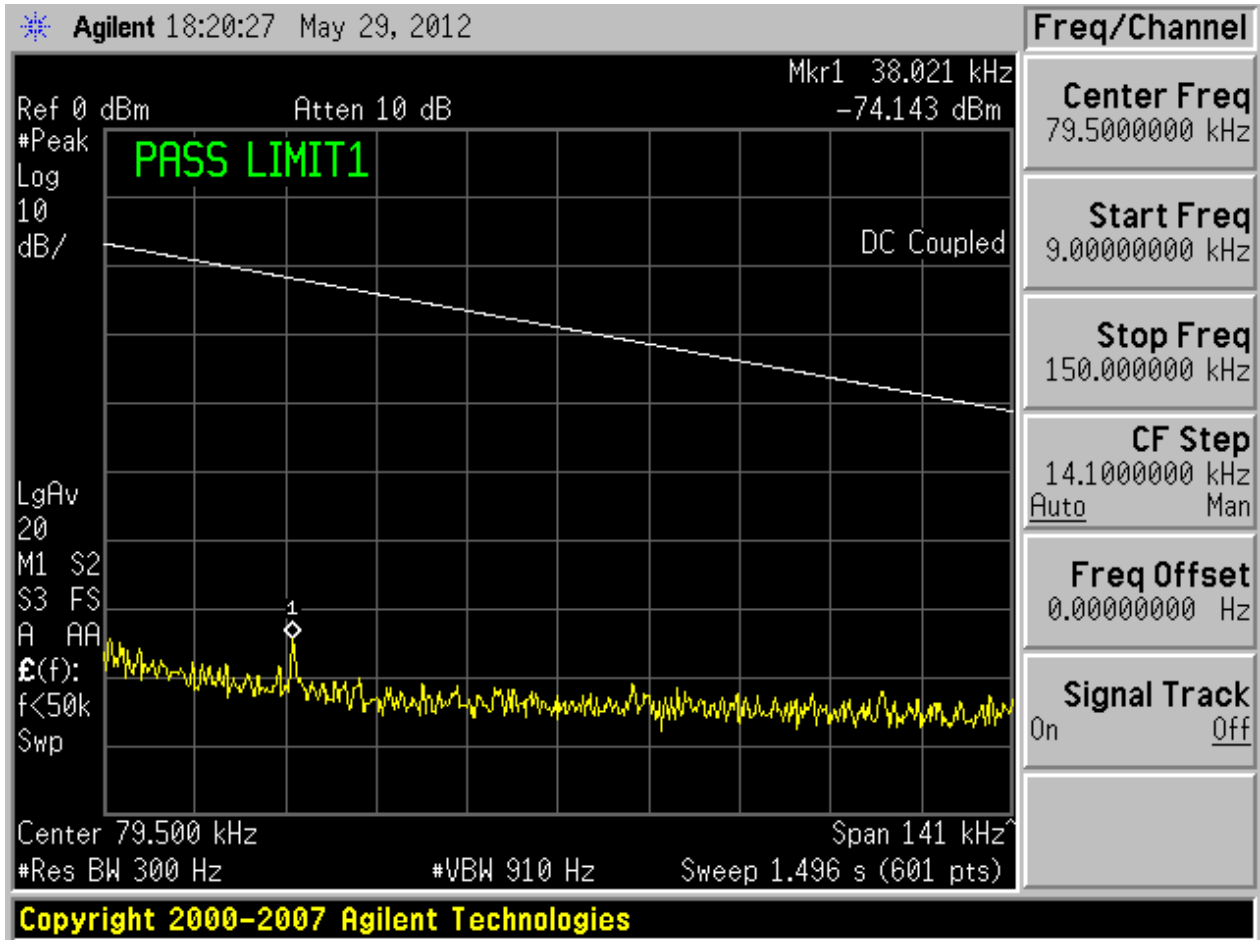
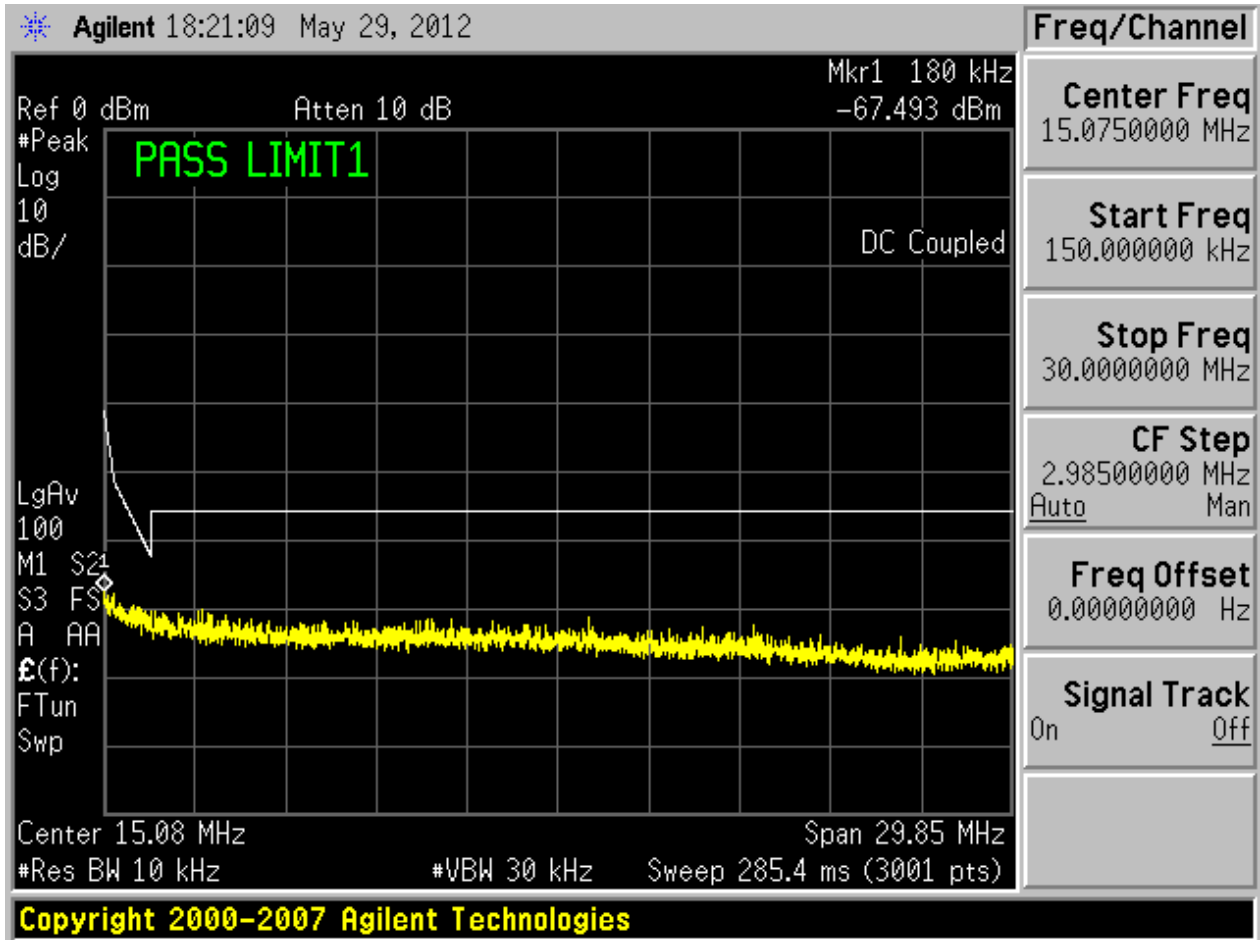
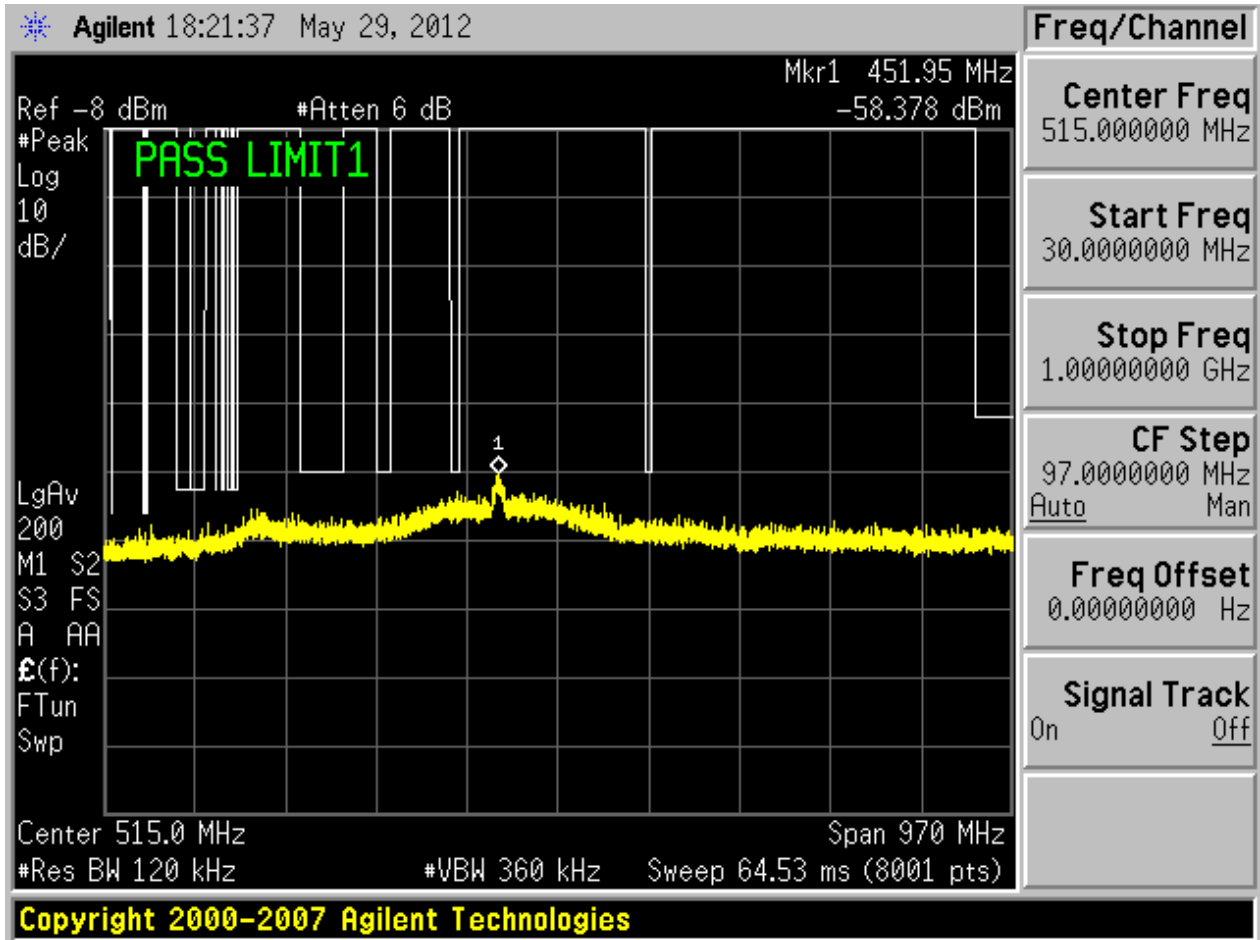
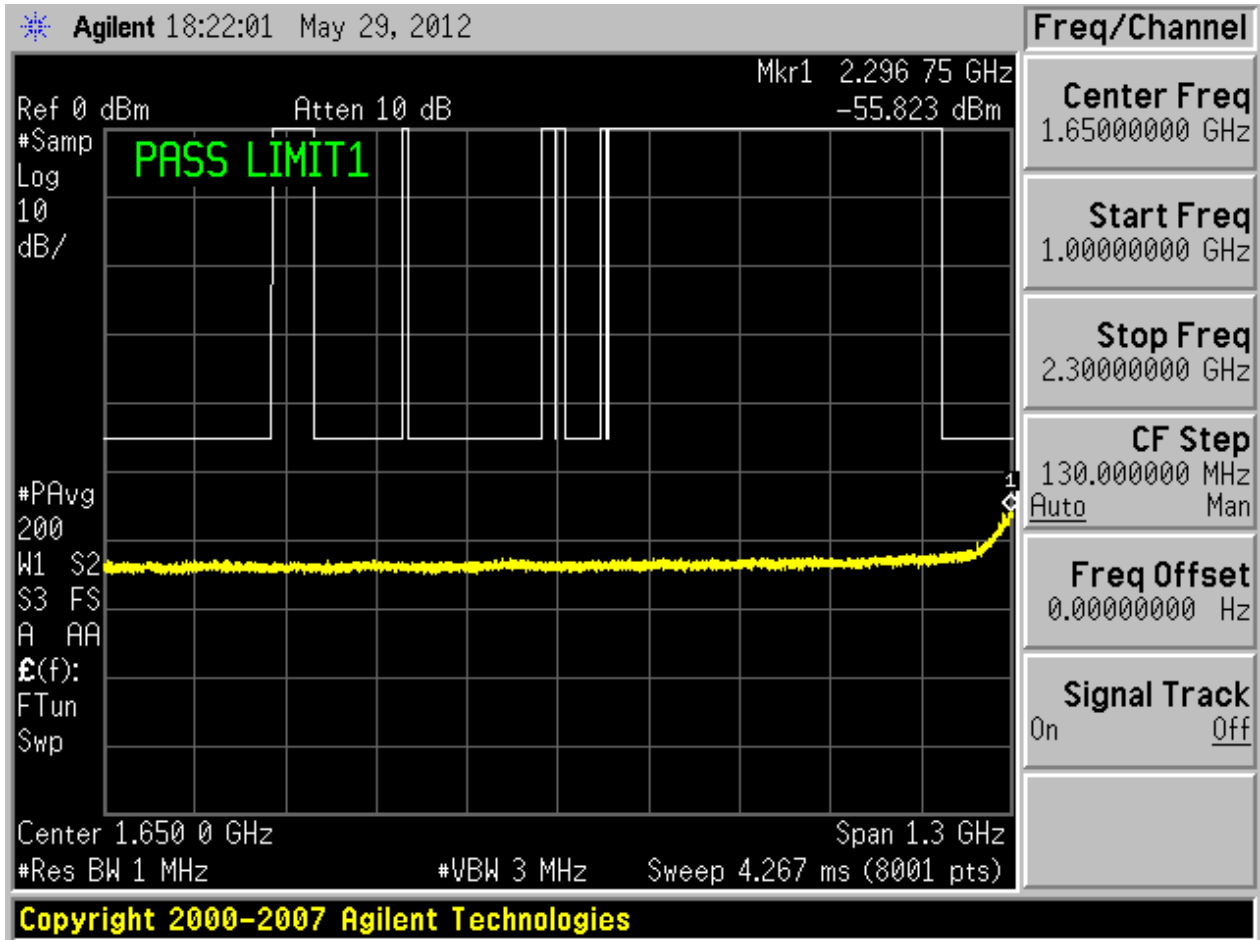


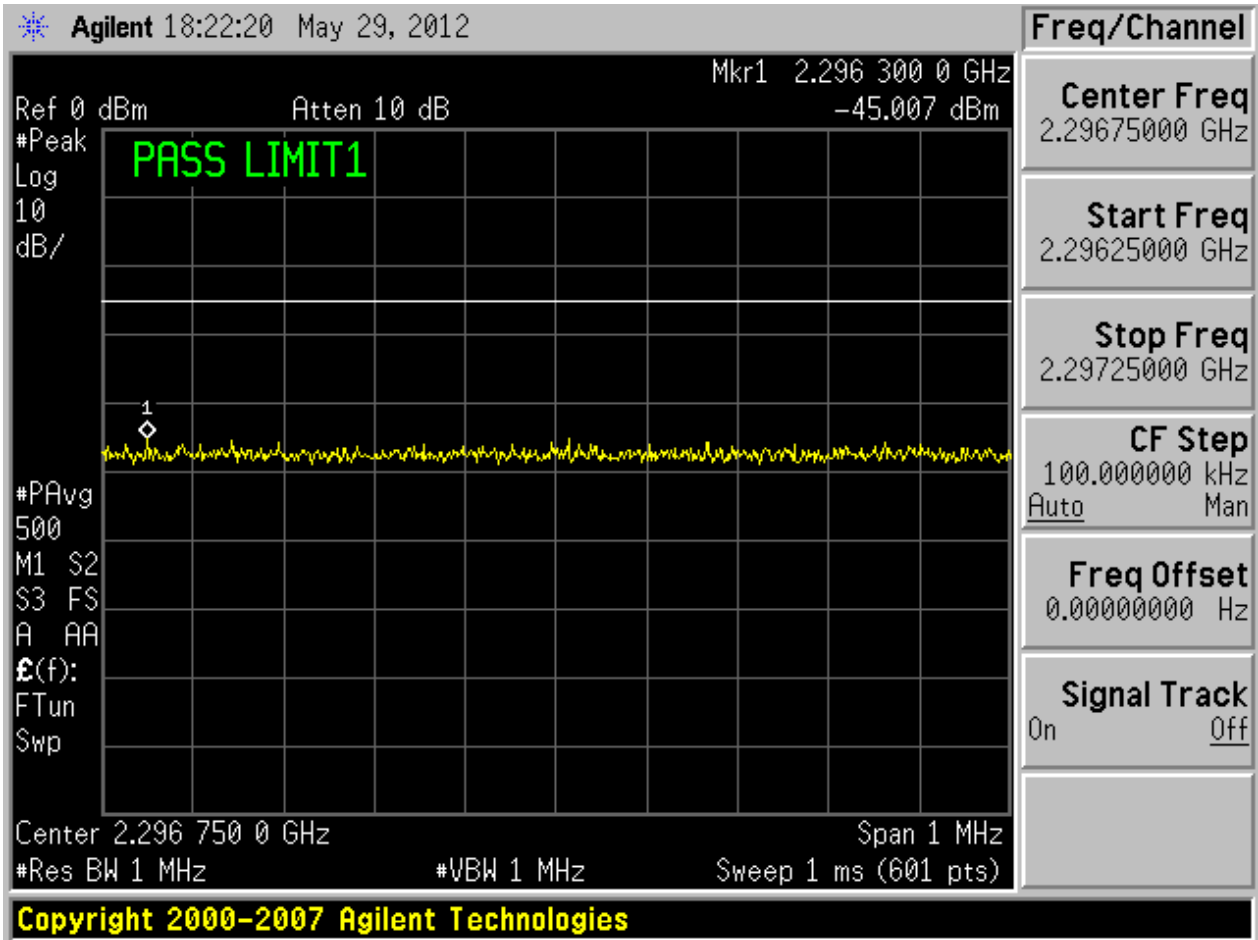
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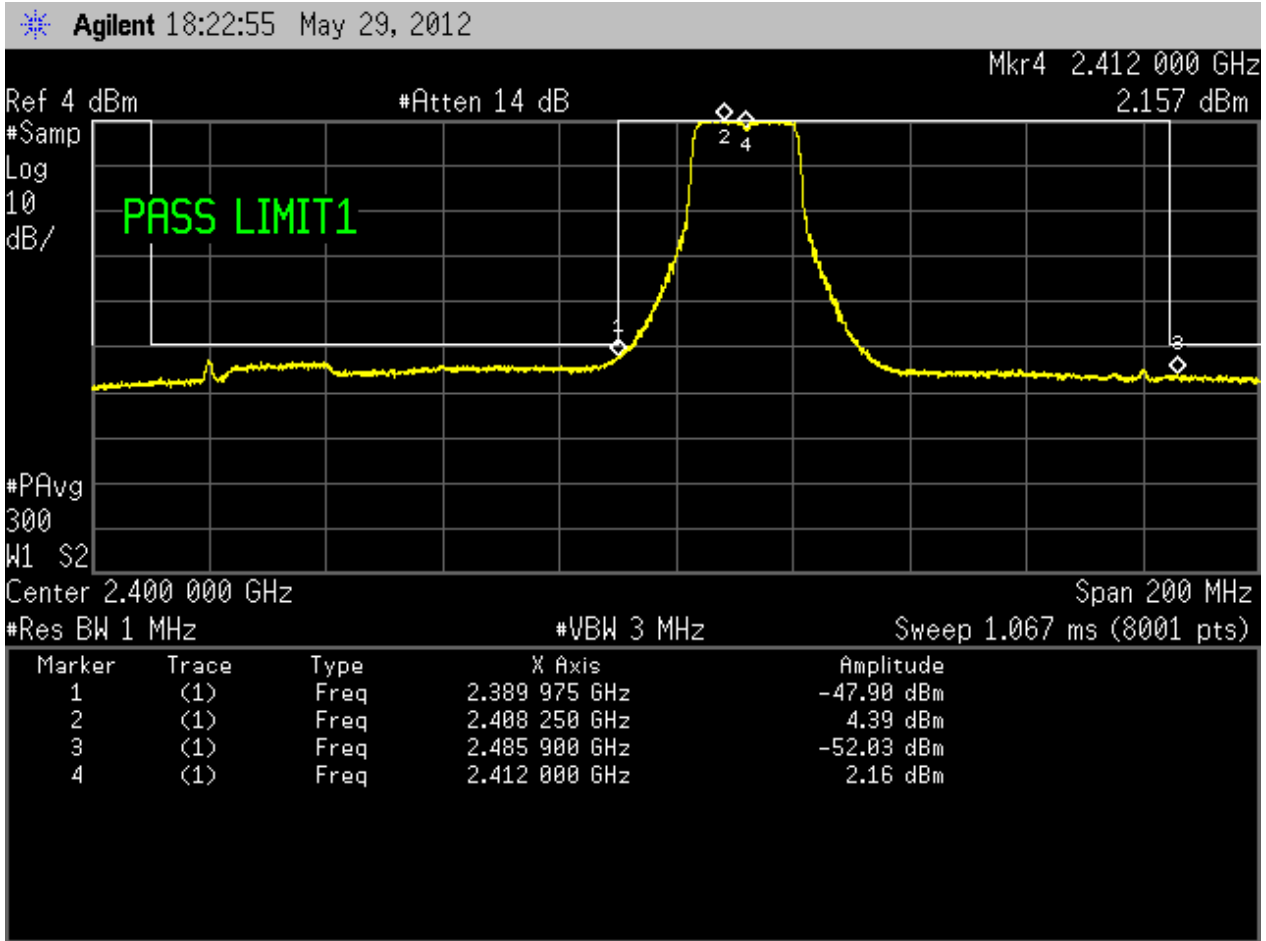


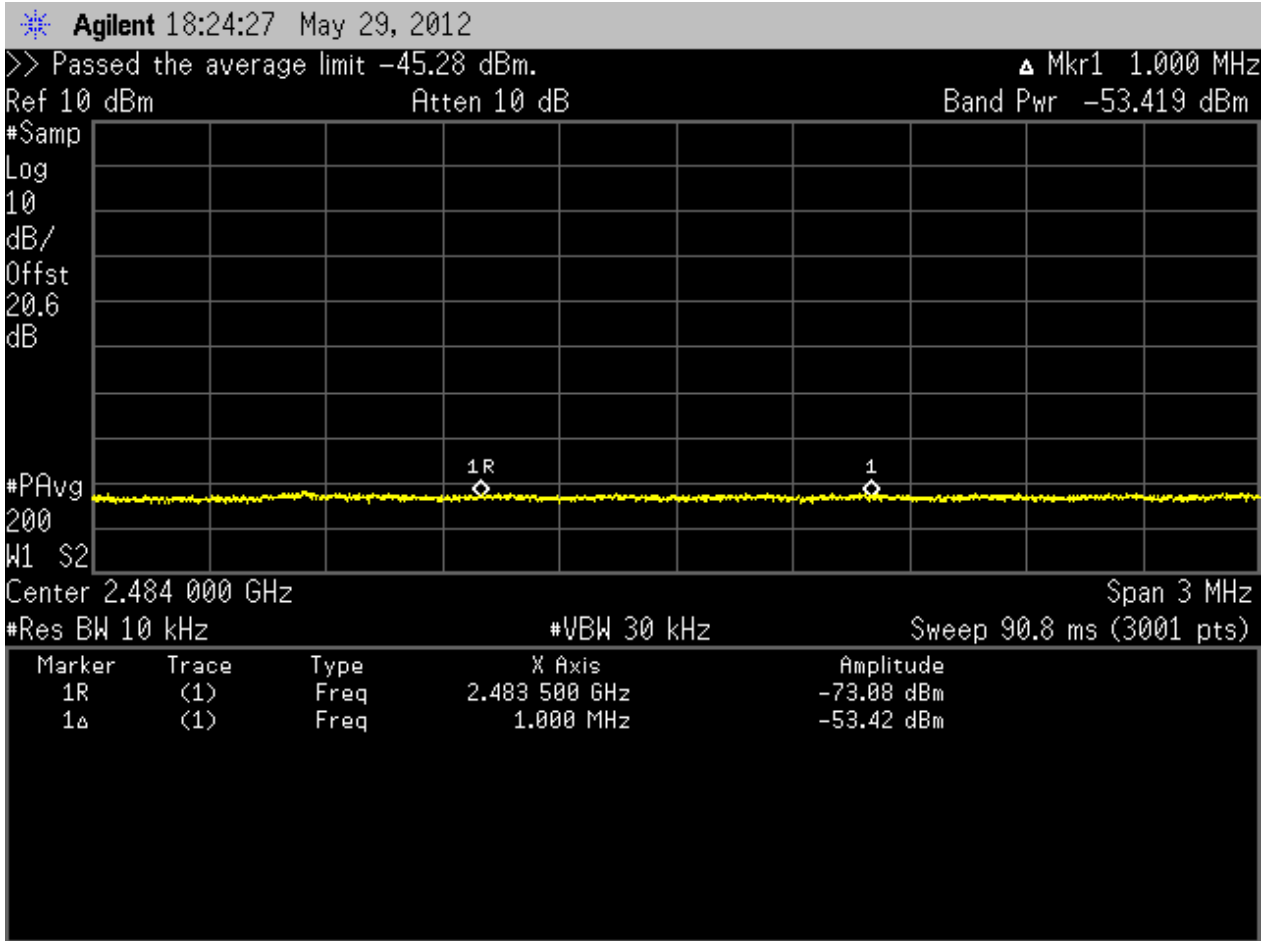


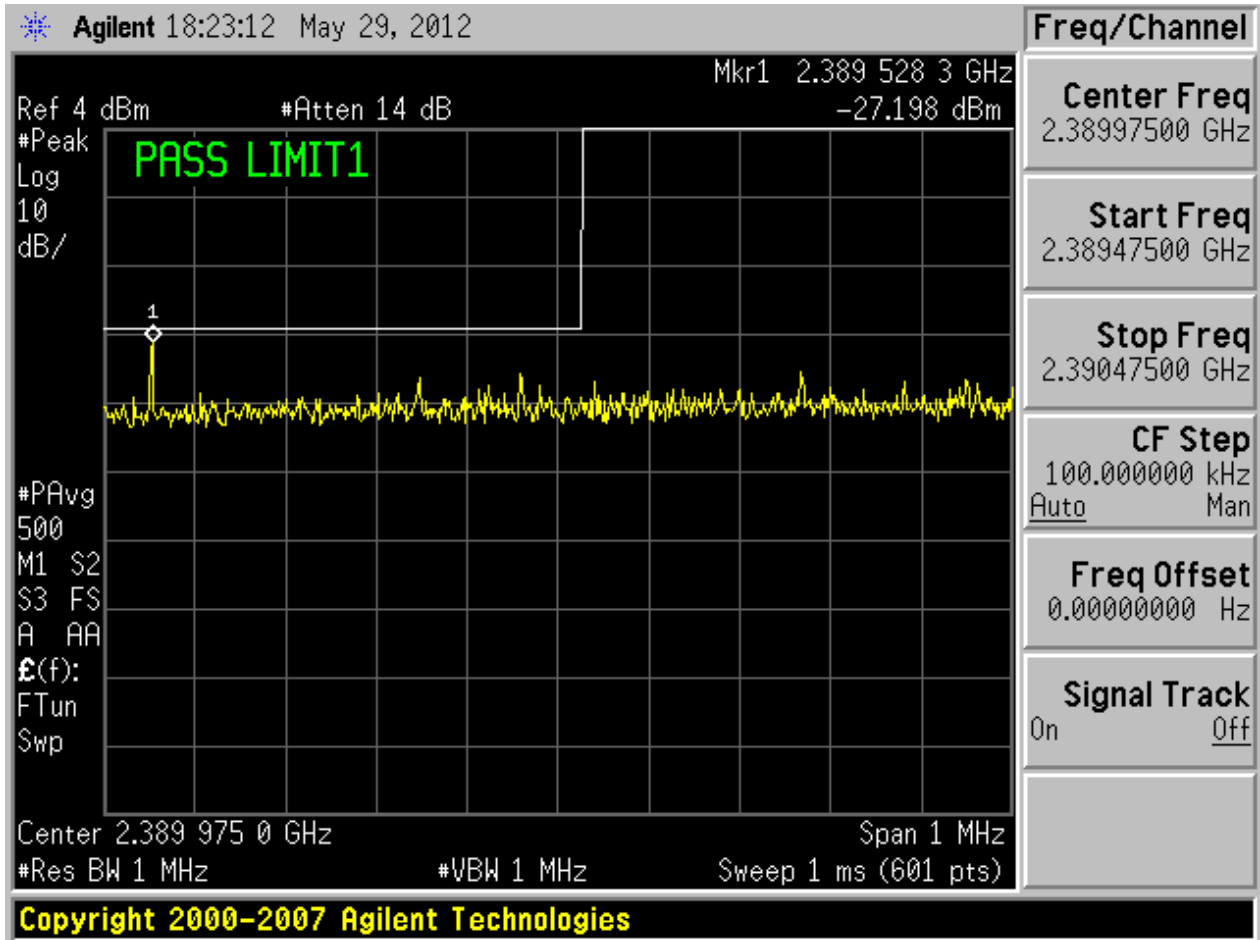


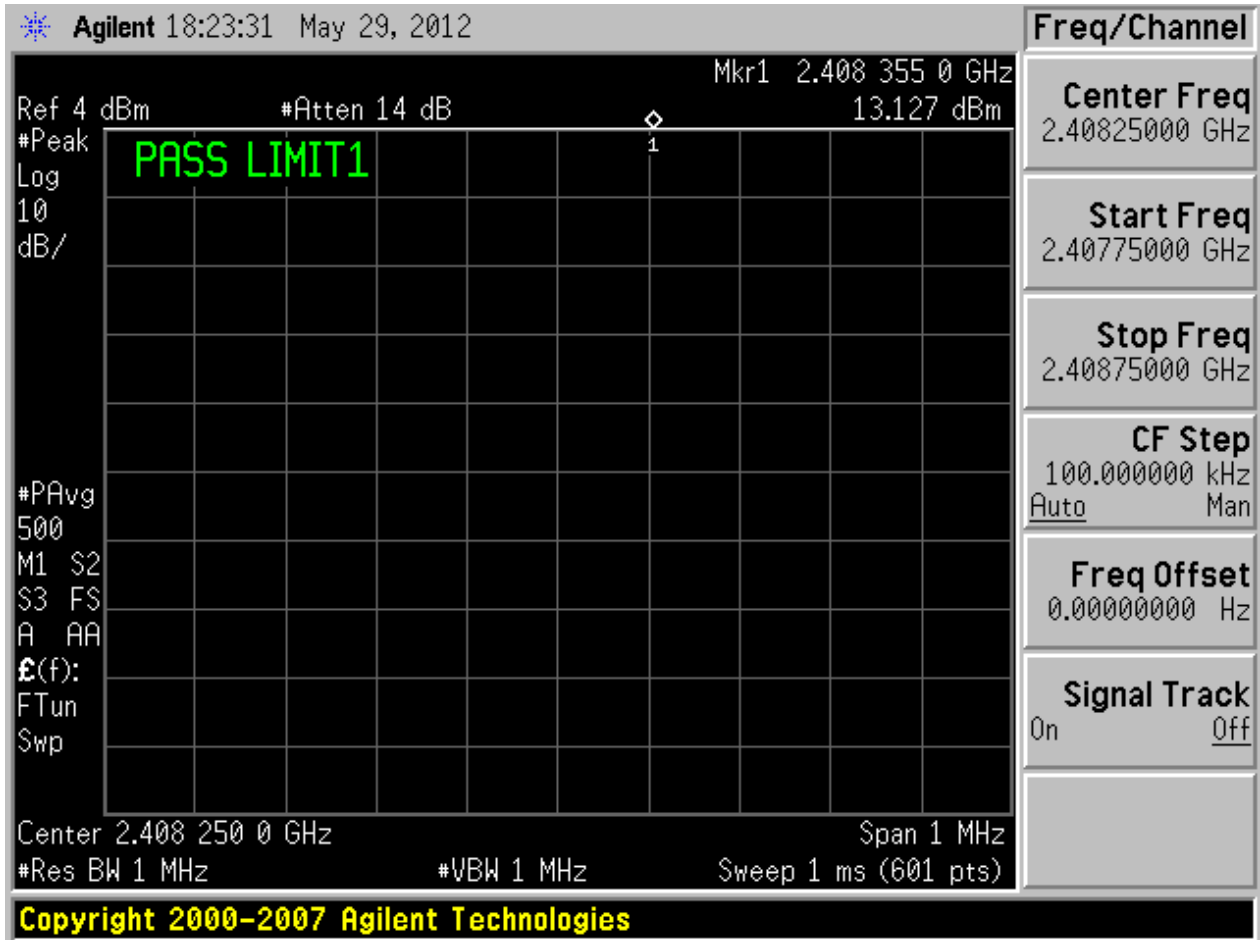


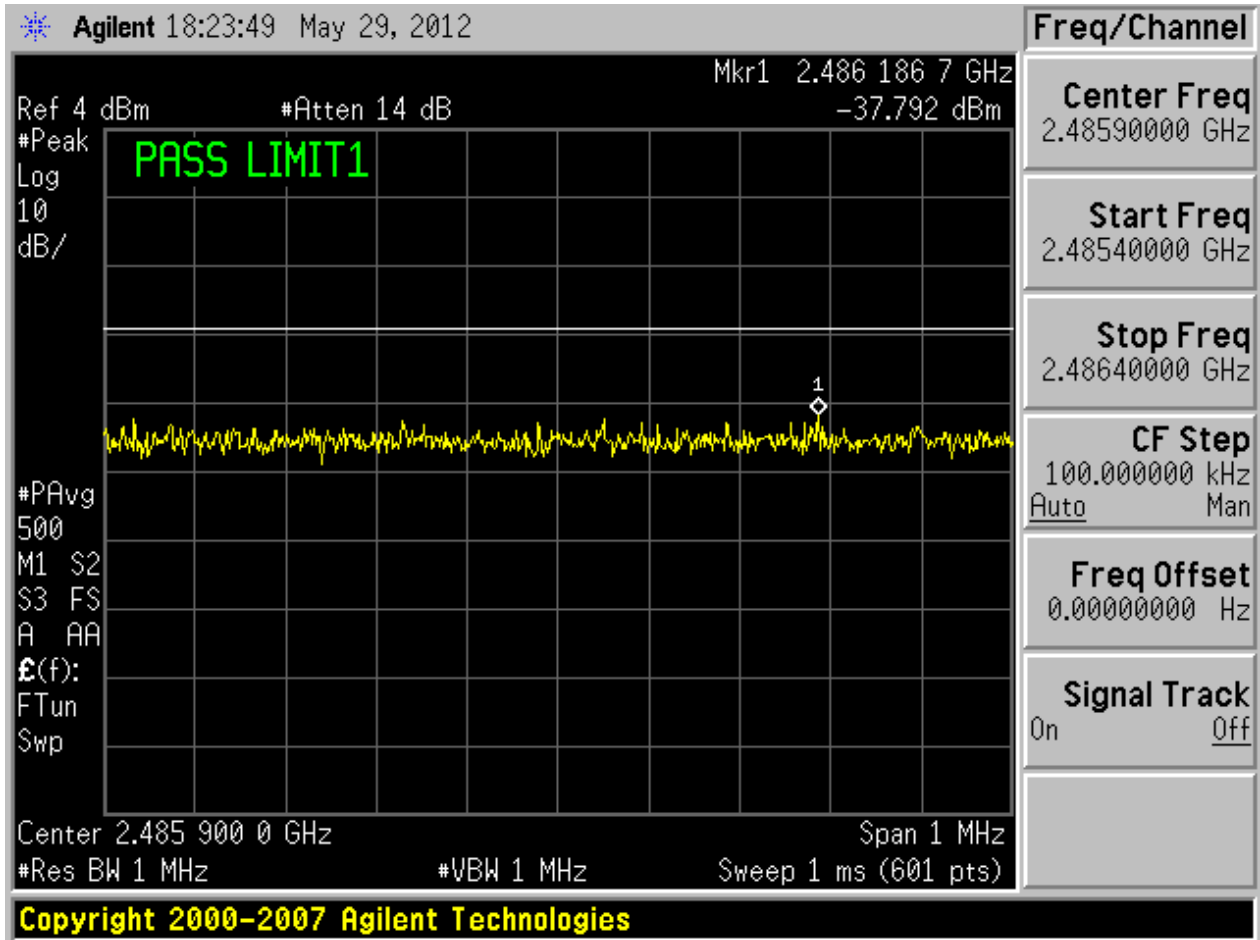


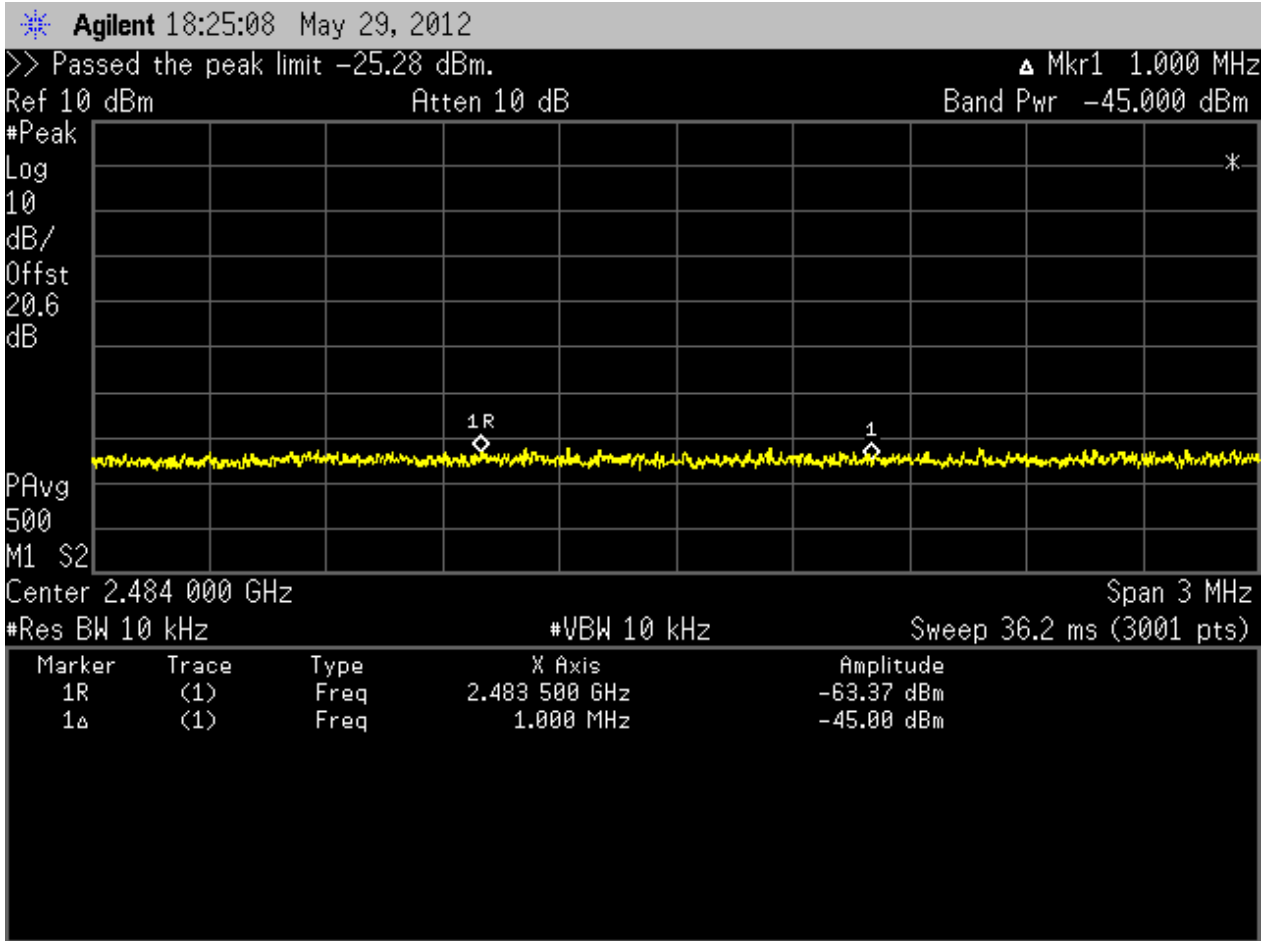


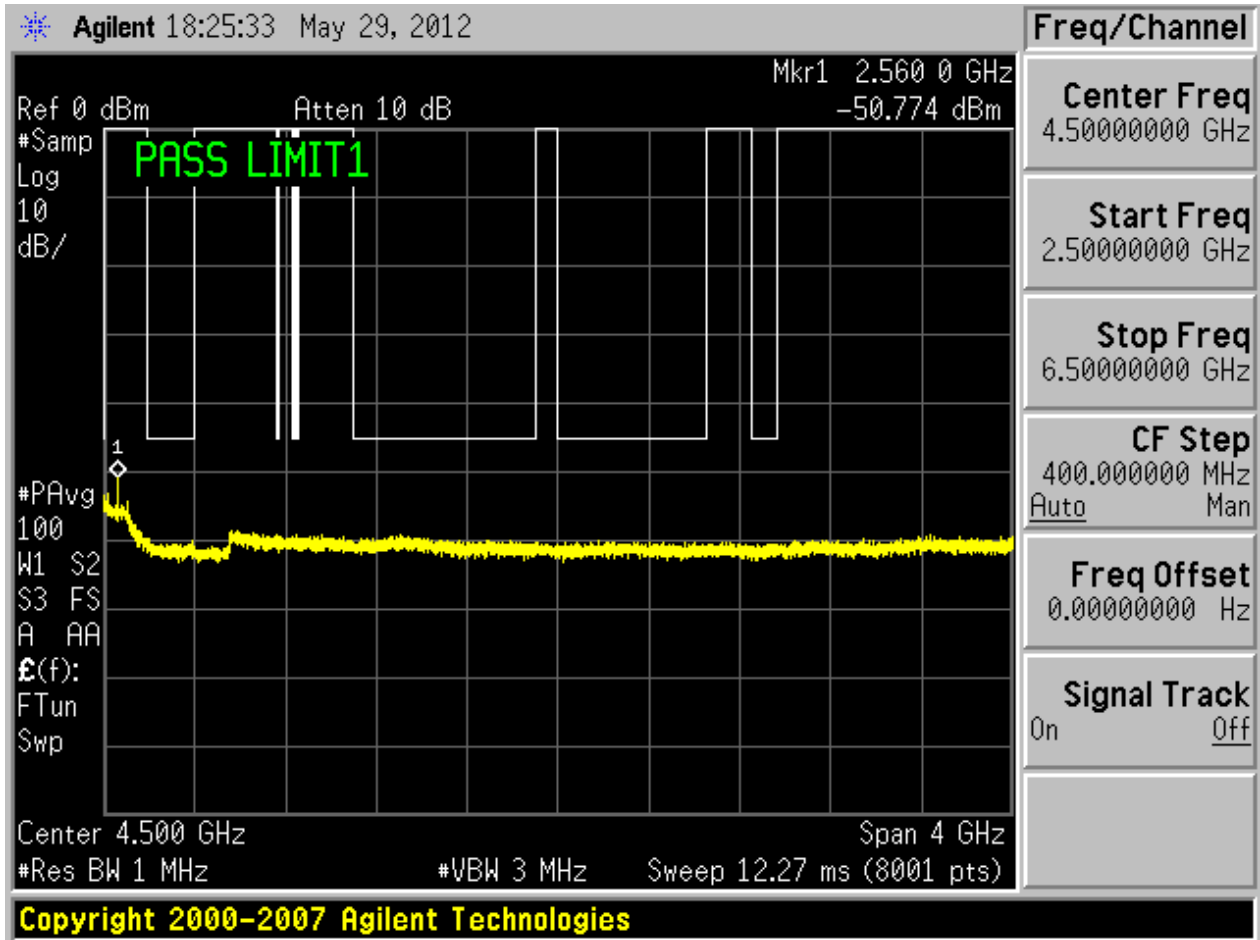


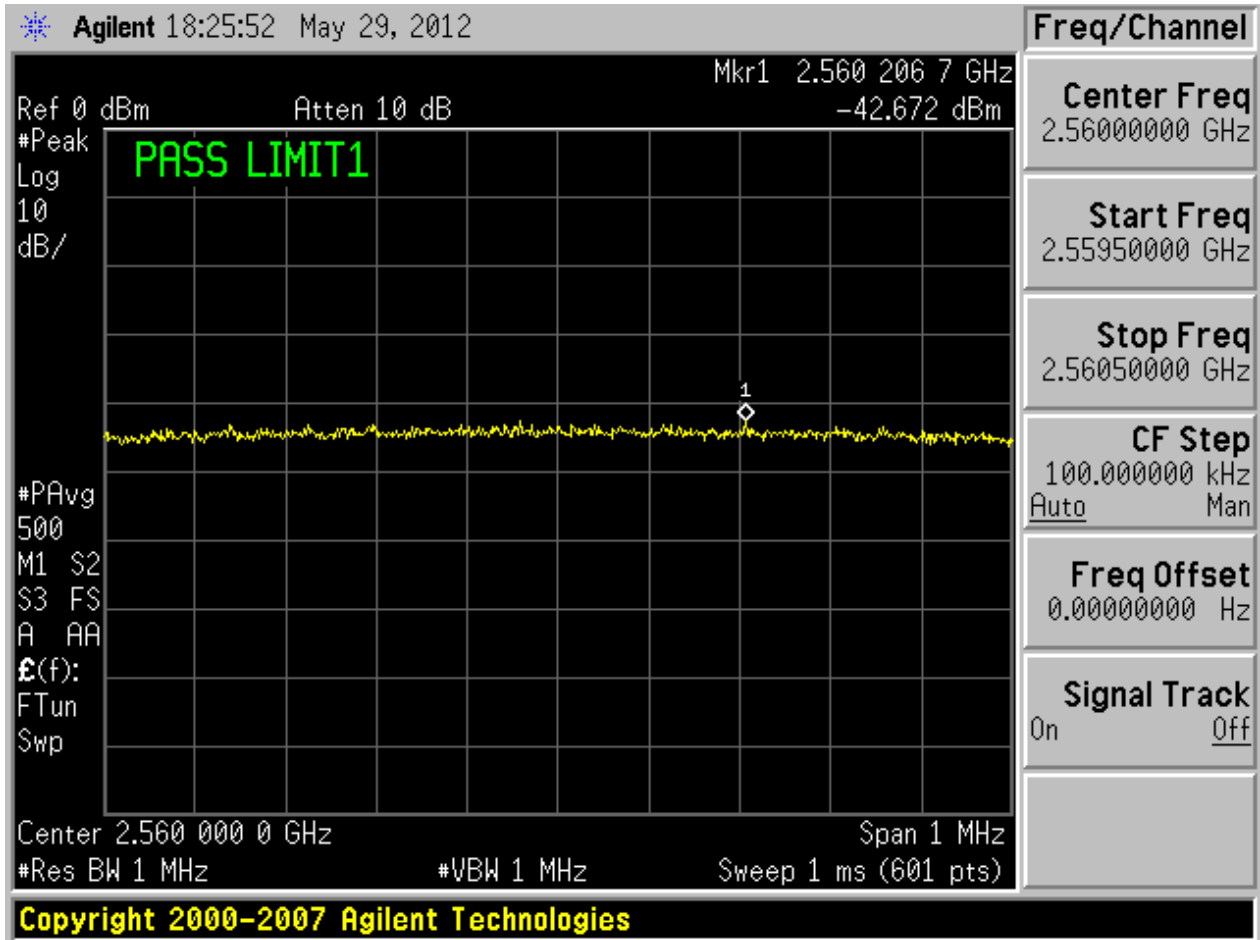


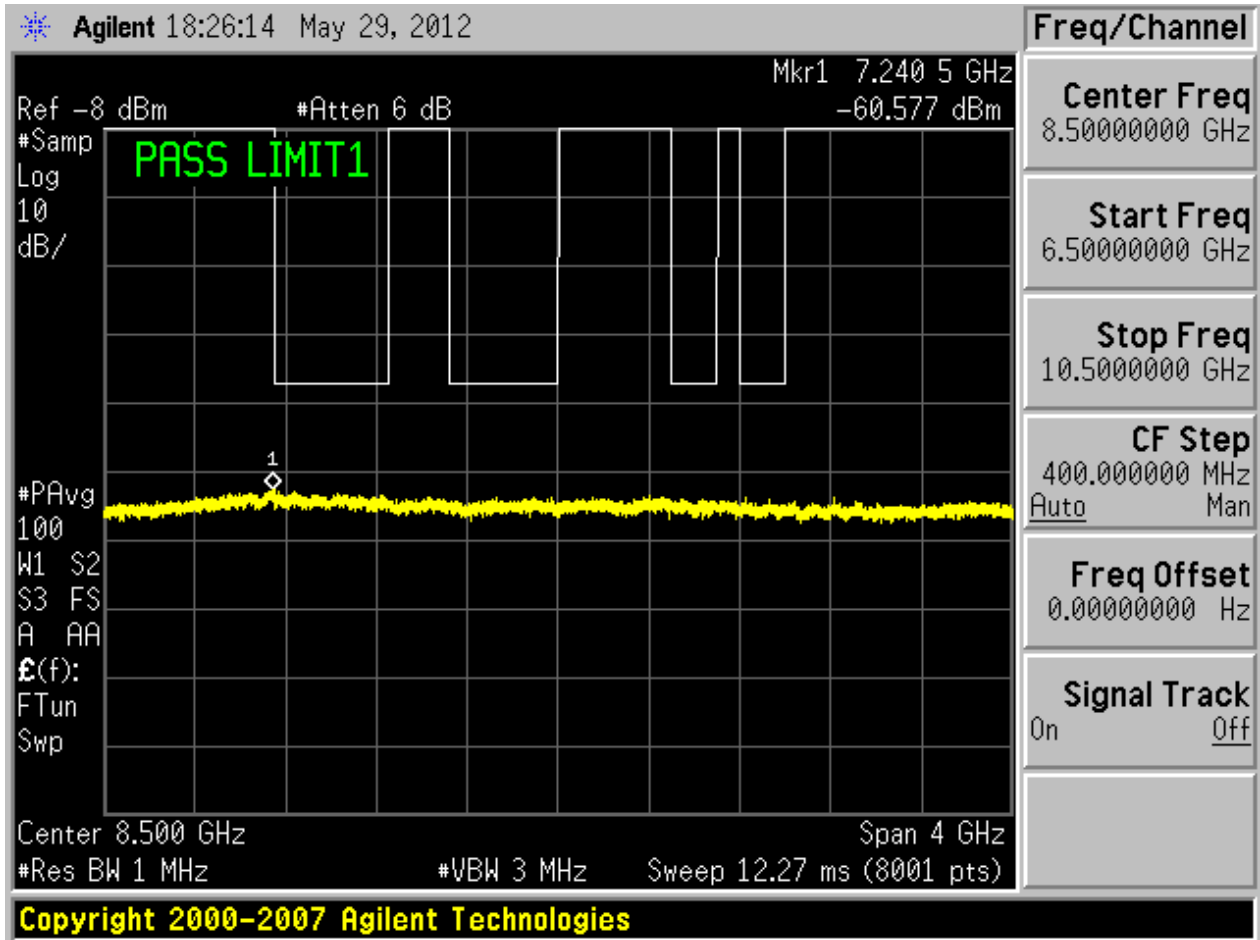


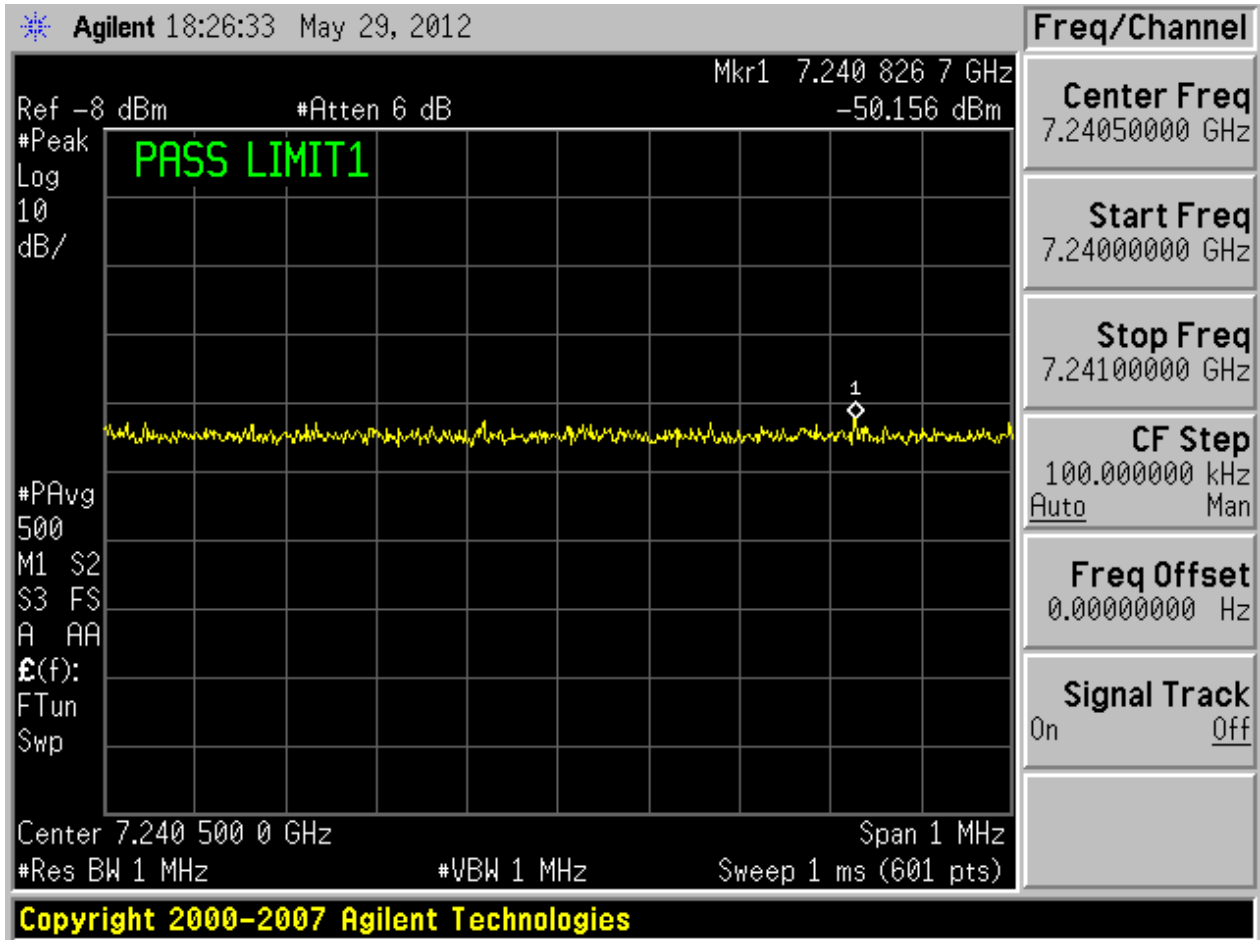


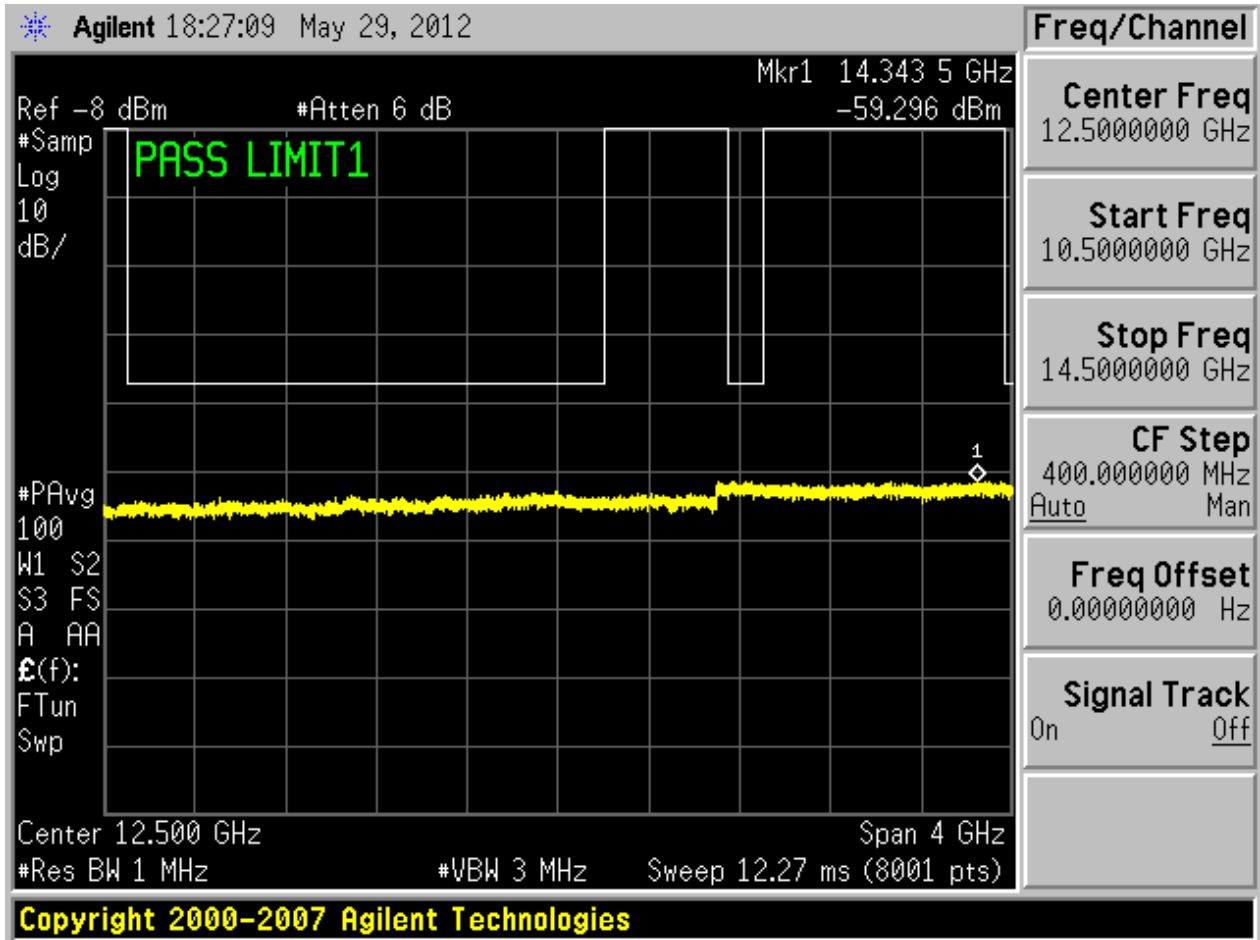


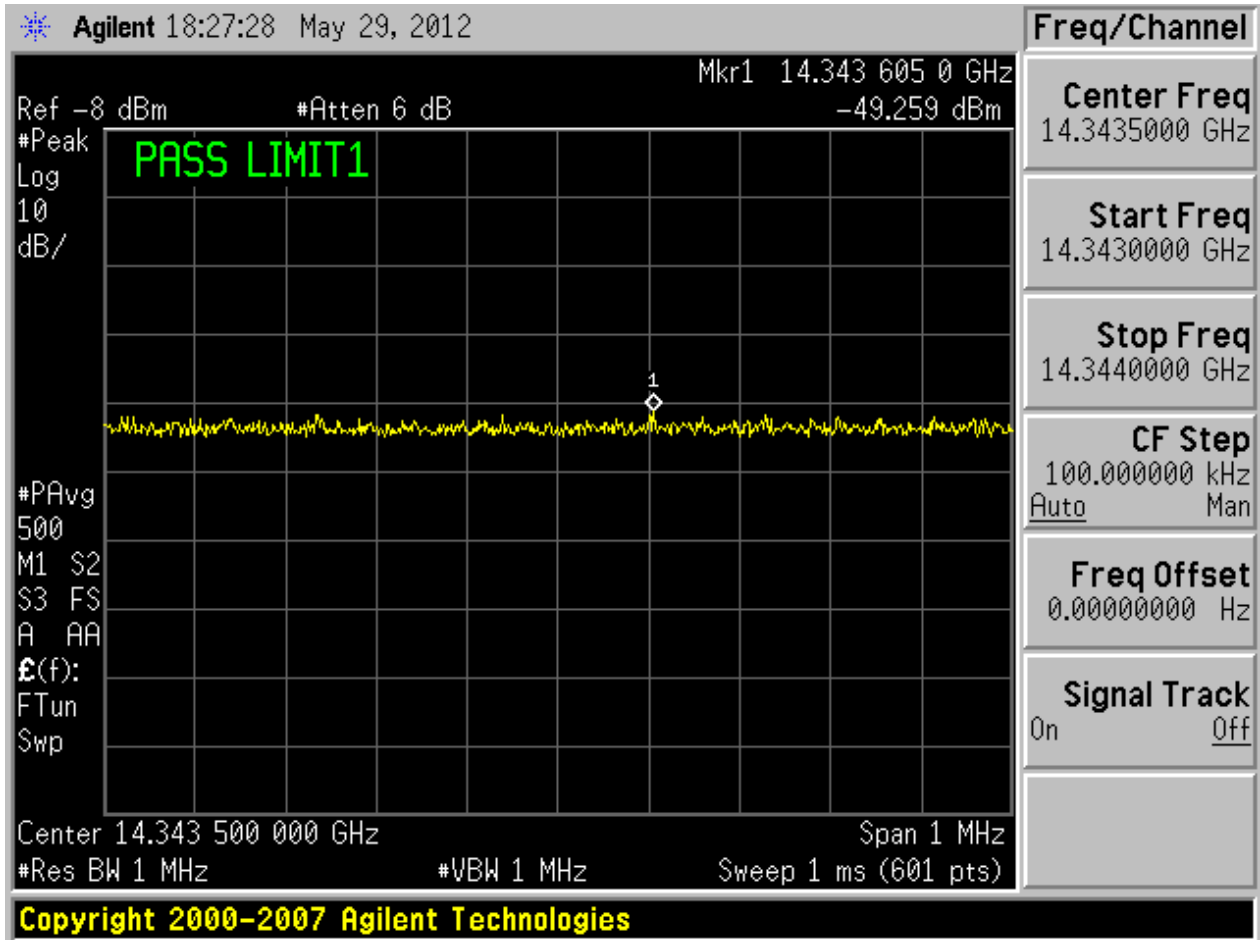


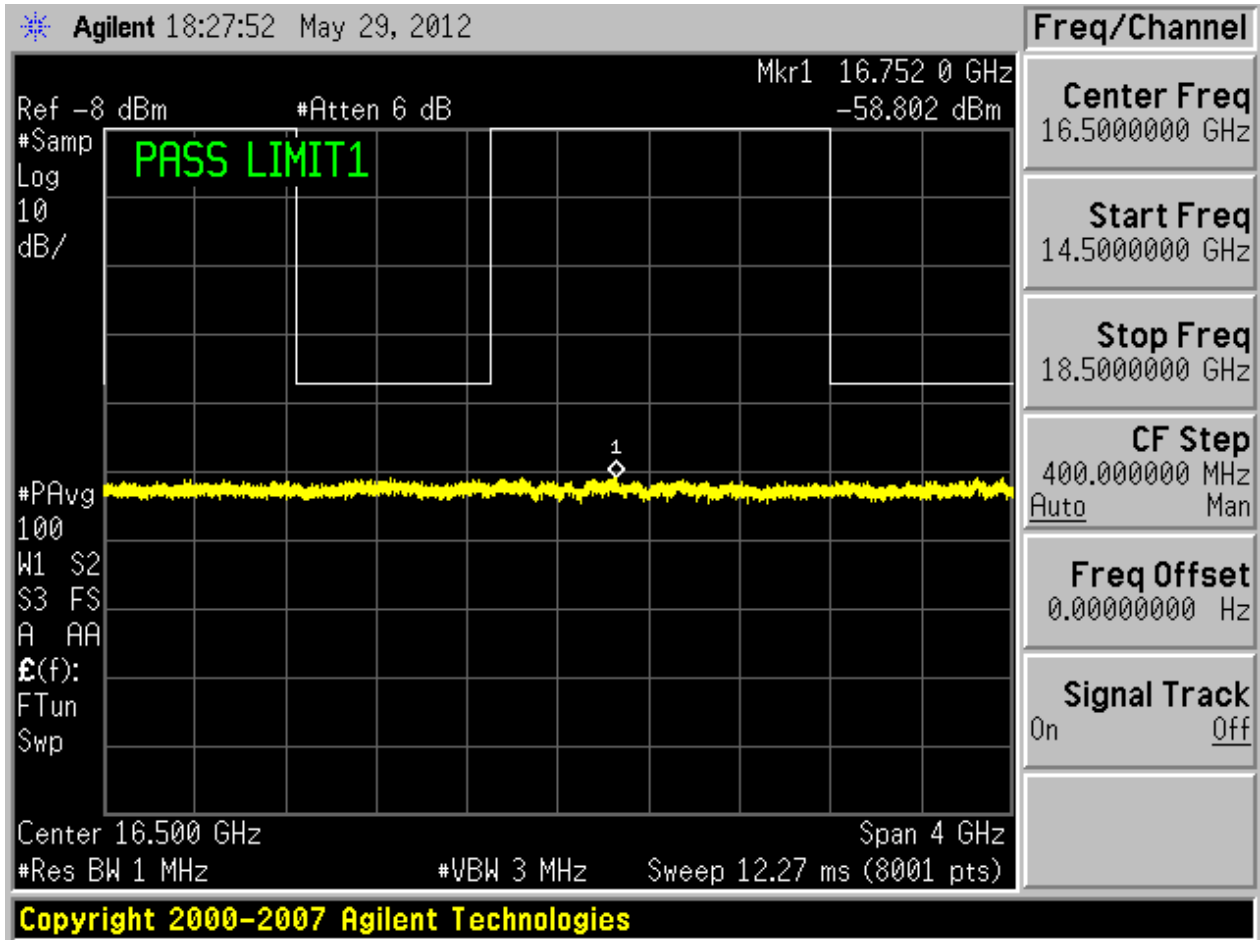


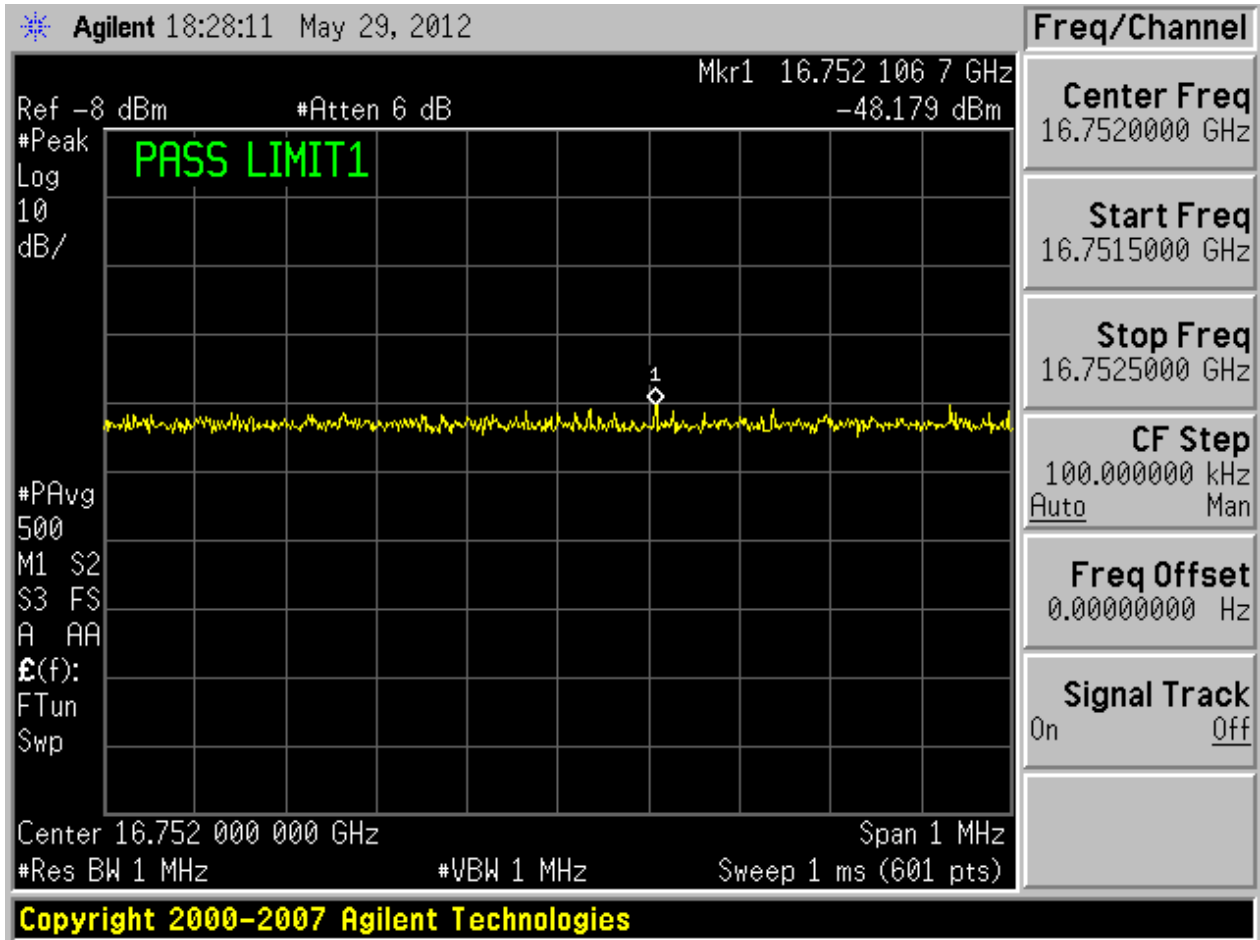


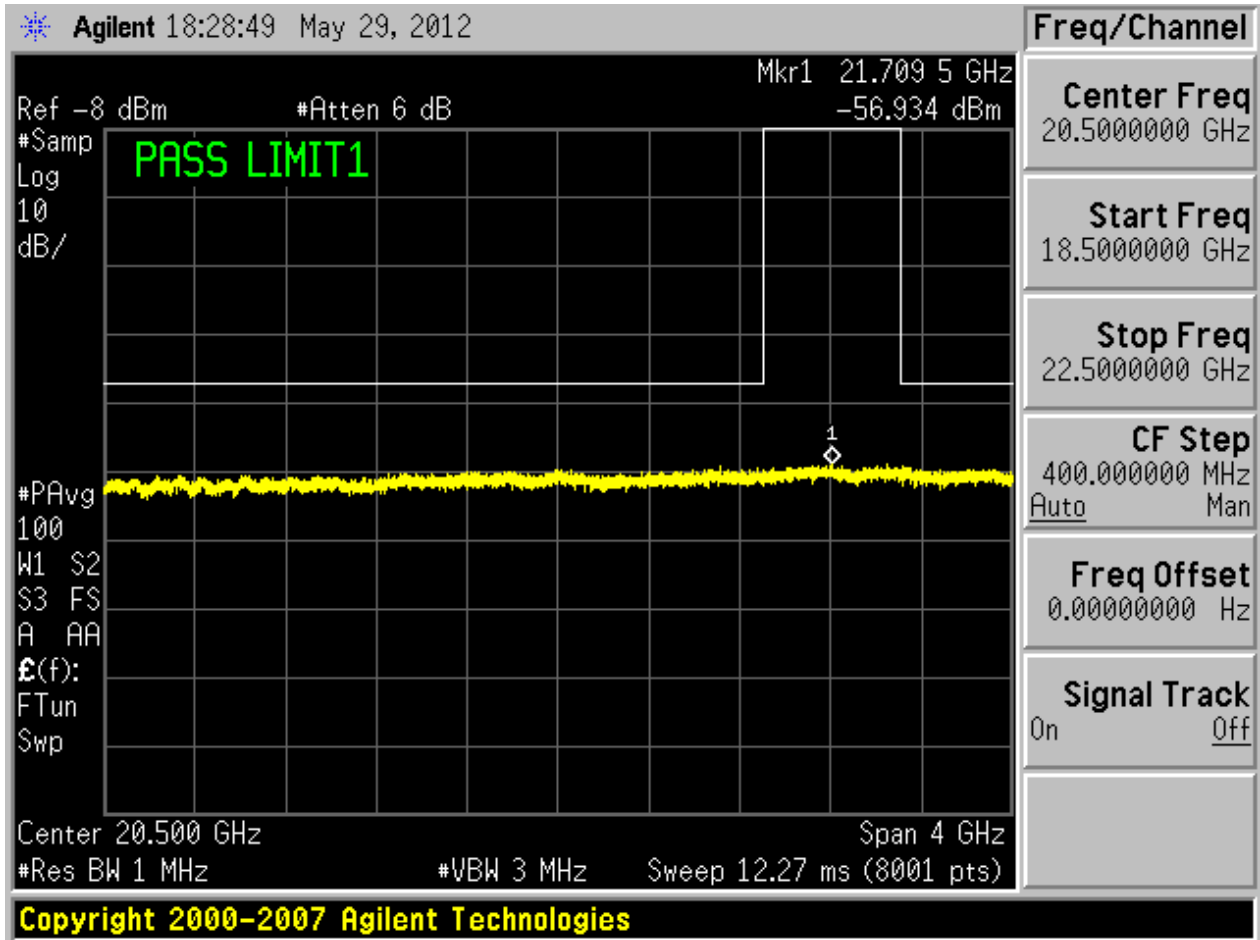


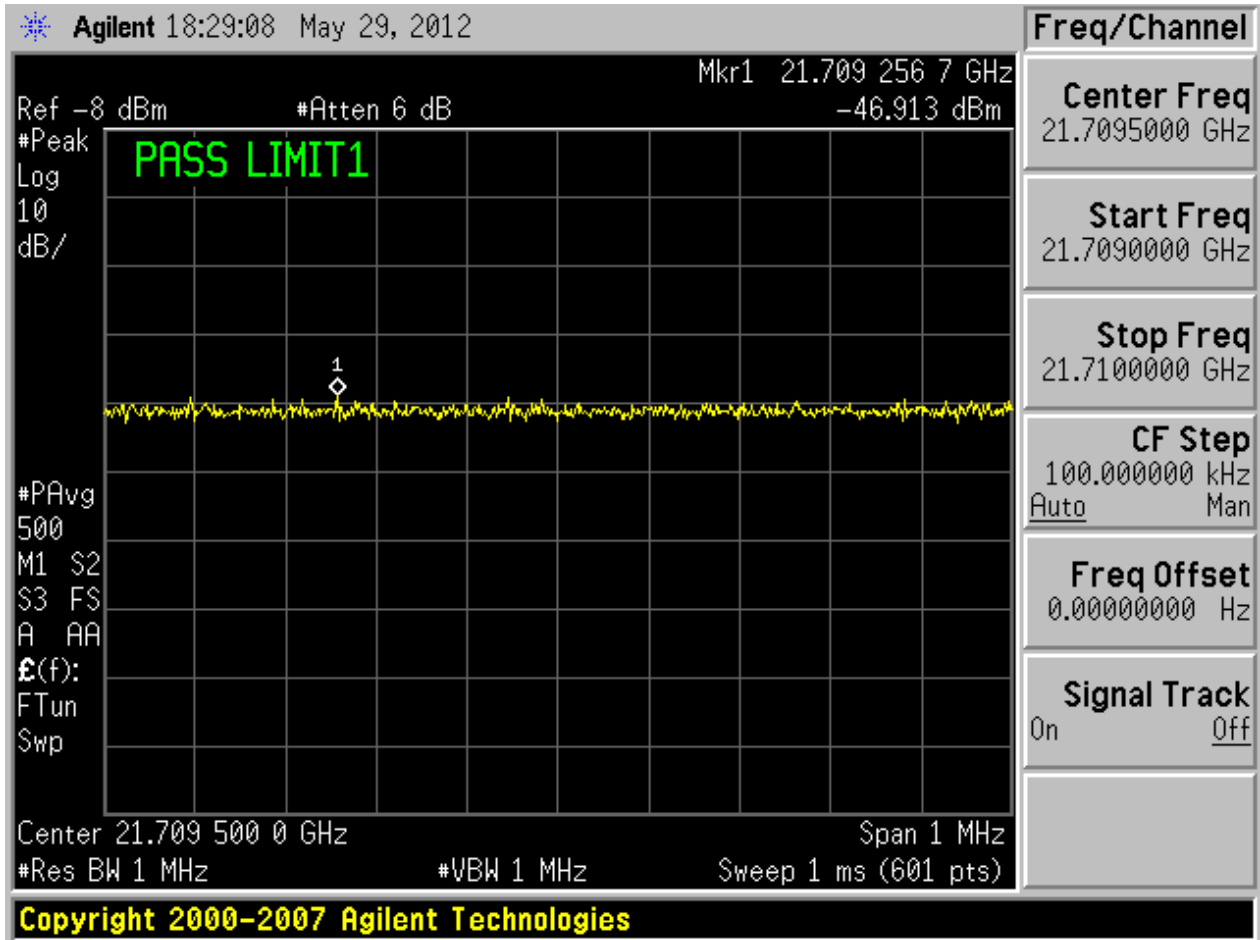


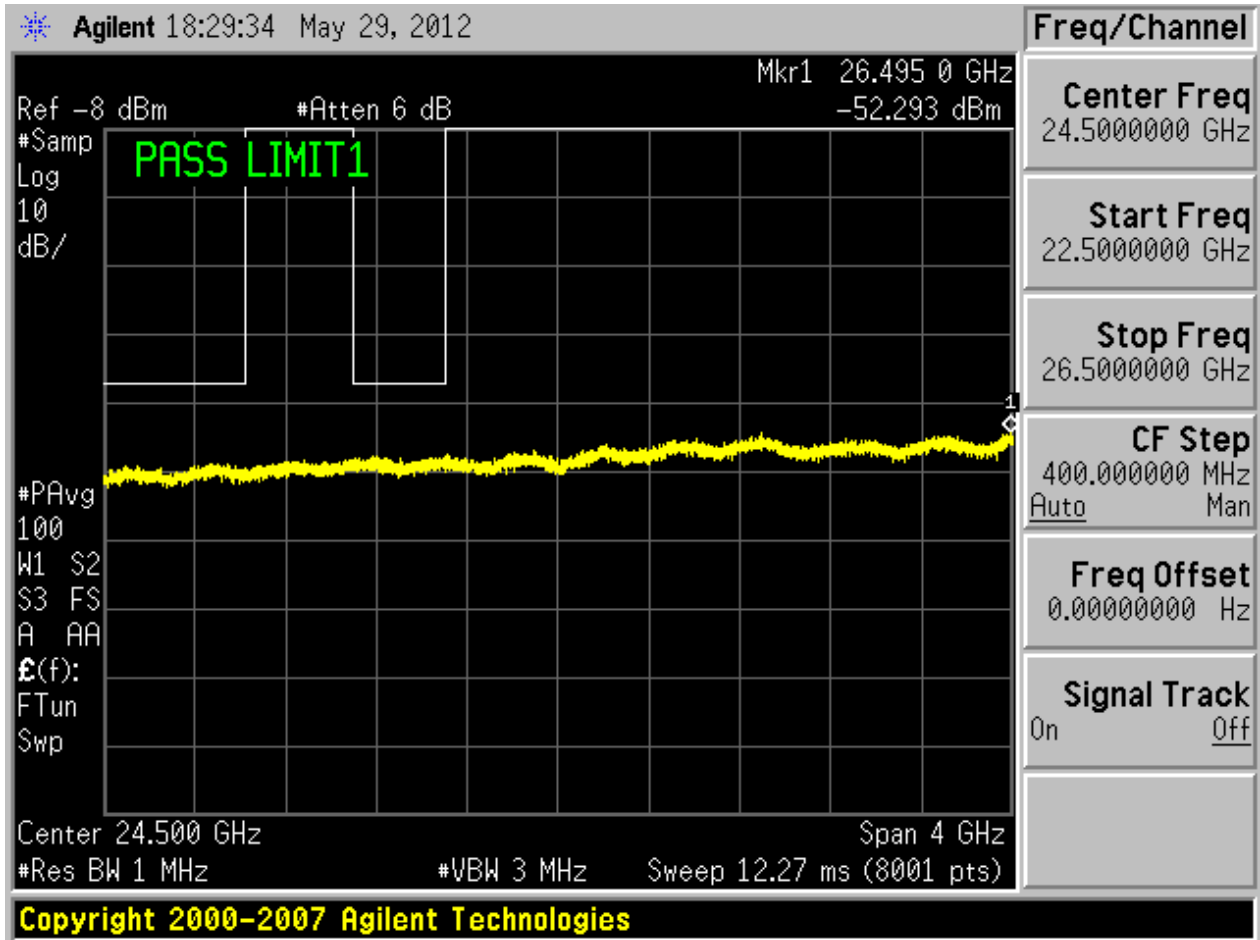


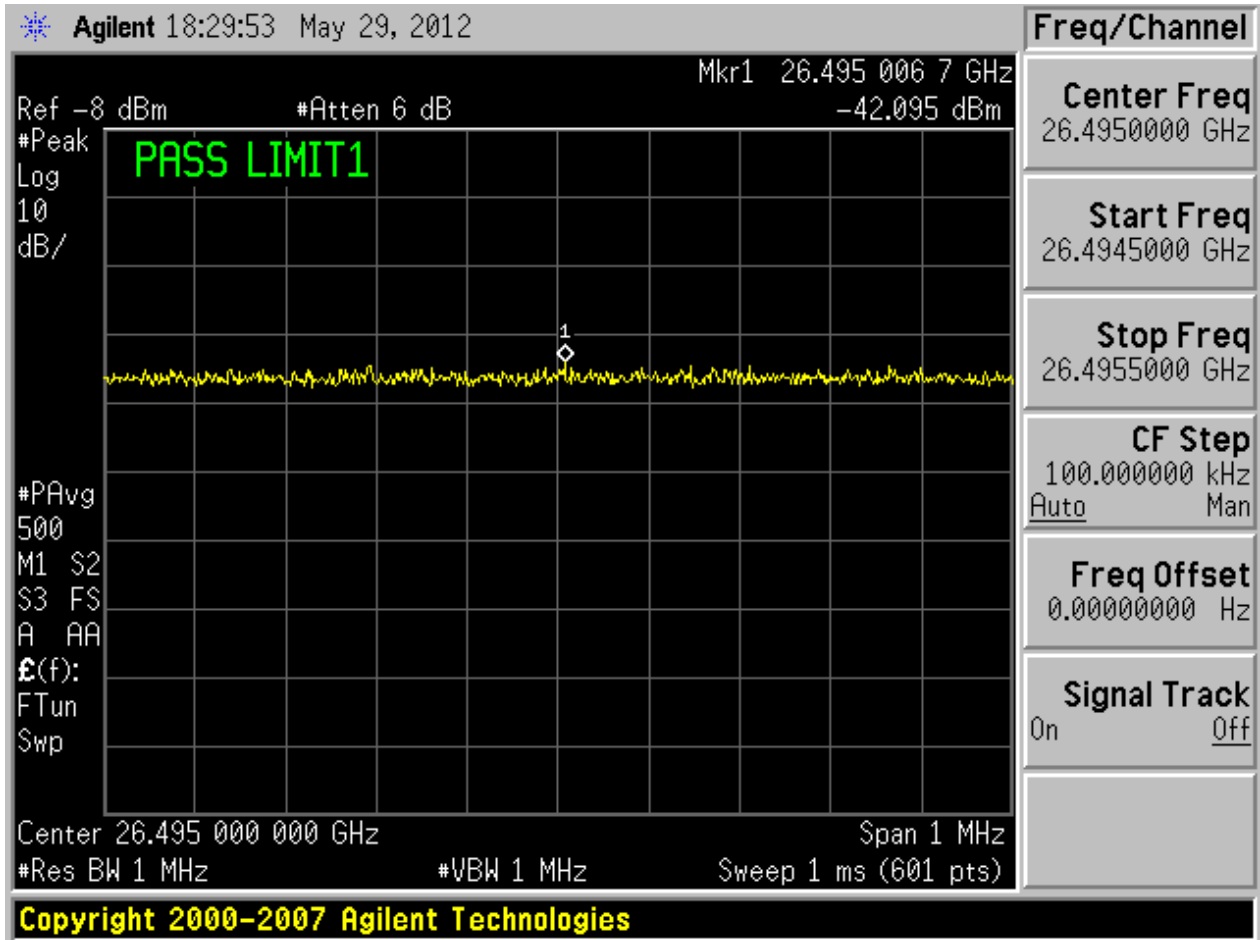




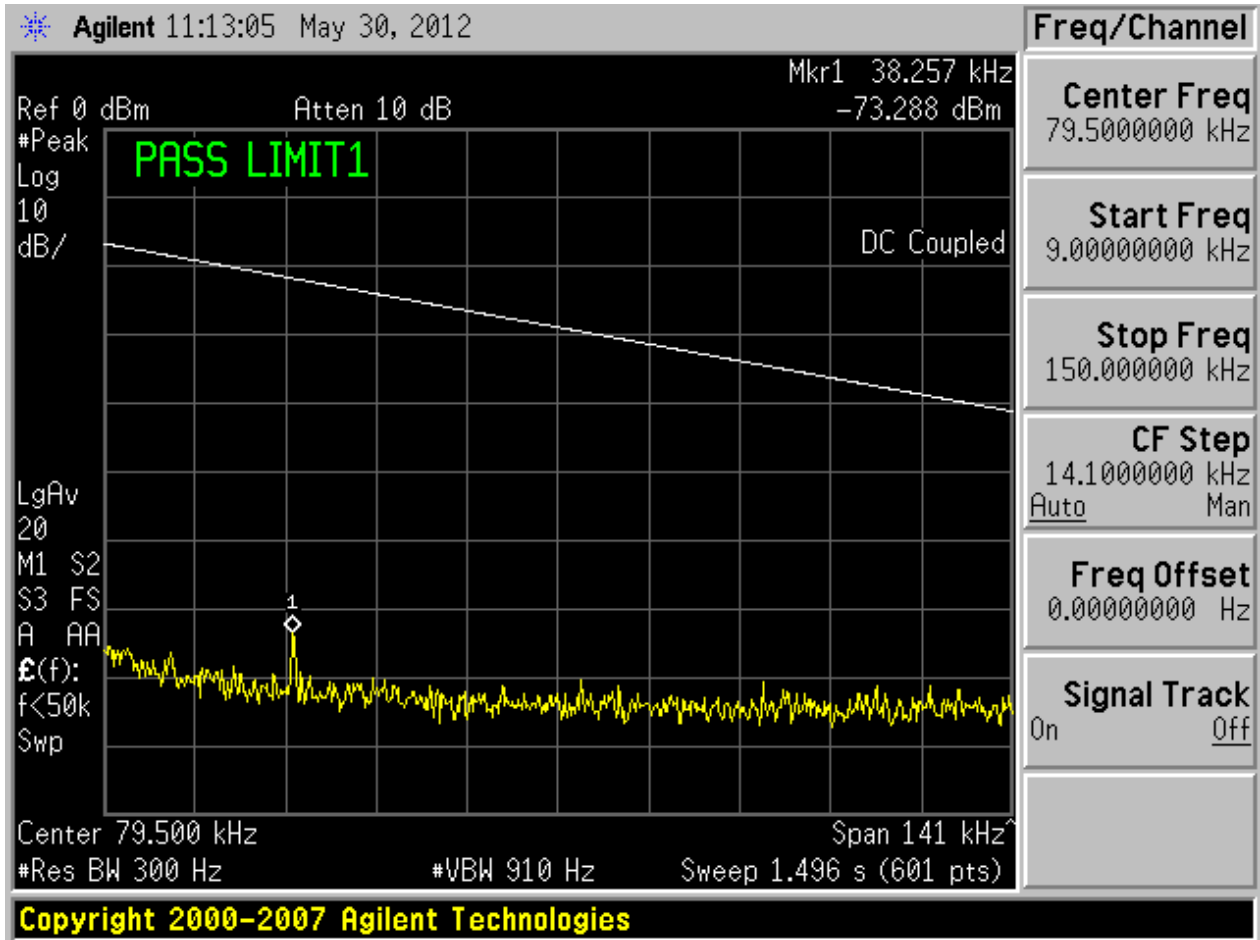


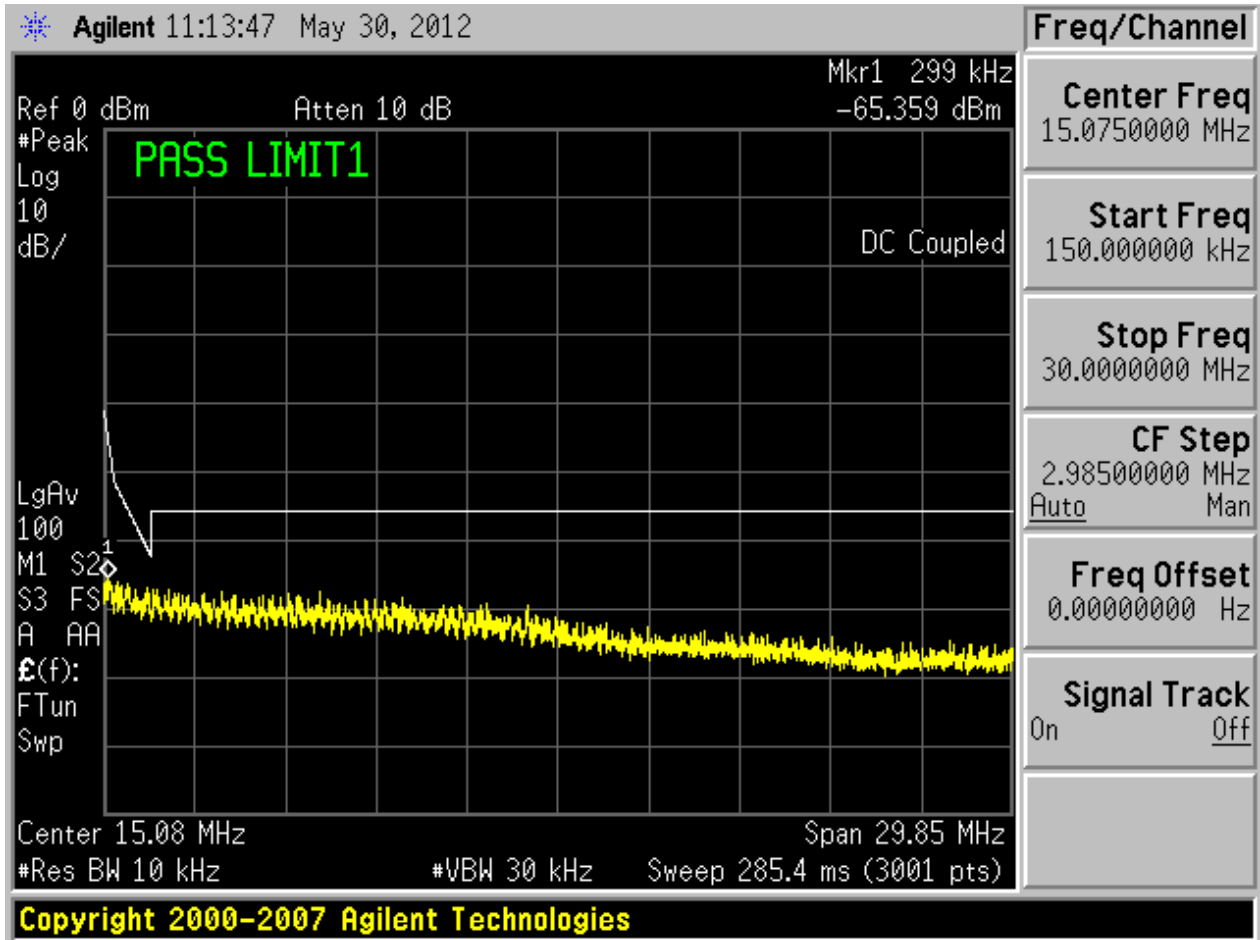


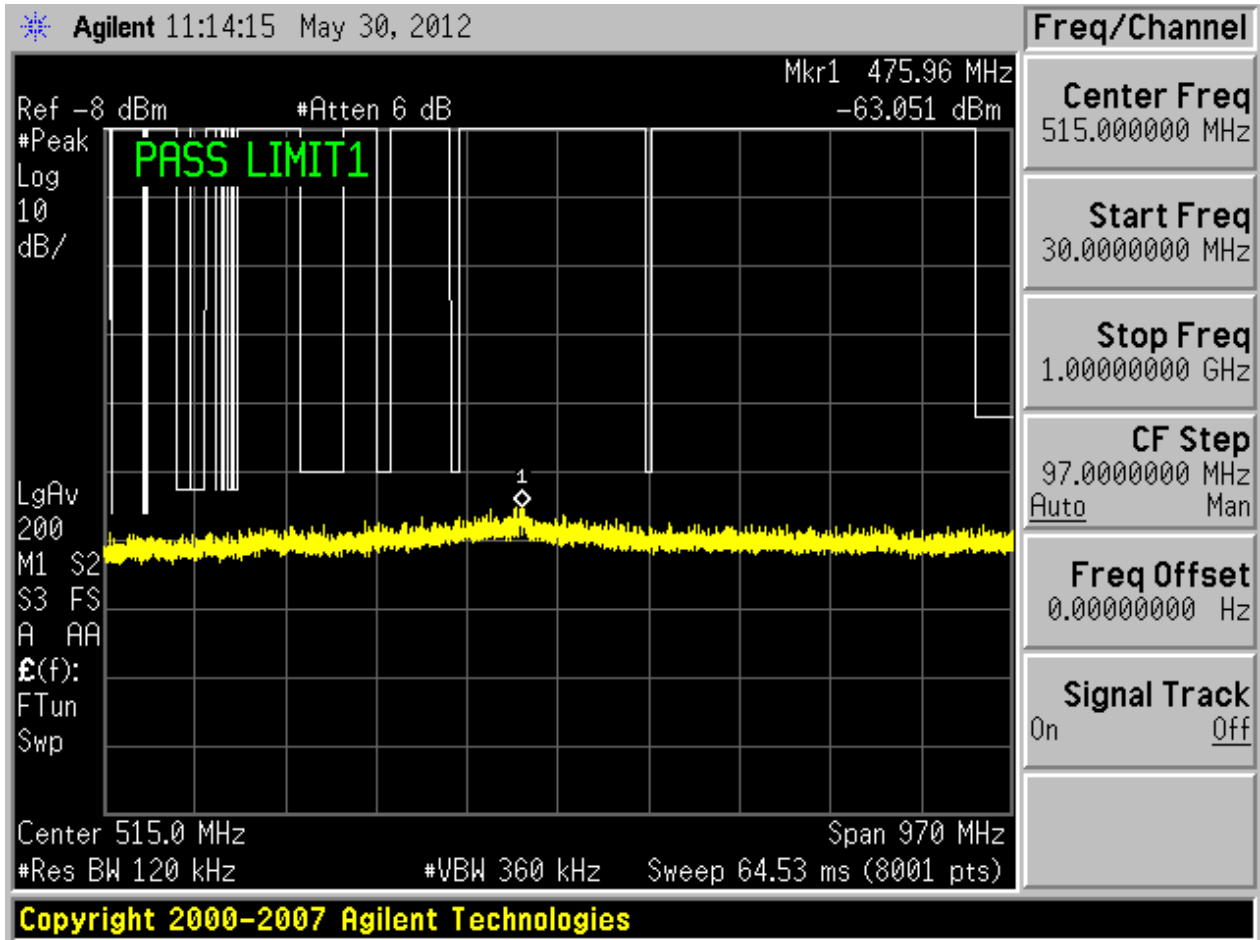


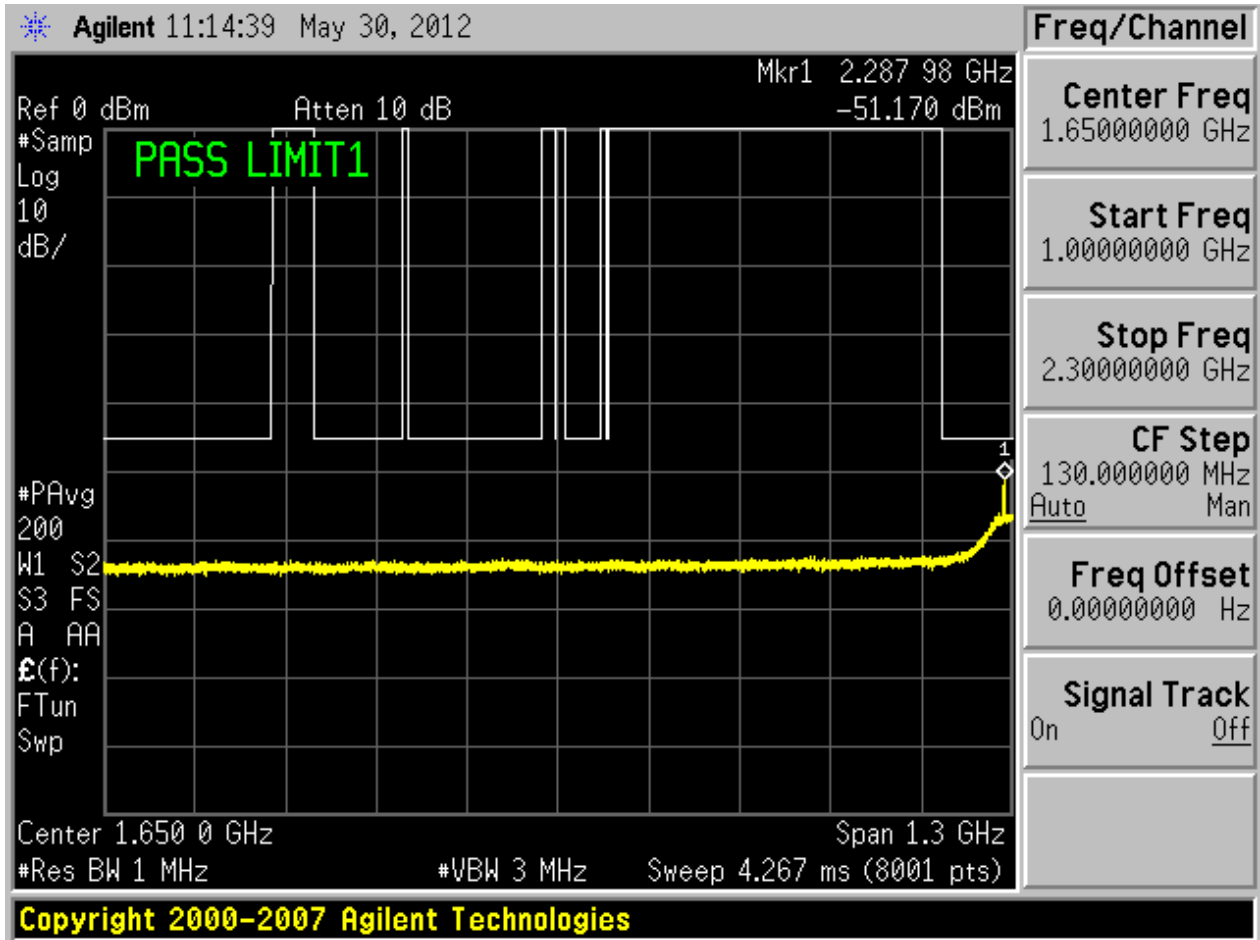


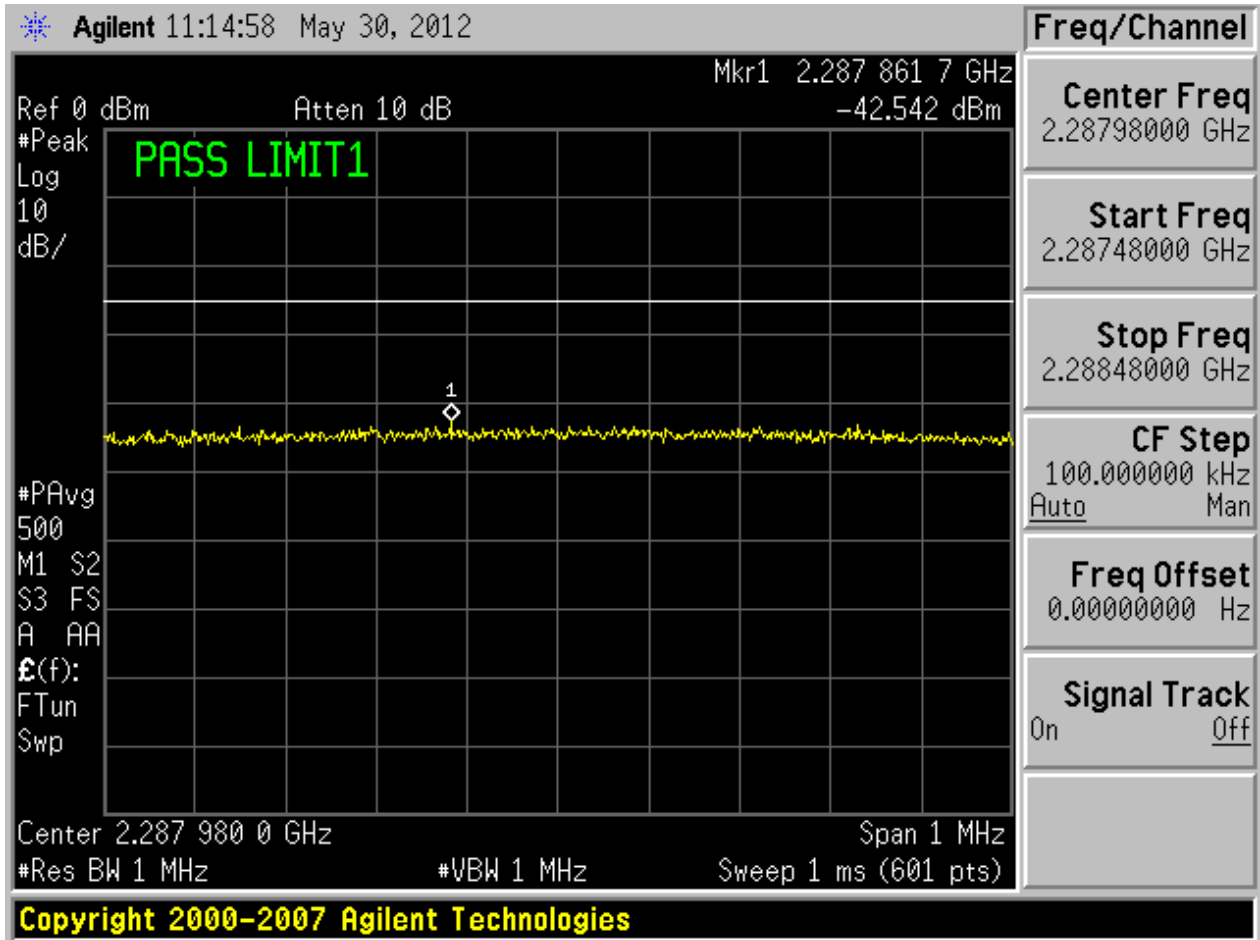
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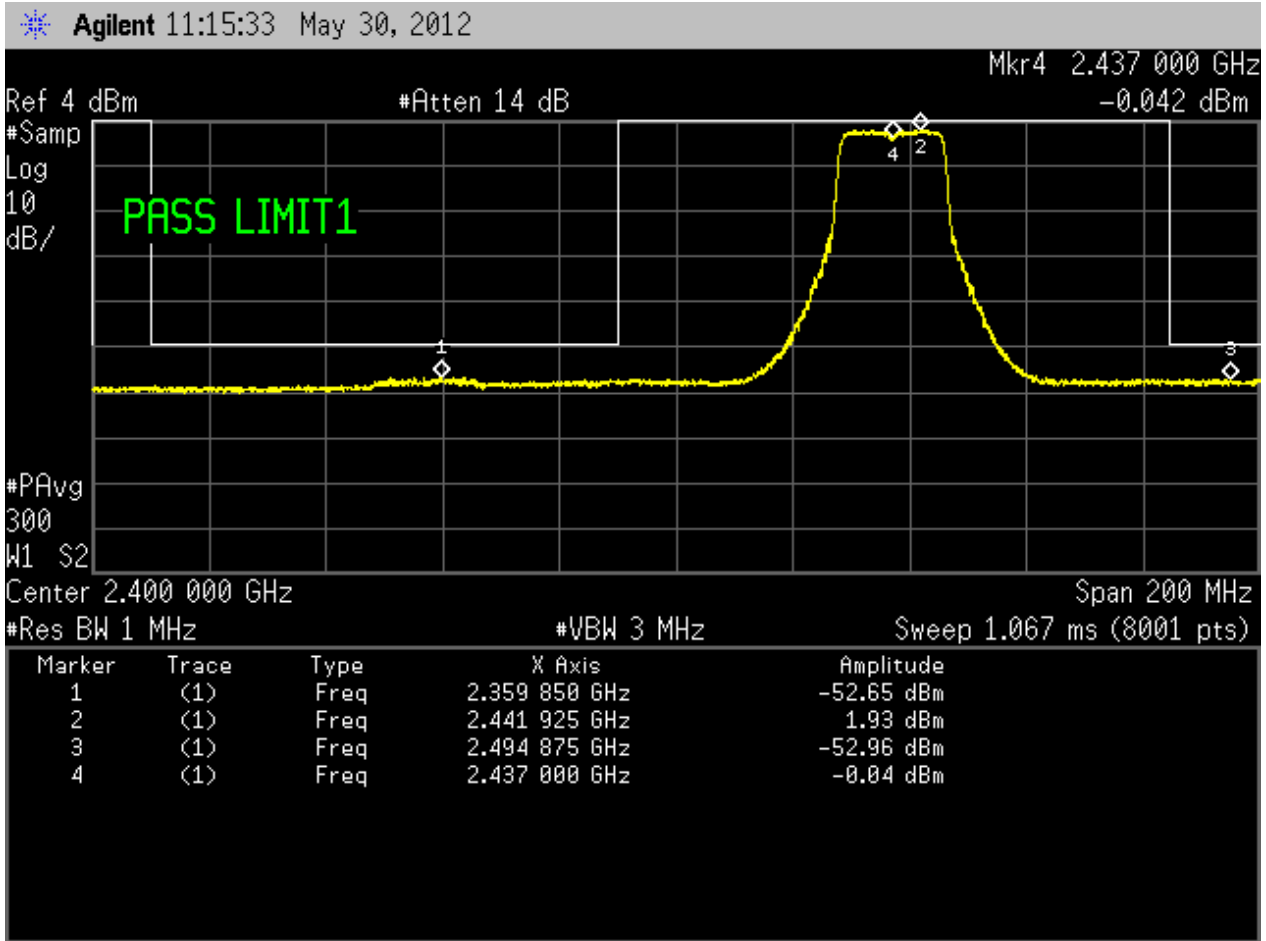


