



# Appendix A: DTS (6 dB) Bandwidth



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

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

## 1 Result Table

EUT Conf.	Ant.	fc(DTS6dBBW) [MHz]	DTS6dBBW [MHz]	Verdict
11B/1_B@1	Ant 1	8.3	2412	Pass
11B/1_B@2	Ant 2	8.3	2412	Pass
11B/1_M@1	Ant 1	8.3	2437	Pass
11B/1_M@2	Ant 2	8.3	2437	Pass
11B/1_T@1	Ant 1	8.3	2462	Pass
11B/1_T@2	Ant 2	8.3	2462	Pass
11G/6_B@1	Ant 1	15.9	2412.05	Pass
11G/6_B@2	Ant 2	15.65	2411.825	Pass
11G/6_M@1	Ant 1	15.7	2436.85	Pass
11G/6_M@2	Ant 2	15.95	2436.975	Pass
11G/6_T@1	Ant 1	15.75	2461.825	Pass
11G/6_T@2	Ant 2	15.65	2461.875	Pass
11N20/0_B@1	Ant 1	17.2	2411.95	Pass
11N20/0_B@2	Ant 2	17.3	2412	Pass
11N20/0_M@1	Ant 1	17.15	2437.025	Pass
11N20/0_M@2	Ant 2	17.3	2437	Pass
11N20/0_T@1	Ant 1	17.25	2461.975	Pass
11N20/0_T@2	Ant 2	17.35	2461.975	Pass
11N20m/8_B@1+2	Ant 1	17.25	2411.975	Pass
	Ant 2	16.6	2411.95	Pass
11N20m/8_M@1+2	Ant 1	17.25	2436.975	Pass
	Ant 2	16.7	2436.95	Pass
11N20m/8_T@1+2	Ant 1	17.3	2462	Pass
	Ant 2	16.5	2461.95	Pass
11N40/0_B@1	Ant 1	36.6	2422	Pass
11N40/0_B@2	Ant 2	36.5	2421.95	Pass
11N40/0_M@1	Ant 1	36.5	2436.95	Pass
11N40/0_M@2	Ant 2	36.5	2436.95	Pass
11N40/0_T@1	Ant 1	36.5	2452.05	Pass
11N40/0_T@2	Ant 2	36.5	2451.95	Pass
11N40m/8_B@1+2	Ant 1	36.5	2421.95	Pass



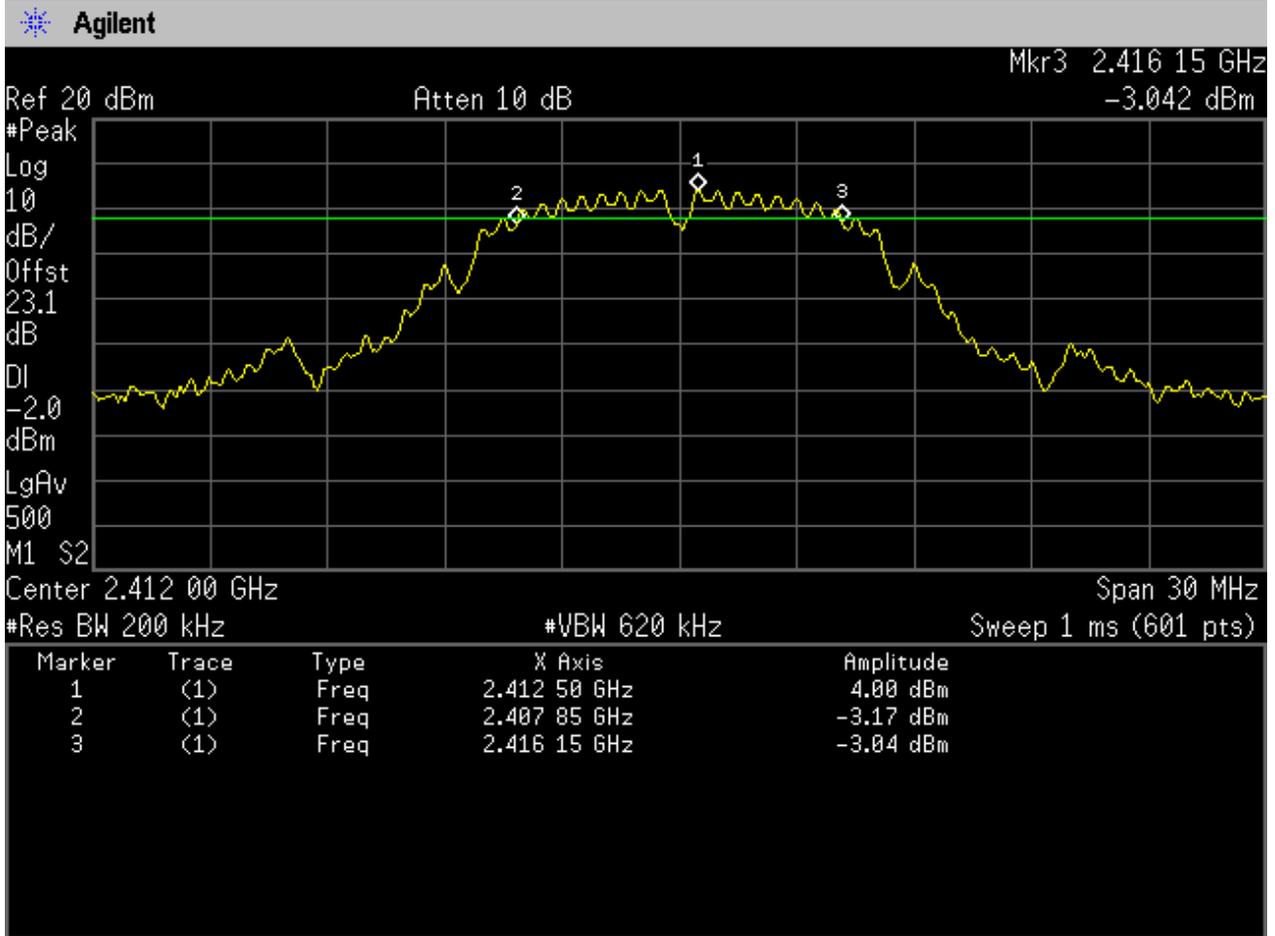
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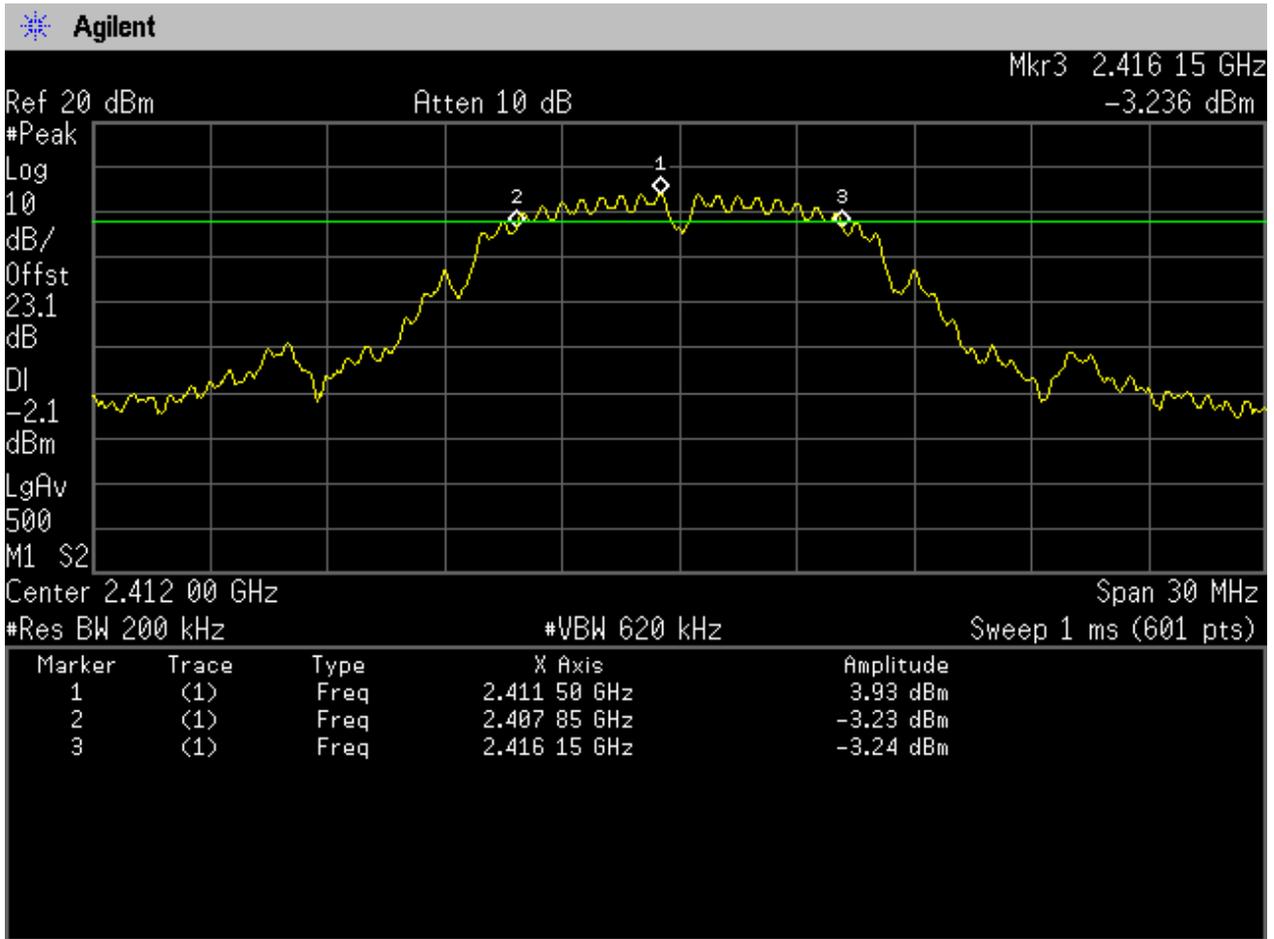
EUT Conf.	Ant.	fc(DTS6dBBW) [MHz]	DTS6dBBW [MHz]	Verdict
	Ant 2	36.6	2422	Pass
11N40m/8_M@1+2	Ant 1	36.5	2436.95	Pass
	Ant 2	36.6	2437	Pass
11N40m/8_T@1+2	Ant 1	36.5	2451.95	Pass
	Ant 2	36.6	2452	Pass

## 2 Test Plot

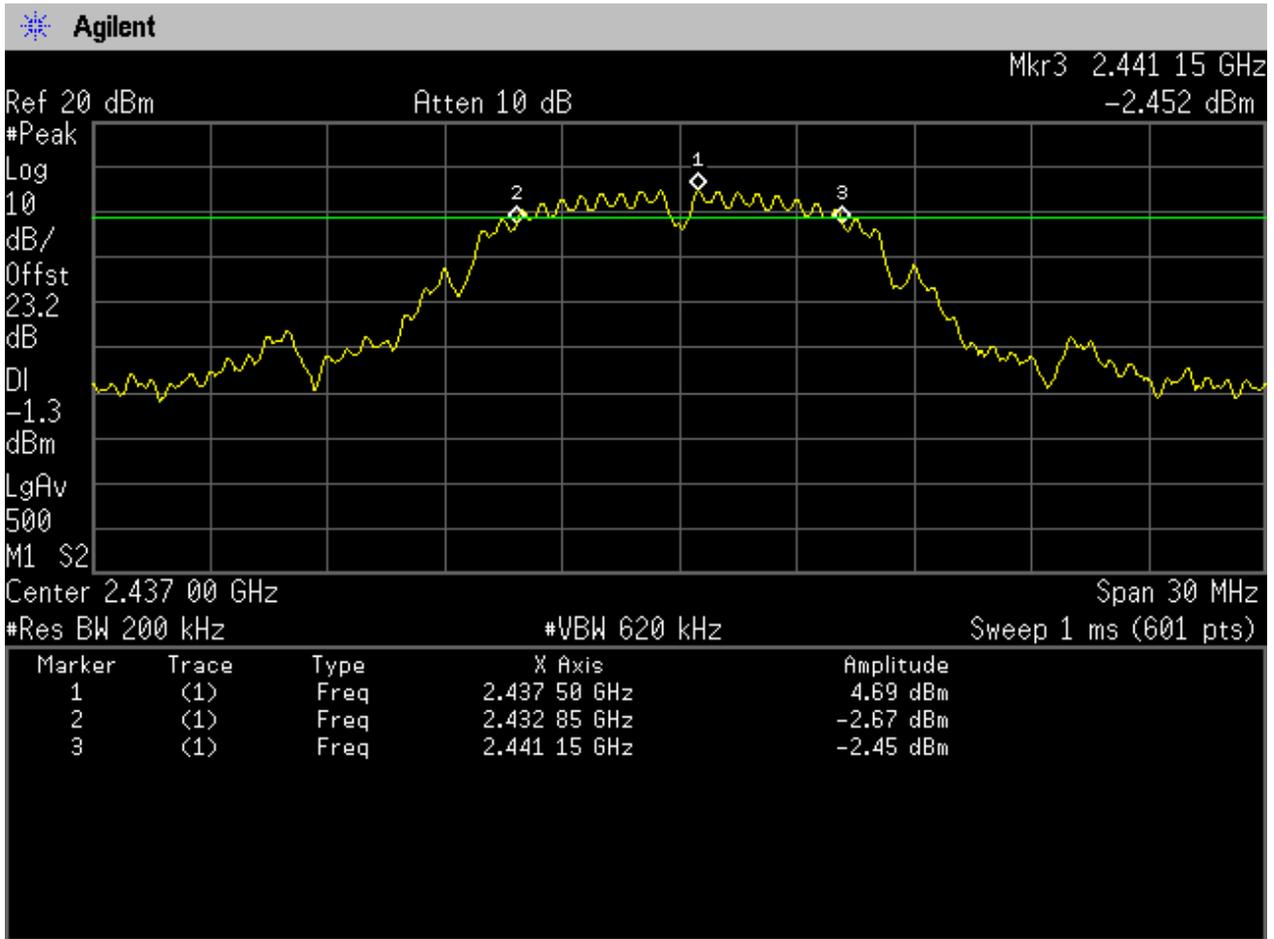
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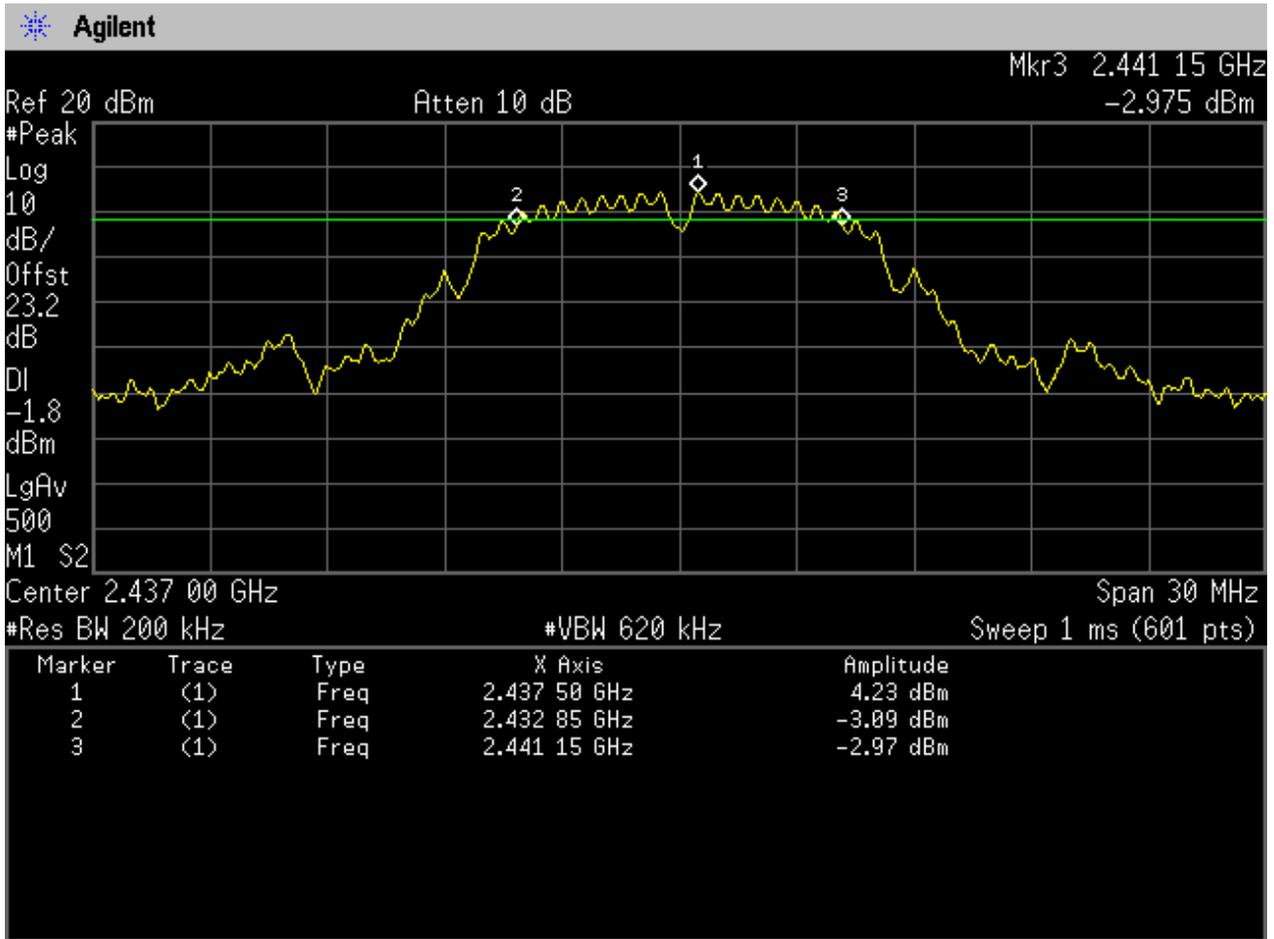
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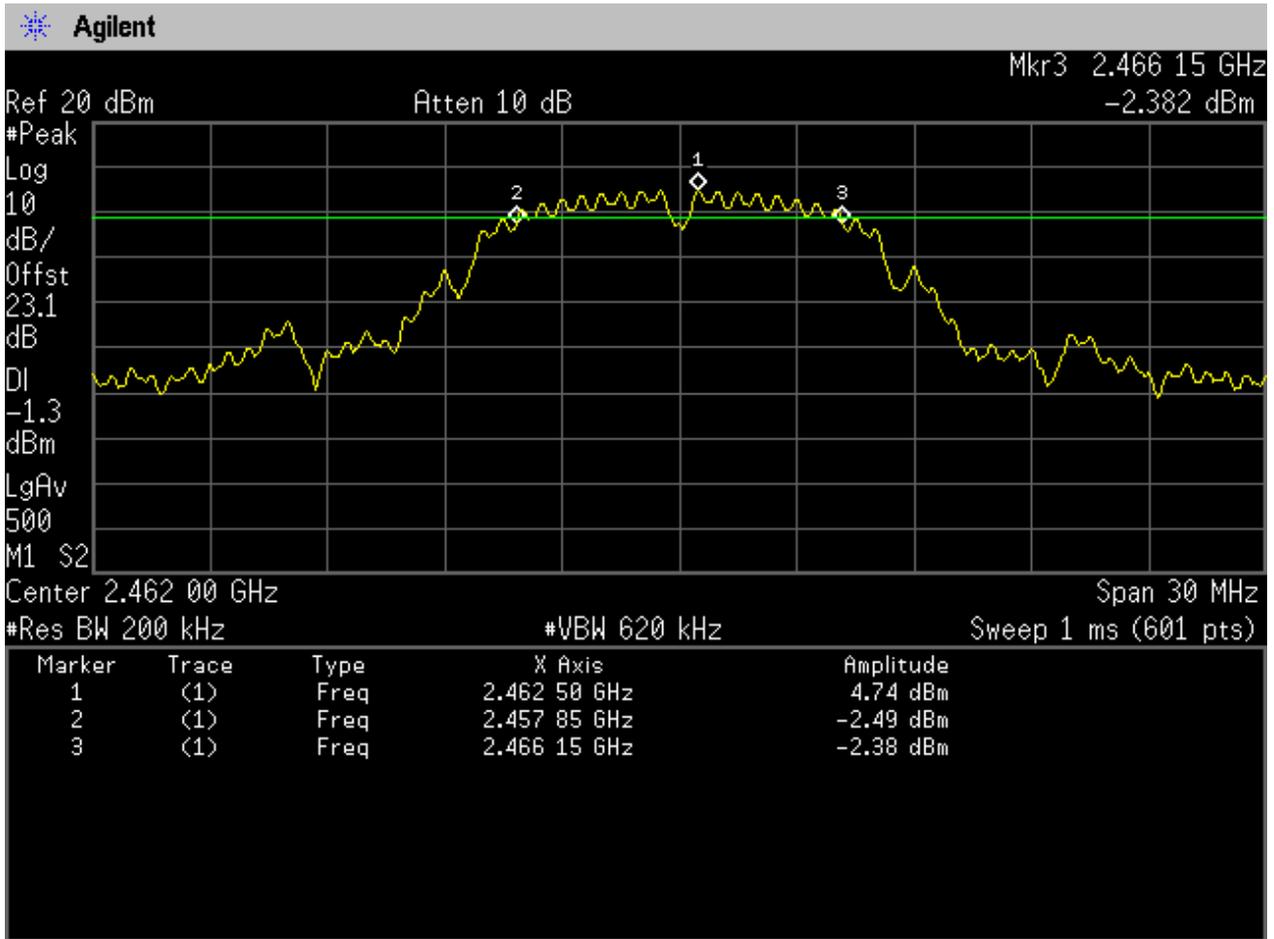
### 2.3 11B/1\_M@1



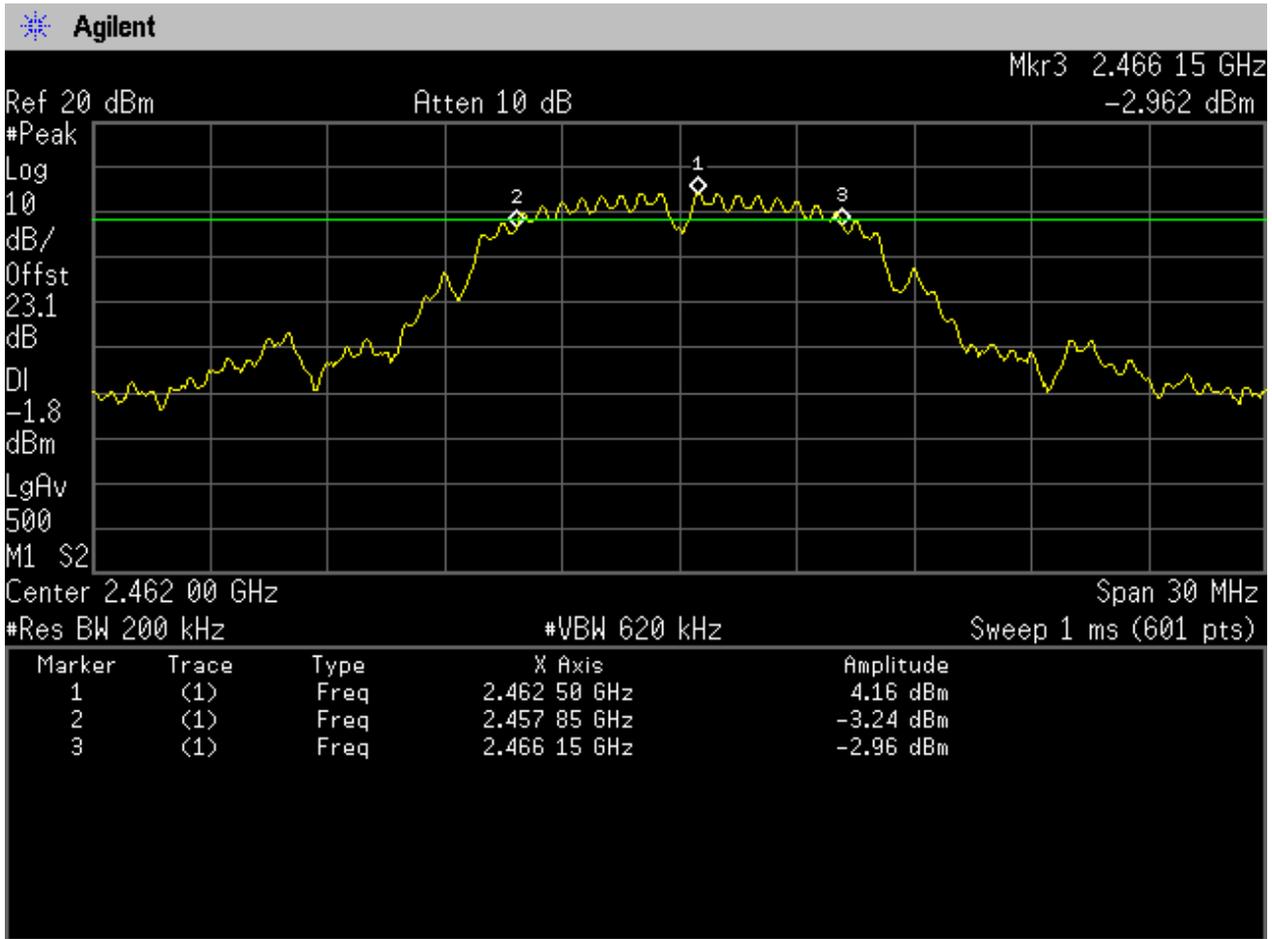
## 2.4 11B/1\_M@2



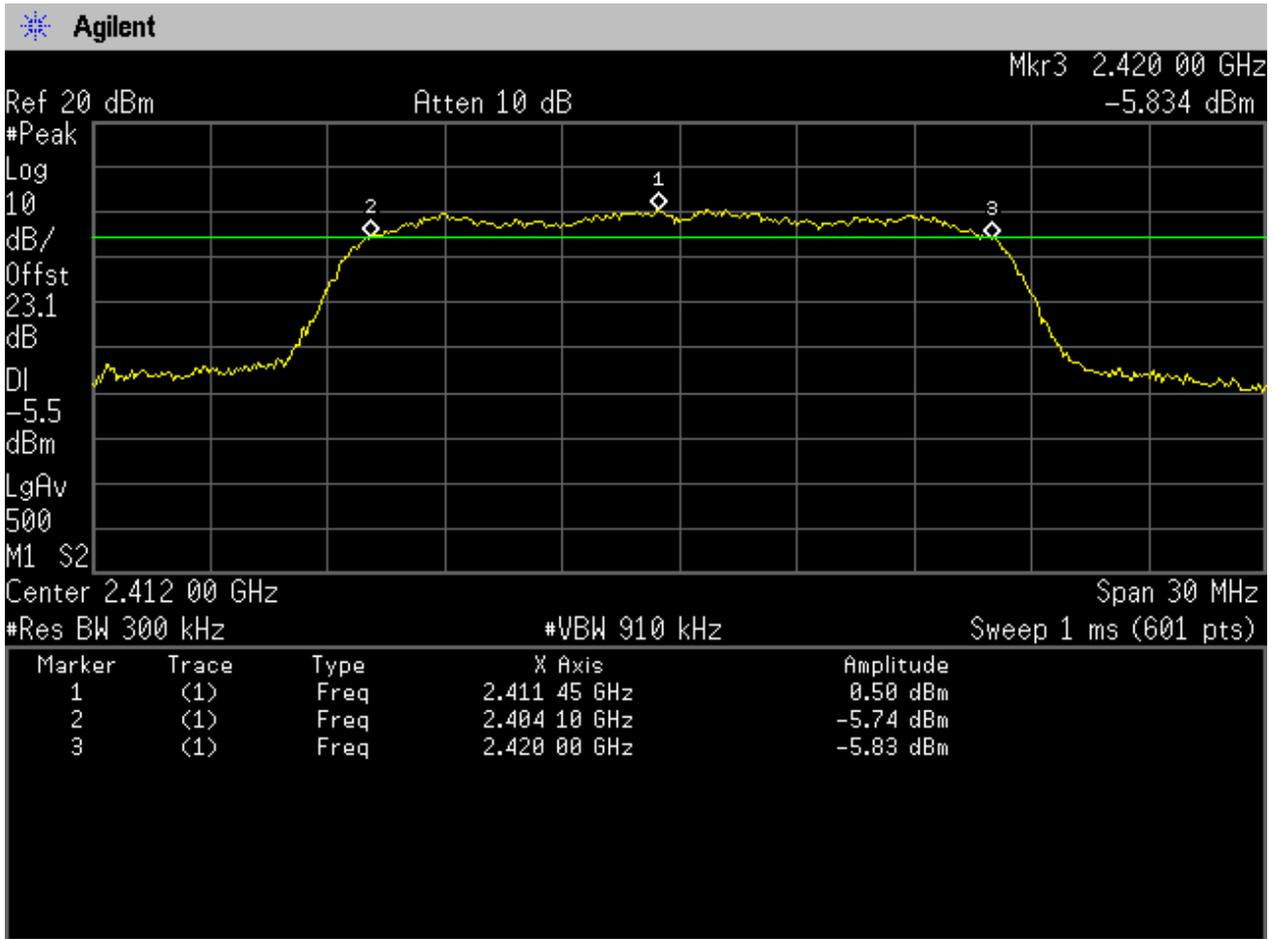
## 2.5 11B/1\_T@1



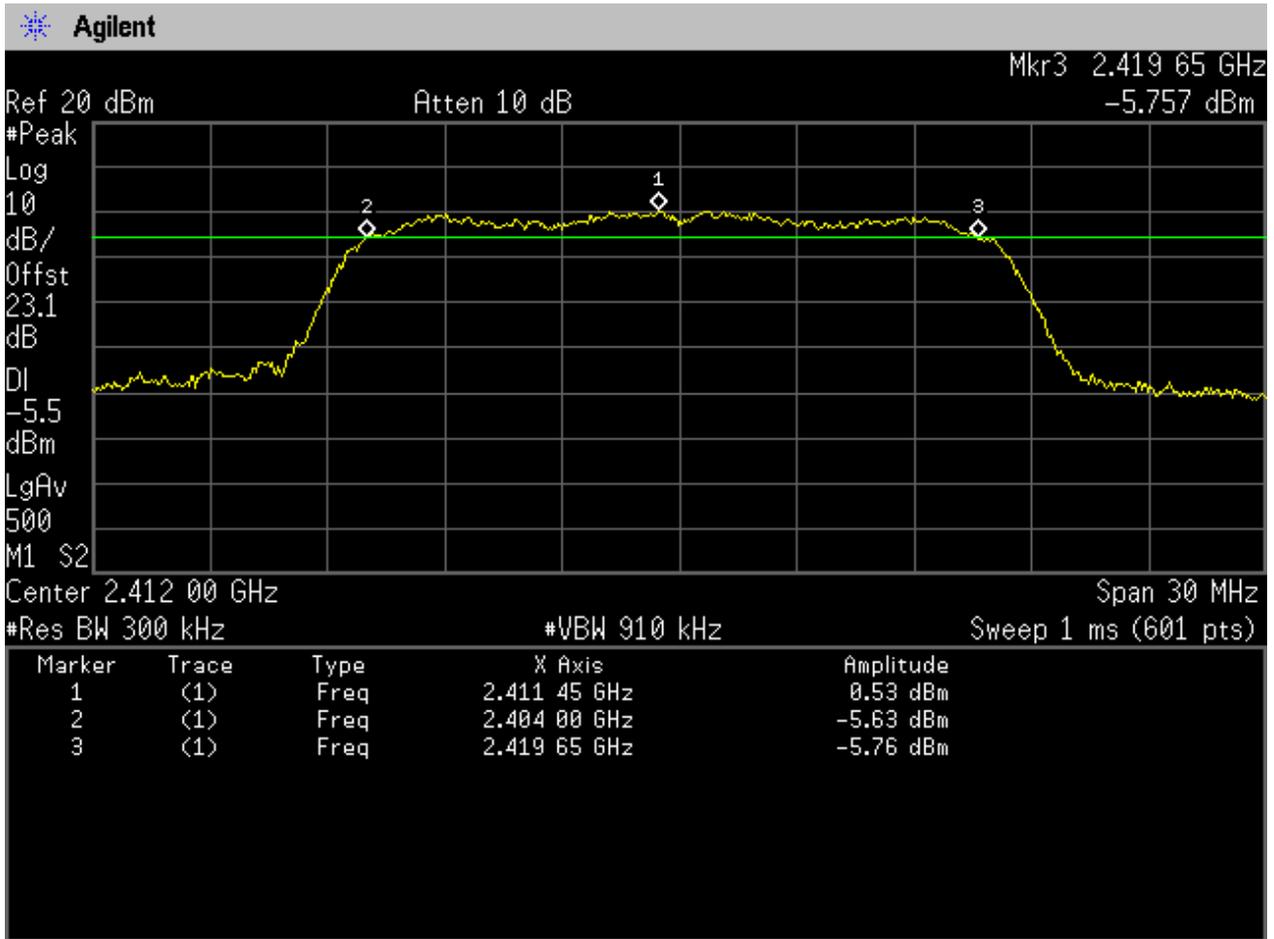
## 2.6 11B/1\_T@2



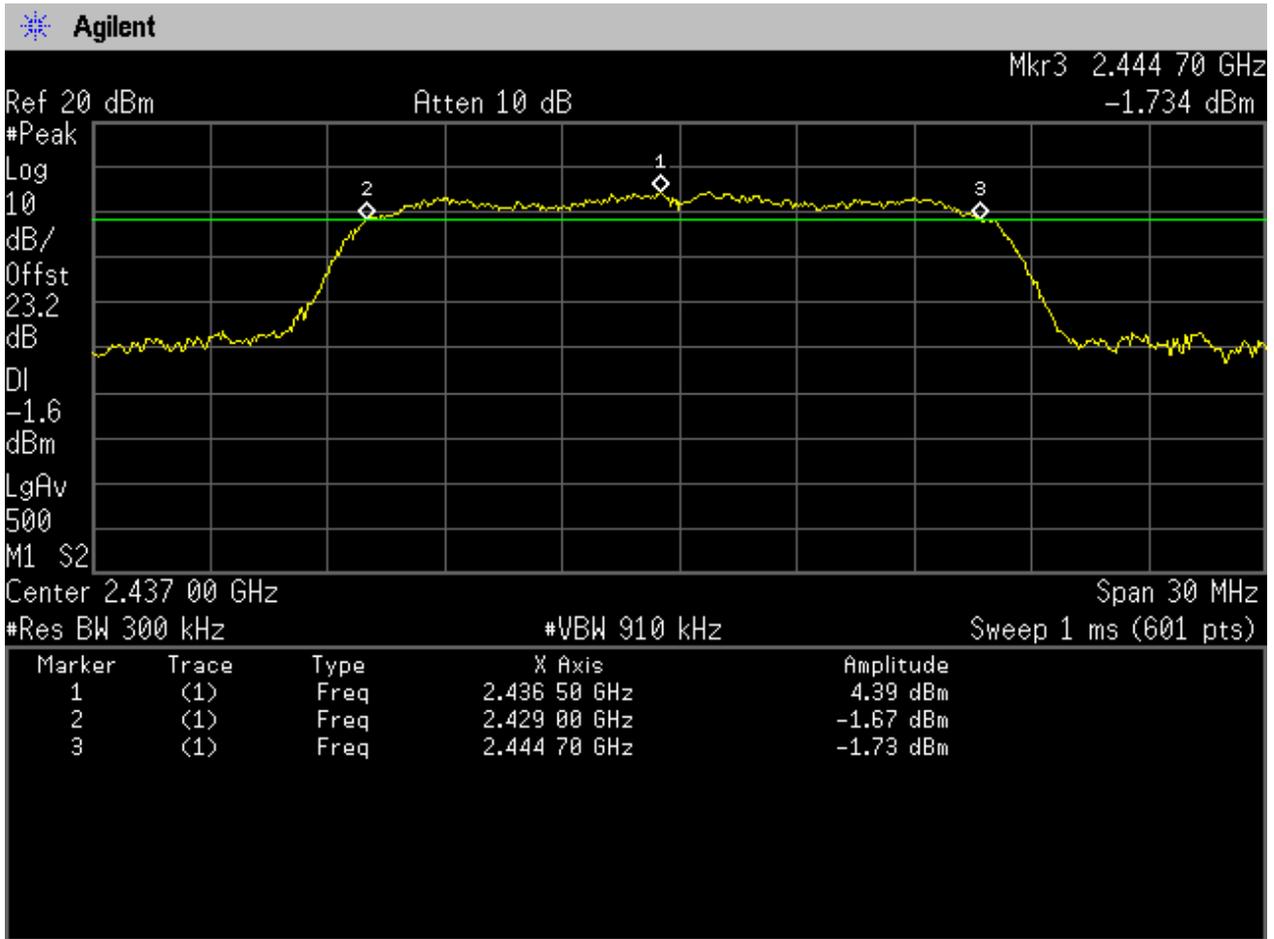
2.7 11G/6\_B@1



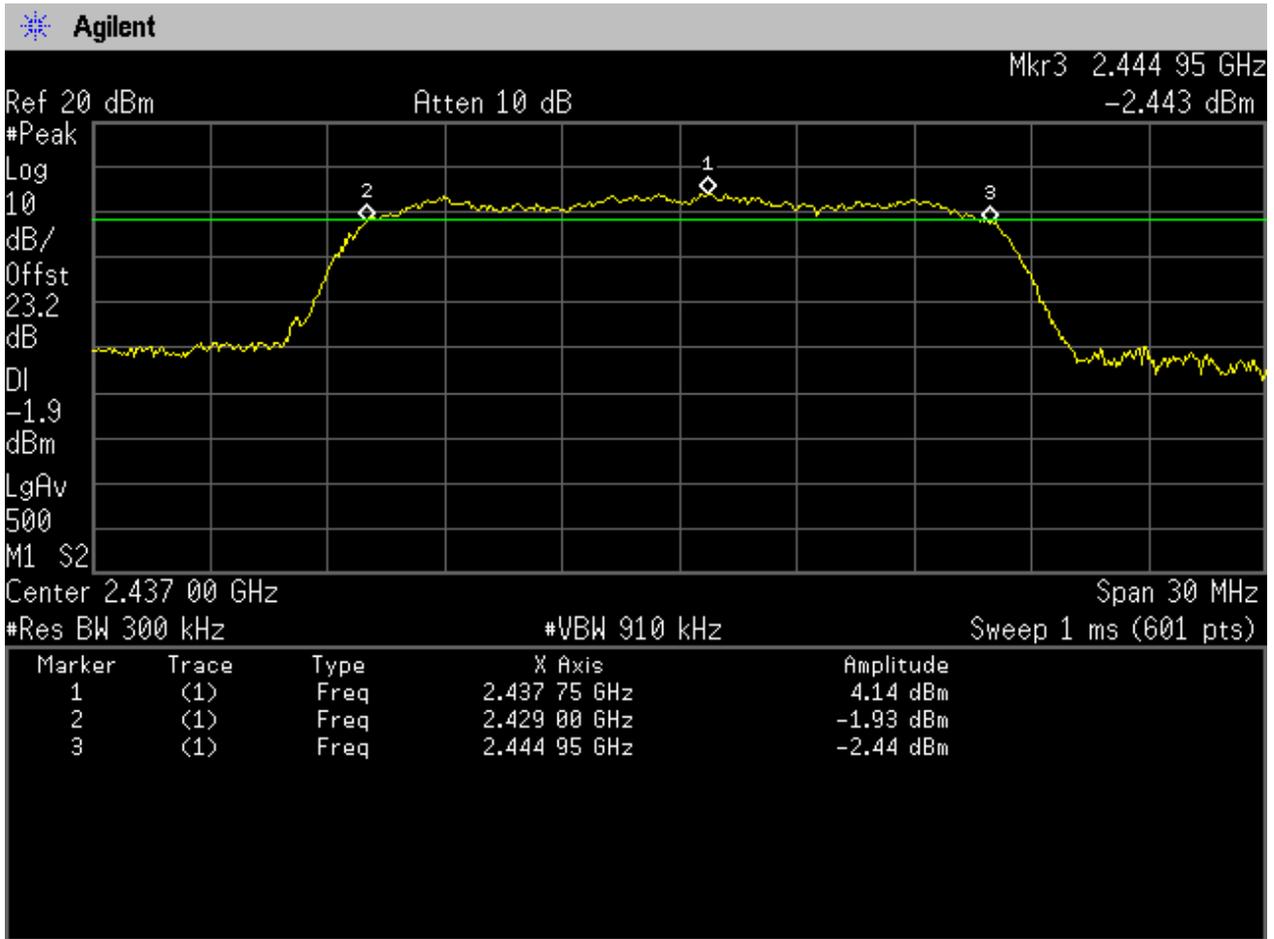
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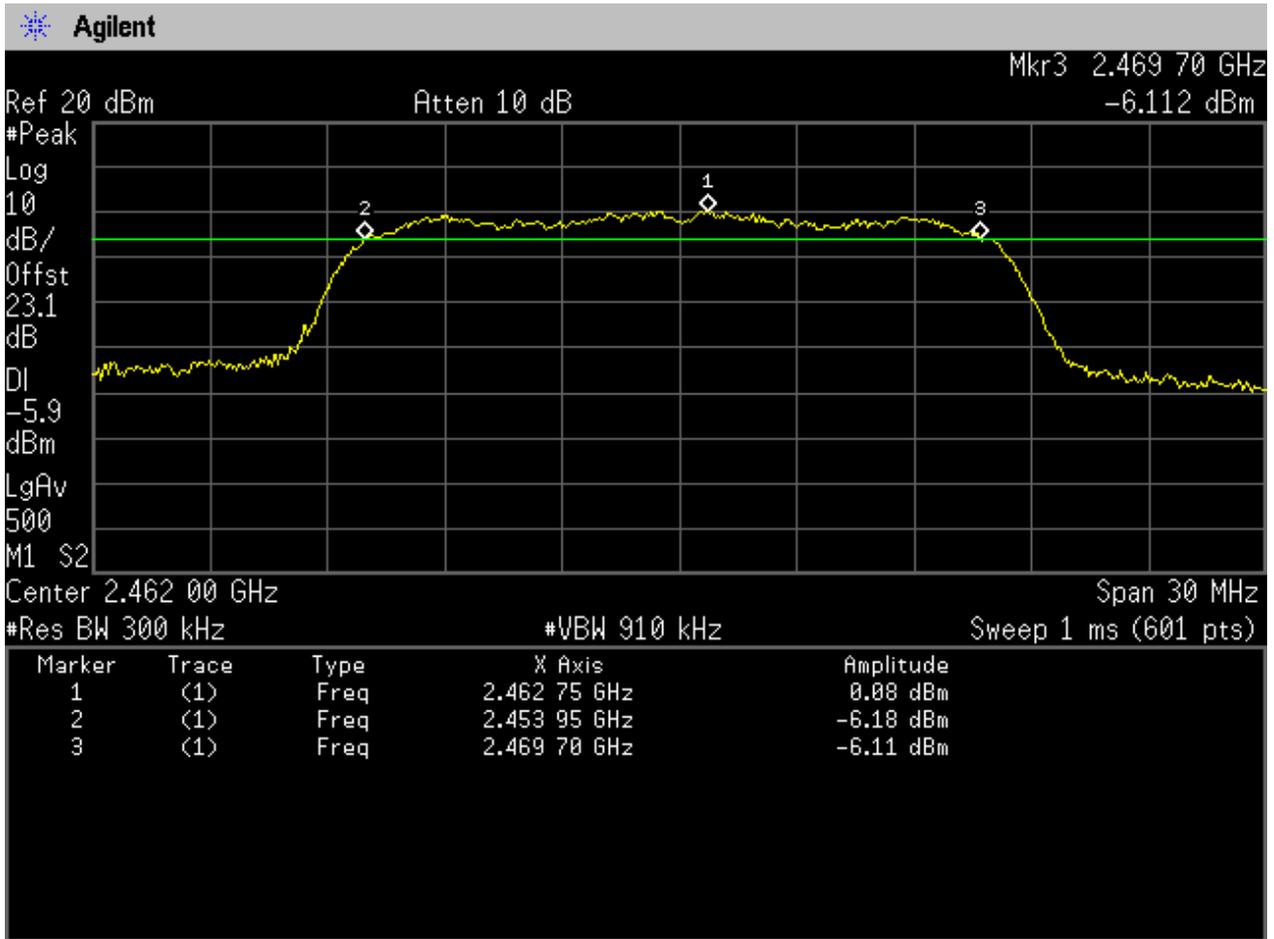
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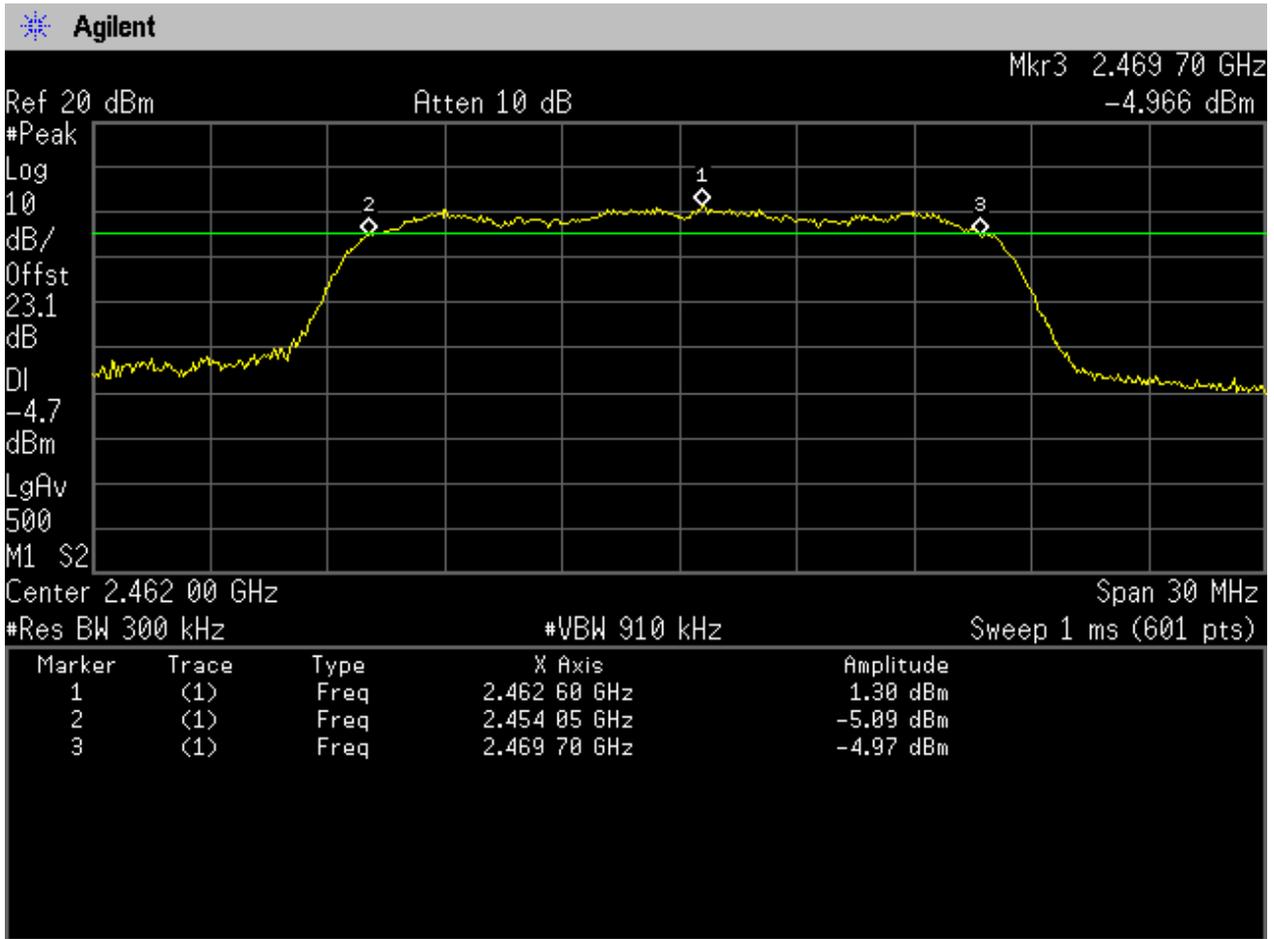
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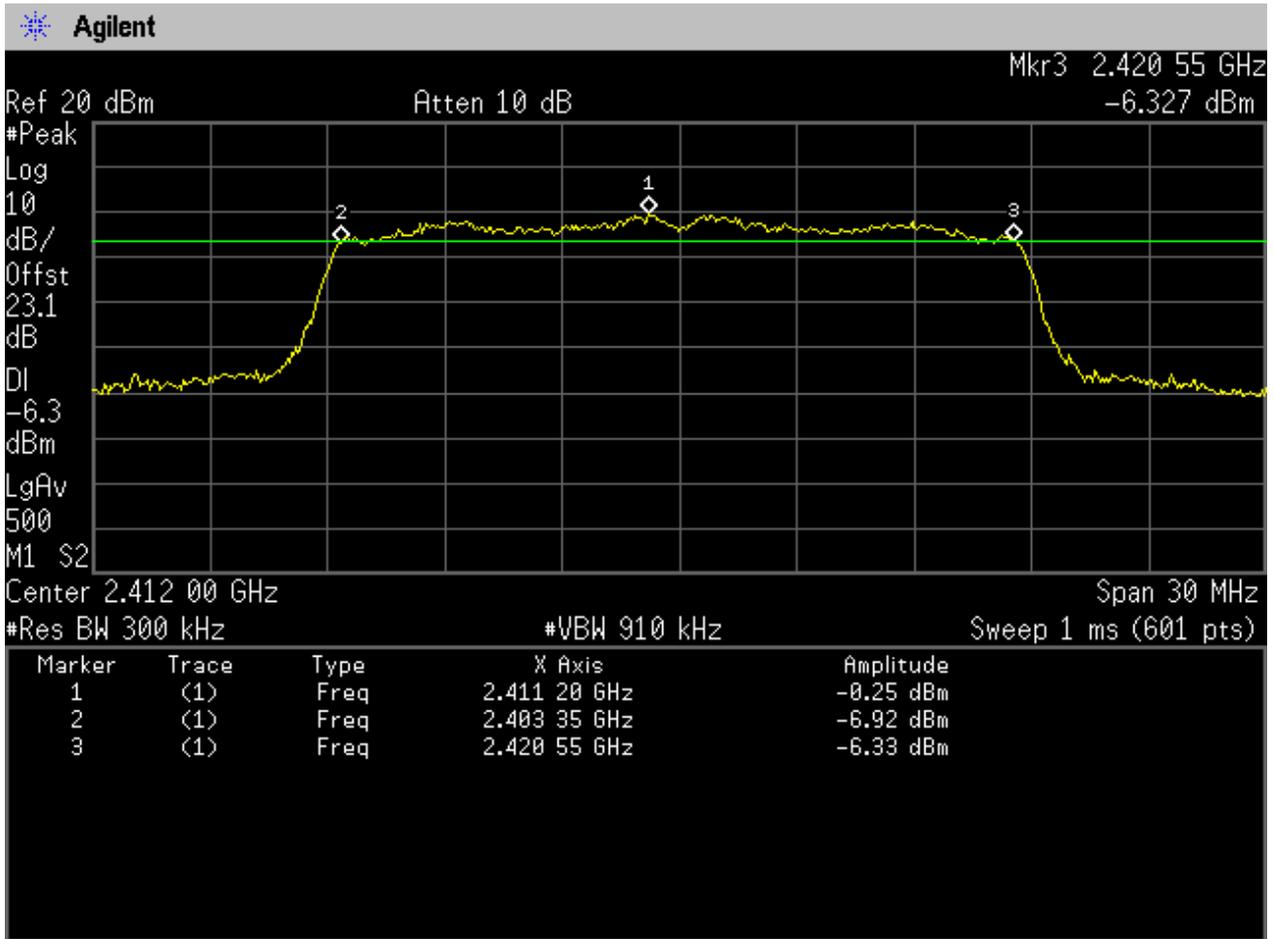
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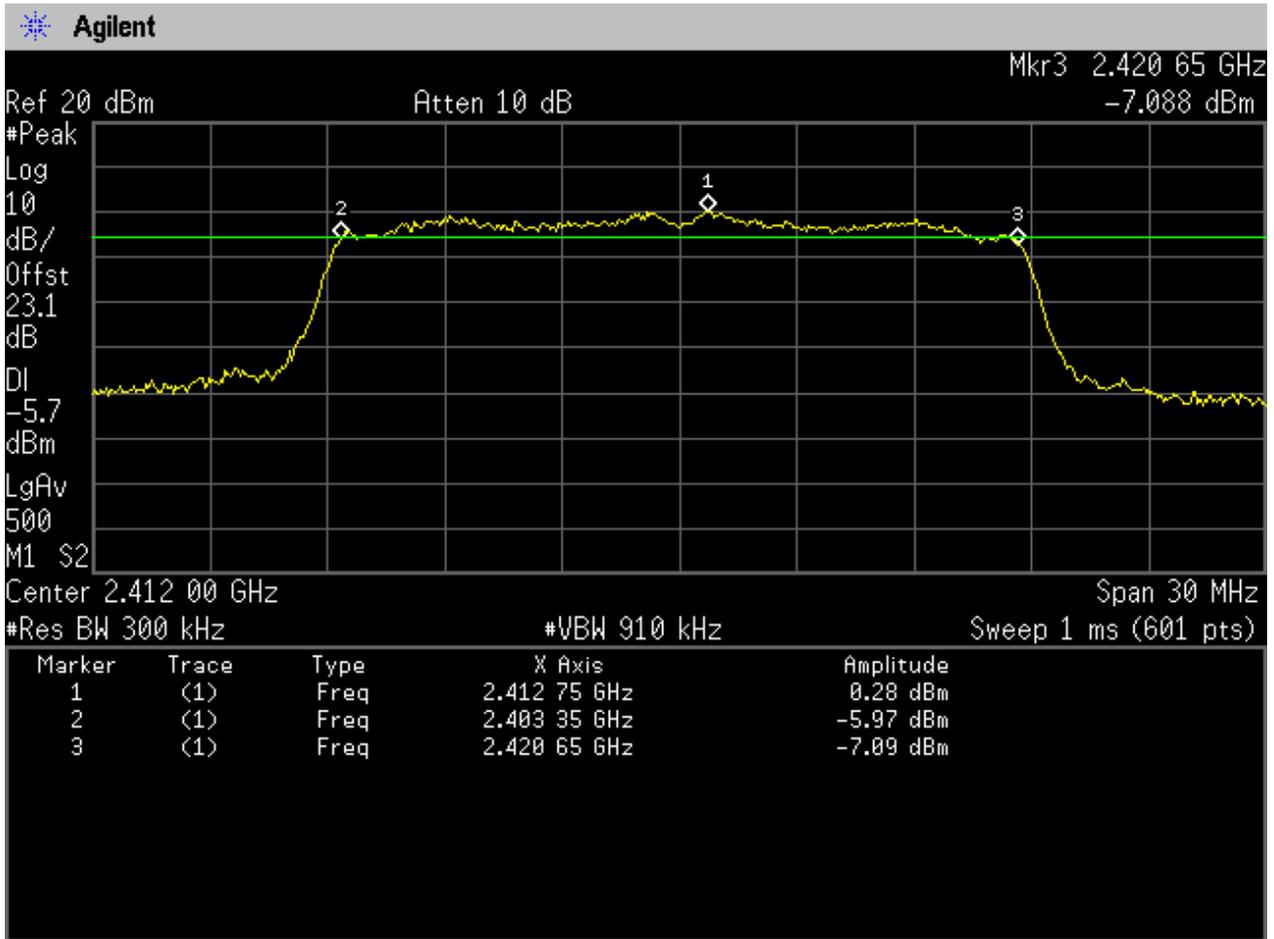
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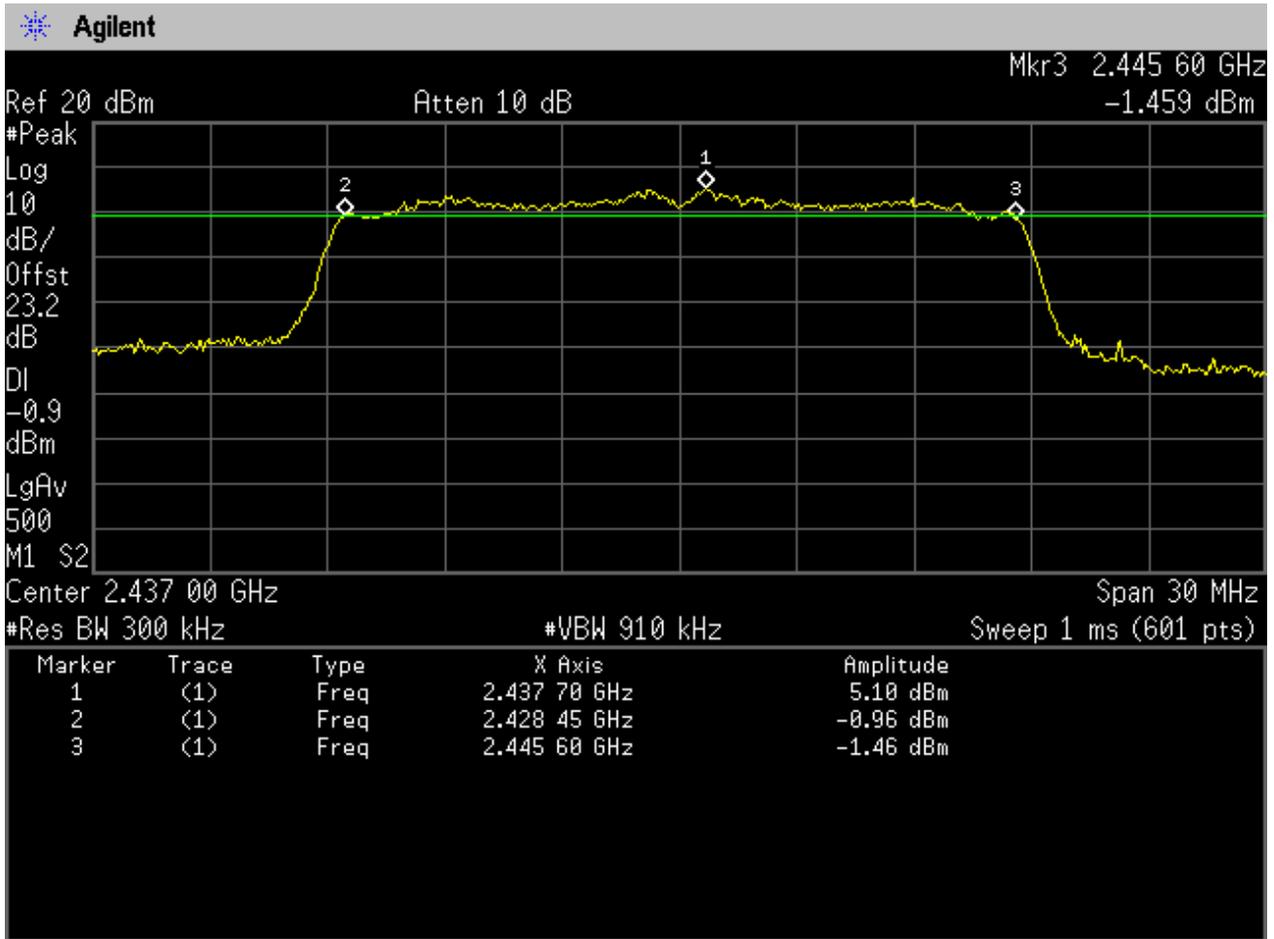
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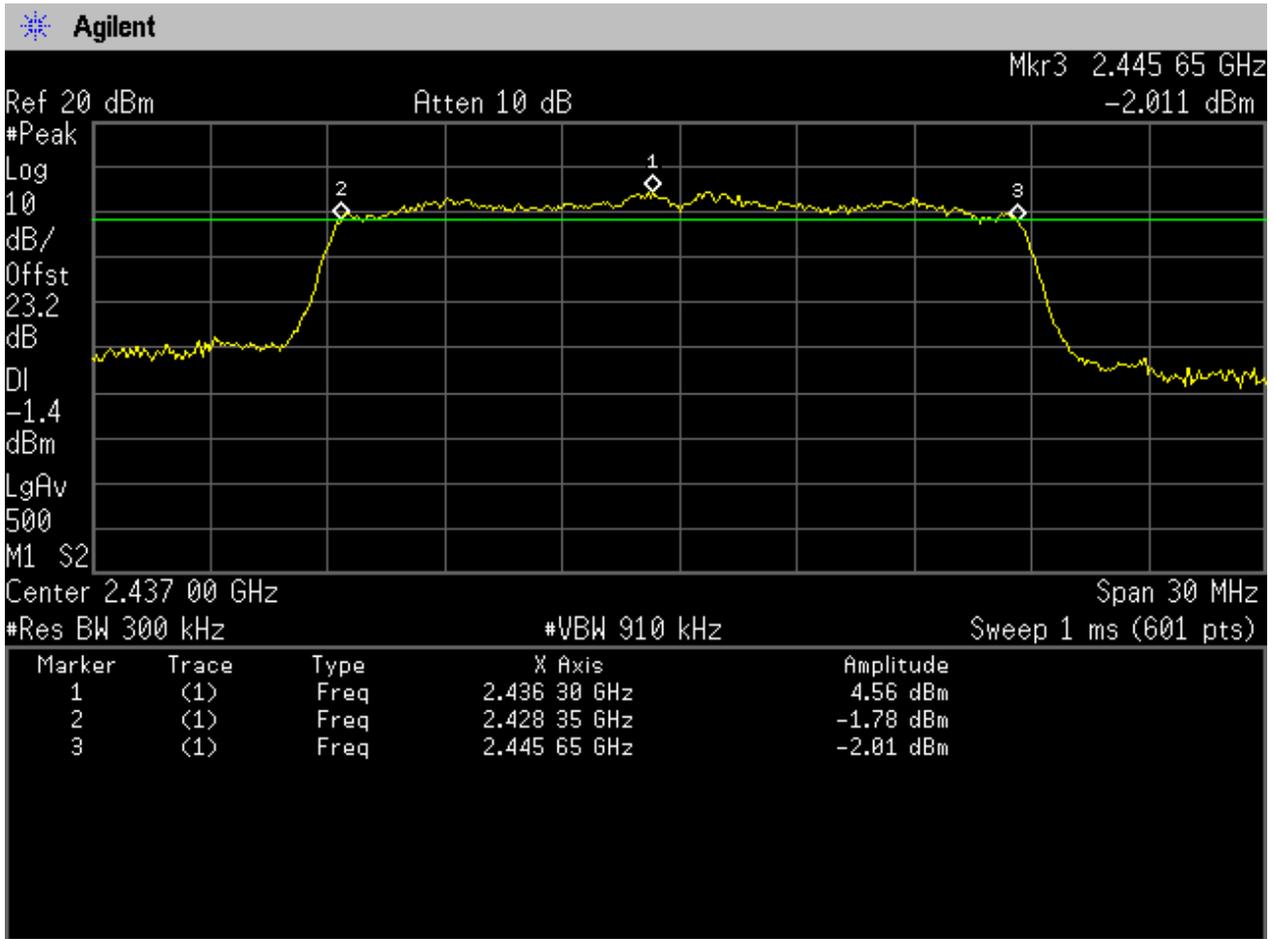
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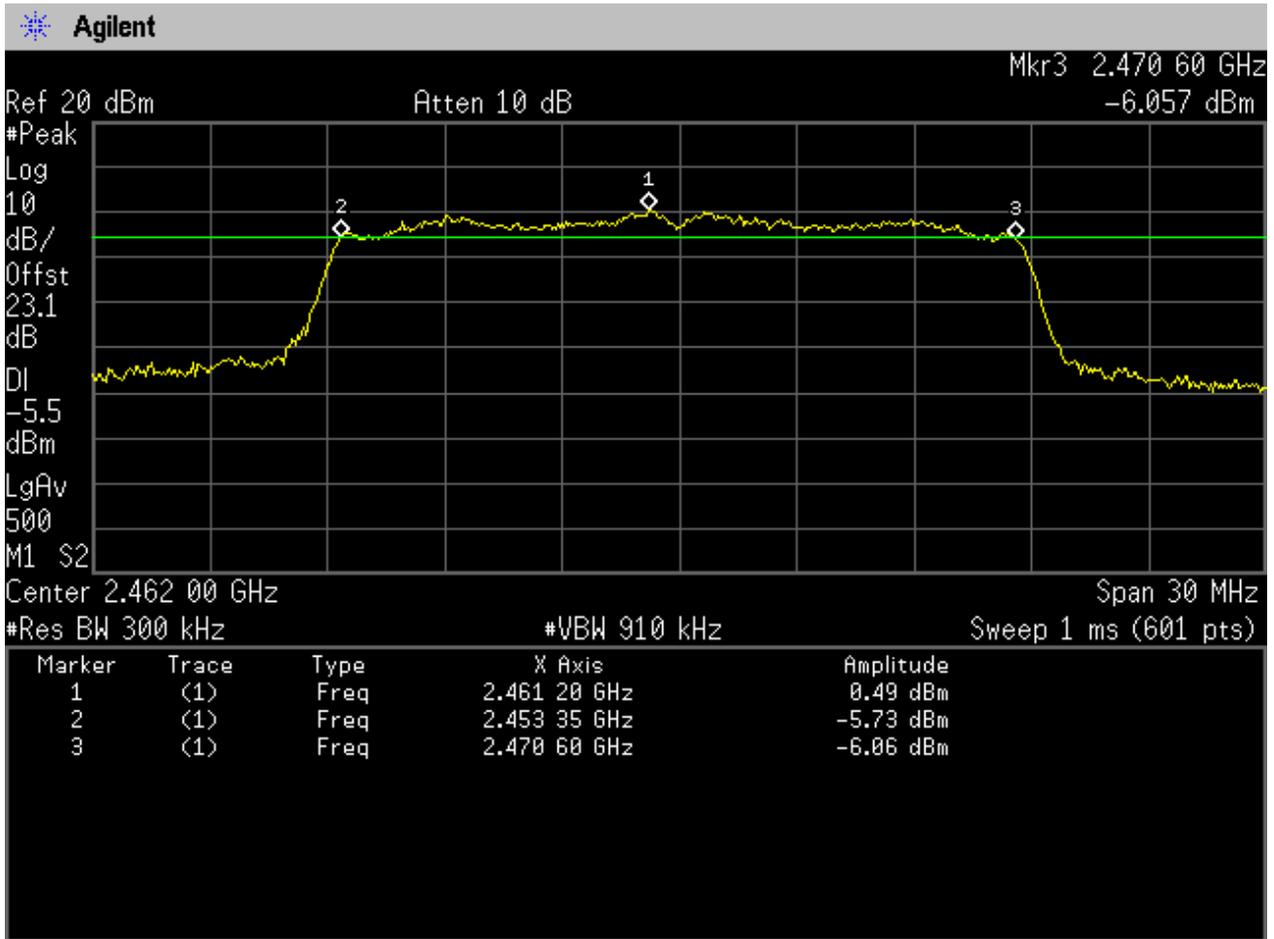
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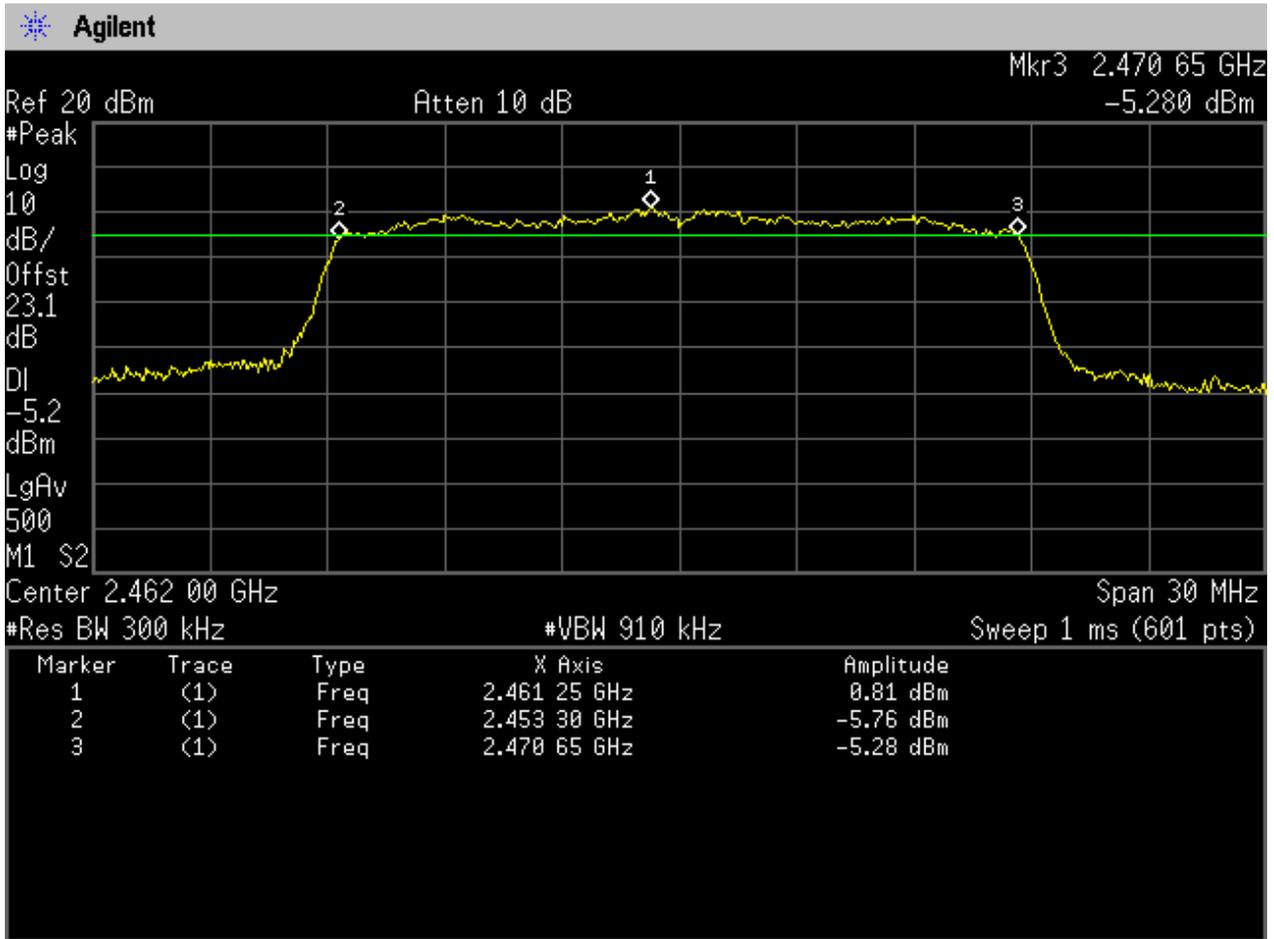
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2.1711N20/0\_T@1

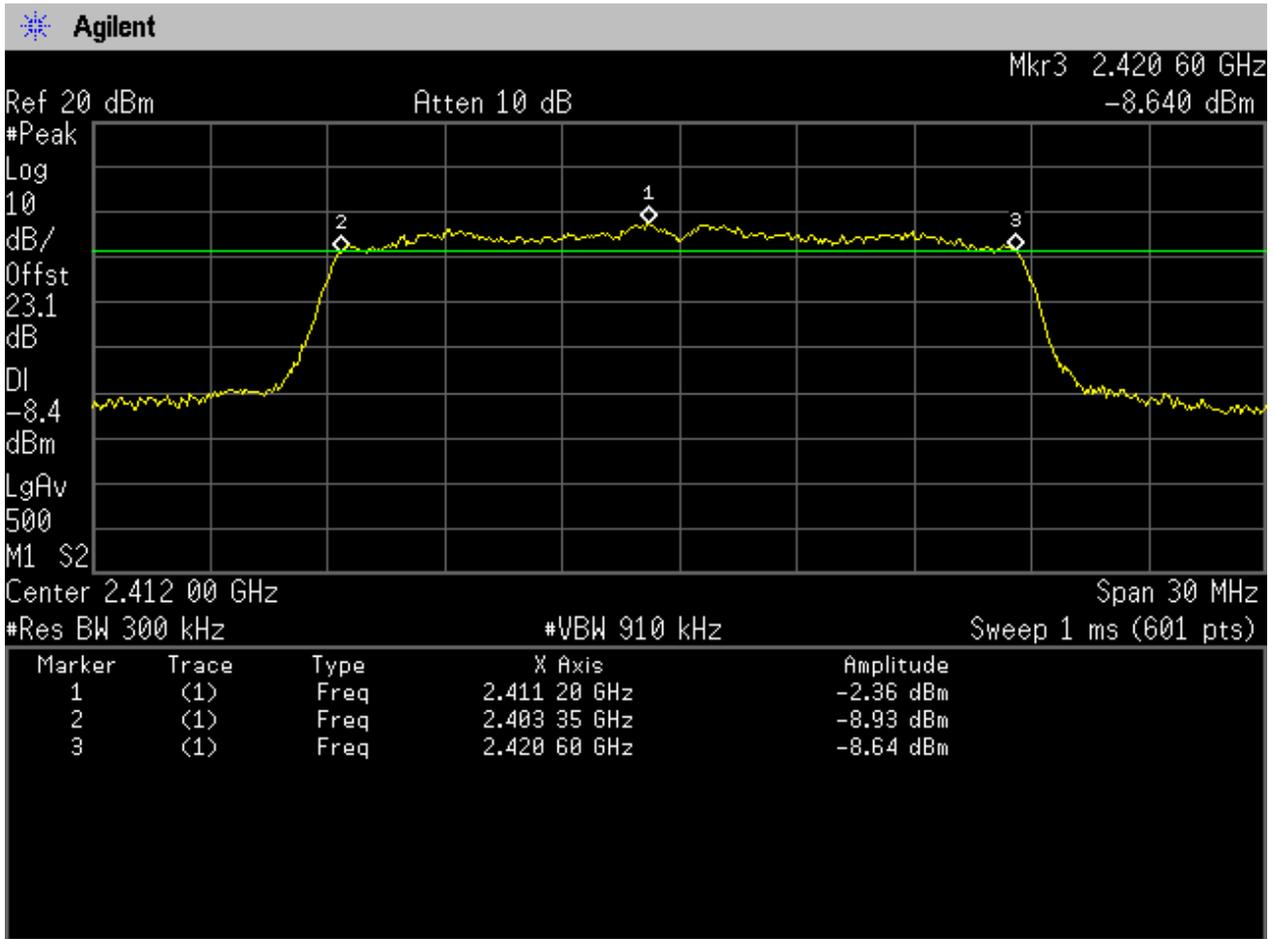


2.1811N20/0\_T@2

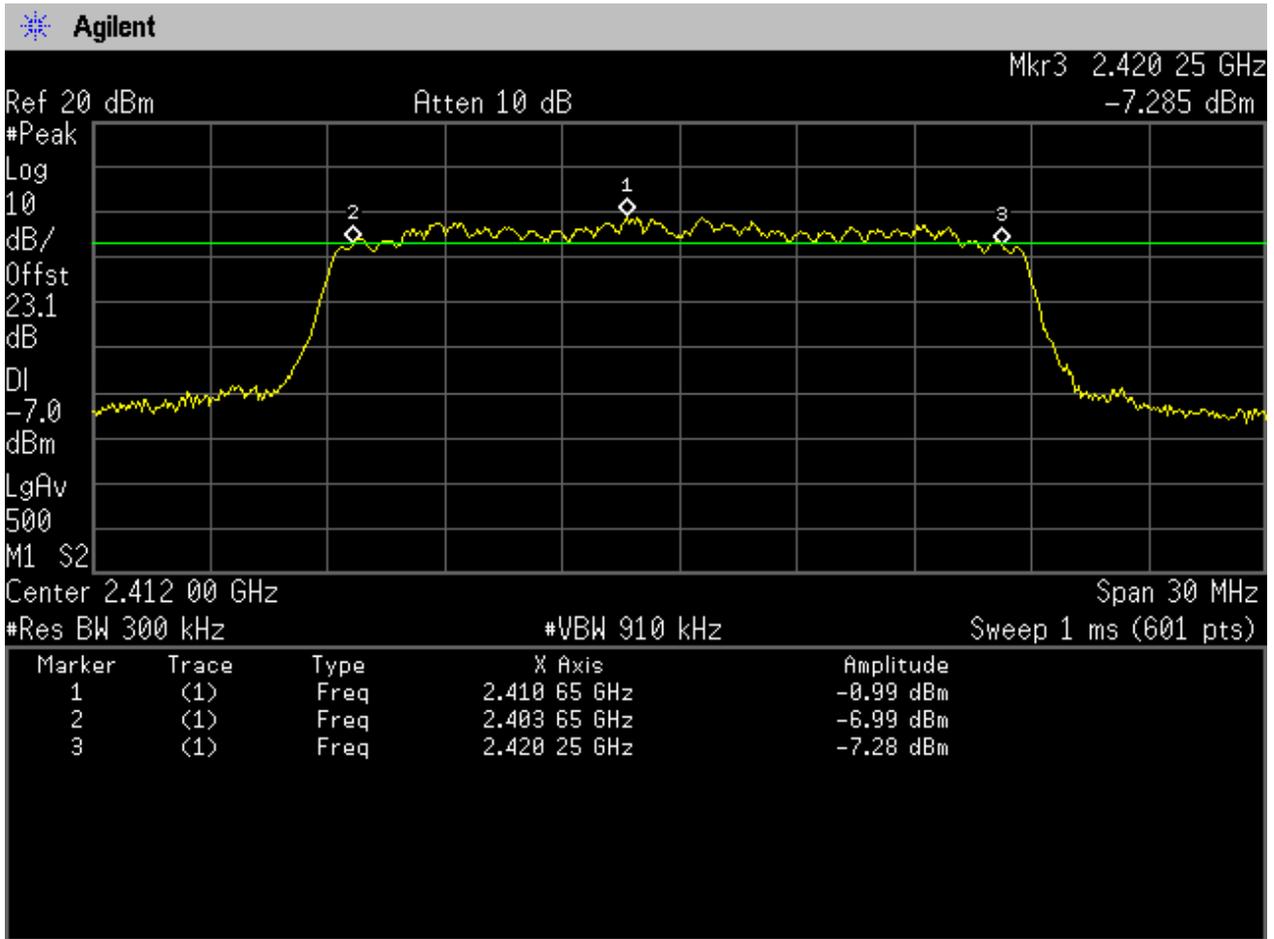


## 2.1911N20m/8\_B@1+2

### 2.19.1 Ant 1

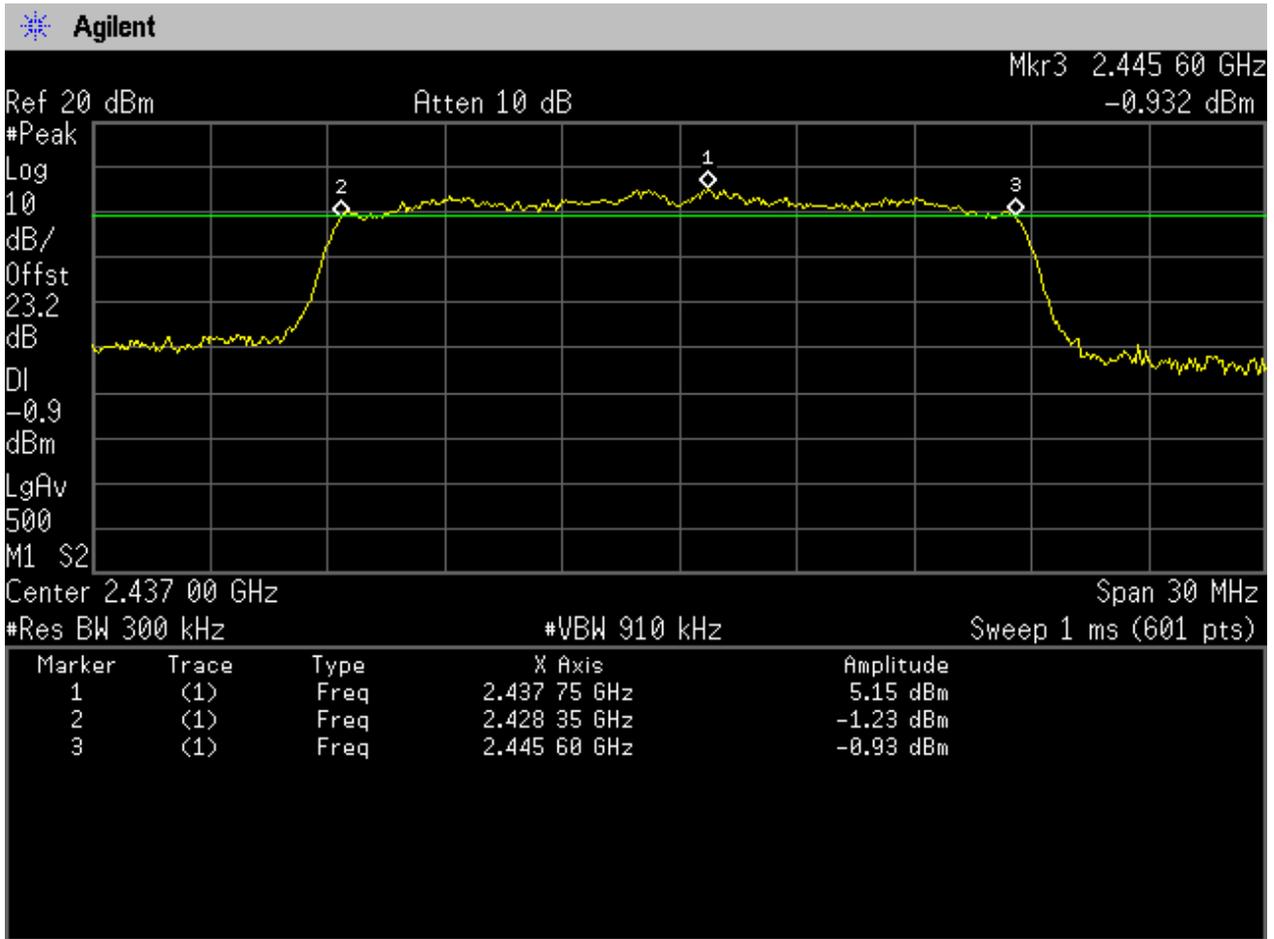


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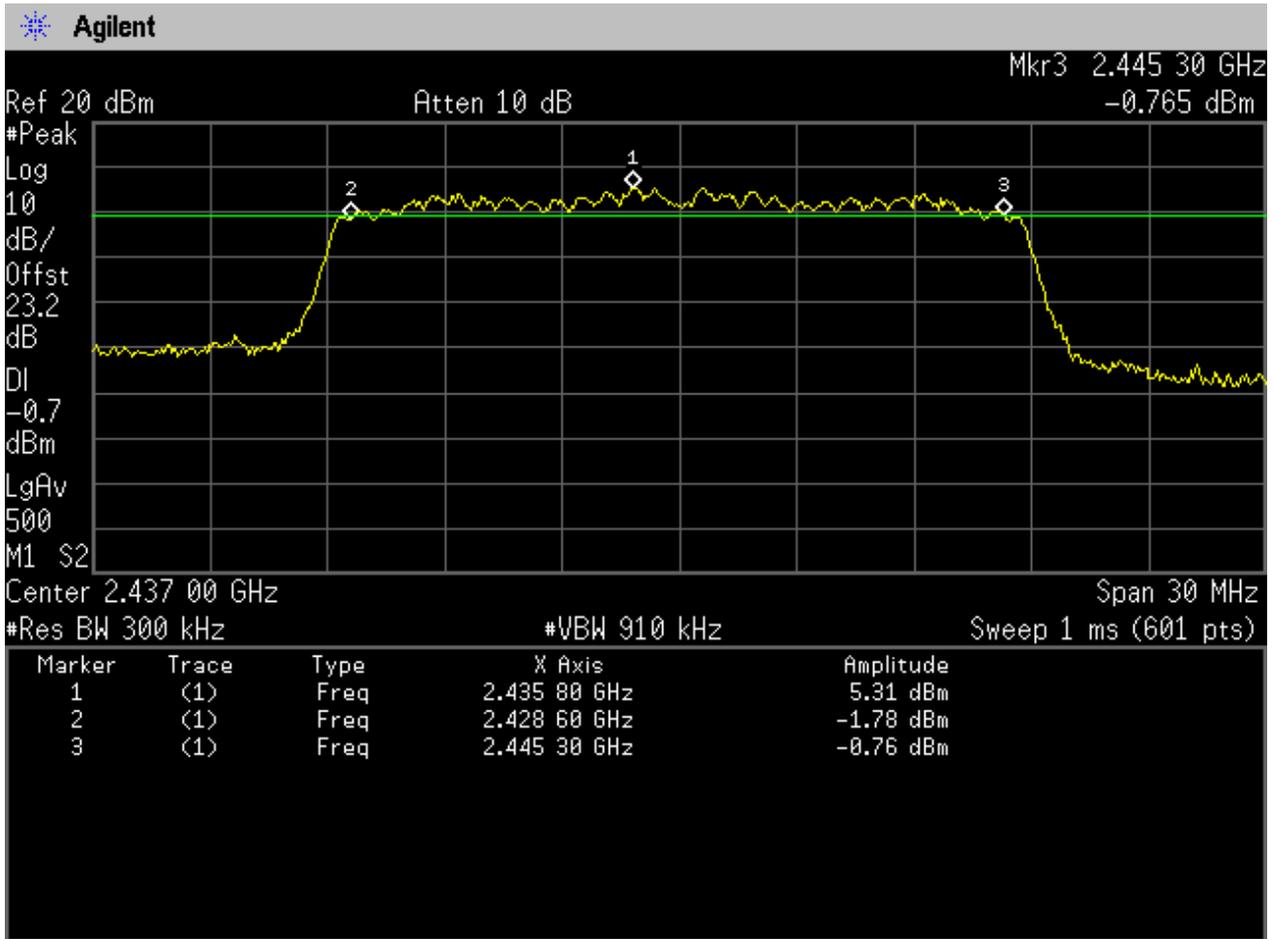


## 2.2011N20m/8\_M@1+2

### 2.20.1 Ant 1

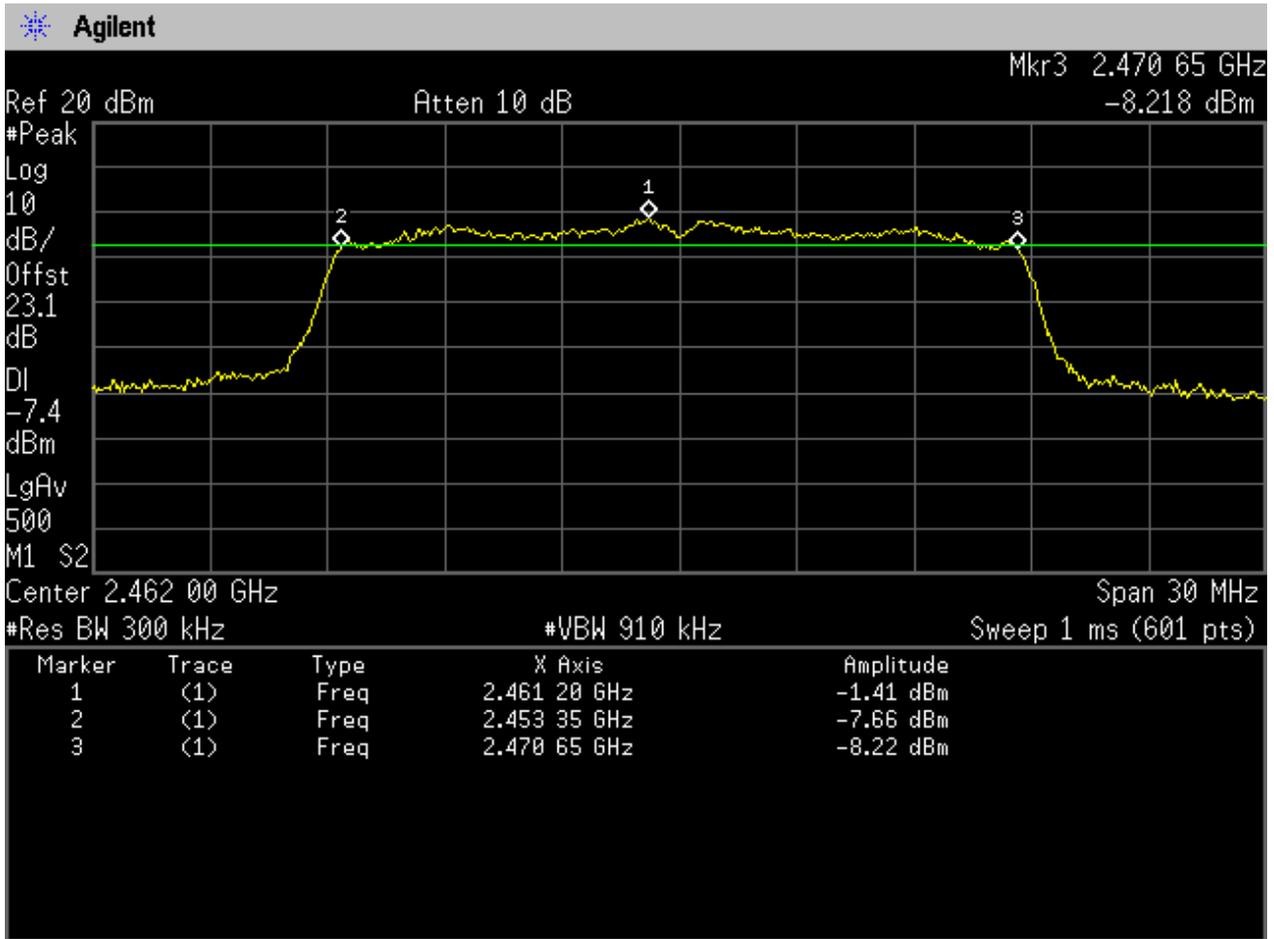


### 2.20.2 Ant 2

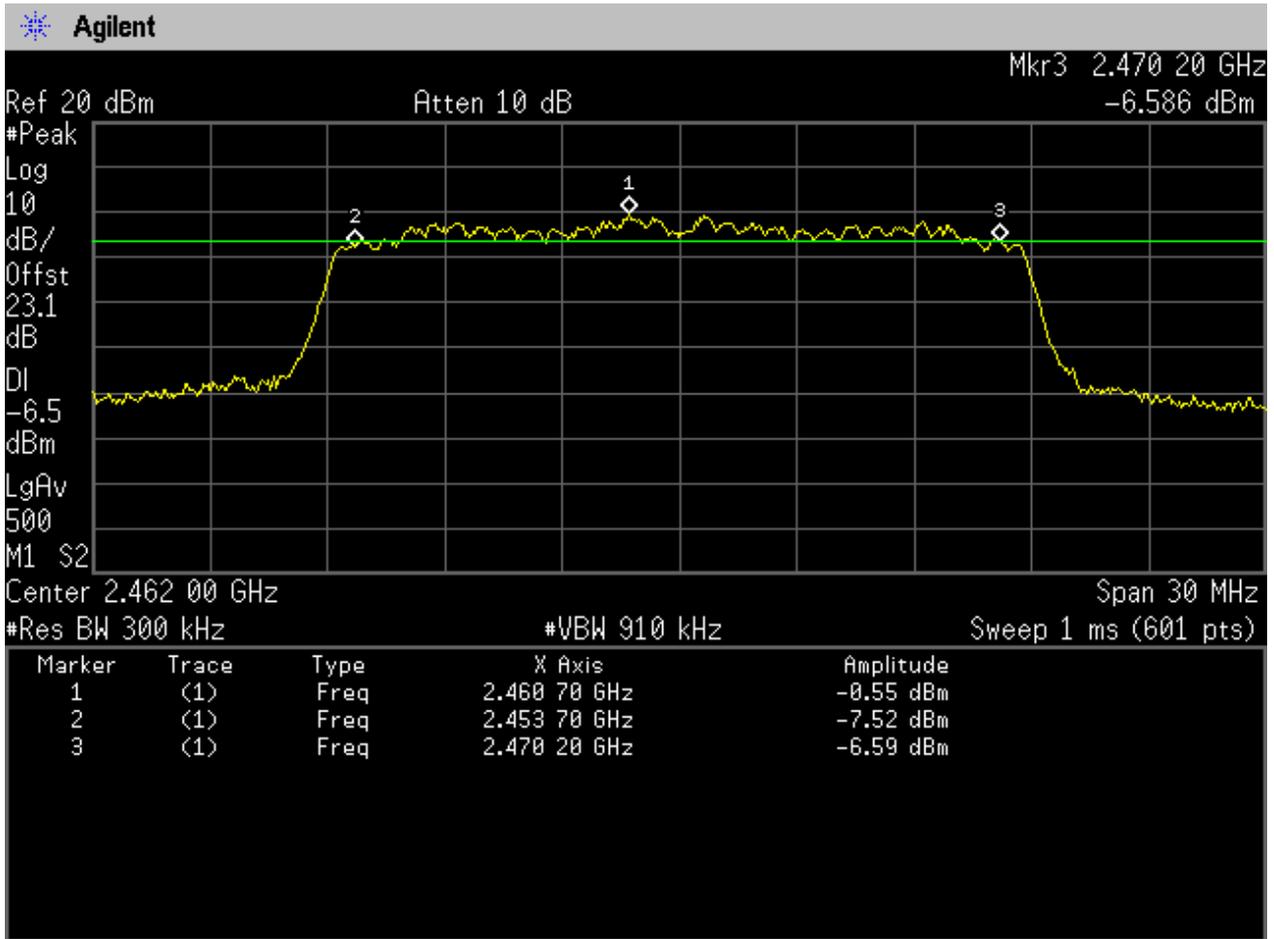


## 2.2111N20m/8\_T@1+2

### 2.21.1 Ant 1

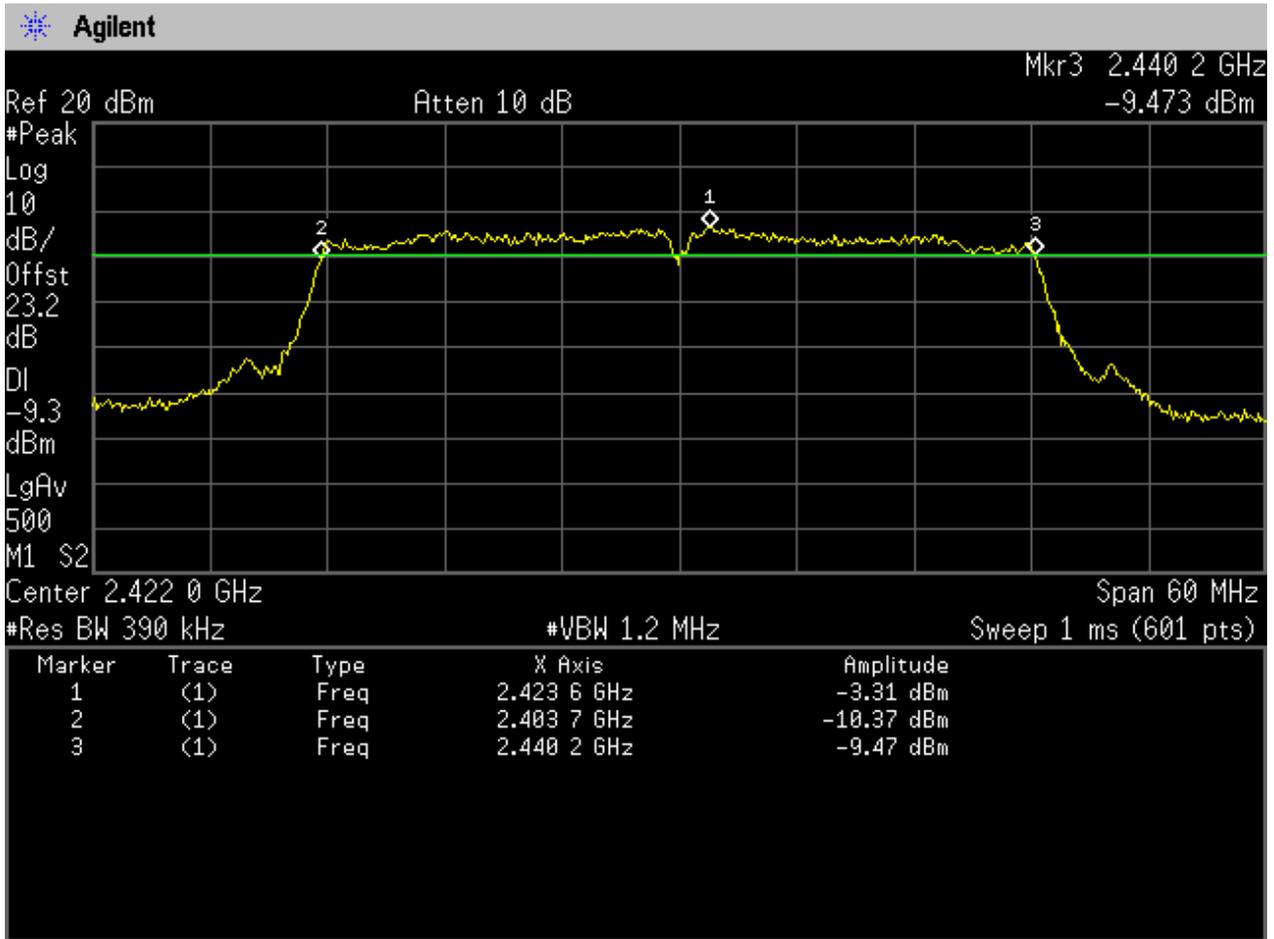


### 2.21.2 Ant 2

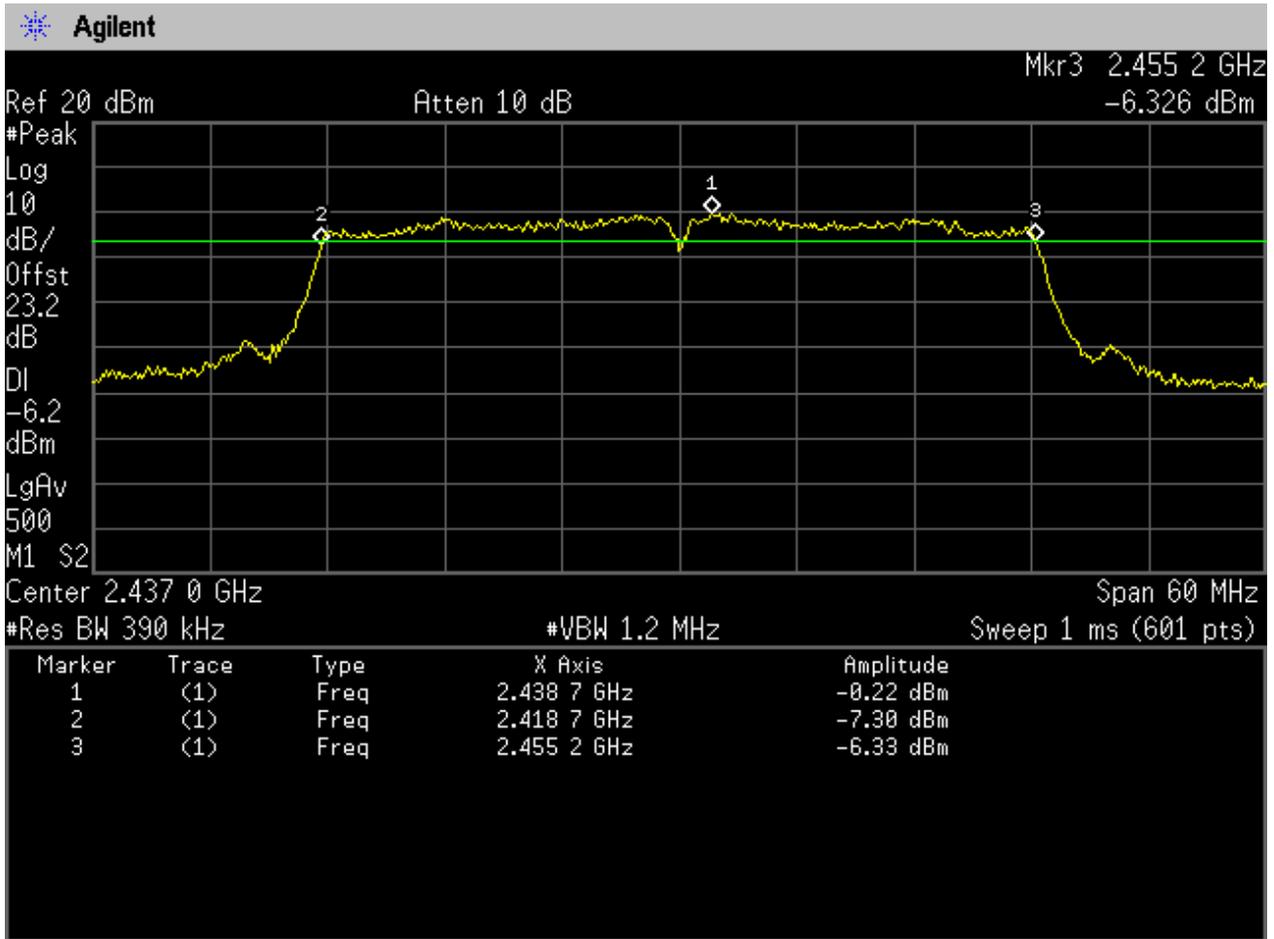


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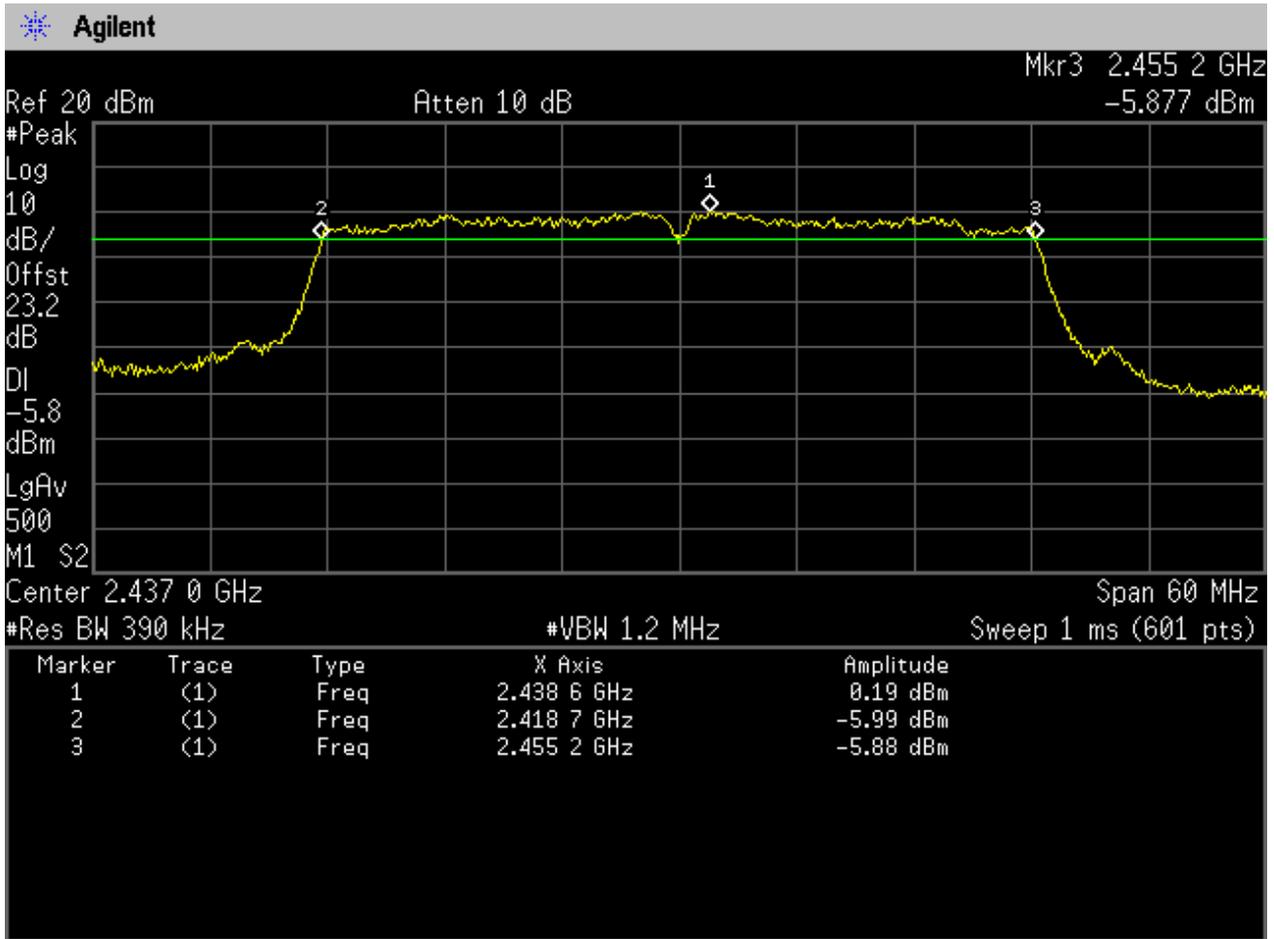




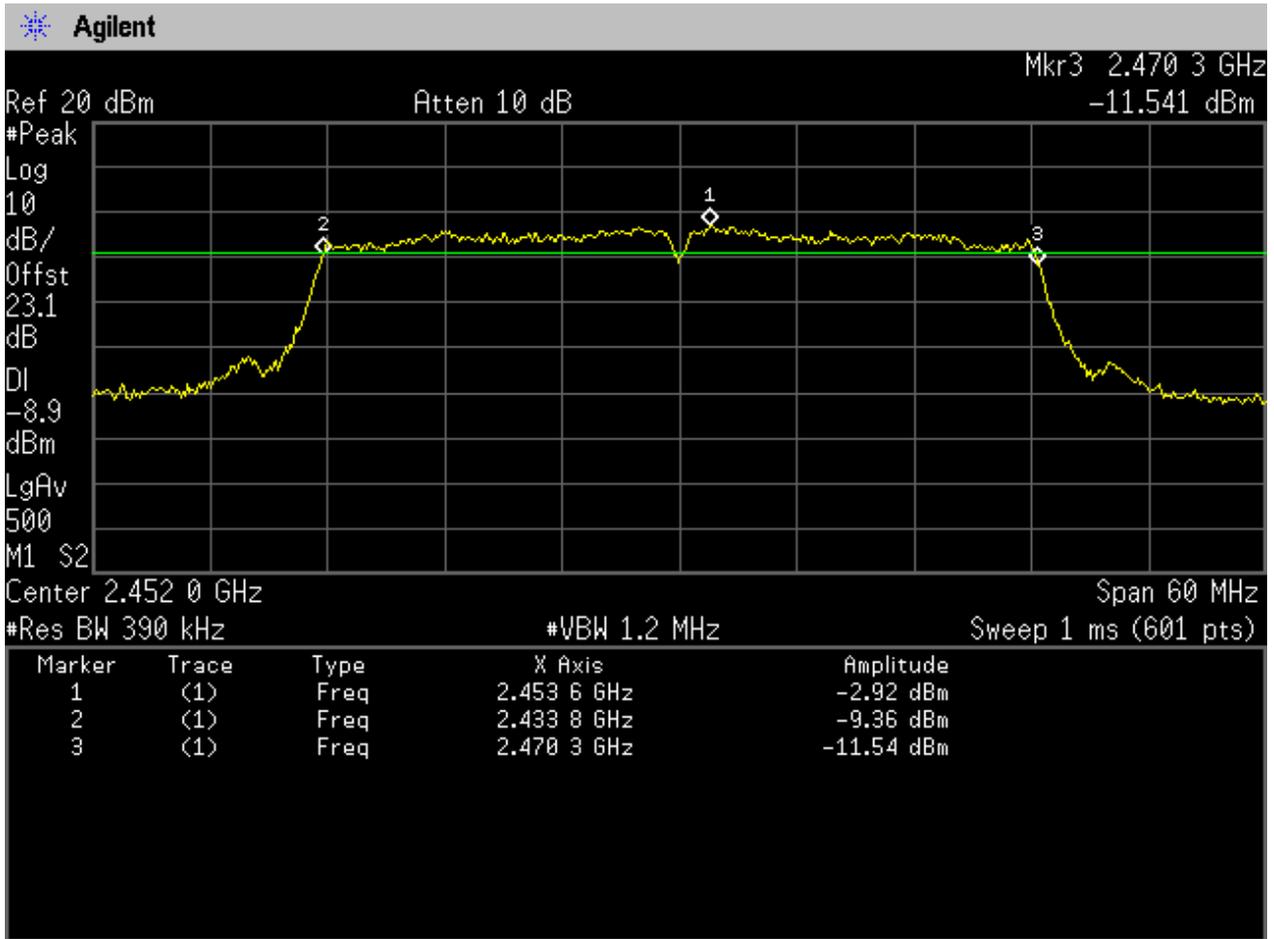
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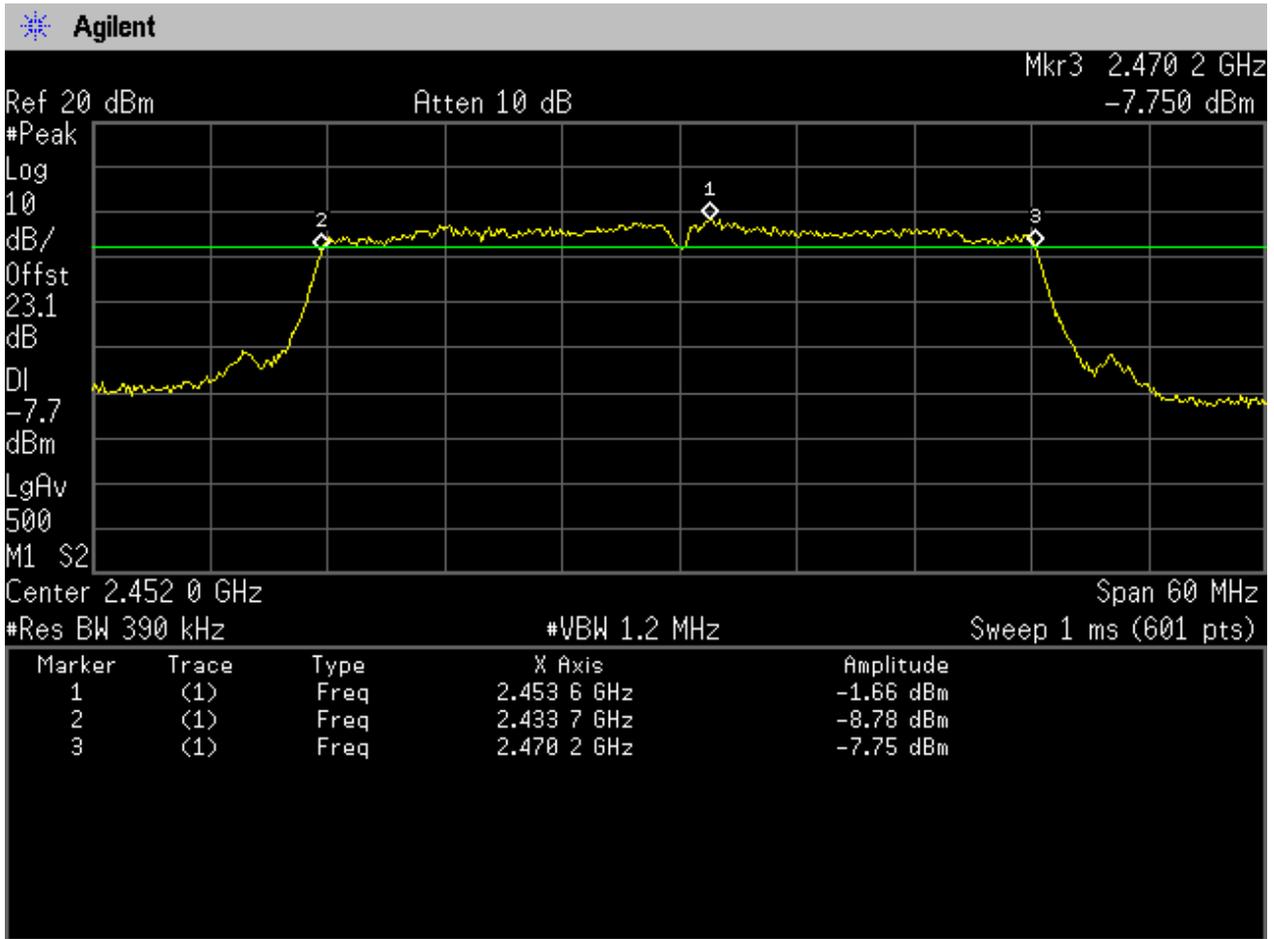
2.2511N40/0\_M@2



2.2611N40/0\_T@1

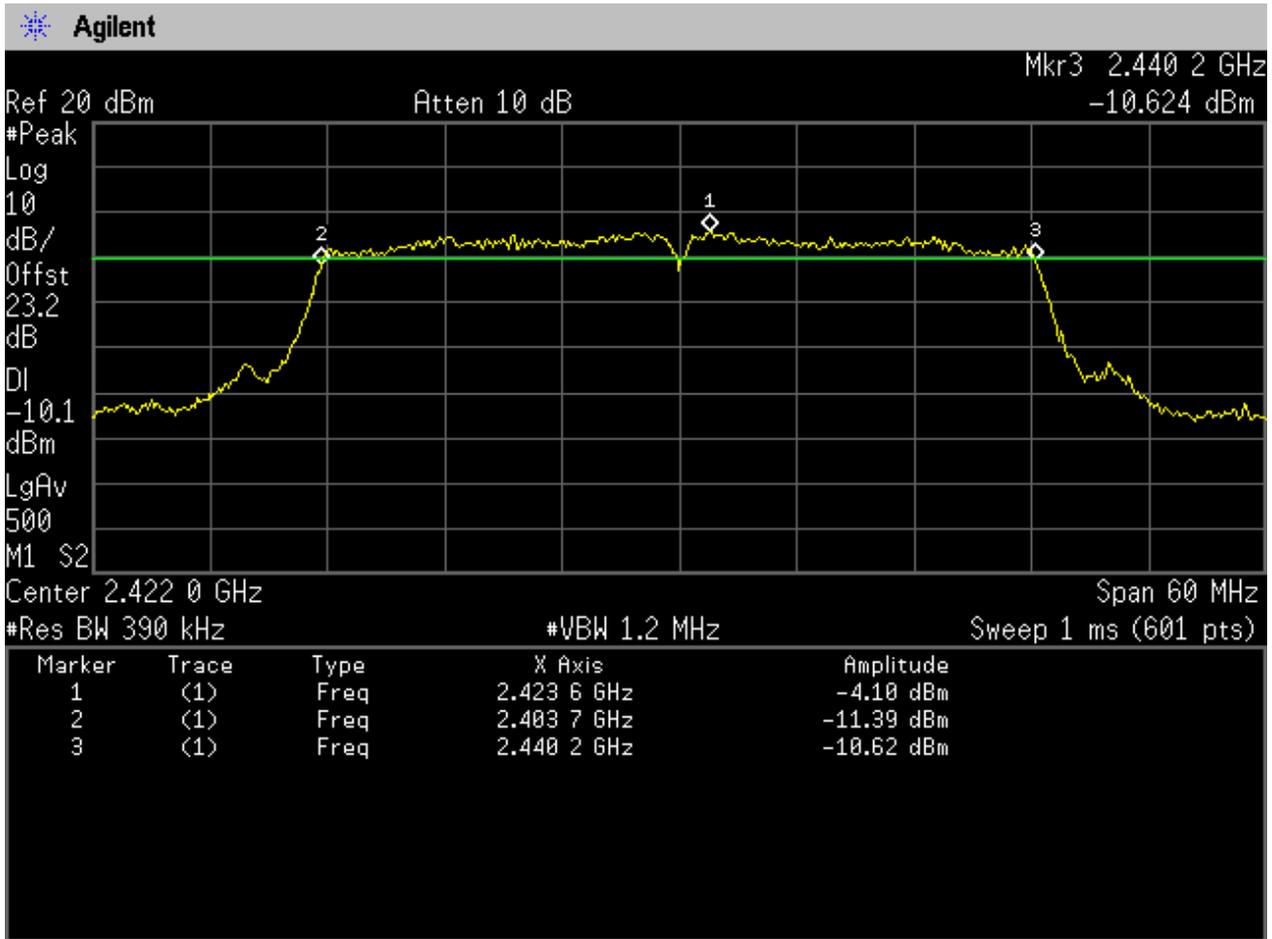


2.2711N40/0\_T@2

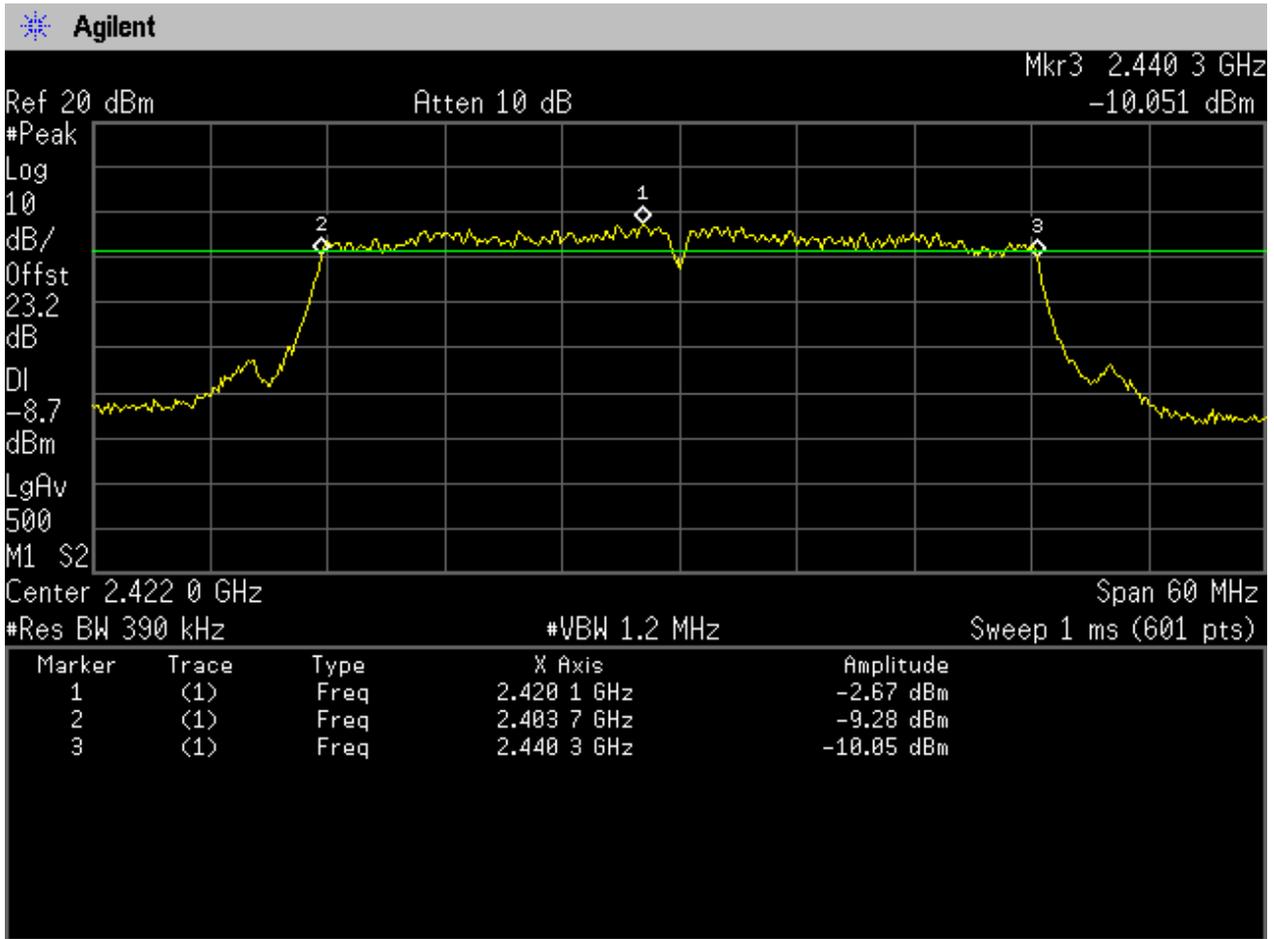


## 2.2811N40m/8\_B@1+2

### 2.28.1 Ant 1

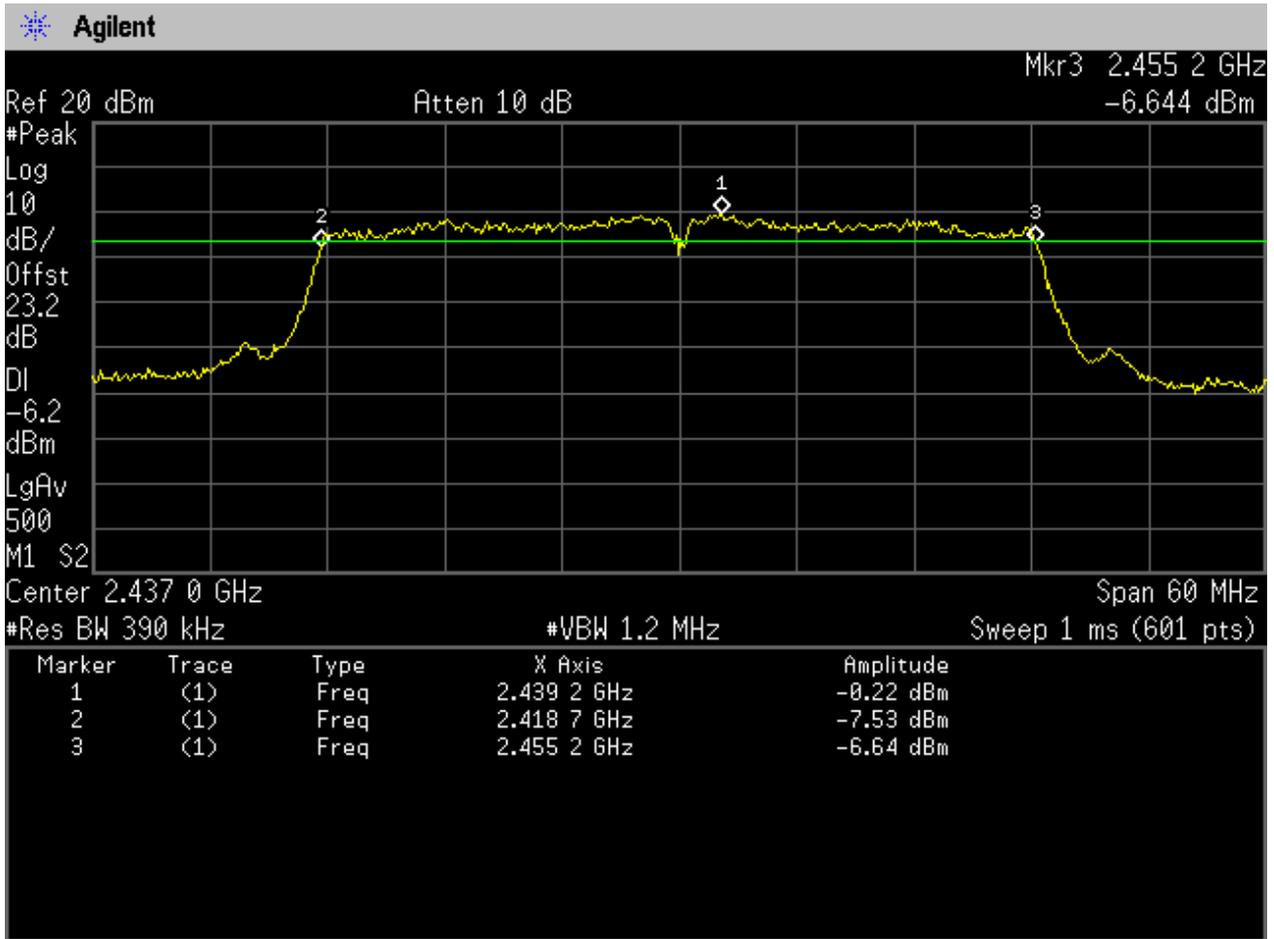


2.28.2 Ant 2

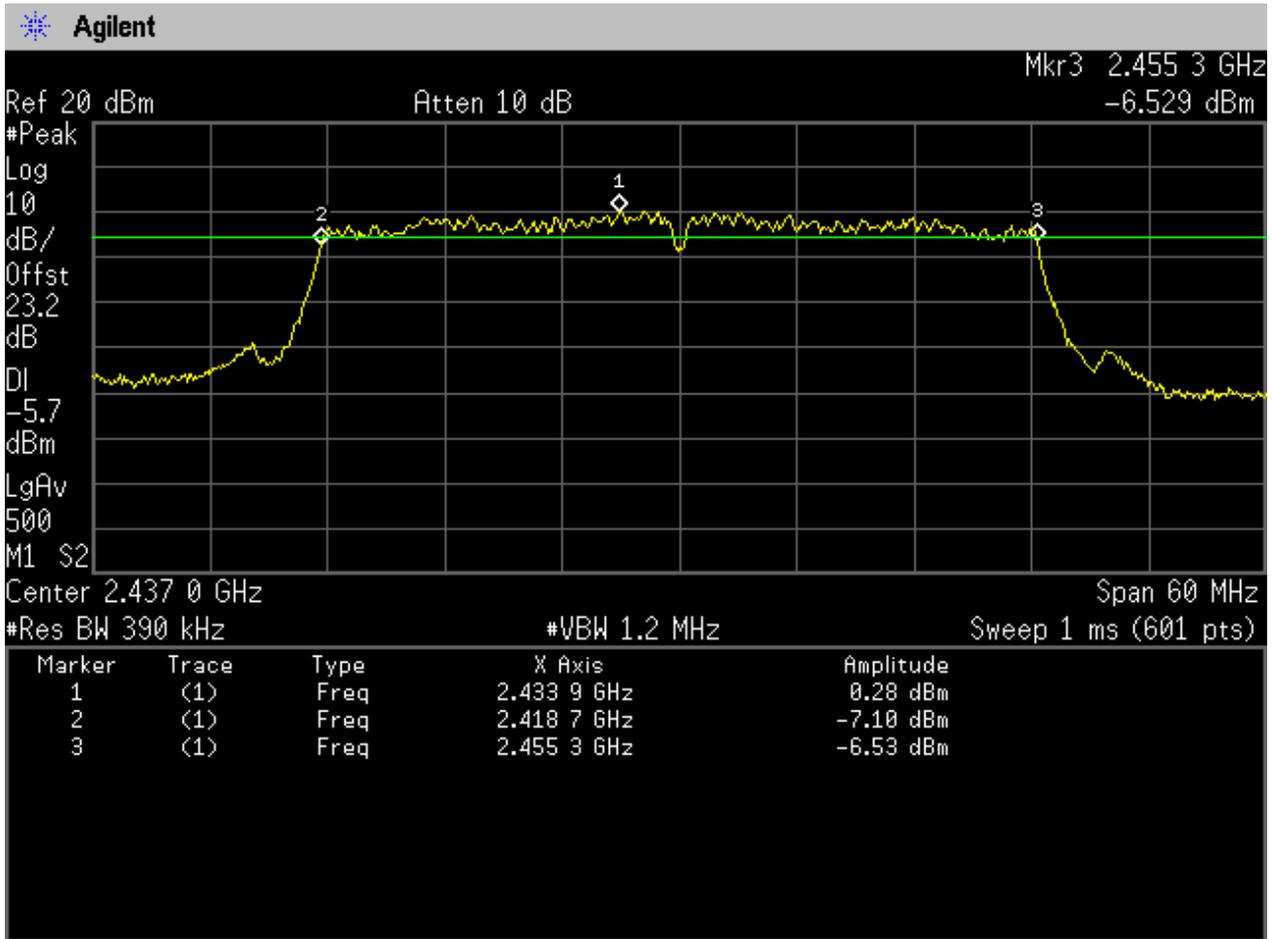


## 2.2911N40m/8\_M@1+2

### 2.29.1 Ant 1

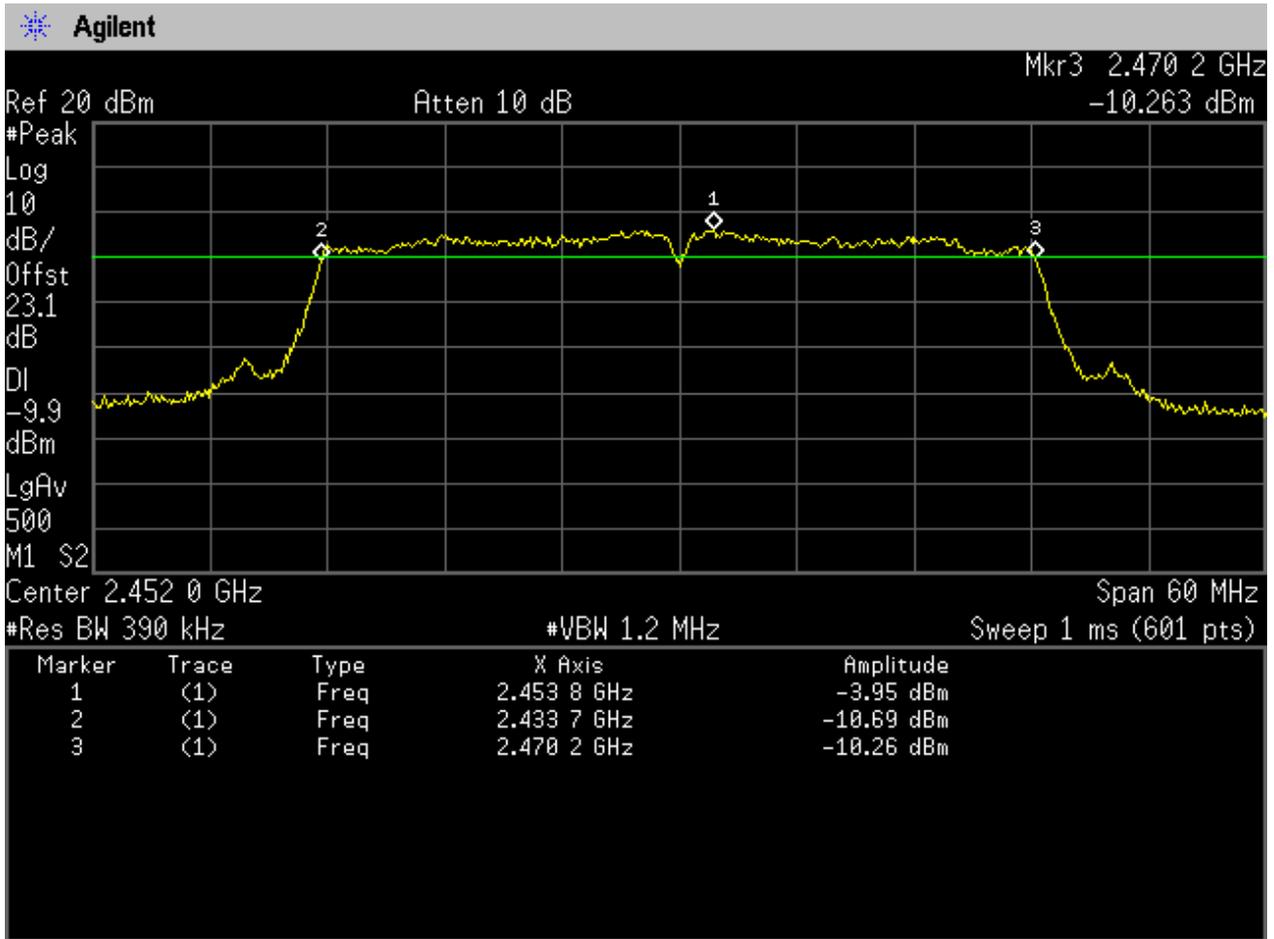


2.29.2 Ant 2

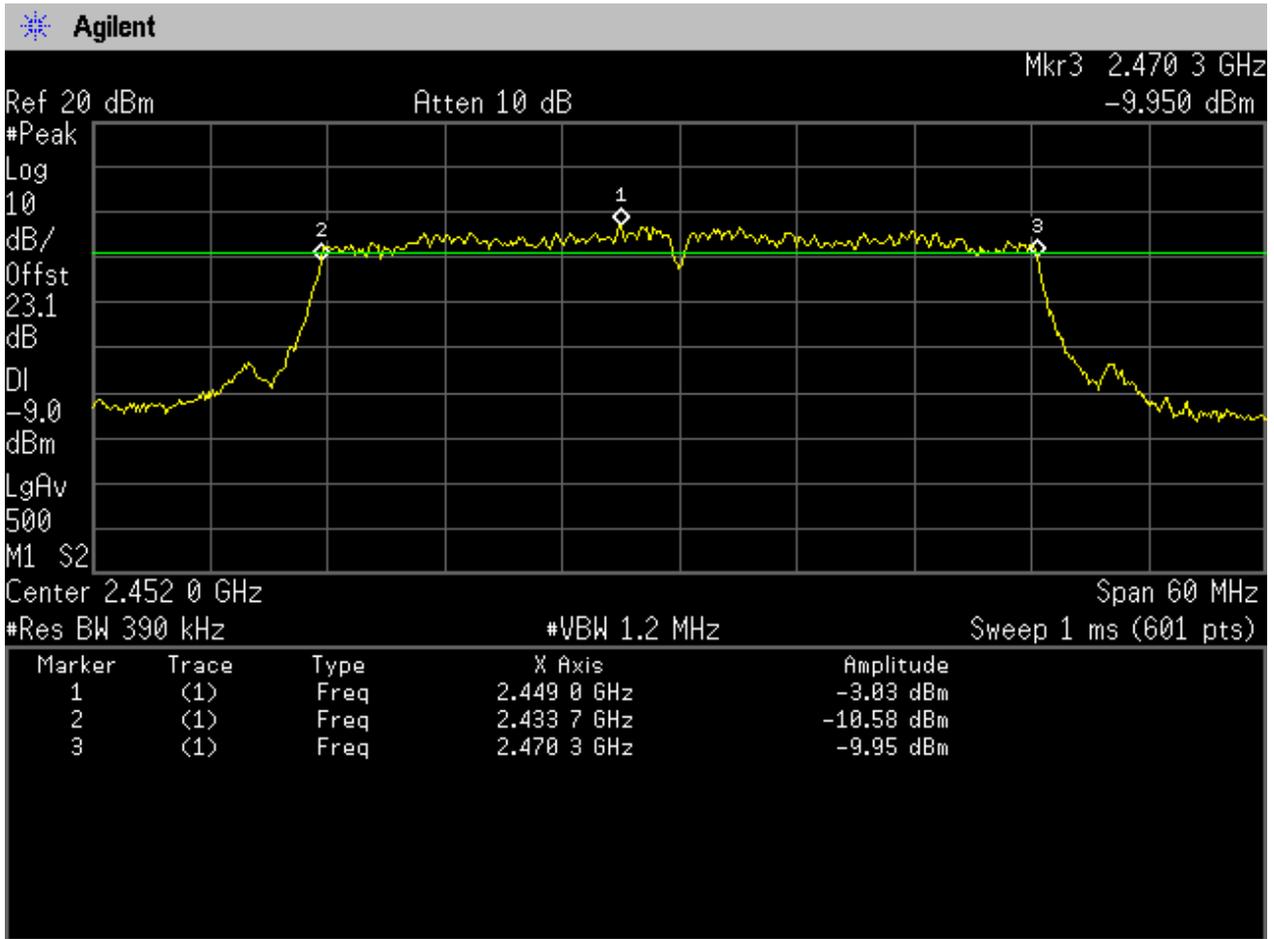


### 2.3011N40m/8\_T@1+2

#### 2.30.1 Ant 1



### 2.30.2 Ant 2





# Appendix B: Occupied Bandwidth



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

## 1 Result Table

EUT Conf.	Ant.	Occupied Bandwidth [MHz]	Verdict
11B/1_B@1	Ant 1	10.39	Pass
11B/1_B@2	Ant 2	10.32	Pass
11B/1_M@1	Ant 1	10.34	Pass
11B/1_M@2	Ant 2	10.31	Pass
11B/1_T@1	Ant 1	10.29	Pass
11B/1_T@2	Ant 2	10.30	Pass
11G/6_B@1	Ant 1	16.42	Pass
11G/6_B@2	Ant 2	16.40	Pass
11G/6_M@1	Ant 1	16.40	Pass
11G/6_M@2	Ant 2	16.45	Pass
11G/6_T@1	Ant 1	16.43	Pass
11G/6_T@2	Ant 2	16.40	Pass
11N20/0_B@1	Ant 1	17.57	Pass
11N20/0_B@2	Ant 2	17.56	Pass
11N20/0_M@1	Ant 1	17.56	Pass
11N20/0_M@2	Ant 2	17.56	Pass
11N20/0_T@1	Ant 1	17.55	Pass
11N20/0_T@2	Ant 2	17.56	Pass
11N20m/8_B@1+2	Ant 1	17.56	Pass
	Ant 2	17.57	Pass
11N20m/8_M@1+2	Ant 1	17.57	Pass
	Ant 2	17.57	Pass
11N20m/8_T@1+2	Ant 1	17.57	Pass
	Ant 2	17.57	Pass
11N40/0_B@1	Ant 1	36.42	Pass
11N40/0_B@2	Ant 2	36.46	Pass
11N40/0_M@1	Ant 1	36.42	Pass
11N40/0_M@2	Ant 2	36.45	Pass
11N40/0_T@1	Ant 1	36.38	Pass
11N40/0_T@2	Ant 2	36.45	Pass
11N40m/8_B@1+2	Ant 1	36.41	Pass
	Ant 2	36.43	Pass
11N40m/8_M@1+2	Ant 1	36.43	Pass
	Ant 2	36.47	Pass
11N40m/8_T@1+2	Ant 1	36.41	Pass



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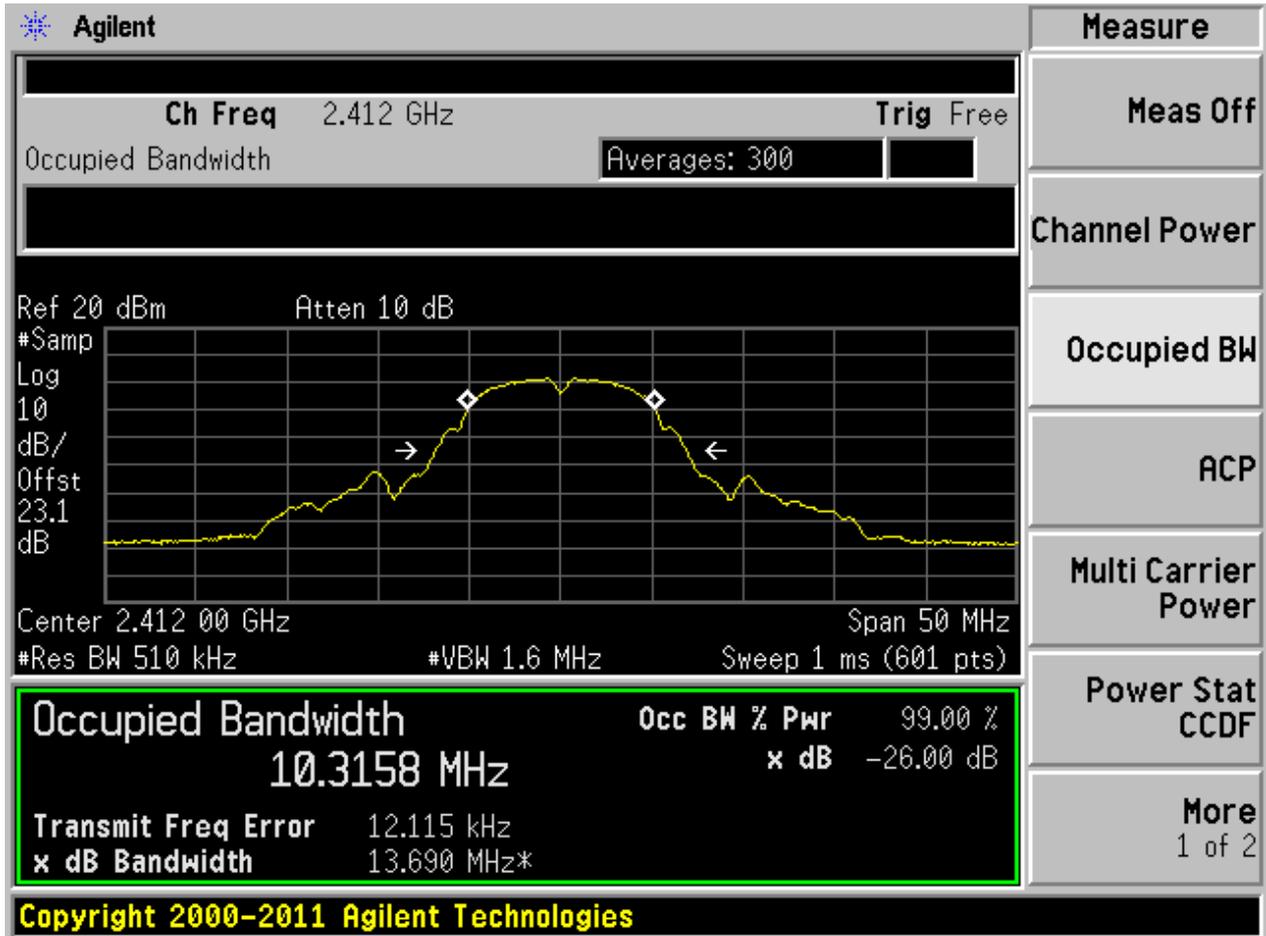
EUT Conf.	Ant.	Occupied Bandwidth [MHz]	Verdict
	Ant 2	36.43	Pass

## 2 Test Plot

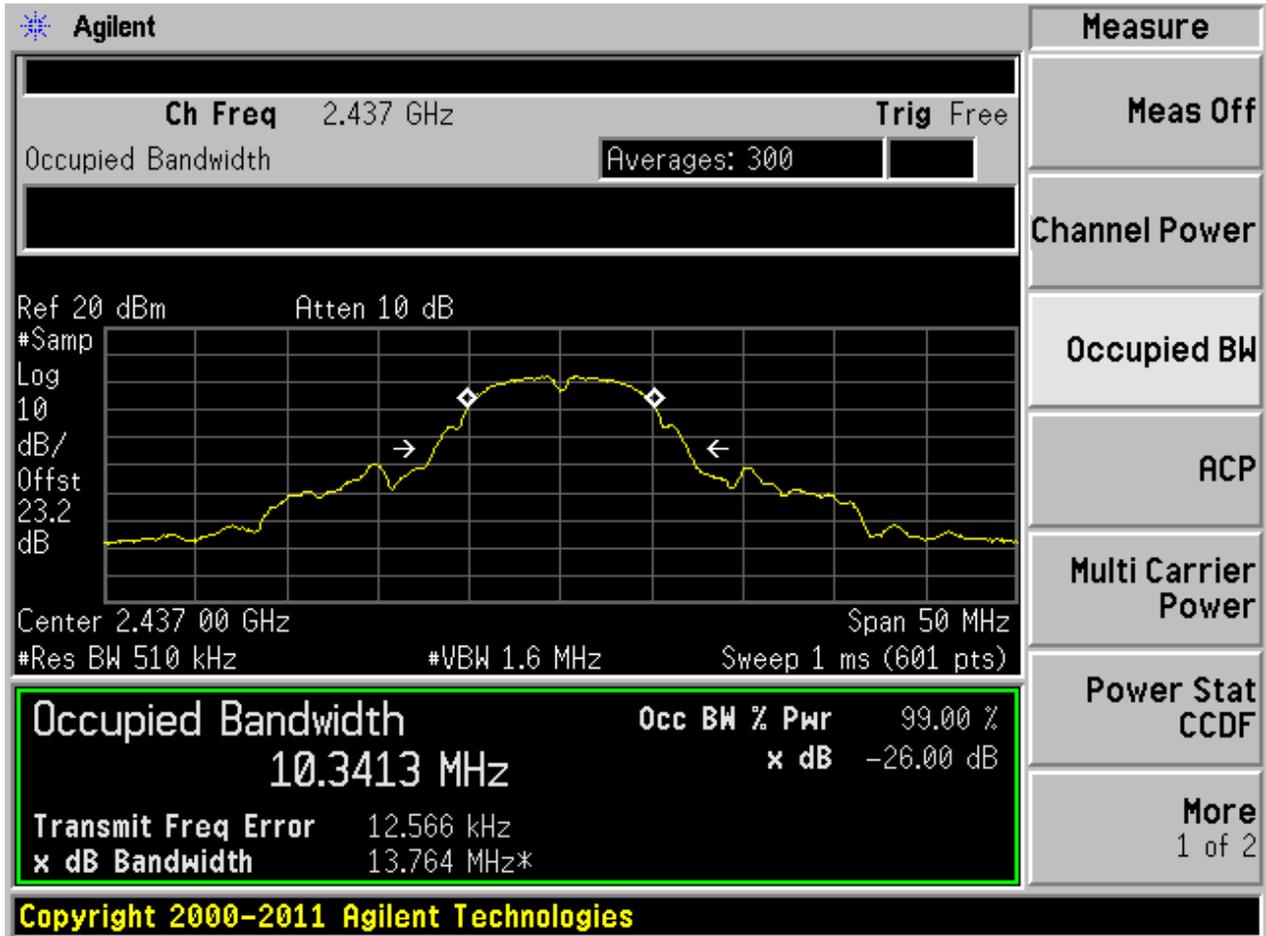
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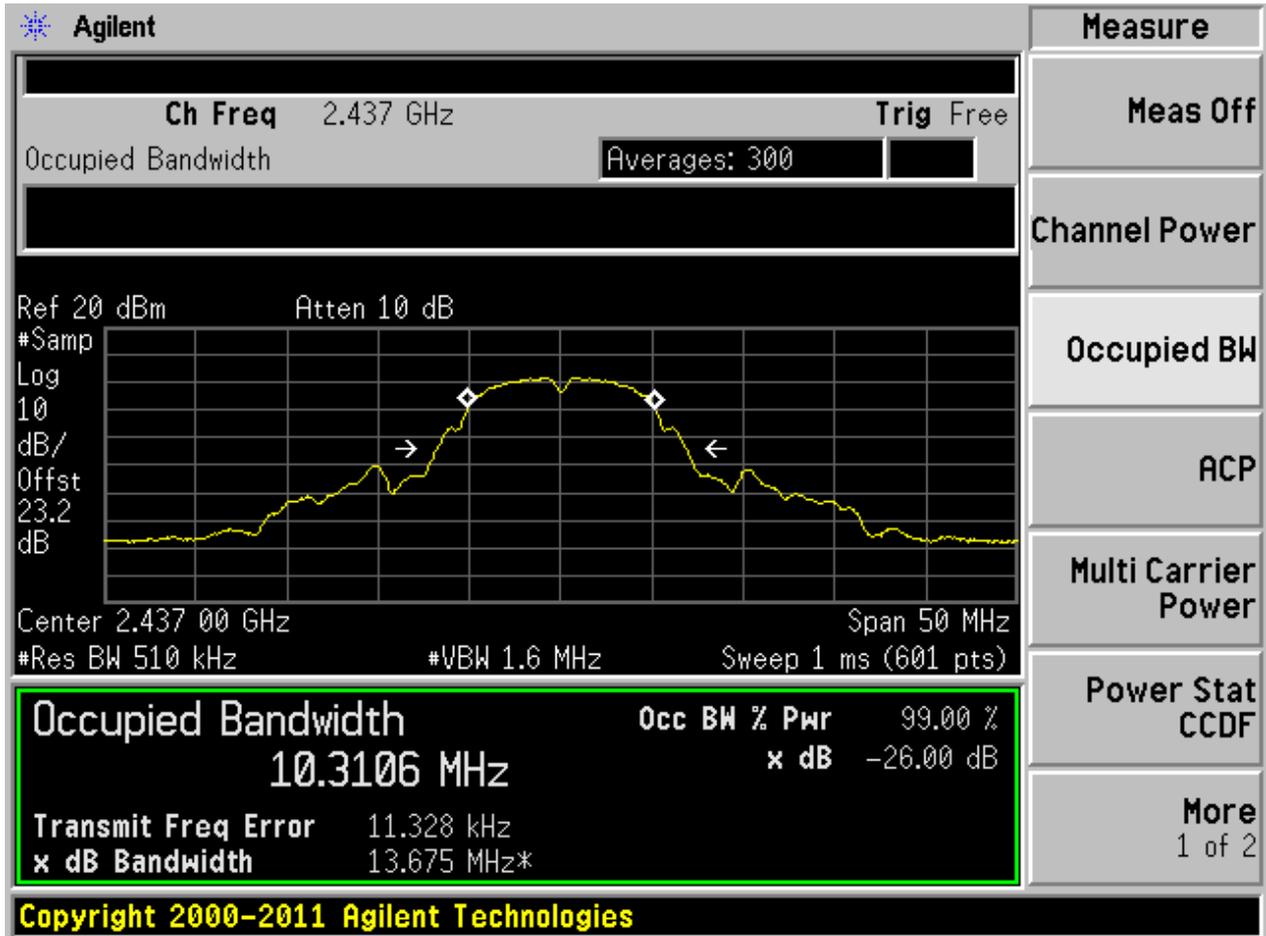
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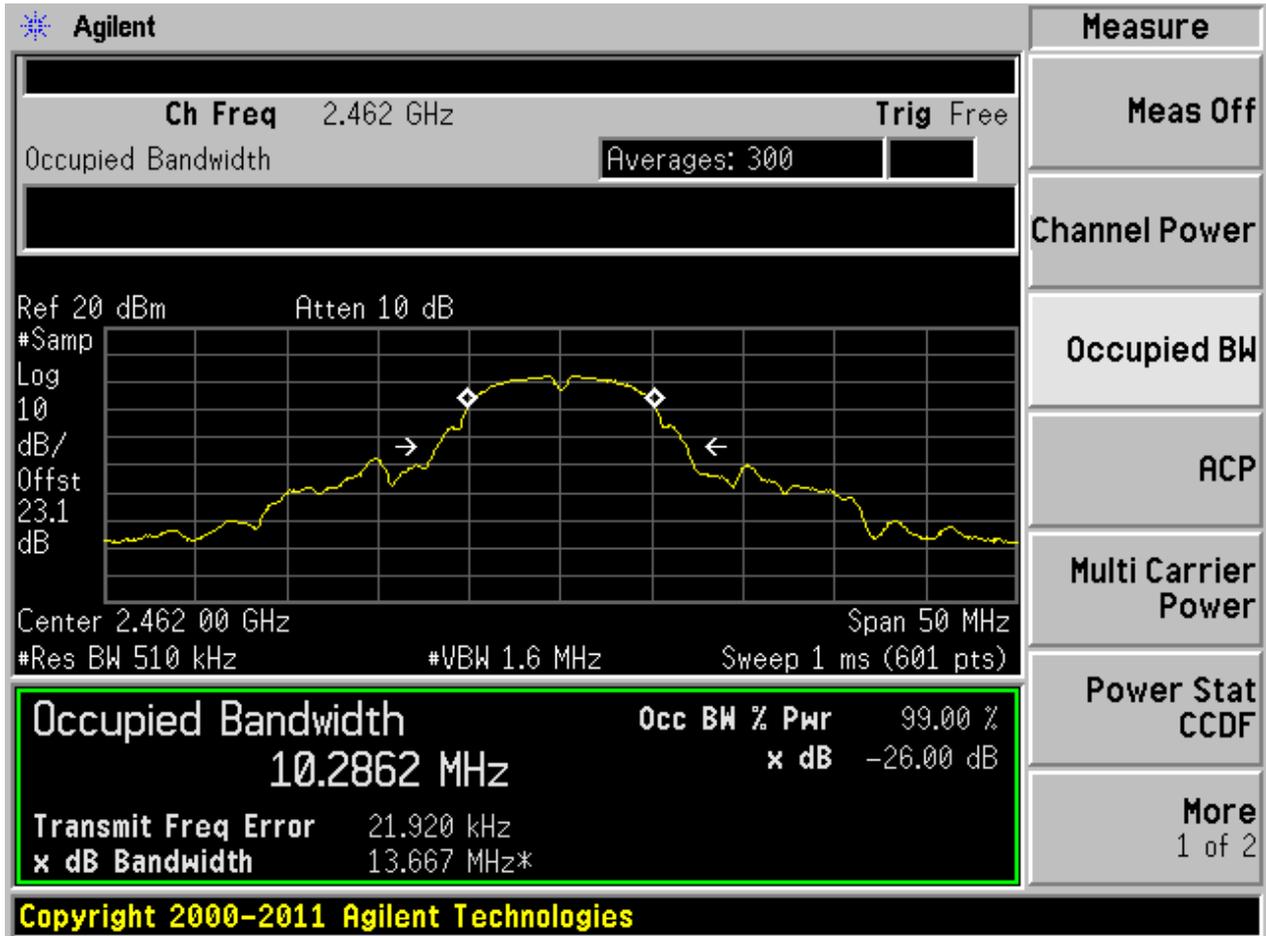
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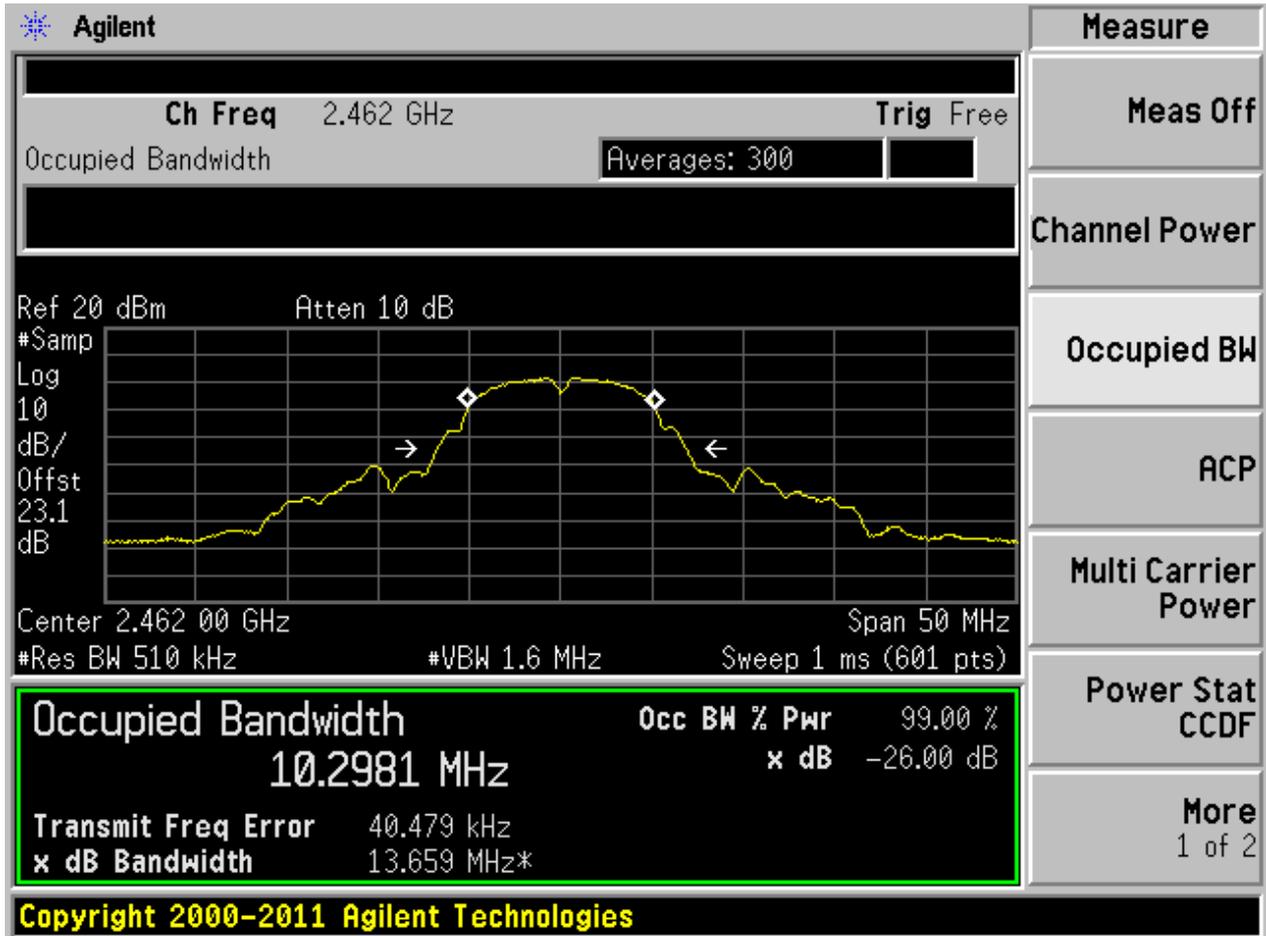
2.4 11B/1\_M@2



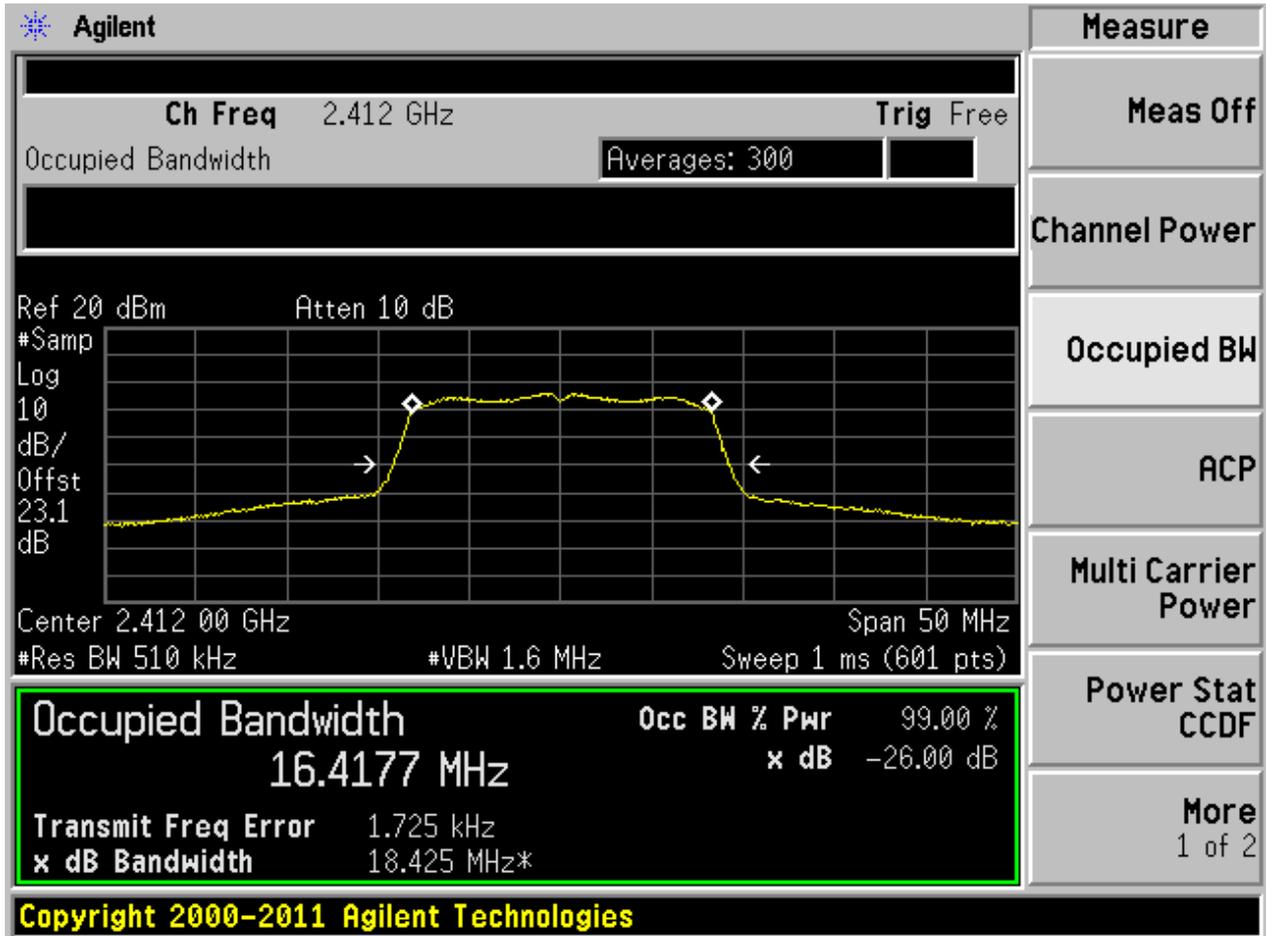
2.5 11B/1\_T@1



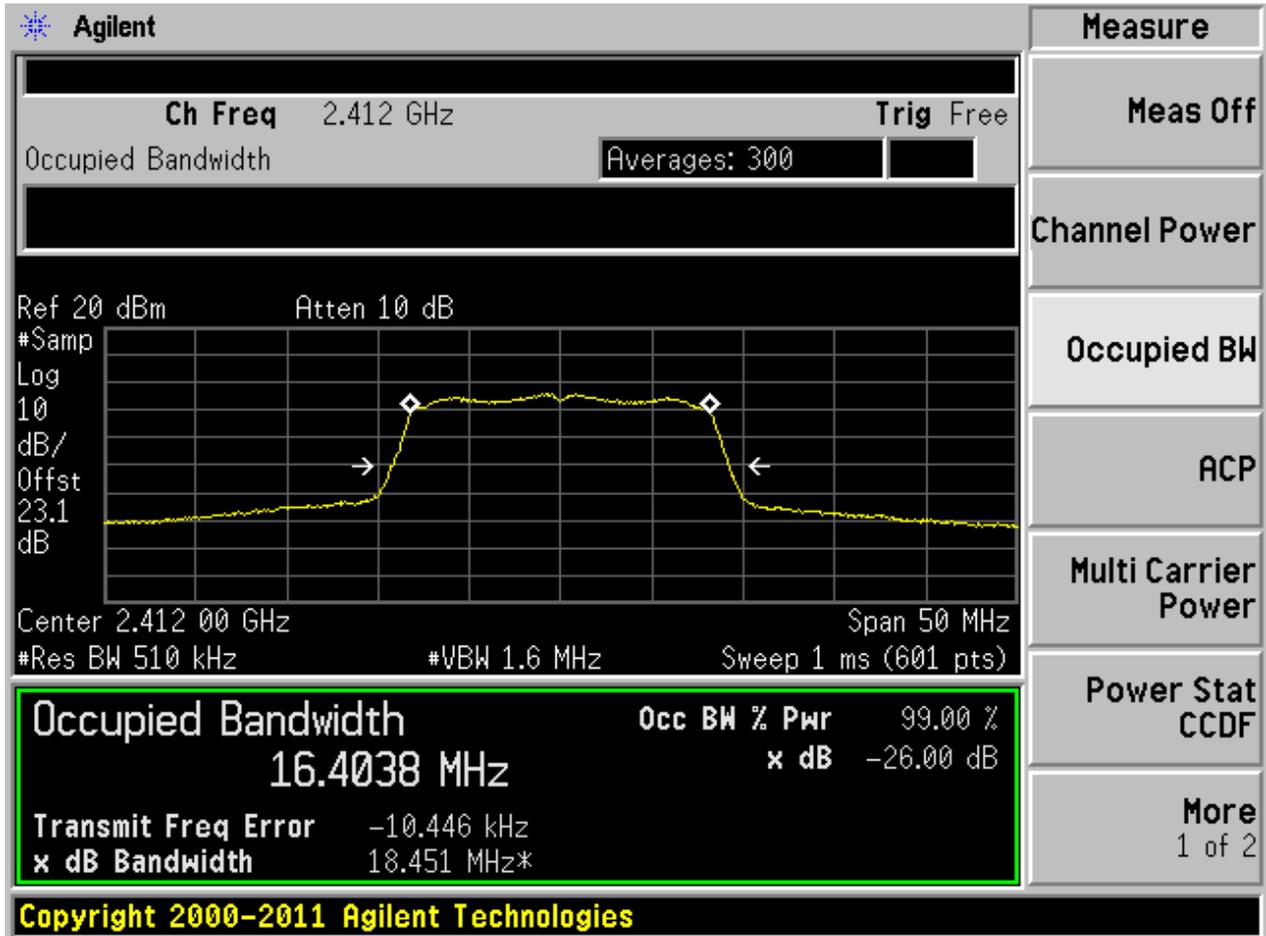
2.6 11B/1\_T@2



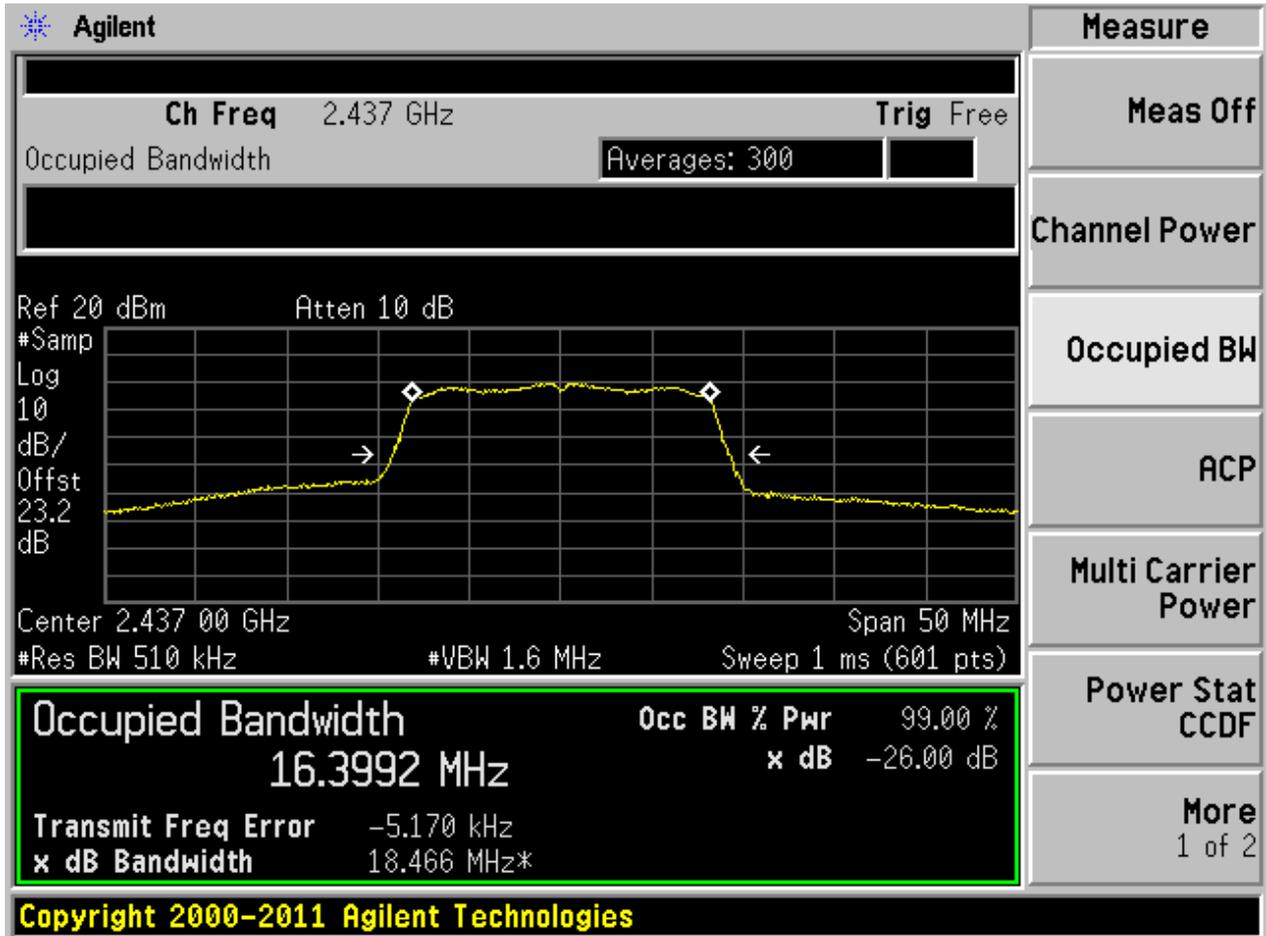
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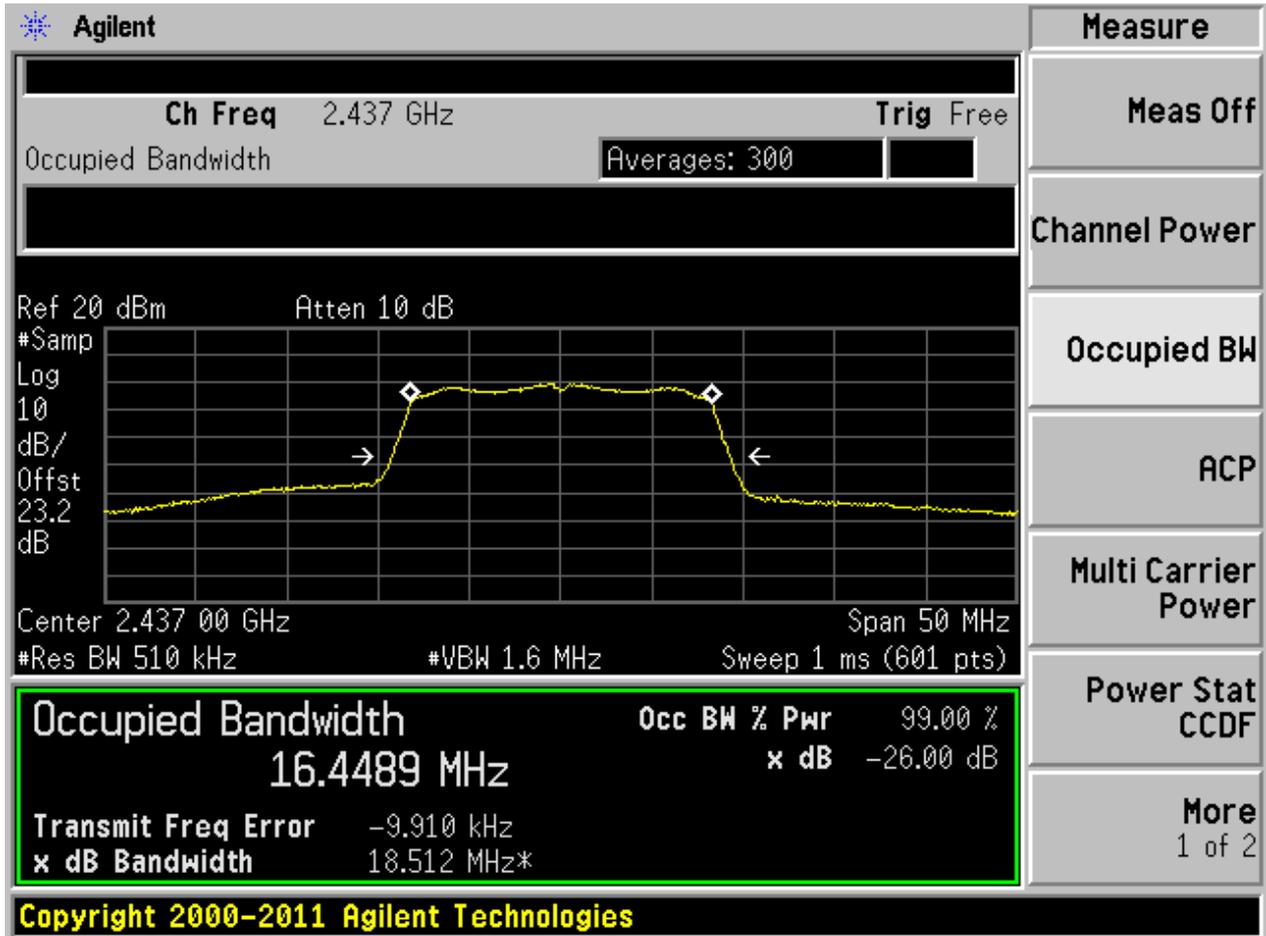
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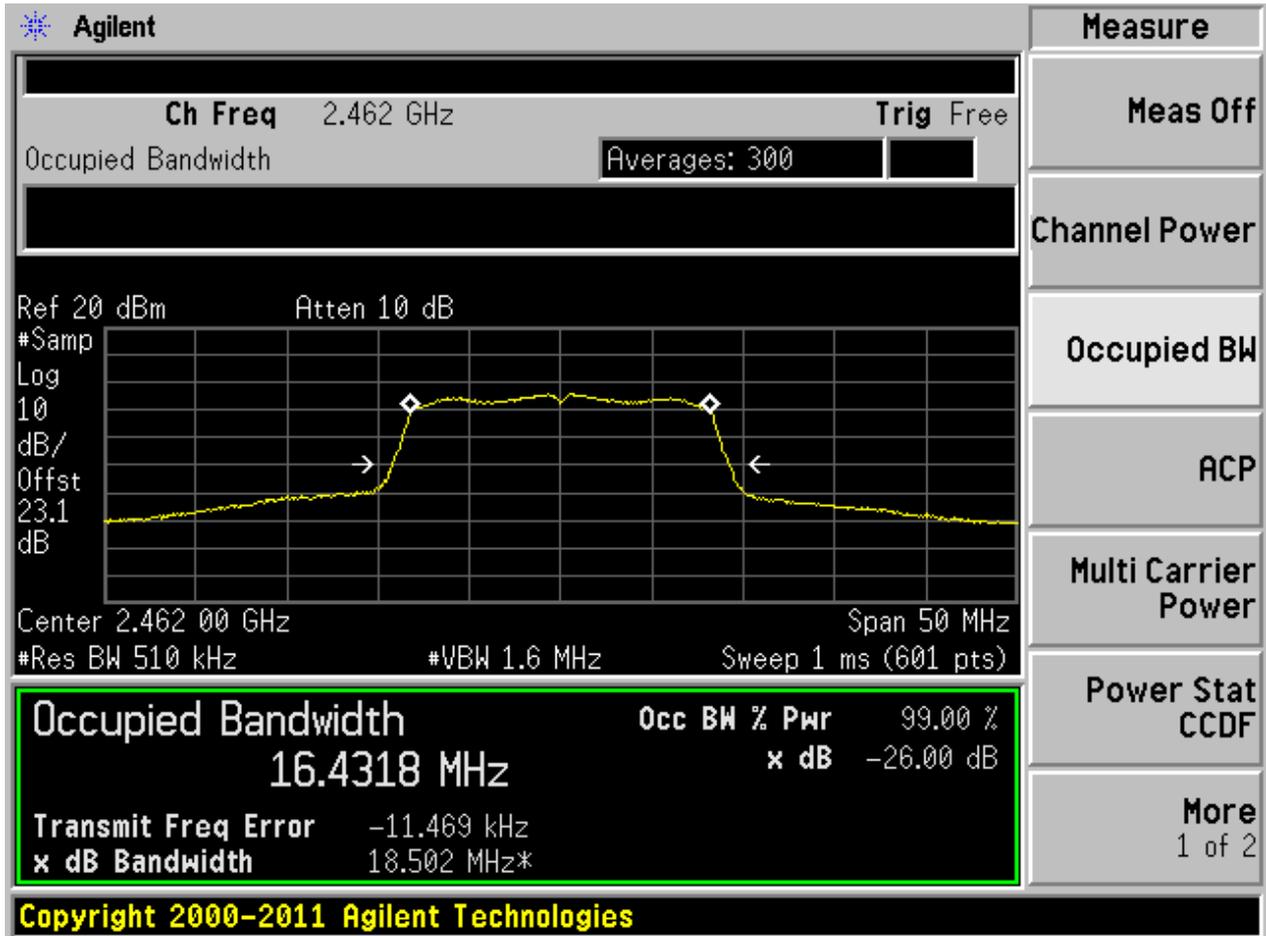
2.9 11G/6\_M@1



