Appendix for Test report

Appendix A: DTS (6 dB) Bandwidth

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

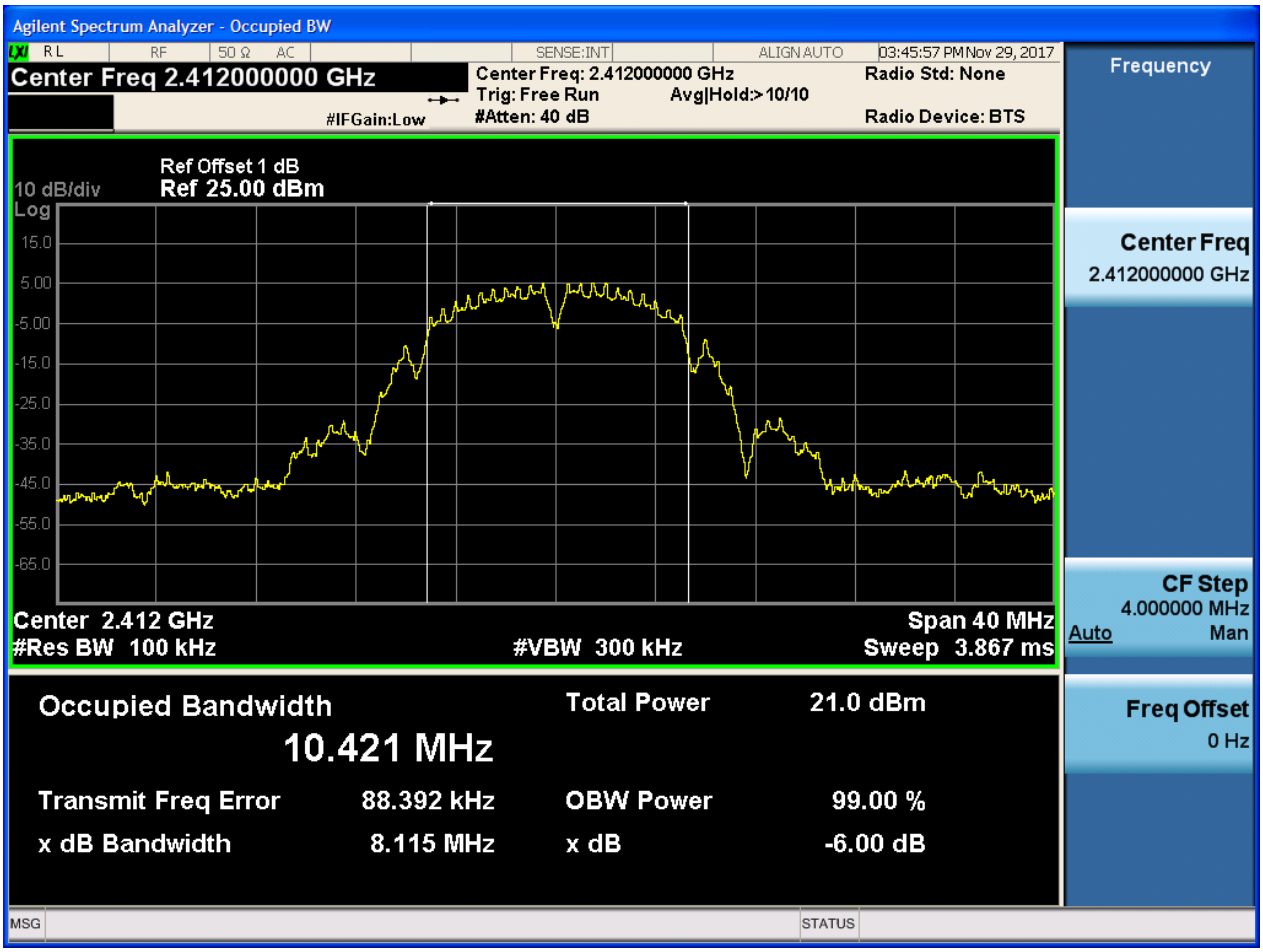
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

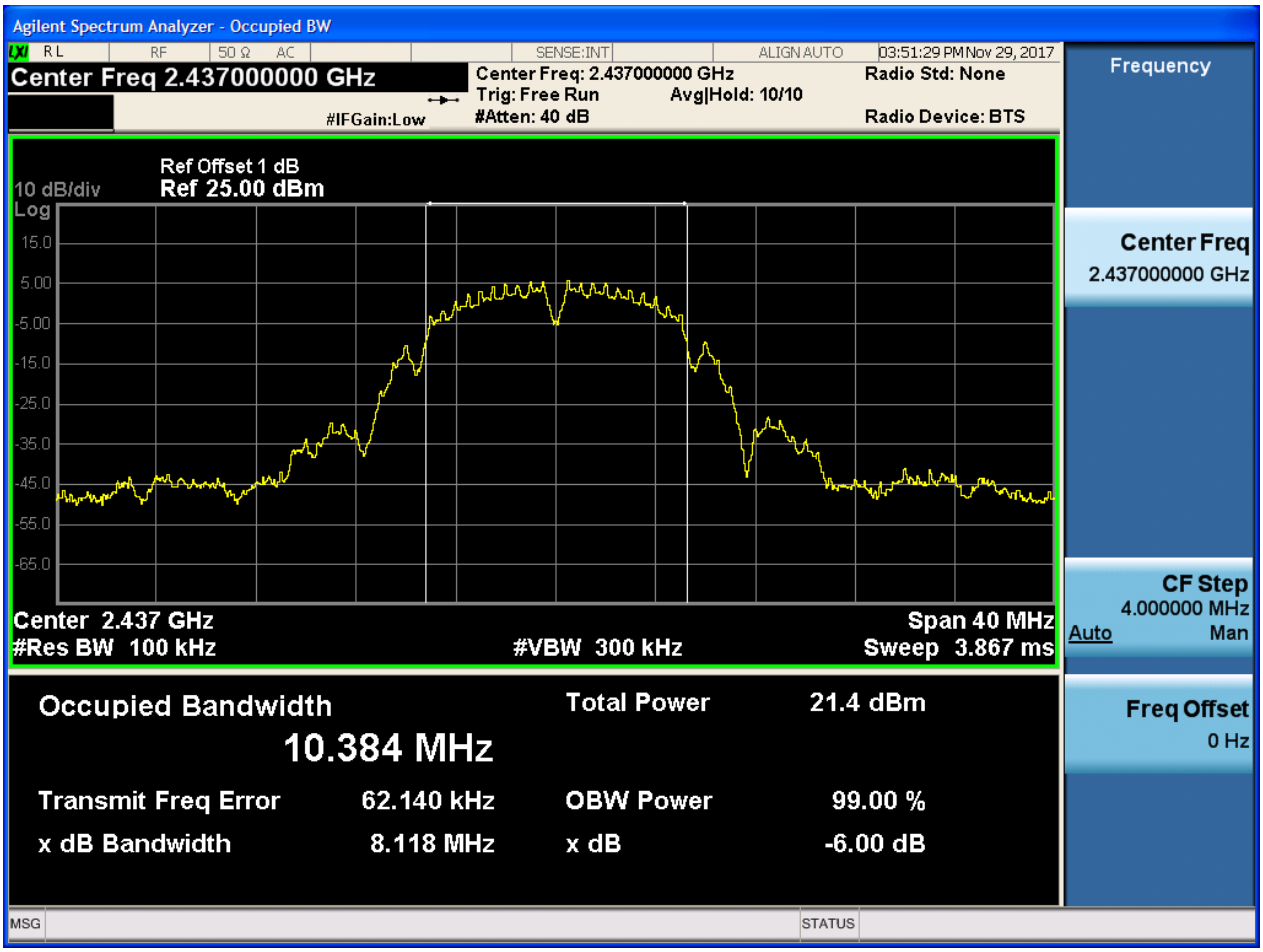
Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
11B	L	2412	Ant 1	8.12	pass
11B	M	2437	Ant 1	8.12	pass
11B	H	2462	Ant 1	8.13	pass
11G	L	2412	Ant 1	16.41	pass
11G	L	2417	Ant 1	16.35	pass
11G	M	2437	Ant 1	16.41	pass
11G	H	2457	Ant 1	16.39	pass
11G	H	2462	Ant 1	16.41	pass
11N20	L	2412	Ant 1	17.60	pass
11N20	L	2417	Ant 1	17.24	pass
11N20	M	2437	Ant 1	17.62	pass
11N20	H	2457	Ant 1	17.59	pass
11N20	H	2462	Ant 1	17.62	pass
11N40	L	2422	Ant 1	35.50	pass
11N40	M	2437	Ant 1	35.51	pass
11N40	H	2452	Ant 1	35.41	pass