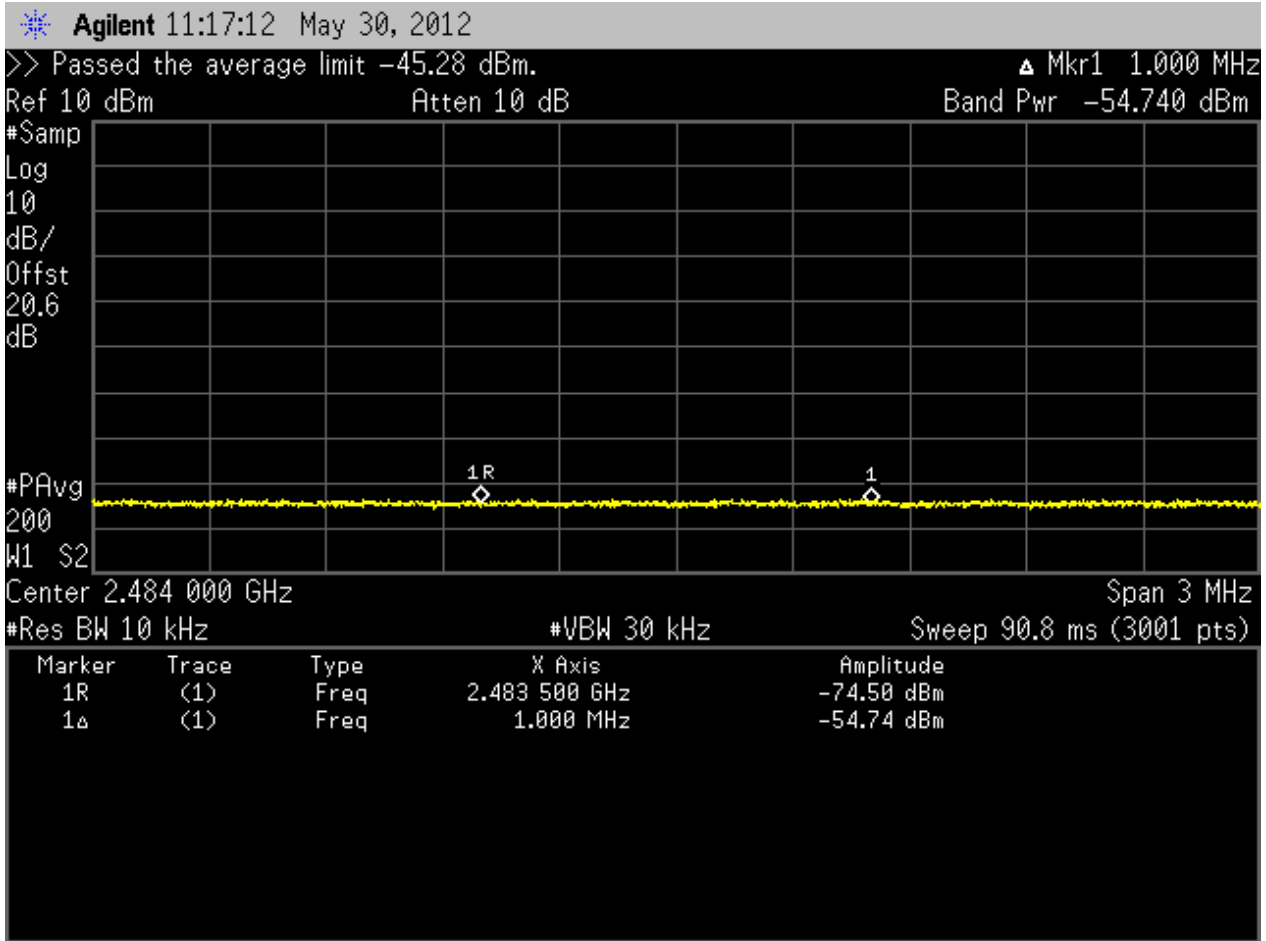


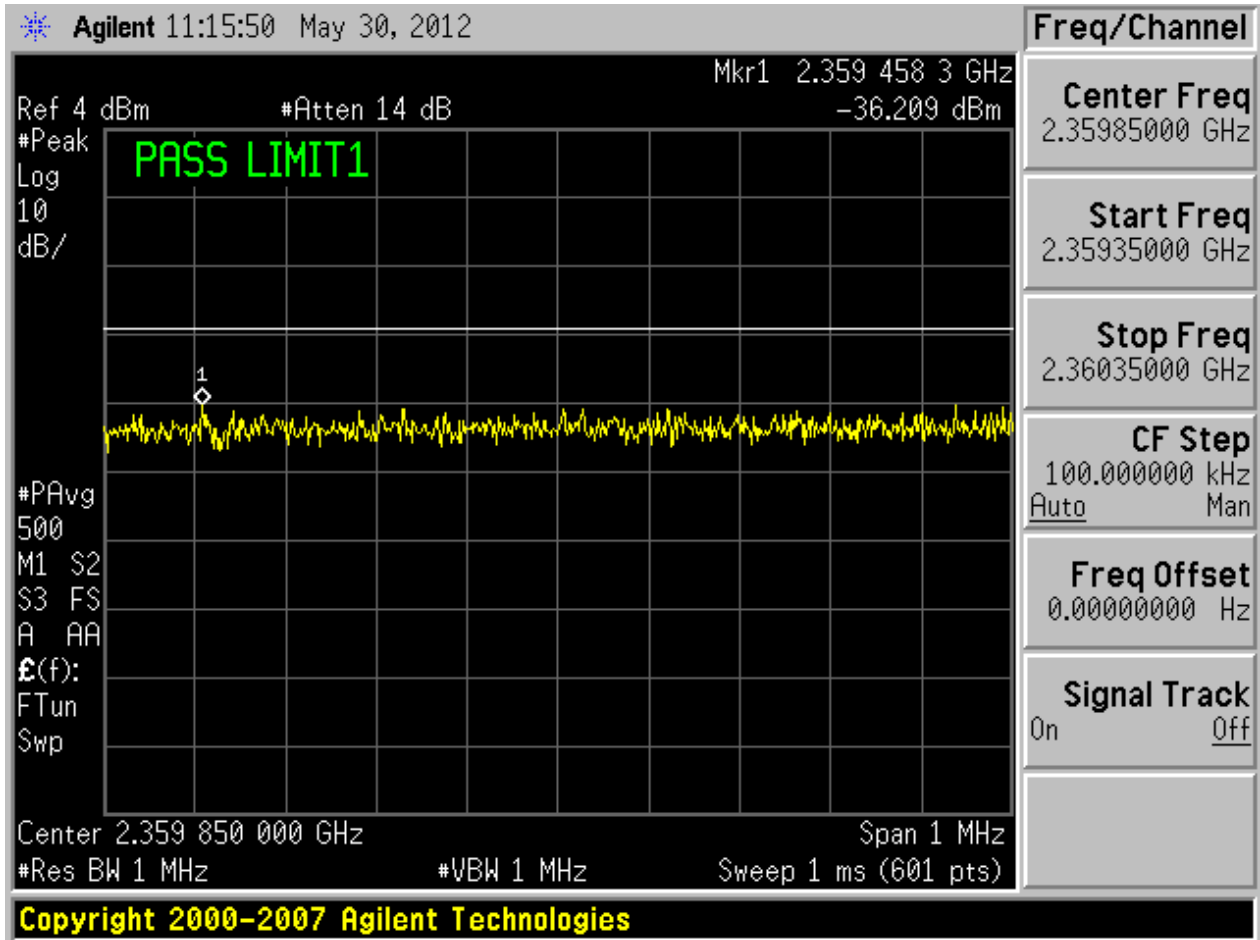


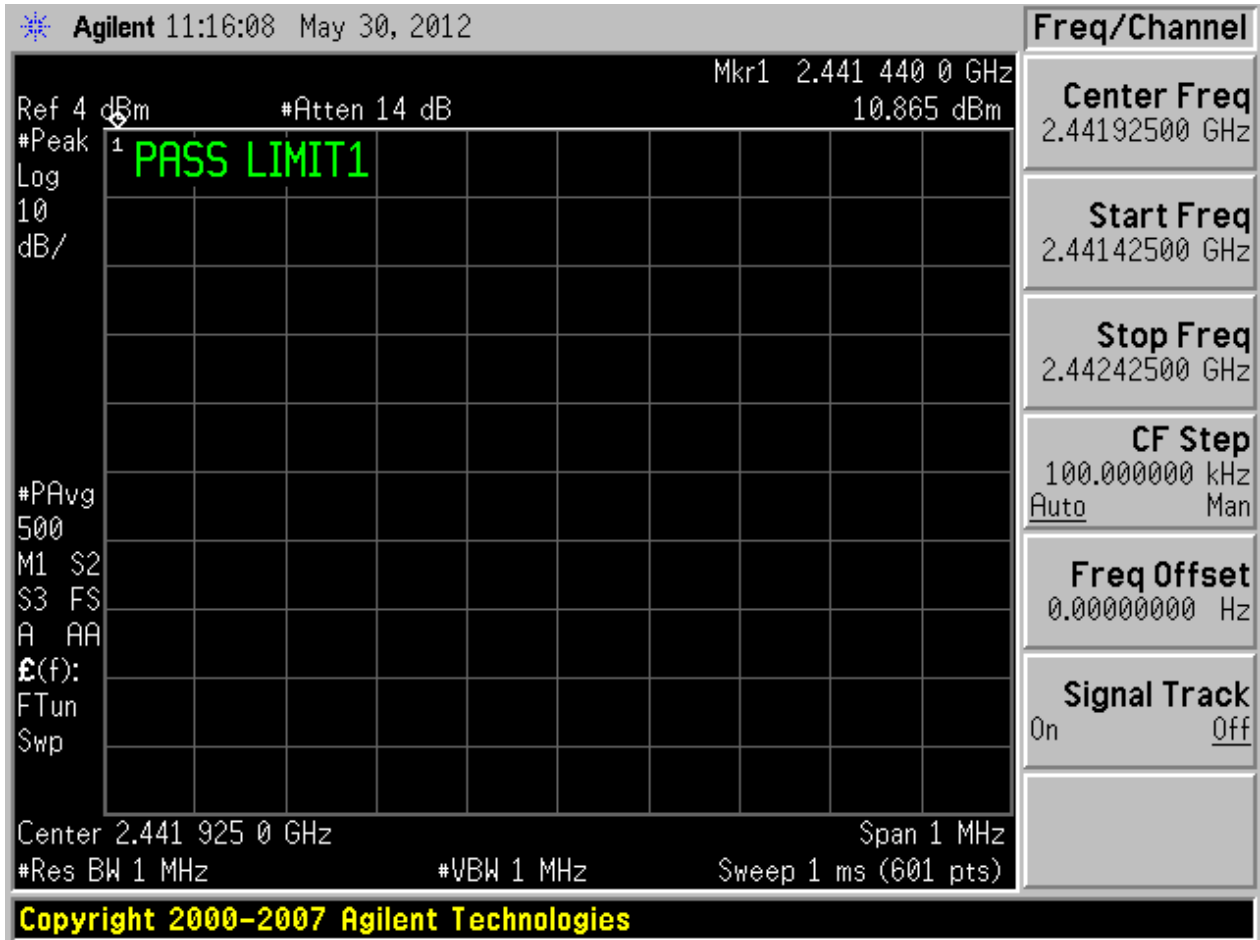


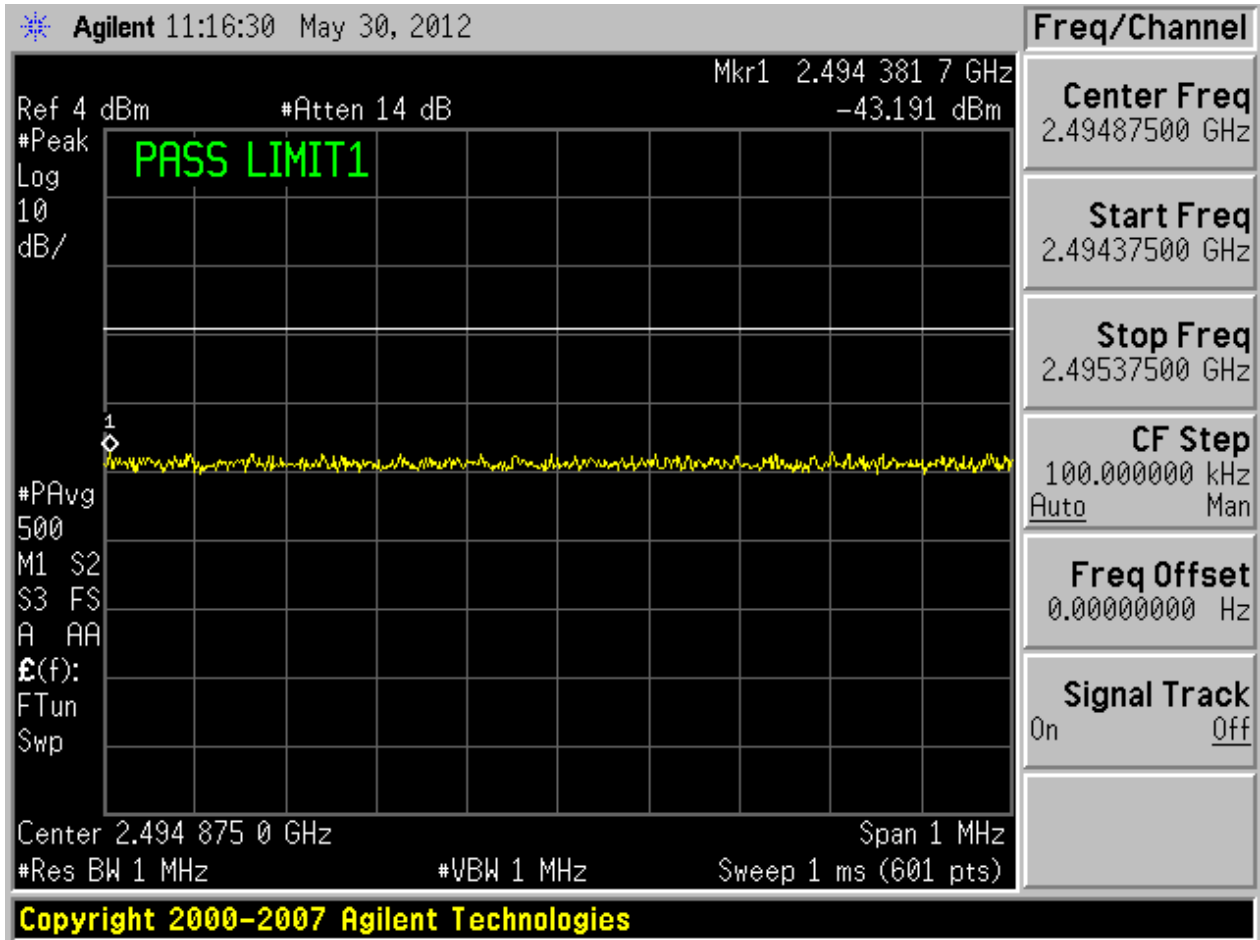


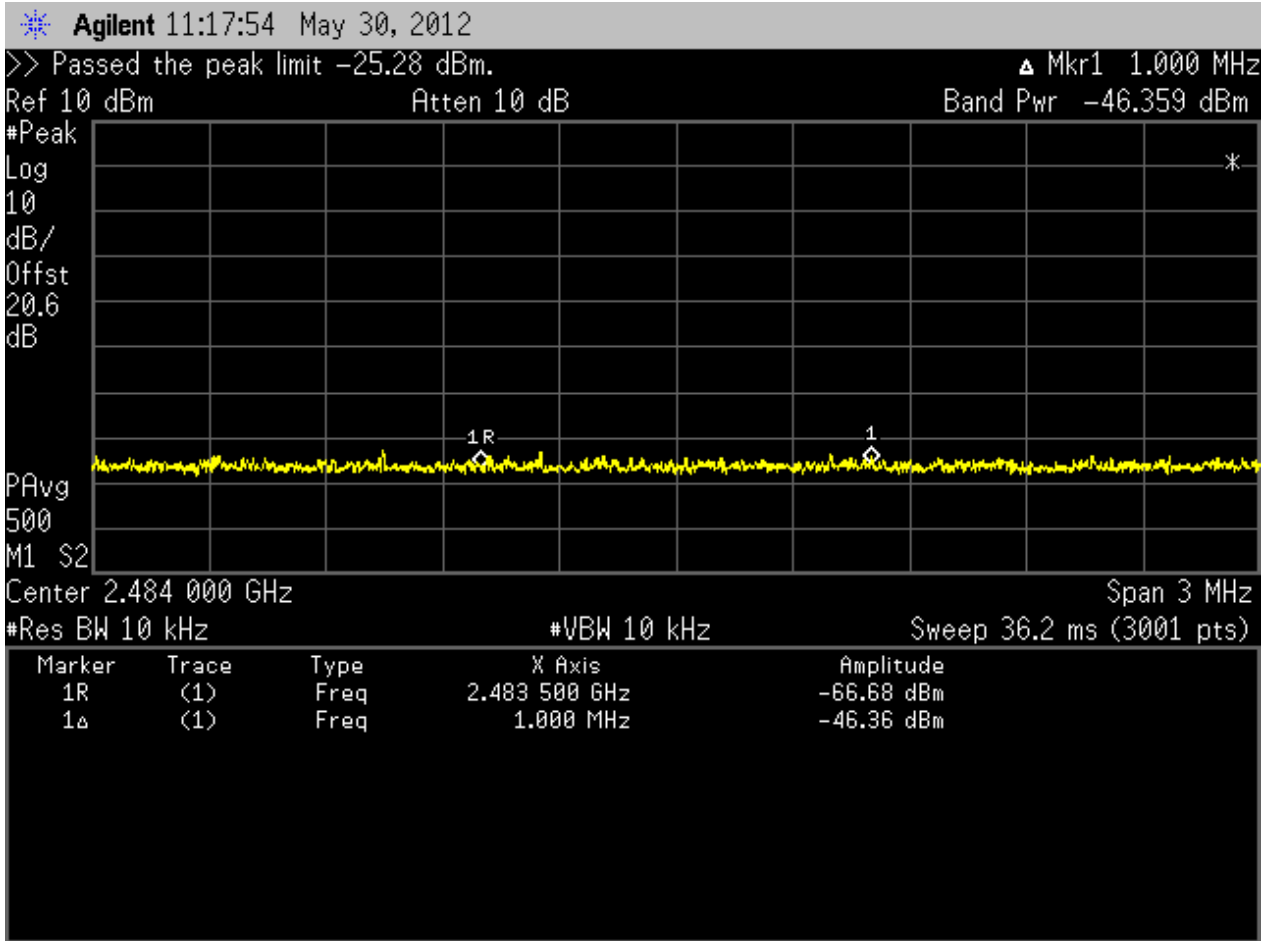


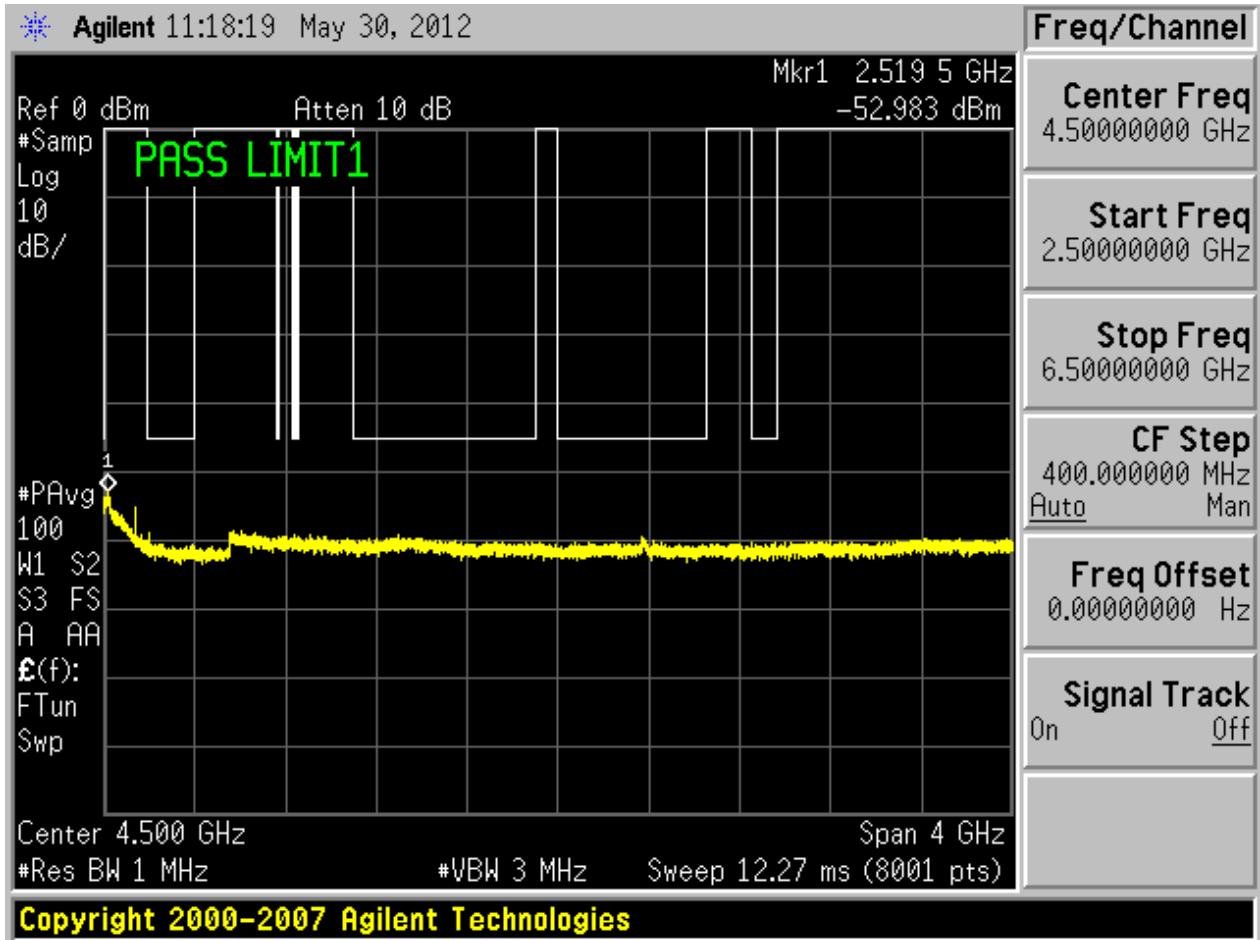


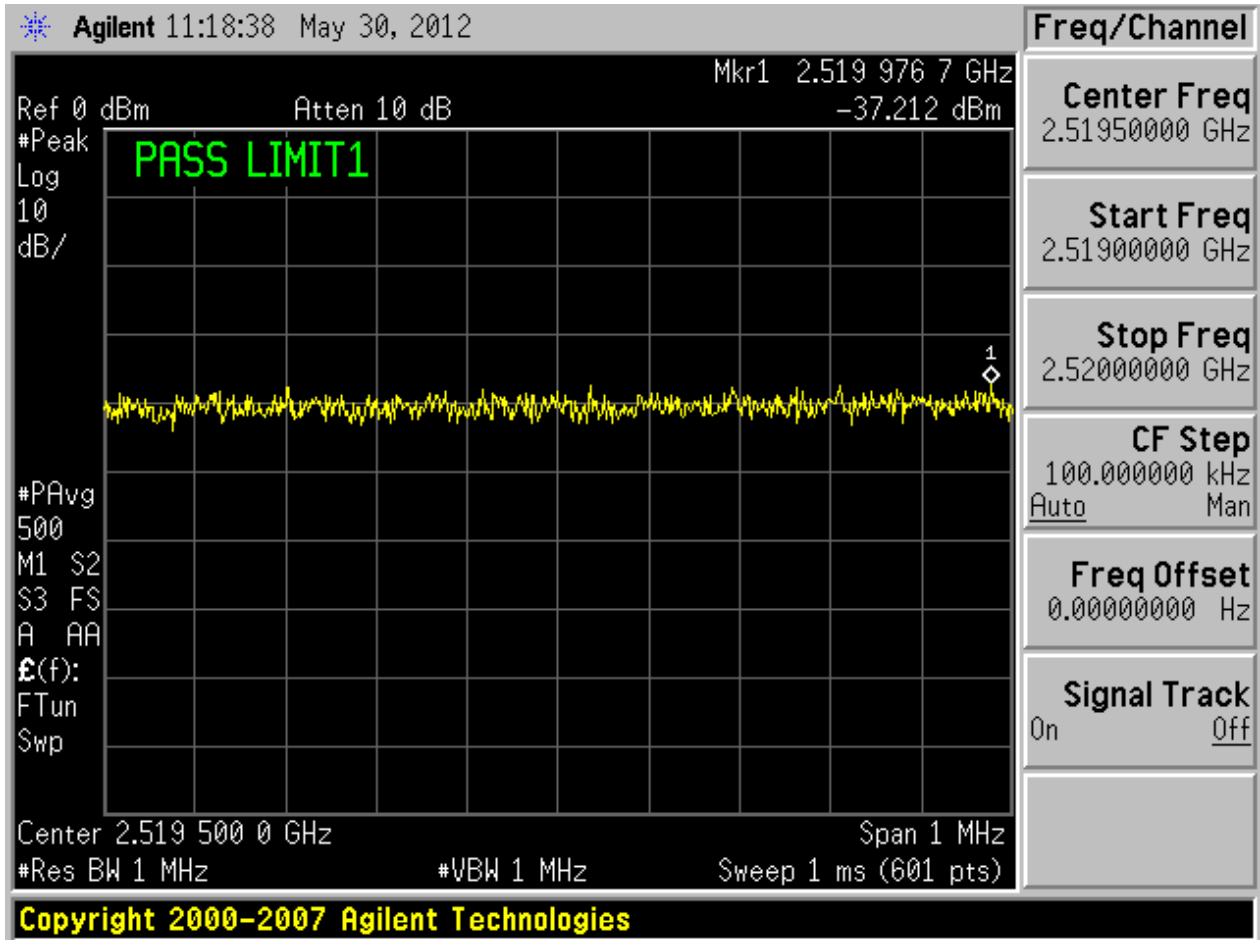


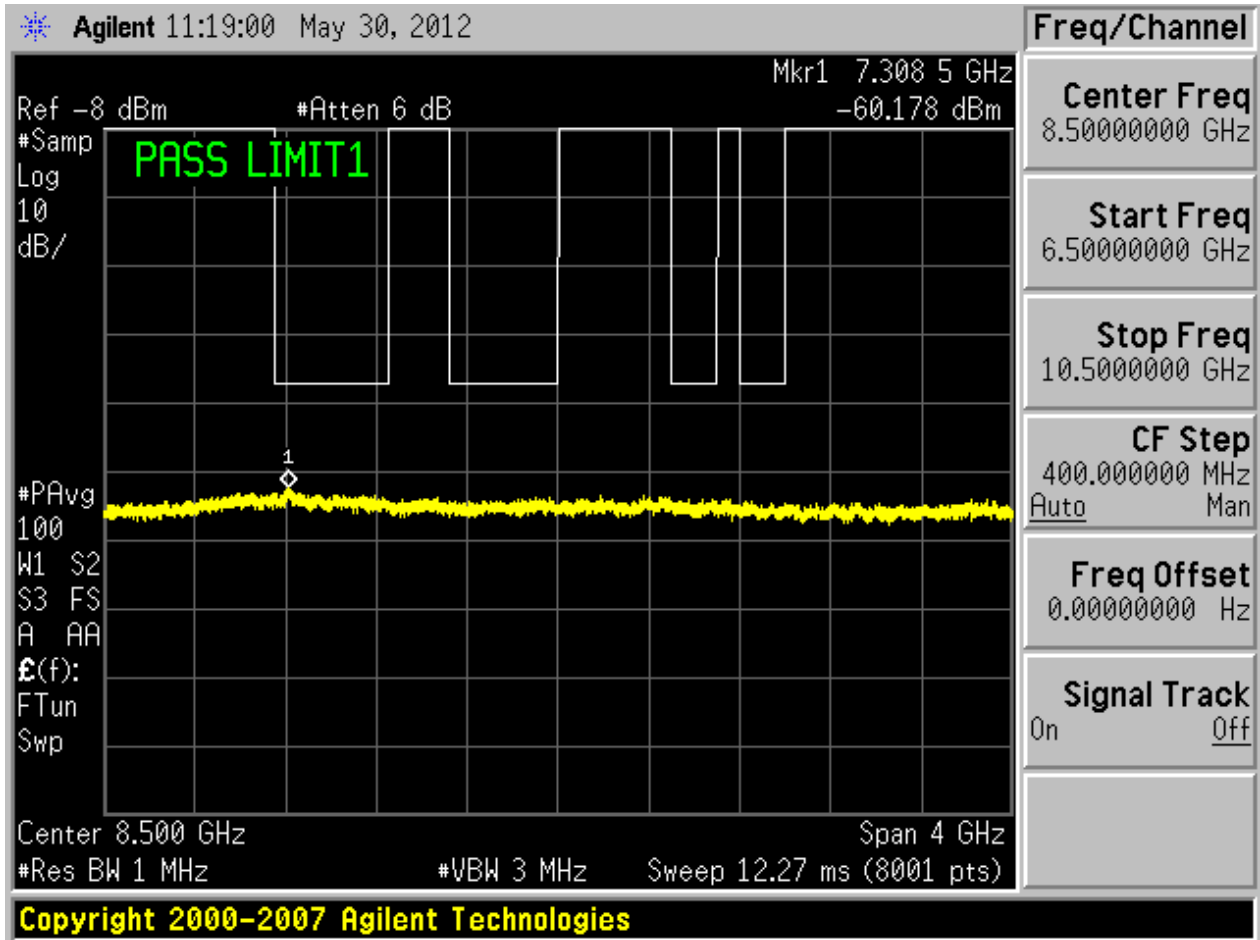


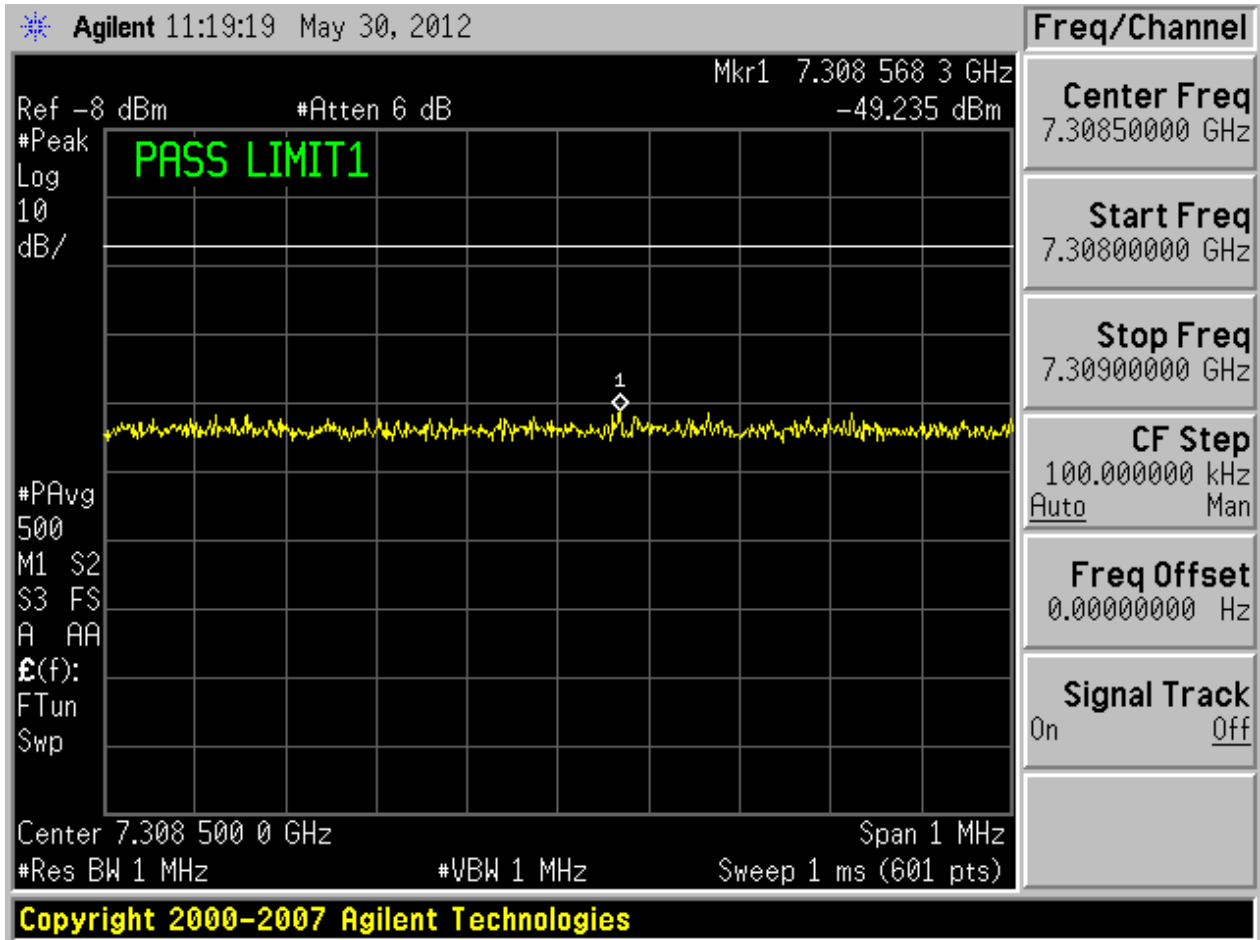


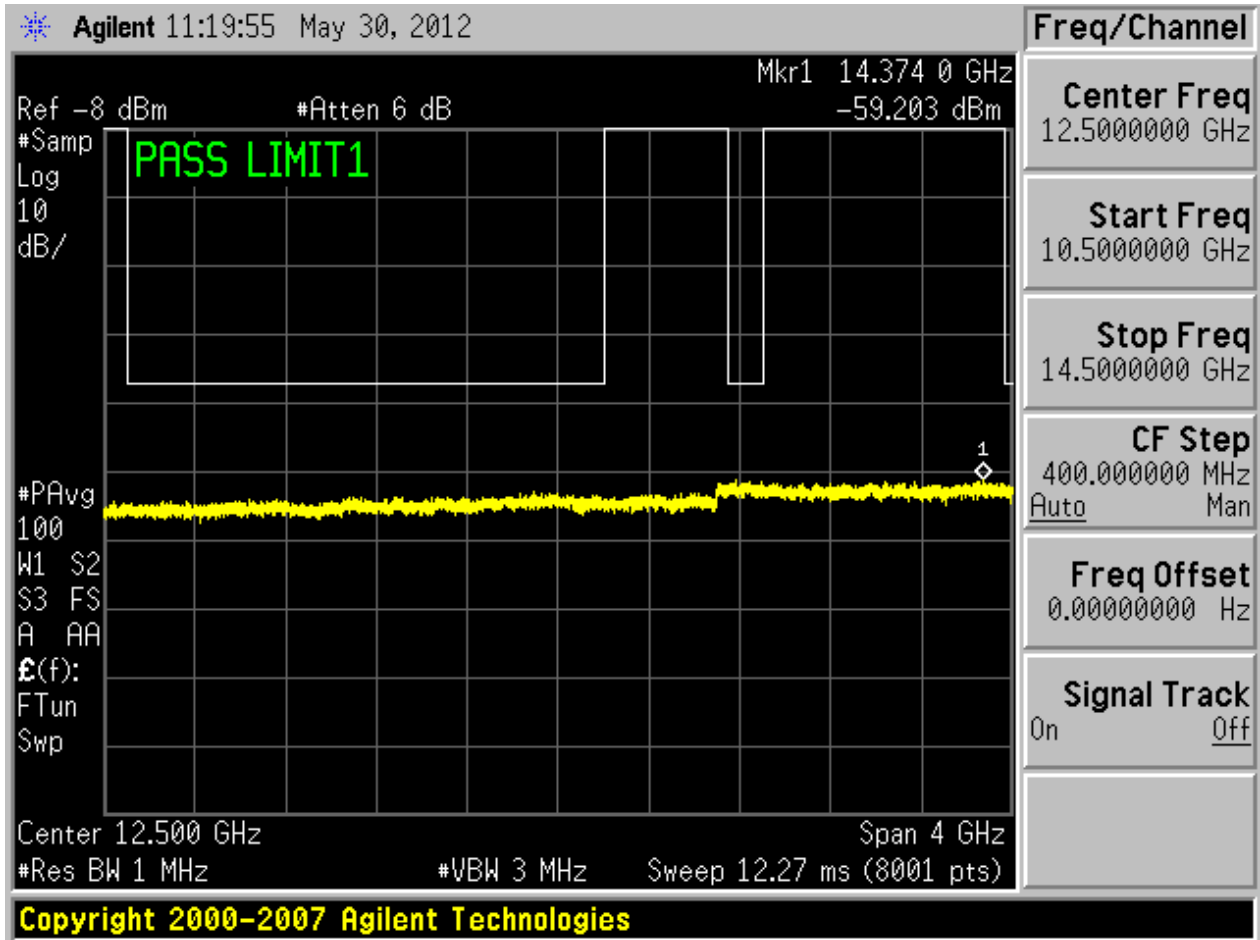


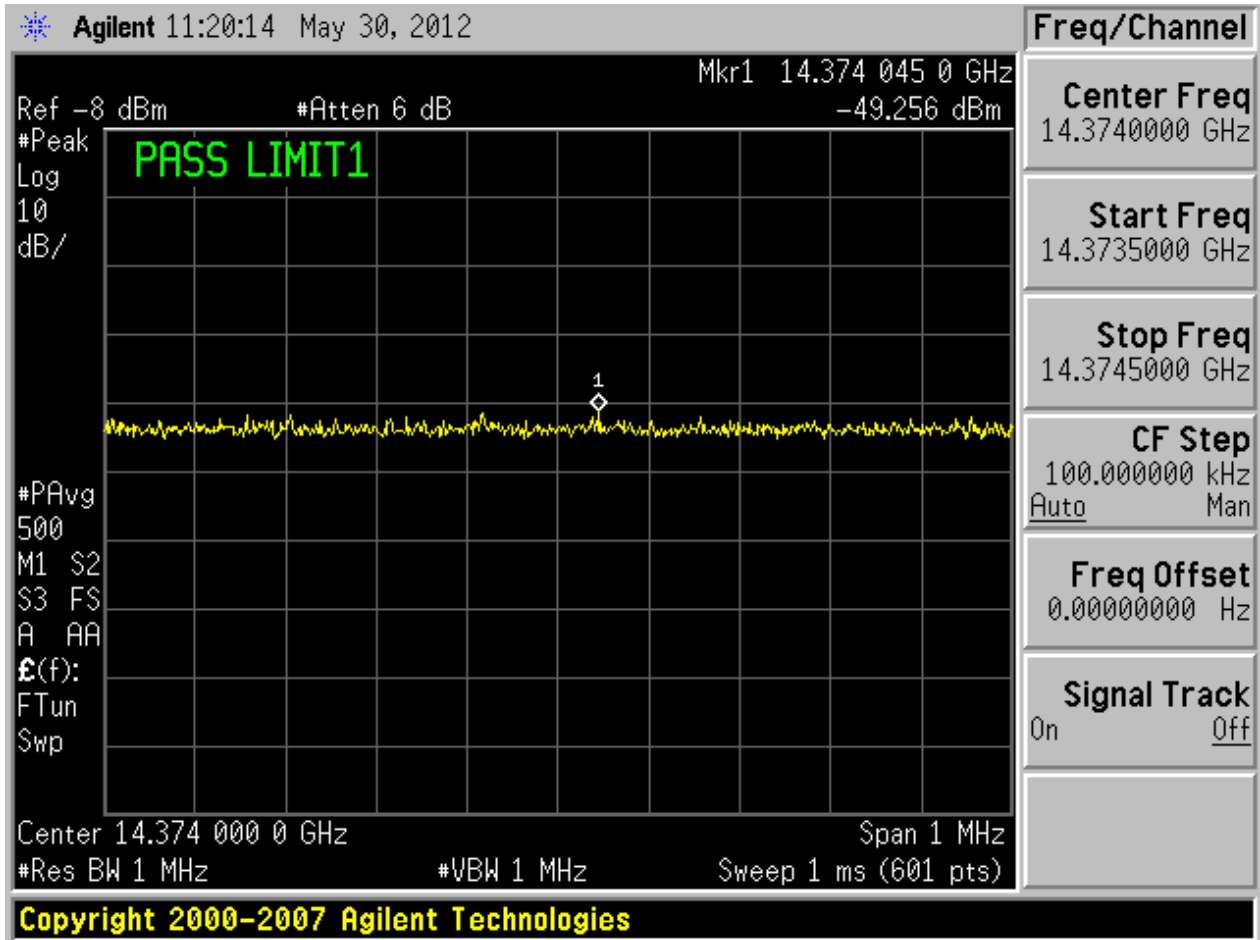


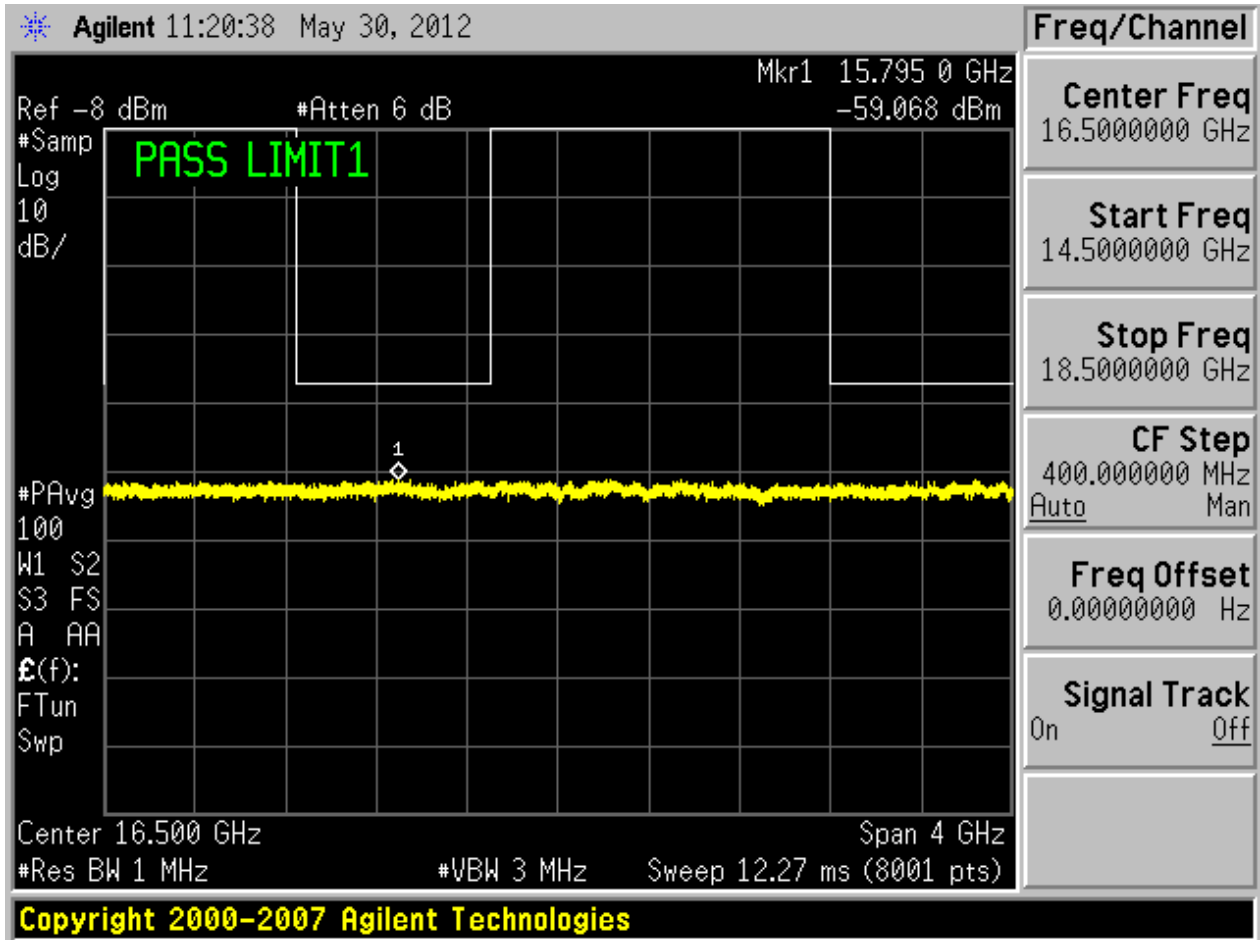


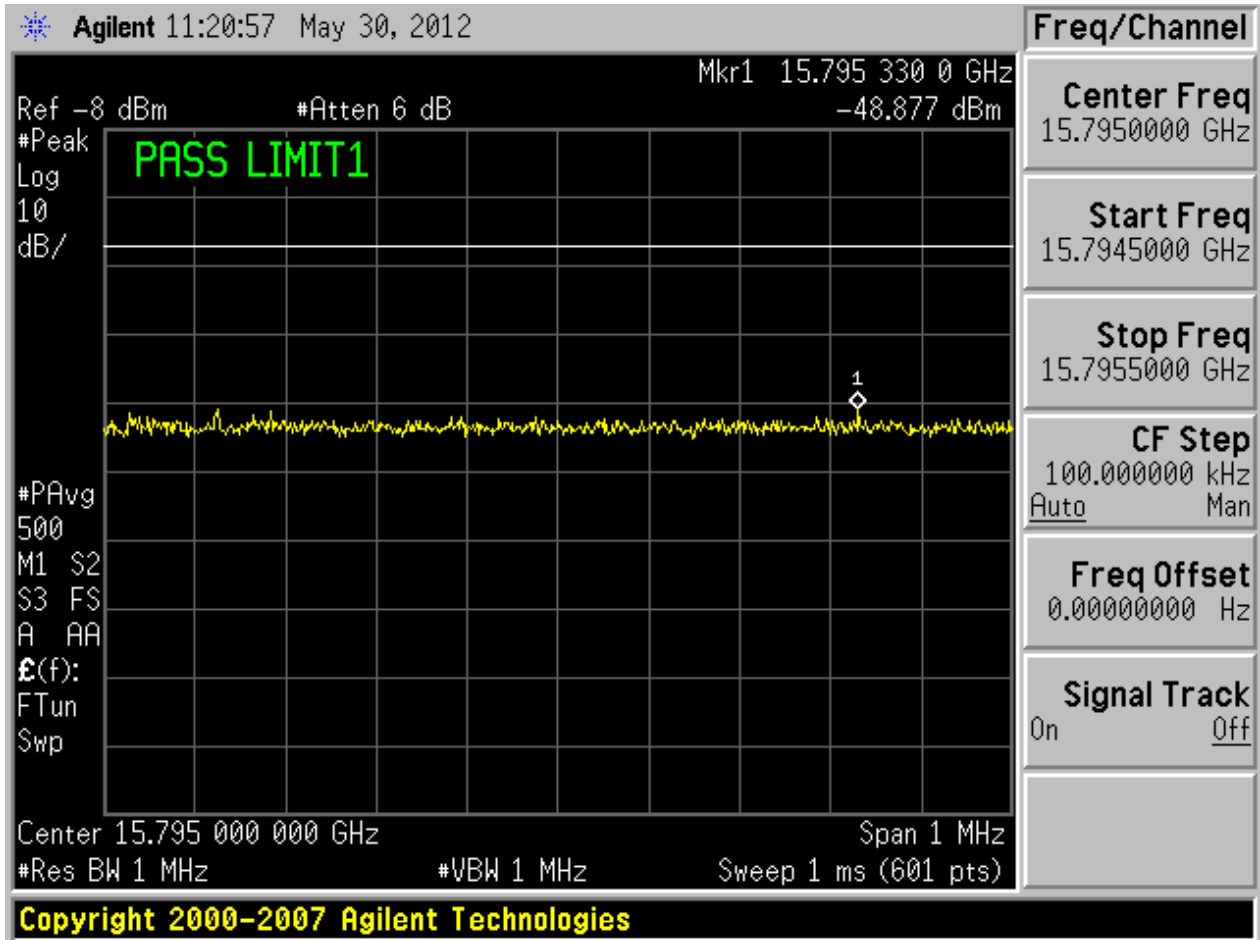


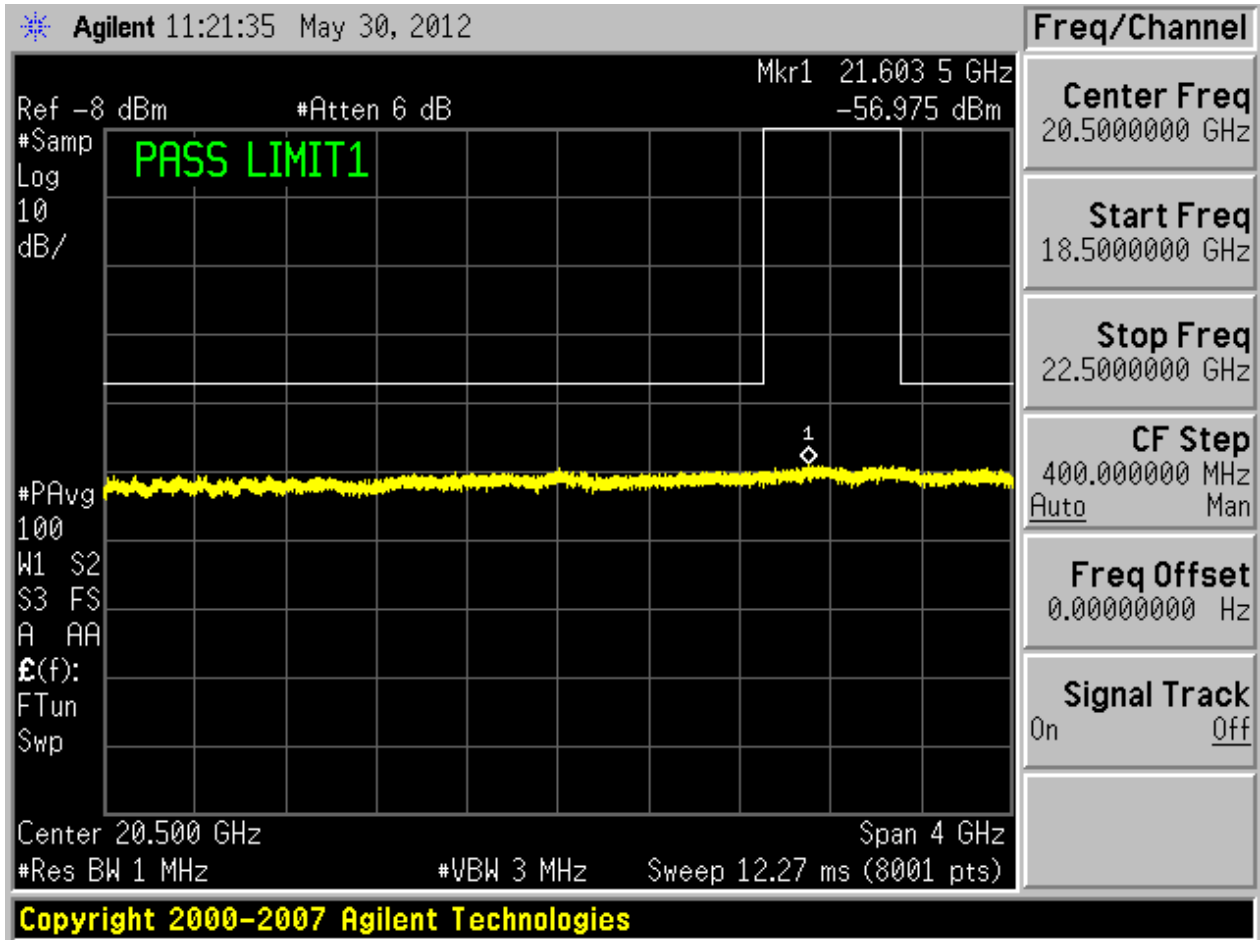


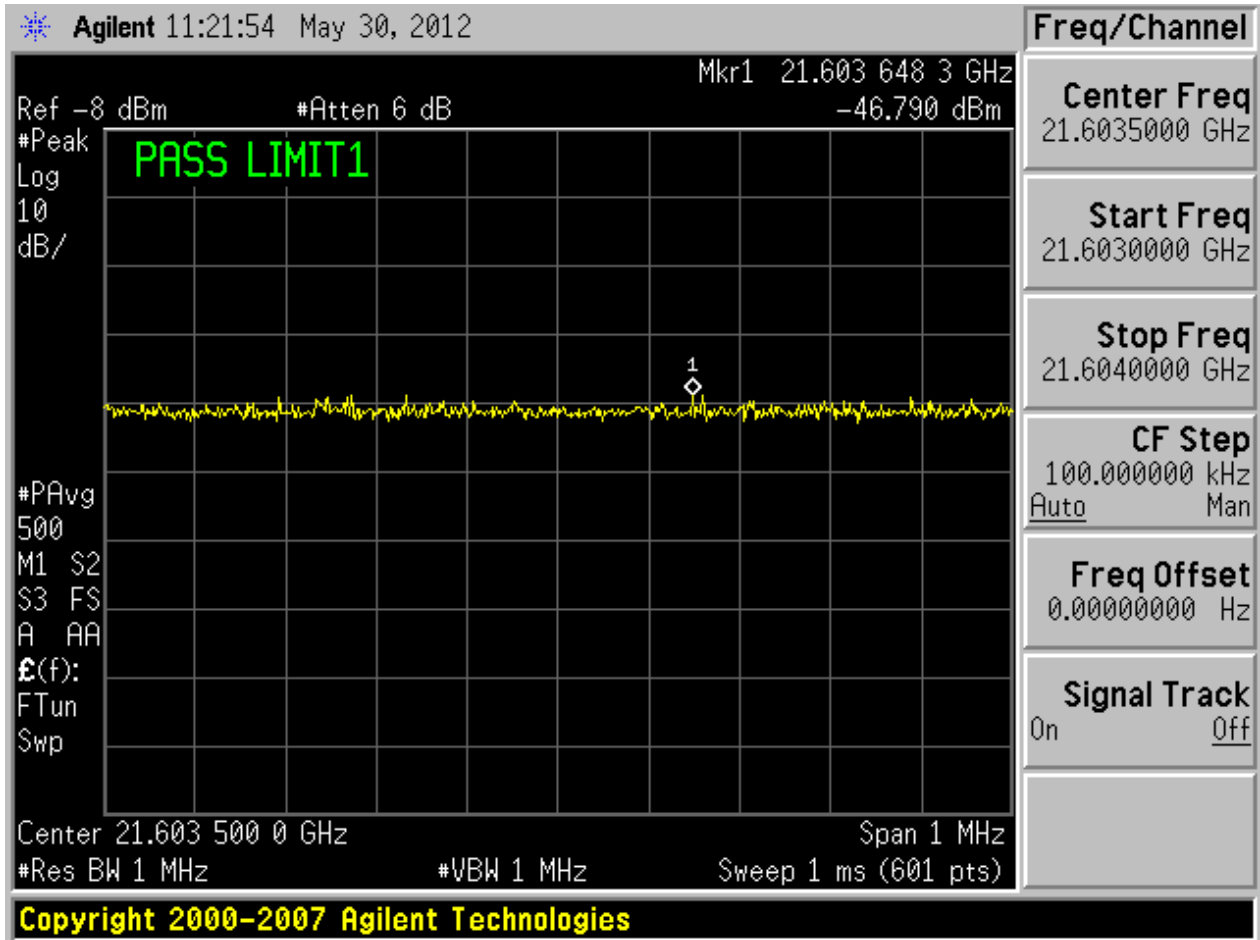


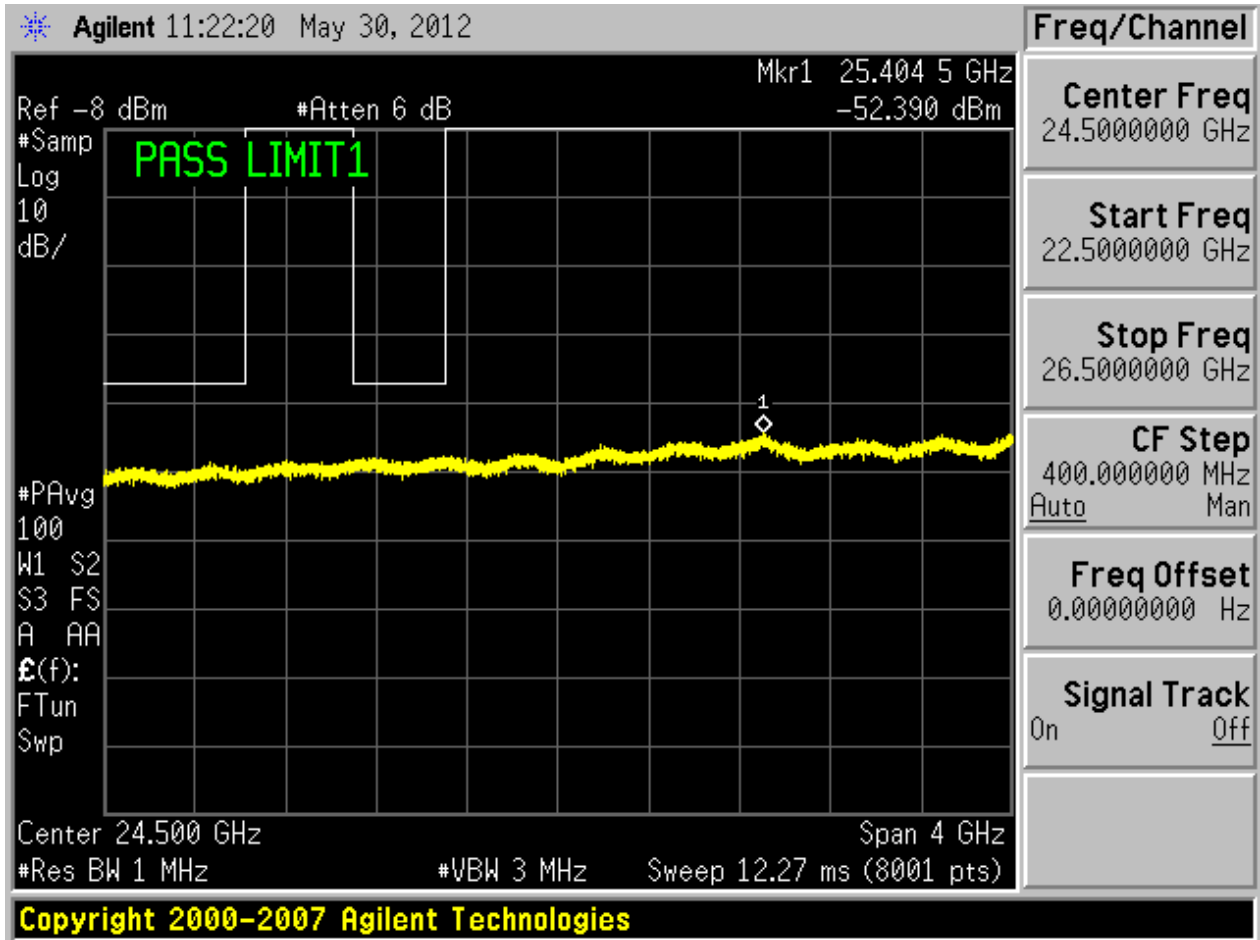


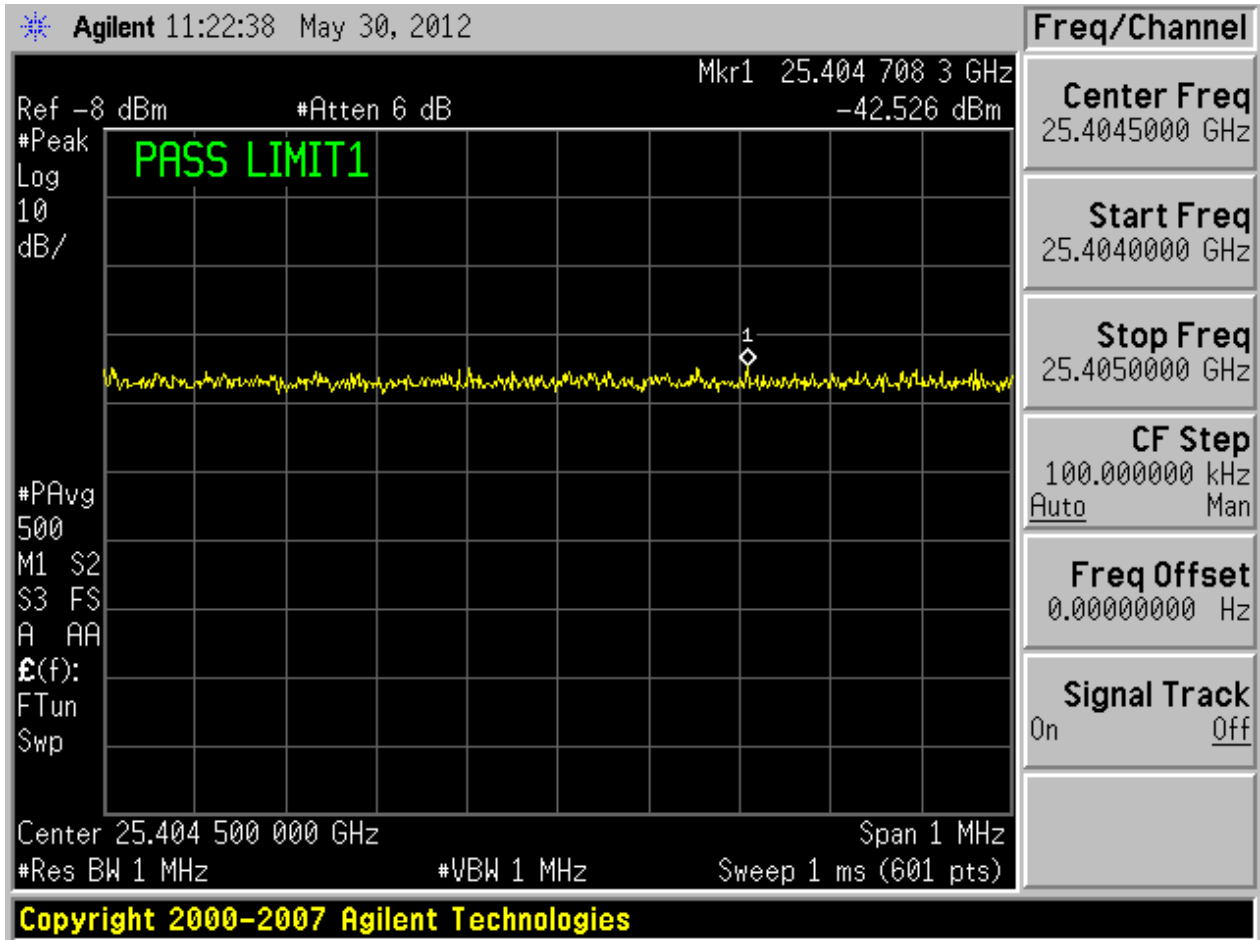




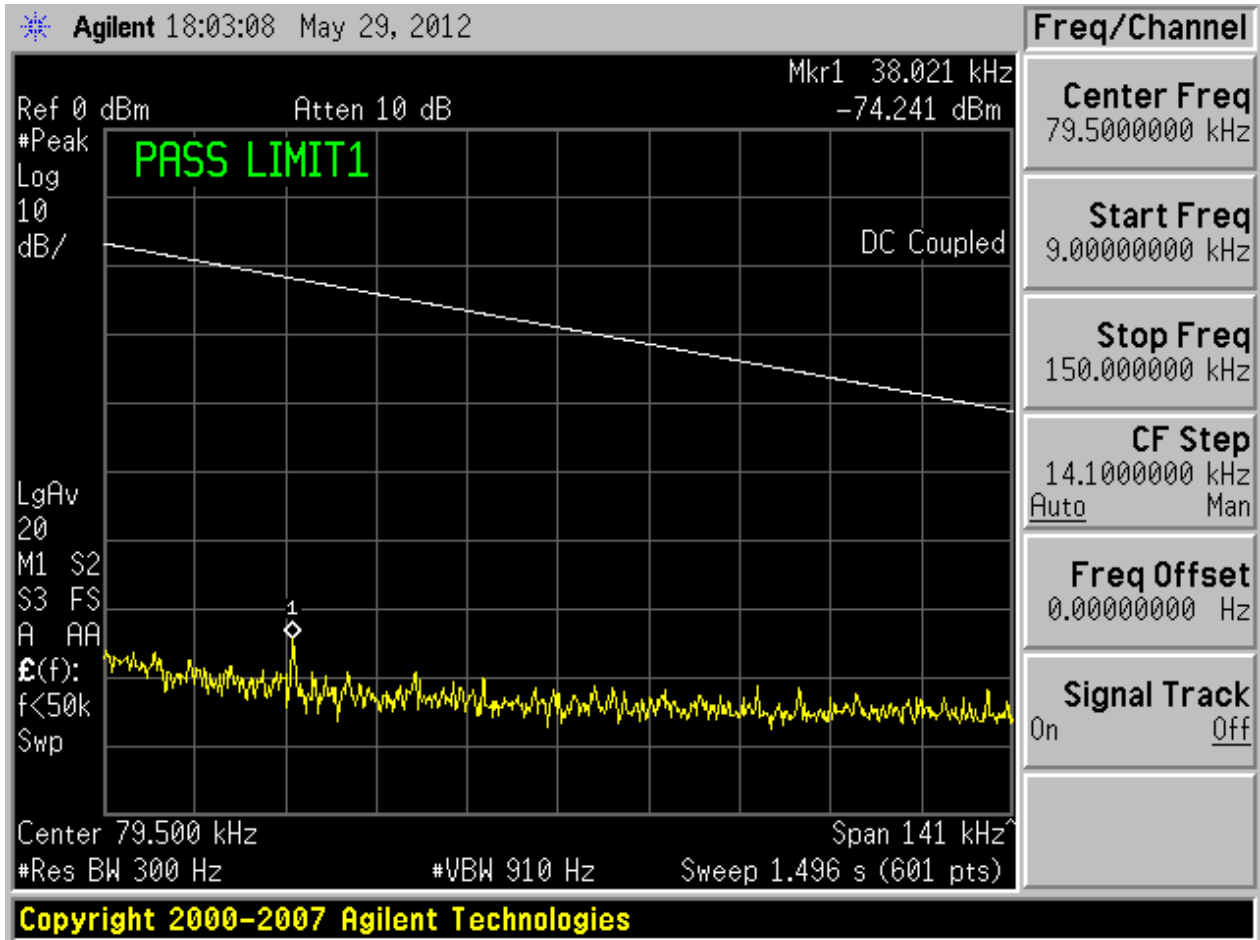


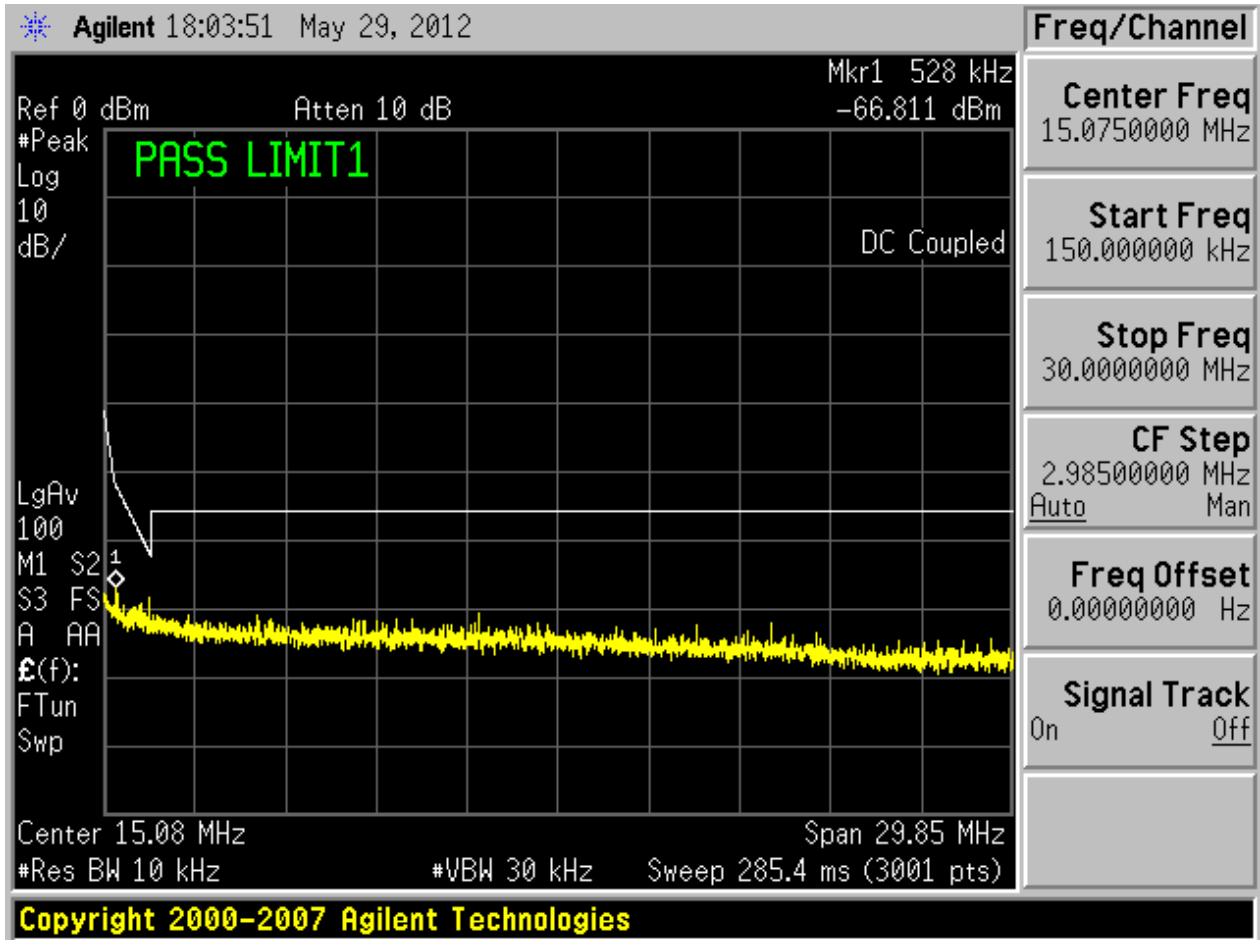


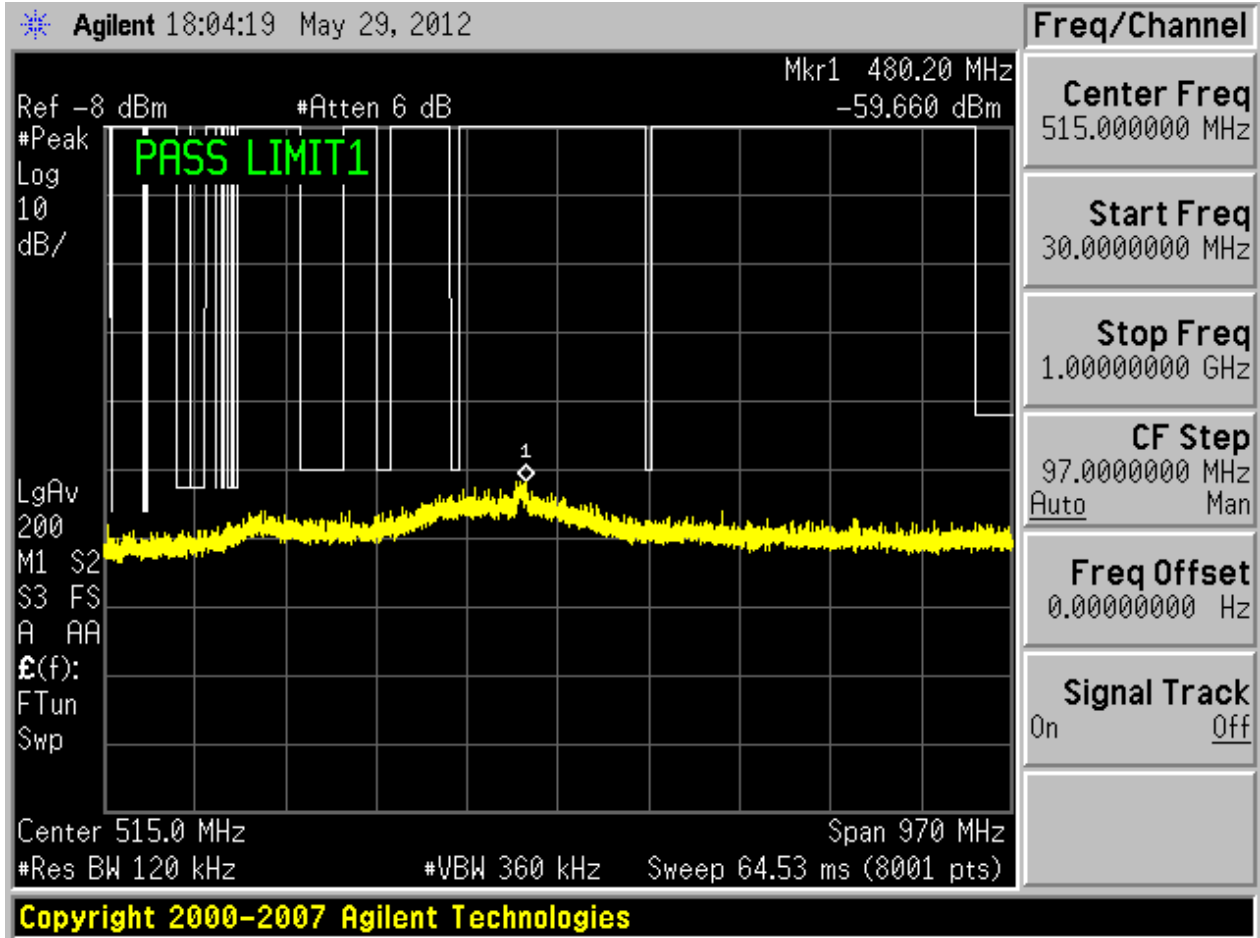


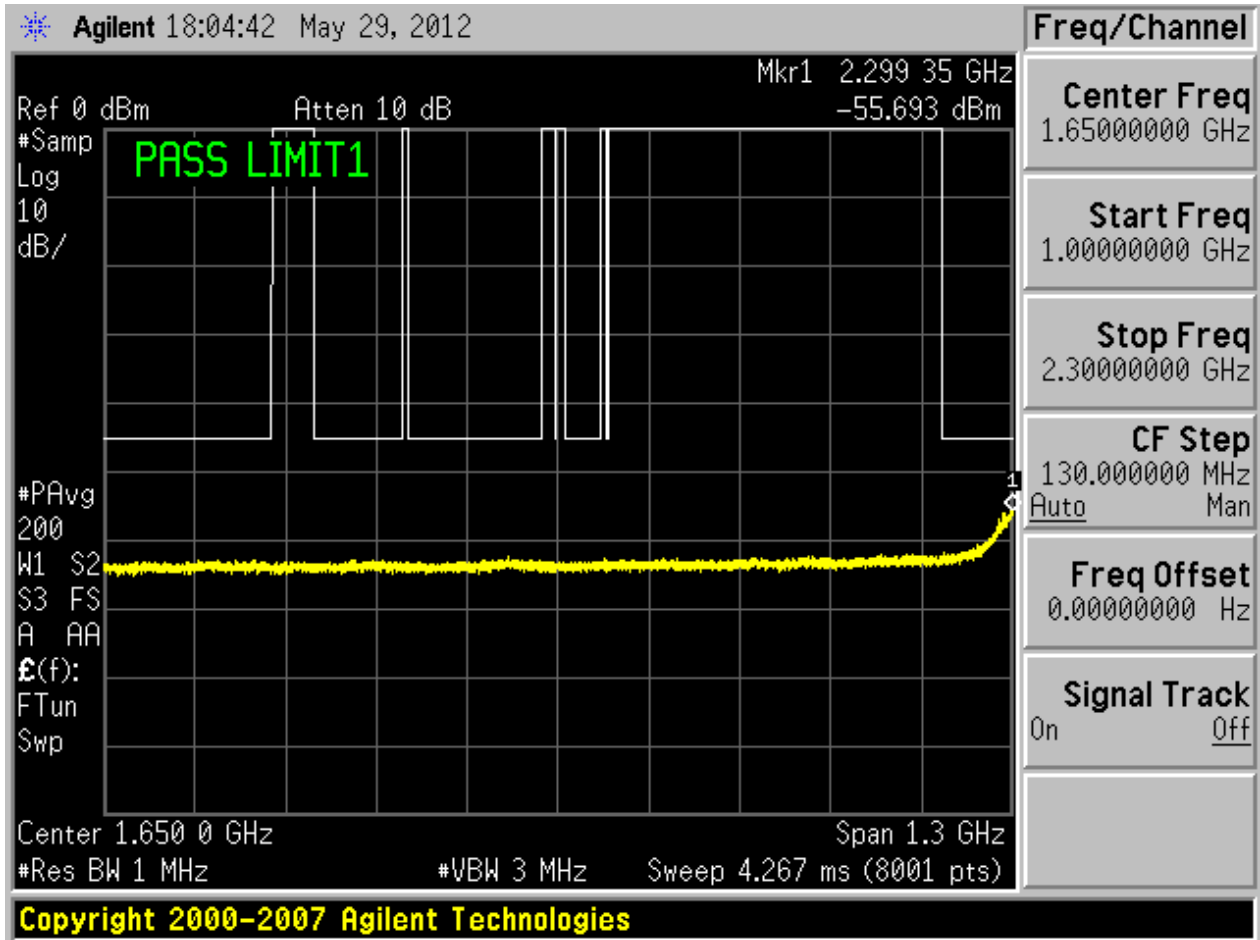


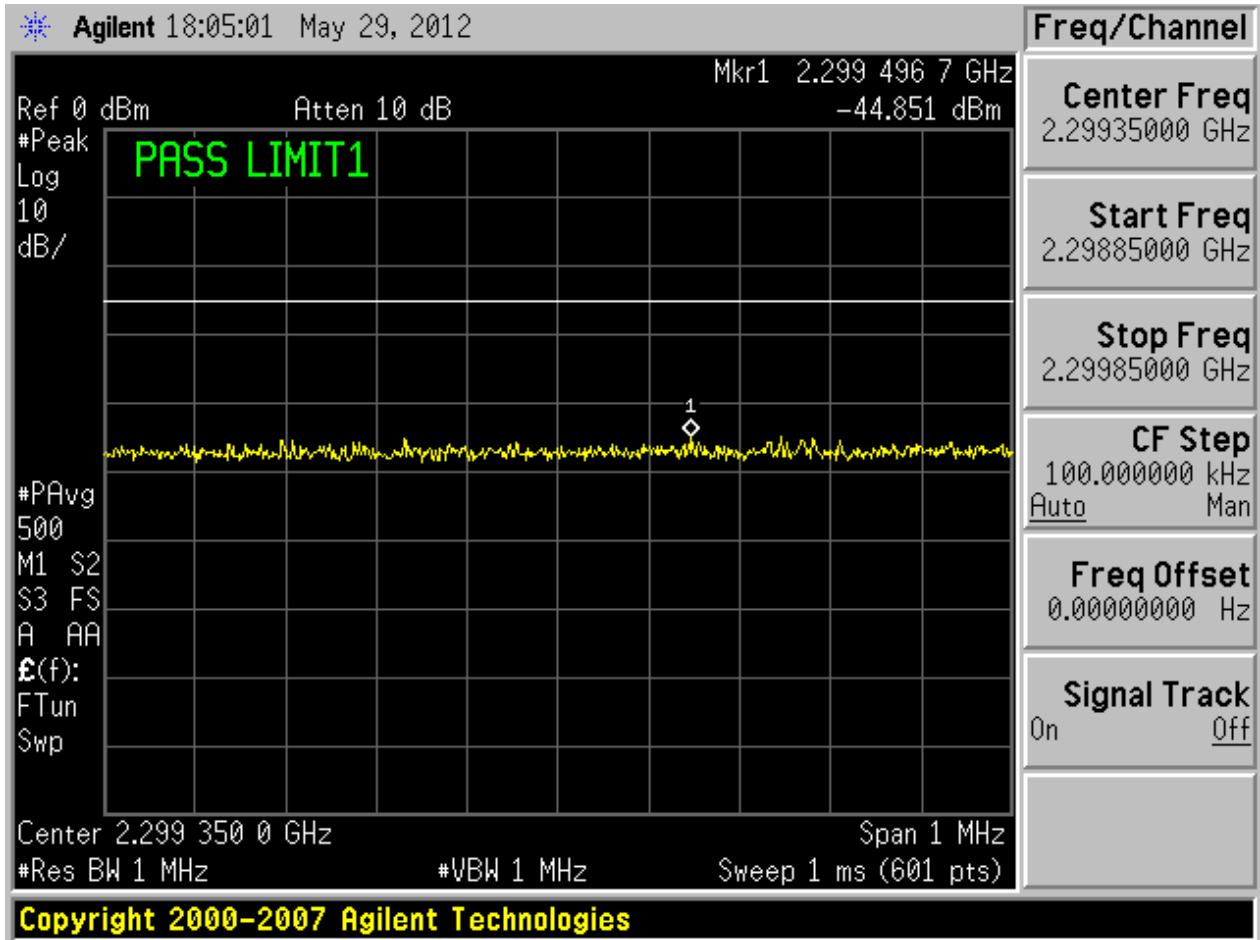
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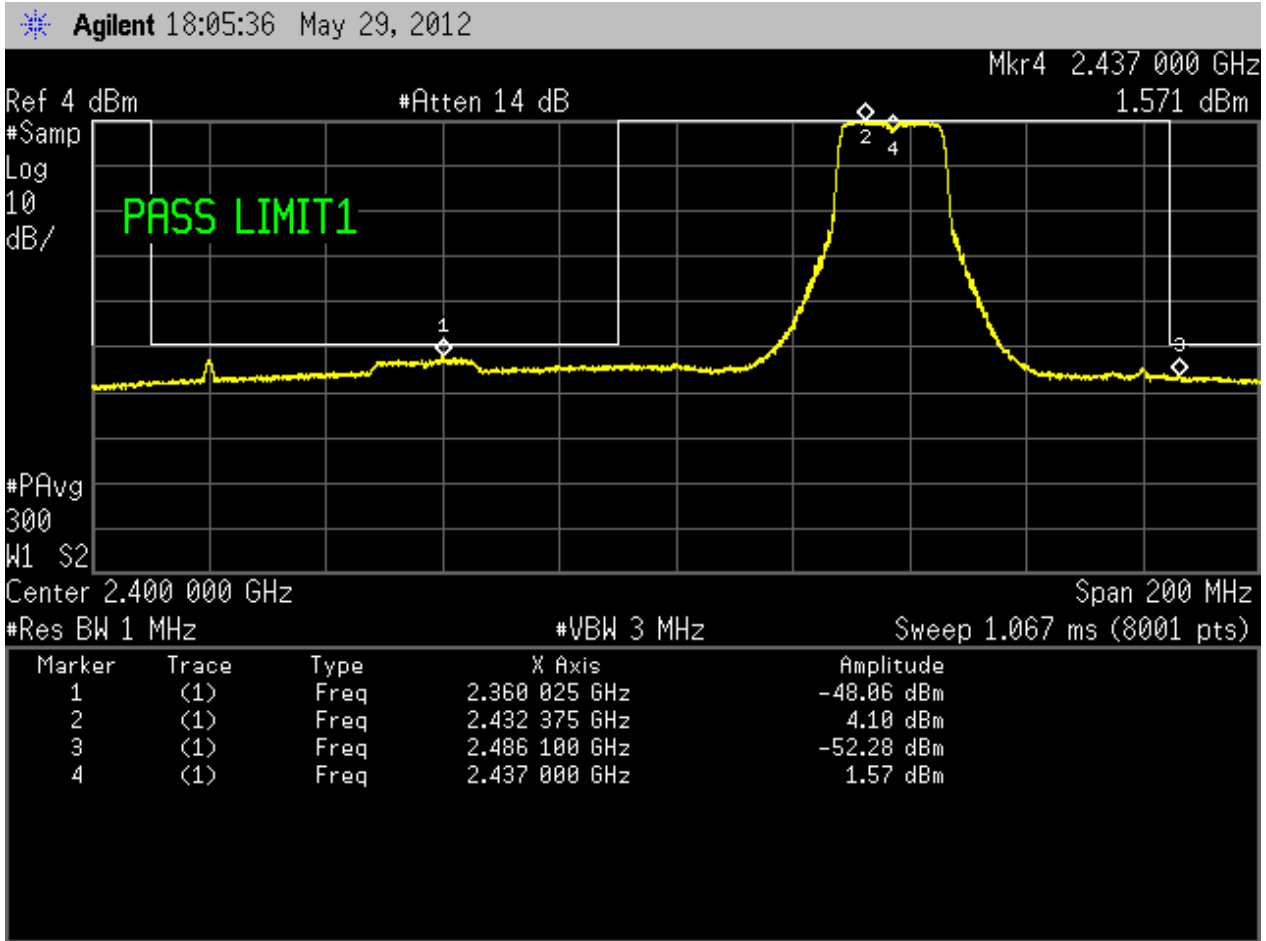