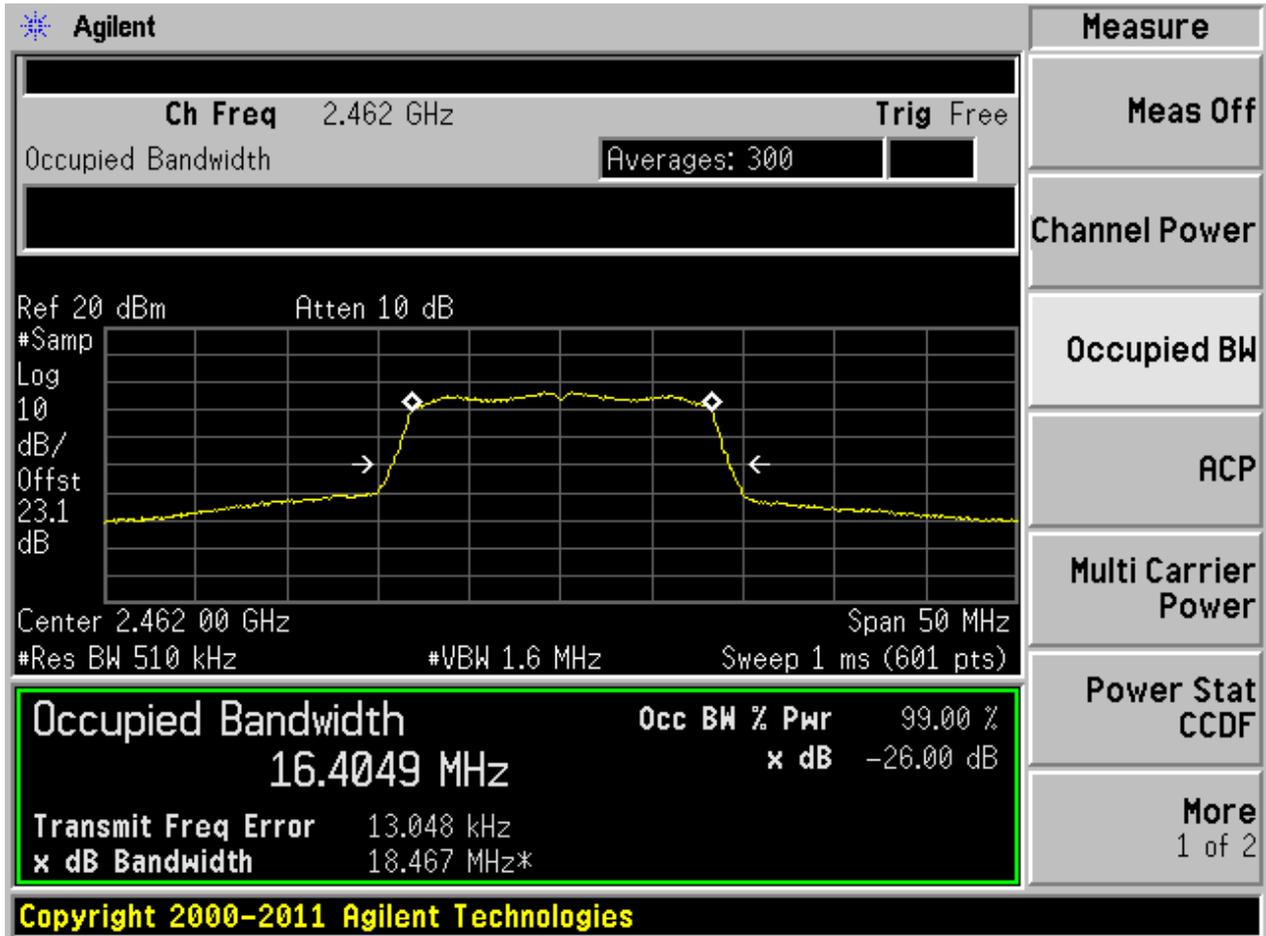
2.1011G/6\_M@2



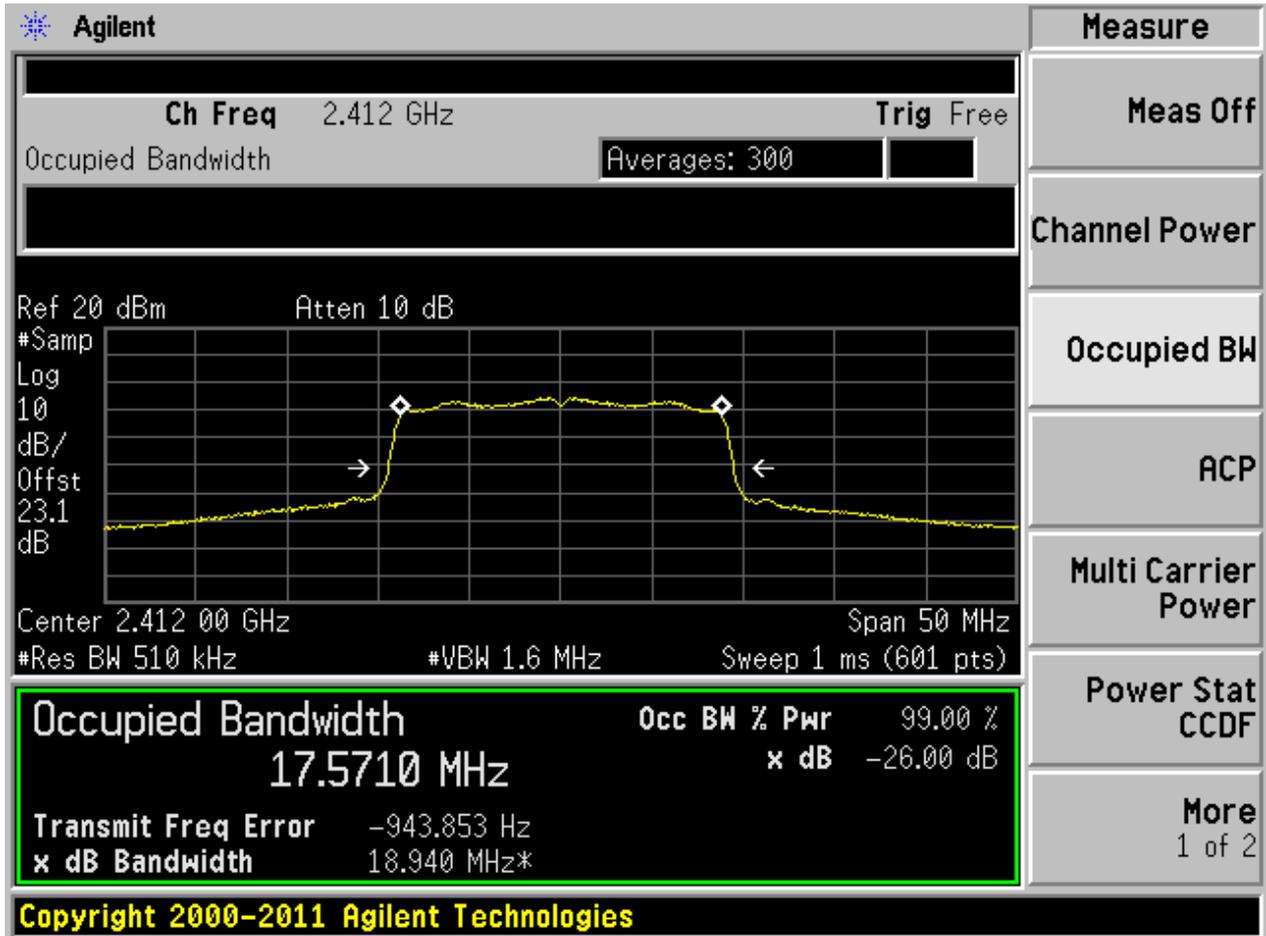
2.1111G/6\_T@1



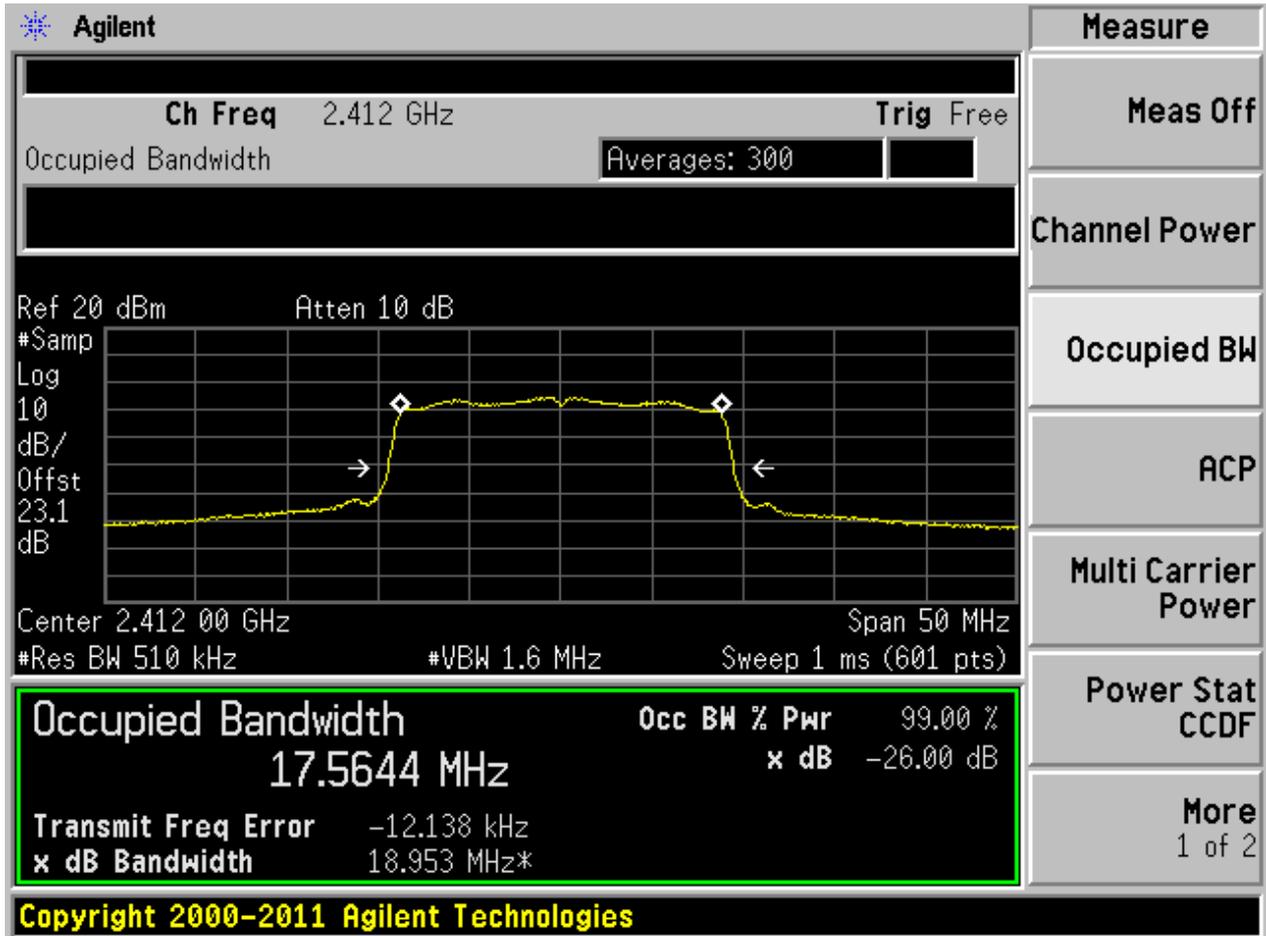
2.1211G/6\_T@2



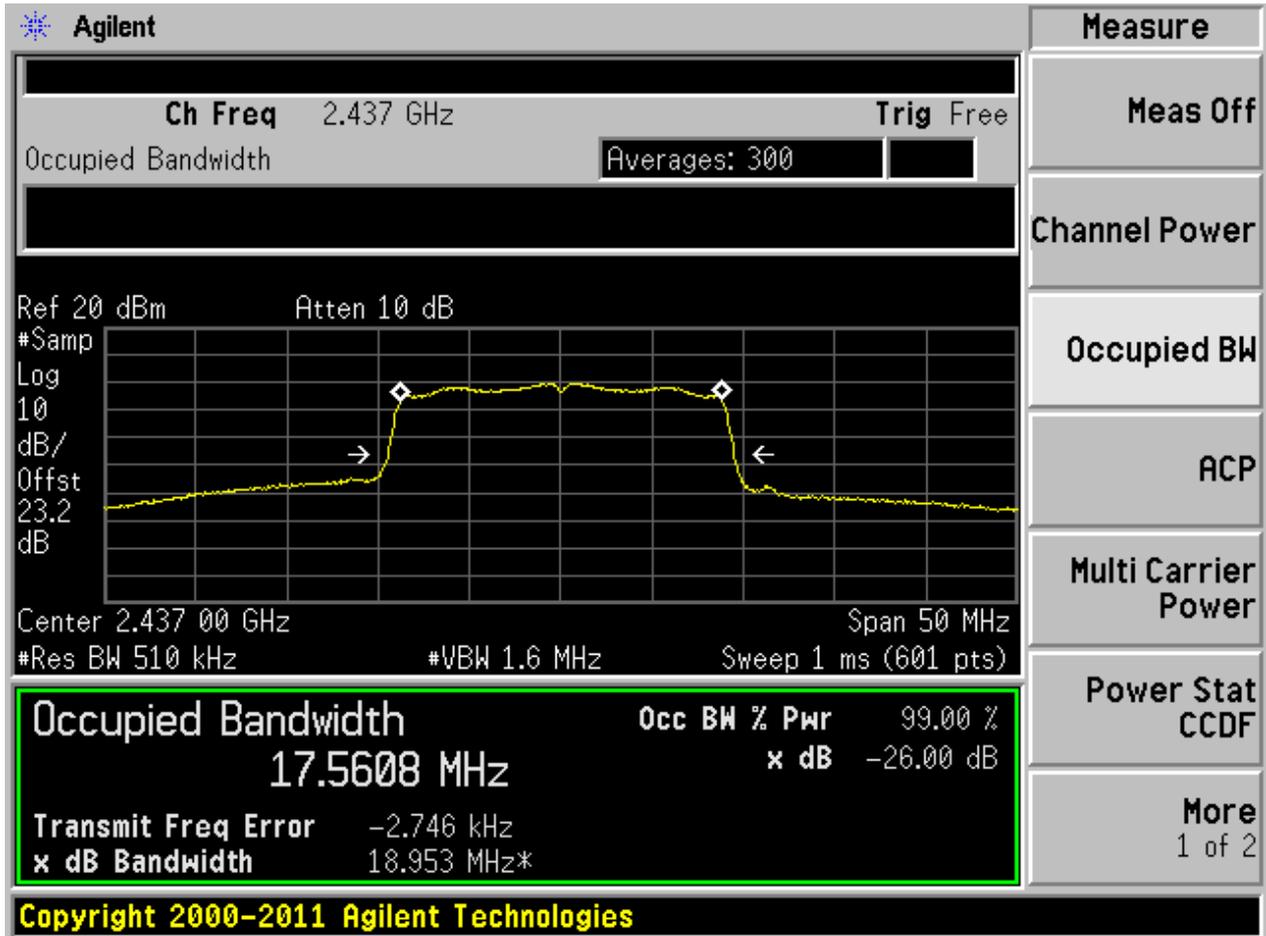
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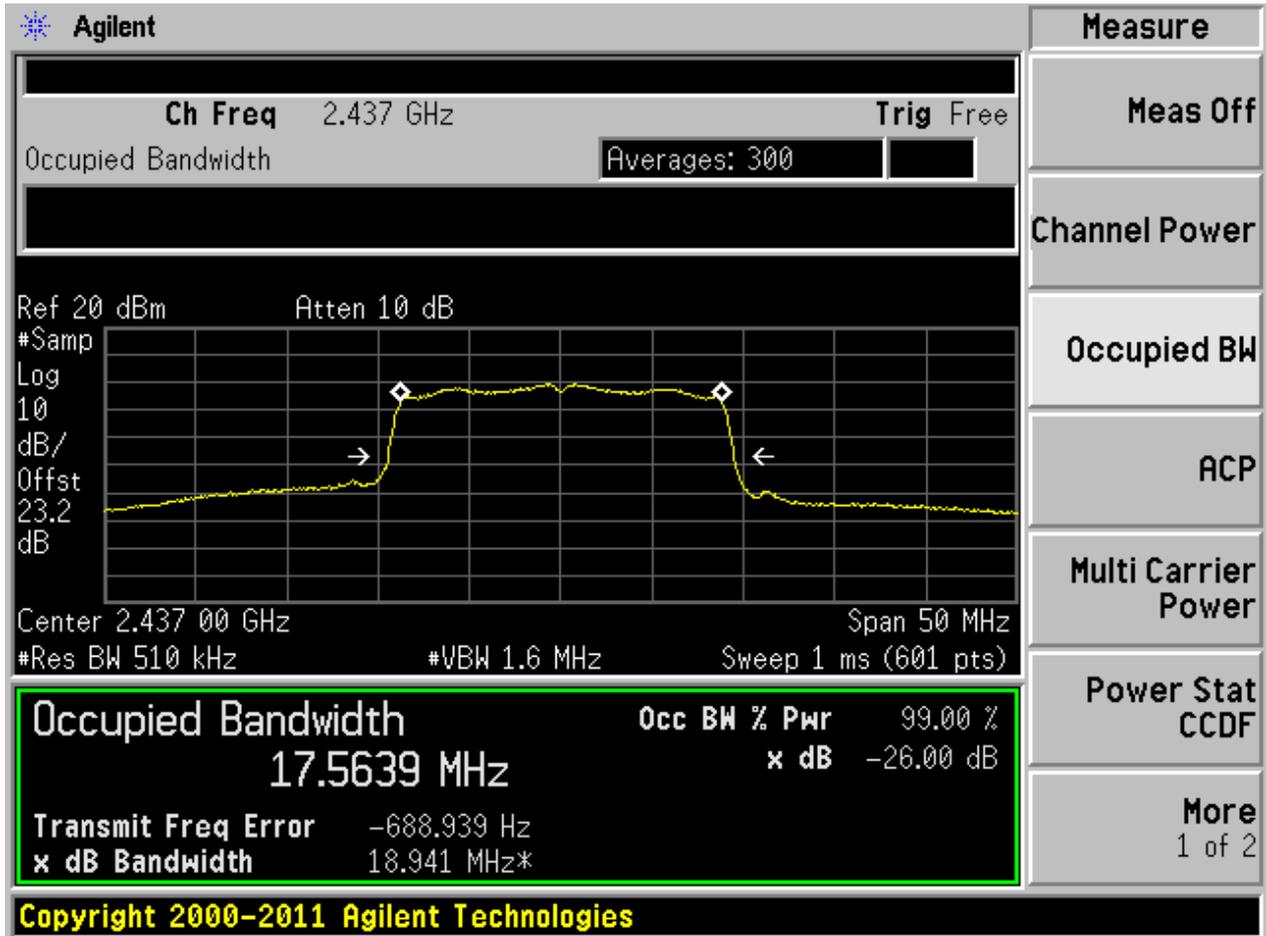
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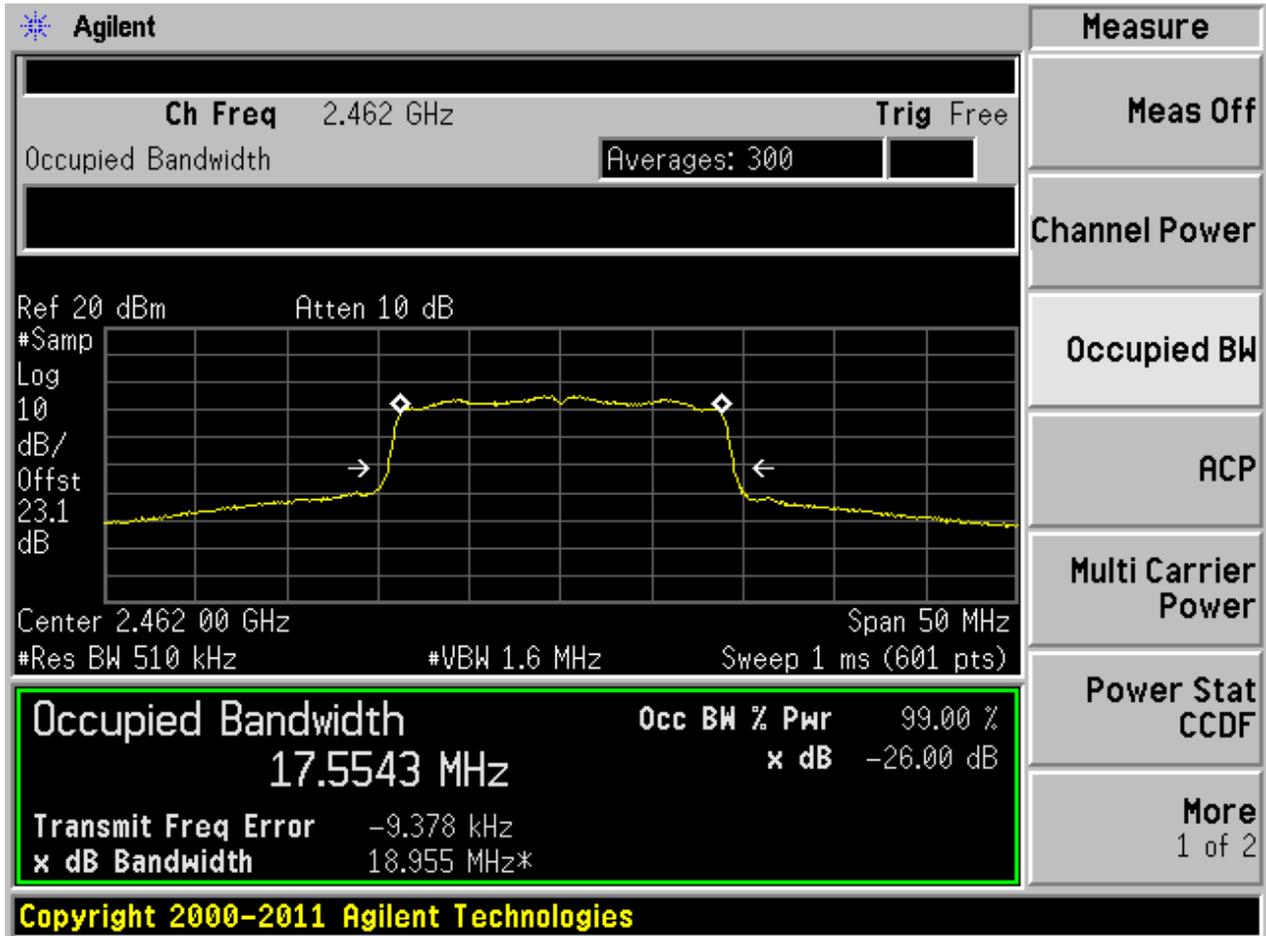
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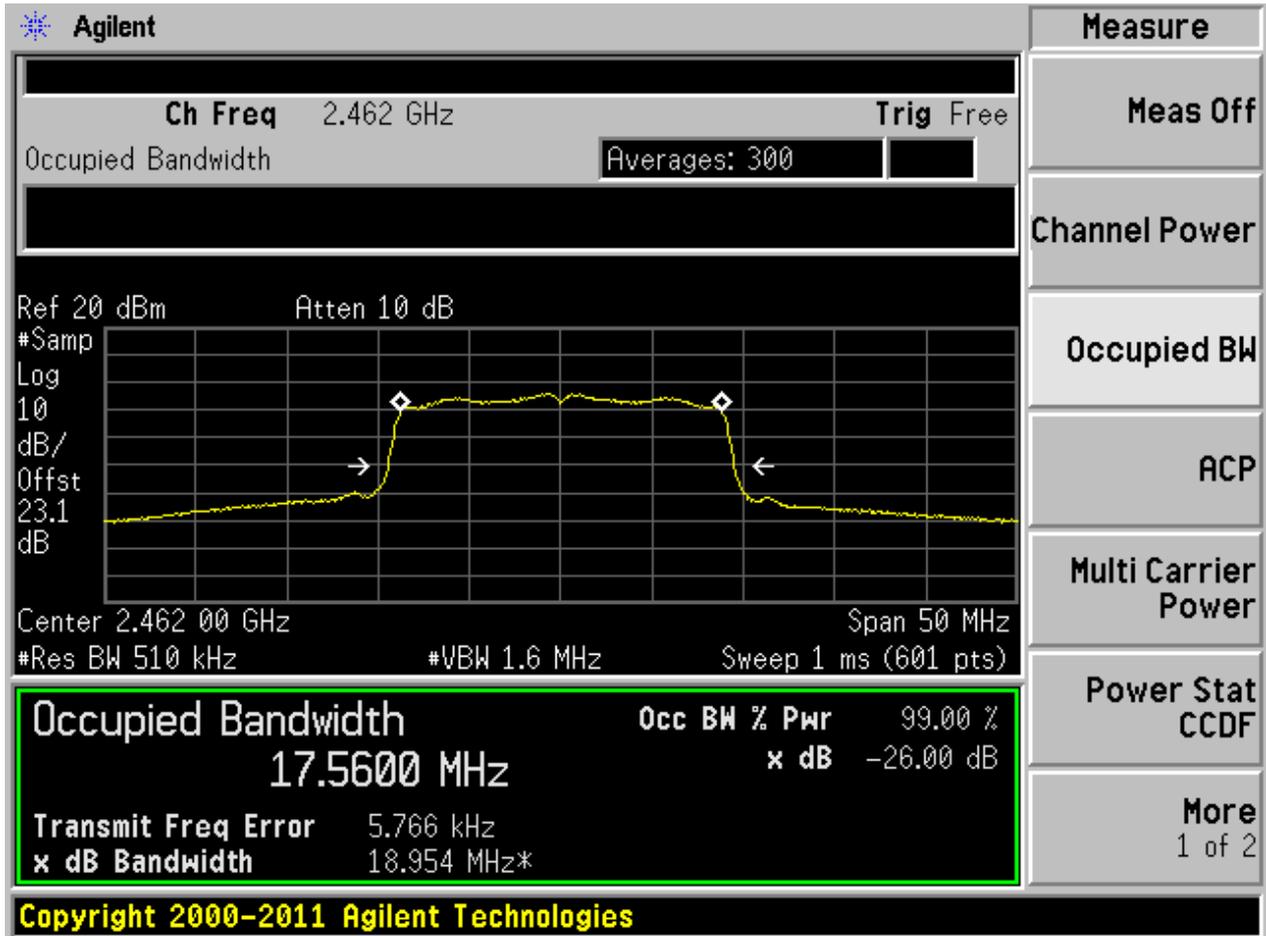
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2.1711N20/0\_T@1

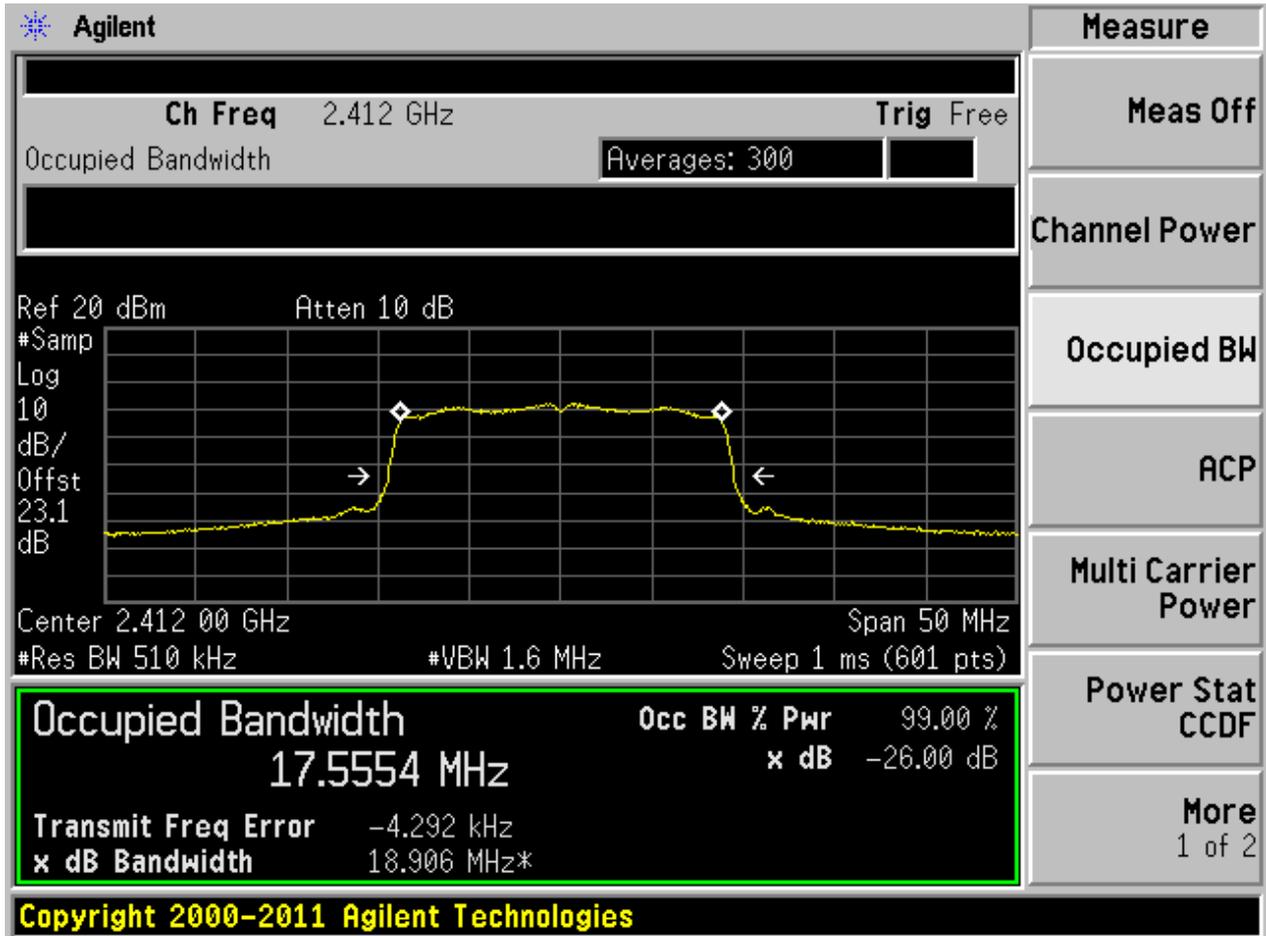


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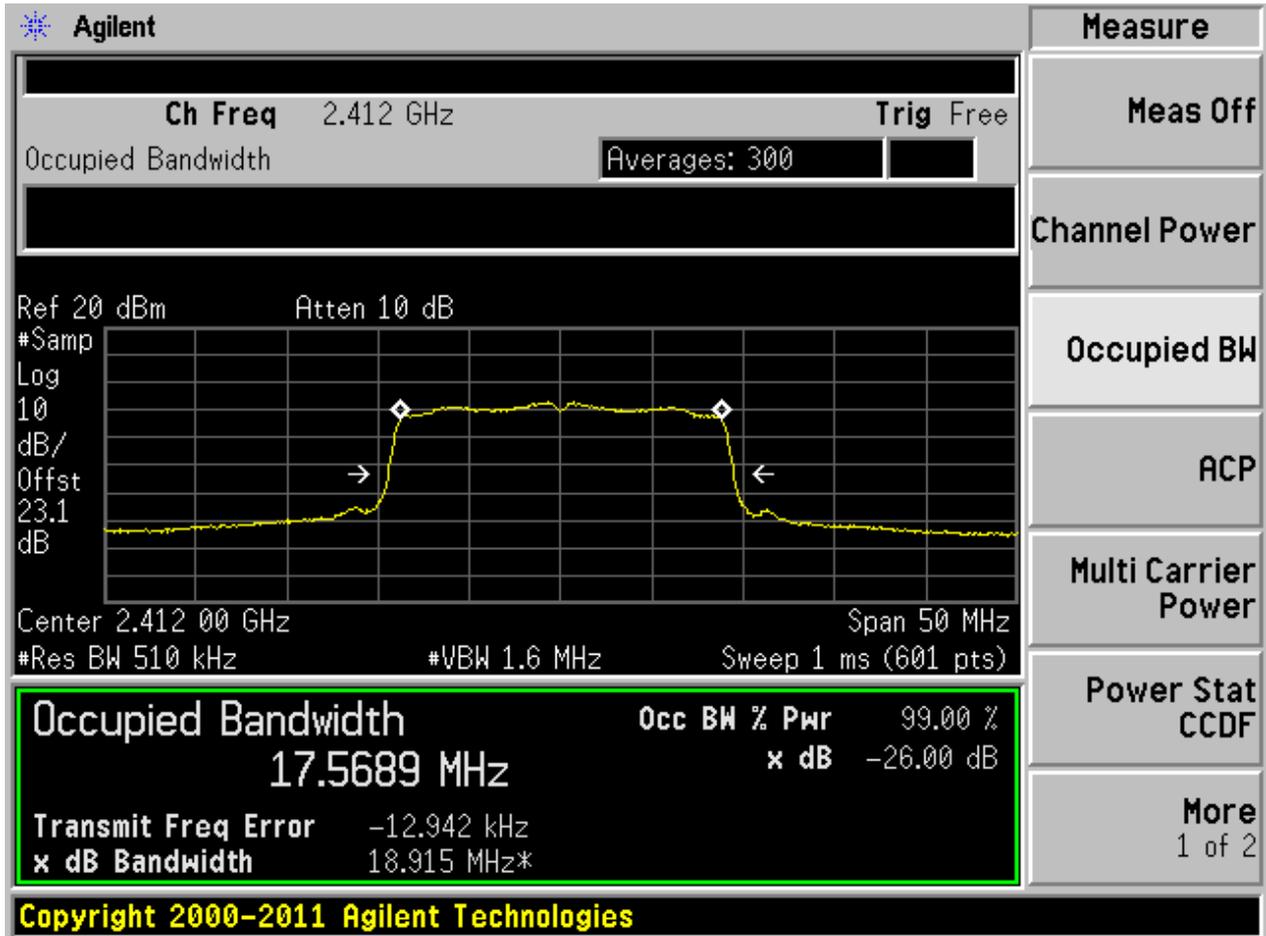


2.1911N20m/8\_B@1+2

2.19.1 Ant 1

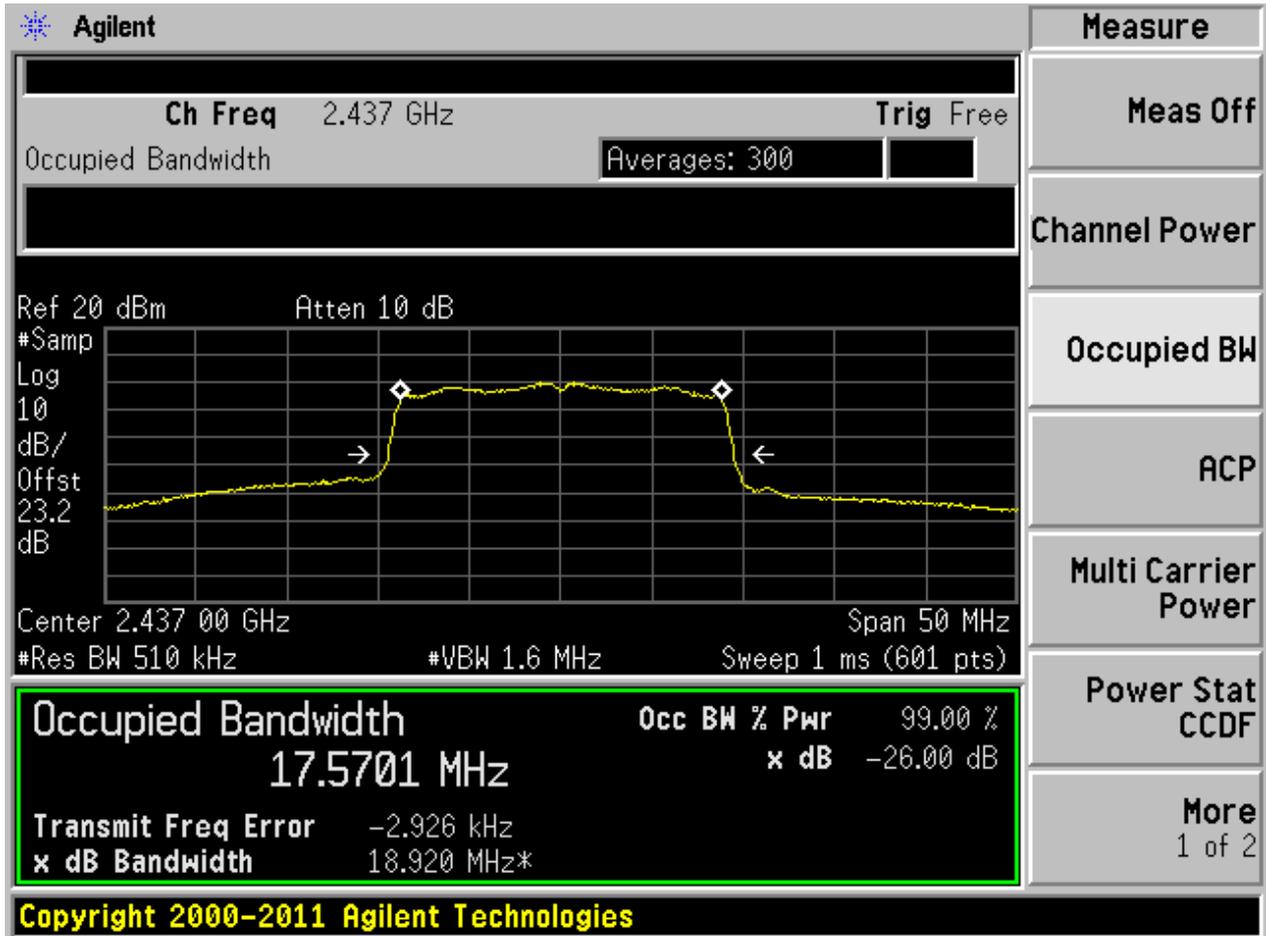


2.19.2 Ant 2

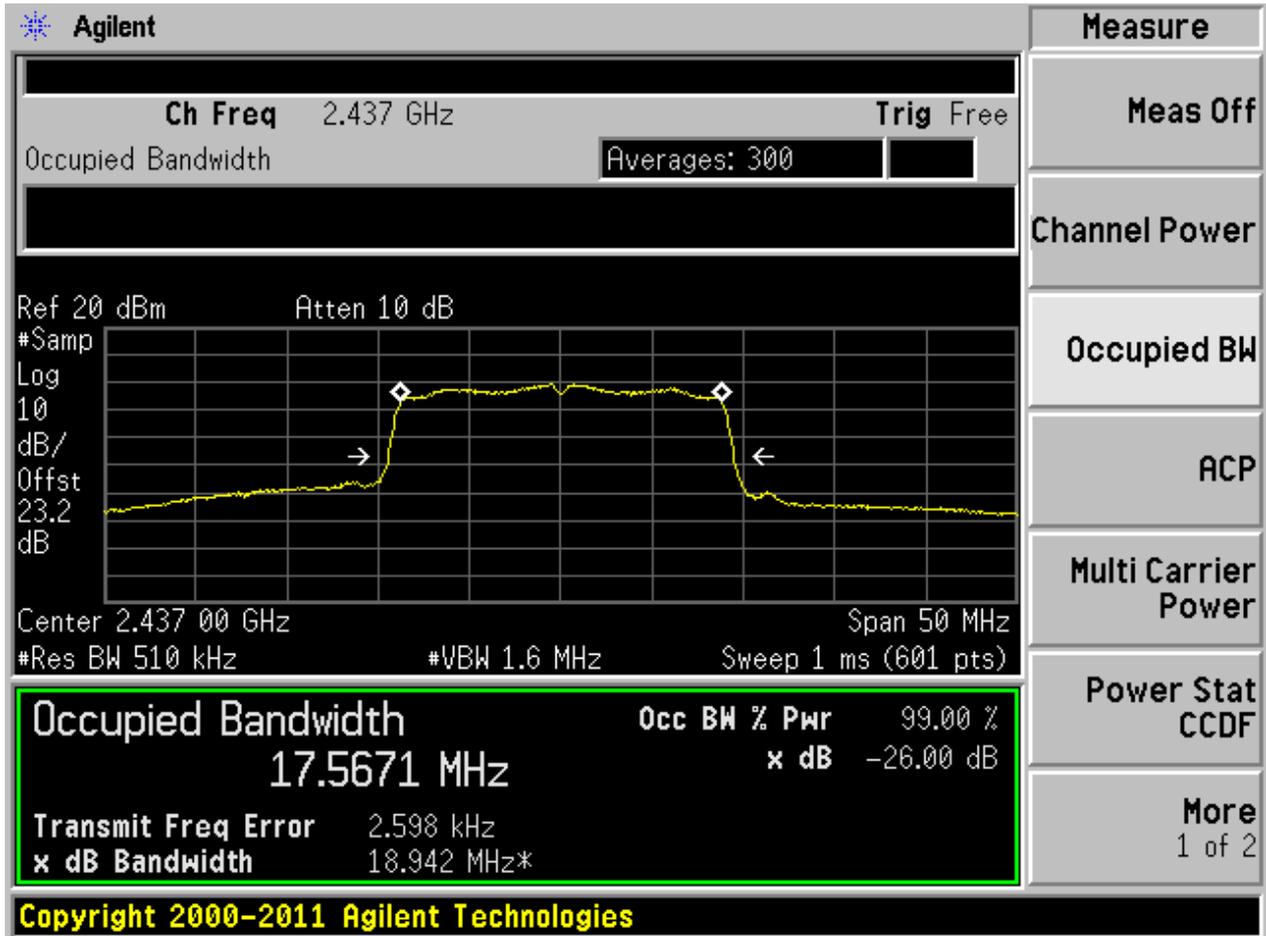


2.2011N20m/8\_M@1+2

2.20.1 Ant 1

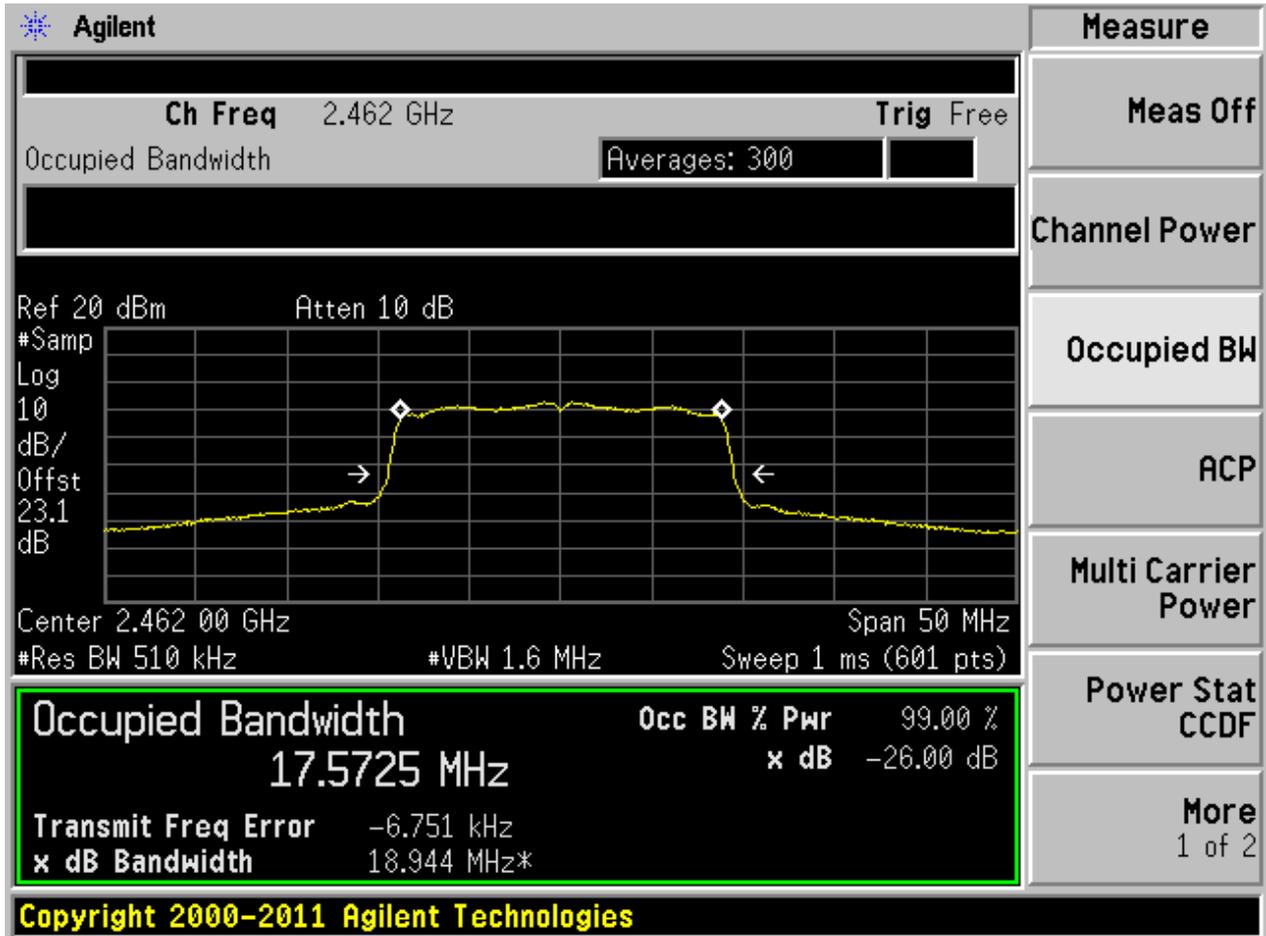


2.20.2 Ant 2

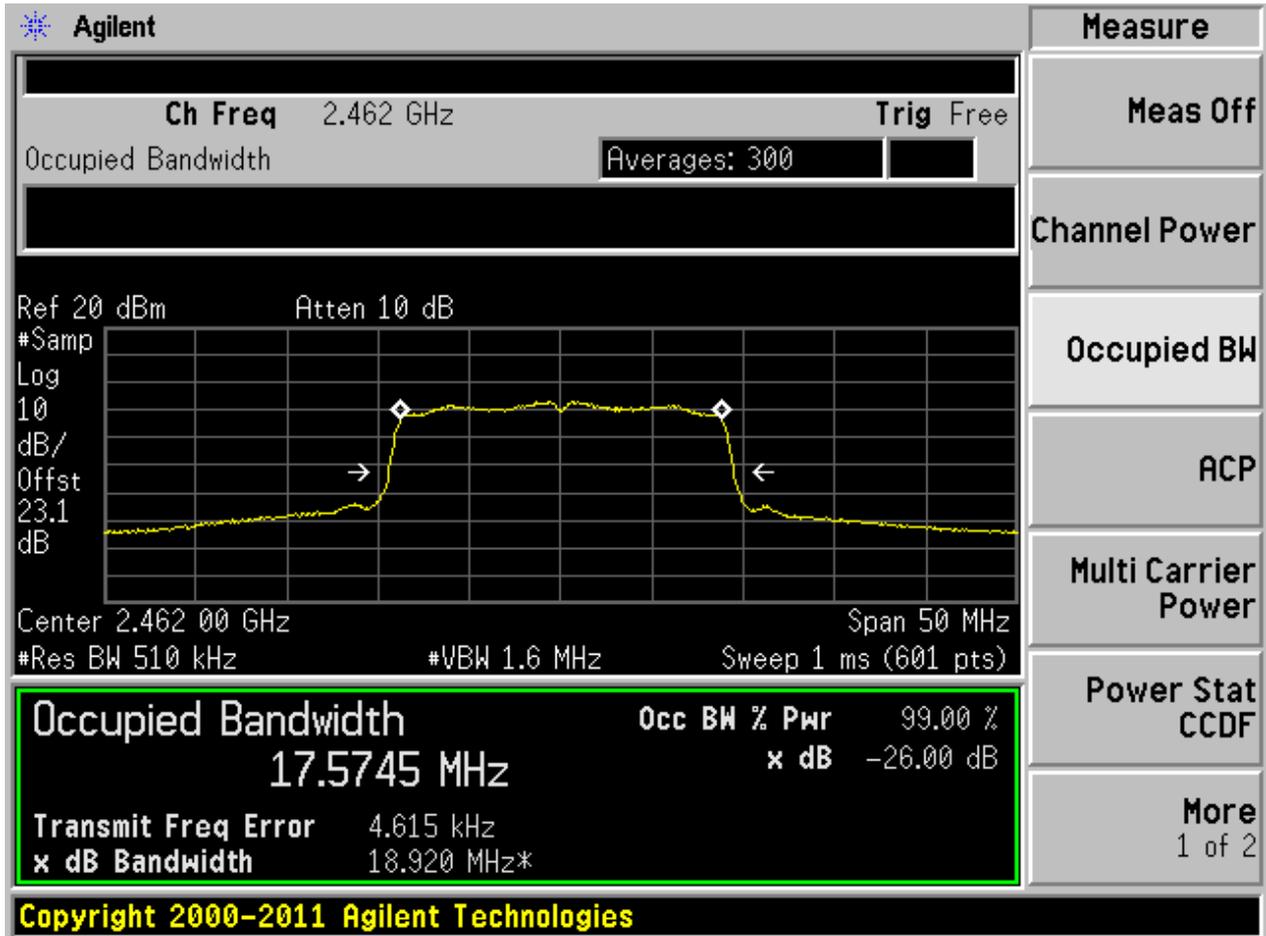


2.2111N20m/8\_T@1+2

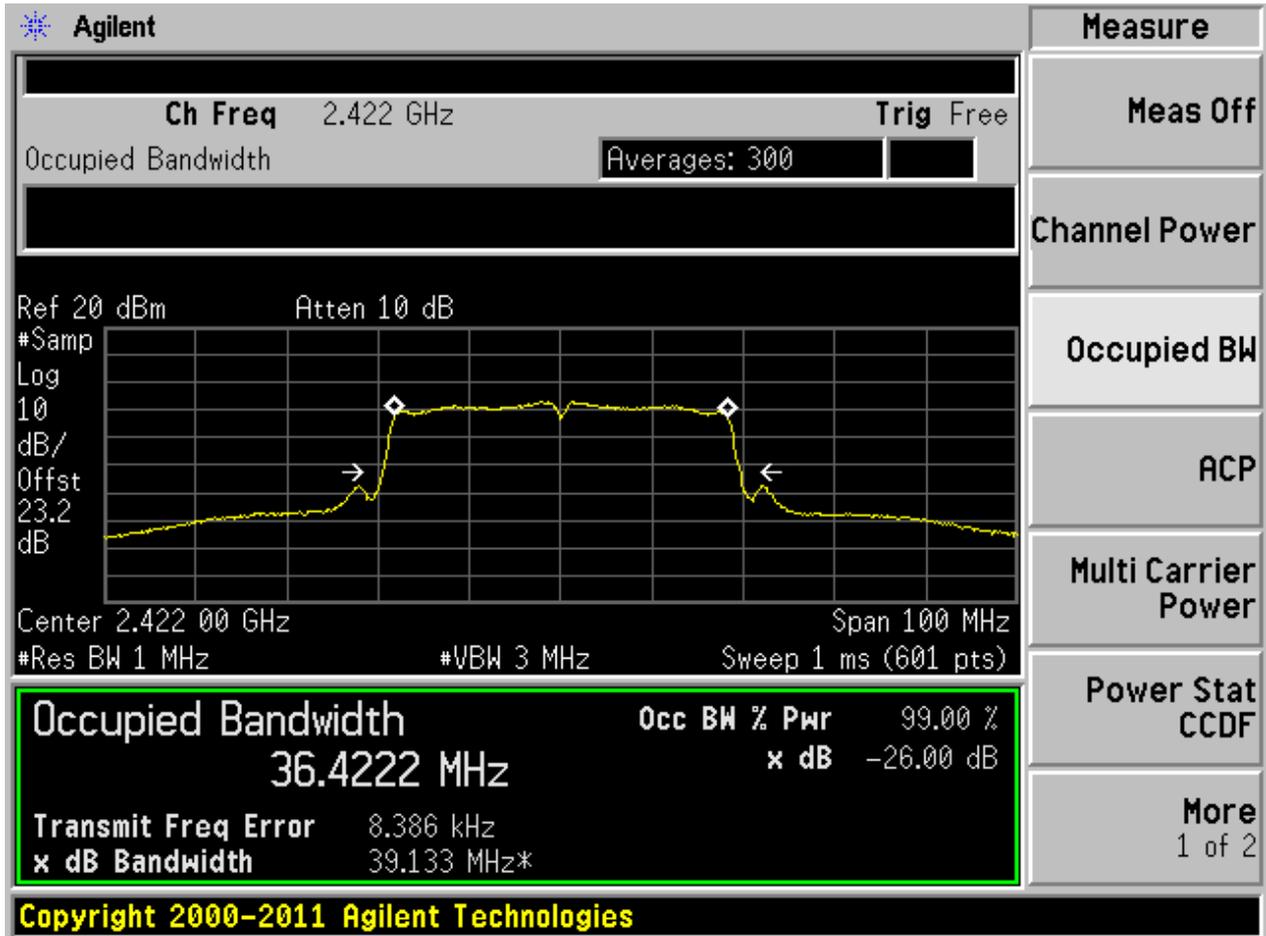
2.21.1 Ant 1



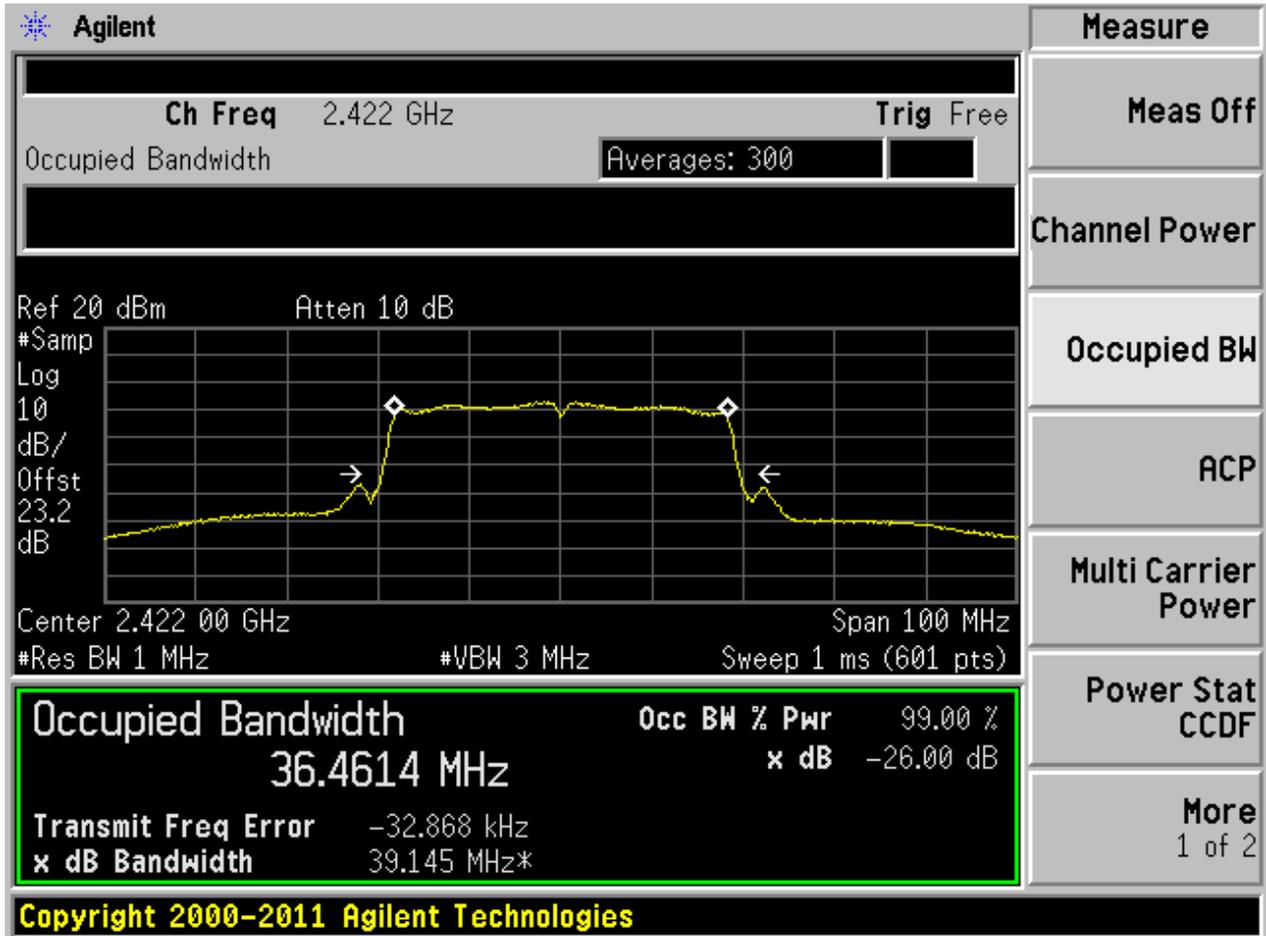
2.21.2 Ant 2



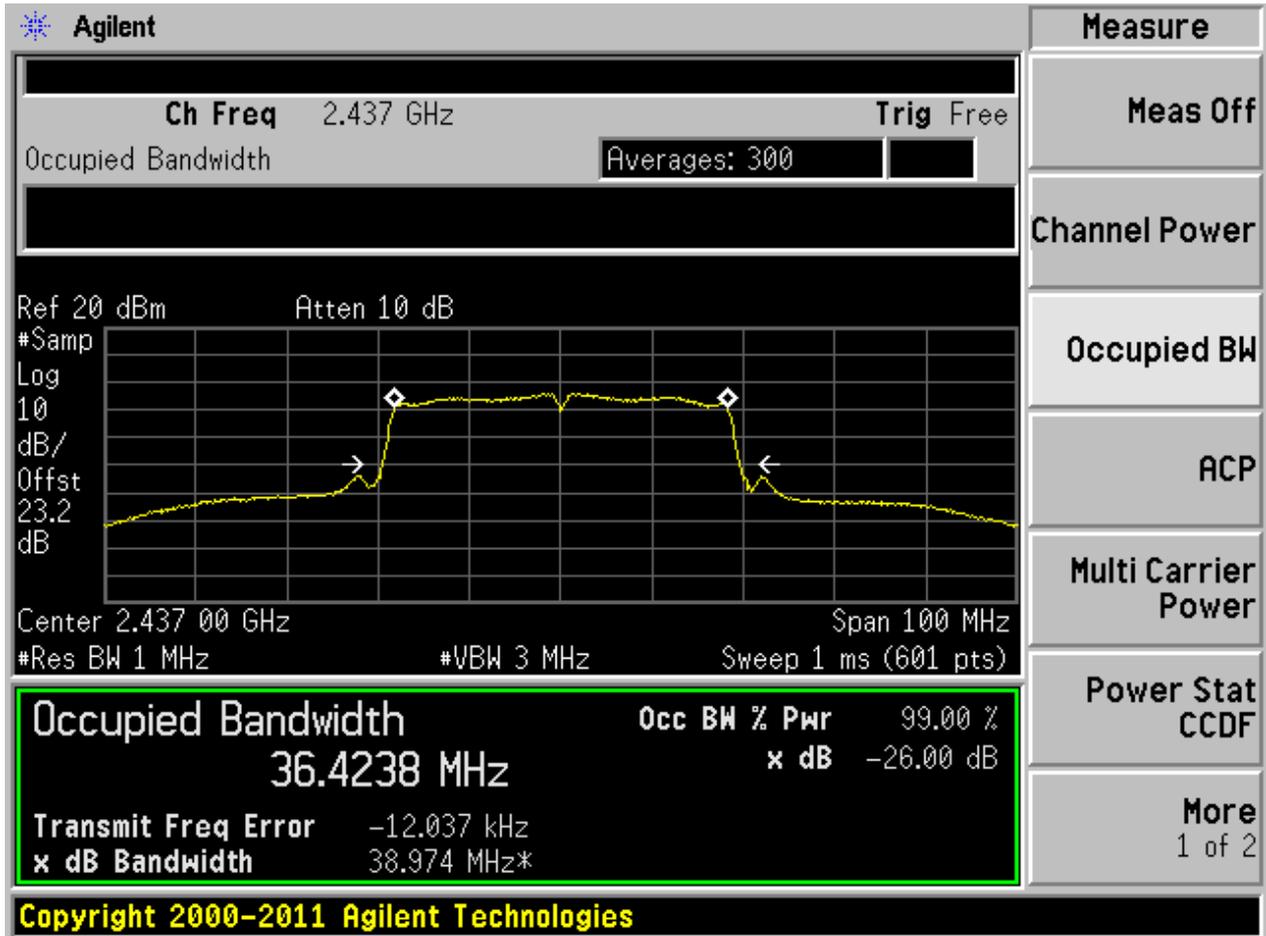
2.2211N40/0\_B@1



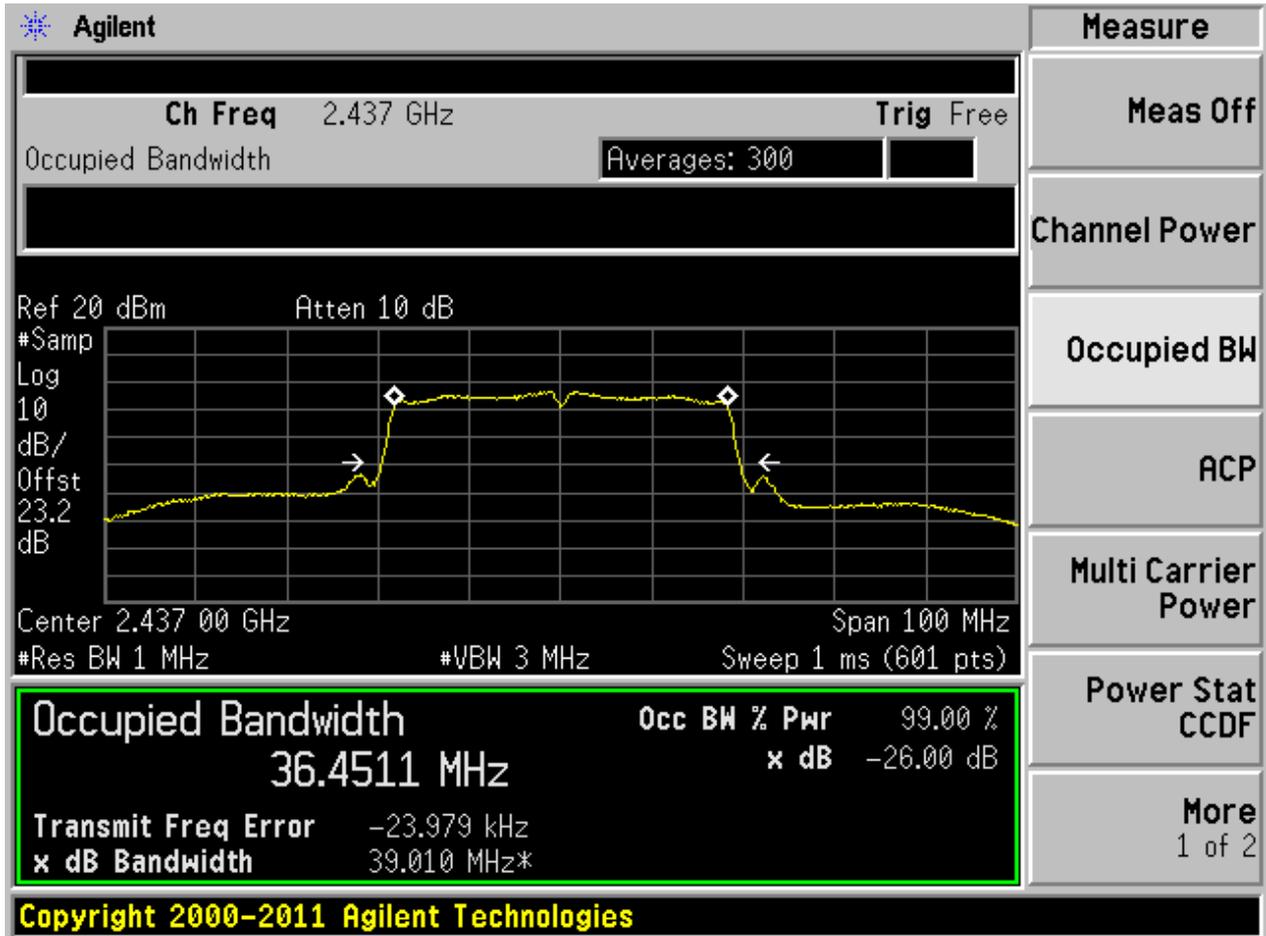
2.2311N40/0\_B@2



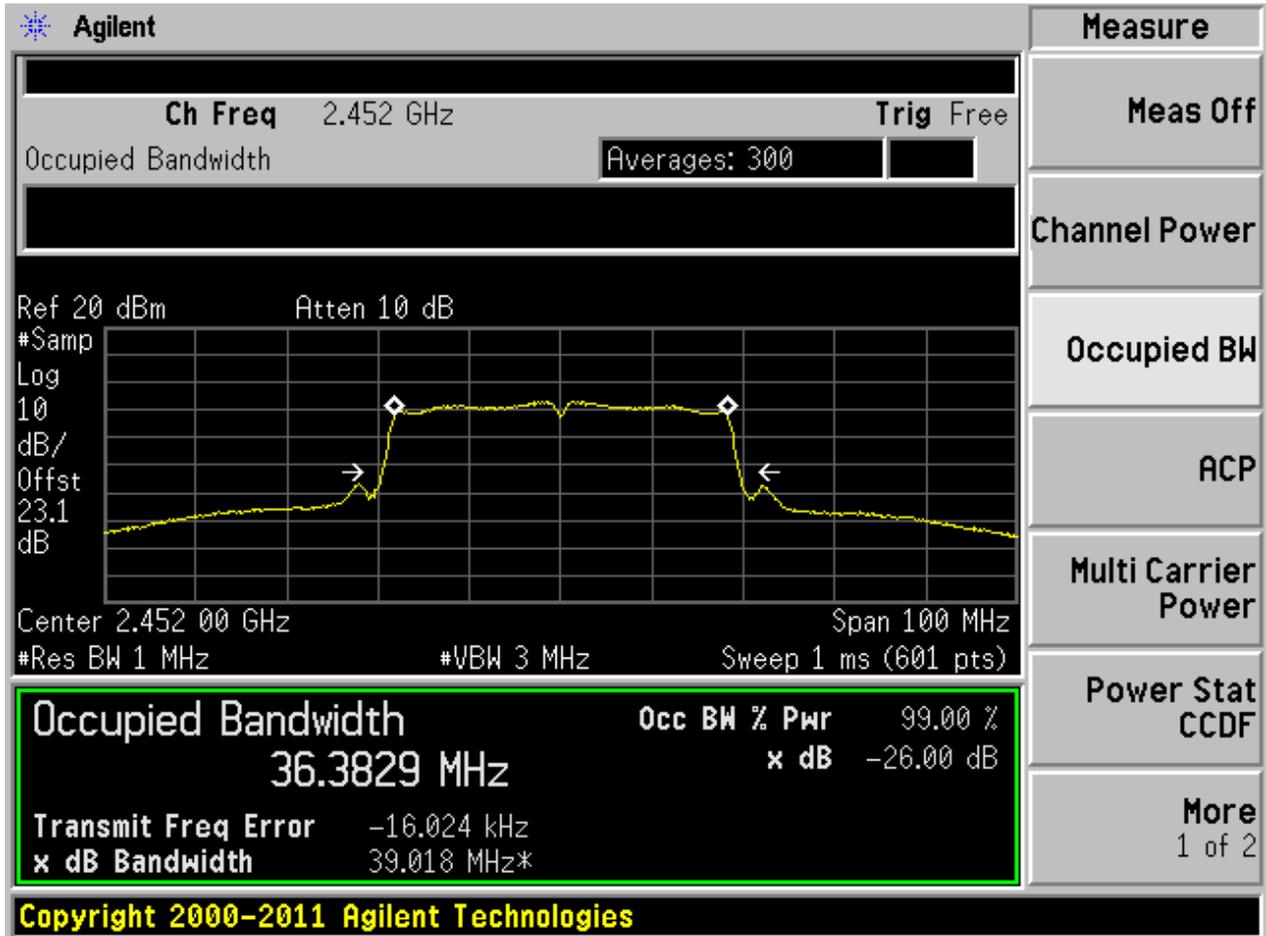
2.2411N40/0\_M@1



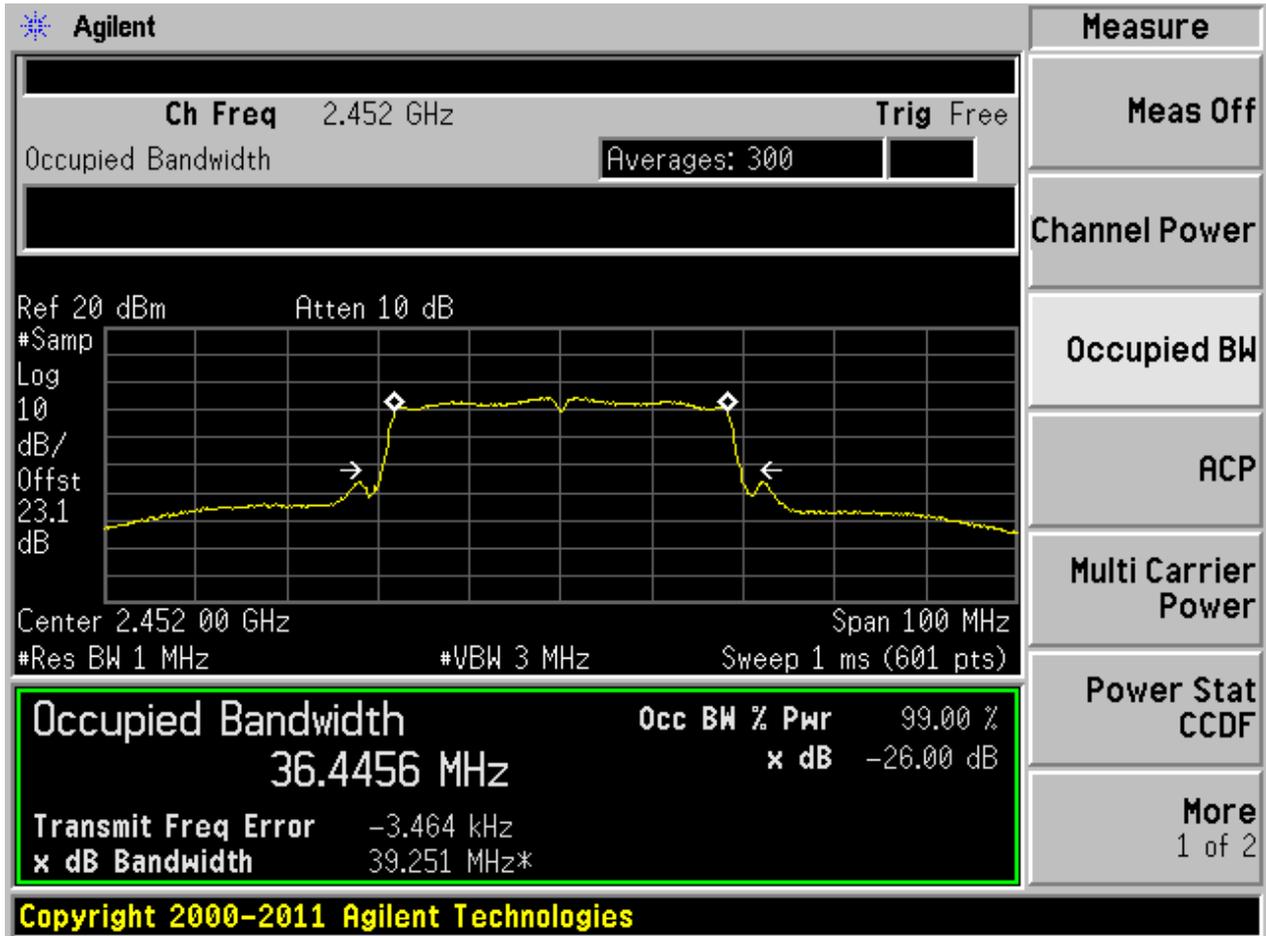
2.2511N40/0\_M@2



2.2611N40/0\_T@1

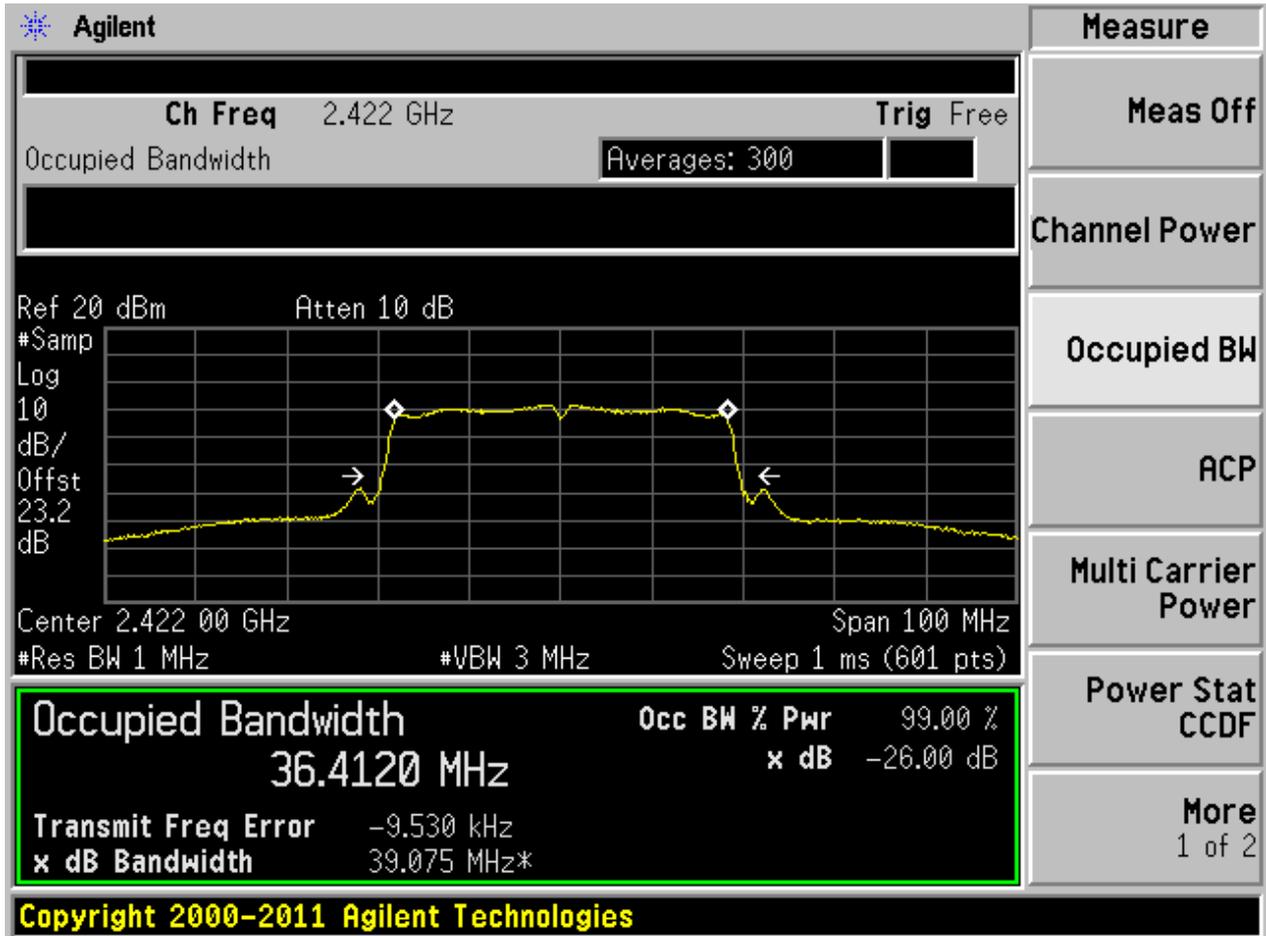


2.2711N40/0\_T@2

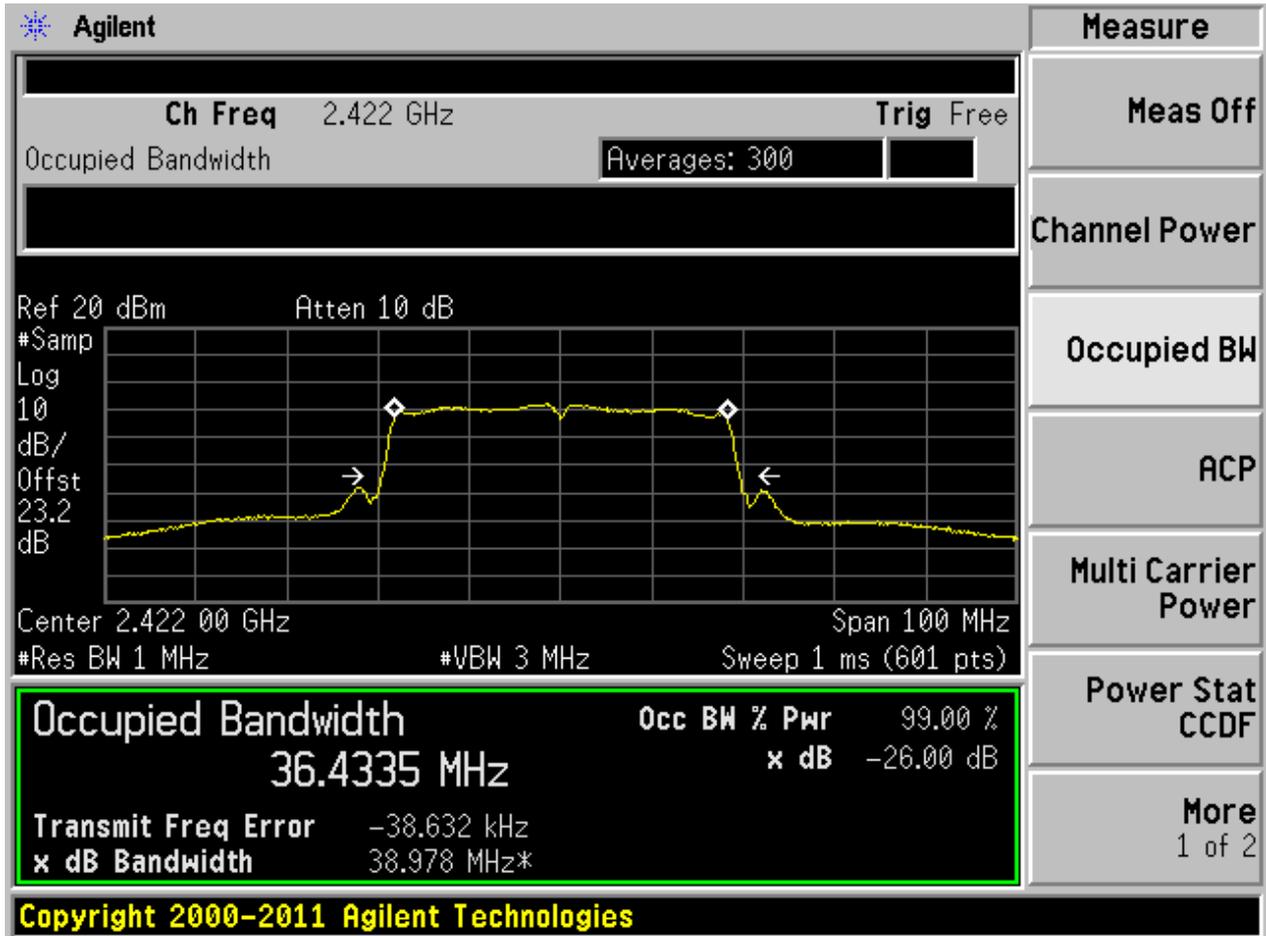


2.2811N40m/8\_B@1+2

2.28.1 Ant 1

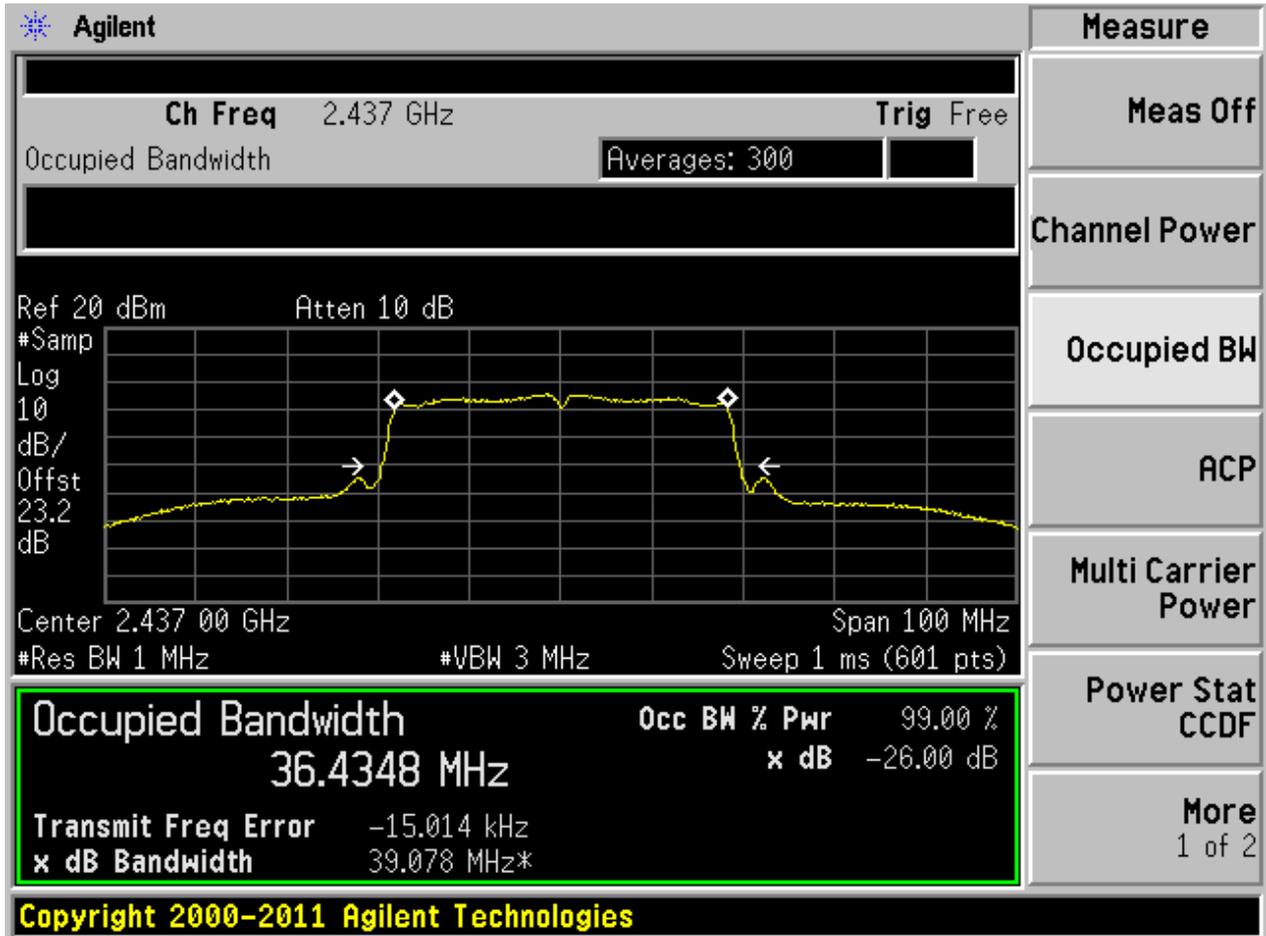


2.28.2 Ant 2

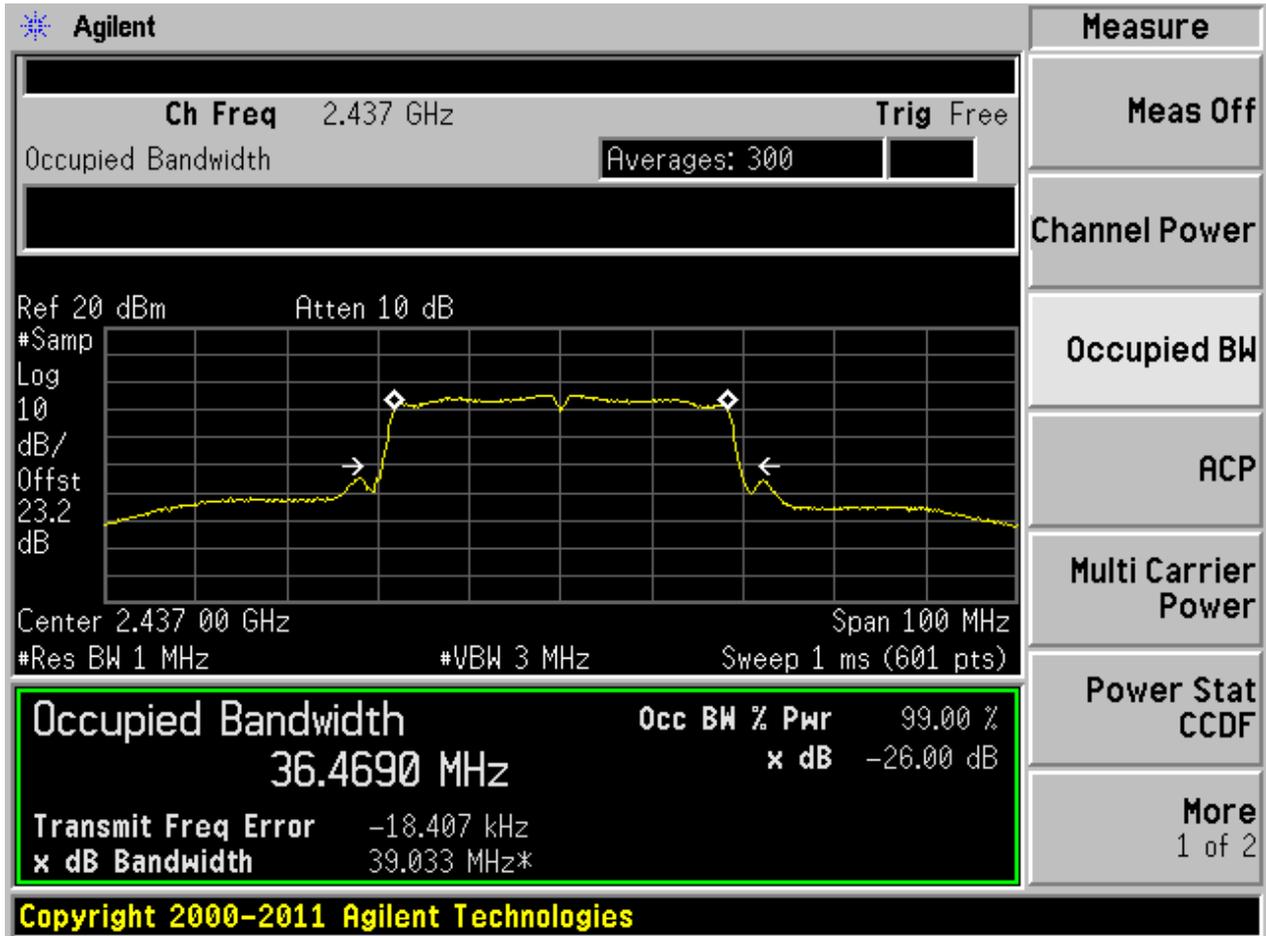


2.2911N40m/8\_M@1+2

2.29.1 Ant 1

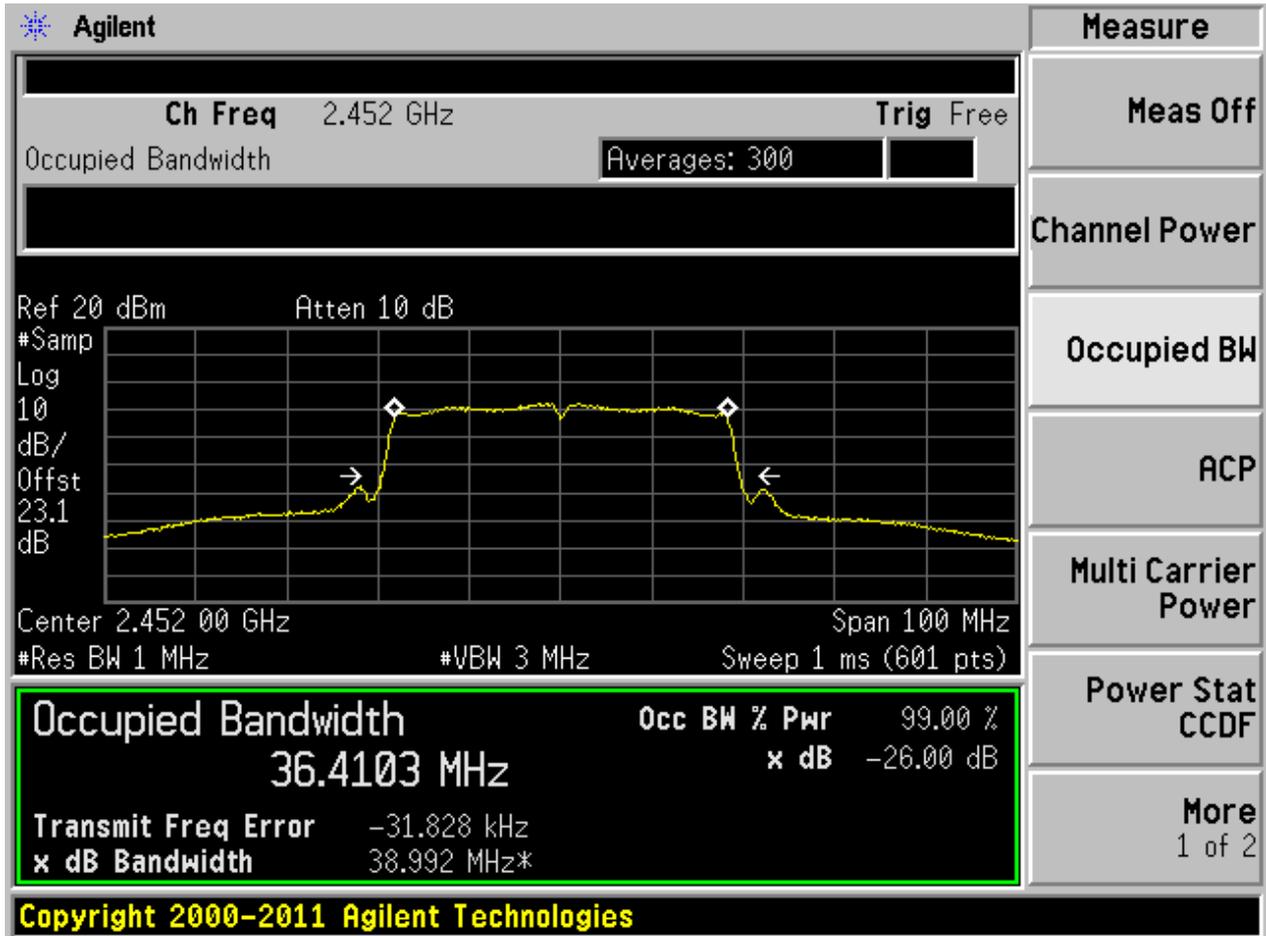


2.29.2 Ant 2



2.3011N40m/8\_T@1+2

2.30.1 Ant 1



2.30.2 Ant 2



Agilent

**Measure**

**Ch Freq** 2.452 GHz
**Trig** Free

Occupied Bandwidth

Averages: 300

Ref 20 dBm
Atten 10 dB

#Samp 10
Log

dB/Offst 23.1 dB

Center 2.452 00 GHz
Span 100 MHz

#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)

<b>Occupied Bandwidth</b>	<b>Occ BW % Pwr</b>	99.00 %
36.4298 MHz	x dB	-26.00 dB
<b>Transmit Freq Error</b>	-25.801 kHz	
<b>x dB Bandwidth</b>	39.082 MHz*	

**Channel Power**

**Meas Off**

**Occupied BW**

**ACP**

**Multi Carrier Power**

**Power Stat CCDF**

**More**
1 of 2

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# Appendix C: Maximum Peak Conducted Output Power

In this Appendix, the “Pmax” refers to the measured “Maximum Peak Conducted Output Power” value. The “fc(DTS6dBBW)” and “DTS6dBBW” in “DTS (6 dB) Bandwidth” are used to determine the integrated band power.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain as “Pmax@i [dBm]”, and then combined into the final result “Pmax [dBm]” to compare with the limit according to:  $P_{max} [dBm] = 10 \times \lg(10^{(P_{max}@1 [dBm] / 10)} + \dots + 10^{(P_{max}@N [dBm] / 10)})$  (the N denotes the antenna chains used by smart antenna systems).

## 1 Result Table

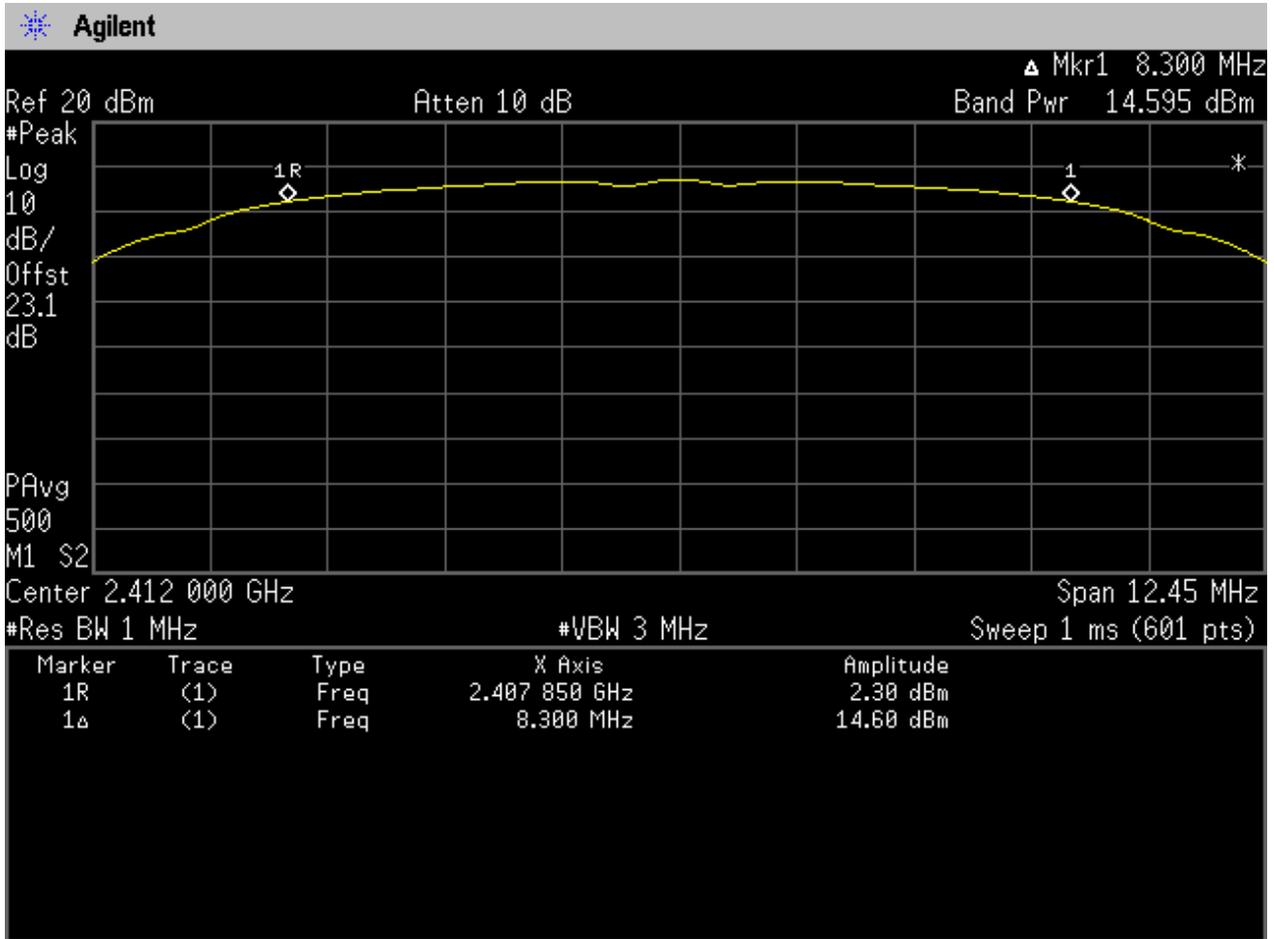
EUT Conf.	Ant.	Pmax@i [dBm]	Pmax [dBm]	Verdict
11B/1_B@1	Ant 1	14.6	14.6	Pass
11B/1_B@2	Ant 2	14.59	14.59	Pass
11B/1_M@1	Ant 1	15.34	15.34	Pass
11B/1_M@2	Ant 2	14.85	14.85	Pass
11B/1_T@1	Ant 1	15.38	15.38	Pass
11B/1_T@2	Ant 2	14.77	14.77	Pass
11G/6_B@1	Ant 1	16.41	16.41	Pass
11G/6_B@2	Ant 2	16.2	16.2	Pass
11G/6_M@1	Ant 1	20.21	20.21	Pass
11G/6_M@2	Ant 2	19.97	19.97	Pass
11G/6_T@1	Ant 1	16.24	16.24	Pass
11G/6_T@2	Ant 2	17.01	17.01	Pass
11N20/0_B@1	Ant 1	14.97	14.97	Pass
11N20/0_B@2	Ant 2	15.68	15.68	Pass
11N20/0_M@1	Ant 1	20.45	20.45	Pass
11N20/0_M@2	Ant 2	20.07	20.07	Pass
11N20/0_T@1	Ant 1	15.78	15.78	Pass
11N20/0_T@2	Ant 2	16.6	16.6	Pass
11N20m/8_B@1+2	Ant 1	12.96	16.41	Pass
	Ant 2	13.8		
11N20m/8_M@1+2	Ant 1	20.58	23.55	Pass
	Ant 2	20.5		
11N20m/8_T@1+2	Ant 1	13.8	16.99	Pass
	Ant 2	14.15		
11N40/0_B@1	Ant 1	14.33	14.33	Pass
11N40/0_B@2	Ant 2	14.3	14.3	Pass
11N40/0_M@1	Ant 1	17.29	17.29	Pass
11N40/0_M@2	Ant 2	18.01	18.01	Pass
11N40/0_T@1	Ant 1	14.53	14.53	Pass
11N40/0_T@2	Ant 2	15.75	15.75	Pass



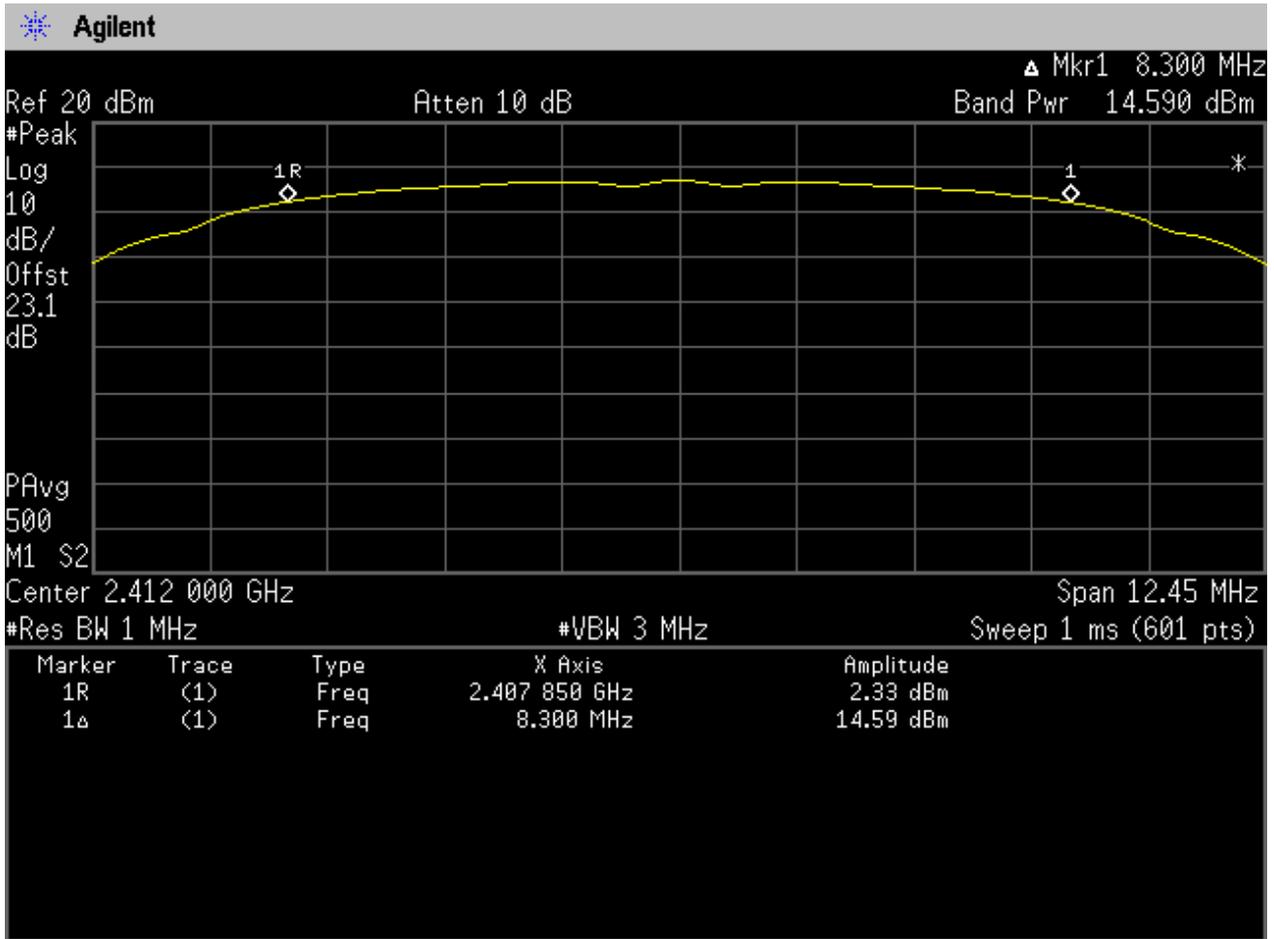
EUT Conf.	Ant.	Pmax@i [dBm]	Pmax [dBm]	Verdict
11N40m/8_B@1+2	Ant 1	13.29	16.77	Pass
	Ant 2	14.18		
11N40m/8_M@1+2	Ant 1	17.11	20.24	Pass
	Ant 2	17.34		
11N40m/8_T@1+2	Ant 1	13.65	16.88	Pass
	Ant 2	14.08		

