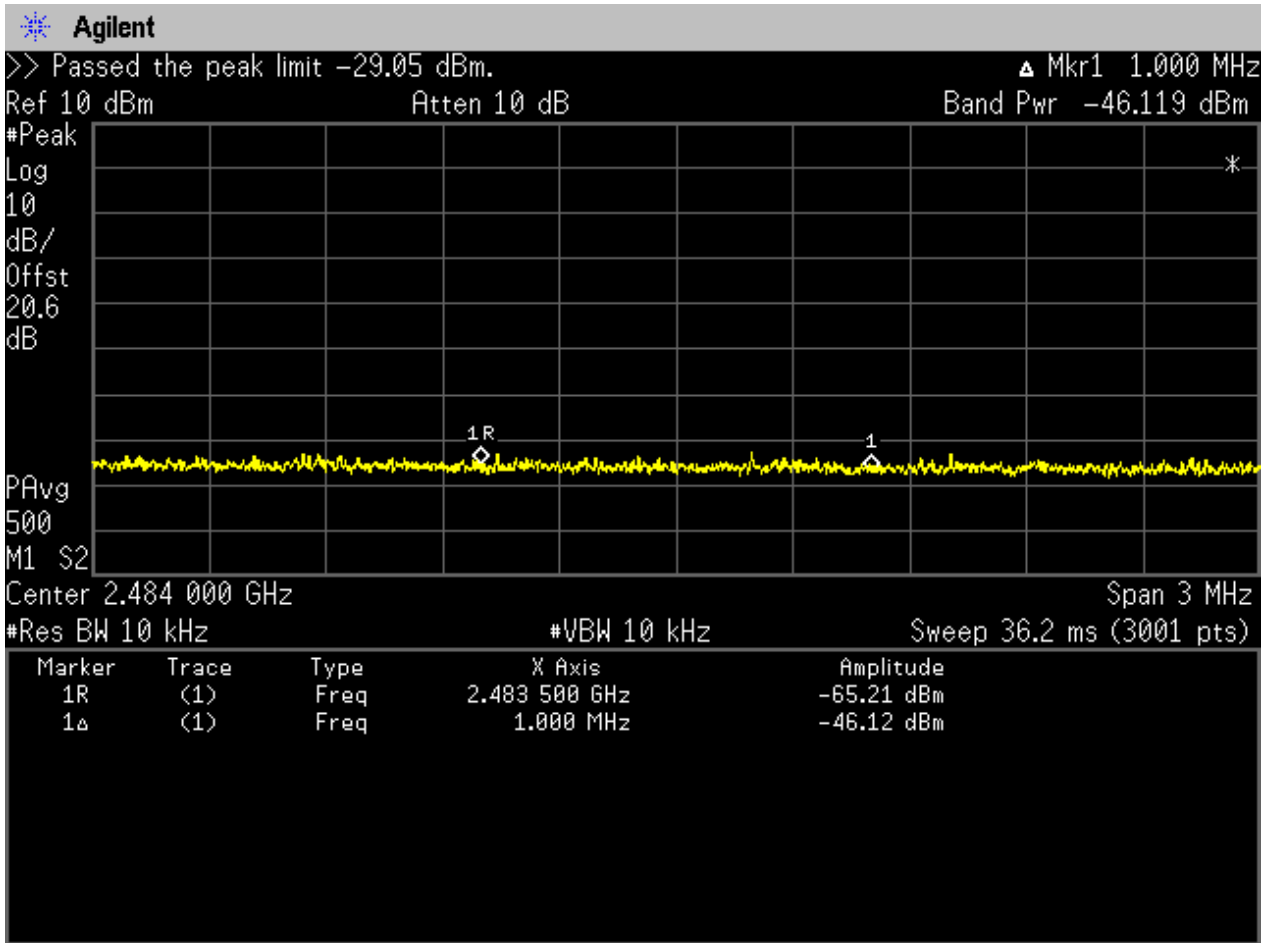


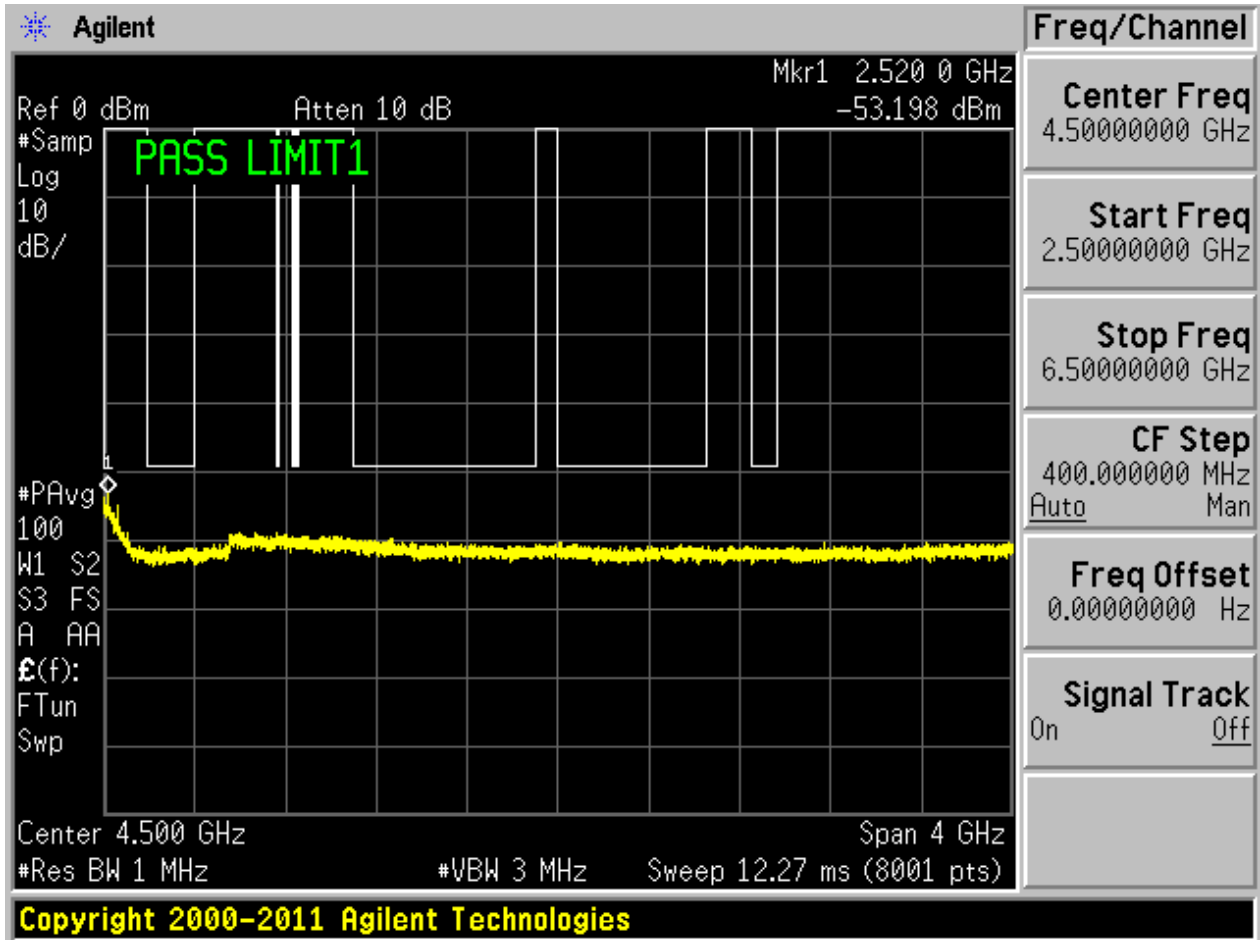


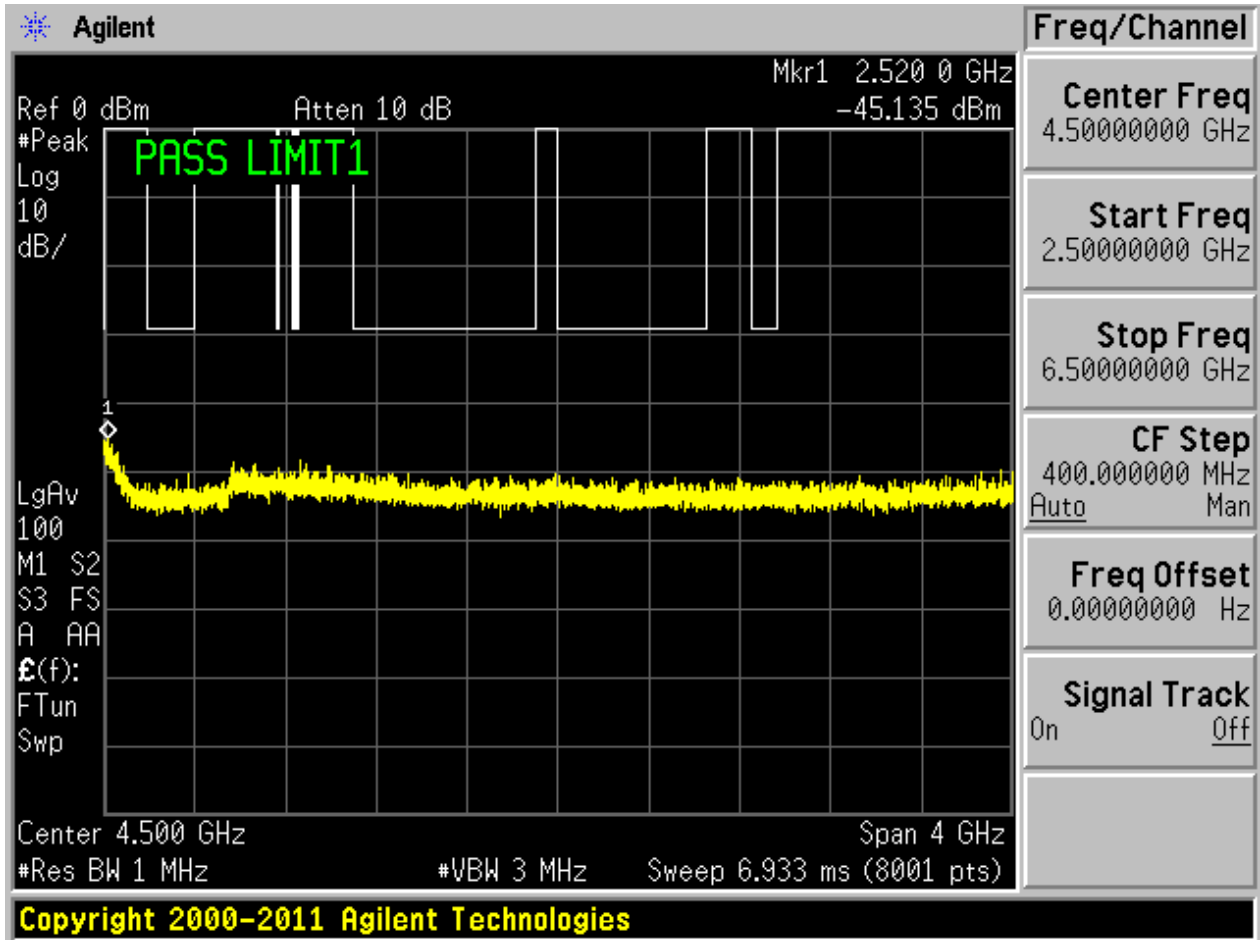


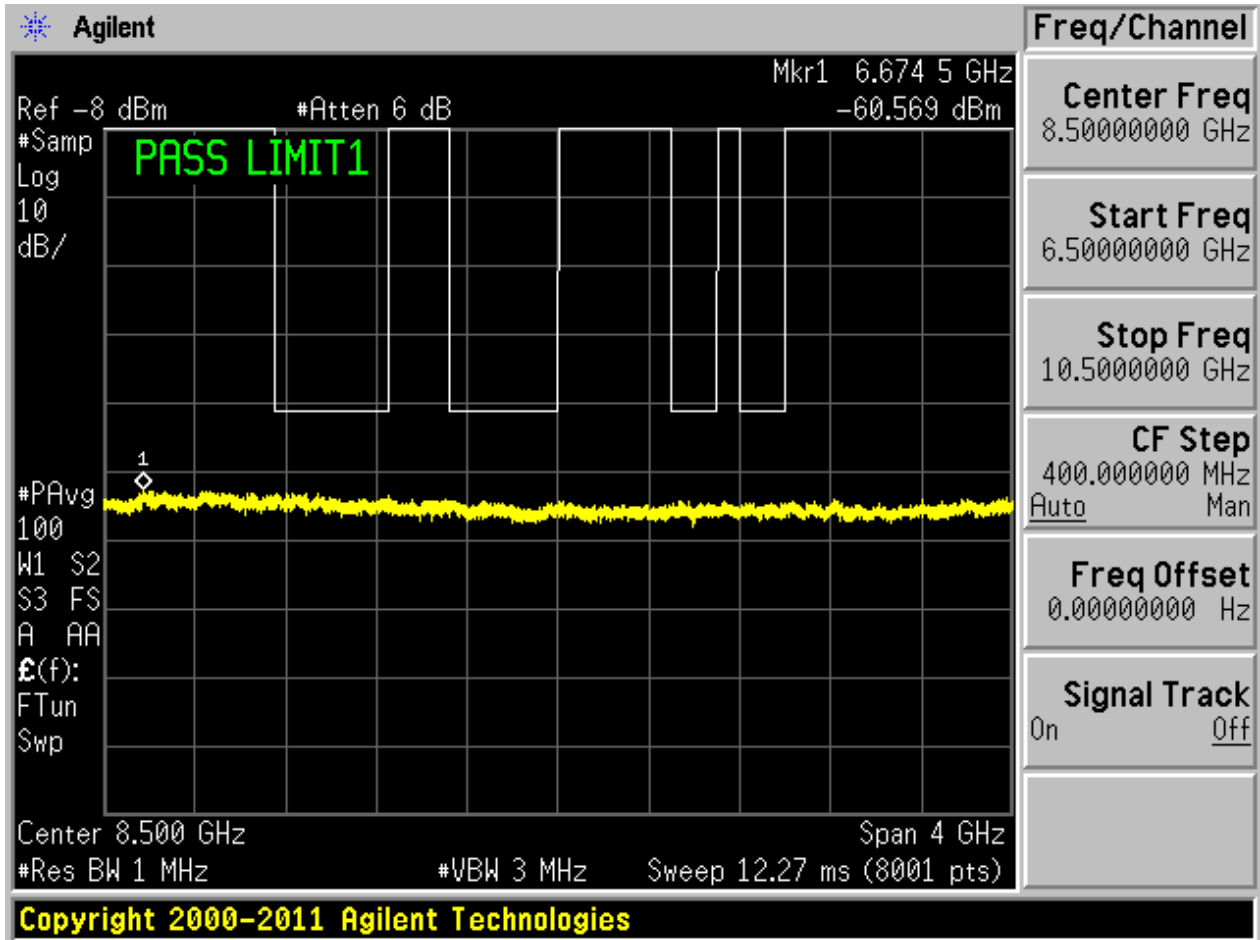


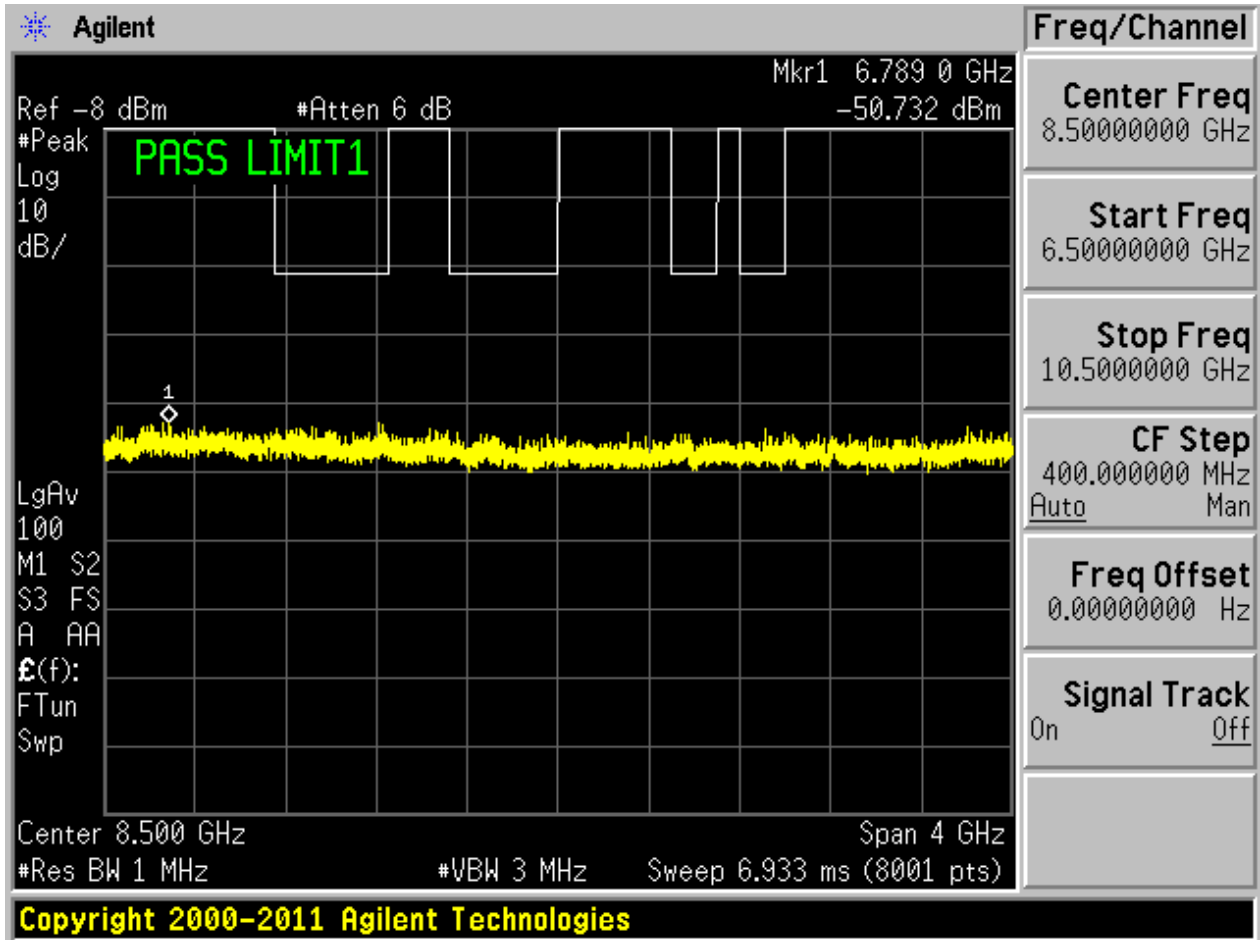


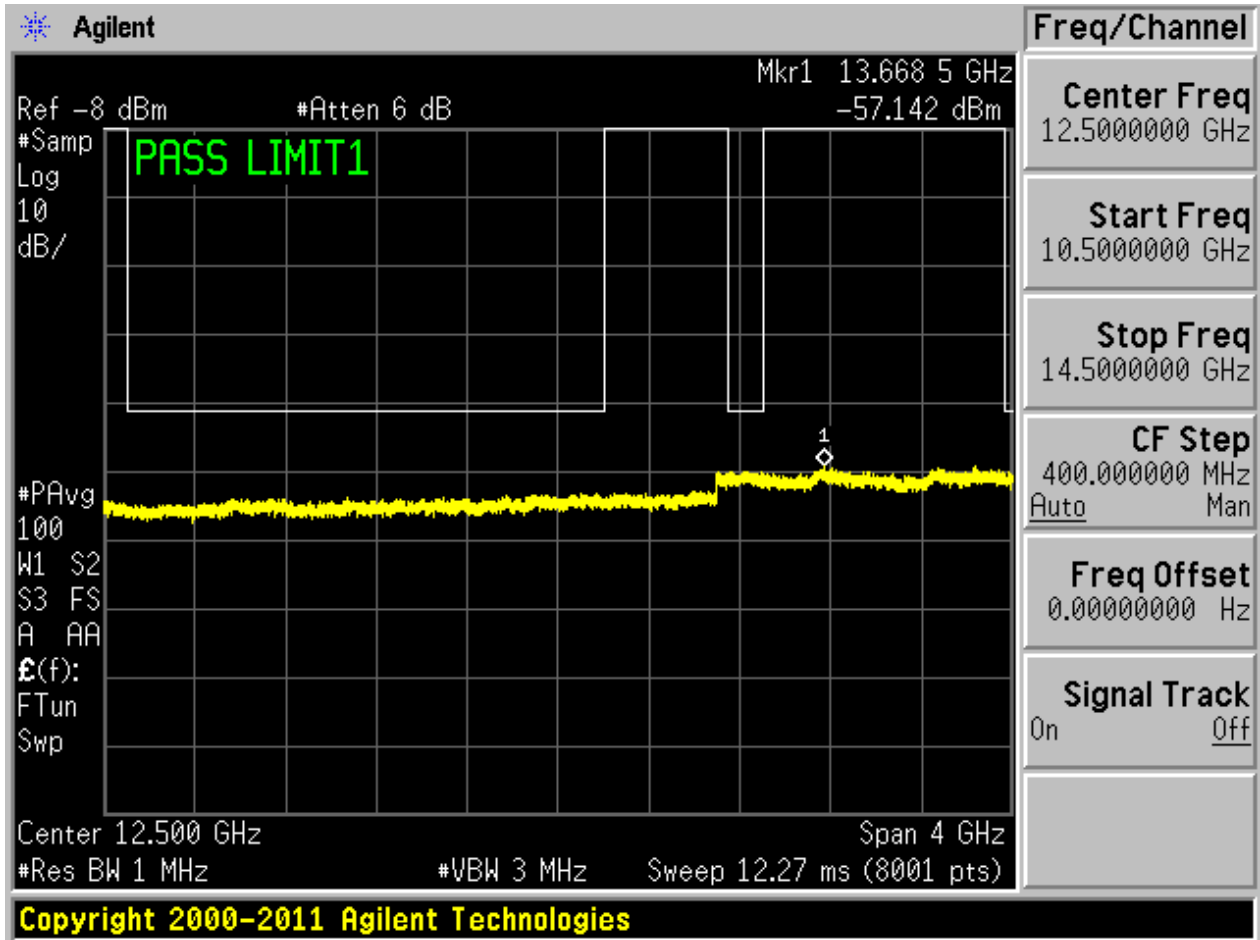