Part II - Test Plots

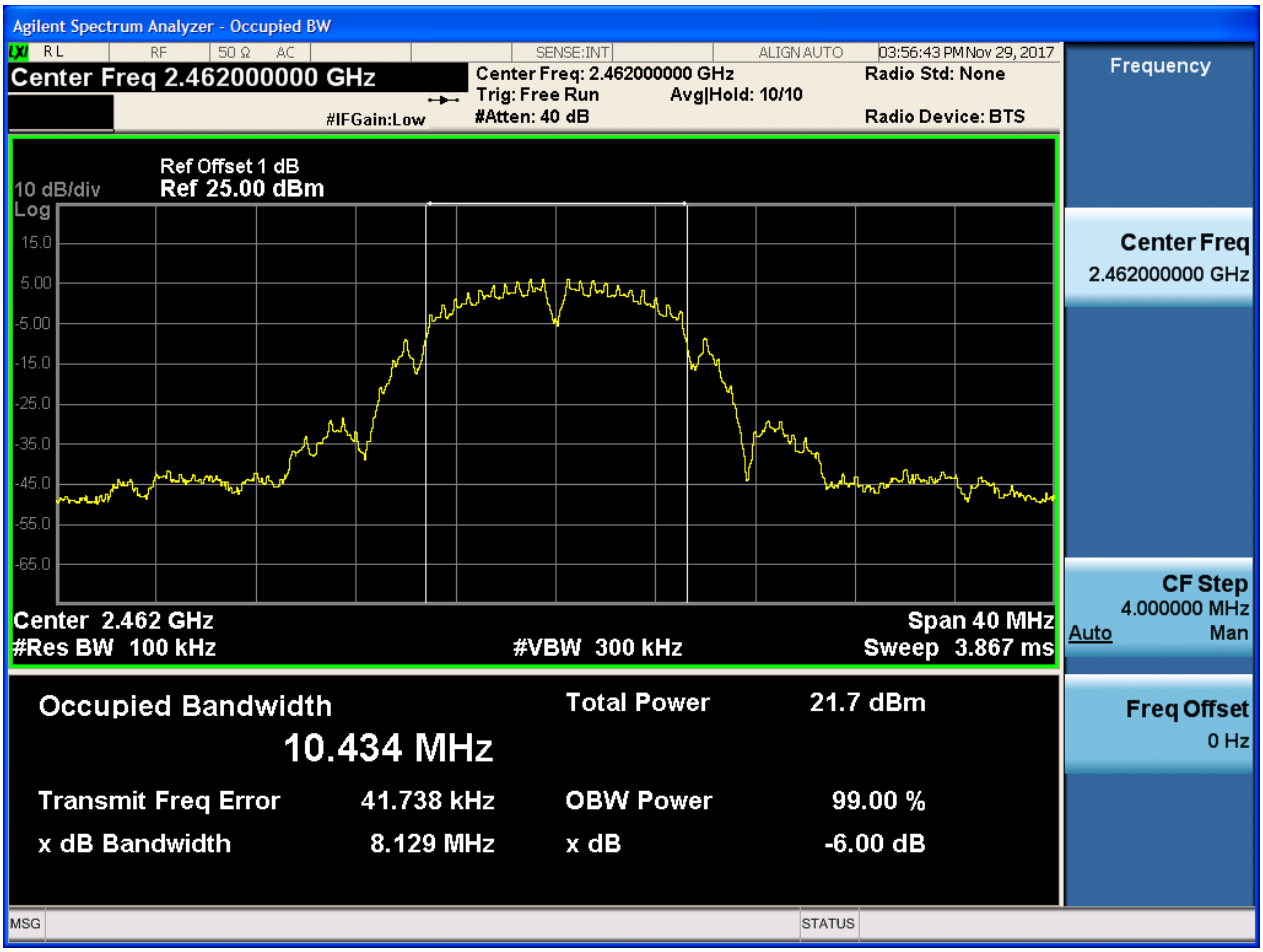
2.1 11B_L@Ant 1



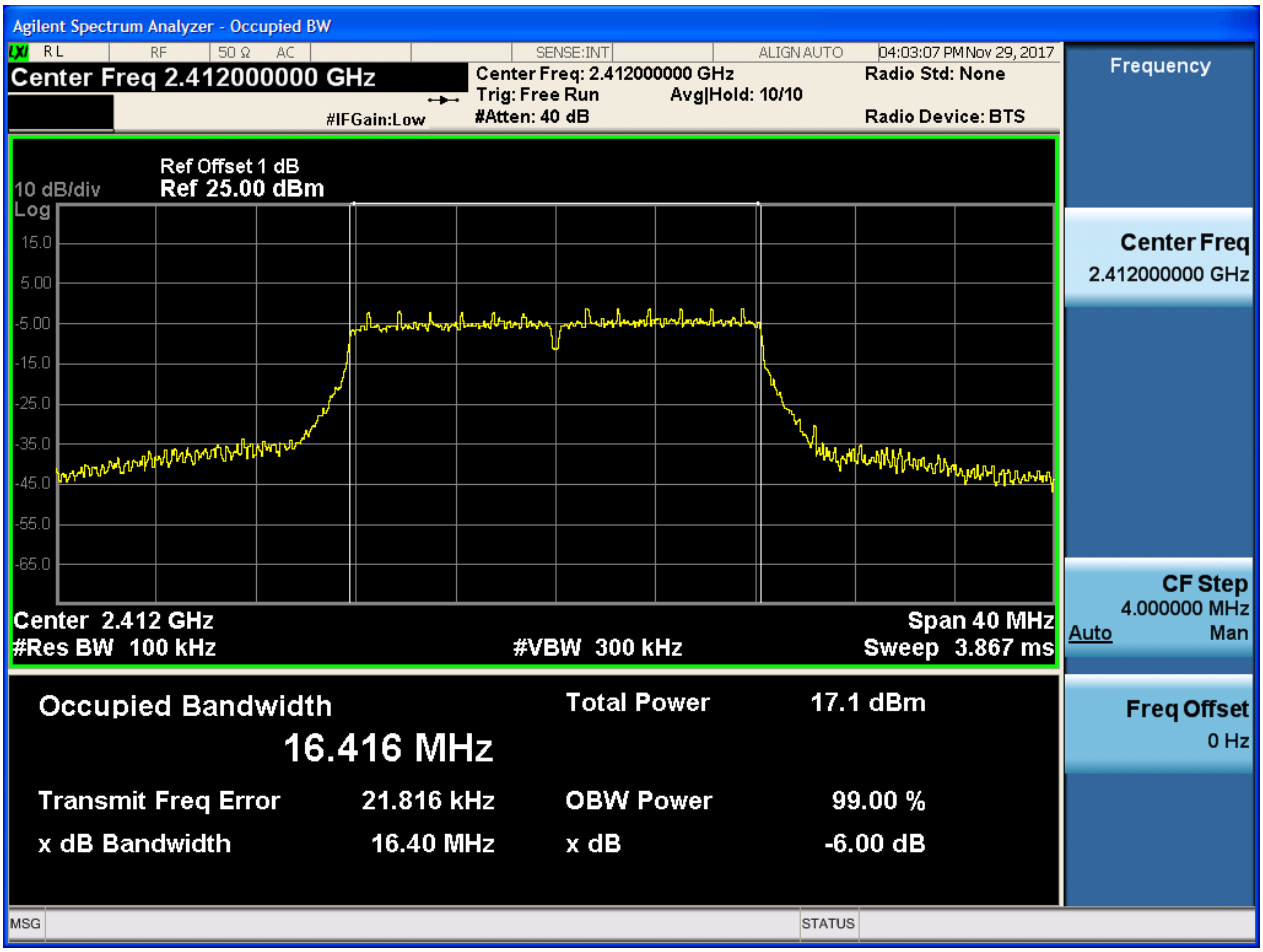
2.2 11B_M@Ant 1



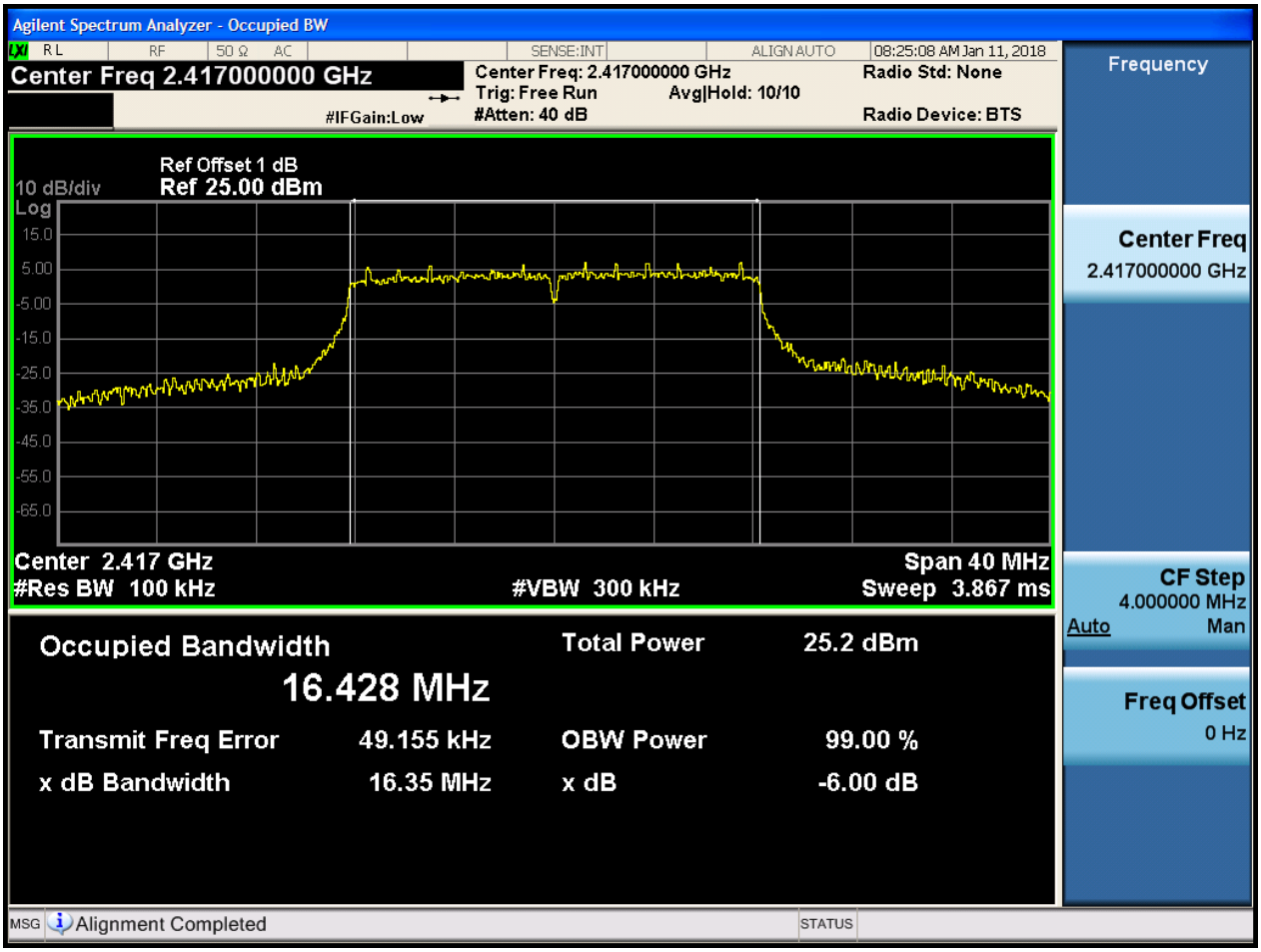
2.3 11B_H@Ant 1



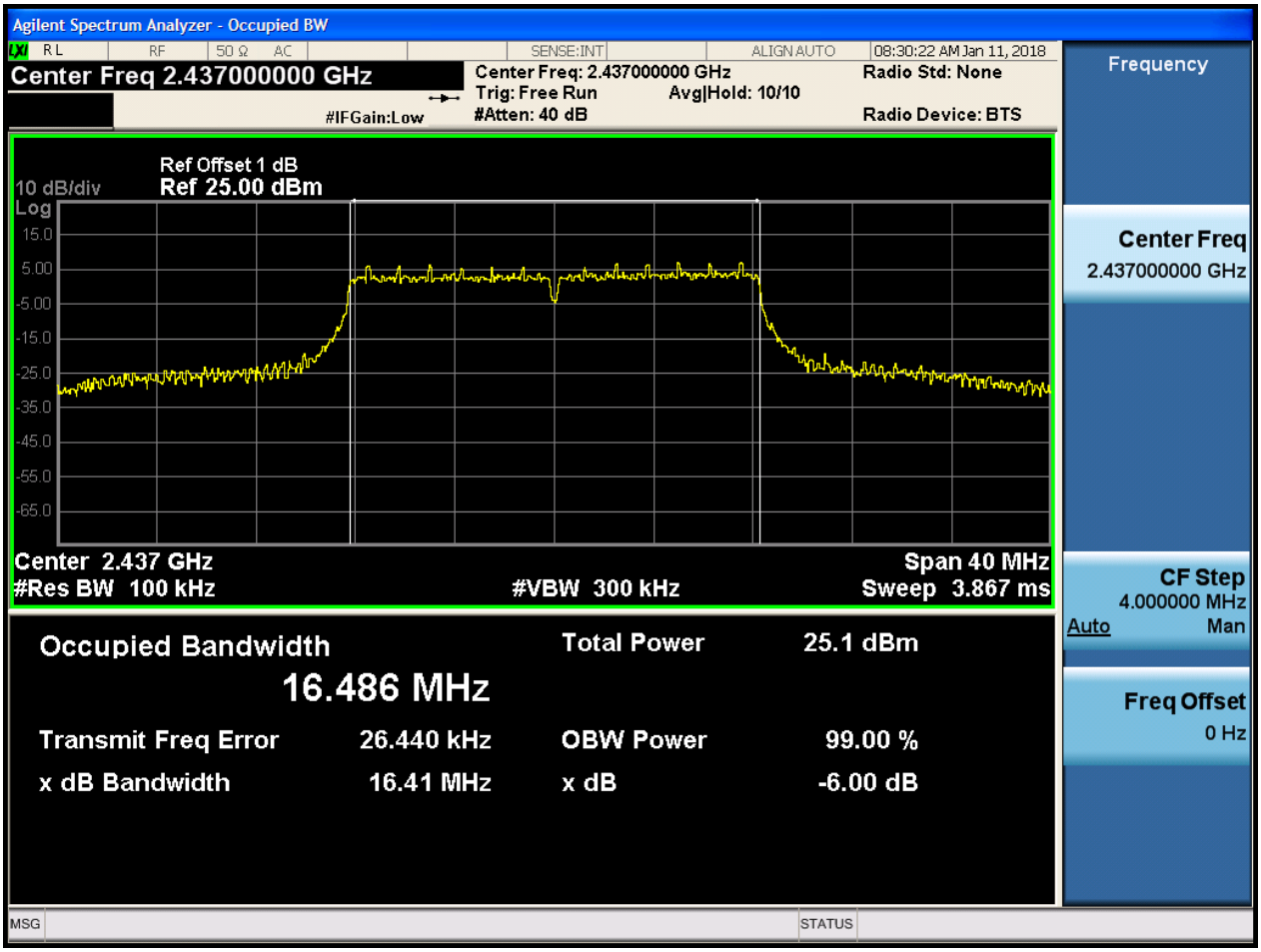
2.4 11G_L_2412@Ant 1



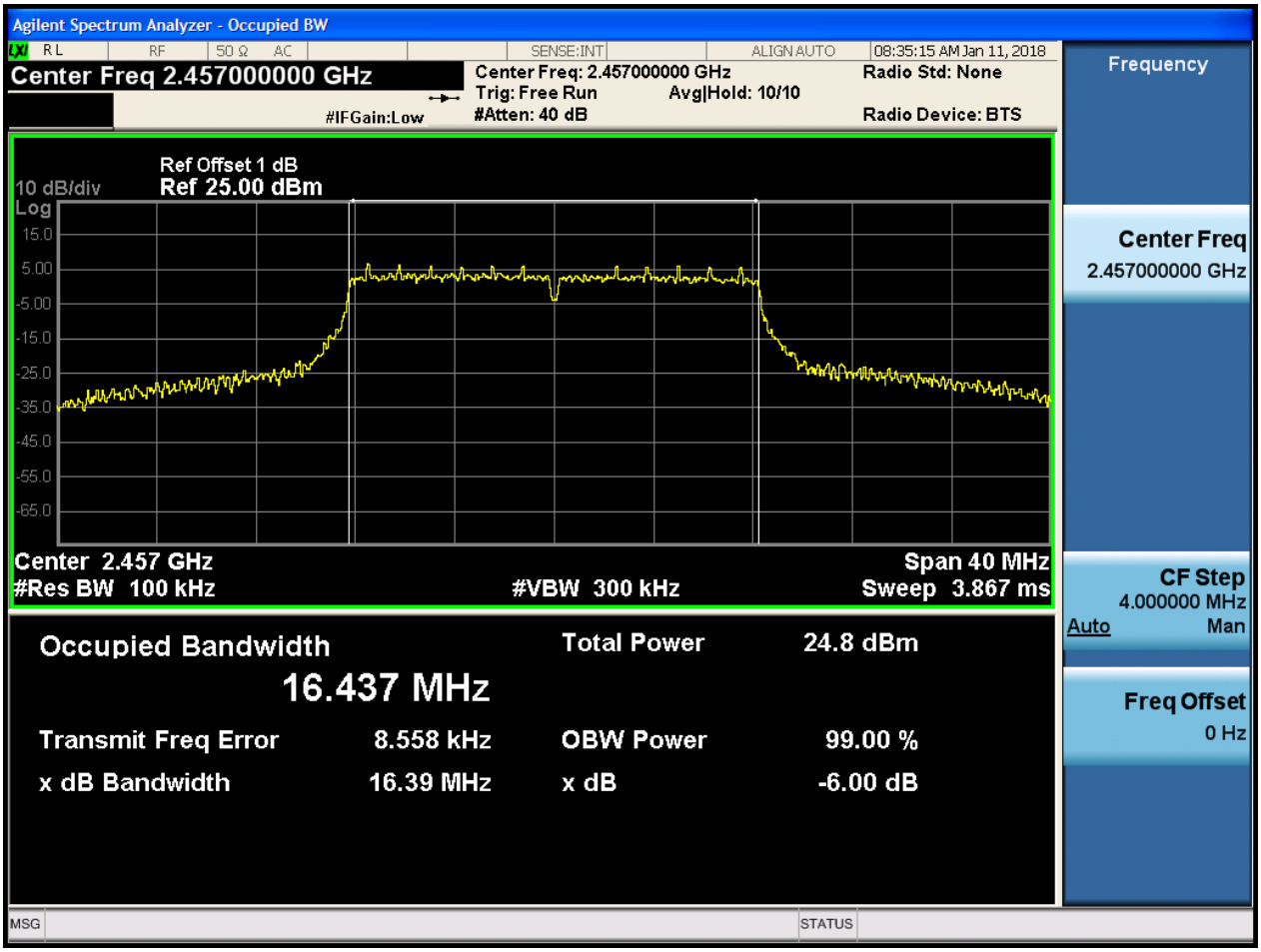
2.5 11G_L_2417@Ant 1



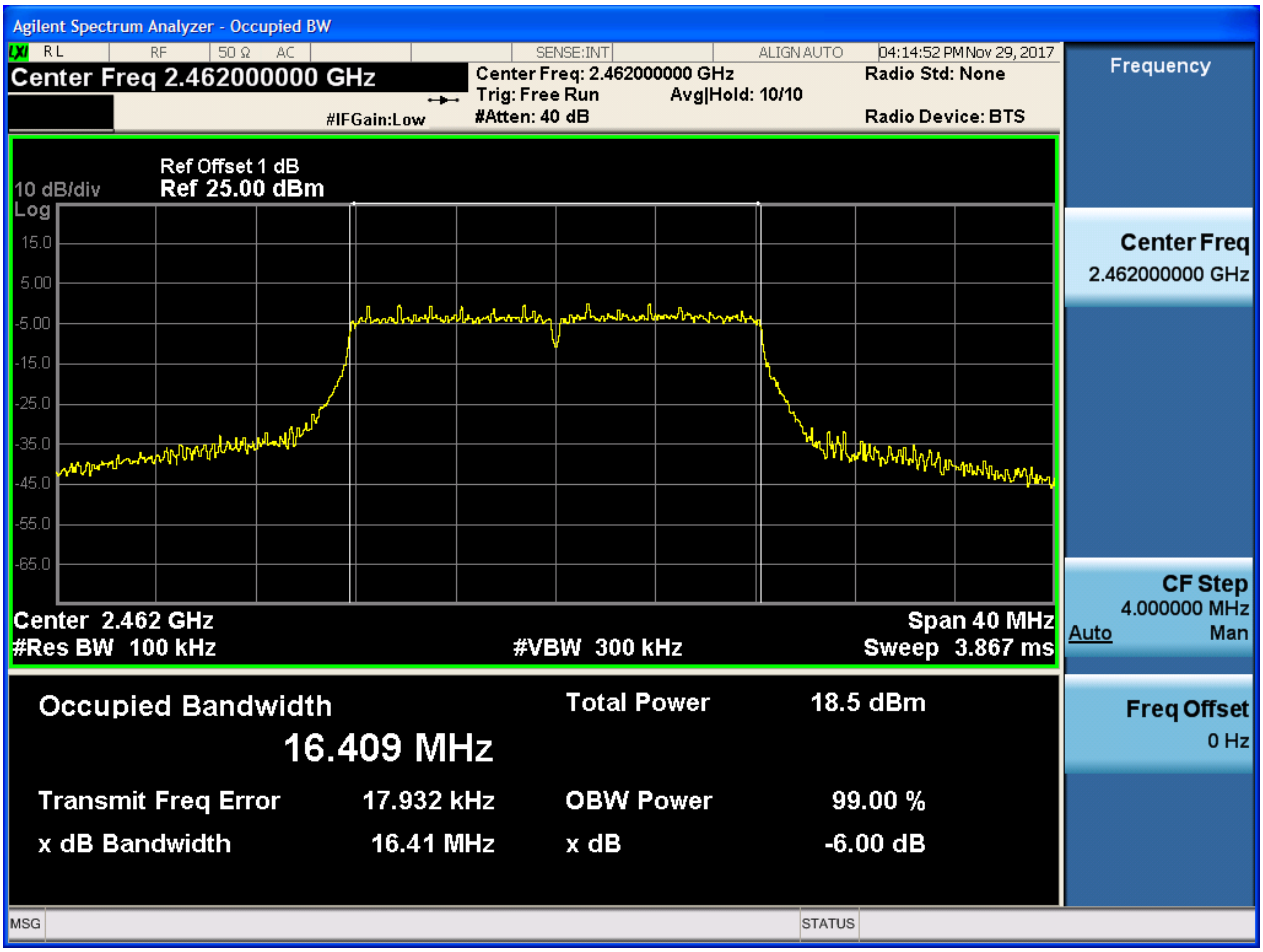
2.6 11G_M_2437@Ant 1



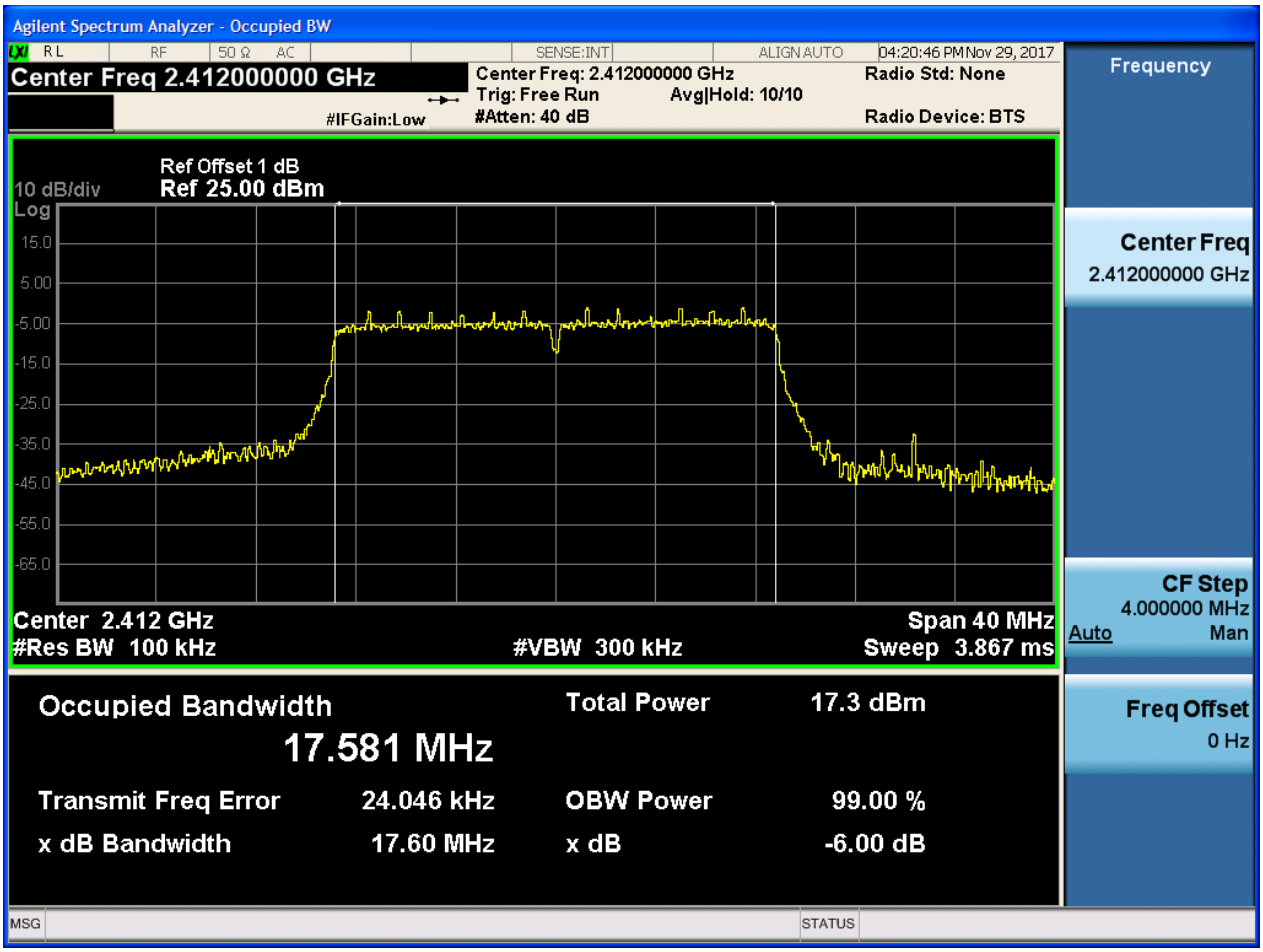
2.7 11G_H_2457@Ant 1



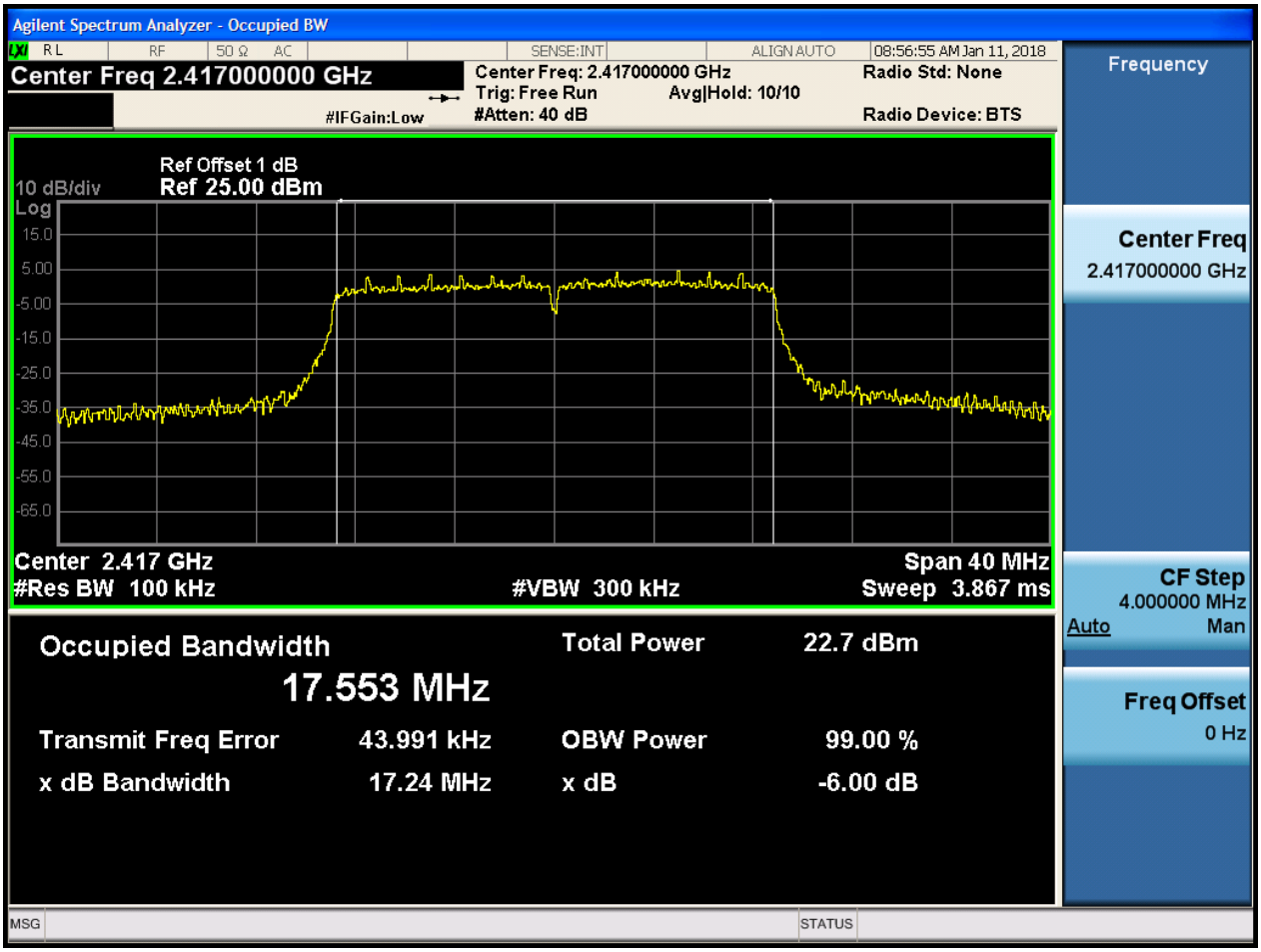
2.8 11G_H_2462@Ant 1



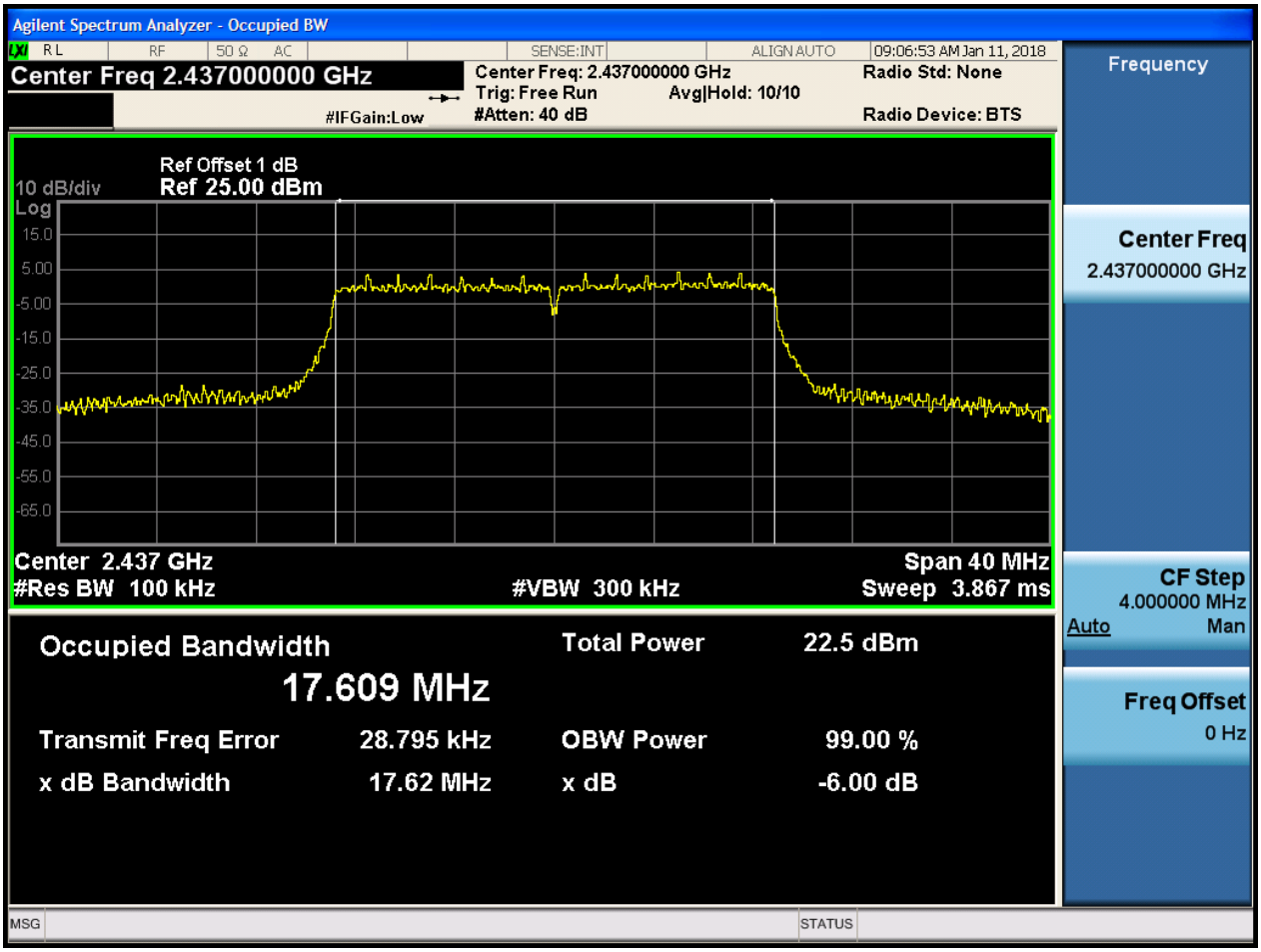
2.9 11N20_L_2412@Ant 1



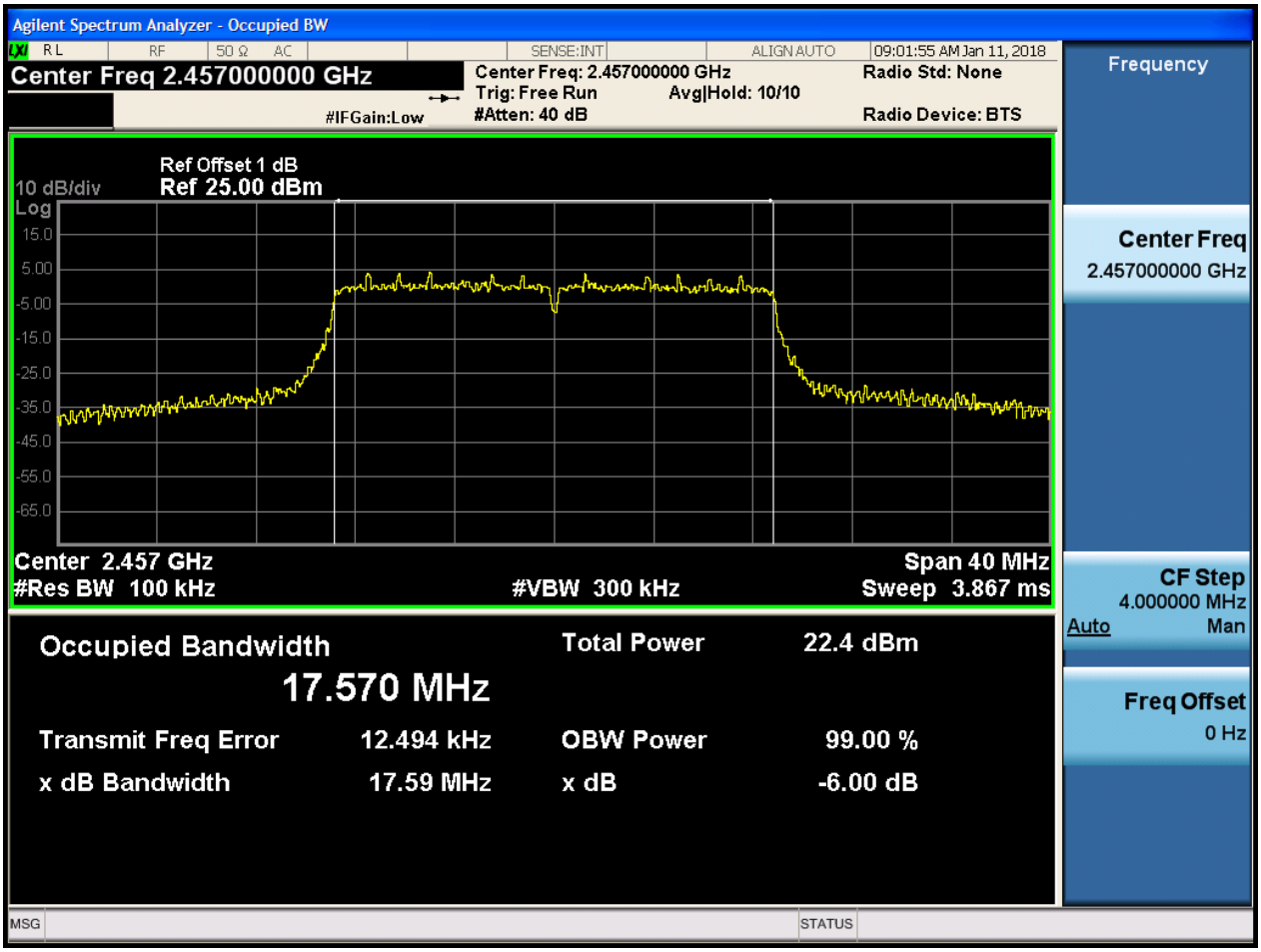
2.10 11N20_L_2417@Ant 1



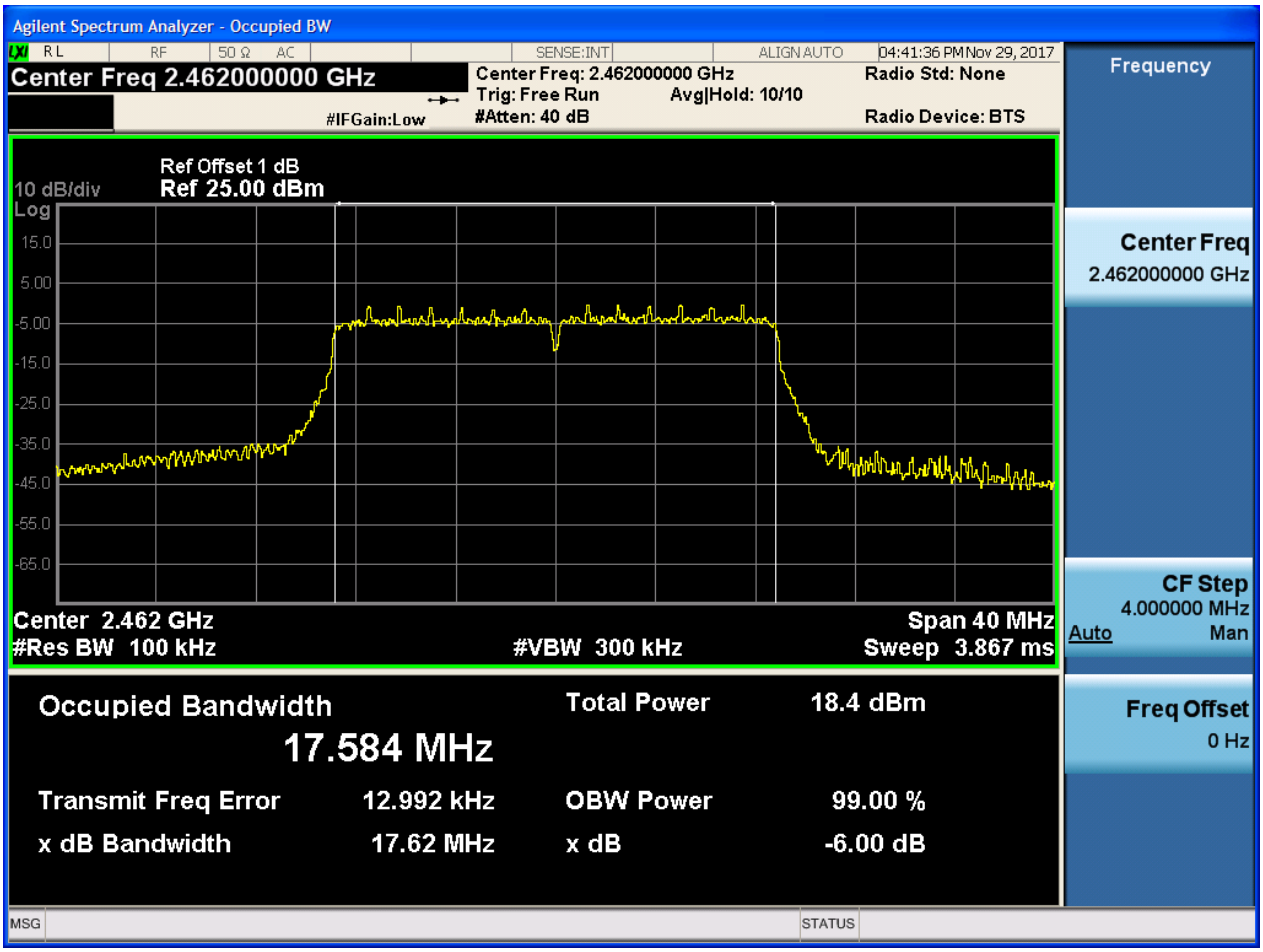
2.11 11N20_M_2437@Ant 1



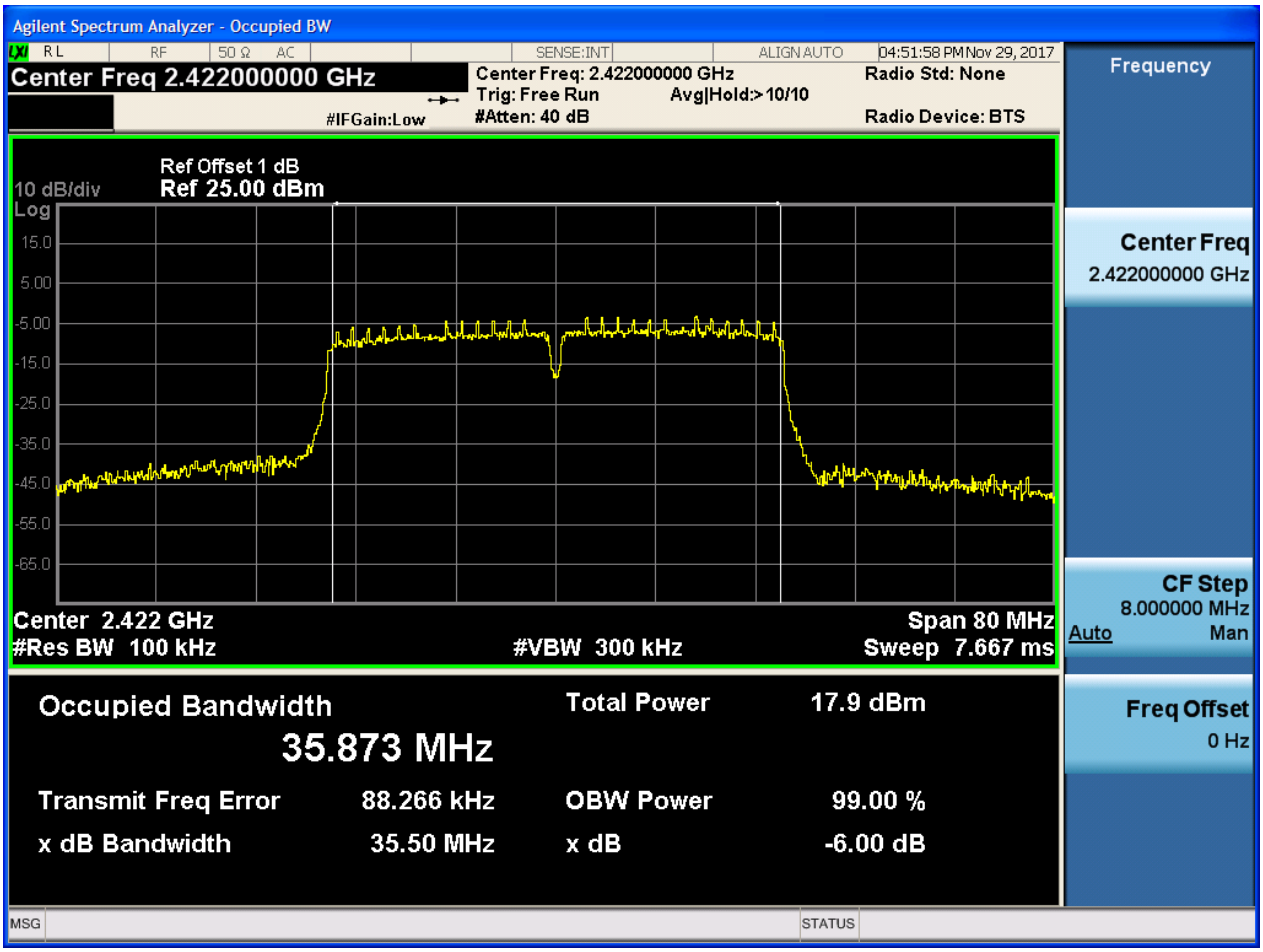
2.12 11N20_H_2457@Ant 1



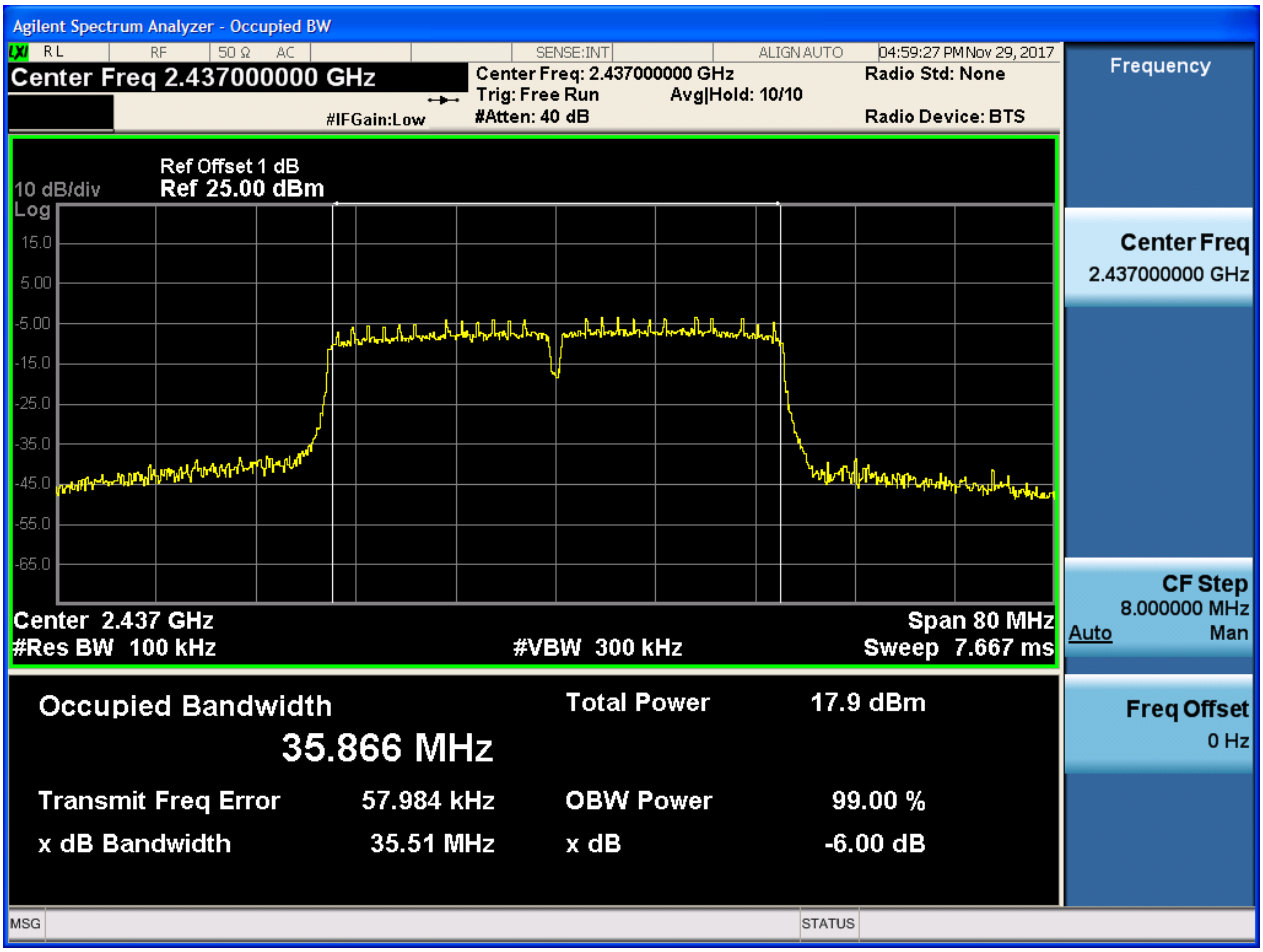
2.13 11N20_H_2462@Ant 1



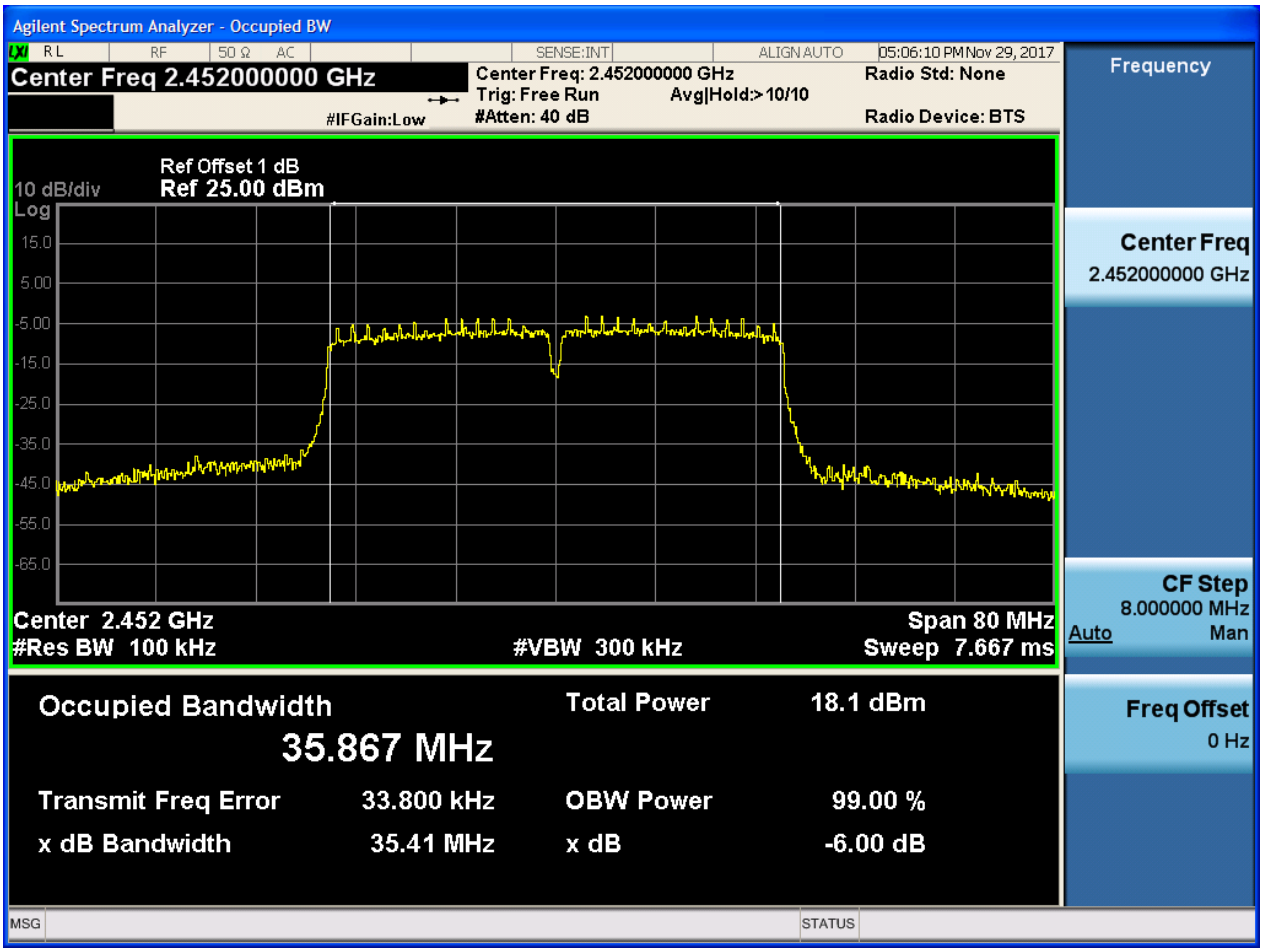
2.14 11N40_L@Ant 1



2.15 11N40_M@Ant 1



2.16 11N40_H@Ant 1



Appendix B: Occupied Bandwidth

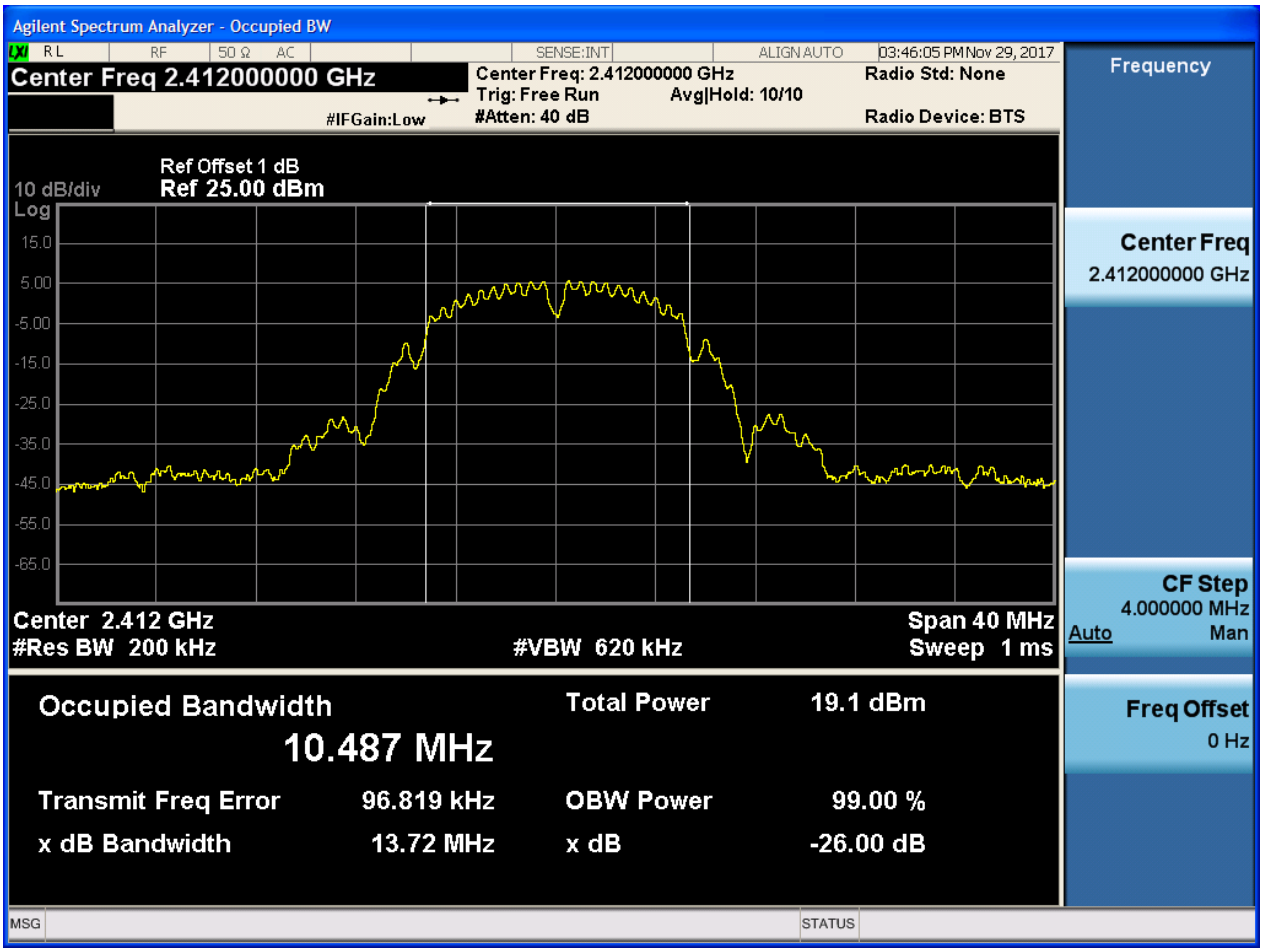
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

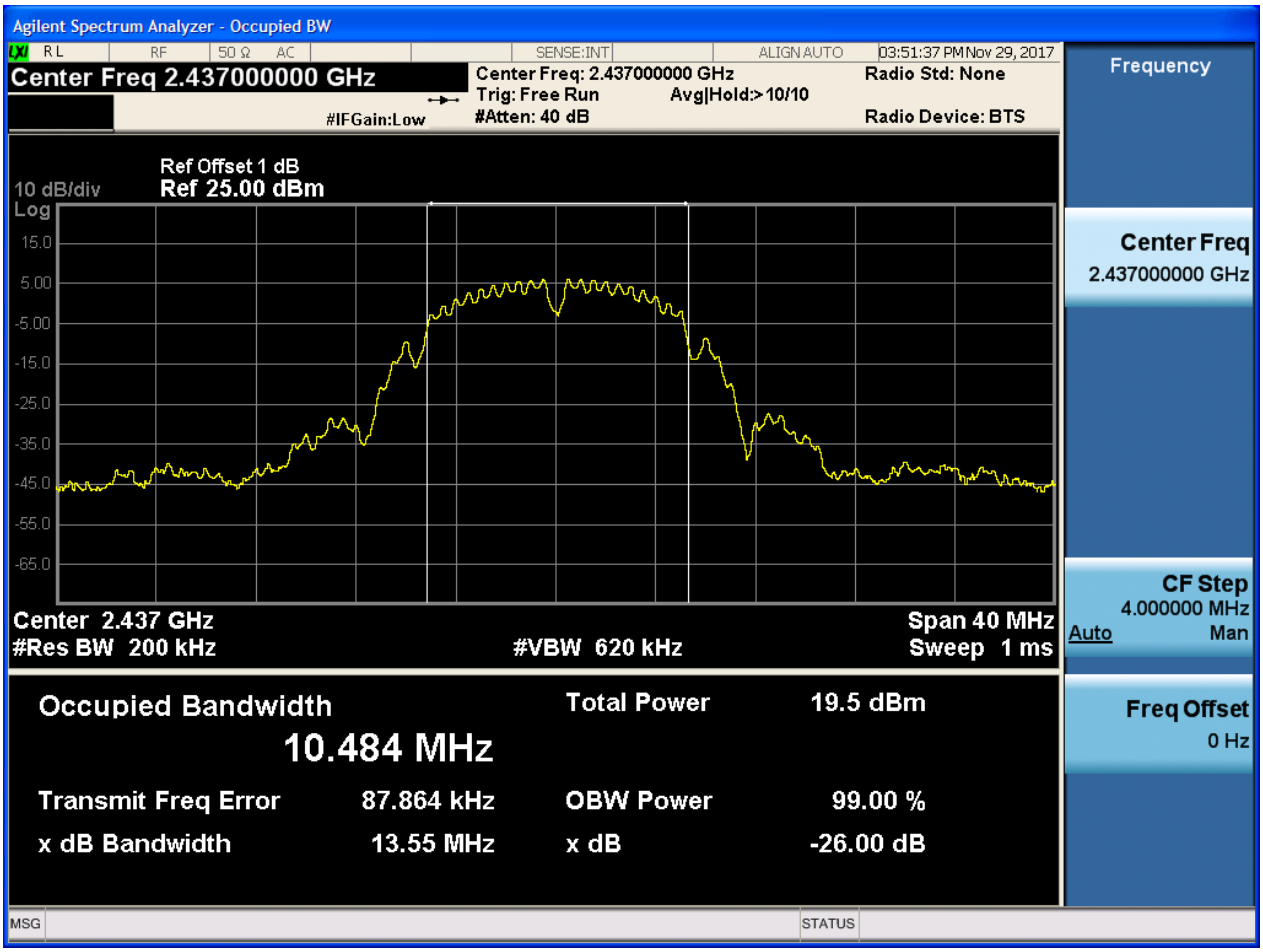
Test Mode	Test Channel	Frequency[MHz]	Ant	Occupied Bandwidth [MHz]	Verdict
11B	L	2412	Ant 1	10.49	pass
11B	M	2437	Ant 1	10.48	pass
11B	H	2462	Ant 1	10.49	pass
11G	L	2412	Ant 1	16.52	pass
11G	L	2417	Ant 1	16.53	pass
11G	M	2437	Ant 1	16.63	pass
11G	H	2457	Ant 1	16.53	pass
11G	H	2462	Ant 1	16.51	pass
11N20	L	2412	Ant 1	17.61	pass
11N20	L	2417	Ant 1	17.57	pass
11N20	M	2437	Ant 1	17.64	pass
11N20	H	2457	Ant 1	17.61	pass
11N20	H	2462	Ant 1	17.60	pass
11N40	L	2422	Ant 1	35.93	pass
11N40	M	2437	Ant 1	35.90	pass
11N40	H	2452	Ant 1	35.91	pass