## 2 Test Plot

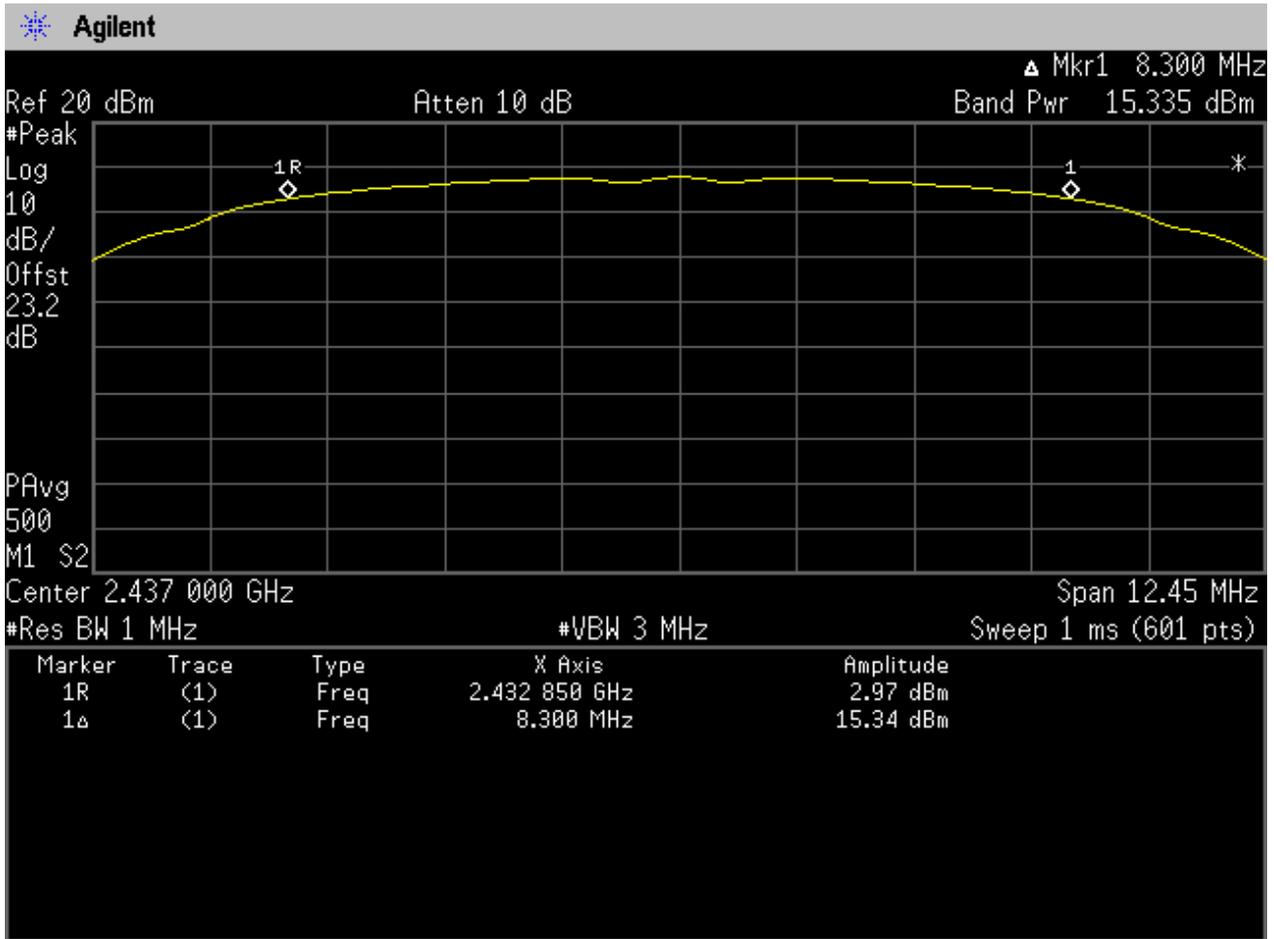
### 2.1 11B/1\_B@1



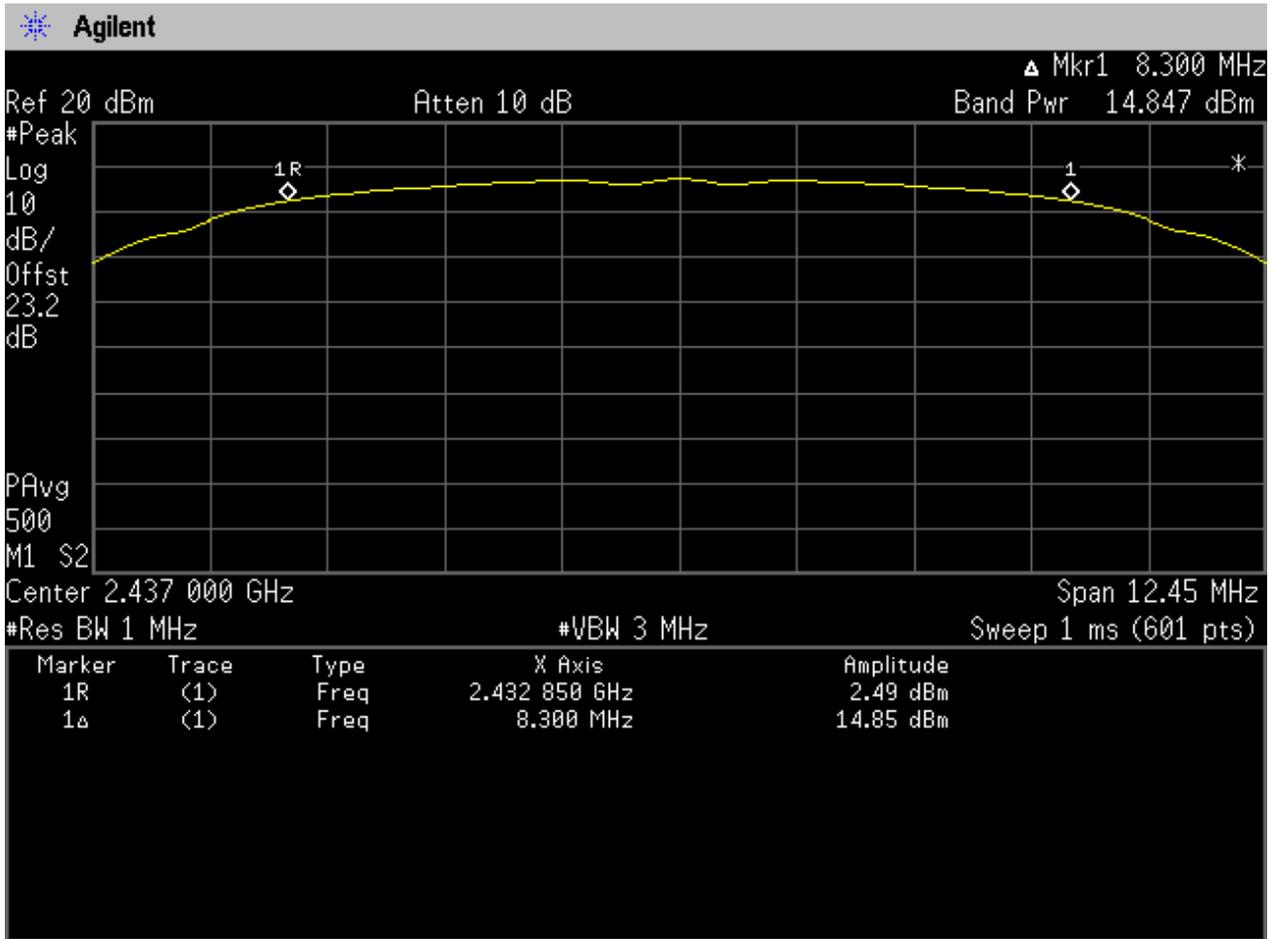
### 2.2 11B/1\_B@2



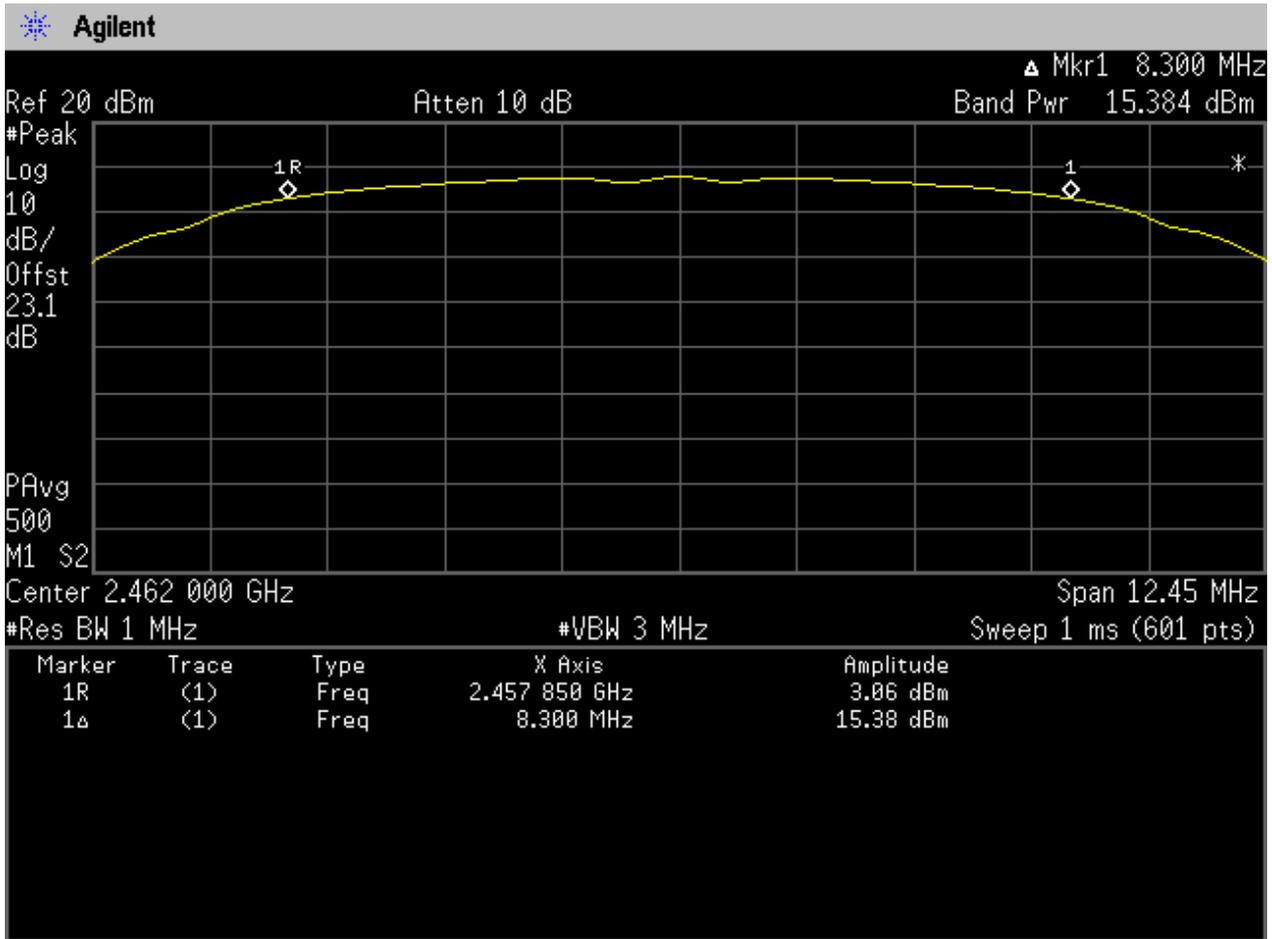
### 2.3 11B/1\_M@1



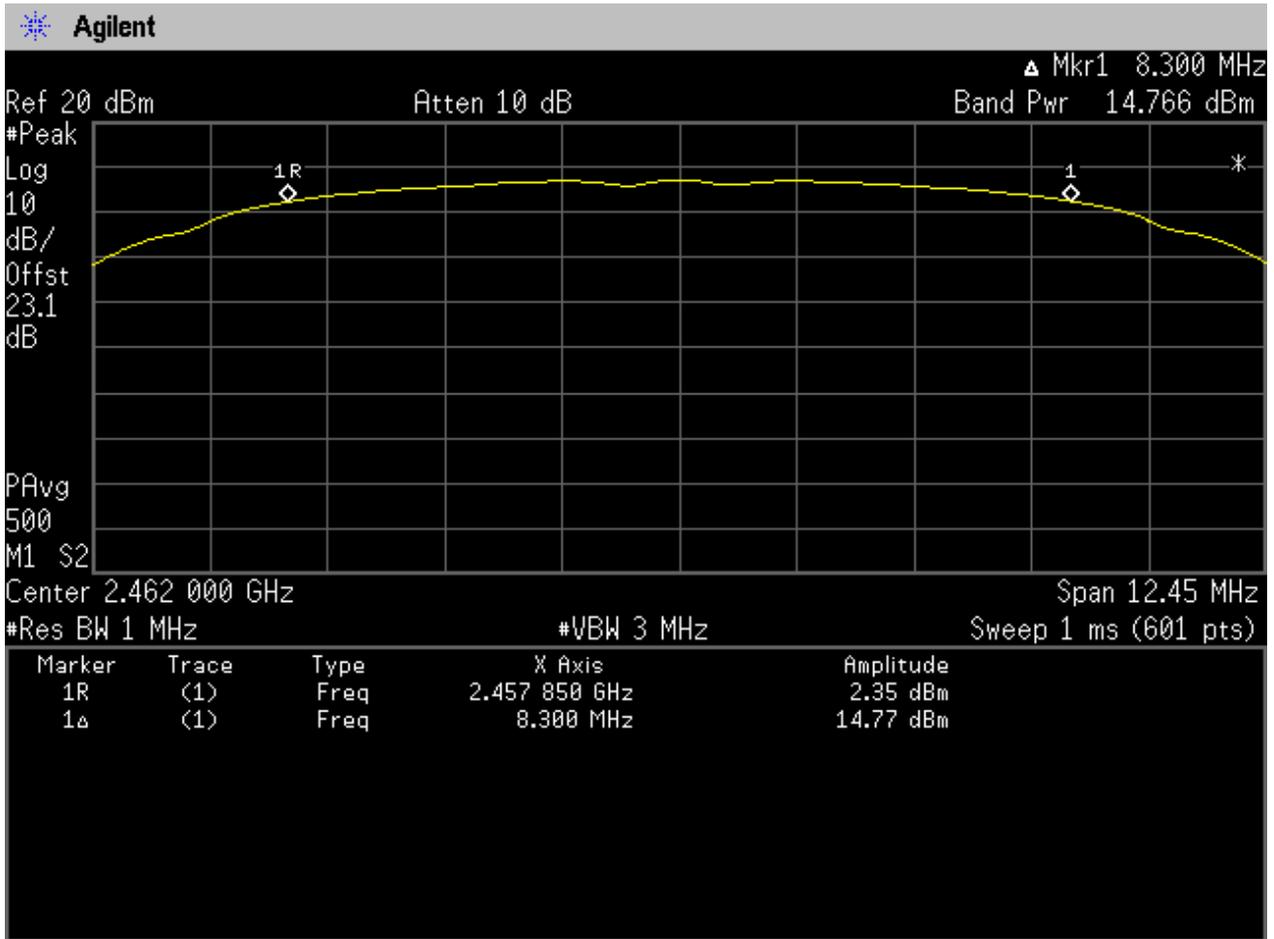
## 2.4 11B/1\_M@2



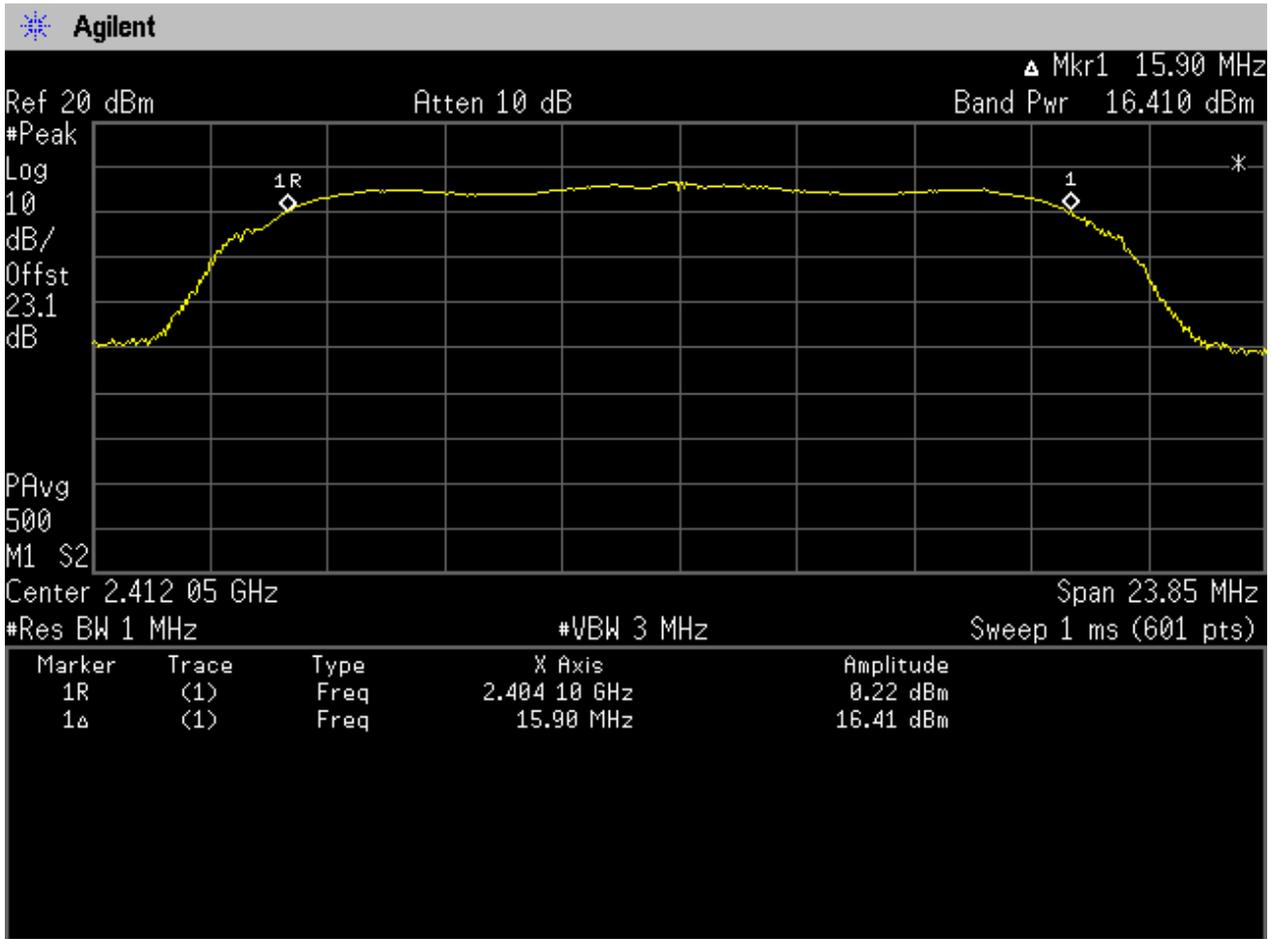
## 2.5 11B/1\_T@1



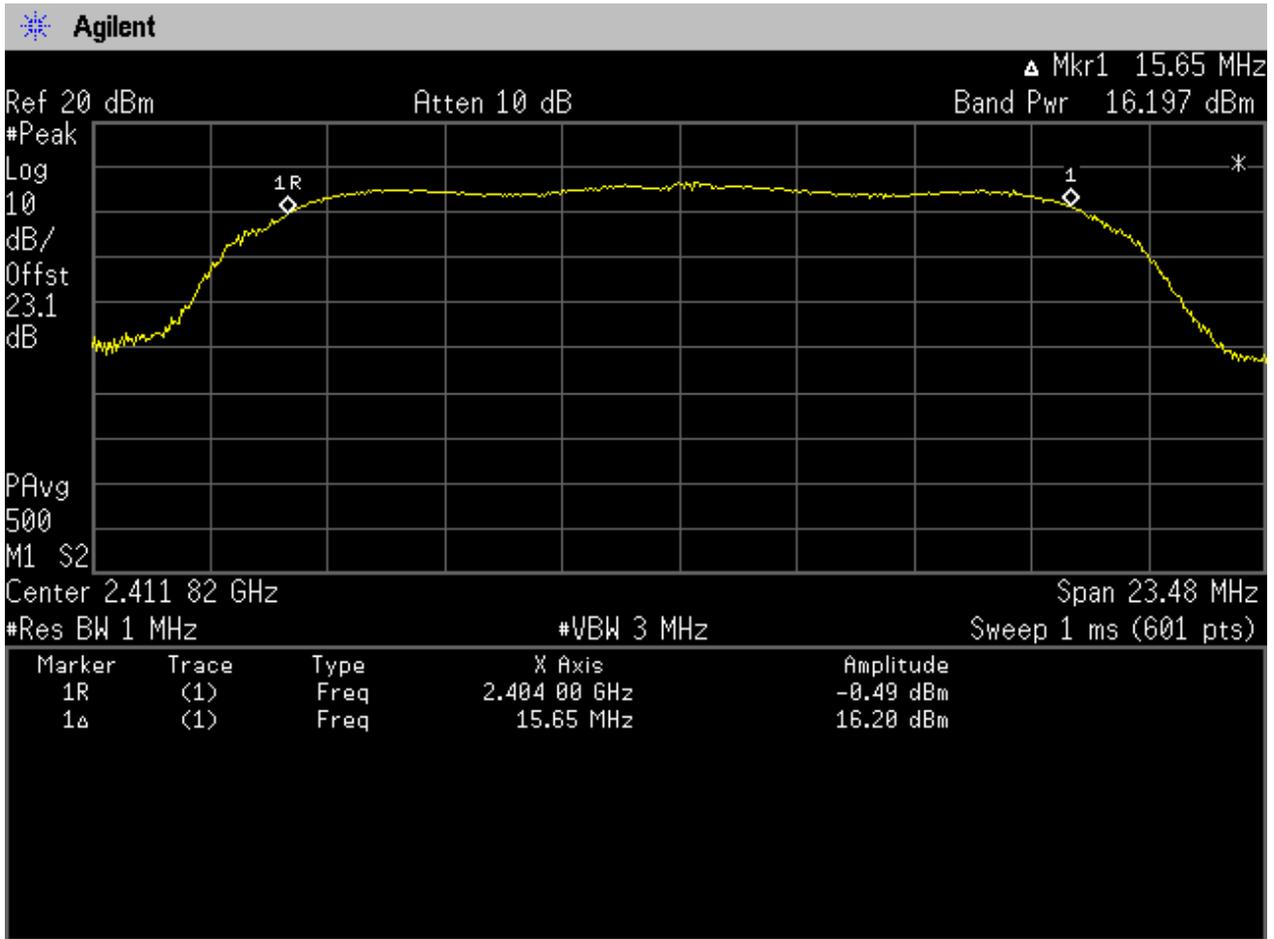
## 2.6 11B/1\_T@2



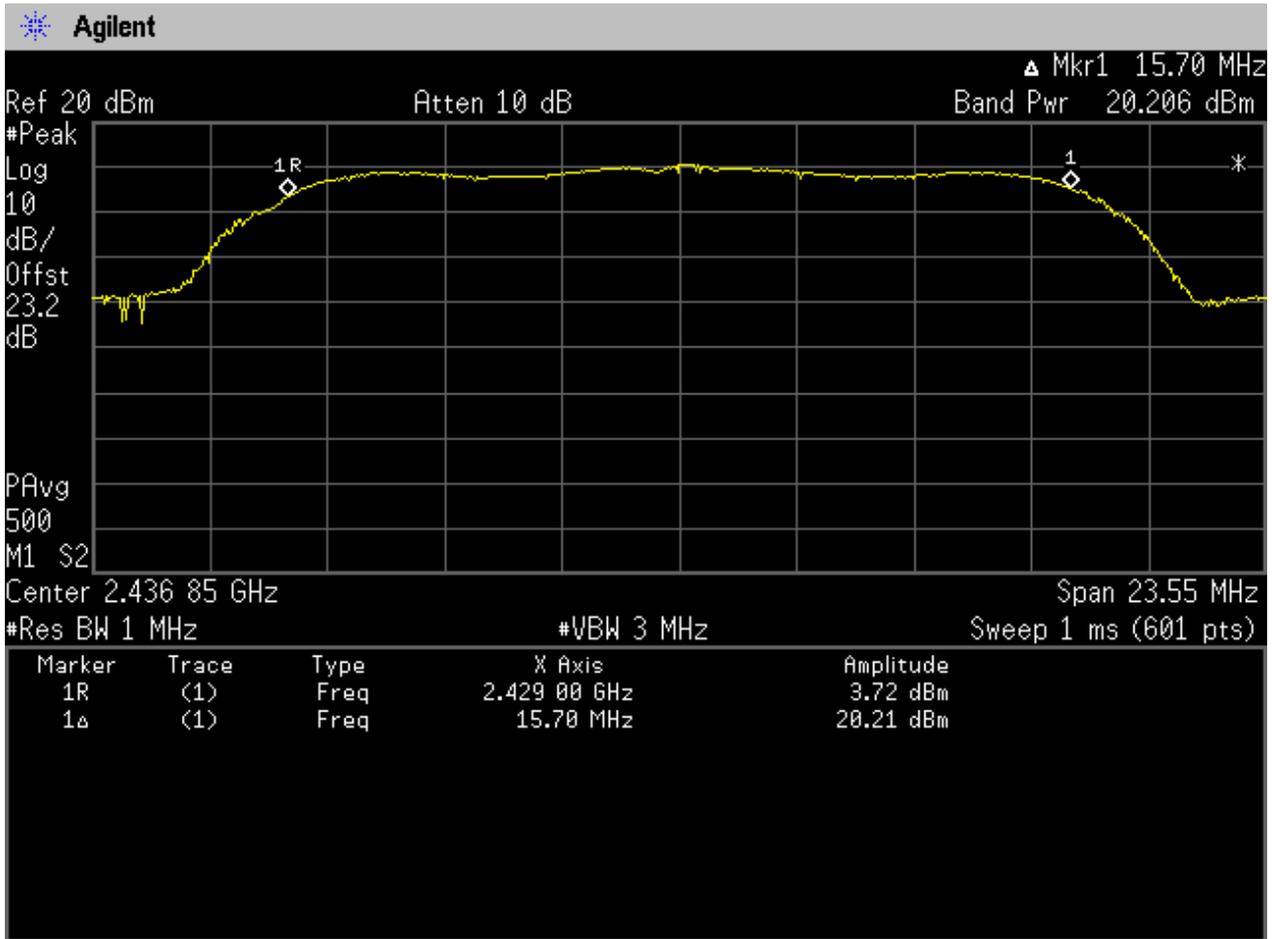
2.7 11G/6\_B@1



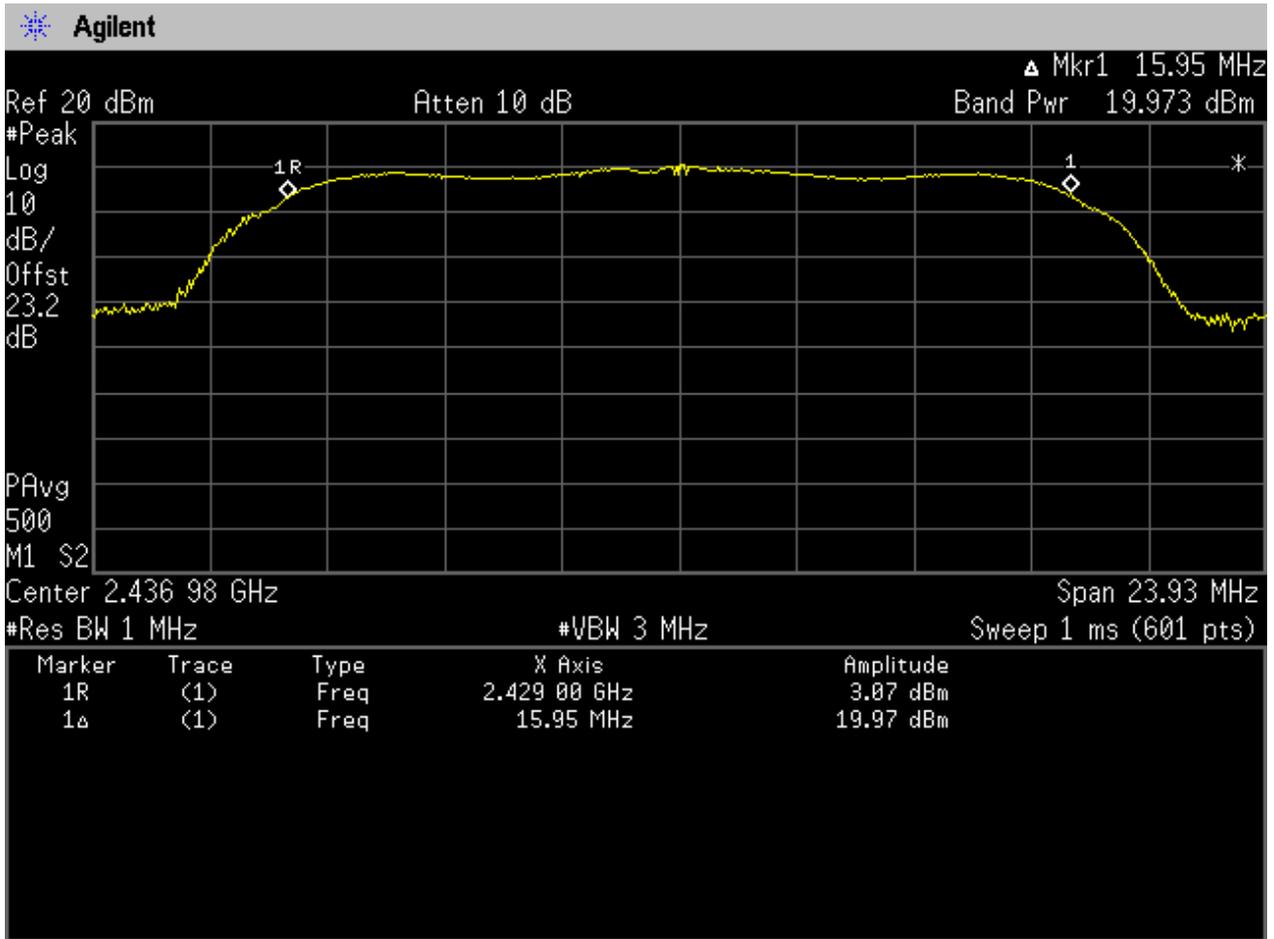
## 2.8 11G/6\_B@2



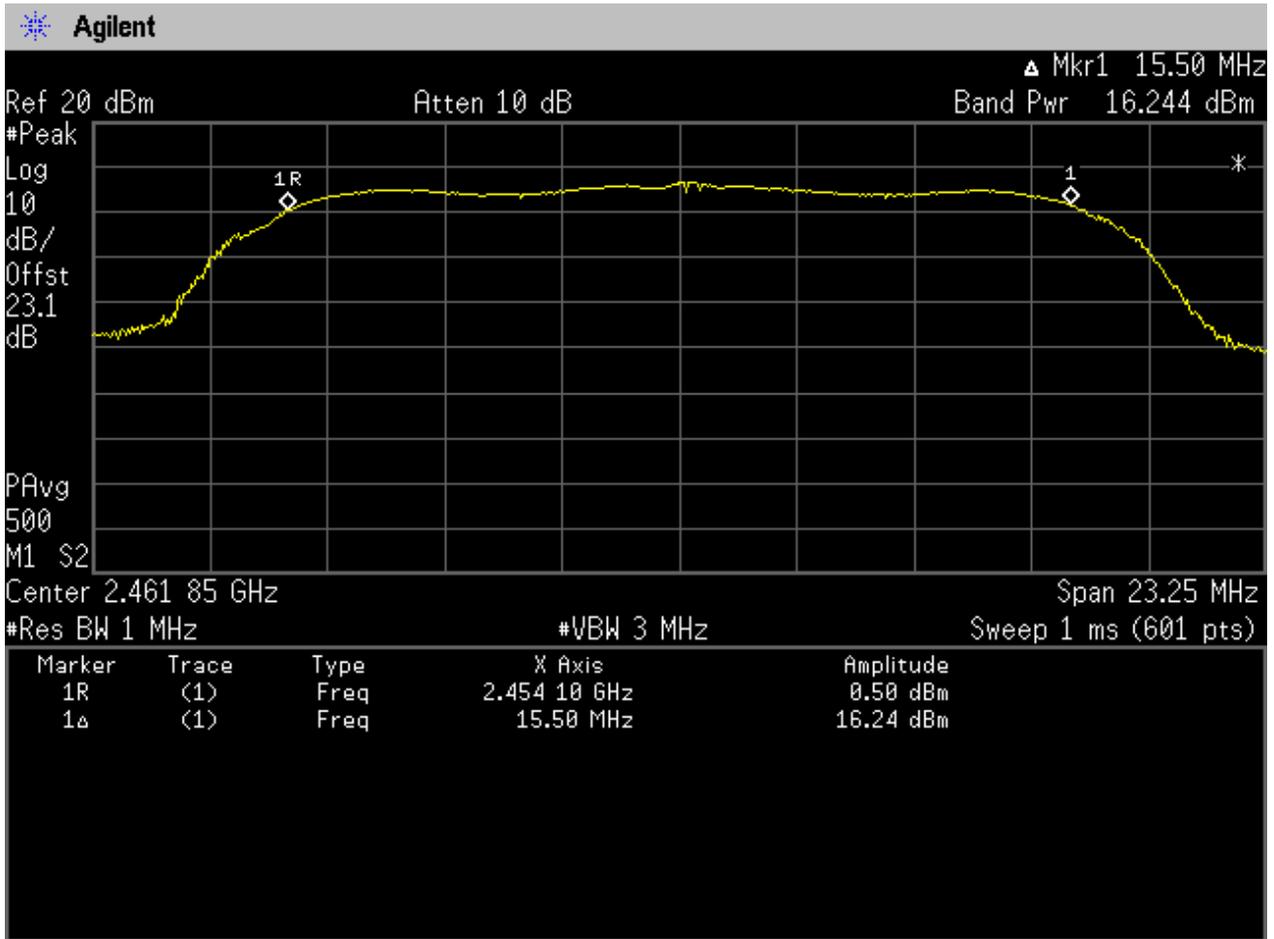
2.9 11G/6\_M@1



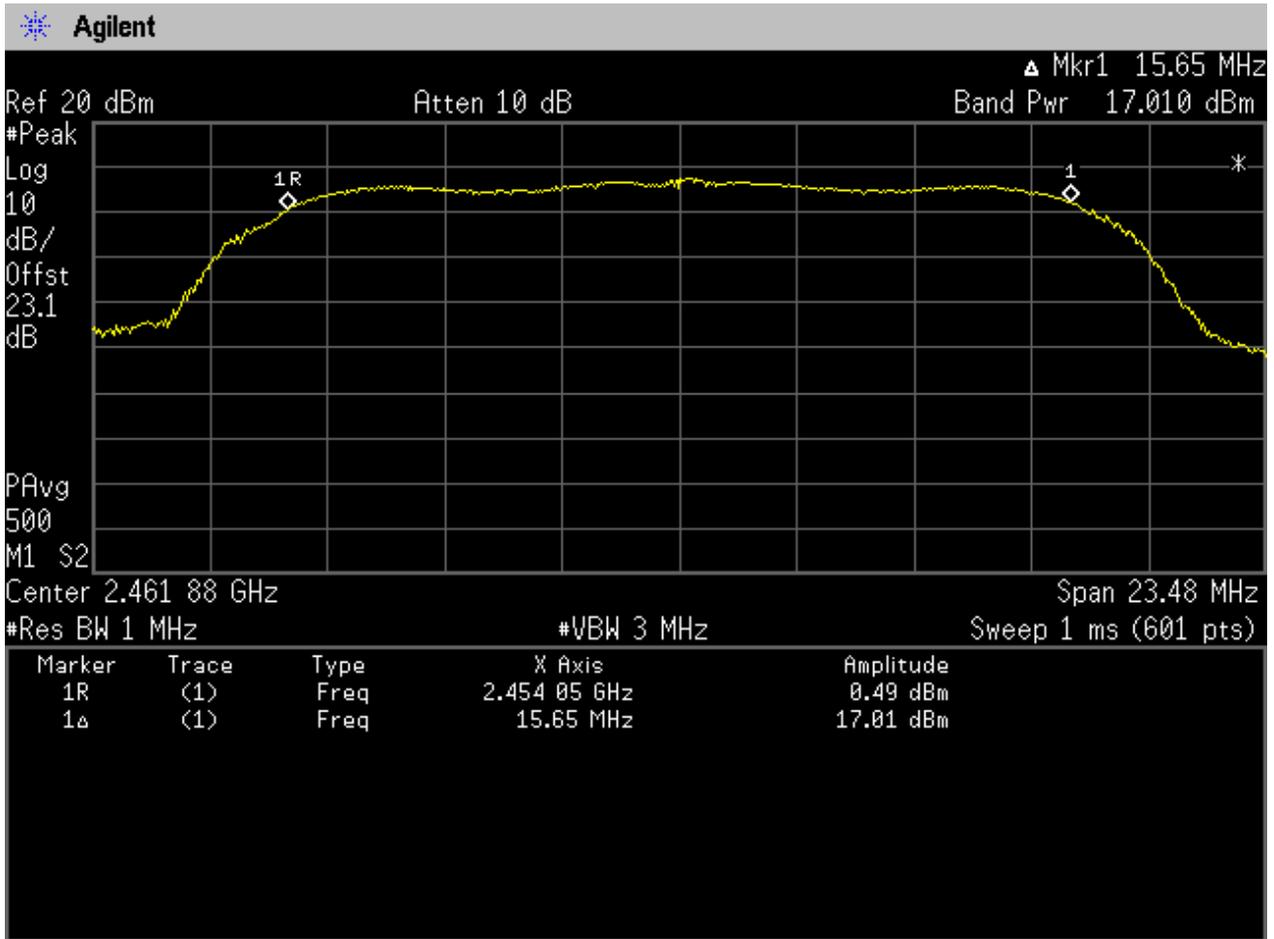
2.1011G/6\_M@2



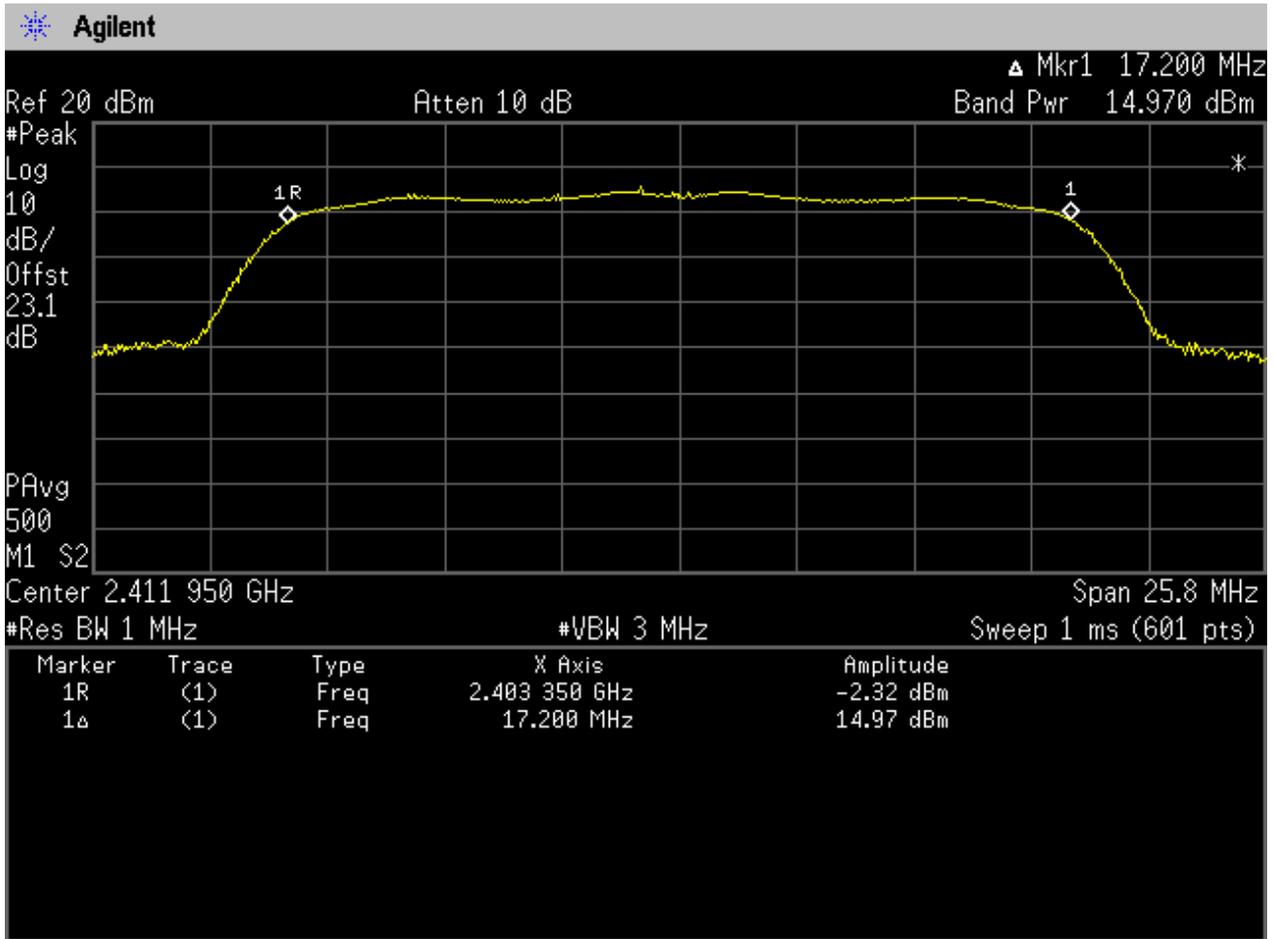
2.1111G/6\_T@1



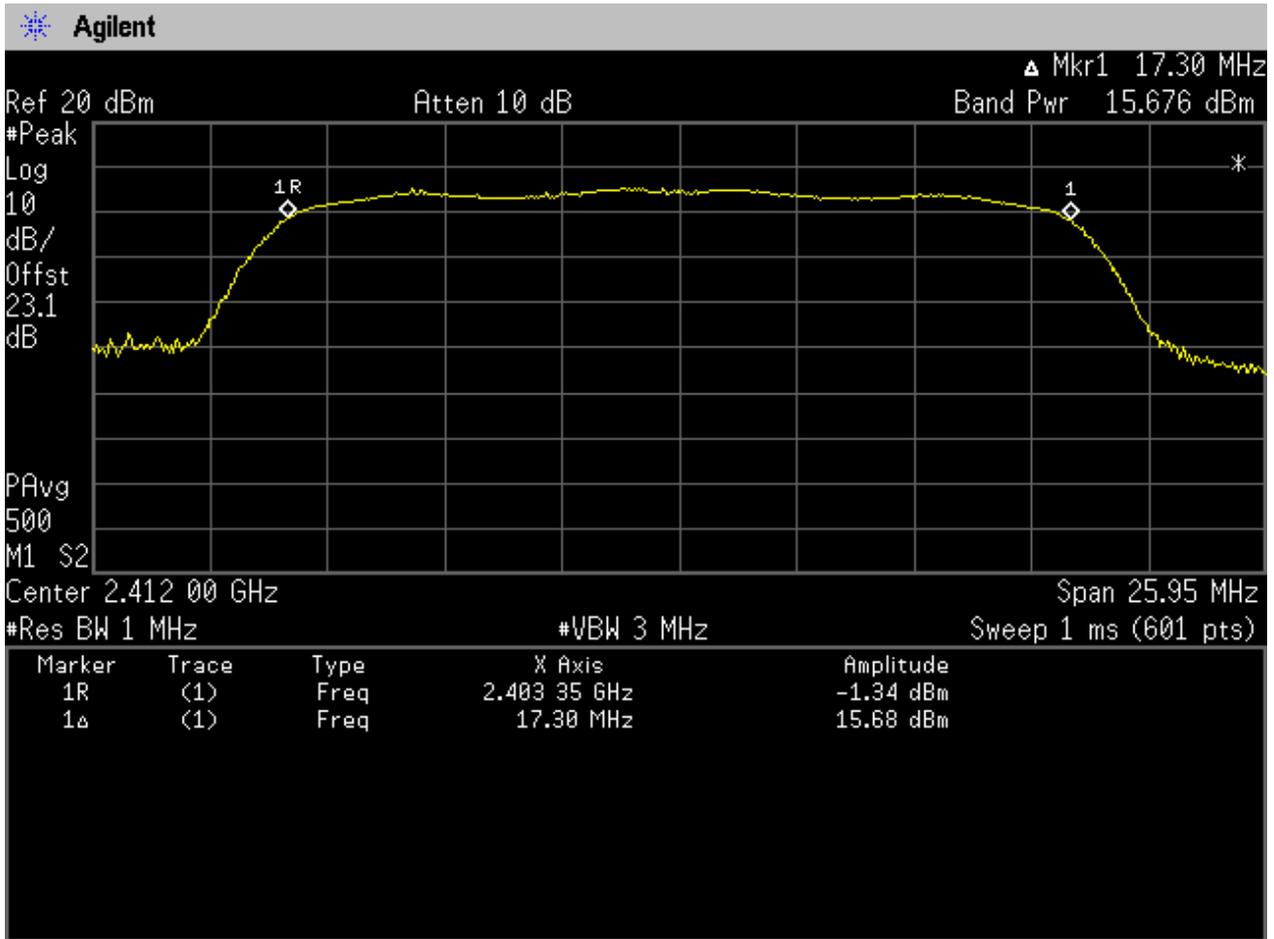
2.1211G/6\_T@2



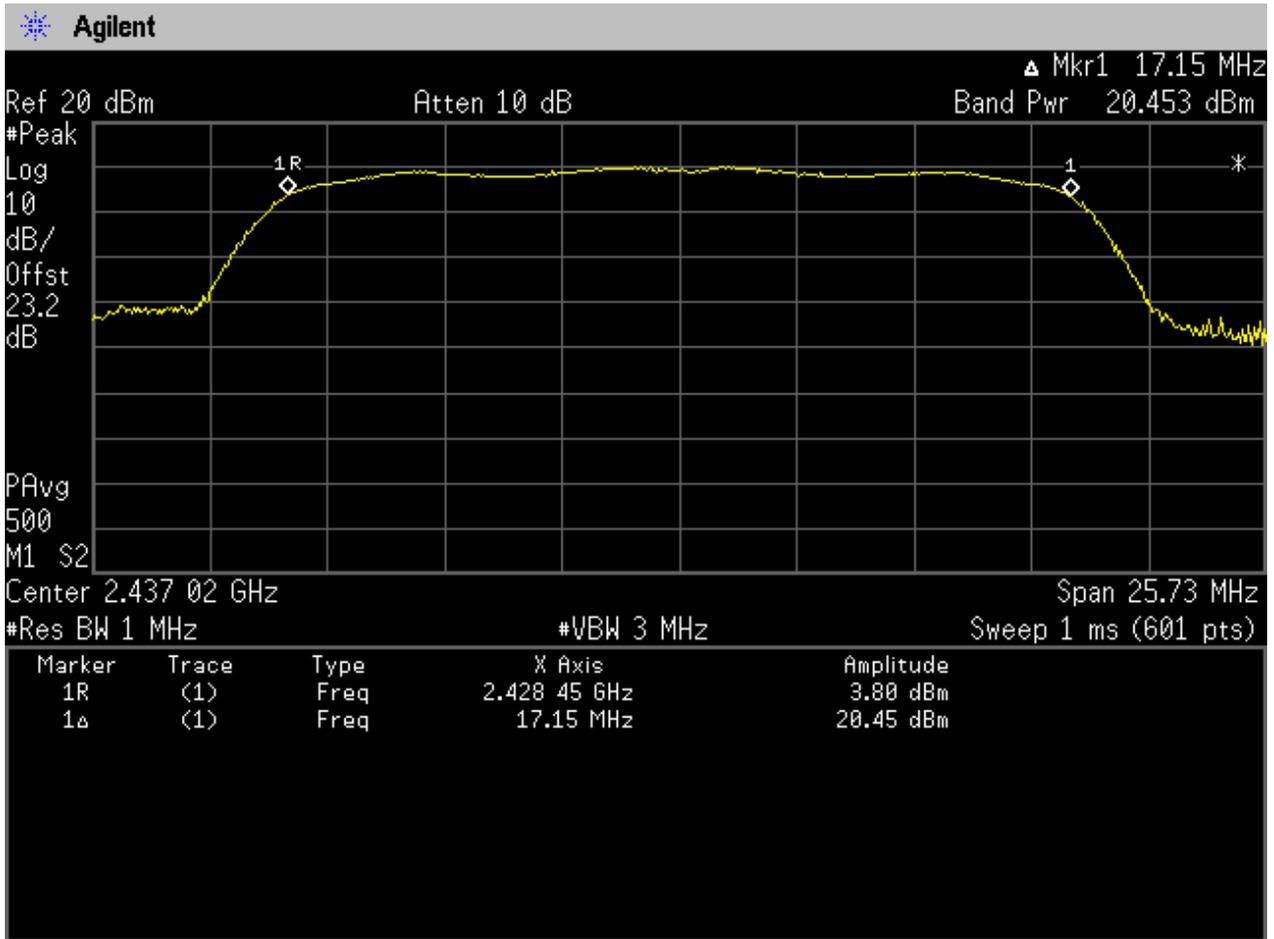
2.1311N20/0\_B@1



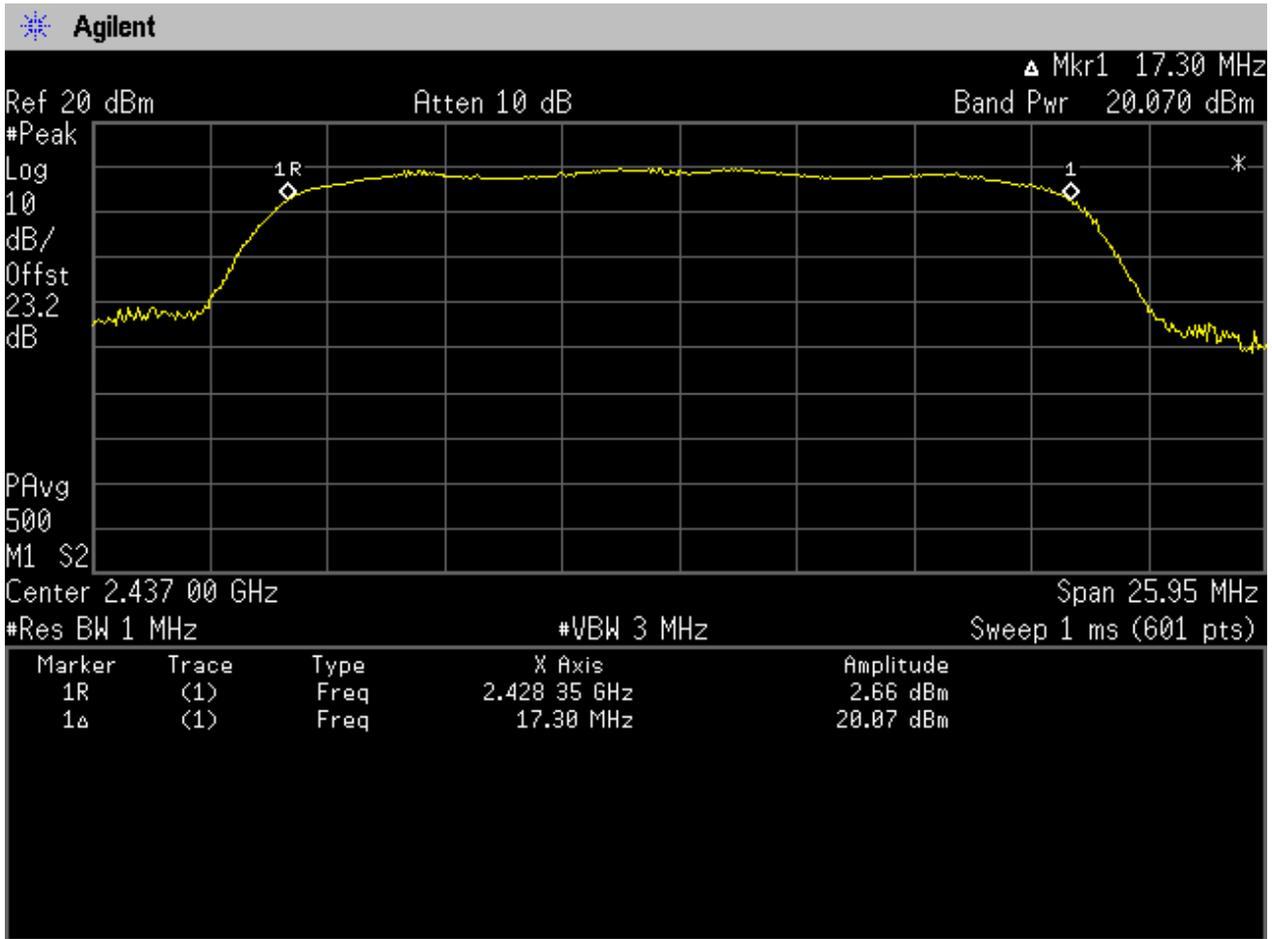
2.1411N20/0\_B@2



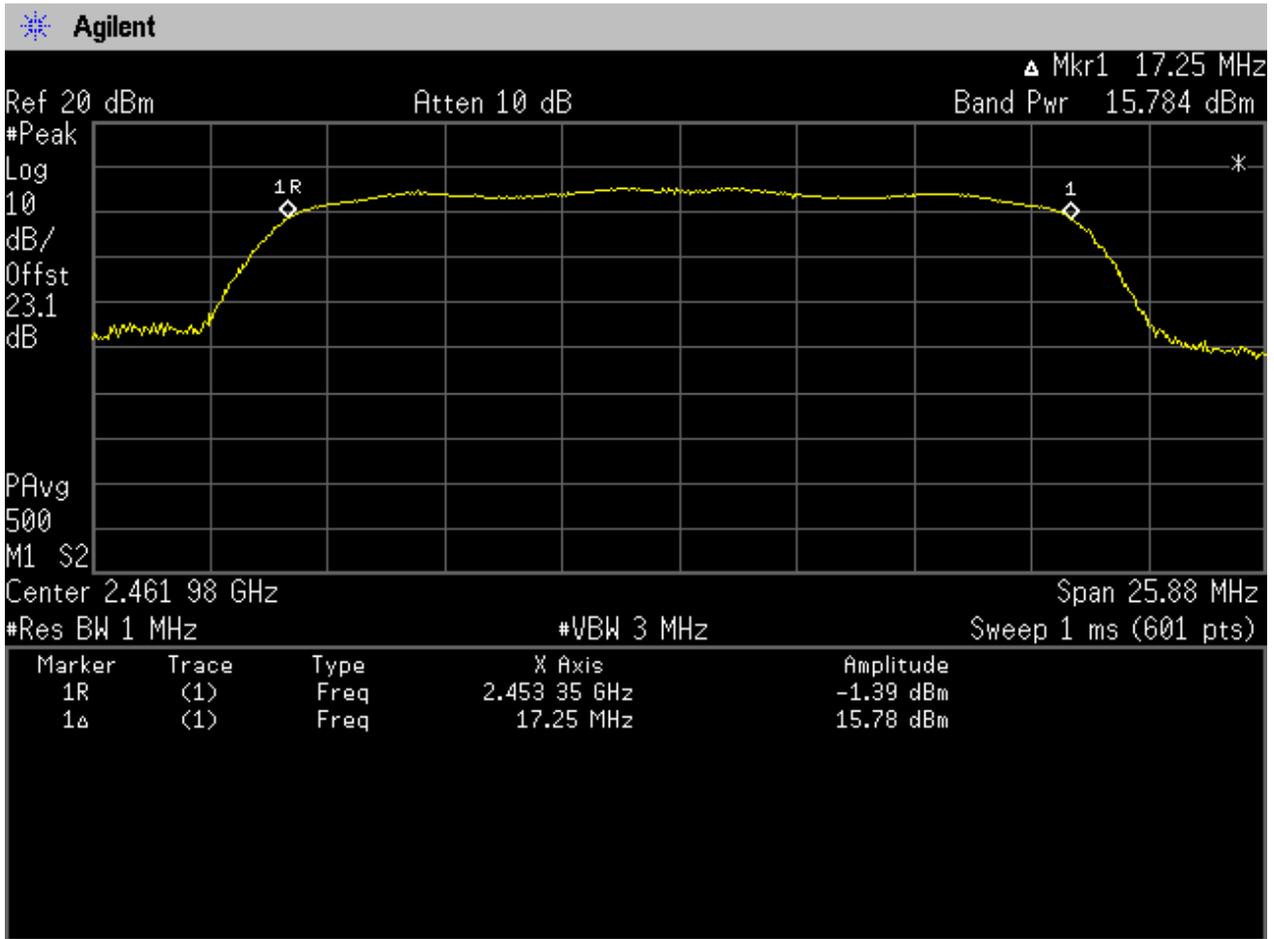
2.1511N20/0\_M@1



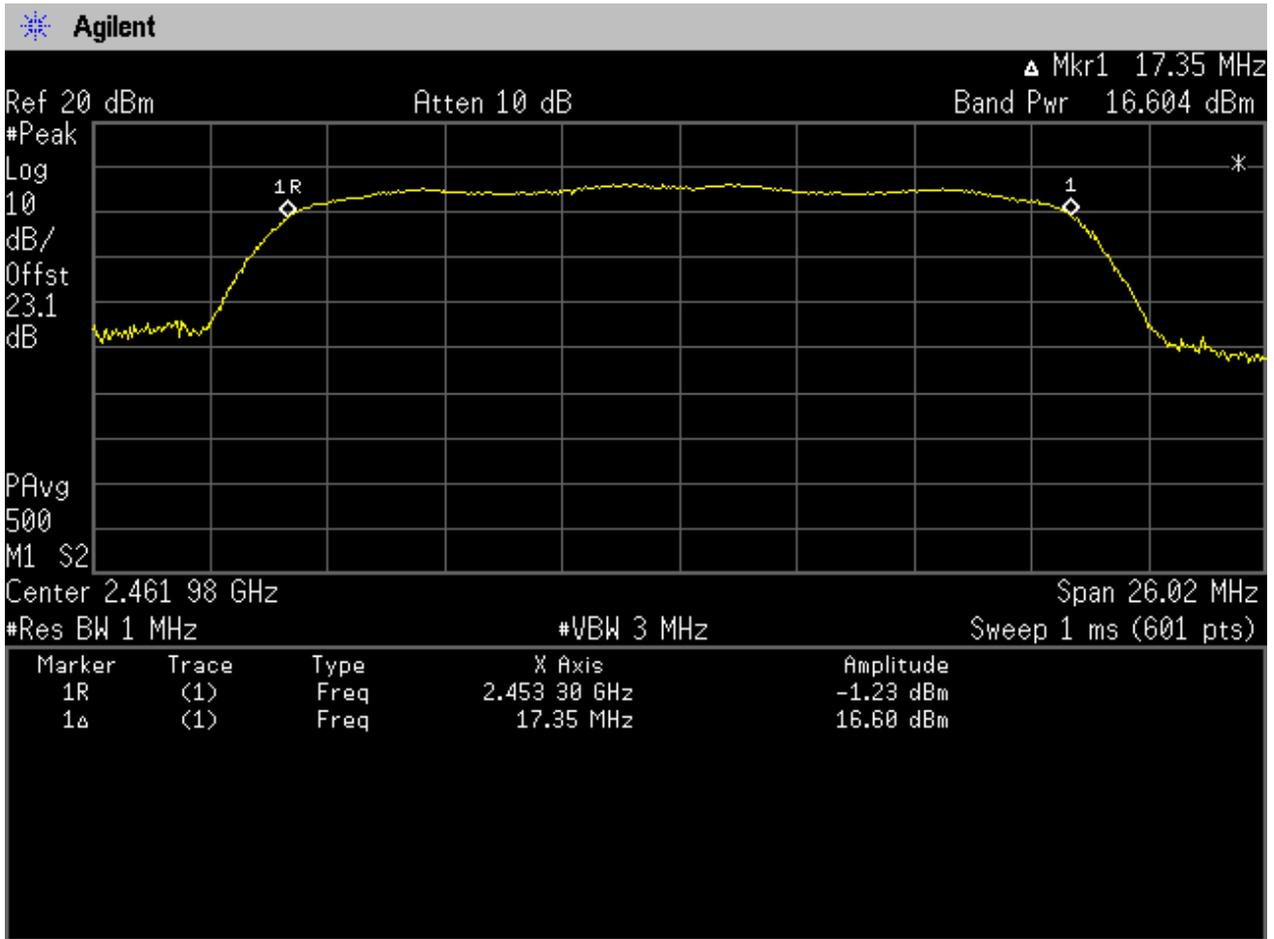
2.1611N20/0\_M@2



2.1711N20/0\_T@1

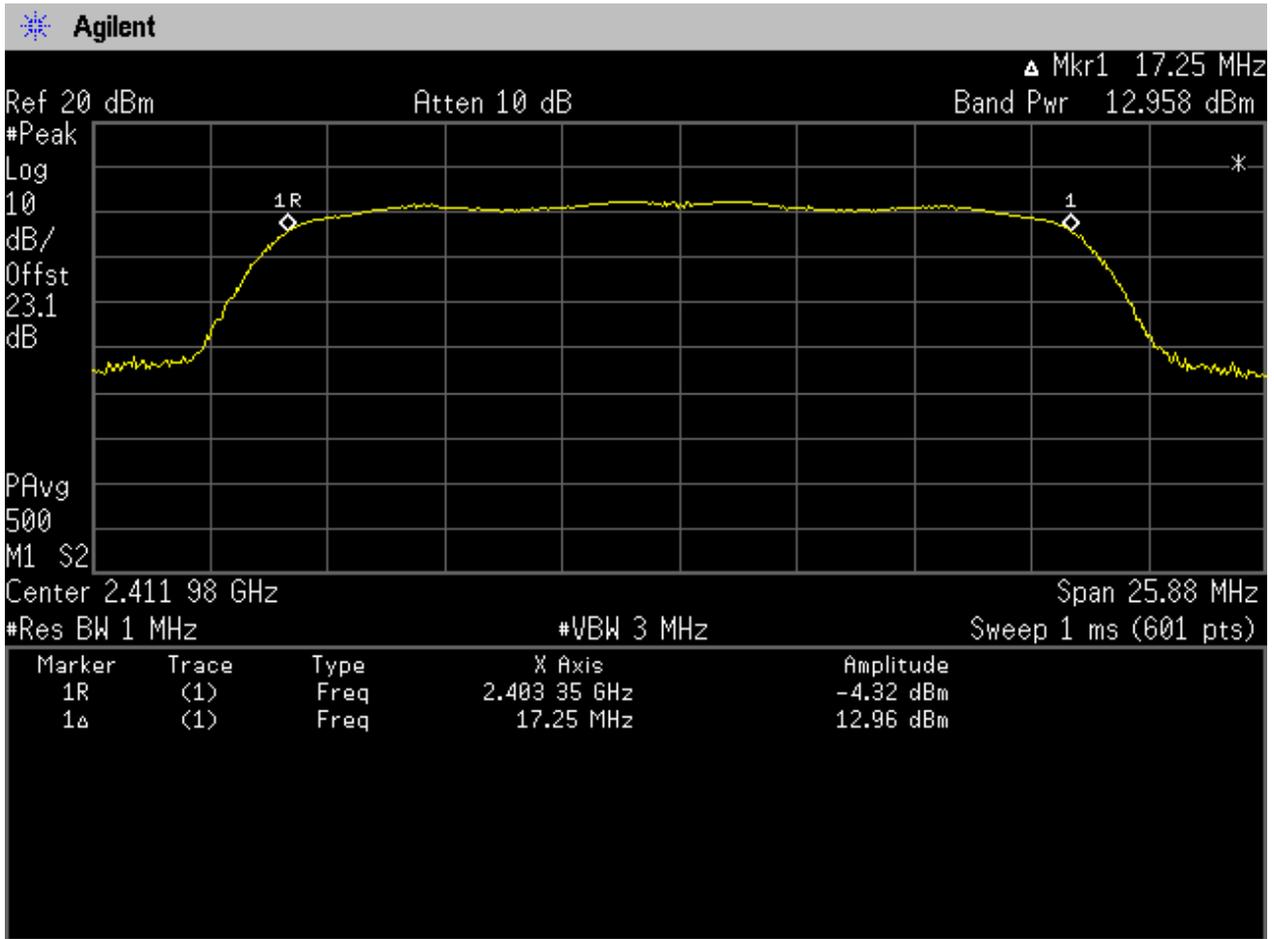


2.1811N20/0\_T@2

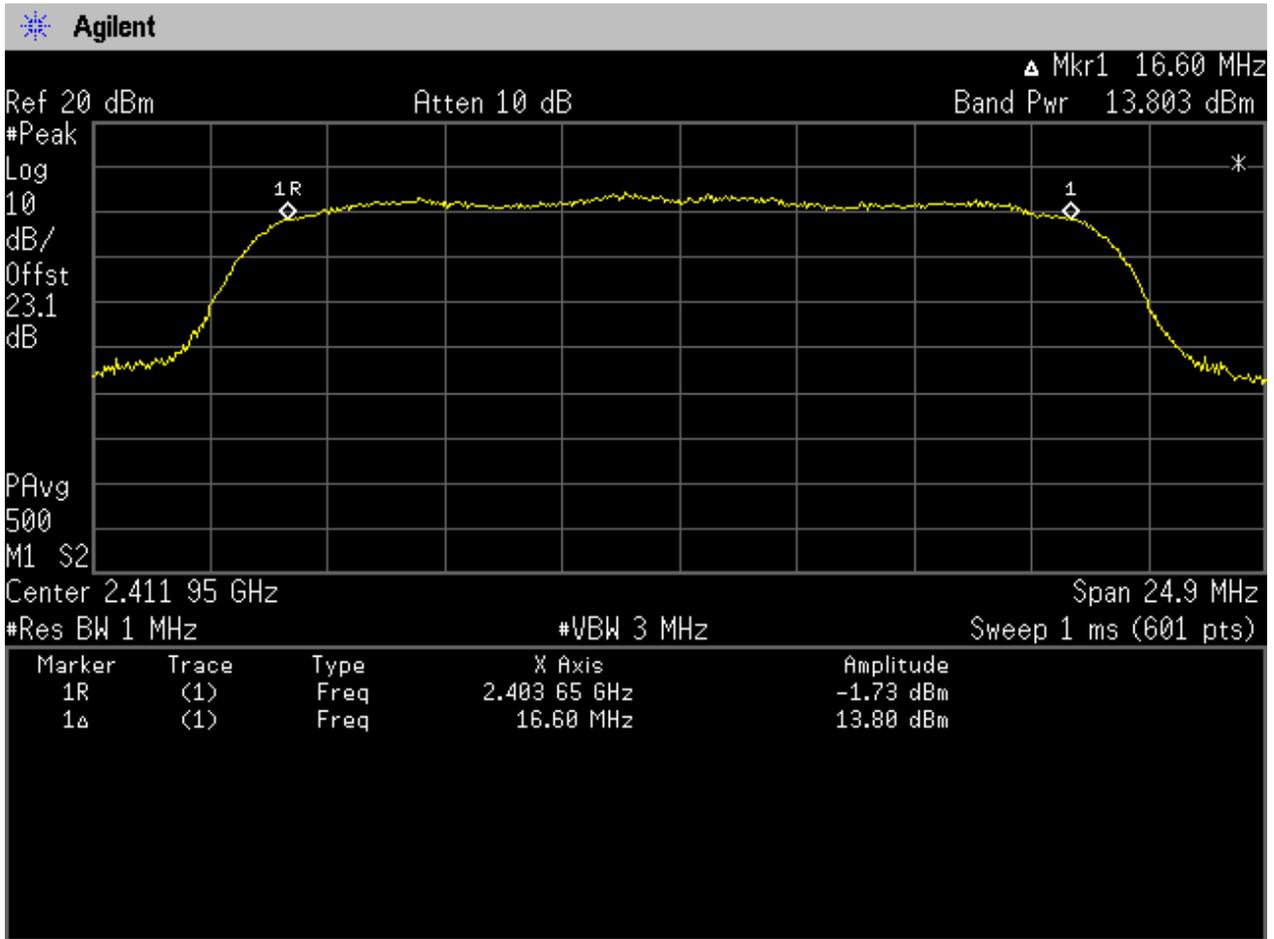


## 2.1911N20m/8\_B@1+2

### 2.19.1 Ant 1

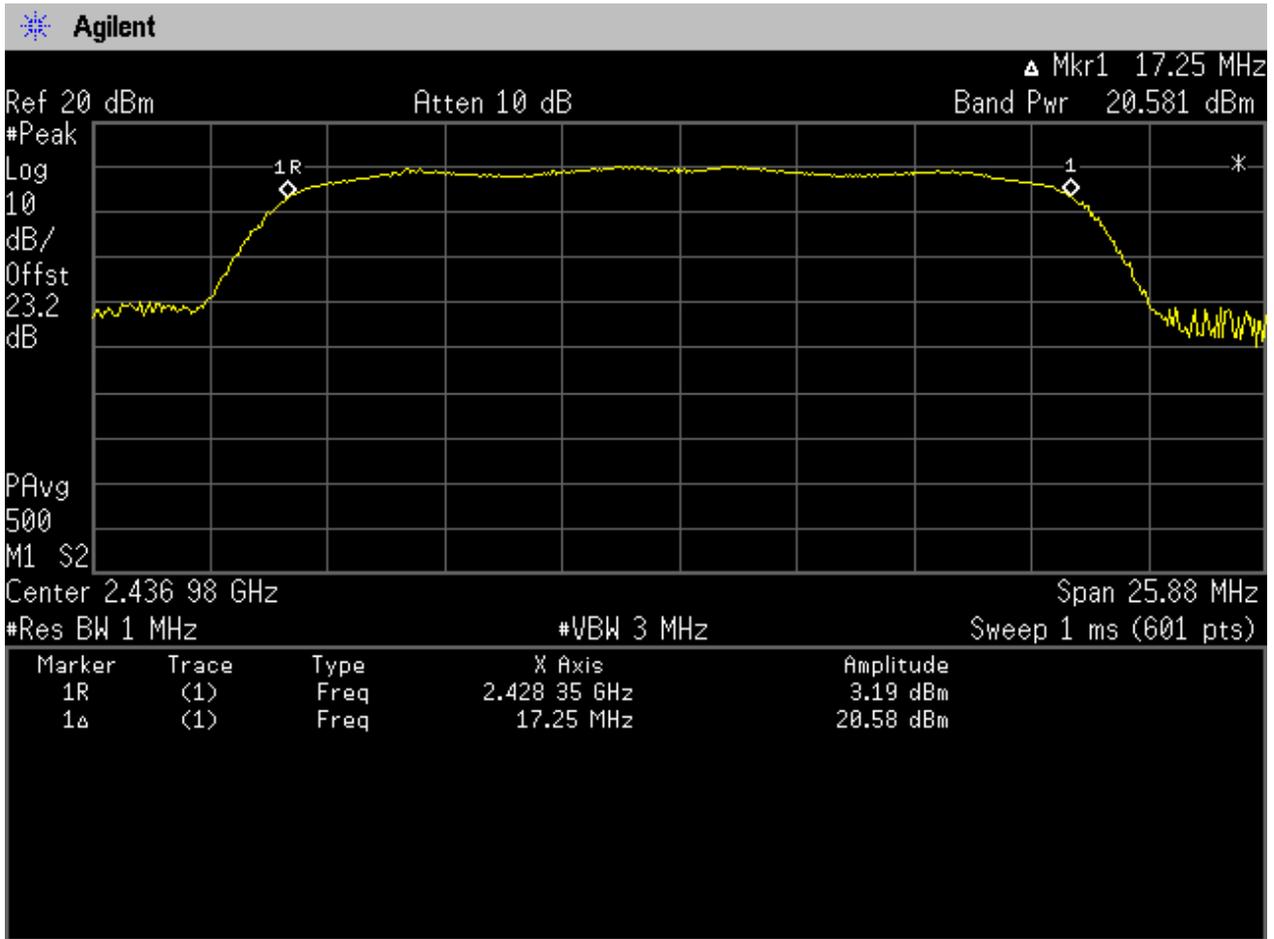


### 2.19.2 Ant 2

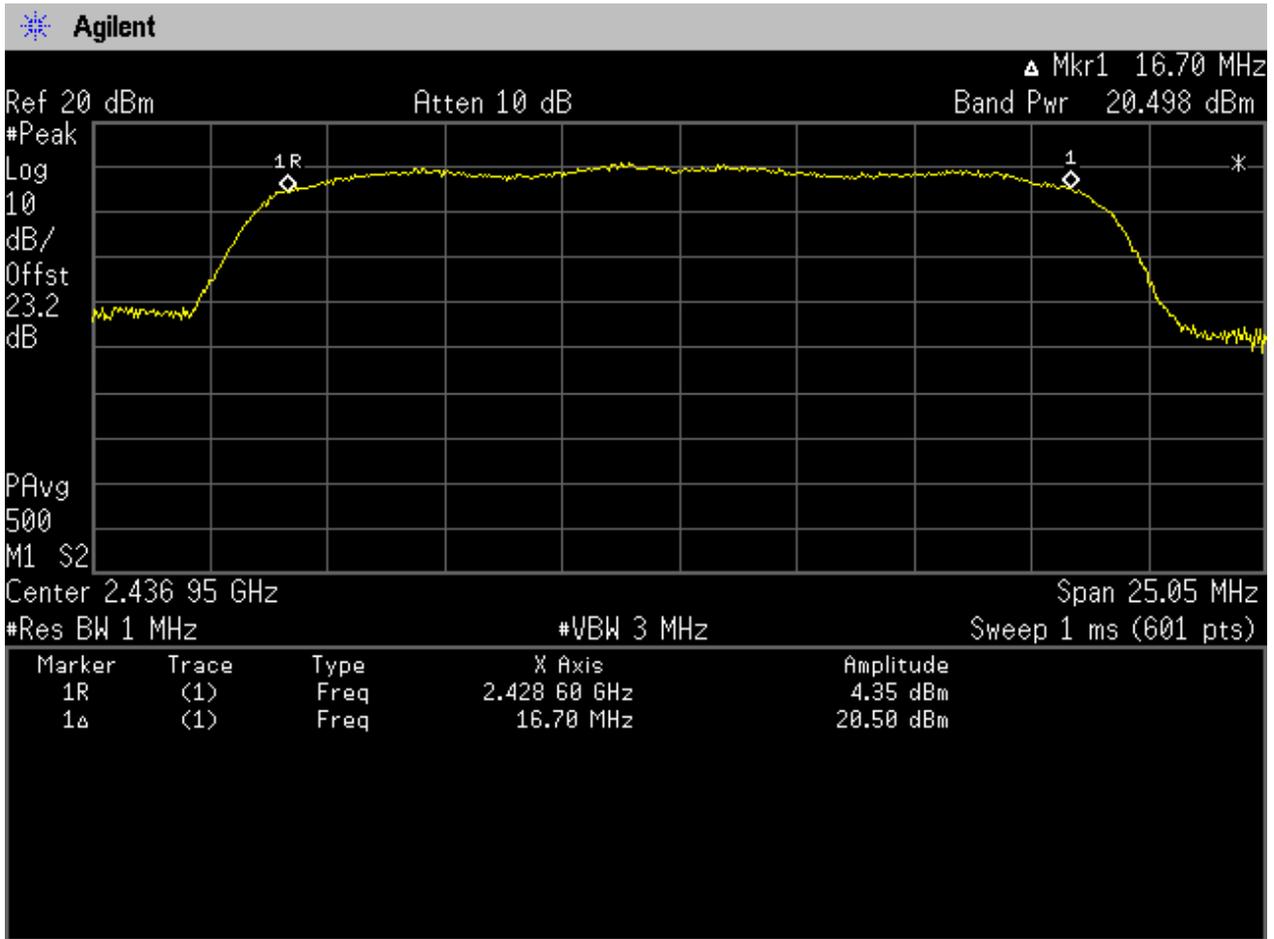


## 2.2011N20m/8\_M@1+2

### 2.20.1 Ant 1

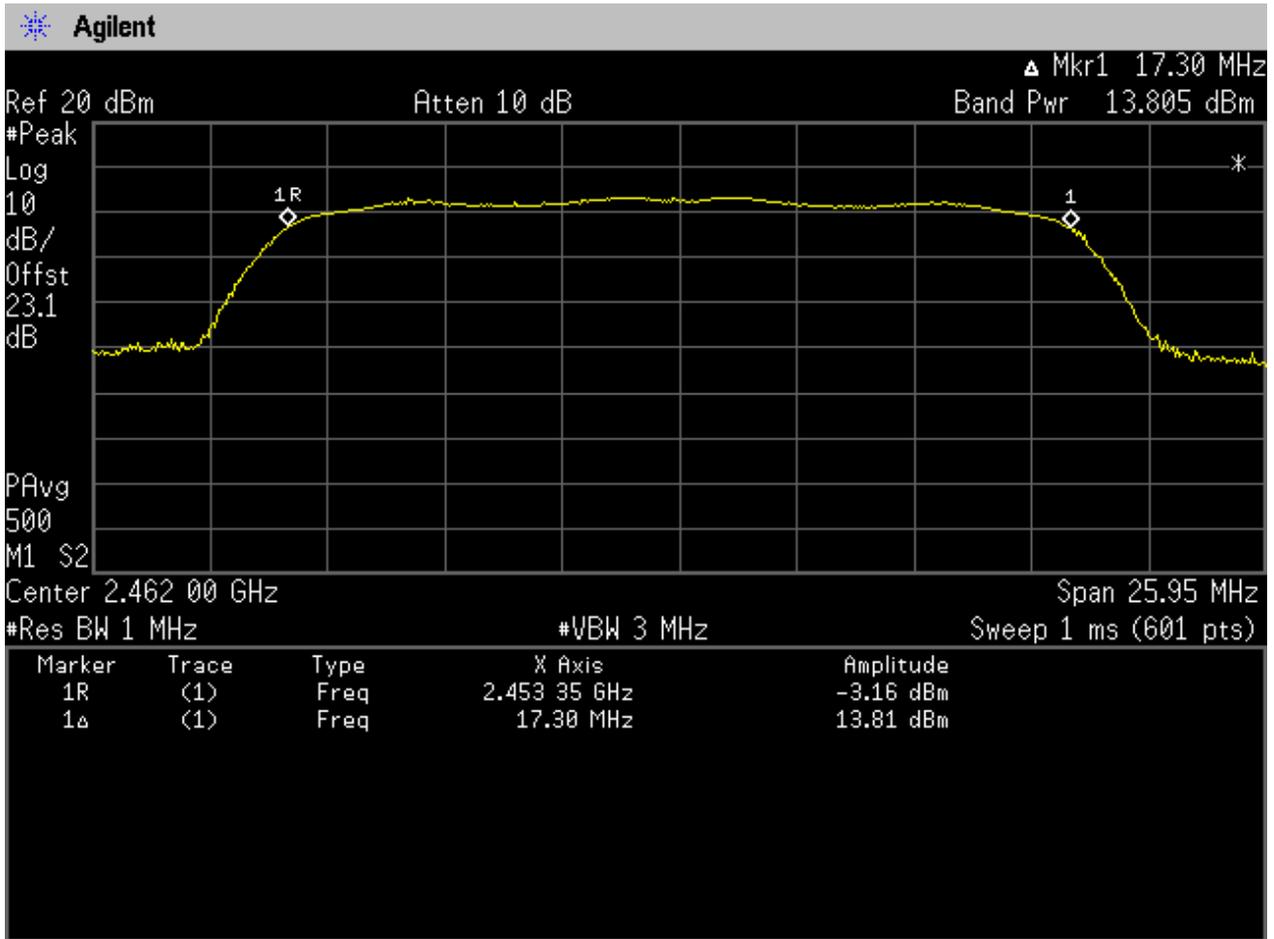


### 2.20.2 Ant 2

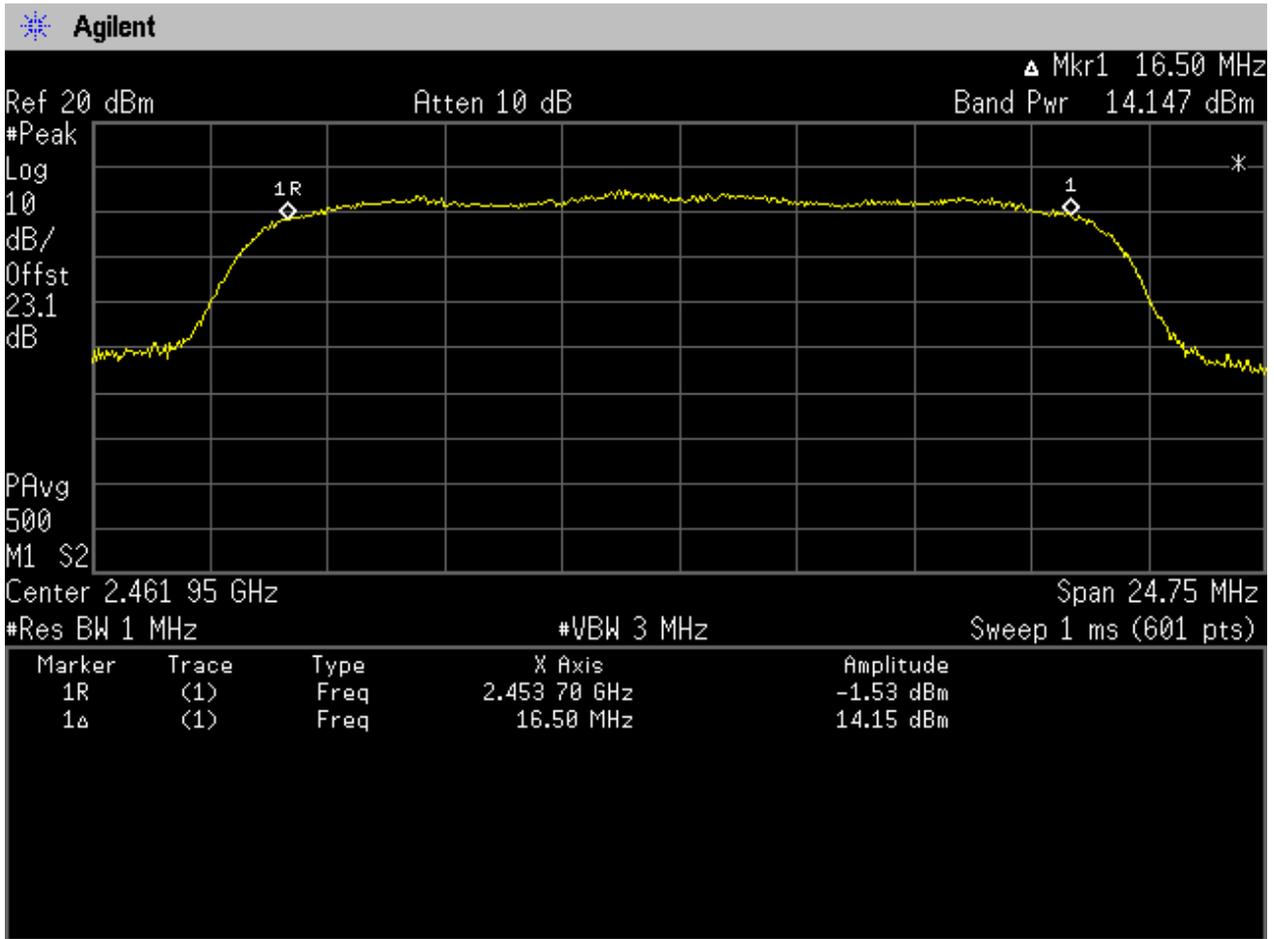


## 2.2111N20m/8\_T@1+2

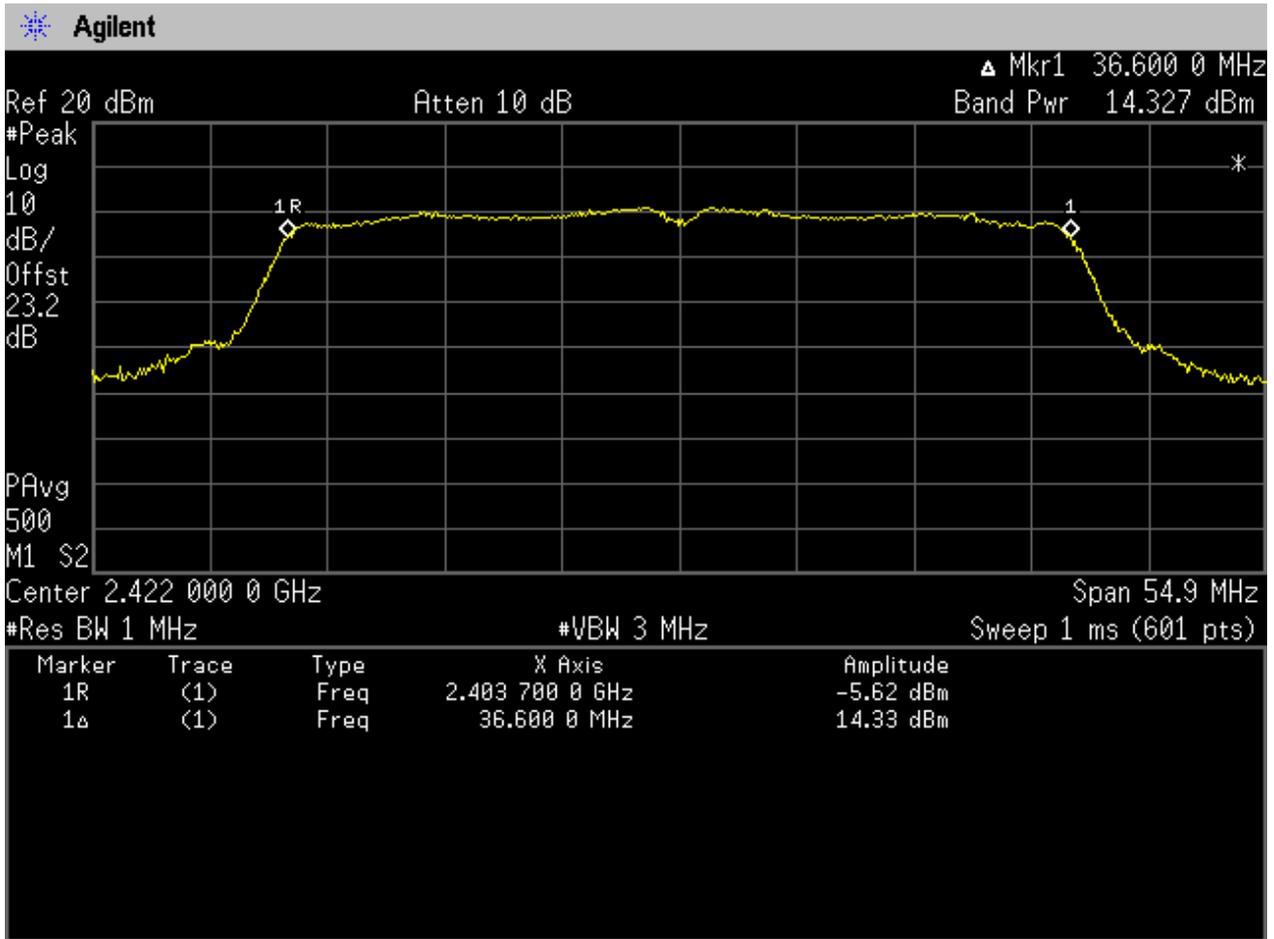
### 2.21.1 Ant 1



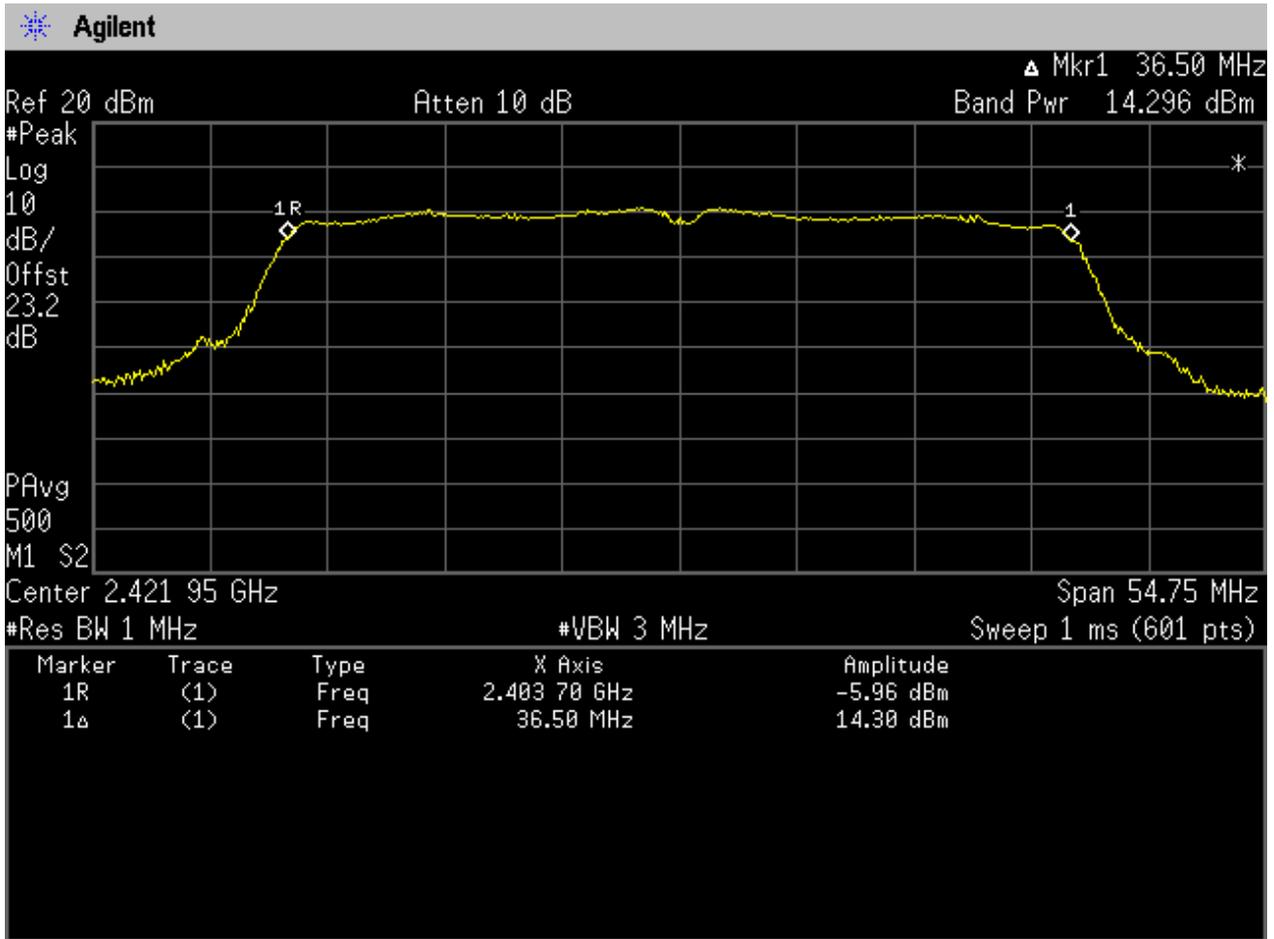
### 2.21.2 Ant 2



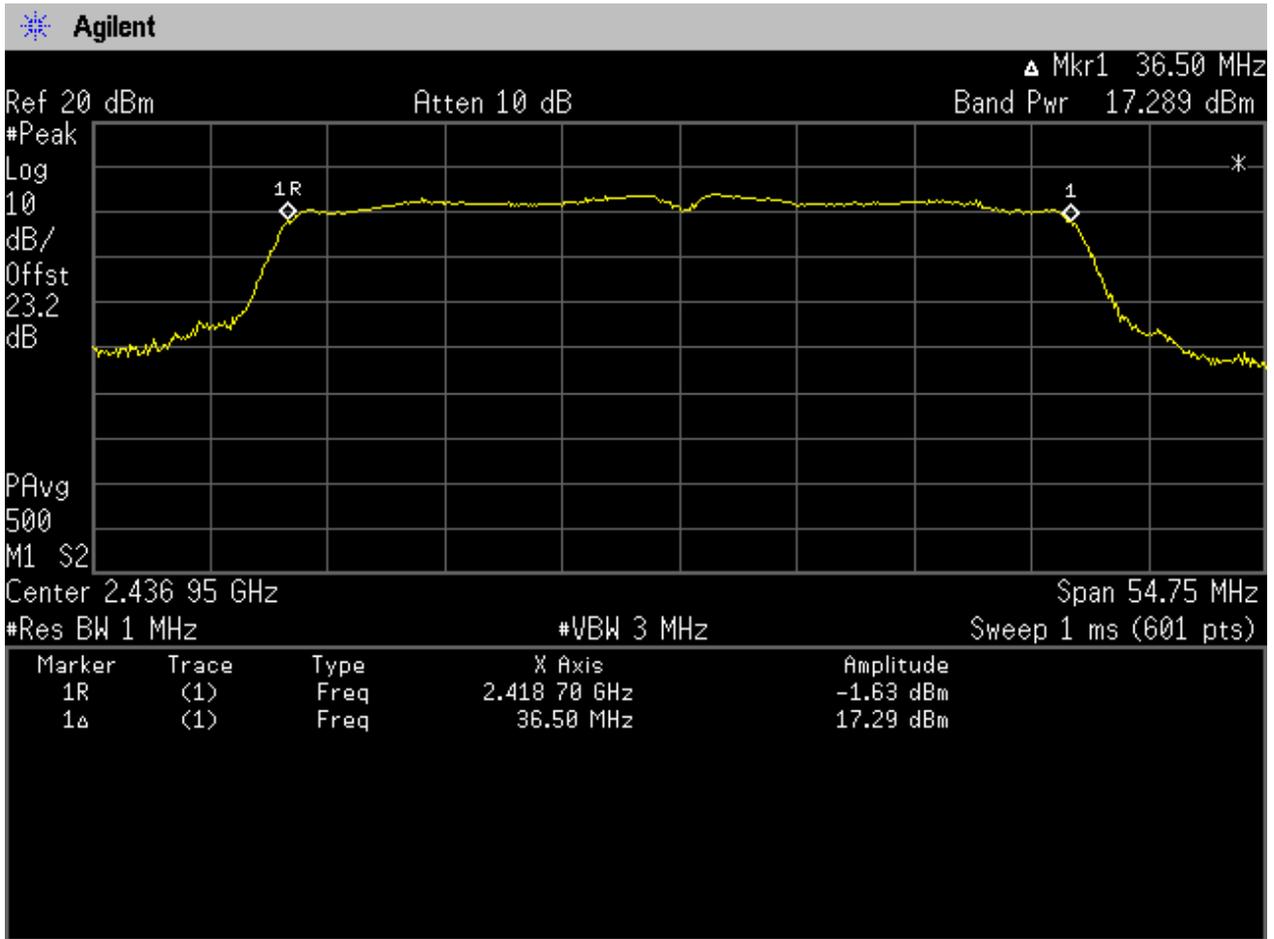
2.2211N40/0\_B@1



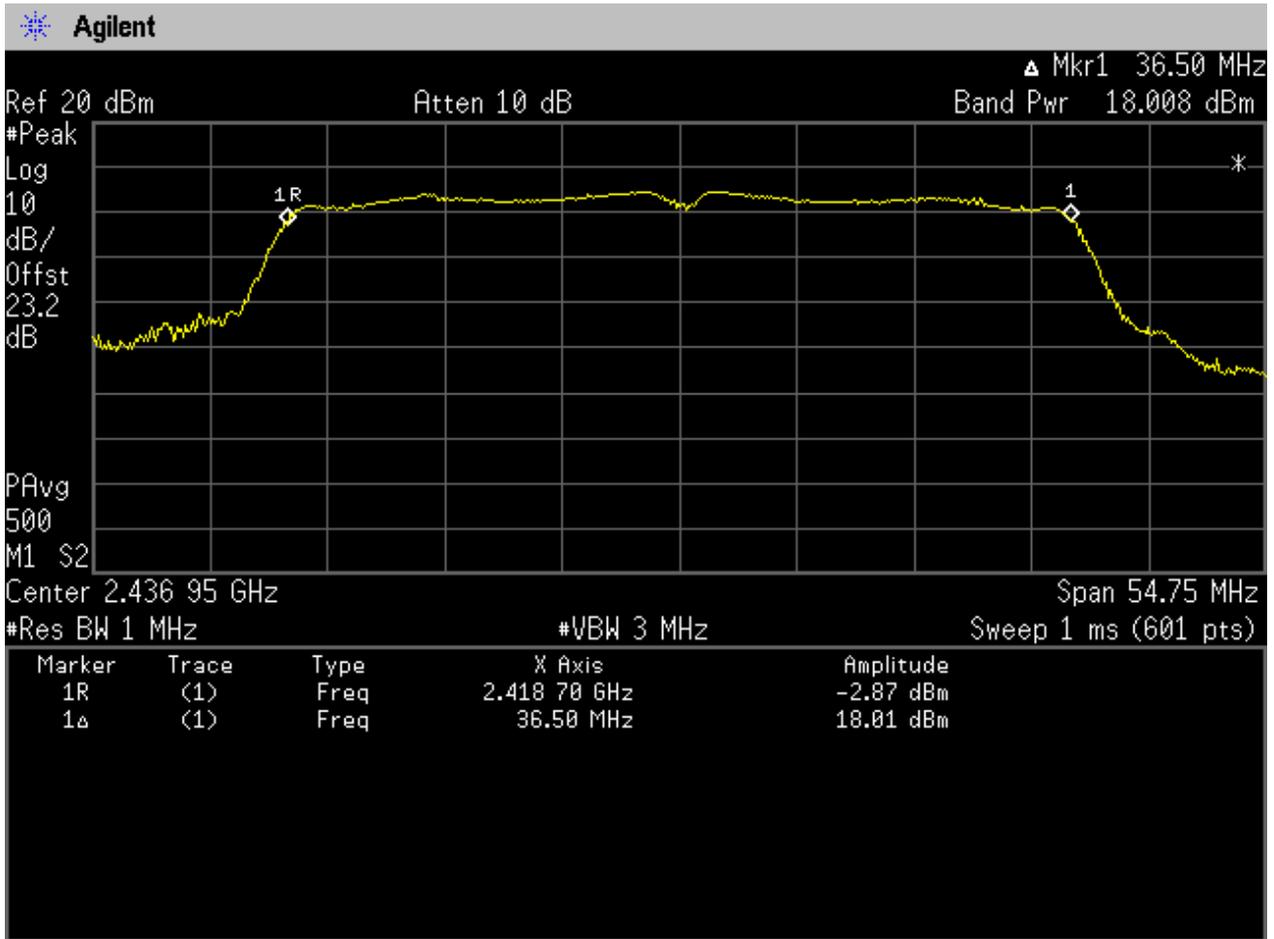
2.2311N40/0\_B@2



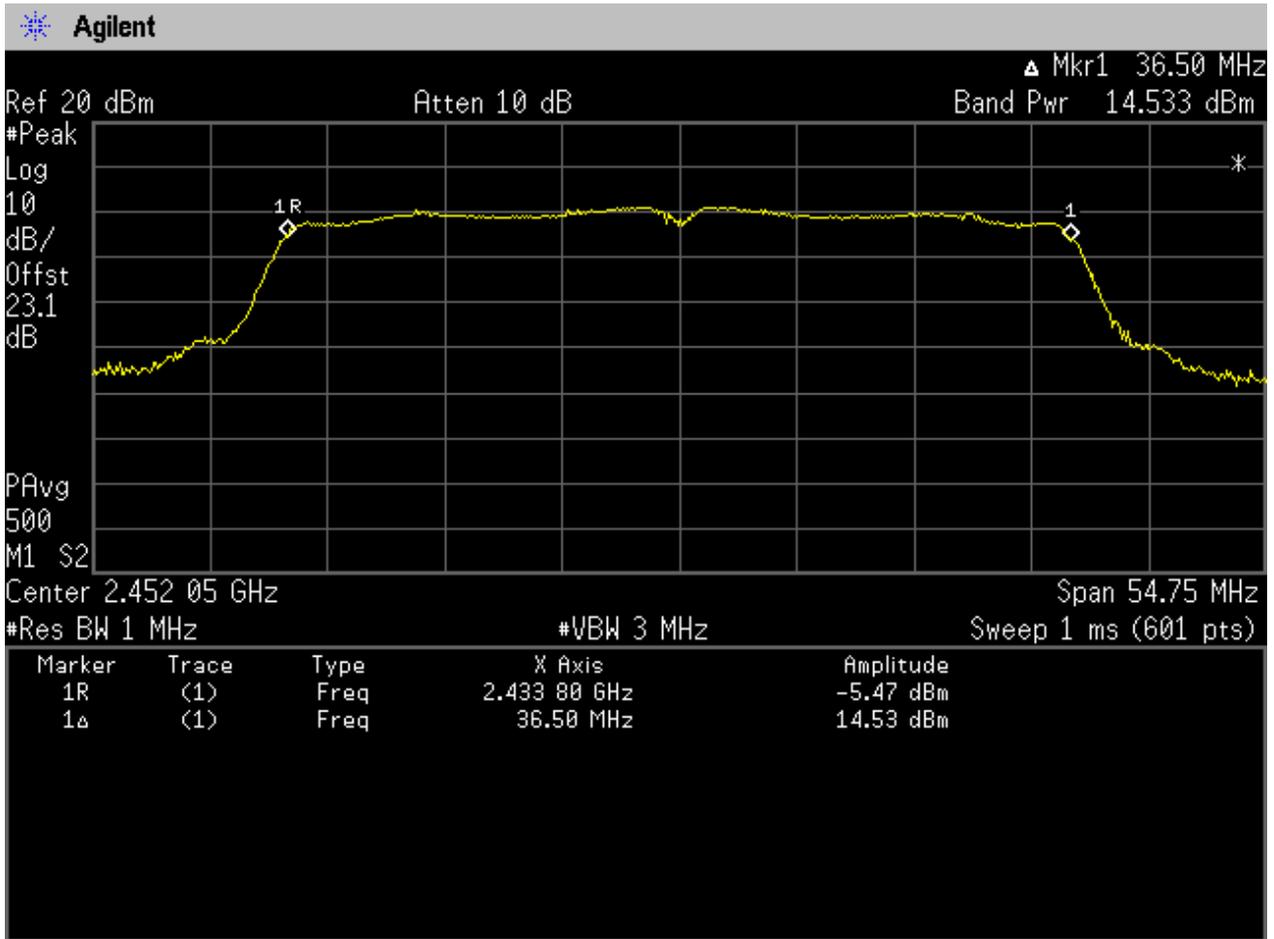
2.2411N40/0\_M@1



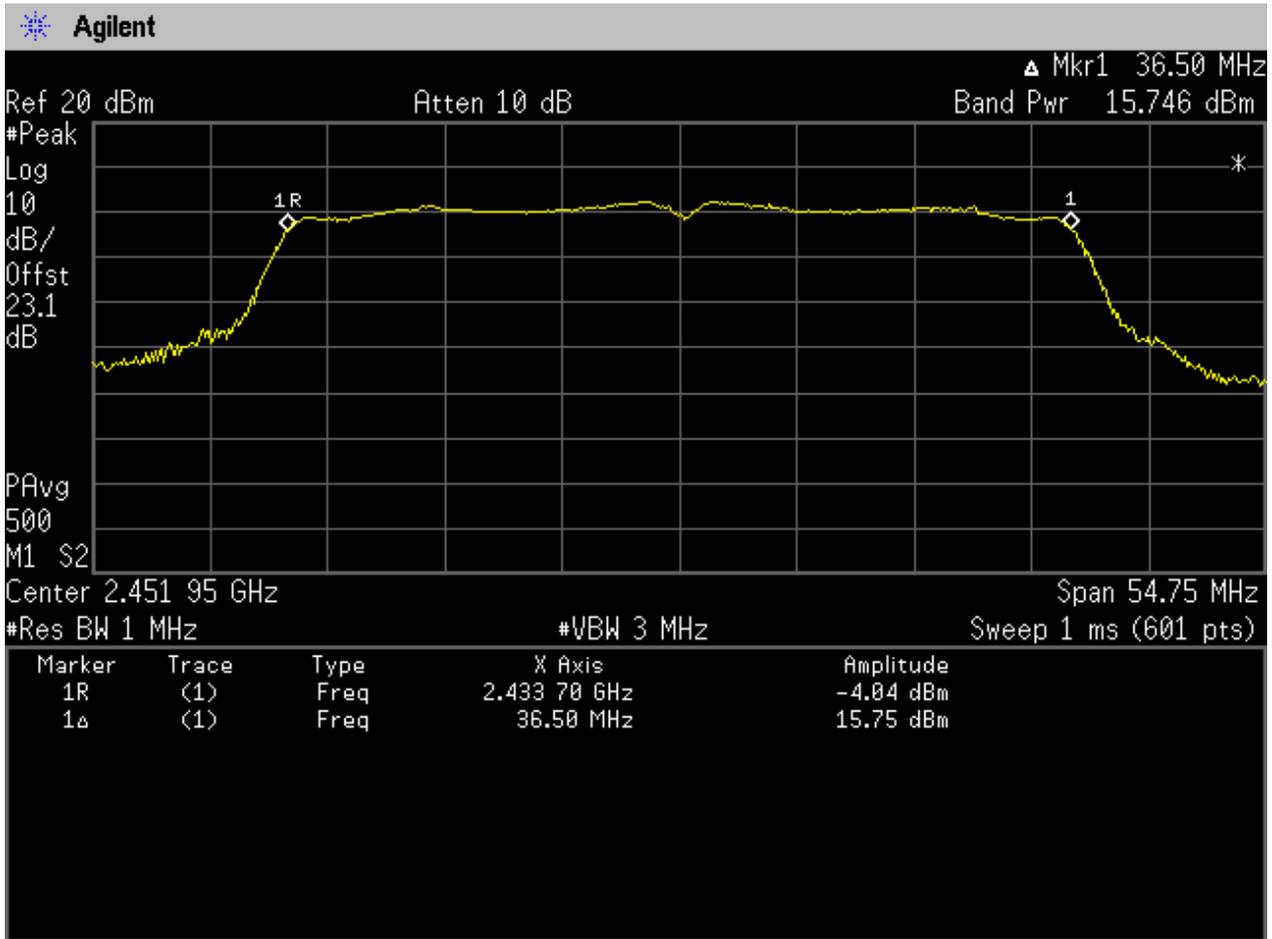
2.2511N40/0\_M@2



2.2611N40/0\_T@1

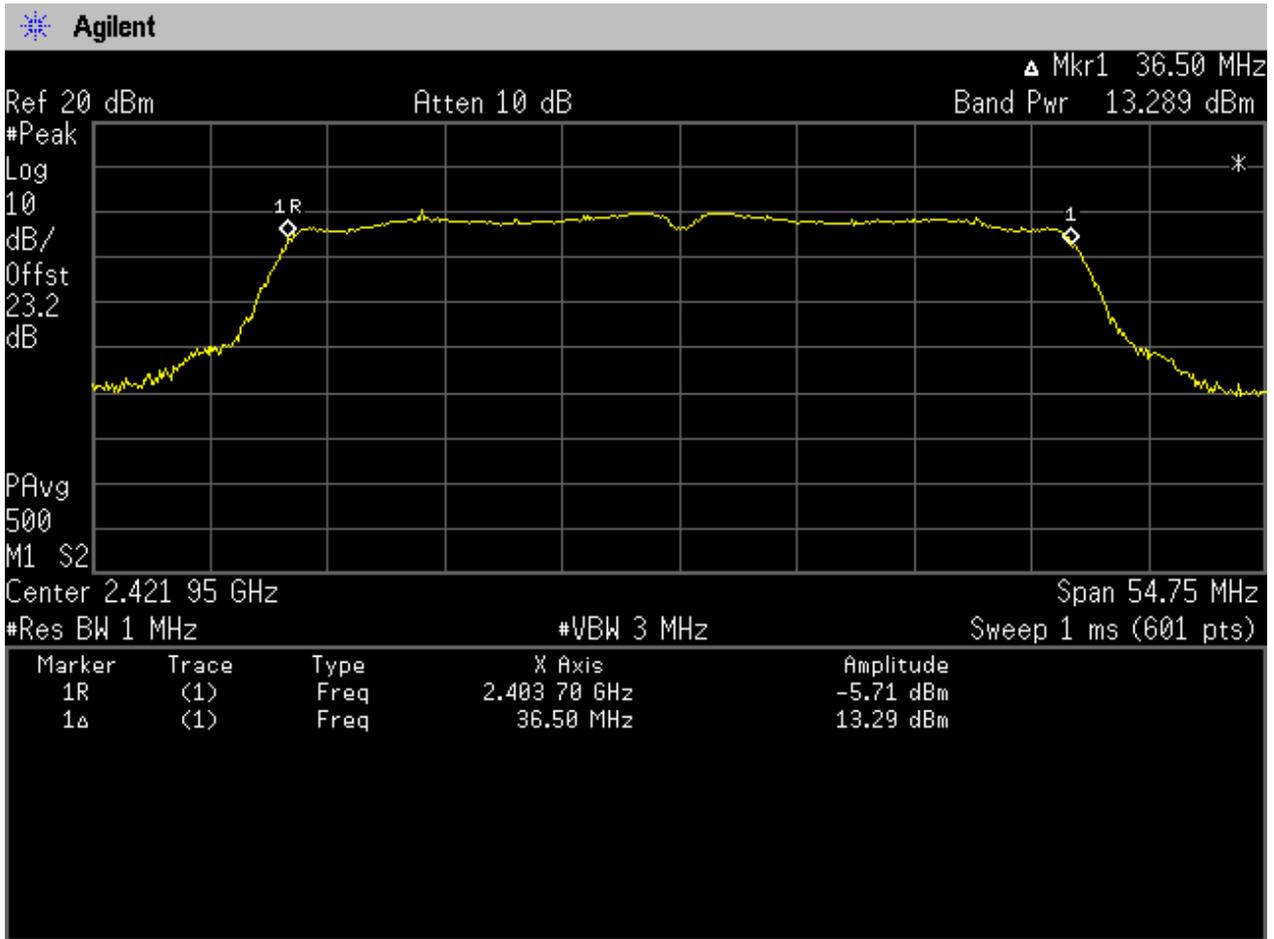


2.2711N40/0\_T@2

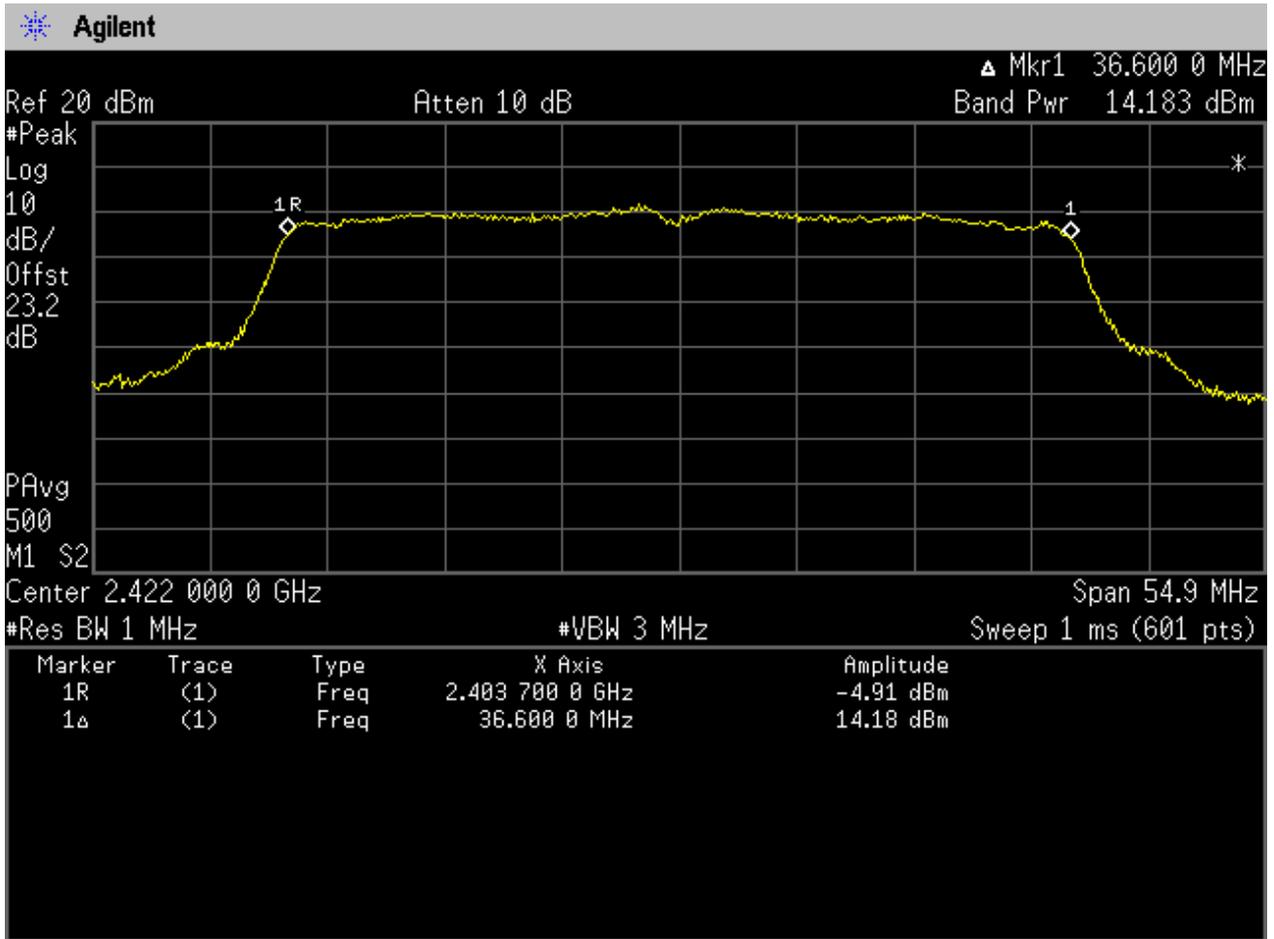


2.2811N40m/8\_B@1+2

2.28.1 Ant 1

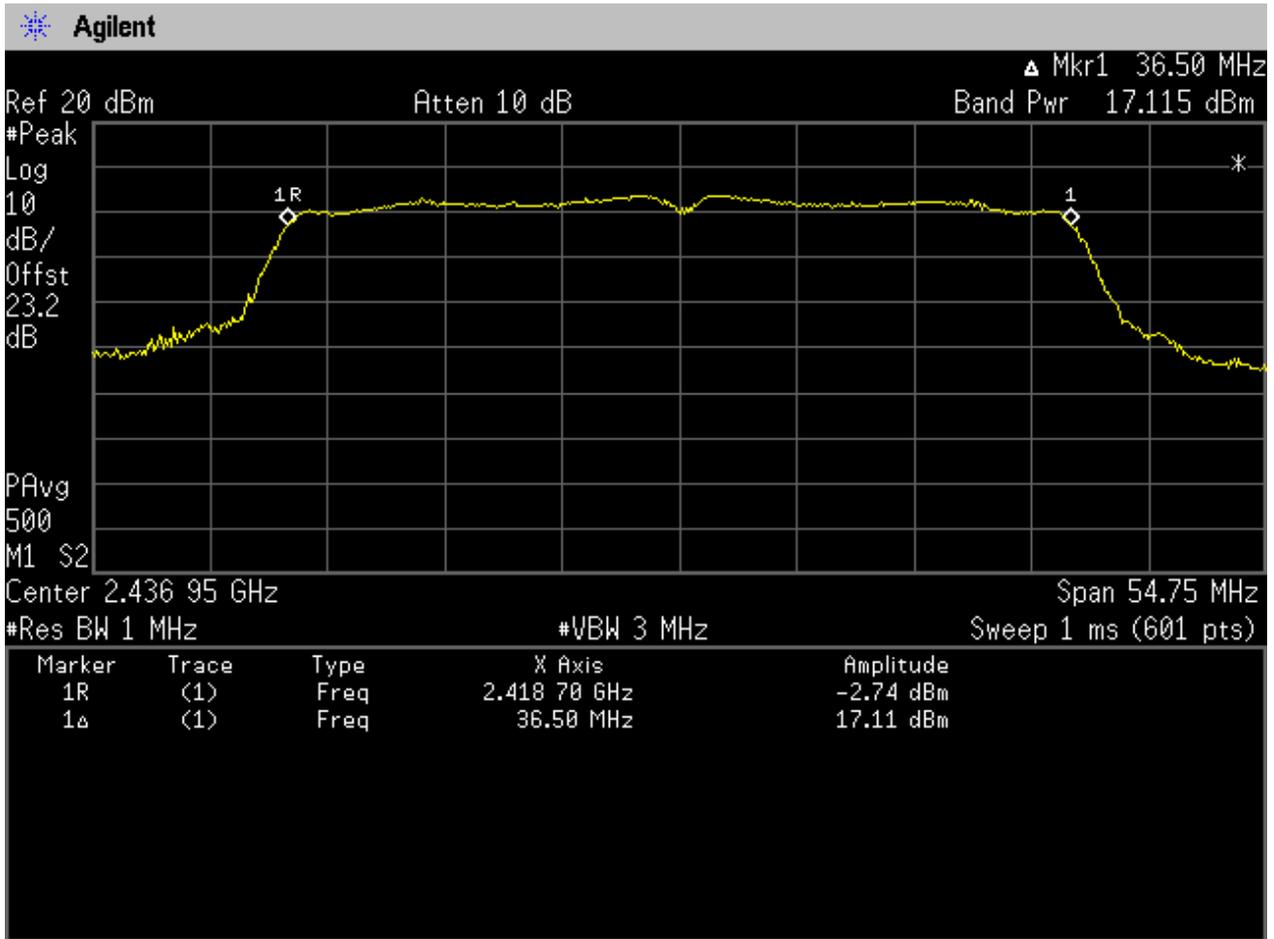


2.28.2 Ant 2

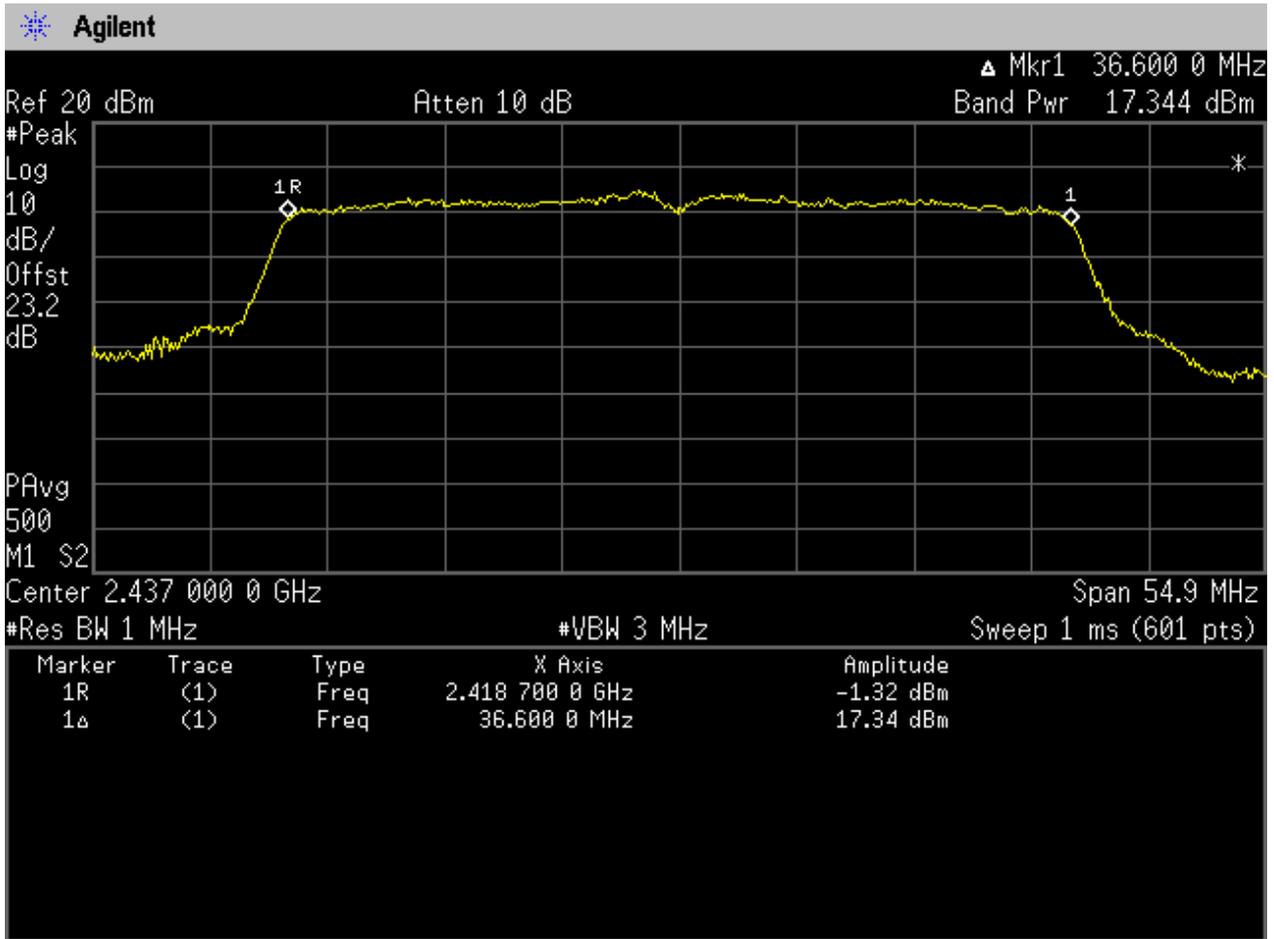


## 2.2911N40m/8\_M@1+2

### 2.29.1 Ant 1

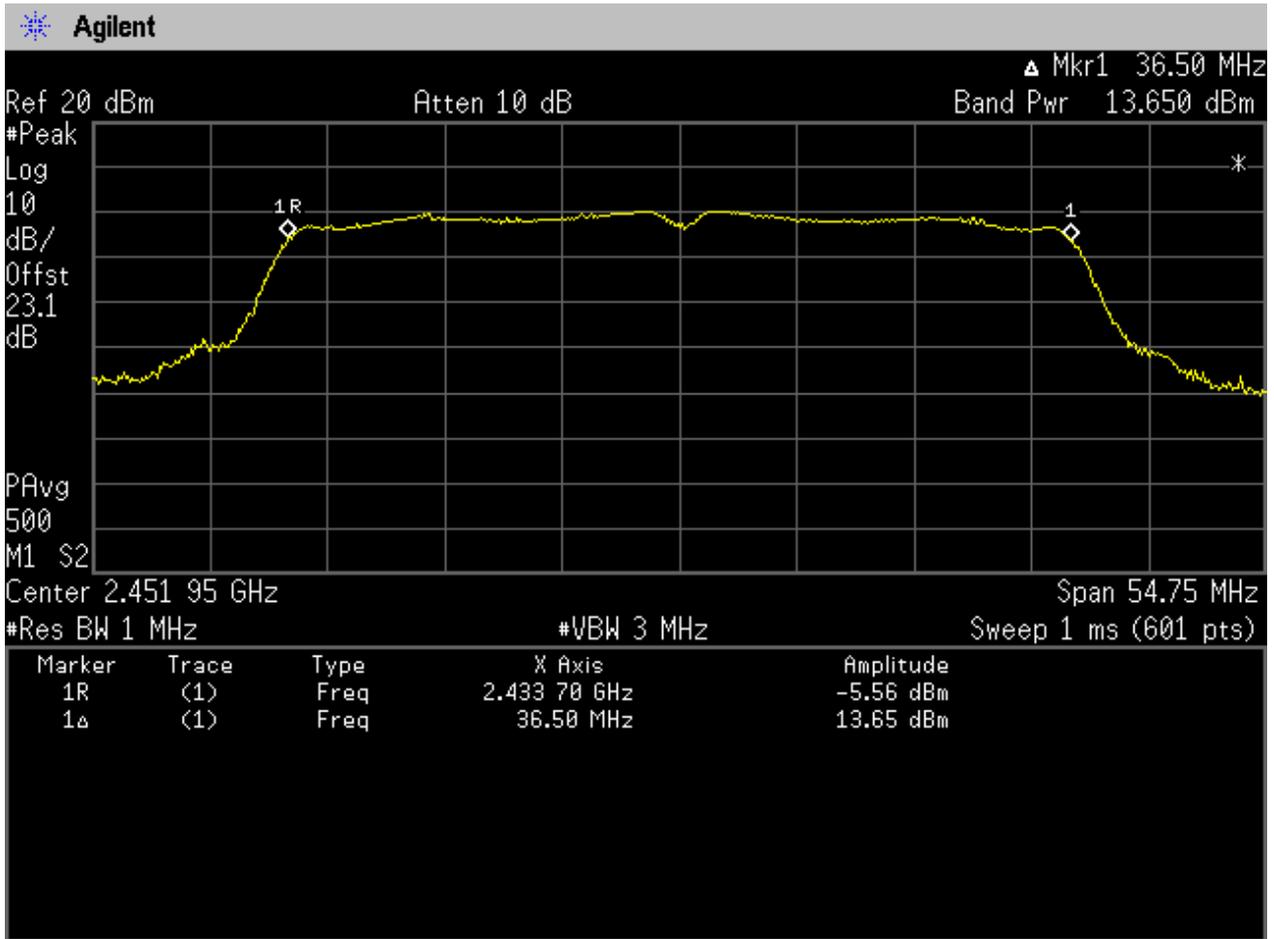


### 2.29.2 Ant 2

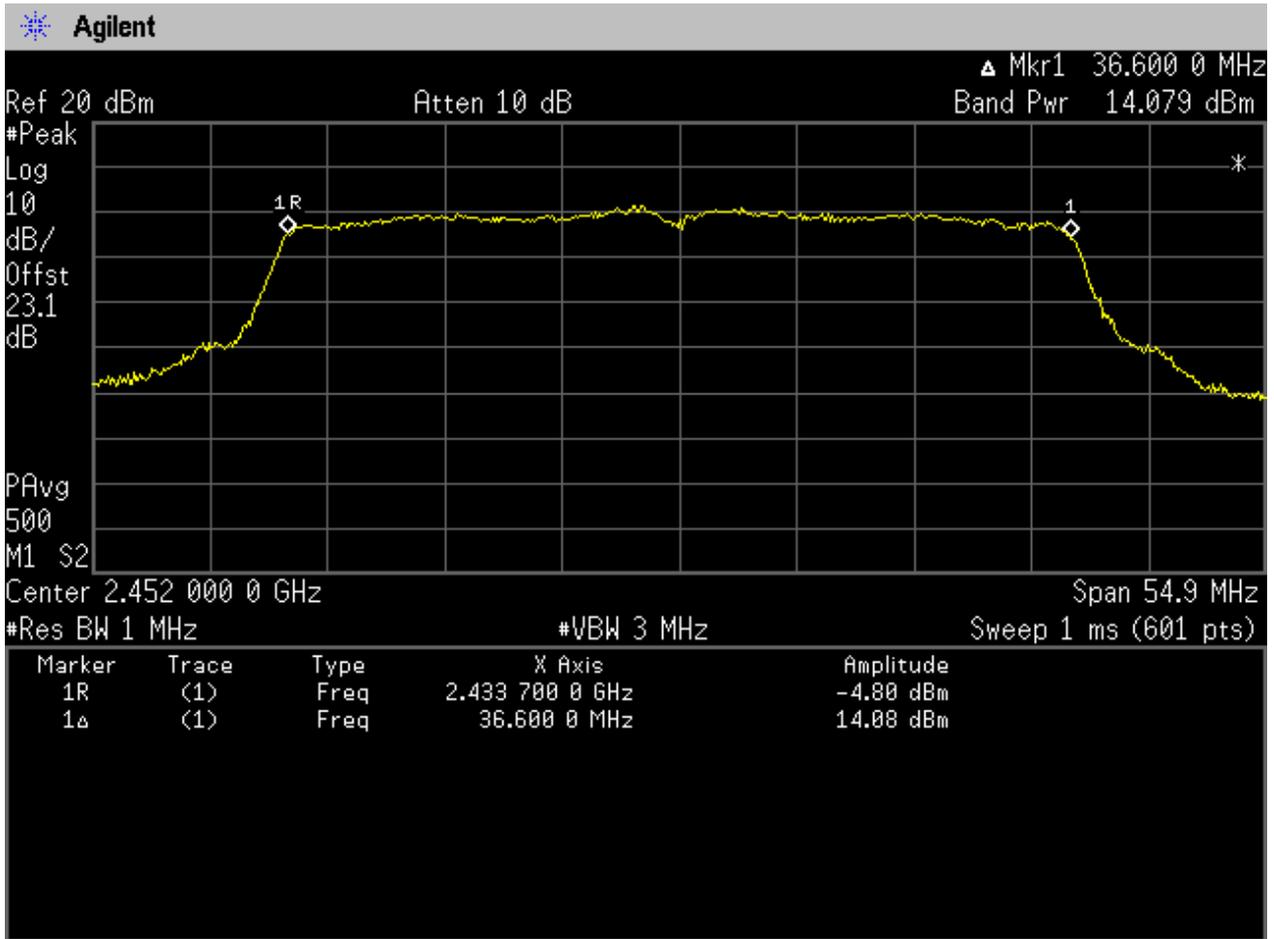


## 2.3011N40m/8\_T@1+2

### 2.30.1 Ant 1



### 2.30.2 Ant 2





# Appendix D: Maximum Power Spectral Density Level

In this Appendix, the “PD\*” refers to the measured “Maximum Power Spectral Density” value with 100 kHz RBW. The final result “PD” within 3 kHz bandwidth, which is used to compare with the limit requirements, should be adjusted according to:  $PD [dBm/3 kHz] = PD^* [dBm/100 kHz] - 15.2 [dB]$ .

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain as “PD@i [dBm]”, and then combined into the final result “PD [dBm]” to compare with the limit according to:  $PD [dBm] = 10 \times \lg(10^{PD@1 [dBm] / 10} + \dots + 10^{PD@N [dBm] / 10})$  (the N denotes the antenna chains used by smart antenna systems). NOTE that the method is a stringent but convenient consideration, because each “PD@i [dBm]” may be located at different frequency occurrence. For the final judgment, the combination of the final result “PD [dBm]” (Trace#sum) should be performed frequency-by-frequency on the measured spectrum trace for each antenna chain (Trace#i). Unless otherwise specified, the method for final judgment will not be used.

## 1 Result Table

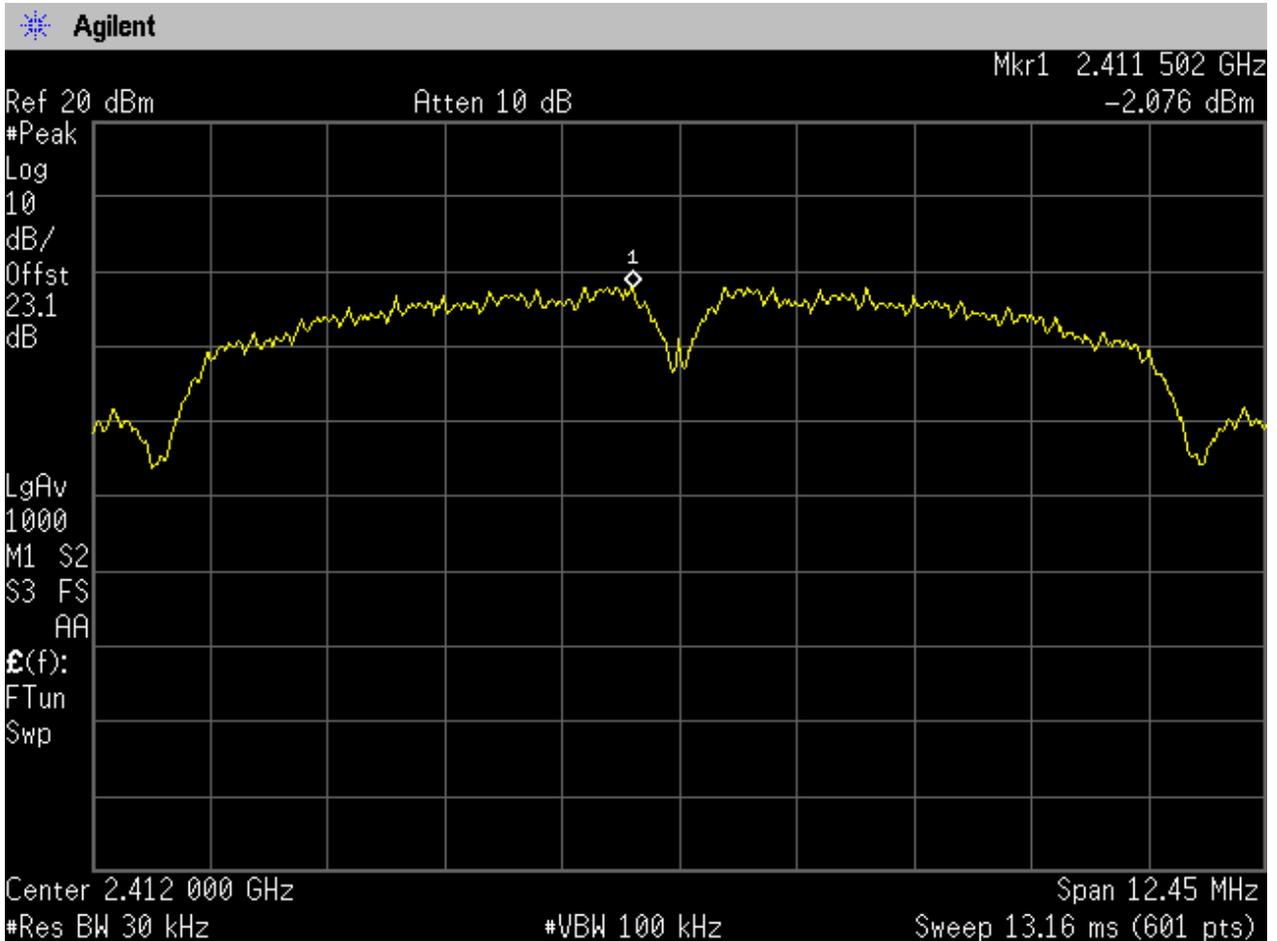
EUT Conf.	Ant.	PD@i [dBm/3kHz]	PD [dBm/3kHz]	Verdict
11B/1_B@1	Ant 1	-2.08	-2.08	Pass
11B/1_B@2	Ant 2	-2.07	-2.07	Pass
11B/1_M@1	Ant 1	-1.32	-1.32	Pass
11B/1_M@2	Ant 2	-1.71	-1.71	Pass
11B/1_T@1	Ant 1	-1.23	-1.23	Pass
11B/1_T@2	Ant 2	-1.6	-1.6	Pass
11G/6_B@1	Ant 1	-5.86	-5.86	Pass
11G/6_B@2	Ant 2	-6.03	-6.03	Pass
11G/6_M@1	Ant 1	-2.49	-2.49	Pass
11G/6_M@2	Ant 2	-2.42	-2.42	Pass
11G/6_T@1	Ant 1	-5.82	-5.82	Pass
11G/6_T@2	Ant 2	-5.54	-5.54	Pass
11N20/0_B@1	Ant 1	-7.89	-7.89	Pass
11N20/0_B@2	Ant 2	-7.29	-7.29	Pass
11N20/0_M@1	Ant 1	-2.46	-2.46	Pass
11N20/0_M@2	Ant 2	-2.99	-2.99	Pass
11N20/0_T@1	Ant 1	-6.71	-6.71	Pass
11N20/0_T@2	Ant 2	-6.39	-6.39	Pass
11N20m/8_B@1+2	Ant 1	-9.8	-6.06	Pass
	Ant 2	-8.44		
11N20m/8_M@1+2	Ant 1	-2.41	0.91	Pass
	Ant 2	-1.81		
11N20m/8_T@1+2	Ant 1	-8.94	-5.48	Pass
	Ant 2	-8.08		
11N40/0_B@1	Ant 1	-10.96	-10.96	Pass
11N40/0_B@2	Ant 2	-11.17	-11.17	Pass



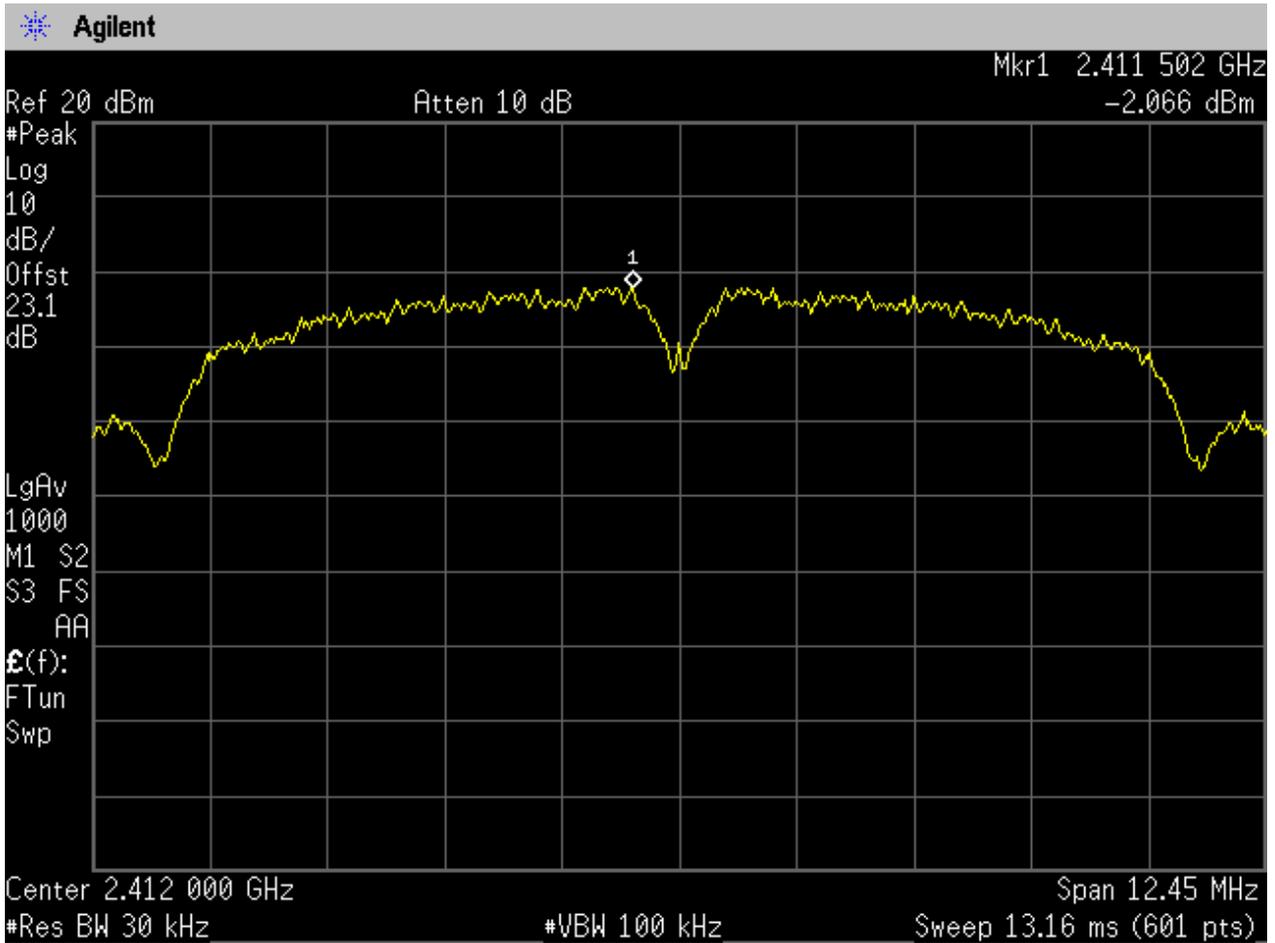
EUT Conf.	Ant.	PD@i [dBm/3kHz]	PD [dBm/3kHz]	Verdict
11N40/0_M@1	Ant 1	-8.13	-8.13	Pass
11N40/0_M@2	Ant 2	-7.51	-7.51	Pass
11N40/0_T@1	Ant 1	-10.69	-10.69	Pass
11N40/0_T@2	Ant 2	-9.59	-9.59	Pass
11N40m/8_B@1+2	Ant 1	-12.14	-8.74	Pass
	Ant 2	-11.4		
11N40m/8_M@1+2	Ant 1	-8.4	-5.33	Pass
	Ant 2	-8.28		
11N40m/8_T@1+2	Ant 1	-11.82	-8.65	Pass
	Ant 2	-11.5		
(**): The method for final judgment is used for this configuration.				

## 2 Test Plot

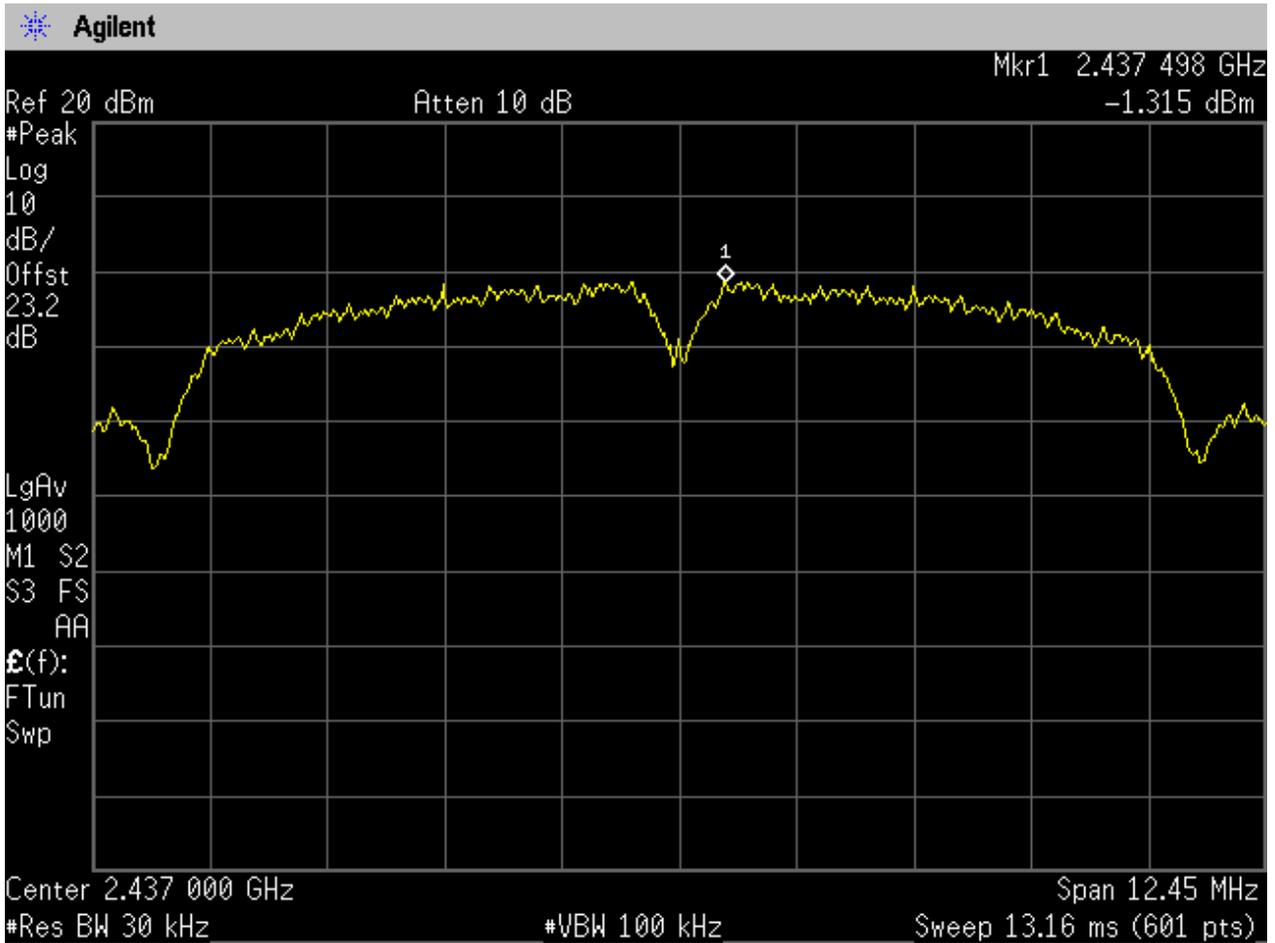
### 2.1 11B/1\_B@1



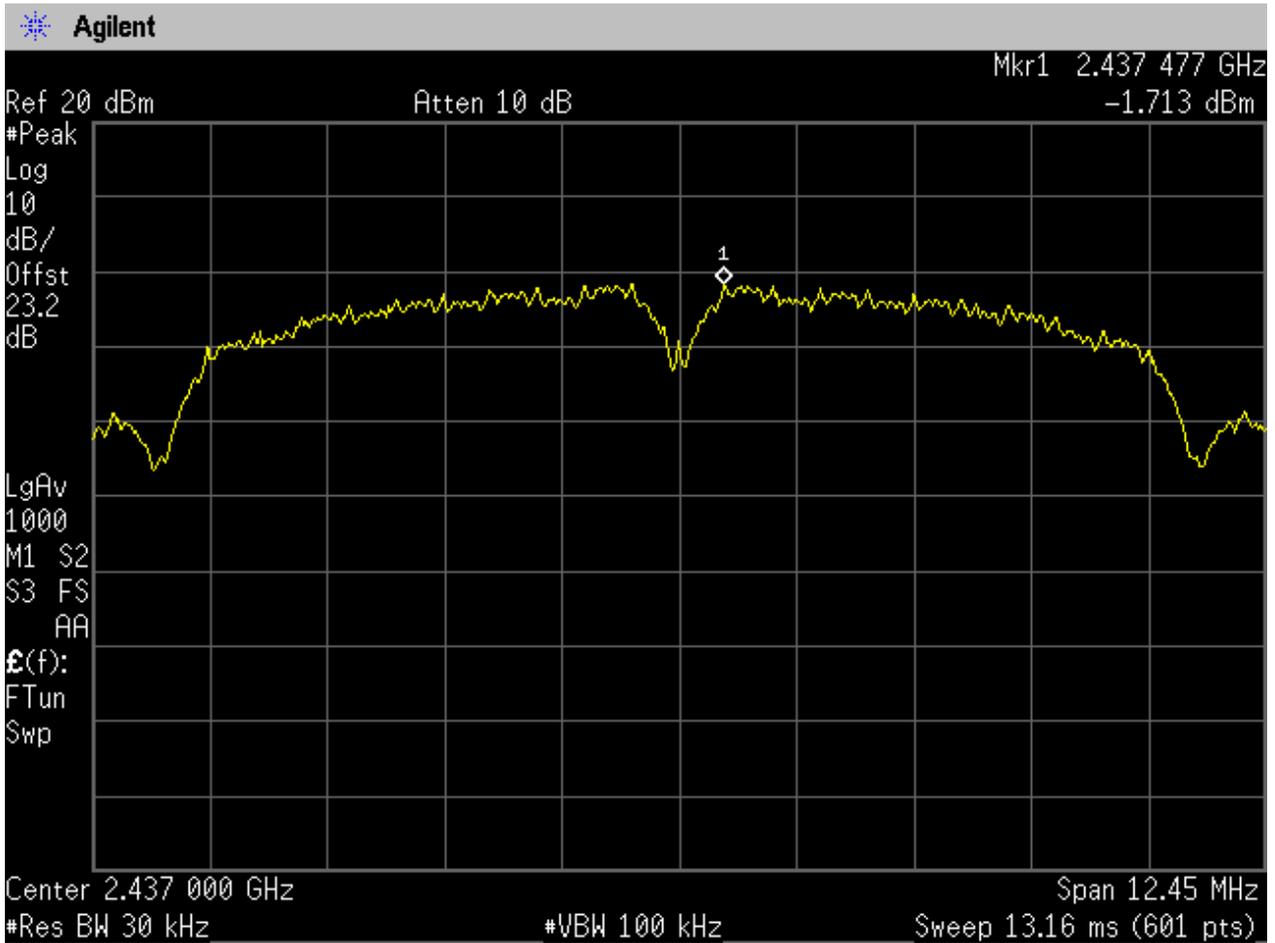
### 2.2 11B/1\_B@2



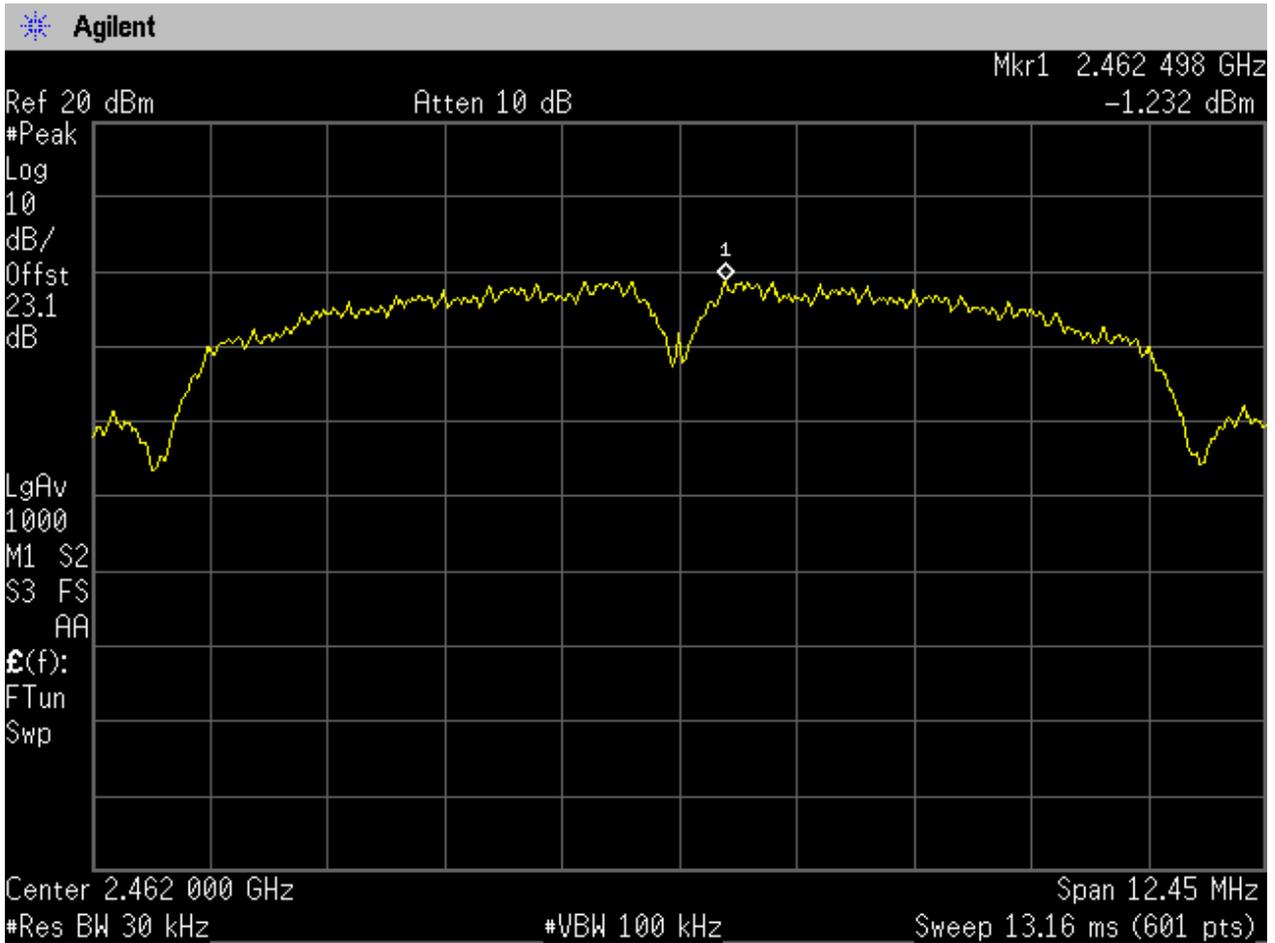
### 2.3 11B/1\_M@1



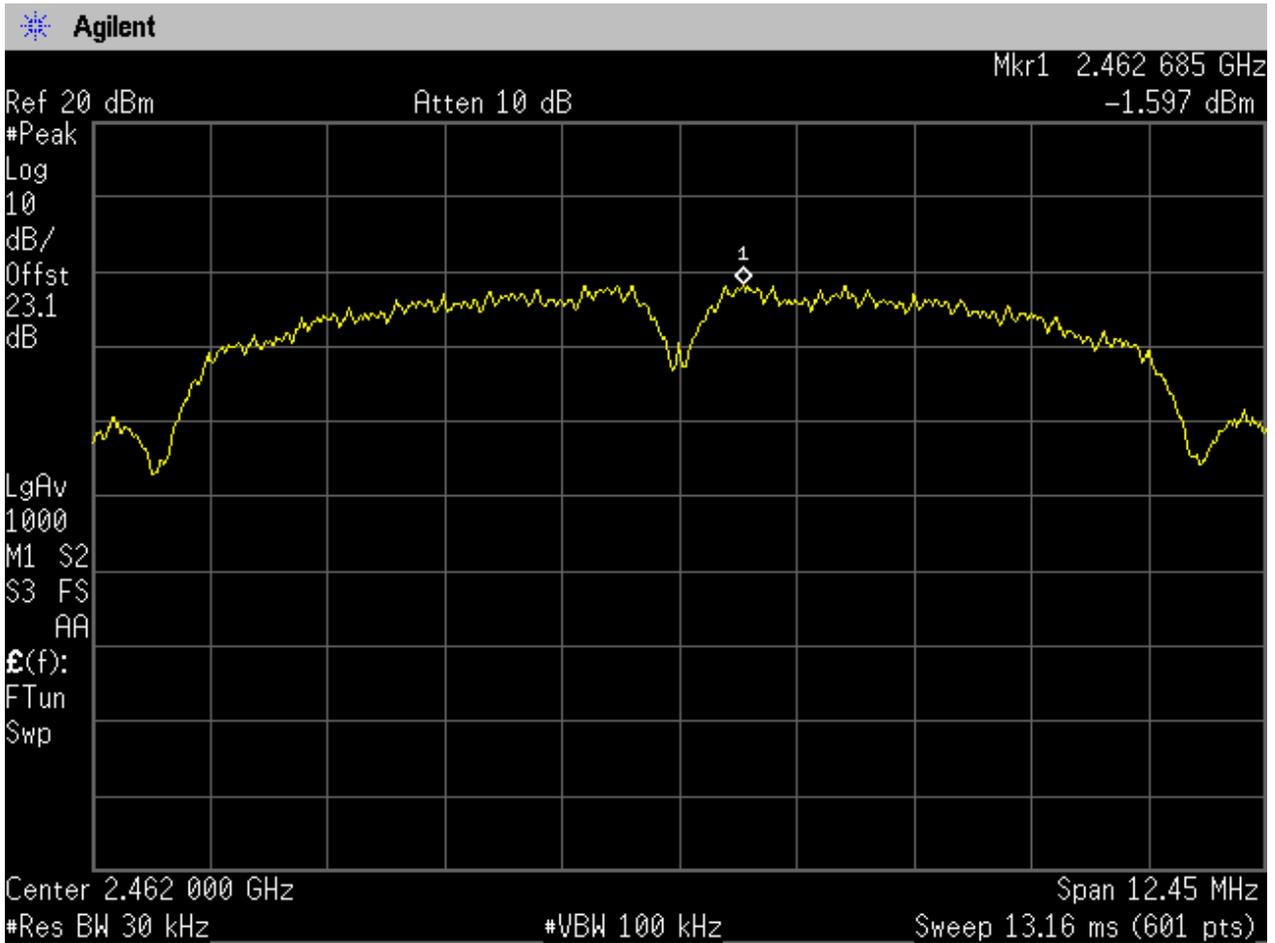
## 2.4 11B/1\_M@2



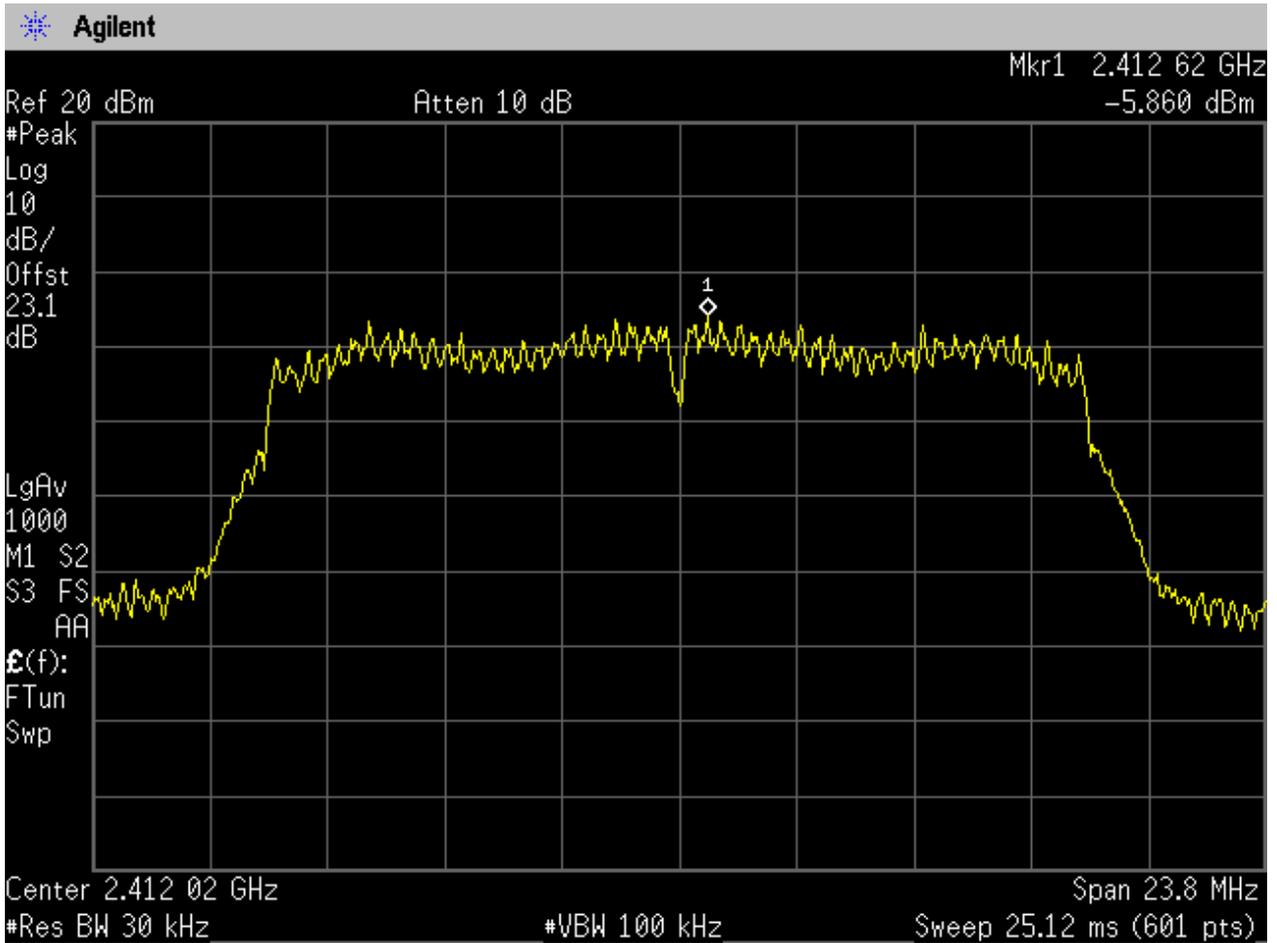
## 2.5 11B/1\_T@1



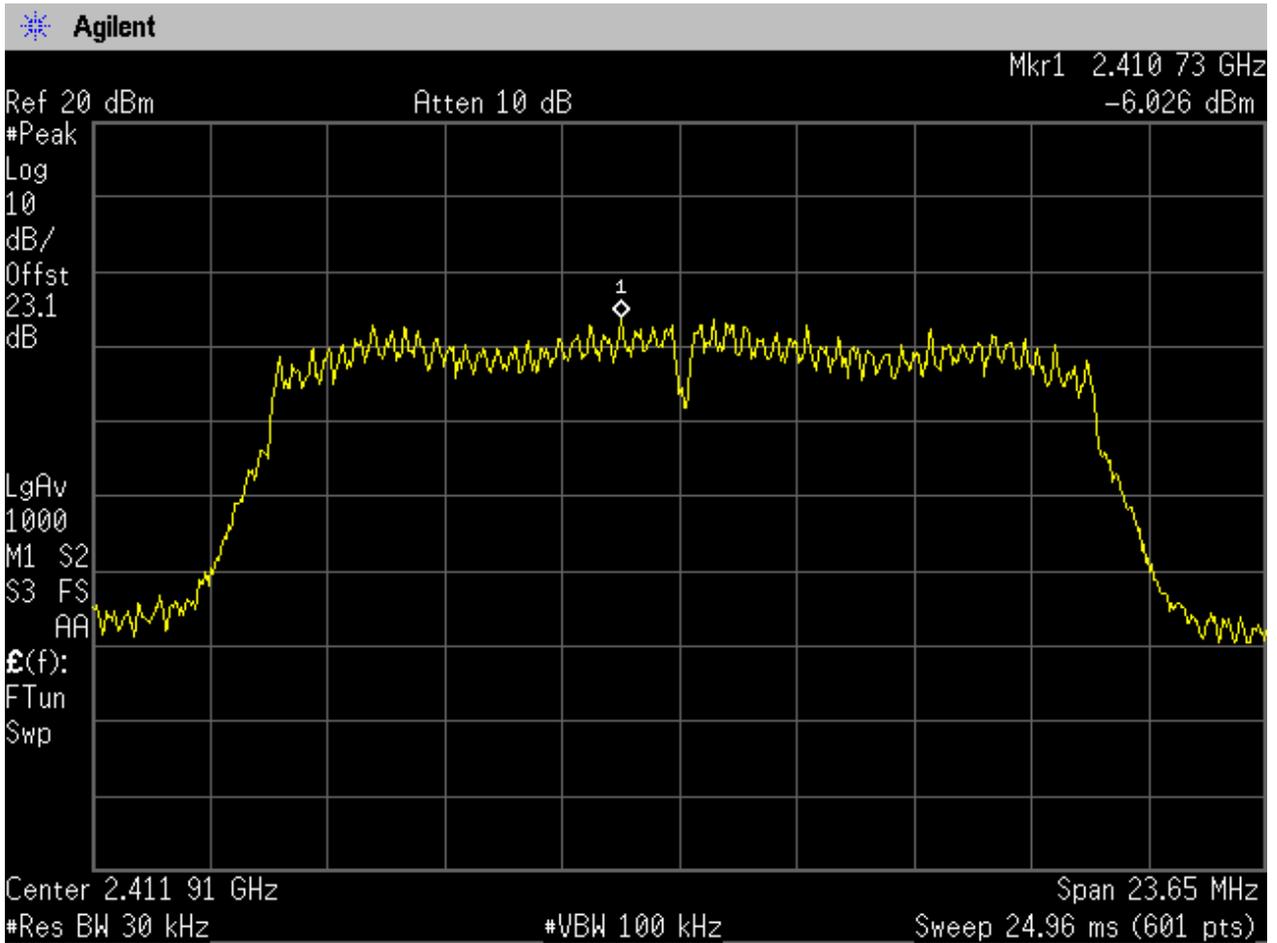
## 2.6 11B/1\_T@2



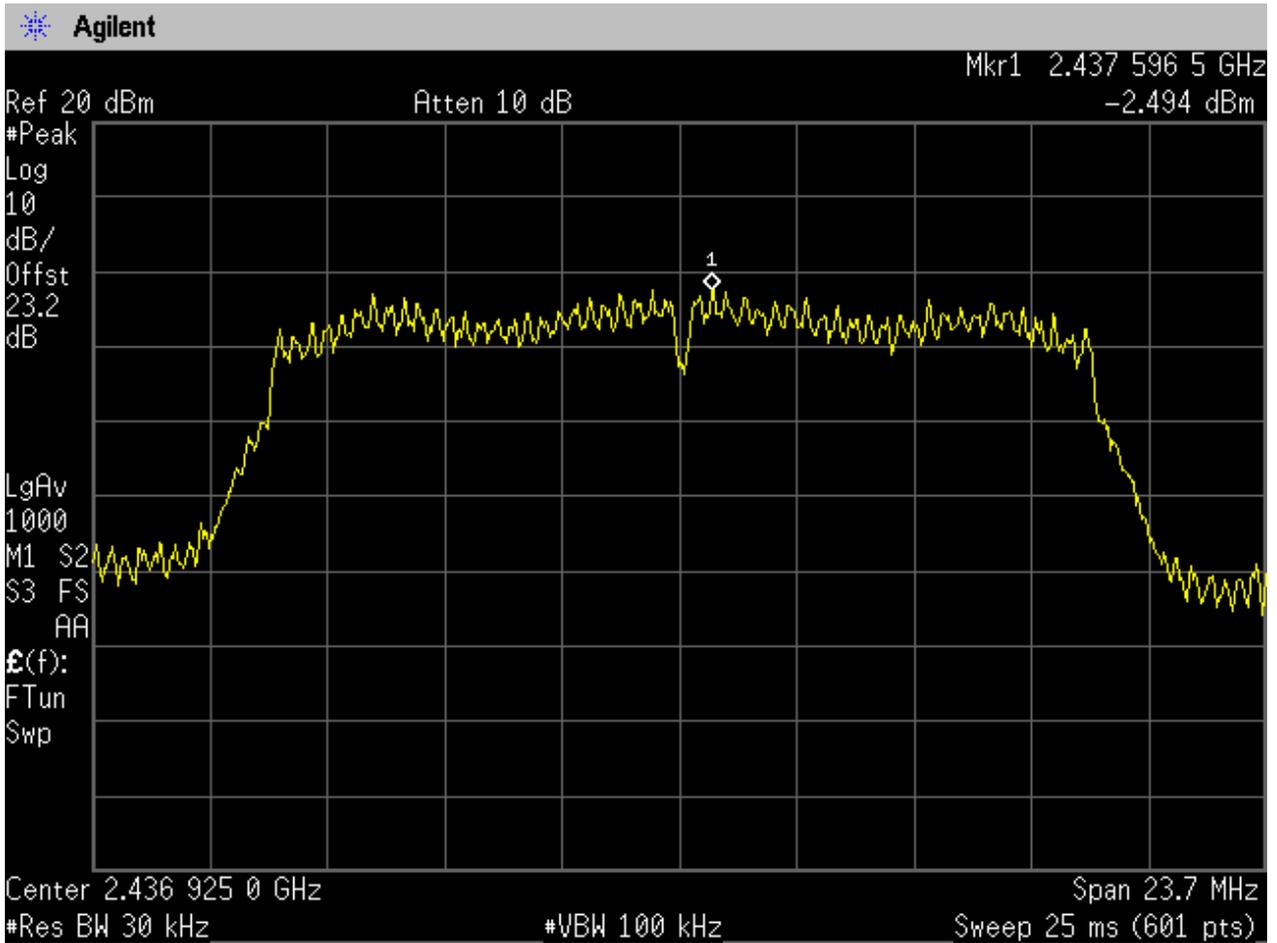
### 2.7 11G/6\_B@1



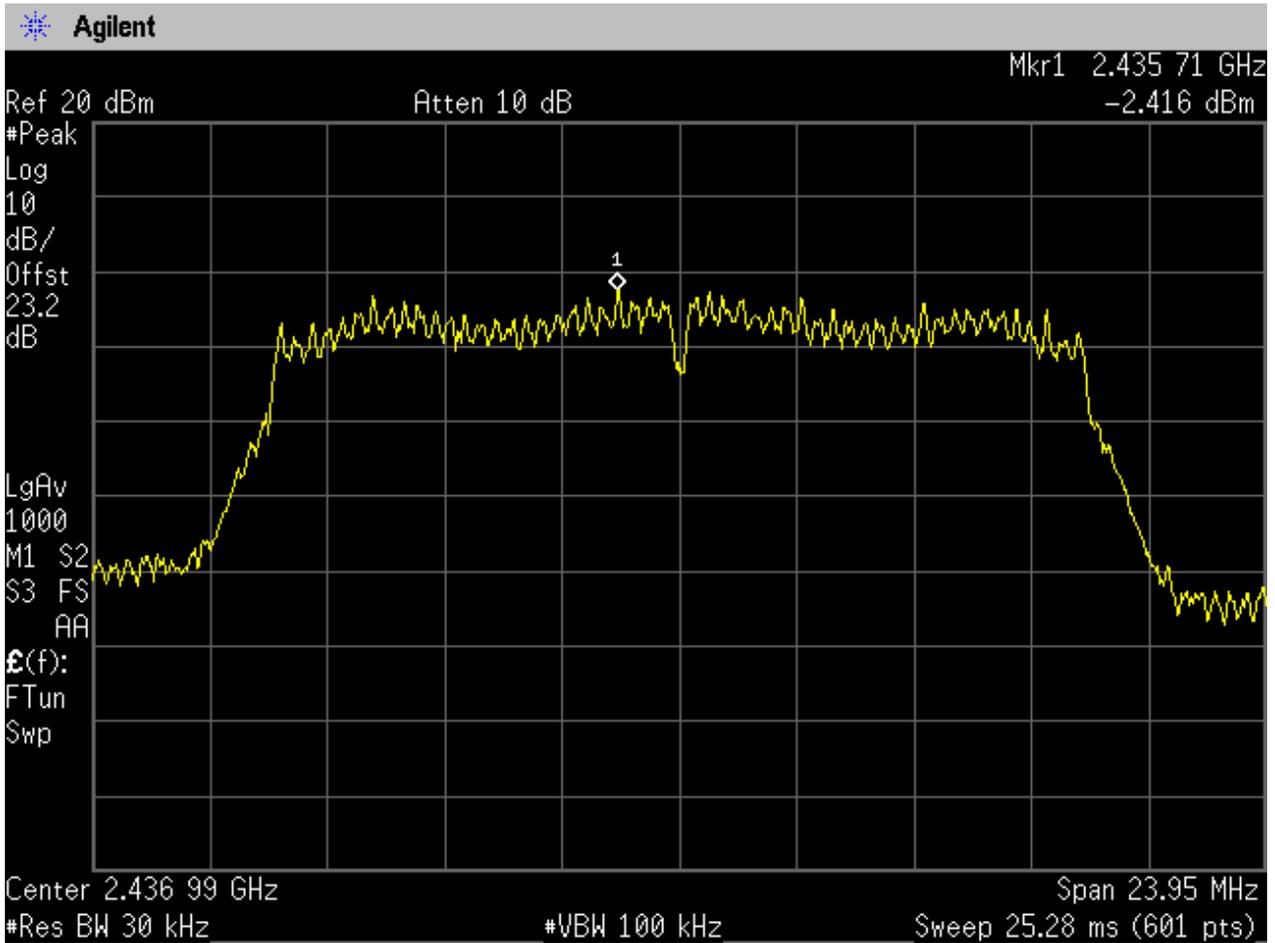
## 2.8 11G/6\_B@2



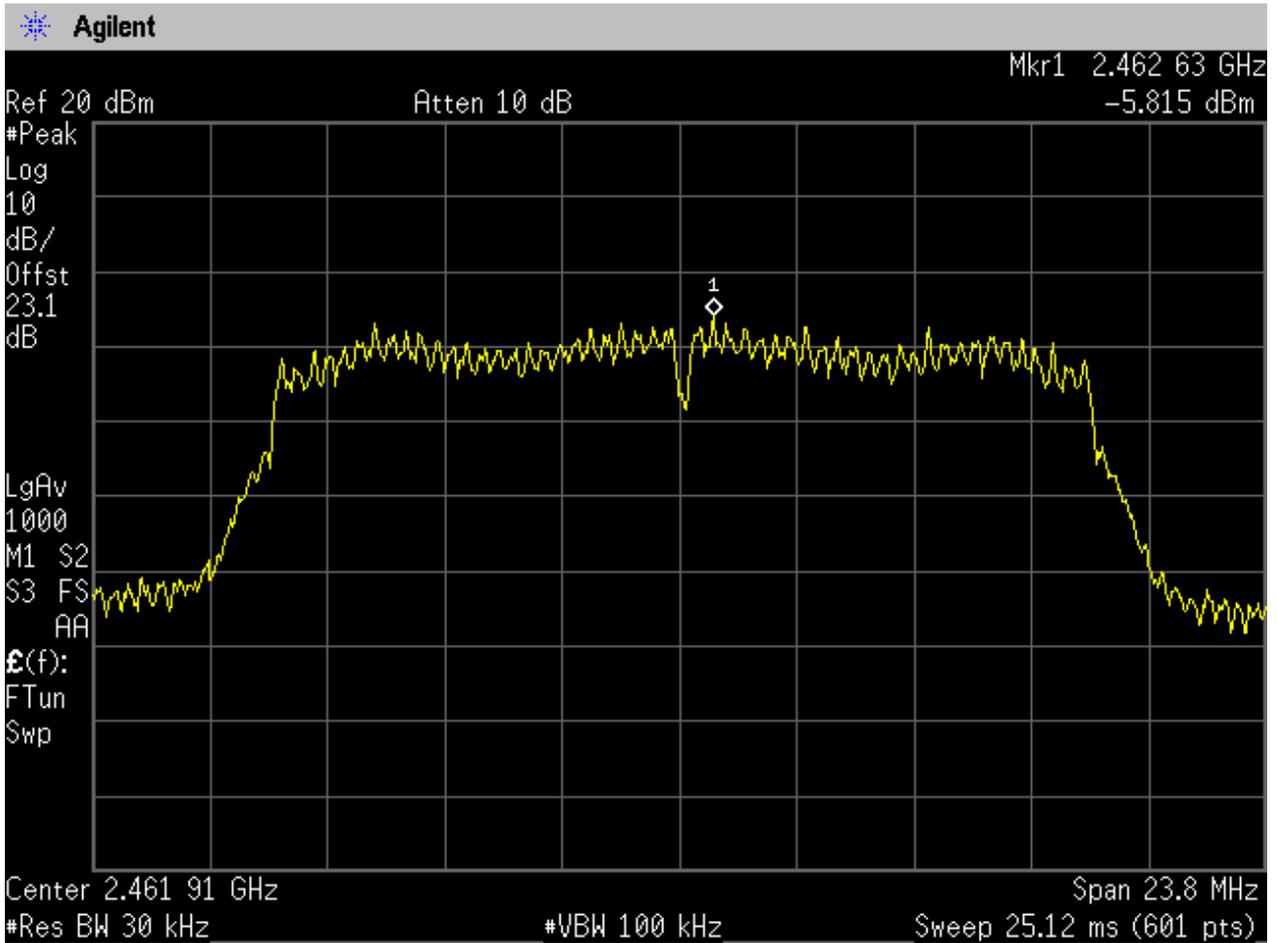
### 2.9 11G/6\_M@1



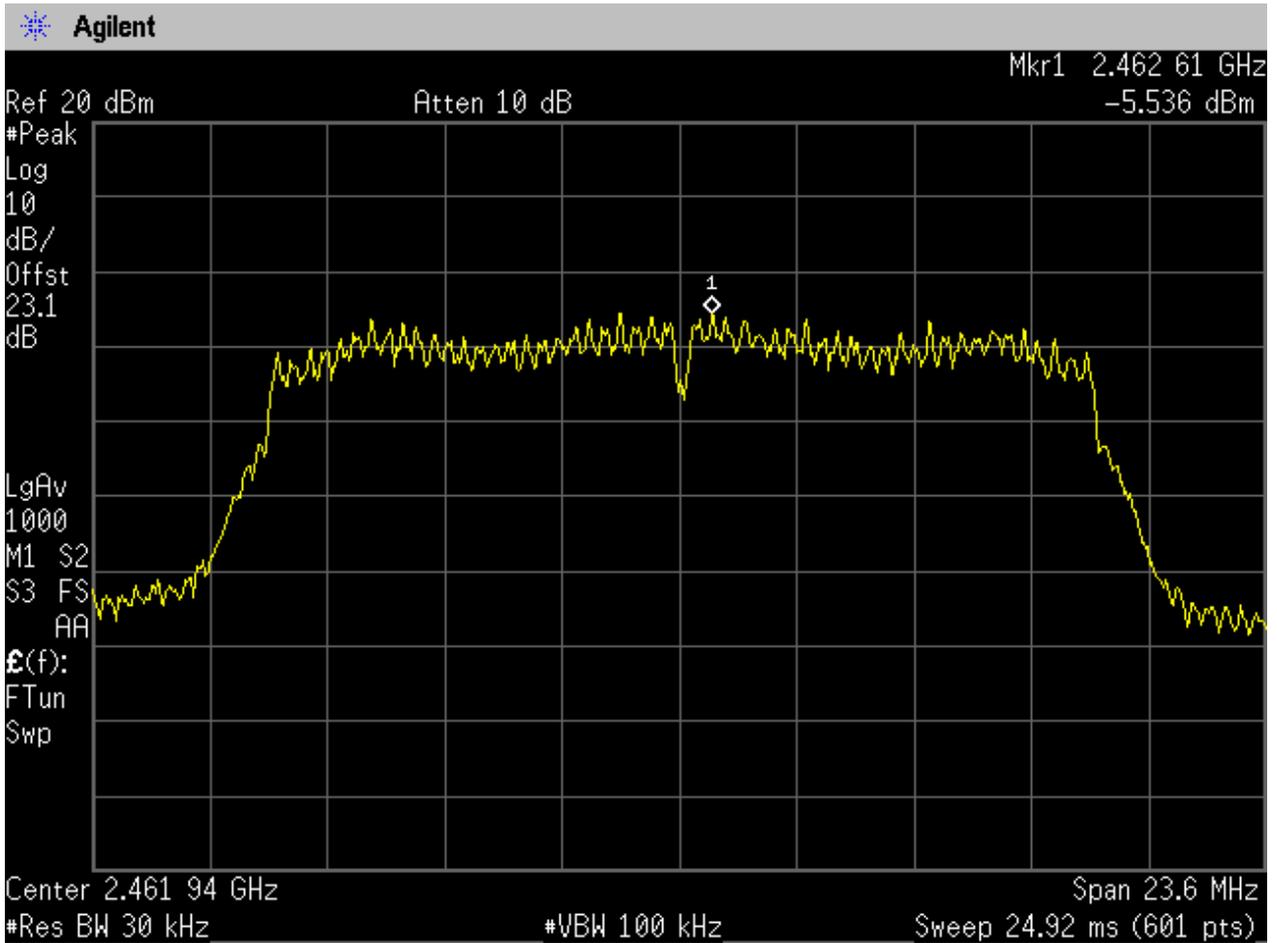
2.1011G/6\_M@2



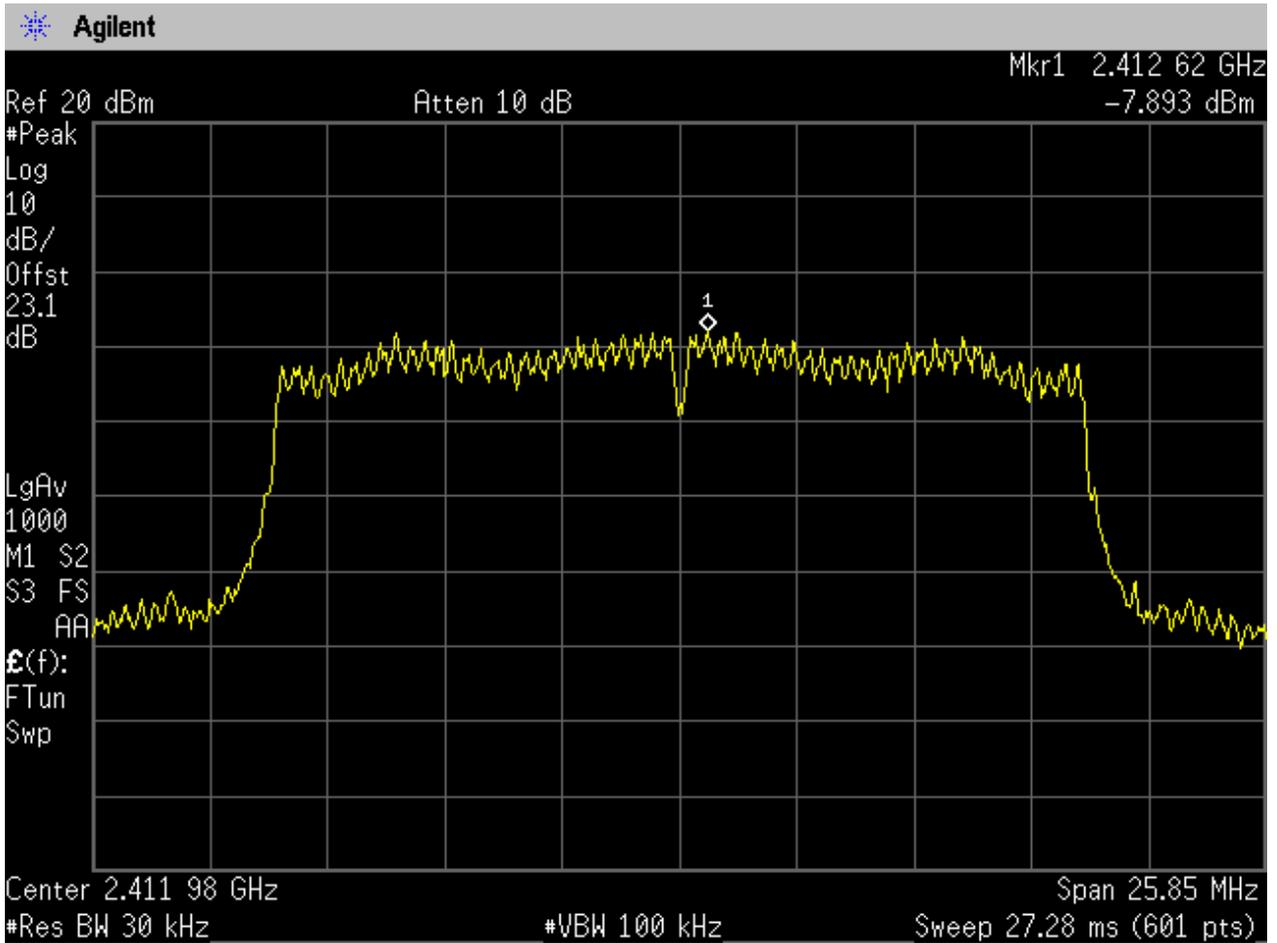
2.1111G/6\_T@1



2.1211G/6\_T@2

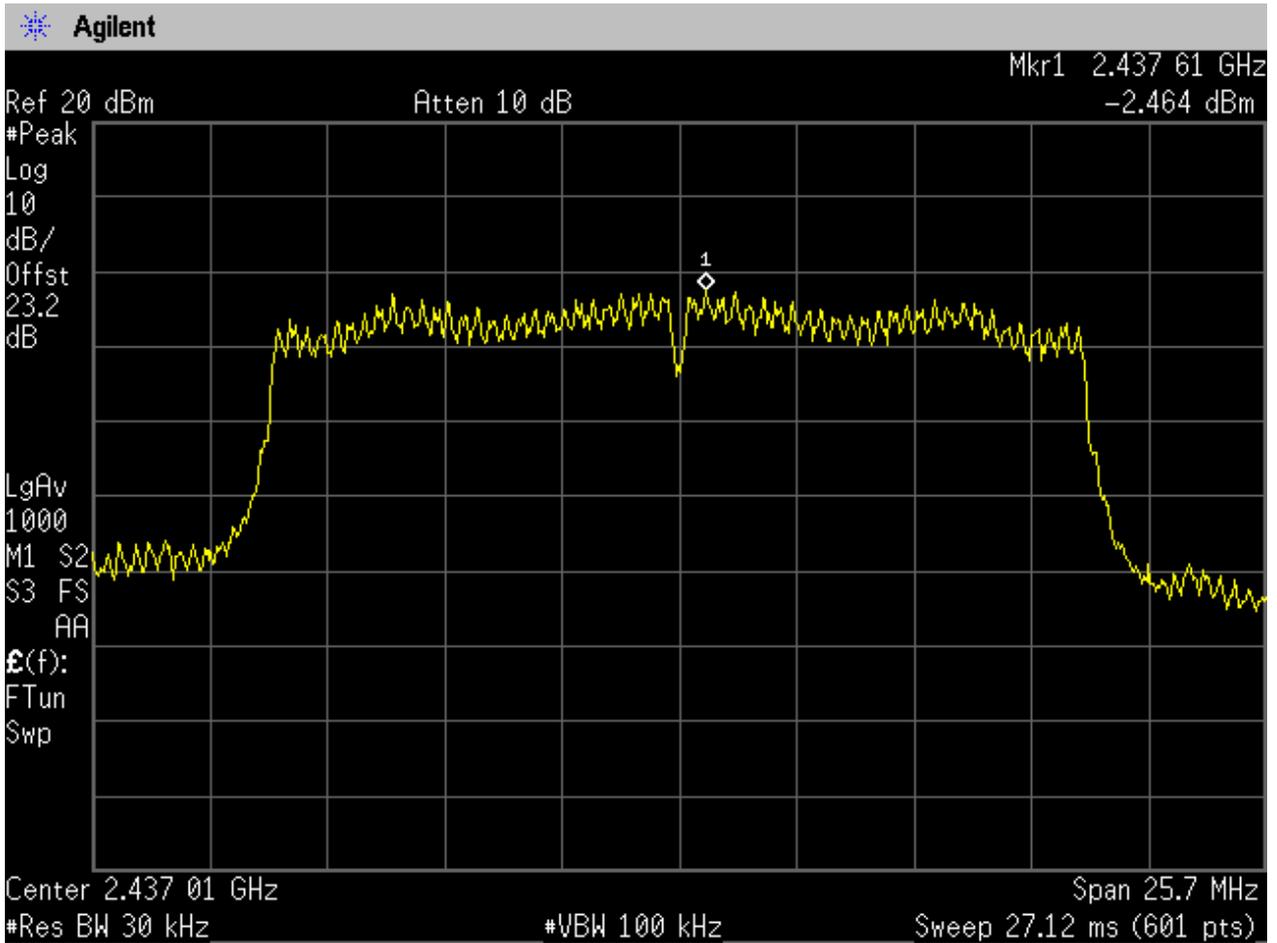


2.1311N20/0\_B@1



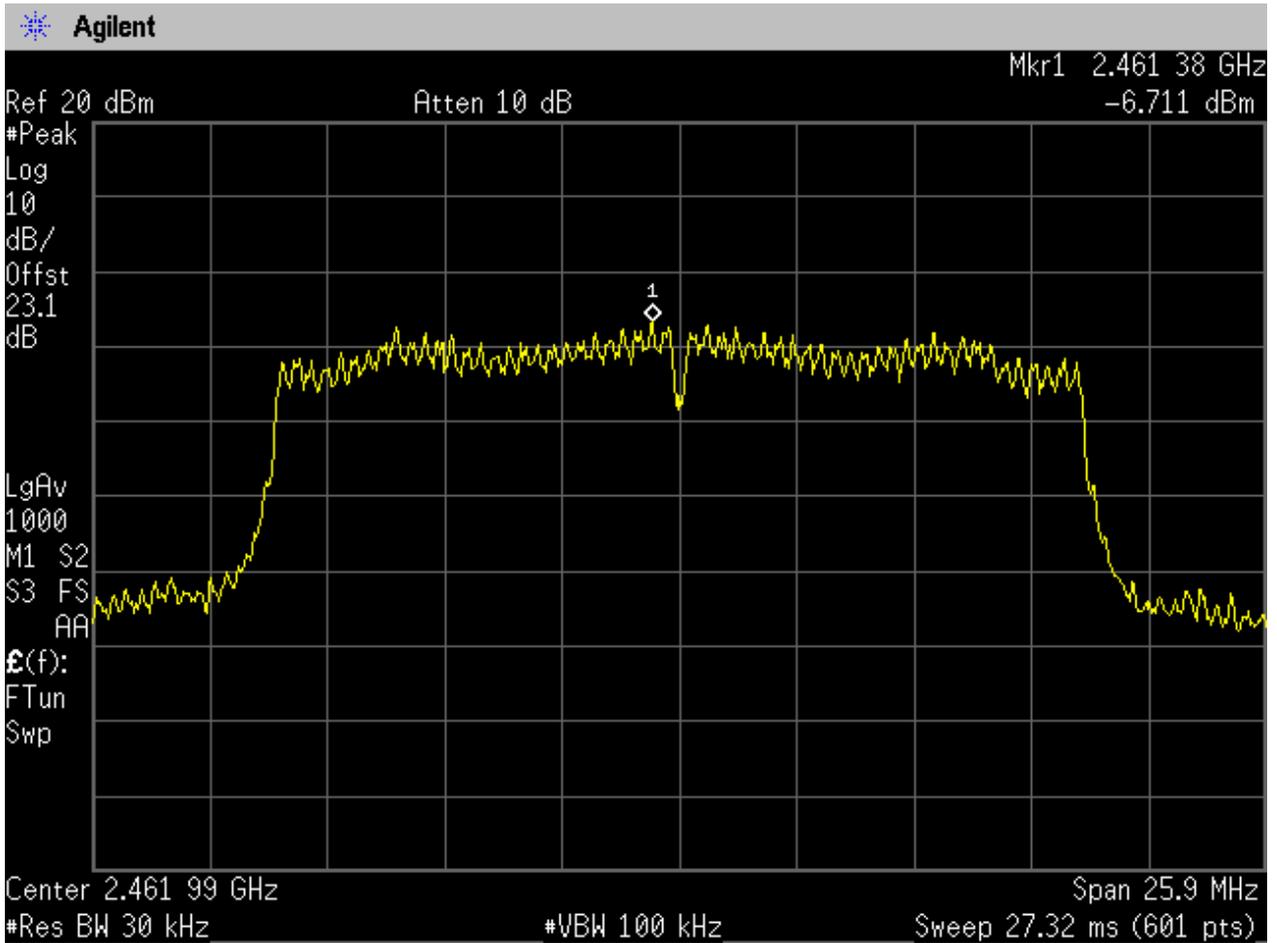
2.1411N20/0\_B@2



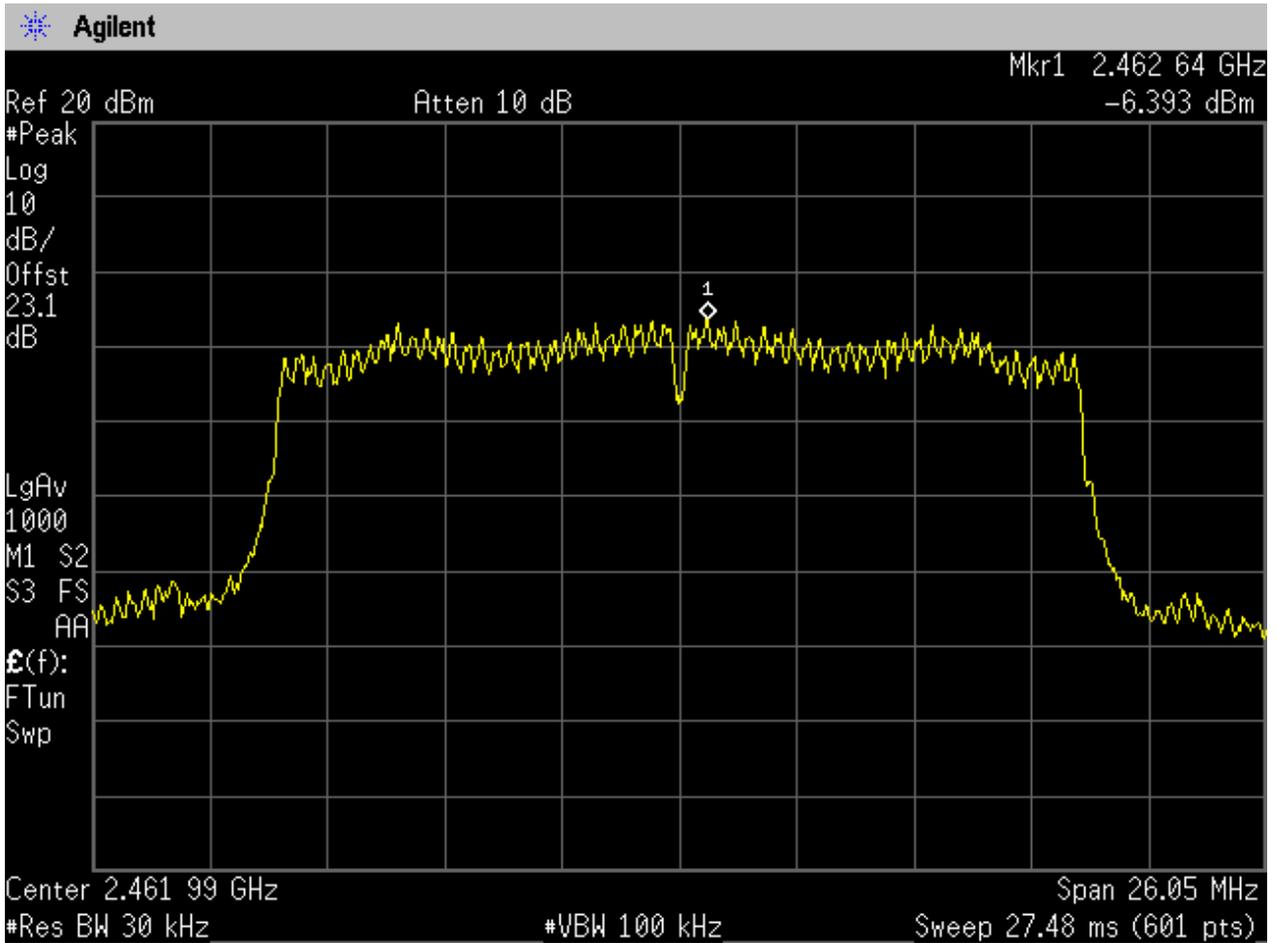


2.1611N20/0\_M@2



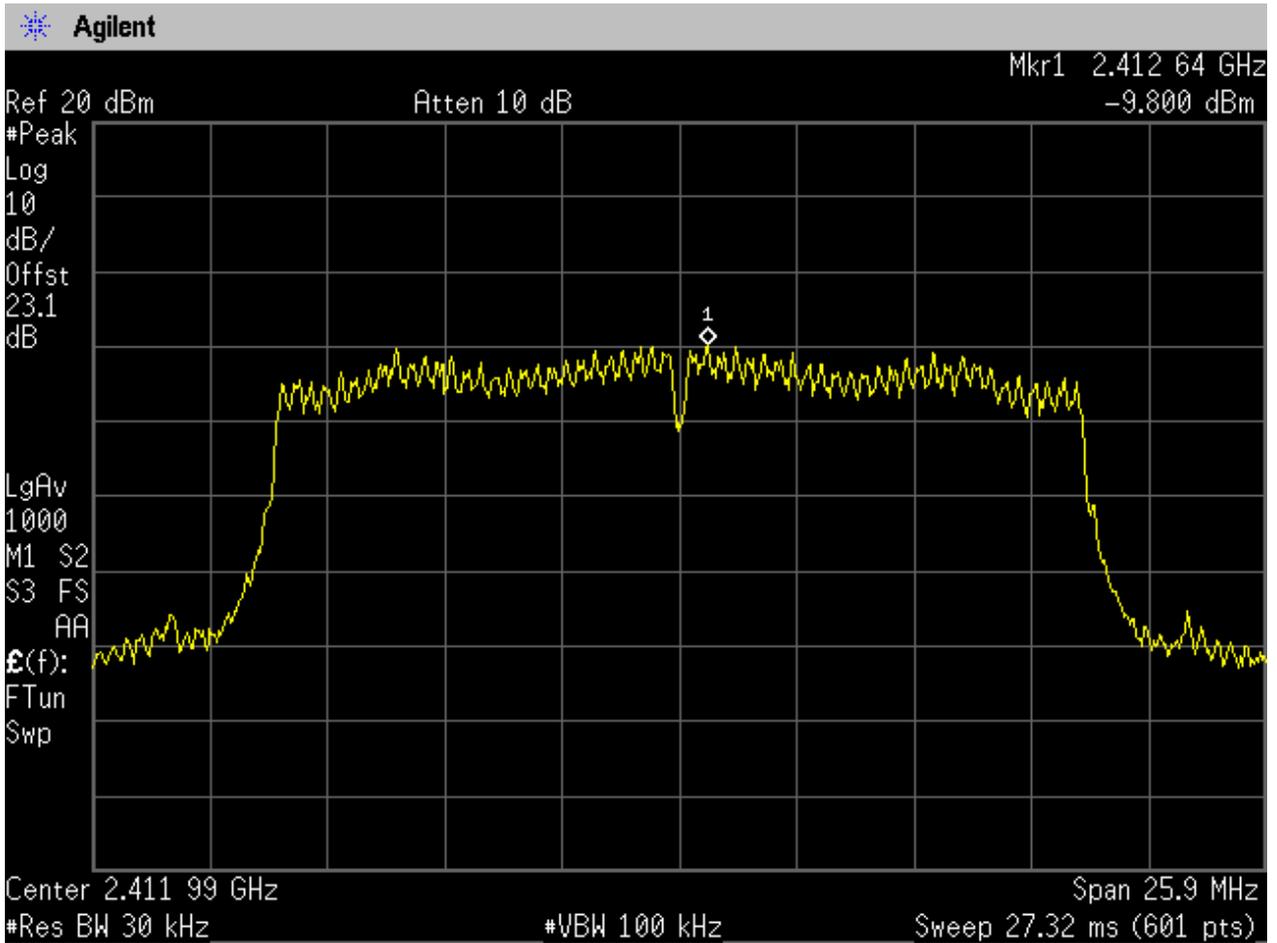


2.1811N20/0\_T@2

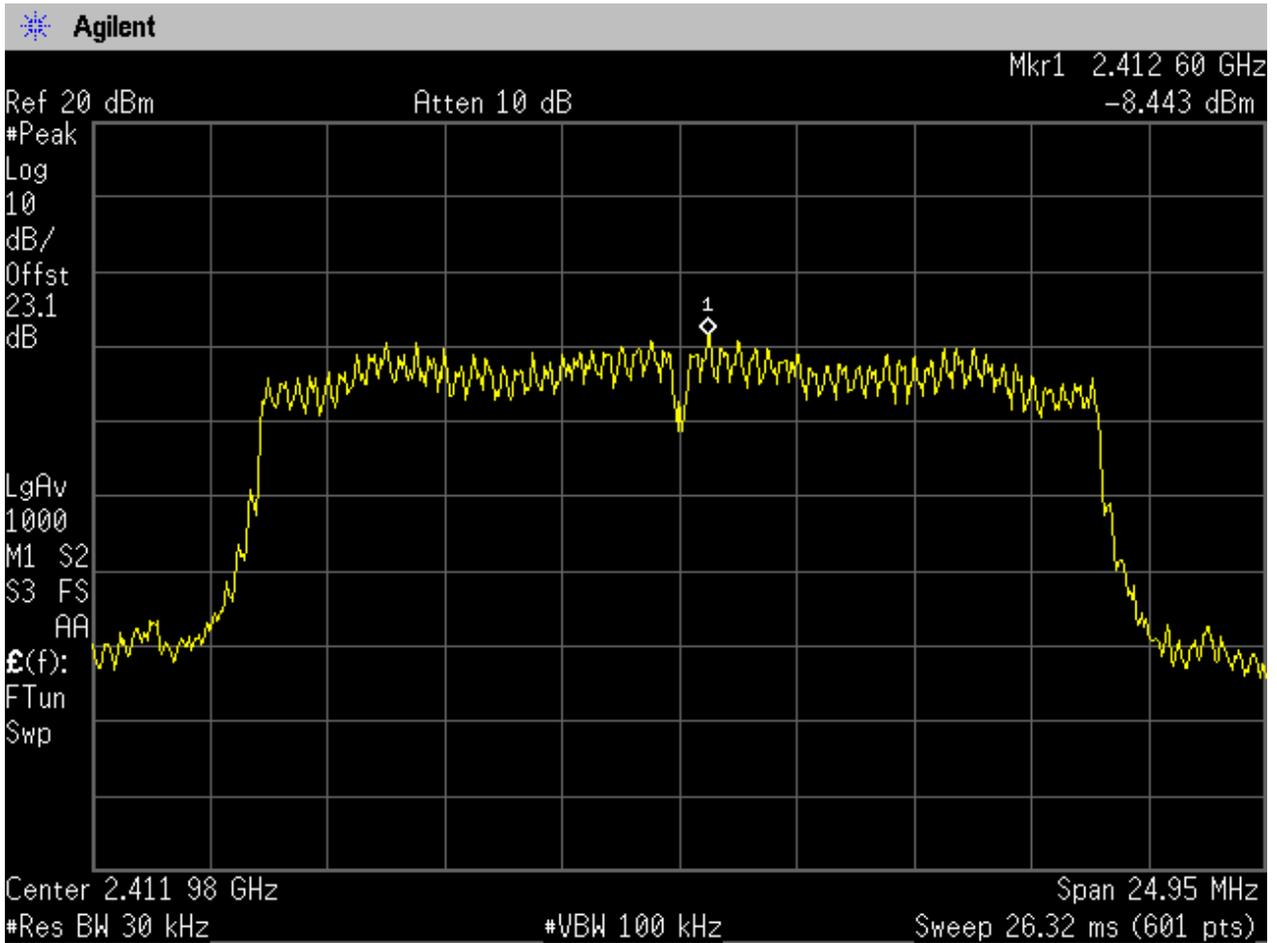


## 2.1911N20m/8\_B@1+2

### 2.19.1 Ant 1 (Trace#1)



### 2.19.2 Ant 2 (Trace#2)

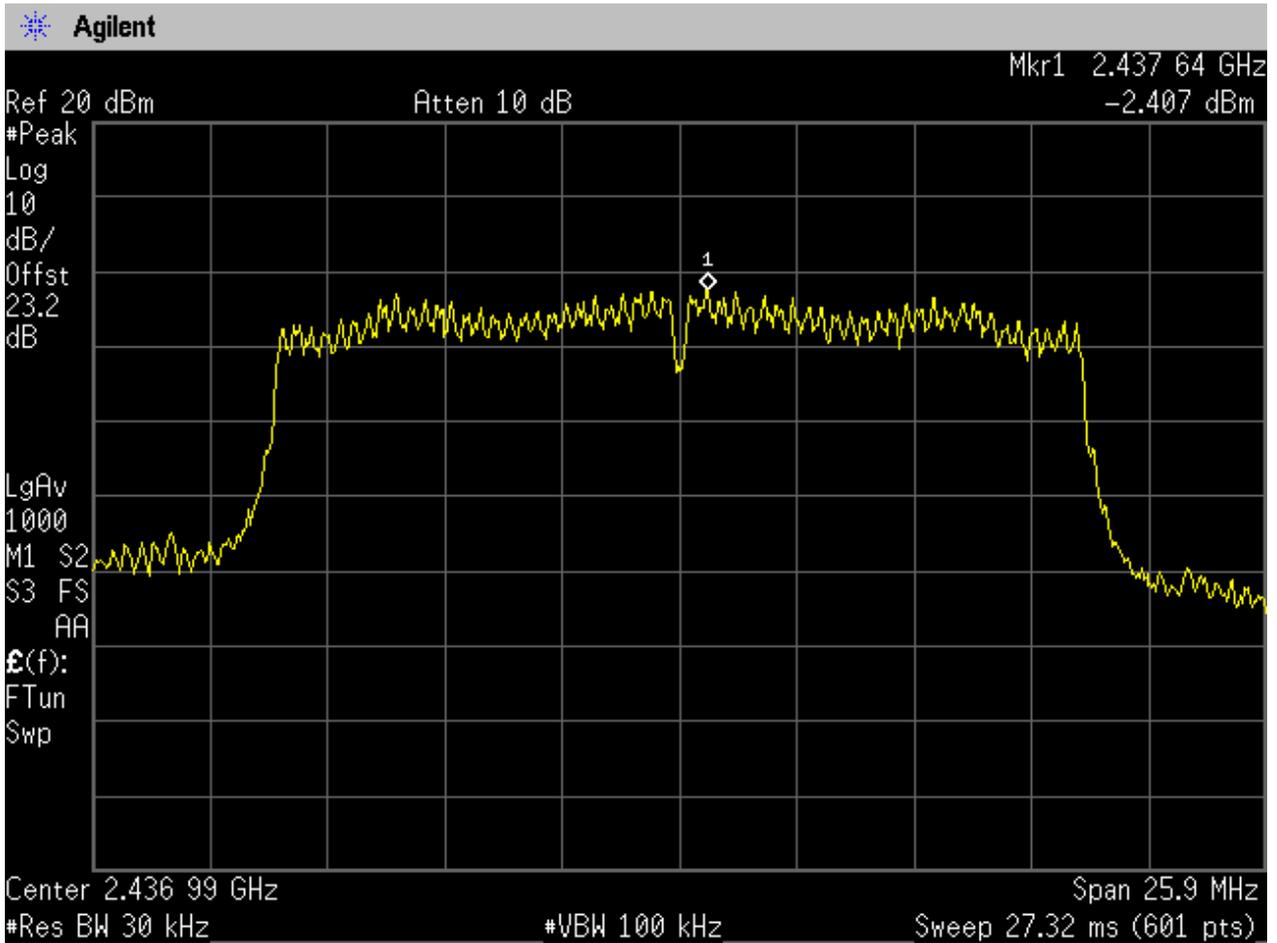


**2.19.3 Trace#sum (if needed for final judgment)**

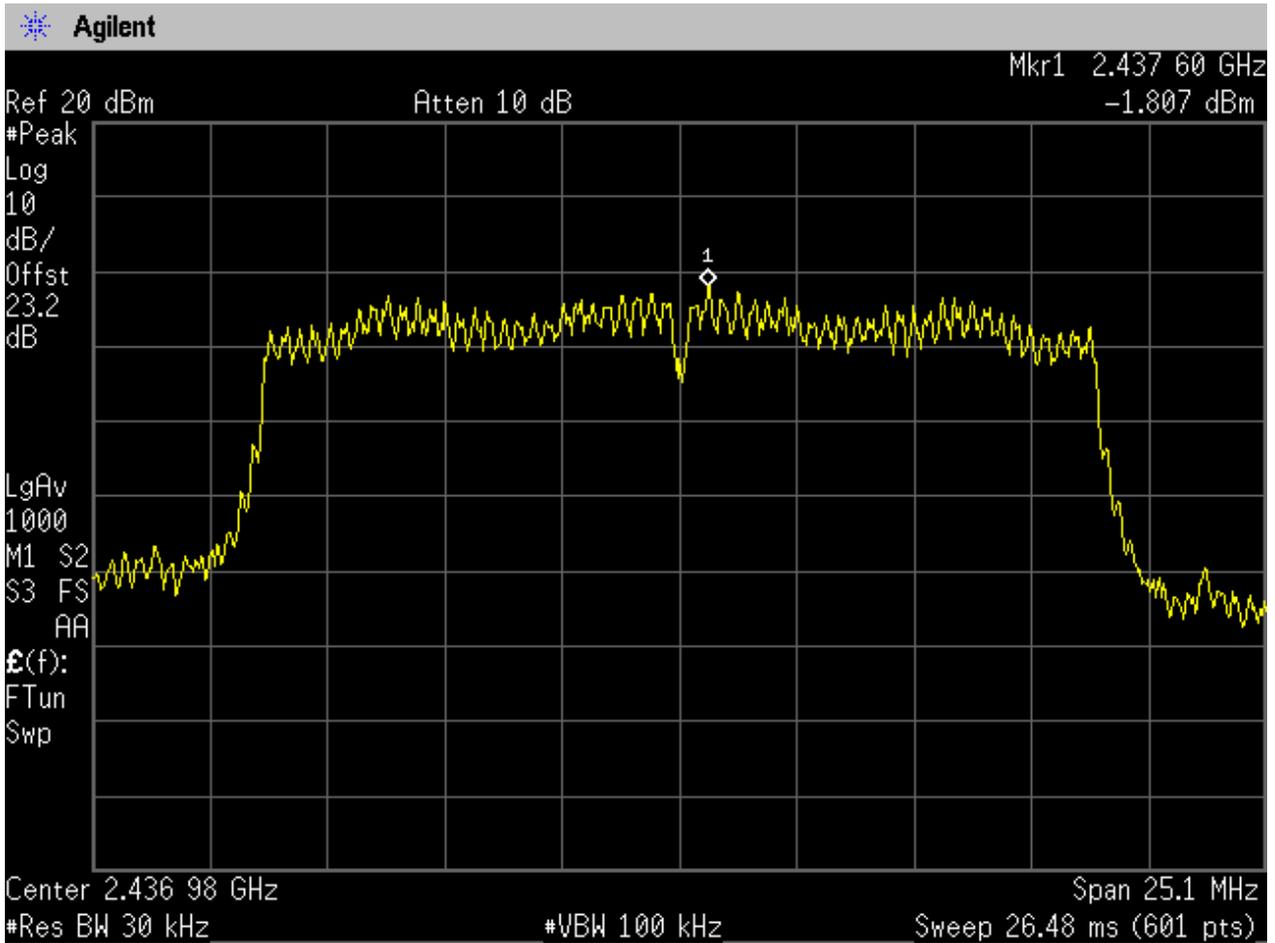
(Not applicable)

**2.2011N20m/8\_M@1+2**

**2.20.1 Ant 1 (Trace#1)**



### 2.20.2 Ant 2 (Trace#2)

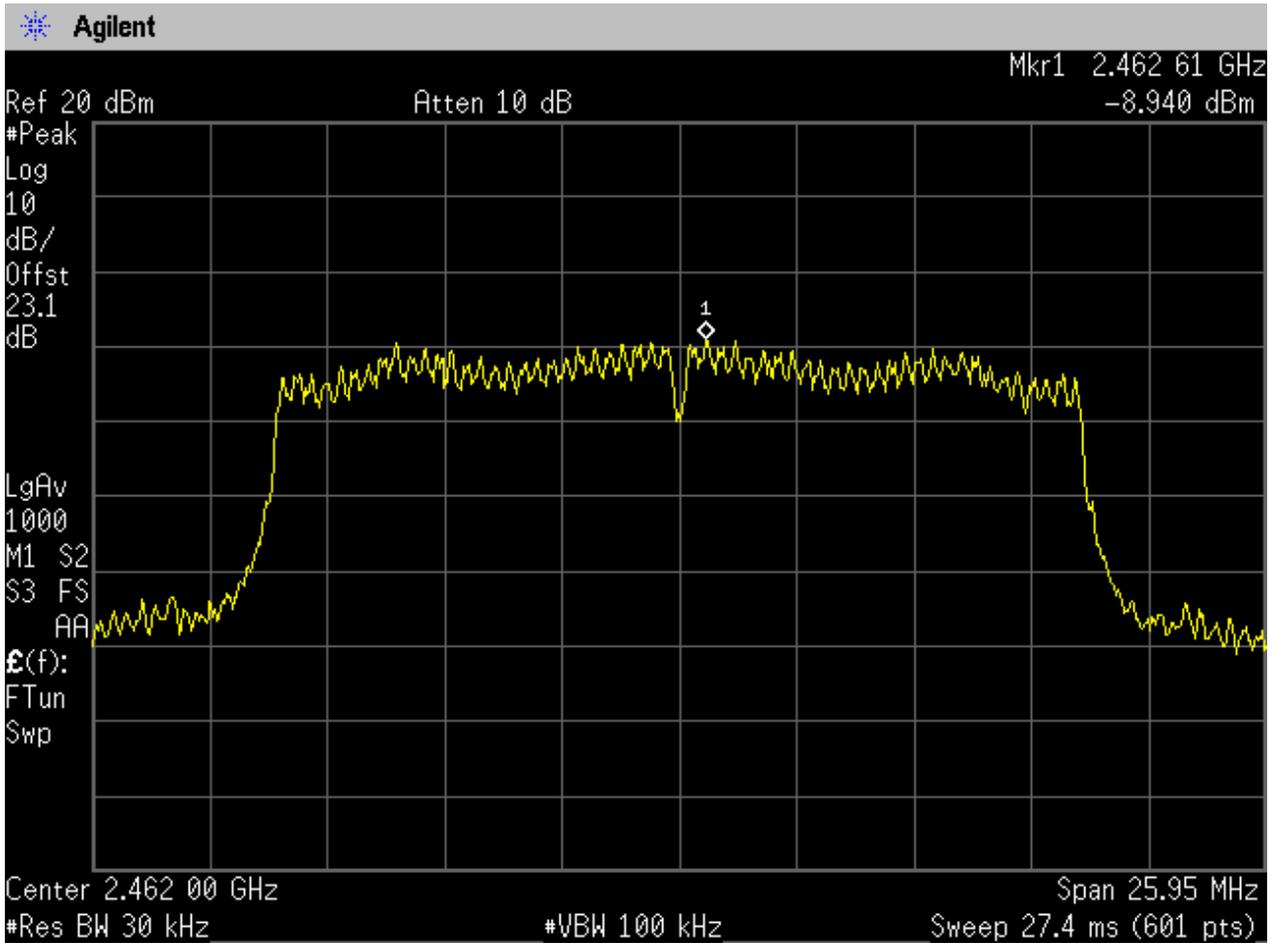


### 2.20.3 Trace#sum (if needed for final judgment)

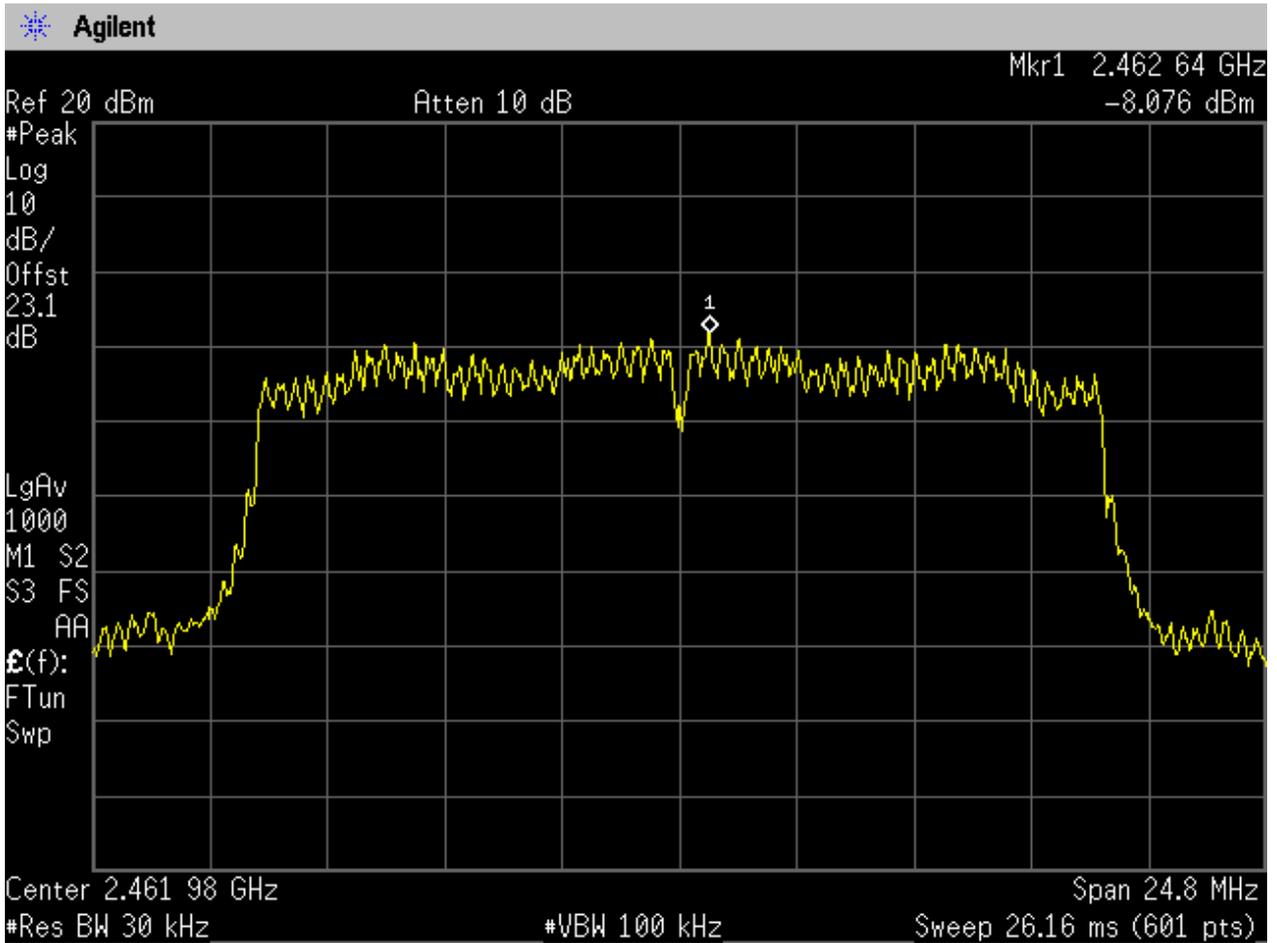
(Not applicable)

### 2.2111N20m/8\_T@1+2

#### 2.21.1 Ant 1 (Trace#1)



### 2.21.2 Ant 2 (Trace#2)

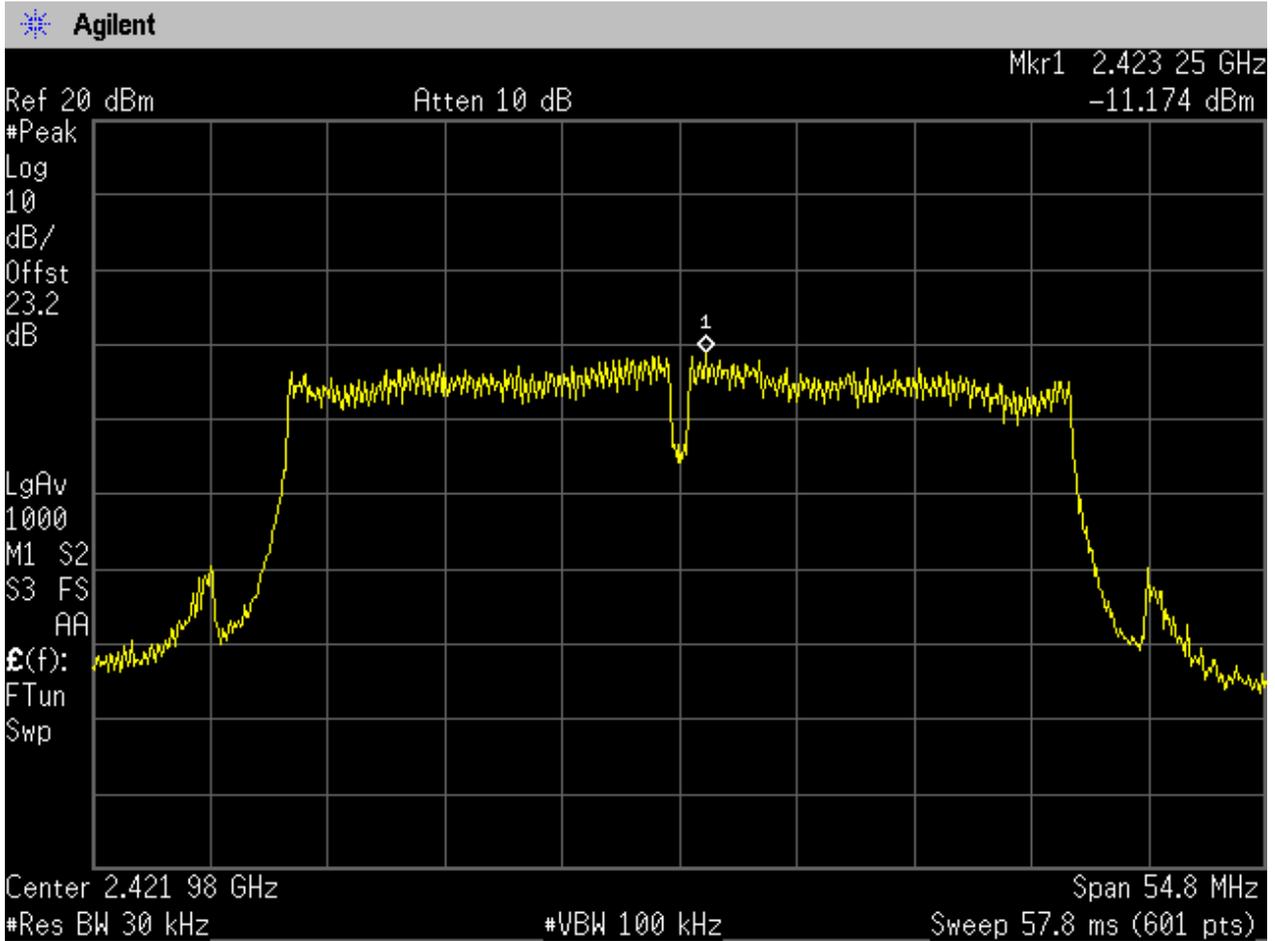


### 2.21.3 Trace#sum (if needed for final judgment)

(Not applicable)

### 2.2211N40/0\_B@1



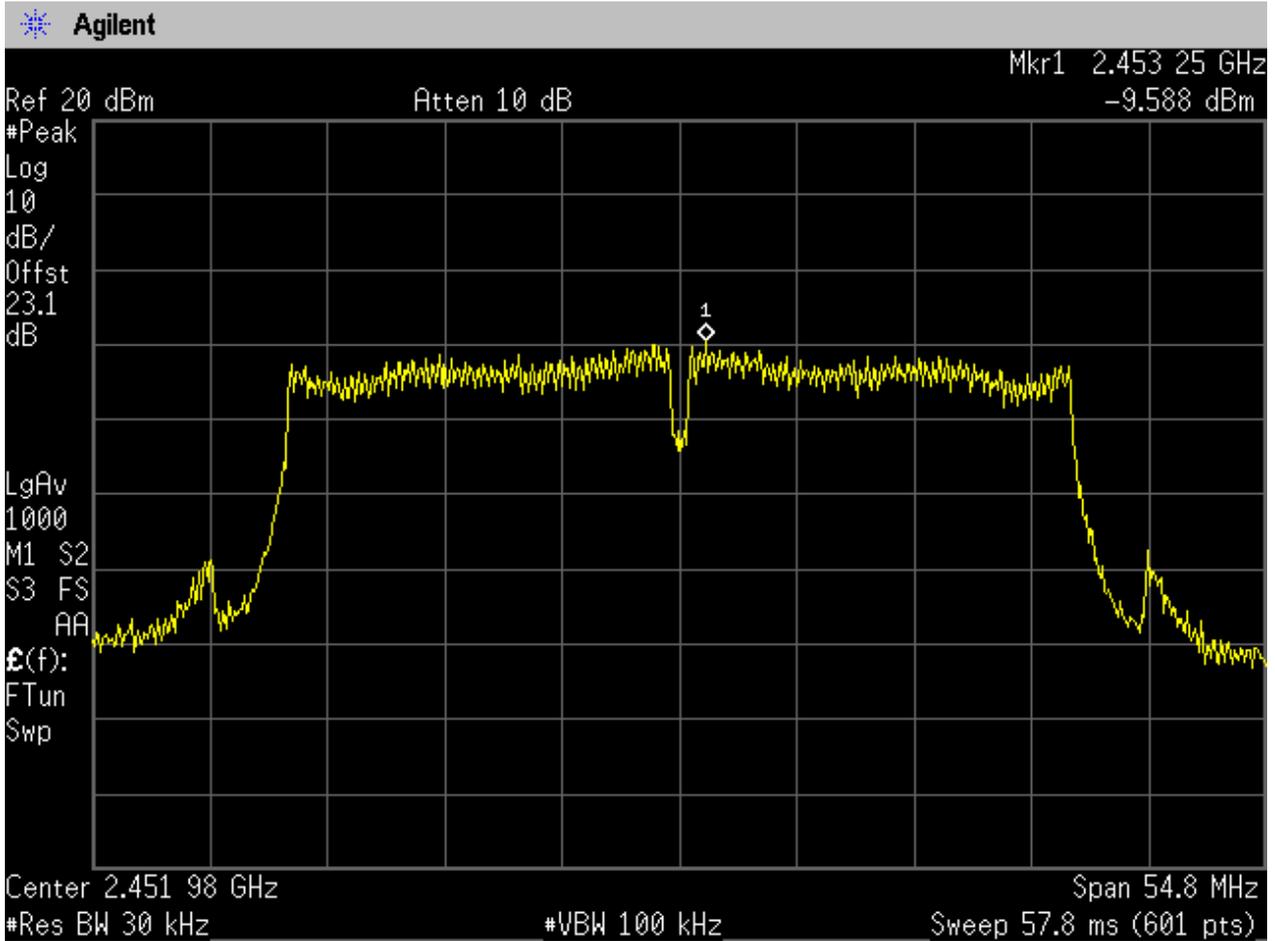


2.2411N40/0\_M@1



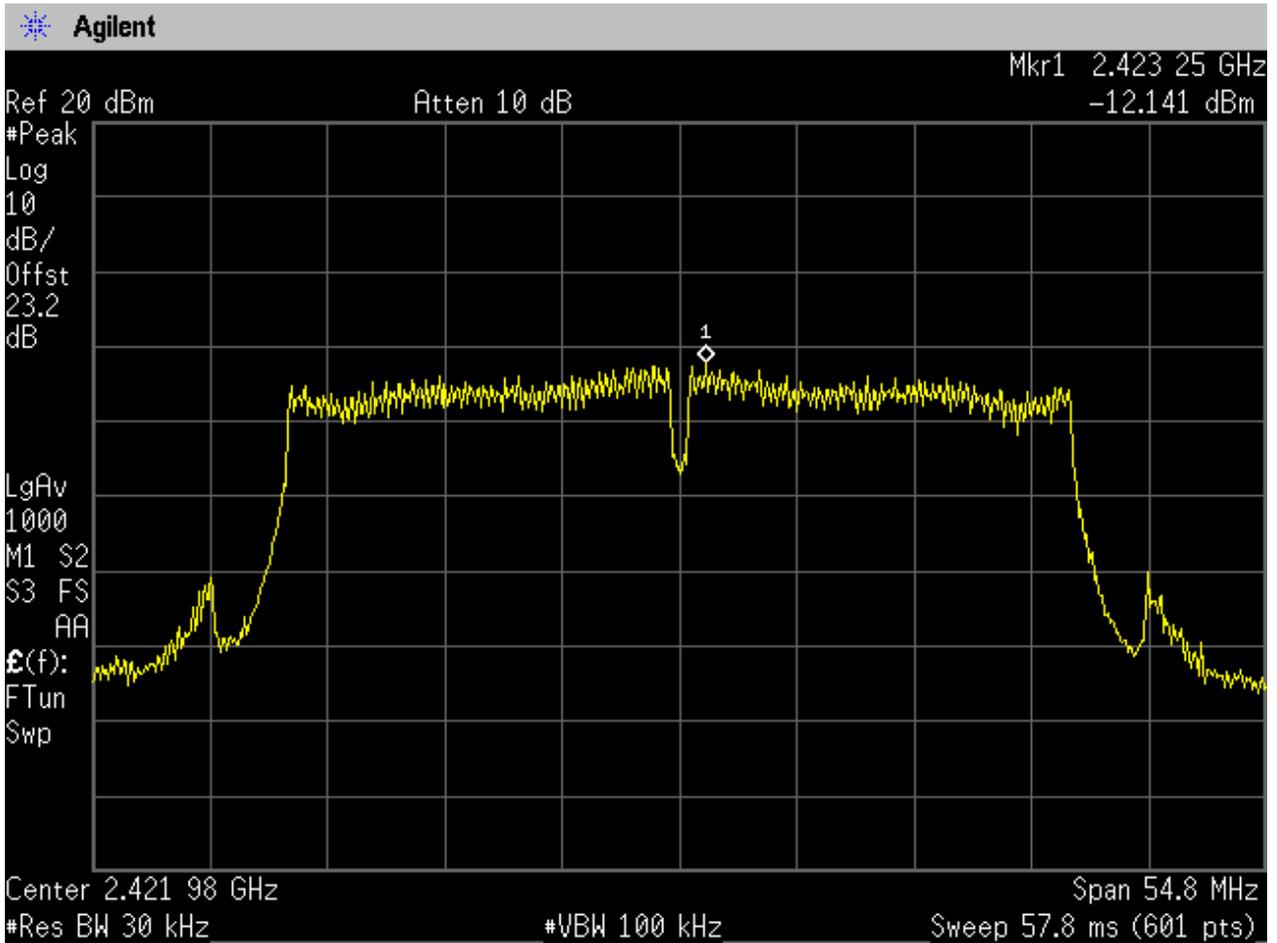




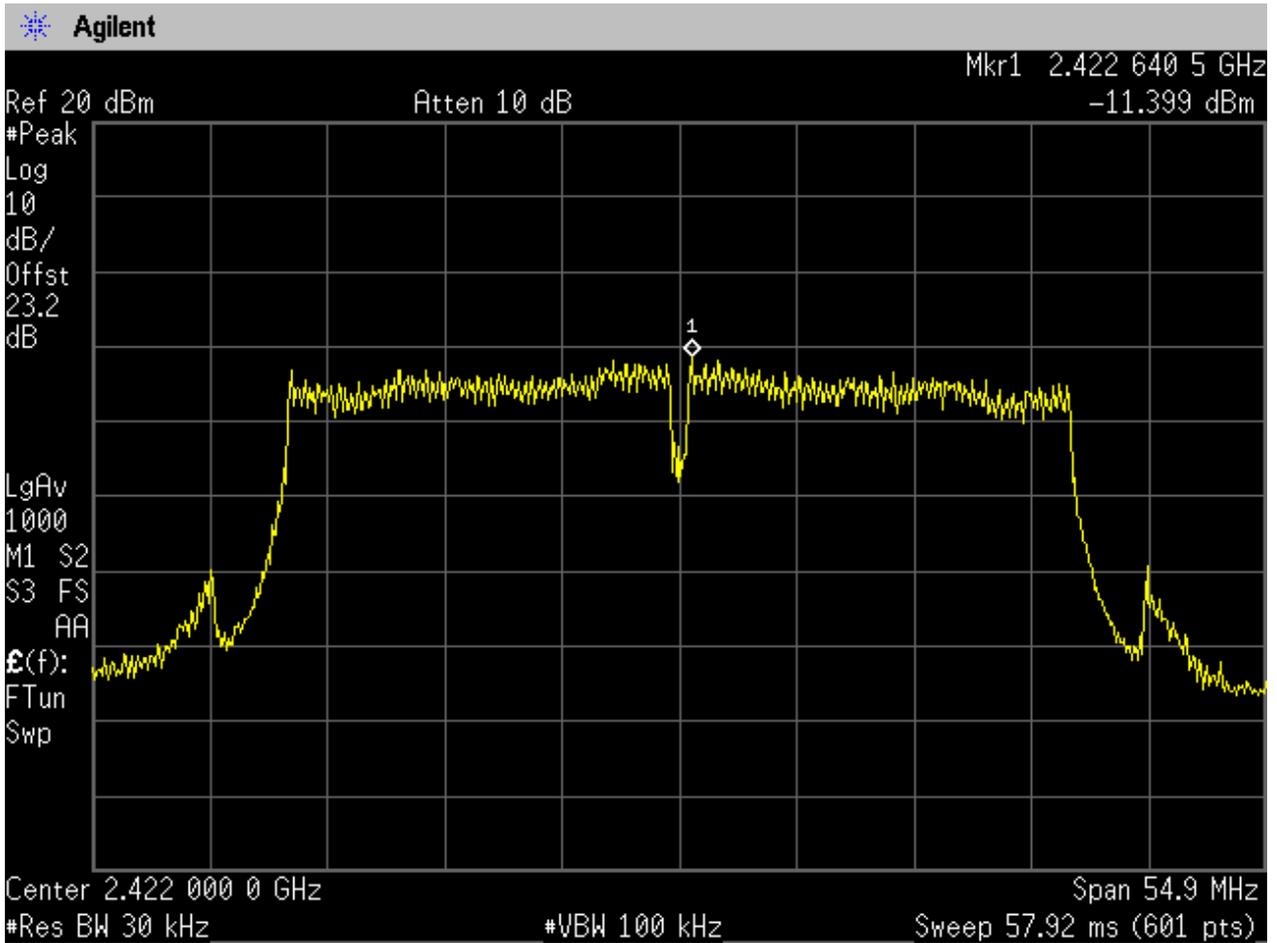


## 2.2811N40m/8\_B@1+2

### 2.28.1 Ant 1 (Trace#1)



### 2.28.2 Ant 2 (Trace#2)

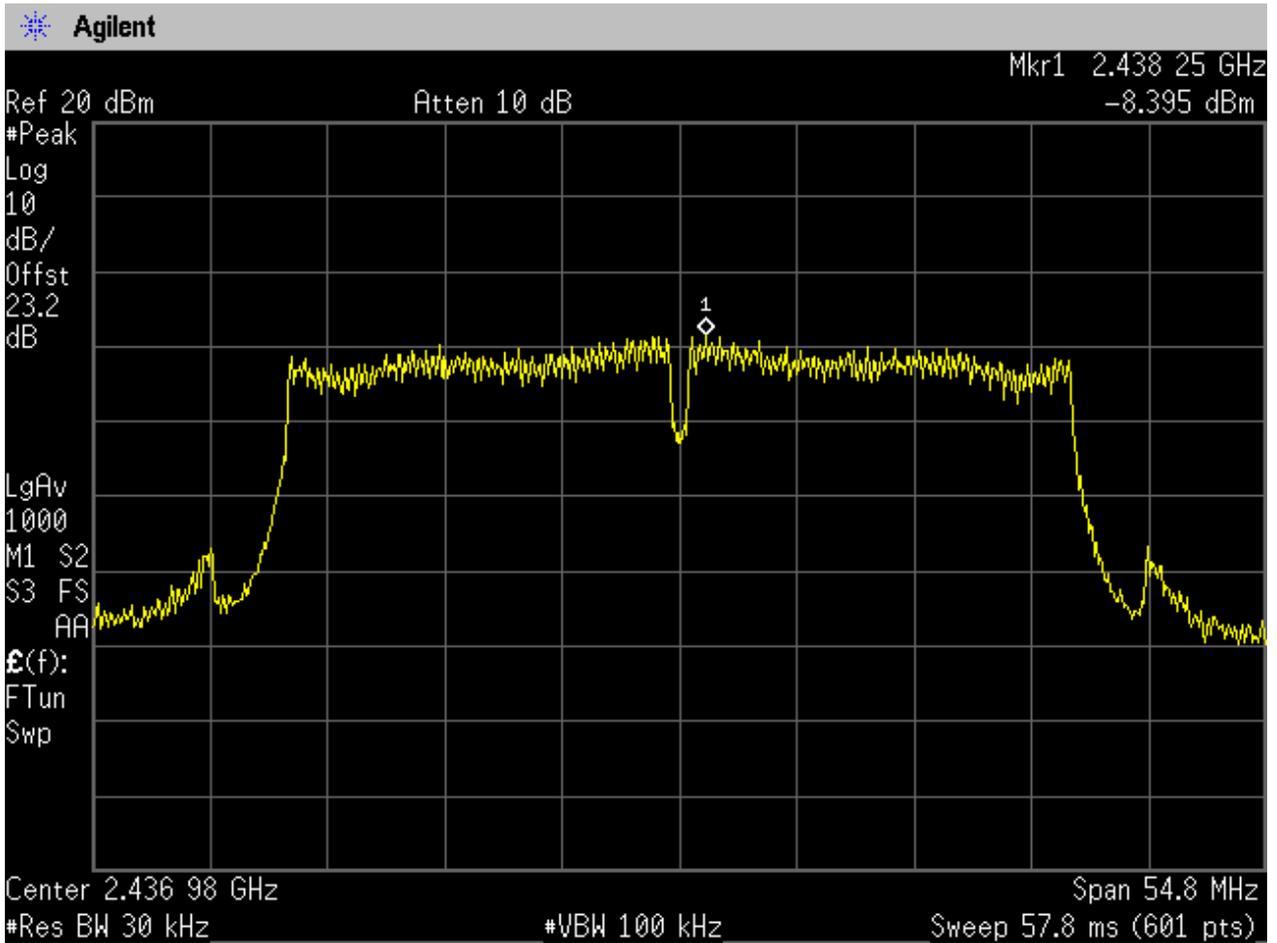


### 2.28.3 Trace#sum (if needed for final judgment)

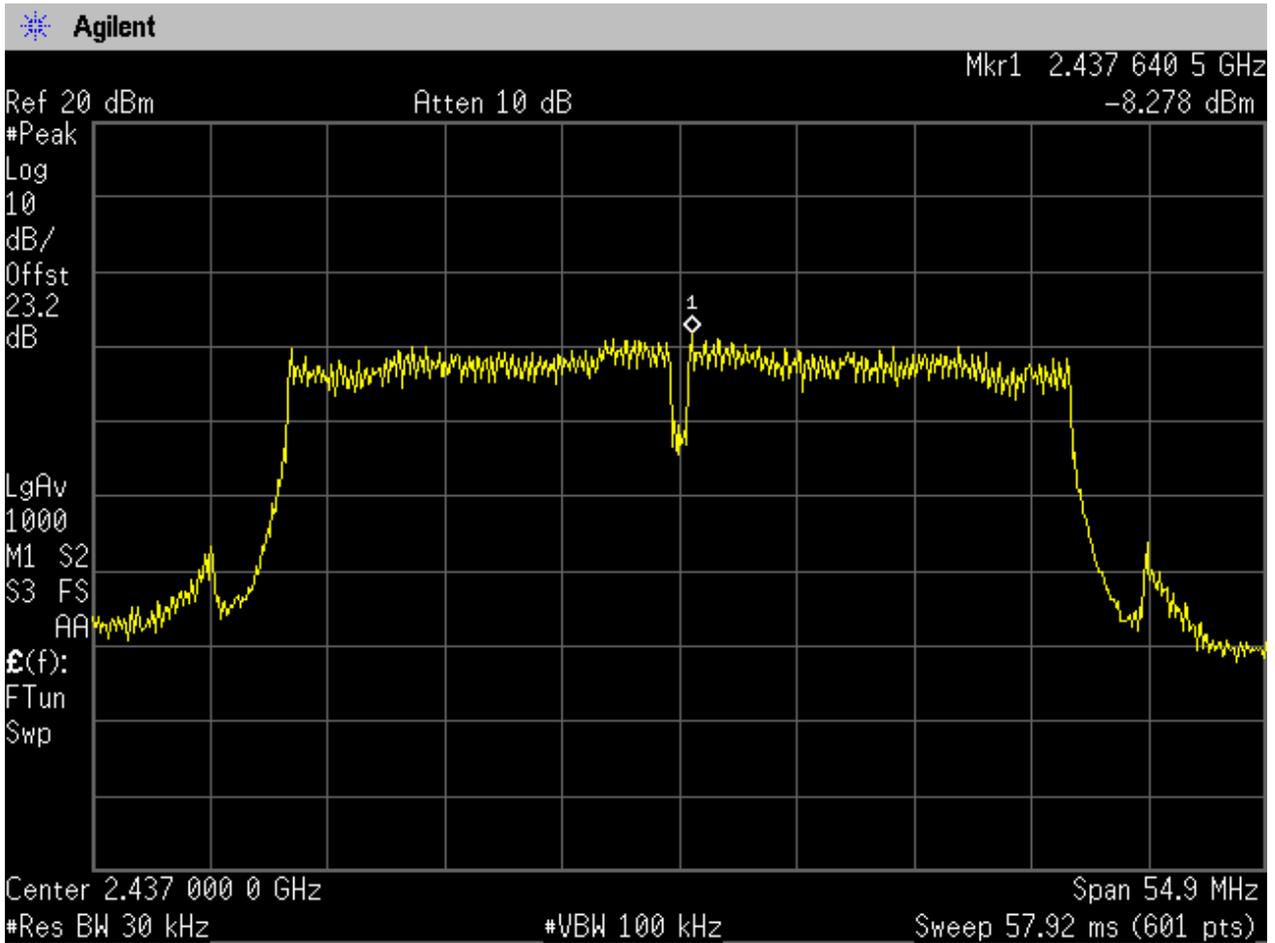
(Not applicable)

### 2.2911N40m/8\_M@1+2

#### 2.29.1 Ant 1 (Trace#1)



### 2.29.2 Ant 2 (Trace#2)

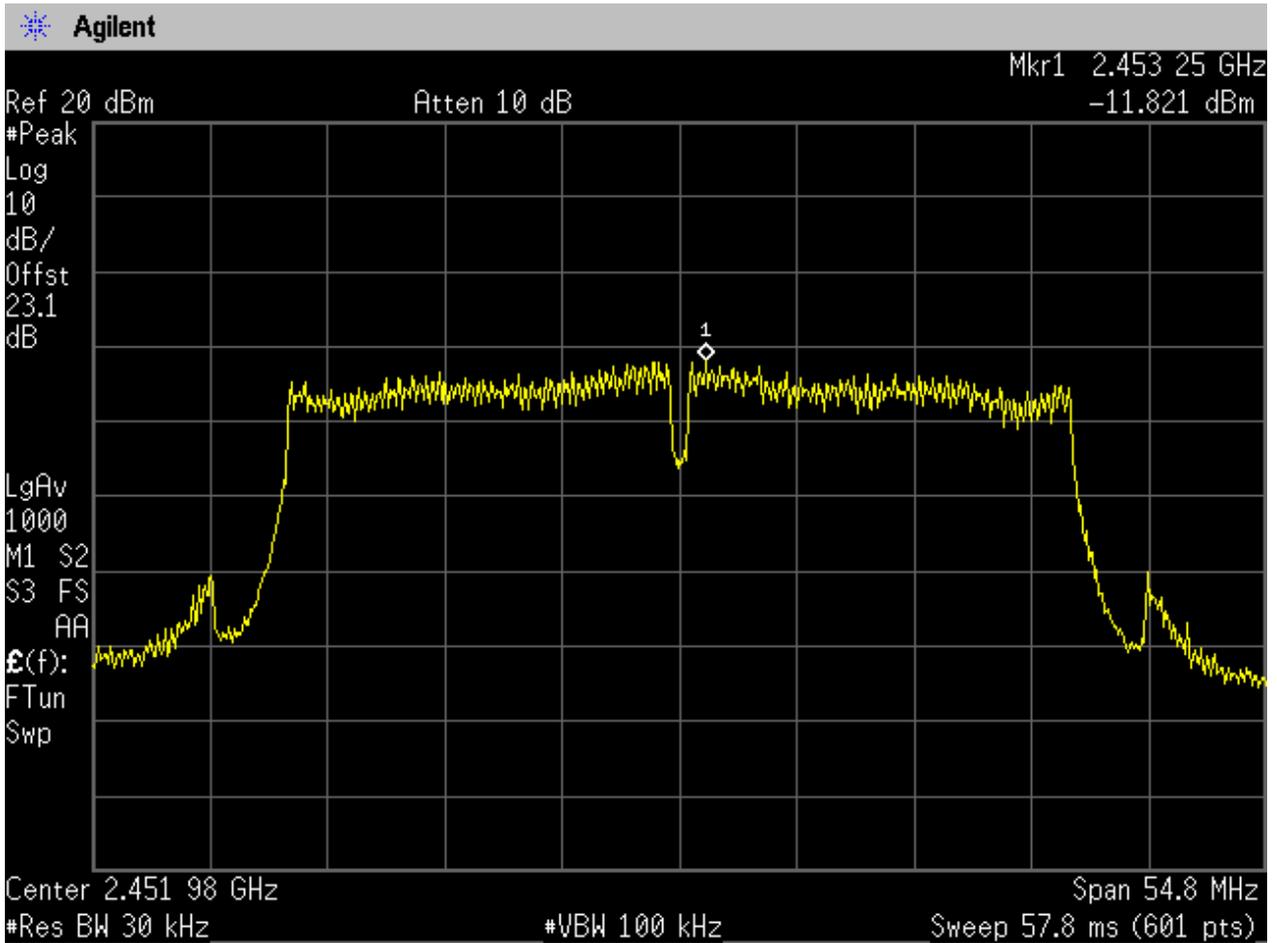


### 2.29.3 Trace#sum (if needed for final judgment)

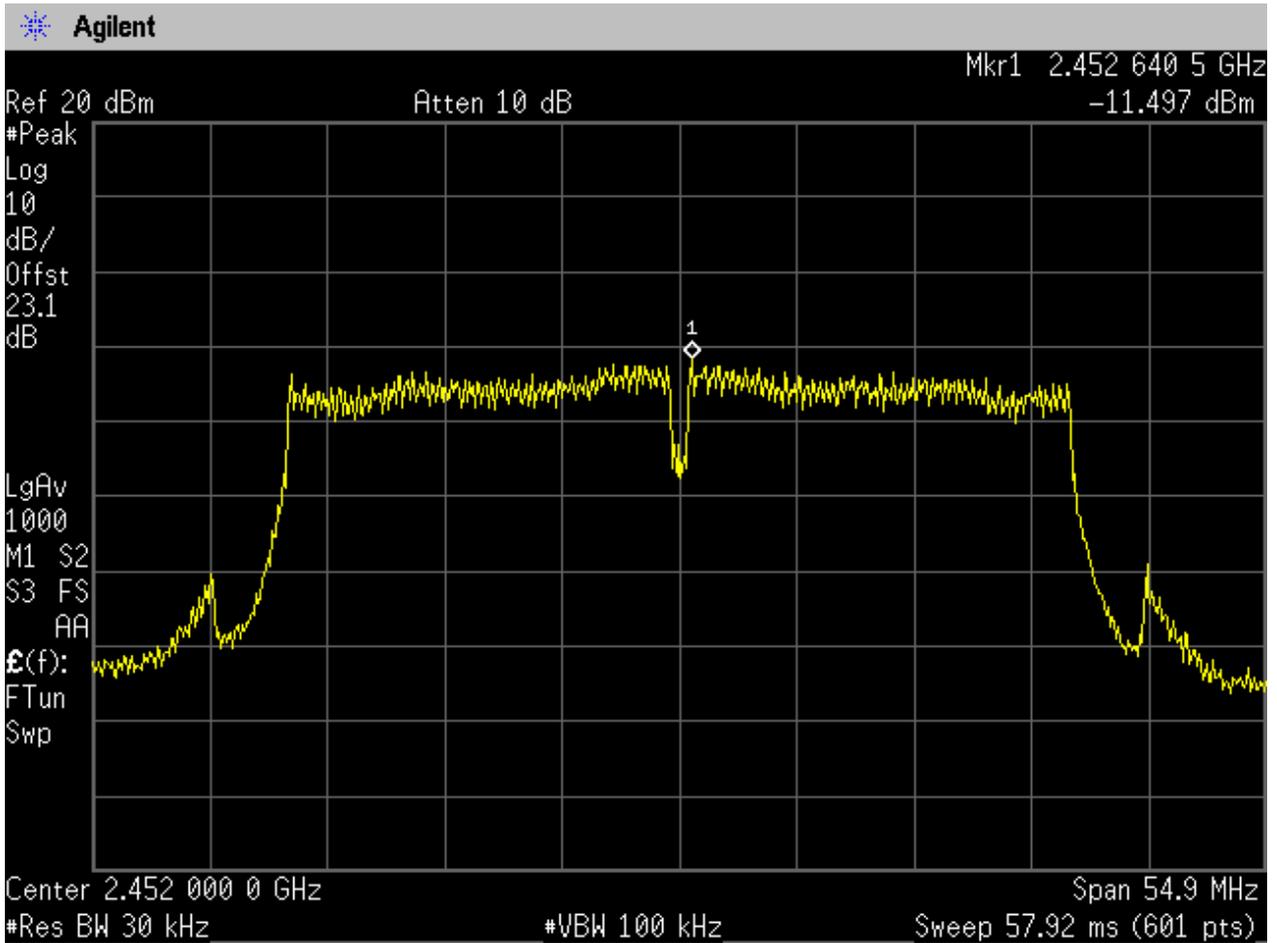
(Not applicable)

### 2.3011N40m/8\_T@1+2

#### 2.30.1 Ant 1 (Trace#1)



### 2.30.2 Ant 2 (Trace#2)



### 2.30.3 Trace#sum (if needed for final judgment)

(Not applicable)



# **Appendix E: Unwanted Emissions into Non-Restricted Frequency Bands**

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

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

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

In the result table, the “< Limit” denotes that “The Puw [dBm] is less than Pref [dBm] – 20 [dB], see test plots for detailed”.