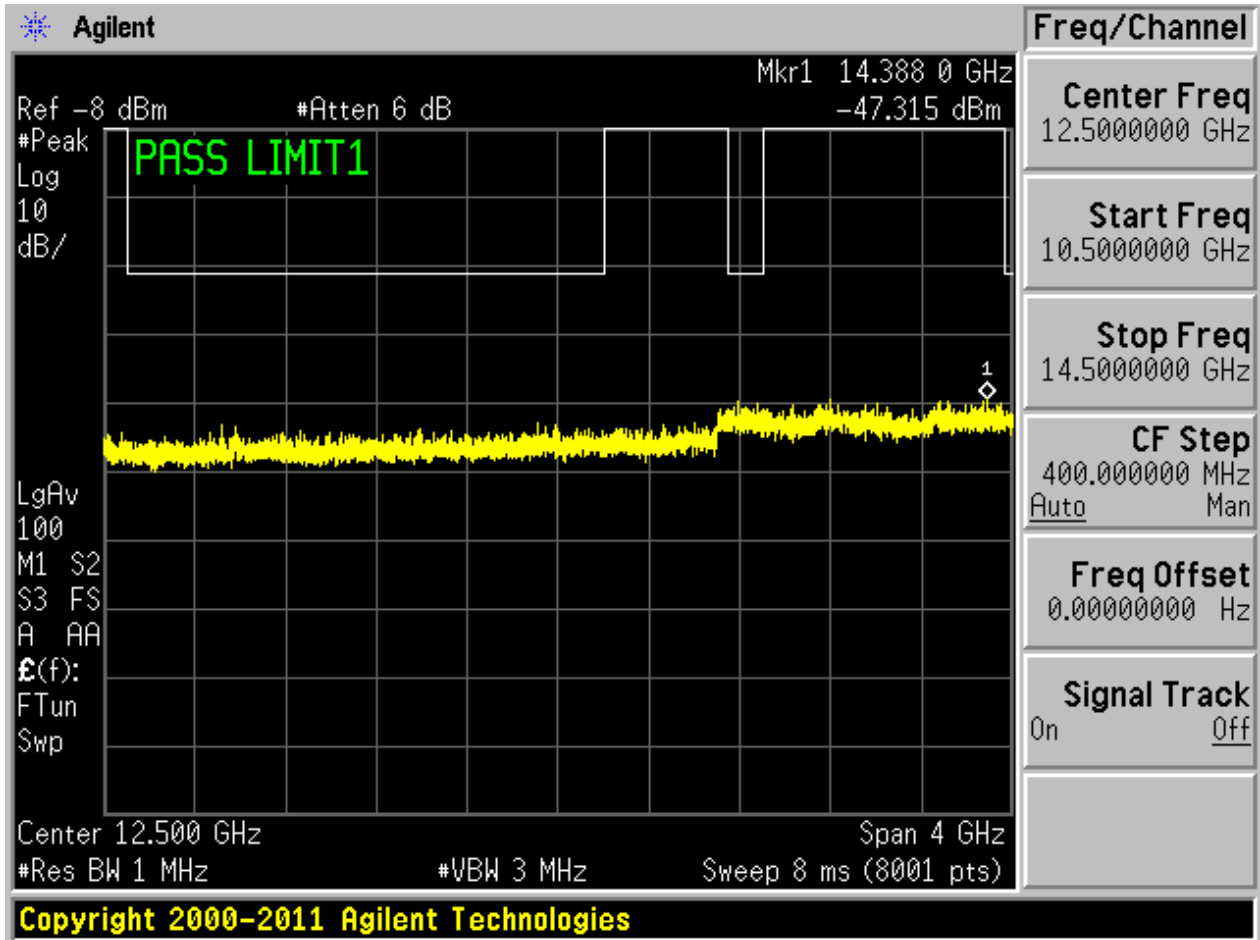


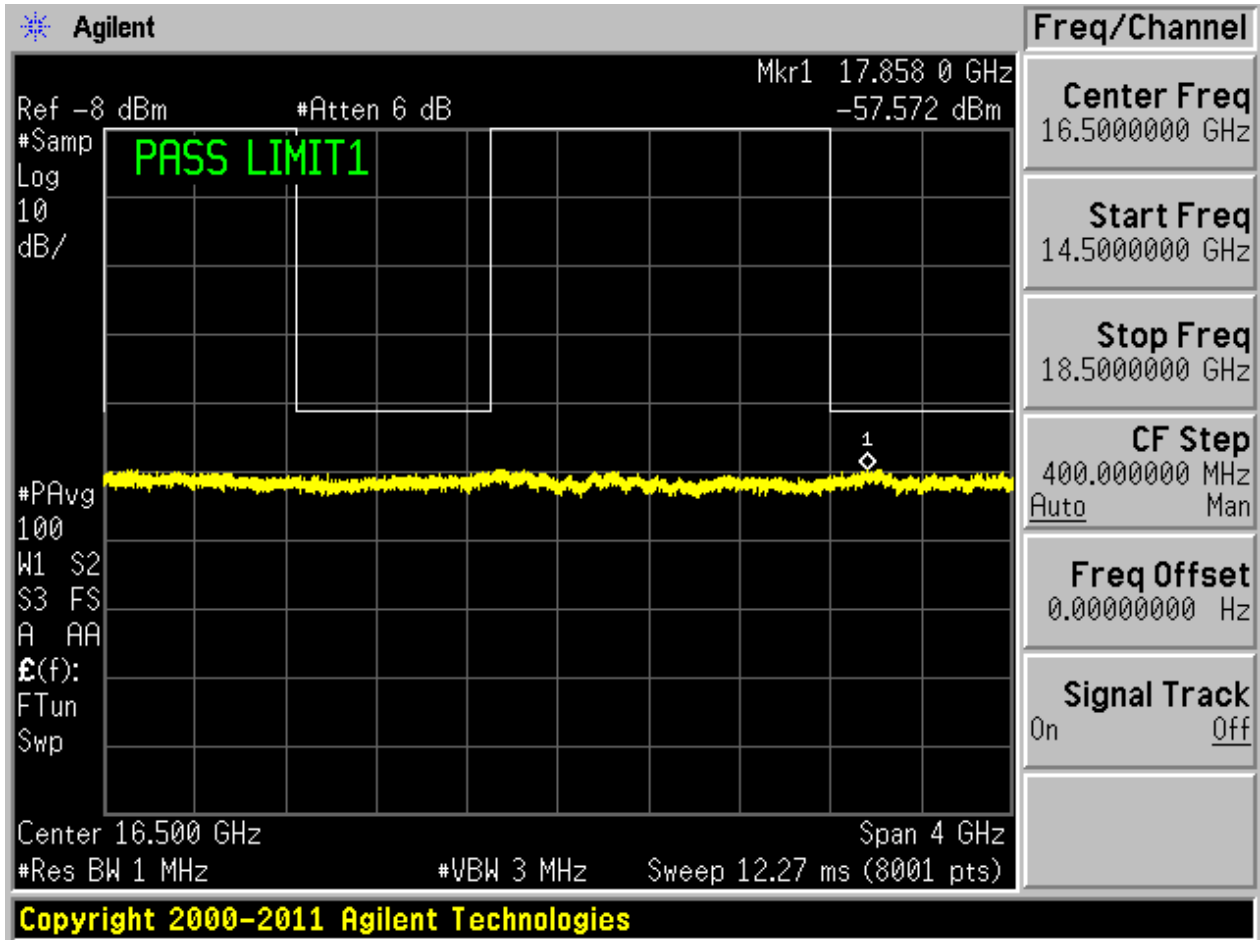


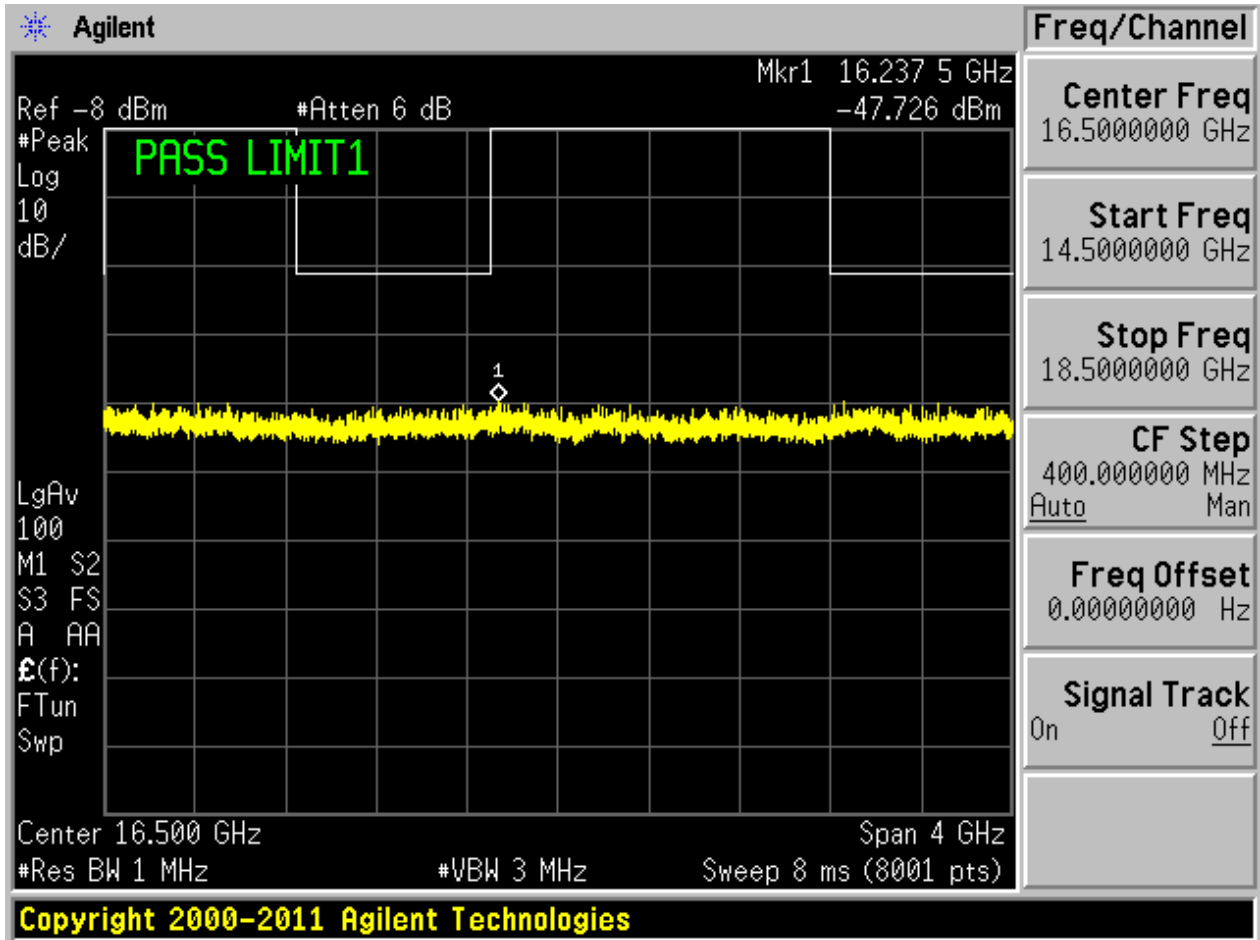


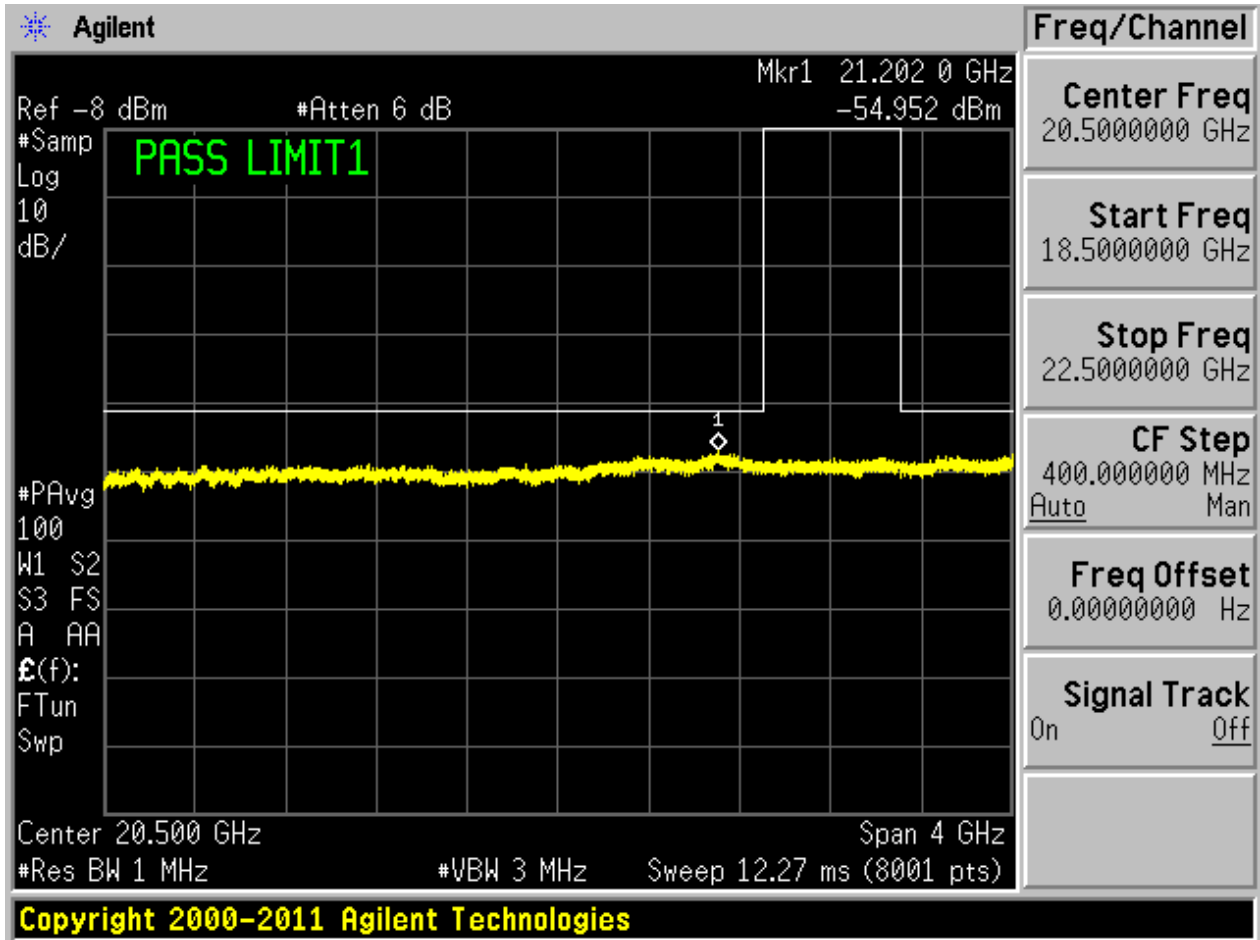


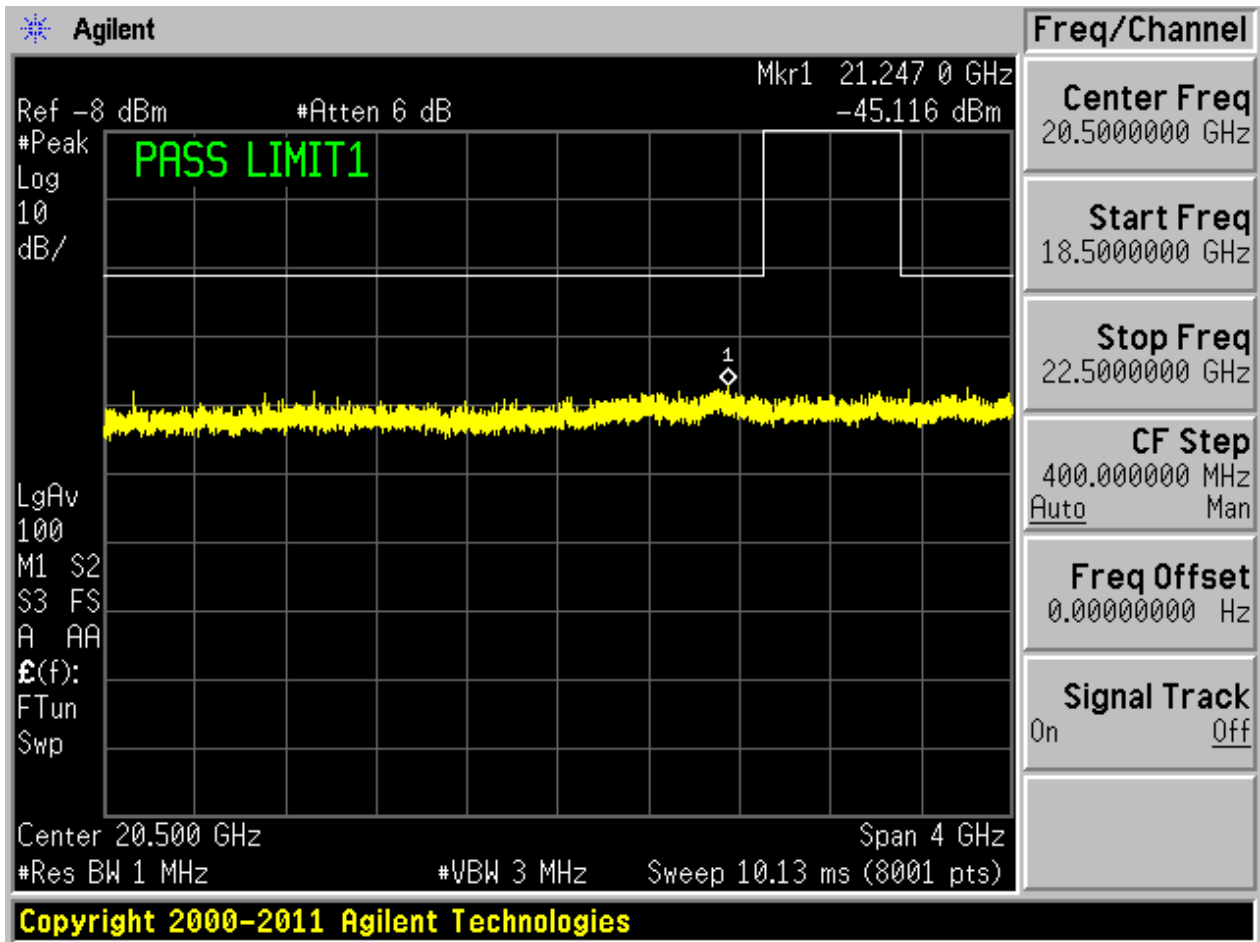


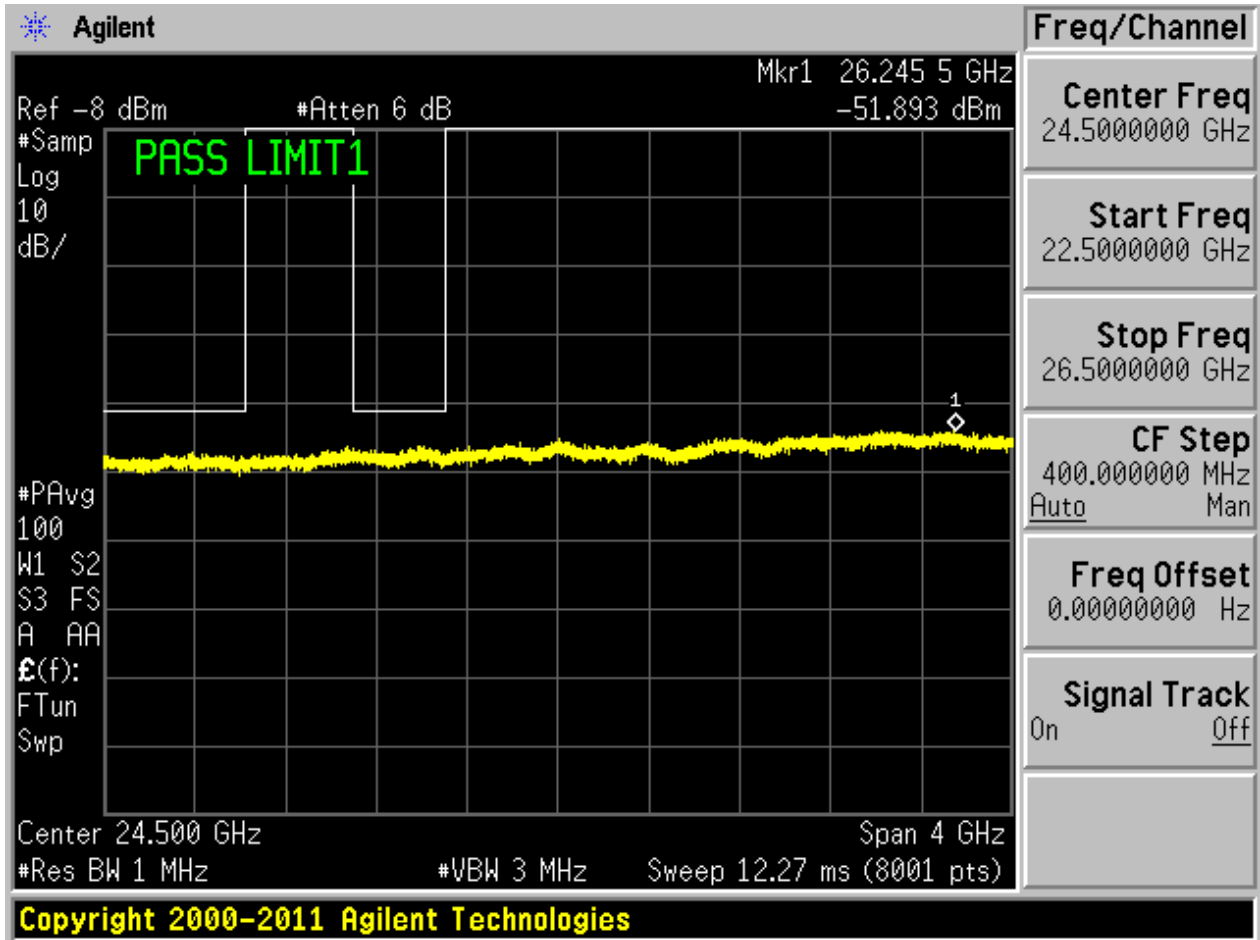


