



Appendix for Testreport

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

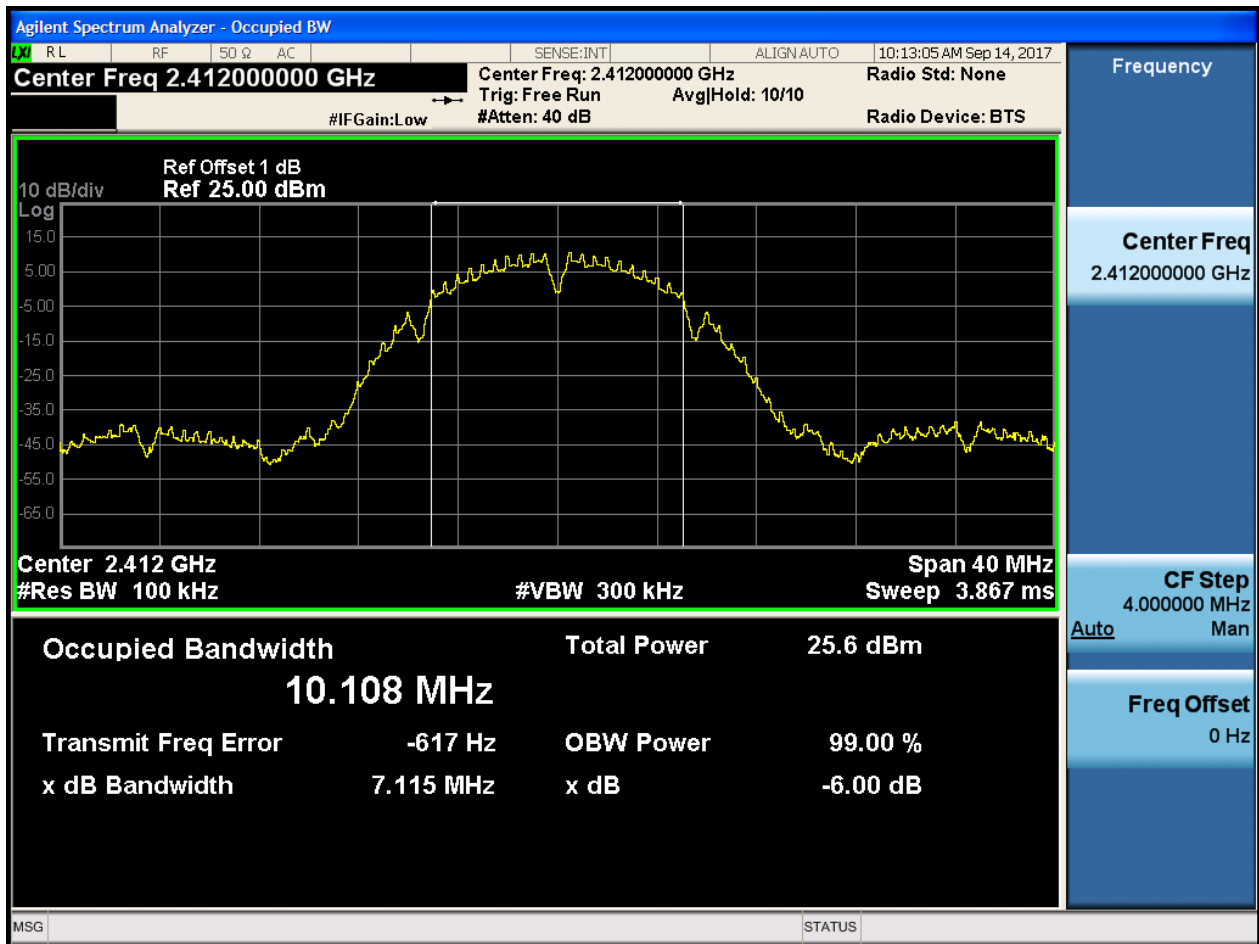
Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
11B	L	2412	Ant 1	7.12	pass
11B	L	2412	Ant 2	7.58	pass
11B	M	2437	Ant 1	7.10	pass
11B	M	2437	Ant 2	7.57	pass
11B	H	2462	Ant 1	7.08	pass
11B	H	2462	Ant 2	7.11	pass
11G	L	2412	Ant 1	16.37	pass
11G	L	2412	Ant 2	16.36	pass
11G	M	2437	Ant 1	16.40	pass
11G	M	2437	Ant 2	16.37	pass
11G	H	2462	Ant 1	16.37	pass
11G	H	2462	Ant 2	16.38	pass
11N20	L	2412	Ant 1	17.61	pass
11N20	L	2412	Ant 2	17.61	pass
11N20	M	2437	Ant 1	17.60	pass
11N20	M	2437	Ant 2	17.65	pass
11N20	H	2462	Ant 1	17.60	pass
11N20	H	2462	Ant 2	17.60	pass
11N20m	L	2412	Ant 1	17.60	pass
11N20m	L	2412	Ant 2	17.66	pass
11N20m	M	2437	Ant 1	17.62	pass
11N20m	M	2437	Ant 2	17.66	pass
11N20m	H	2462	Ant 1	17.61	pass
11N20m	H	2462	Ant 2	17.65	pass
11G CDD	L	2412	Ant 1	16.35	pass
11G CDD	L	2412	Ant 2	16.42	pass
11G CDD	M	2437	Ant 1	16.37	pass
11G CDD	M	2437	Ant 2	16.40	pass



Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
11G CDD	H	2462	Ant 1	16.39	pass
11G CDD	H	2462	Ant 2	16.41	pass

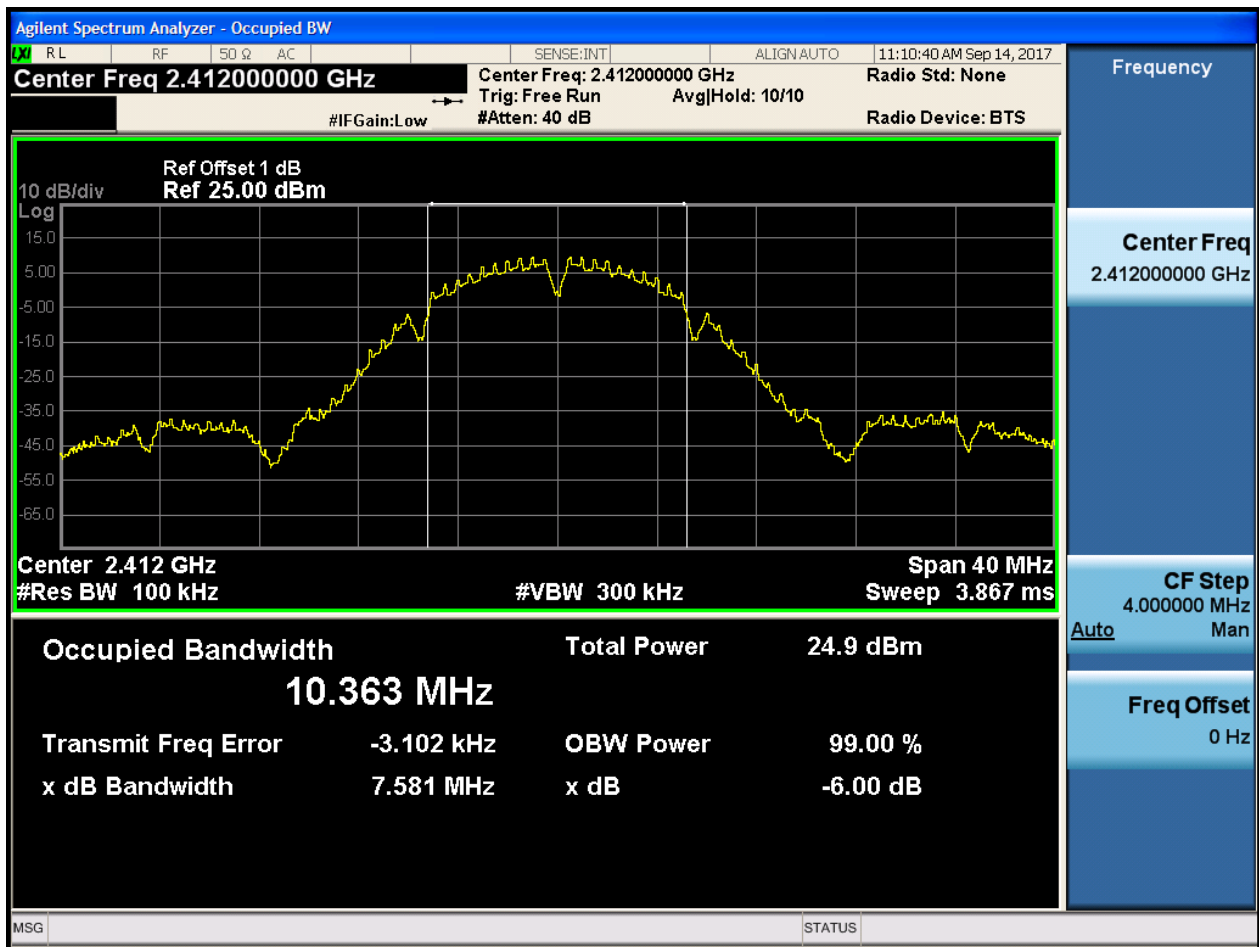
Part II - Test Plots

2.1 11B_L@Ant 1



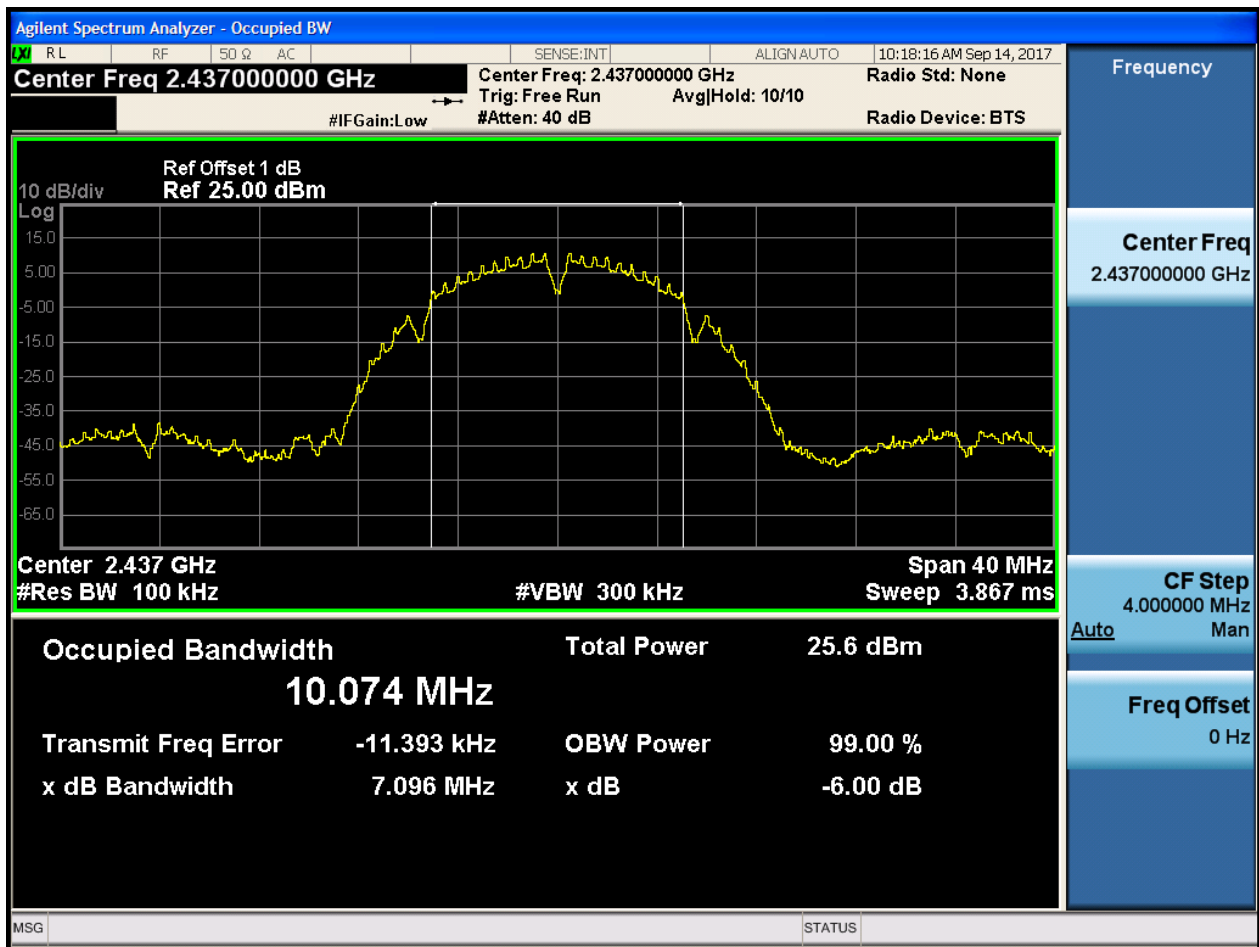


2.2 11B_L@Ant 2



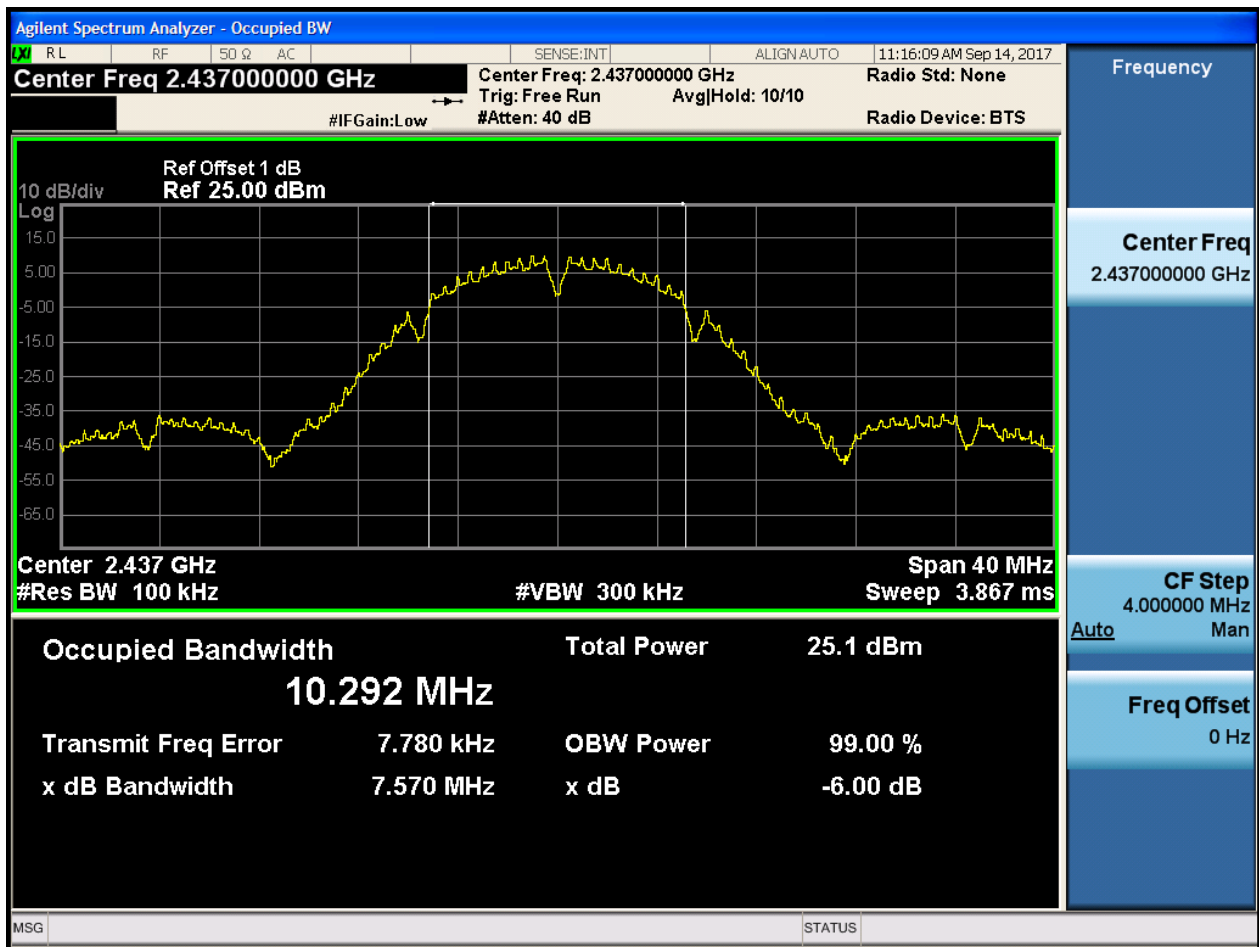


2.3 11B_M@Ant 1



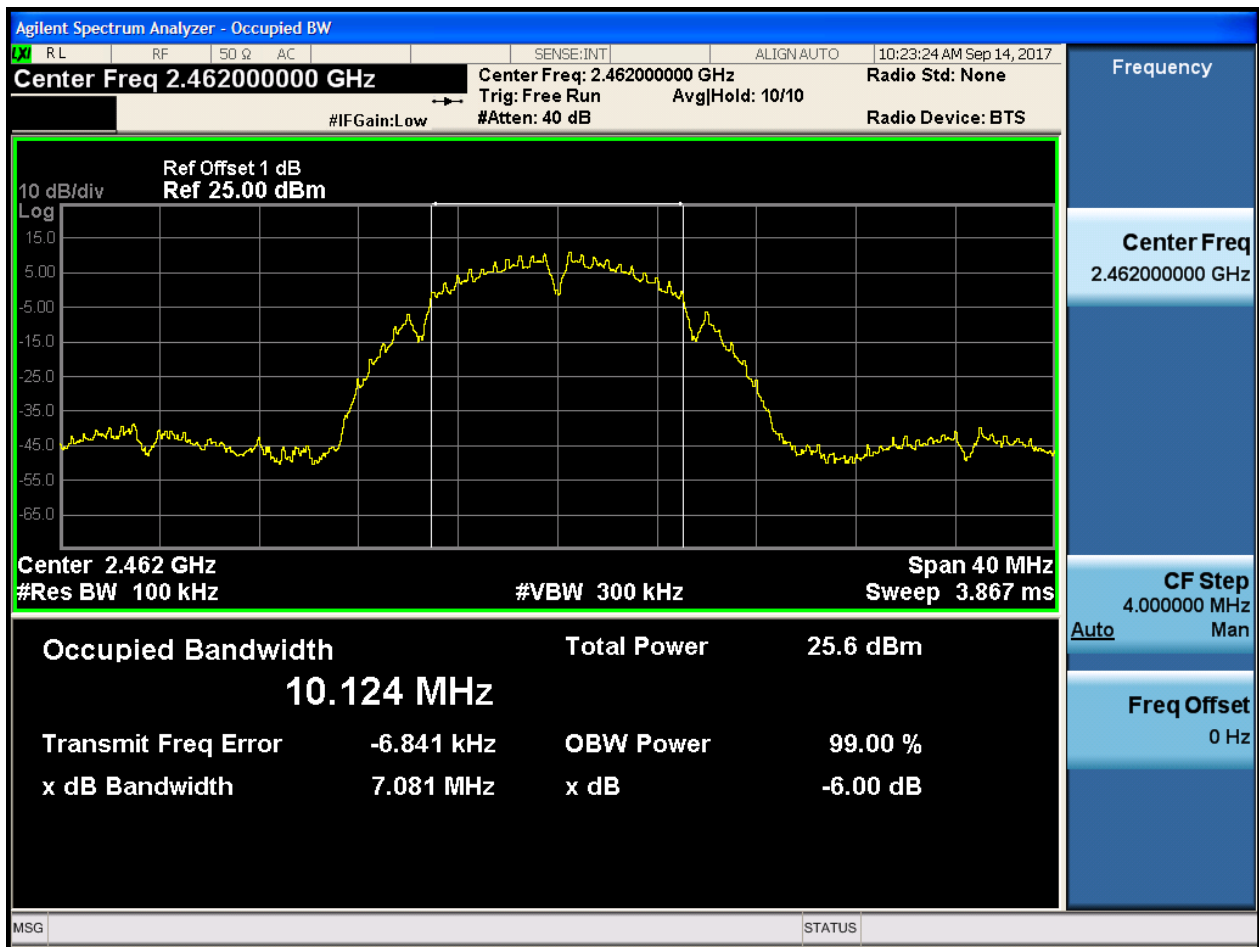


2.4 11B_M@Ant 2



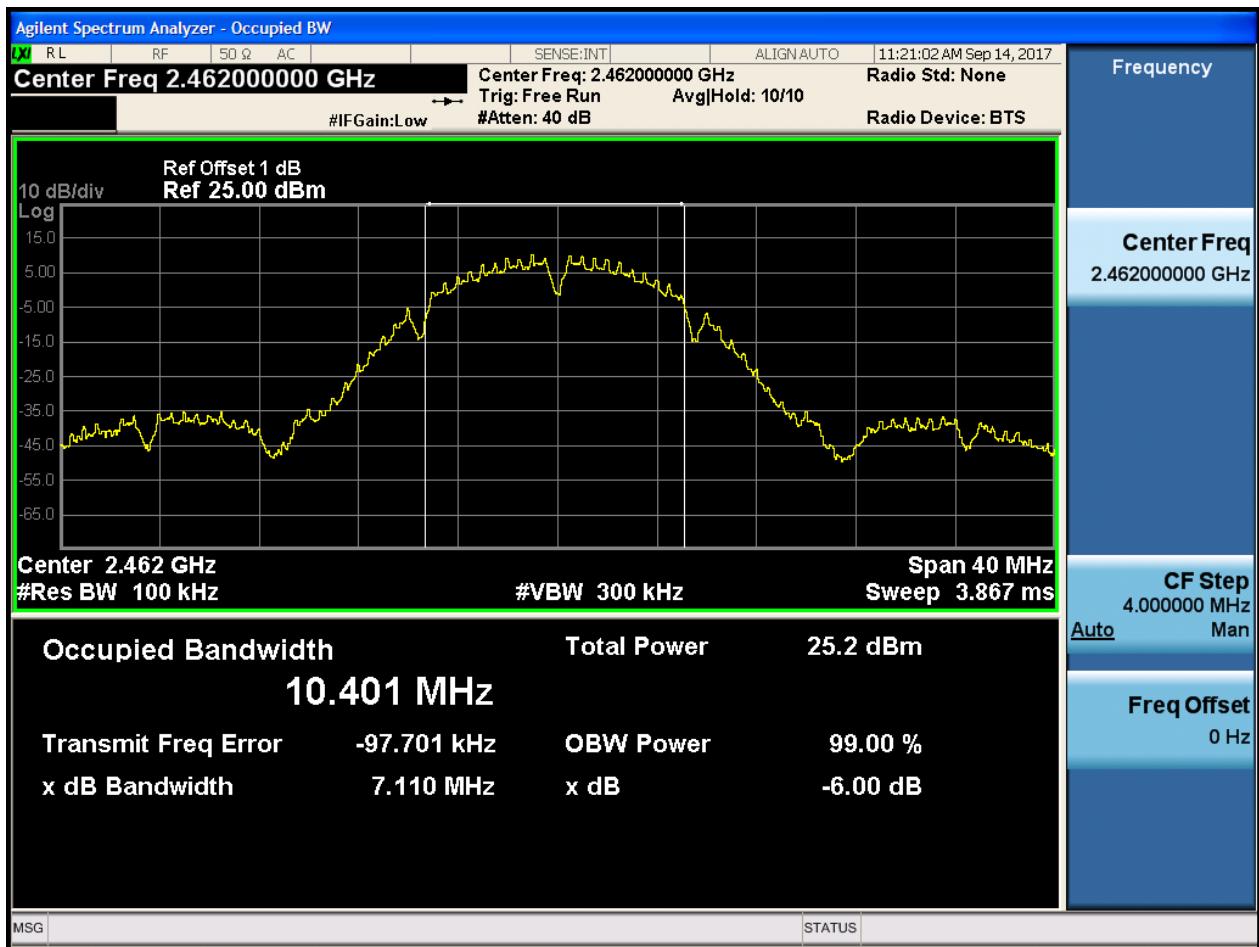


2.5 11B_H@Ant 1



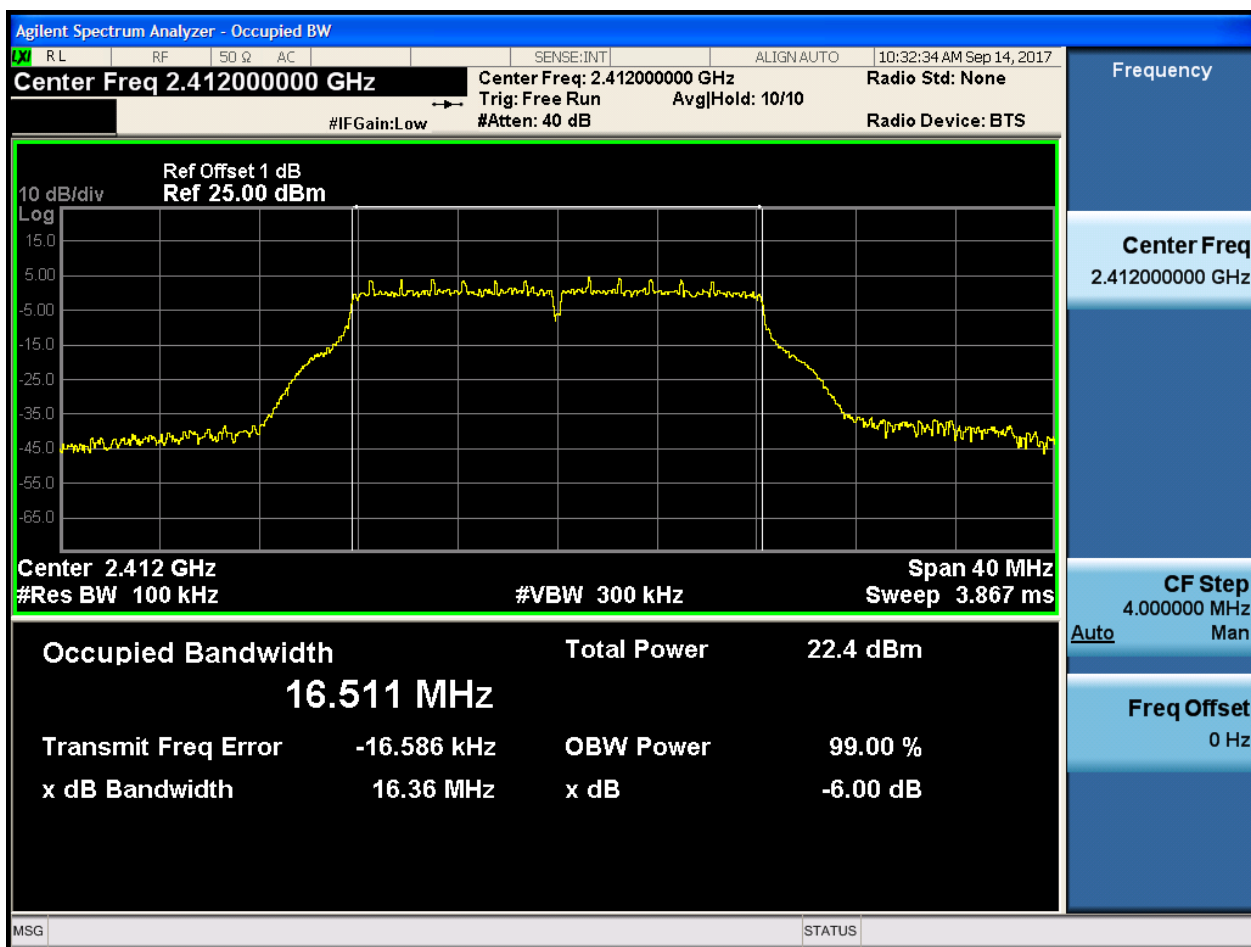


2.6 11B_H@Ant 2



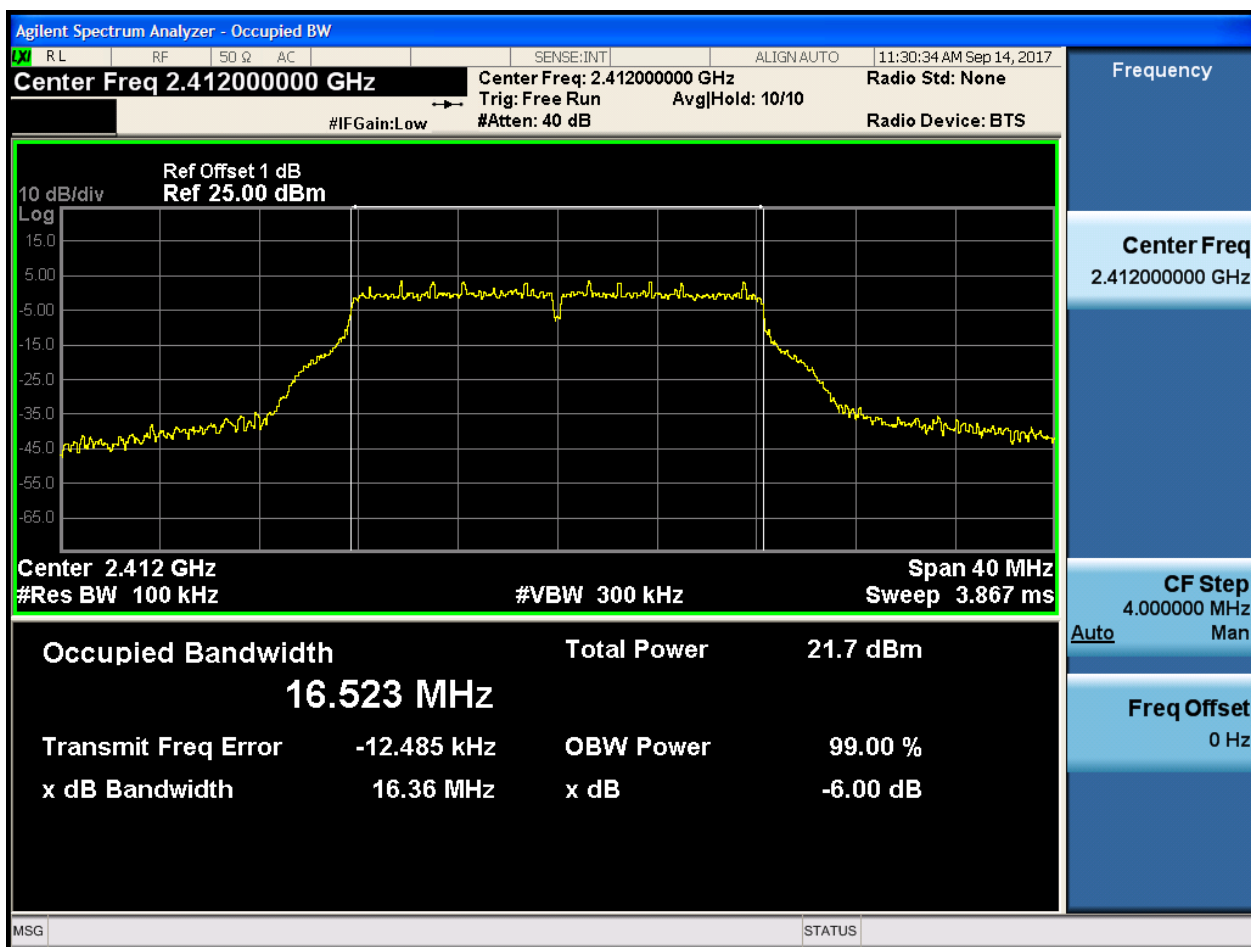


2.7 11G_L@Ant 1



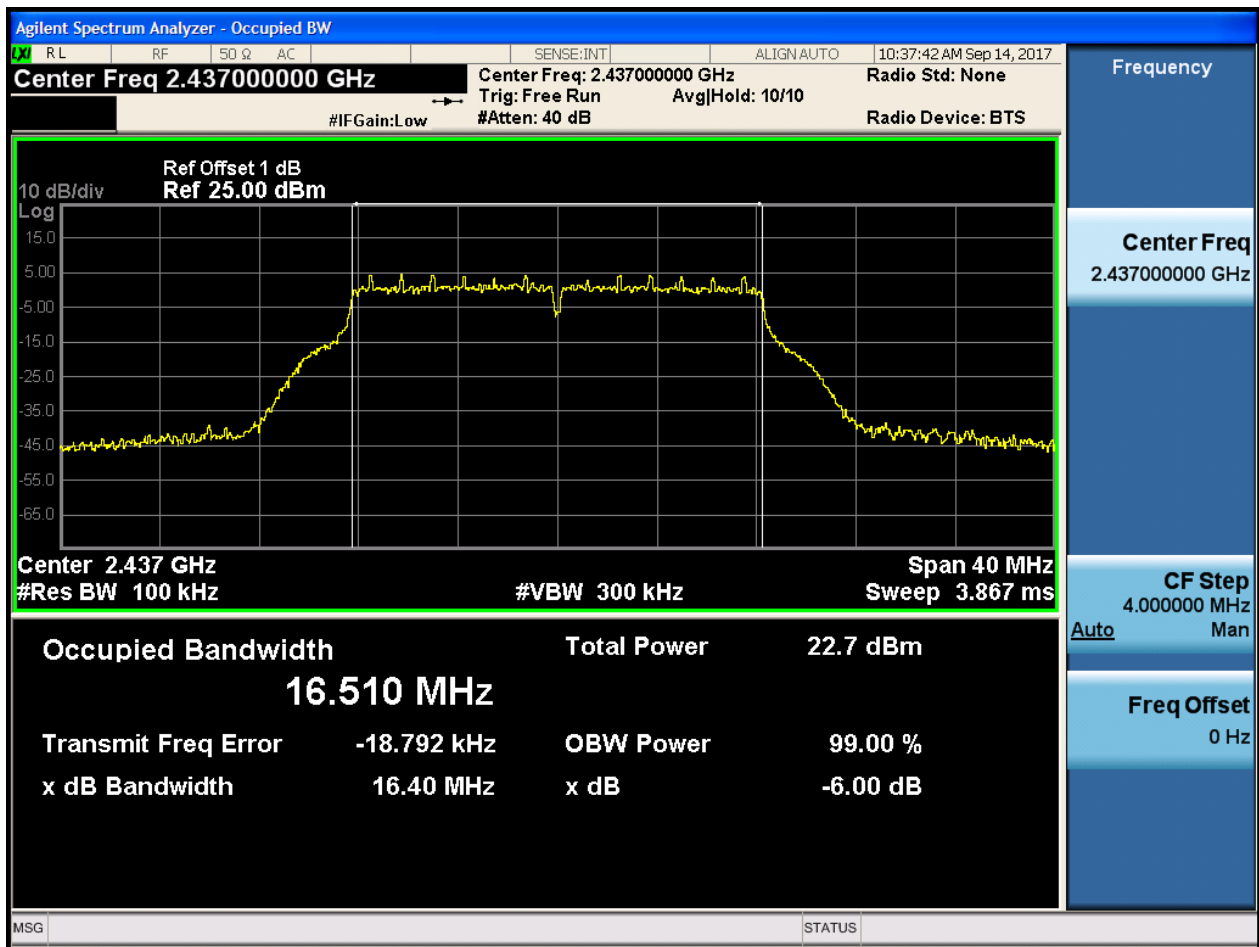


2.8 11G_L@Ant 2



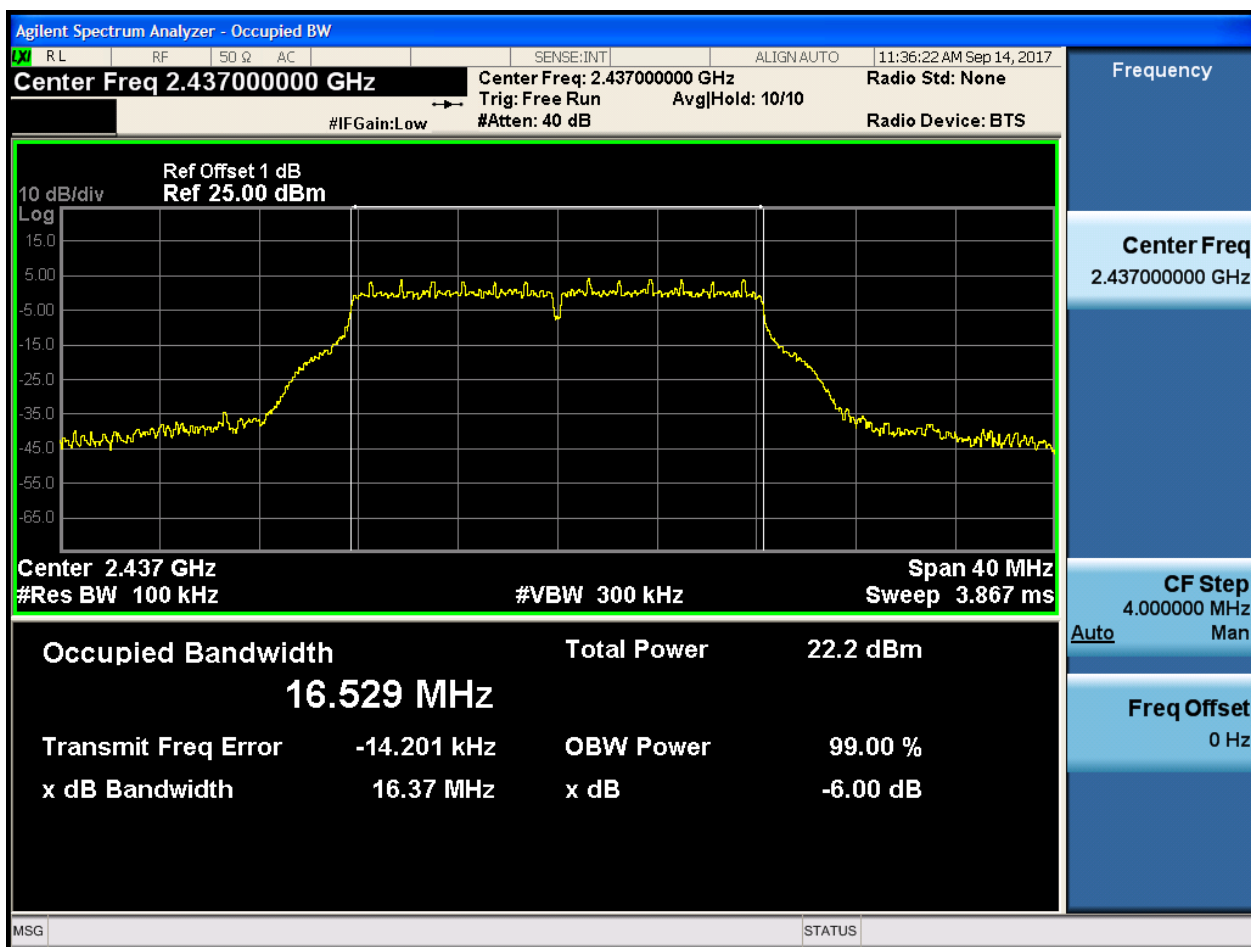


2.9 11G_M@Ant 1





2.10 11G_M@Ant 2





Agilent Spectrum Analyzer - Occupied BW

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 10:42:25 AM Sep 14, 2017

Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Radio Std: None
Trig: Free Run Avg/Hold: 10/10
#IFGain: Low #Atten: 40 dB Radio Device: BTS

Ref Offset 1 dB
Ref 25.00 dBm

10 dB/div
Log

The spectrum plot shows a yellow trace on a black grid. The y-axis is labeled 'Log' and ranges from -65.0 to 15.0 dBm. The x-axis represents frequency. The trace shows a signal with a flat top and sloped sides, characteristic of a channel signal. The top of the signal is around -5 dBm, and the sides roll off to about -45 dBm at the edges of the span.

Center 2.462 GHz Span 40 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 3.867 ms

Occupied Bandwidth		Total Power	
16.513 MHz		22.7 dBm	
Transmit Freq Error	-33.895 kHz	OBW Power	99.00 %
x dB Bandwidth	16.37 MHz	x dB	-6.00 dB