## 1 Result Table

EUT Conf.	Ant.	Pref [dBm]	Puw [dBm]	Verdict
11B/1_B@1	Ant 1	3.87	< Limit	Pass
11B/1_B@2	Ant 2	3.8	< Limit	Pass
11B/1_M@1	Ant 1	4.56	< Limit	Pass
11B/1_M@2	Ant 2	3.99	< Limit	Pass
11B/1_T@1	Ant 1	4.54	< Limit	Pass
11B/1_T@2	Ant 2	4.03	< Limit	Pass
11G/6_B@1	Ant 1	-1.1	< Limit	Pass
11G/6_B@2	Ant 2	-1.21	< Limit	Pass
11G/6_M@1	Ant 1	1.87	< Limit	Pass
11G/6_M@2	Ant 2	2.31	< Limit	Pass
11G/6_T@1	Ant 1	-1.44	< Limit	Pass
11G/6_T@2	Ant 2	-0.83	< Limit	Pass
11N20/0_B@1	Ant 1	-3.18	< Limit	Pass
11N20/0_B@2	Ant 2	-1.79	< Limit	Pass
11N20/0_M@1	Ant 1	2.73	< Limit	Pass
11N20/0_M@2	Ant 2	1.93	< Limit	Pass
11N20/0_T@1	Ant 1	-1.68	< Limit	Pass
11N20/0_T@2	Ant 2	-0.91	< Limit	Pass
11N20m/8_B@1+2	Ant 1	-4.69	< Limit	Pass
	Ant 2	-4.59	< Limit	Pass
11N20m/8_M@1+2	Ant 1	2.88	< Limit	Pass
	Ant 2	1.85	< Limit	Pass

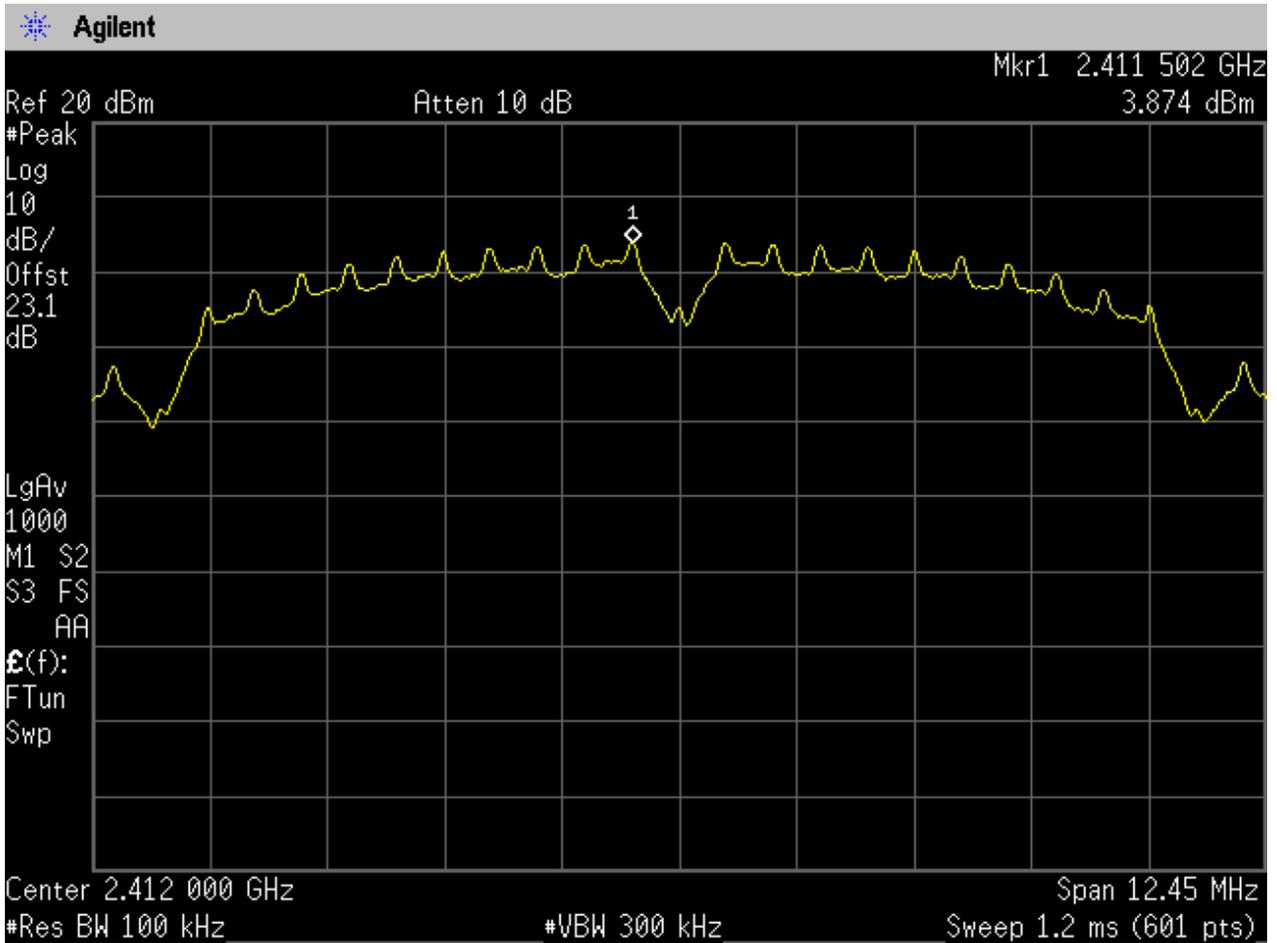


EUT Conf.	Ant.	Pref [dBm]	Puw [dBm]	Verdict
11N20m/8_T@1+2	Ant 1	-3.64	< Limit	Pass
	Ant 2	-4.07	< Limit	Pass
11N40/0_B@1	Ant 1	-6.54	< Limit	Pass
11N40/0_B@2	Ant 2	-6.56	< Limit	Pass
11N40/0_M@1	Ant 1	-3.7	< Limit	Pass
11N40/0_M@2	Ant 2	-2.96	< Limit	Pass
11N40/0_T@1	Ant 1	-6.29	< Limit	Pass
11N40/0_T@2	Ant 2	-5.28	< Limit	Pass
11N40m/8_B@1+2	Ant 1	-7.67	< Limit	Pass
	Ant 2	-7.28	< Limit	Pass
11N40m/8_M@1+2	Ant 1	-3.79	< Limit	Pass
	Ant 2	-4.24	< Limit	Pass
11N40m/8_T@1+2	Ant 1	-7.26	< Limit	Pass
	Ant 2	-7.33	< Limit	Pass

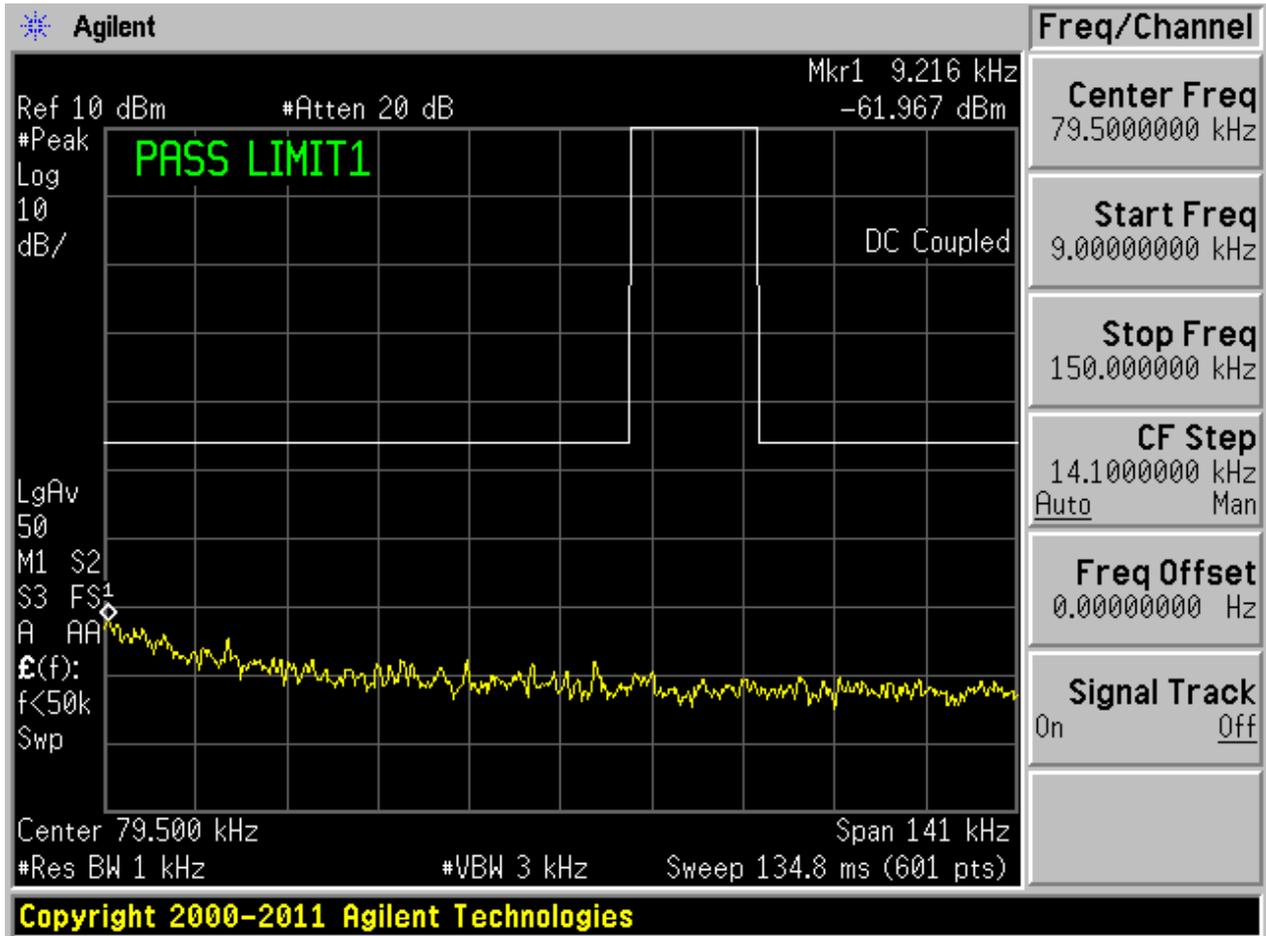
## 2 Test Plot

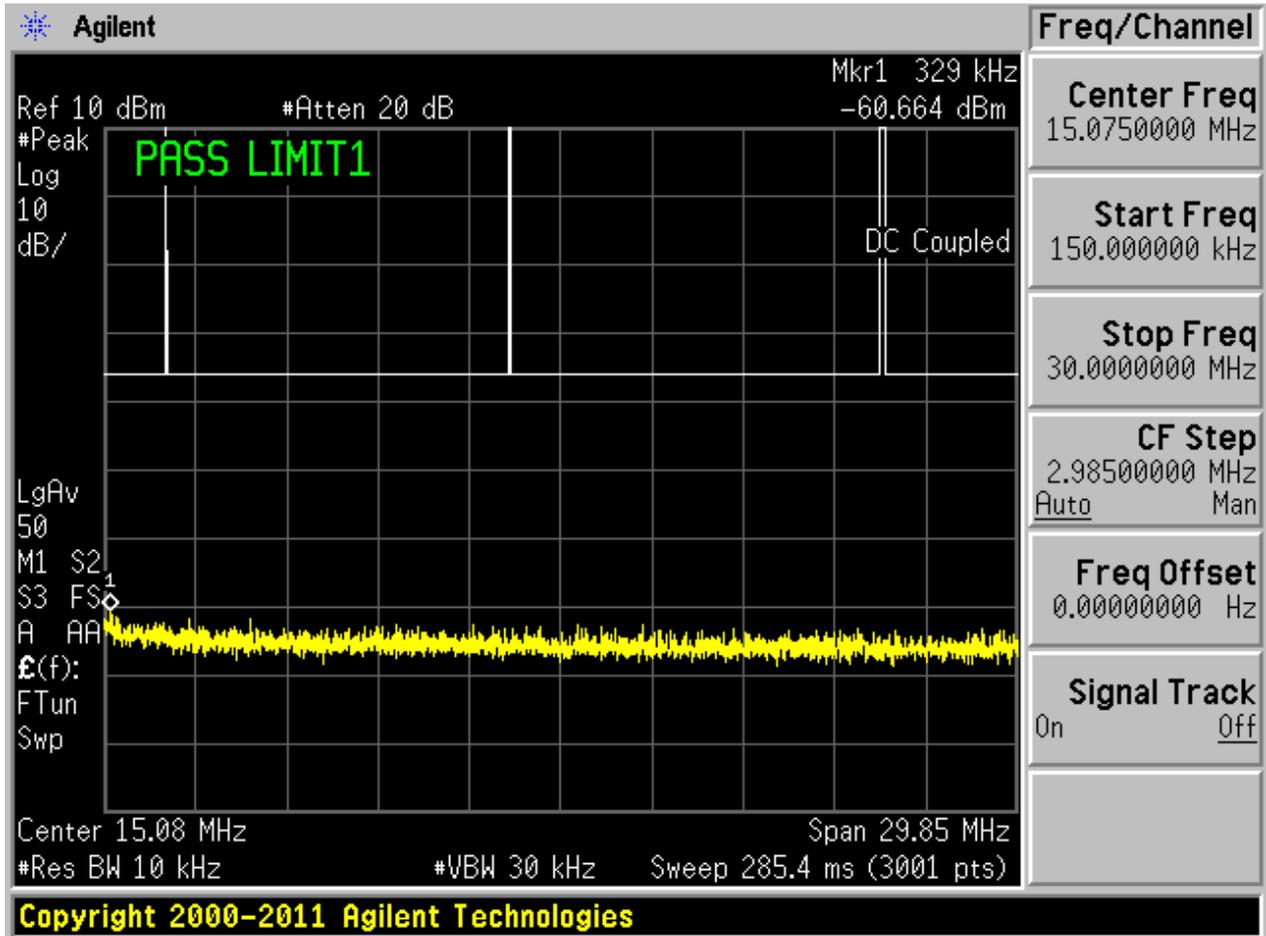
### 2.1 11B/1\_B@1

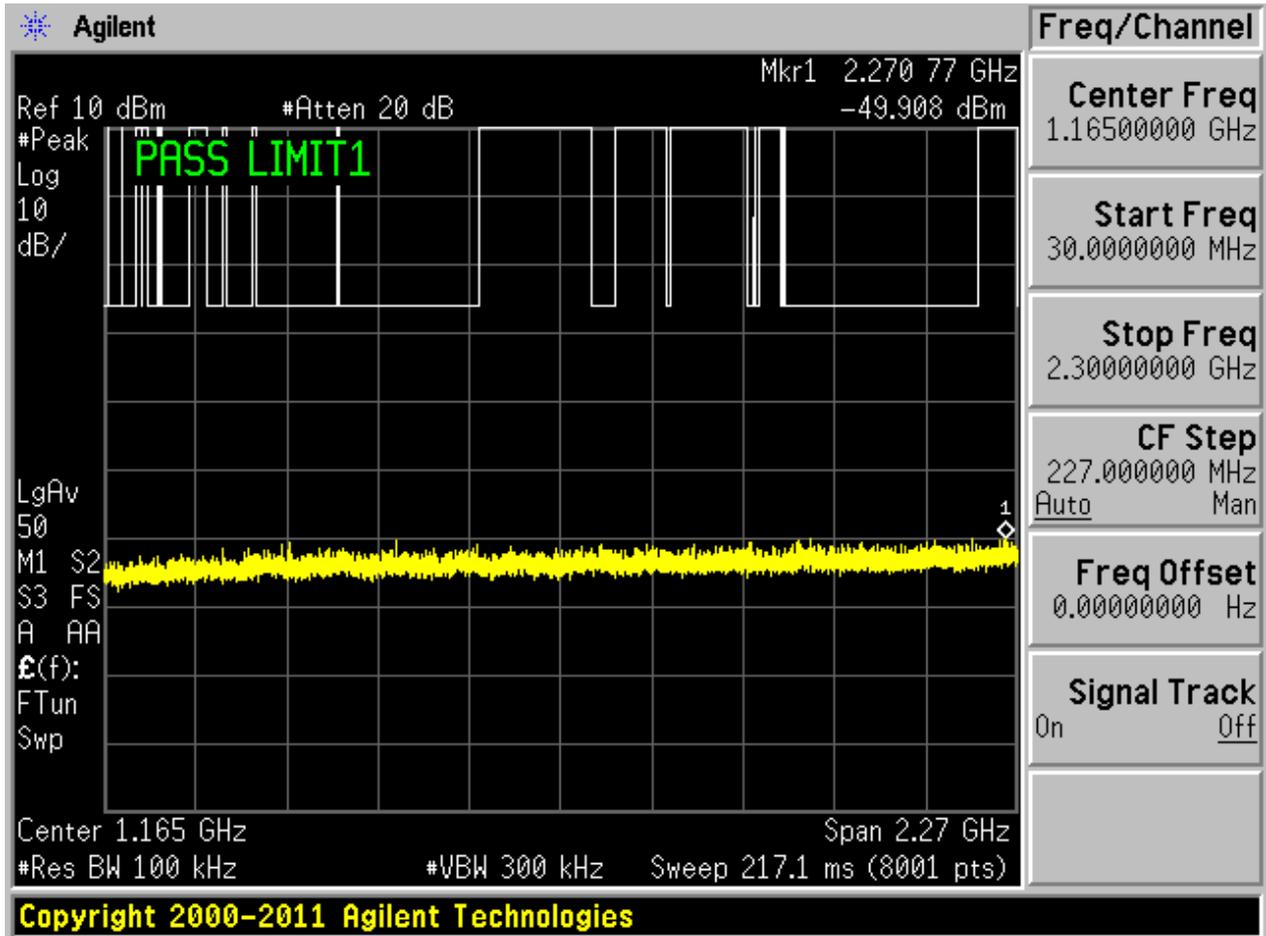
#### 2.1.1 Pref

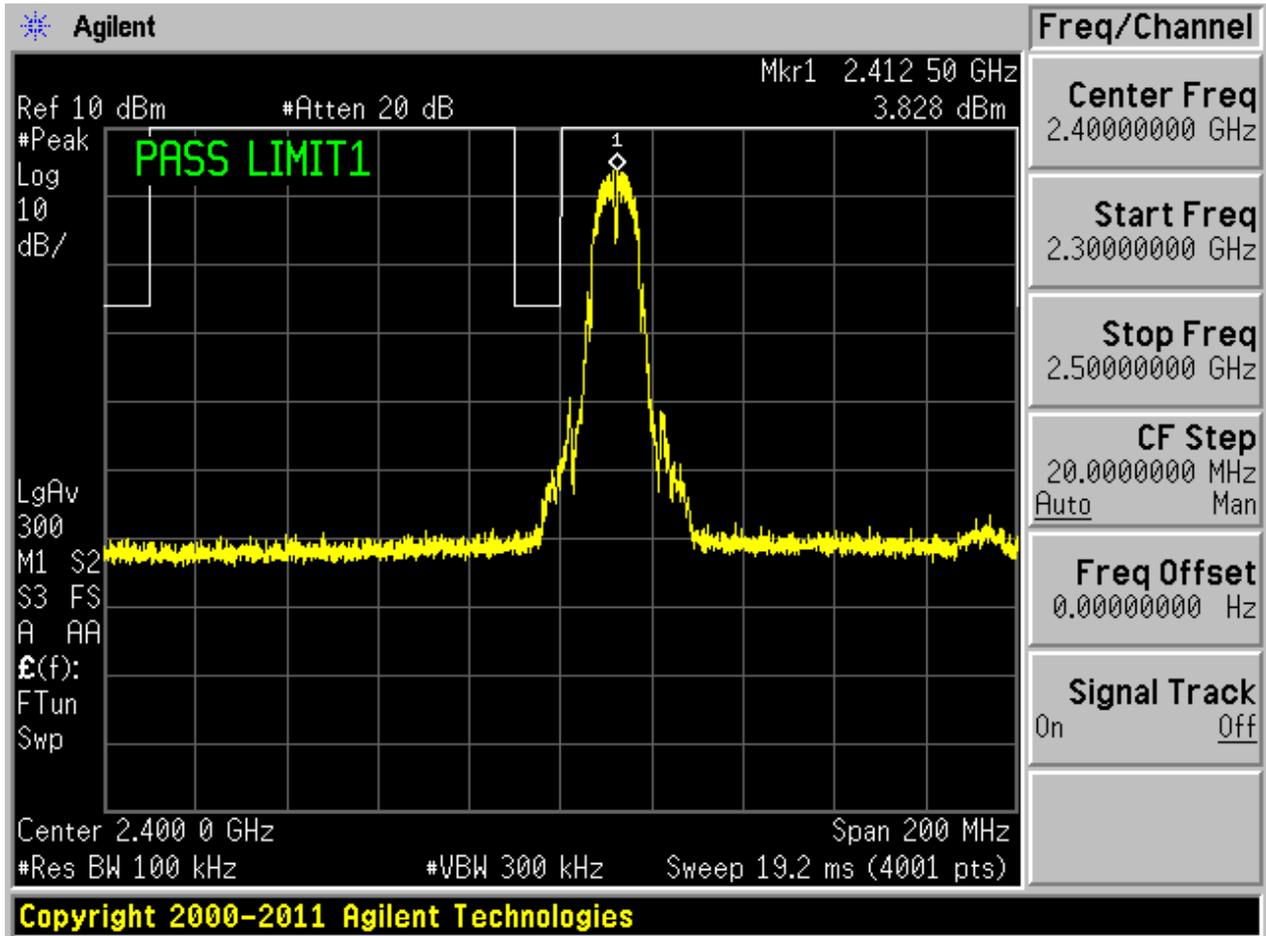


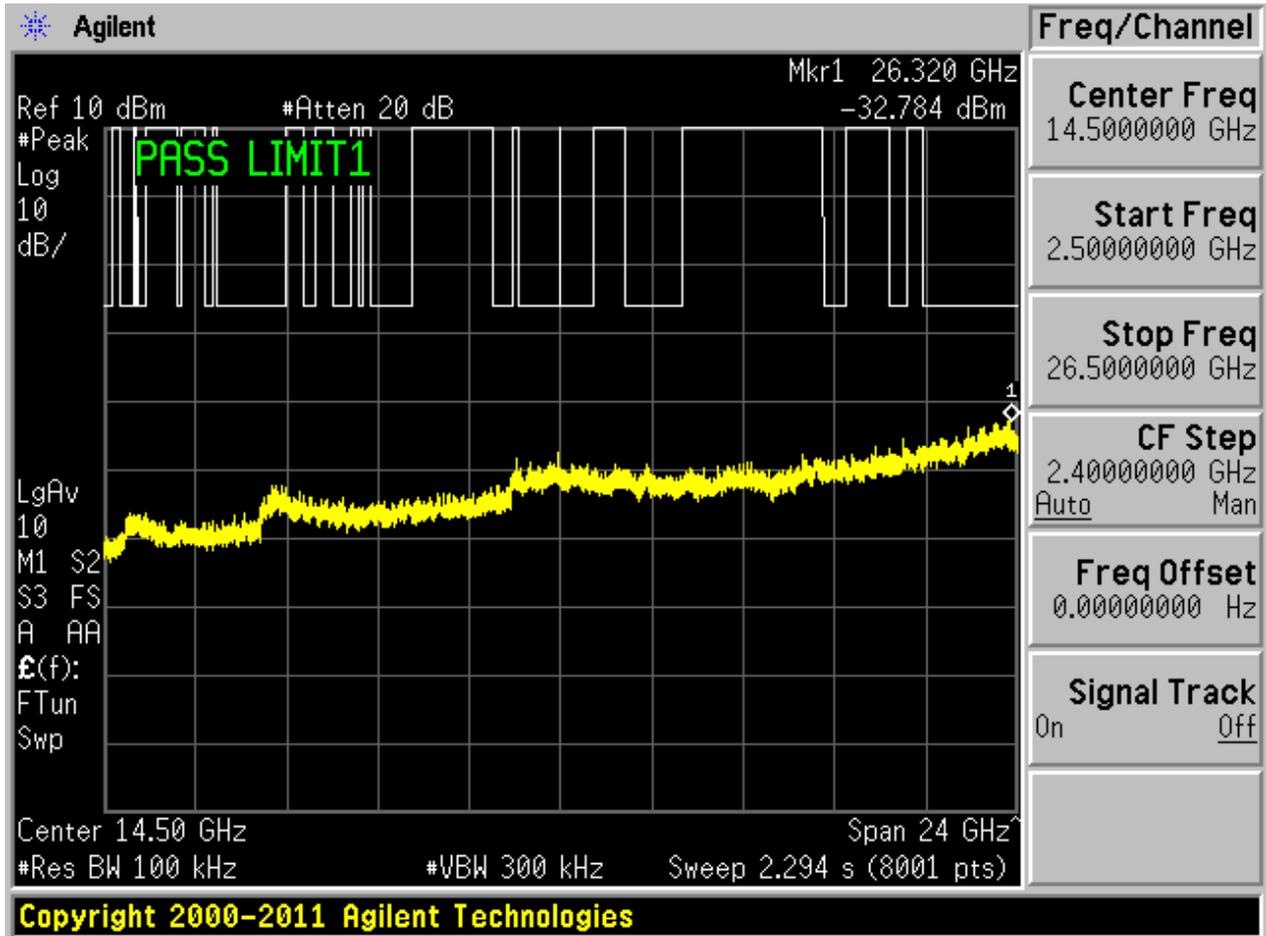
#### 2.1.2 Puw





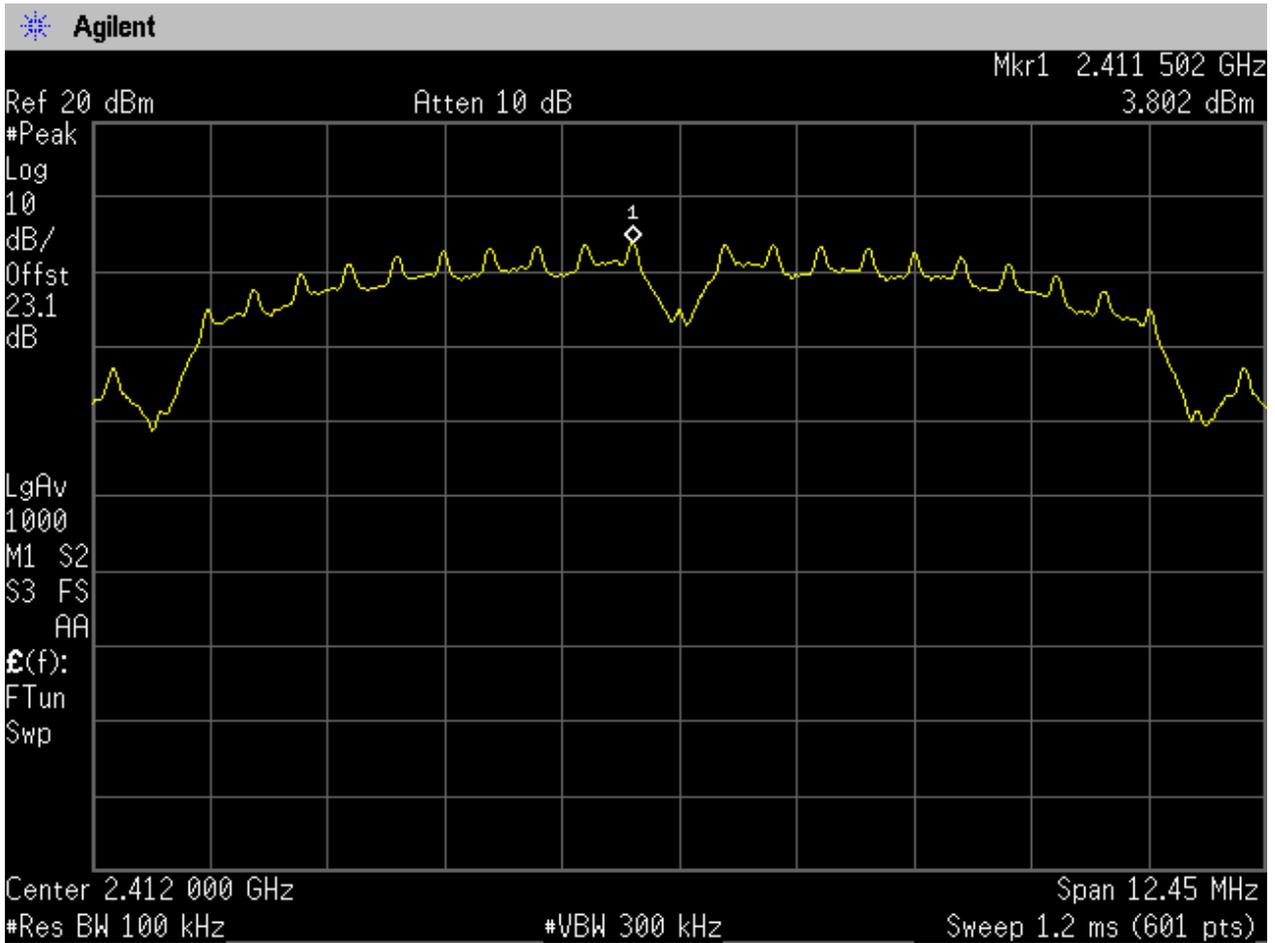




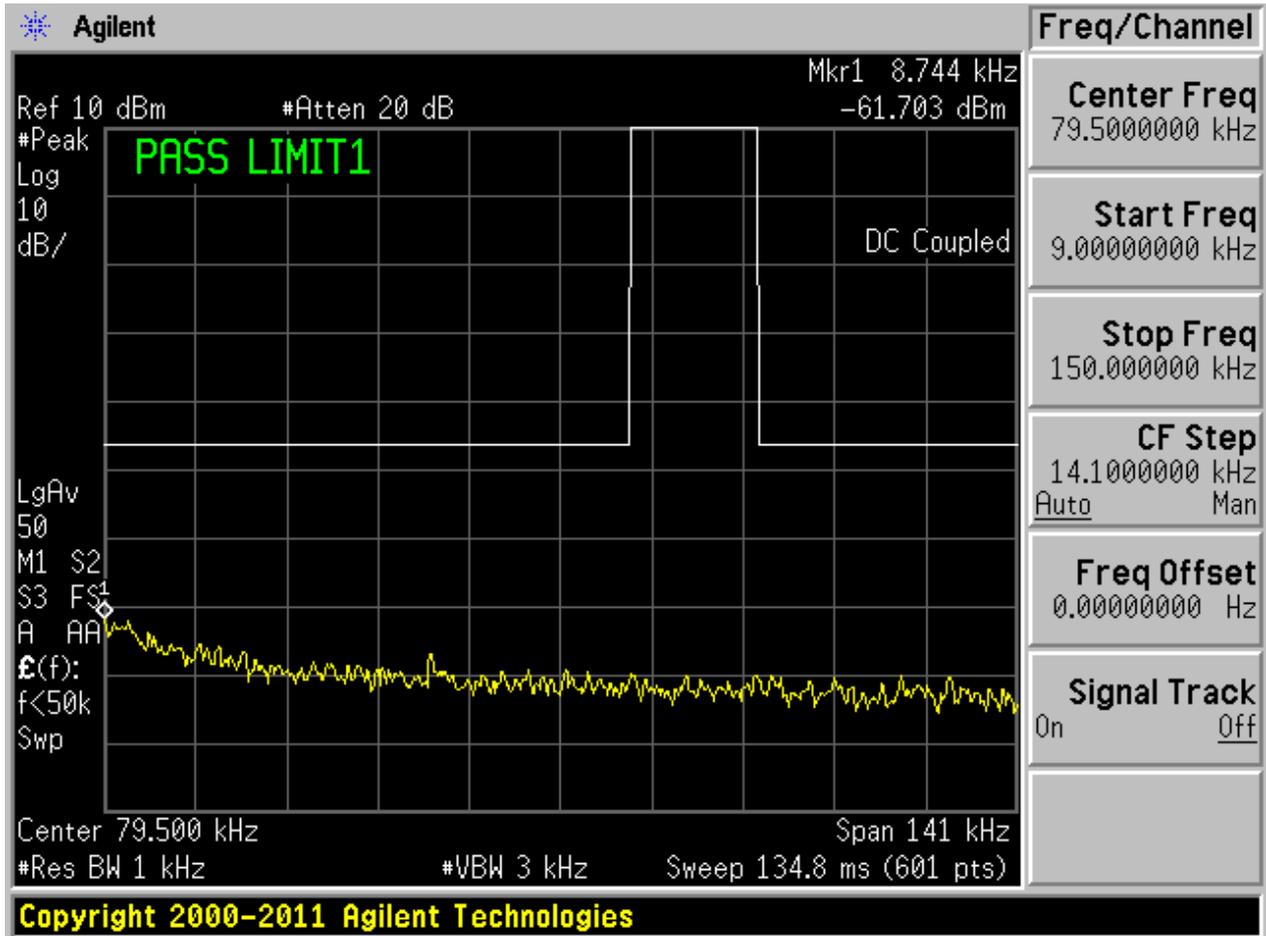


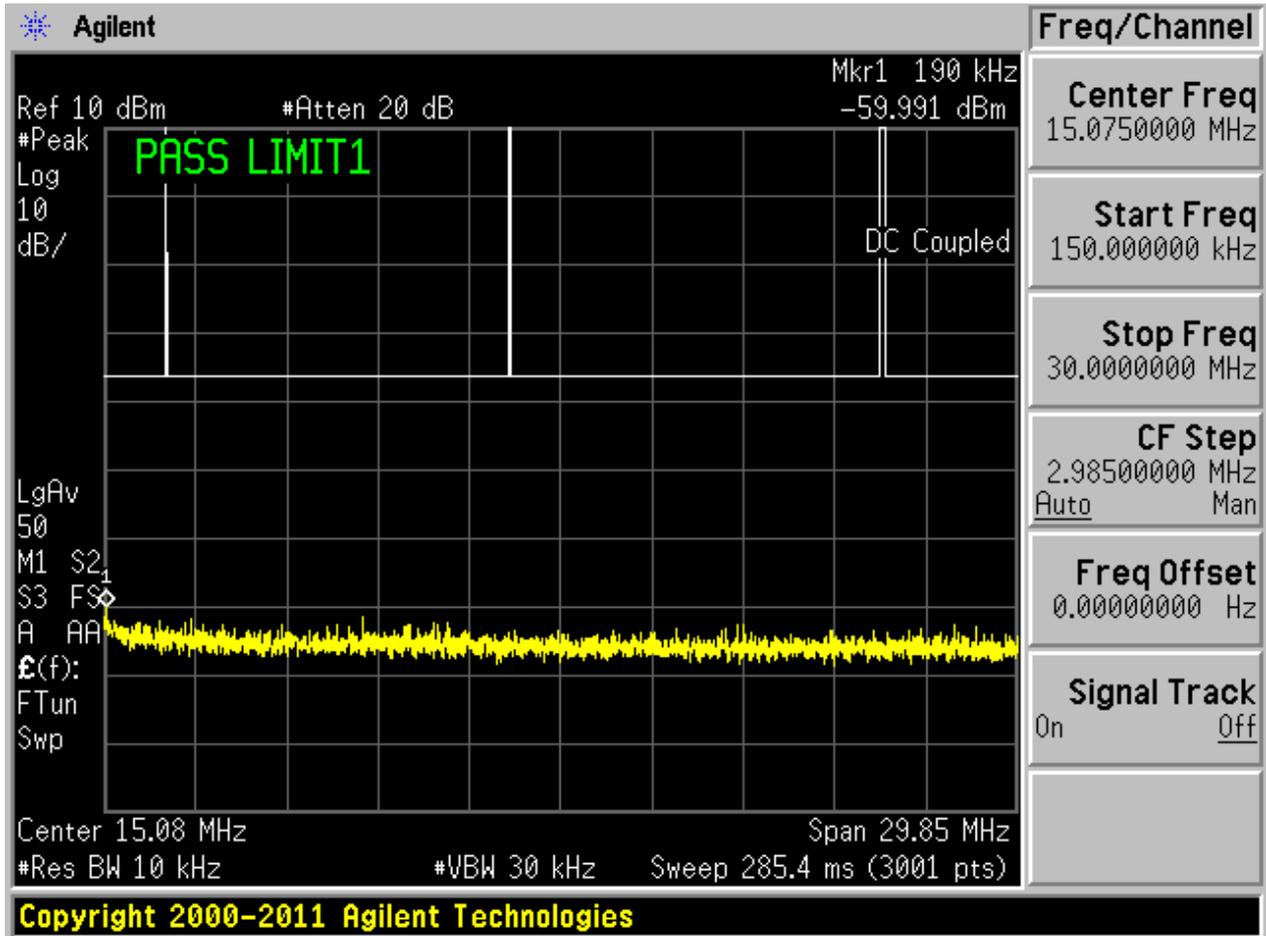
## 2.2 11B/1\_B@2

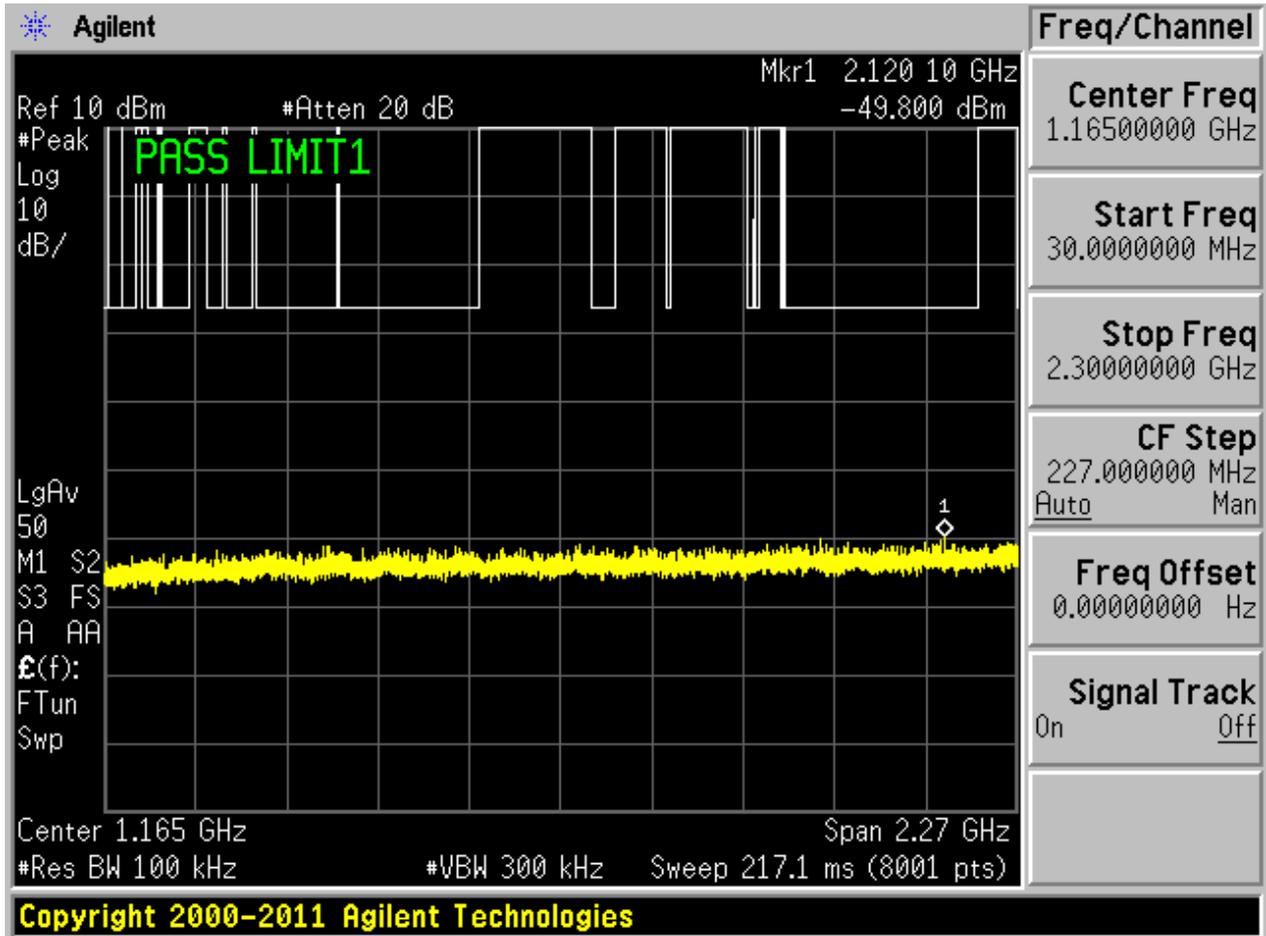
### 2.2.1 Pref

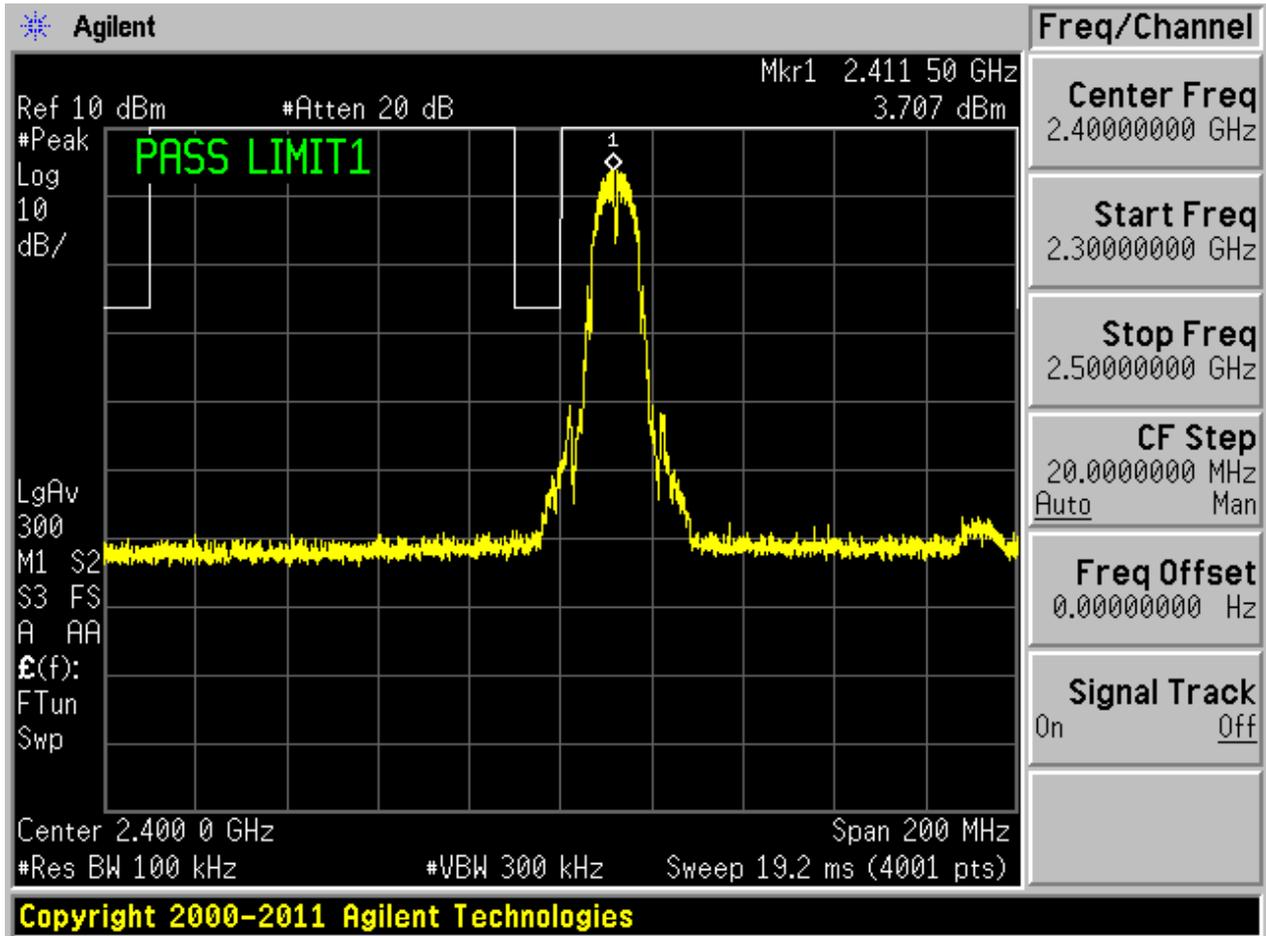


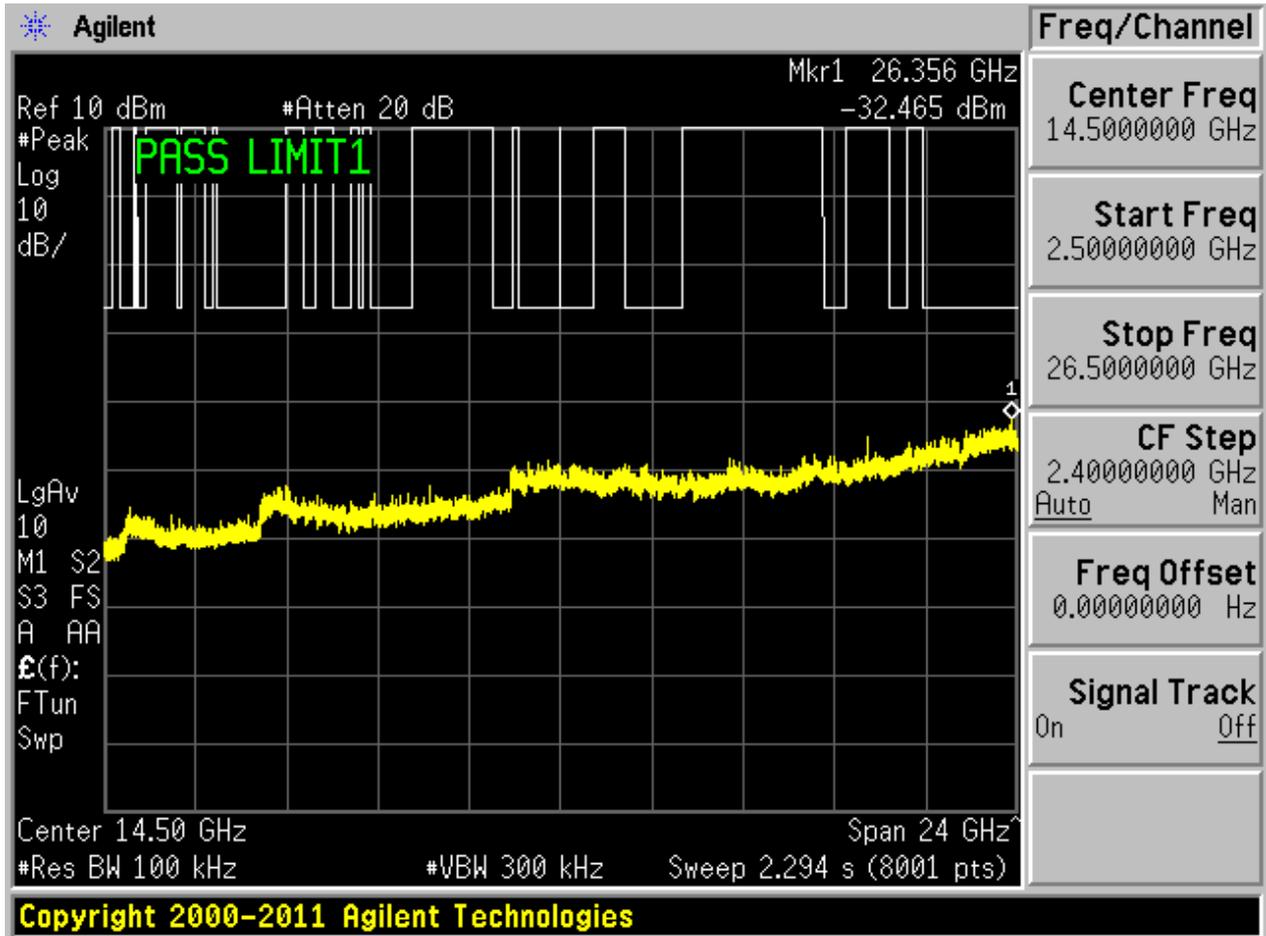
### 2.2.2 Puw





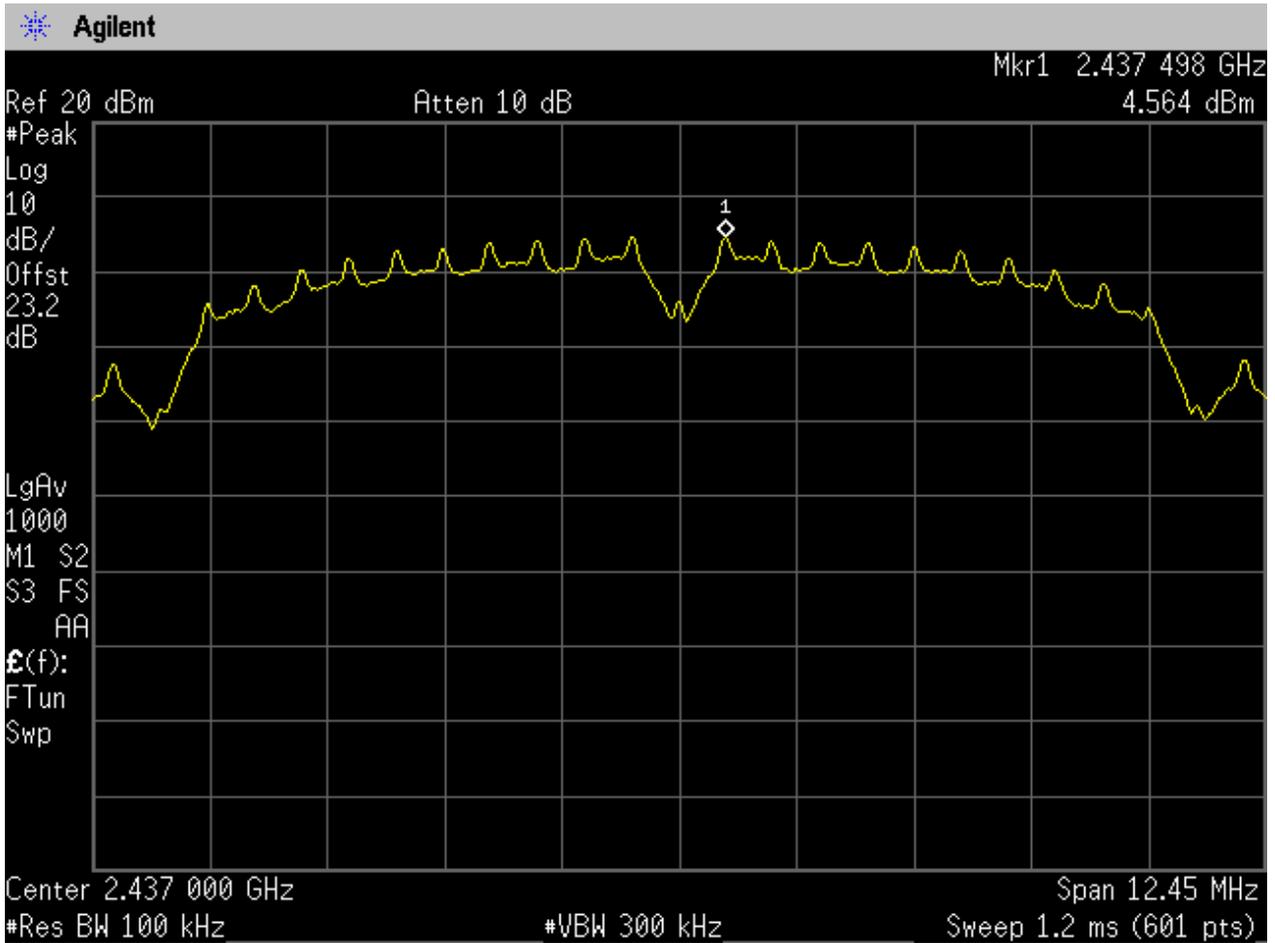




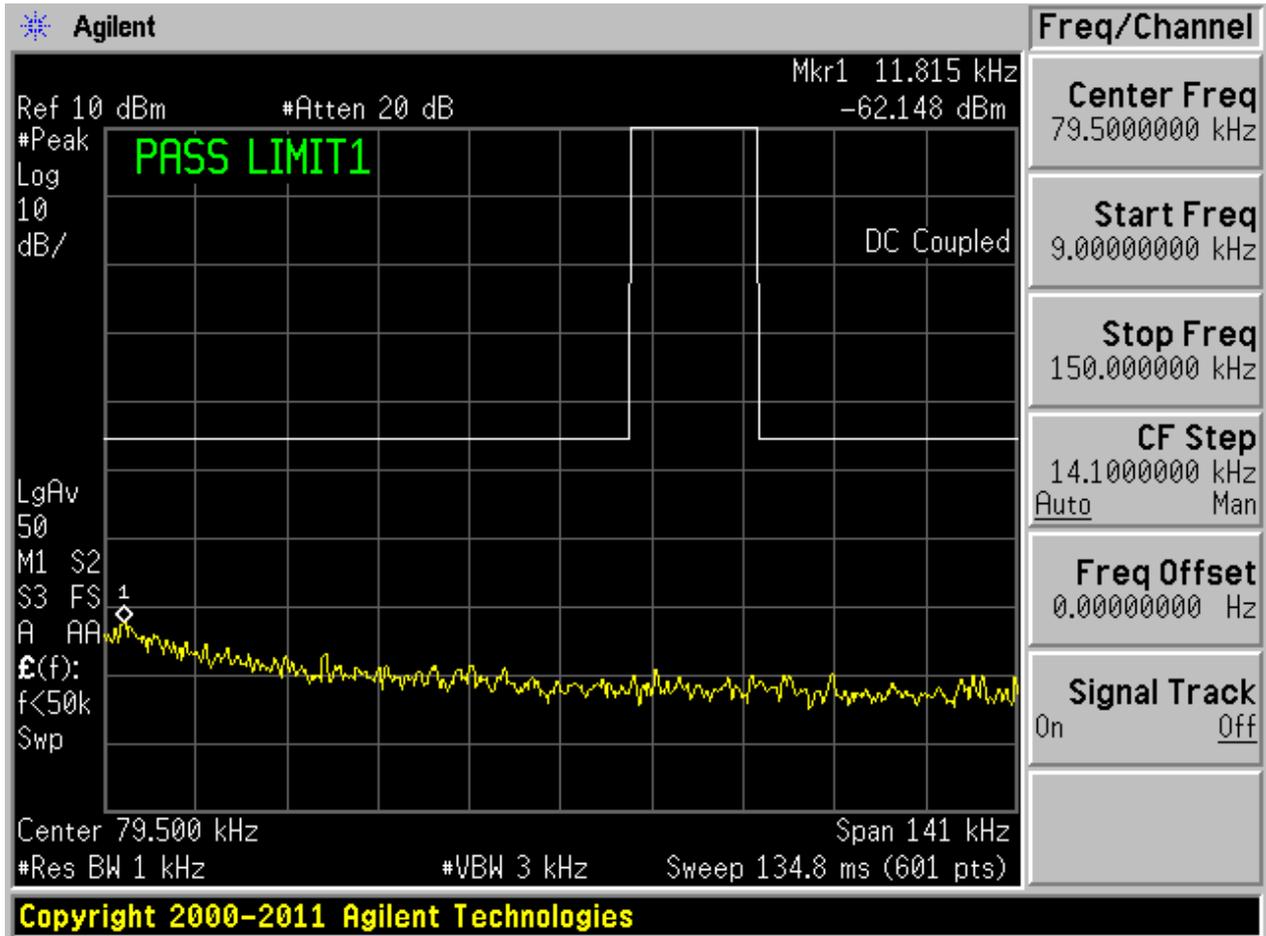


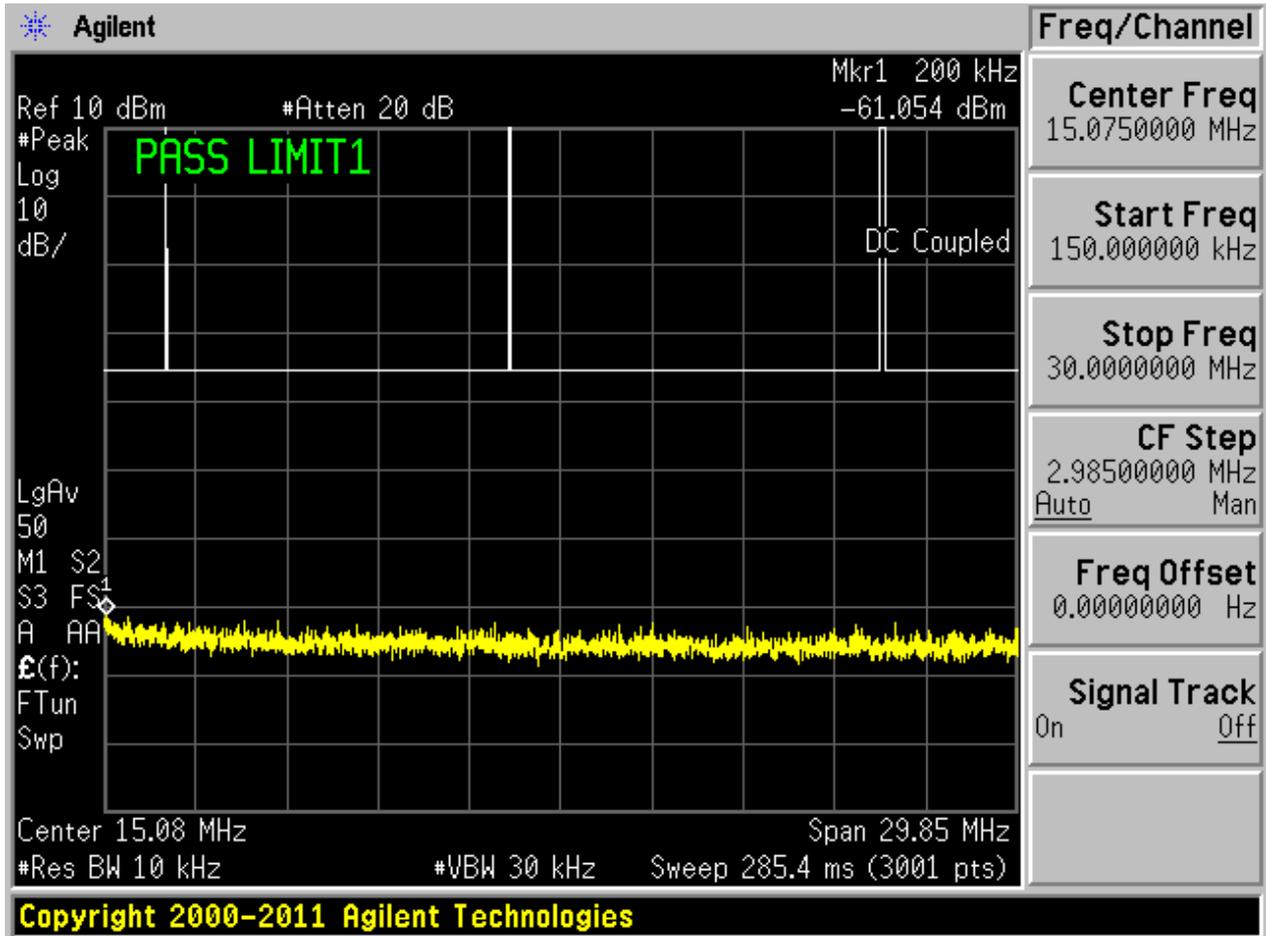
### 2.3 11B/1\_M@1

#### 2.3.1 Pref

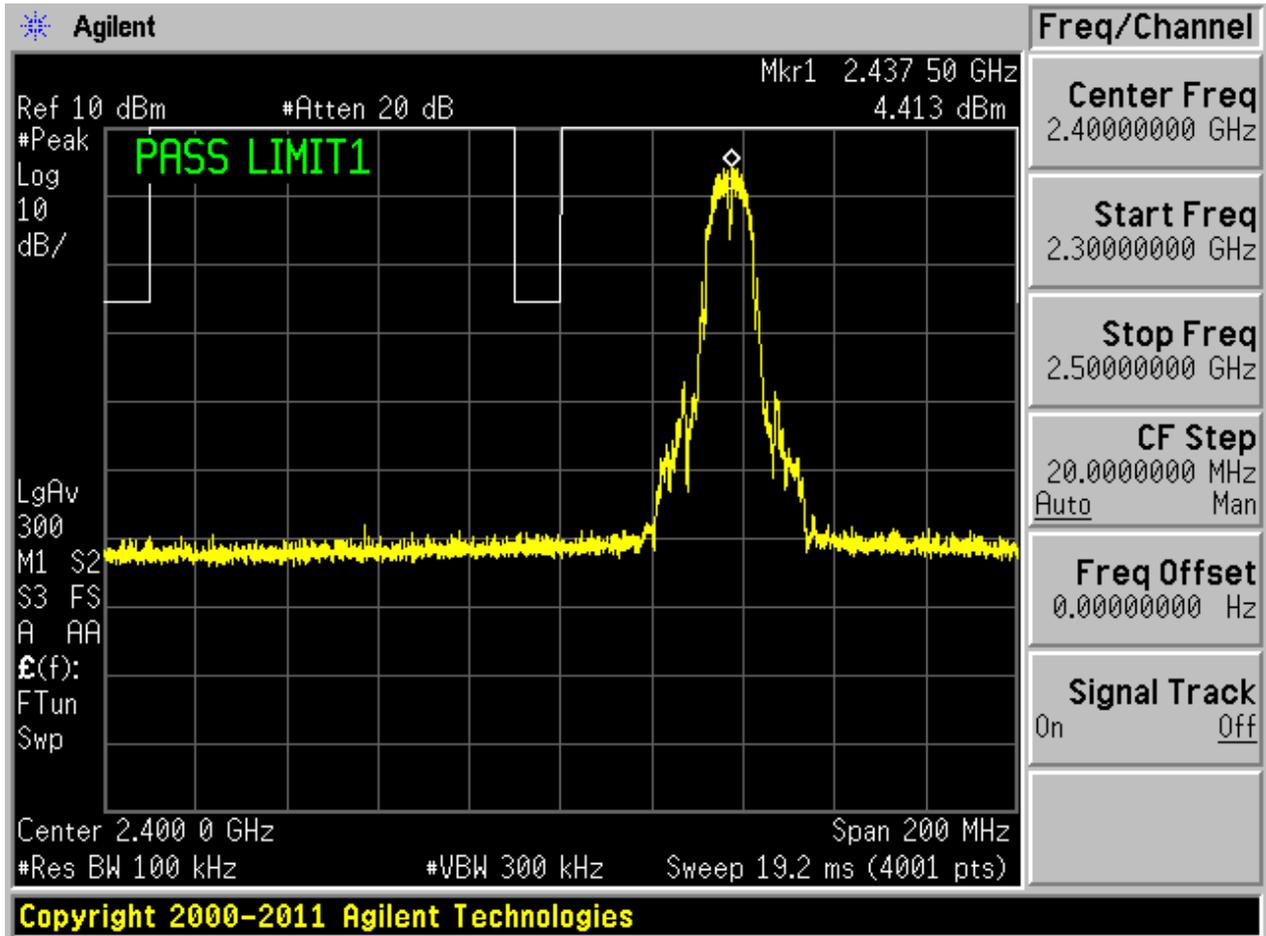


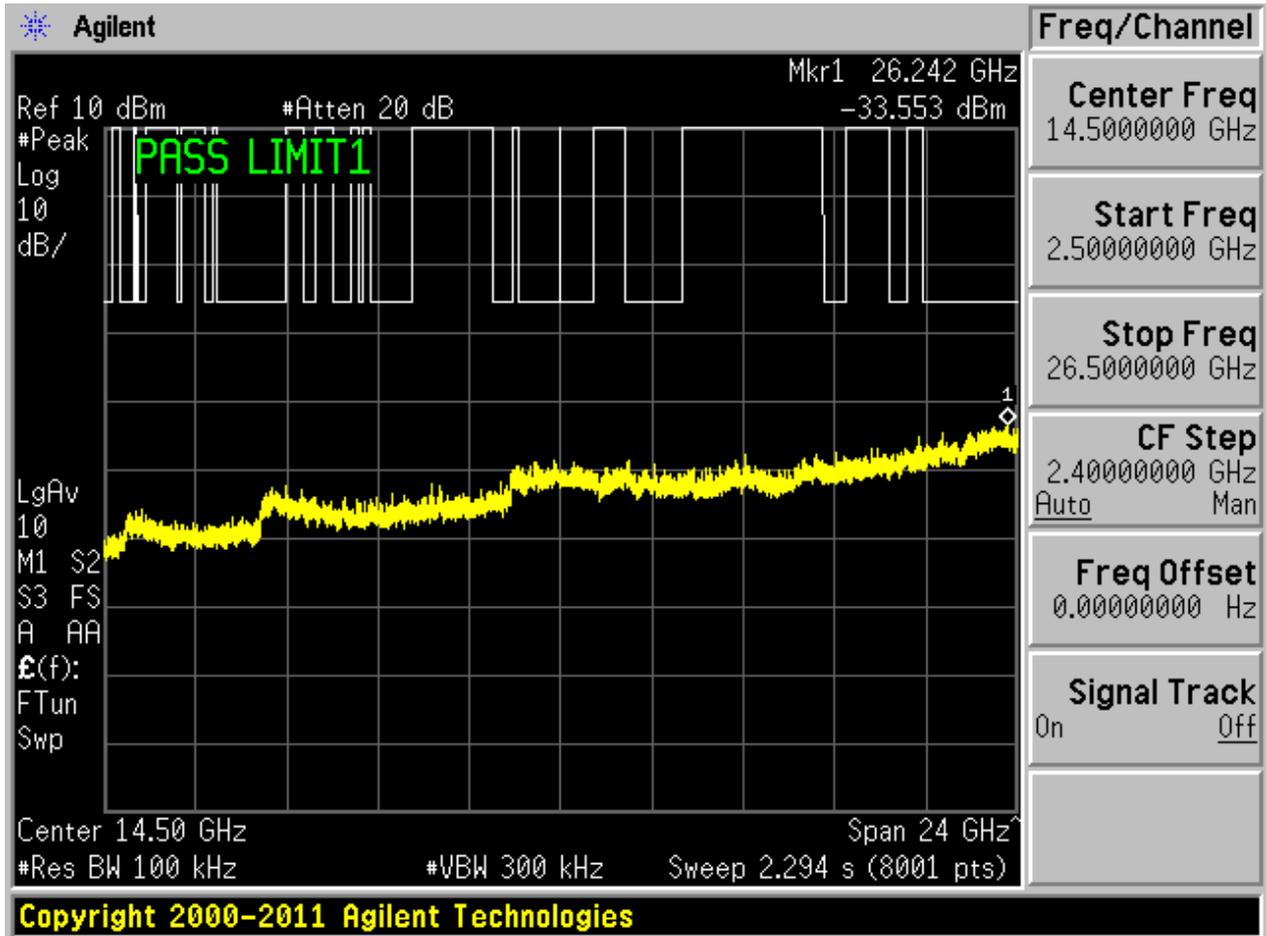
### 2.3.2 Puw





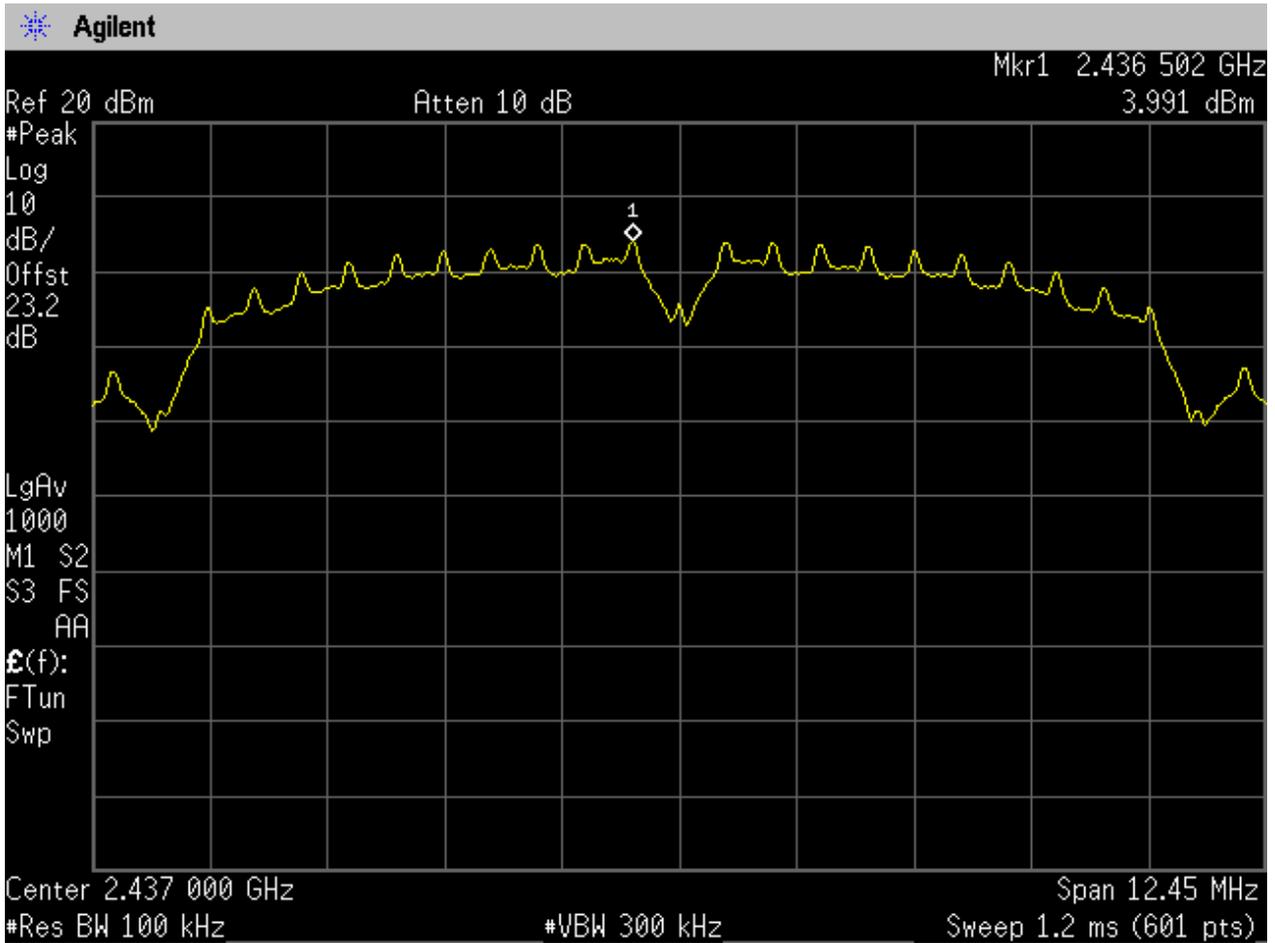




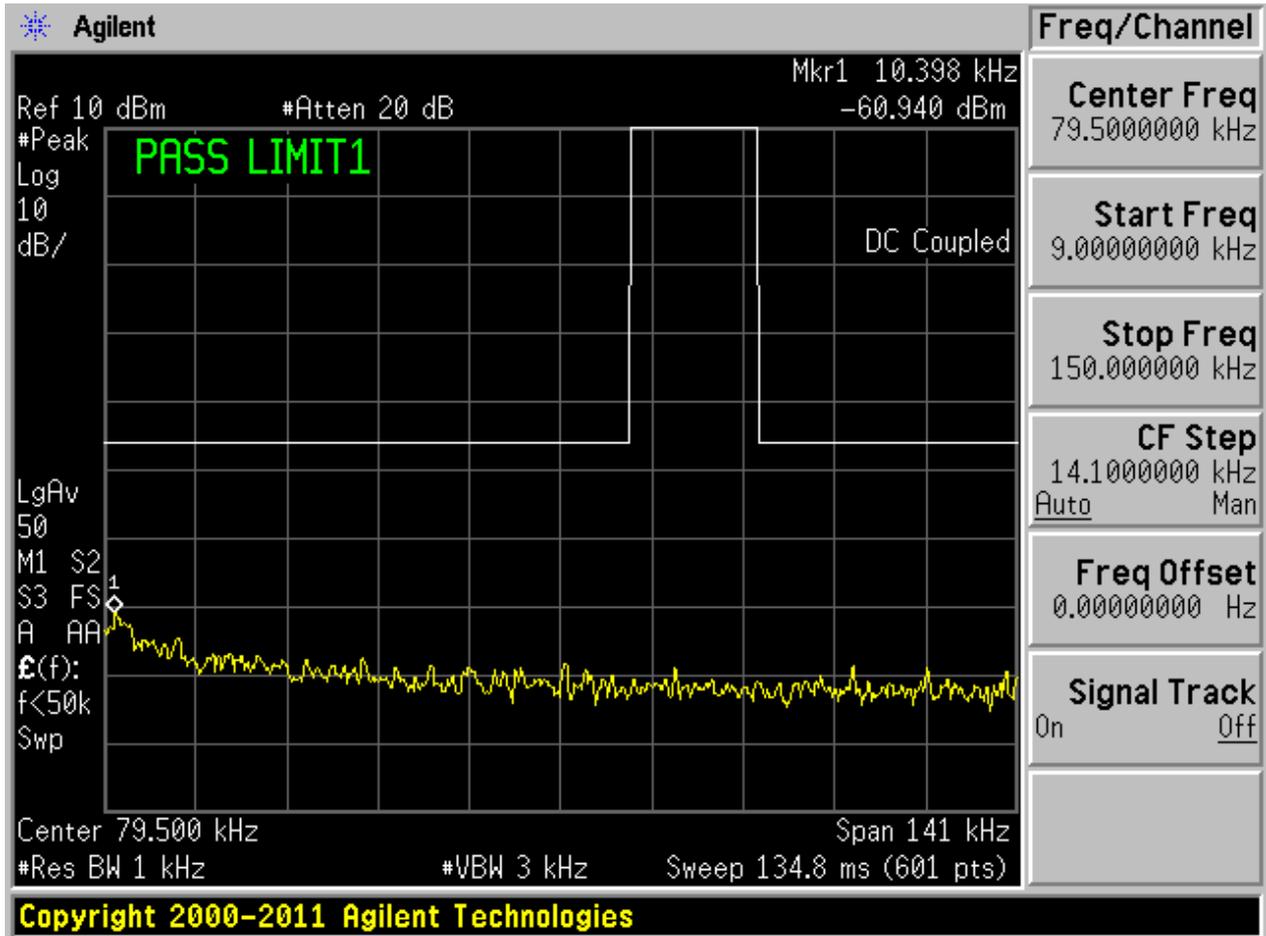


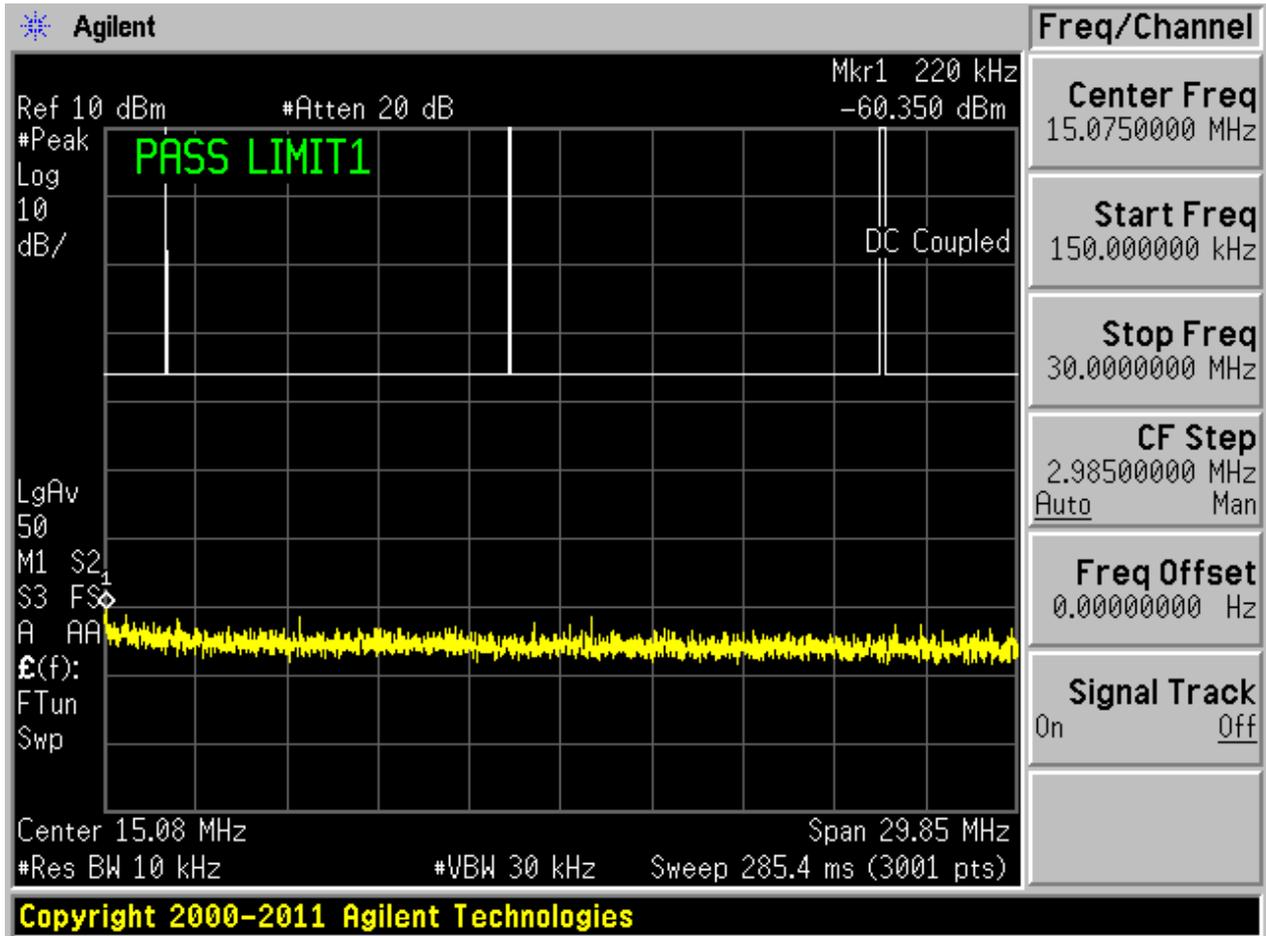
## 2.4 11B/1\_M@2

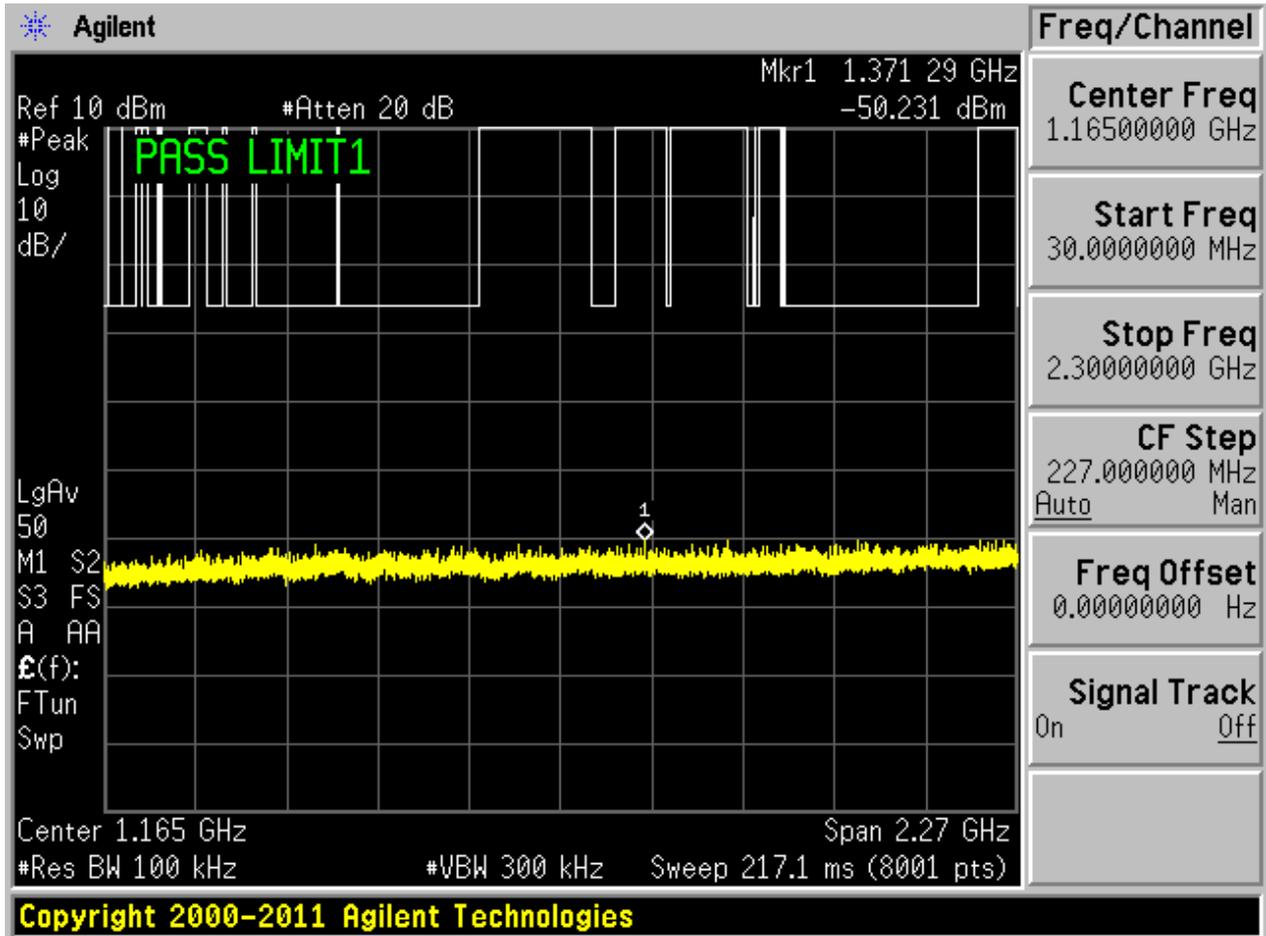
### 2.4.1 Pref

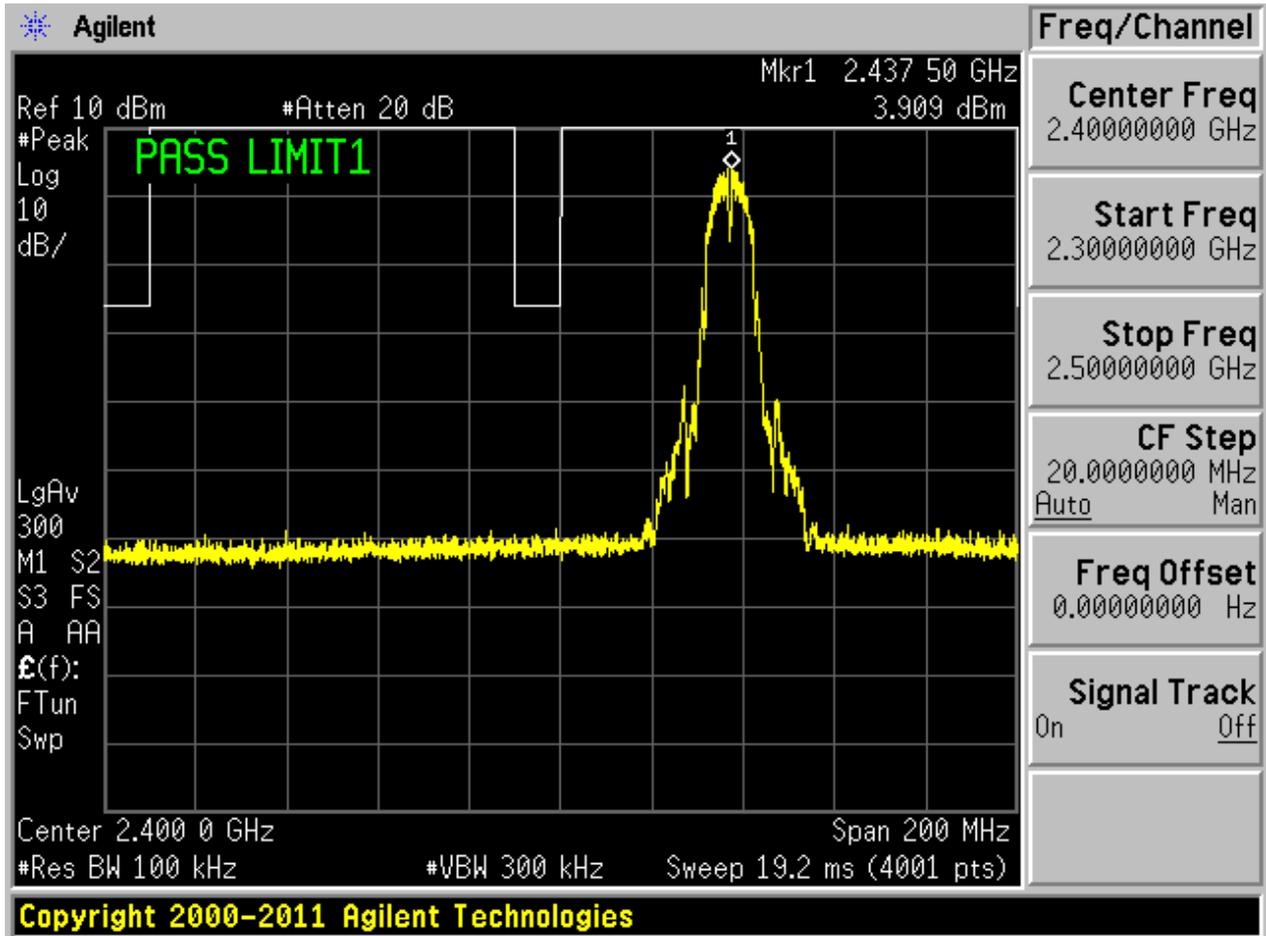


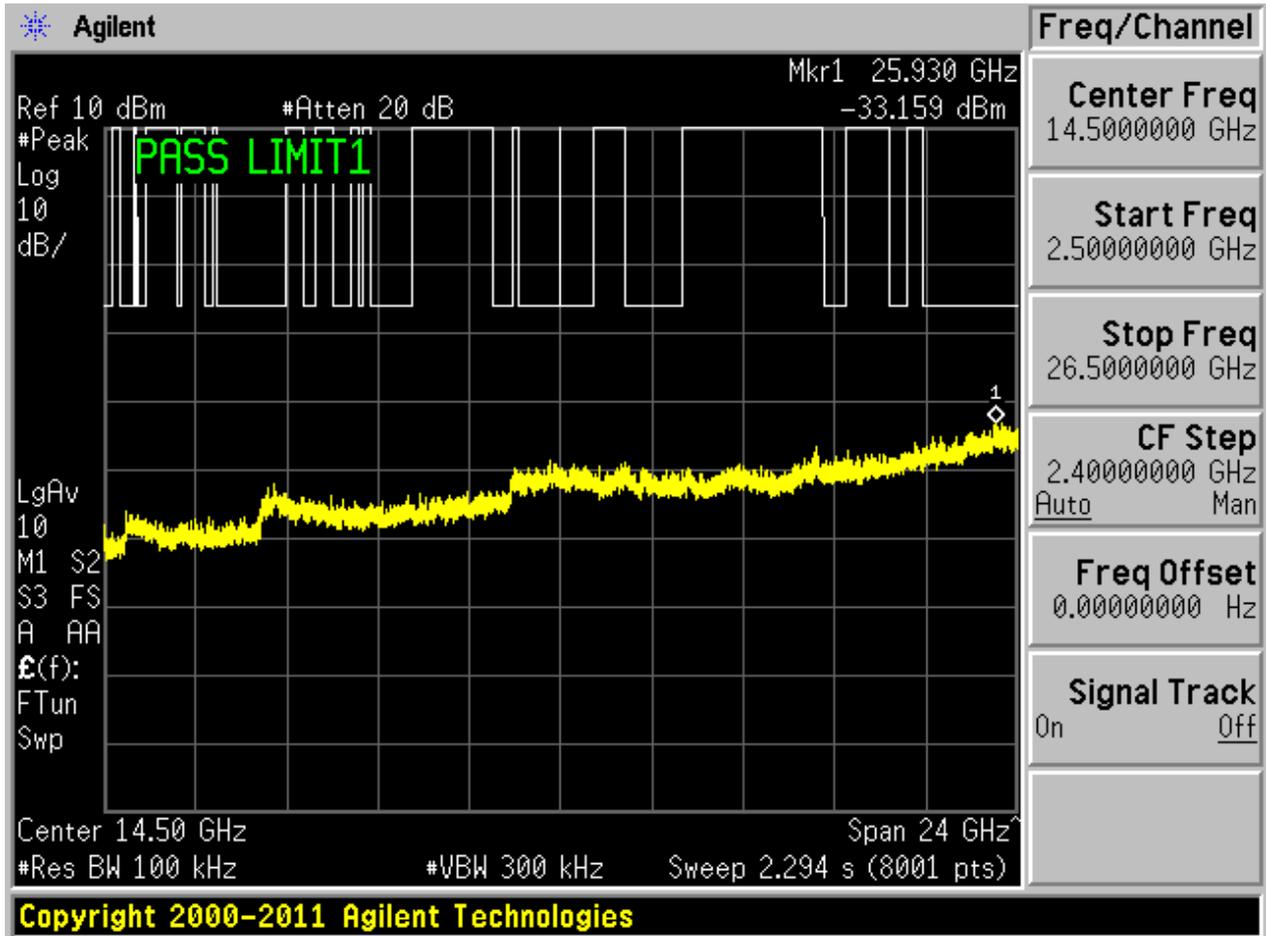
## 2.4.2 Puw





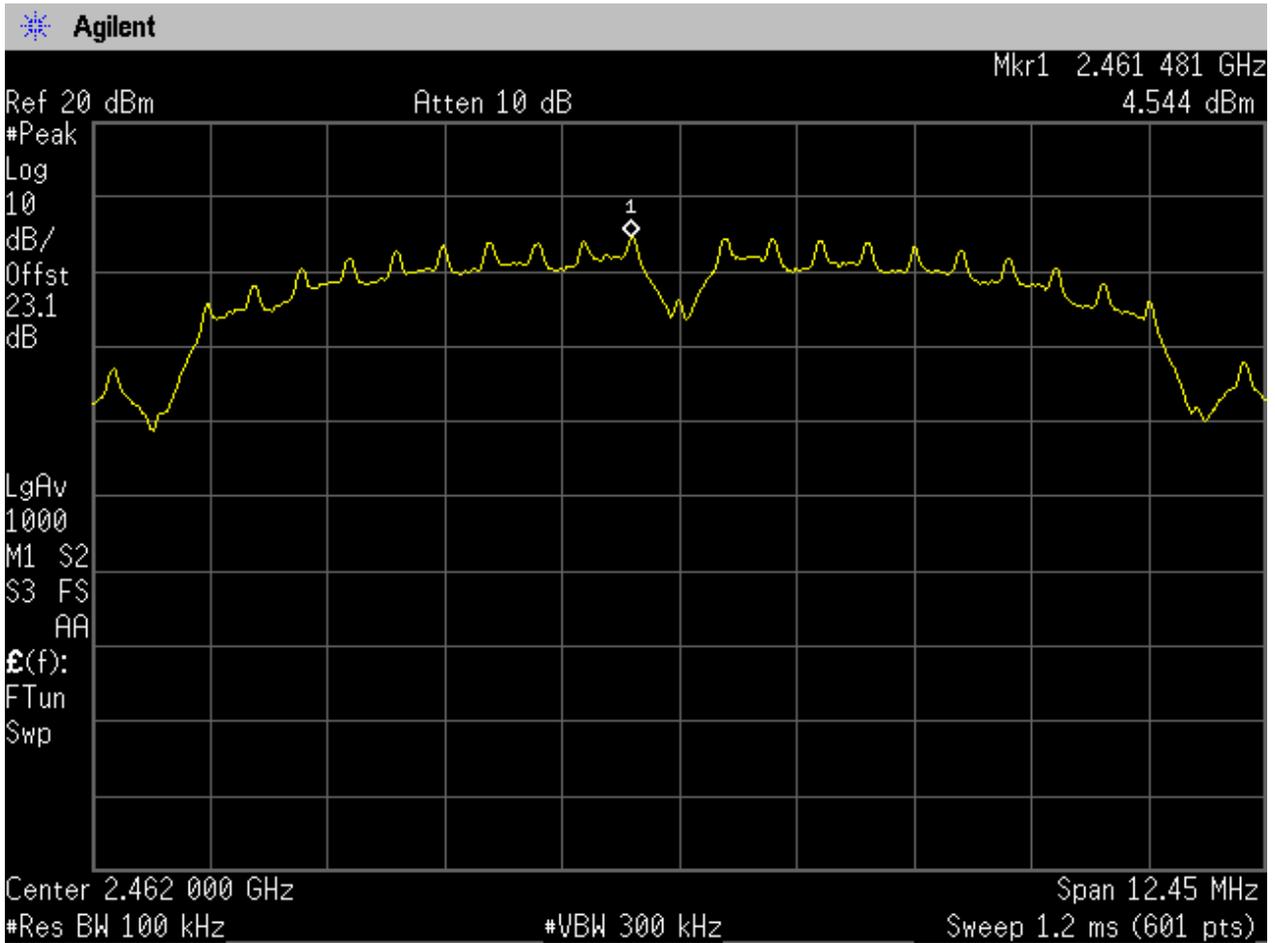




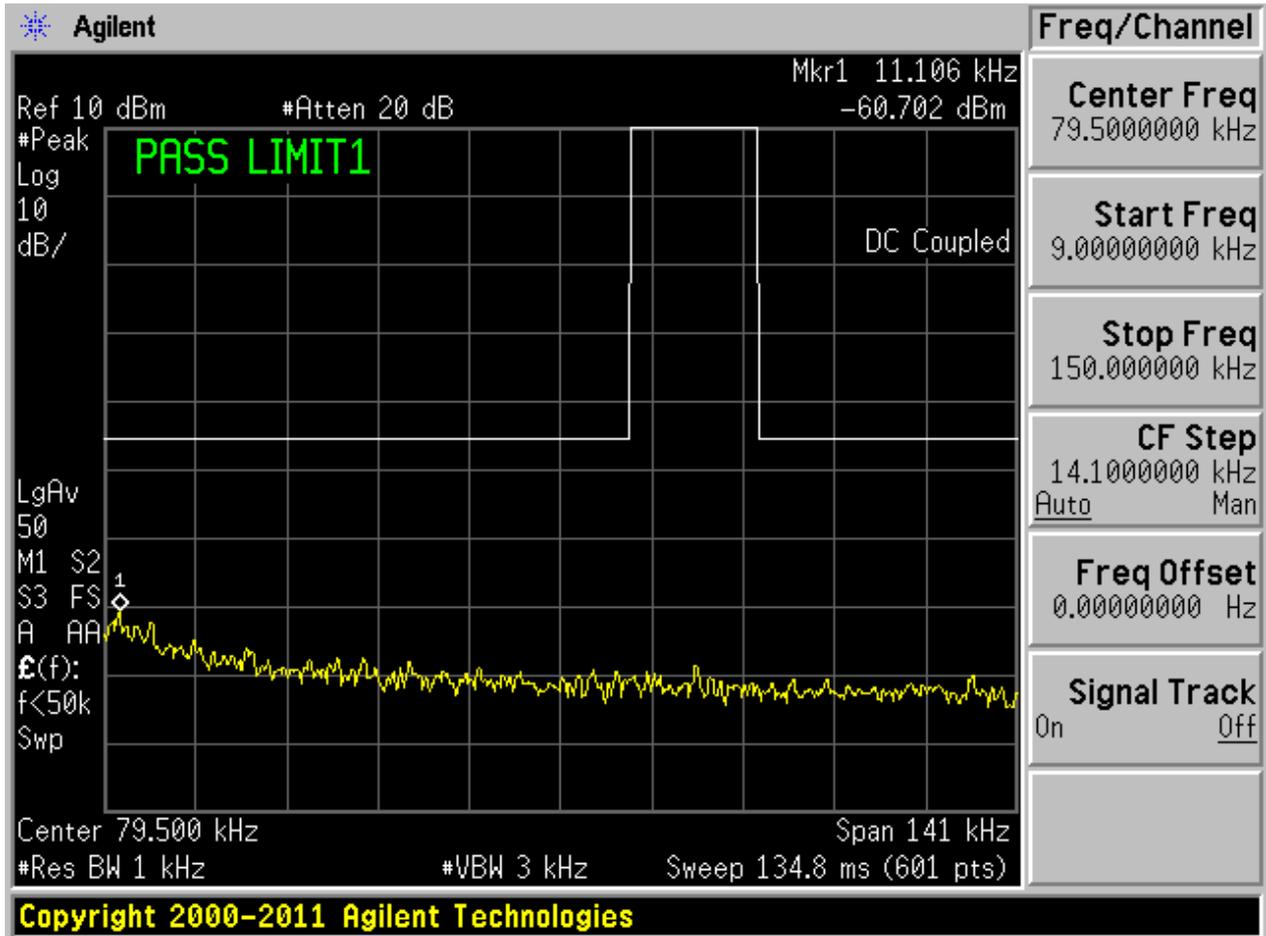


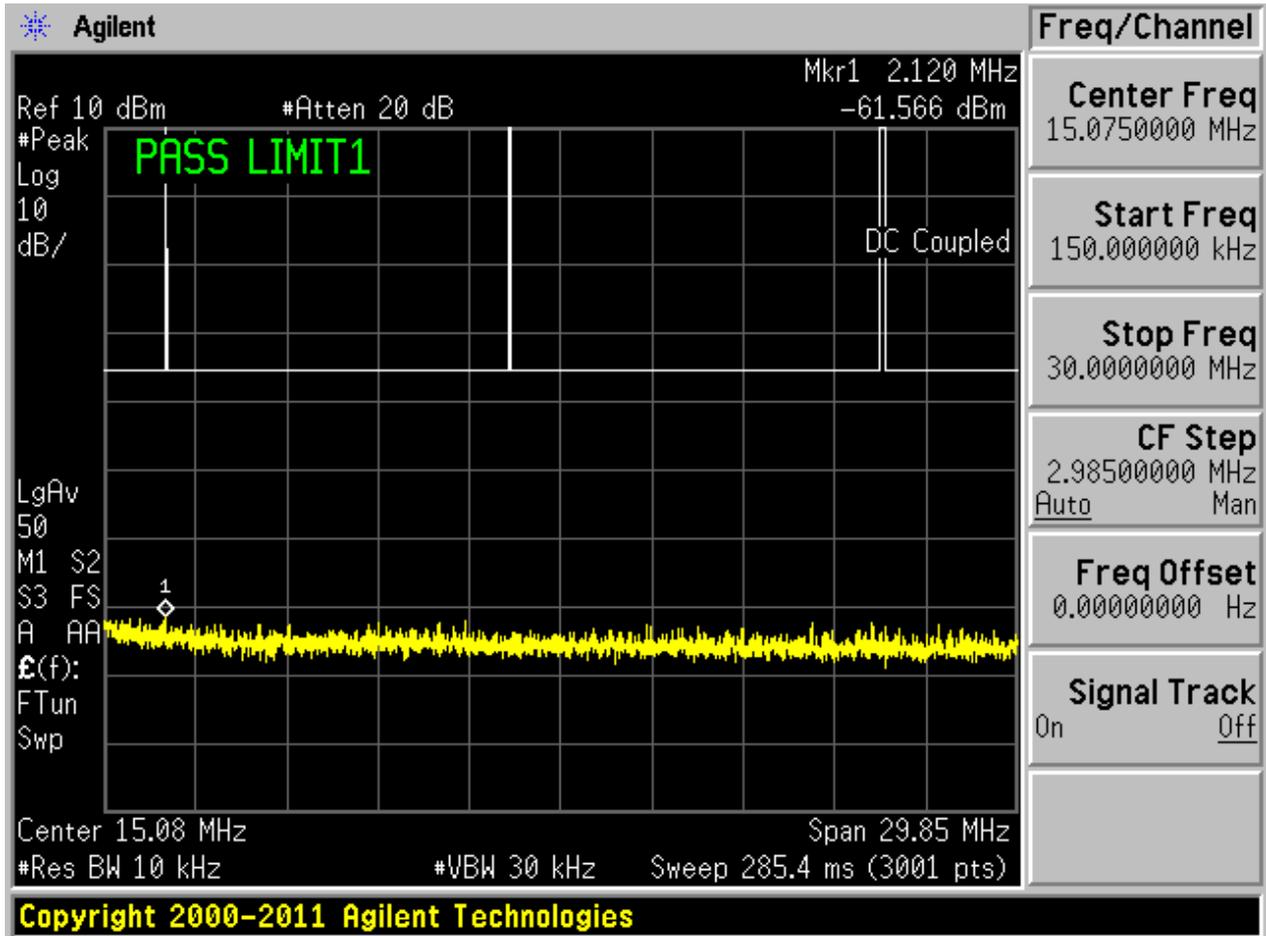
## 2.5 11B/1\_T@1

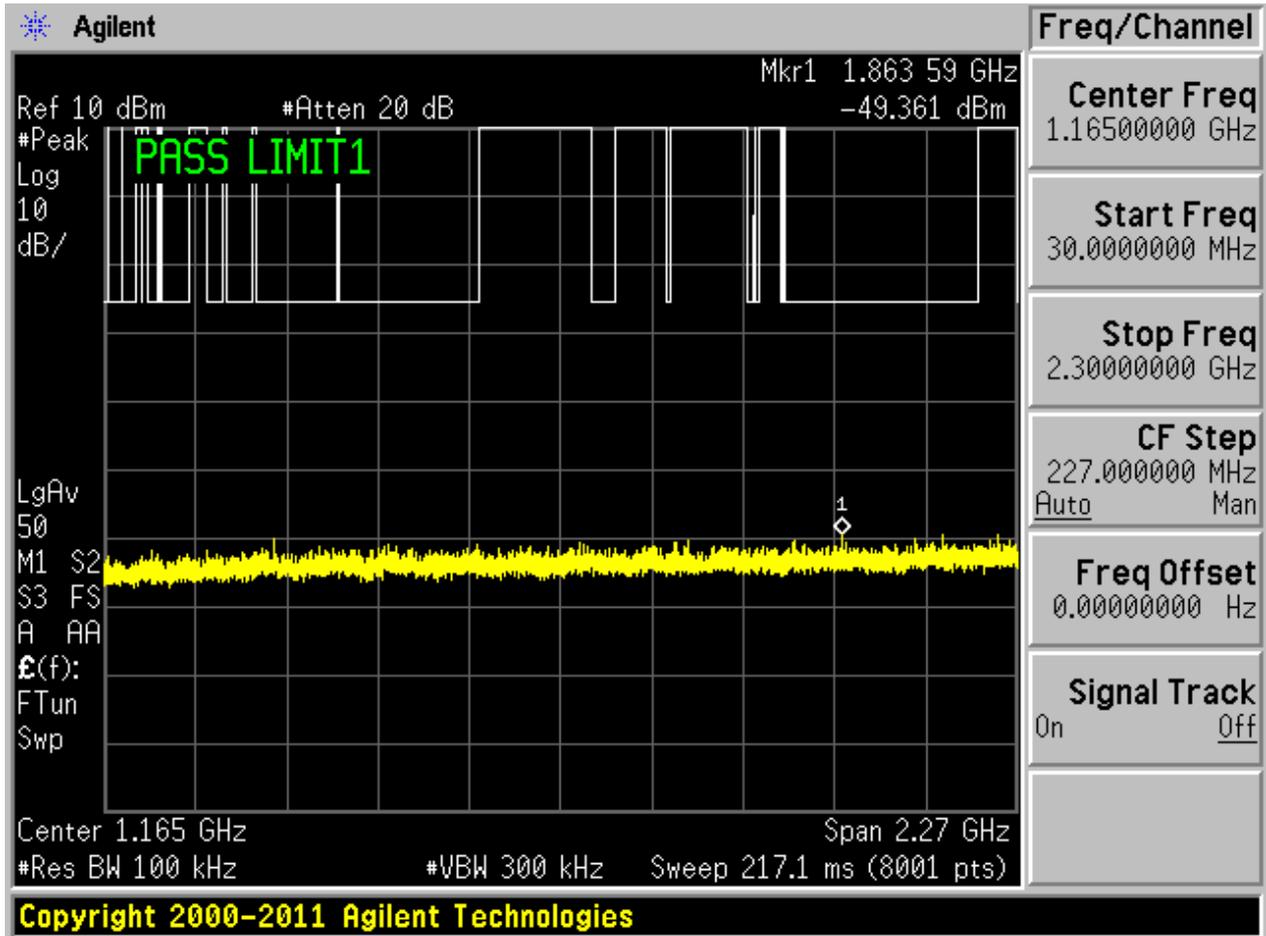
### 2.5.1 Pref

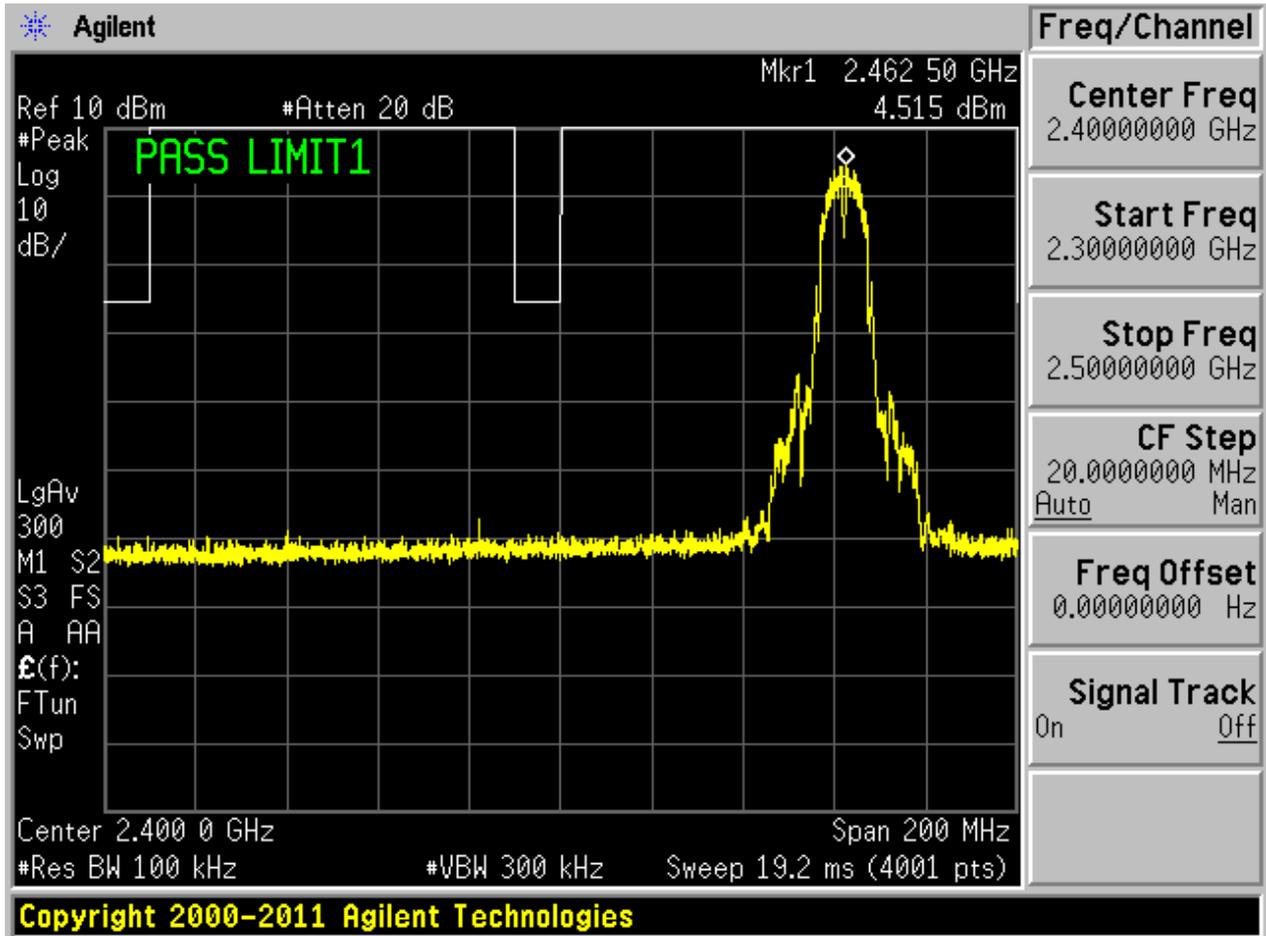


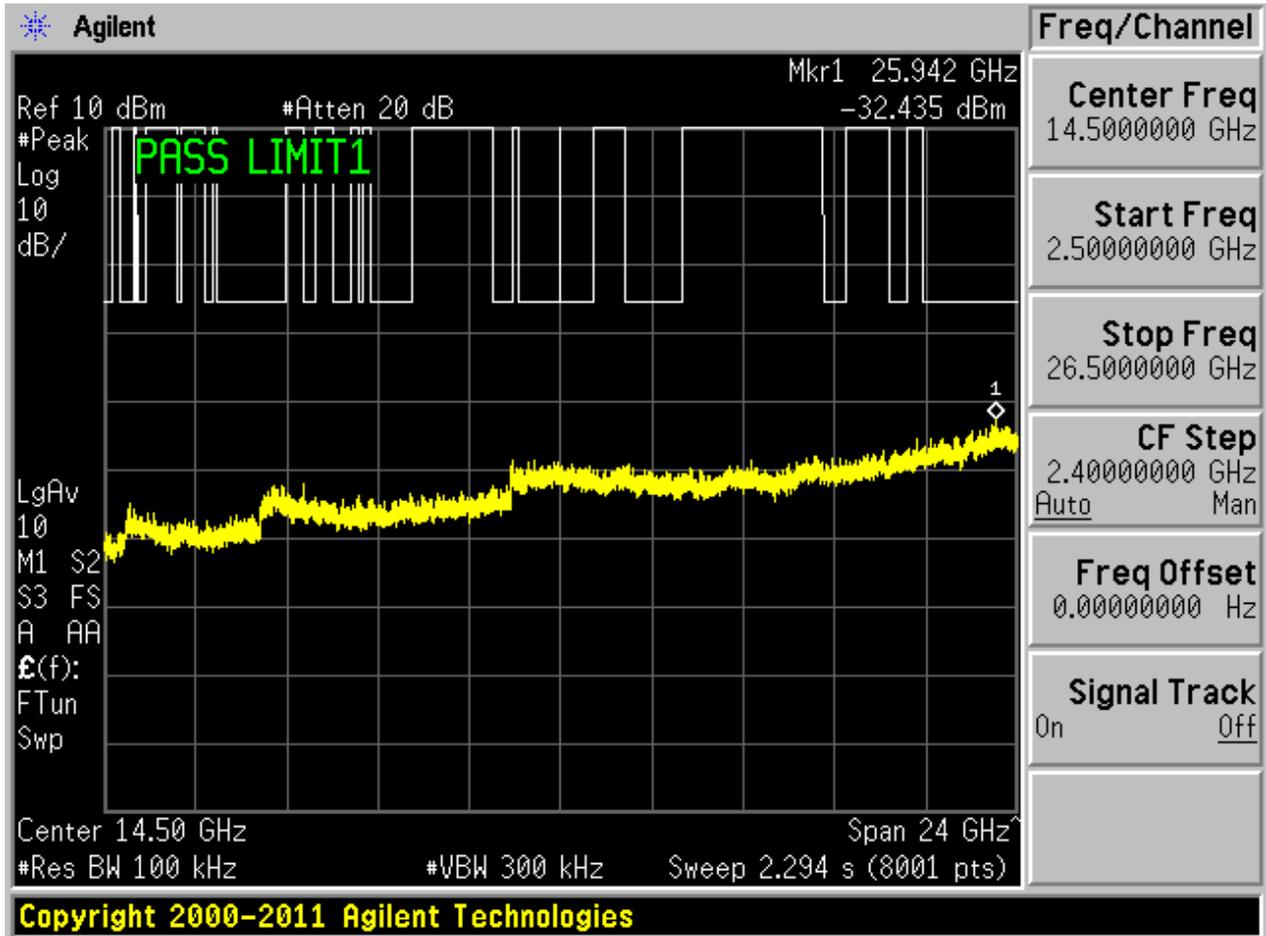
### 2.5.2 Puw





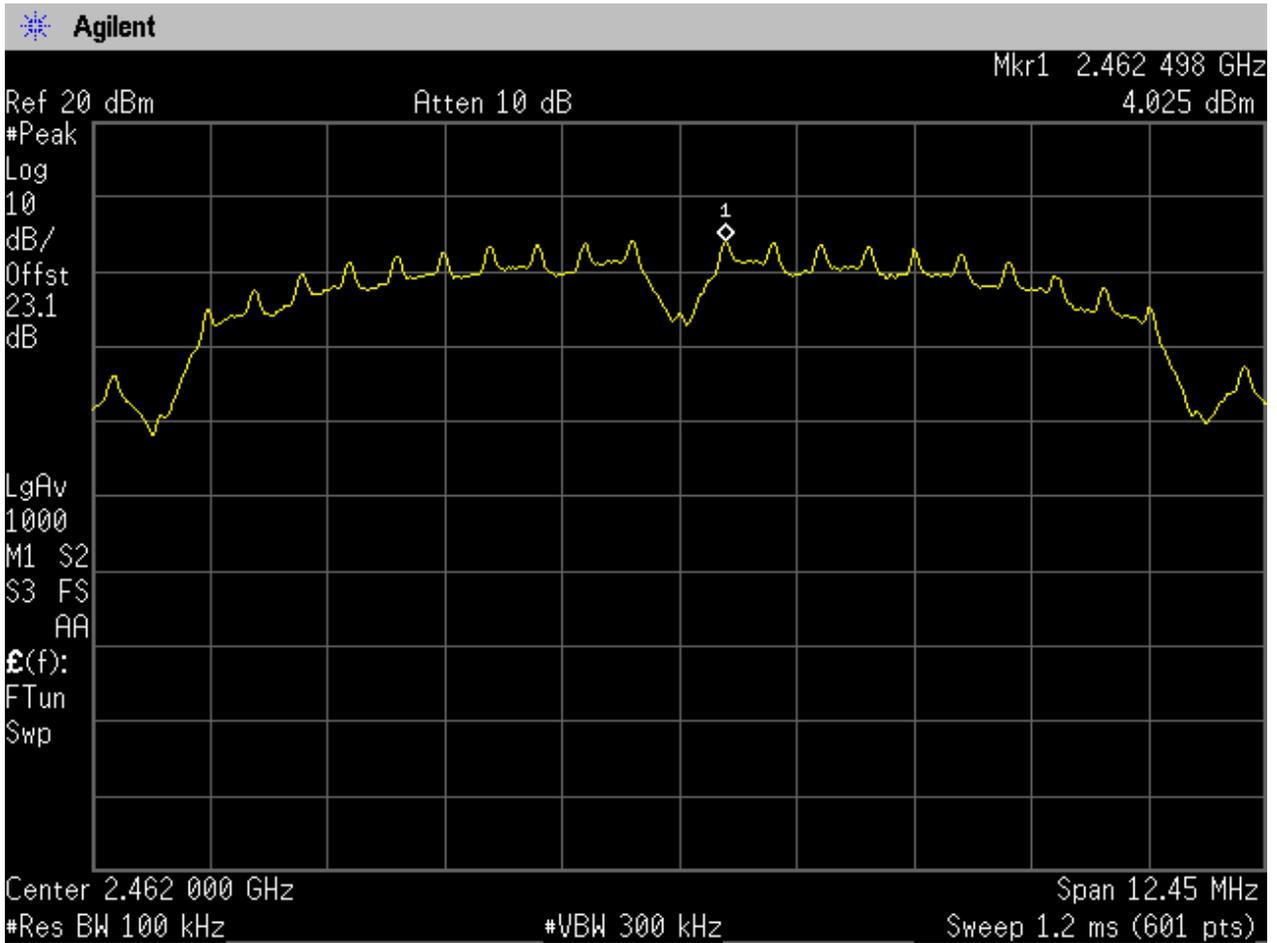




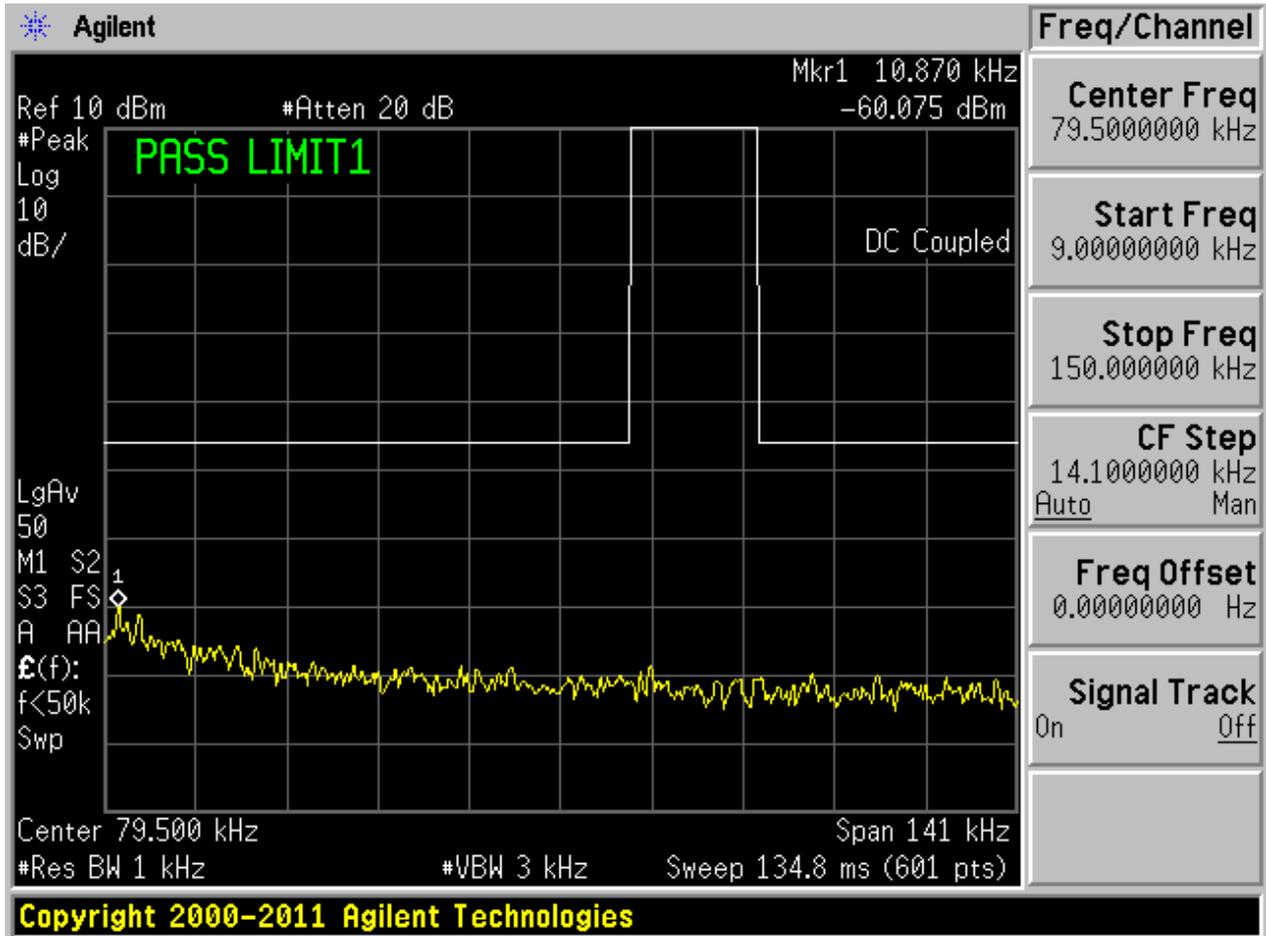


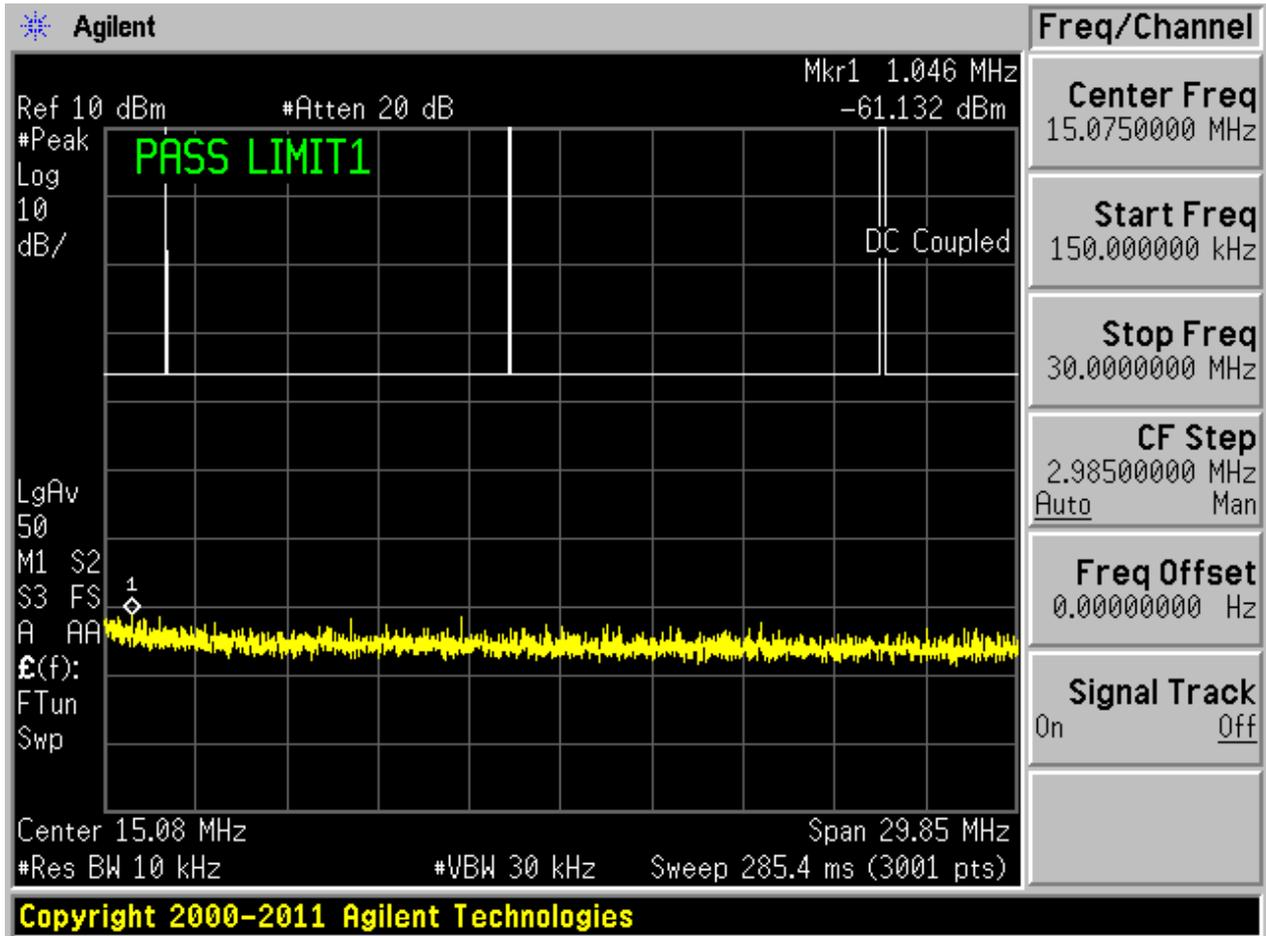
## 2.6 11B/1\_T@2

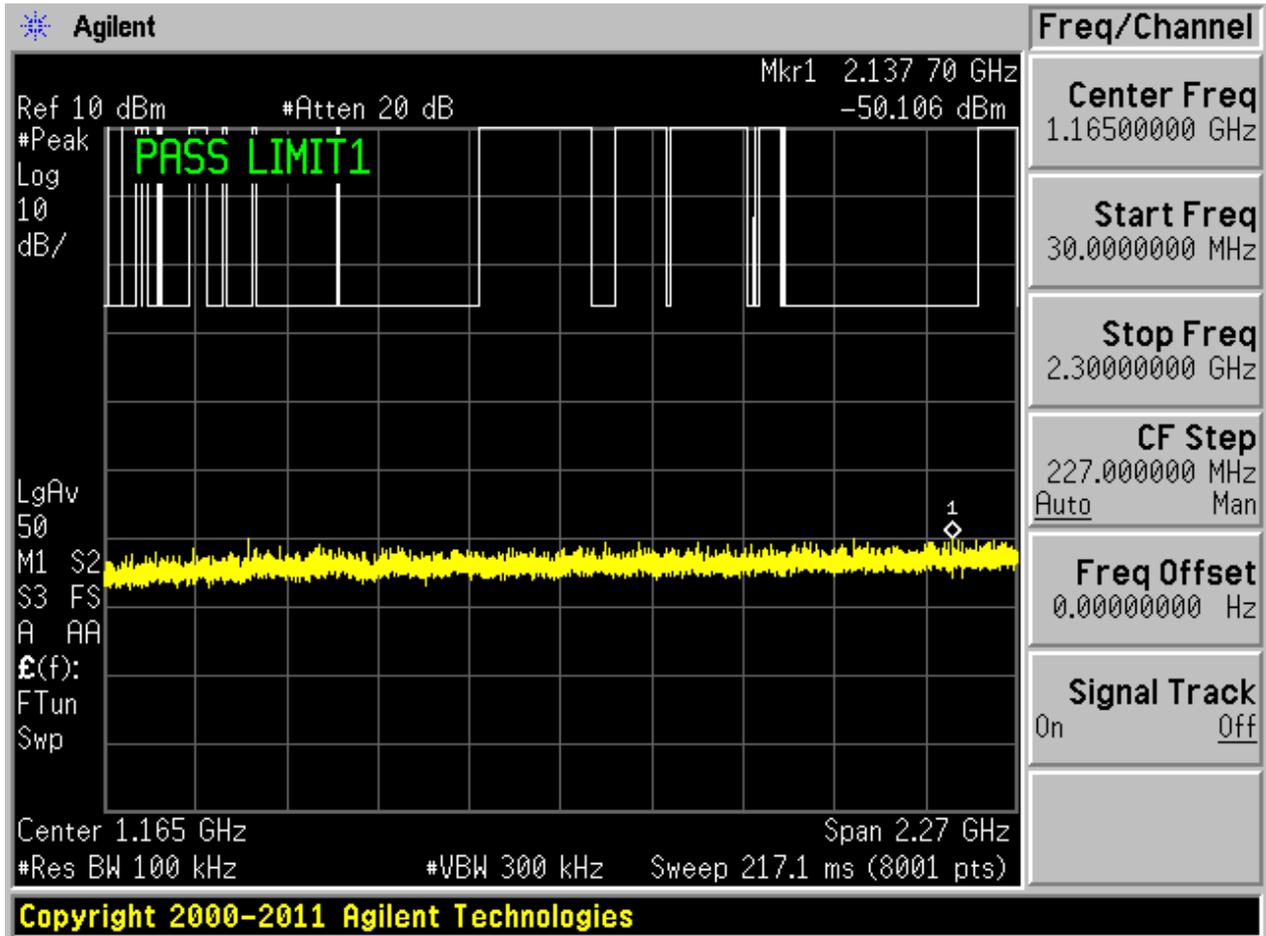
### 2.6.1 Pref

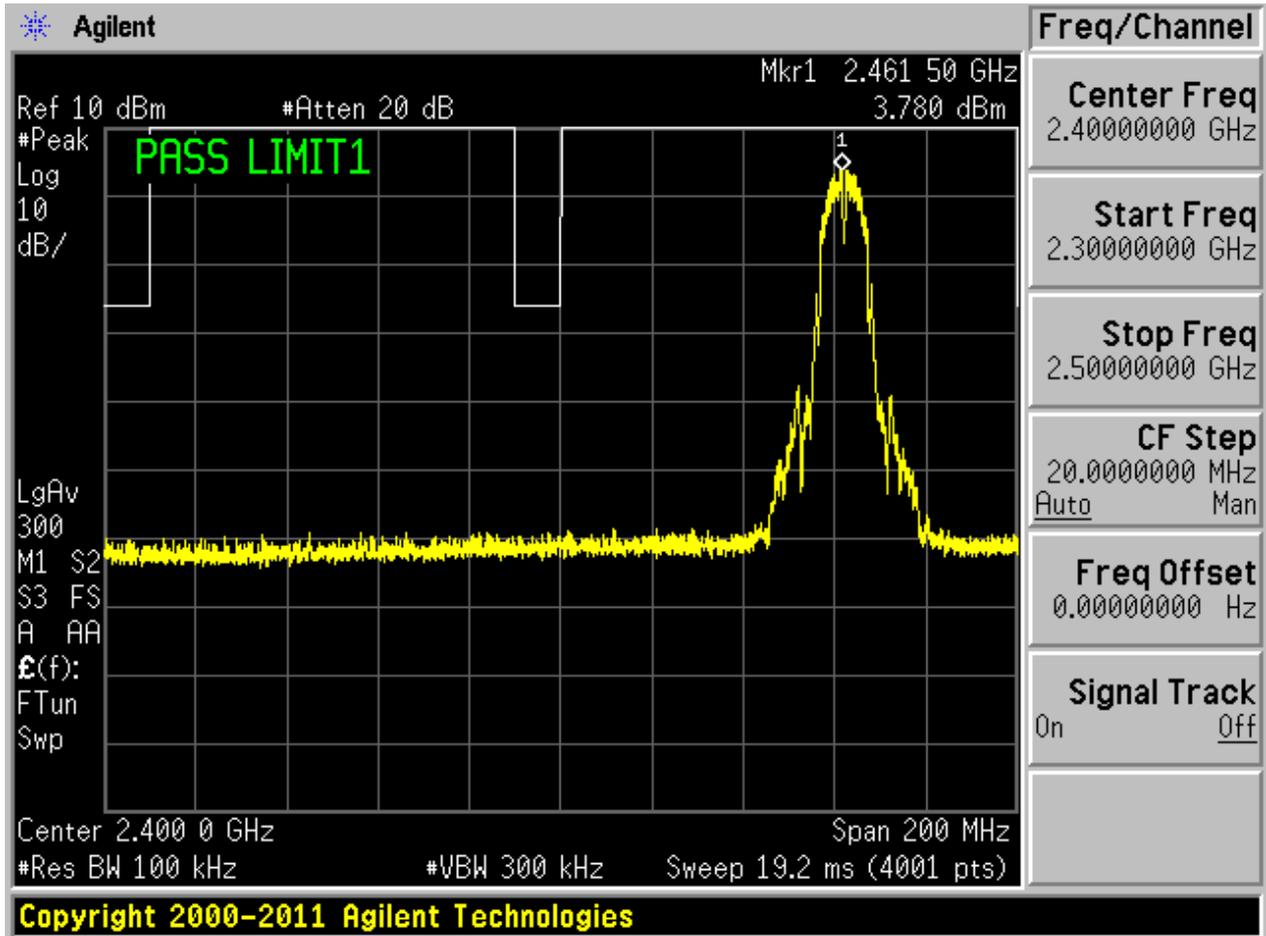


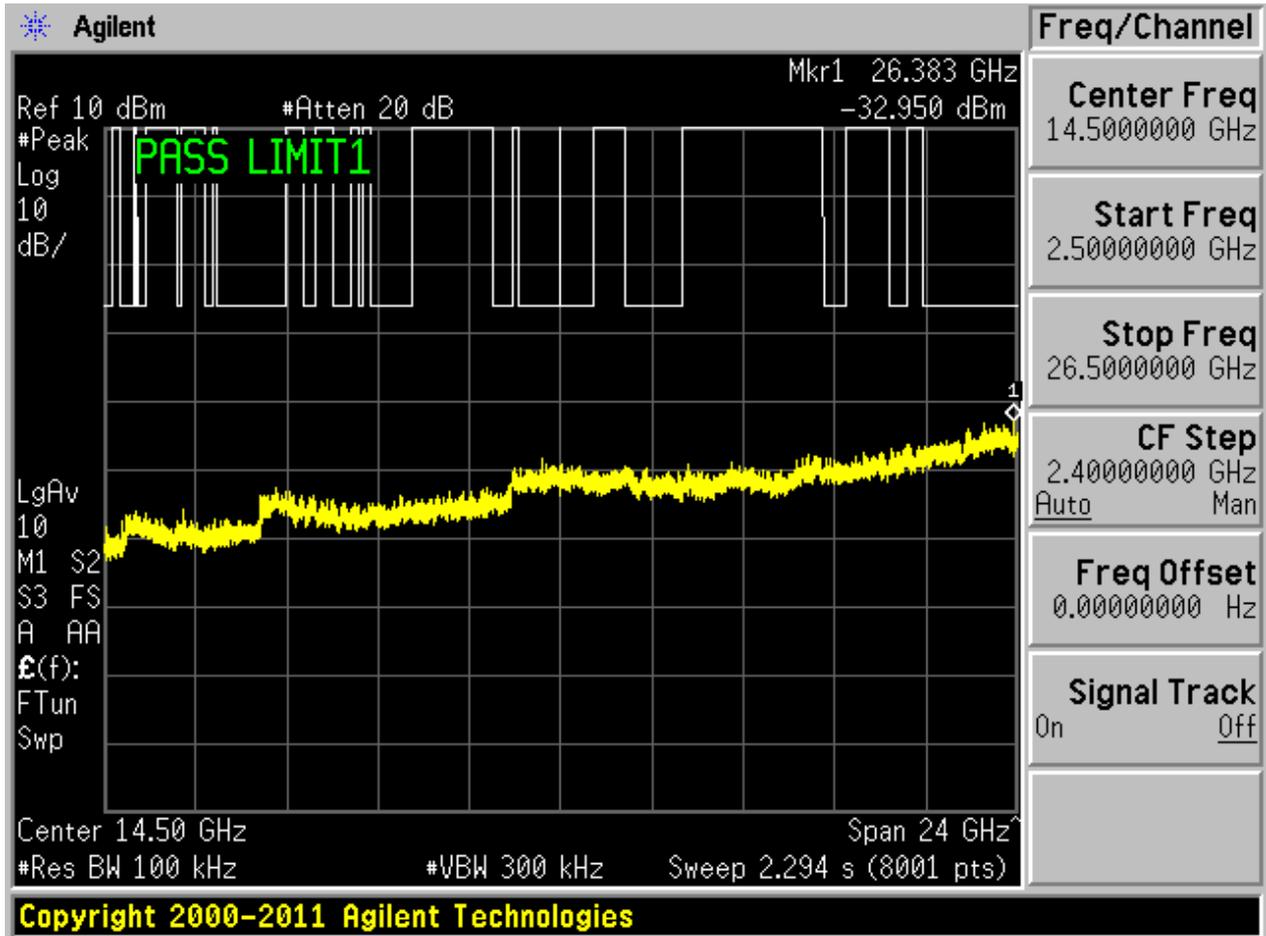
**2.6.2 Puw**





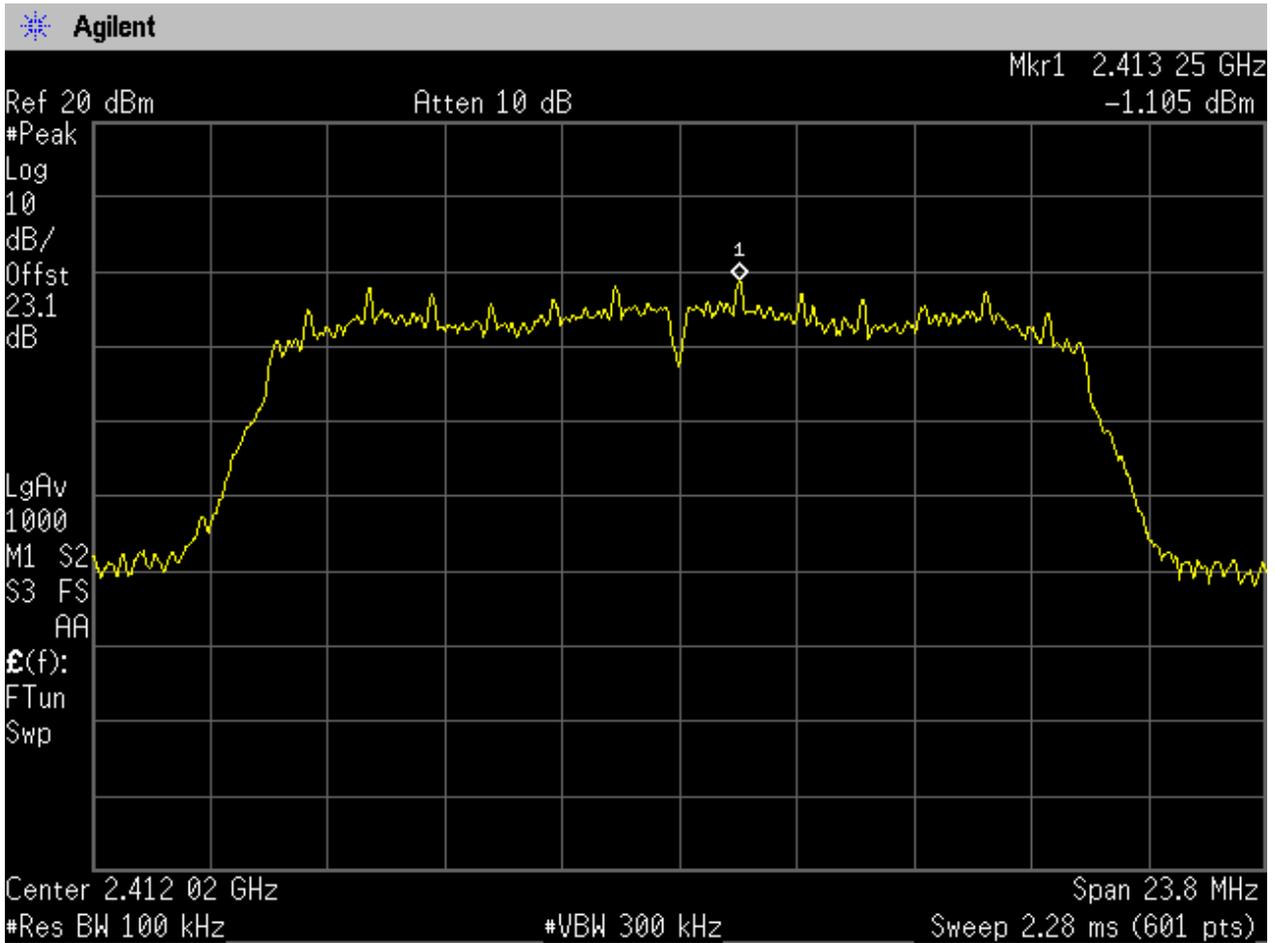




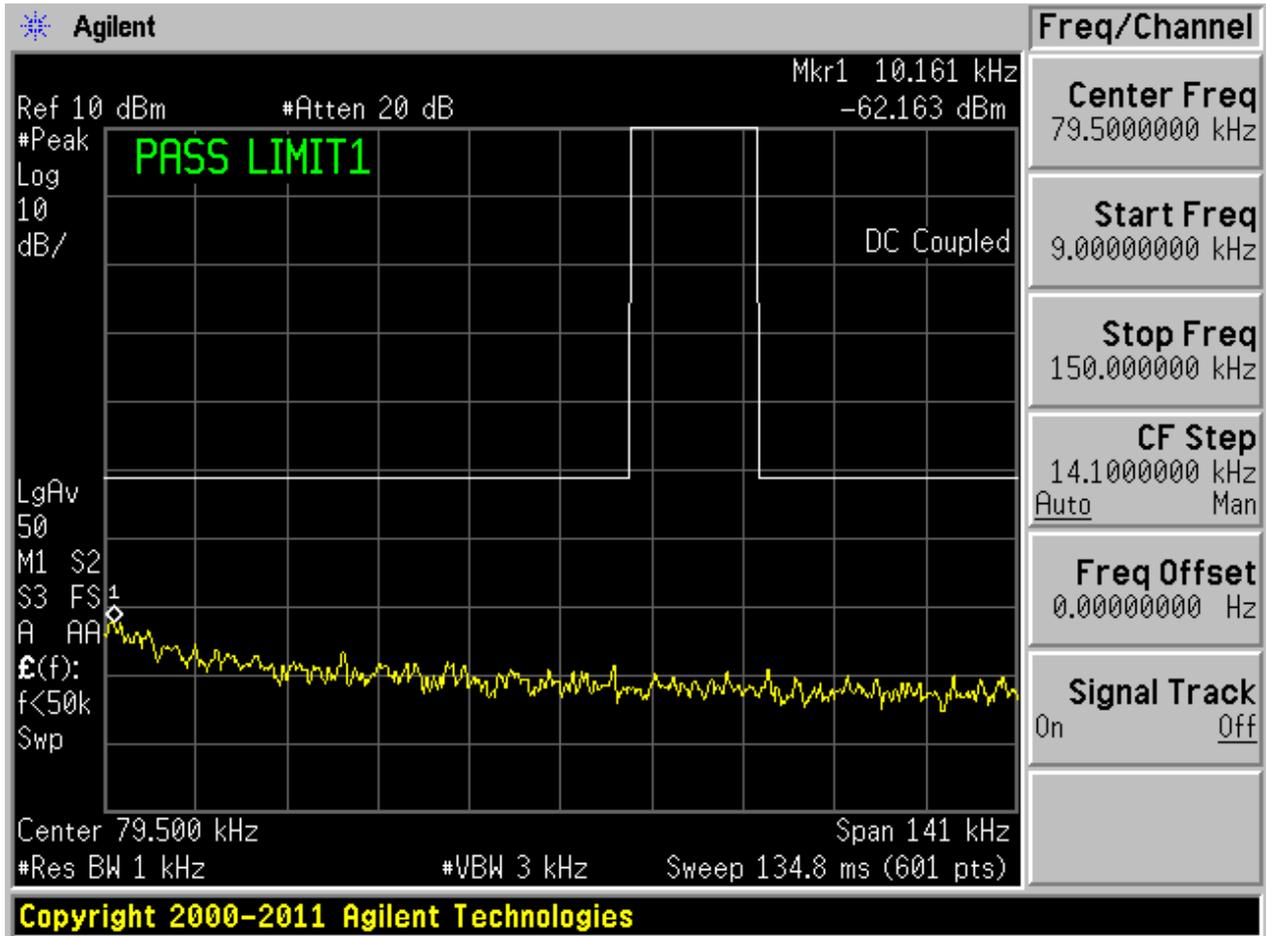


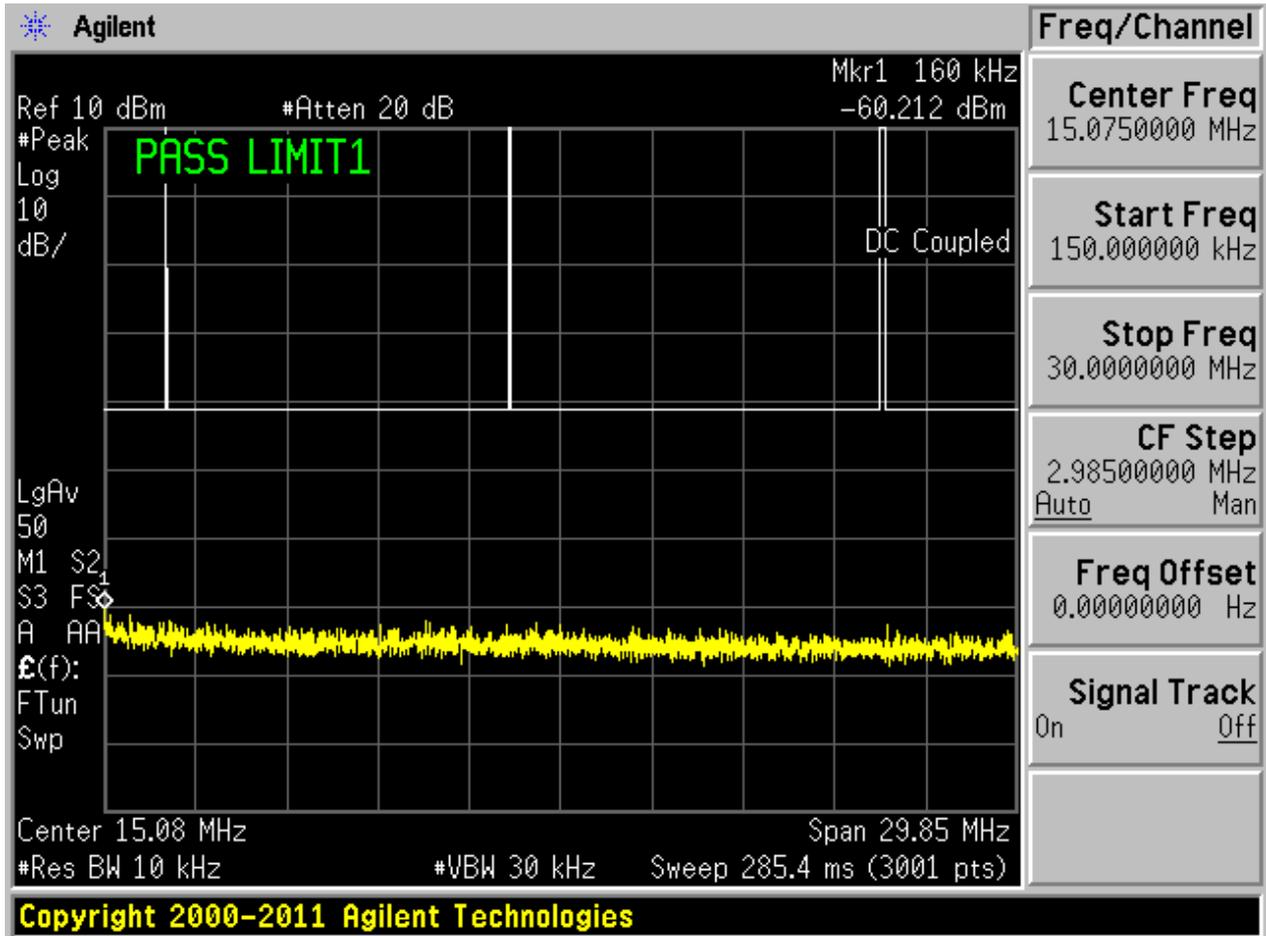
## 2.7 11G/6\_B@1

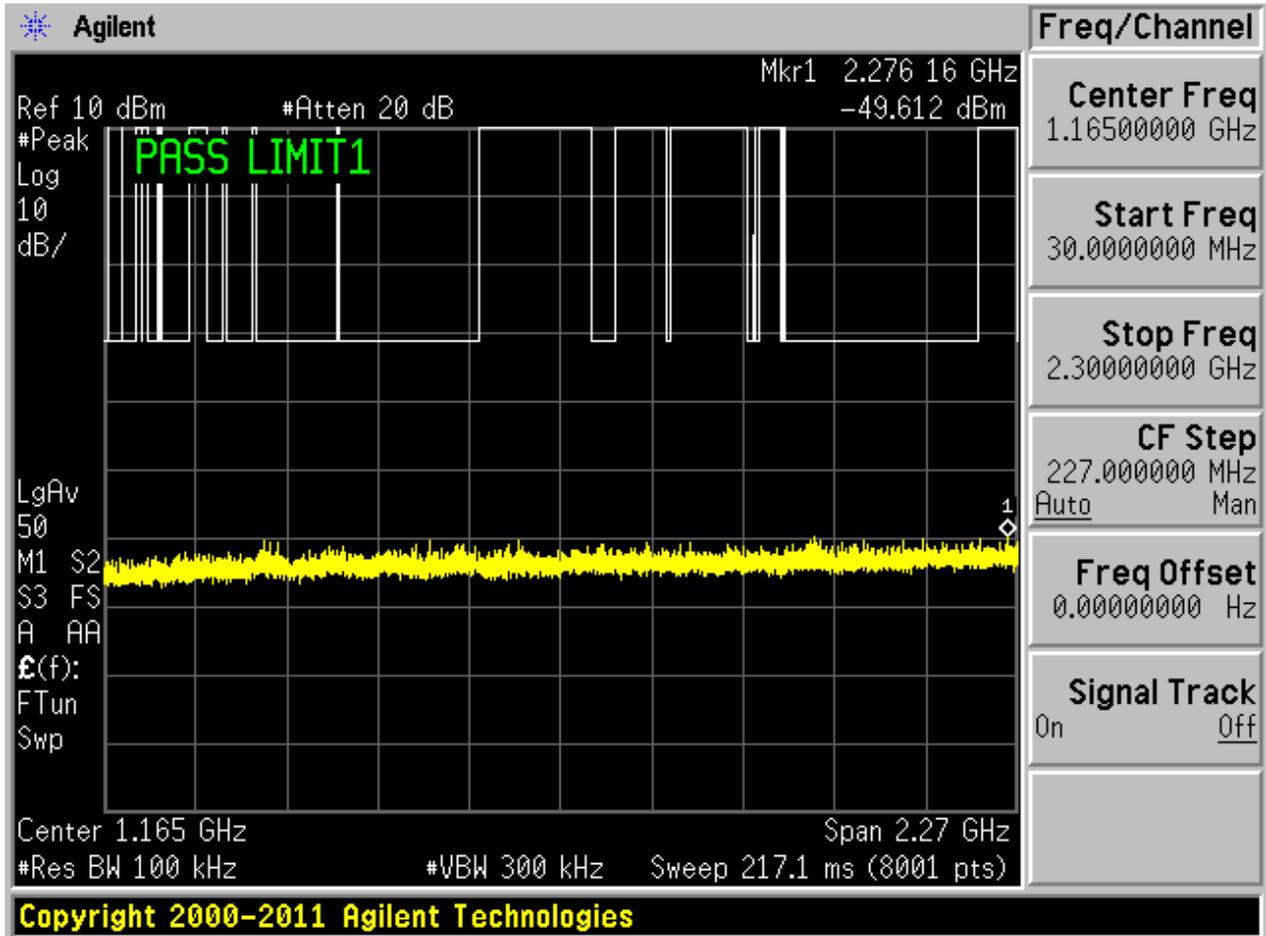
### 2.7.1 Pref

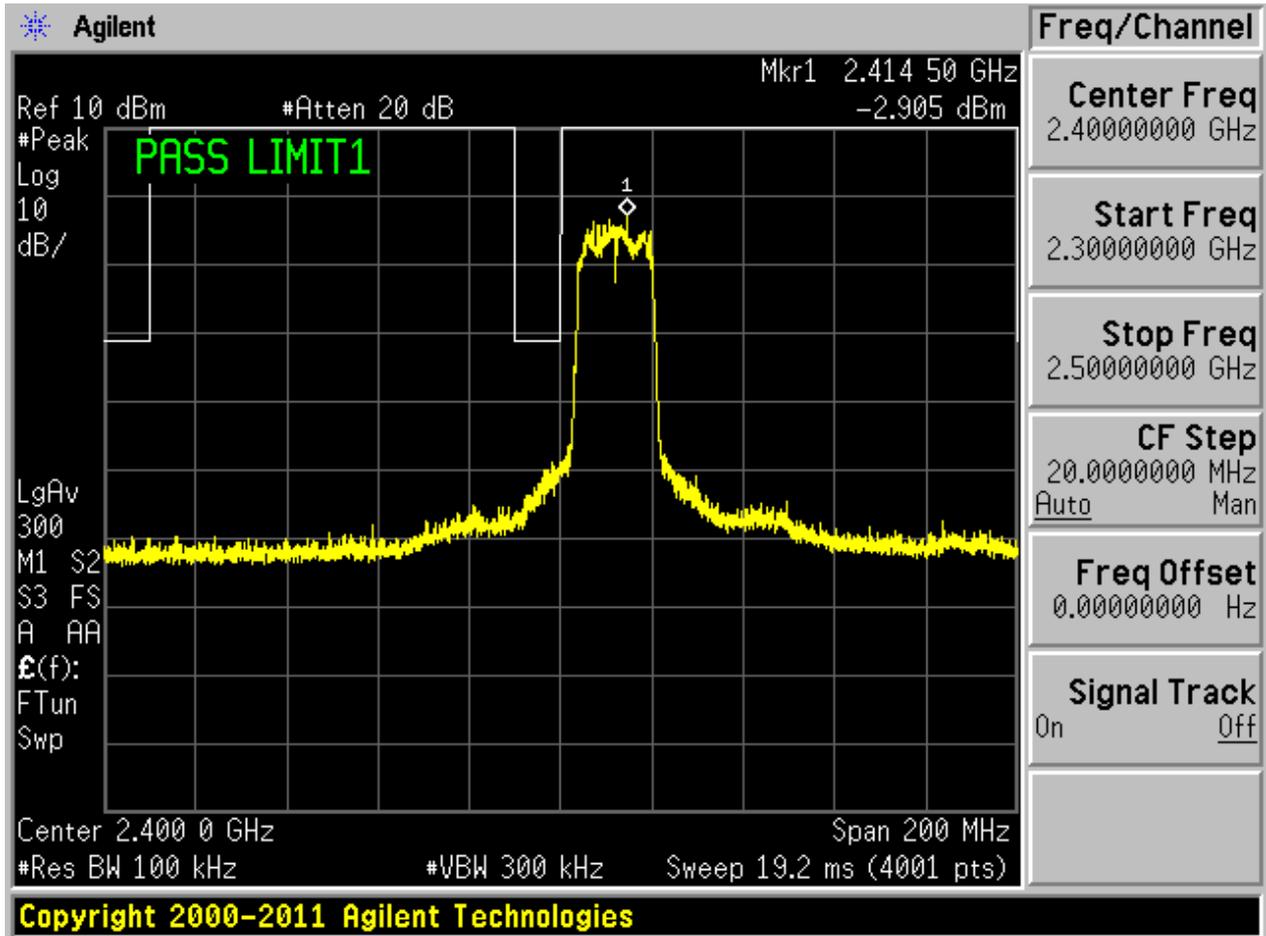


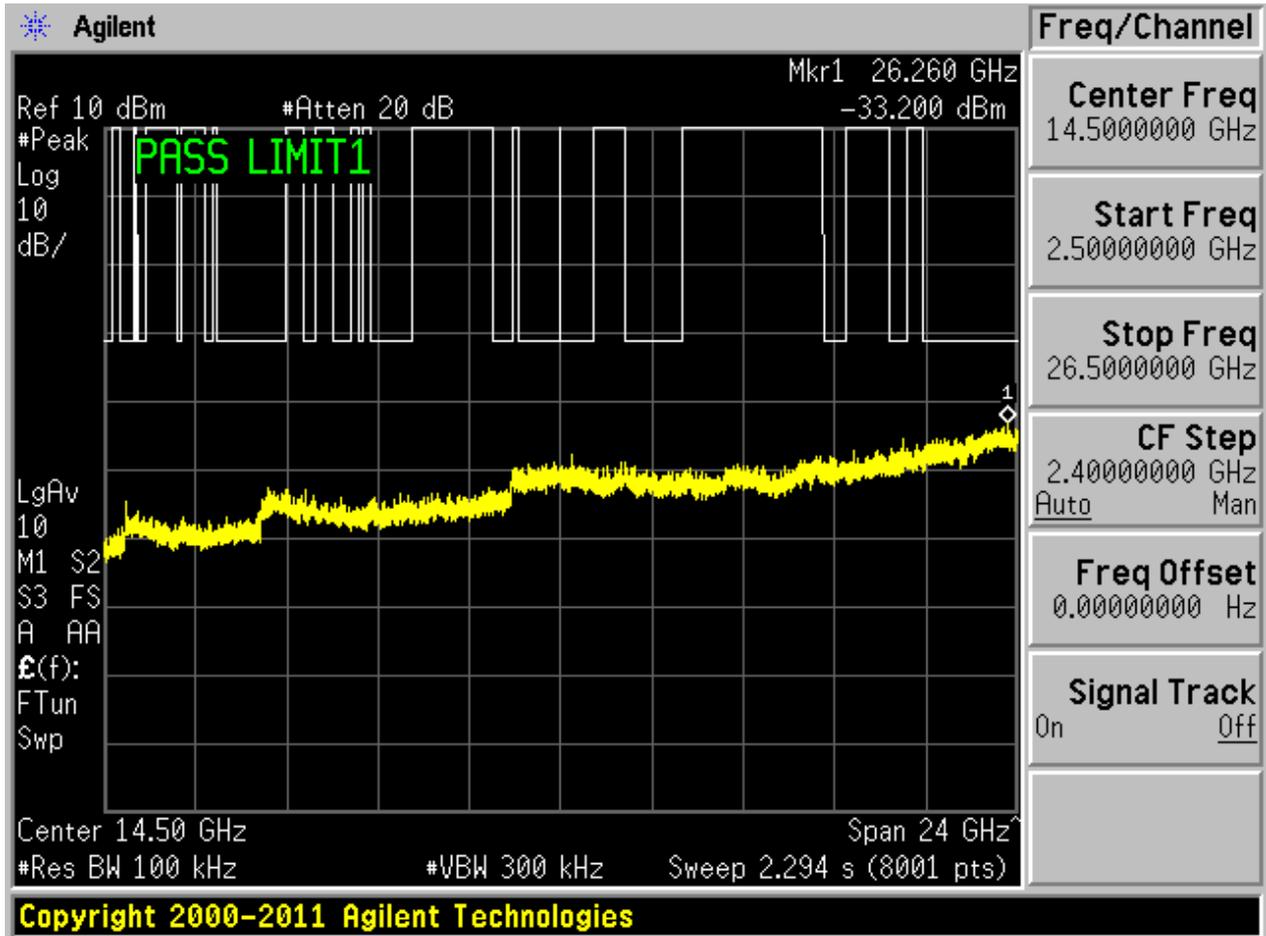
### 2.7.2 Puw





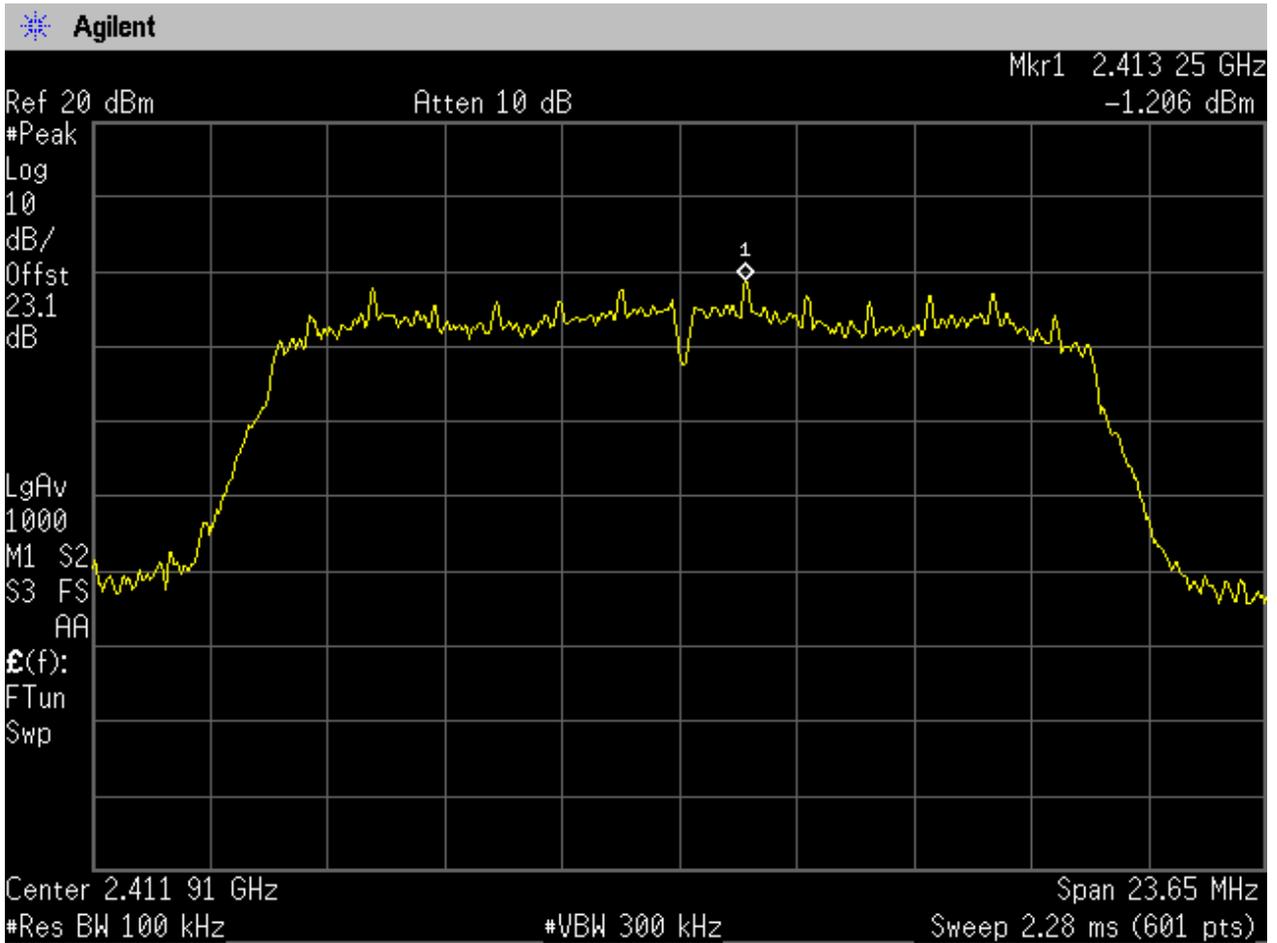




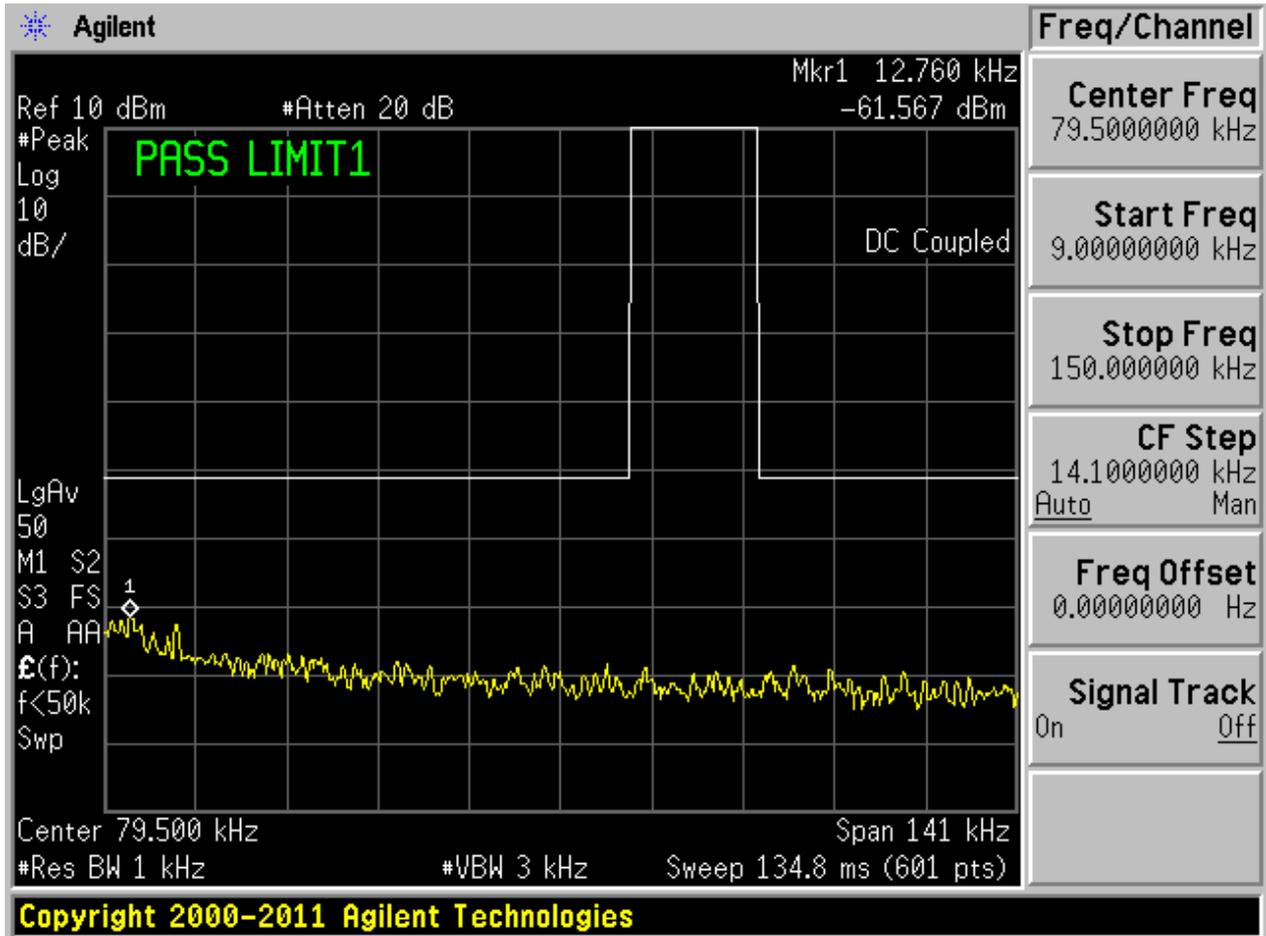


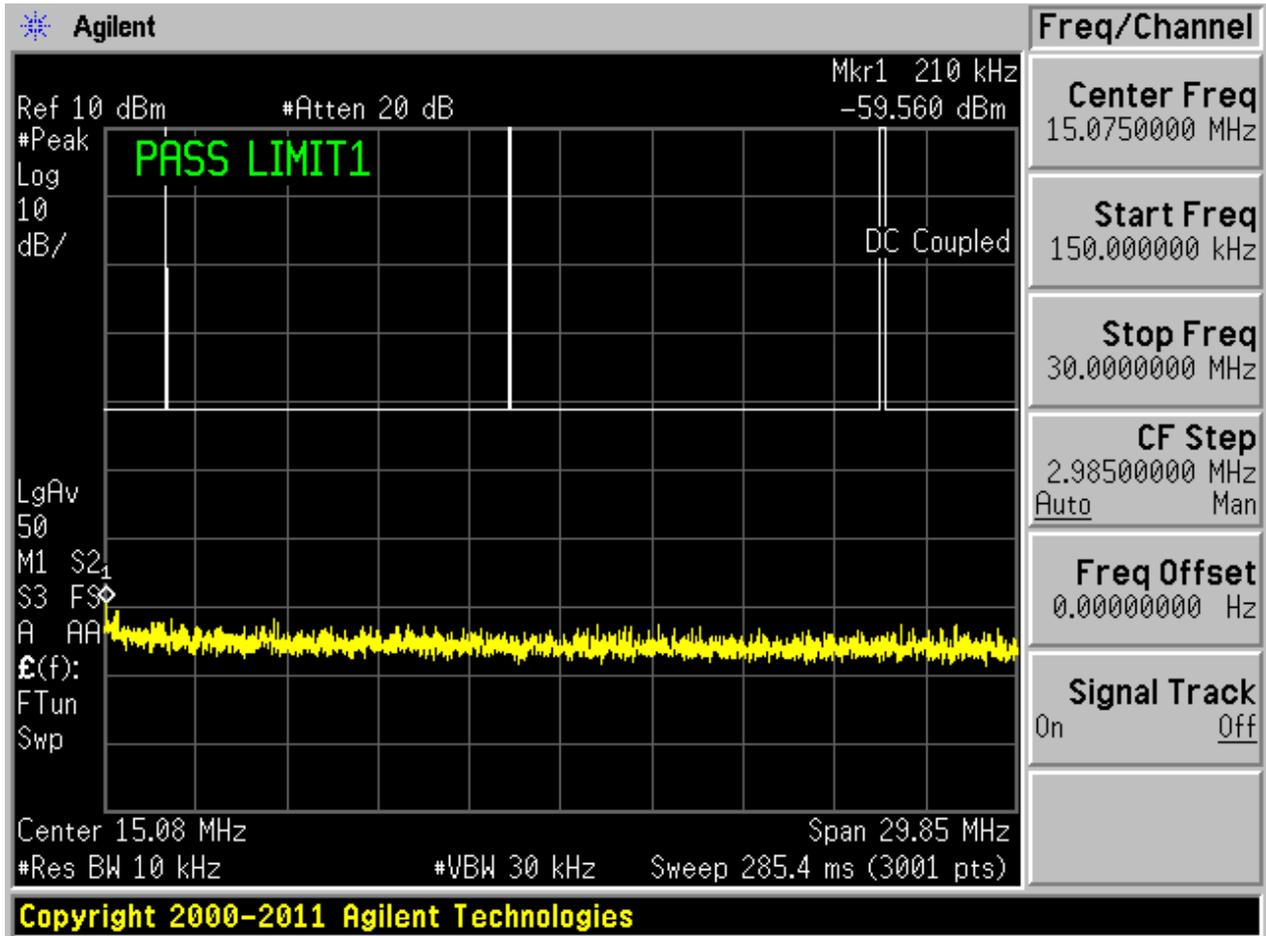
## 2.8 11G/6\_B@2

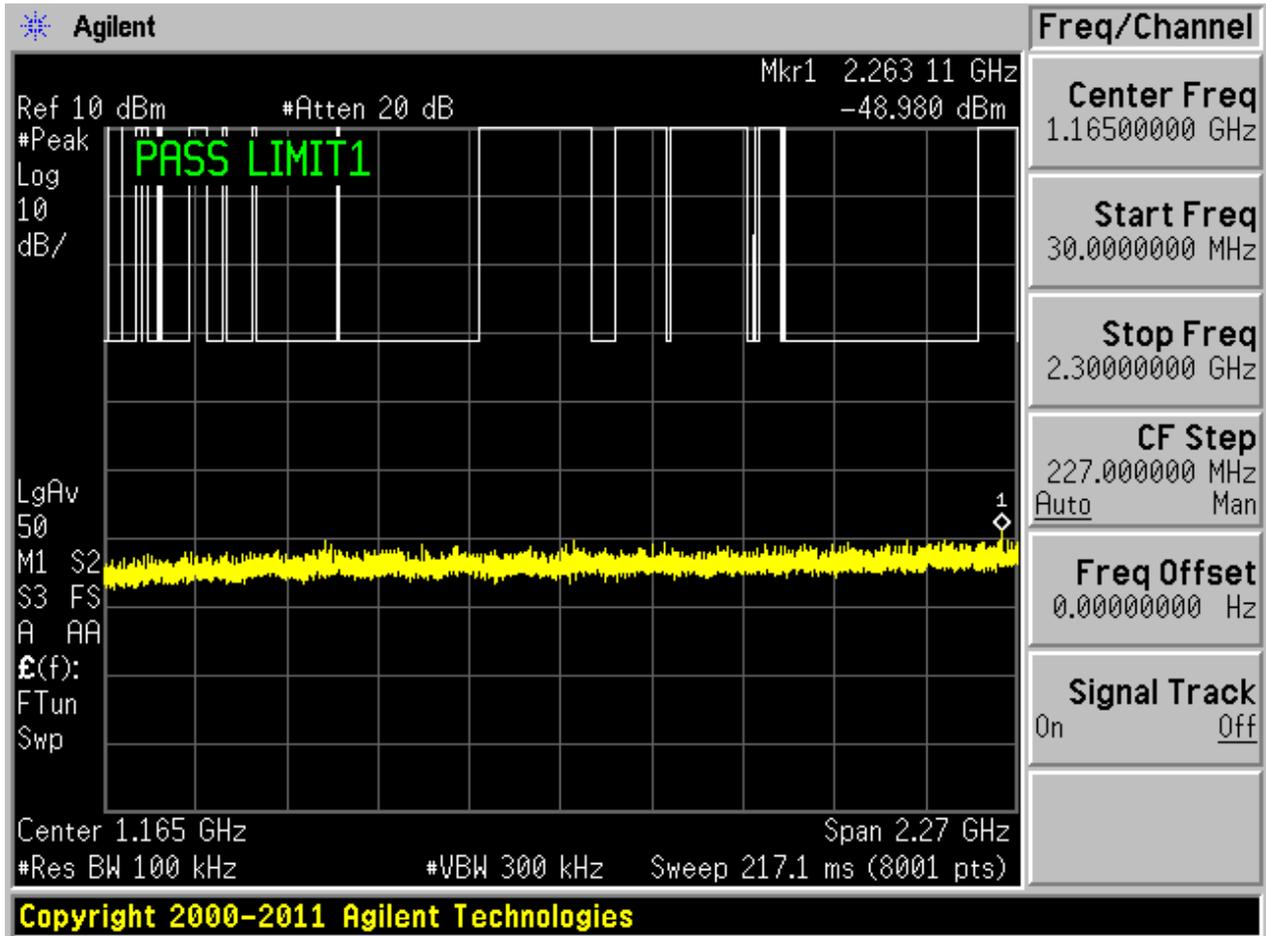
### 2.8.1 Pref

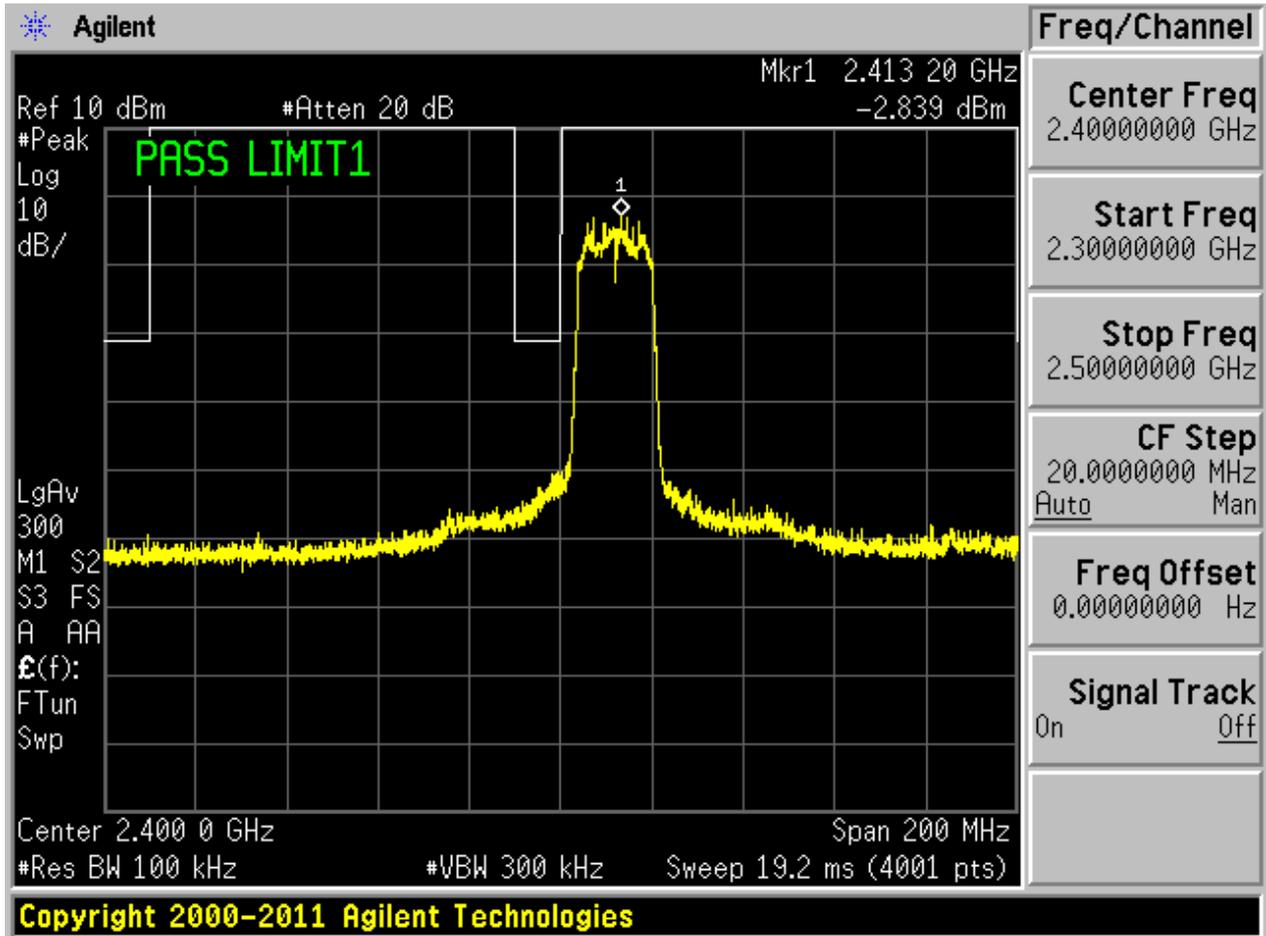


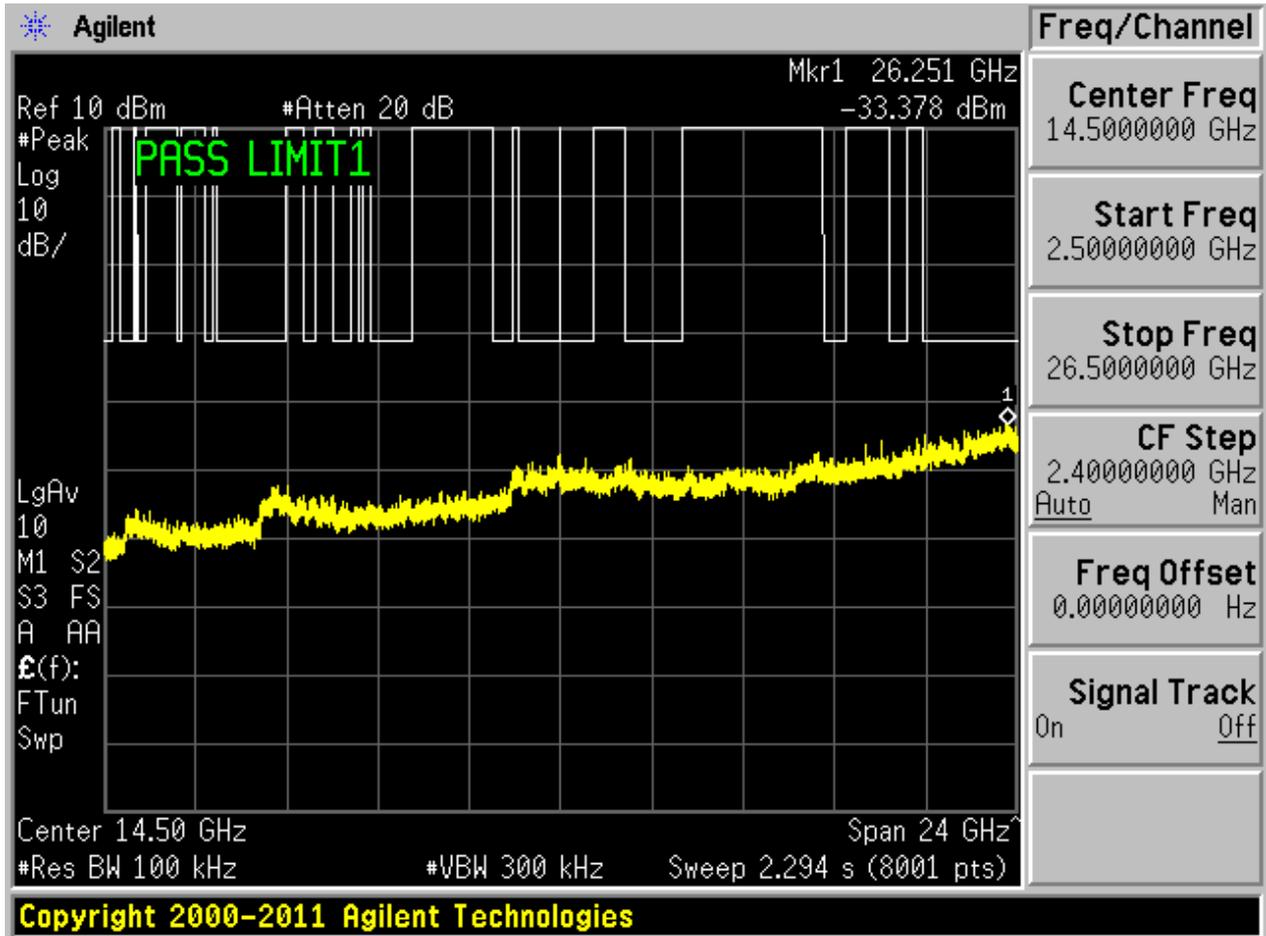
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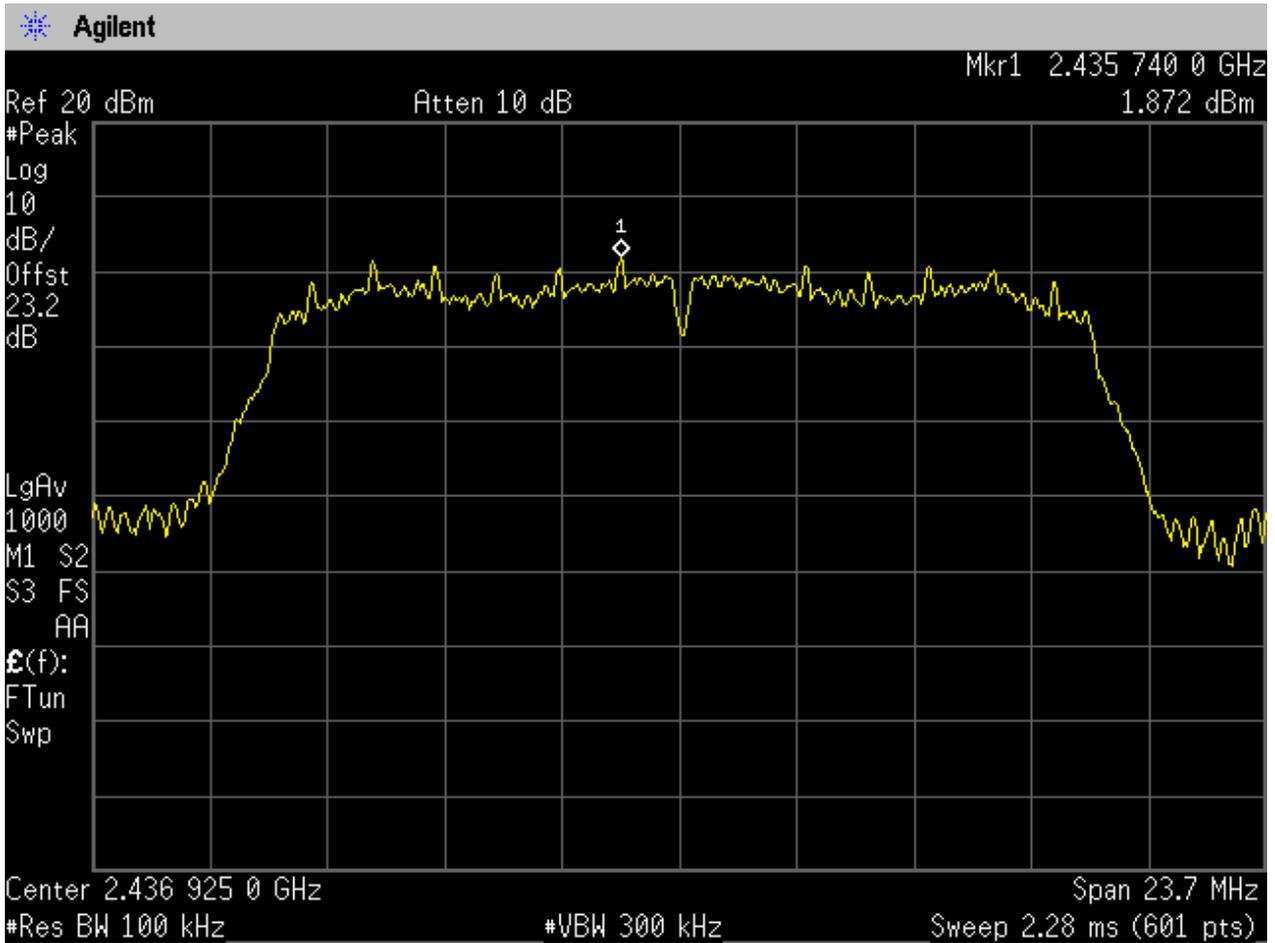




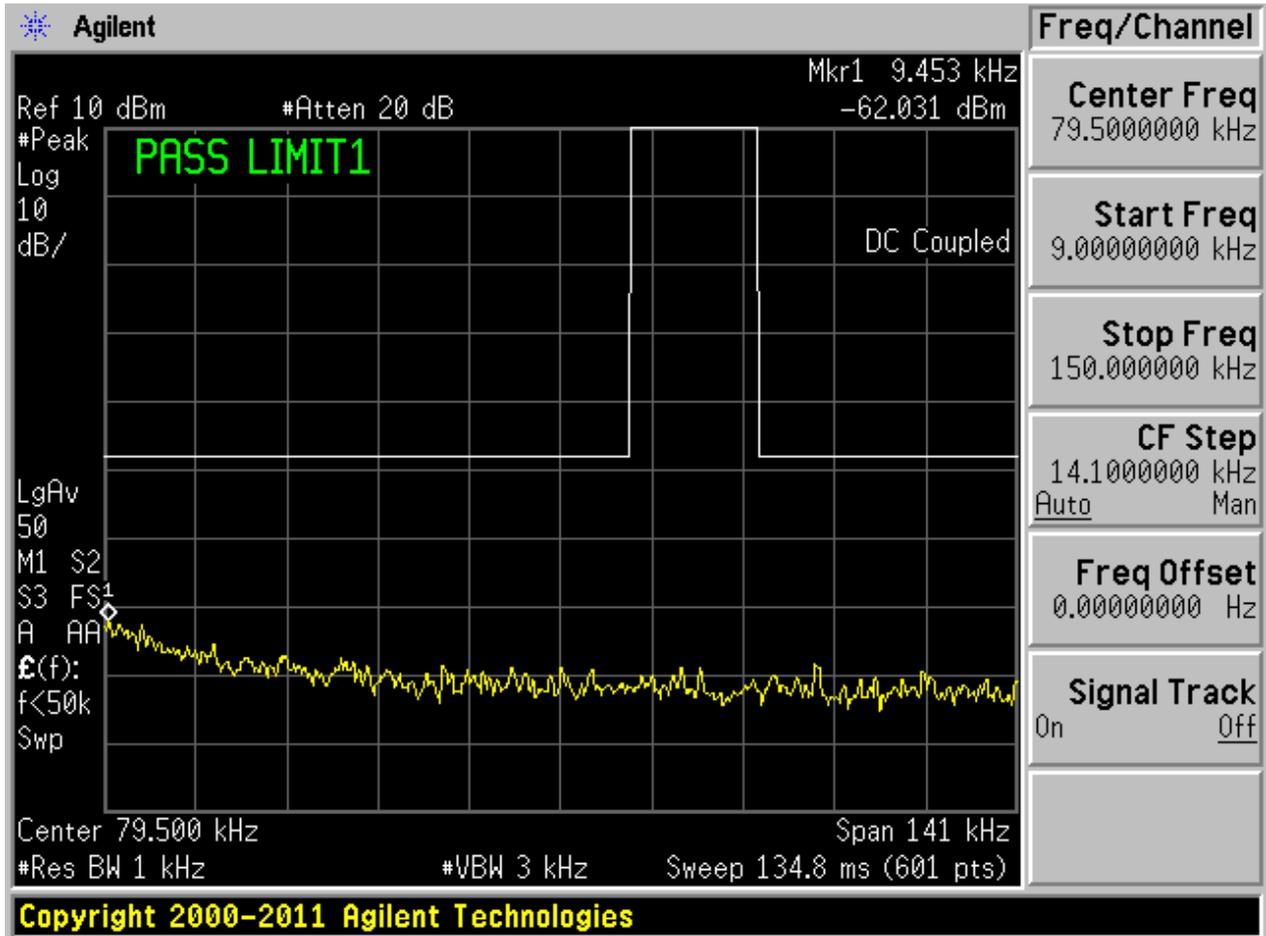


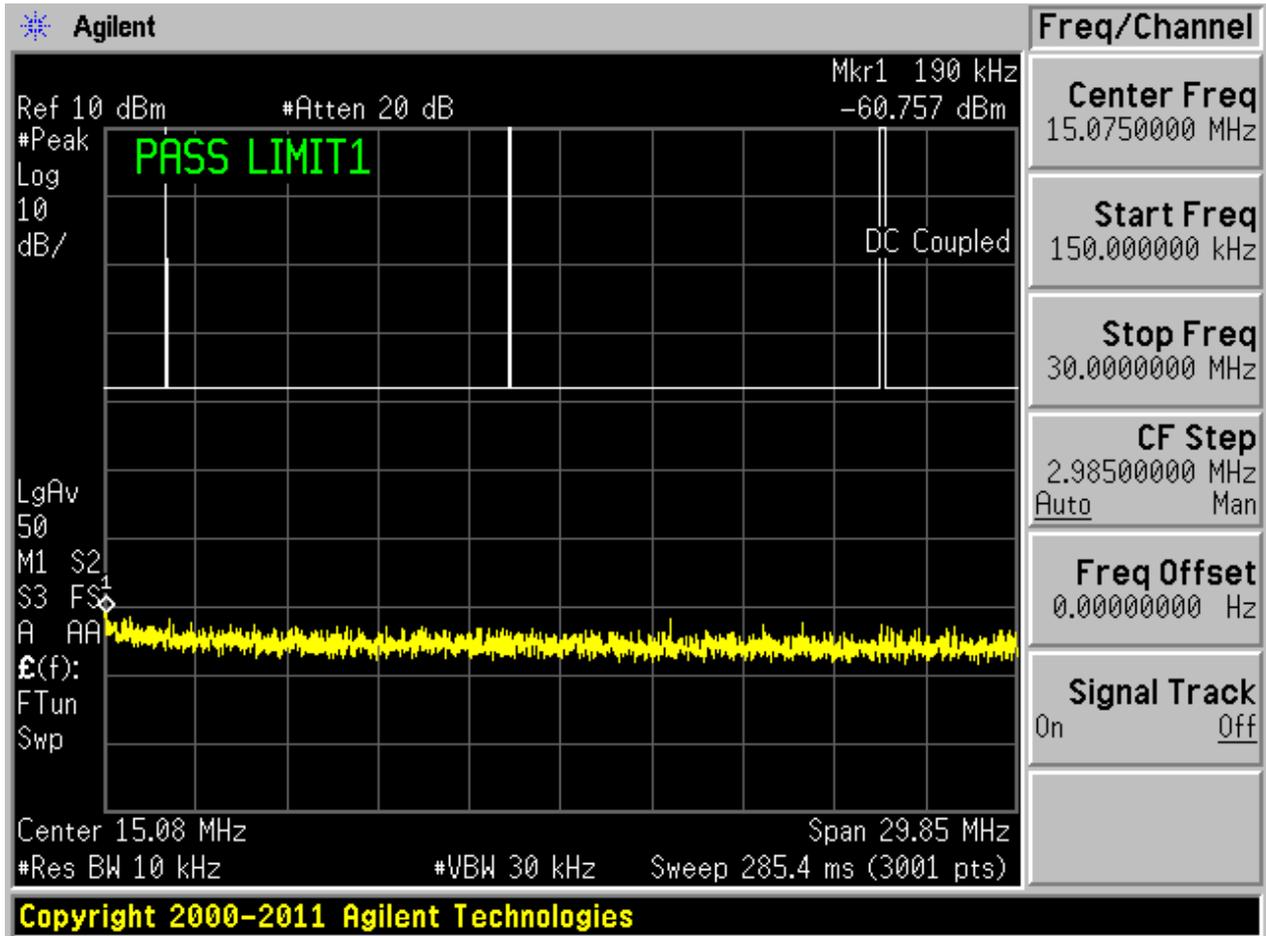
## 2.9 11G/6\_M@1

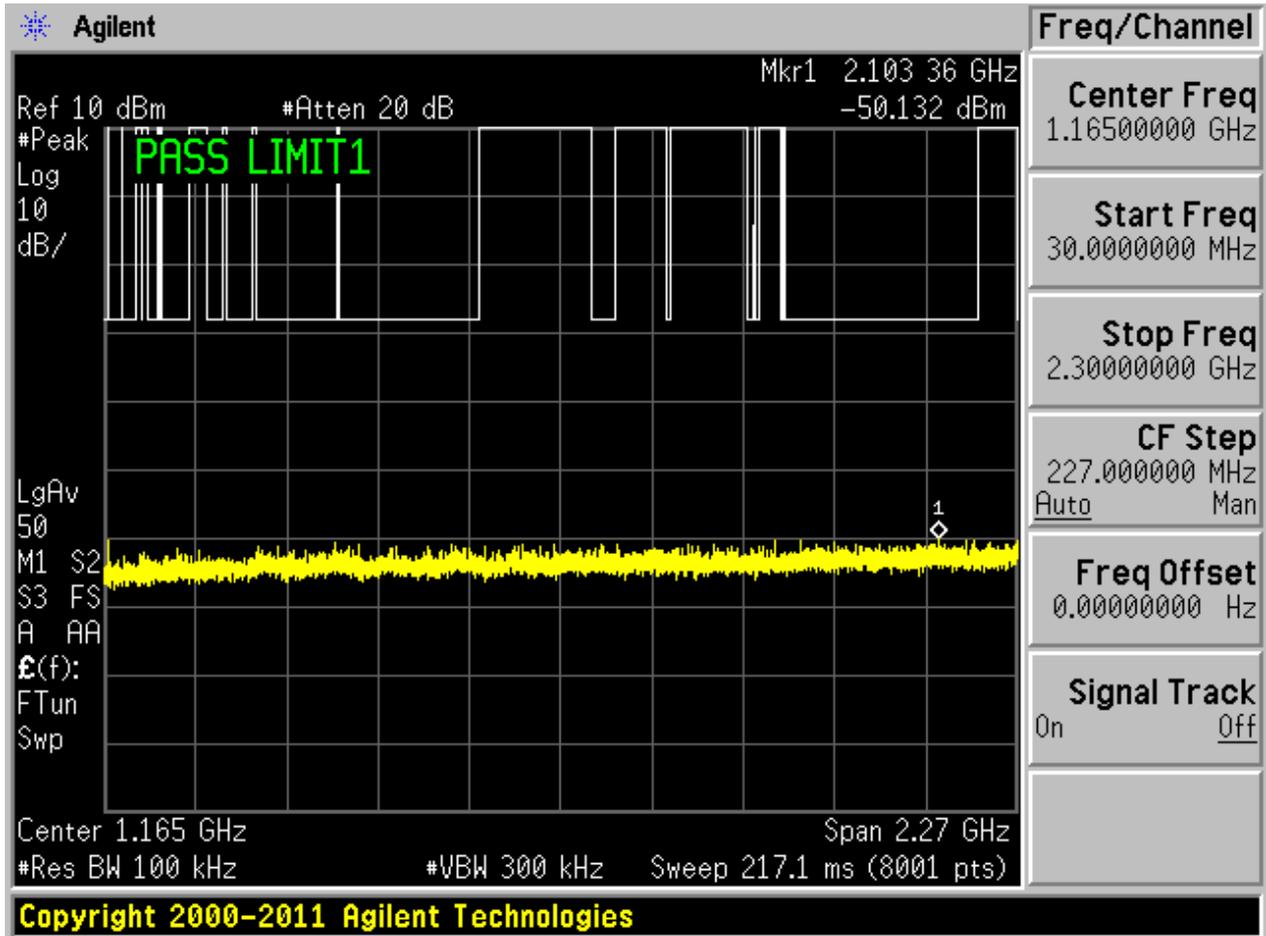
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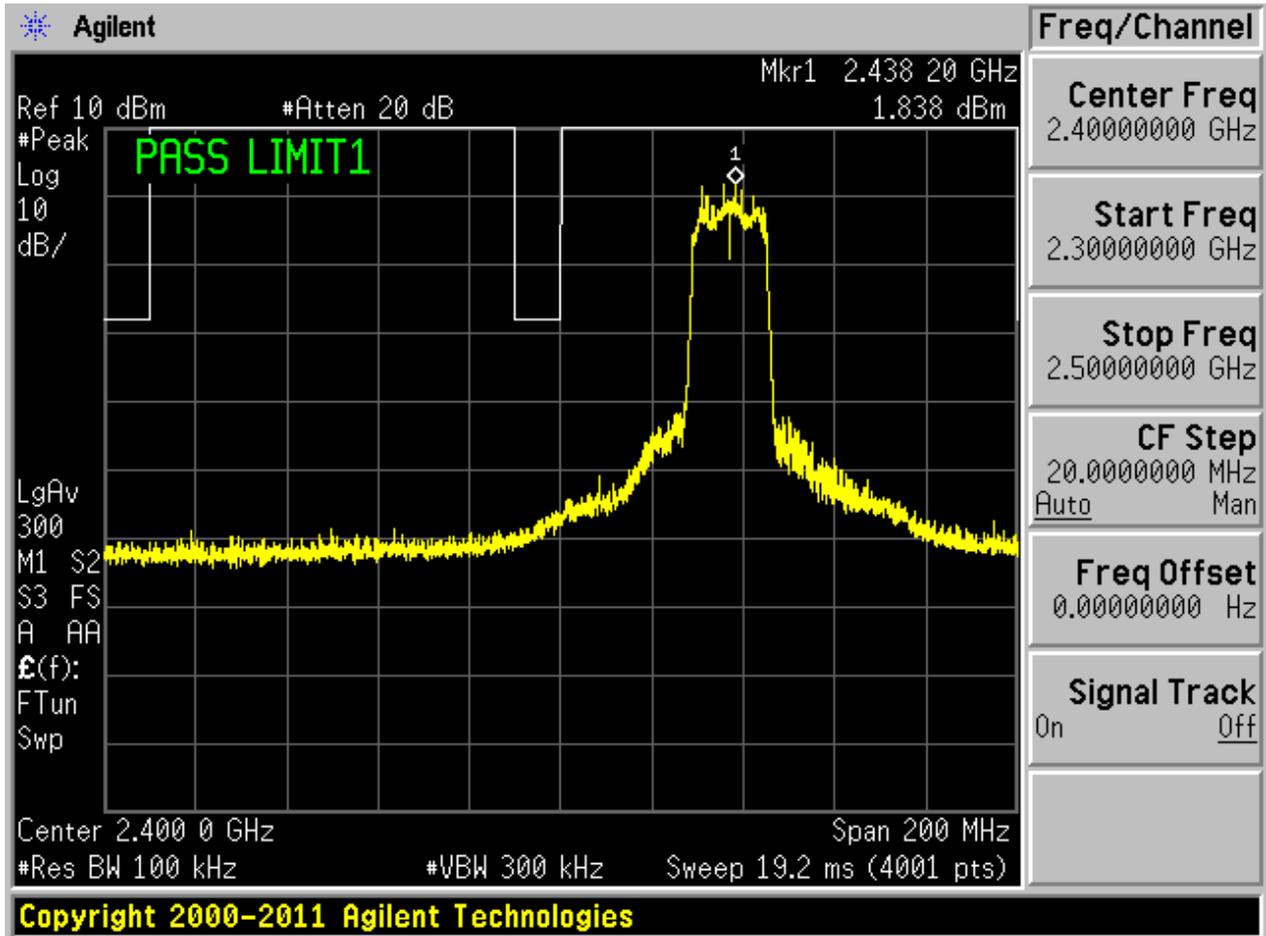


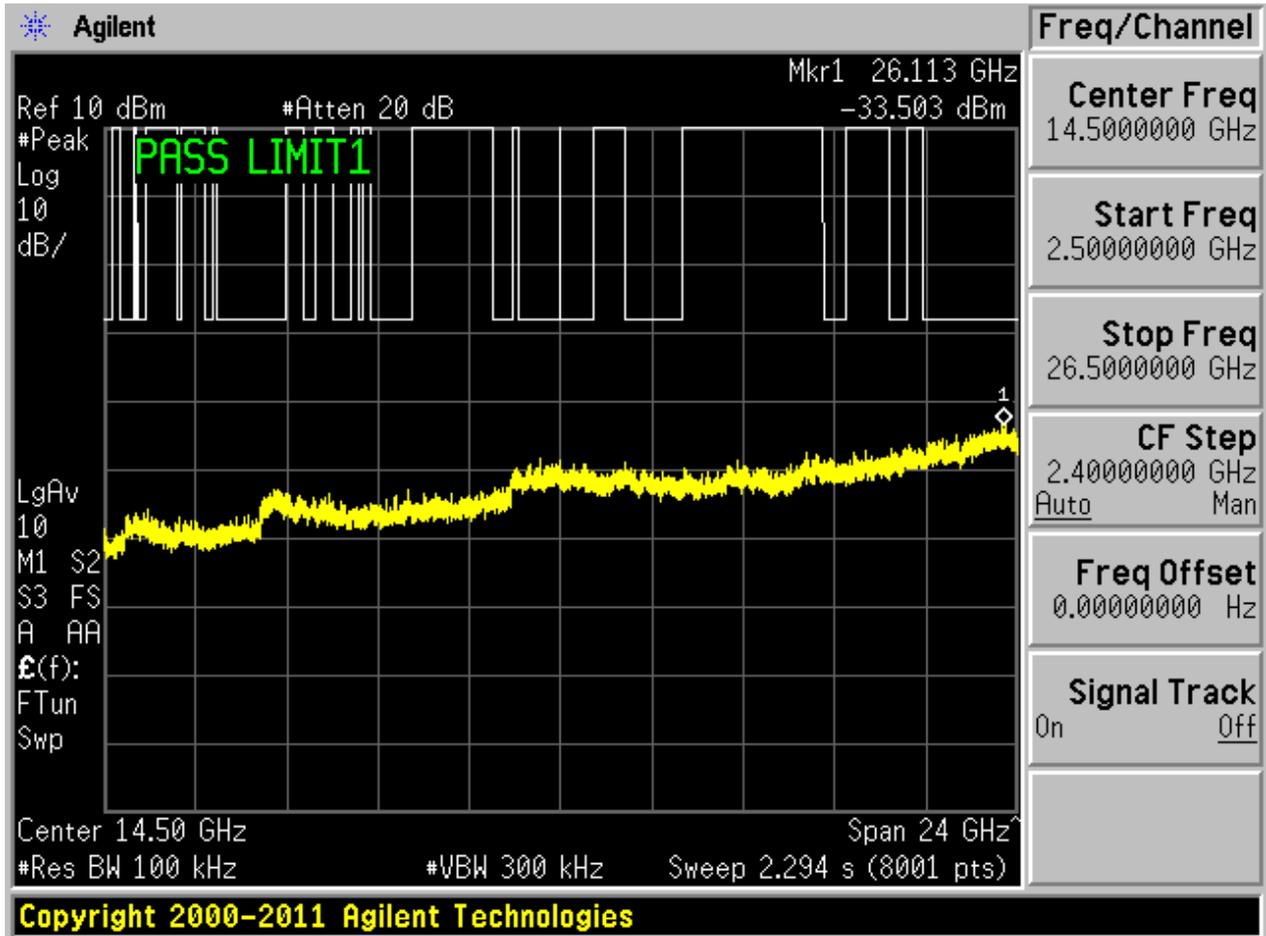
### 2.9.2 Puw





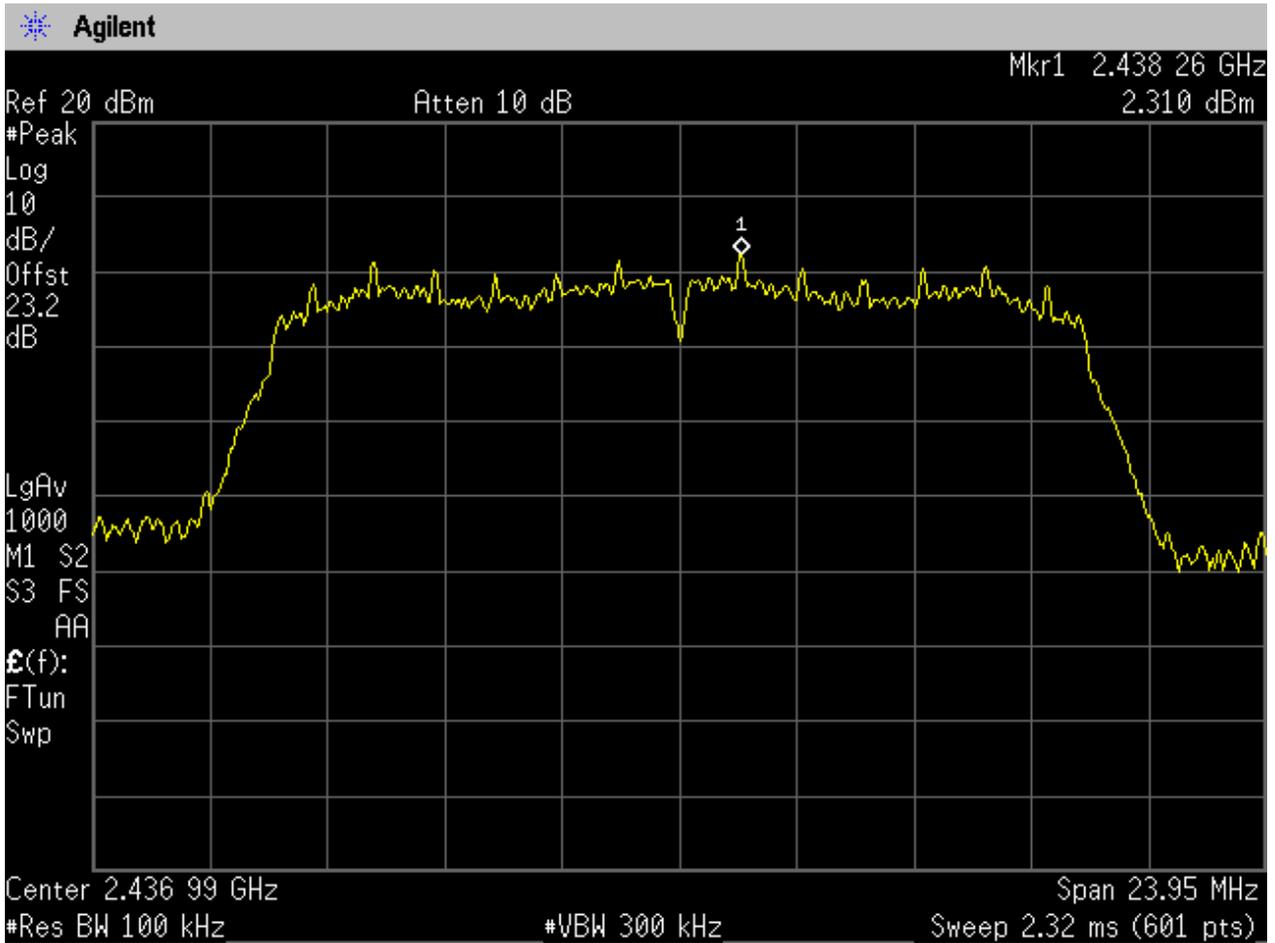




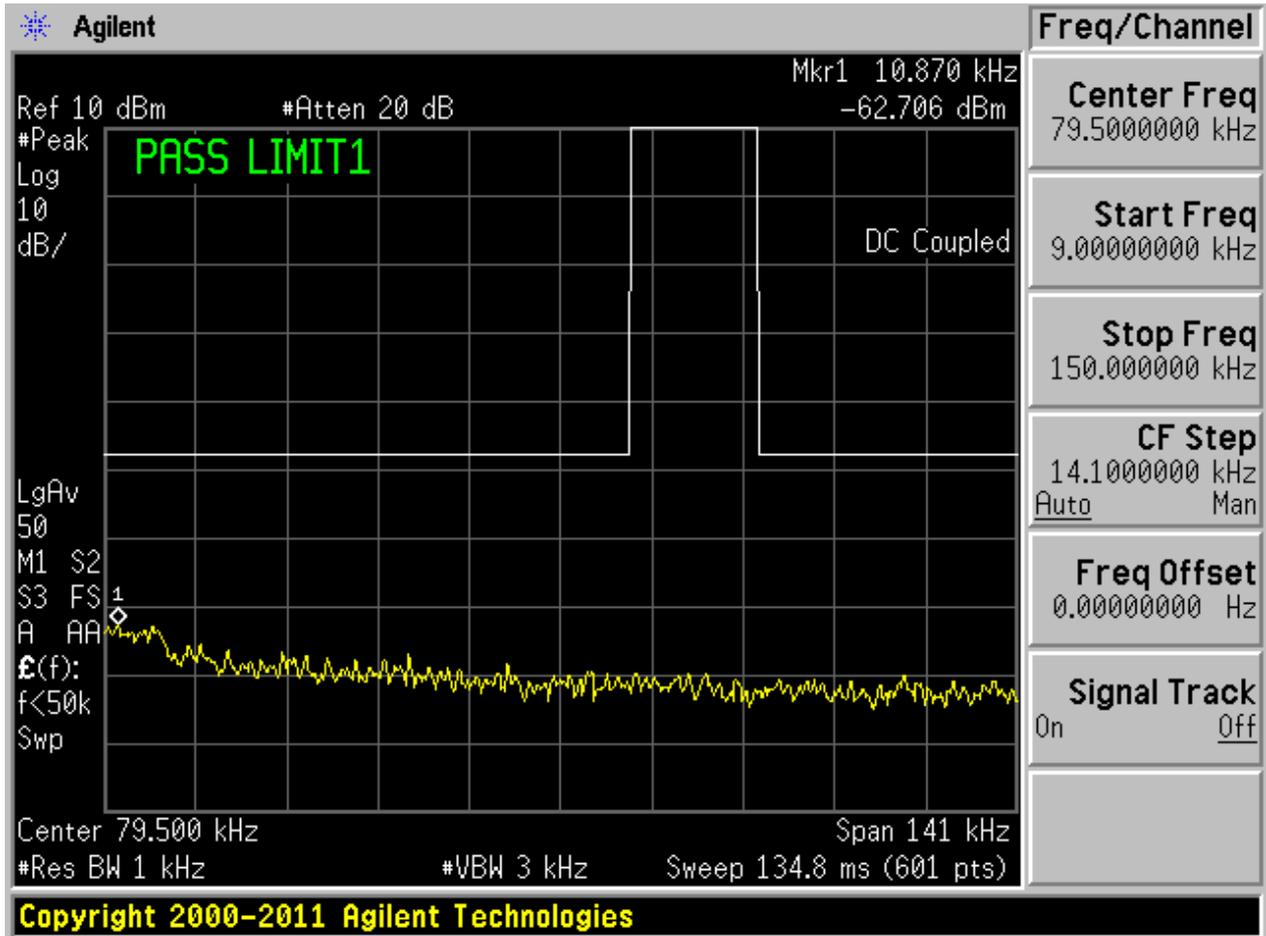


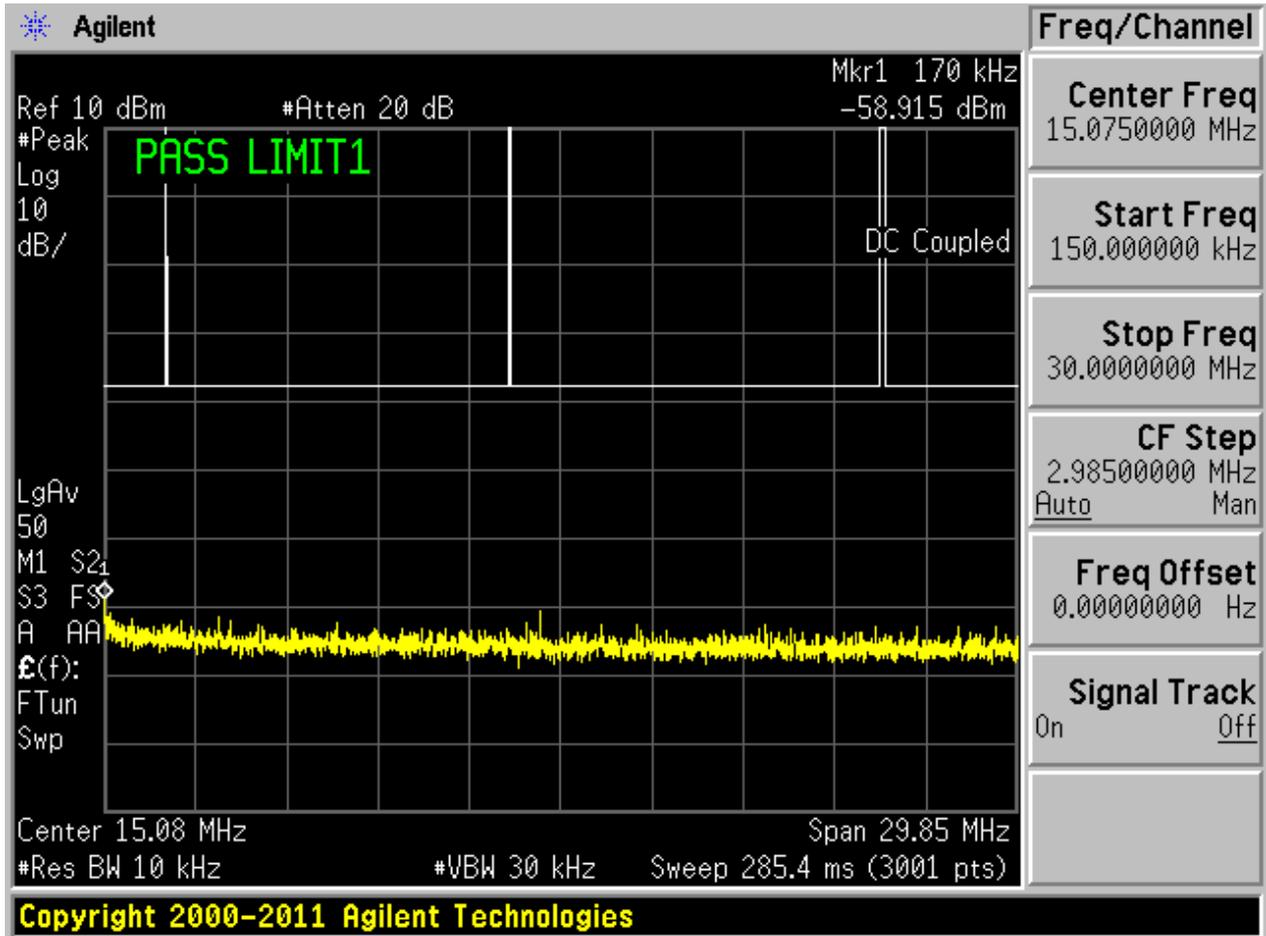
2.1011G/6\_M@2

2.10.1 Pref

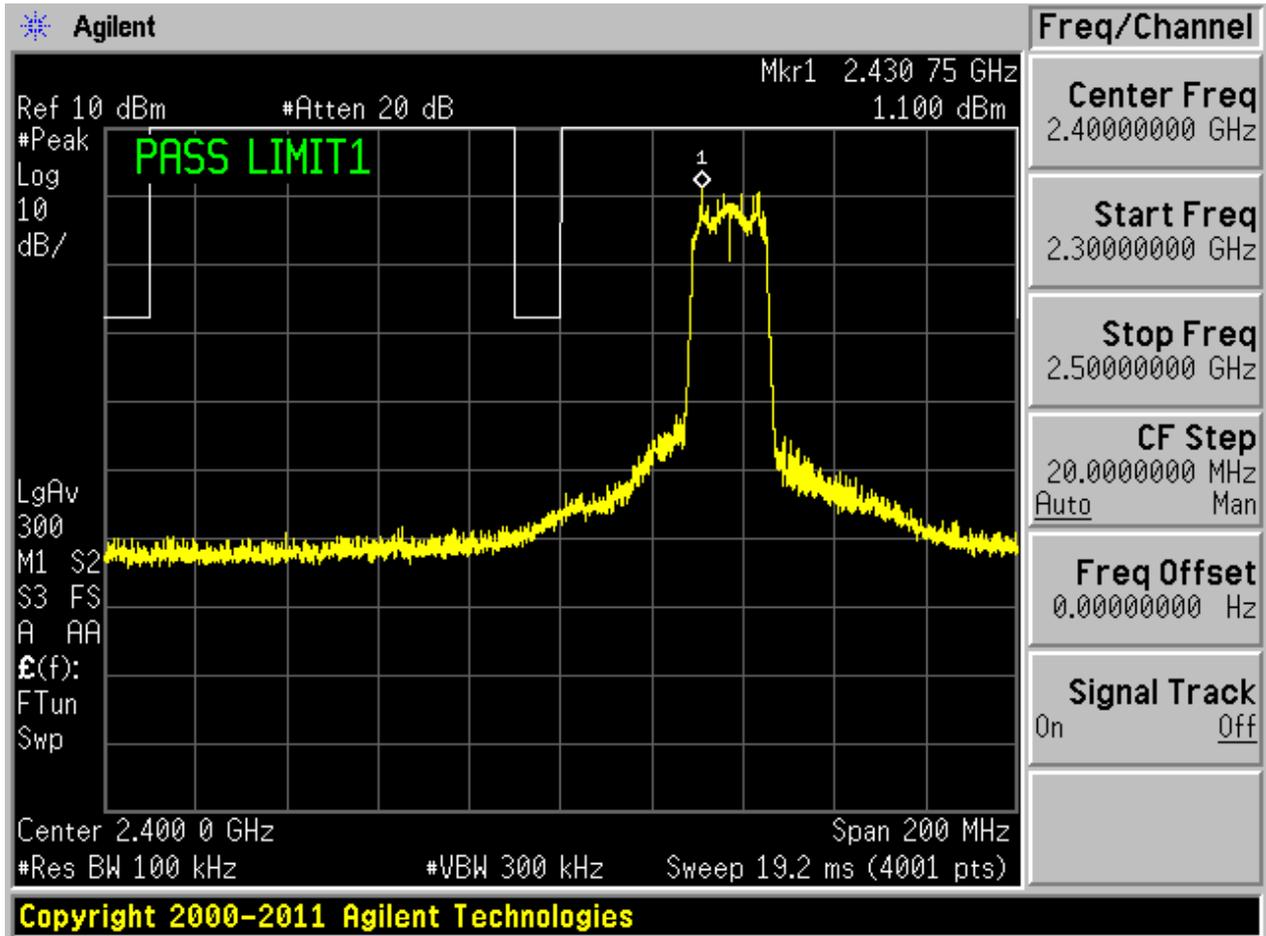


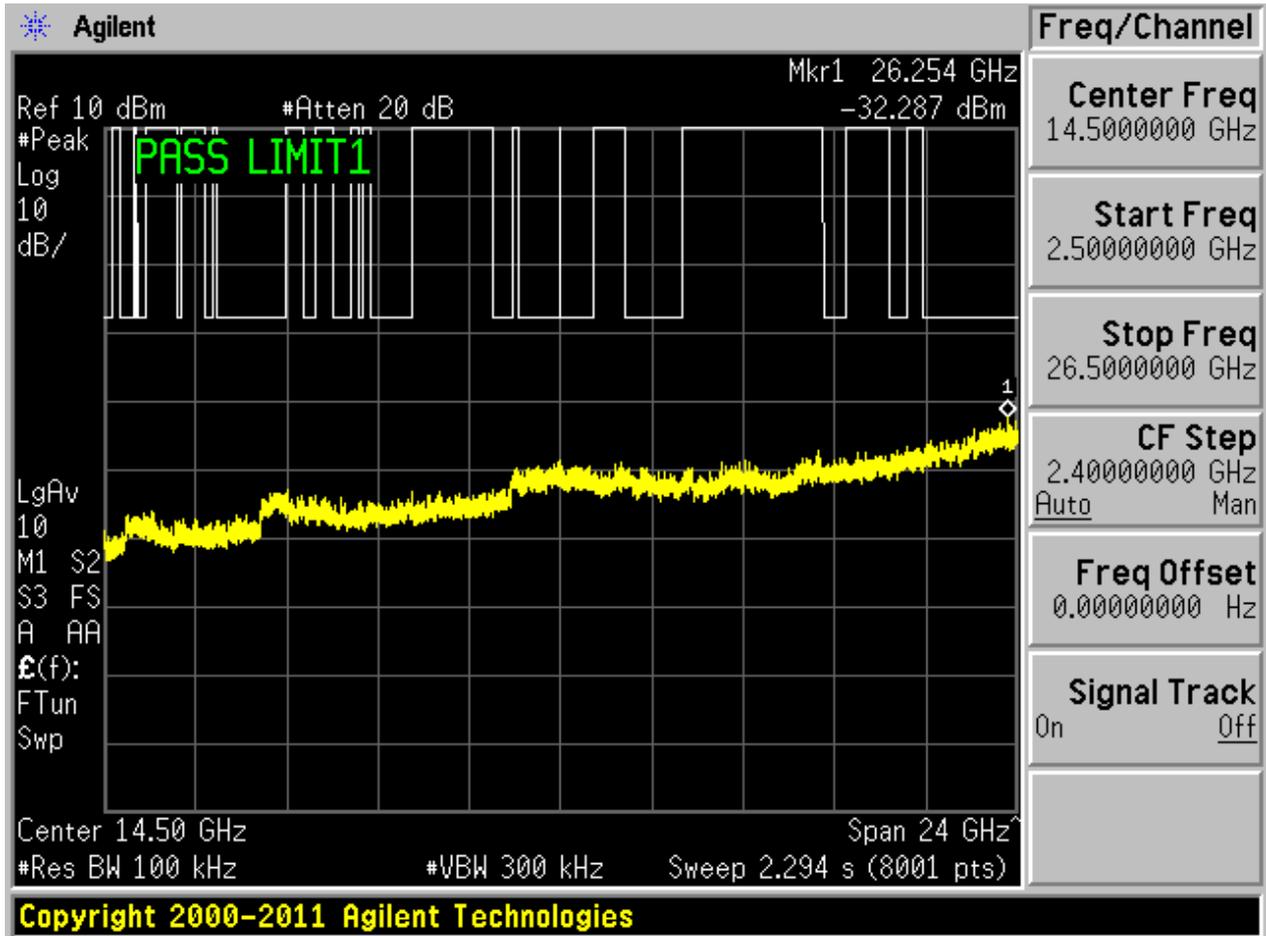
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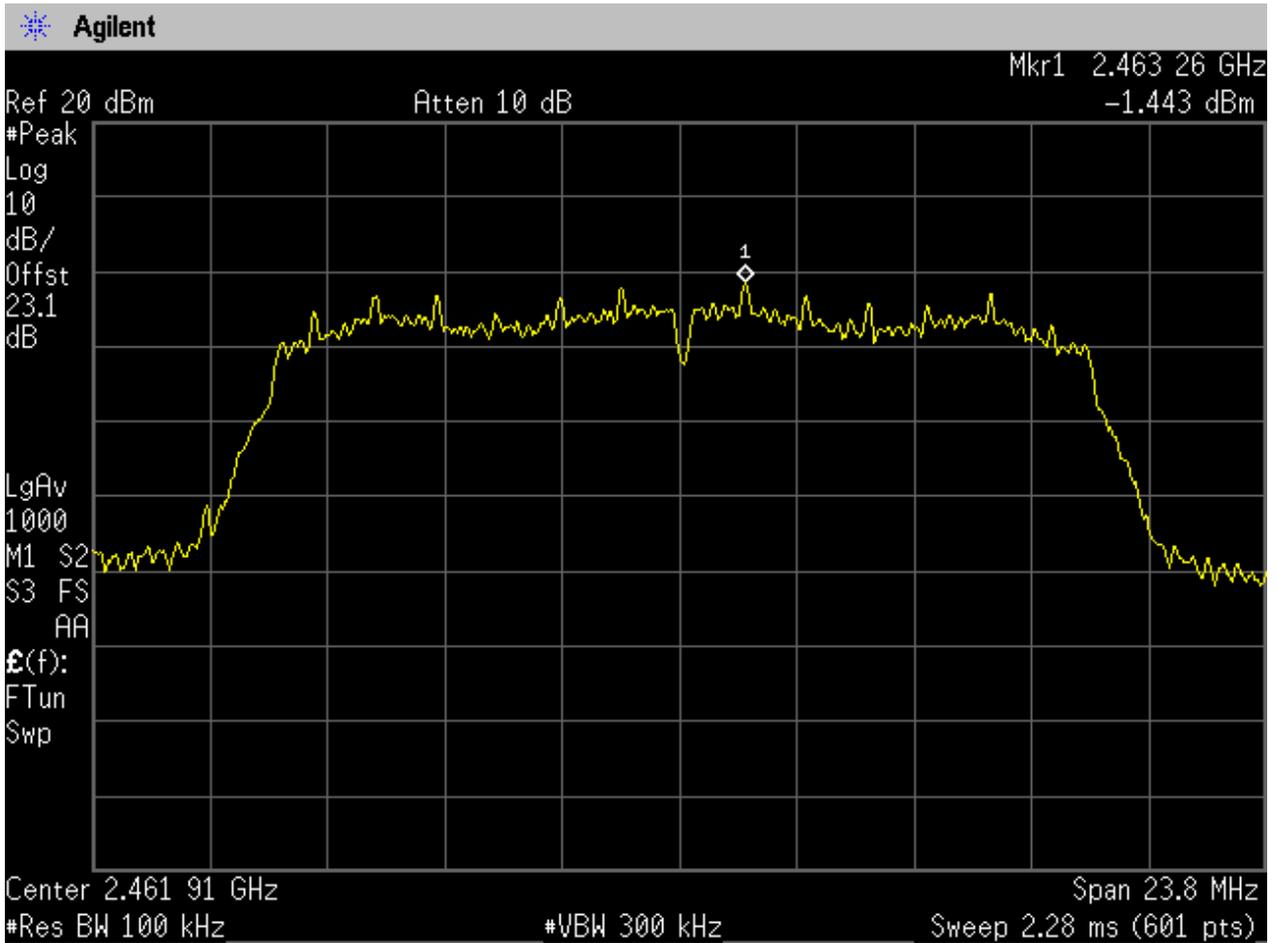




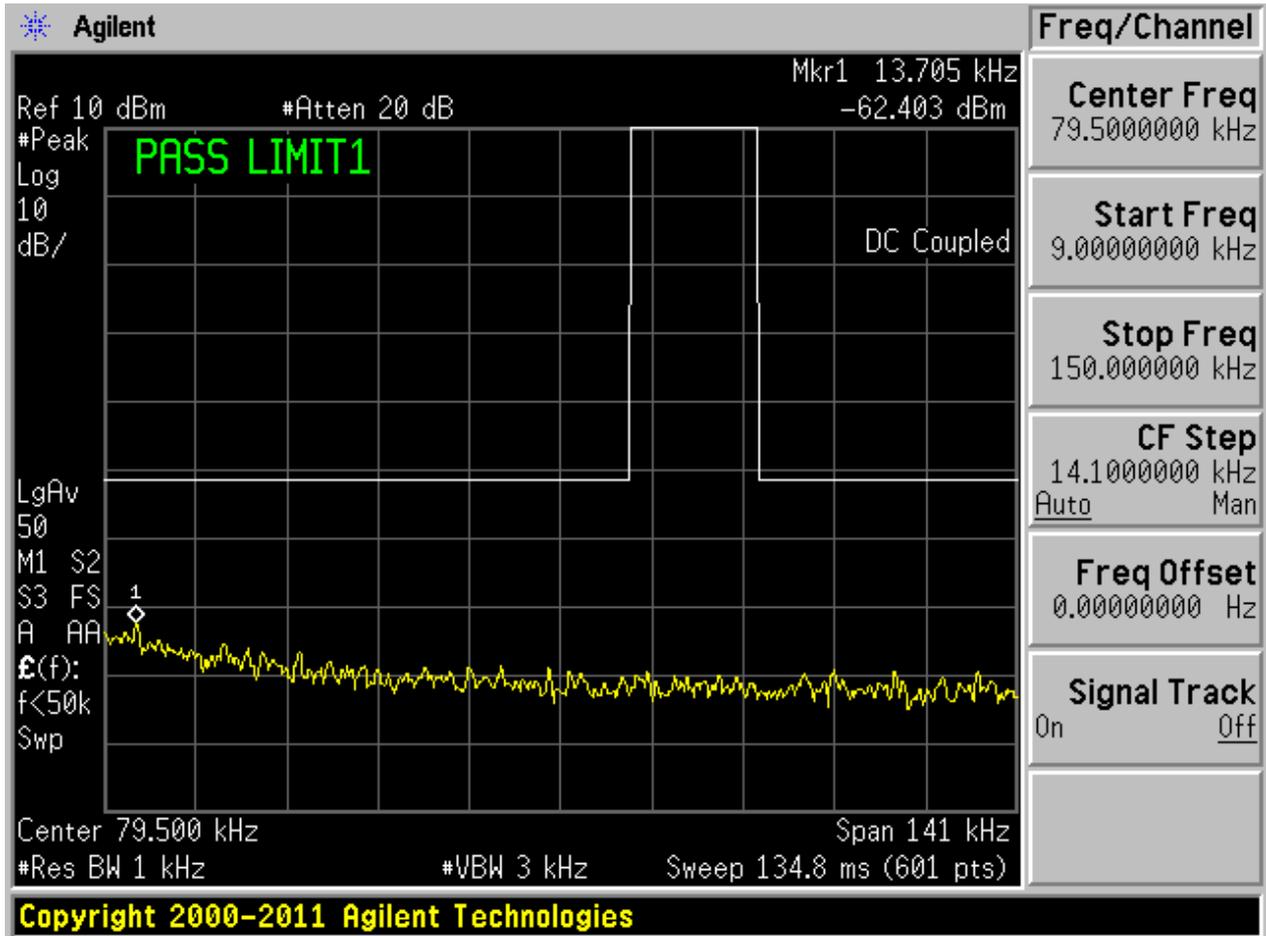


2.1111G/6\_T@1

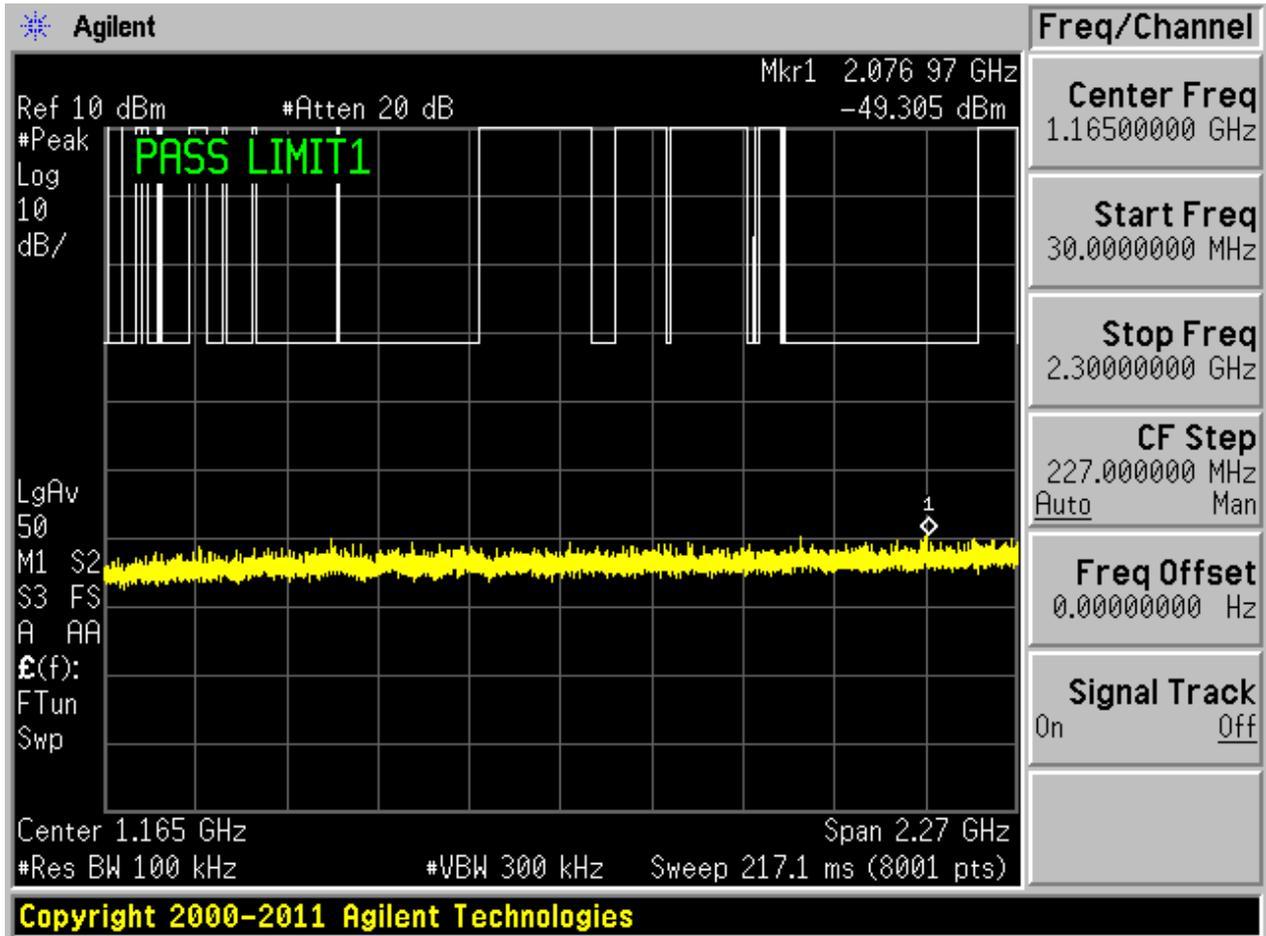
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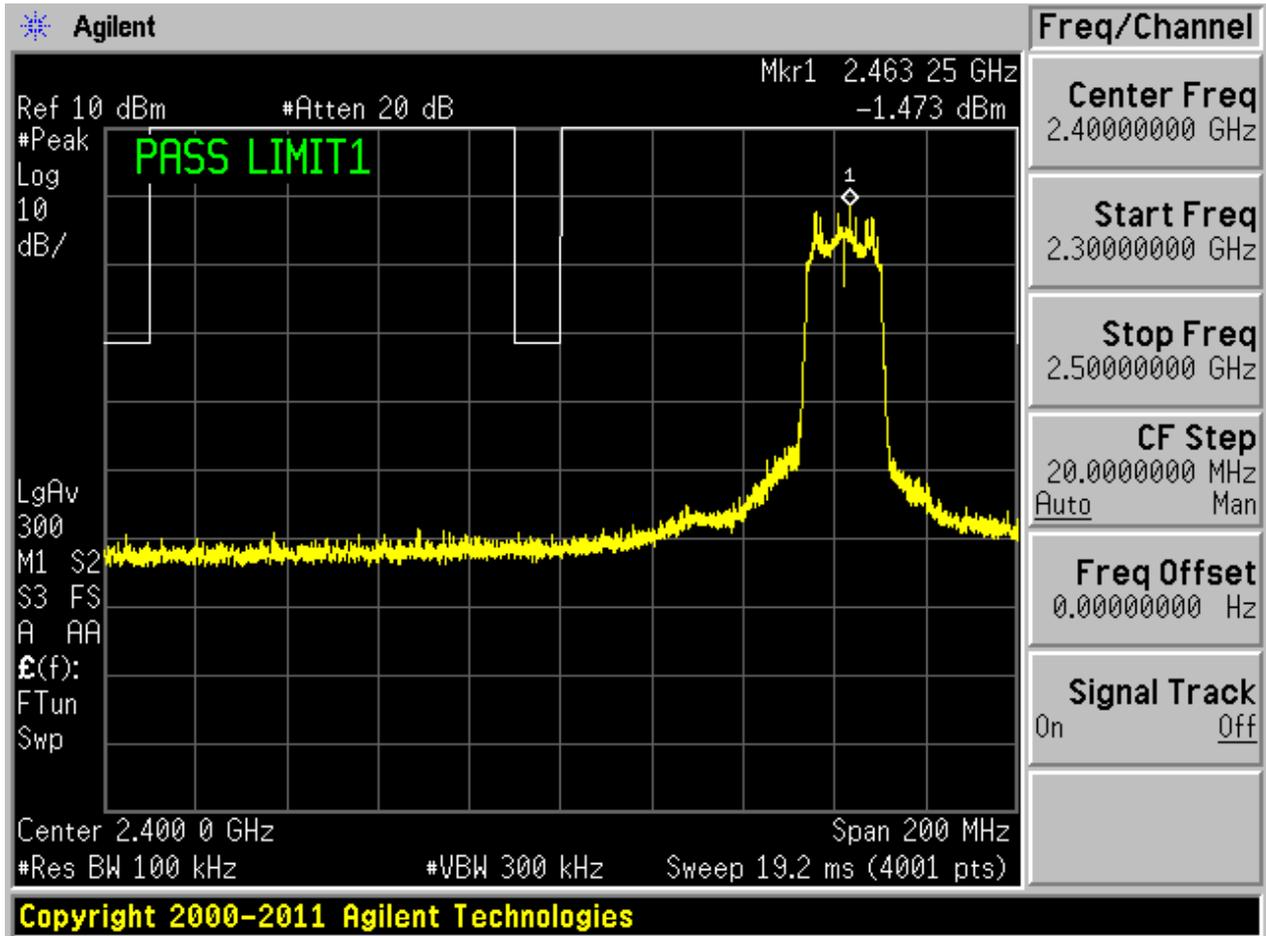


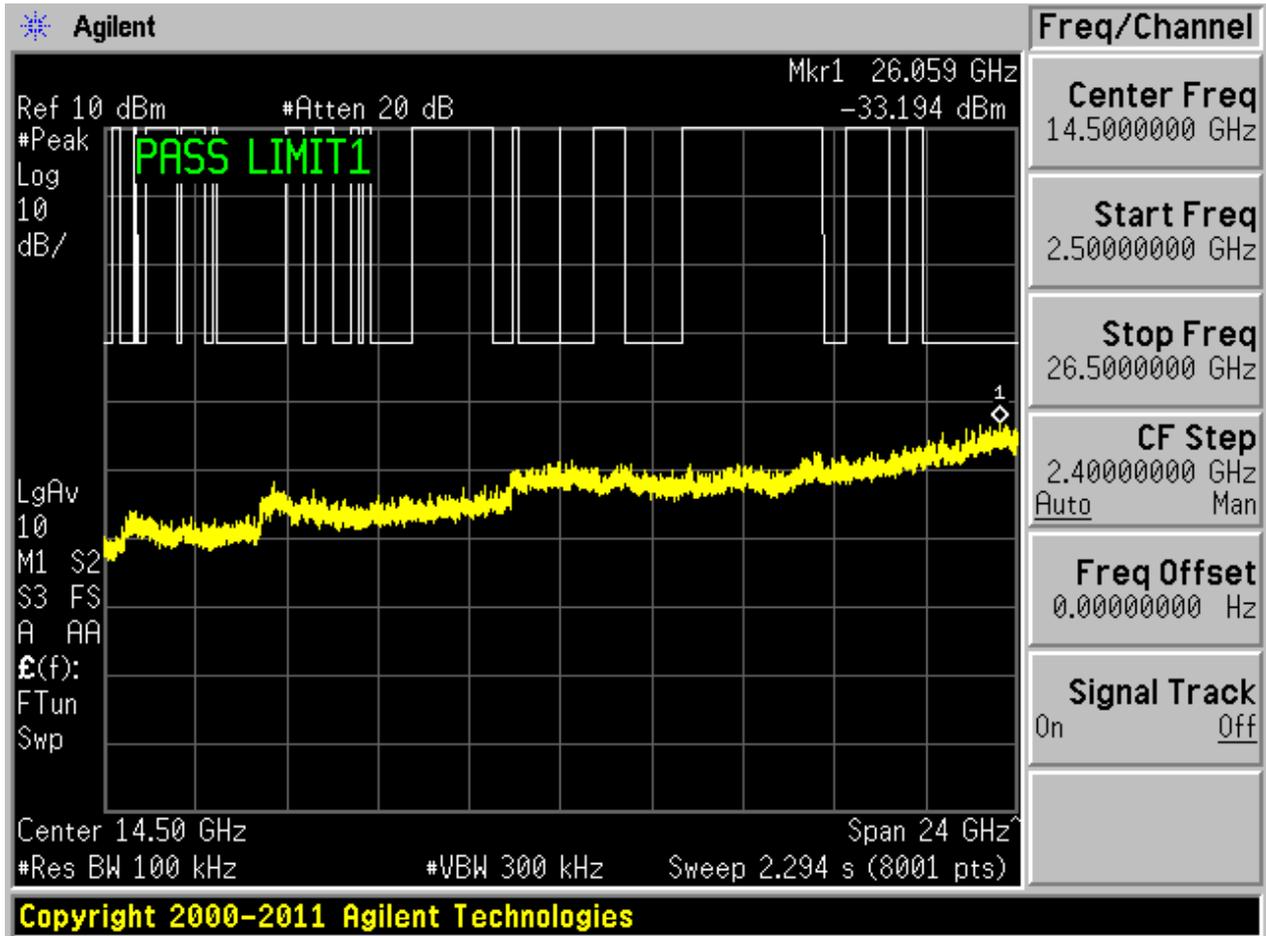
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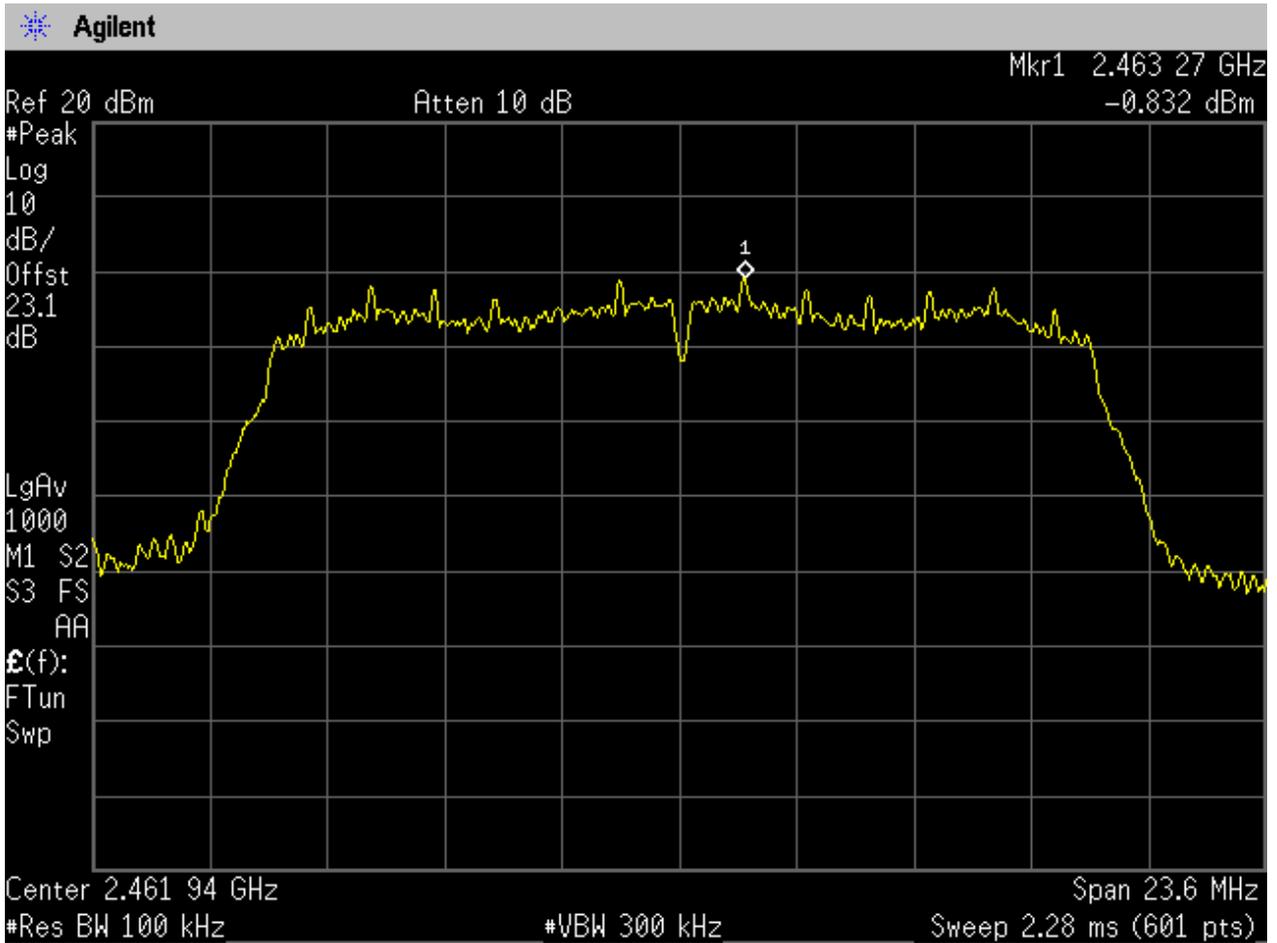




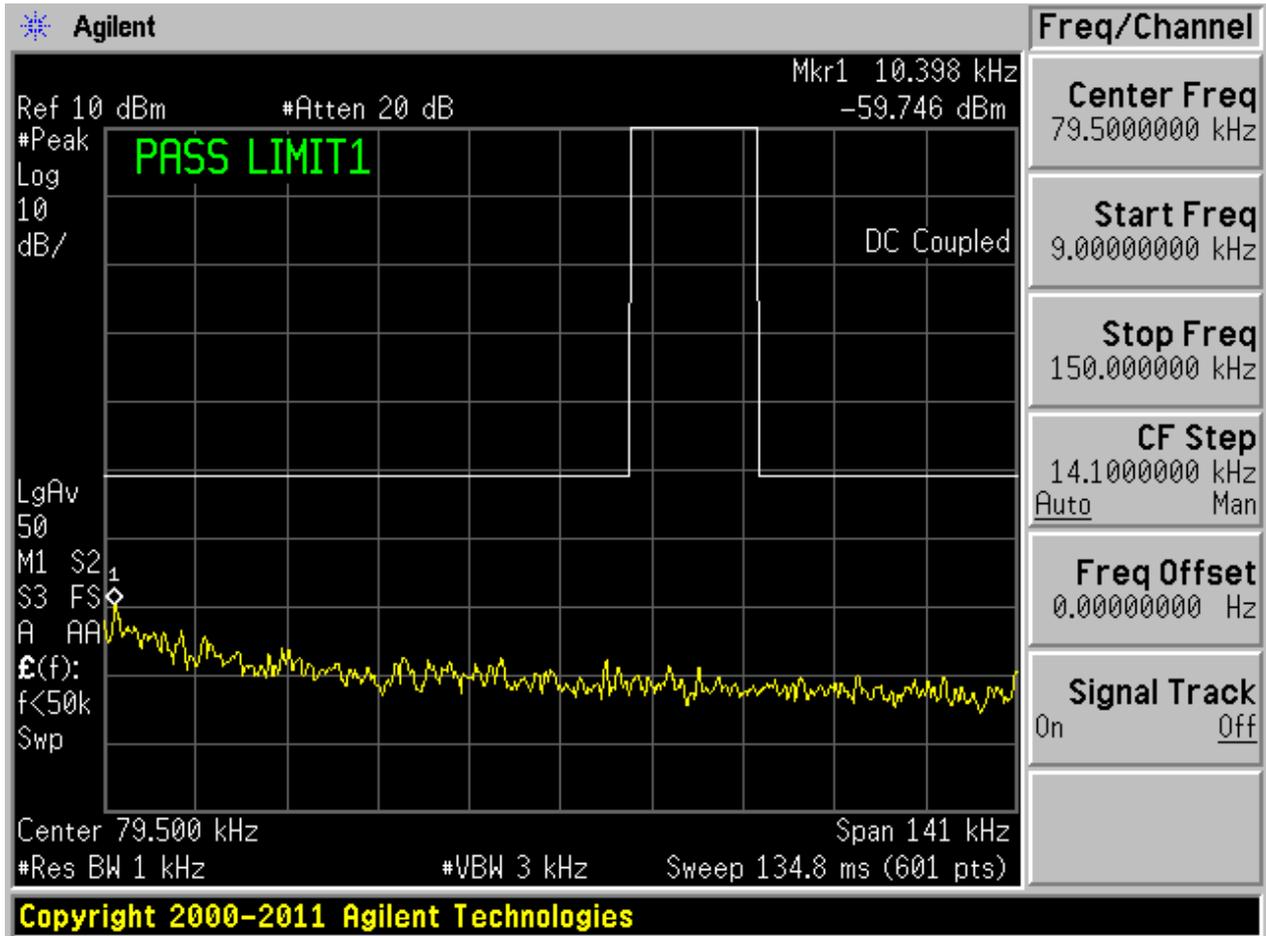


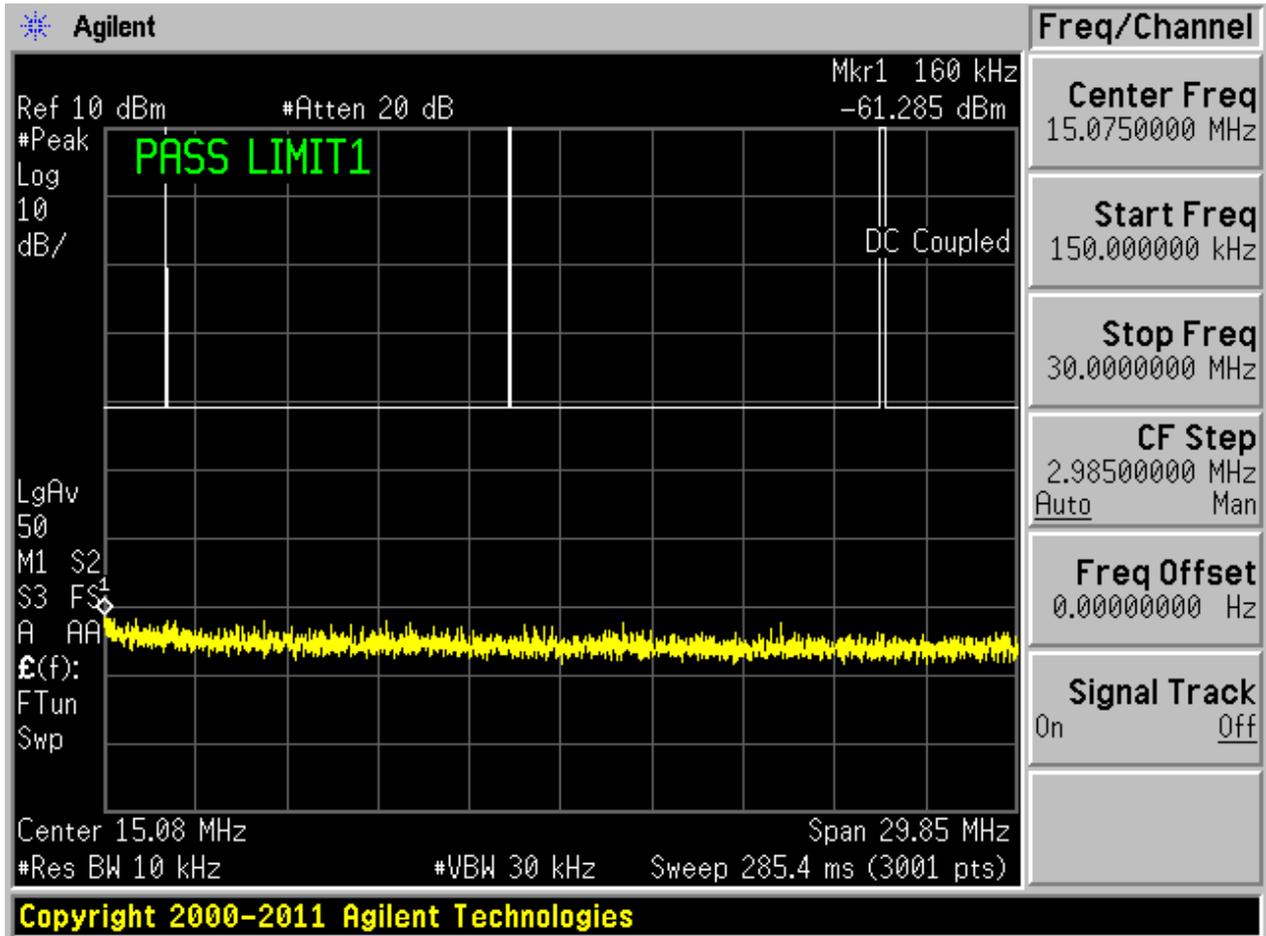
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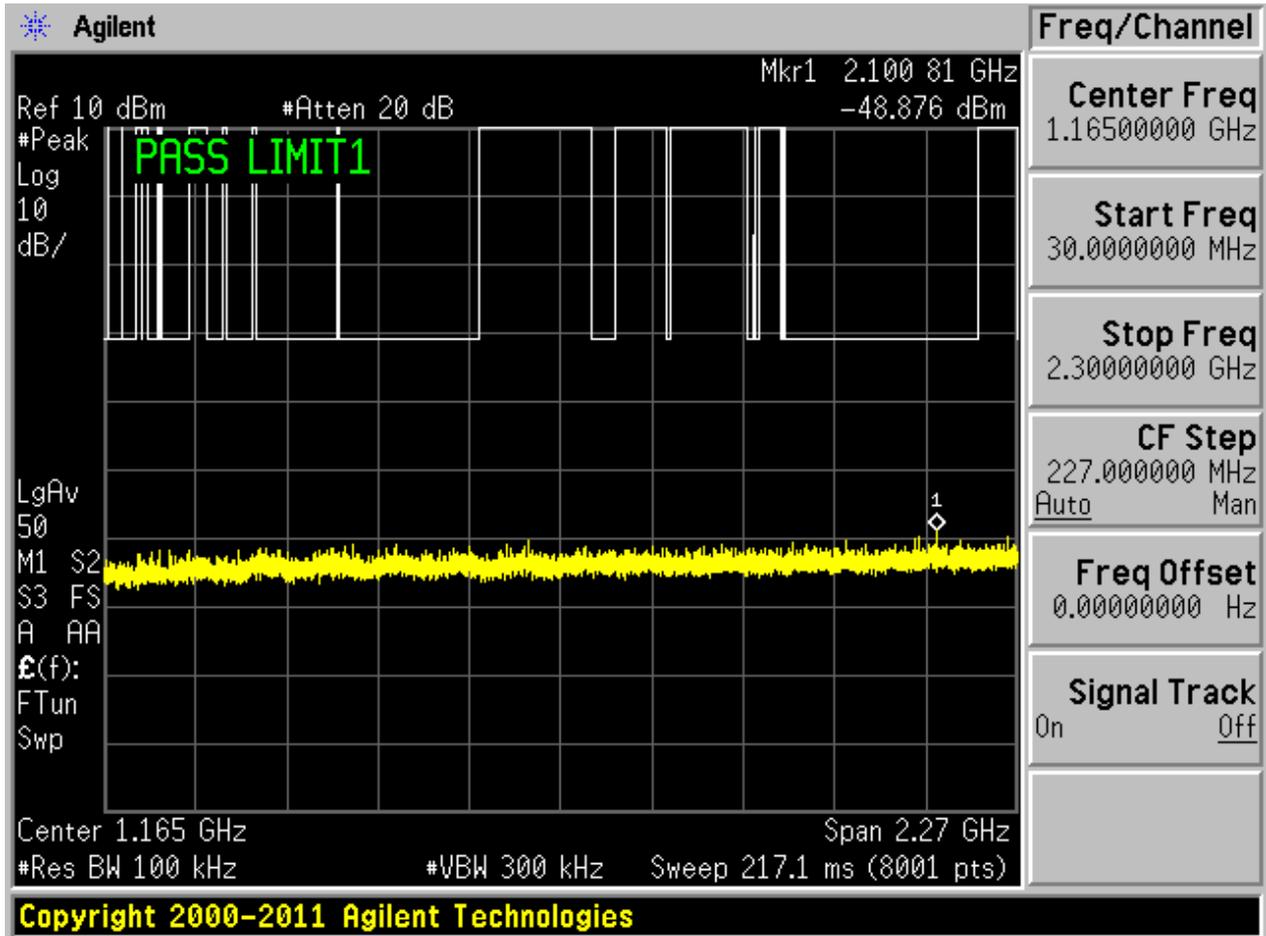
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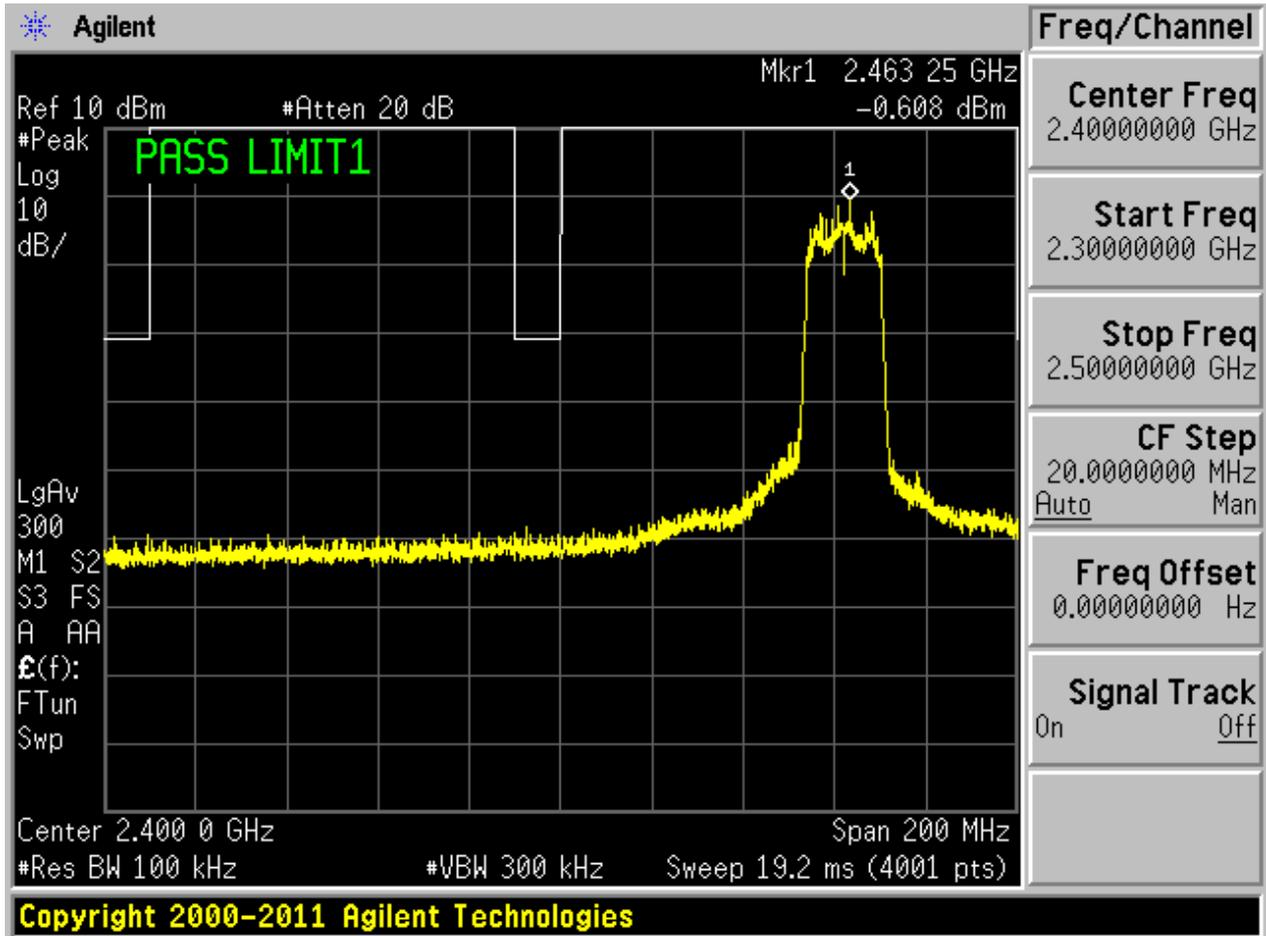


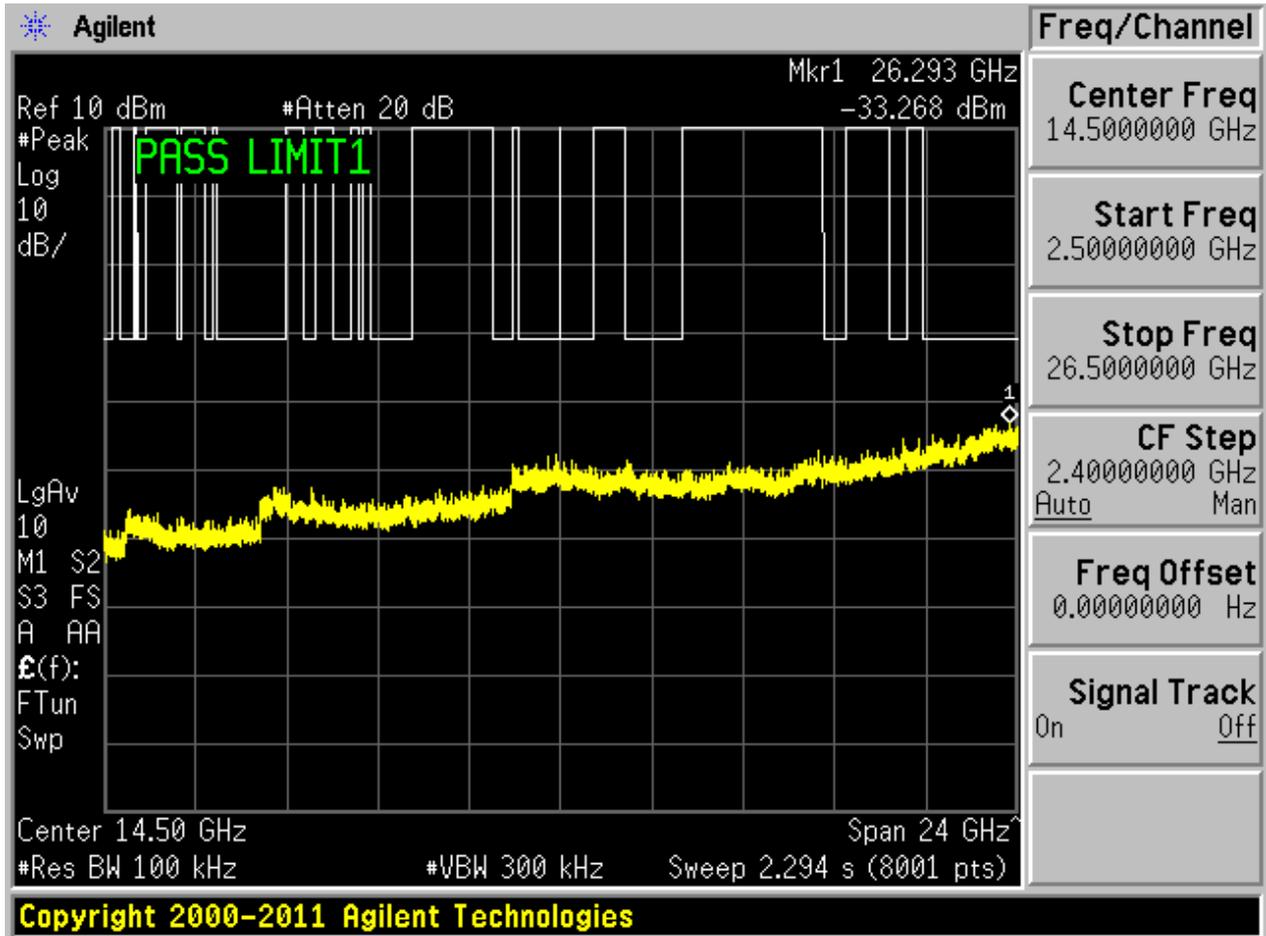
### 2.12.2 Puw





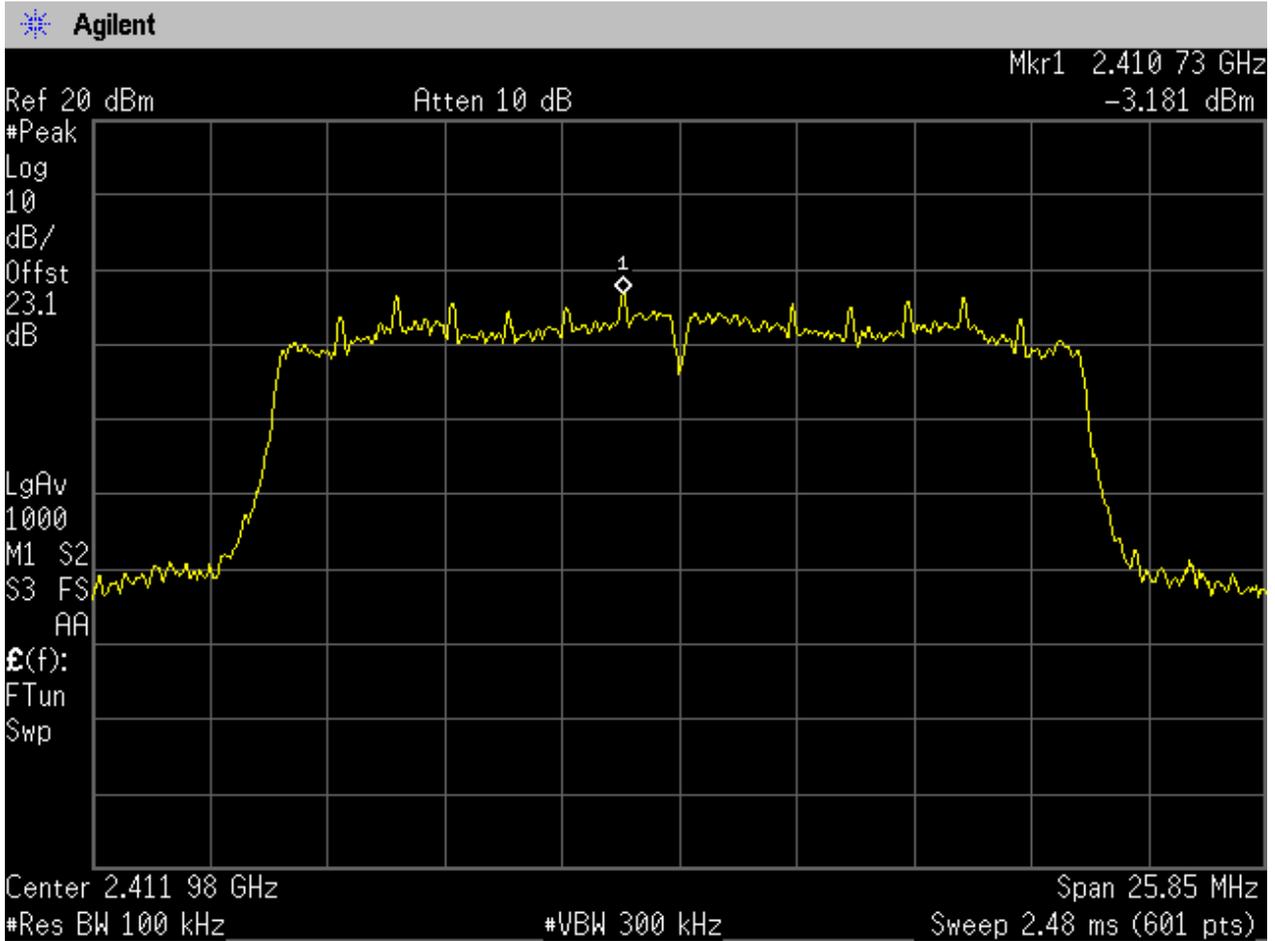




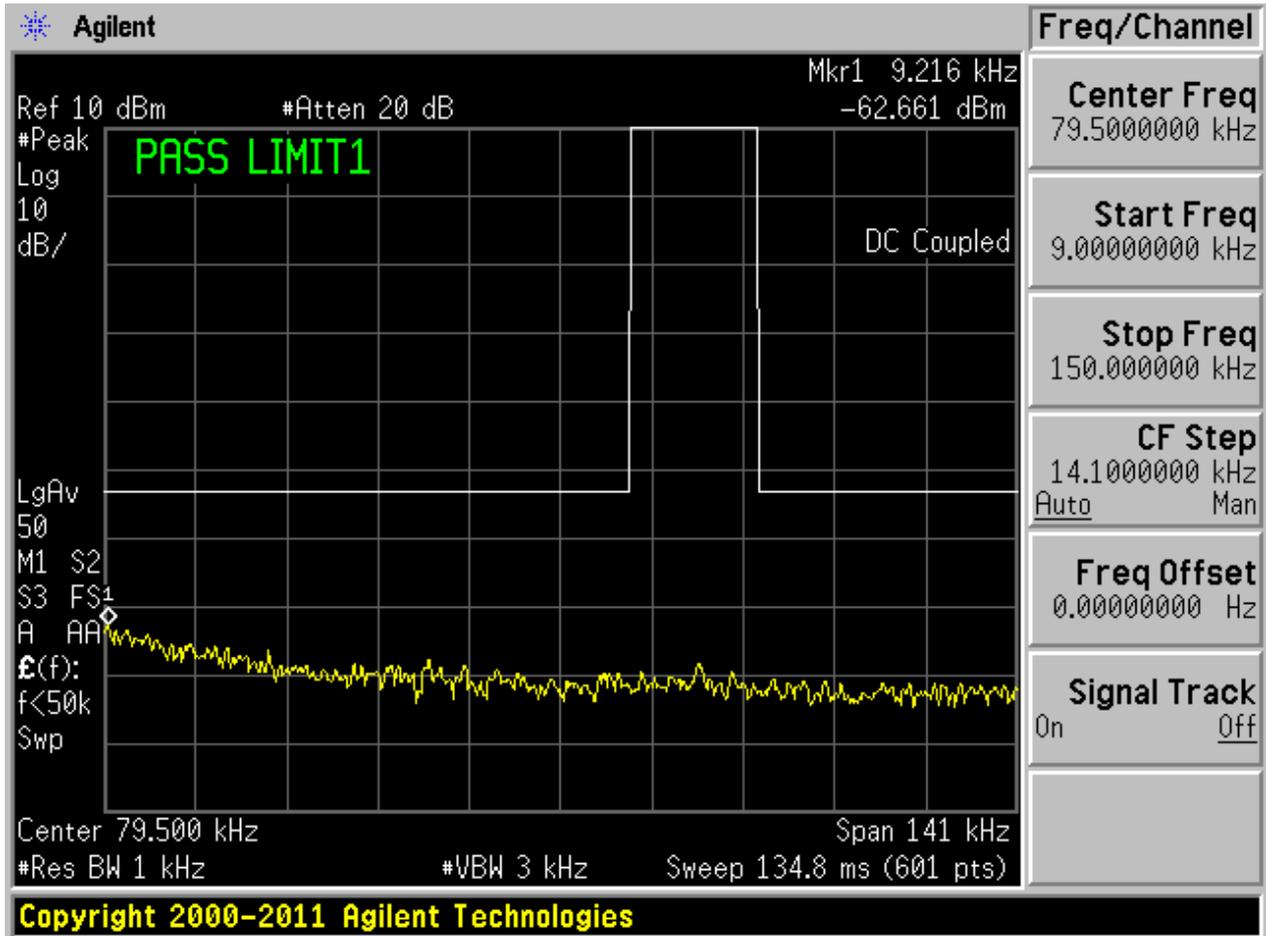


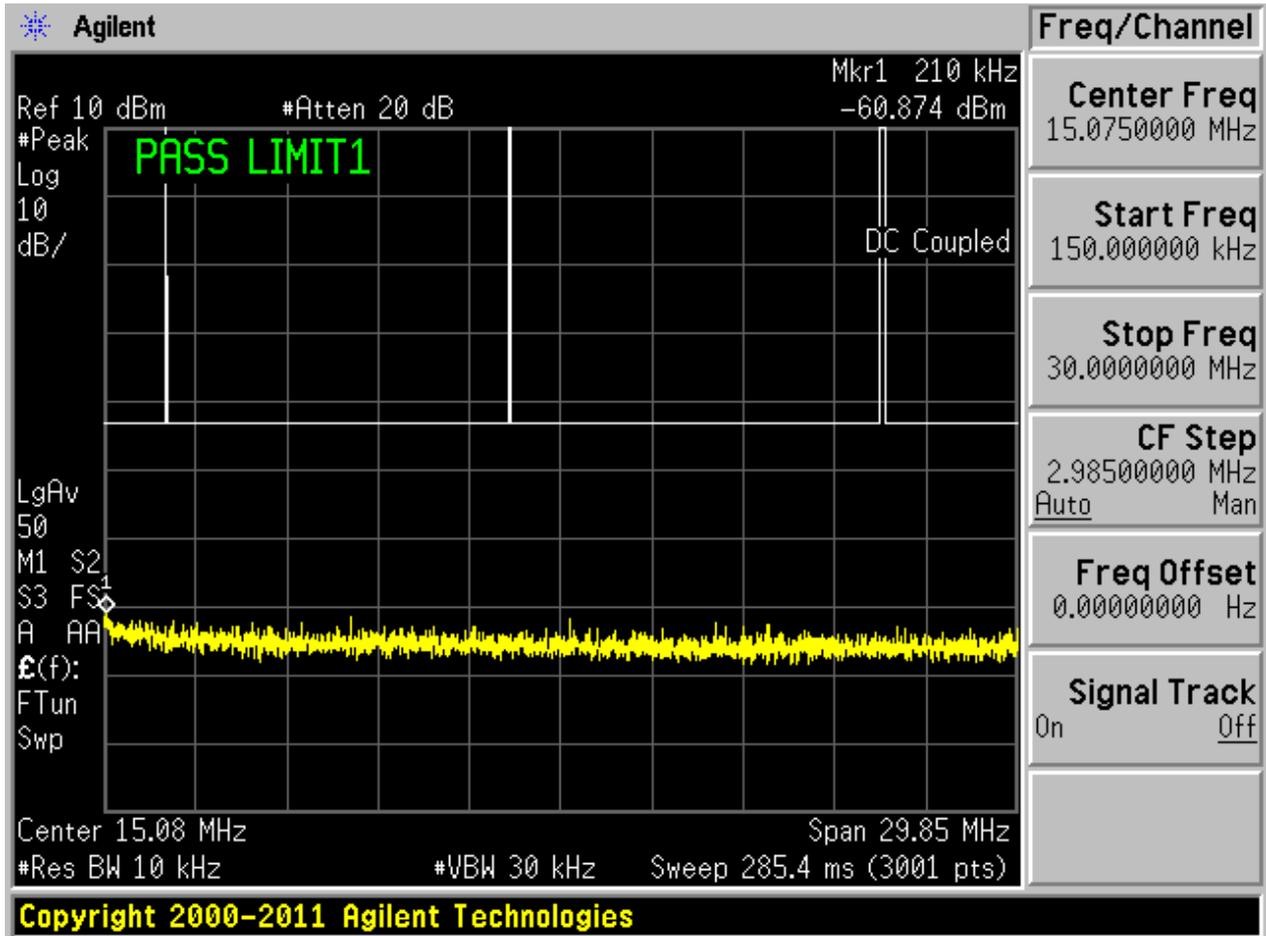
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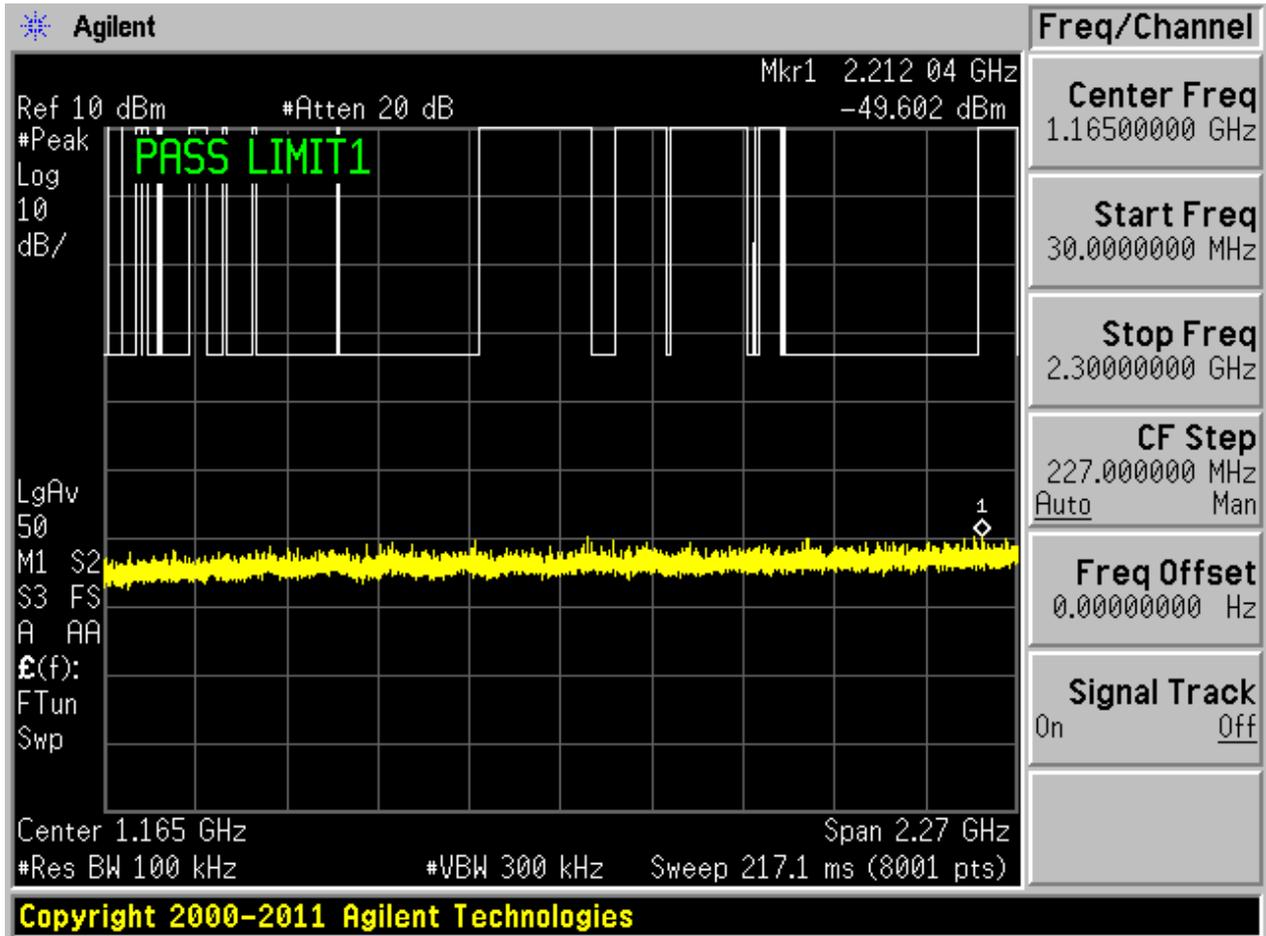
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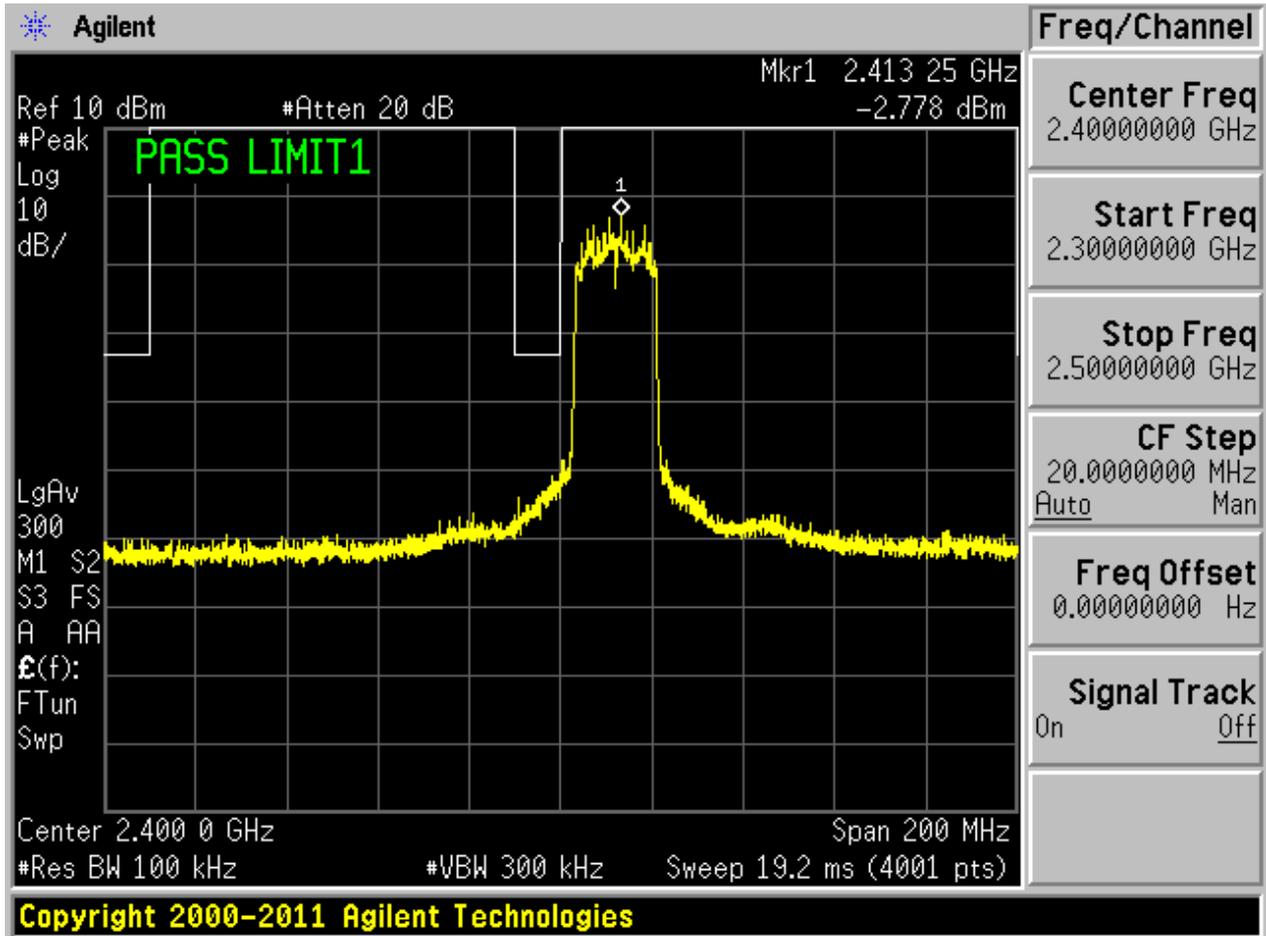


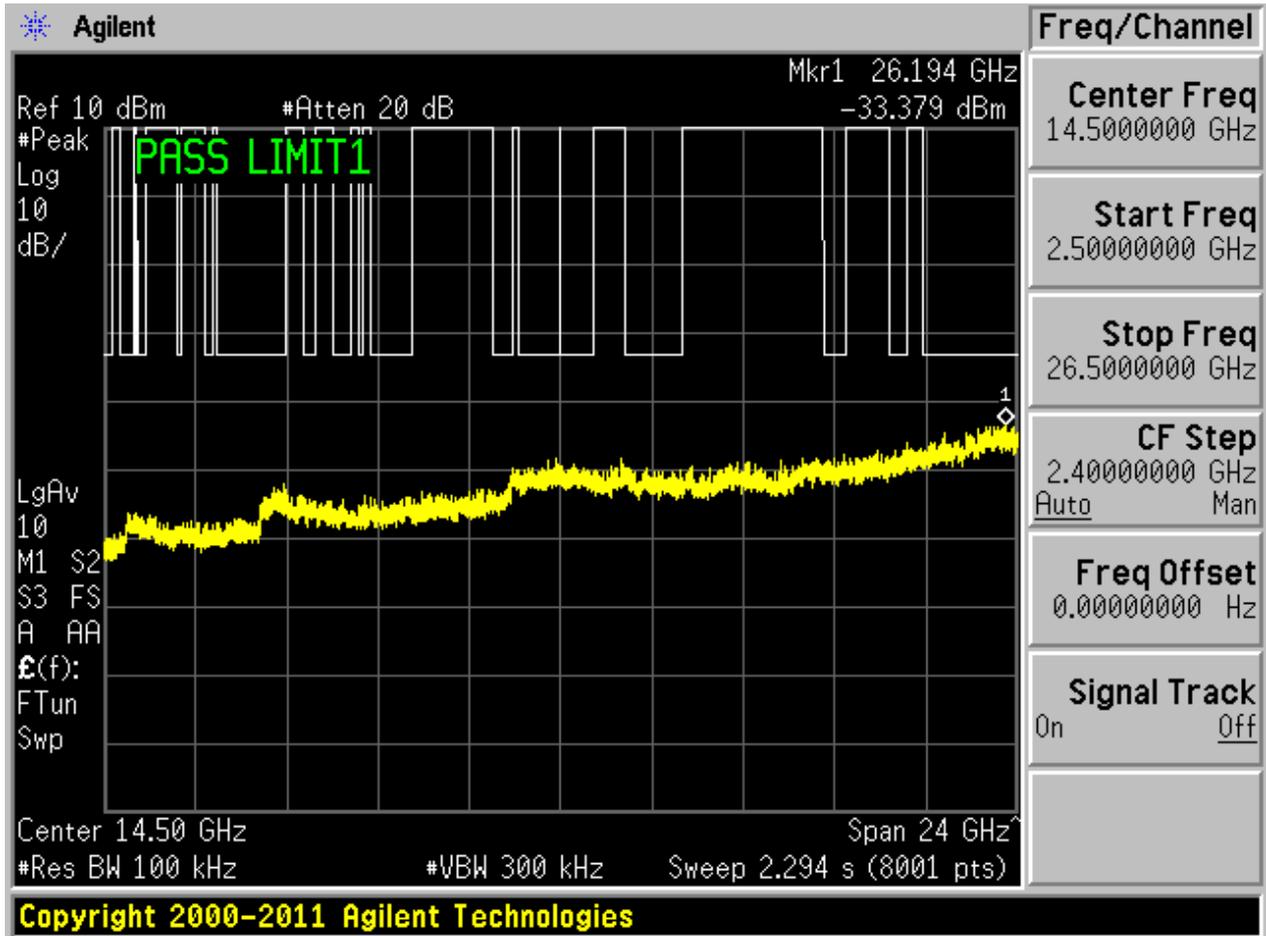
### 2.13.2 Puw





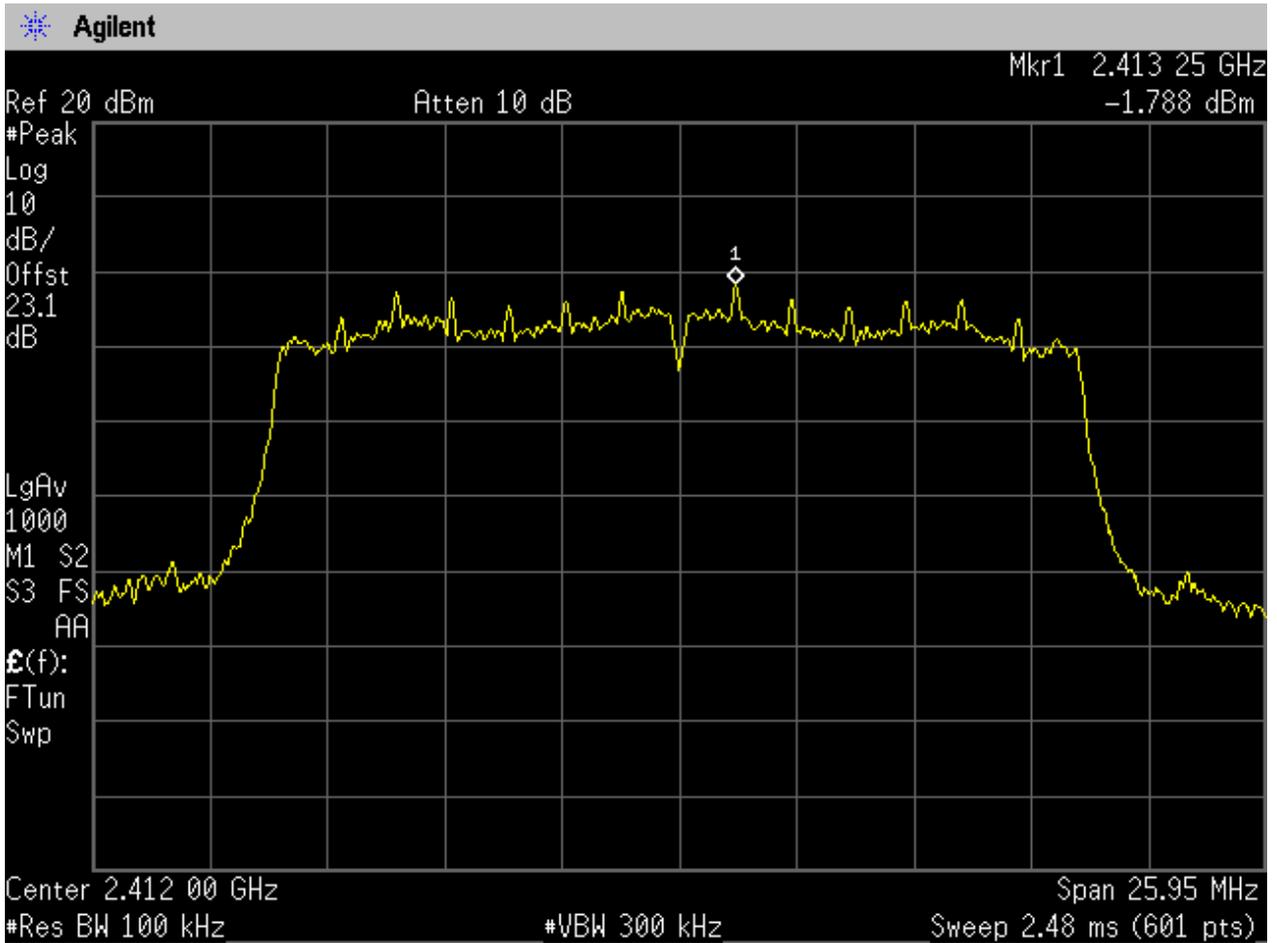




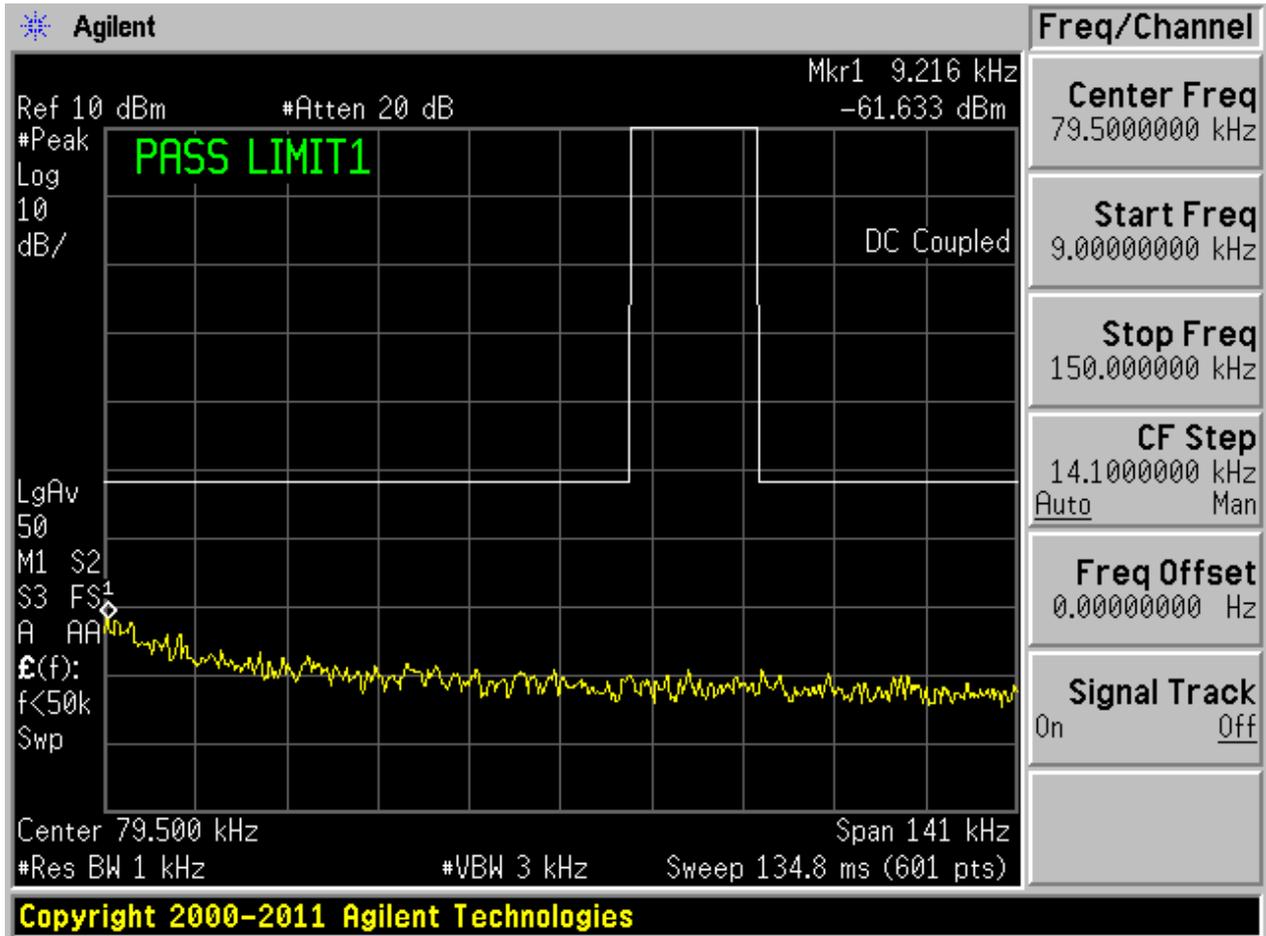


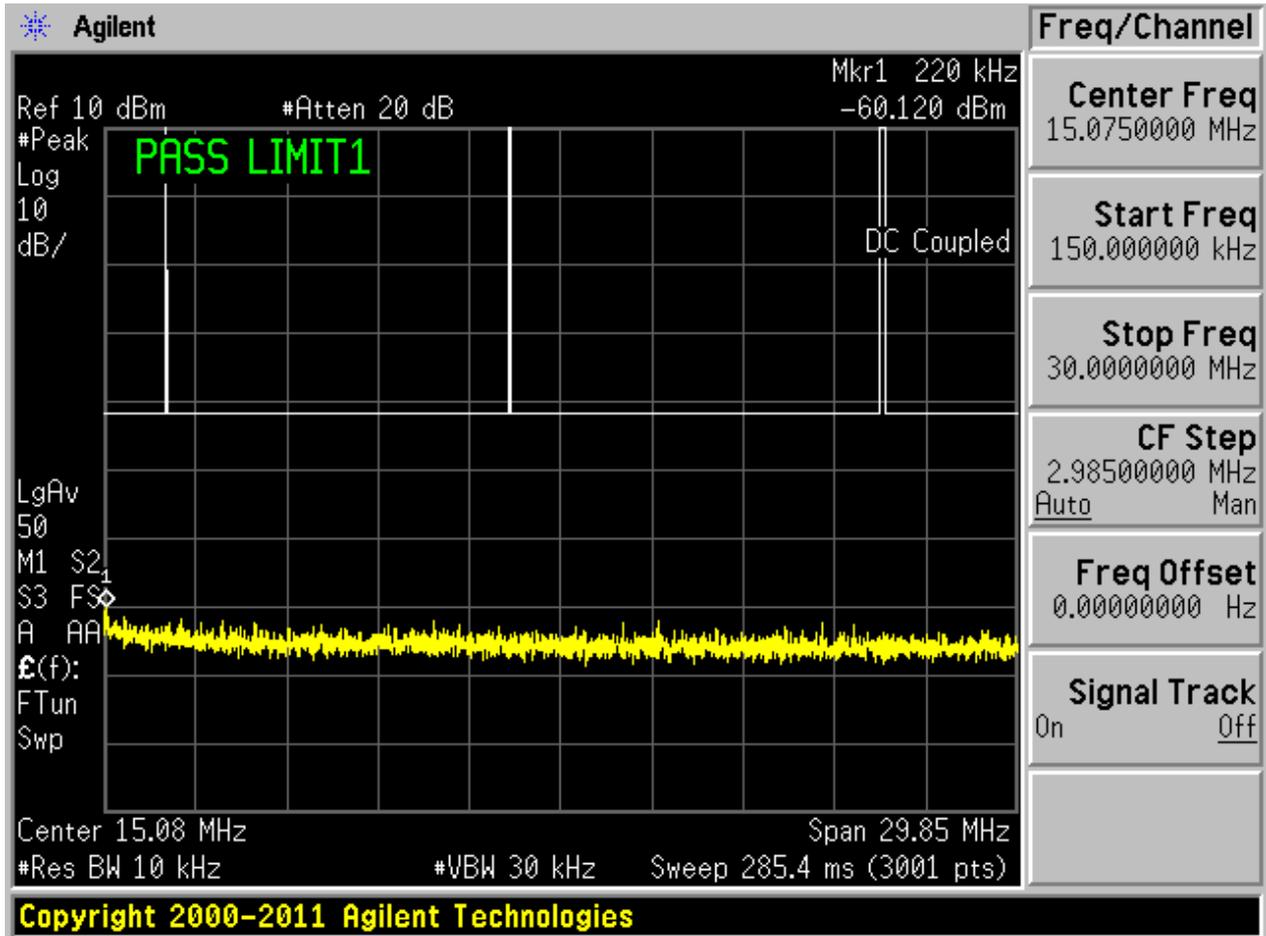
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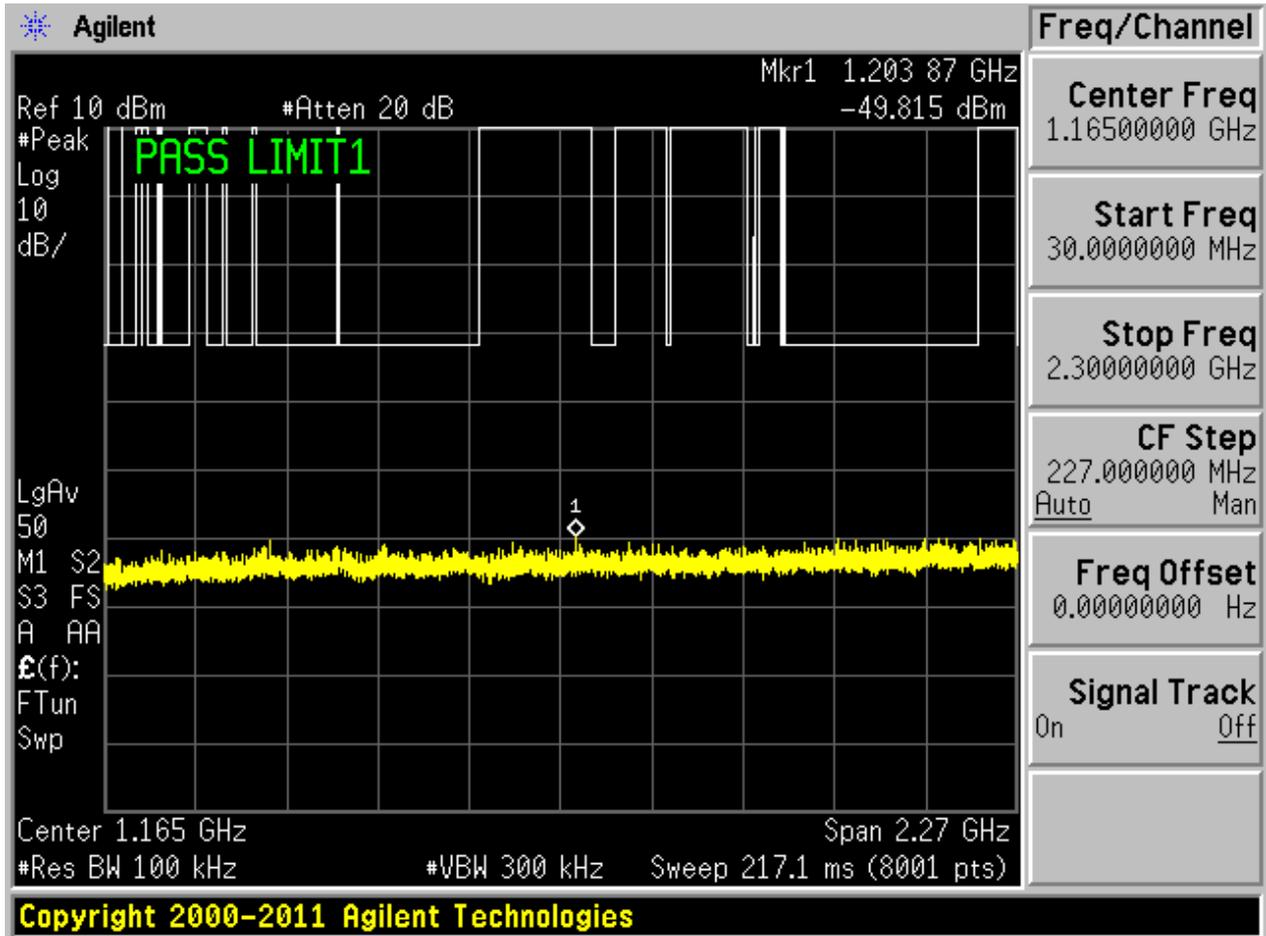
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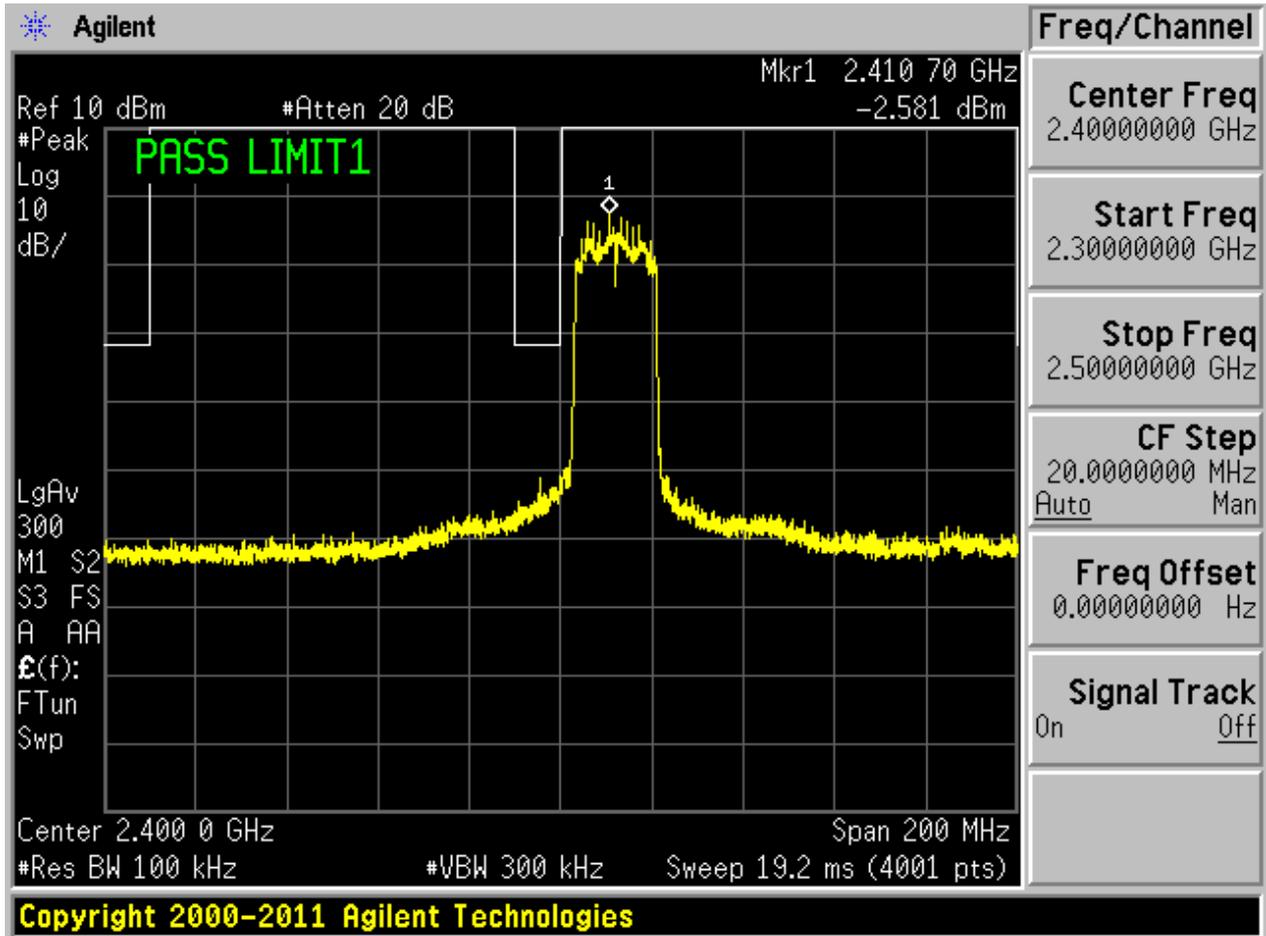


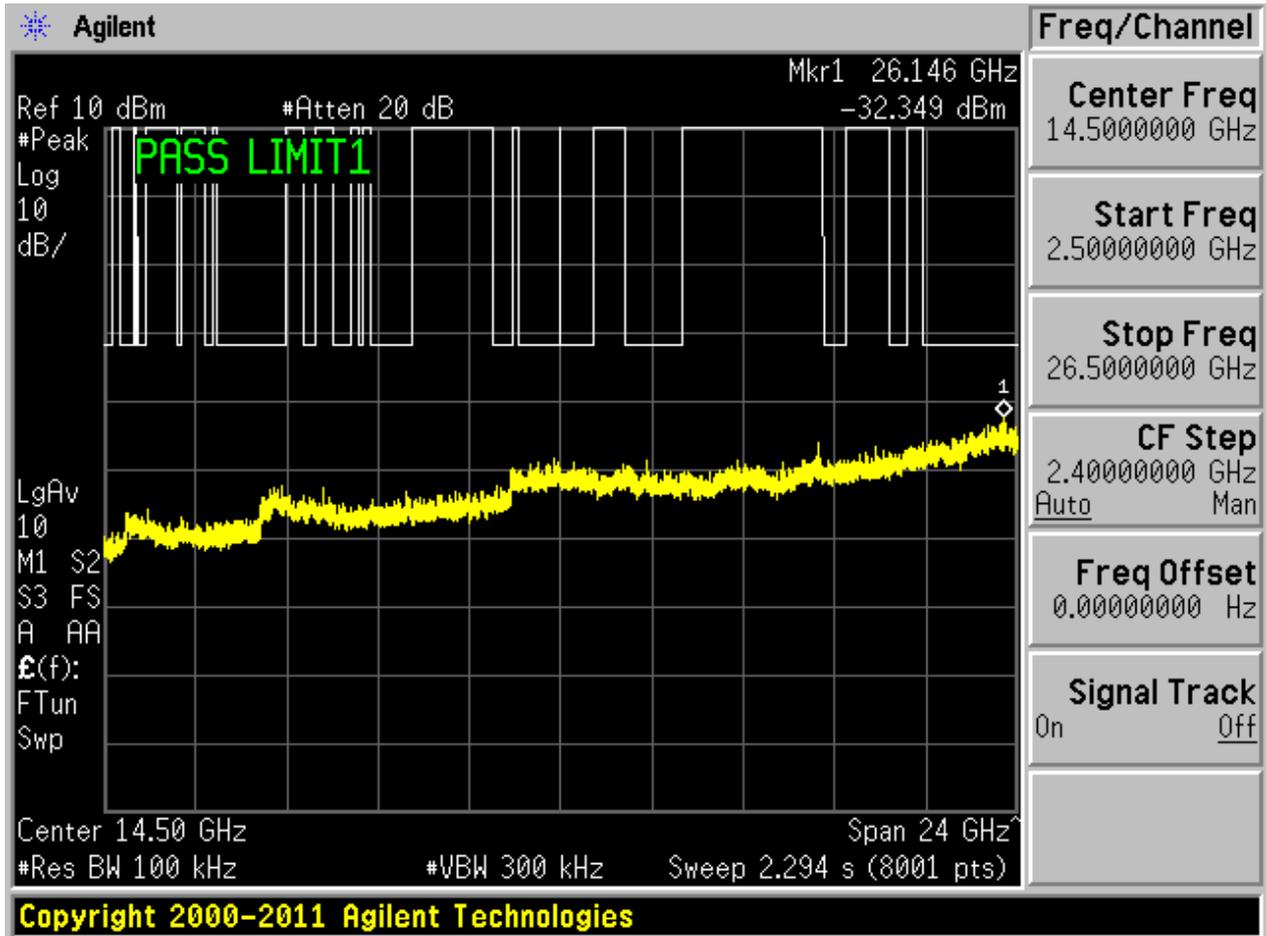
### 2.14.2 Puw





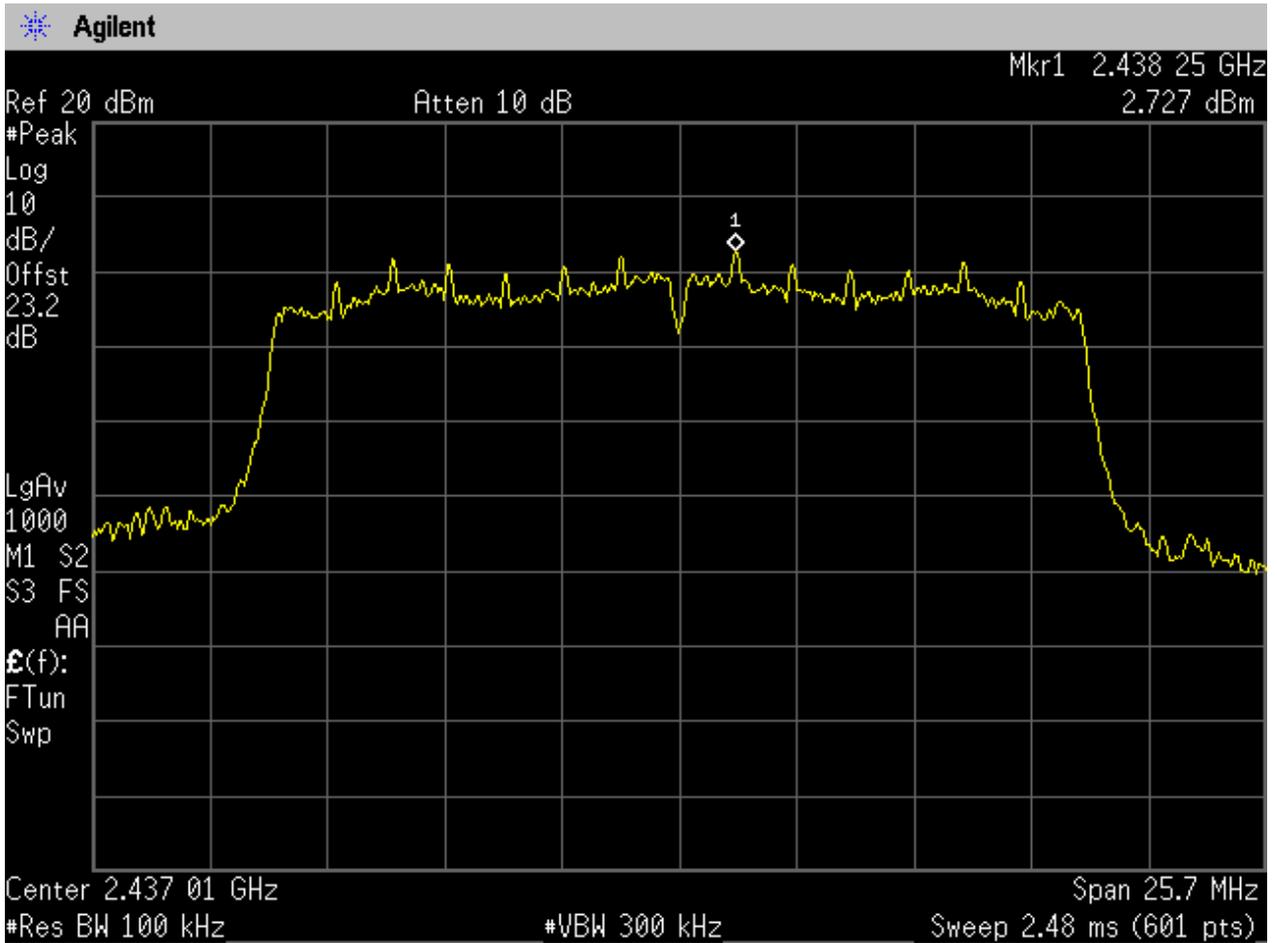




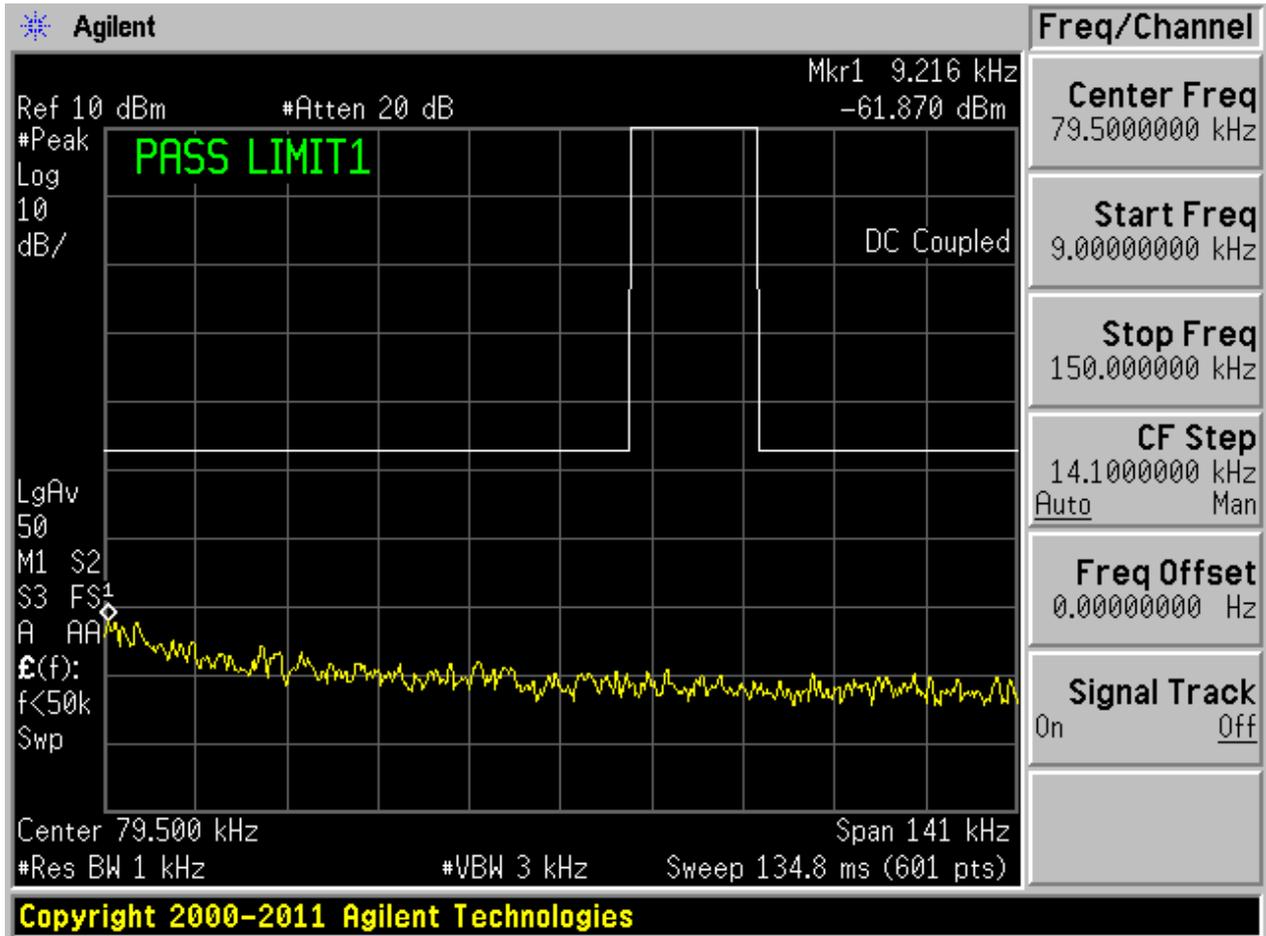


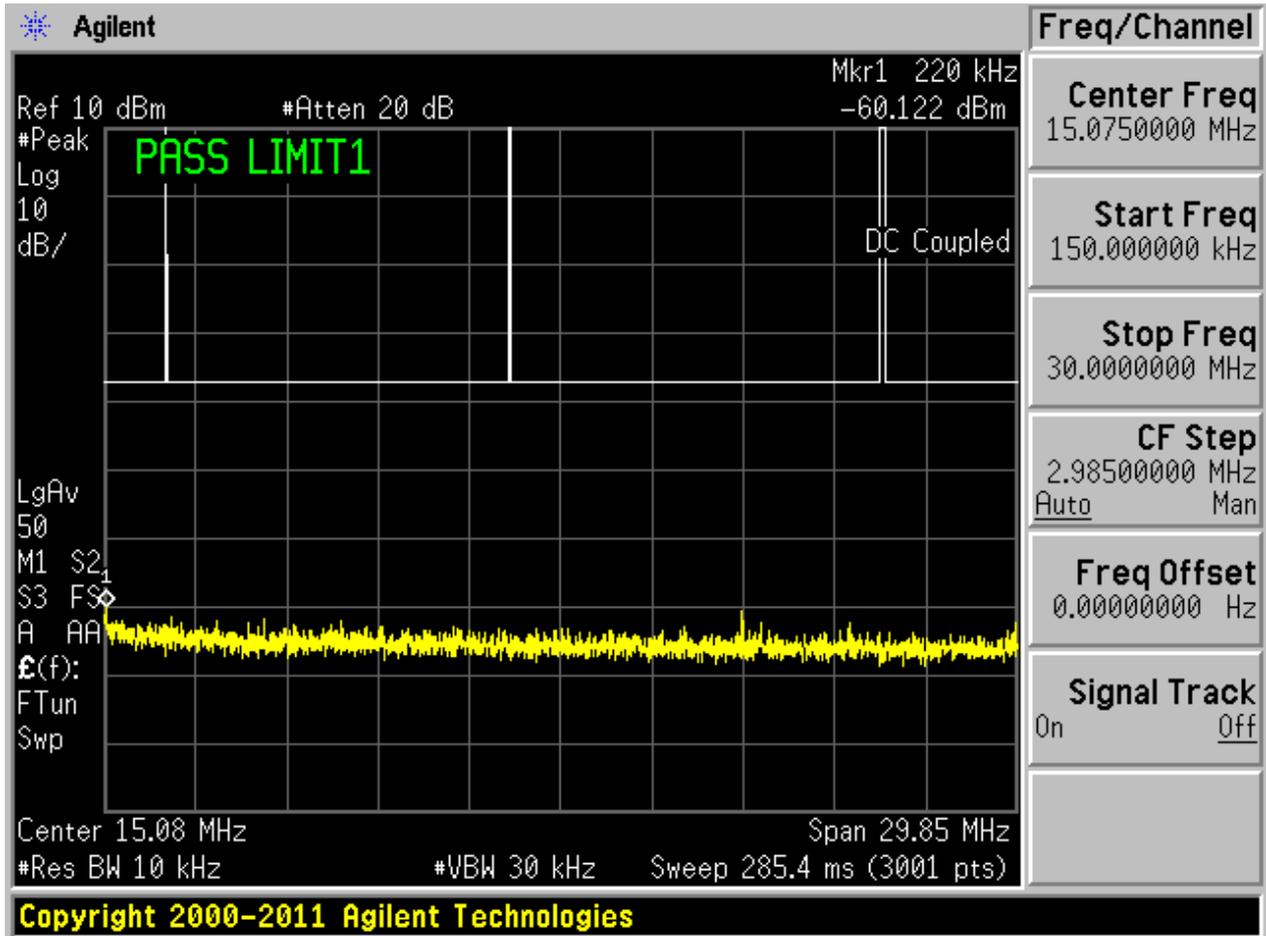
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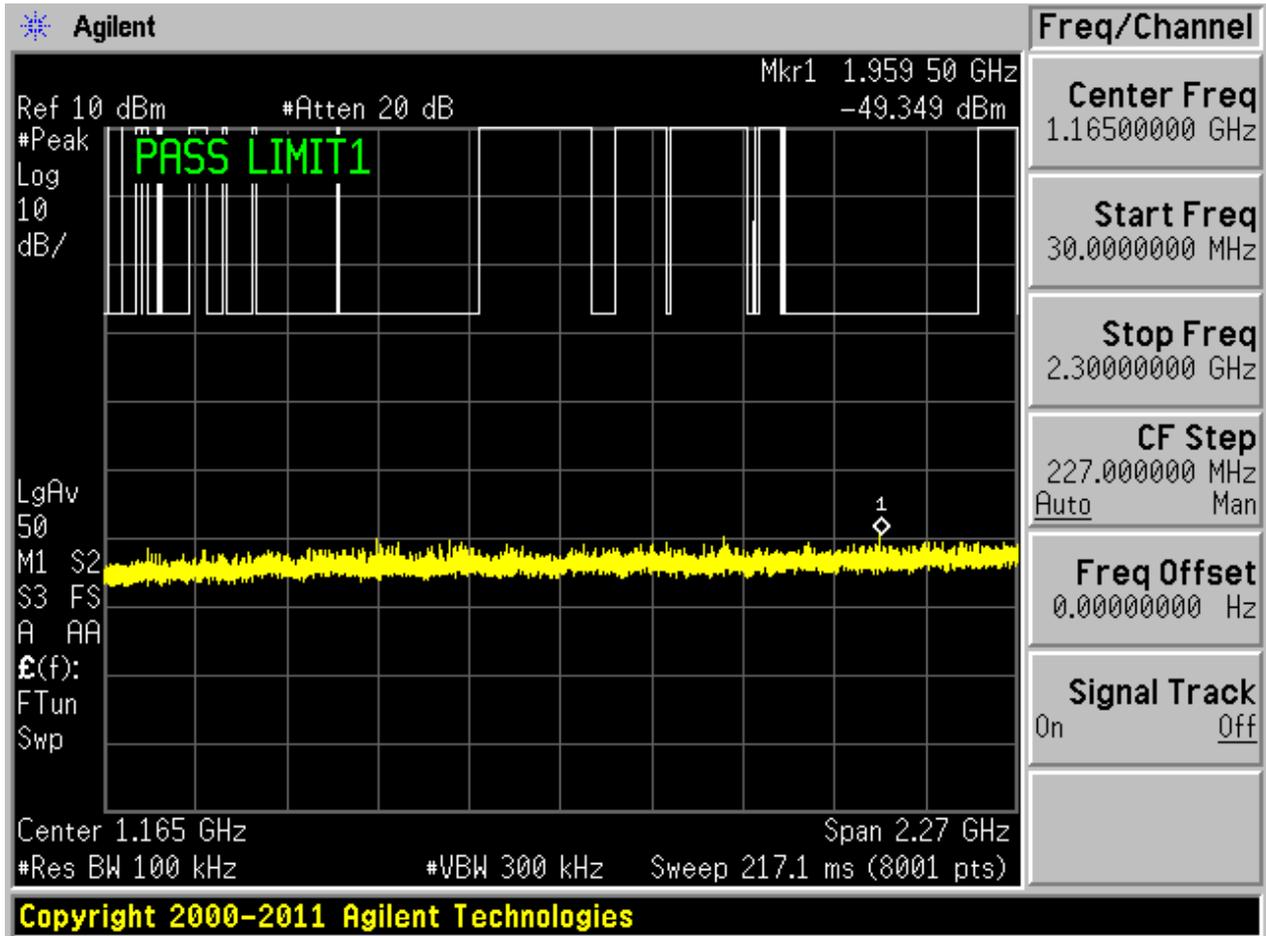
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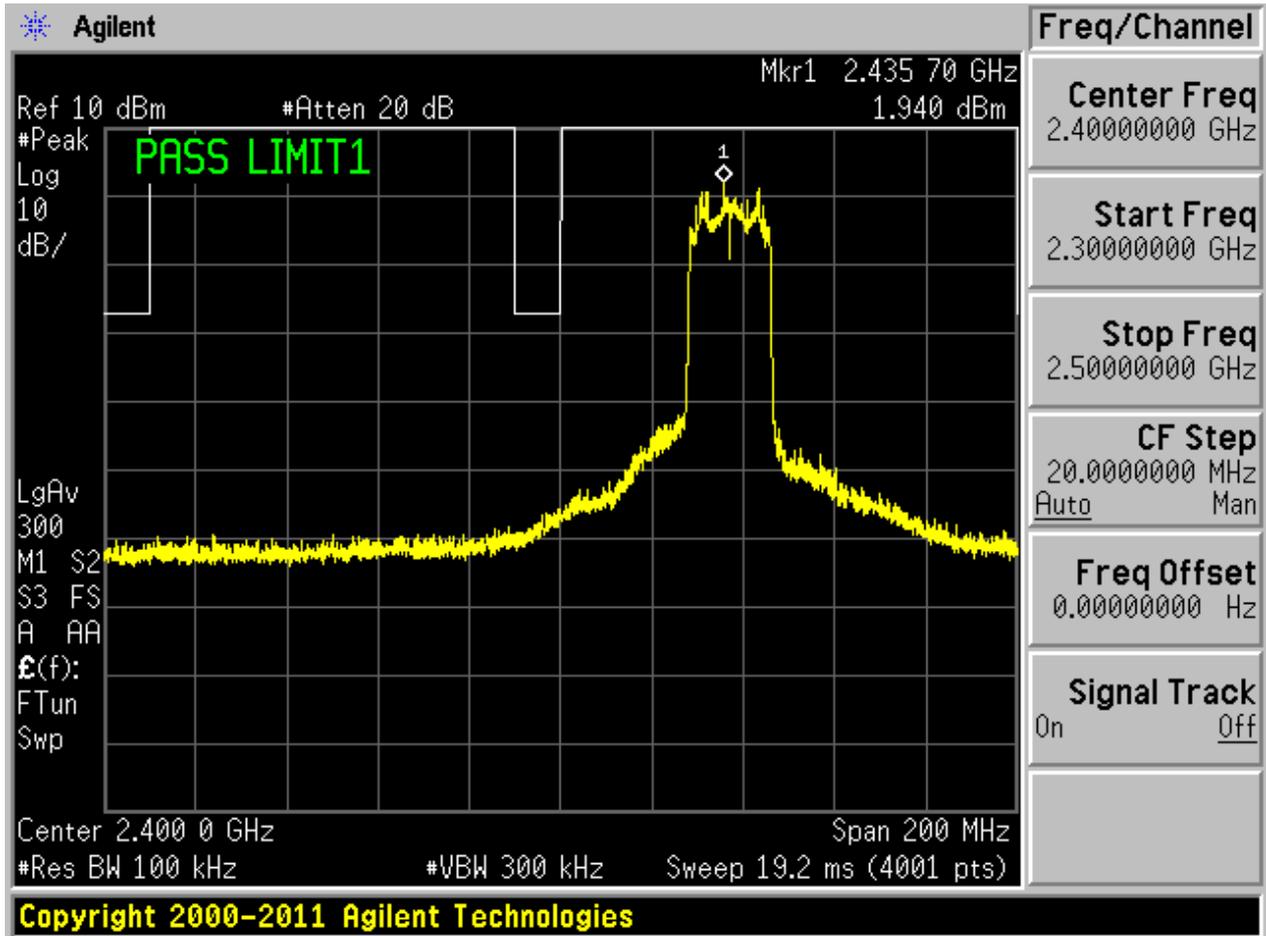


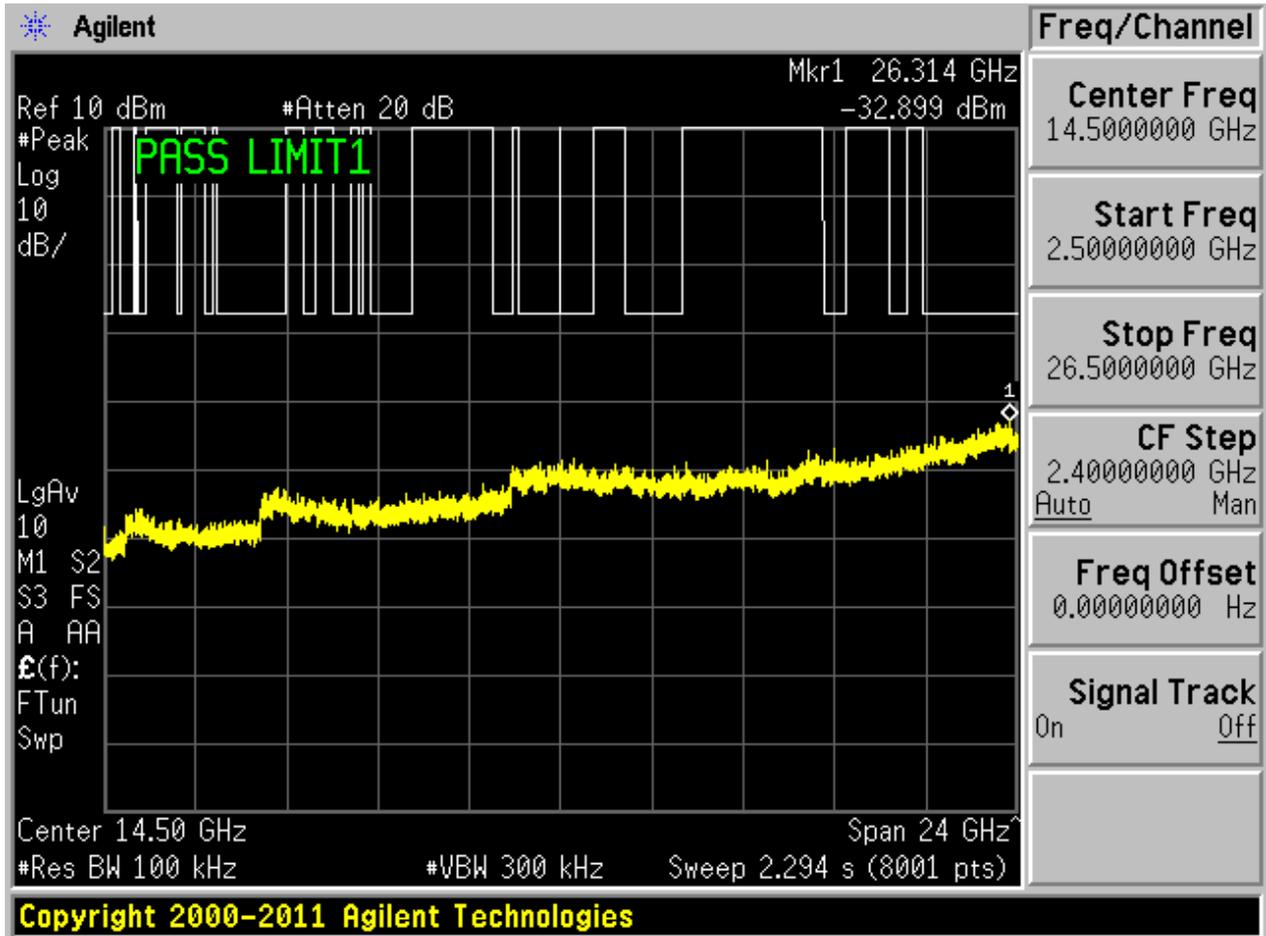
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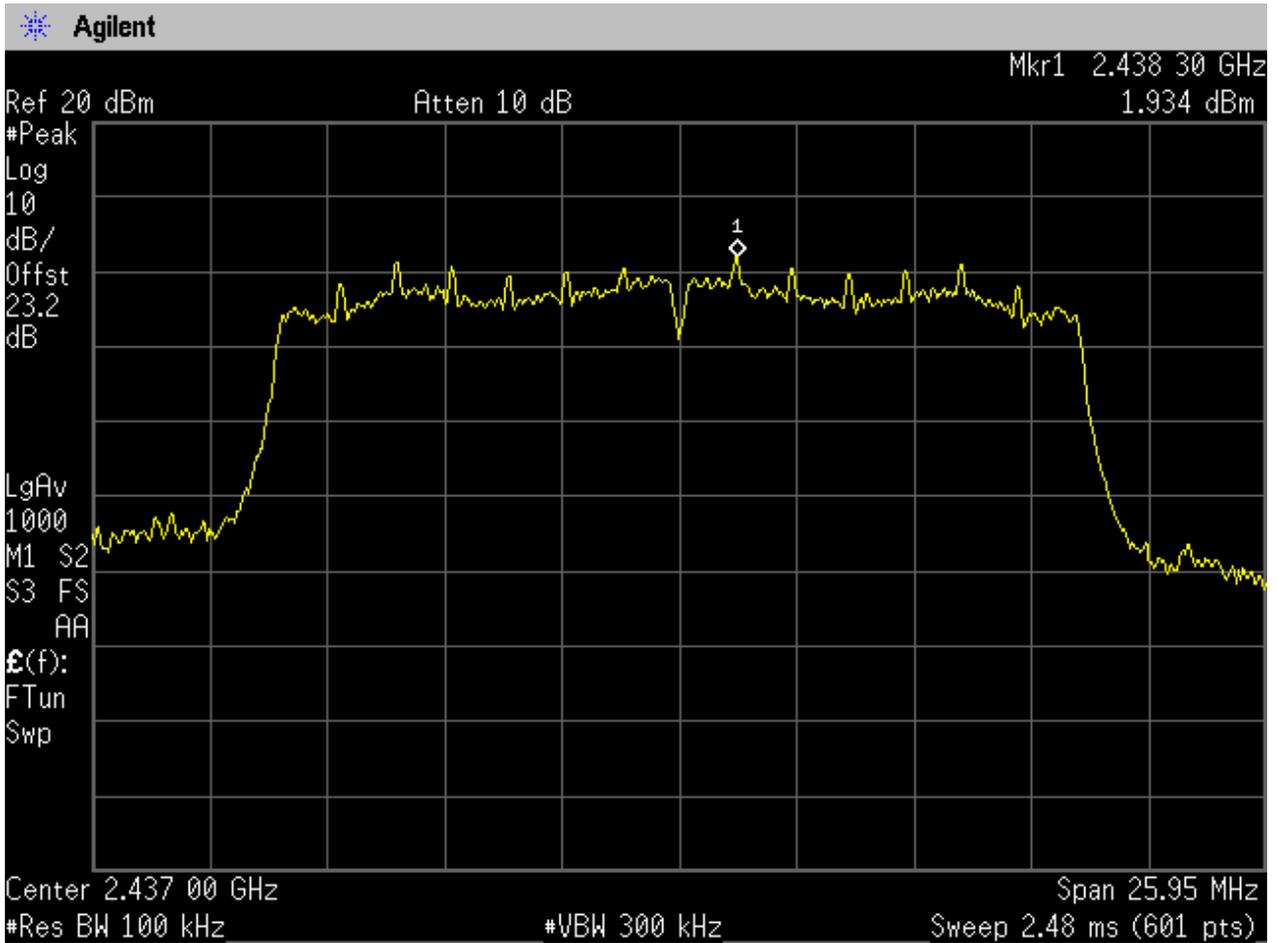




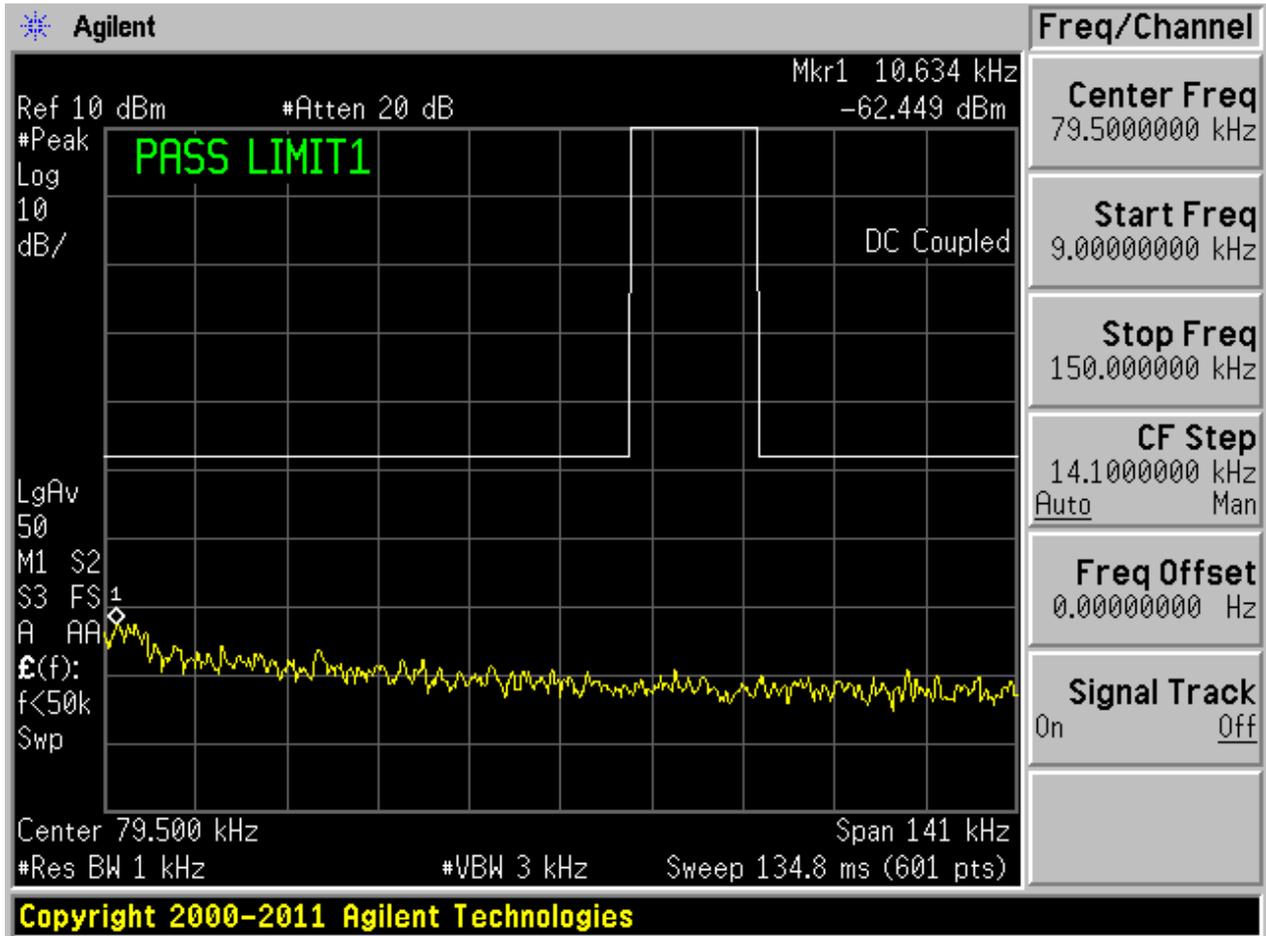


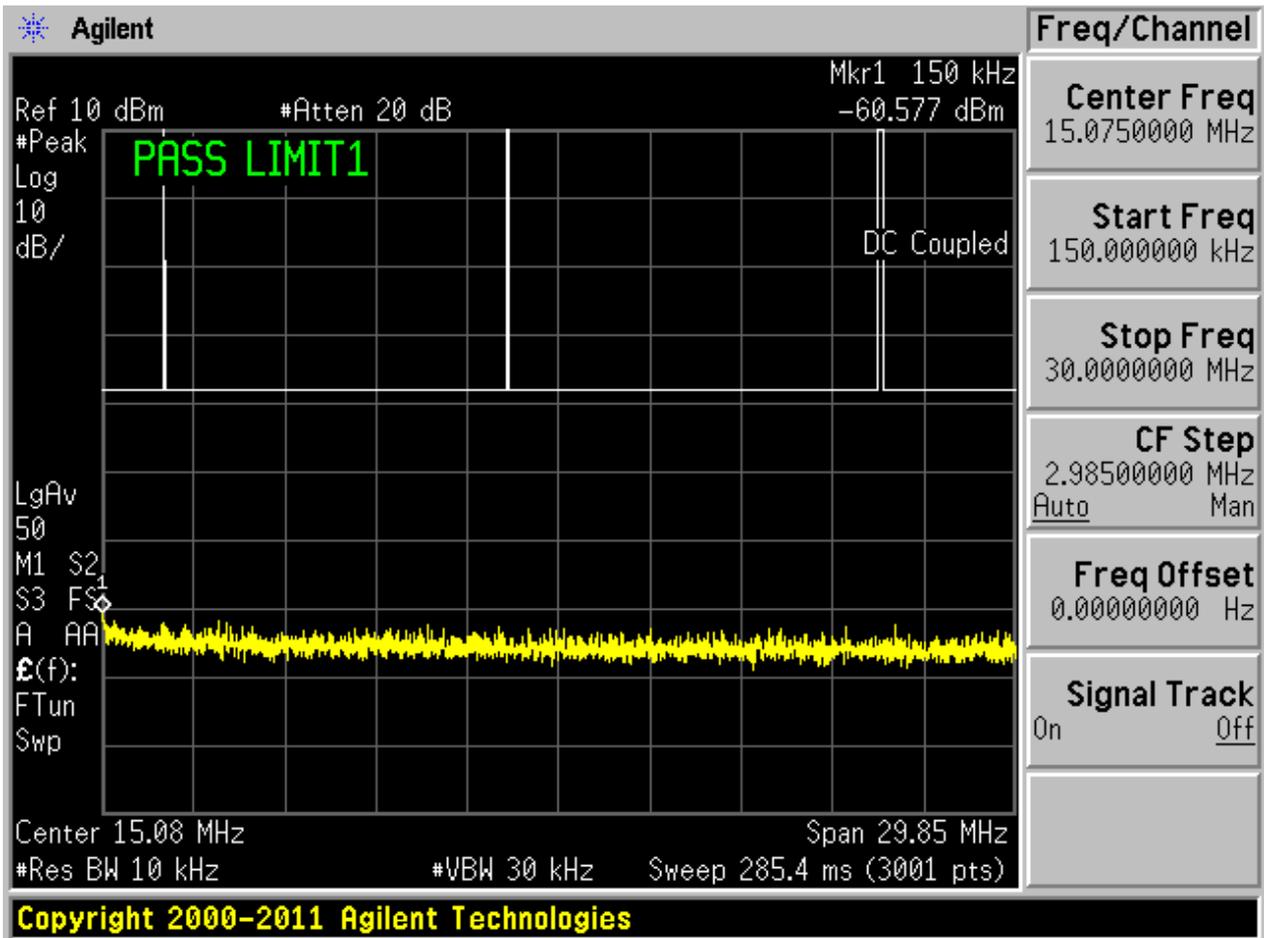
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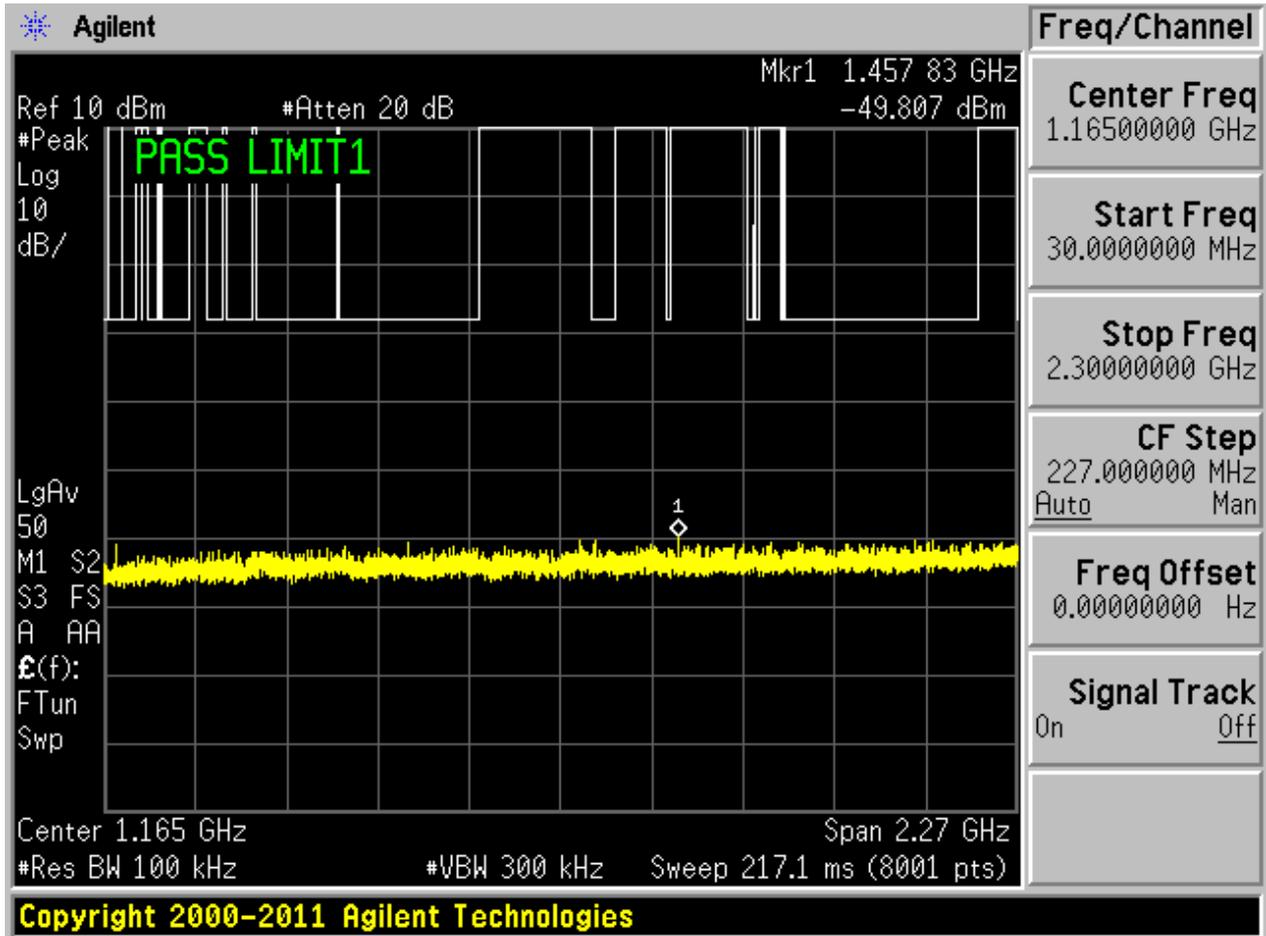
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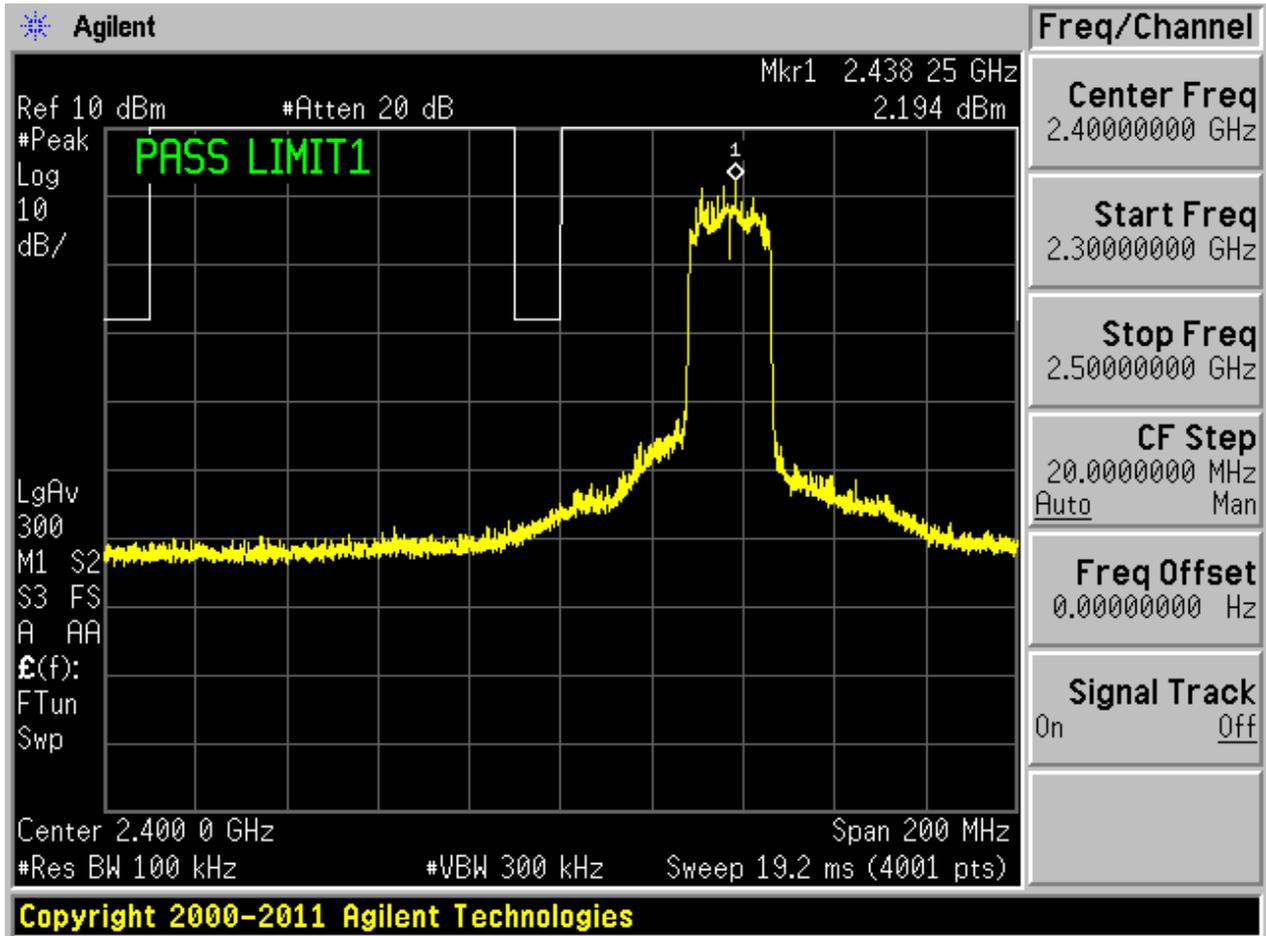


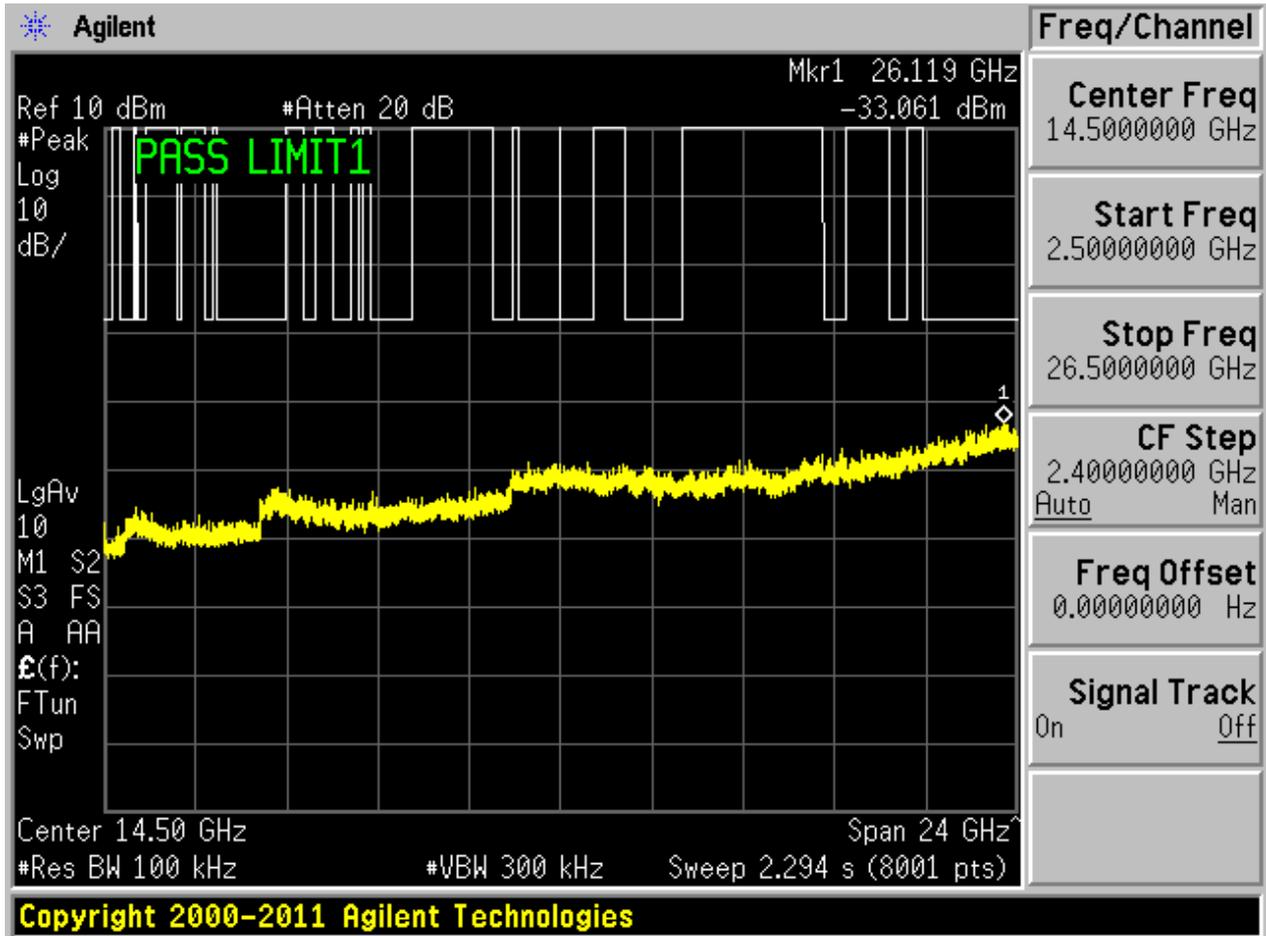
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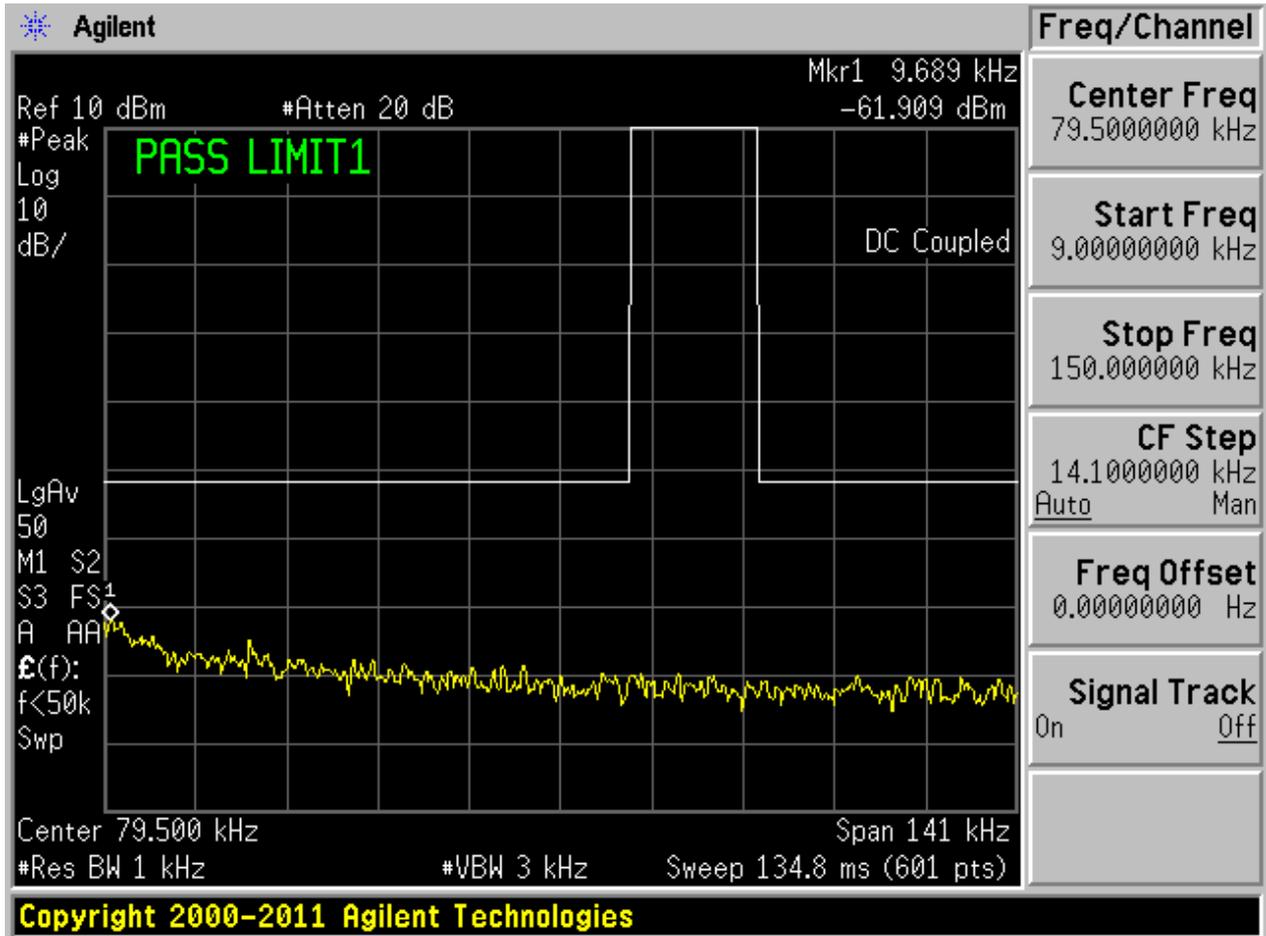


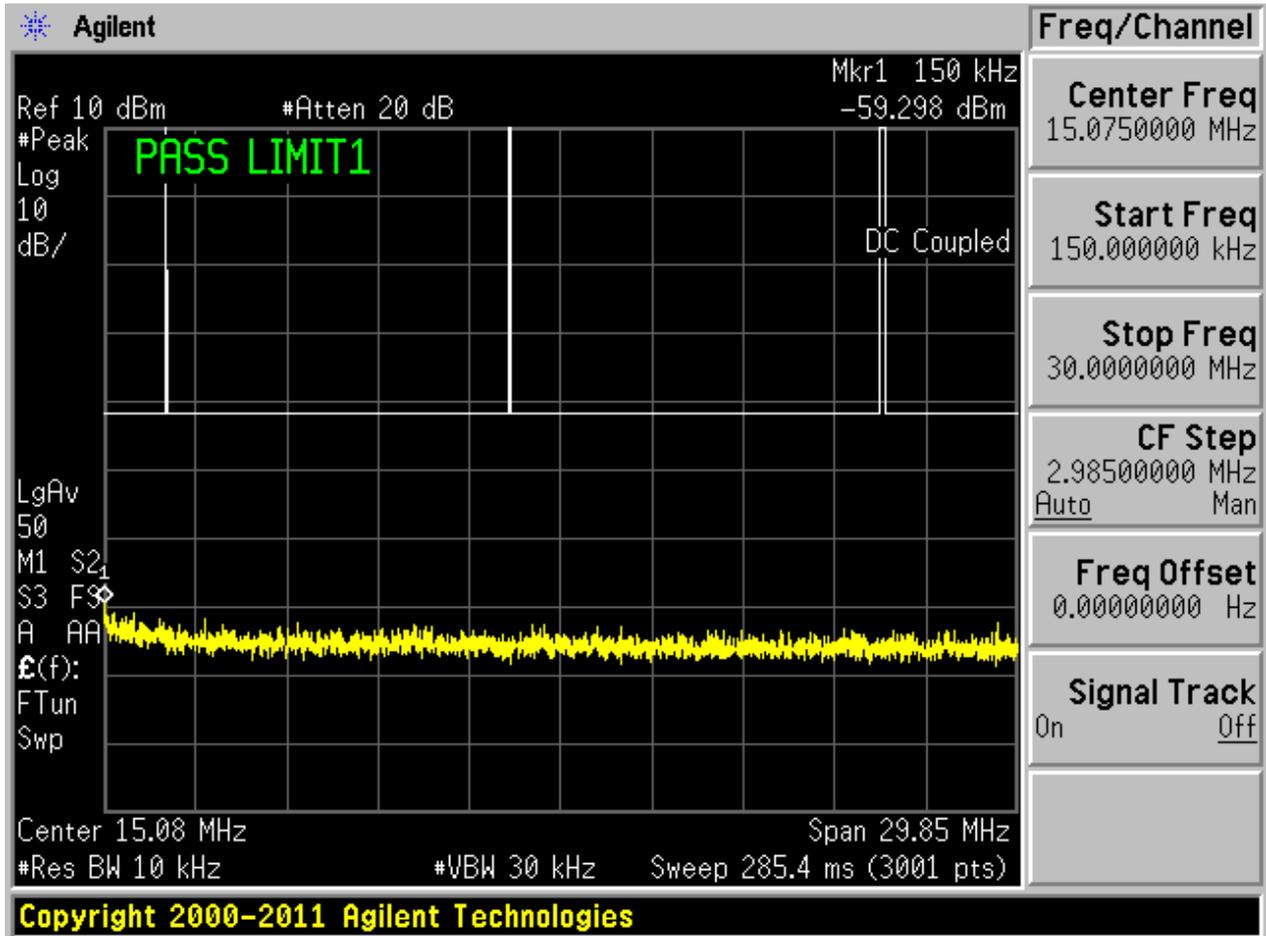


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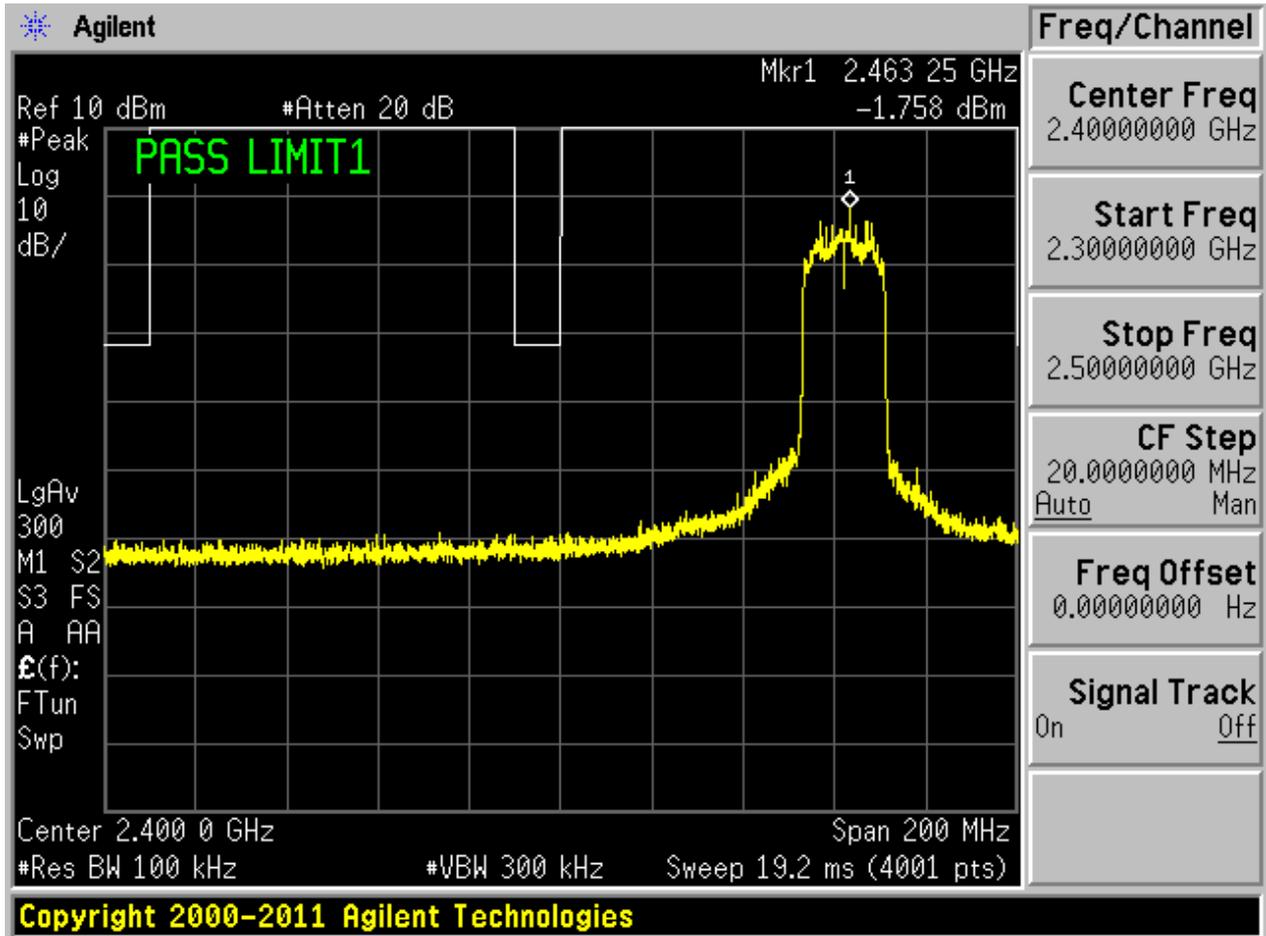
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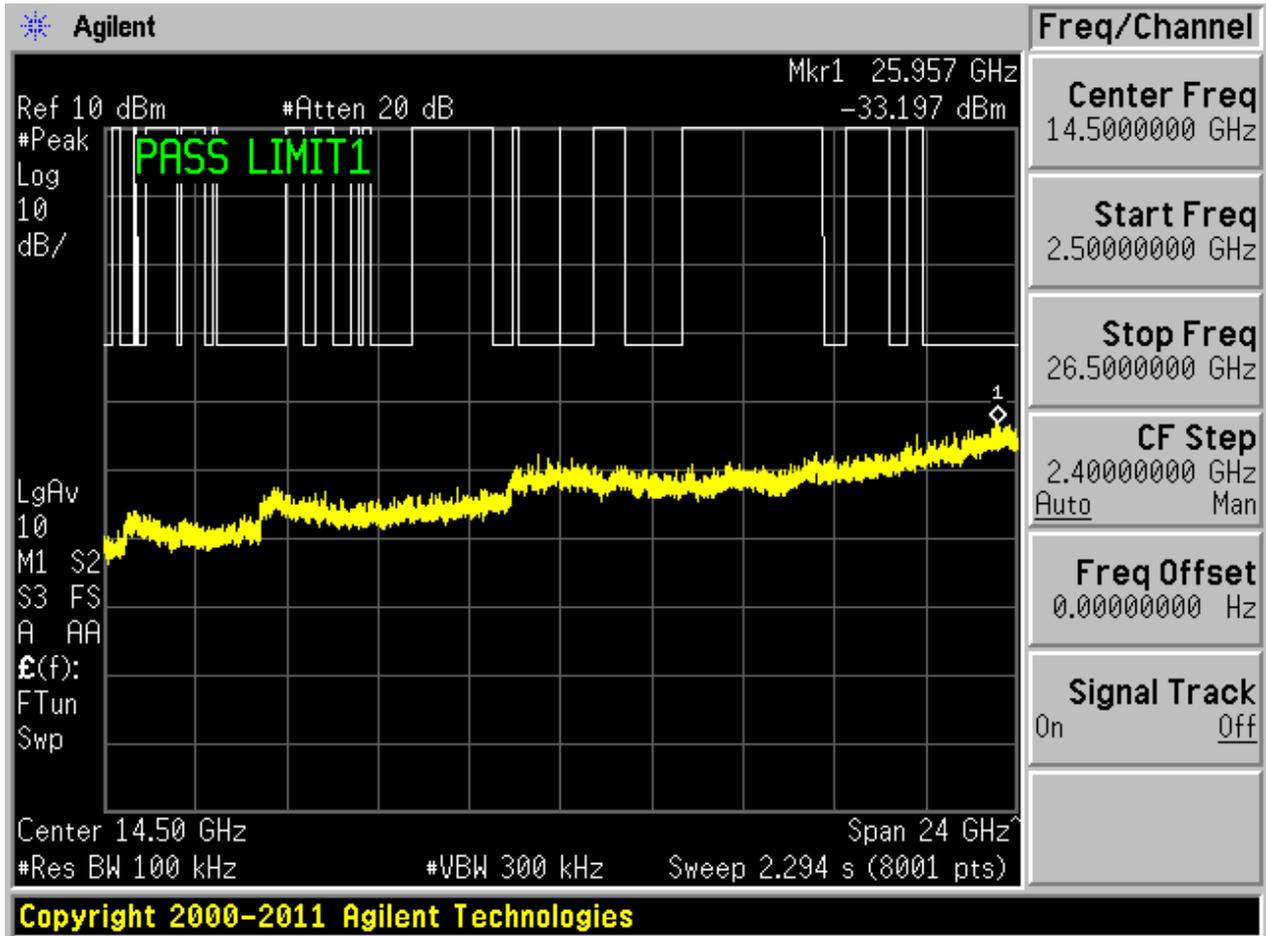






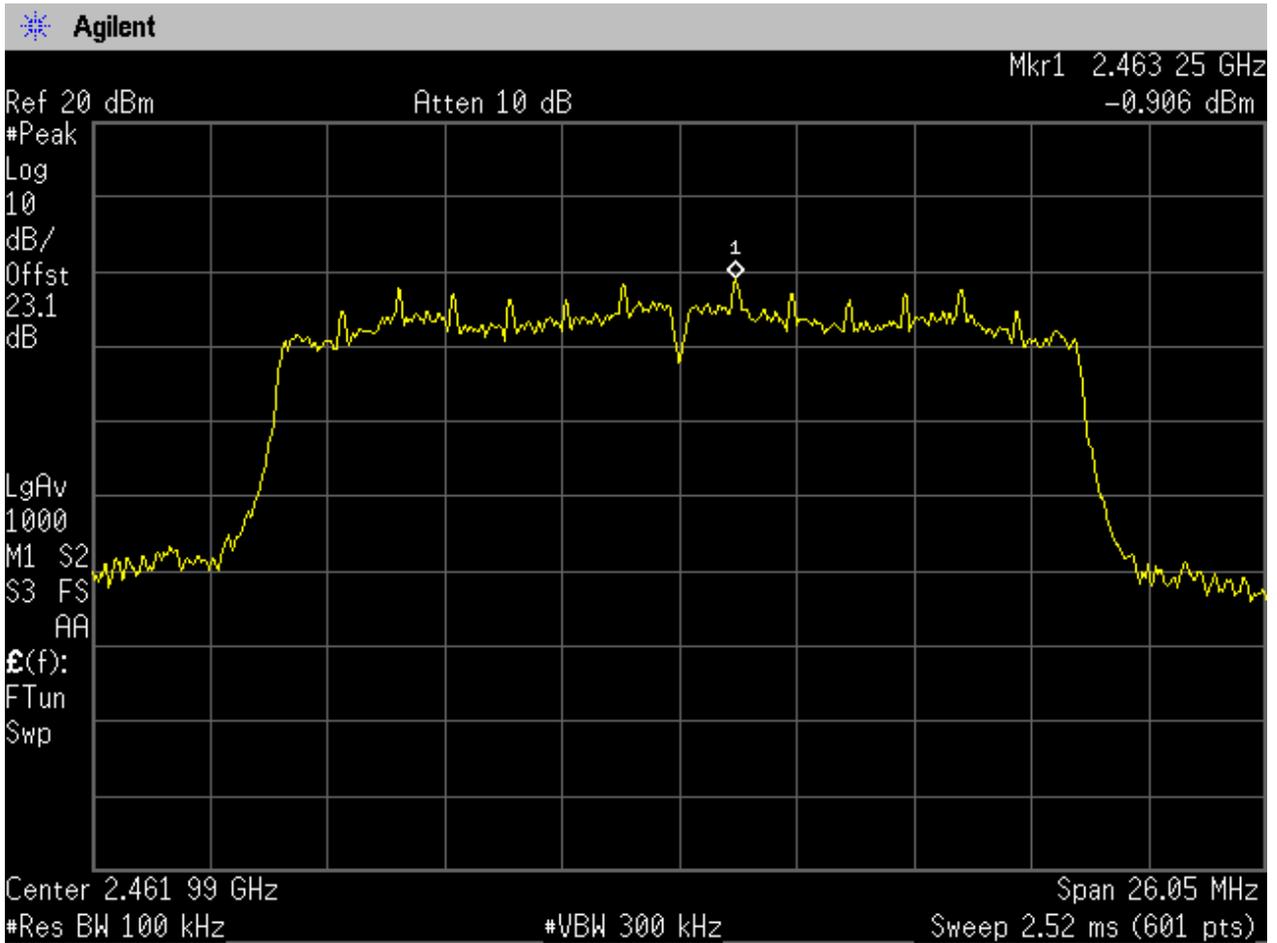




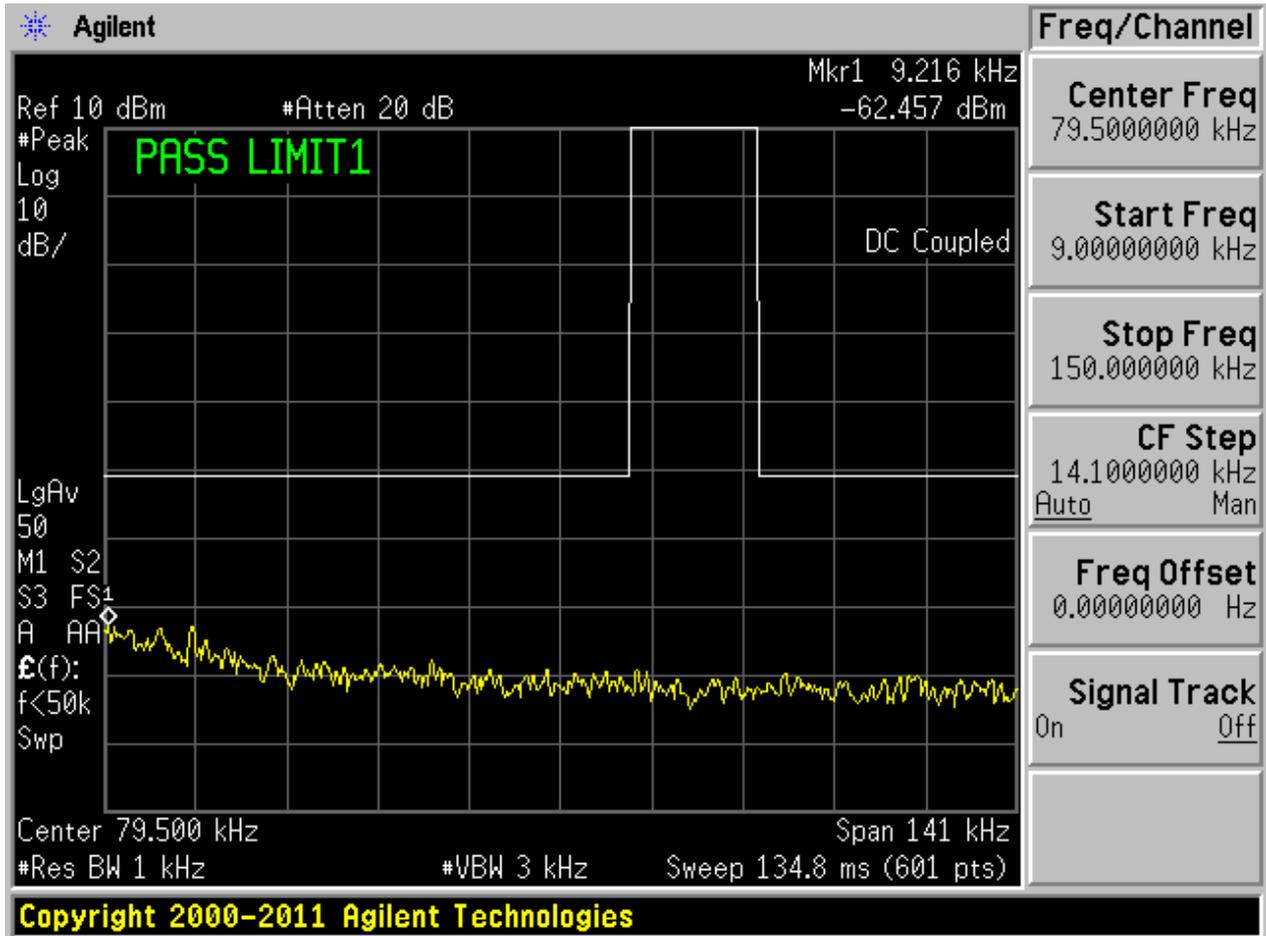


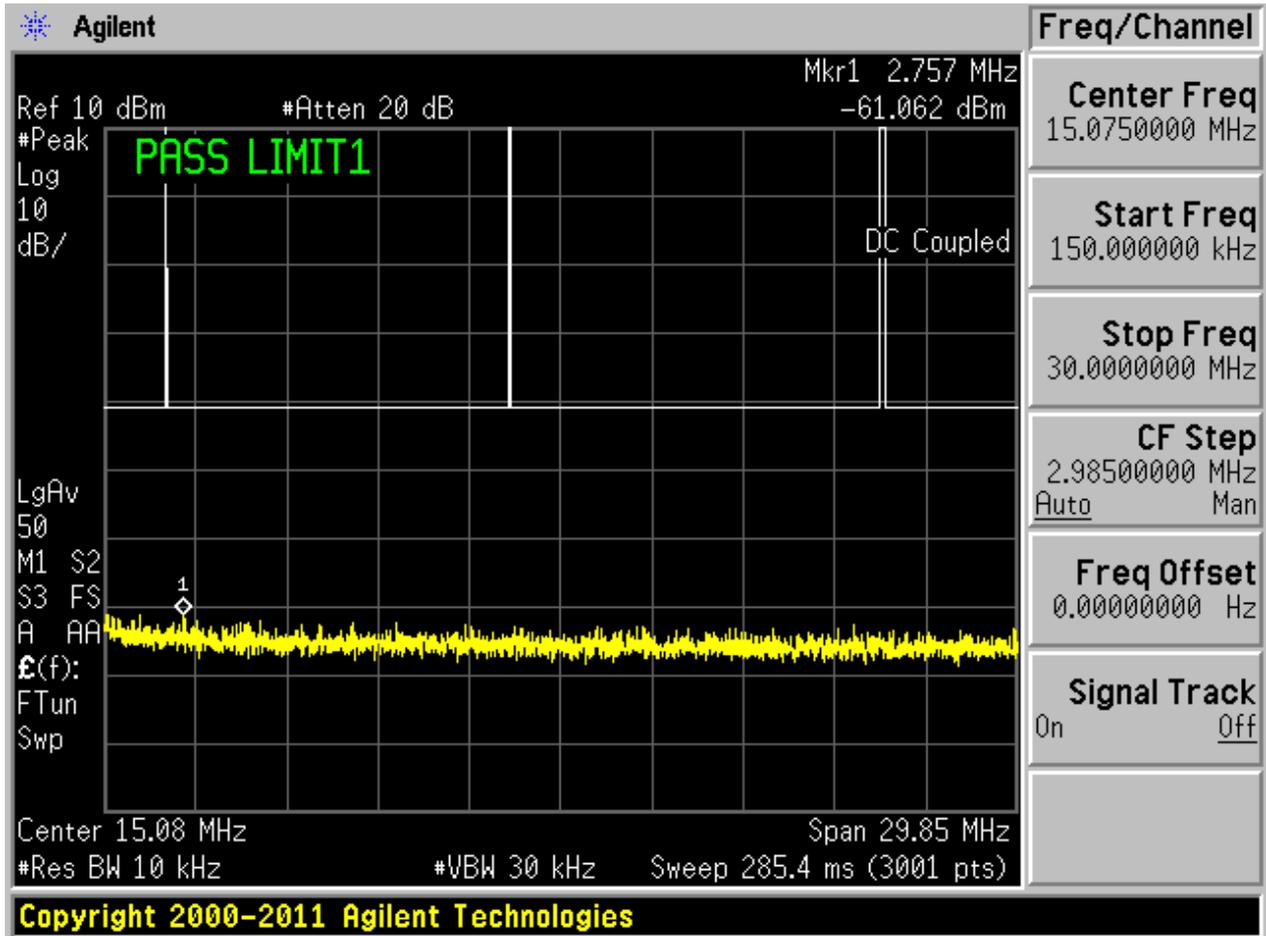
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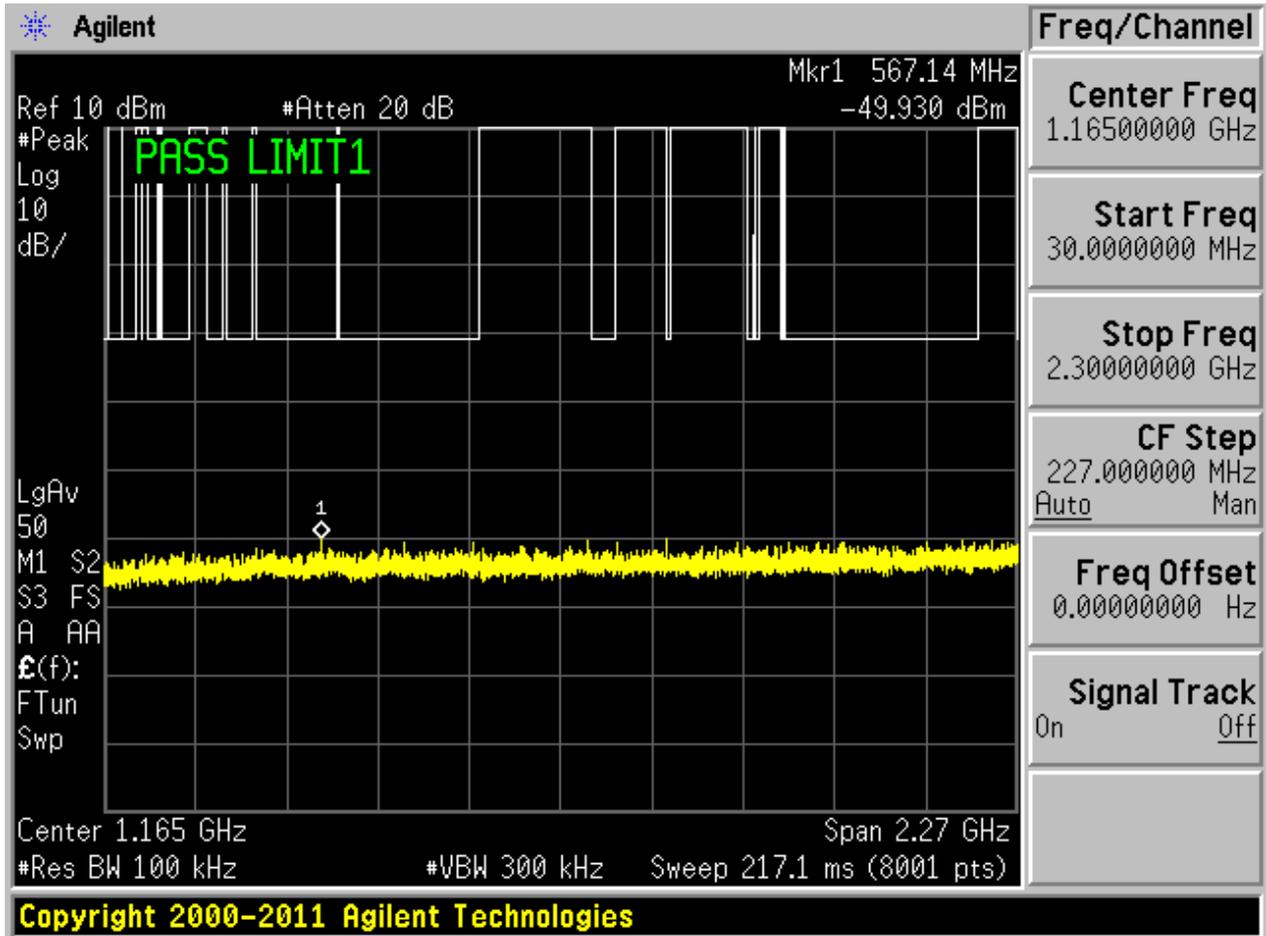
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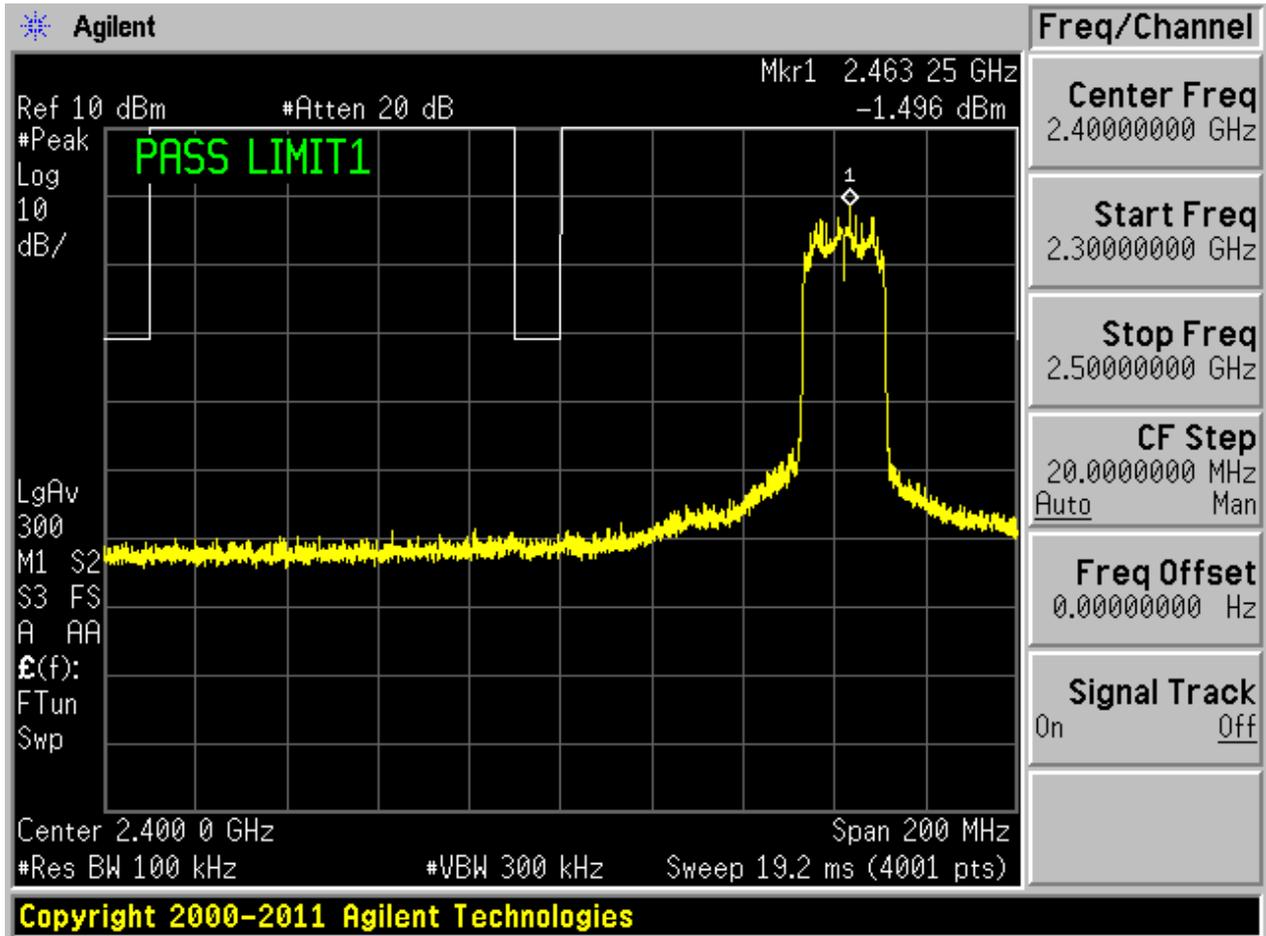


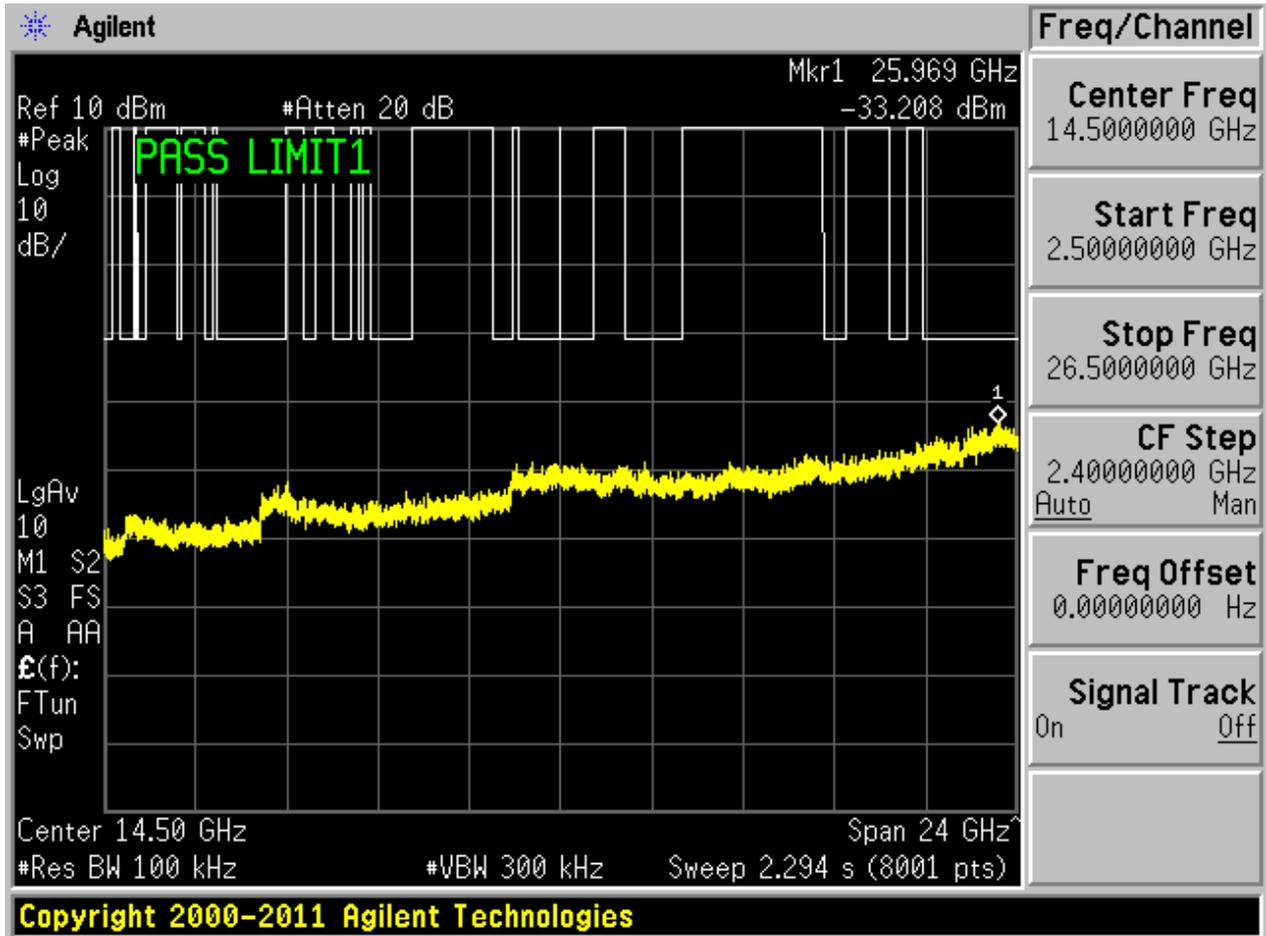
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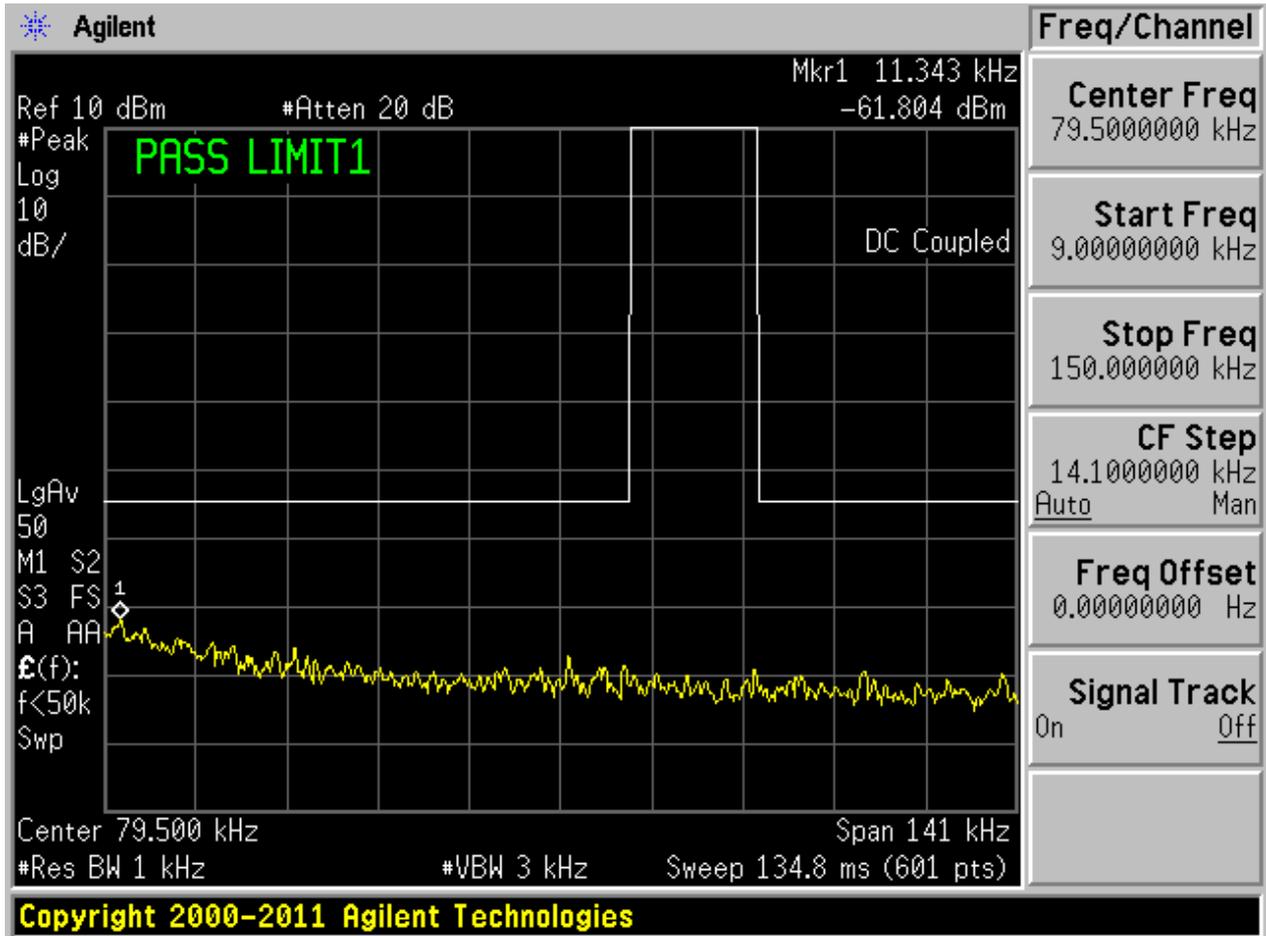


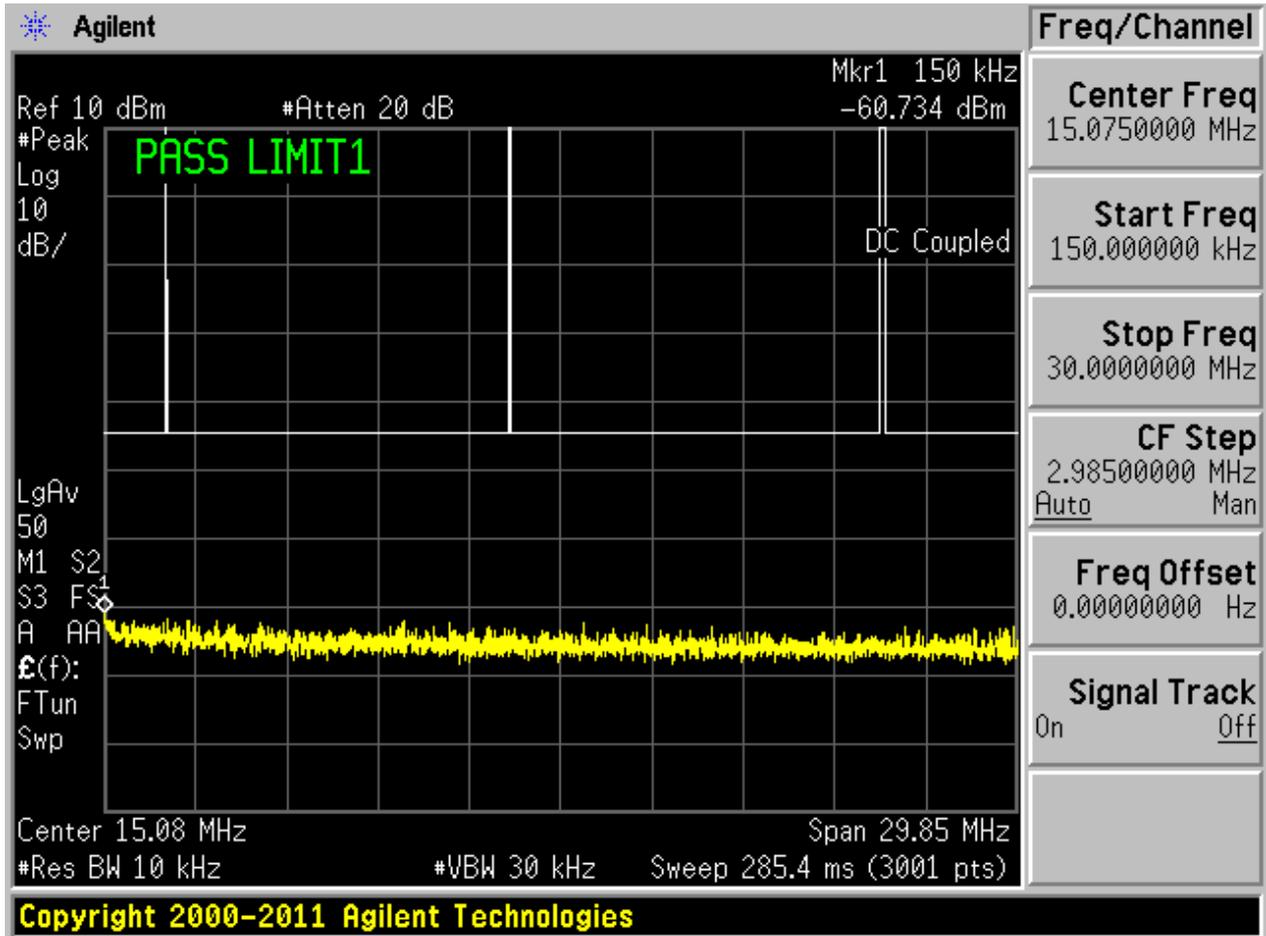
2.1911N20m/8\_B@1+2

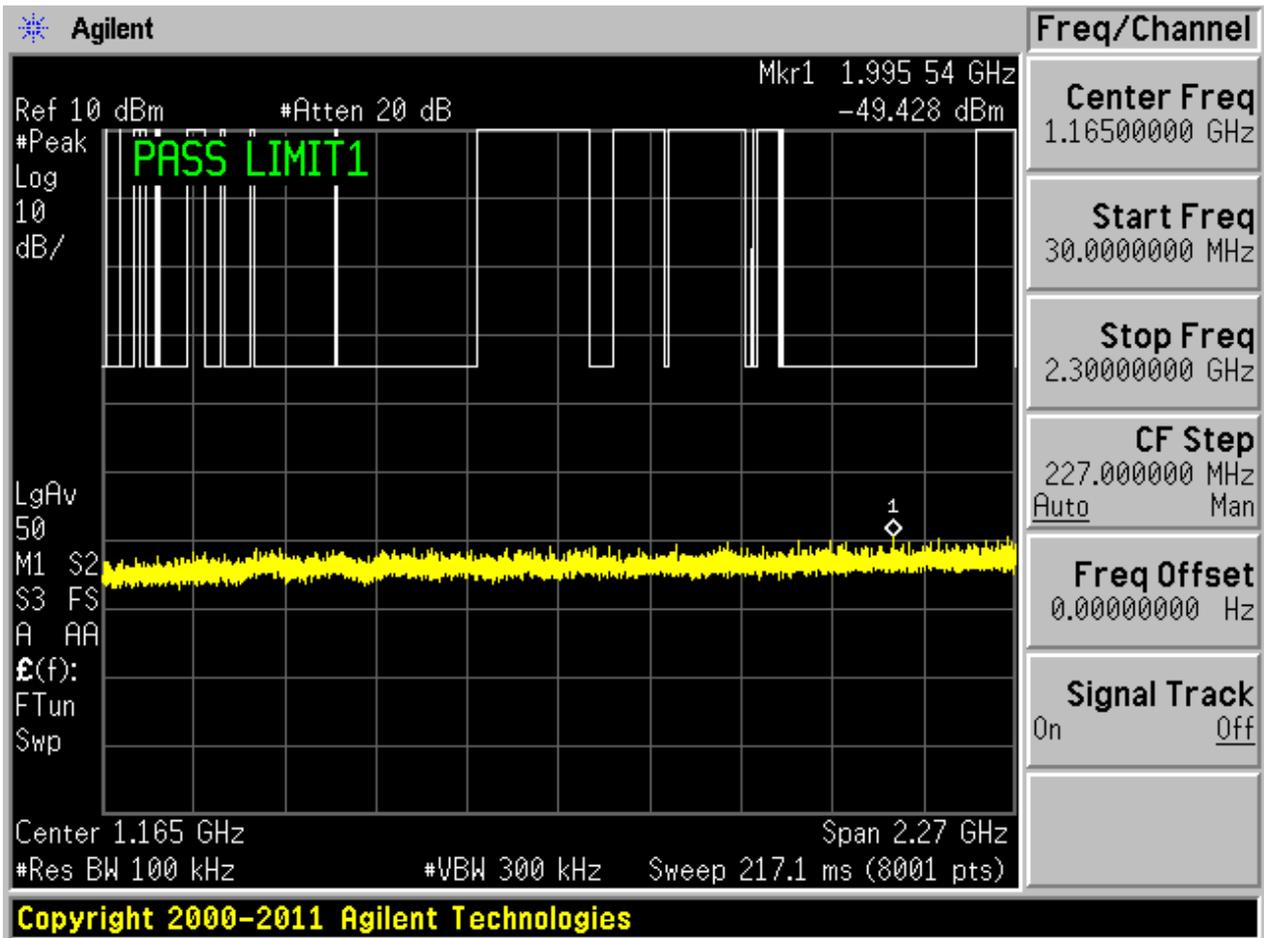
2.19.1 Ant 1

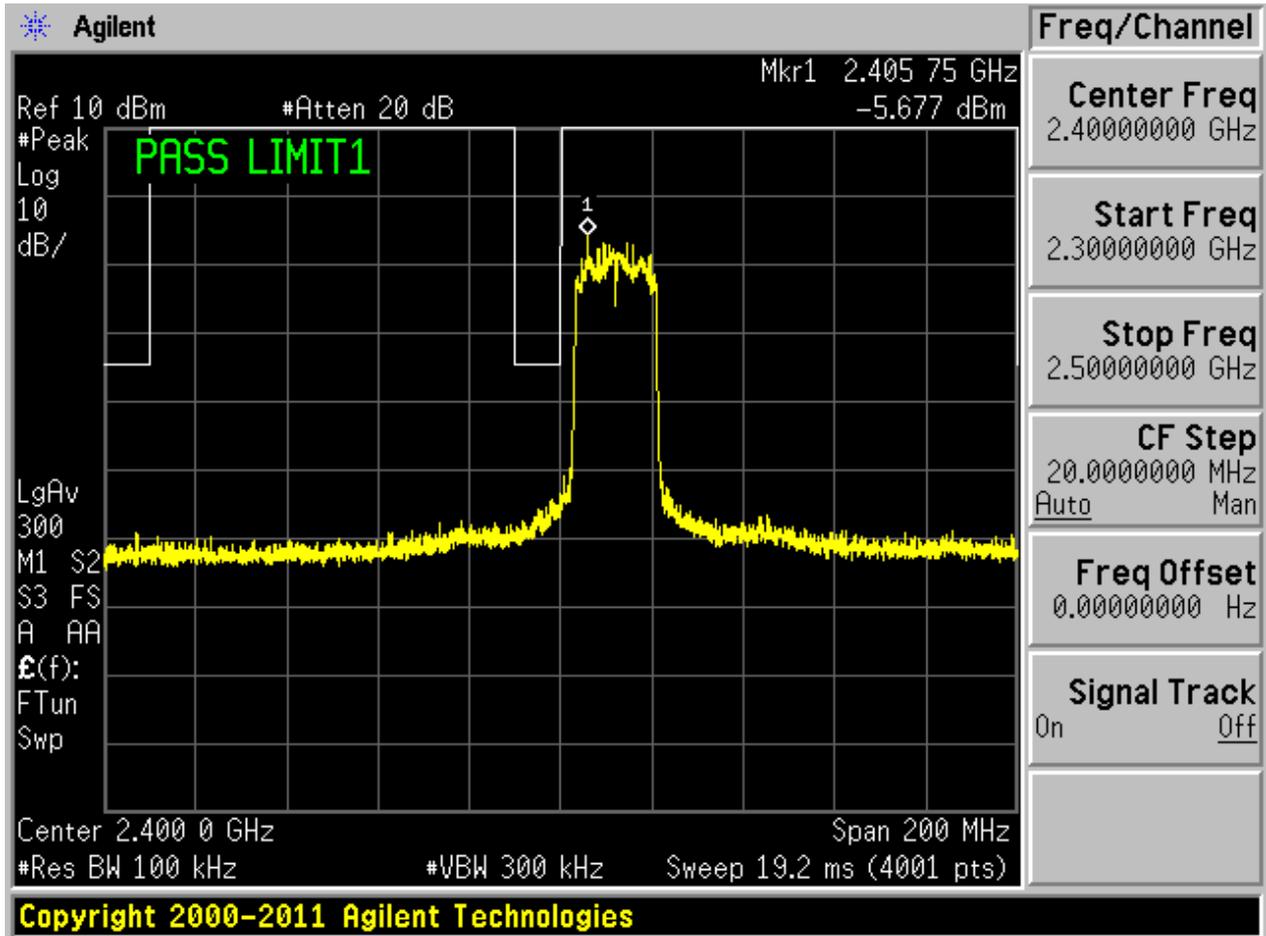
2.19.1.1 Pref

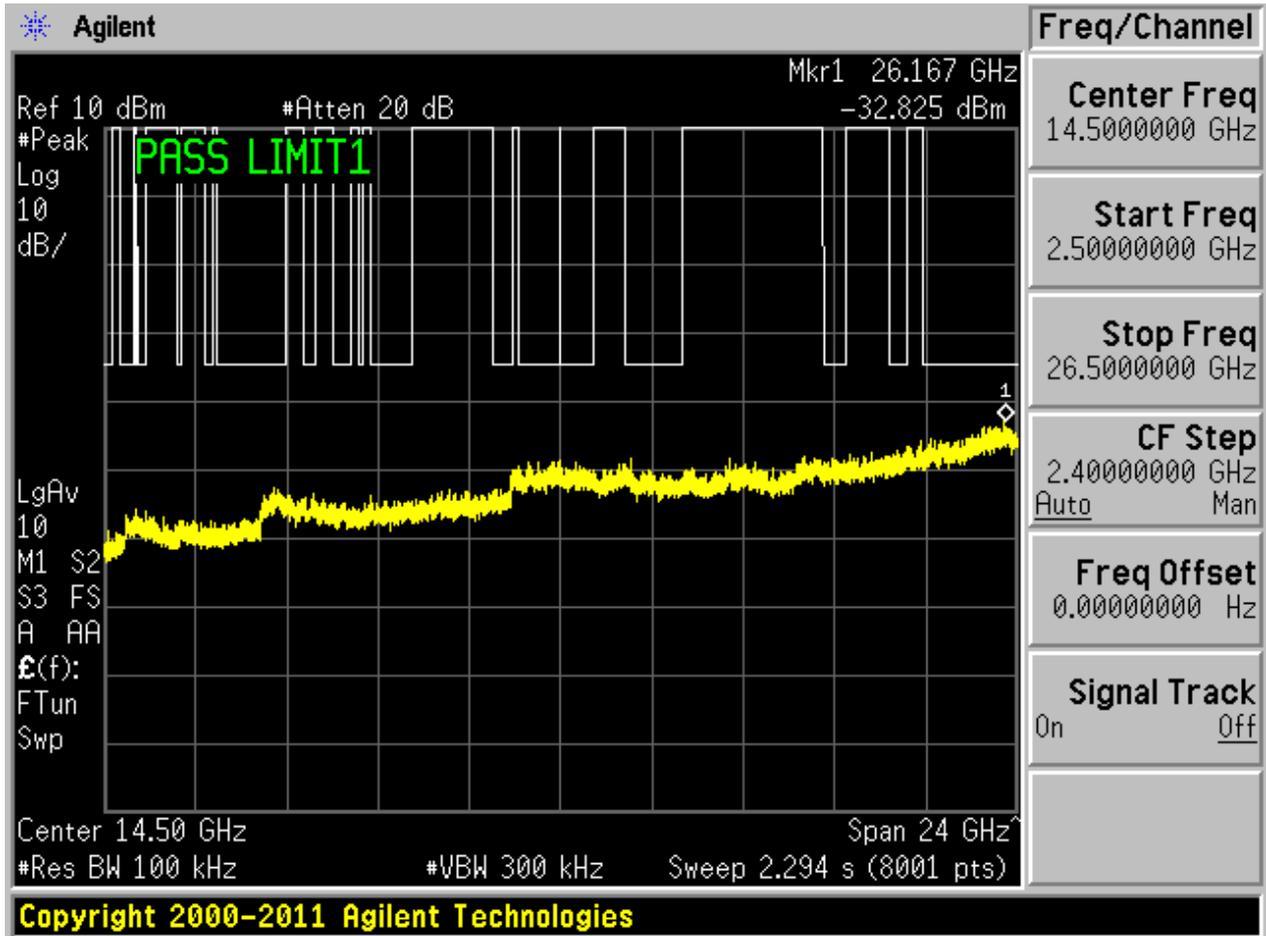








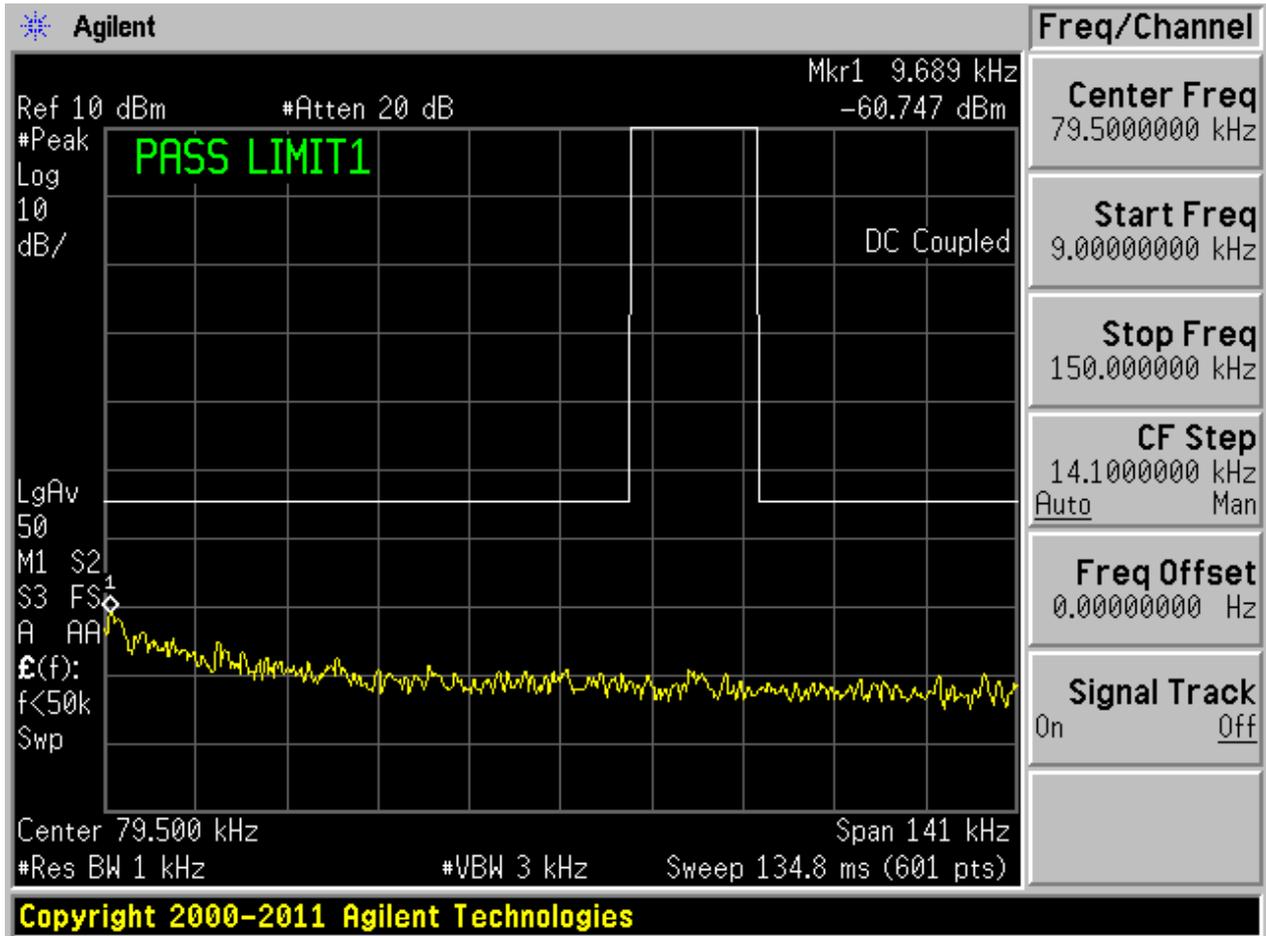


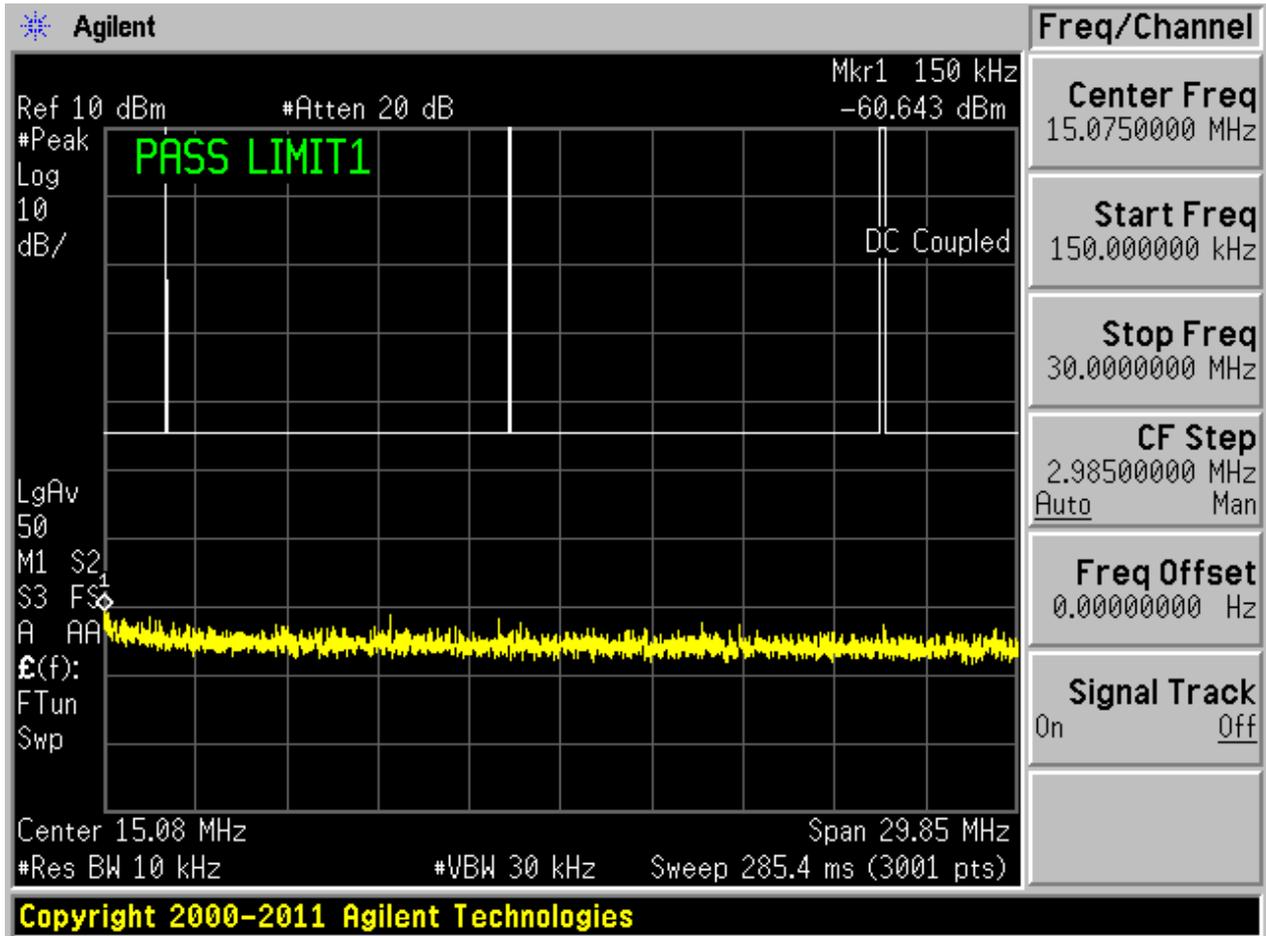


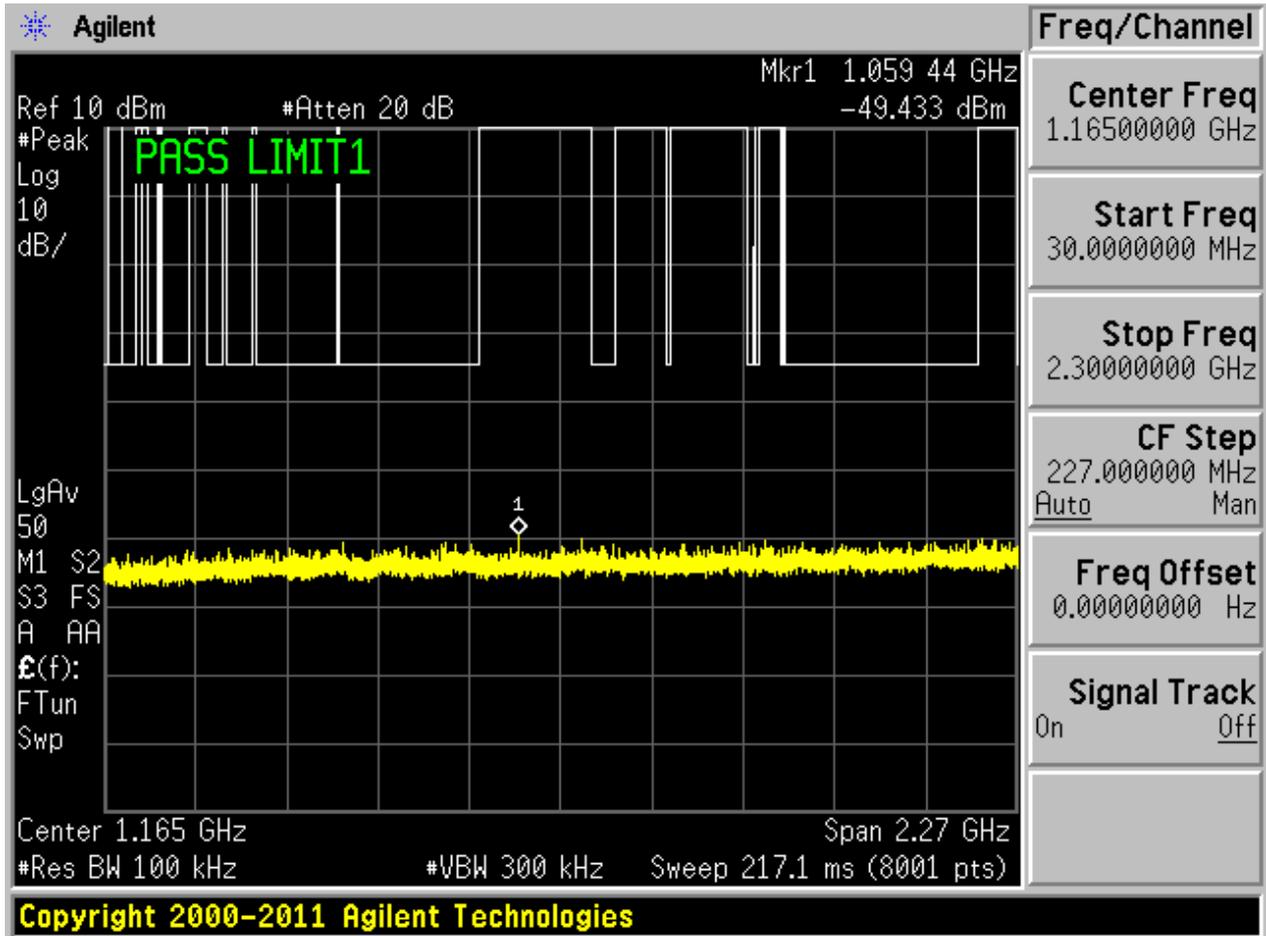
## 2.19.2 Ant 2

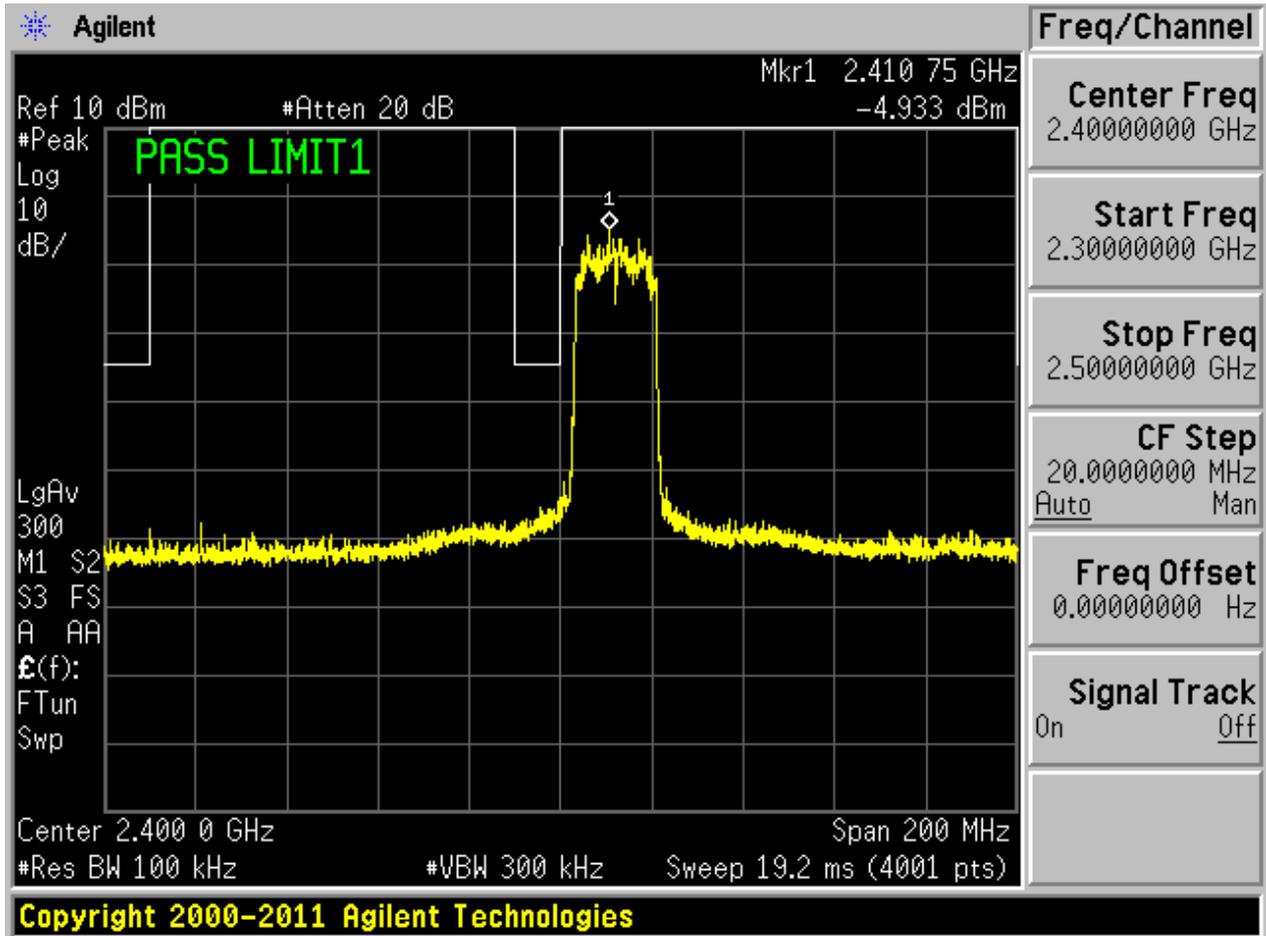
### 2.19.2.1 Pref

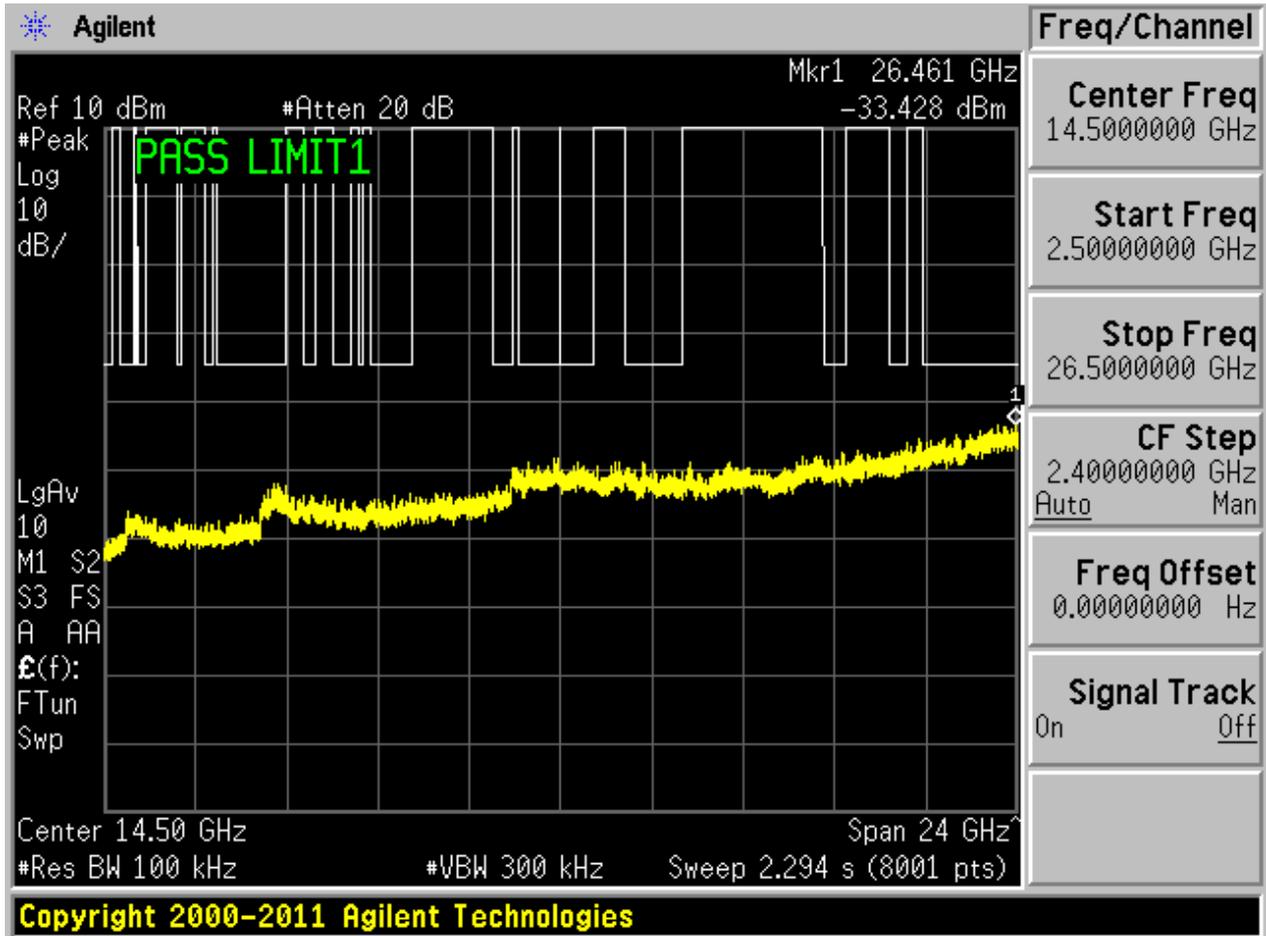








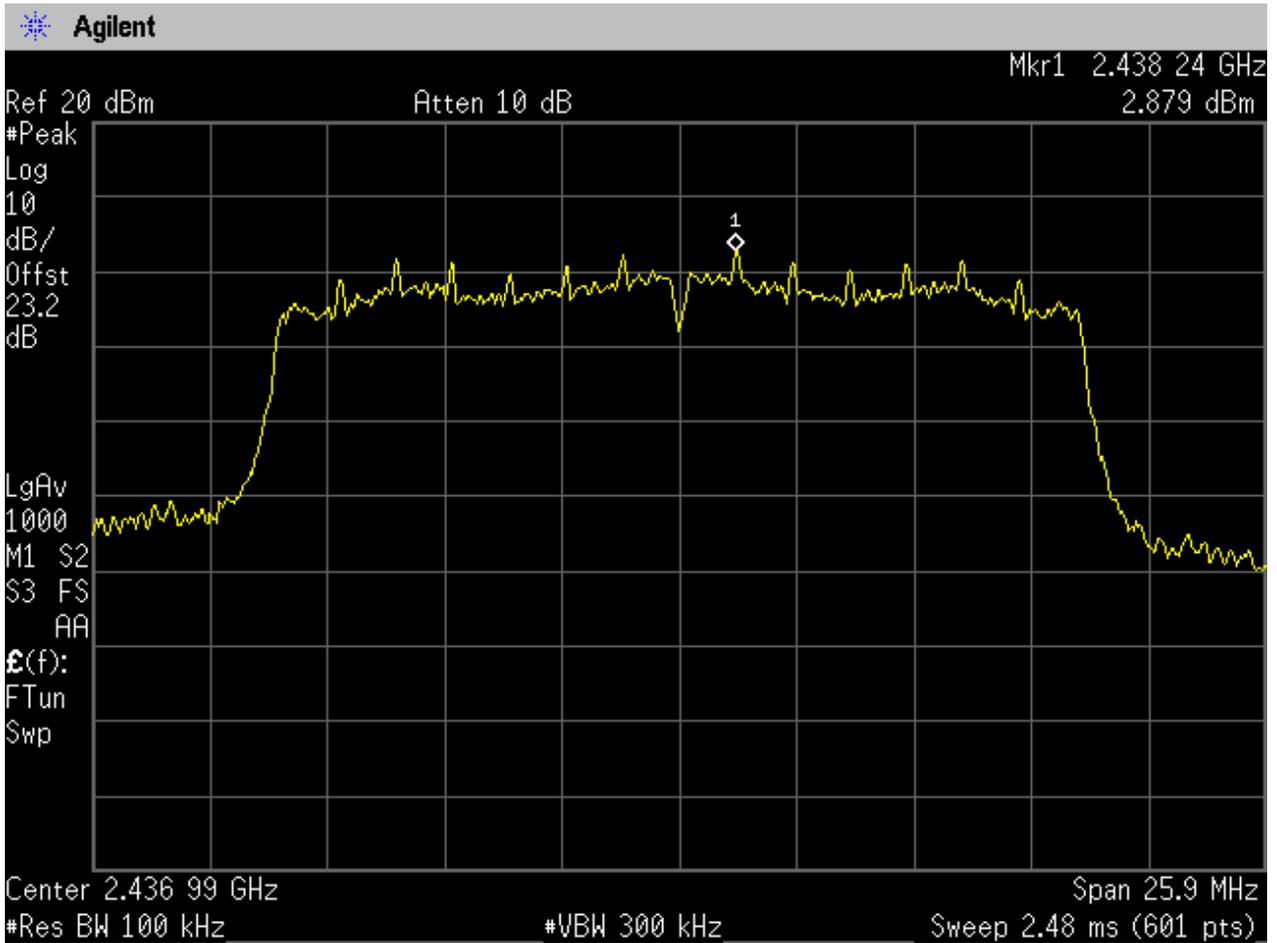




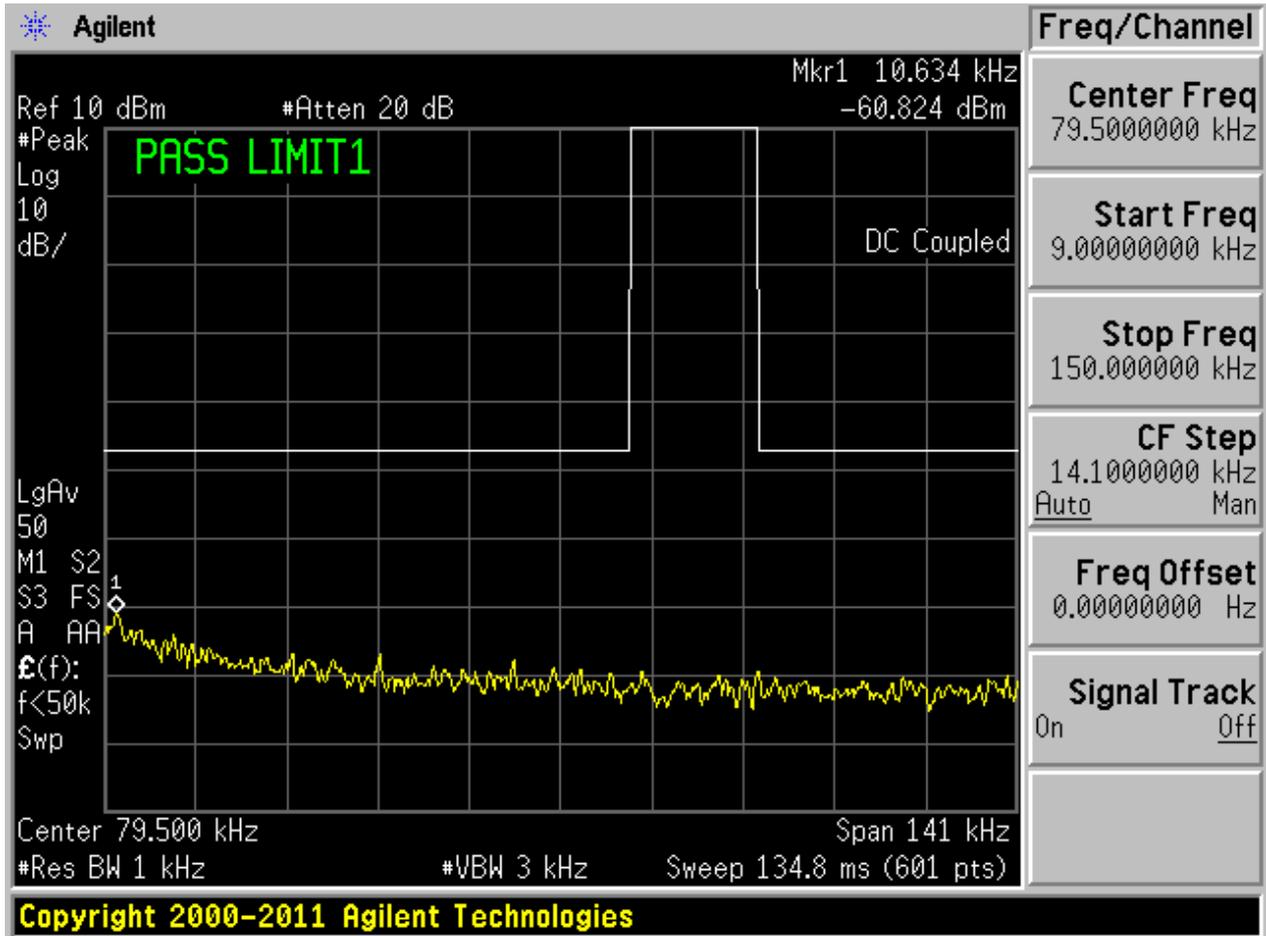
2.2011N20m/8\_M@1+2

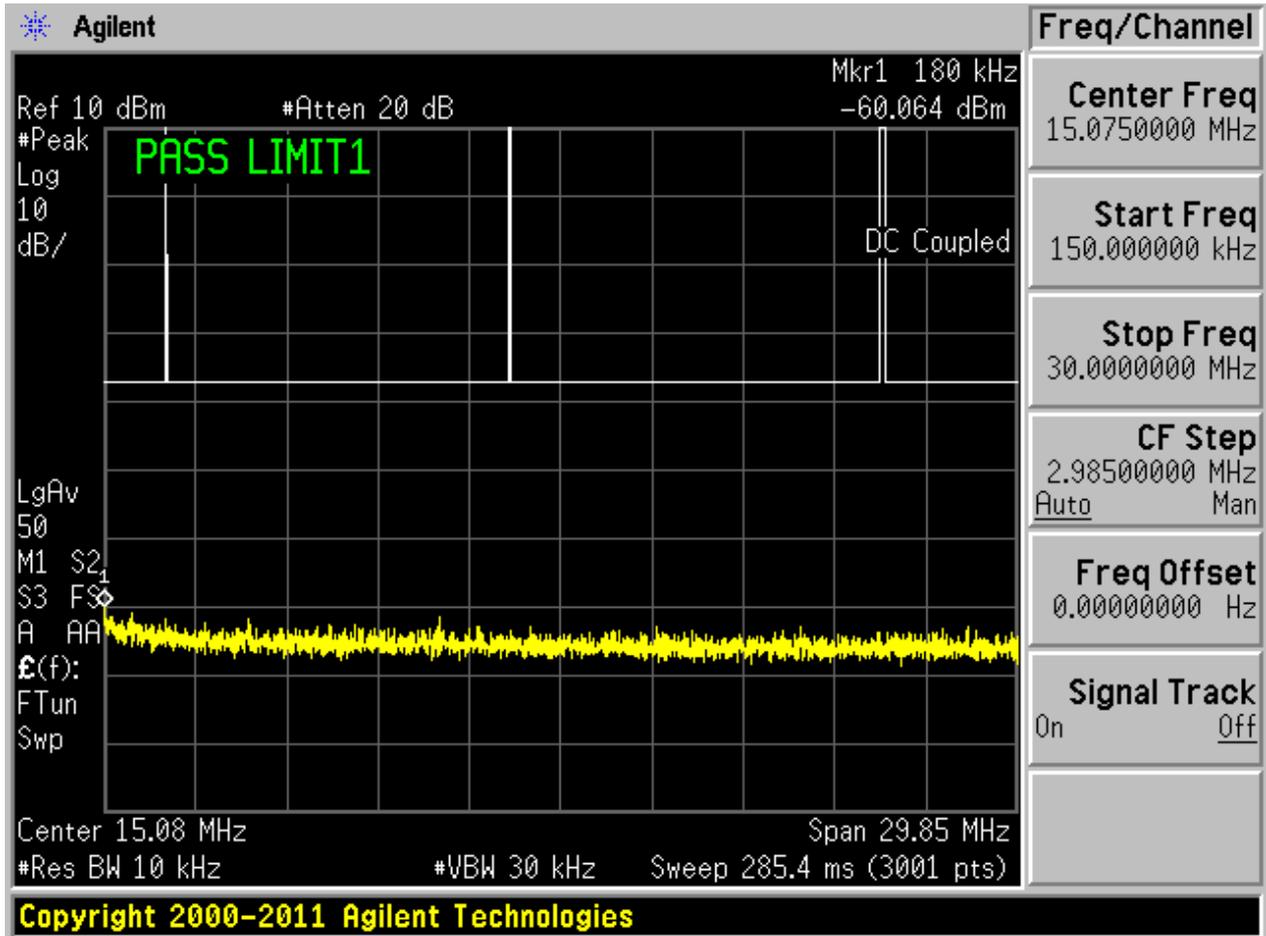
2.20.1 Ant 1

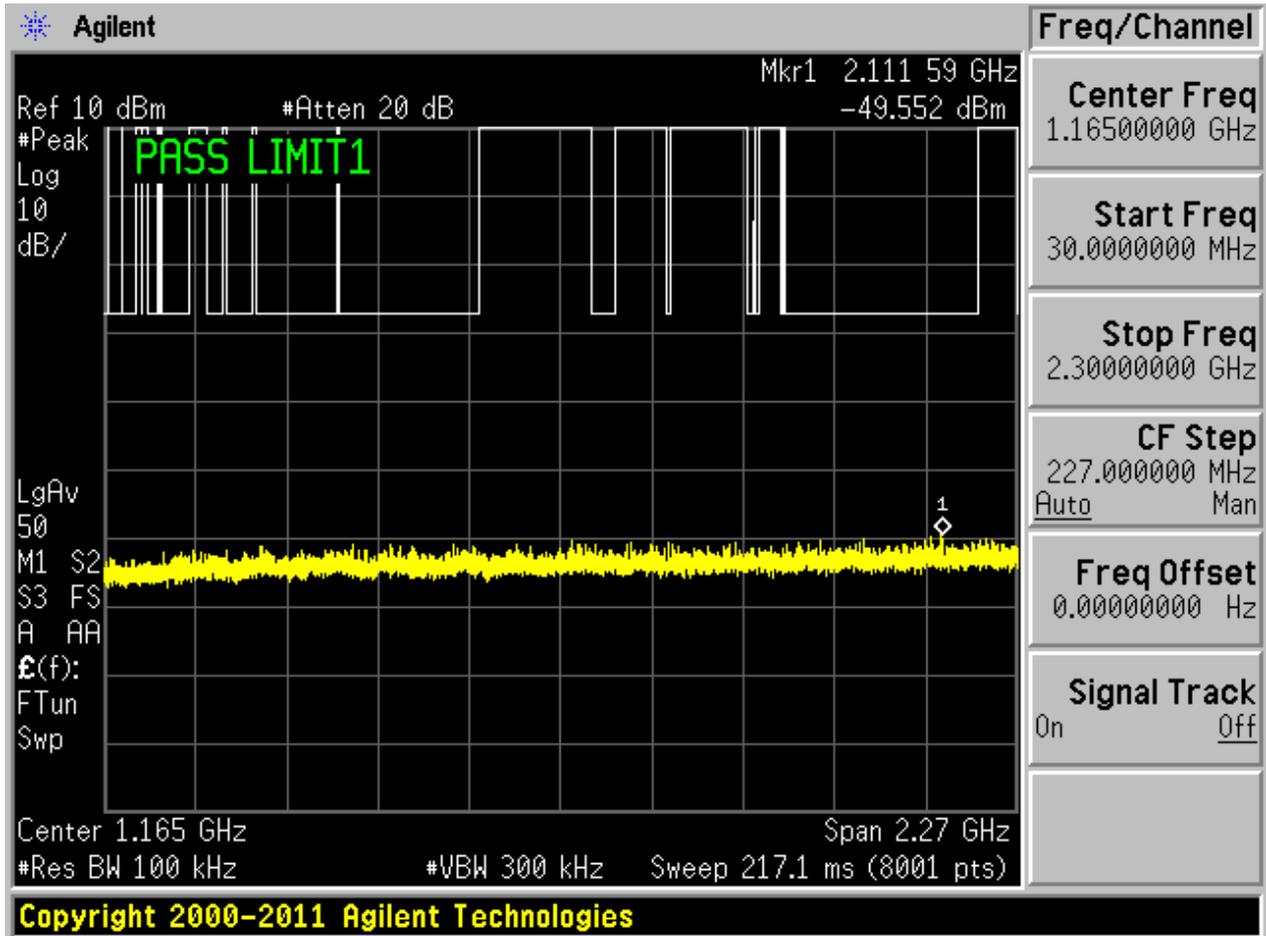
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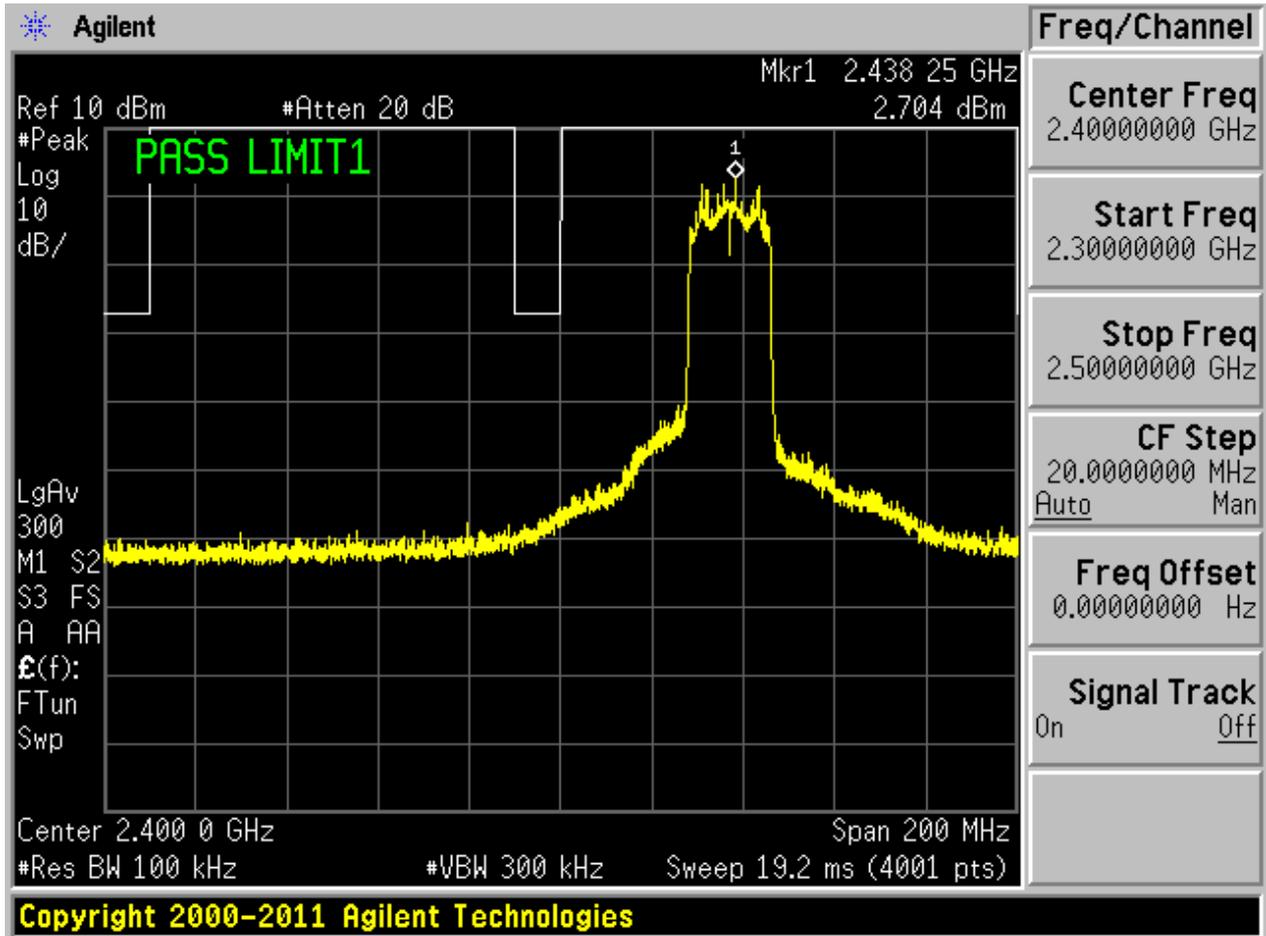


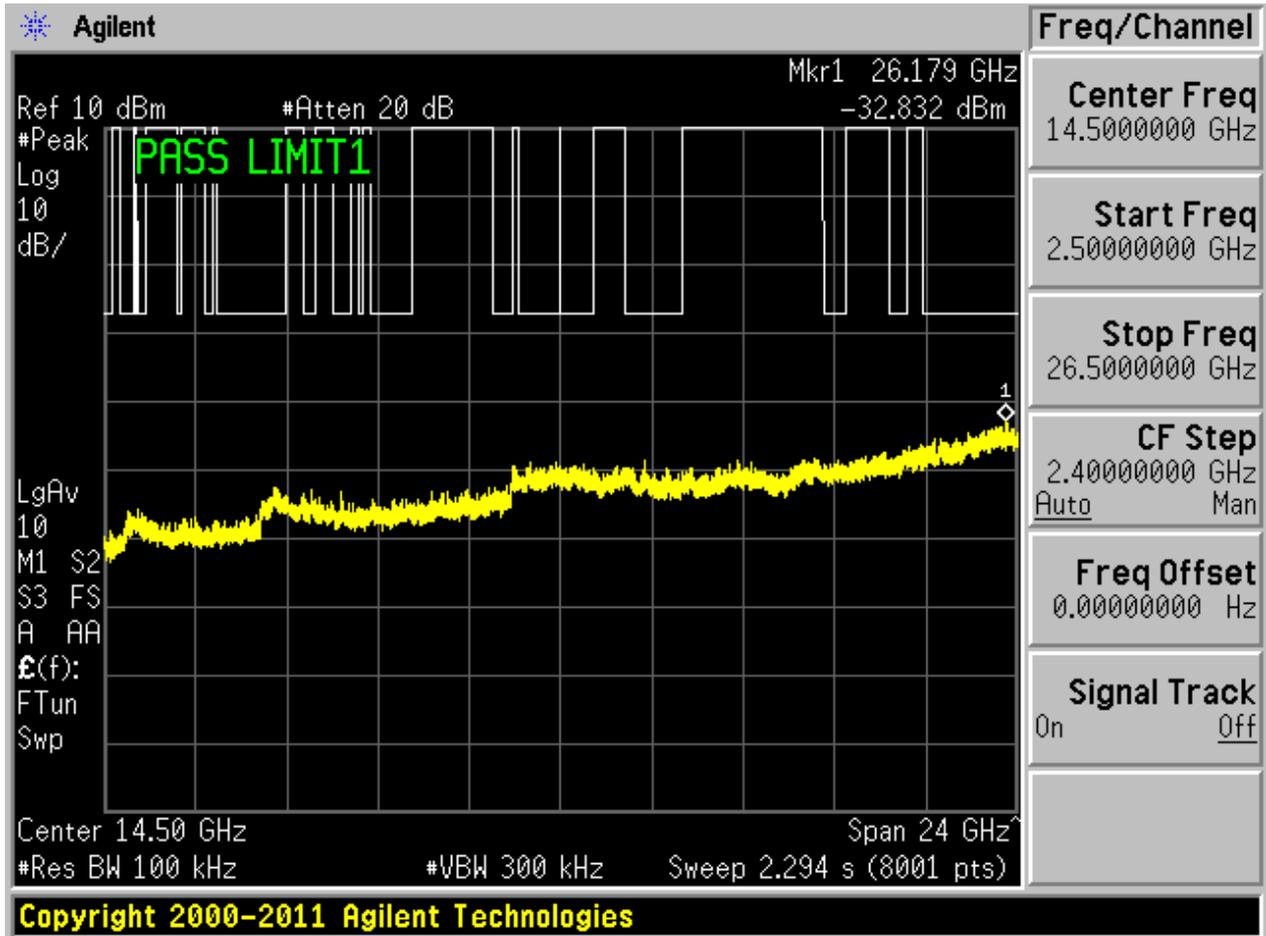
### 2.20.1.2 P<sub>uw</sub>





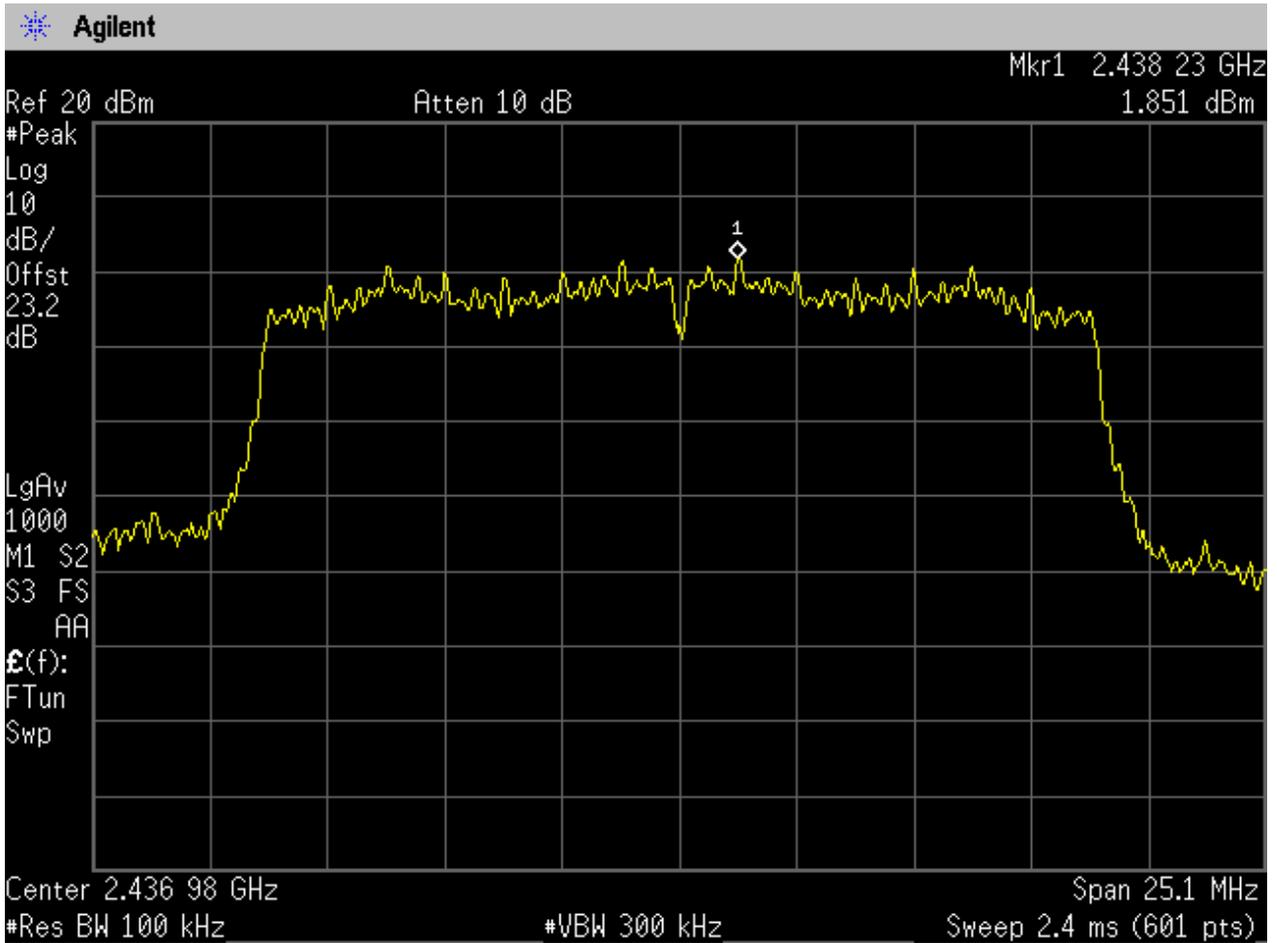




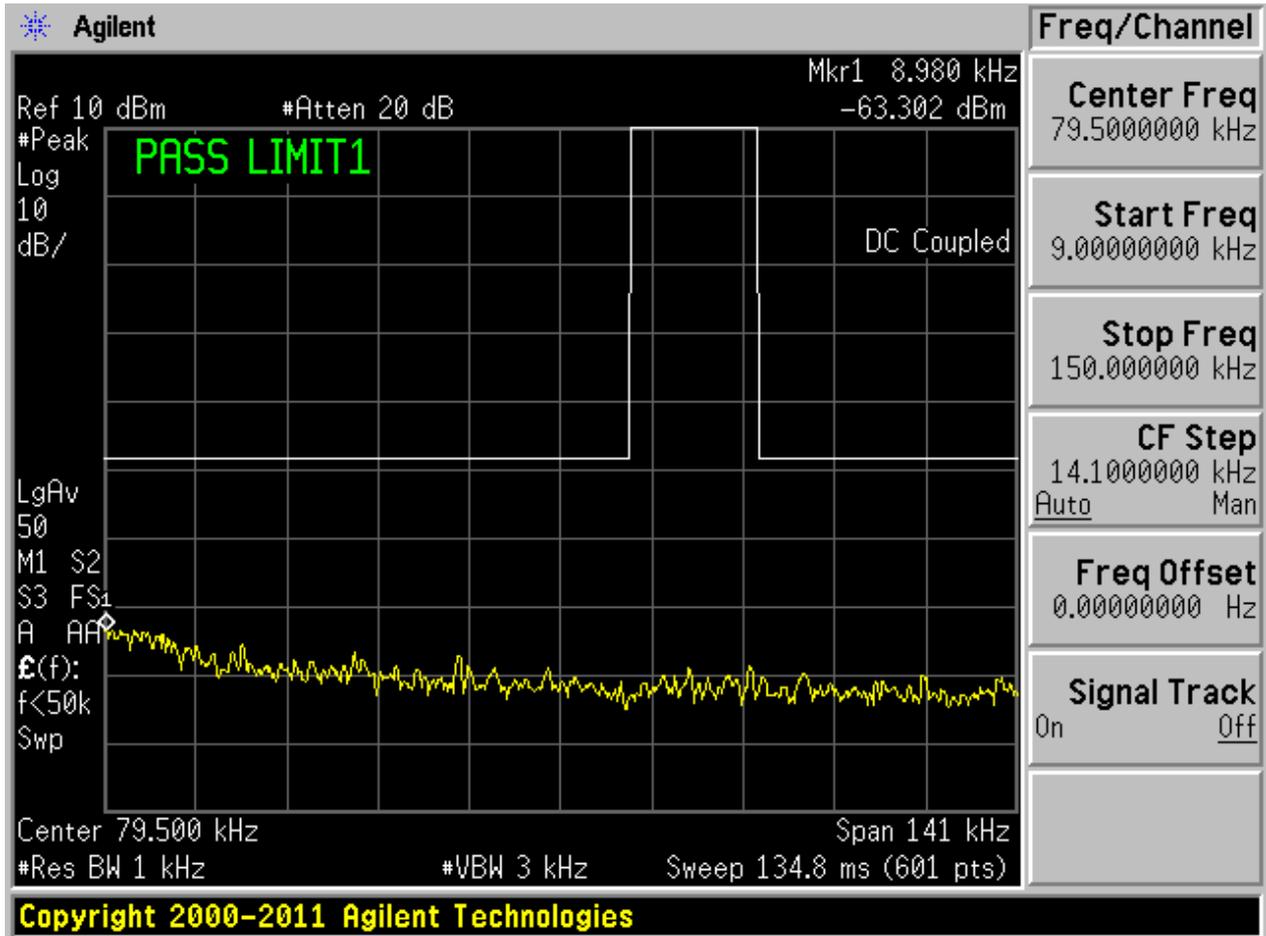


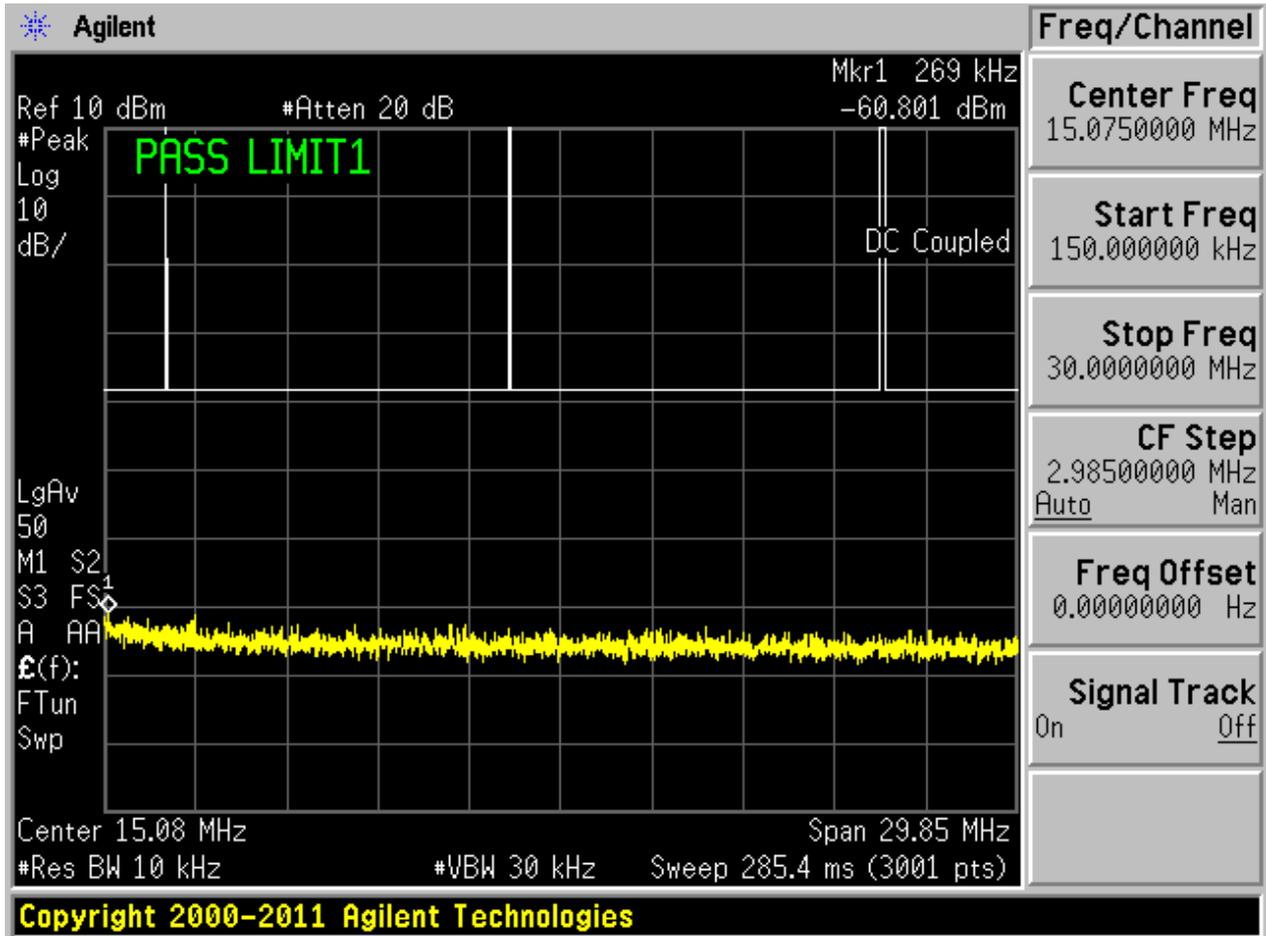
2.20.2 Ant 2

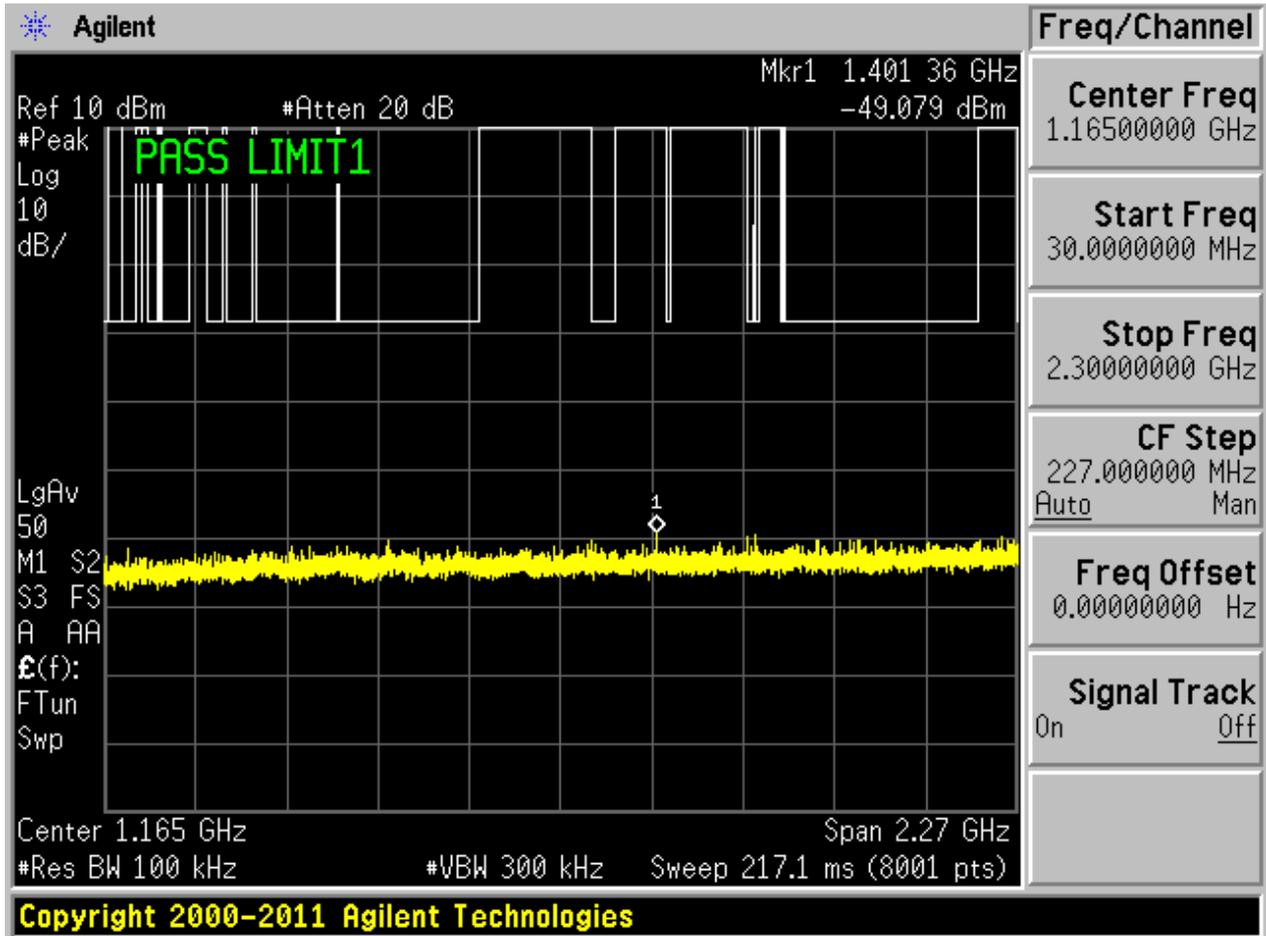
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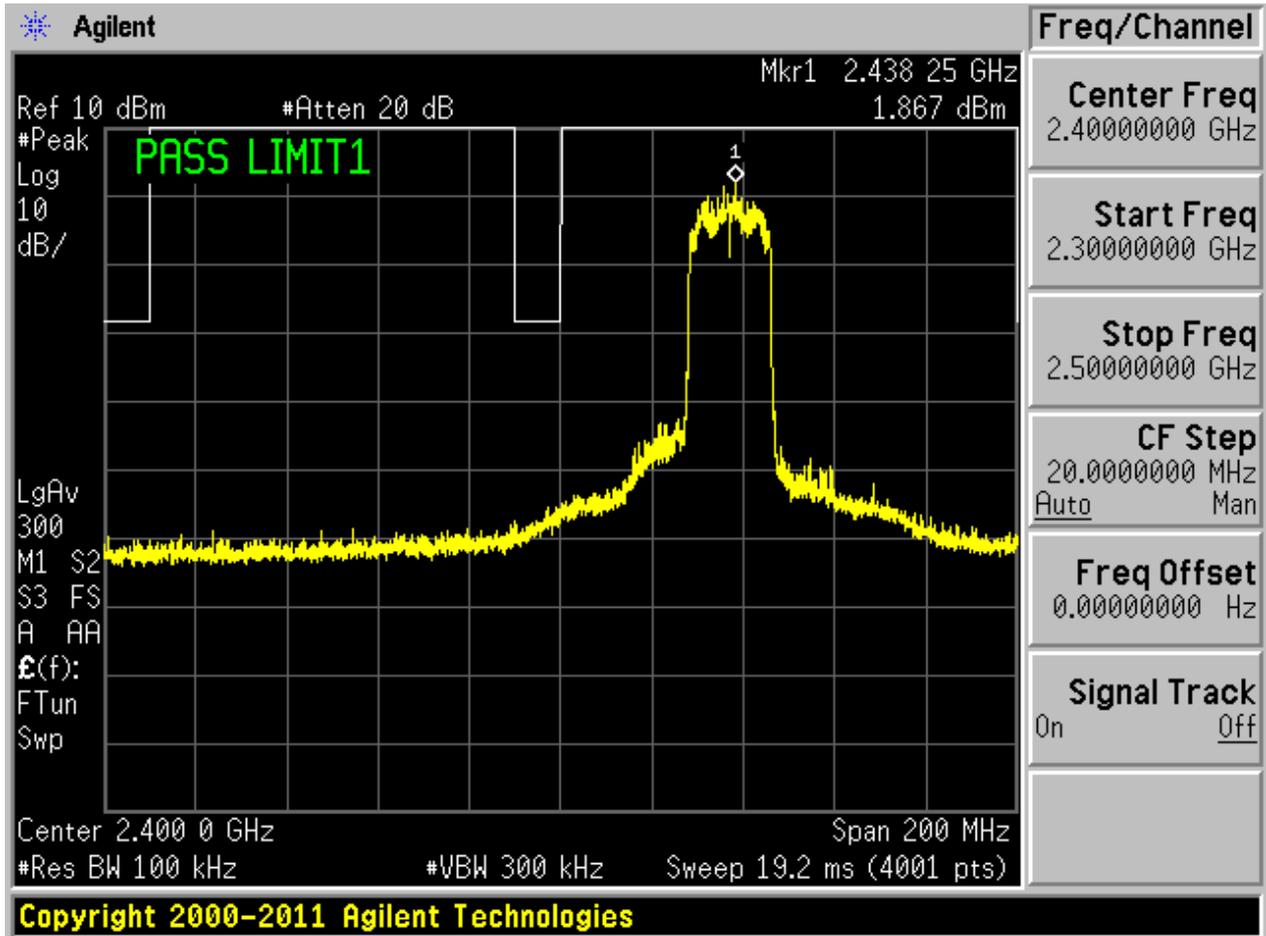


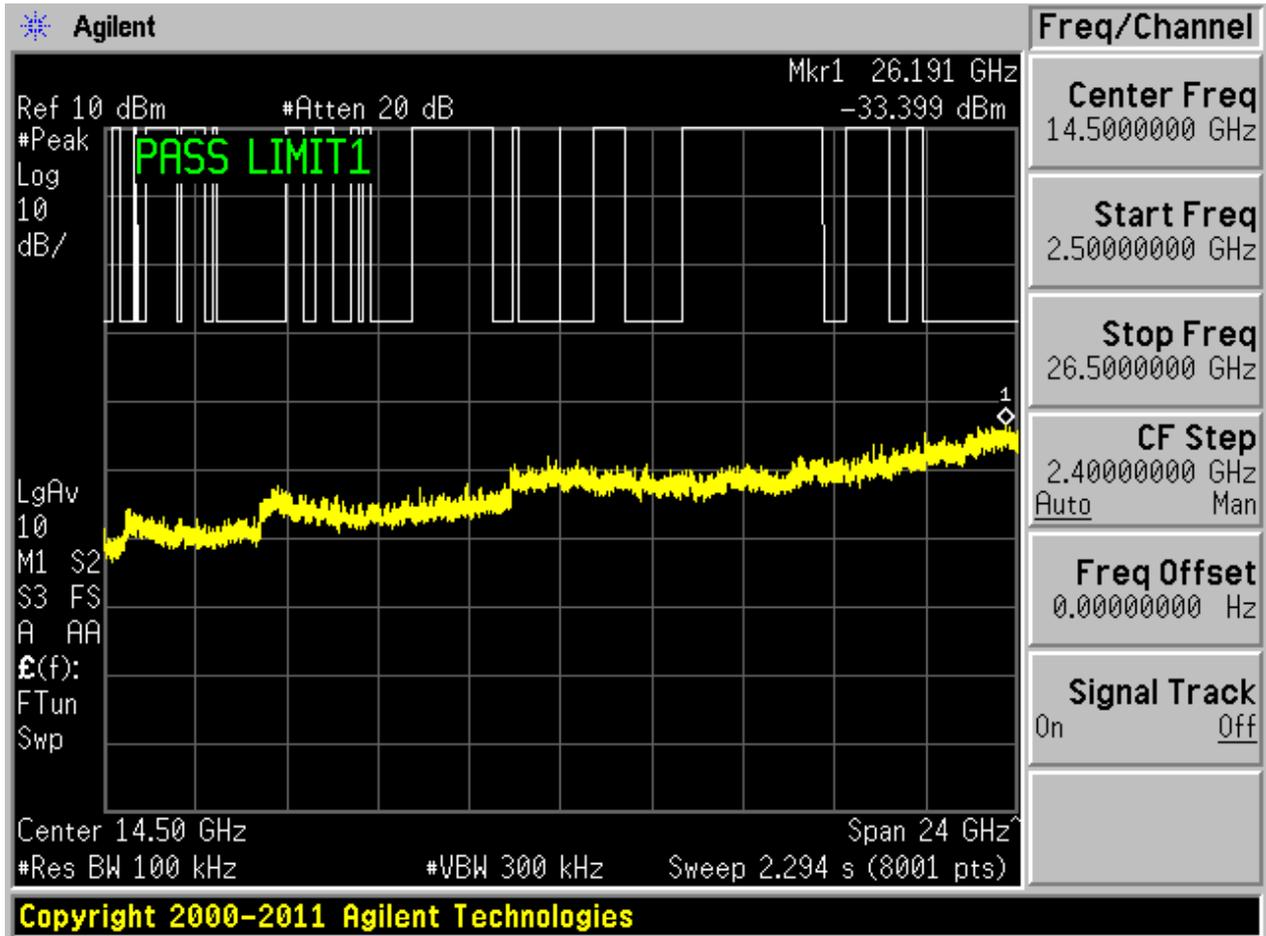
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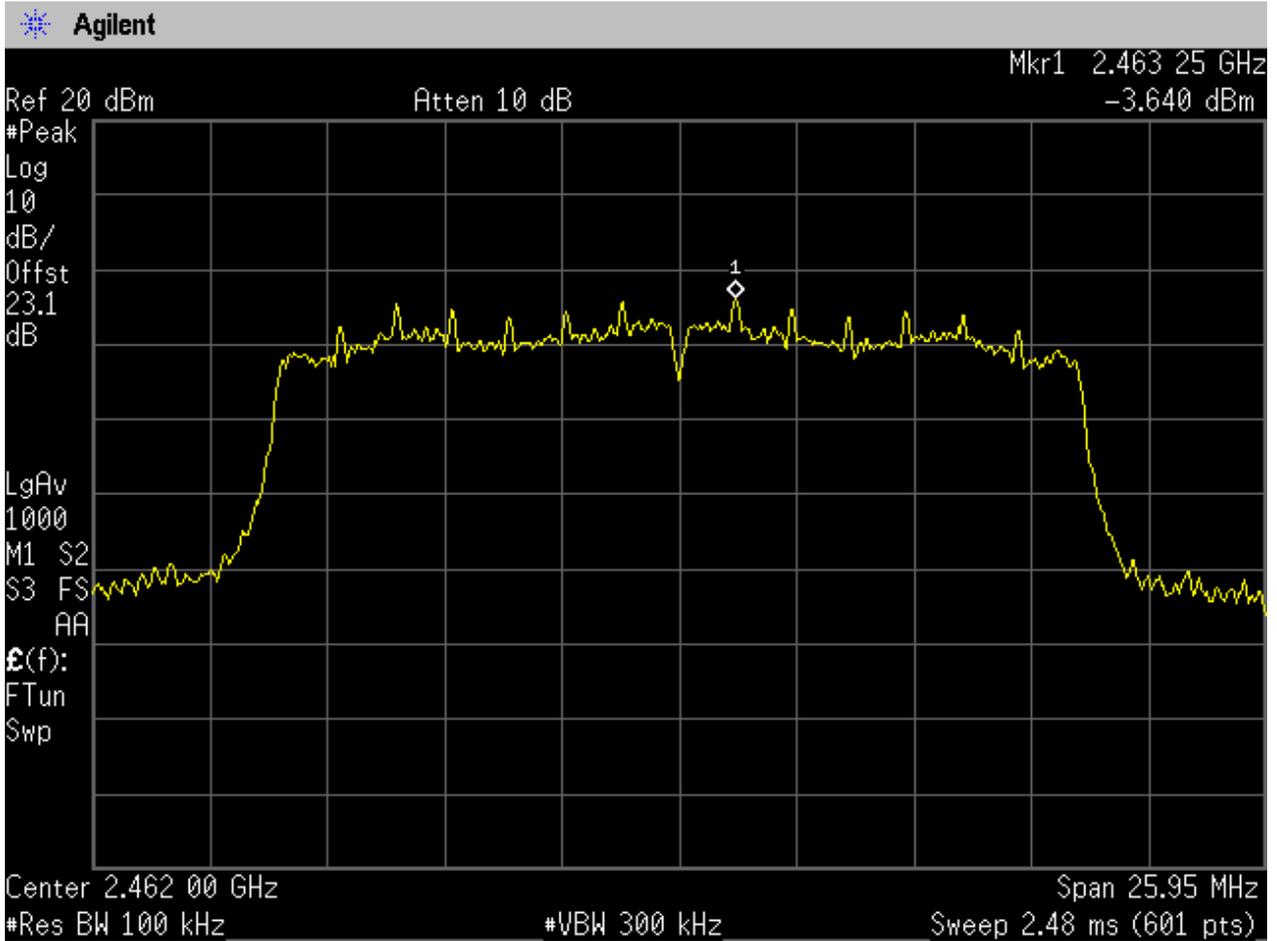




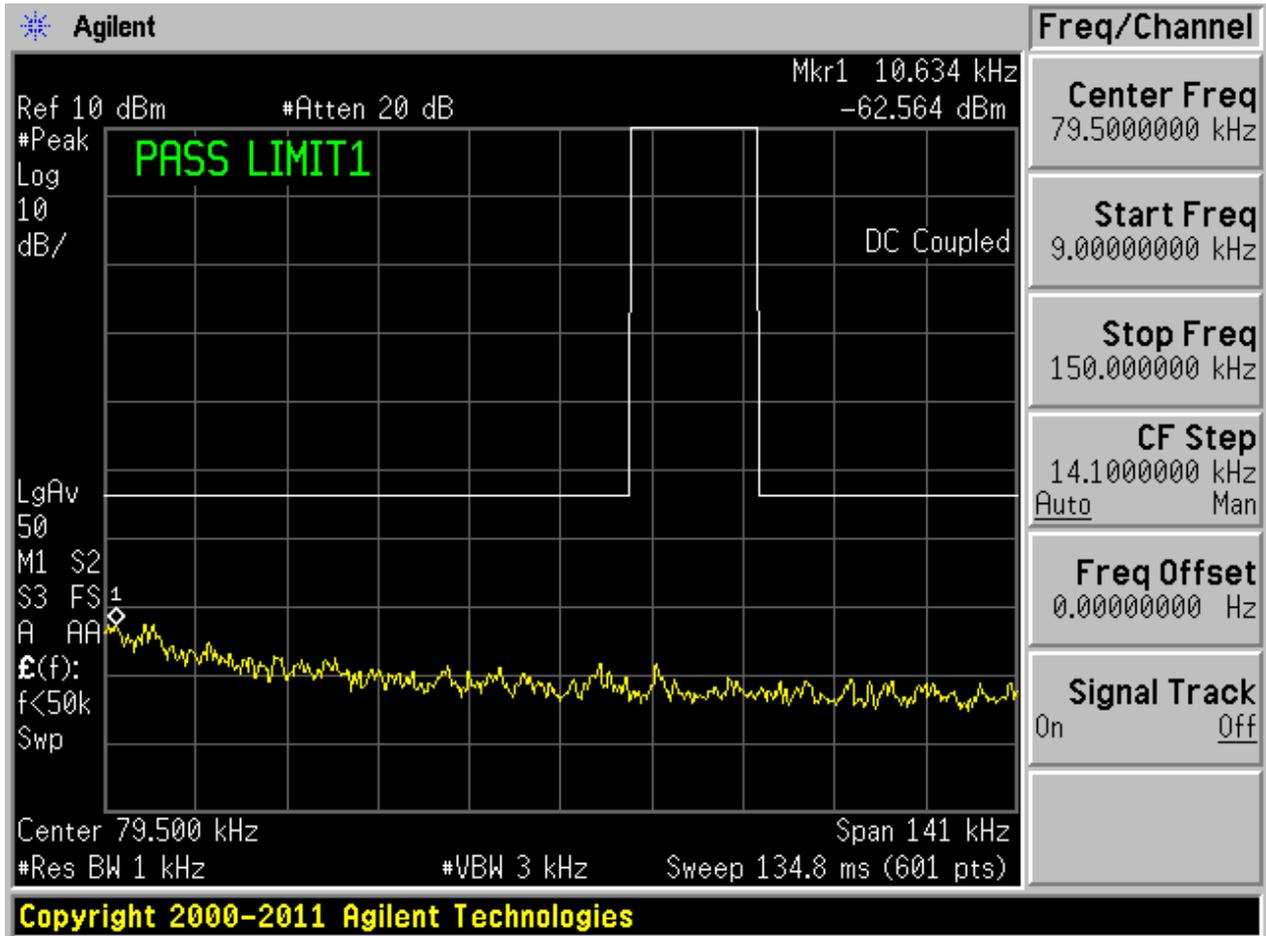
2.2111N20m/8\_T@1+2

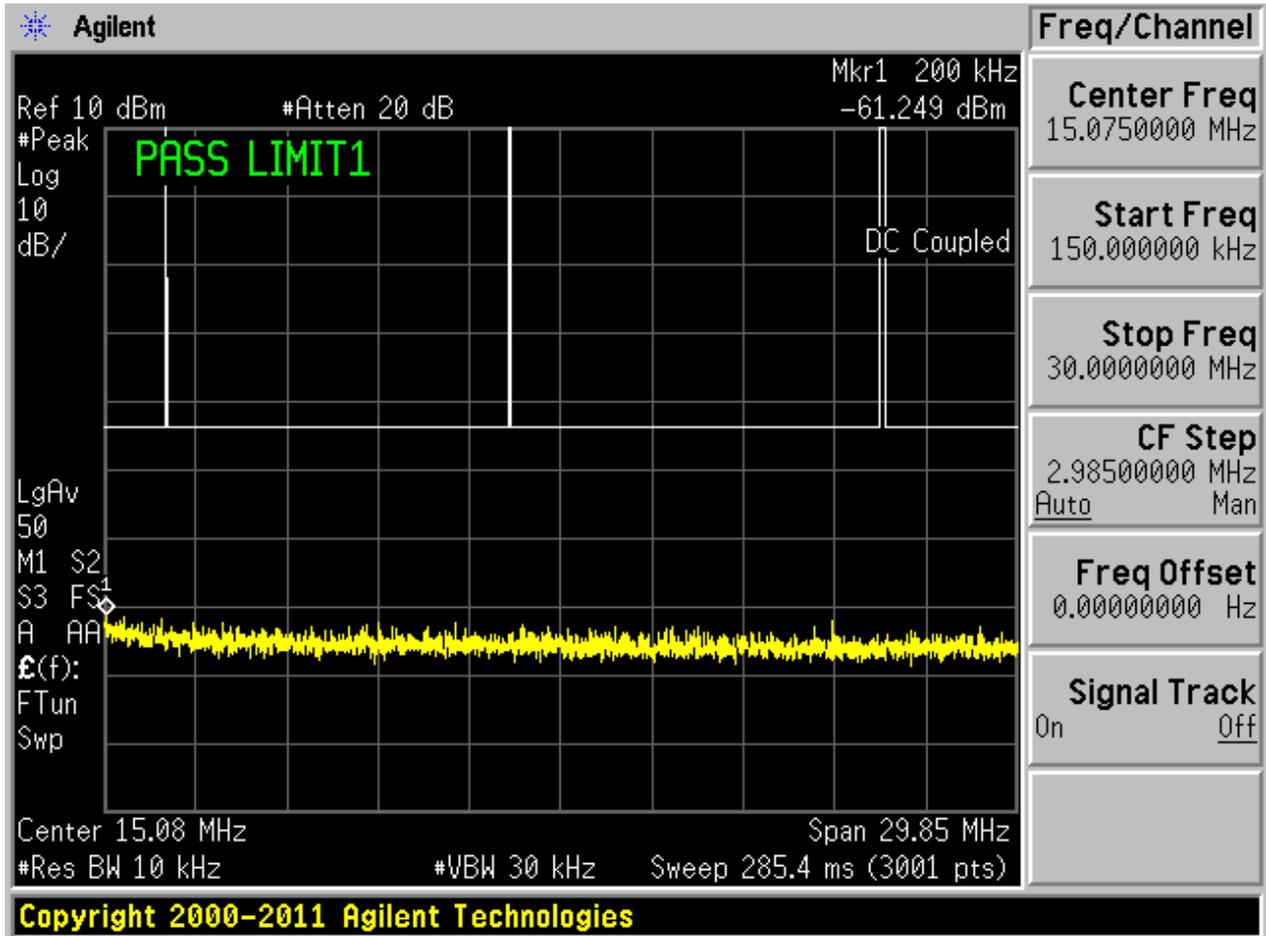
2.21.1 Ant 1

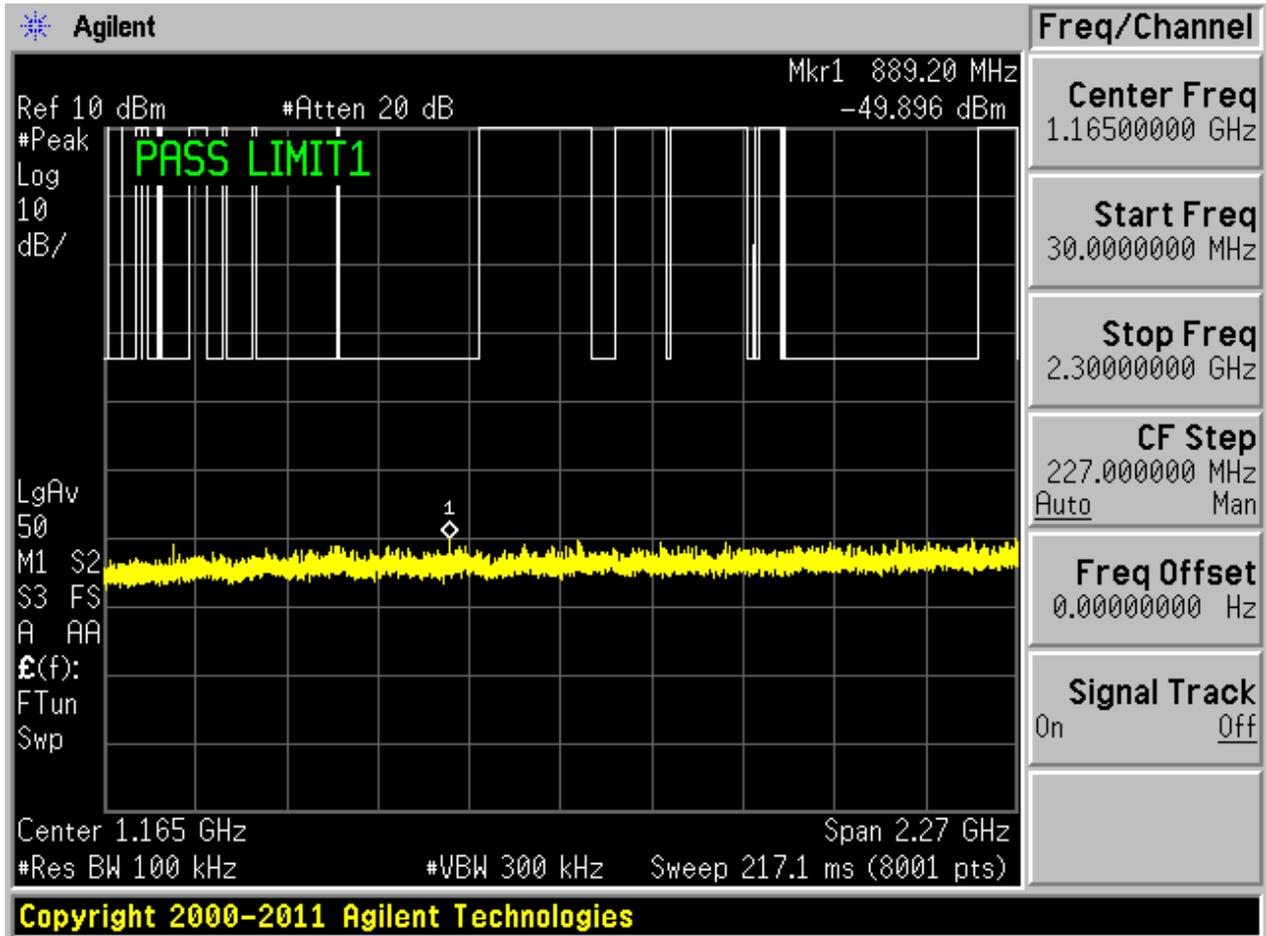
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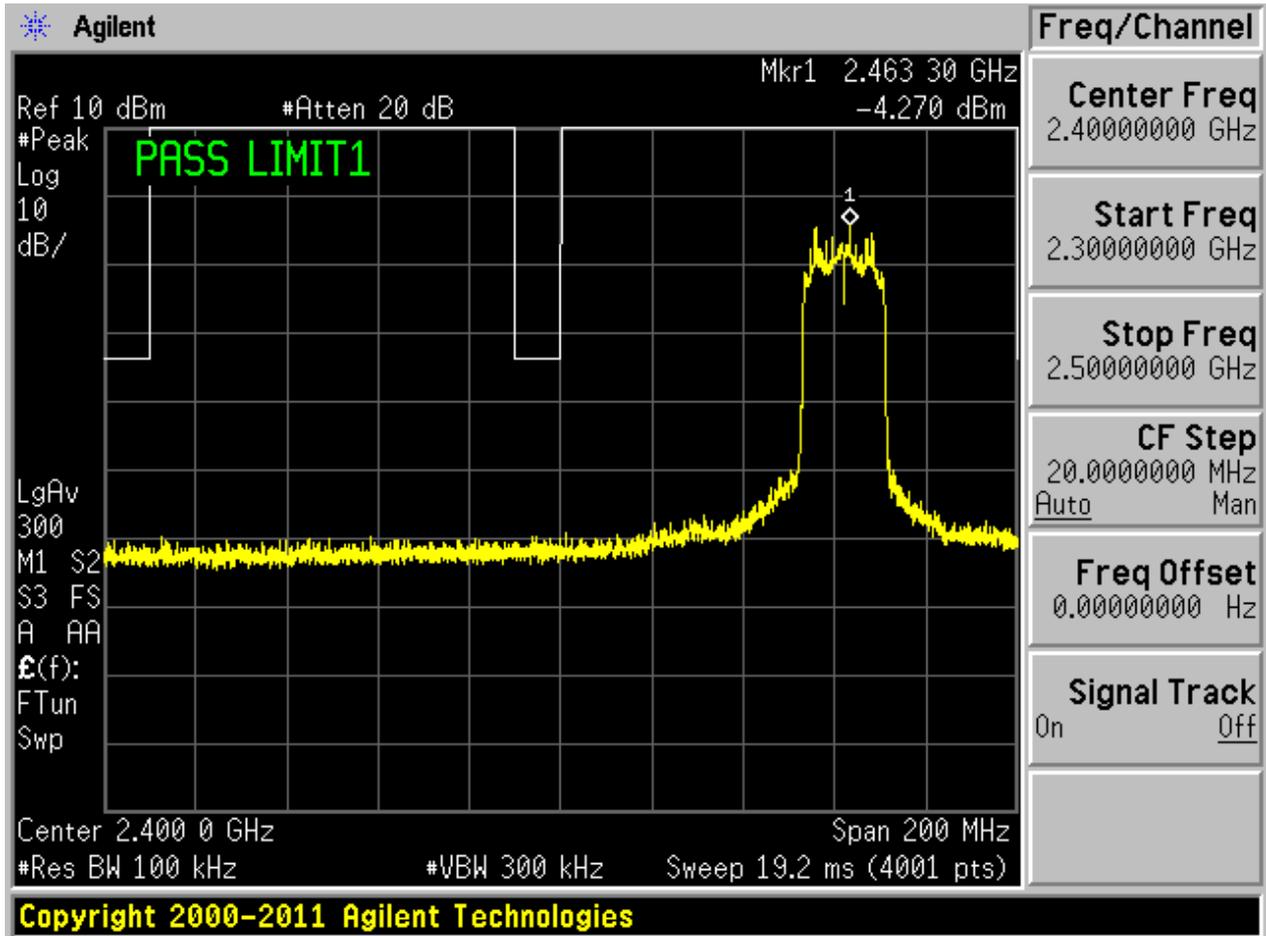


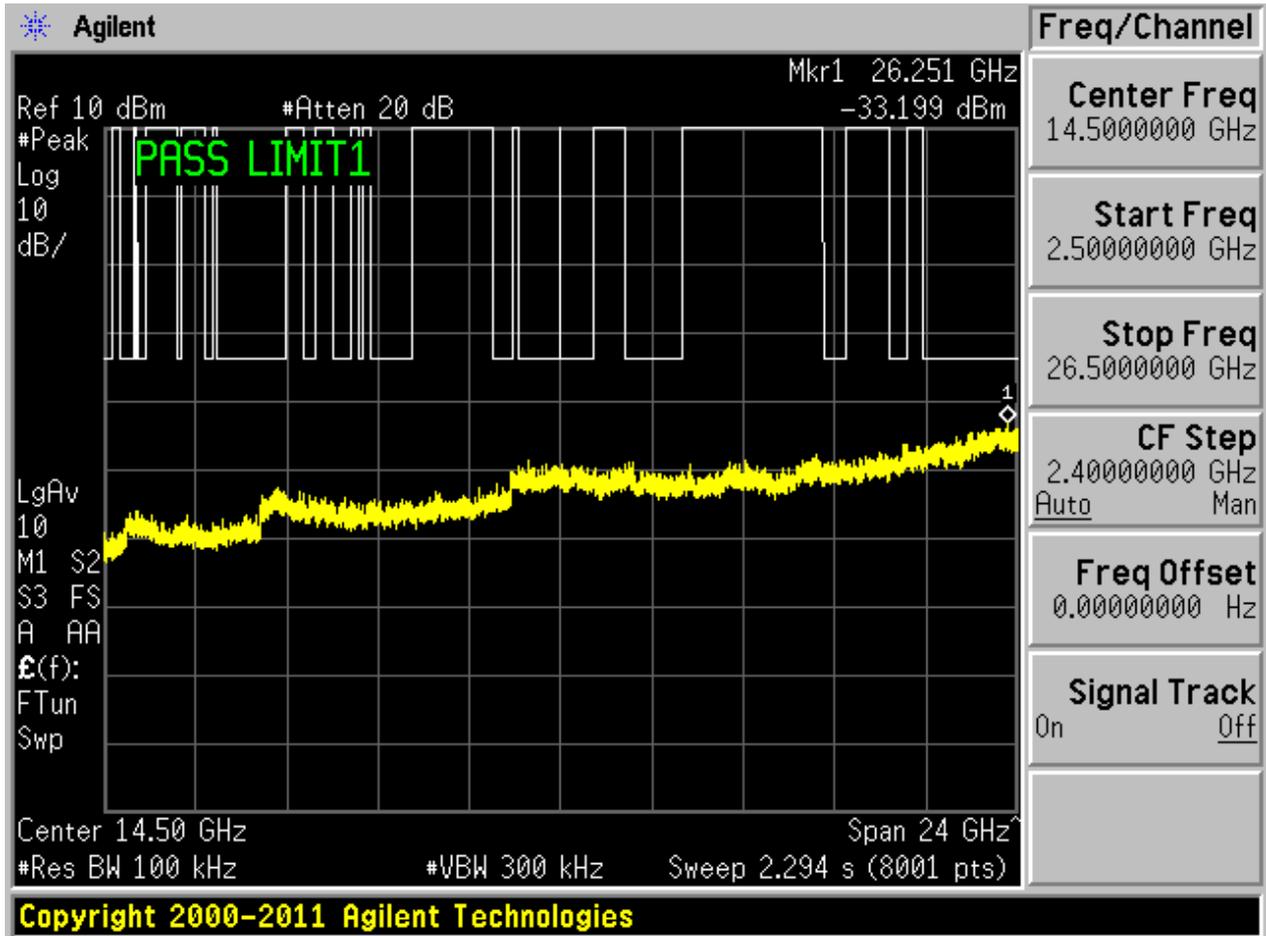
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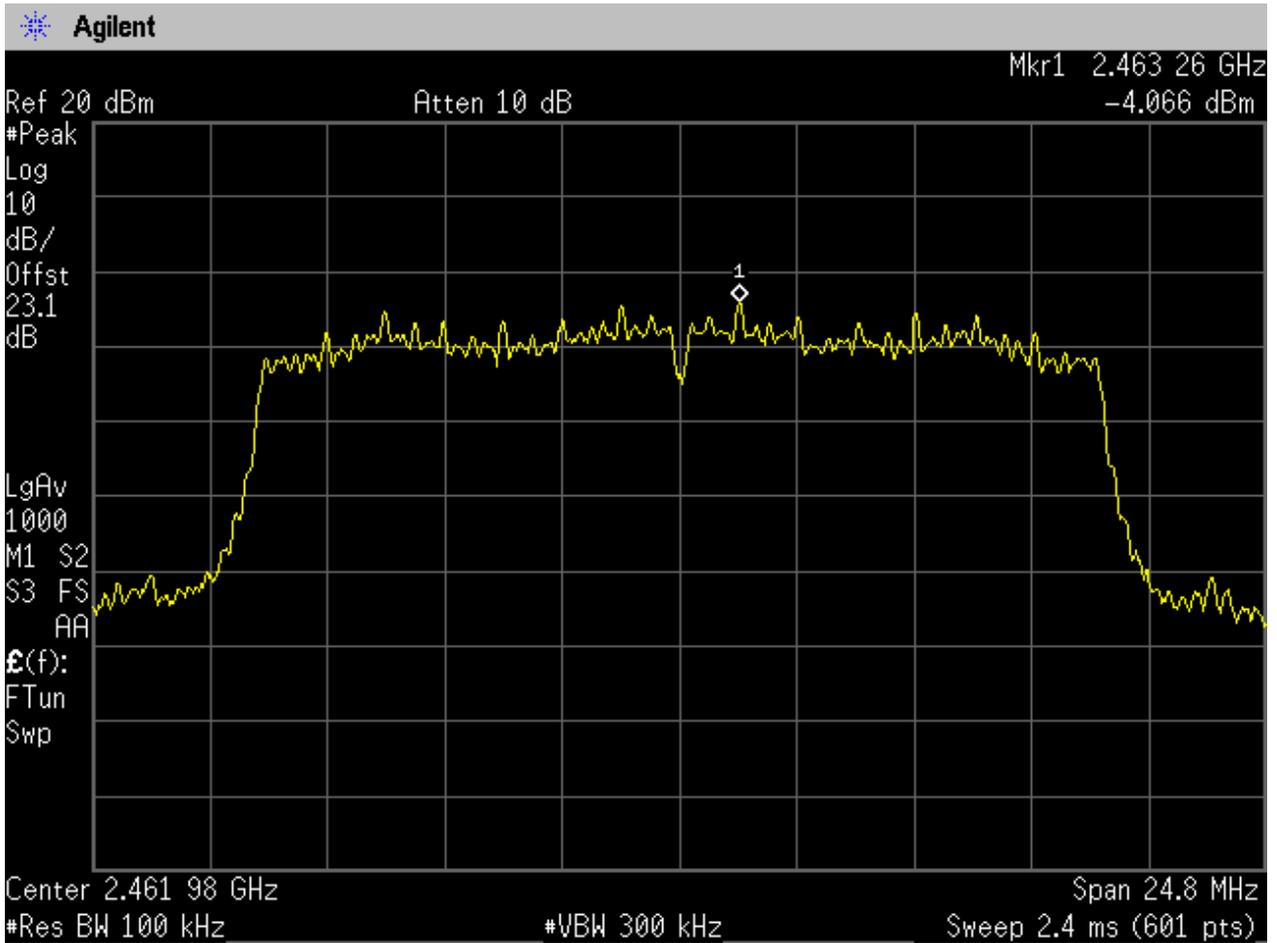




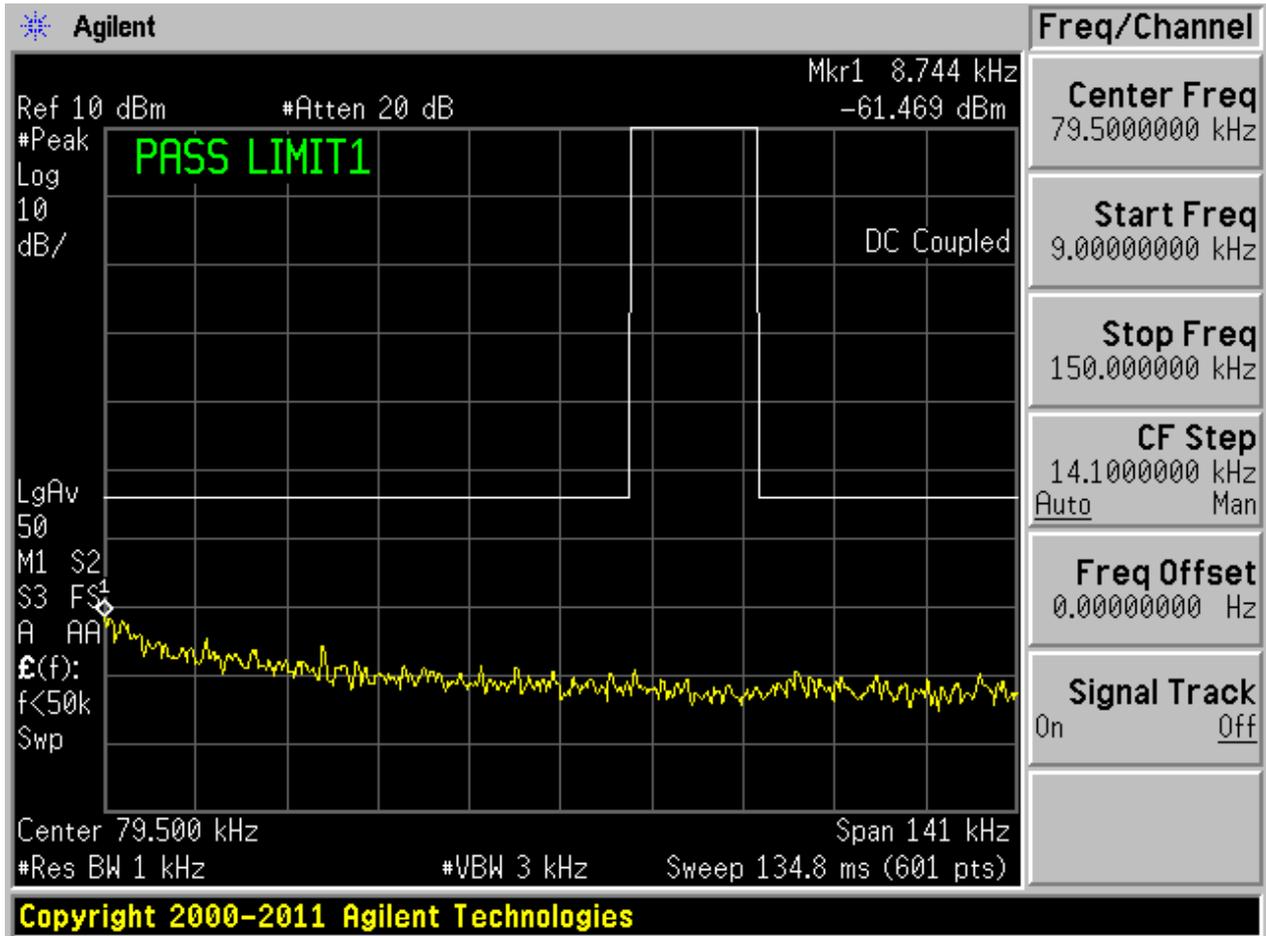


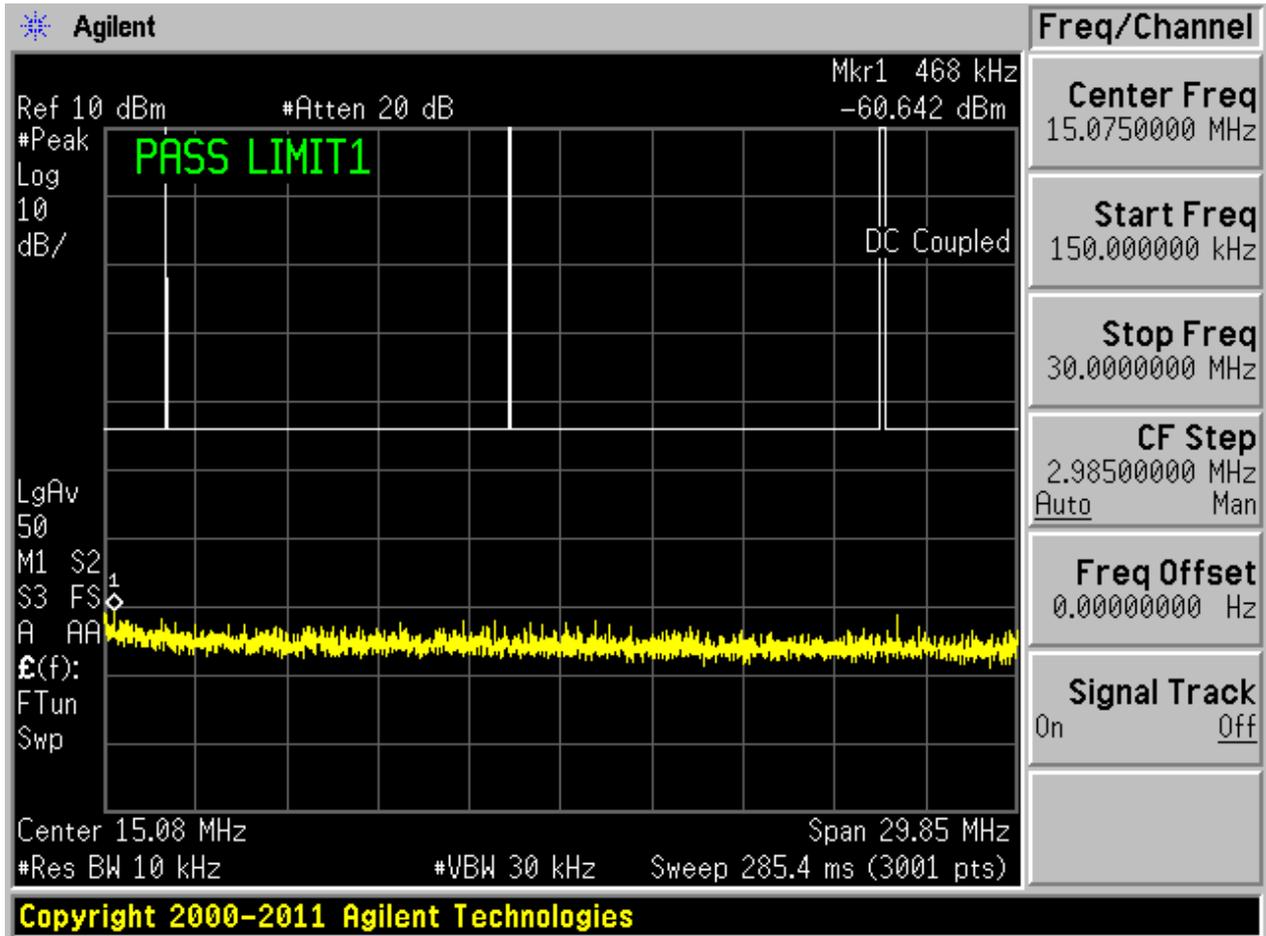
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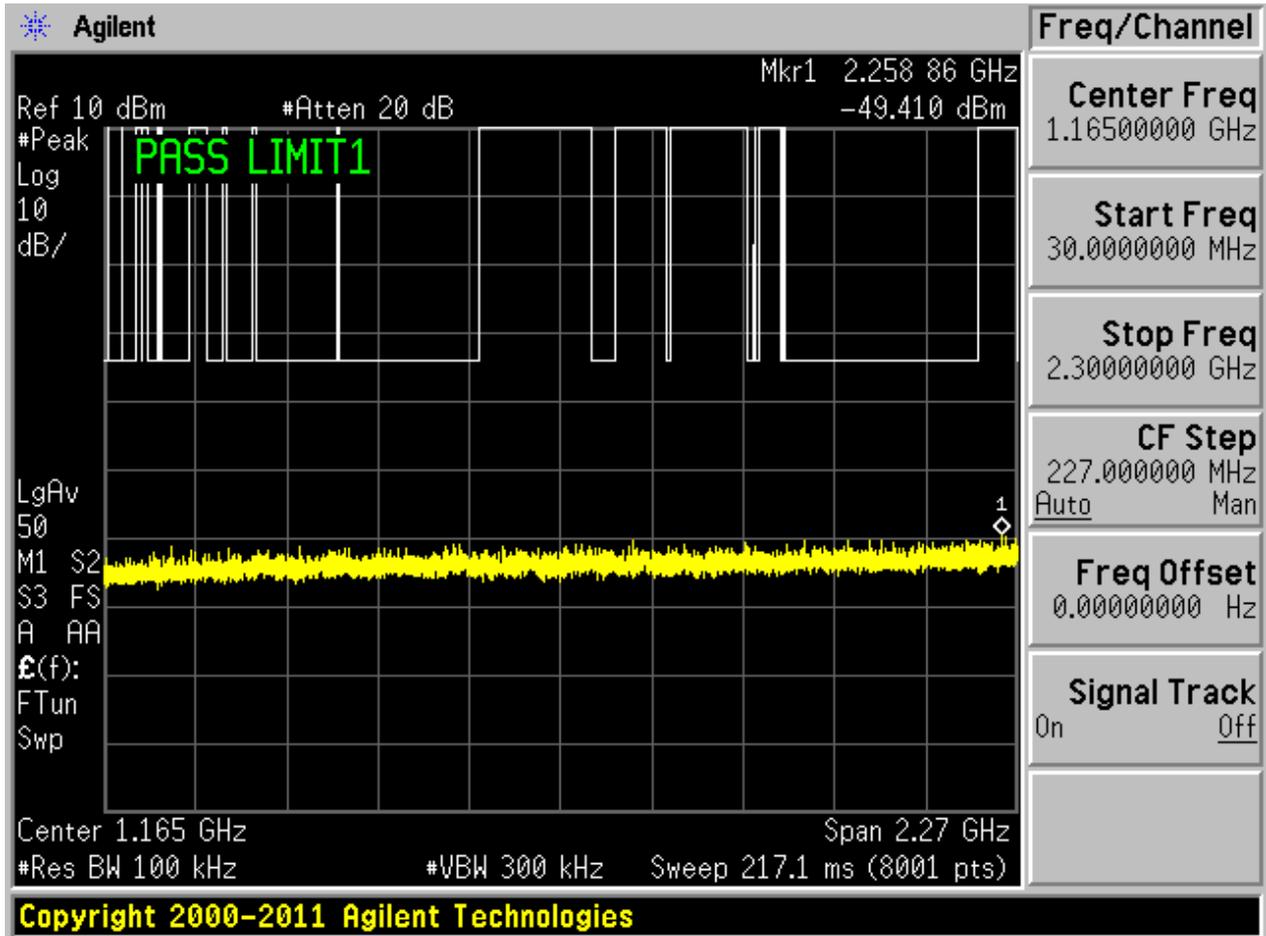
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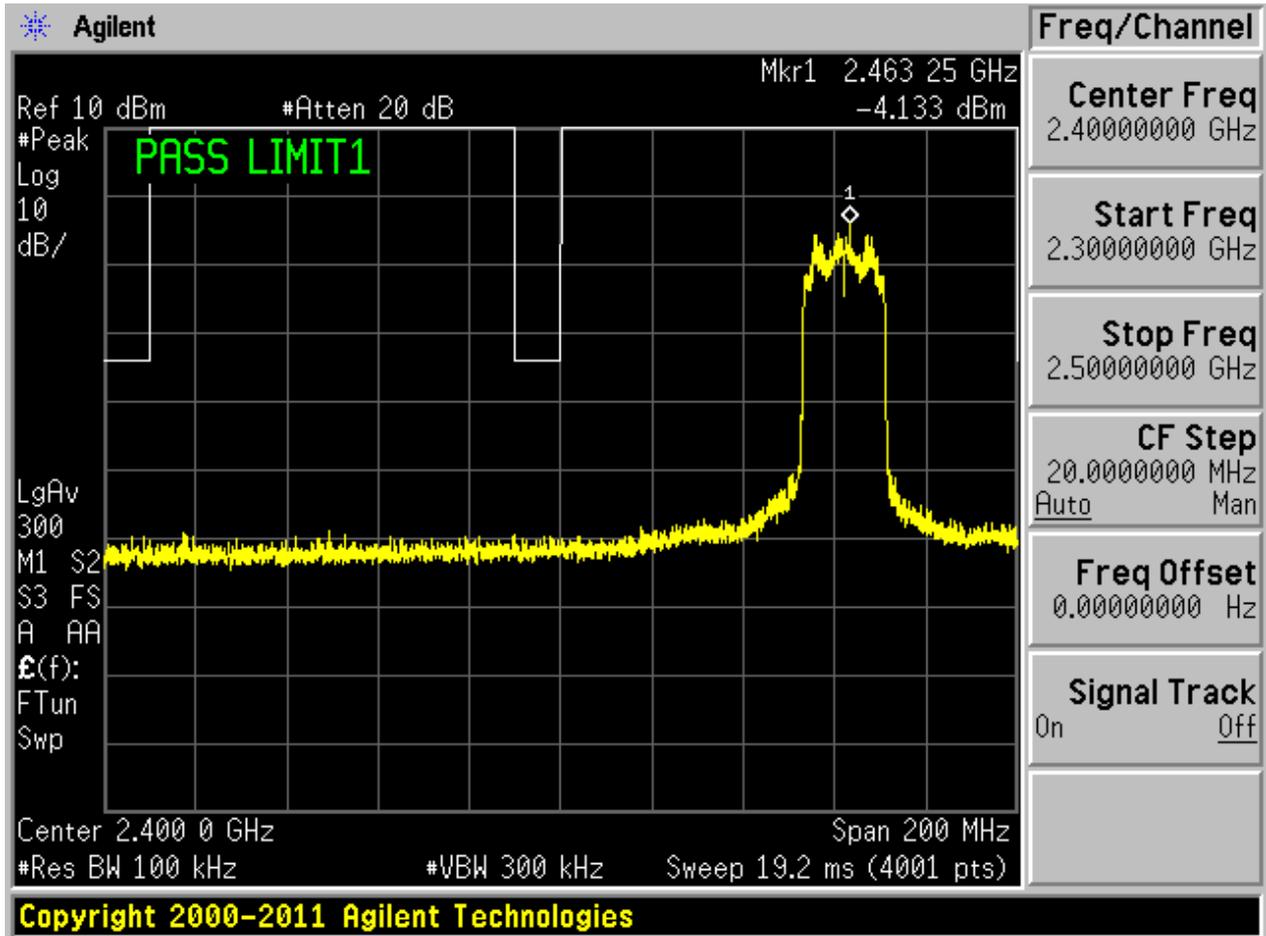


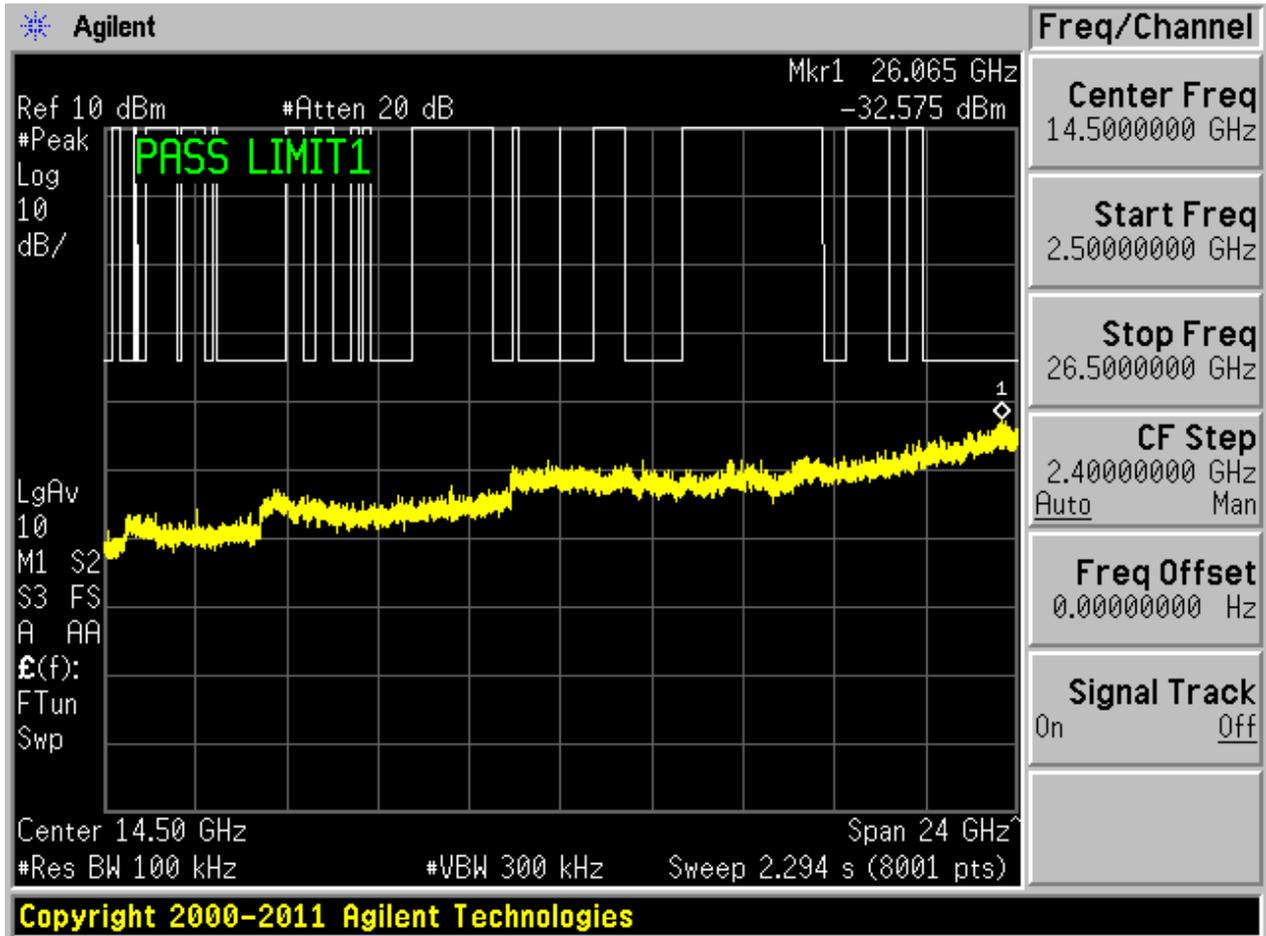
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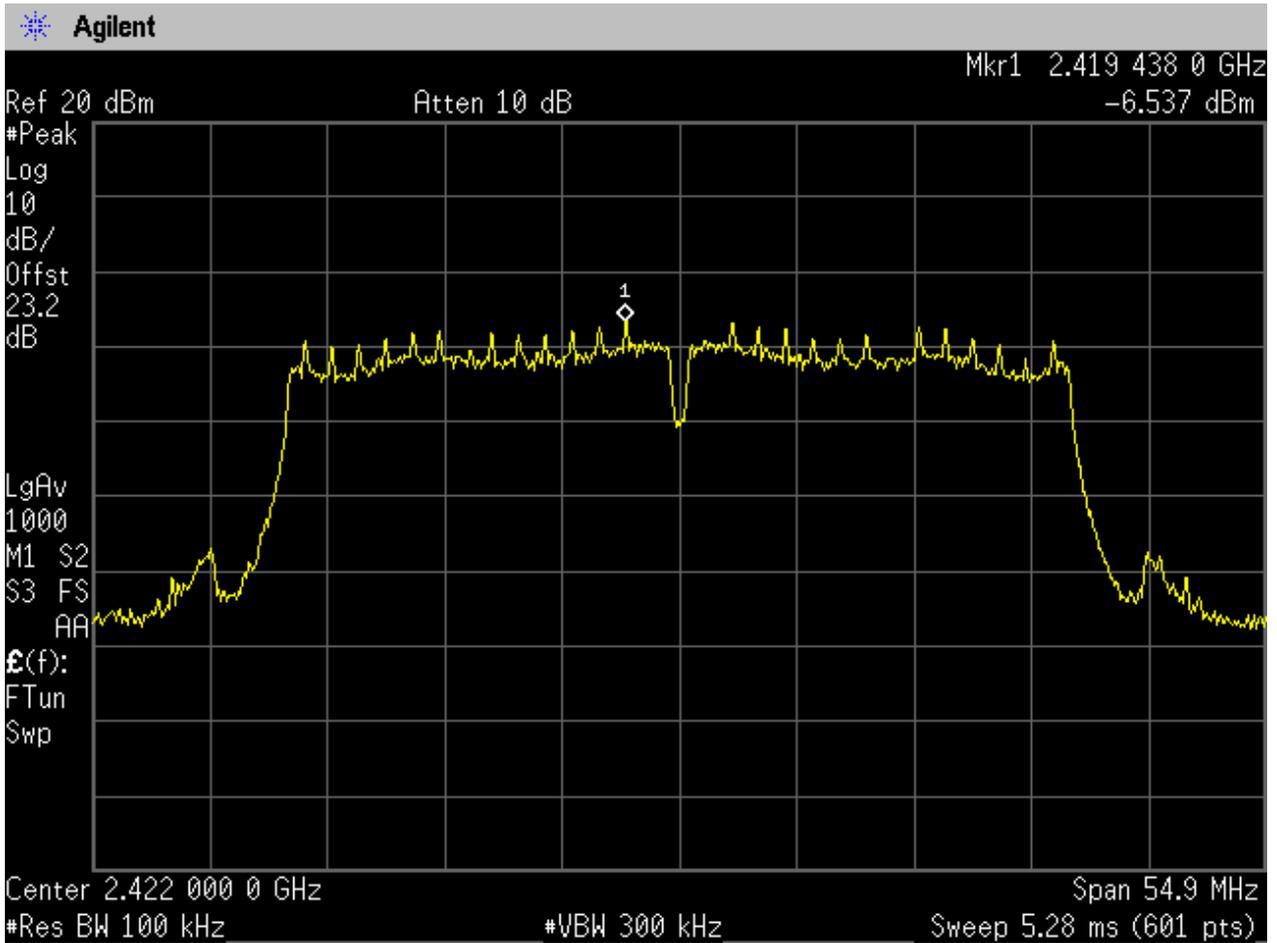




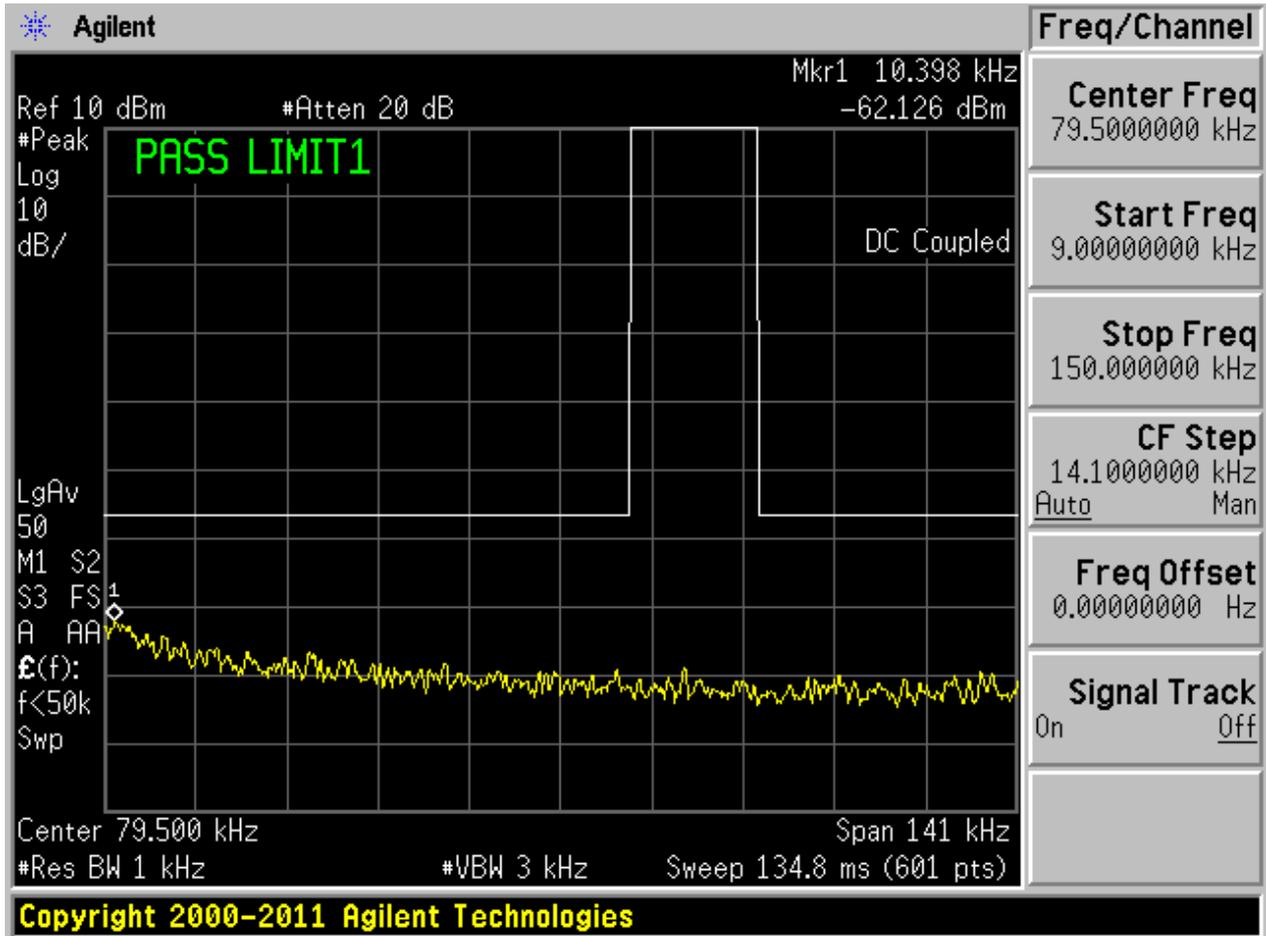


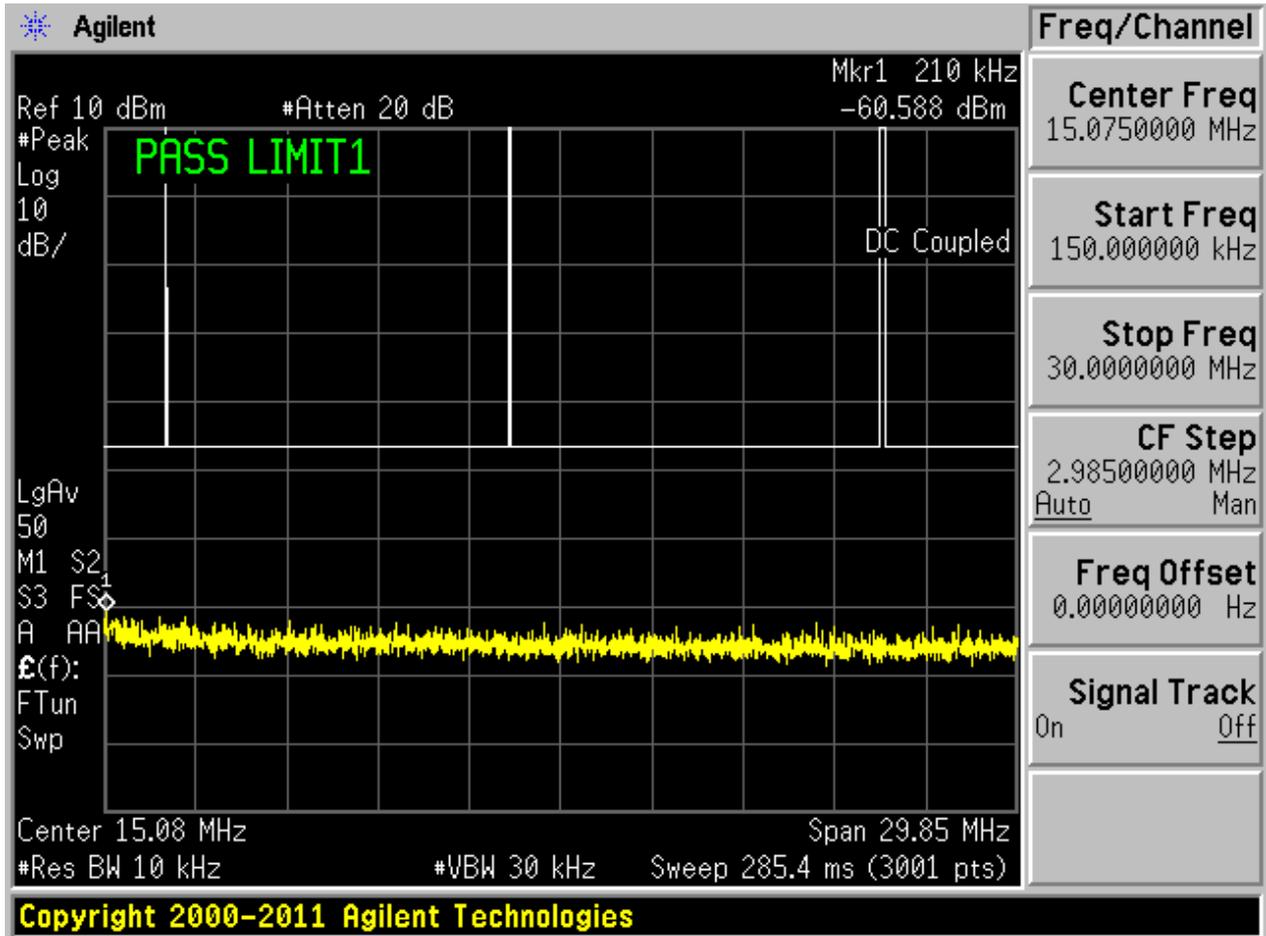
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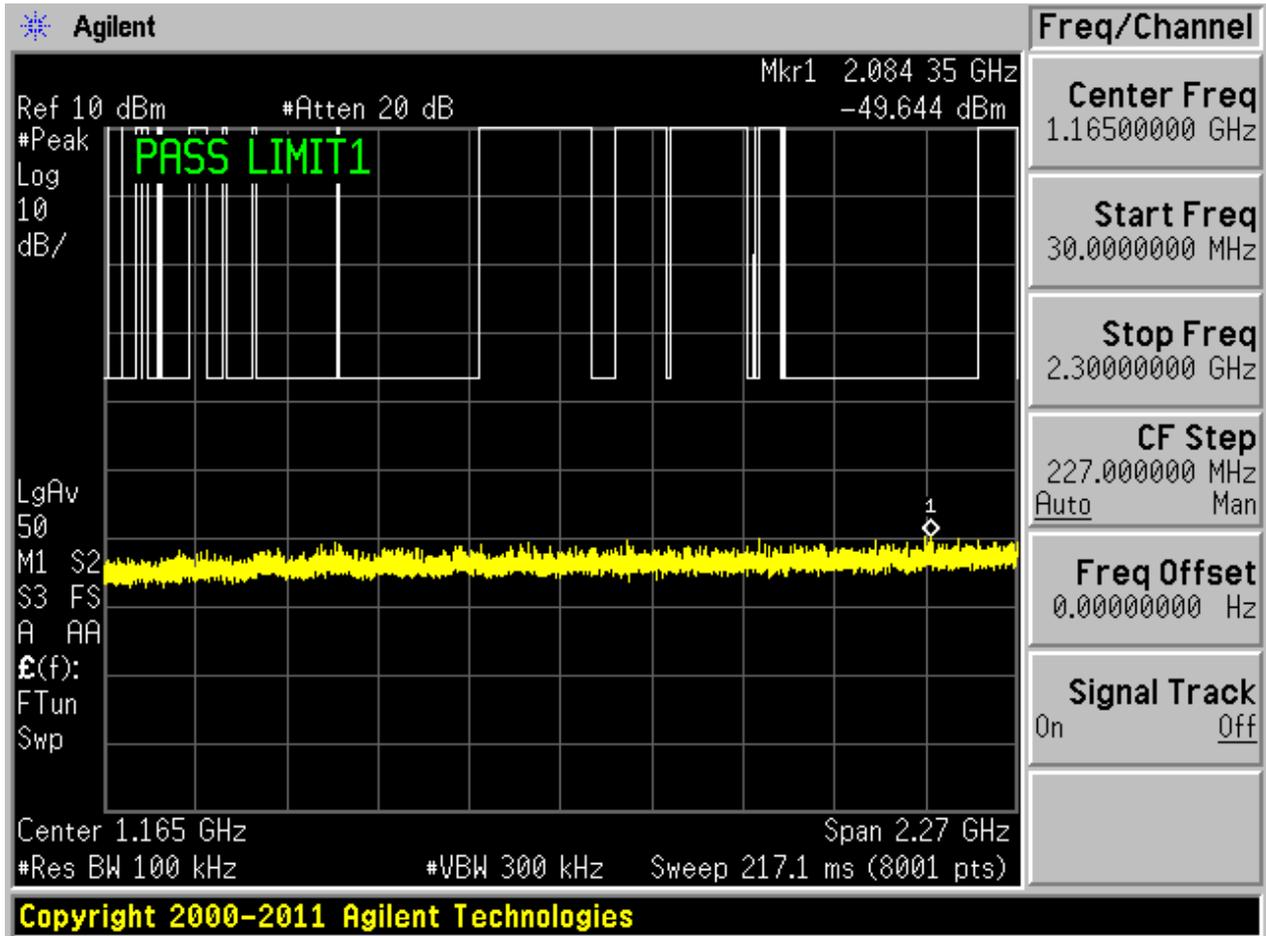
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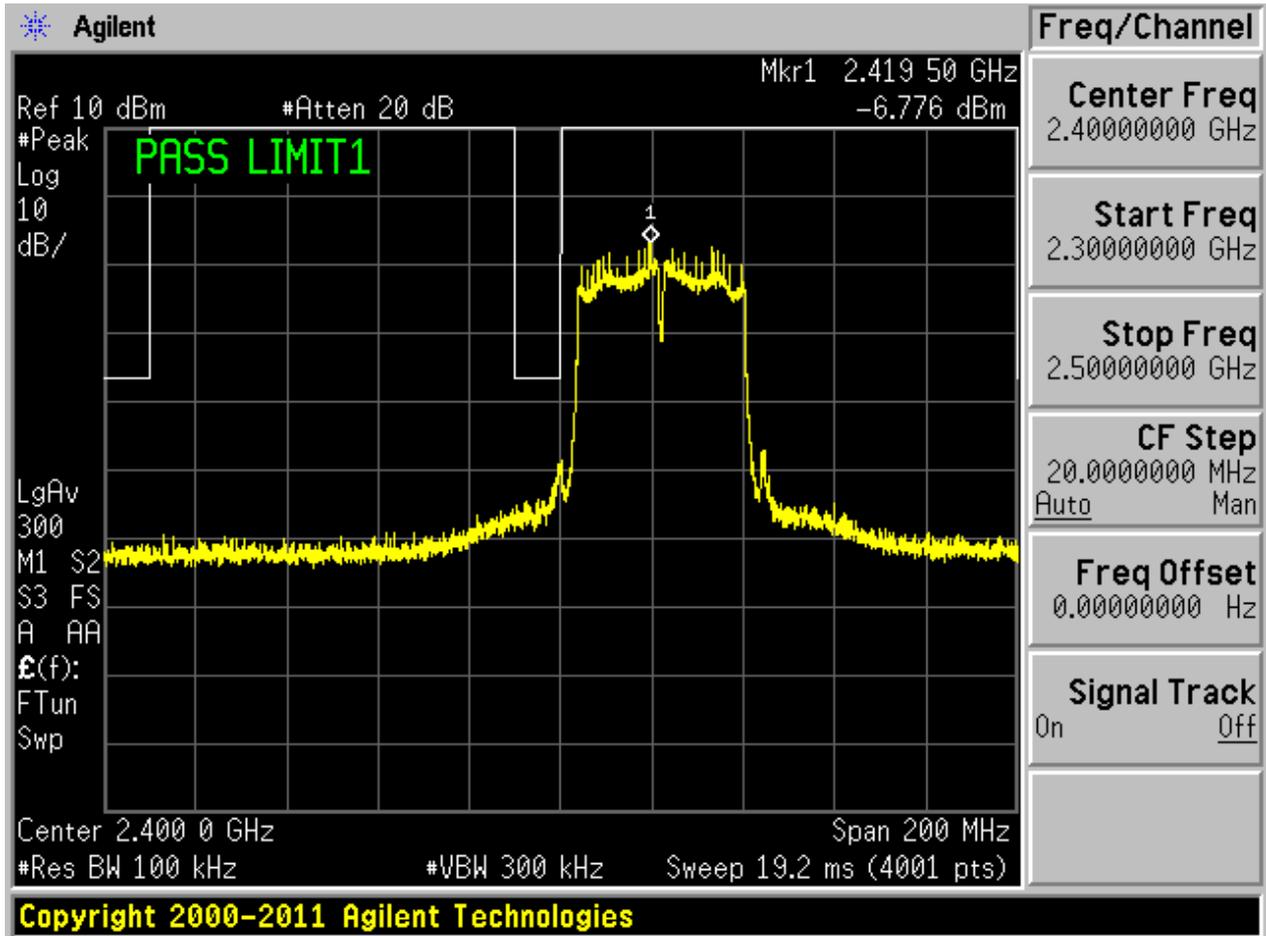


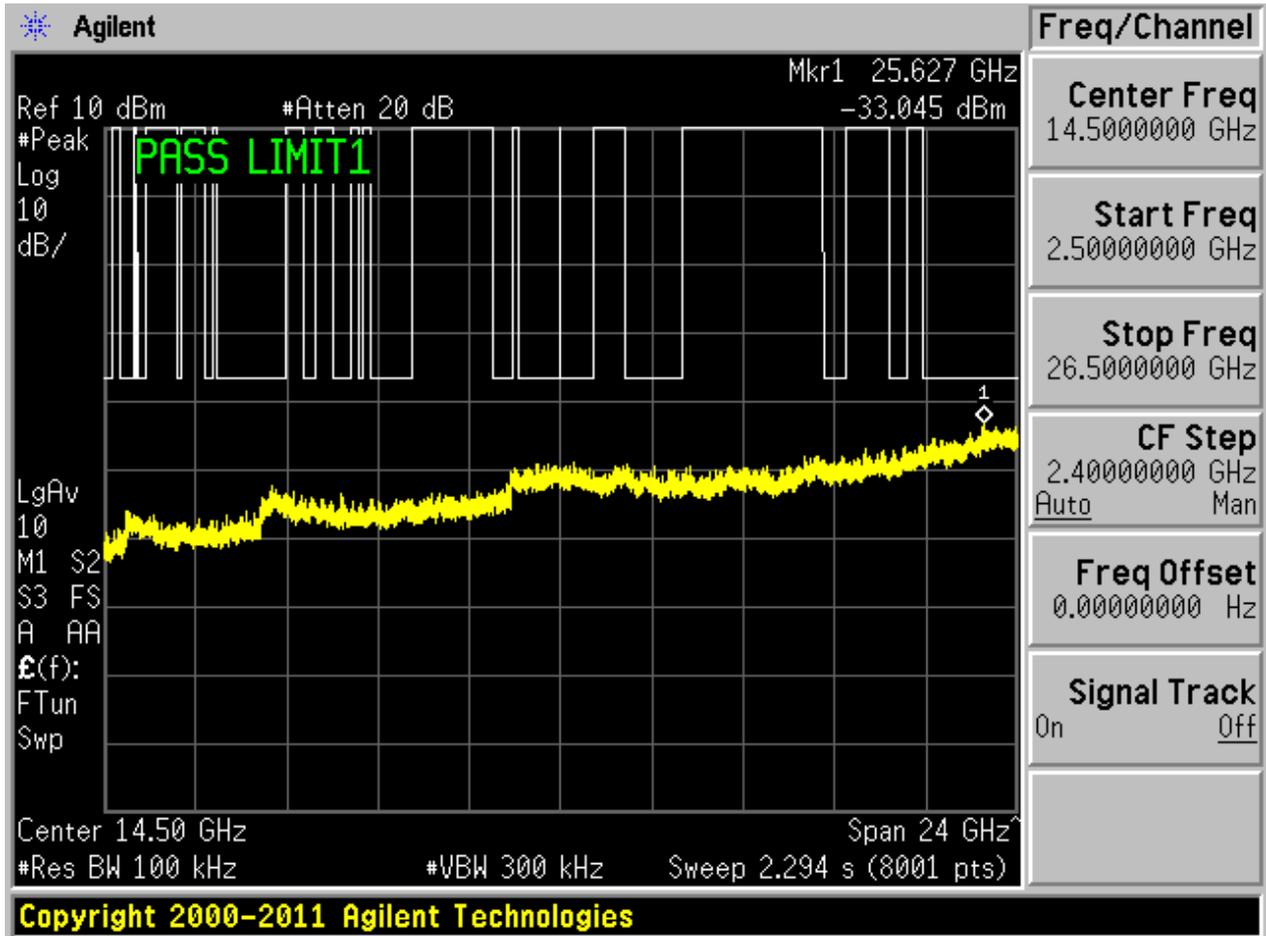
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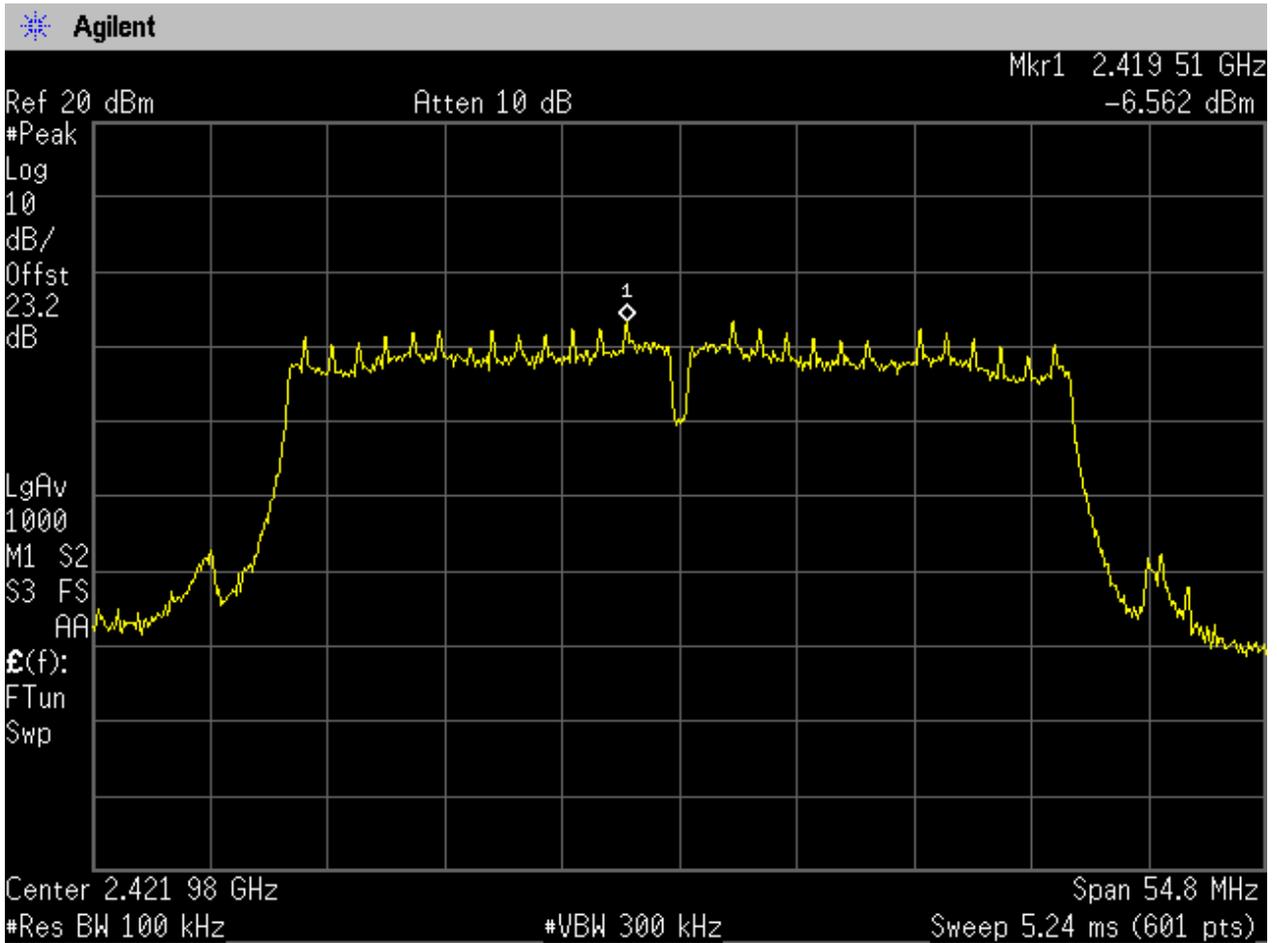




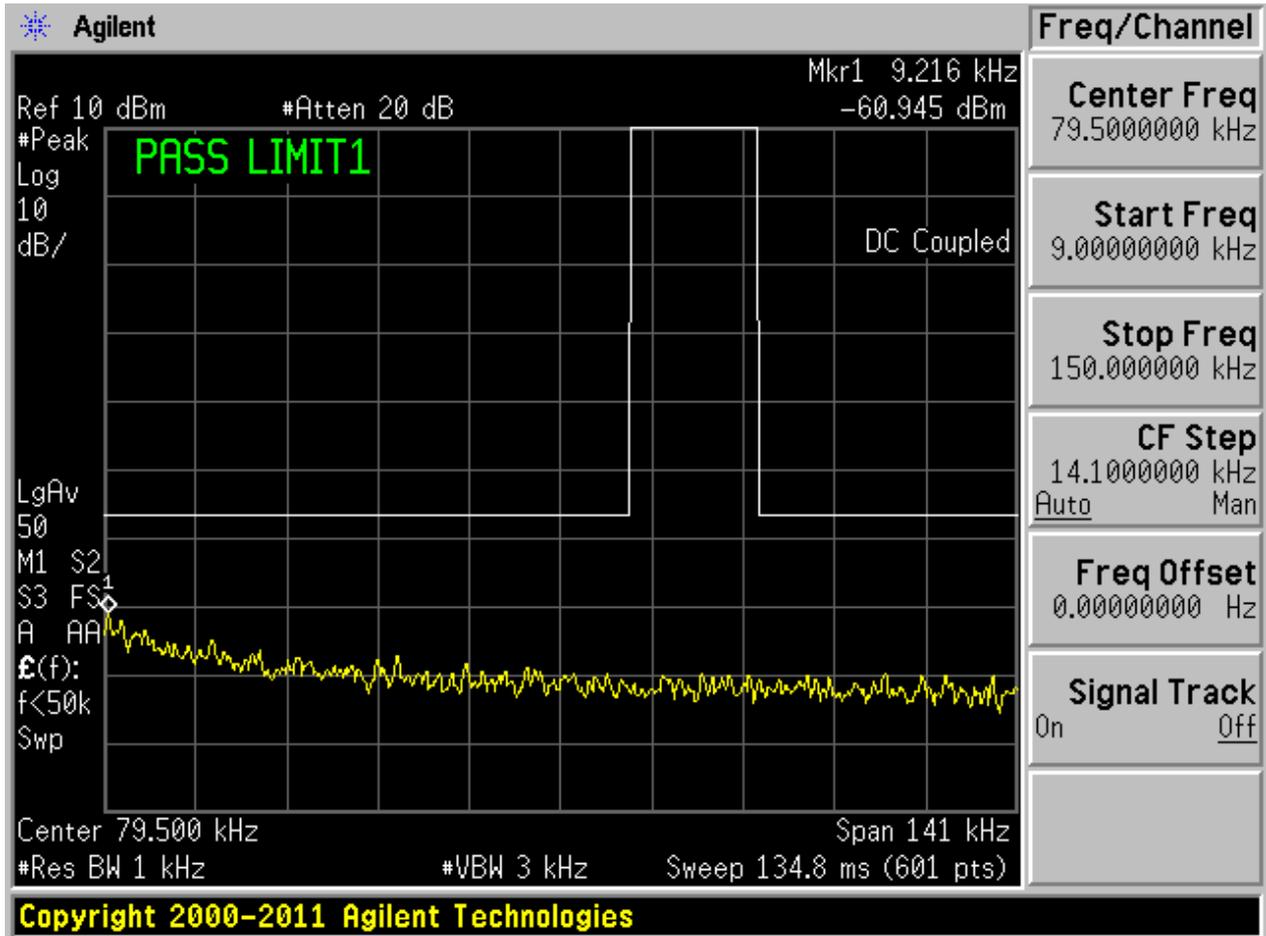


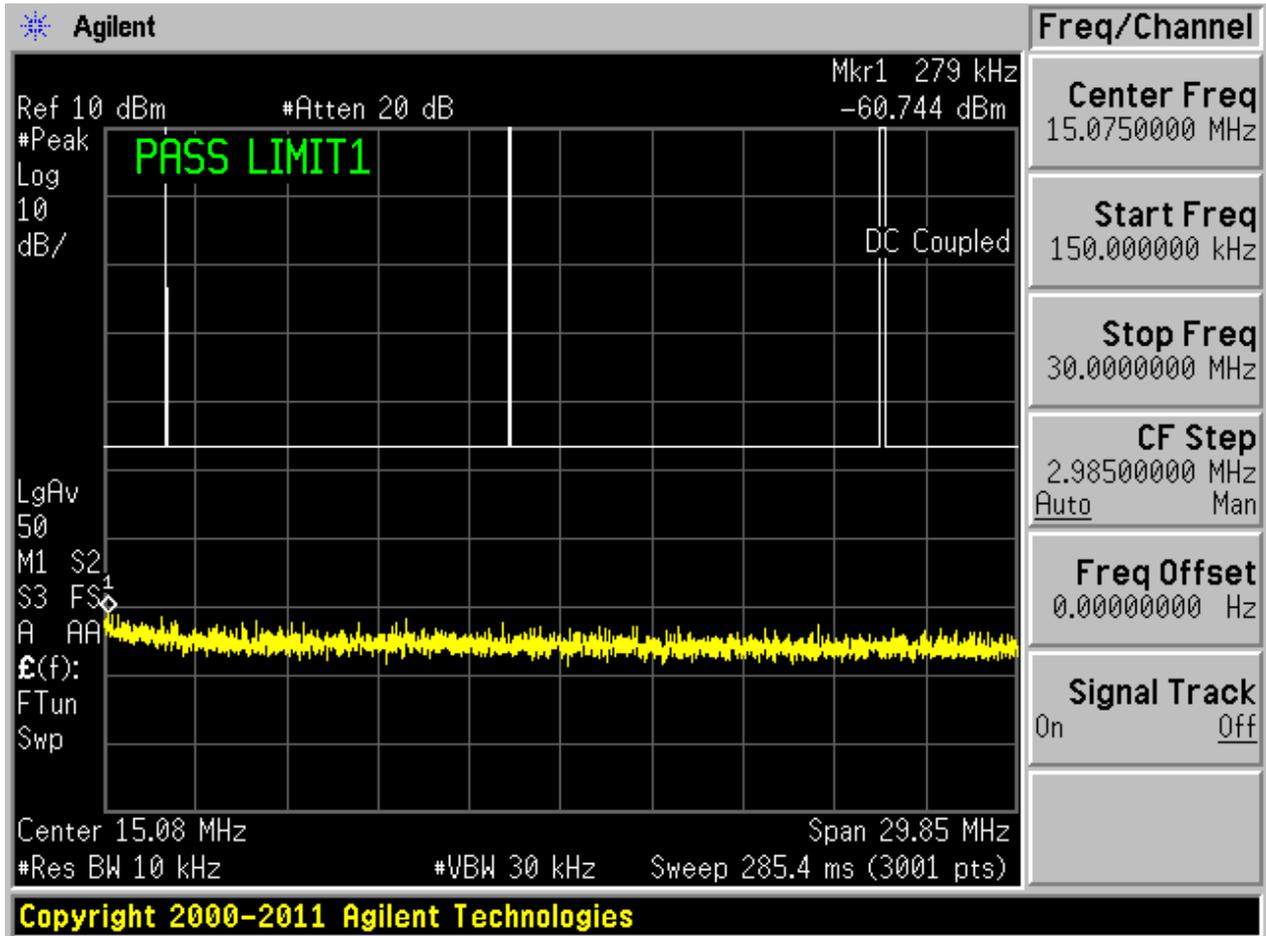
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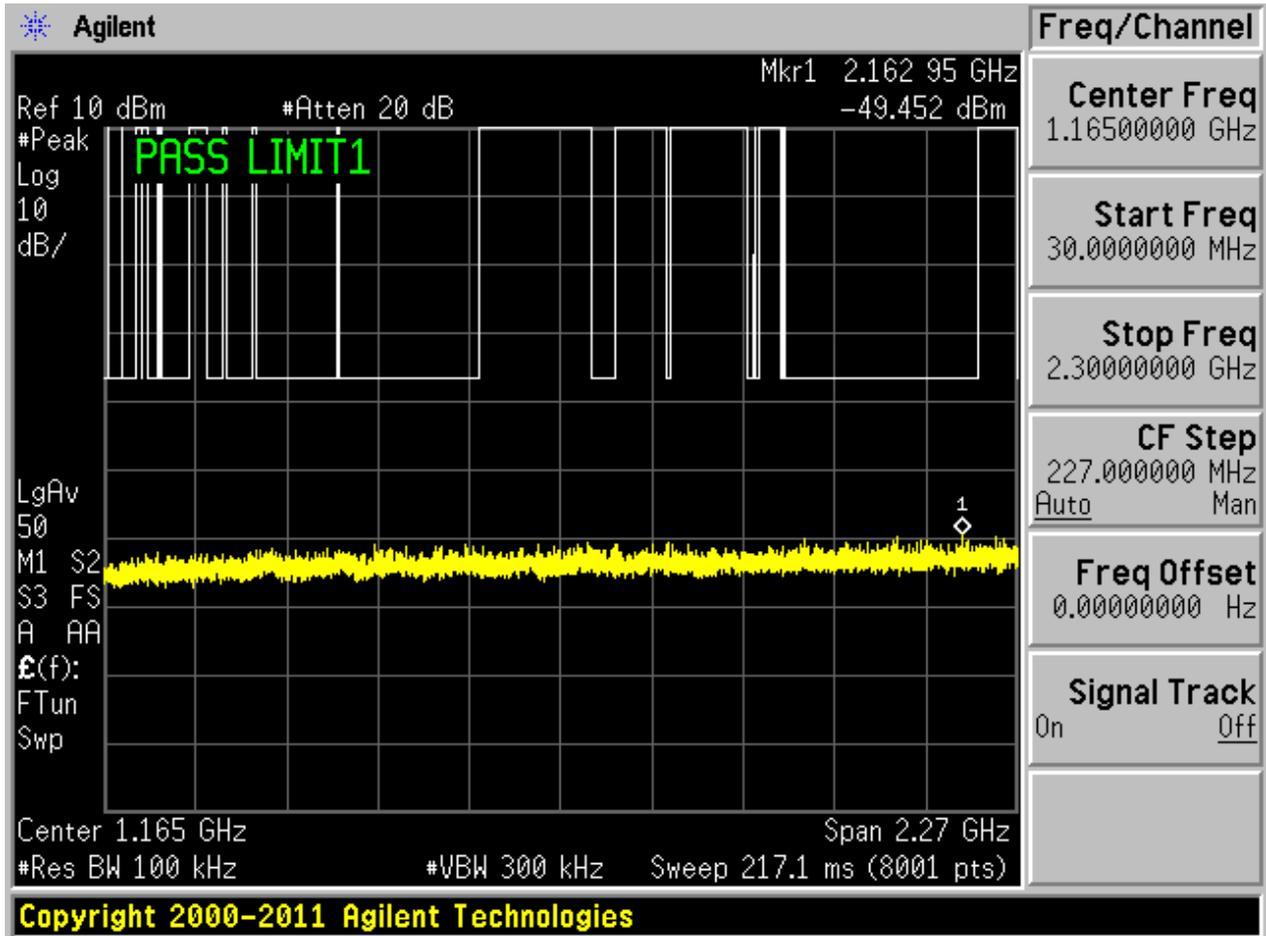
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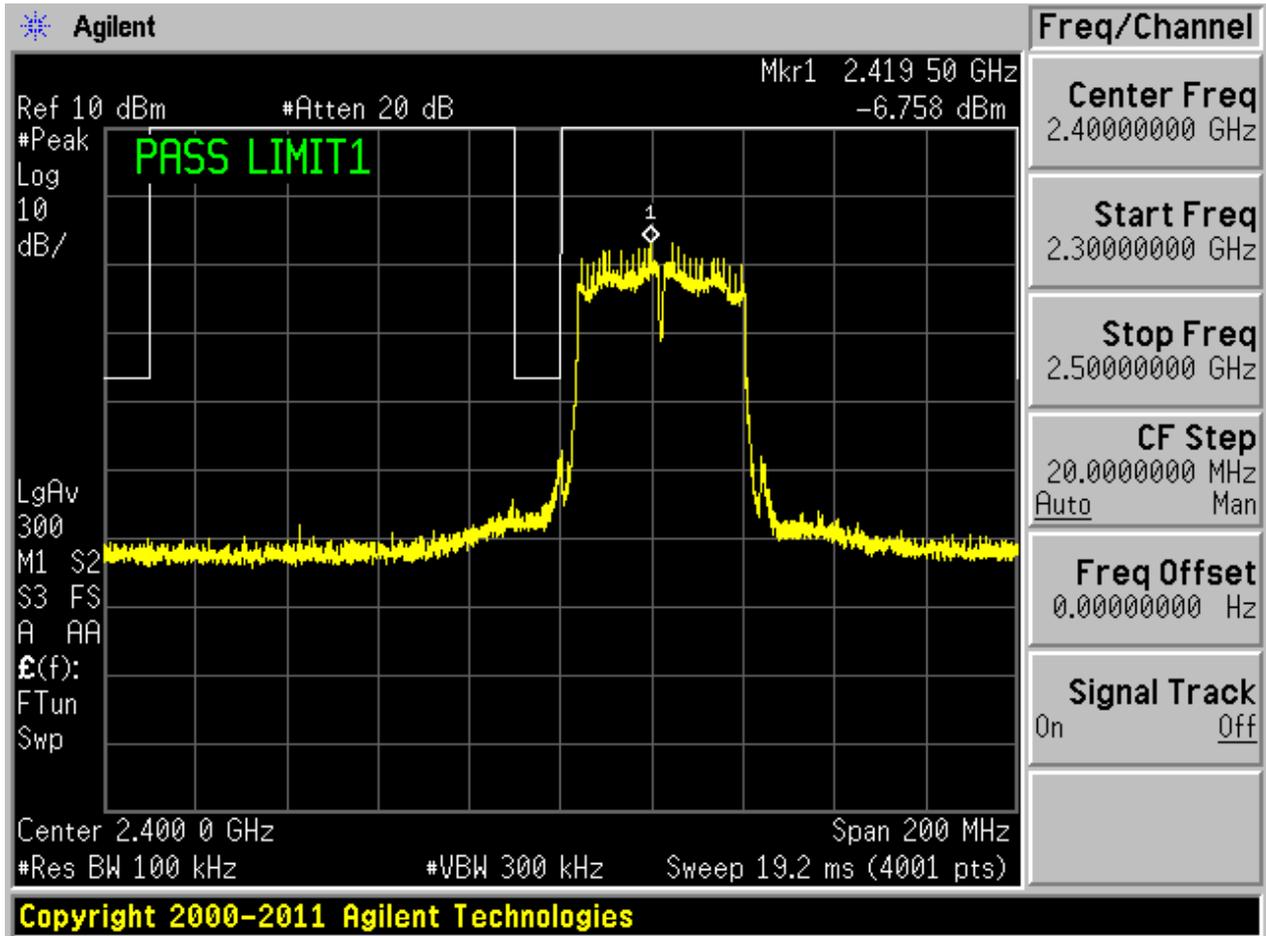


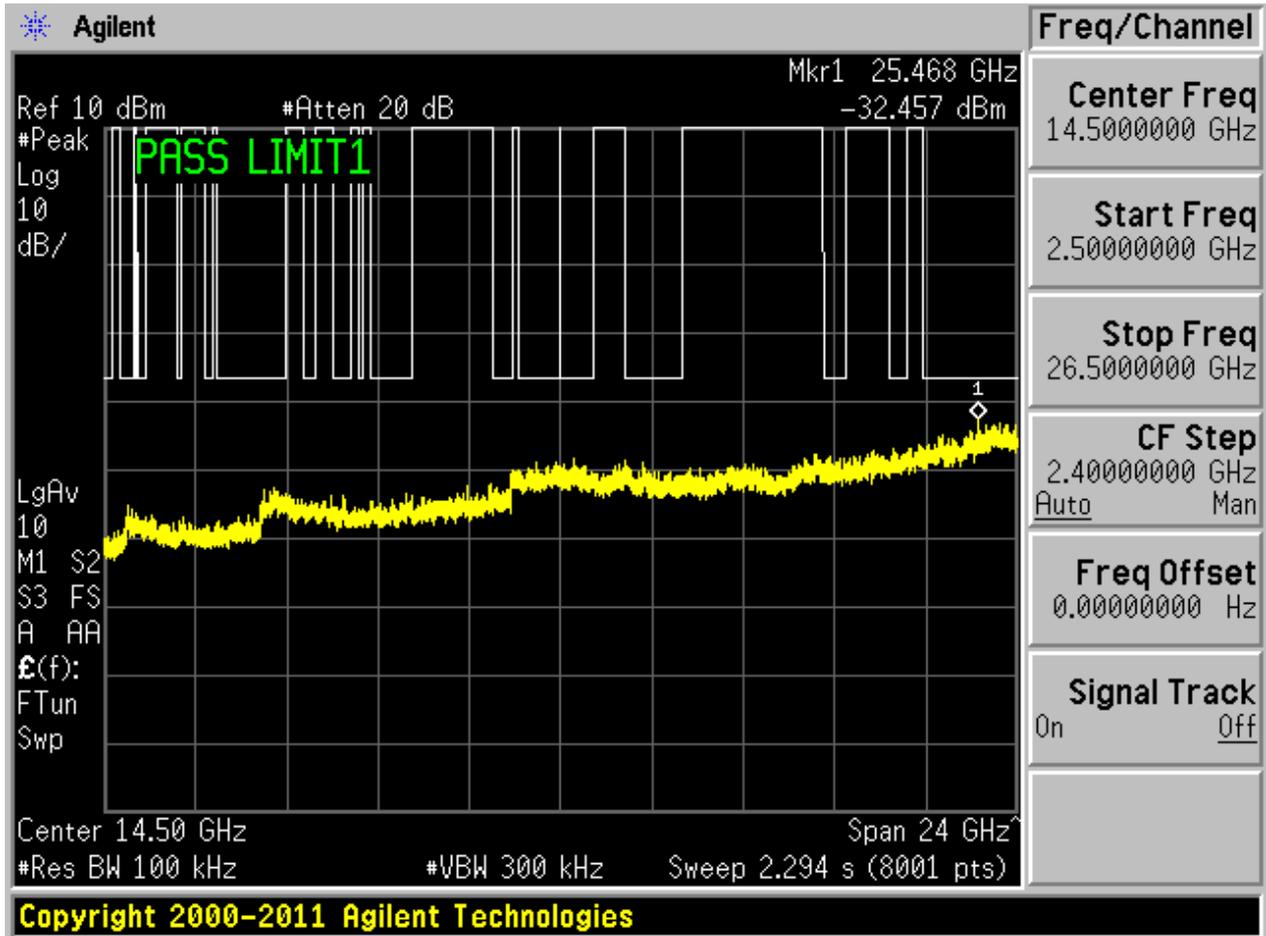
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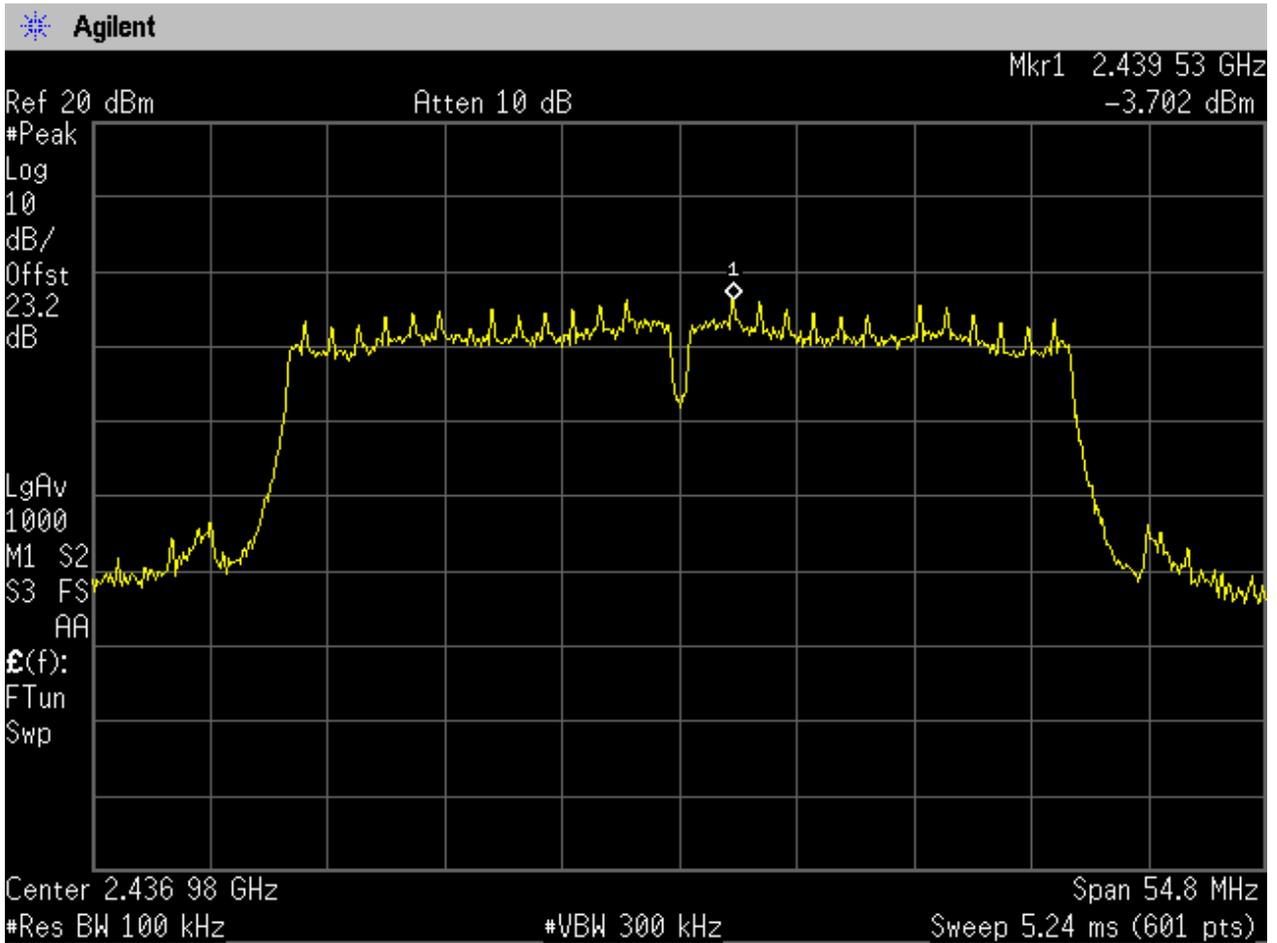




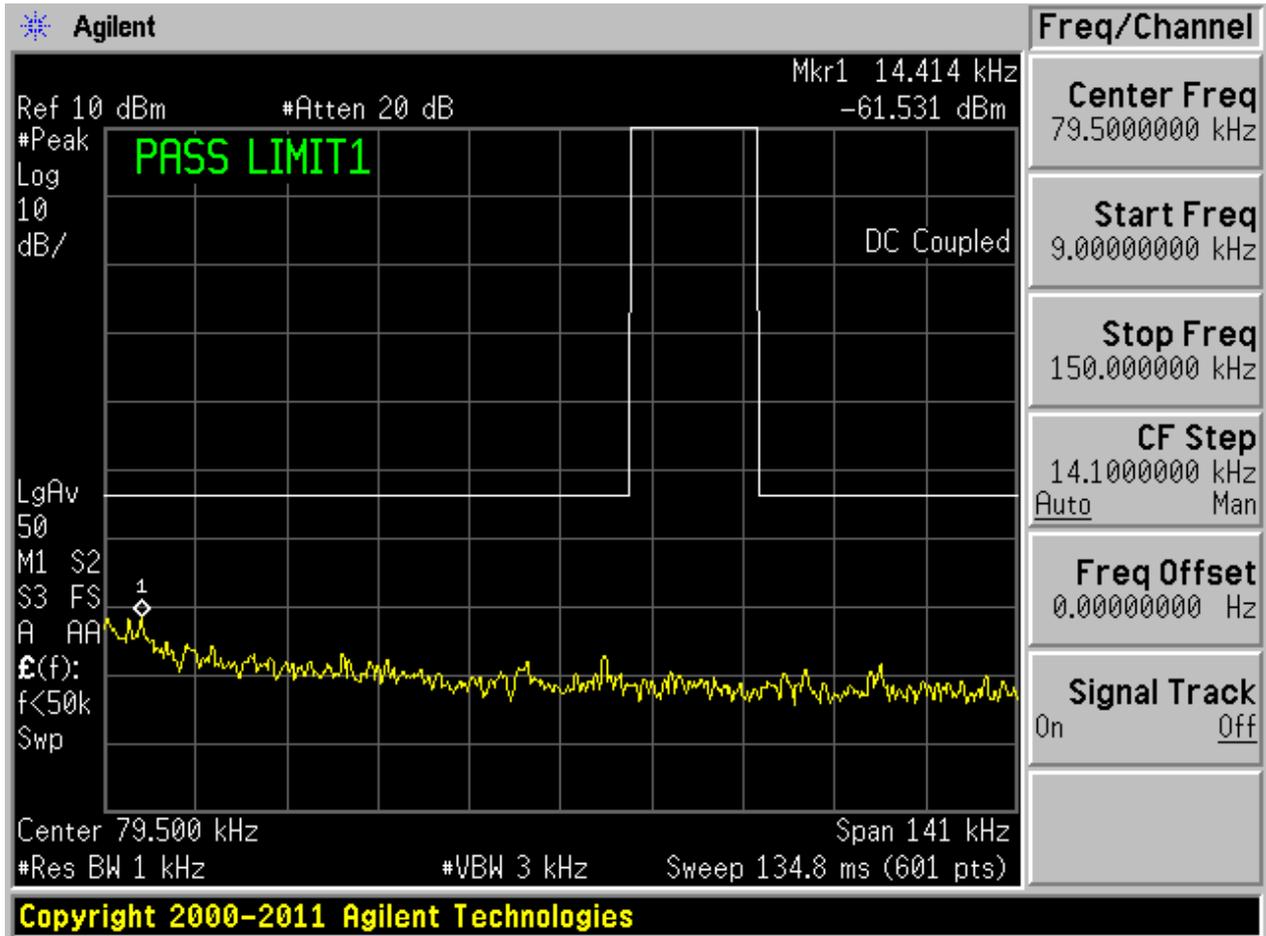


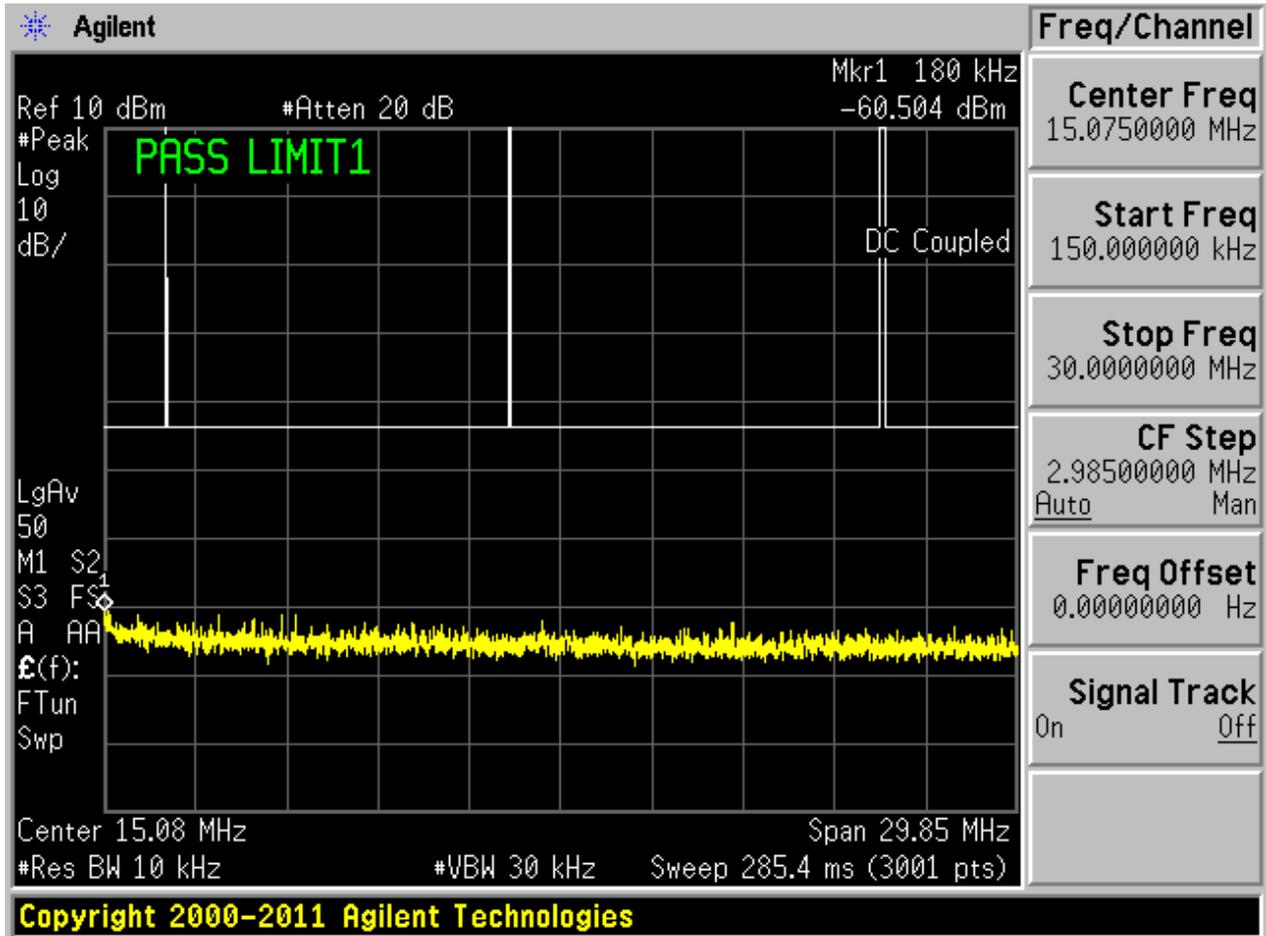
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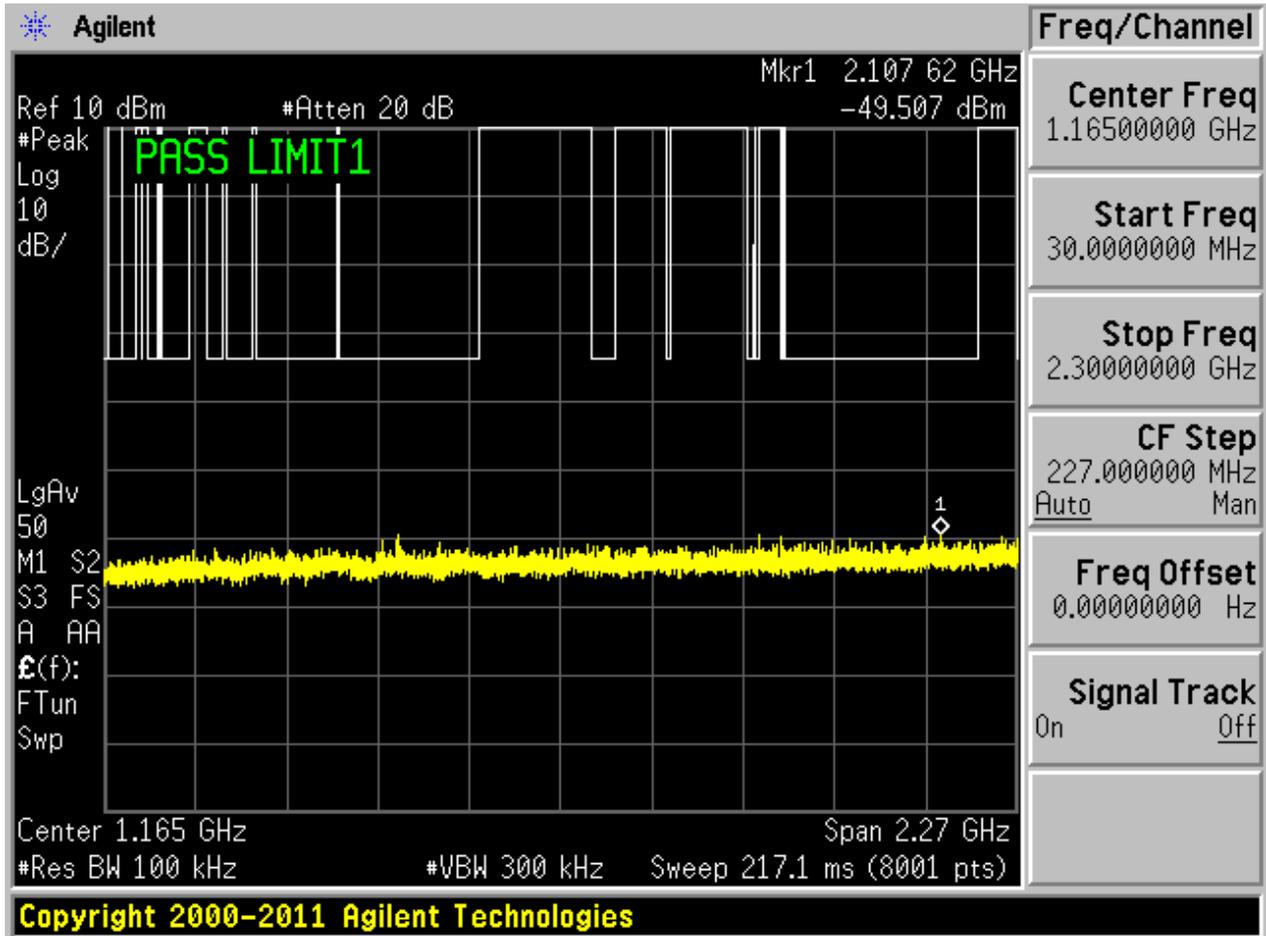
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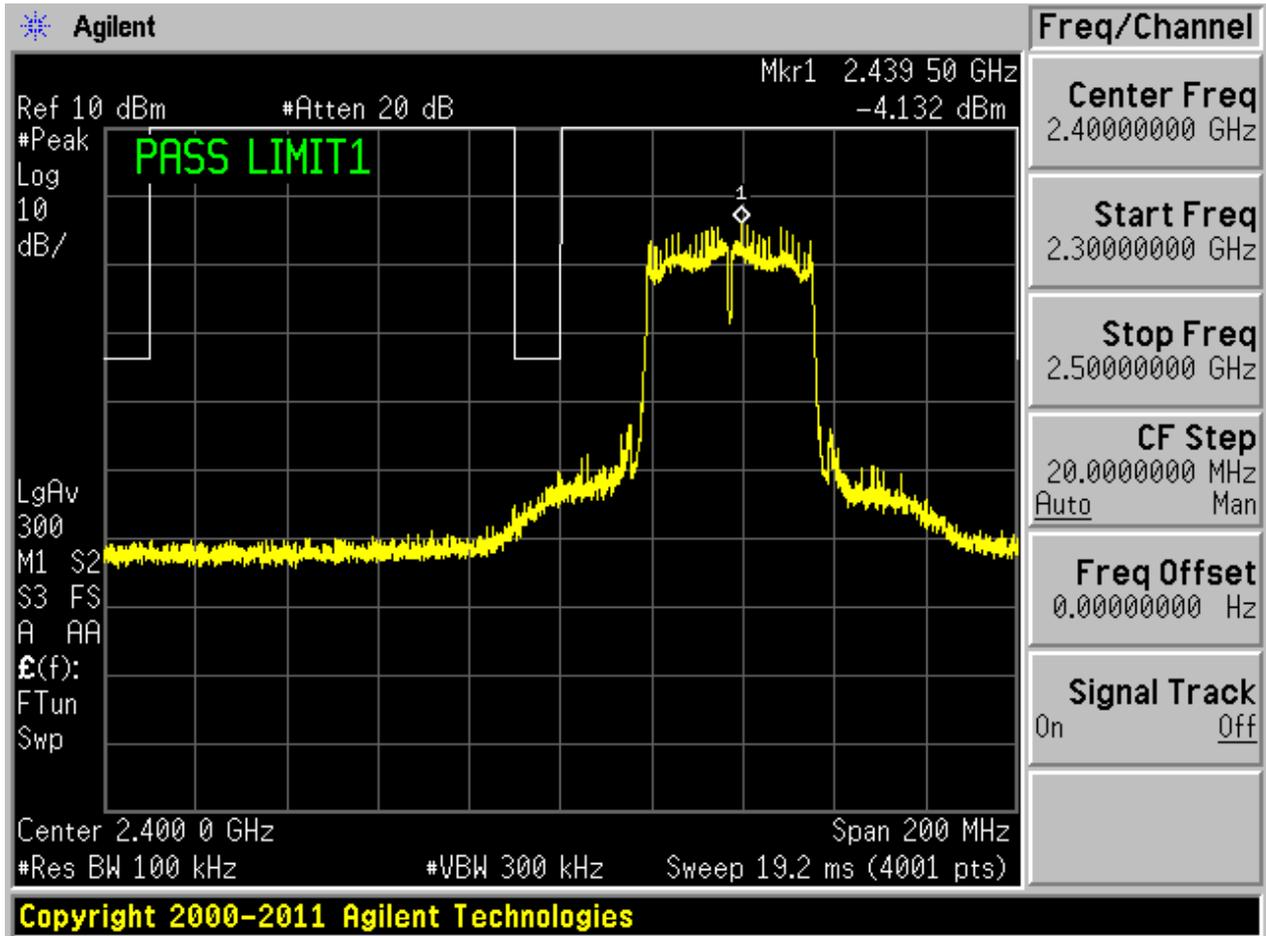


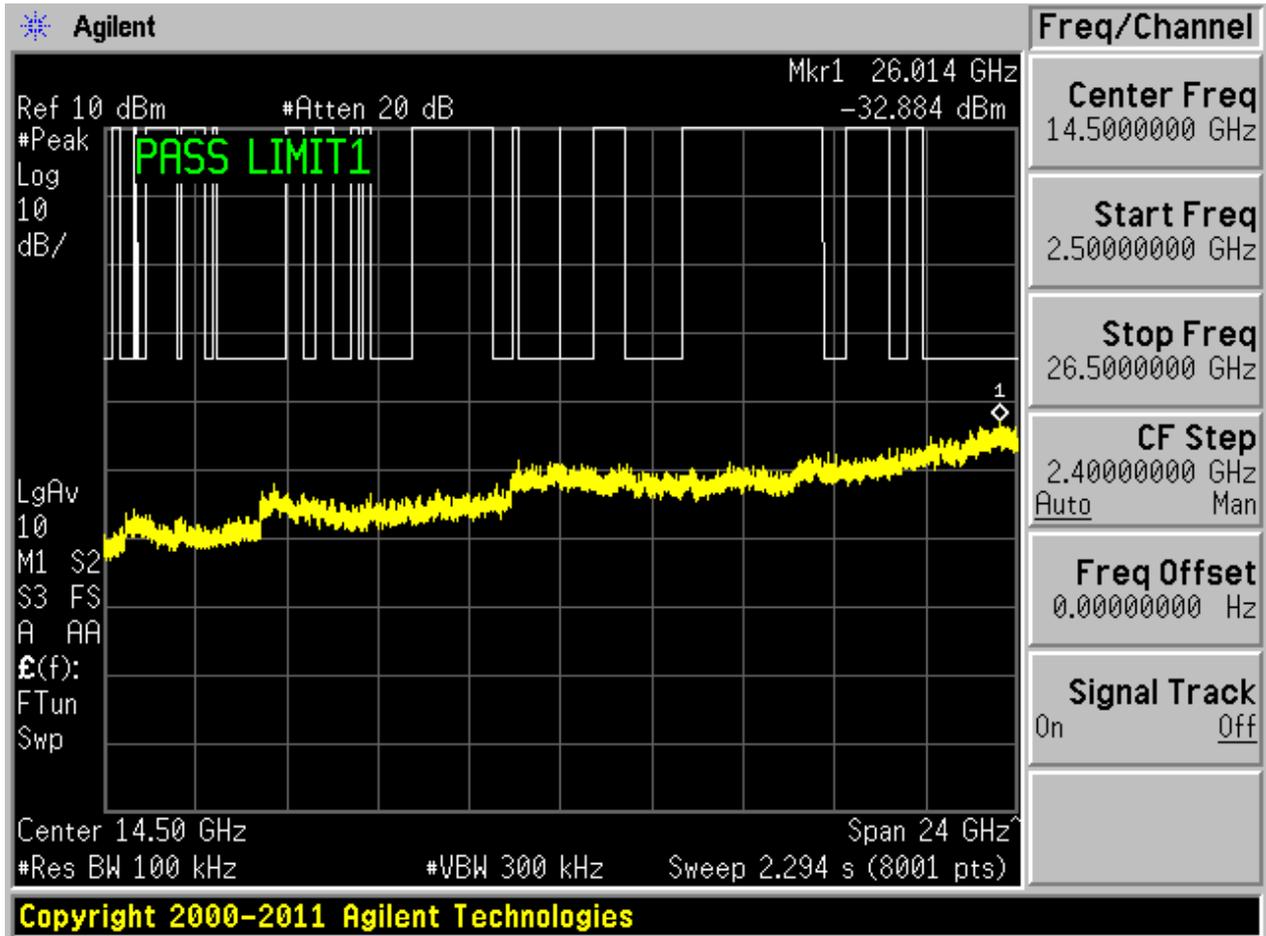
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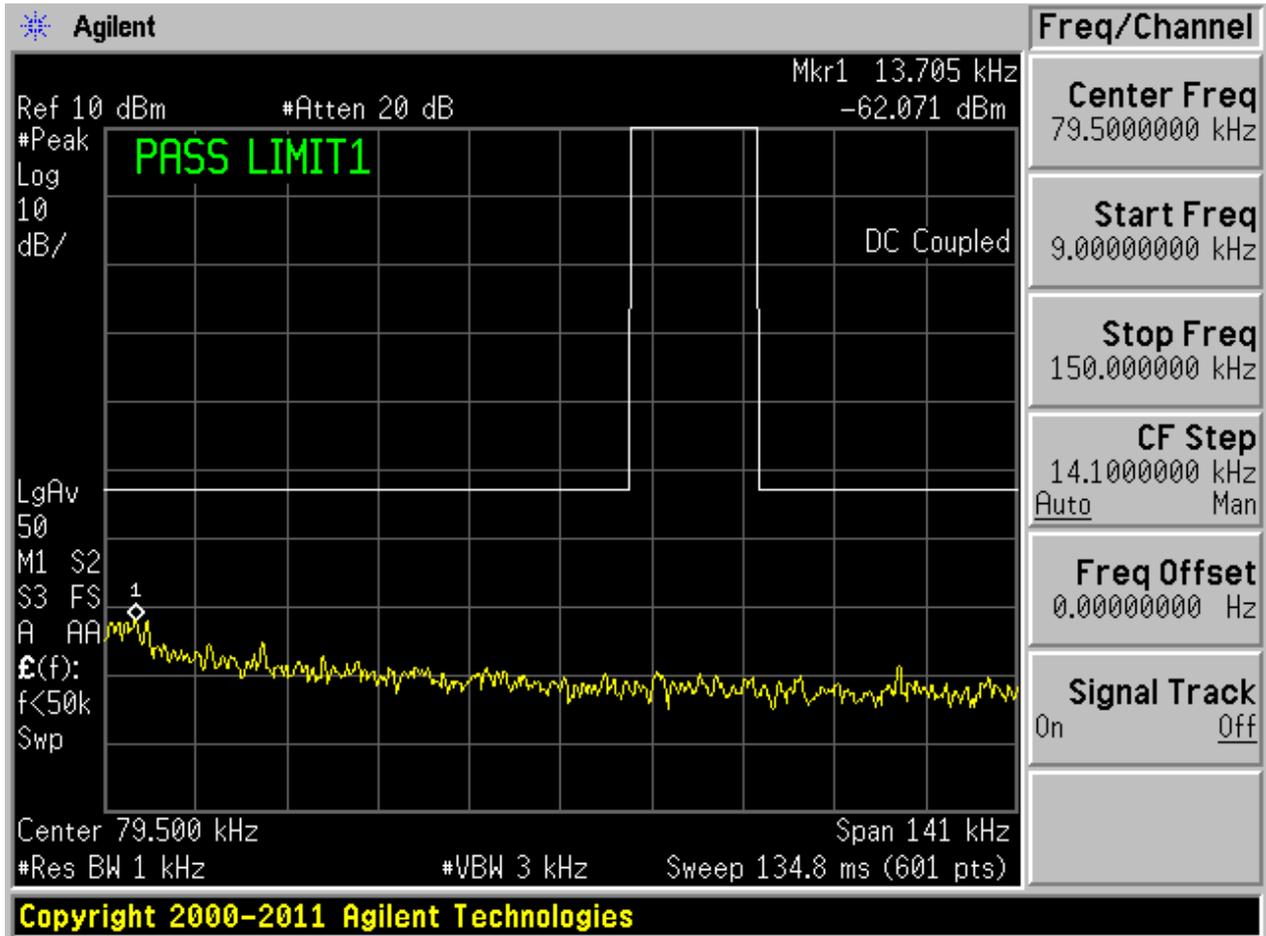


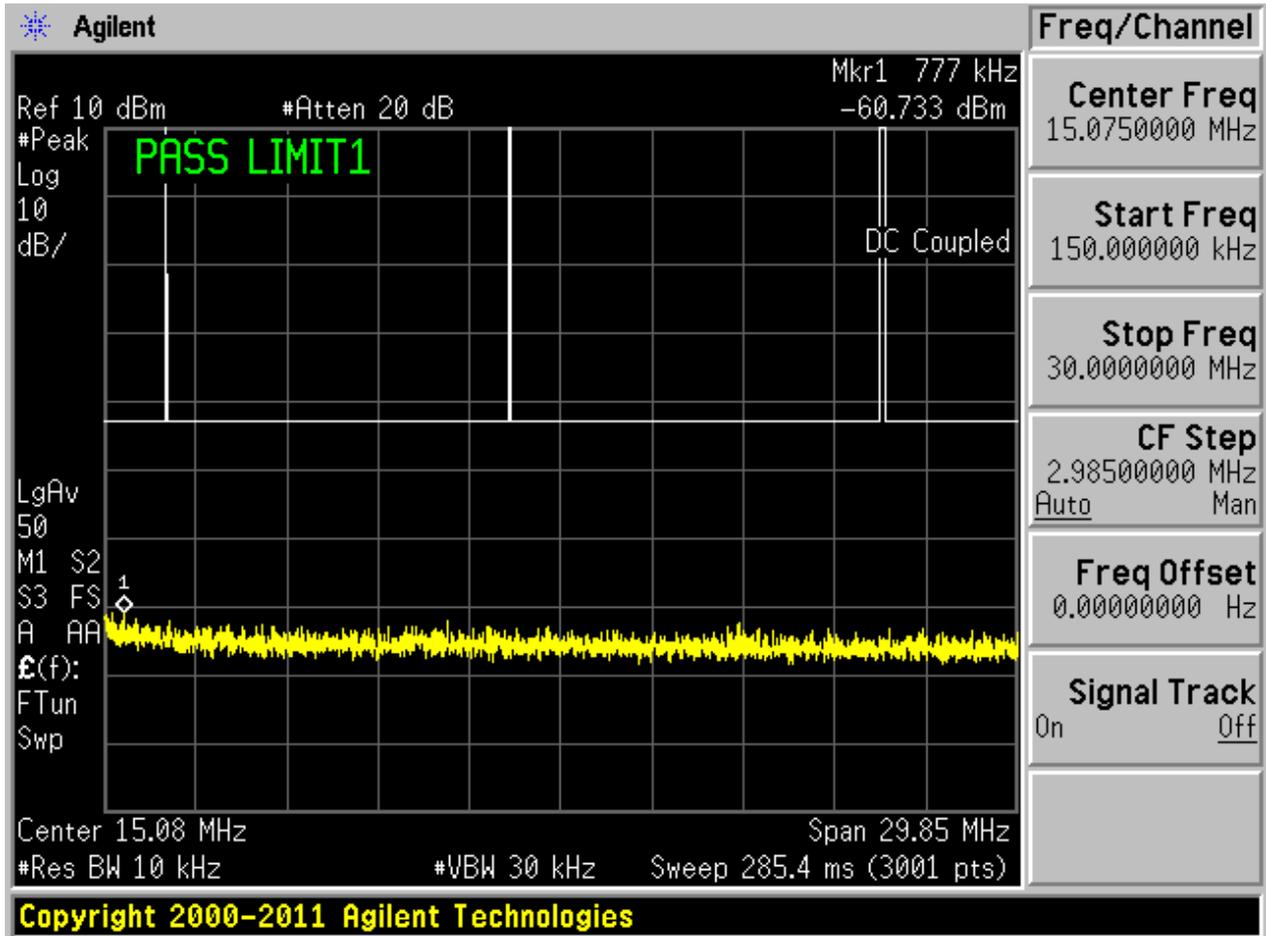


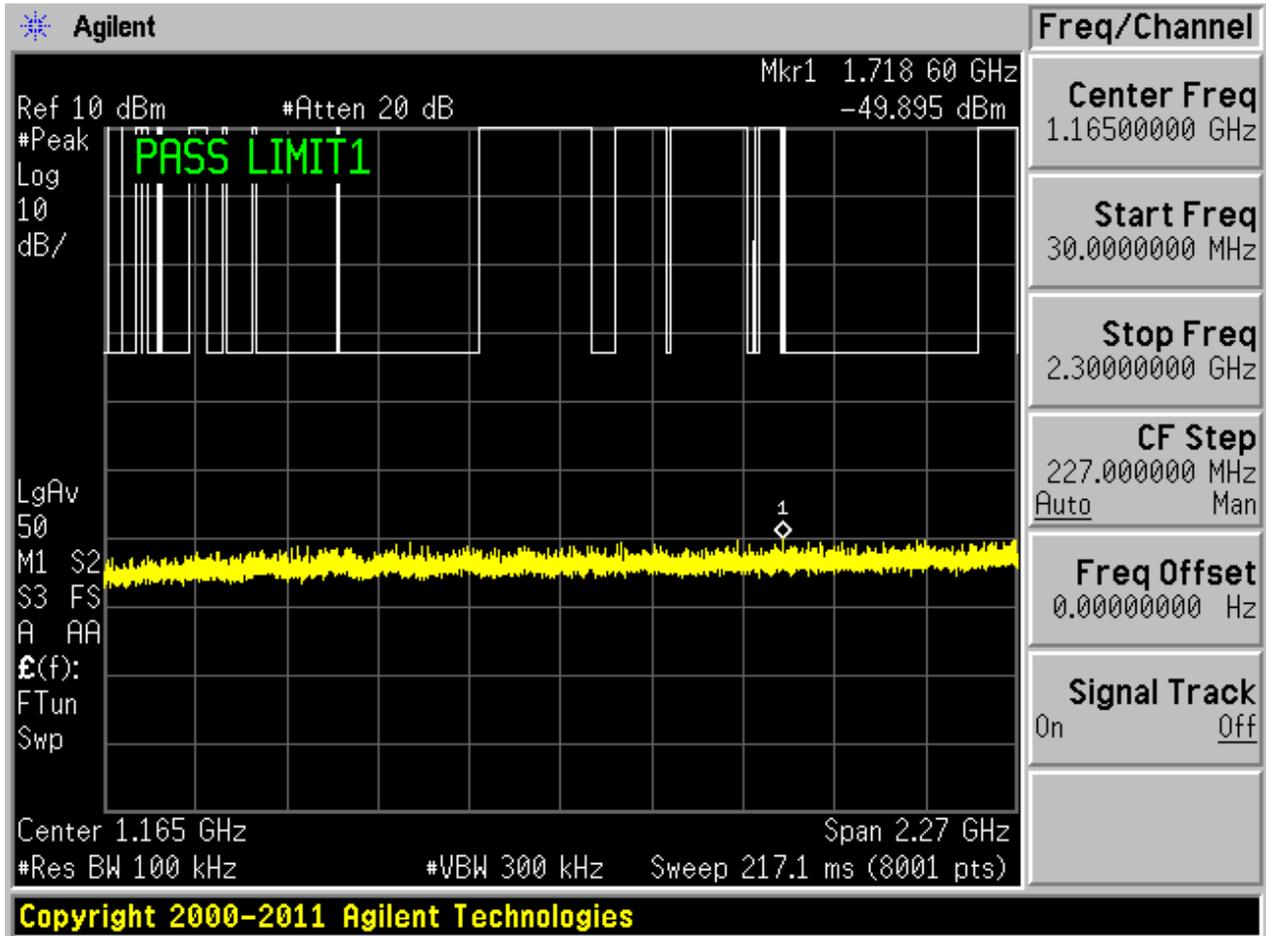
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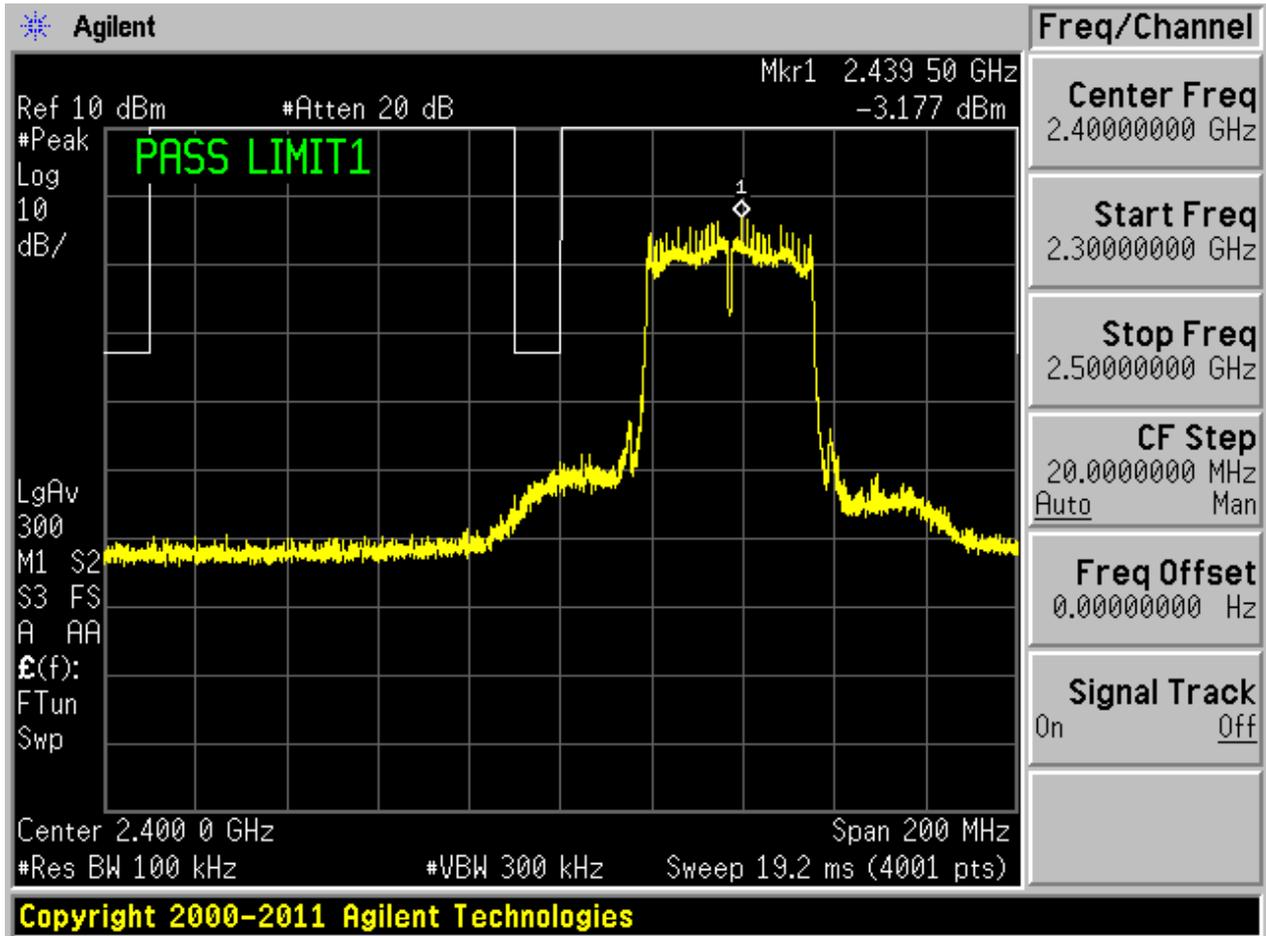
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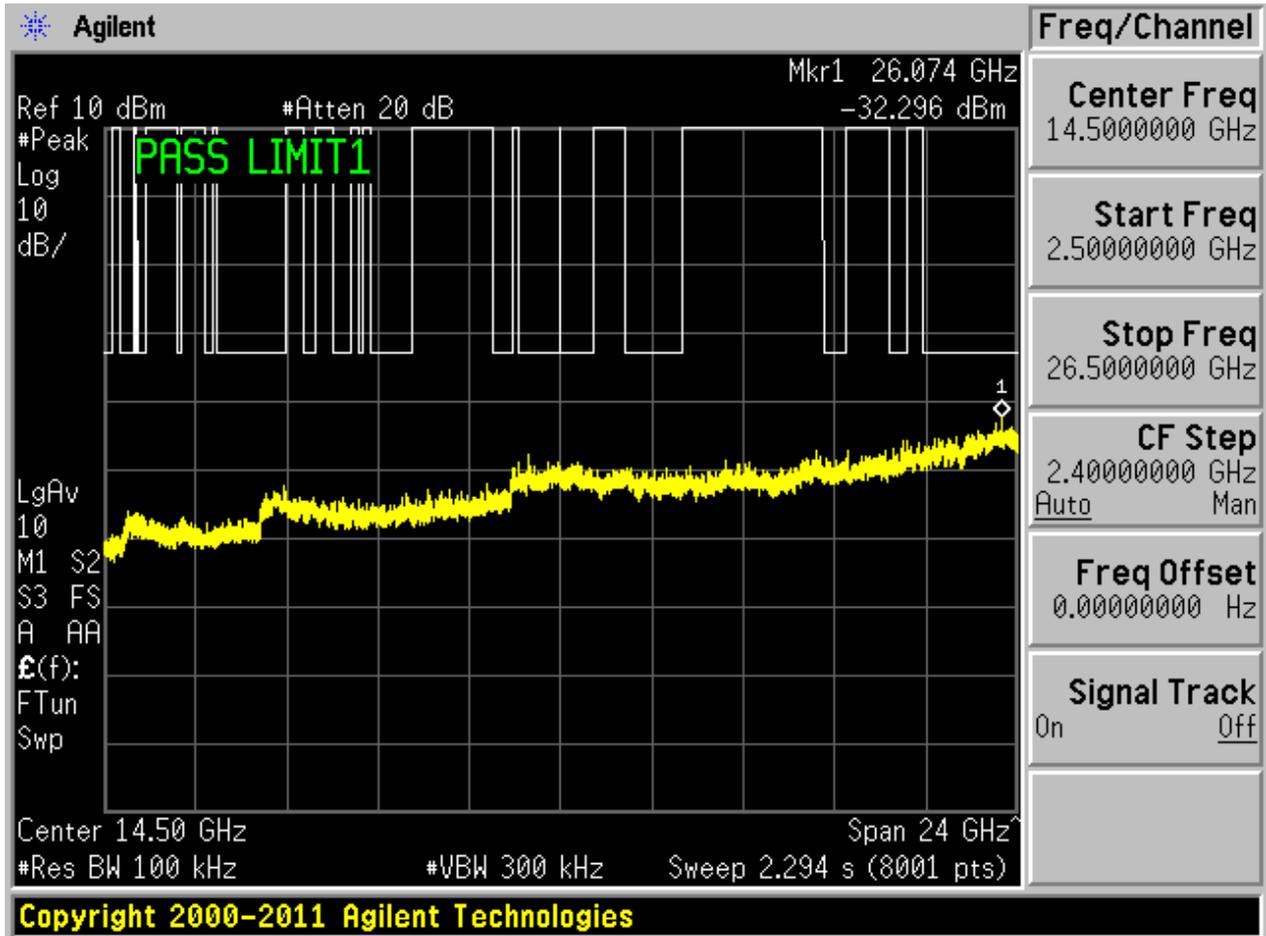






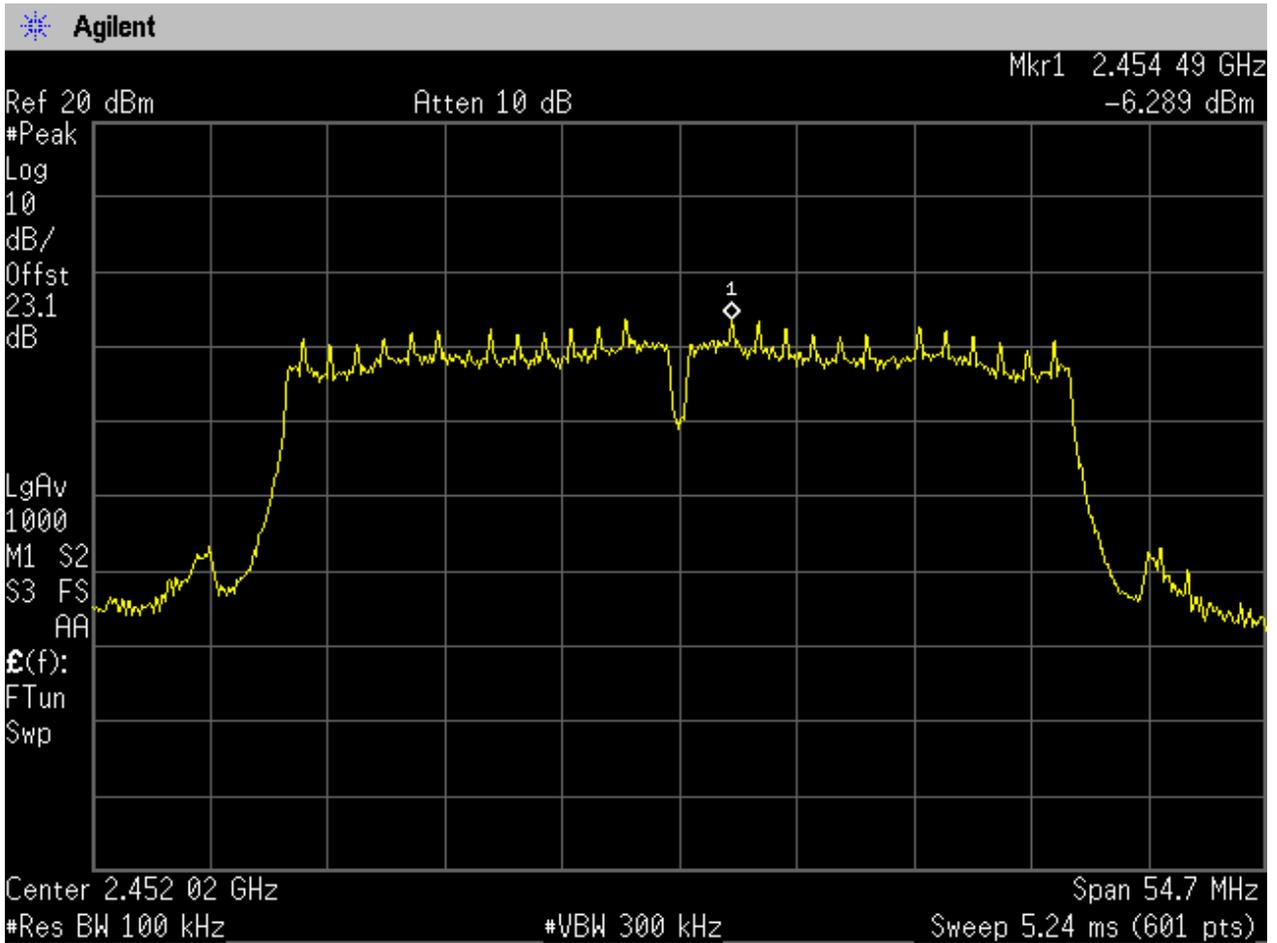




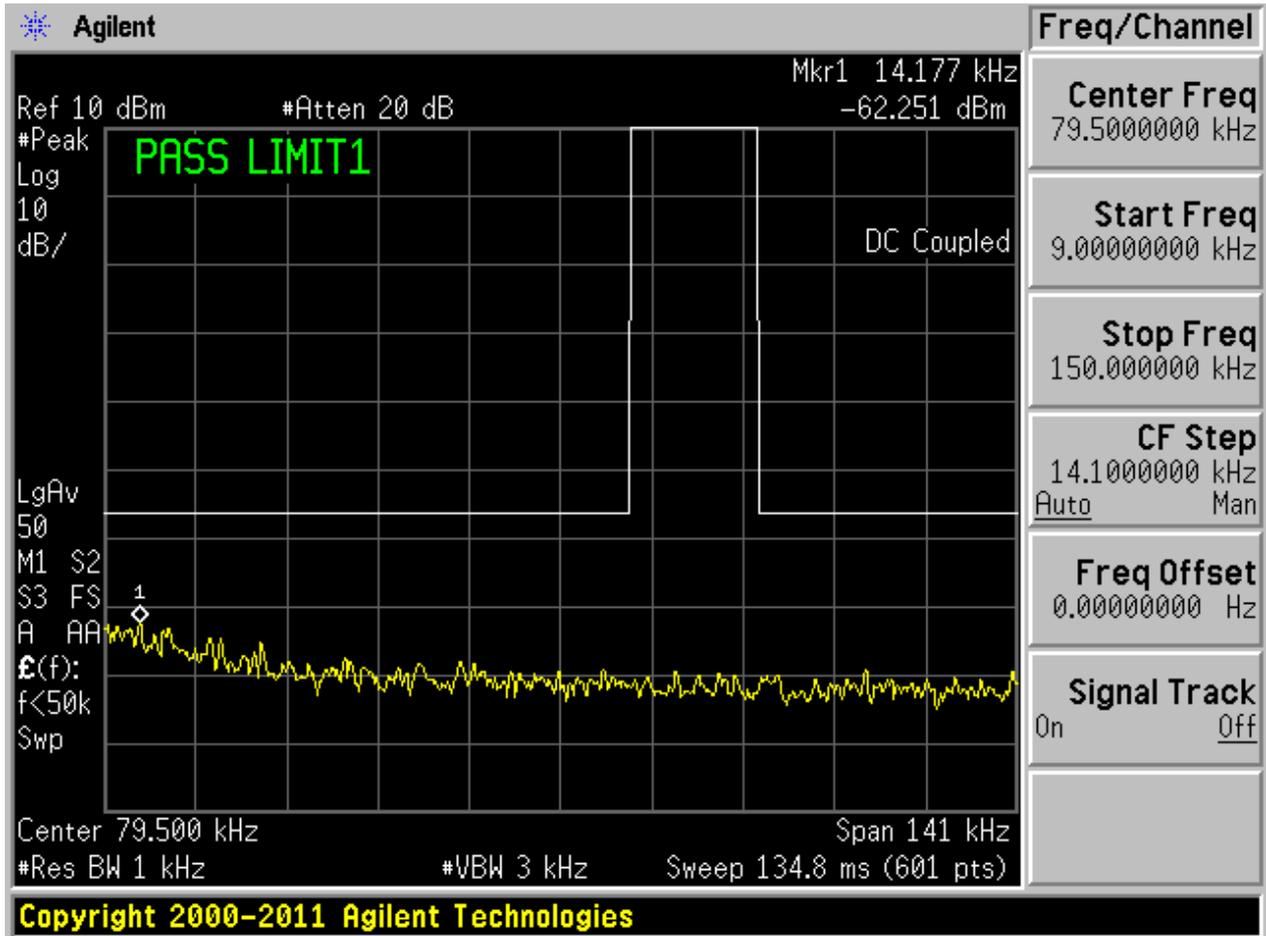


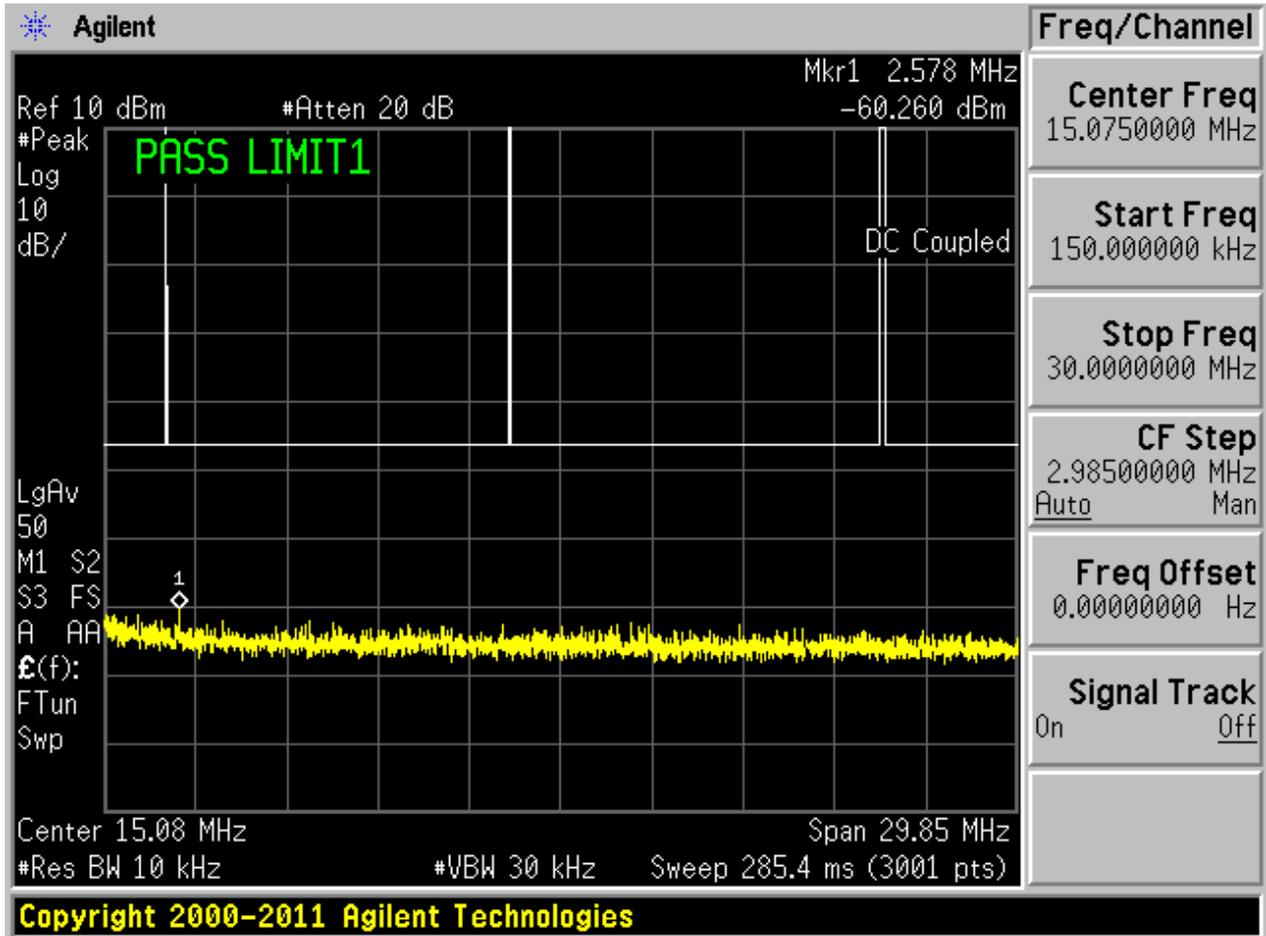
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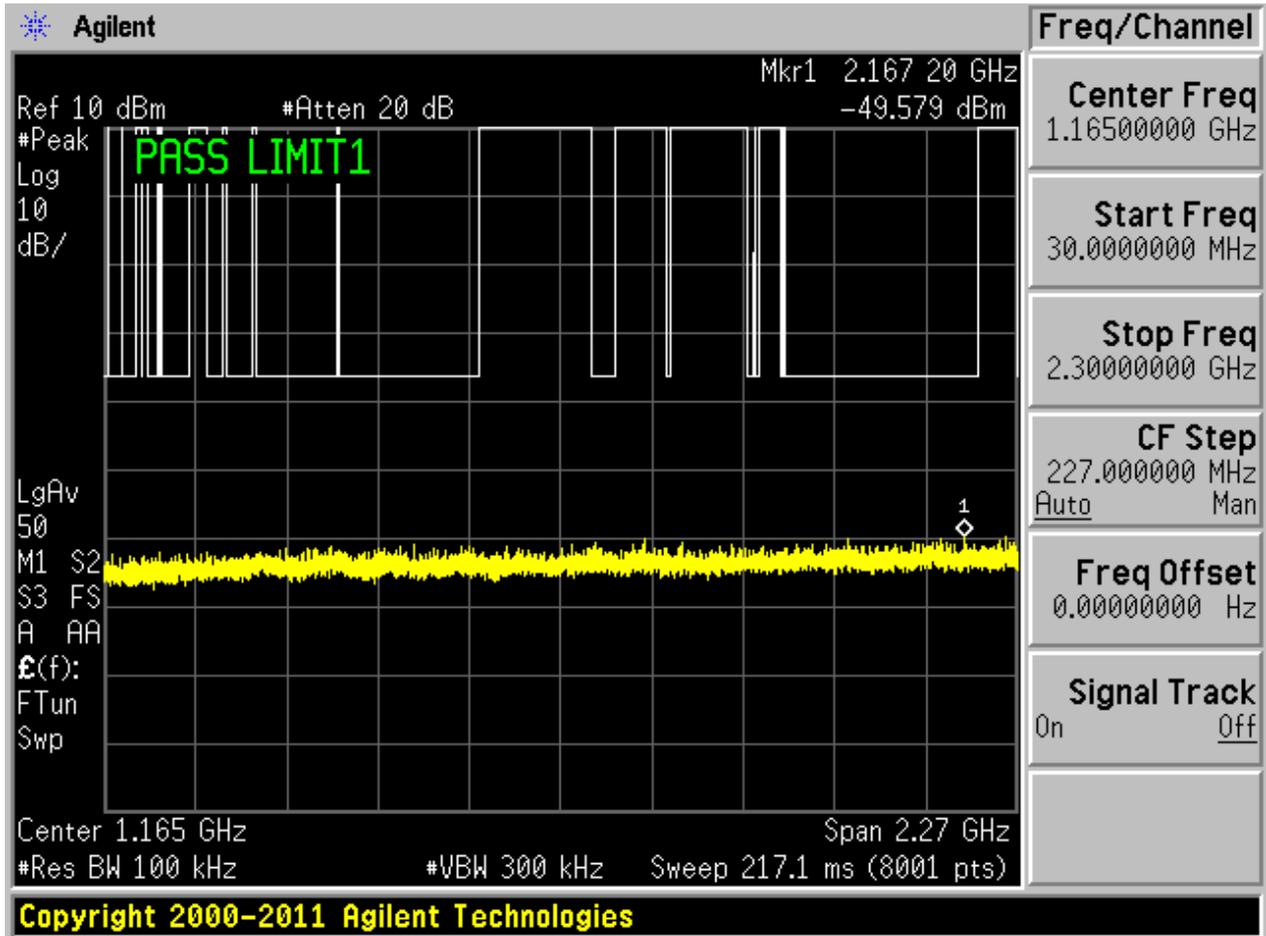
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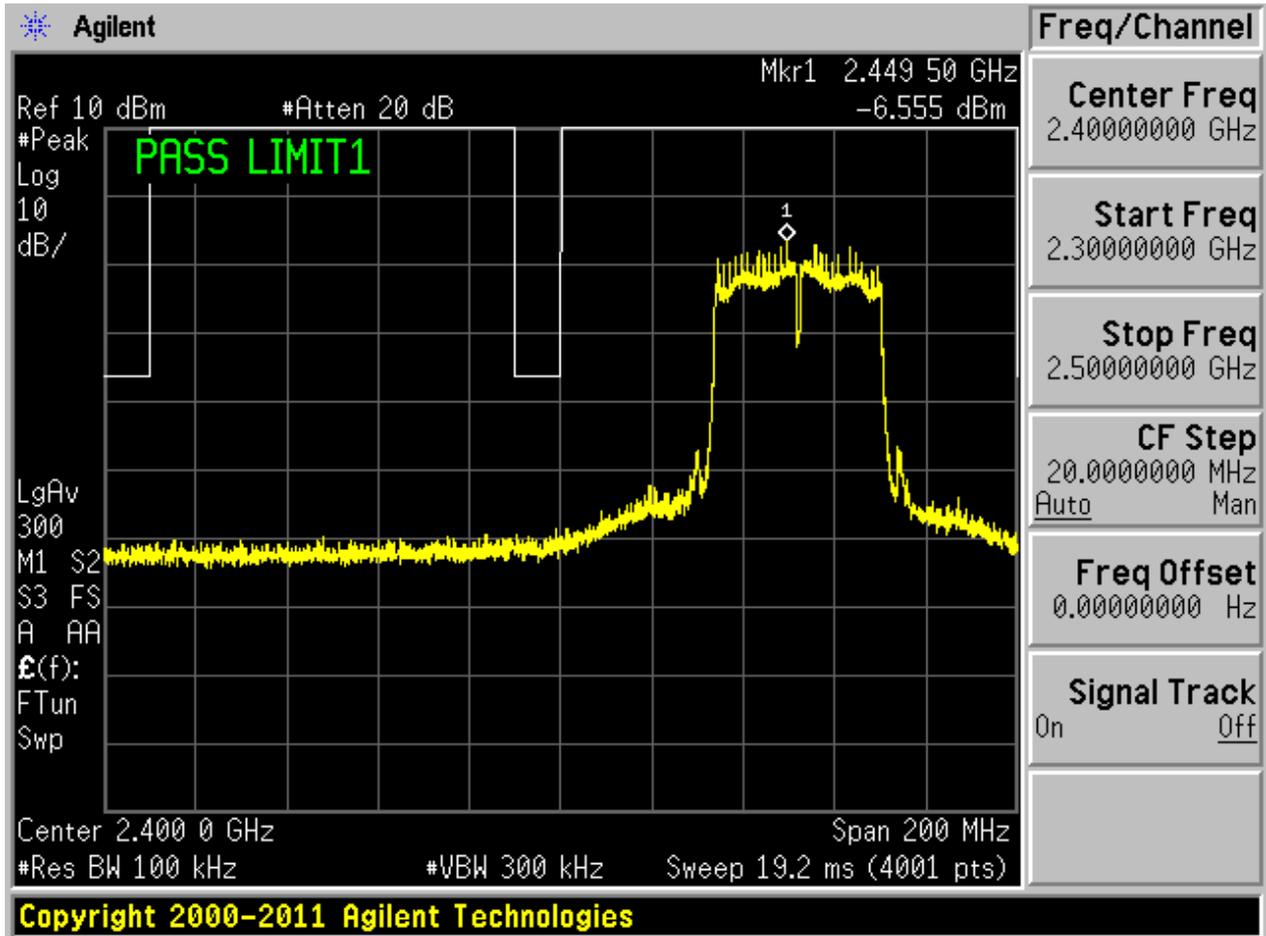


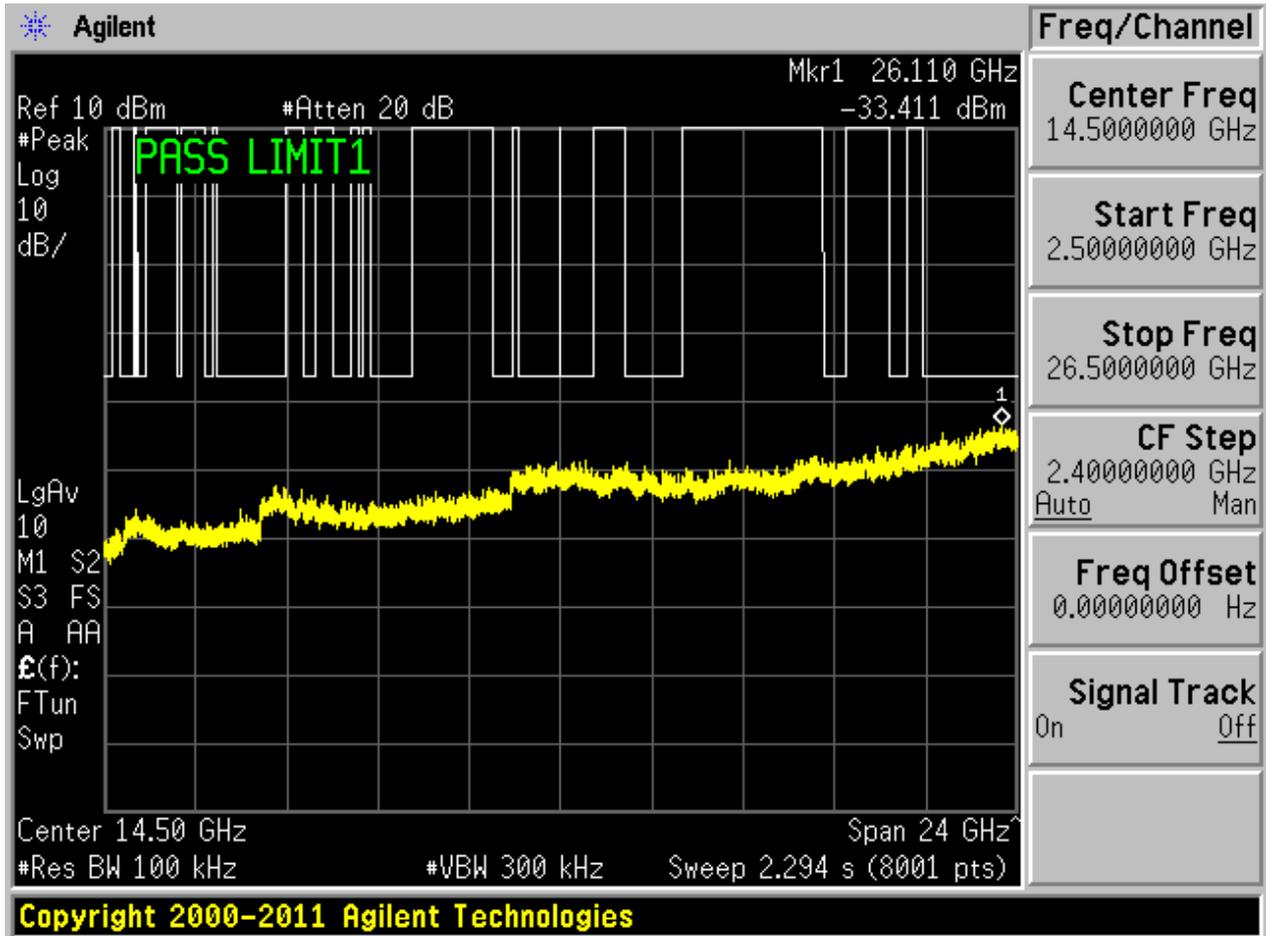
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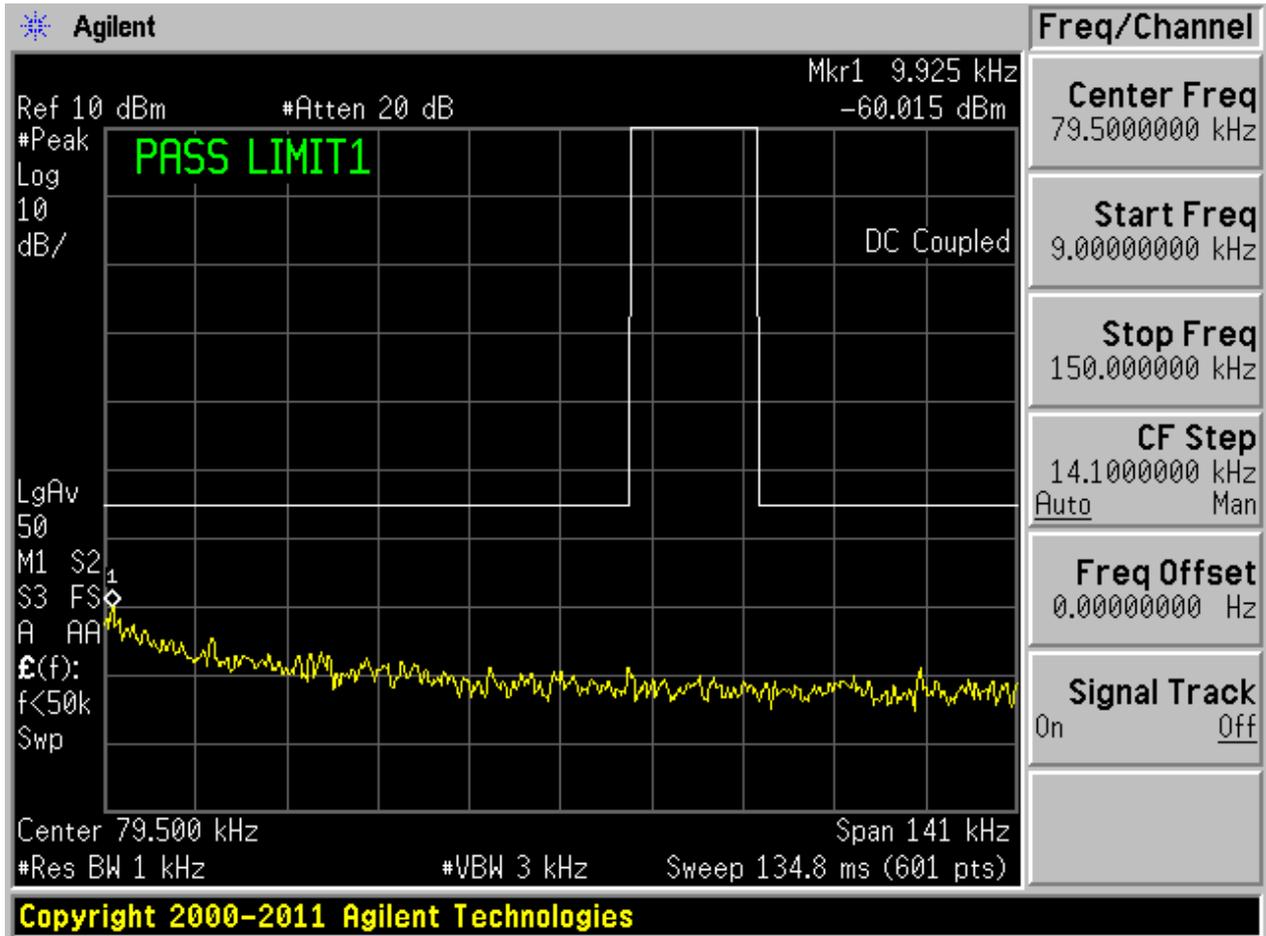


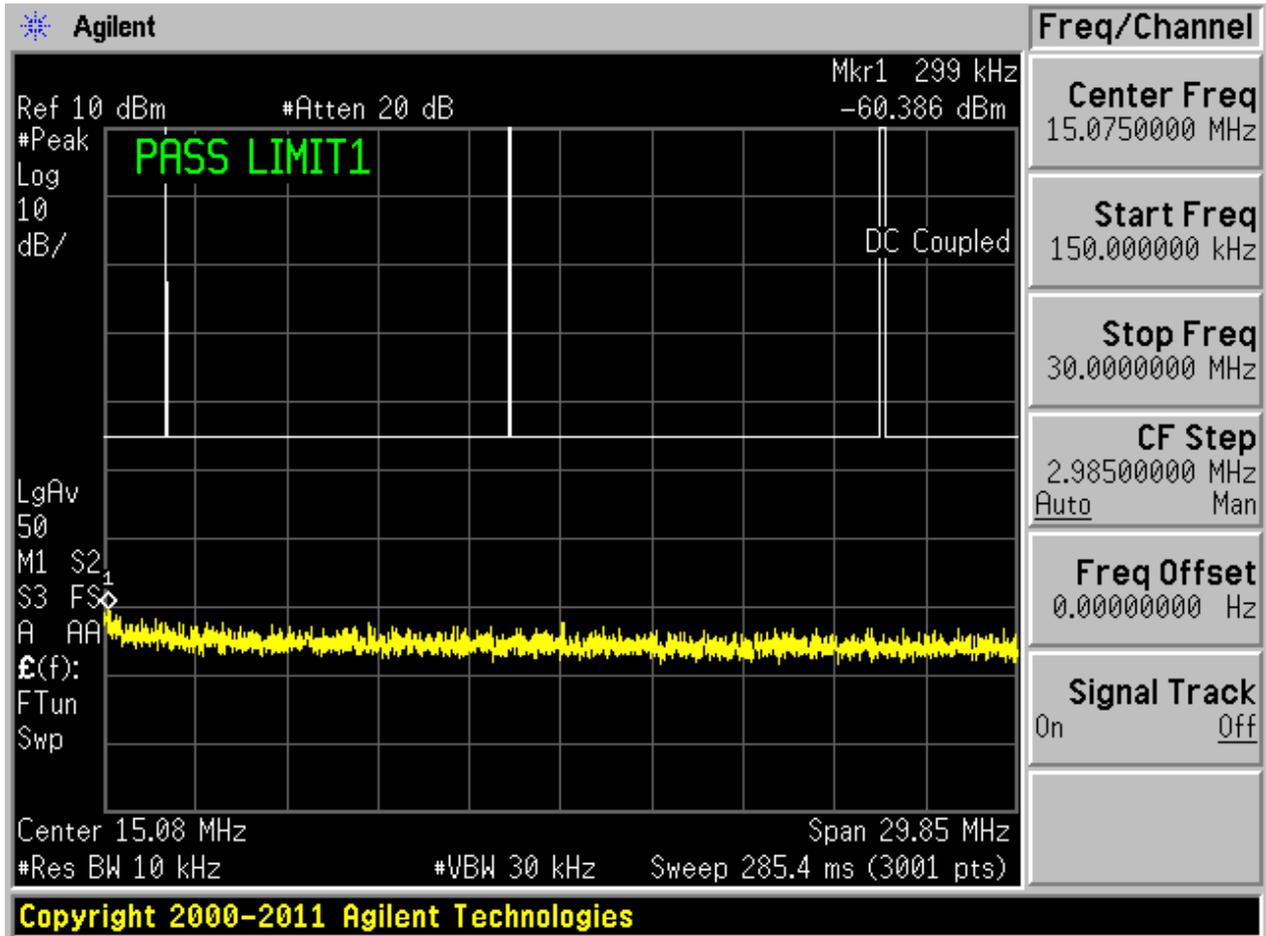


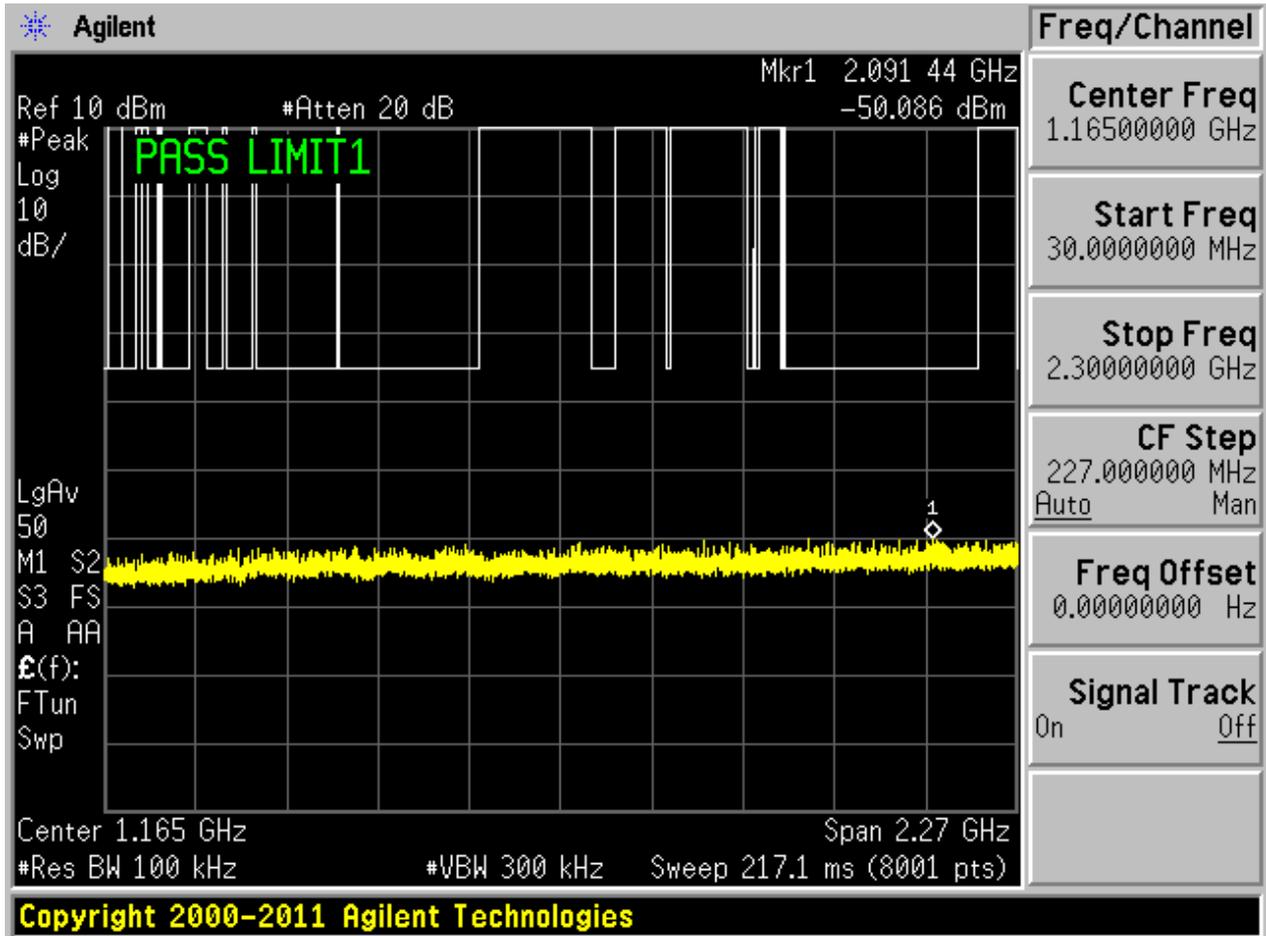
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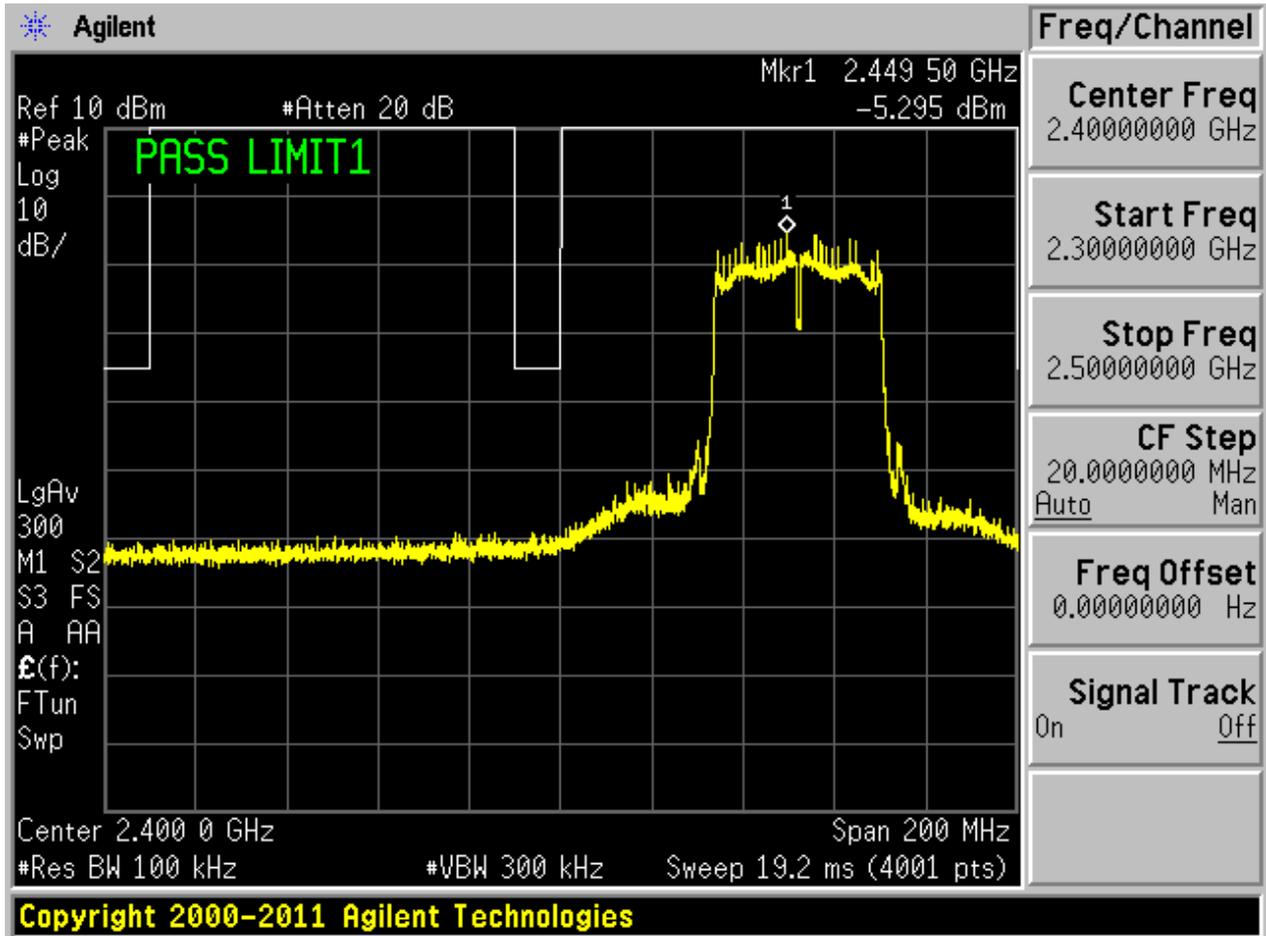
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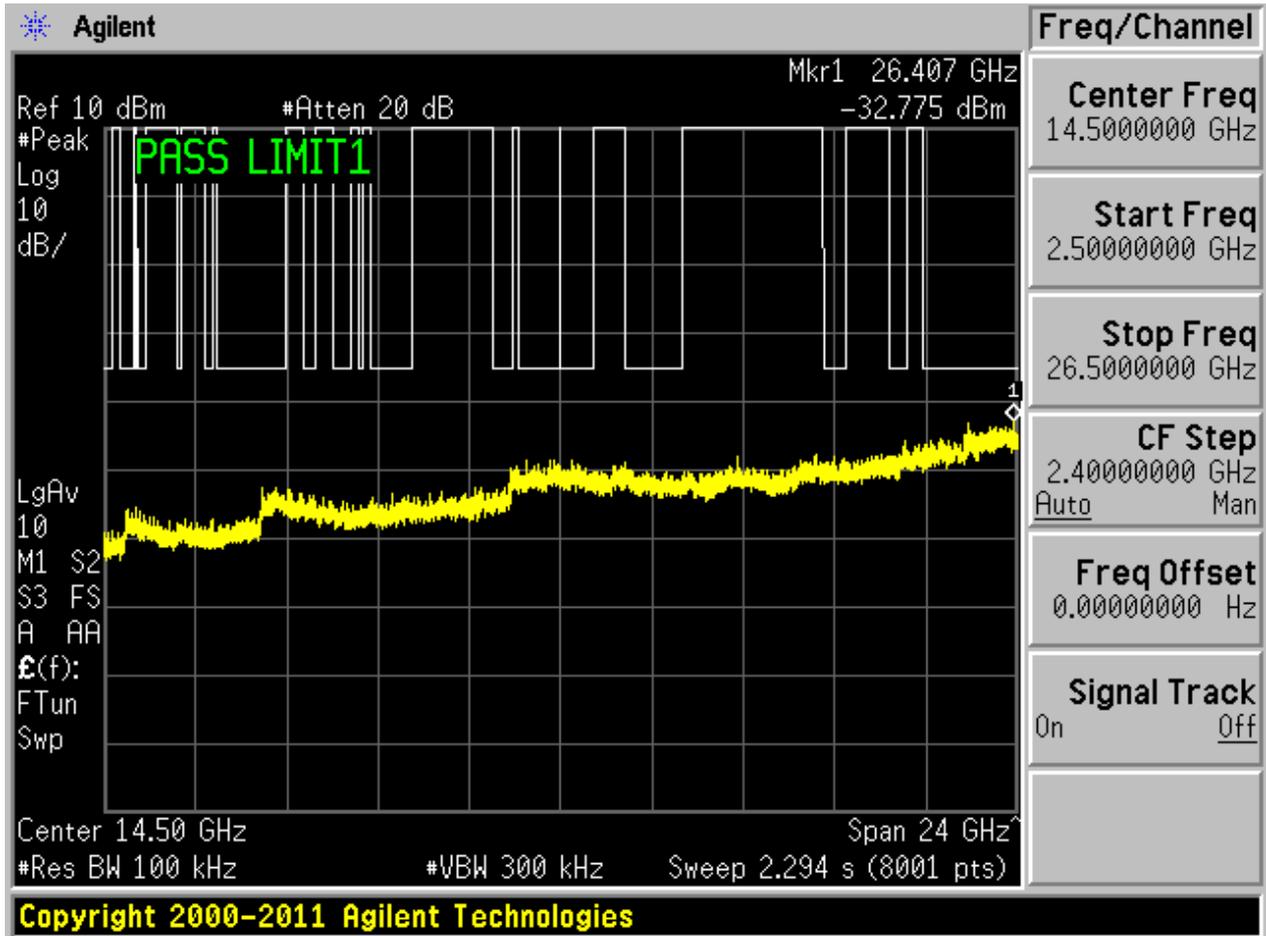










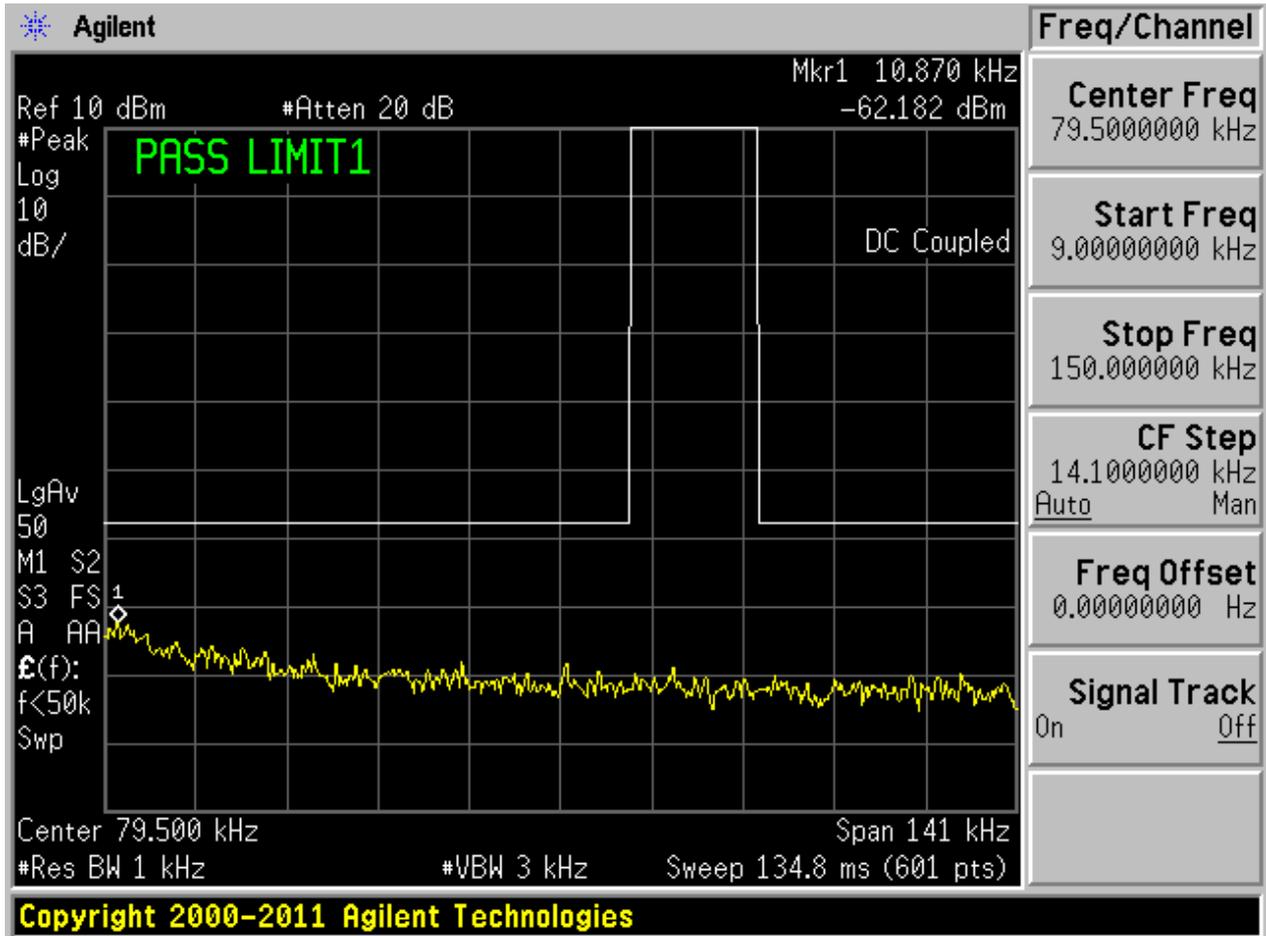


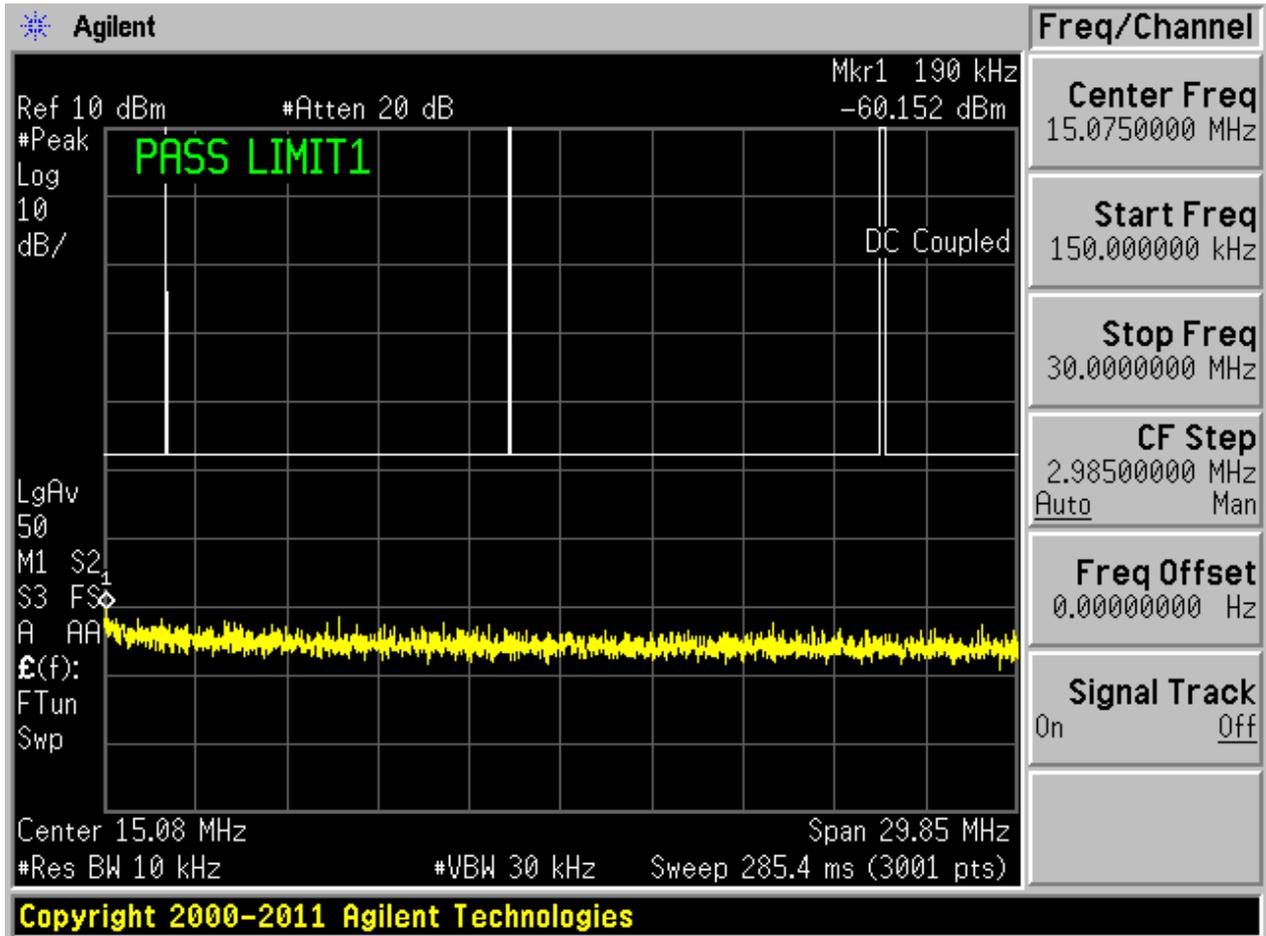
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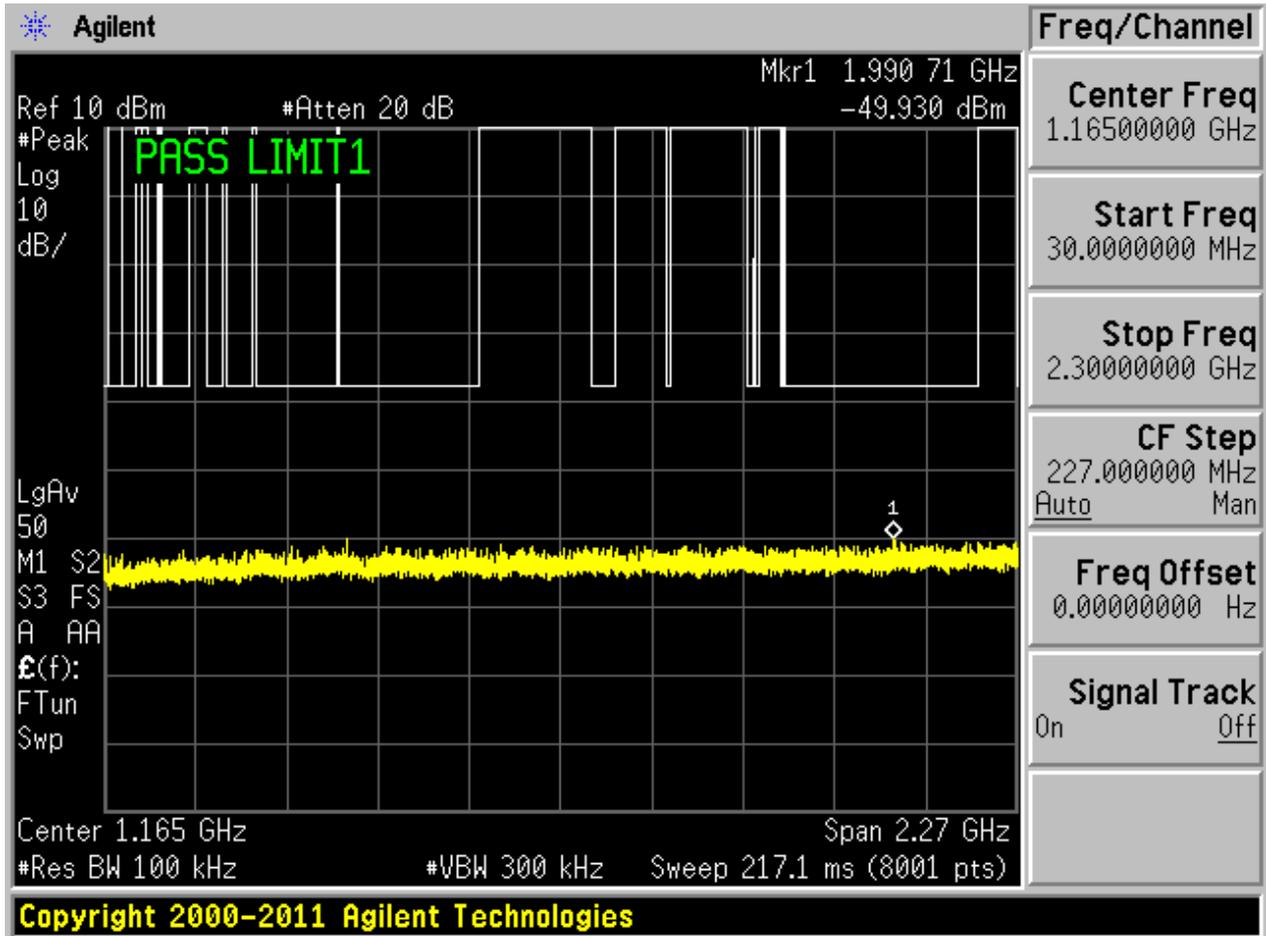
2.28.1 Ant 1

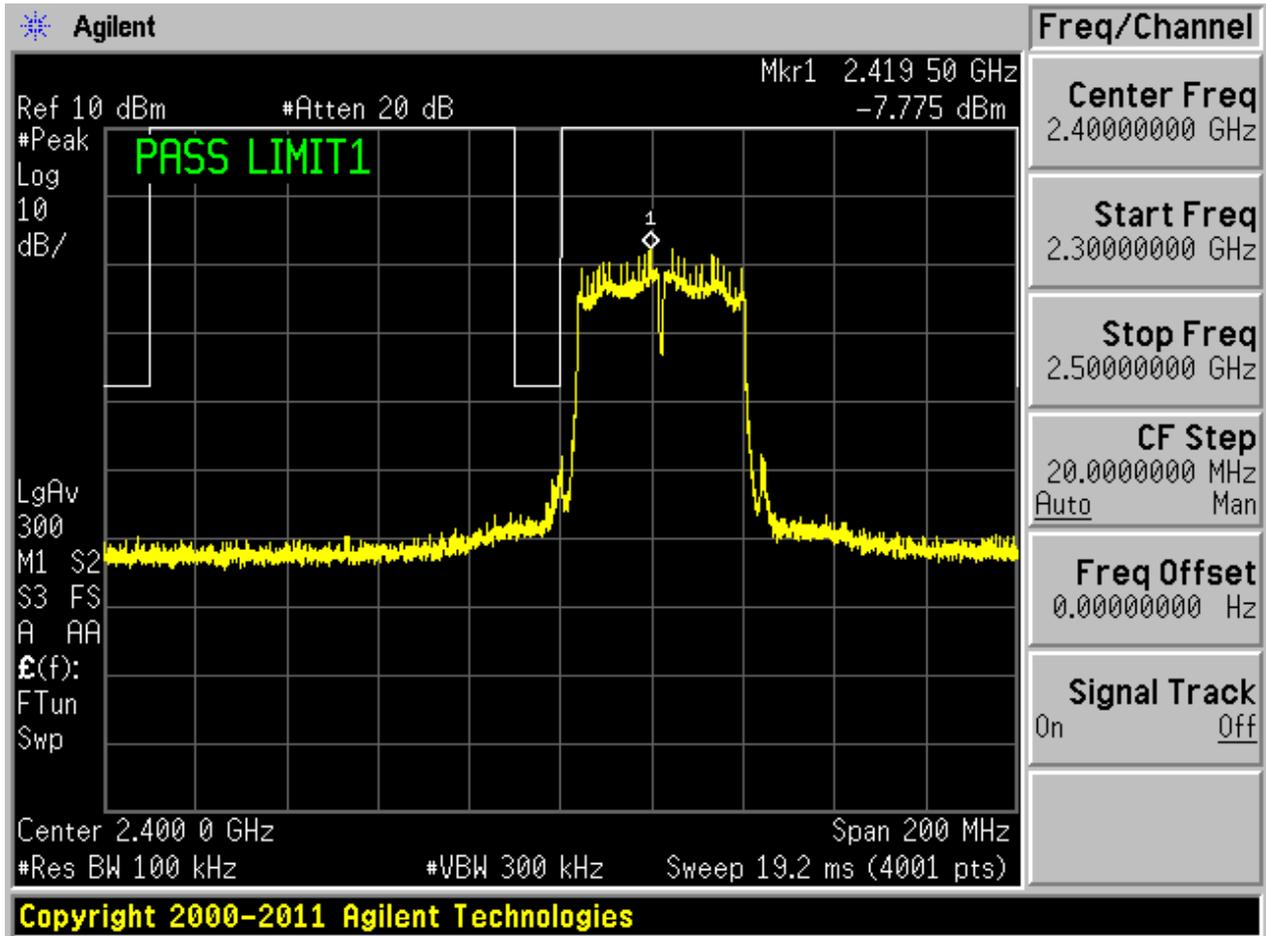
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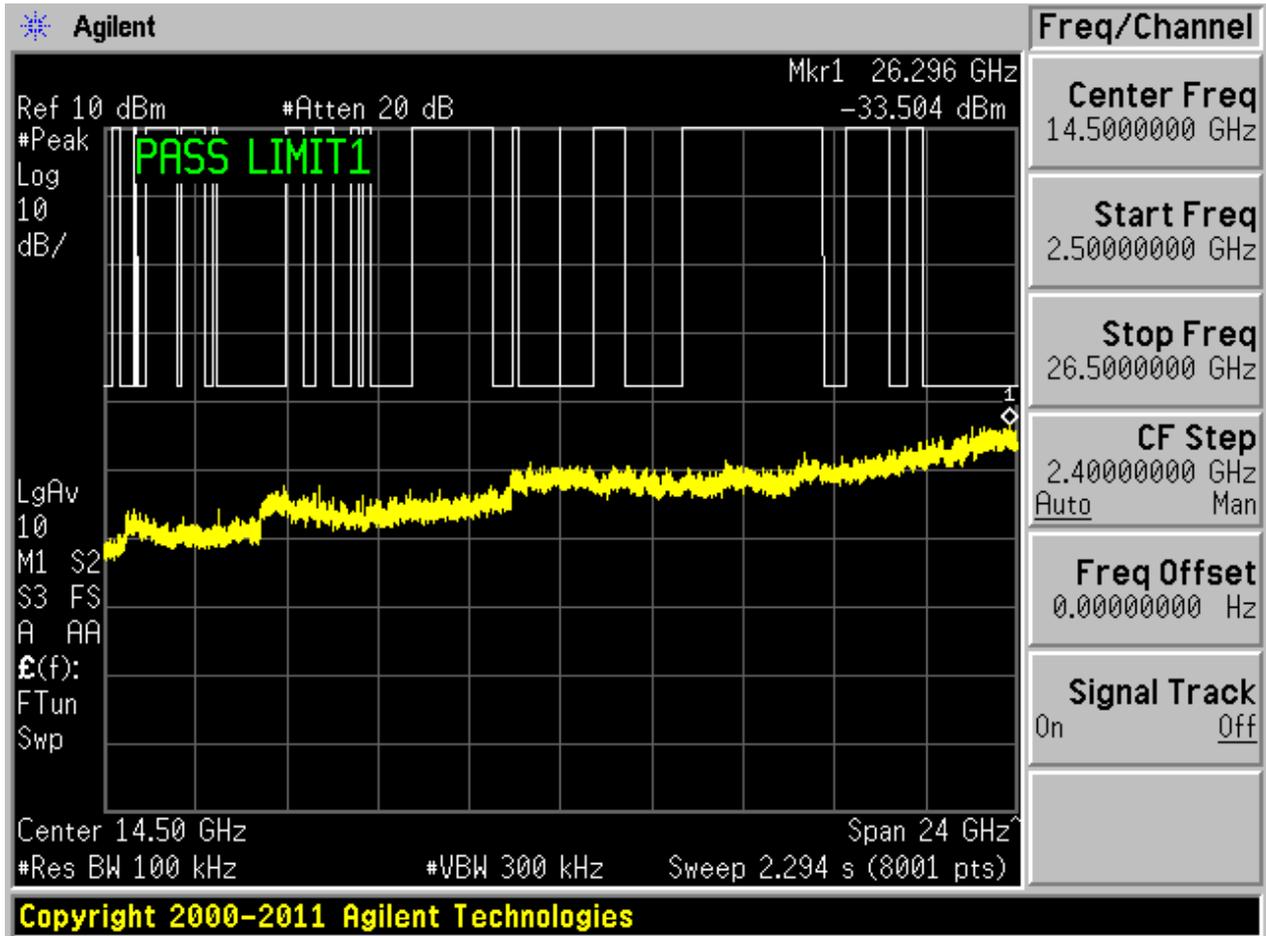






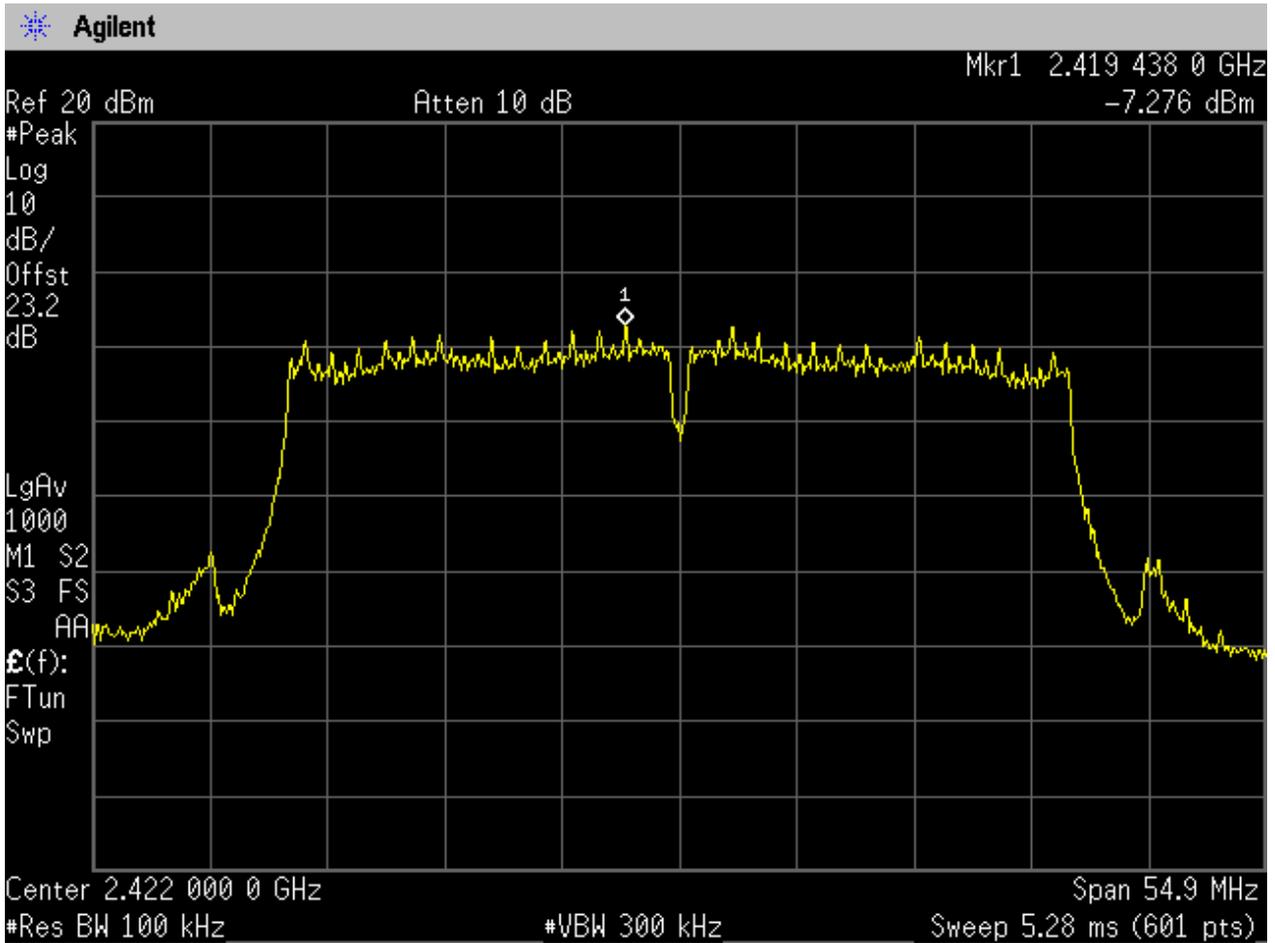




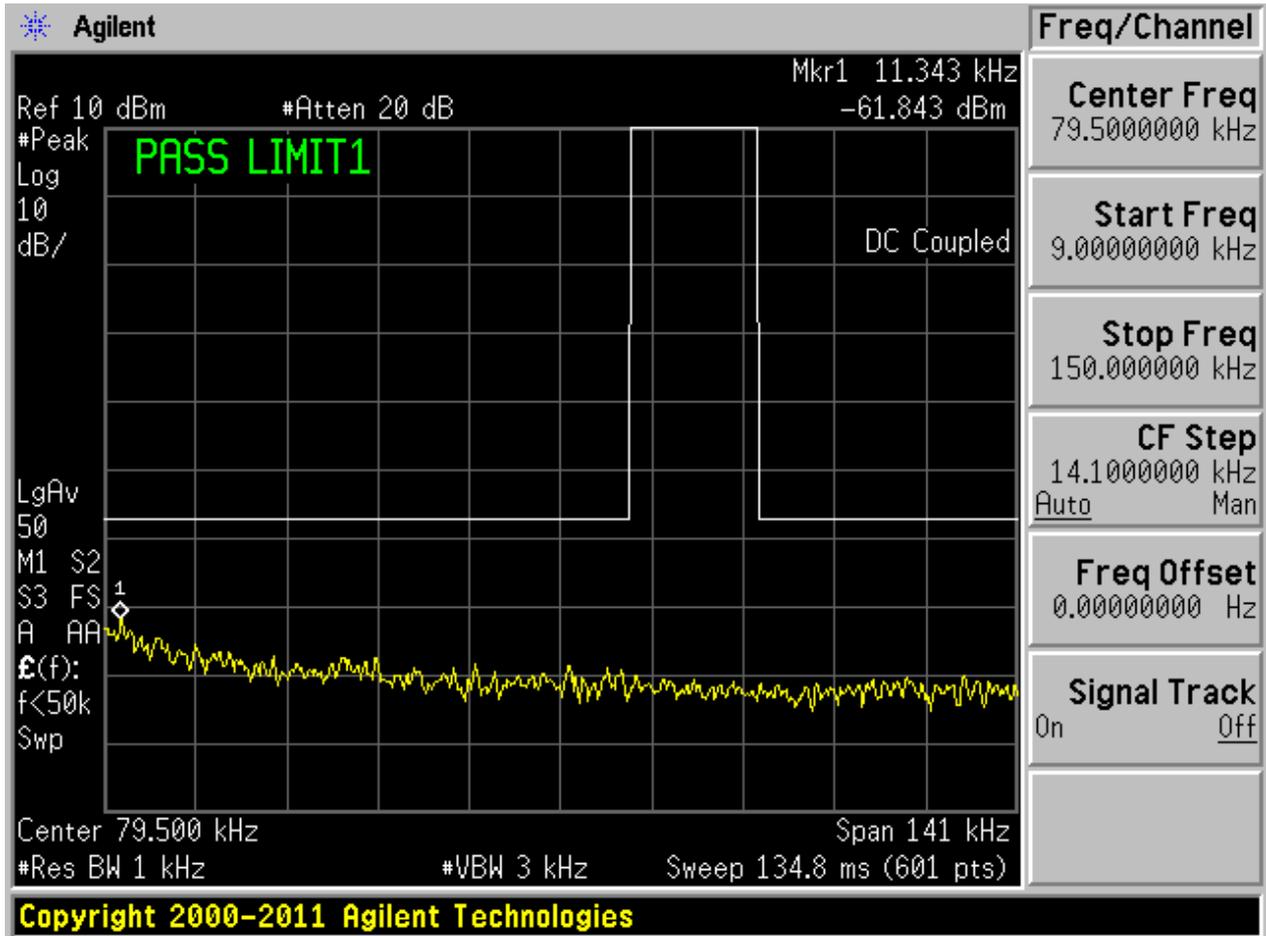


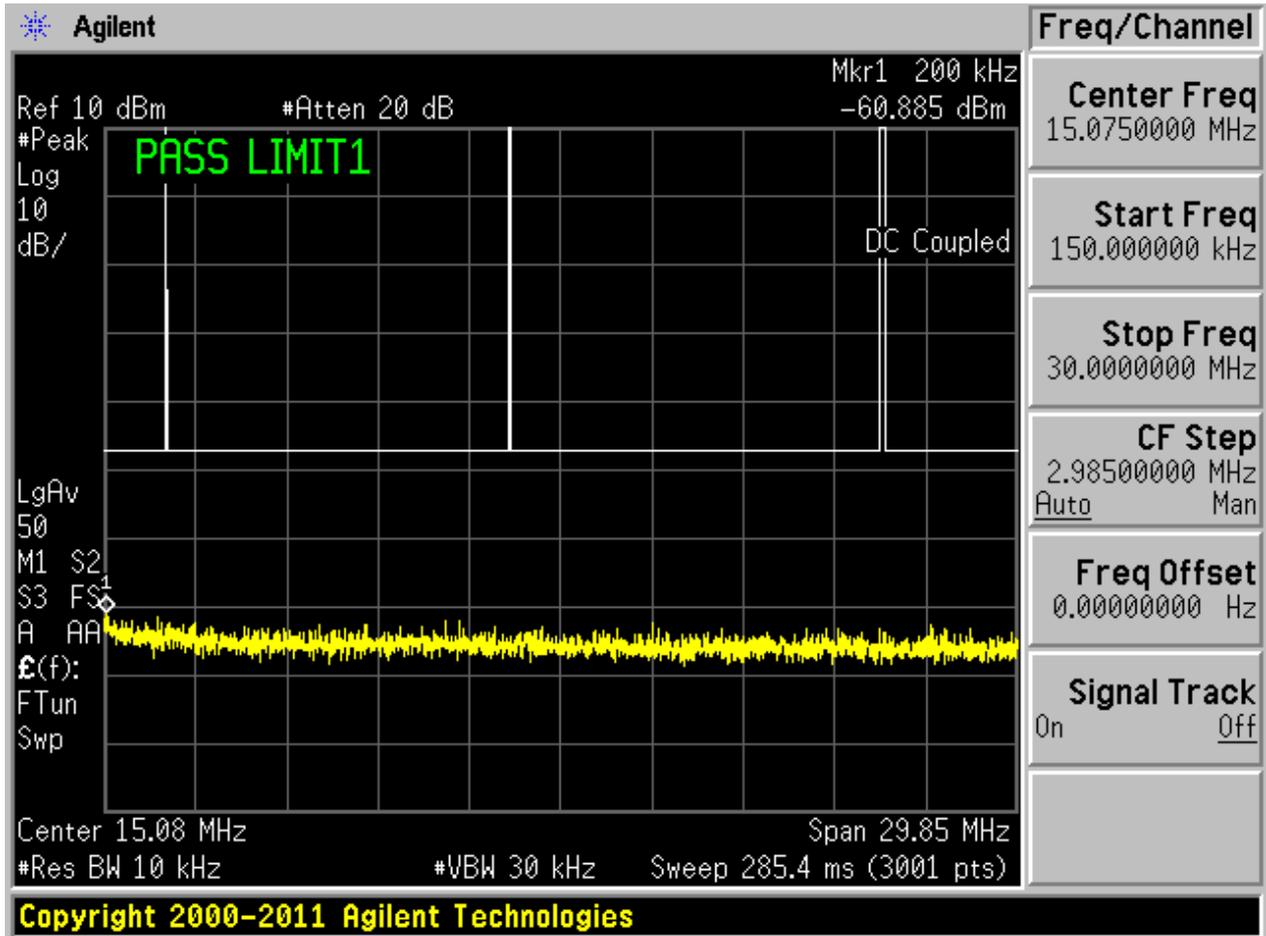
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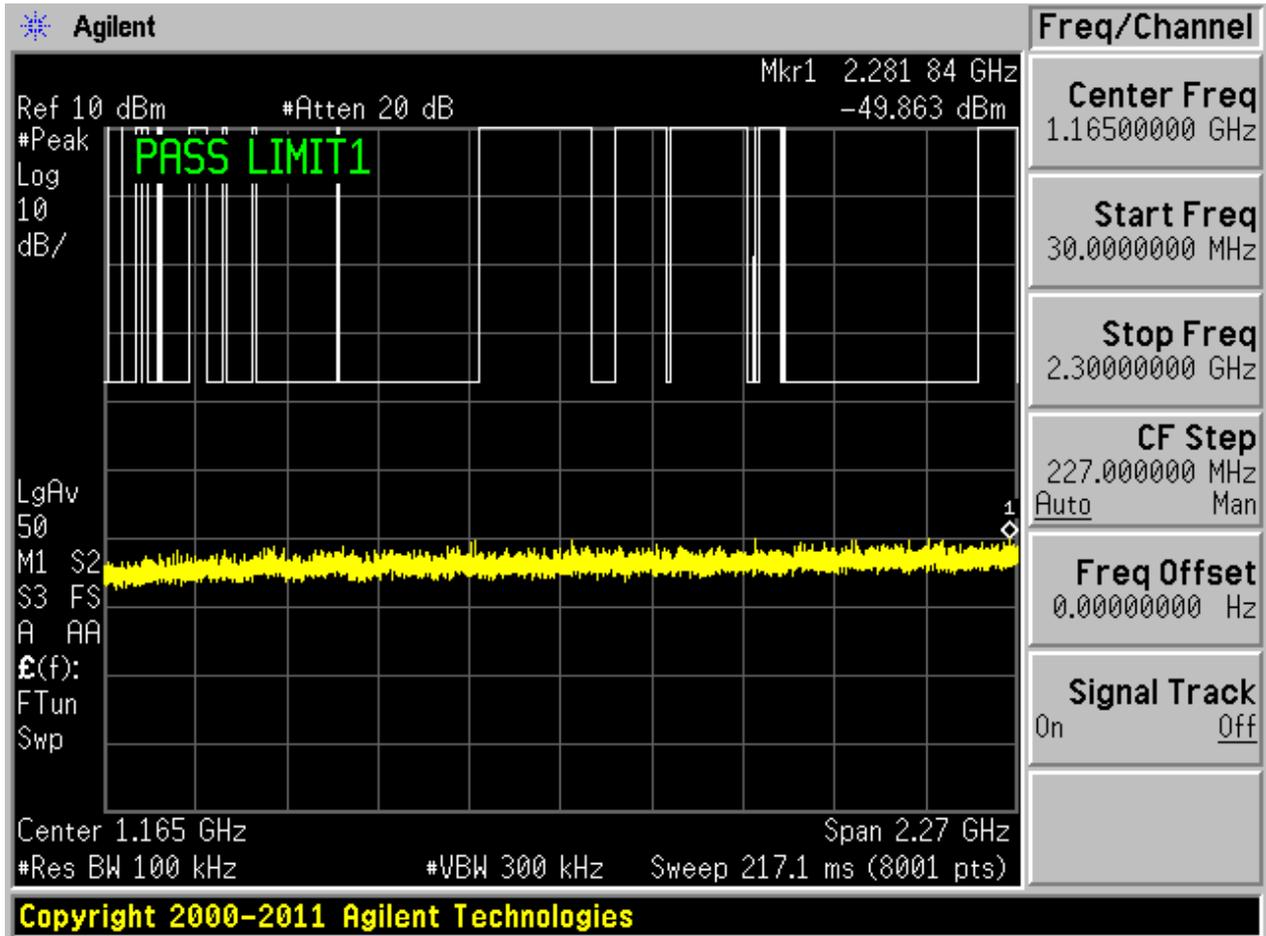
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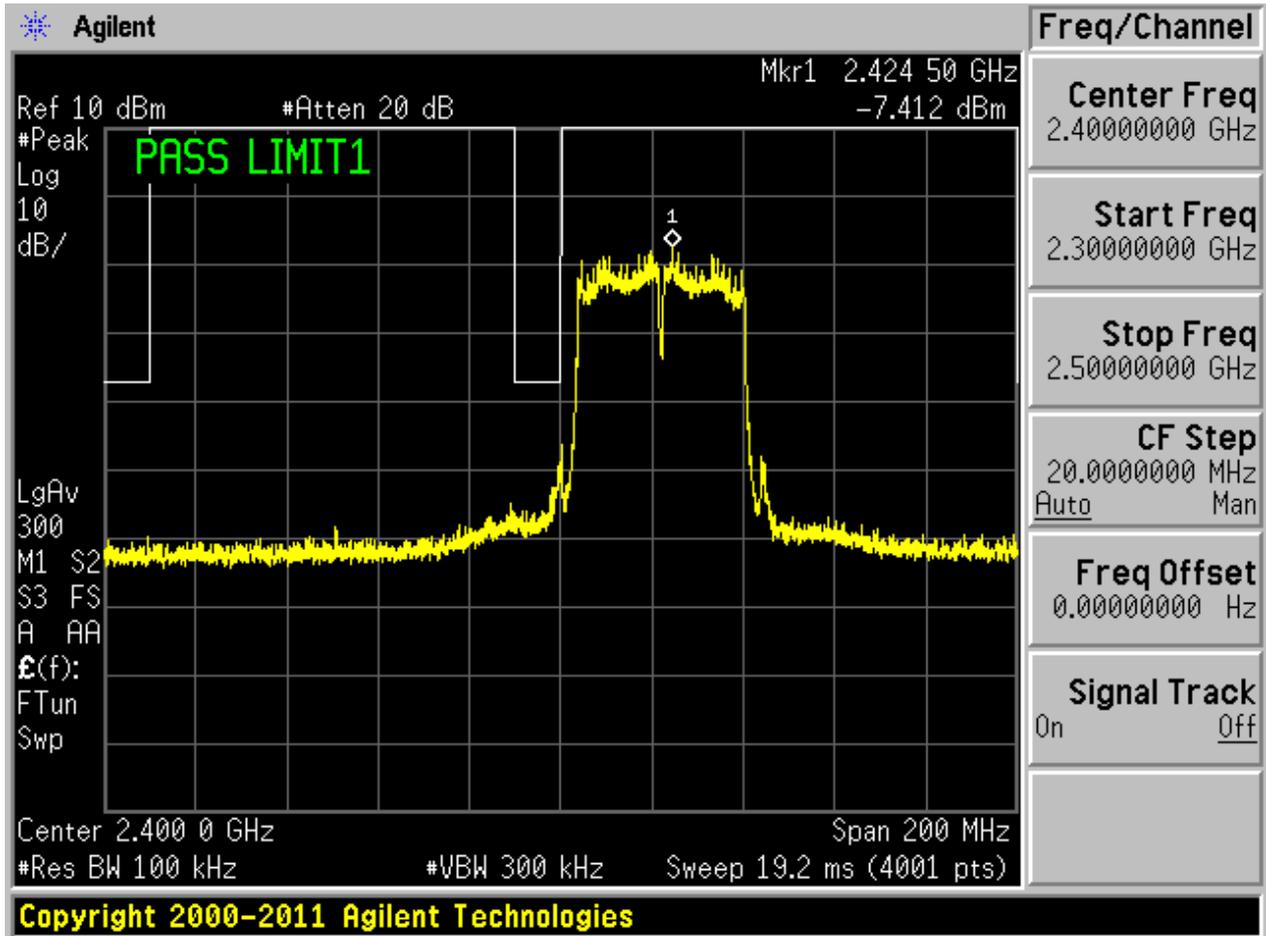