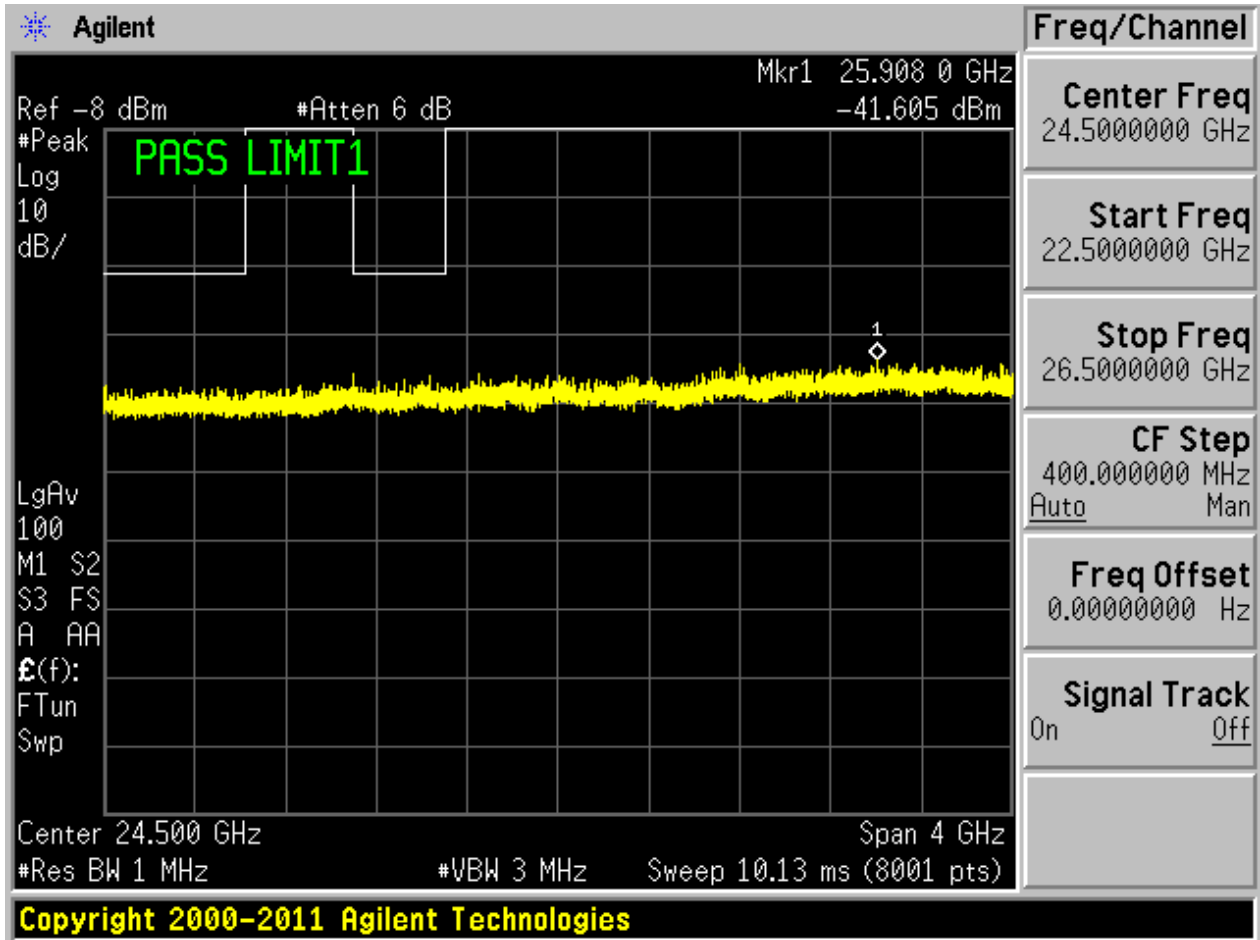




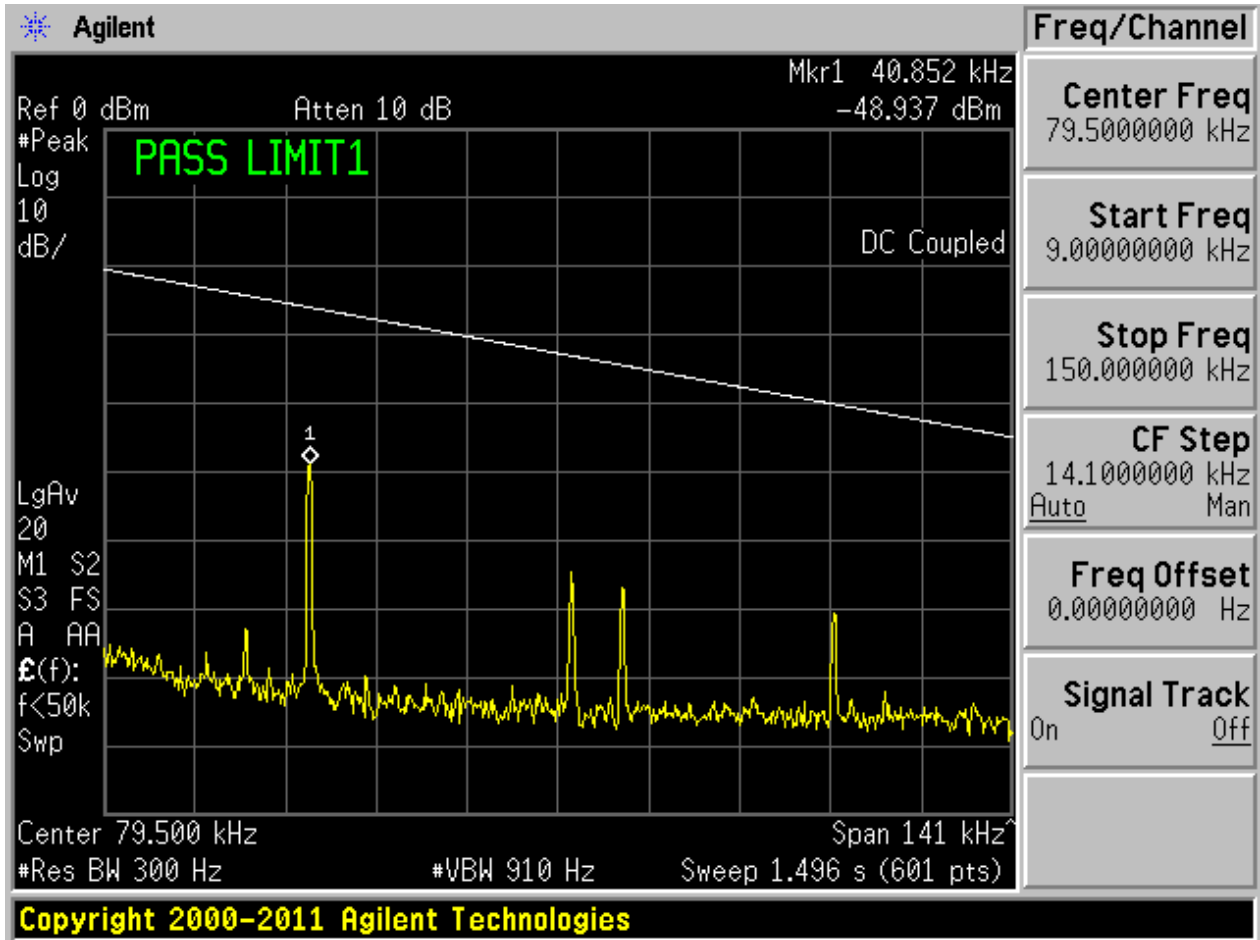


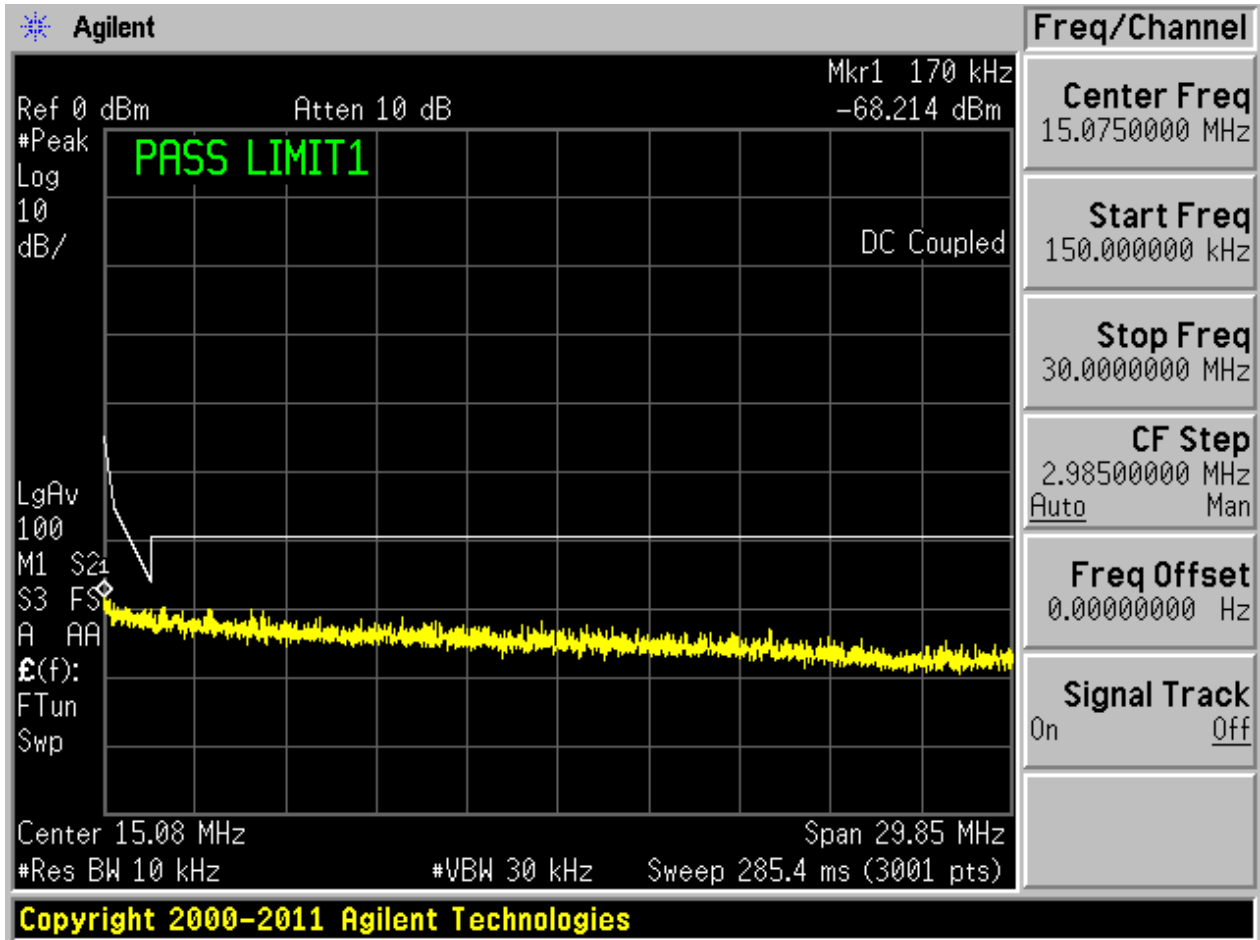


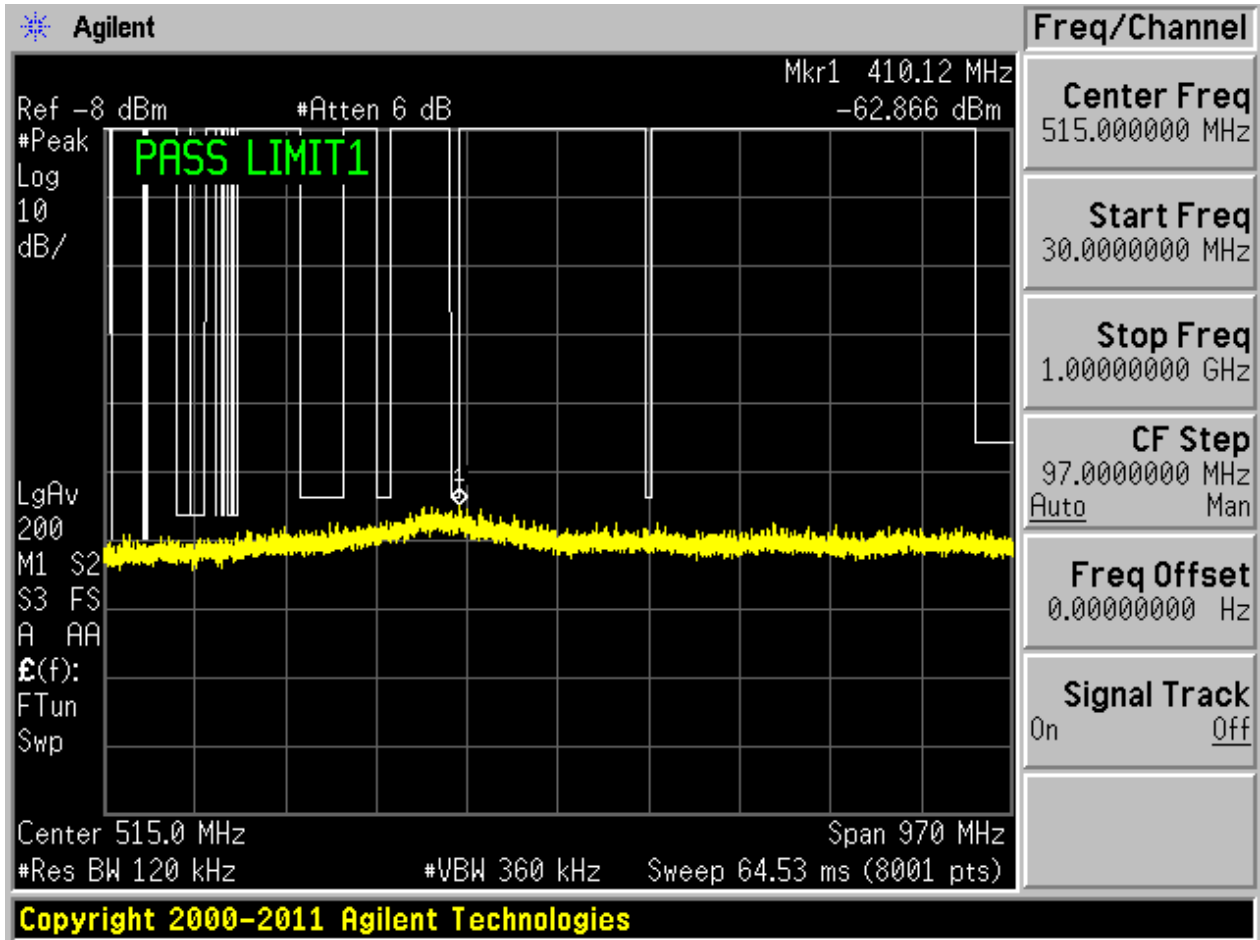


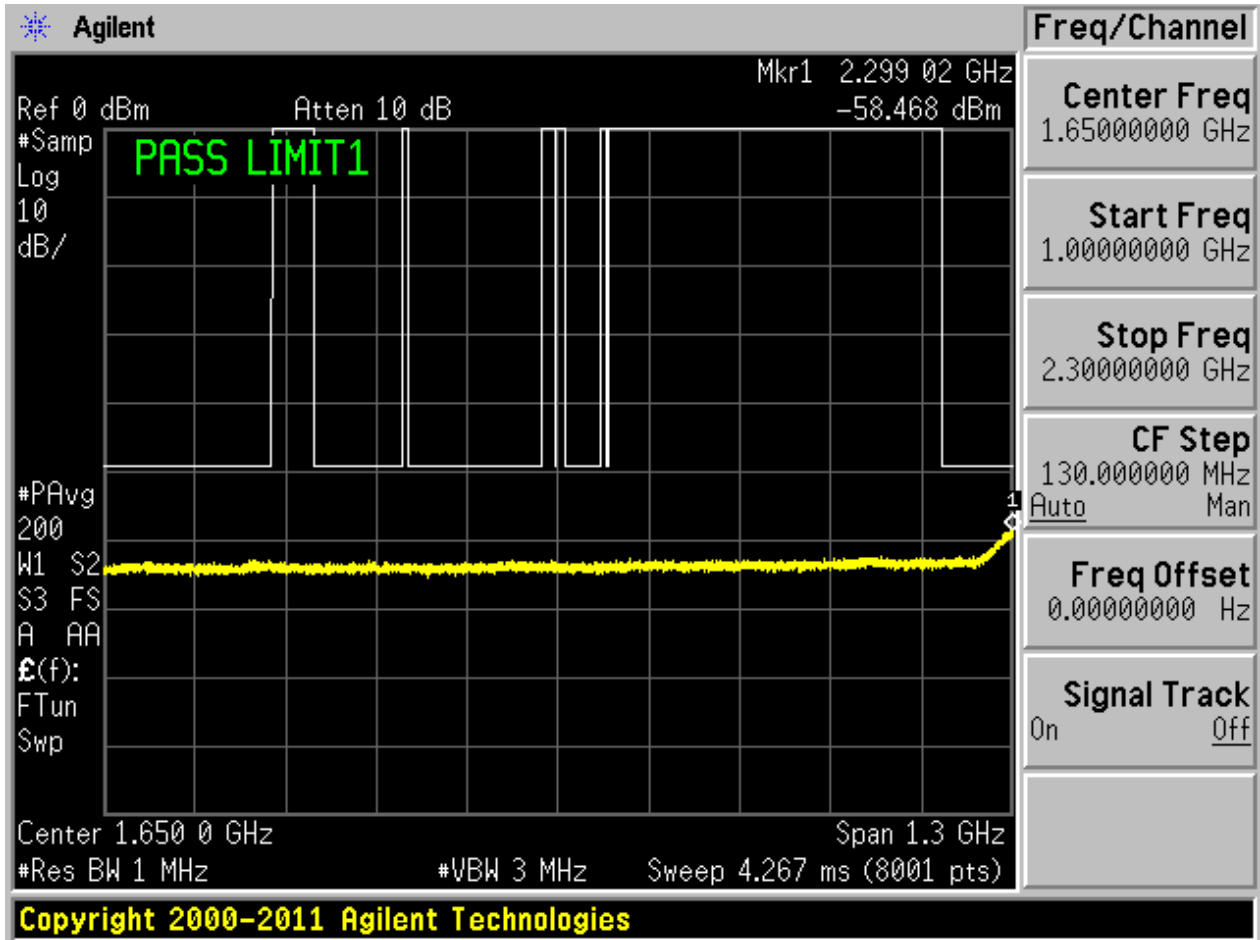


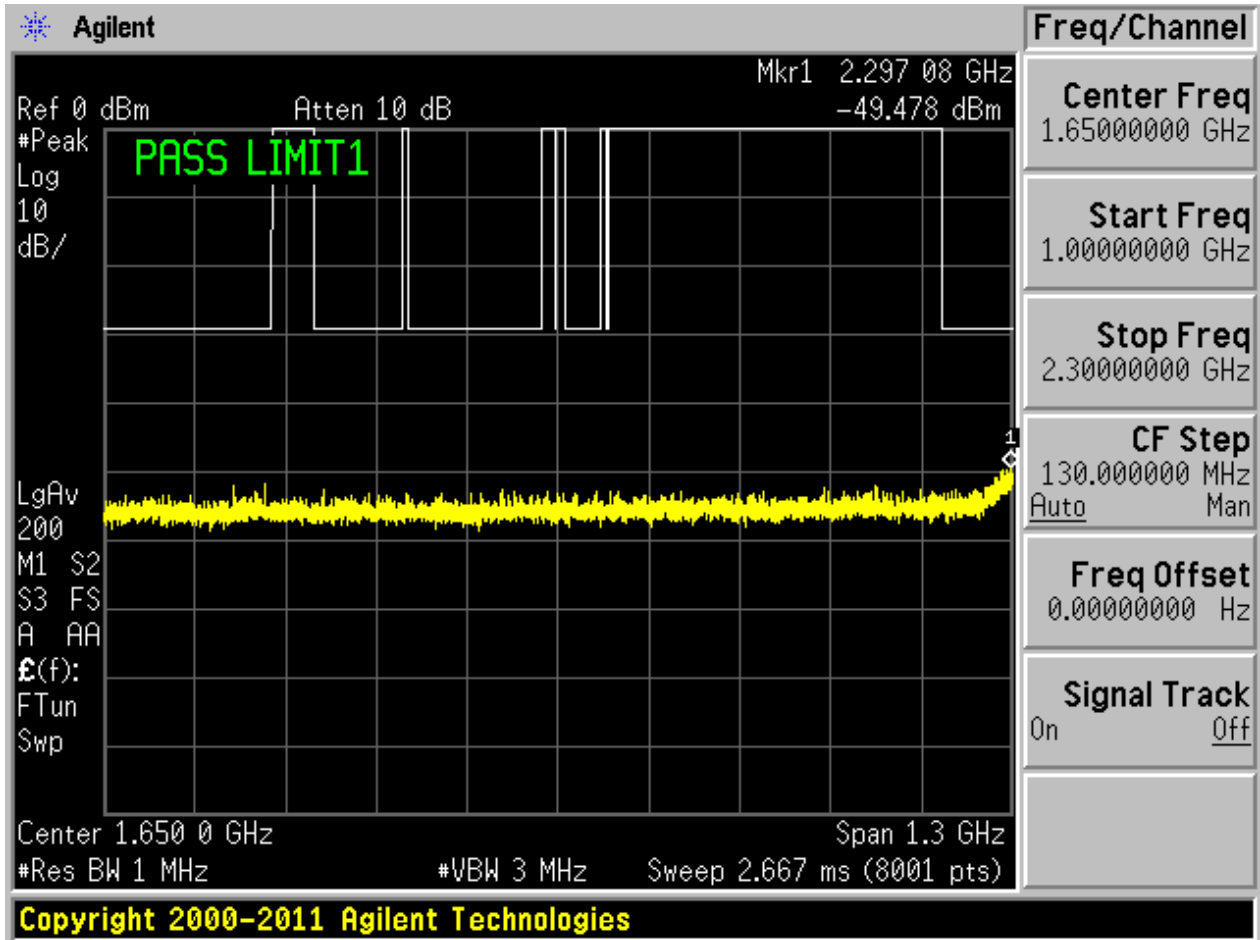
2.27.3 Ant 3 (Trace#3)