MSG STATUS

Frequency

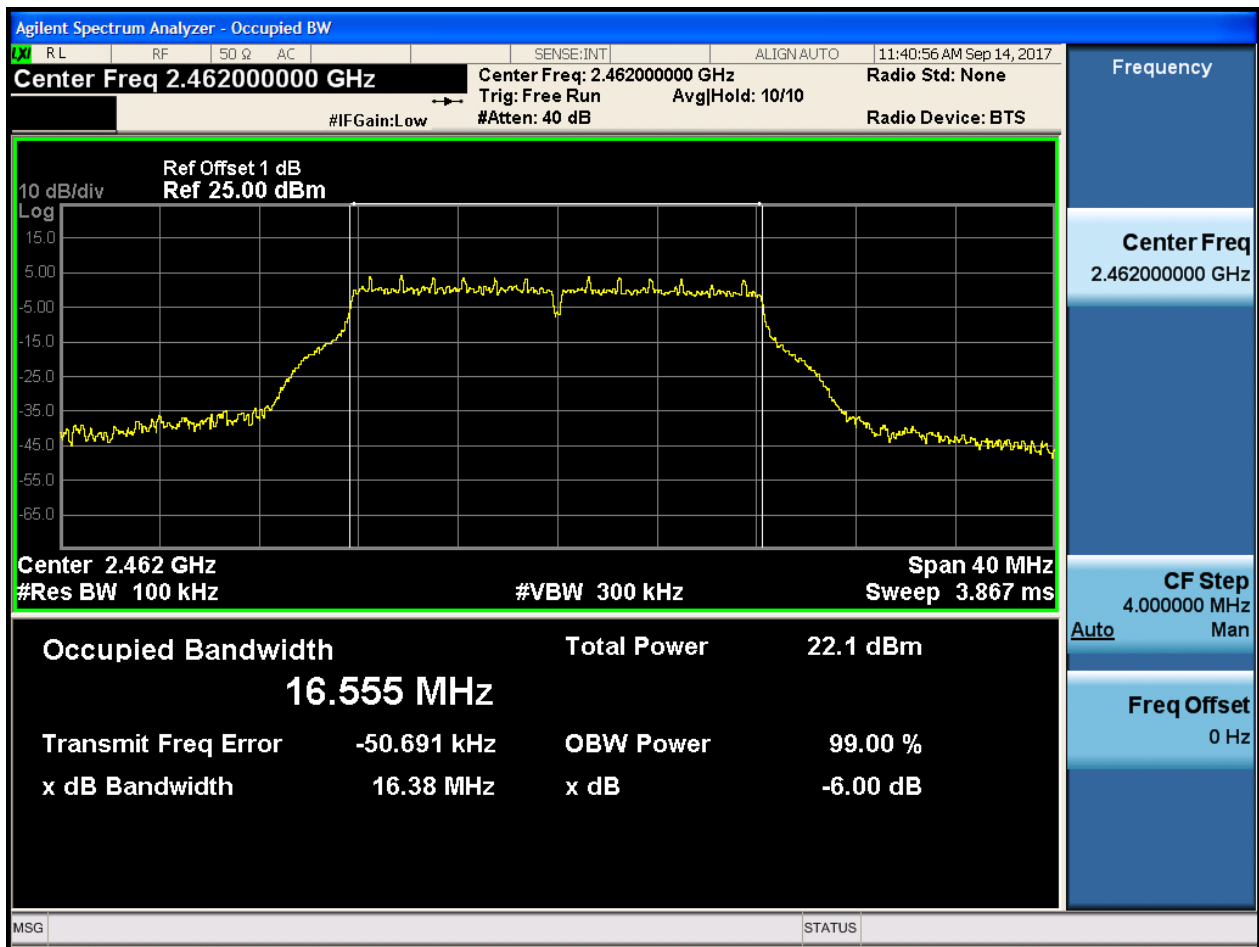
Center Freq
2.462000000 GHz

CF Step
4.000000 MHz
Auto Man

Freq Offset
0 Hz

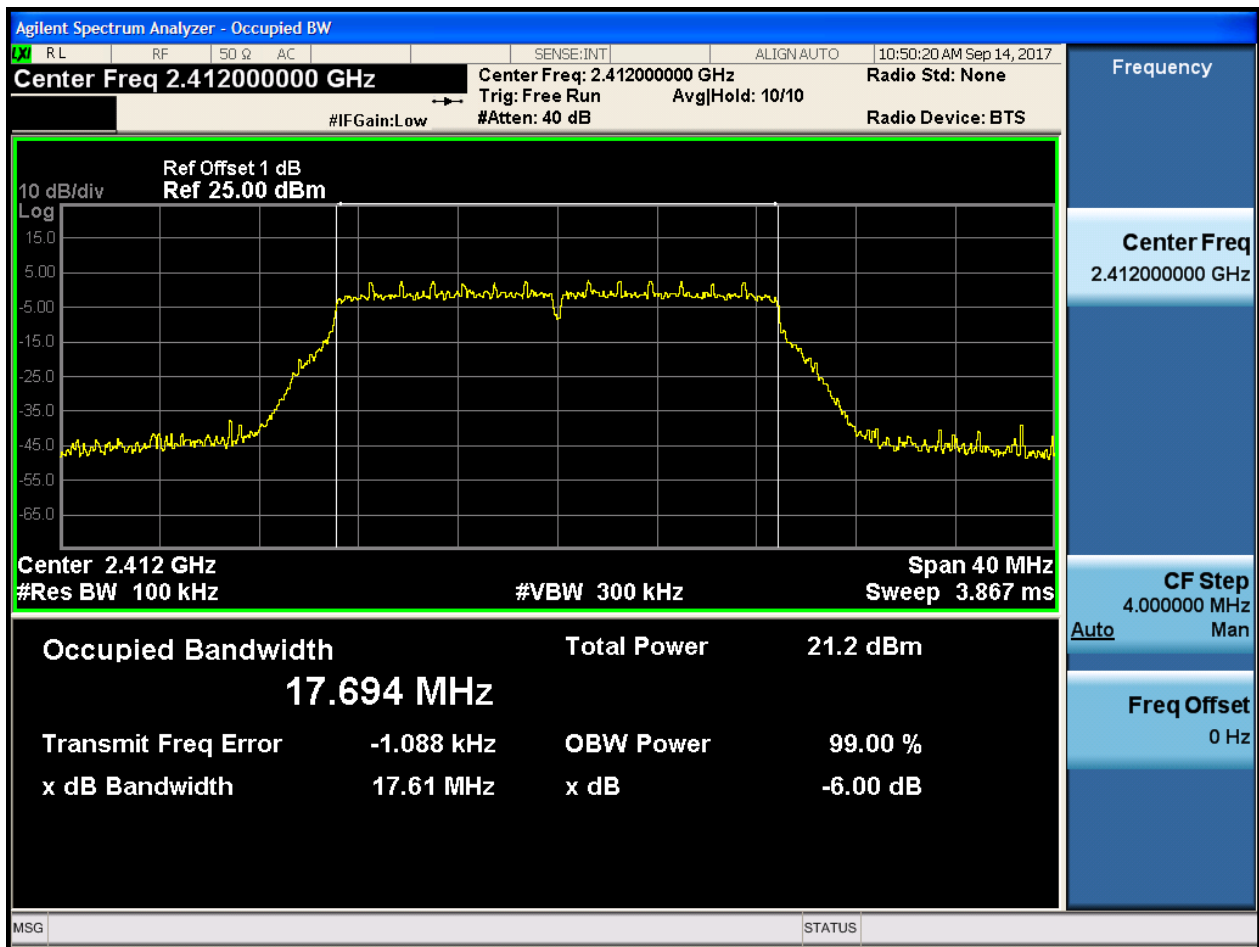


2.12 11G_H@Ant 2



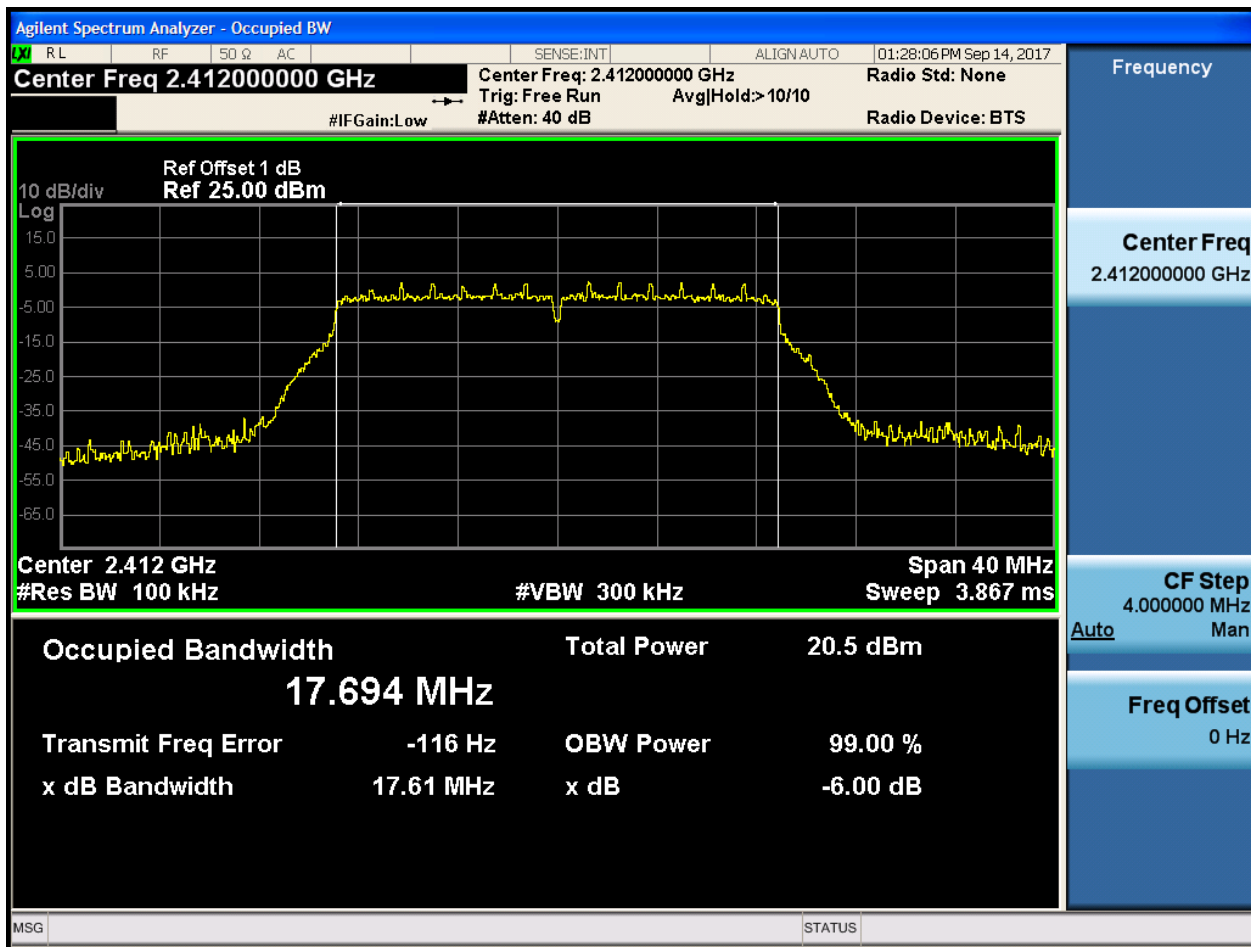


2.13 11N20_L@Ant 1



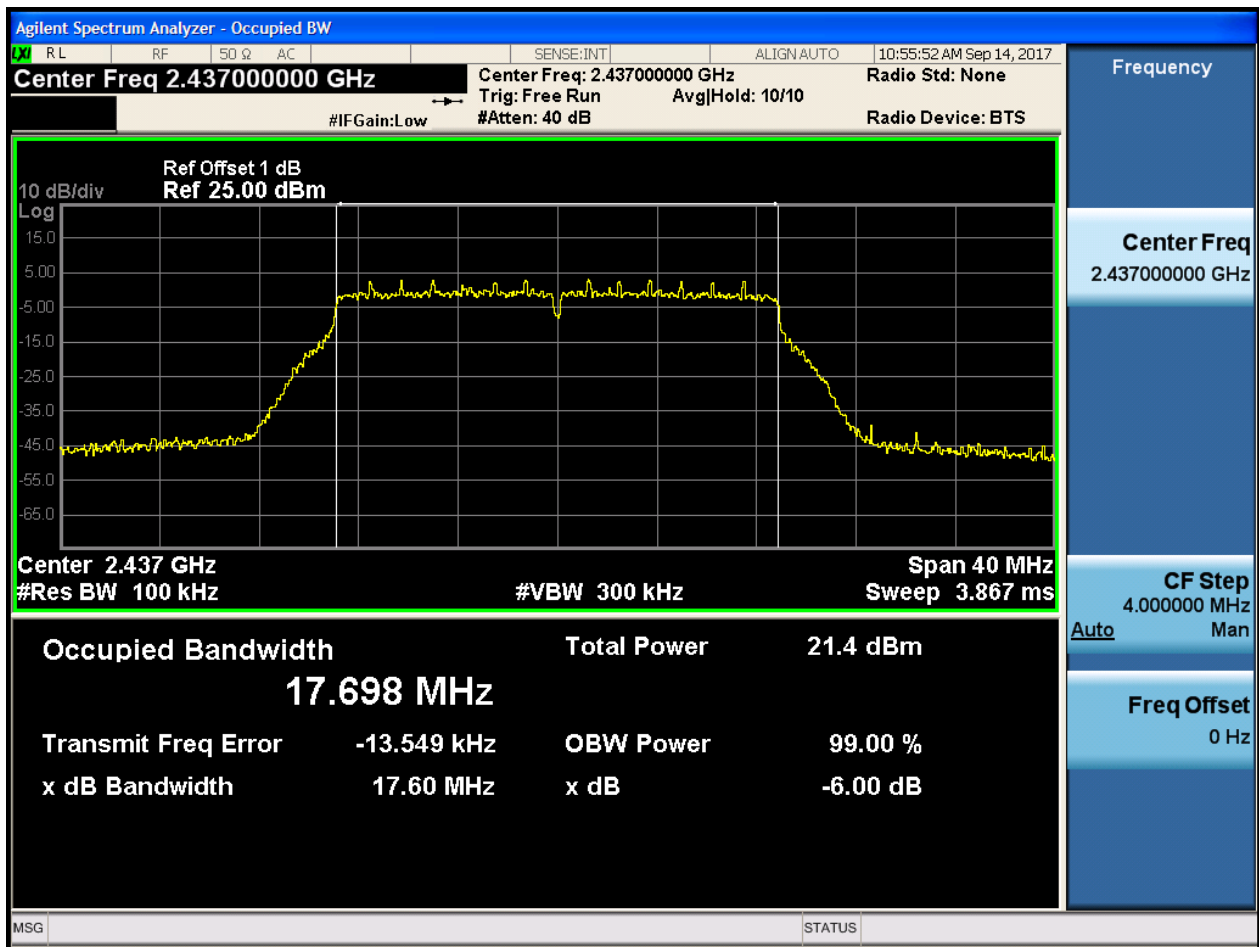


2.14 11N20_L@Ant 2



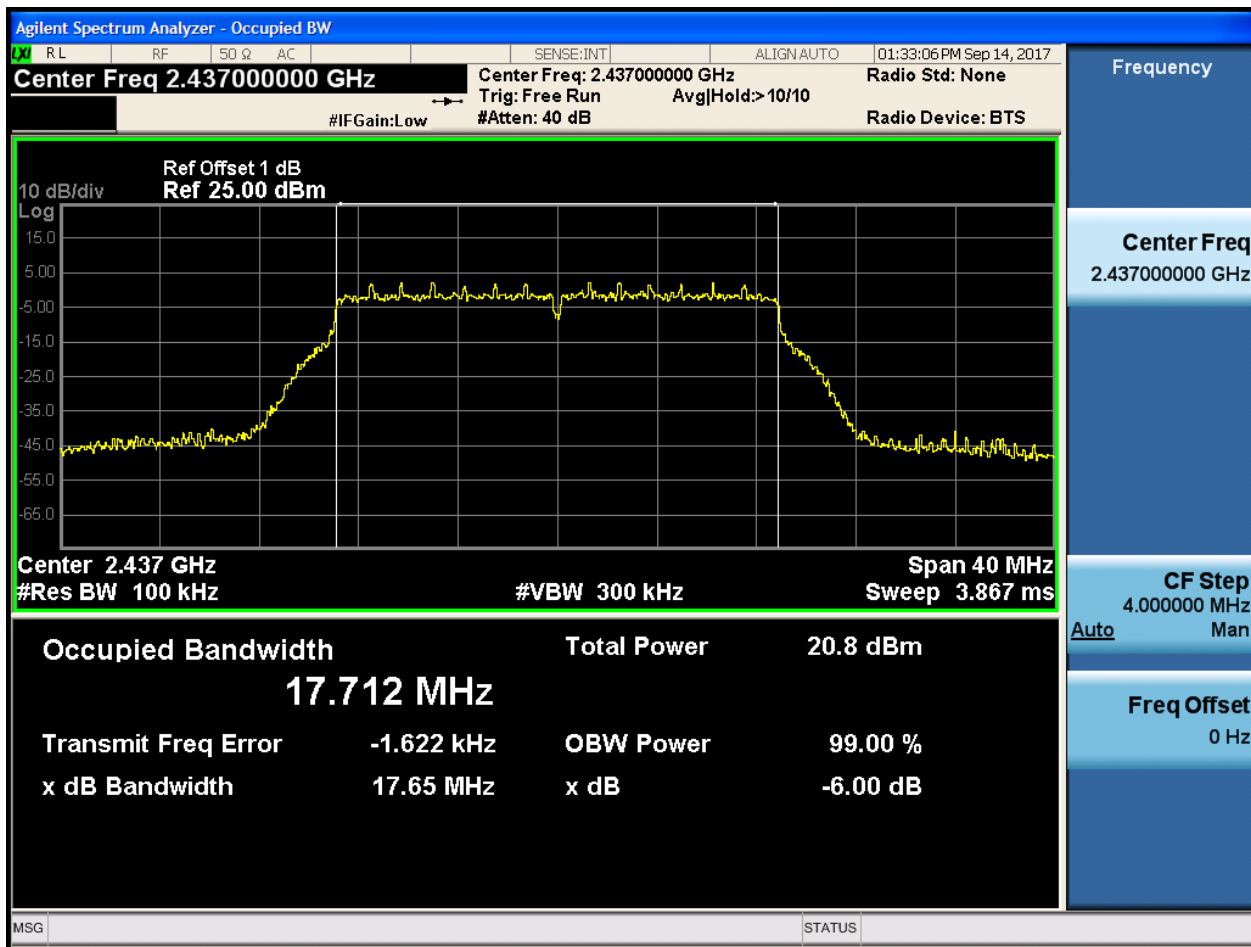


2.15 11N20_M@Ant 1



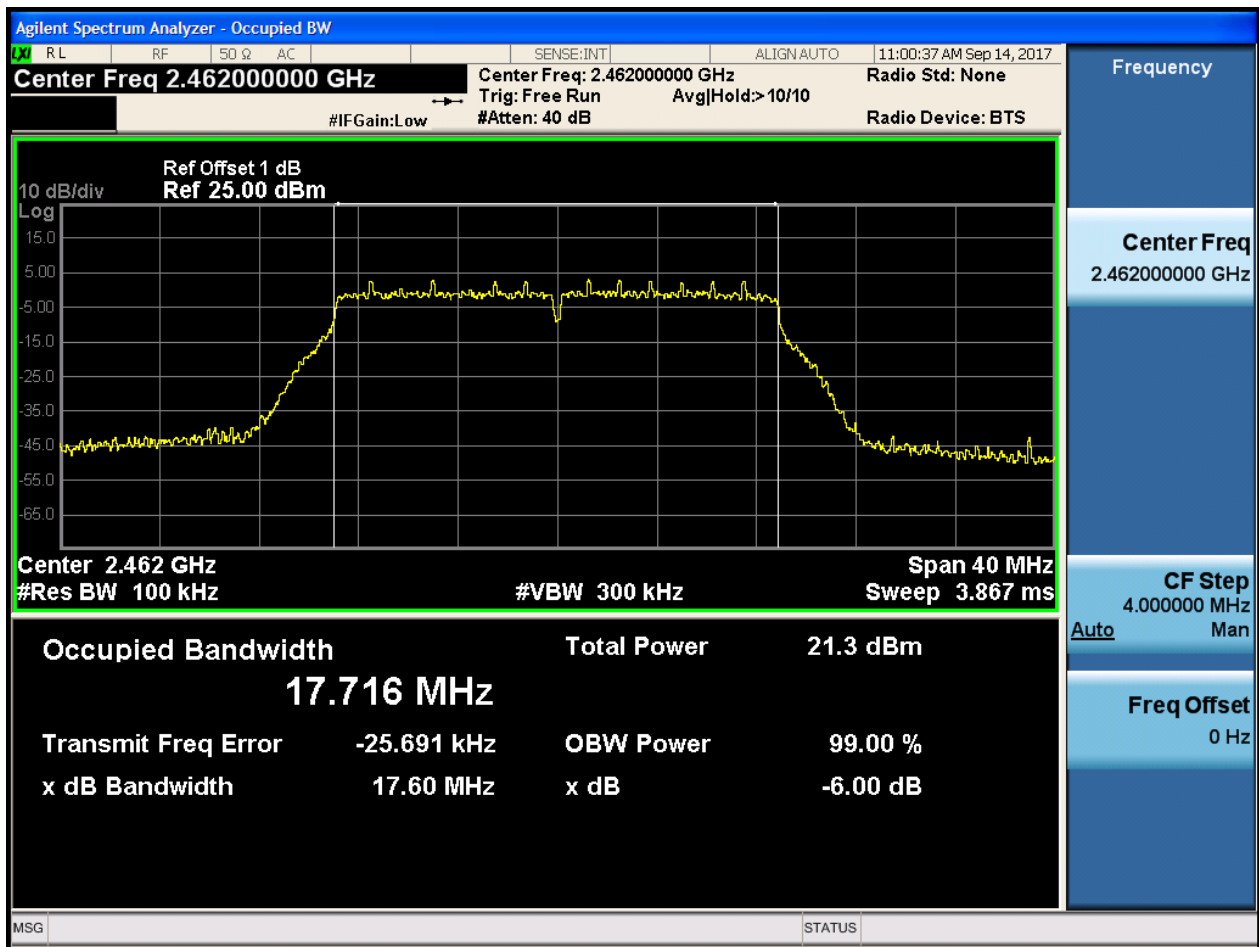


2.16 11N20_M@Ant 2



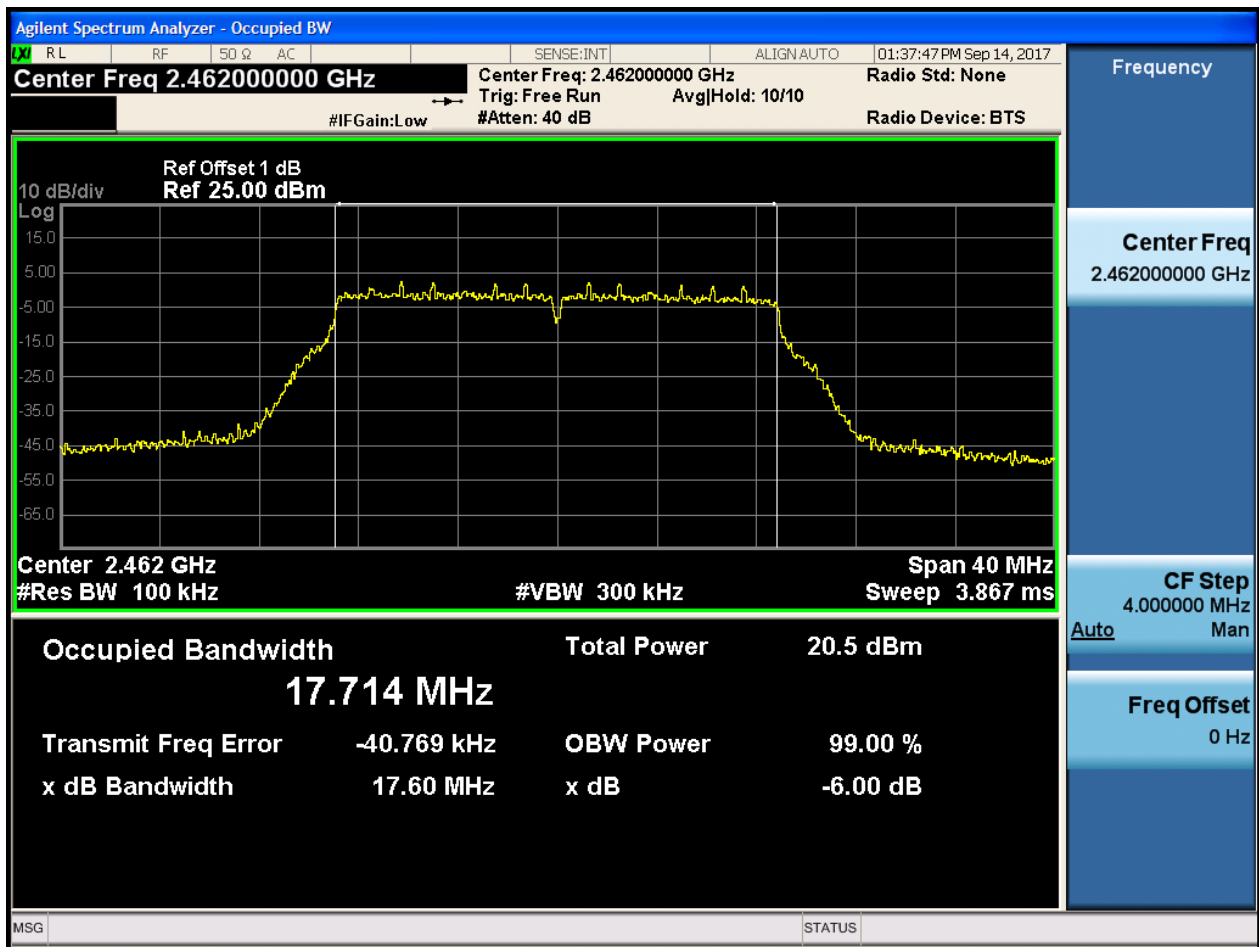


2.17 11N20_H@Ant 1



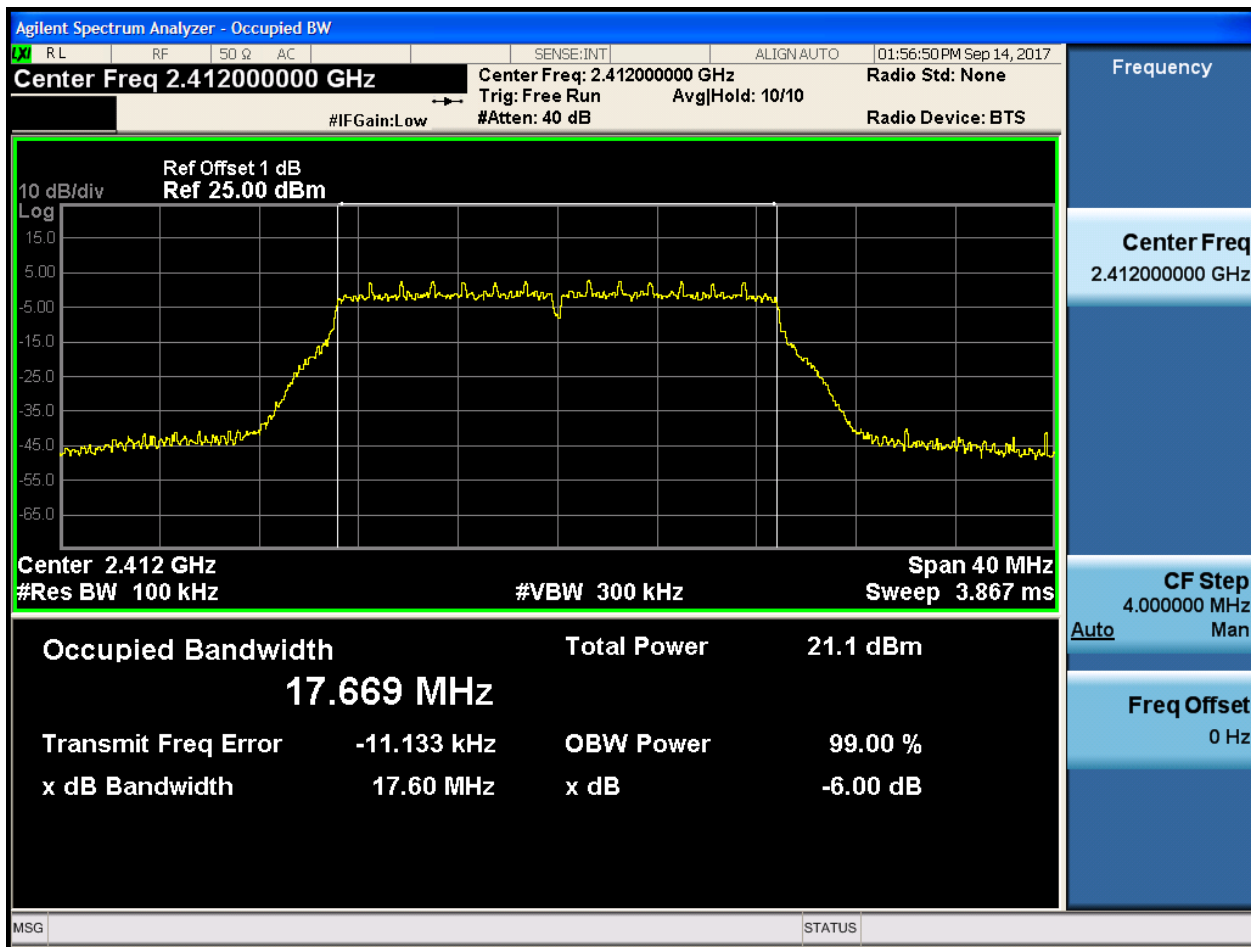


2.18 11N20_H@Ant 2



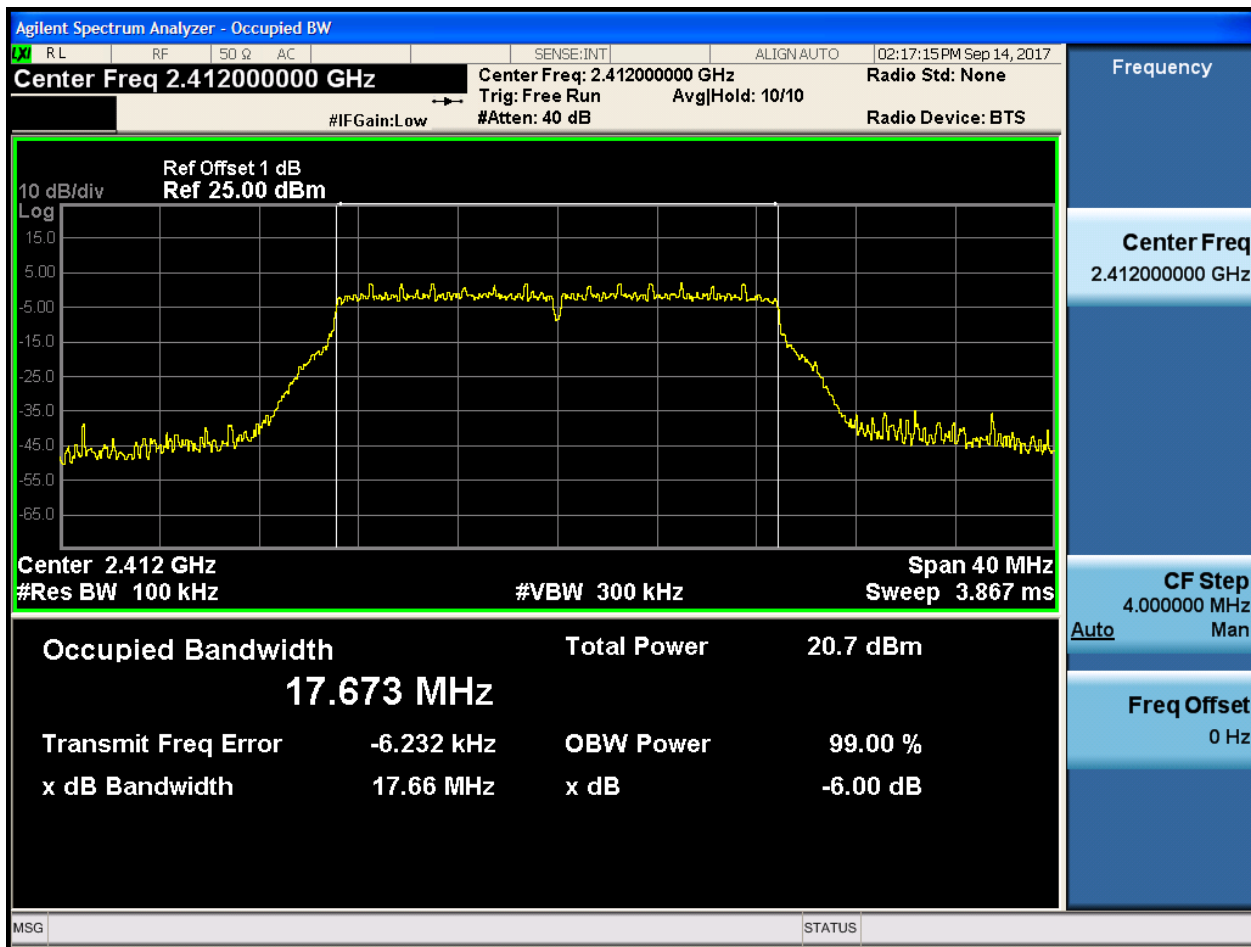


2.19 11N20m_L@Ant 1



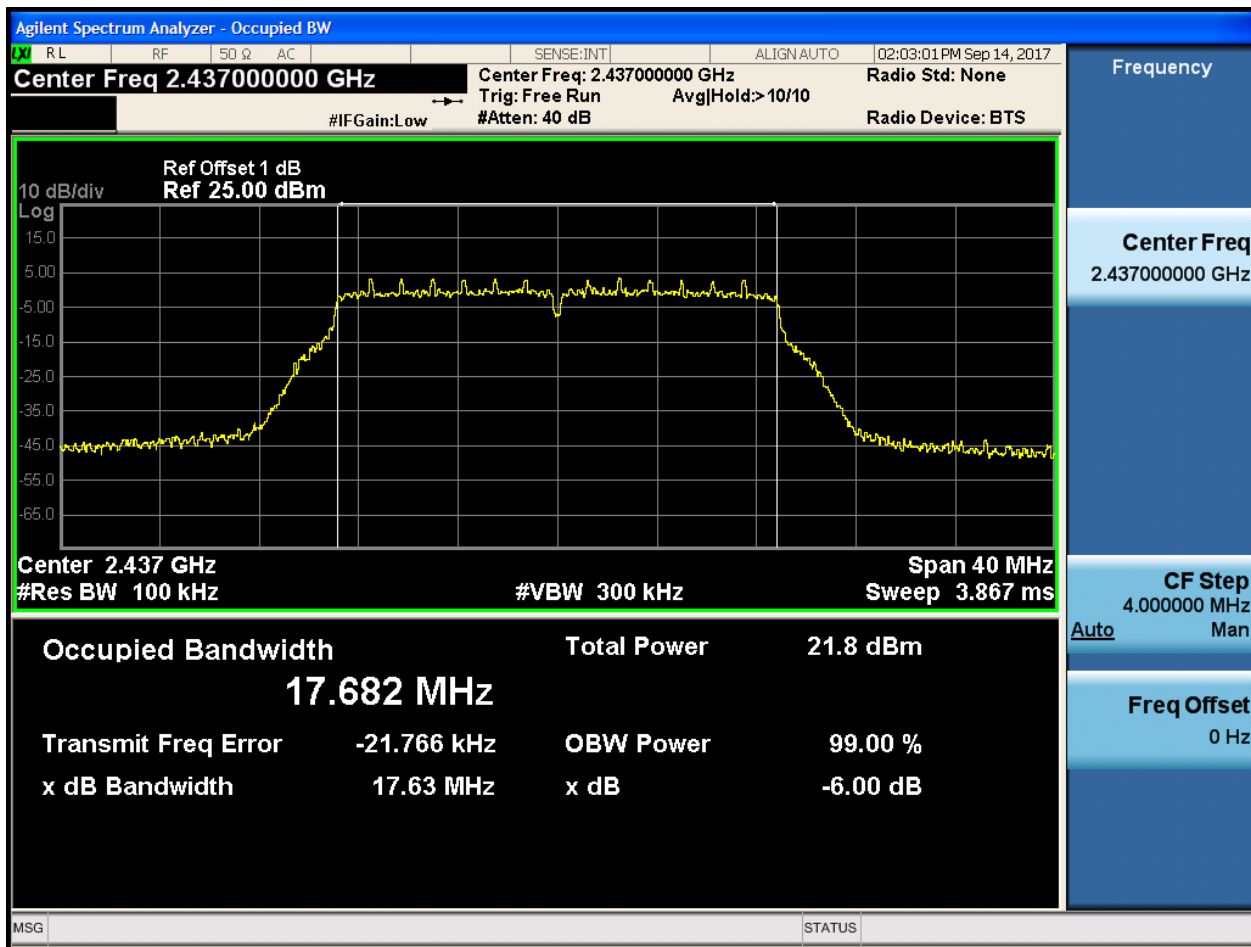


2.20 11N20m_L@Ant 2



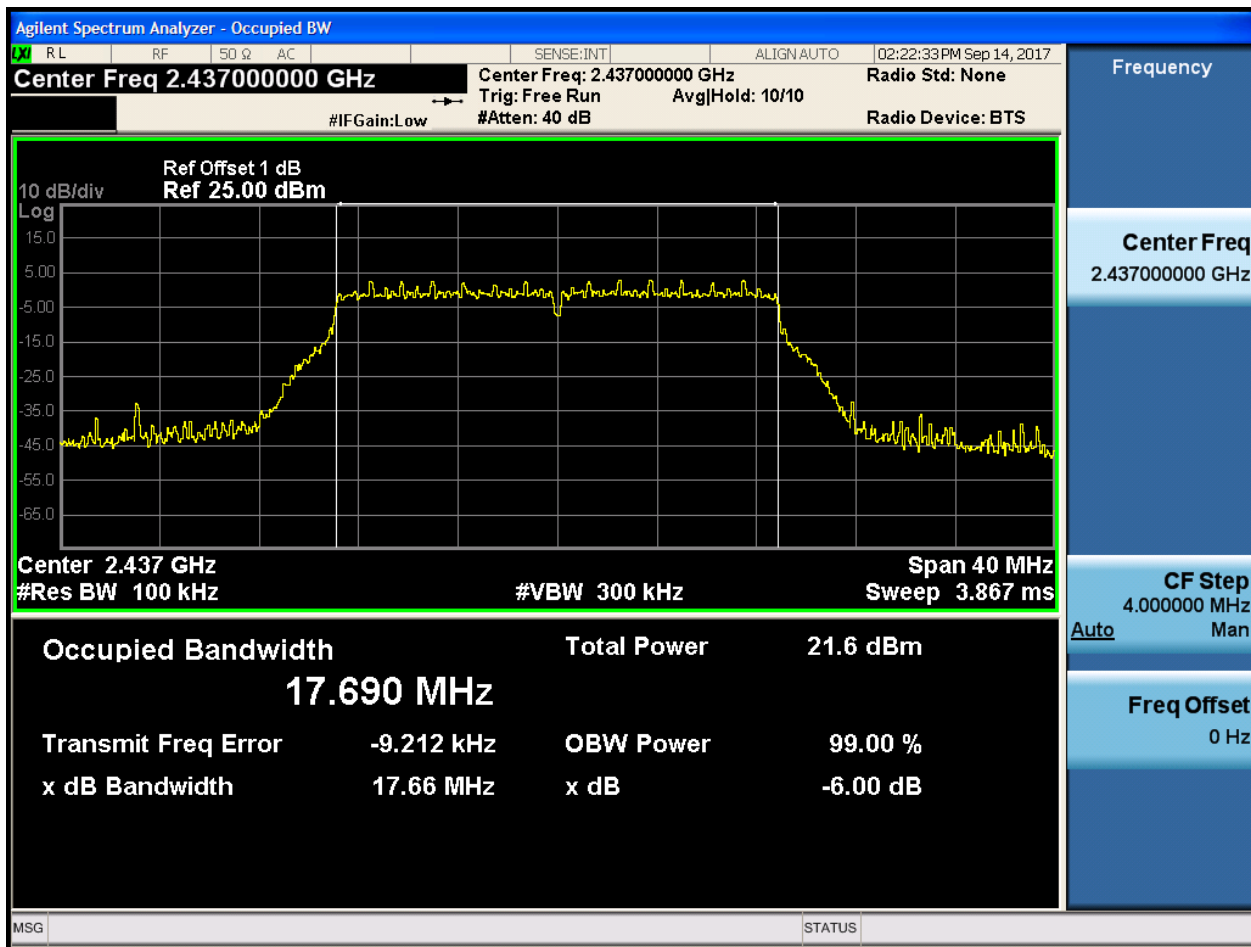


2.21 11N20m_M@Ant 1



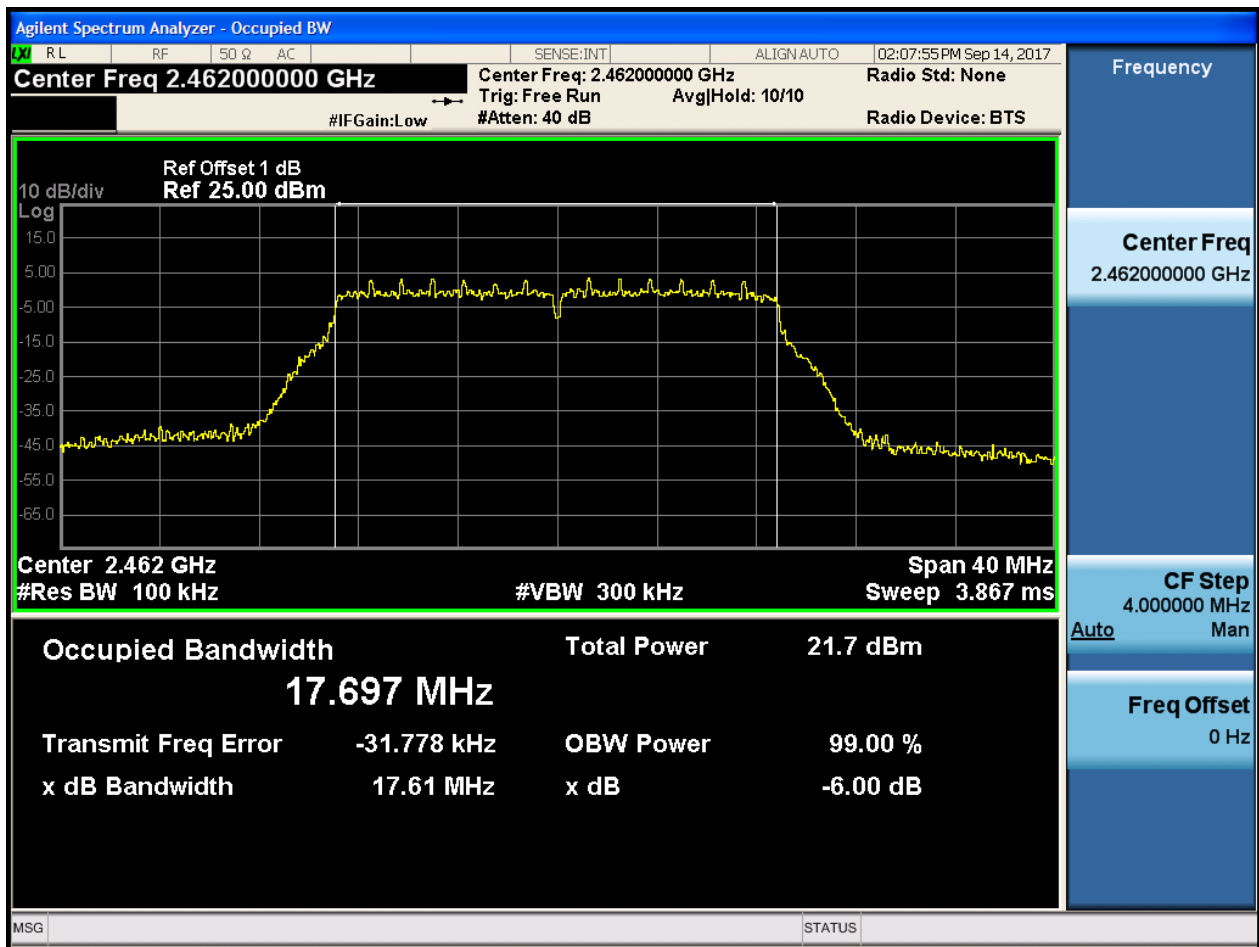


2.22 11N20m_M@Ant 2

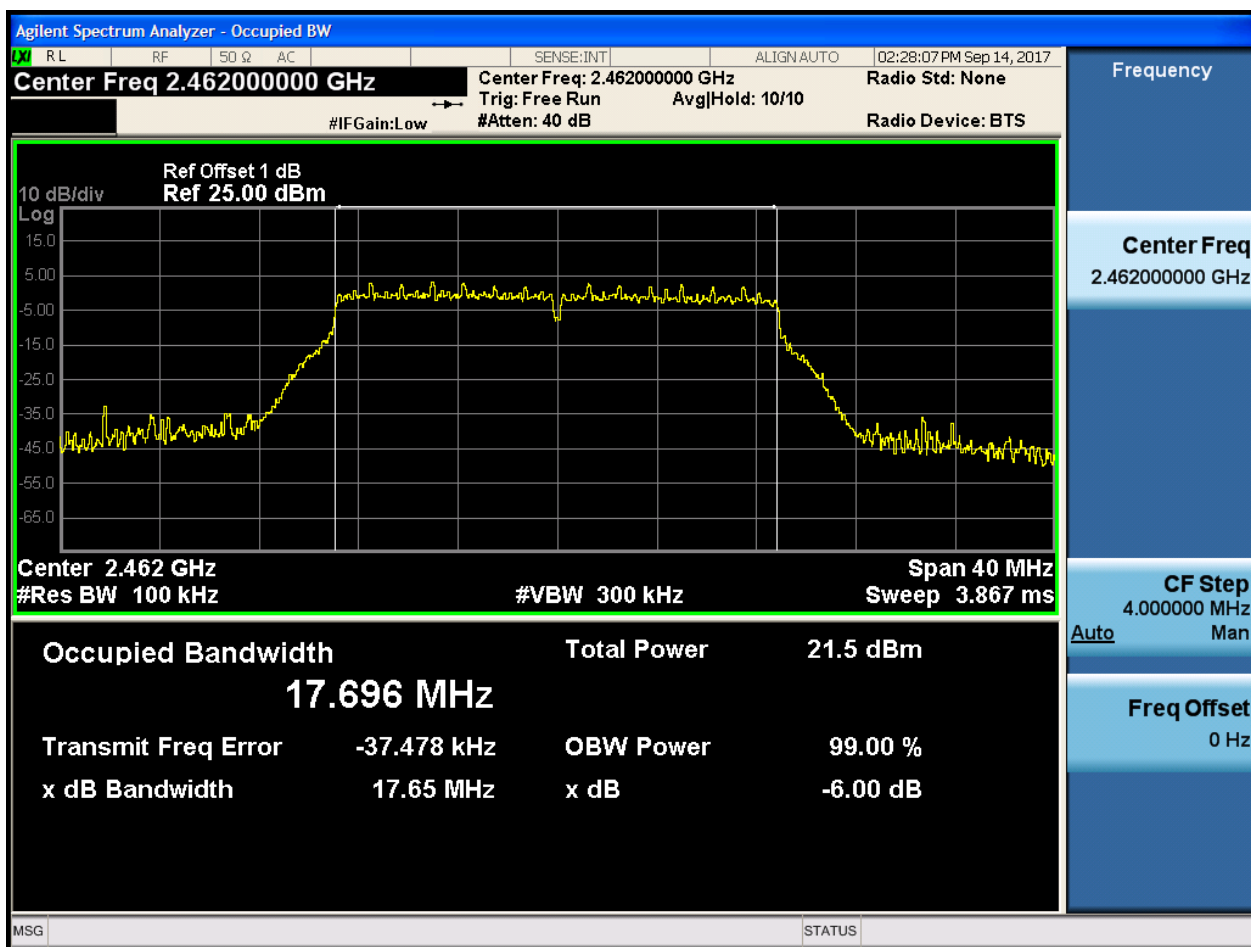




2.23 11N20m_H@Ant 1

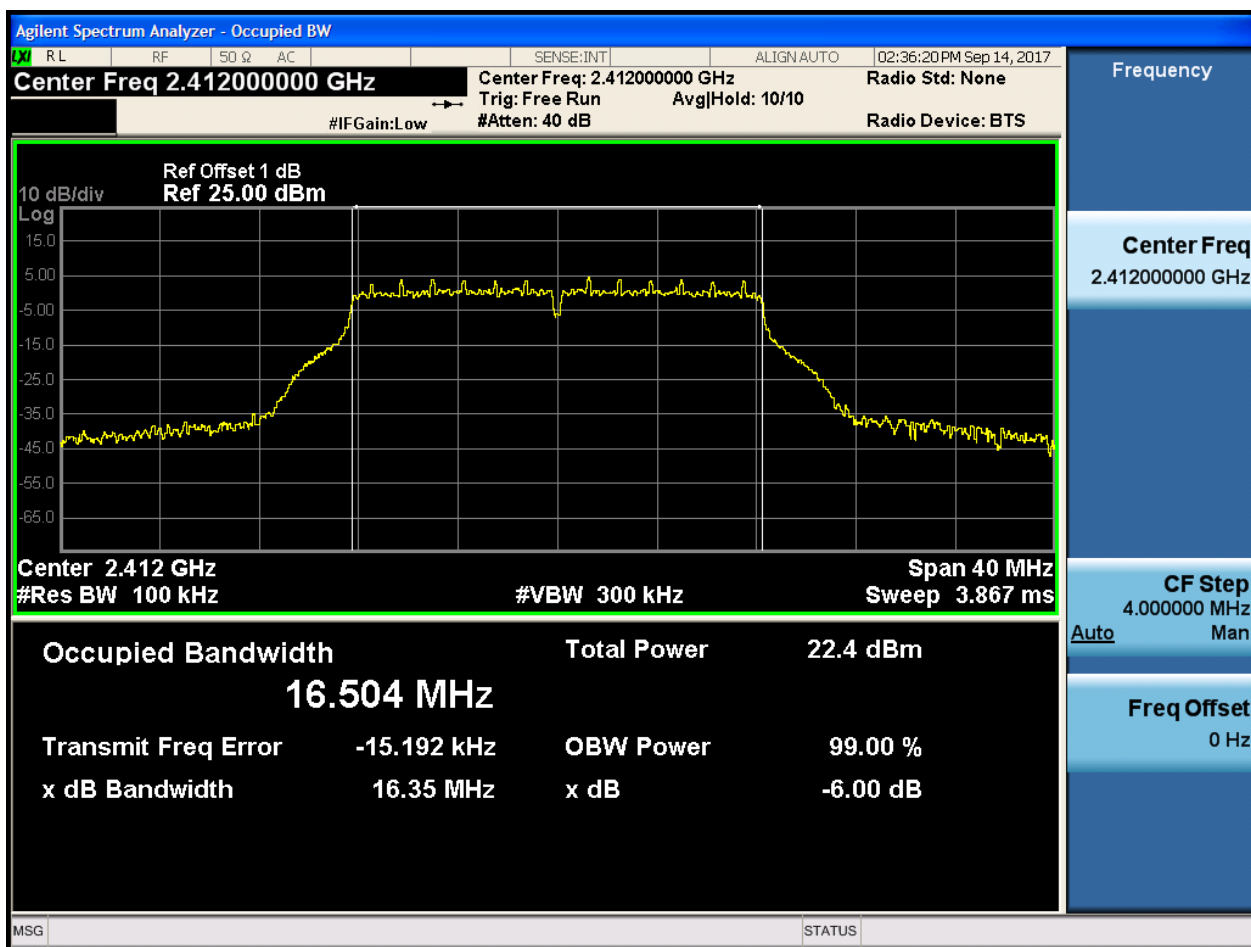


2.24 11N20m_H@Ant 2



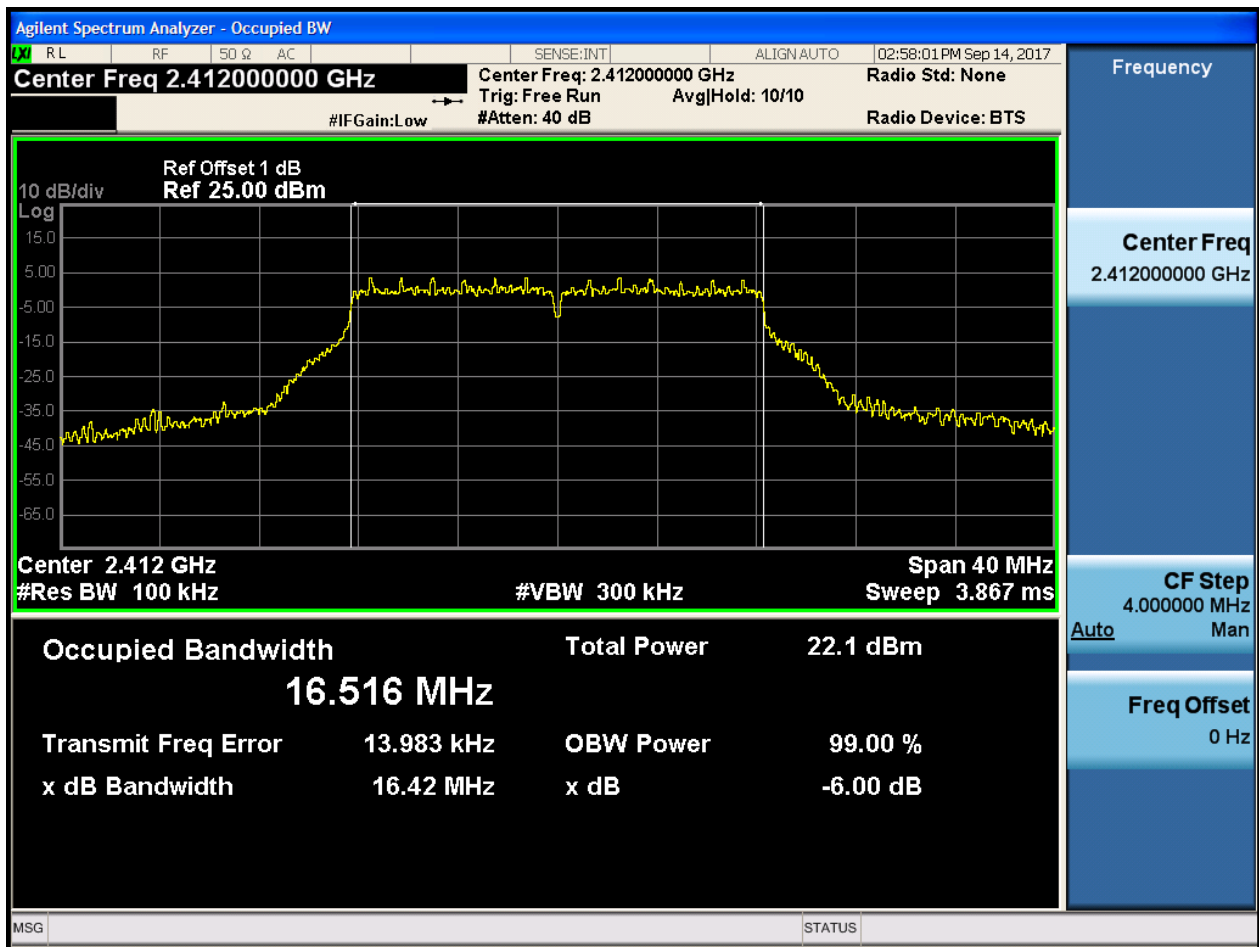


2.25 11G_CDD L@Ant 1



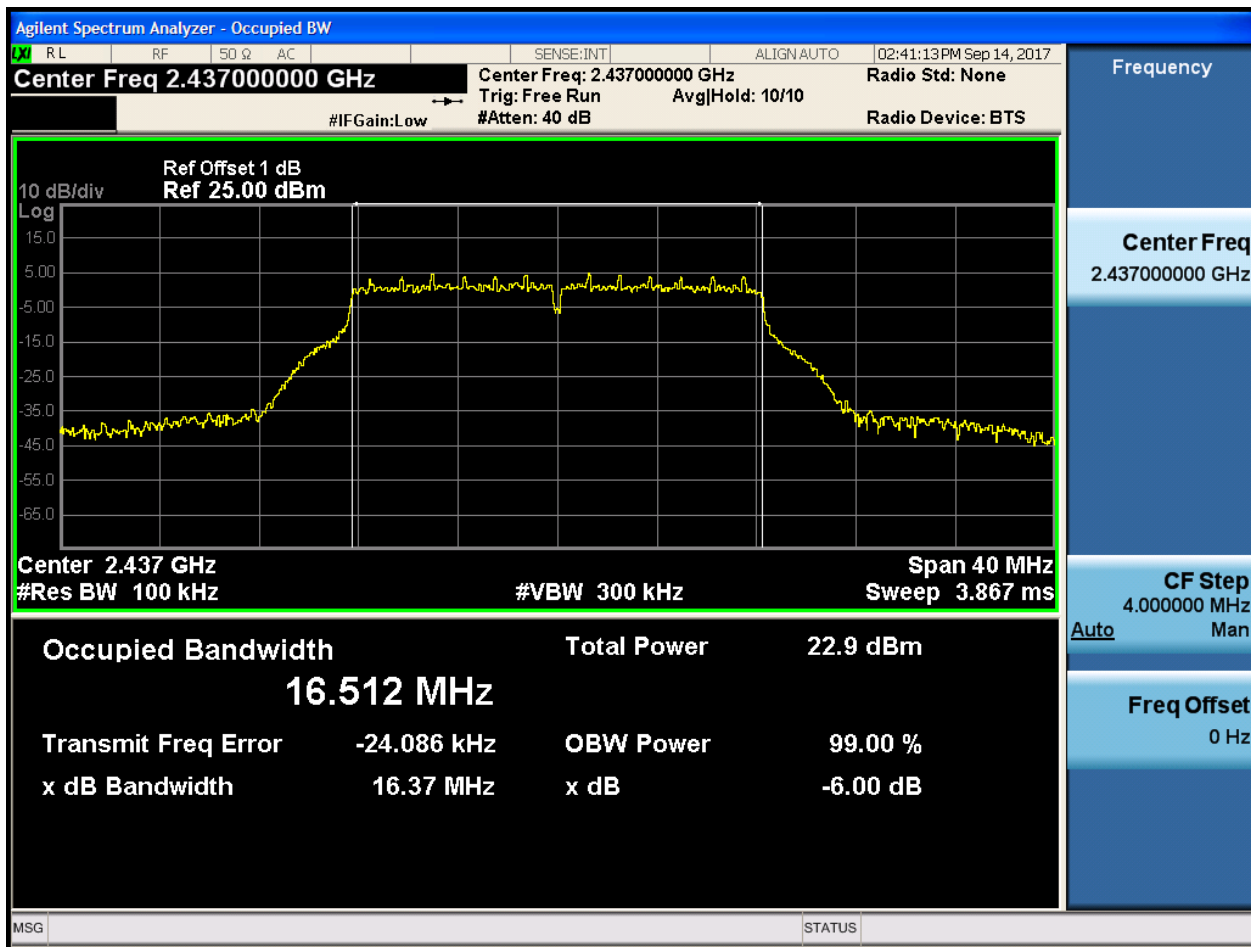


2.26 11G_CDD L@Ant 2



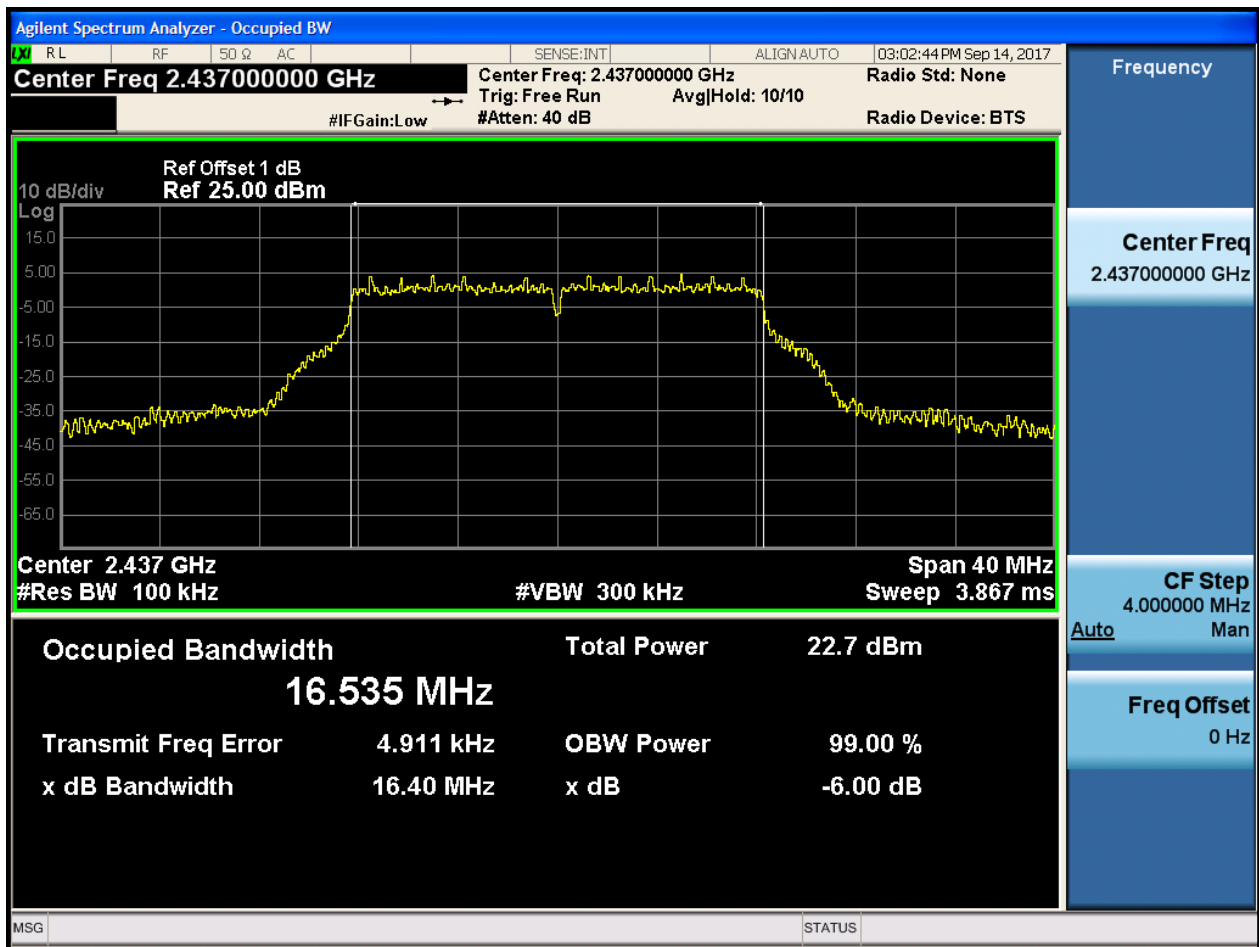


2.27 11G_CDD M@Ant 1



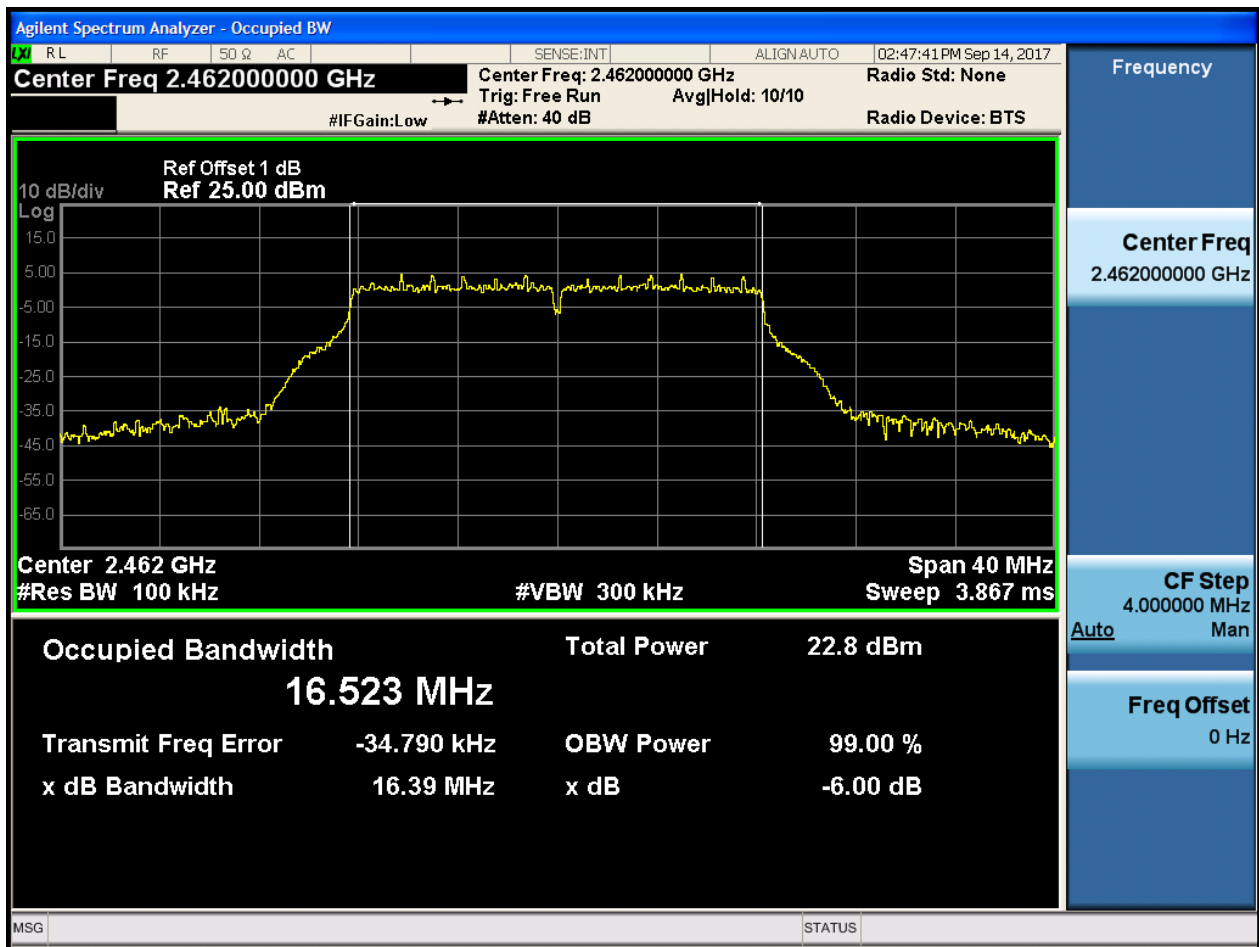


2.28 11G_CDD M@Ant 2



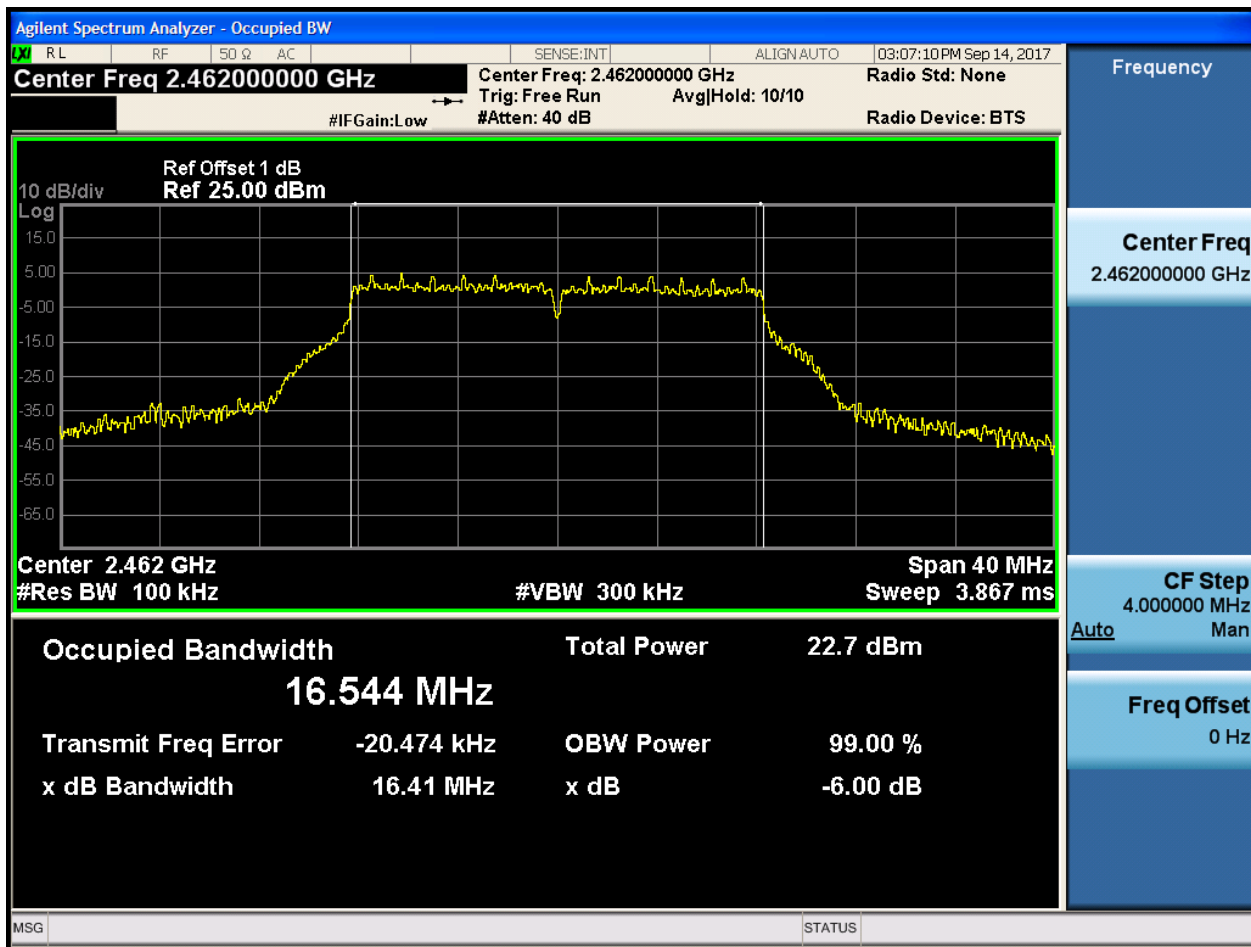


2.29 11G_CDD H@Ant 1





2.30 11G_CDD H@Ant 2



Appendix B: Occupied Bandwidth

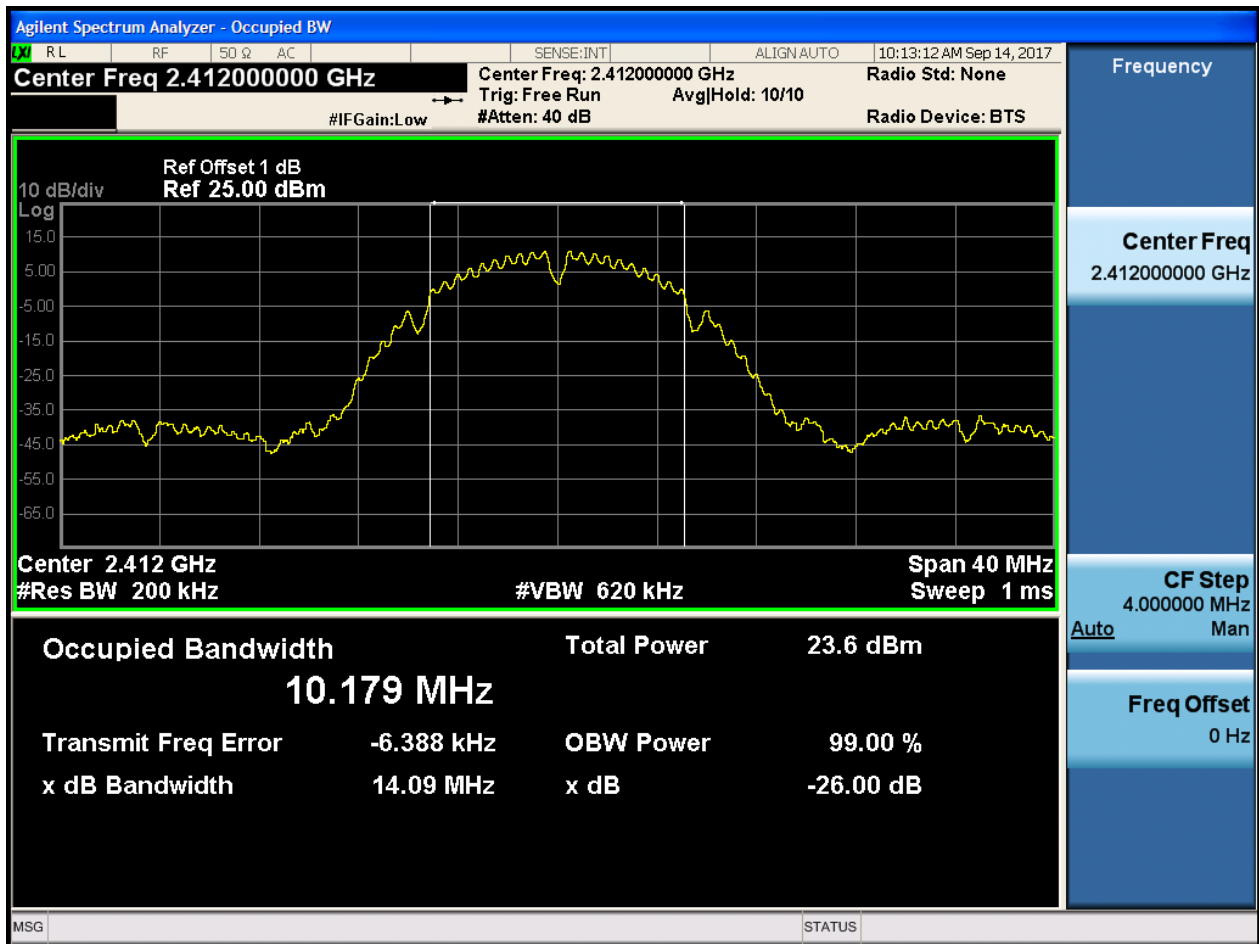
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Occupied Bandwidth [MHz]	Verdict
11B	L	2412	Ant 1	10.18	pass
11B	L	2412	Ant 2	10.45	pass
11B	M	2437	Ant 1	10.14	pass
11B	M	2437	Ant 2	10.34	pass
11B	H	2462	Ant 1	10.19	pass
11B	H	2462	Ant 2	10.47	pass
11G	L	2412	Ant 1	16.72	pass
11G	L	2412	Ant 2	16.74	pass
11G	M	2437	Ant 1	16.70	pass
11G	M	2437	Ant 2	16.74	pass
11G	H	2462	Ant 1	16.70	pass
11G	H	2462	Ant 2	16.78	pass
11N20	L	2412	Ant 1	17.83	pass
11N20	L	2412	Ant 2	17.83	pass
11N20	M	2437	Ant 1	17.84	pass
11N20	M	2437	Ant 2	17.87	pass
11N20	H	2462	Ant 1	17.88	pass
11N20	H	2462	Ant 2	17.89	pass
11N20m	L	2412	Ant 1	17.86	pass
11N20m	L	2412	Ant 2	17.80	pass
11N20m	M	2437	Ant 1	17.84	pass
11N20m	M	2437	Ant 2	17.83	pass
11N20m	H	2462	Ant 1	17.83	pass
11N20m	H	2462	Ant 2	17.86	pass
11G CDD	L	2412	Ant 1	16.72	pass
11G CDD	L	2412	Ant 2	16.74	pass
11G CDD	M	2437	Ant 1	16.72	pass
11G CDD	M	2437	Ant 2	16.74	pass
11G CDD	H	2462	Ant 1	16.73	pass
11G CDD	H	2462	Ant 2	16.73	pass

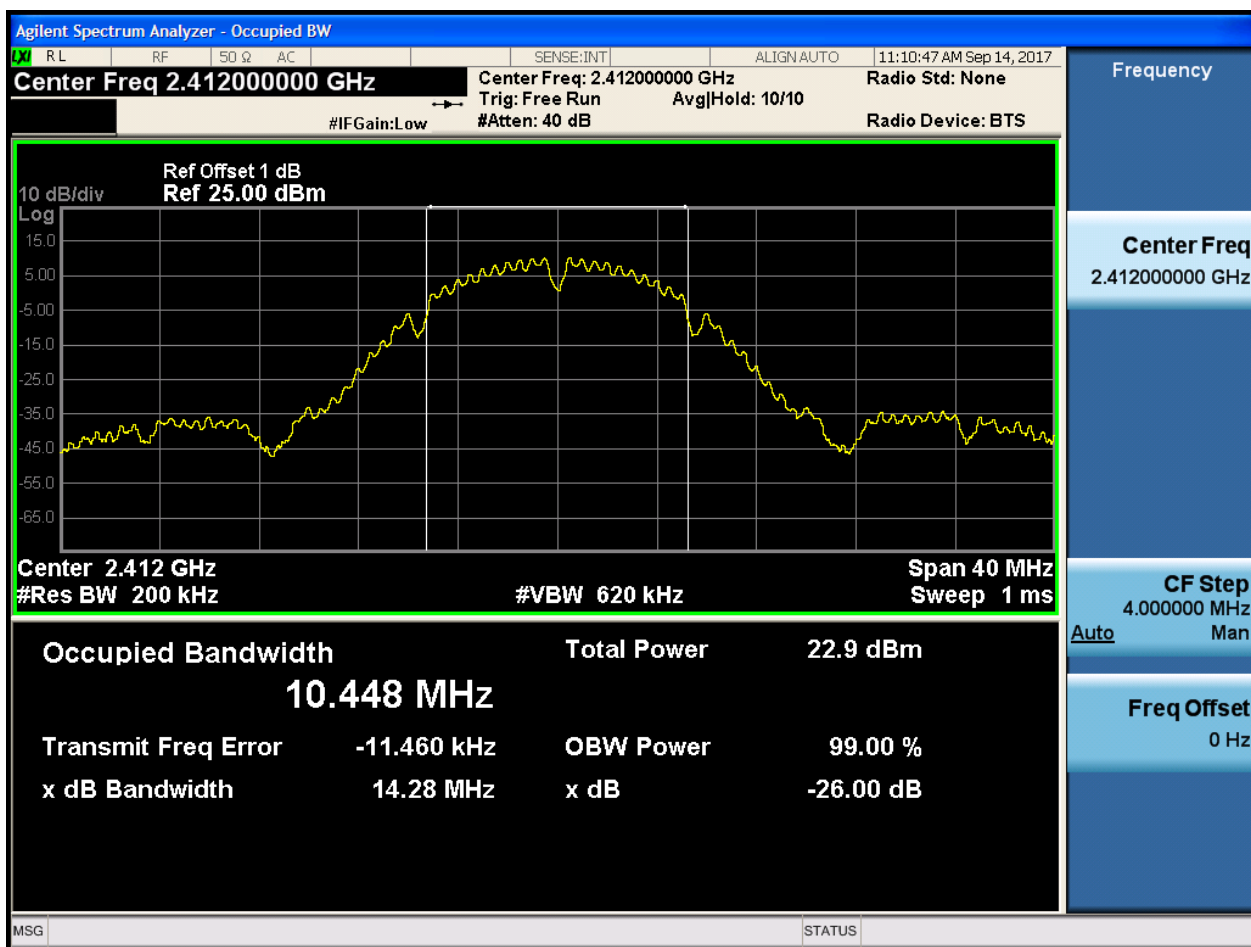
Part II - Test Plots

2.1 11B_L@Ant 1



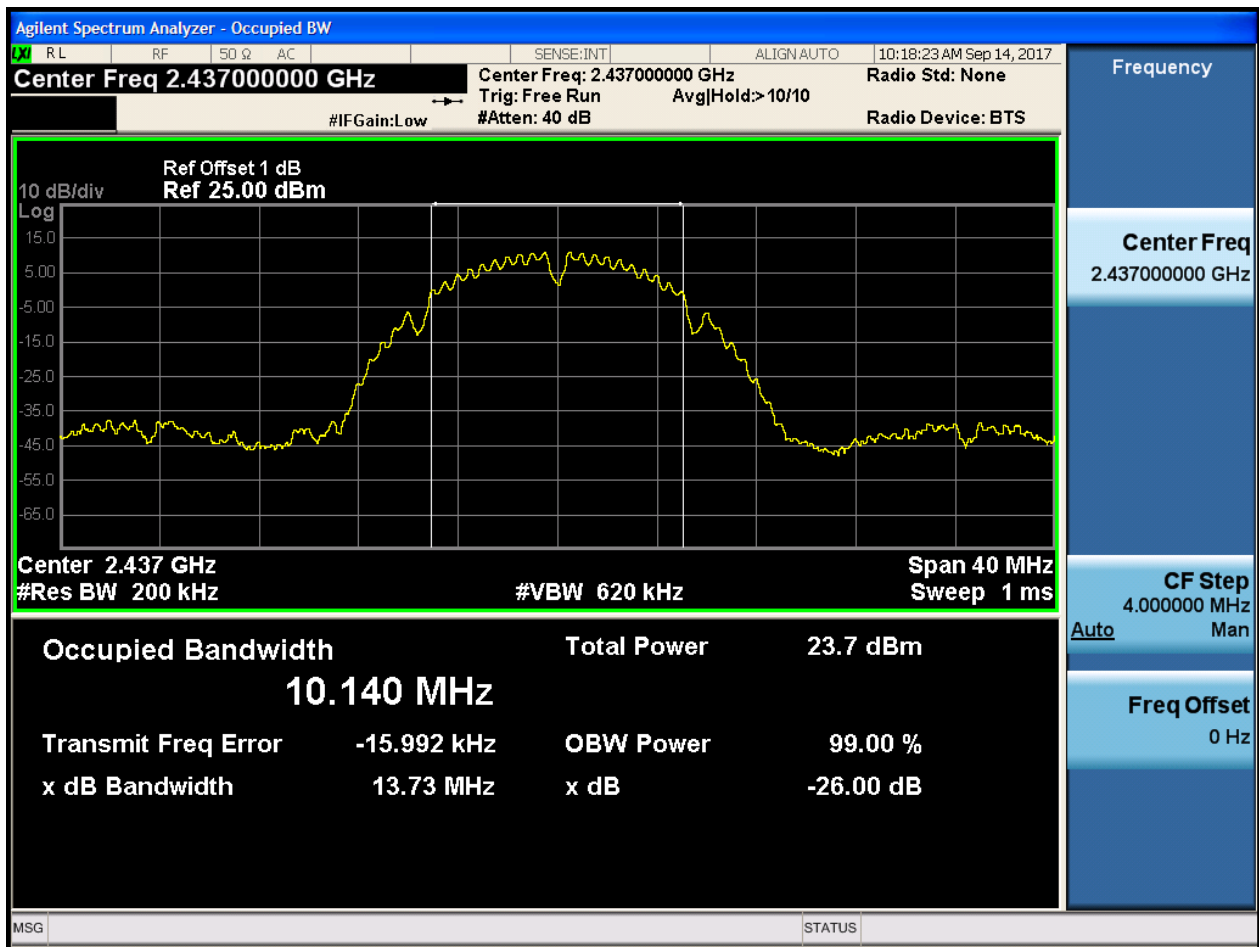


2.2 11B_L@Ant 2



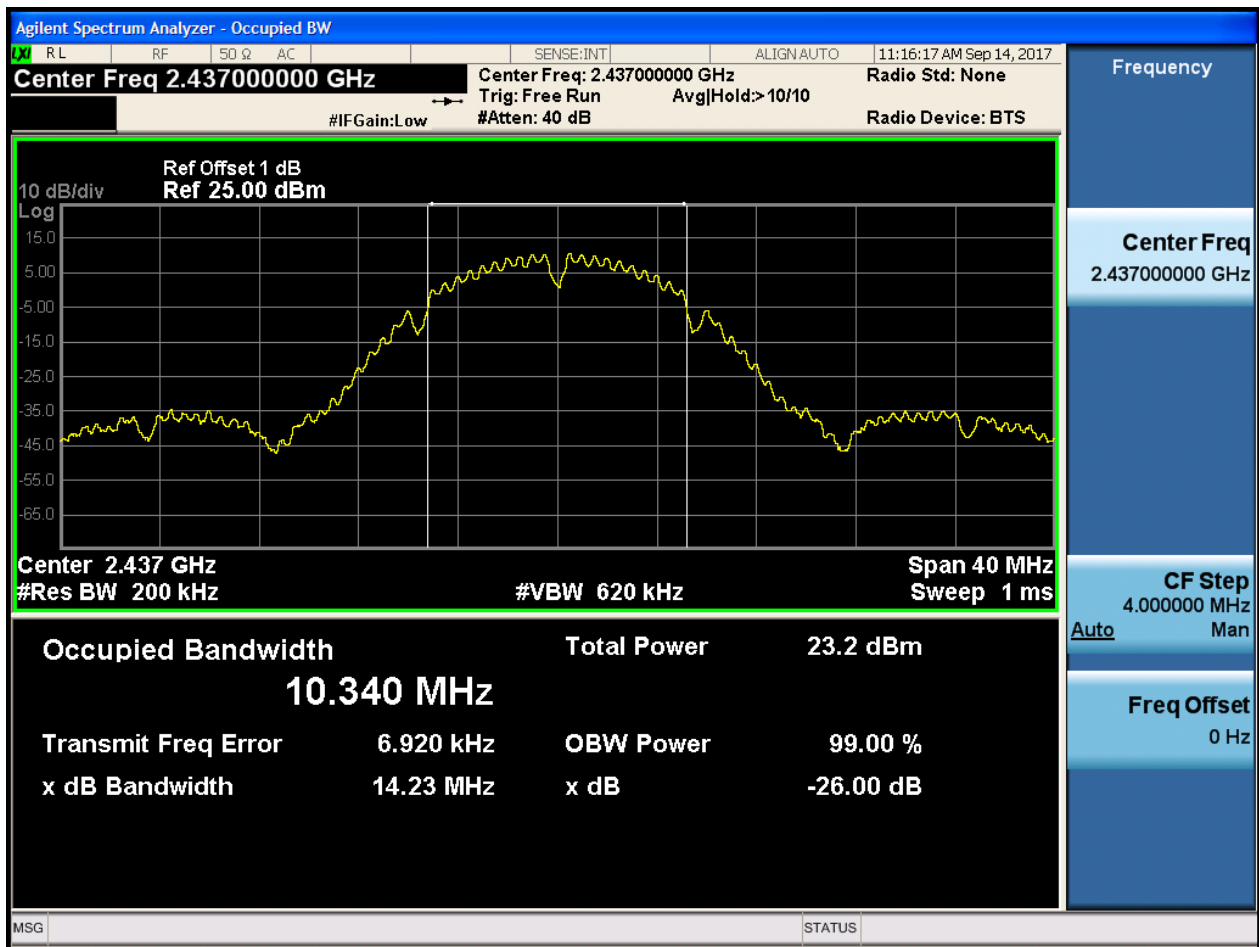


2.3 11B_M@Ant 1



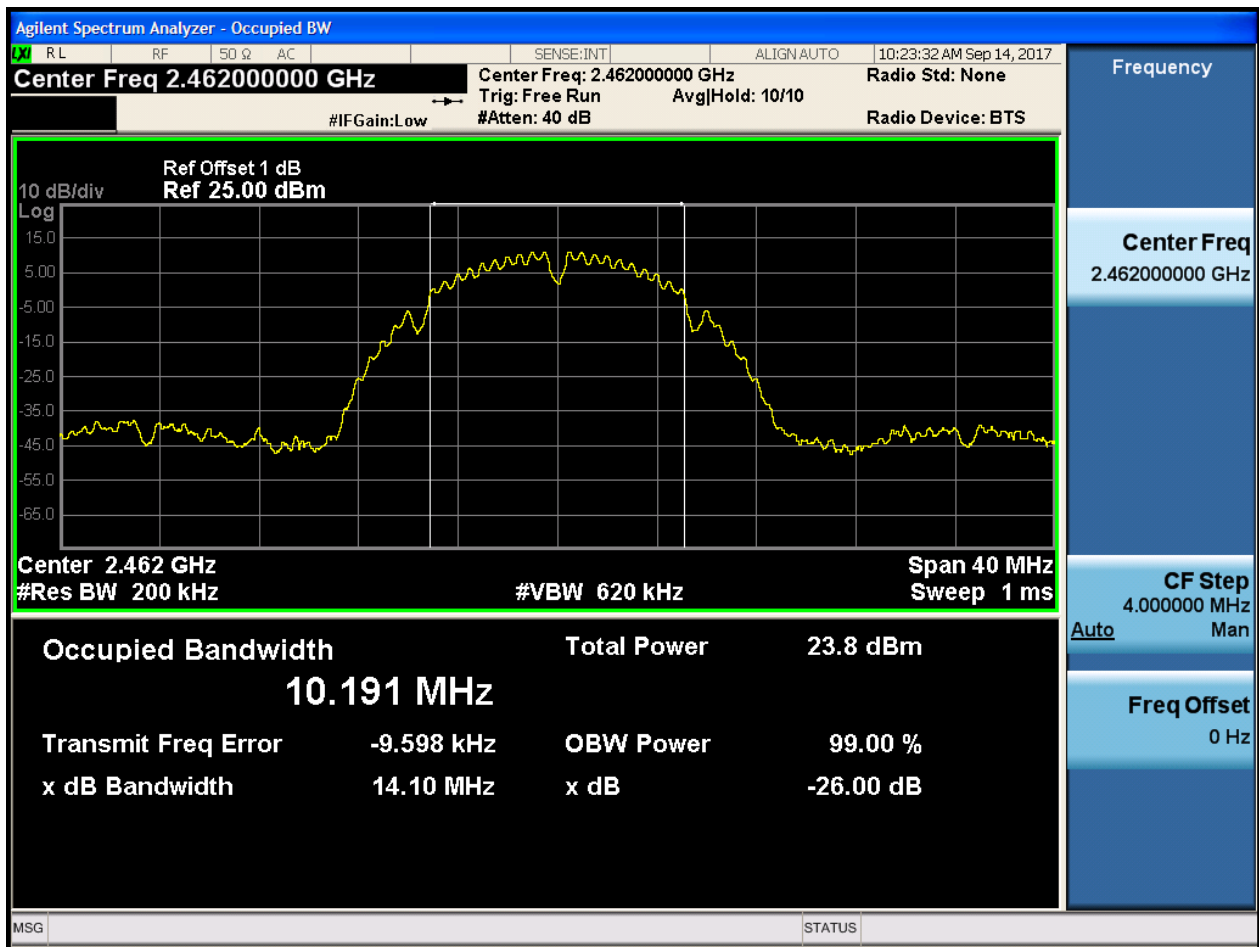


2.4 11B_M@Ant 2



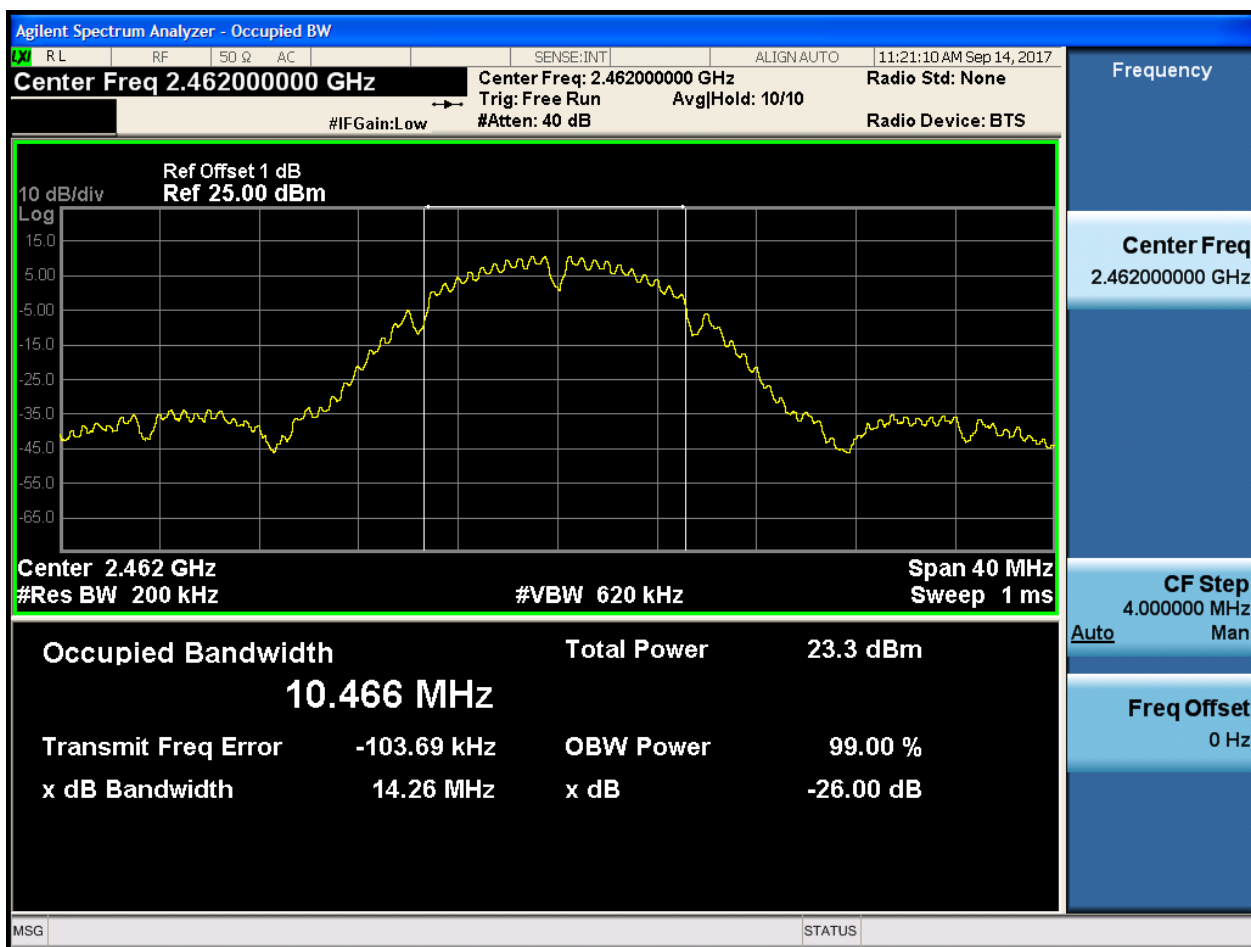


2.5 11B_H@Ant 1



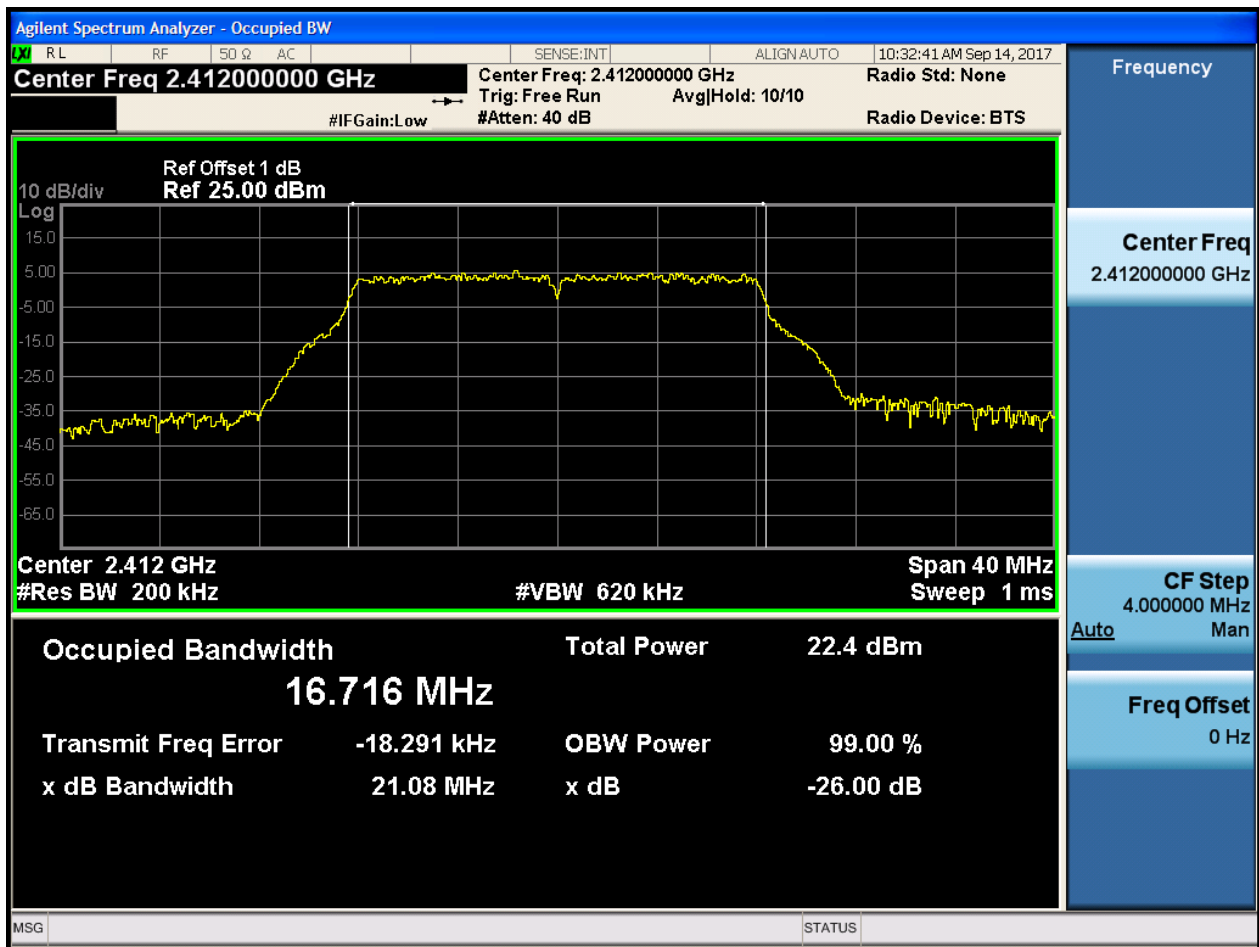


2.6 11B_H@Ant 2



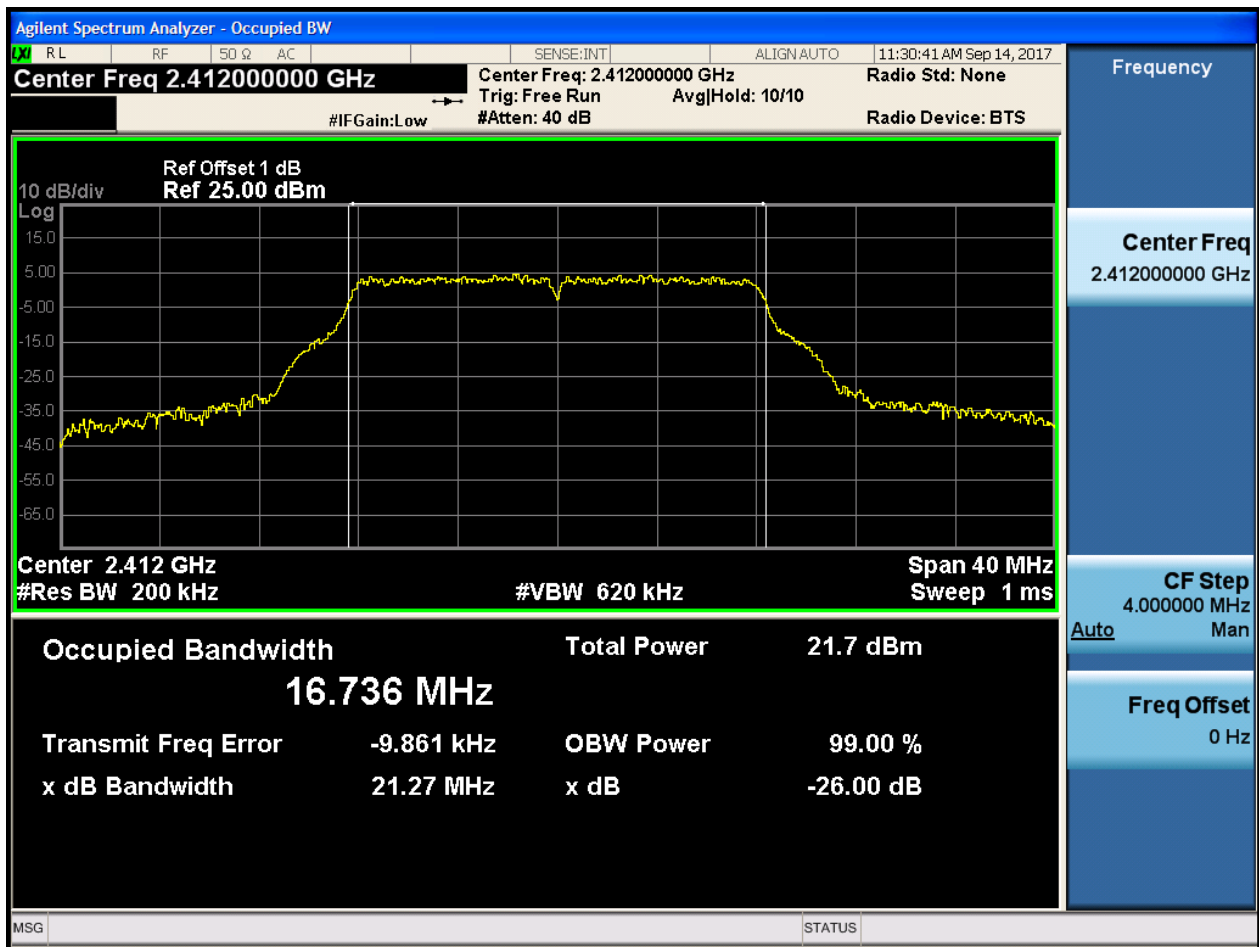


2.7 11G_L@Ant 1



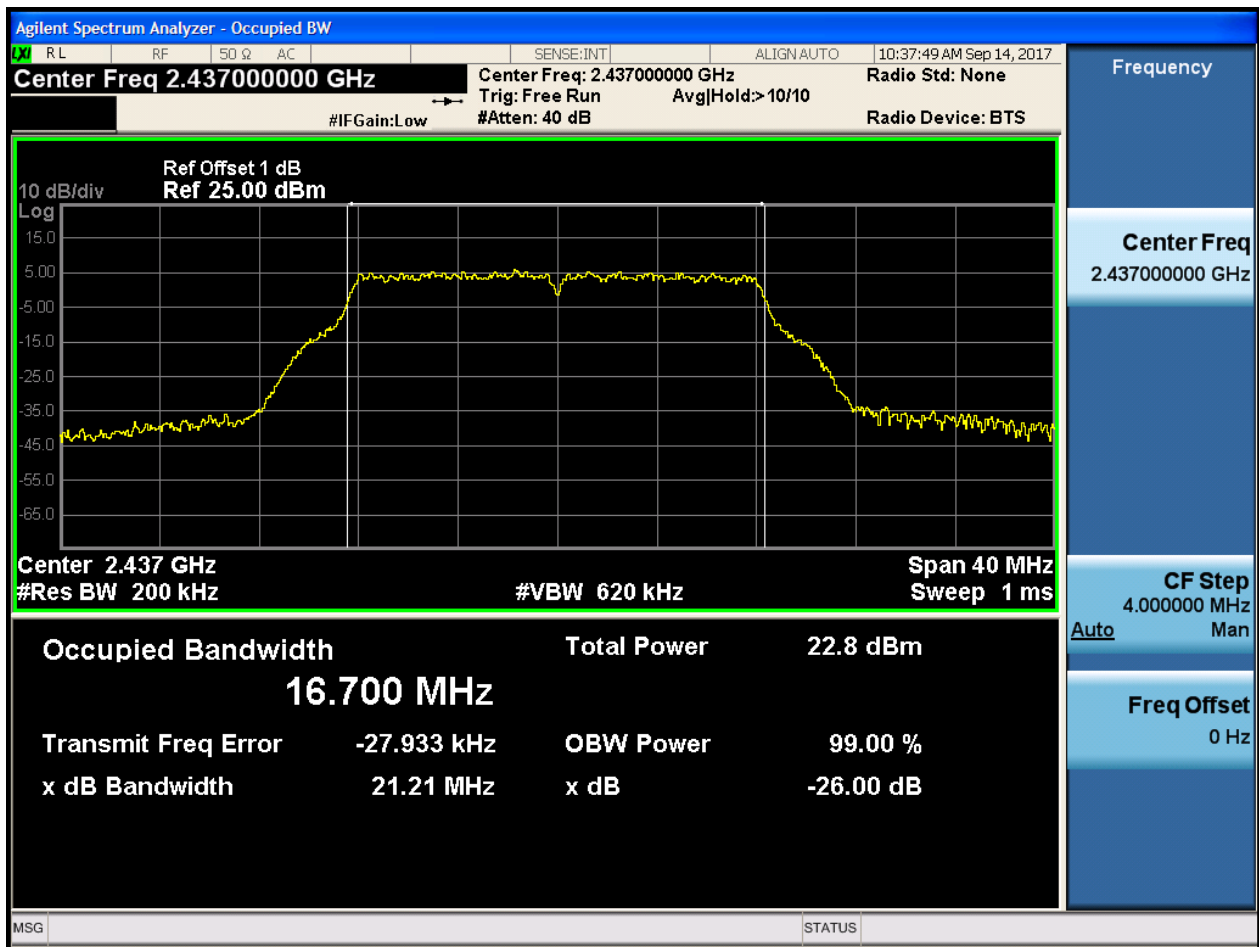


2.8 11G_L@Ant 2



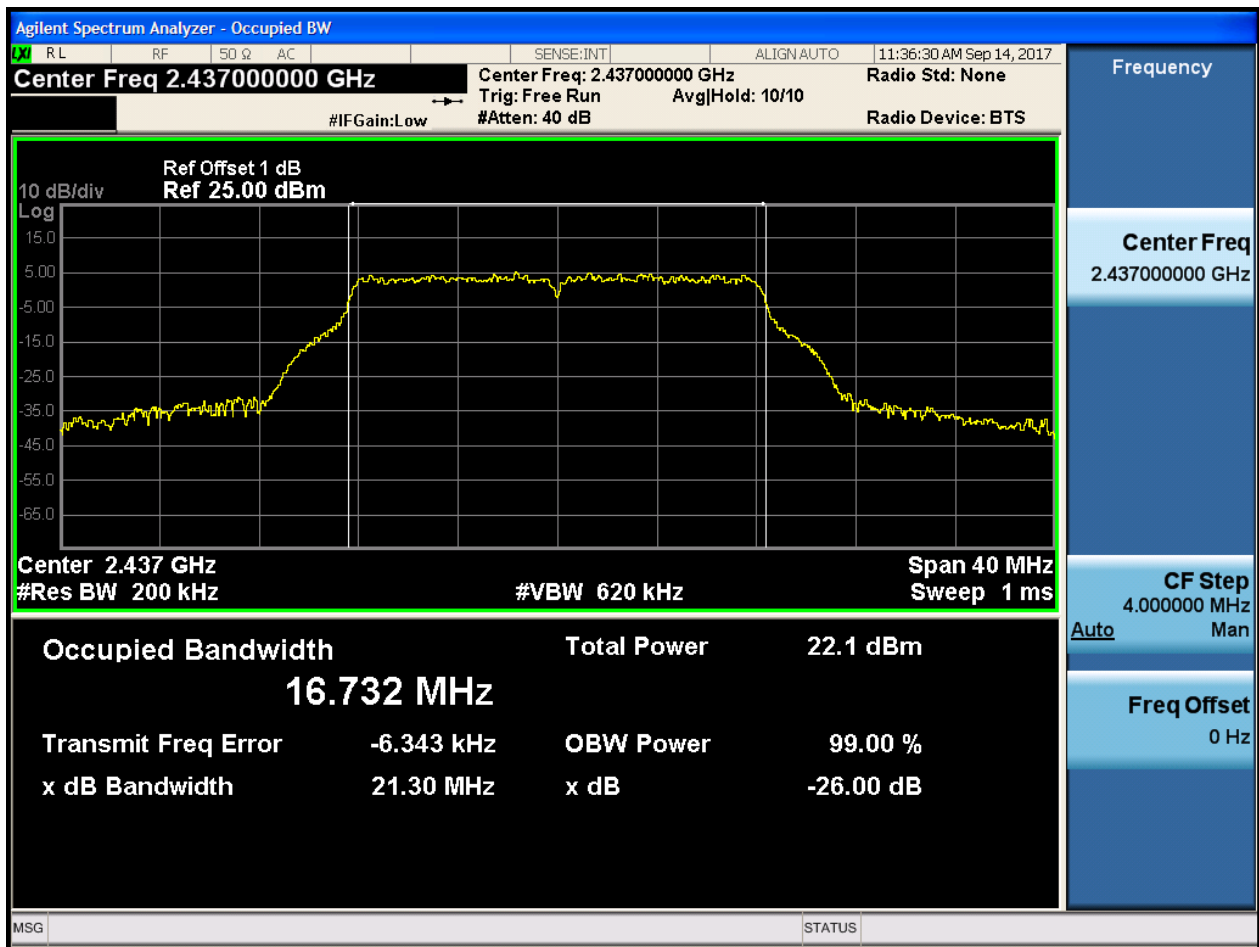


2.9 11G_M@Ant 1



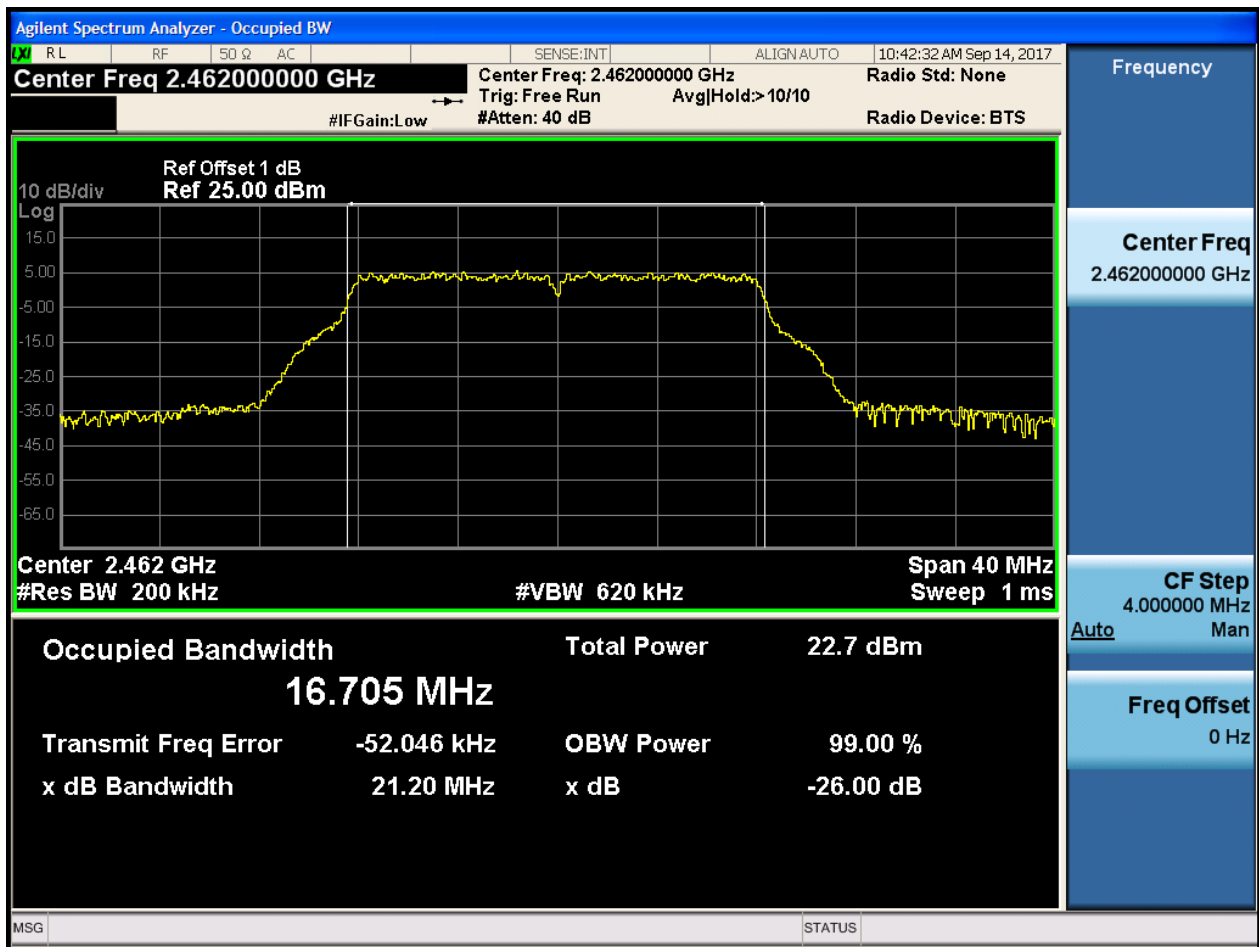


2.10 11G_M@Ant 2



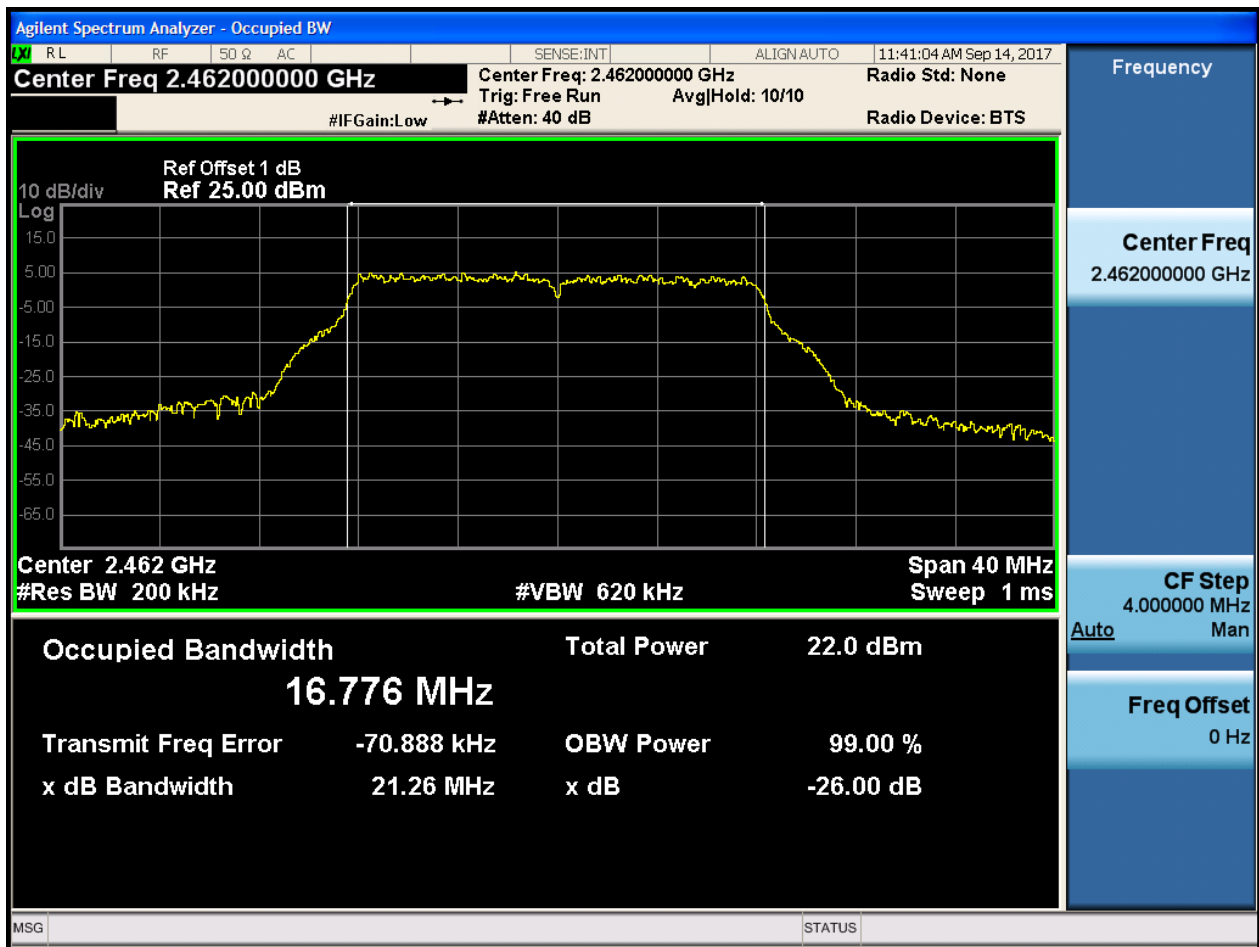


2.11 11G_H@Ant 1



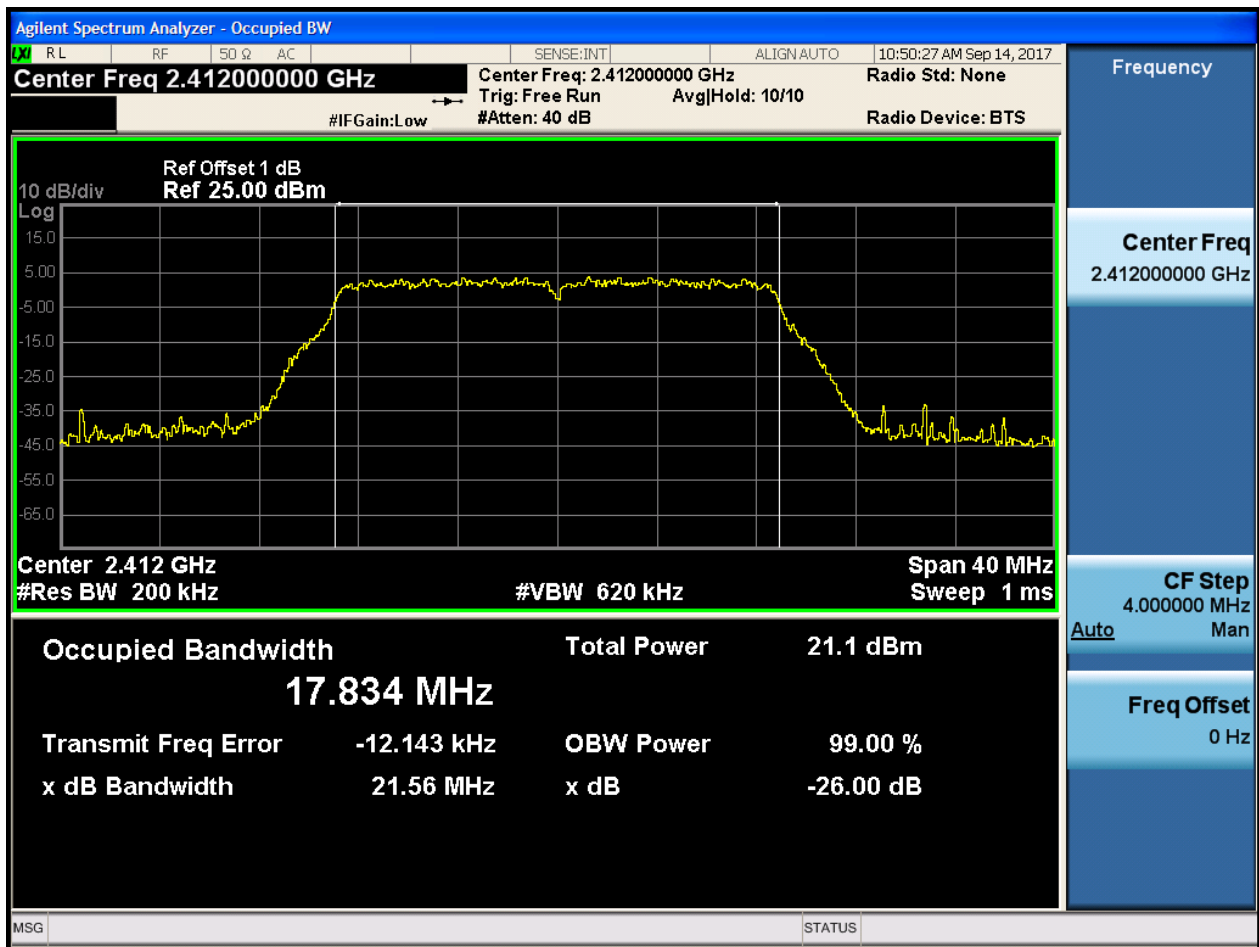


2.12 11G_H@Ant 2



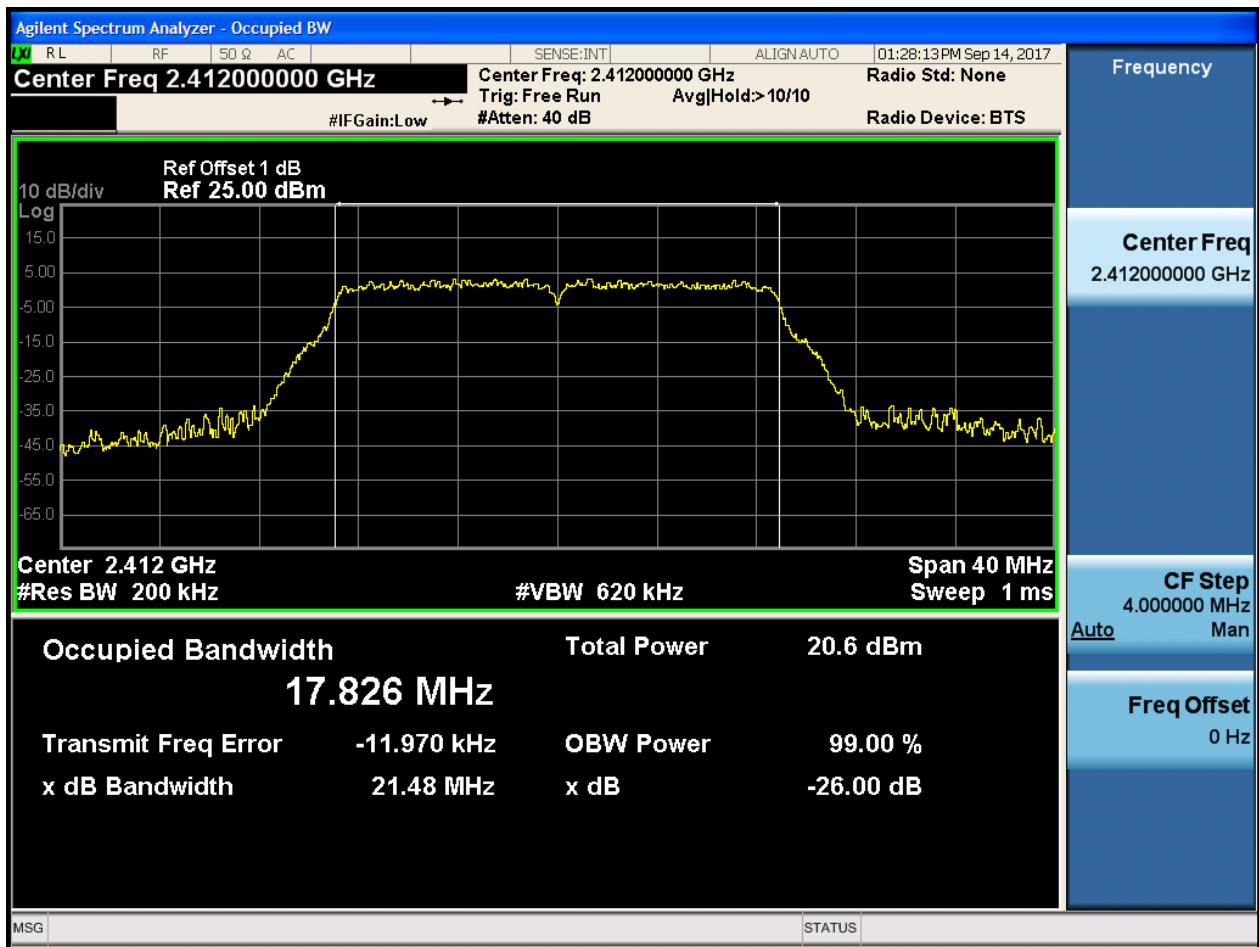


2.13 11N20_L@Ant 1



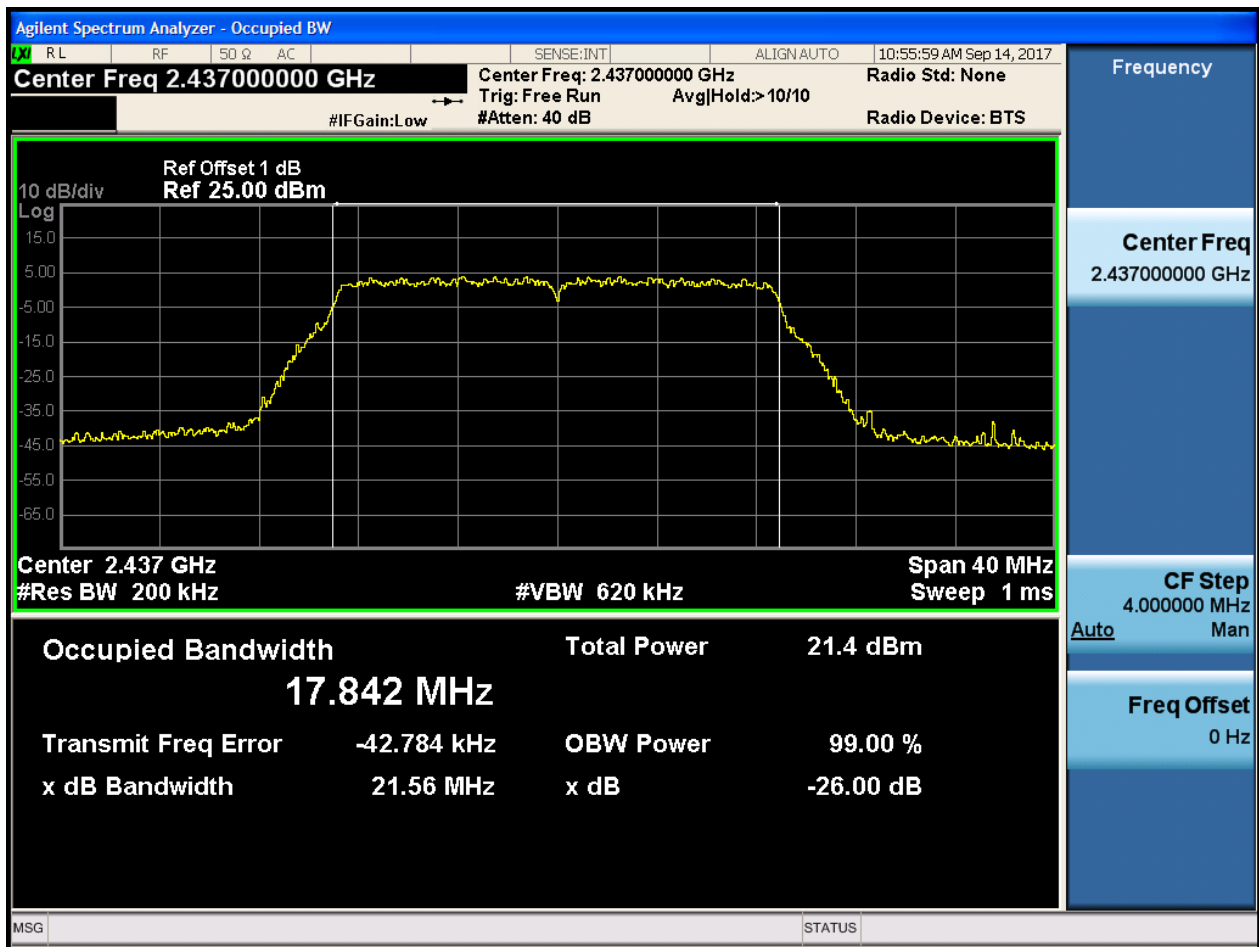


2.14 11N20_L@Ant 2



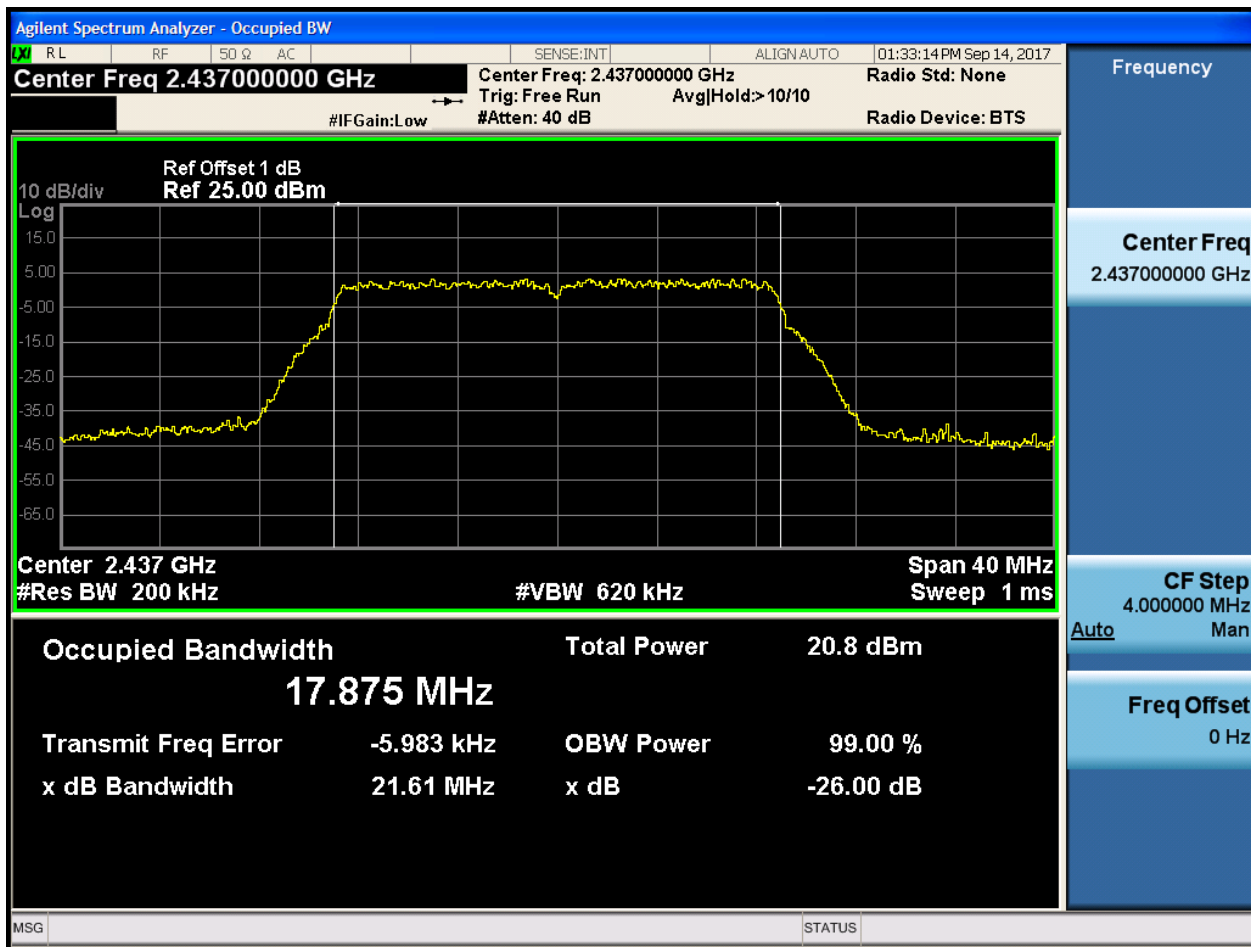


2.15 11N20_M@Ant 1



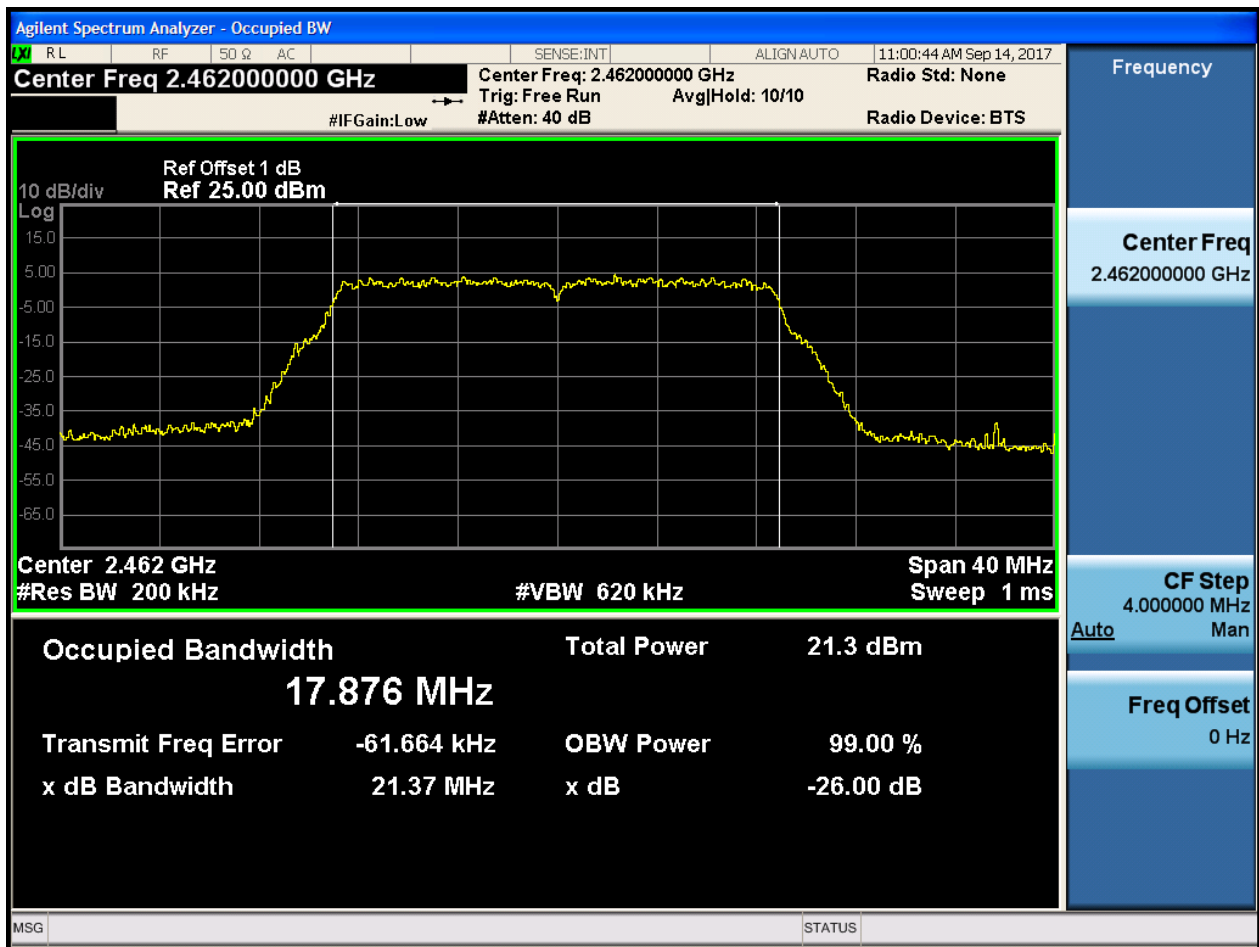


2.16 11N20_M@Ant 2



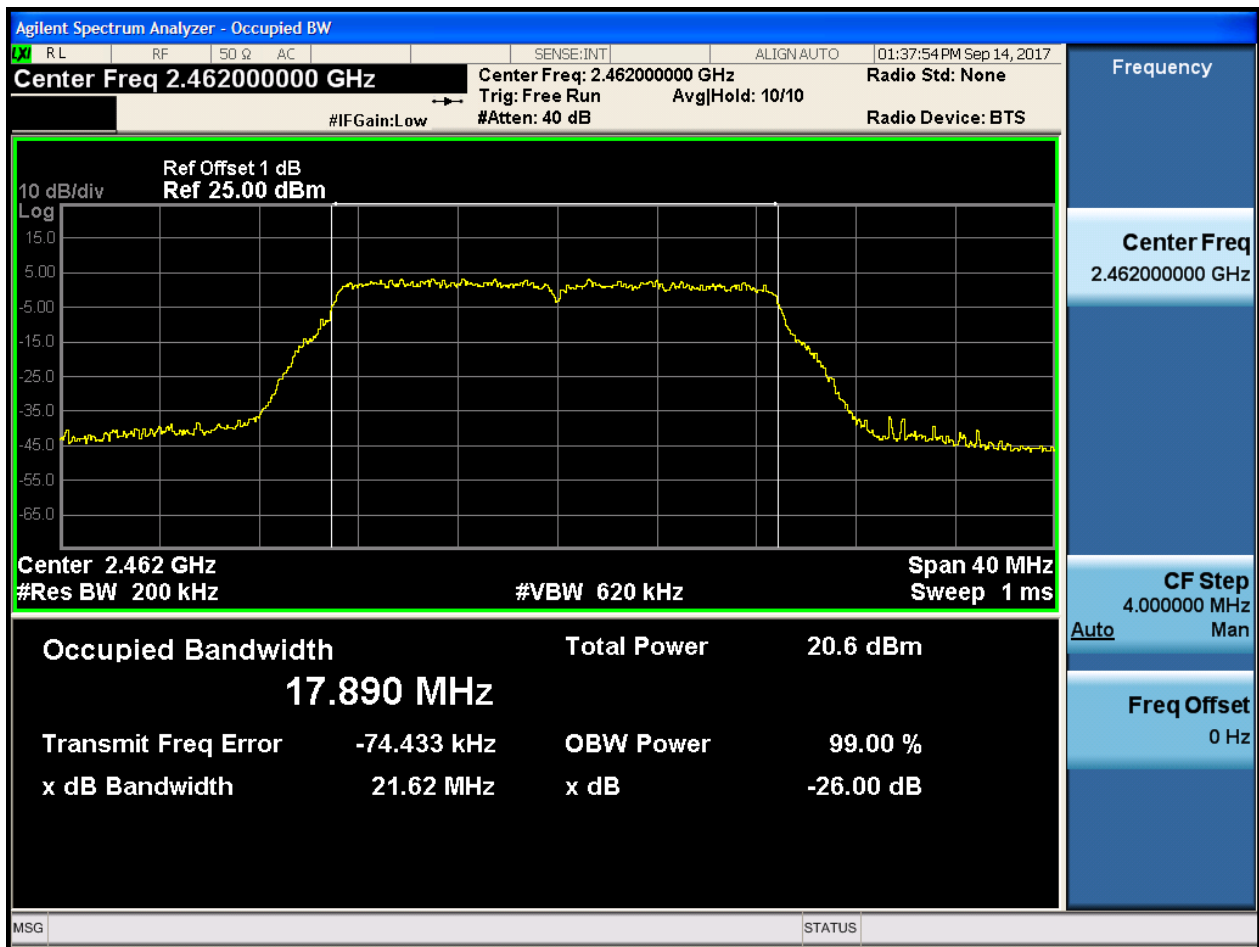


2.17 11N20_H@Ant 1



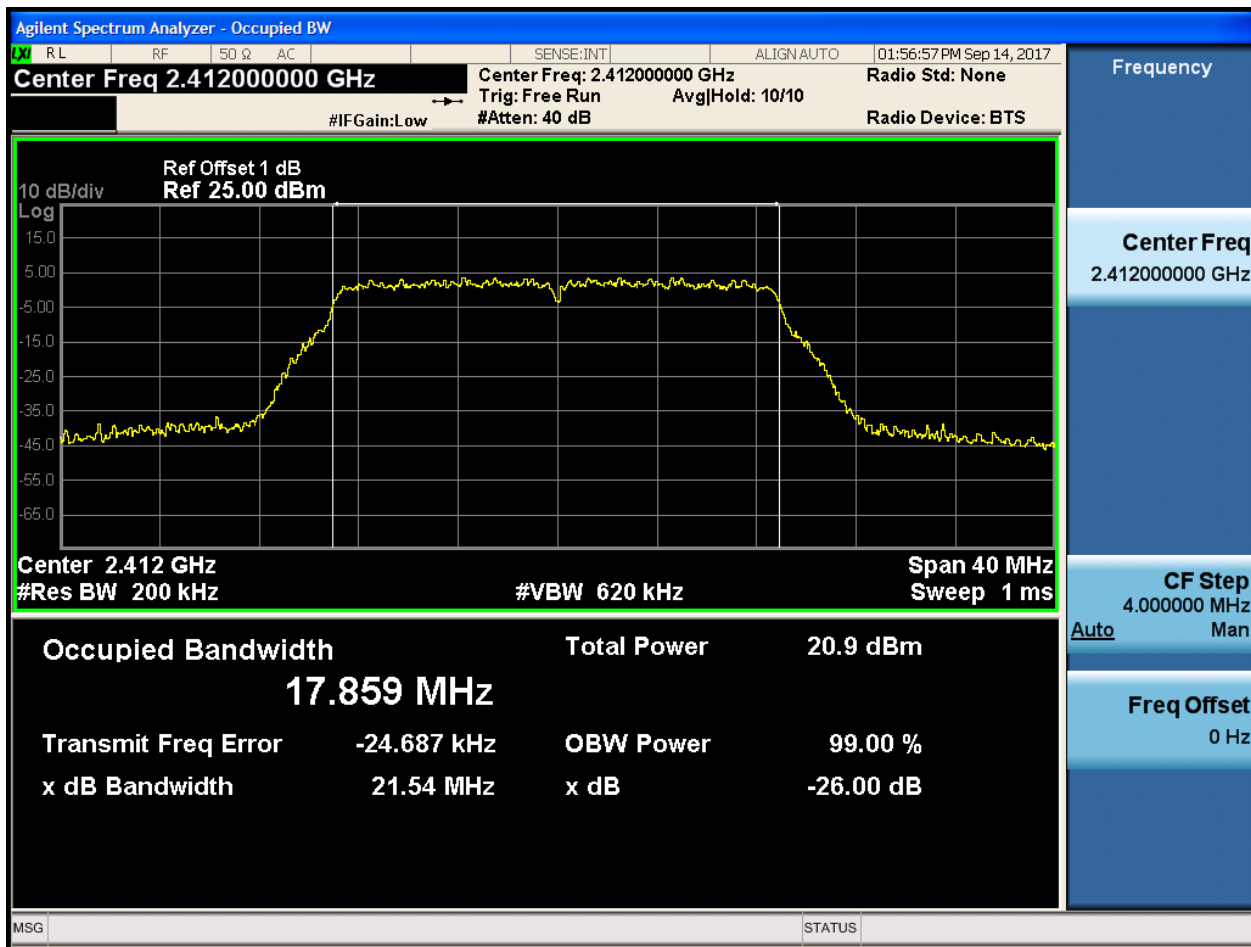


2.18 11N20_H@Ant 2



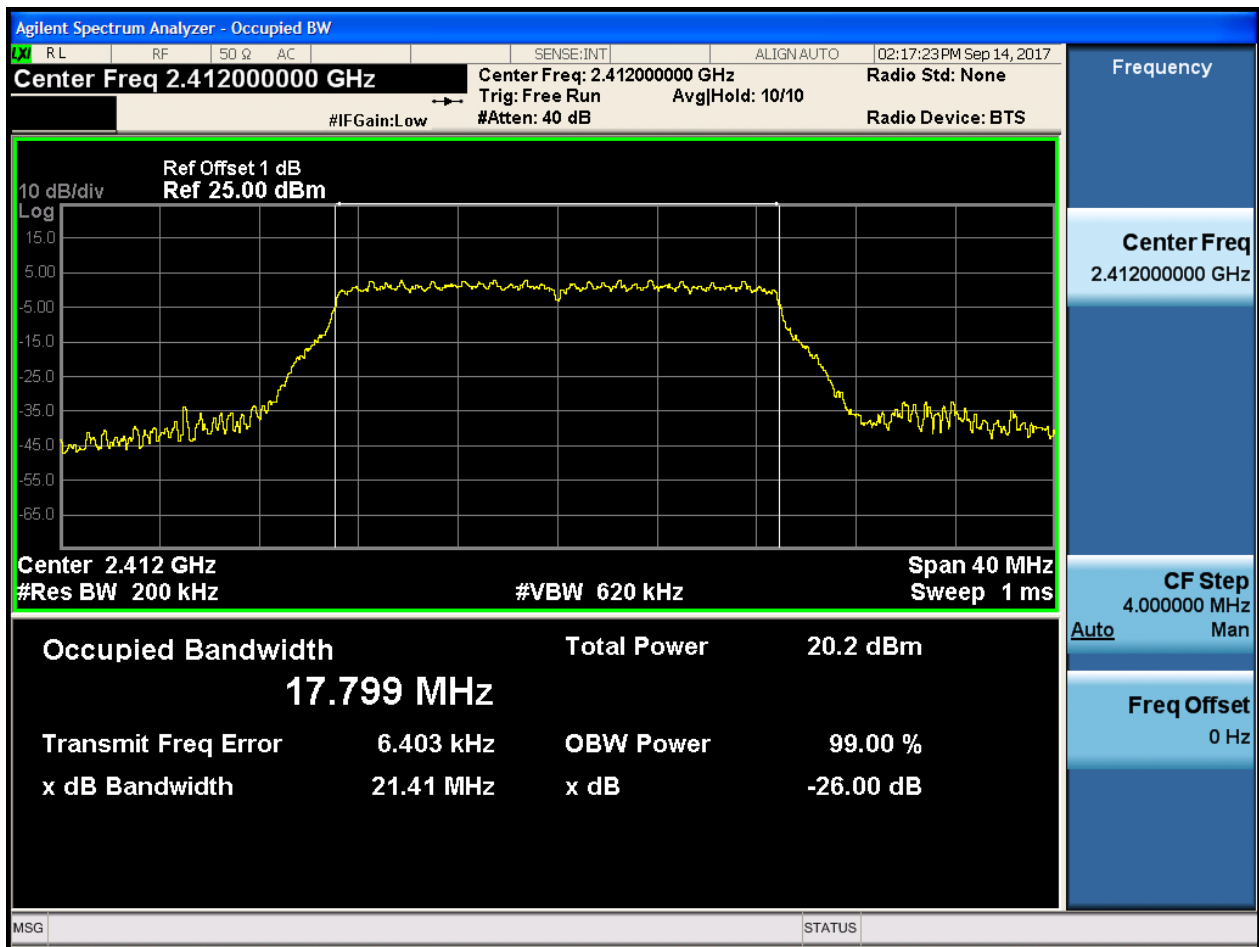


2.19 11N20m_L@Ant 1



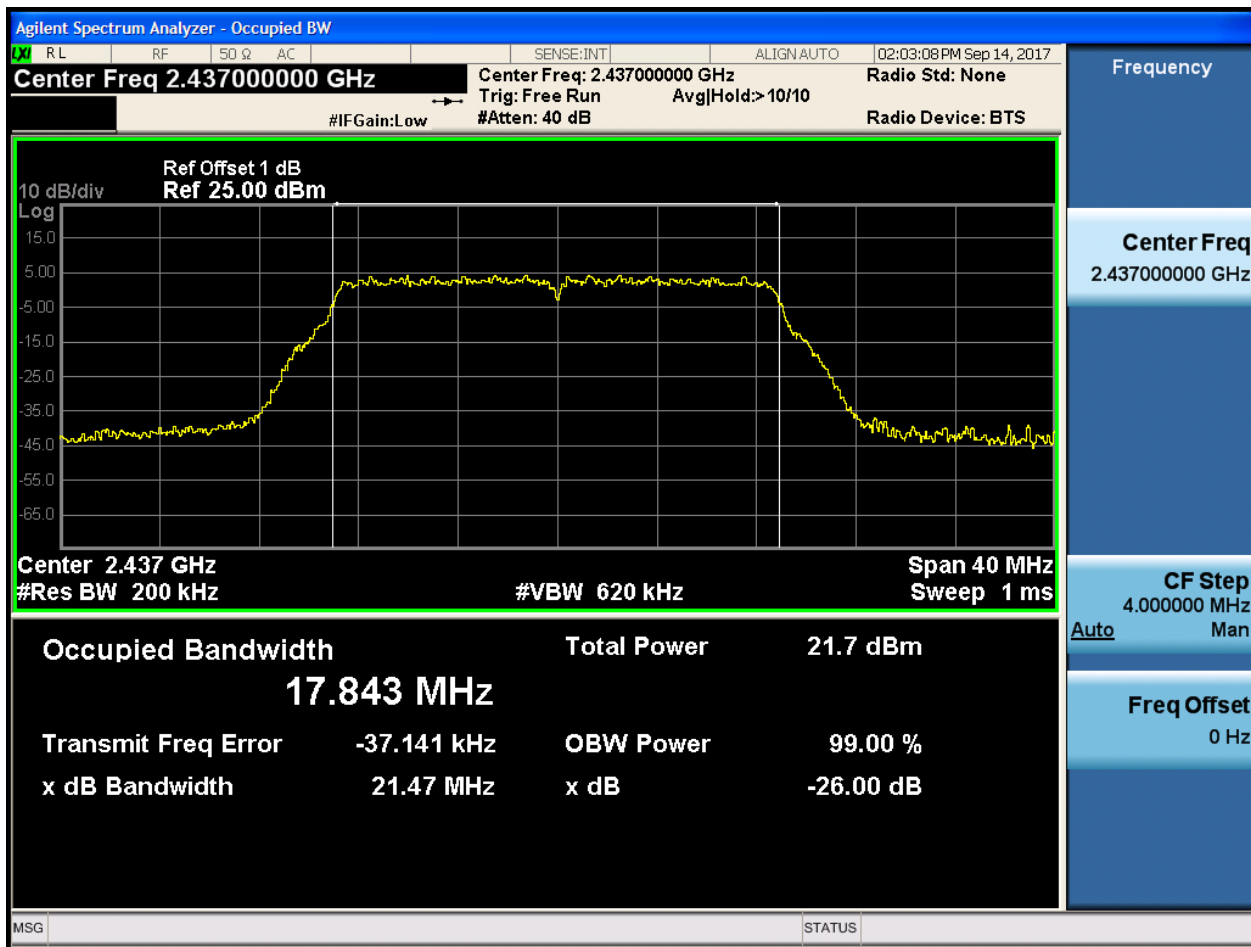


2.20 11N20m_L@Ant 2



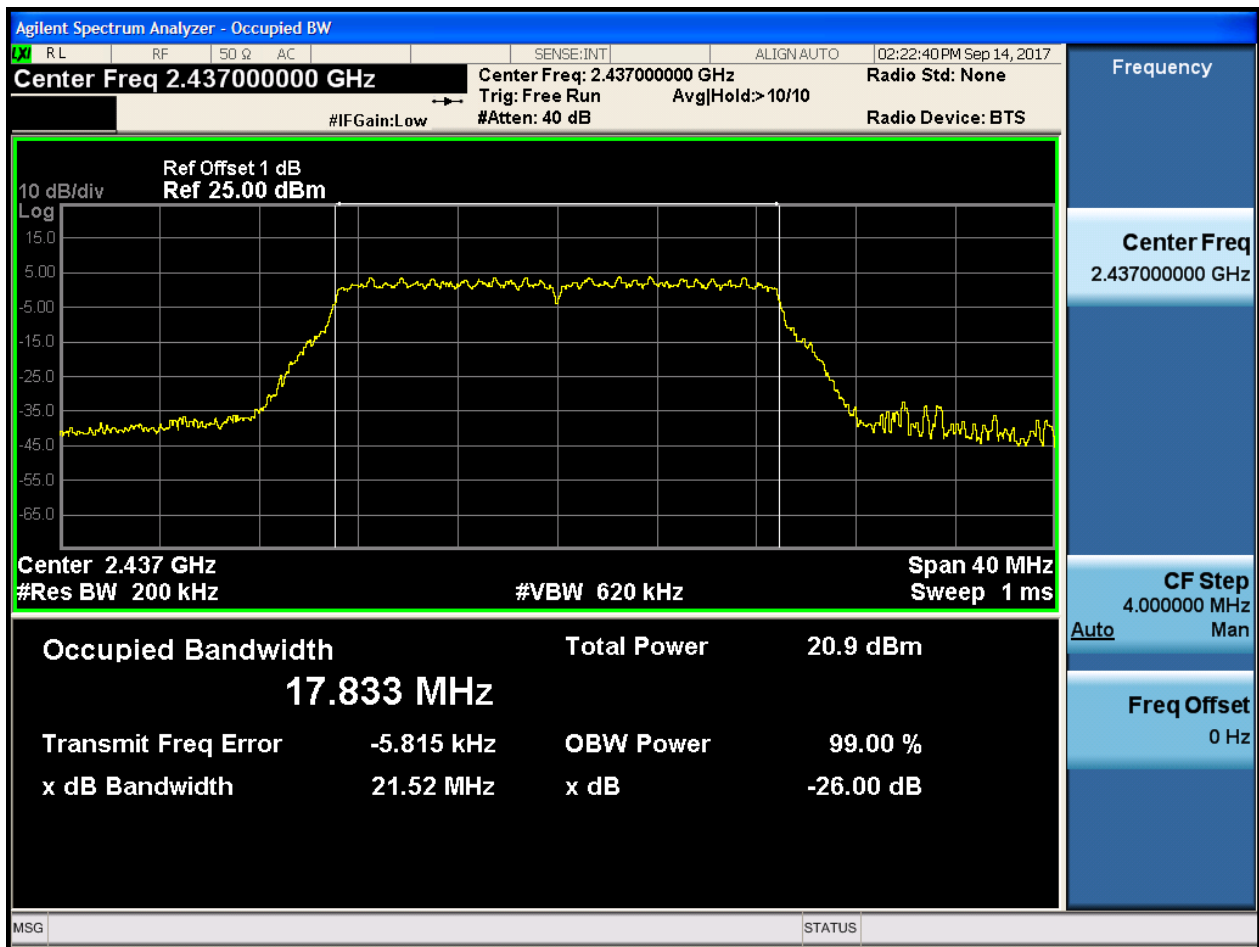


2.21 11N20m_M@Ant 1



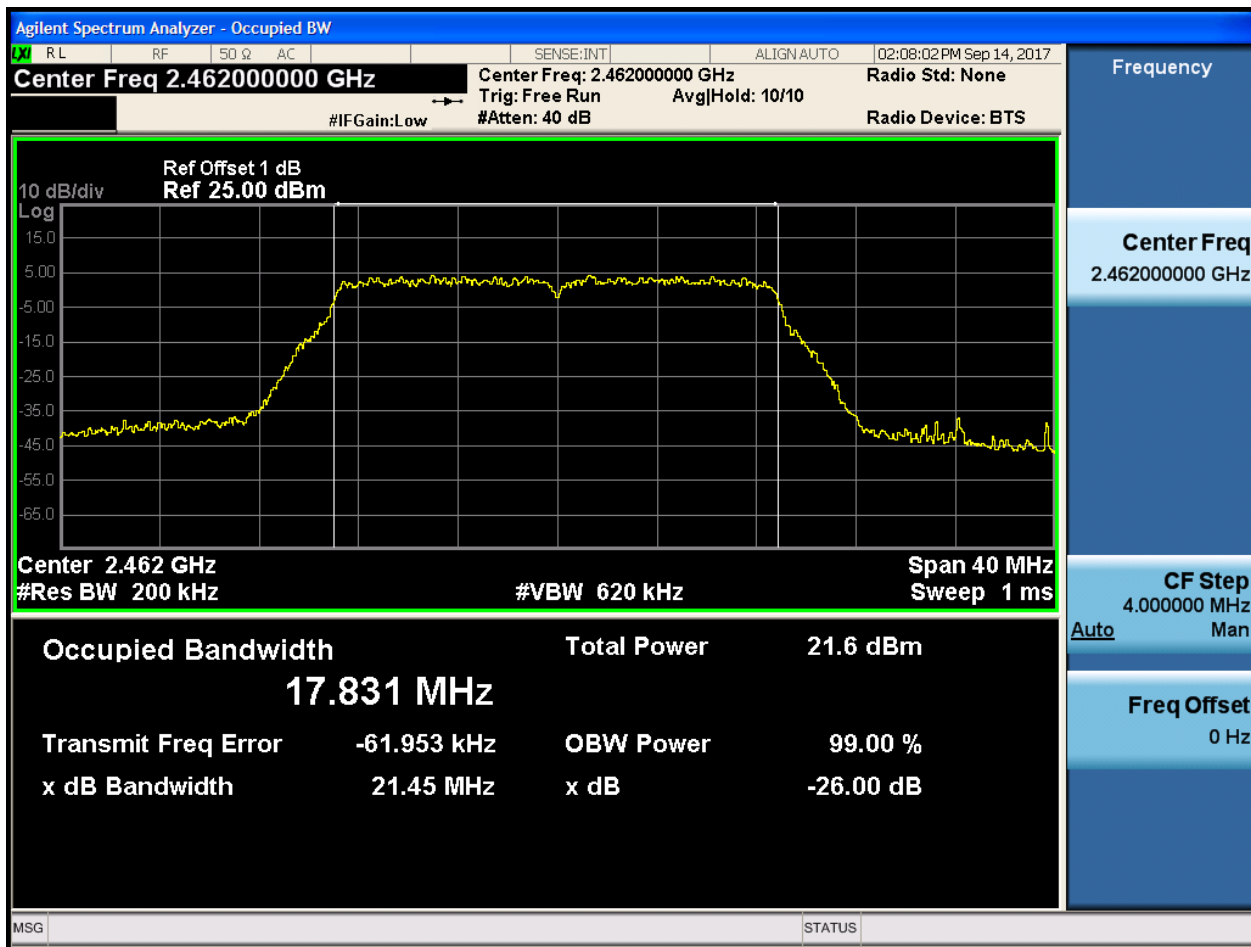


2.22 11N20m_M@Ant 2



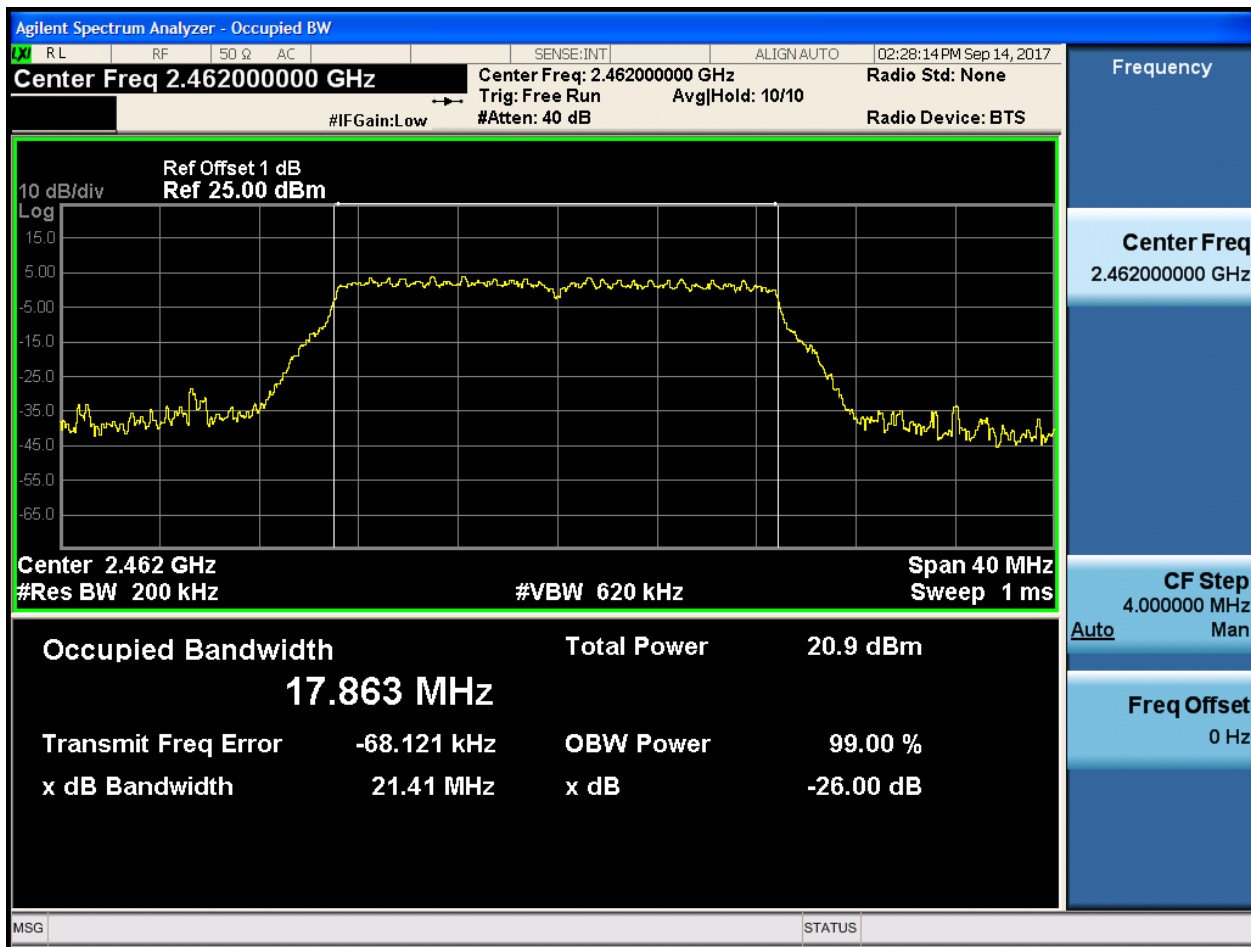


2.23 11N20m_H@Ant 1



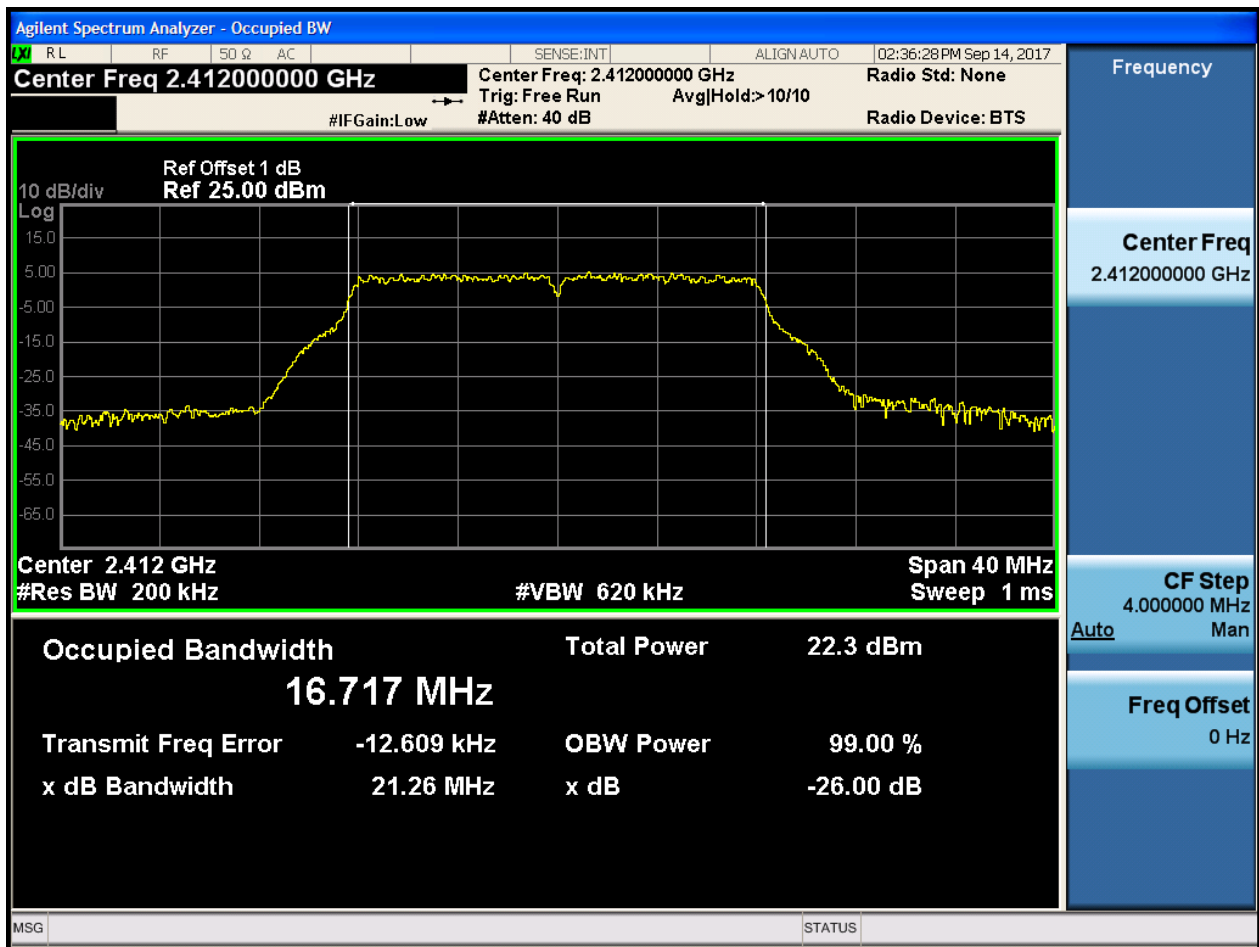


2.24 11N20m_H@Ant 2



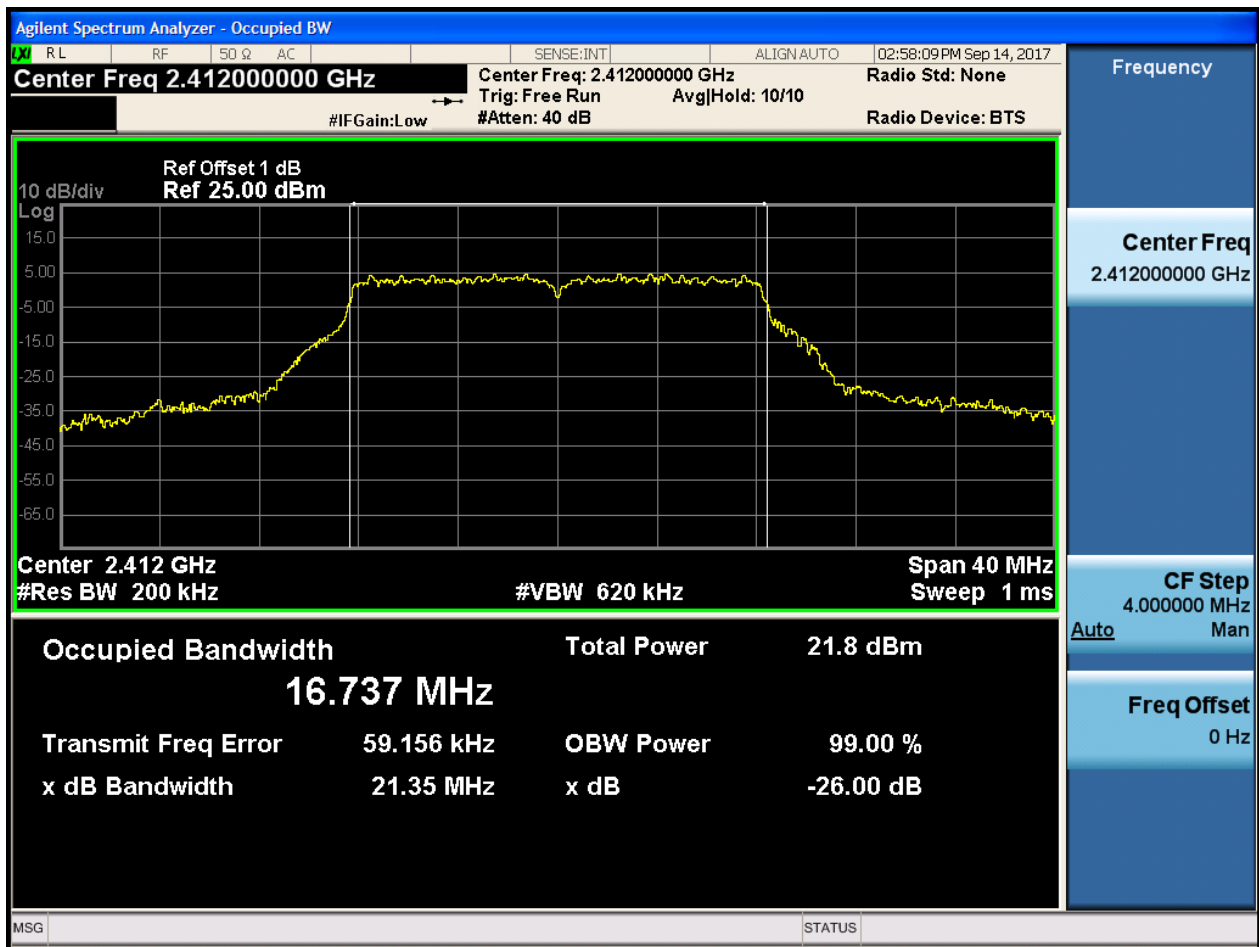


2.25 11G CDD_L@Ant 1



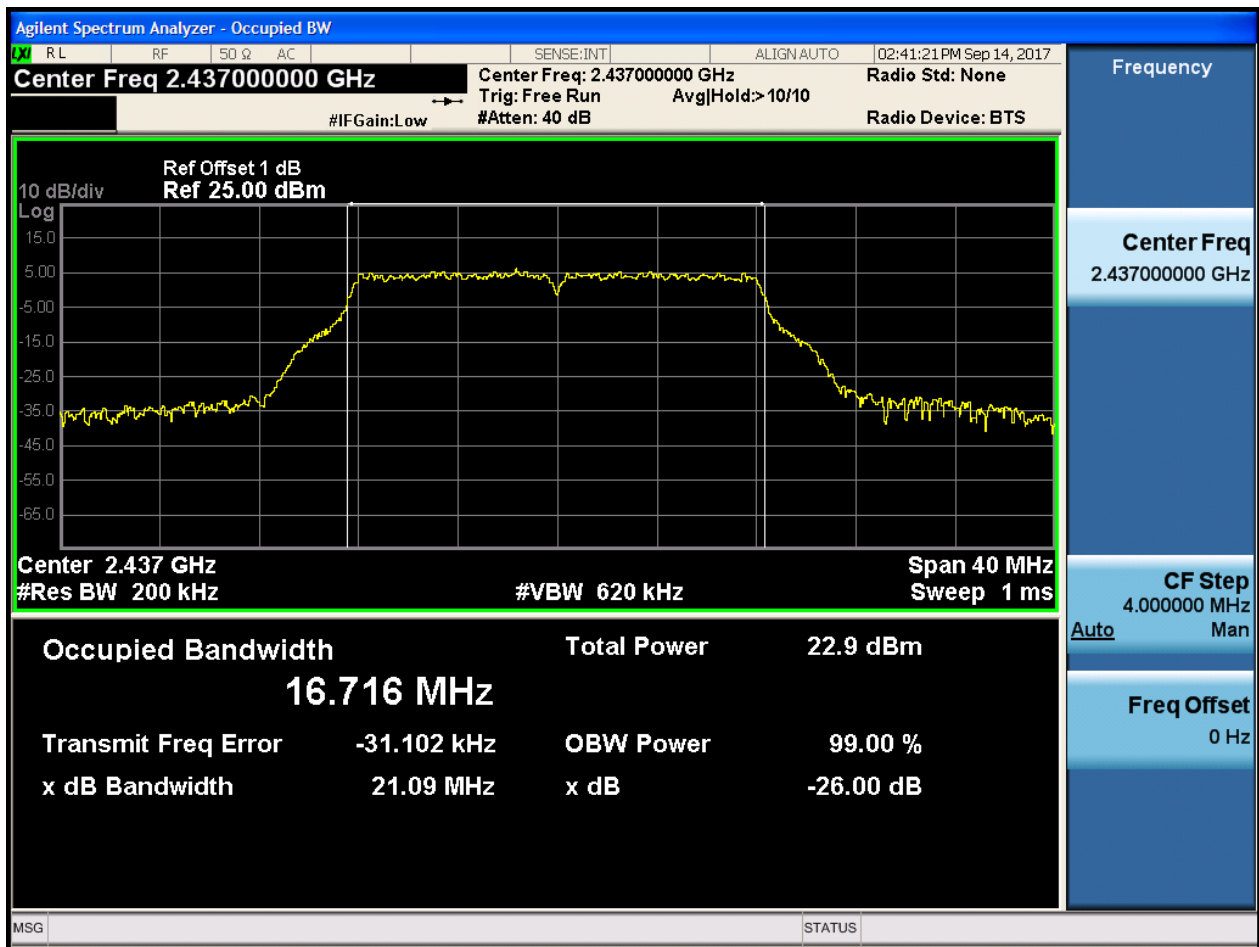


2.26 11G CDD__L@Ant 2



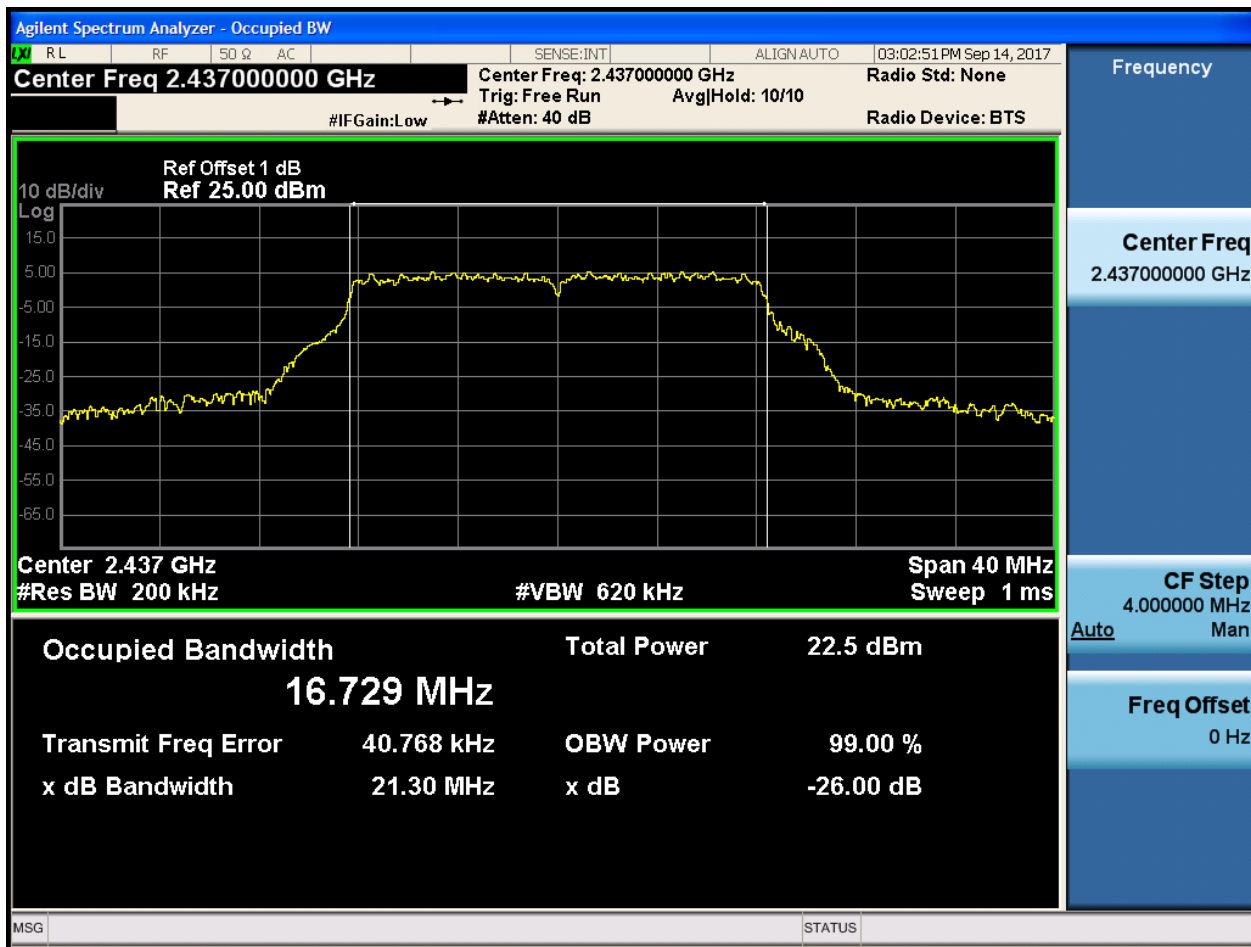


2.27 11G CDD__M@Ant 1



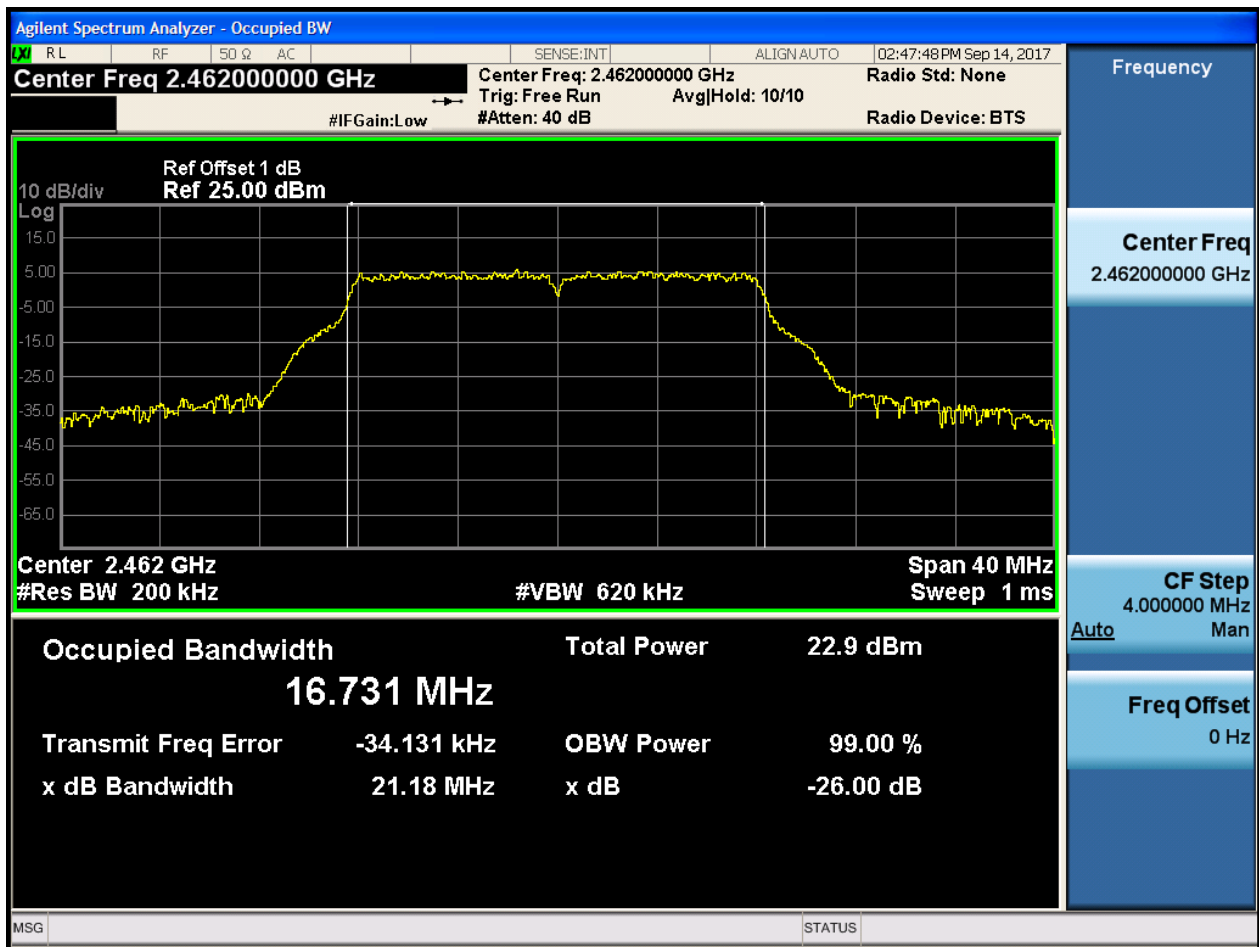


2.28 11G CDD__M@Ant 2

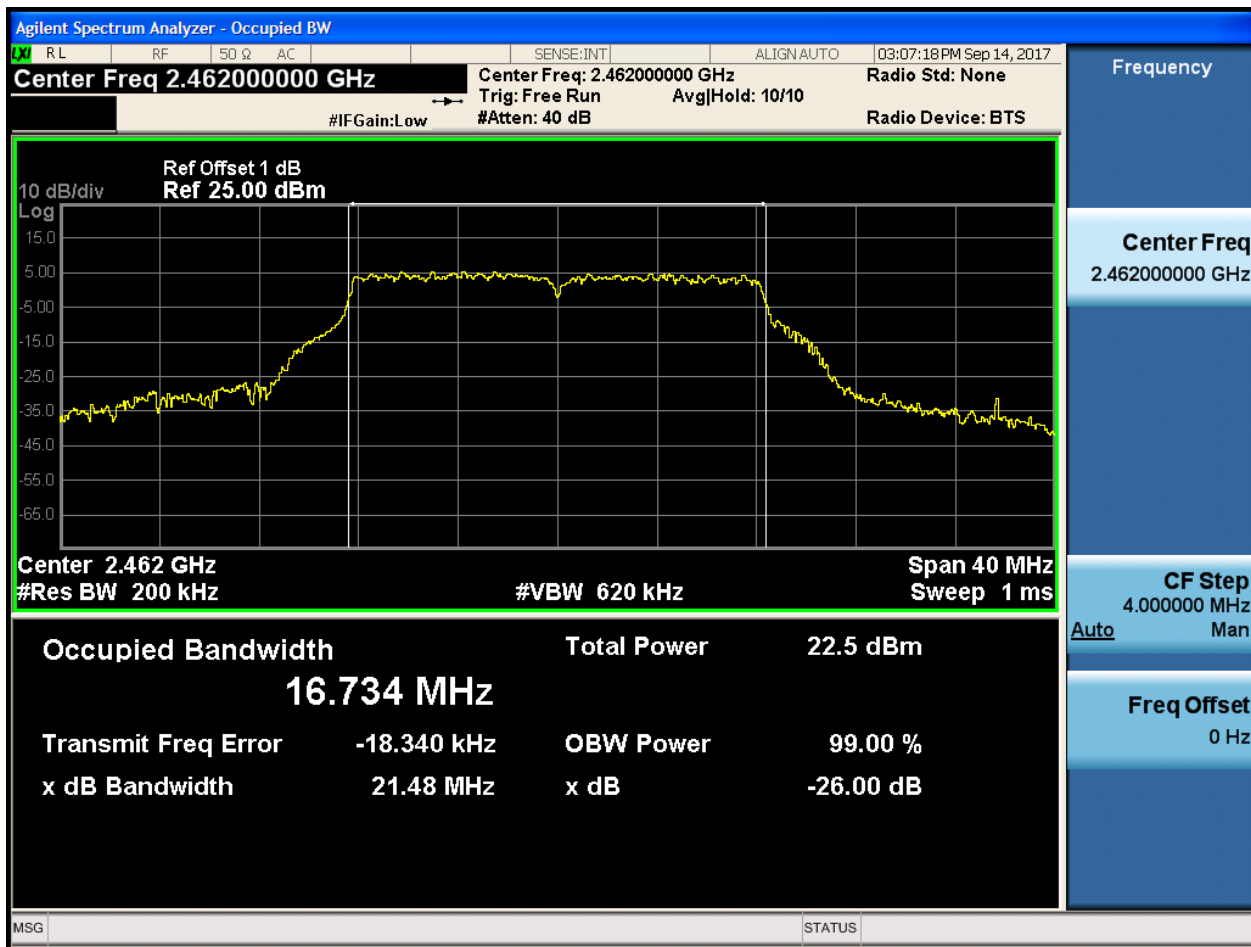




2.29 11G CDD__H@Ant 1



2.30 11G CDD__H@Ant 2



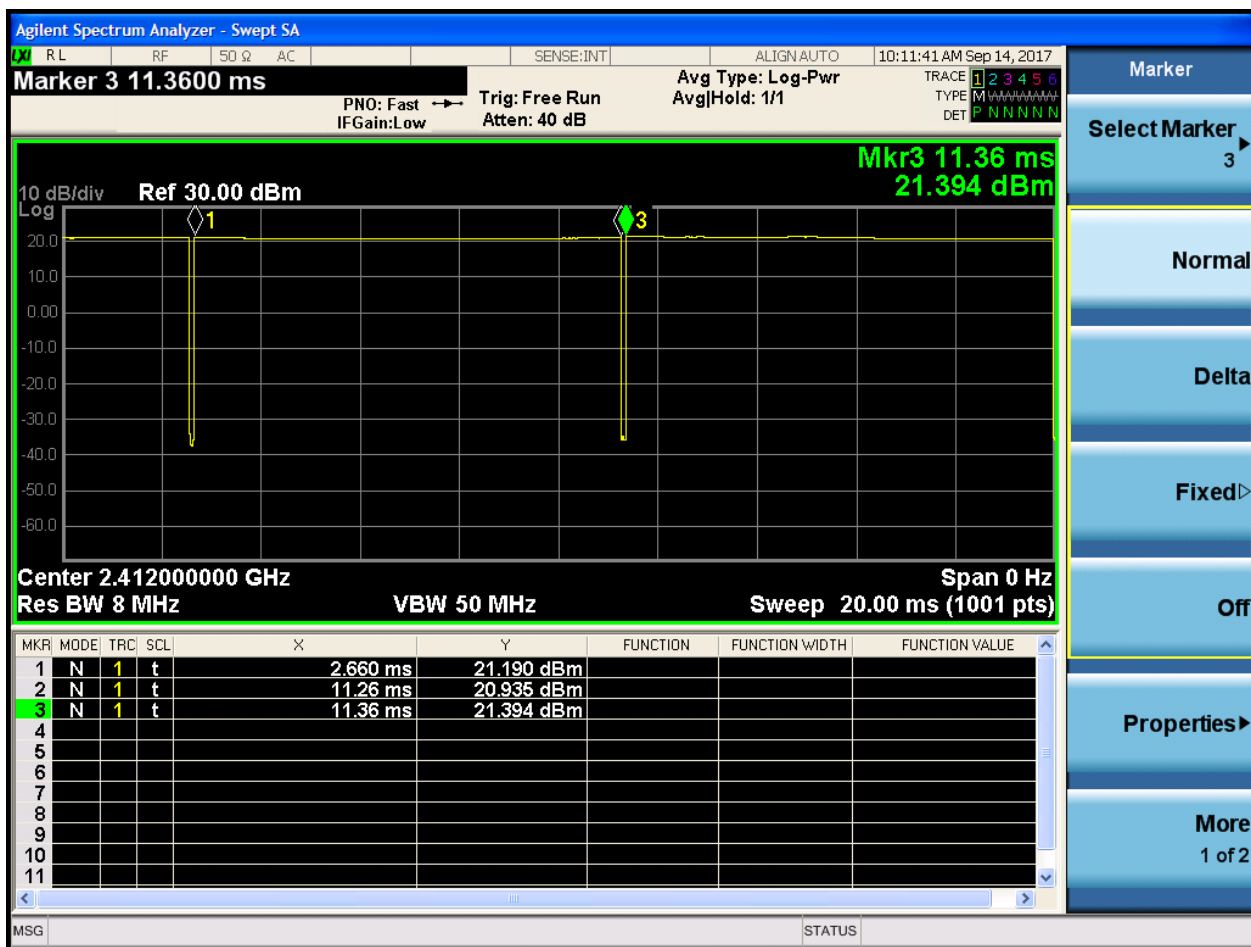
Appendix C: Duty Cycle

Part I - Test Results

Test Mode	TX Freq. [MHz]	Ant	Duty cycle [%]
11B	CH1,CH6,CH11	Ant 1	99
11B	CH1,CH6,CH11	Ant 2	99
11G/11G CDD	CH1,CH6,CH11	Ant 1	93
11G/11G CDD	CH1,CH6,CH11	Ant 2	93
11N20SISO	CH1,CH6,CH11	Ant 1	93
11N20SISO	CH1,CH6,CH11	Ant 2	93
11N20MIMO	CH1,CH6,CH11	Ant 1	87
11N20MIMO	CH1,CH6,CH11	Ant 2	87

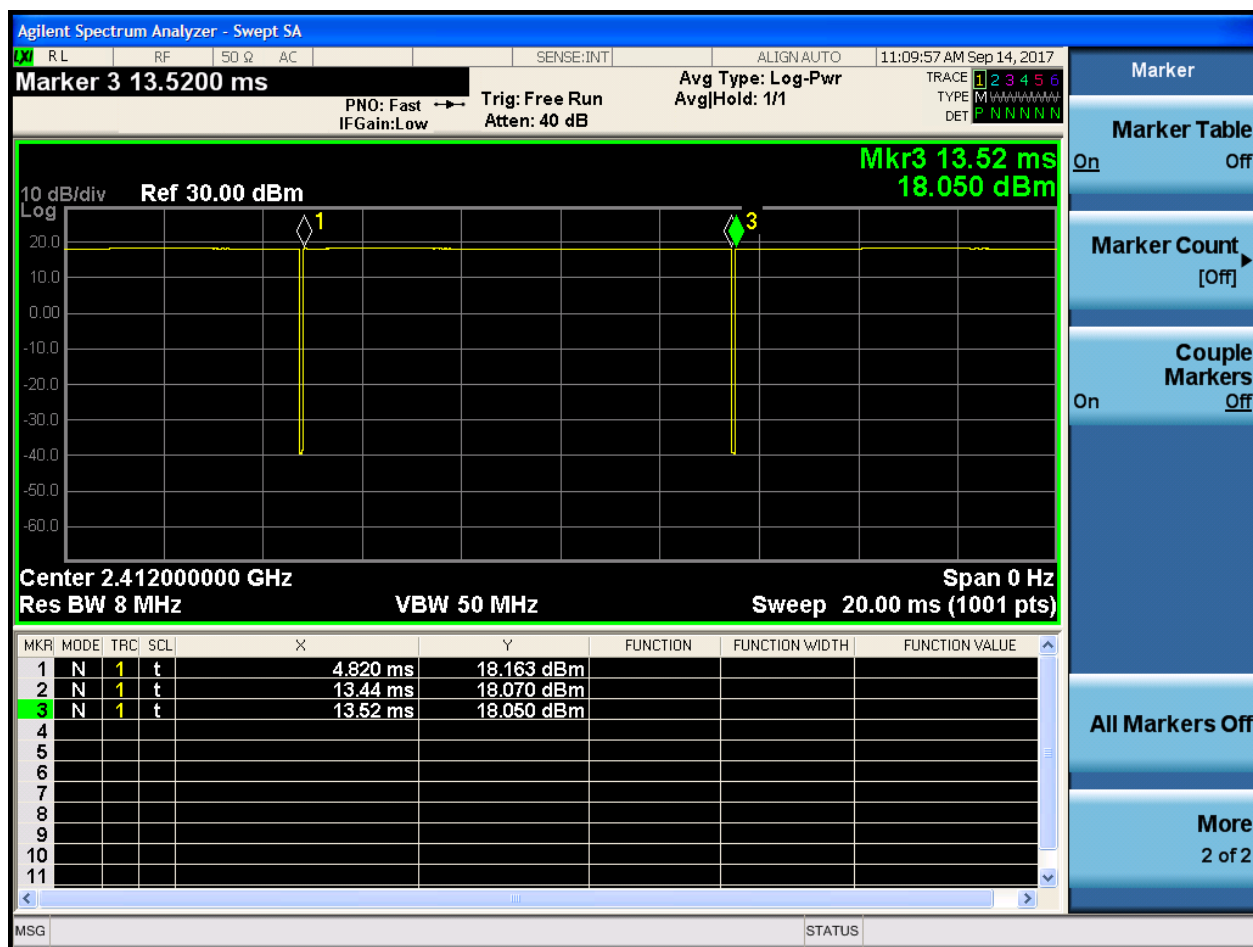
Part II - Test Plots

11B ANT1



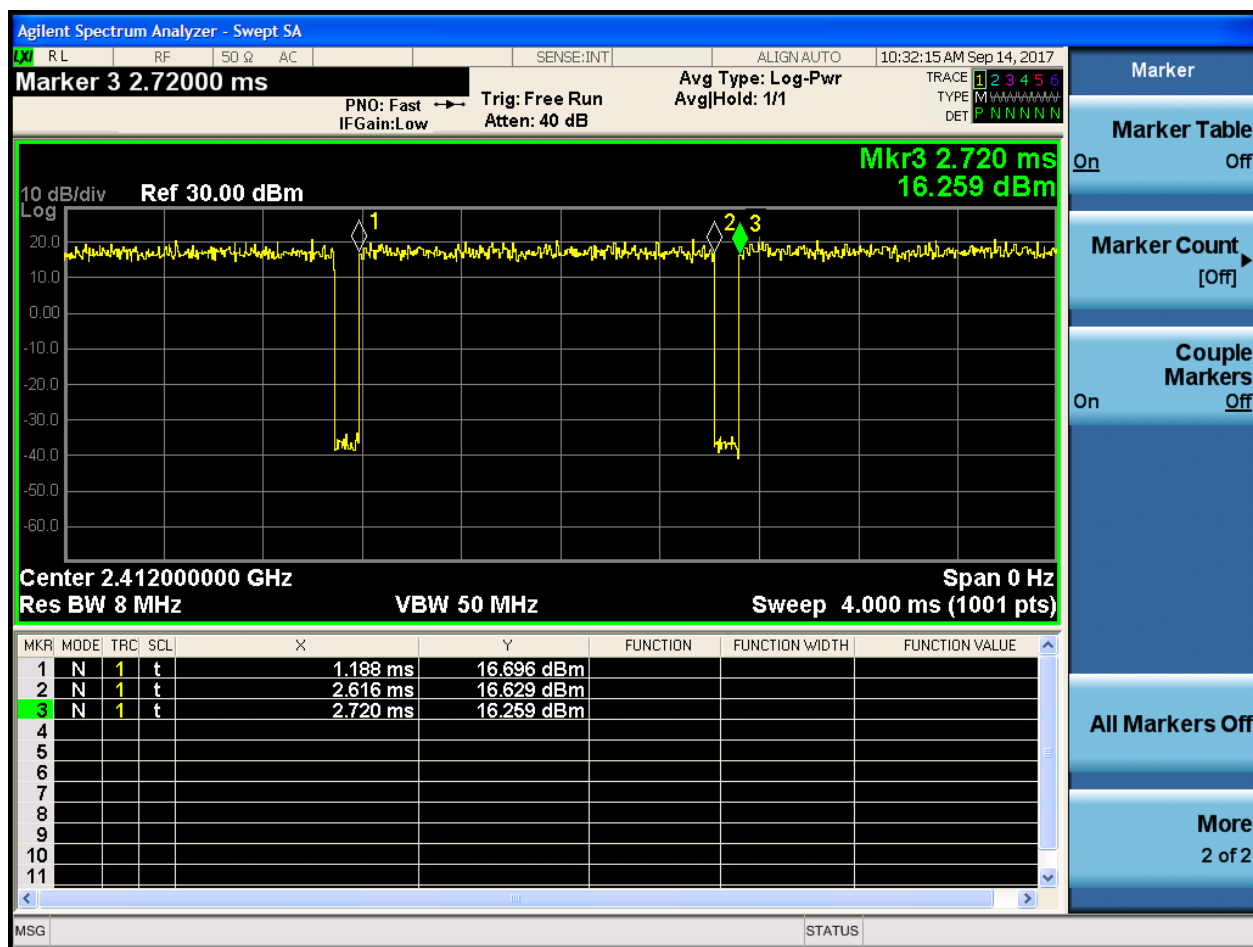


11B_ANT2



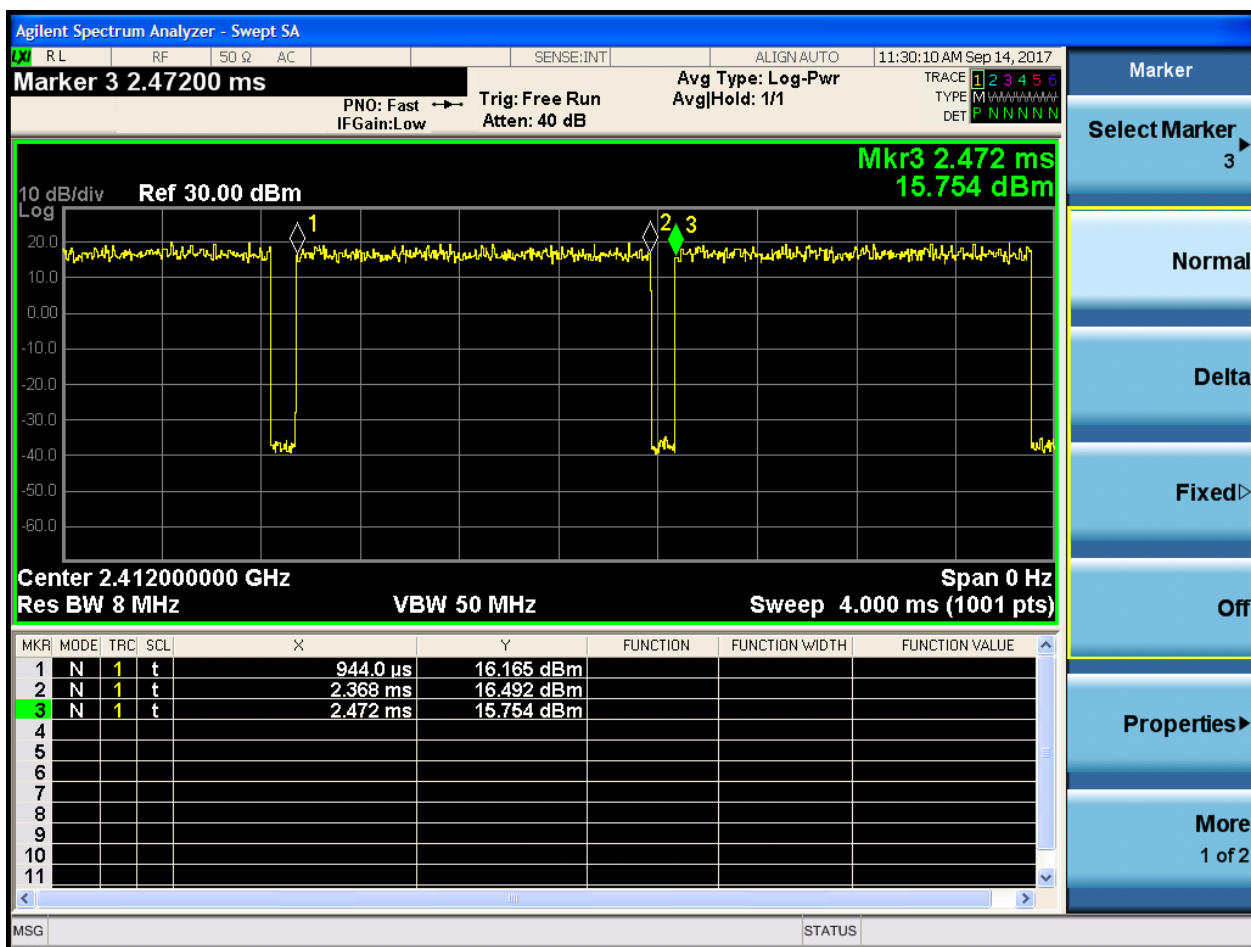


11G/11GCDD_ANT1



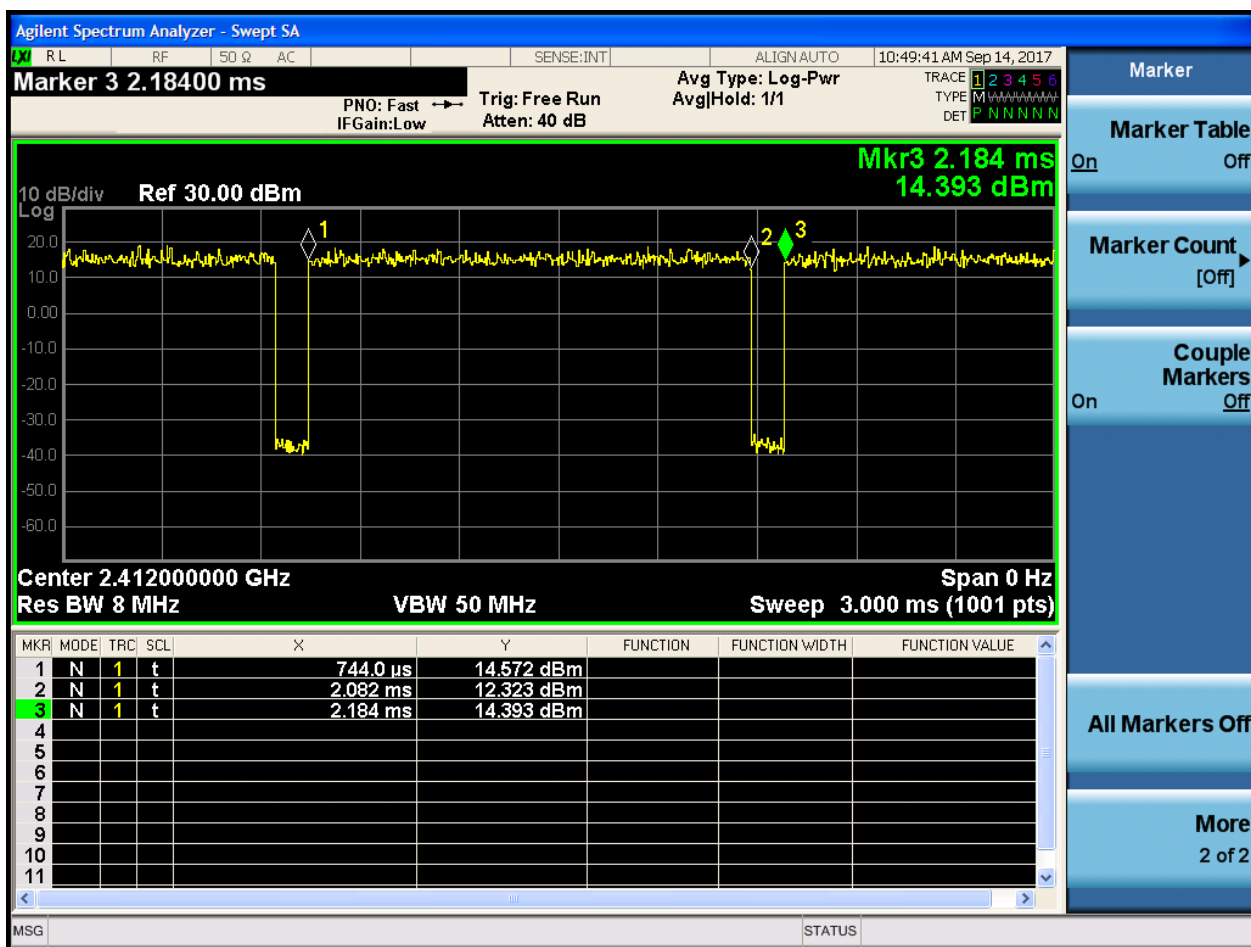


11G/11GCDD_ANT2



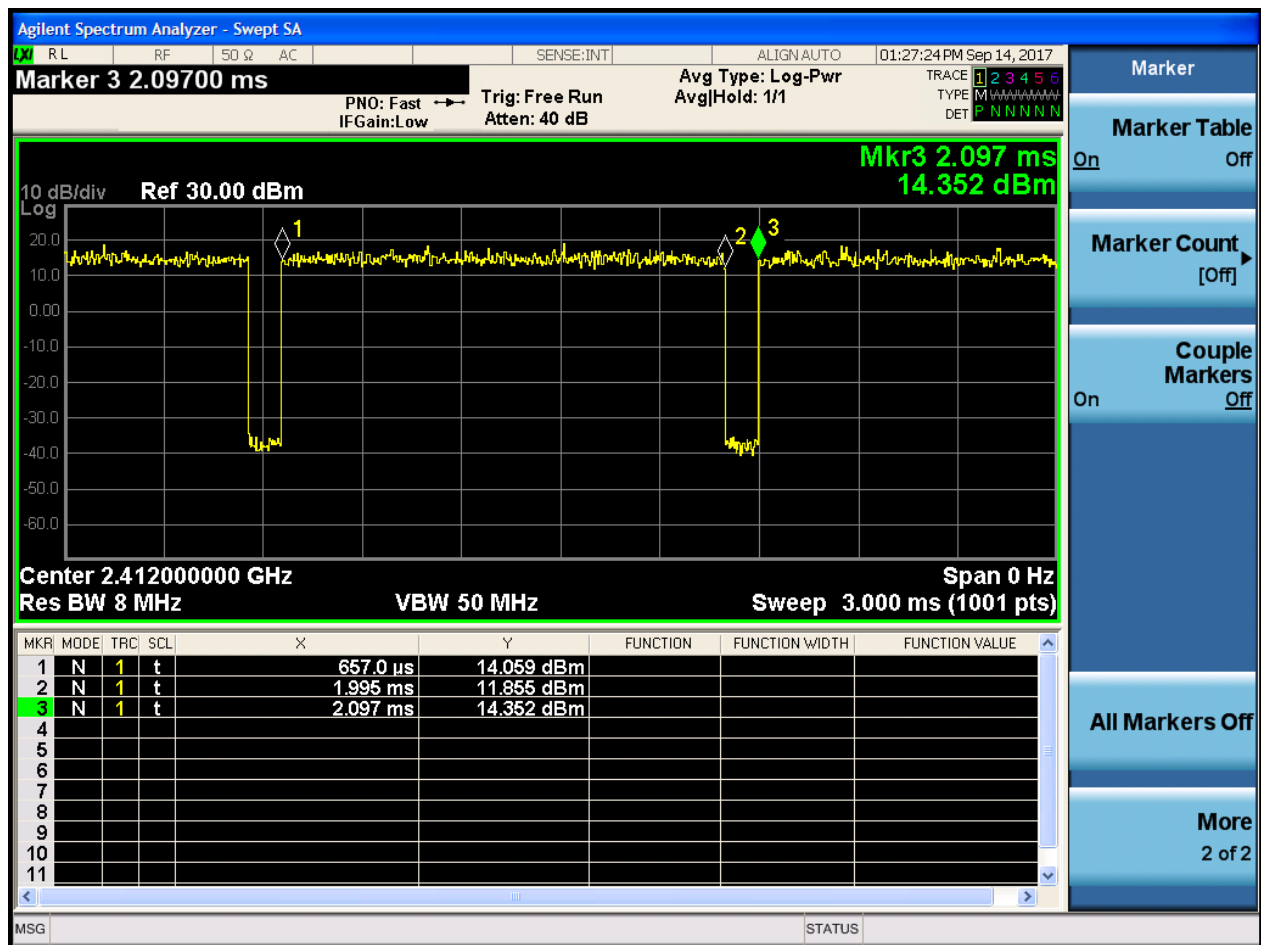


11N20SISO_ANT1



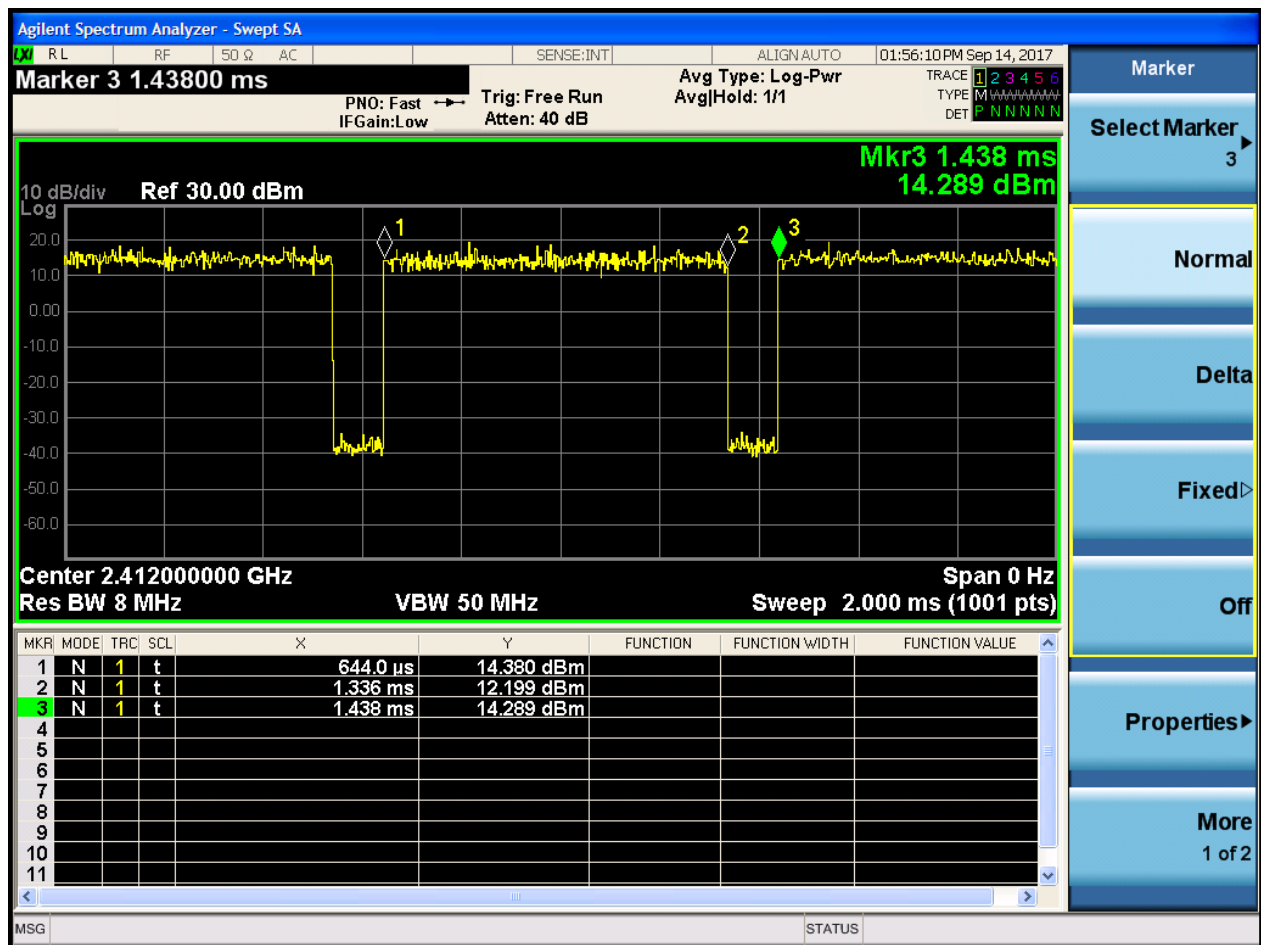


11N20SISO_ANT2



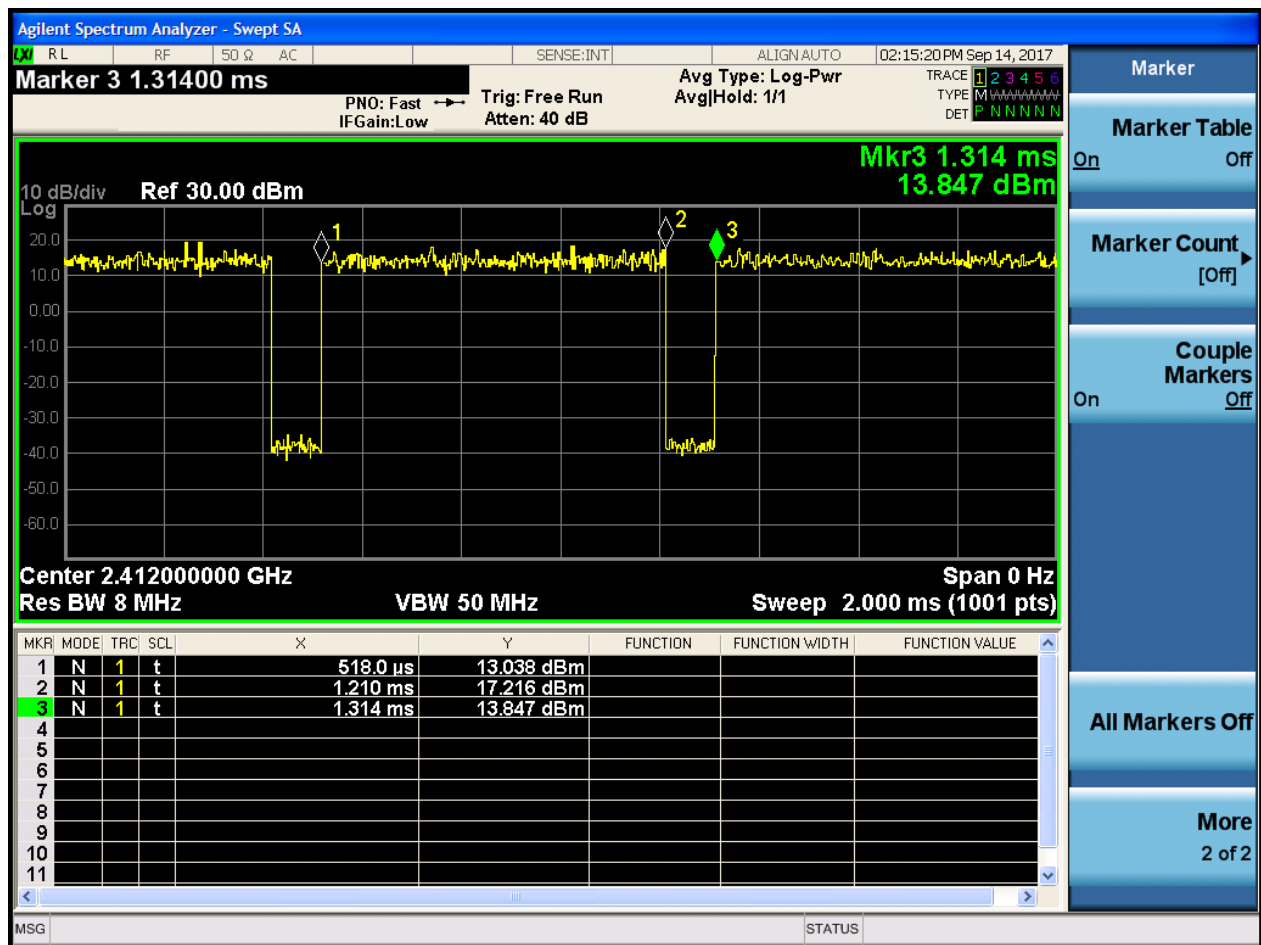


11N20MIMO_ANT1





11N20MIMO_ANT2



Appendix D: Maximum Conducted Average Output Power

Part I - Test Results

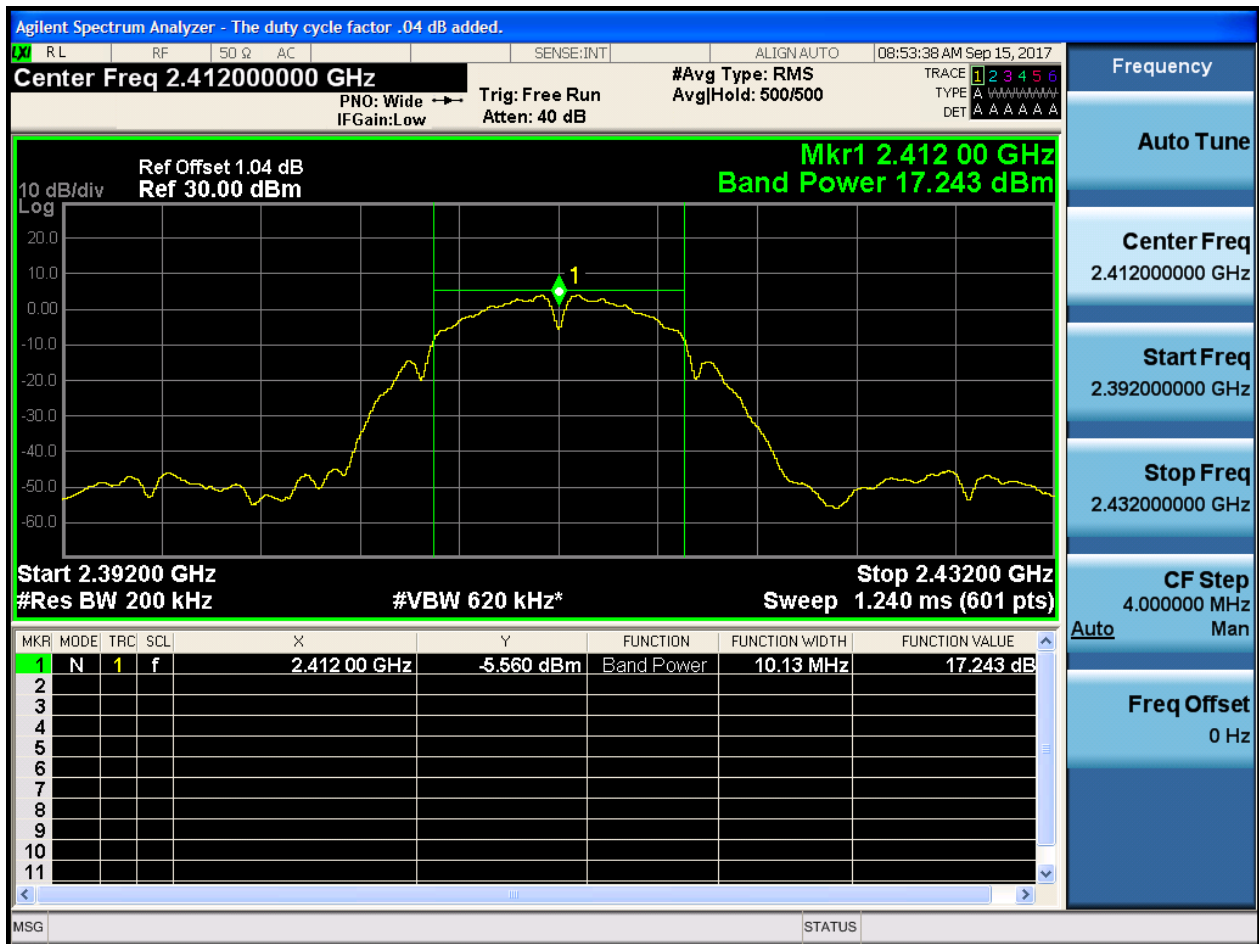
Test Mode	Test Channel	Frequency[MHz]	Ant	Duty Cycle [%]	Power[dBm]	Verdict
11B	L	2412	Ant 1	99	17.24	pass
11B	L	2412	Ant 2	99	16.80	pass
11B	M	2437	Ant 1	99	17.30	pass
11B	M	2437	Ant 2	99	17.01	pass
11B	H	2462	Ant 1	99	17.26	pass
11B	H	2462	Ant 2	99	16.84	pass
11G	L	2412	Ant 1	93	15.56	pass
11G	L	2412	Ant 2	93	14.85	pass
11G	M	2437	Ant 1	93	15.86	pass
11G	M	2437	Ant 2	93	15.23	pass
11G	H	2462	Ant 1	93	15.77	pass
11G	H	2462	Ant 2	93	15.17	pass
11N20	L	2412	Ant 1	93	14.03	pass
11N20	L	2412	Ant 2	93	13.43	pass
11N20	M	2437	Ant 1	93	14.34	pass

Test Mode	Test Channel	Frequency[MHz]	Ant	Duty Cycle [%]	Power[dBm]	Verdict
11N20	M	2437	Ant 2	93	13.75	pass
11N20	H	2462	Ant 1	93	14.21	pass
11N20	H	2462	Ant 2	93	13.52	pass
11N20m	L	2412	Ant 1	87	13.84	pass
11N20m	L	2412	Ant 2	87	13.44	pass
11N20m	L	2412	SUM	87	16.65	pass
11N20m	M	2437	Ant 1	87	14.63	pass
11N20m	M	2437	Ant 2	87	14.19	pass
11N20m	M	2437	SUM	87	17.42	pass
11N20m	H	2462	Ant 1	87	14.53	pass
11N20m	H	2462	Ant 2	87	14.12	pass
11N20m	H	2462	SUM	87	17.34	pass
11G CDD	L	2412	Ant 1	93	15.47	pass
11G CDD	L	2412	Ant 2	93	15.12	pass
11G CDD	L	2412	SUM	93	18.31	pass
11G CDD	M	2437	Ant 1	93	16.04	pass
11G CDD	M	2437	Ant 2	93	15.76	pass

Test Mode	Test Channel	Frequency[MHz]	Ant	Duty Cycle [%]	Power[dBm]	Verdict
11G CDD	M	2437	SUM	93	18.91	pass
11G CDD	H	2462	Ant 1	93	15.98	pass
11G CDD	H	2462	Ant 2	93	15.84	pass
11G CDD	H	2462	SUM	93	18.92	pass

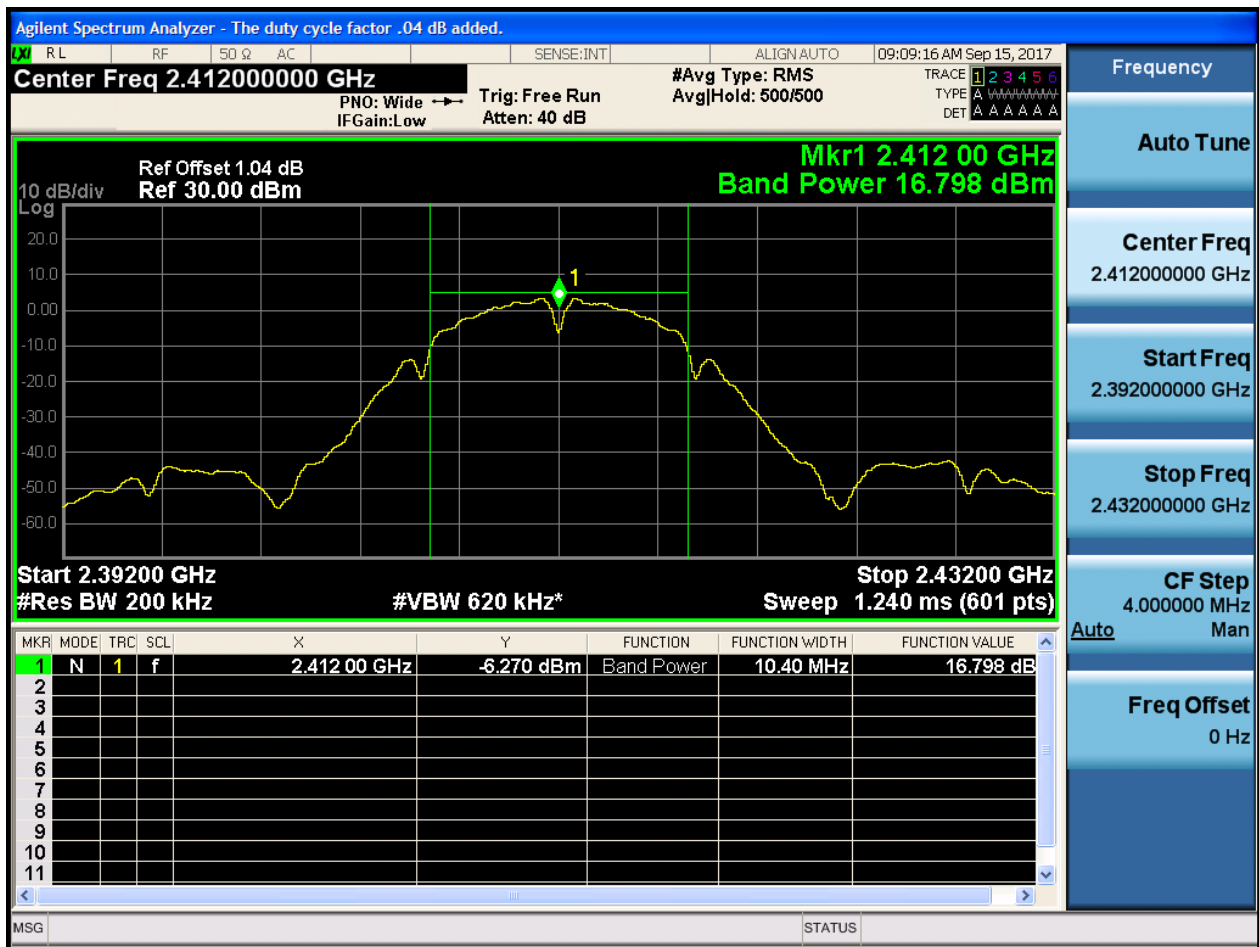
Part II - Test Plots

2.1 11B_L@Ant 1



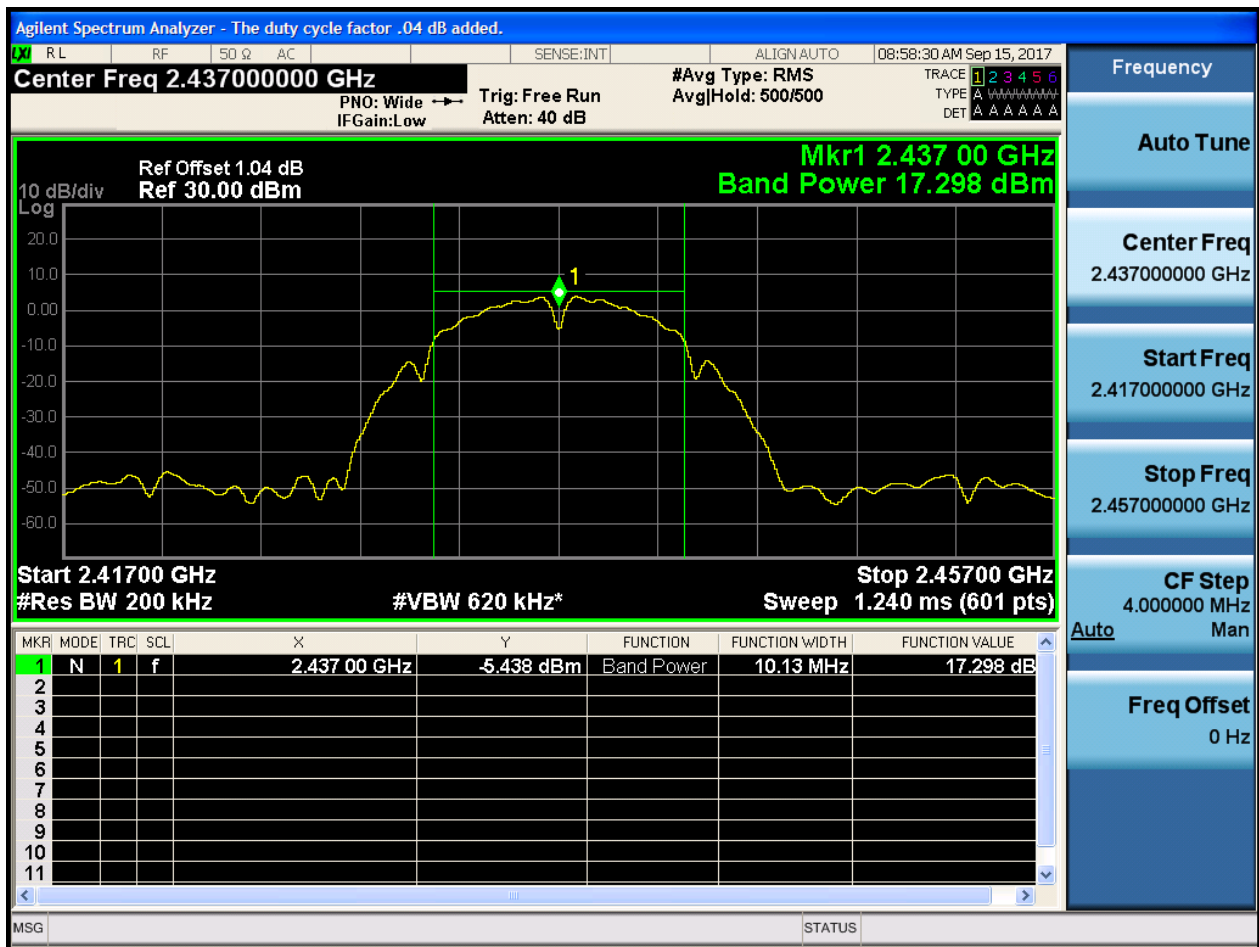


2.2 11B_L@Ant 2



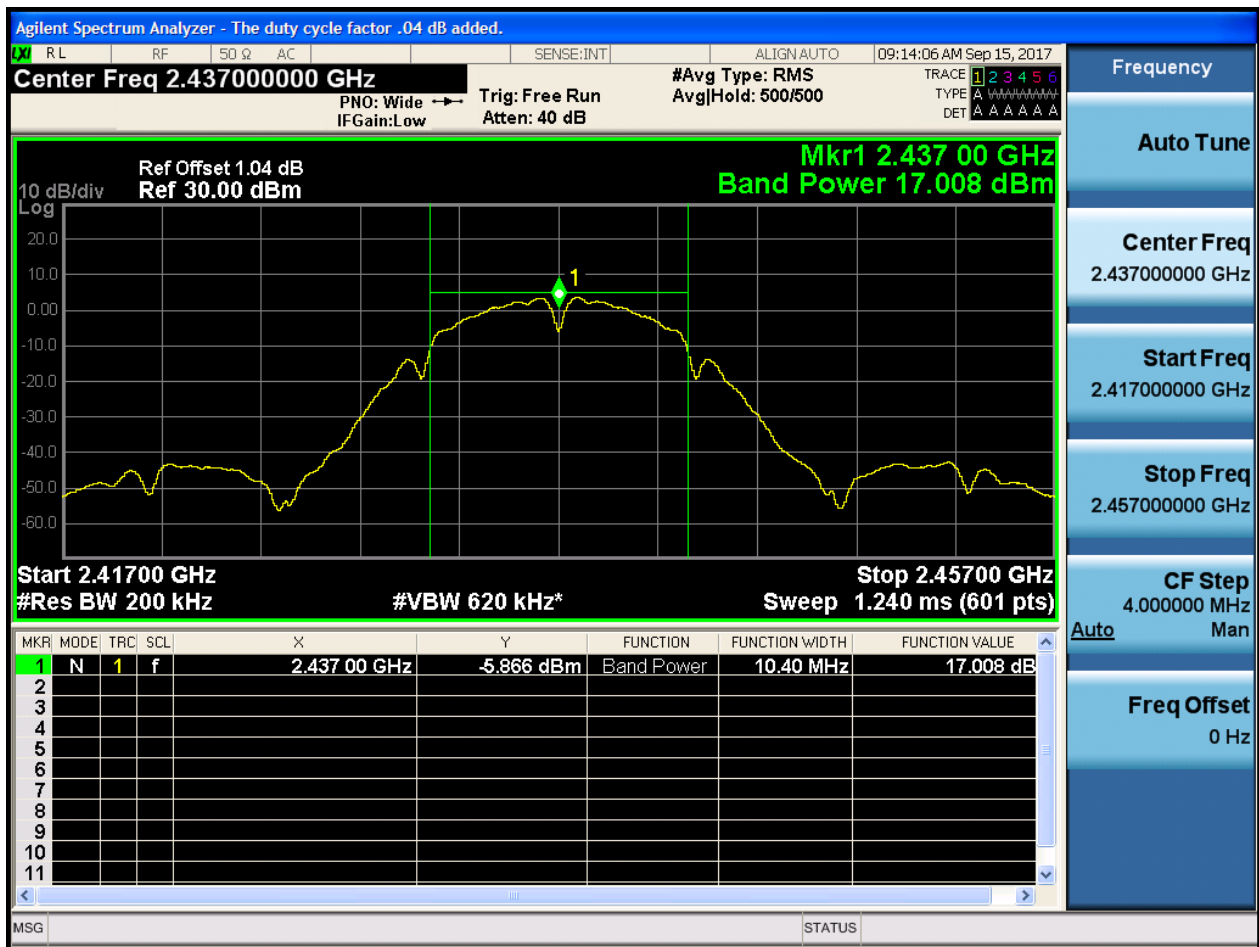


2.3 11B_M@Ant 1



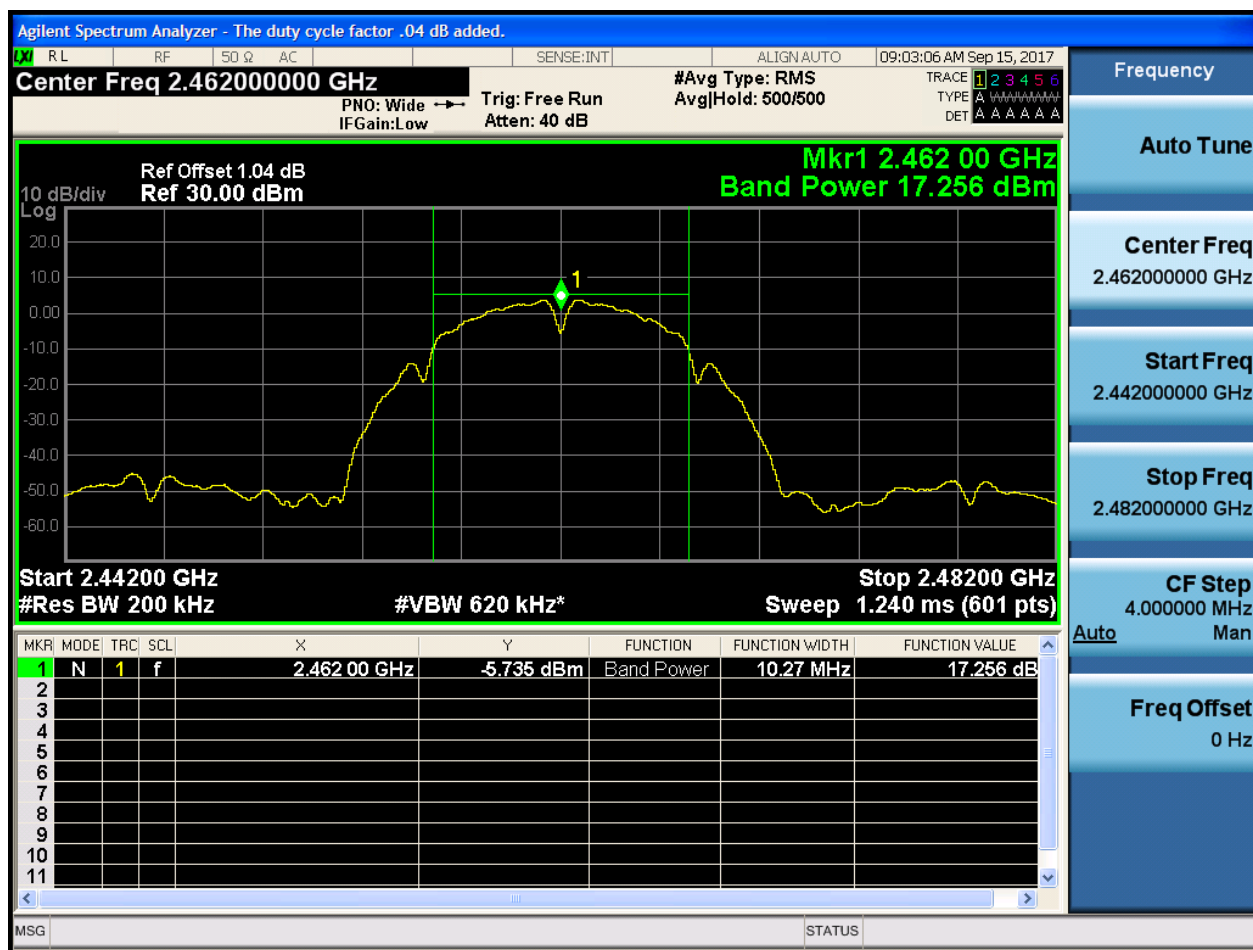


2.4 11B_M@Ant 2



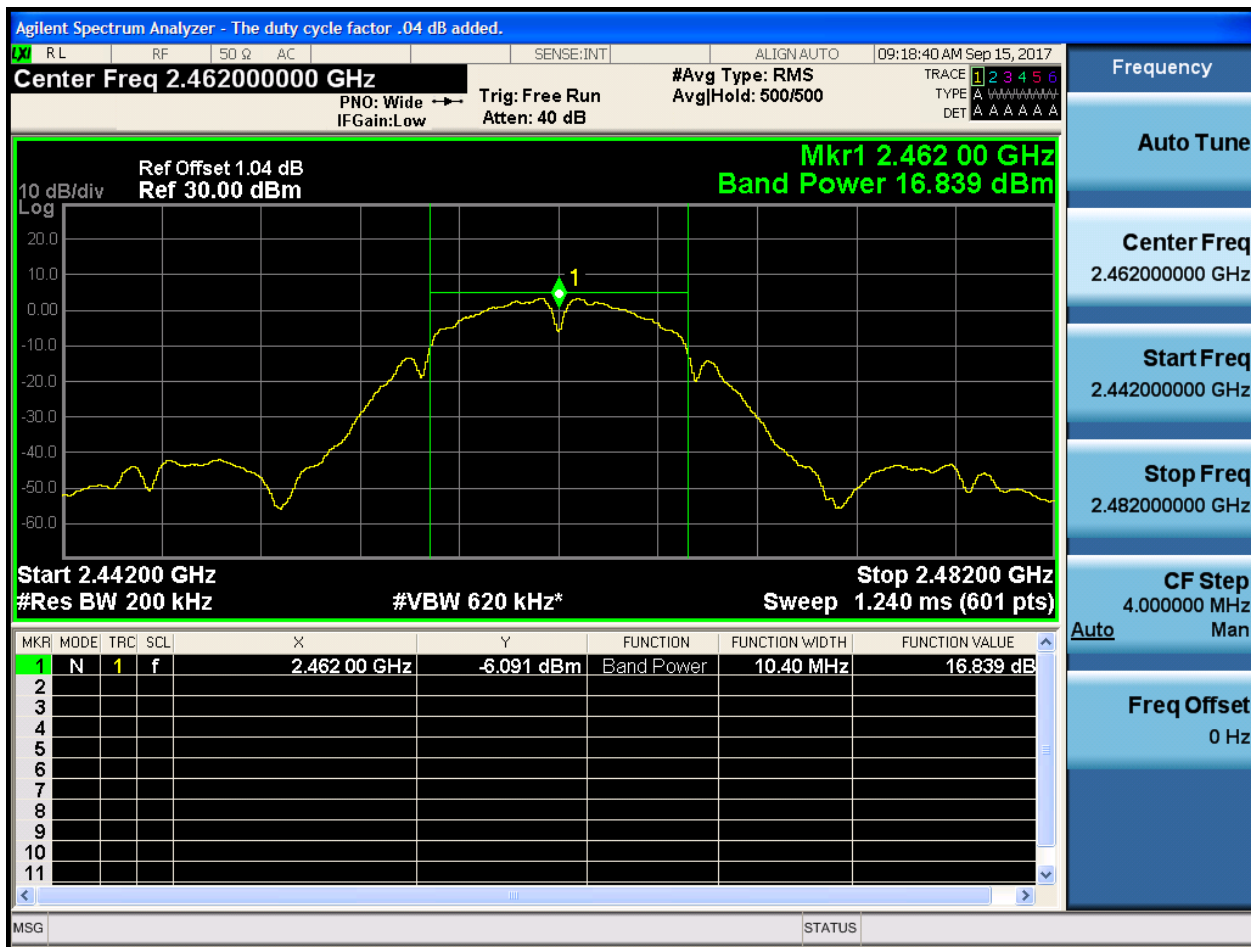


2.5 11B_H@Ant 1



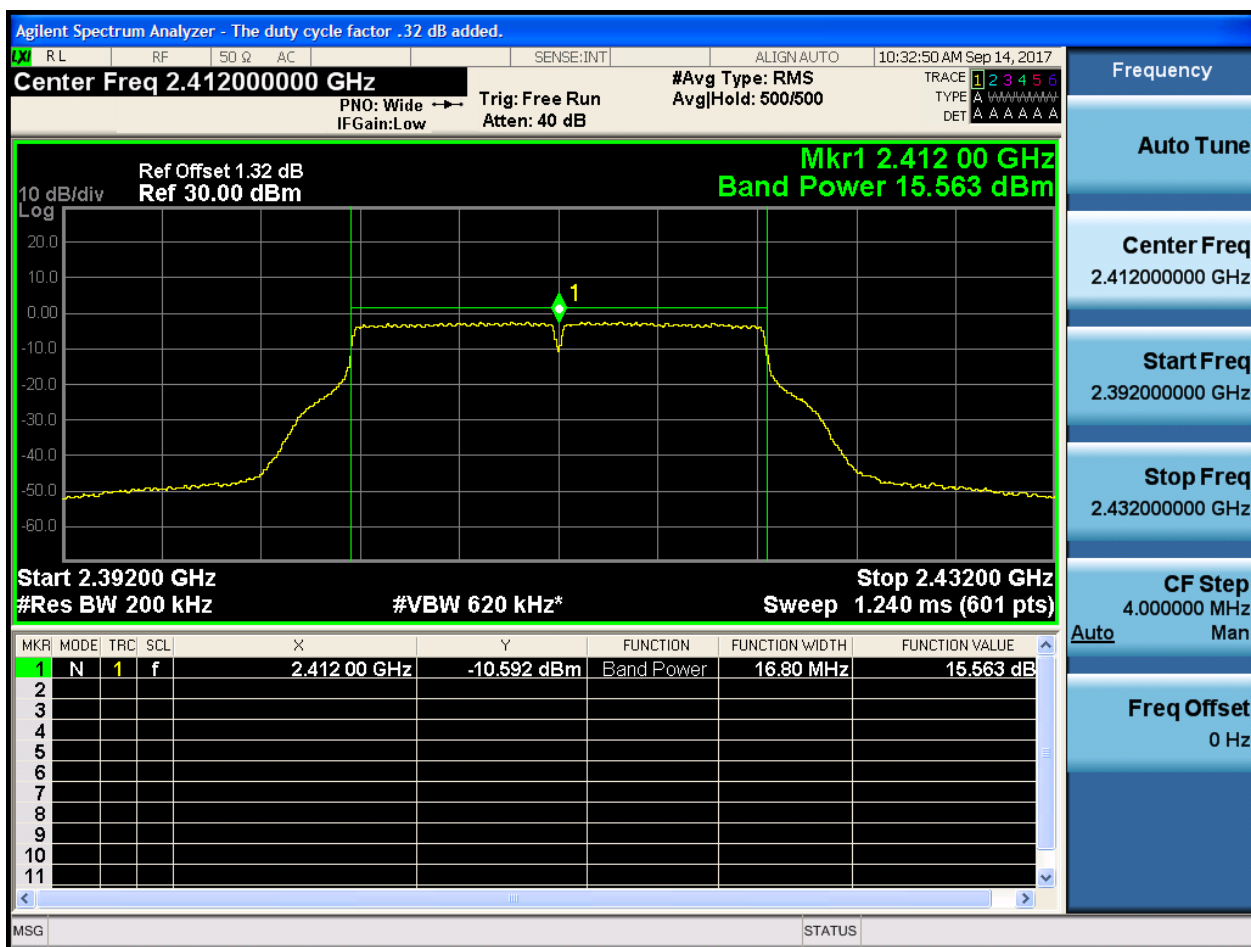


2.6 11B_H@Ant 2



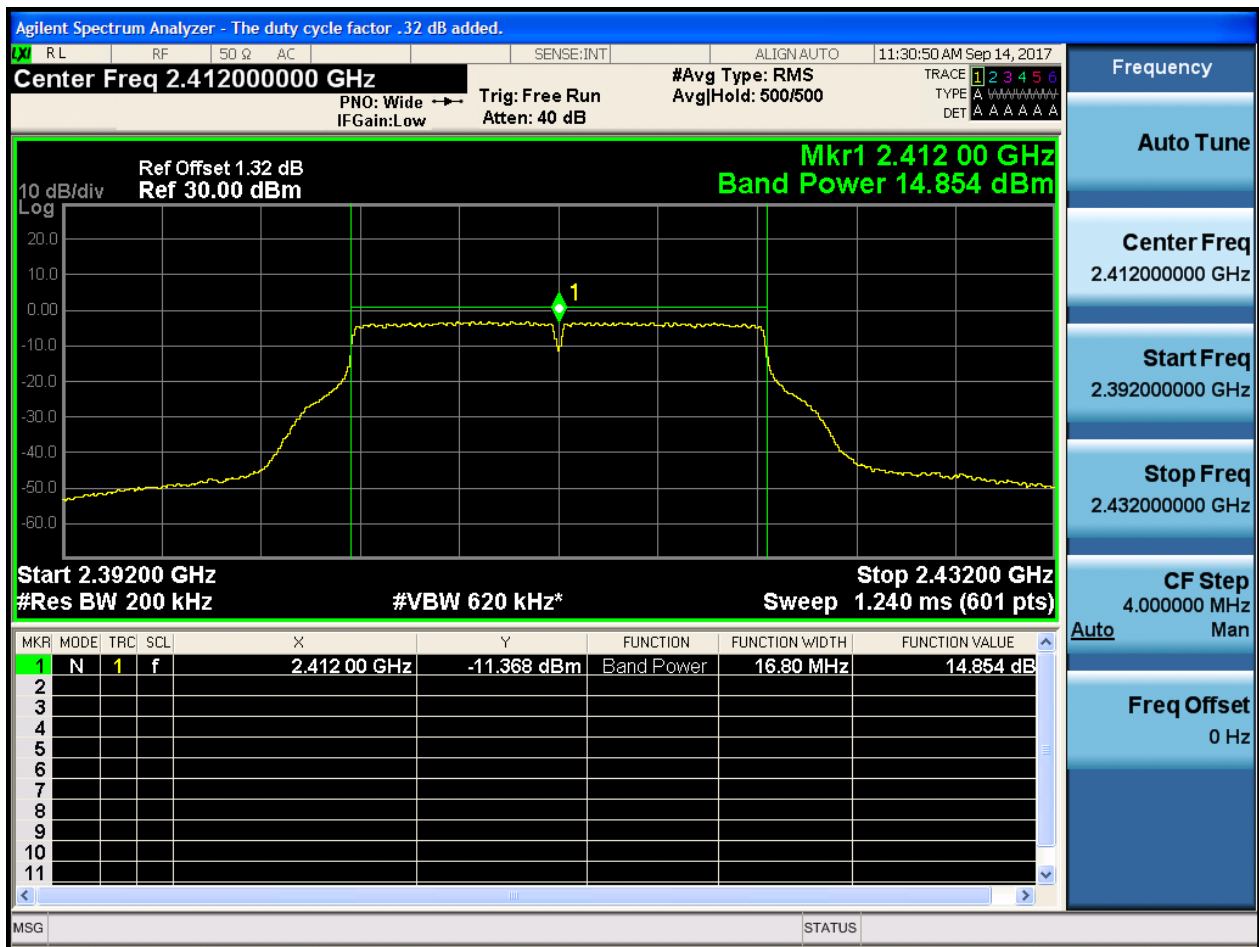


2.7 11G_L@Ant 1



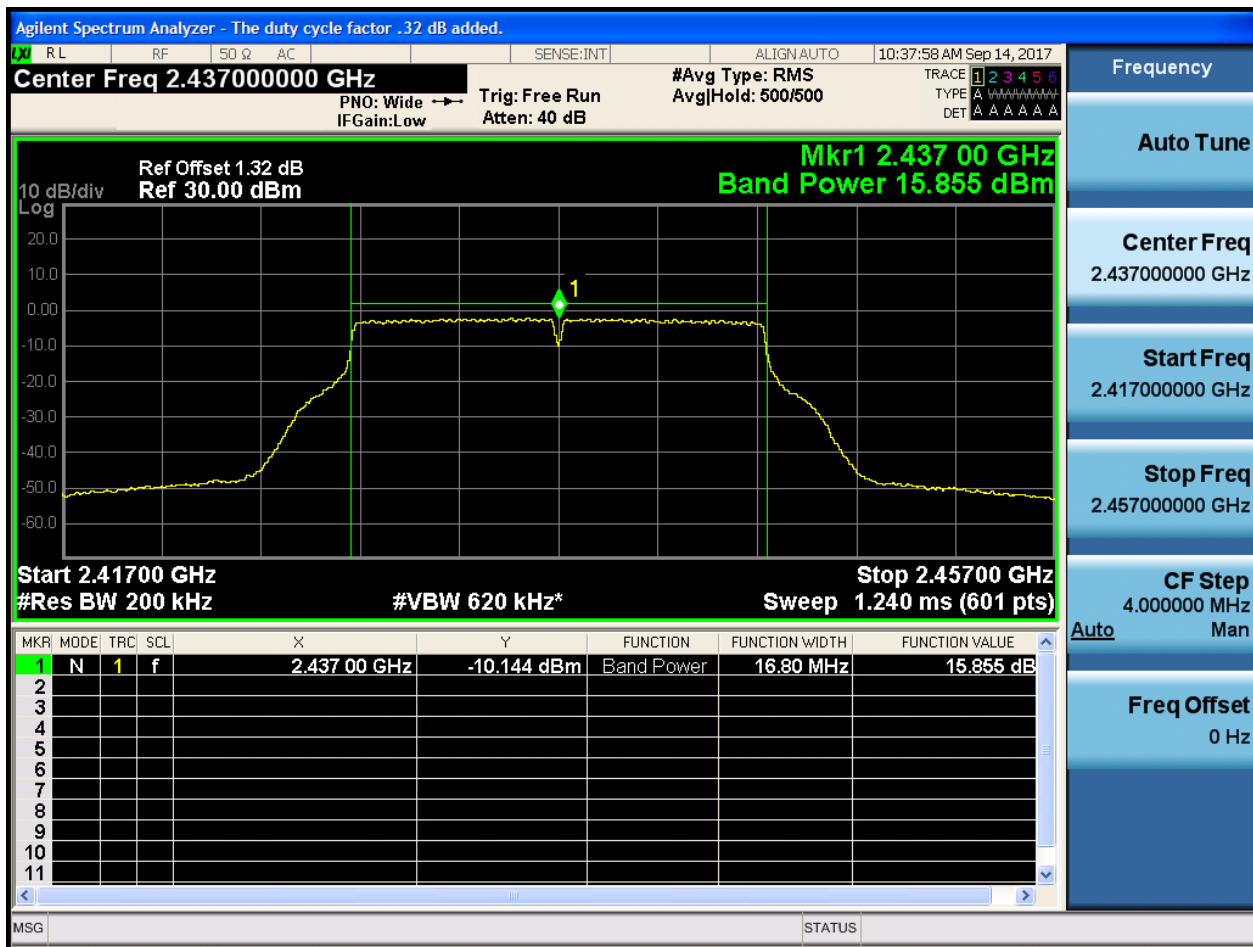


2.8 11G_L@Ant 2



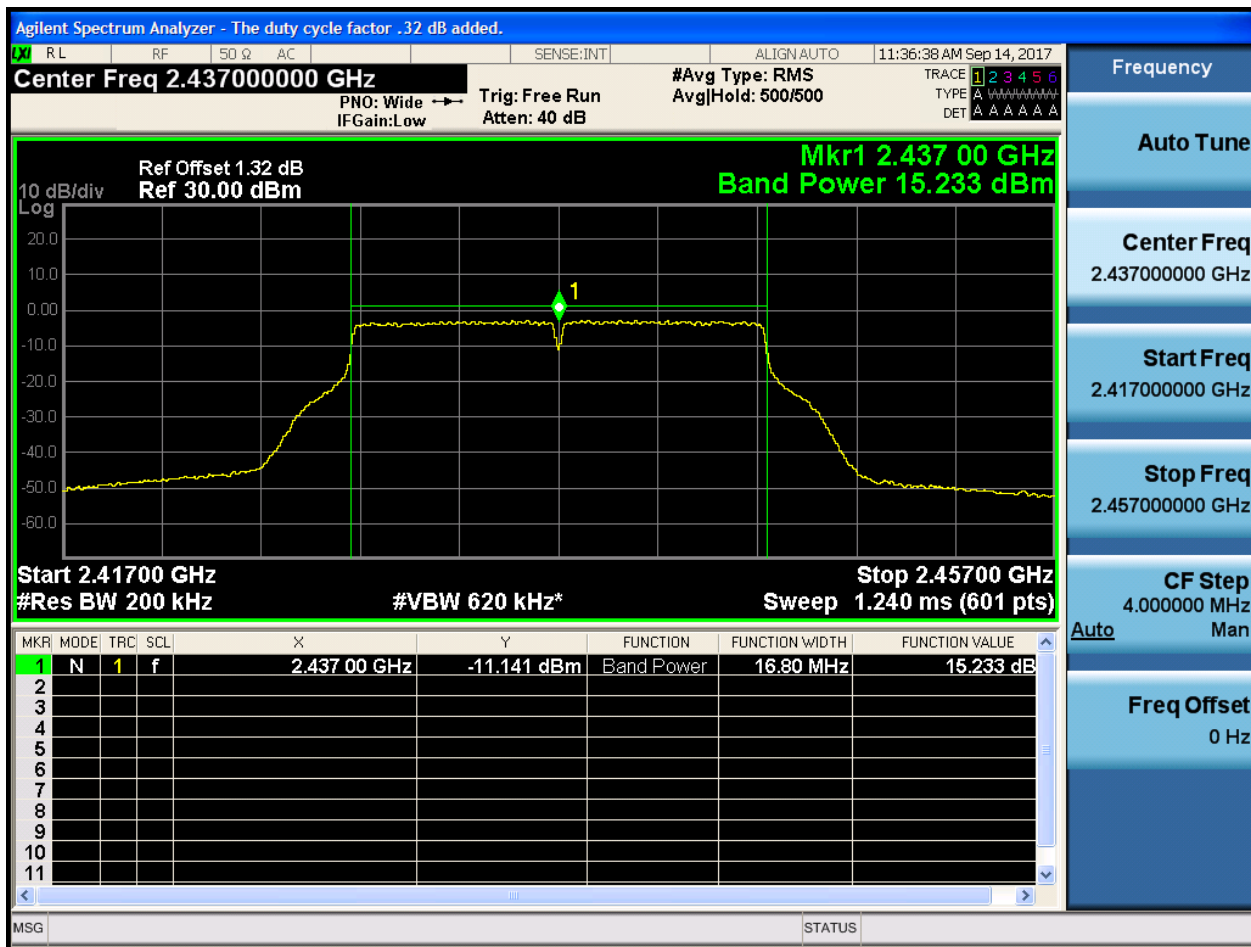


2.9 11G_M@Ant 1



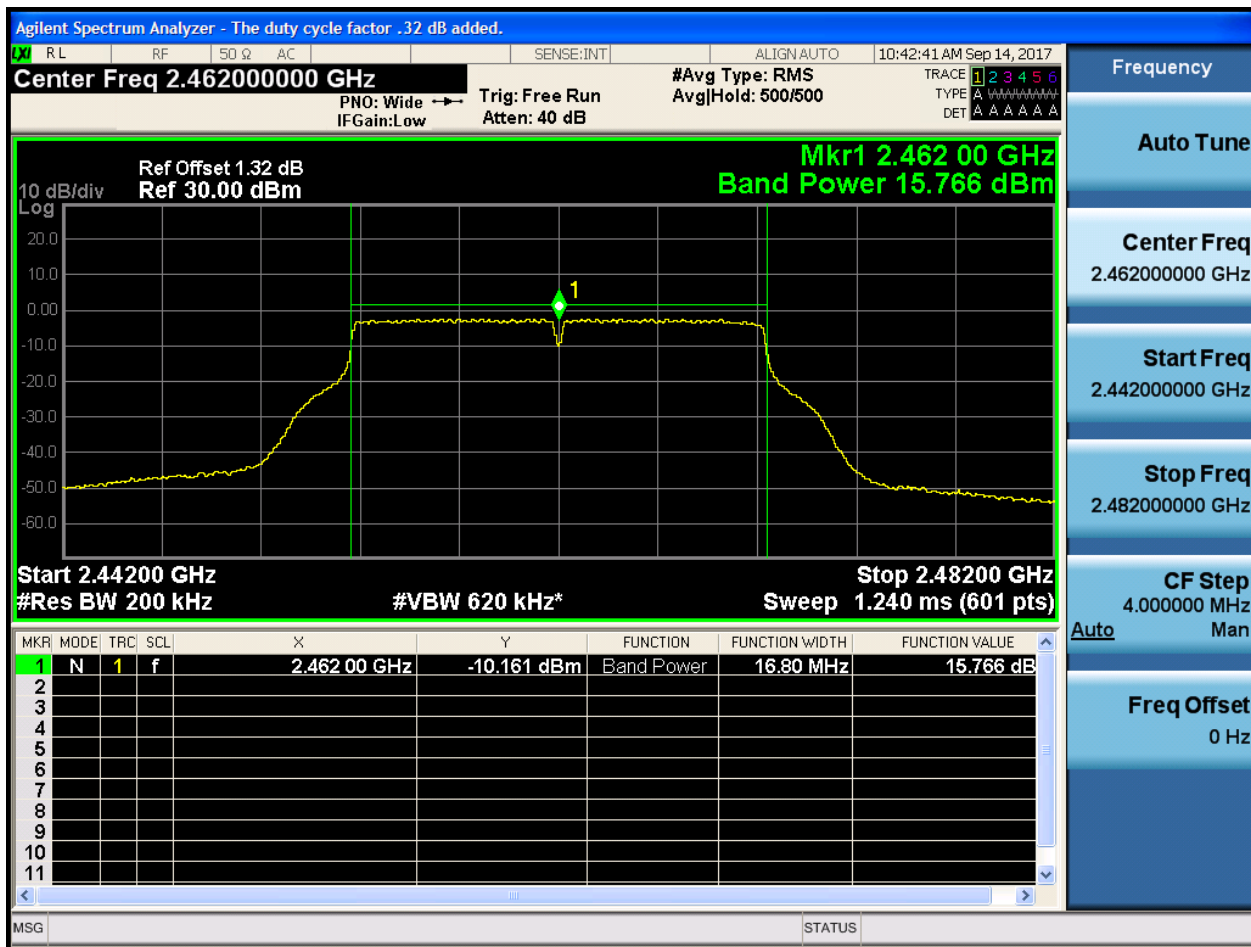


2.10 11G_M@Ant 2



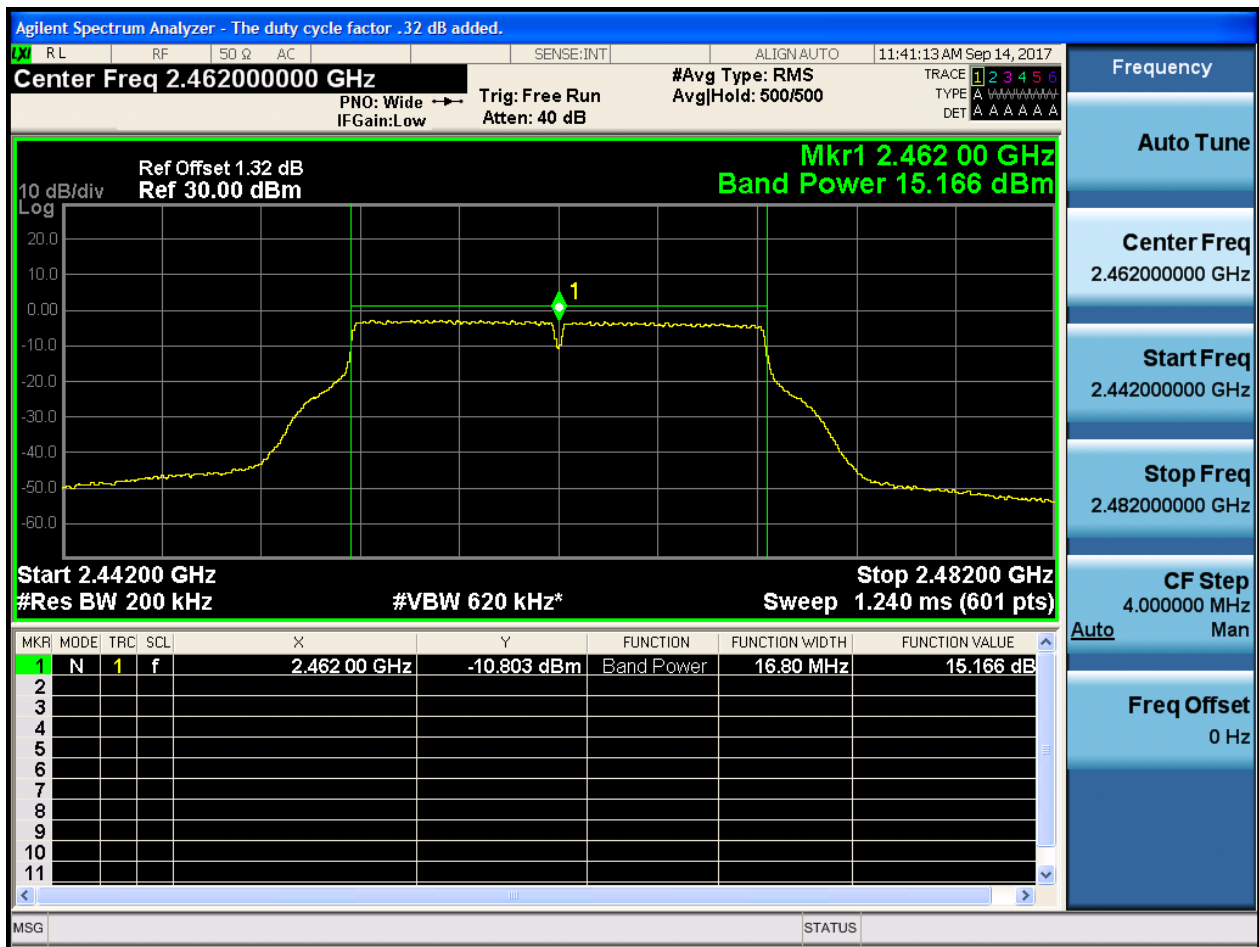


2.11 11G_H@Ant 1



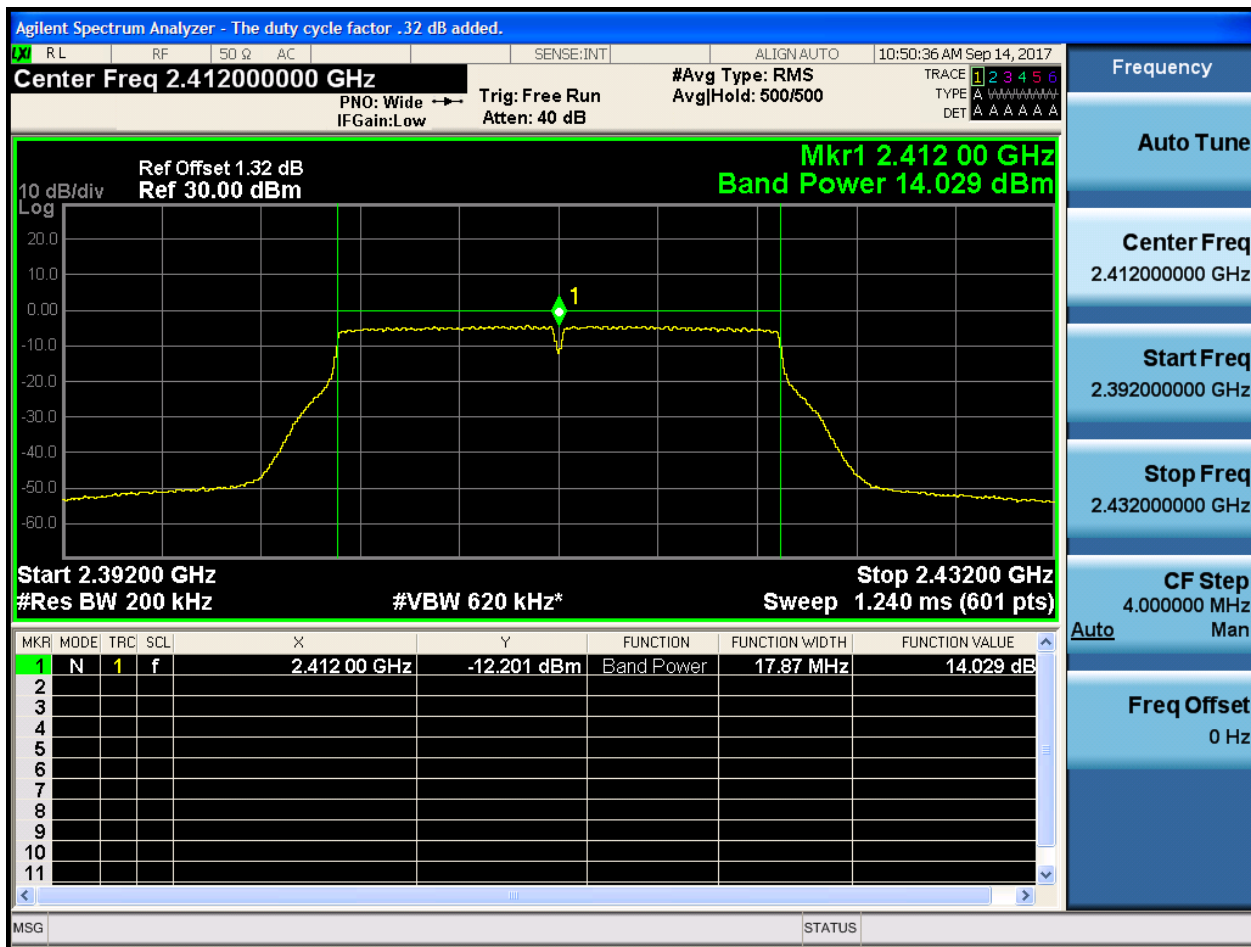


2.12 11G_H@Ant 2



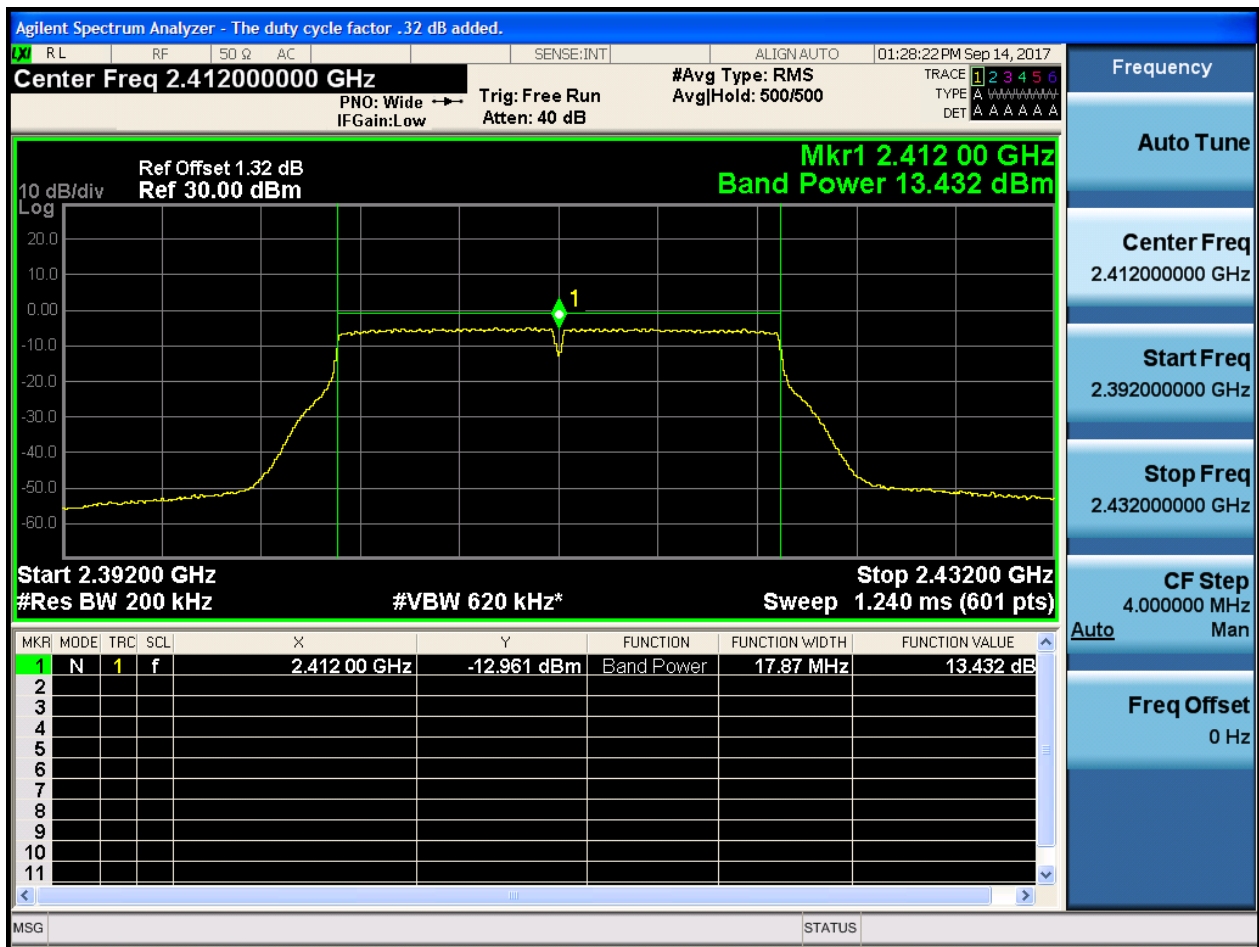


2.13 11N20_L@Ant 1



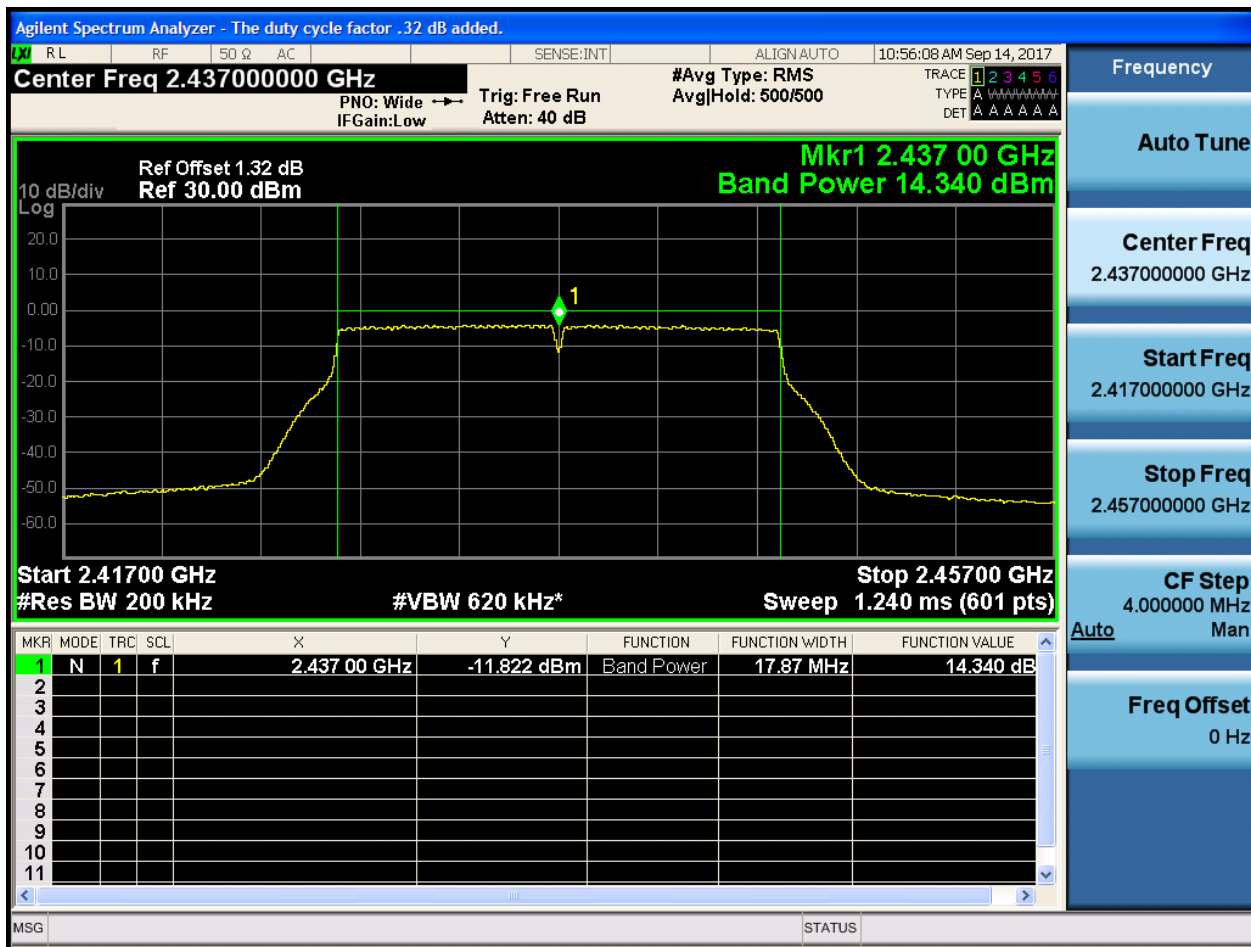


2.14 11N20_L@Ant 2



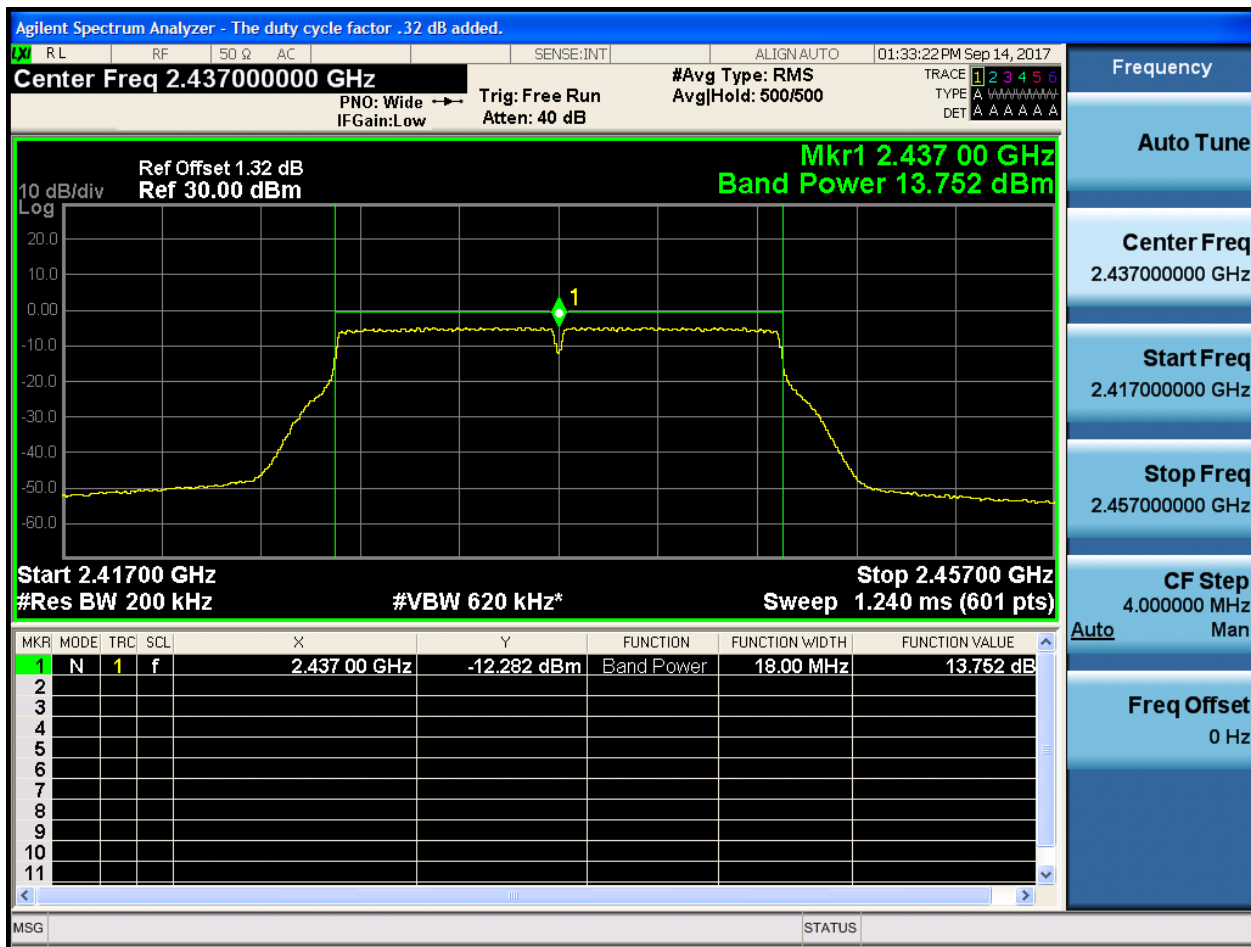


2.15 11N20_M@Ant 1



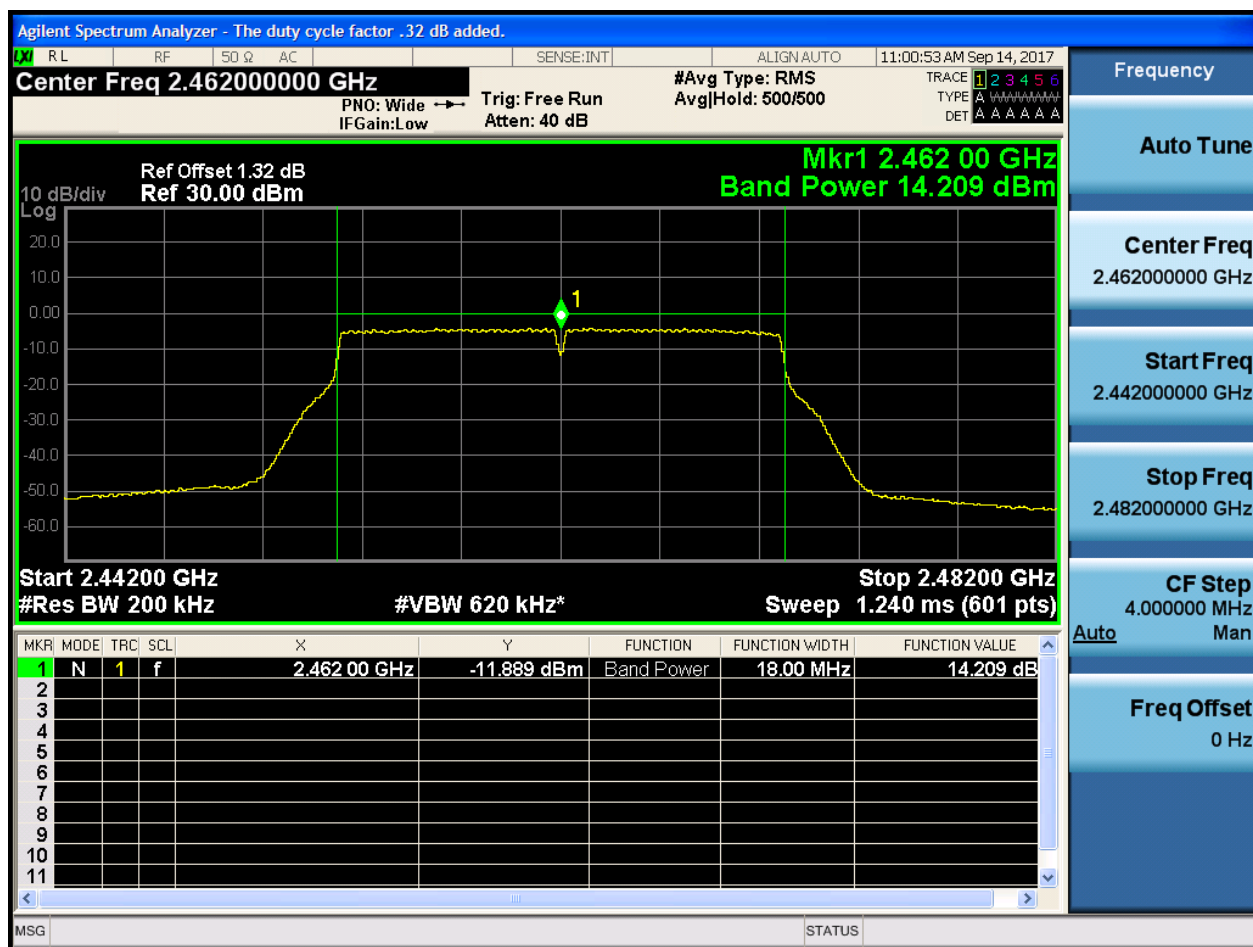


2.16 11N20_M@Ant 2



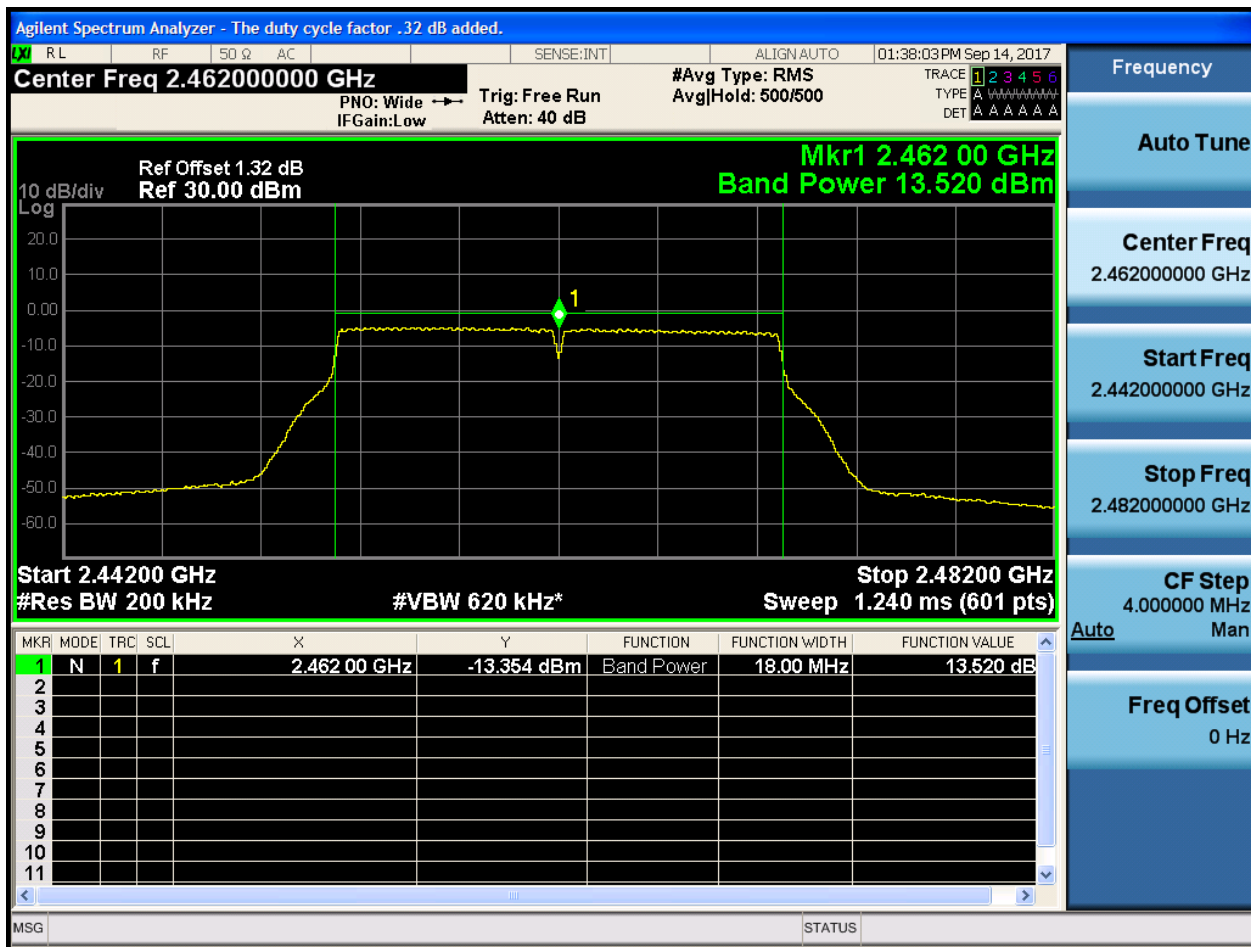


2.17 11N20_H@Ant 1



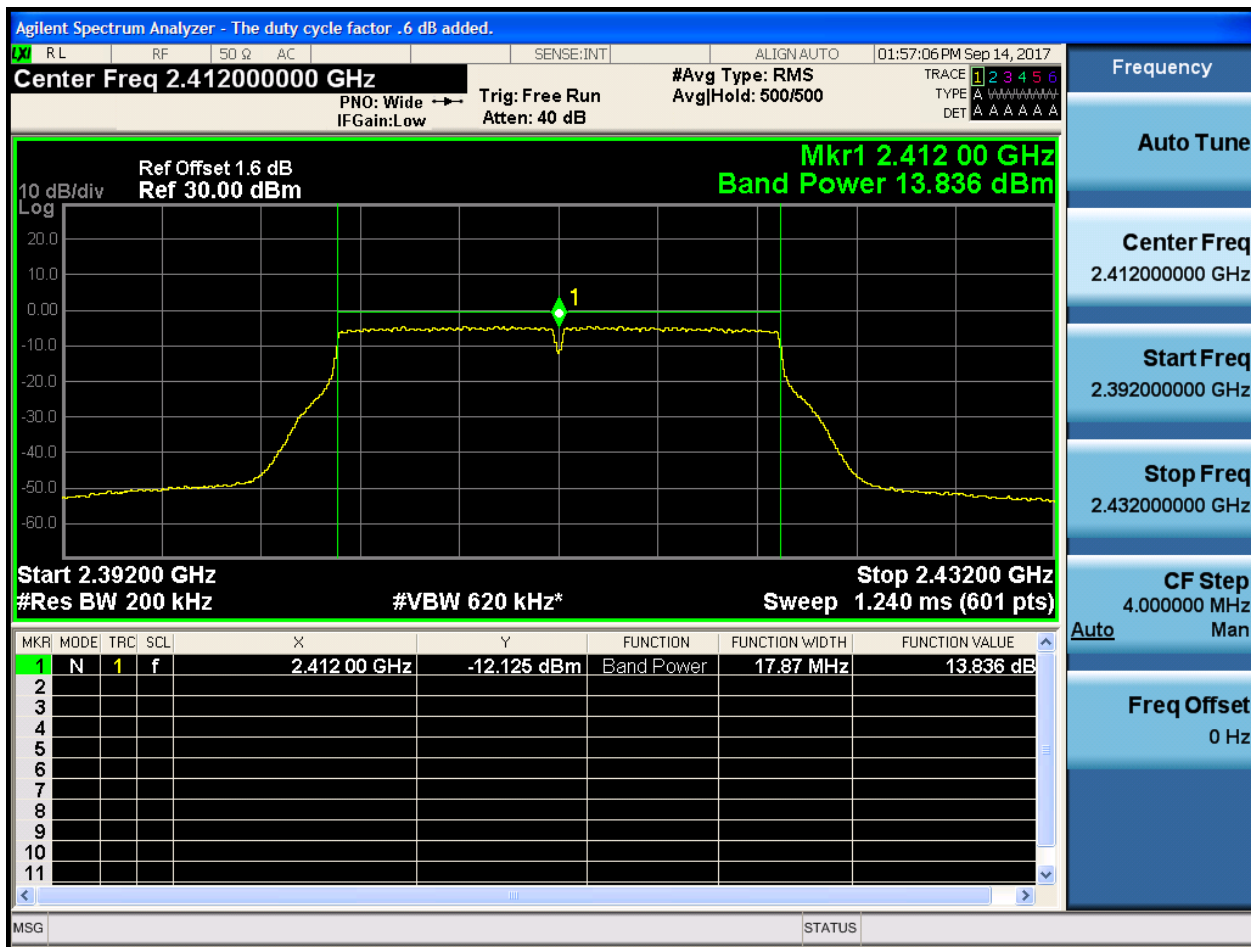


2.18 11N20_H@Ant 2



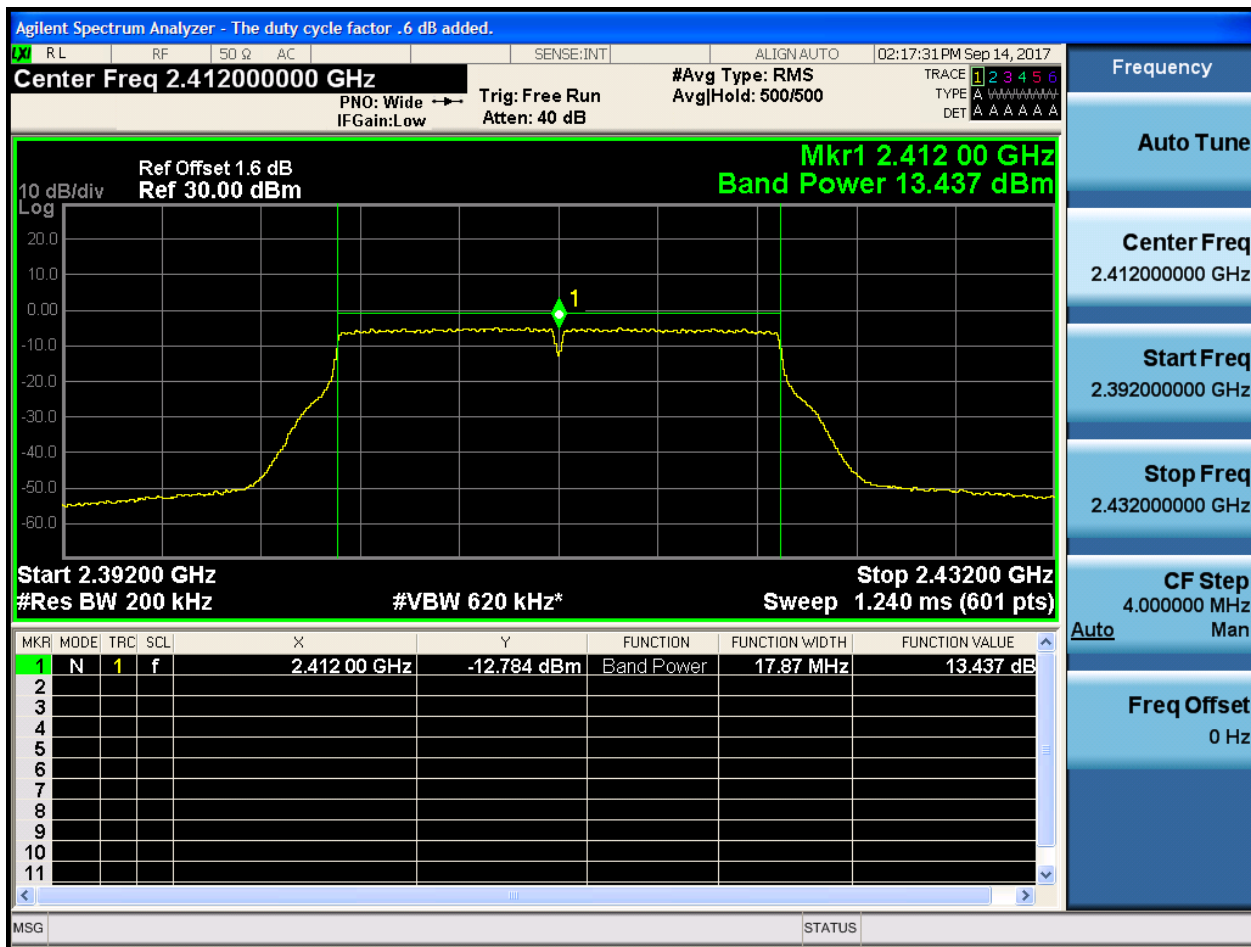


2.19 11N20m_L@Ant 1



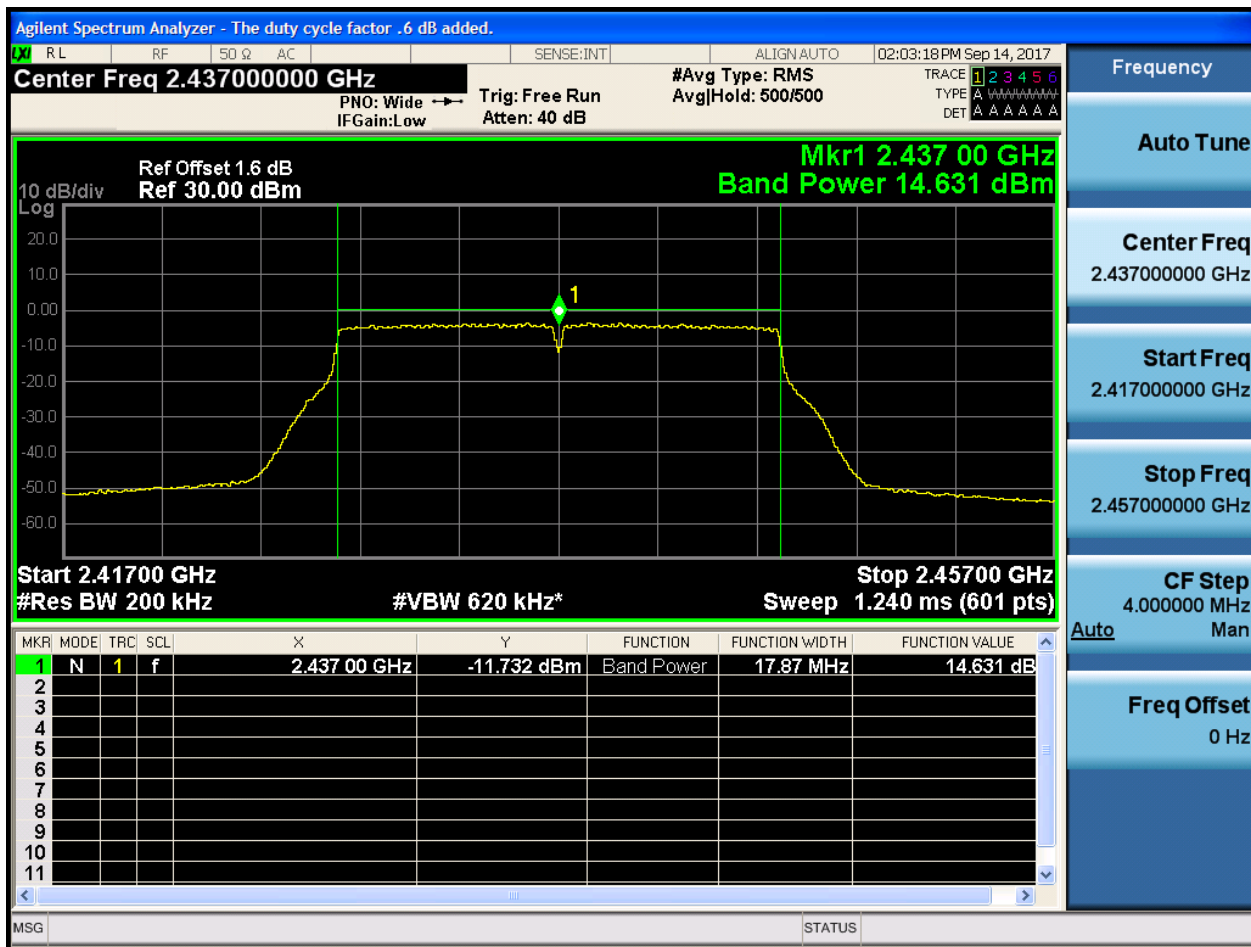


2.20 11N20m_L@Ant 2



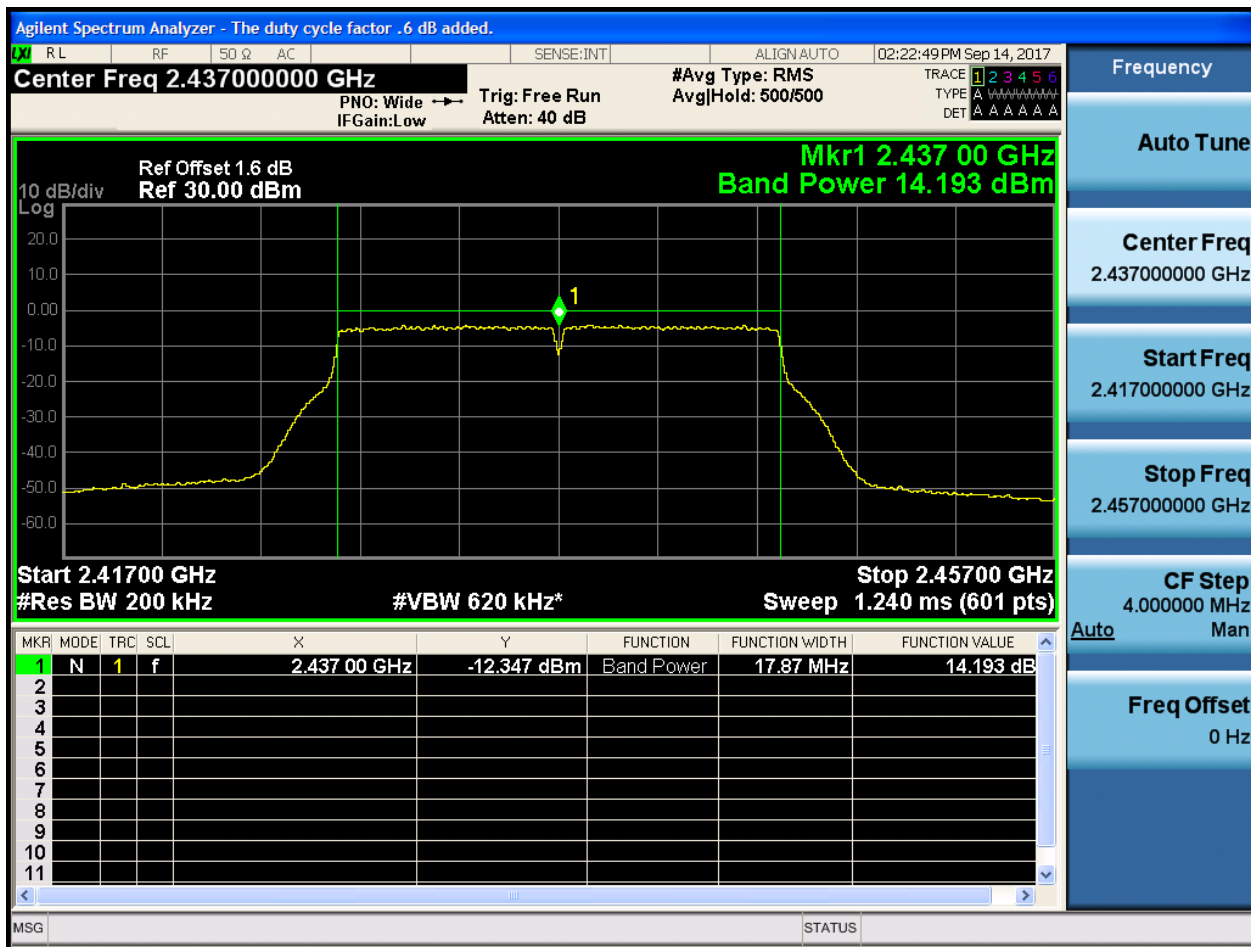


2.21 11N20m_M@Ant 1



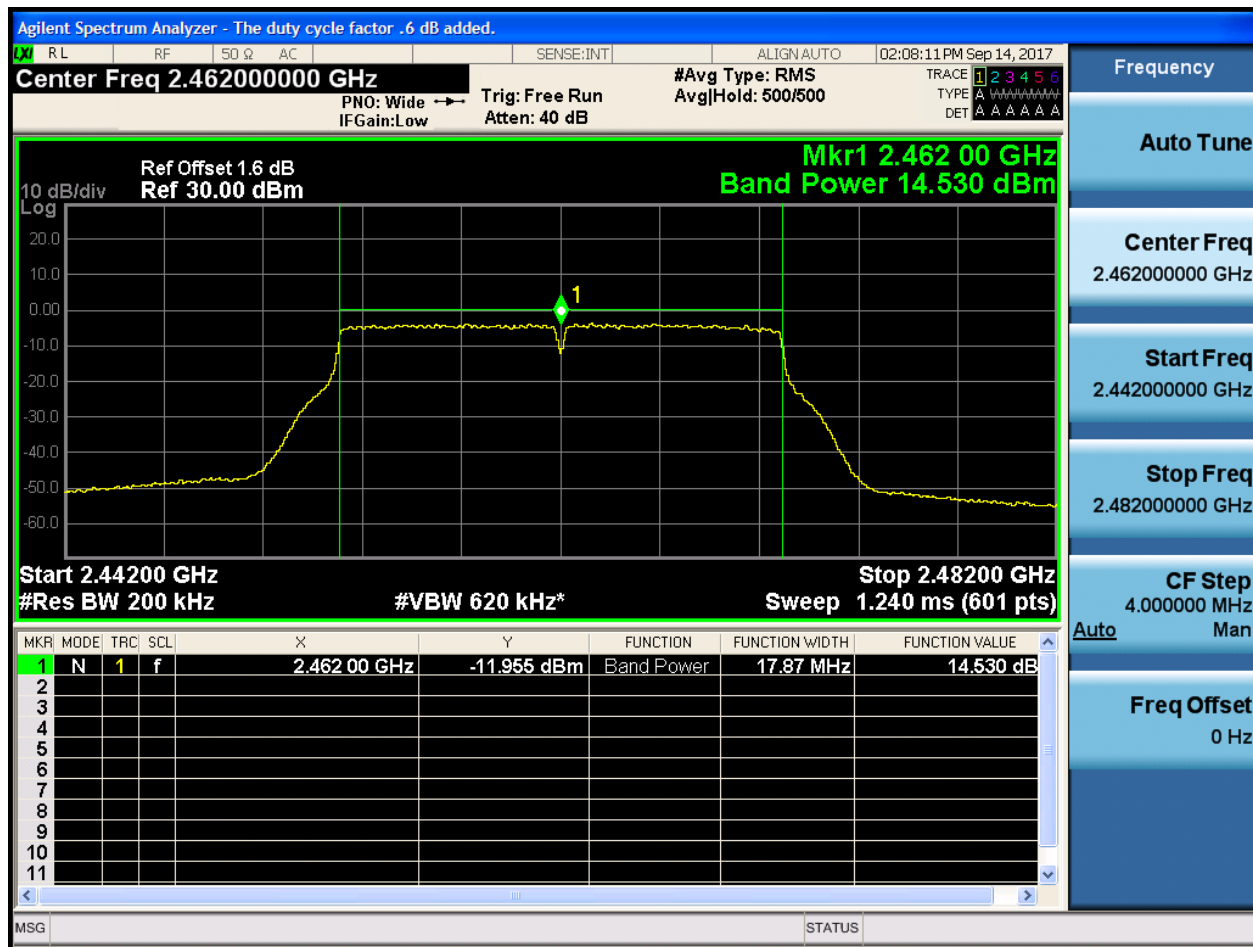


2.22 11N20m_M@Ant 2

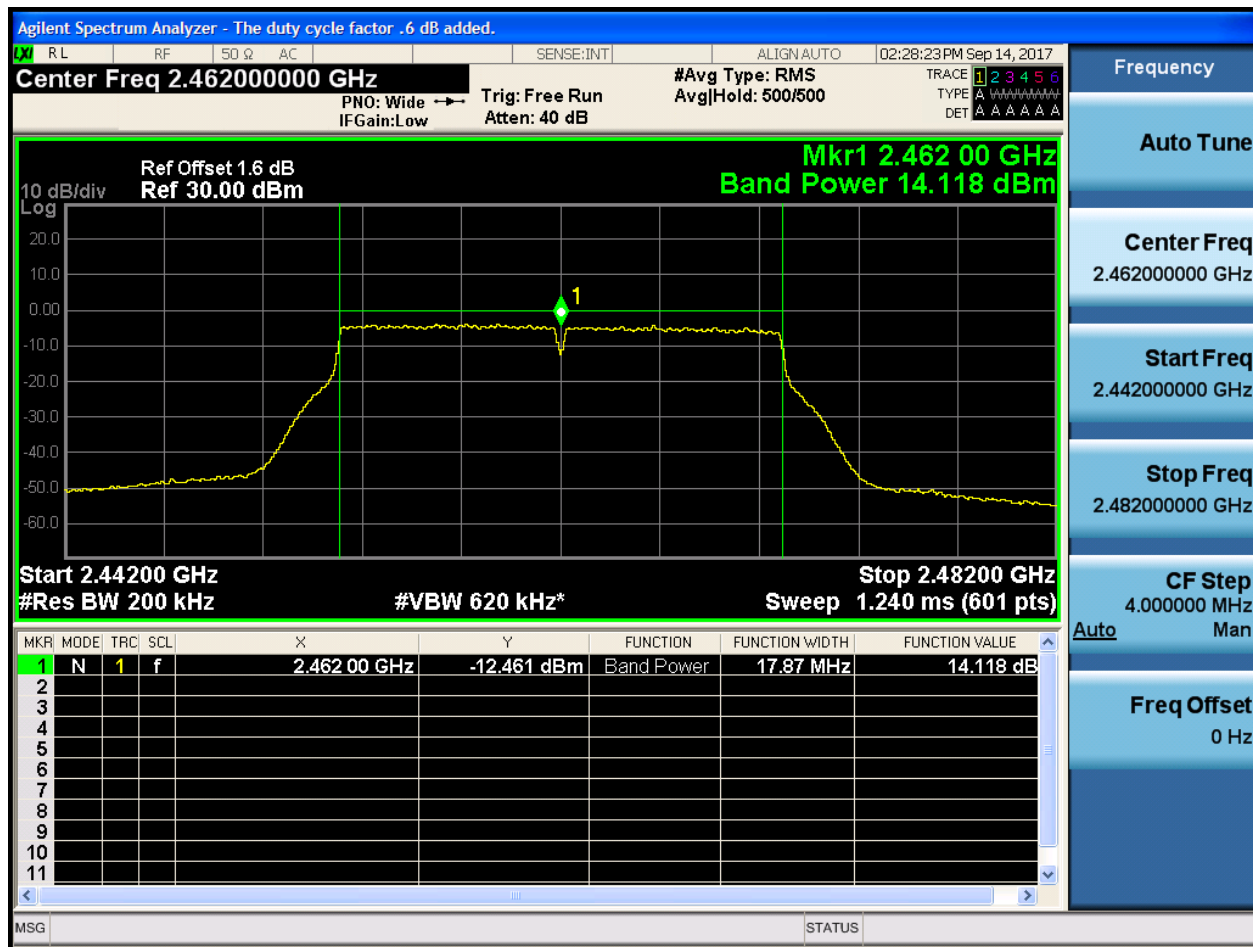




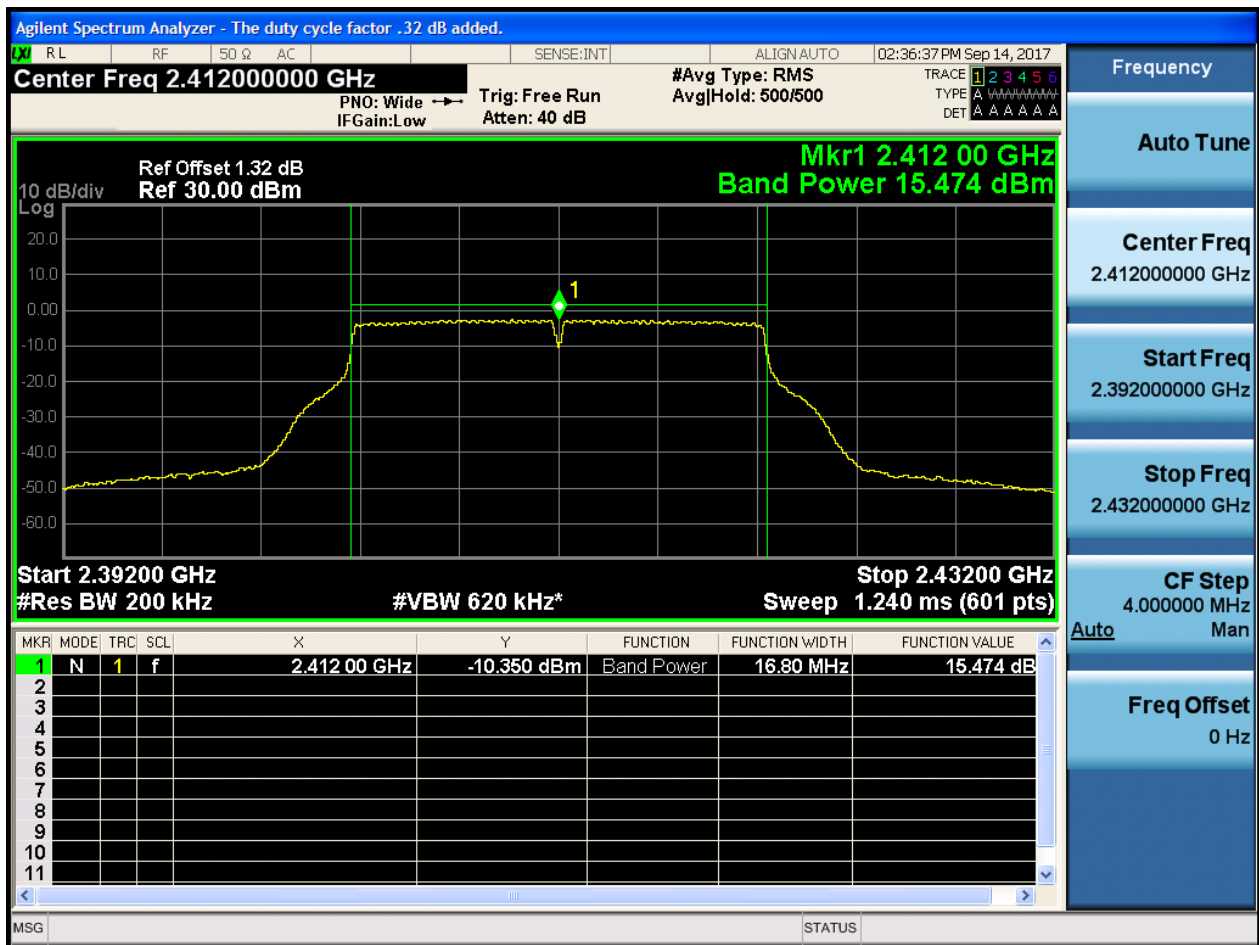
2.23 11N20m_H@Ant 1



2.24 11N20m_H@Ant 2

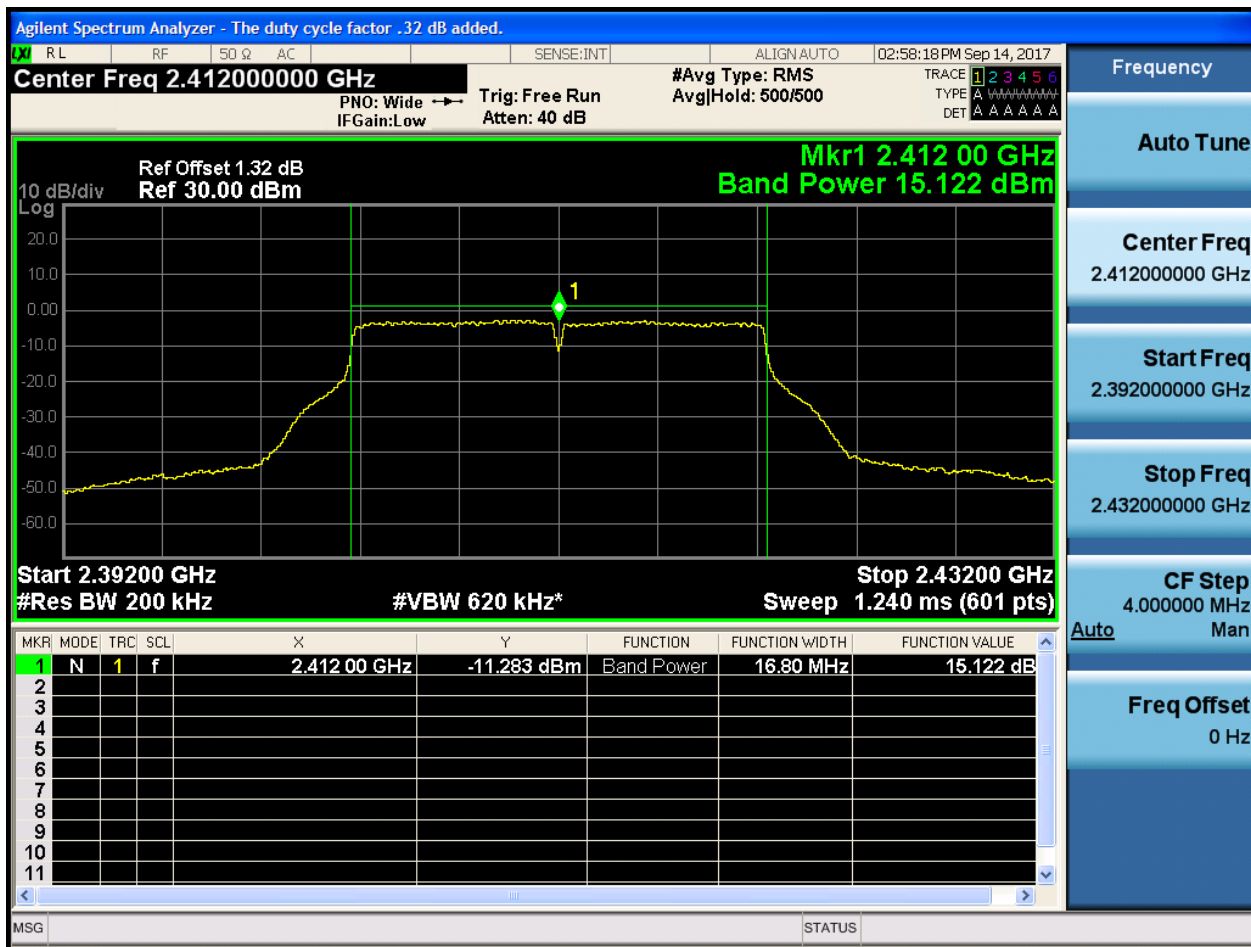


2.25 11G CDD__L@Ant 1



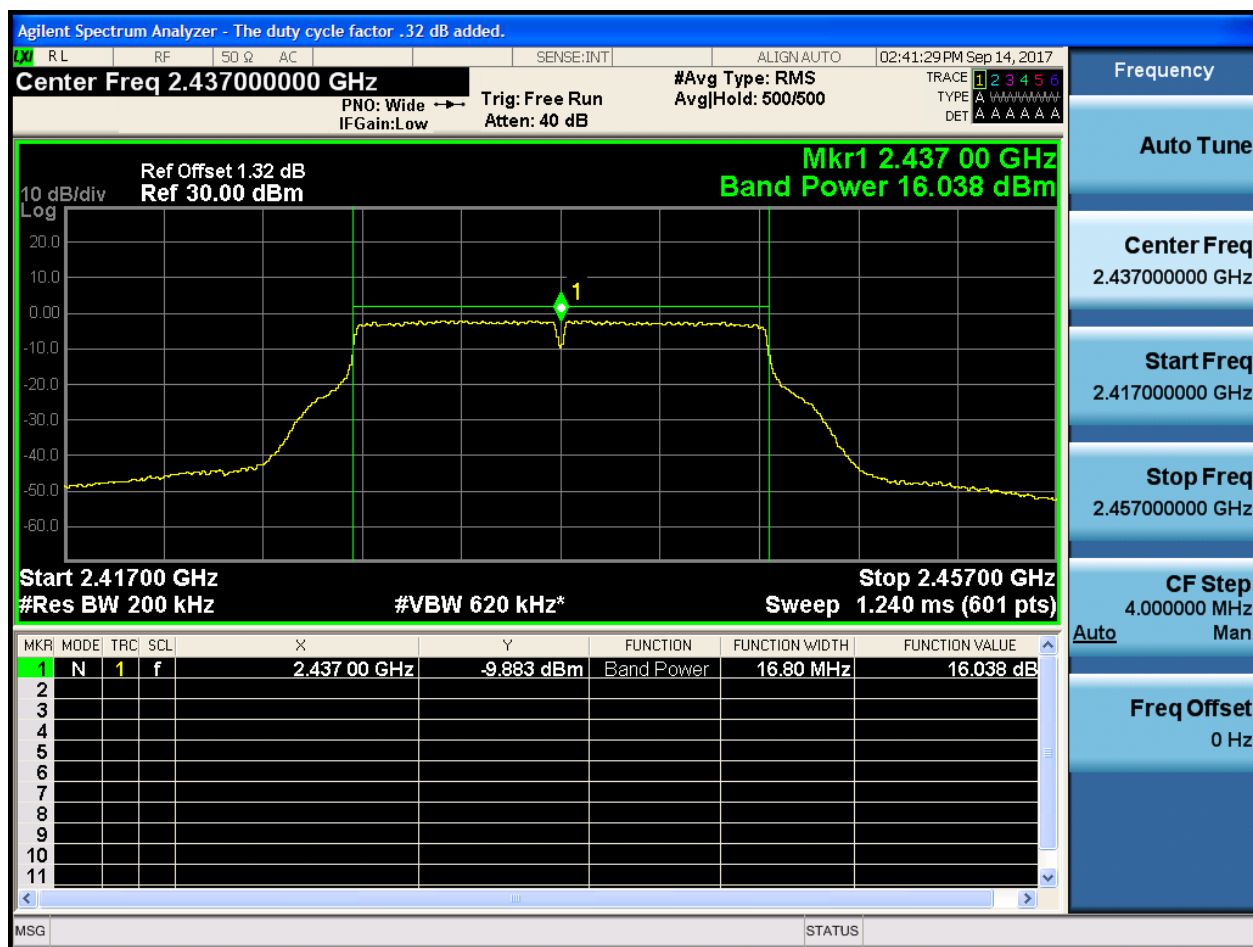


2.26 11G CDD__L@Ant 2



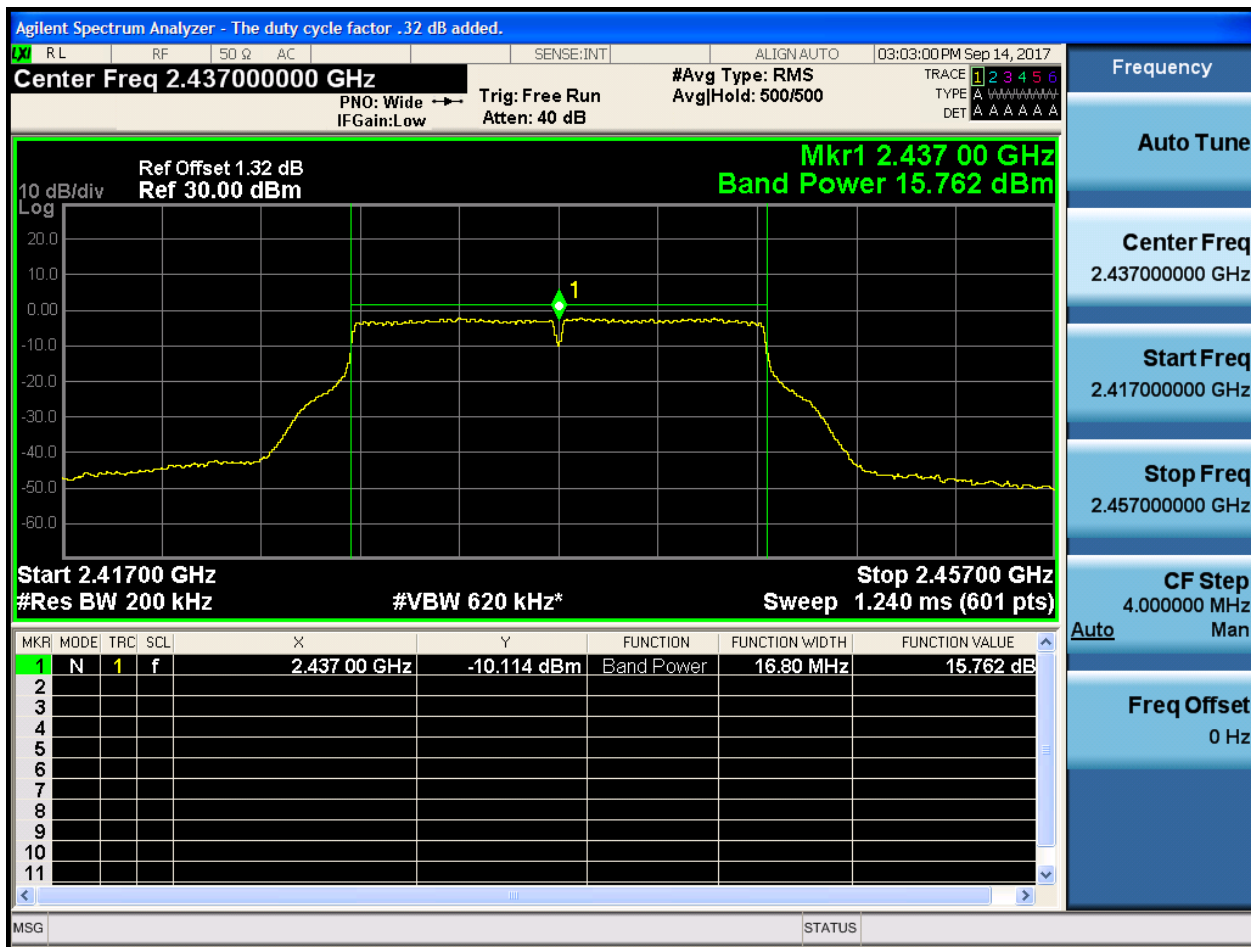


2.27 11G CDD__M@Ant 1



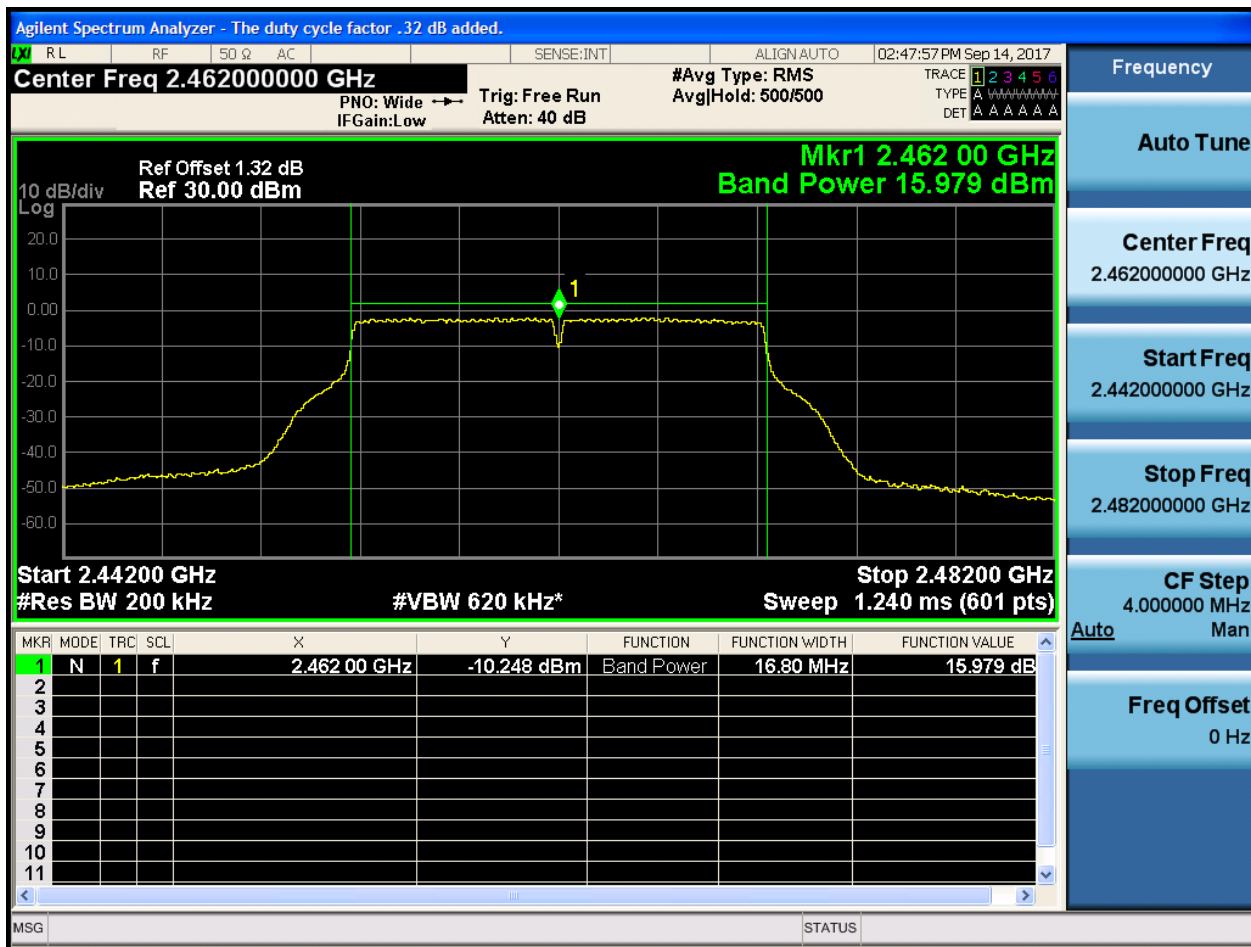


2.28 11G CDD__M@Ant 2



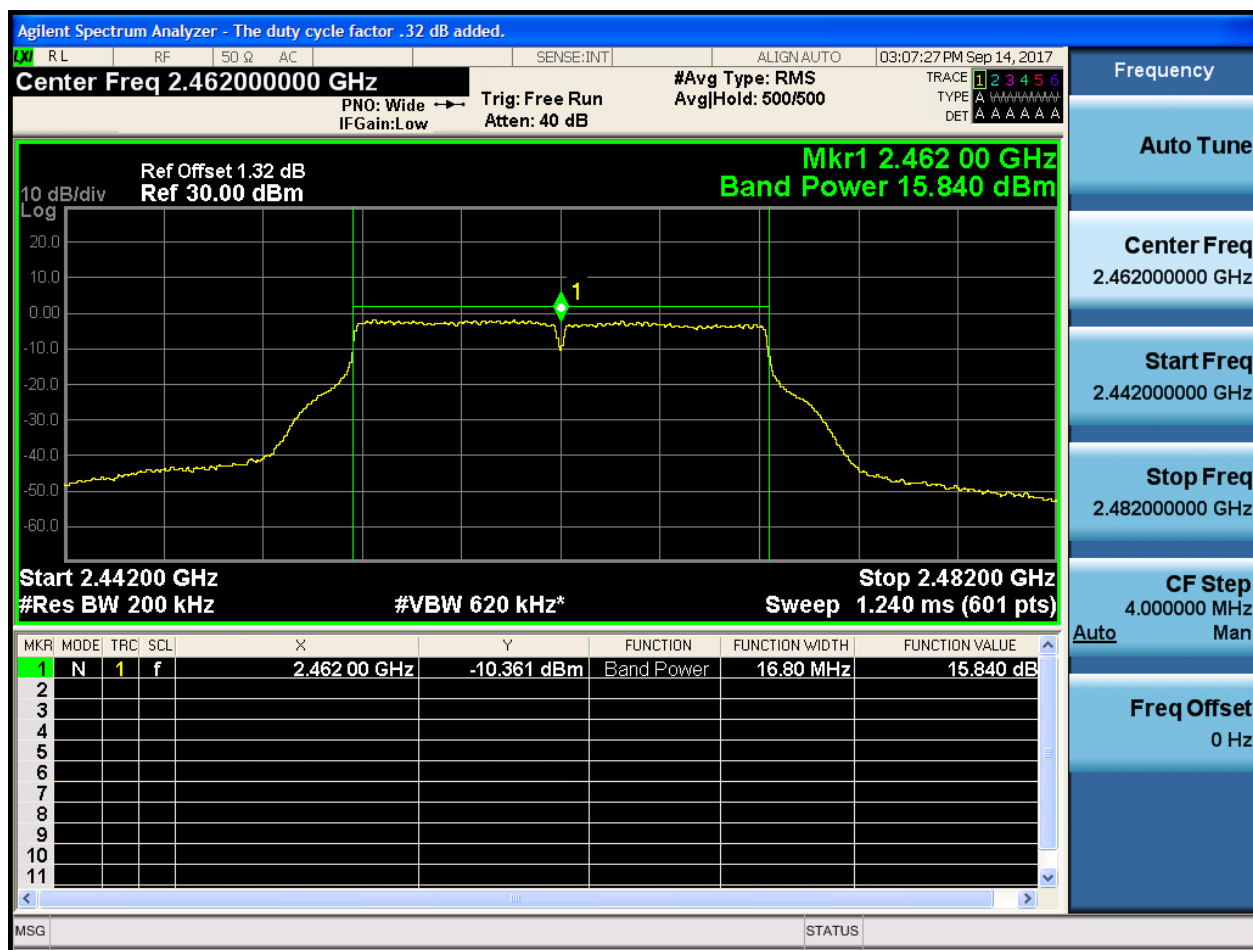


2.29 11G CDD__H@Ant 1





2.30 11G CDD__H@Ant 2



Appendix E: Maximum Power Spectral Density Level

Part I - Test Results

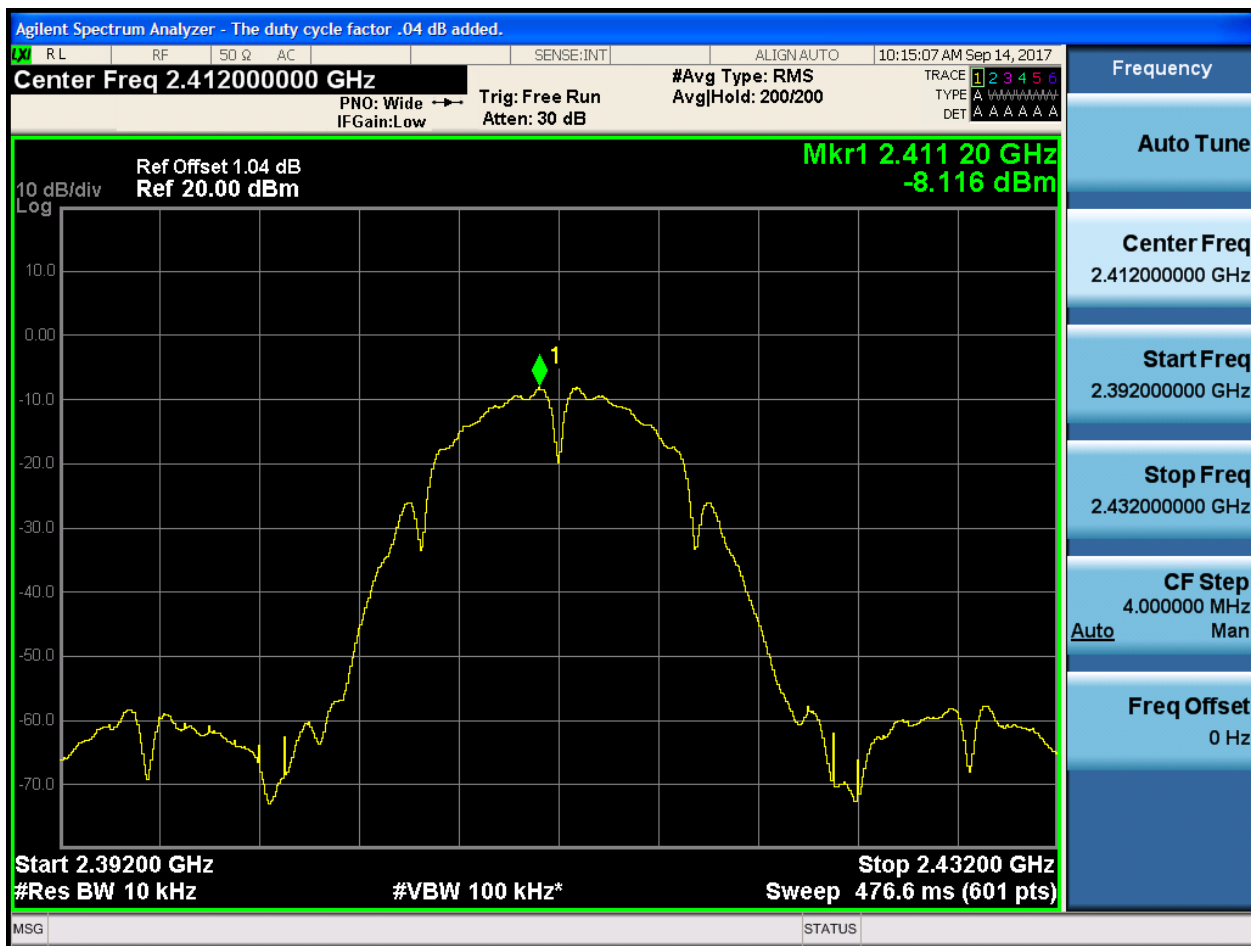
Test Mode	Test Channel	Frequency[MHz]	Ant	Duty Cycle [%]	PD[MHz]	Verdict
11B	L	2412	Ant 1	99	-8.12	pass
11B	L	2412	Ant 2	99	-8.91	pass
11B	M	2437	Ant 1	99	-8.07	pass
11B	M	2437	Ant 2	99	-8.57	pass
11B	H	2462	Ant 1	99	-7.91	pass
11B	H	2462	Ant 2	99	-8.54	pass
11G	L	2412	Ant 1	93	-13.43	pass
11G	L	2412	Ant 2	93	-13.92	pass
11G	M	2437	Ant 1	93	-13.32	pass
11G	M	2437	Ant 2	93	-14.00	pass
11G	H	2462	Ant 1	93	-13.38	pass
11G	H	2462	Ant 2	93	-13.75	pass
11N20	L	2412	Ant 1	93	-16.01	pass
11N20	L	2412	Ant 2	93	-16.69	pass
11N20	M	2437	Ant 1	93	-15.77	pass

Test Mode	Test Channel	Frequency[MHz]	Ant	Duty Cycle [%]	PD[MHz]	Verdict
11N20	M	2437	Ant 2	93	-16.46	pass
11N20	H	2462	Ant 1	93	-16.04	pass
11N20	H	2462	Ant 2	93	-16.49	pass
11N20m	L	2412	Ant 1	87	-16.12	pass
11N20m	L	2412	Ant 2	87	-16.01	pass
11N20m	L	2412	SUM	87	-13.05	pass
11N20m	M	2437	Ant 1	87	-15.37	pass
11N20m	M	2437	Ant 2	87	-15.53	pass
11N20m	M	2437	SUM	87	-12.44	pass
11N20m	H	2462	Ant 1	87	-15.55	pass
11N20m	H	2462	Ant 2	87	-15.26	pass
11N20m	H	2462	SUM	87	-12.39	pass
11G CDD	L	2412	Ant 1	93	-13.51	pass
11G CDD	L	2412	Ant 2	93	-14.09	pass
11G CDD	L	2412	SUM	93	-10.78	pass
11G CDD	M	2437	Ant 1	93	-12.93	pass
11G CDD	M	2437	Ant 2	93	-13.64	pass

Test Mode	Test Channel	Frequency[MHz]	Ant	Duty Cycle [%]	PD[MHz]	Verdict
11G CDD	M	2437	SUM	93	-10.26	pass
11G CDD	H	2462	Ant 1	93	-13.43	pass
11G CDD	H	2462	Ant 2	93	-12.99	pass
11G CDD	H	2462	SUM	93	-10.19	pass