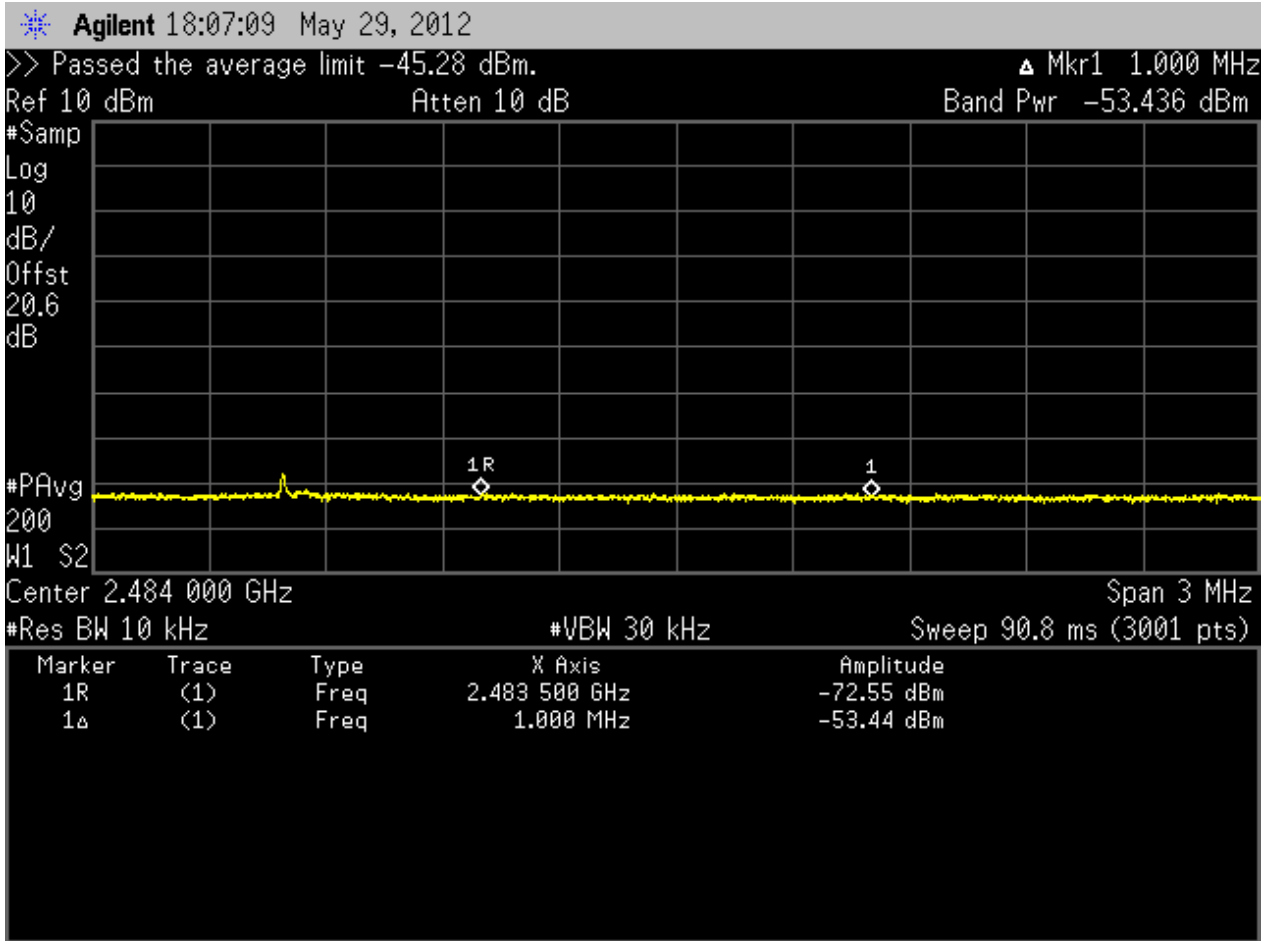


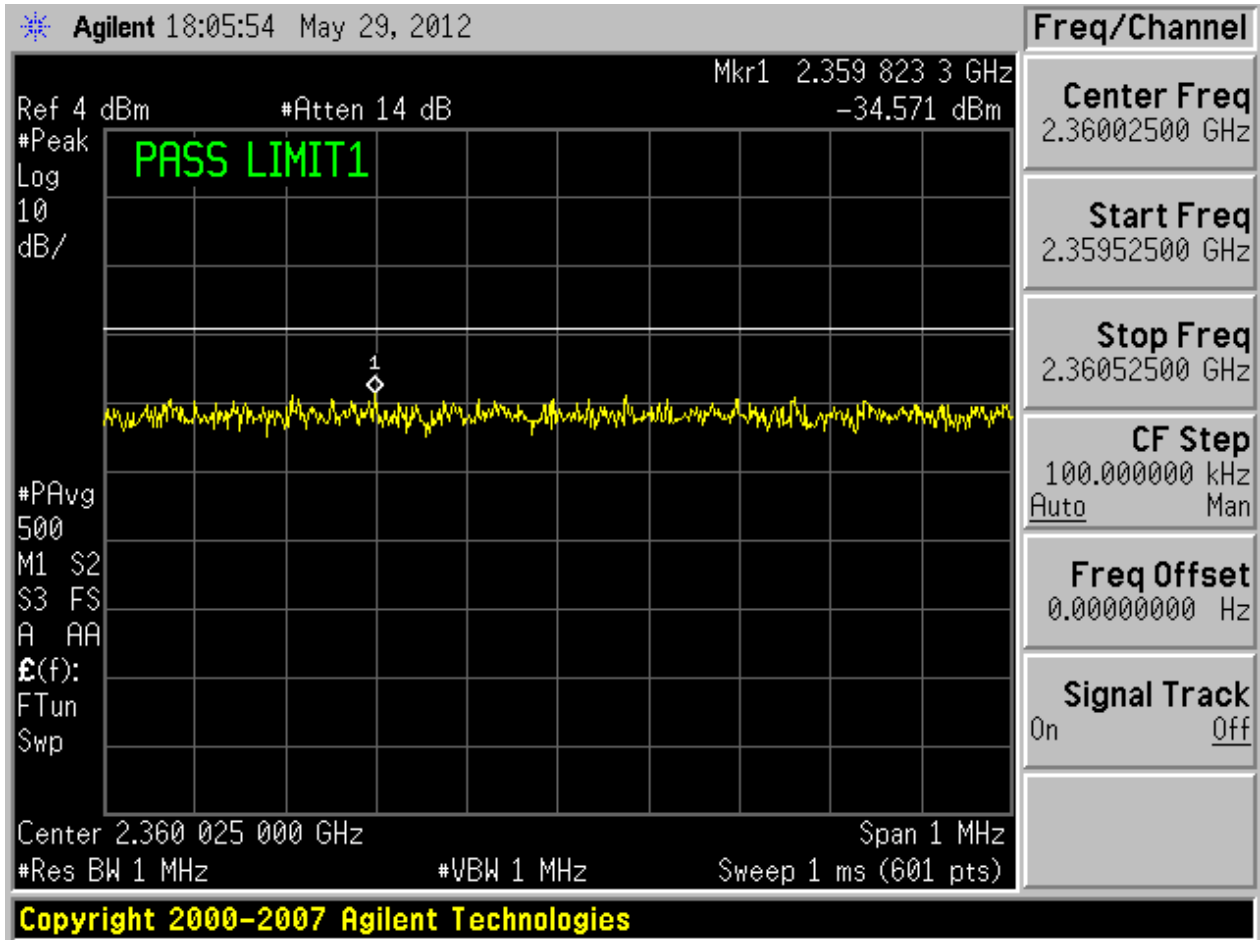


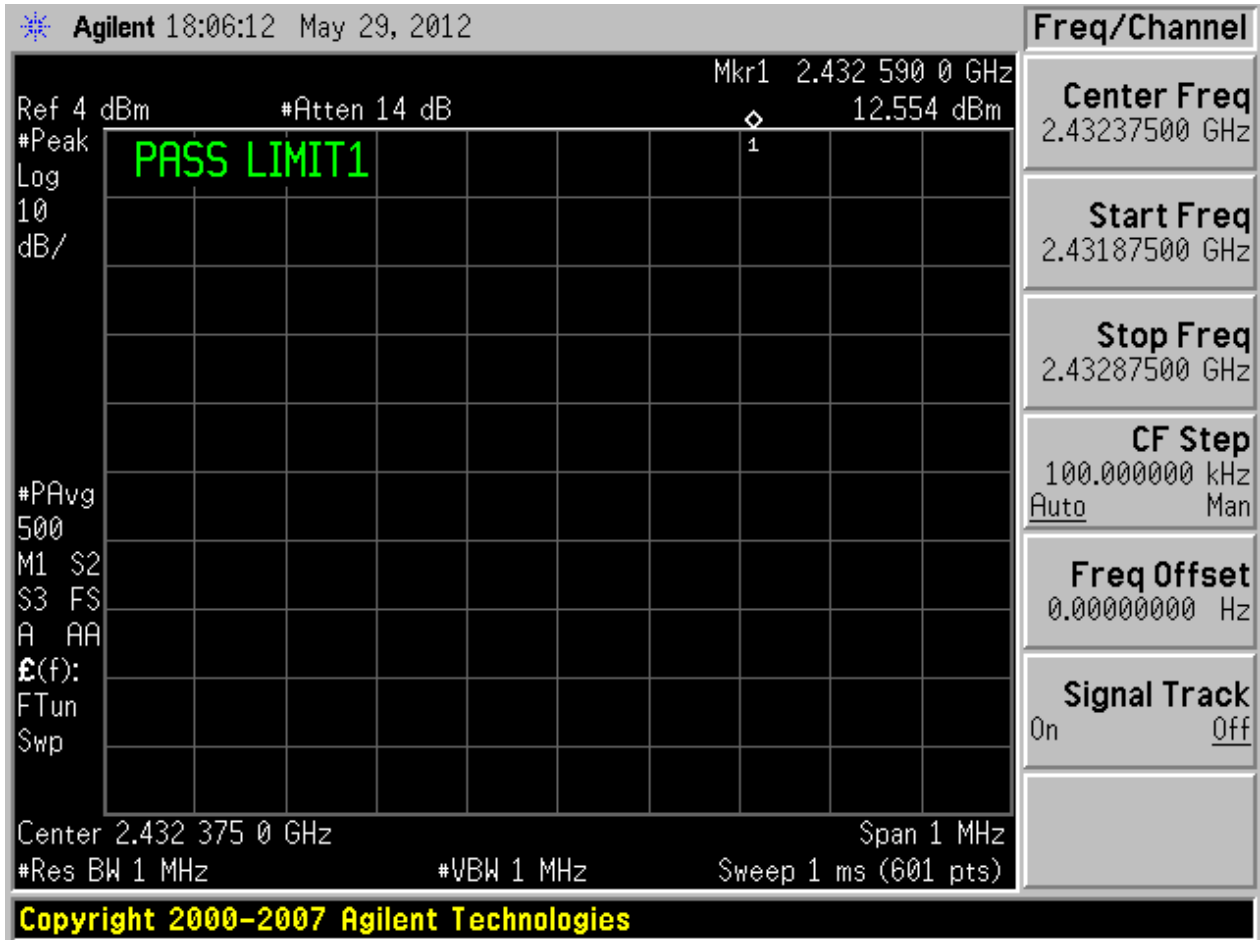


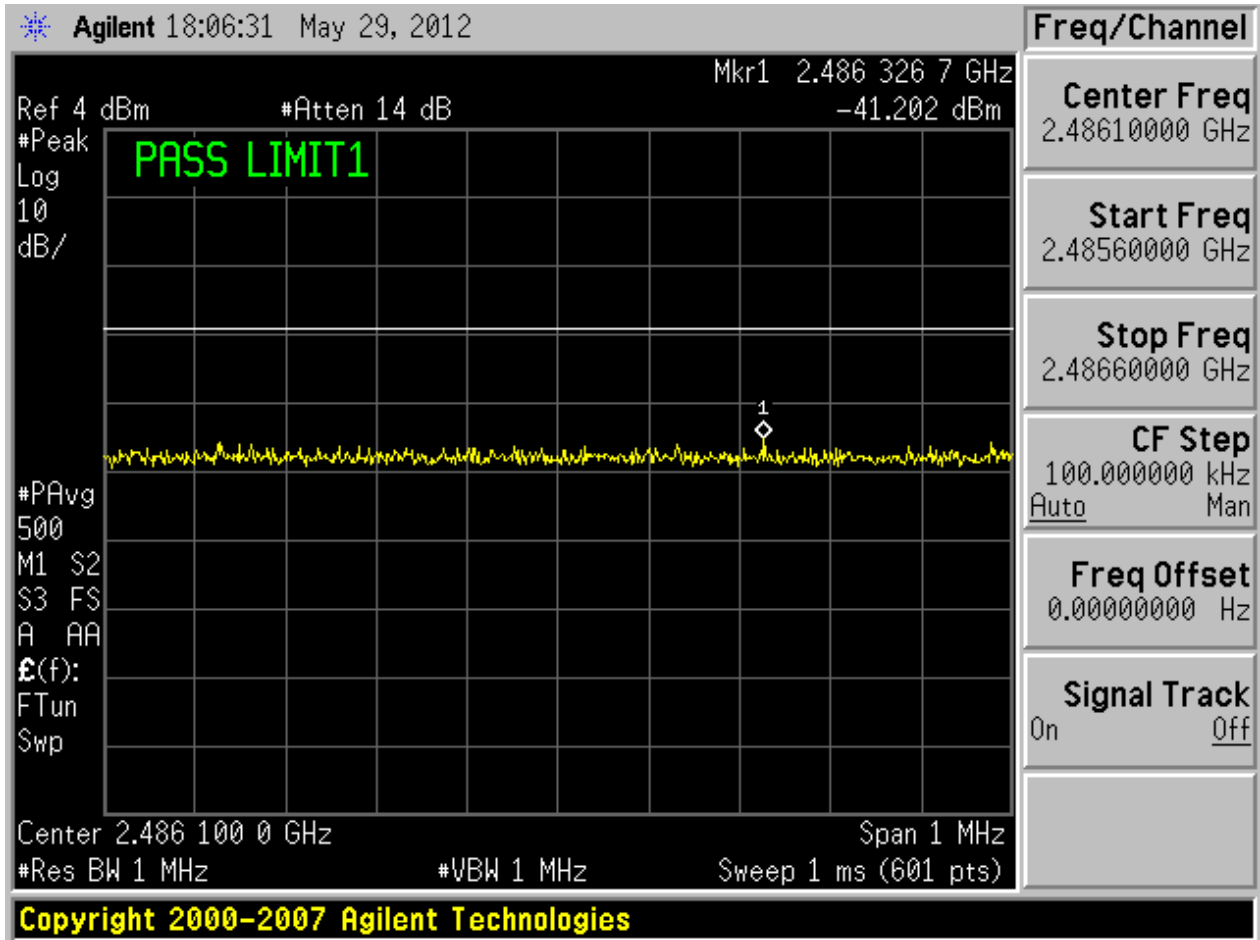


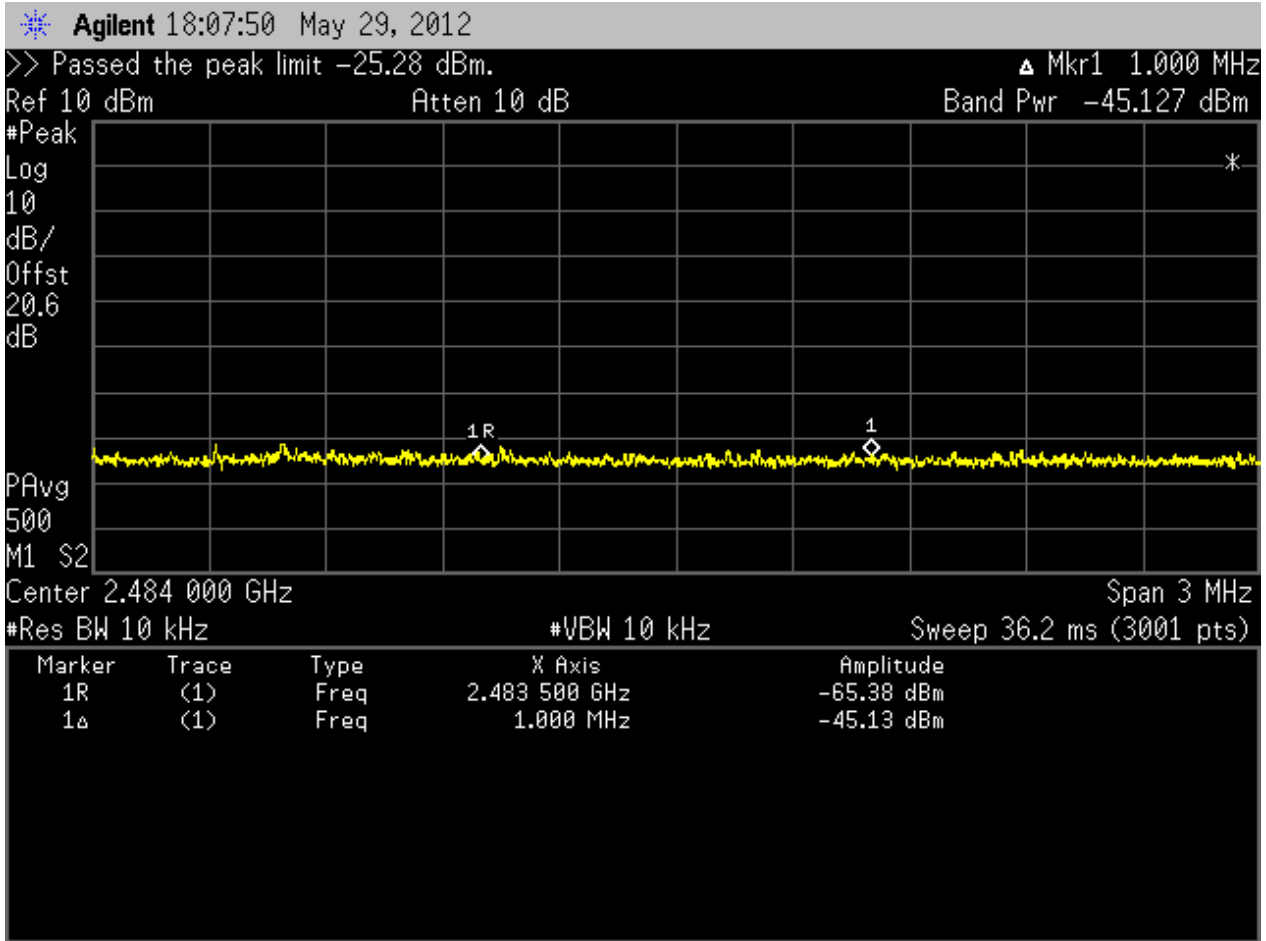


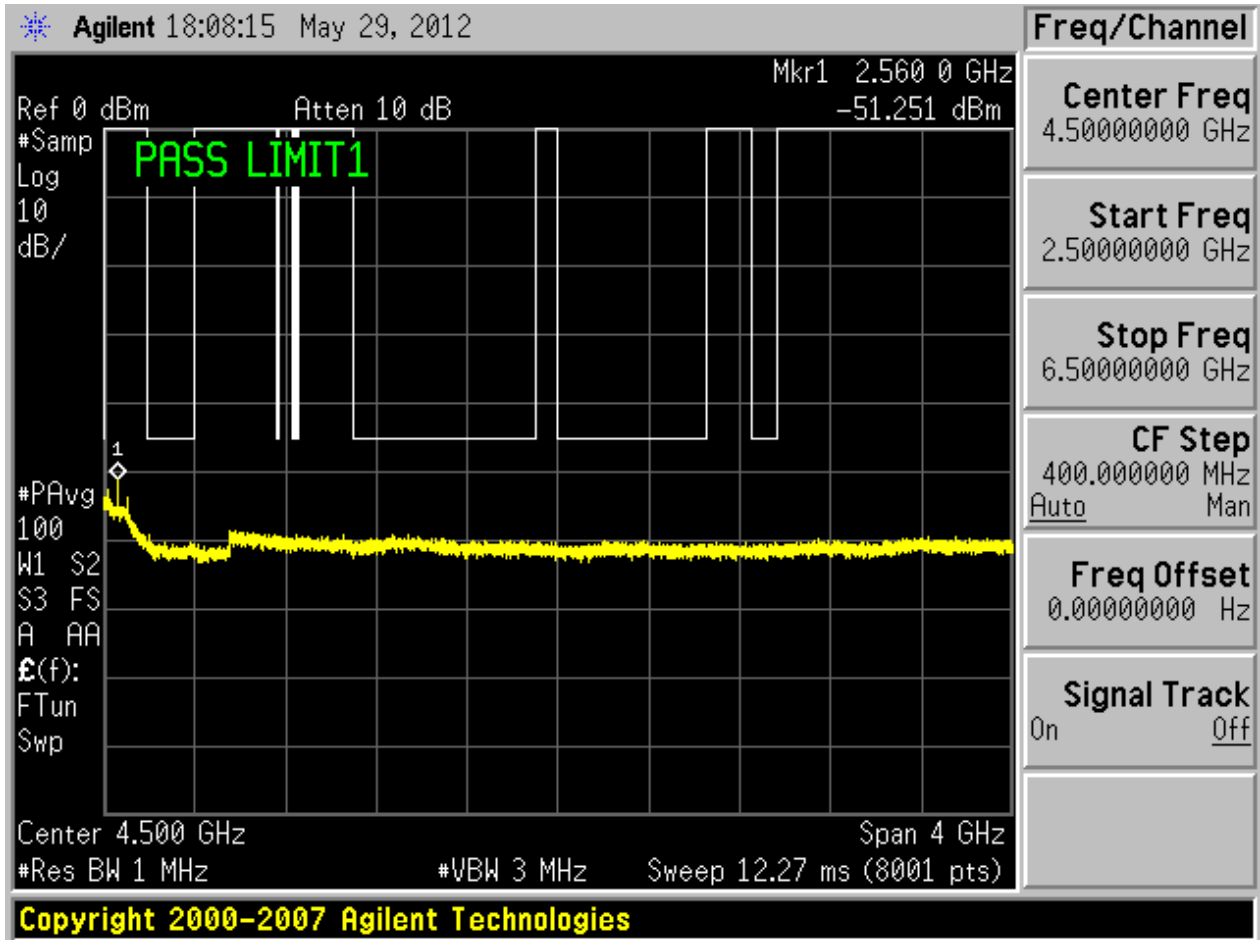


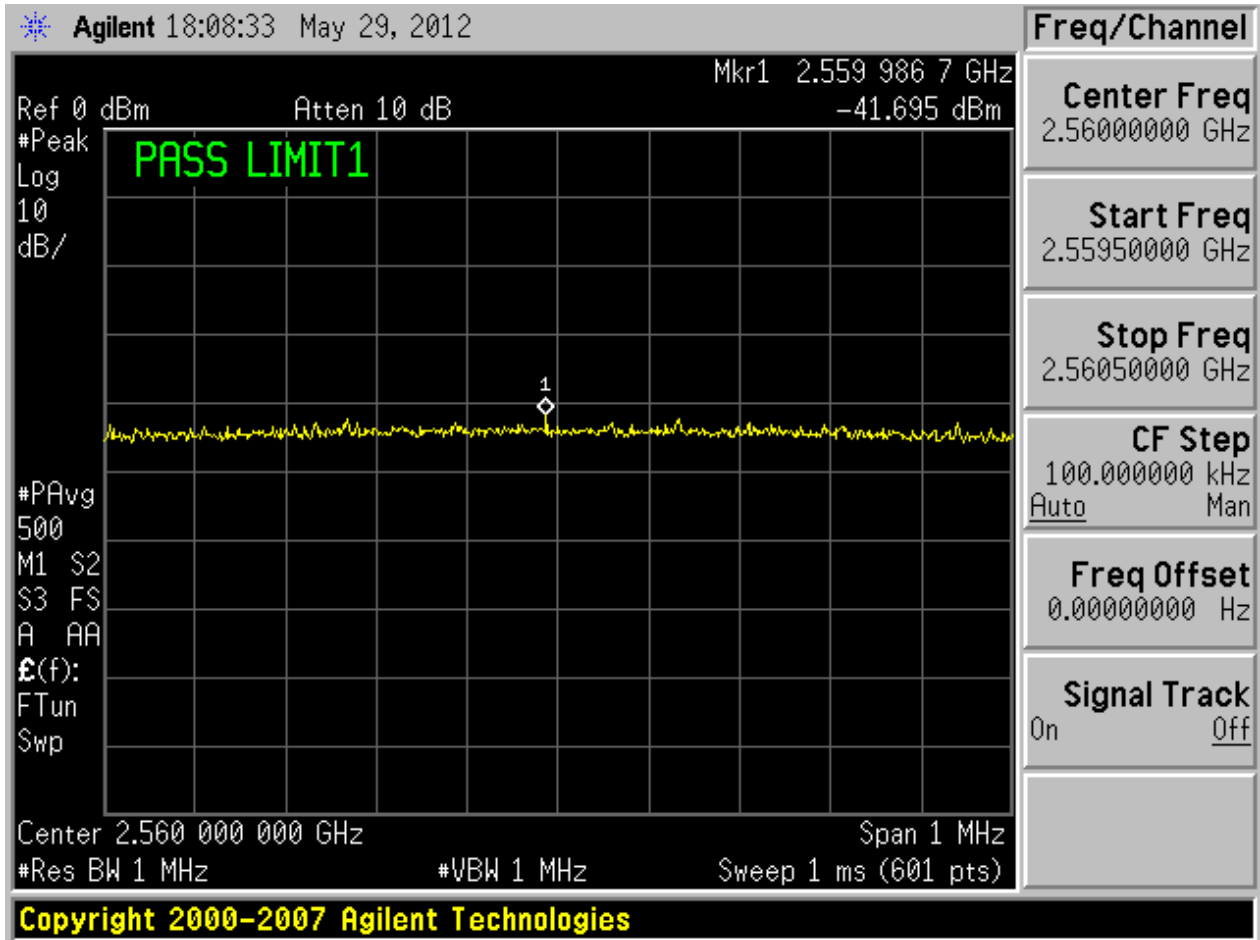


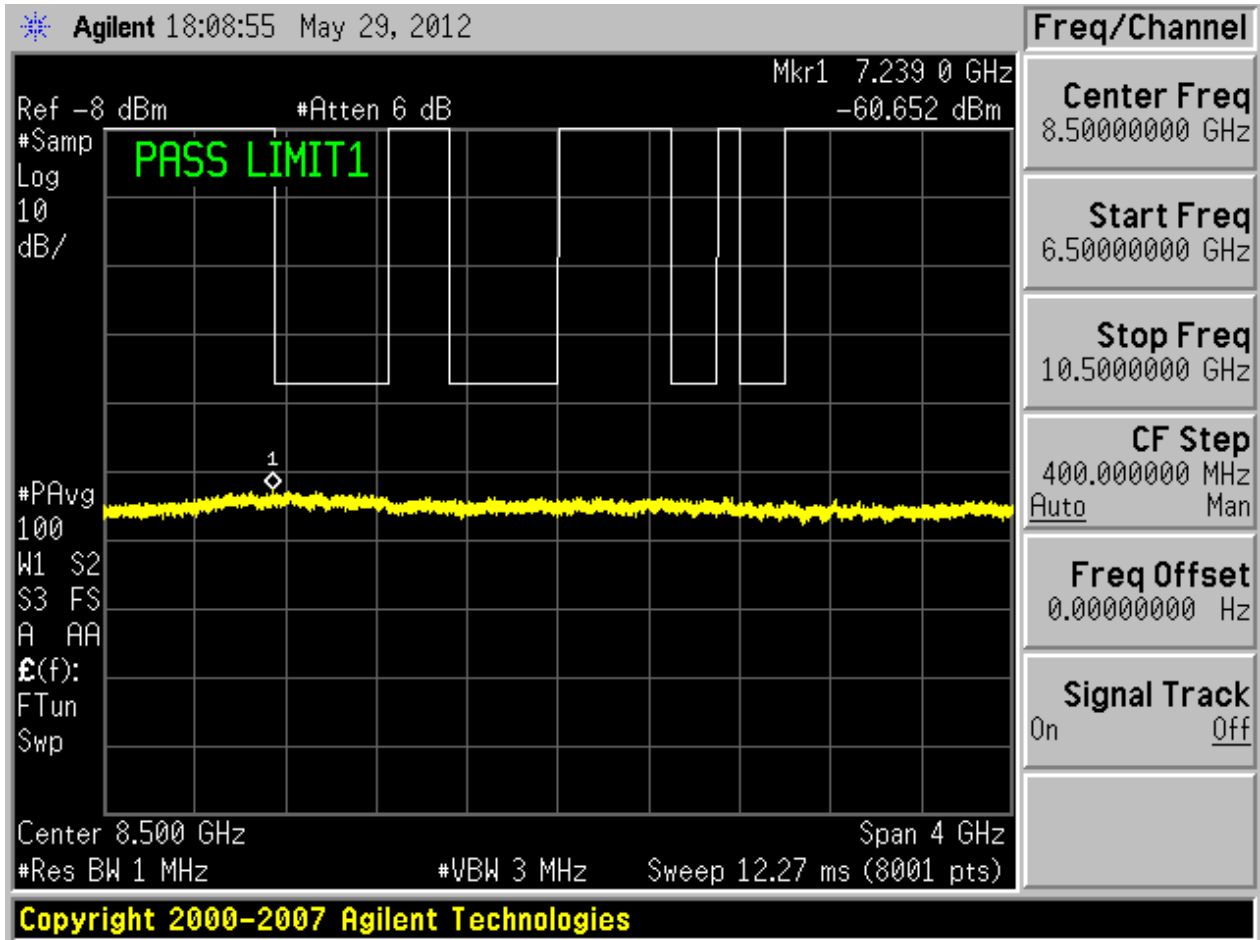


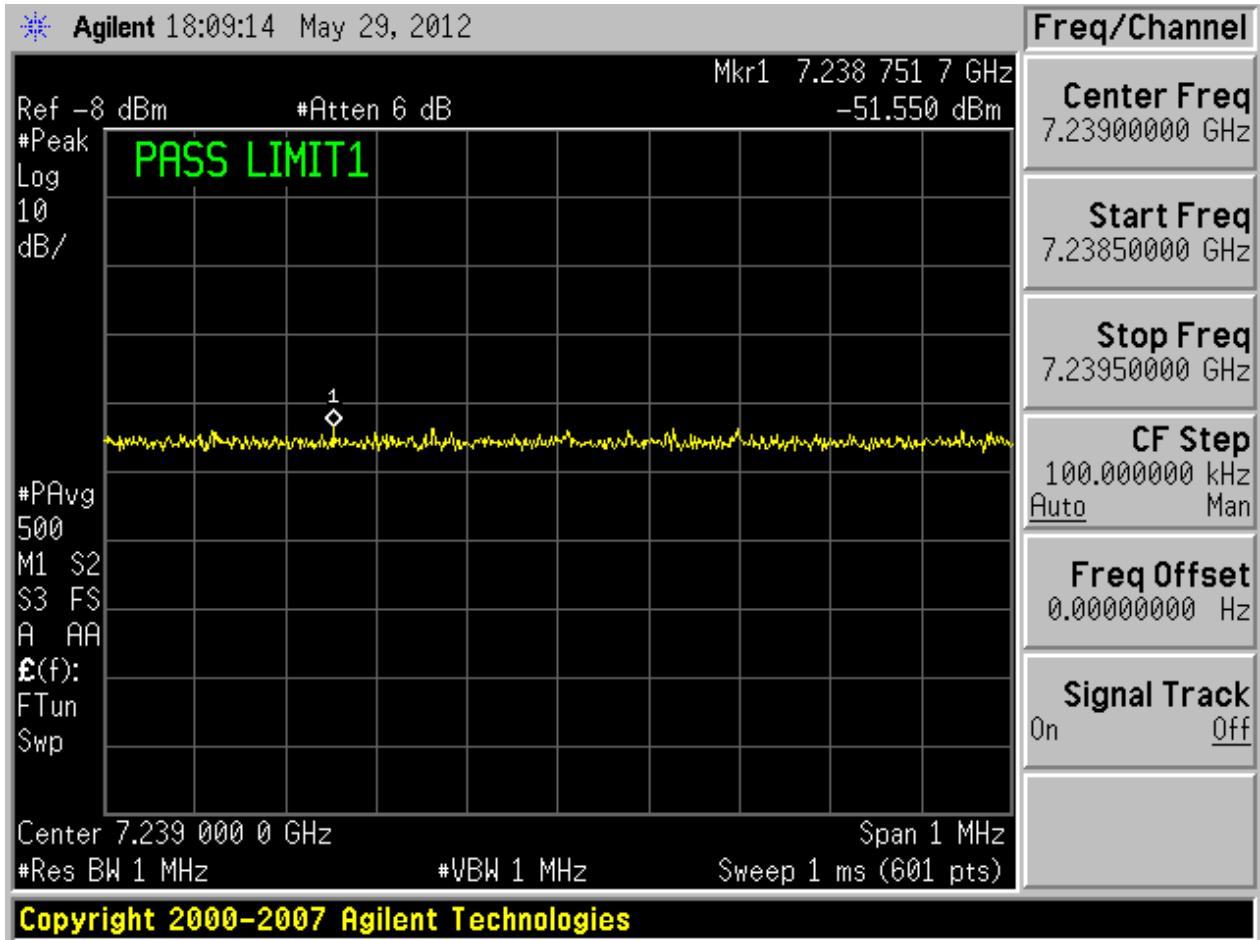


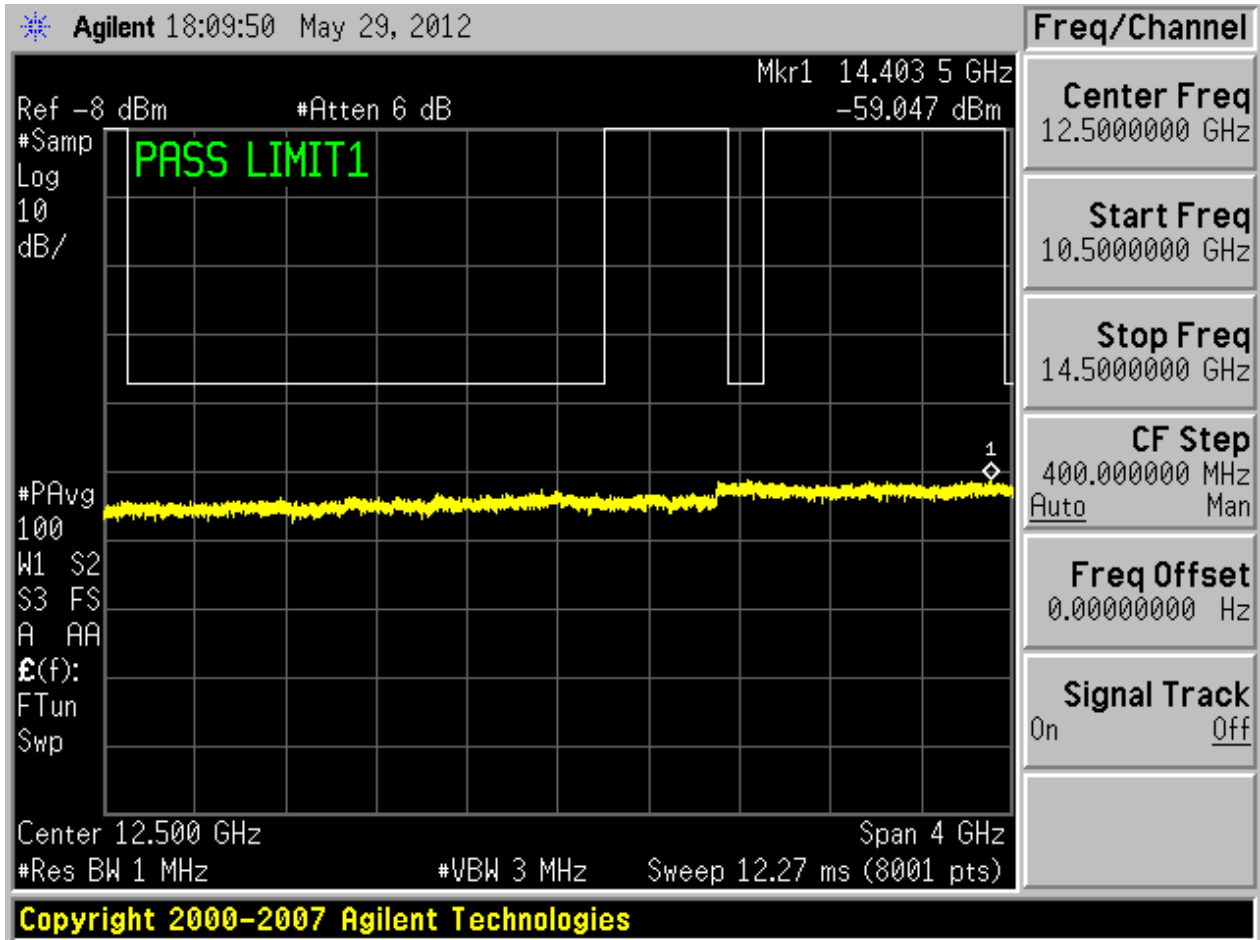


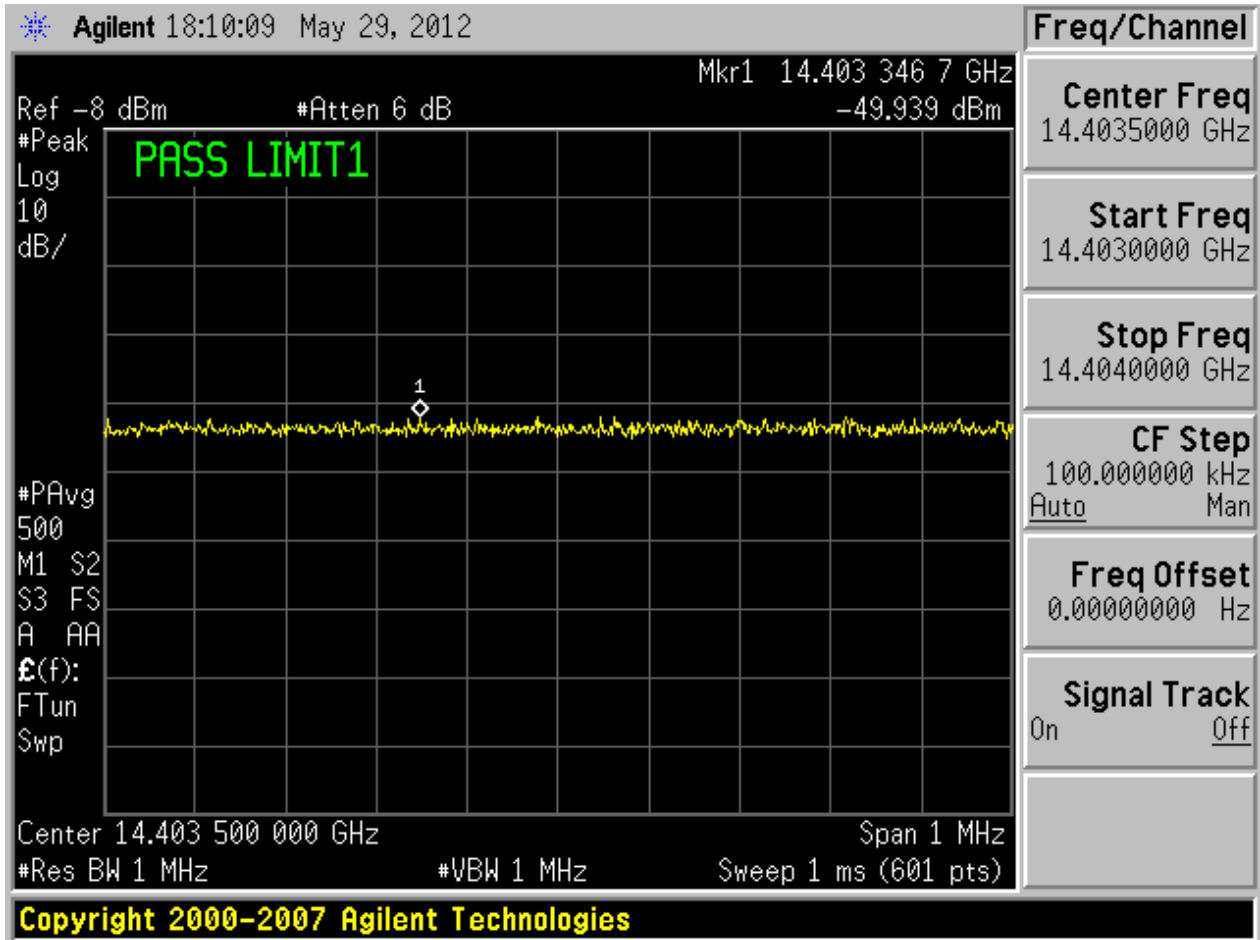


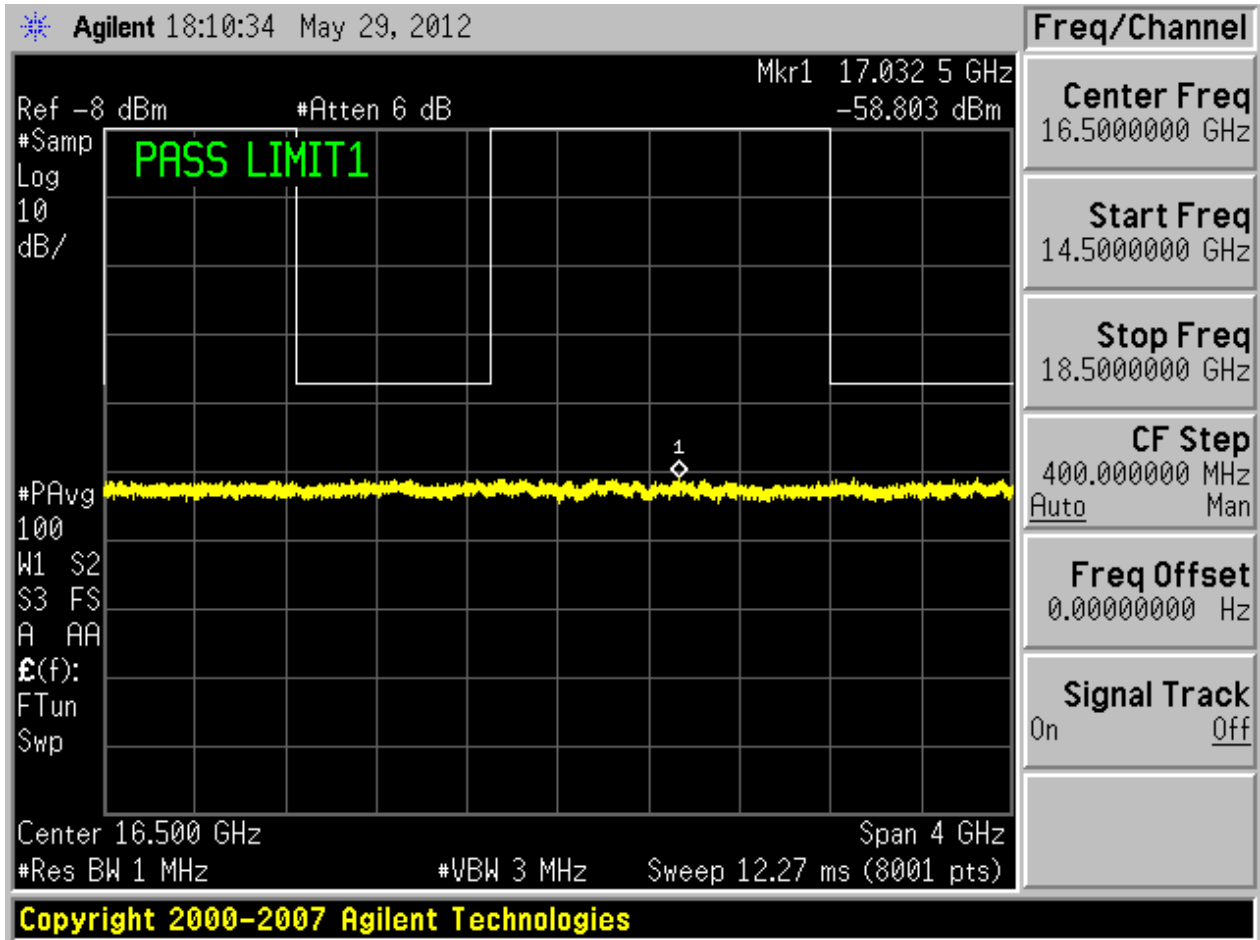


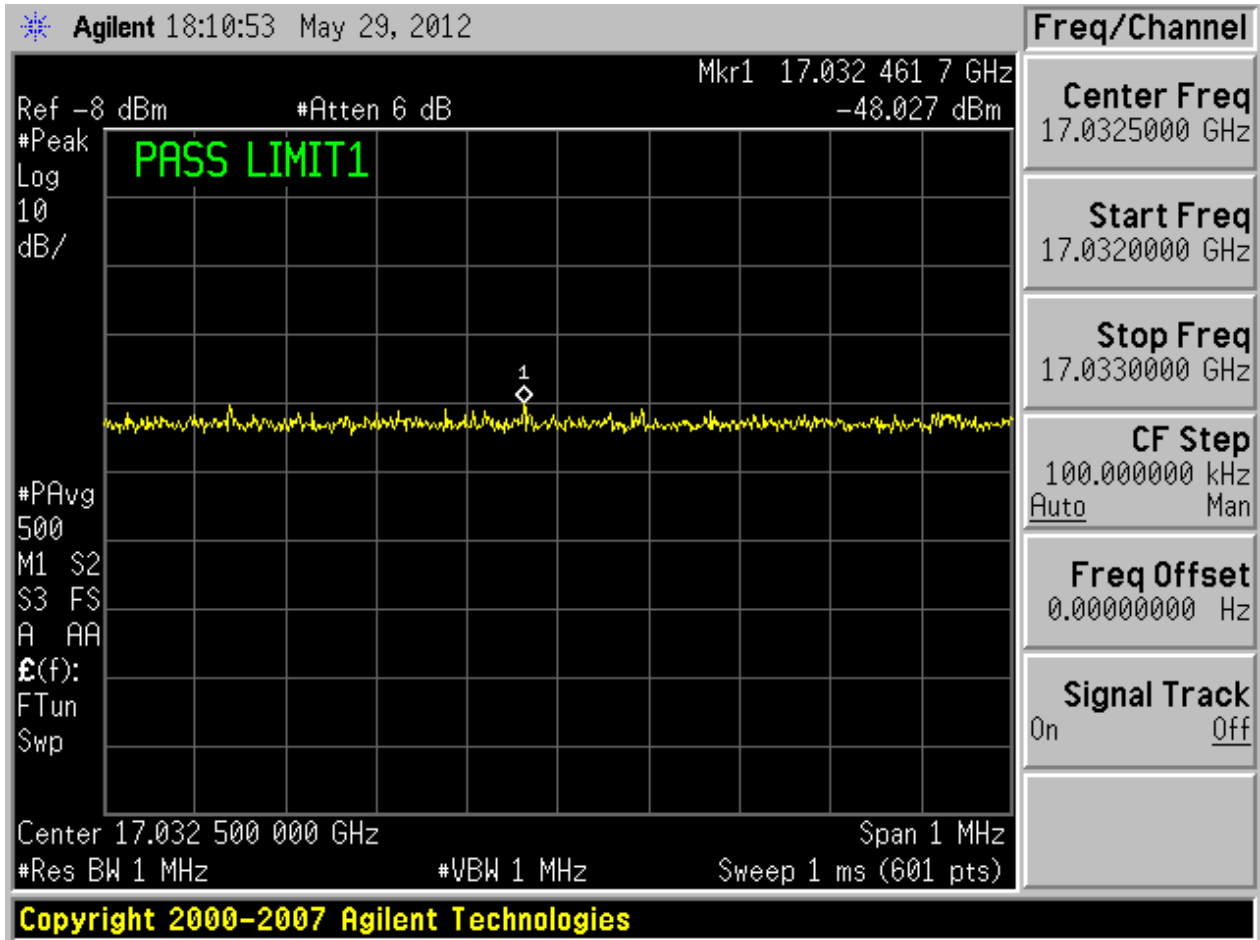


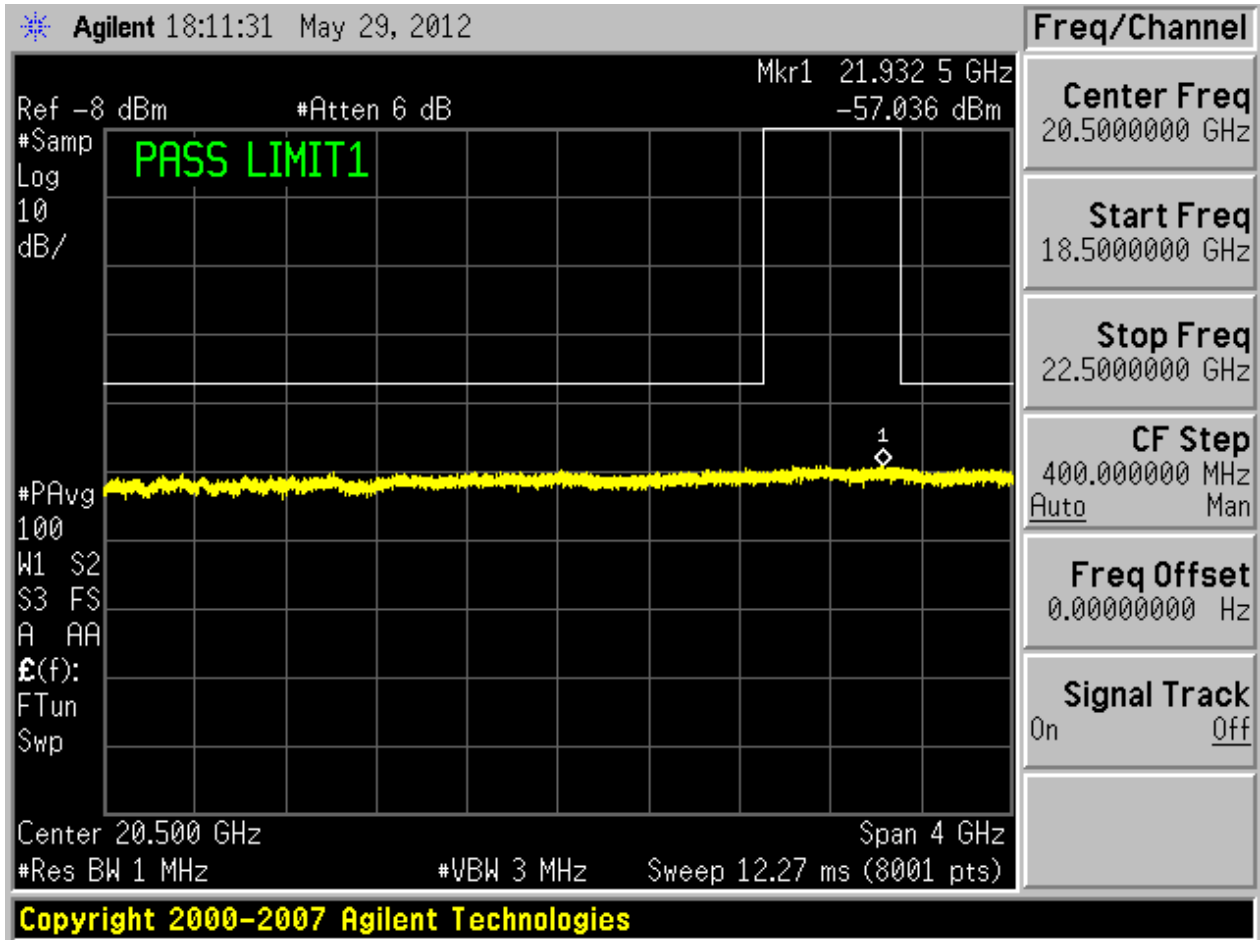


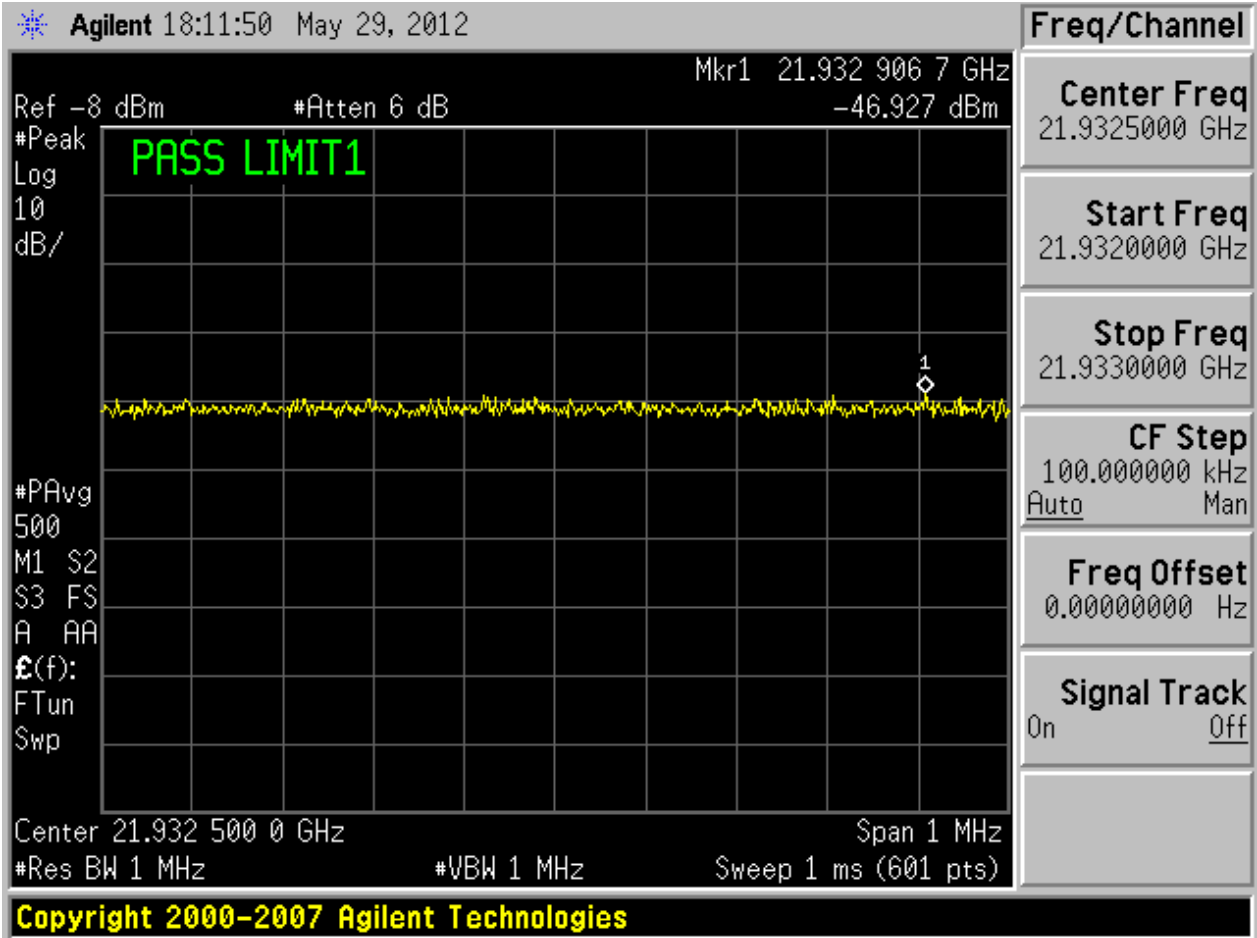


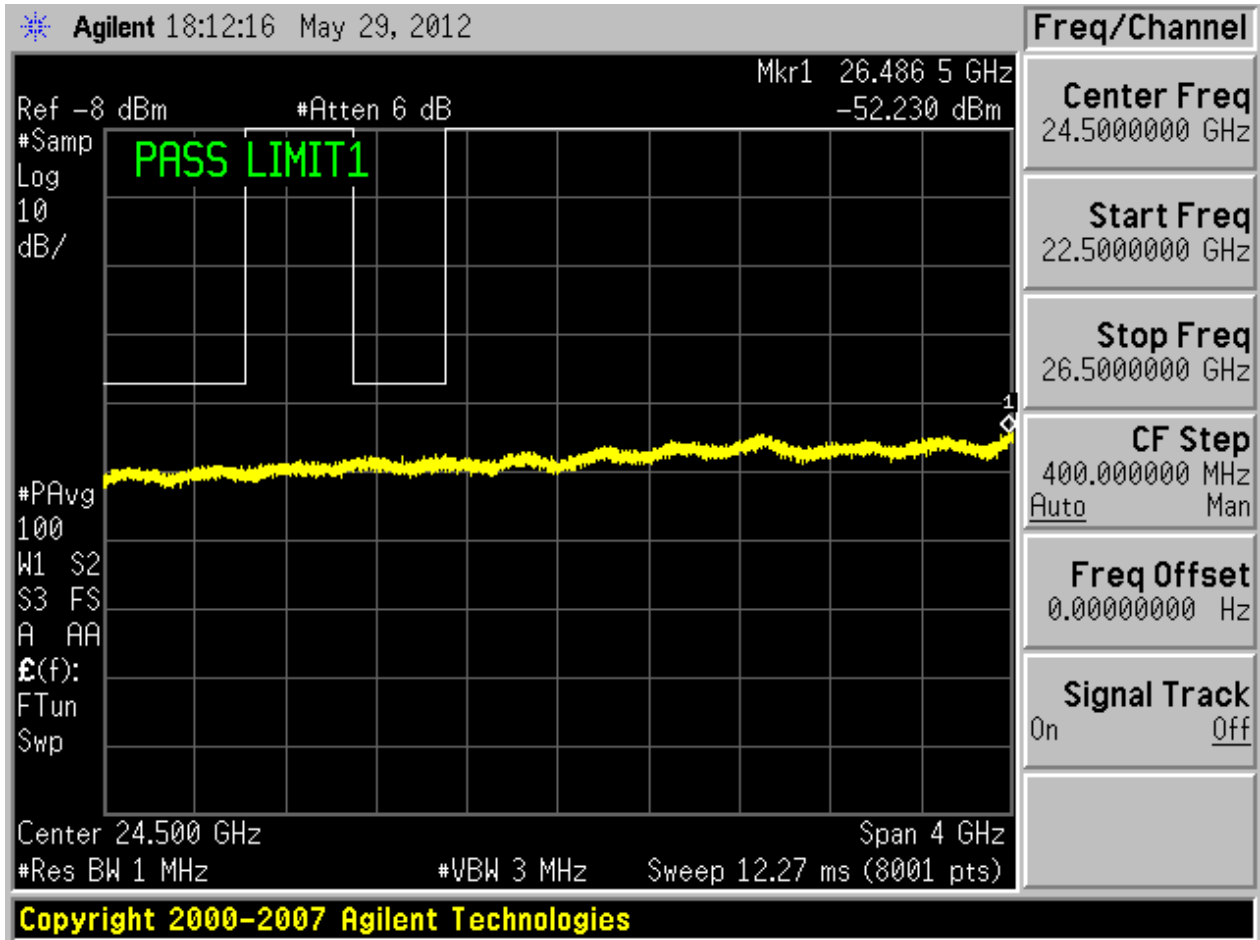


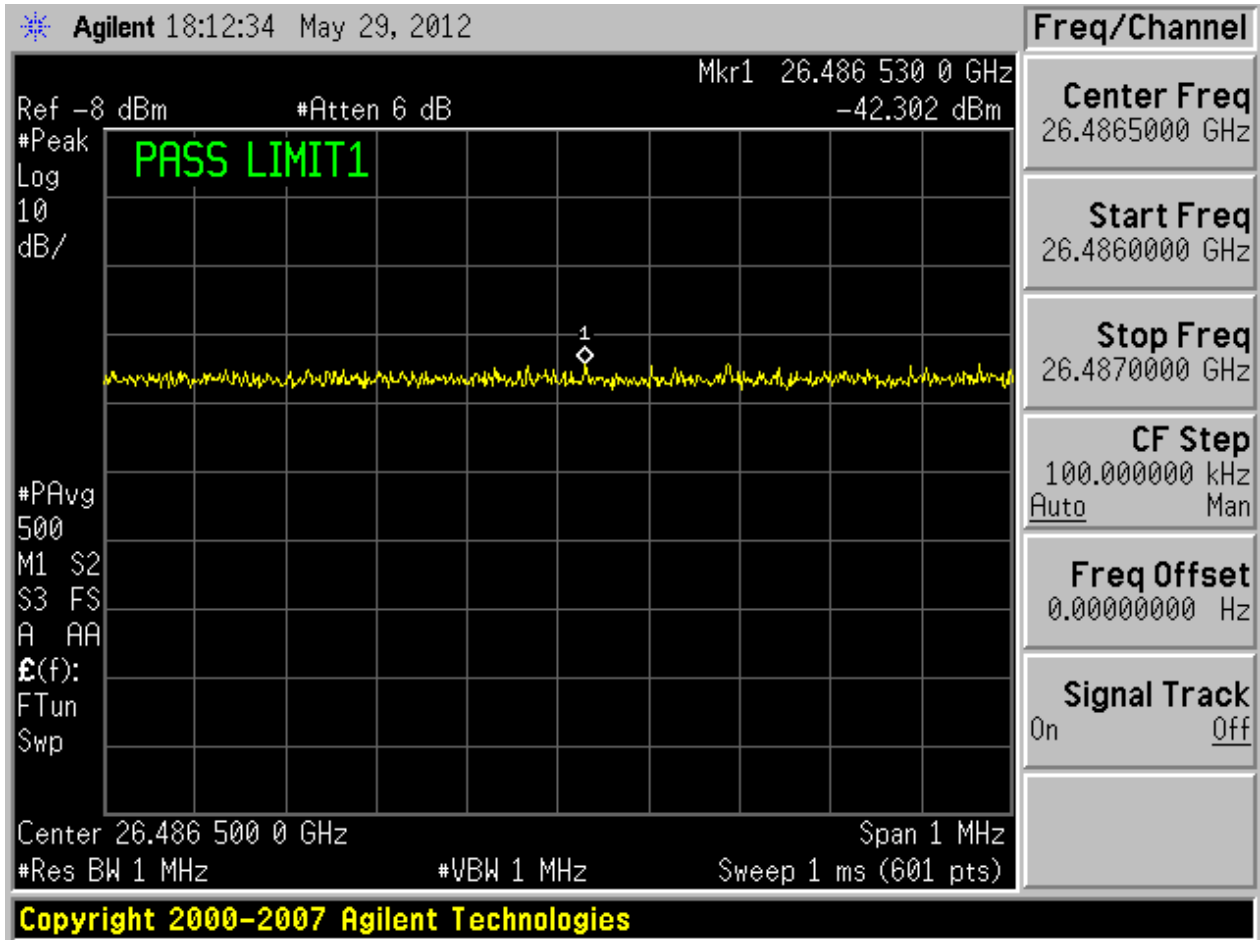




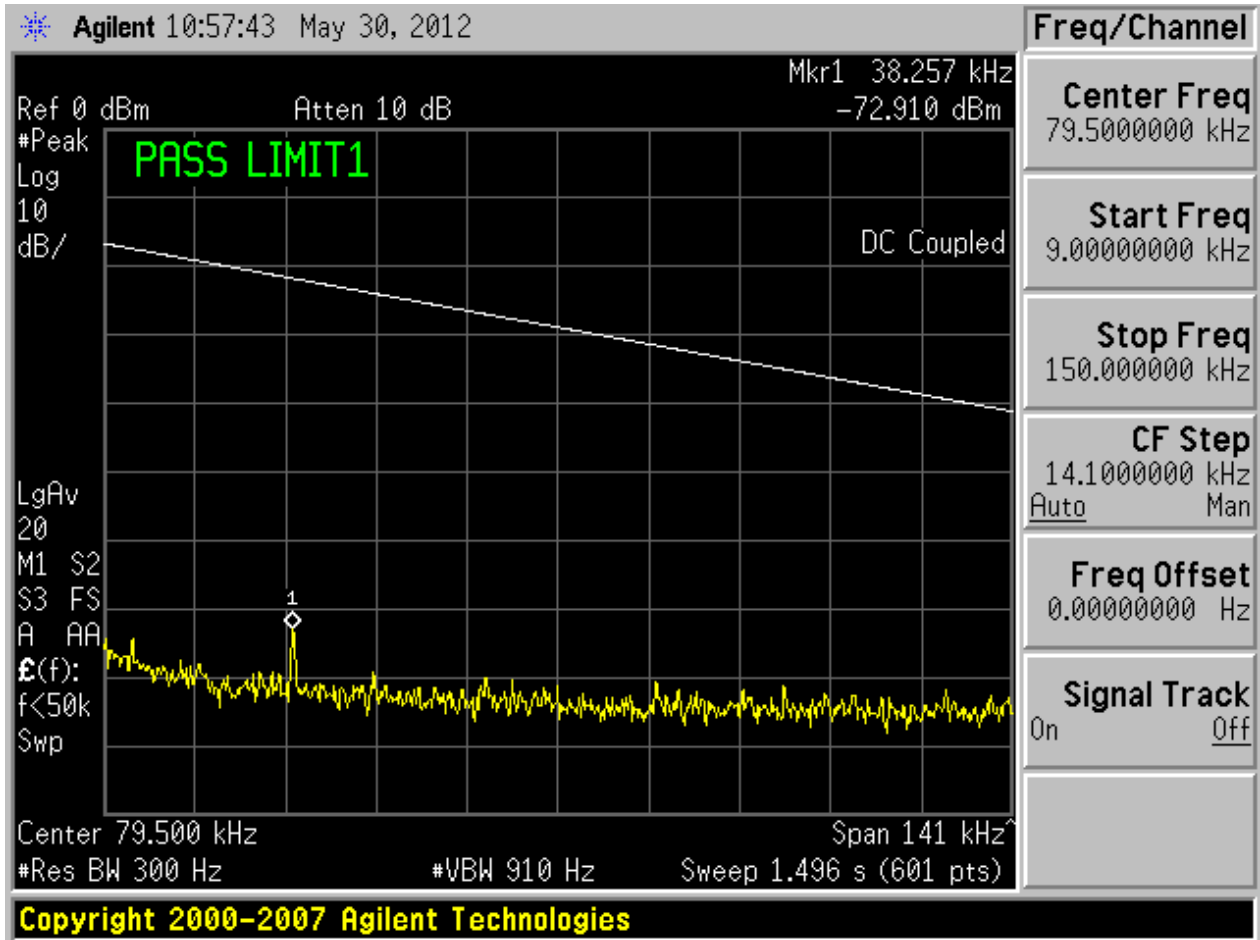


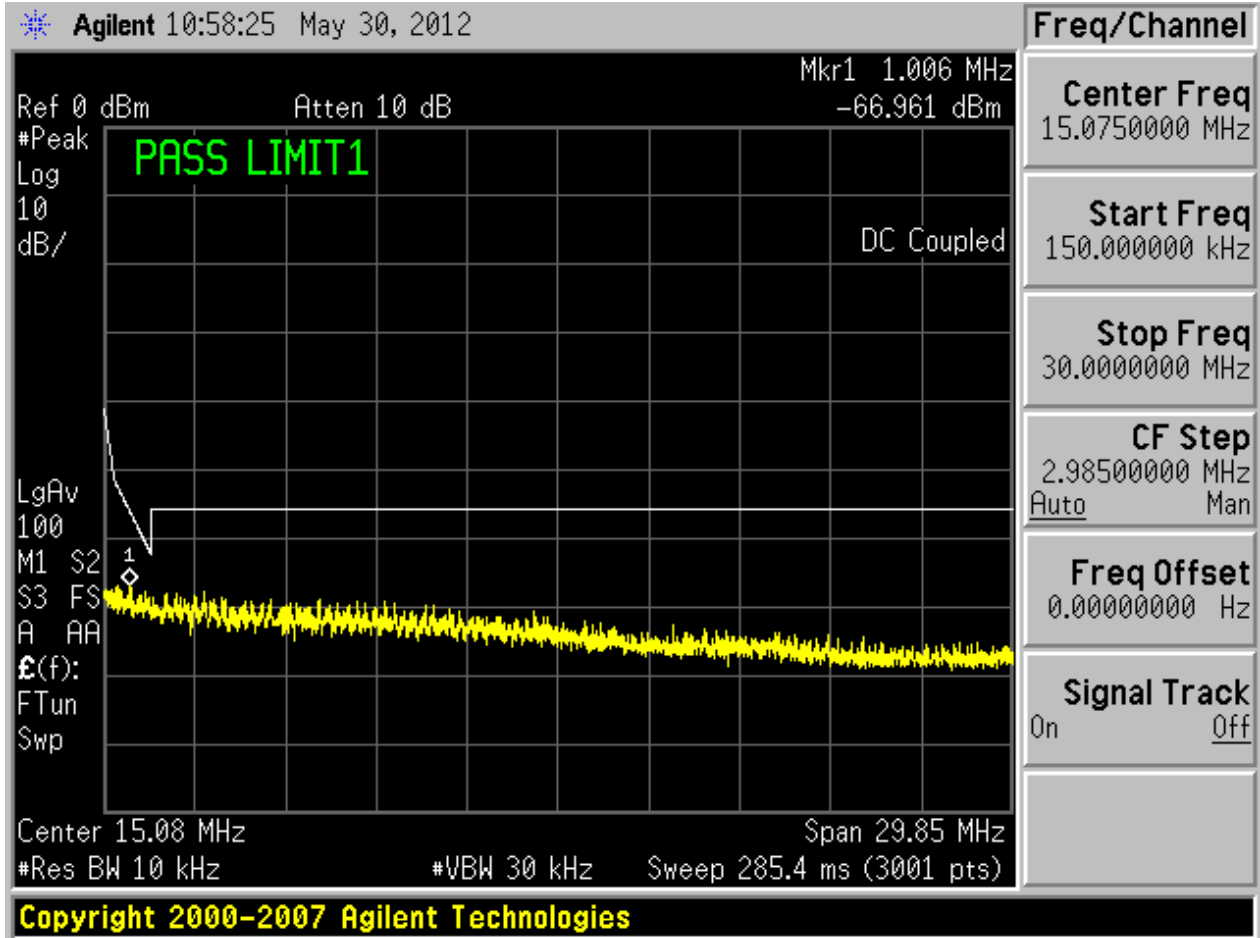


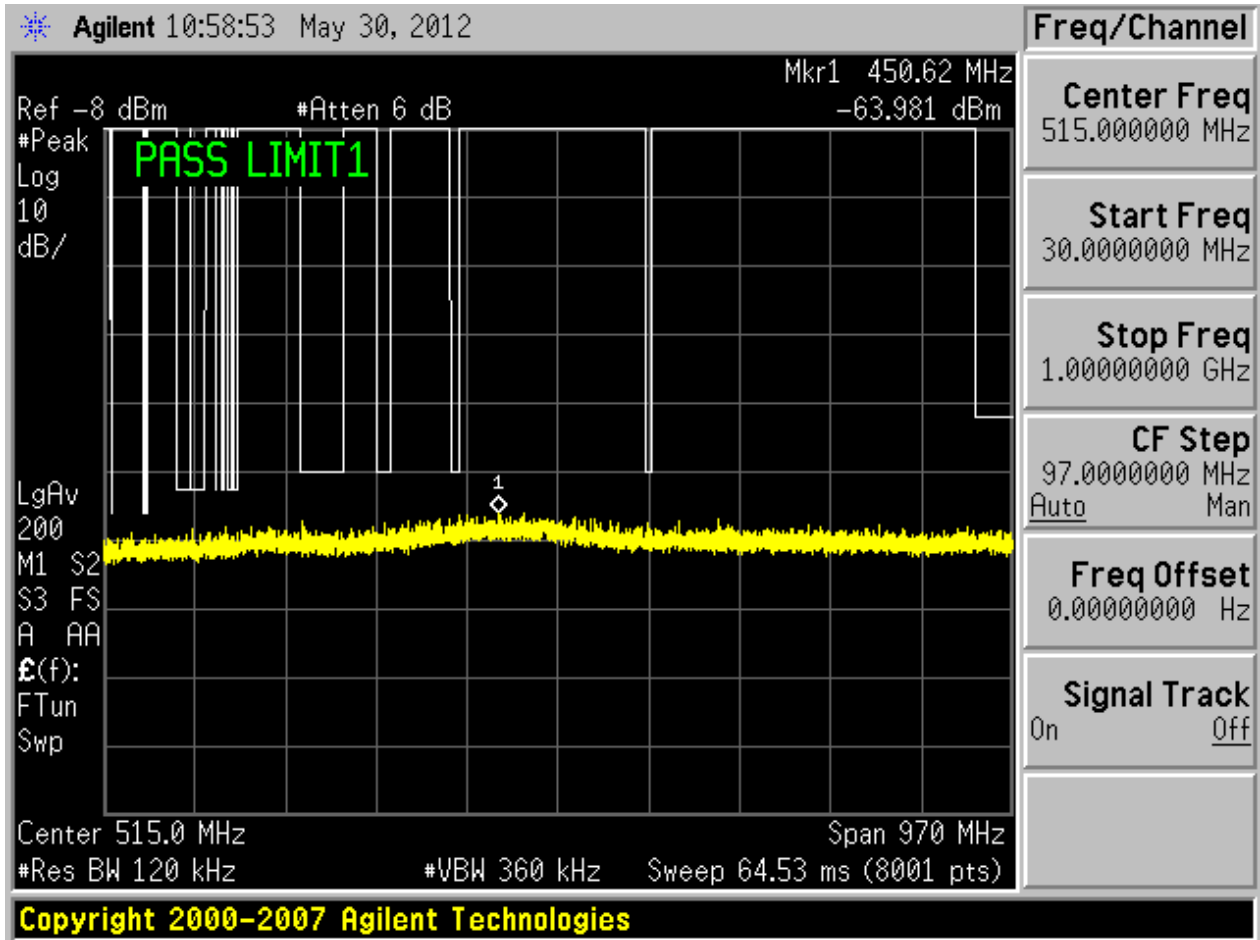


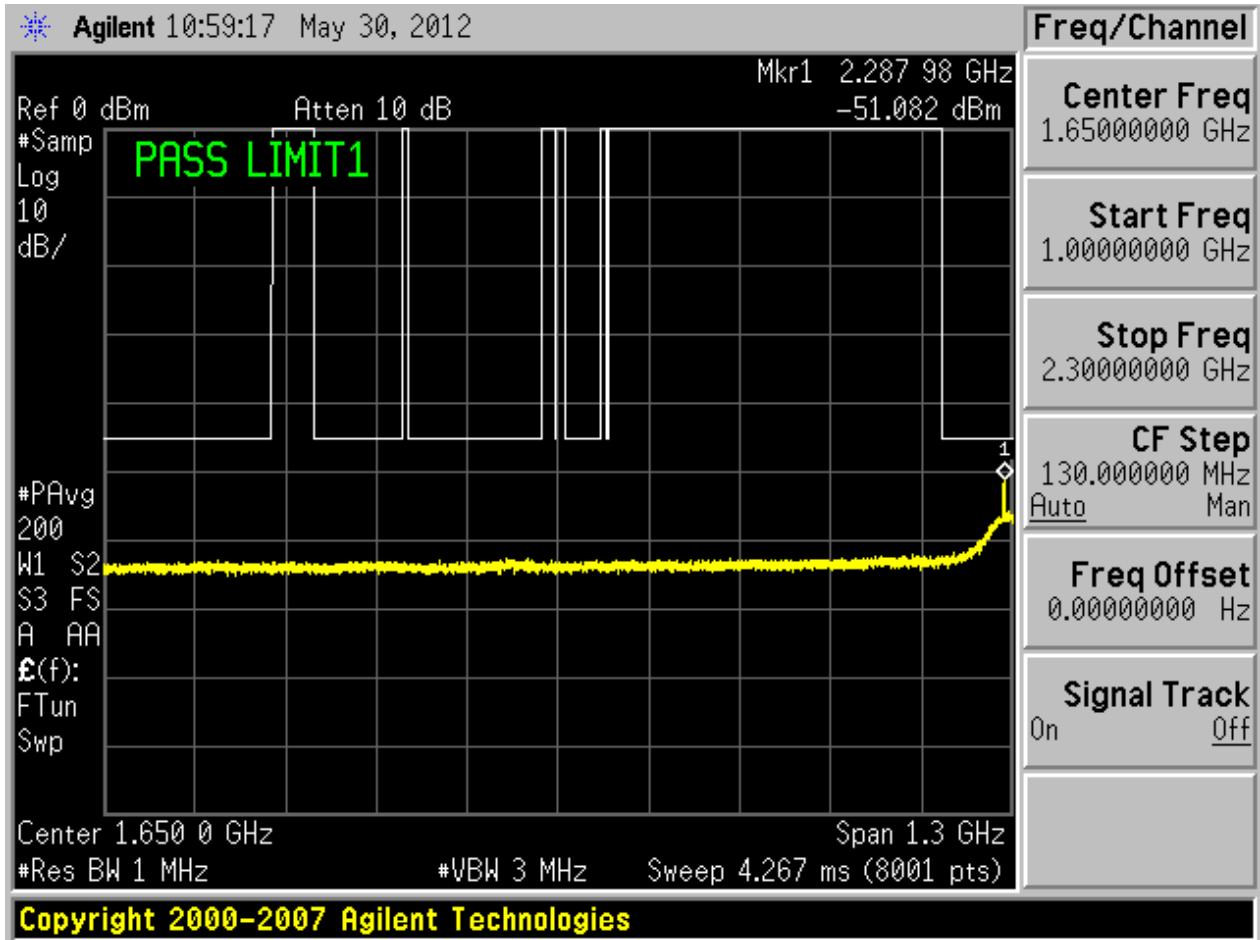


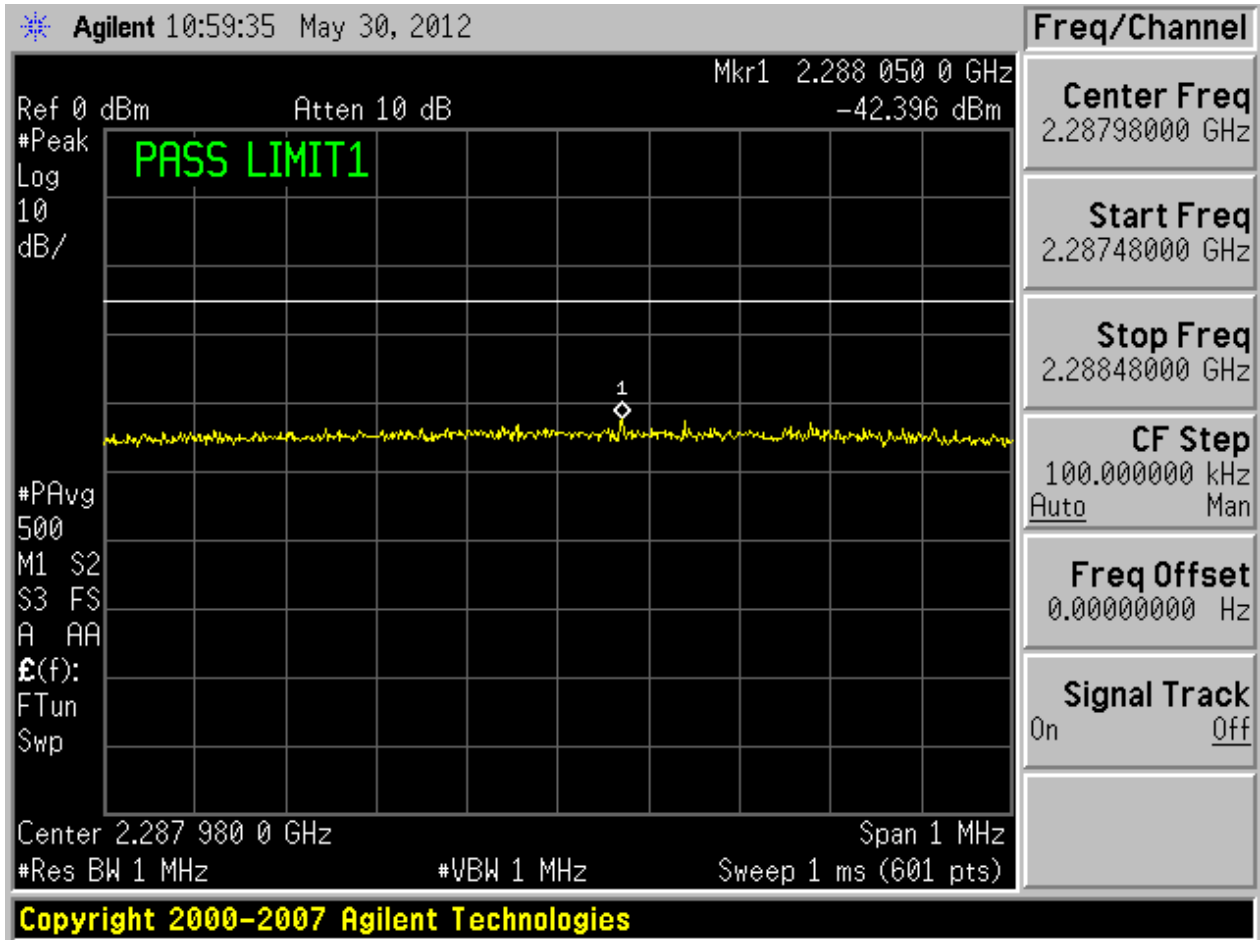
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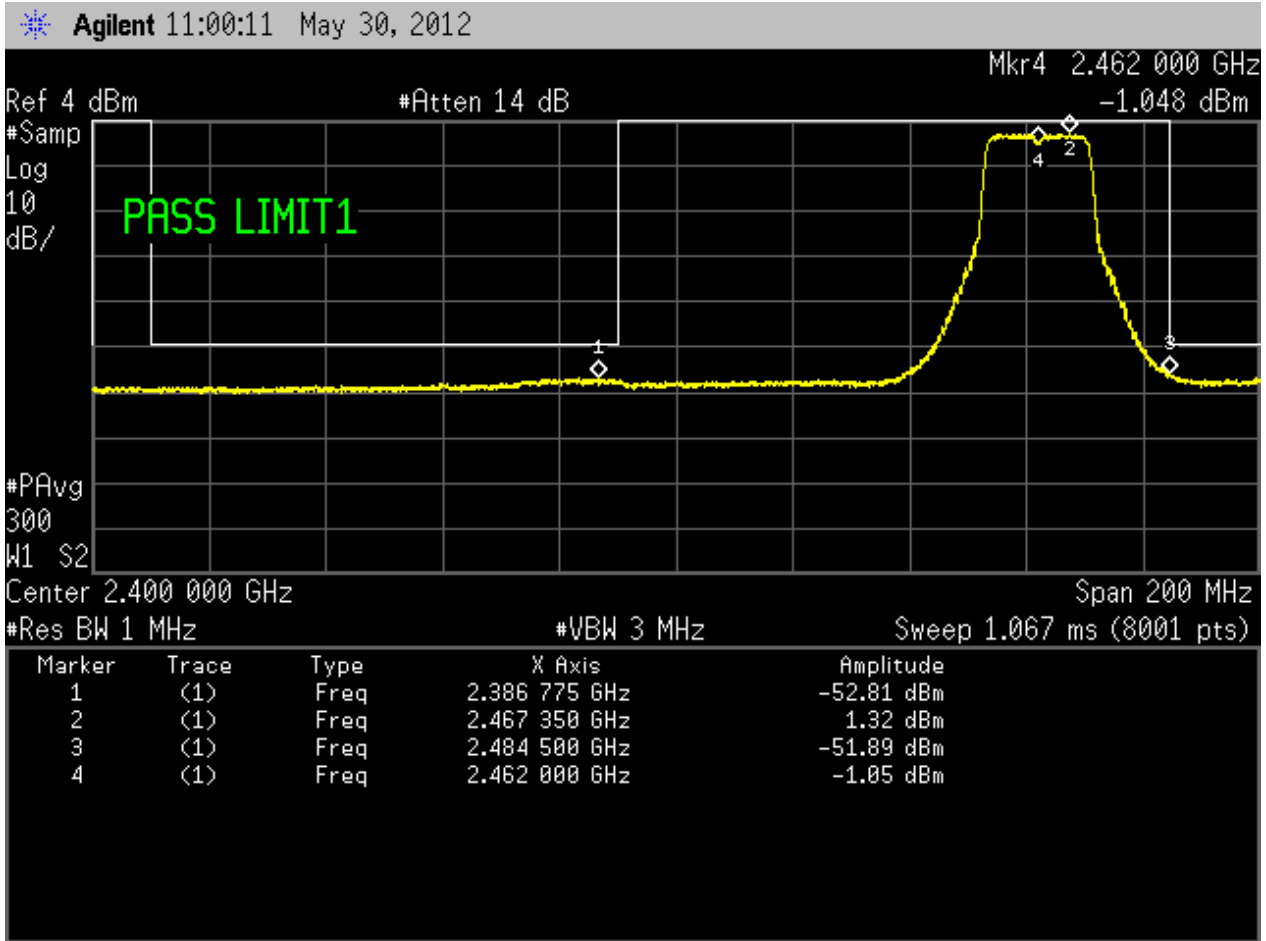


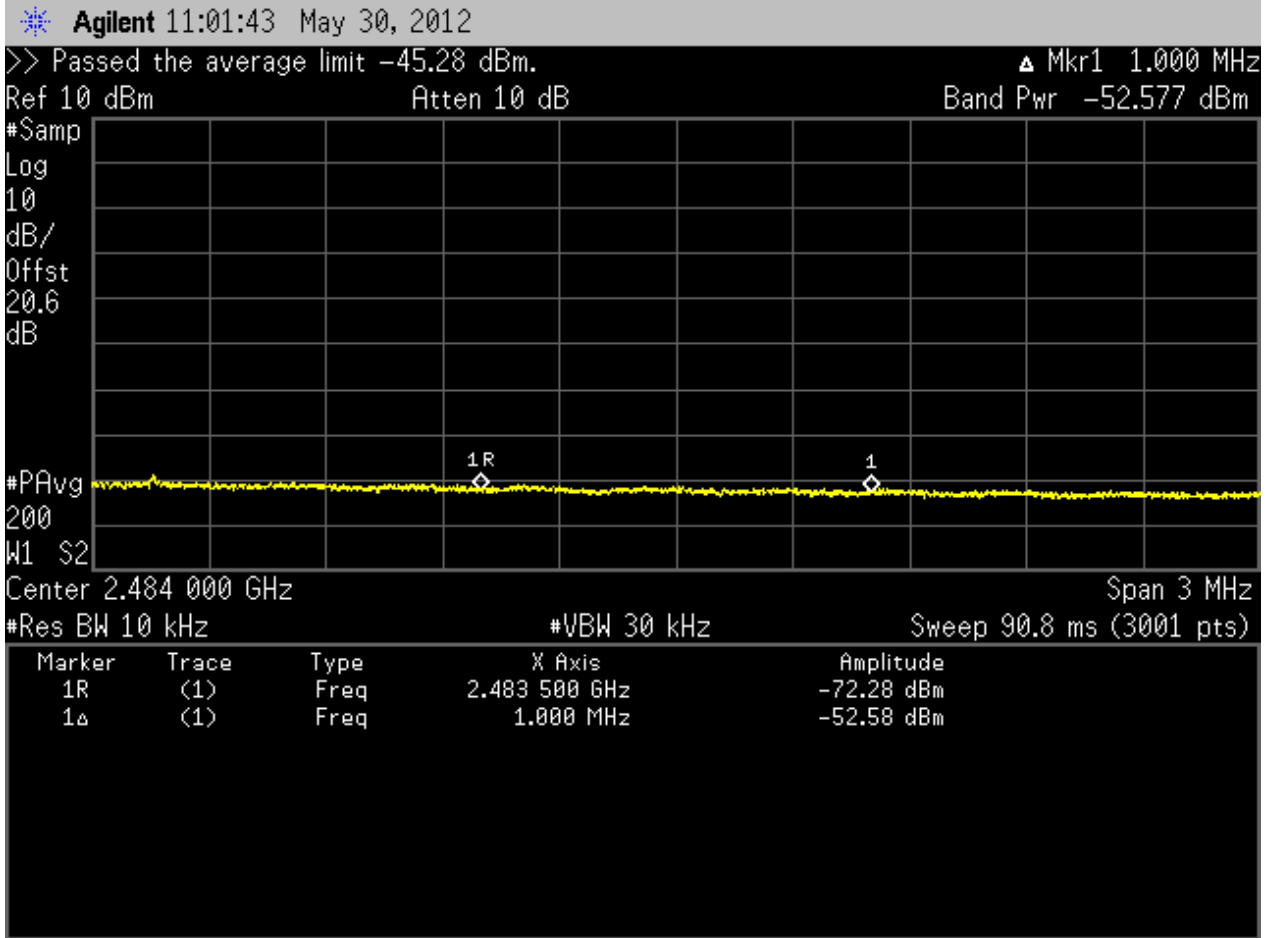


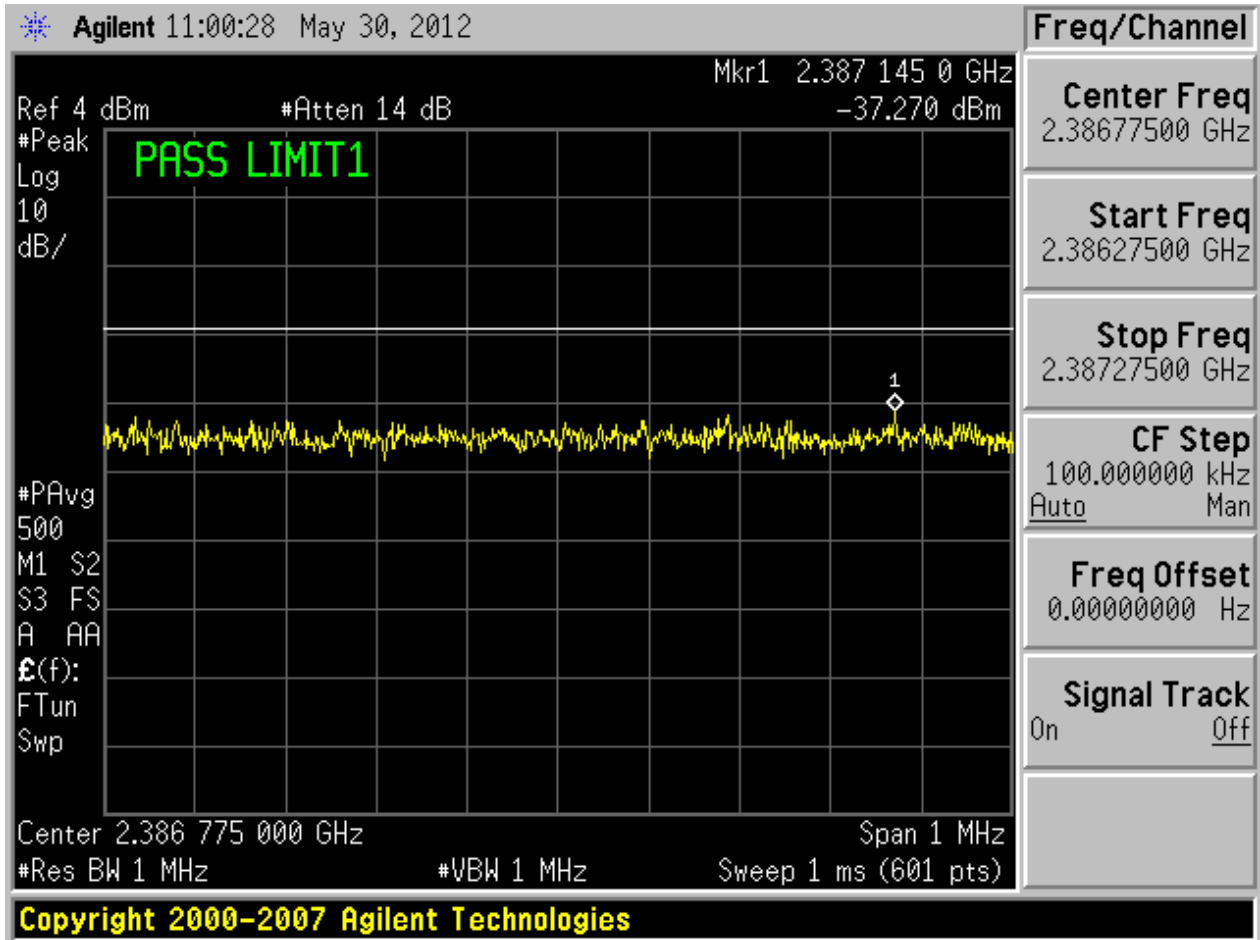


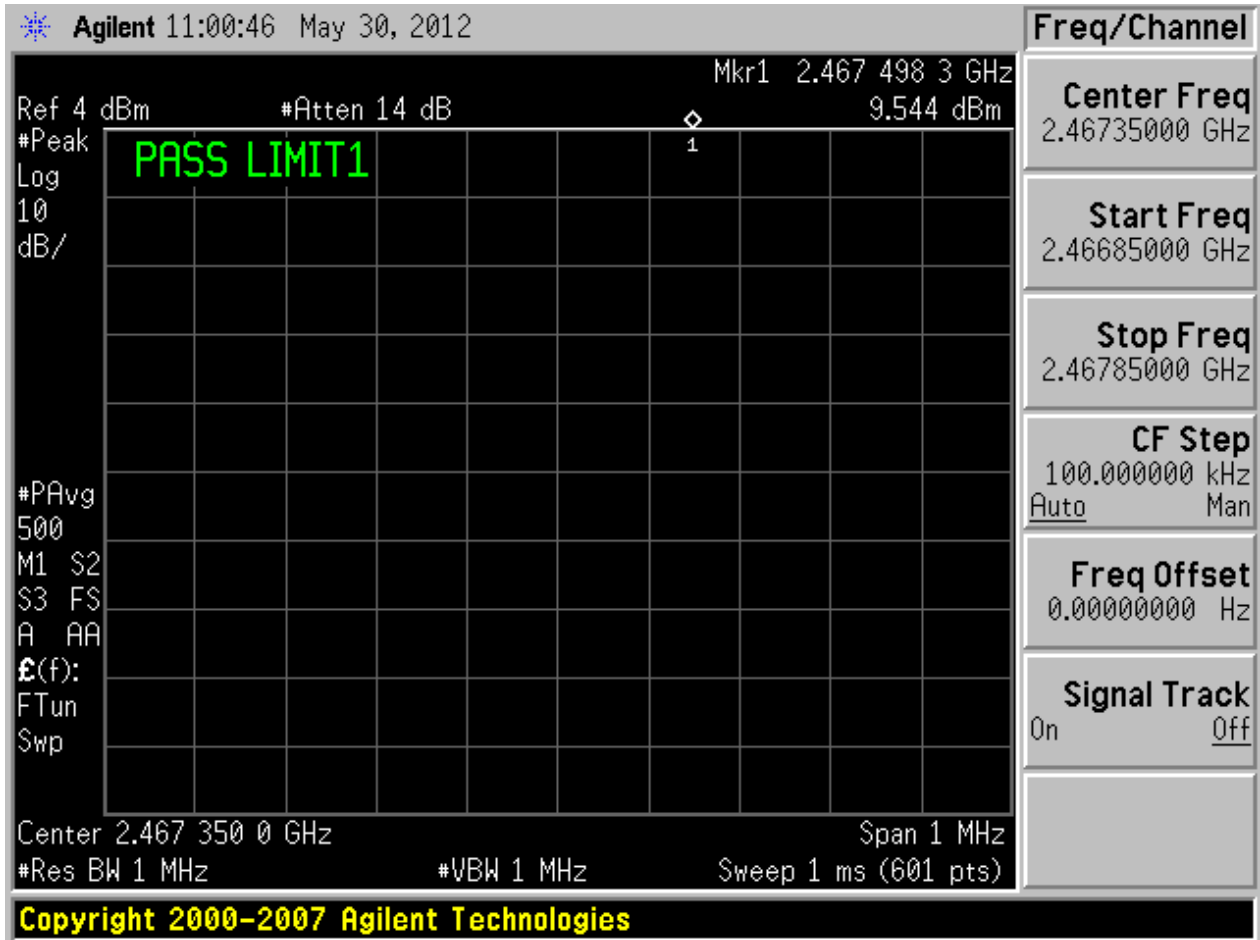


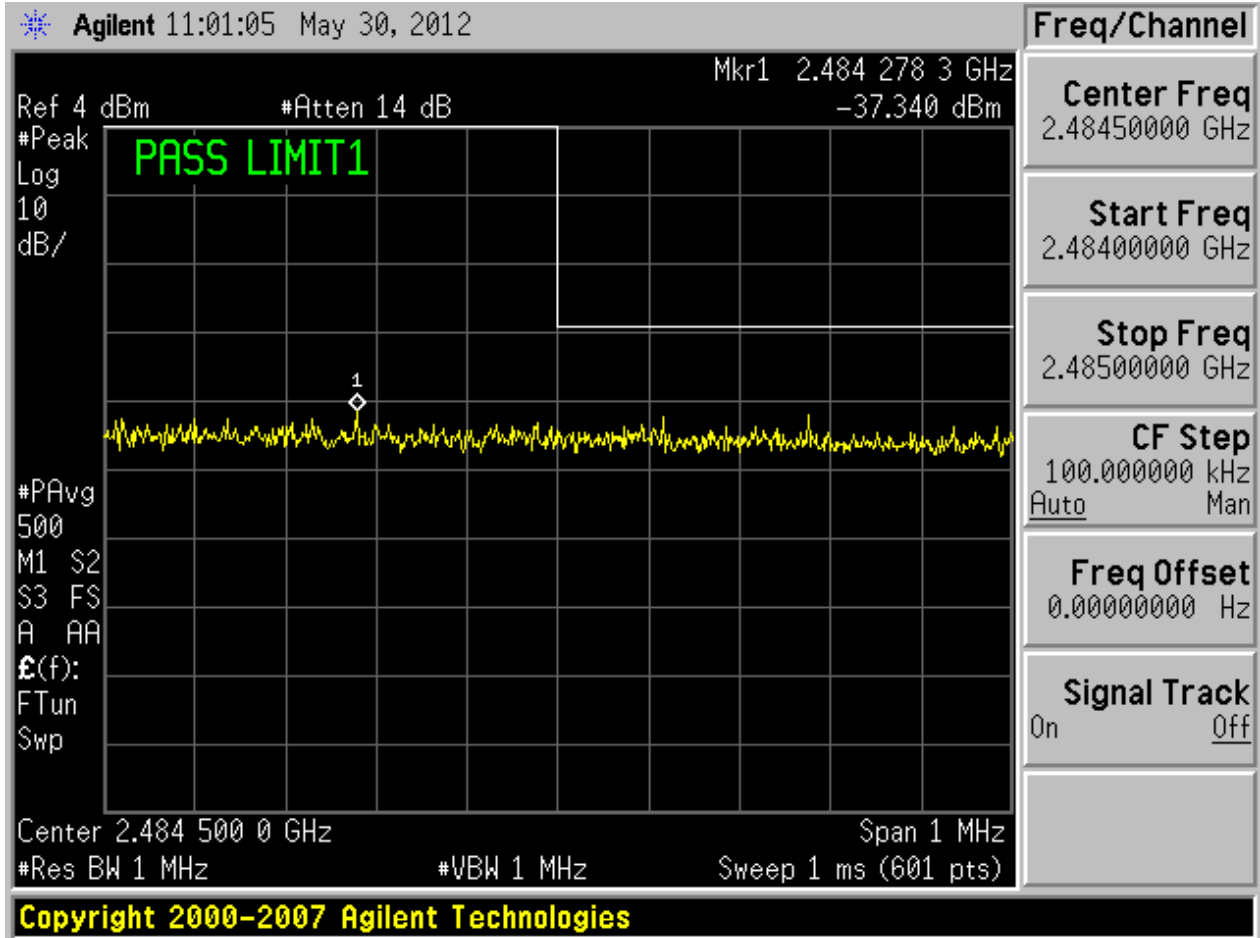


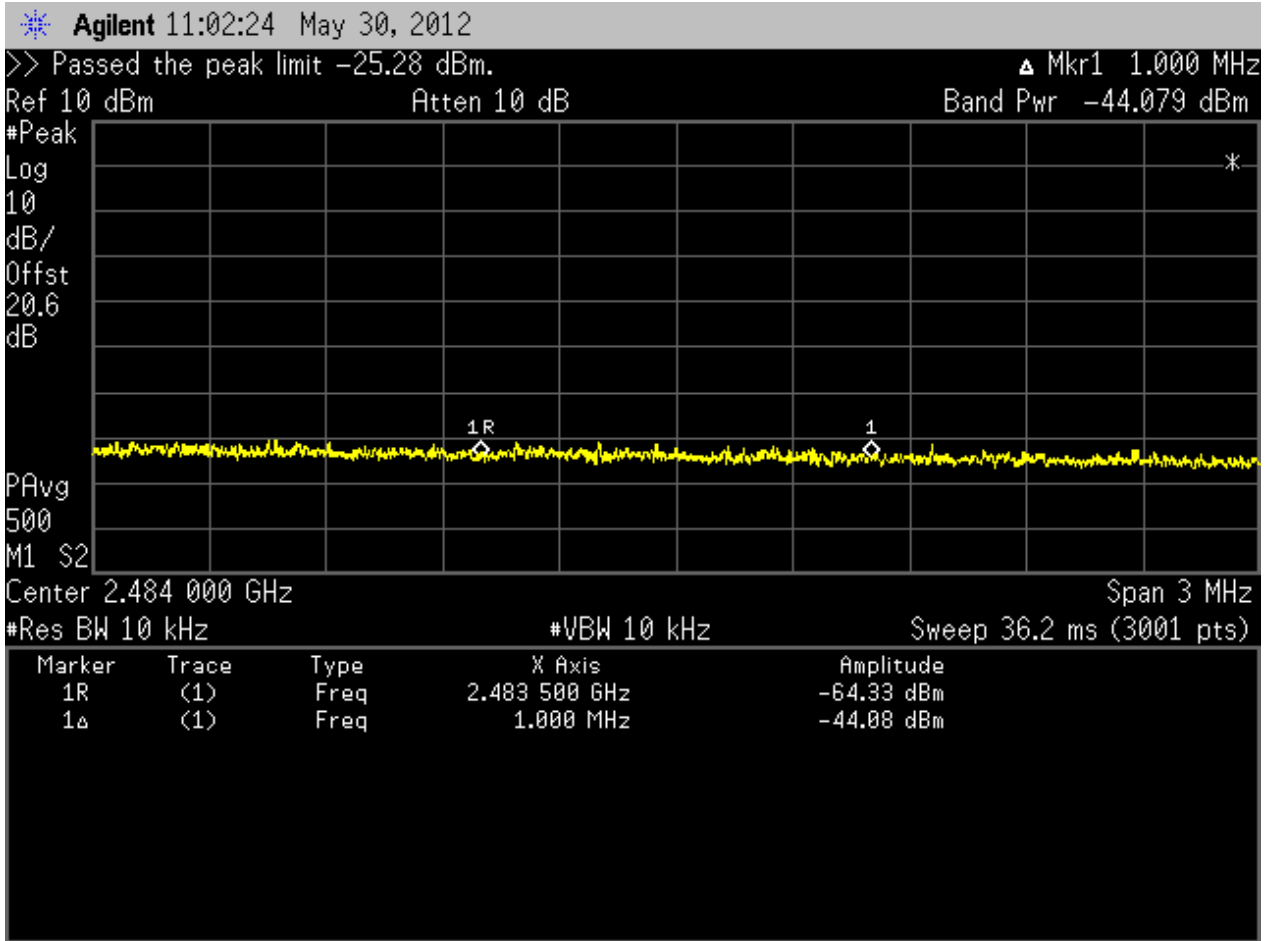


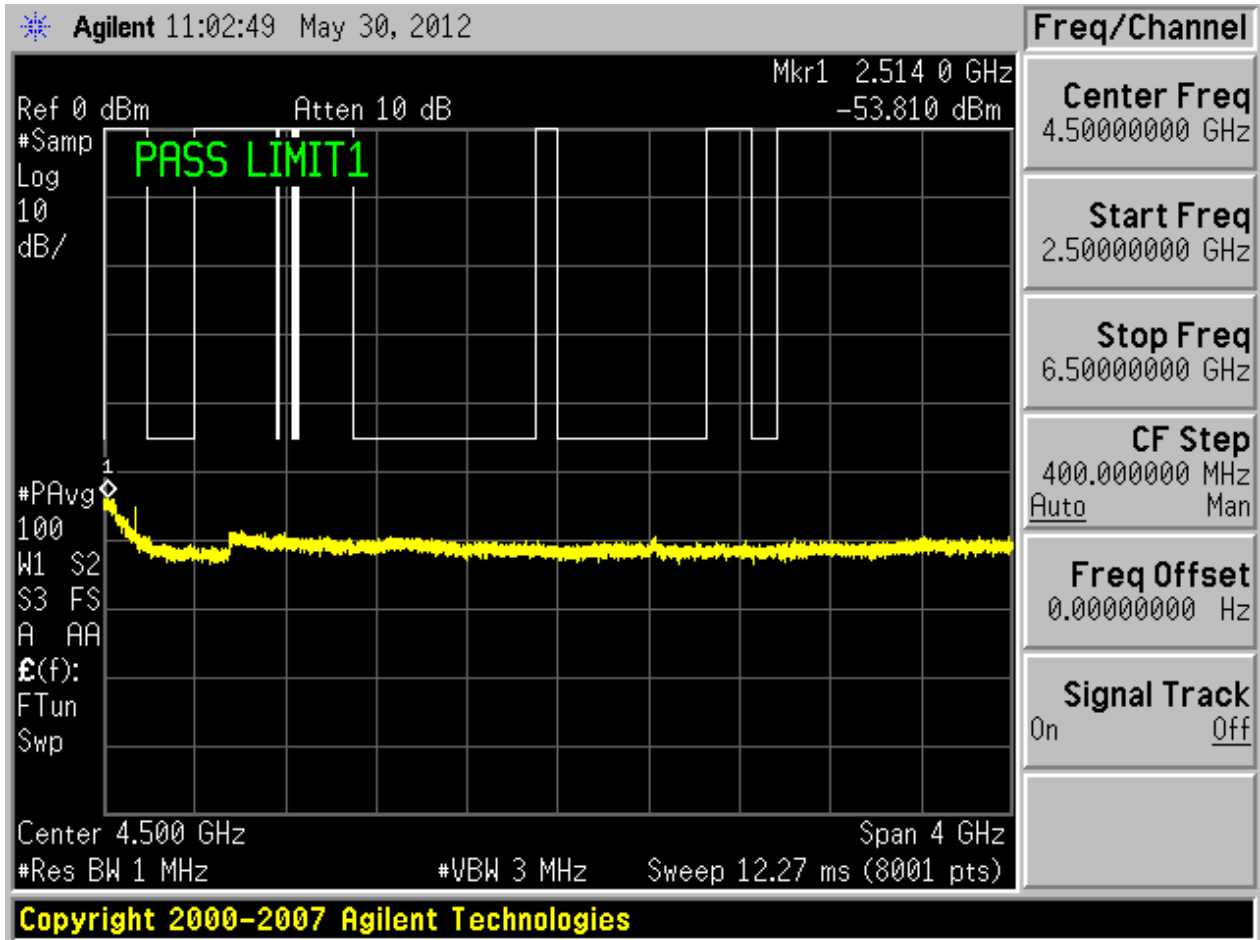


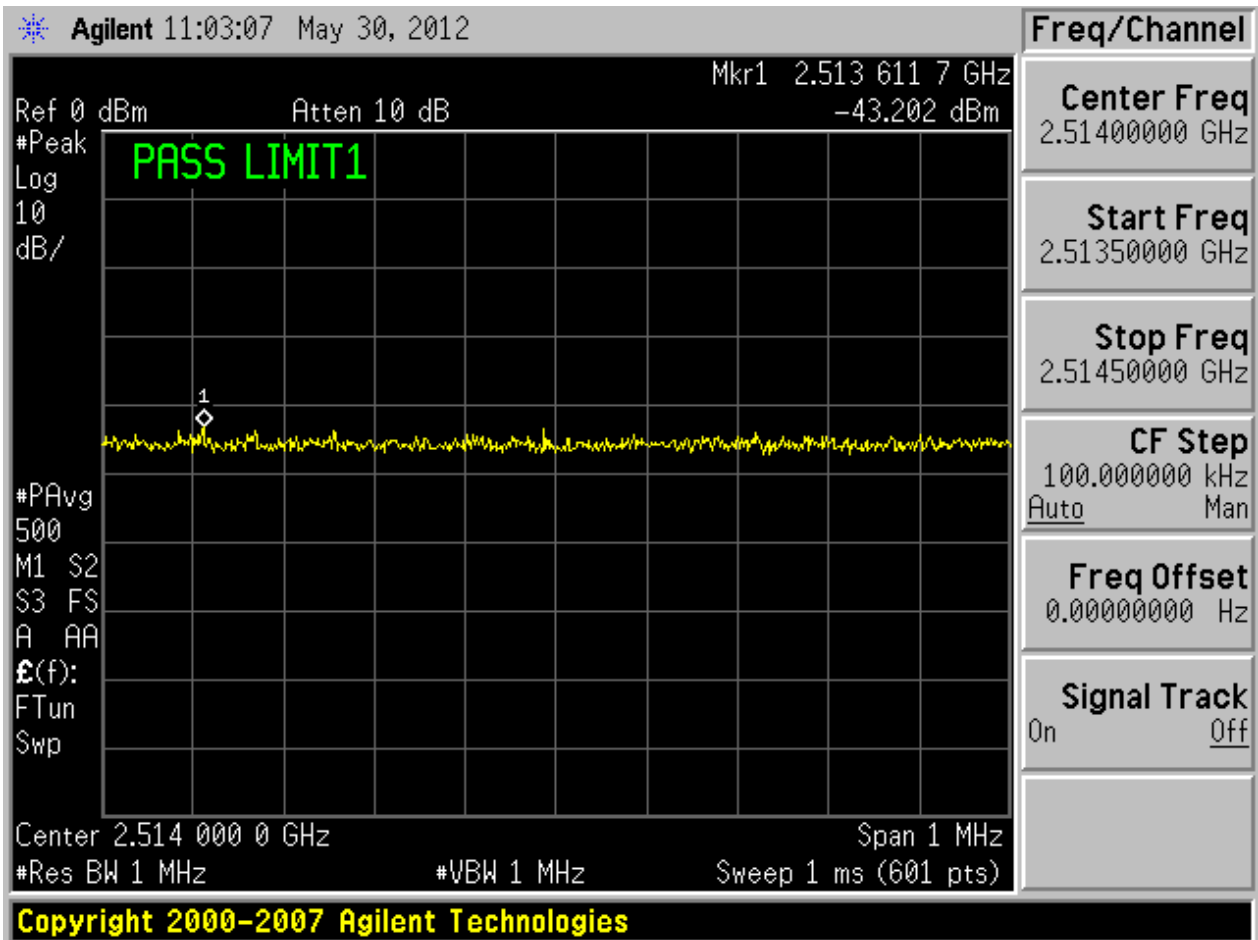


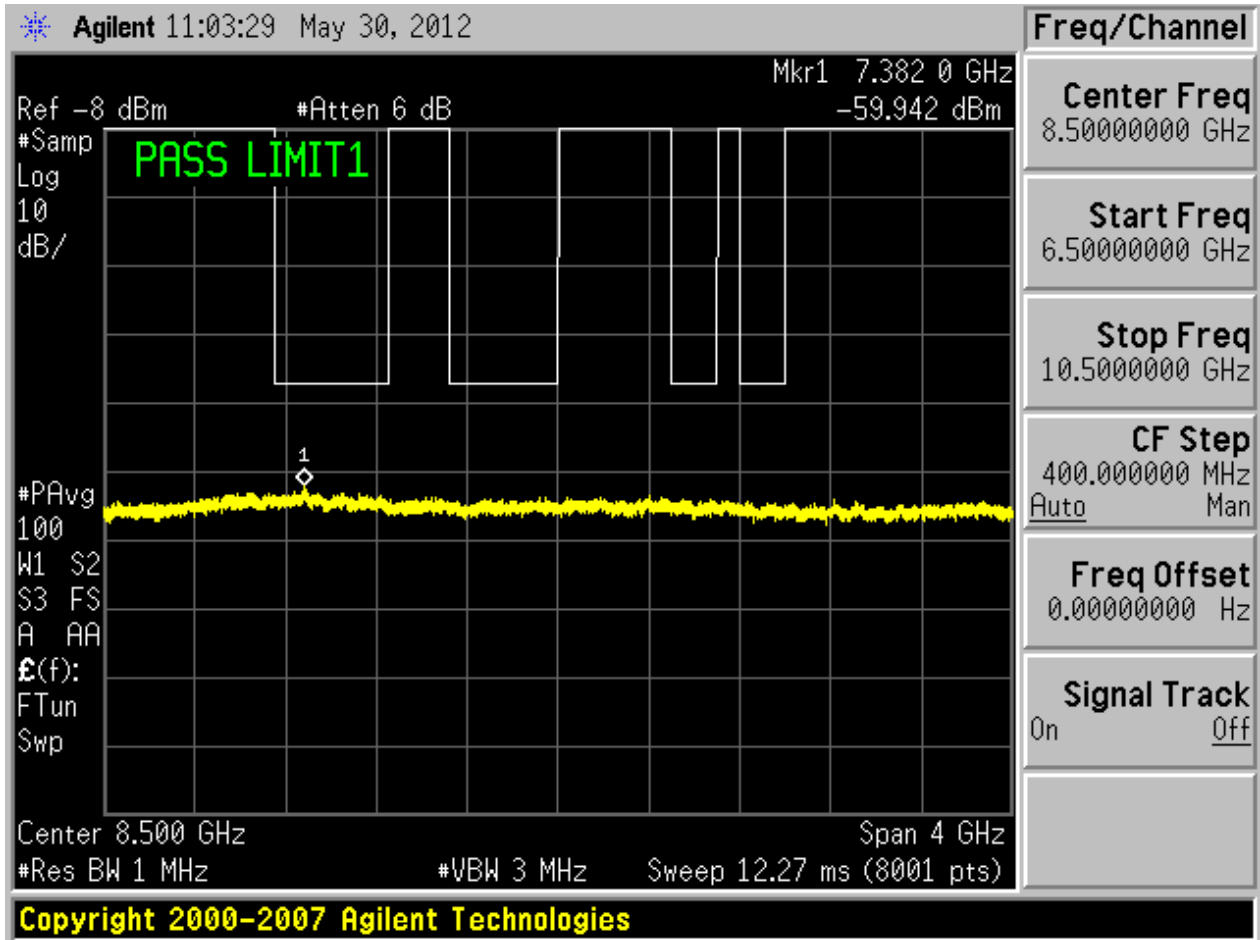


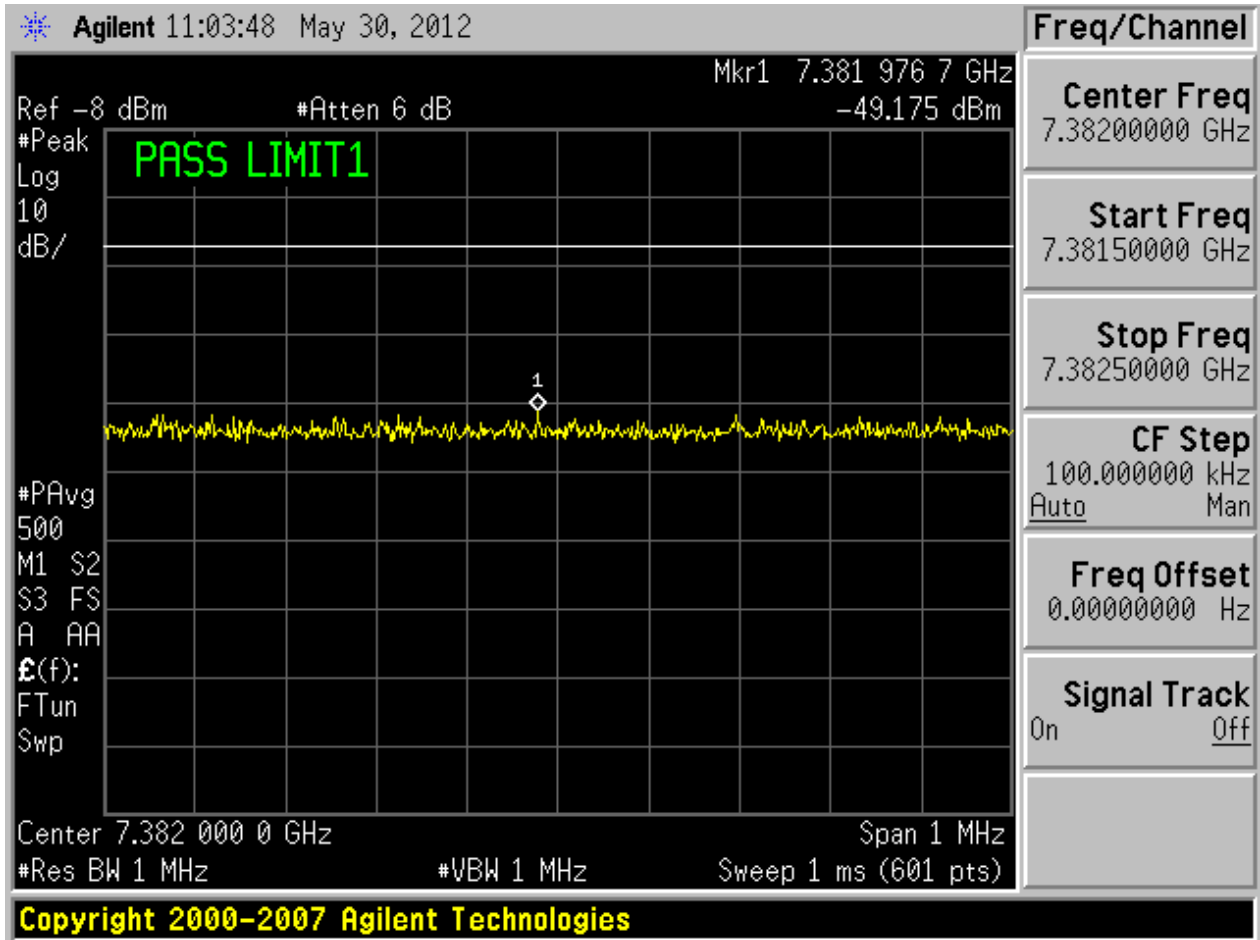


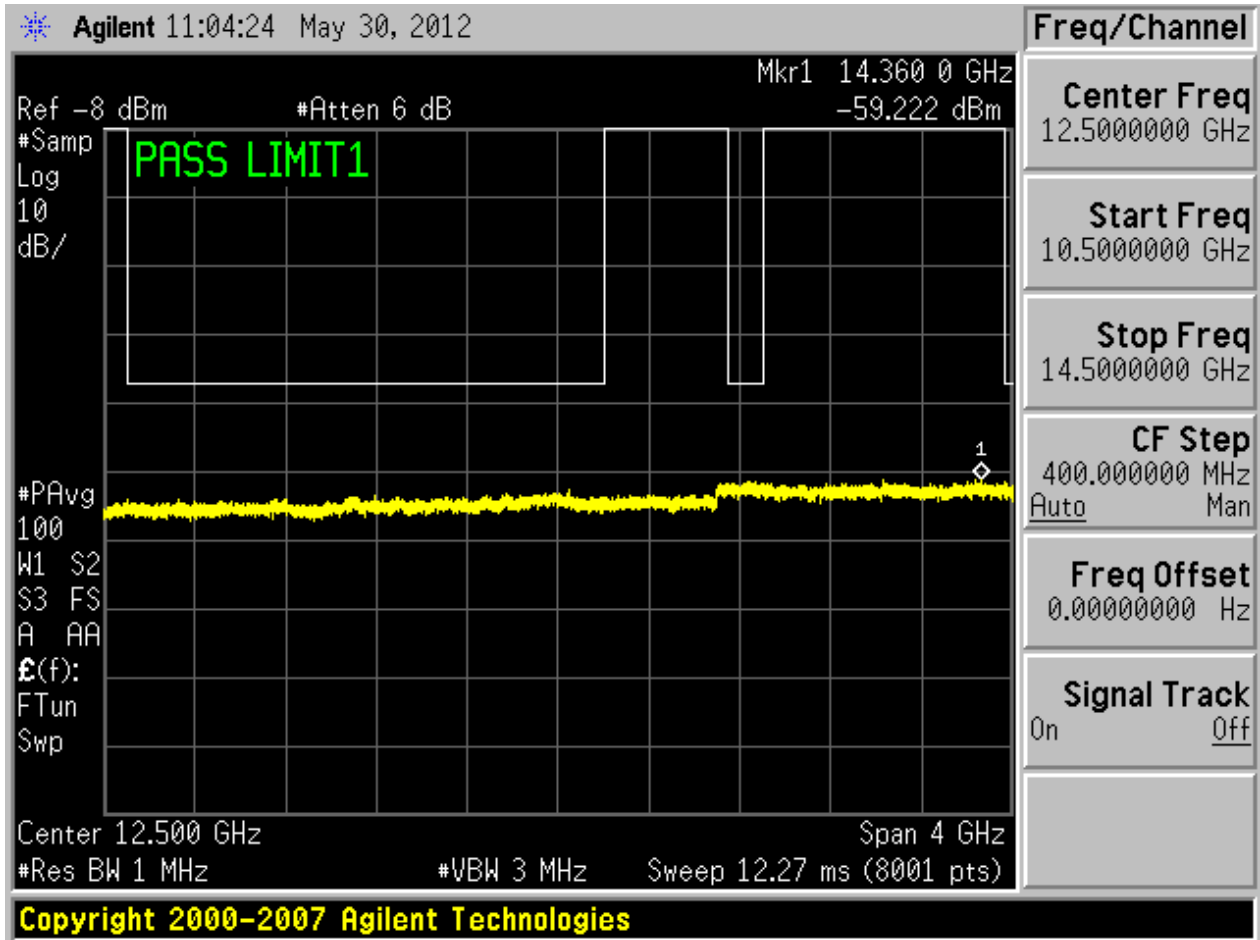


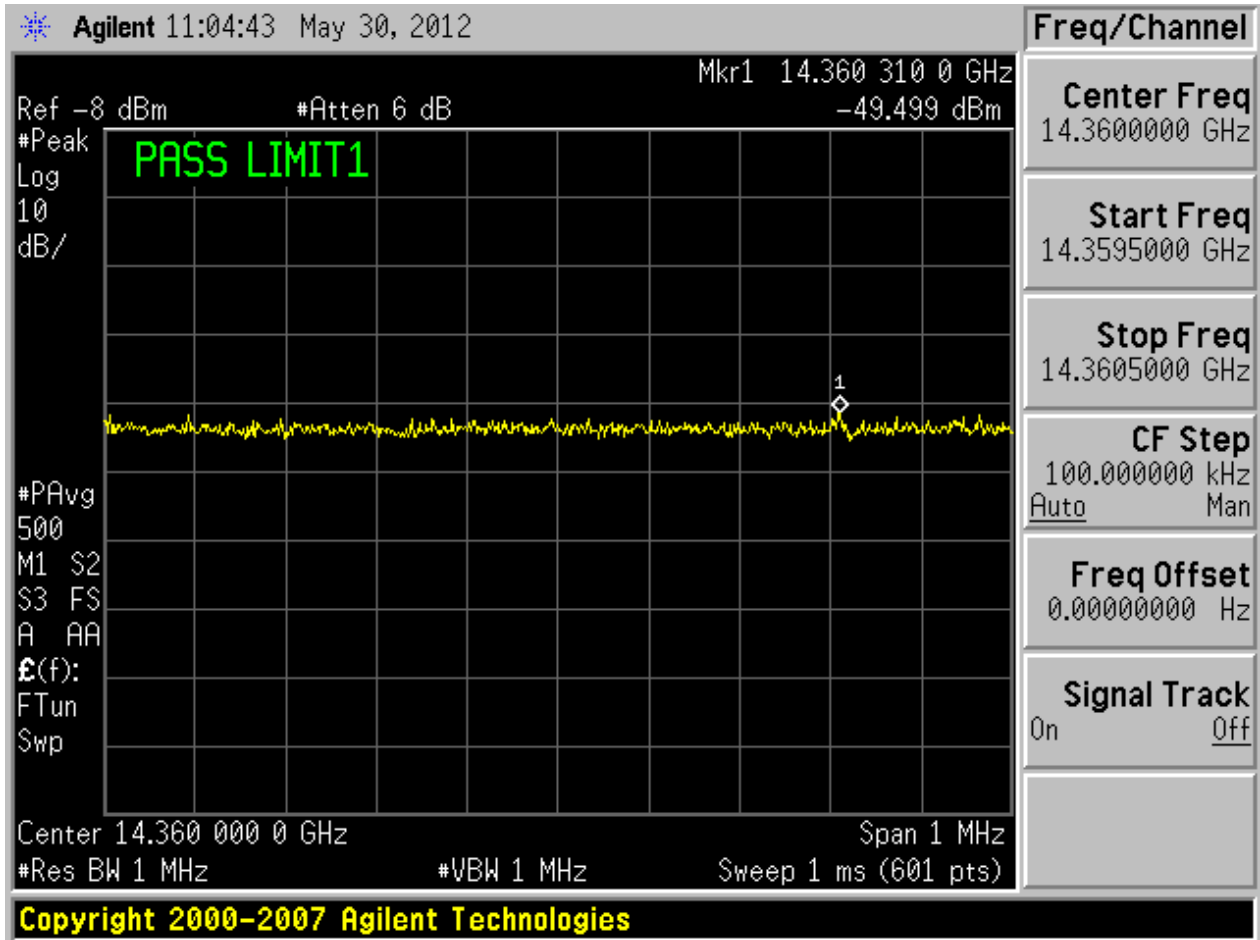


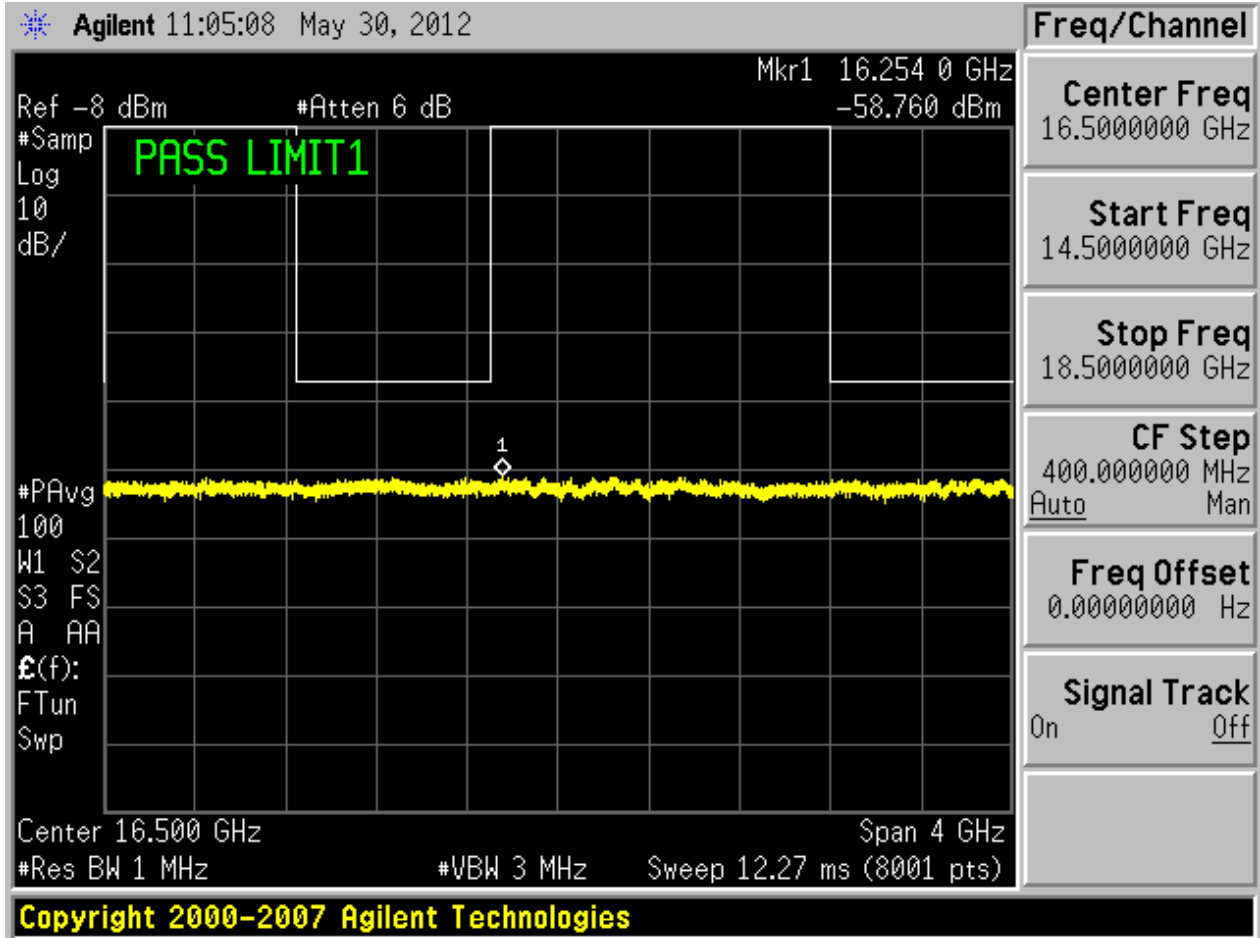


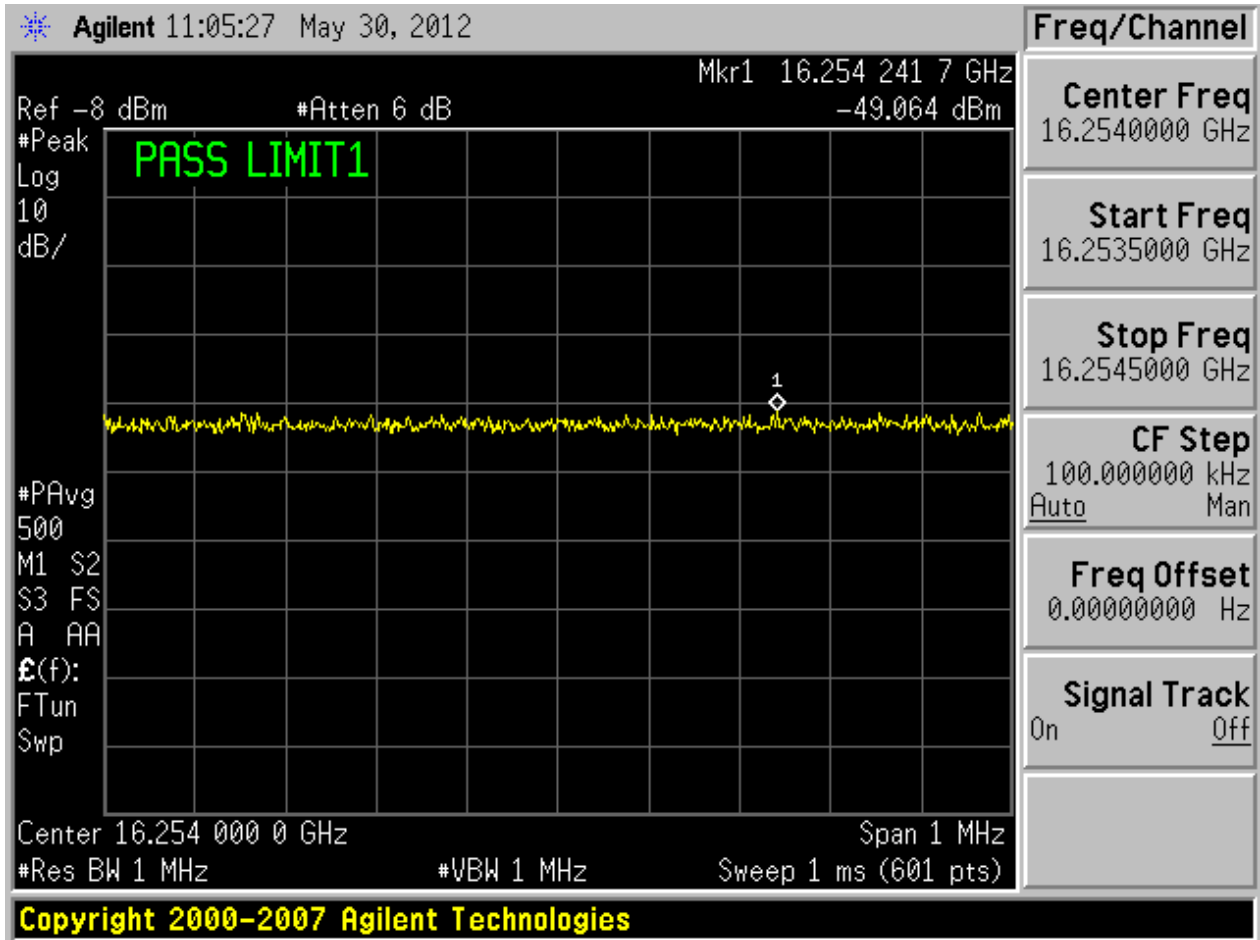


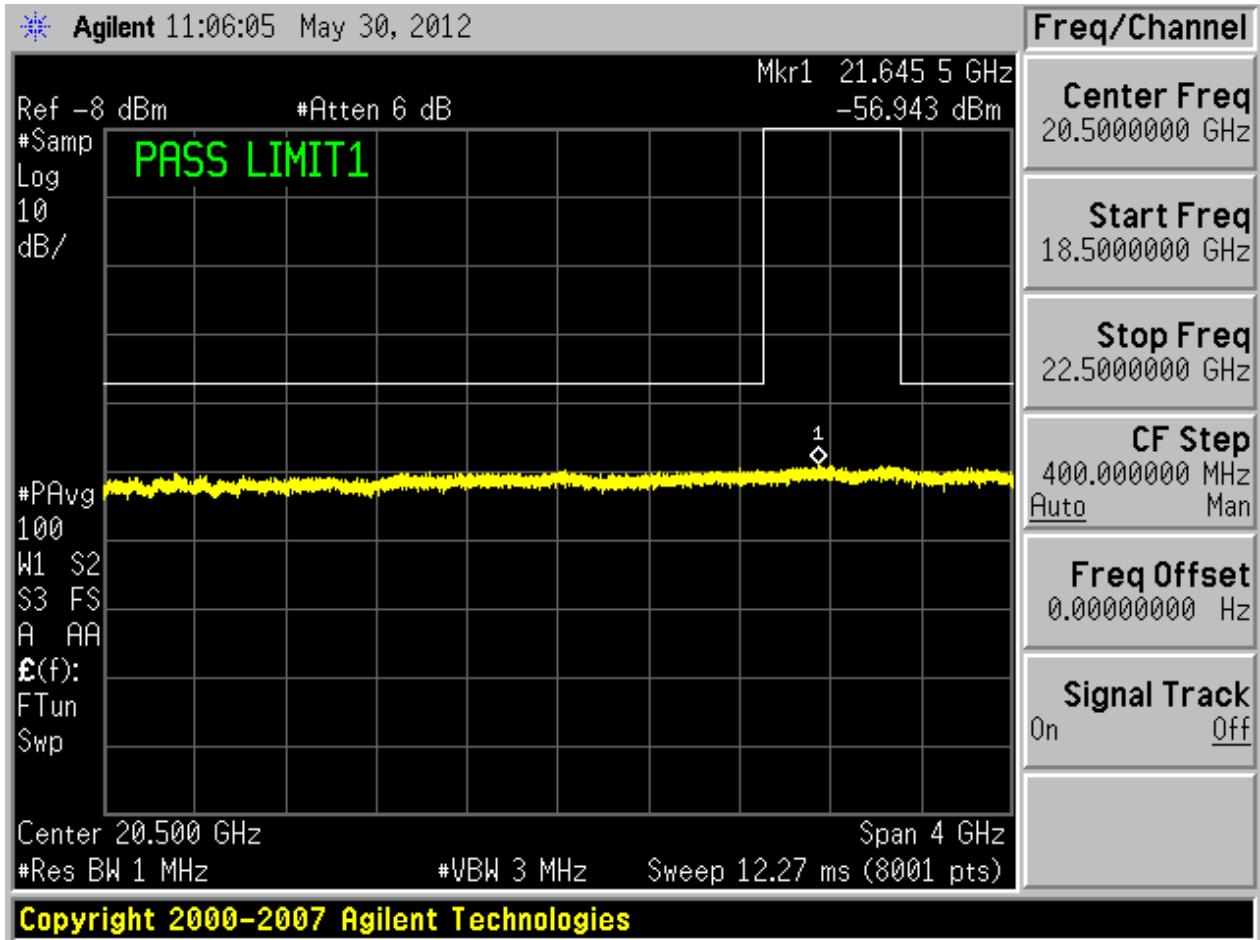


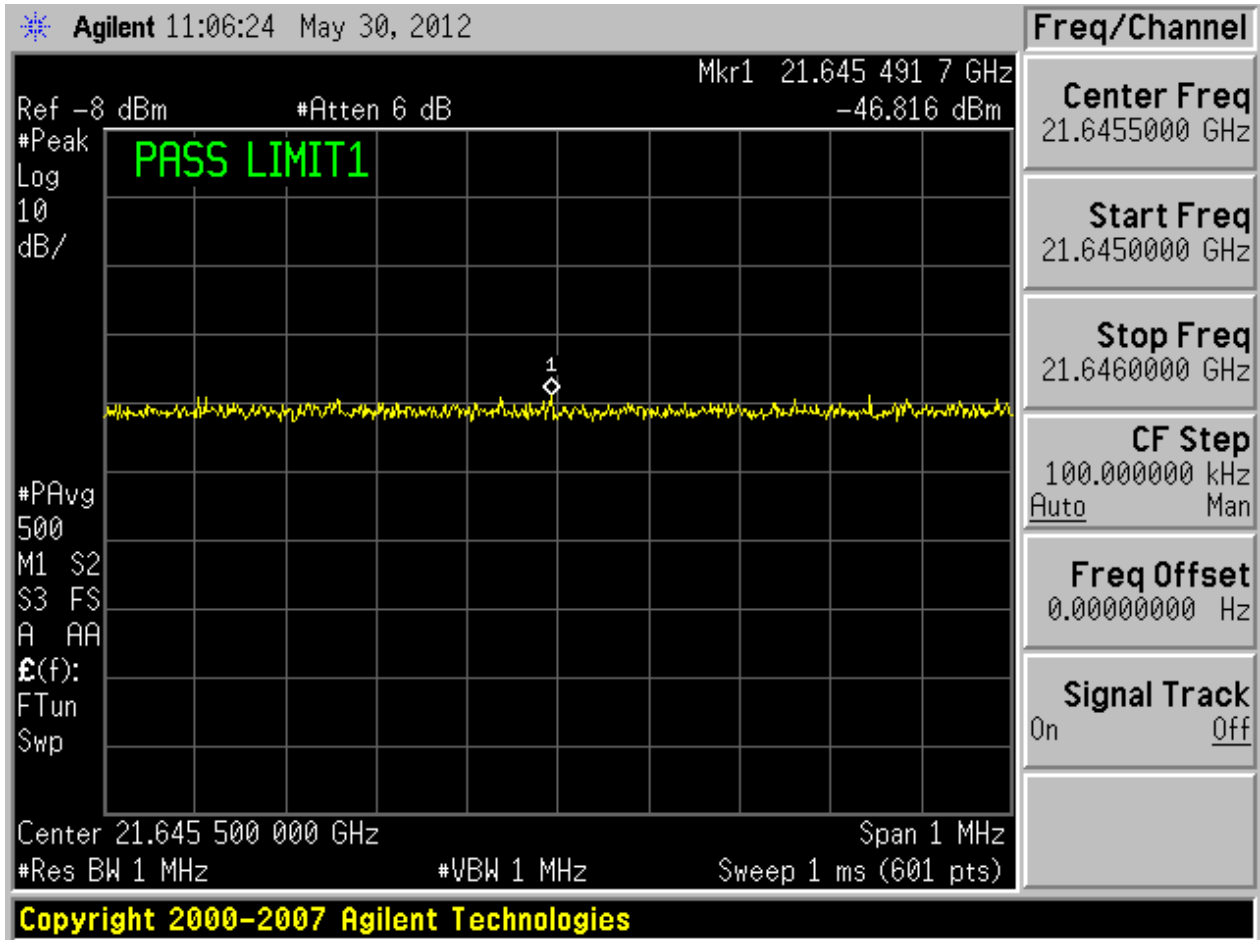


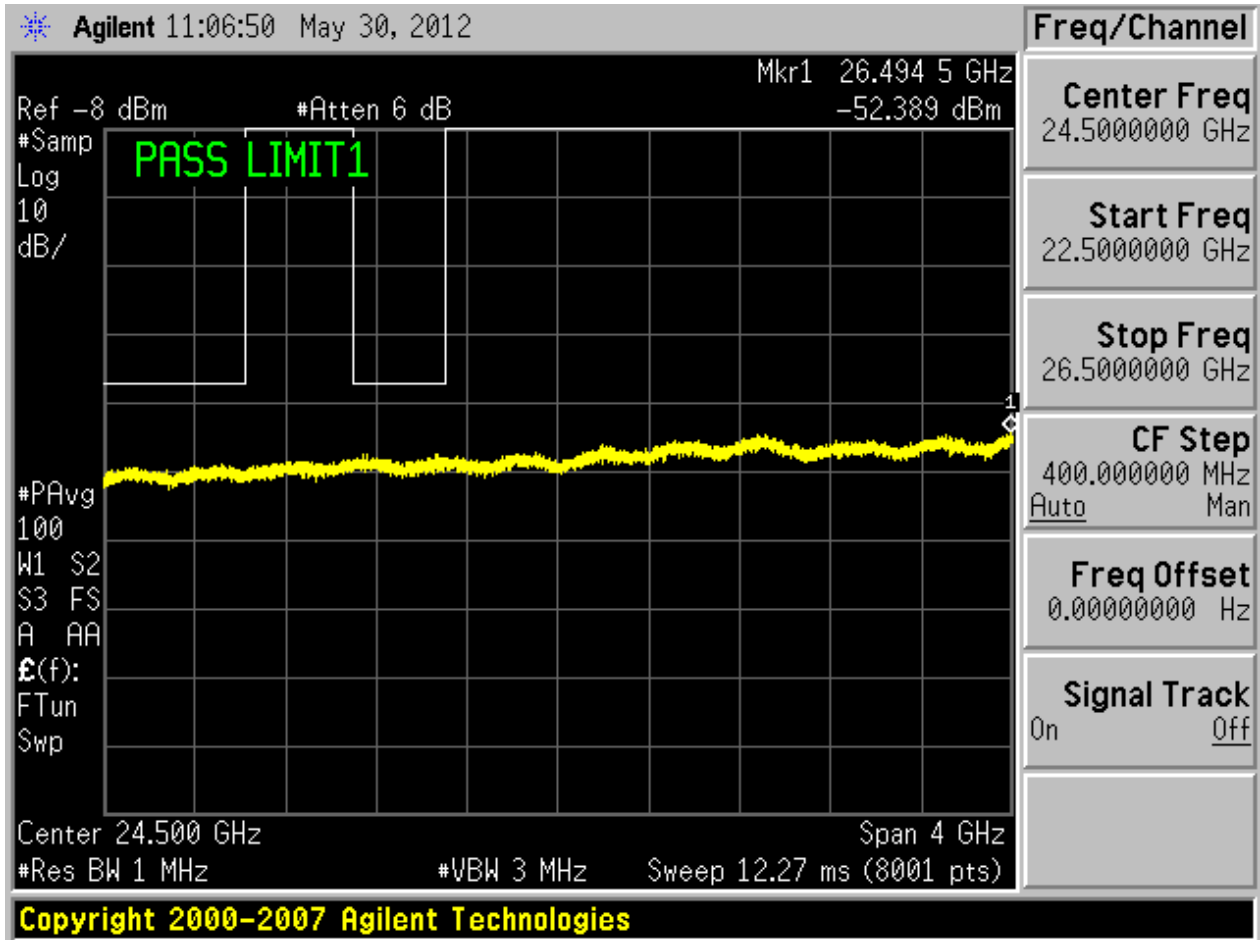


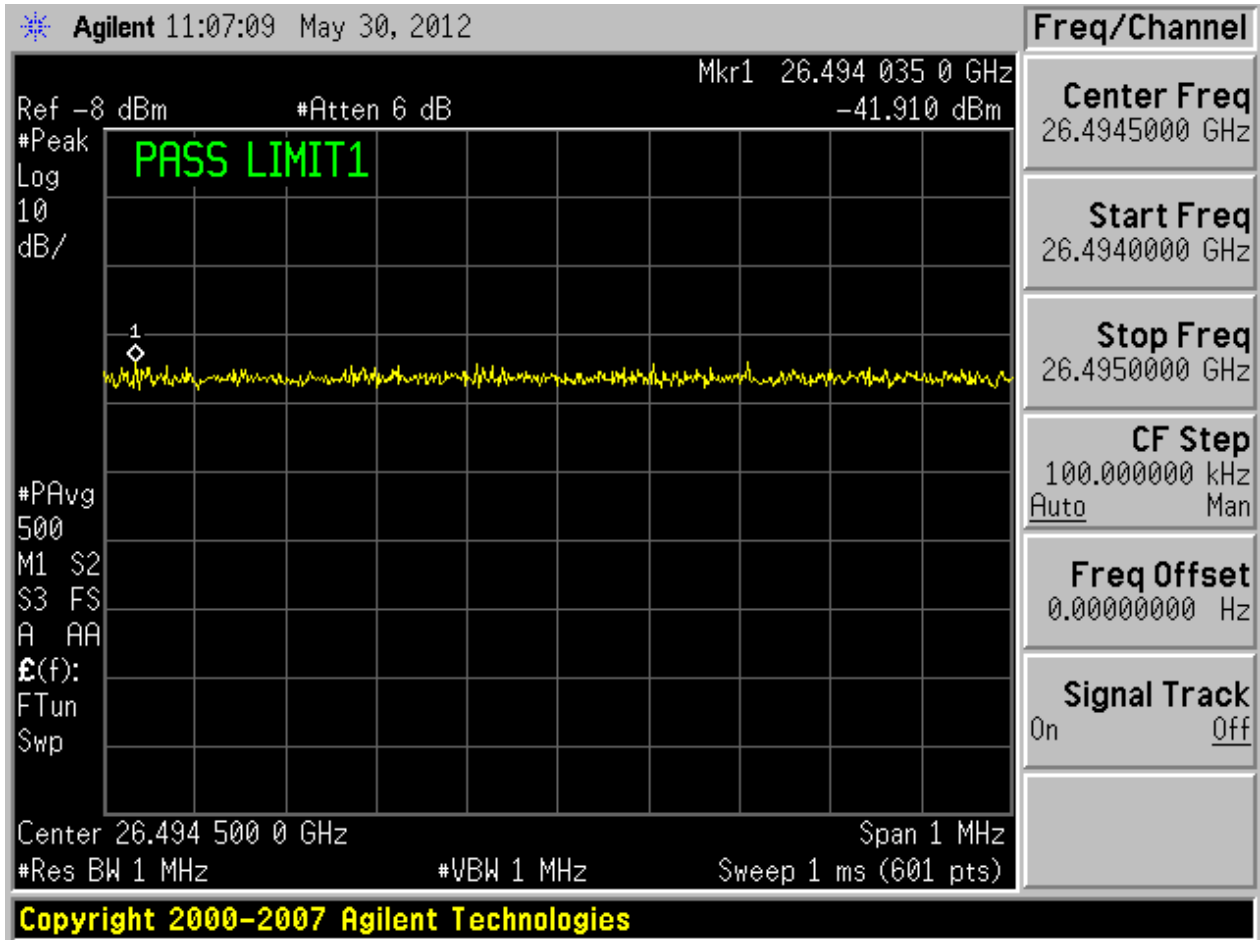




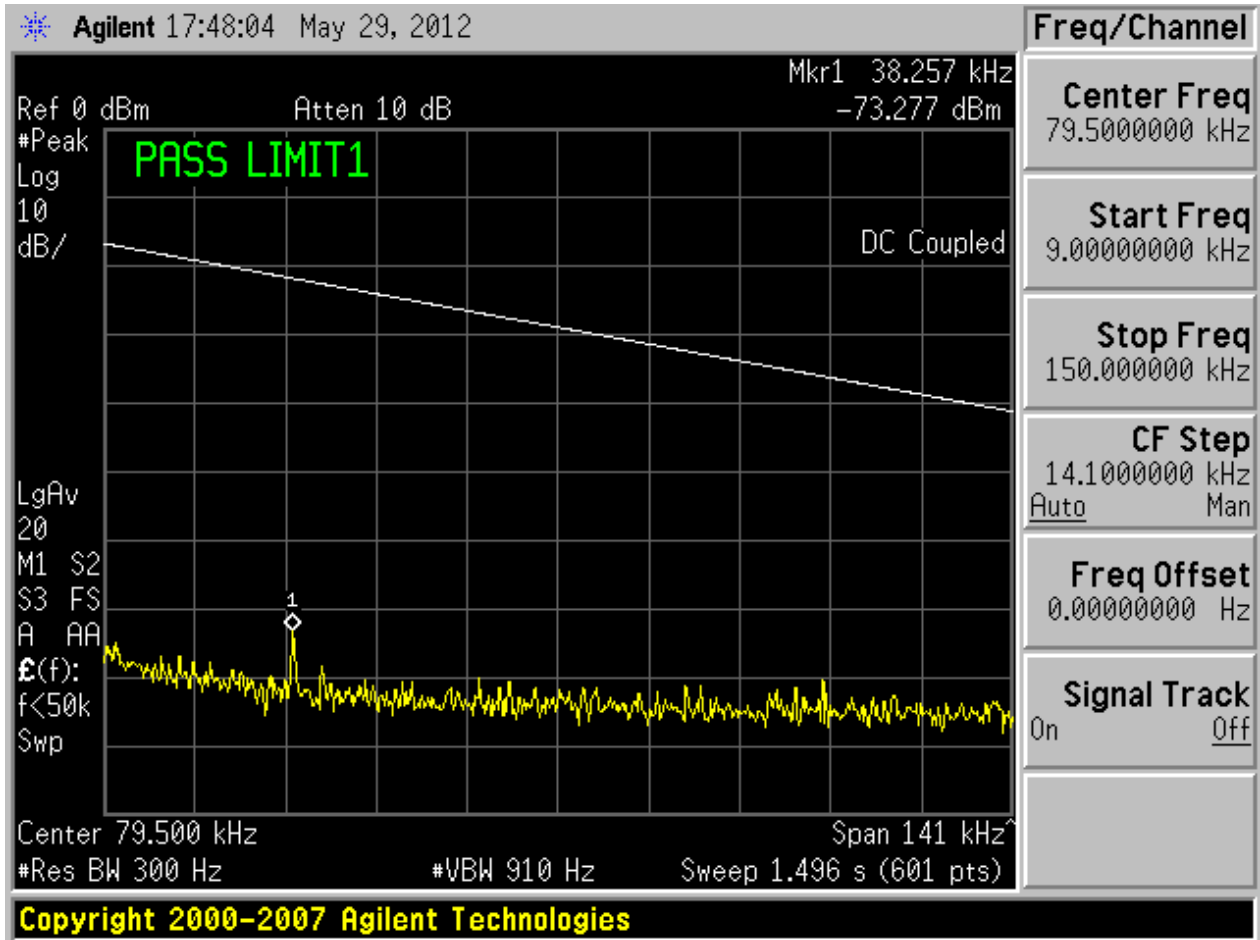


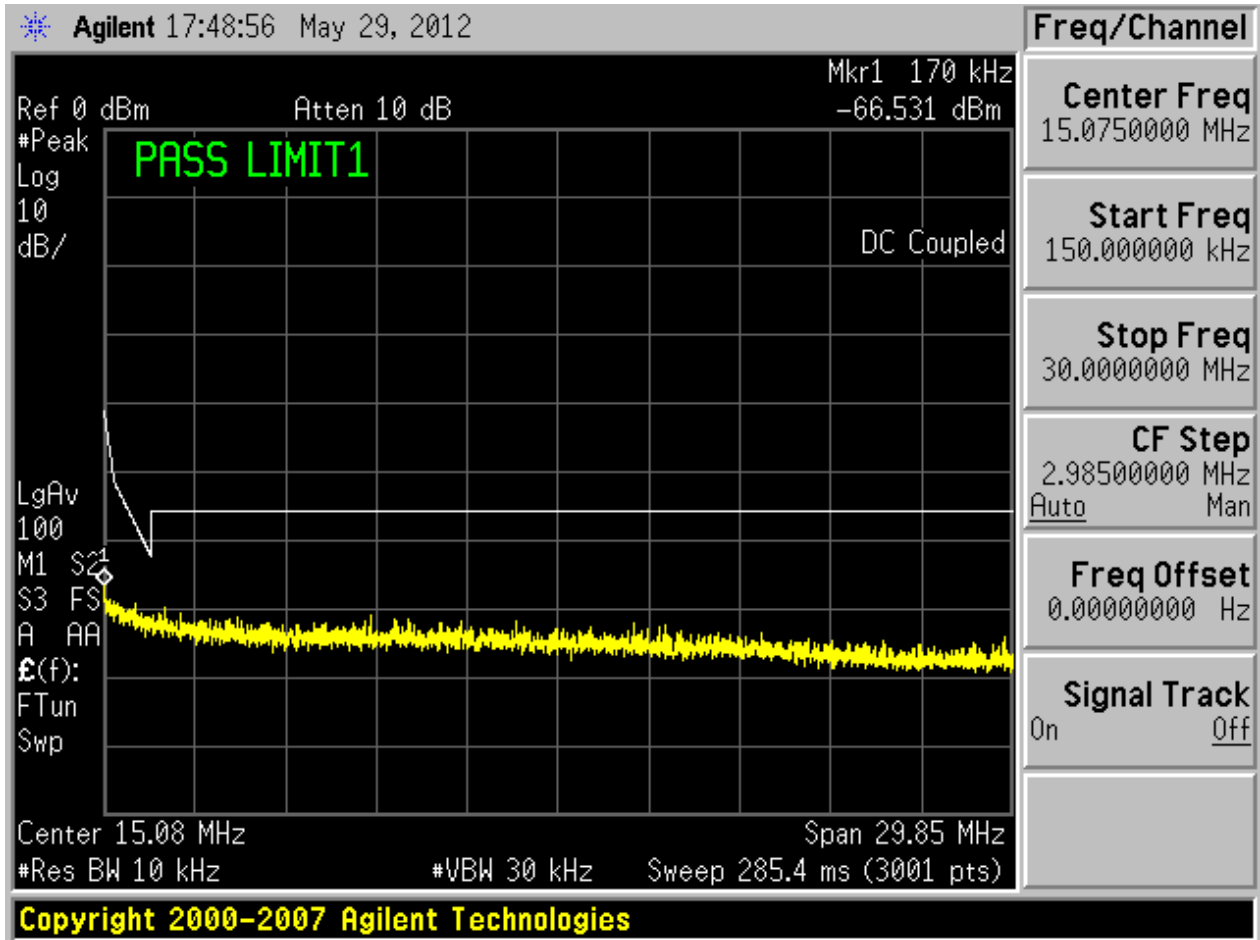


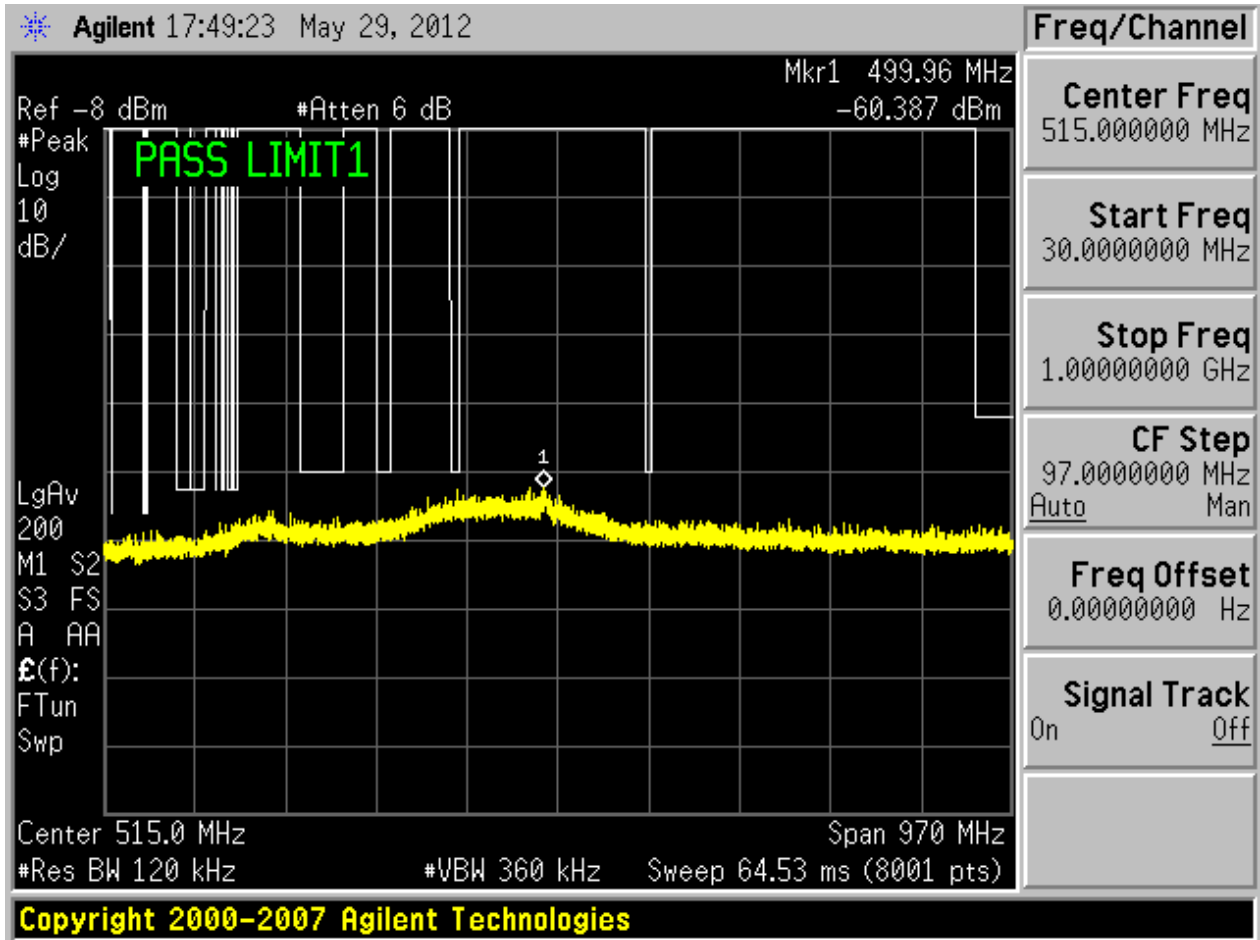


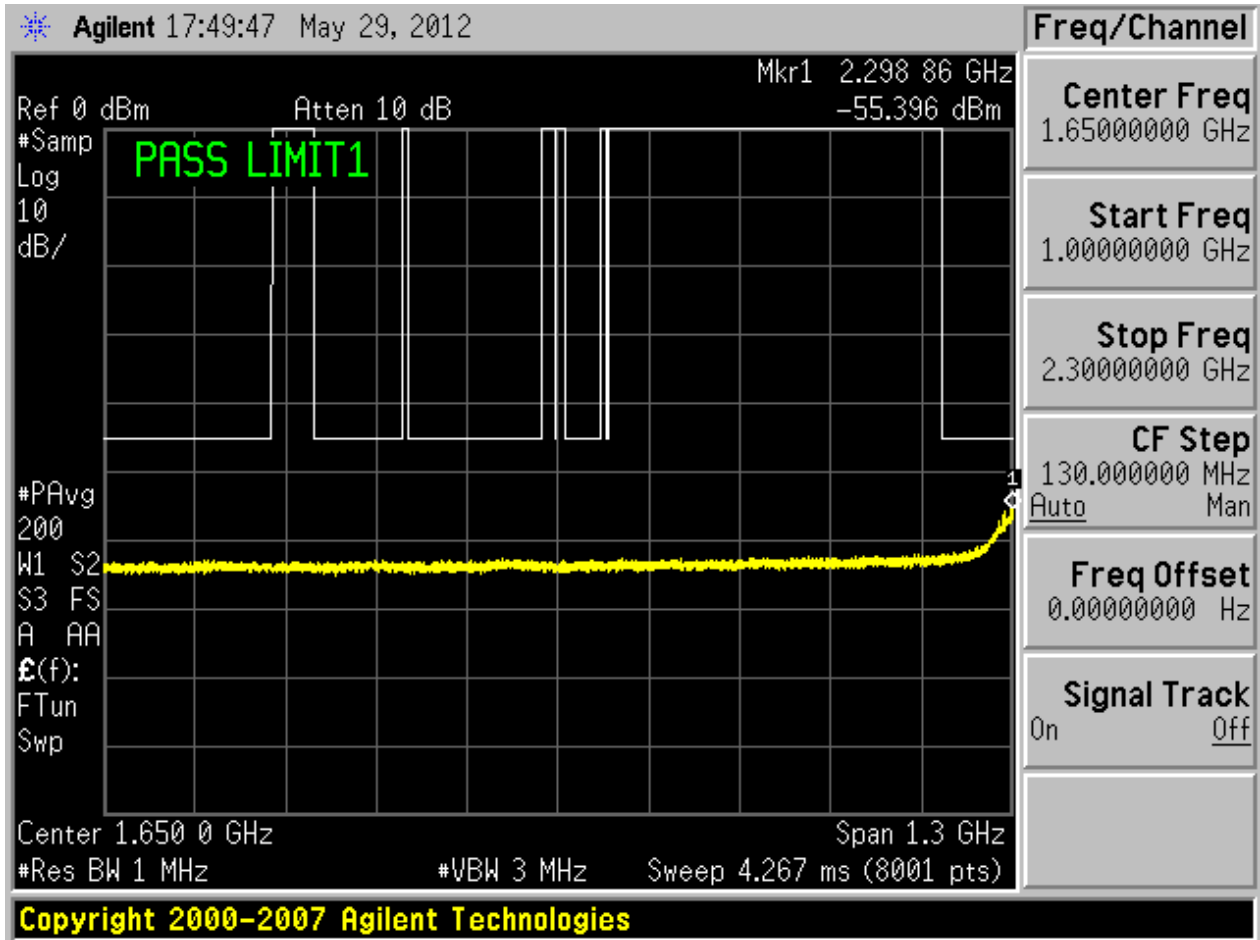


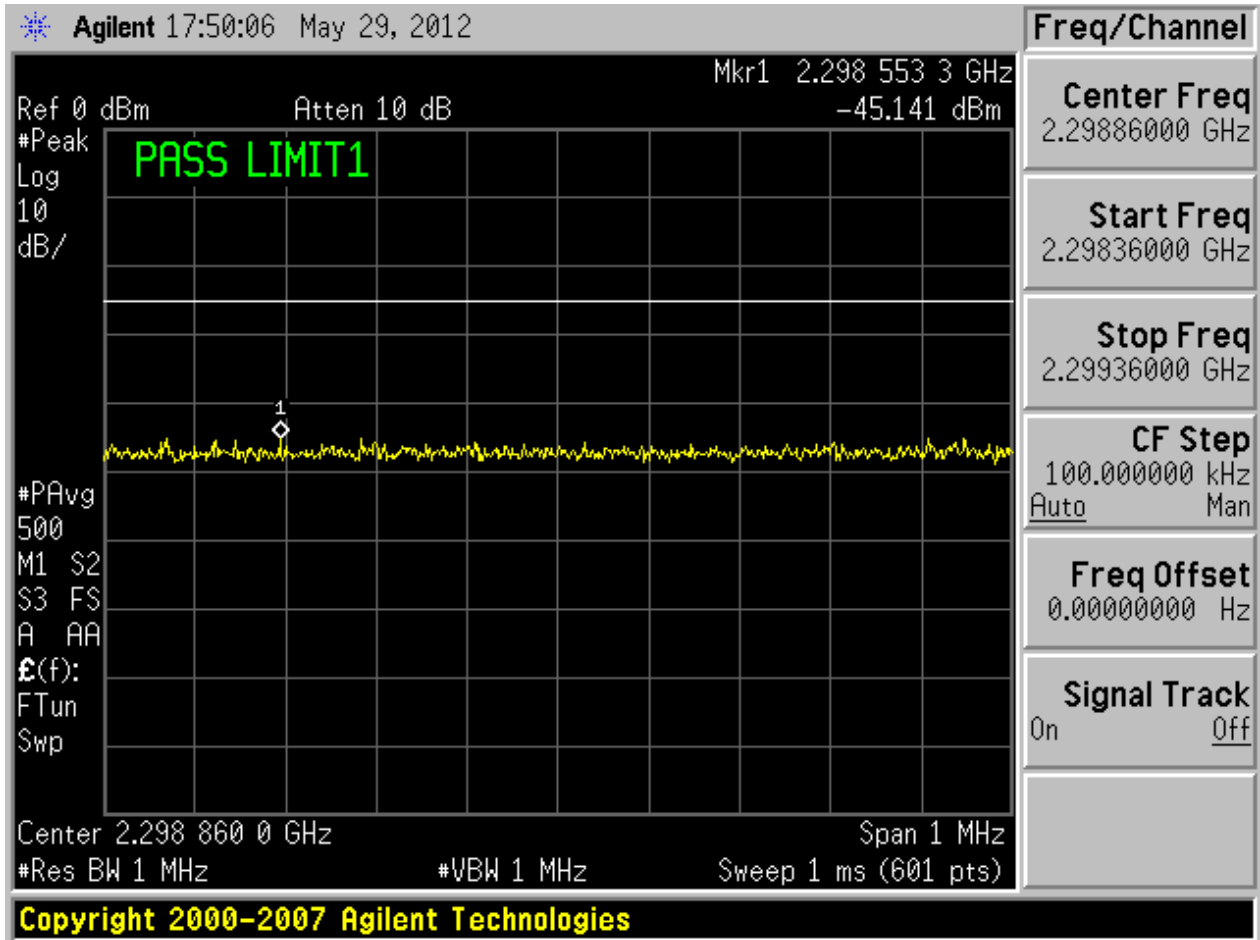
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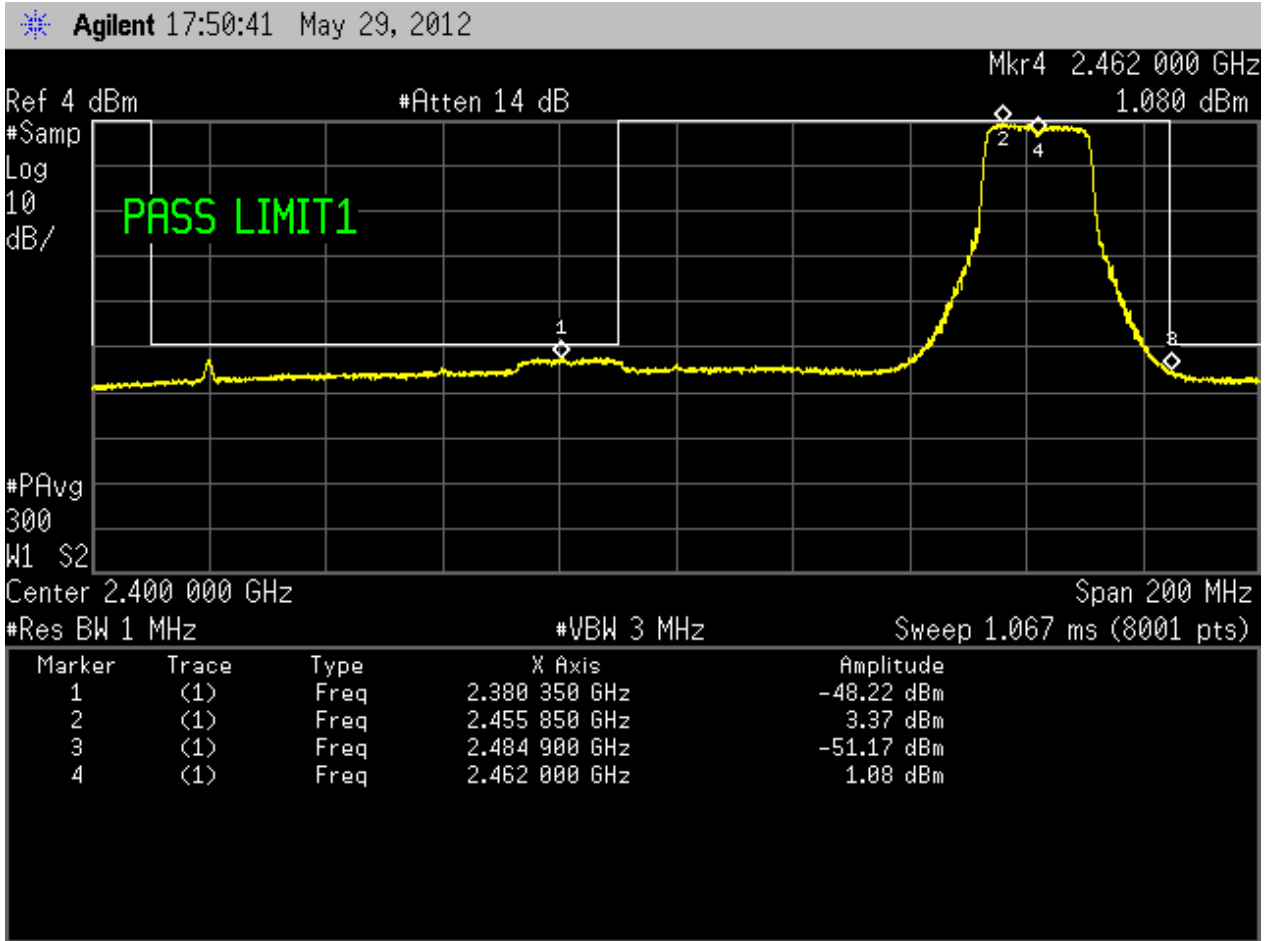