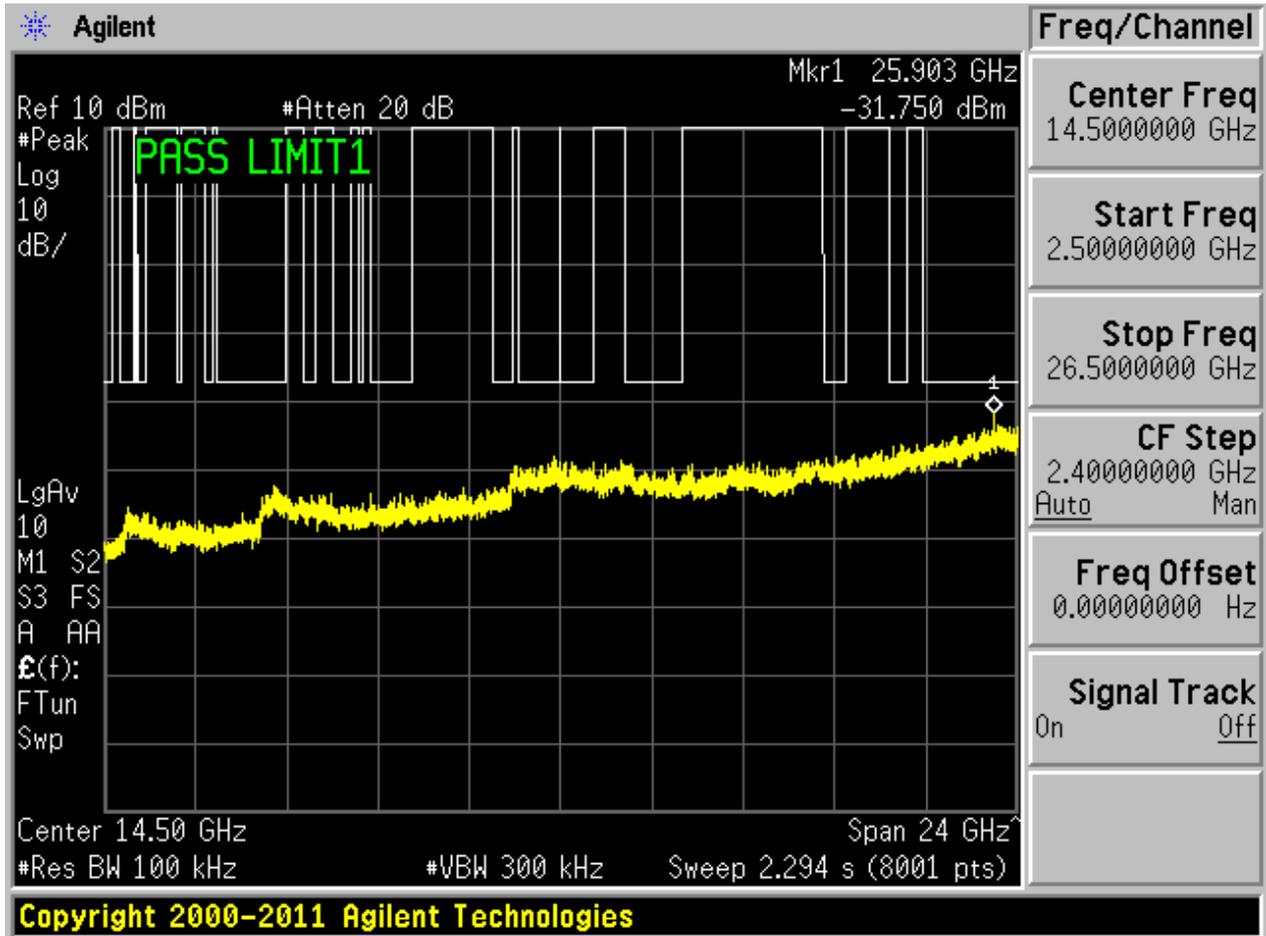
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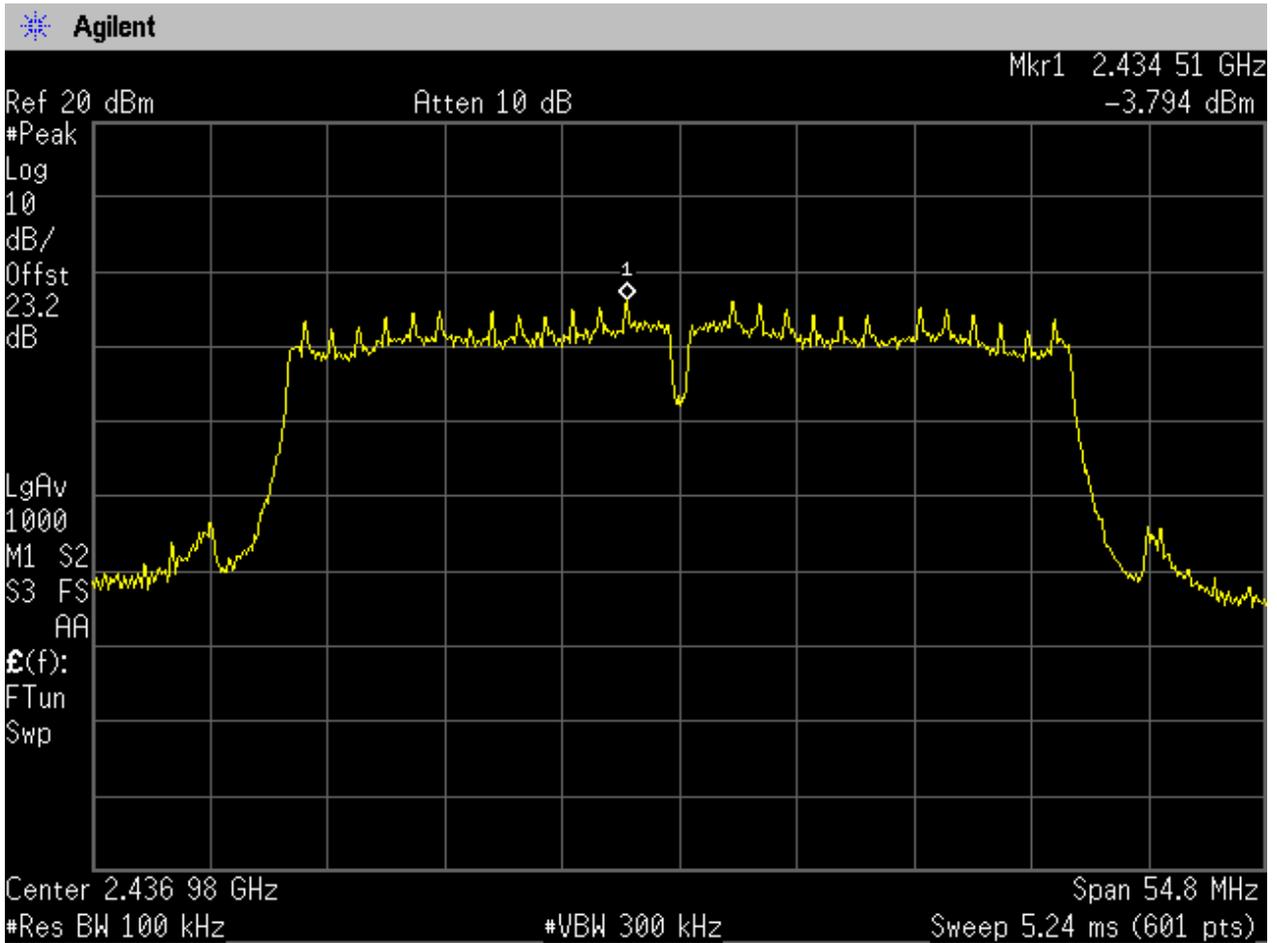




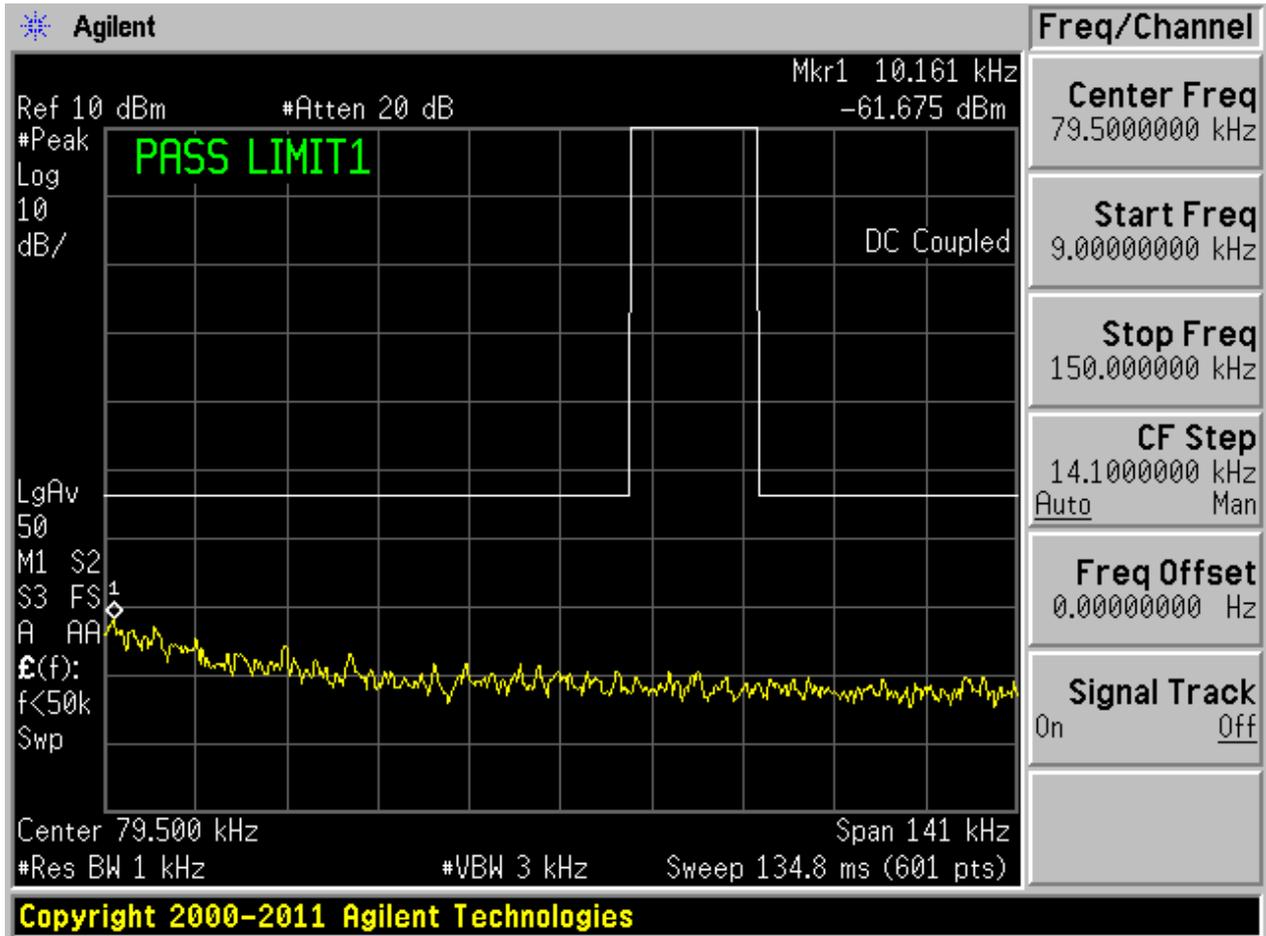
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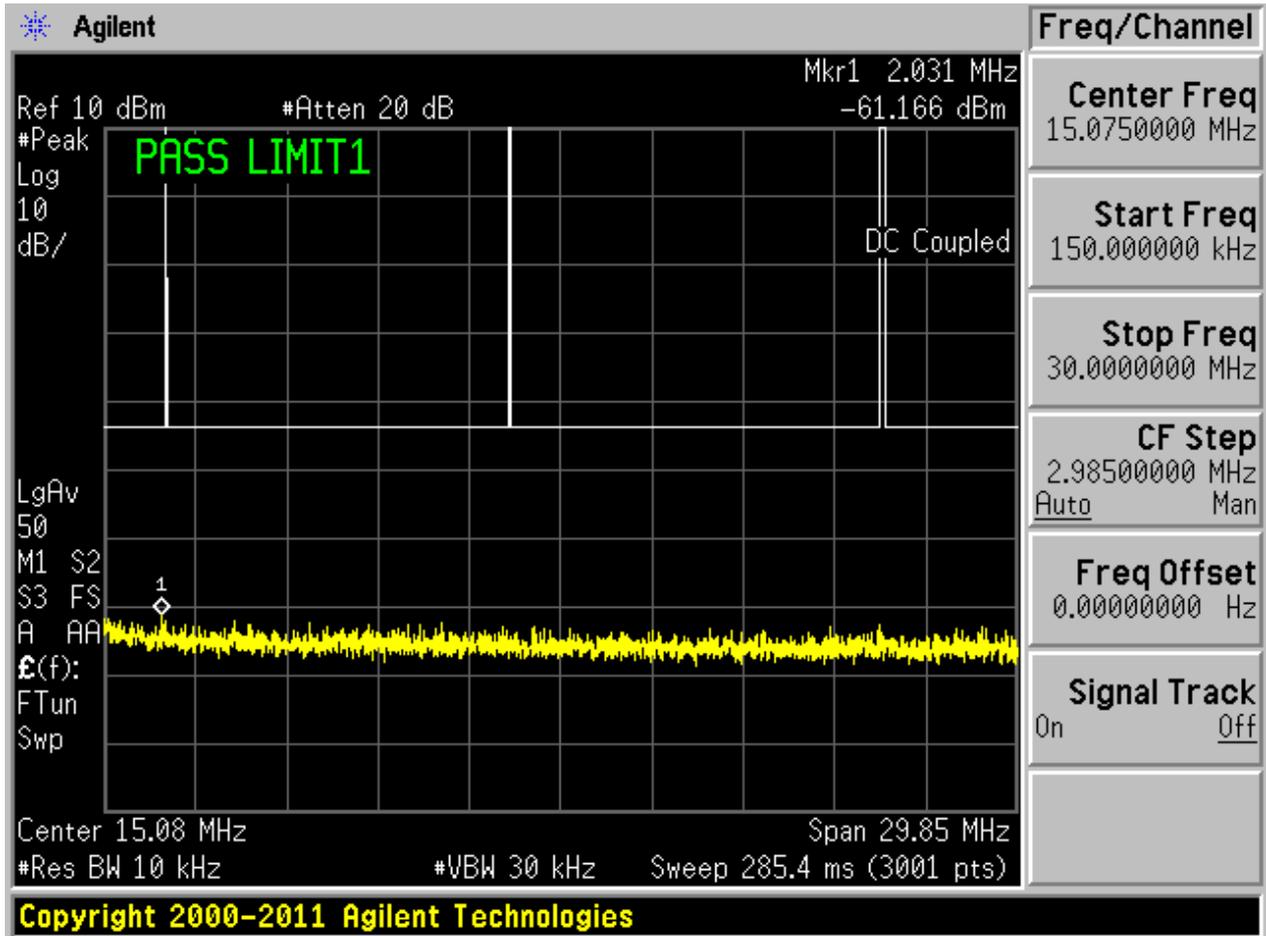
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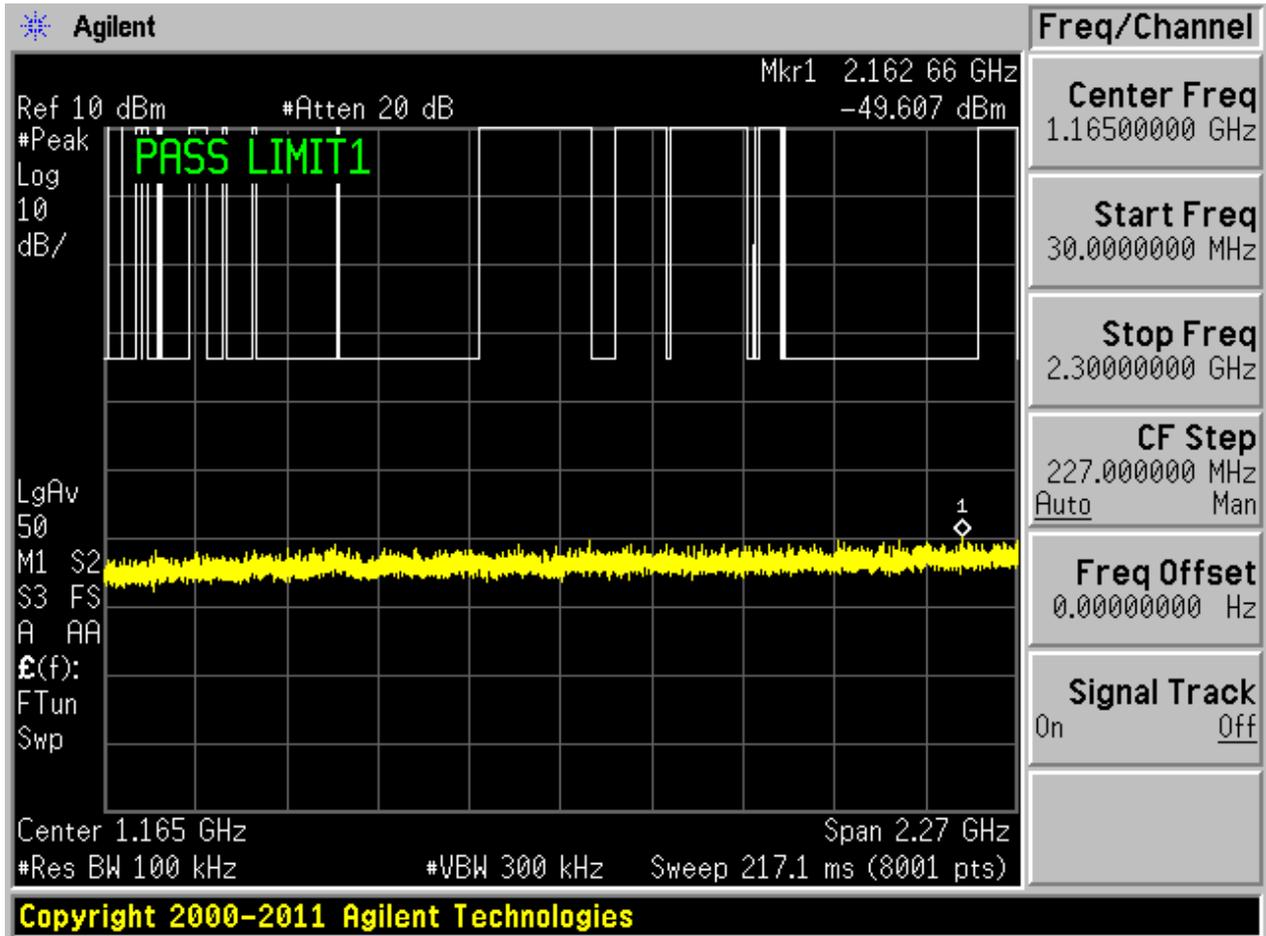
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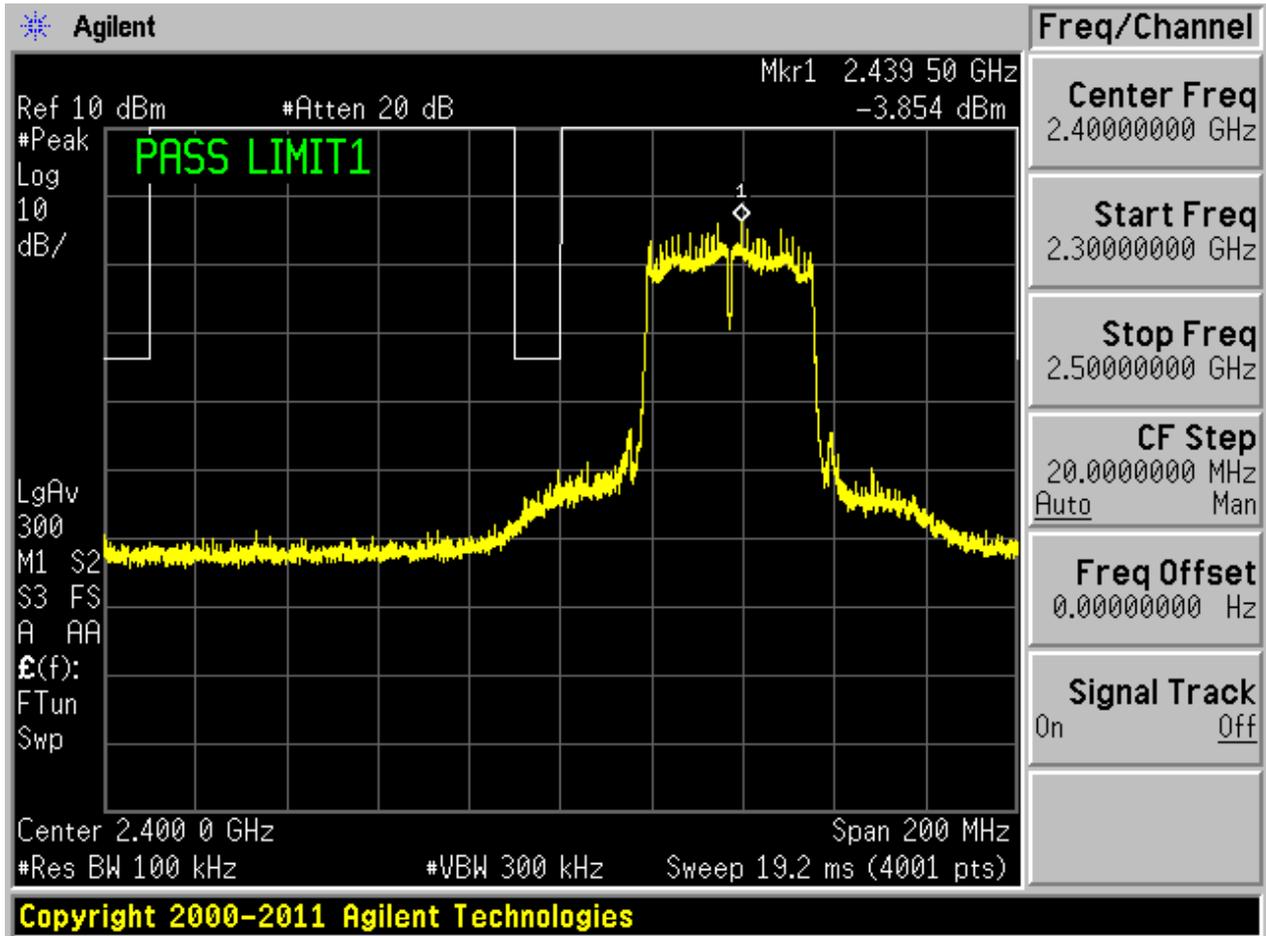


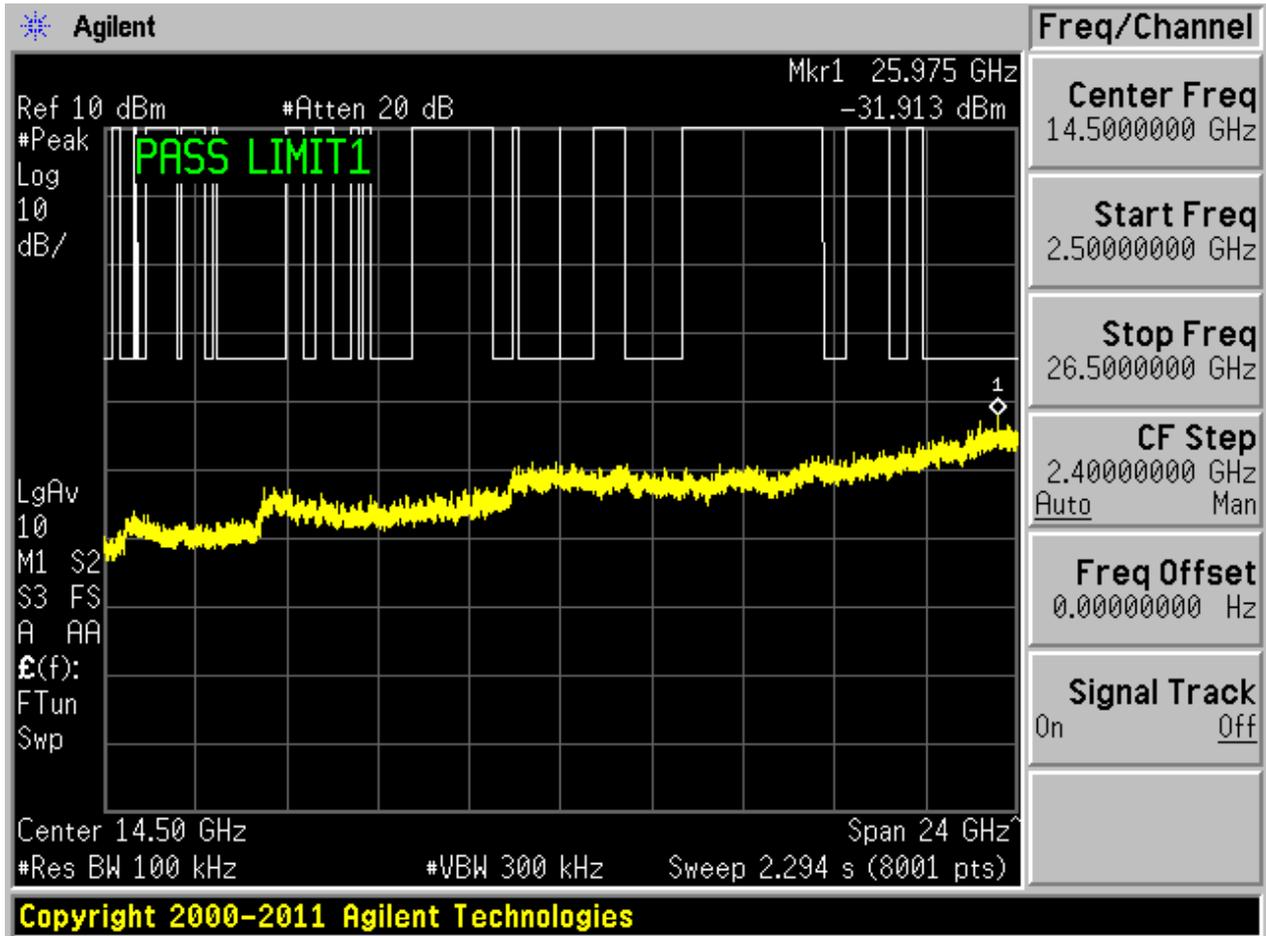
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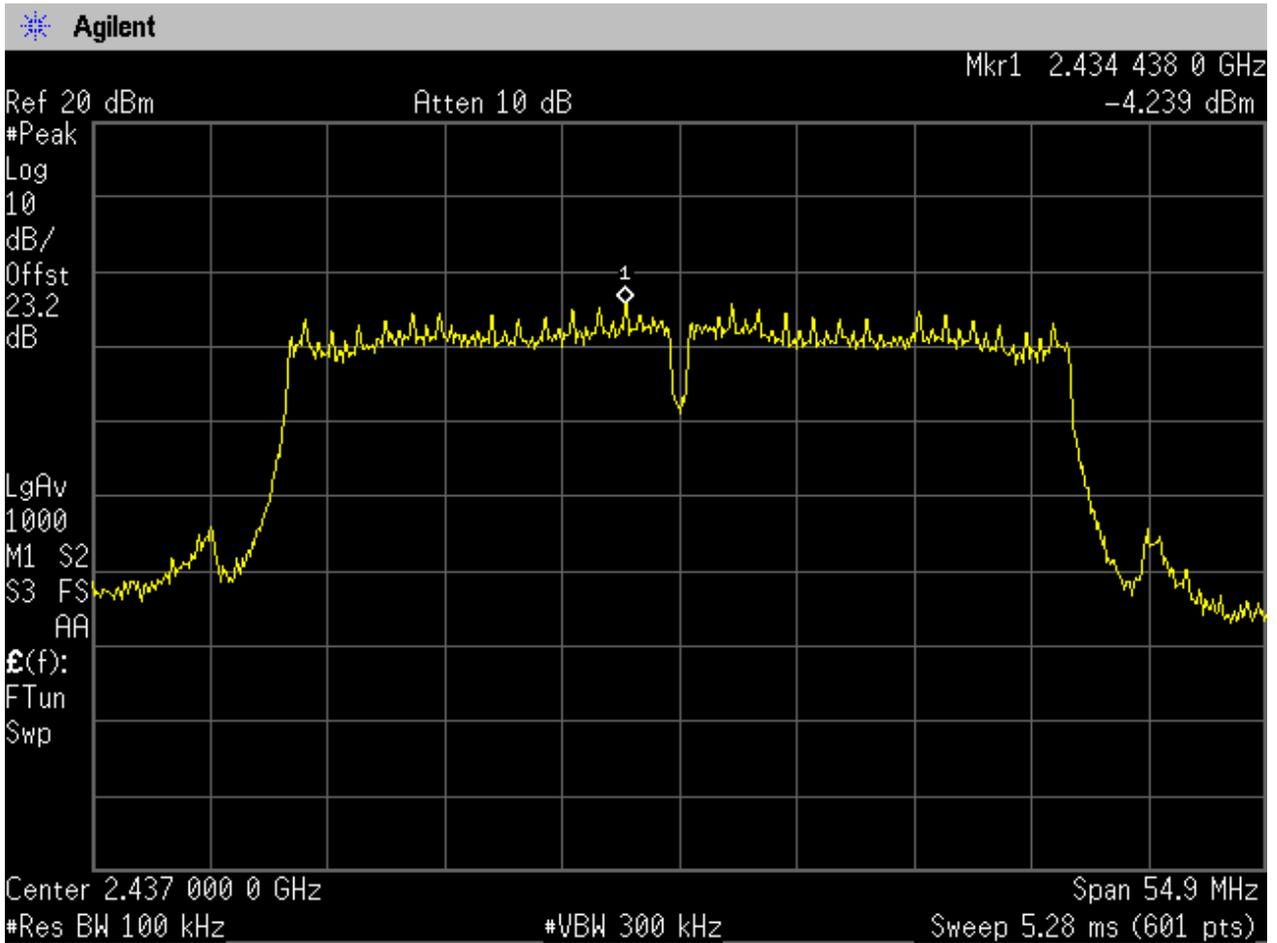




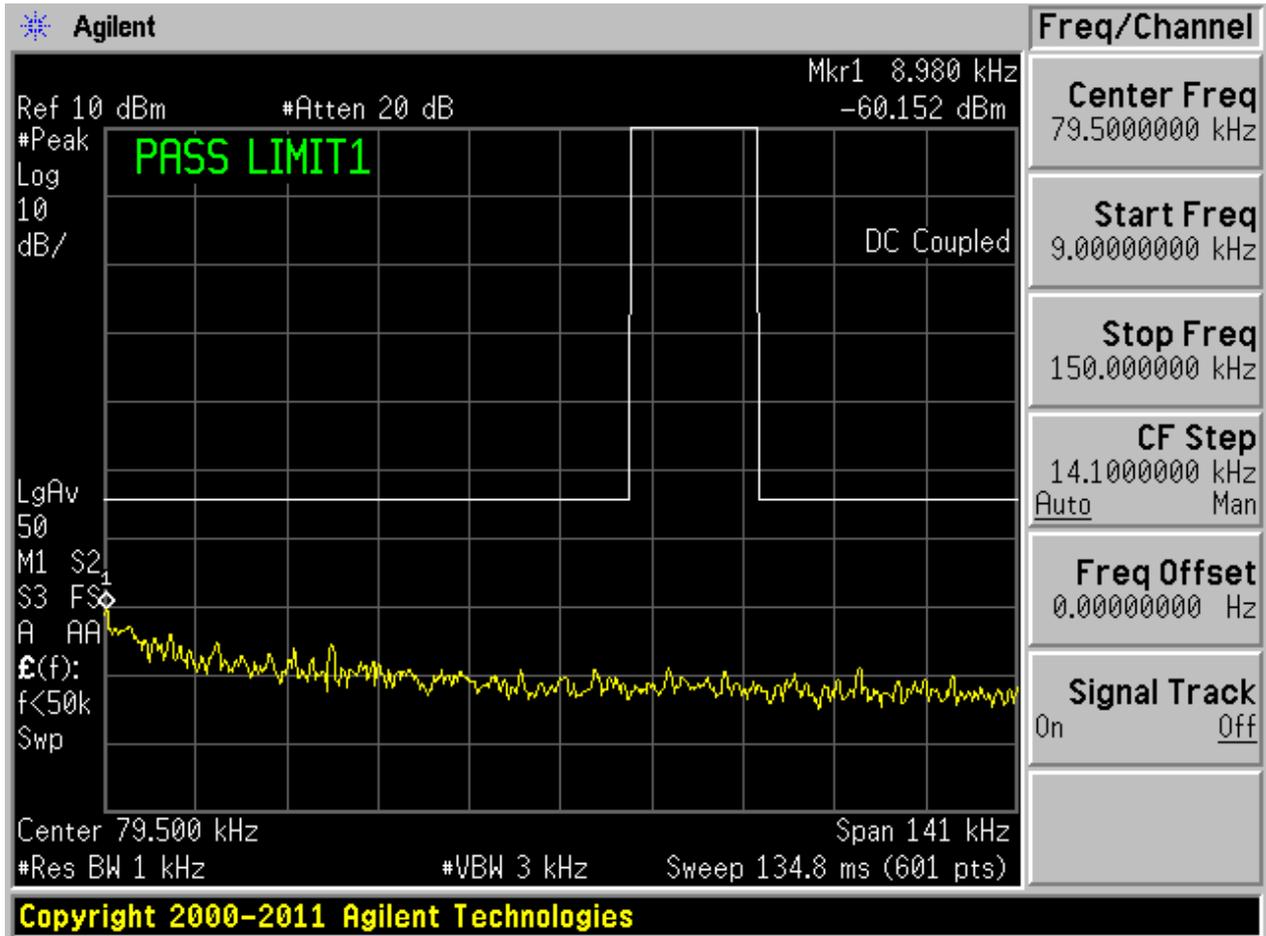


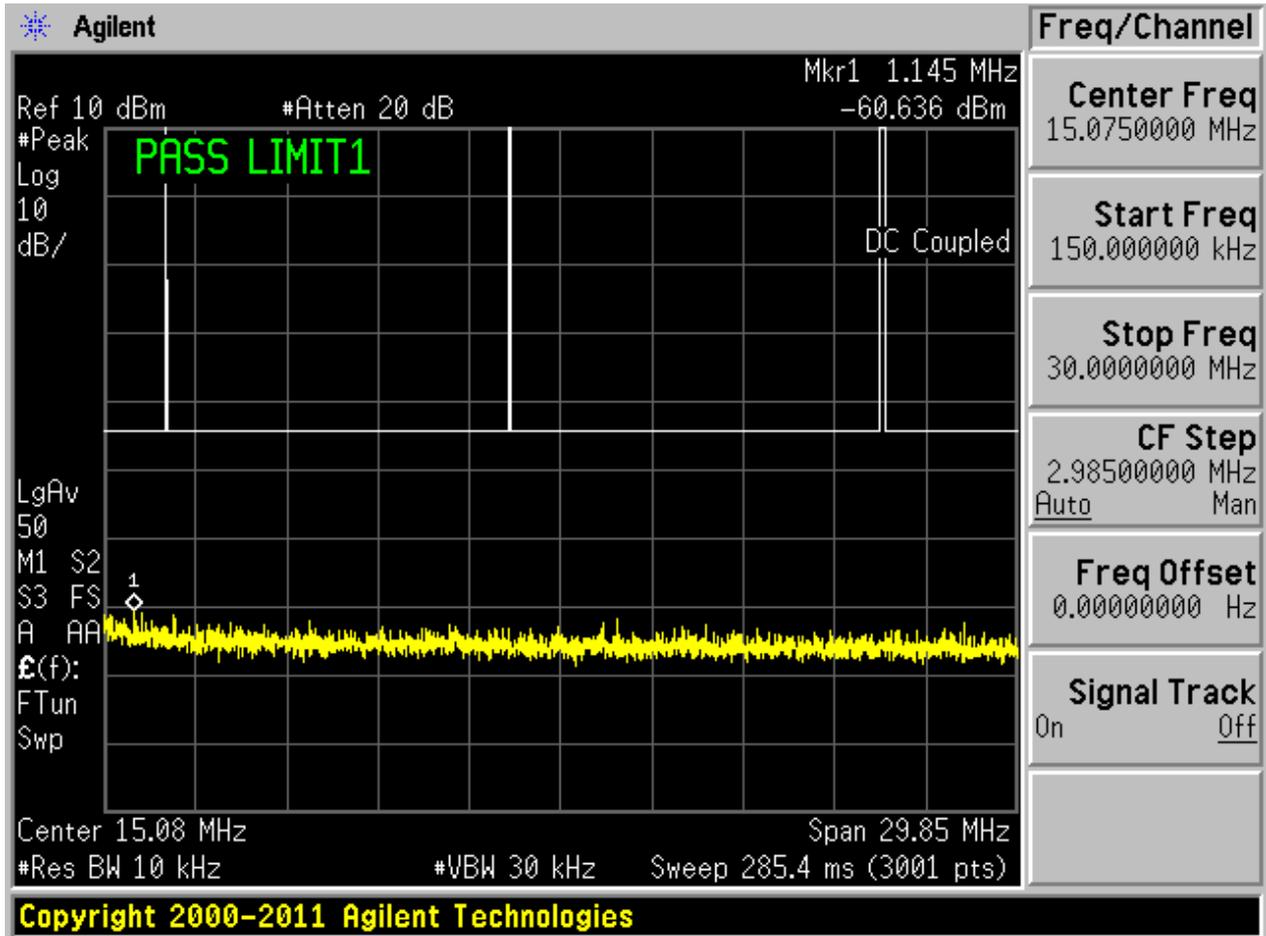
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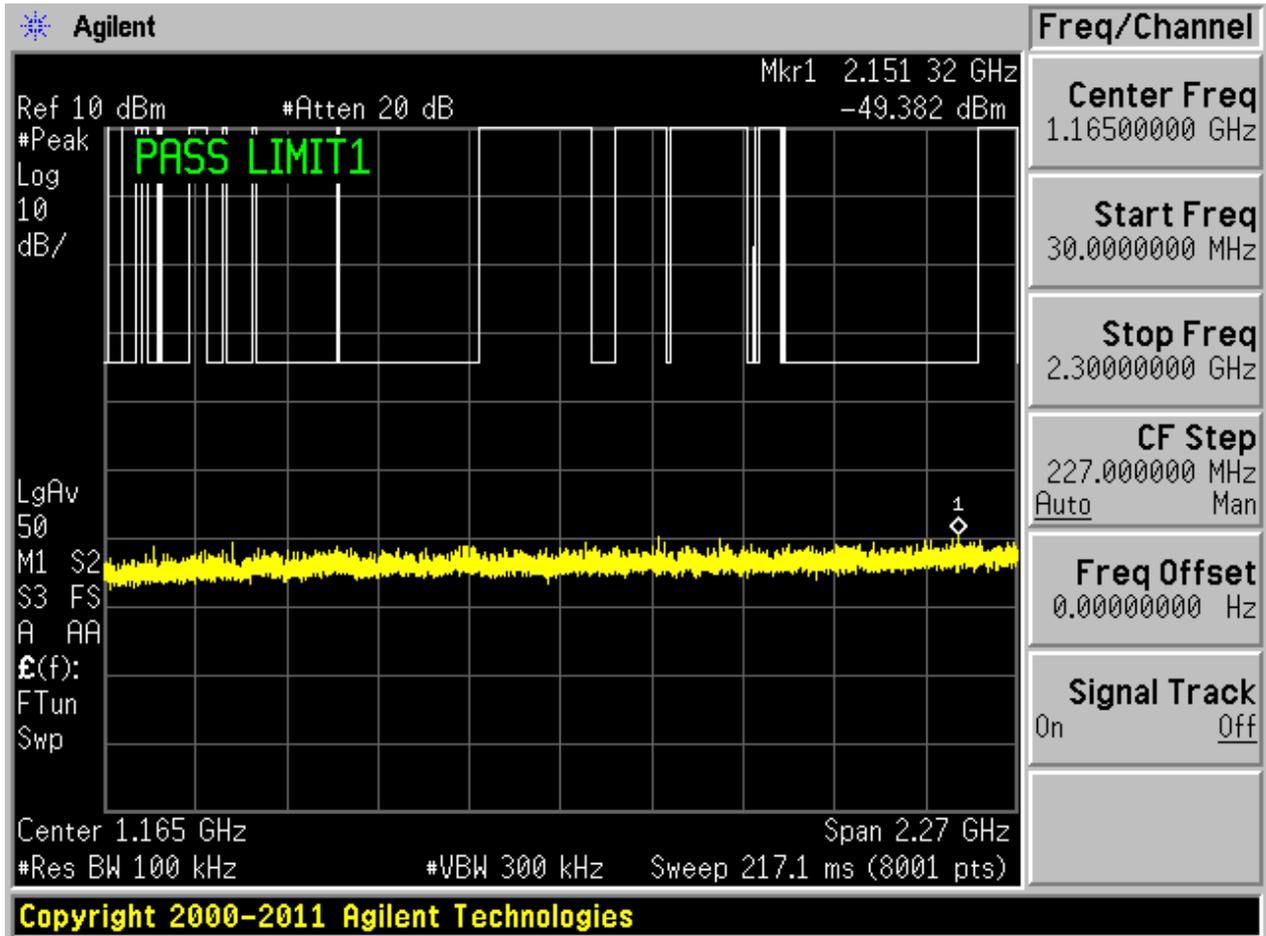
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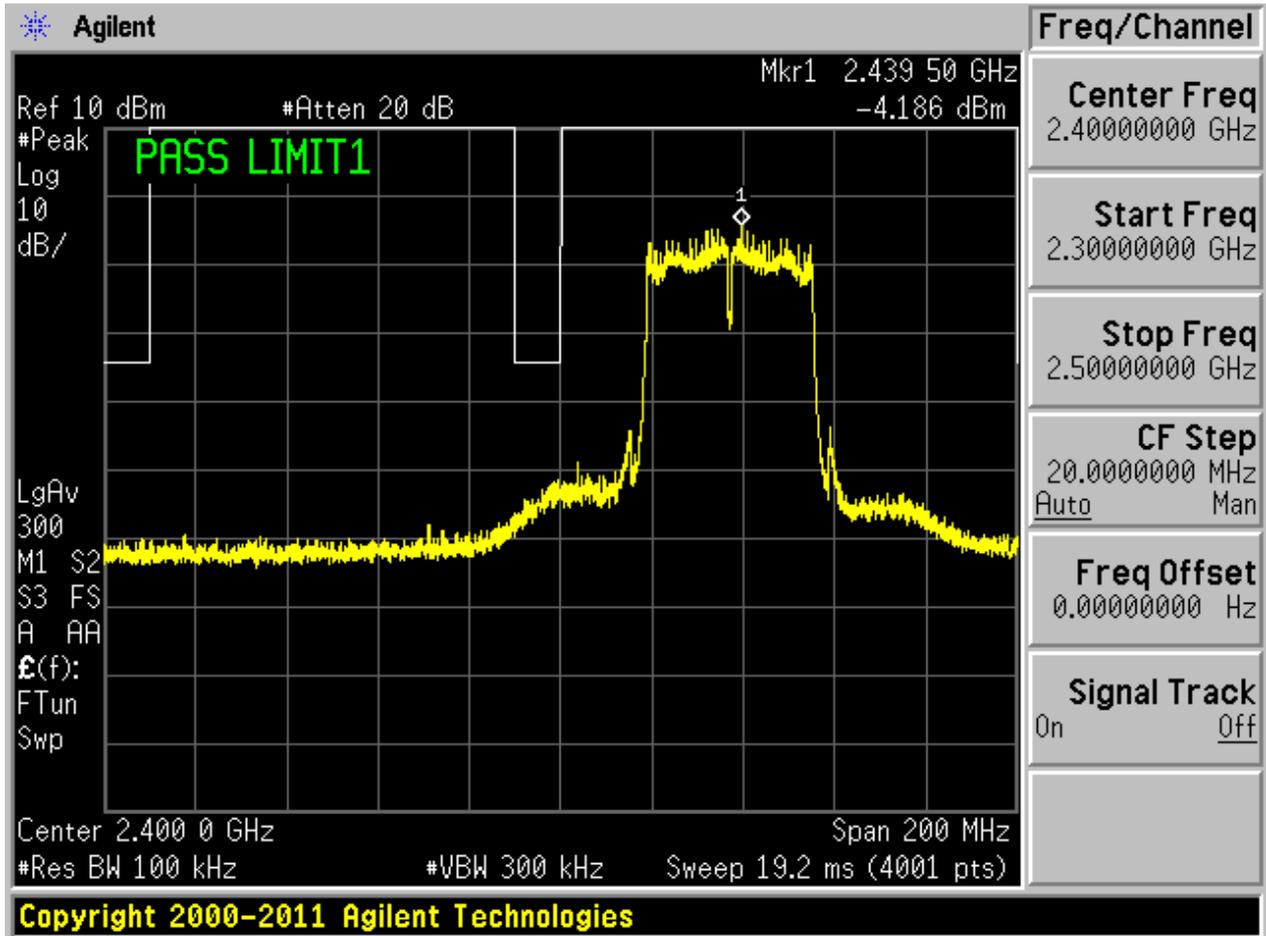


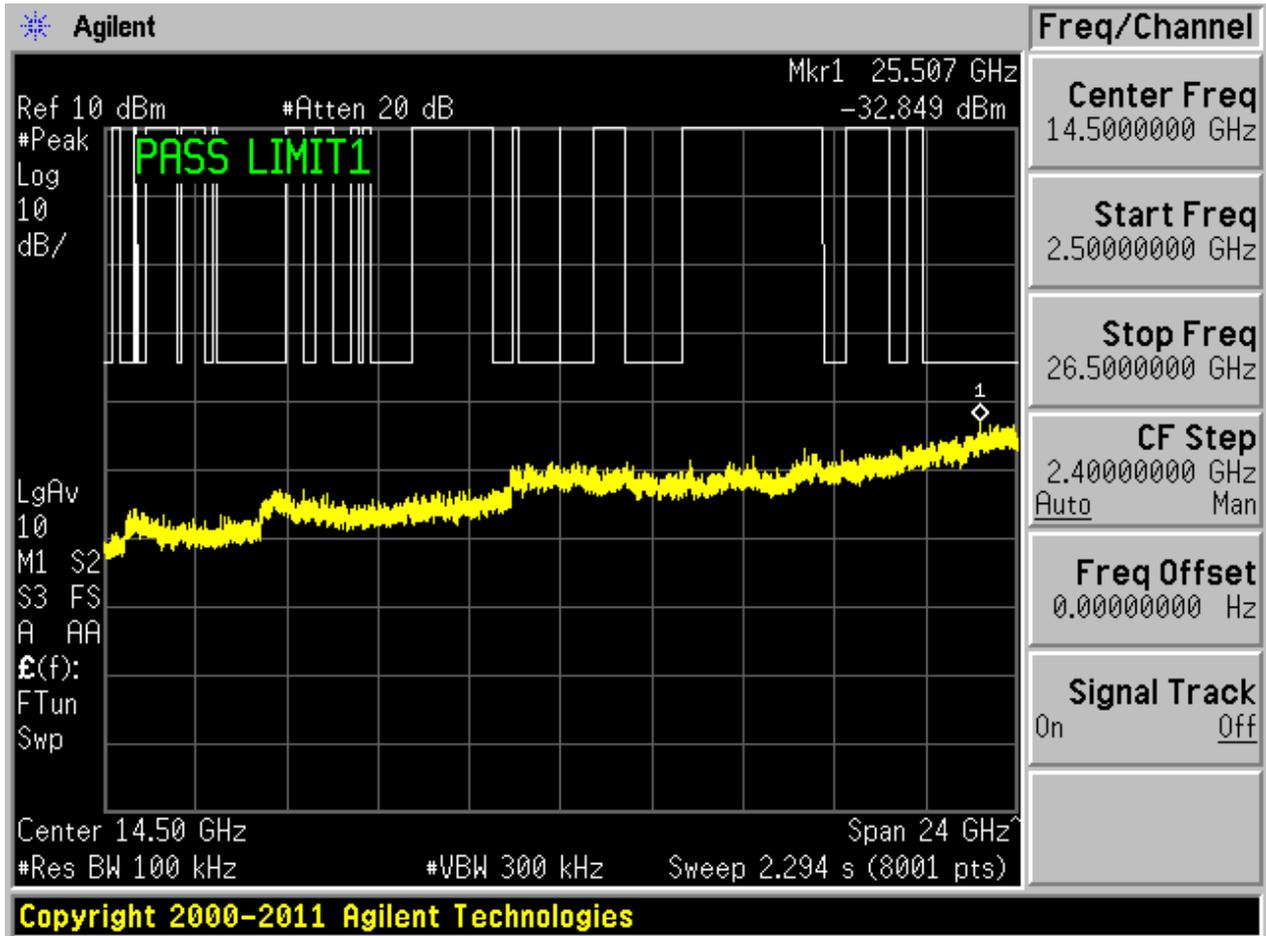
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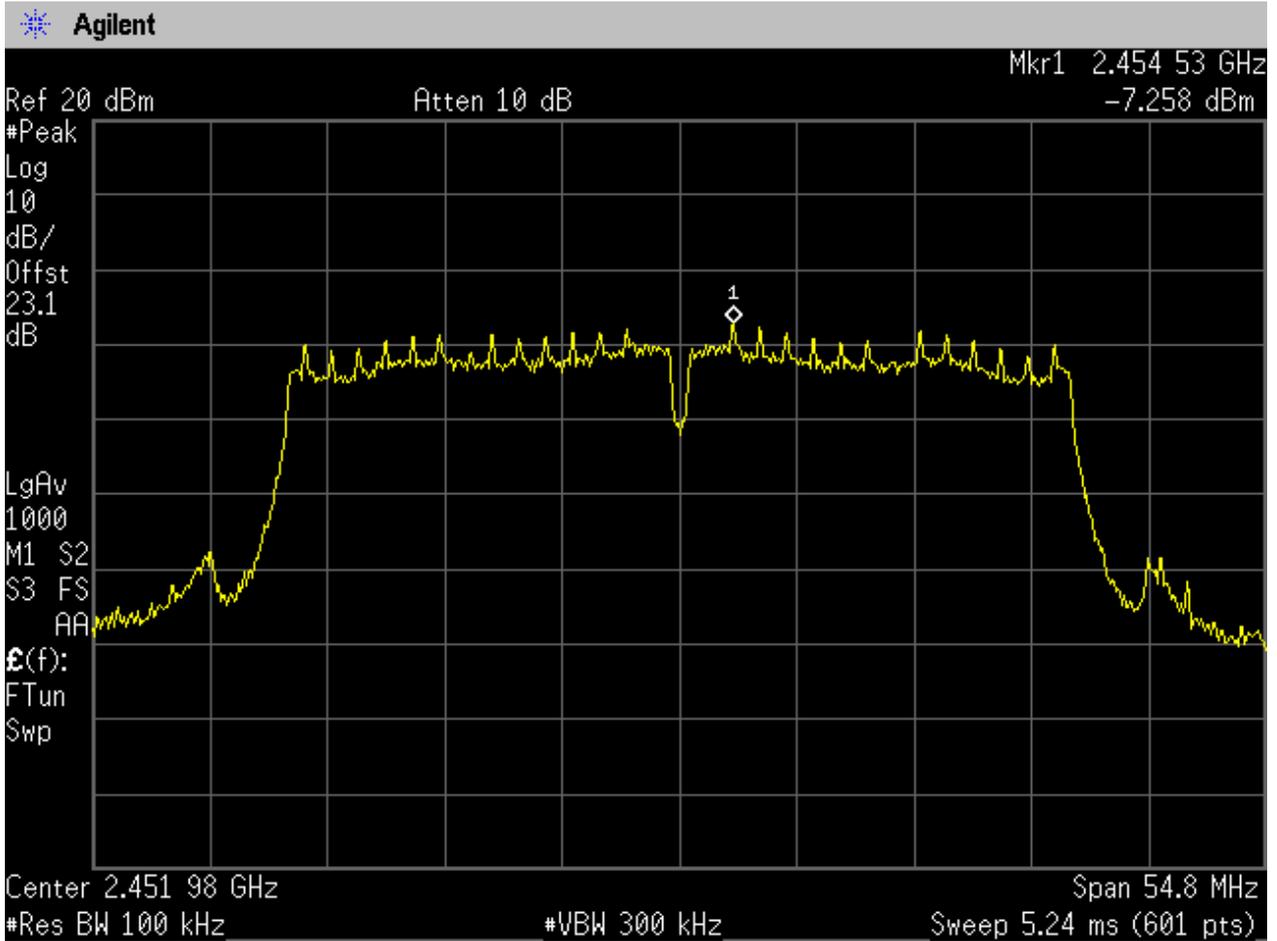




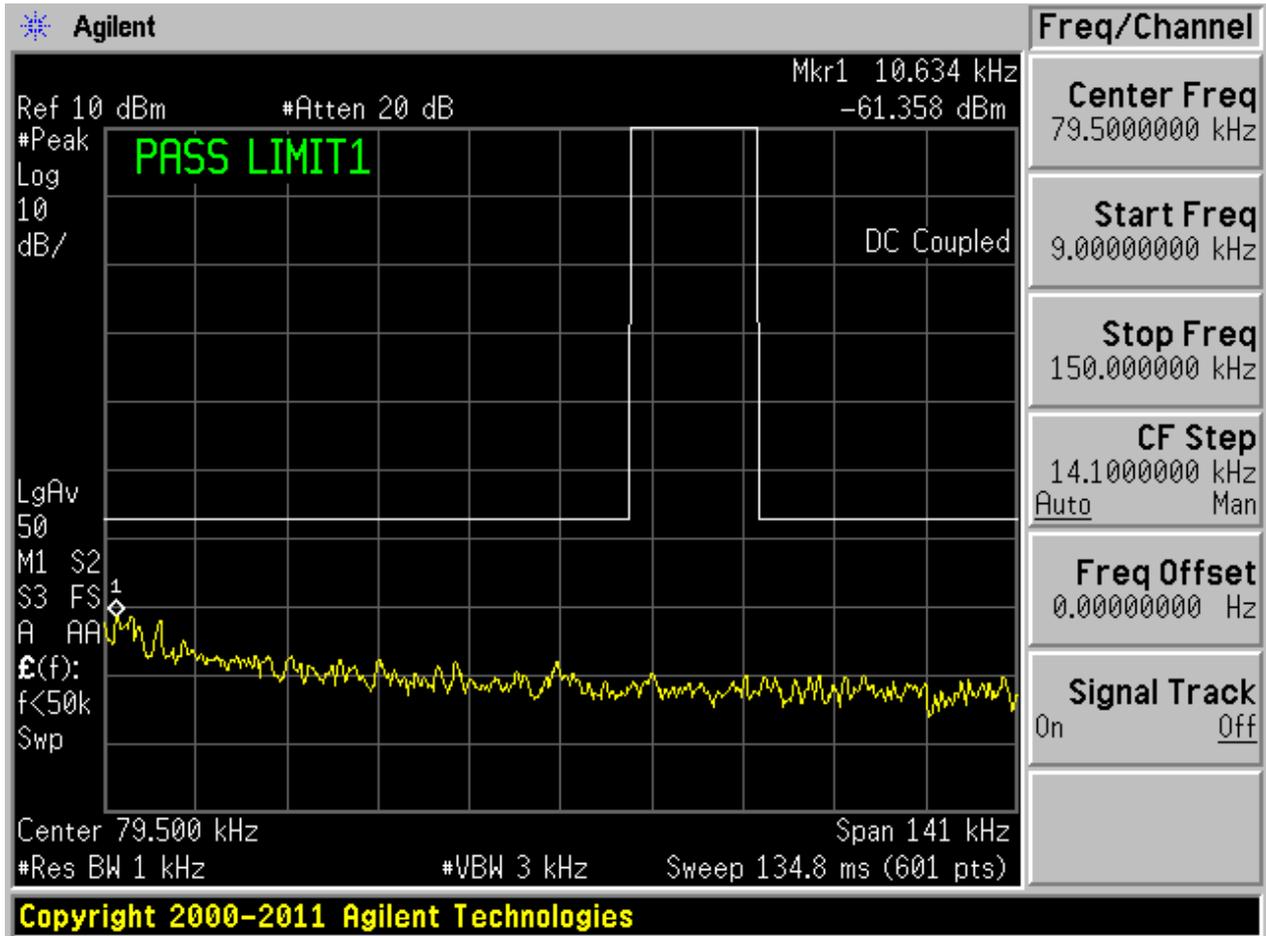
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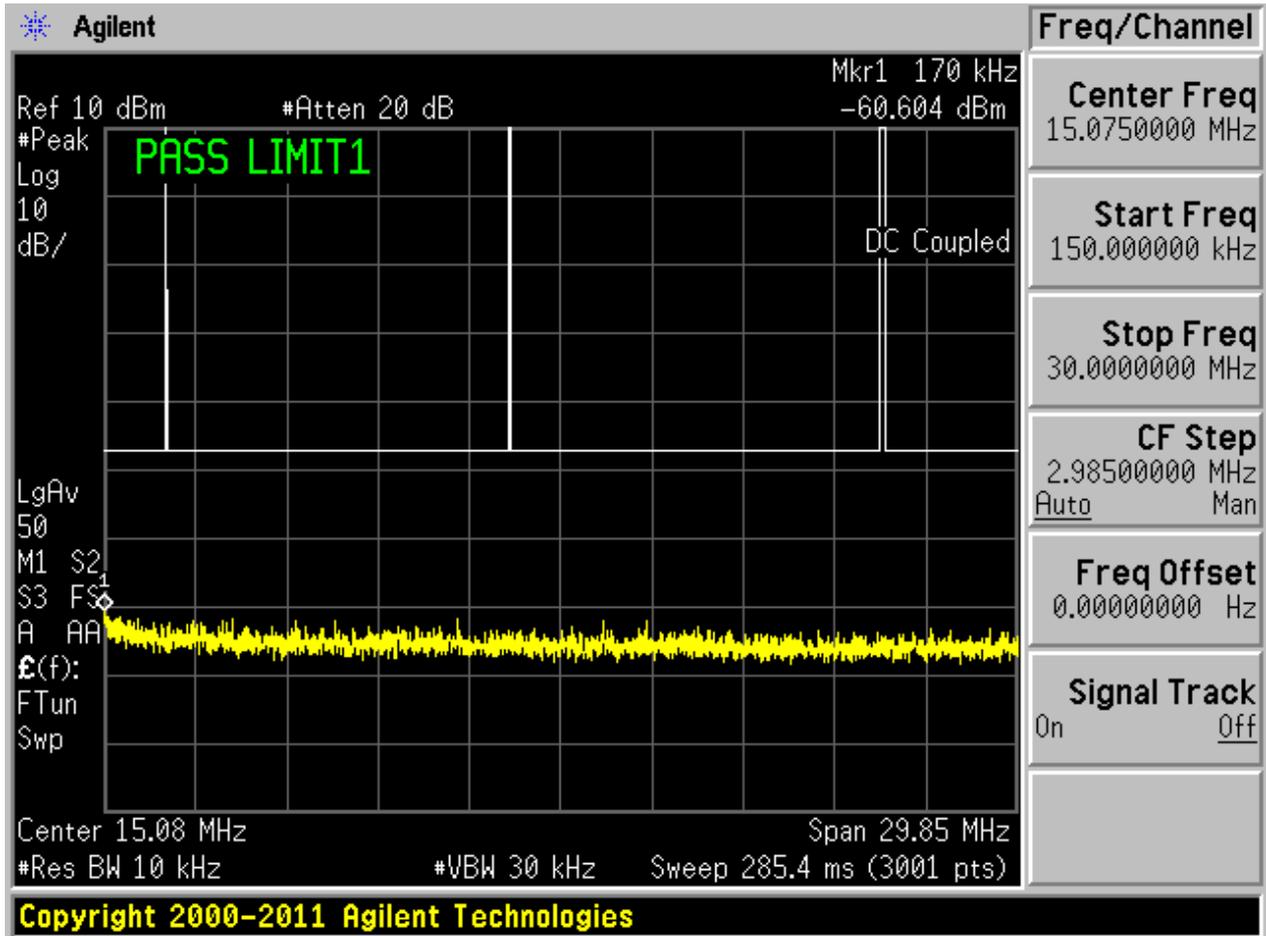
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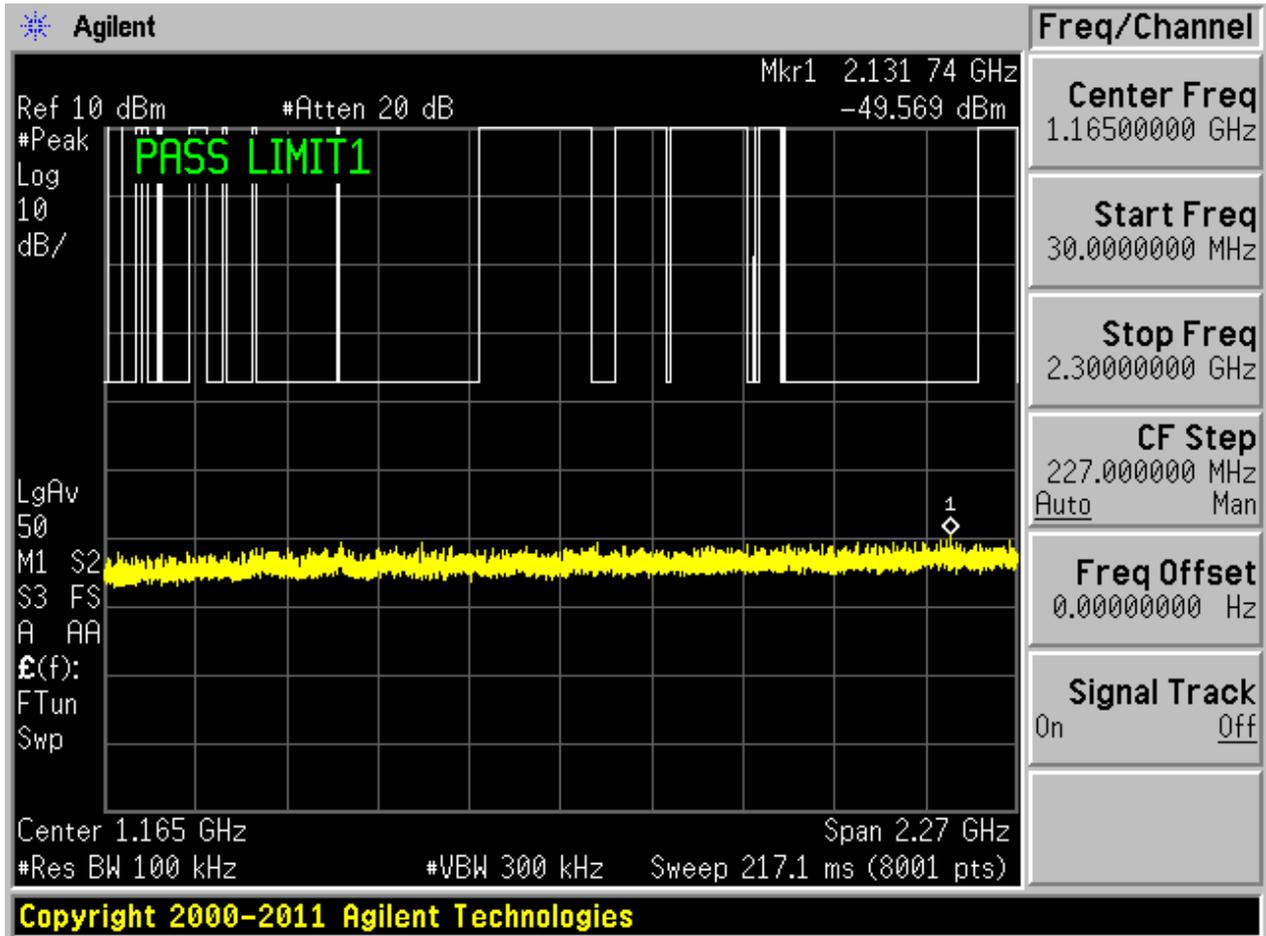
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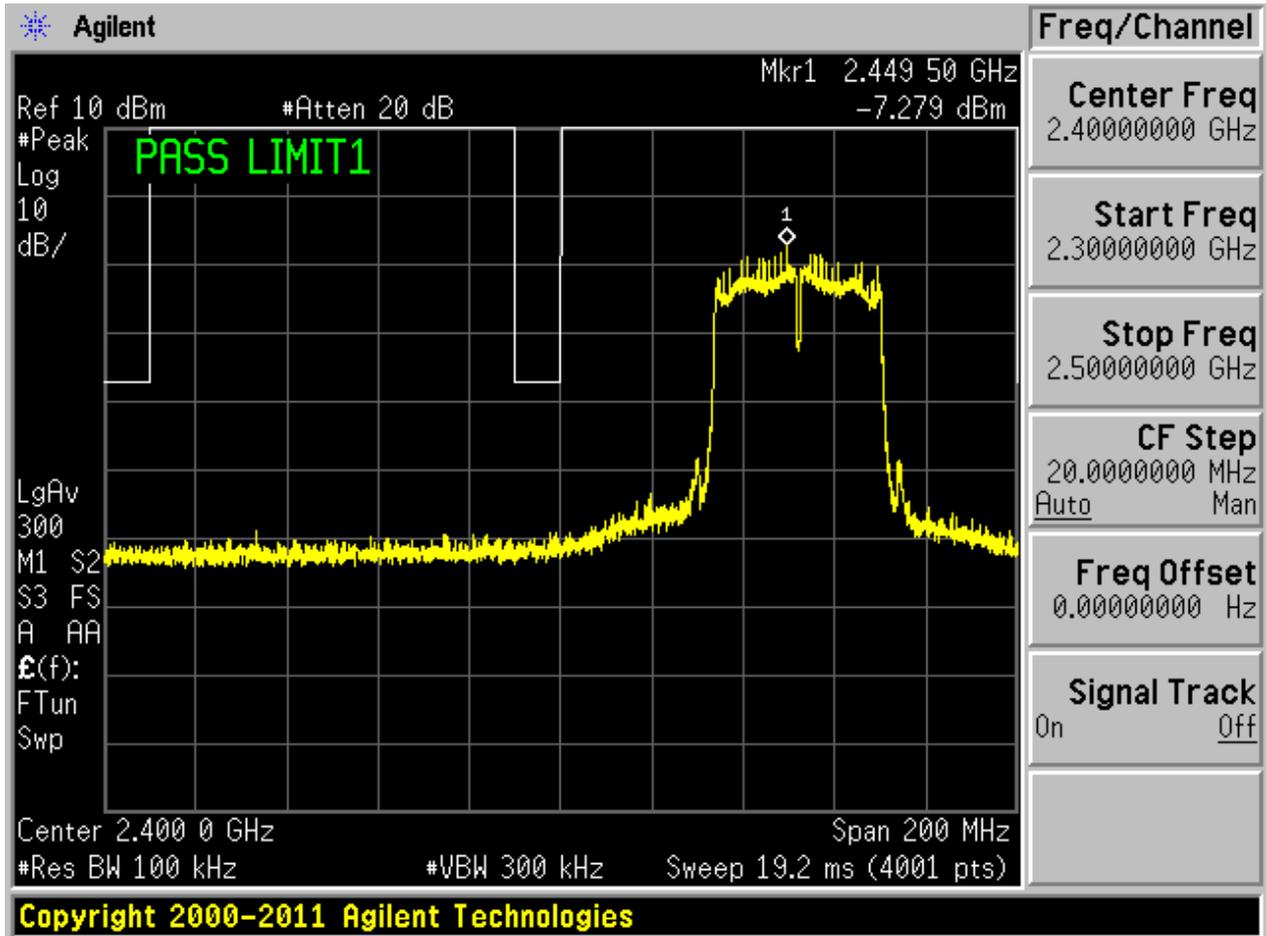


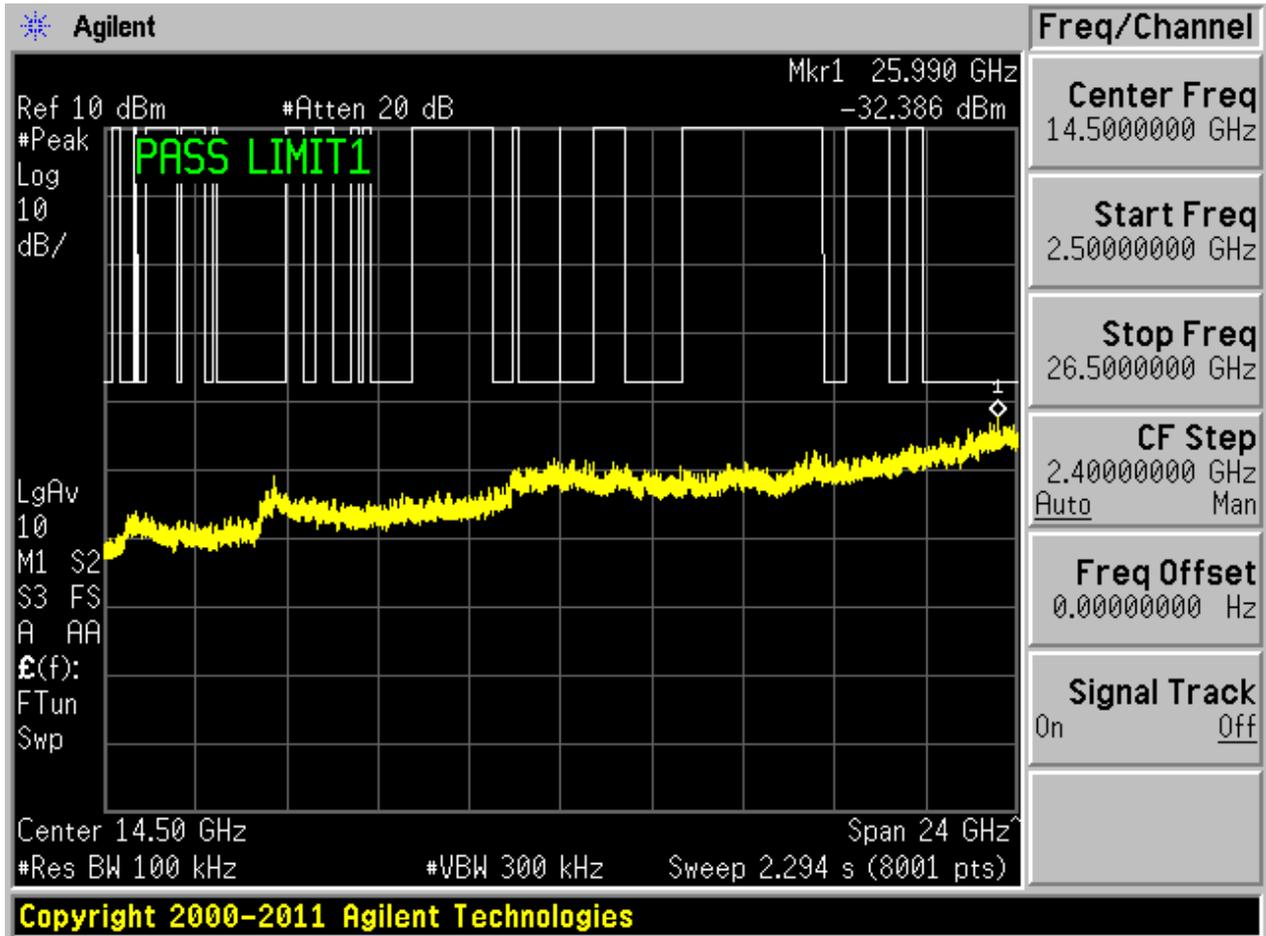
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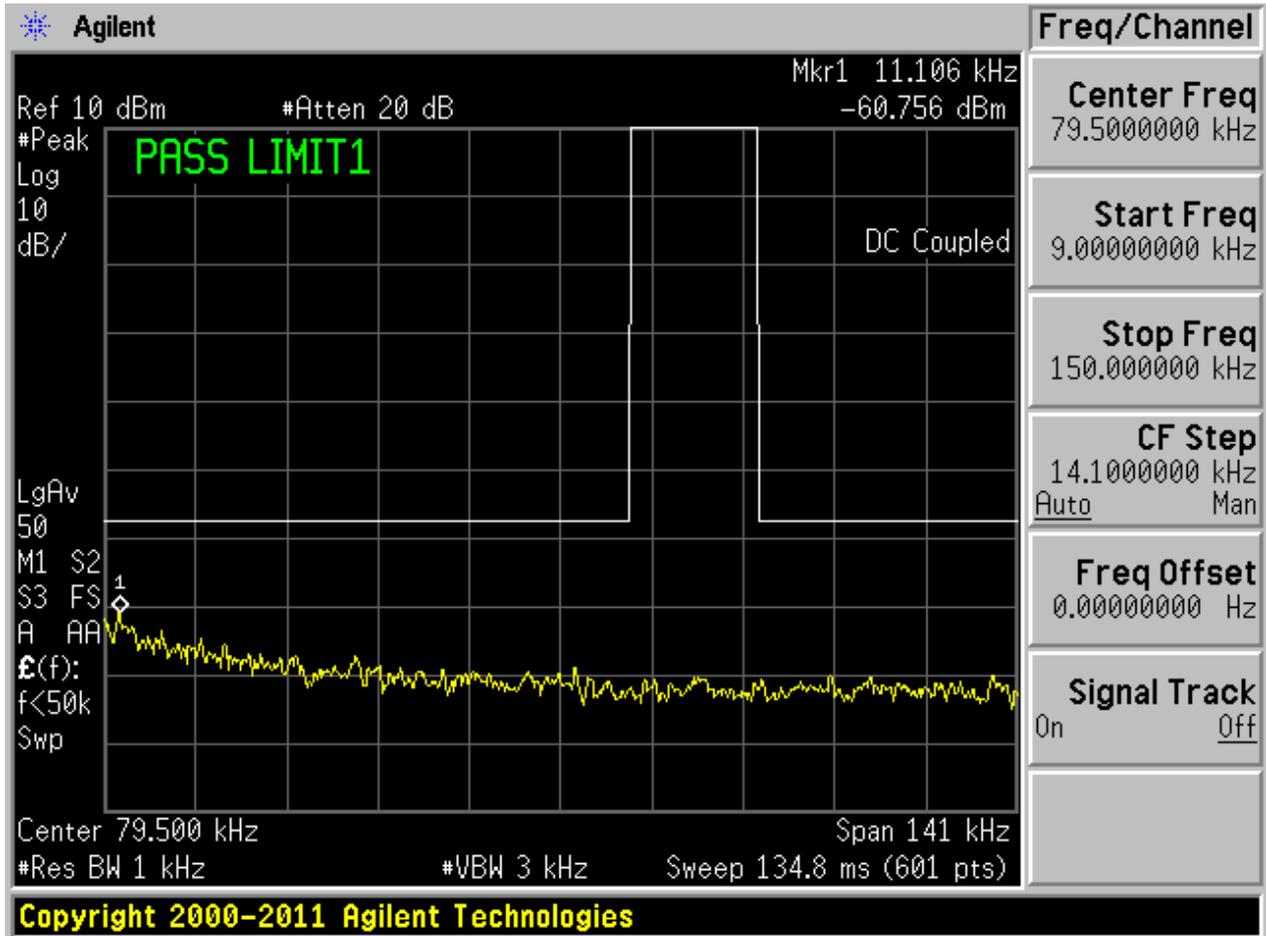


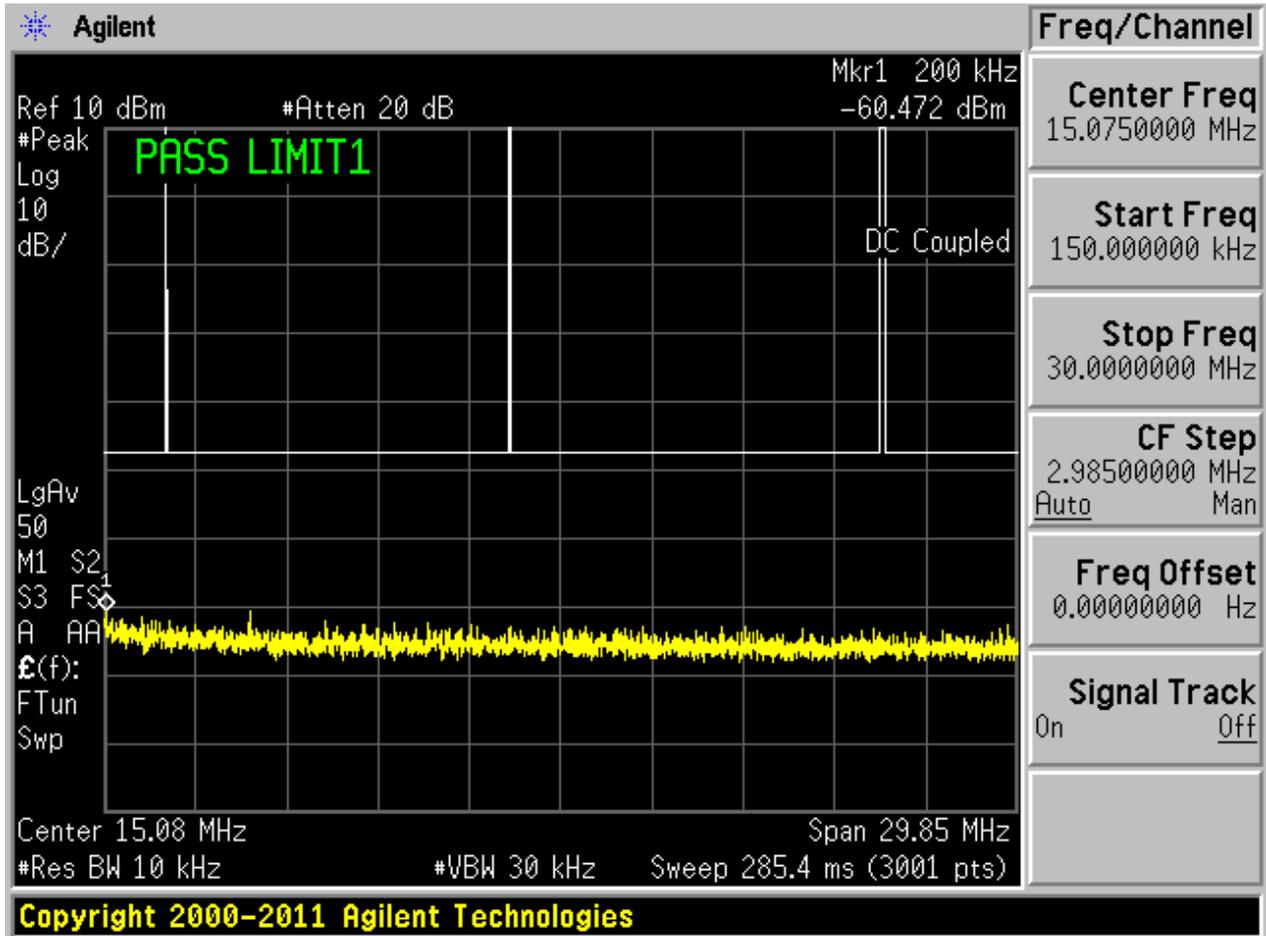


### 2.30.2 Ant 2

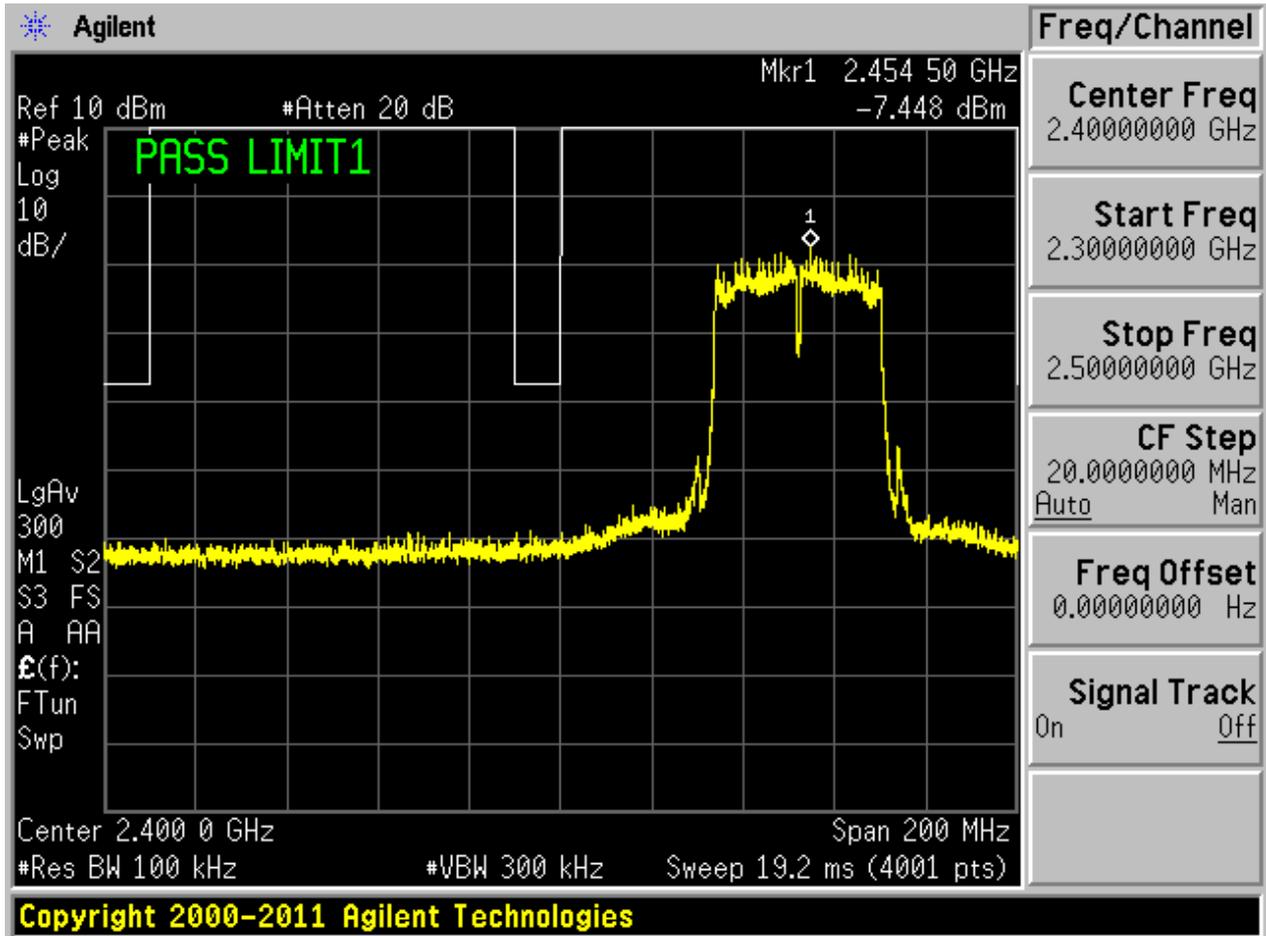
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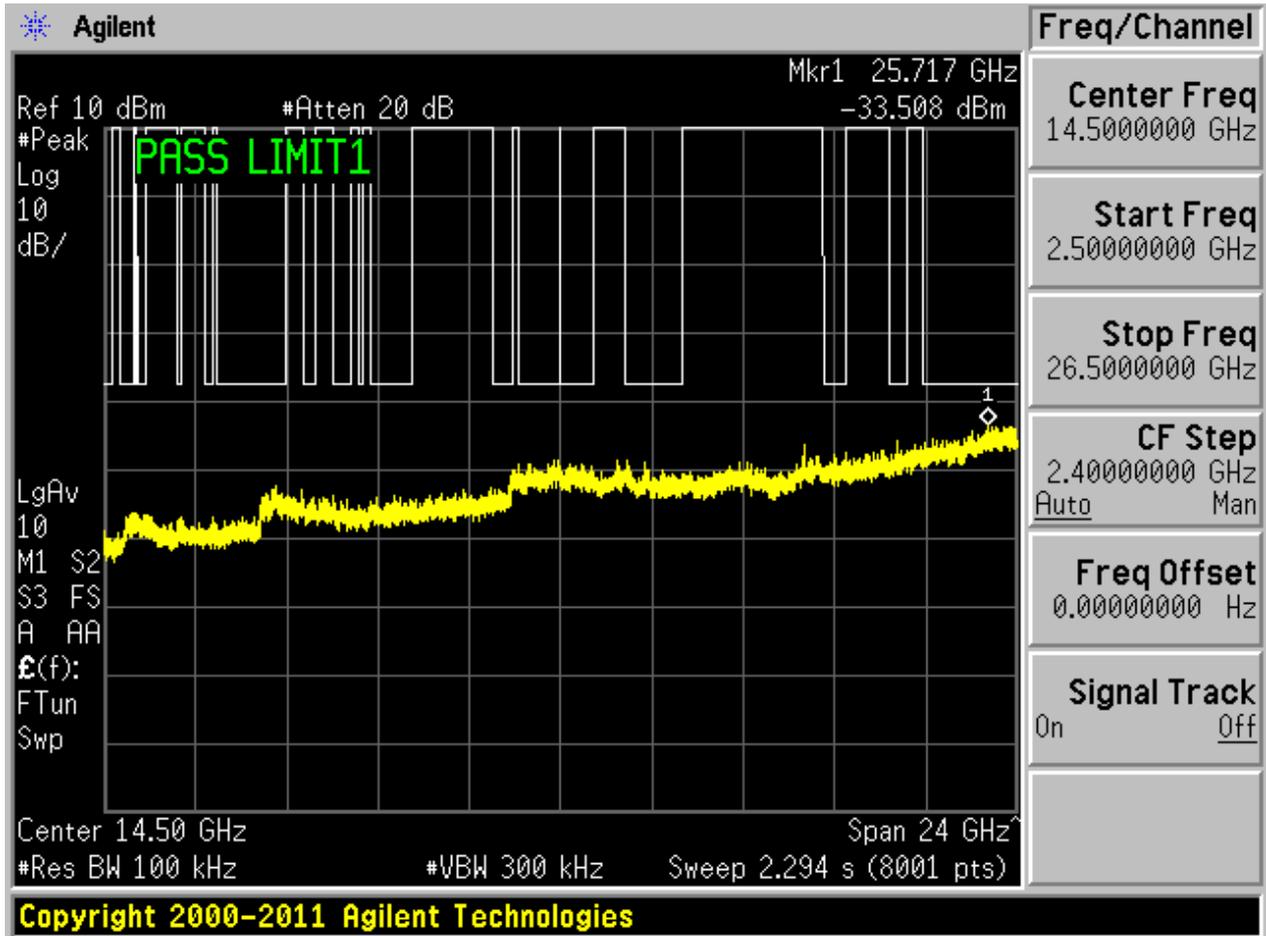














# **Appendix F.1: Unwanted Emissions into Restricted Frequency Bands (Conducted)**

According to FCC KDB 558074, the limit for antenna-port conducted measurement may be converted by the formula of “ $P_{lim} [dBm] = E_{lim} [dB\mu V/m] + 20 \times \lg(d [m]) - 104.8 [dB] - G [dBi] - \text{factor} [dB]$ ”, where:

- “ $P_{lim}$ ” denotes the antenna-port conducted limit,
- “ $E_{lim}$ ” denotes the electric field strength limit,
- “ $d$ ” denotes the measurement distance for radiated measurement,
- “ $G$ ” denotes the antenna gain (max per port), or 2 dBi, whichever is greater, and
- “factor” denotes the factor to model worst-case ground reflections, that is 6.0 dB for emissions  $\leq 30$  MHz, 4.7 dB for emissions  $> 30$  MHz and  $\leq 1000$  MHz, and 0.0 dB for emissions  $> 1000$  MHz.

The measurement contains two steps:

- For the measurement below 1 GHz:
  - (Step 1): Pre-measurement with Peak detector and CISPR Quasi-peak limit;
  - (Step 2): if needed, measurement with CISPR Quasi-peak detector and limit based on the Step 1.
- For the measurement above 1 GHz:
  - (Step 1): measurement with Average detector and Average limit;
  - (Step 2): measurement with Peak detector and Peak limit.

The measurement of unwanted emissions at the edge of the authorized frequency bands can be complicated by the leakage of RF energy from the fundamental emission into the RBW passband. For measurements at the band edges, a narrower RBW is used within the first 1 MHz beyond the fundamental emissions (in this Appendix it refers to the range 2483.5 MHz to 2484.5 MHz) and the measured energy is subsequently integrated over the appropriate reference bandwidth (i.e. 1 MHz).

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain as “Emissions@i [dBm]”, and used as respective results for each chain to compare with the corrected limit  $P_{lim}@i [dBm] = P_{lim} [dBm] - 10 \times \lg(N) [dB]$  (the N denotes the antenna chains used by smart antenna systems). NOTE that the method is a stringent but convenient consideration, because each chain may have different spectrum occurrence. For the final judgment, the measured emissions for each antenna chain “Emissions@i [dBm]” (Trace#i) should be added linearly frequency-by-frequency to get the final result “Emissions [dBm]” (Trace#sum), which is used to compared with the limit “ $P_{lim} [dBm]$ ”. Unless otherwise specified, the method for final judgment will not be used.

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 Conf.	Ant.	Emissions@i [dBm]	Emissions [dBm]	Verdict
11B/1_B@1	Ant 1	< Limit	= Emissions@i	Pass
11B/1_B@2	Ant 2	< Limit	= Emissions@i	Pass
11B/1_M@1	Ant 1	< Limit	= Emissions@i	Pass
11B/1_M@2	Ant 2	< Limit	= Emissions@i	Pass
11B/1_T@1	Ant 1	< Limit	= Emissions@i	Pass

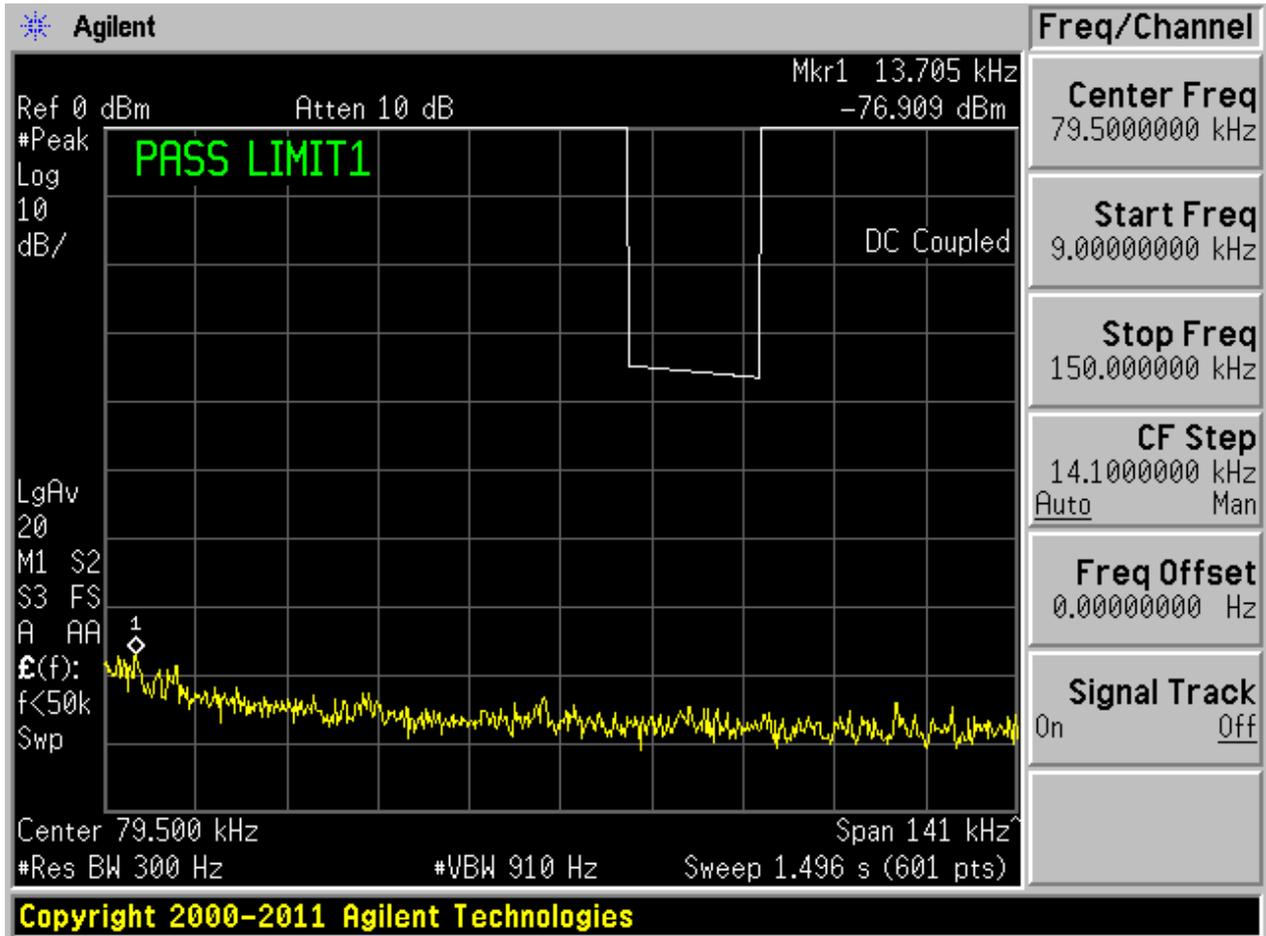


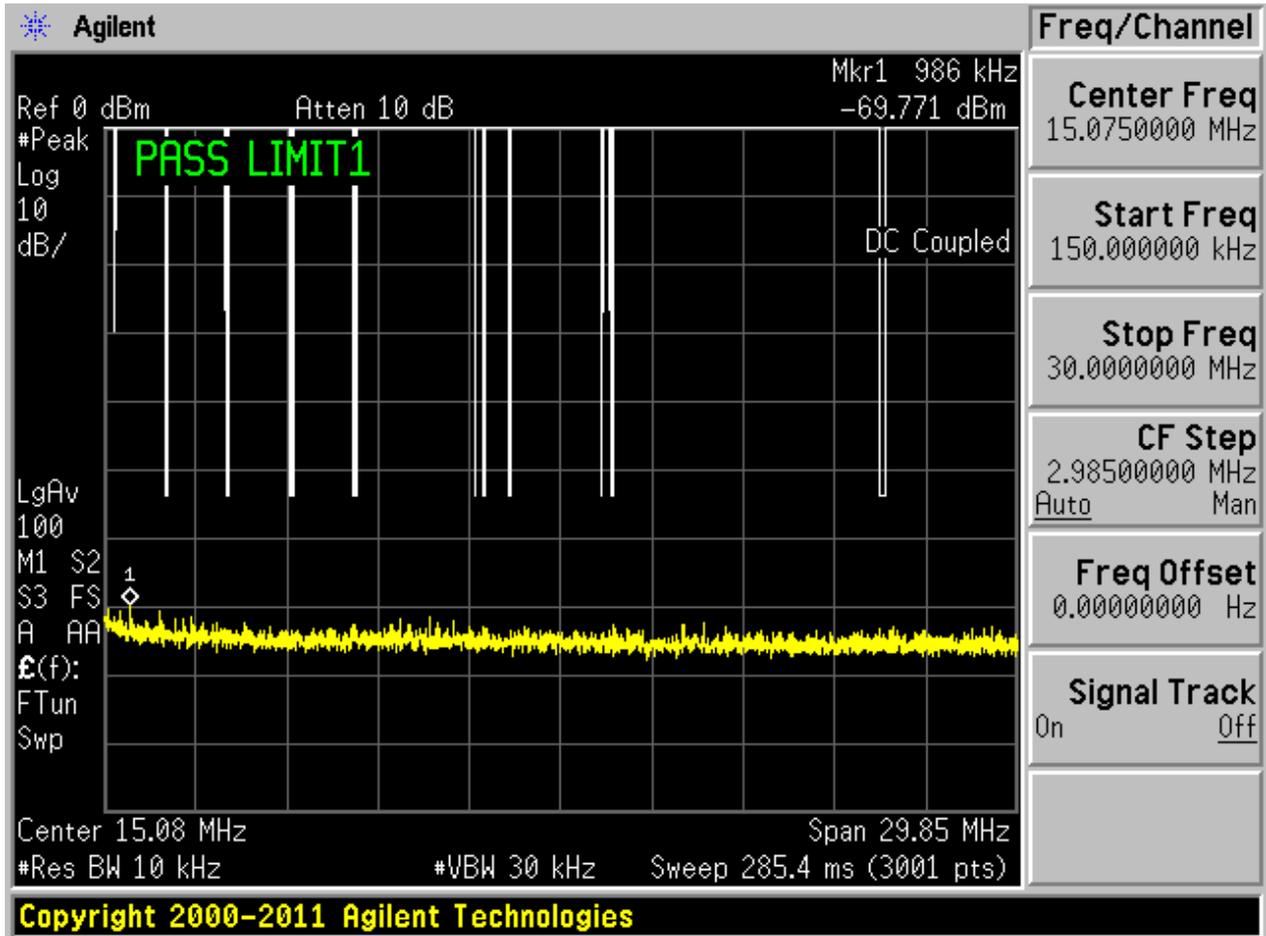
EUT Conf.	Ant.	Emissions@i [dBm]	Emissions [dBm]	Verdict
11B/1_T@2	Ant 2	< Limit	= Emissions@i	Pass
11G/6_B@1	Ant 1	< Limit	= Emissions@i	Pass
11G/6_B@2	Ant 2	< Limit	= Emissions@i	Pass
11G/6_M@1	Ant 1	< Limit	= Emissions@i	Pass
11G/6_M@2	Ant 2	< Limit	= Emissions@i	Pass
11G/6_T@1	Ant 1	< Limit	= Emissions@i	Pass
11G/6_T@2	Ant 2	< Limit	= Emissions@i	Pass
11N20/0_B@1	Ant 1	< Limit	= Emissions@i	Pass
11N20/0_B@2	Ant 2	< Limit	= Emissions@i	Pass
11N20/0_M@1	Ant 1	< Limit	= Emissions@i	Pass
11N20/0_M@2	Ant 2	< Limit	= Emissions@i	Pass
11N20/0_T@1	Ant 1	< Limit	= Emissions@i	Pass
11N20/0_T@2	Ant 2	< Limit	= Emissions@i	Pass
11N20m/8_B@1+2	Ant 1	< Limit	< Limit	Pass
	Ant 2	< Limit		
11N20m/8_M@1+2	Ant 1	< Limit	< Limit	Pass
	Ant 2	< Limit		
11N20m/8_T@1+2	Ant 1	< Limit	< Limit	Pass
	Ant 2	< Limit		
11N40/0_B@1	Ant 1	< Limit	= Emissions@i	Pass
11N40/0_B@2	Ant 2	< Limit	= Emissions@i	Pass
11N40/0_M@1	Ant 1	< Limit	= Emissions@i	Pass
11N40/0_M@2	Ant 2	< Limit	= Emissions@i	Pass
11N40/0_T@1	Ant 1	< Limit	= Emissions@i	Pass
11N40/0_T@2	Ant 2	< Limit	= Emissions@i	Pass
11N40m/8_B@1+2	Ant 1	< Limit	< Limit	Pass
	Ant 2	< Limit		
11N40m/8_M@1+2	Ant 1	< Limit	< Limit	Pass
	Ant 2	< Limit		
11N40m/8_T@1+2	Ant 1	< Limit	< Limit	Pass
	Ant 2	< Limit		
(**): The method for final judgment is used for this configuration.				

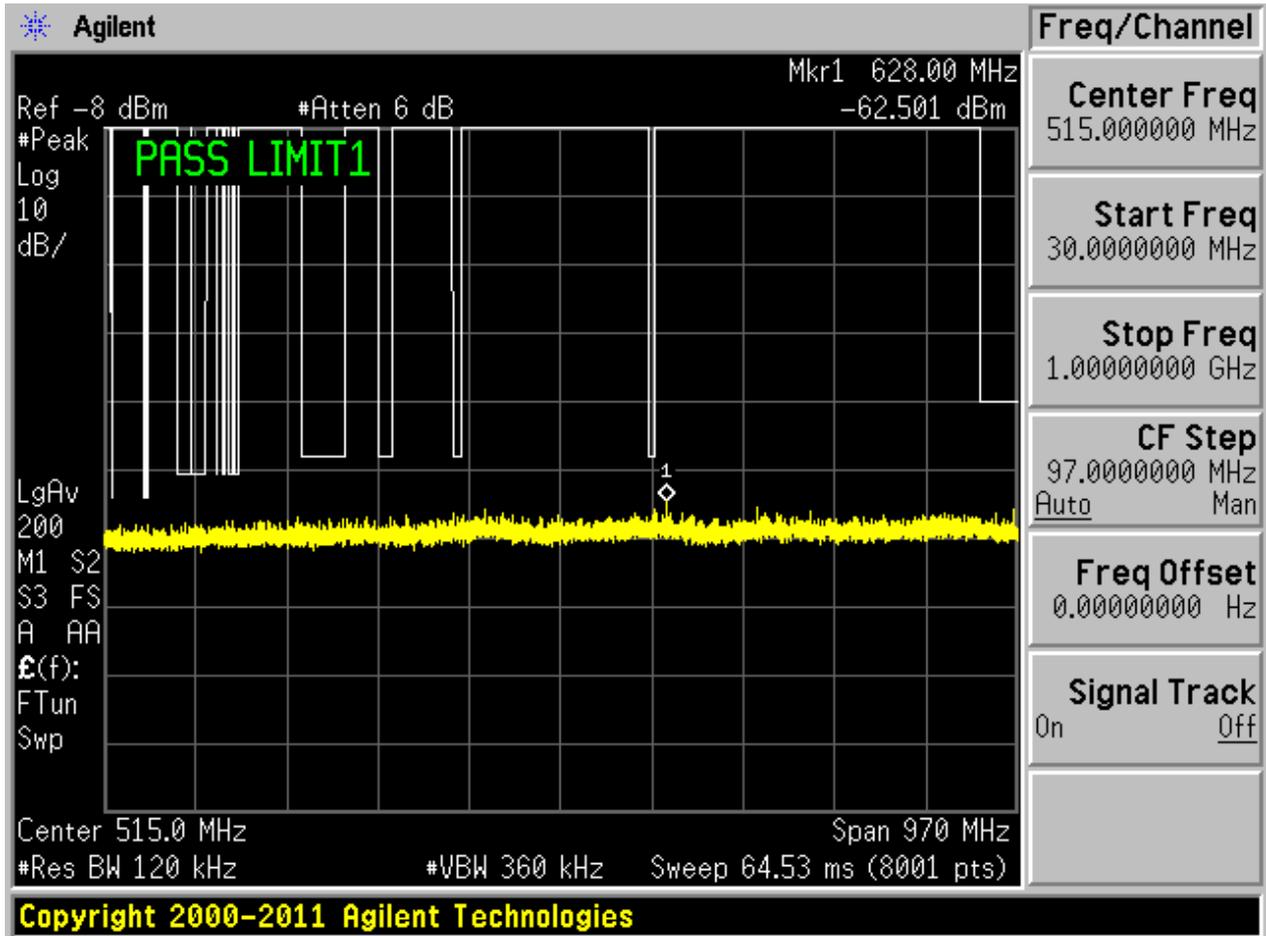


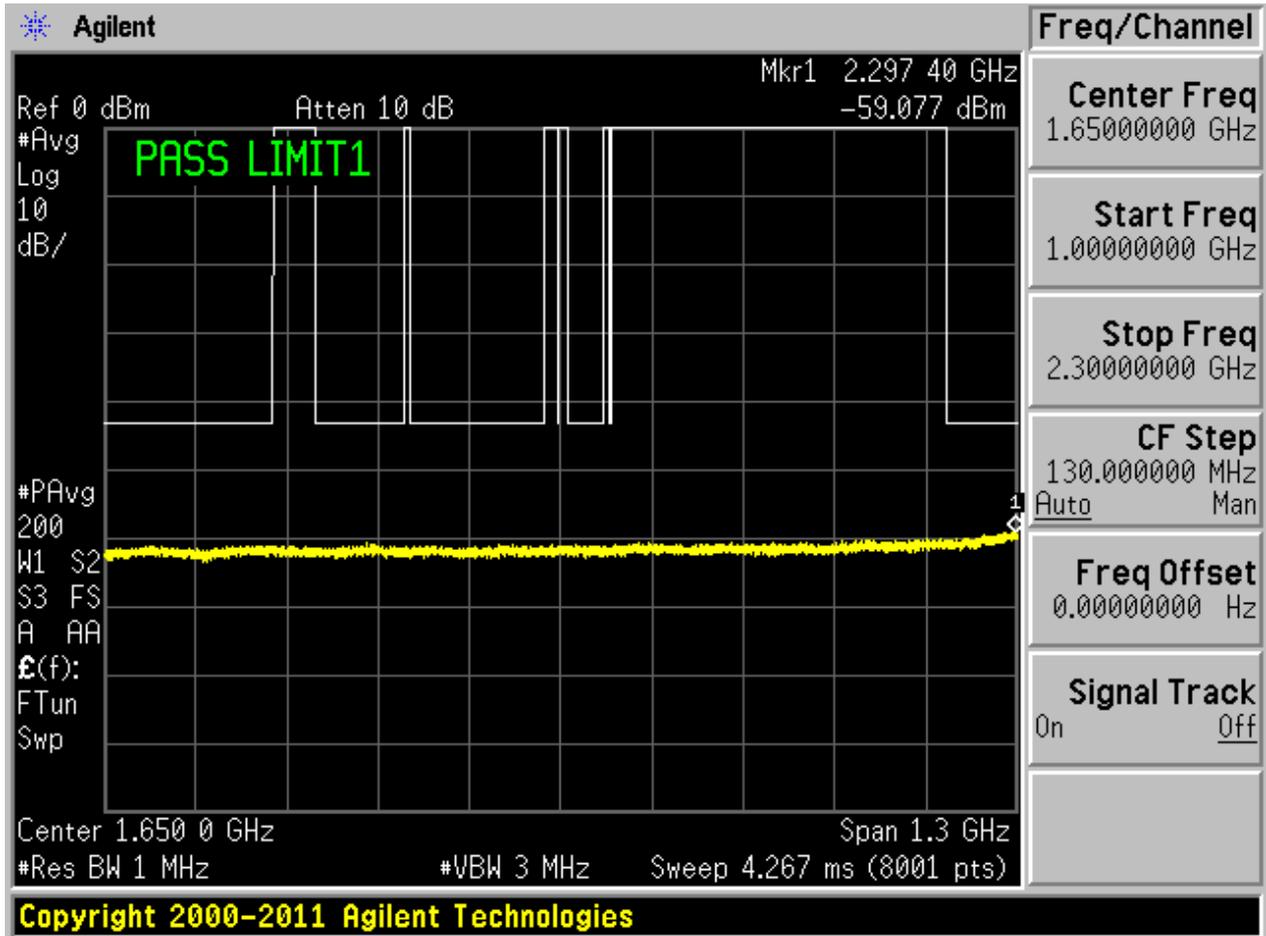
## 2 Result Plot

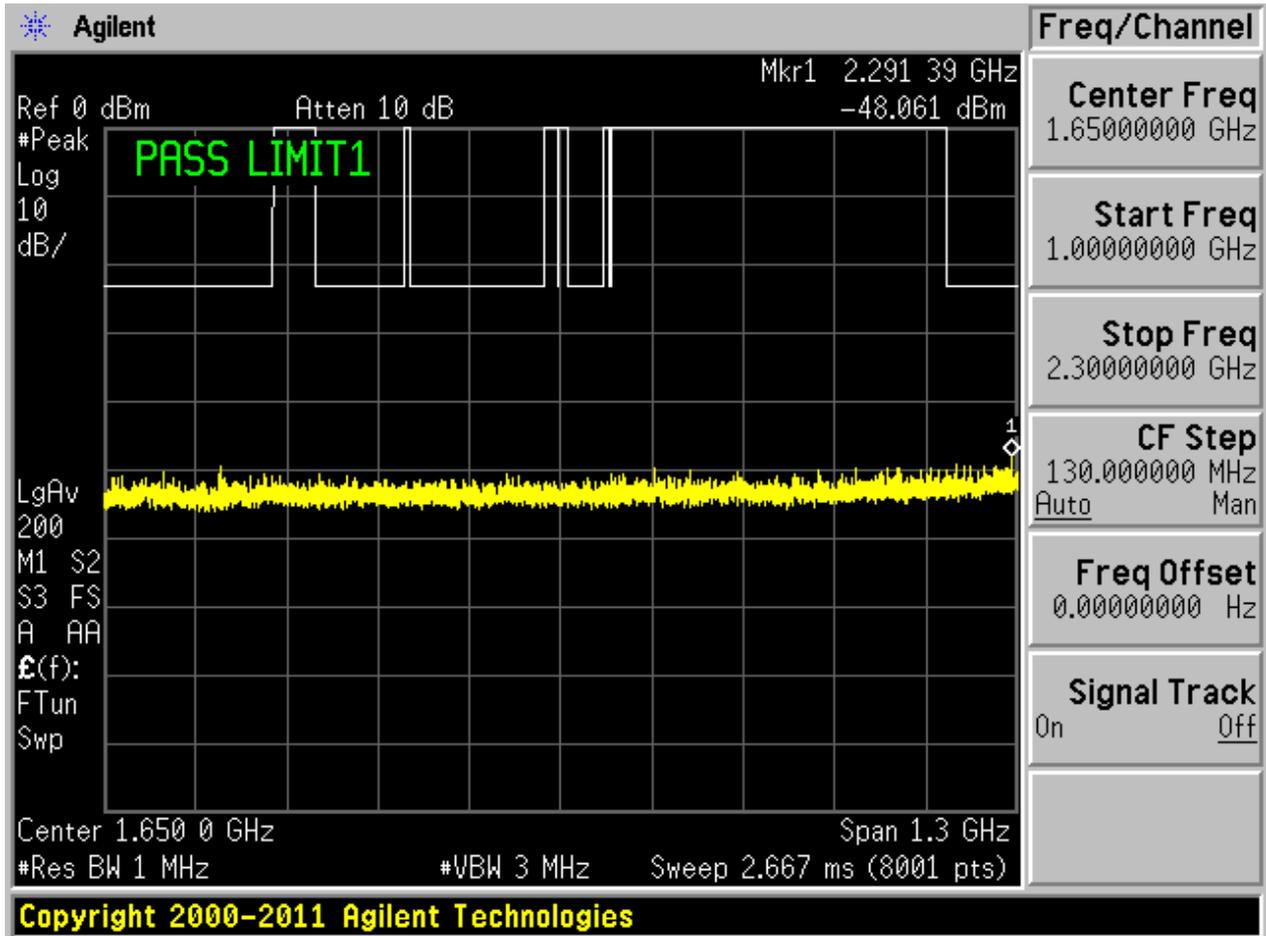
### 2.1 11B/1\_B@1

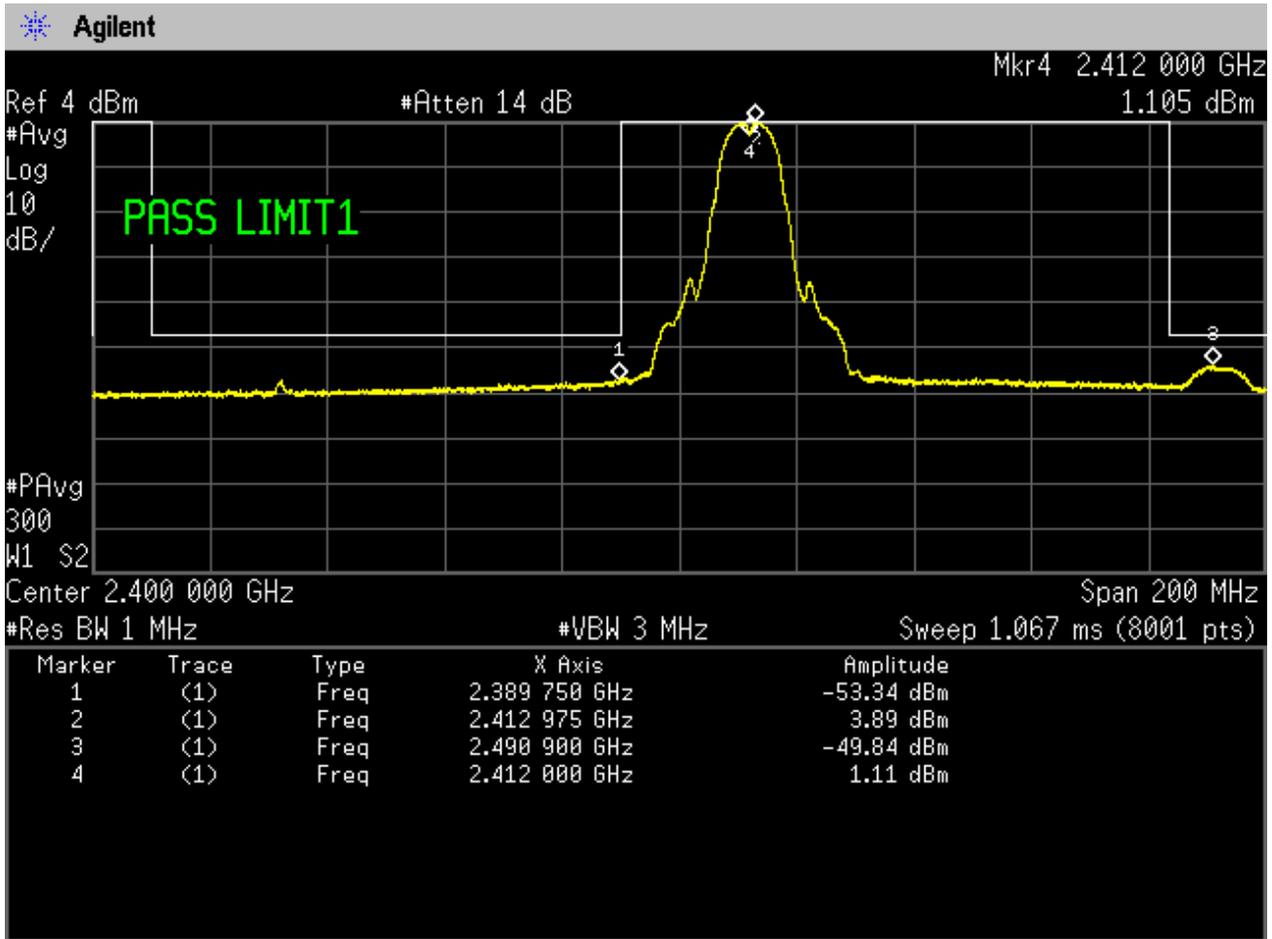


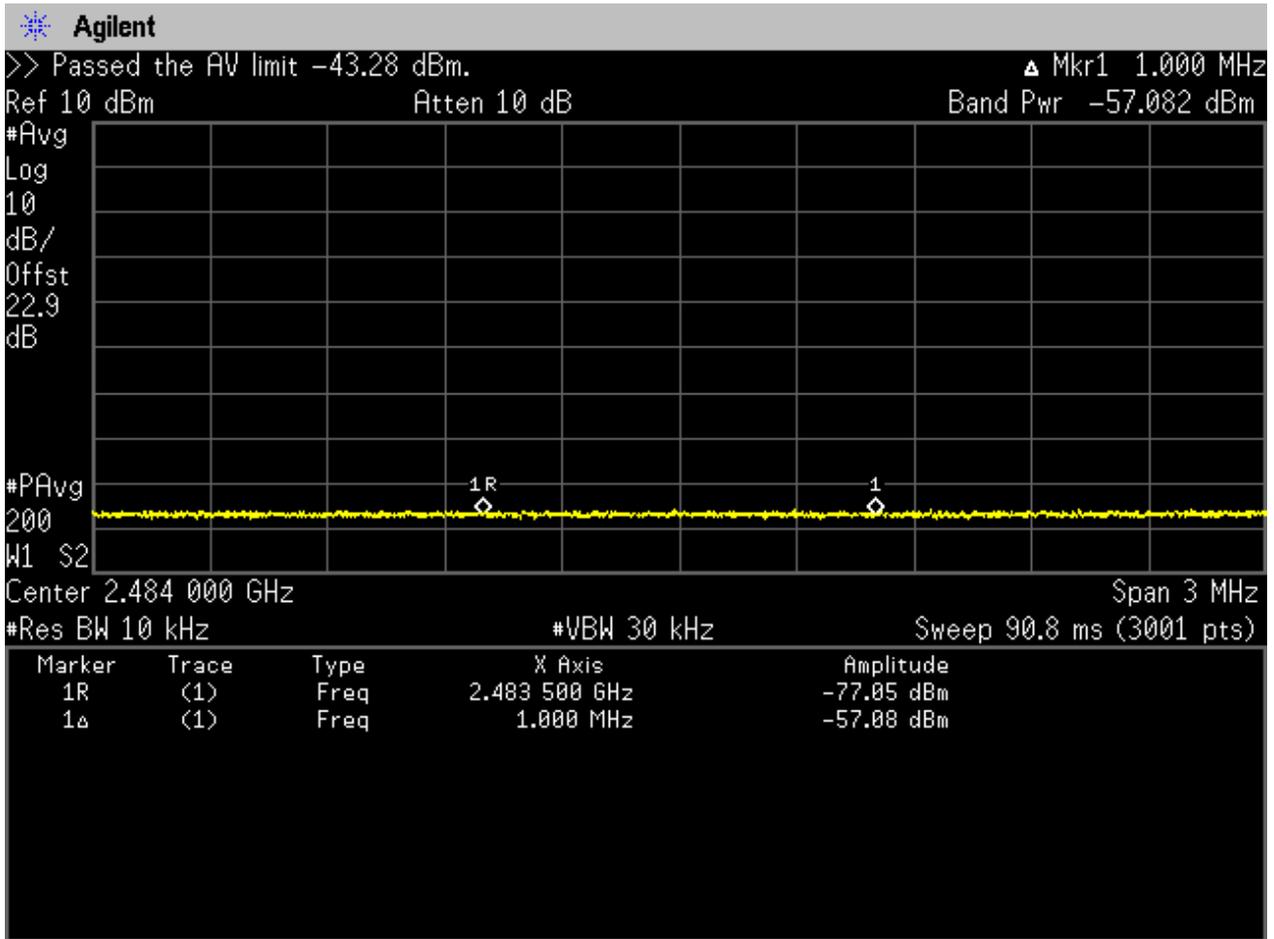


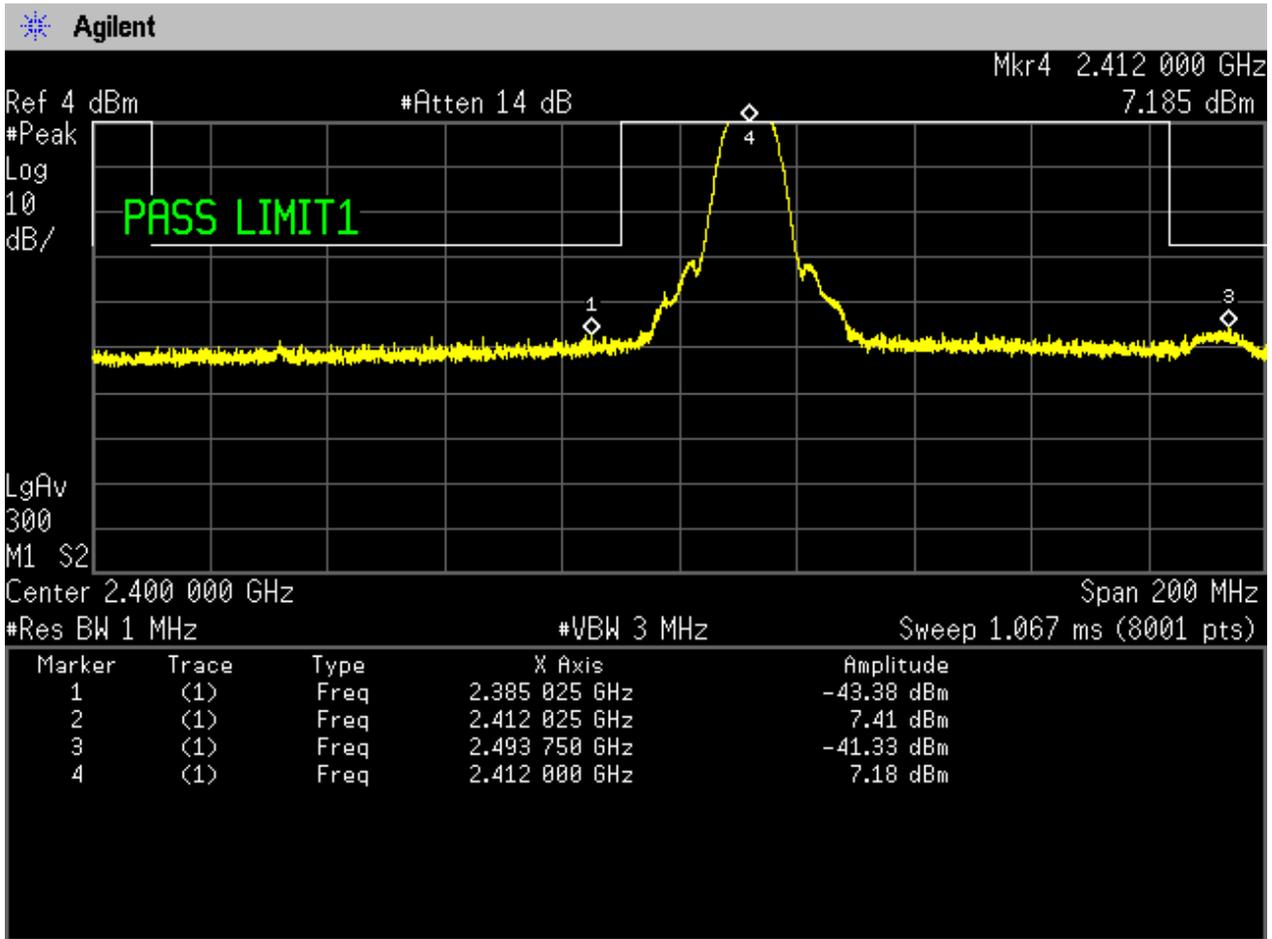


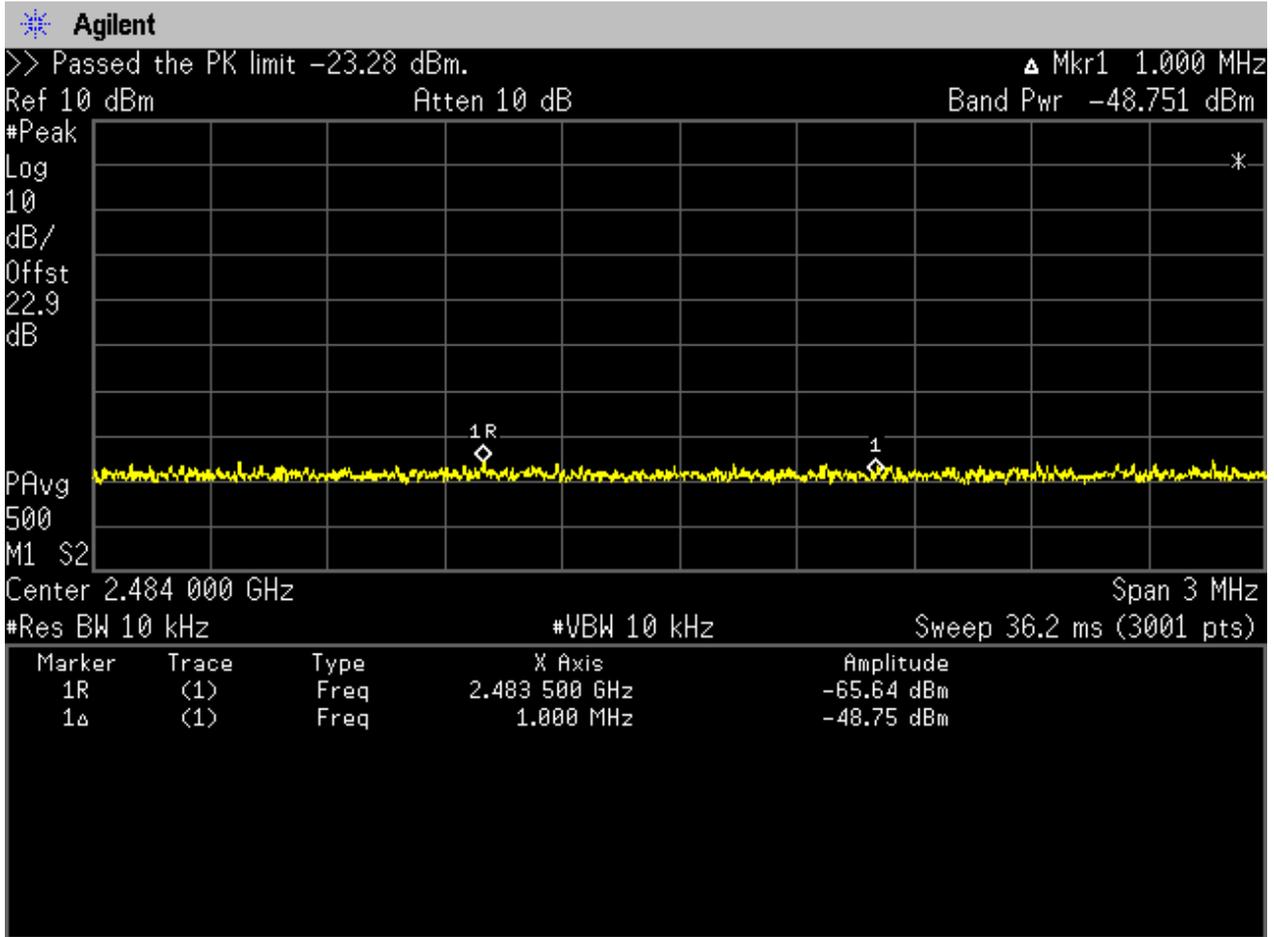


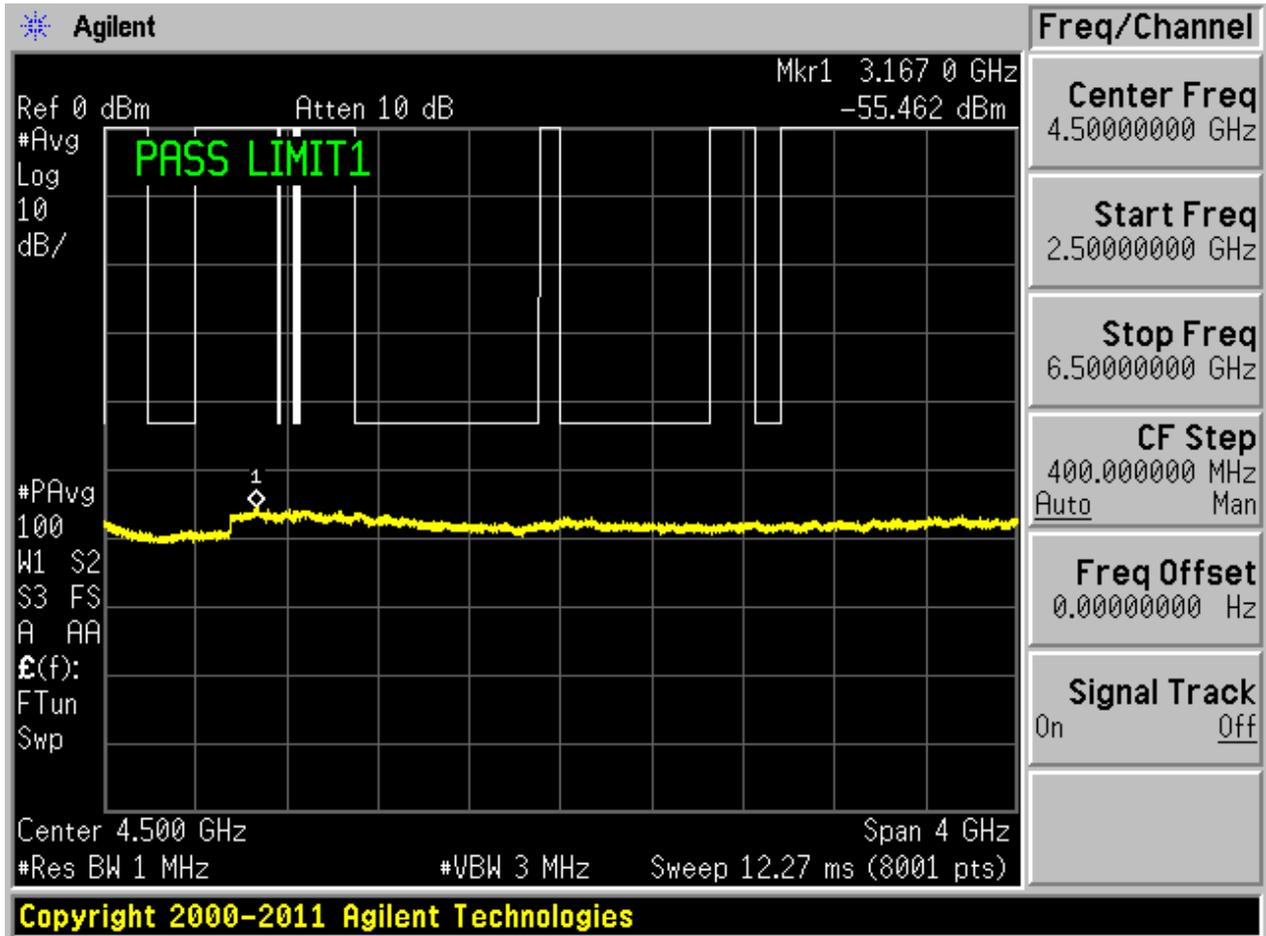


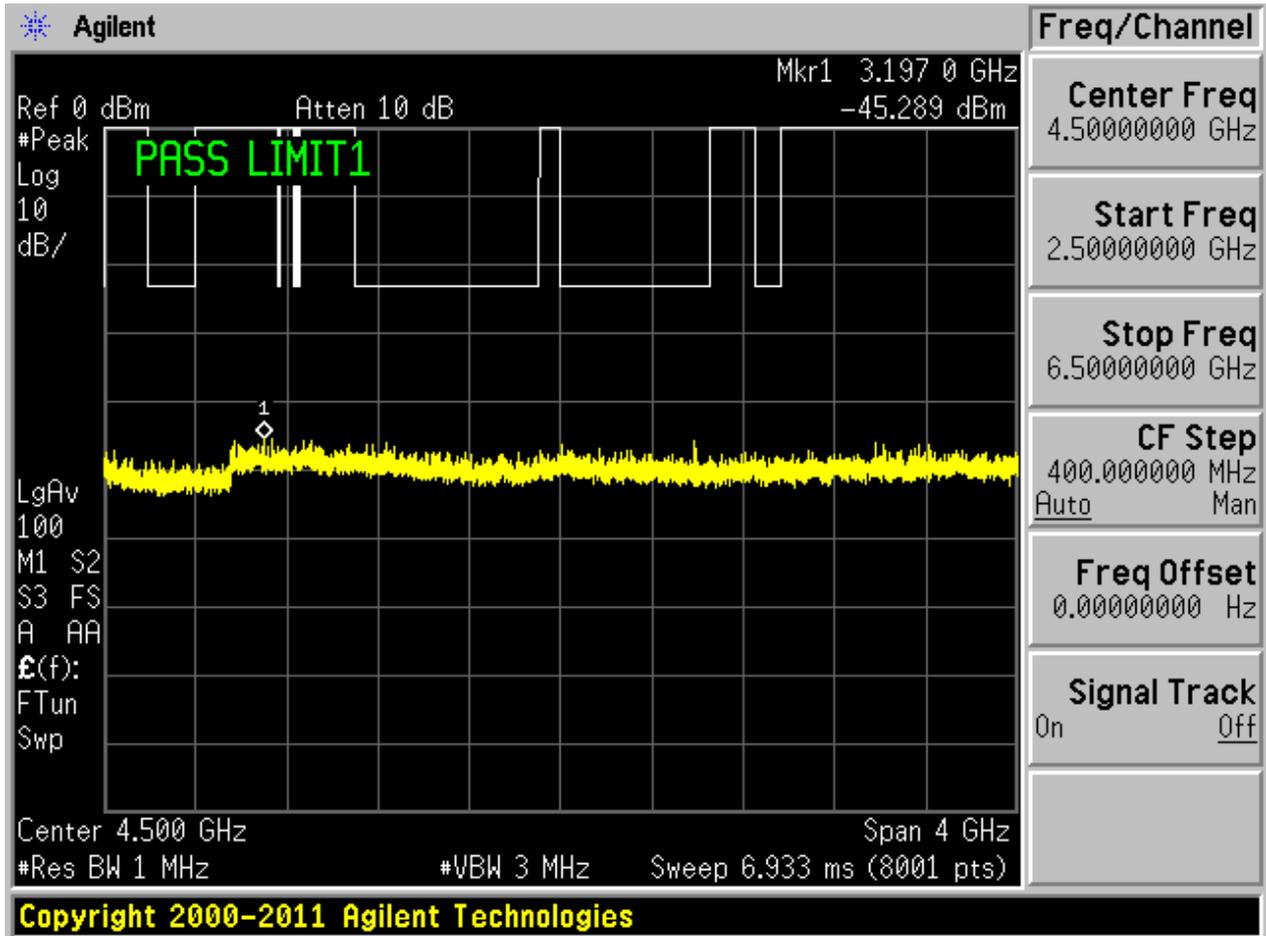


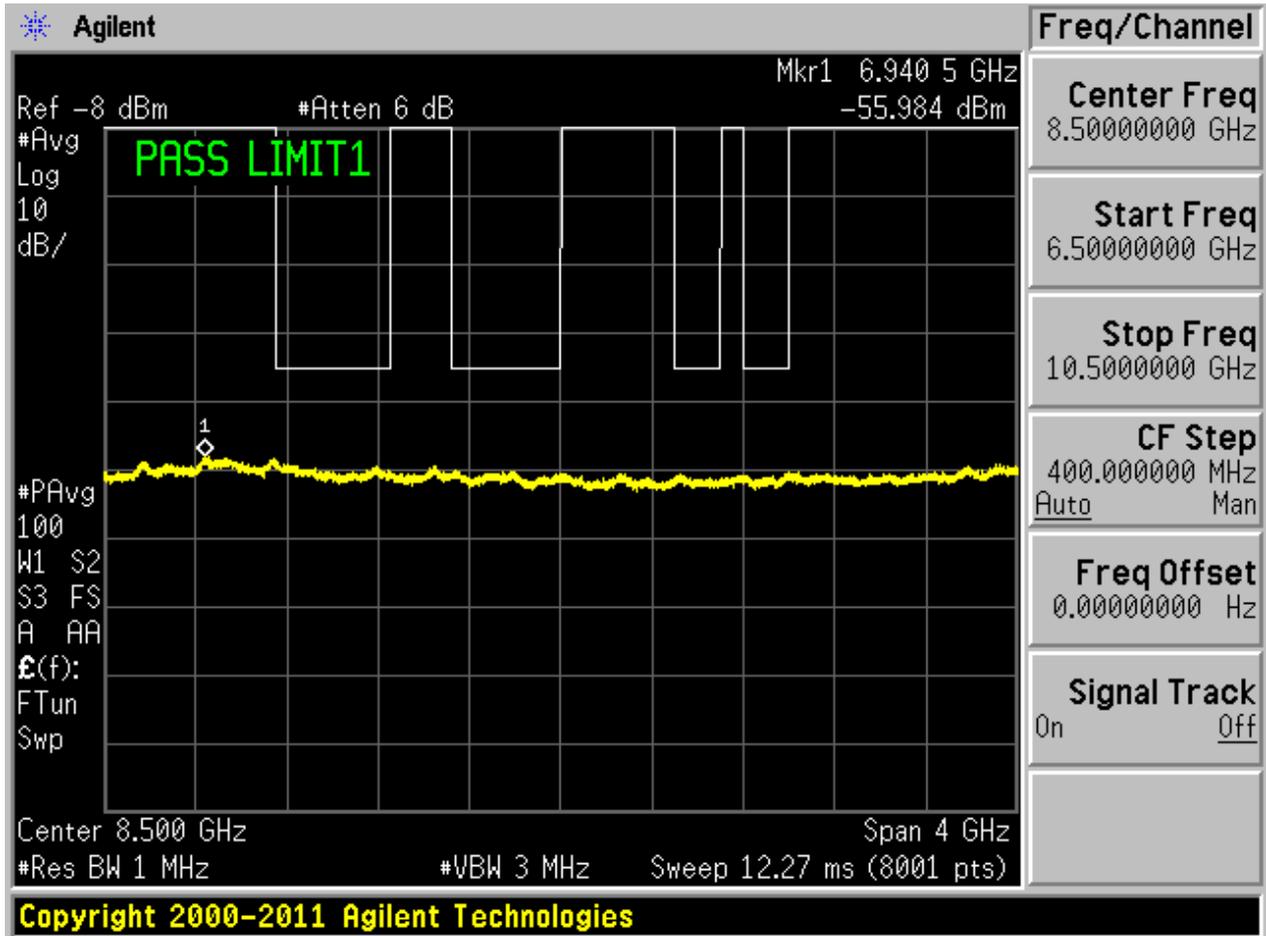


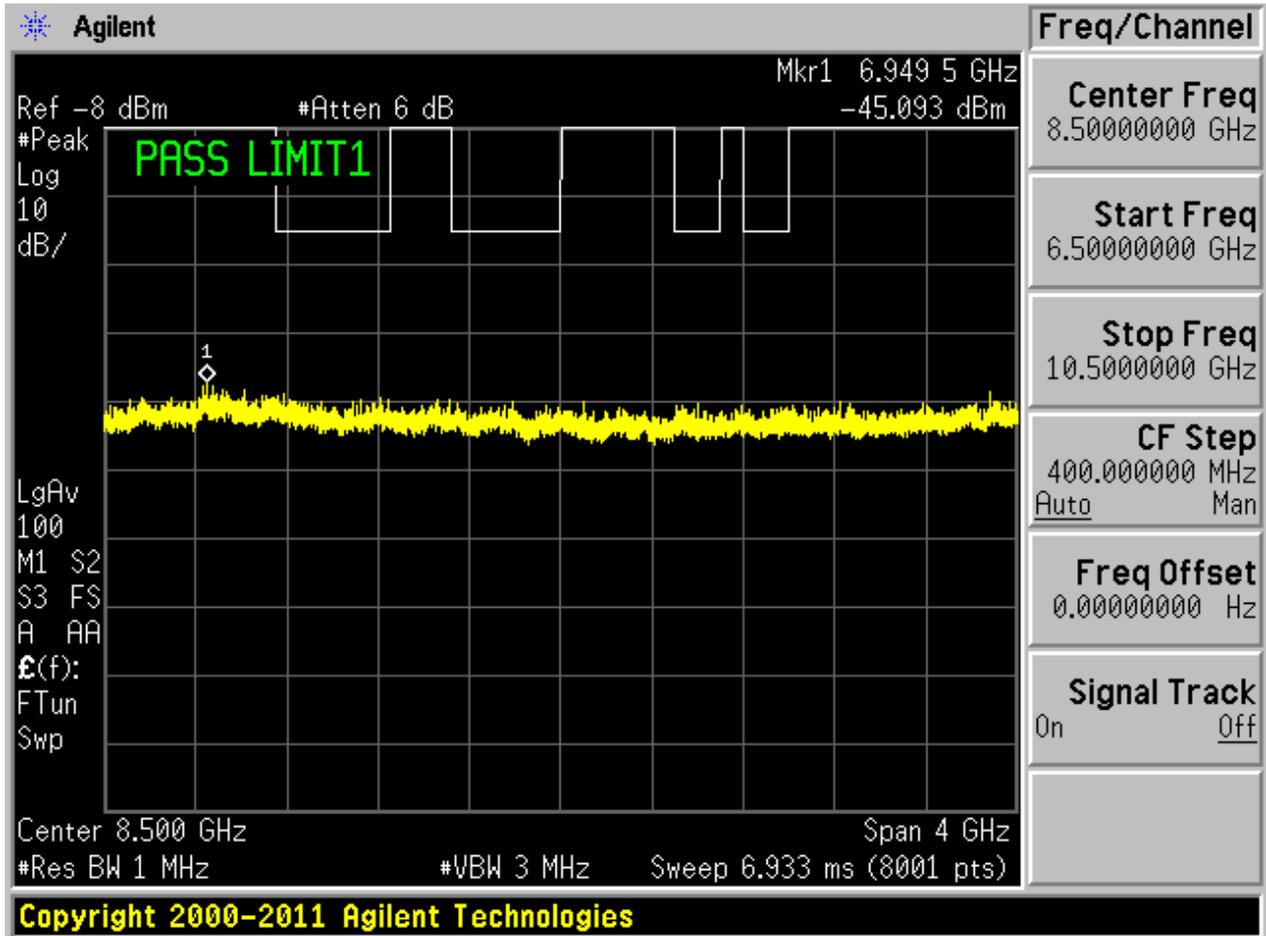


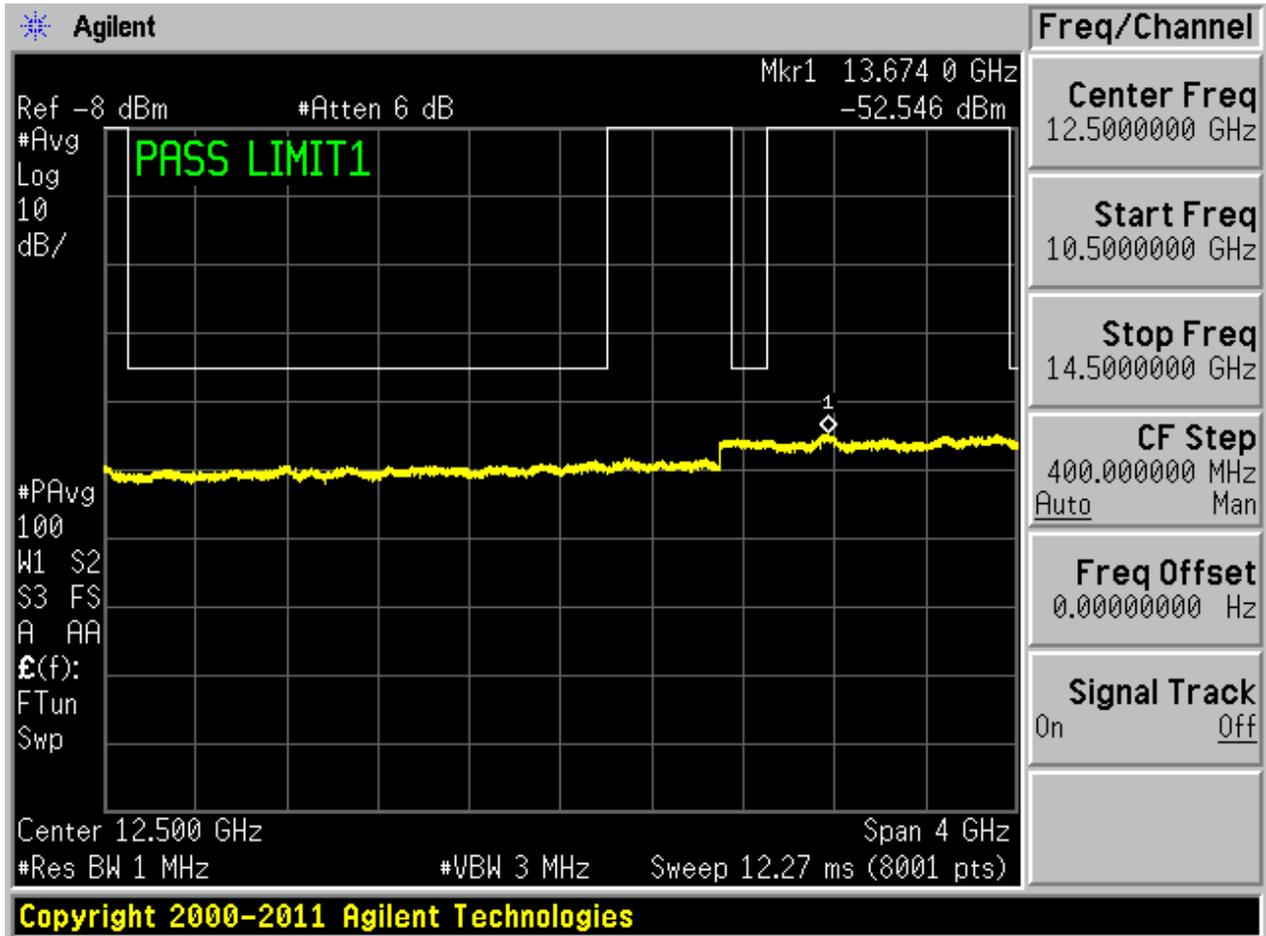


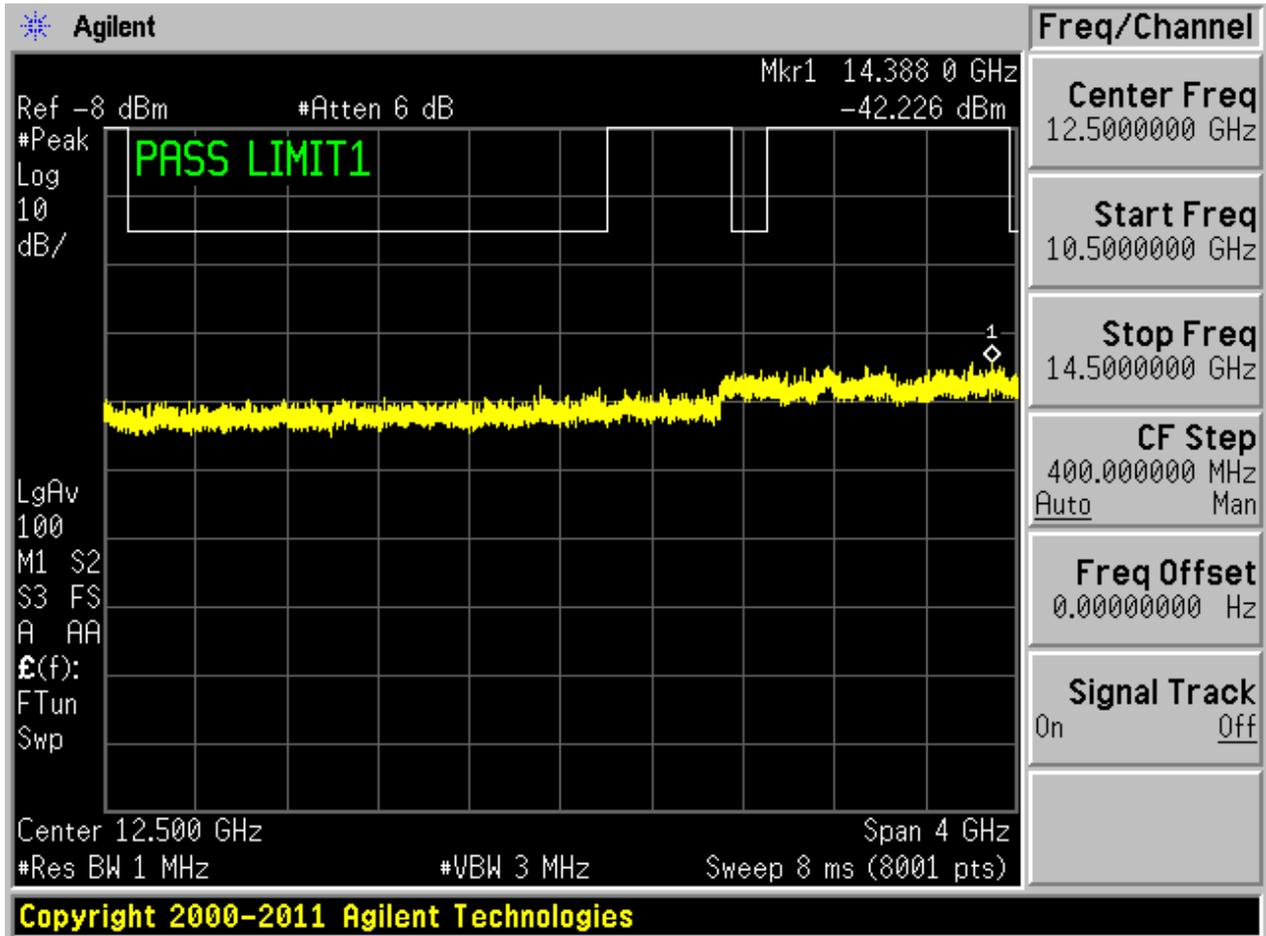


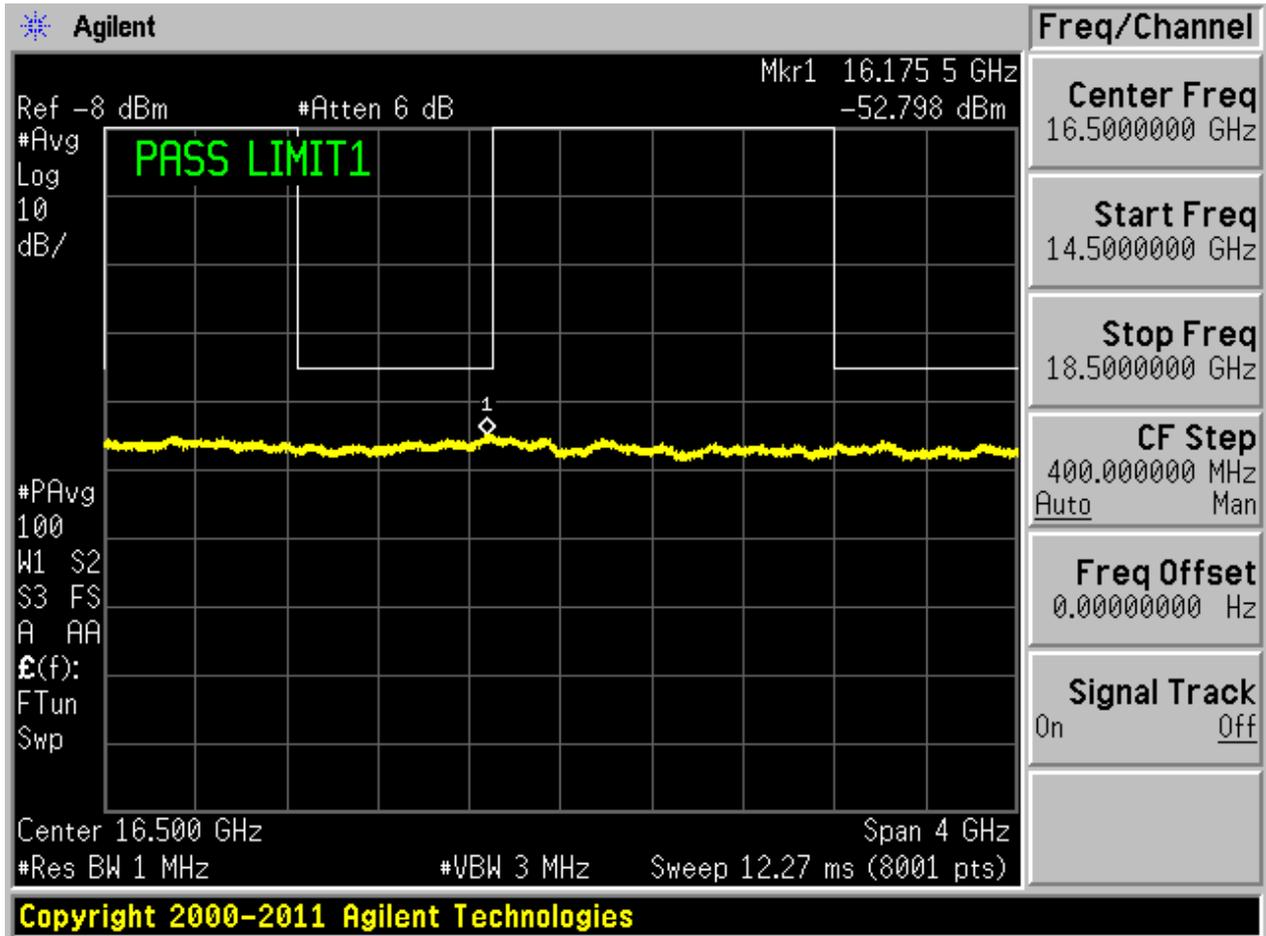


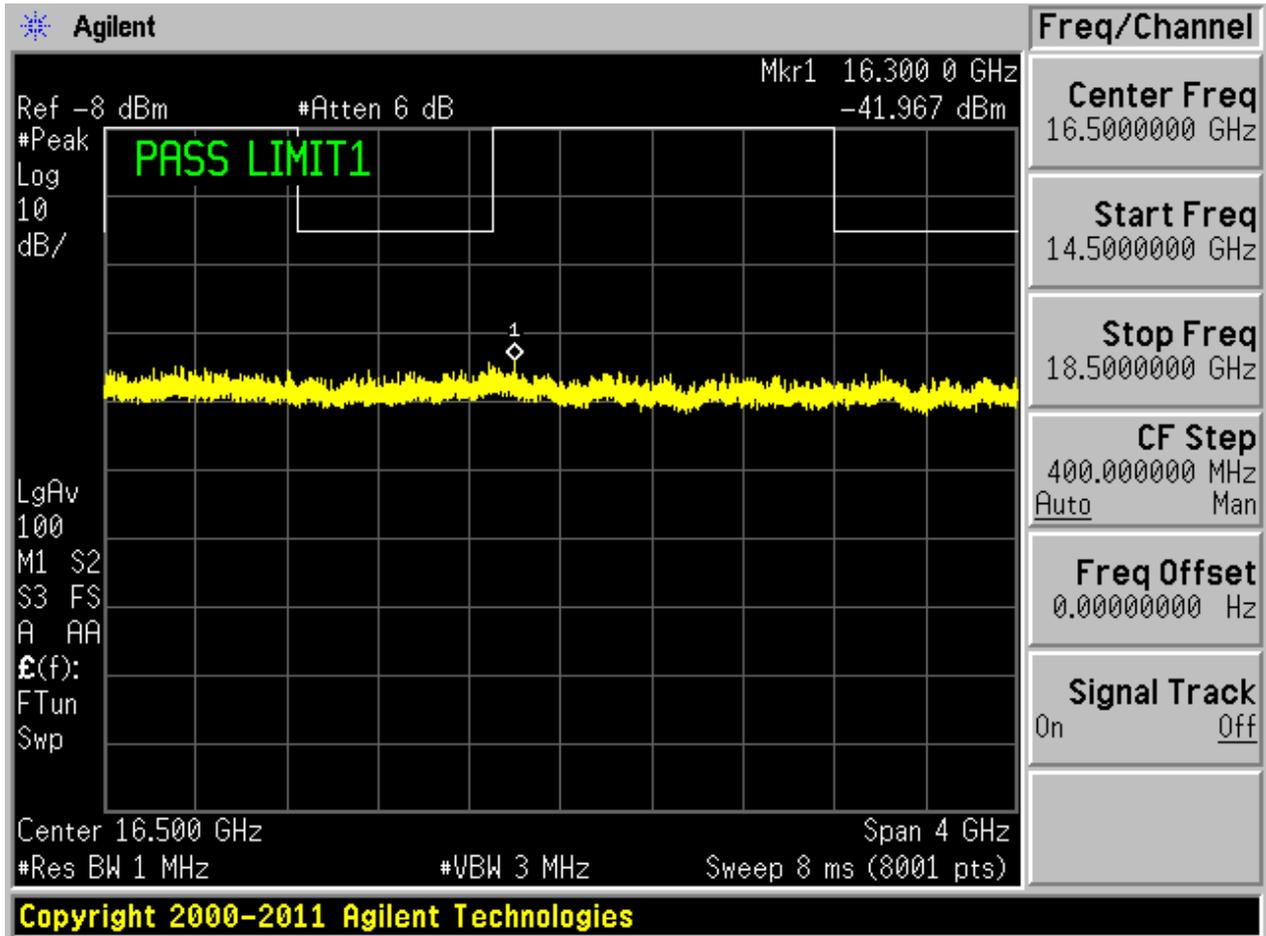


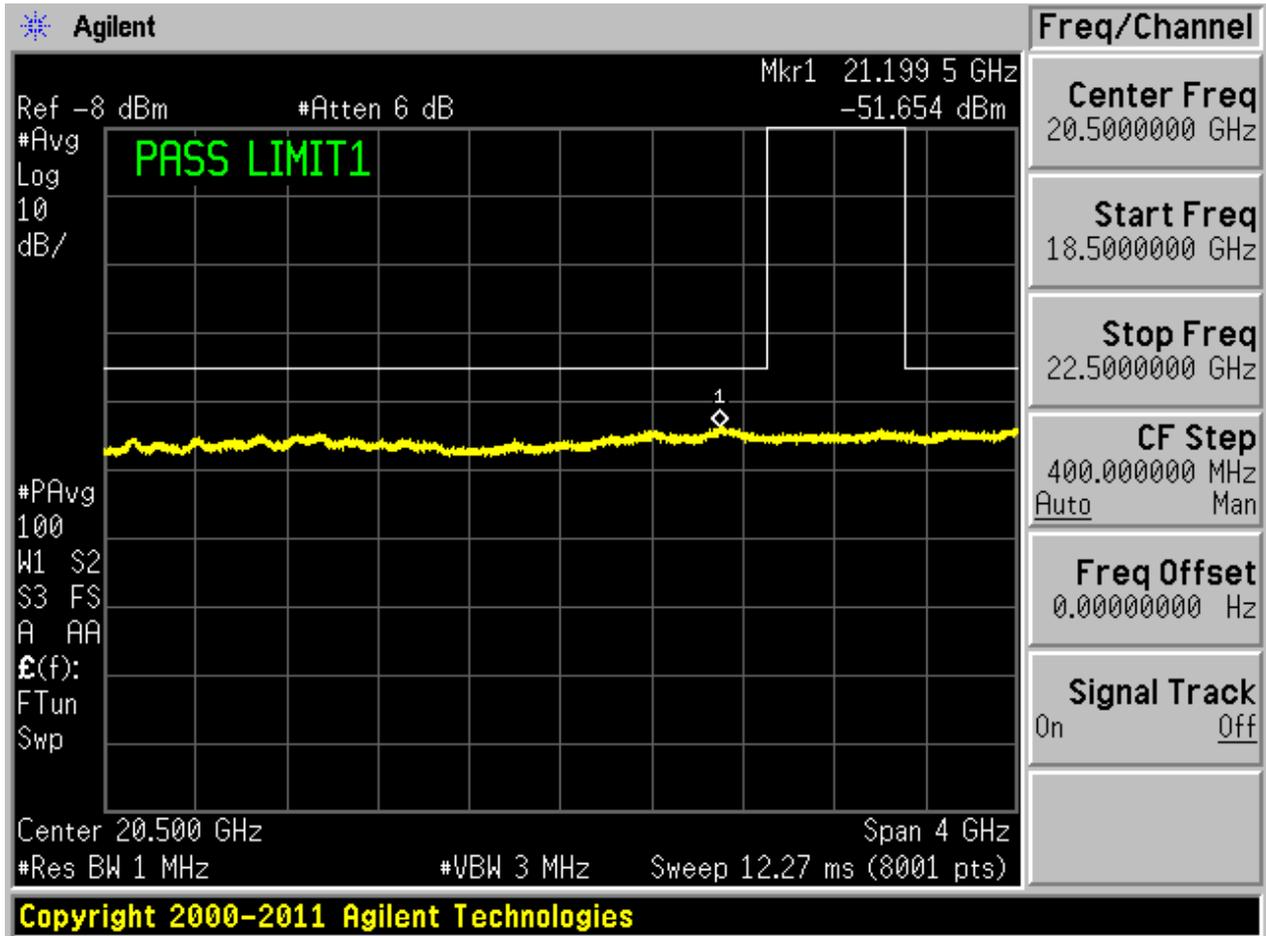


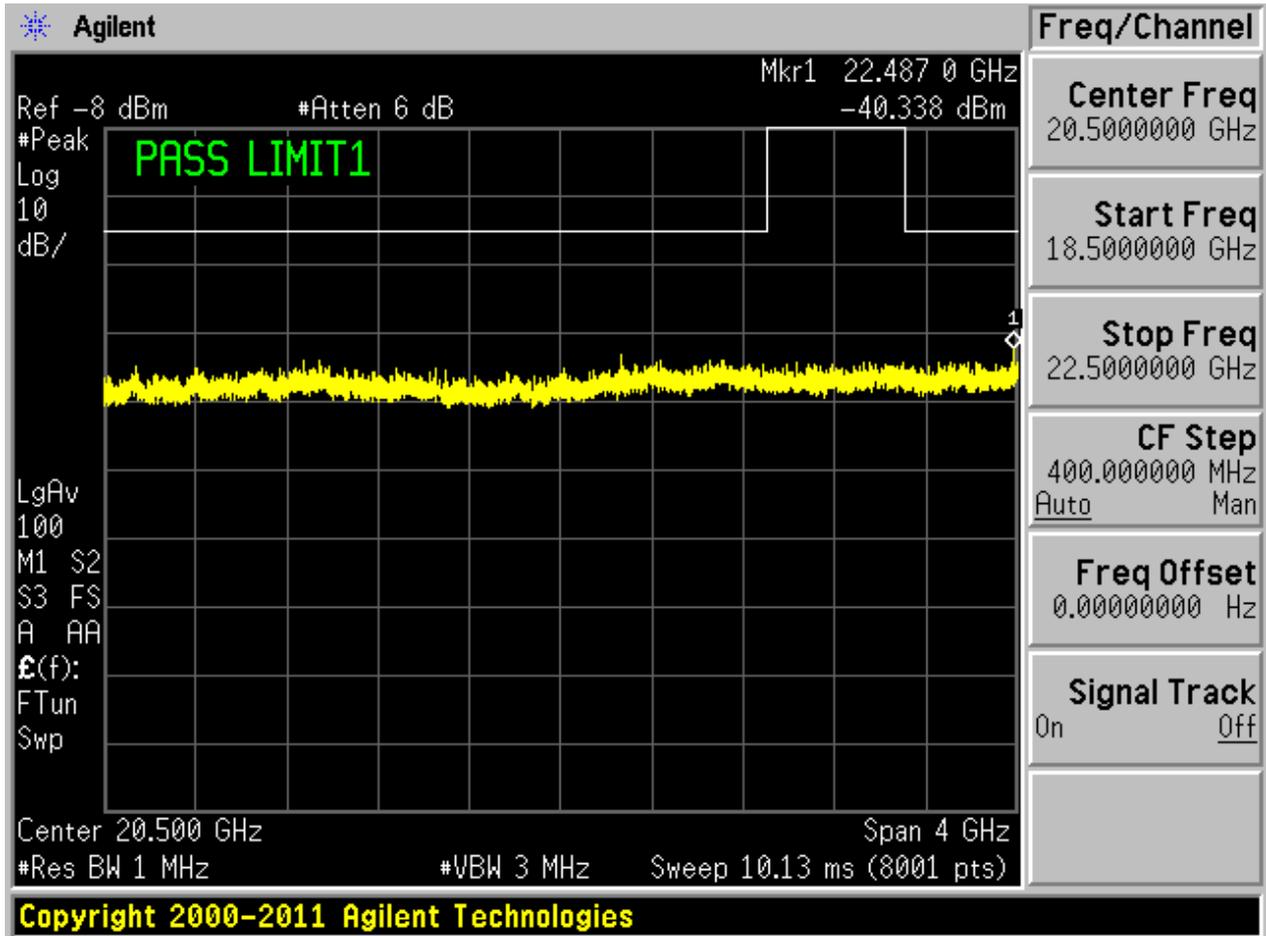


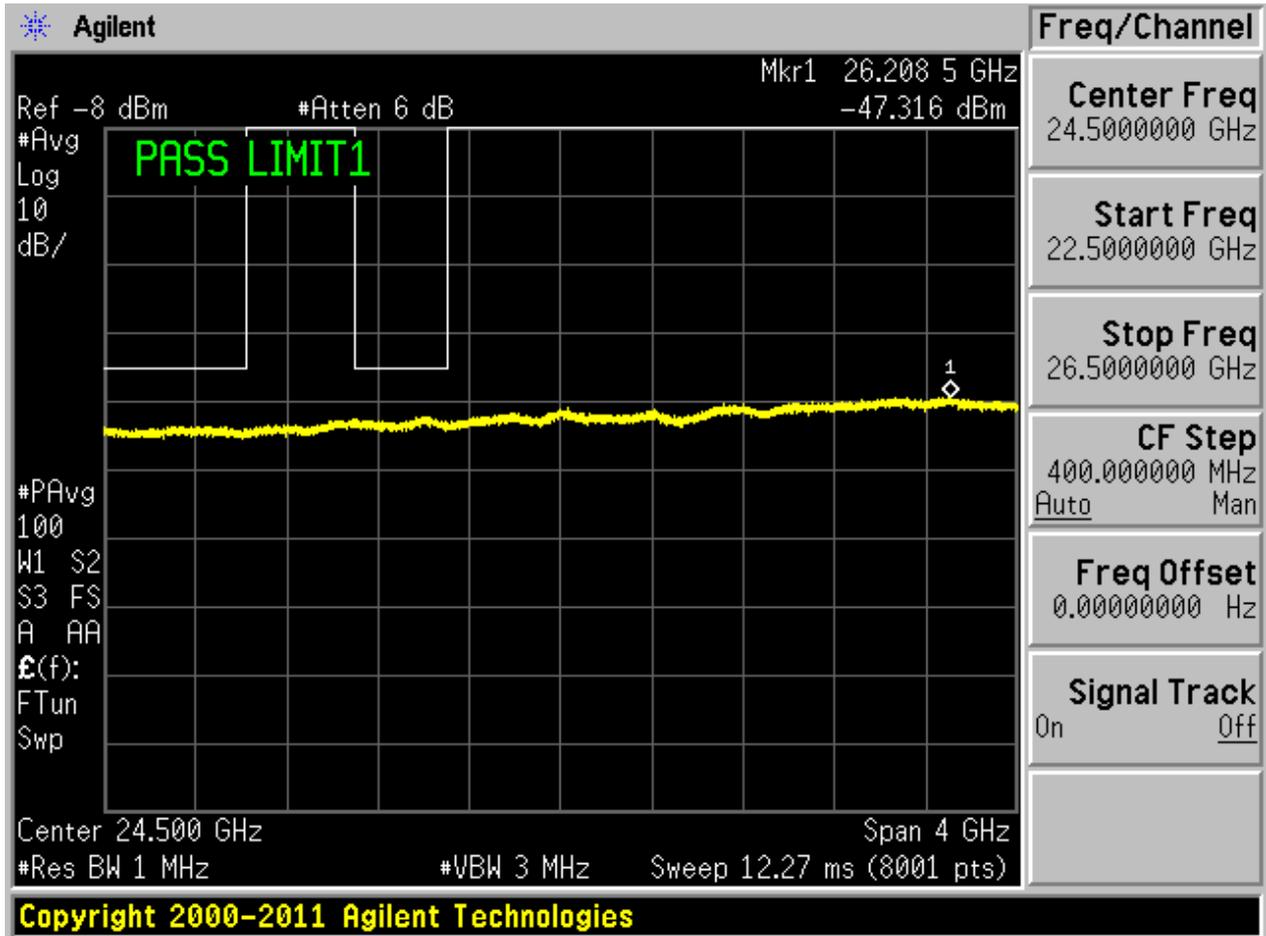


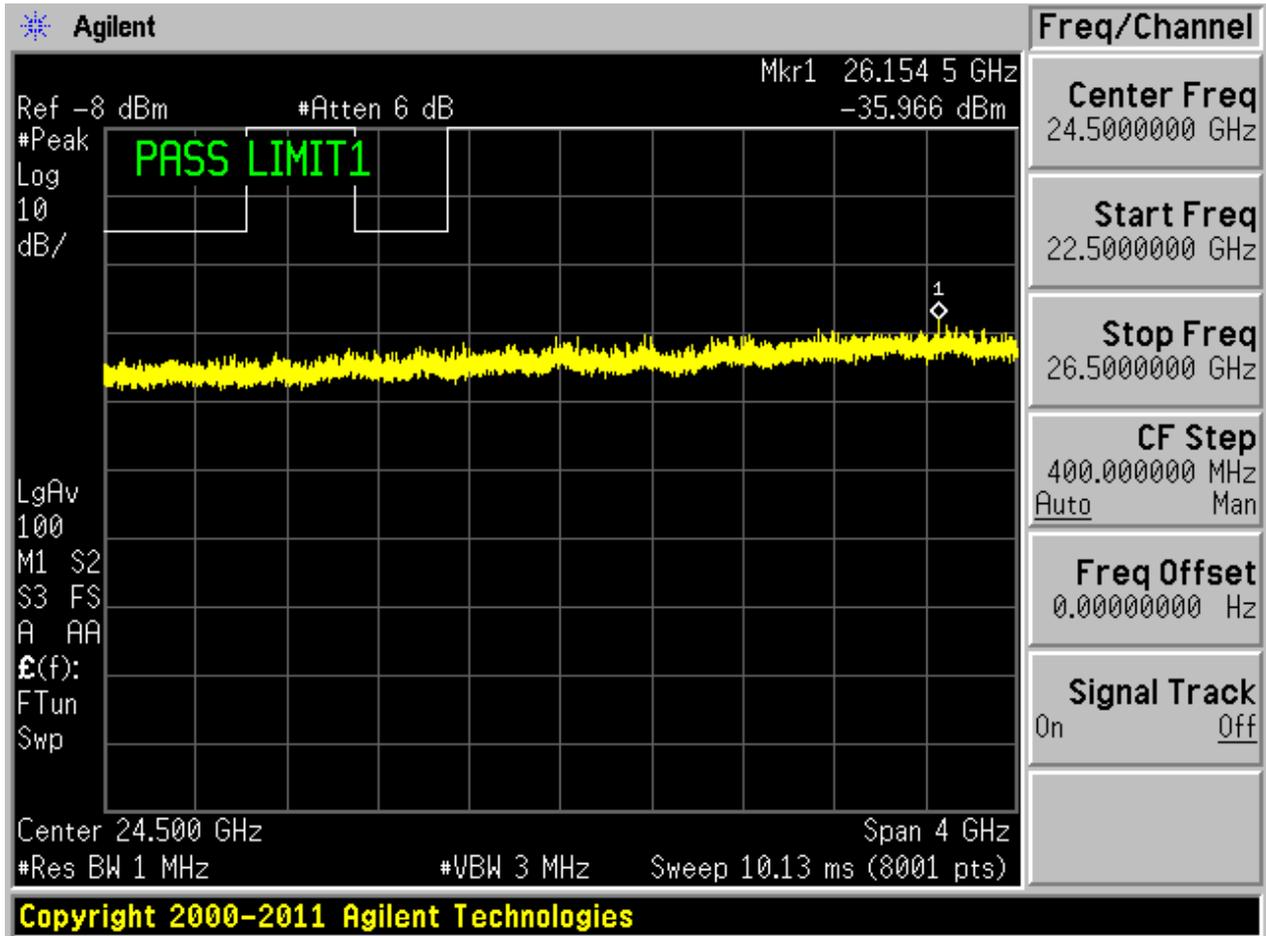












## 2.2 11B/1\_B@2