Part II - Test Plots

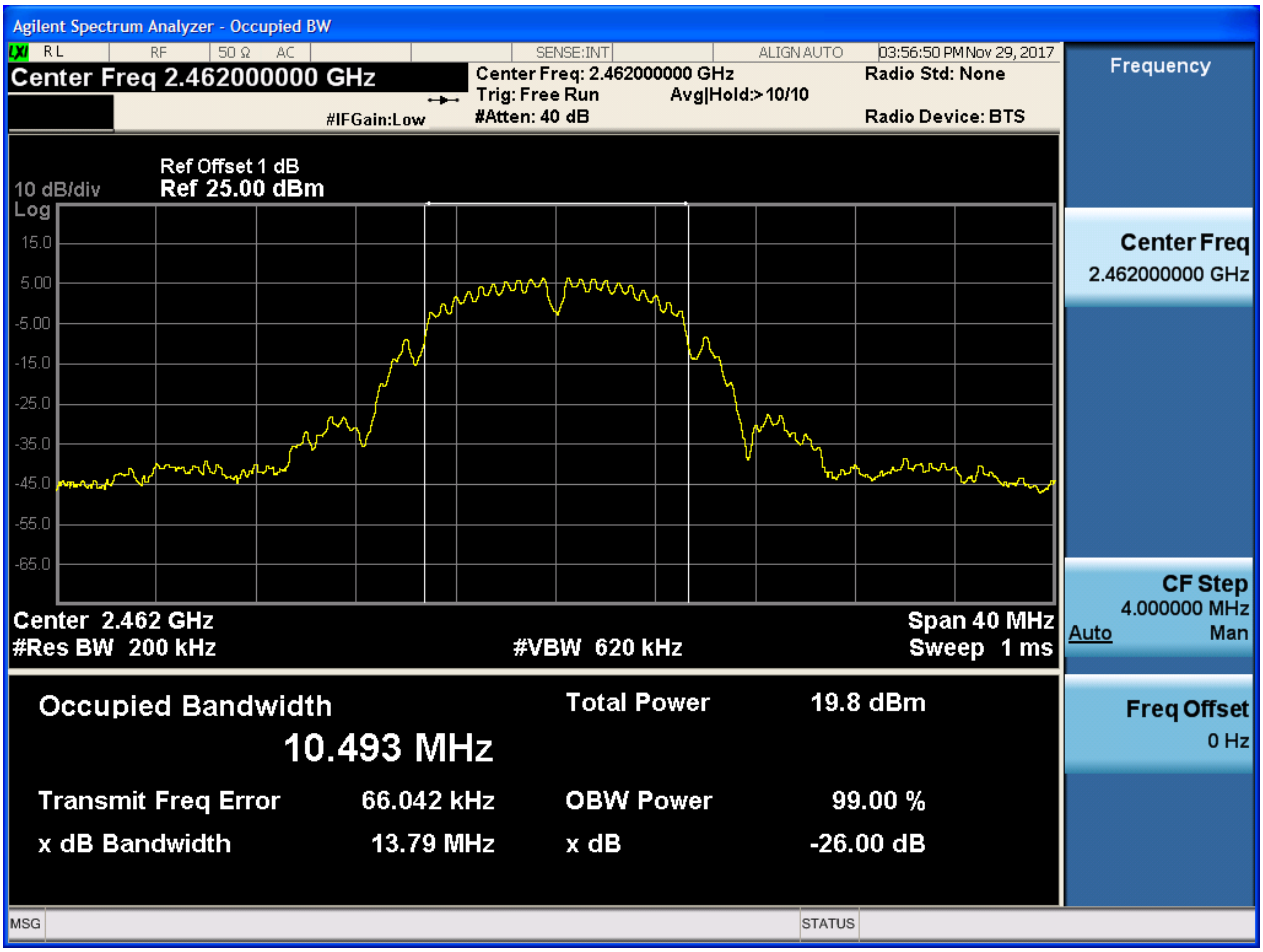
2.1 11B_L@Ant 1



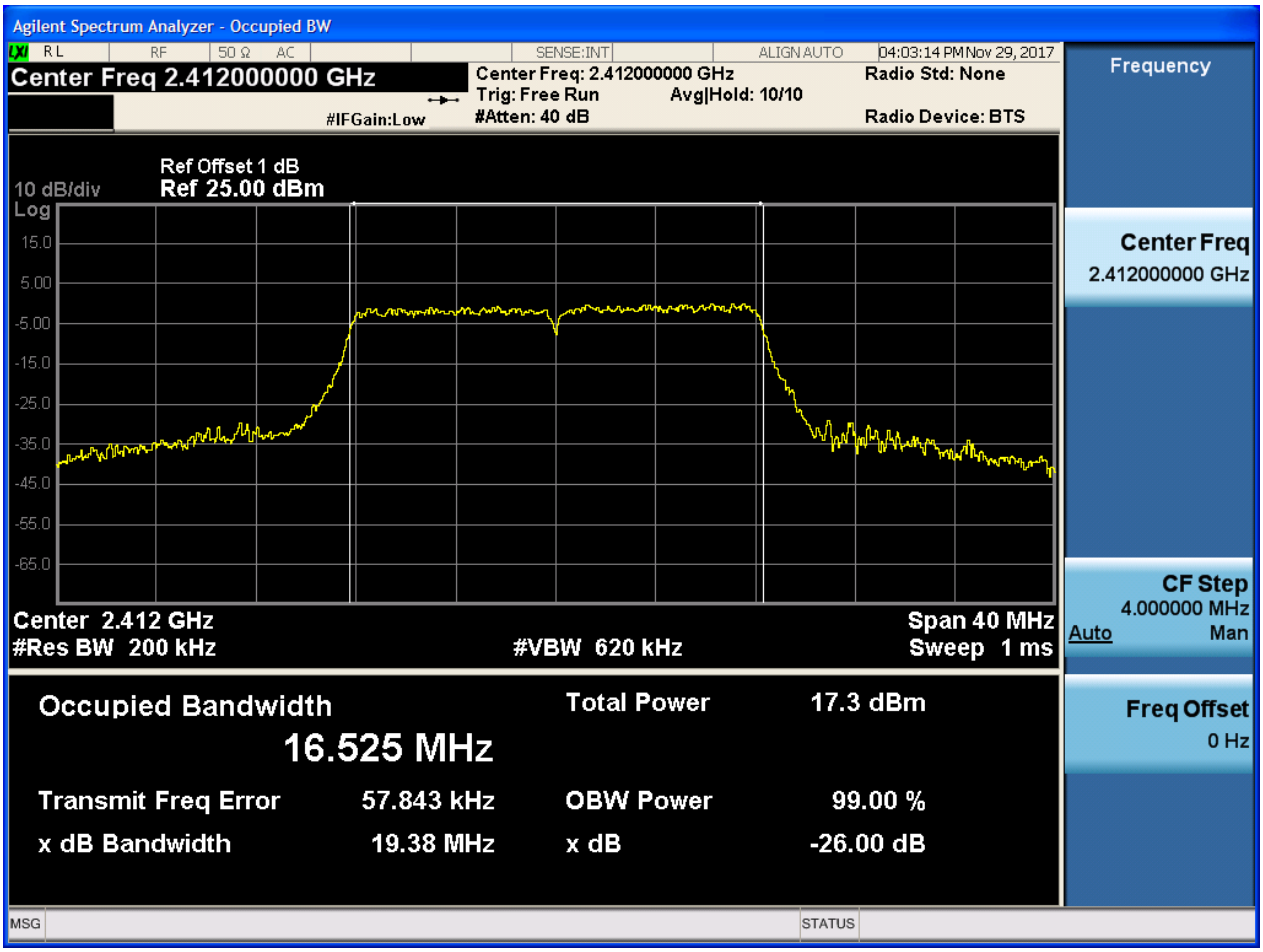
2.2 11B_M@Ant 1



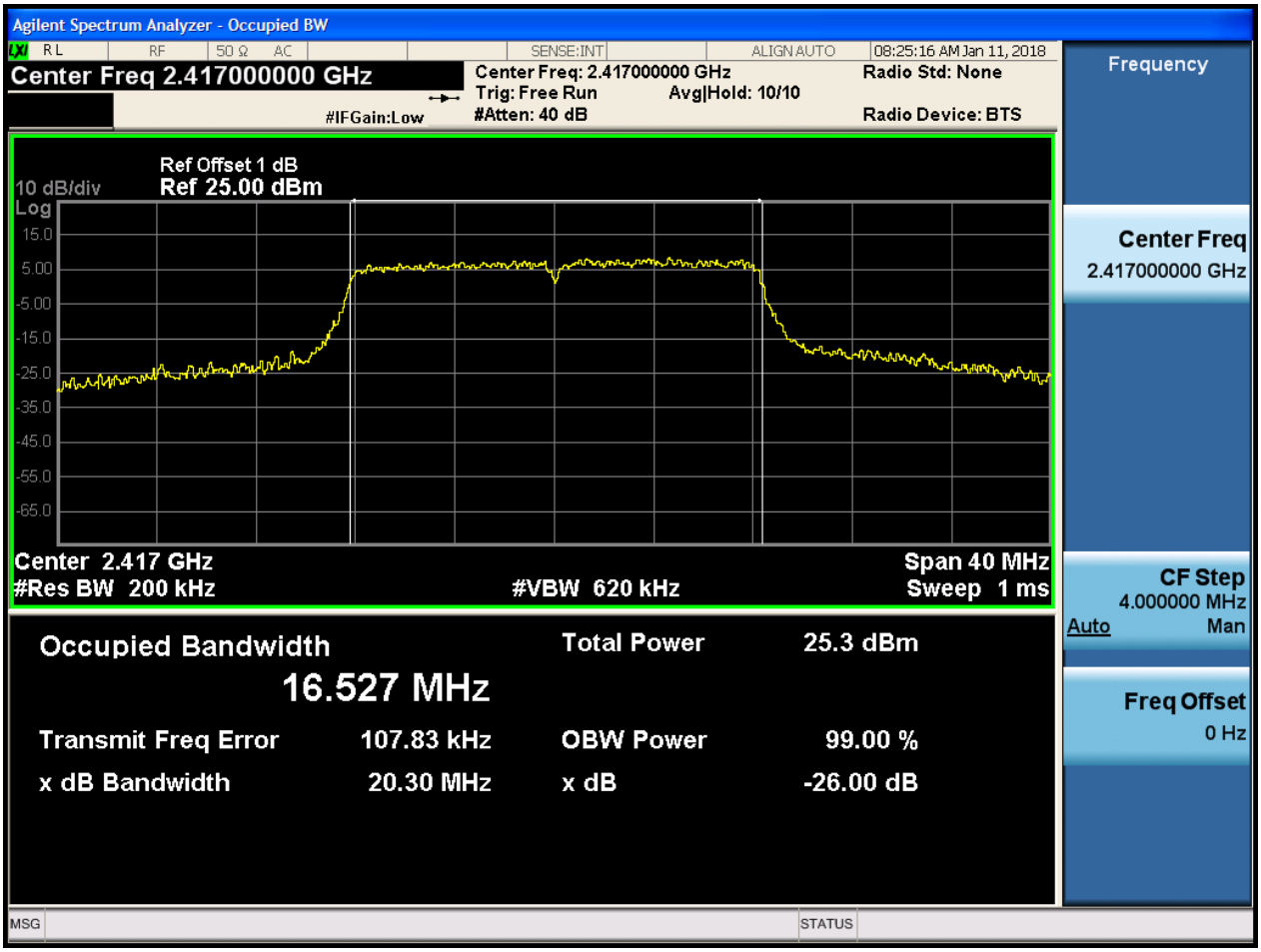
2.3 11B_H@Ant 1



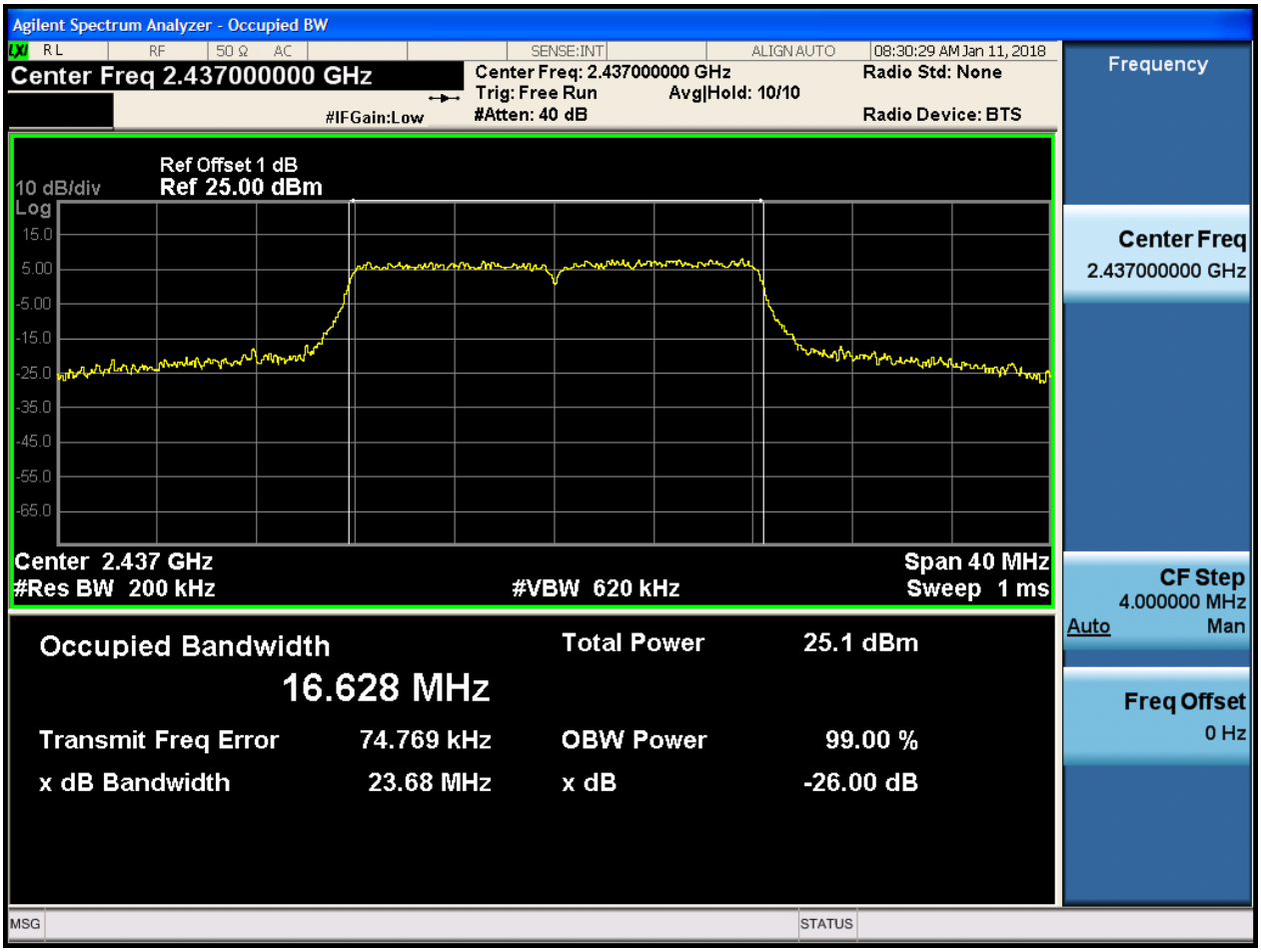
2.4 11G_L_2412@Ant 1



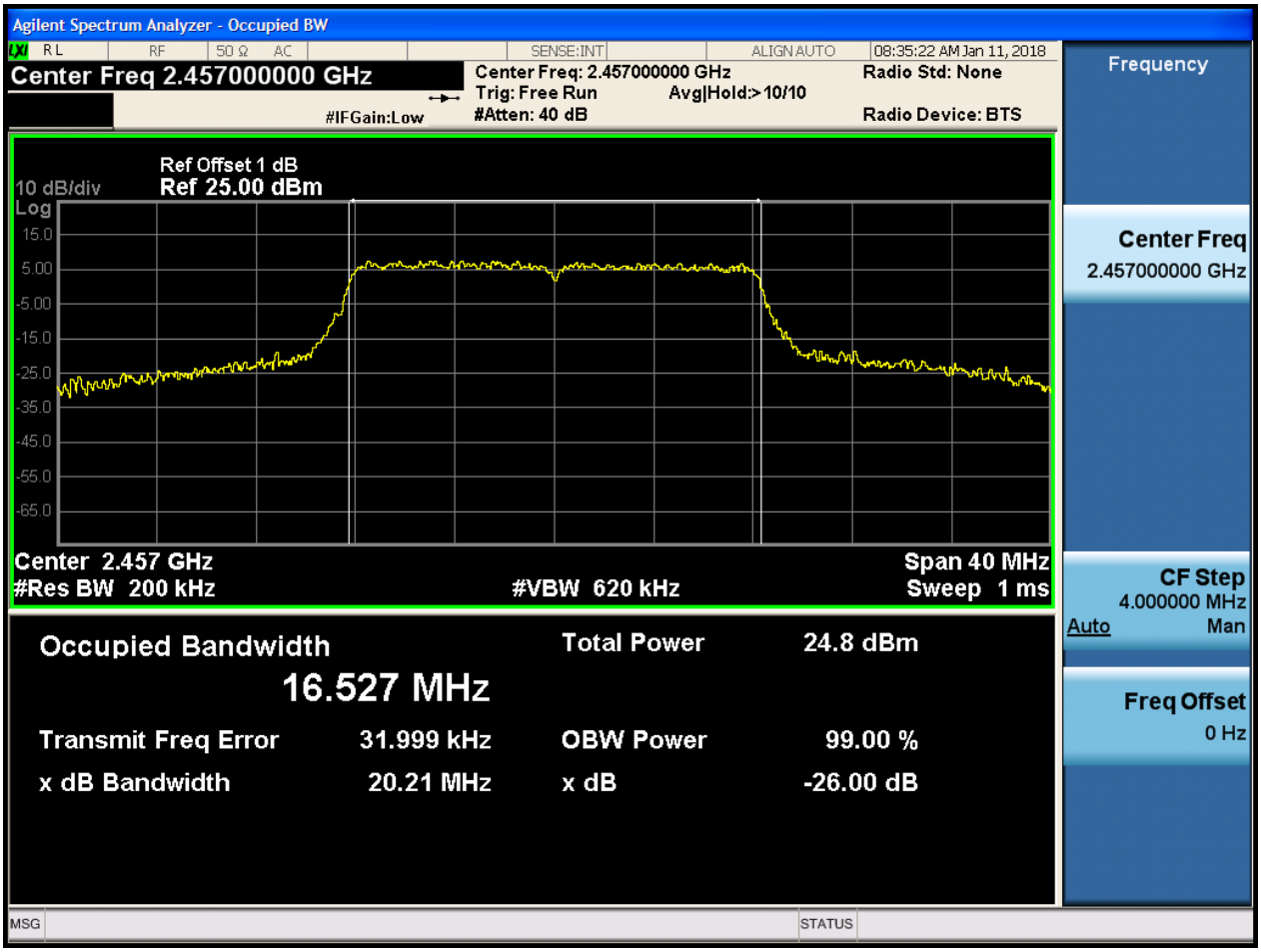
2.5 11G_L_2417@Ant 1



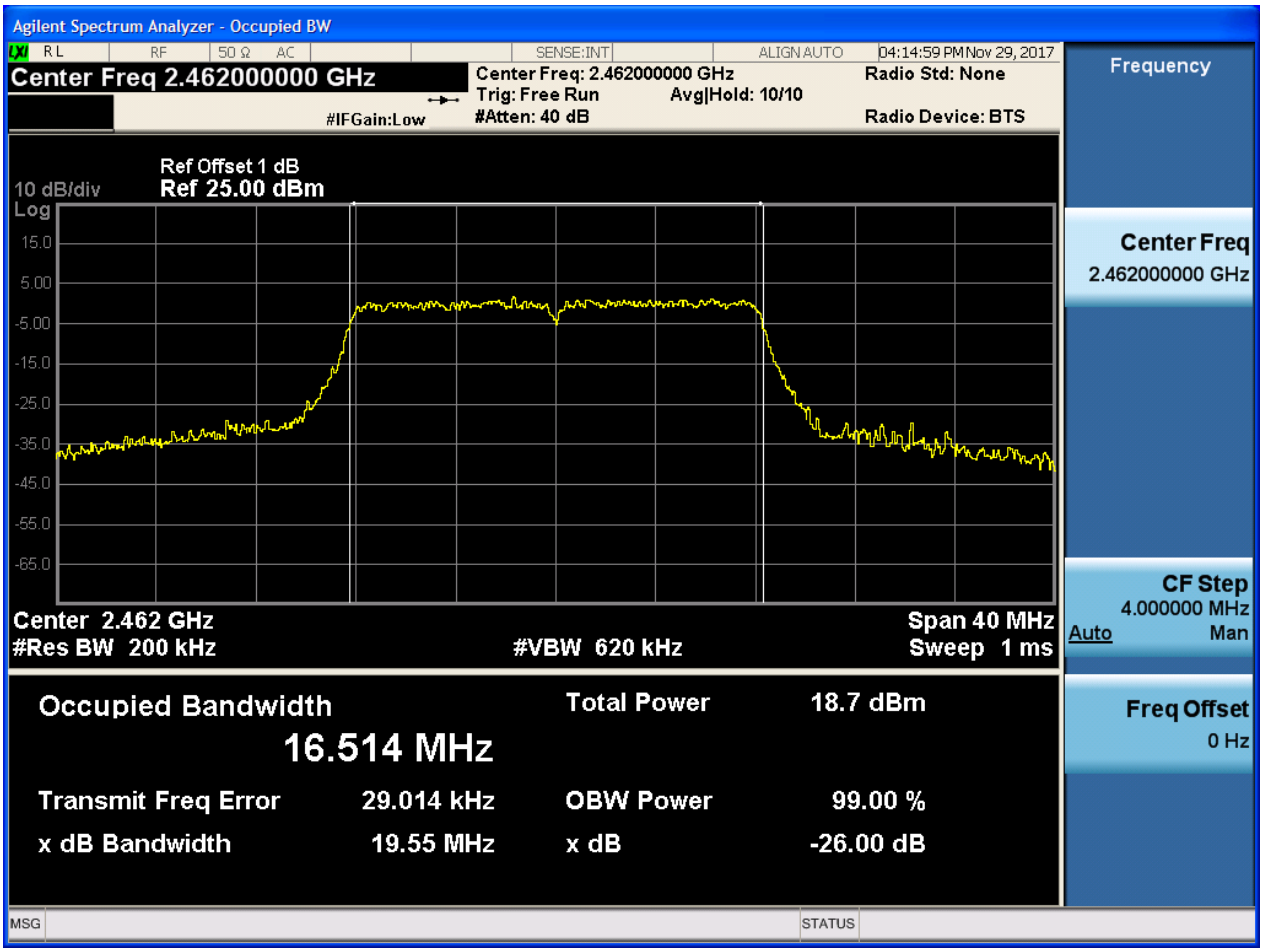
2.6 11G_M_2437@Ant 1



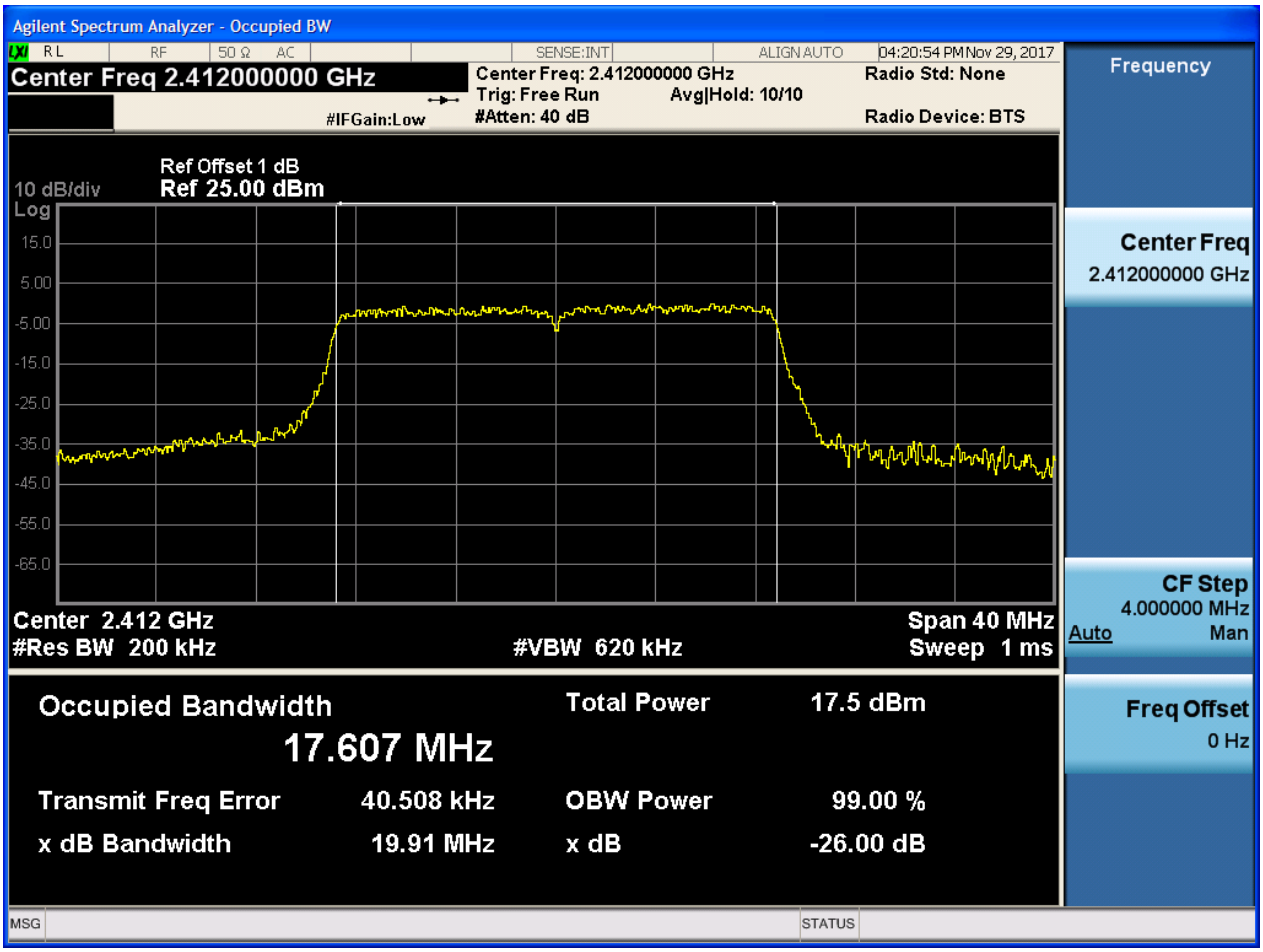
2.7 11G_H_2457@Ant 1



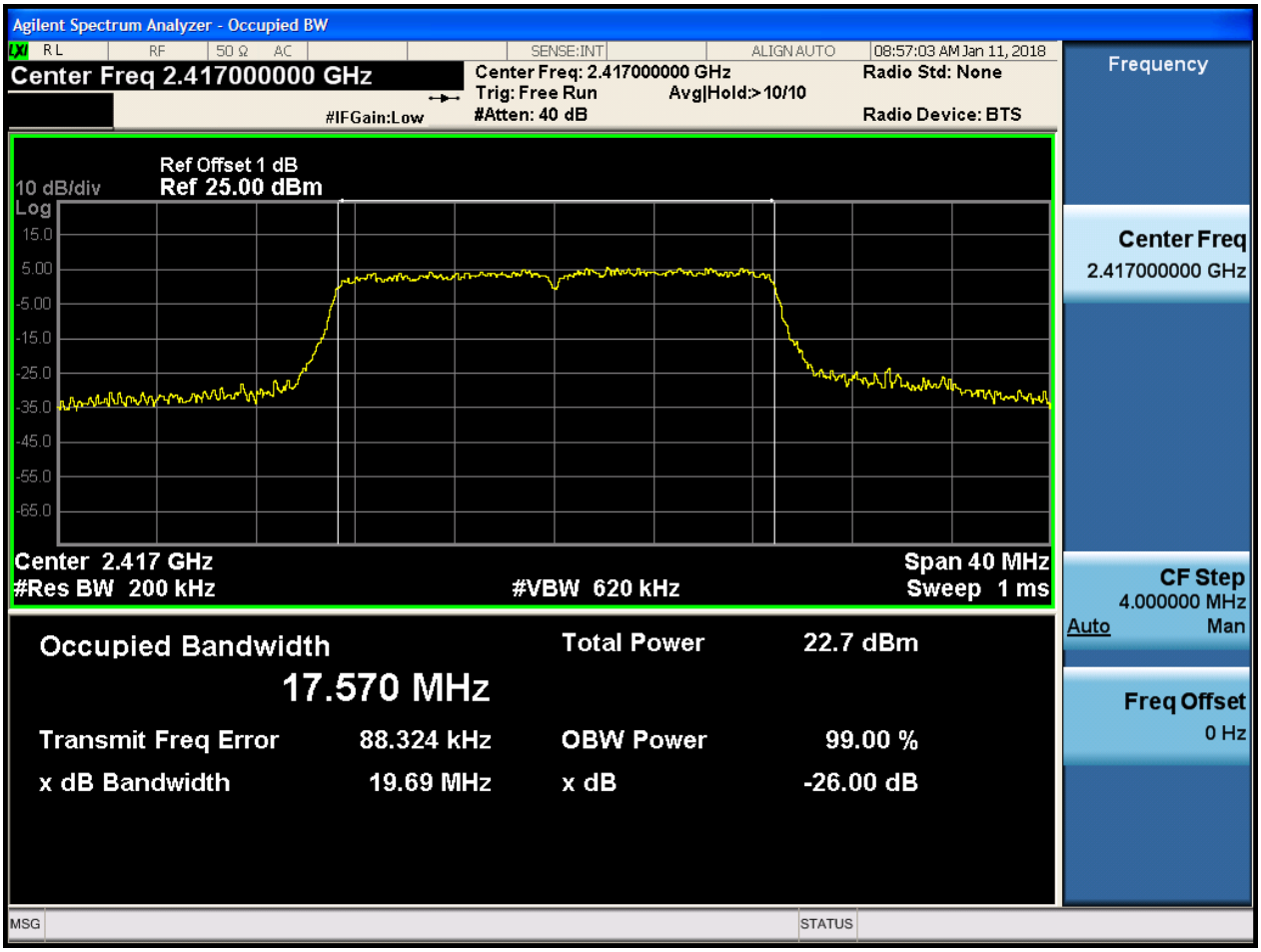
2.8 11G_H_2462@Ant 1



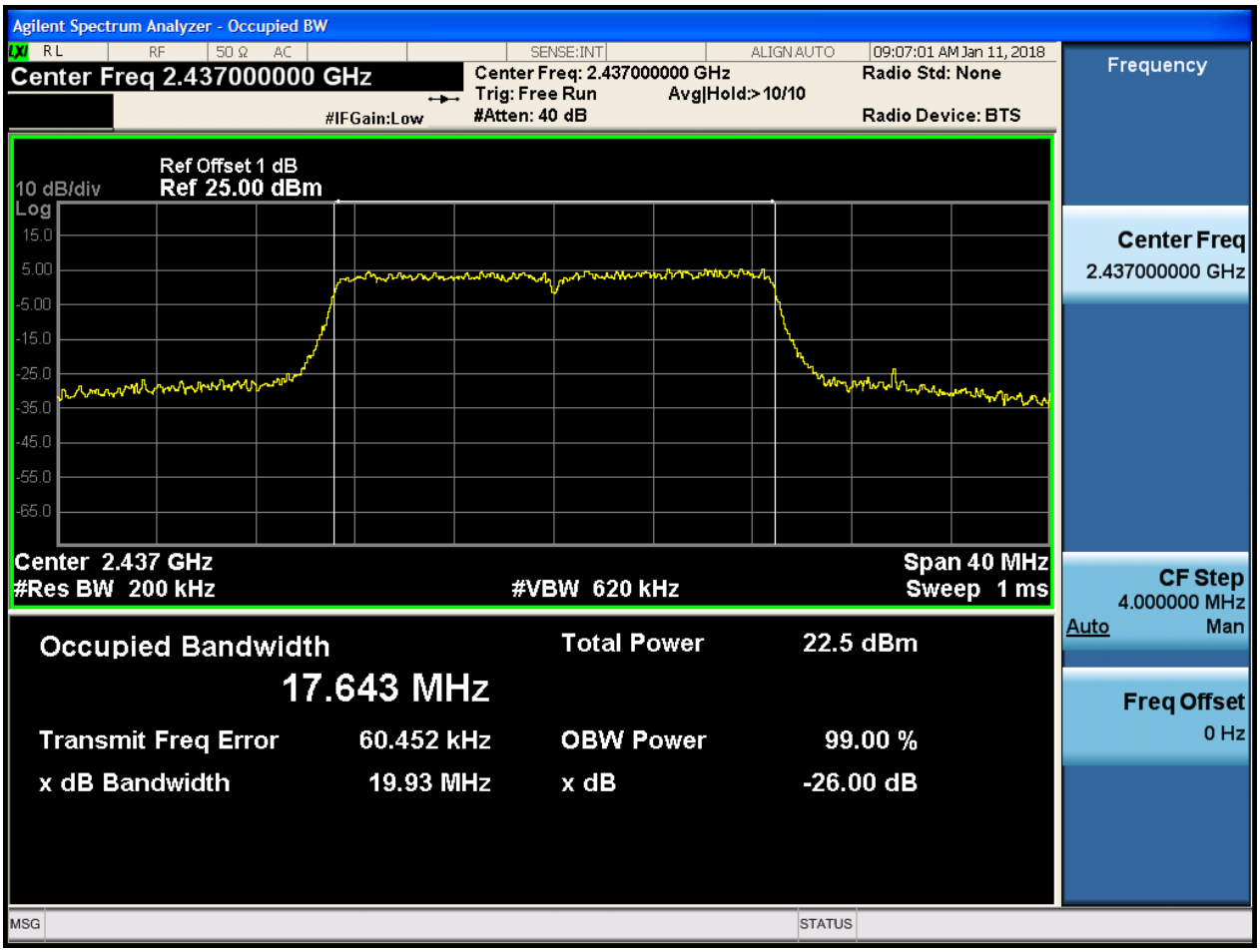
2.9 11N20_L_2412@Ant 1



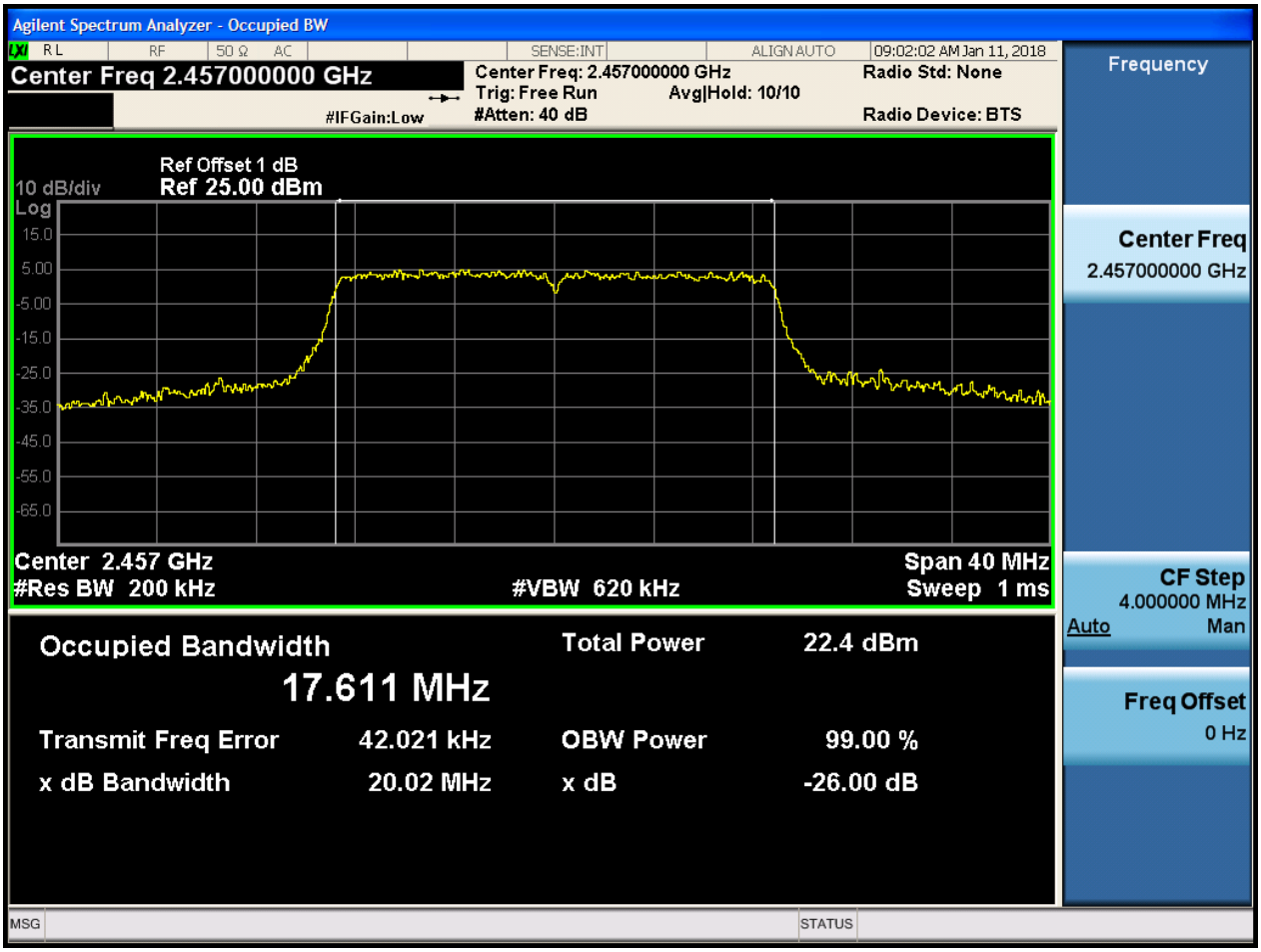
2.10 11N20_L_2417@Ant 1



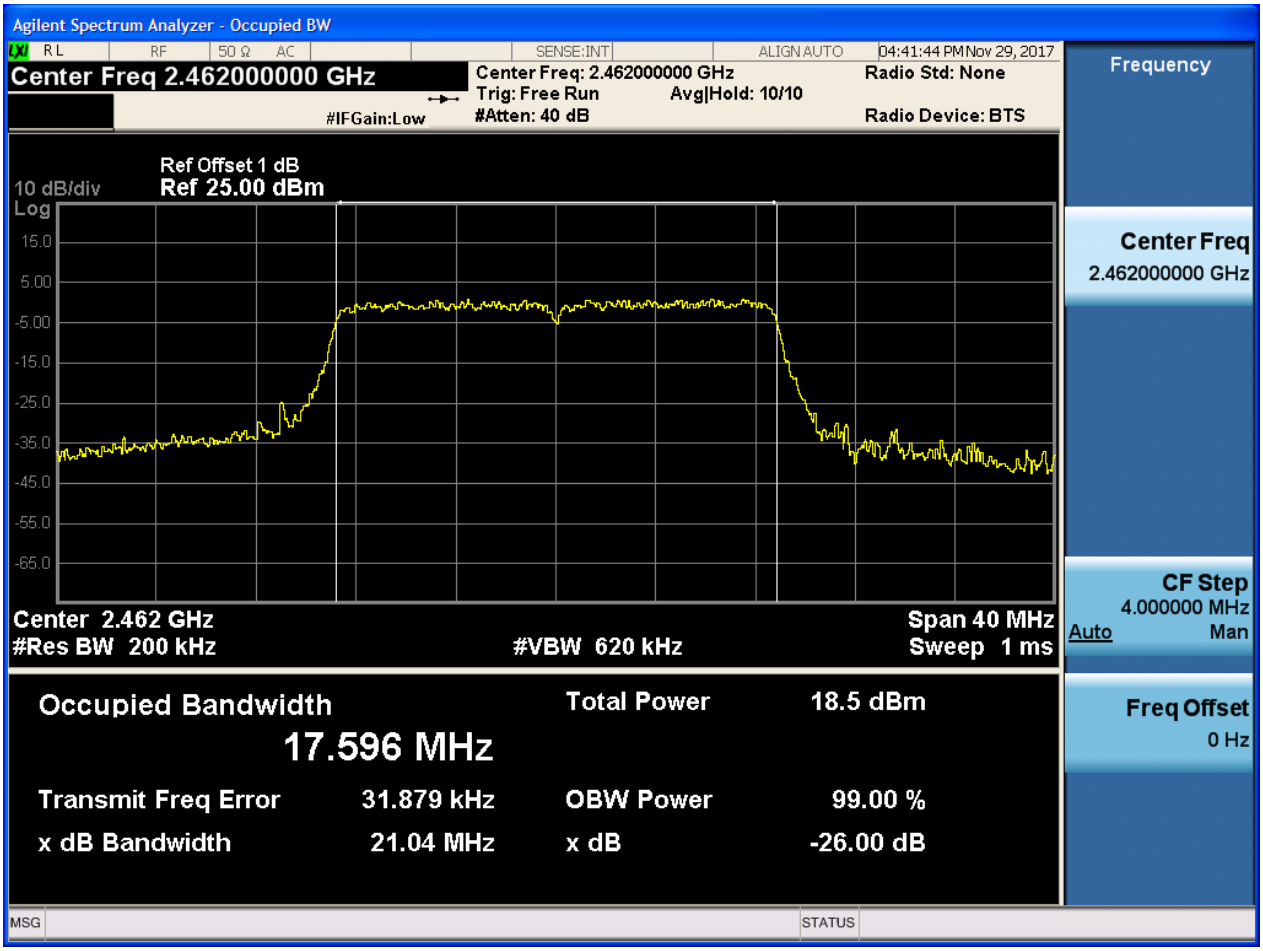
2.11 11N20_M_2437@Ant 1



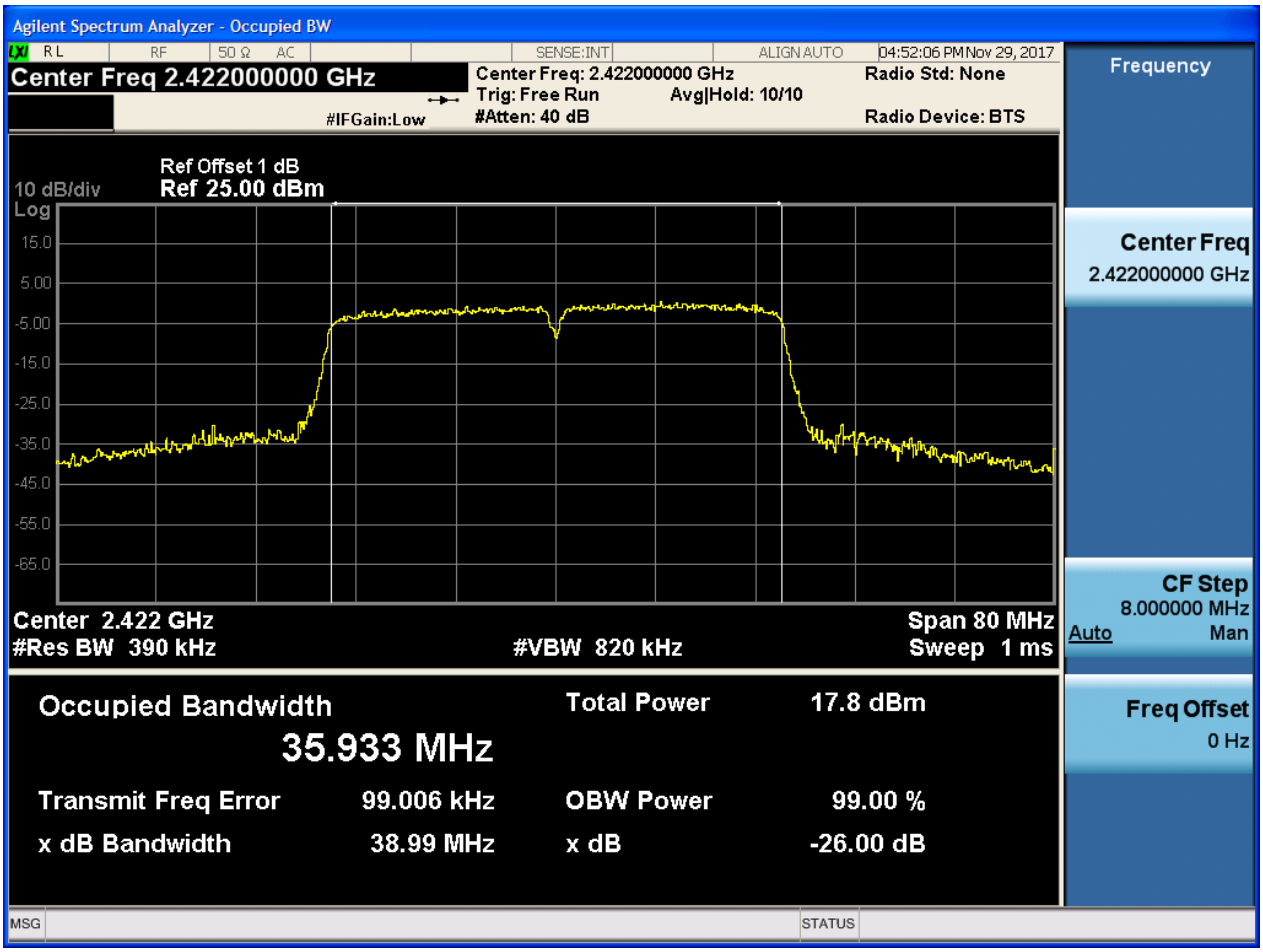
2.12 11N20_H_2457@Ant 1



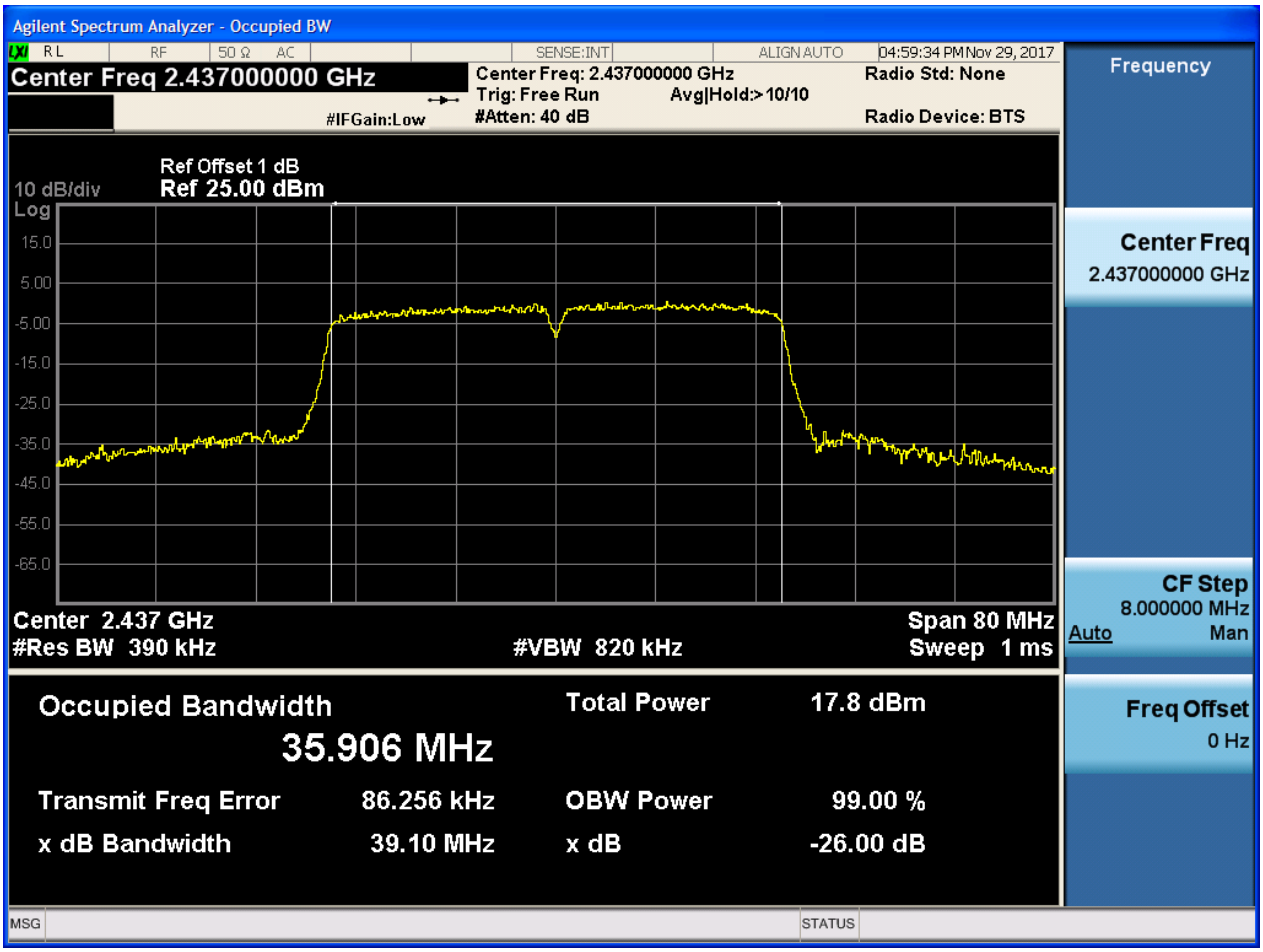
2.13 11N20_H_2462@Ant 1



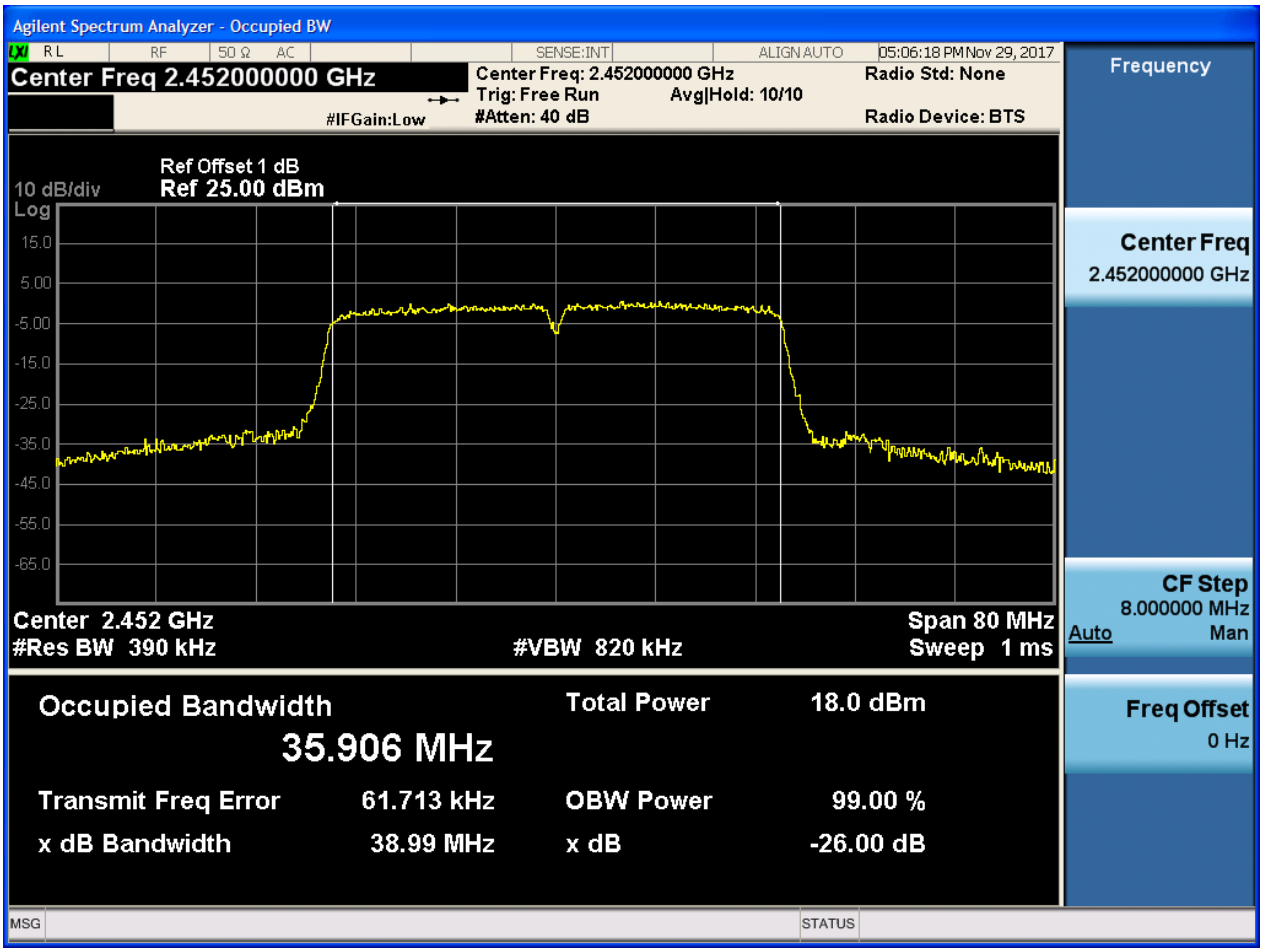
2.14 11N40_L@Ant 1



2.15 11N40_M@Ant 1



2.16 11N40_H@Ant 1



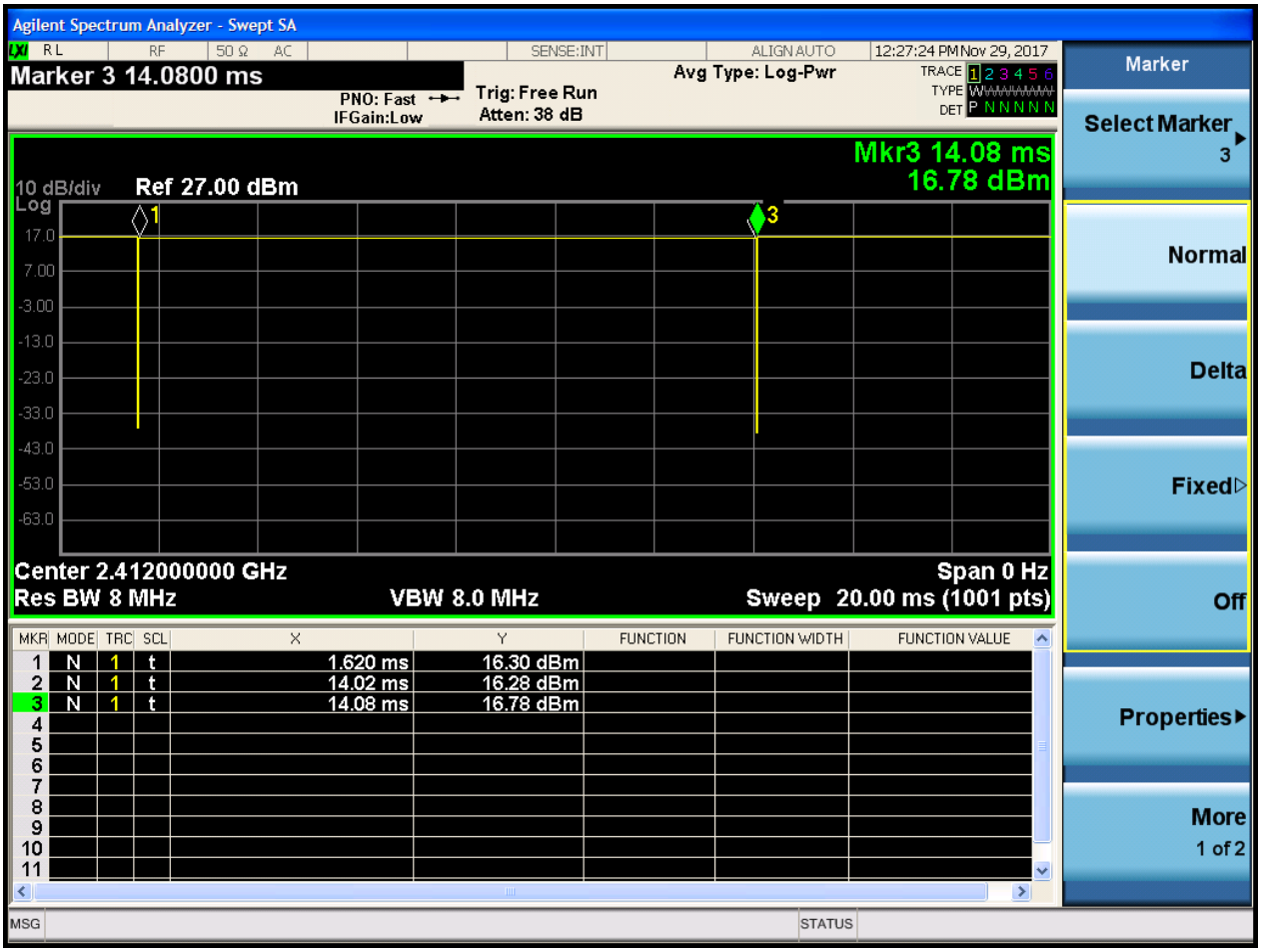
Appendix C: Duty Cycle

Part I - Test Results

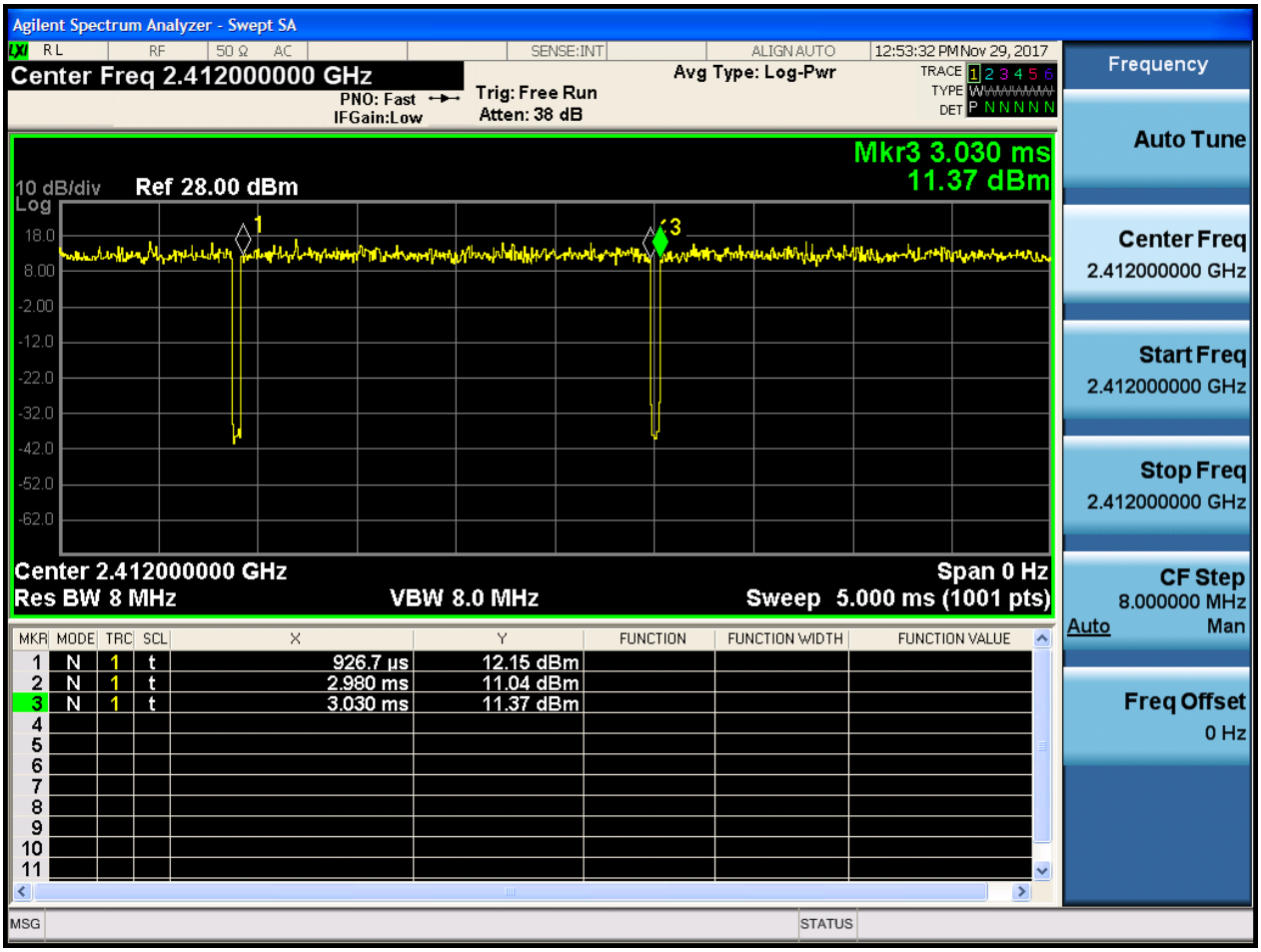
Test Mode	TX Freq. [MHz]	Duty cycle [%]
11B	Ant 1: CH1,CH6,CH11	99.5
11G	Ant 1: CH1, CH2,CH6, CH10,CH11	97.6
11N_20M_SISO	Ant 1: CH1, CH2,CH6, CH10,CH11	97.5
11N_40M_SISO	Ant 1: CH3,CH6,CH9	95

Part II - Test Plots

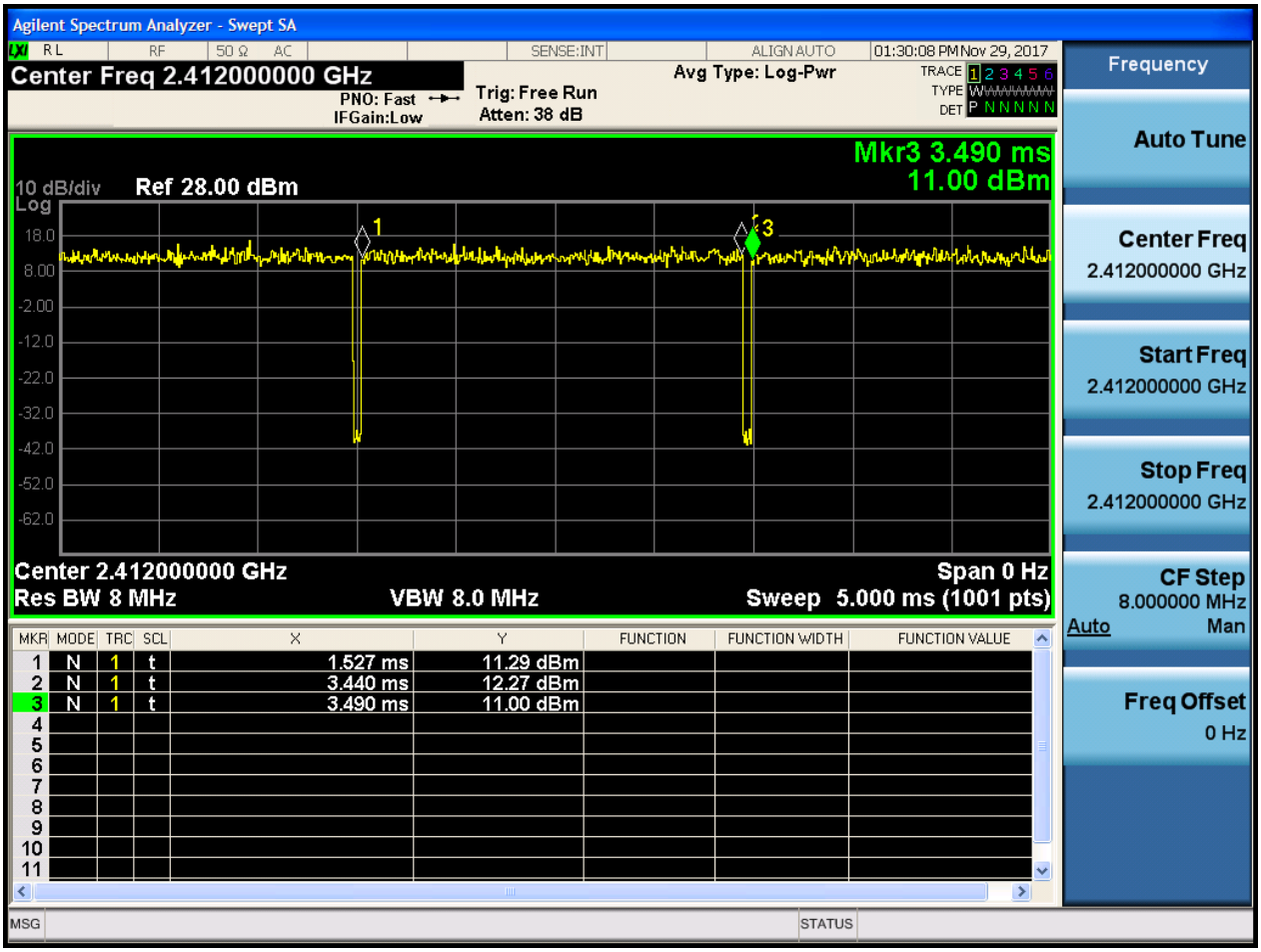
2.1 11B



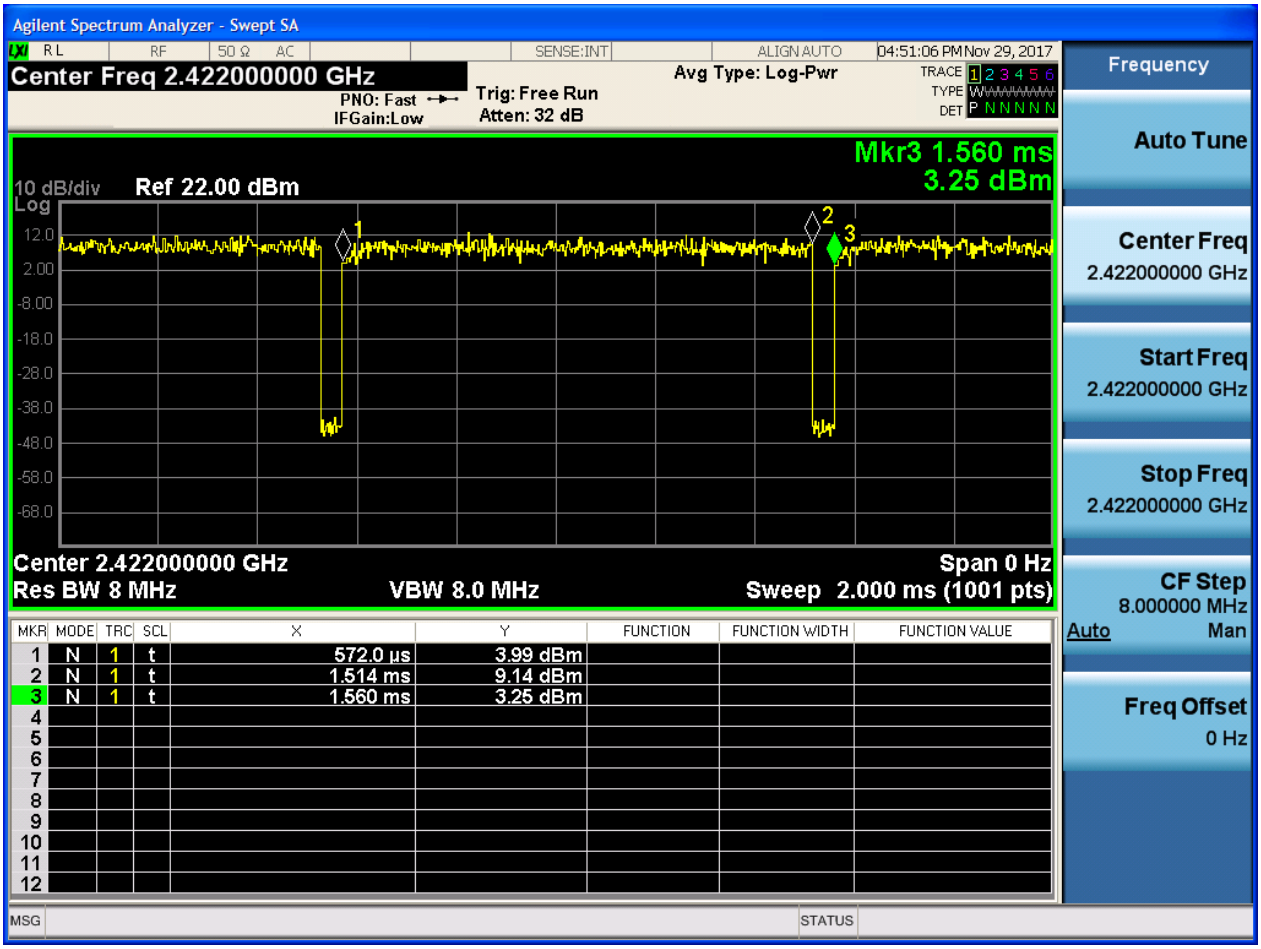
2.2 11G



2.3 11N20



2.4 11N40



Appendix D: Maximum Conducted Average Output Power

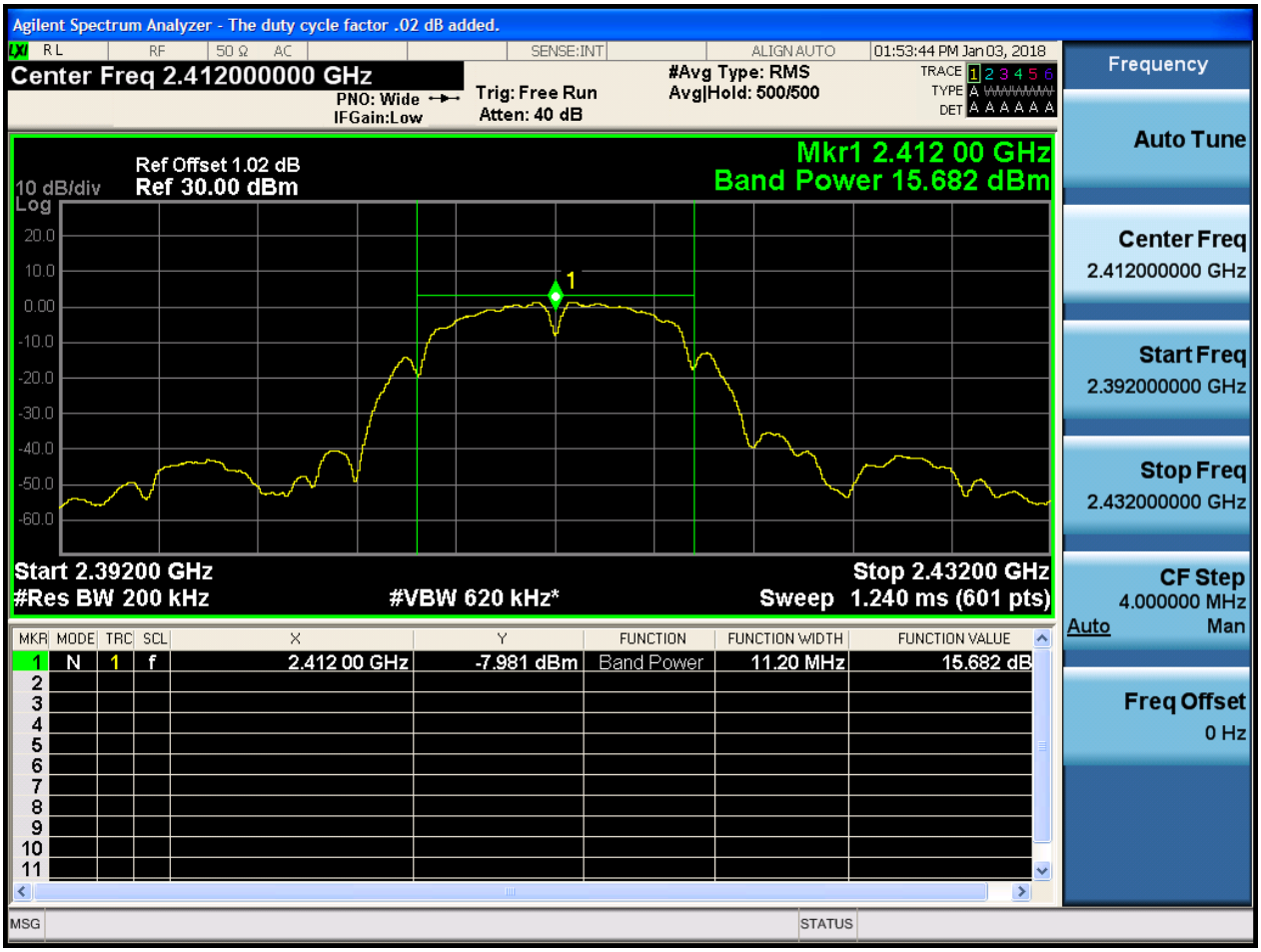
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Duty Cycle [%]	Power[dBm]	Verdict
11B	L	2412	Ant 1	99.5	15.68	pass
11B	M	2437	Ant 1	99.5	15.27	pass
11B	H	2462	Ant 1	99.5	15.70	pass
11G	L	2412	Ant 1	97.6	12.18	pass
11G	L	2417	Ant 1	97.6	18.19	pass
11G	M	2437	Ant 1	97.6	18.11	pass
11G	H	2457	Ant 1	97.6	17.77	pass
11G	H	2462	Ant 1	97.6	12.43	pass
11N20	L	2412	Ant 1	97.5	10.97	pass
11N20	L	2417	Ant 1	97.5	15.65	pass
11N20	M	2437	Ant 1	97.5	15.43	pass
11N20	H	2457	Ant 1	97.5	15.32	pass
11N20	H	2462	Ant 1	97.5	11.29	pass
11N40	L	2422	Ant 1	95	7.66	pass
11N40	M	2437	Ant 1	95	9.06	pass

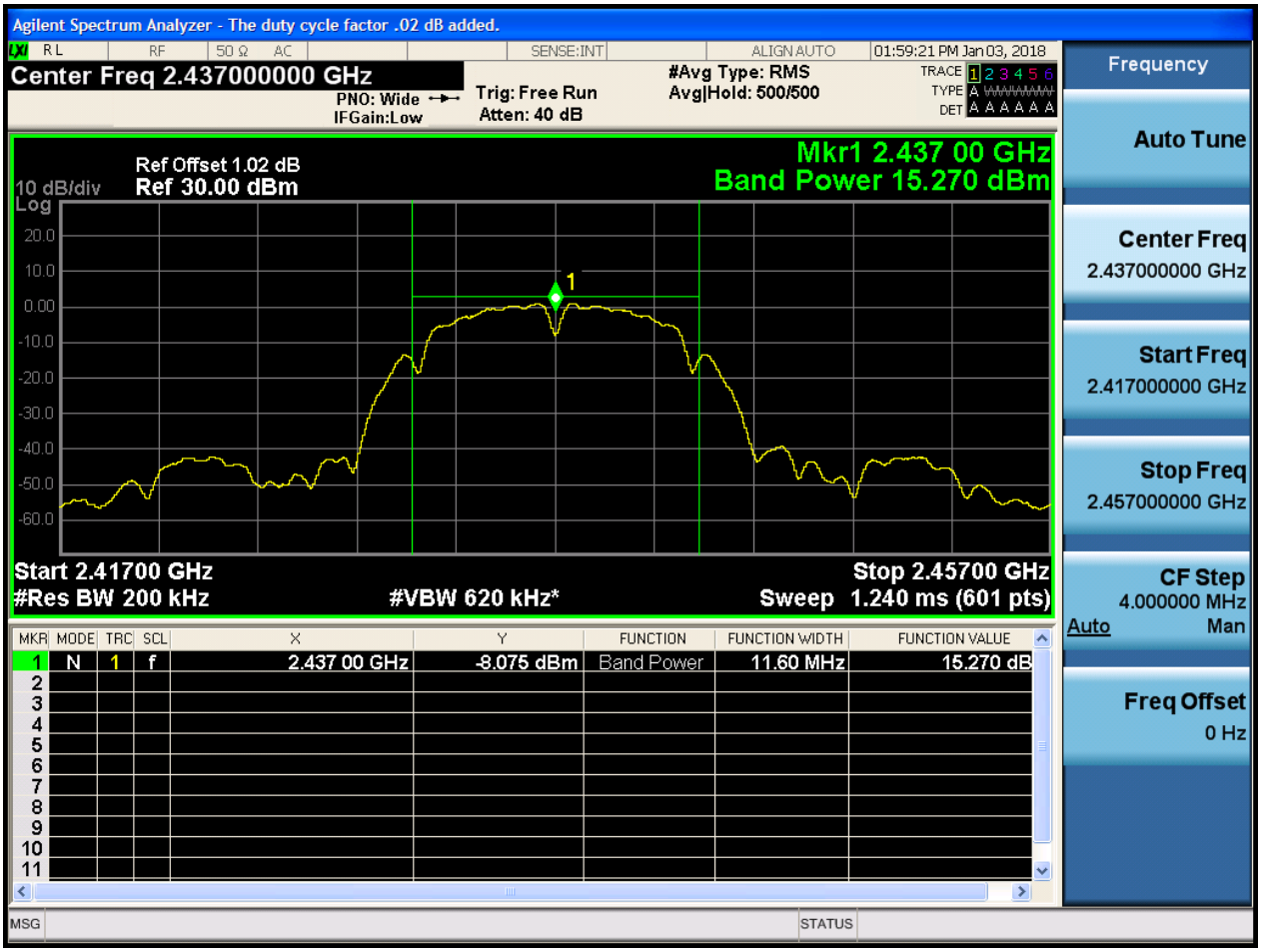
Test Mode	Test Channel	Frequency[MHz]	Ant	Duty Cycle [%]	Power[dBm]	Verdict
11N40	H	2452	Ant 1	95	9.85	pass