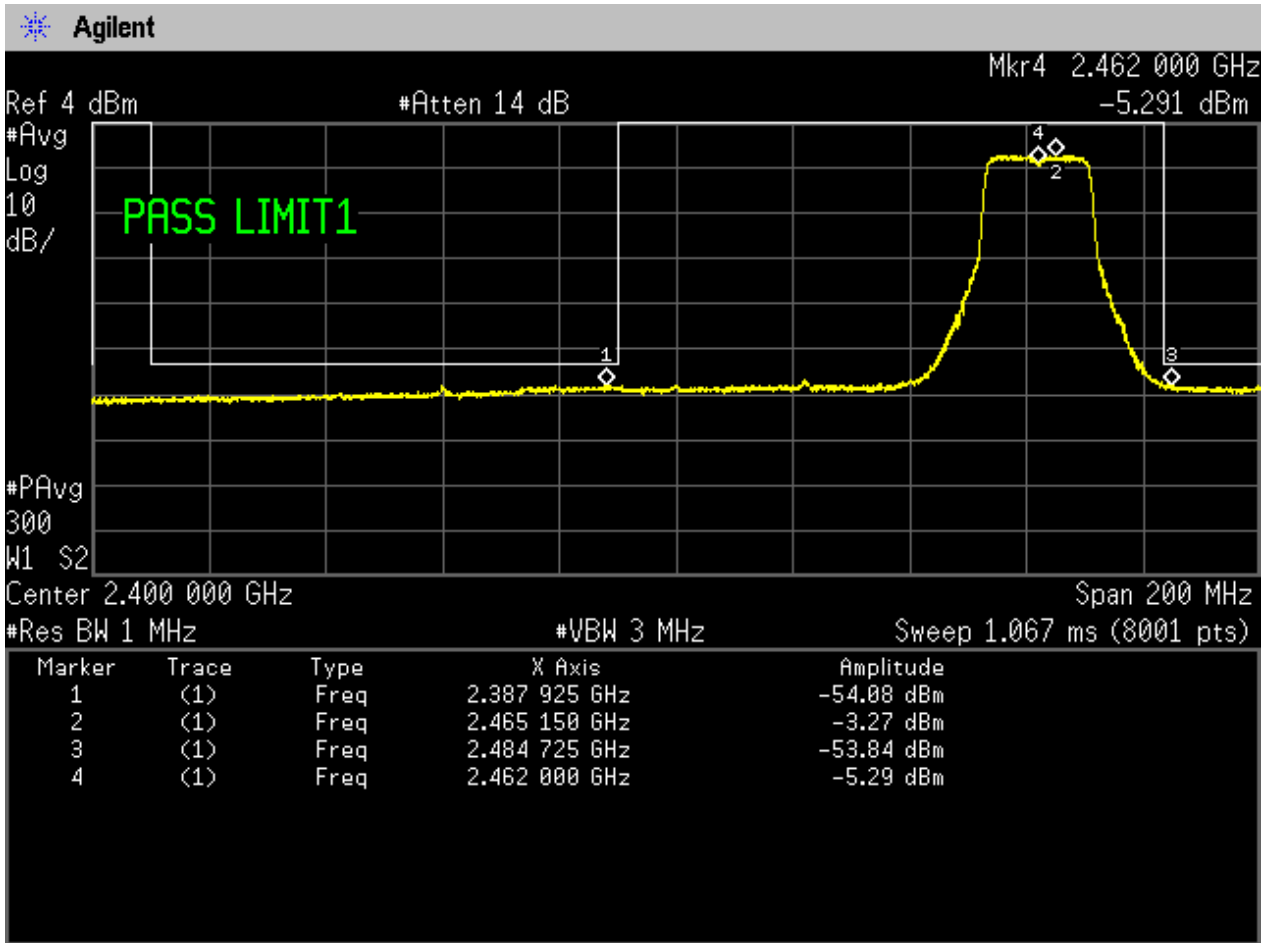


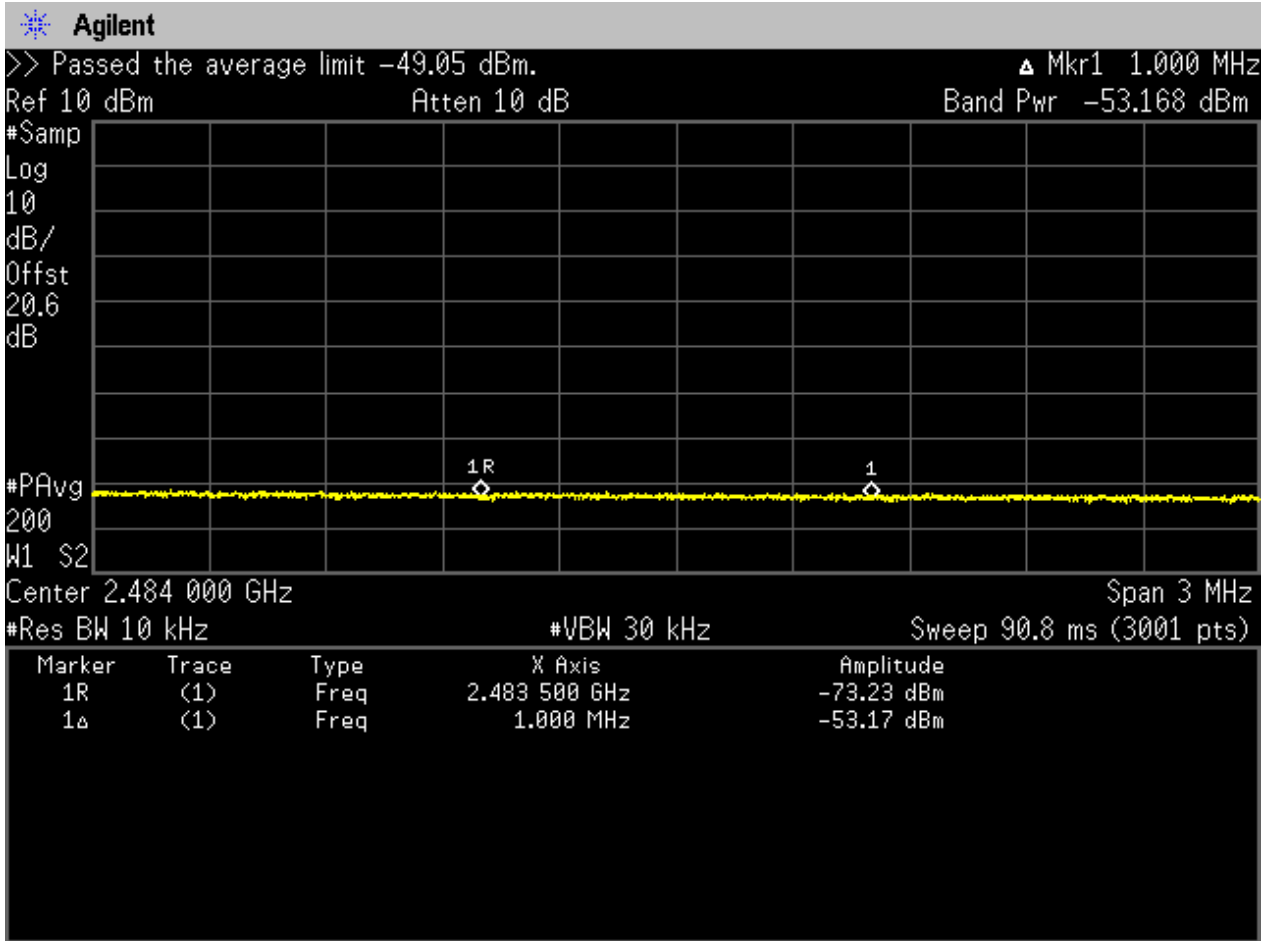


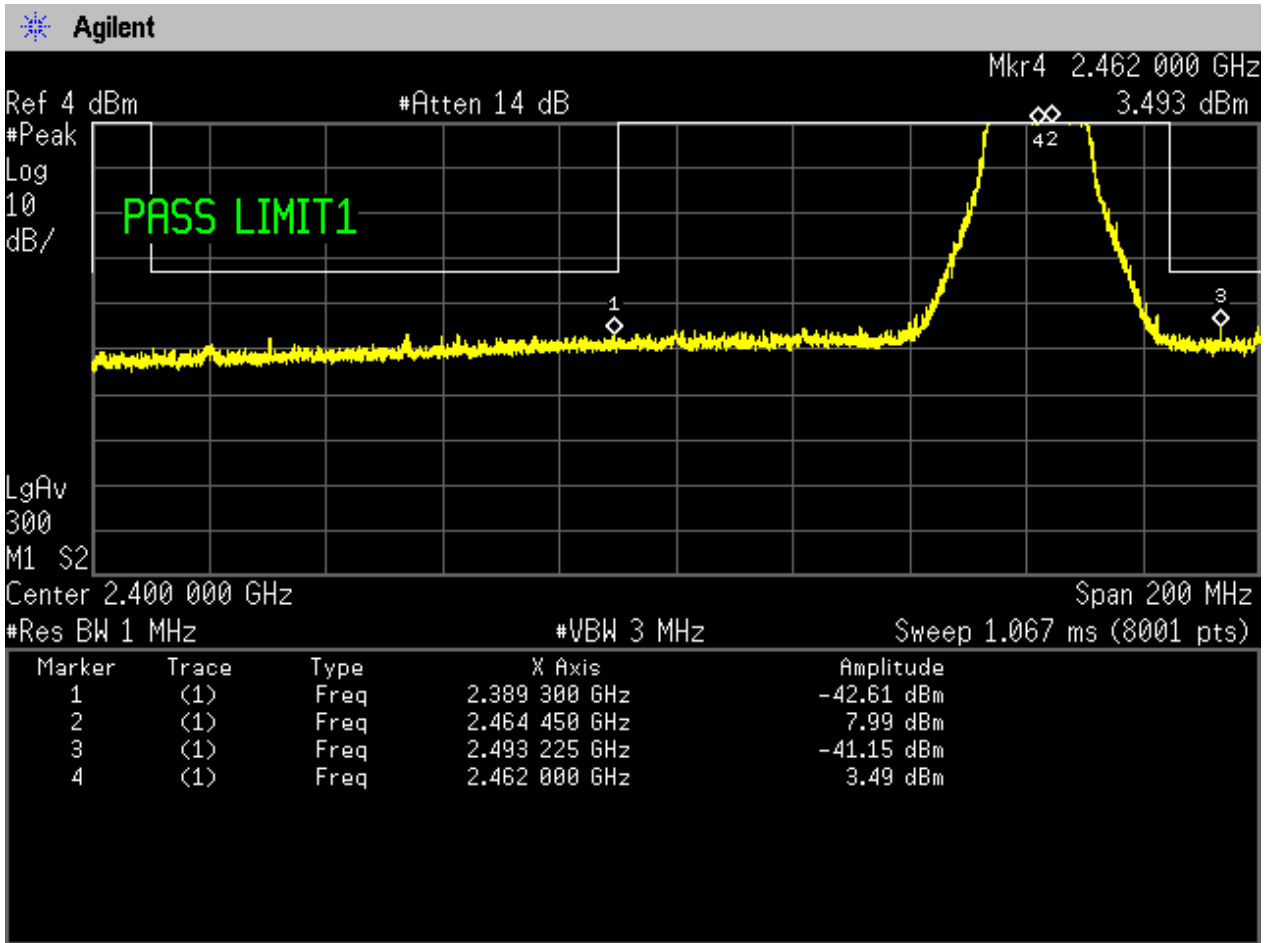


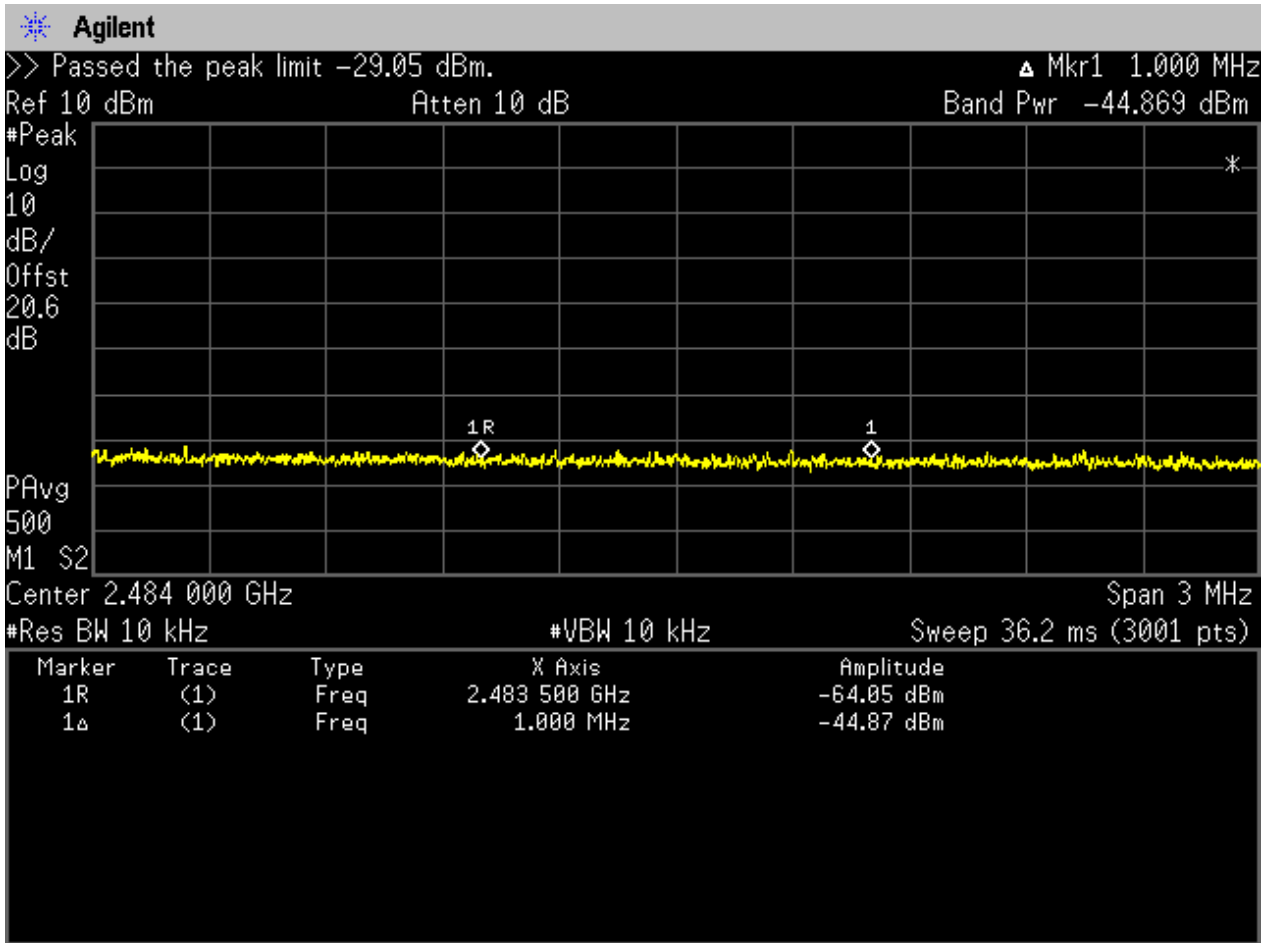


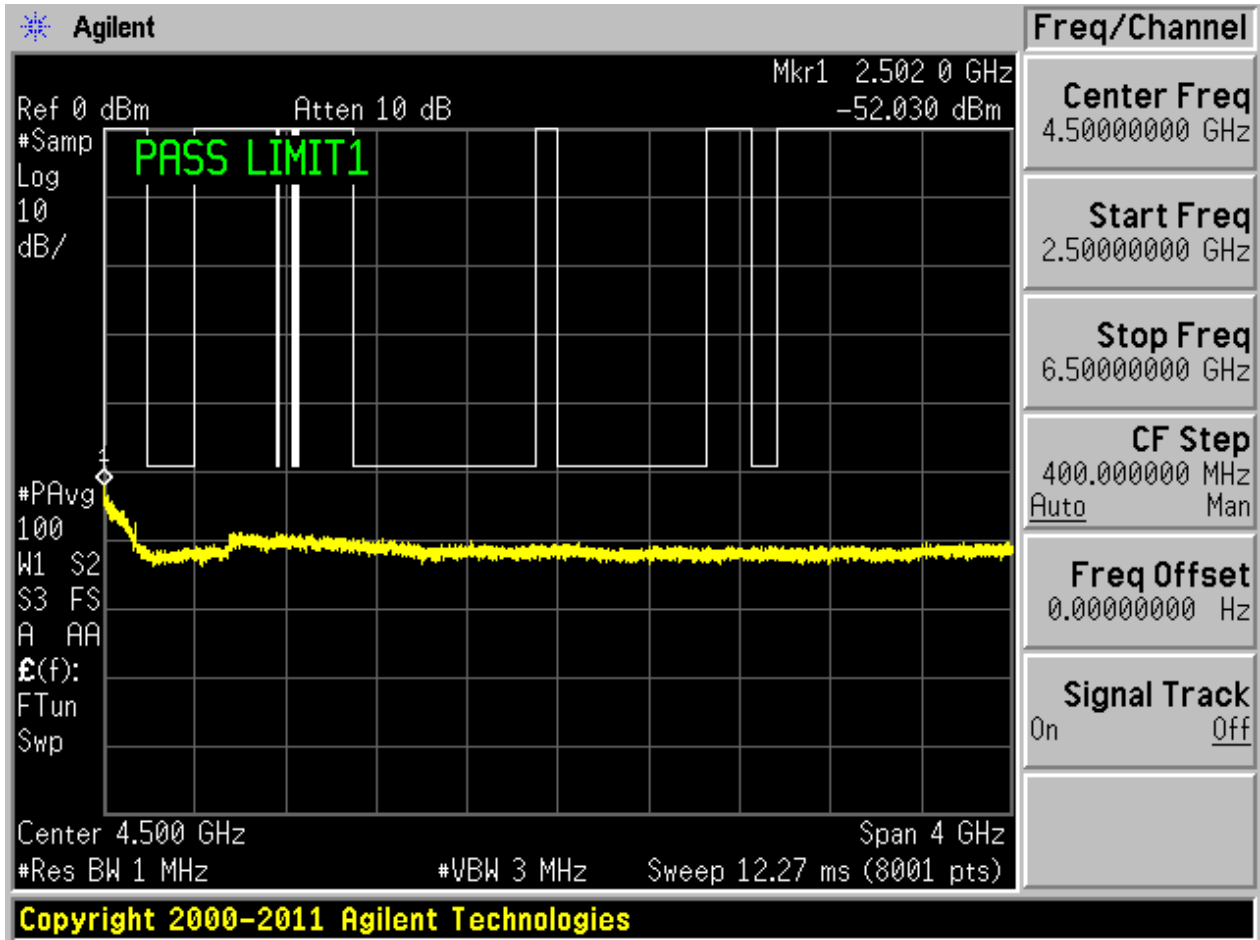


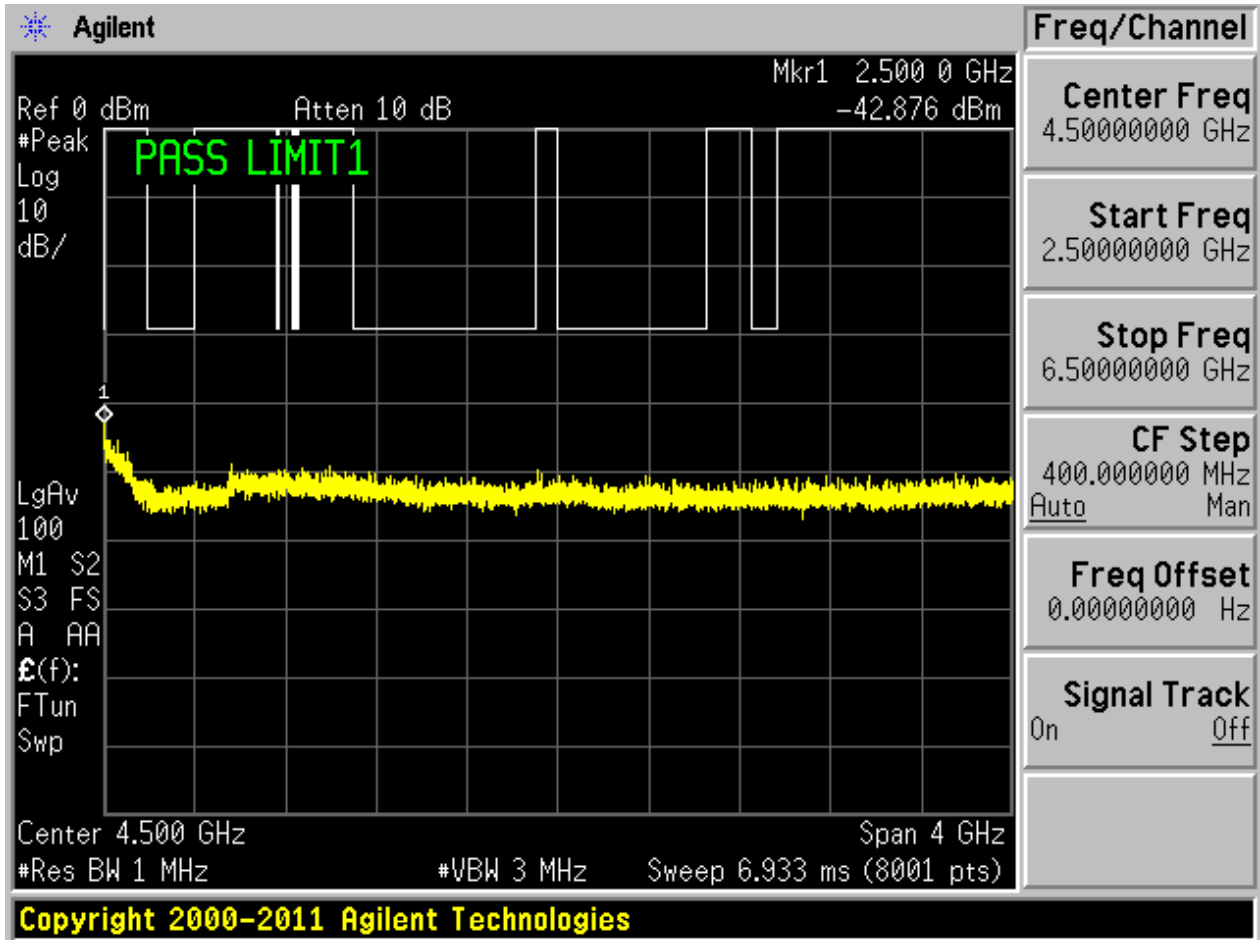


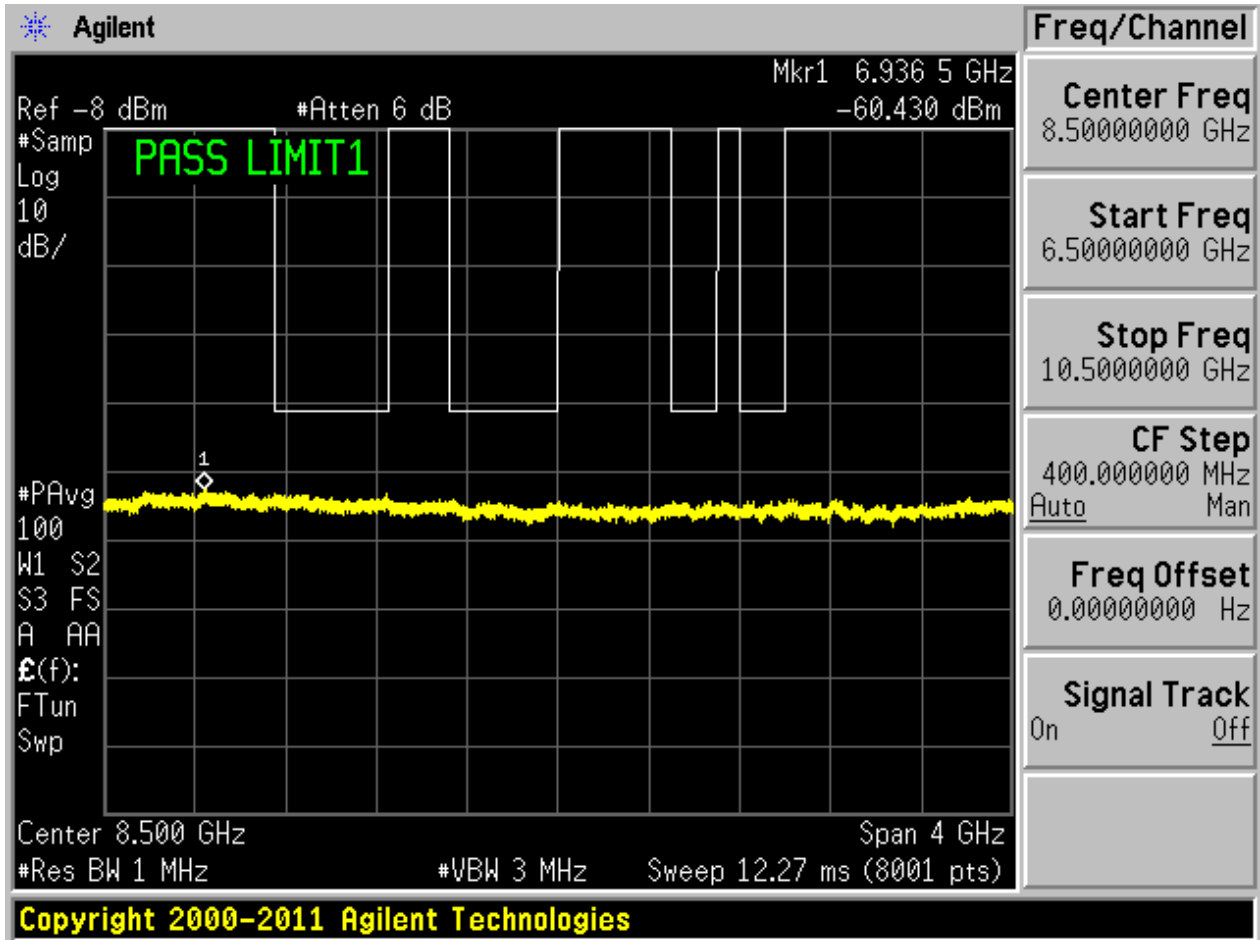


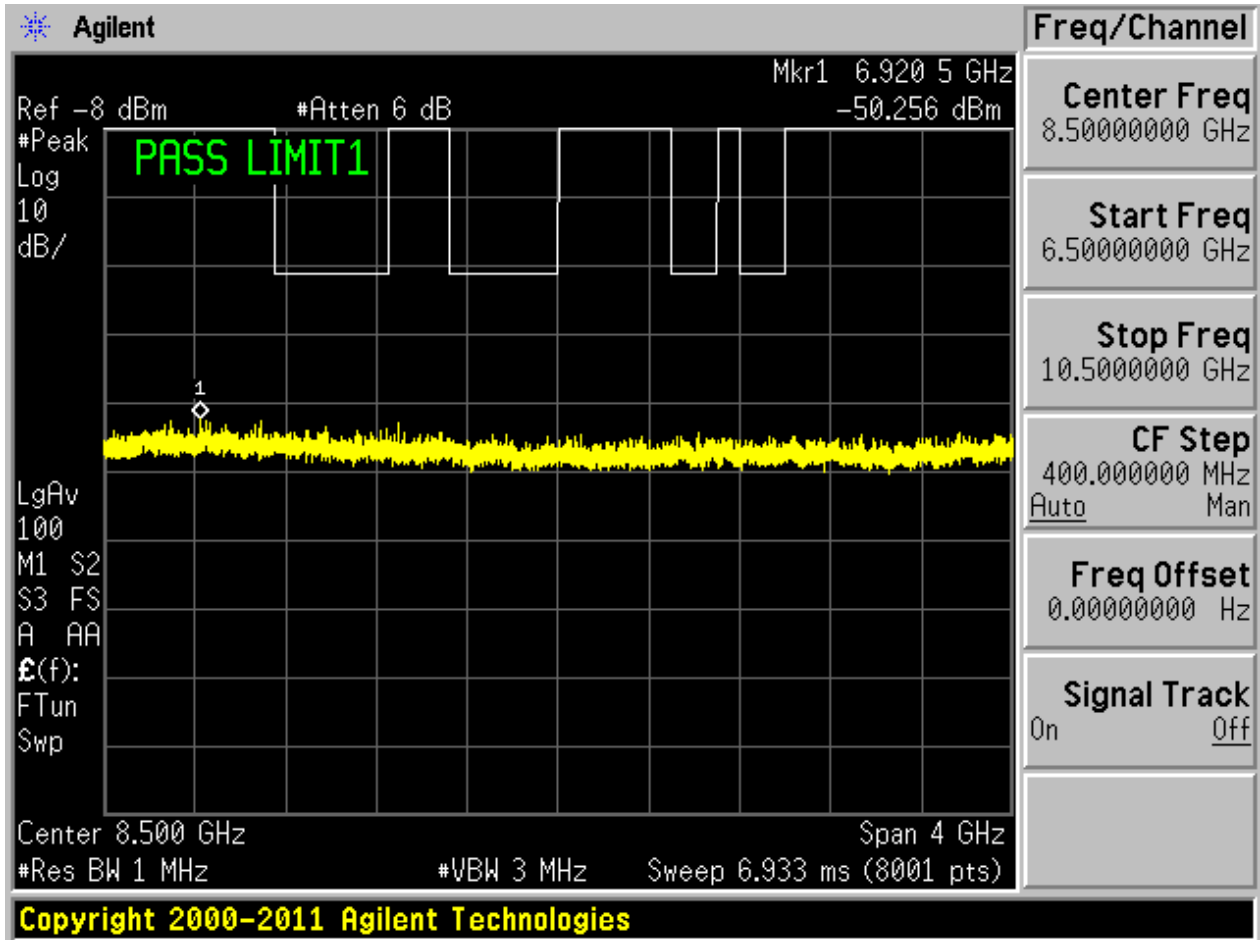


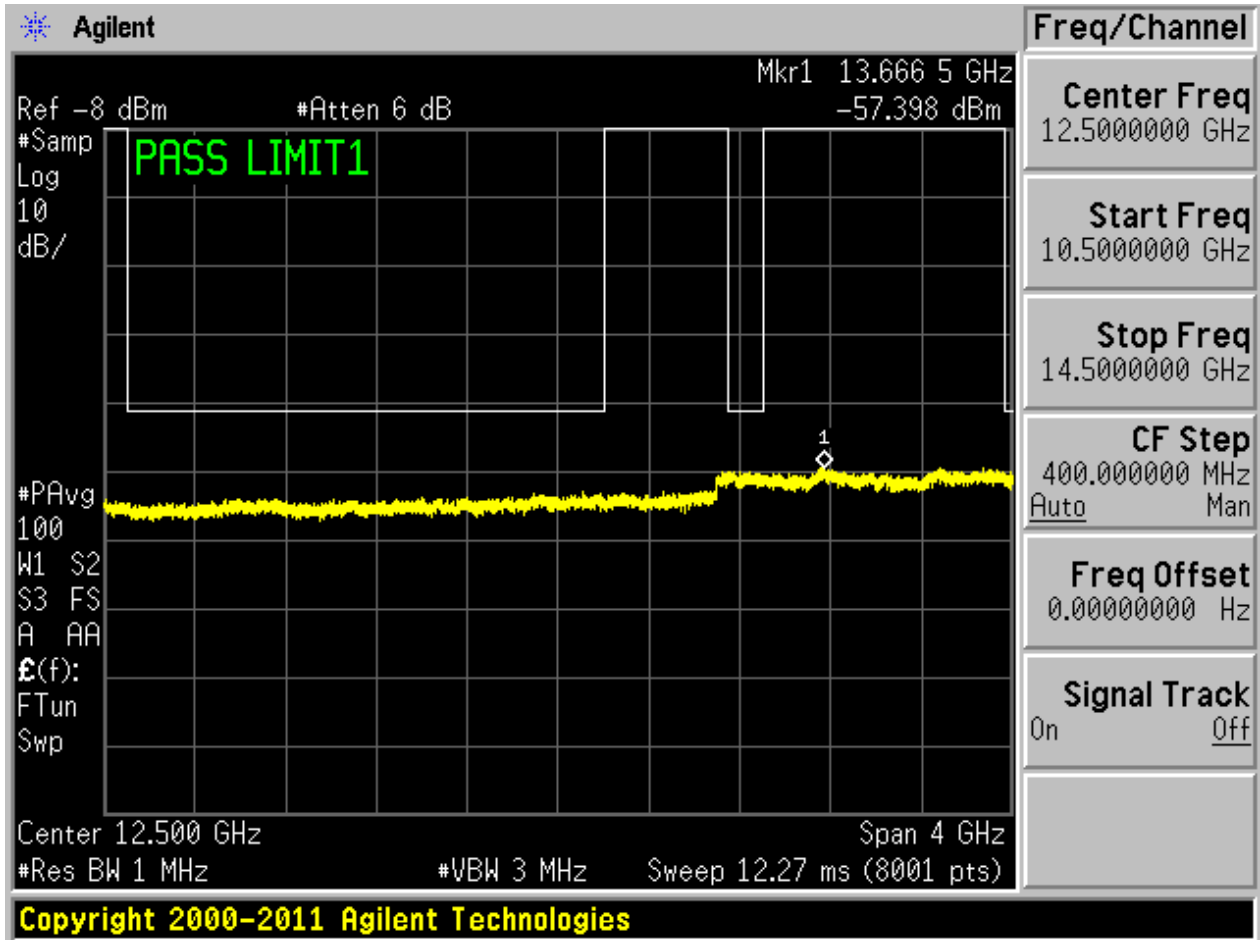


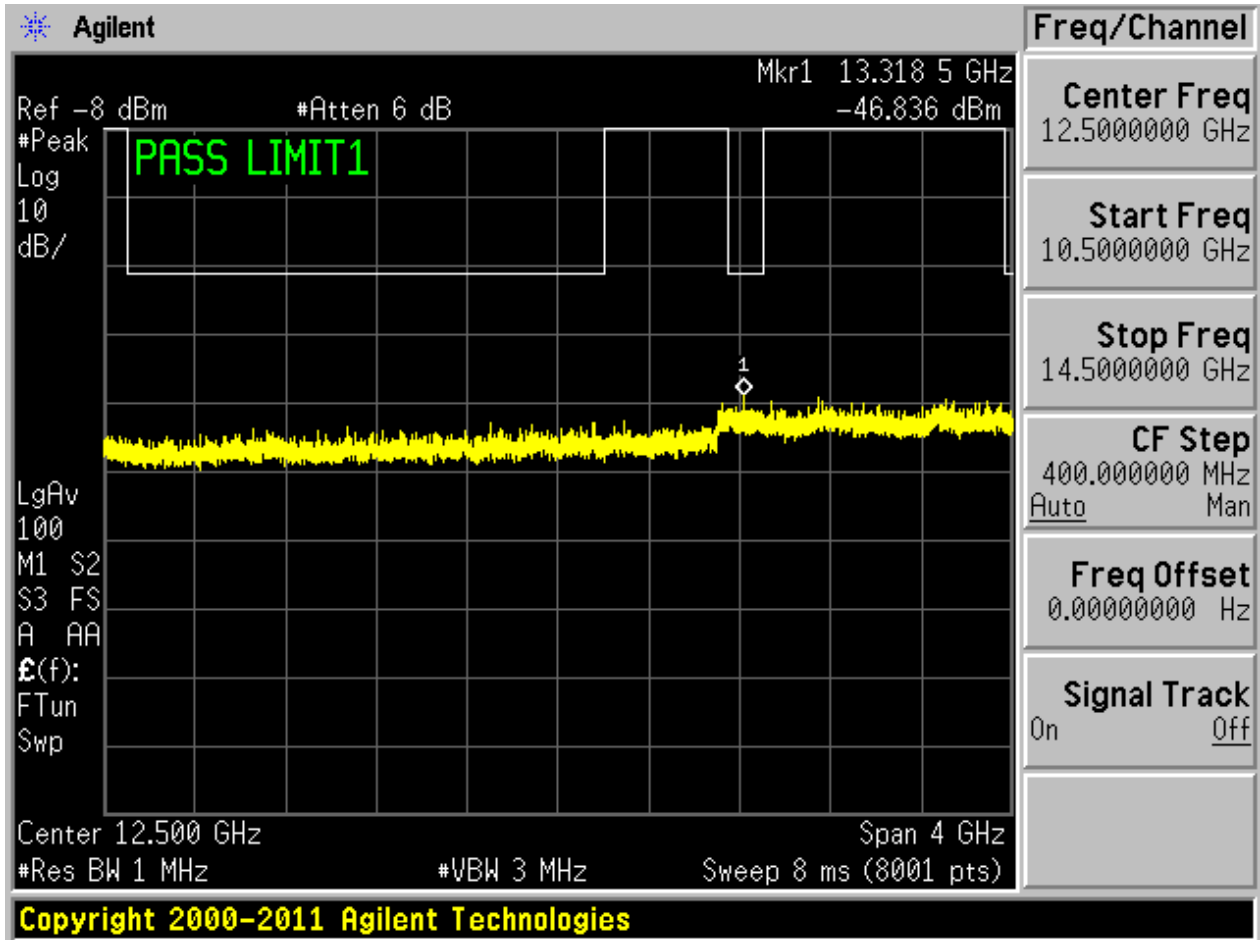


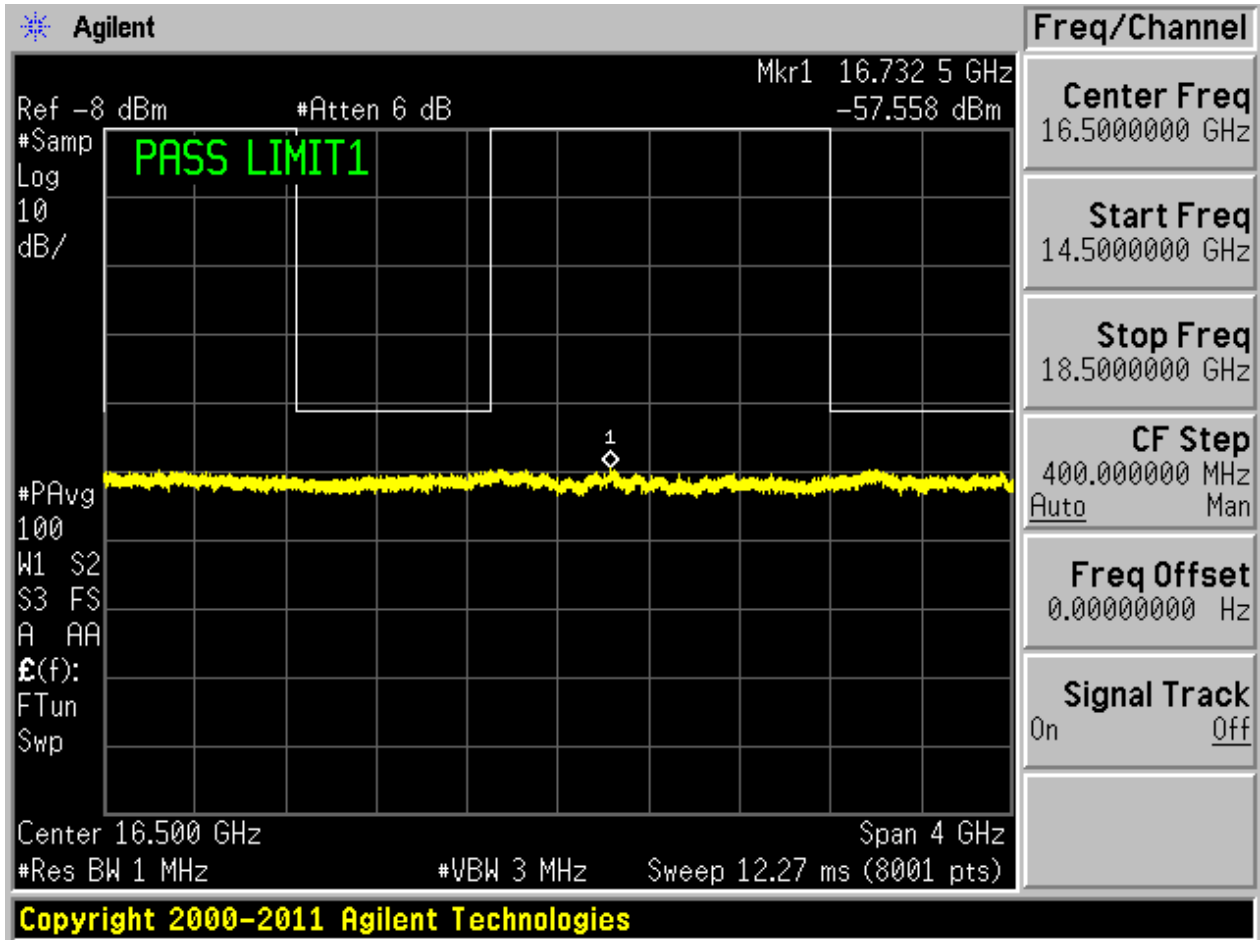


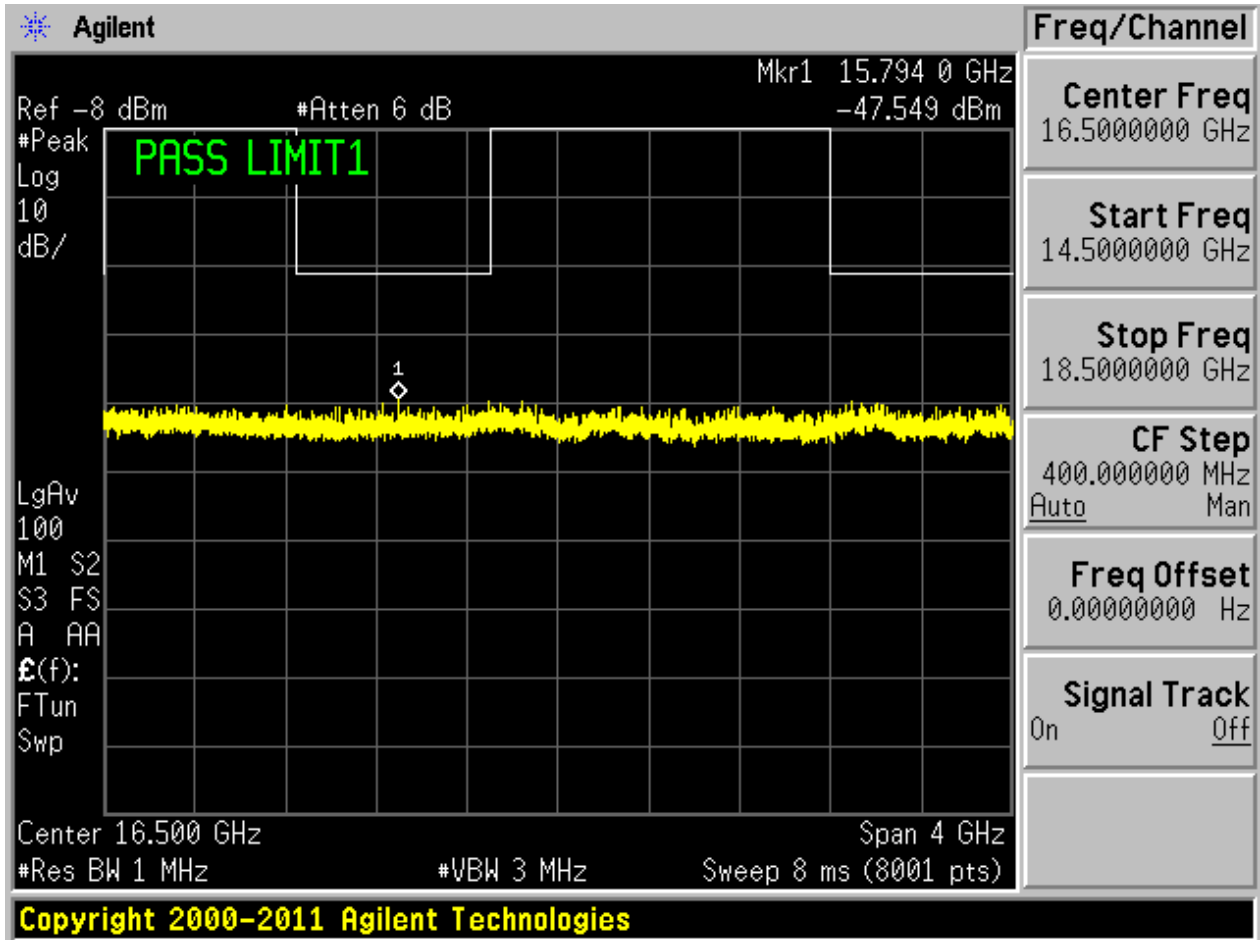


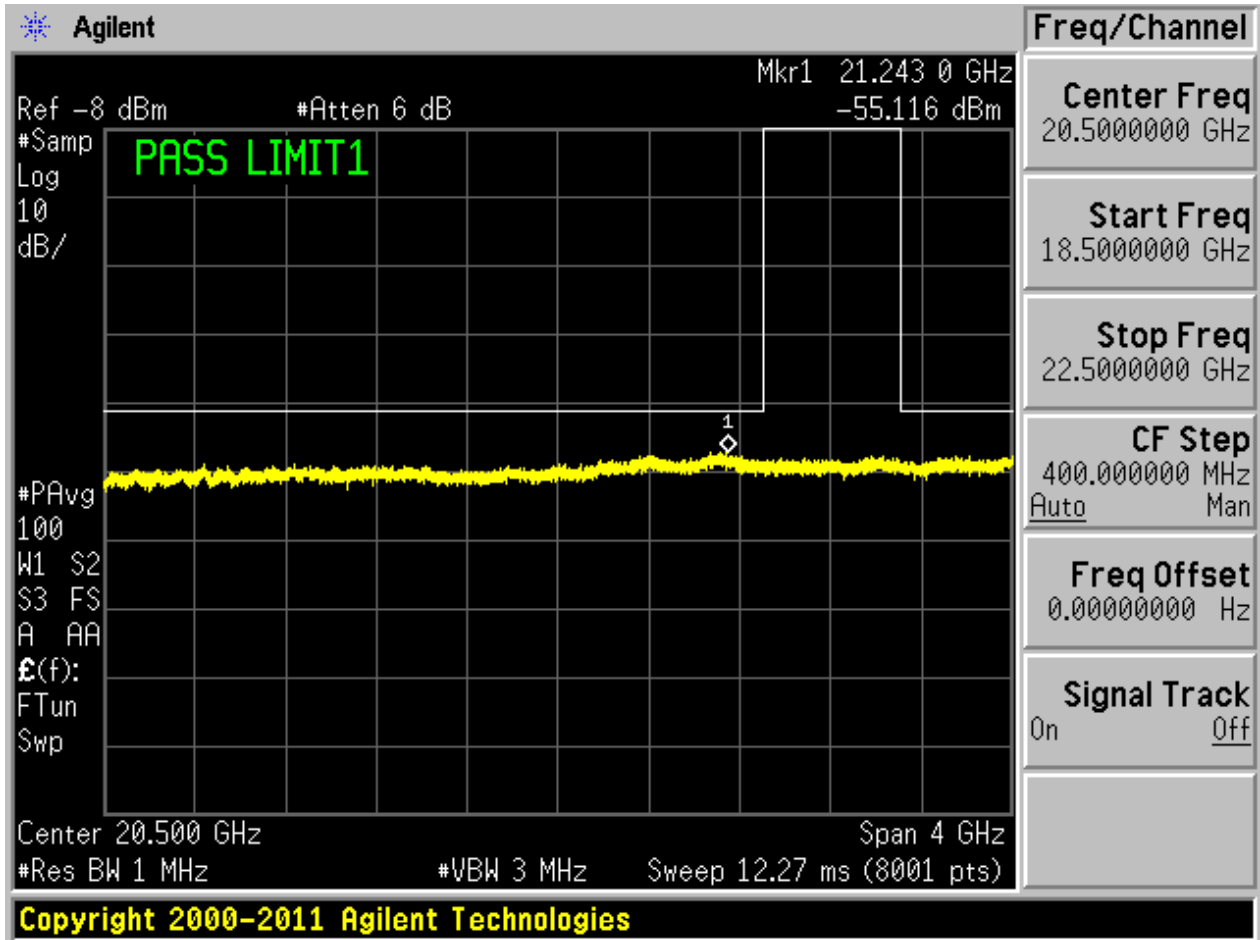


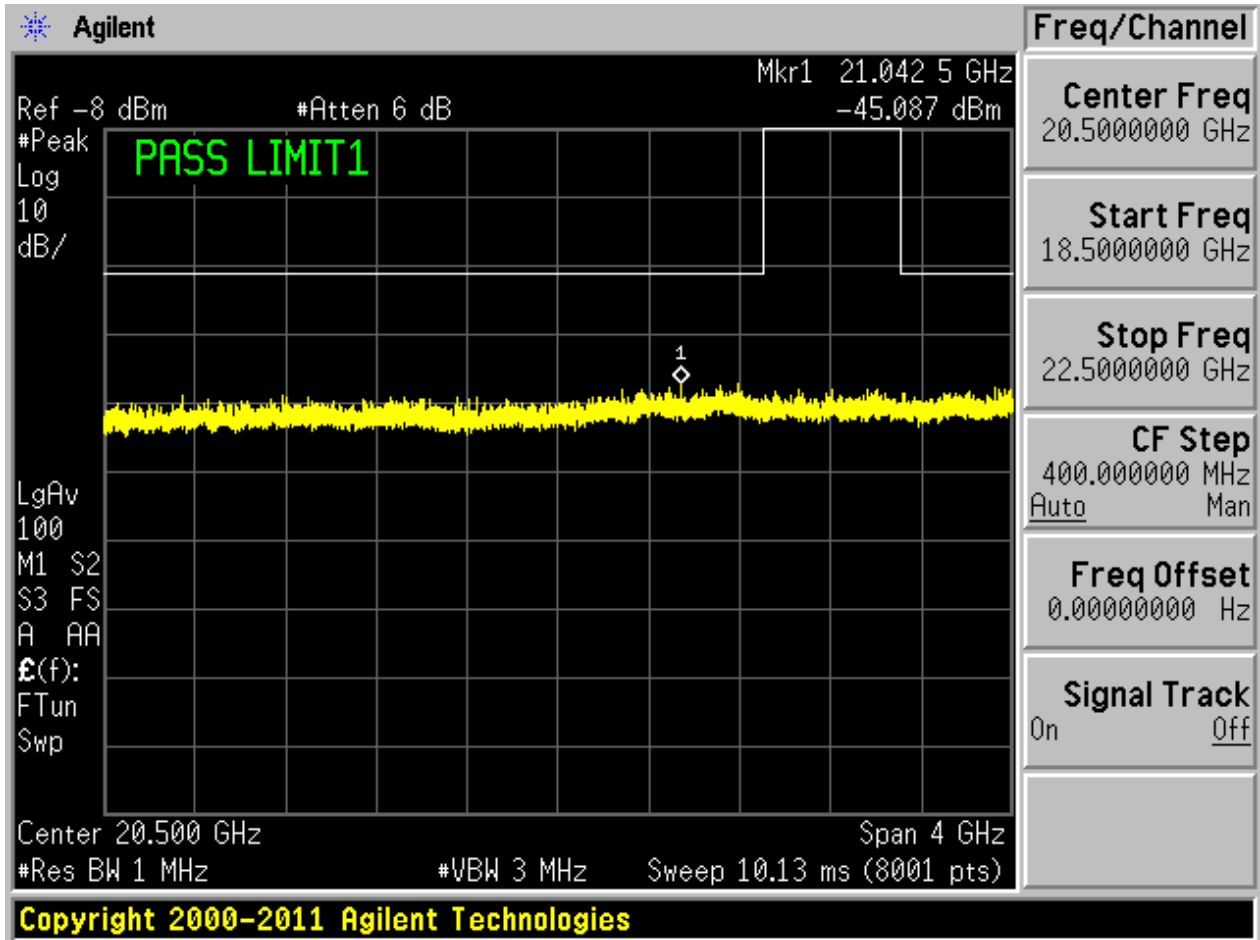


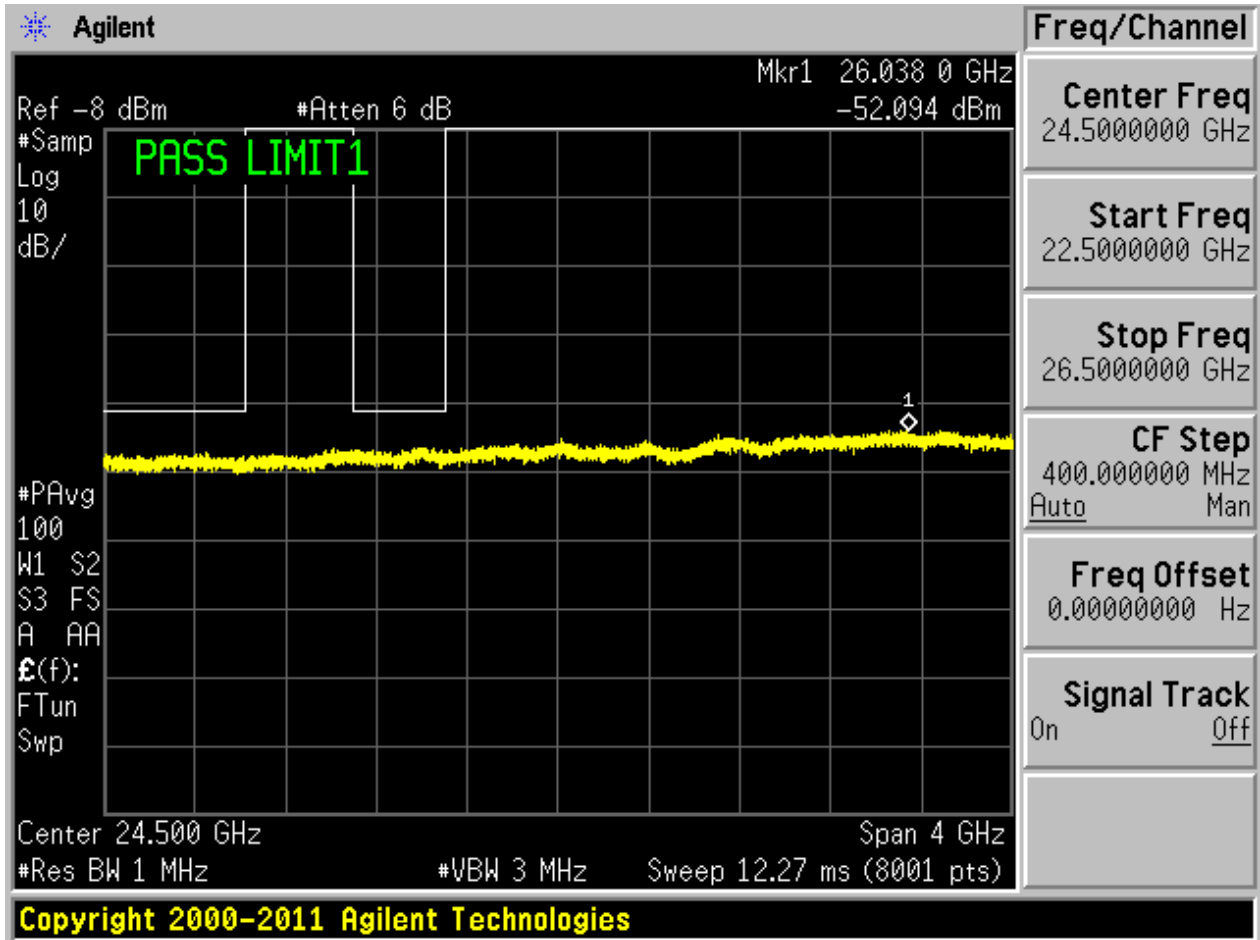


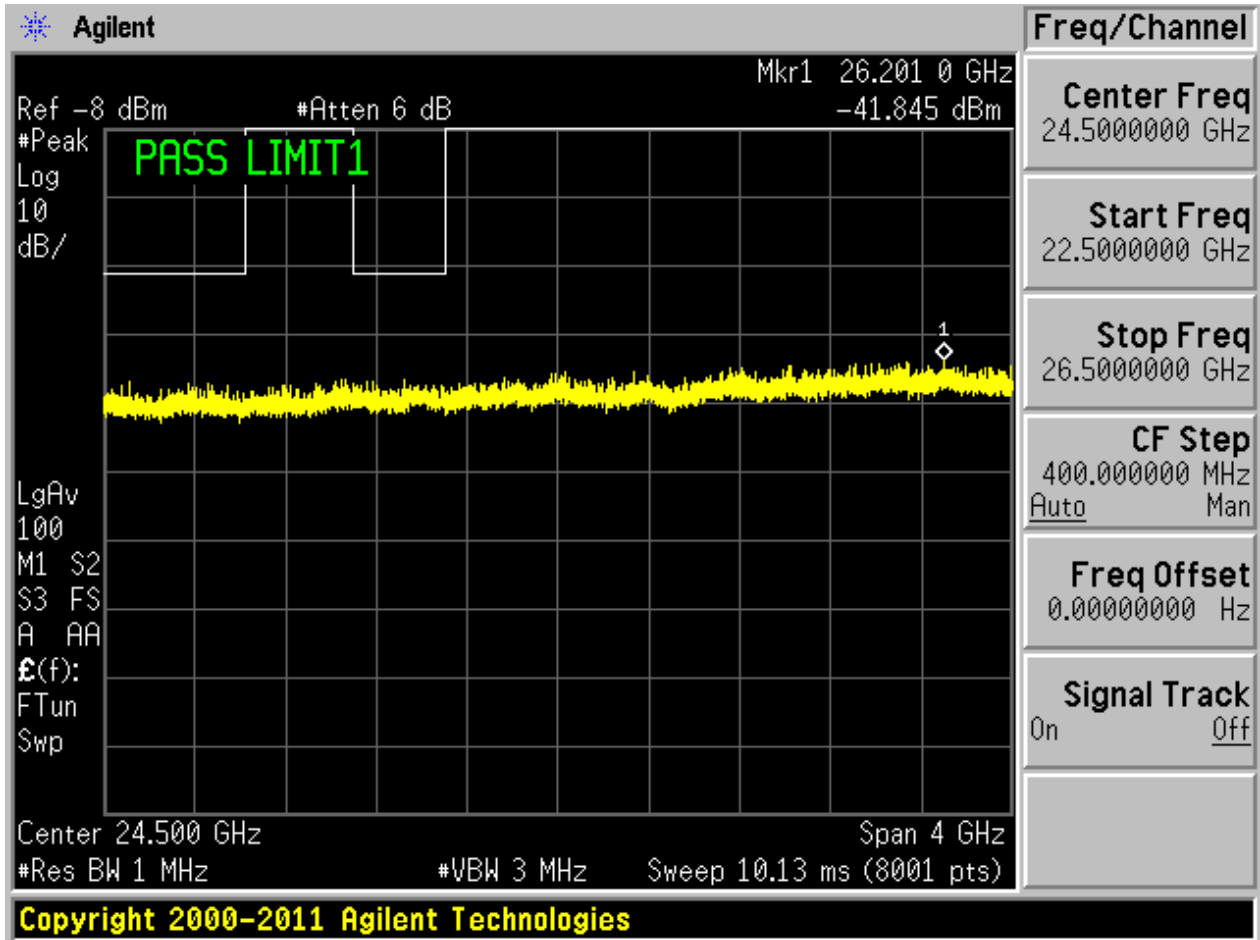












2.27.4 Trace#sum (if needed for final judgment)

(Not applicable)