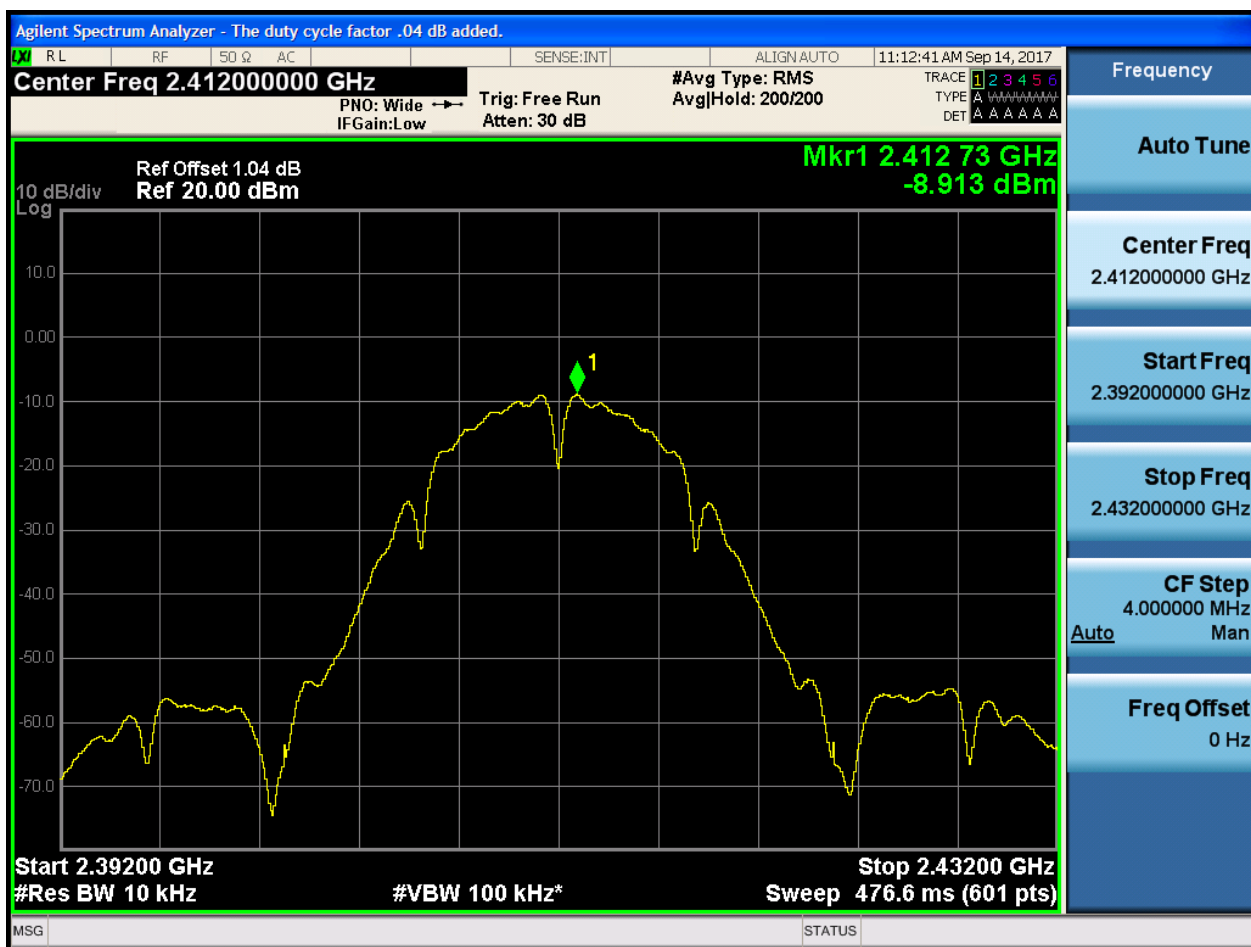
Part II - Test Plots

2.1 11B_L@Ant 1

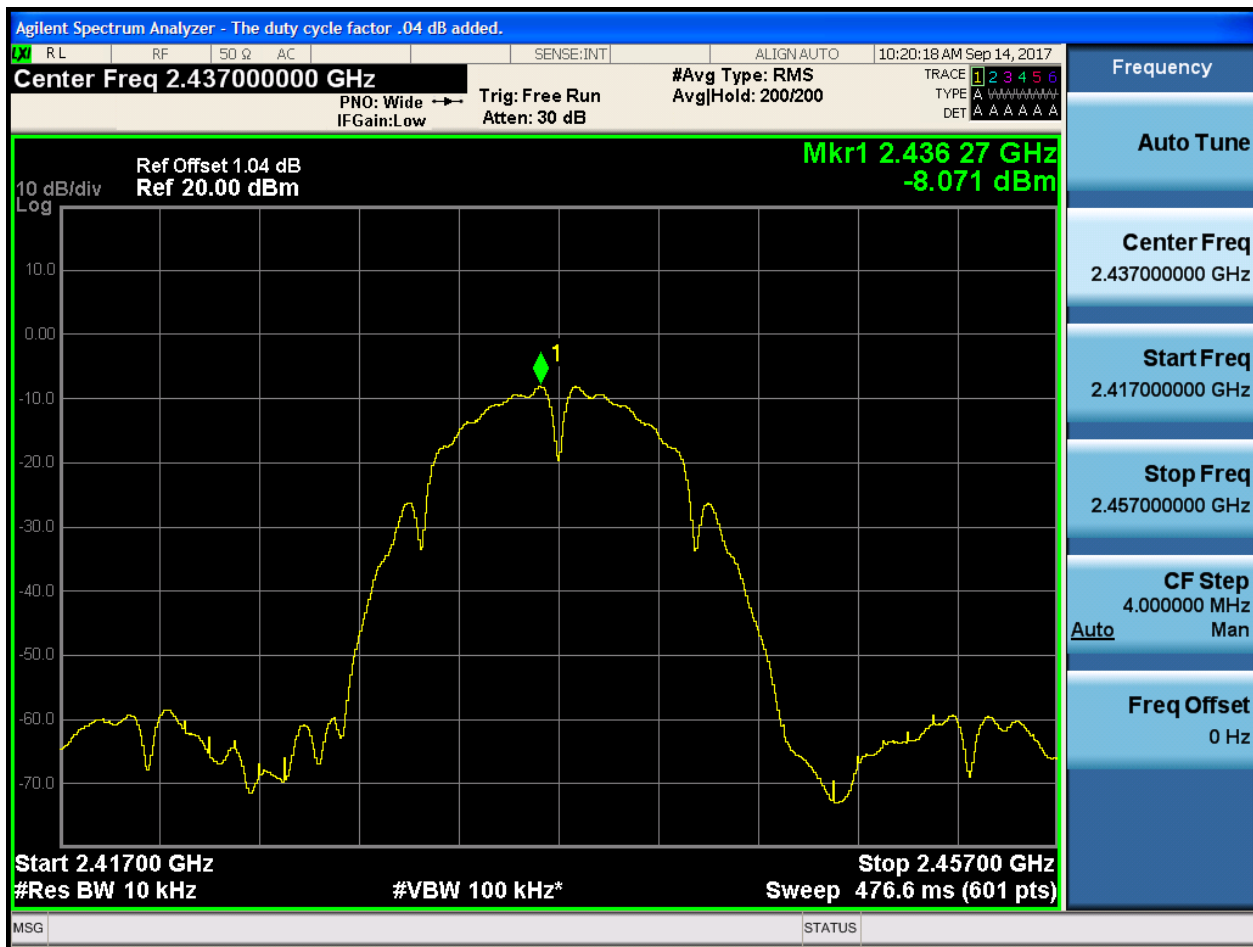




2.2 11B_L@Ant 2

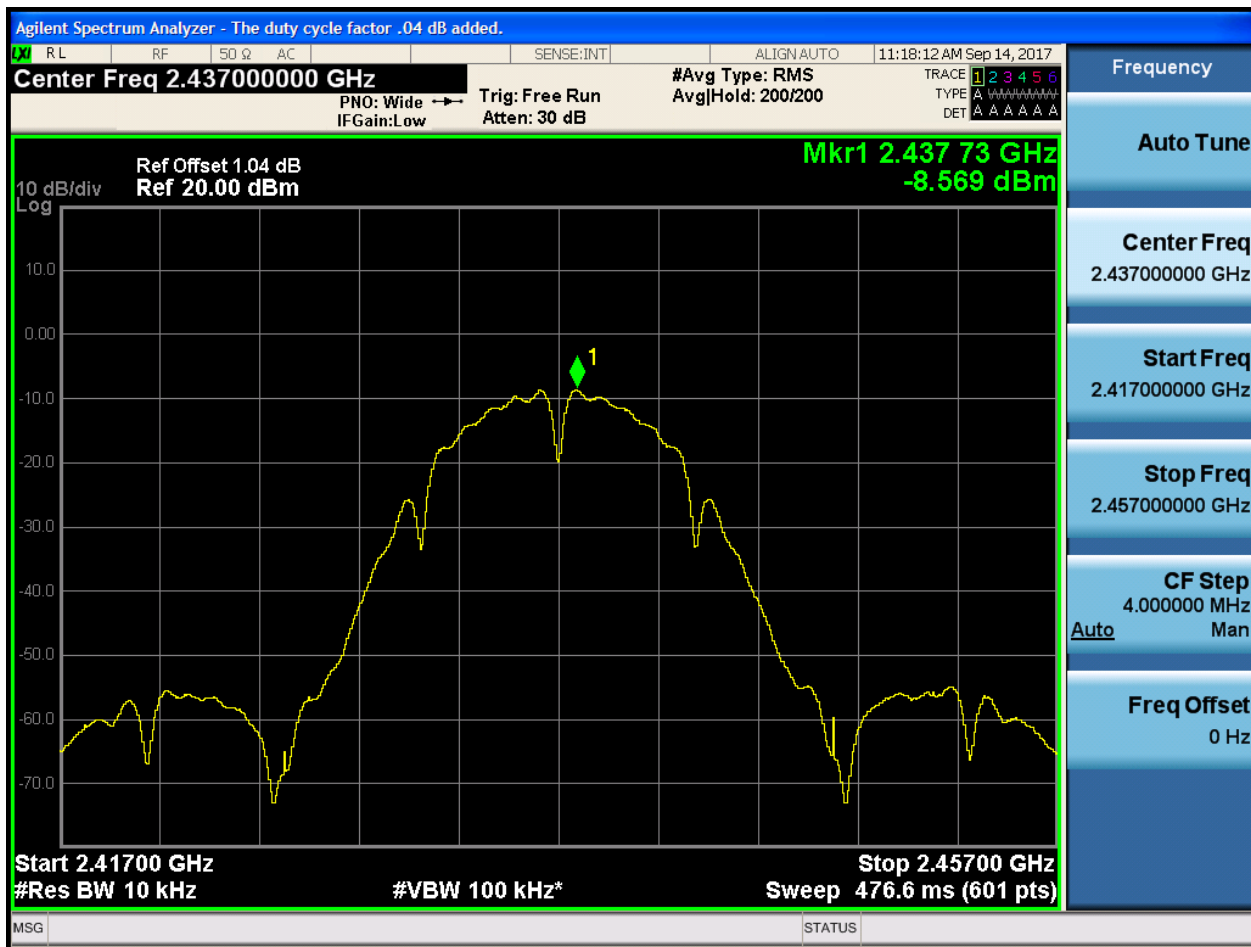


2.3 11B_M@Ant 1



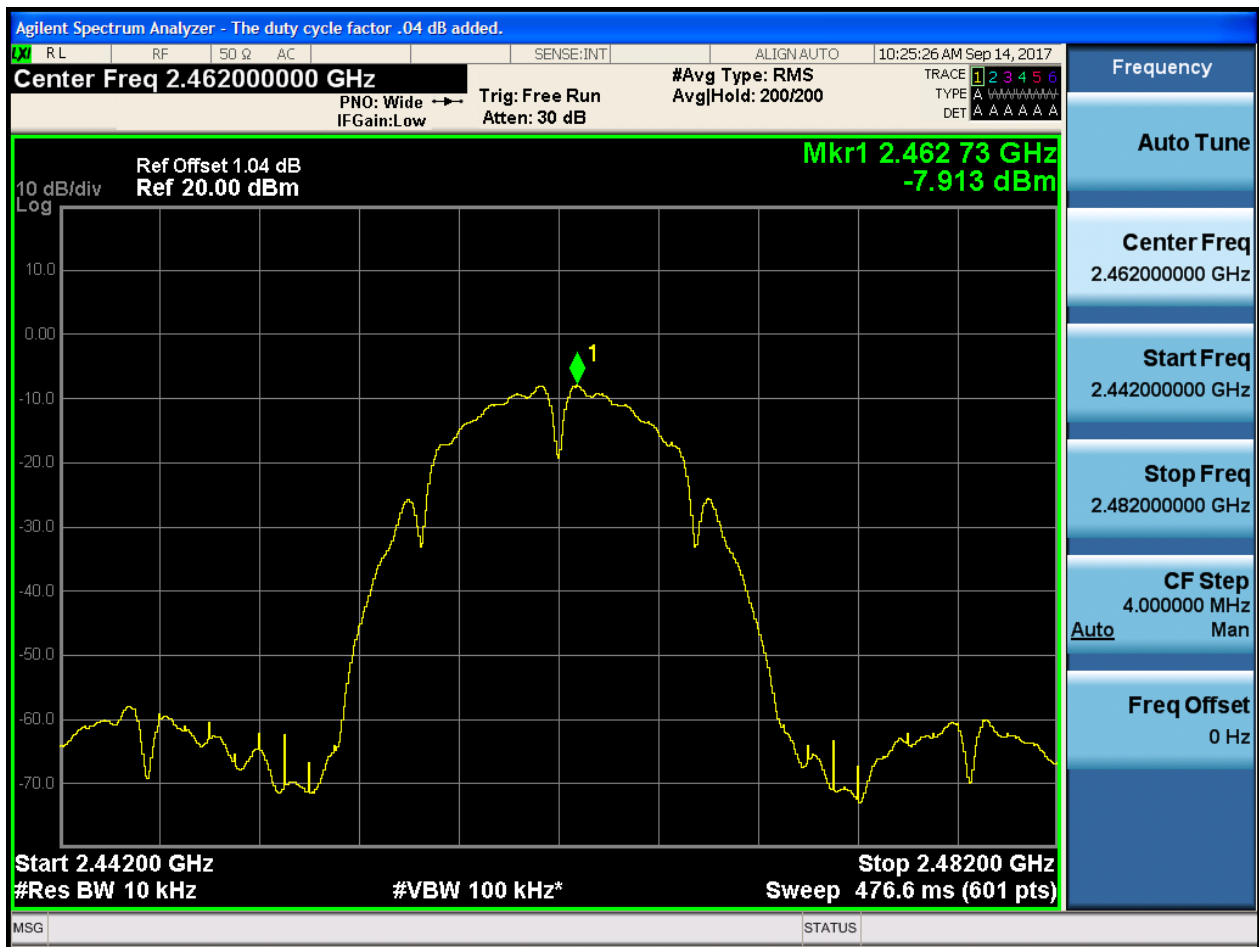


2.4 11B_M@Ant 2



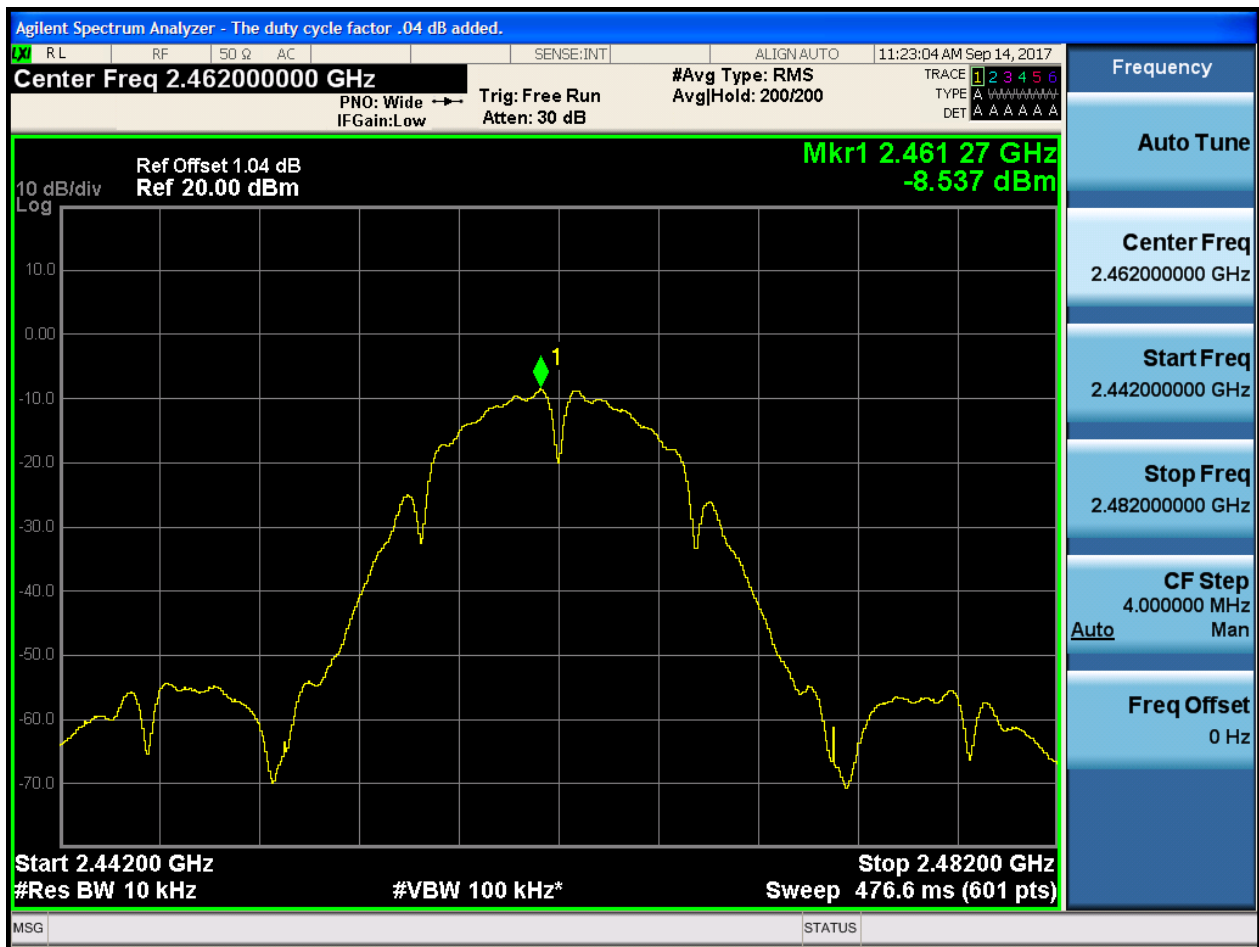


2.5 11B_H@Ant 1



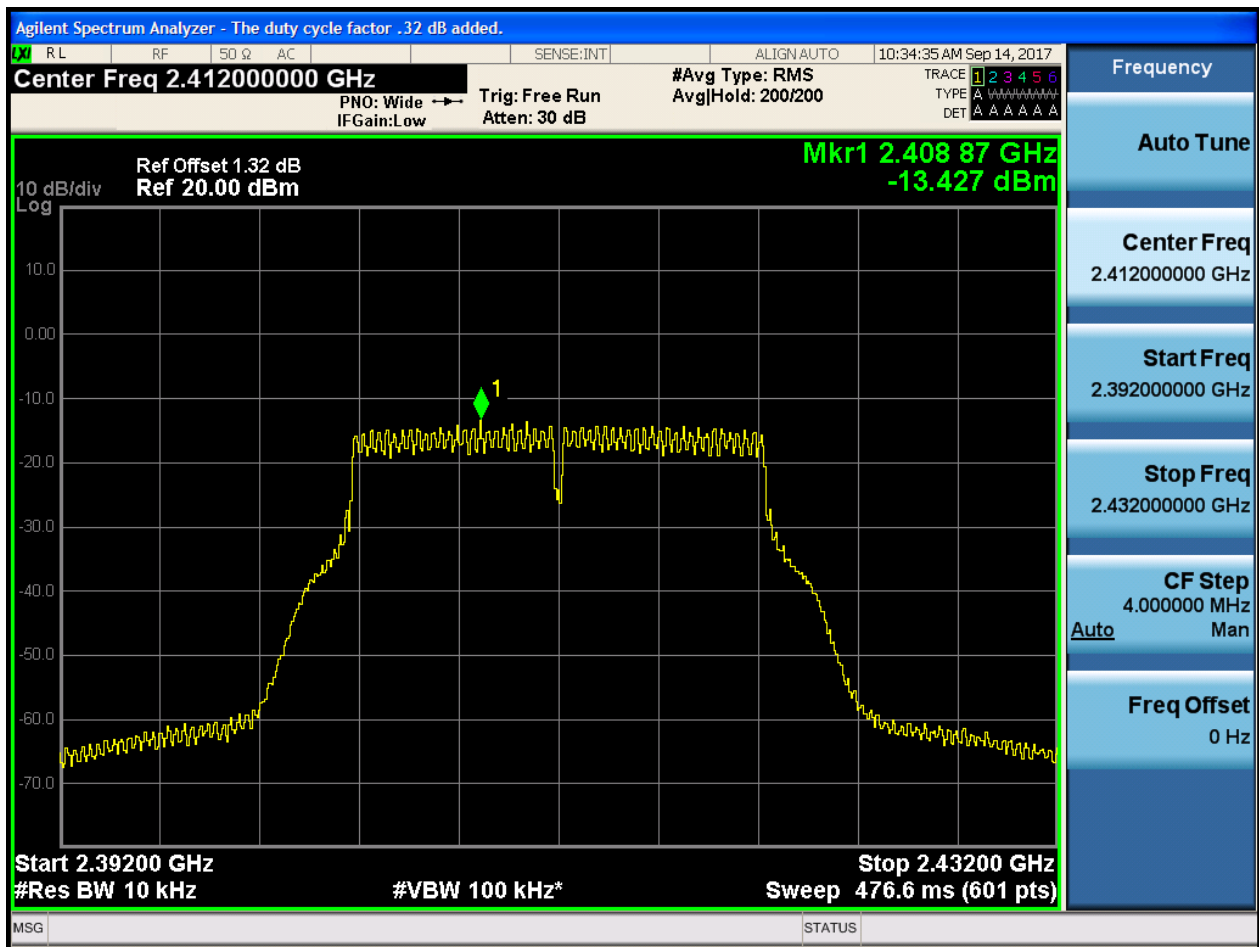


2.6 11B_H@Ant 2



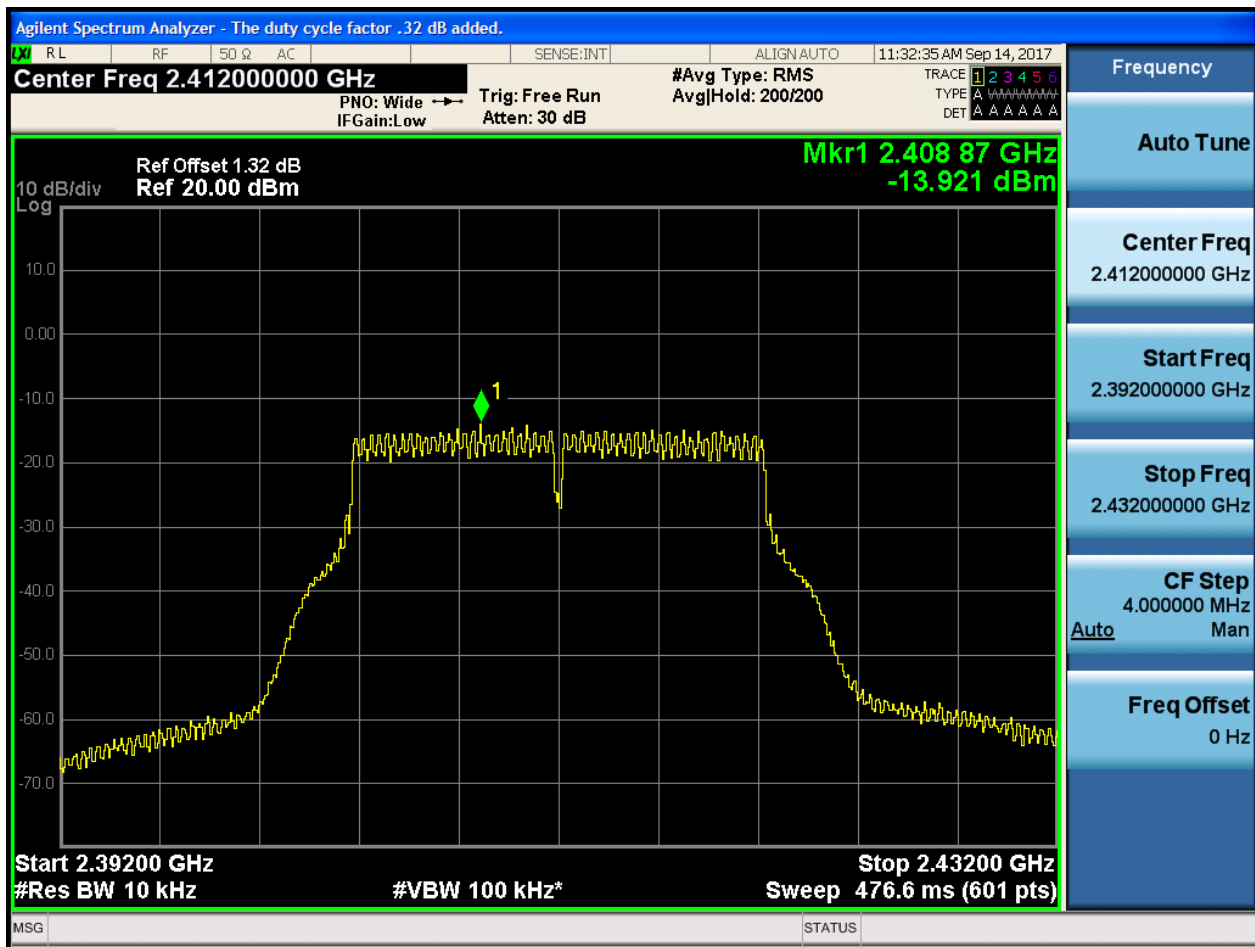


2.7 11G_L@Ant 1



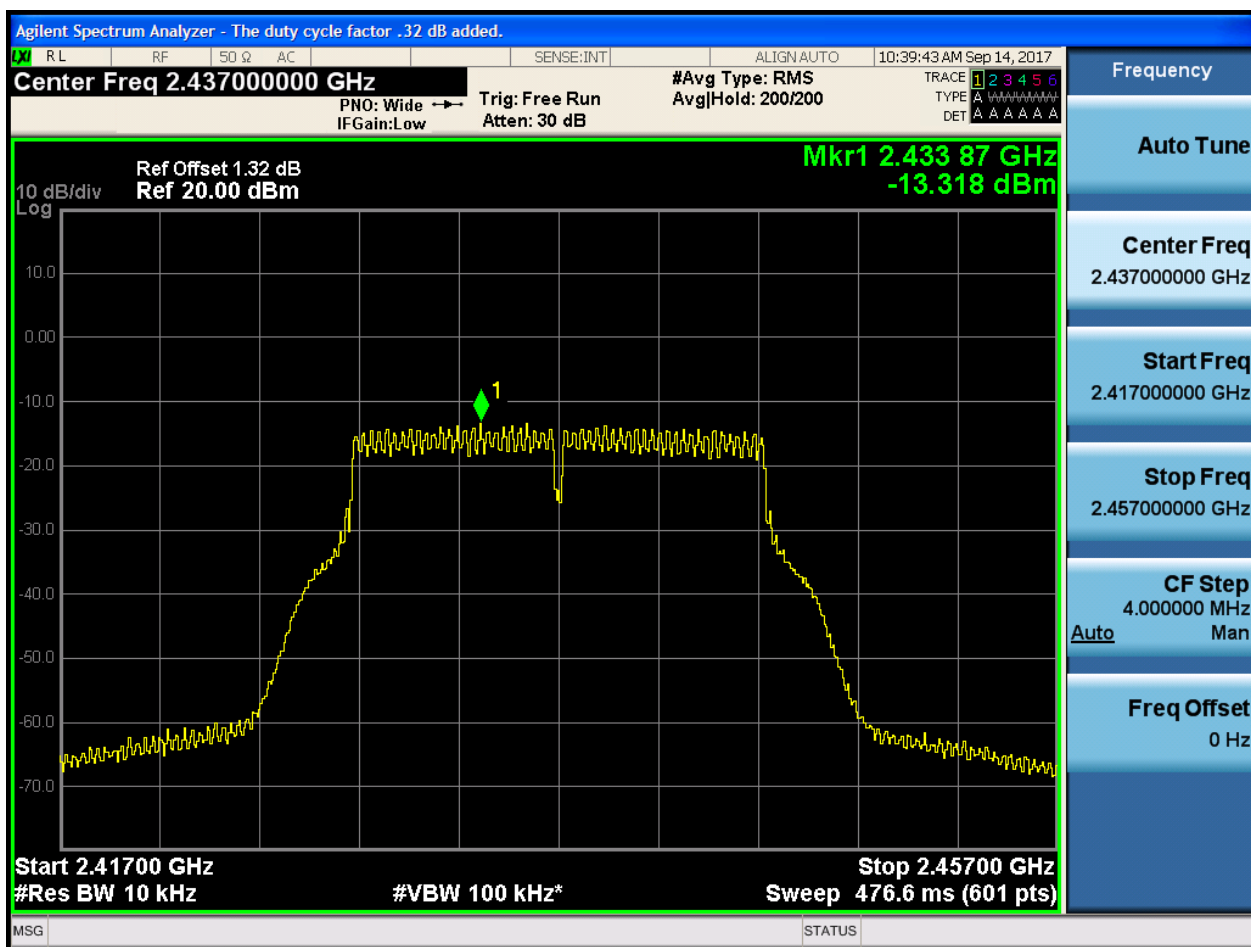


2.8 11G_L@Ant 2



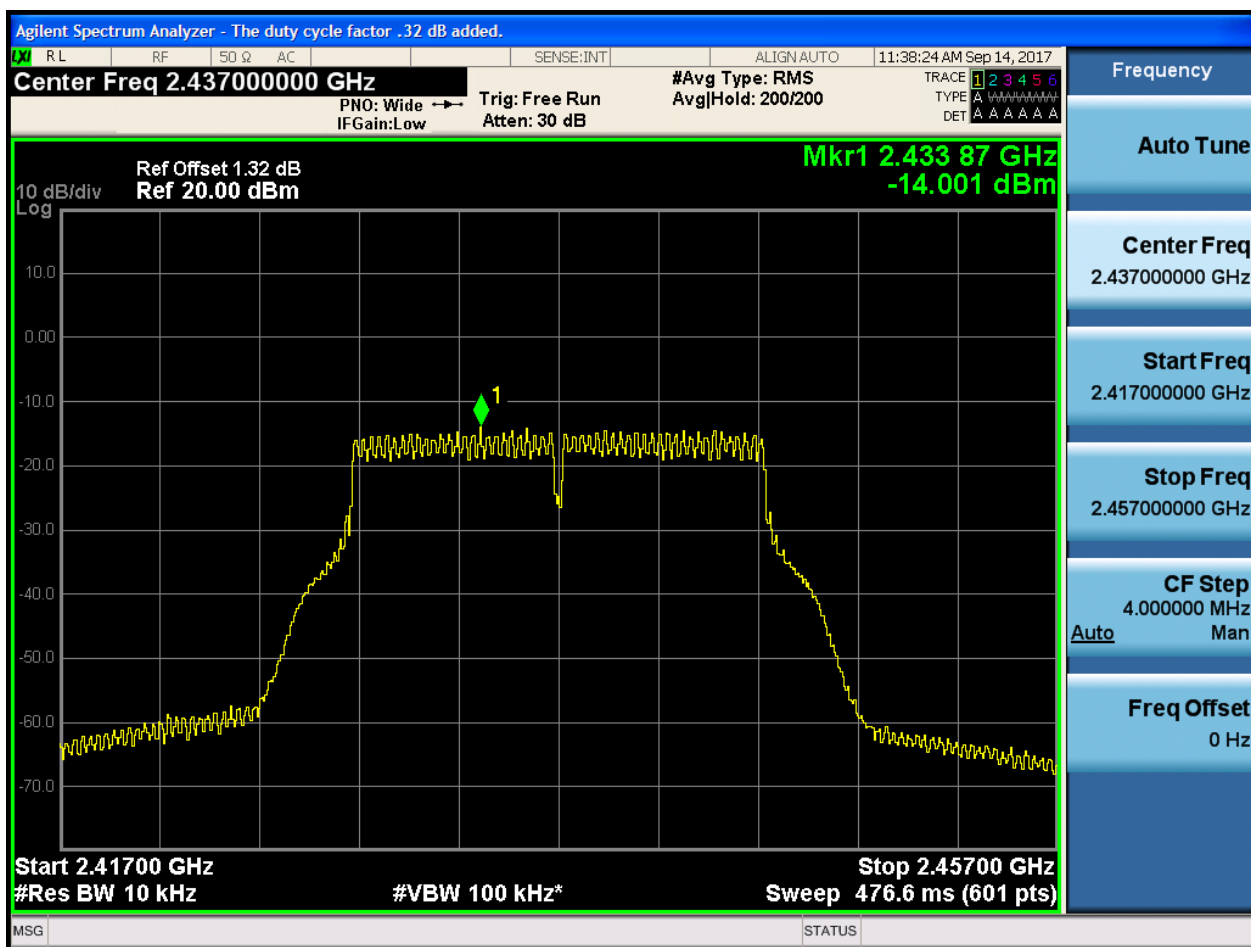


2.9 11G_M@Ant 1



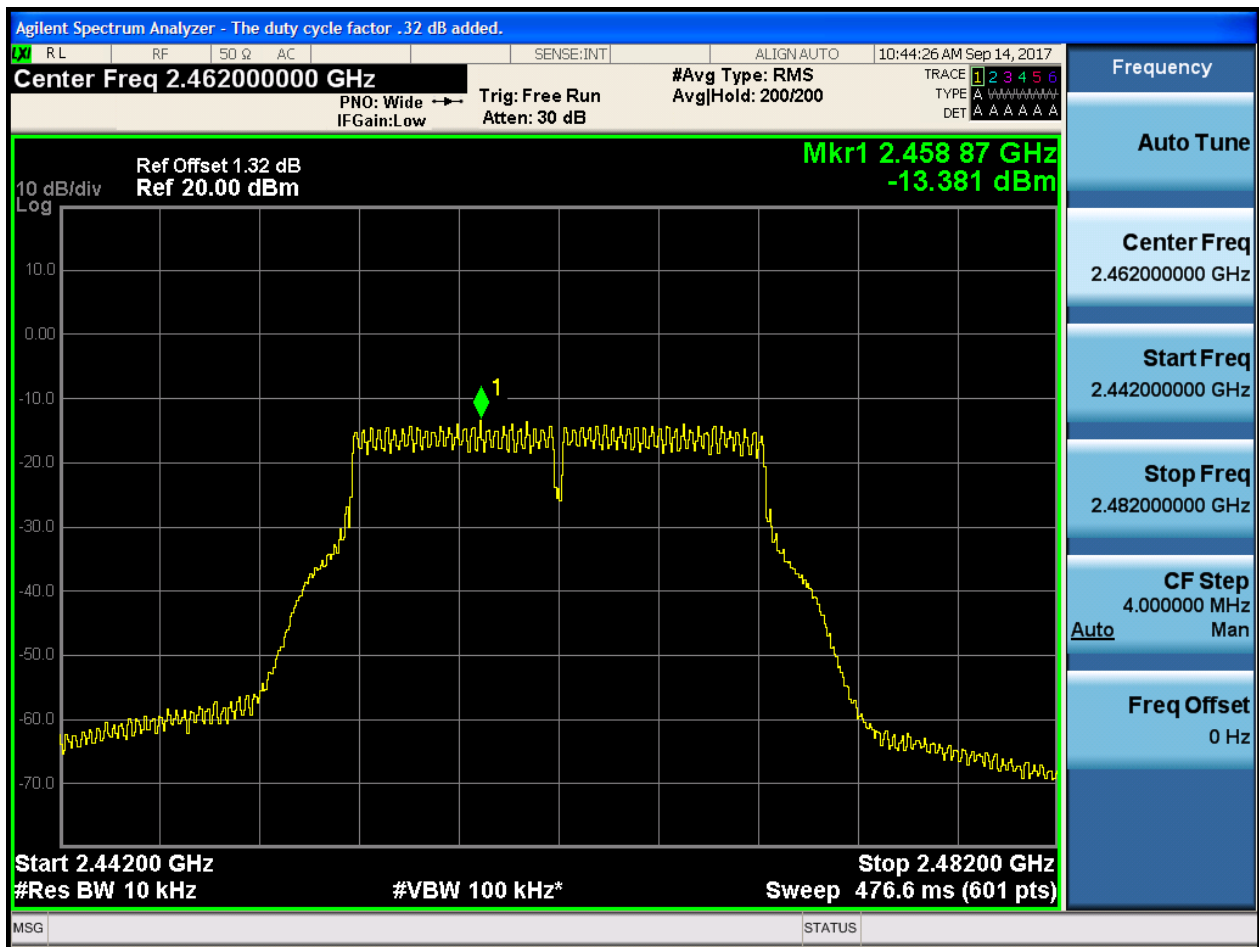


2.10 11G_M@Ant 2



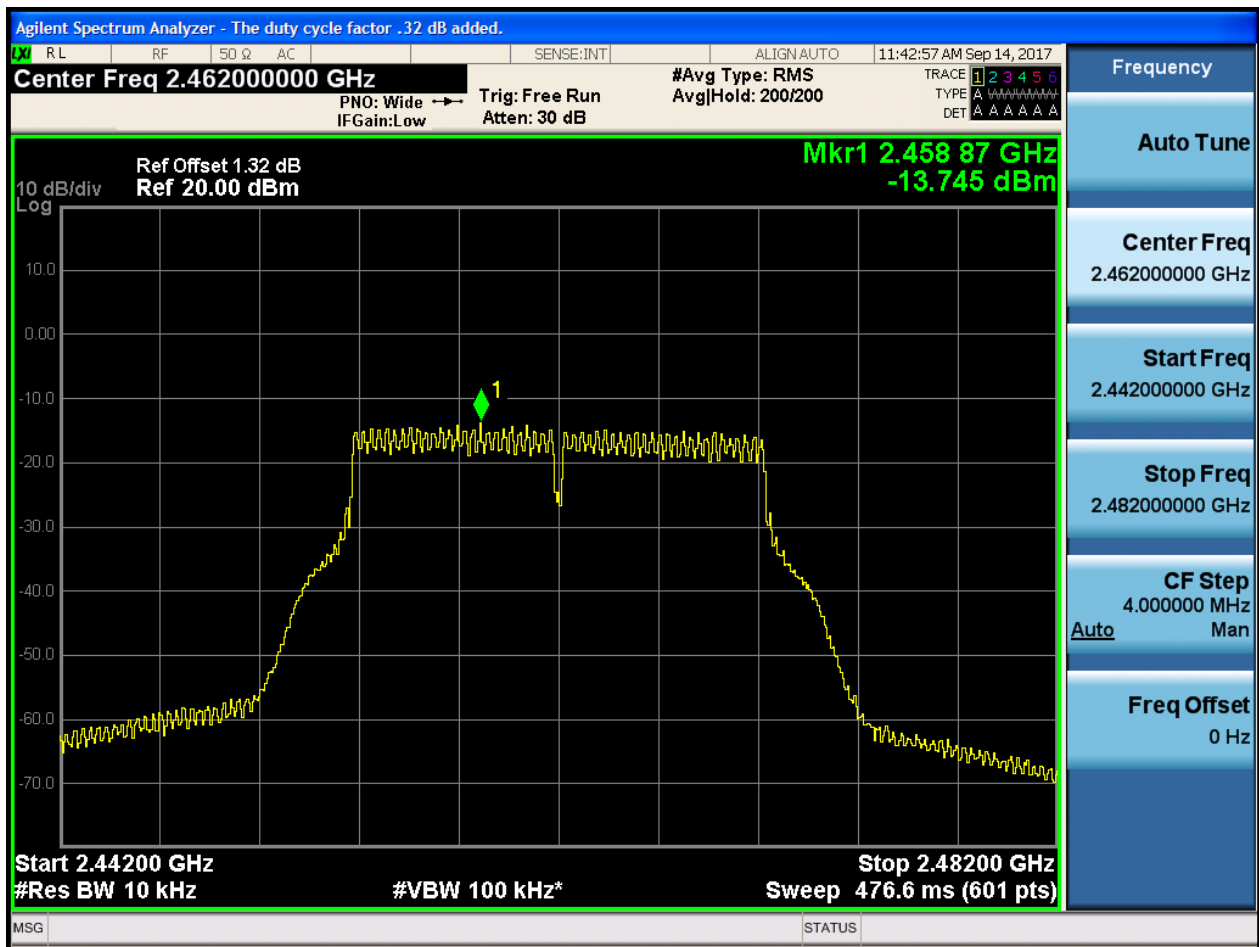


2.11 11G_H@Ant 1



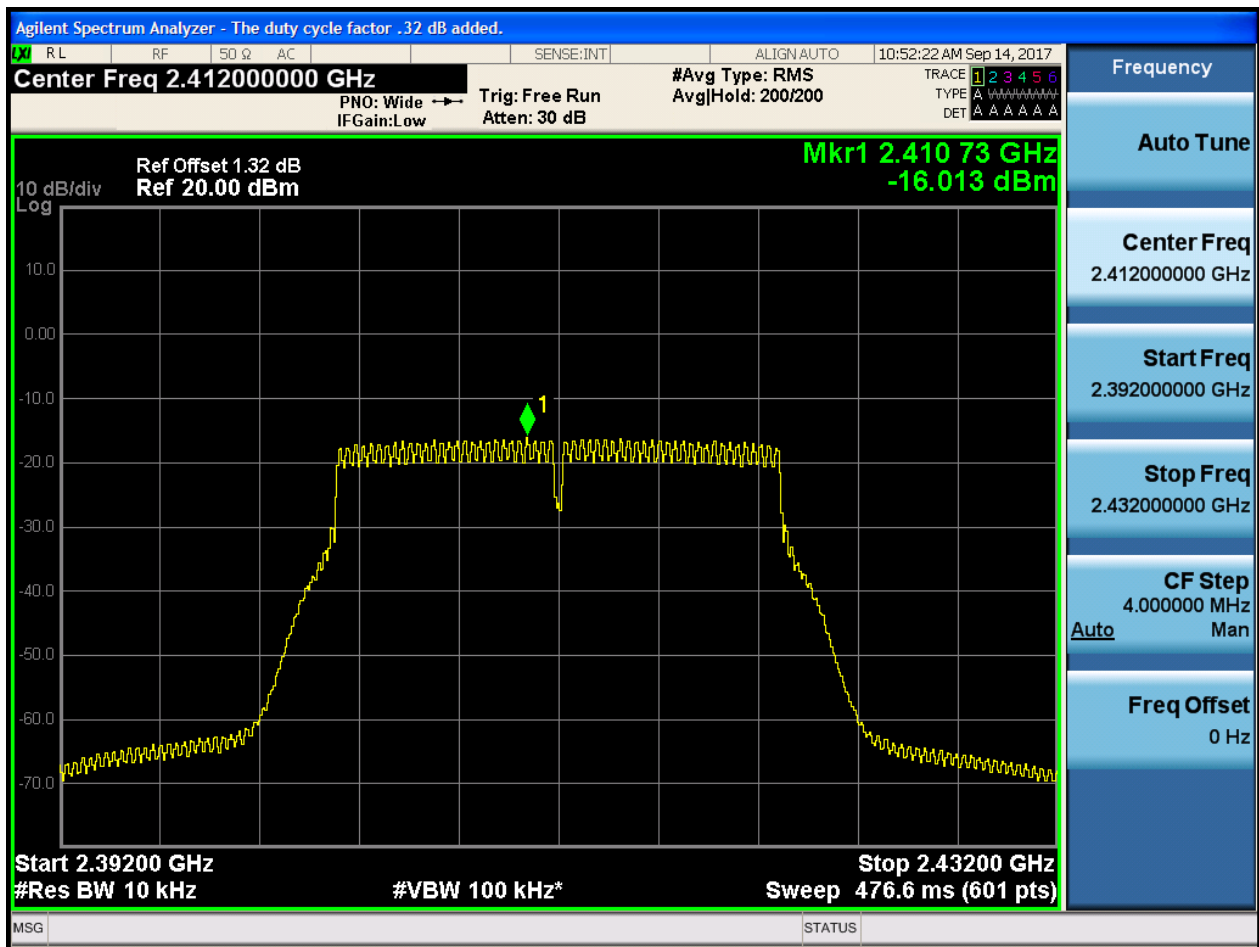


2.12 11G_H@Ant 2



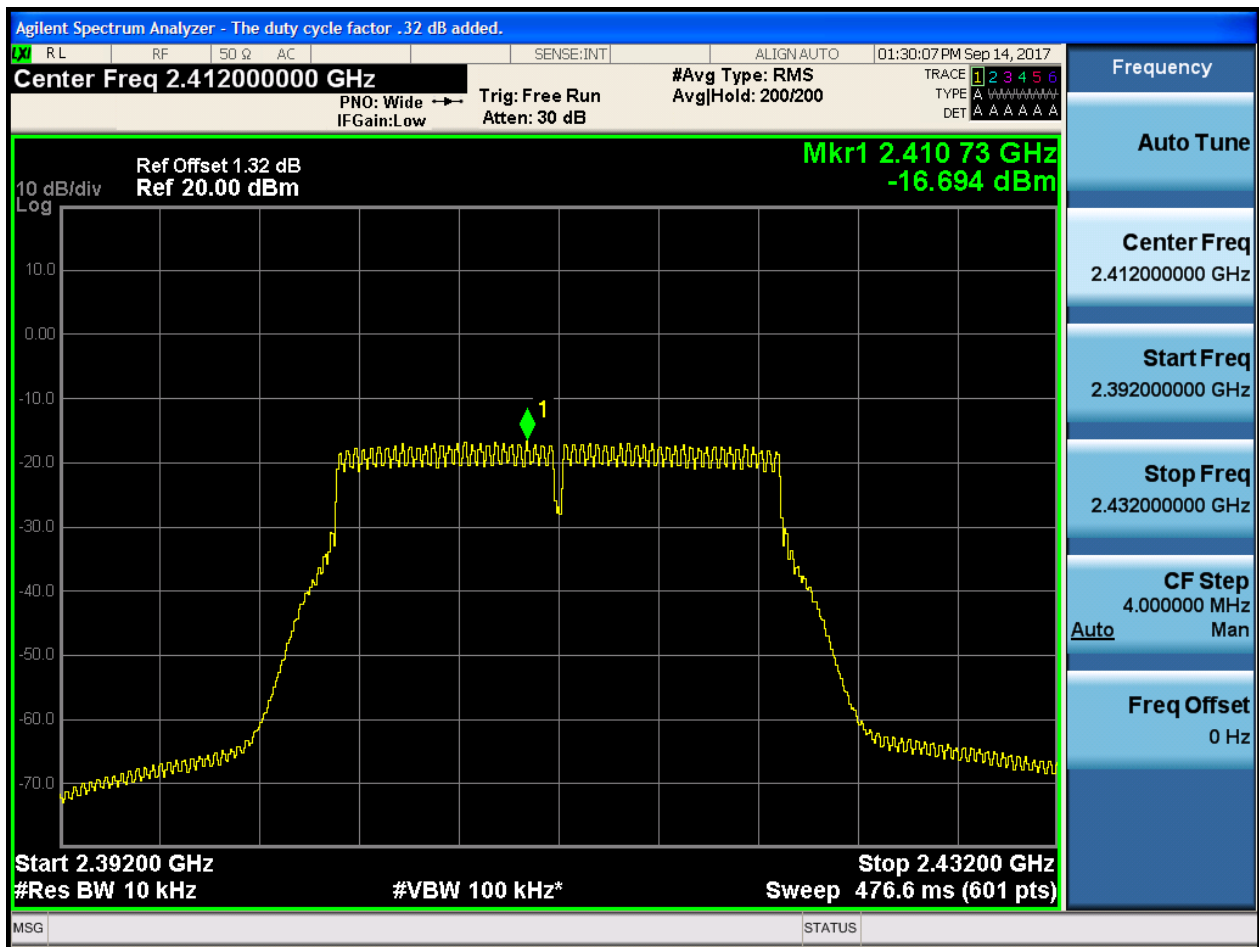


2.13 11N20_L@Ant 1



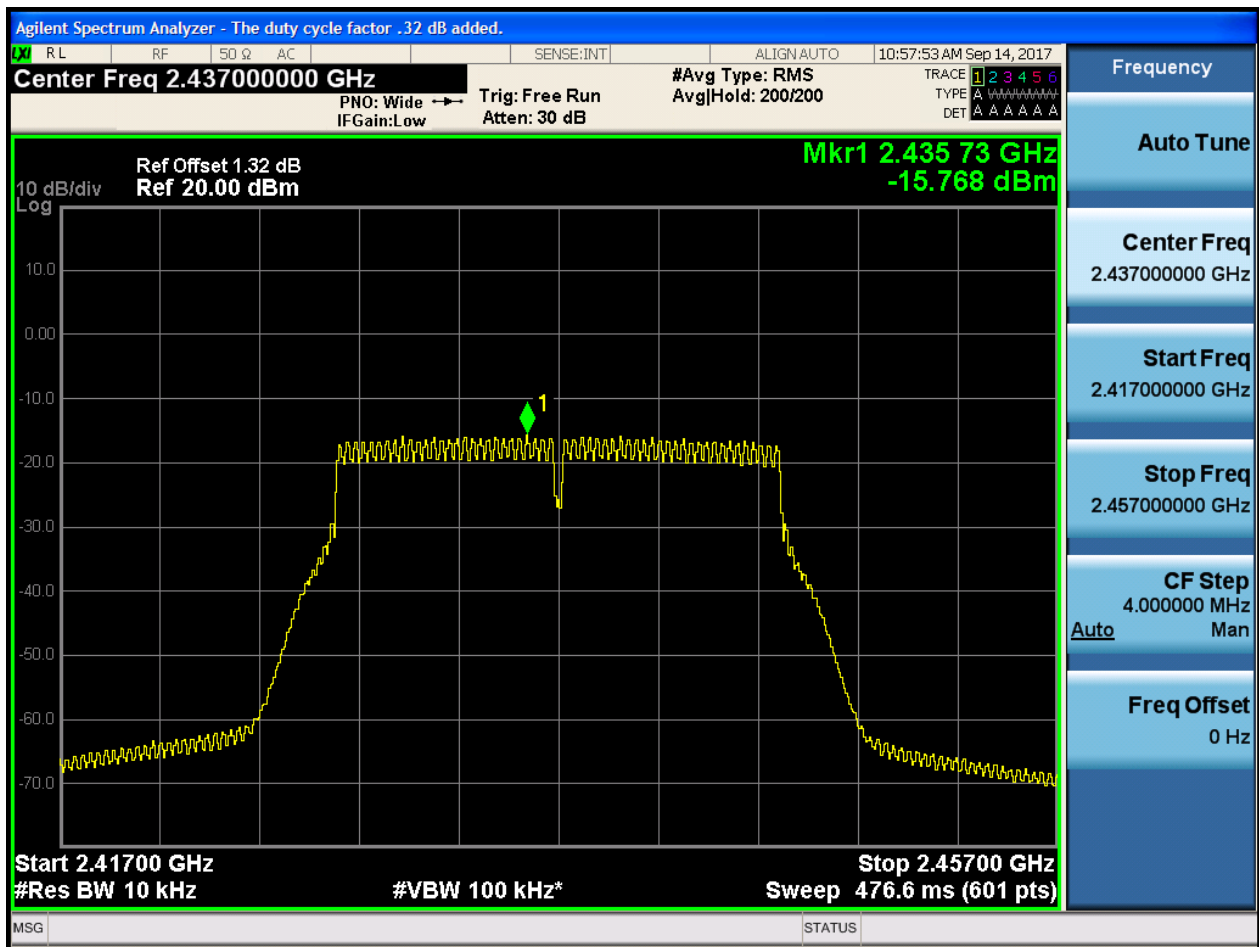


2.14 11N20_L@Ant 2



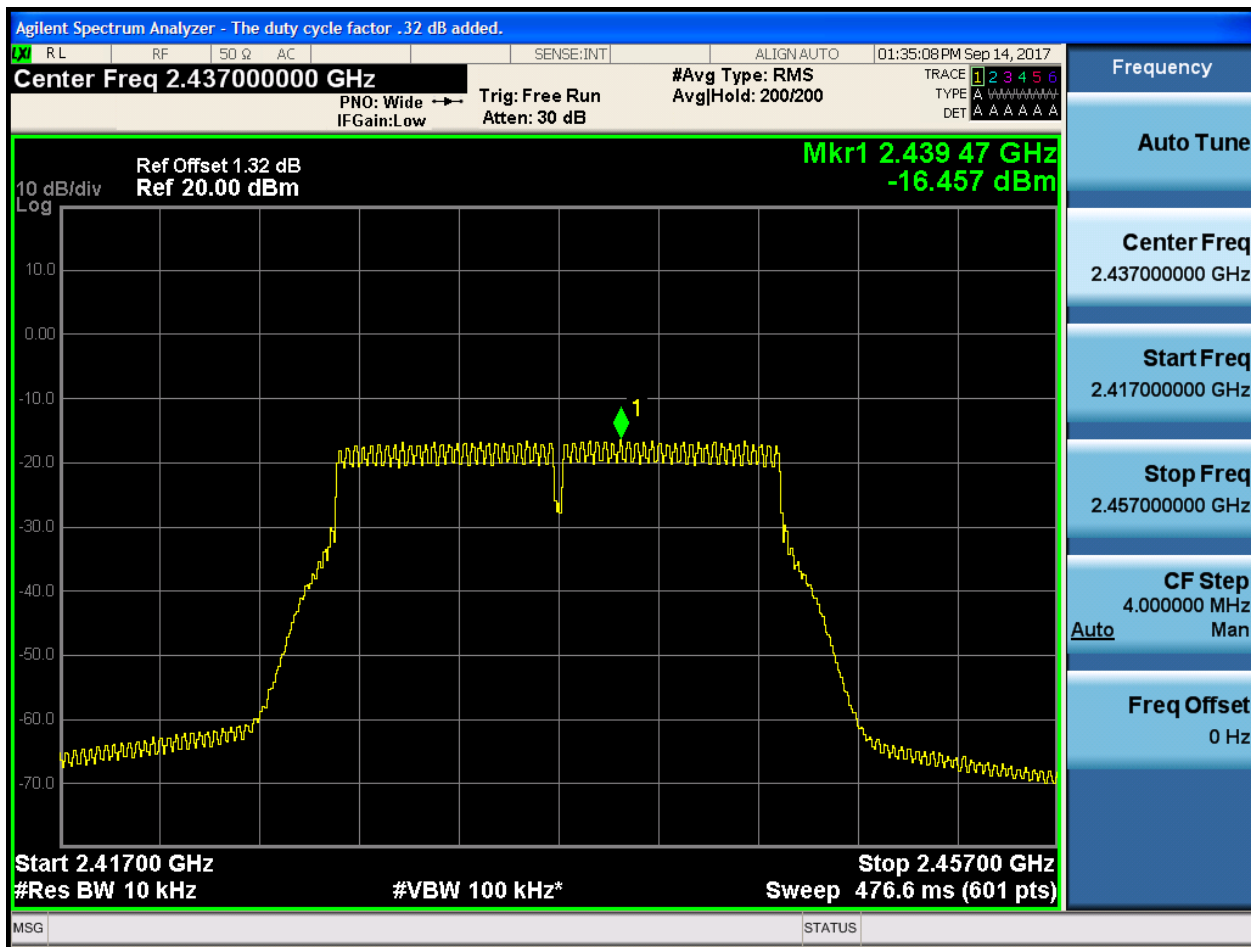


2.15 11N20_M@Ant 1



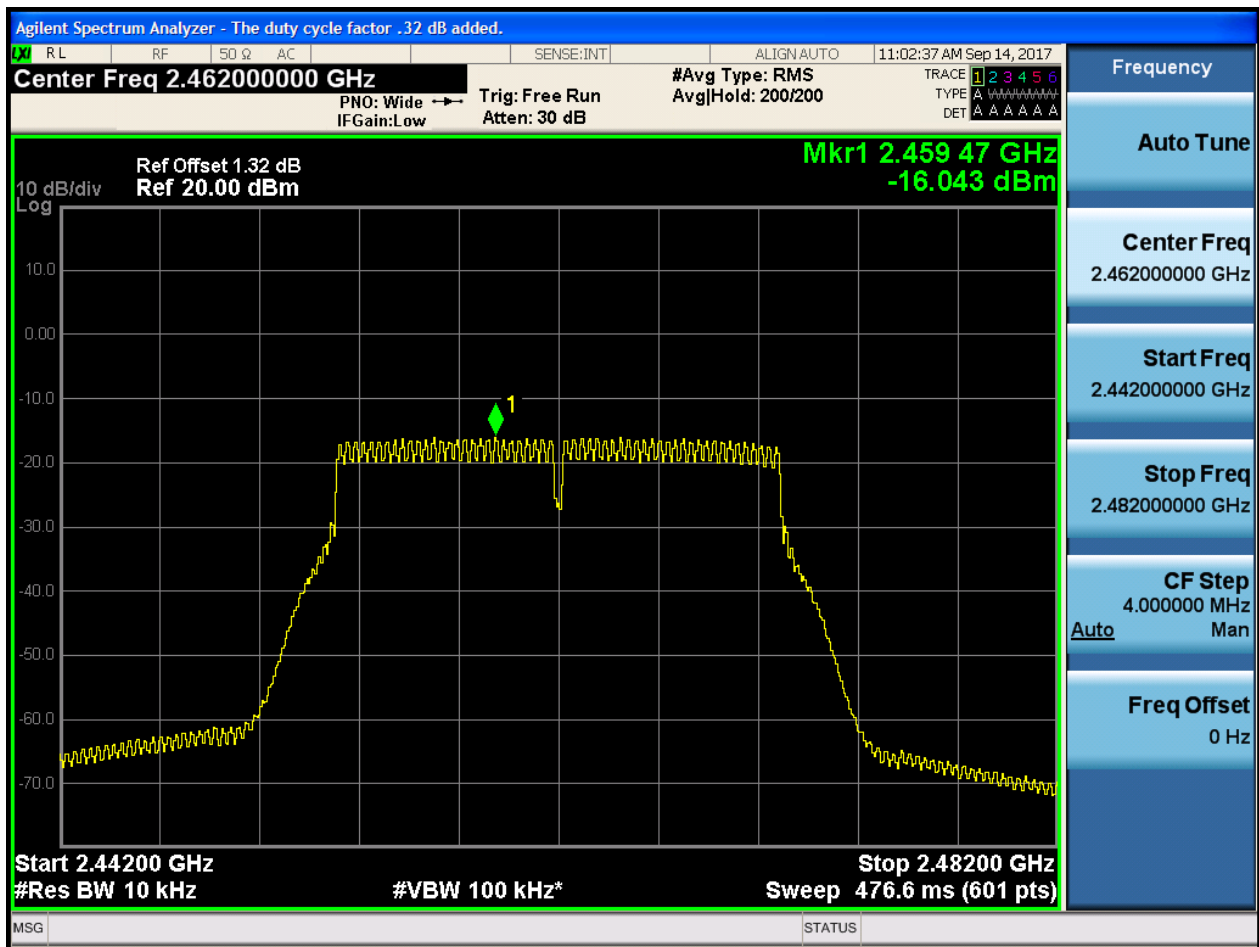


2.16 11N20_M@Ant 2



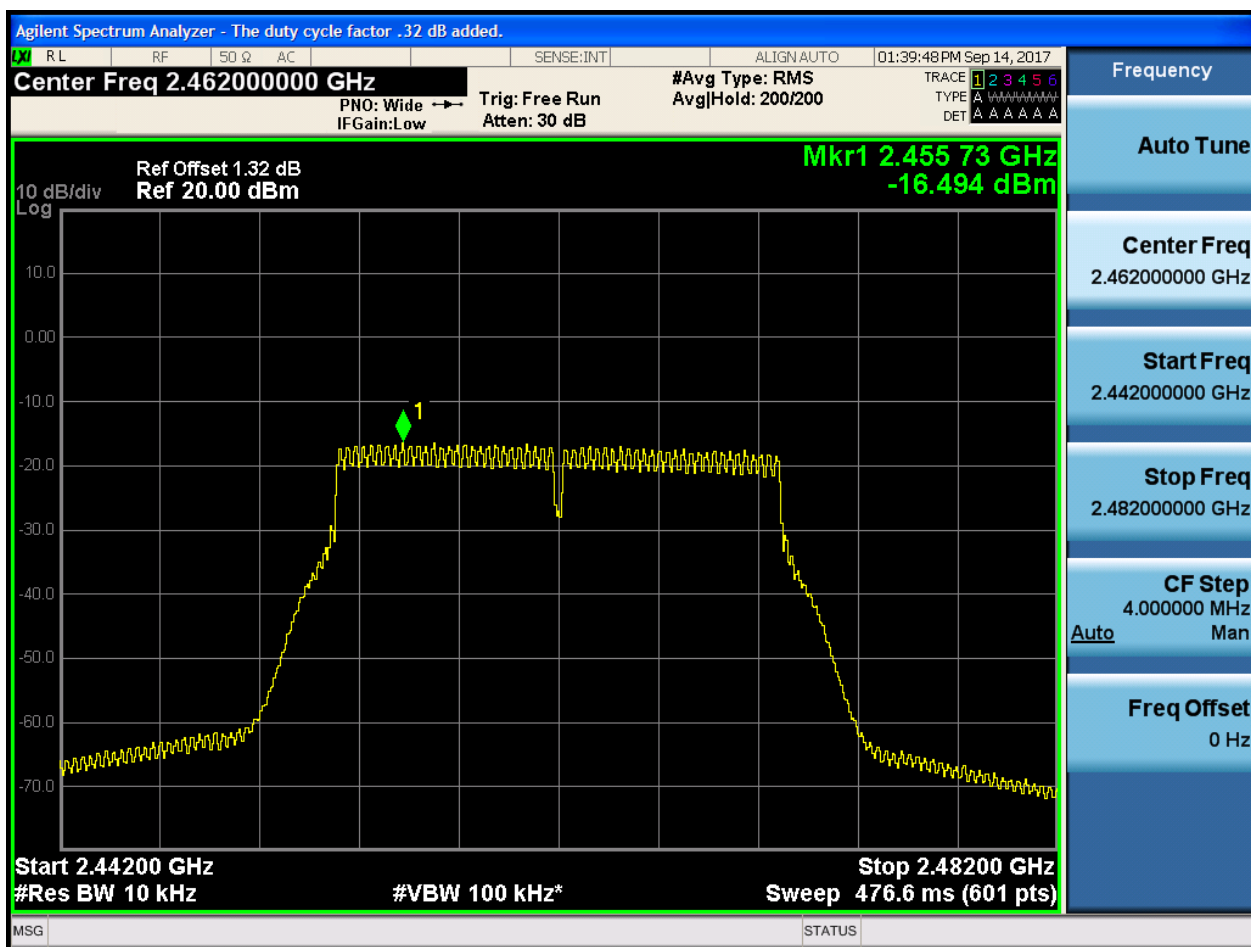


2.17 11N20_H@Ant 1



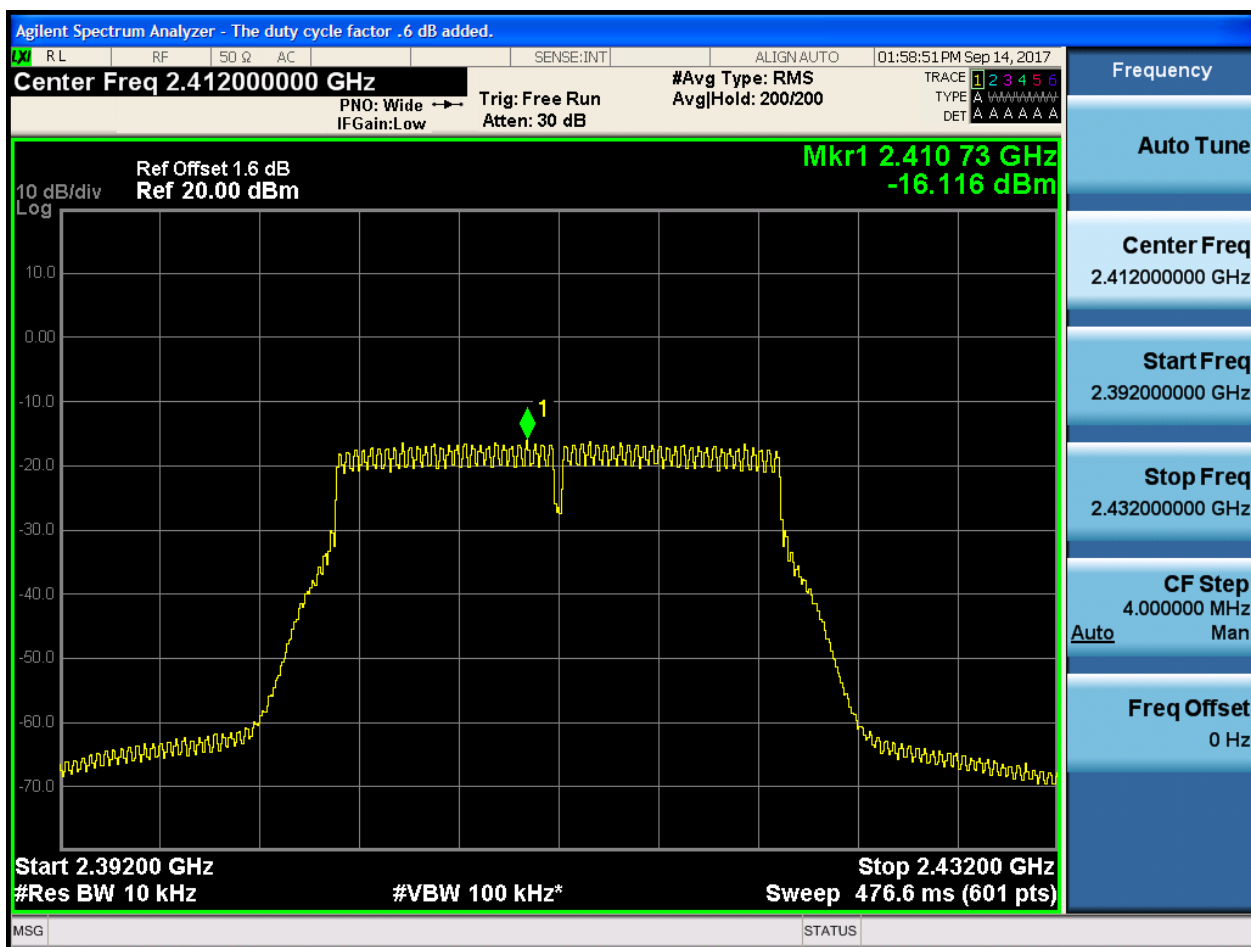


2.18 11N20_H@Ant 2



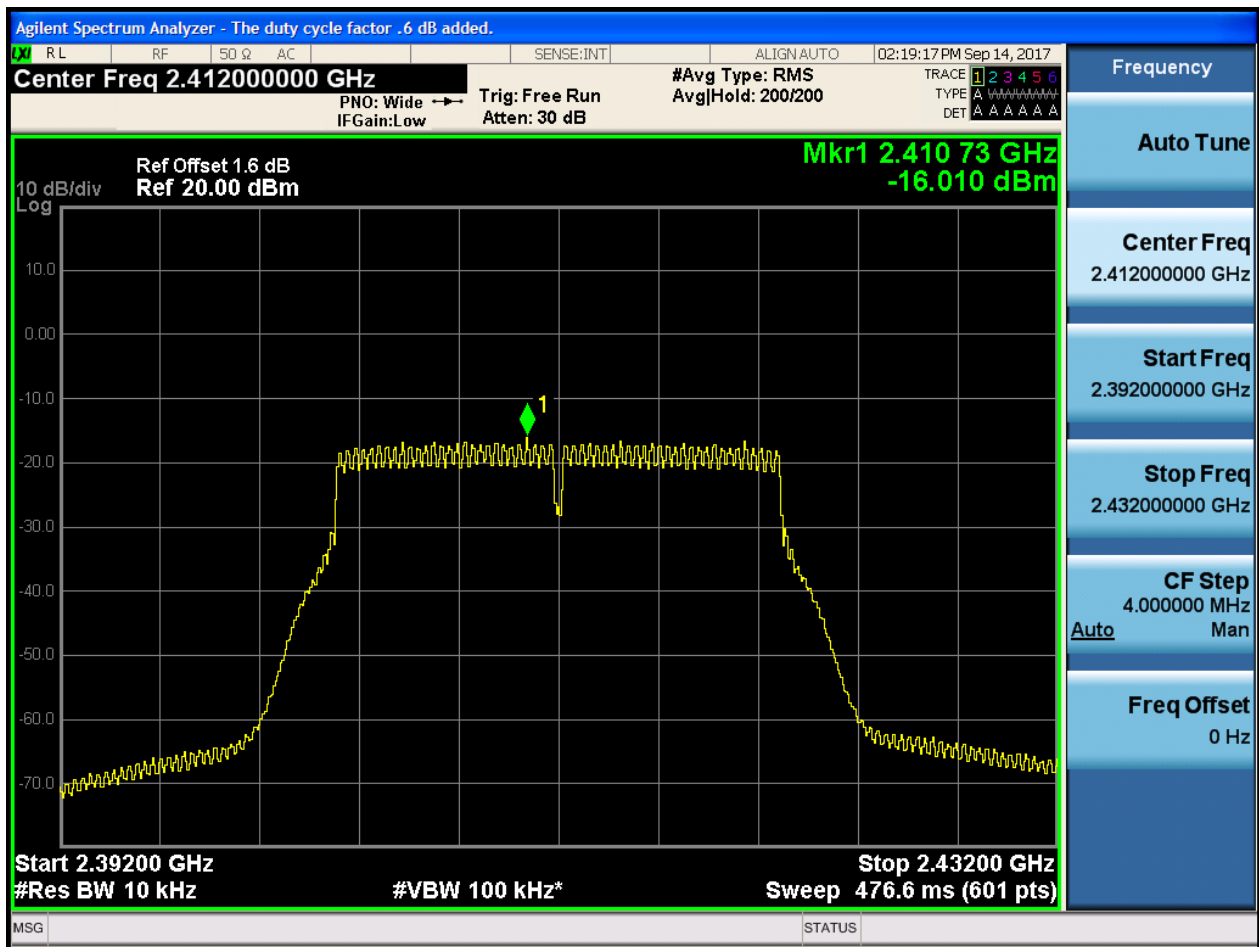


2.19 11N20m_L@Ant 1



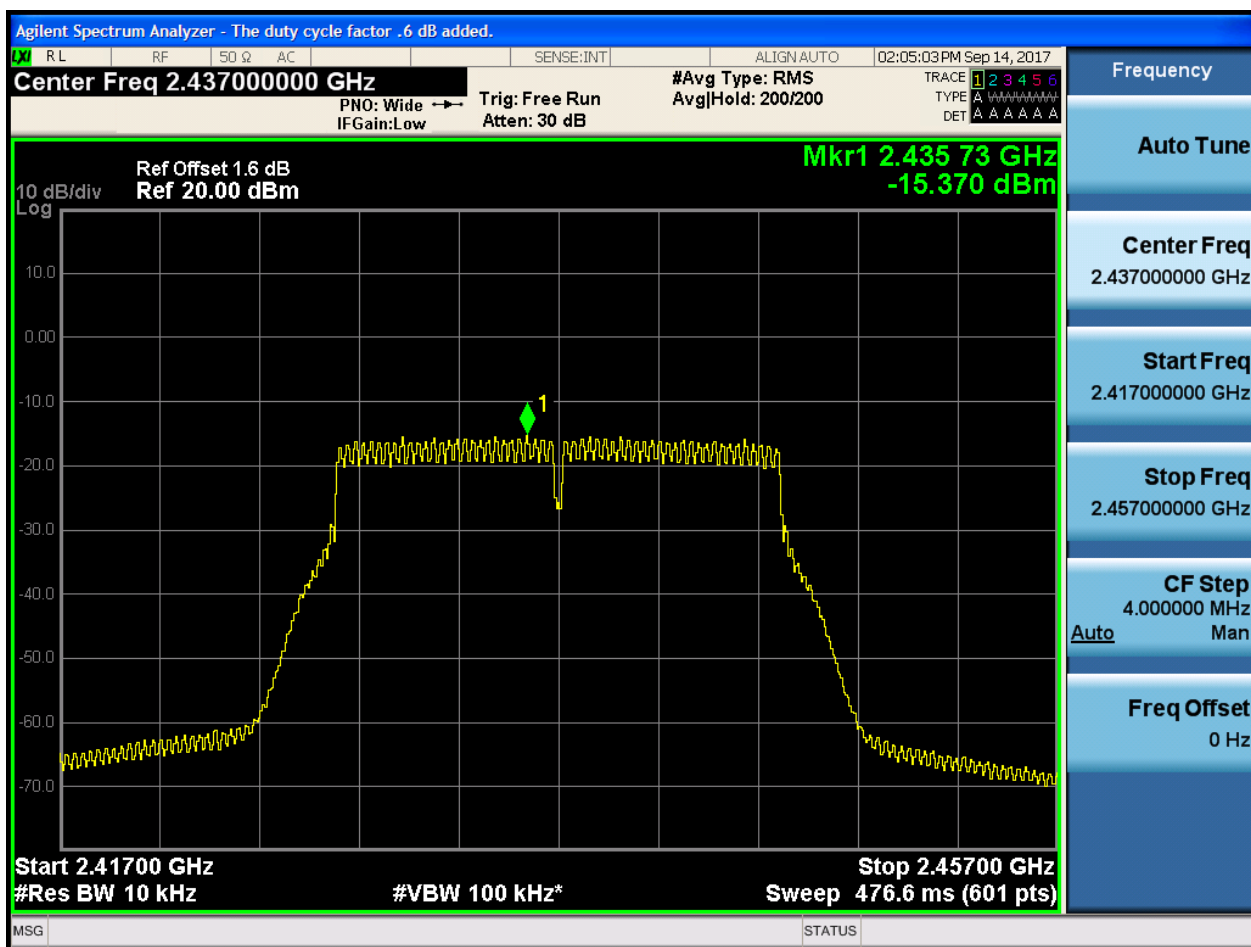


2.20 11N20m_L@Ant 2



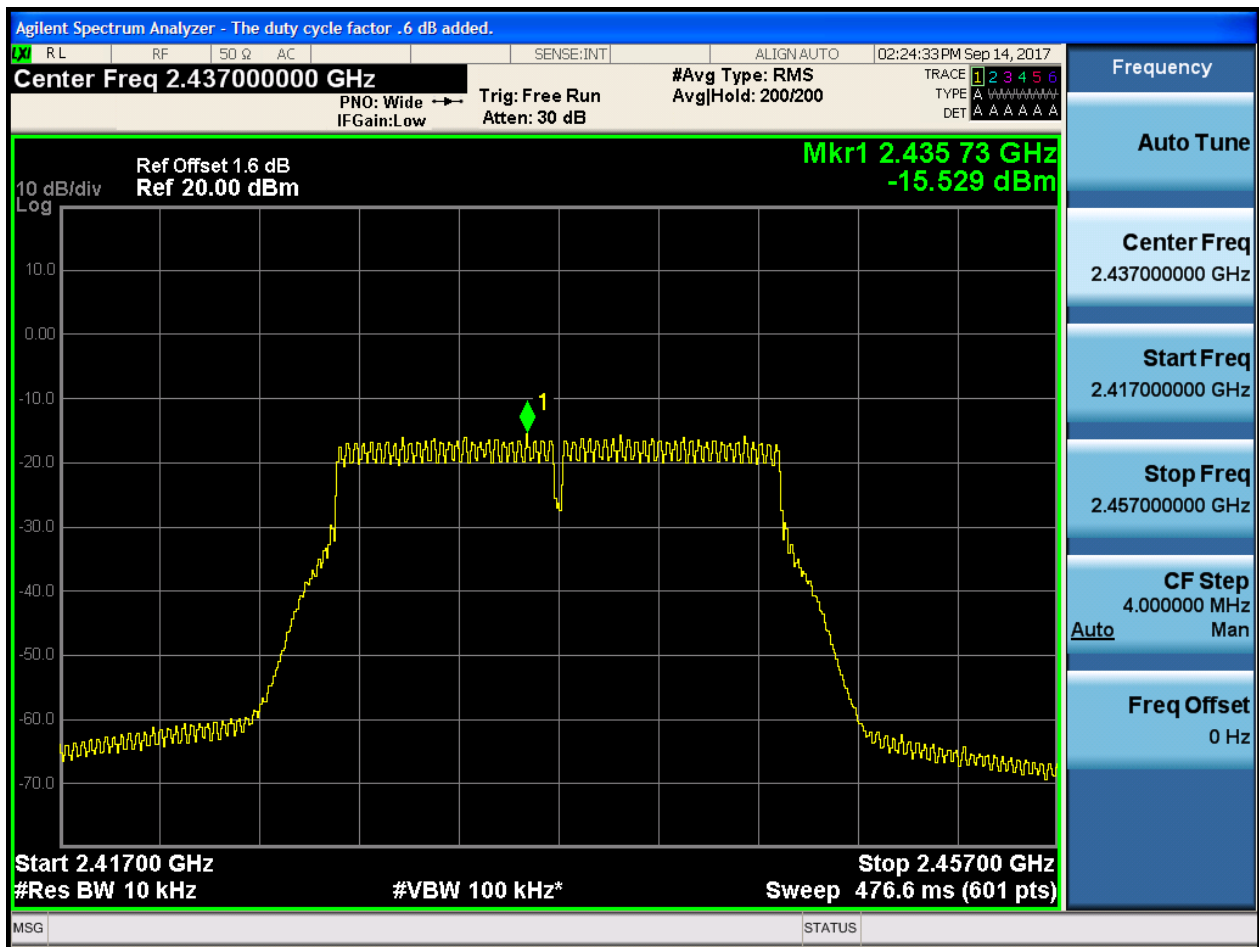


2.21 11N20m_M@Ant 1



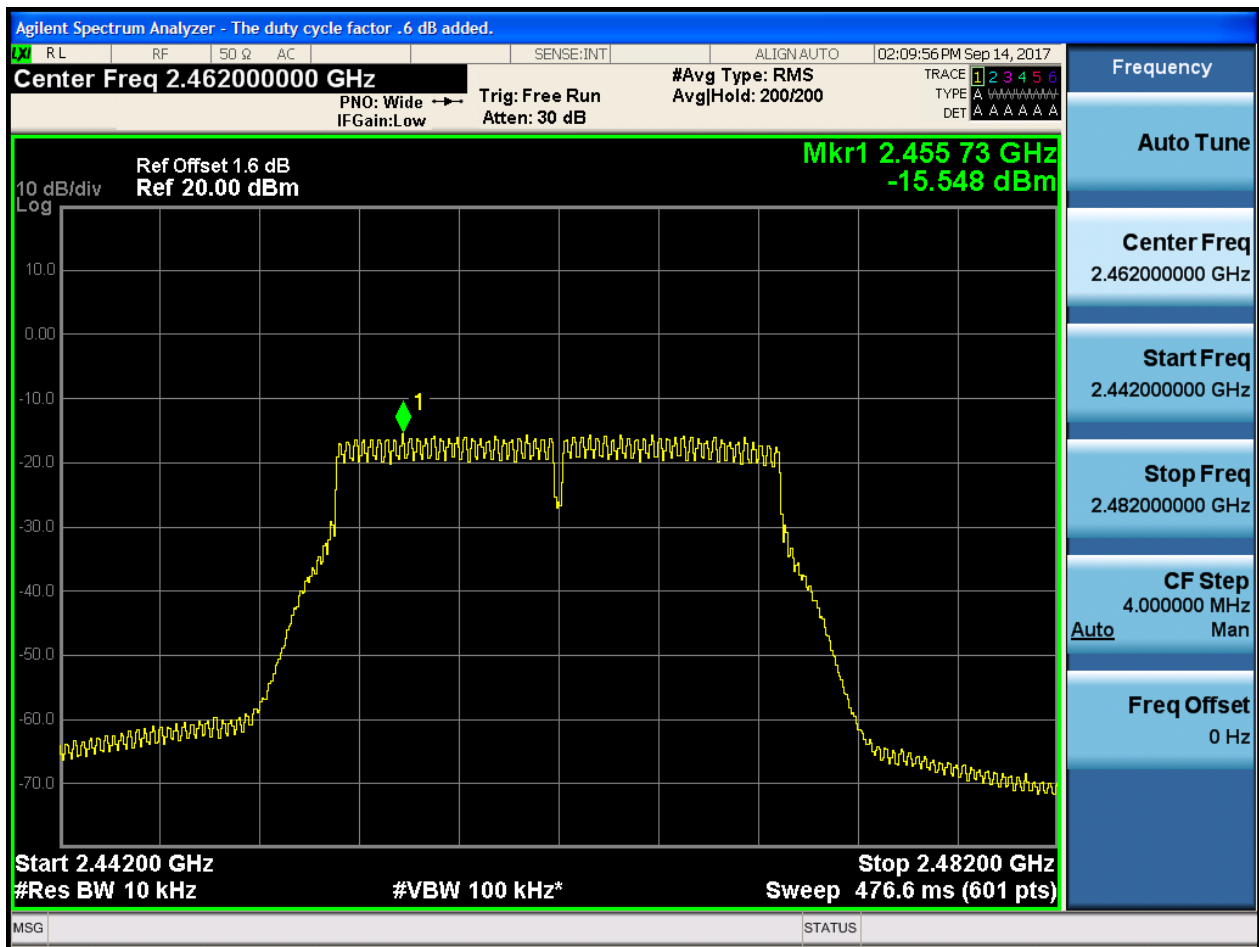


2.22 11N20m_M@Ant 2





2.23 11N20m_H@Ant 1





2.24 11N20m_H@Ant 2