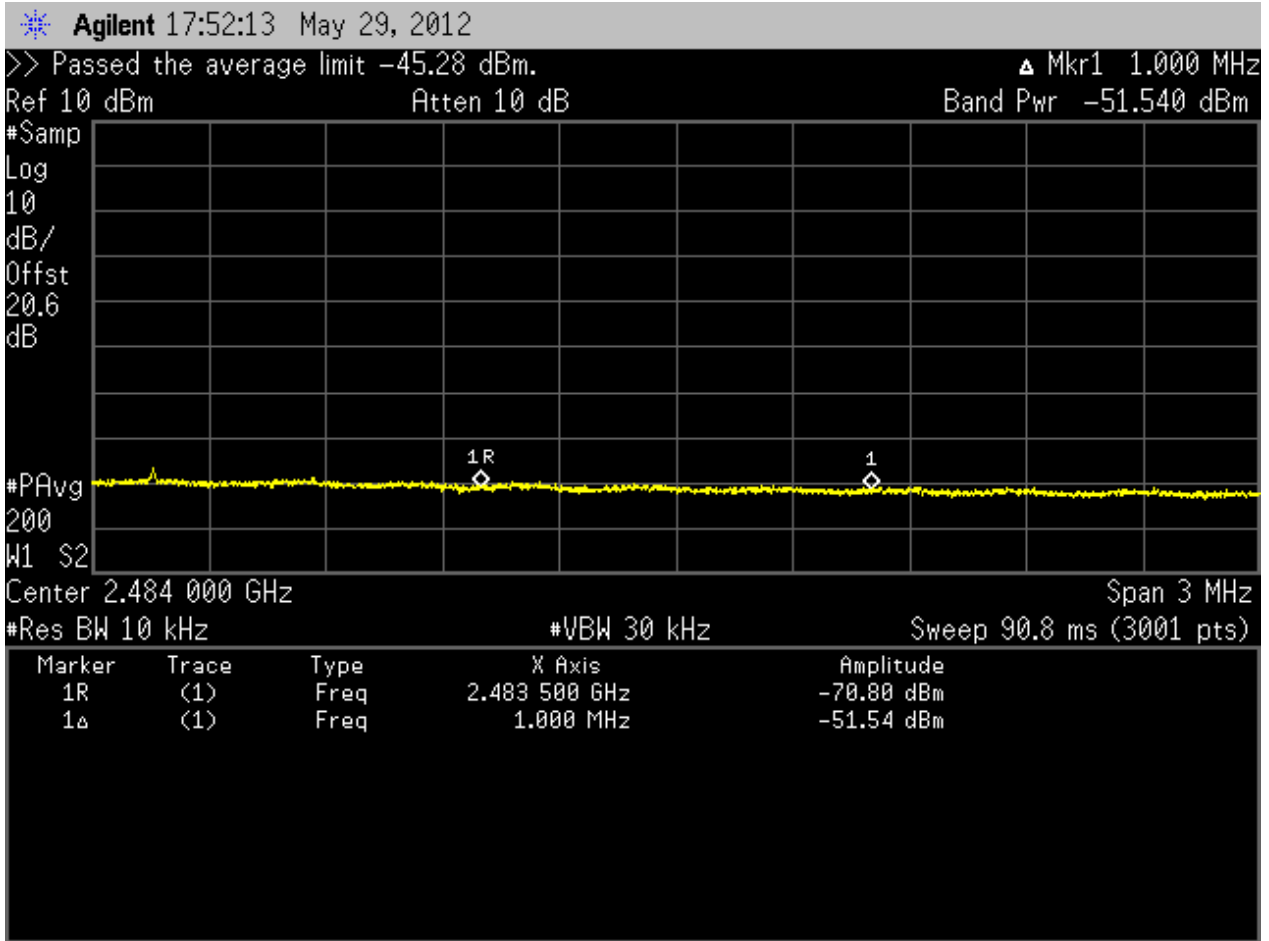


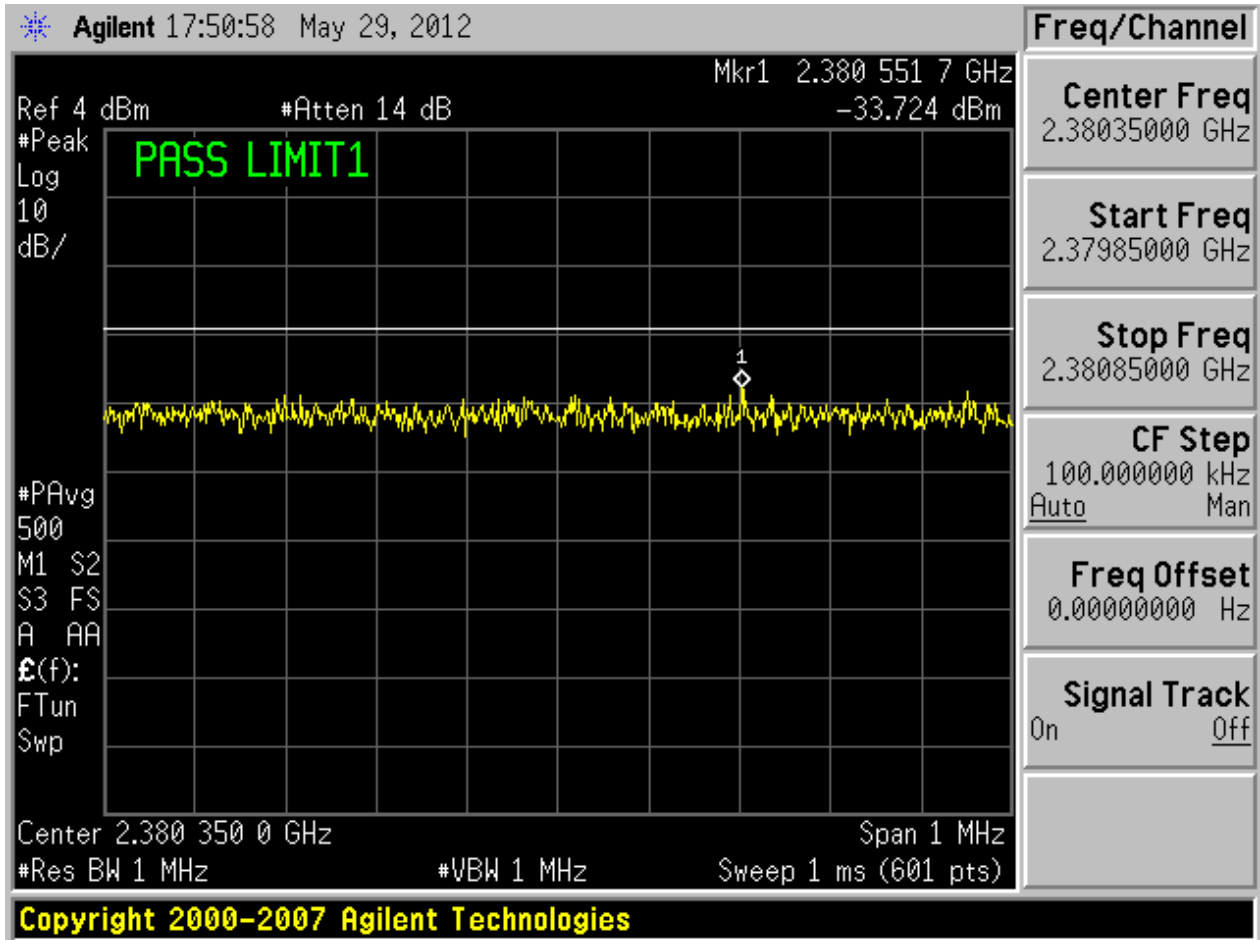


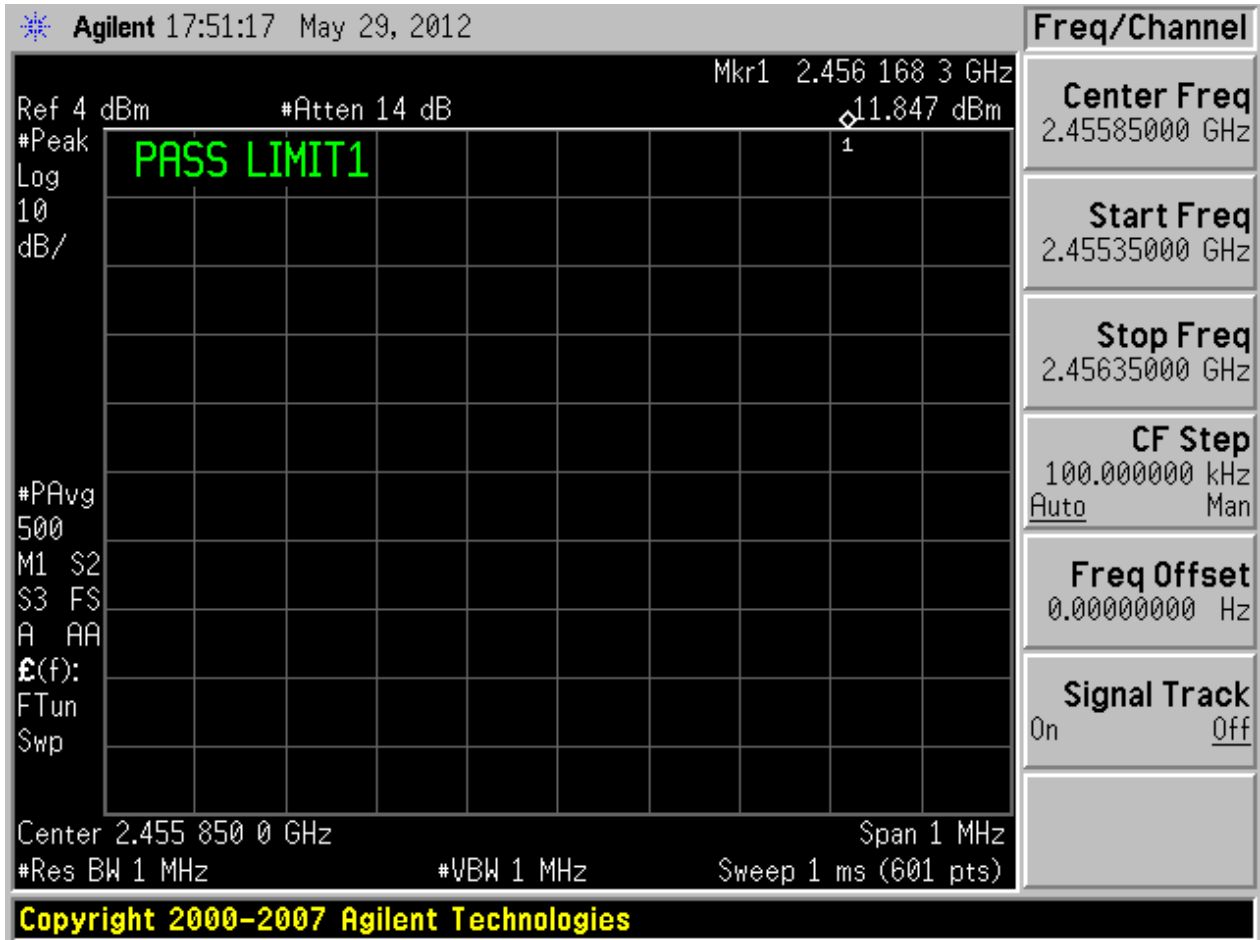


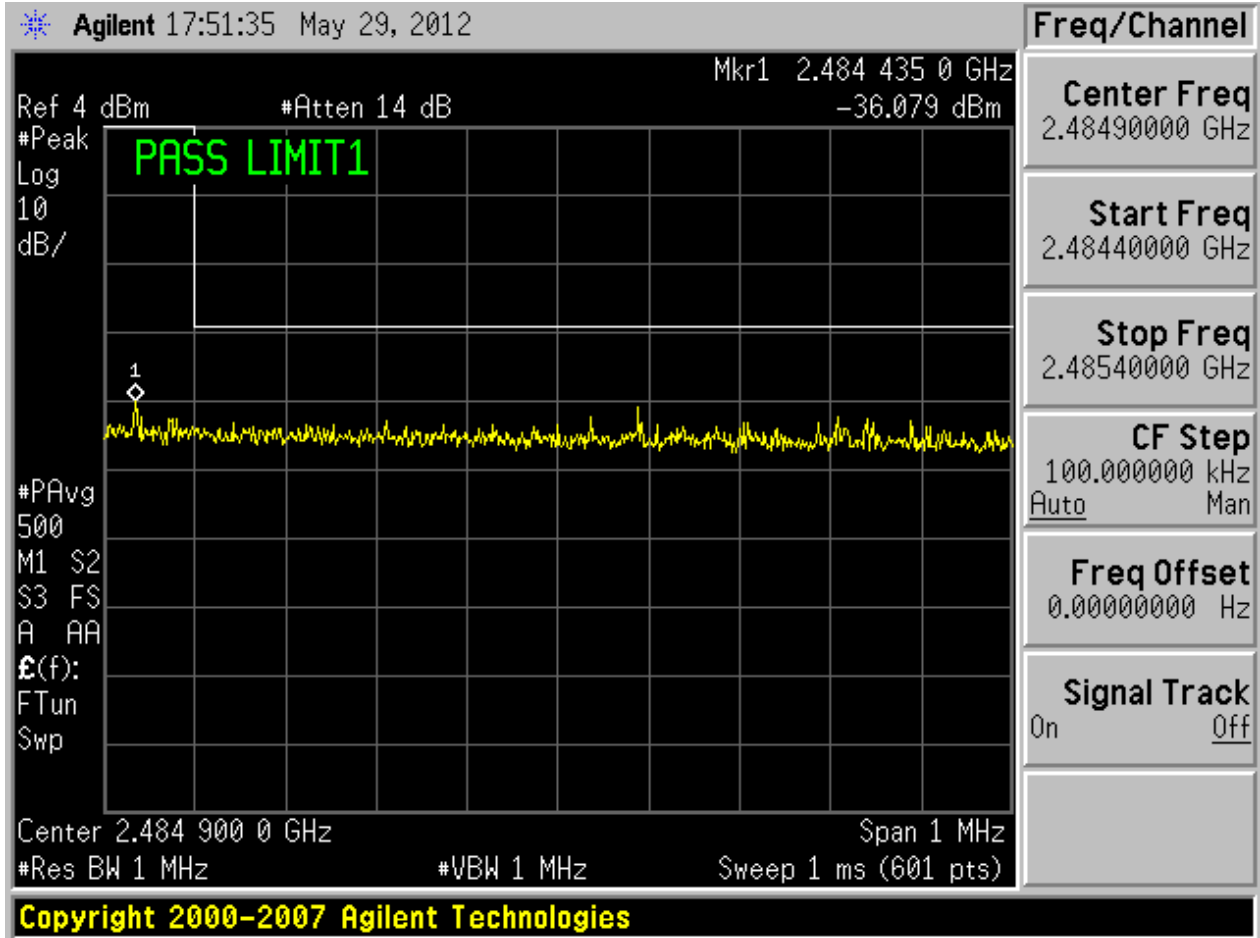


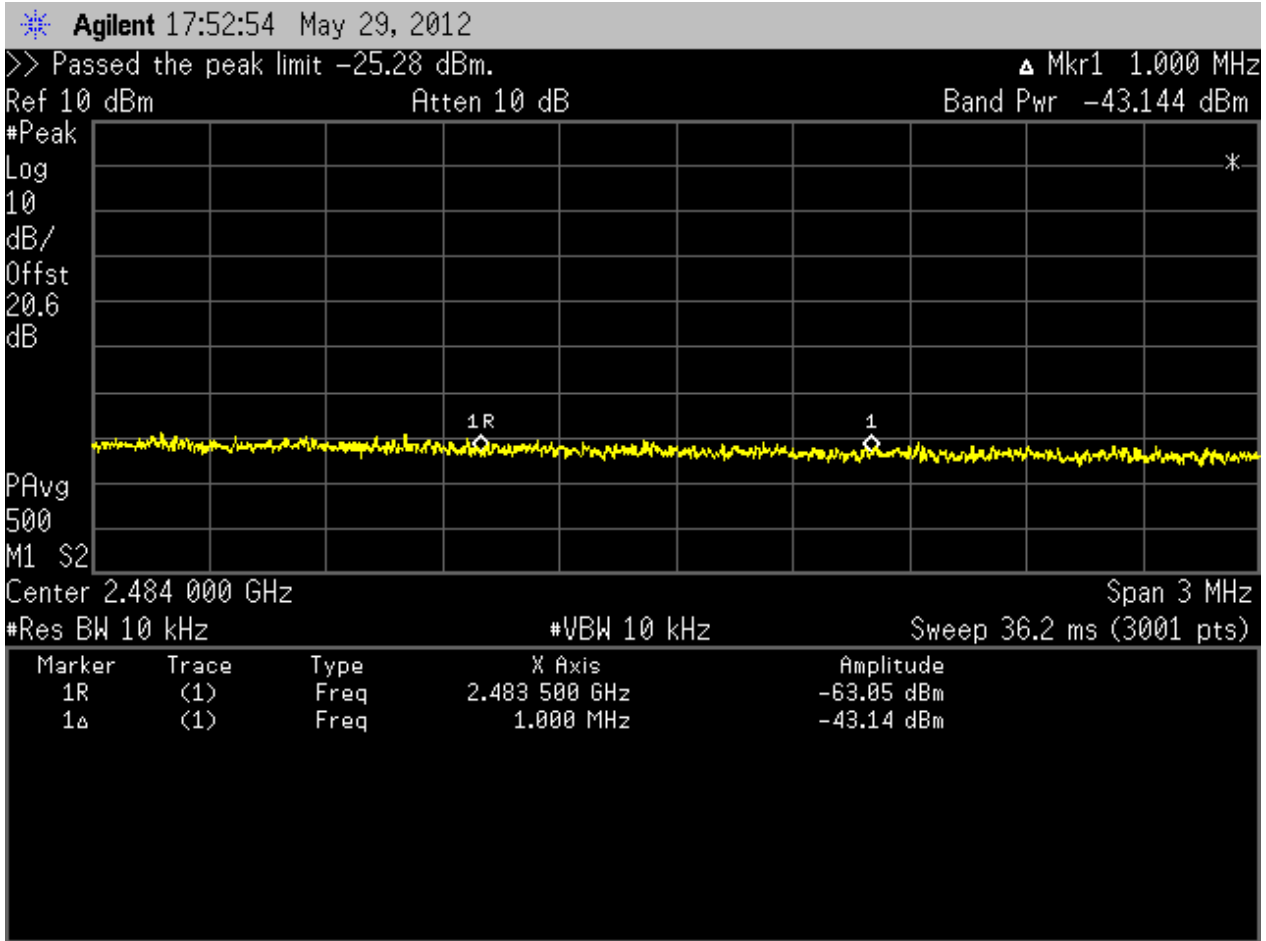


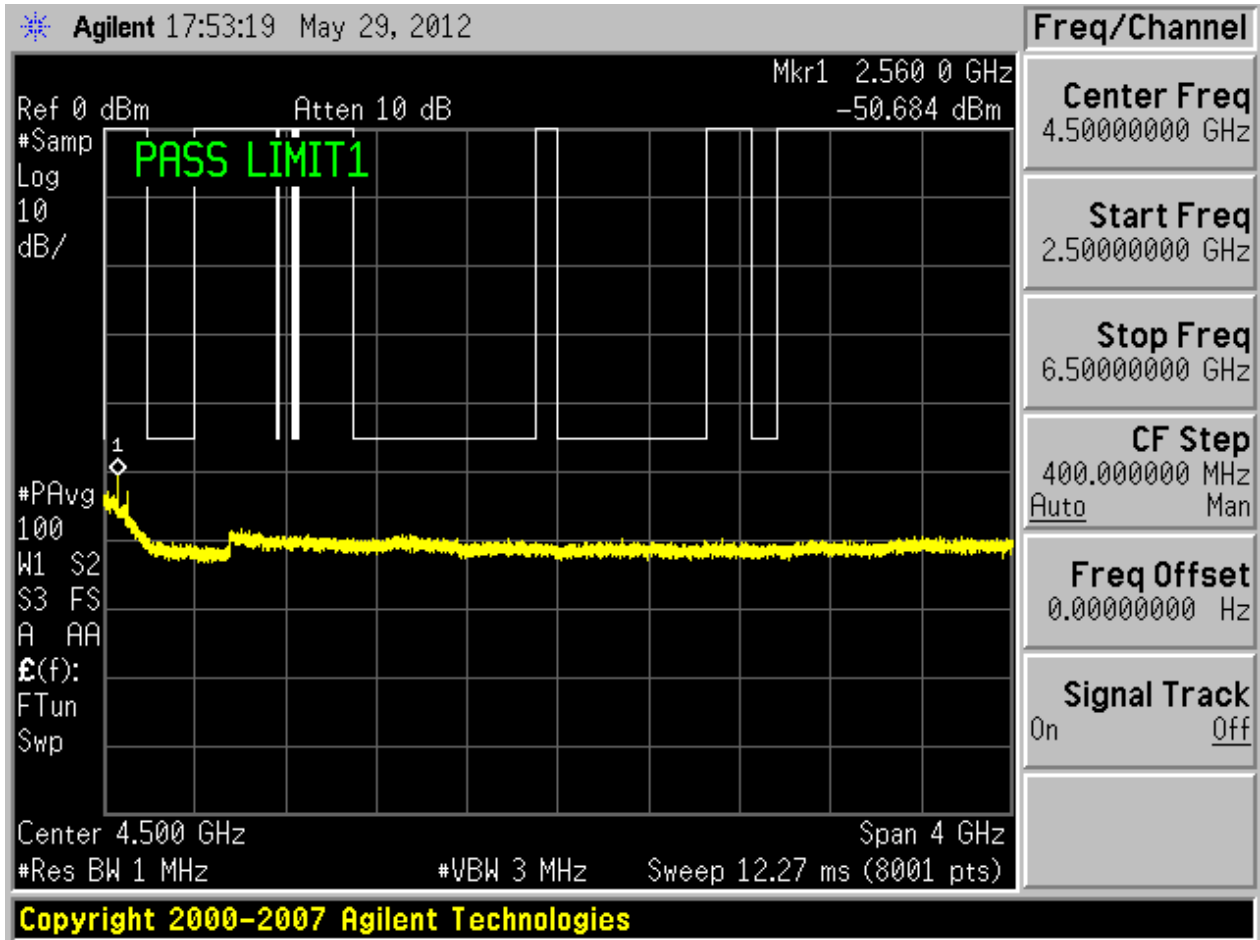


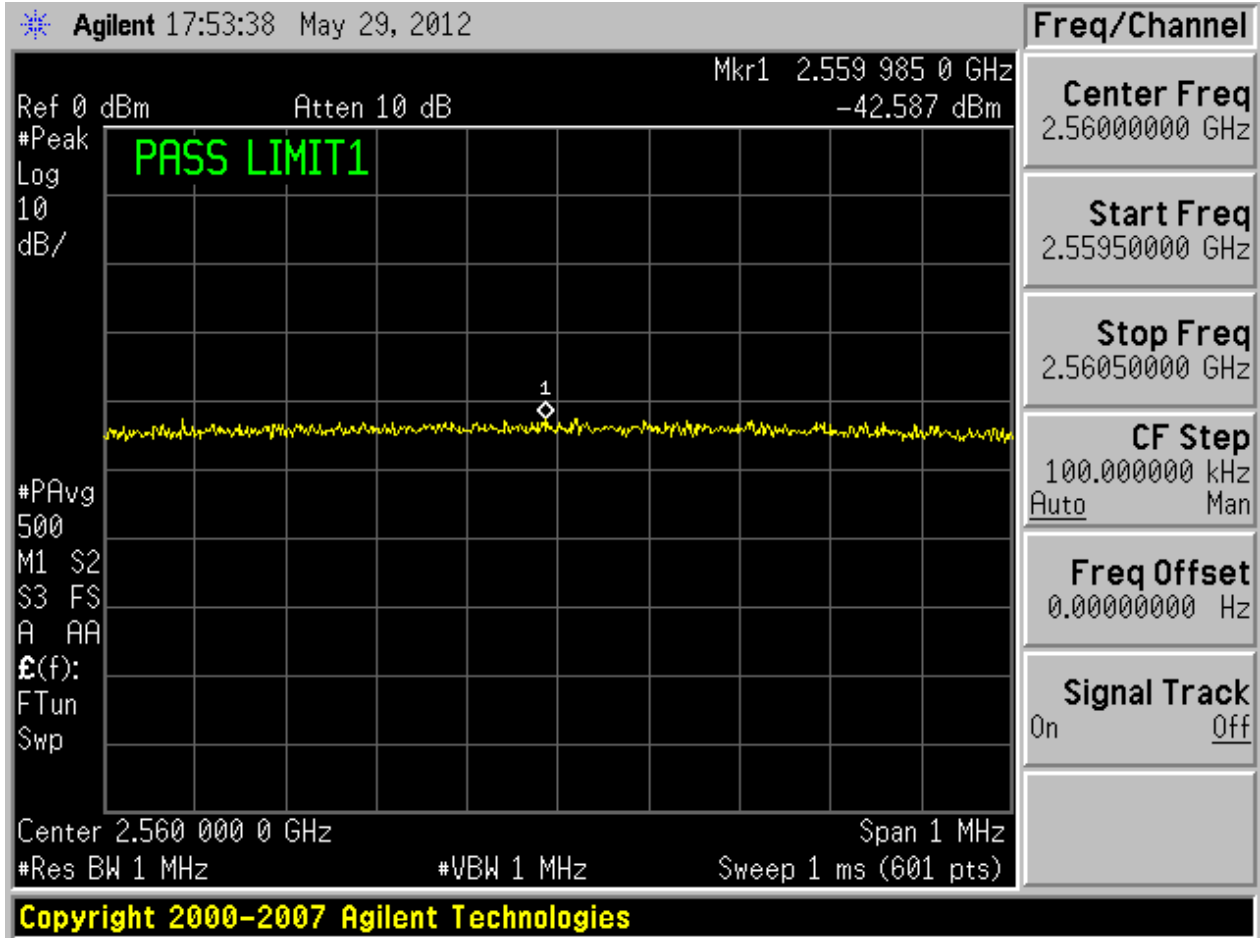


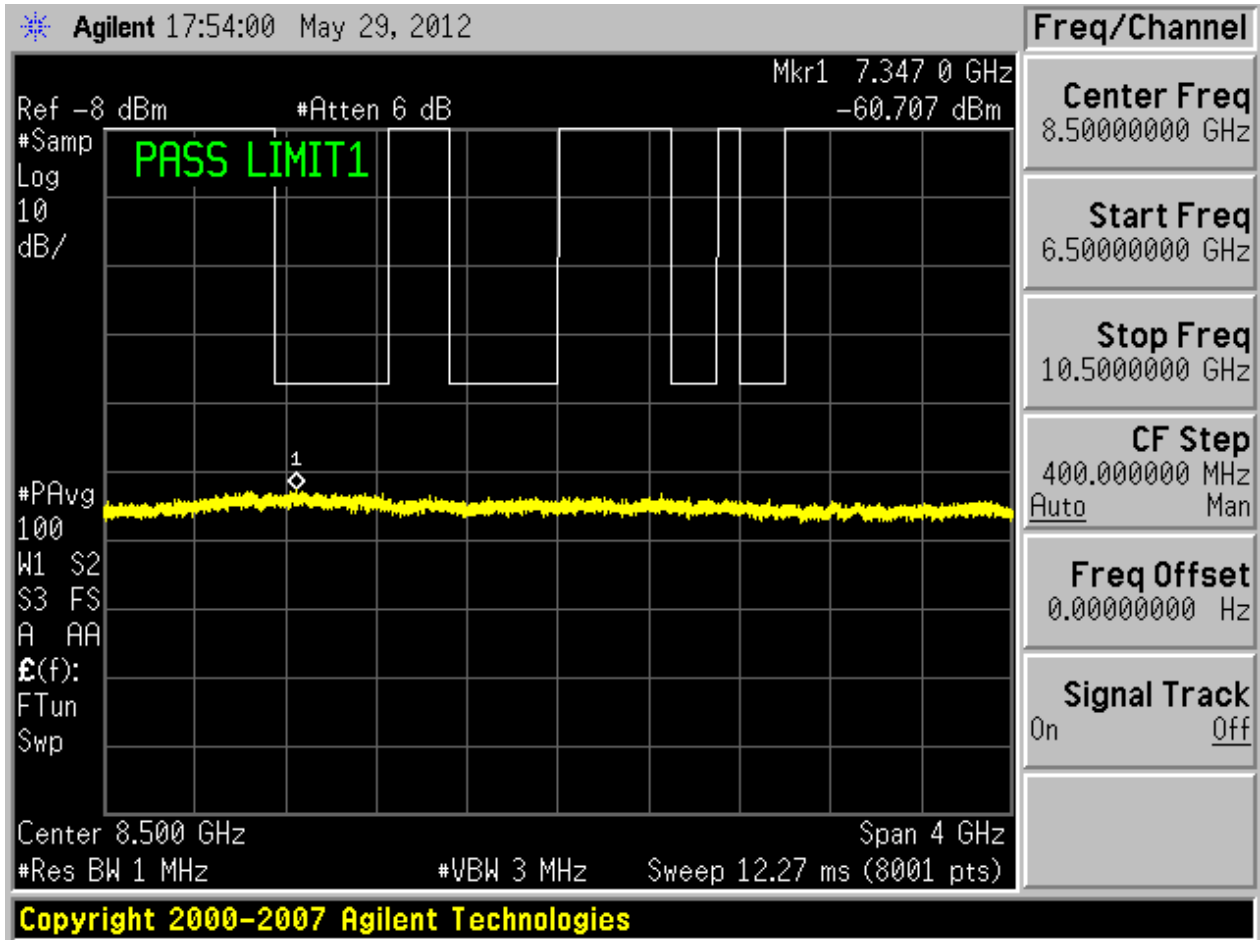


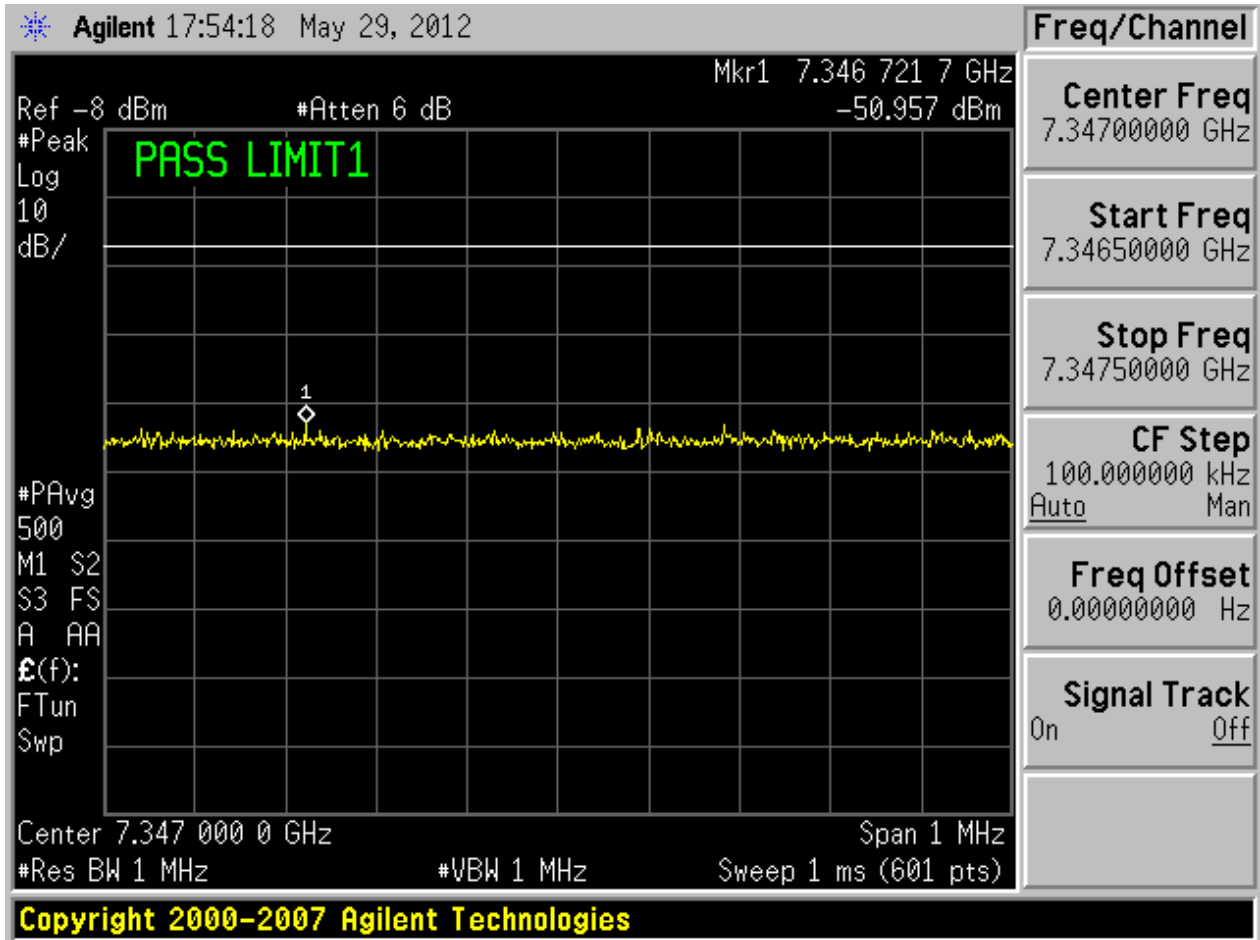


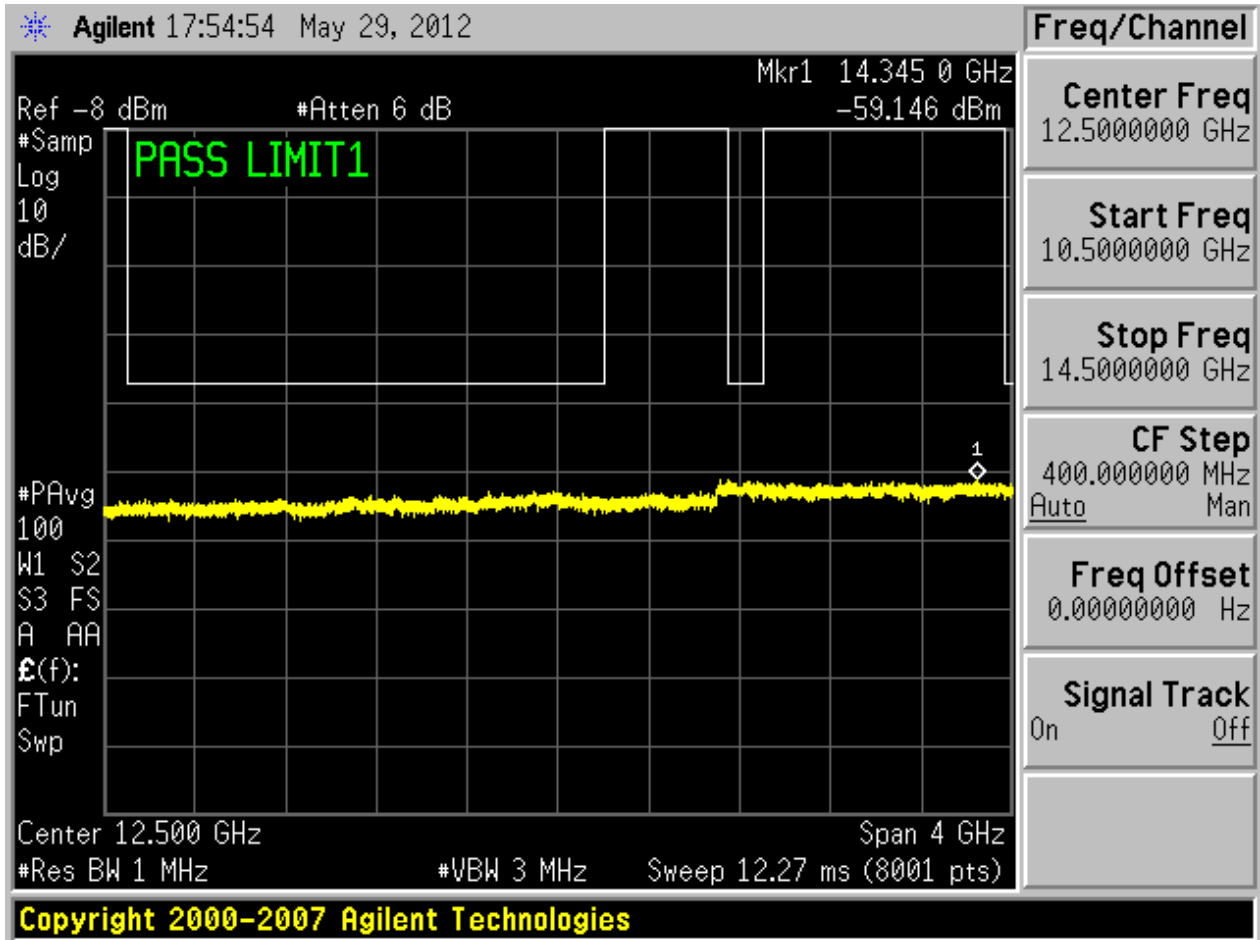


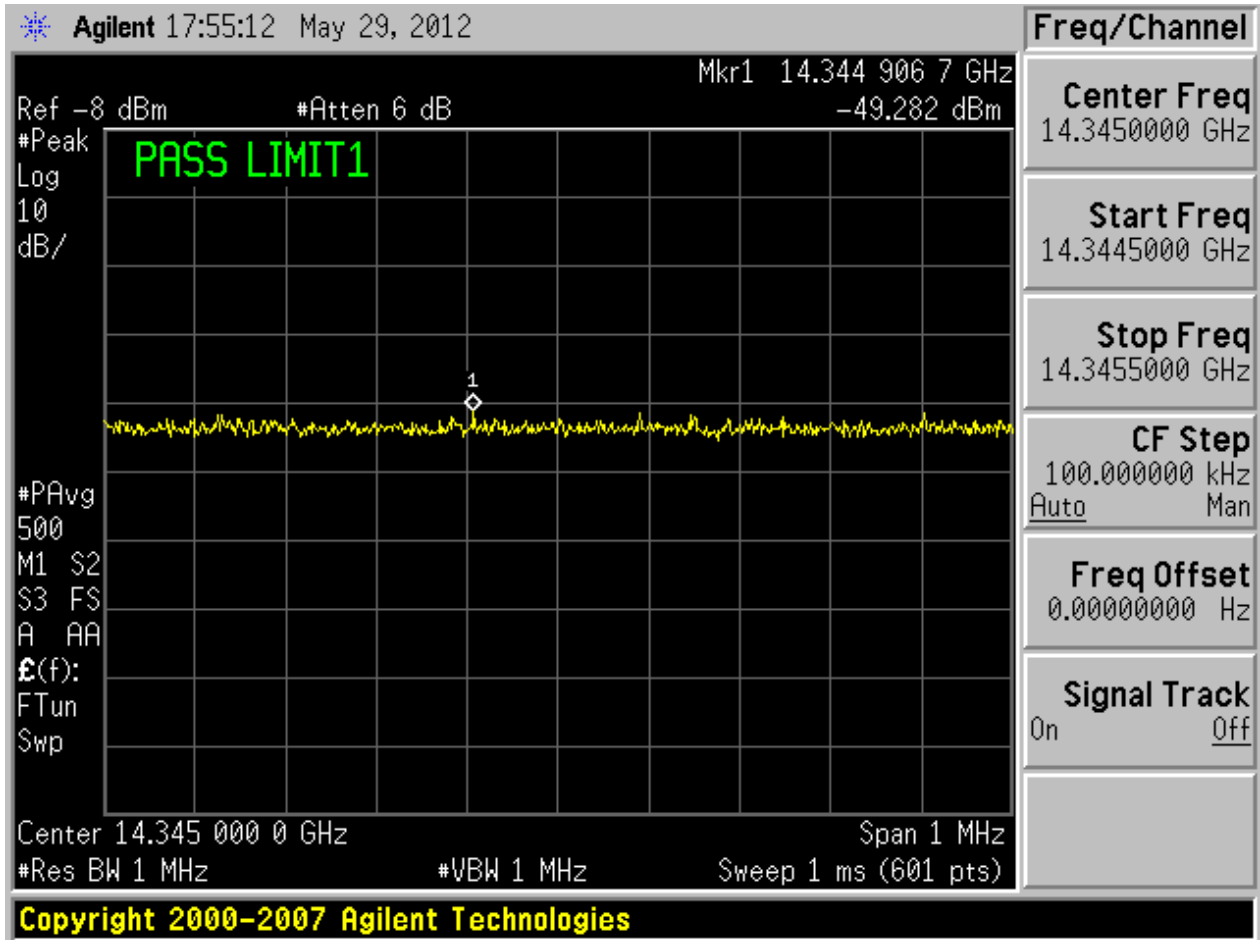


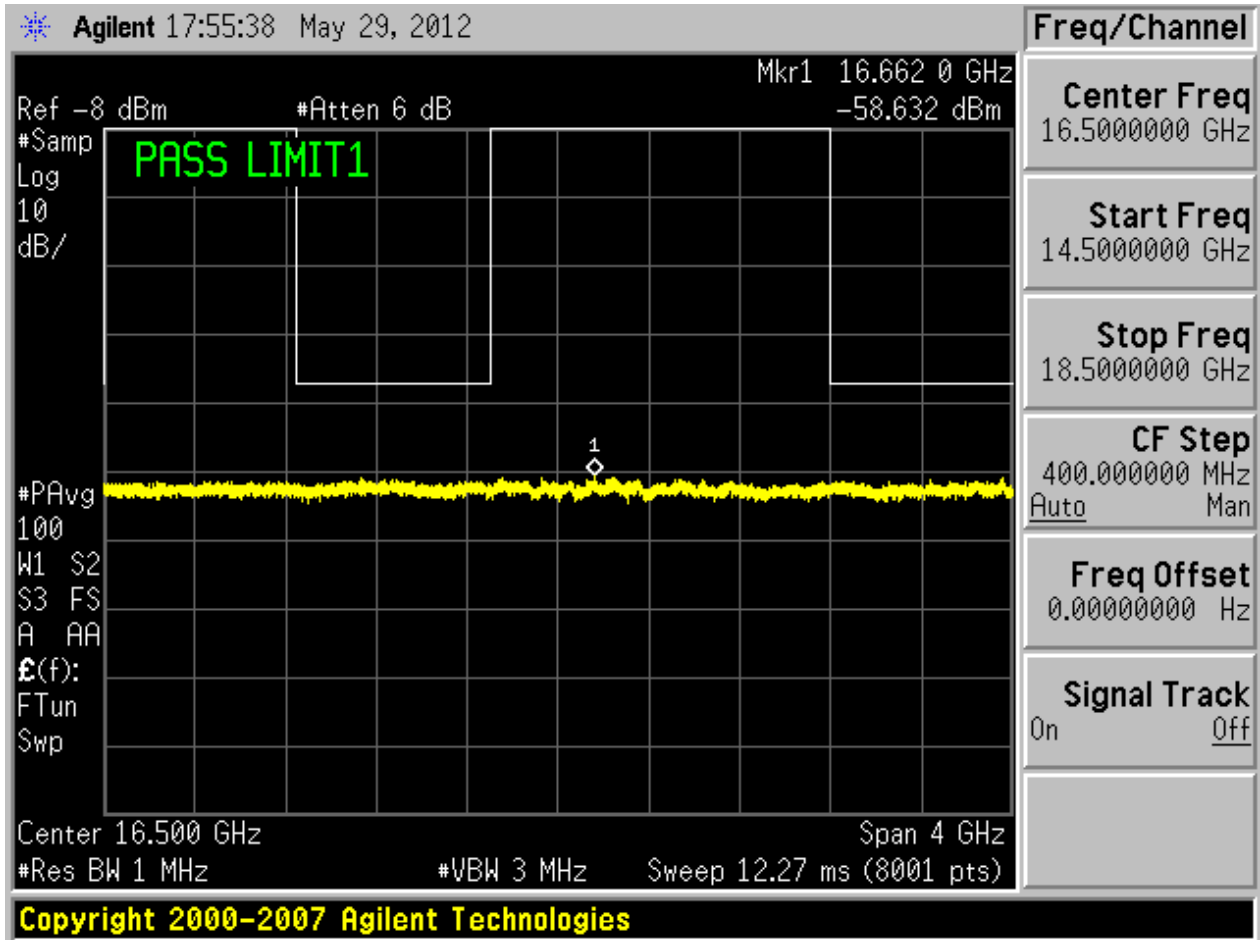


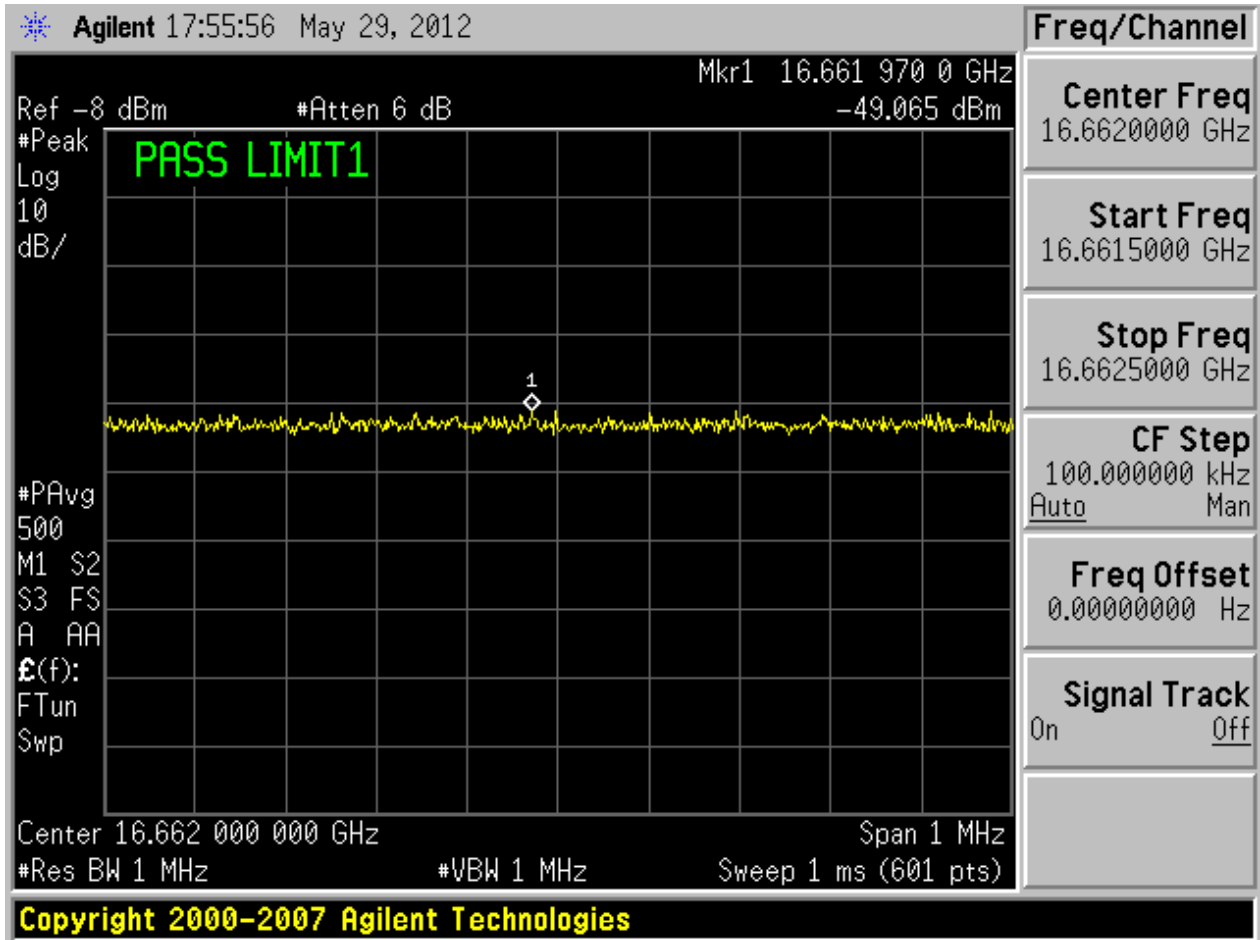


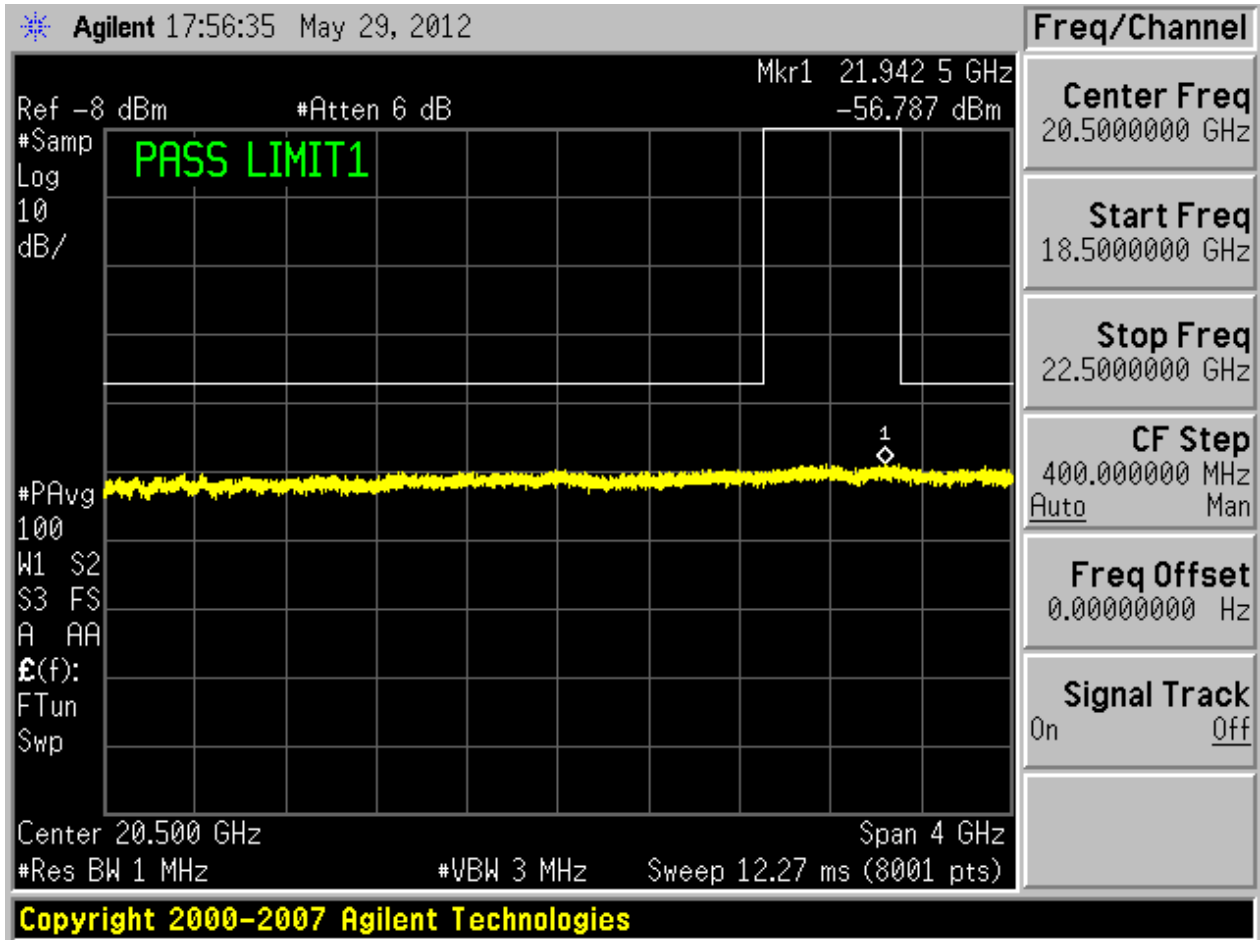


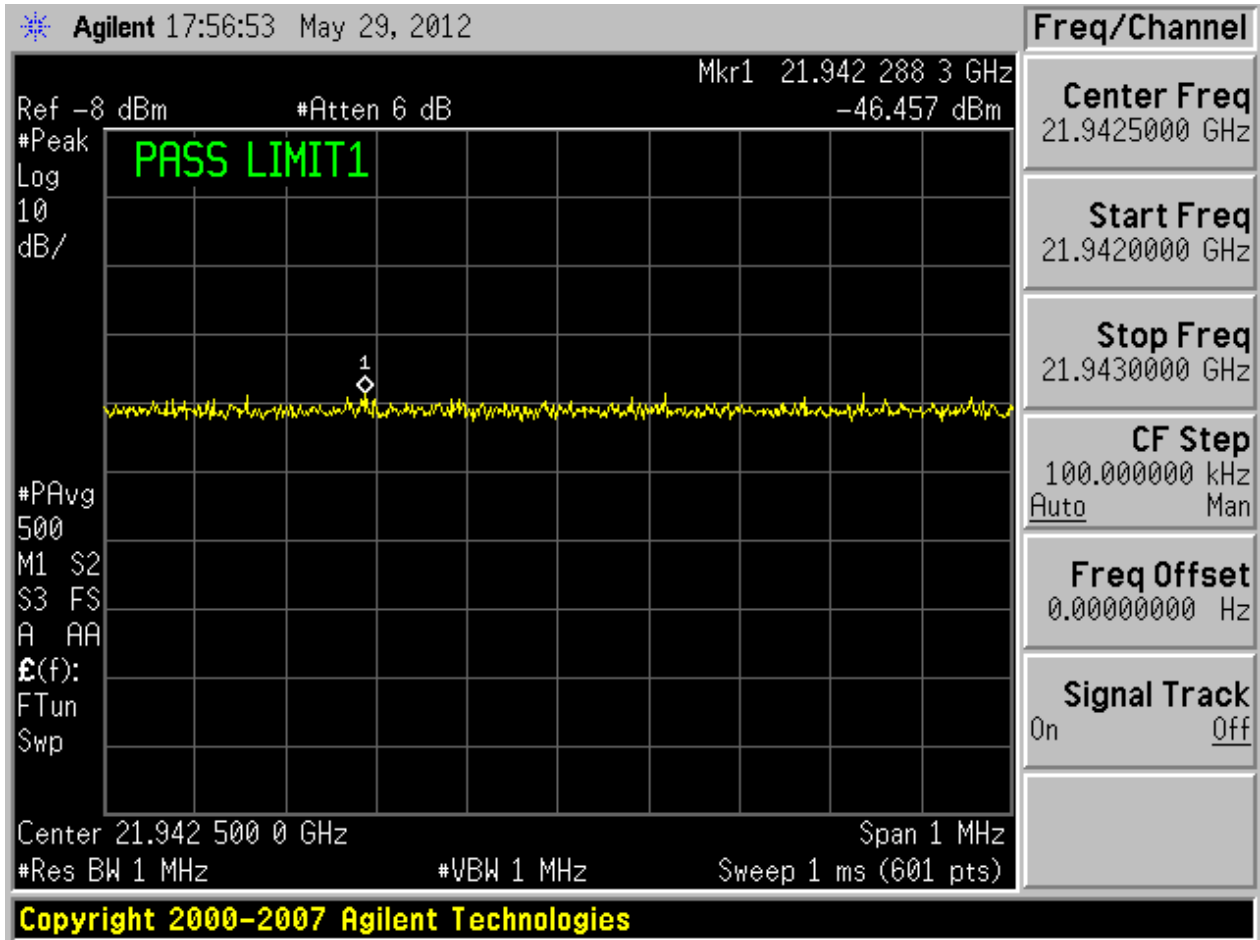


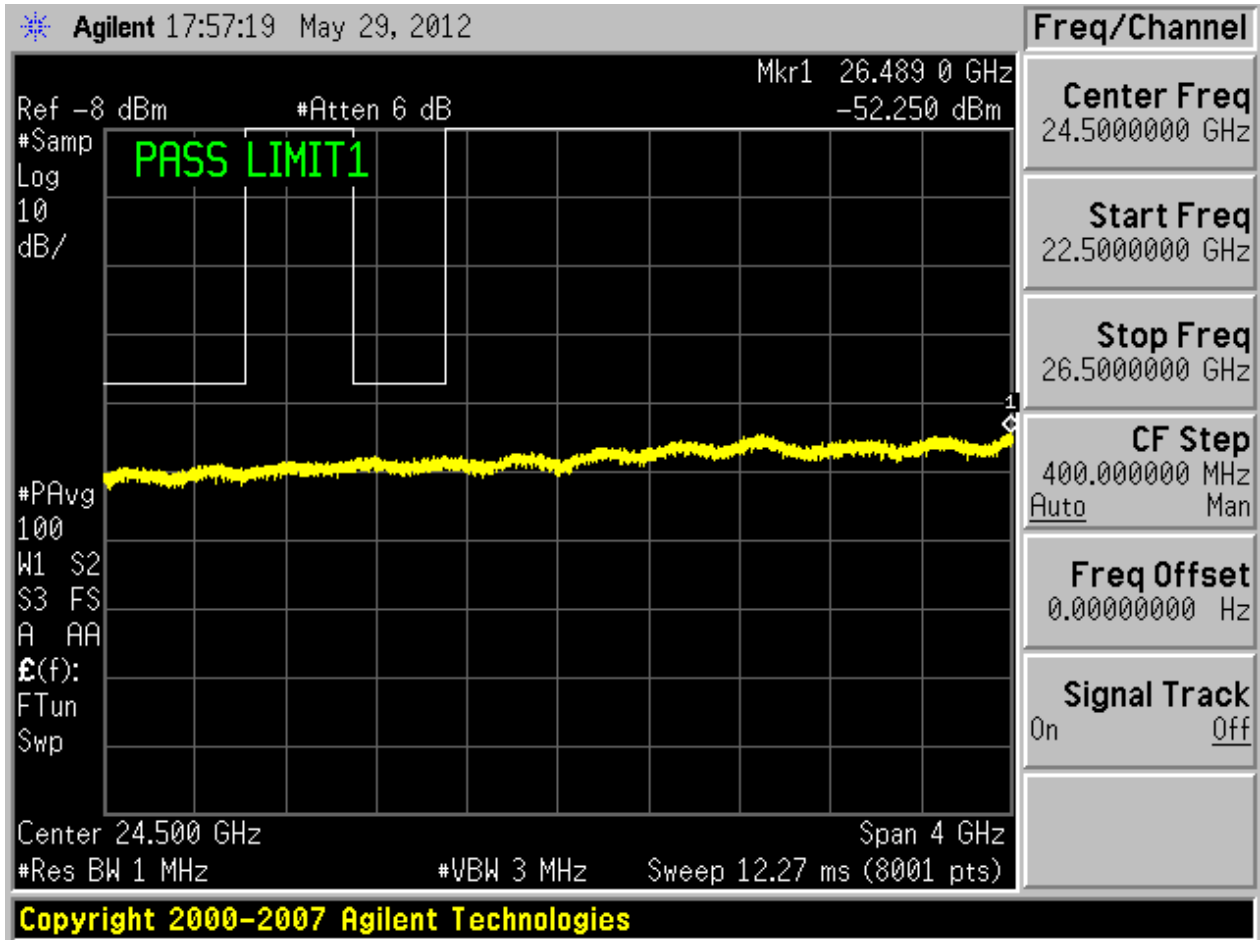


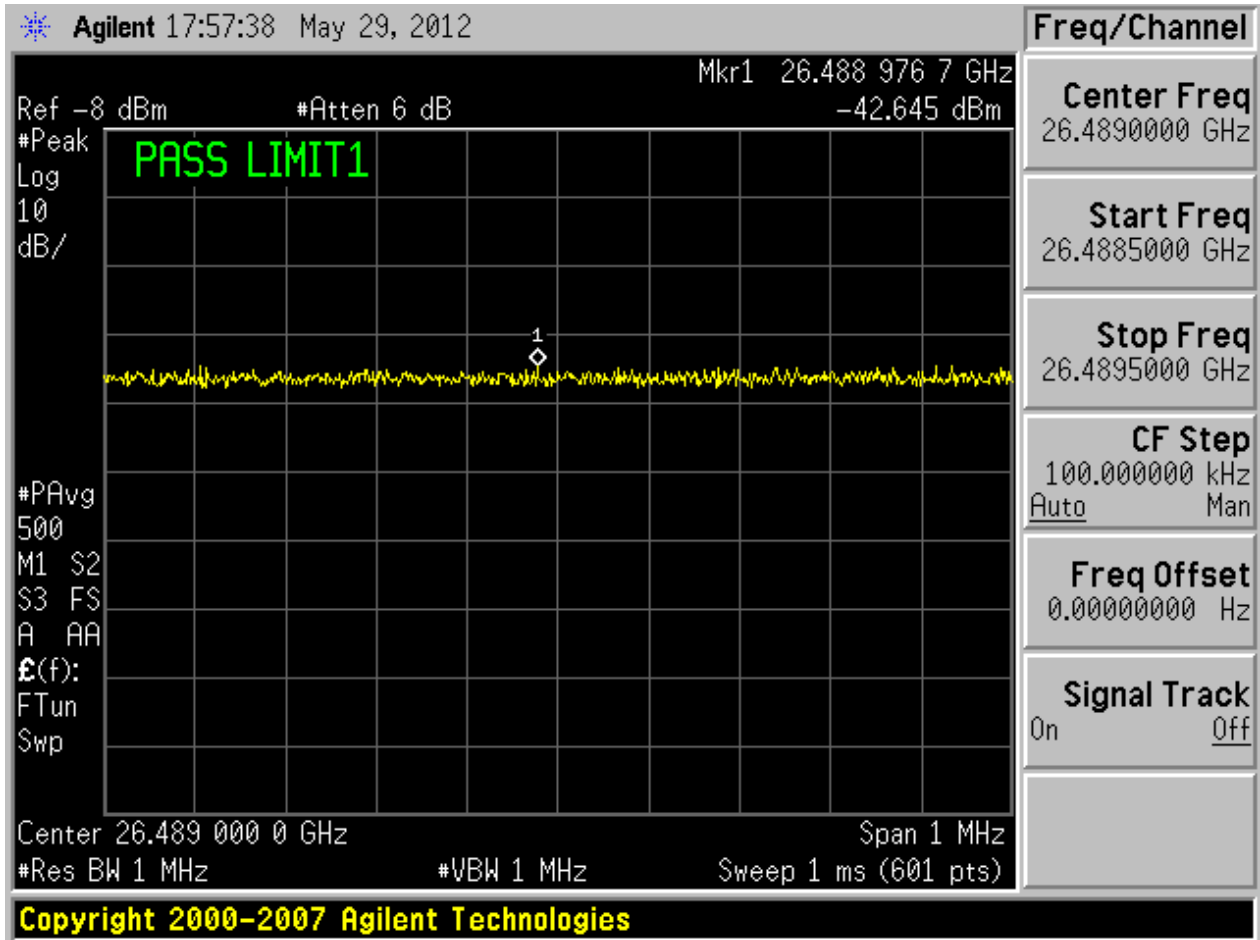






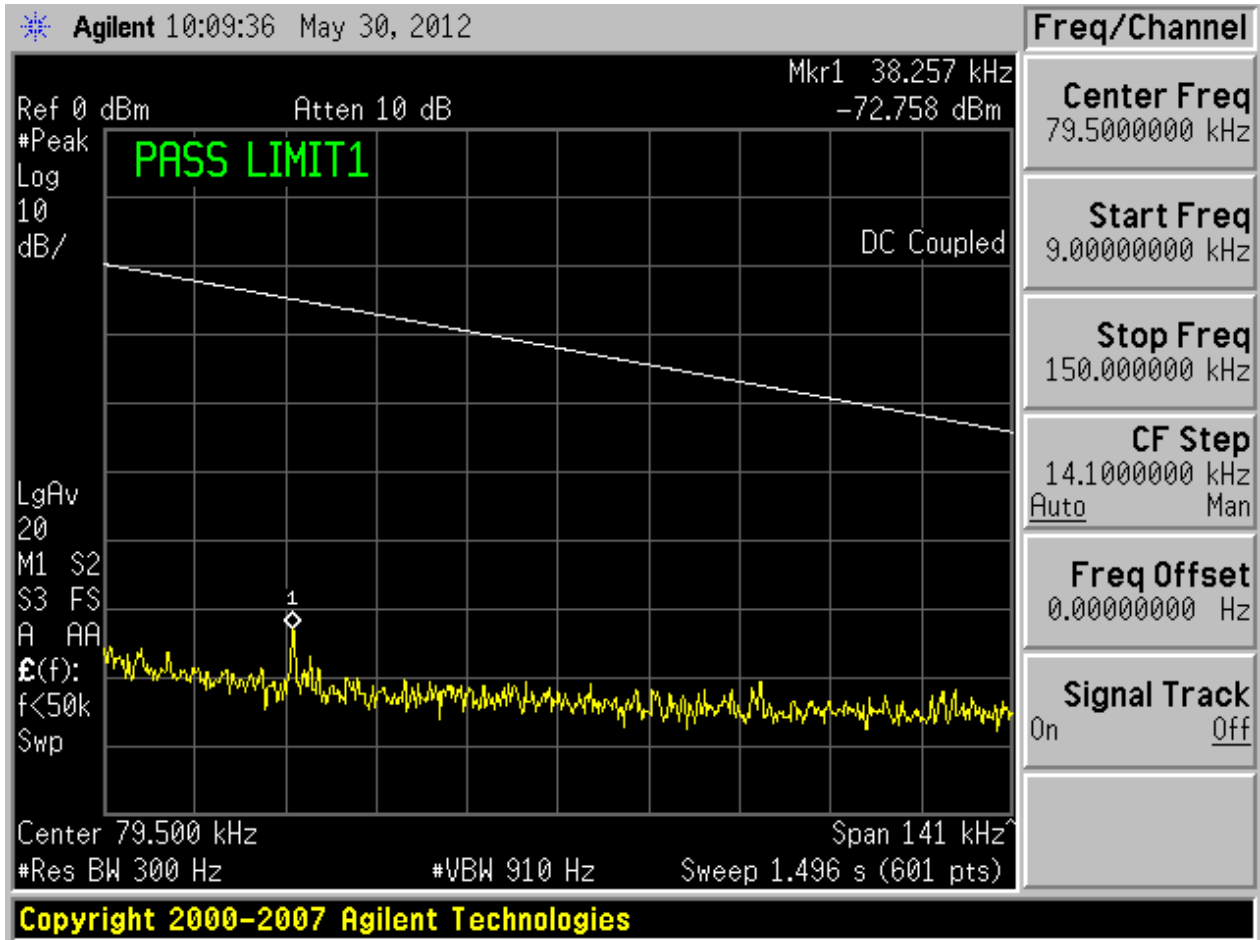


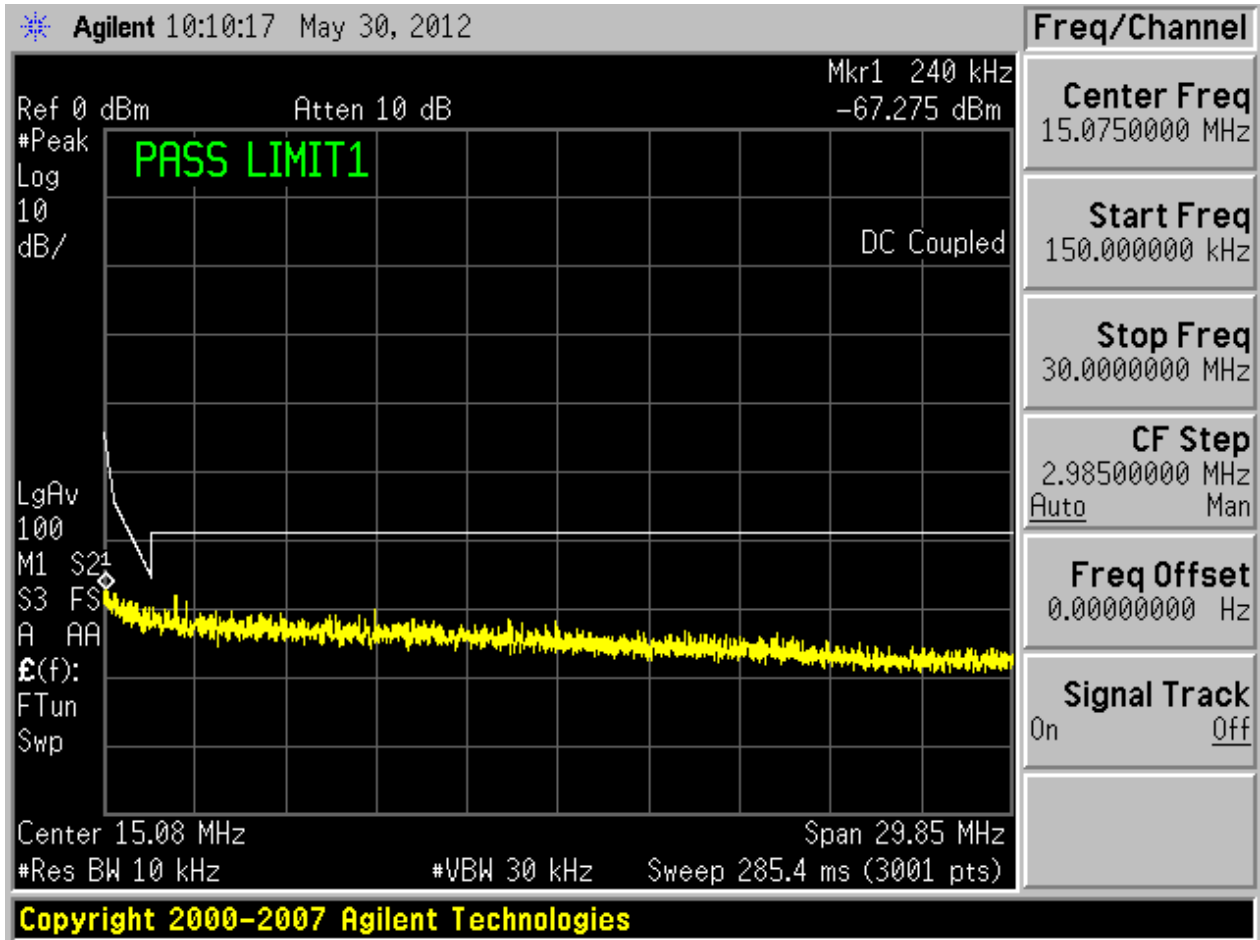


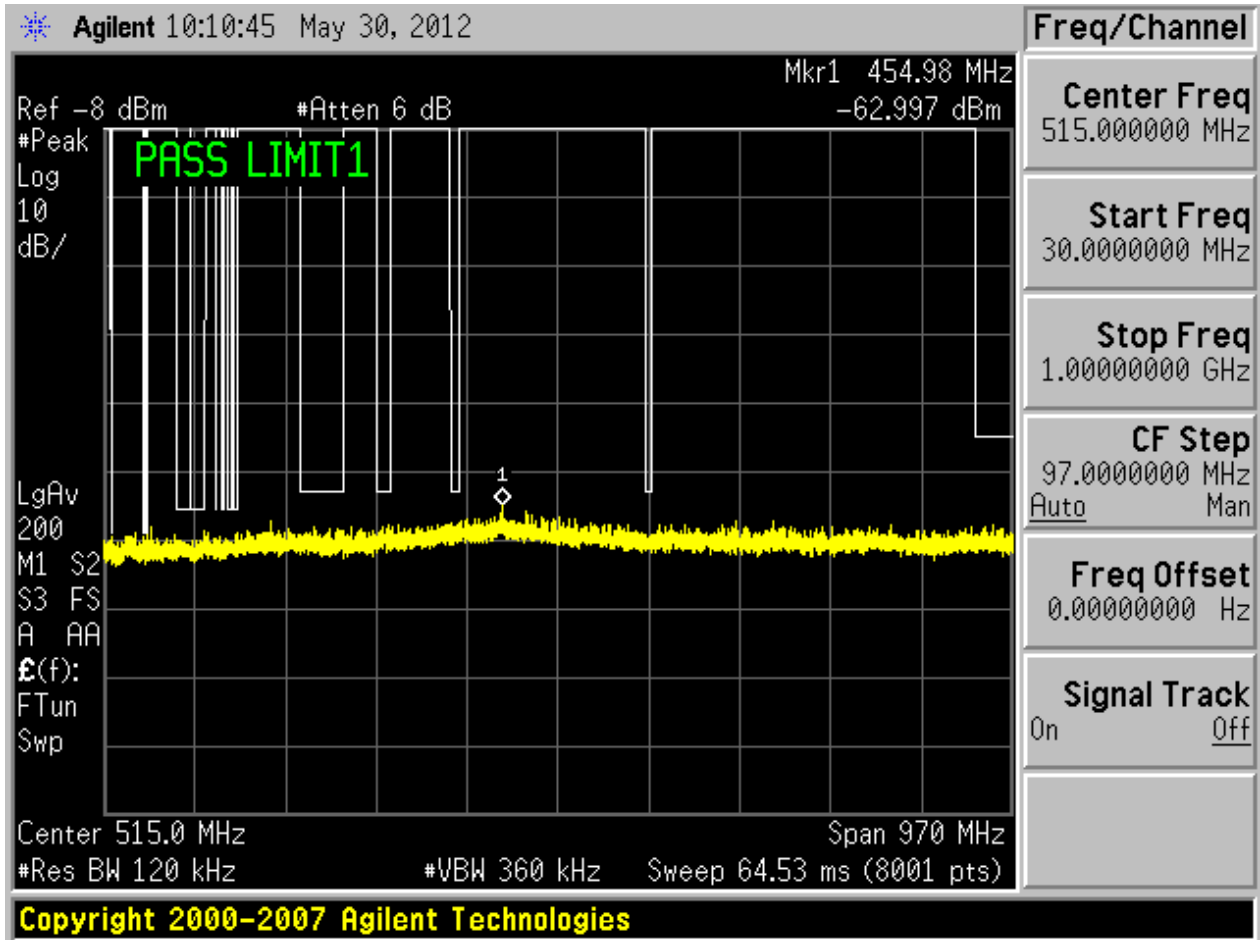


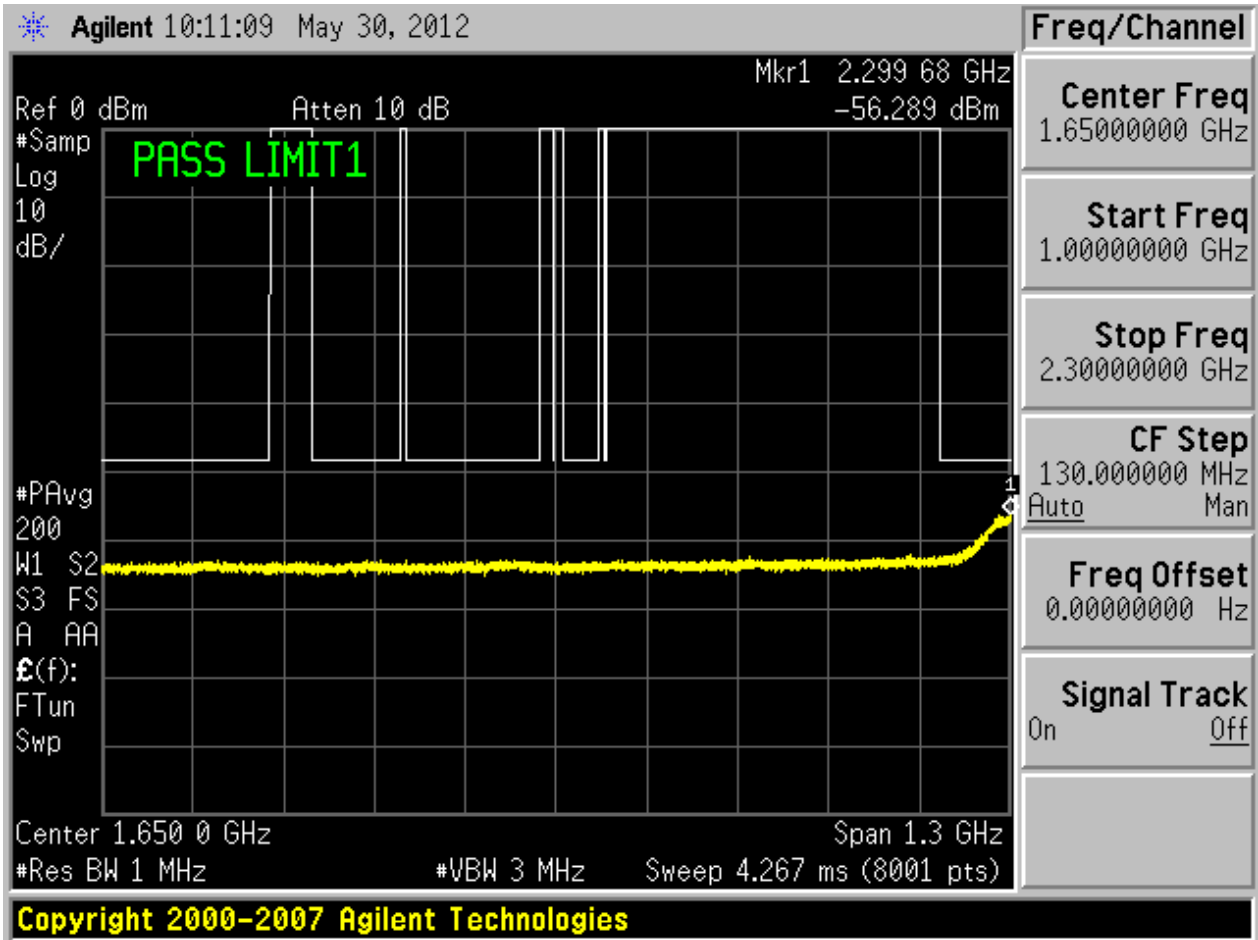
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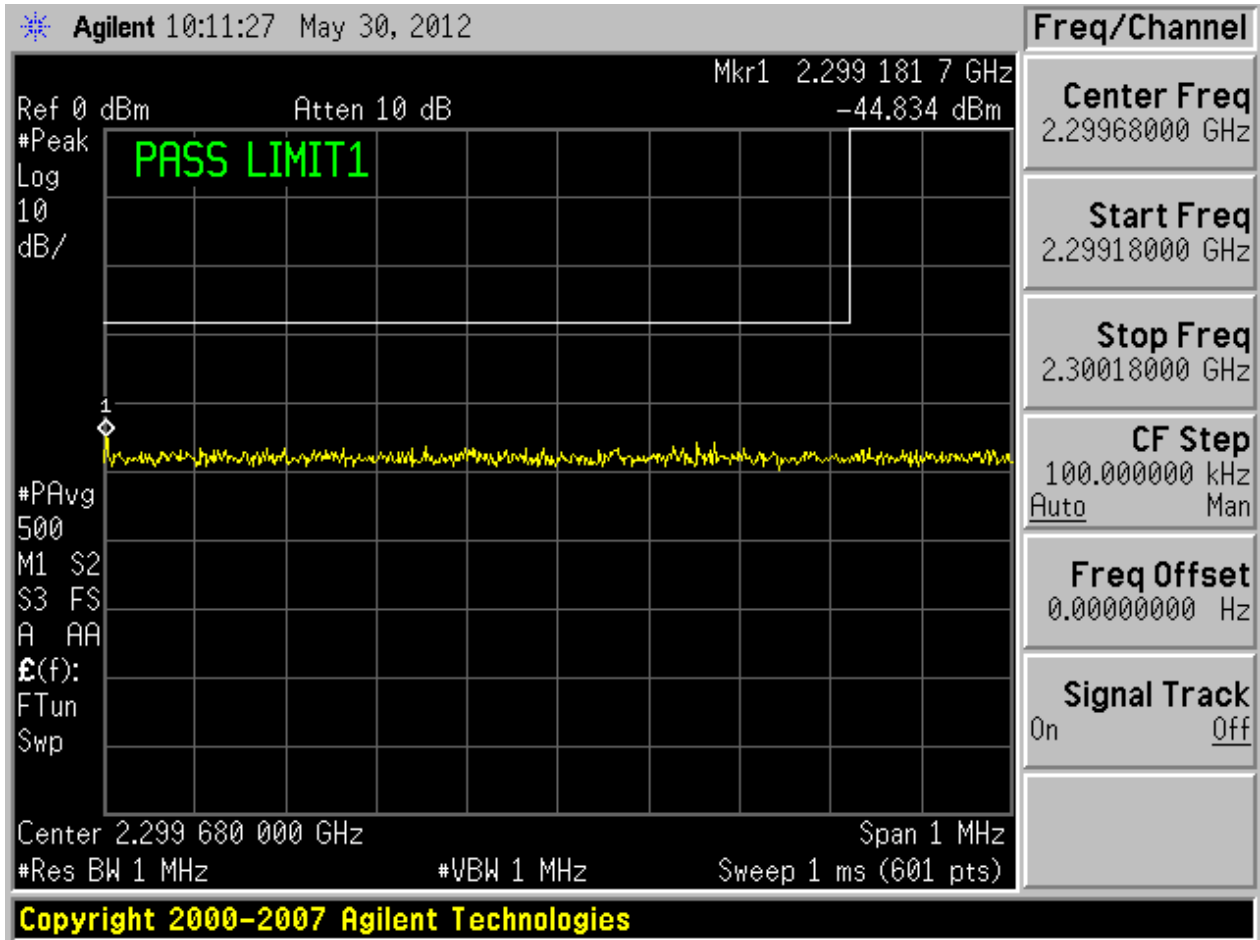
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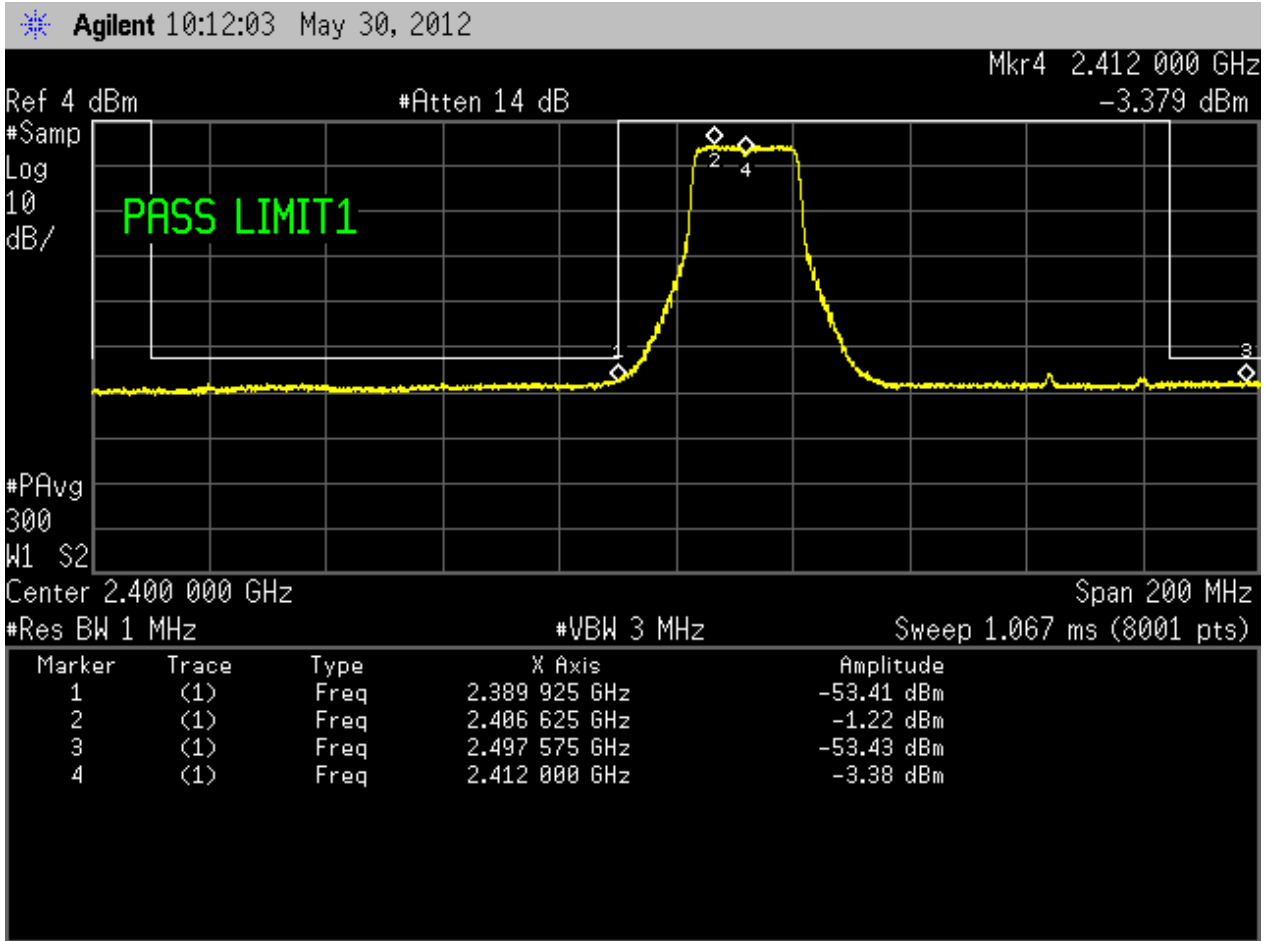