Appendix F.2: Unwanted Emissions into Restricted Frequency Bands (Radiated)



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 “1 GHz to 3 GHz”,
- (Part 3): Test range of “3 GHz to 18 GHz”, and
- (Part 4): Test range of “18 GHz to 26.5 GHz”.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at all chains to get a final result, due to the radiated measurement method. The result is the directly measured sum of each chain.

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”.

1 Result Table

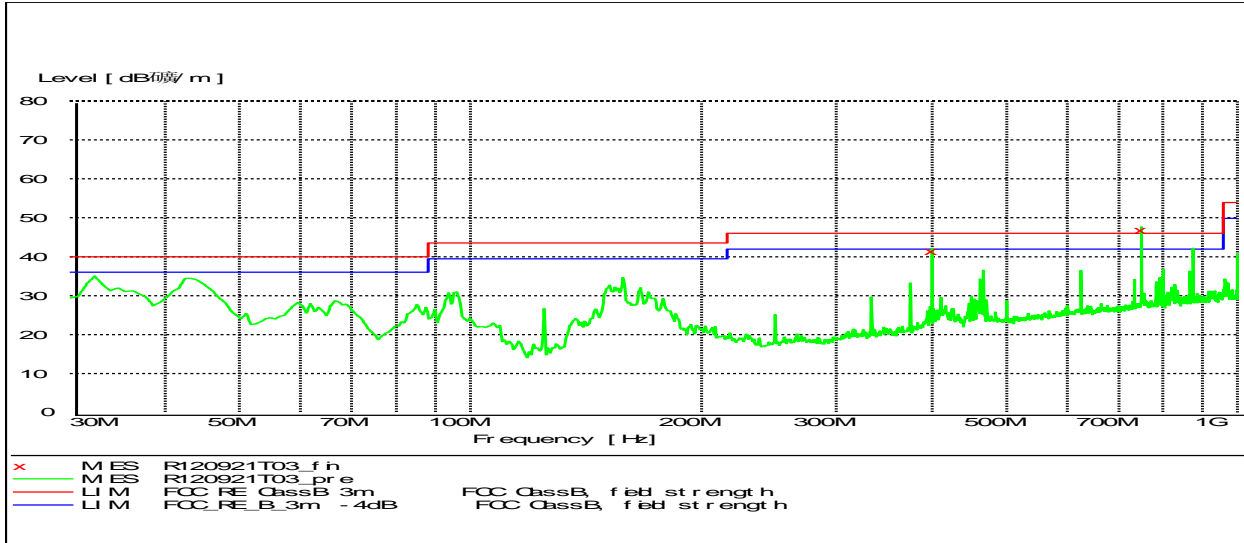
EUT Placement	Test Range	EUT Conf.	Emissions	Verdict
Flatwise	30 MHz to 1 GHz	Worst Case (11B/1_T@2)	< Limit	Pass
	1 GHz to 3 GHz	Worse Case (11B/1_B@2)	< Limit	Pass
		Worse Case (11B/1_M@2)	< Limit	Pass