Part II - Test Plots

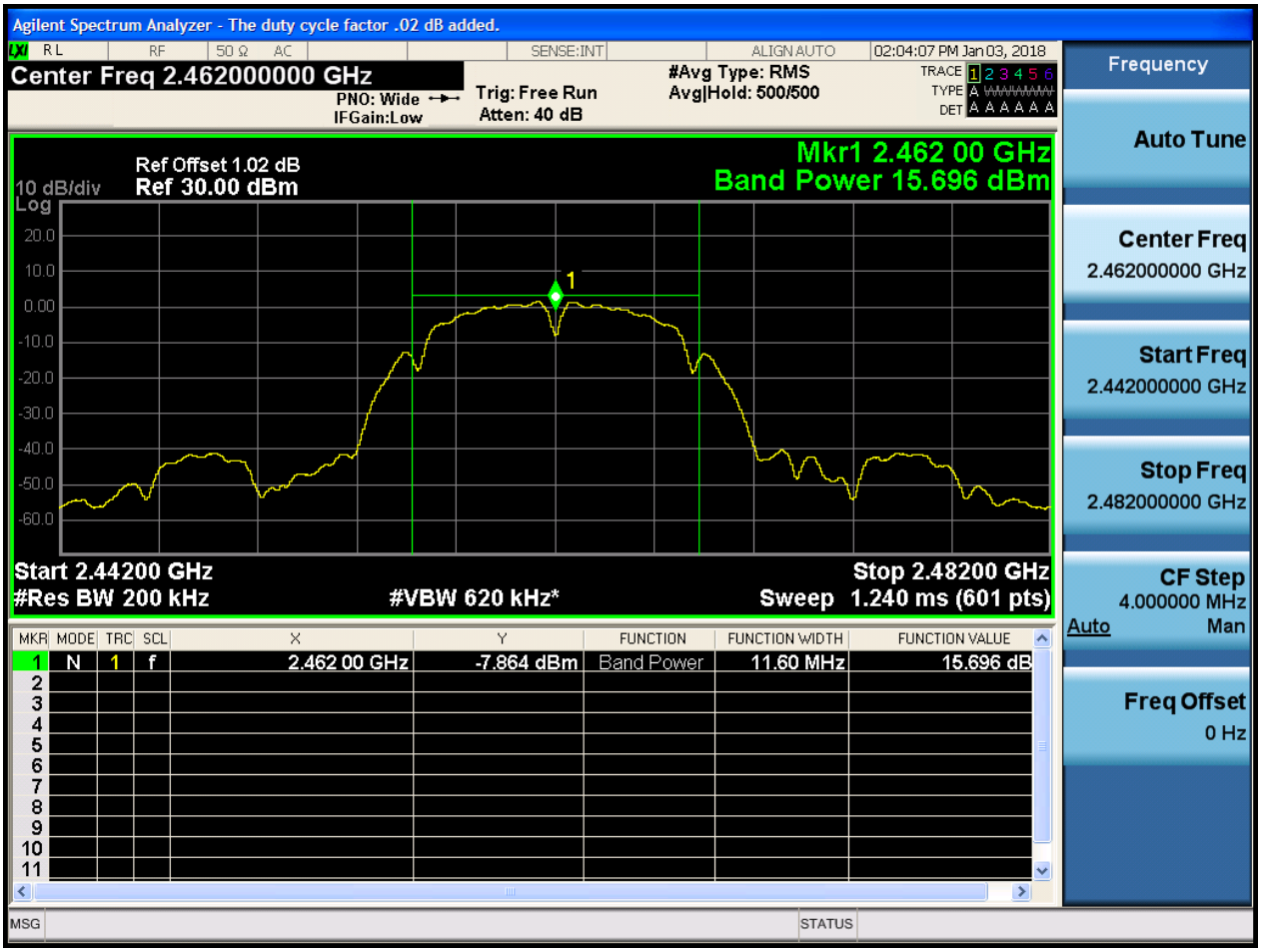
2.1 11B_L@Ant 1



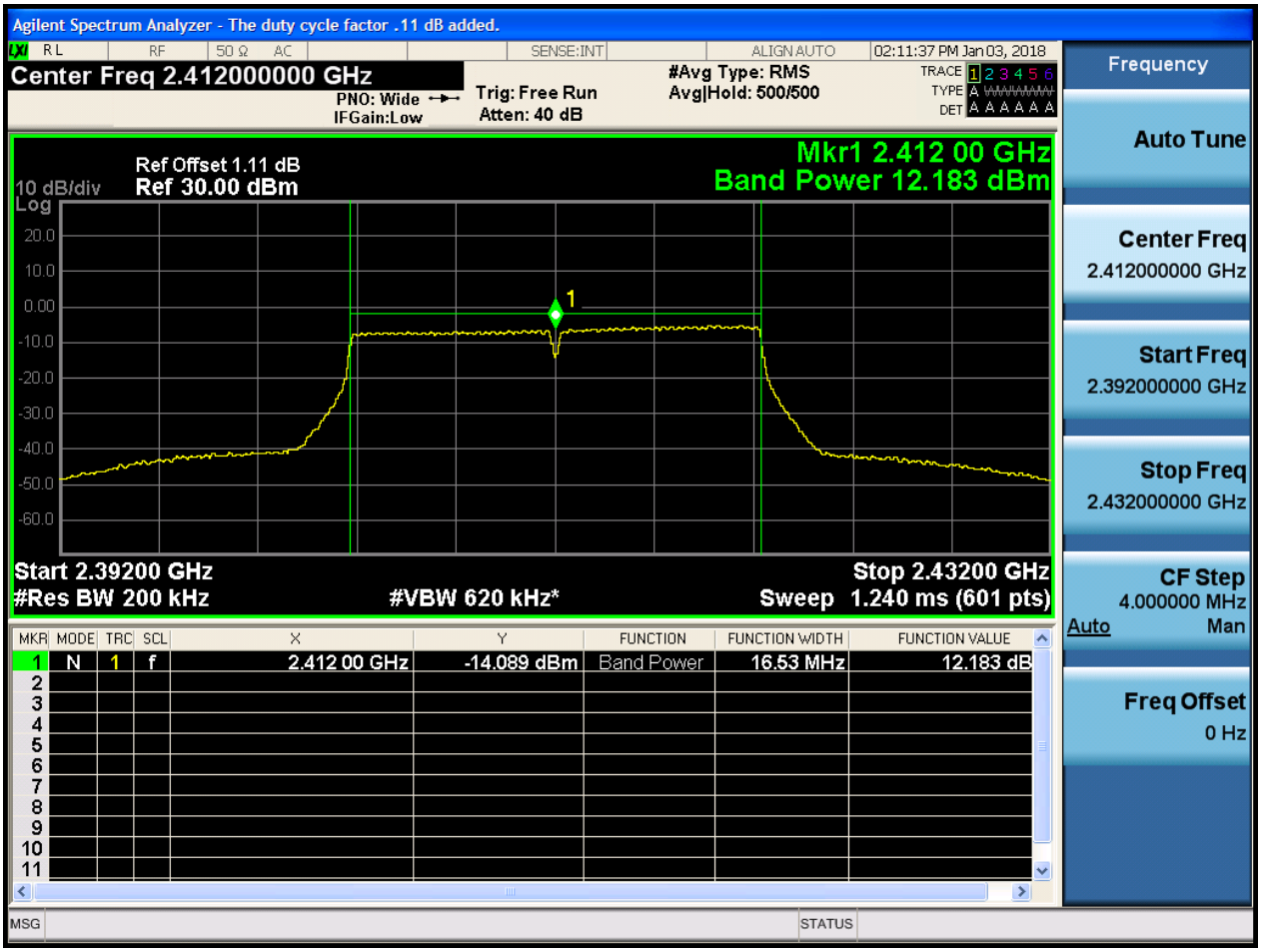
2.2 11B_M@Ant 1



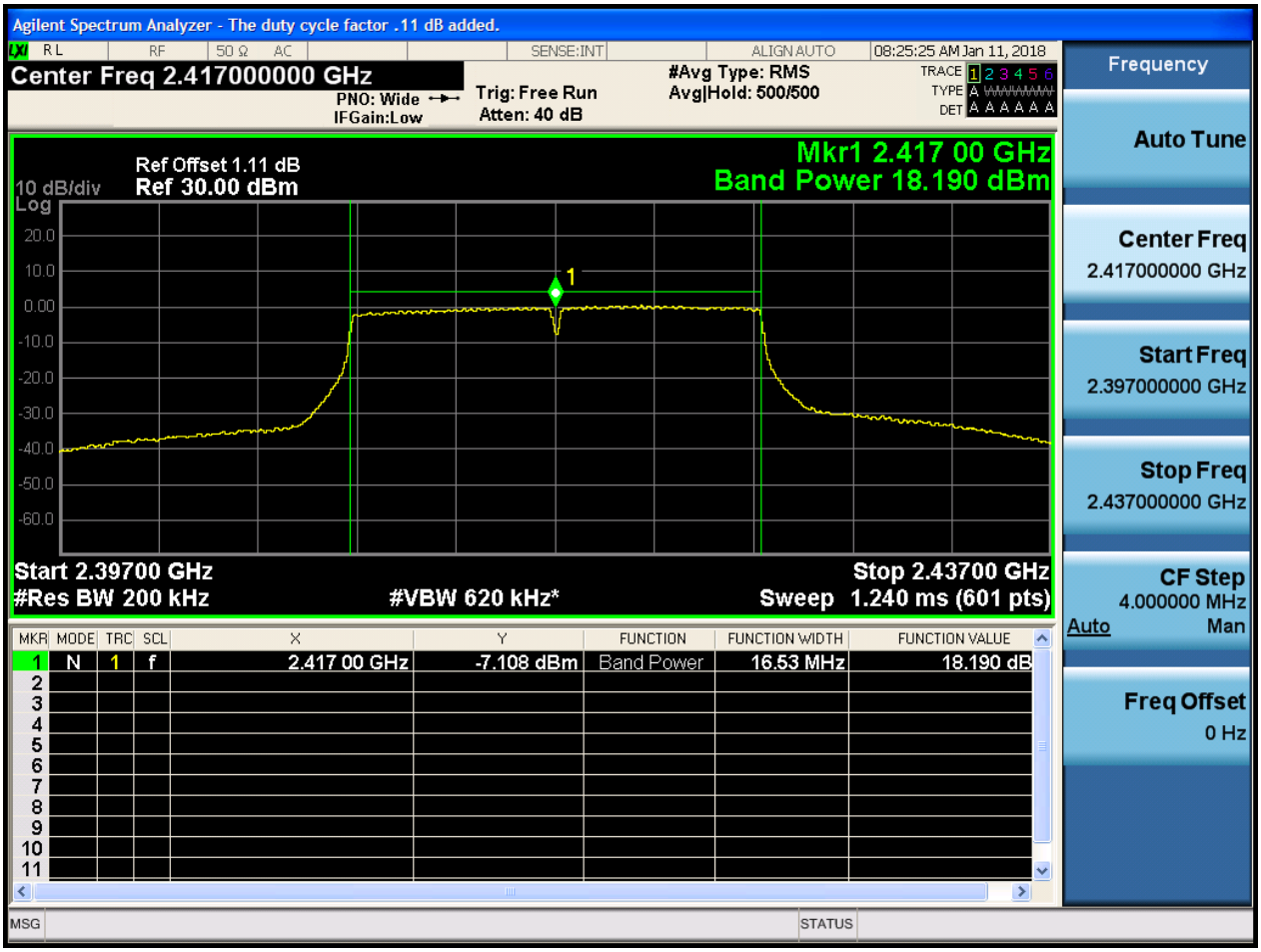
2.3 11B_H@Ant 1



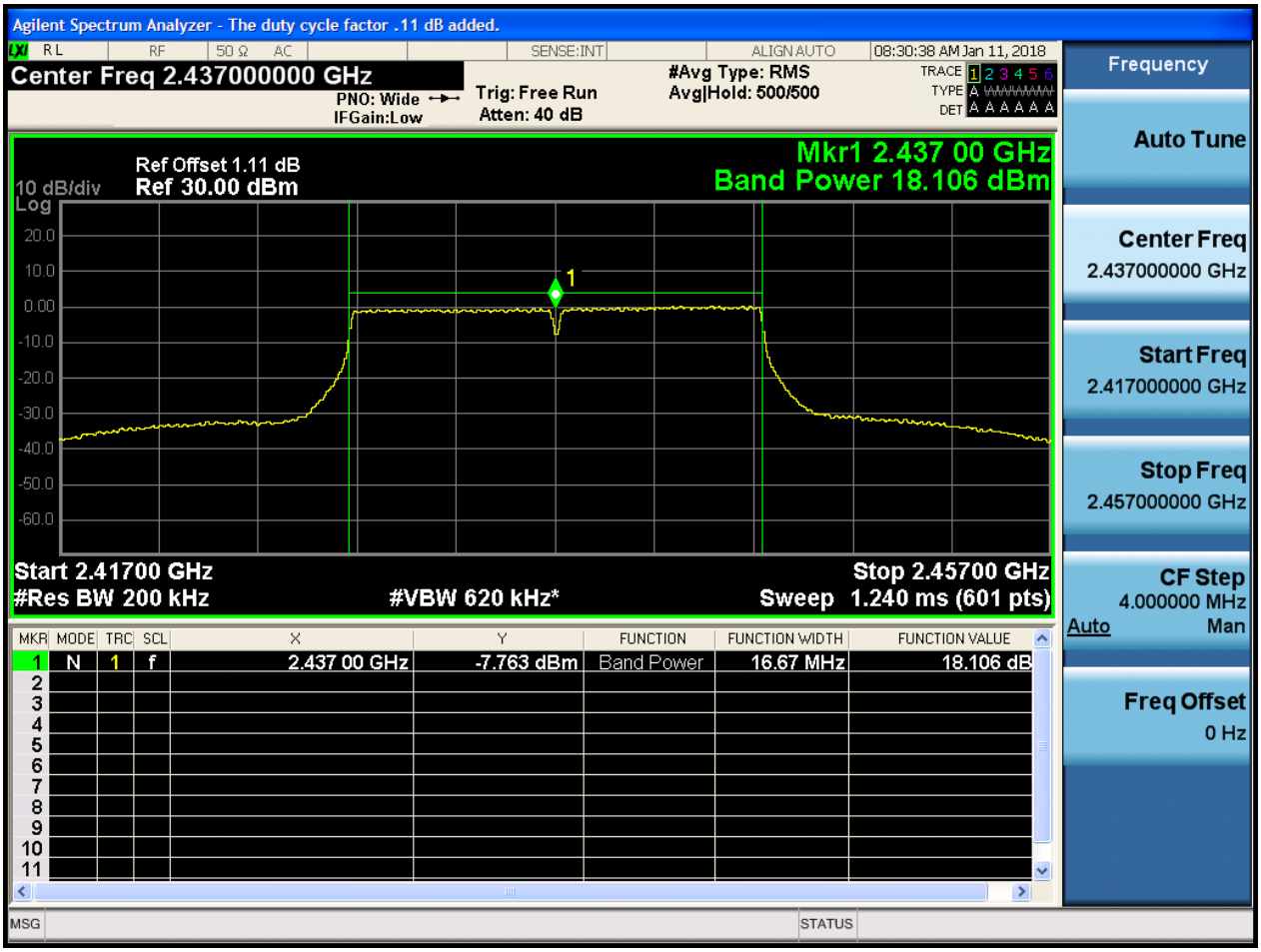
2.4 11G_L_2412@Ant 1



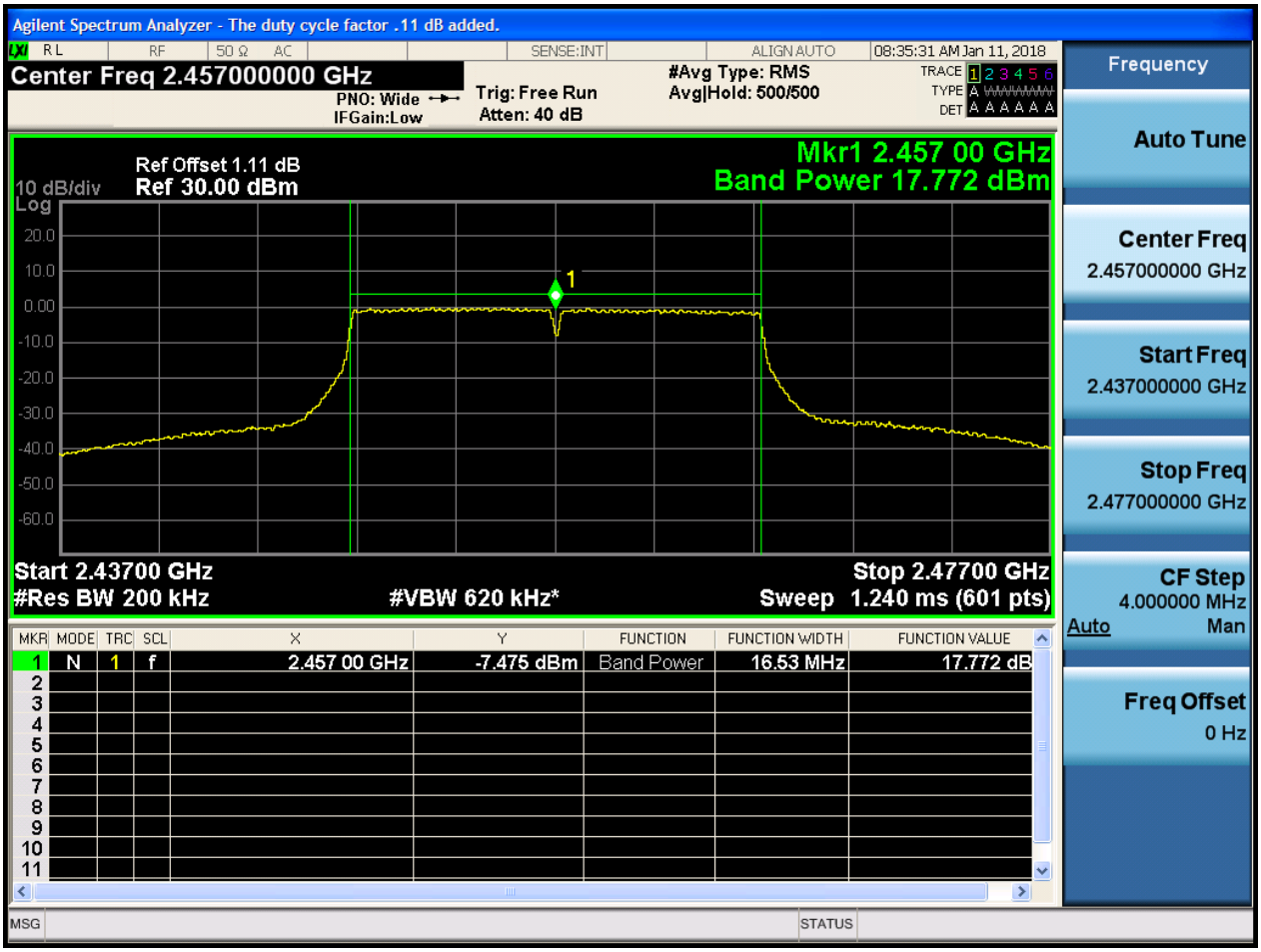
2.5 11G_L_2417@Ant 1



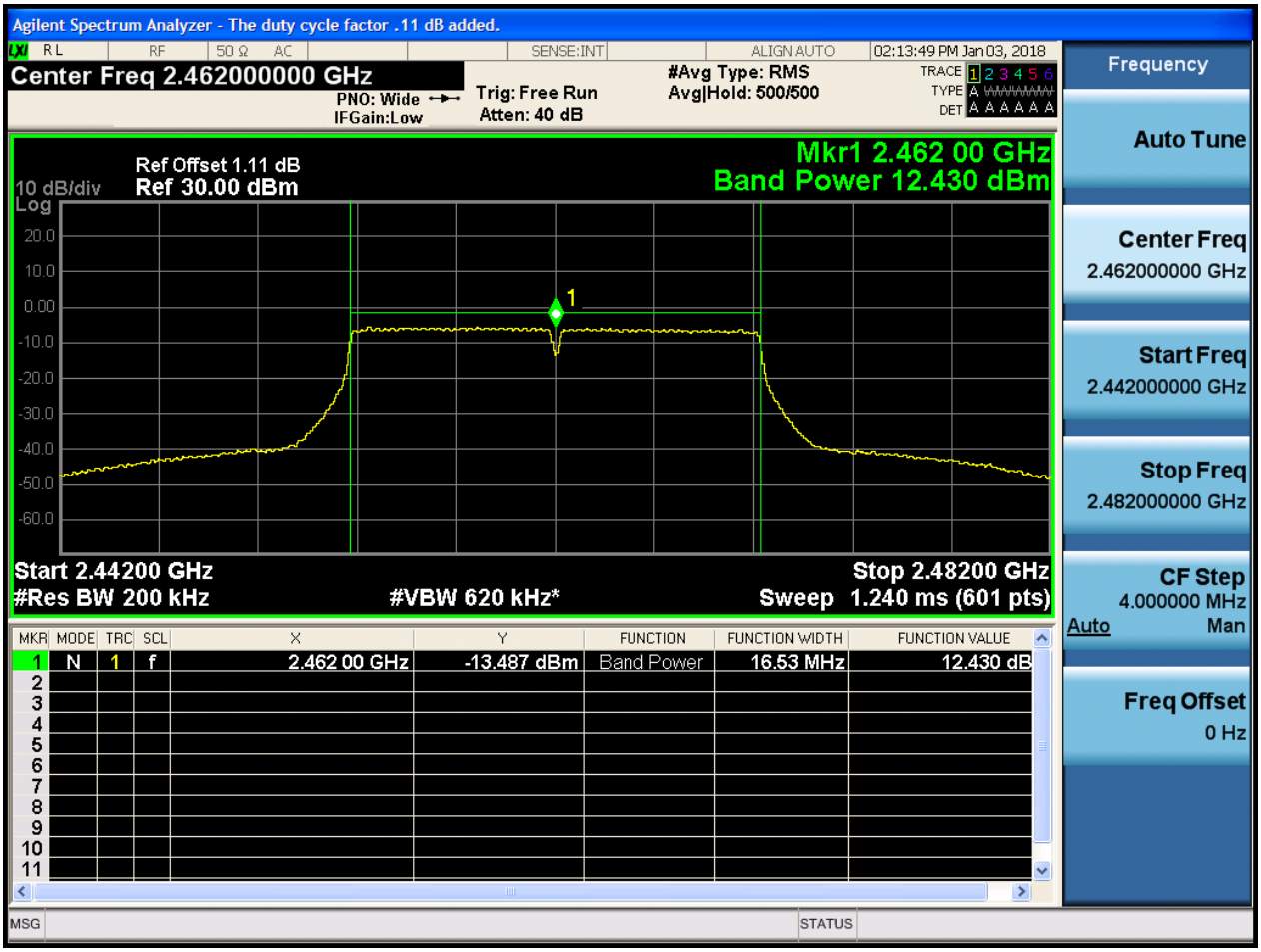
2.6 11G_M_2437@Ant 1



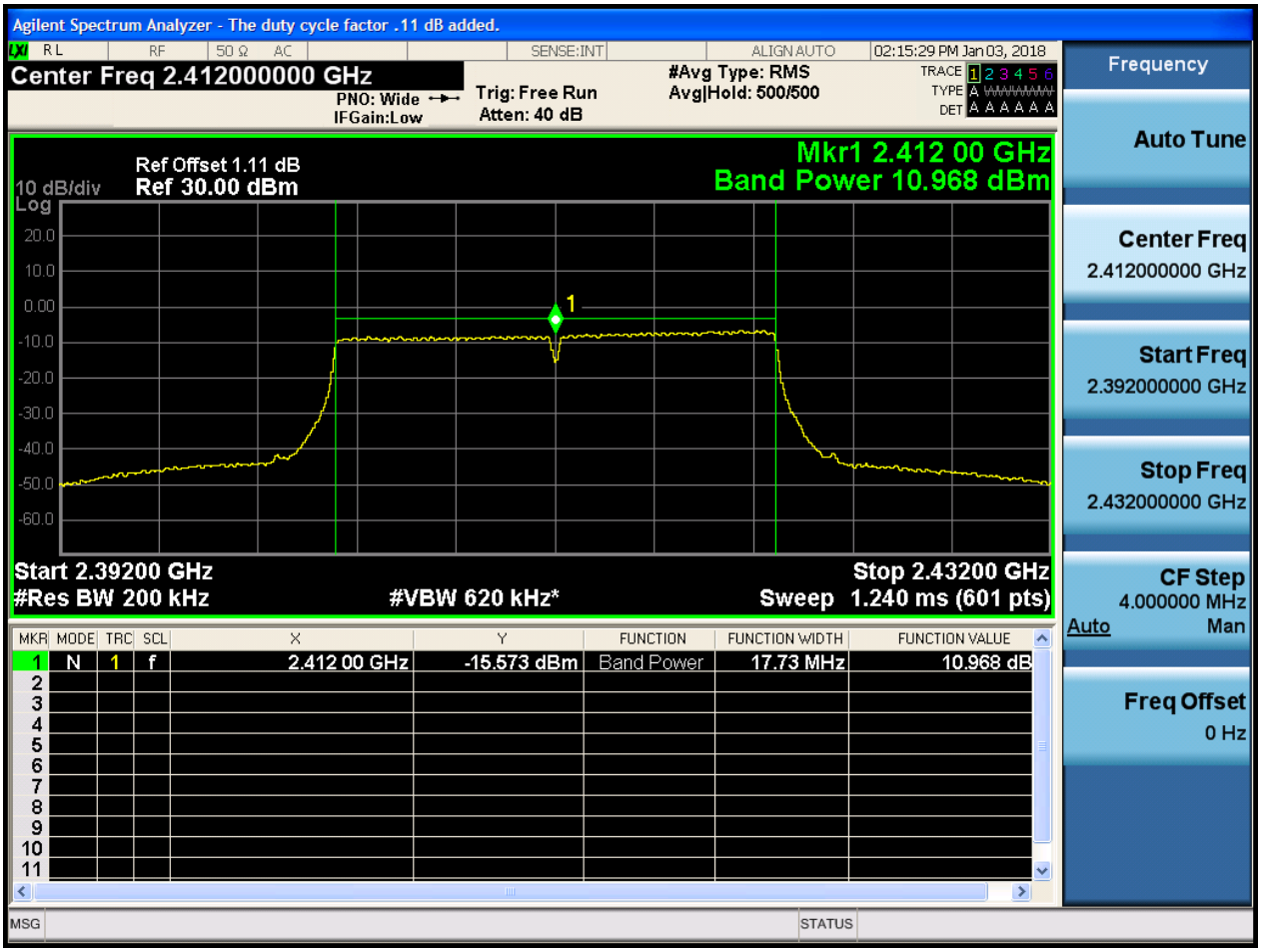
2.7 11G_H_2457@Ant 1



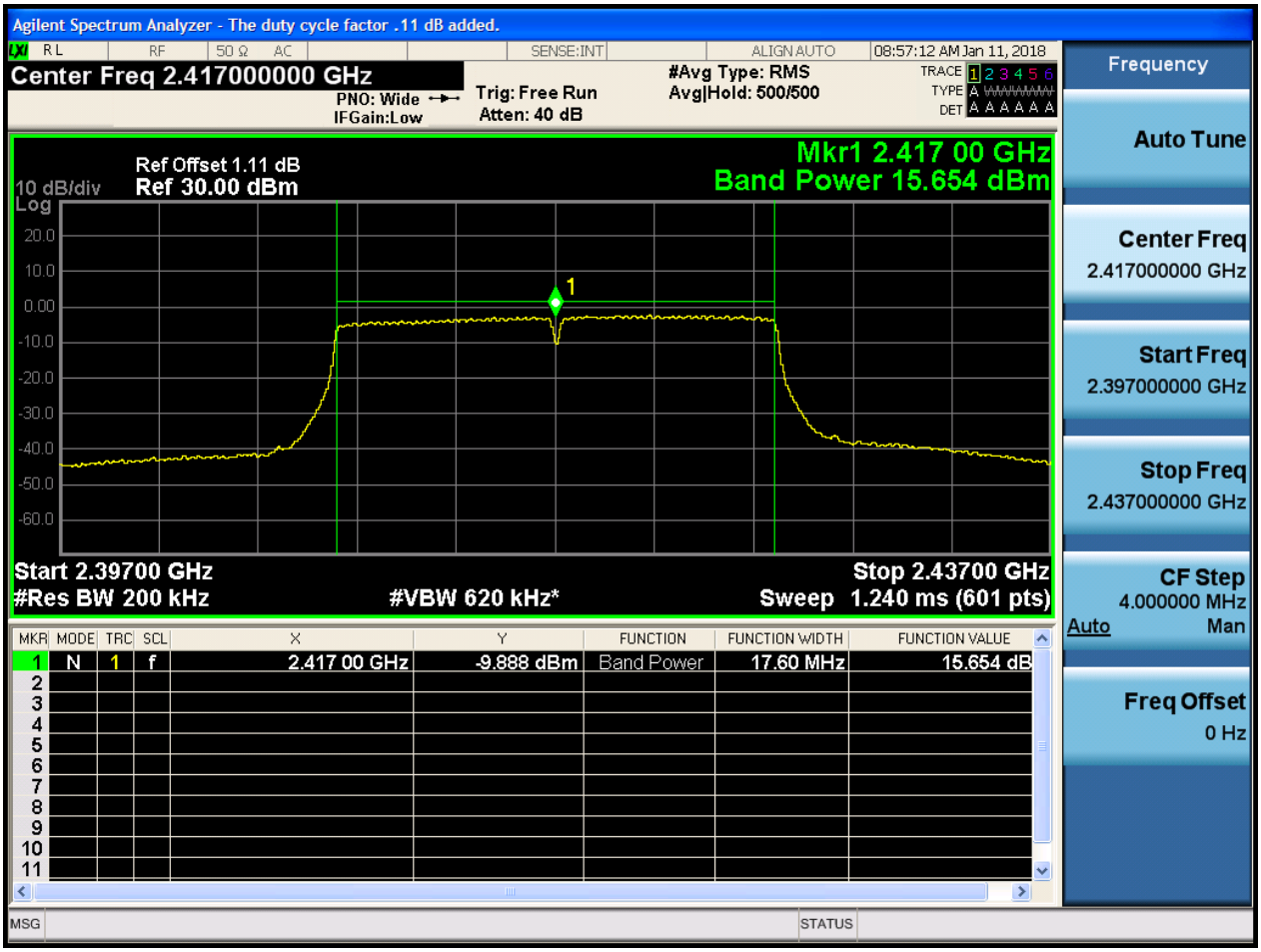
2.8 11G_H@_2462Ant 1



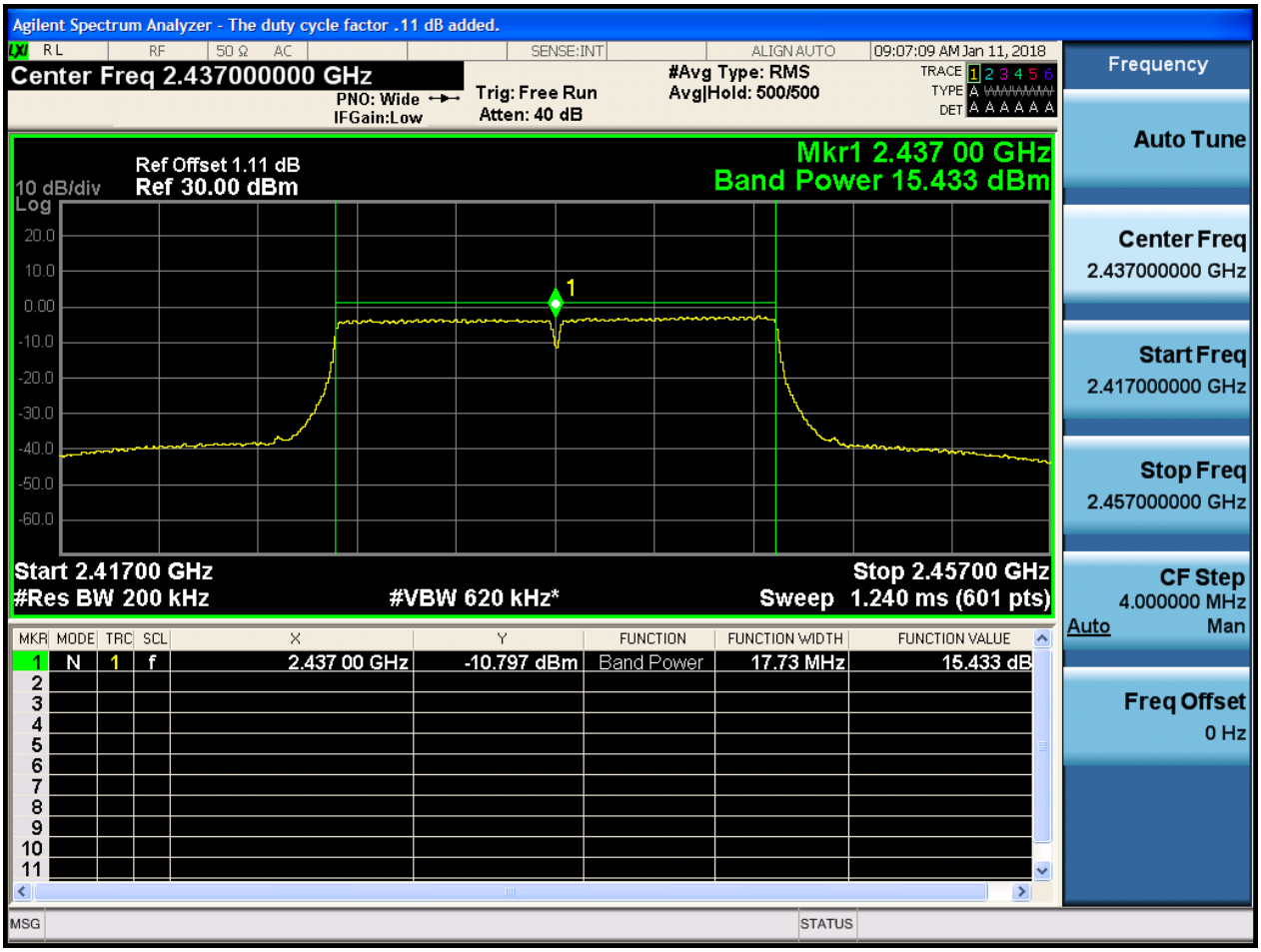
2.9 11N20_L_2412@Ant 1



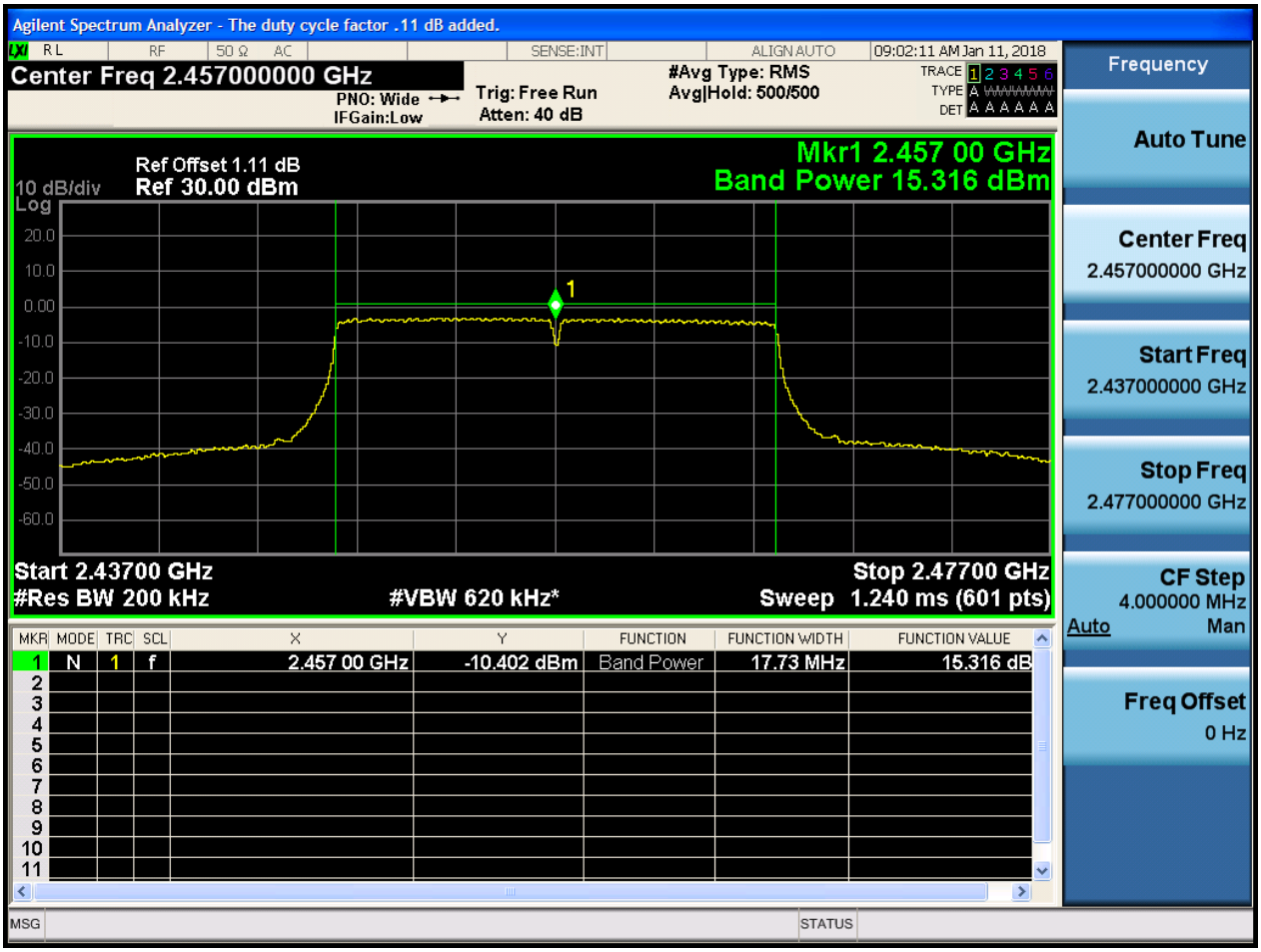
2.10 11N20_L_2417@Ant 1



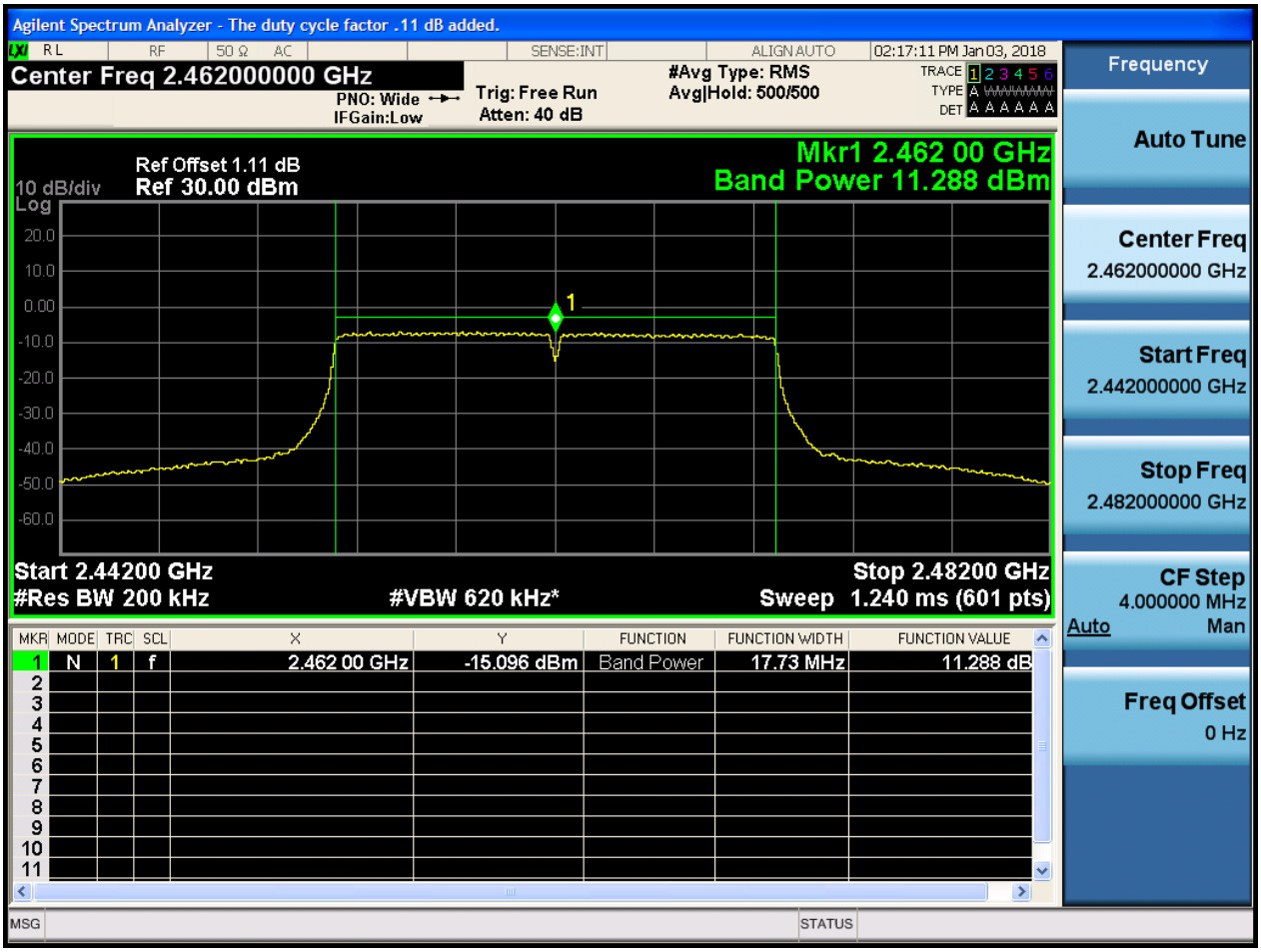
2.11 11N20_M_2437@Ant 1



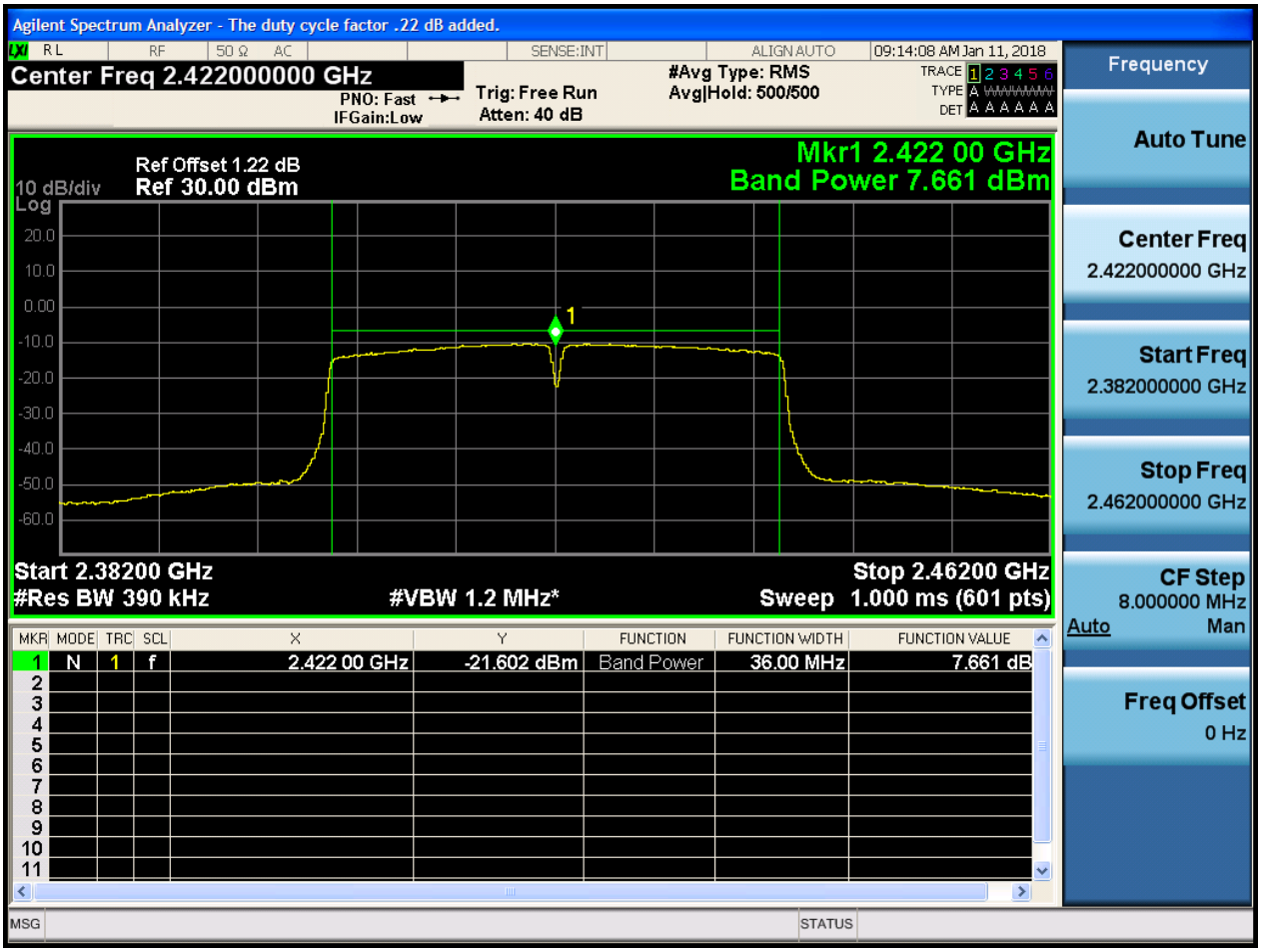
2.12 11N20_H_2457@Ant 1



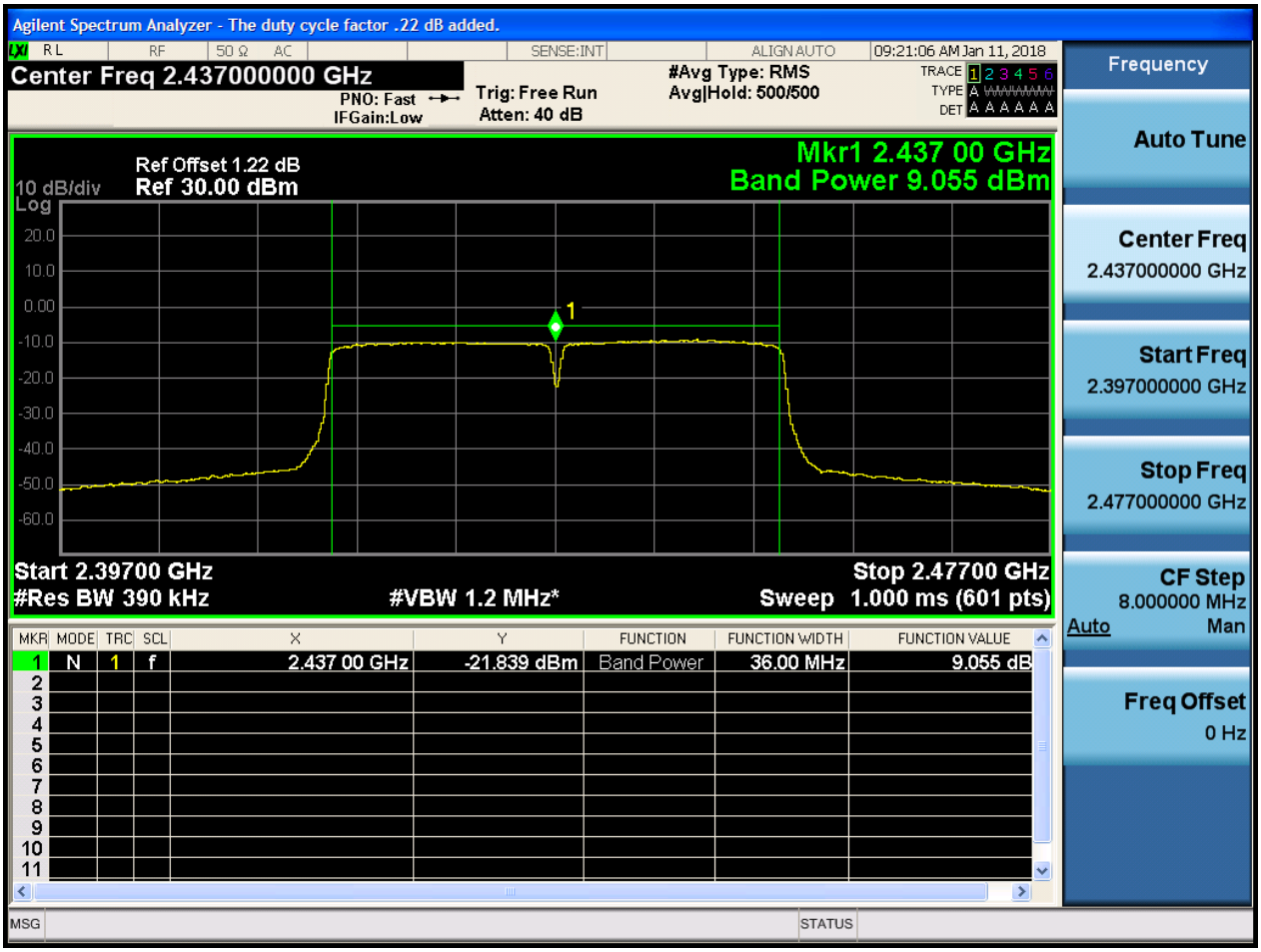
2.13 11N20_H_2462@Ant 1



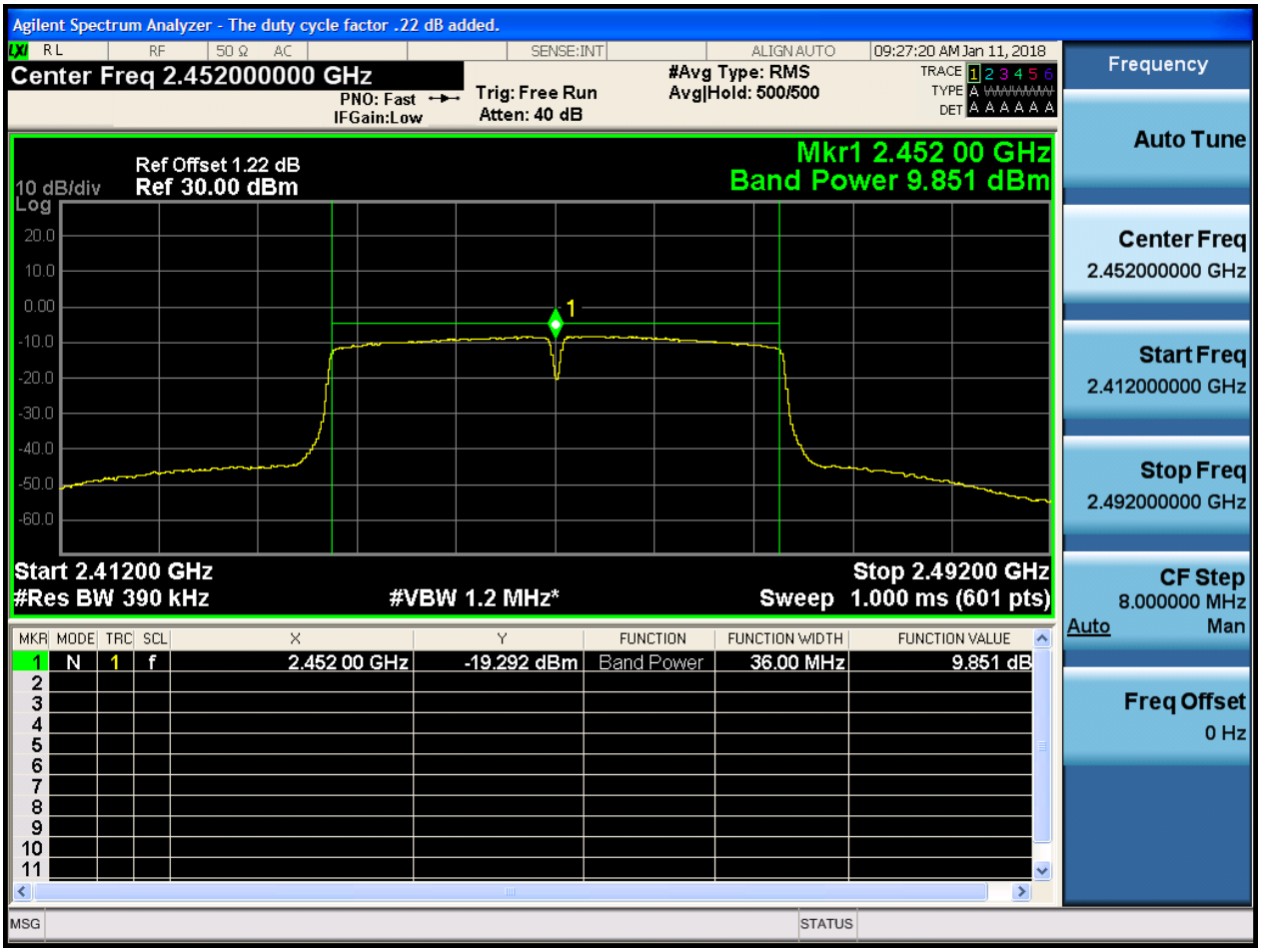
2.14 11N40_L@Ant 1



2.15 11N40_M@Ant 1



2.16 11N40_H@Ant 1



Appendix E: Maximum Power Spectral Density Level

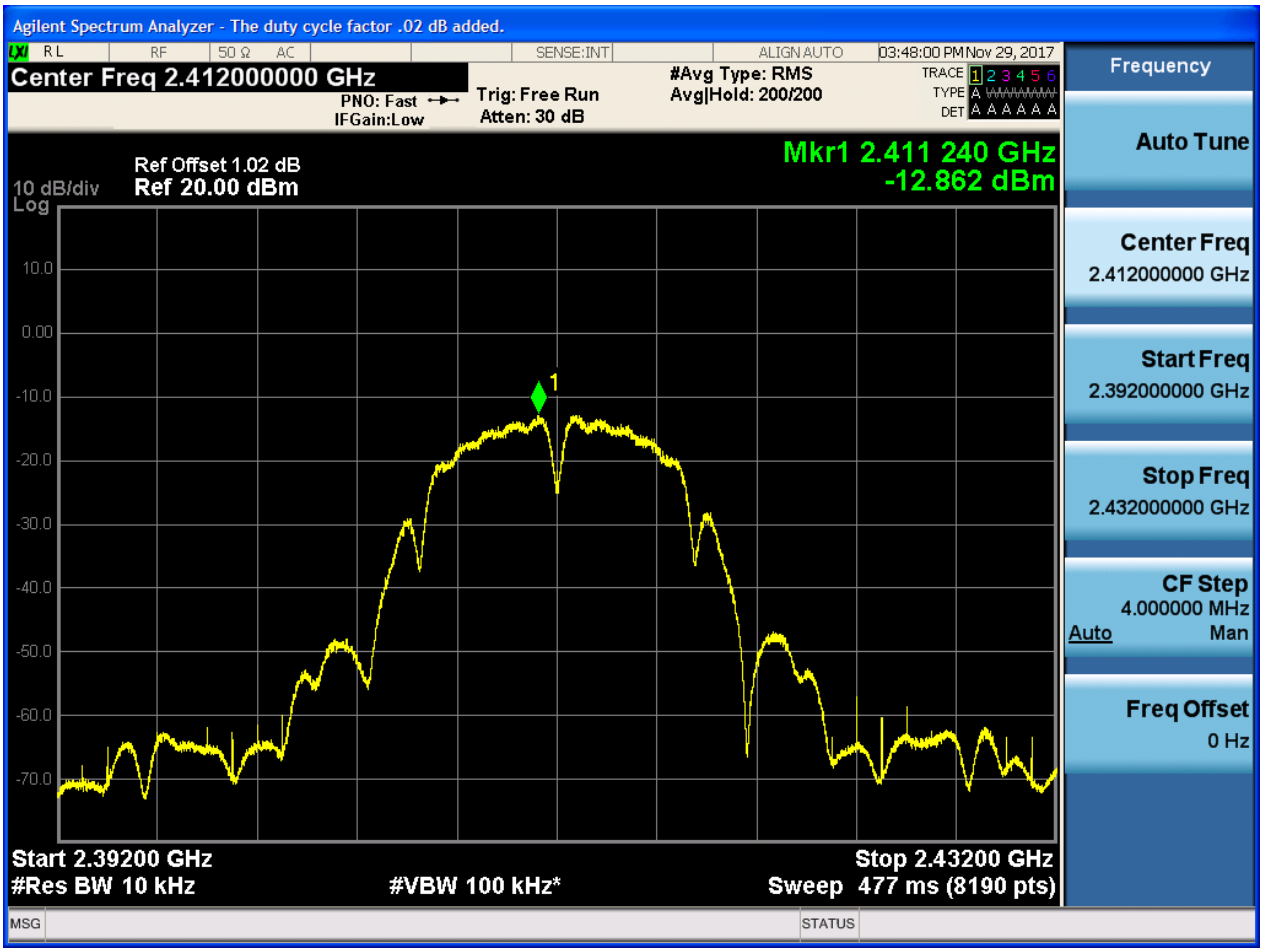
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Duty Cycle [%]	PSD[dBm/10 kHz]	Verdict
11B	L	2412	Ant 1	99	-12.86	pass
11B	M	2437	Ant 1	99	-12.06	pass
11B	H	2462	Ant 1	99	-11.70	pass
11G	L	2412	Ant 1	97	-18.90	pass
11G	L	2417	Ant 1	97	-10.37	pass
11G	M	2437	Ant 1	97	-10.64	pass
11G	H	2457	Ant 1	97	-11.69	pass
11G	H	2462	Ant 1	97	-17.69	pass
11N20	L	2412	Ant 1	97	-19.46	pass
11N20	L	2417	Ant 1	97	-13.55	pass
11N20	M	2437	Ant 1	97	-13.57	pass
11N20	H	2457	Ant 1	97	-14.4	pass
11N20	H	2462	Ant 1	97	-17.98	pass
11N40	L	2422	Ant 1	95	-21.05	pass
11N40	M	2437	Ant 1	95	-21.27	pass