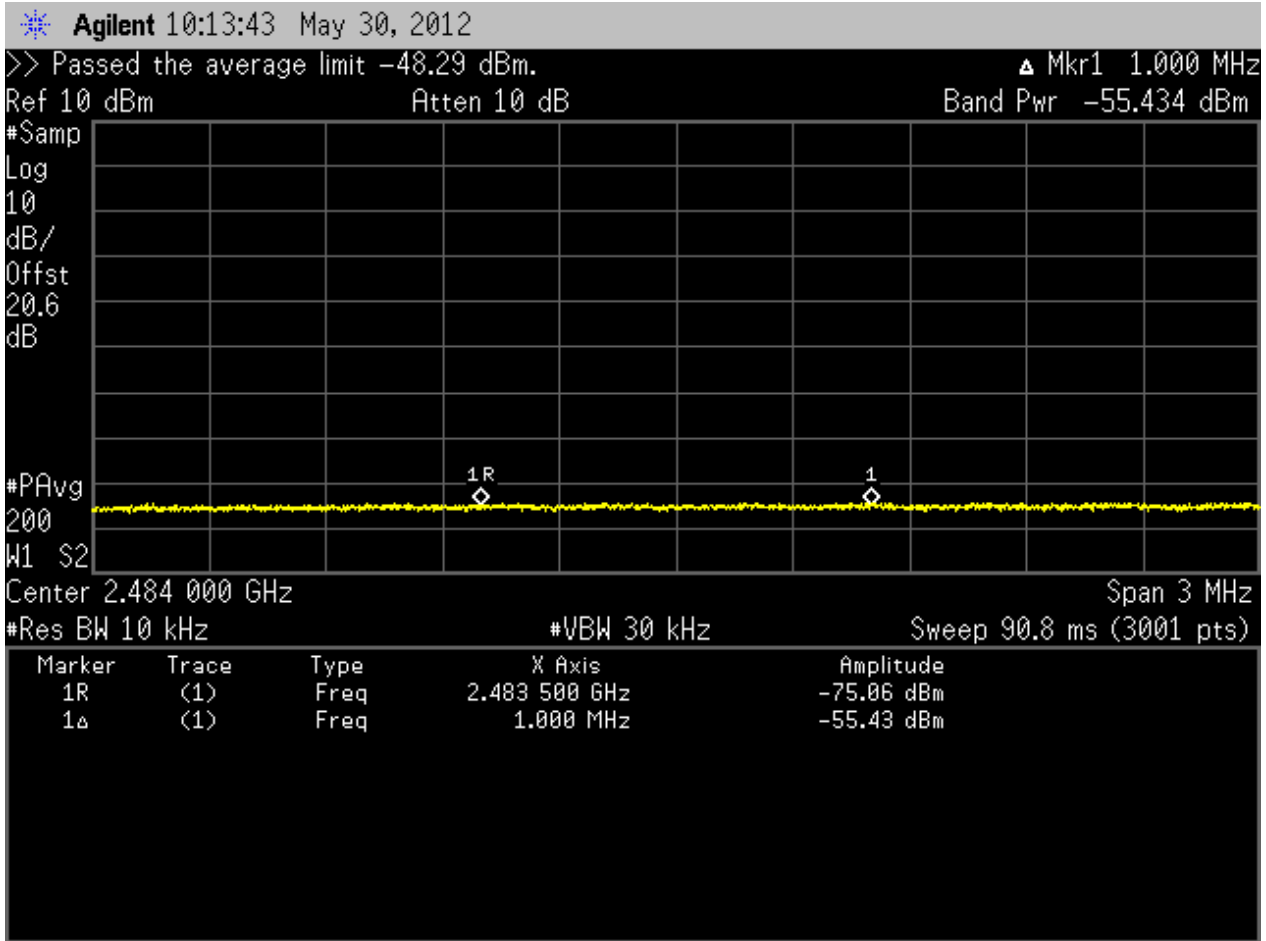


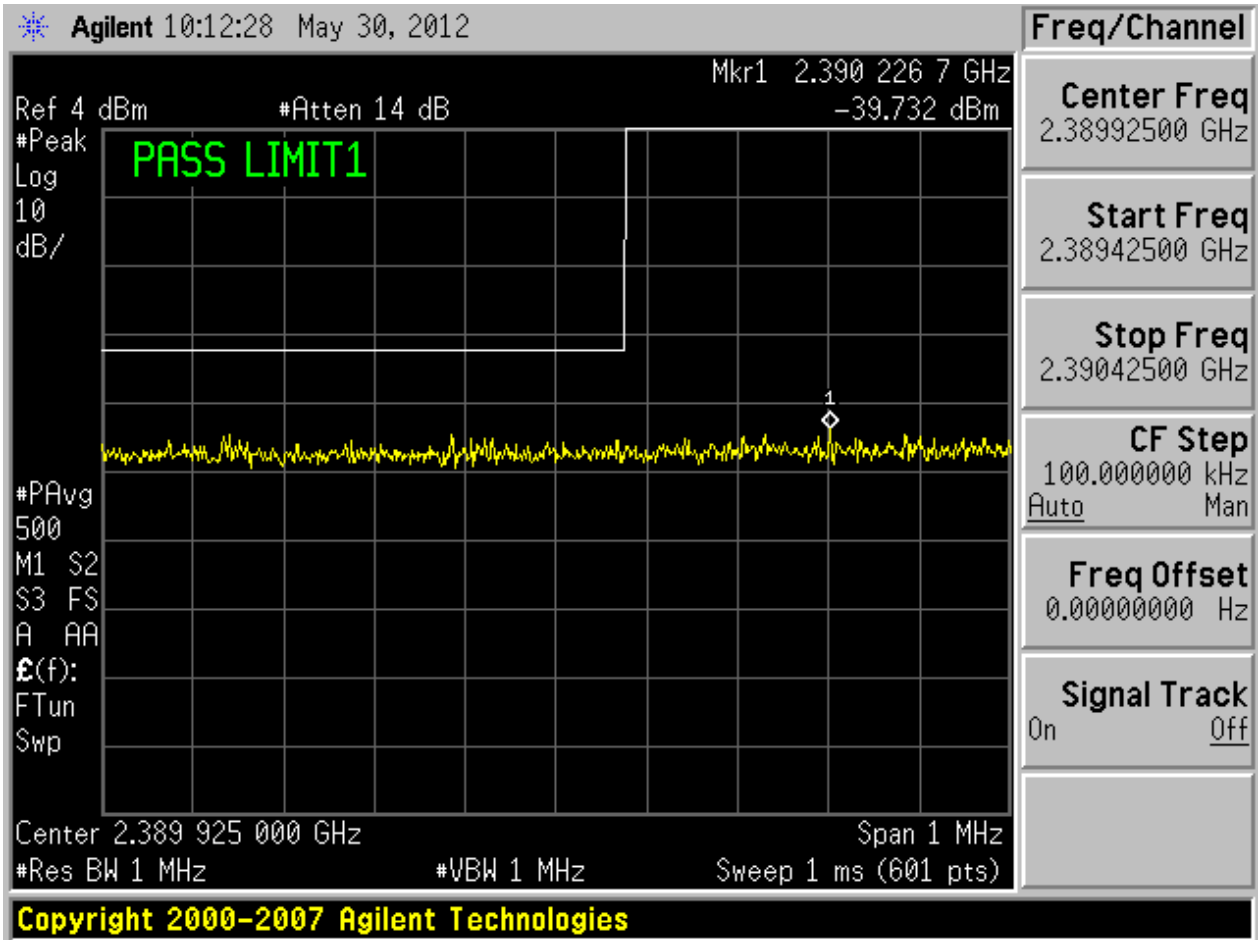


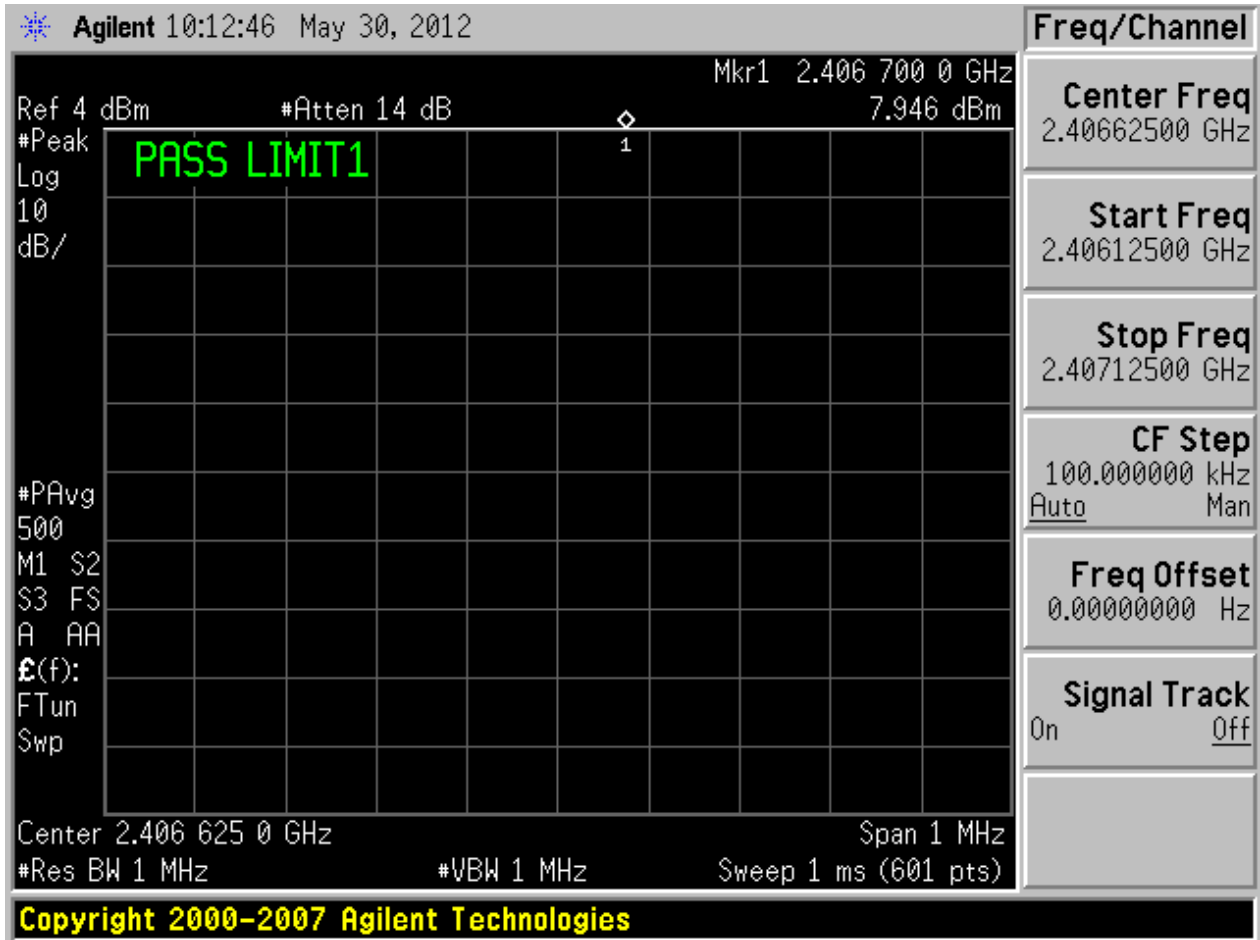


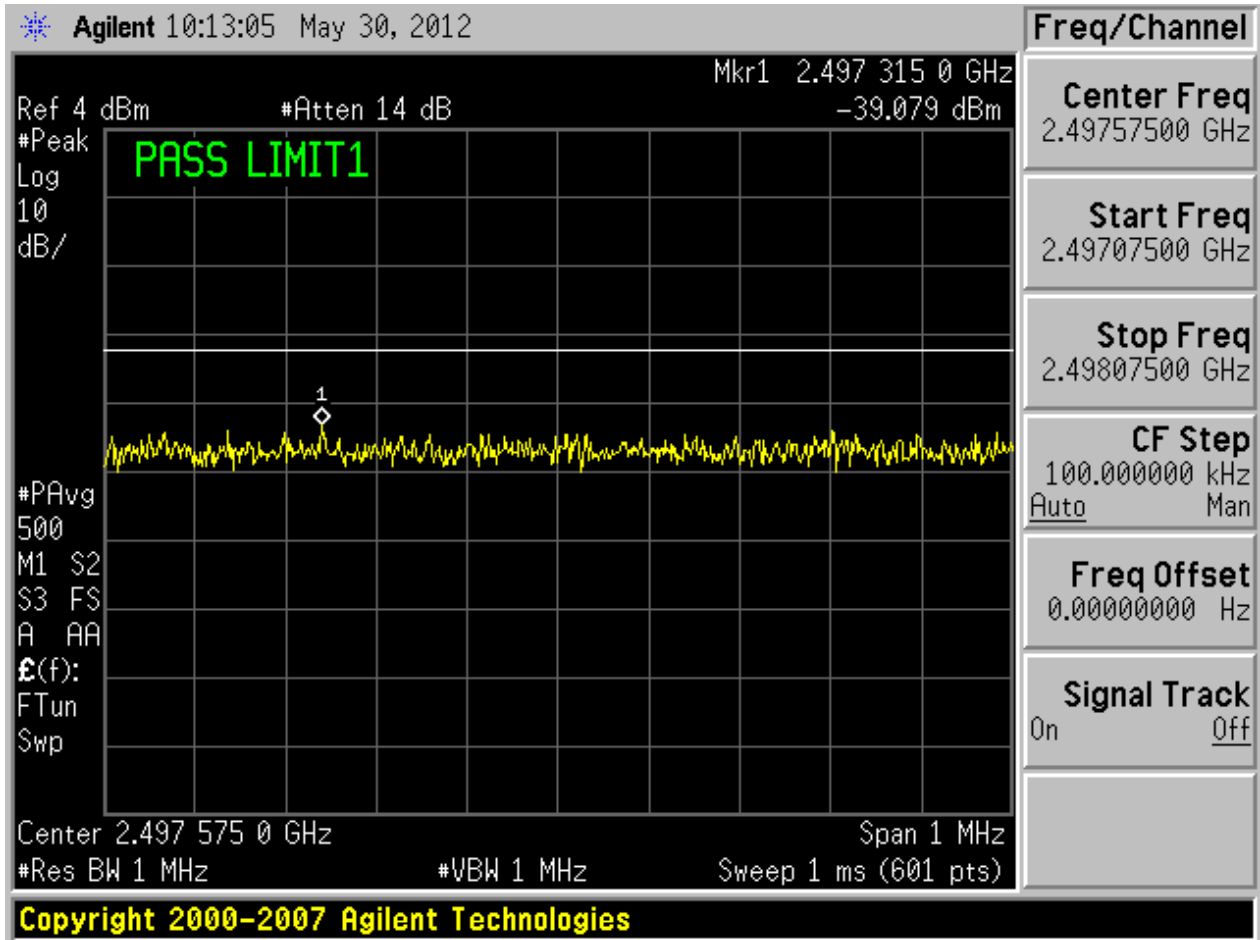


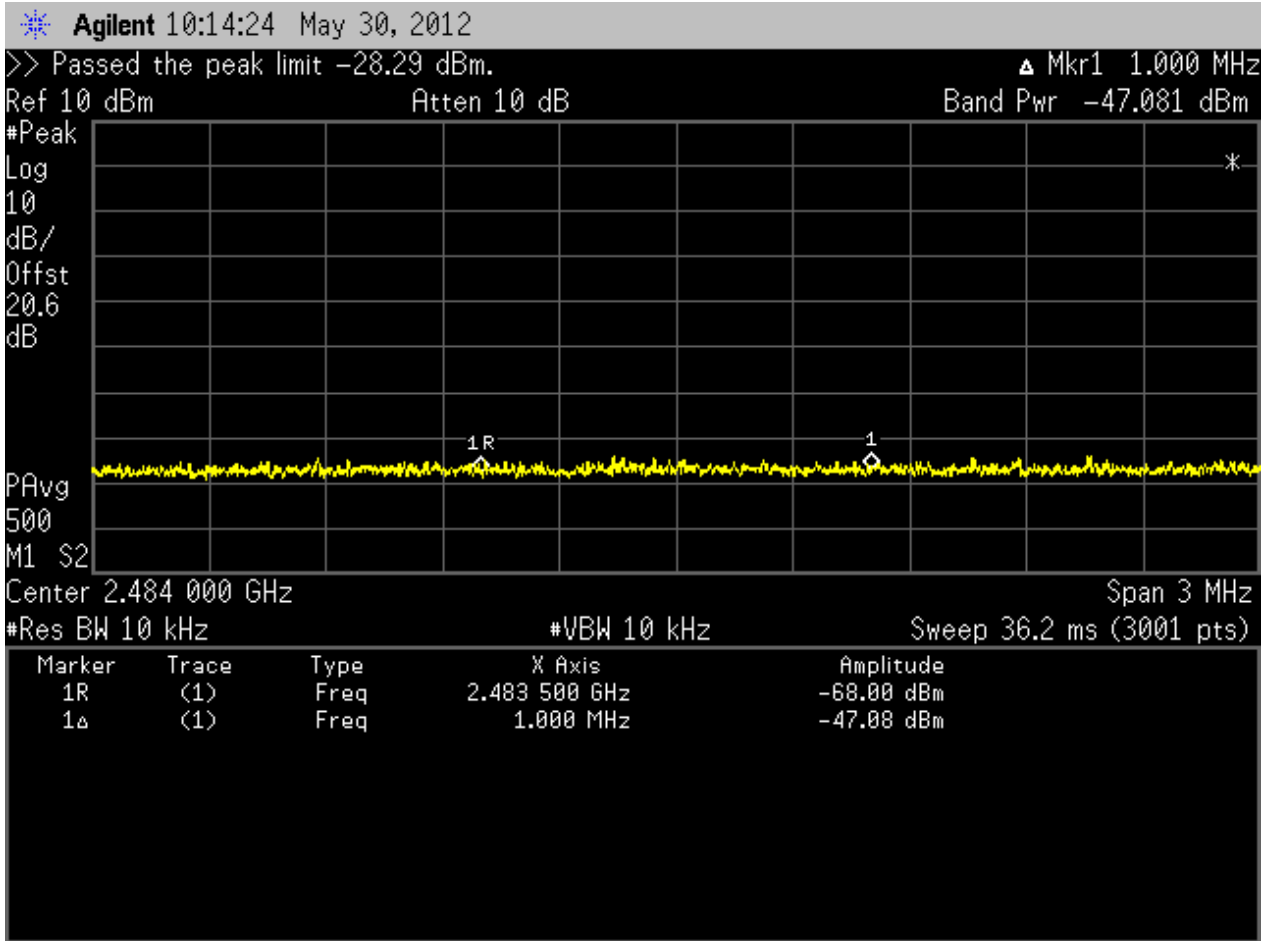


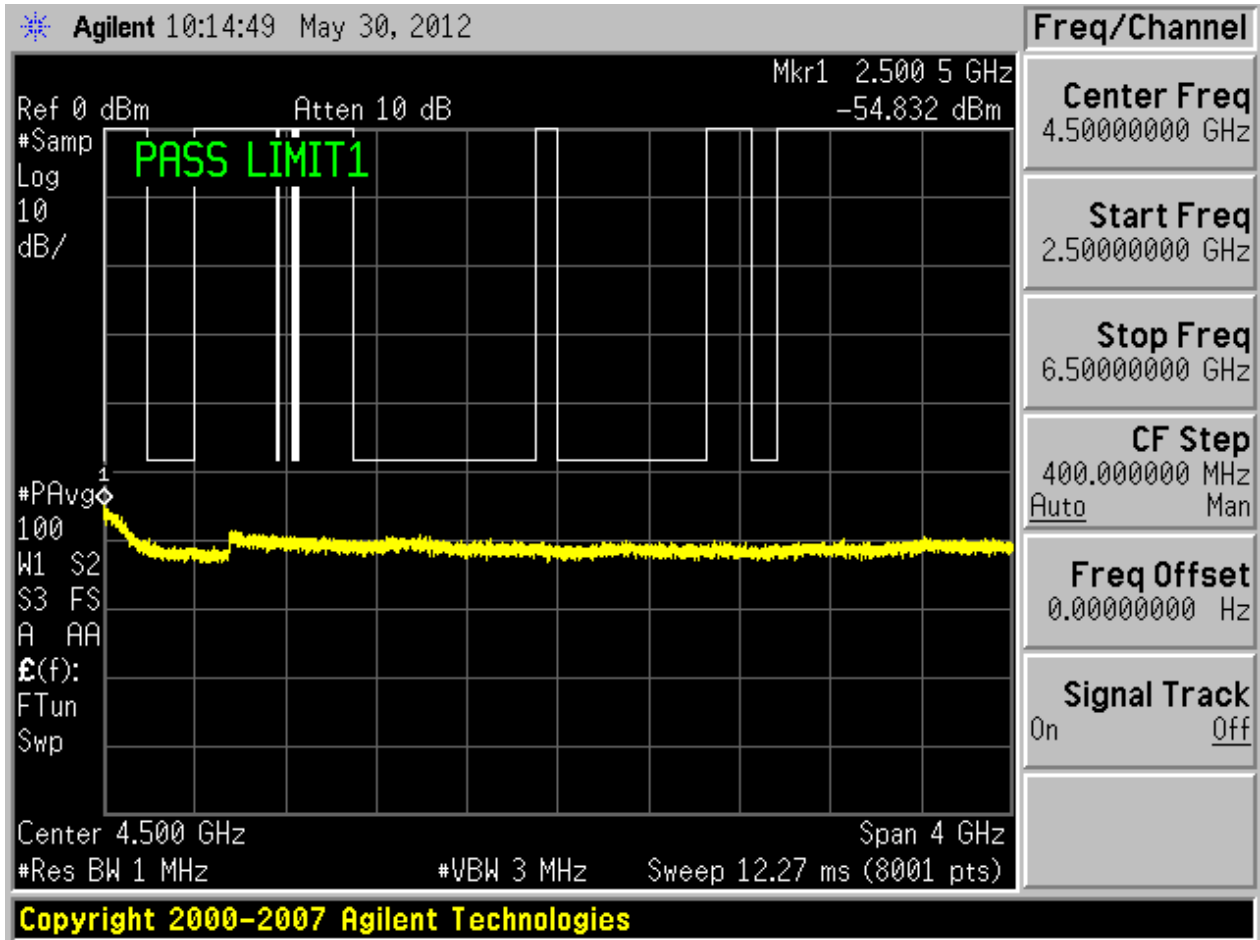


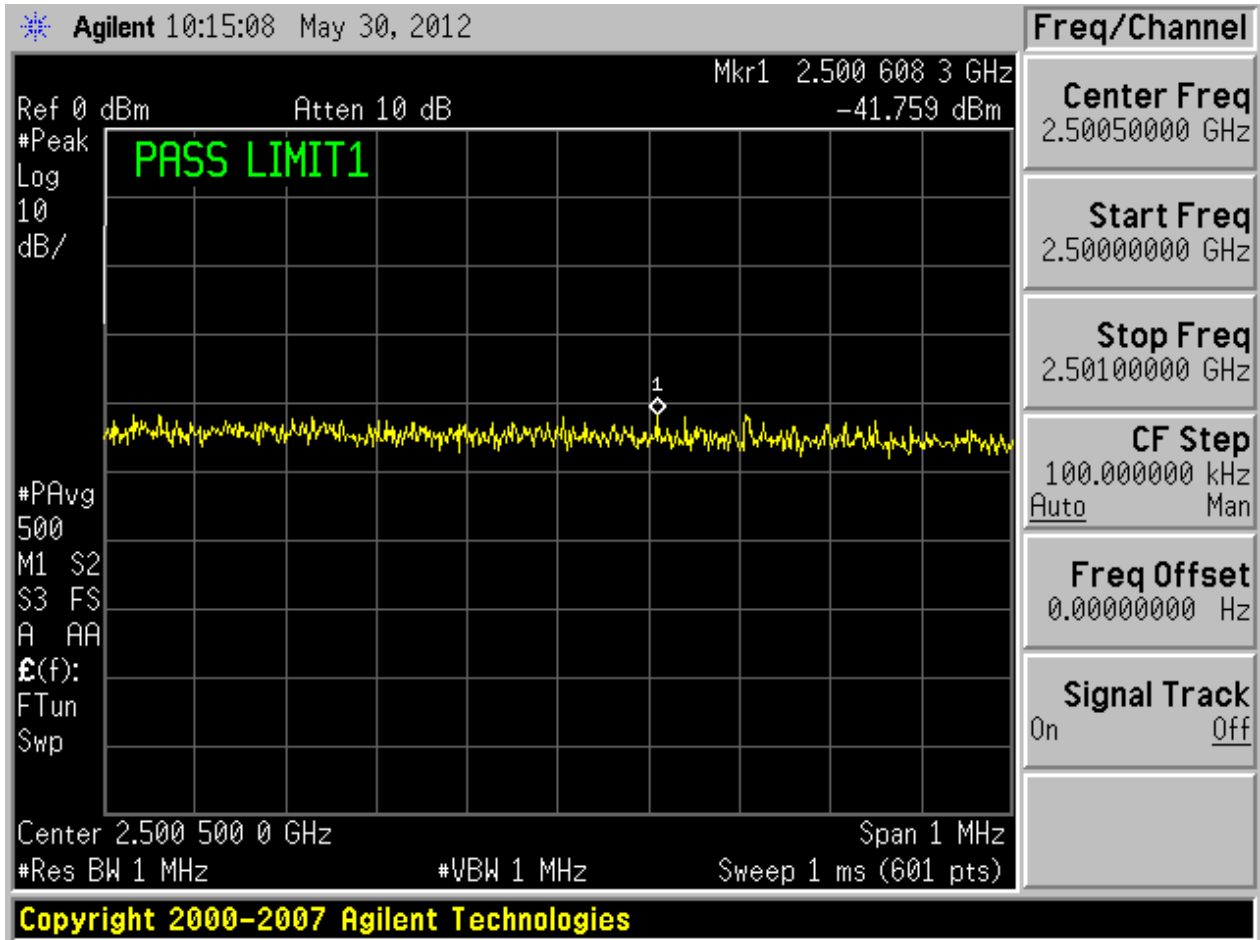


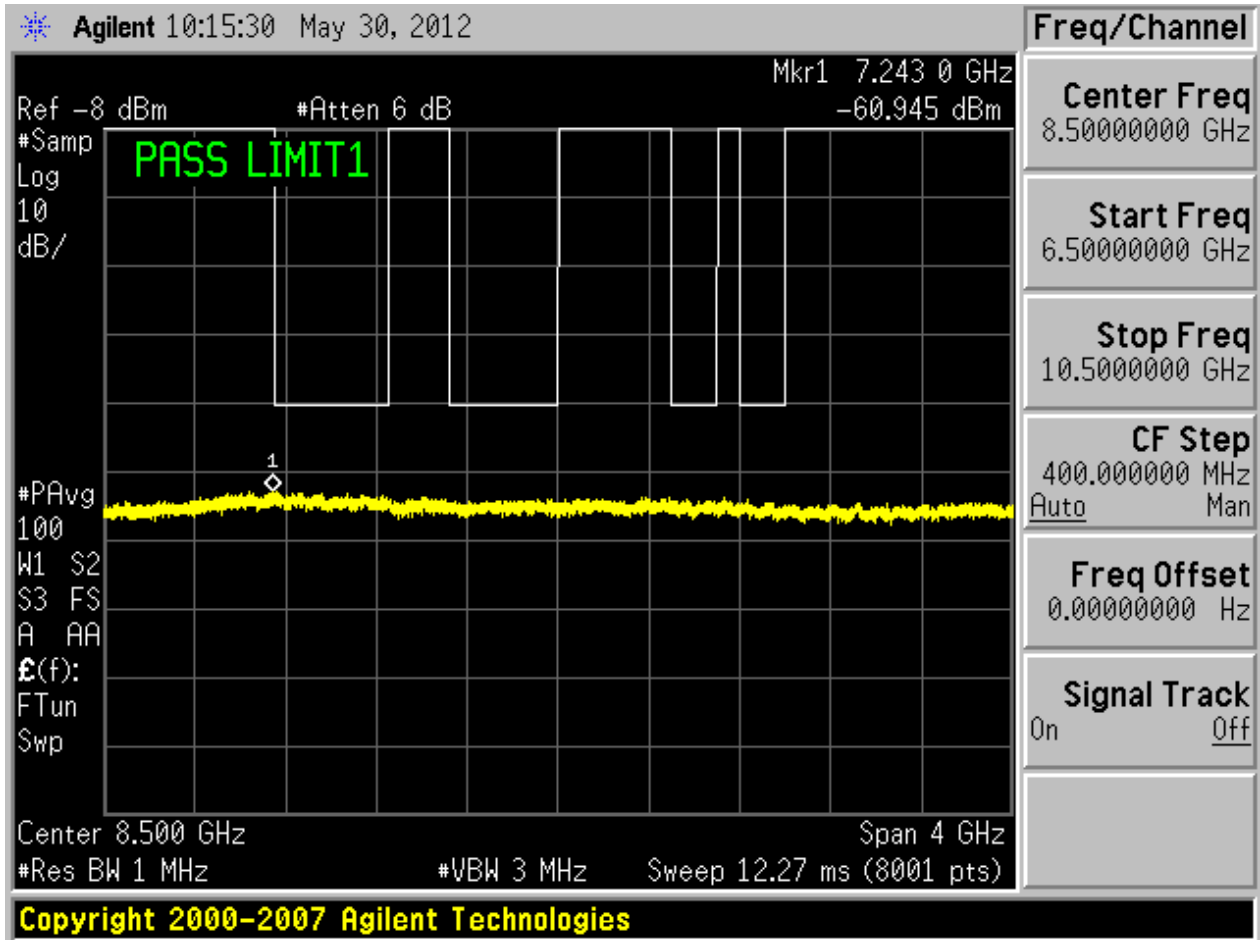


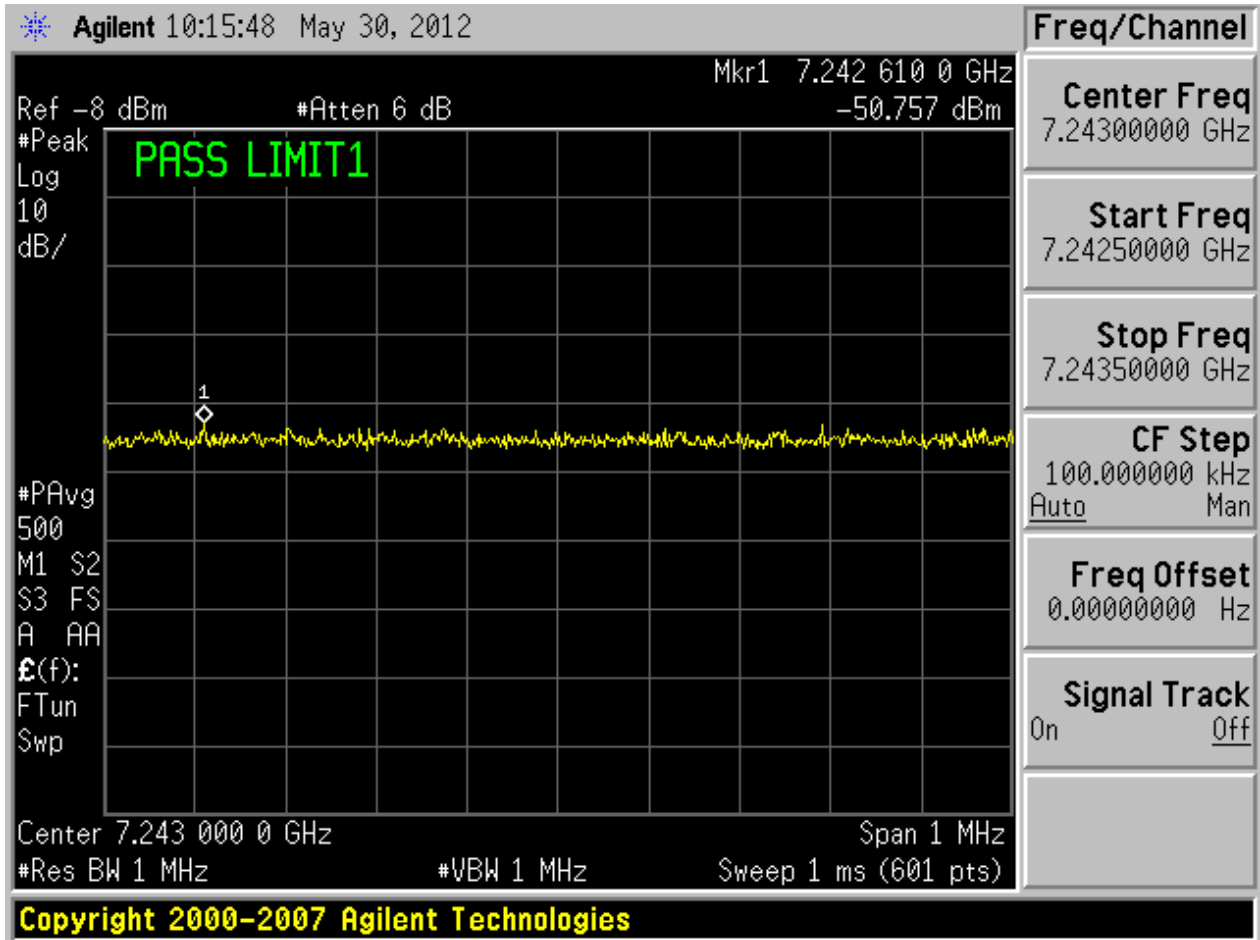


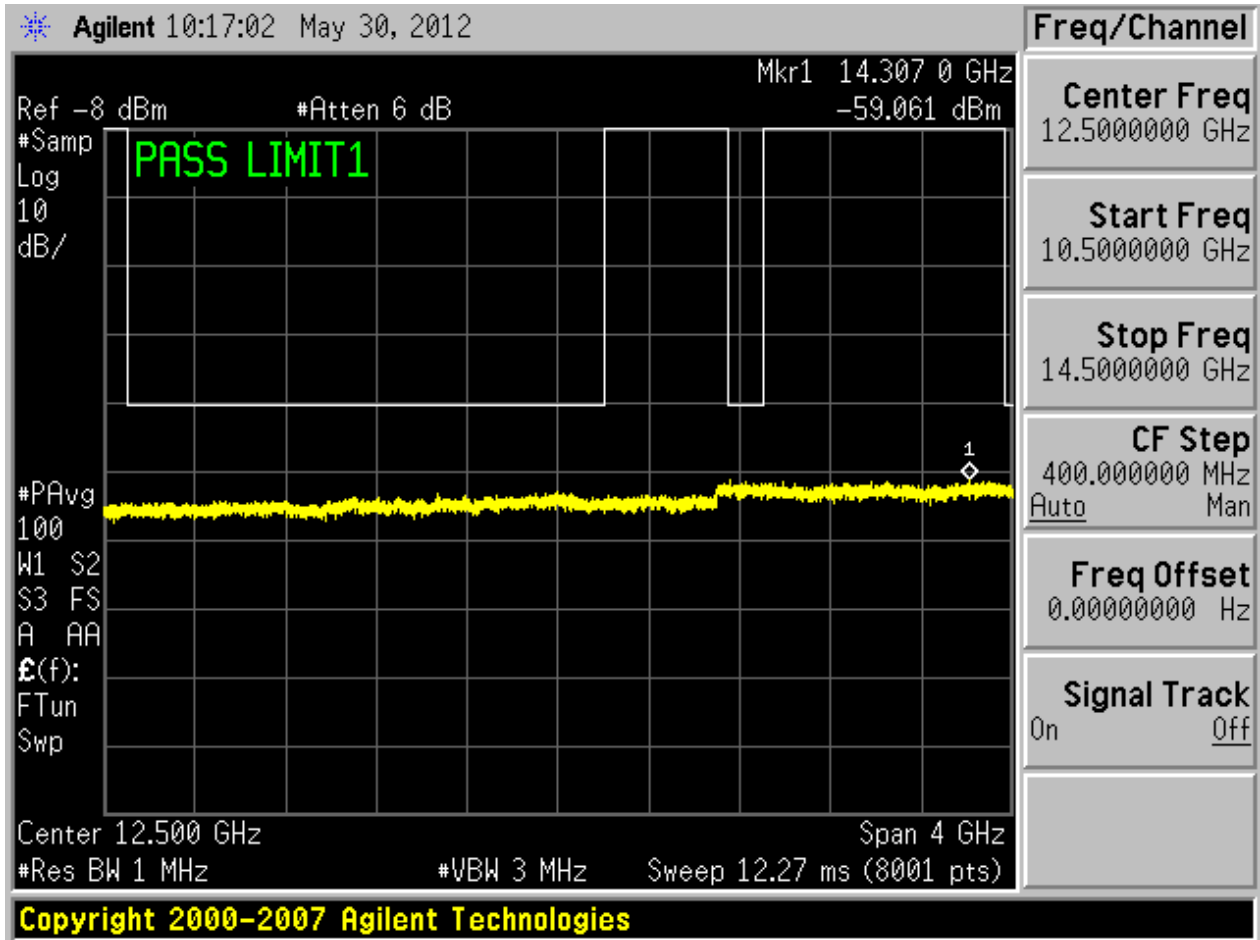


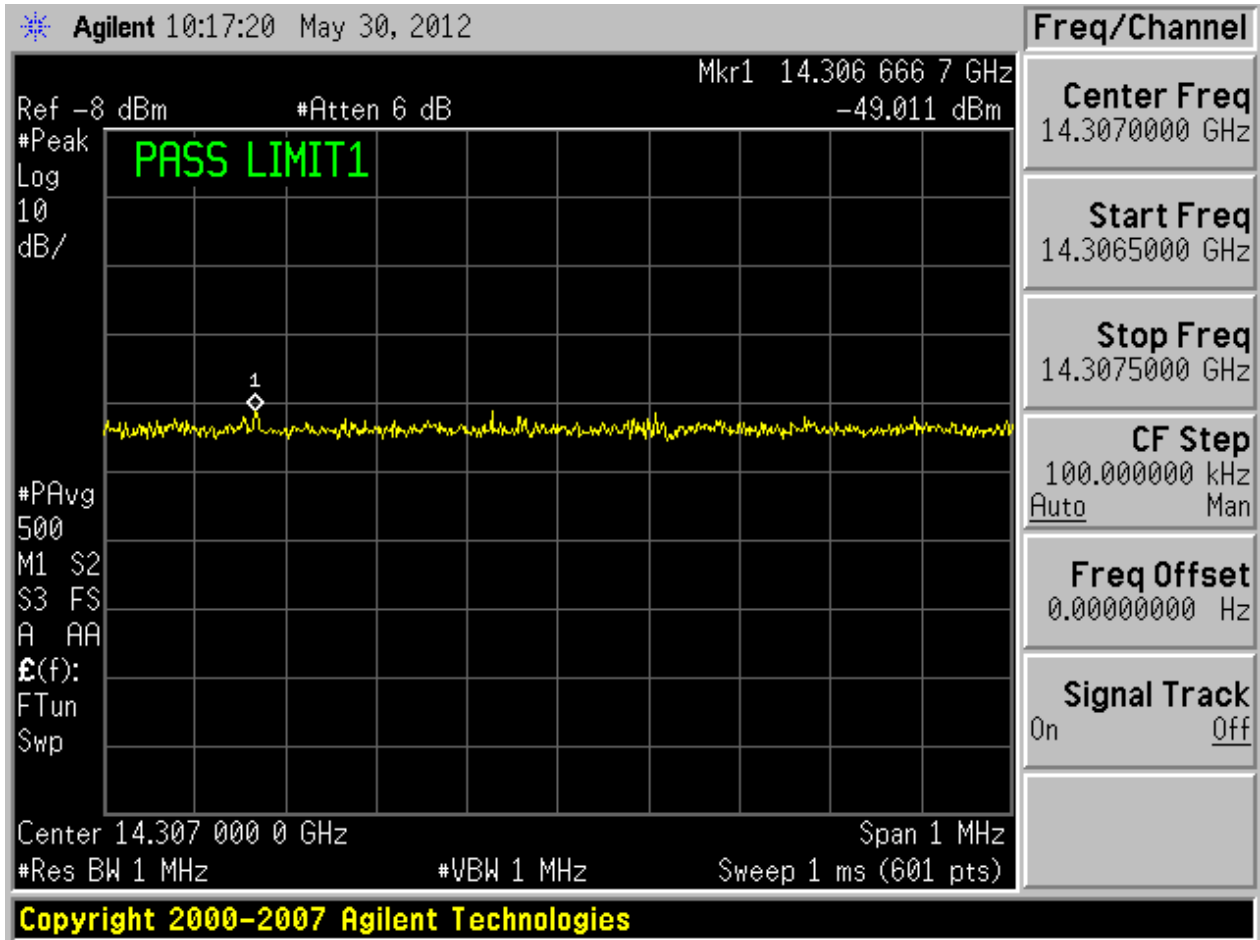


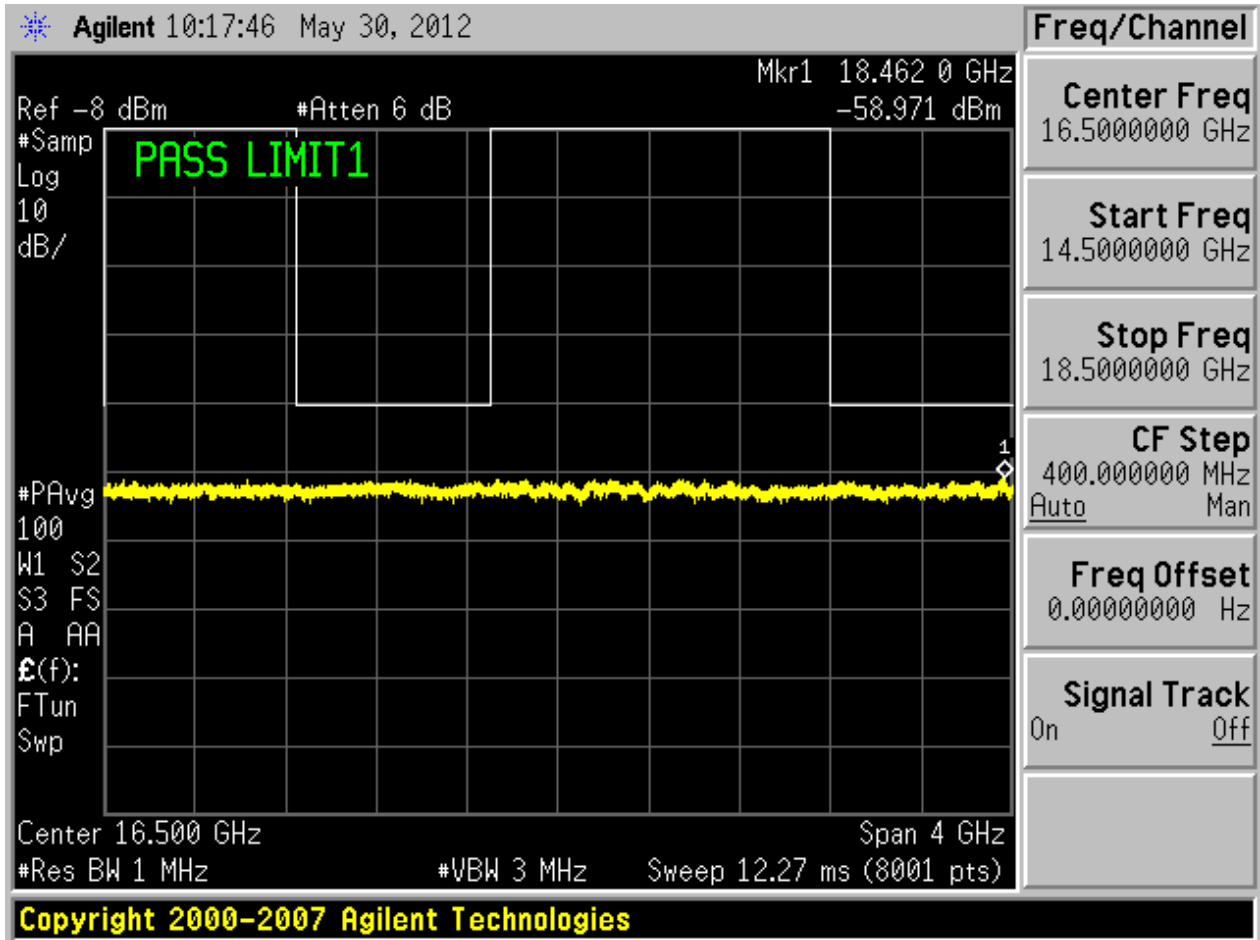


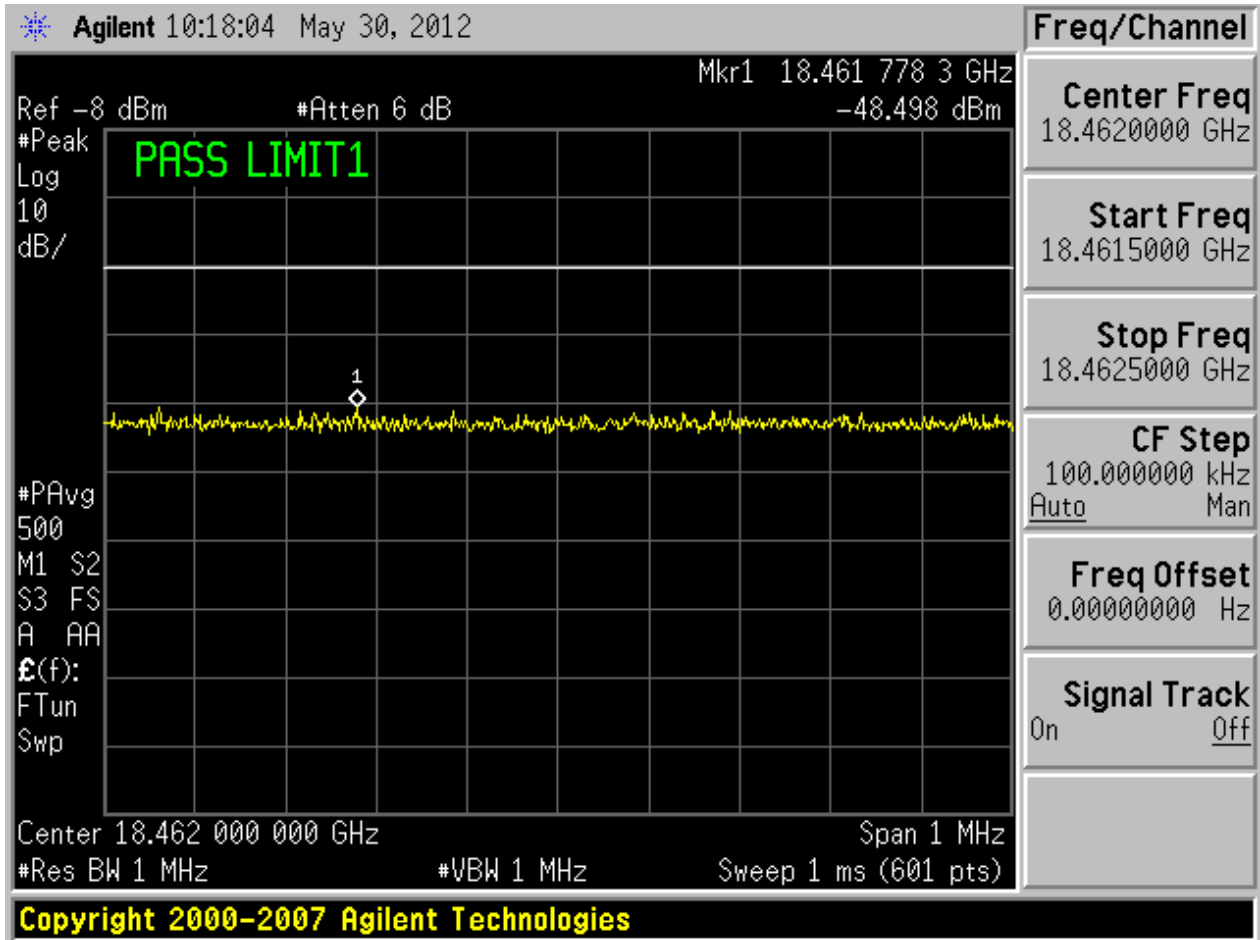


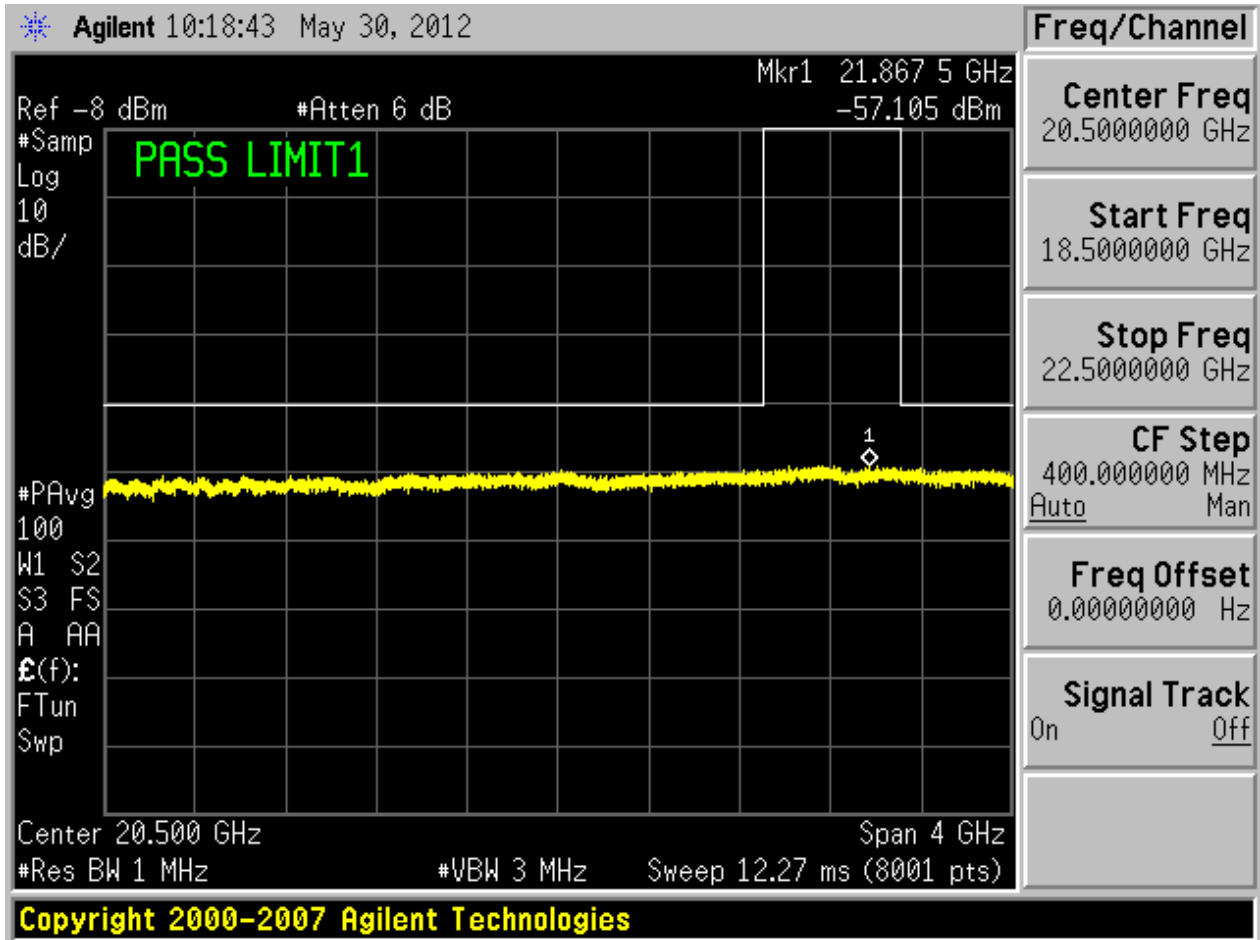


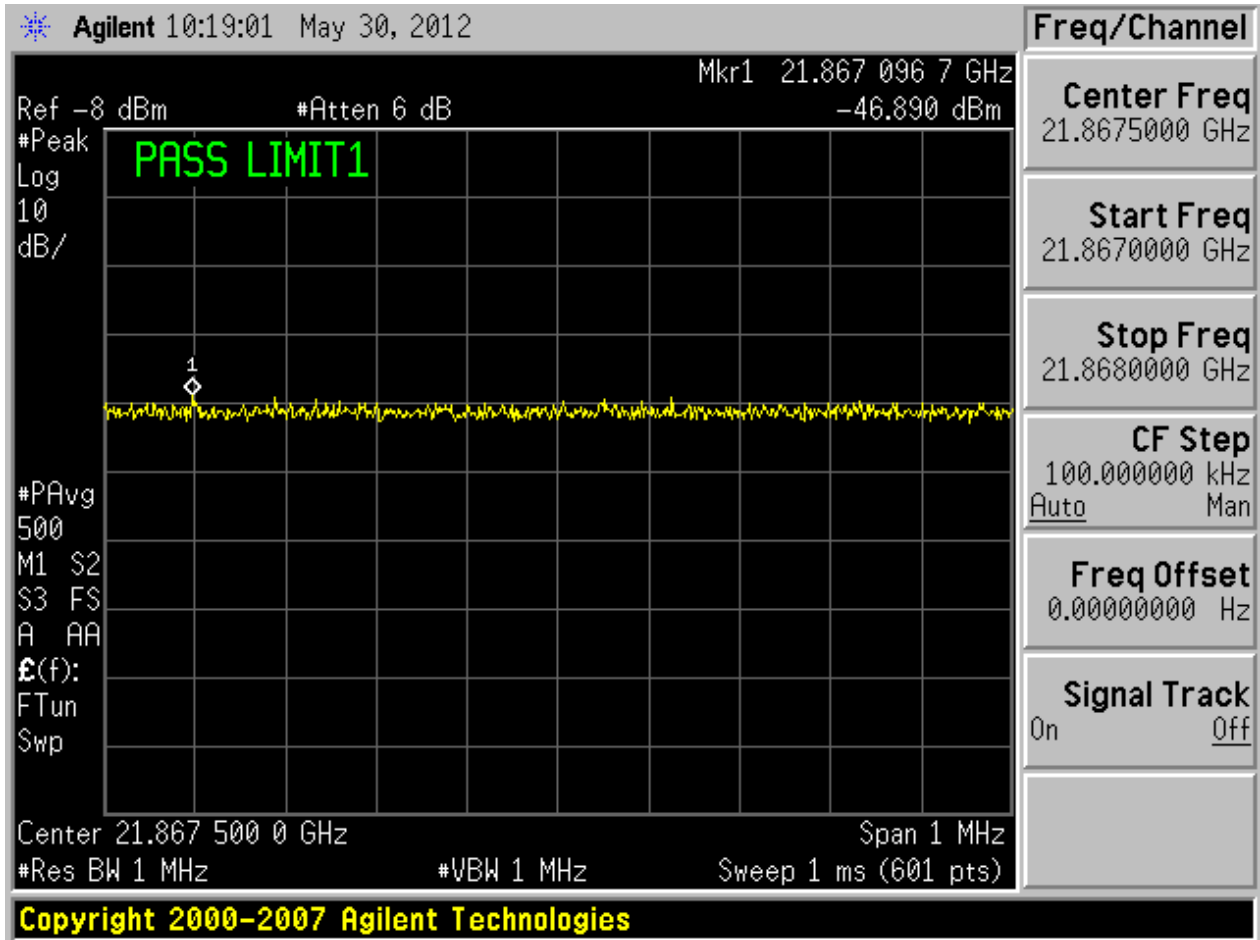


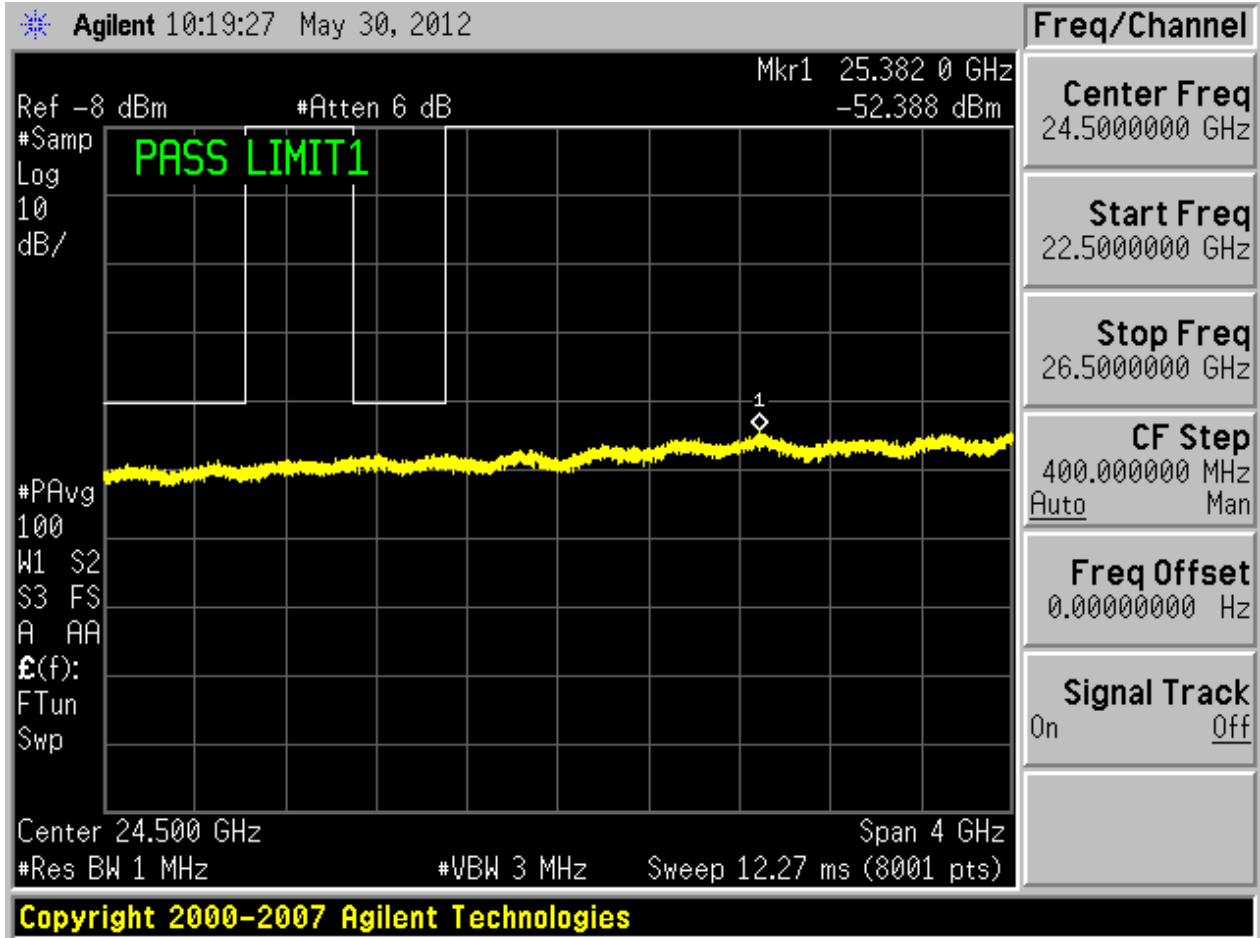


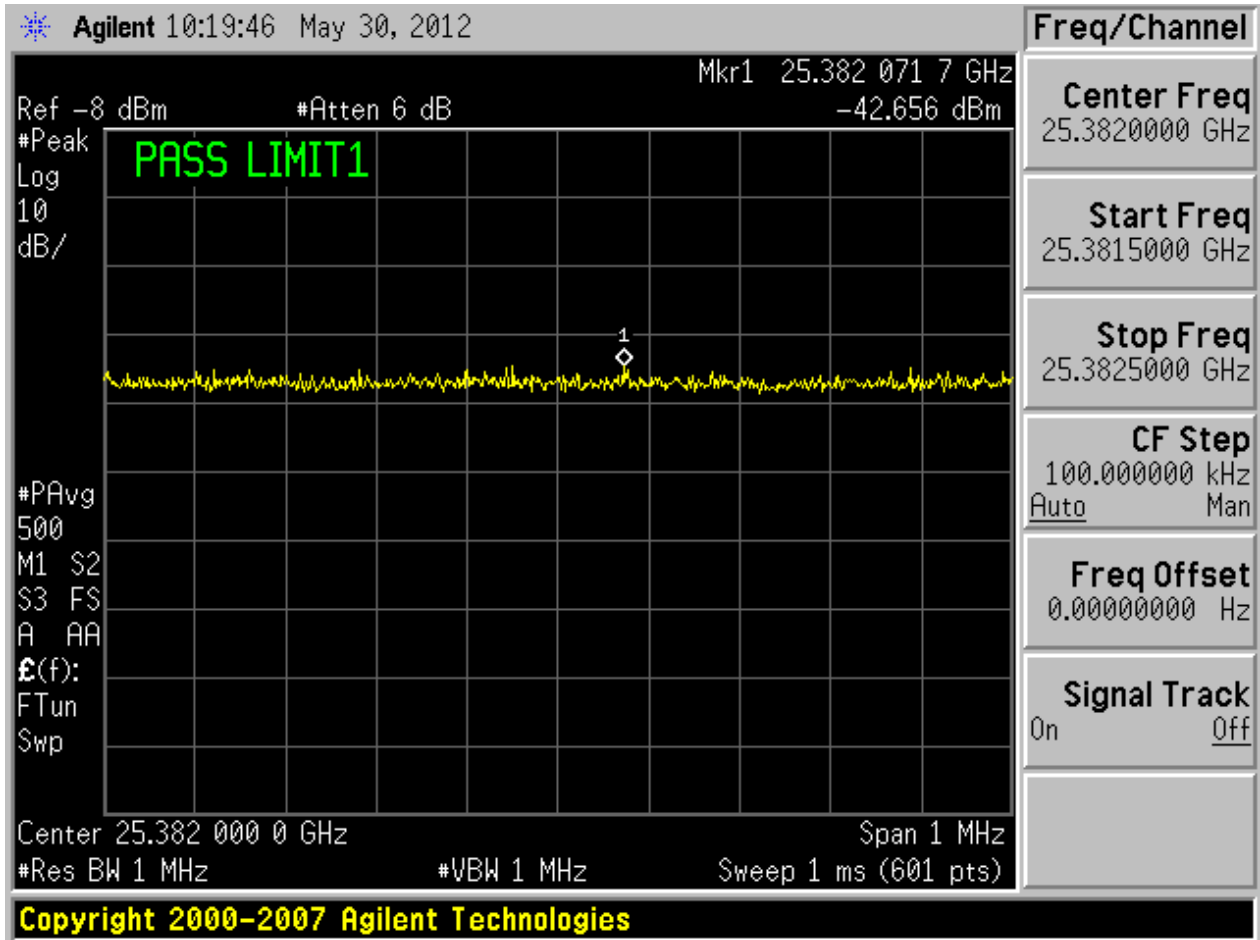




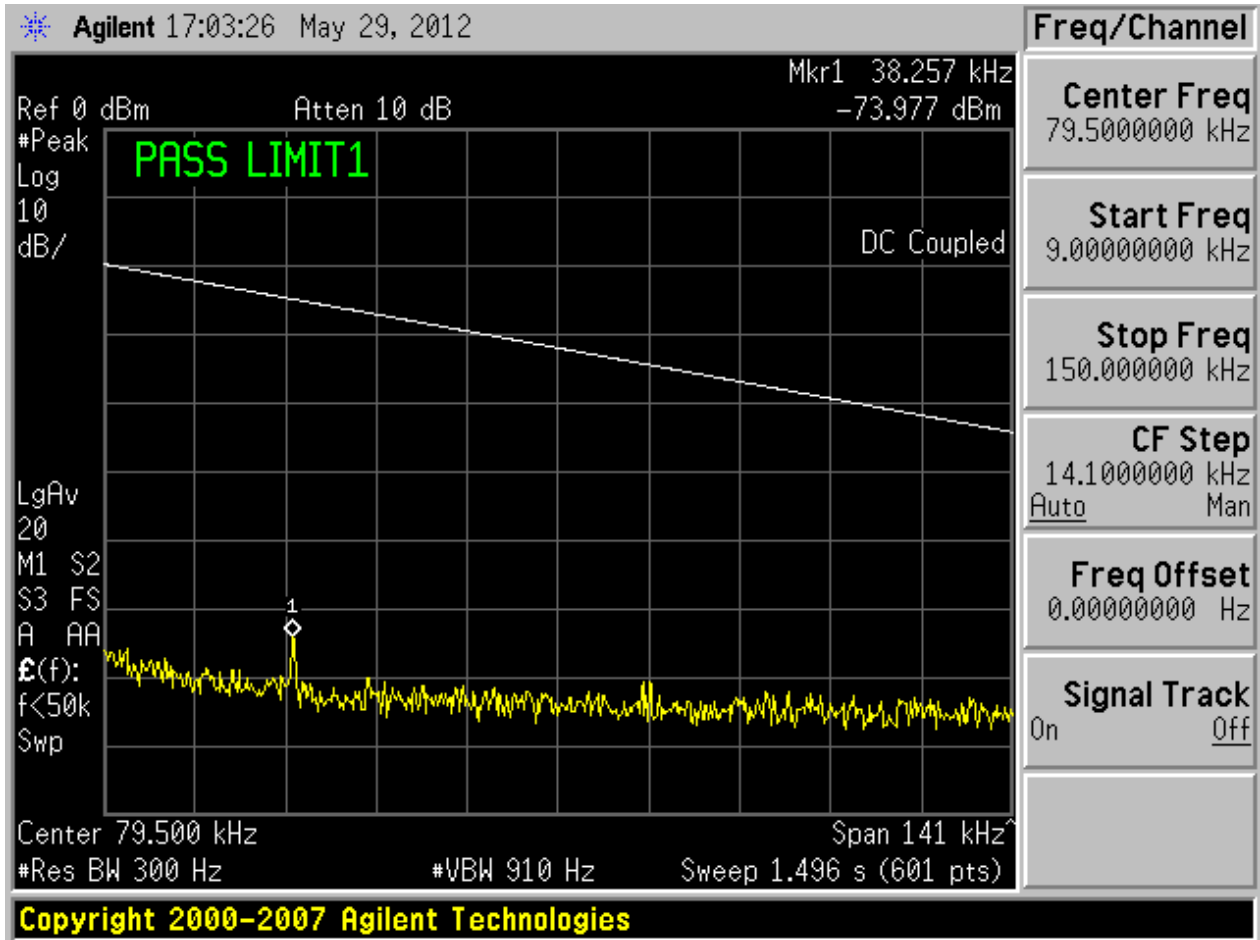


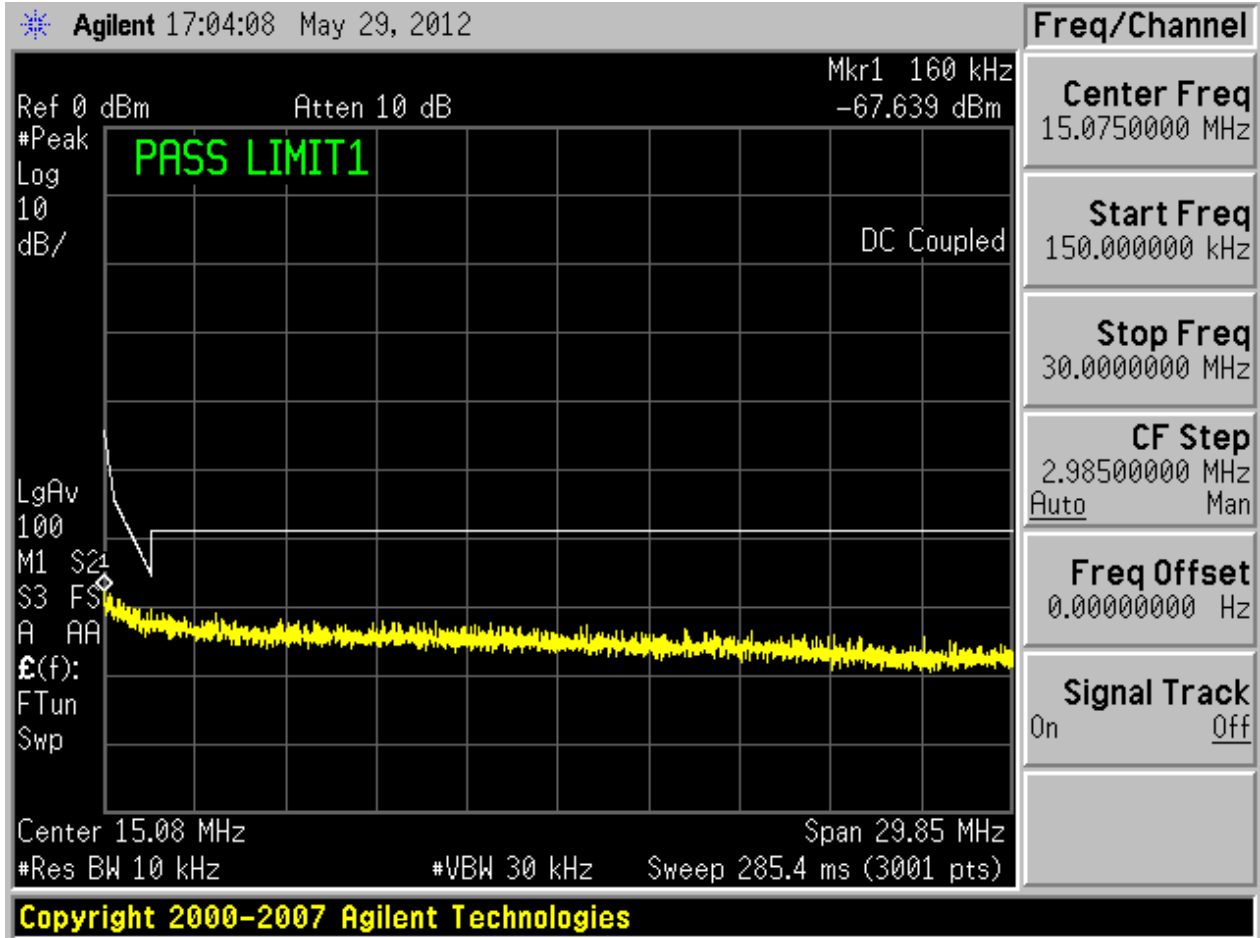


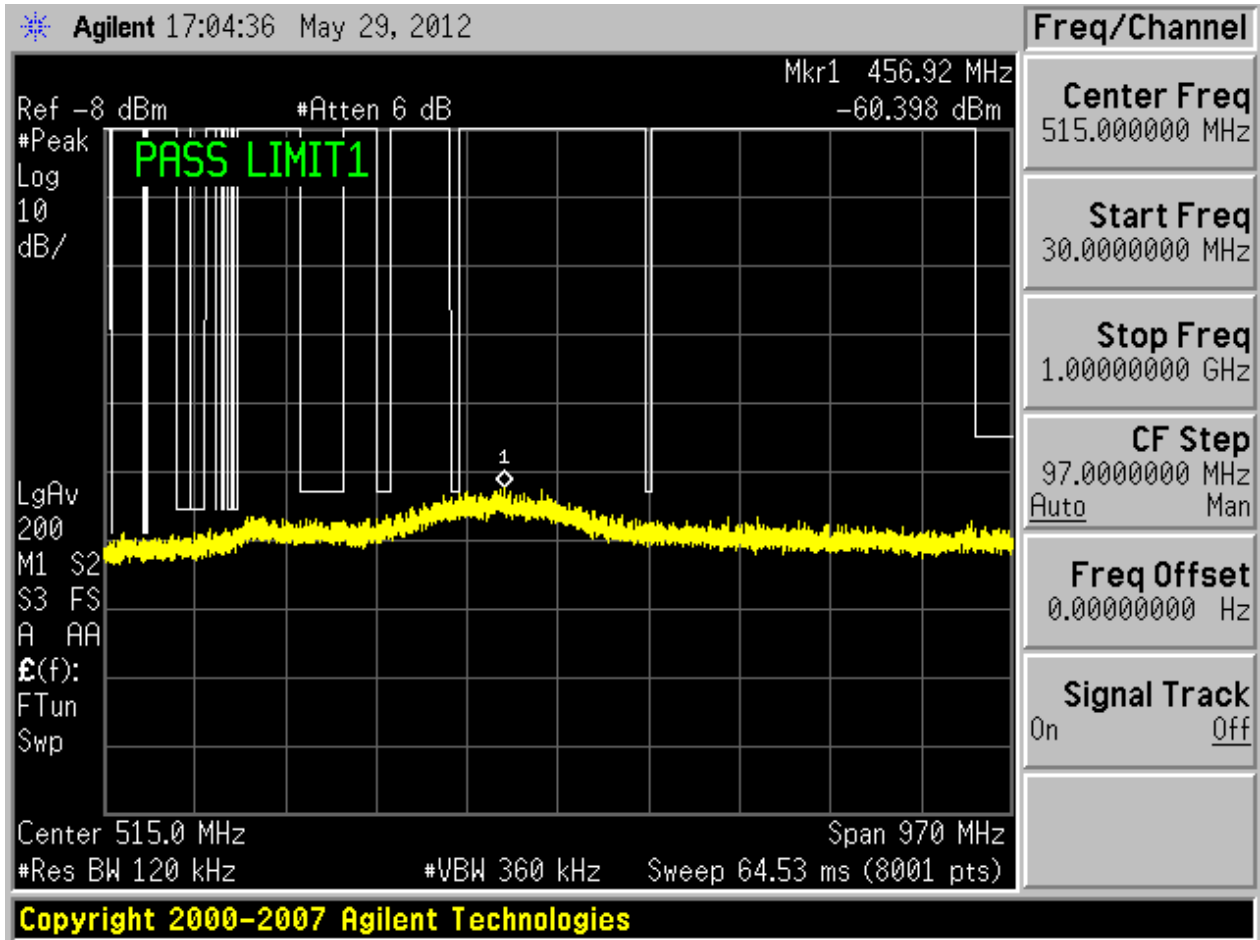


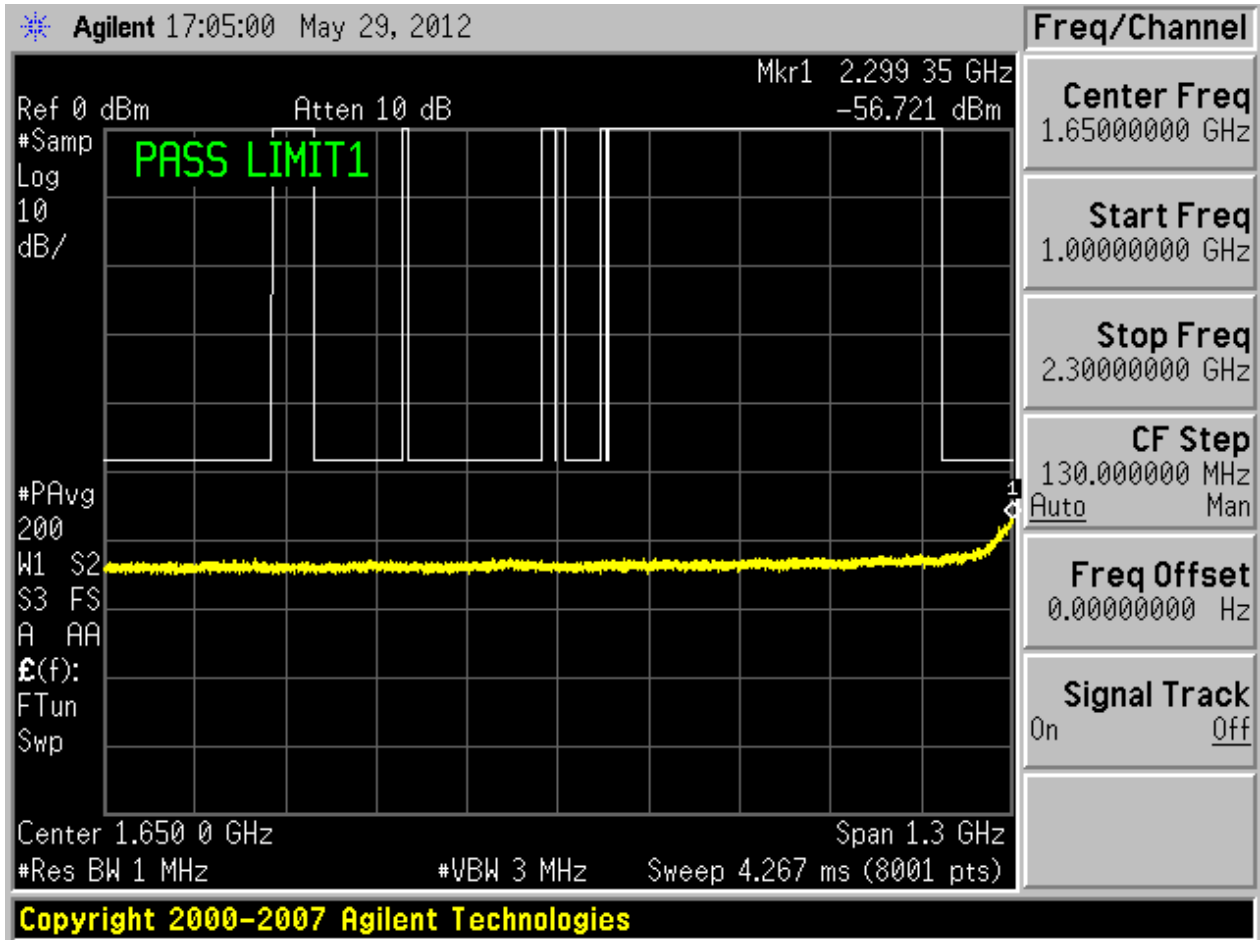


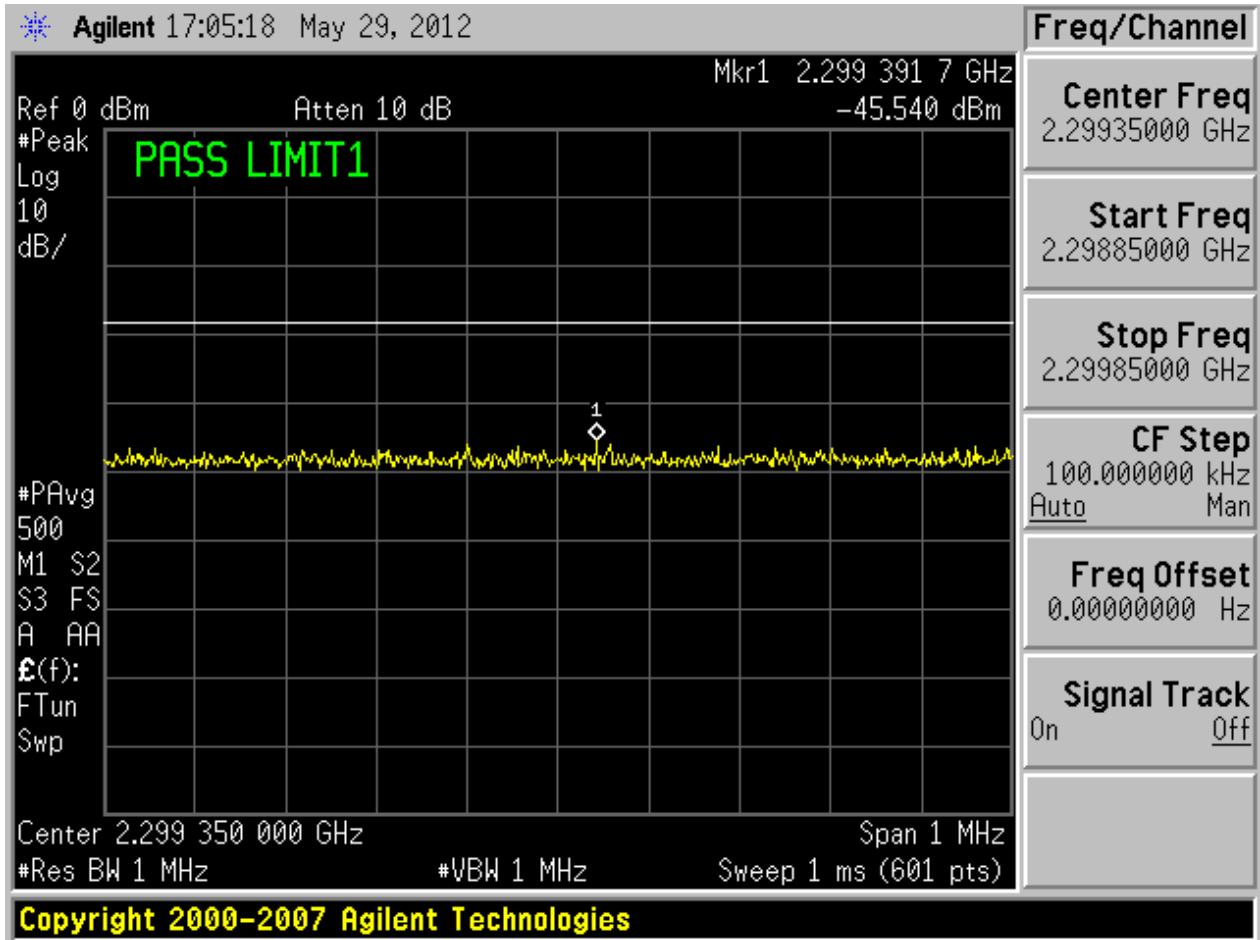
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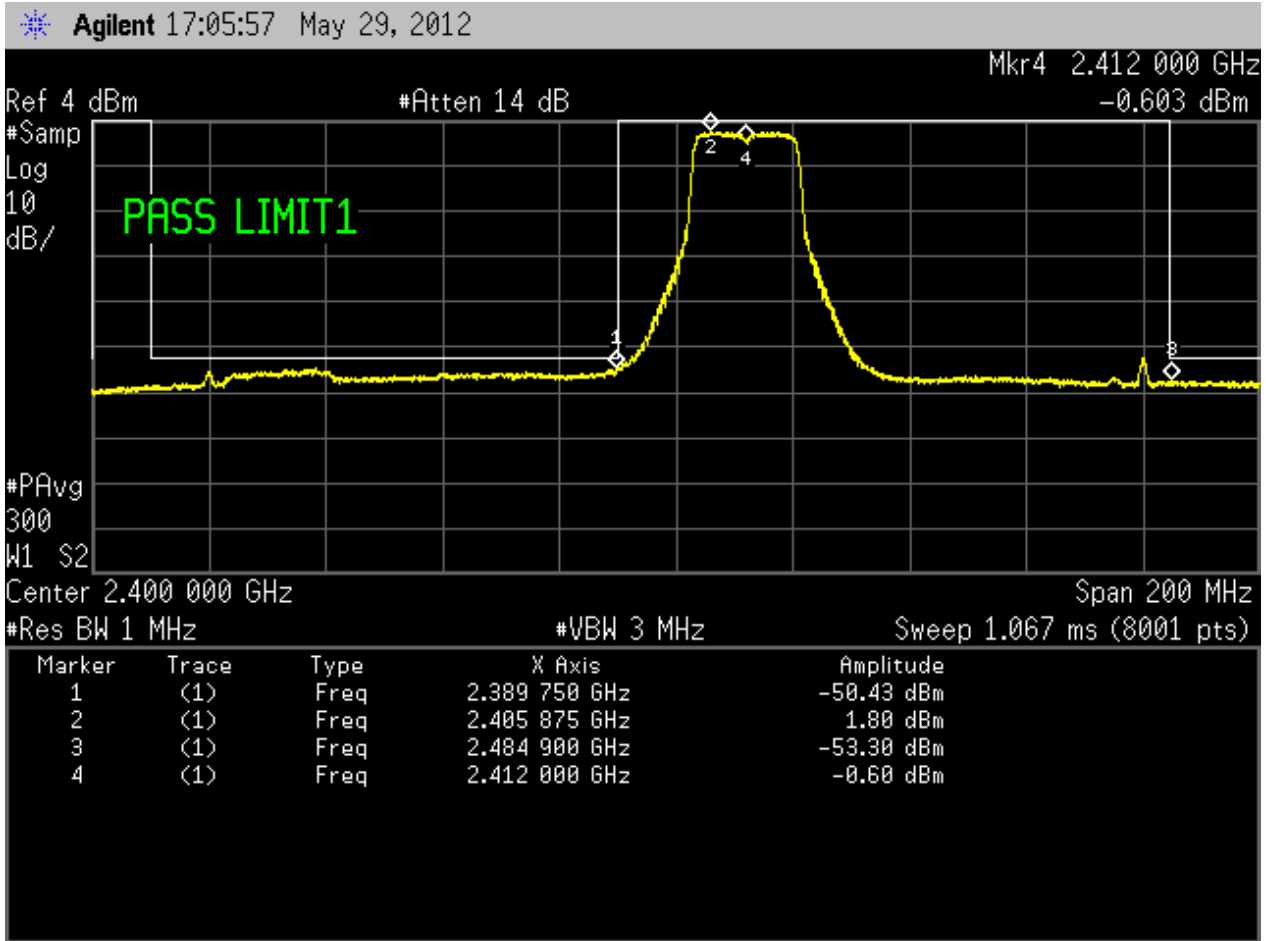


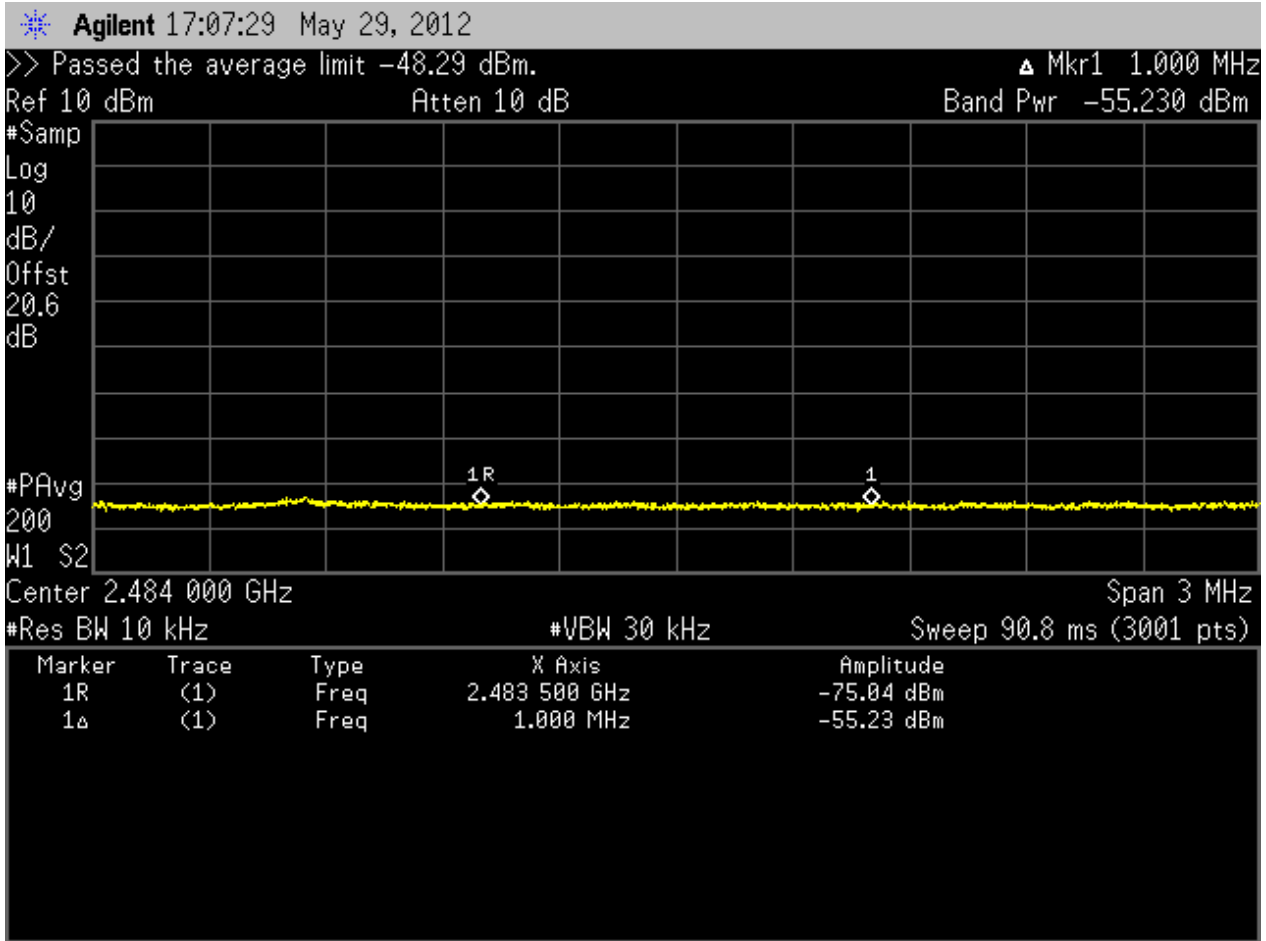


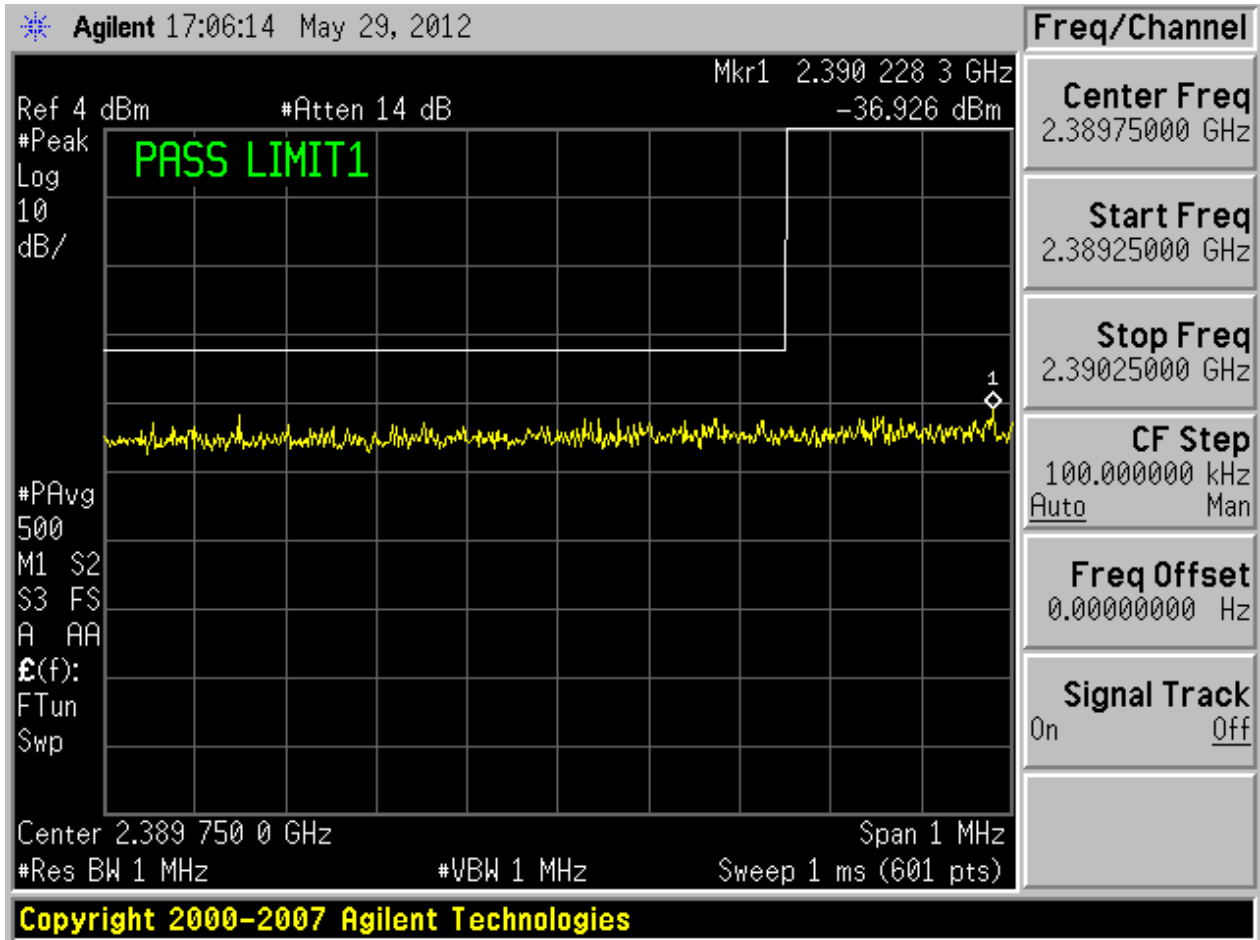


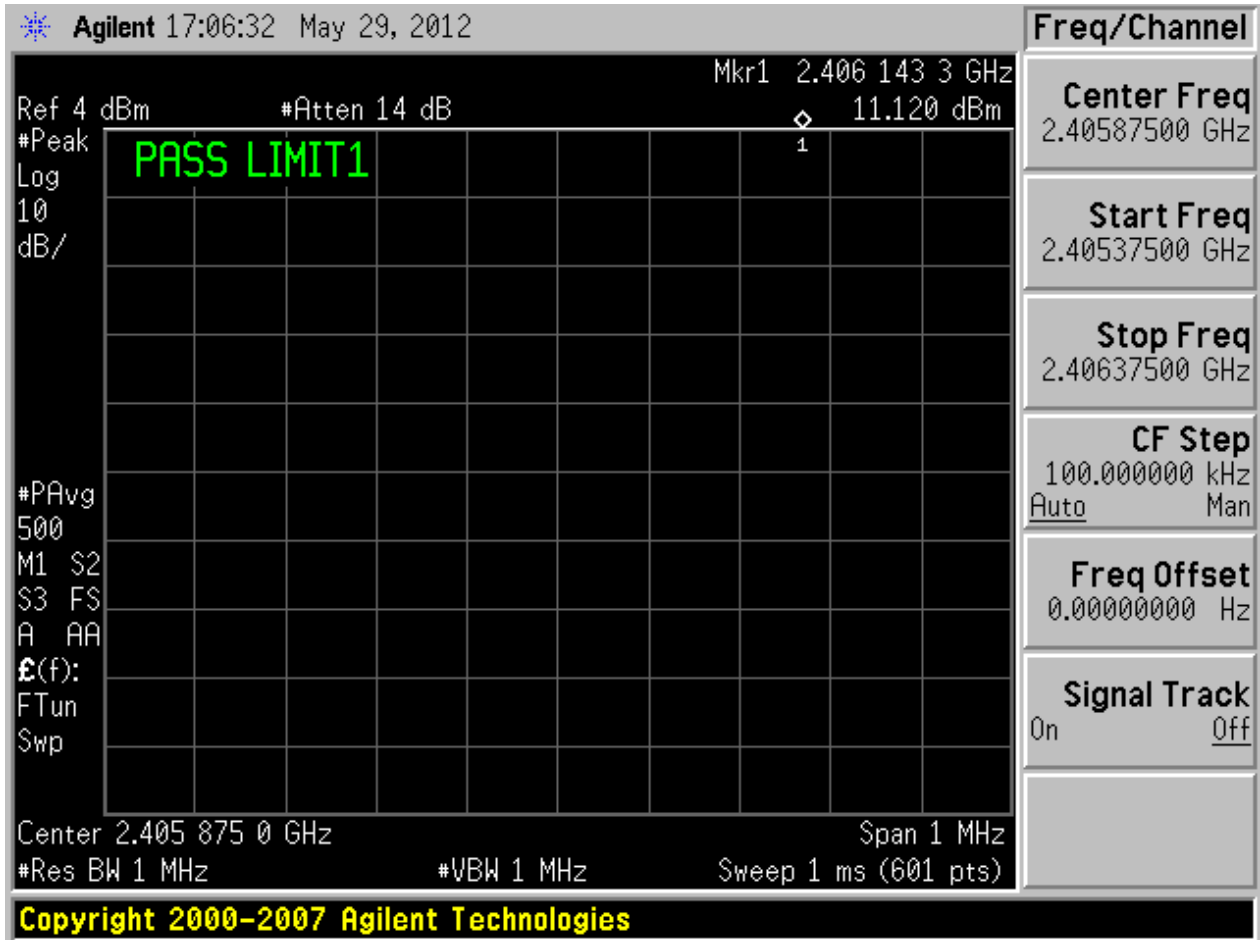


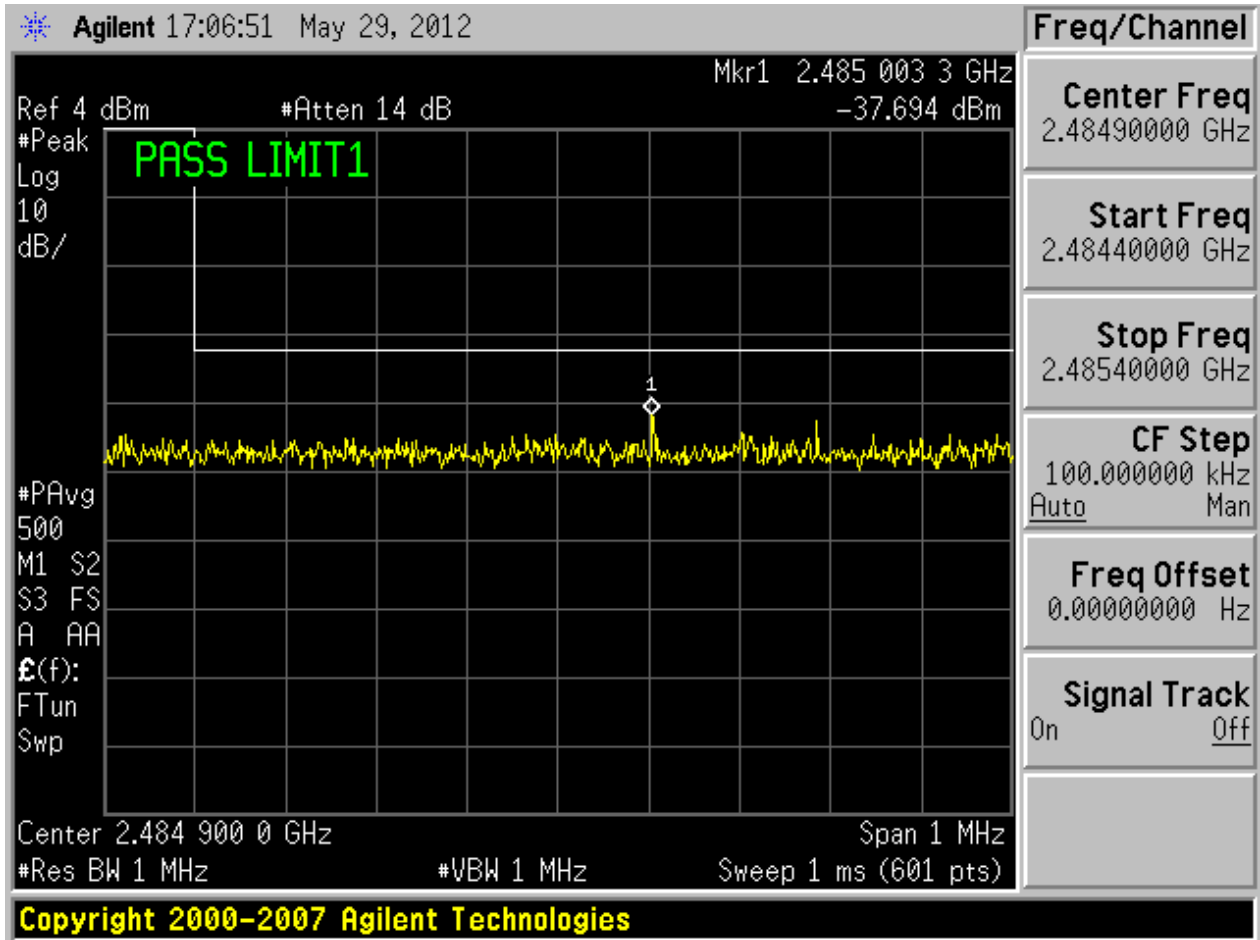


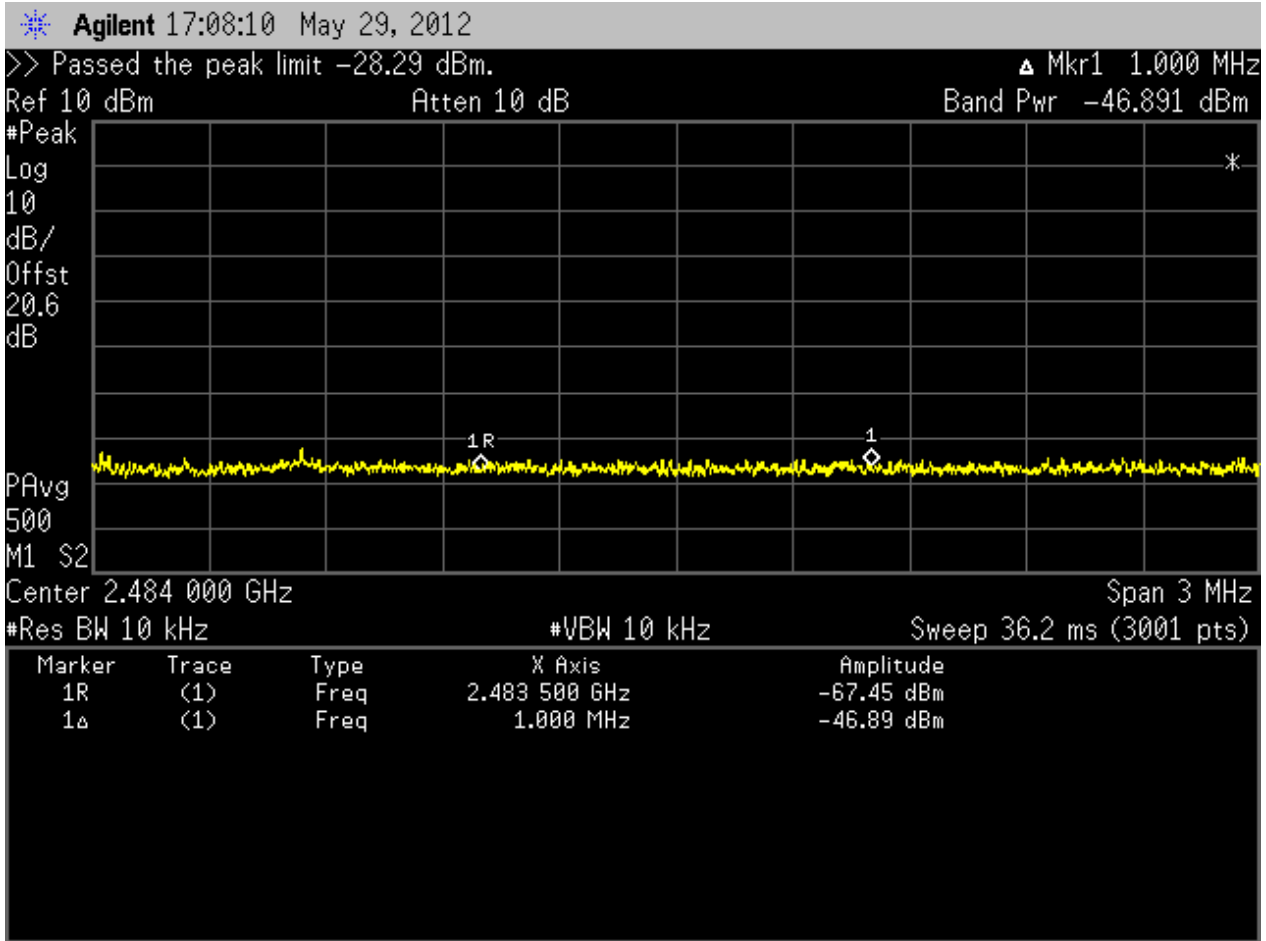


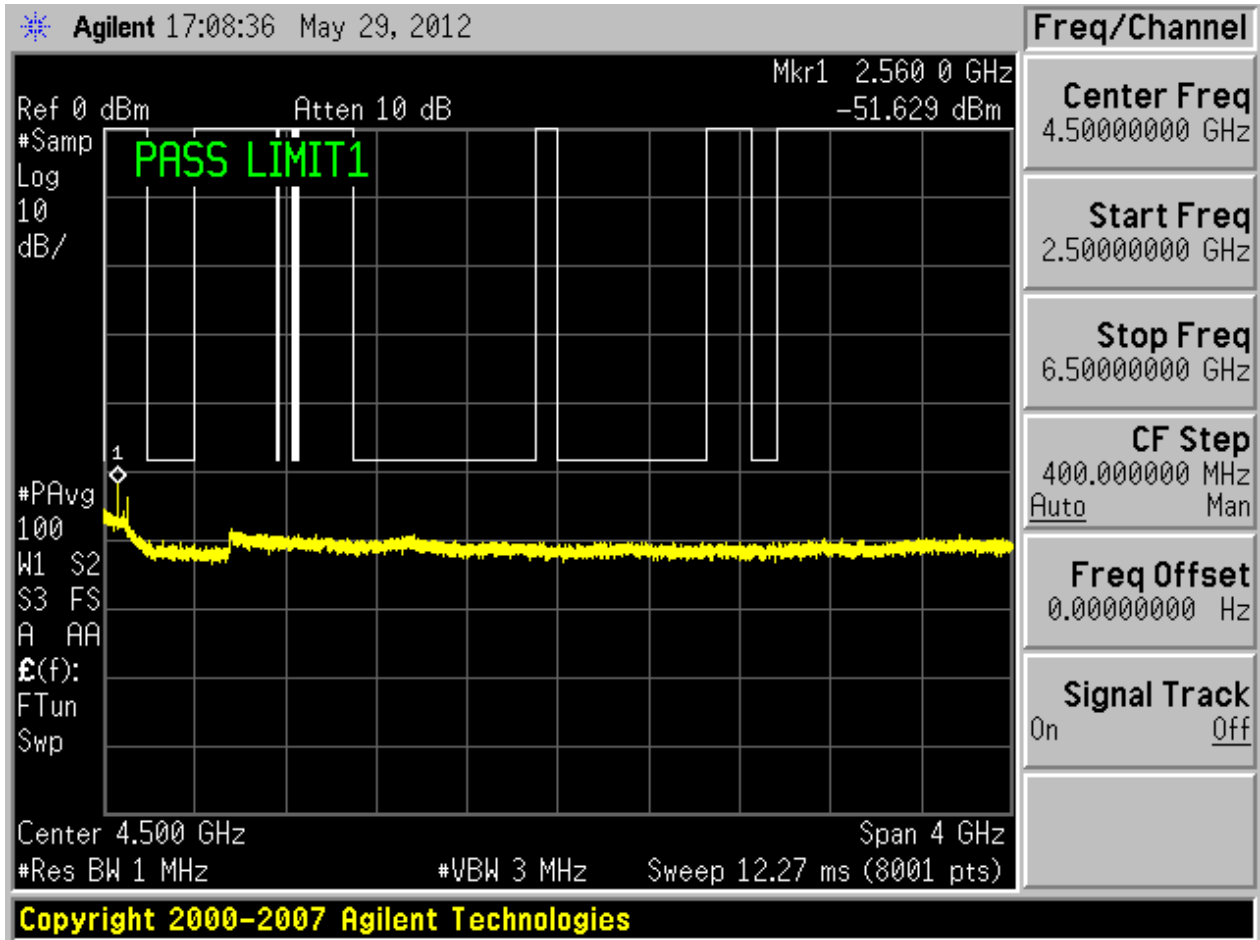


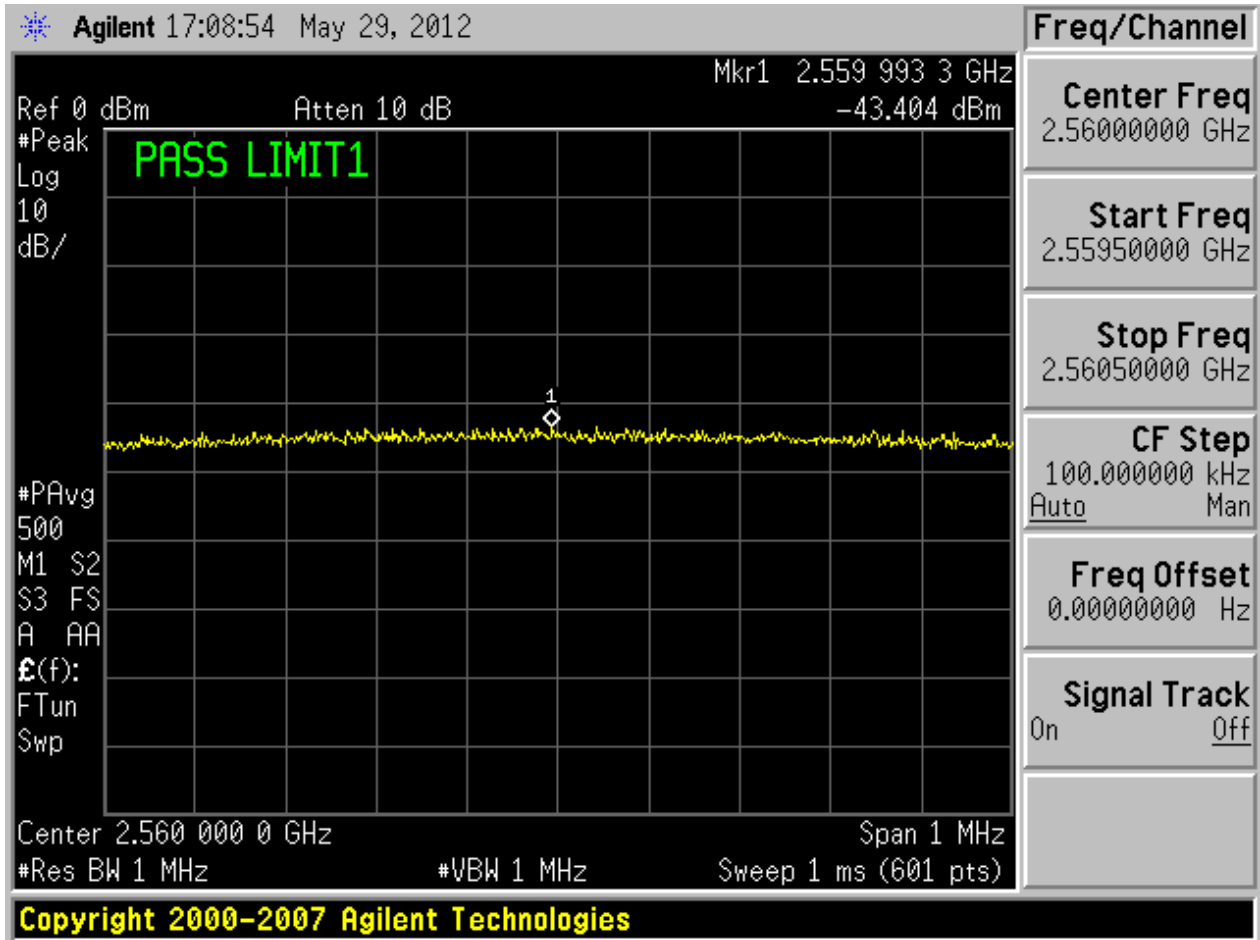


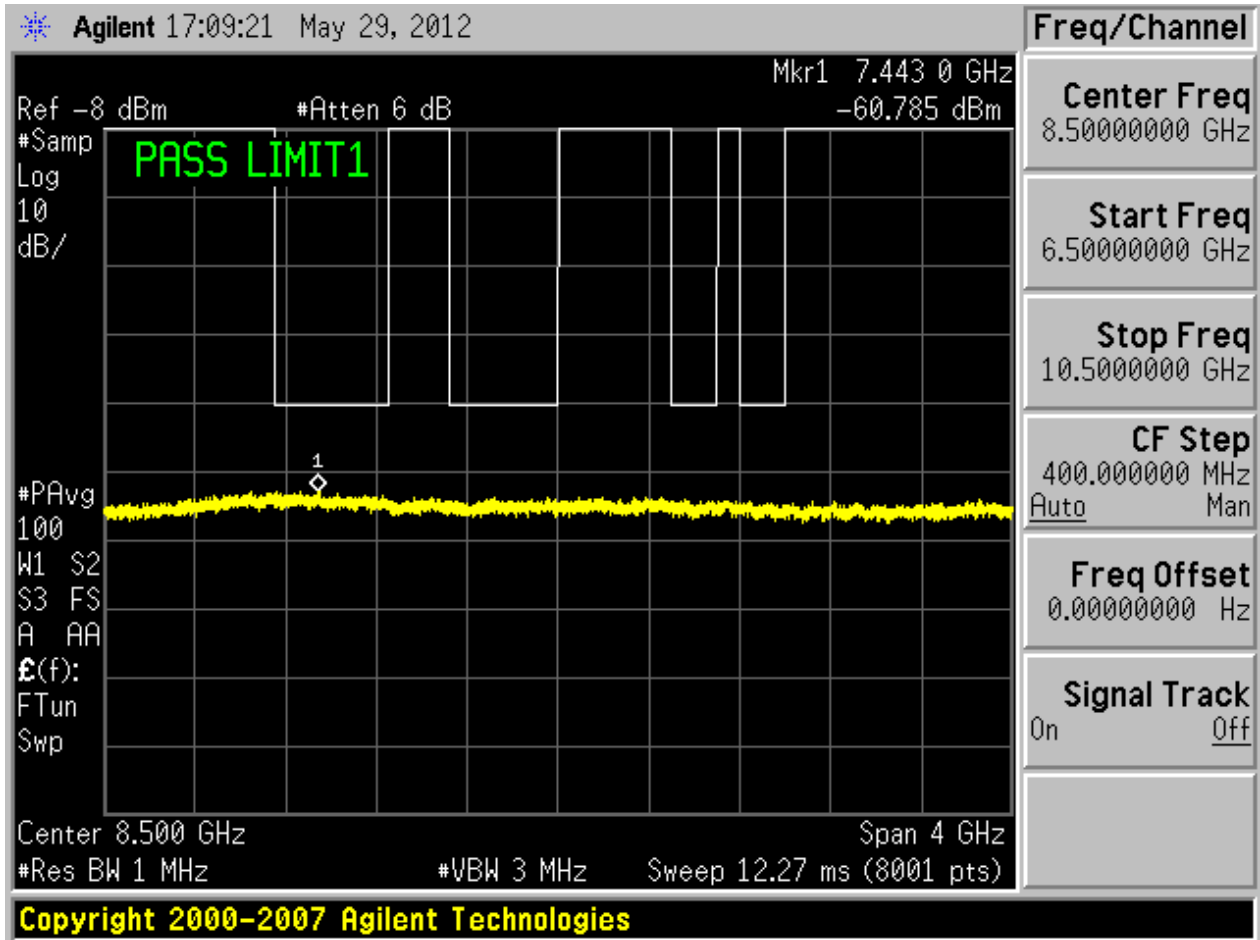


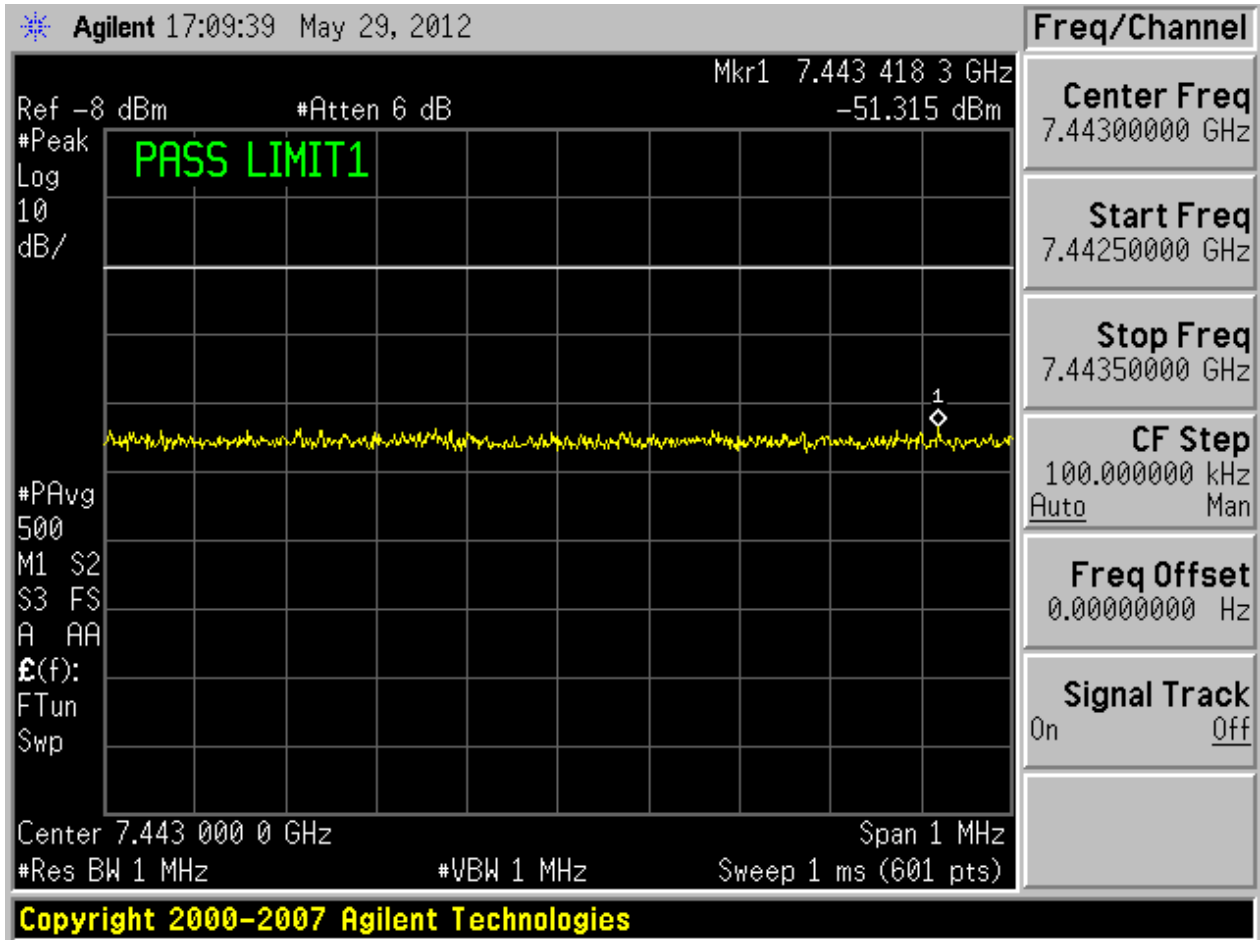


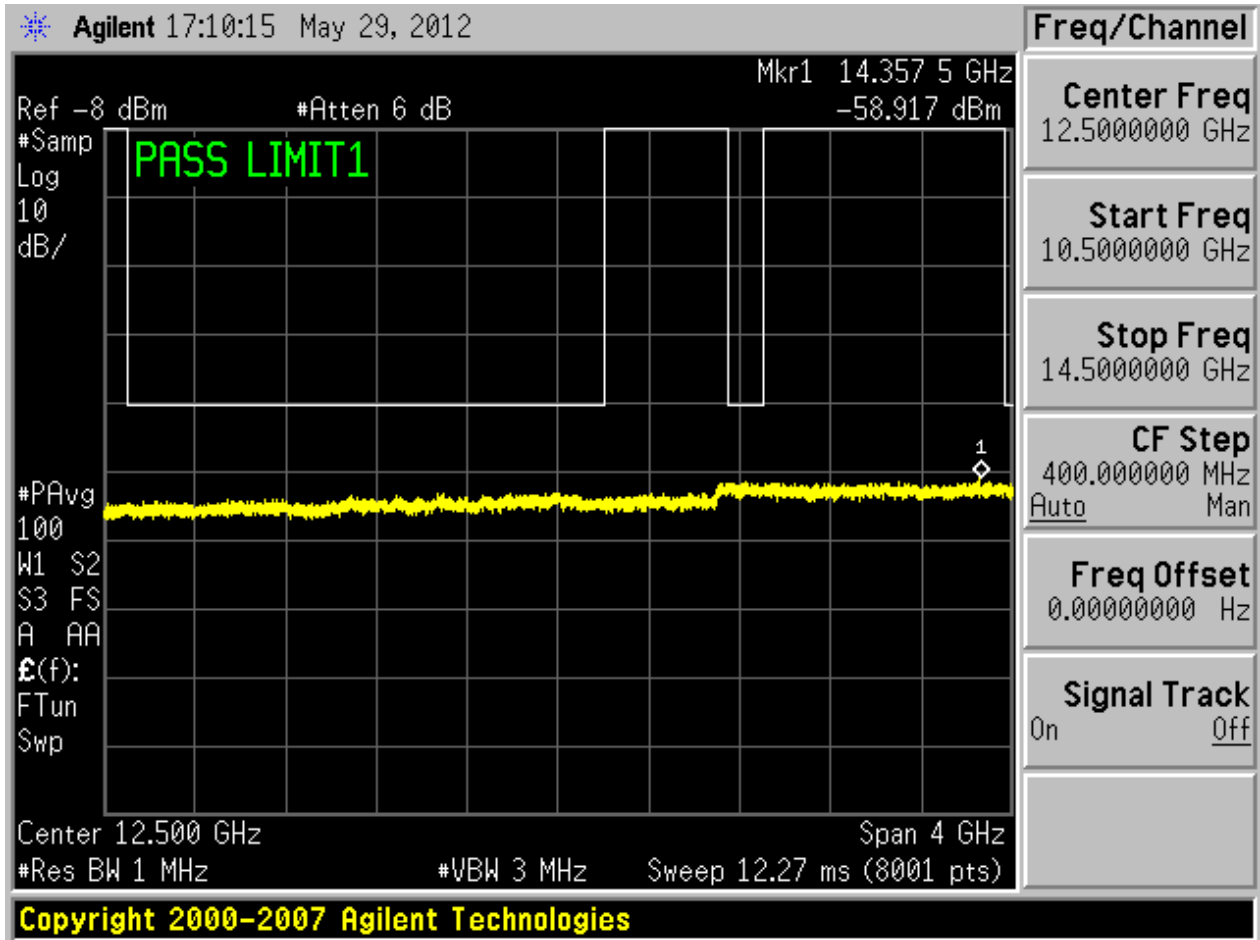


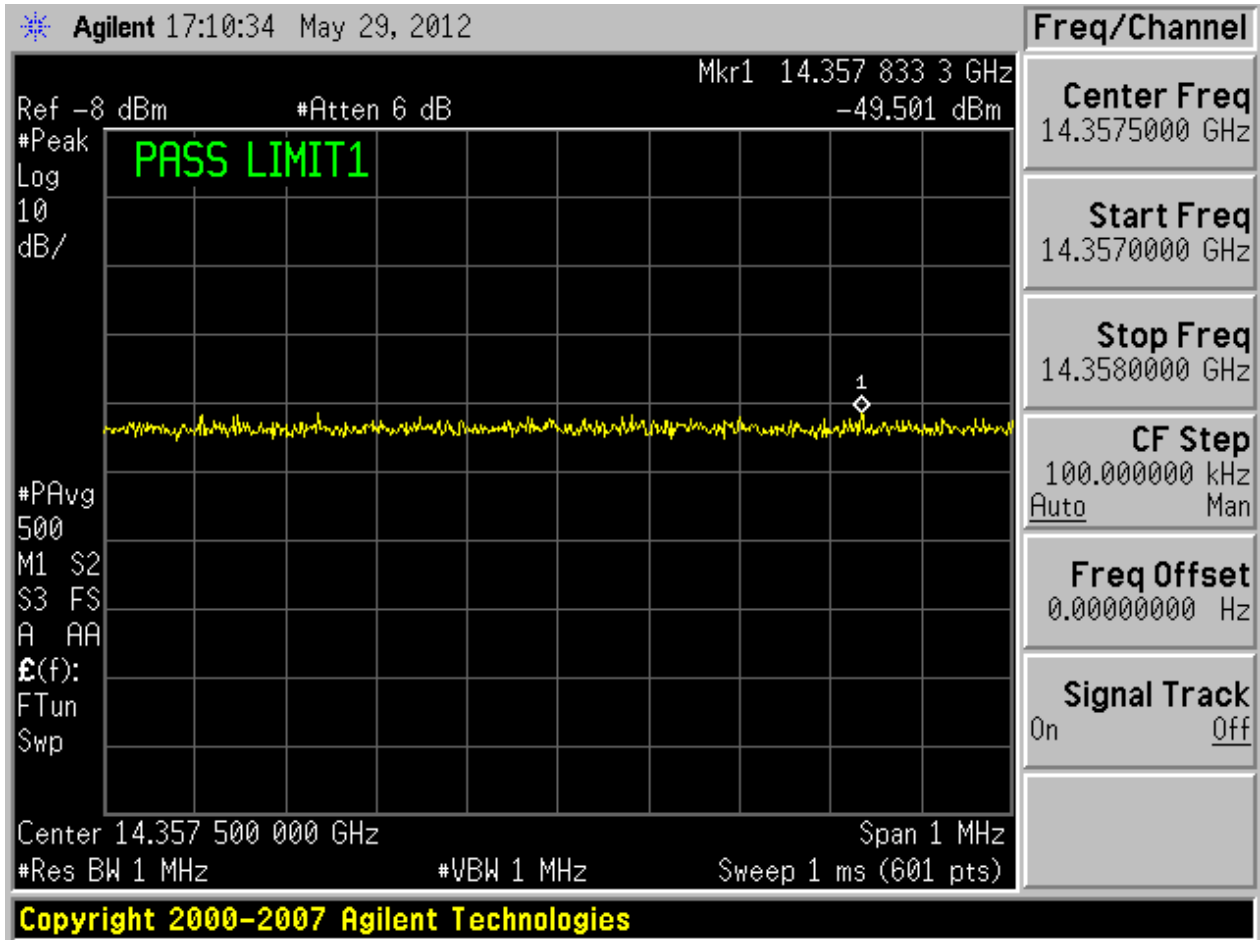


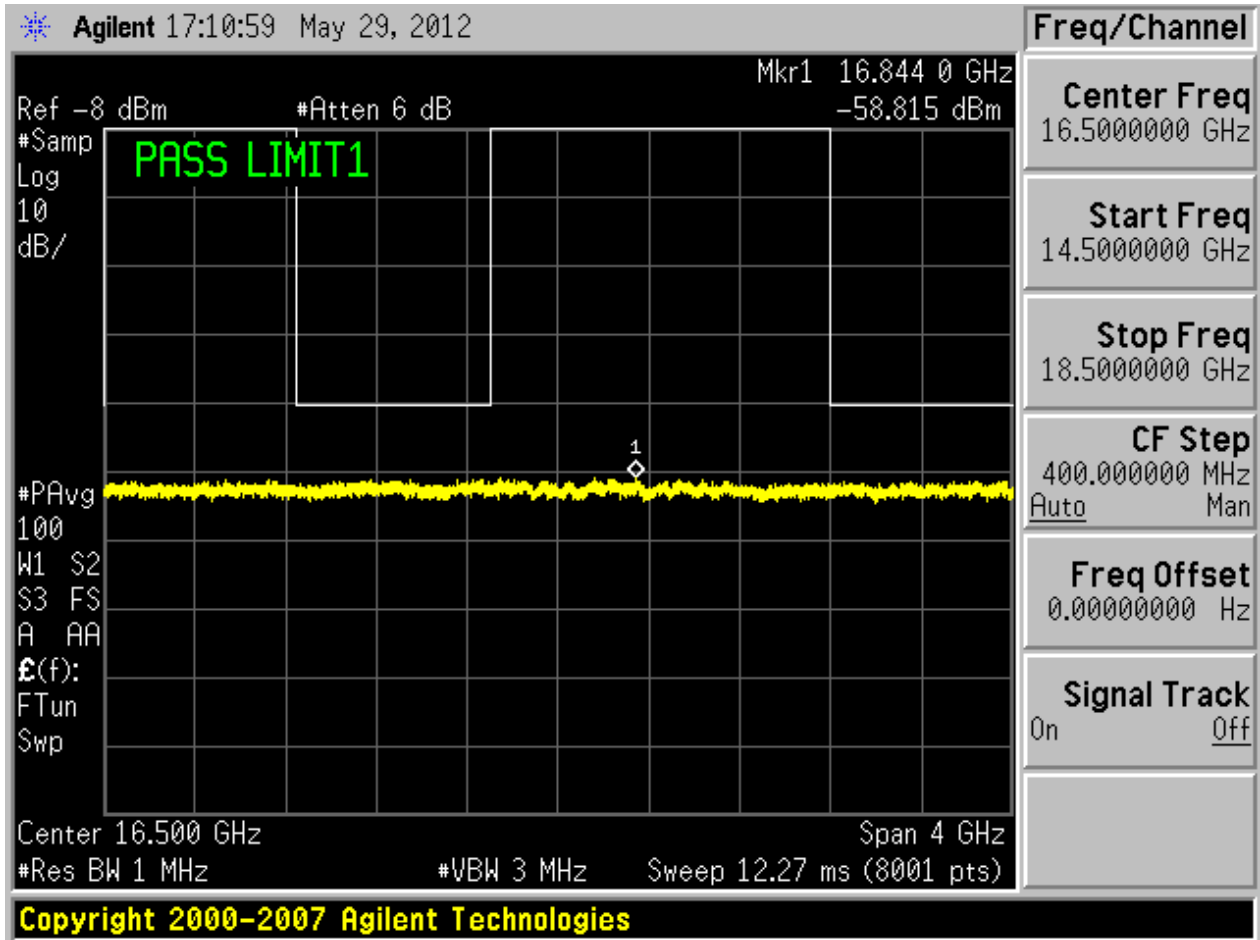


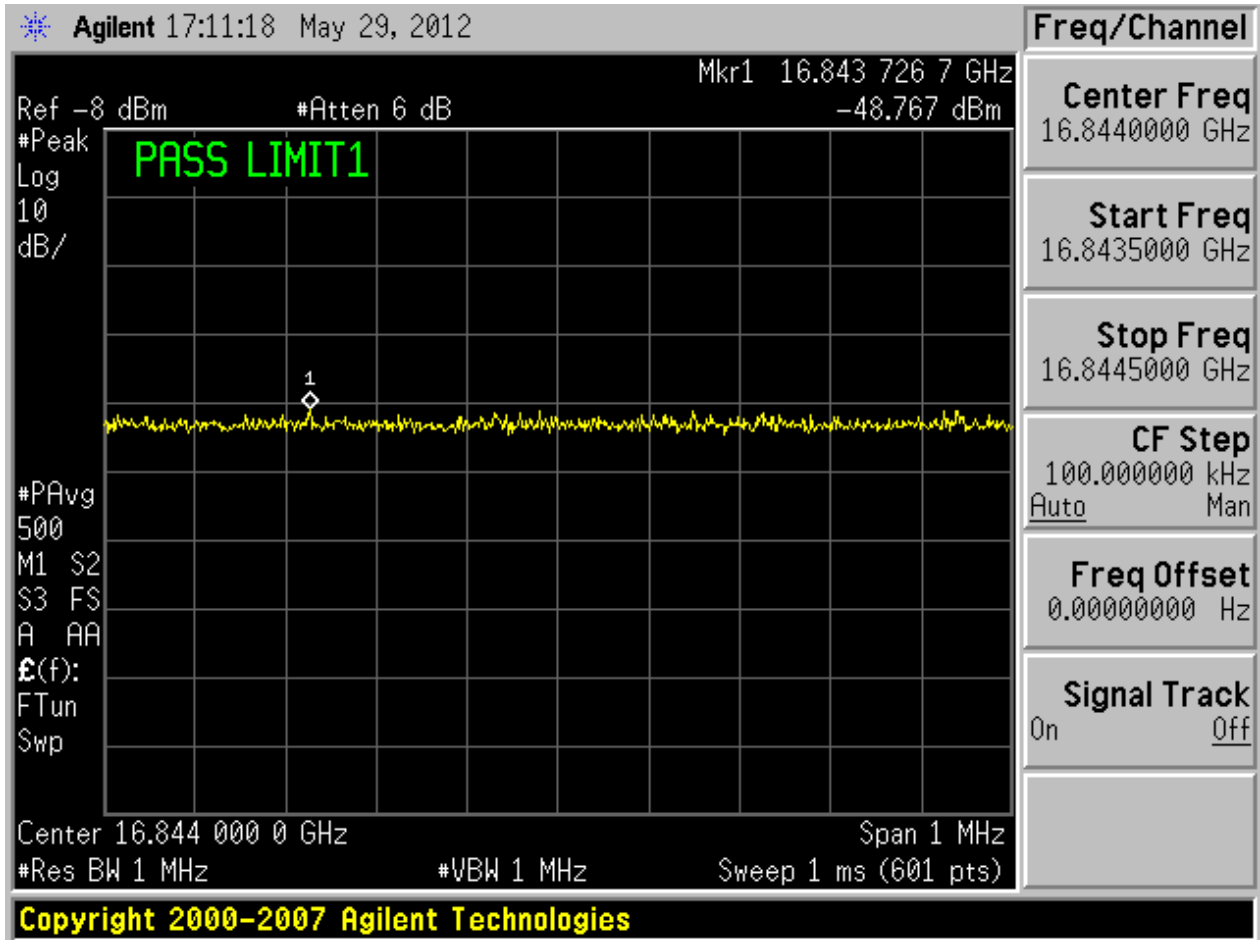


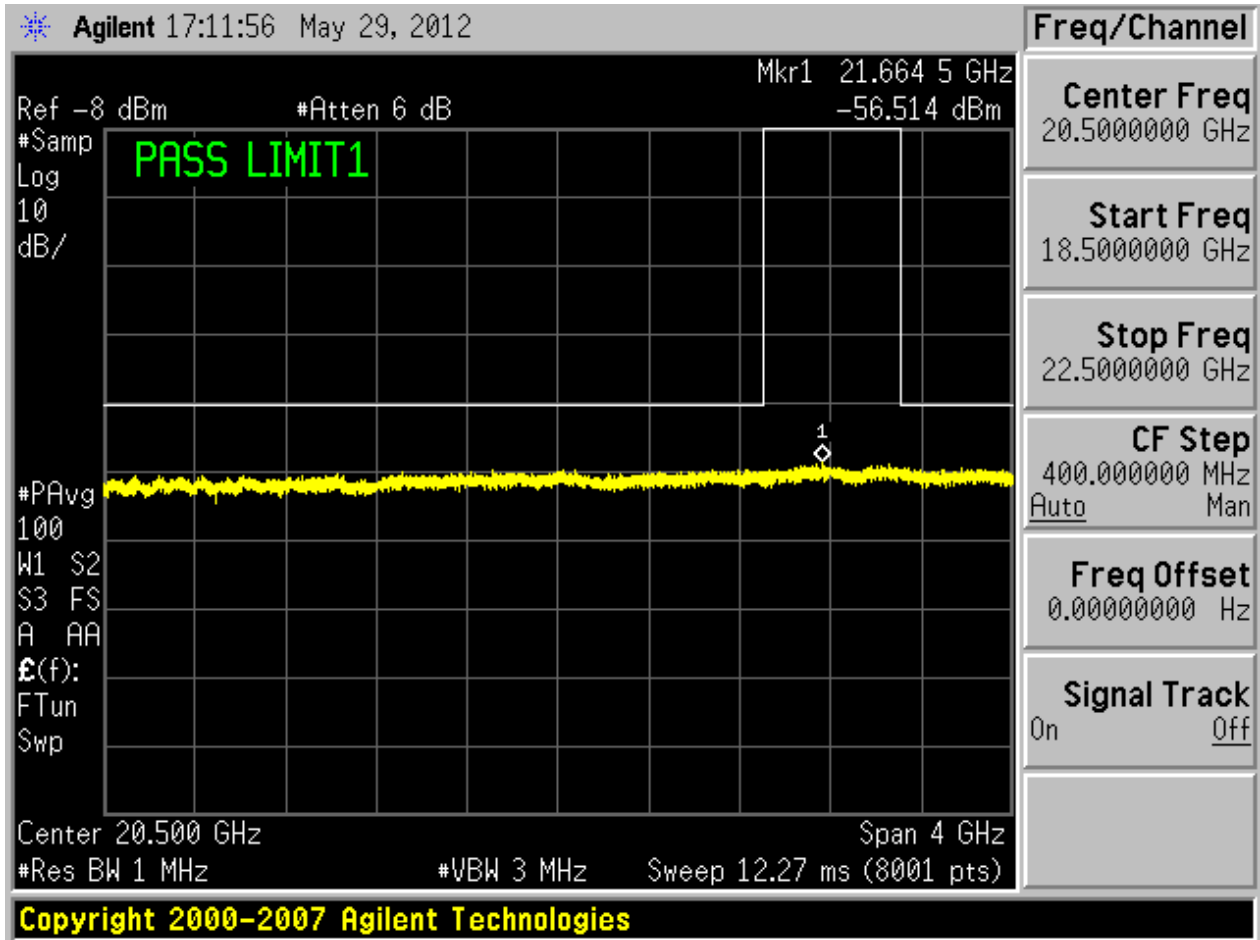


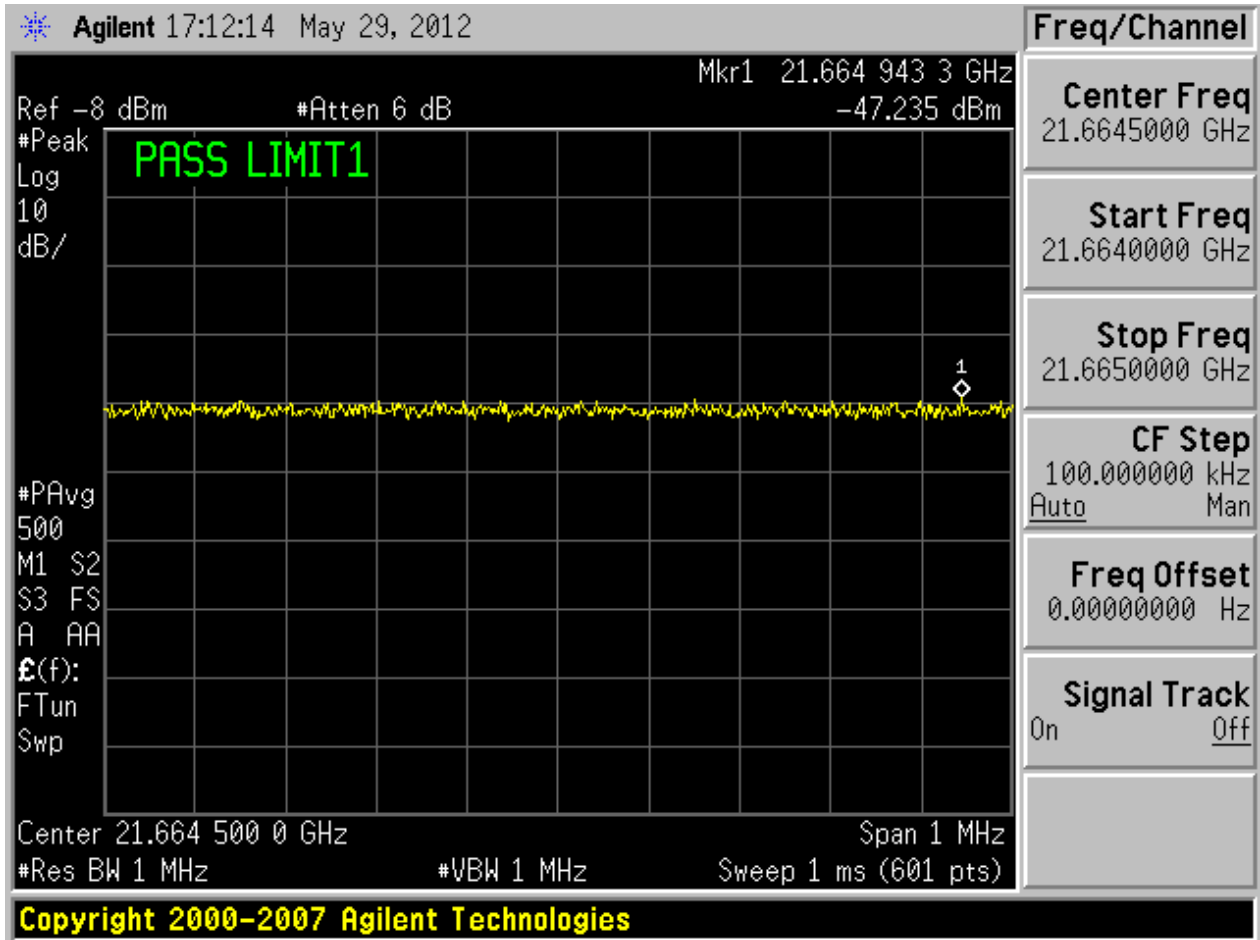


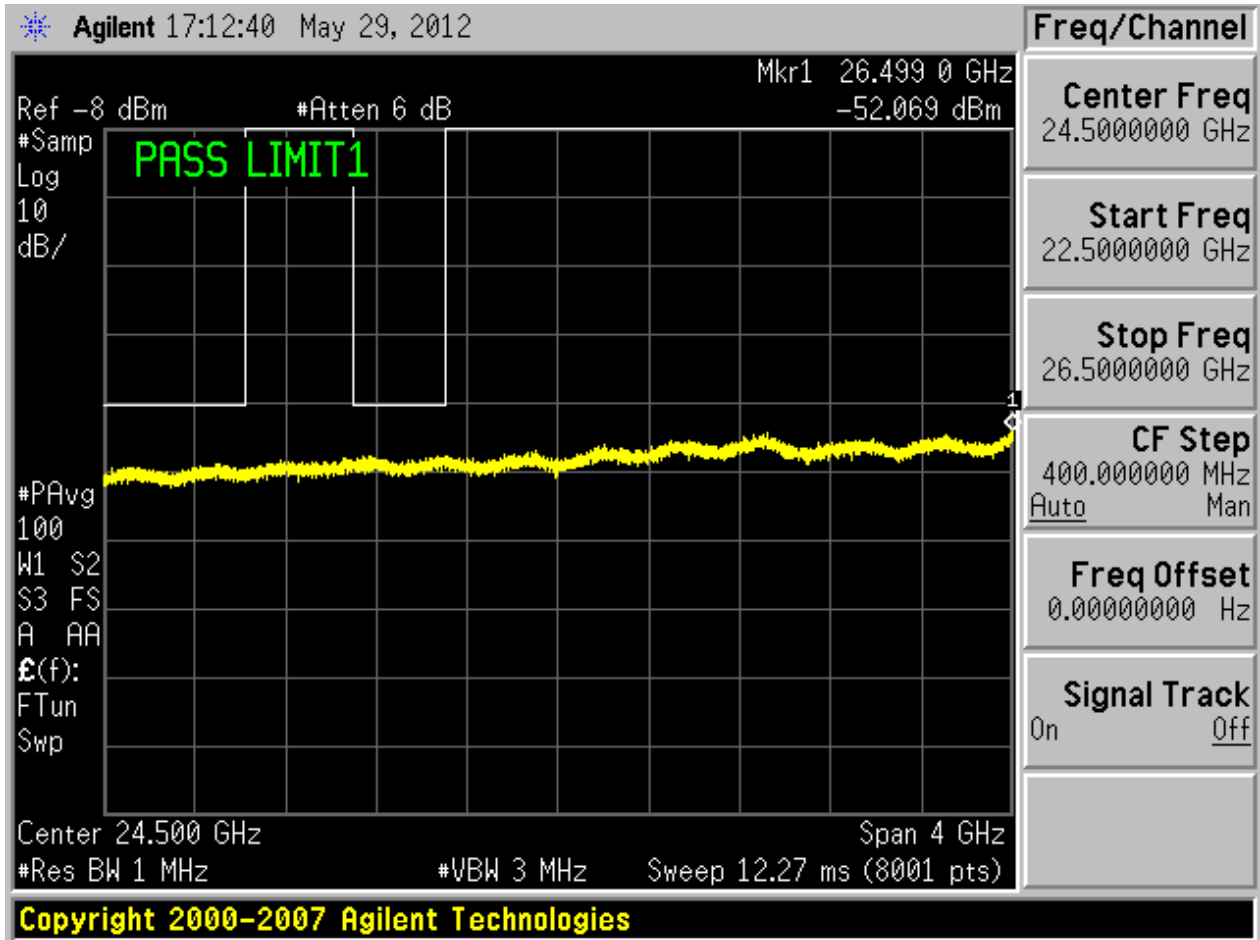


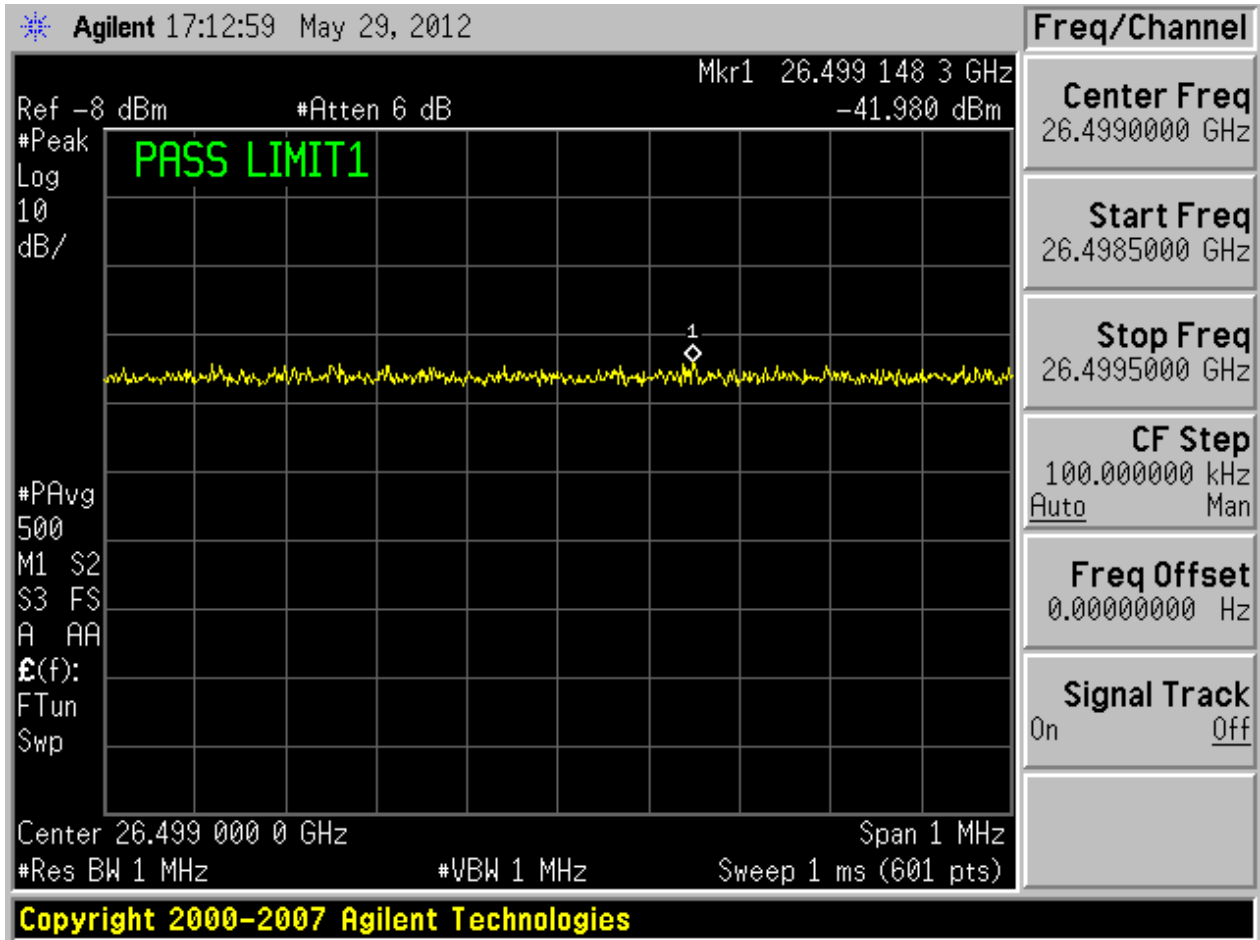






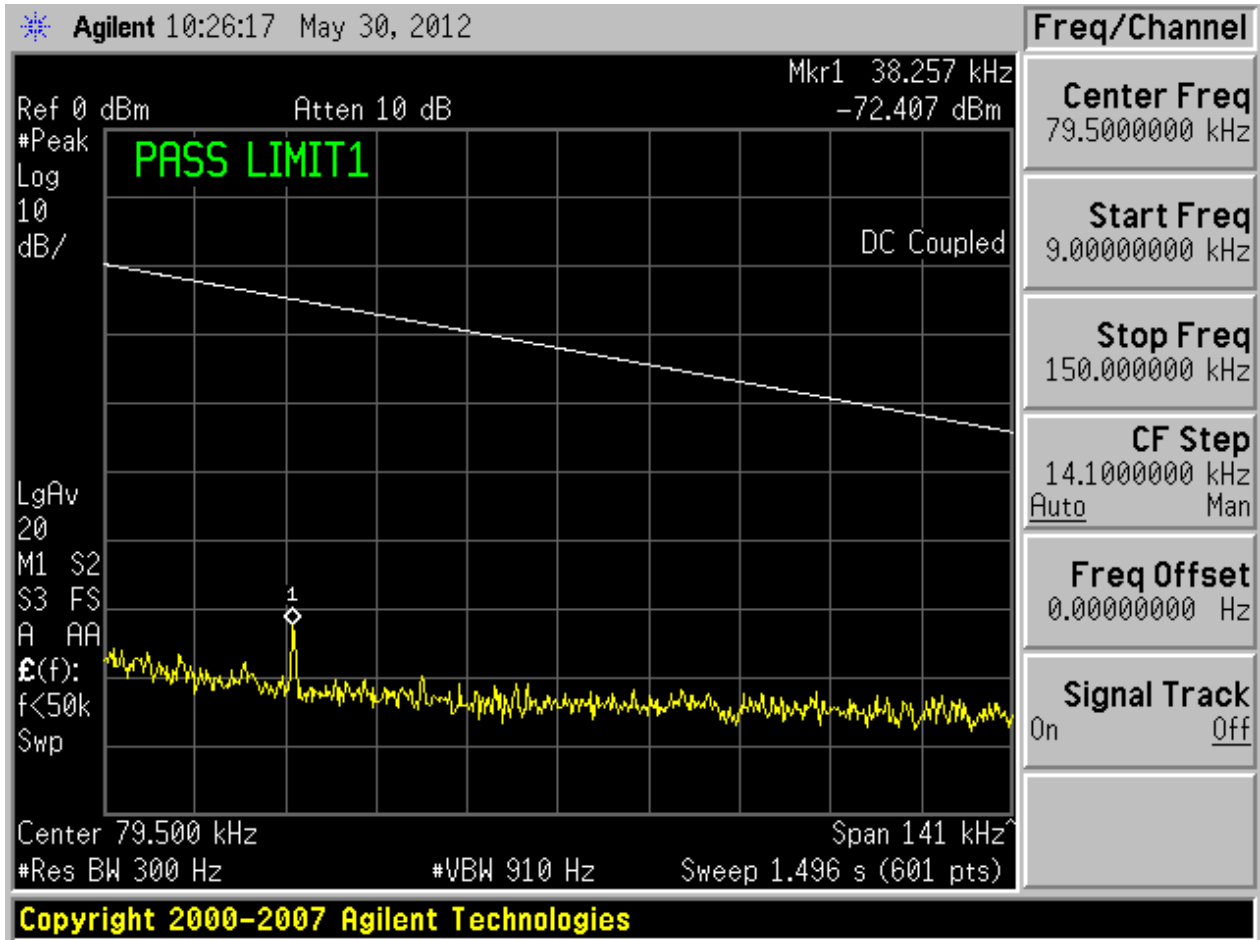


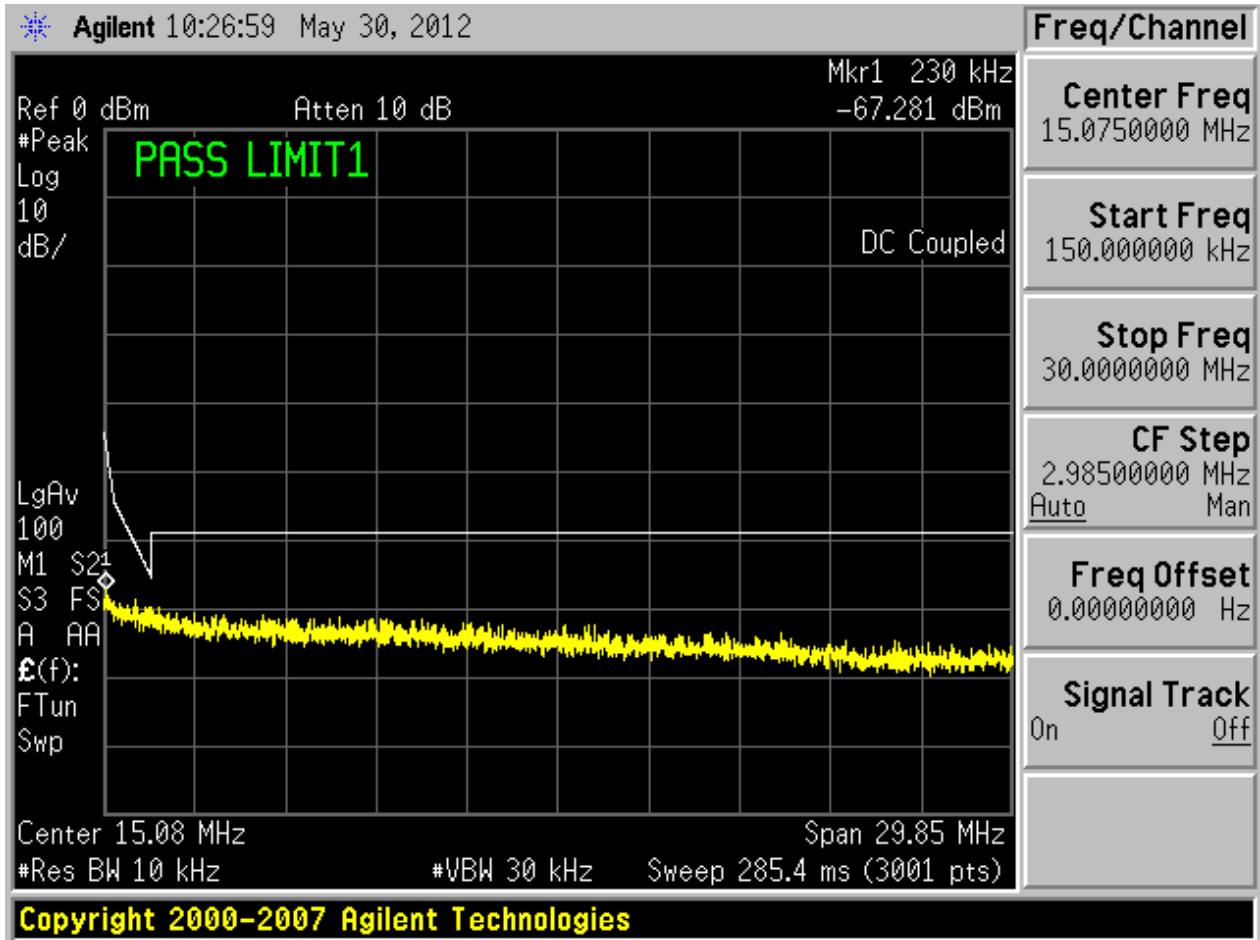


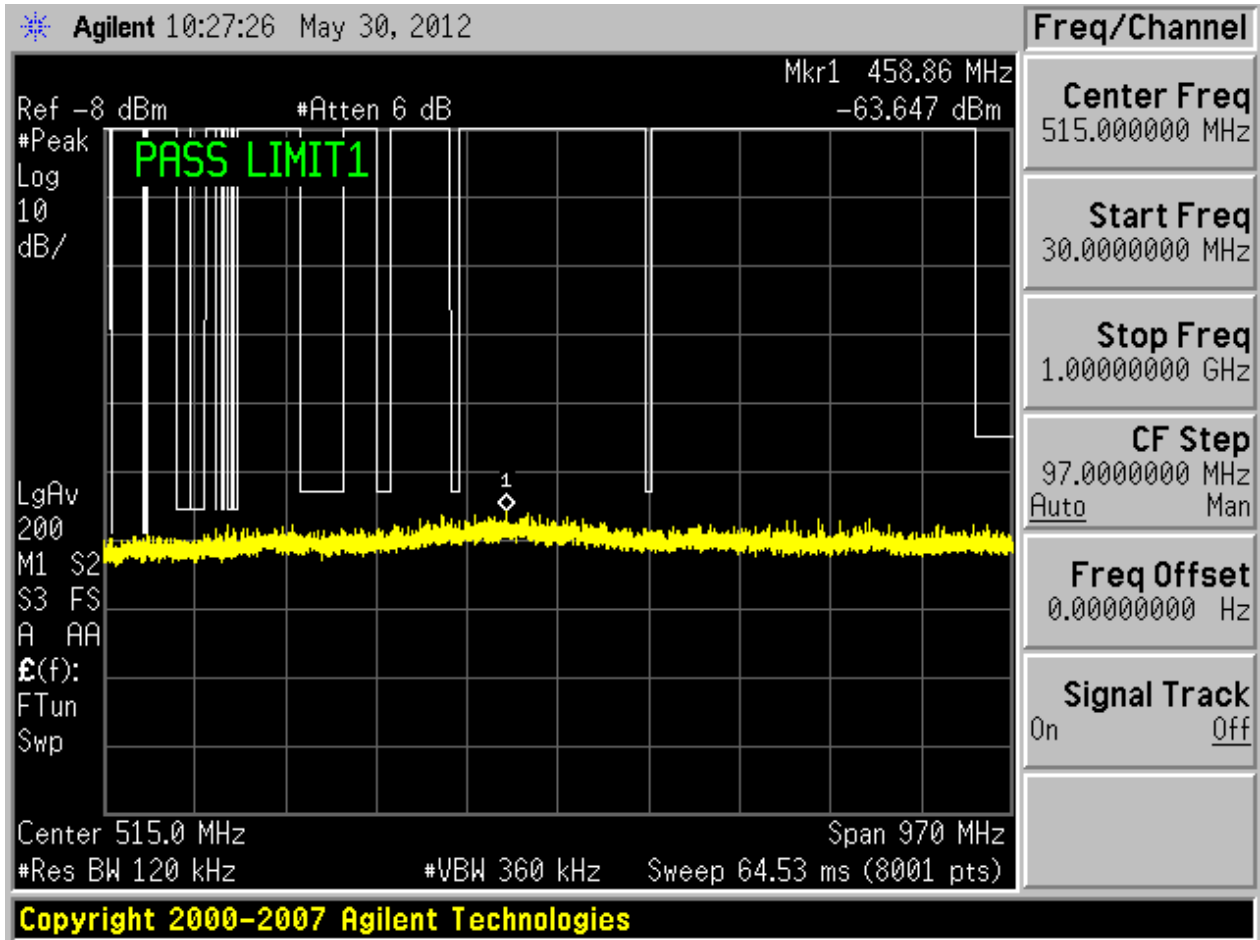


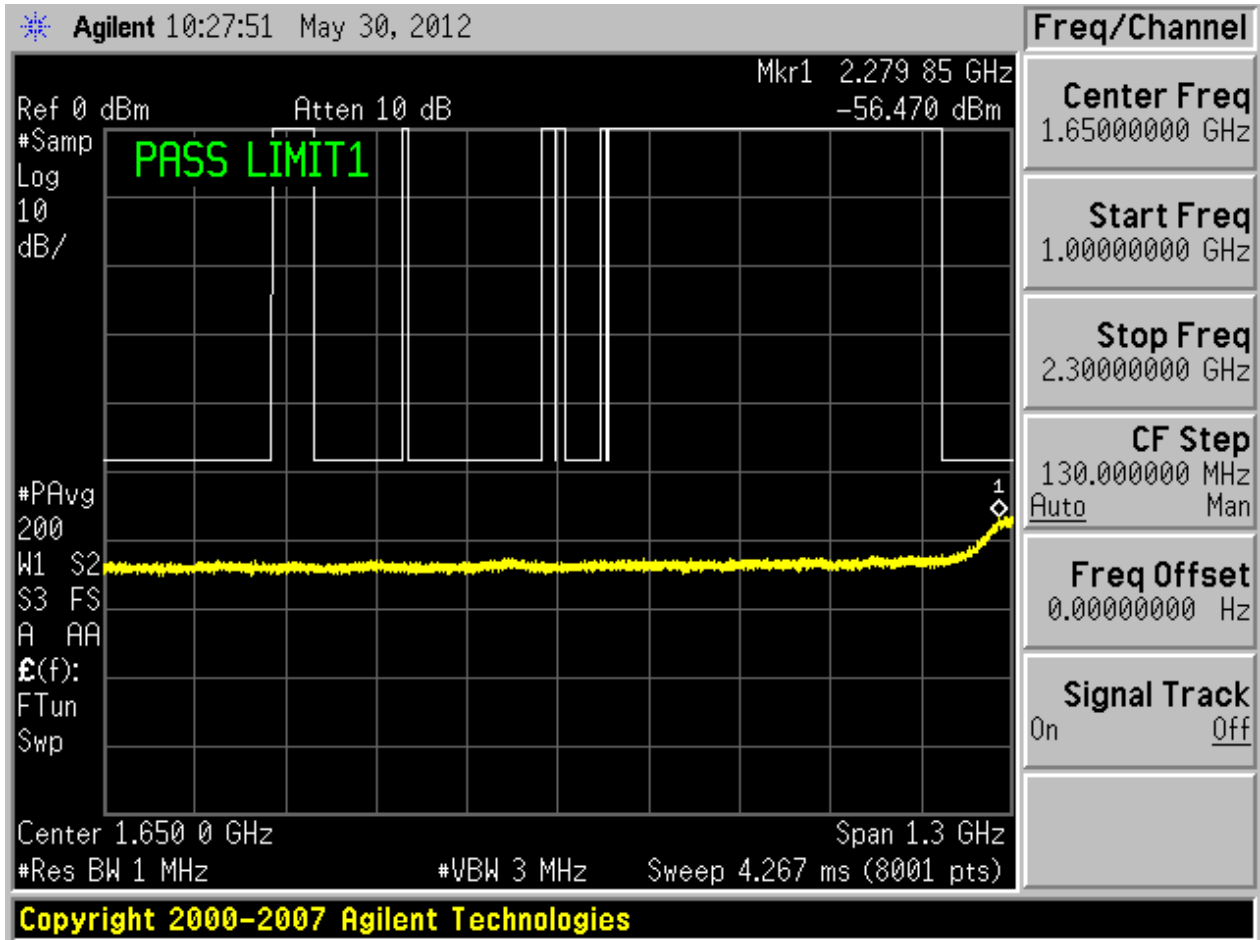
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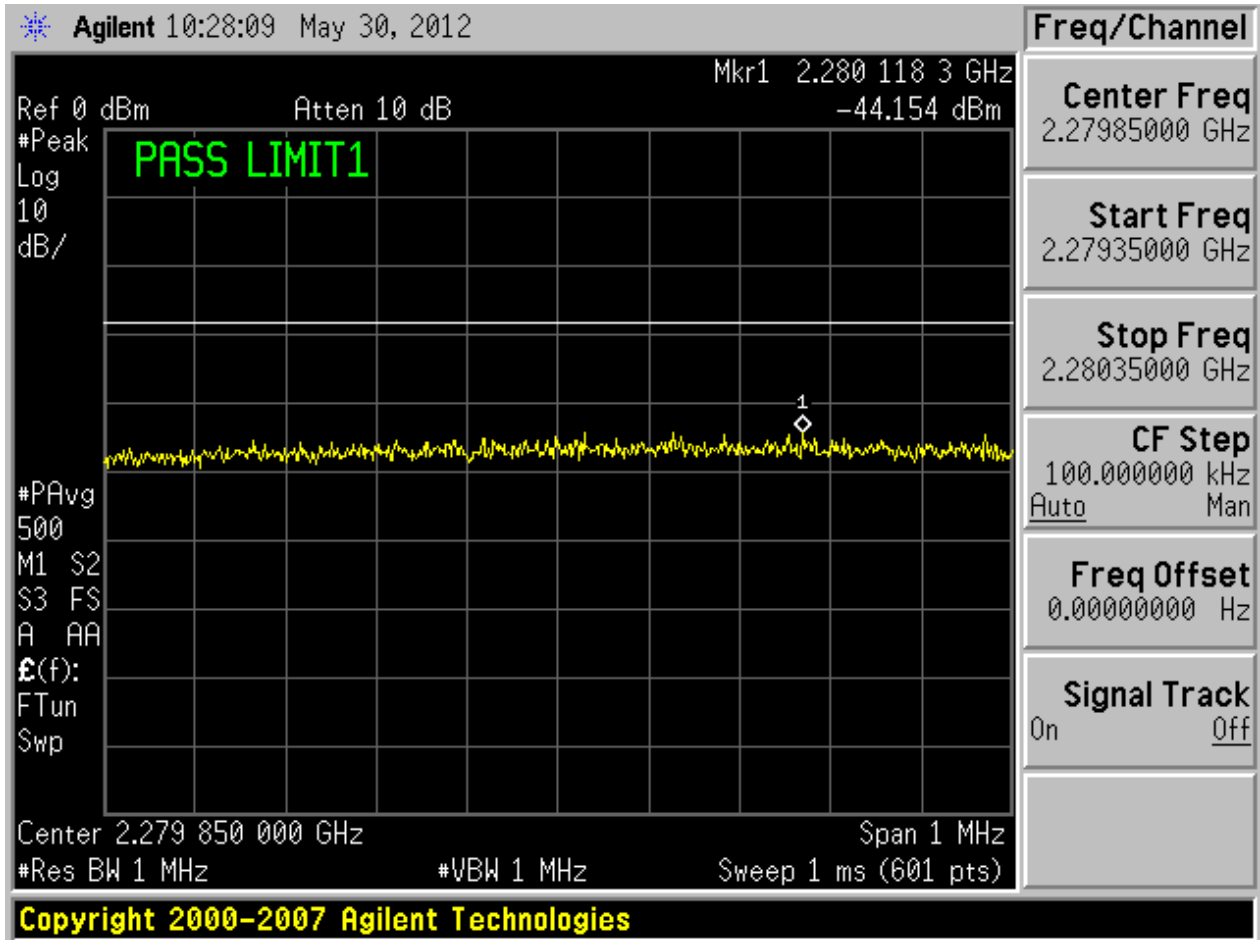
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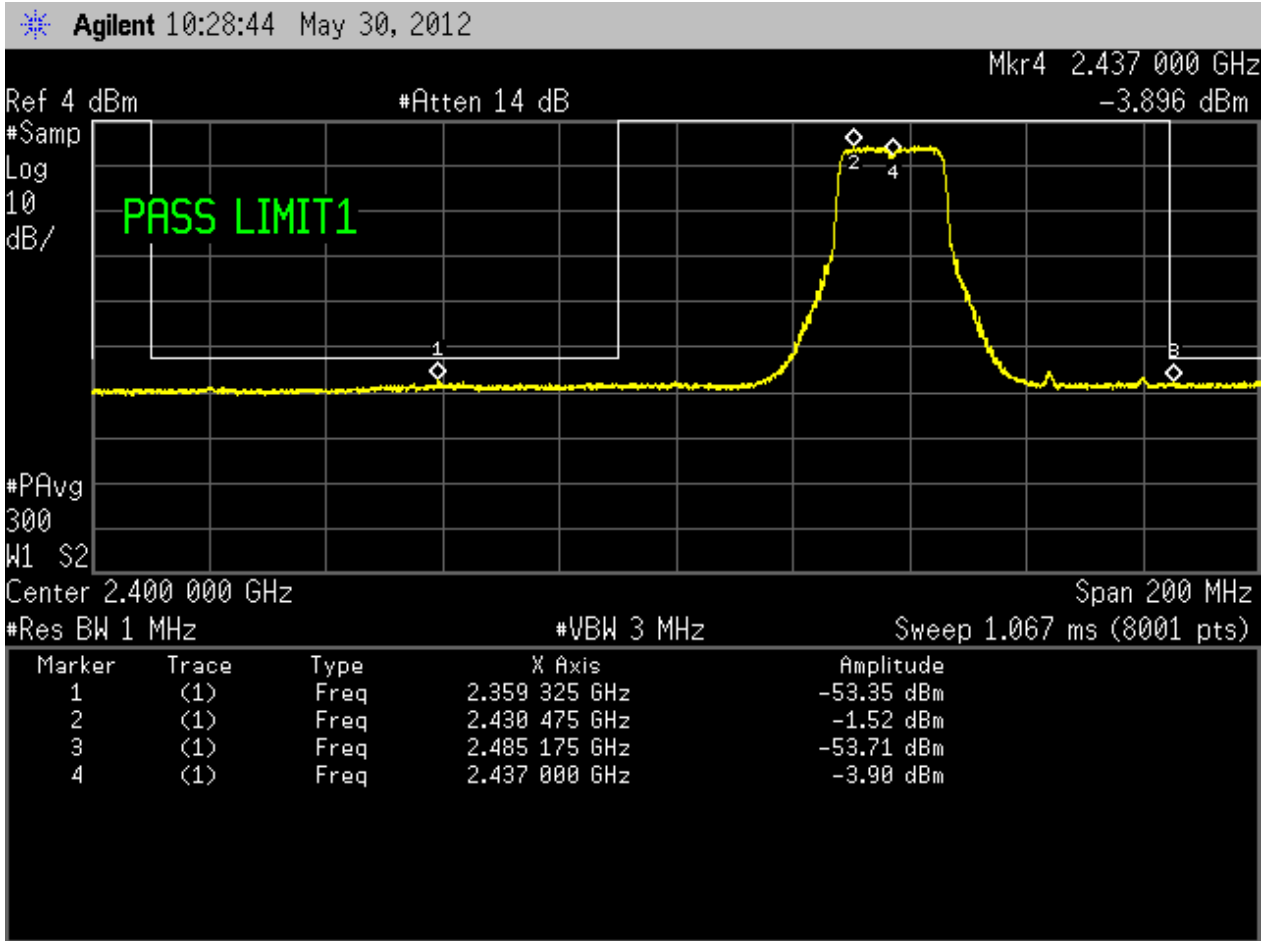


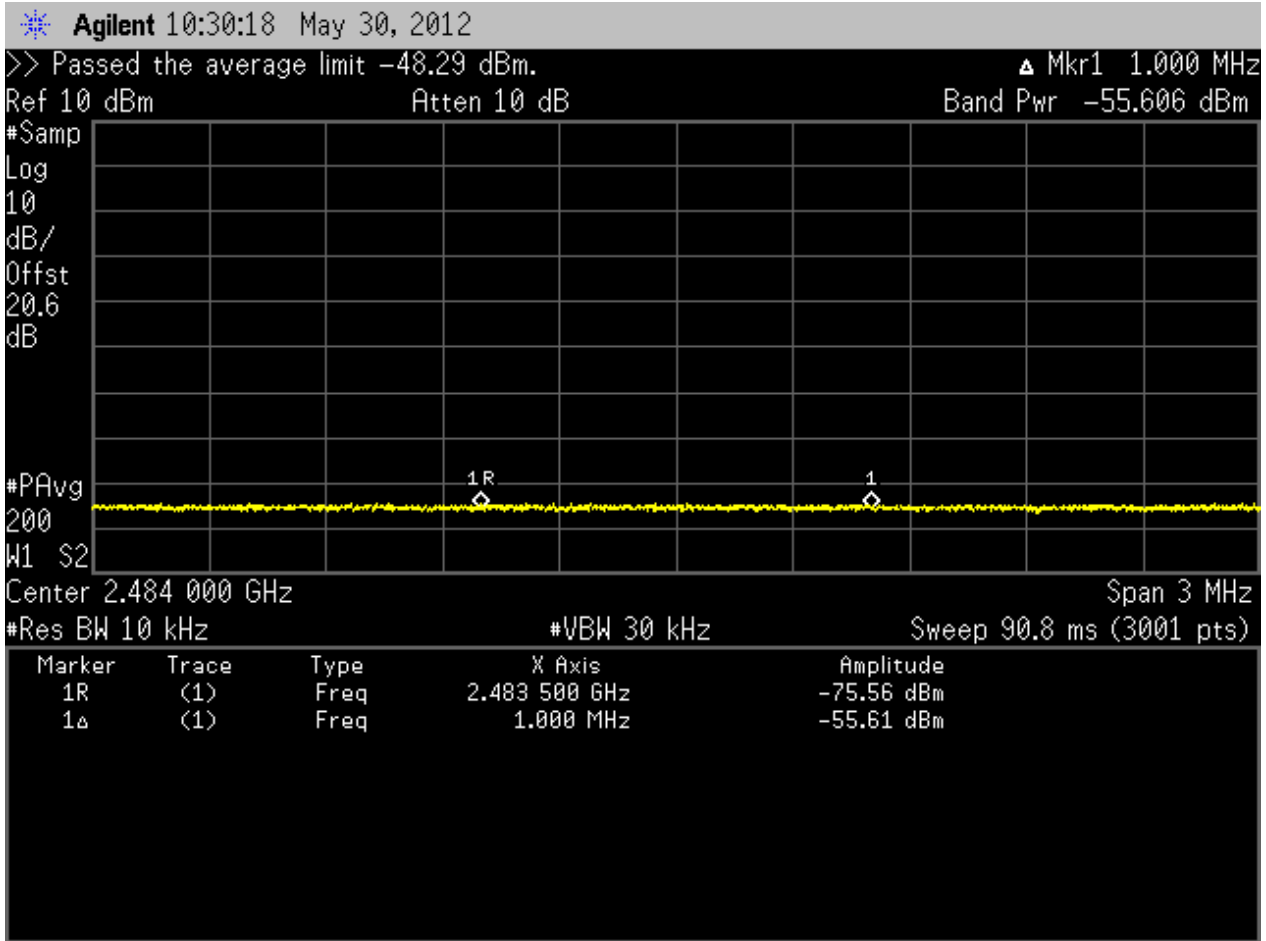


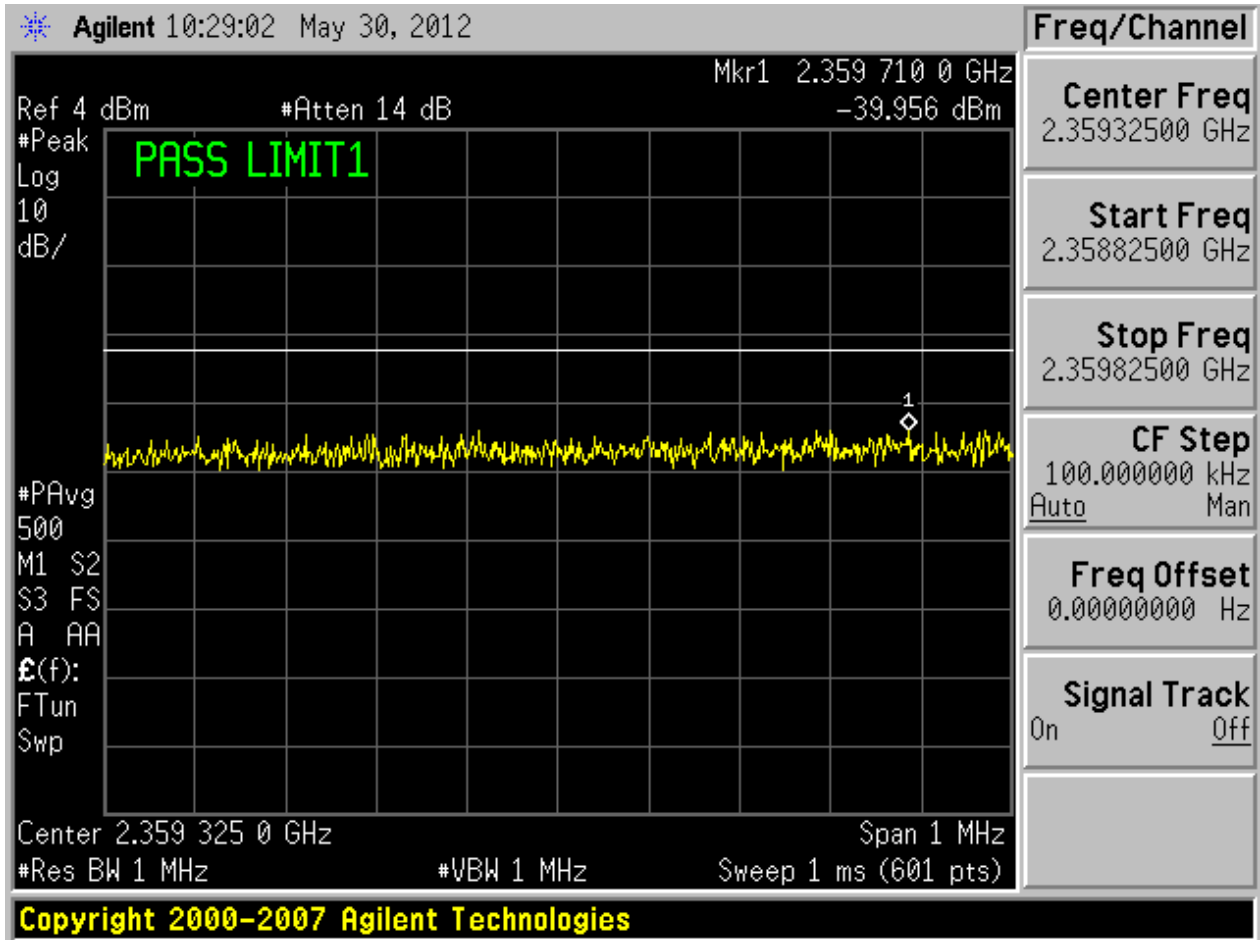


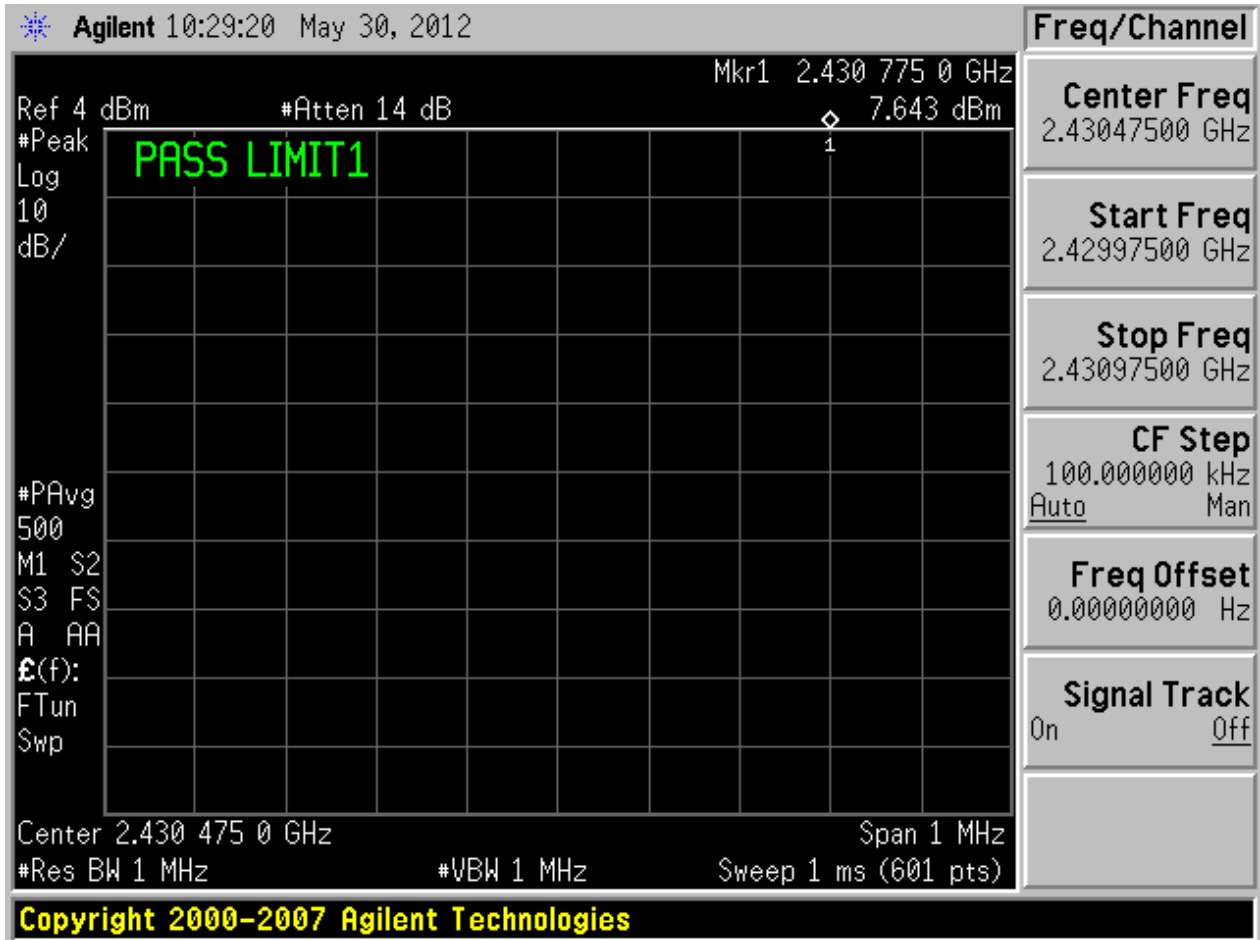


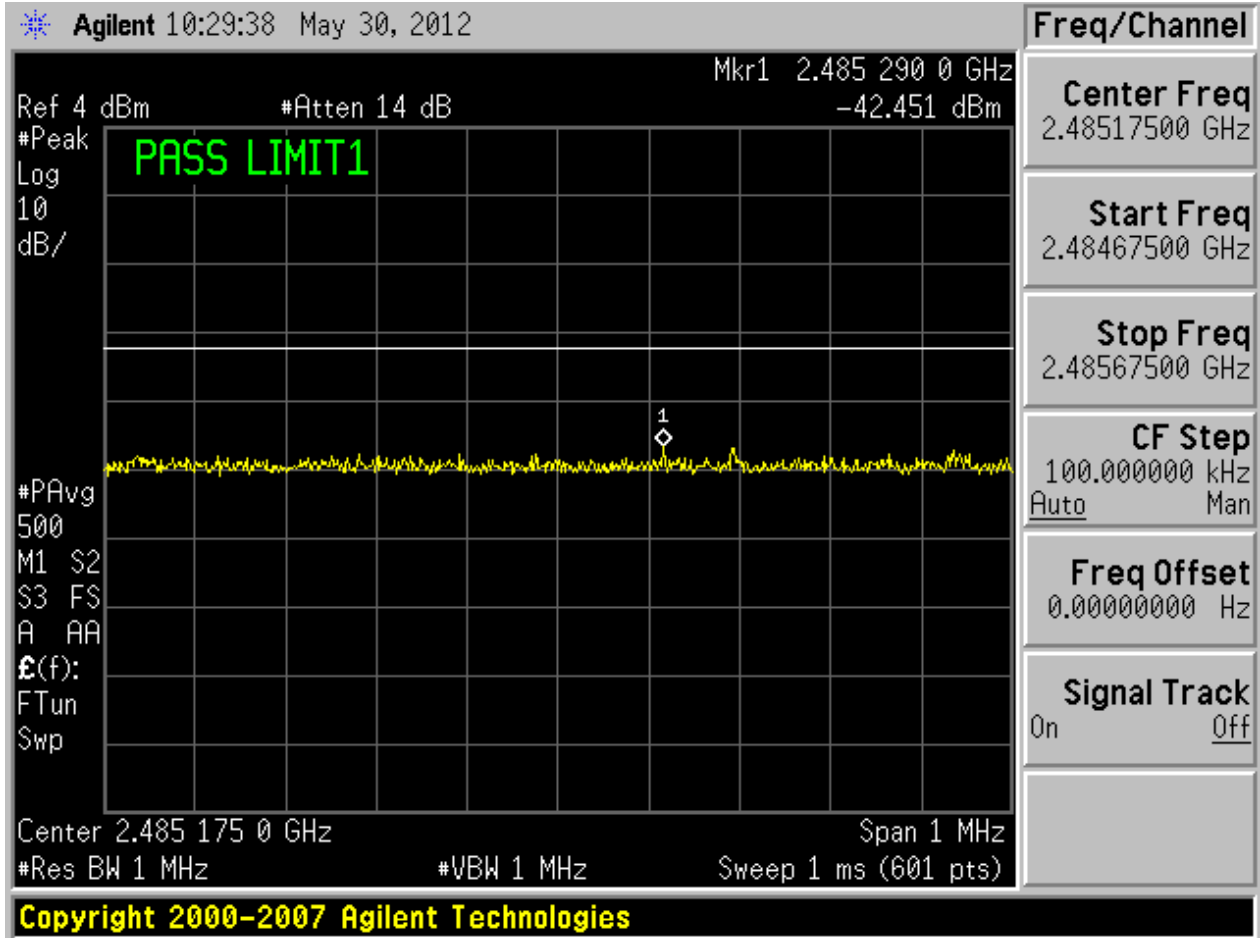


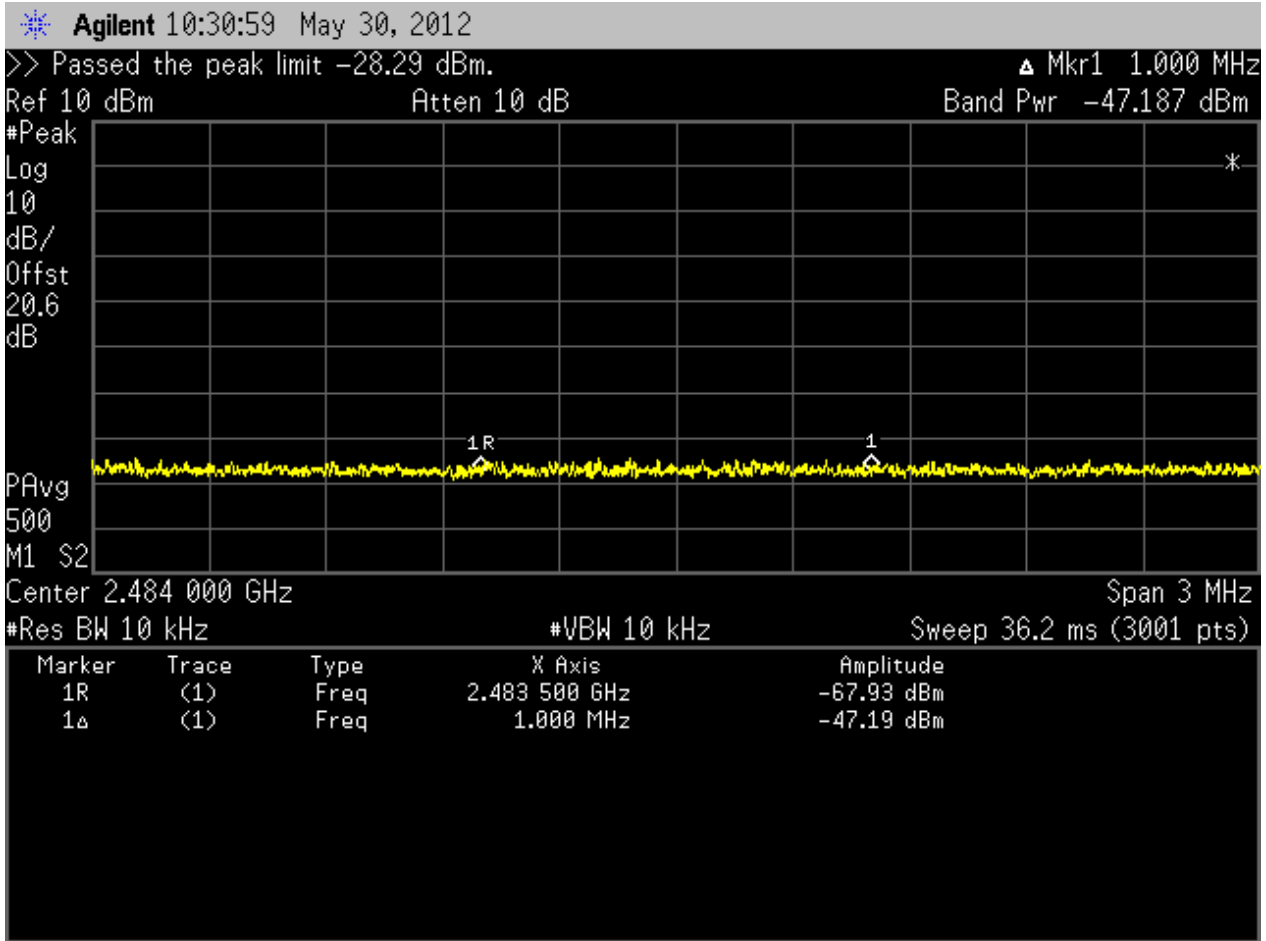


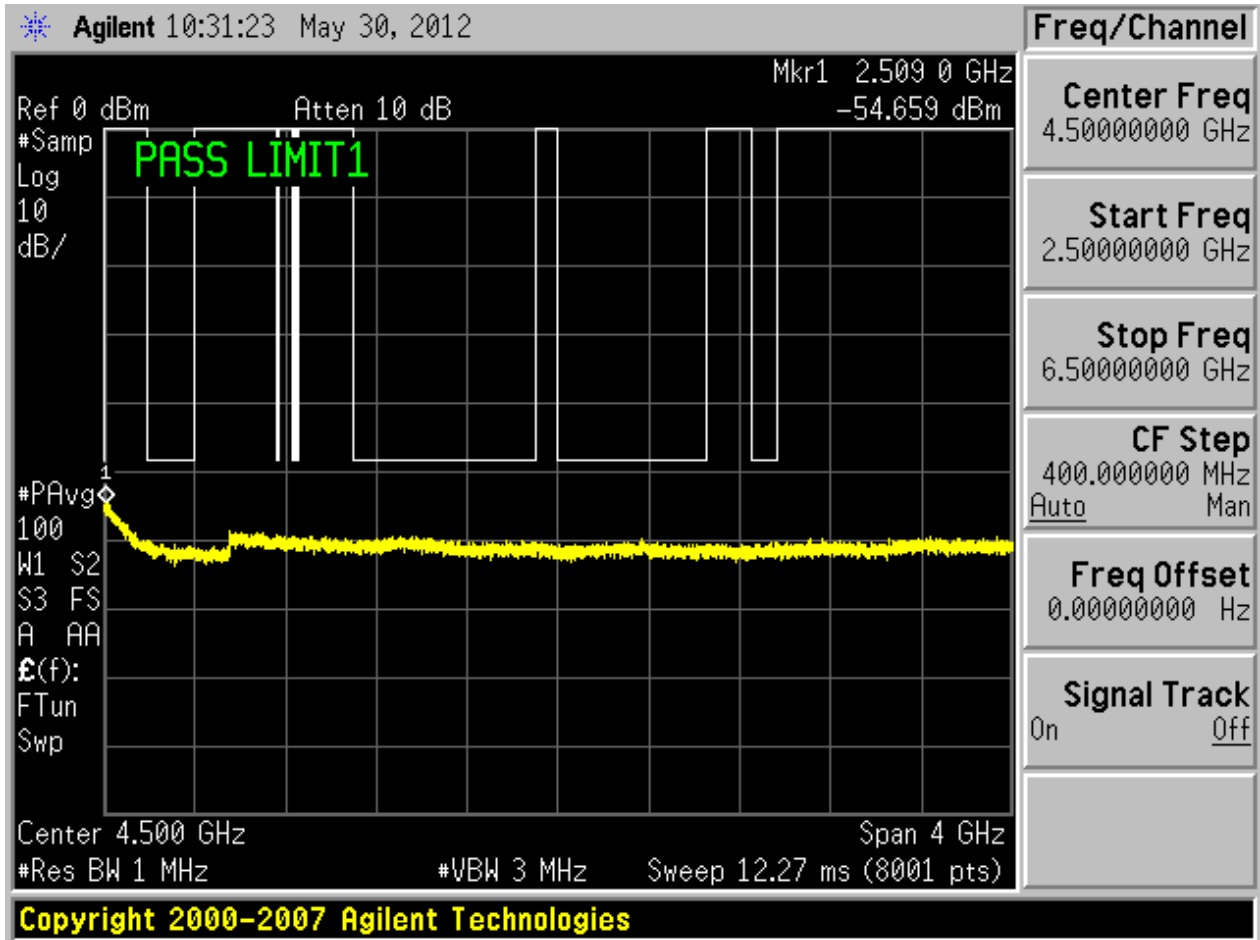


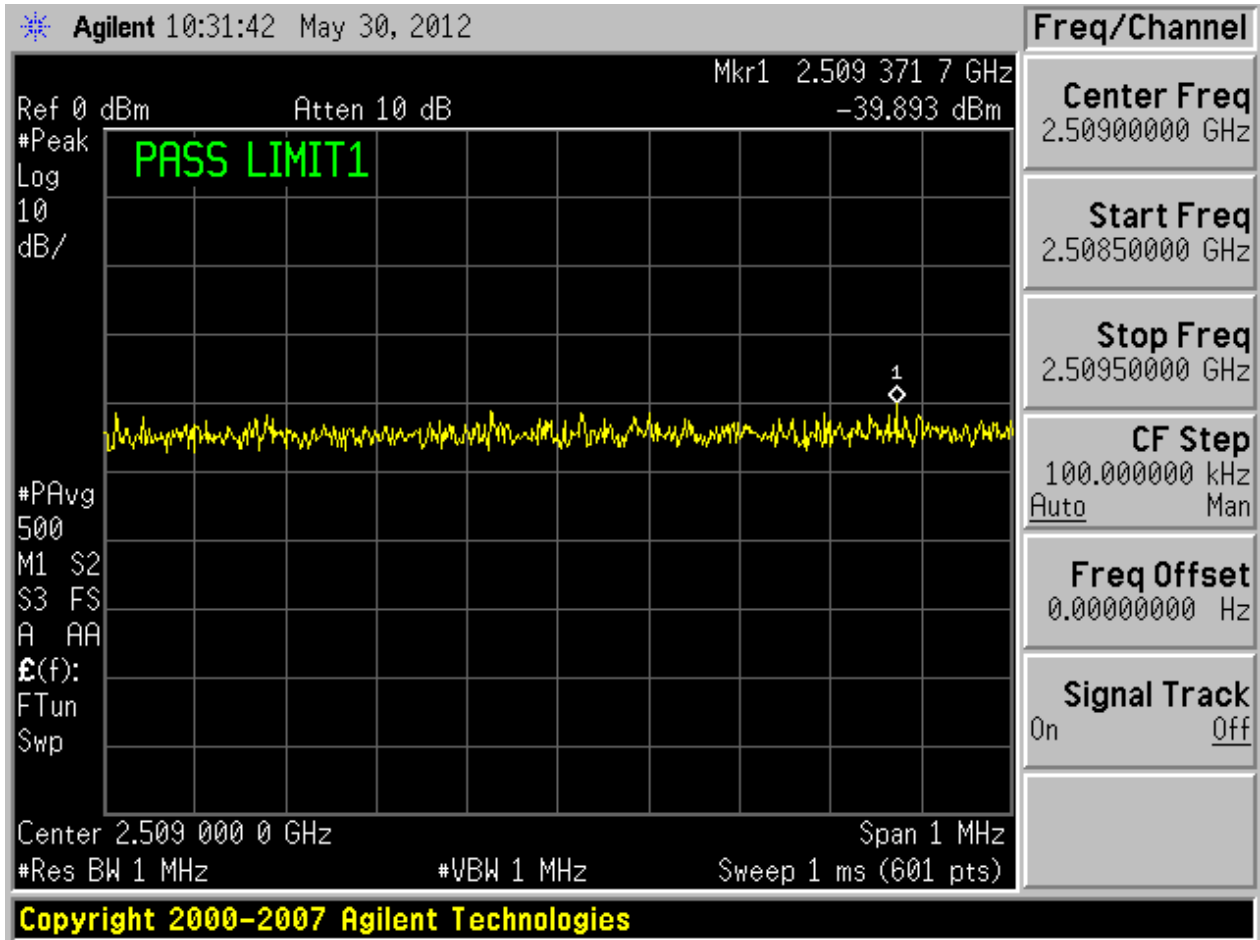


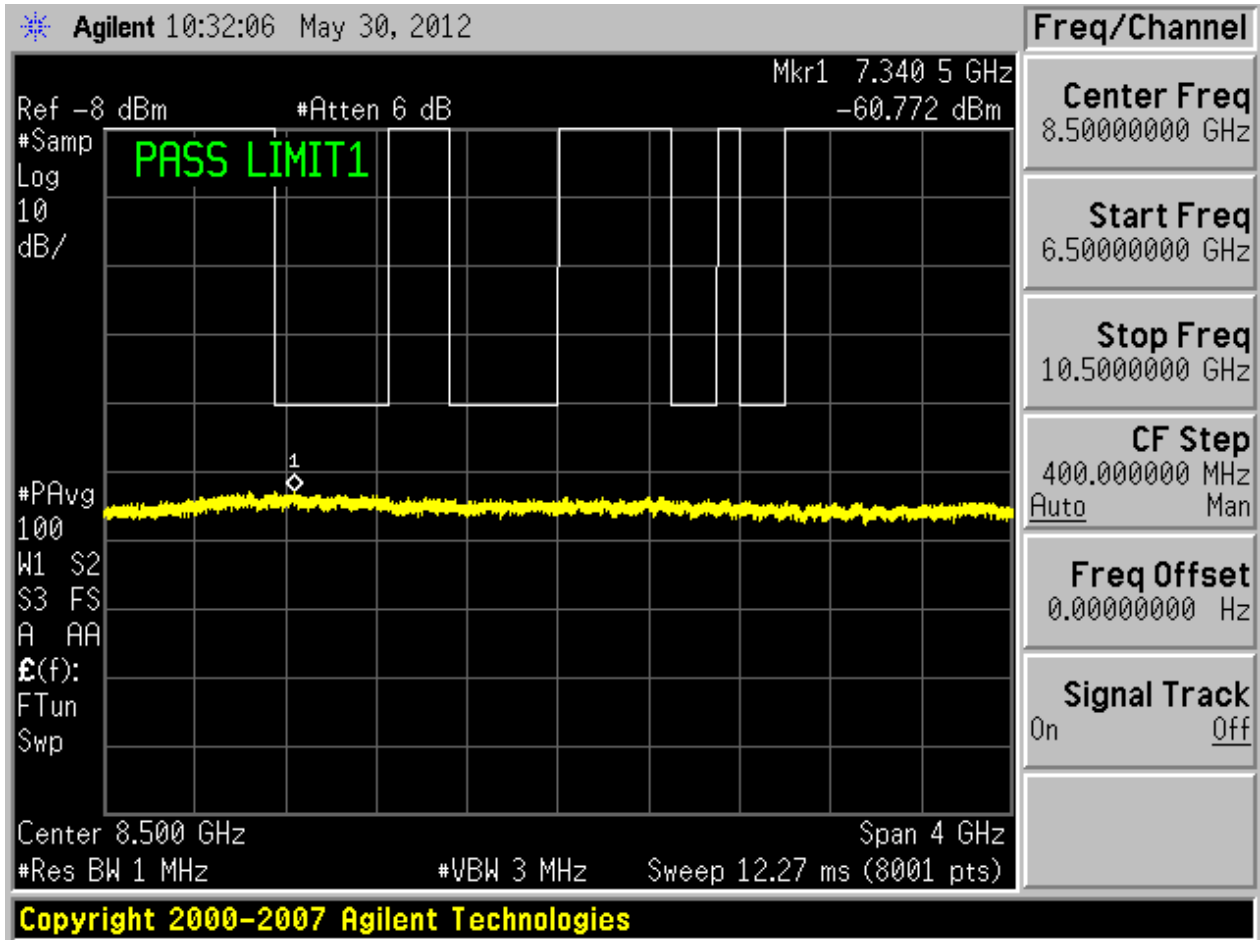


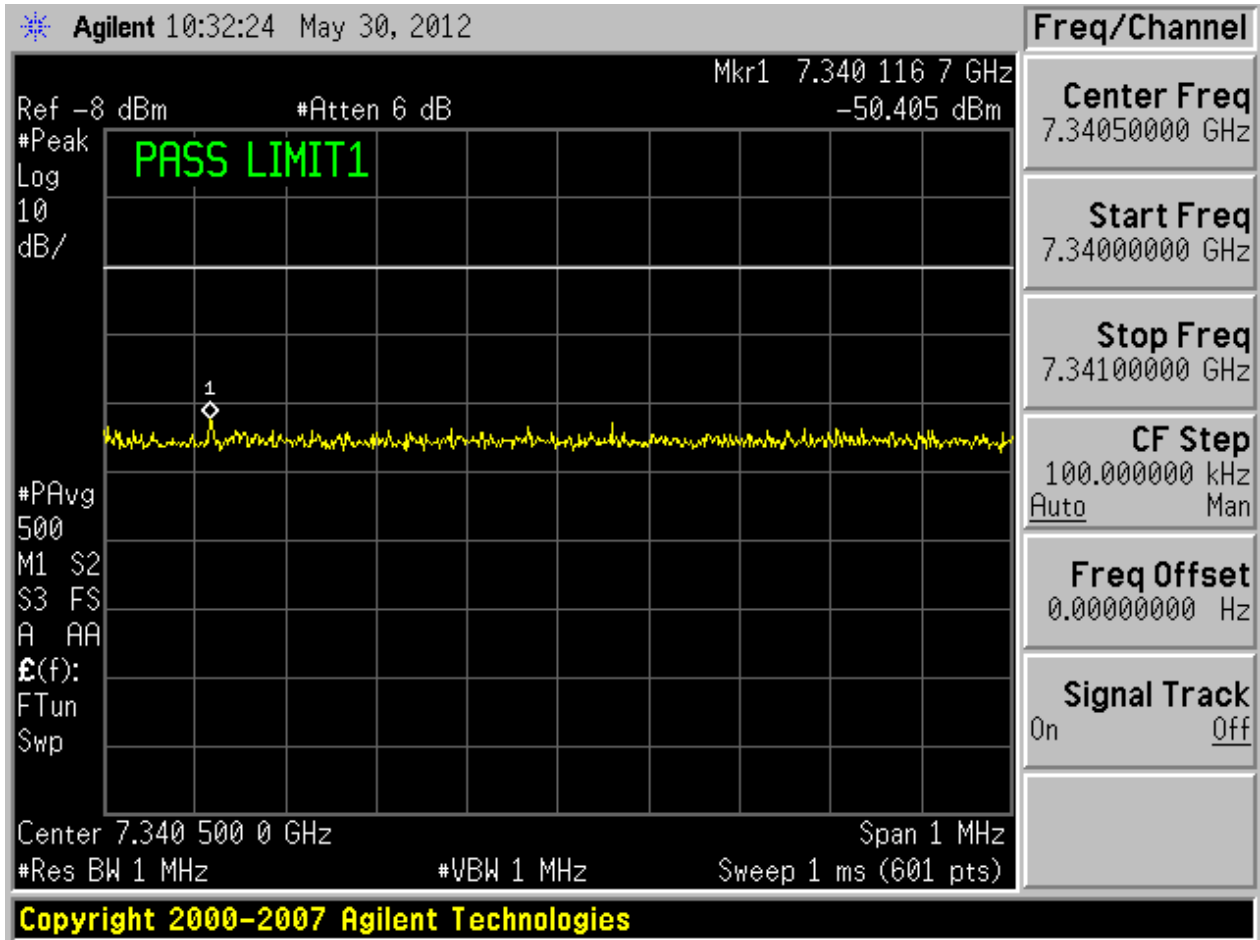


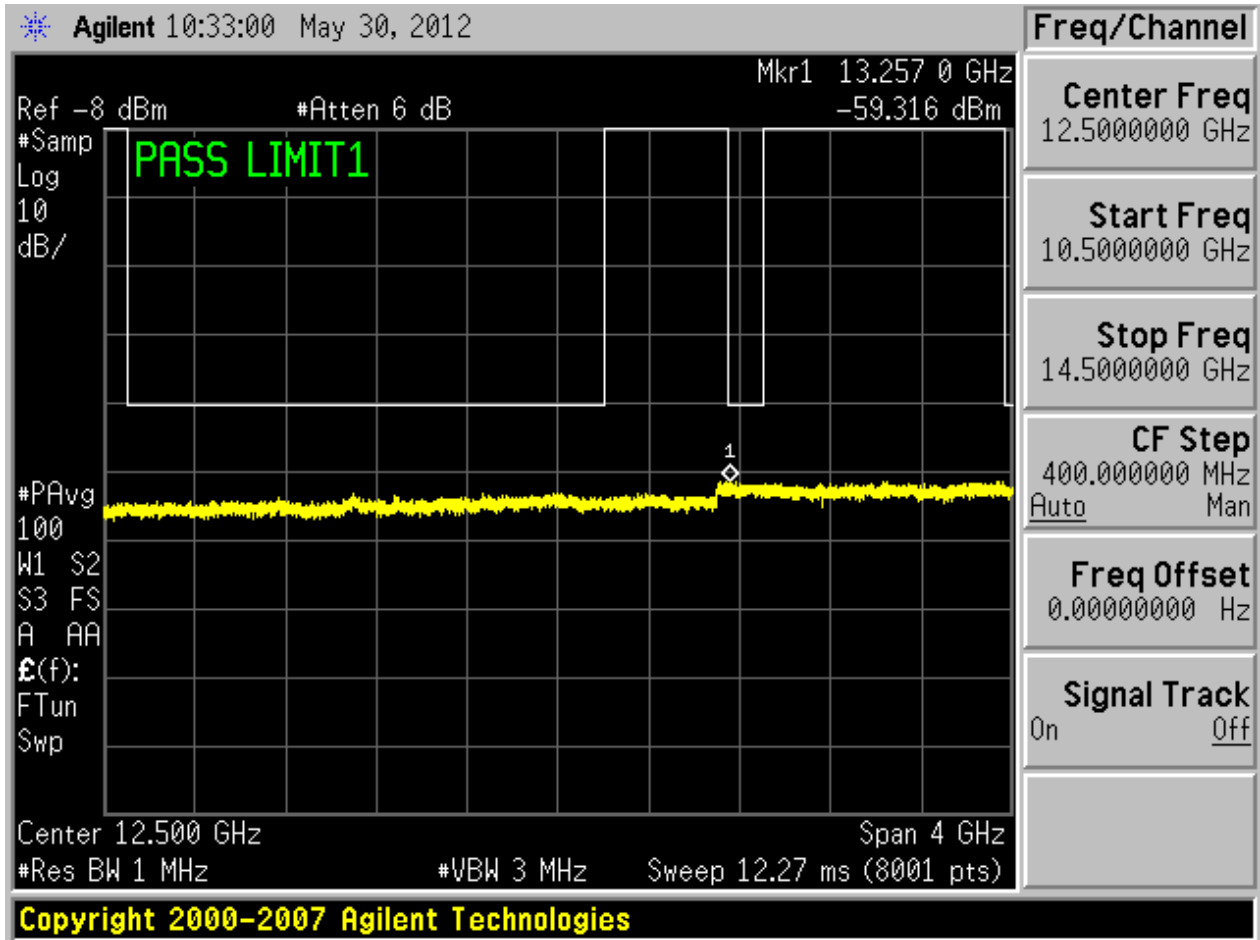


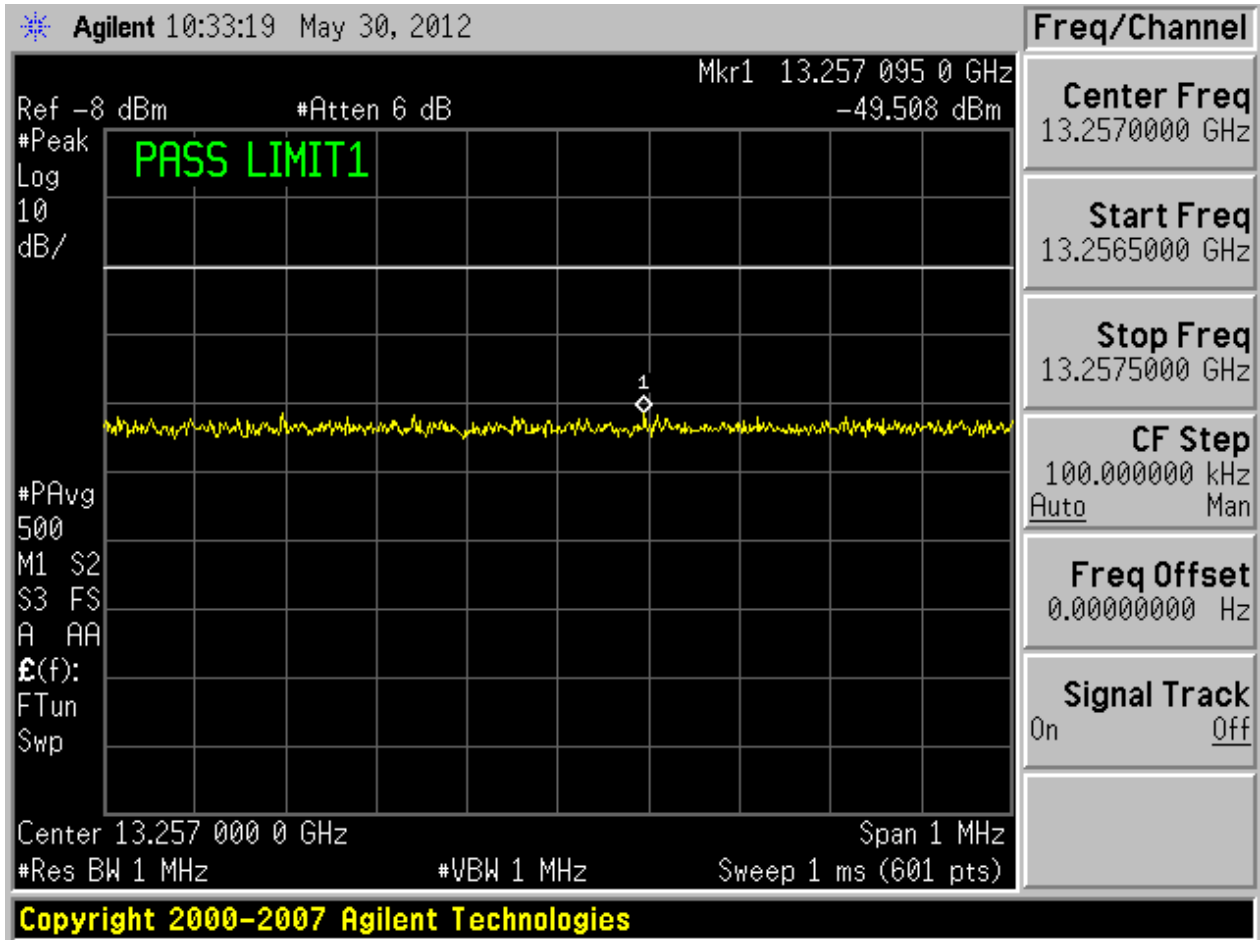


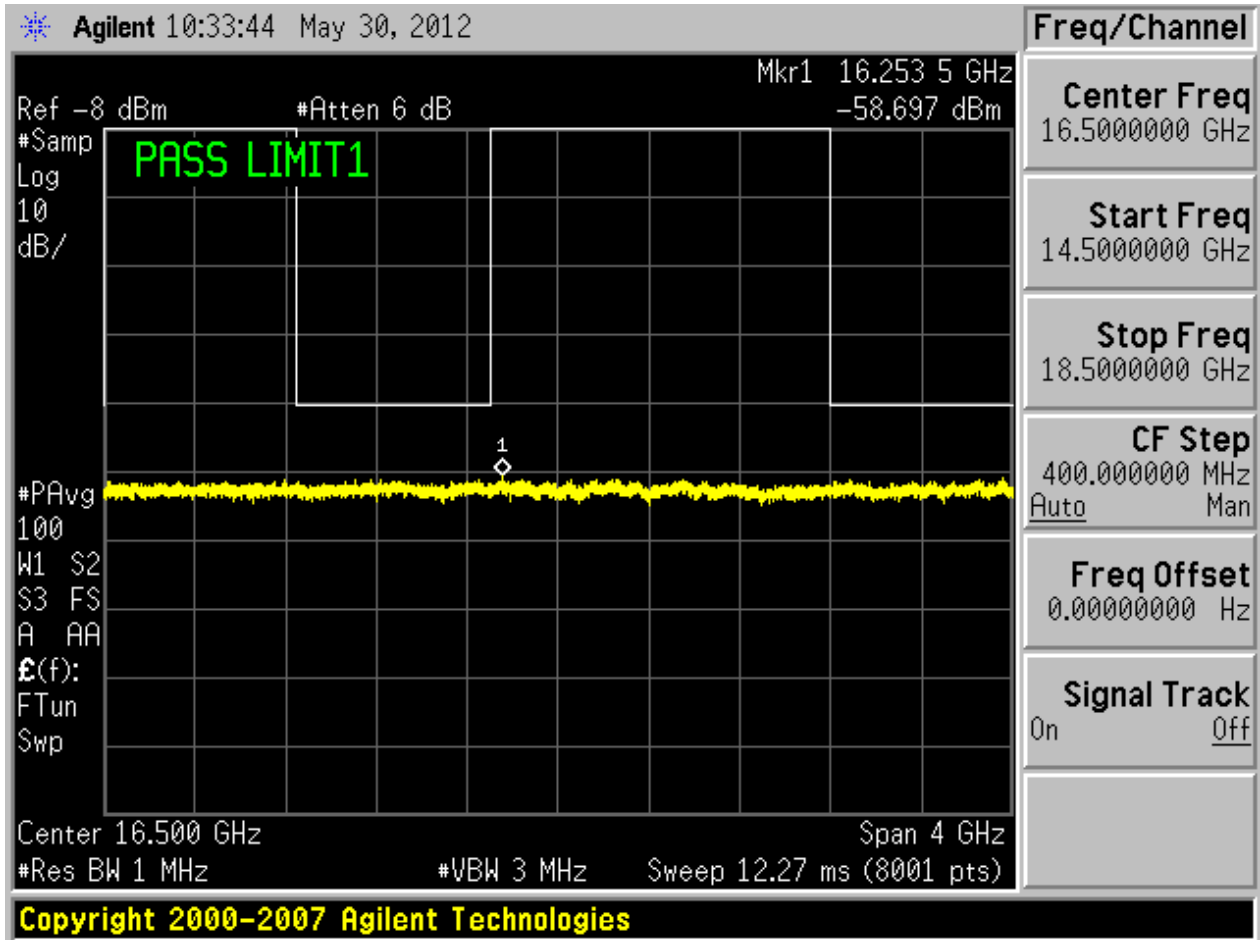


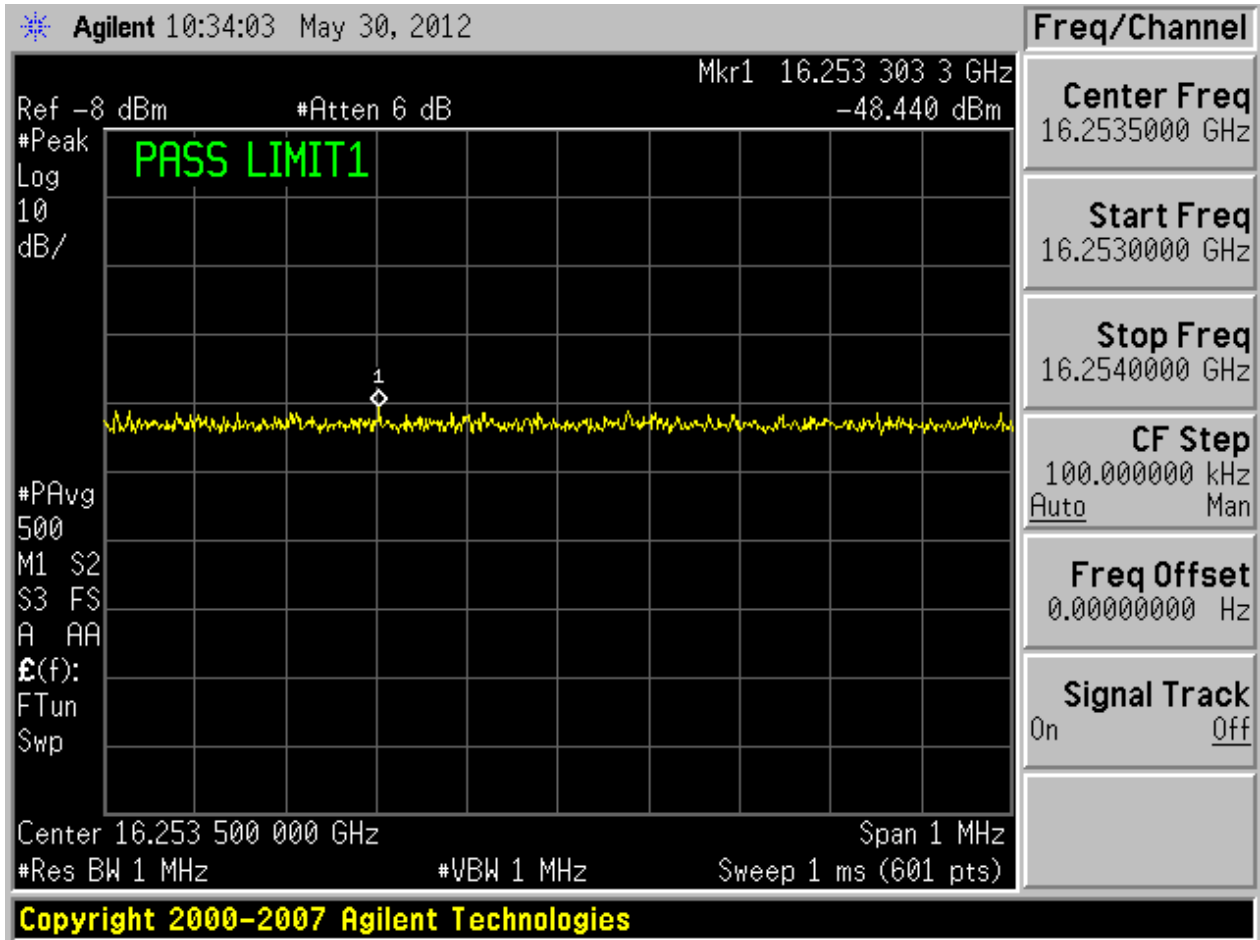


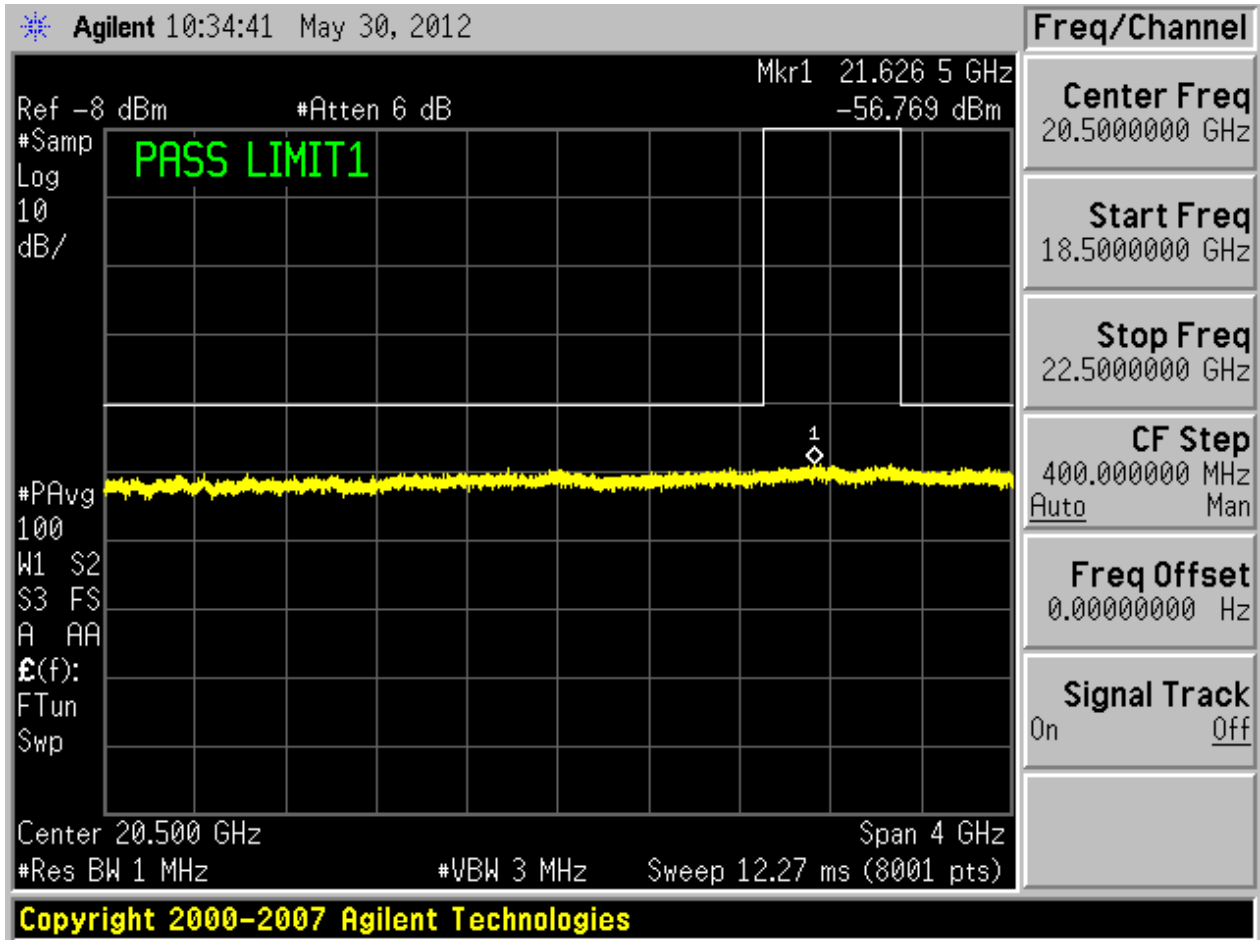


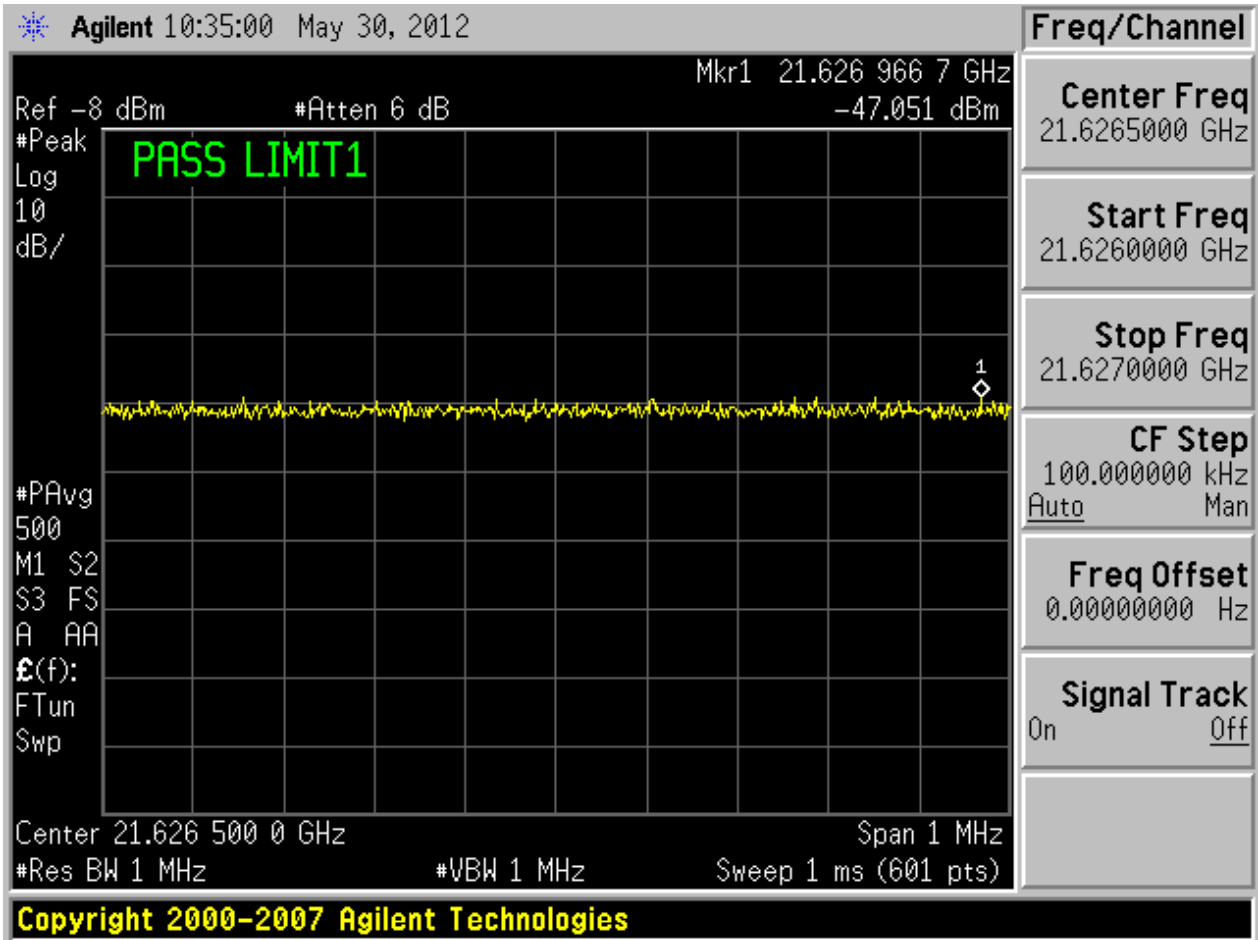


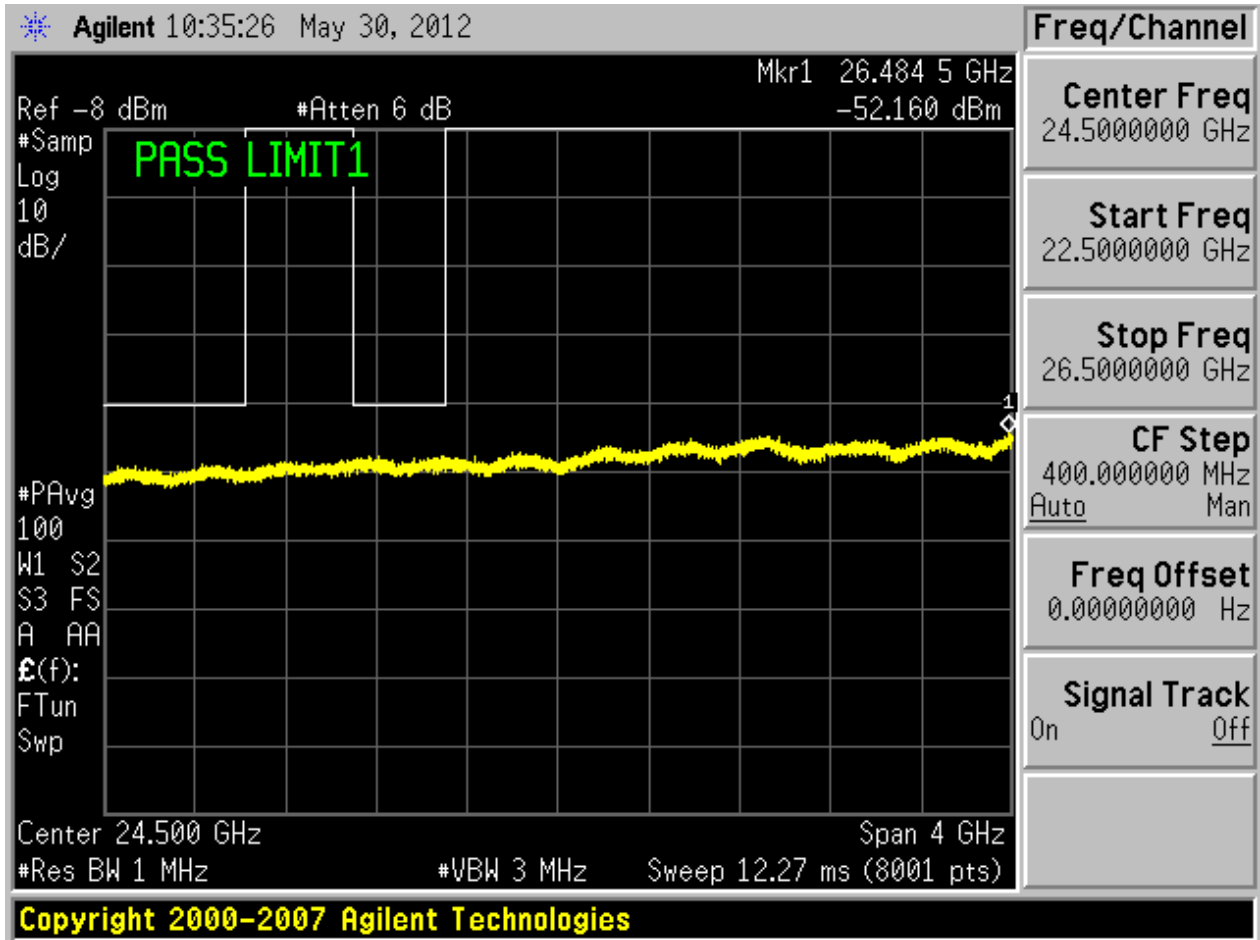


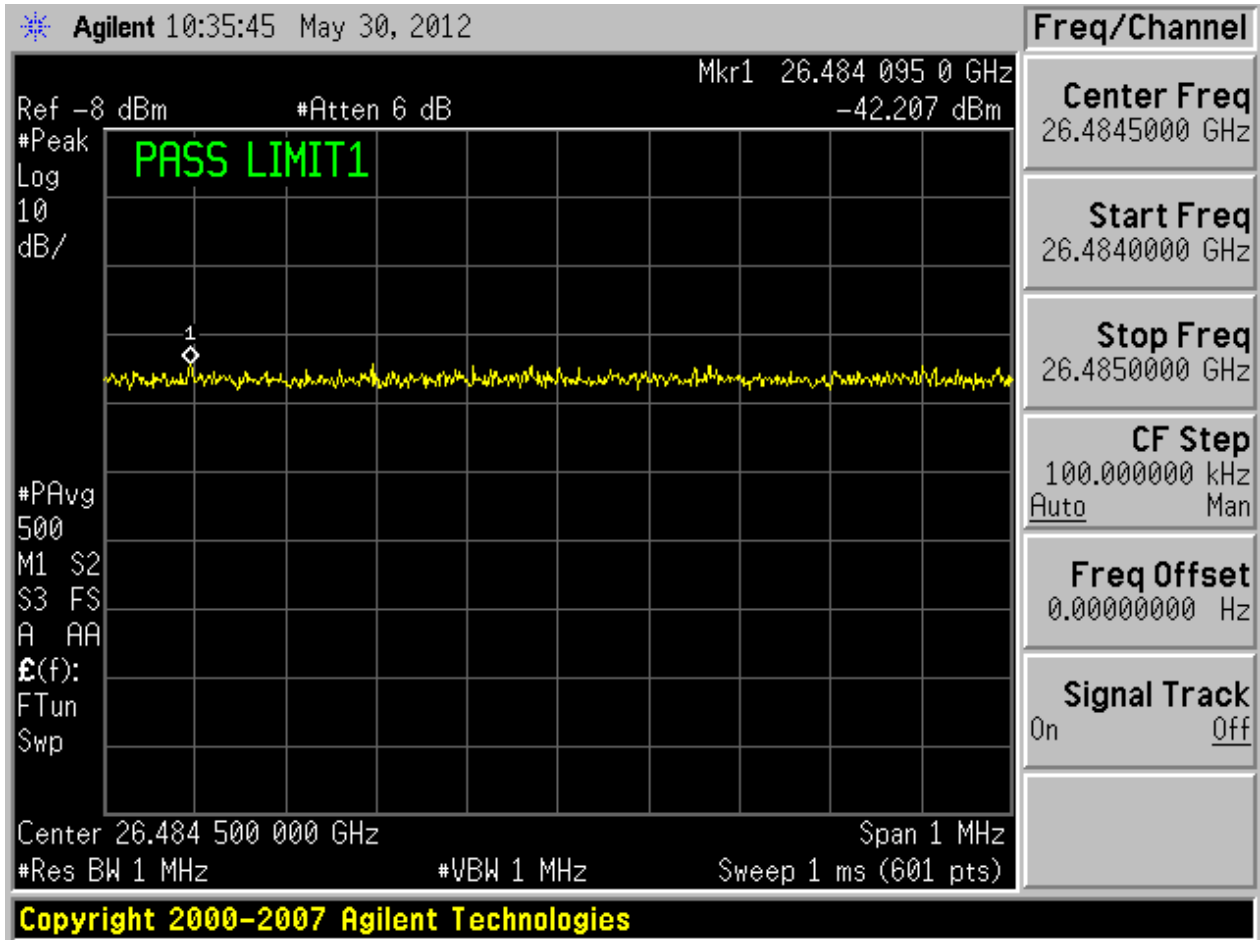




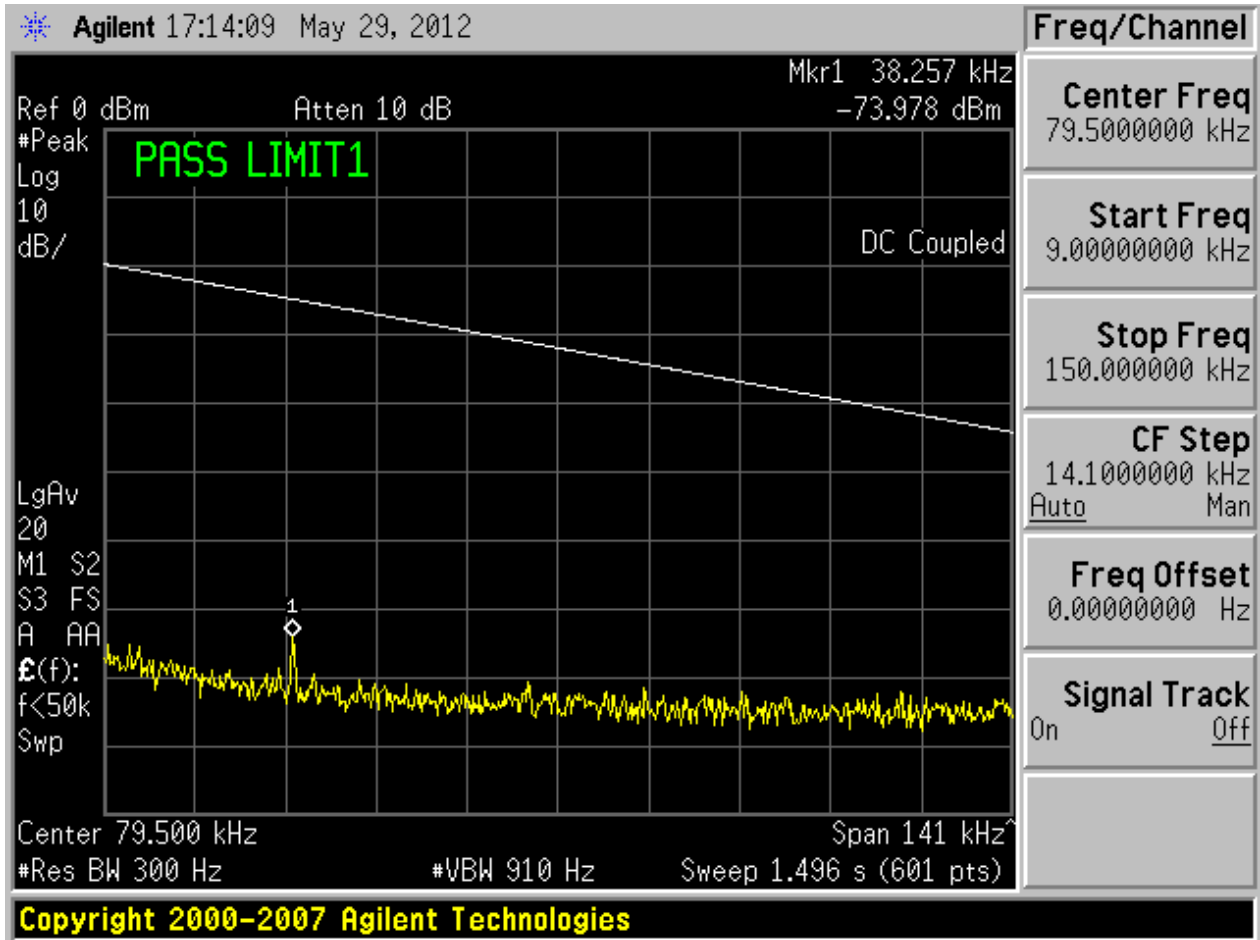


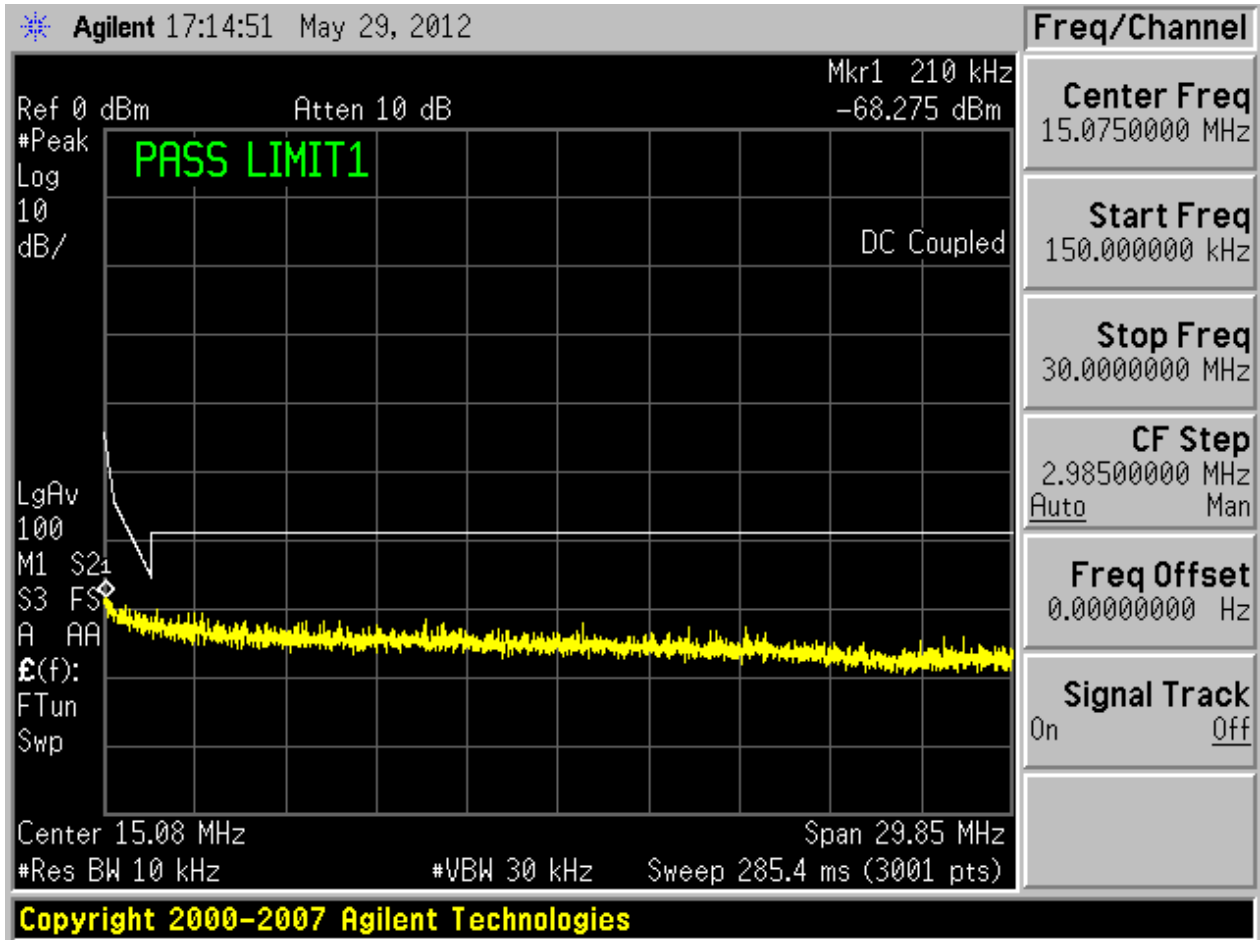


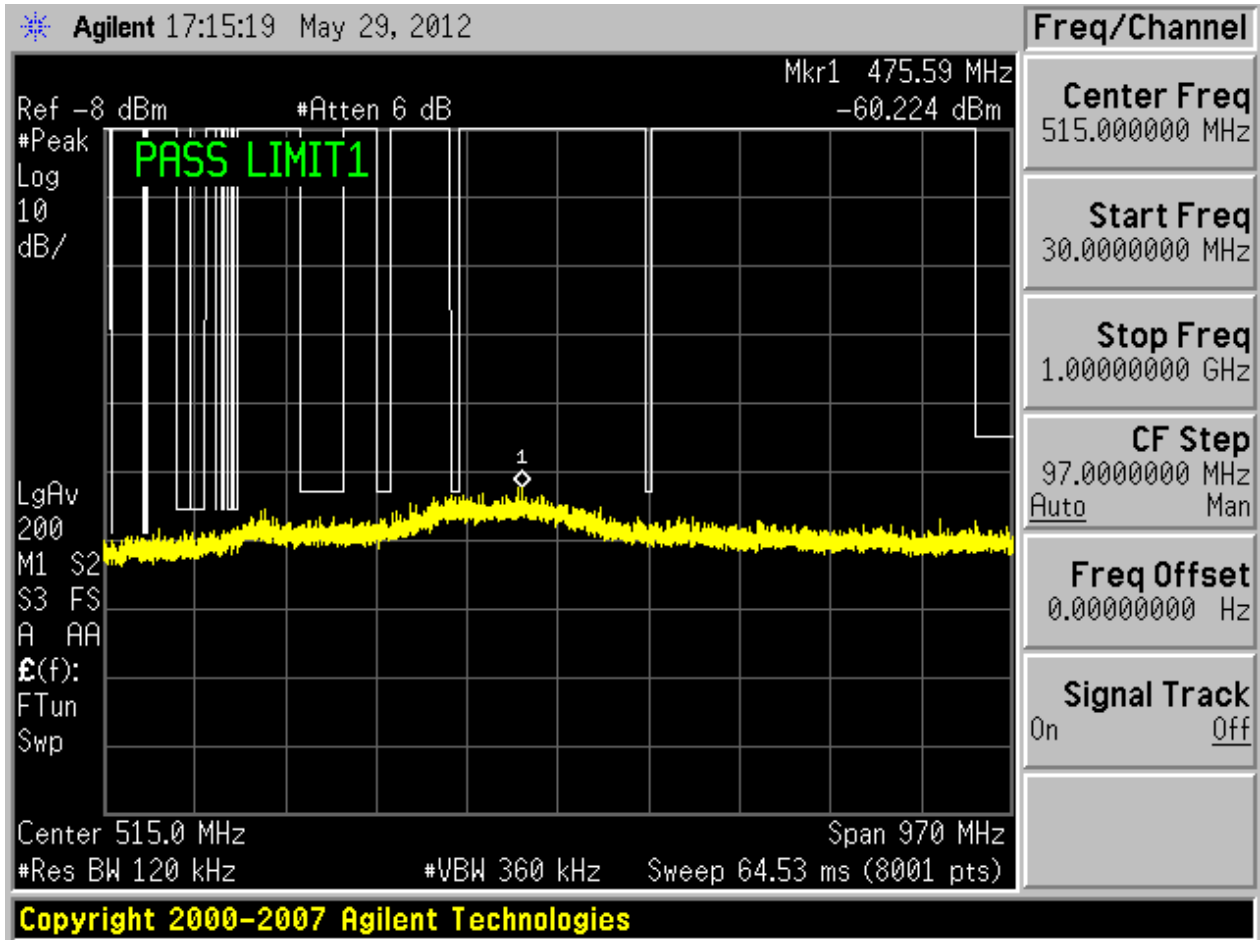


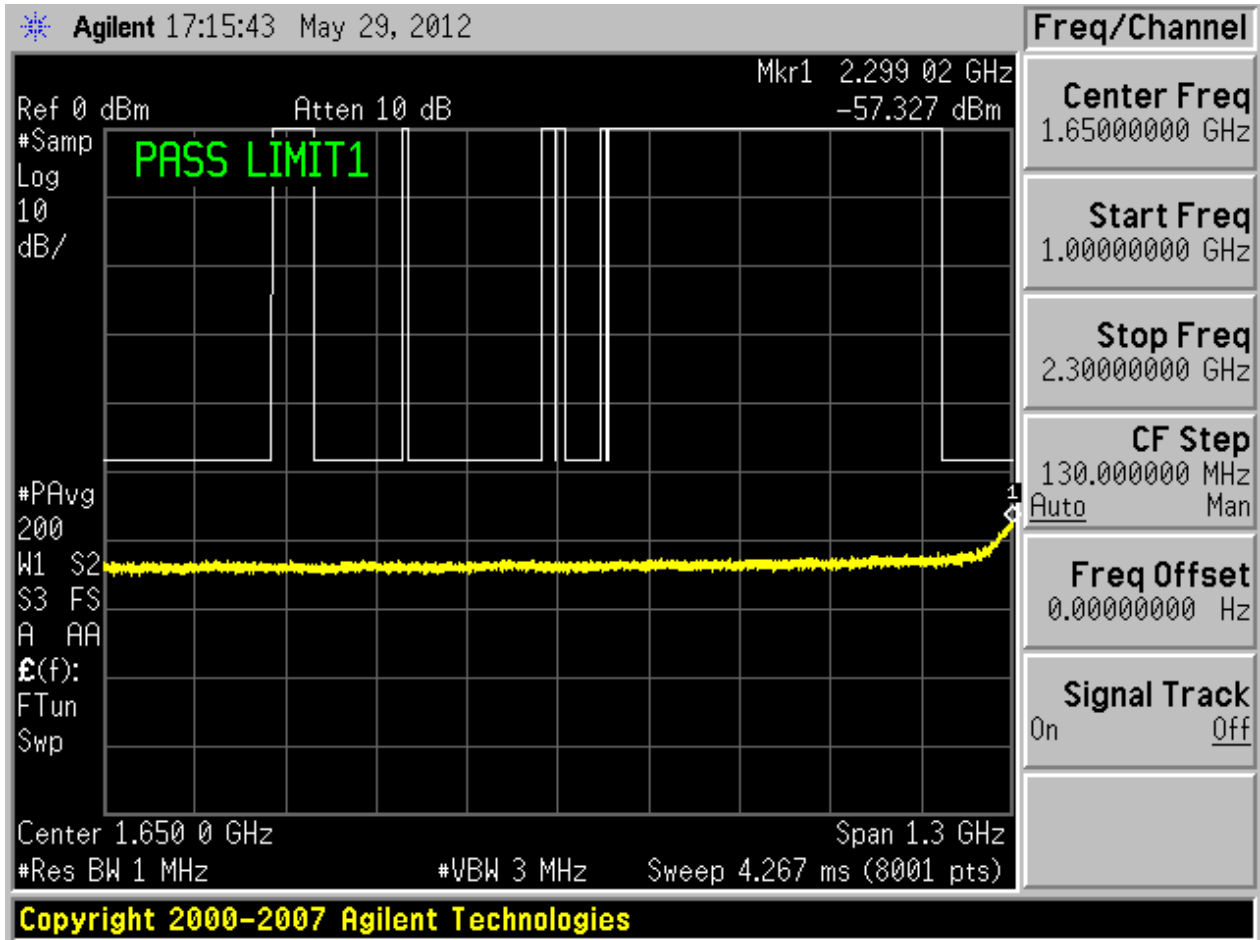


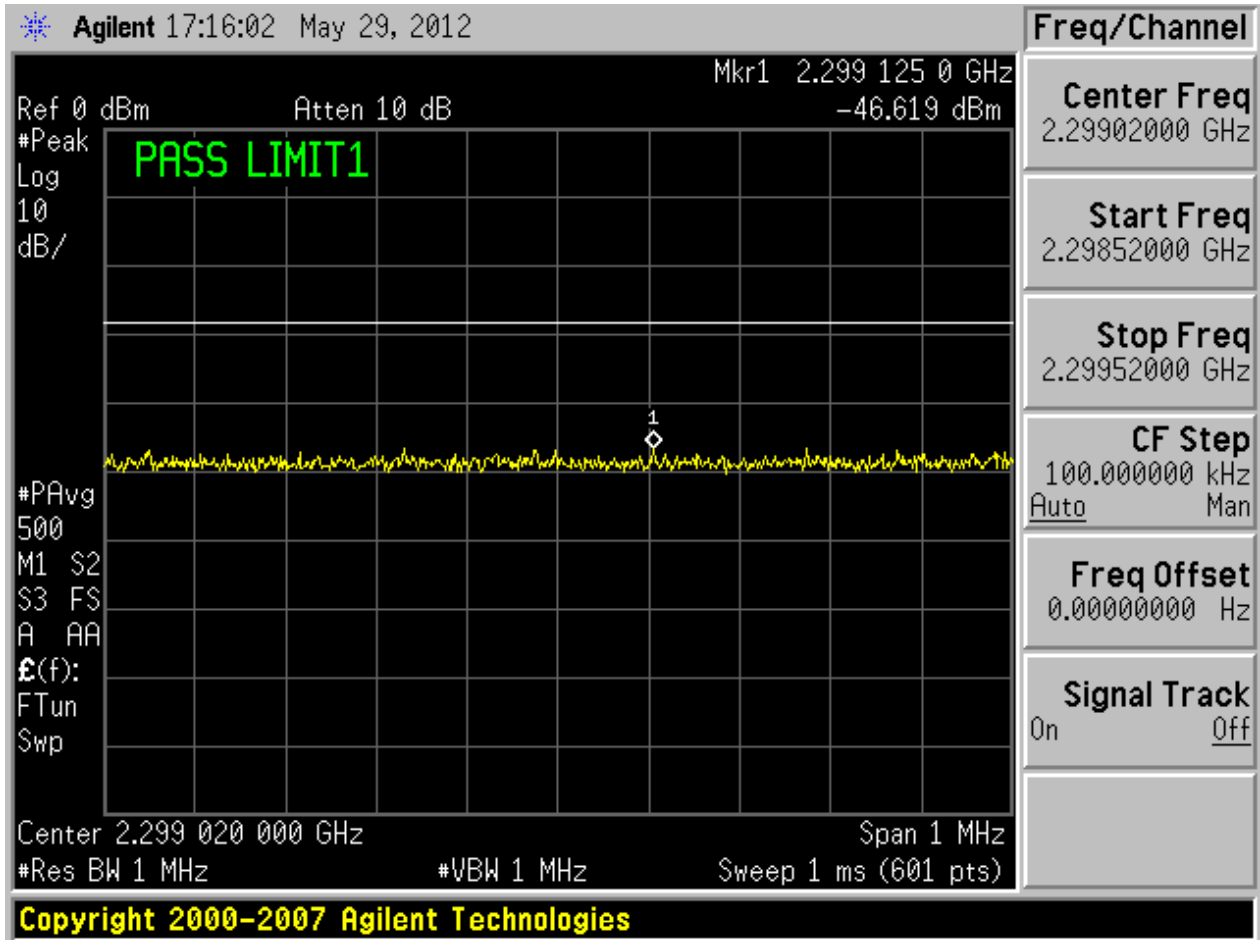
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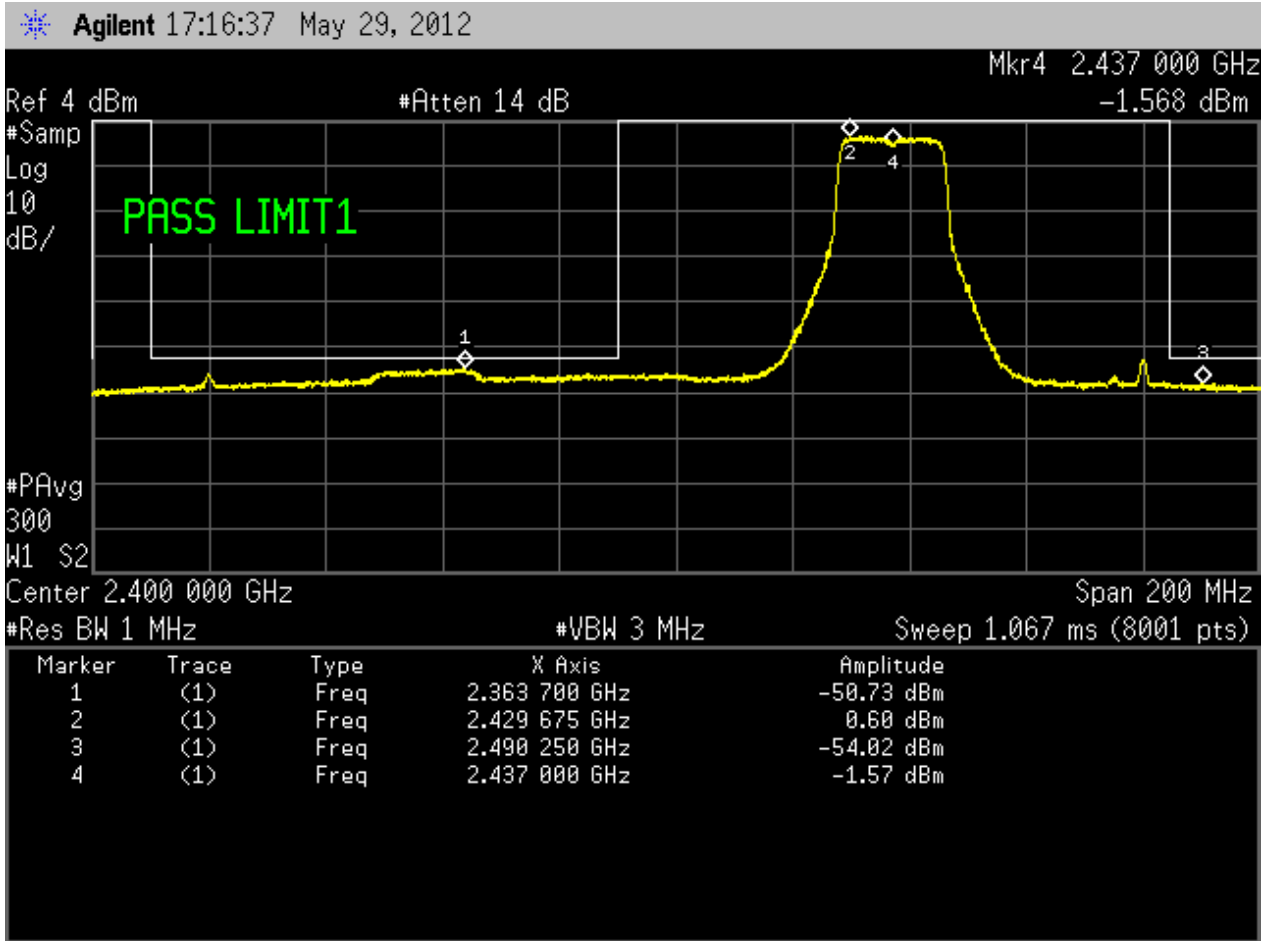


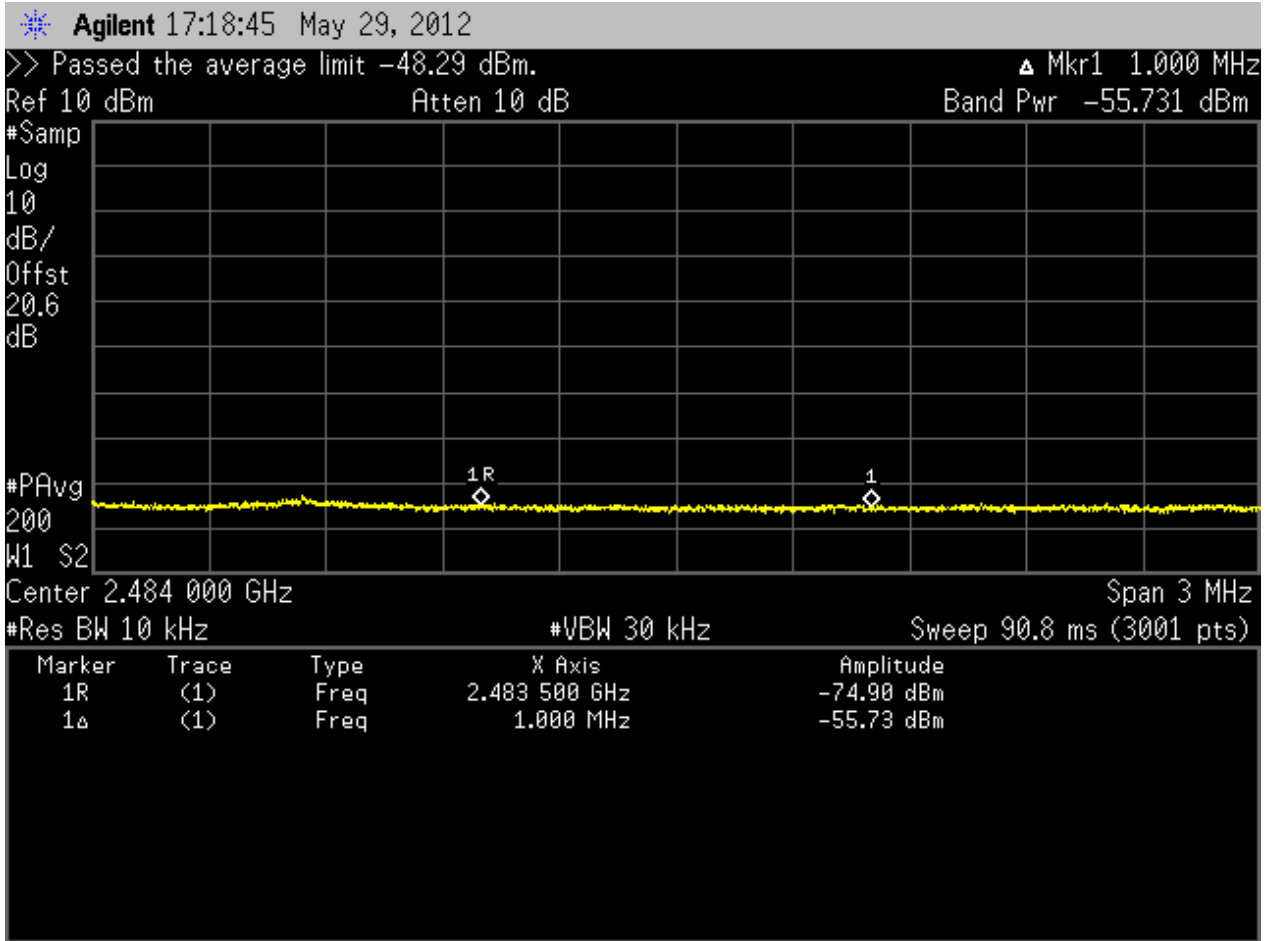


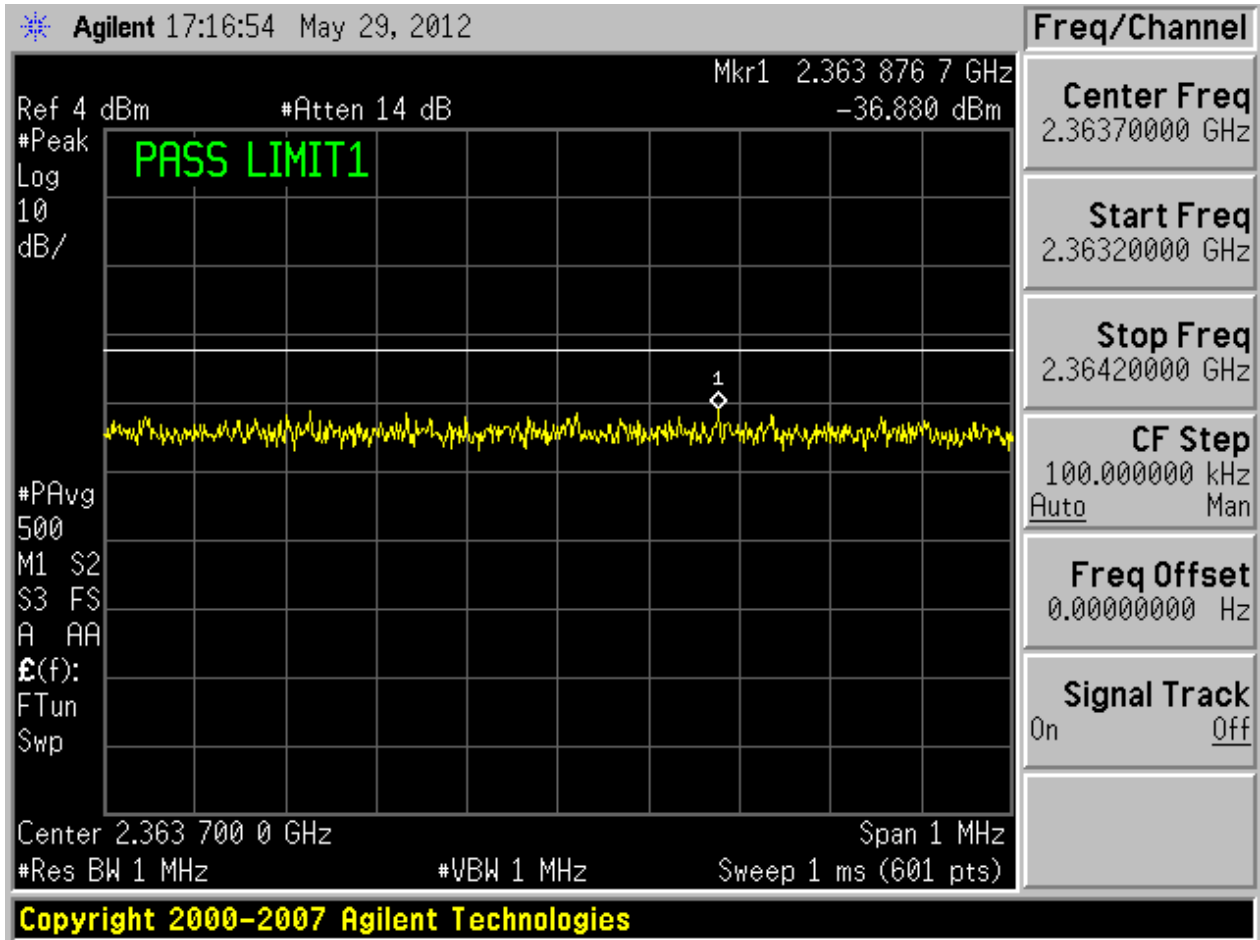


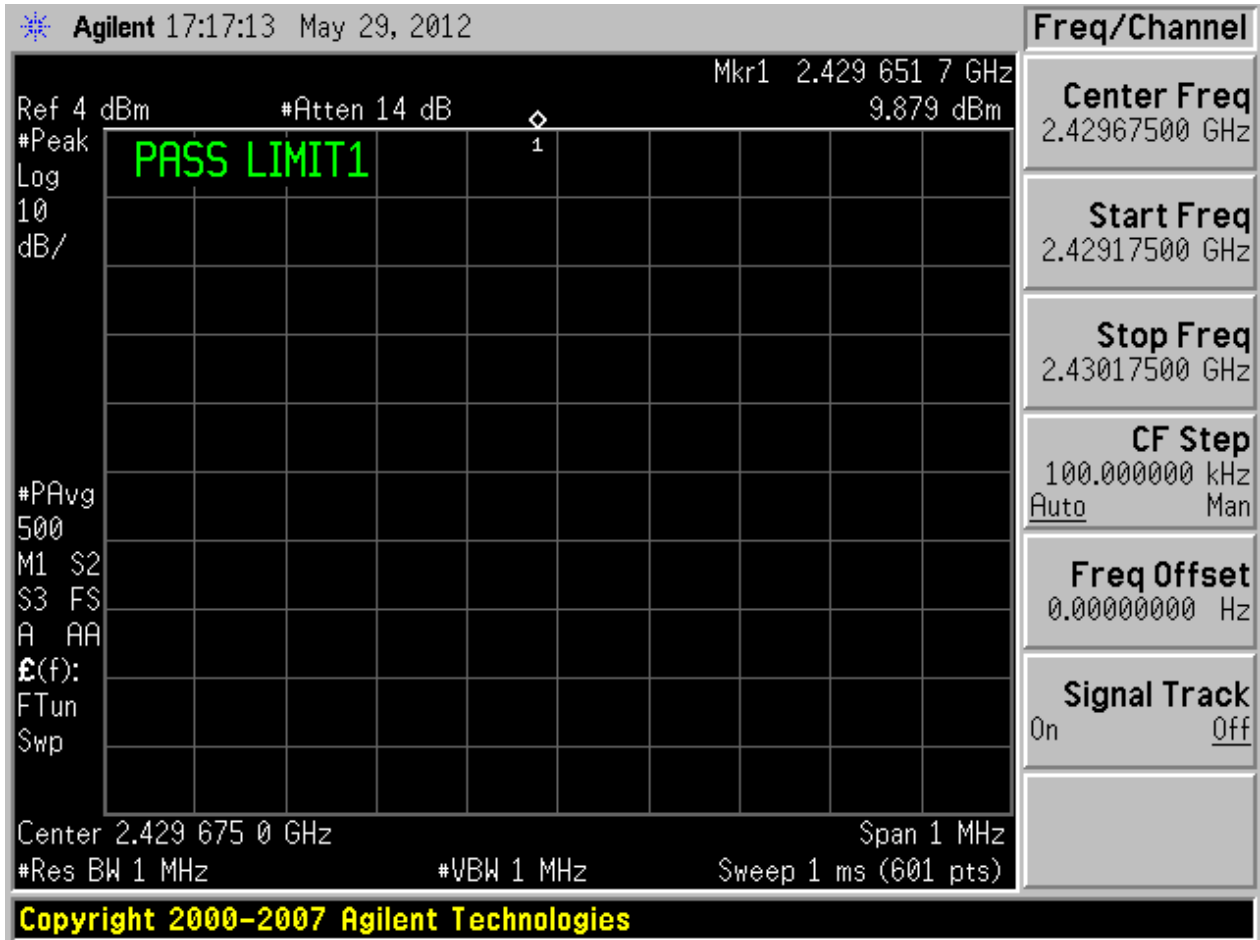


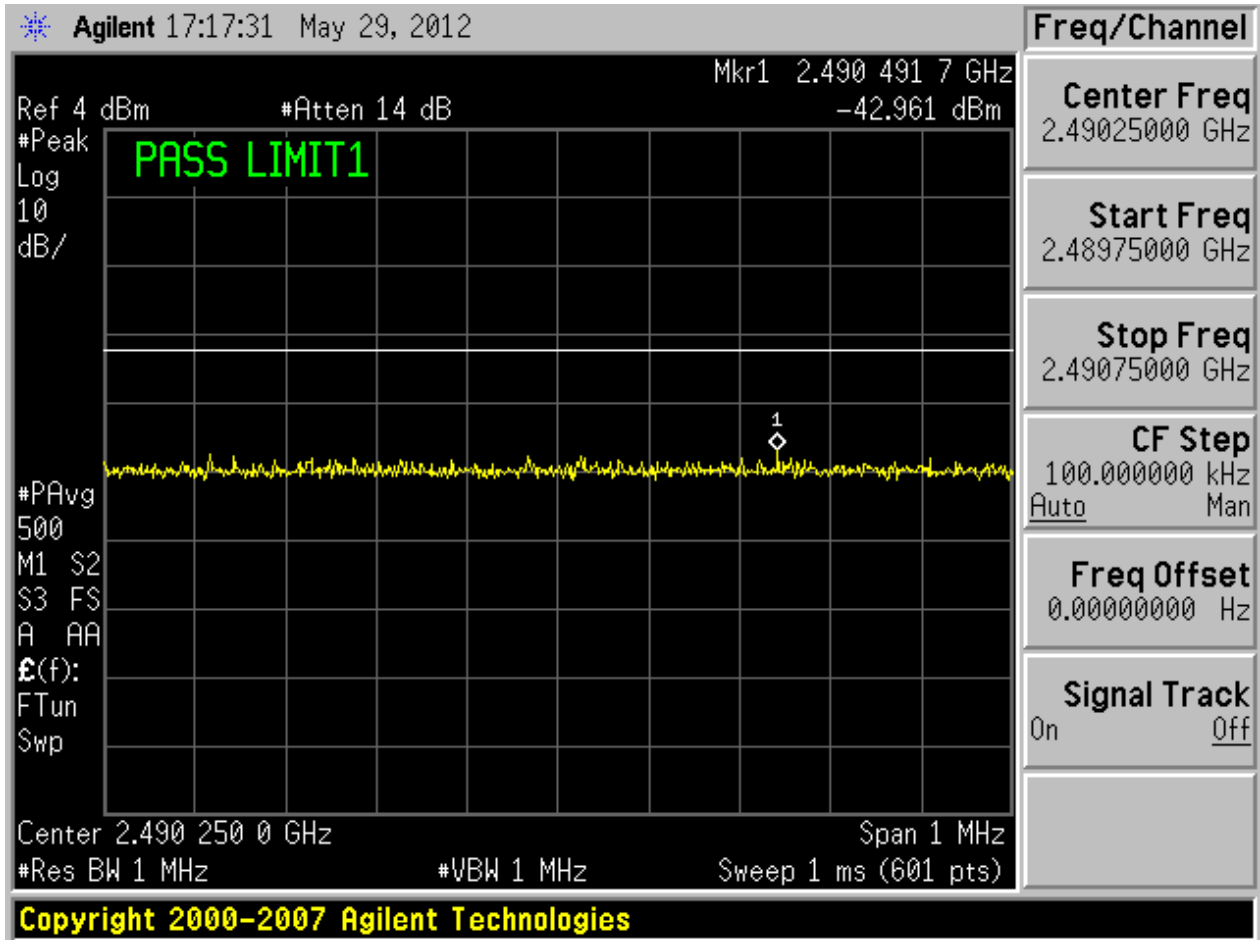


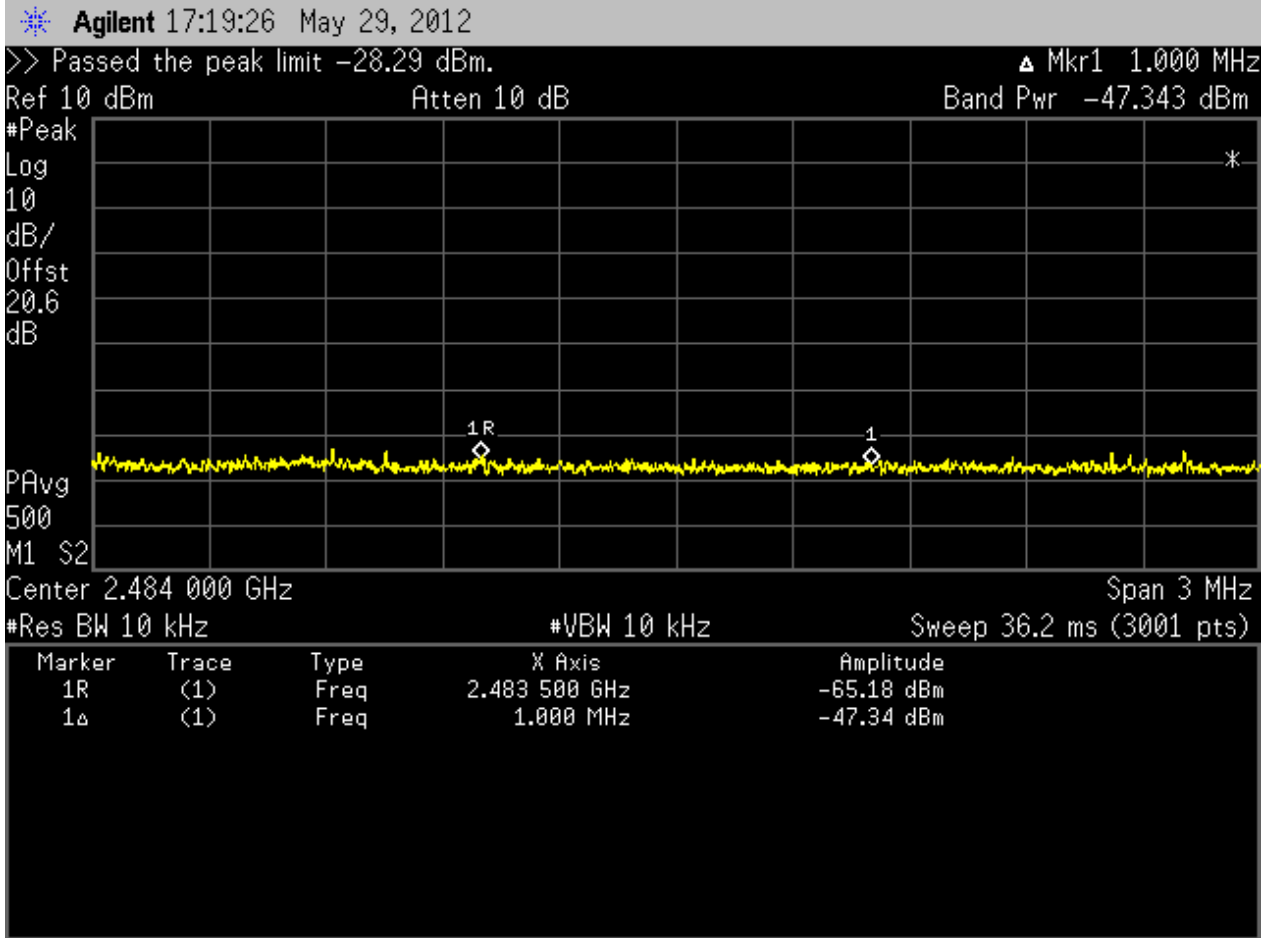


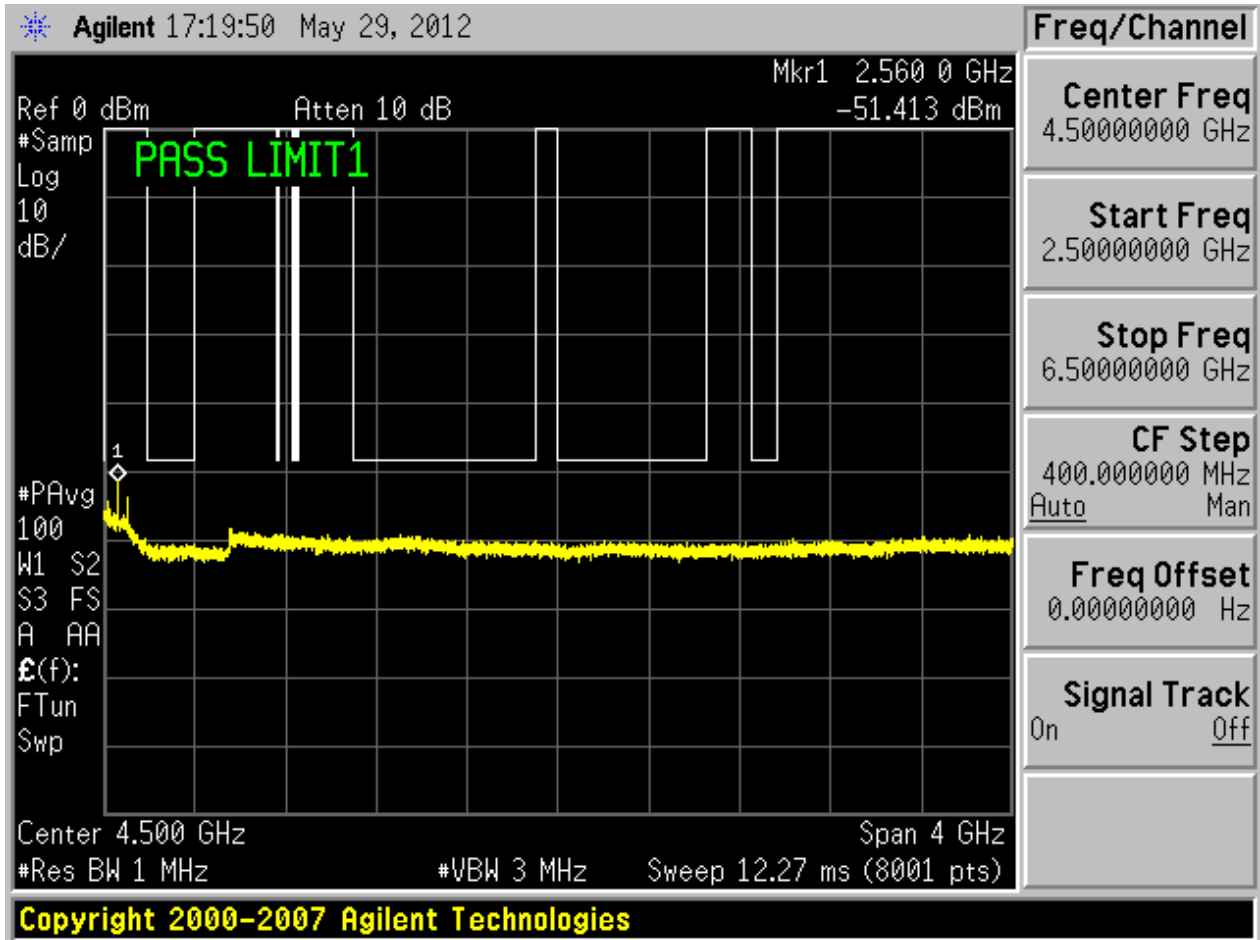


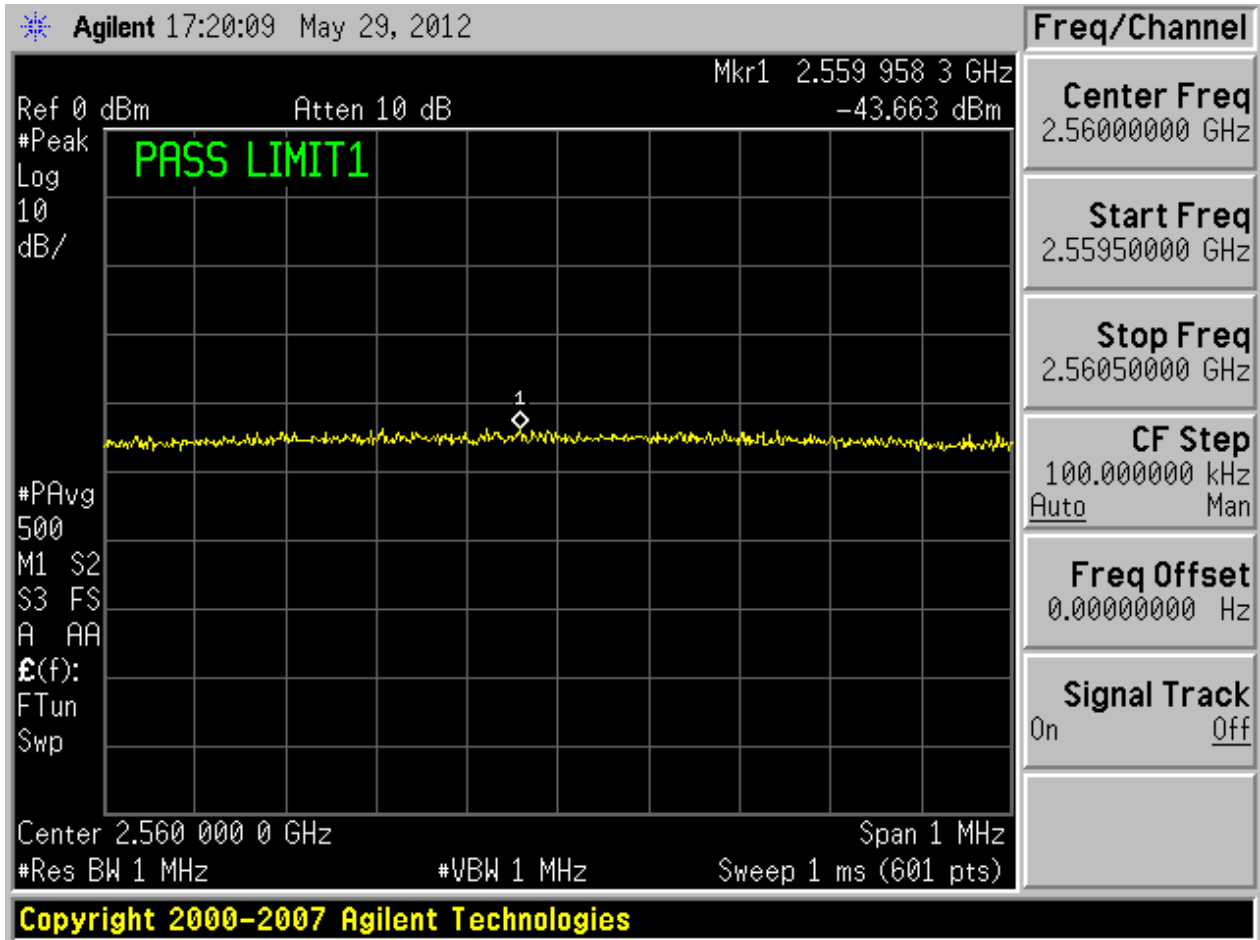


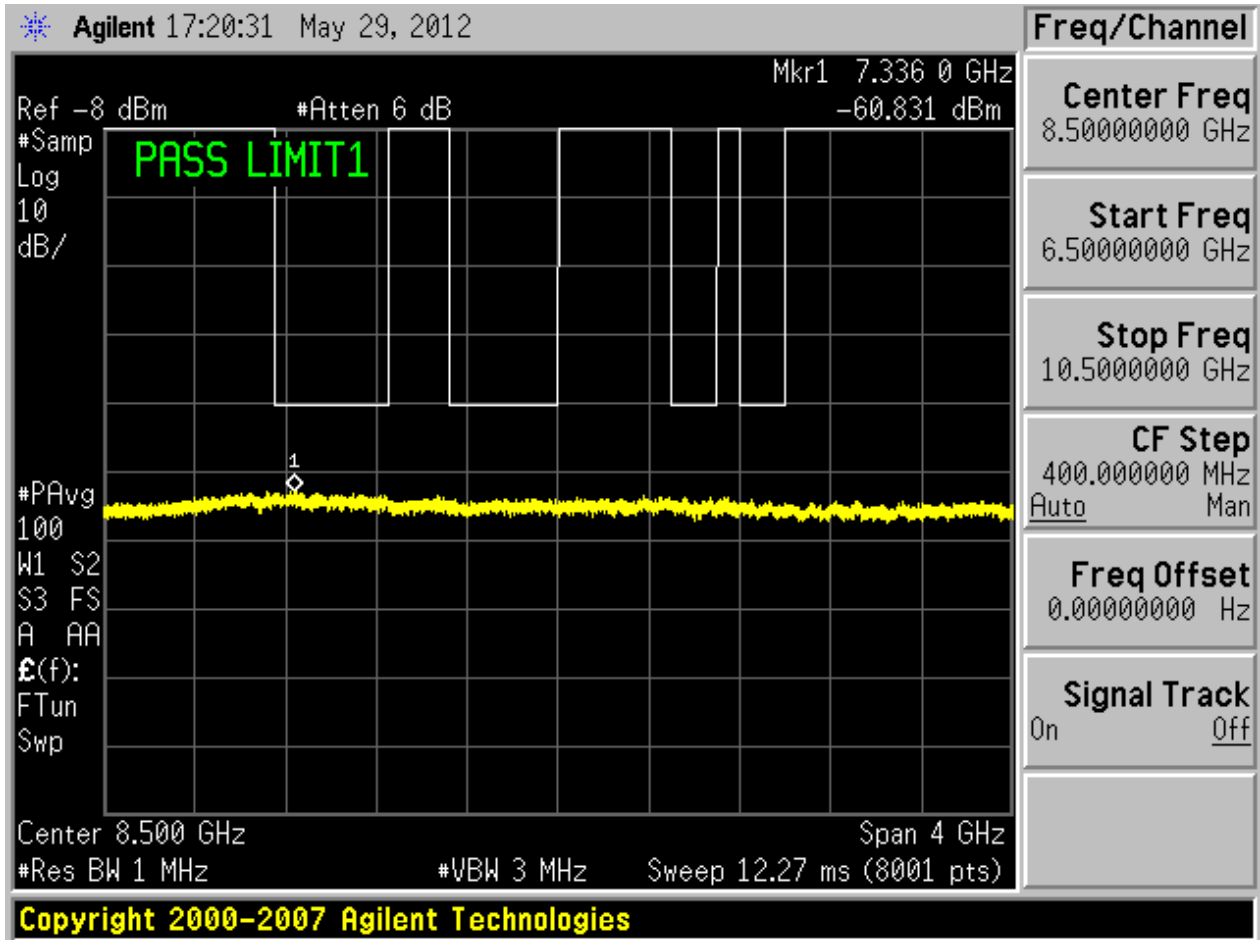


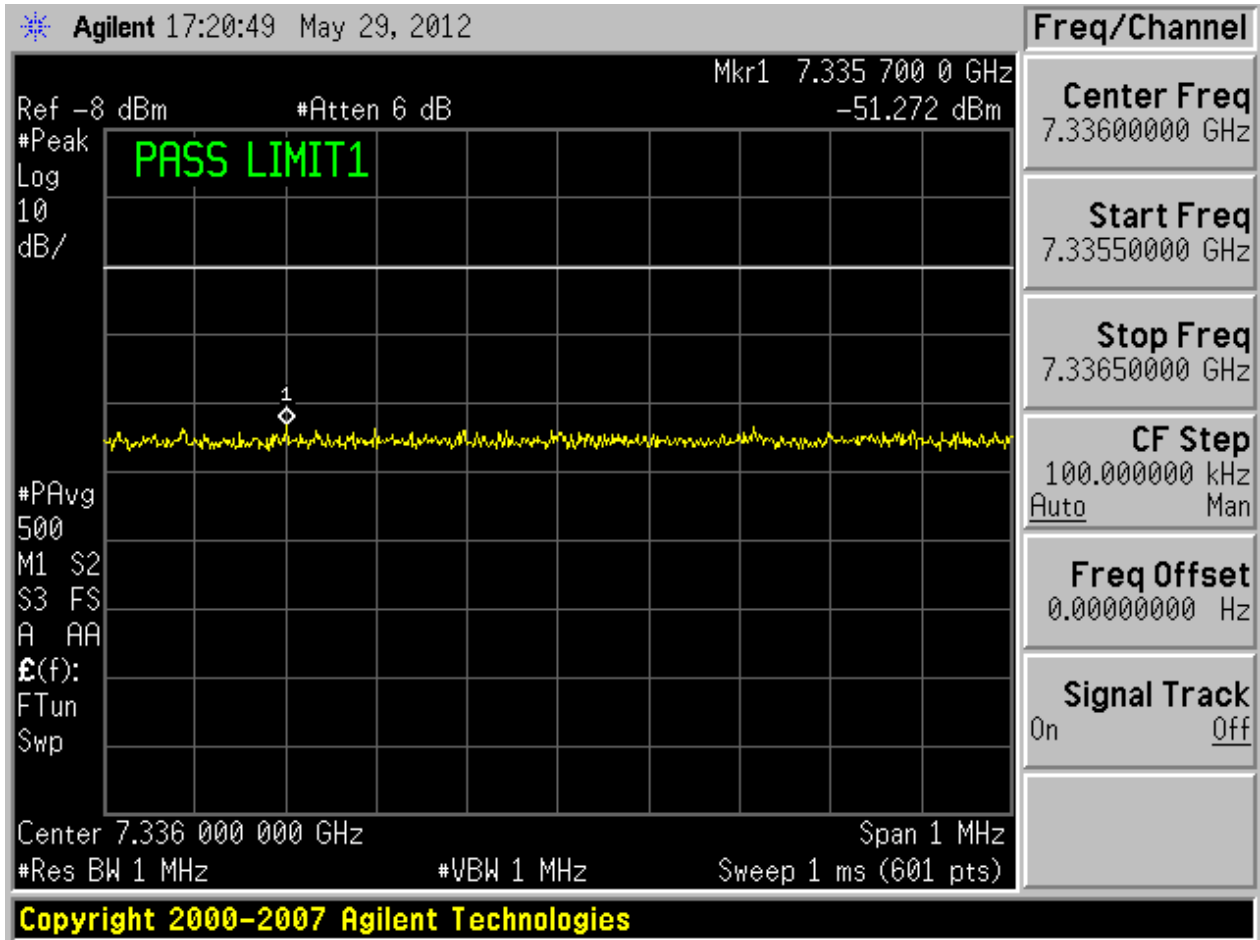


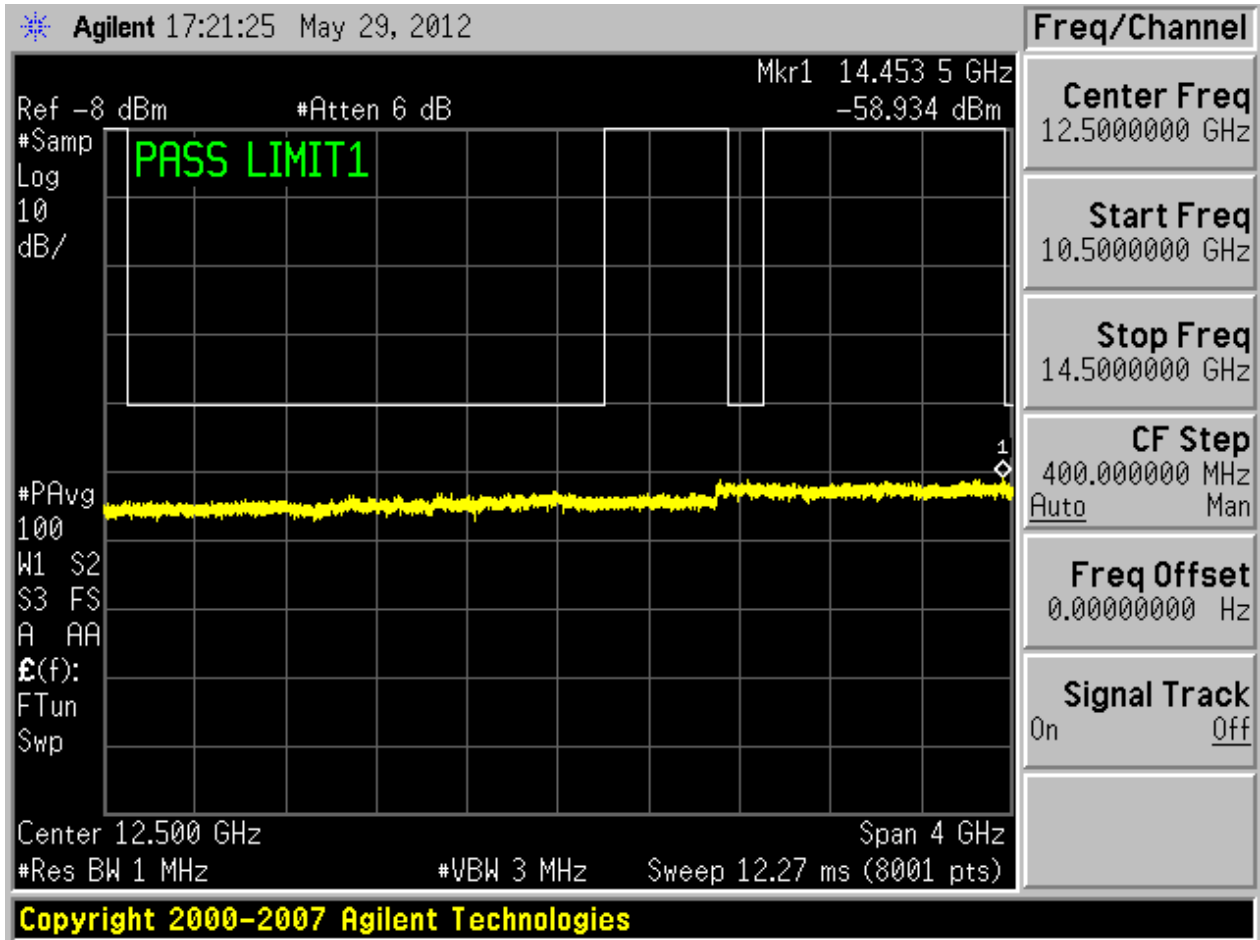


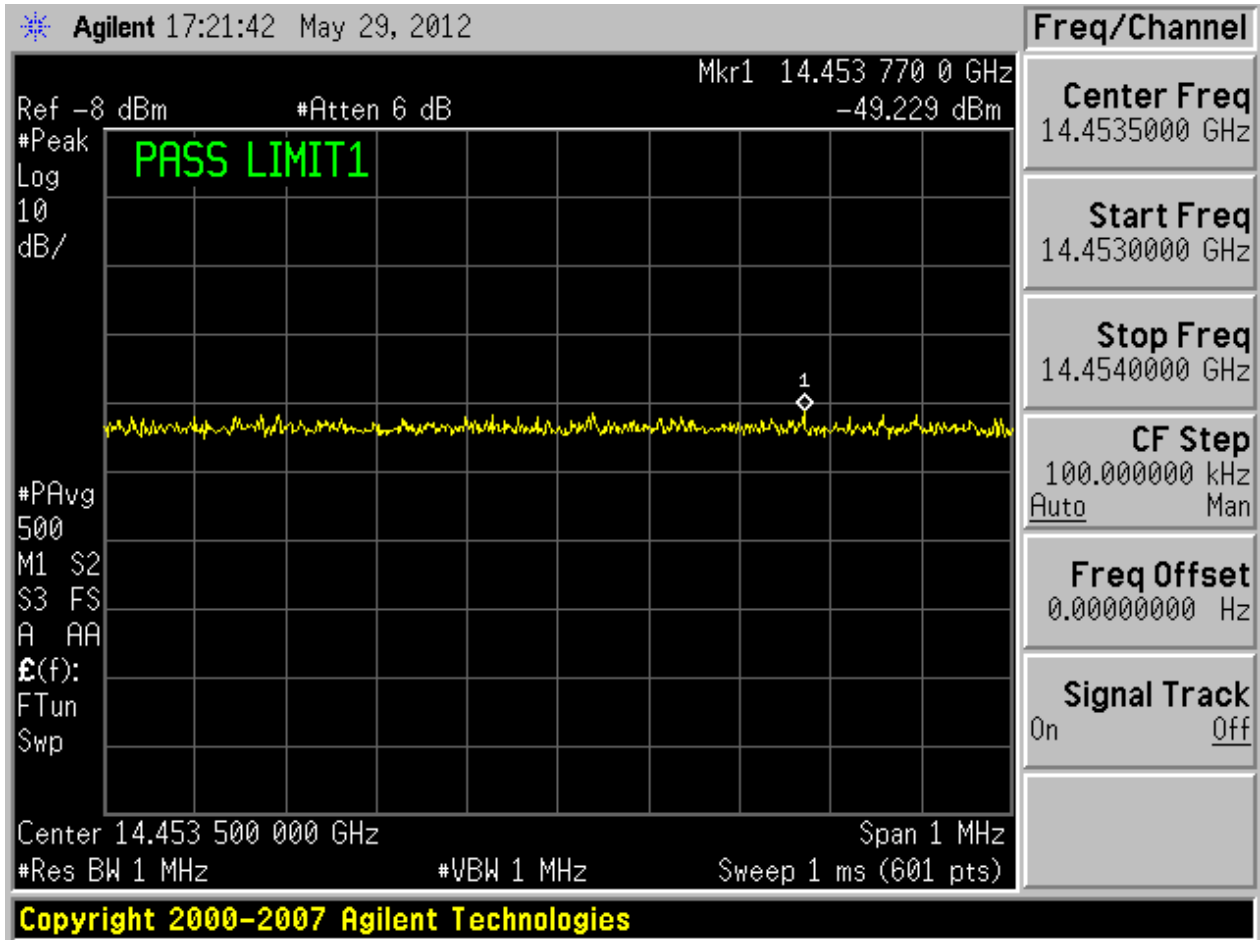


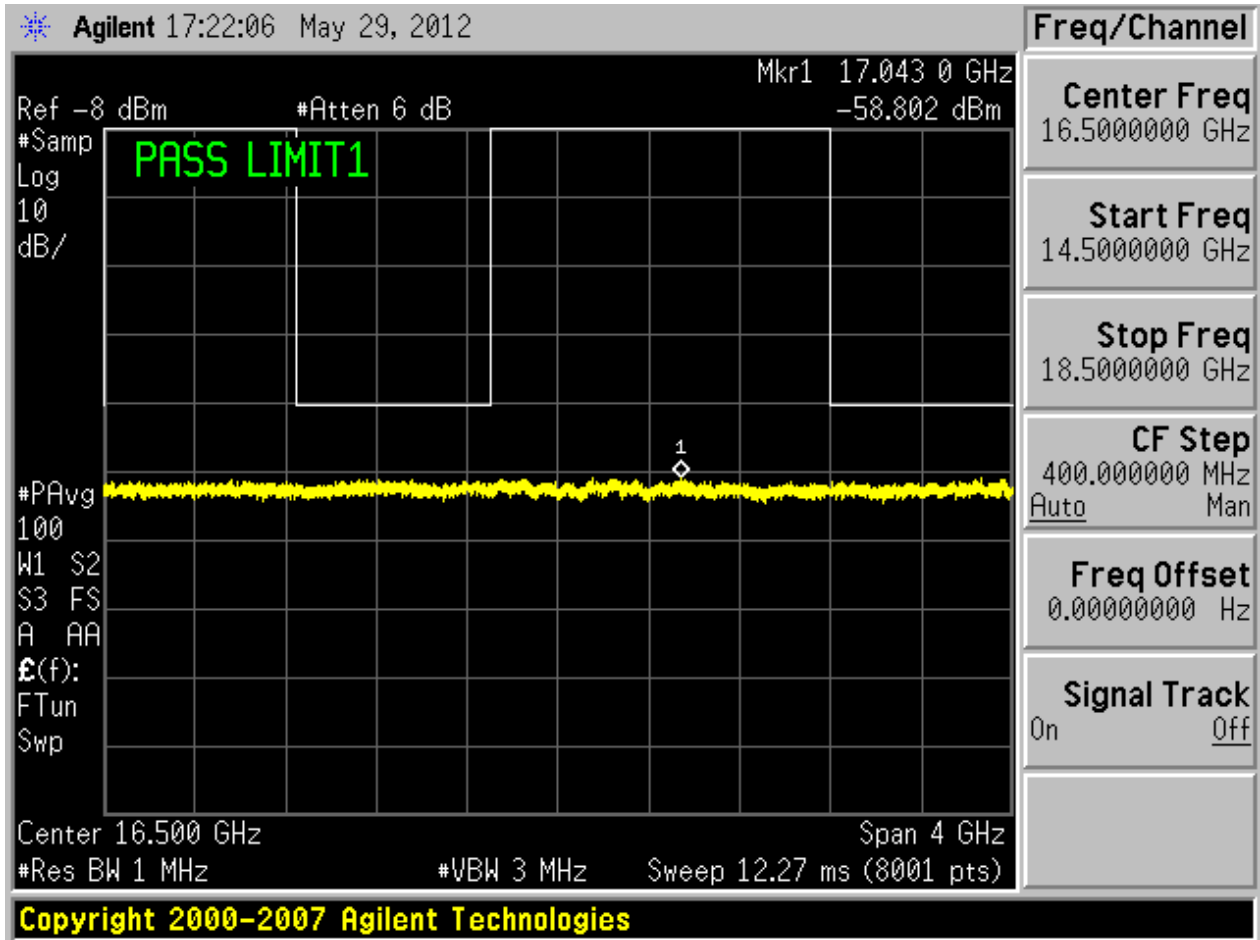


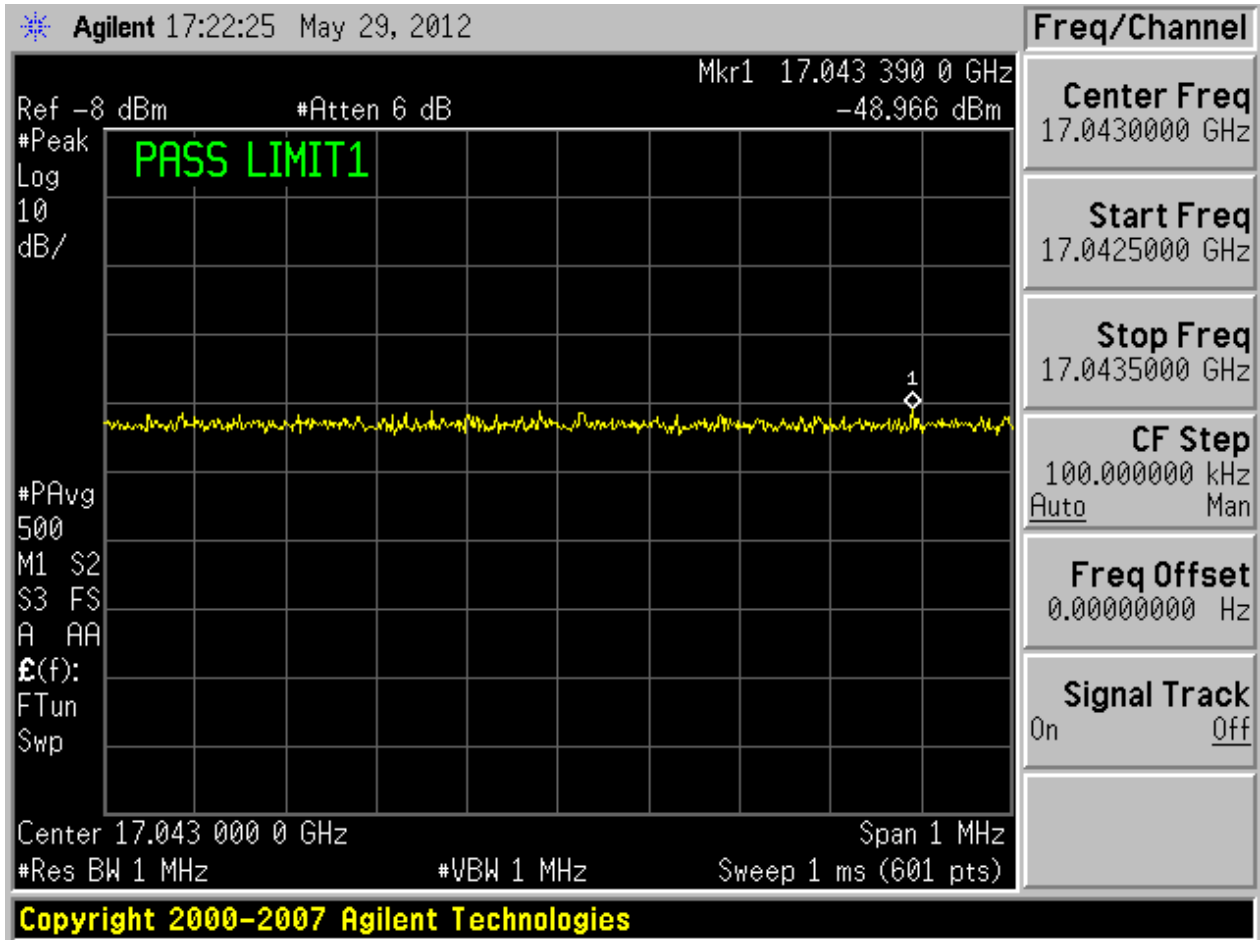


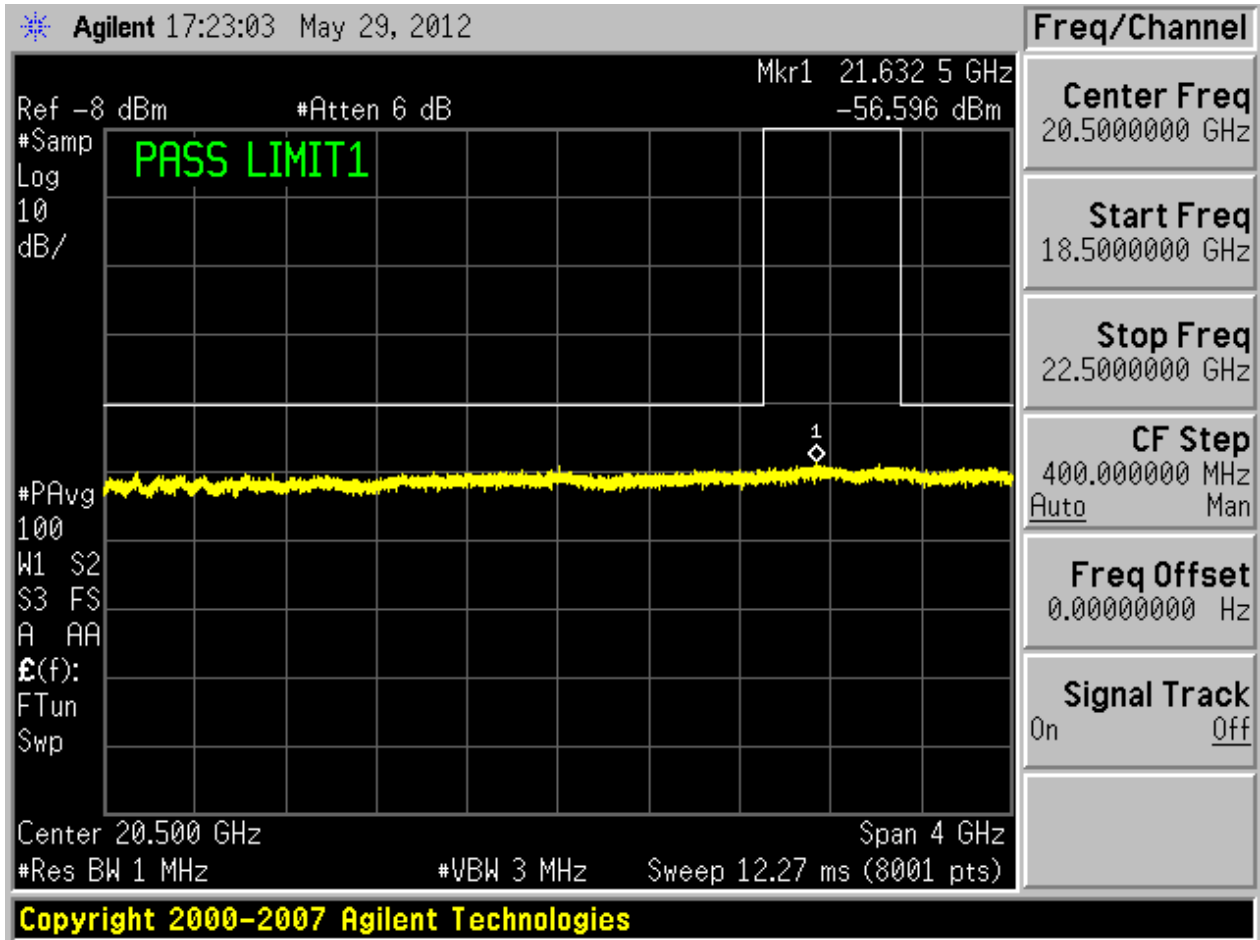


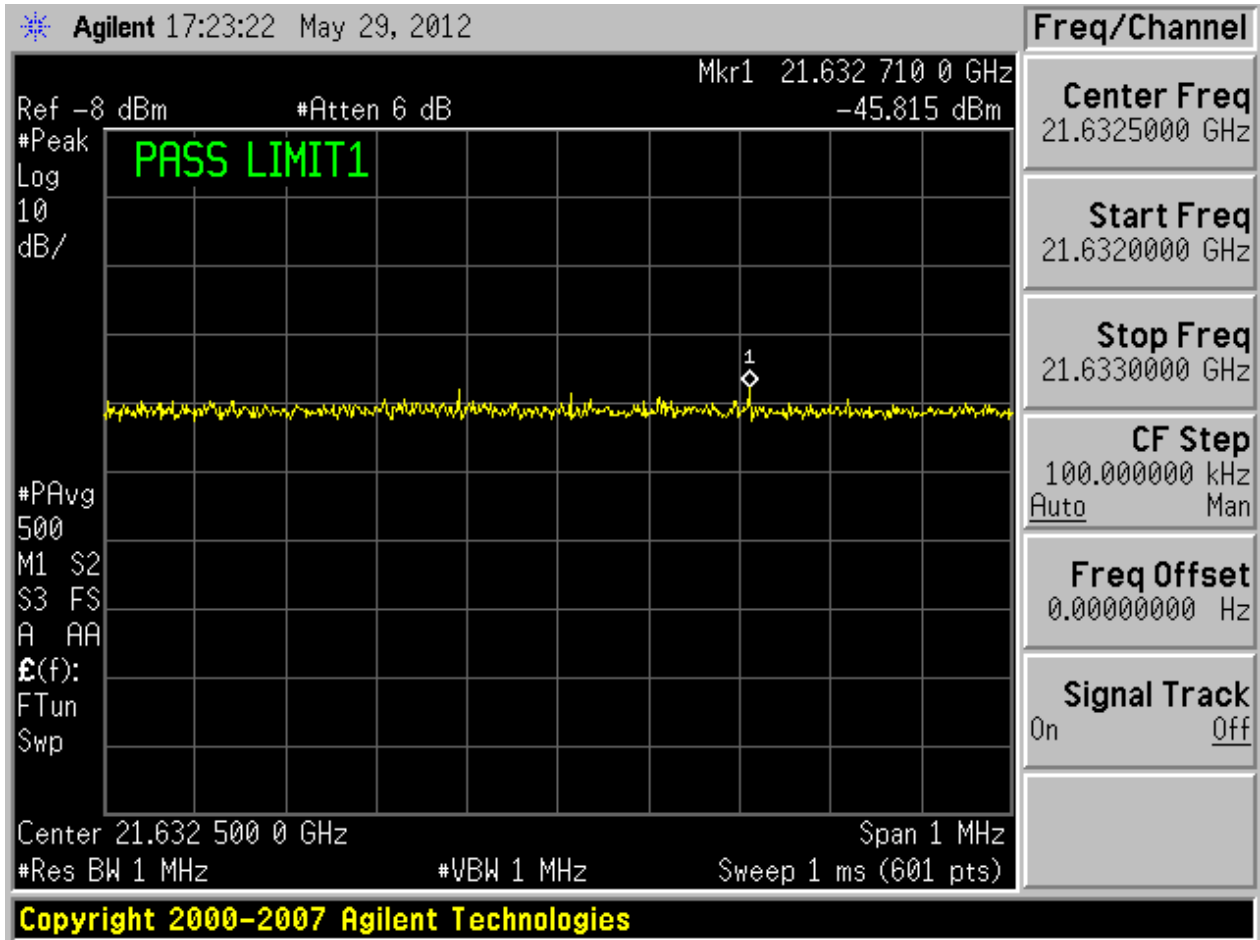


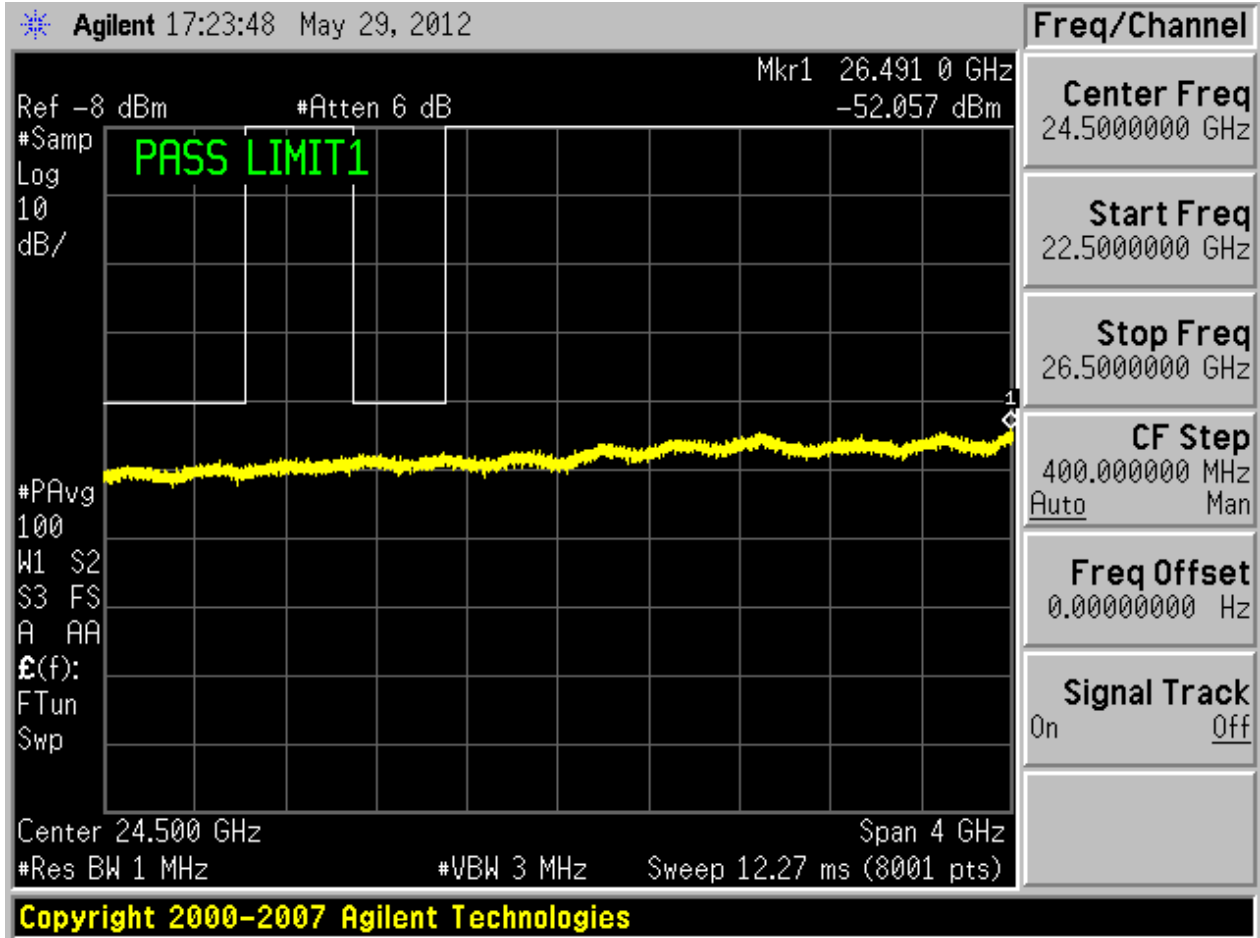


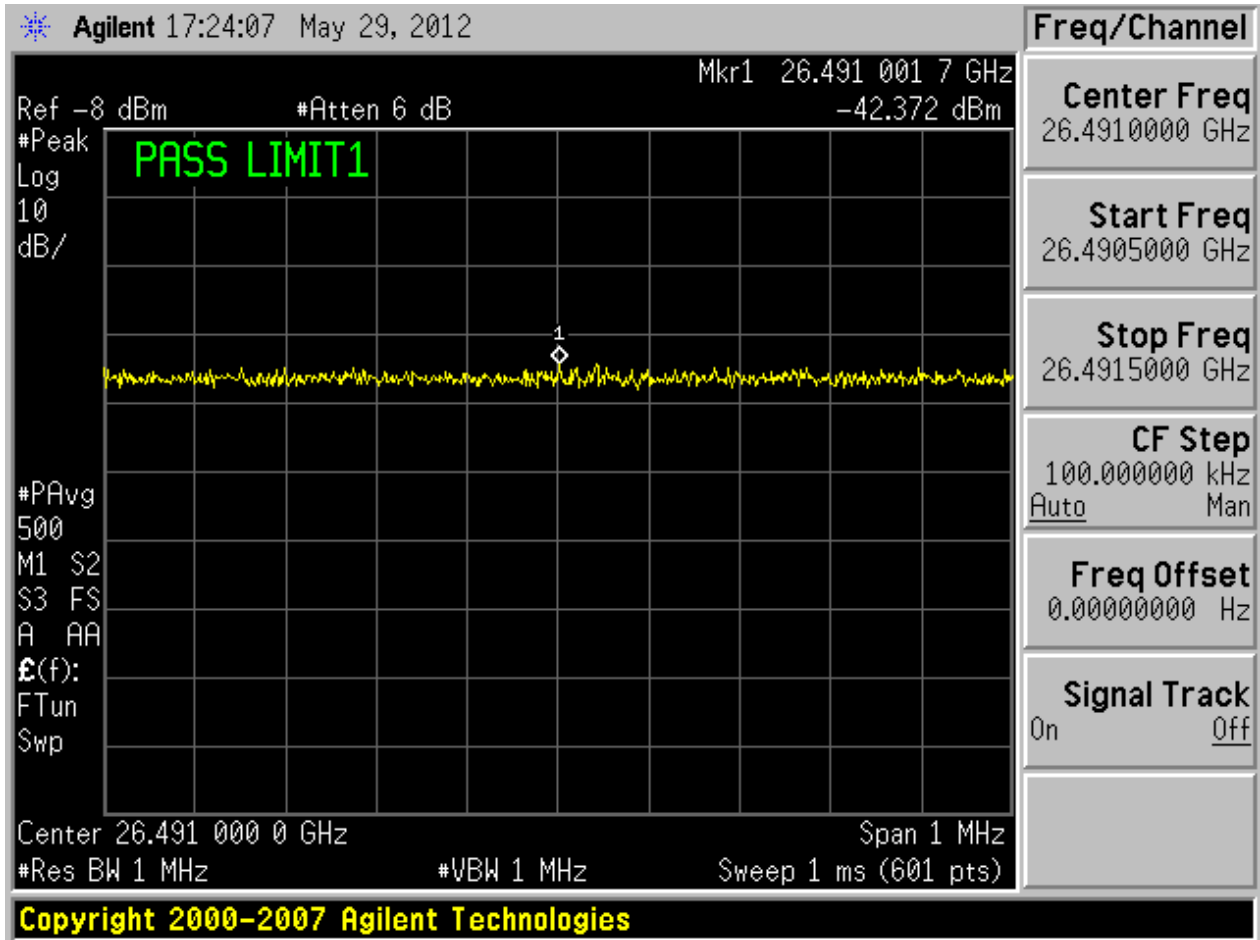






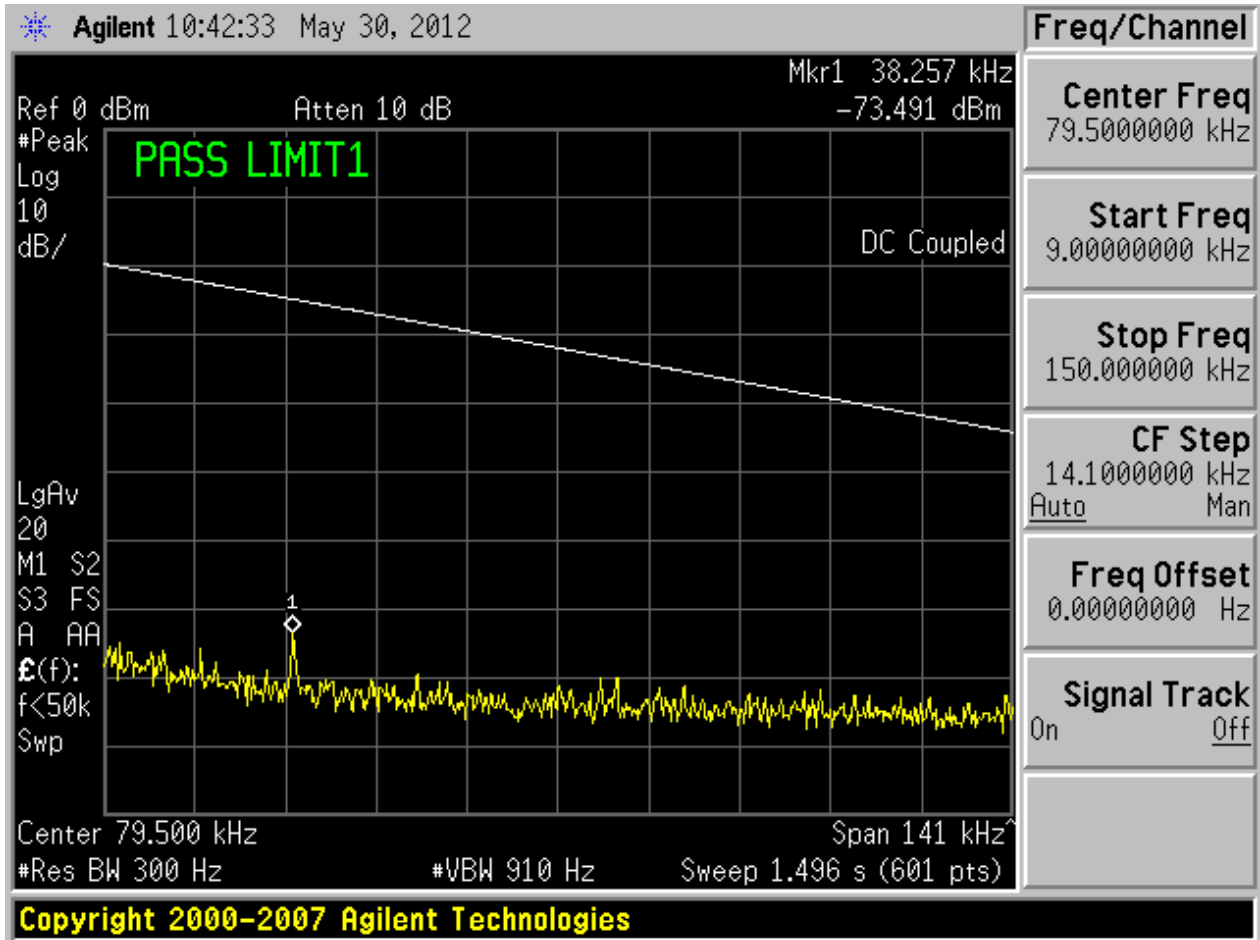


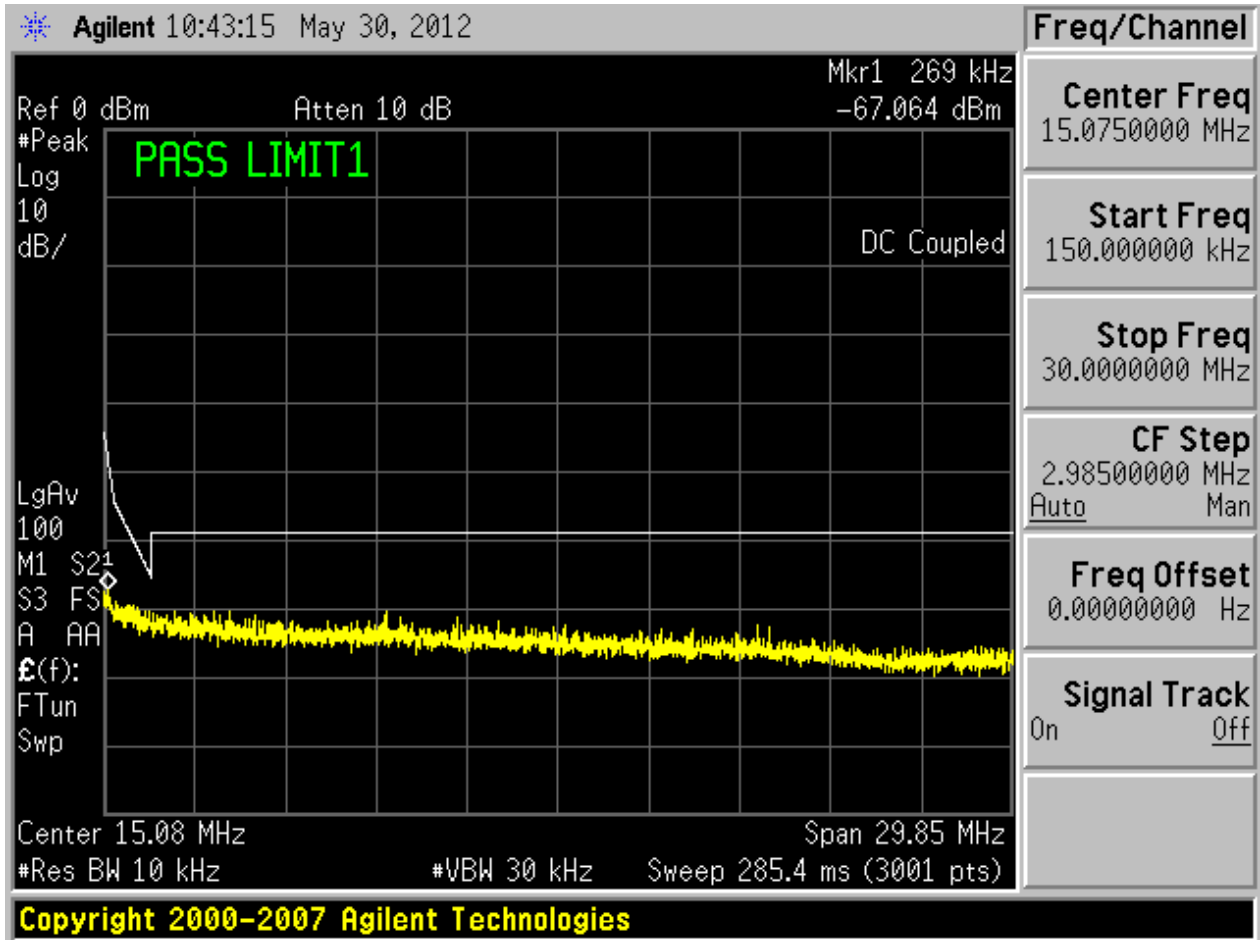


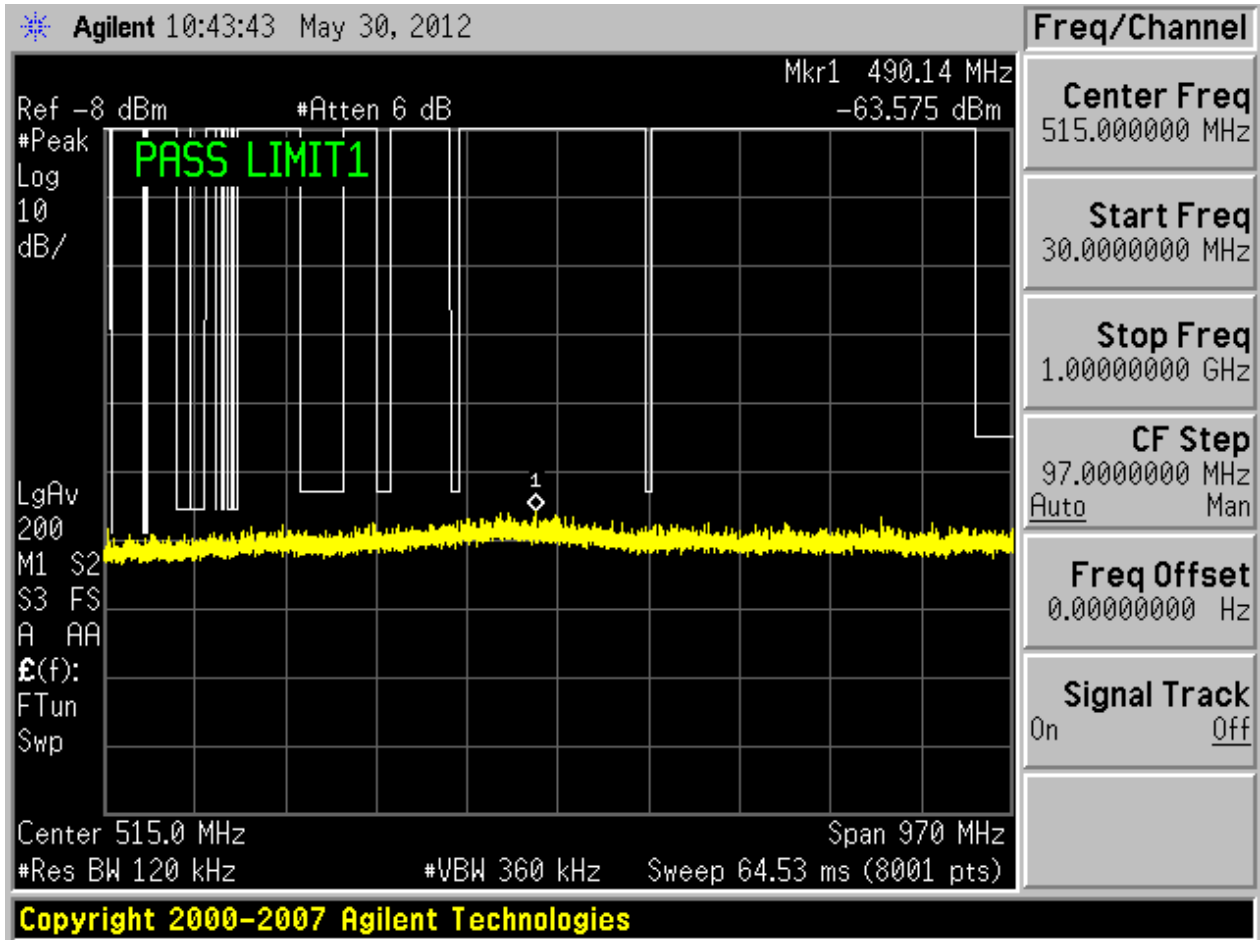


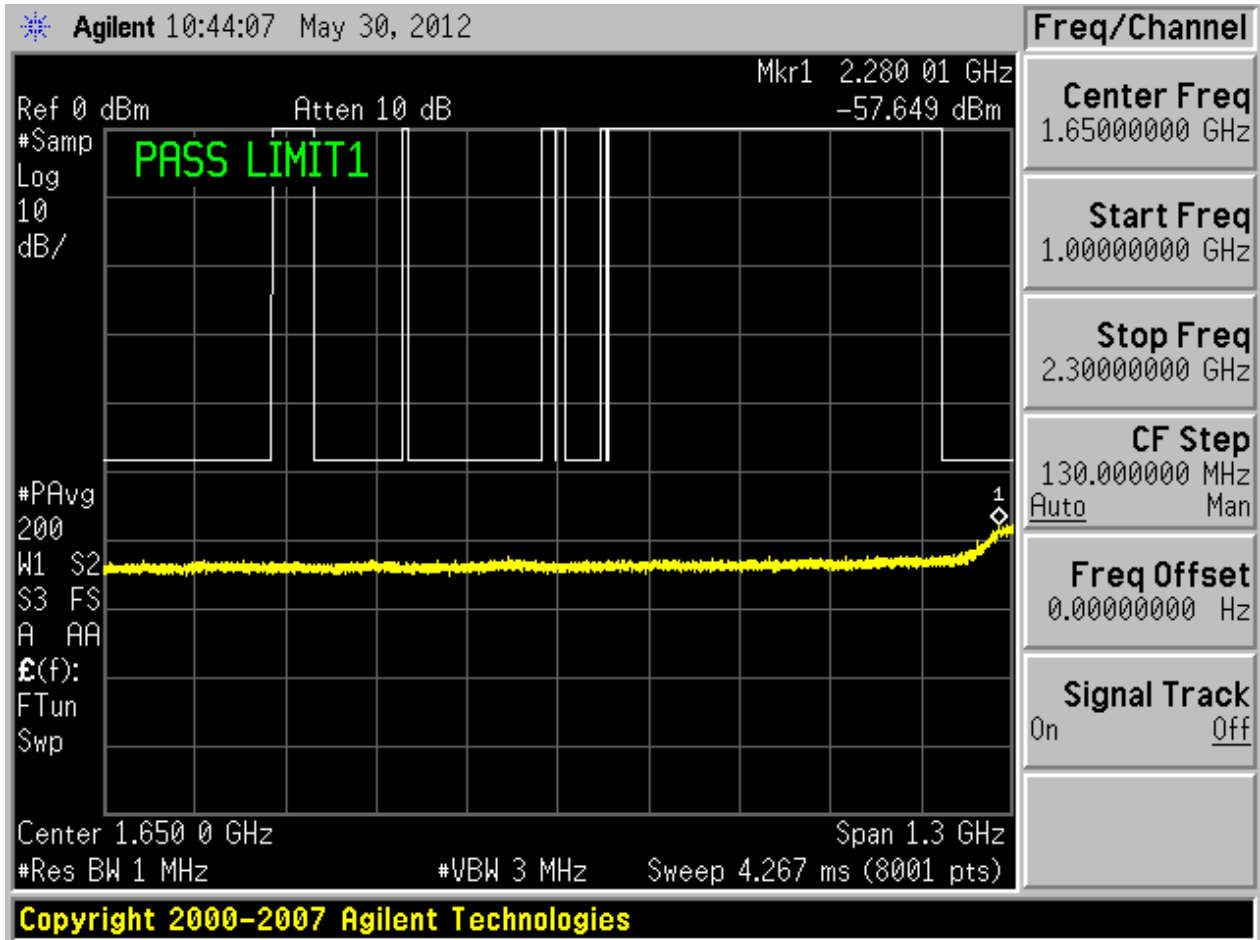
2.2111N20m/8_T@1+2

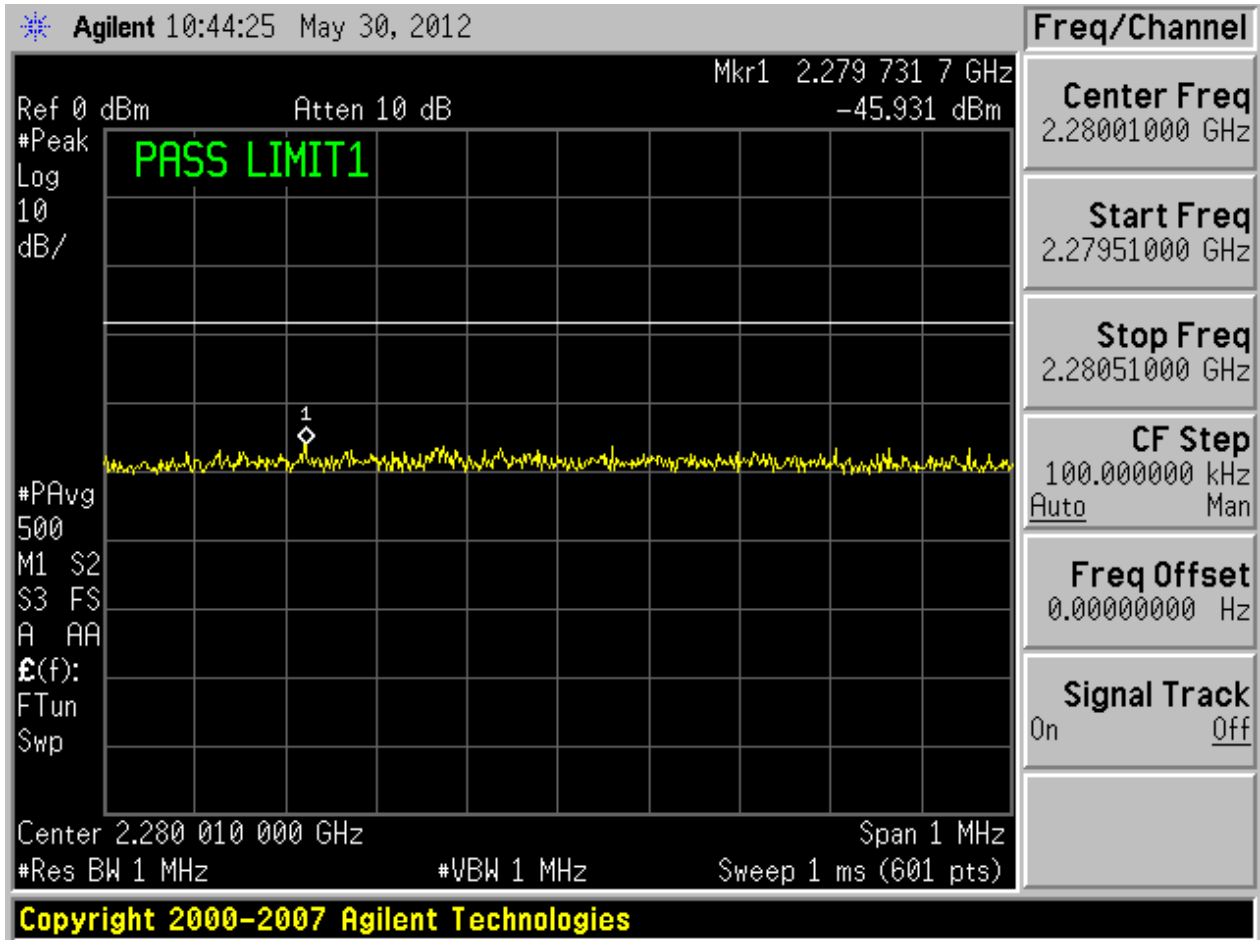
2.21.1 Ant 1

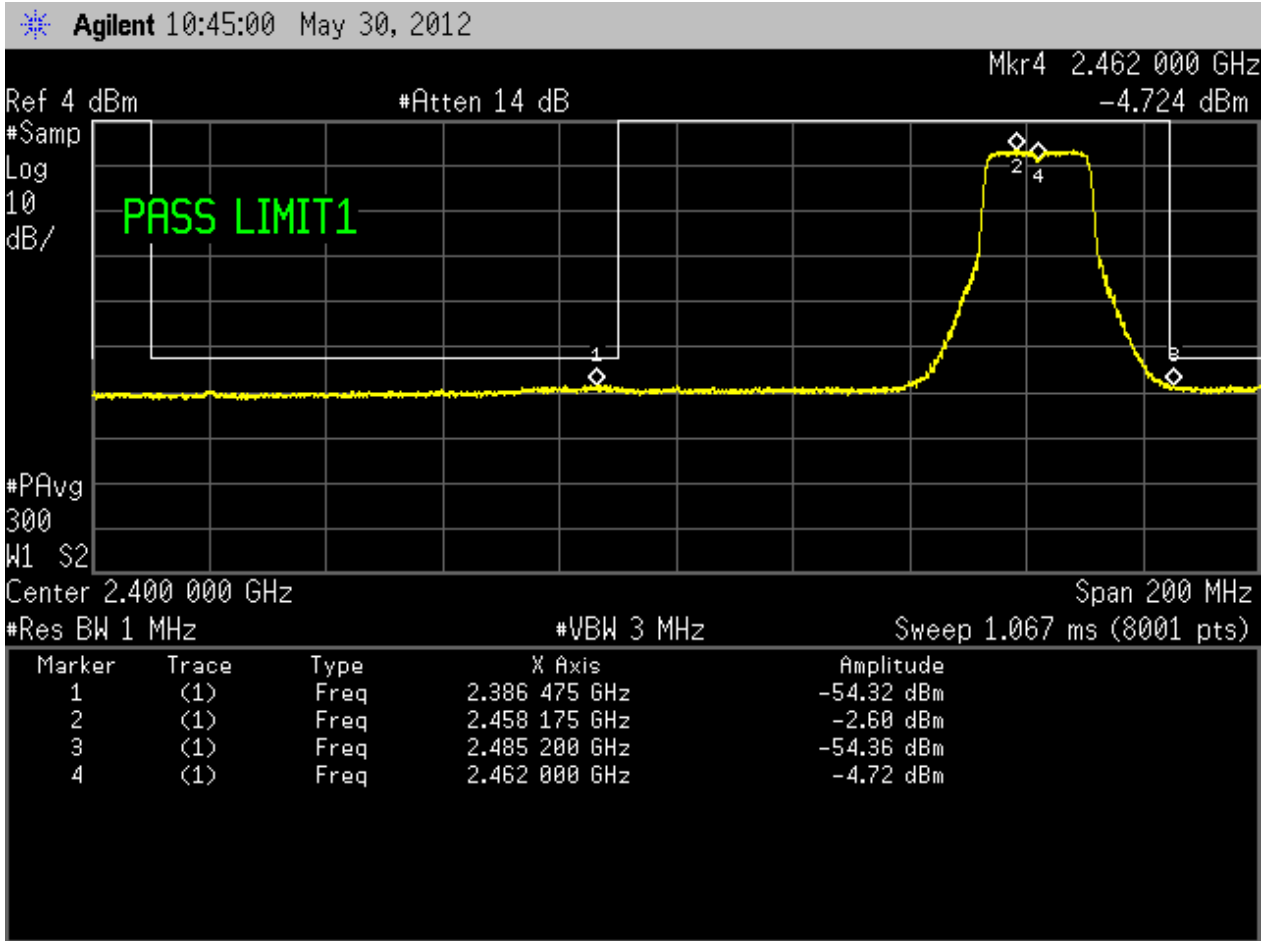


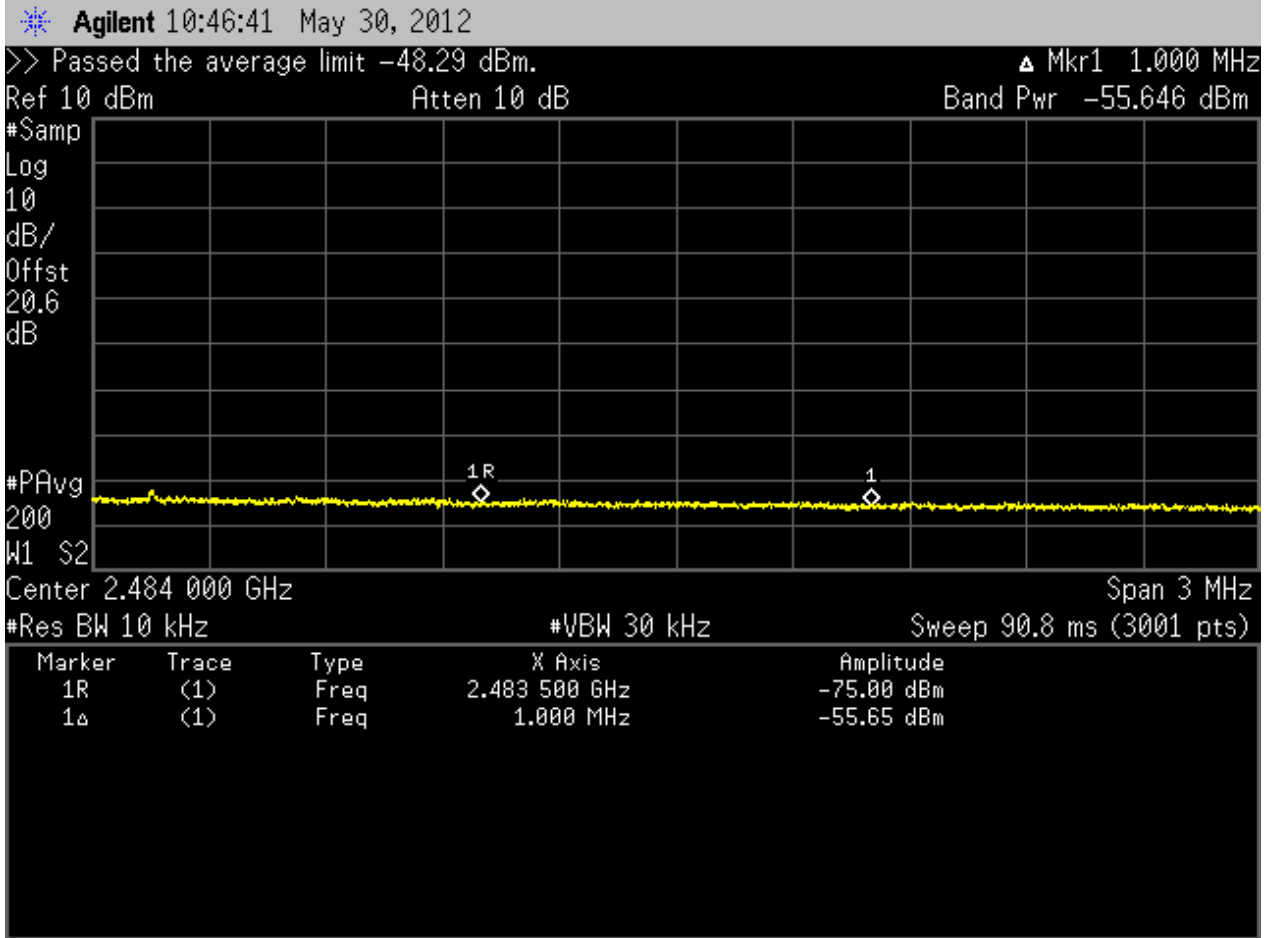


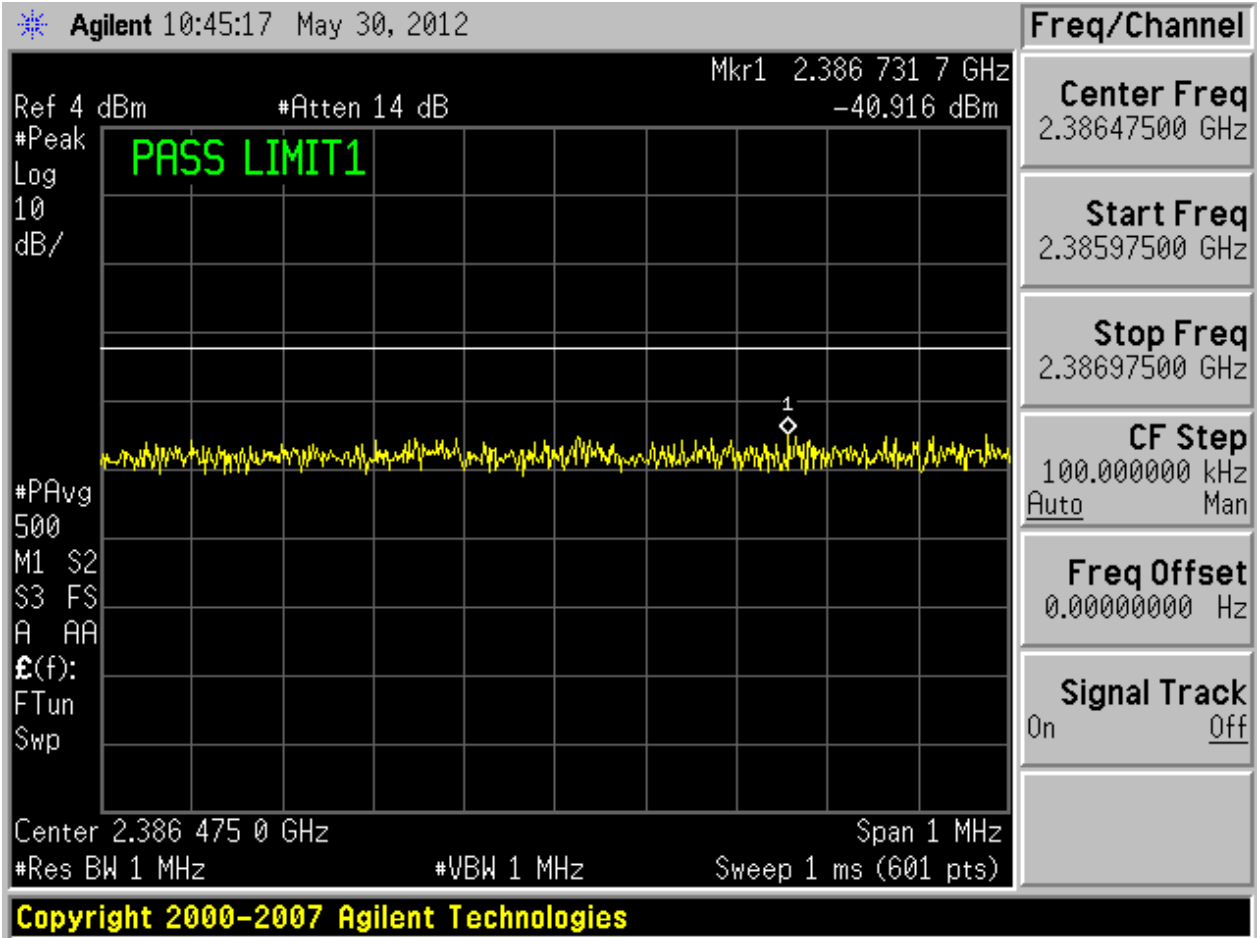


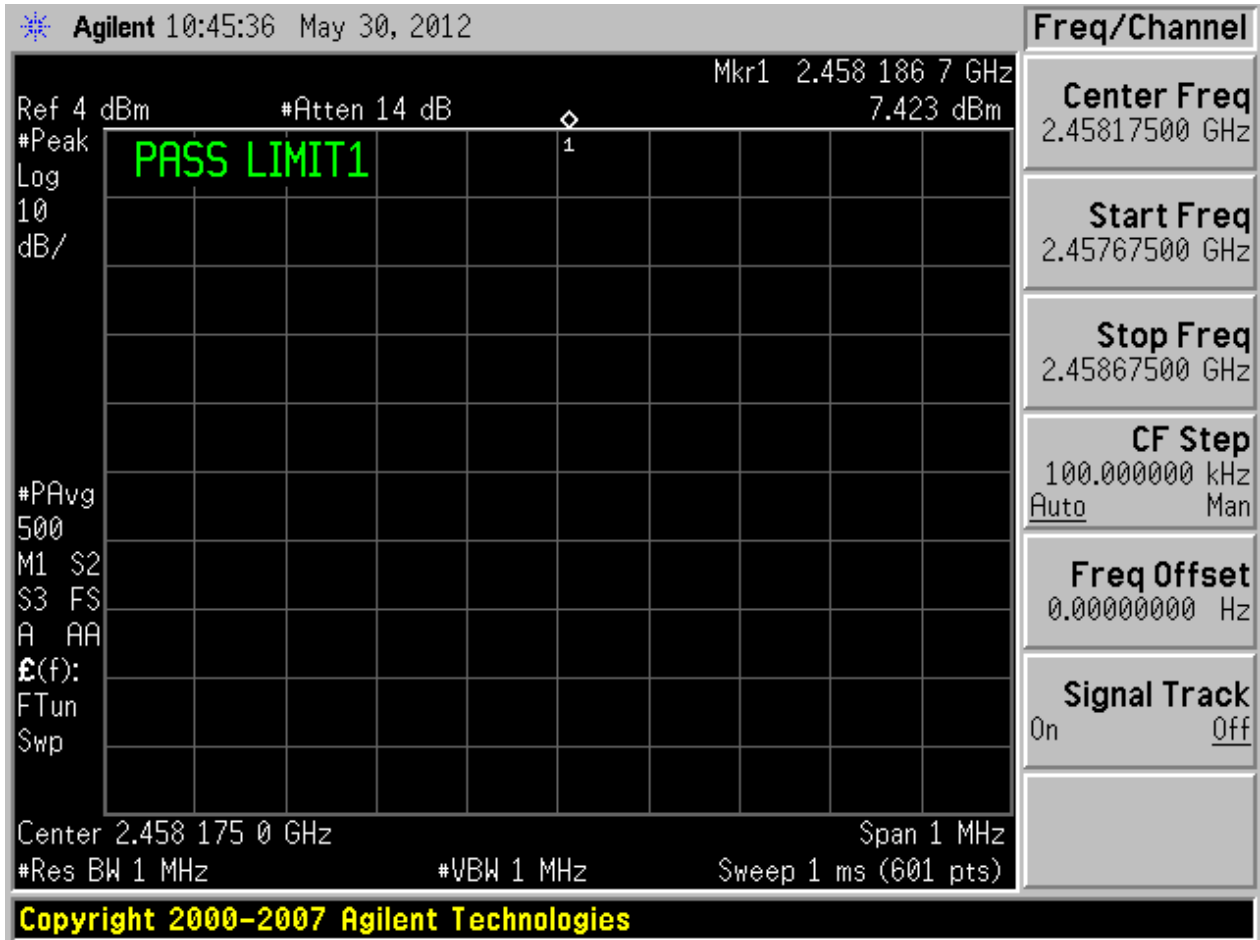


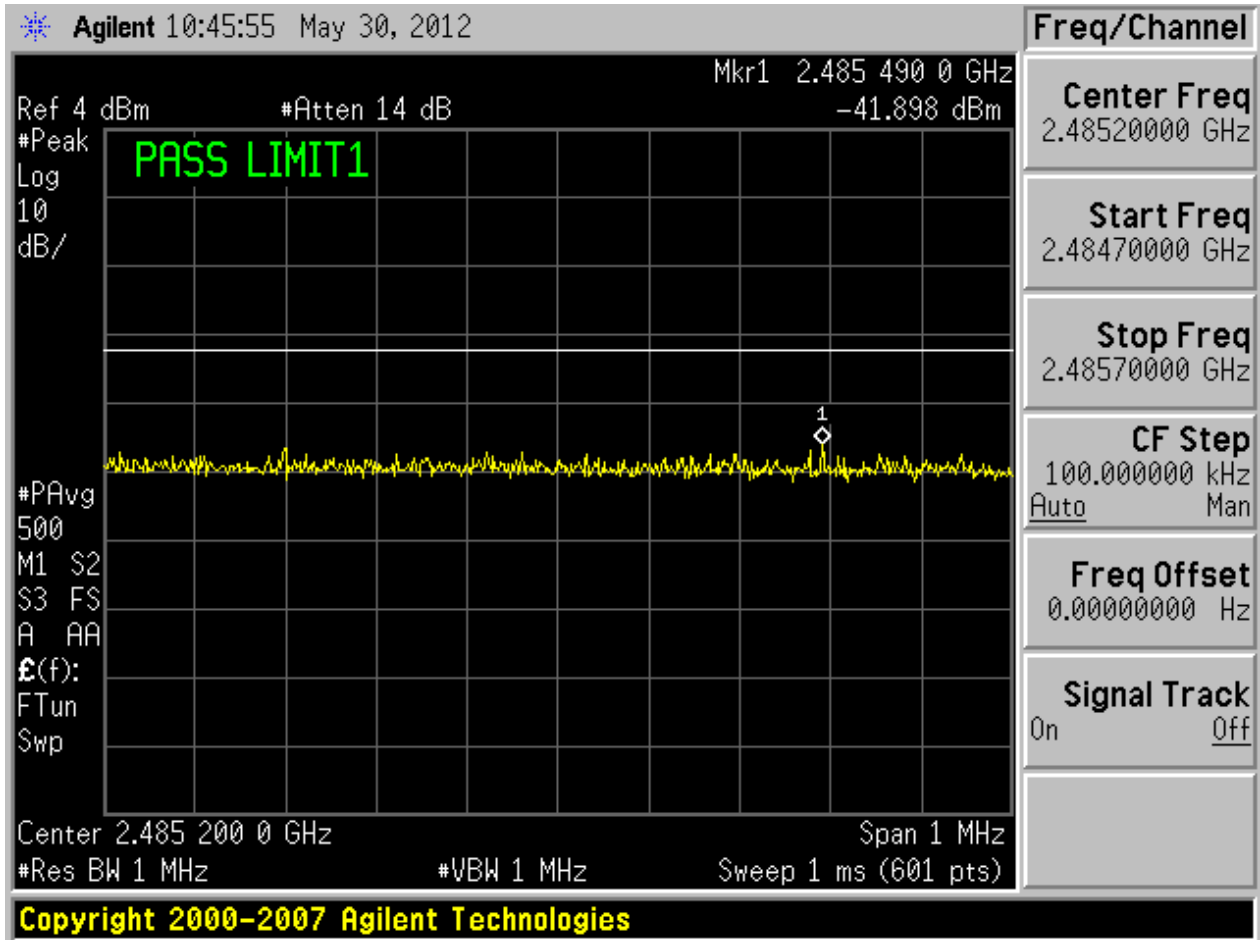


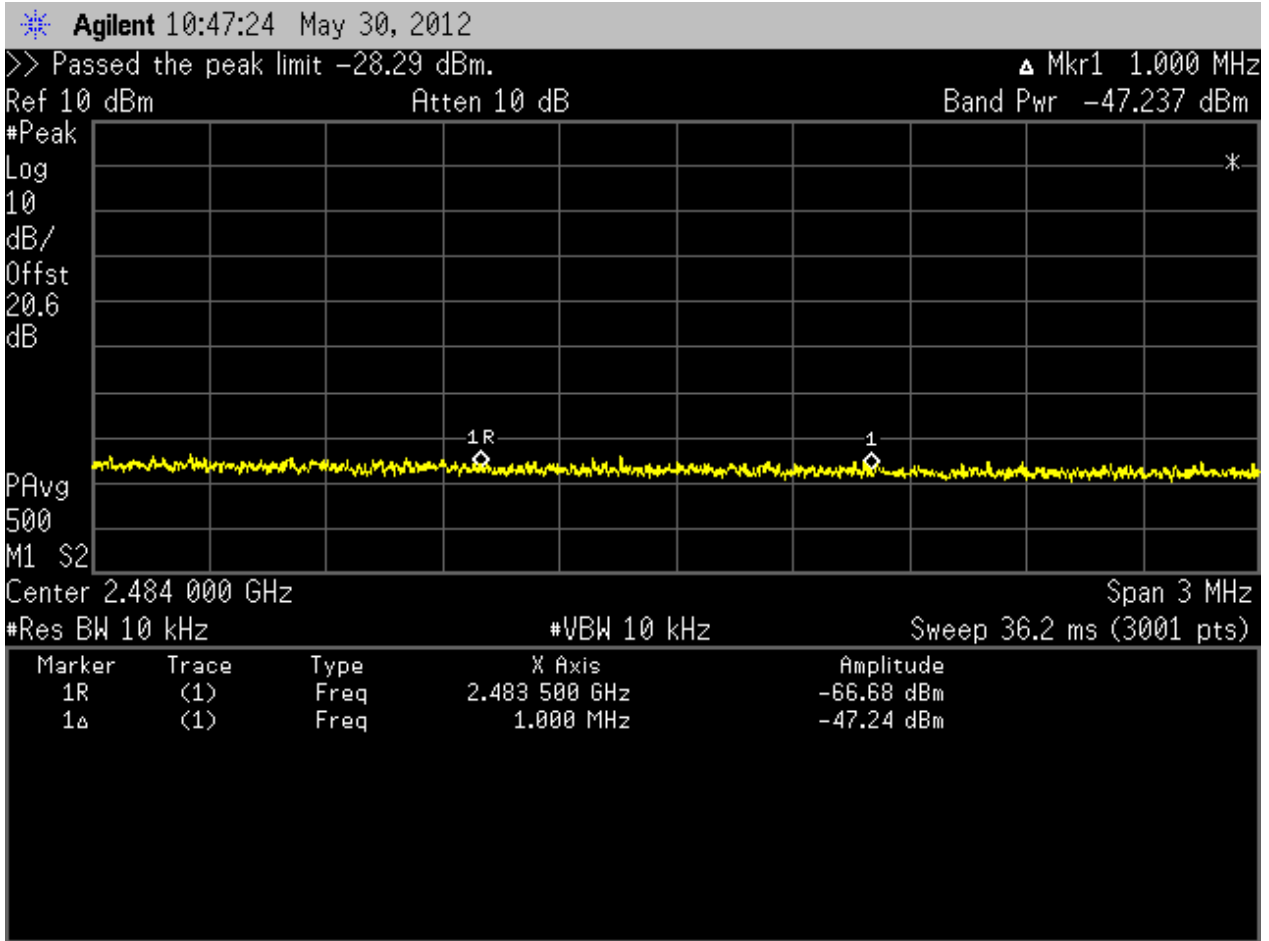


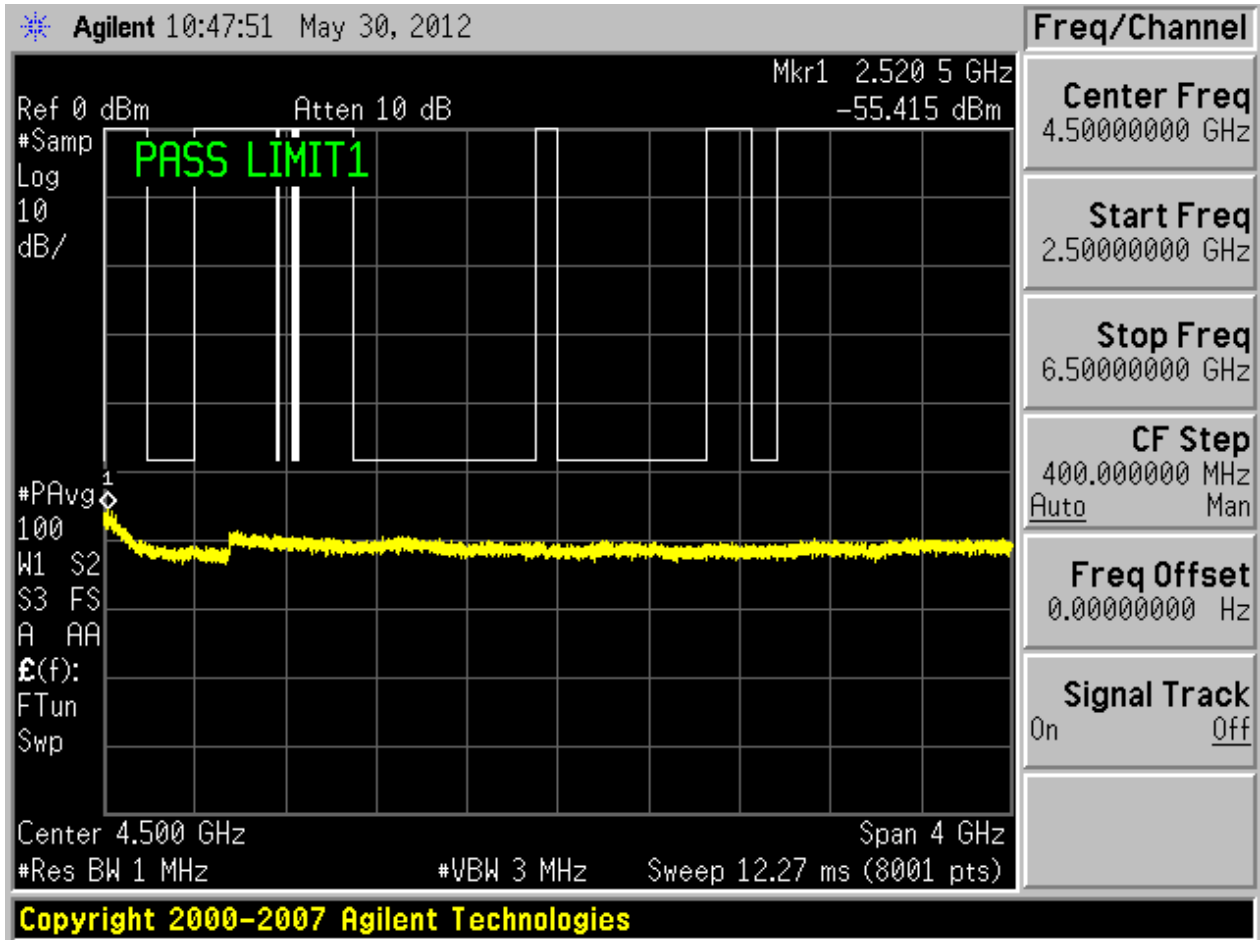


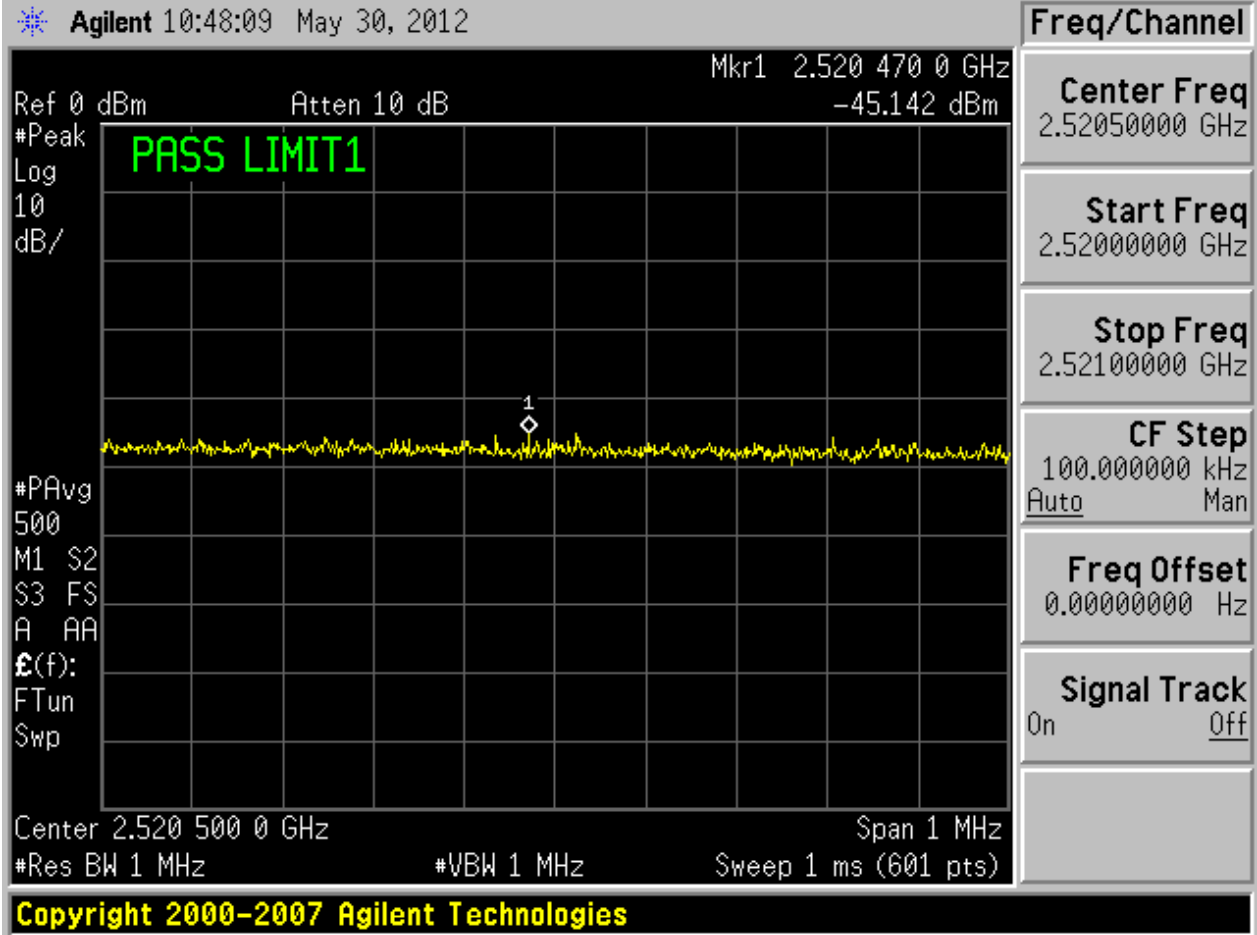


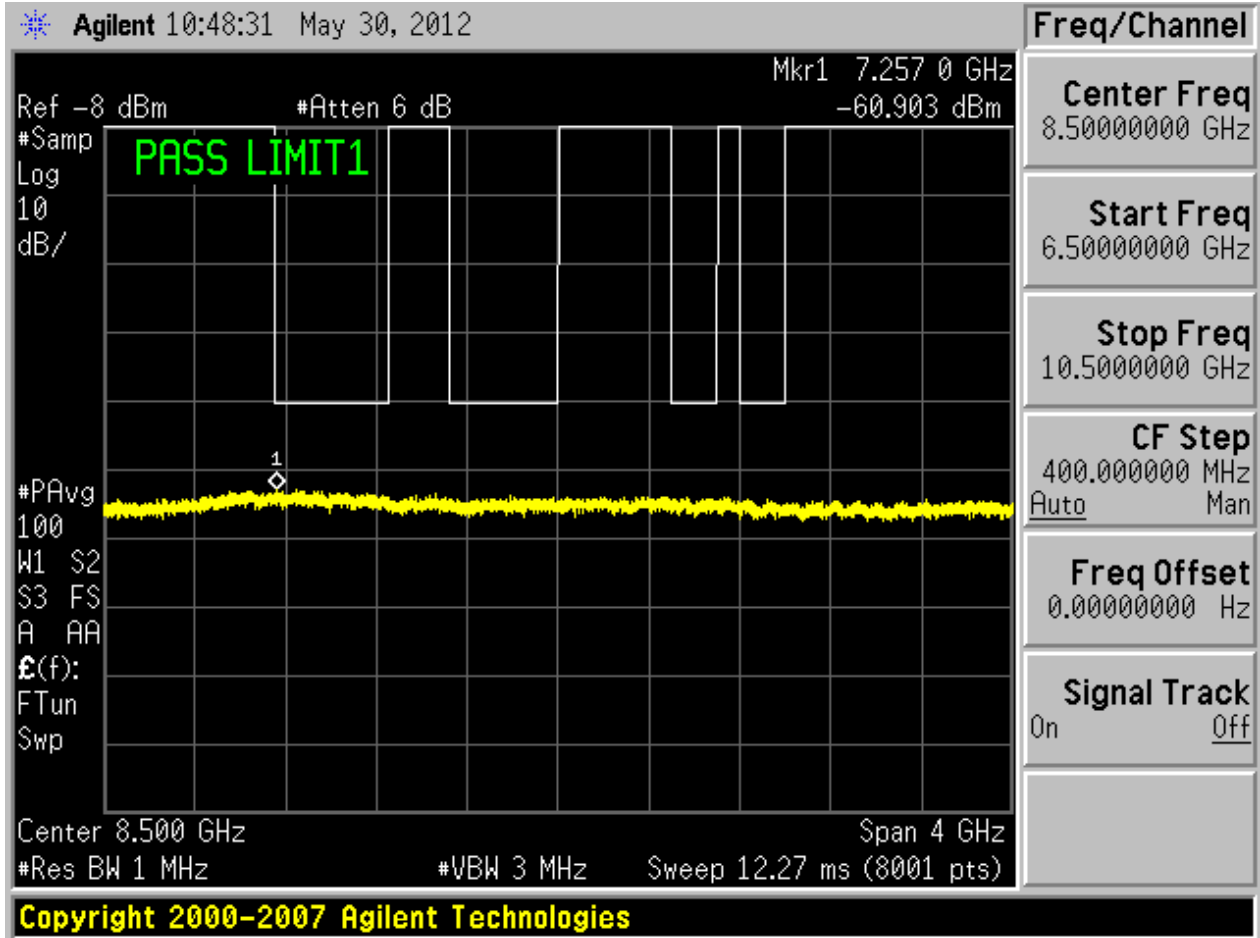


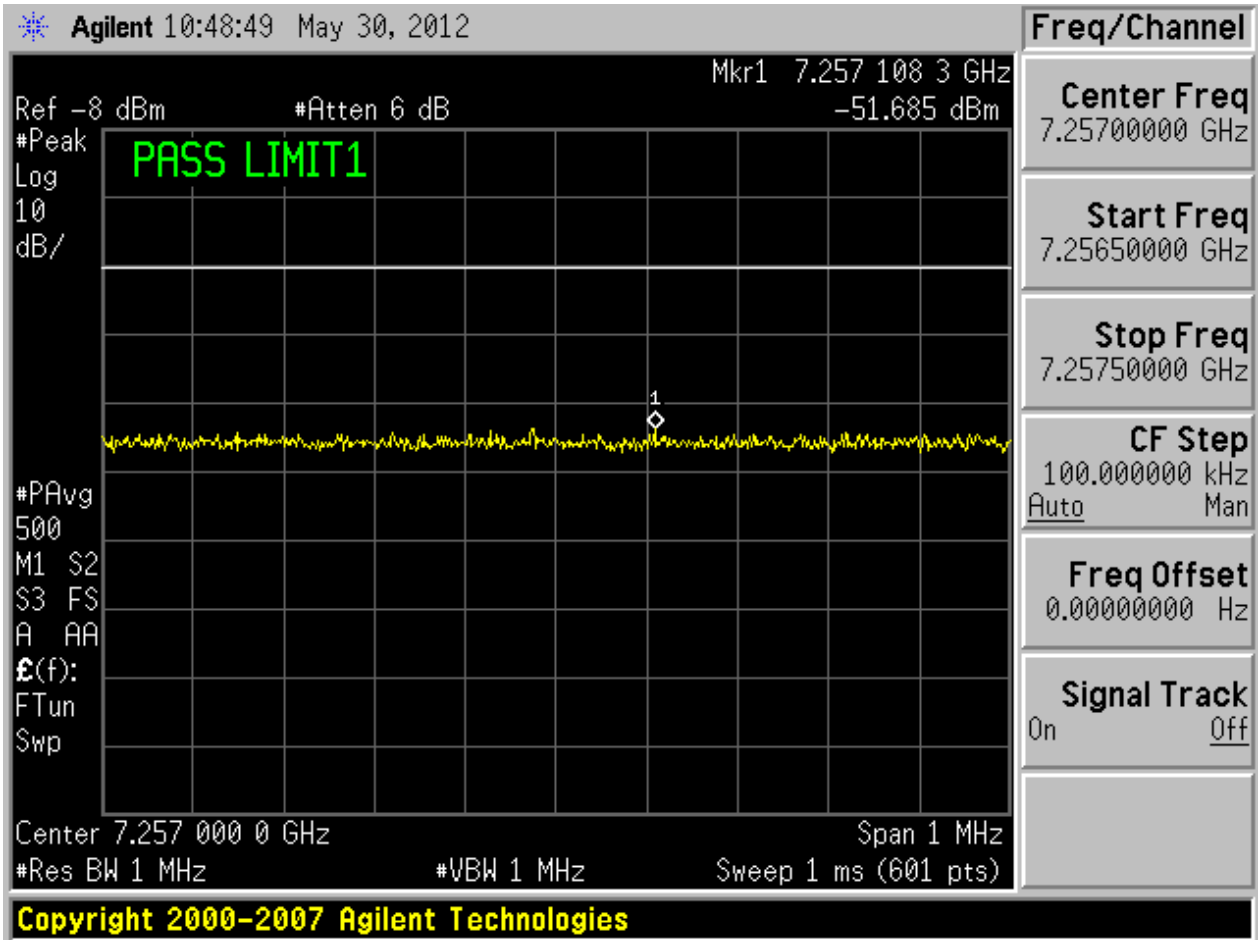


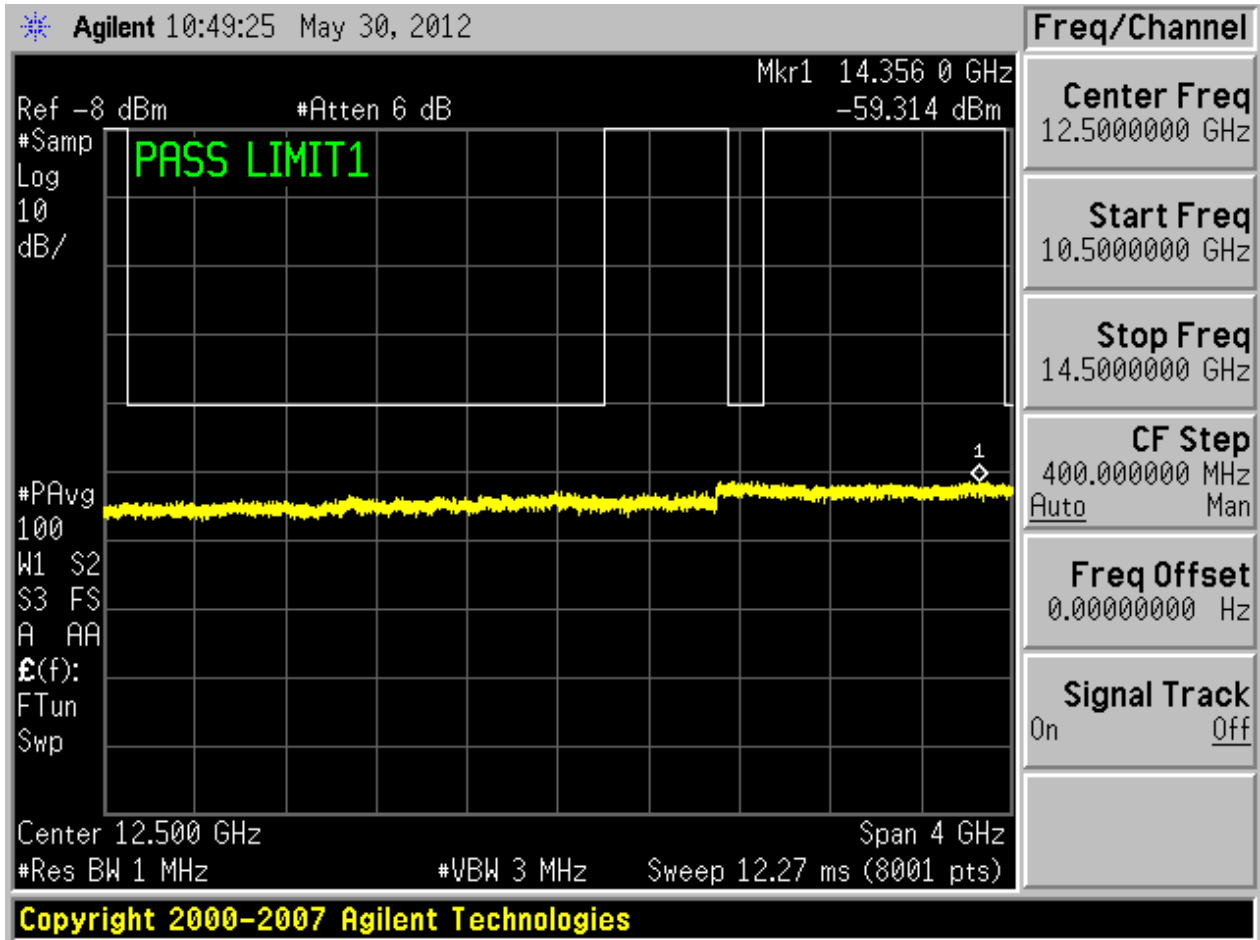


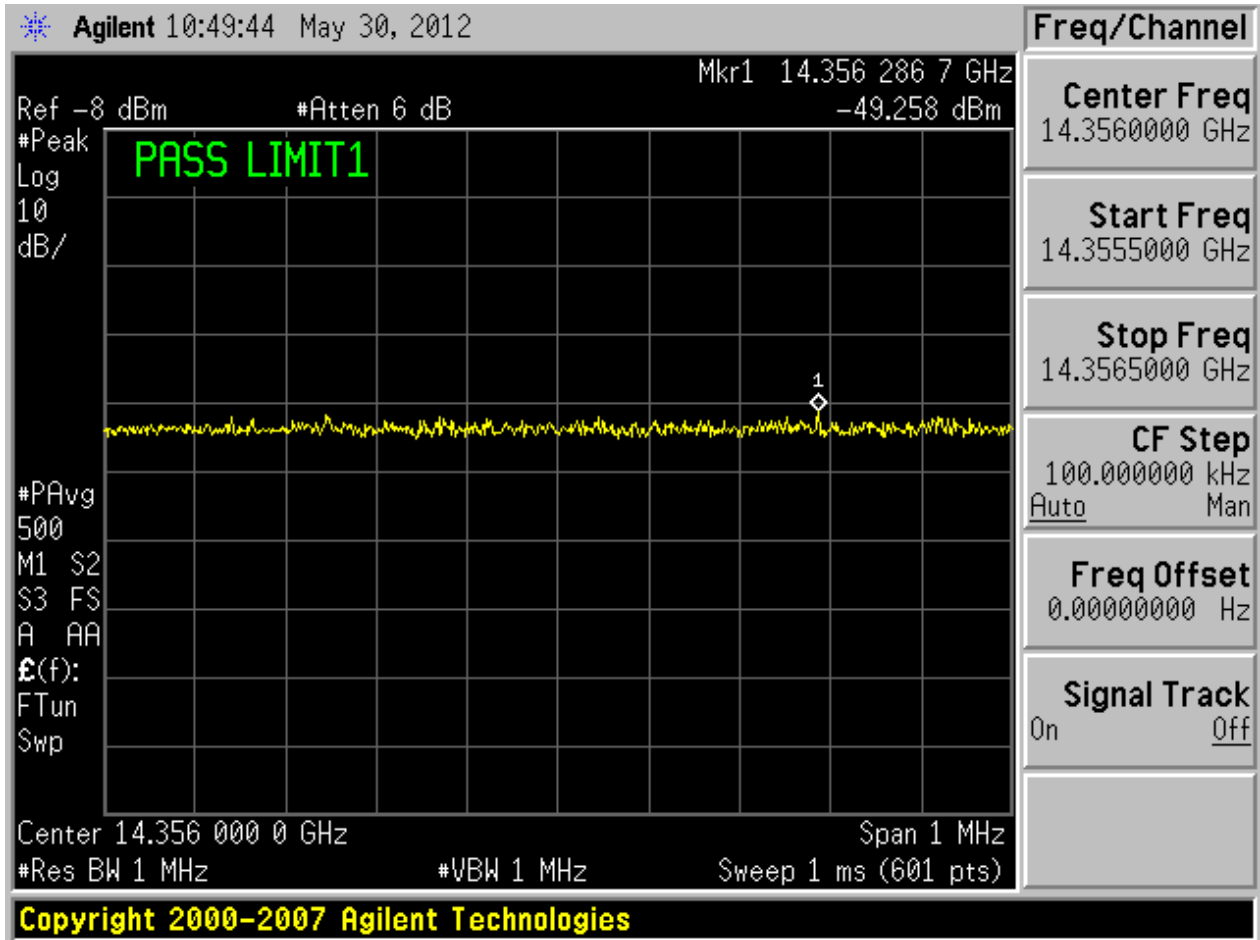


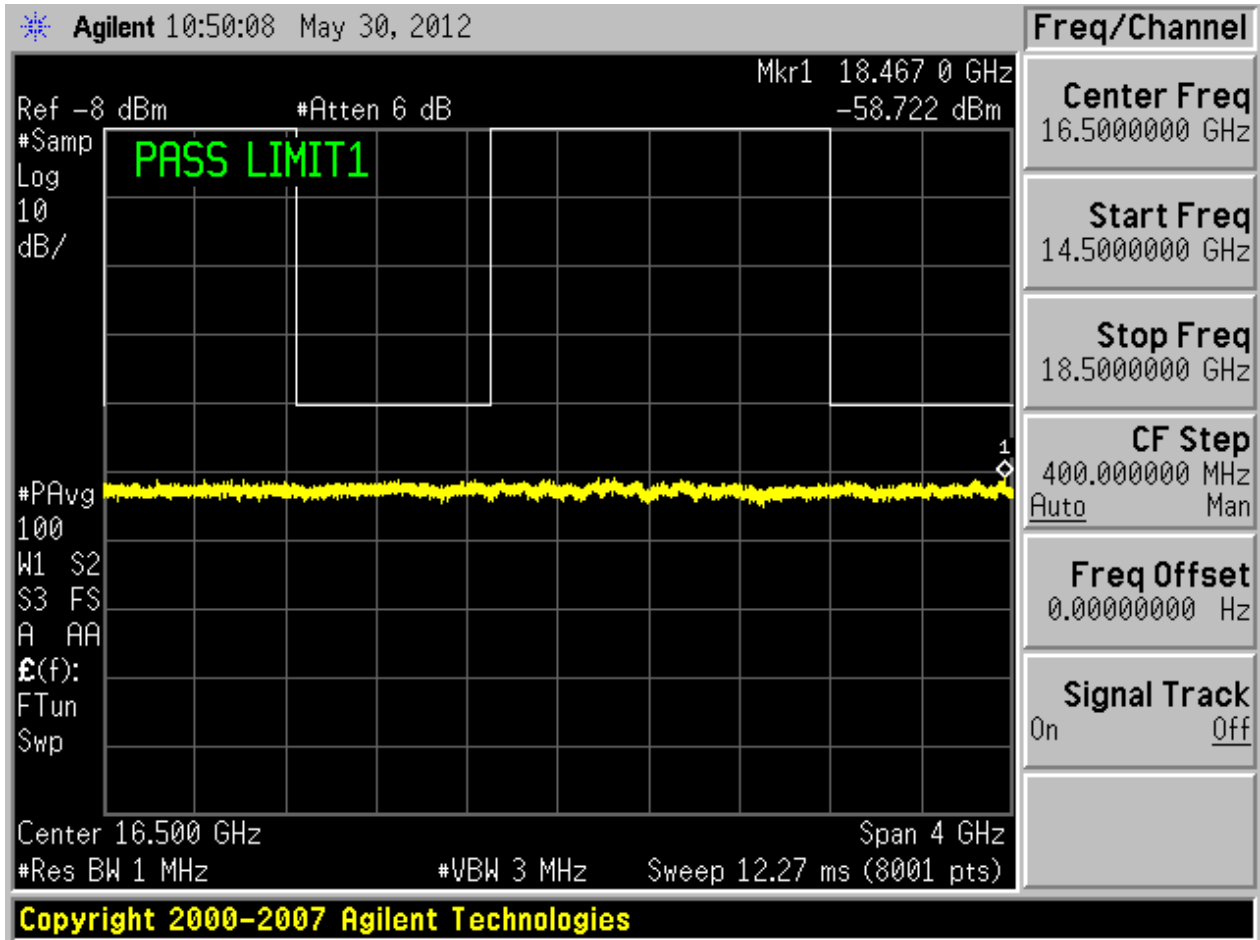


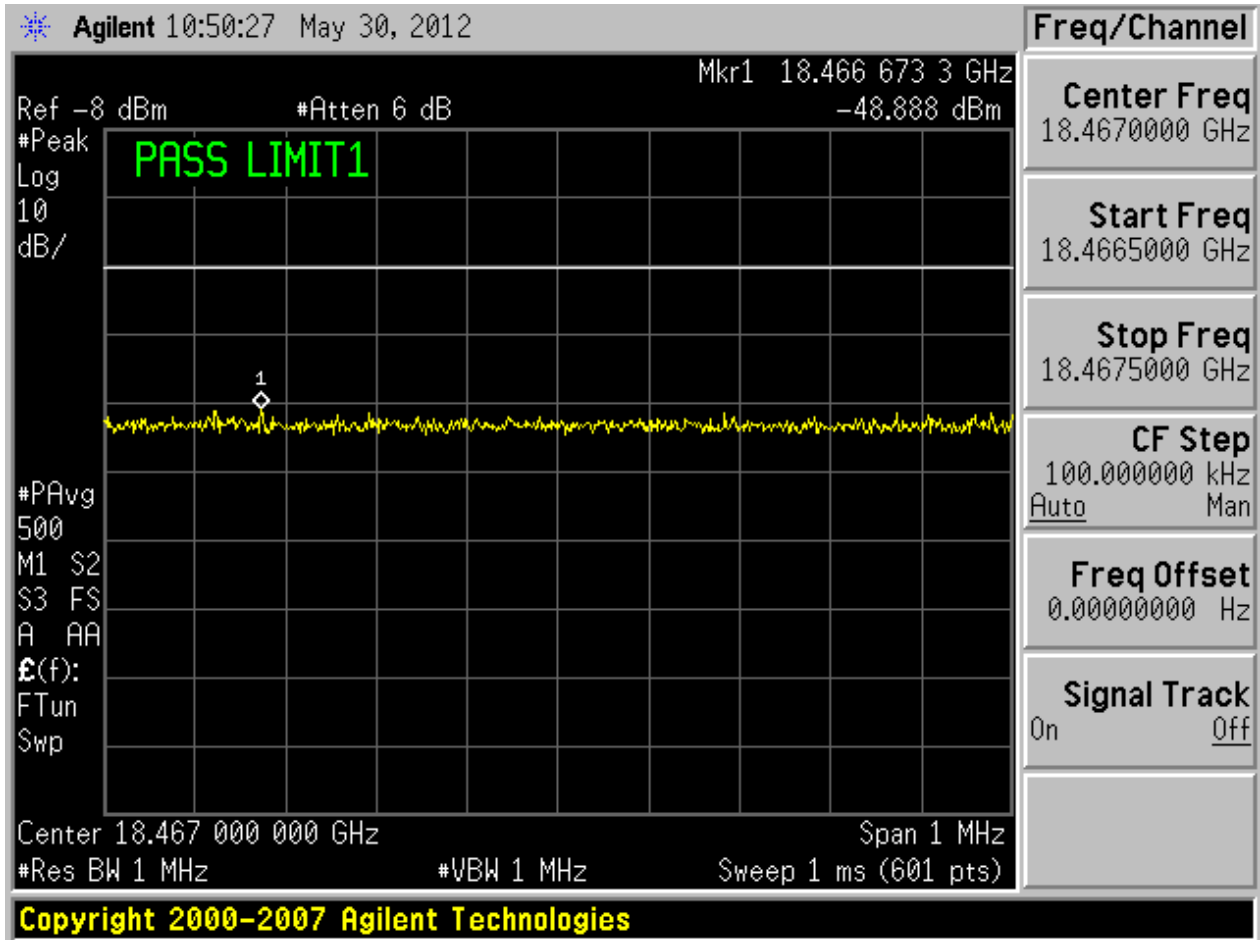


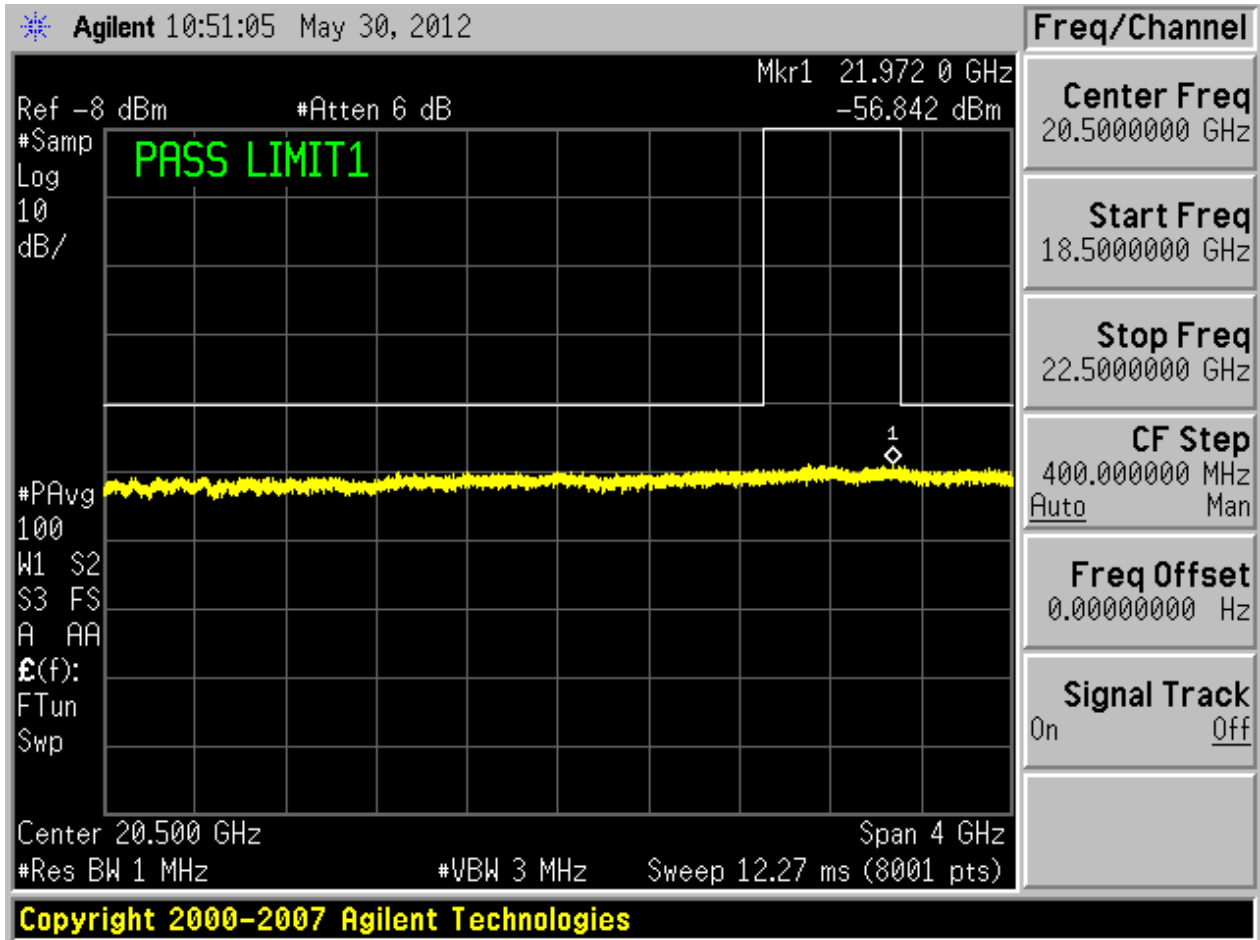


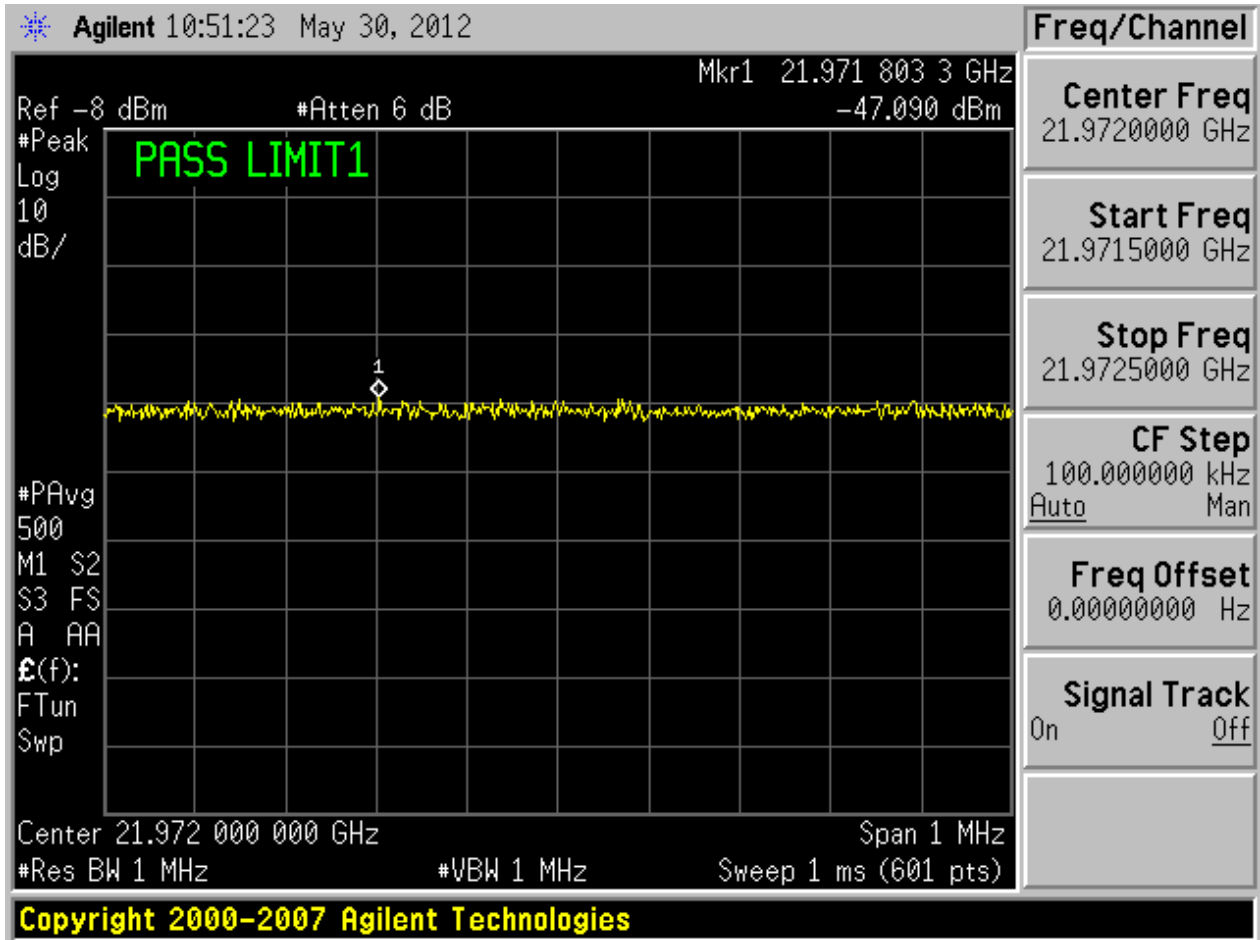


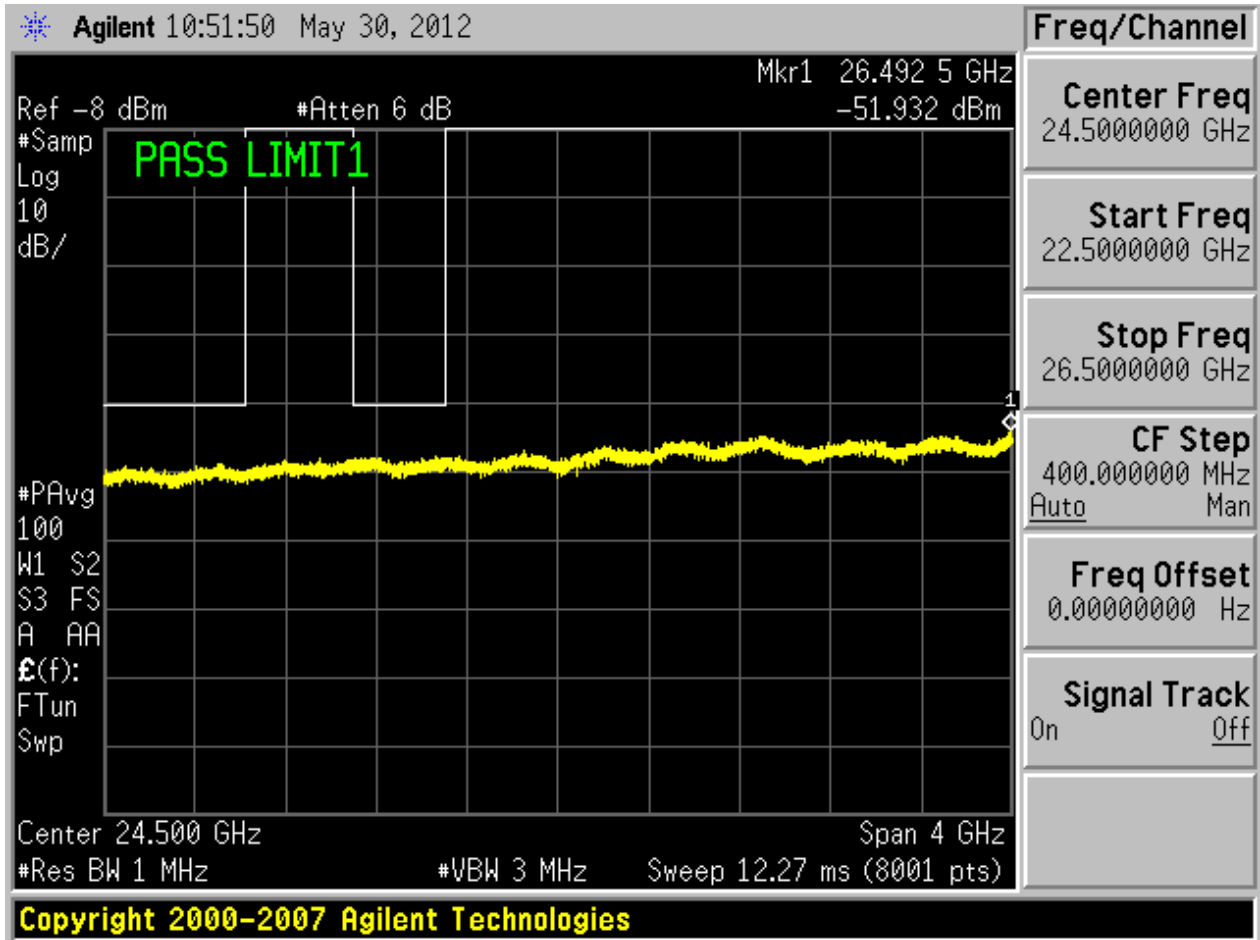


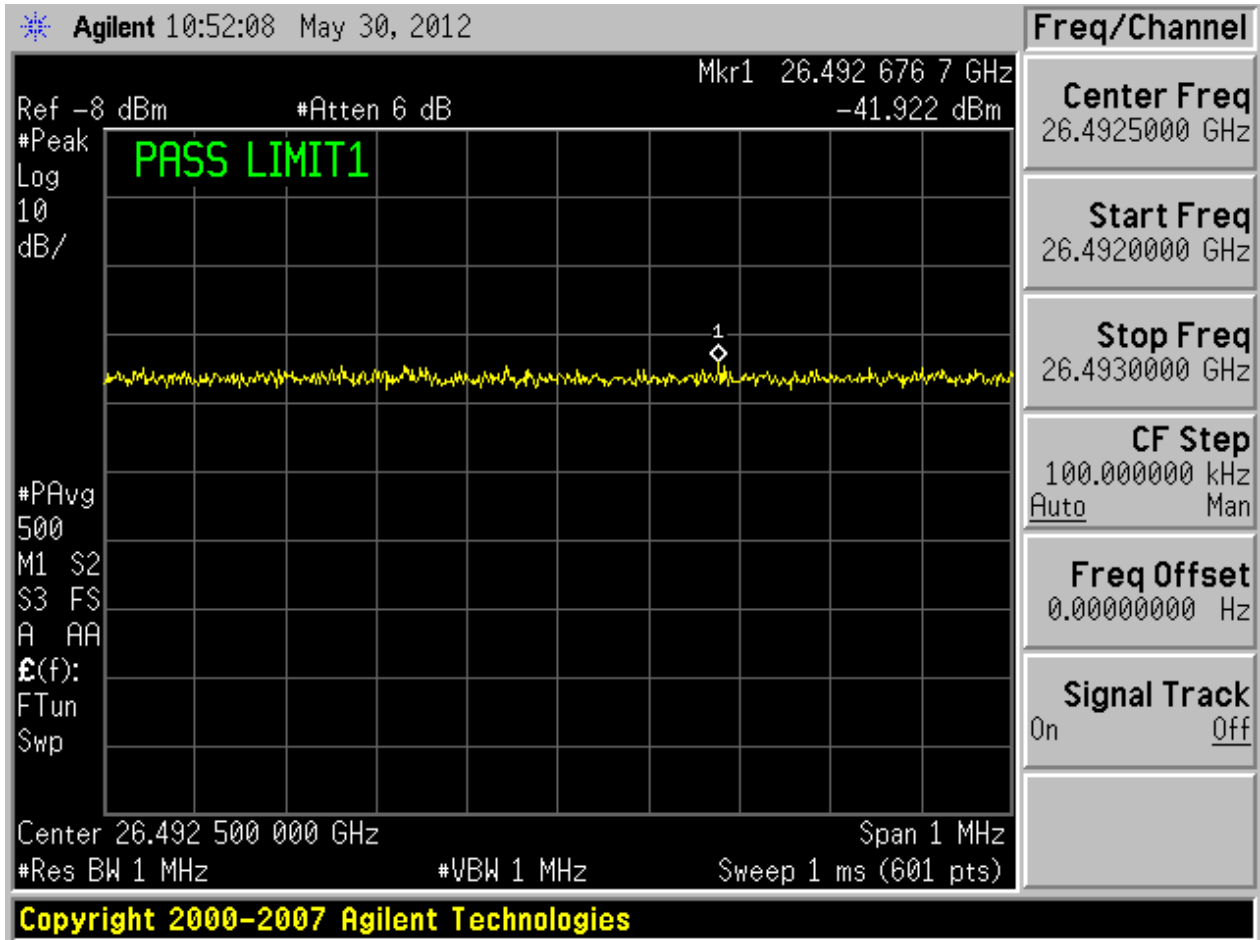




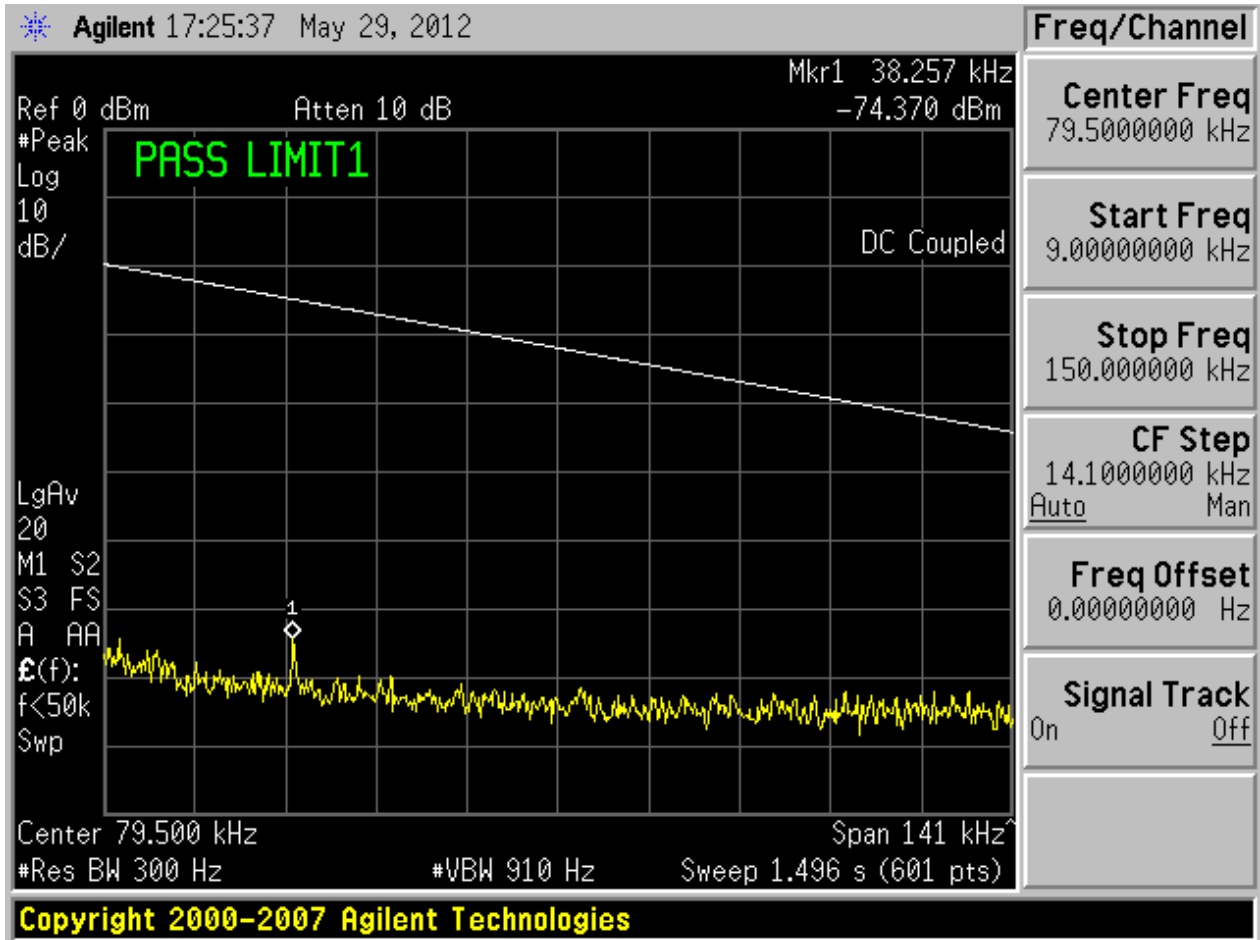


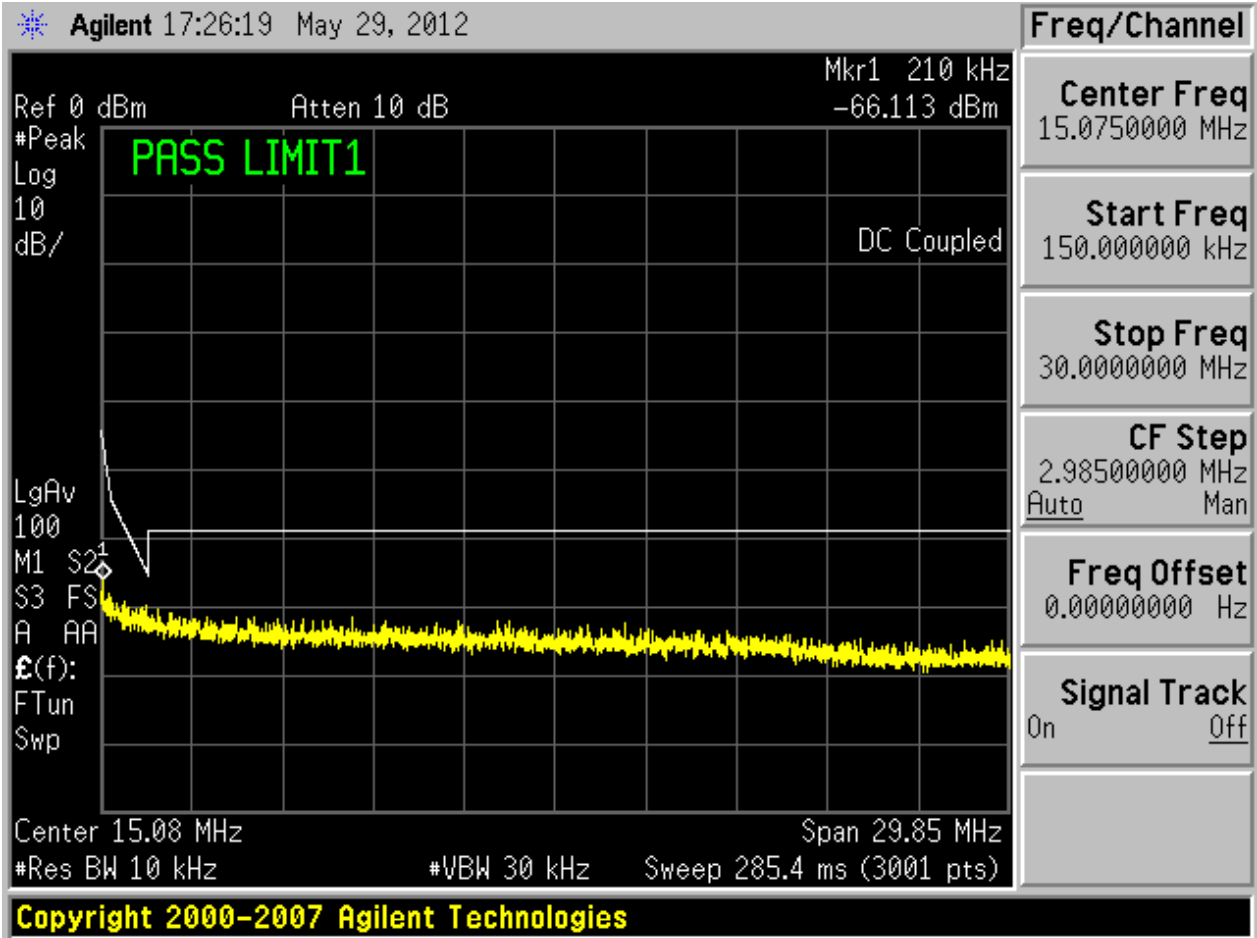


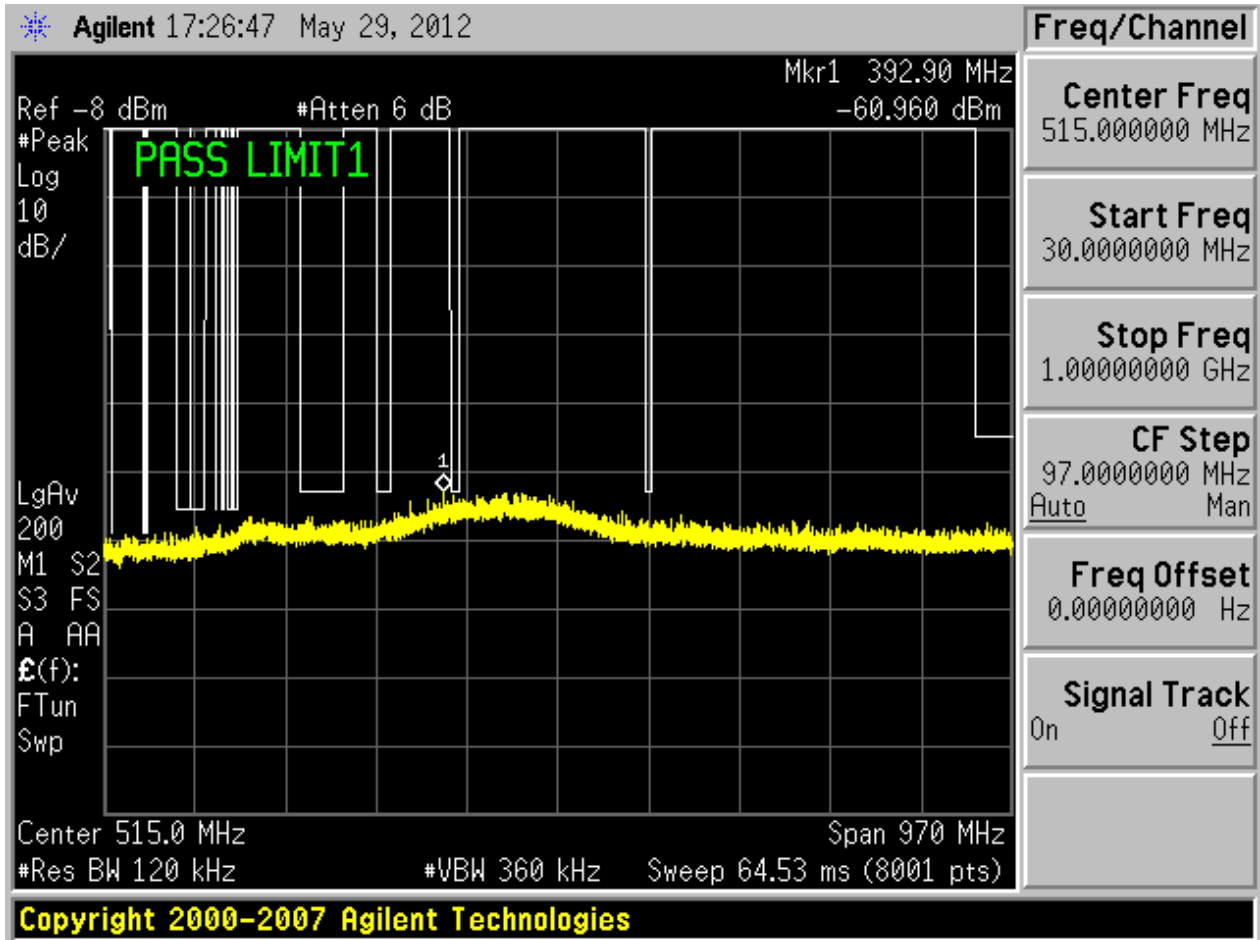


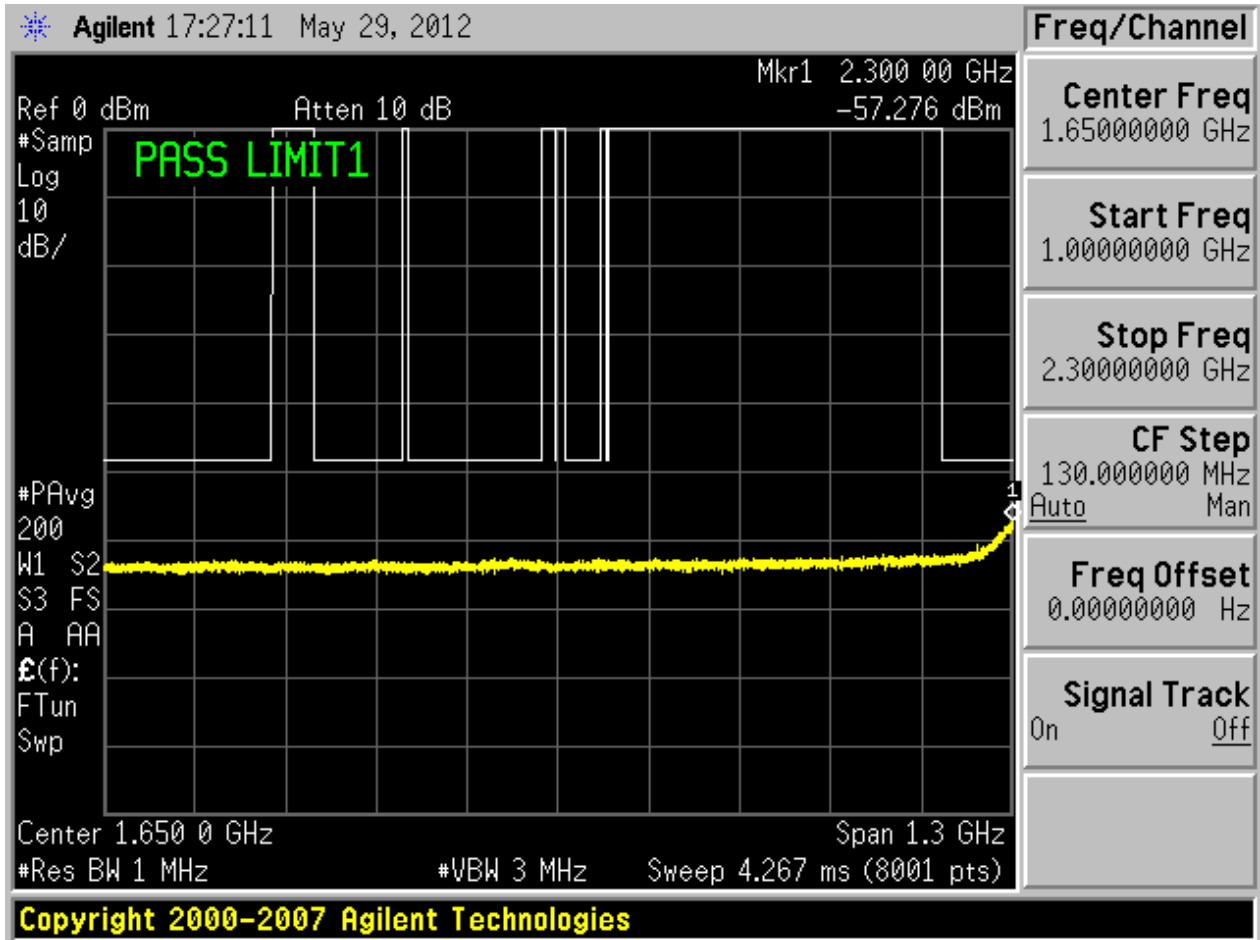


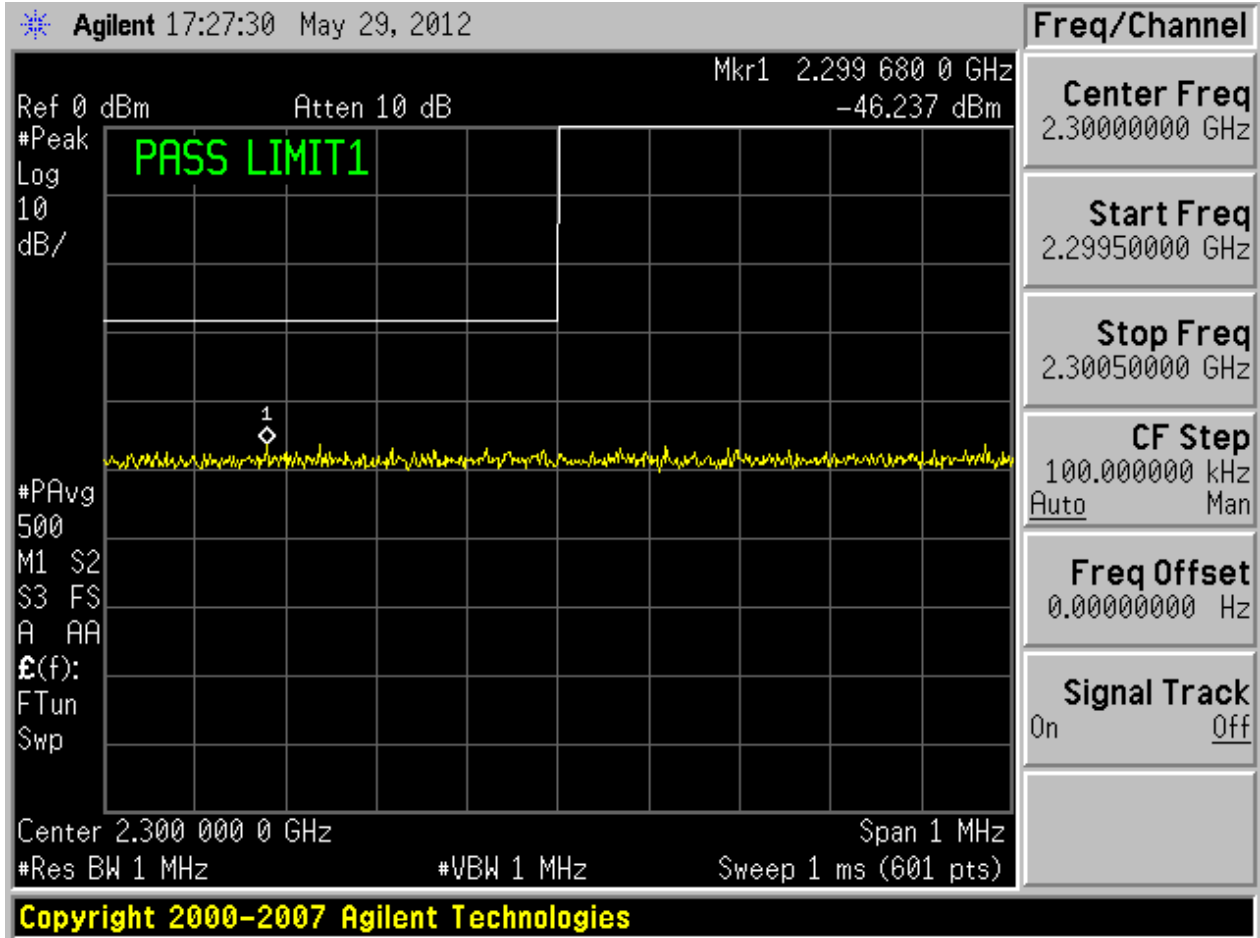
2.21.2 Ant 2

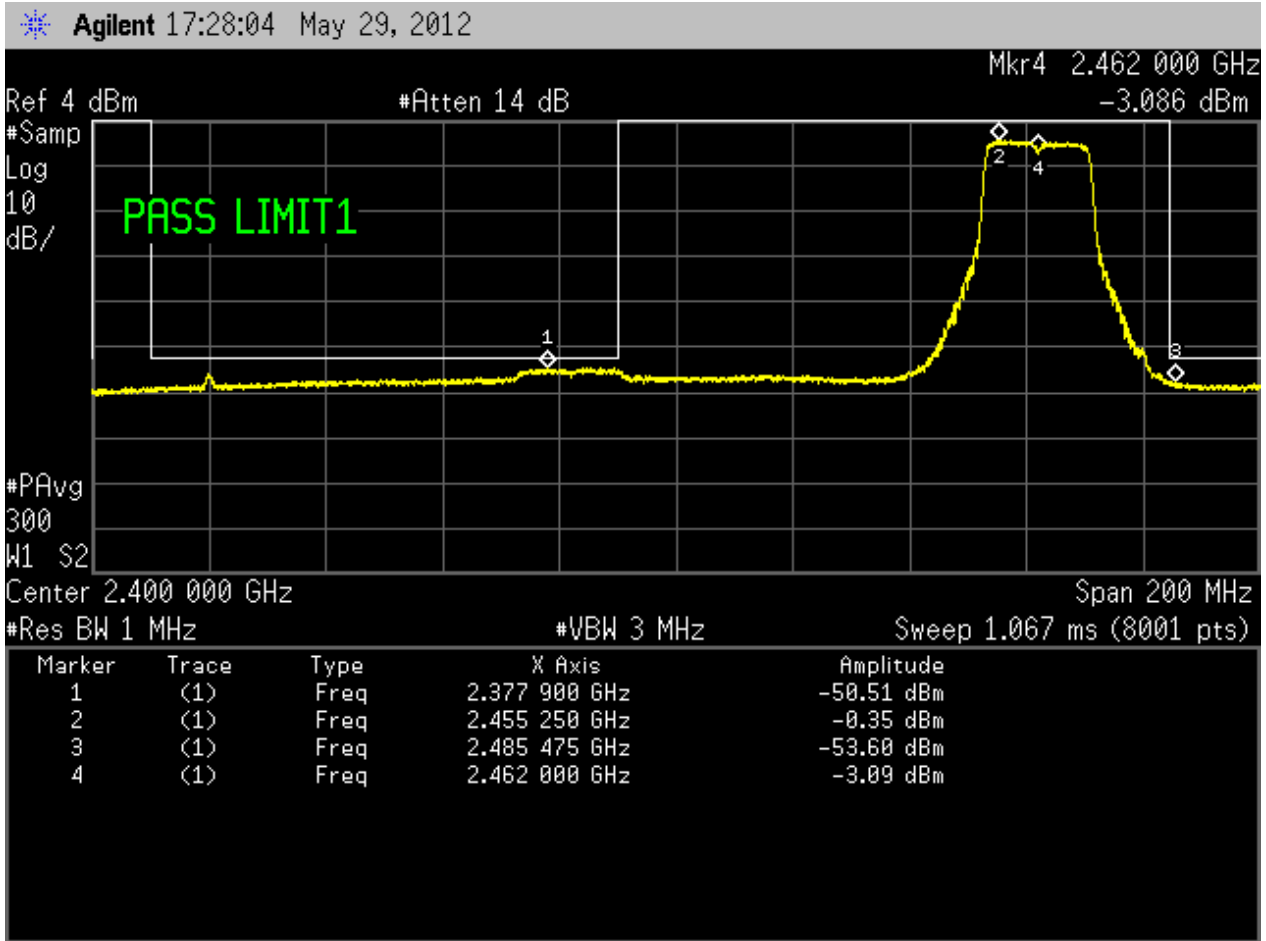


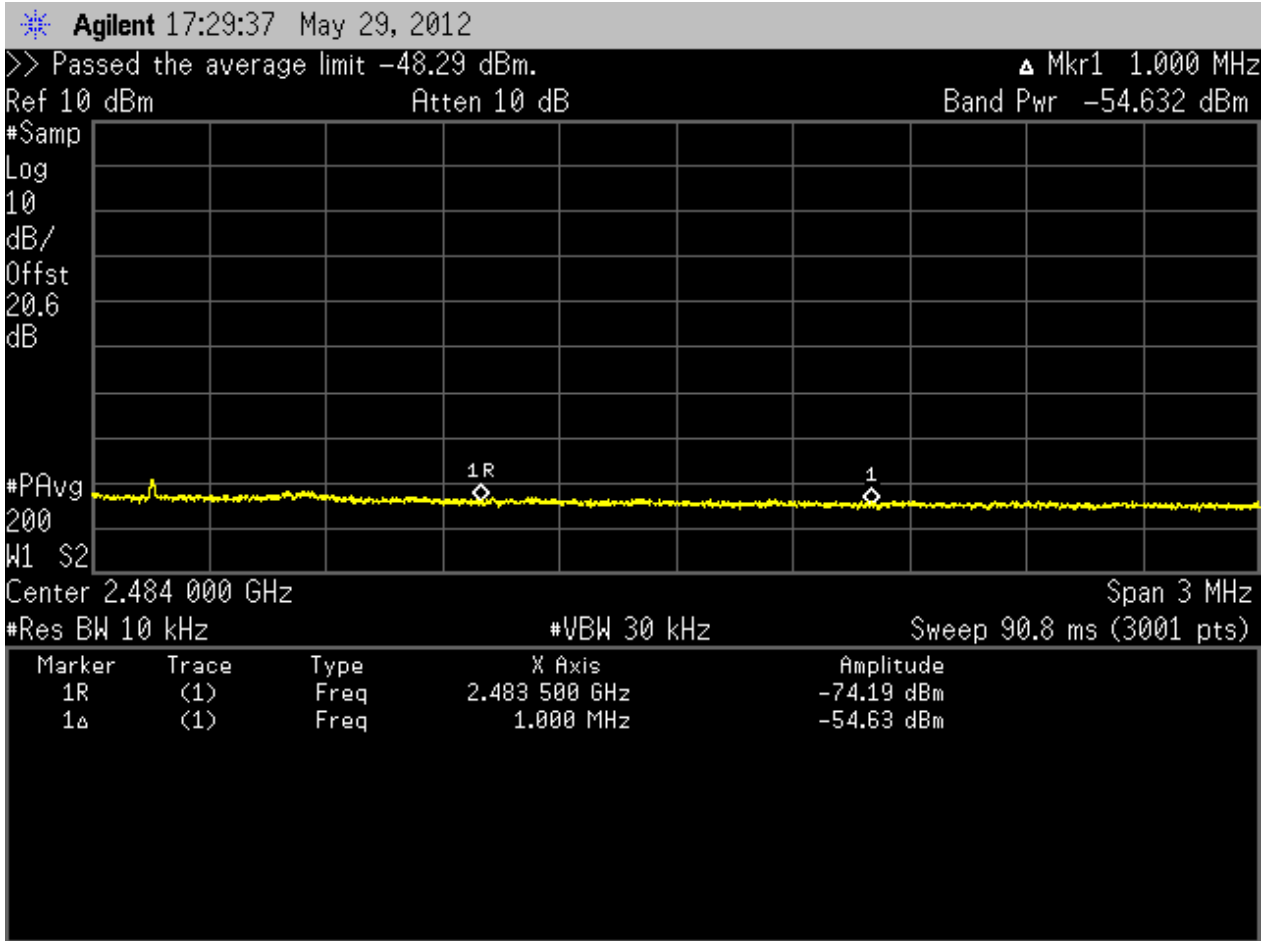


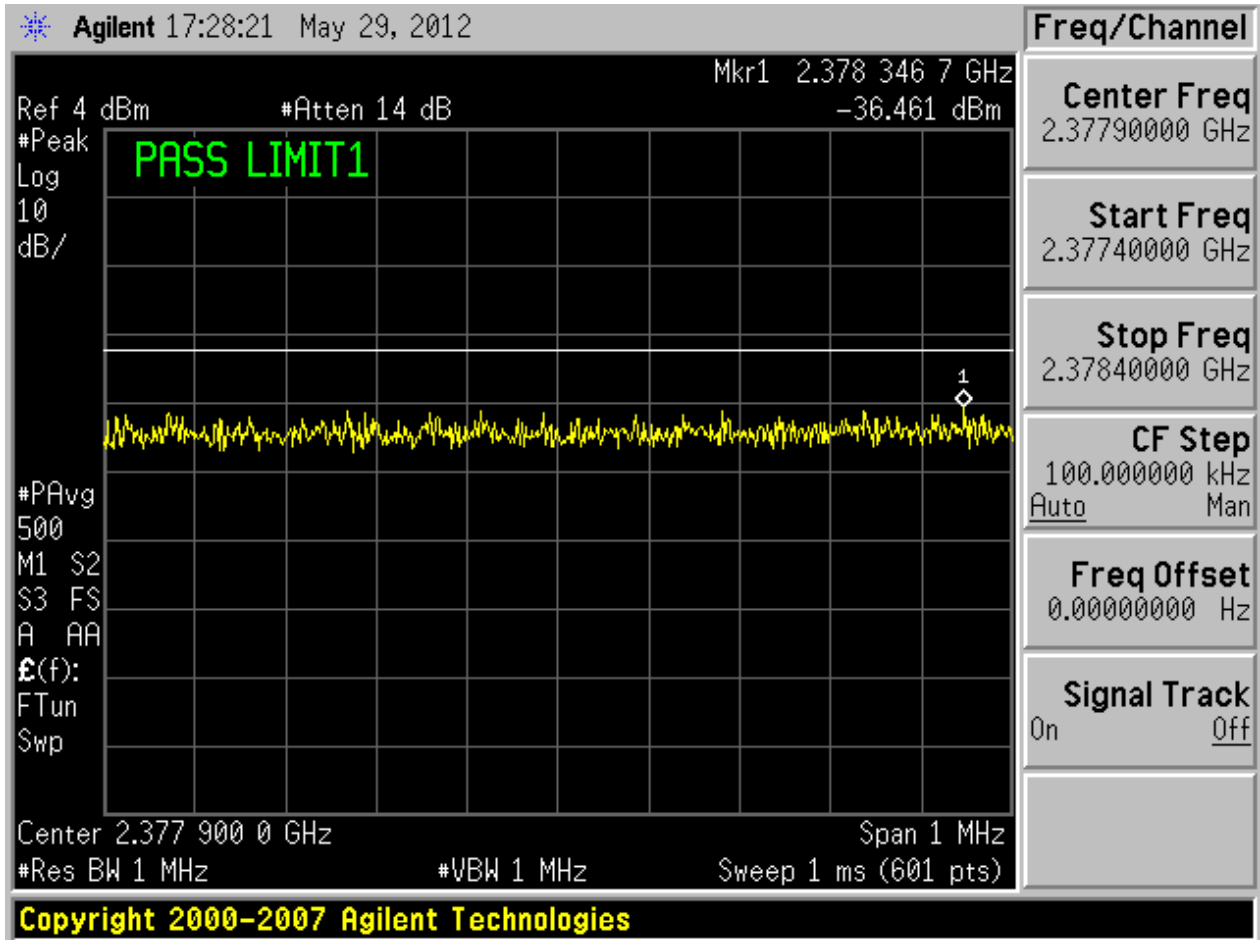


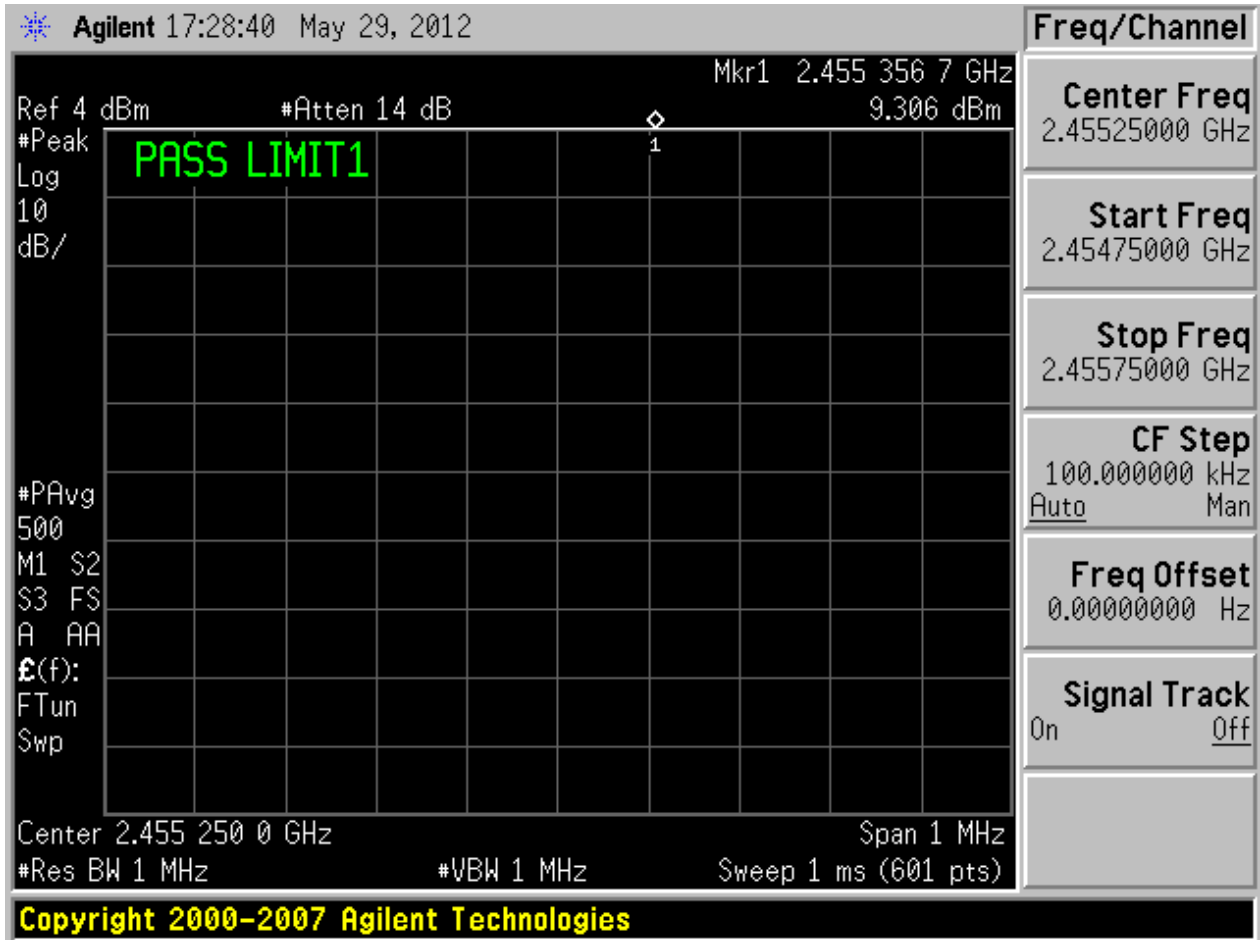


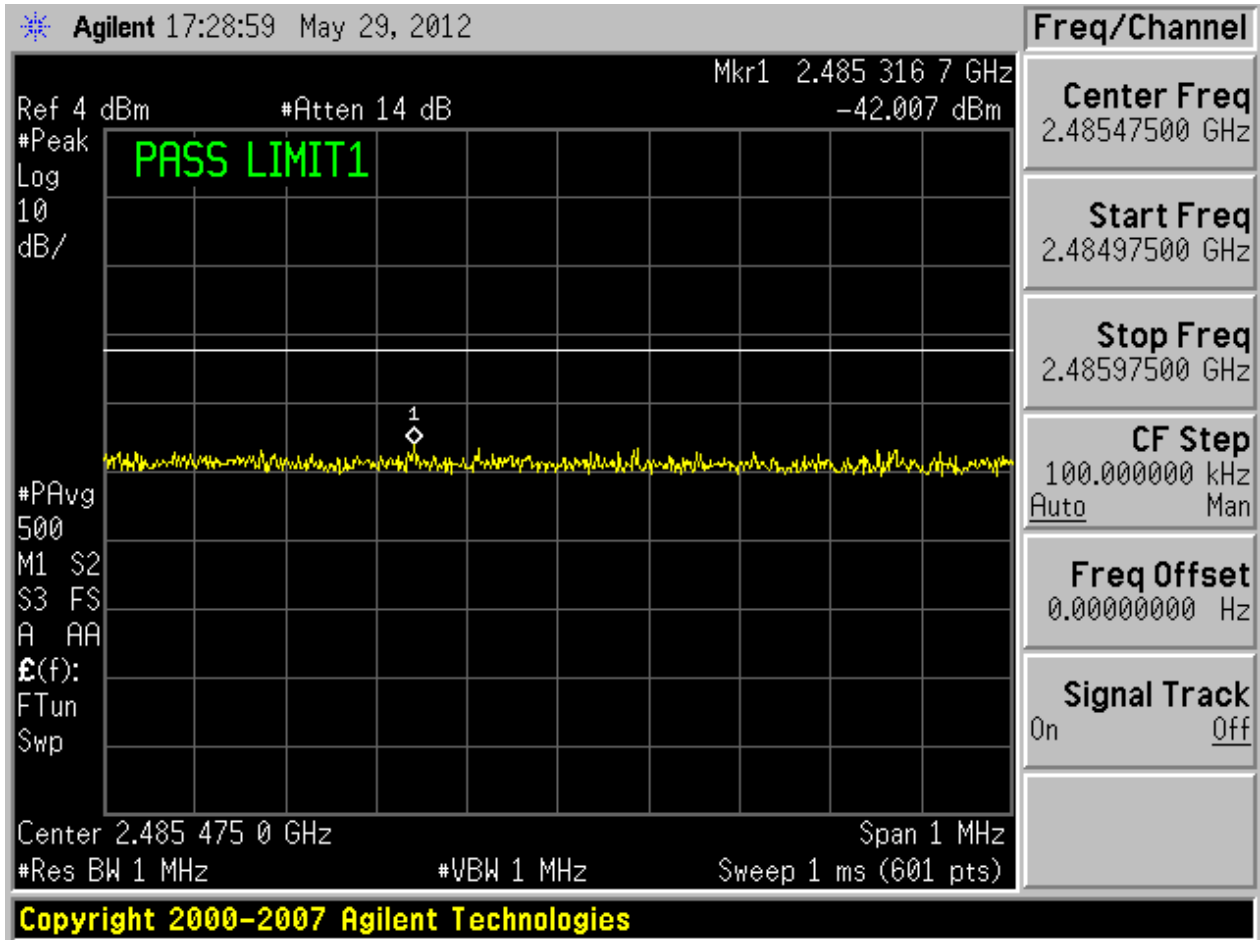


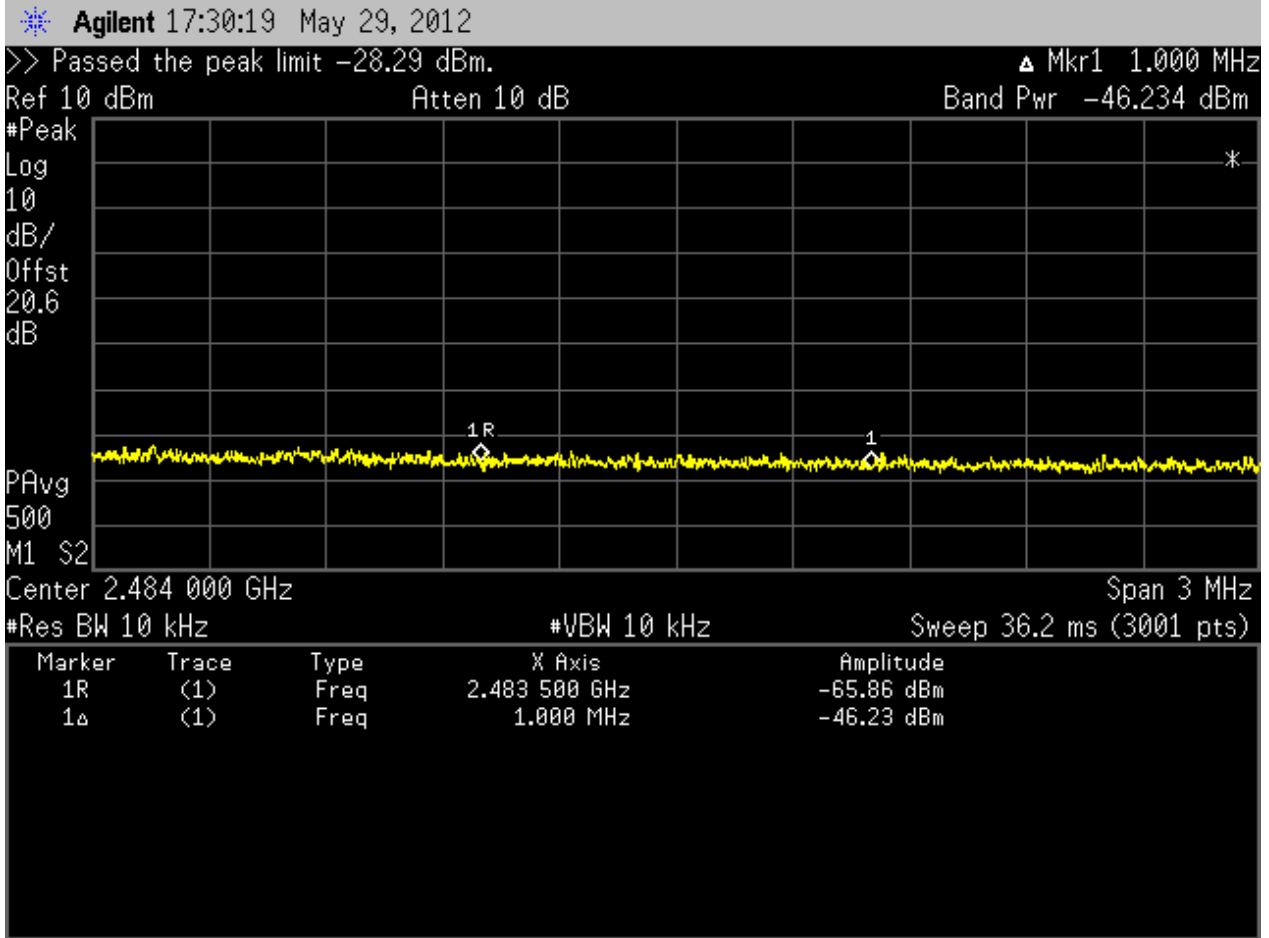


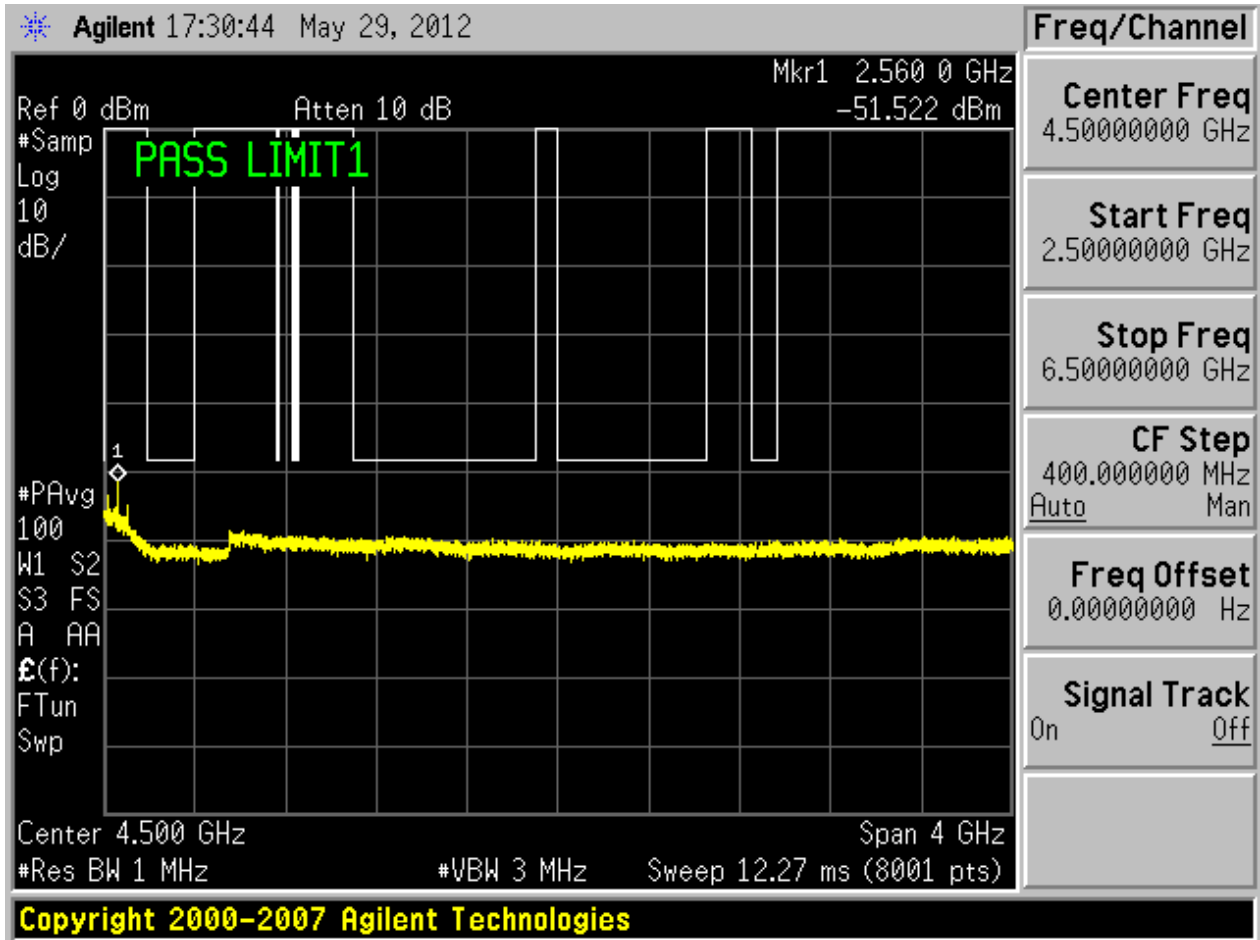


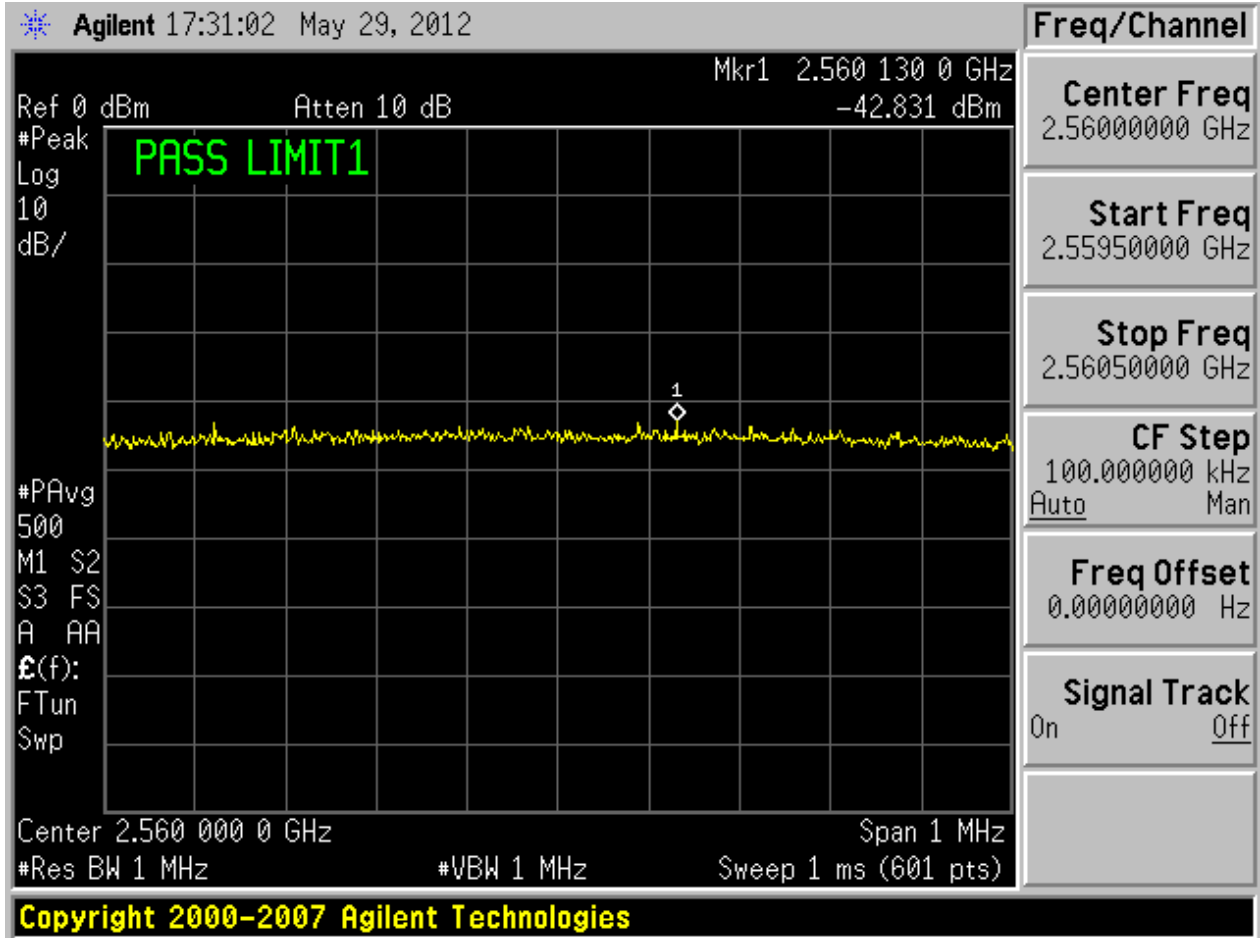


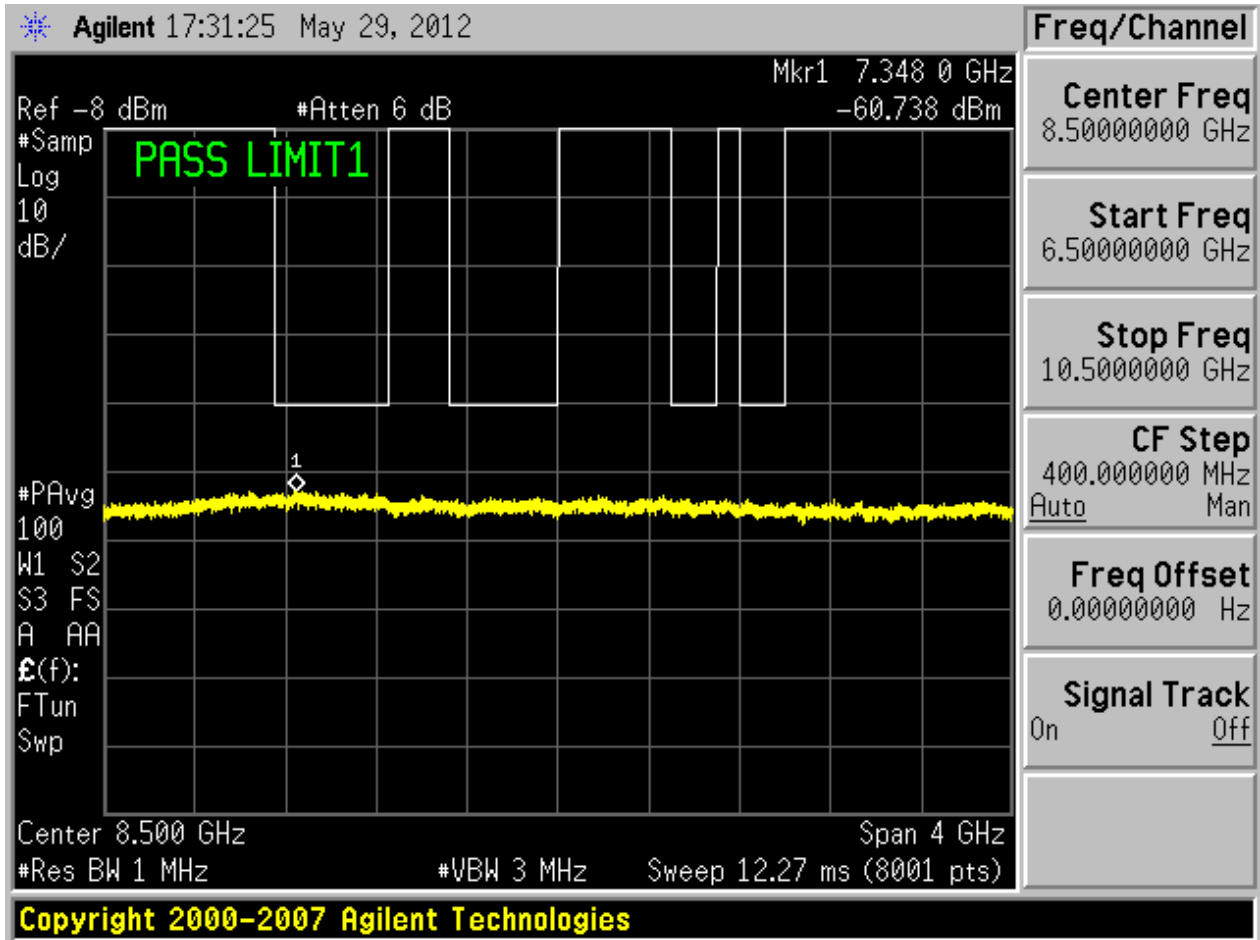


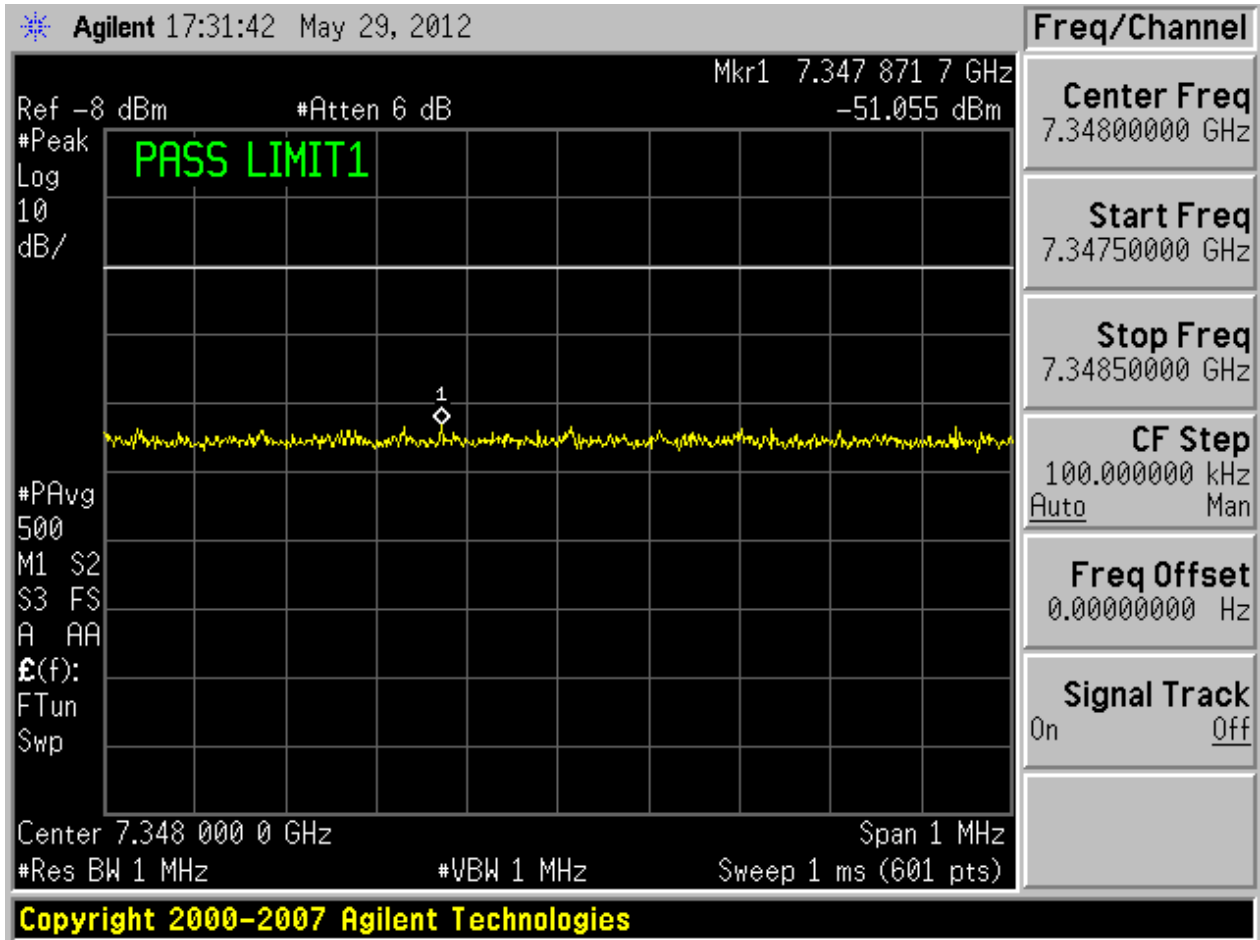


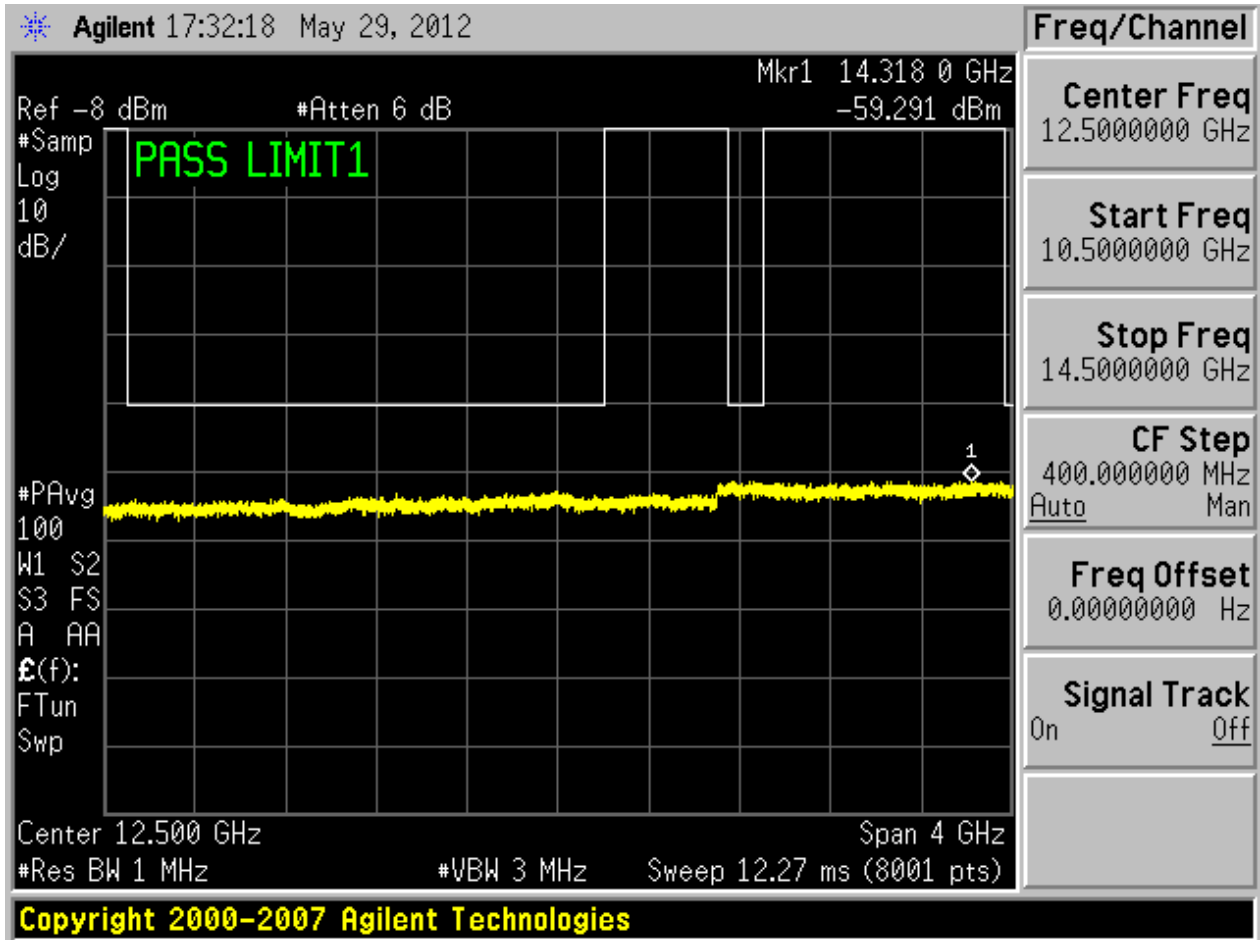


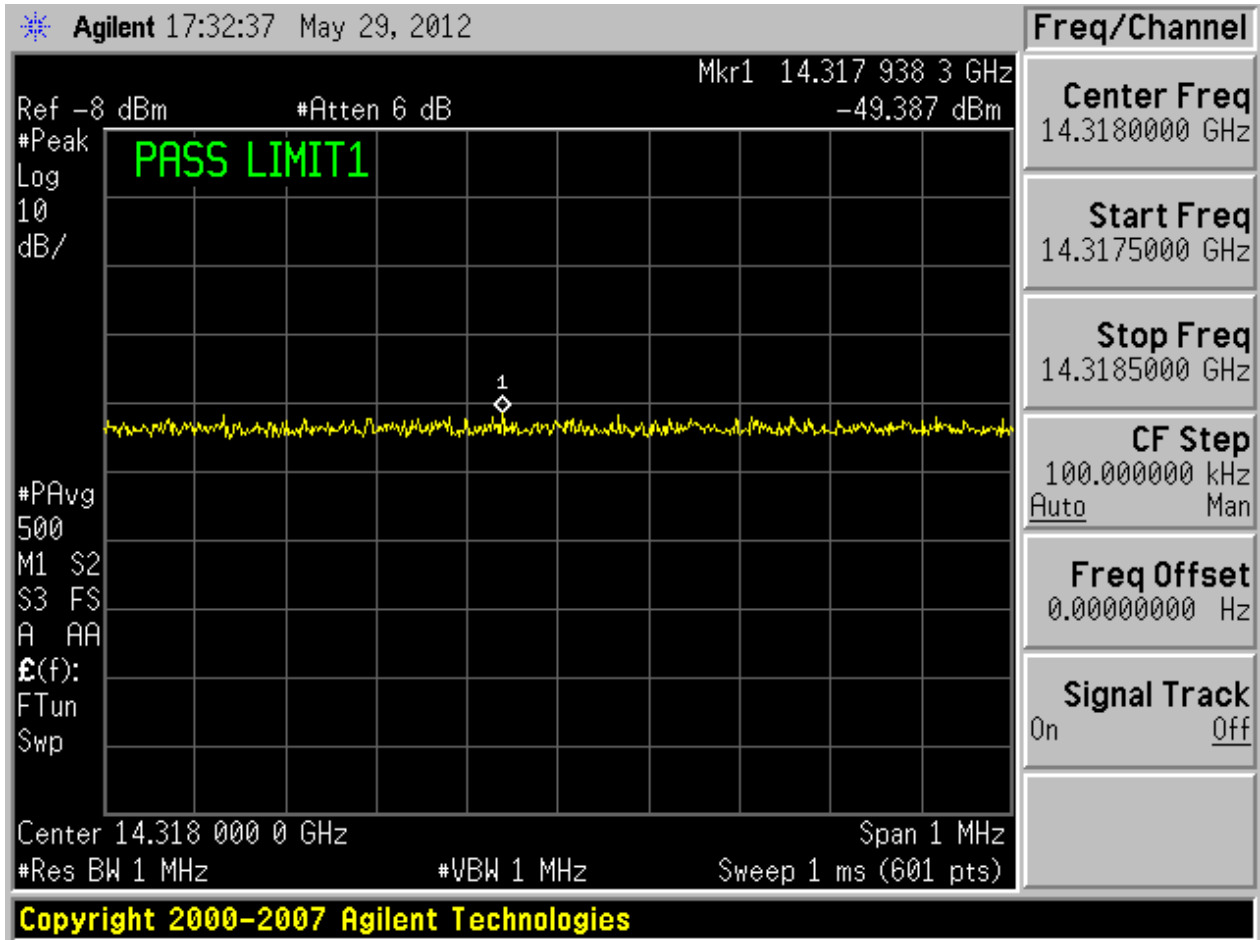


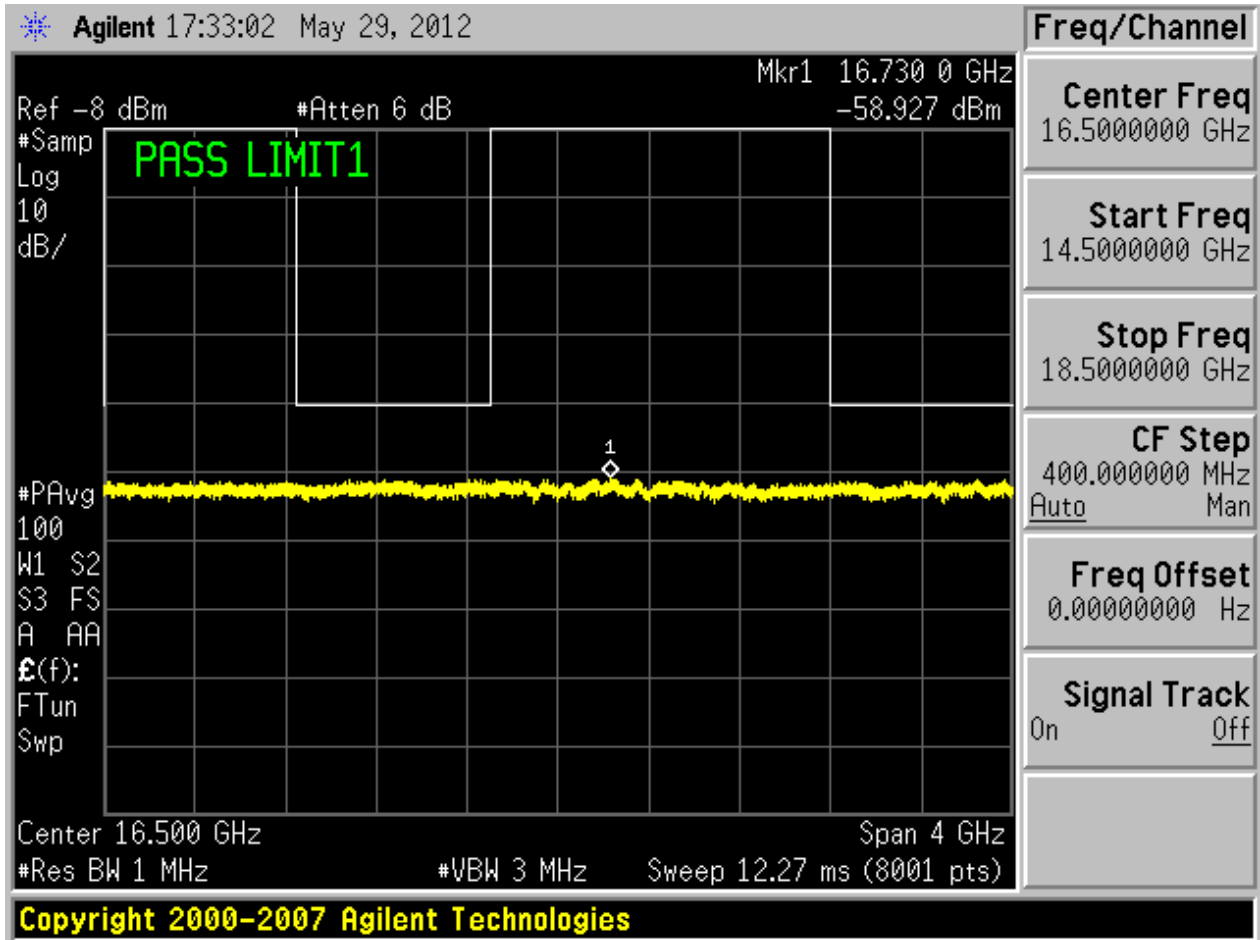


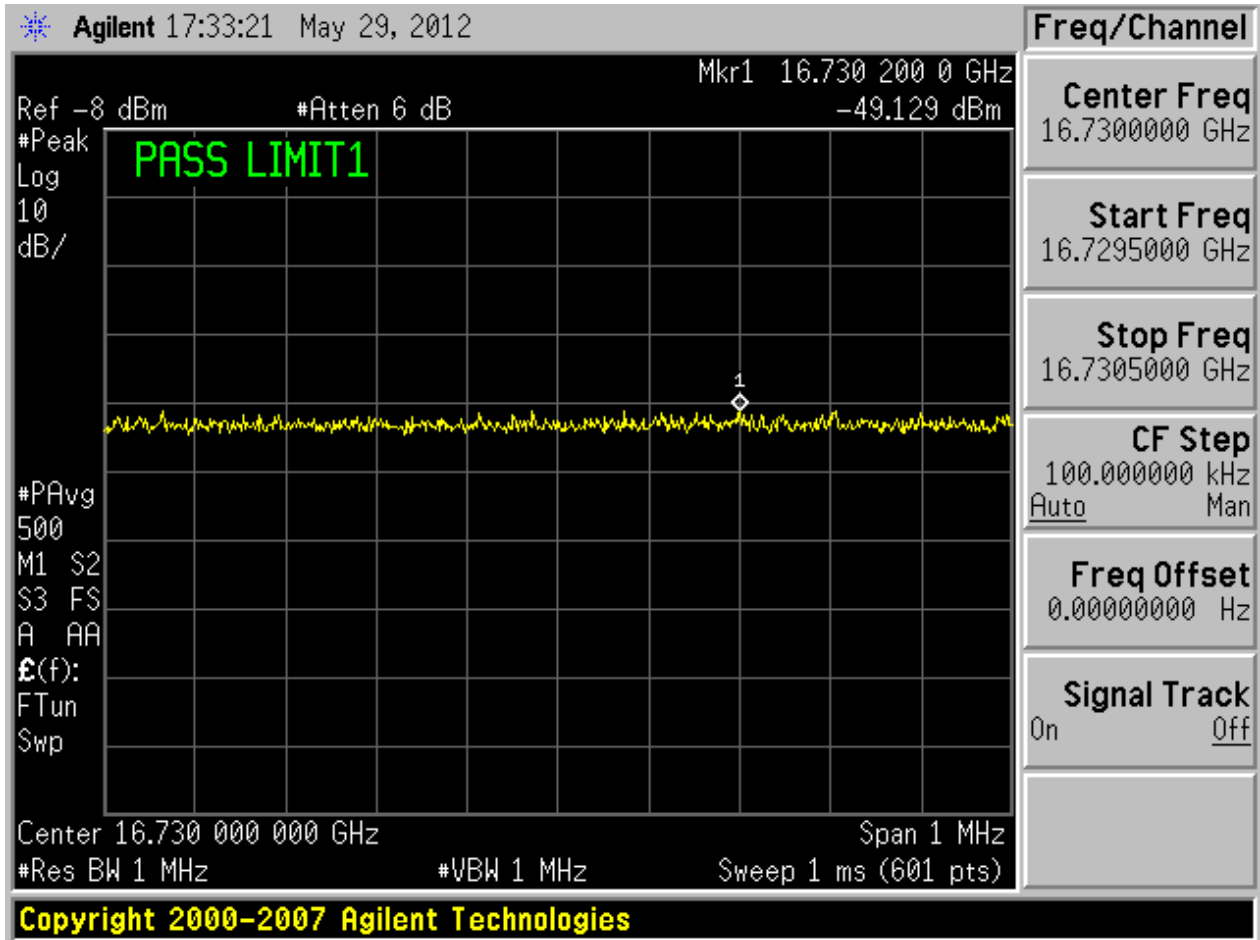


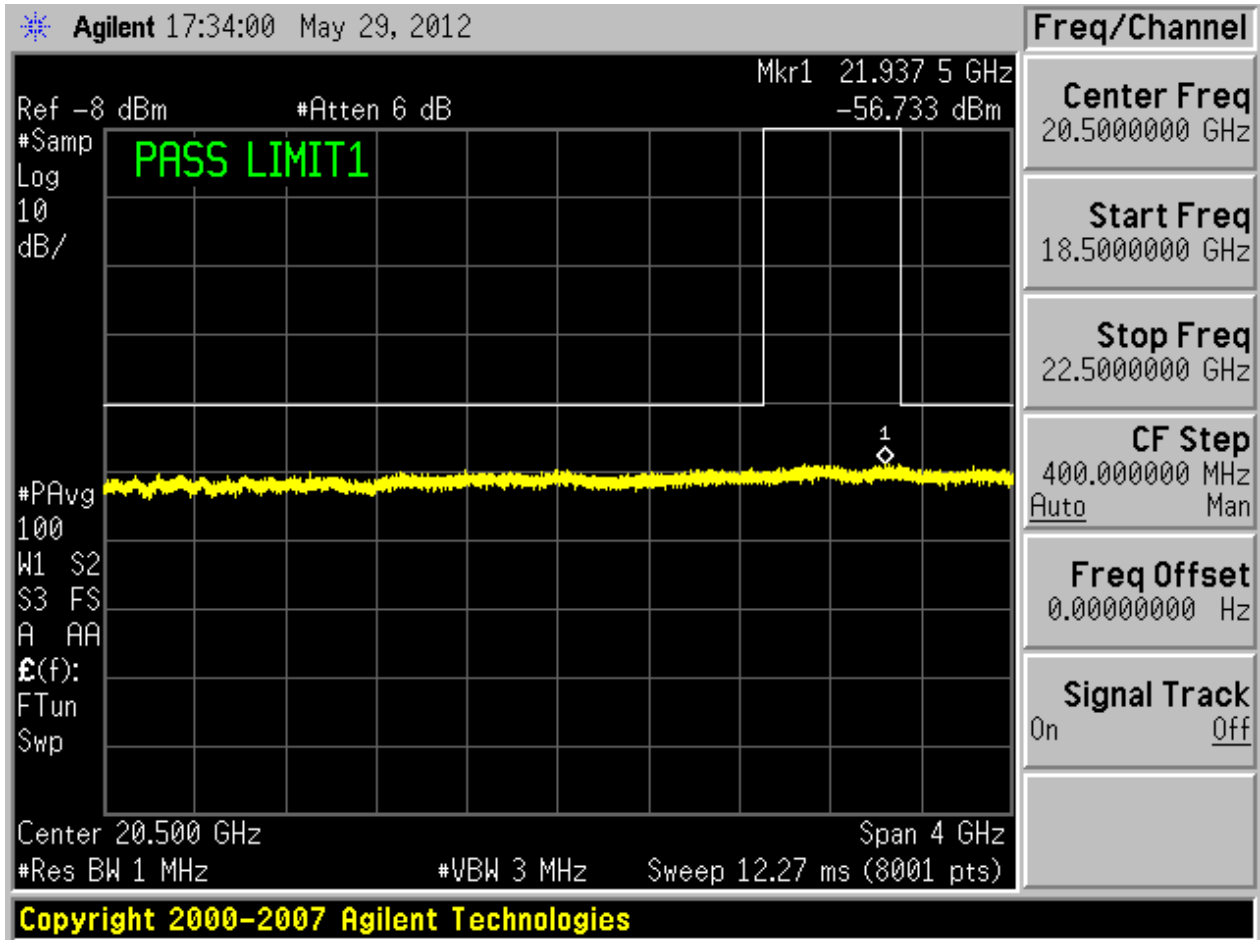


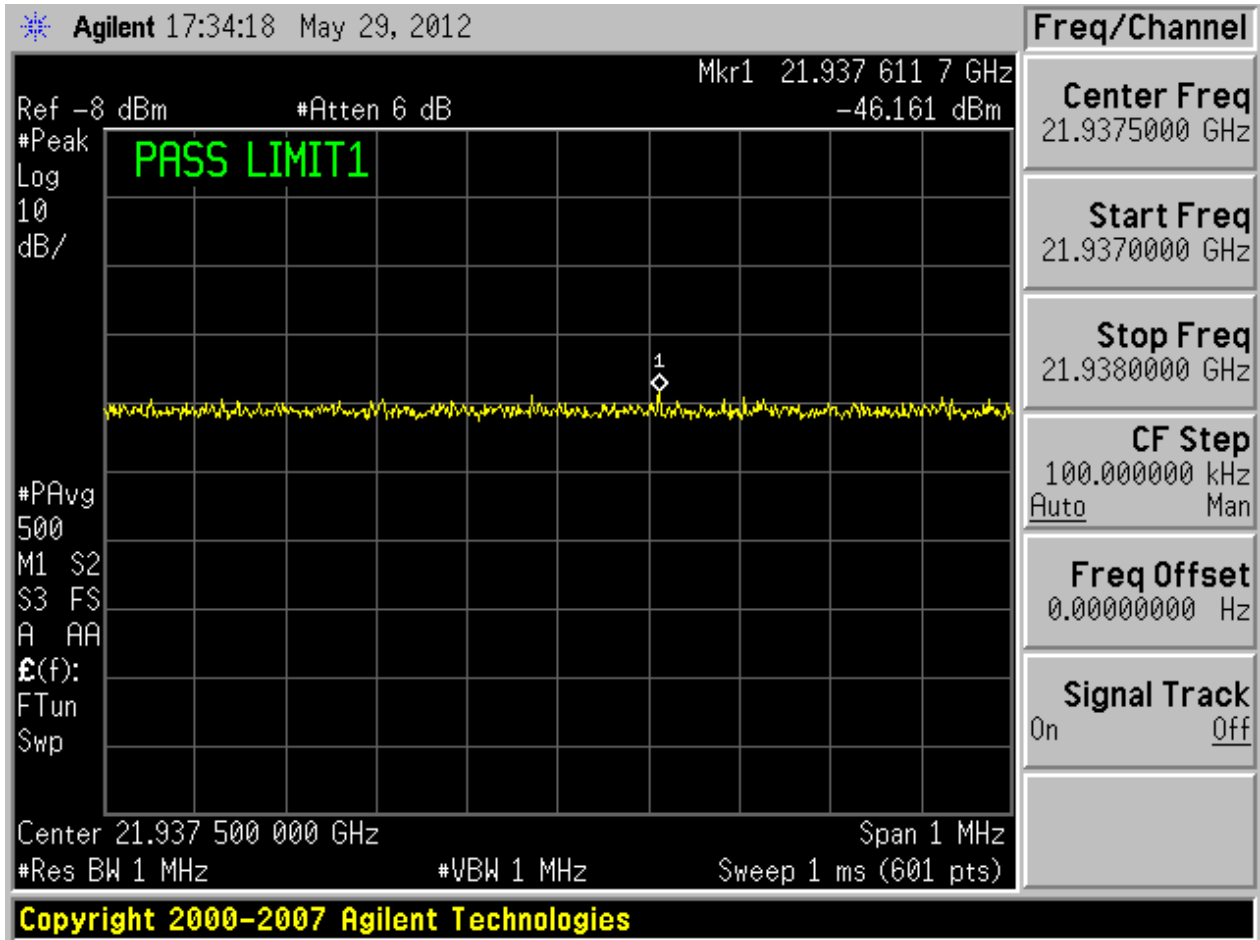


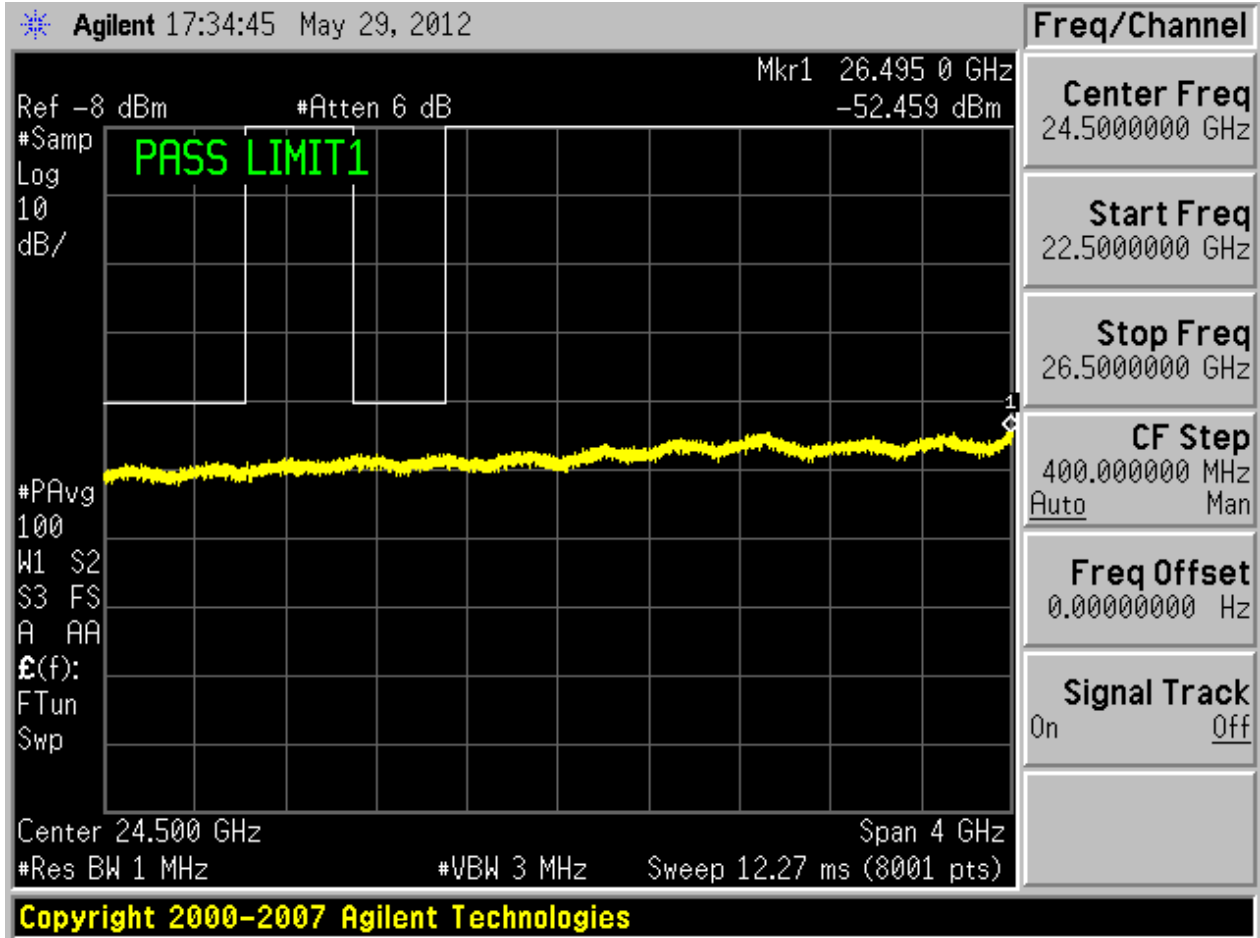


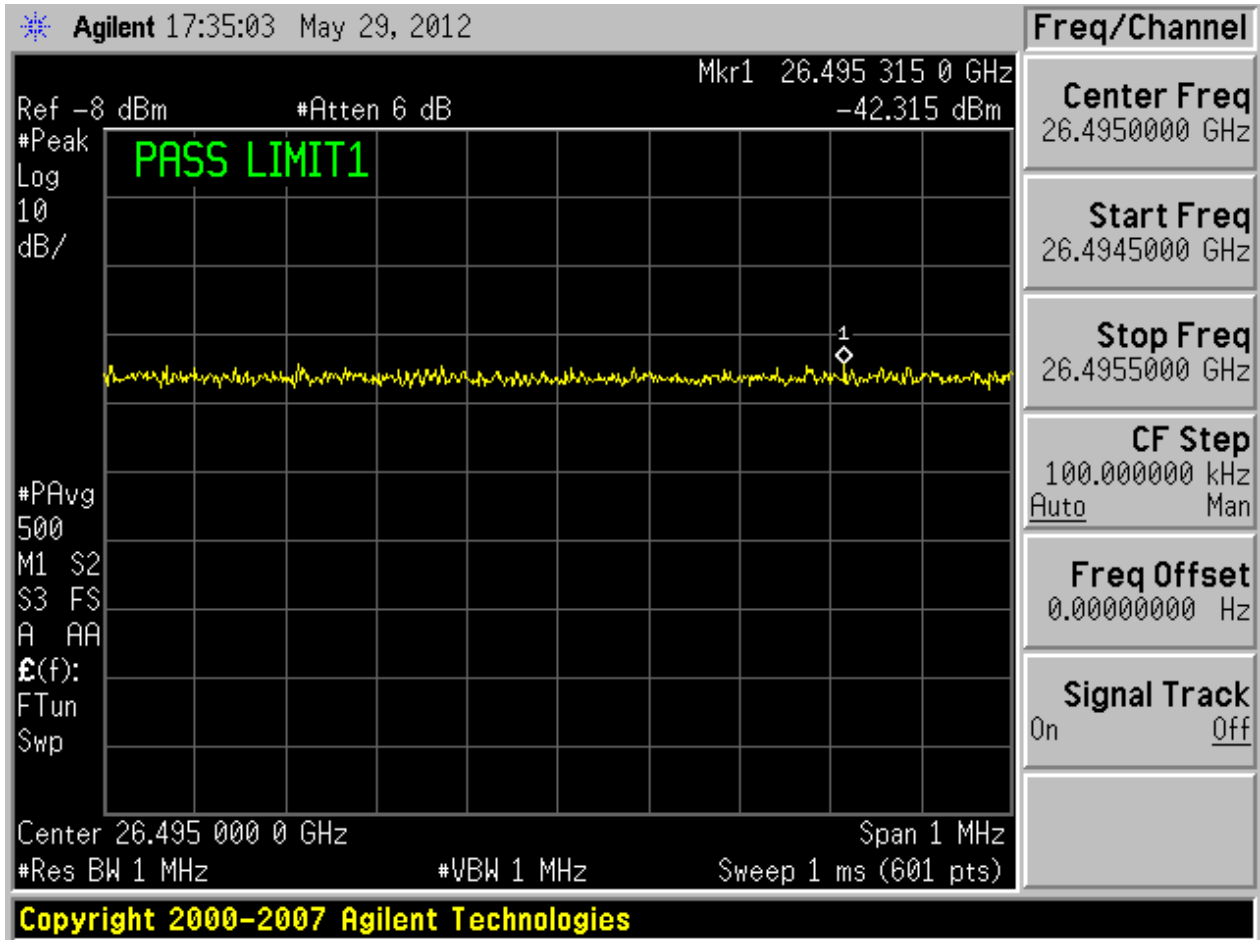














Appendix E.2: Unwanted Emissions into Restricted Frequency Bands (Radiated)



1 Result Table

NOTE 1: 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”.
- Part 4: Test range of “18 GHz to 26.5 GHz”.

NOTE 2: For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at all chains to get a final result. The result is the directly measured sum of each chain.

NOTE 3: In this Appendix, may only the test results and plots under the worst case are reported. The “< Limit” in results table denotes “Not found obvious spikes, or see marked spikes on plots or listed emissions in result tables”.

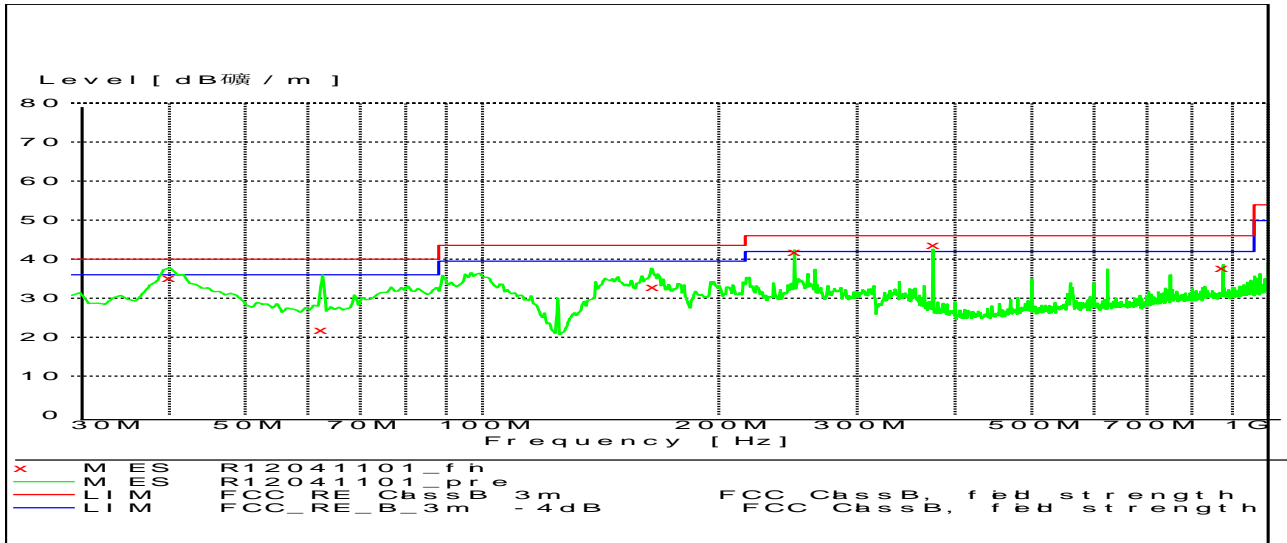
EUT Placement	Test Range	EUT Conf.	Maximum Emissions	Verdict
Flatwise	30 MHz to 1 GHz	Worst Case (11B/1_B@2)	< Limit	Pass
	1 GHz to 3 GHz	11B/1_B@2	< Limit	Pass
		11B/1_T@2	< Limit	Pass
		11G/6_B@2	< Limit	Pass
		11G/6_T@2	< Limit	Pass
		11N20/0_B@2	< Limit	Pass
		11N20/0_T@2	< Limit	Pass
		11N20m/8_B@1+2	< Limit	Pass
		11N20m/8_T@1+2	< Limit	Pass
	3 GHz to 18 GHz	Worst Case (11B/1_B@2)	< Limit	Pass
	18 GHz to 26.5 GHz	Worst Case (11B/1_B@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_B@2)



MEASUREMENT RESULT: "R12041101_fin"

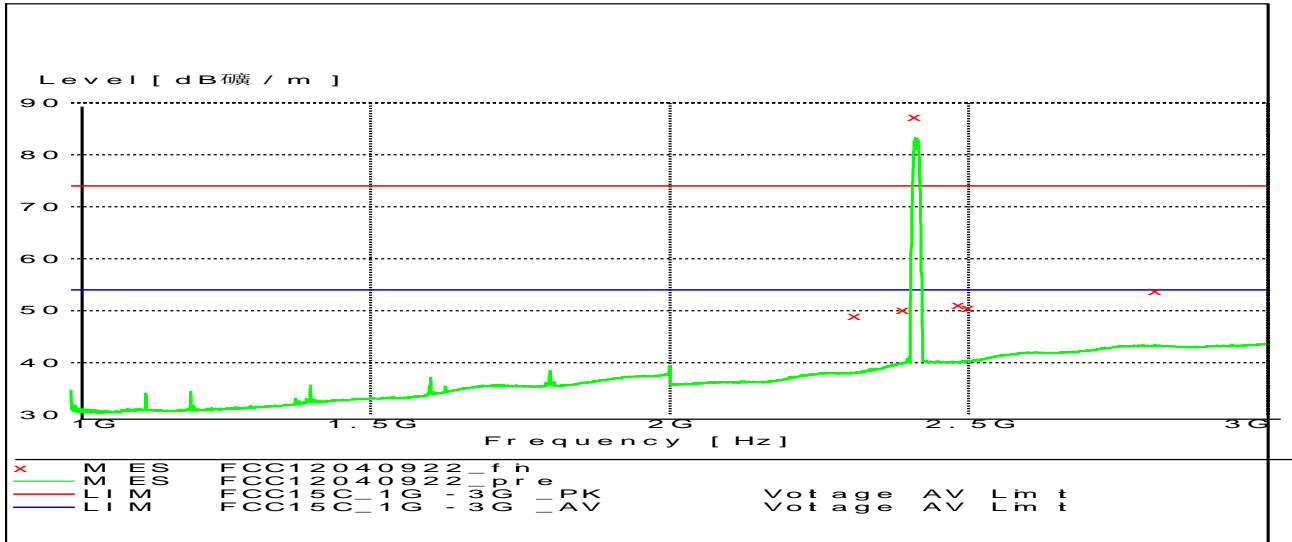
4/11/2012 4:31PM

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height	Azimuth cm	Polarization deg
40.020000	35.10	-8.7	40.0	4.9	QP	188.0	358.00	VERTICAL
62.520000	21.70	-16.2	40.0	18.3	QP	196.0	170.00	VERTICAL
164.940000	32.90	-9.8	43.5	10.6	QP	171.0	0.00	HORIZONTAL
250.020000	41.70	-6.9	46.0	4.3	QP	100.0	289.00	HORIZONTAL
375.000000	43.70	-3.3	46.0	2.3	QP	100.0	137.00	HORIZONTAL
874.980000	37.70	3.6	46.0	8.3	QP	100.0	13.00	HORIZONTAL



2.1.2 Test range of "1 GHz to 3 GHz"

2.1.2.1 11B/1_B@2

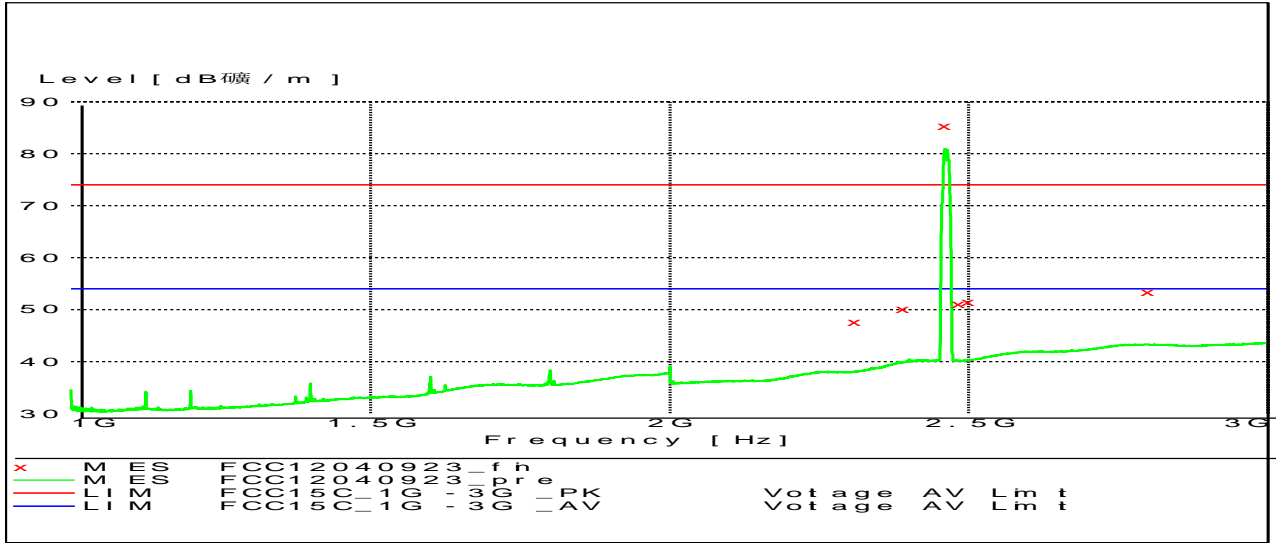


MEASUREMENT RESULT: "FCC12040922_fin"

4/9/2012 10:21PM

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height	Azimuth cm	Polarization deg
2310.080000	49.00	0.1	74.0	25.0	PK	100.0	180.00	HORIZONTAL
2390.080000	50.20	0.5	74.0	23.8	PK	100.0	0.00	HORIZONTAL
2410.240000	87.30	0.6	74.0	-13.3	PK	100.0	0.00	HORIZONTAL
2483.680000	51.00	0.9	74.0	23.0	PK	200.0	180.00	HORIZONTAL
2500.000000	50.50	1.0	74.0	23.5	PK	100.0	90.00	VERTICAL
2811.600000	53.70	3.2	74.0	20.3	PK	100.0	0.00	VERTICAL

2.1.2.2 11B/1_T@2

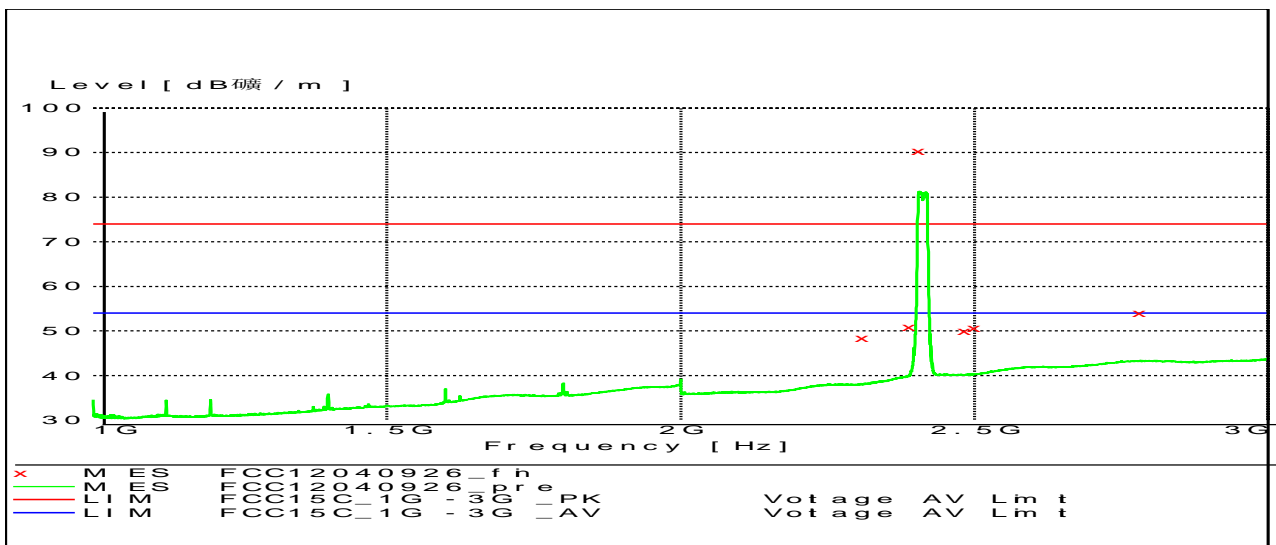


MEASUREMENT RESULT: "FCC12040923_fin"

4/9/2012 10:34PM

Frequency MHz	Level dB _{μV/m}	Transd dB	Limit dB _{μV/m}	Margin dB	Det. dB	Height cm	Azimuth deg	Polarization deg
2310.080000	47.60	0.1	74.0	26.4	PK	100.0	0.00	VERTICAL
2389.920000	50.00	0.5	74.0	24.0	PK	100.0	180.00	HORIZONTAL
2460.320000	85.20	0.8	74.0	-11.2	PK	100.0	0.00	HORIZONTAL
2483.360000	51.00	0.9	74.0	23.0	PK	200.0	270.00	VERTICAL
2500.000000	51.40	1.0	74.0	22.6	PK	100.0	270.00	VERTICAL
2799.200000	53.40	3.2	74.0	20.6	PK	100.0	270.00	VERTICAL

2.1.2.3 11G/6_B@2



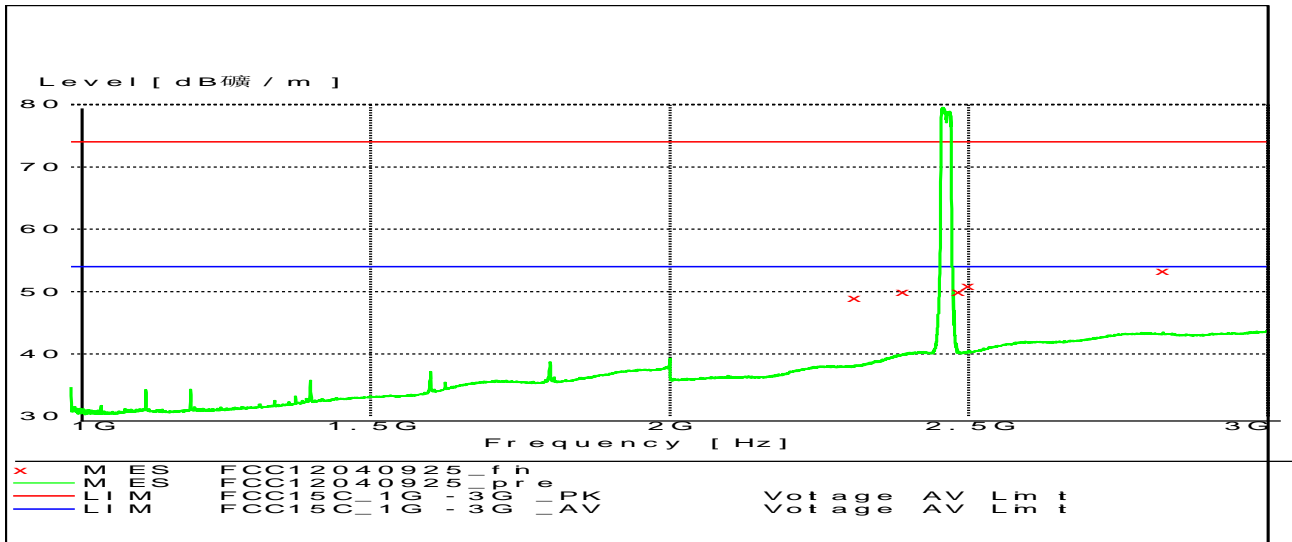


MEASUREMENT RESULT: "FCC12040926_fin"

4/9/2012 11:18PM

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Det.	Height	Azimuth cm	Polarization deg
2310.240000	48.50	0.1	74.0	25.5	PK	100.0	270.00	VERTICAL
2389.920000	50.80	0.5	74.0	23.2	PK	100.0	0.00	HORIZONTAL
2406.400000	90.30	0.6	74.0	-16.3	PK	100.0	0.00	HORIZONTAL
2483.680000	49.90	0.9	74.0	24.1	PK	200.0	180.00	HORIZONTAL
2499.840000	50.70	1.0	74.0	23.3	PK	200.0	180.00	VERTICAL
2782.000000	54.10	3.1	74.0	19.9	PK	100.0	270.00	VERTICAL

2.1.2.4 11G/6_T@2



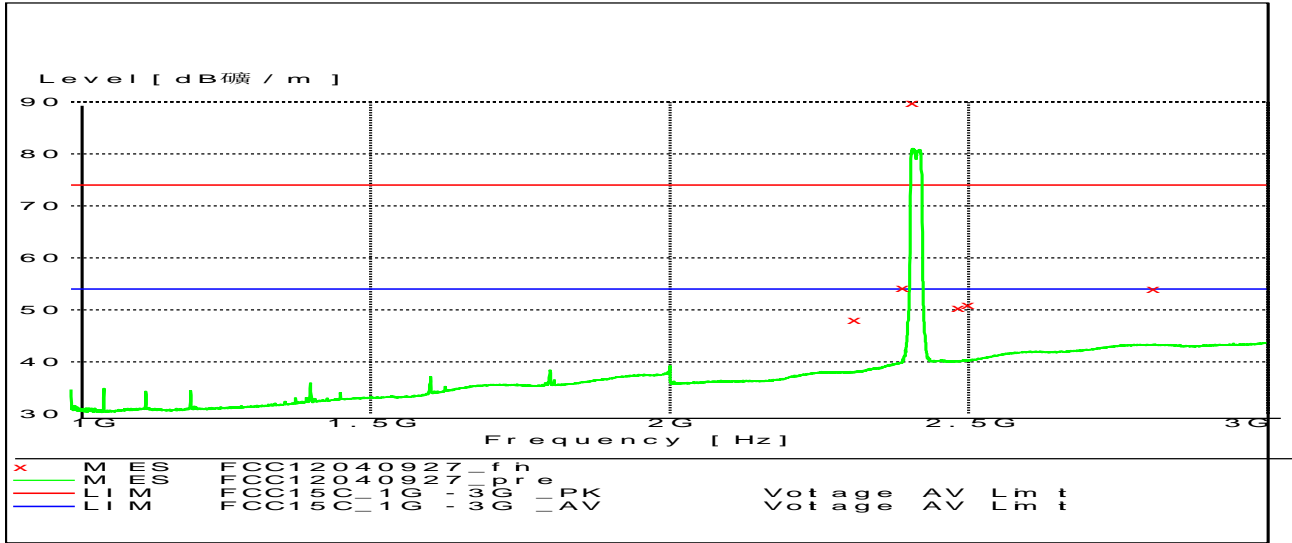
MEASUREMENT RESULT: "FCC12040925_fin"

4/9/2012 11:04PM

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Det.	Height	Azimuth cm	Polarization deg
2310.240000	49.00	0.1	74.0	25.0	PK	200.0	0.00	HORIZONTAL
2390.080000	50.00	0.5	74.0	24.0	PK	200.0	90.00	VERTICAL
2456.160000	88.70	0.8	74.0	-14.7	PK	100.0	0.00	HORIZONTAL
2483.680000	49.90	0.9	74.0	24.1	PK	100.0	0.00	HORIZONTAL
2500.000000	50.90	1.0	74.0	23.1	PK	100.0	0.00	HORIZONTAL
2824.800000	53.30	3.3	74.0	20.7	PK	200.0	180.00	VERTICAL



2.1.2.5 11N20/0_B@2



MEASUREMENT RESULT: "FCC12040927_fin"

4/9/2012 11:31PM

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
2310.080000	48.10	0.1	74.0	25.9	PK	100.0	180.00	HORIZONTAL
2389.920000	54.20	0.5	74.0	19.8	PK	100.0	0.00	HORIZONTAL
2406.400000	89.80	0.6	74.0	-15.8	PK	100.0	0.00	HORIZONTAL
2483.520000	50.30	0.9	74.0	23.7	PK	200.0	180.00	HORIZONTAL
2499.840000	51.00	1.0	74.0	23.0	PK	100.0	270.00	VERTICAL
2809.600000	54.00	3.2	74.0	20.0	PK	100.0	0.00	VERTICAL

2.1.2.6 11N20/0_T@2

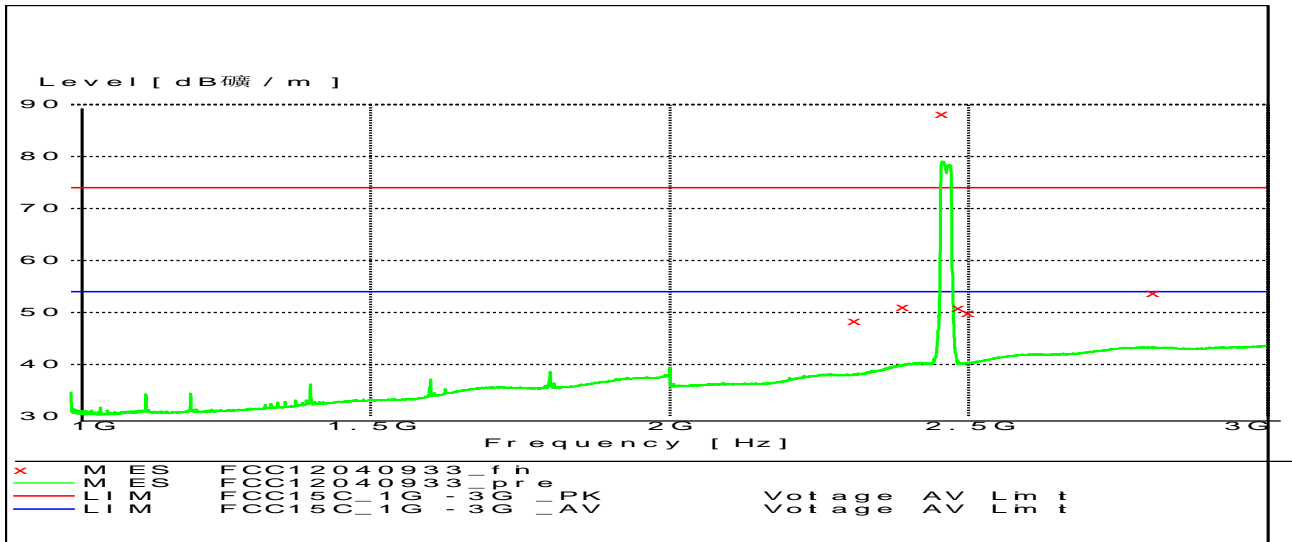


MEASUREMENT RESULT: "FCC12040934_fin"

4/10/2012 1:03AM

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height	Azimuth cm	Polarization deg
2310.240000	48.40	0.1	74.0	25.6	PK	100.0	0.00	HORIZONTAL
2390.080000	56.50	0.5	74.0	17.5	PK	100.0	0.00	HORIZONTAL
2405.920000	90.00	0.6	74.0	-16.0	PK	100.0	0.00	HORIZONTAL
2483.520000	50.40	0.9	74.0	23.6	PK	200.0	90.00	HORIZONTAL
2499.840000	50.30	1.0	74.0	23.7	PK	100.0	0.00	HORIZONTAL
2797.200000	53.90	3.2	74.0	20.1	PK	200.0	0.00	HORIZONTAL

2.1.2.8 11N20m/8_T@1+2



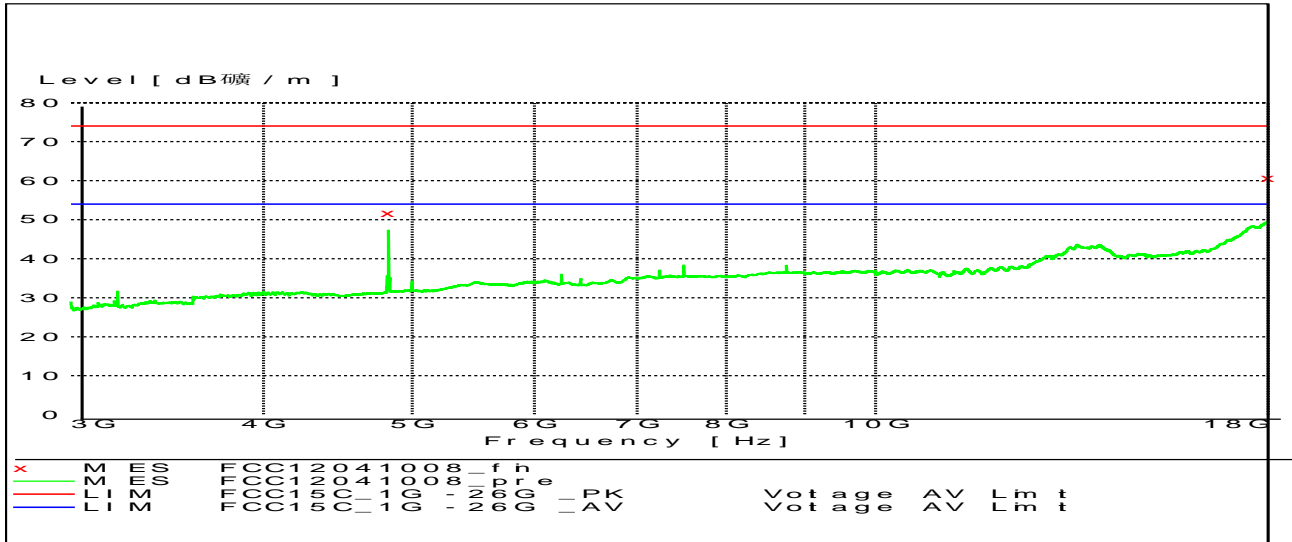
MEASUREMENT RESULT: "FCC12040933_fin"

4/10/2012 12:52AM

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height	Azimuth cm	Polarization deg
2309.920000	48.40	0.1	74.0	25.6	PK	200.0	180.00	VERTICAL
2390.240000	51.10	0.5	74.0	22.9	PK	200.0	180.00	VERTICAL
2455.680000	88.20	0.8	74.0	-14.2	PK	100.0	0.00	HORIZONTAL
2483.520000	50.90	0.9	74.0	23.1	PK	100.0	0.00	HORIZONTAL
2500.000000	49.80	1.0	74.0	24.2	PK	100.0	180.00	VERTICAL
2809.200000	53.80	3.2	74.0	20.2	PK	200.0	180.00	HORIZONTAL

2.1.3 Test range of "3 GHz to 18 GHz"

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



MEASUREMENT RESULT: "FCC12041008_fin"

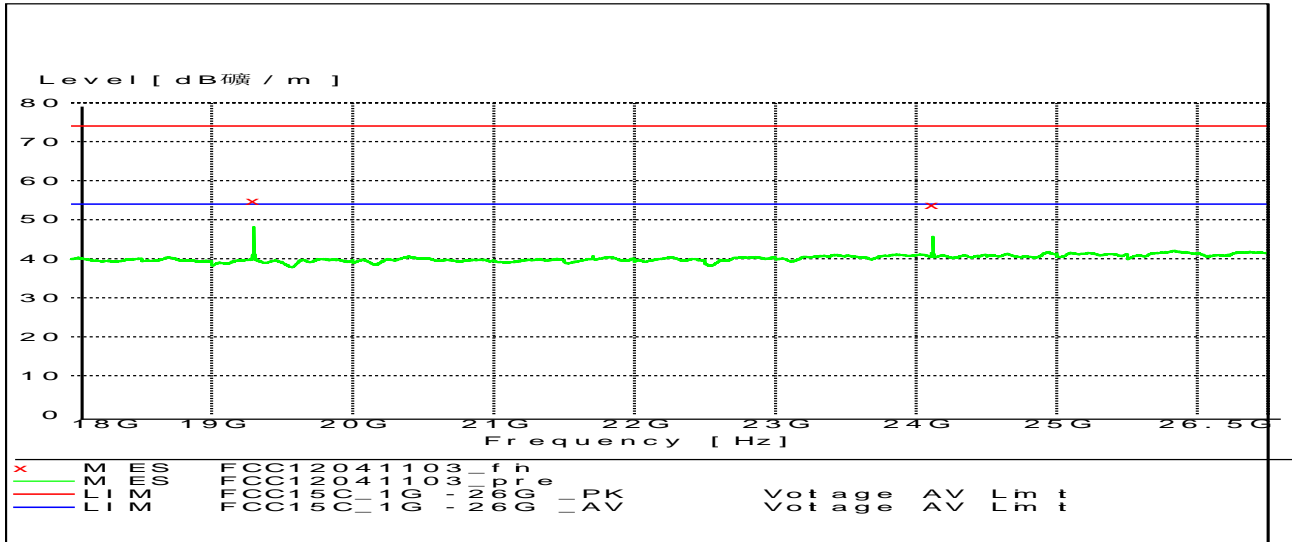
4/10/2012 7:48AM

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dB μ V/m	dB	dB μ V/m	dB	dB	cm	deg	deg
4824.000000	51.60	9.1	74.0	22.4	PK	100.0	0.00	HORIZONTAL
17998.400000	60.70	29.5	74.0	13.3	PK	200.0	90.00	HORIZONTAL



2.1.4 Test range of "18 GHz to 26.5 GHz"

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



MEASUREMENT RESULT: "FCC12041103_fin"

4/11/2012 3:16PM

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Det.	Height	Azimuth cm	Polarization deg
19295.600000	54.70	27.9	74.0	19.3	PK	100.0	180.00	VERTICAL
24119.600000	53.80	28.1	74.0	20.2	PK	100.0	90.00	VERTICAL



Appendix F: Receiver Spurious Emissions (Radiated, Only for IC requirement)



1 Result Table

NOTE 1: The whole testing range is from “30 MHz to 8 GHz (3rd harmonics)” is divided into 2 parts, which are:

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

NOTE 2: For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at all chains to get a final result. The result is the directly measured sum of each chain.

NOTE 3: In this Appendix, may only the test results and plots under the worst case are reported. The “< Limit” in results table denotes “Not found obvious spikes, or see marked spikes on plots or listed emissions in result tables”.

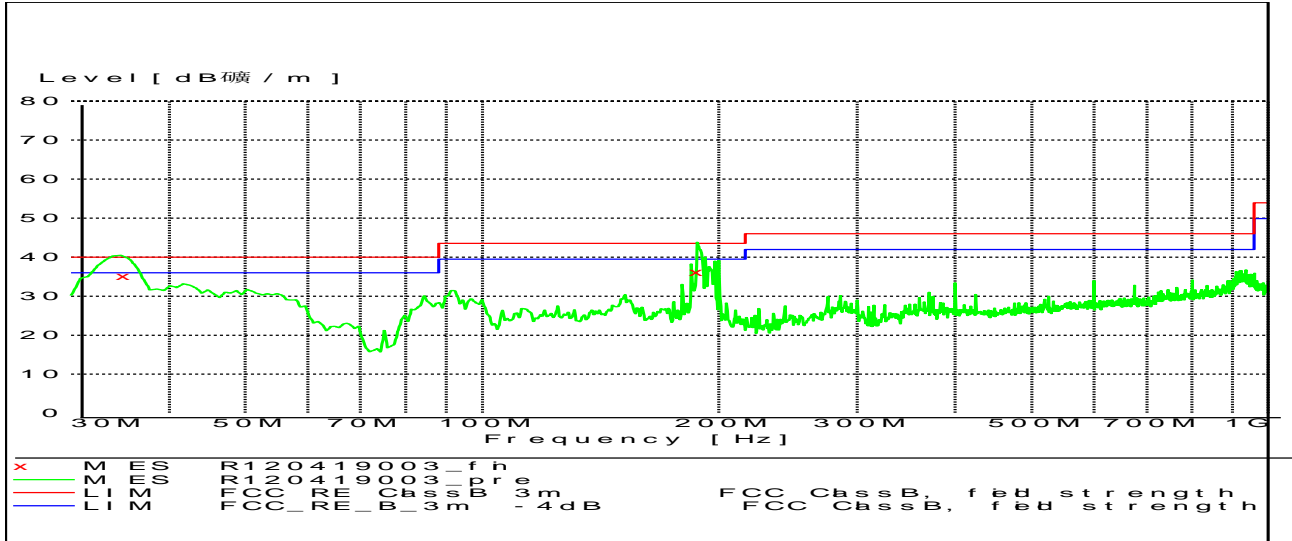
EUT Placement	Test Range	EUT Conf.	Maximum Emissions	Verdict
Flatwise	30 MHz to 1 GHz	11x_RX	< Limit	Pass
	1 GHz to 8 GHz	11x_RX	< Limit	Pass

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: "R120419003_fin"

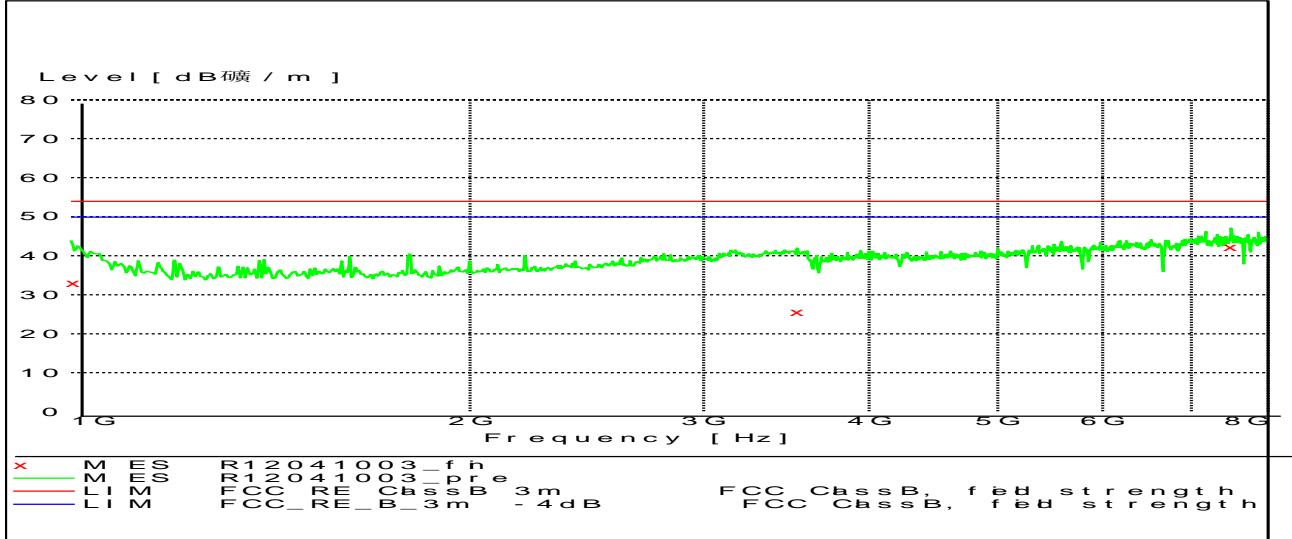
4/19/2012 6:34PM

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Det.	Height	Azimuth cm	Polarization deg
34.980000	35.20	-5.6	40.0	4.8	QP	101.0	5.00	VERTICAL
187.500000	36.20	-10.7	43.5	7.3	QP	131.0	132.00	HORIZONTAL



2.1.2 Testing Range of "1 GHz to 8 GHz"

2.1.2.1 11x_RX



MEASUREMENT RESULT: "R12041003_fin"

4/10/2012 7:28AM

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1005.000000	32.90	-7.3	53.9	21.0	AV	100.0	156.00	HORIZONTAL
3533.000000	25.50	5.1	53.9	28.4	AV	200.0	146.00	HORIZONTAL
7500.000000	42.10	11.6	53.9	11.8	AV	165.0	189.00	VERTICAL



Appendix G: AC Power Line Conducted Emissions



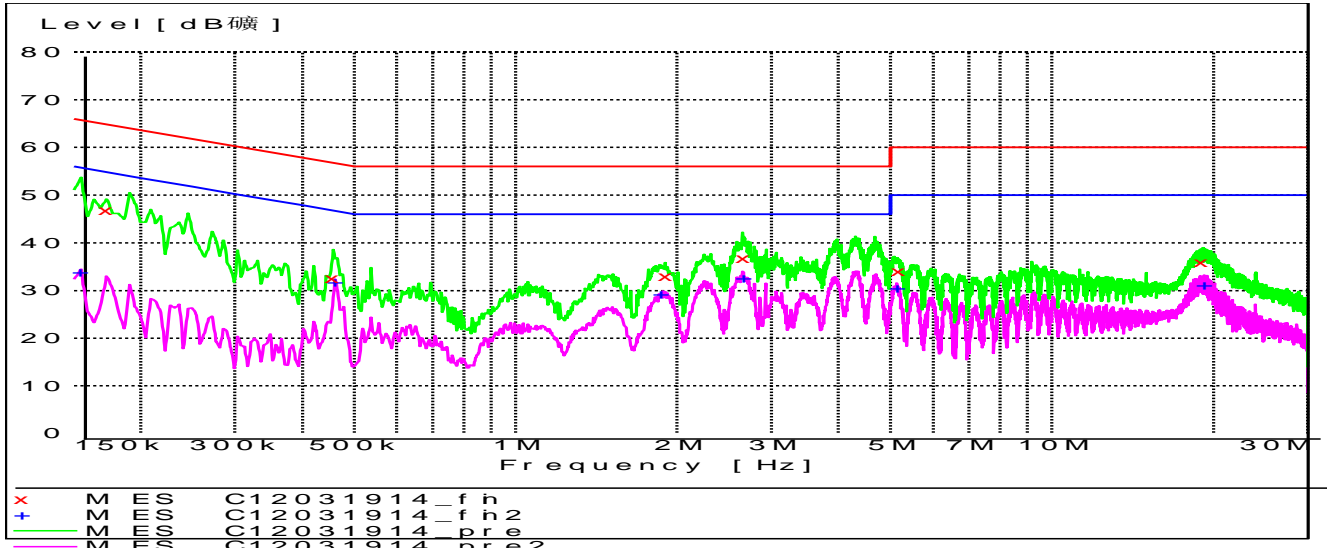
1 Result Table

NOTE: In this Appendix, may only the test results and plots under the worst case are reported.

EUT Conf.	Maximum Emissions	Verdict
11B/1_M@1	Not found obvious spikes, or see marked spikes on plots or listed emissions in result tables.	Pass

2 Result Plot

2.1 11B/1_M@1



MEASUREMENT RESULT: "C12031914_fin"

3/19/2012 4:21PM

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.172500	46.90	9.9	65	17.9	QP	L3	GND
0.456000	32.50	9.9	57	24.3	QP	N	GND
1.905000	33.00	10.0	56	23.0	QP	N	GND
2.670000	36.90	10.1	56	19.1	QP	L3	GND
5.190000	34.10	10.3	60	25.9	QP	L3	GND
19.009500	35.90	10.6	60	24.1	QP	N	GND



Appendix H: Photos of Test Setups

1 Test Setup 2

1.1 Radiated (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

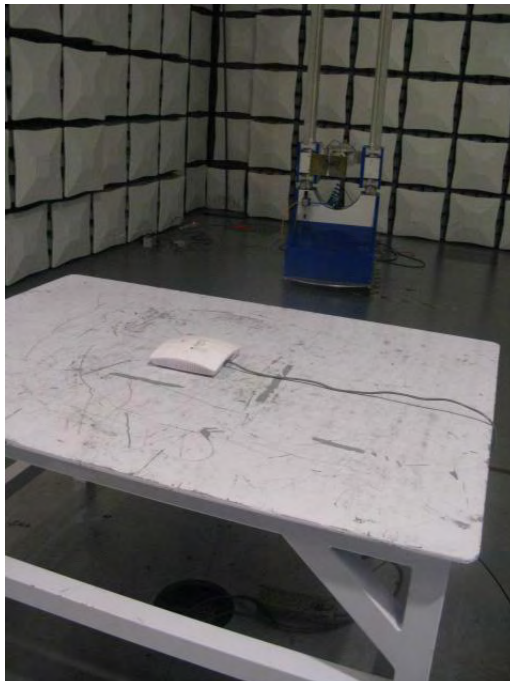


1.2 Radiated (Only for IC Requirement - Receiver Spurious Emissions)

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