		Worse Case (11B/1_T@2)	< Limit	Pass
		Worse Case (11B/1_T@1+2)	< Limit	Pass
		Worse Case (11N20/0_B@2)	< Limit	Pass
	3 GHz to 18 GHz	Worst Case (11B/1_T@2)	< Limit	Pass
	18 GHz to 26.5 GHz	Worst Case (11B/1_M@2)	< Limit	Pass

2 Result Plot

2.1 EUT Placement: Flatwise

2.1.1 Test range of "30 MHz to 1 GHz"

2.1.1.1 Worst Case (11B/1_T@2)



MEASUREMENT RESULT: "R120921T03_fin"

2012-9-21 8:38

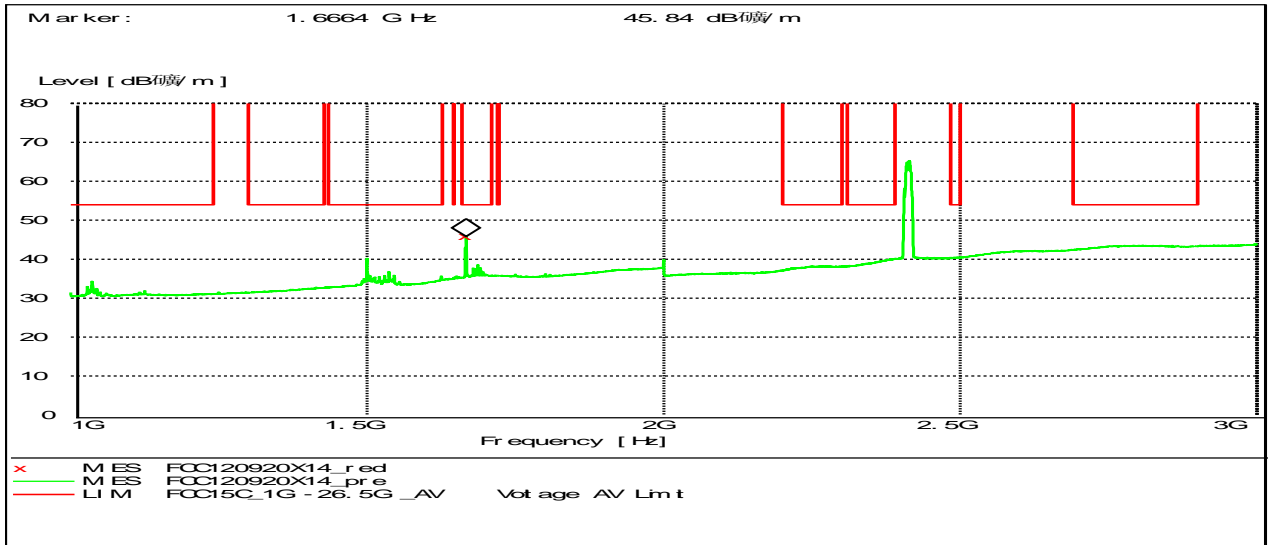
Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBµV/m	dB	dBµV/m	dB	dB	cm	deg	deg
400.020000	41.50	-6.1	46.0	4.5	QP	100.0	284.00	VERTICAL
750.000000	46.80	-0.7	46.0	-0.8	QP	100.0	289.00	VERTICAL (*)

NOTE: though the level exceeds the limit in plot, this frequency is exempted from the limits requirements for restricted bands.

2.1.2 Test range of "1 GHz to 3 GHz"

2.1.2.1 Worse Case (11B/1_B@2)

2.1.2.1.1 AV

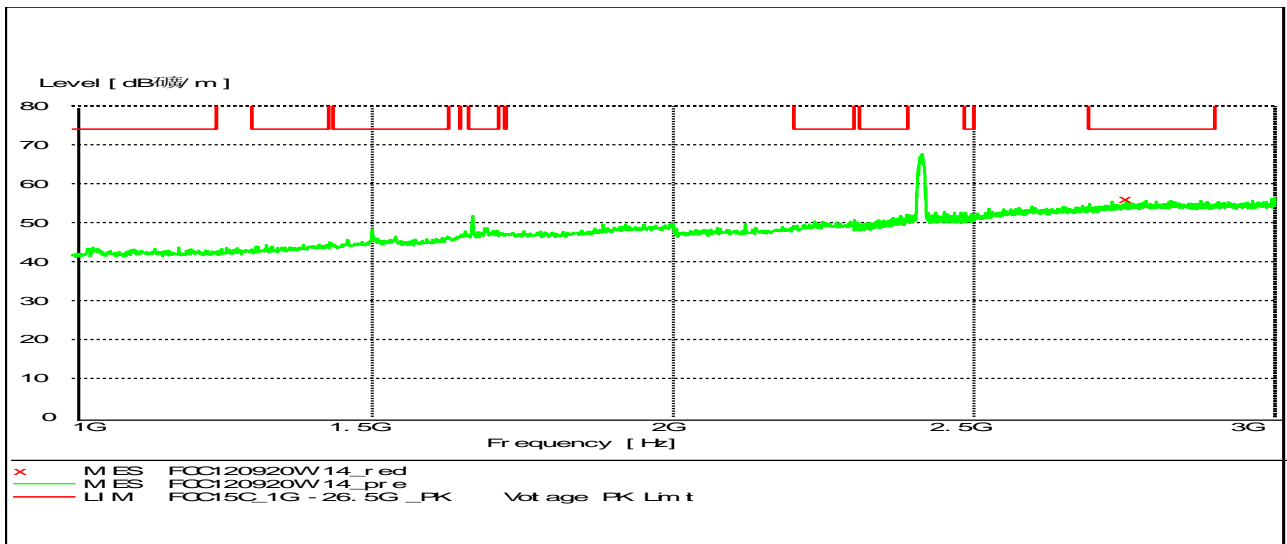


MEASUREMENT RESULT: "FCC120920X14_red"

2012-9-21 4:33

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det. dB	Height cm	Azimuth deg	Polarization
1666.800000	46.00	-3.3	54.0	8.0	---	100.0	270.00	HORIZONTAL

2.1.2.1.2 PK



MEASUREMENT RESULT: "FCC120920W14_red"

2012-9-21 4:44

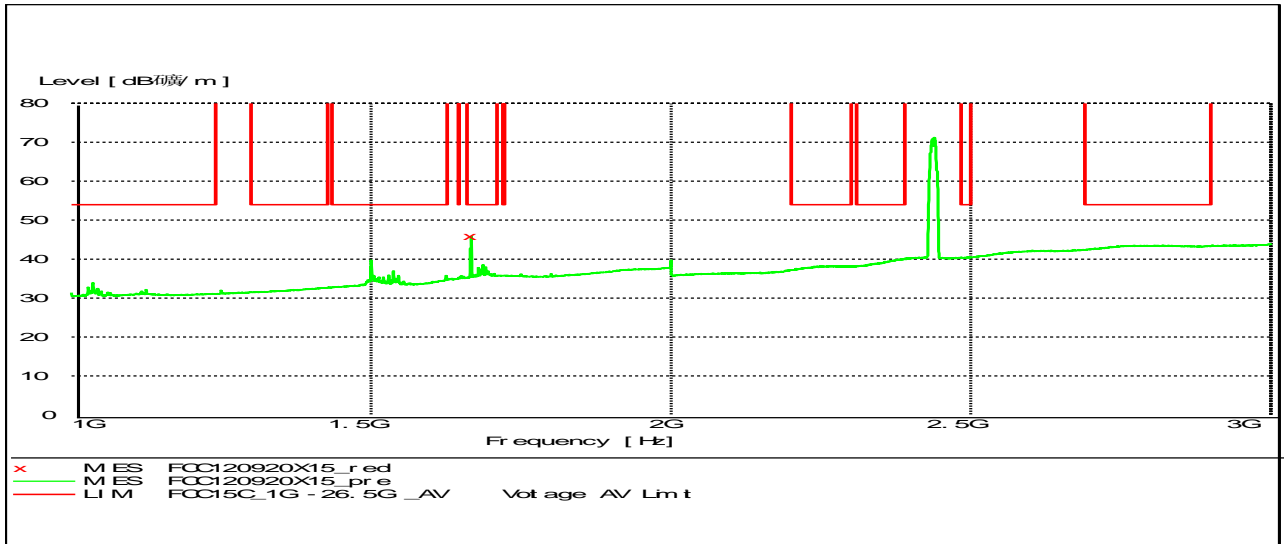
Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
-----------	-------	--------	-------	--------	------	--------	---------	--------------



MHz	dBμV/m	dB	dBμV/m	dB		cm	deg
2752.800000	55.90	3.0	74.0	18.1	---	100.0	90.00 HORIZONTAL

2.1.2.2 Worse Case (11B/1_M@2)

2.1.2.2.1 AV

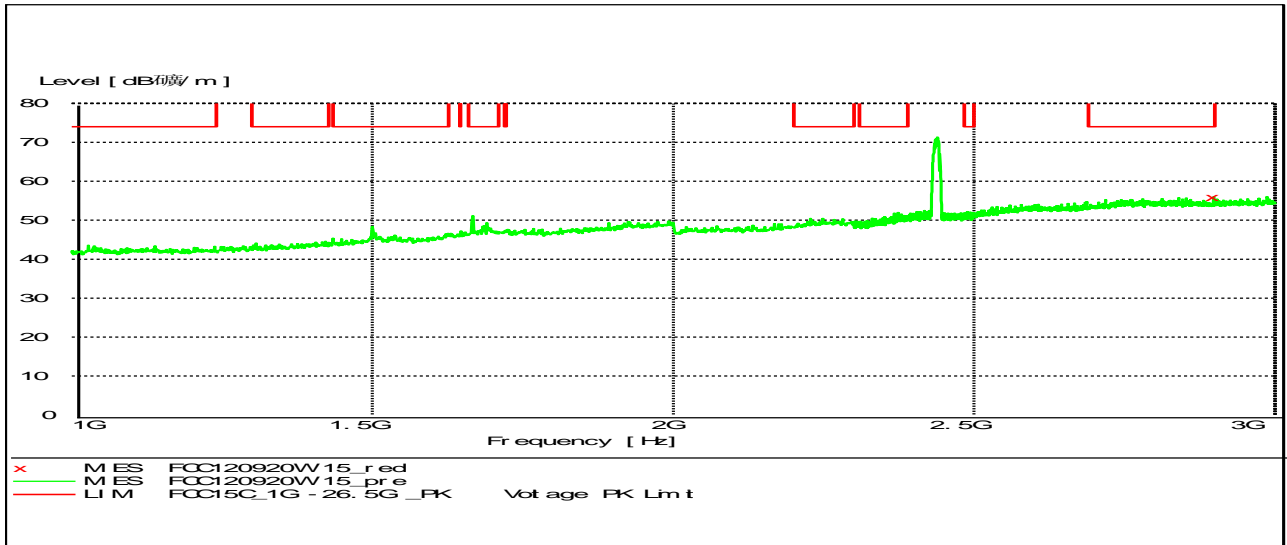


MEASUREMENT RESULT: "FCC120920X15_red"

2012-9-21 5:03

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB	dB	cm	deg	deg
1666.800000	45.90	-3.3	54.0	8.1	---	100.0	270.00	HORIZONTAL

2.1.2.2.2 PK



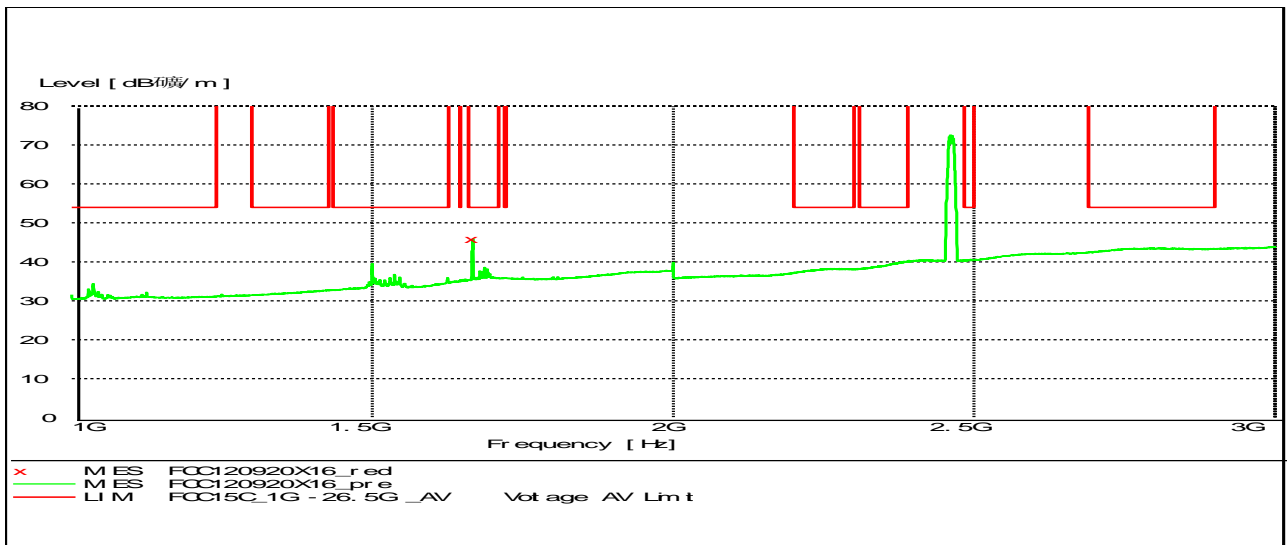
MEASUREMENT RESULT: "FCC120920W15_red"

2012-9-21 4:55

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB	dB	cm	cm	deg
2898.400000	56.00	3.5	74.0	18.0	---	100.0	270.00	VERTICAL

2.1.2.3 Worse Case (11B/1_T@2)

2.1.2.3.1 AV



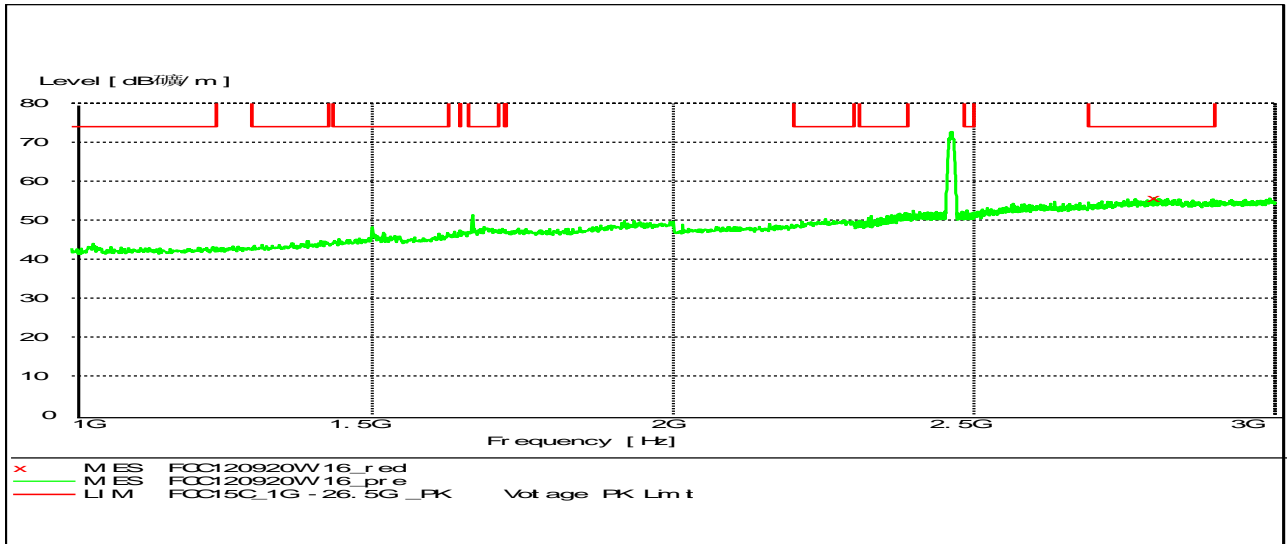
MEASUREMENT RESULT: "FCC120920X16_red"



2012-9-21 5:11

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Det. dB	Height	Azimuth cm	Polarization deg
1666.800000	45.90	-3.3	54.0	8.1	---	100.0	270.00	HORIZONTAL

2.1.2.3.2 PK



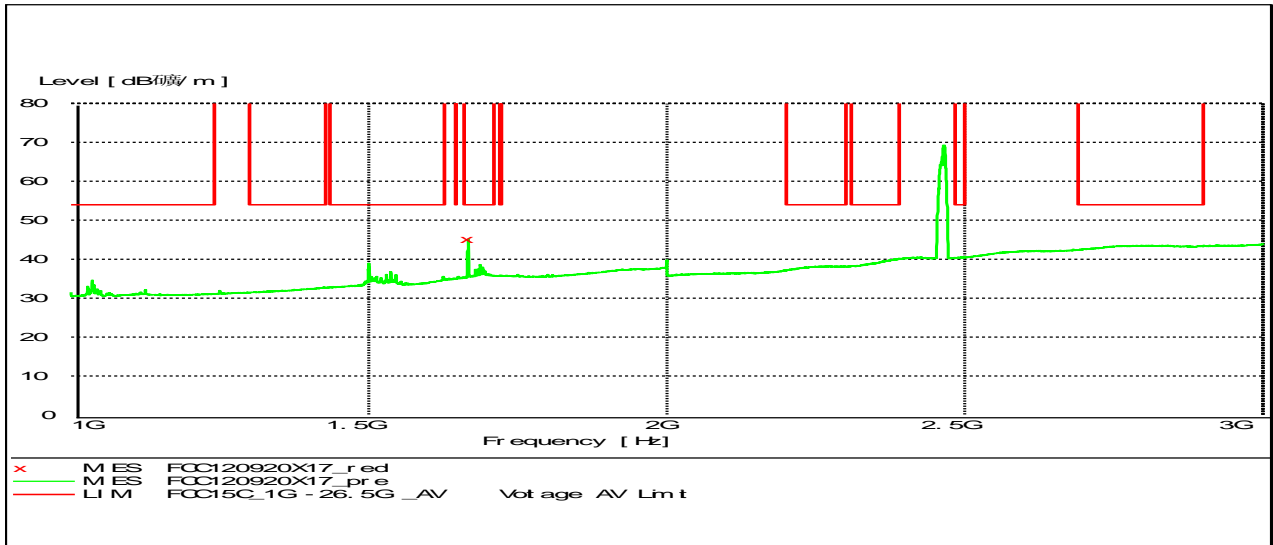
MEASUREMENT RESULT: "FCC120920W16_red"

2012-9-21 5:22

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Det. dB	Height	Azimuth cm	Polarization deg
2800.000000	55.80	3.2	74.0	18.2	---	100.0	180.00	VERTICAL

2.1.2.4 Worse Case (11B/1_T@1+2)

2.1.2.4.1 AV

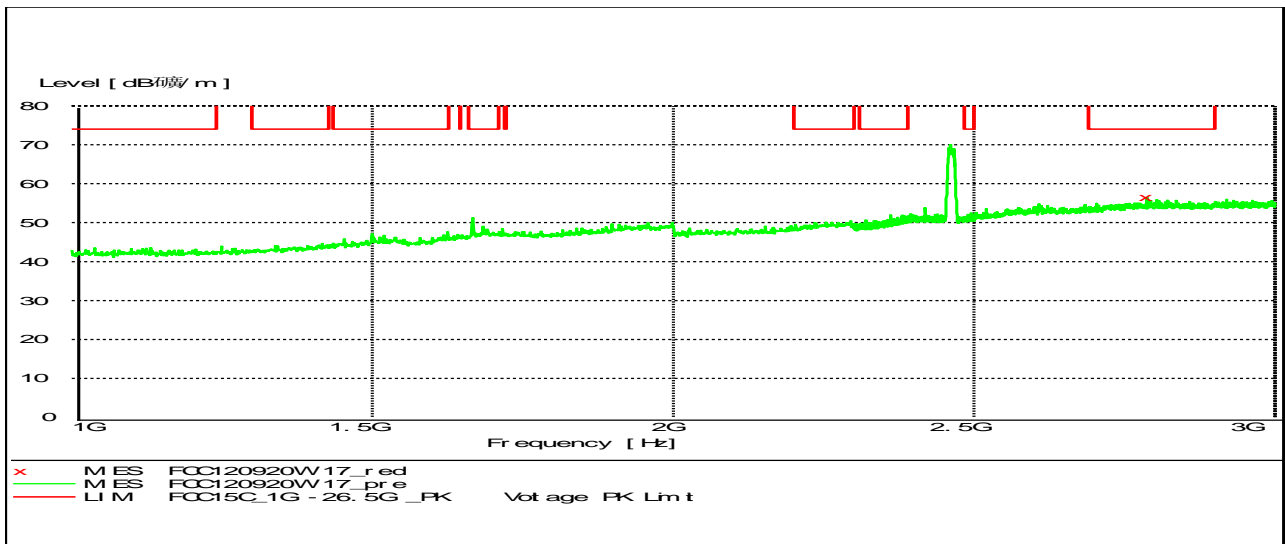


MEASUREMENT RESULT: "FCC120920X17_red"

2012-9-21 5:42

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det. dB	Height cm	Azimuth cm	Polarization deg
1666.800000	45.20	-3.3	54.0	8.8	---	100.0	270.00	HORIZONTAL

2.1.2.4.2 PK



MEASUREMENT RESULT: "FCC120920W17_red"

2012-9-21 5:35

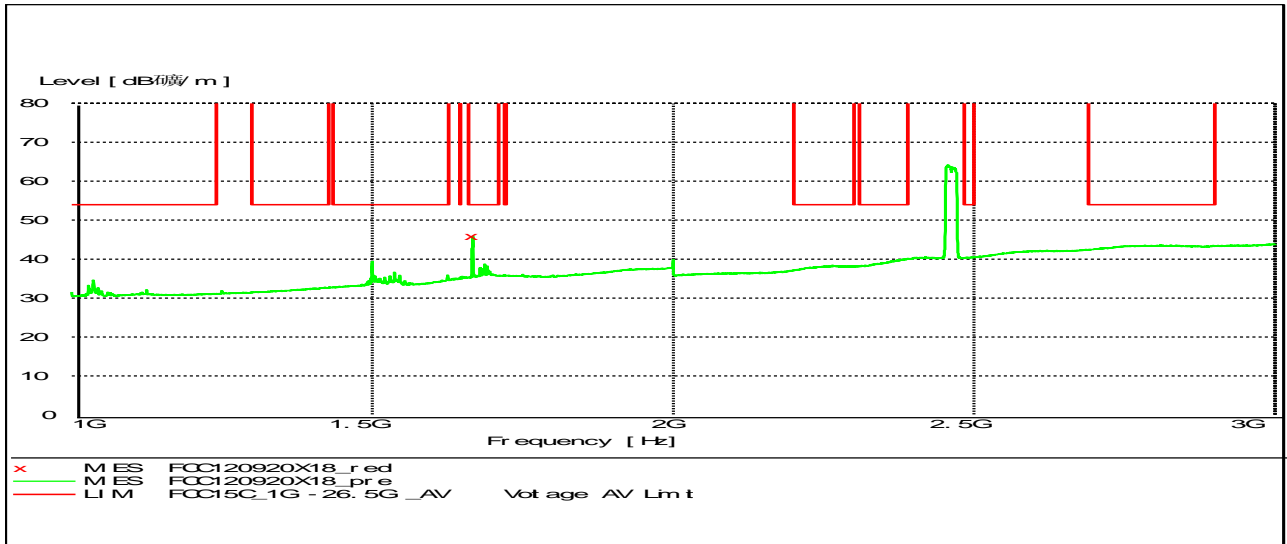
Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
-----------	-------	--------	-------	--------	------	--------	---------	--------------



MHz	dBμV/m	dB	dBμV/m	dB		cm	deg
2787.200000	56.50	3.1	74.0	17.5	---	100.0	270.00 HORIZONTAL

2.1.2.5 Worse Case (11N20/0_B@2)

2.1.2.5.1 AV

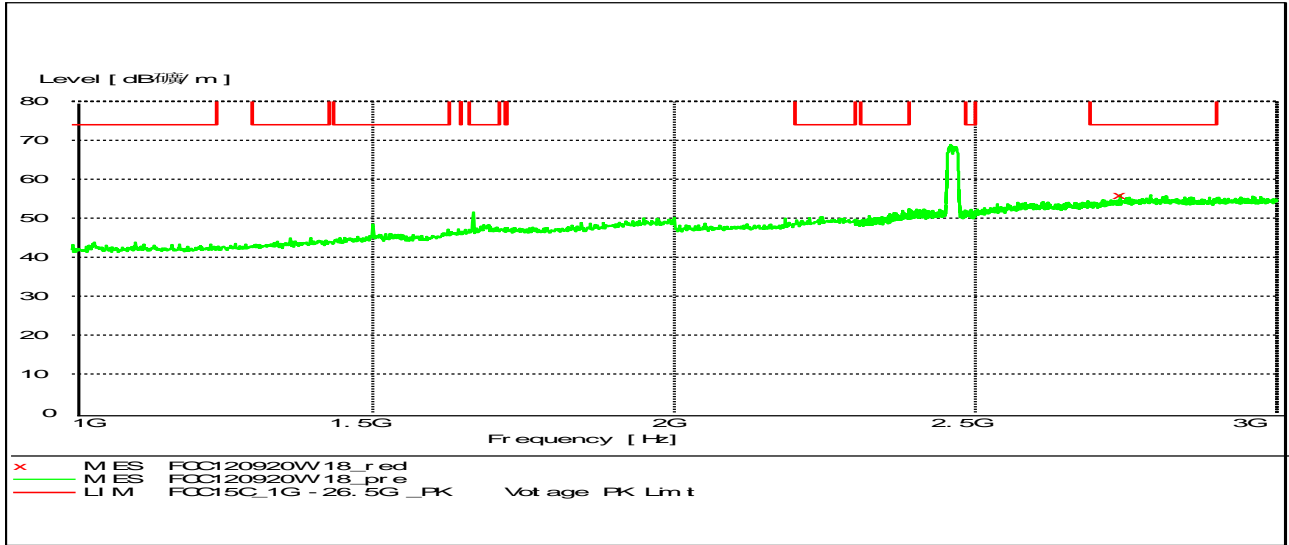


MEASUREMENT RESULT: "FCC120920X18_red"

2012-9-21 5:55

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB	dB	cm	deg	deg
1666.800000	45.90	-3.3	54.0	8.1	---	100.0	270.00	HORIZONTAL

2.1.2.5.2 PK



MEASUREMENT RESULT: "FCC120920W18_red"

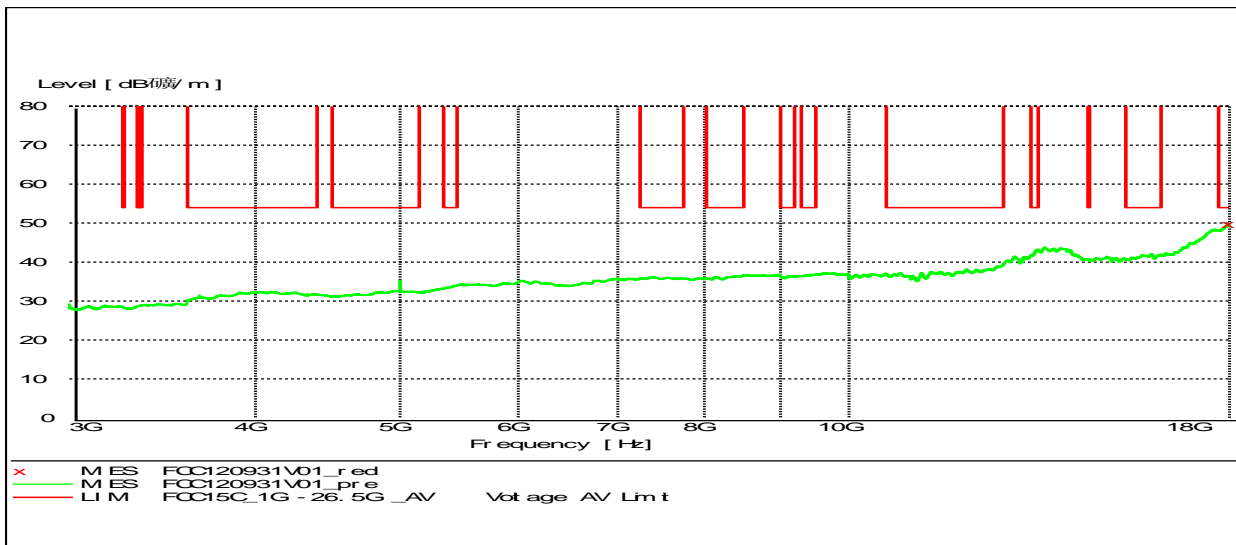
2012-9-21 6:06

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB	dB	cm	cm	deg
2740.400000	56.00	2.9	74.0	18.0	---	100.0	270.00	VERTICAL

2.1.3 Test range of "3 GHz to 18 GHz"

2.1.3.1 Worst Case (11B/1_T@2)

2.1.3.1.1 AV



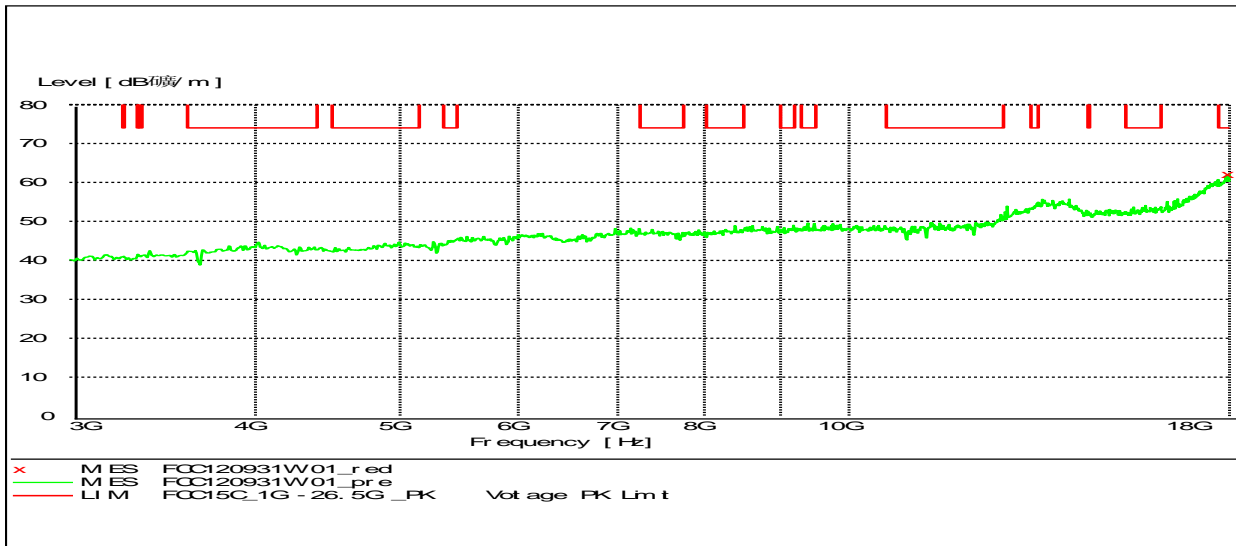


MEASUREMENT RESULT: "FCC120931V01_red"

2012-9-21 6:46

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Det.	Height cm	Azimuth cm	Polarization deg
17997.600000	49.80	29.5	54.0	4.2	---	200.0	270.00	HORIZONTAL

2.1.3.1.2 PK



MEASUREMENT RESULT: "FCC120931W01_red"

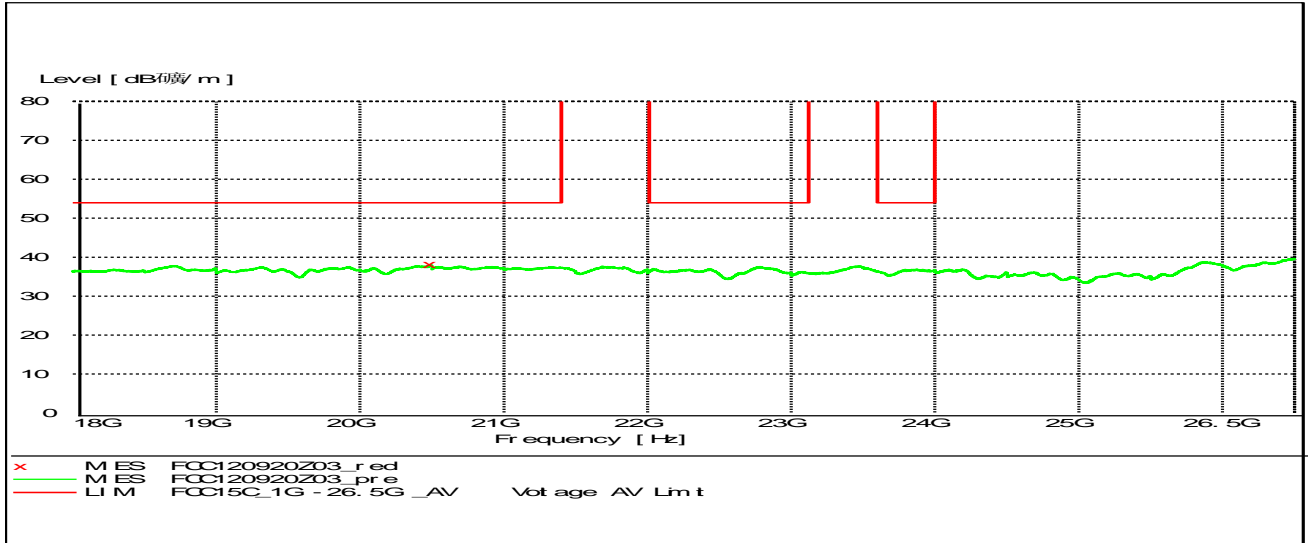
2012-9-21 6:33

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Det.	Height cm	Azimuth cm	Polarization deg
17988.000000	62.20	29.4	74.0	11.8	---	200.0	180.00	VERTICAL

2.1.4 Test range of "18 GHz to 26.5 GHz"

2.1.4.1 Worst Case (11B/1_M@2)

2.1.4.1.1 AV

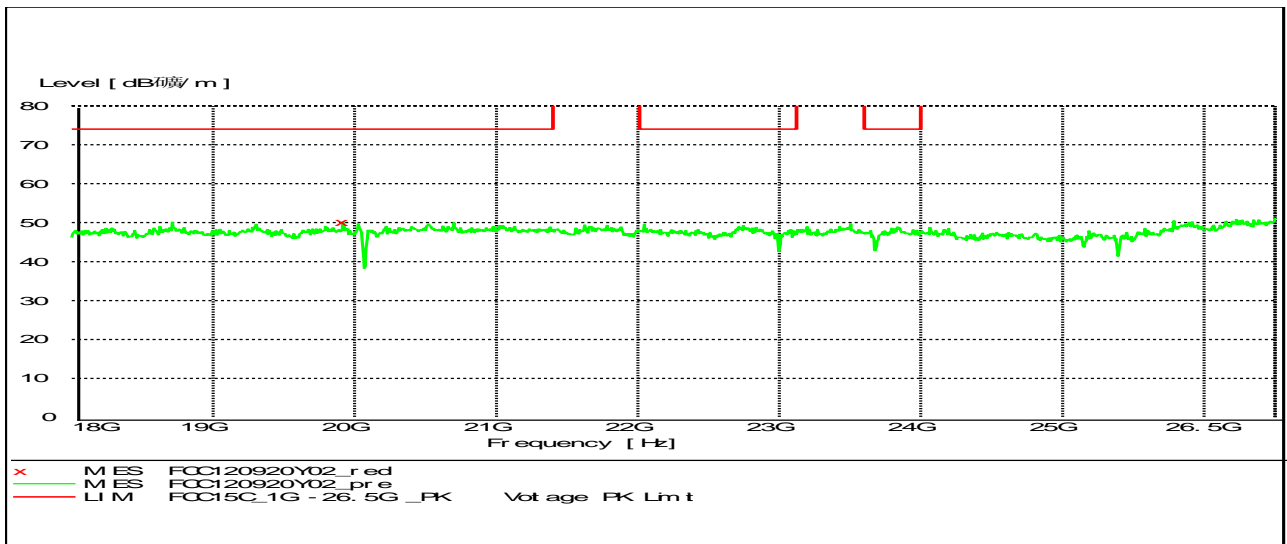


MEASUREMENT RESULT: "FCC120920Z03_red"

2012-9-20 22:20

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB	dB	cm	deg	deg
20492.800000	38.10	29.8	54.0	15.9	---	100.0	0.00	HORIZONTAL

2.1.4.1.2 PK



MEASUREMENT RESULT: "FCC120920Y02_red"

2012-9-20 22:04

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
-----------	-------	--------	-------	--------	------	--------	---------	--------------



MHz	dB μ V/m	dB	dB μ V/m	dB		cm	deg
19917.600000	50.10	29.3	74.0	23.9	---	200.0	0.00 VERTICAL



Appendix G: Receiver Spurious Emissions



The whole testing range is from “30 MHz to 8 GHz (3rd harmonics)” is divided into 2 parts according to the test site settings, which are:

- (Part 1): Test range of “30 MHz to 1 GHz”, and
- (Part 2): Test range of “1 GHz to 8 GHz”.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at all chains to get a final result, due to the radiated measurement method. The result is the directly measured sum of each chain.

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”.

1 Result Table

EUT Placement	Test Range	EUT Conf.	Emissions	Verdict
Flatwise	30 MHz to 1 GHz	11x_RX	< Limit	Pass
	1 GHz to 8 GHz	11x_RX	< Limit	Pass

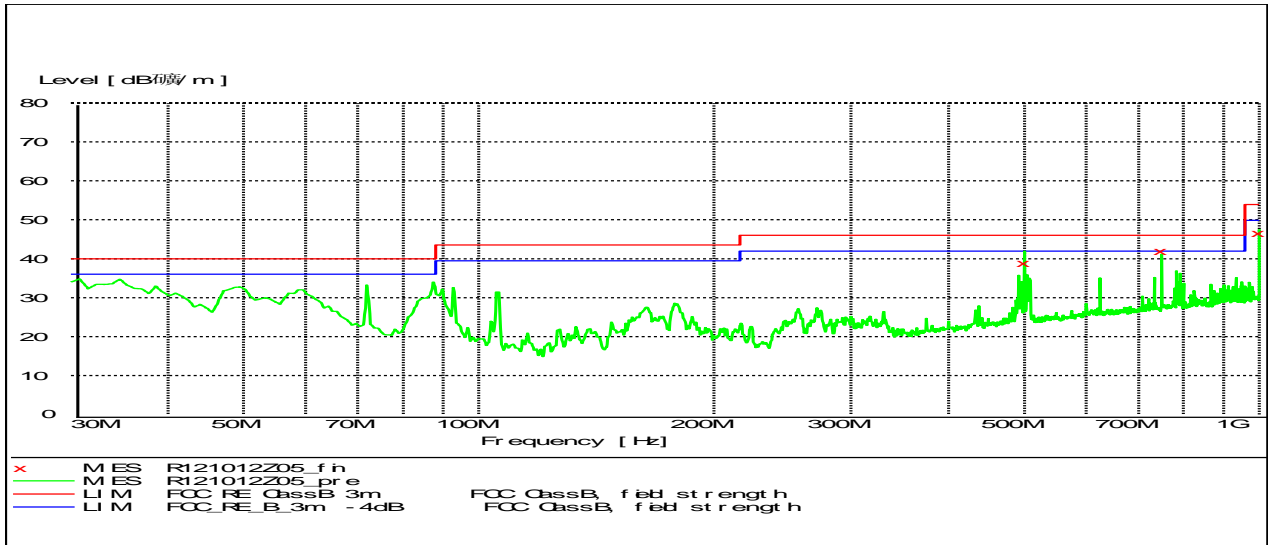


2 Result Plot

2.1 EUT Placement: Flatwise

2.1.1 Testing Range of "30 MHz to 1 GHz"

2.1.1.1 11x_RX



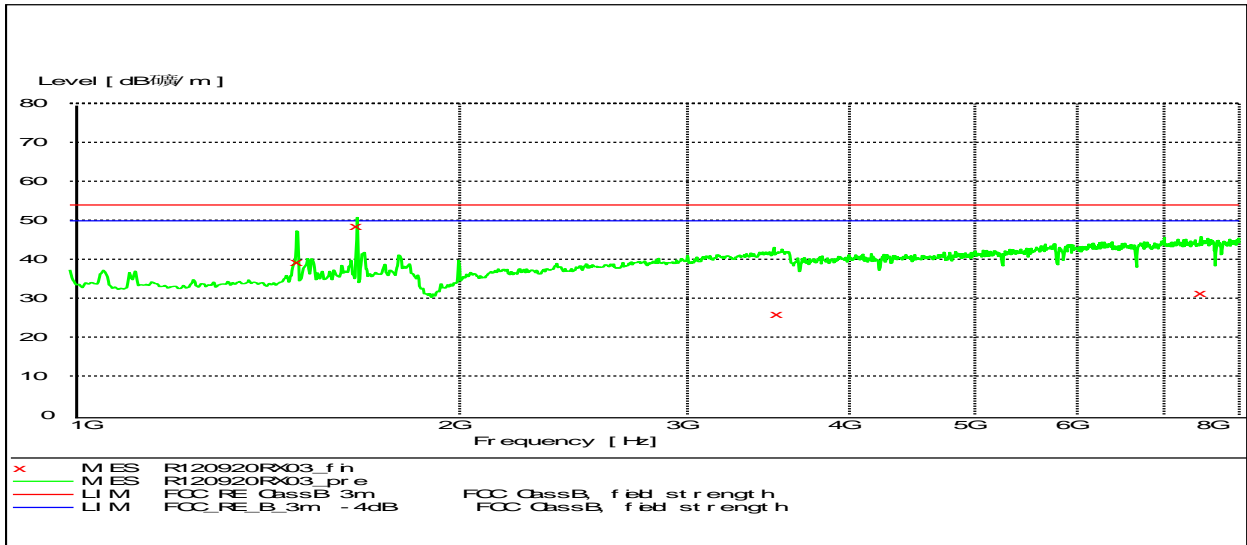
MEASUREMENT RESULT: "R121012Z05_fin"

2012-10-12 11:59

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height	Azimuth cm	Polarization deg
499.980000	38.90	-4.6	46.0	7.1	QP	180.0	199.00	HORIZONTAL
750.000000	42.00	-0.7	46.0	4.0	QP	100.0	139.00	HORIZONTAL
999.960000	46.70	2.9	53.9	7.2	QP	100.0	285.00	HORIZONTAL

2.1.2 Testing Range of "1 GHz to 8 GHz"

2.1.2.1 11x_RX



MEASUREMENT RESULT: "R120920RX03_fin"

2012-9-21 4:20

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height	Azimuth cm	Polarization deg
1499.916000	39.30	-4.2	53.9	14.6	AV	100.0	36.00	VERTICAL
1666.736000	48.60	-2.2	53.9	5.3	AV	100.0	264.00	HORIZONTAL
3521.624000	25.80	5.3	53.9	28.1	AV	100.0	204.00	VERTICAL
7477.864000	31.30	11.5	53.9	22.6	AV	100.0	3.00	VERTICAL



Appendix H: AC Power Line Conducted Emissions



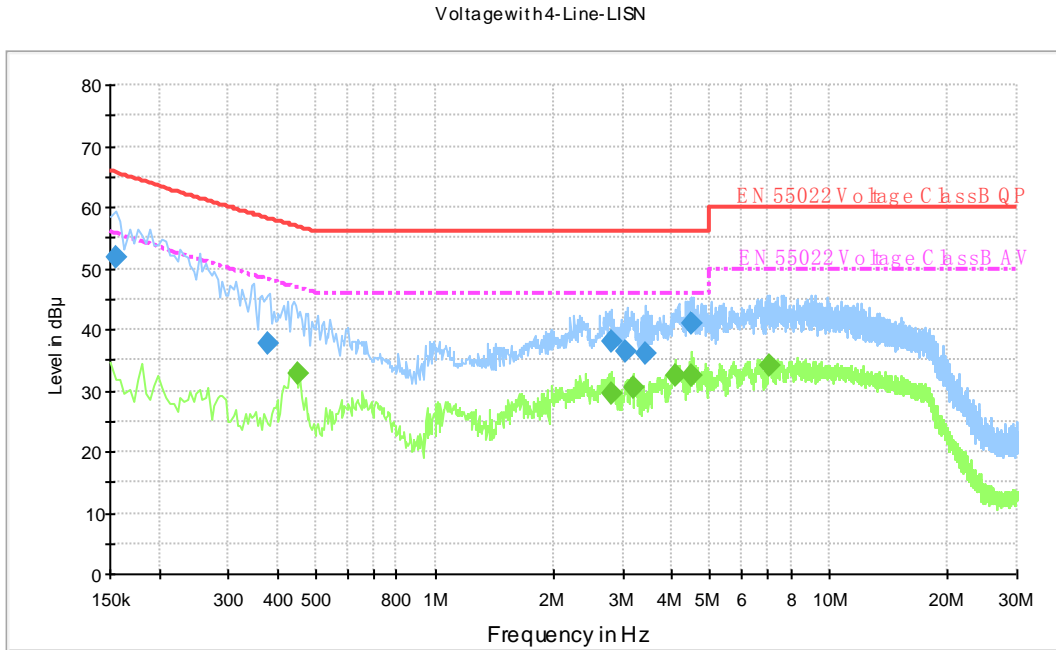
In this Appendix, only the test results and plots under the worst case can be reported.

1 Result Table

EUT Conf.	Maximum Emissions	Verdict
11B/1_B@1	Not found obvious spikes or see marked spikes on plots and listed emissions records.	Pass

2 Result Plot

2.1 11B/1_B@1



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.154500	52.0	1000.0	9.000	GND	L1	10.6	13.7	65.7	
0.374999	37.8	1000.0	9.000	GND	L2	10.4	20.4	58.2	
2.808975	38.0	1000.0	9.000	GND	L2	10.4	18.0	56.0	
3.059625	36.4	1000.0	9.000	GND	L1	10.4	19.6	56.0	
3.422370	36.1	1000.0	9.000	GND	L2	10.4	19.9	56.0	
4.492425	41.0	1000.0	9.000	GND	L2	10.4	15.0	56.0	

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.447000	32.9	1000.0	9.000	GND	L1	10.4	13.9	46.8	
2.800020	29.6	1000.0	9.000	GND	L1	10.4	16.4	46.0	
3.198540	30.5	1000.0	9.000	GND	L2	10.4	15.5	46.0	
4.076040	32.4	1000.0	9.000	GND	L2	10.4	13.6	46.0	
4.456605	32.5	1000.0	9.000	GND	L1	10.4	13.5	46.0	
7.053870	34.2	1000.0	9.000	GND	L2	10.4	15.8	50.0	

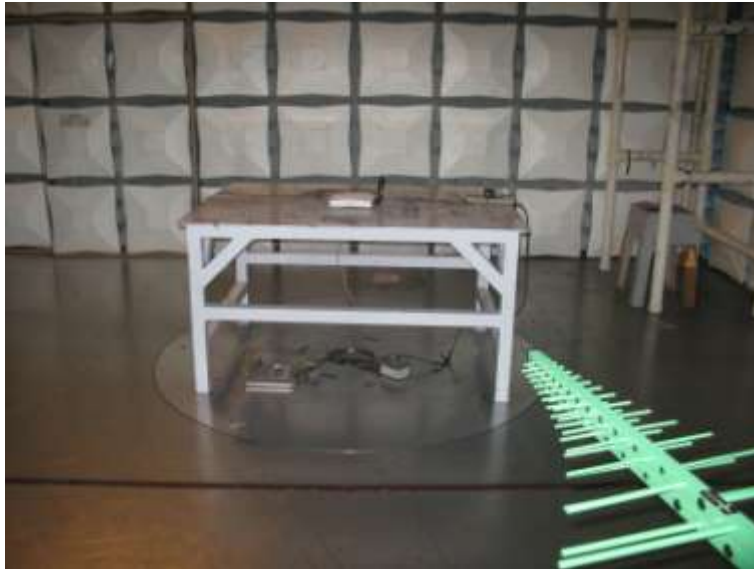


Appendix I: Photos of Test Setups

1 Test Setup 2

1.1 Radiated (Unwanted Emissions into Restricted Frequency Bands, cabinet/case emissions with impedance matching for antenna-port)

1.1.1 Measurement Setup from 30 MHz to 1 GHz



1.1.2 Measurement Setup from 1 GHz to 3 GHz, 3 GHz to 18 GHz

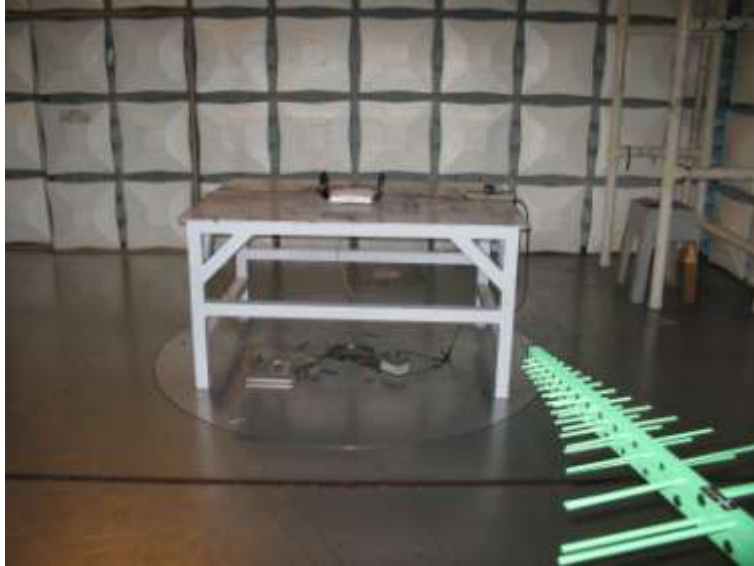


1.1.3 Measurement Setup from 18 GHz to 26.5 GHz



1.2 Radiated (Receiver Spurious Emissions)

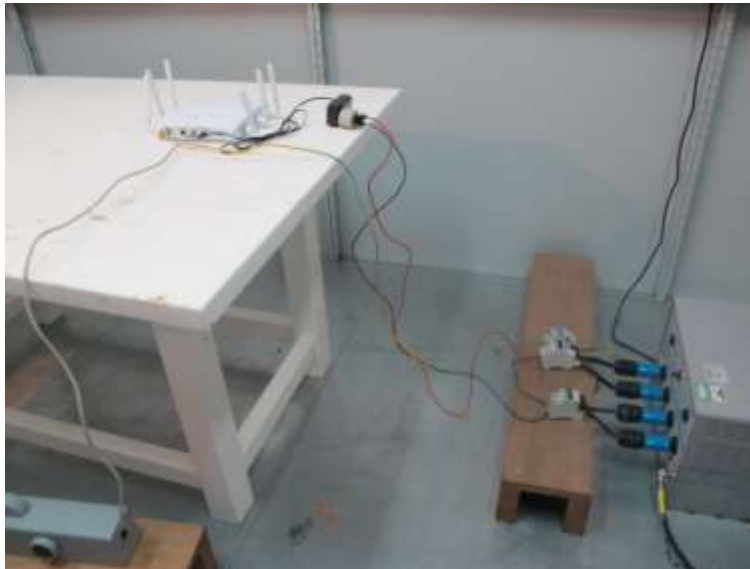
1.2.1 Measurement Setup from 30 MHz to 1 GHz



1.2.2 Measurement Setup from 1 GHz to 8 GHz



2 Test Setup 3



END