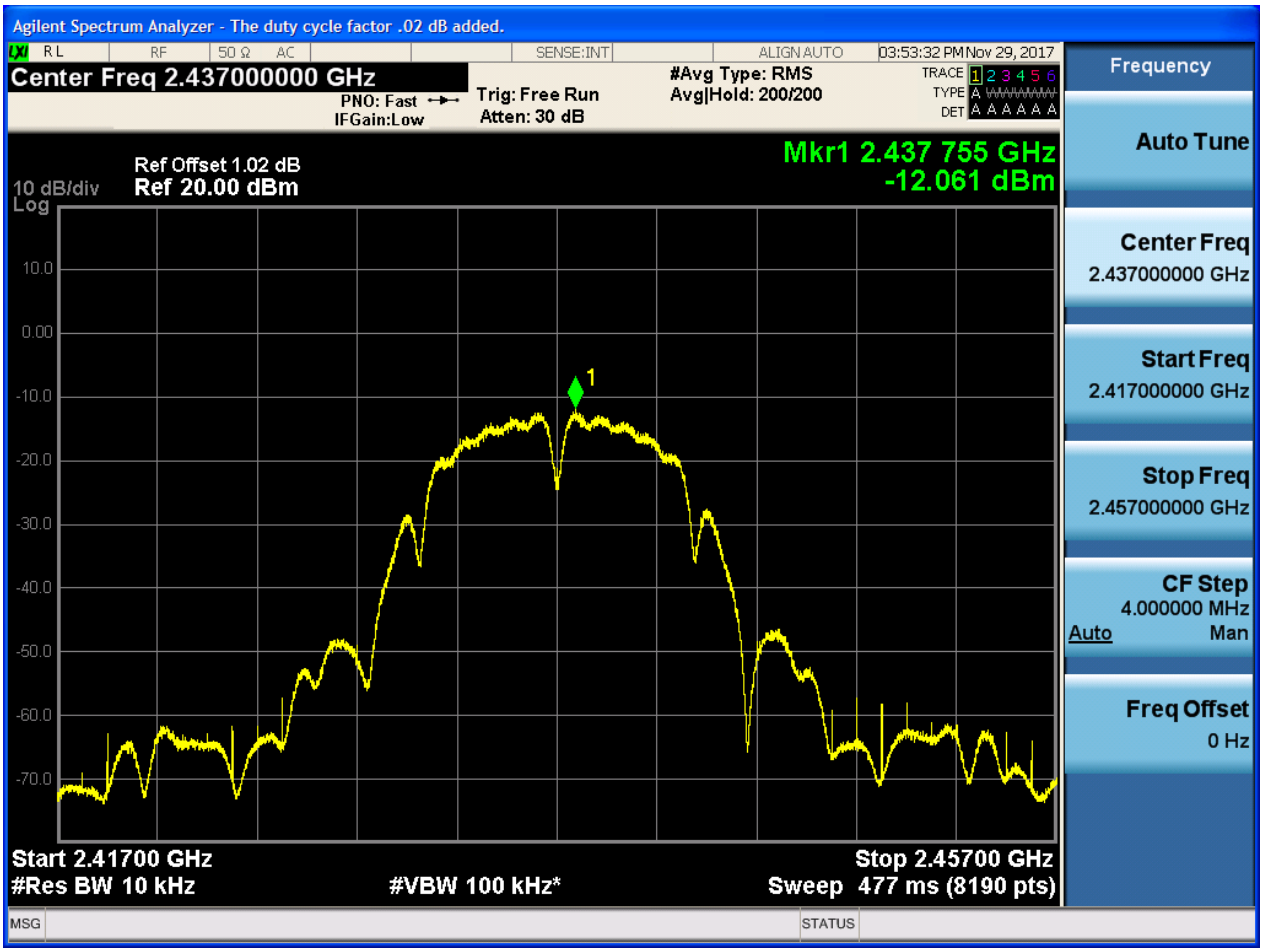
Test Mode	Test Channel	Frequency[MHz]	Ant	Duty Cycle [%]	PSD[dBm/10 kHz]	Verdict
11N40	H	2452	Ant 1	95	-21.08	pass

Part II - Test Plots

2.1 11B_L@Ant 1

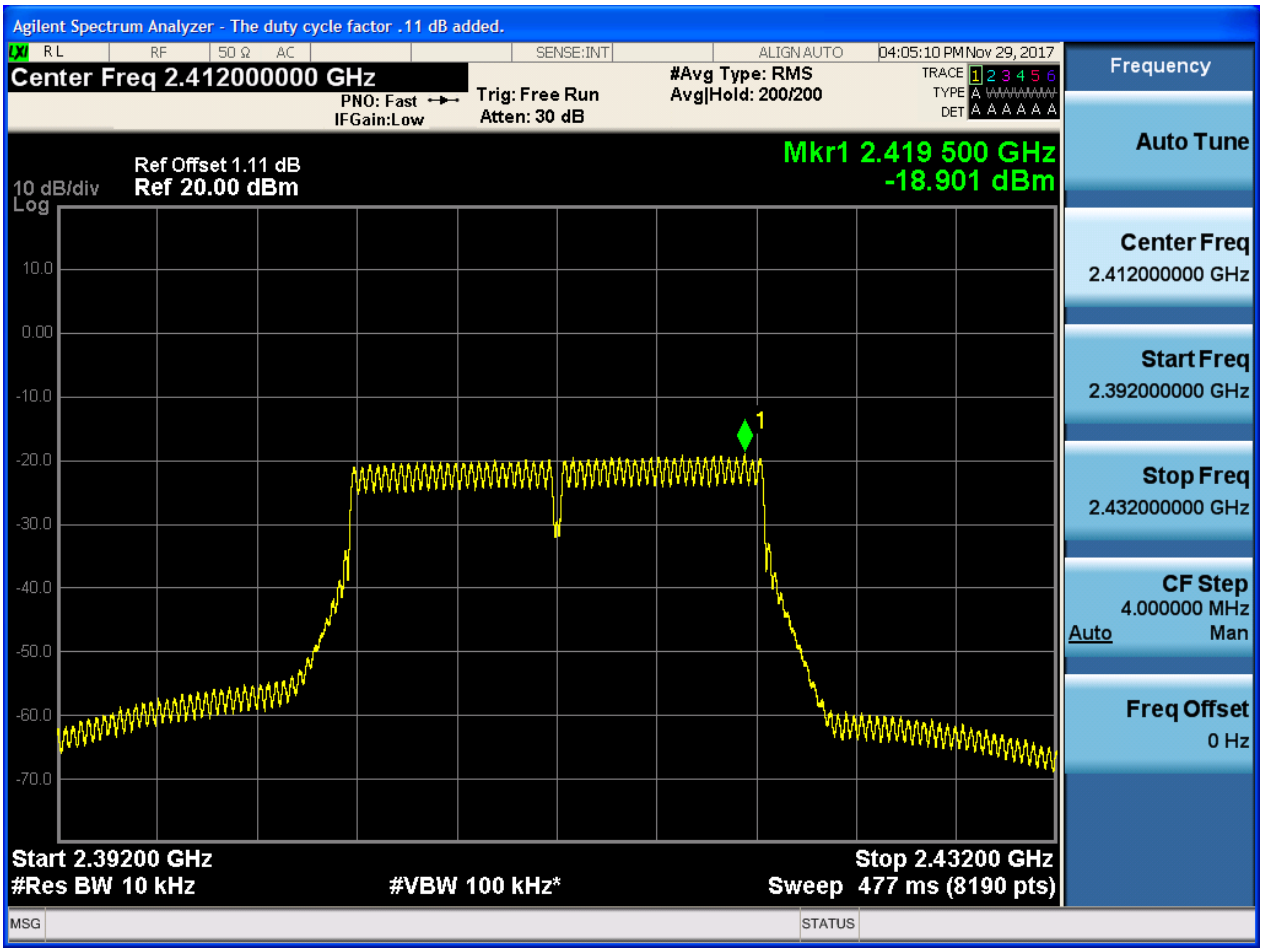


2.2 11B_M@Ant 1

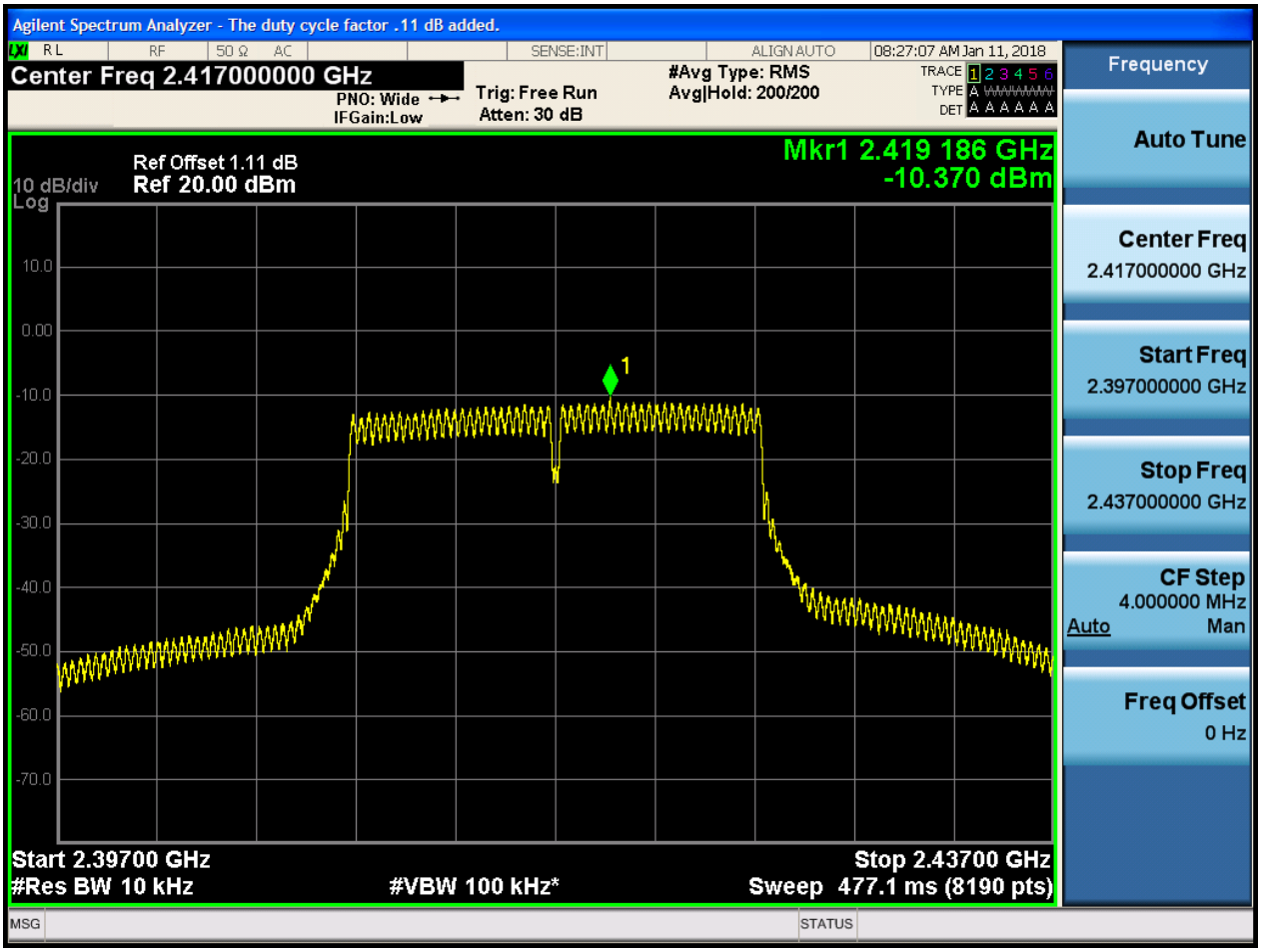


2.3 11B_H@Ant 1

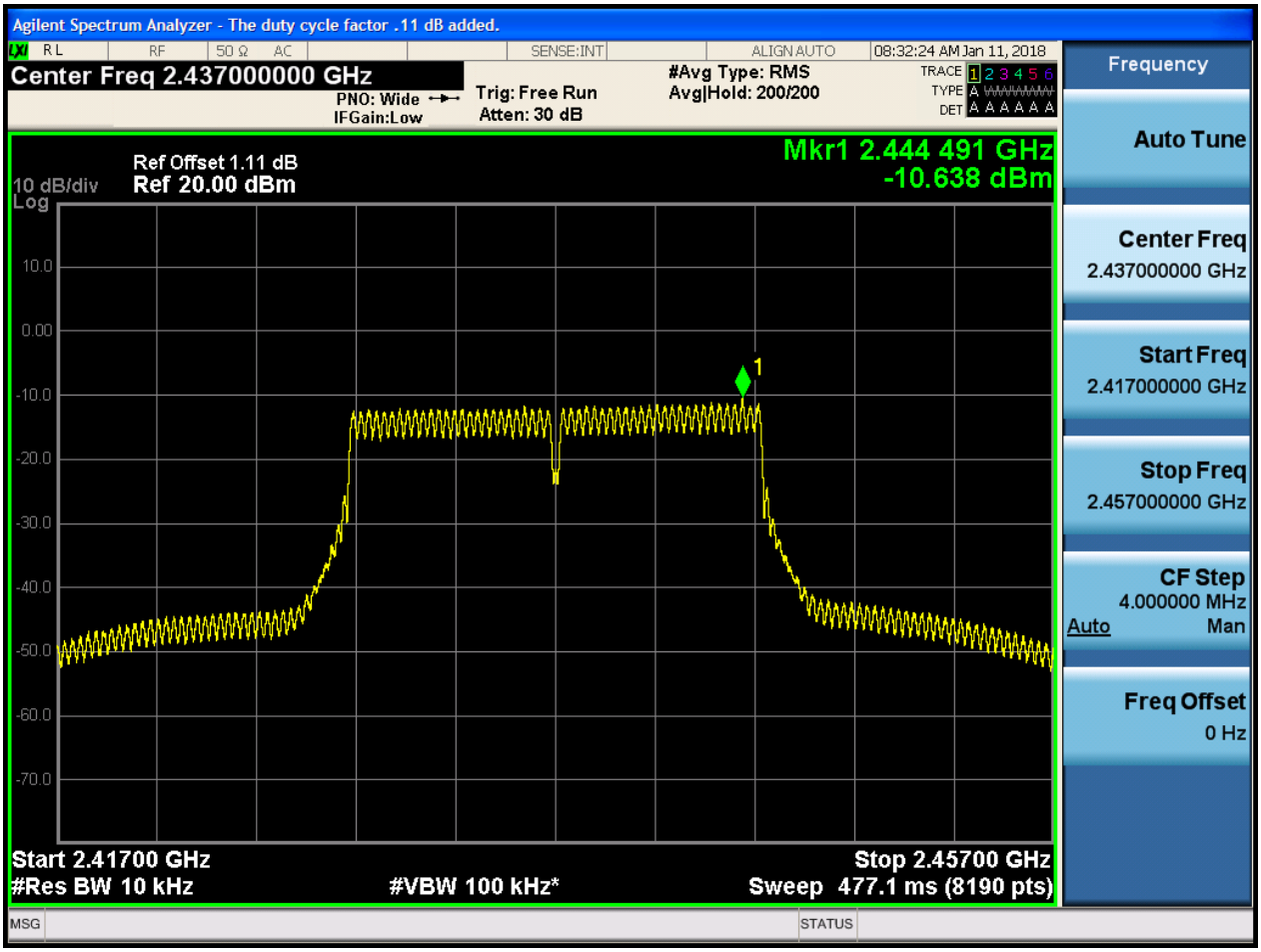
2.4 11G_L_2412@Ant 1



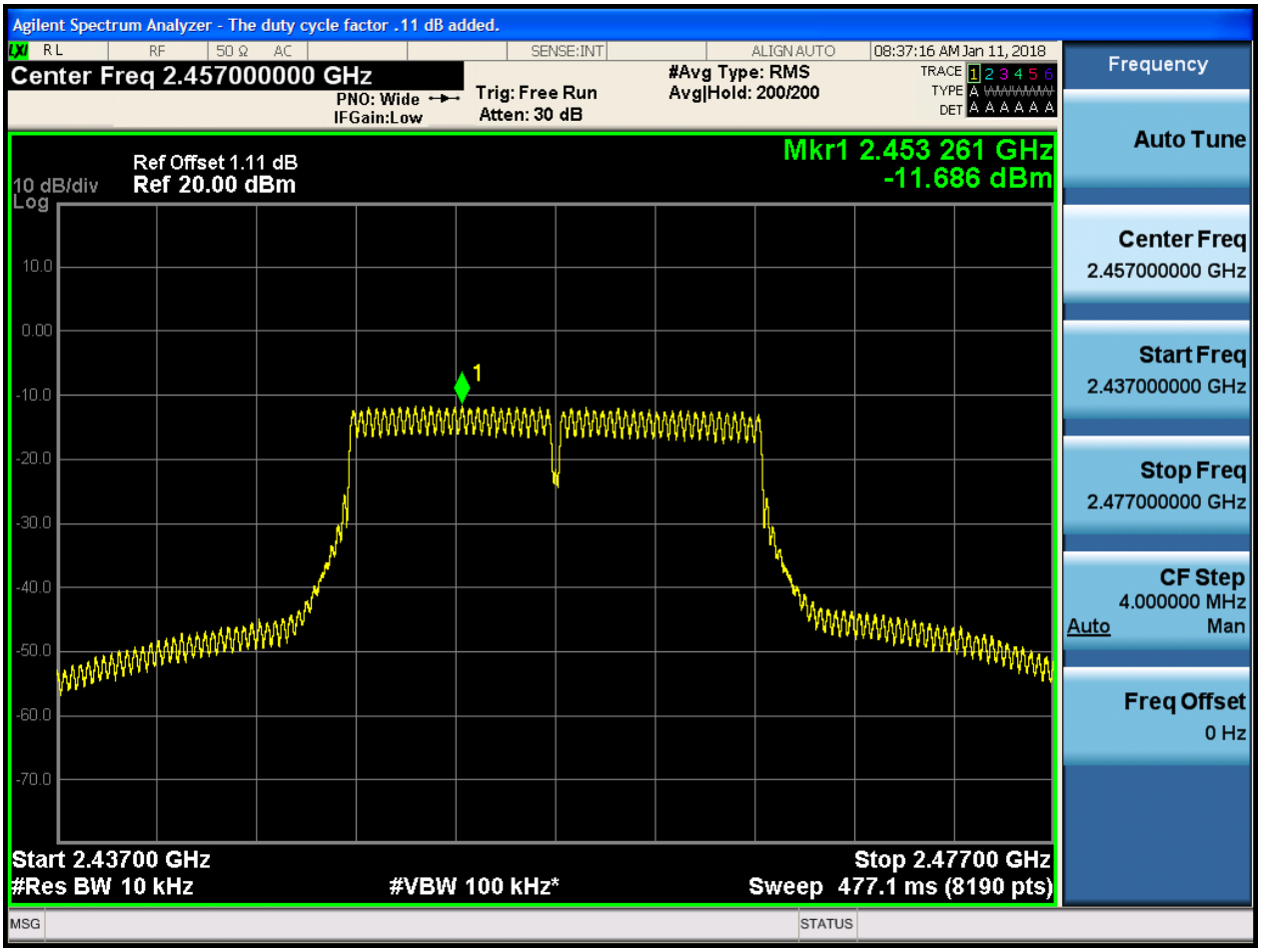
2.5 11G_L_2417@Ant 1



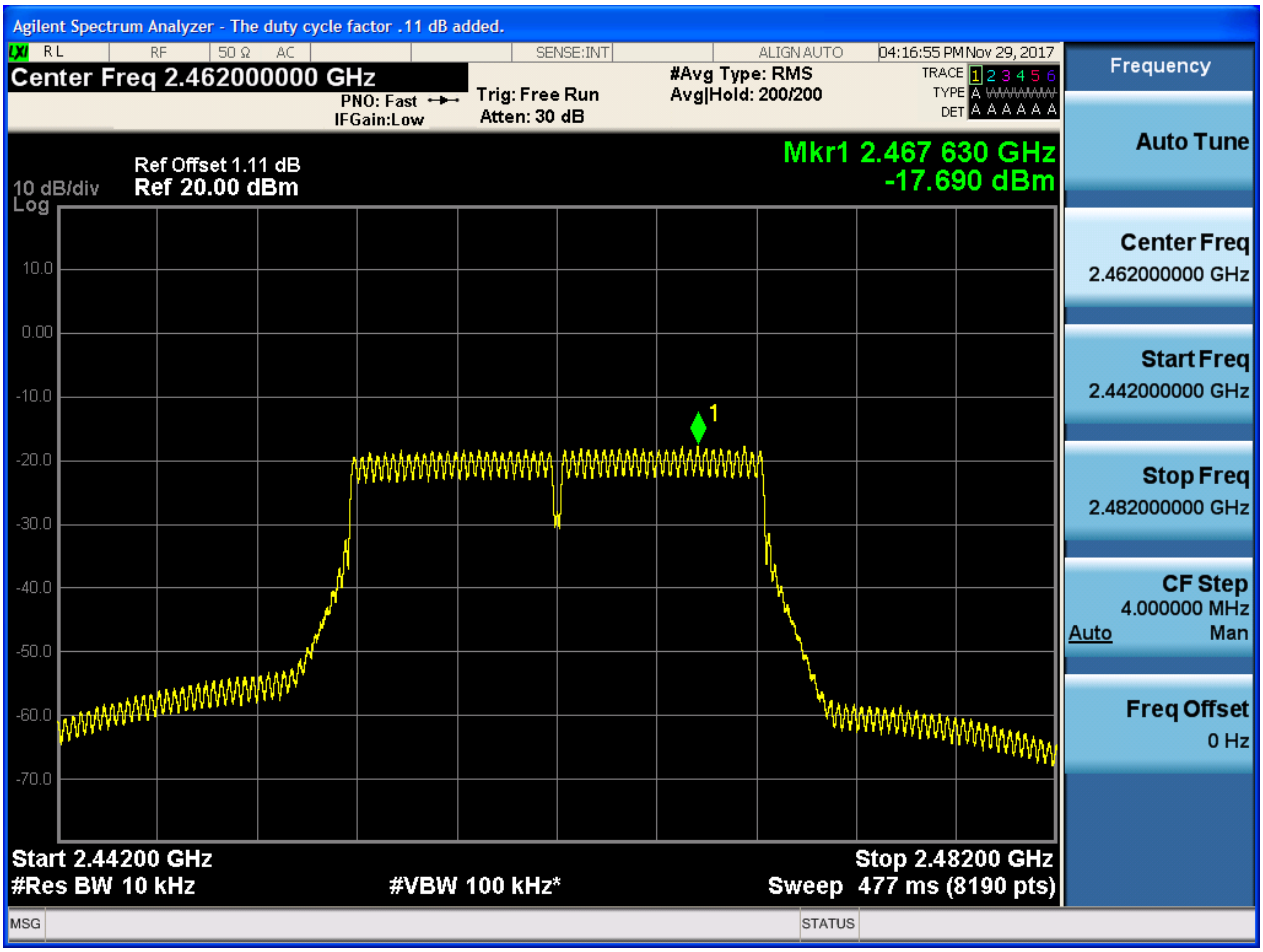
2.6 11G_M_2437@Ant 1



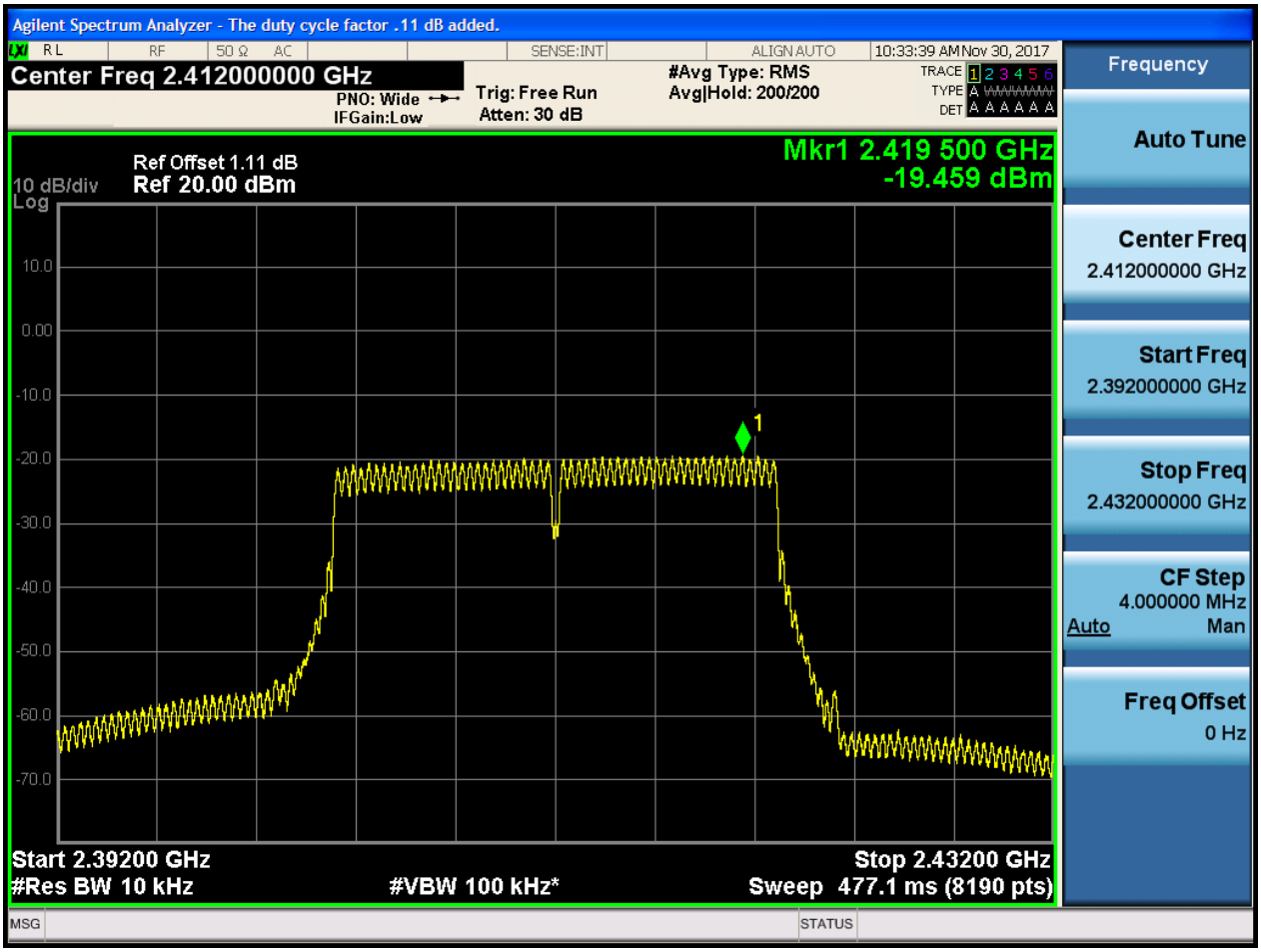
2.7 11G_H_2457@Ant 1



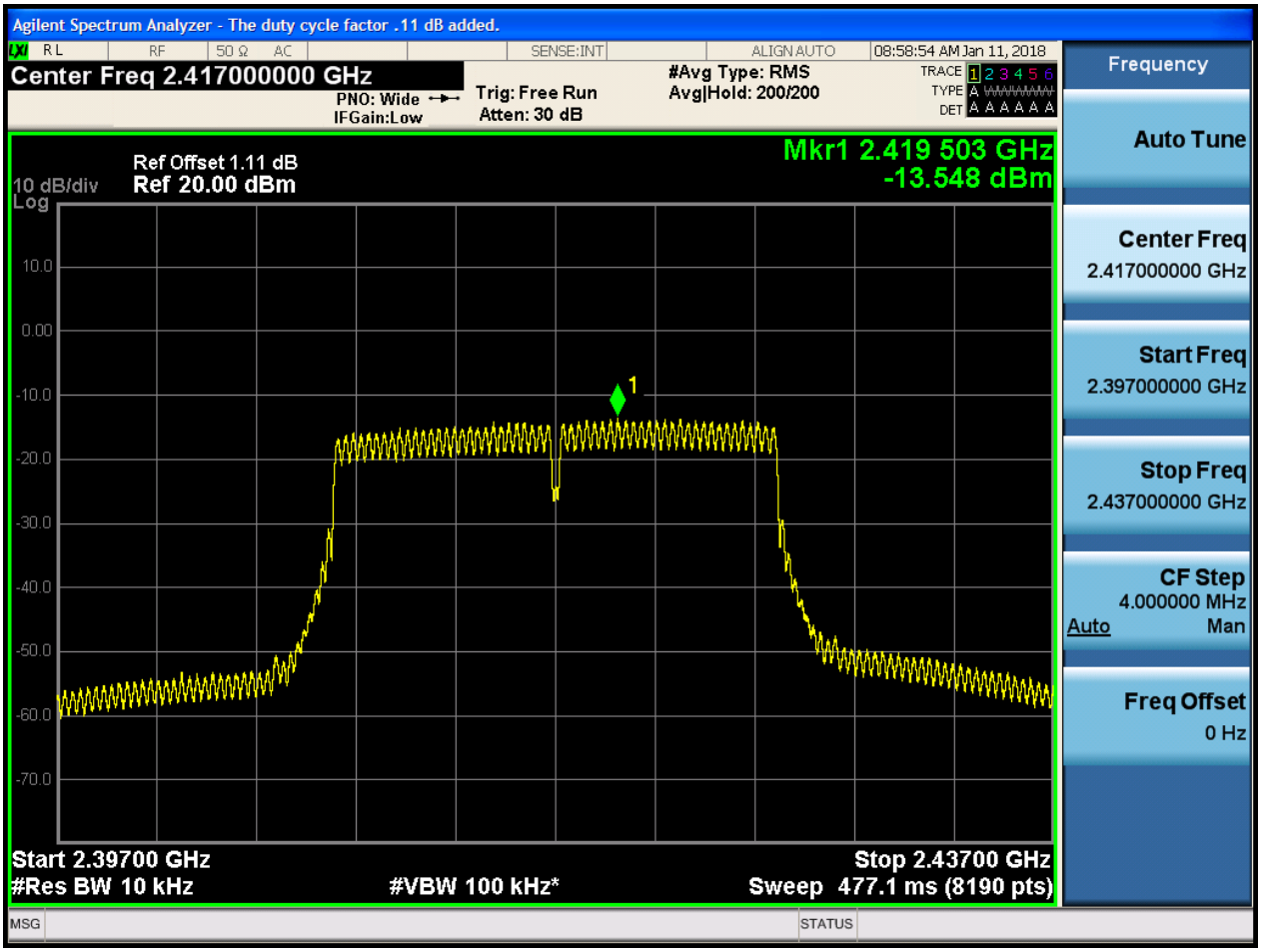
2.8 11G_H_2462@Ant 1



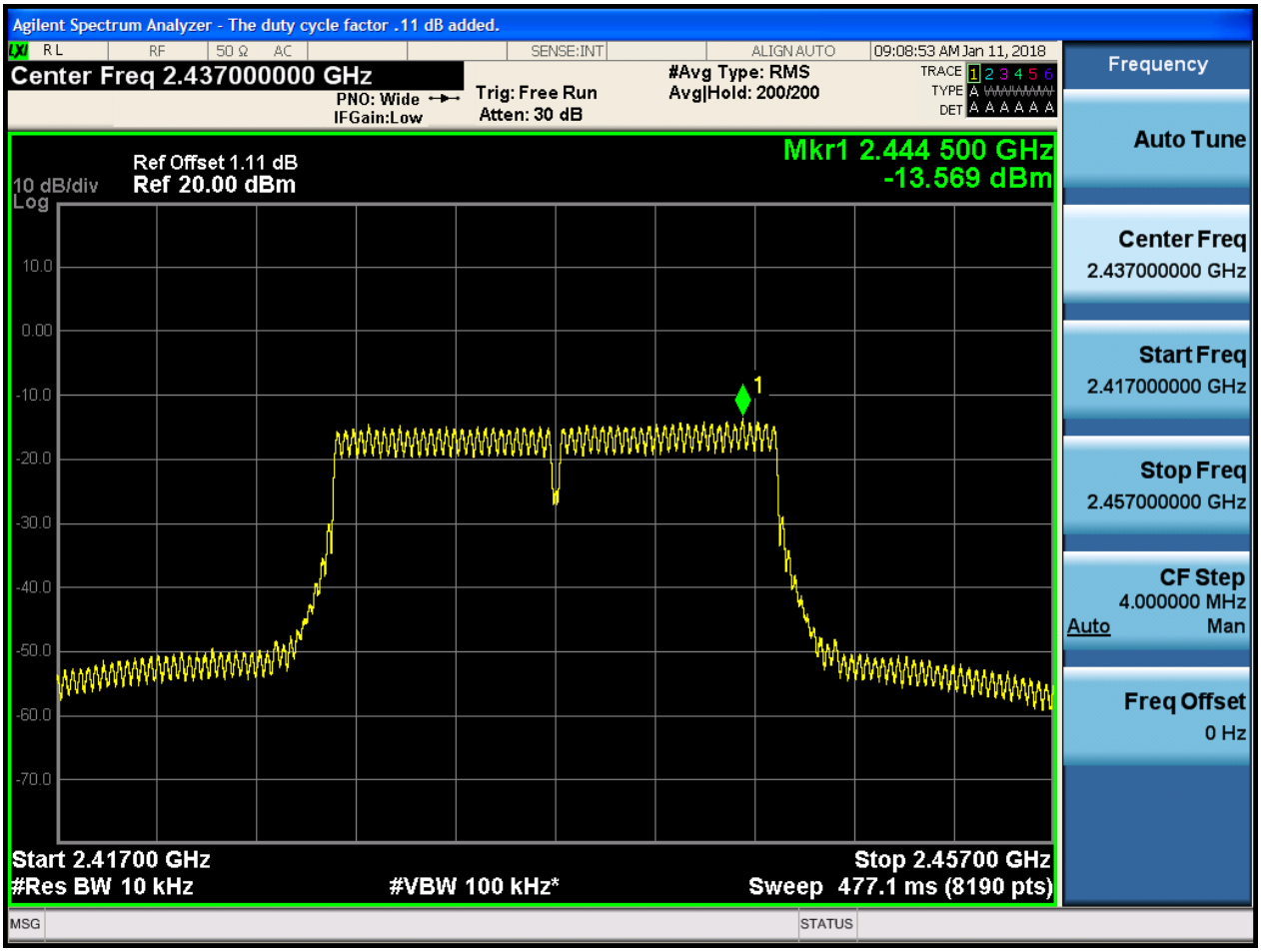
2.9 11N20_L_2412@Ant 1



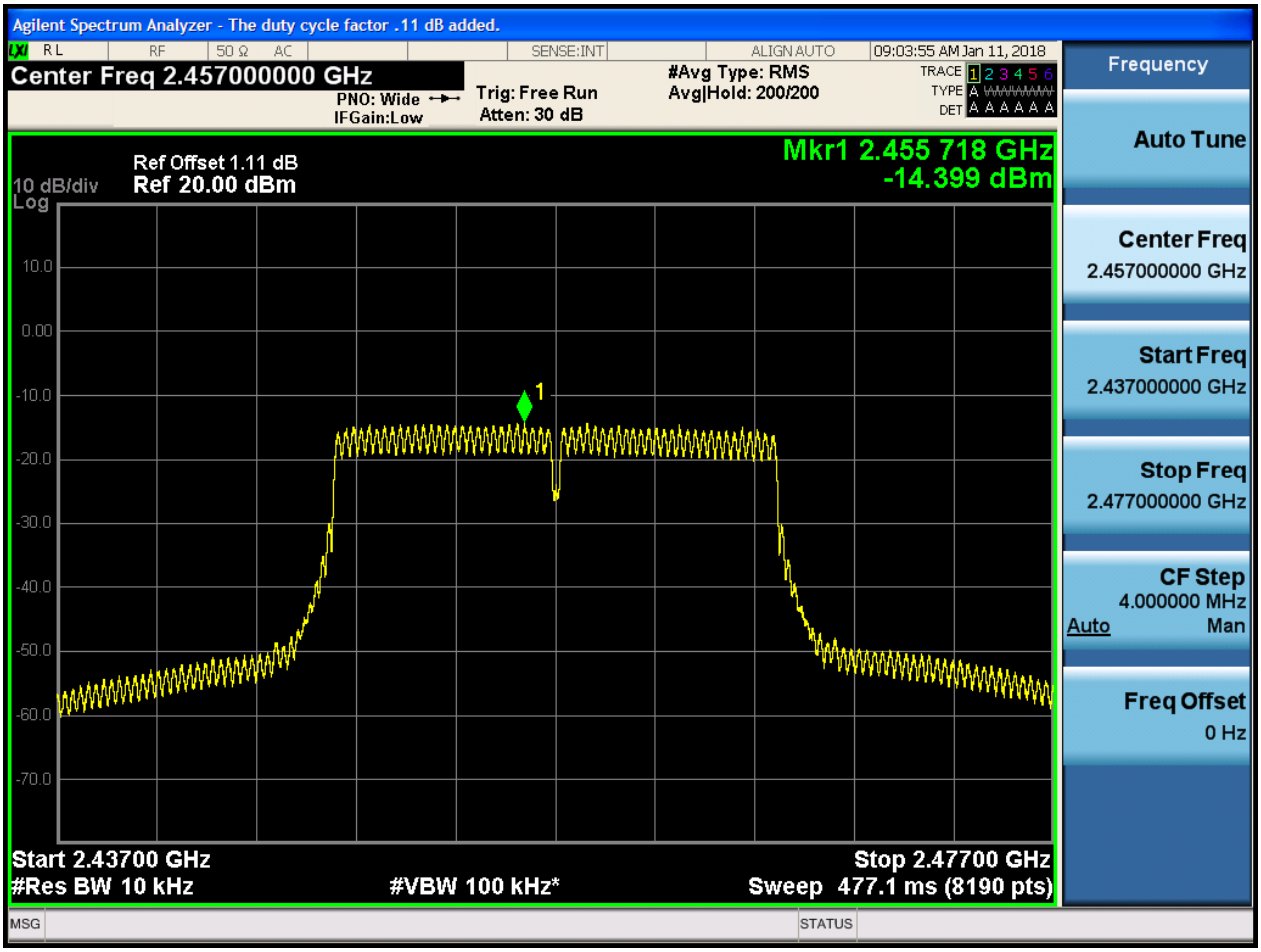
2.10 11N20_L_2417@Ant 1



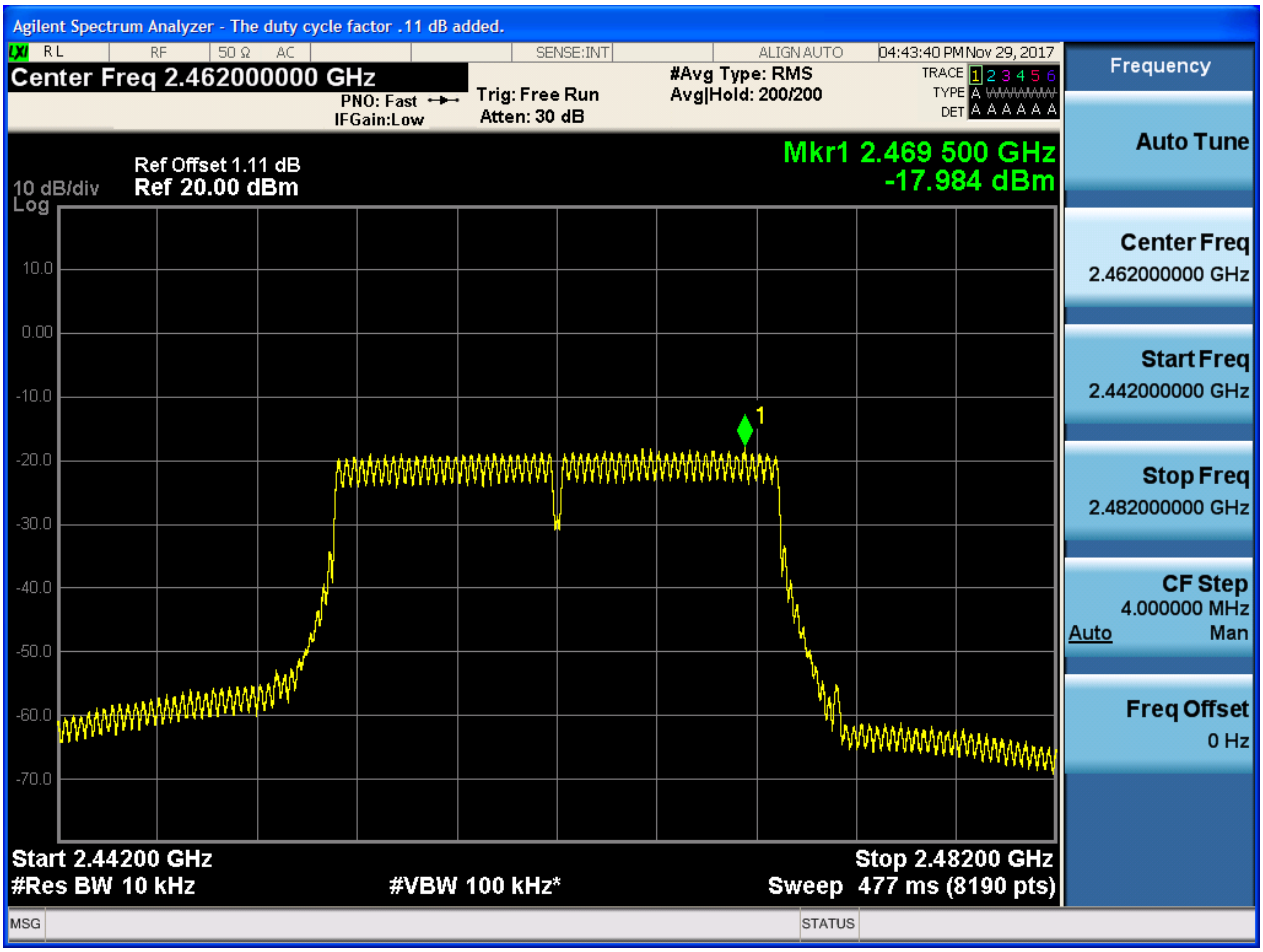
2.11 11N20_M_2437@Ant 1



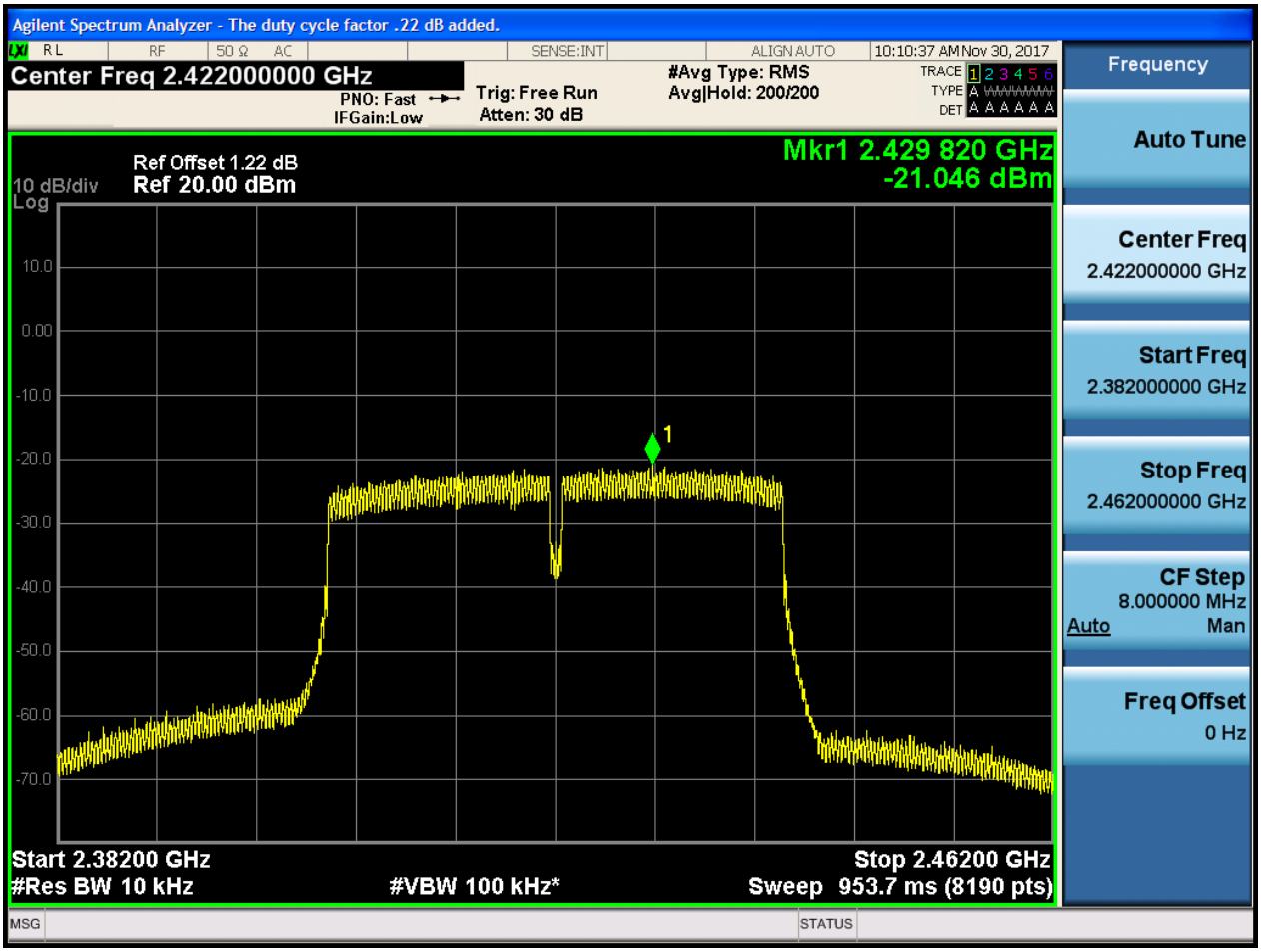
2.12 11N20_H_2457@Ant 1



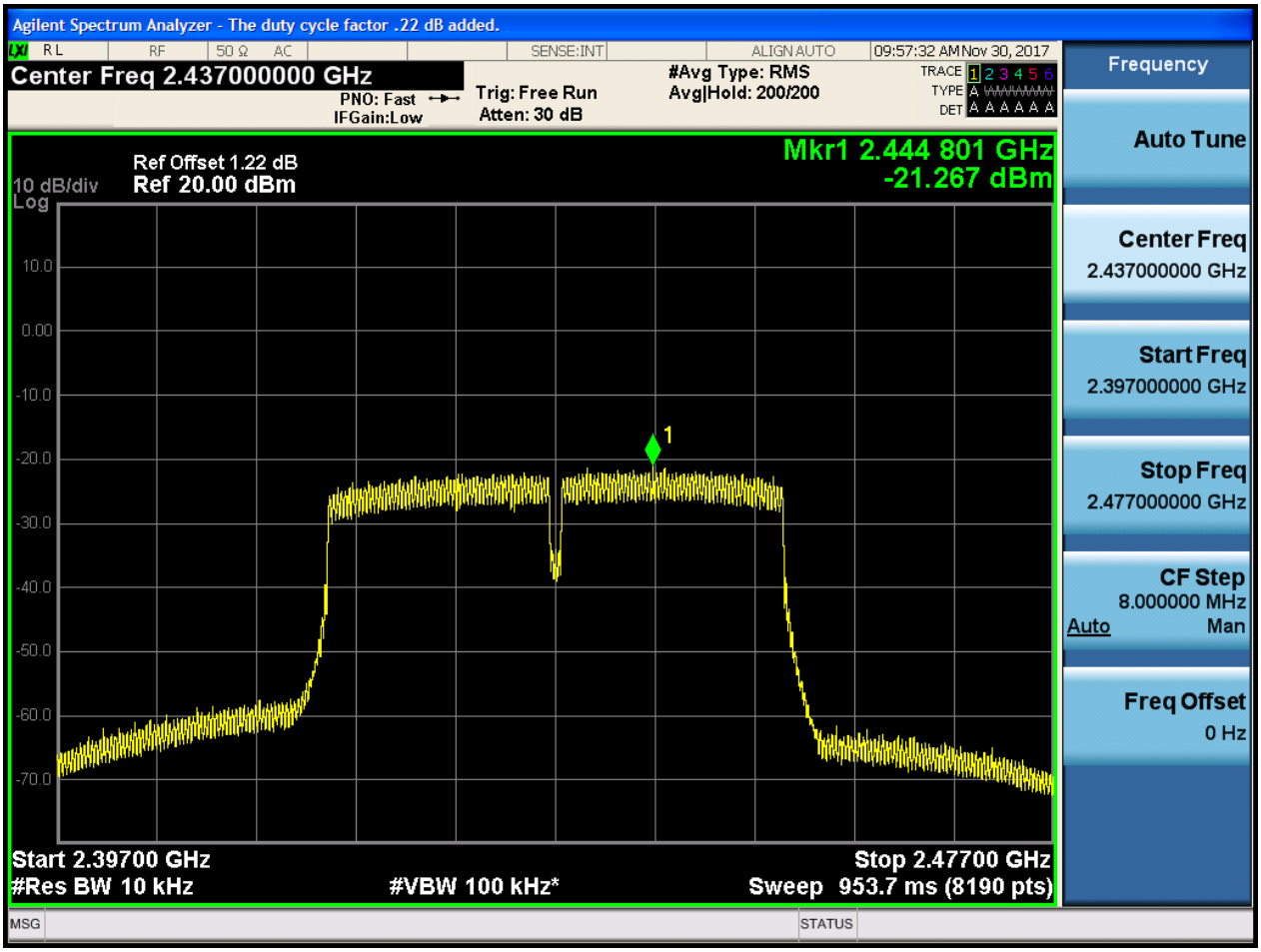
2.13 11N20_H_2462@Ant 1



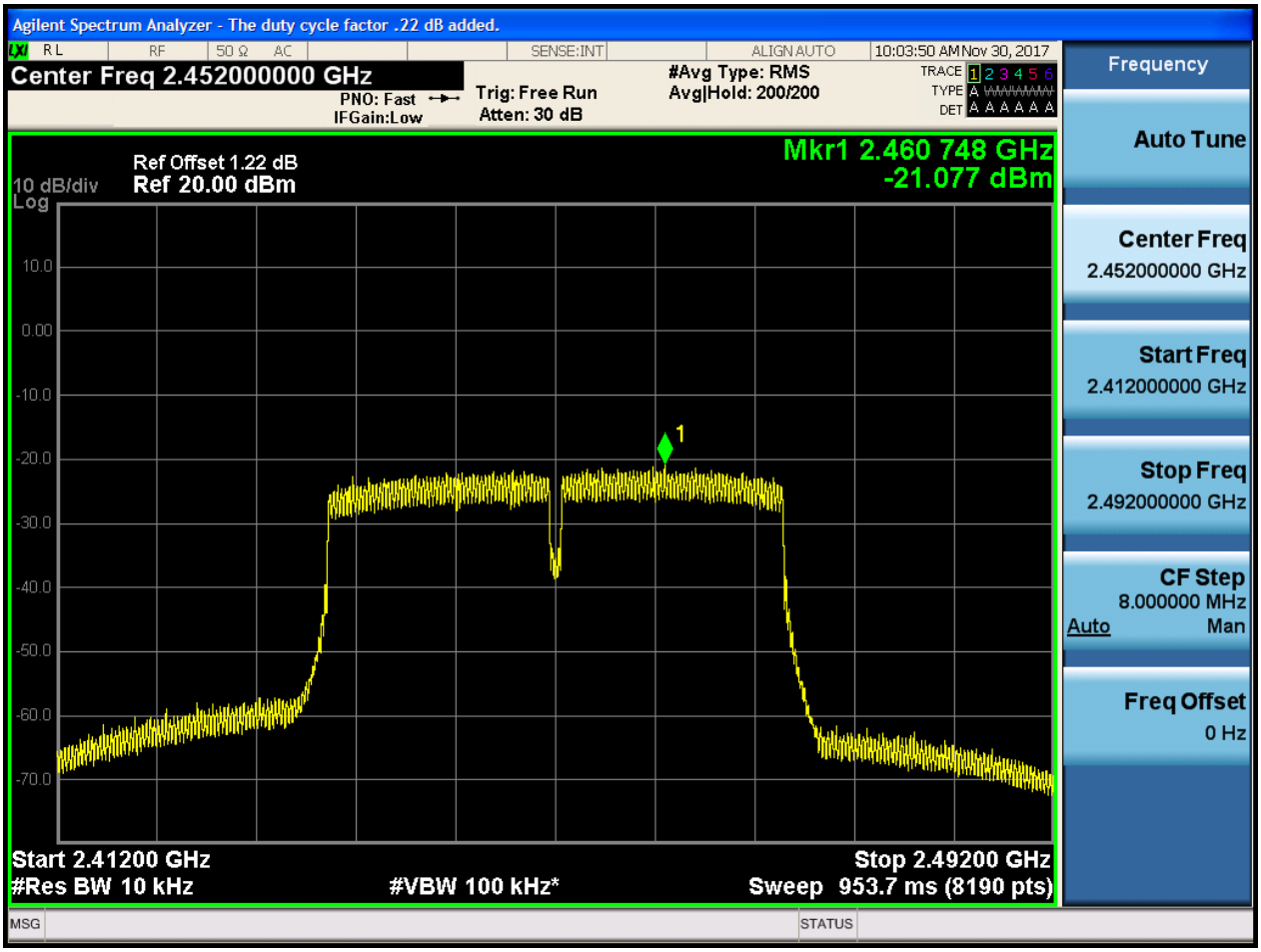
2.14 11N40_L@Ant 1



2.15 11N40_M@Ant 1



2.16 11N40_H@Ant 1



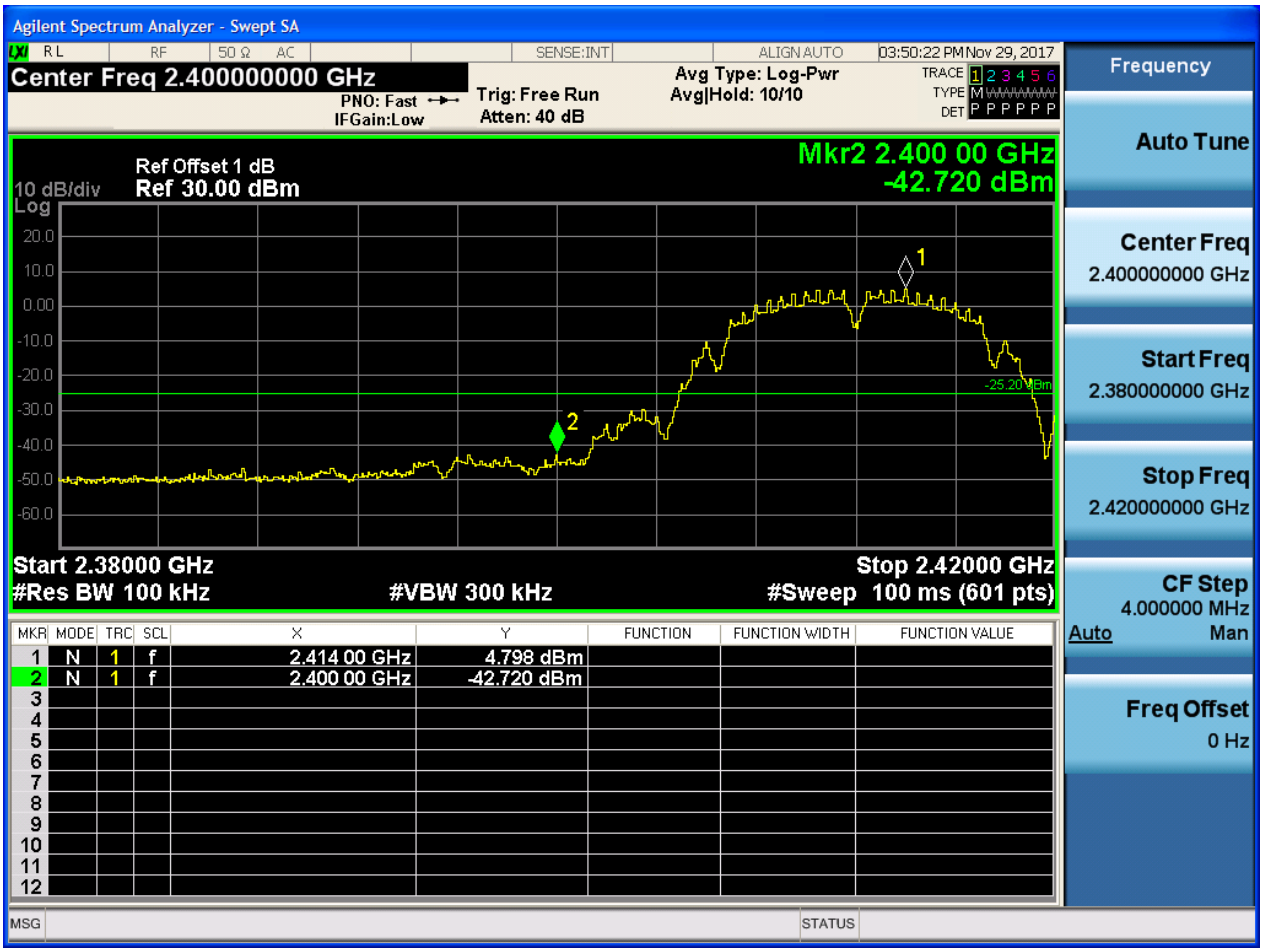
Appendix F: Band Edges Compliance

Part I - Test Results

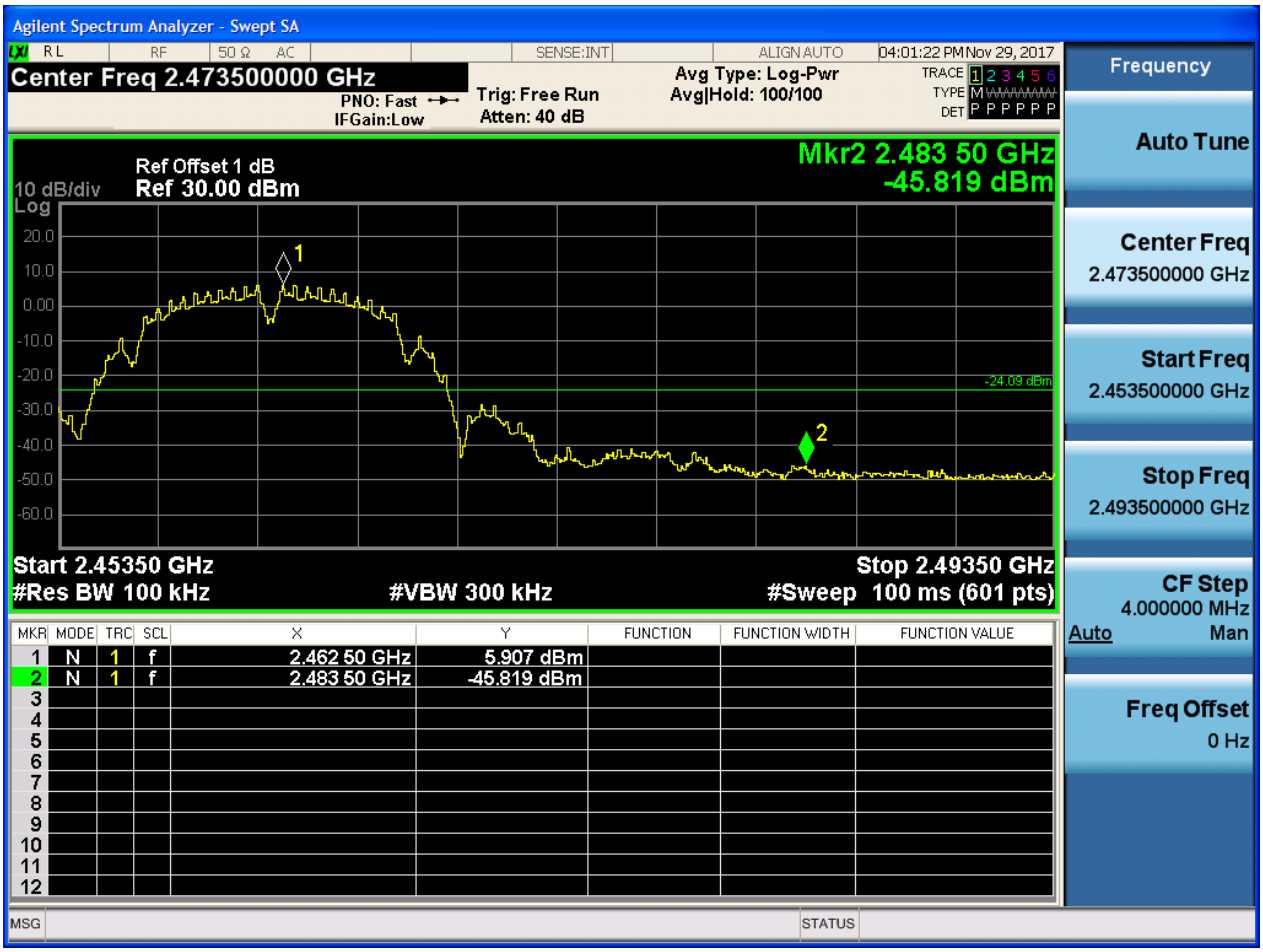
Test Mode	Test Channel	Frequency[MHz]	Ant	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
11B	L	2412	Ant 1	6.32	-42.72	pass
11B	H	2462	Ant 1	6.48	-45.82	pass
11G	L	2412	Ant 1	0.62	-37.15	pass
11G	L	2417	Ant 1	7.98	-27.95	pass
11G	H	2457	Ant 1	8.14	-42.7	pass
11G	H	2462	Ant 1	0.82	-42.41	pass
11N20	L	2412	Ant 1	-0.26	-35.50	pass
11N20	L	2417	Ant 1	5.18	-35.45	pass
11N20	H	2457	Ant 1	5.30	-44.73	pass
11N20	H	2462	Ant 1	-0.53	-45.00	pass
11N40	L	2422	Ant 1	-3.24	-41.31	pass
11N40	H	2452	Ant 1	-2.75	-43.36	pass

Part II - Test Plots

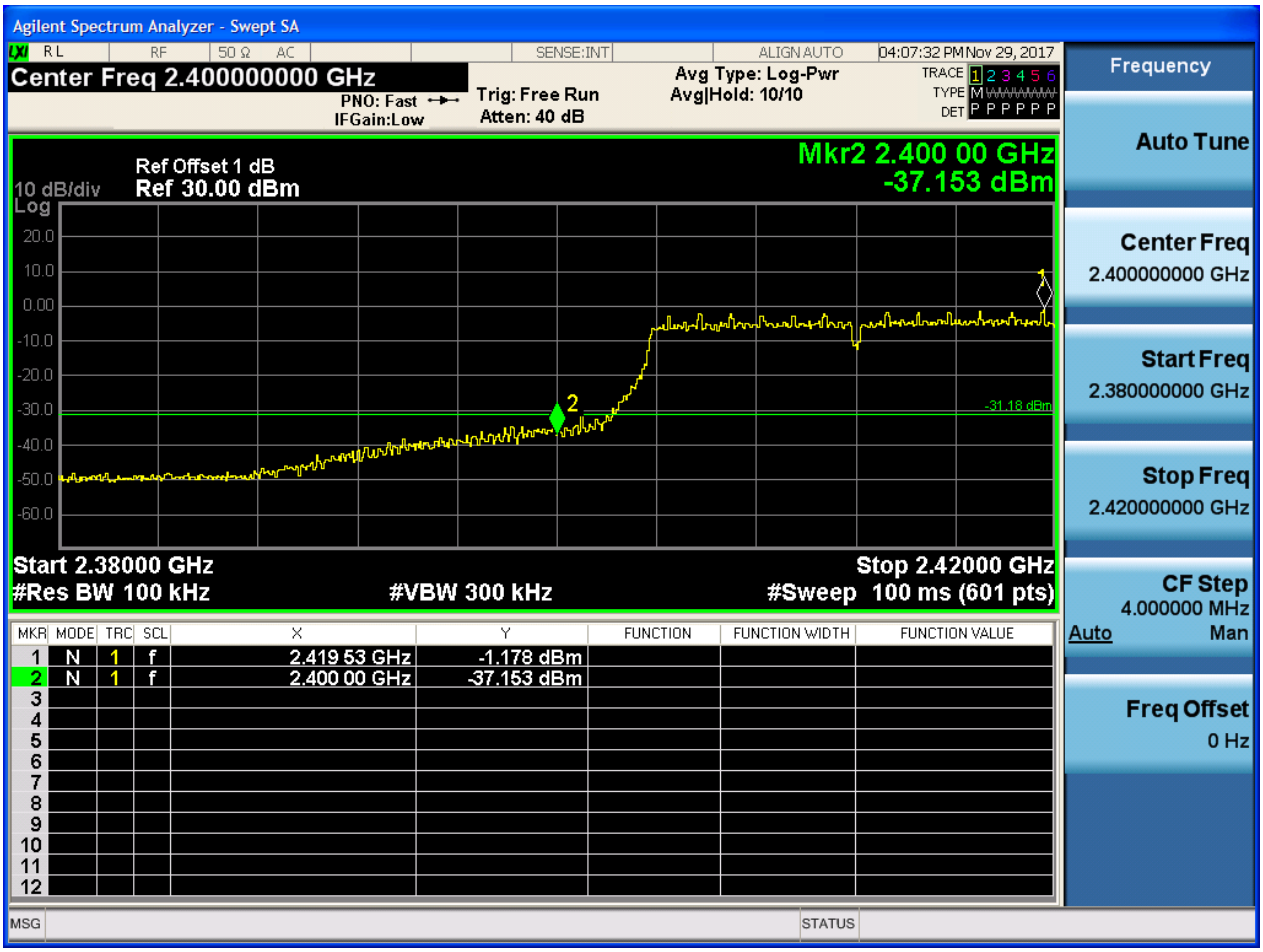
2.1 11B_L@Ant 1



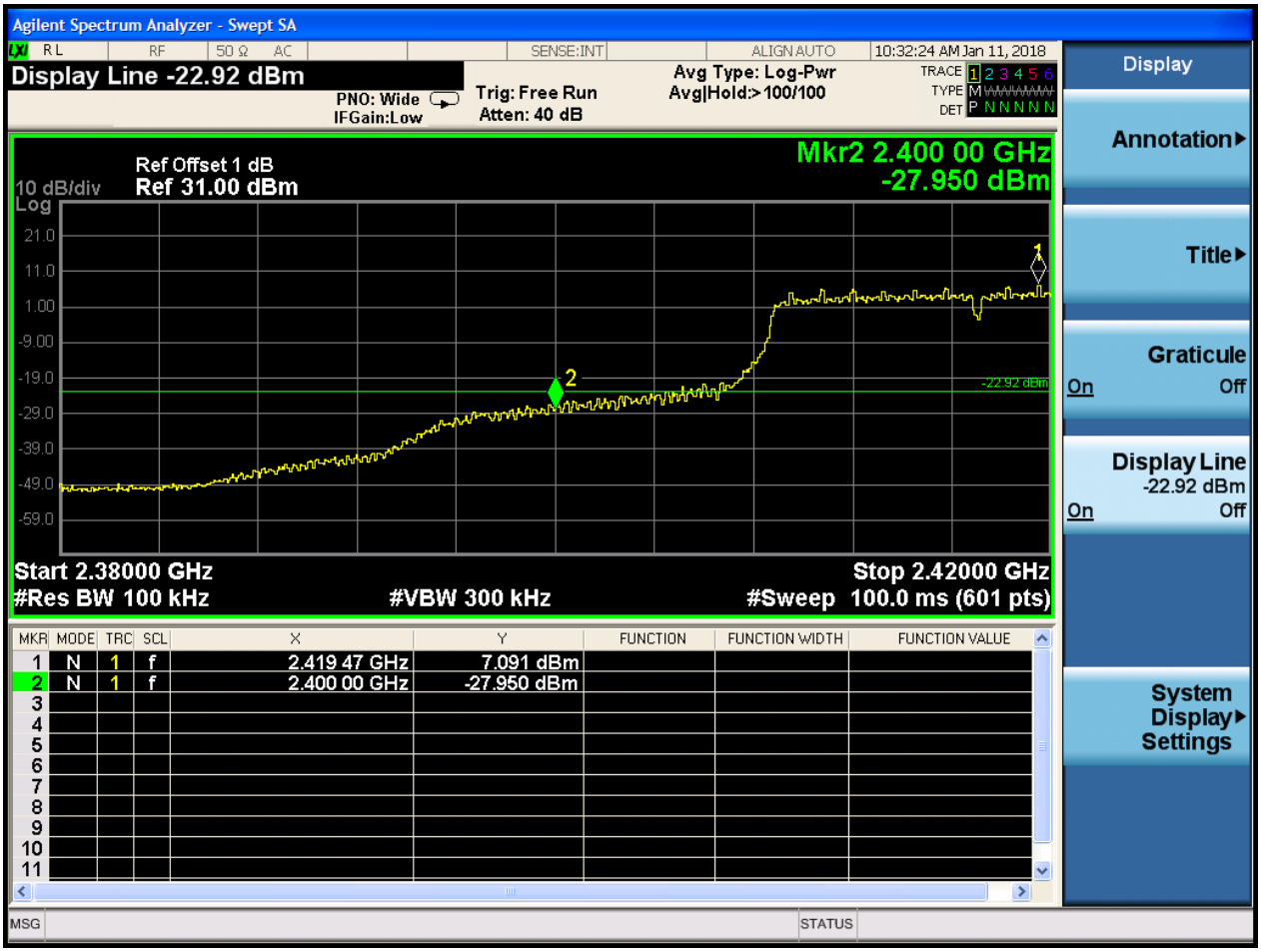
2.2 11B_H@Ant 1



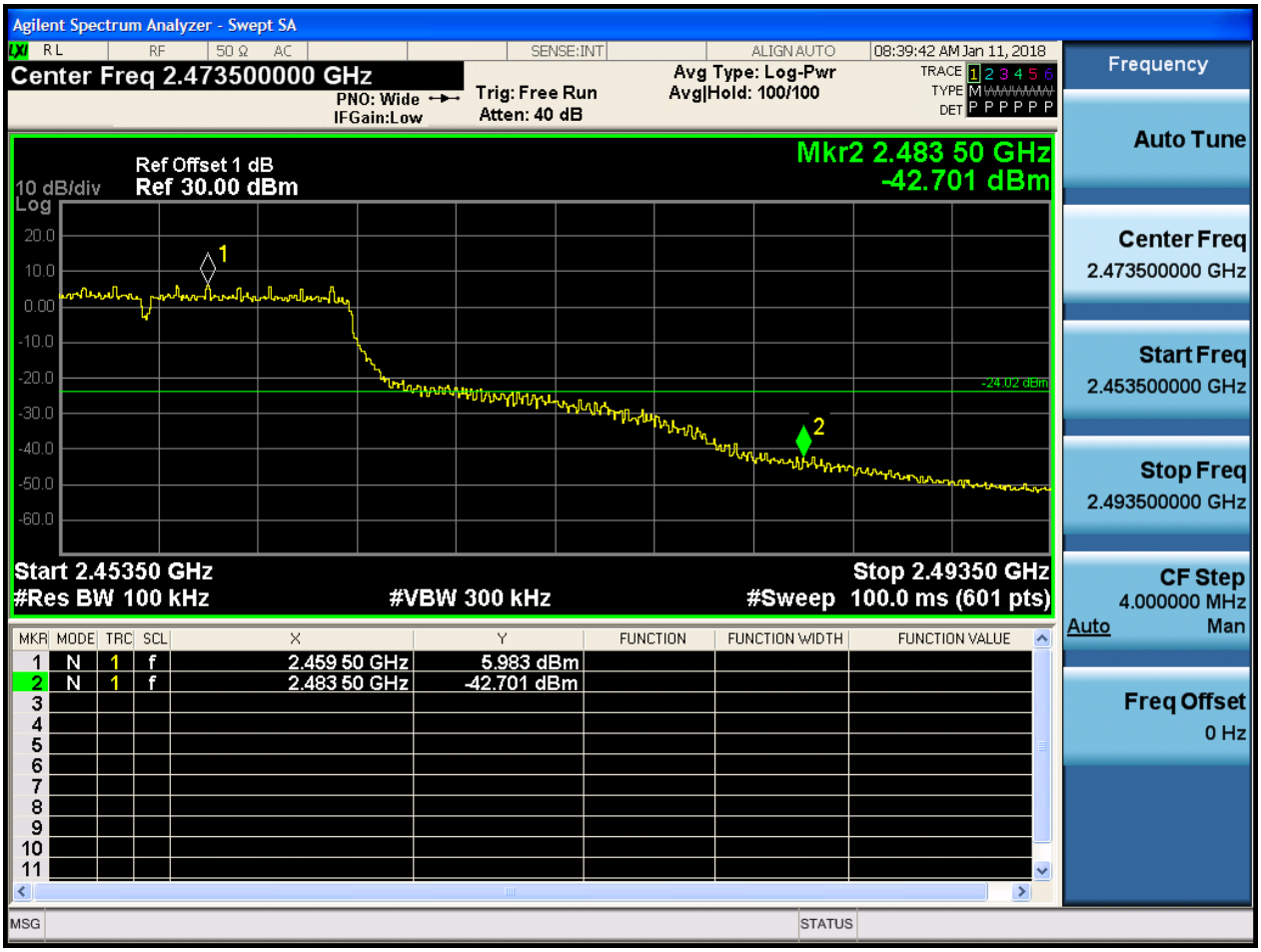
2.3 11G_L_2412@Ant 1



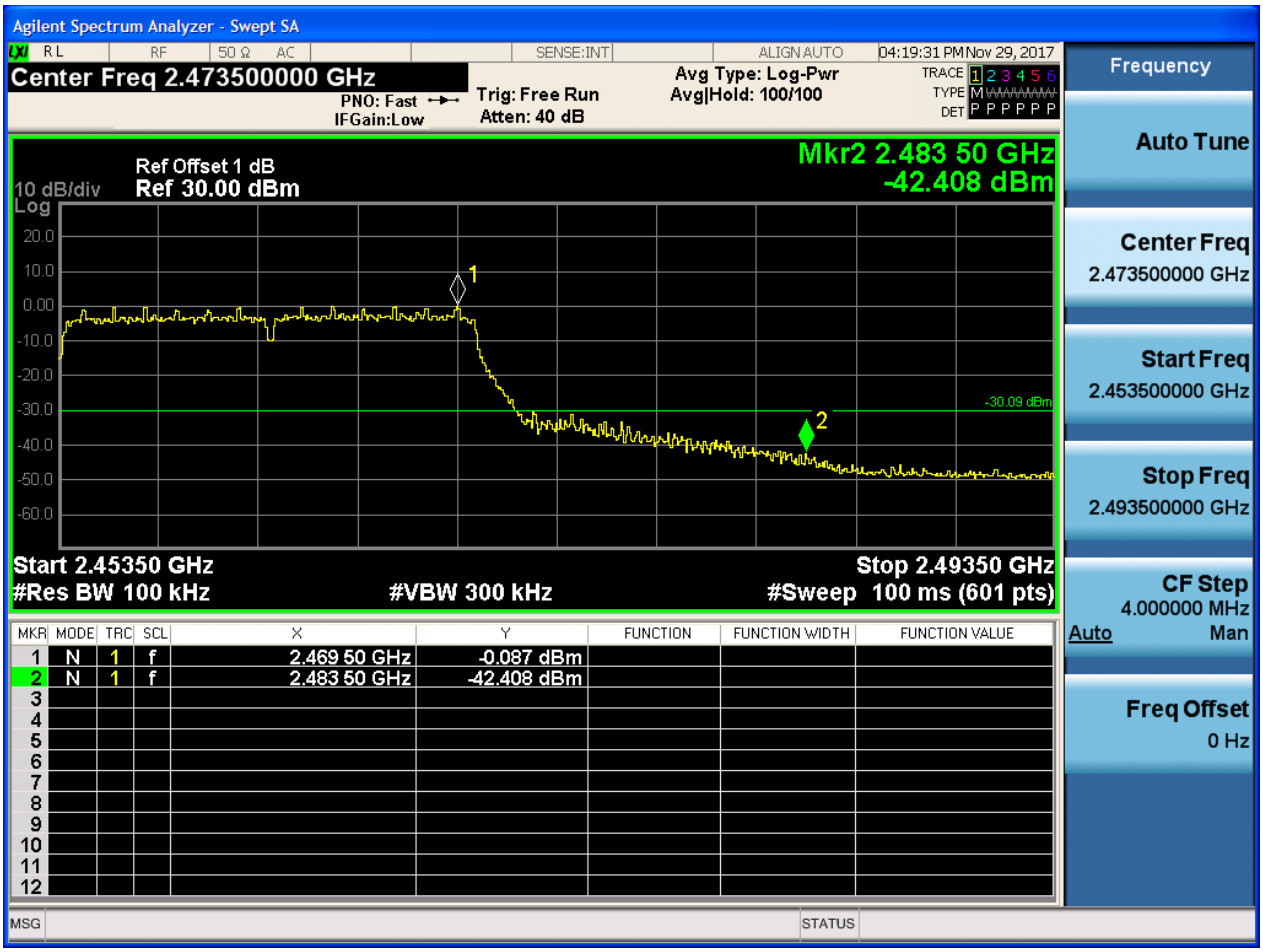
2.4 11G_L_2417@Ant 1



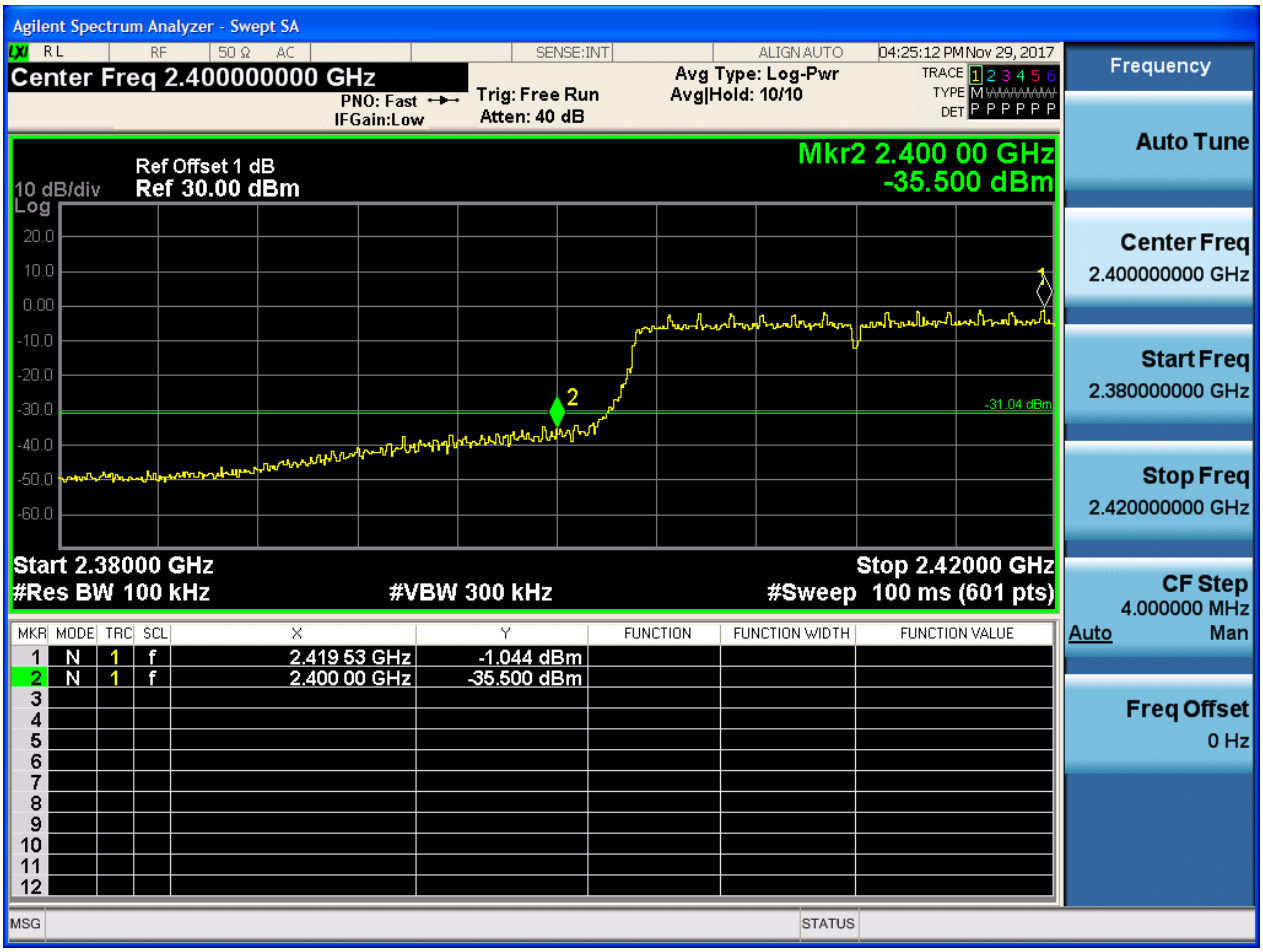
2.5 11G_H_2457@Ant 1



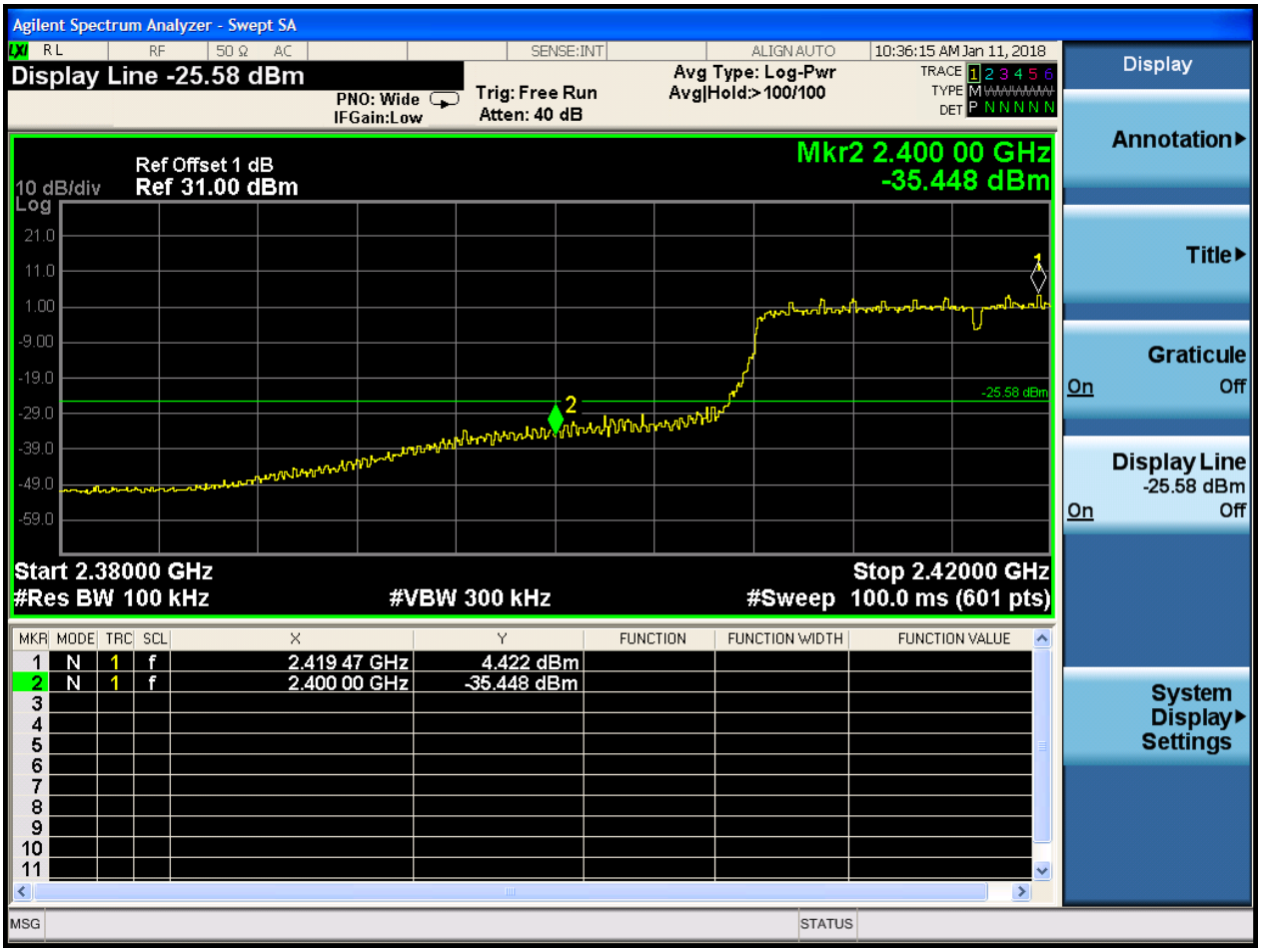
2.6 11G_H_2462@Ant 1



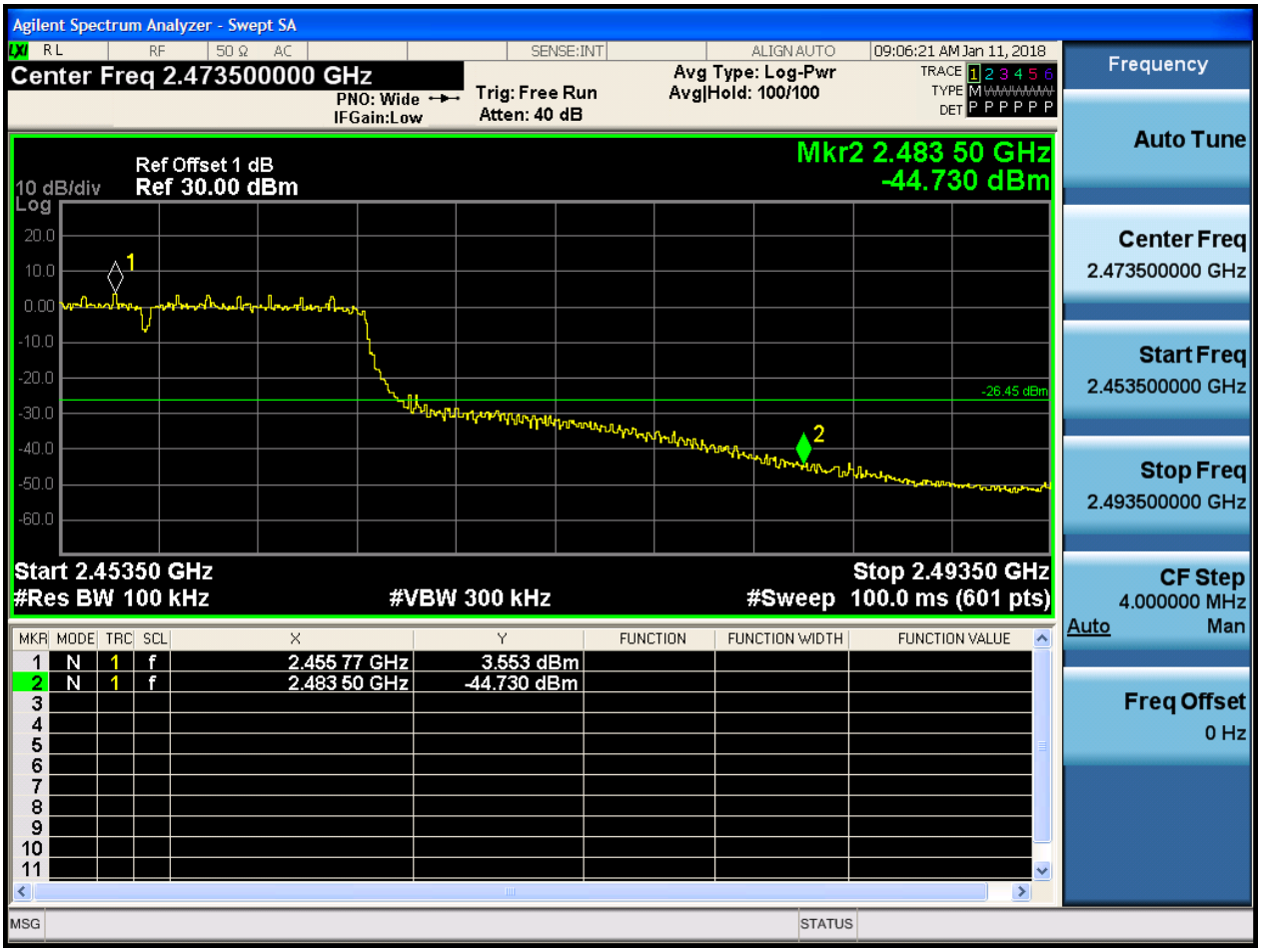
2.7 11N20_L_2412@Ant 1



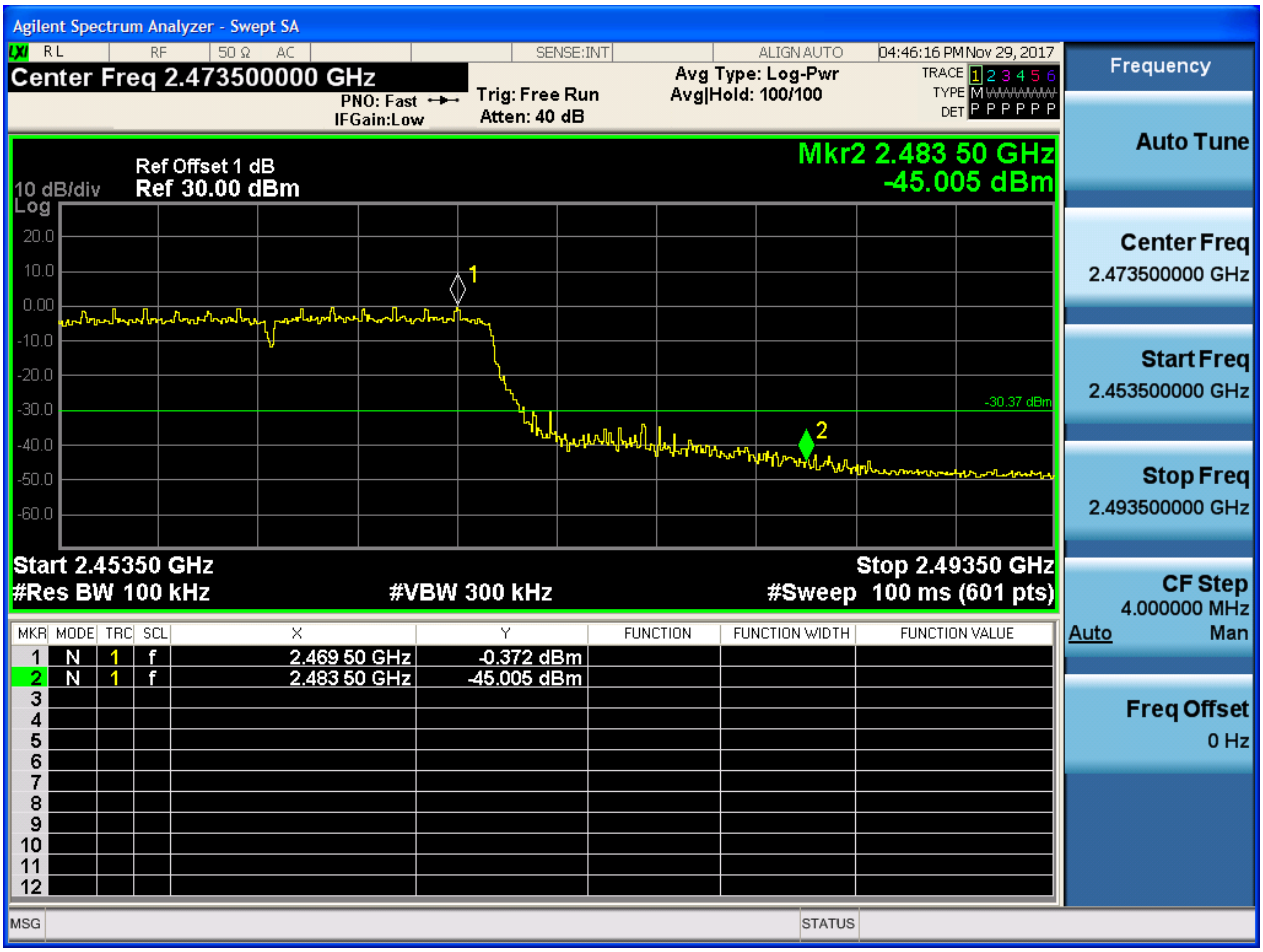
2.8 11N20_L_2417@Ant 1



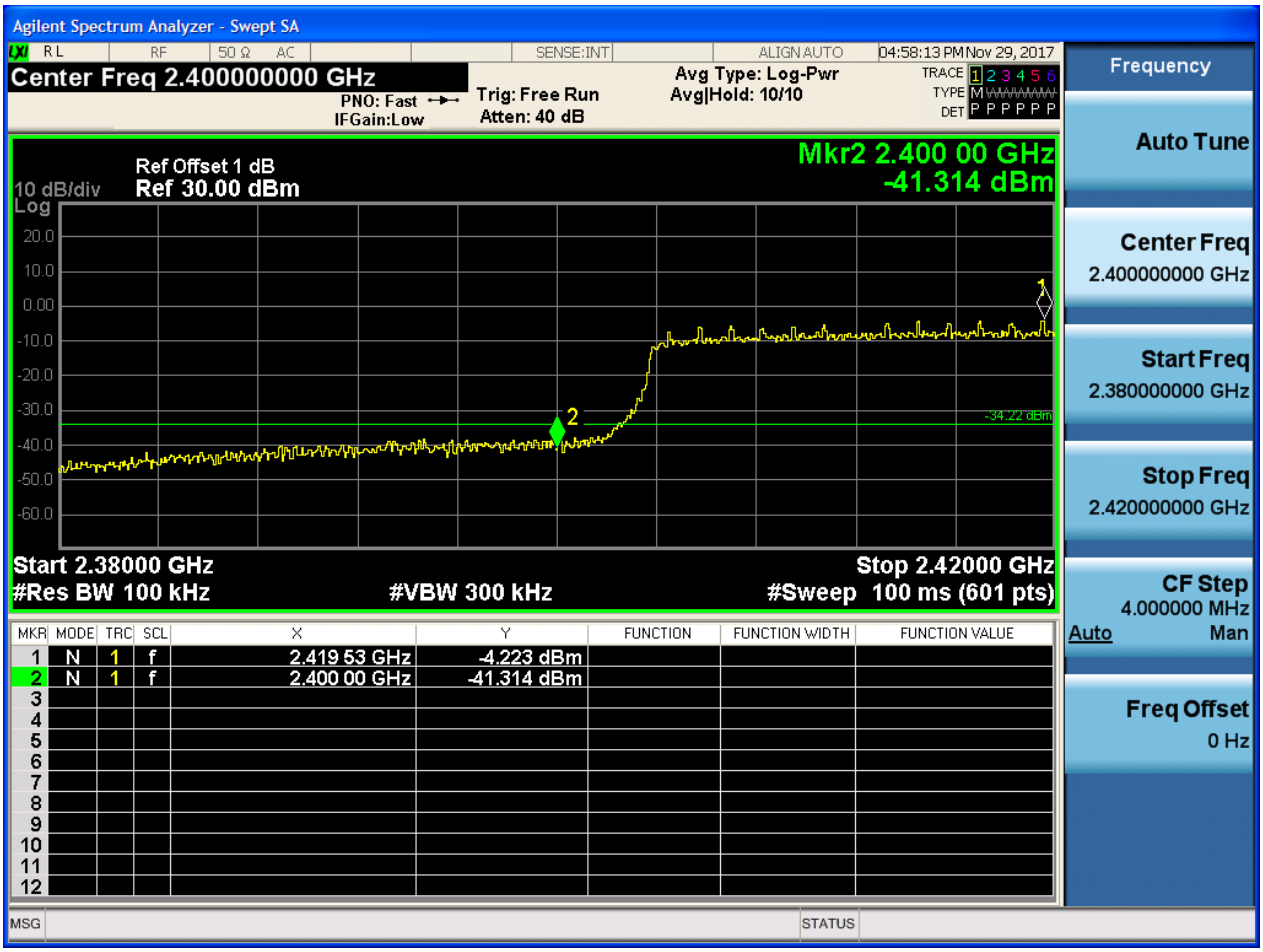
2.9 11N20_H_2457@Ant 1



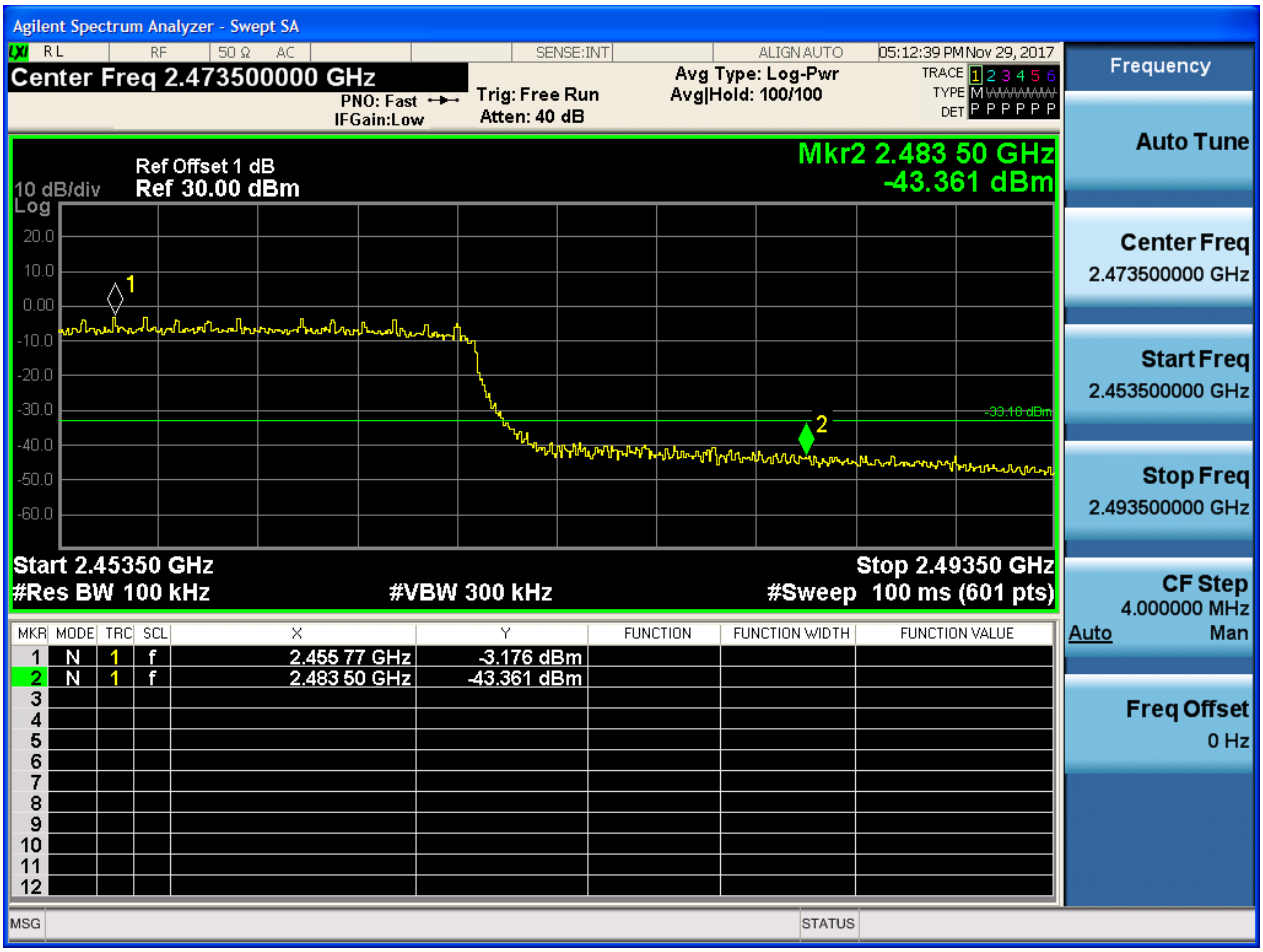
2.10 11N20_H_2462@Ant 1



2.11 11N40_L@Ant 1



2.12 11N40_H@Ant 1



Appendix G: Unwanted Emissions into Non-Restricted Frequency Bands

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

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

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

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

Part I - Test Results

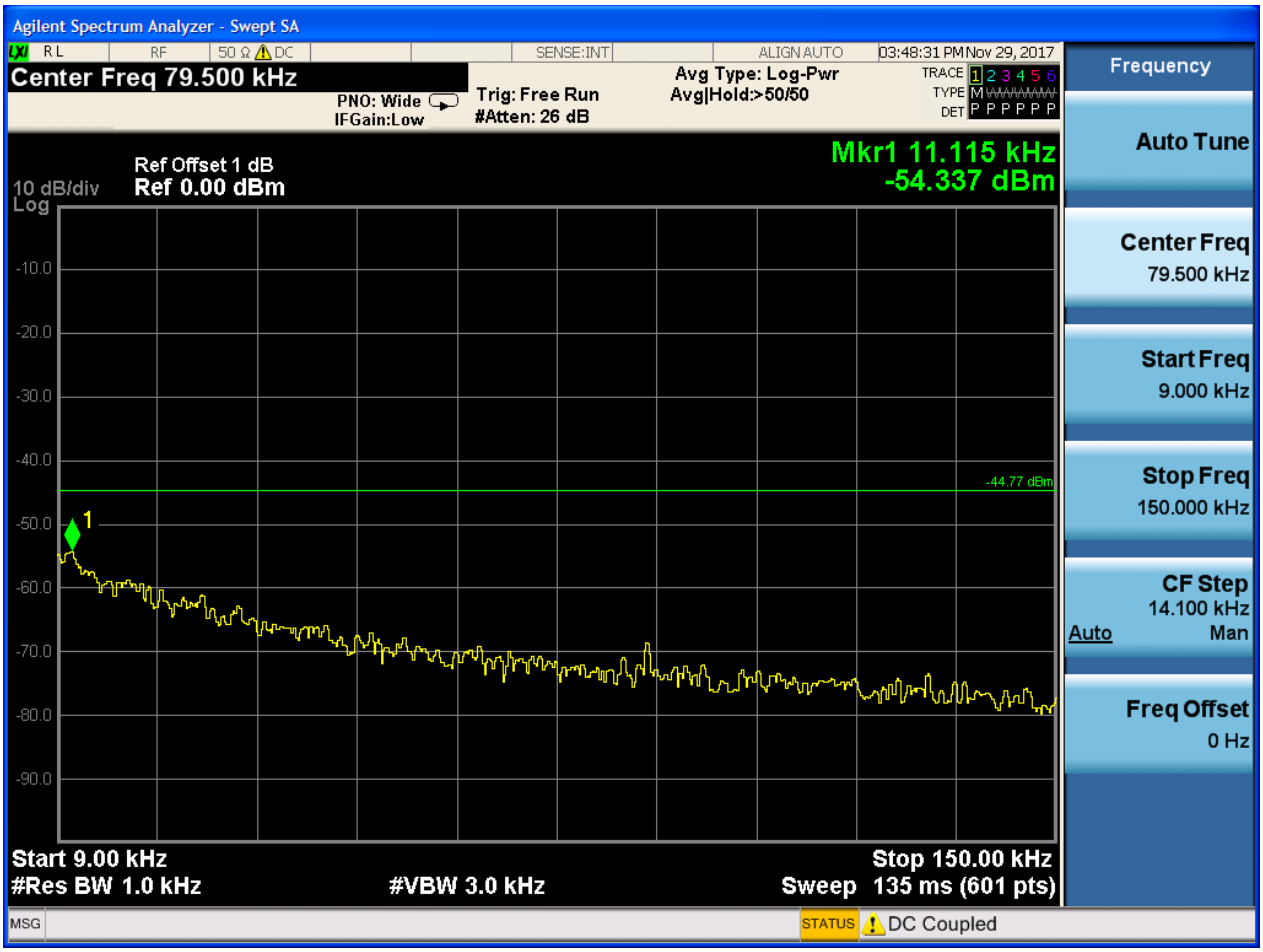
Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]
11B	L	2412	Ant 1	5.23	<limit
11B	M	2437	Ant 1	5.87	<limit
11B	H	2462	Ant 1	6.18	<limit
11G	L	2412	Ant 1	-1	<limit
11G	L	2417	Ant 1	7.33	<limit
11G	M	2437	Ant 1	7.17	<limit
11G	H	2457	Ant 1	6.62	<limit
11G	H	2462	Ant 1	0.02	<limit
11N20	L	2412	Ant 1	-0.96	<limit
11N20	L	2417	Ant 1	4.5	<limit
11N20	M	2437	Ant 1	4.22	<limit
11N20	H	2457	Ant 1	4.13	<limit
11N20	H	2462	Ant 1	0.11	<limit
11N40	L	2422	Ant 1	-2.58	<limit
11N40	M	2437	Ant 1	-3.03	<limit
11N40	H	2452	Ant 1	-2.89	<limit

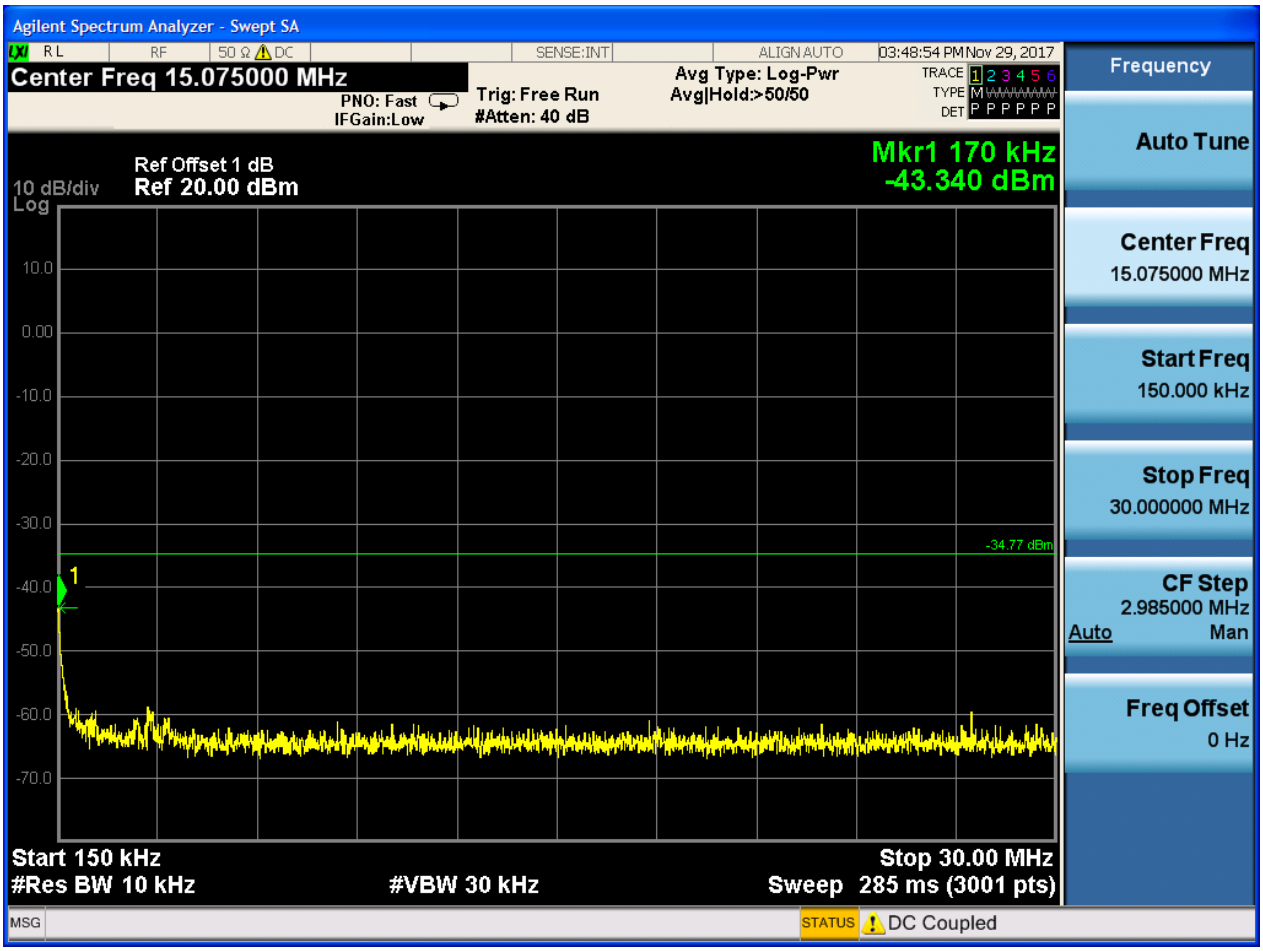
Part II - Test Plots

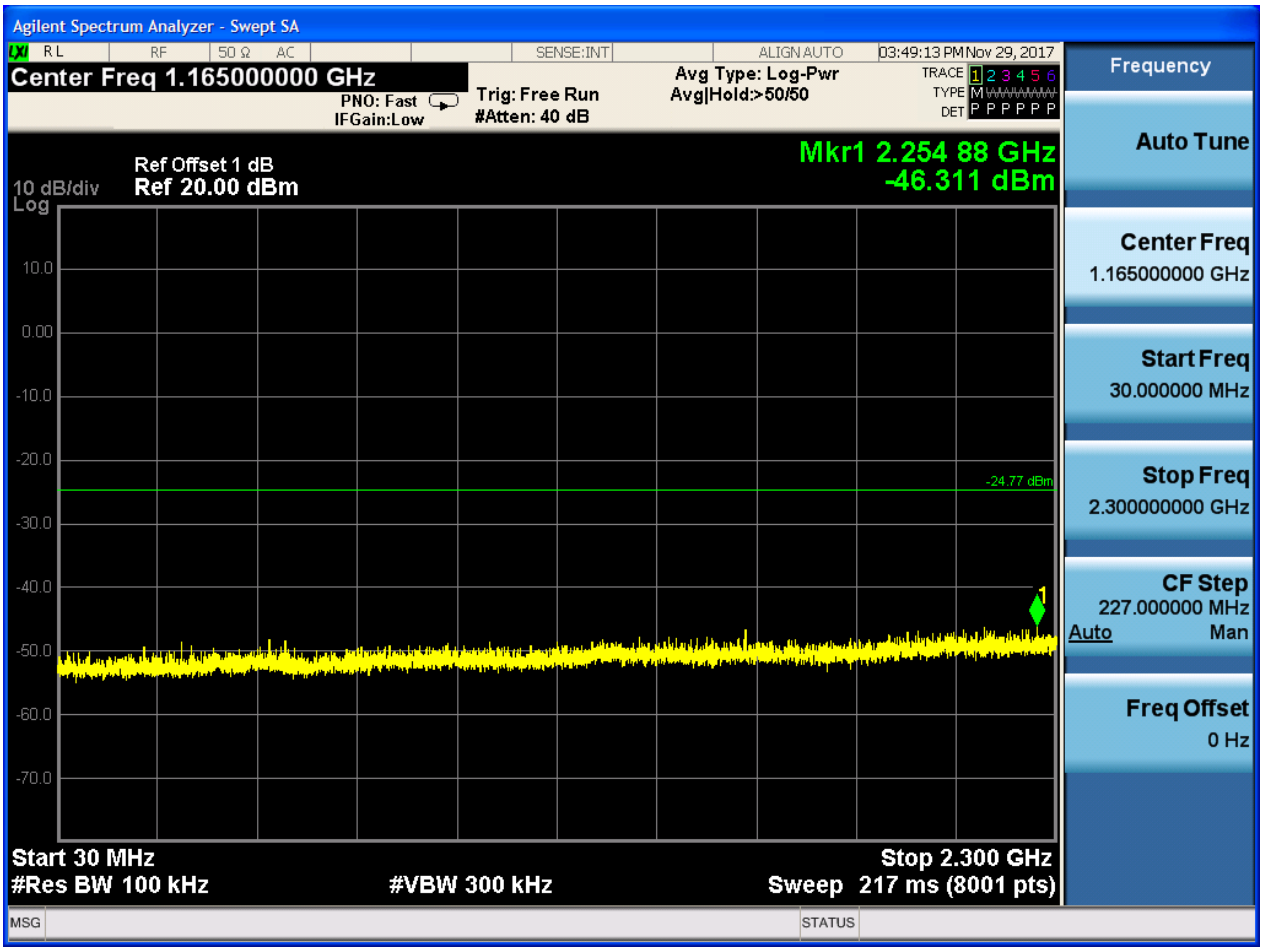
2.1 11B_L@Ant 1

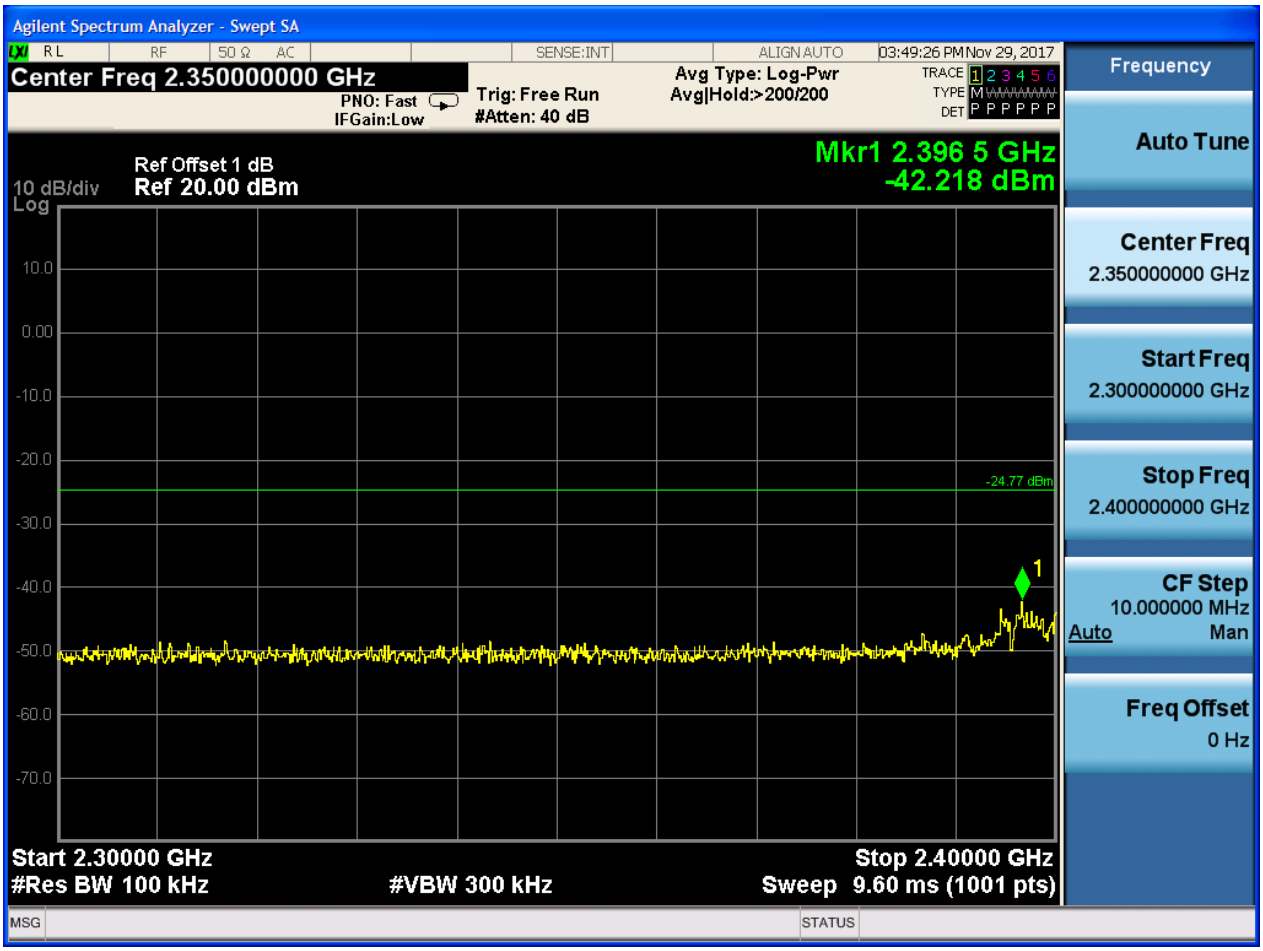
Pref:

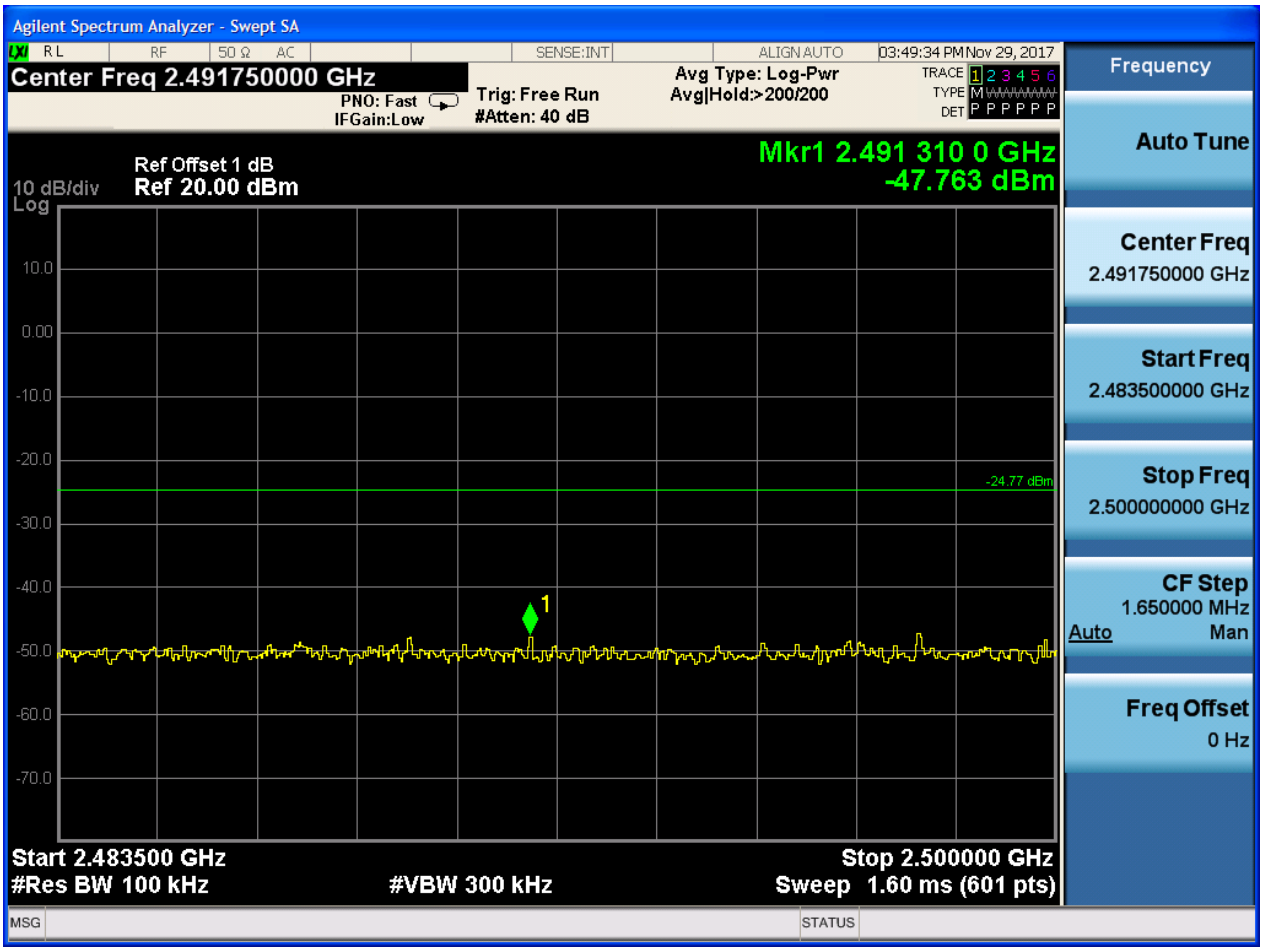
Puw:

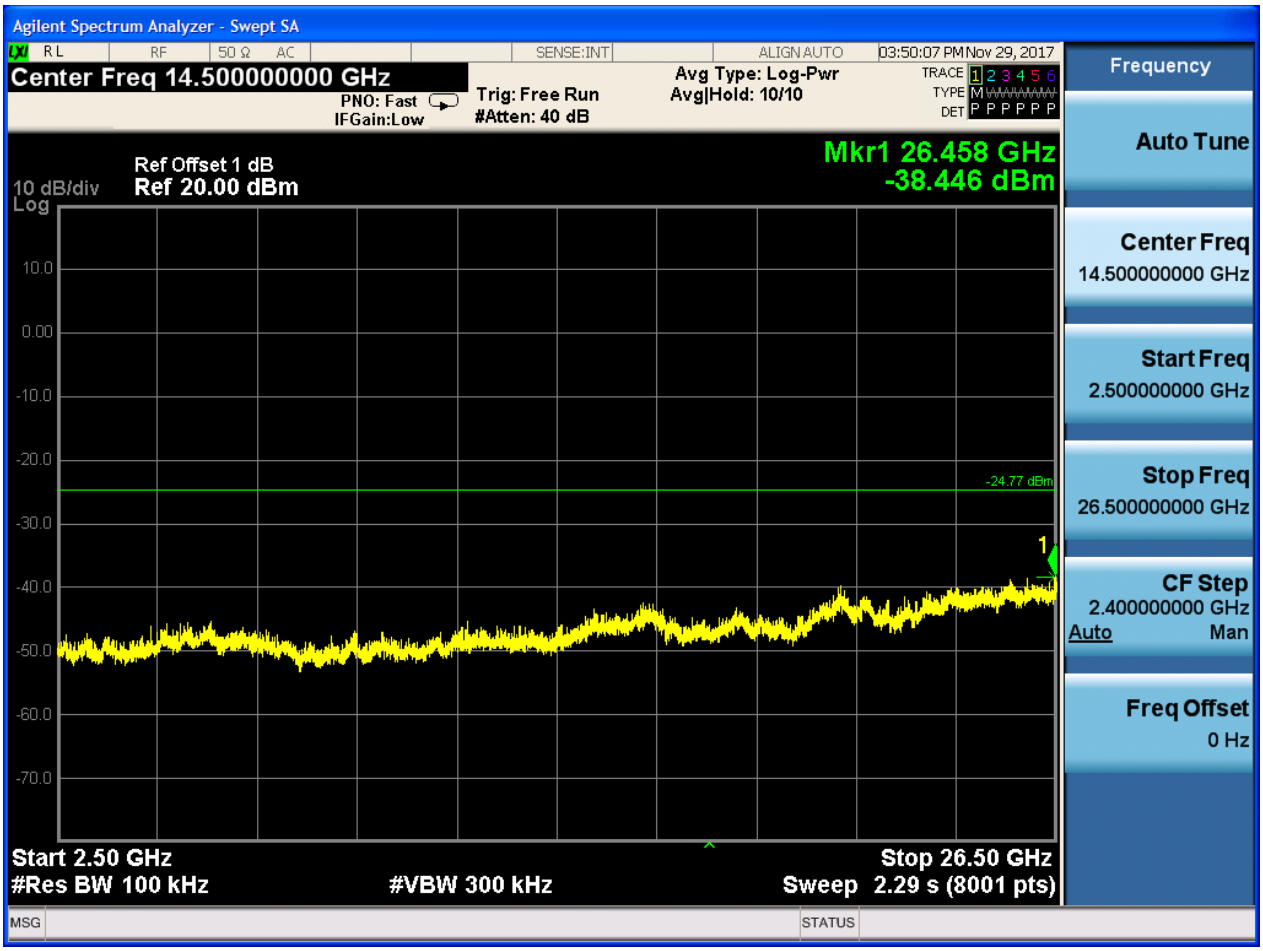






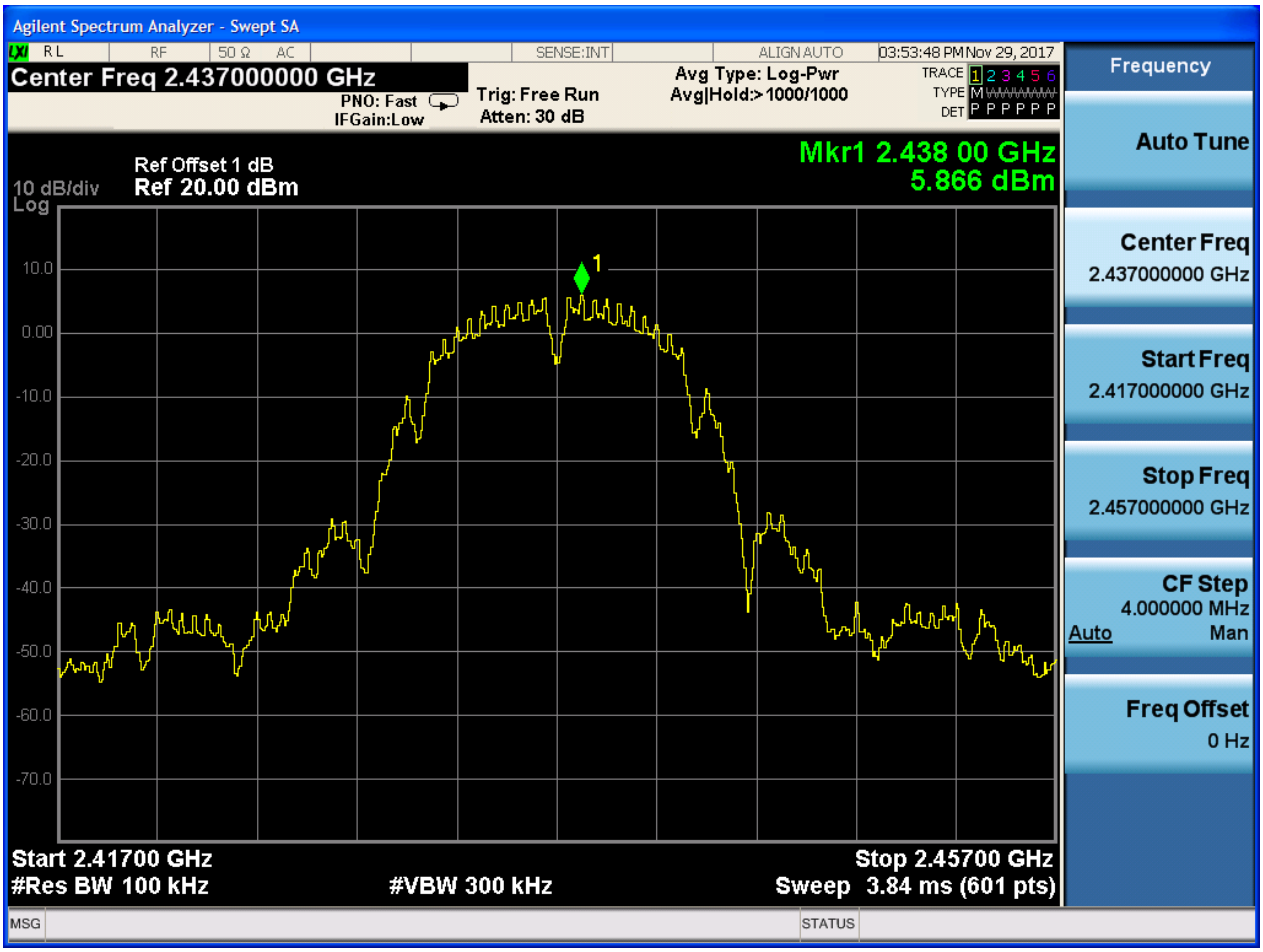




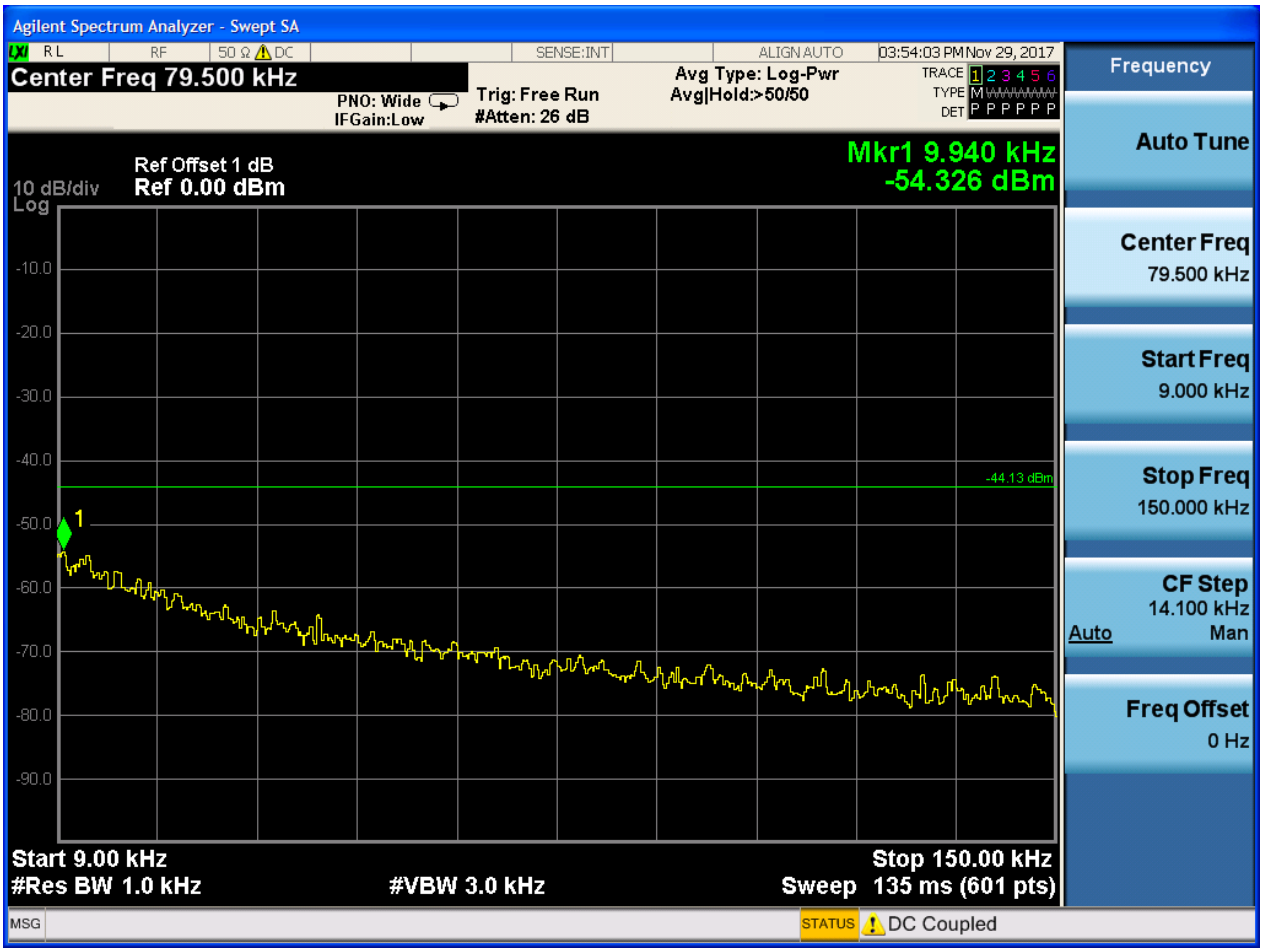


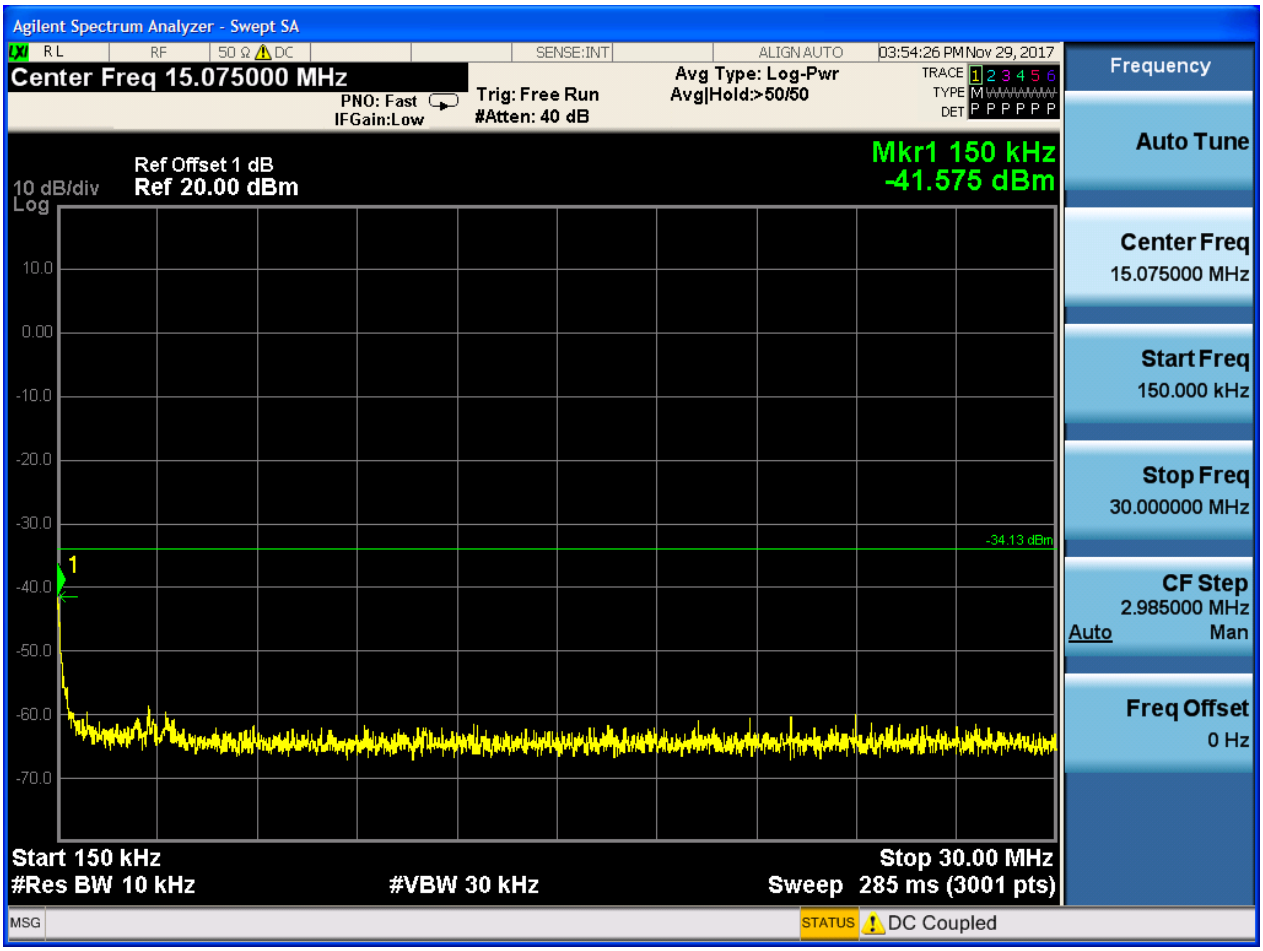
2.2 11B_M@Ant 1

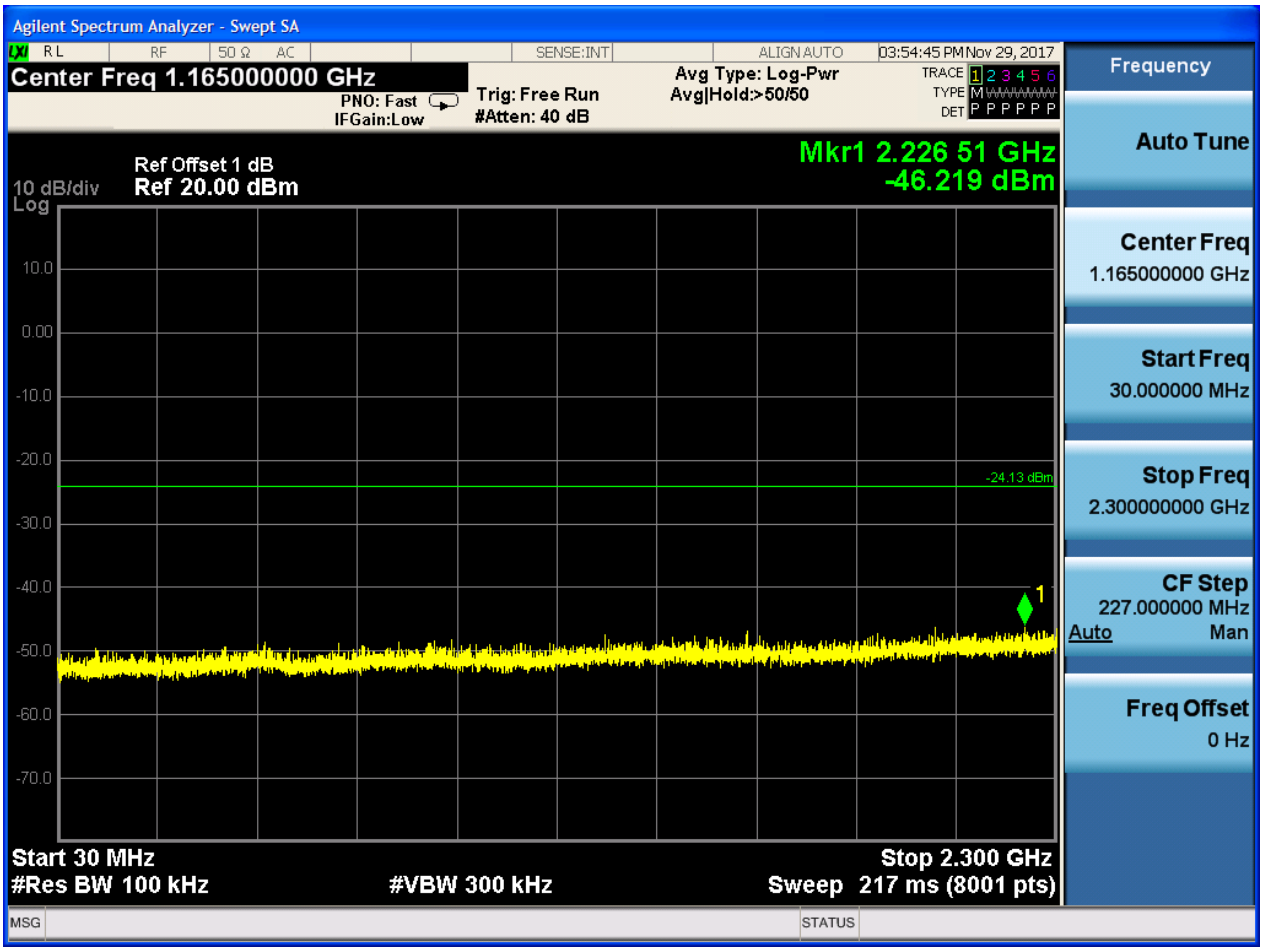
Pref:

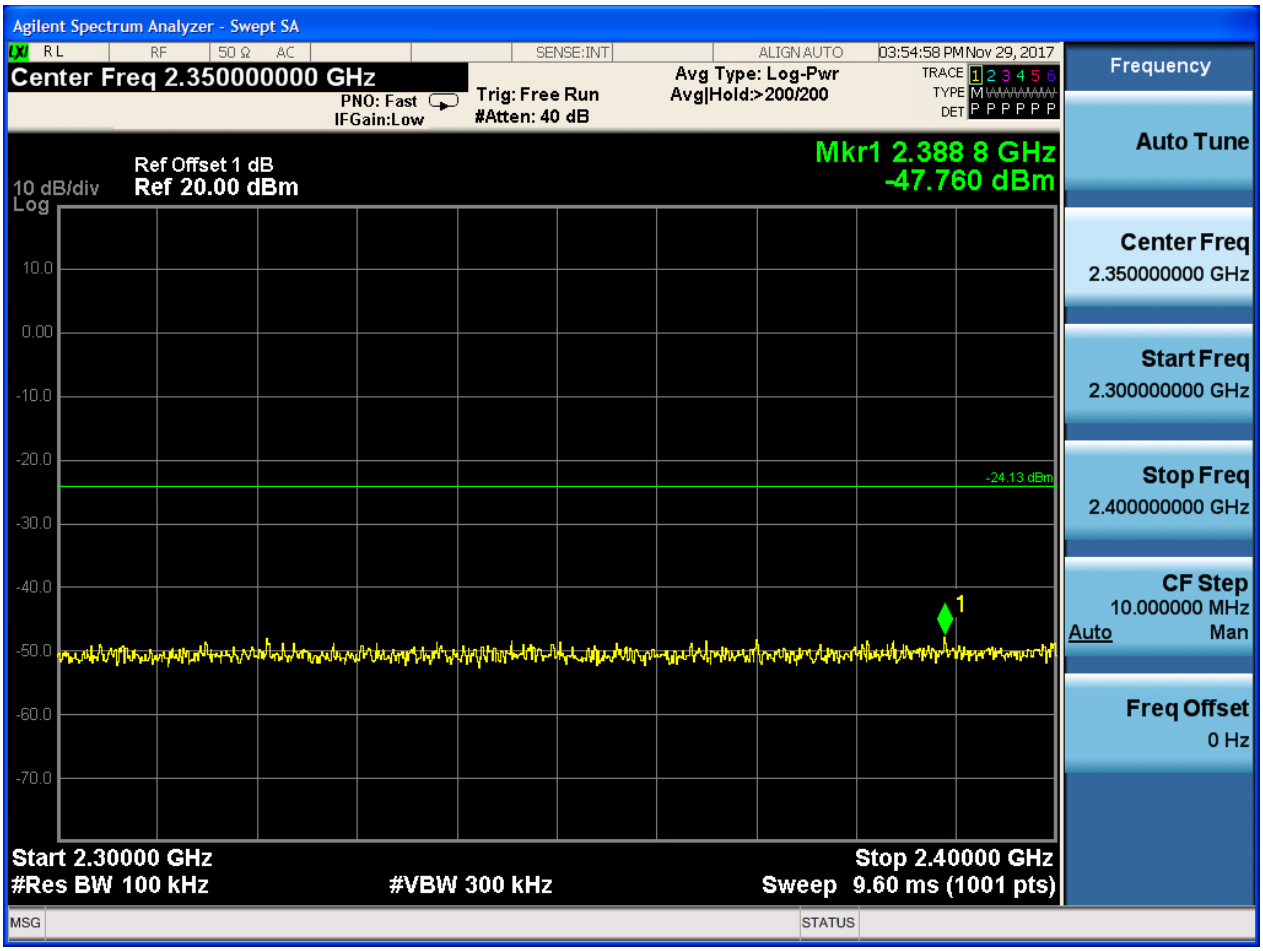


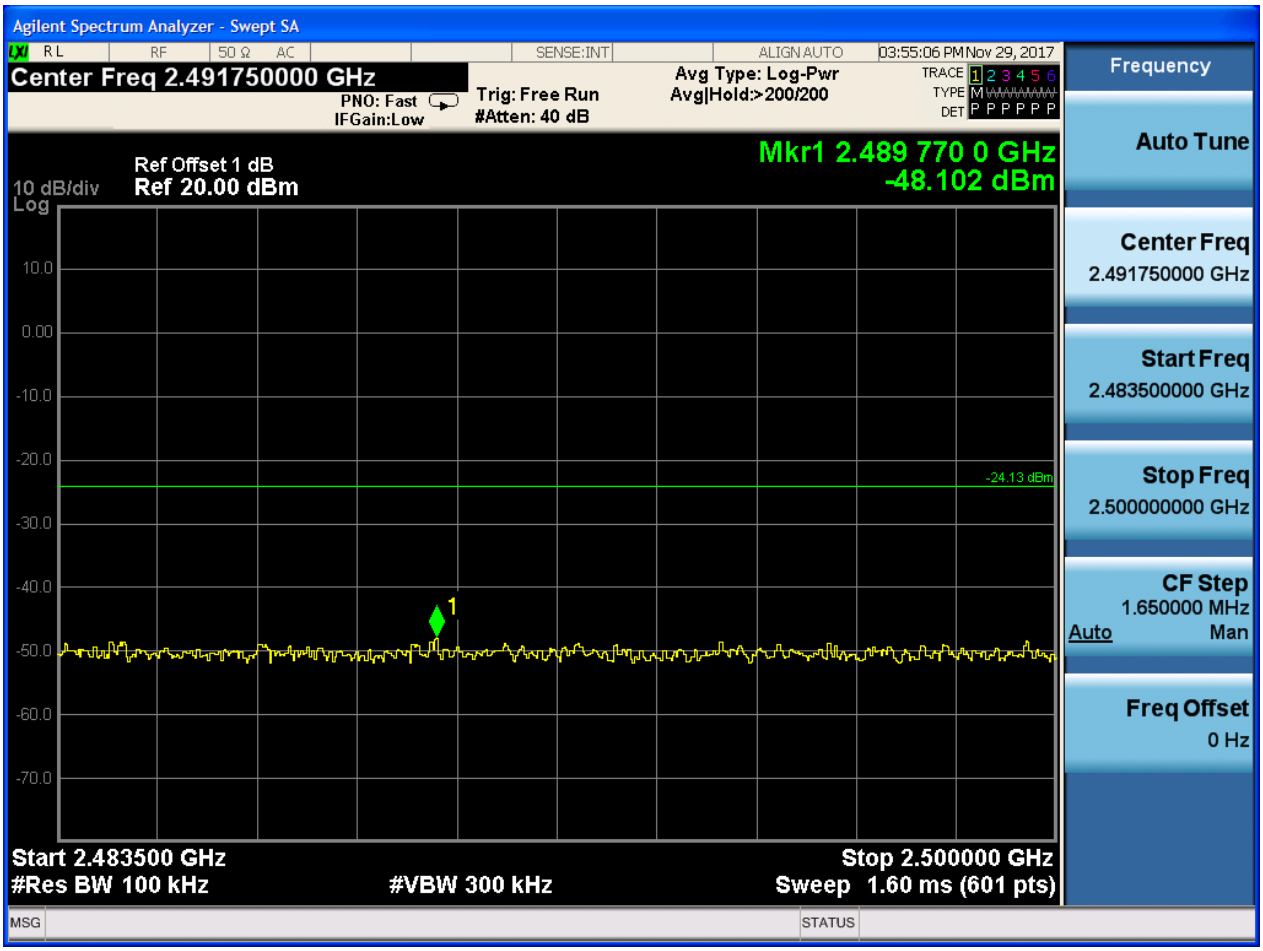
Puw:

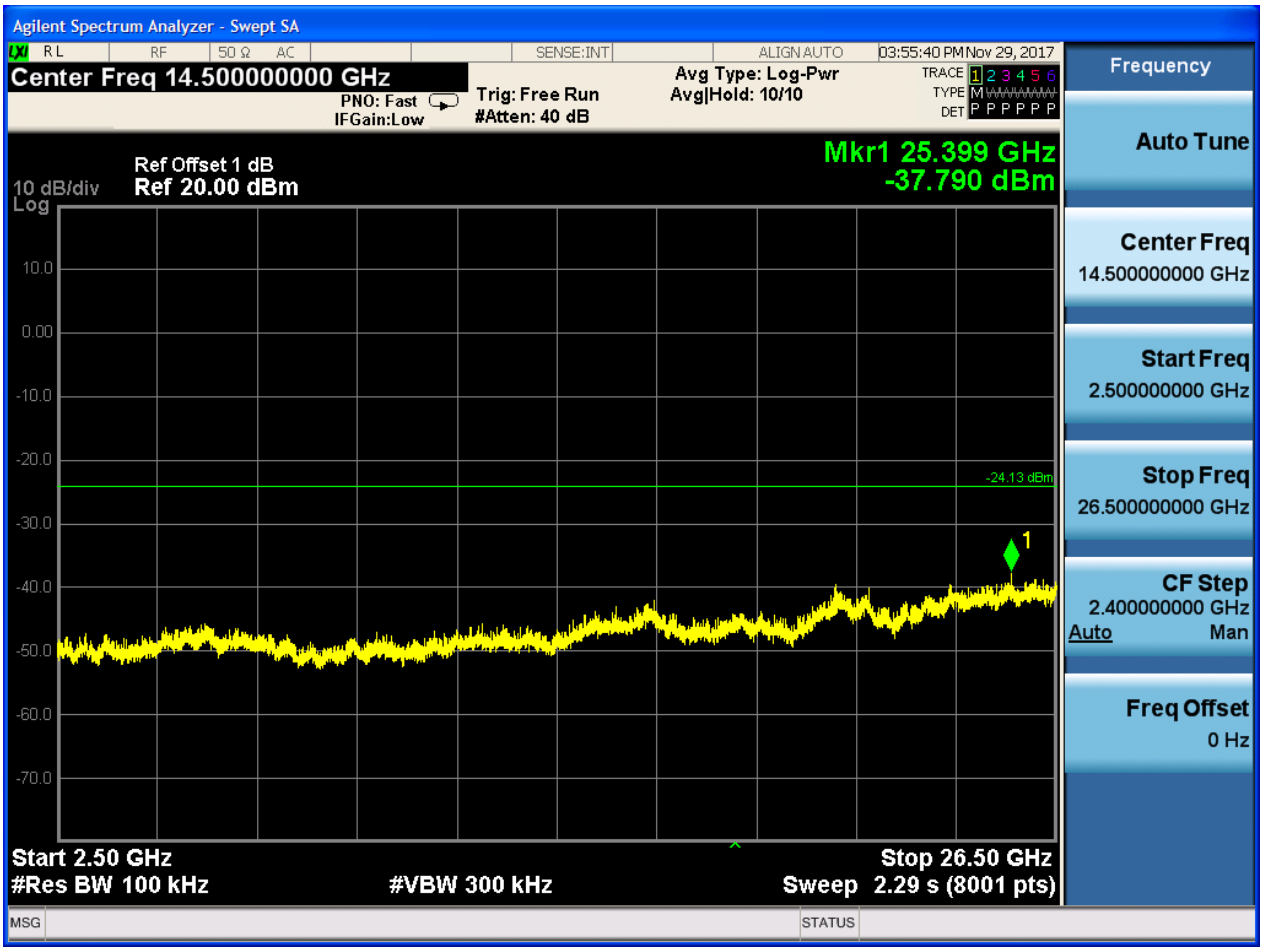






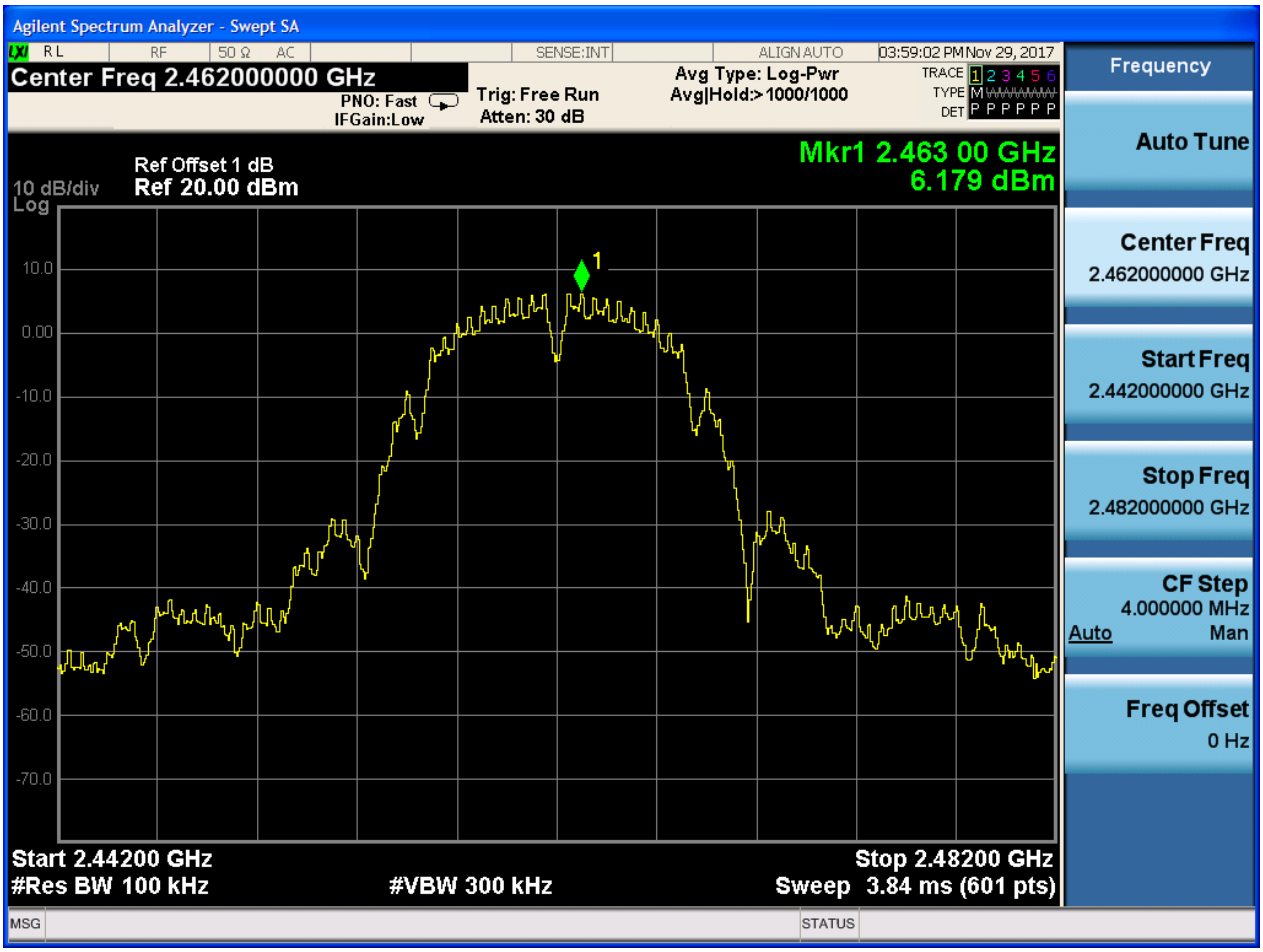




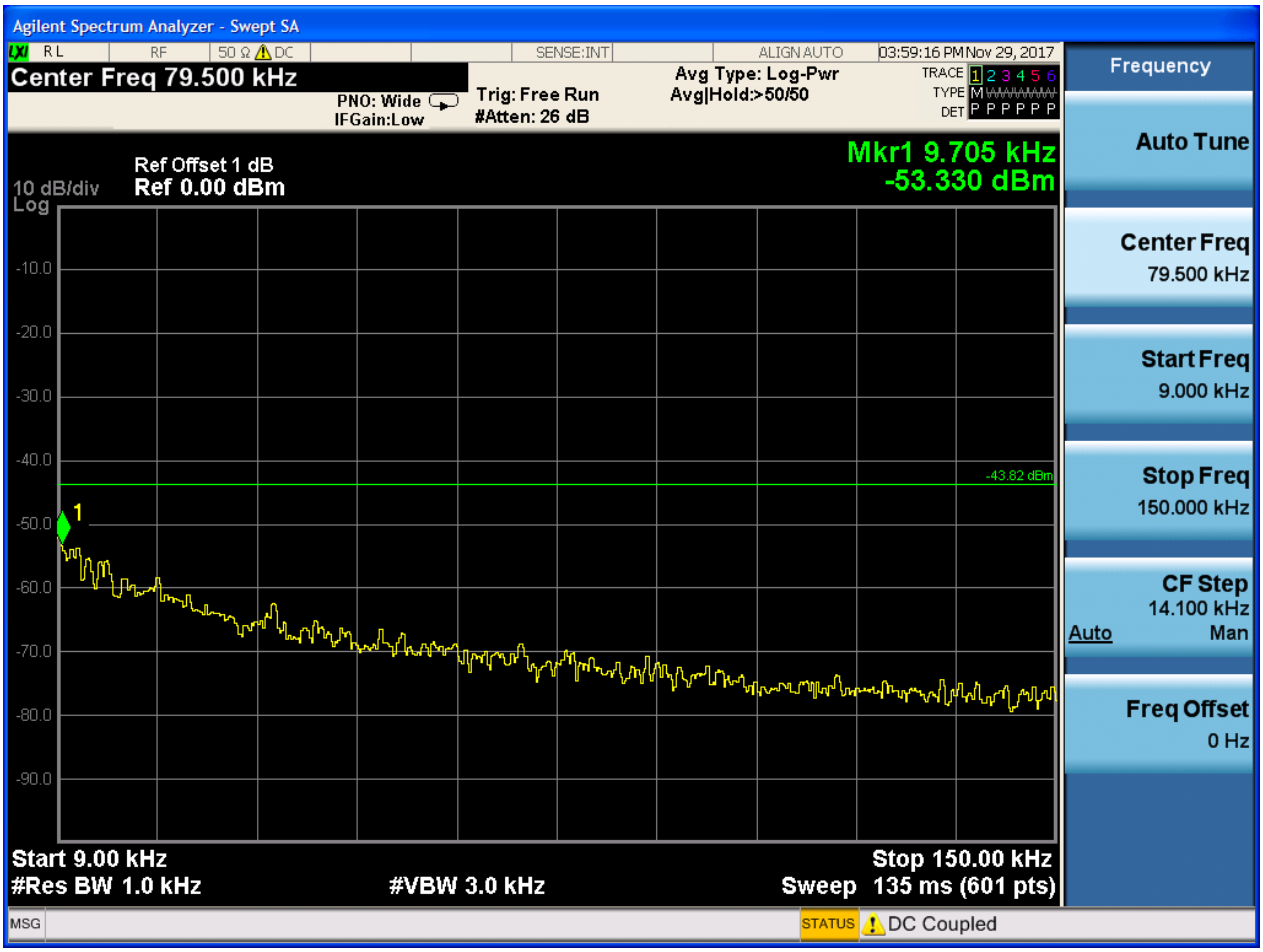


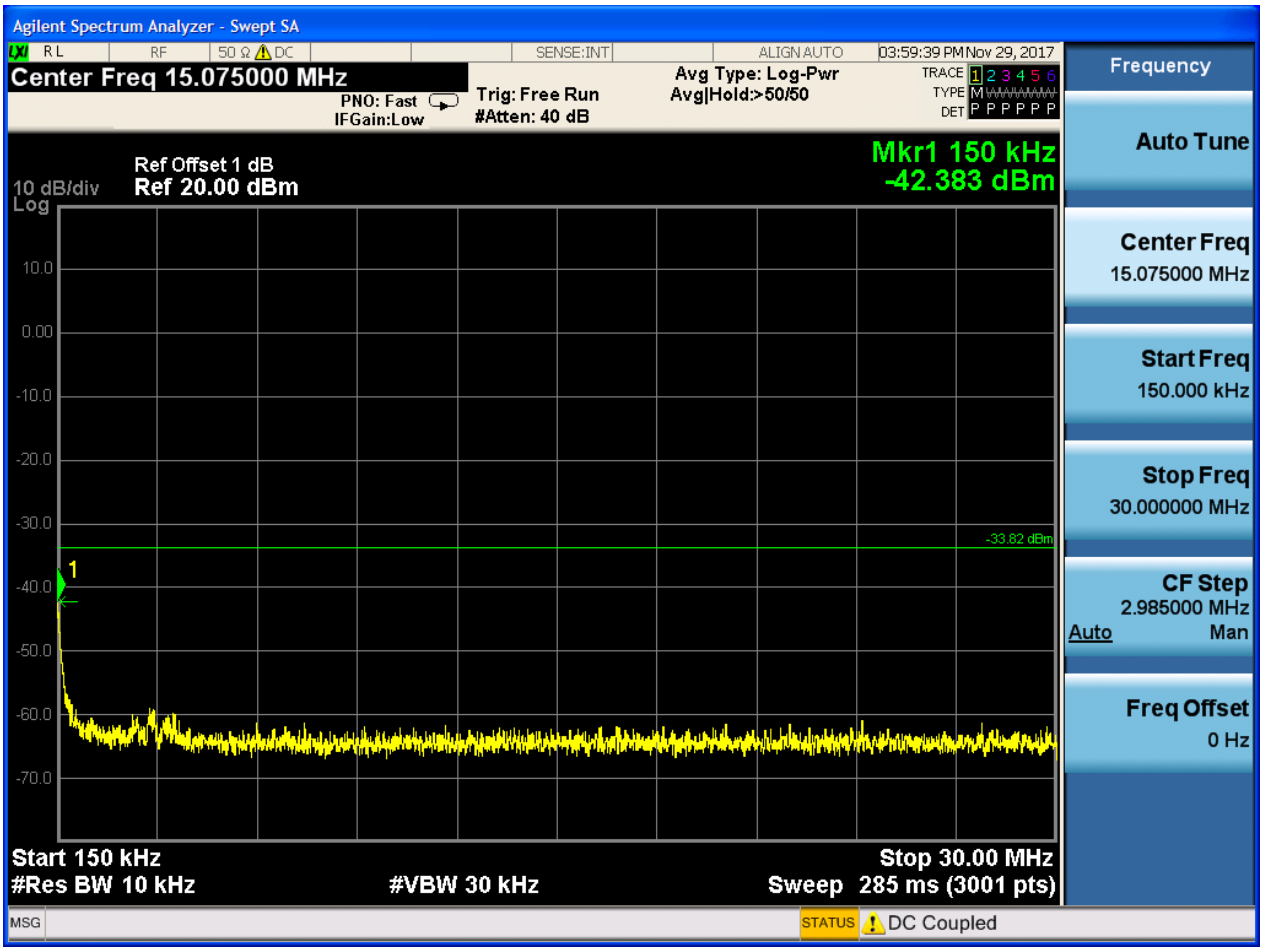
2.3 11B_H@Ant 1

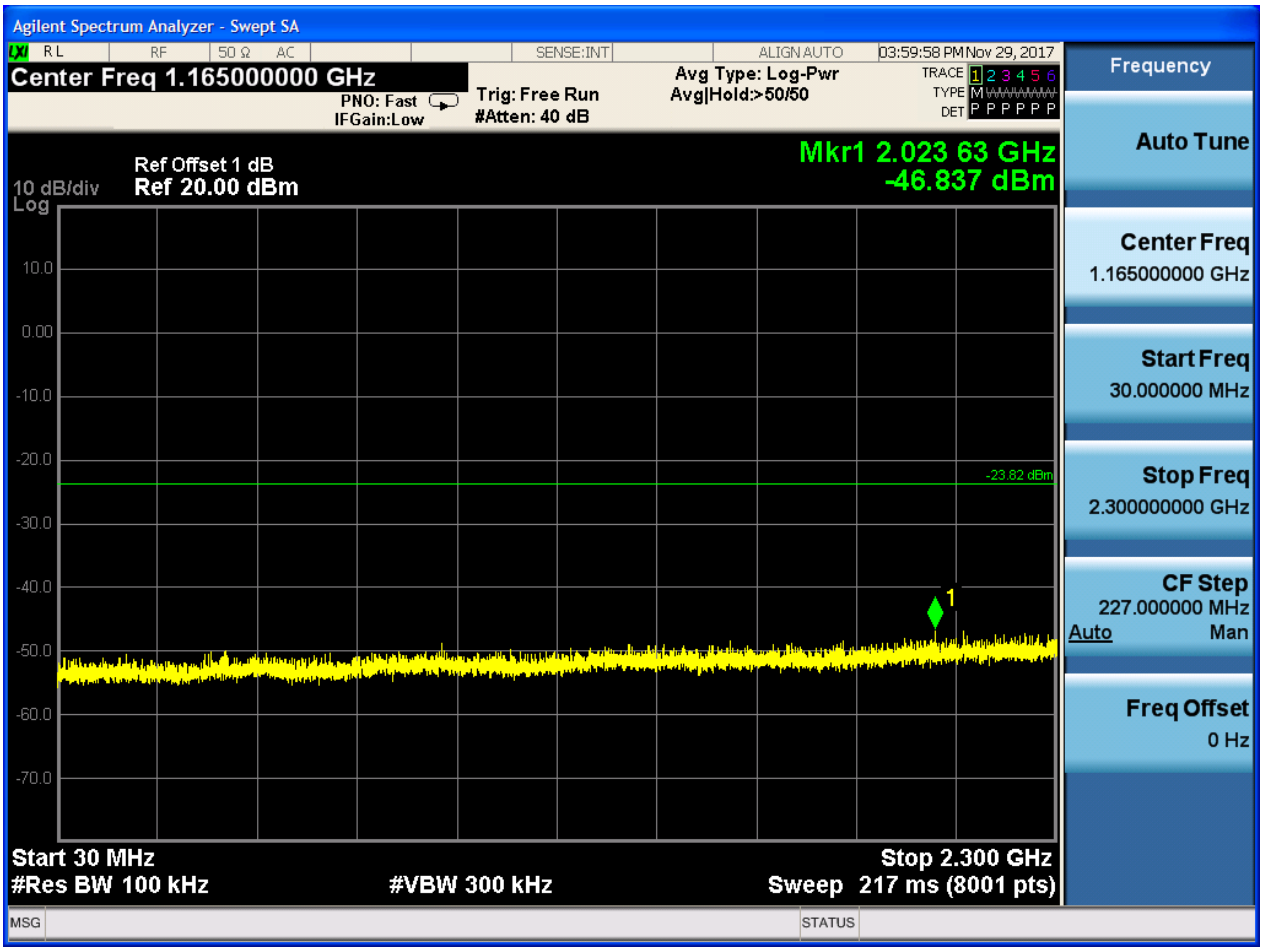
Pref:

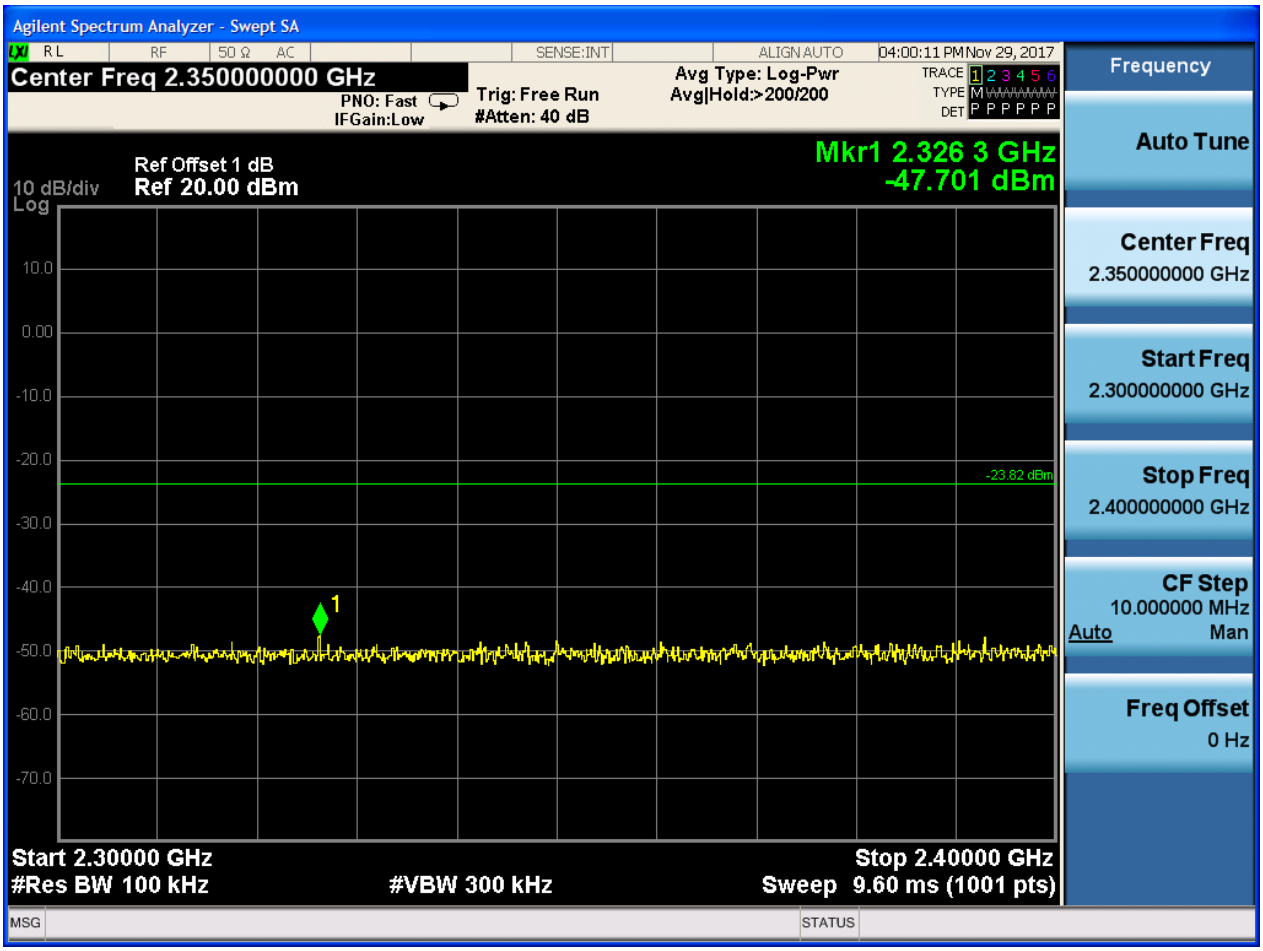


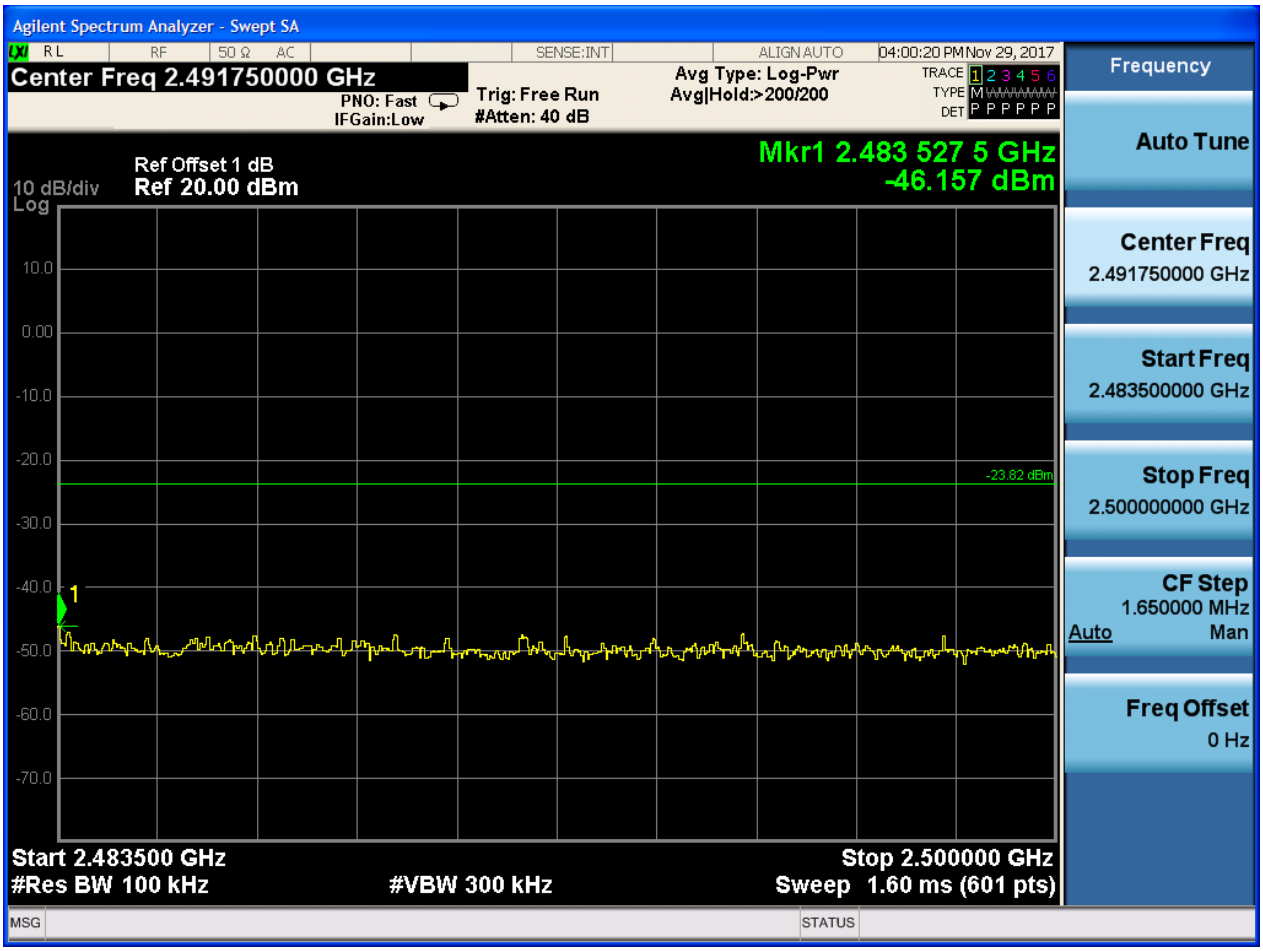
Puw:





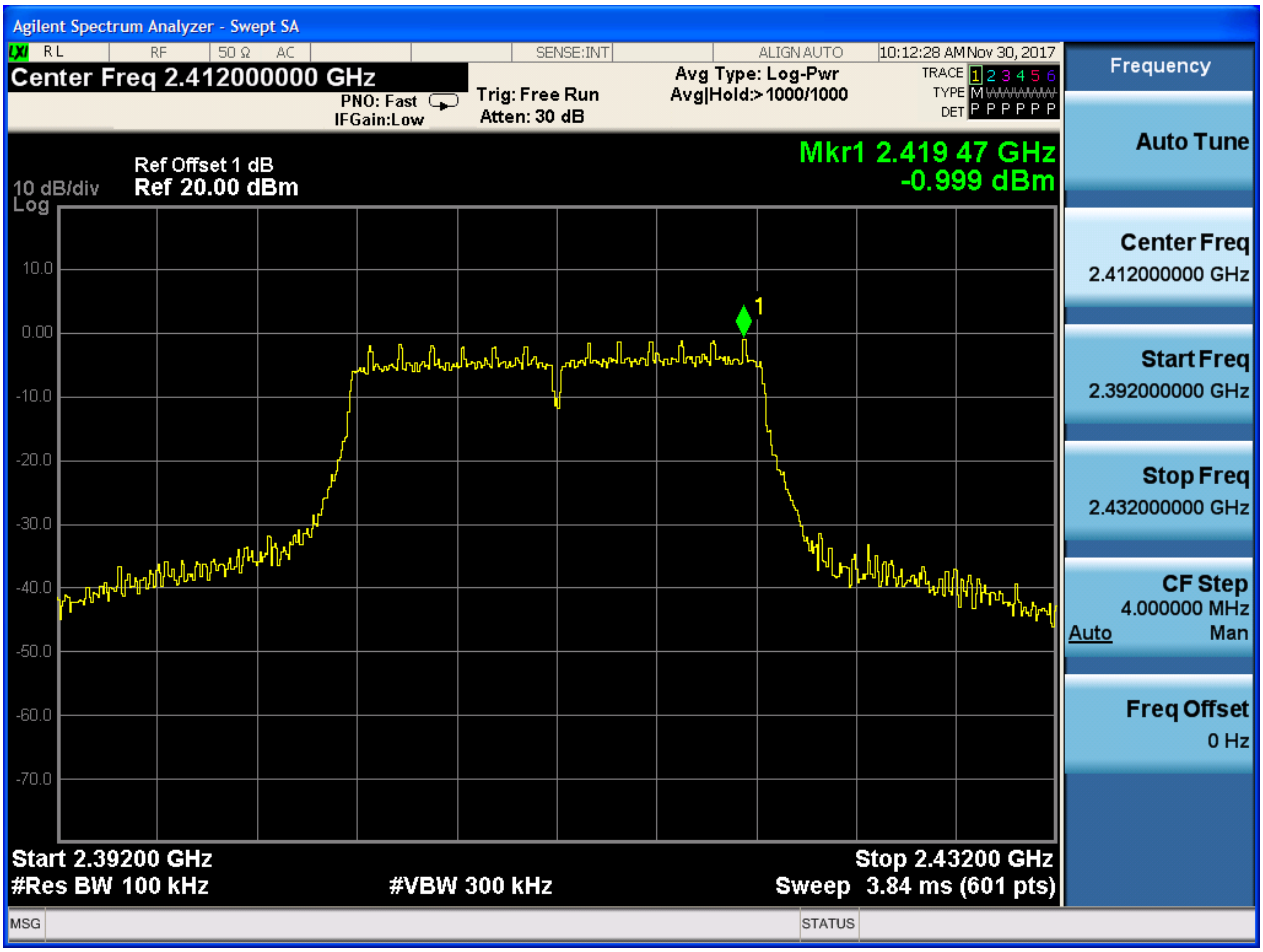






2.4 11G_L_2412@Ant 1

Pref:



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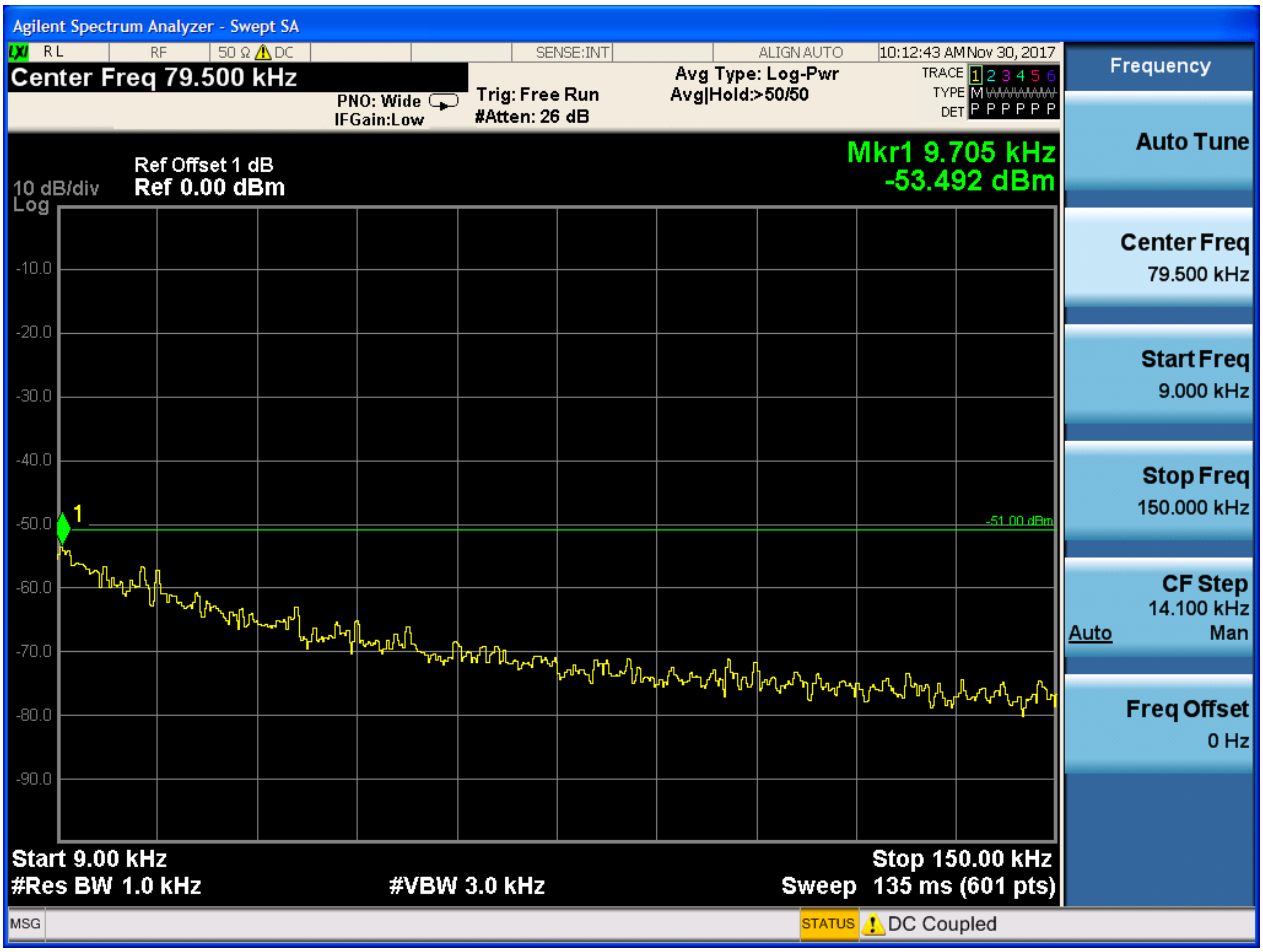
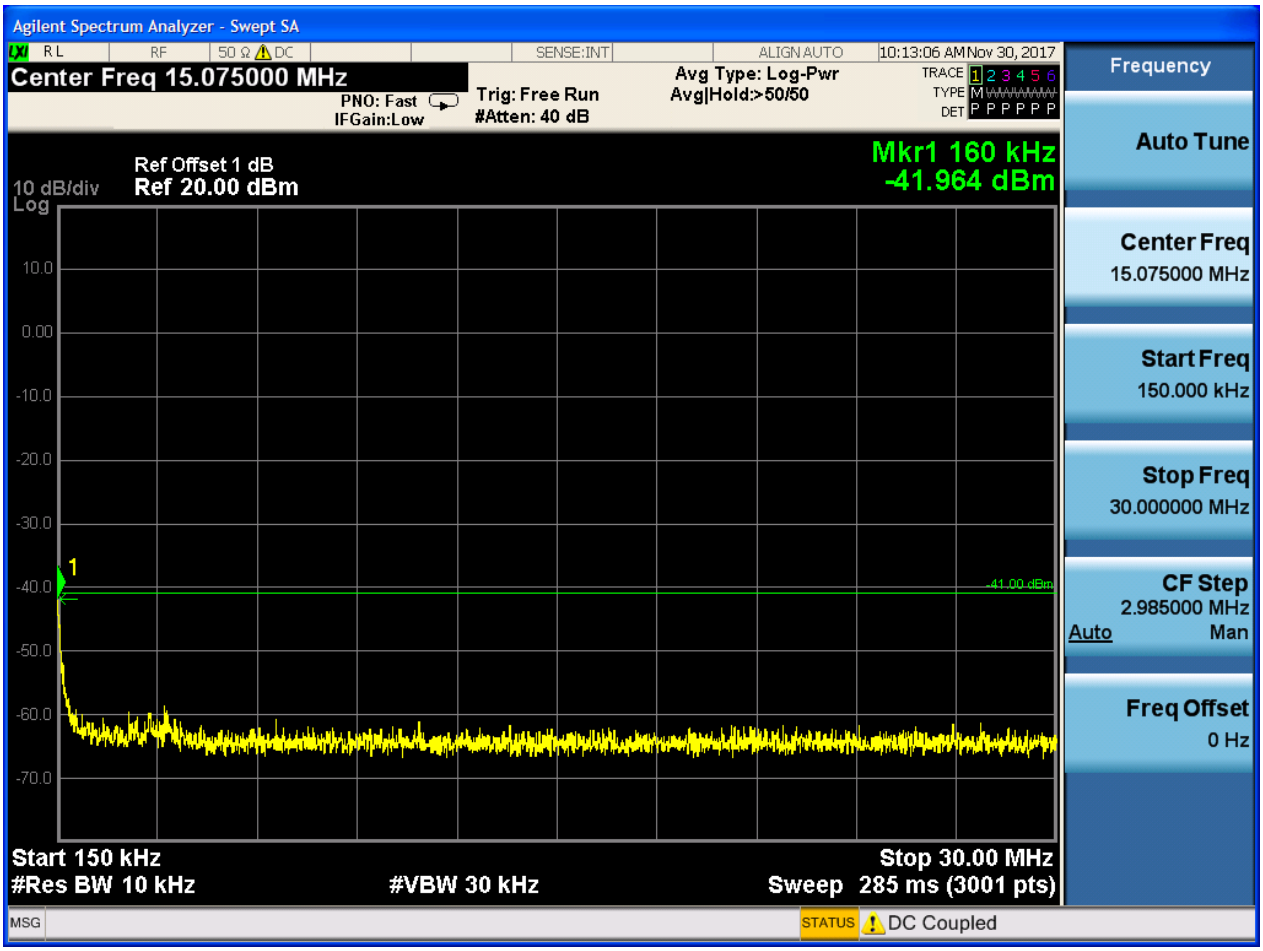
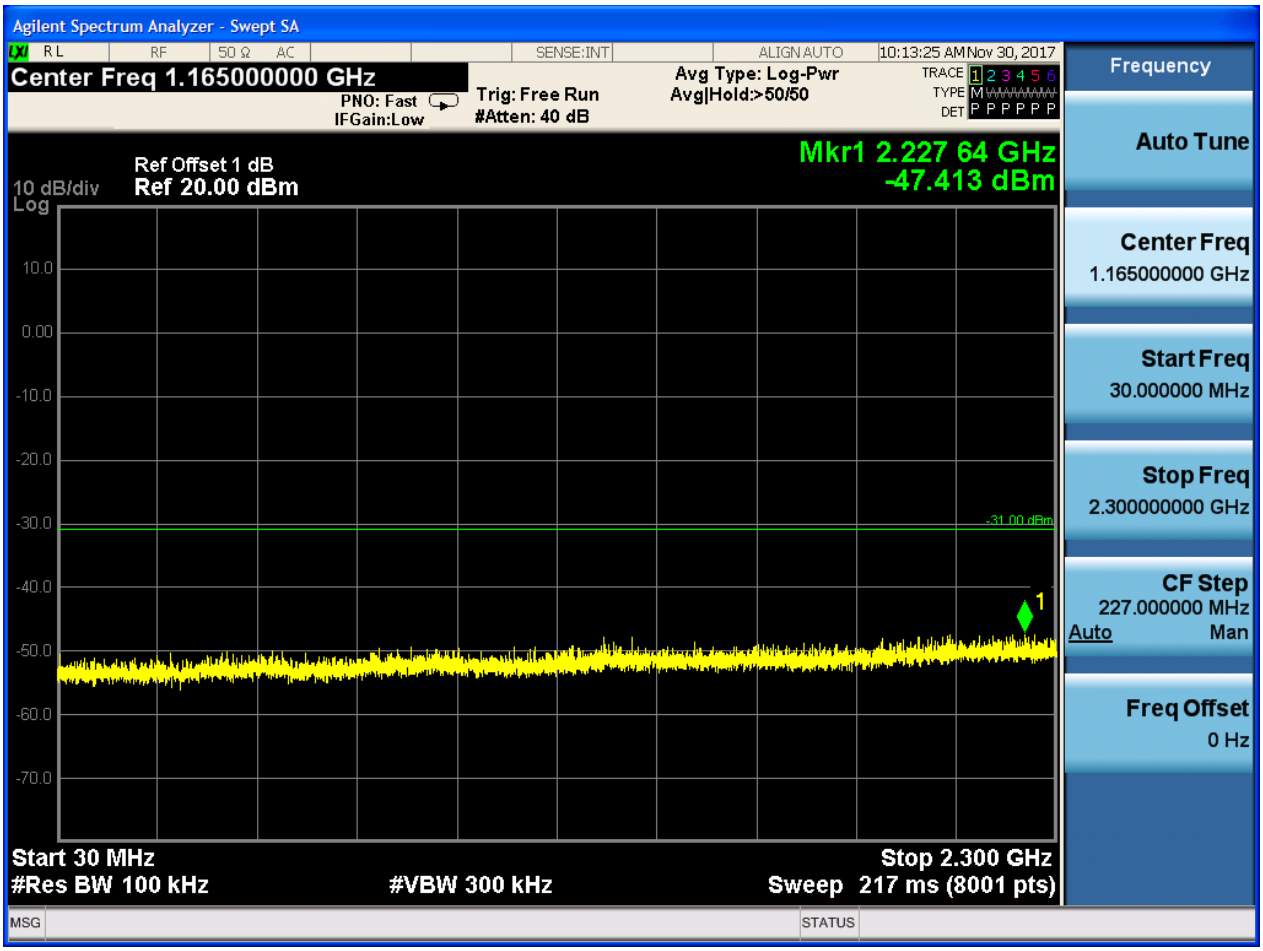
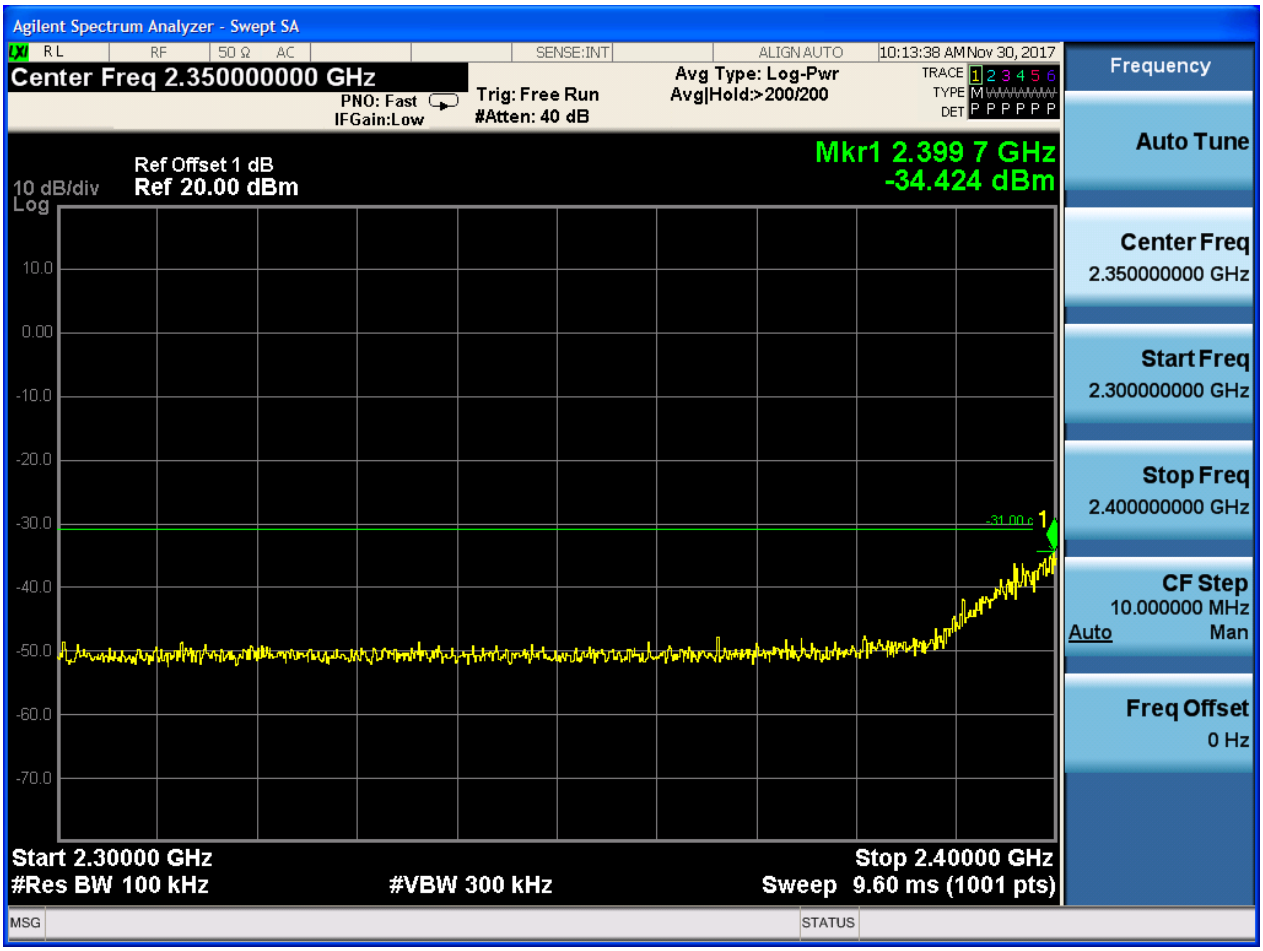
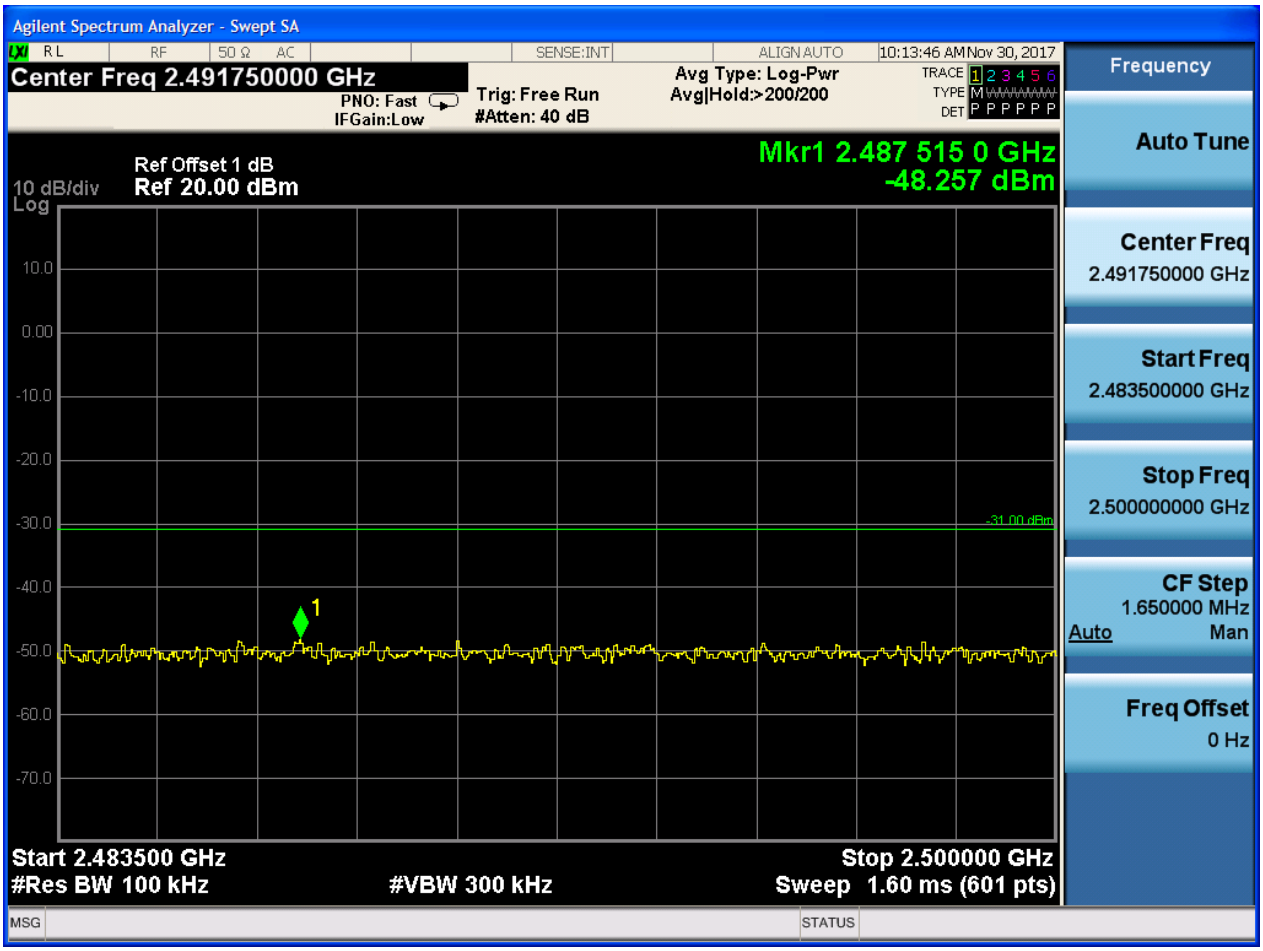
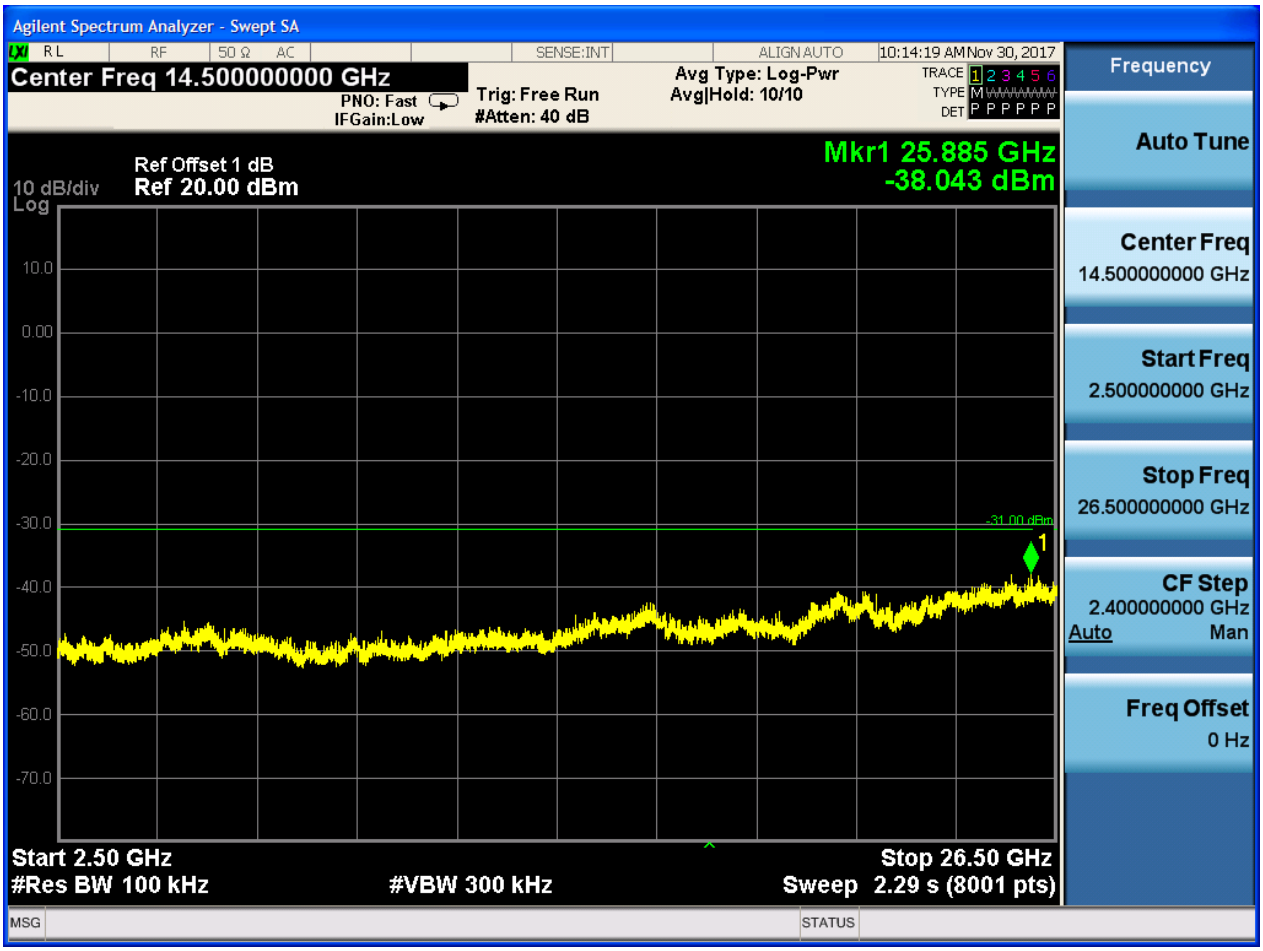

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω DC
SENSE:INT
ALIGN AUTO
10:12:43 AM Nov 30, 2017
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 26 dB
Avg Type: Log-Pwr
Avg|Hold:>50/50
TRACE 1 2 3 4 5 6
TYPE M
DET P P P P P P
Ref Offset 1 dB
10 dB/div
Log
Ref 0.00 dBm
Mkr1 9.705 kHz
-53.492 dBm
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
1
-51.00 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz
Stop 150.00 kHz
Sweep 135 ms (601 pts)
MSG
STATUS
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz











2.5 11G_L_2417@Ant 1

Pref:

Puw: