Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Portable 4G LTE Router
Test Model: GL-E750C6

Environmental Conditions

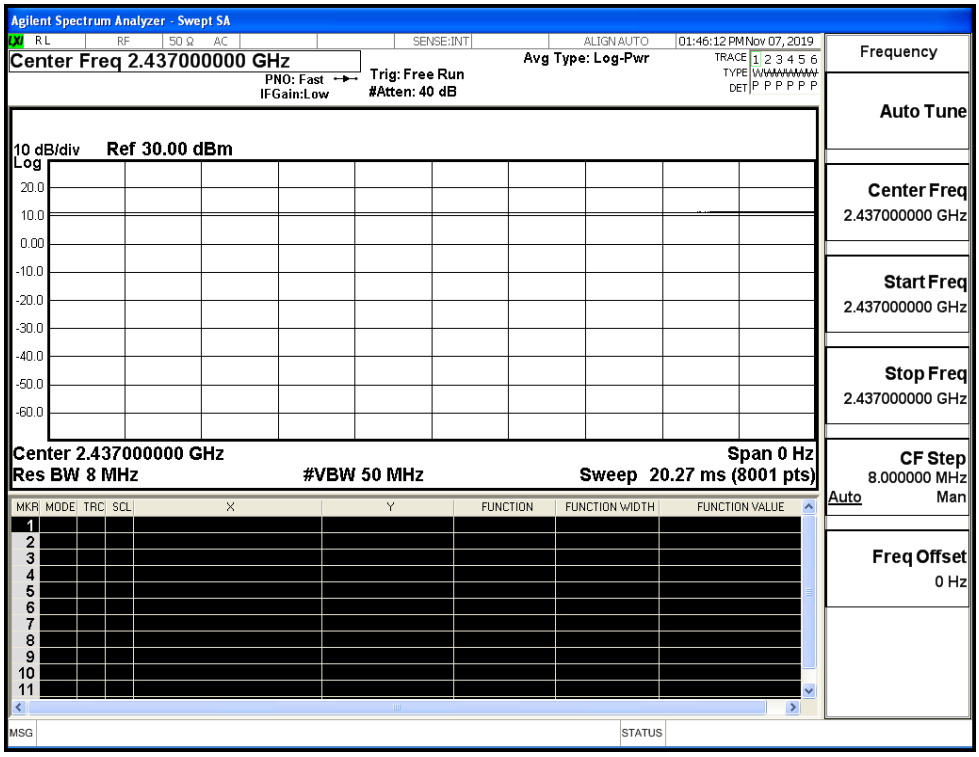
Temperature:	22.6°C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Wang Chuang

A.1 Duty Cycle

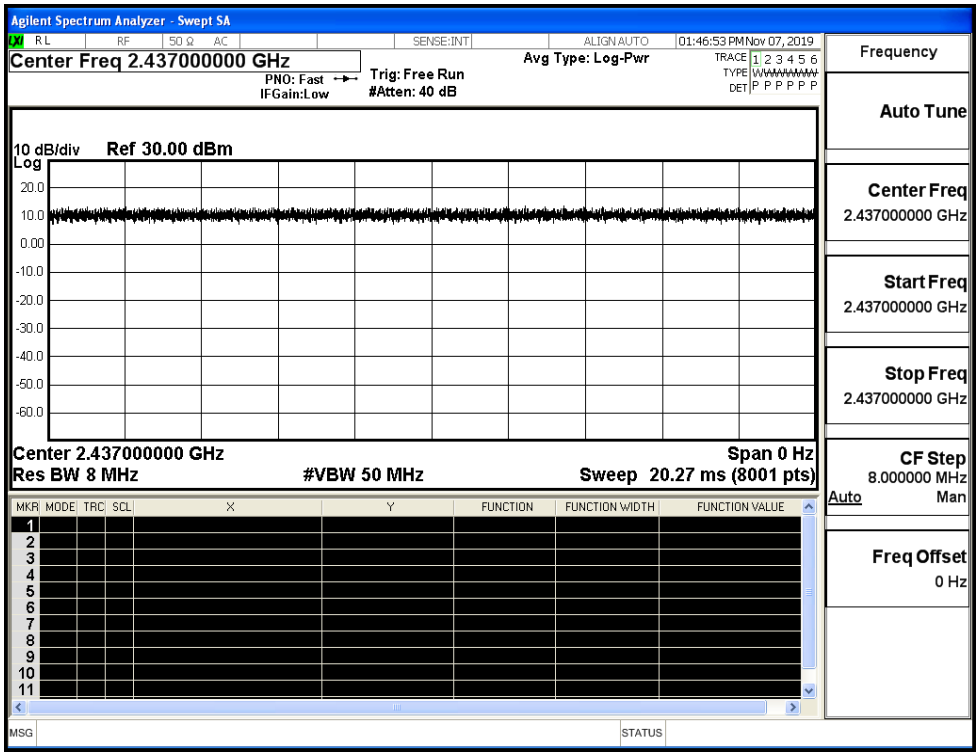
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant_1	100	PASS
11G	2437	Ant_1	100	PASS
11N20	2437	Ant_1	100	PASS
11N40	2437	Ant_1	100	PASS

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant_2	100	PASS
11G	2437	Ant_2	100	PASS
11N20	2437	Ant_2	100	PASS
11N40	2437	Ant_2	100	PASS

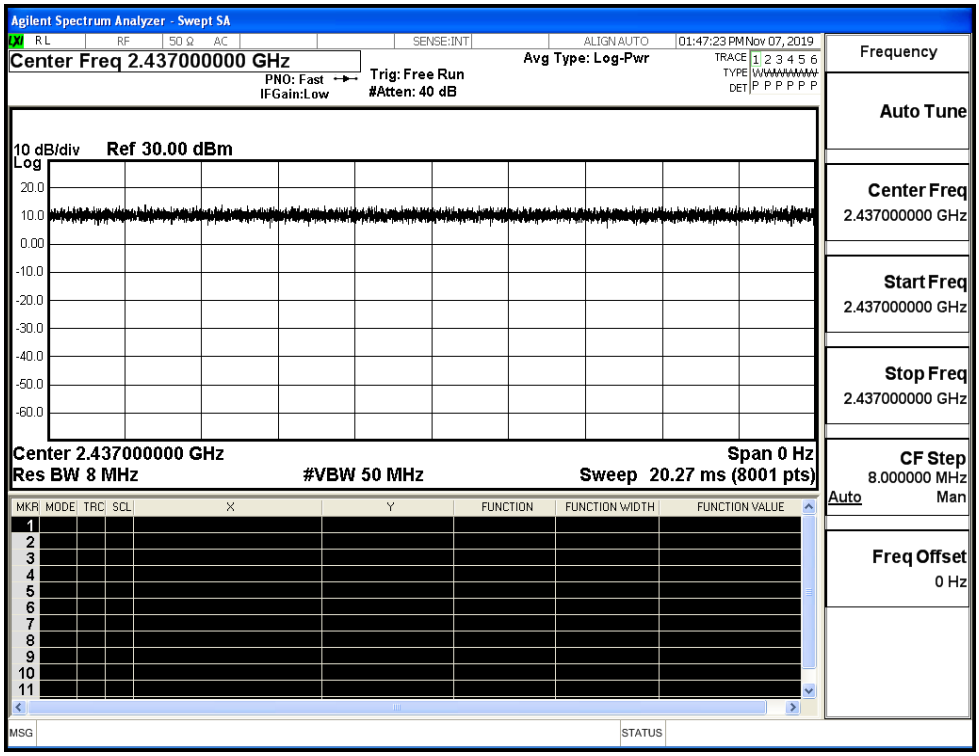
Duty Cycle_11B_2437_Ant_1



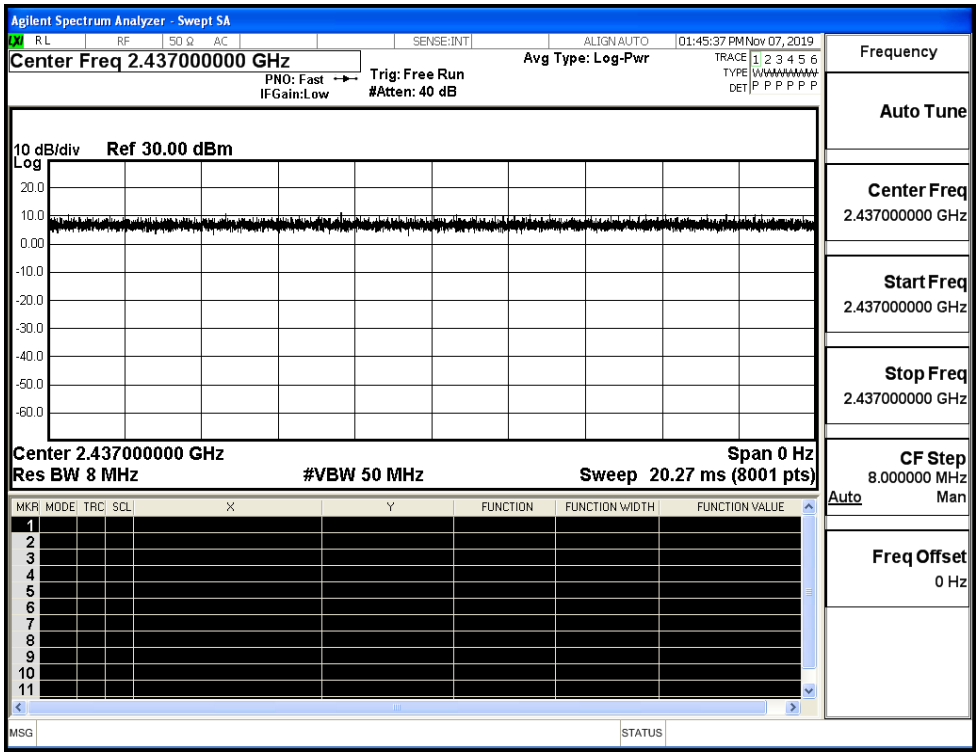
Duty Cycle_11G_2437_Ant_1



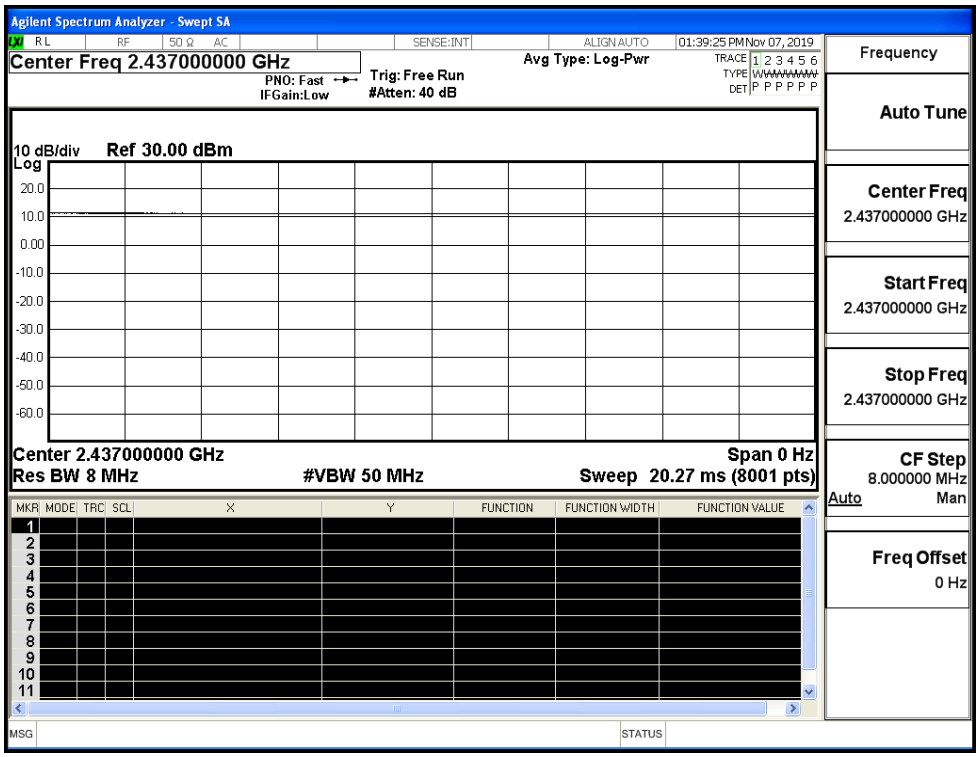
Duty Cycle_11N20_2437_Ant_1



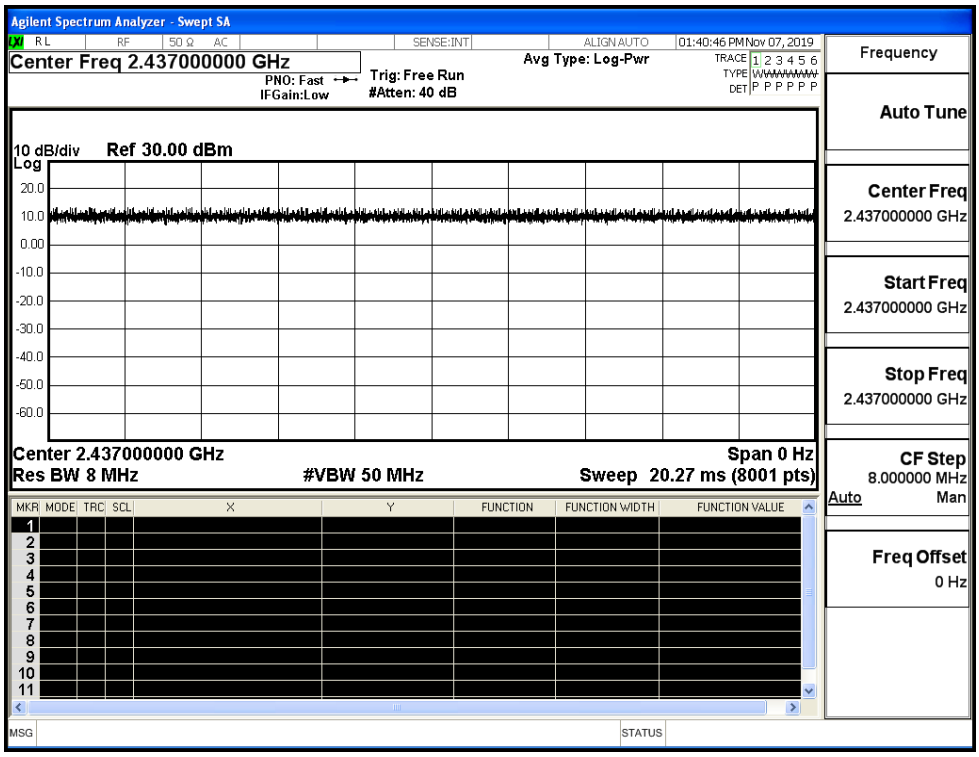
Duty Cycle_11N40_2437_Ant_1



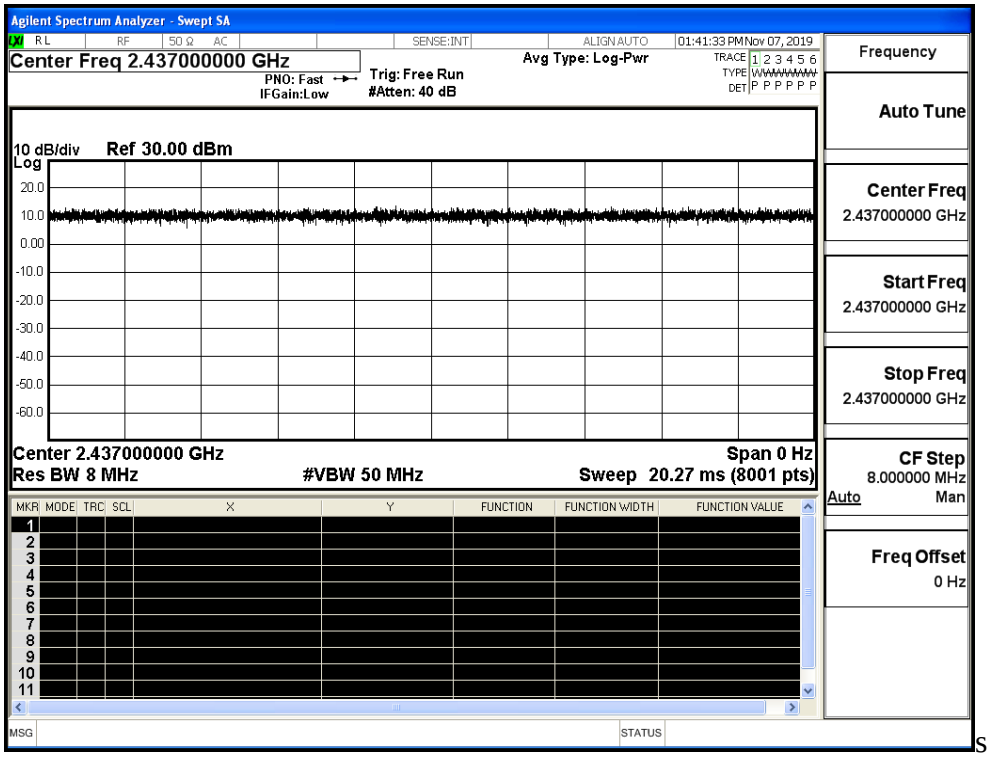
Duty Cycle_11B_2437_Ant_2



Duty Cycle_11G_2437_Ant_2

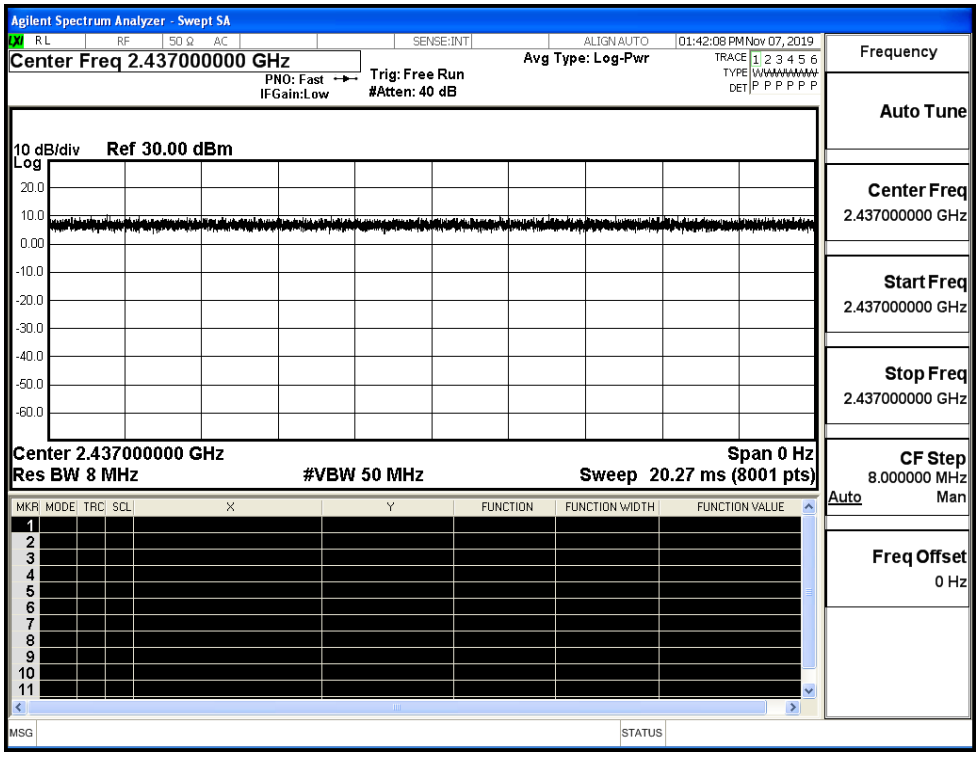


Duty Cycle_11N20_2437_Ant_2



S

Duty Cycle_11N40_2437_Ant_2



A.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]			Limit [dBm]	Verdict
		Ant_1	Ant_2	Sum		
11B	LCH	19.65	19.67	/	30	PASS
	MCH	19.62	19.06	/	30	PASS
	HCH	19.4	19.05	/	30	PASS
11G	LCH	15.5	15.98	/	30	PASS
	MCH	15.28	15.78	/	30	PASS
	HCH	15.21	15.34	/	30	PASS
11N20	LCH	17.86	17.82	20.85	30	PASS
	MCH	17.55	17.35	20.46	30	PASS
	HCH	17.05	17.29	20.18	30	PASS
11N40	LCH	15.75	15.9	18.84	30	PASS
	MCH	15.91	16.03	18.98	30	PASS
	HCH	16.23	16.3	19.28	30	PASS

A.3 Maximum Power Spectral Density

Ant_1

Mode	Channel	Meas.Level [dBm/30KHz]	Convert Factor	Result [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-0.440	-10	-10.440	8	PASS
	MCH	-1.198	-10	-11.198	8	PASS
	HCH	-0.648	-10	-10.648	8	PASS
11G	LCH	-4.473	-10	-14.473	8	PASS
	MCH	-4.947	-10	-14.947	8	PASS
	HCH	-8.776	-10	-18.776	8	PASS
11N20	LCH	-4.484	-10	-14.484	8	PASS
	MCH	-5.536	-10	-15.536	8	PASS
	HCH	-6.609	-10	-16.609	8	PASS
11N40	LCH	-10.292	-10	-20.292	8	PASS
	MCH	-11.072	-10	-21.072	8	PASS
	HCH	-10.622	-10	-20.622	8	PASS

***Note: The Convert Factor = 10*log(3KHz/30KHz) = -10

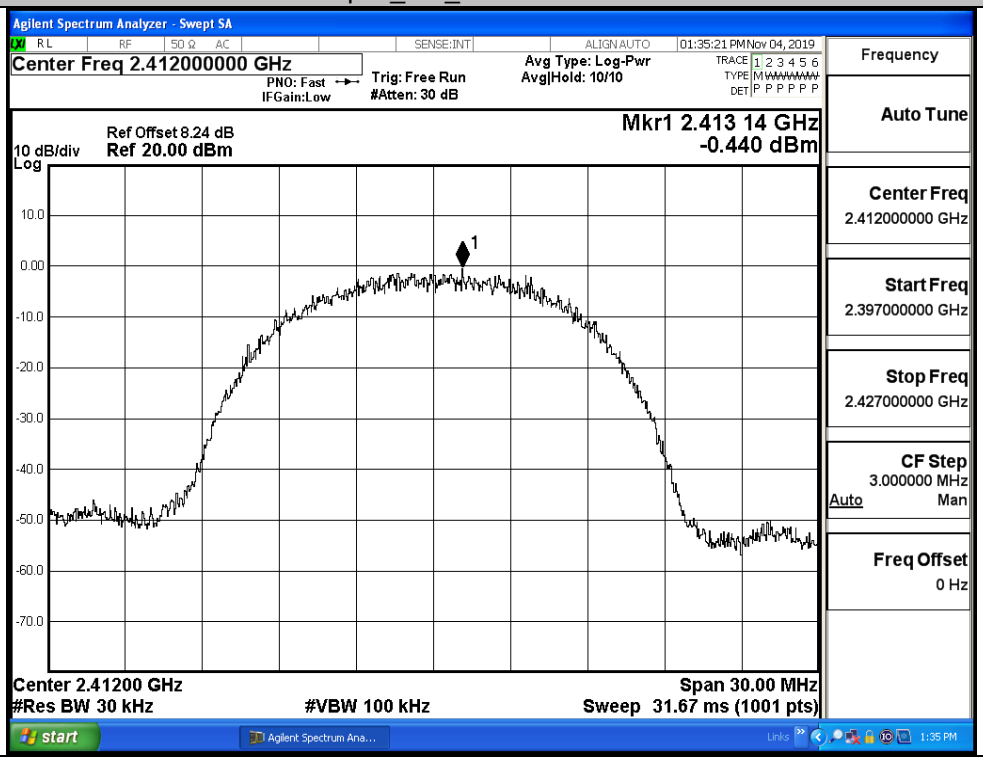
Ant_2

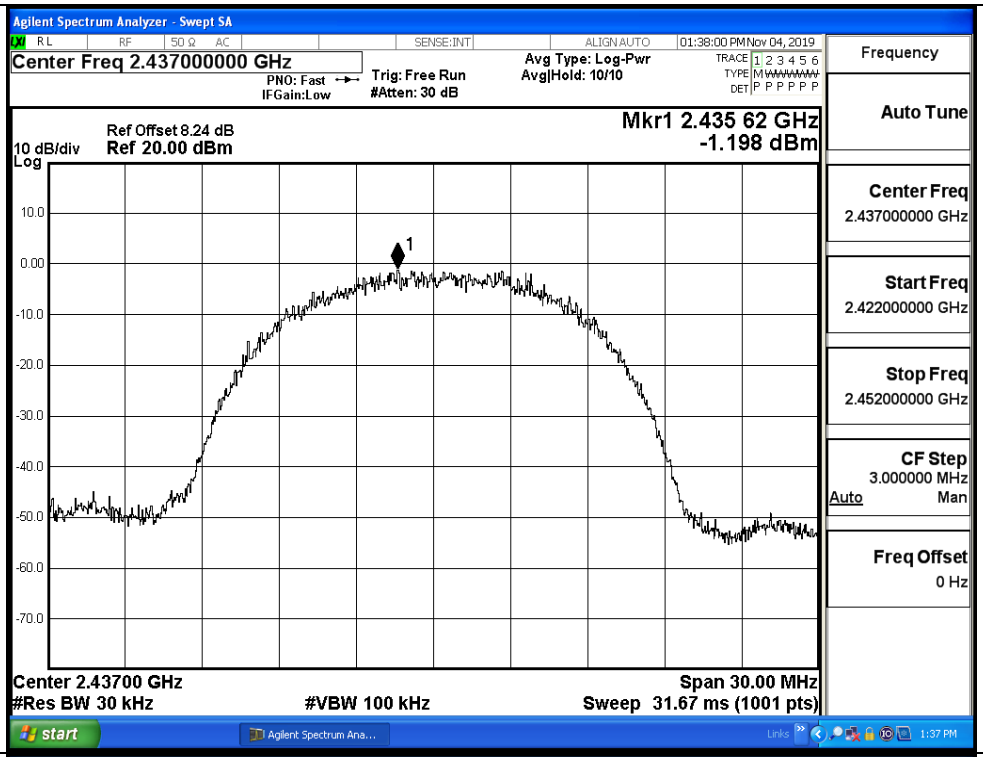
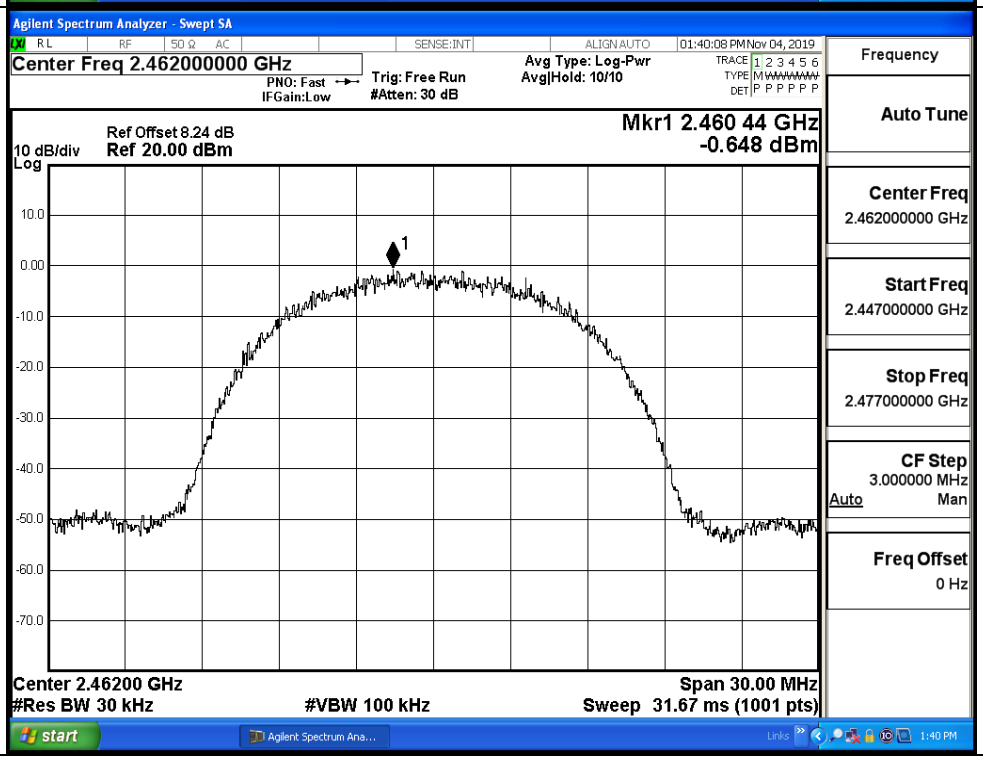
Mode	Channel	Meas.Level [dBm/30KHz]	Convert Factor	Result [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-0.974	-10	-10.974	8	PASS
	MCH	-1.463	-10	-11.463	8	PASS
	HCH	-1.504	-10	-11.504	8	PASS
11G	LCH	-8.149	-10	-18.149	8	PASS
	MCH	-8.457	-10	-18.457	8	PASS
	HCH	-8.447	-10	-18.447	8	PASS
11N20	LCH	-5.899	-10	-15.899	8	PASS
	MCH	-6.043	-10	-16.043	8	PASS
	HCH	-5.275	-10	-15.275	8	PASS
11N40	LCH	-11.226	-10	-21.226	8	PASS
	MCH	-11.320	-10	-21.320	8	PASS
	HCH	-10.563	-10	-20.563	8	PASS

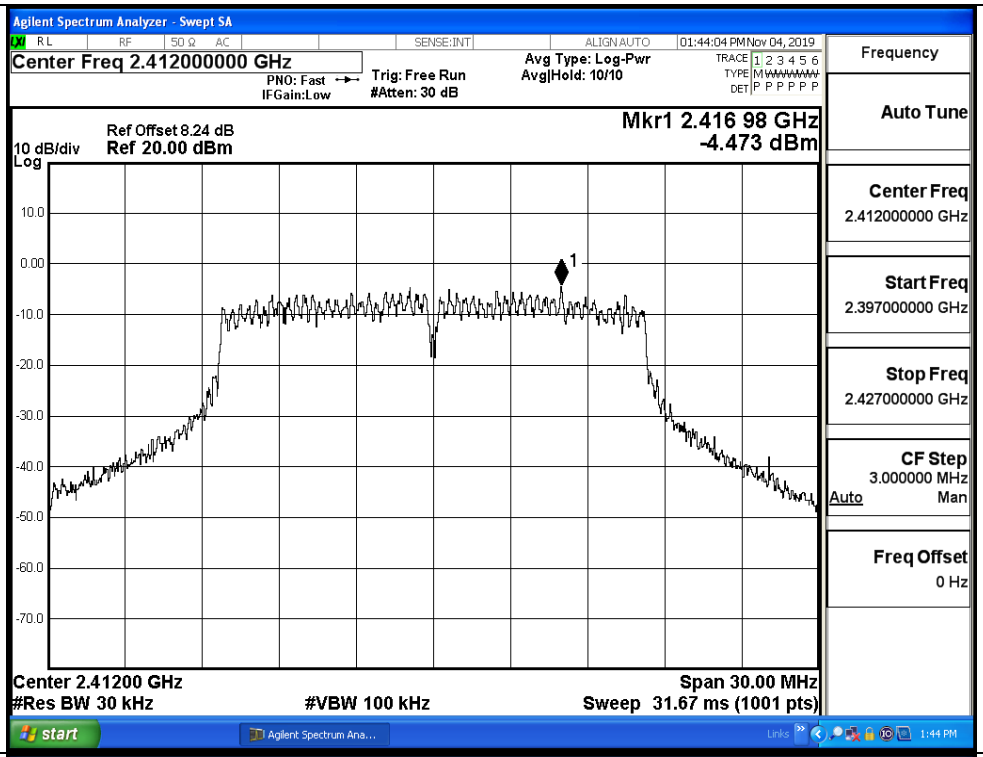
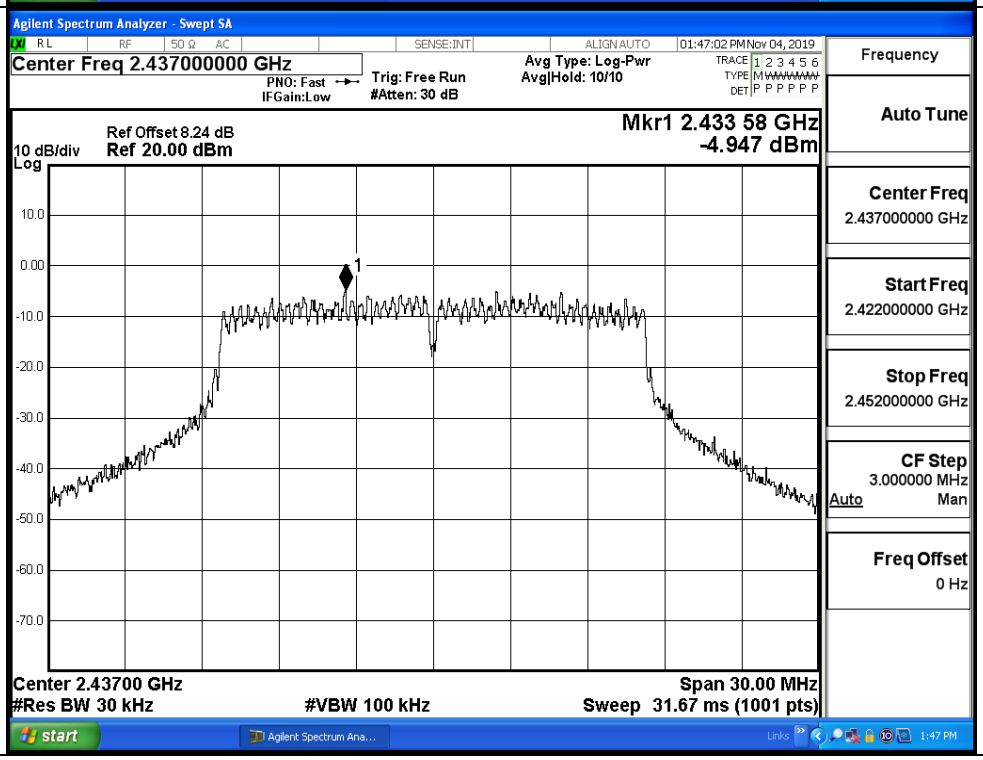
***Note: The Convert Factor = 10*log(3KHz/30KHz) = -10

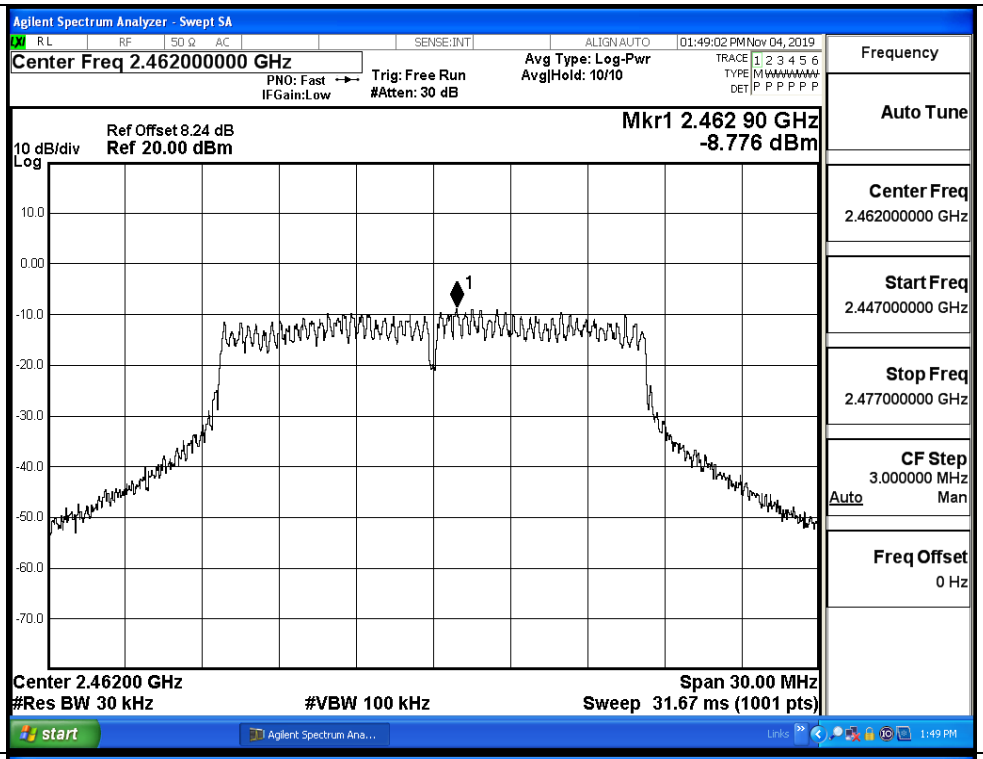
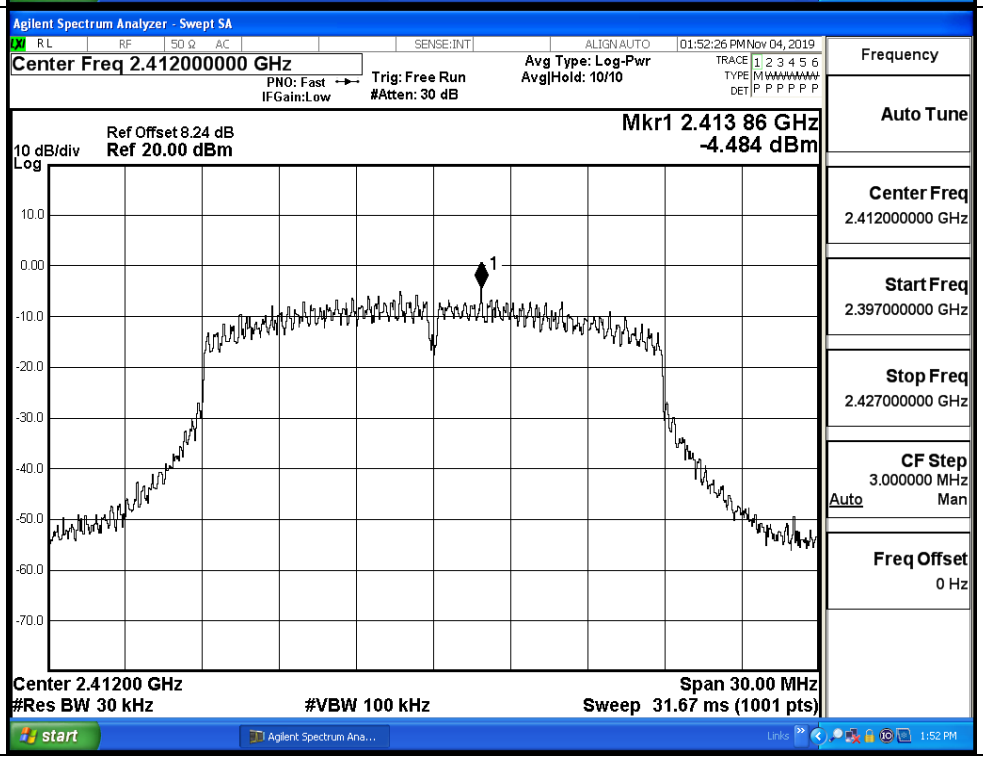
Combined Ant_1 and Ant_2

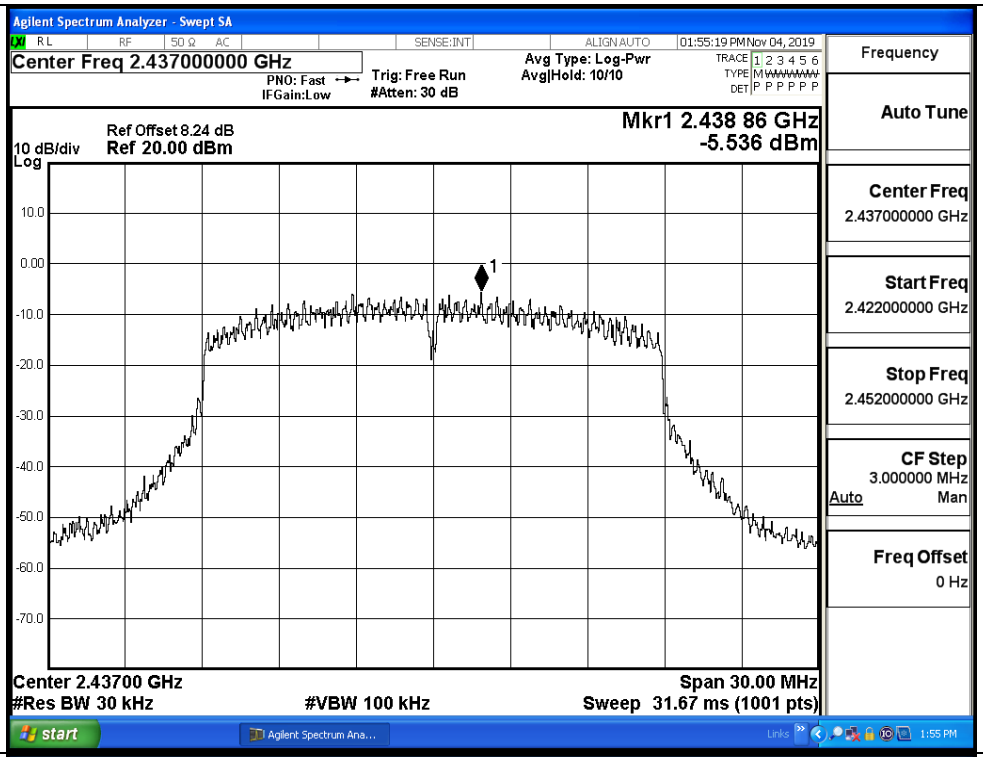
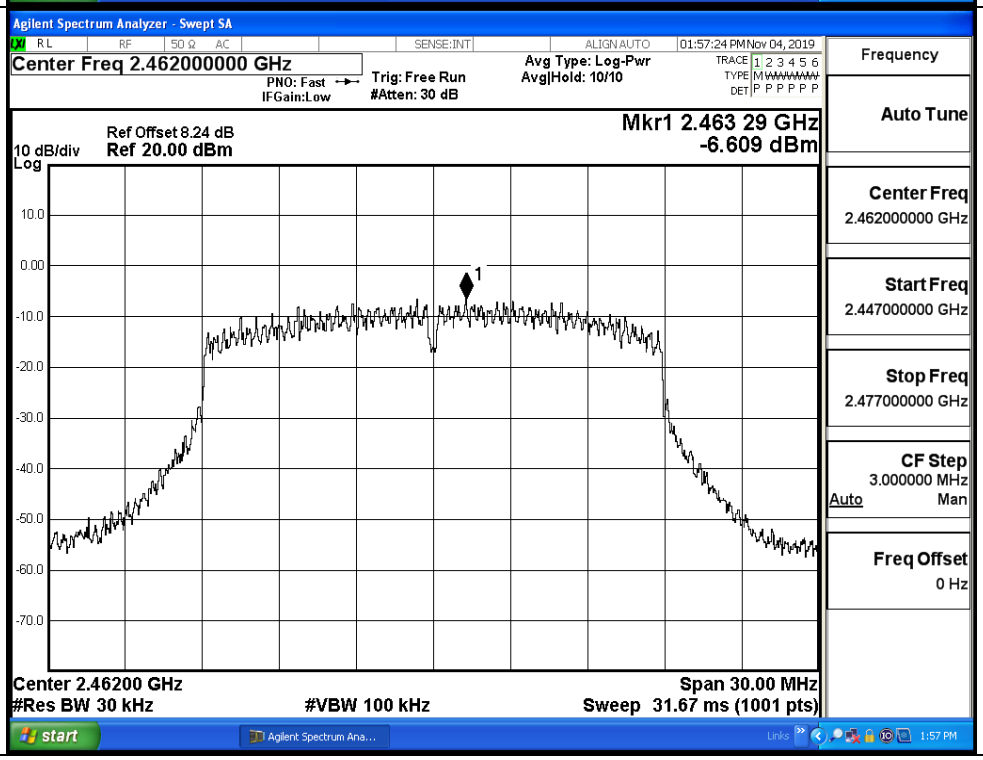
Mode	Channel	Result [dBm/3KHz]			Limit [dBm/3KHz]	Verdict
		Ant_1	Ant_2	Sum		
11N20	LCH	-14.484	-15.899	-12.124	8	PASS
	MCH	-15.536	-16.043	-12.772	8	PASS
	HCH	-16.609	-15.275	-12.881	8	PASS
11N40	LCH	-20.292	-21.226	-17.724	8	PASS
	MCH	-21.072	-21.320	-18.184	8	PASS
	HCH	-20.622	-20.563	-17.582	8	PASS

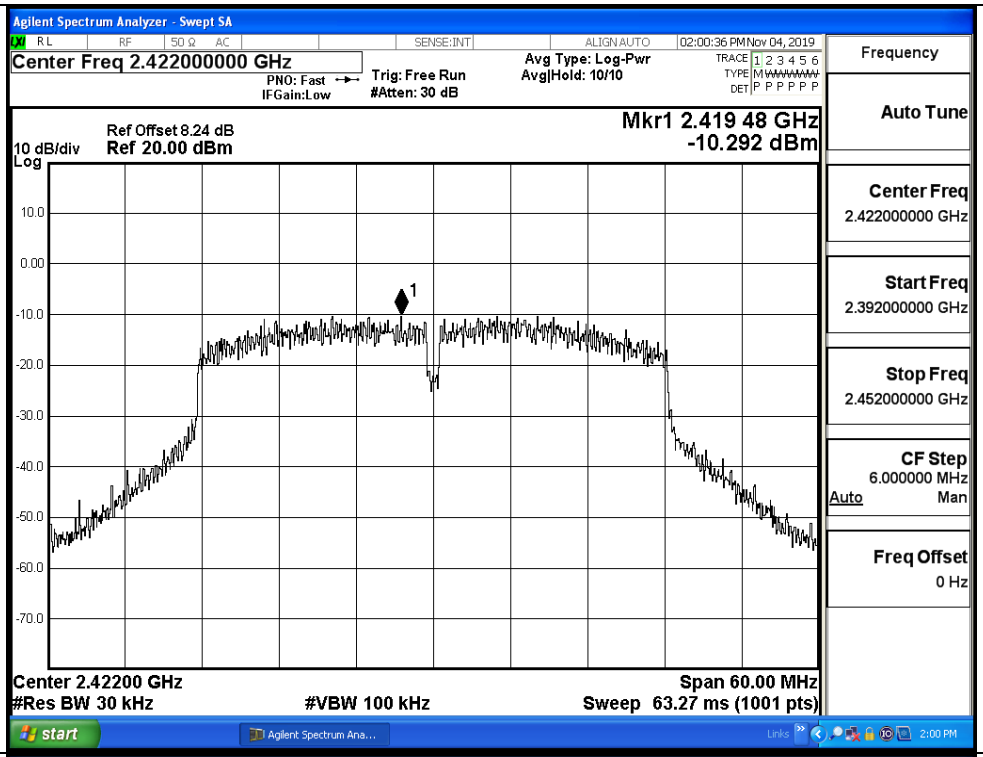
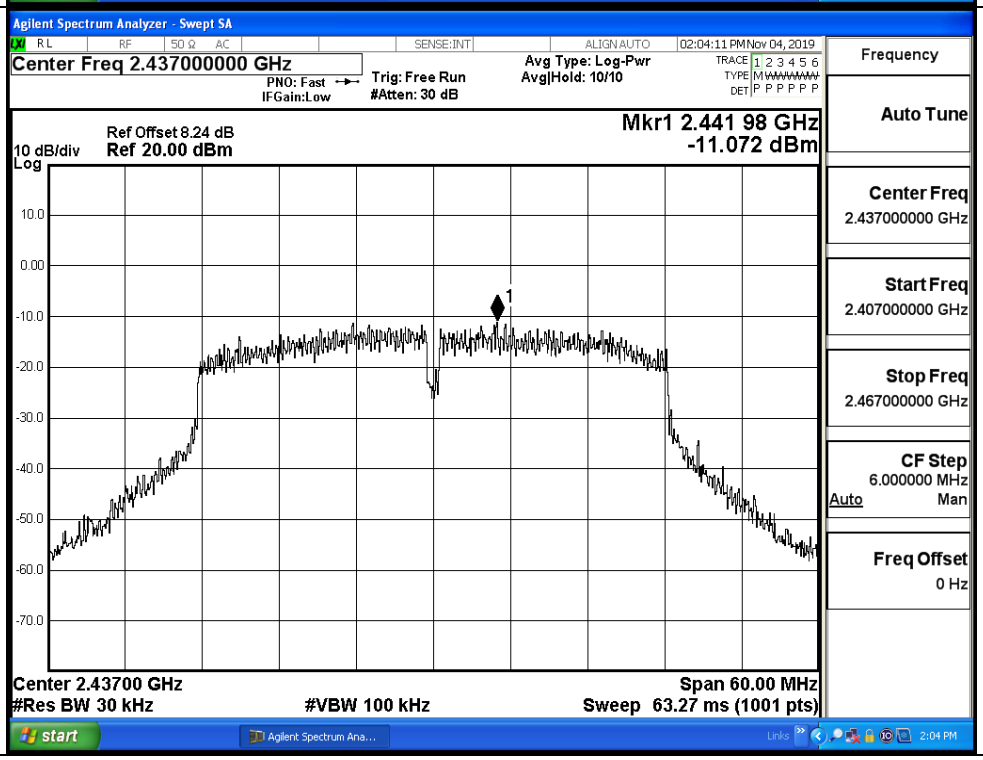
Test Graphs_Ant_1	
11B/LCH	

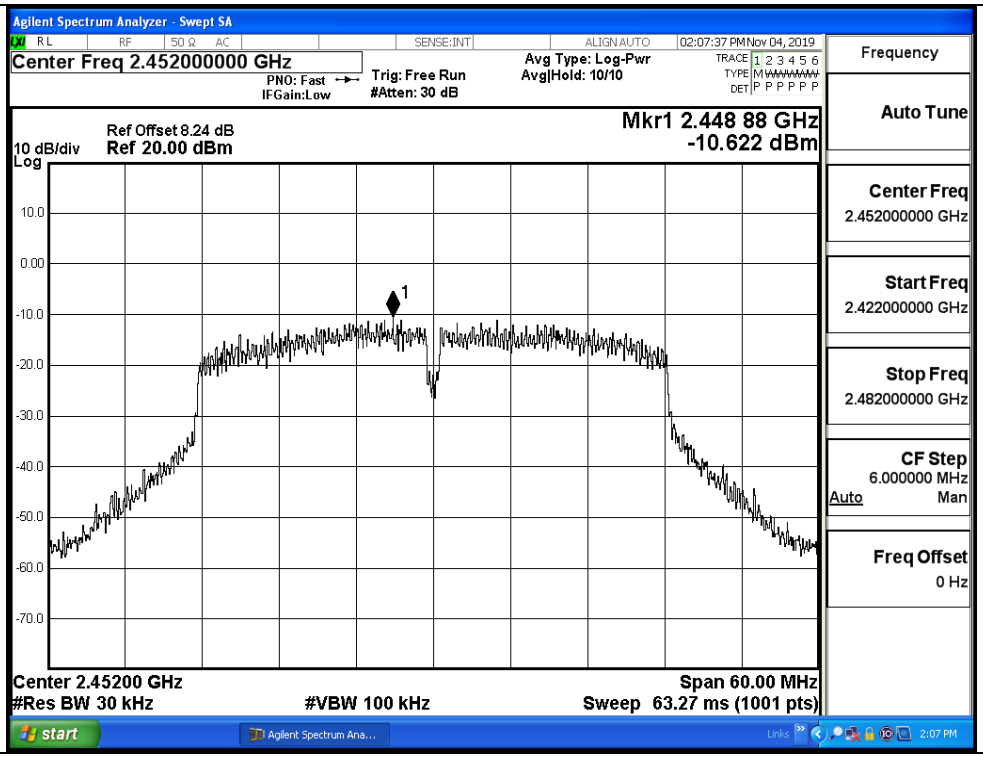
11B/MCH		
11B/HCH		

11G/LCH	
11G/MCH	

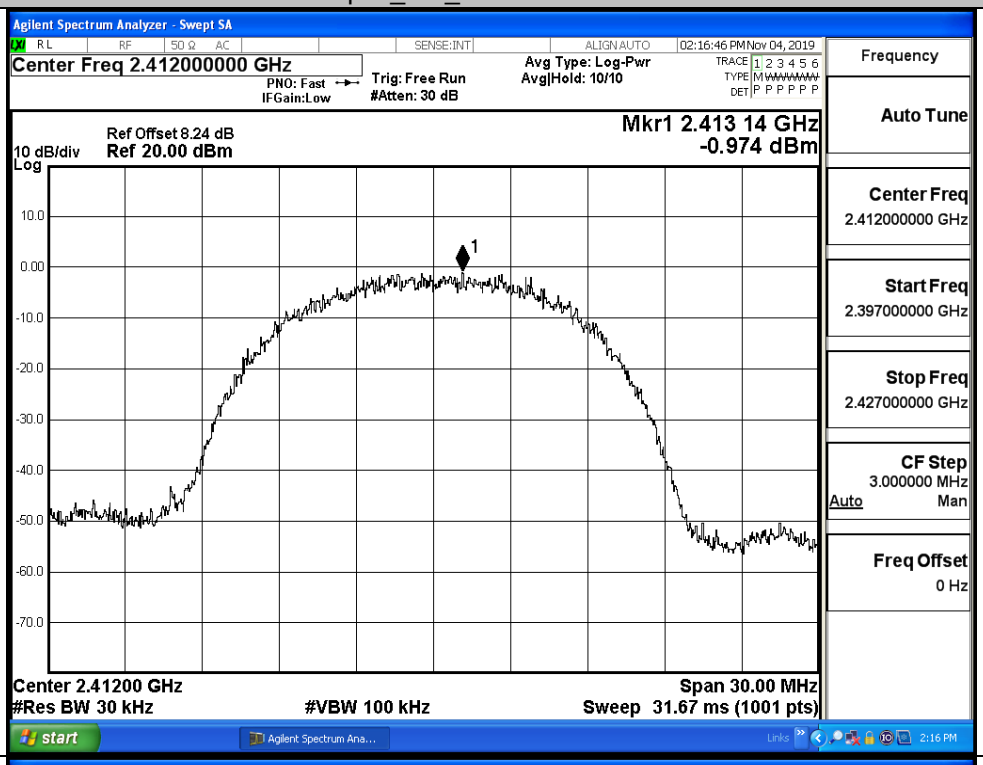
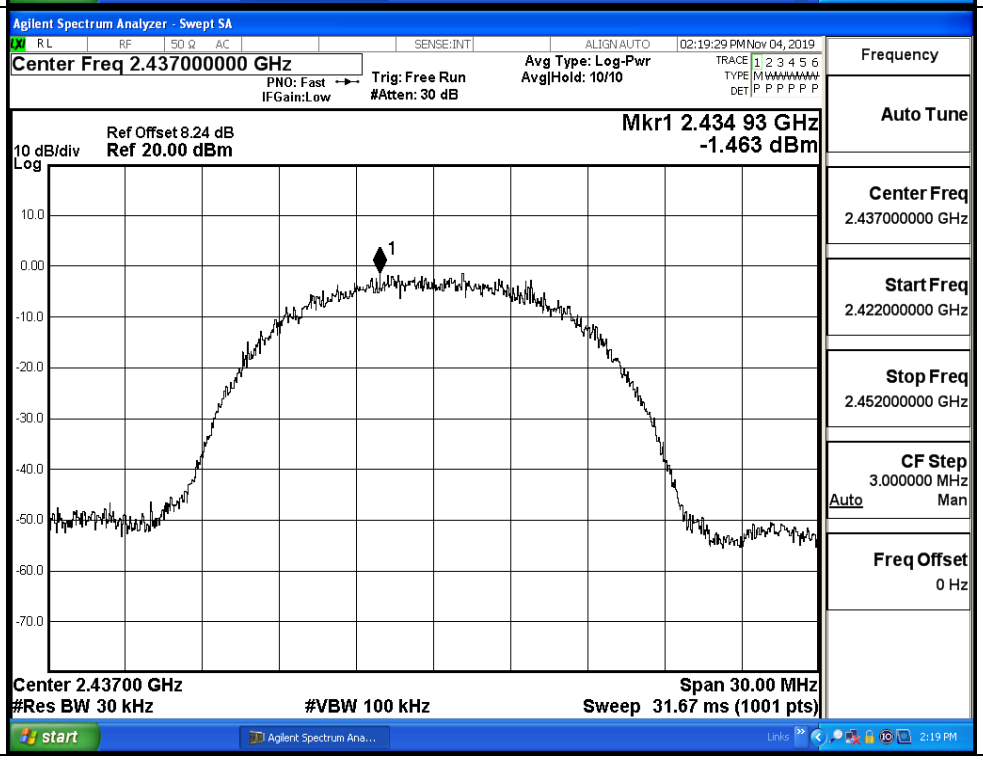
11G/HCH	
11N20/LCH	

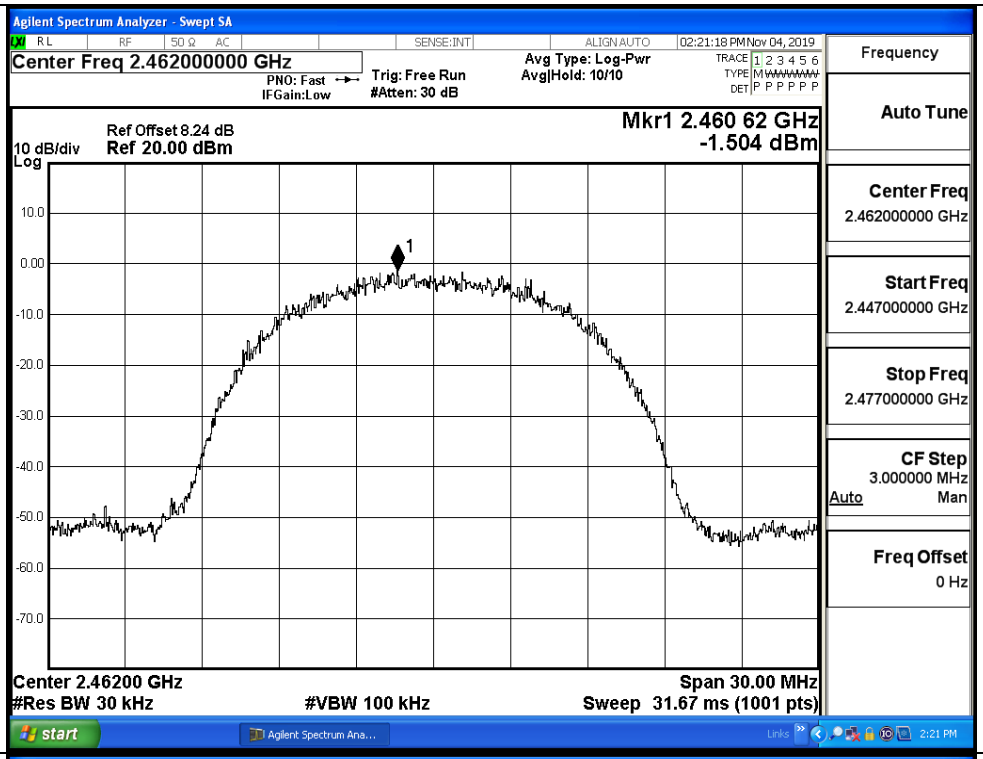
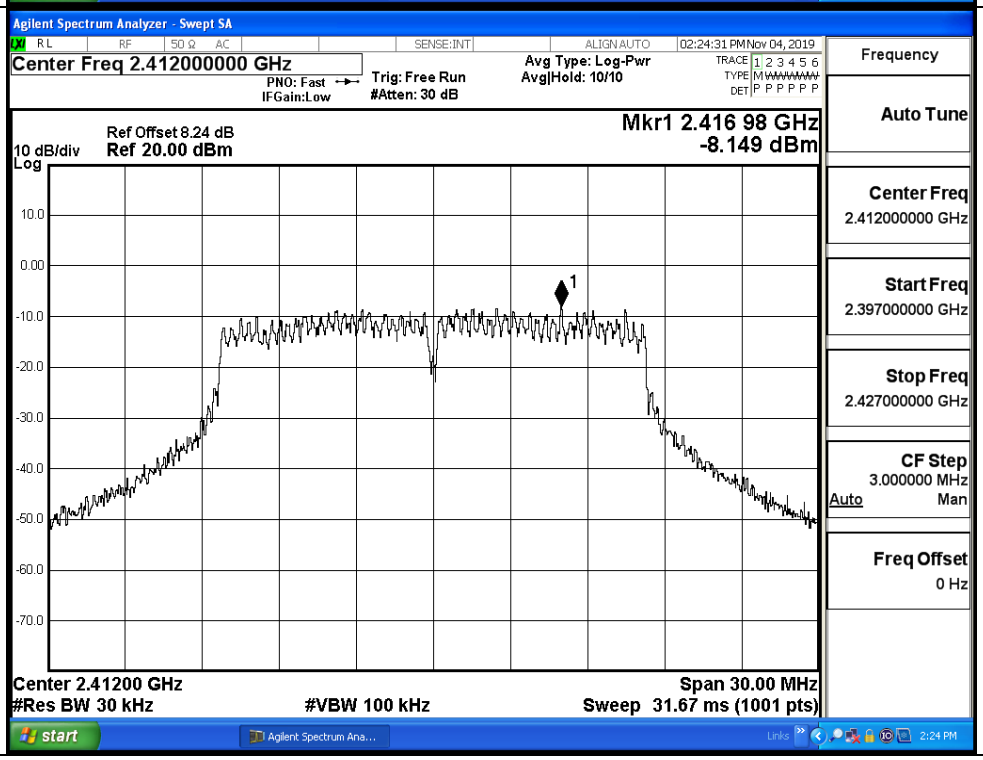
11N20/MCH	
11N20/HCH	

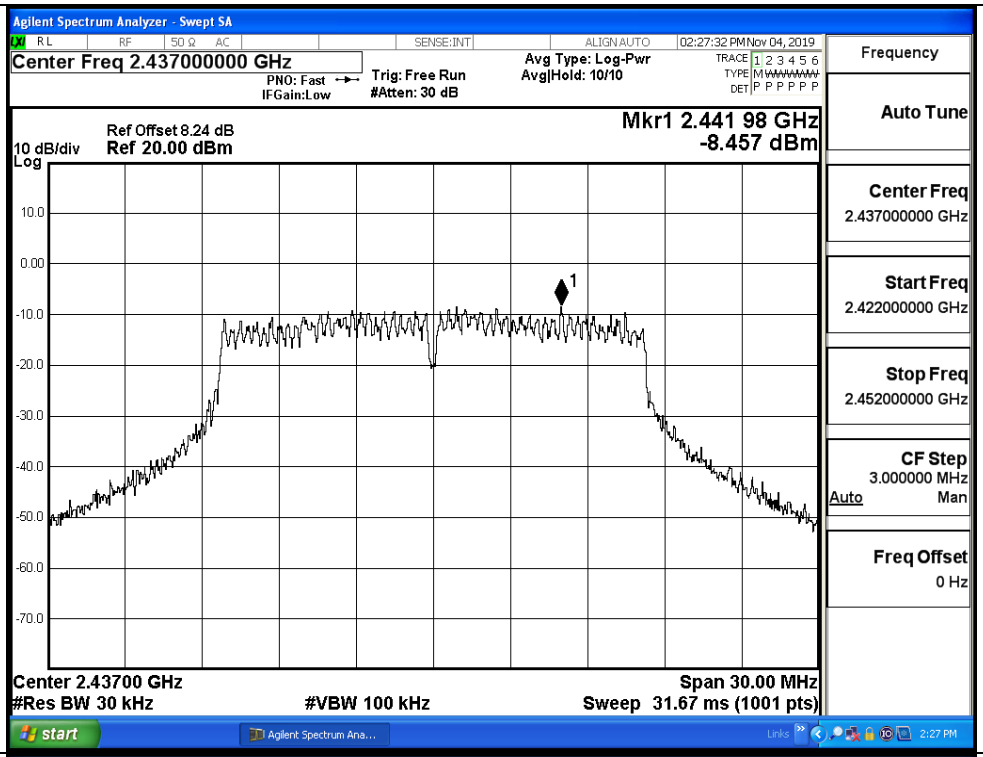
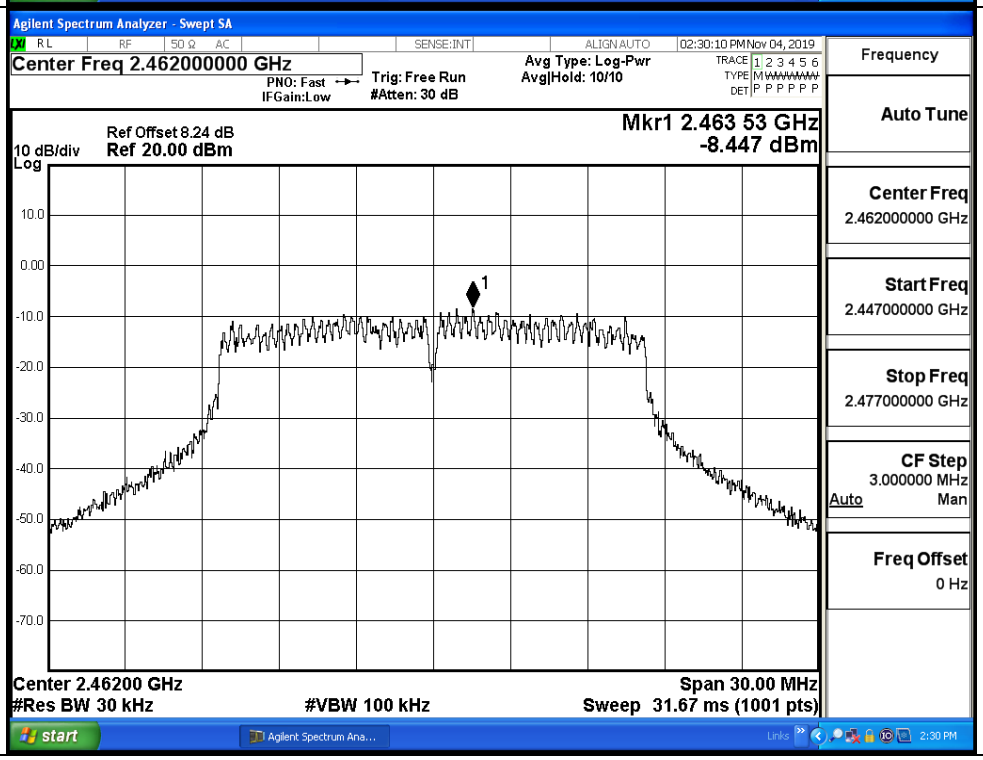
11N40/LCH	
11N40/MCH	

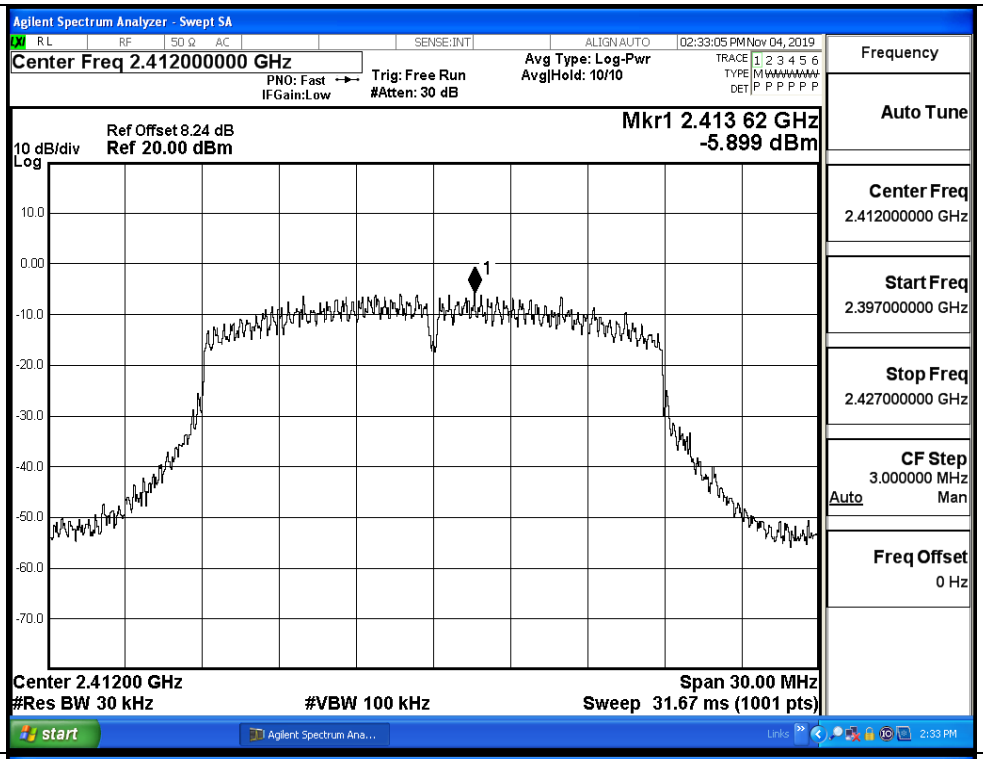
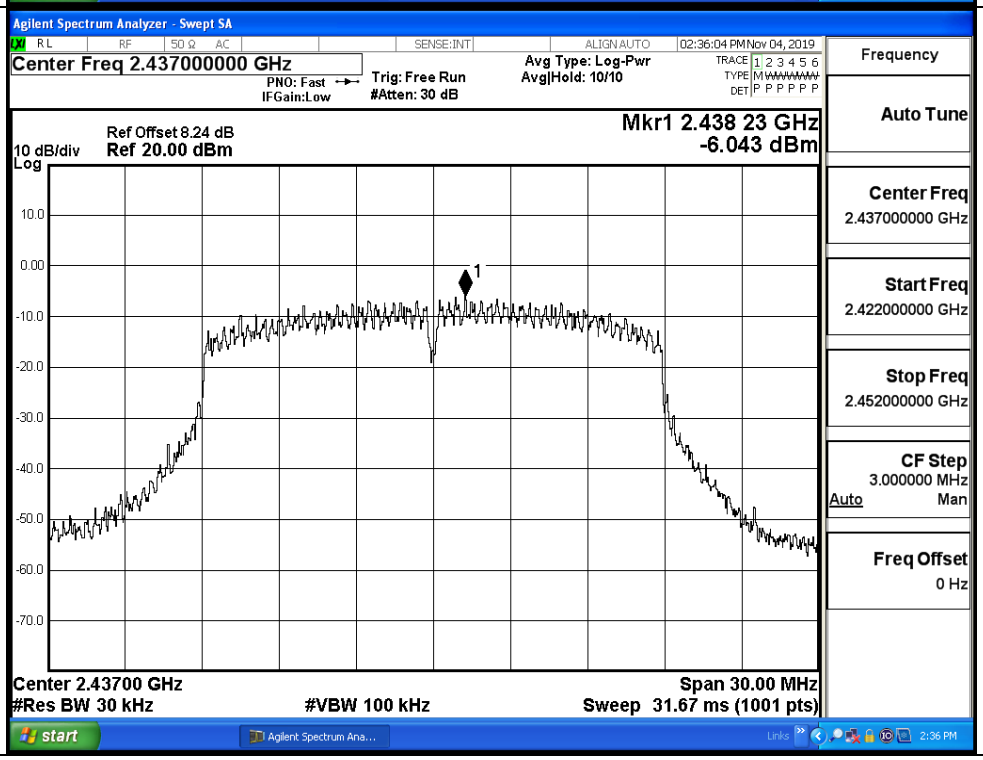
11N40/HCH	

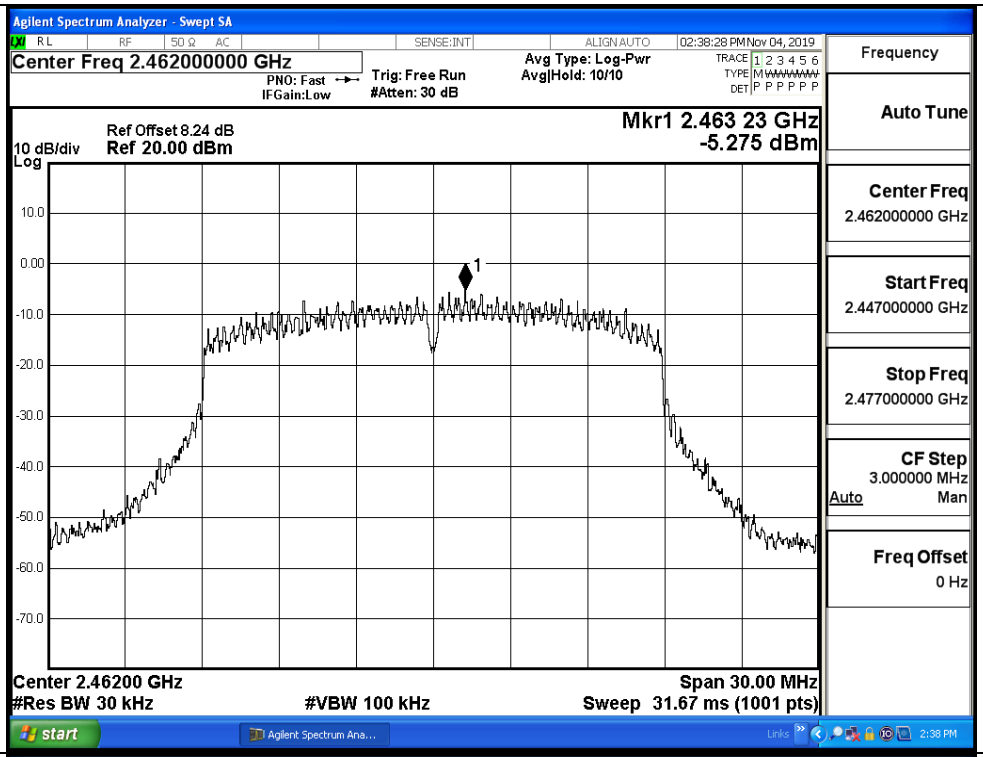
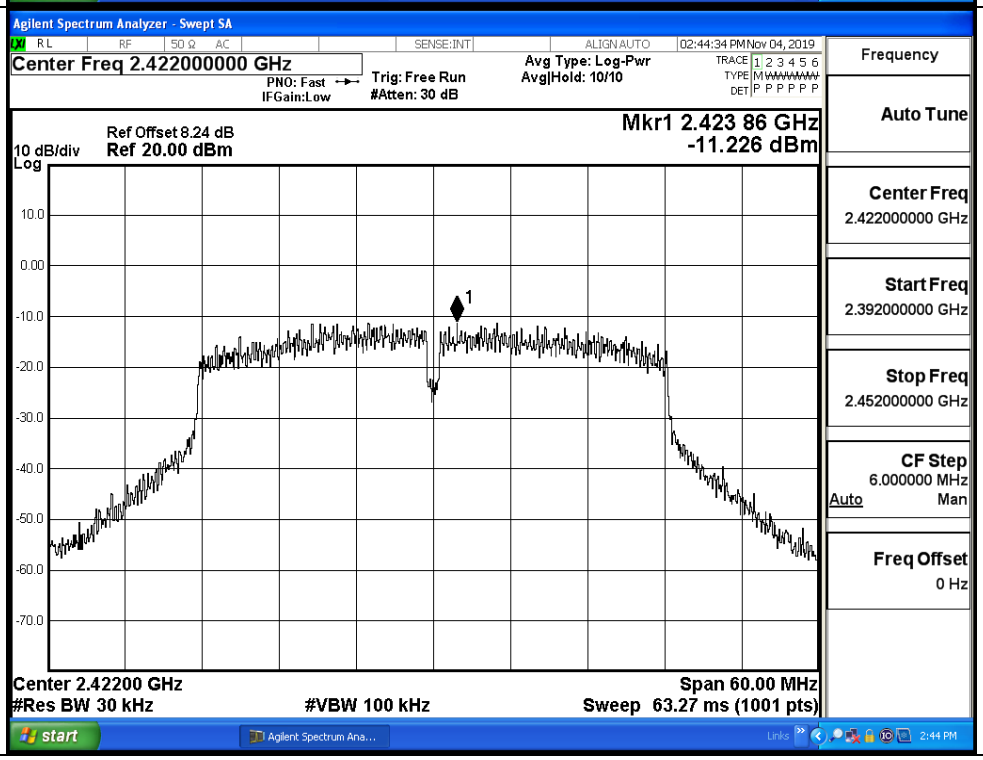
Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
02:07:37 PM Nov 04, 2019
Center Freq 2.452000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P P P P P P
Ref Offset 8.24 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 2.448 88 GHz
-10.622 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 2.45200 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 60.00 MHz
Sweep 63.27 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.452000000 GHz
Start Freq
2.422000000 GHz
Stop Freq
2.482000000 GHz
CF Step
6.000000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
Links
2:07 PM

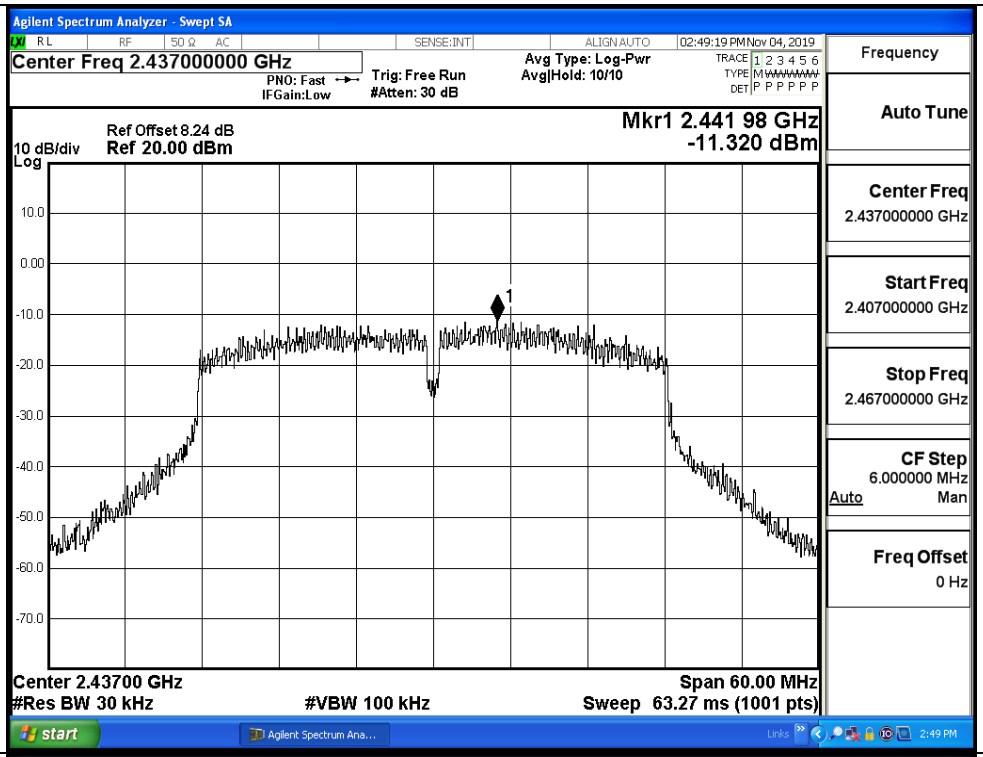
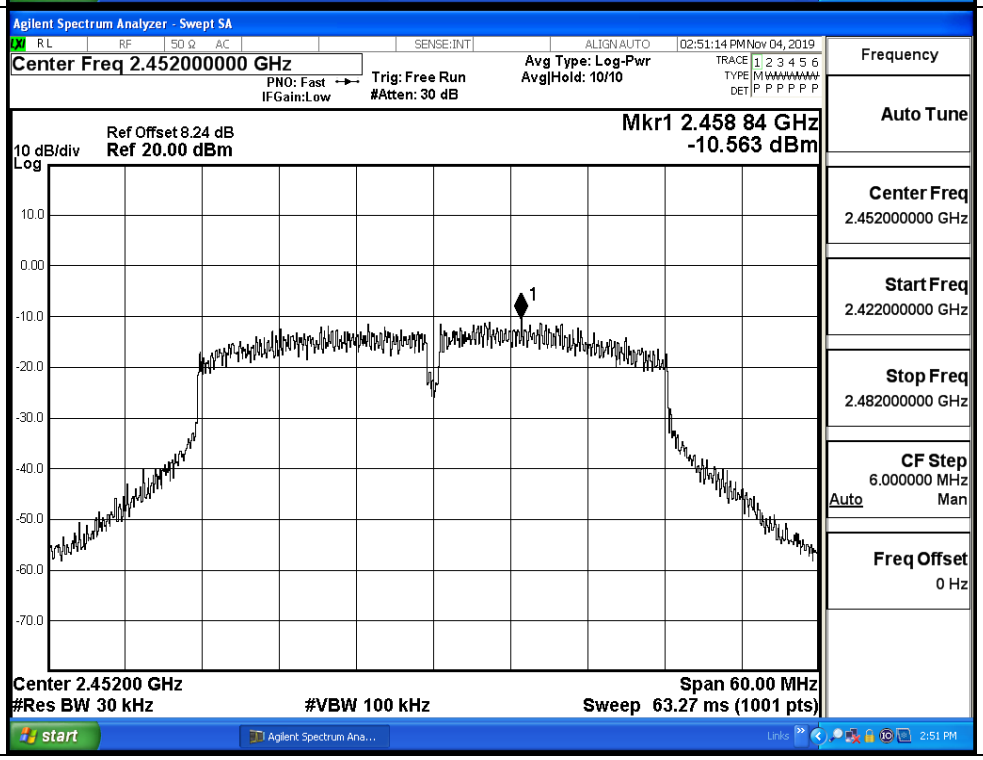
Test Graphs_Ant_2		
11B/LCH		
11B/MCH		

11B/HCH	
11G/LCH	

11G/MCH	
11G/HCH	

11N20/LCH	
11N20/MCH	

11N20/HCH	
11N40/LCH	

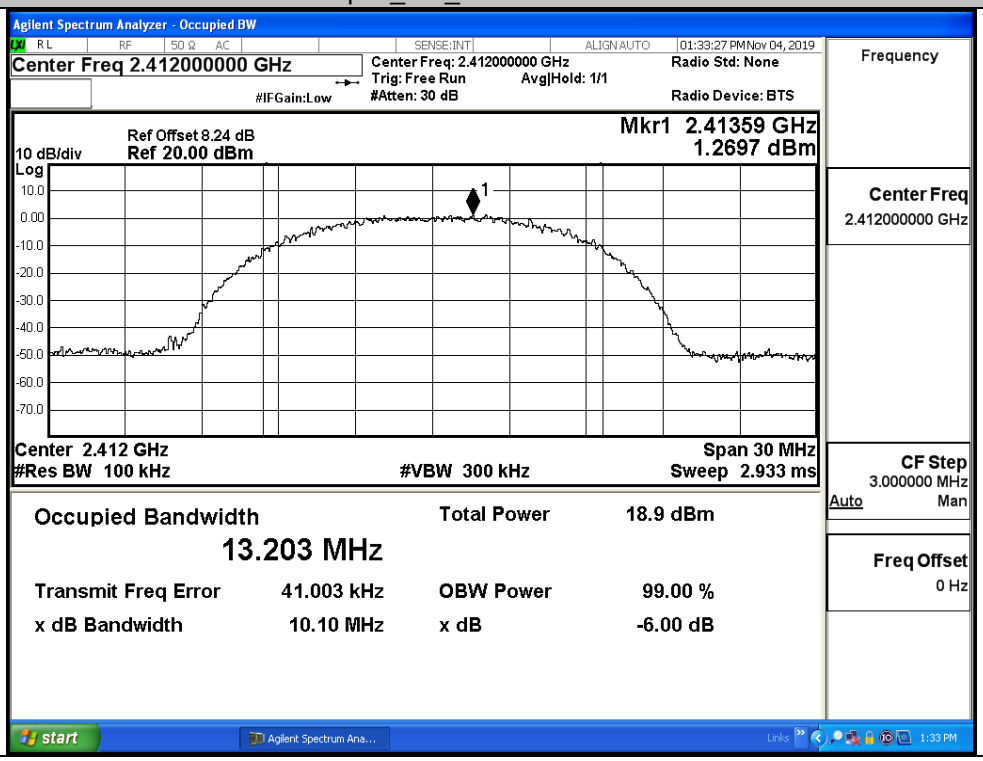
11N40/MCH	
11N40/HCH	

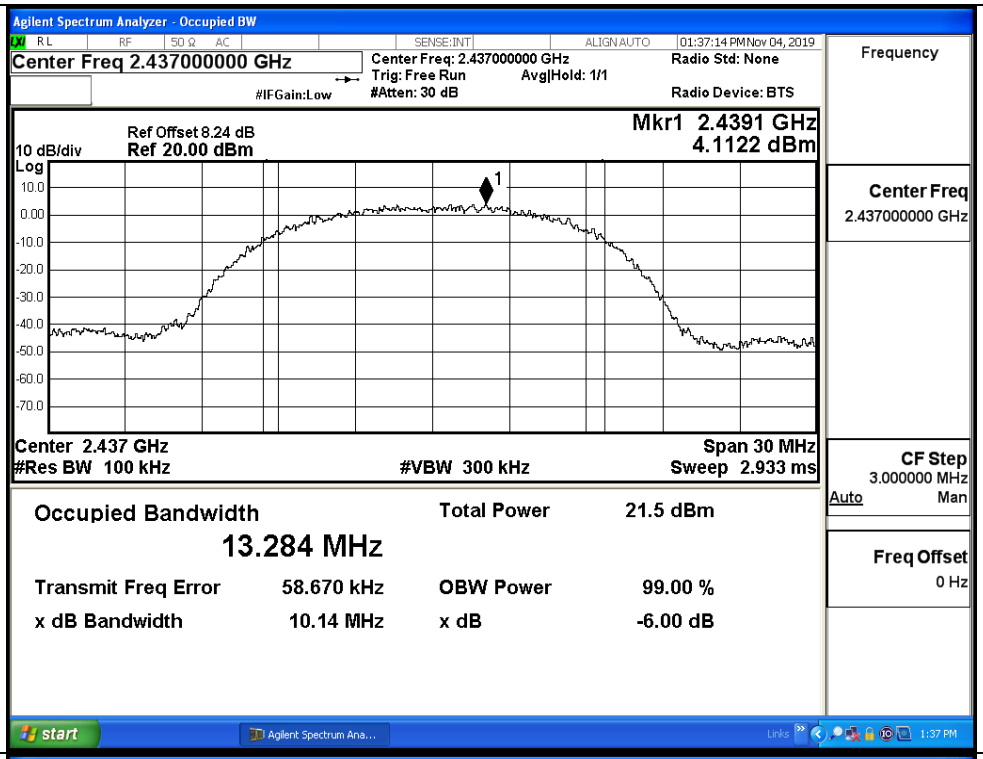
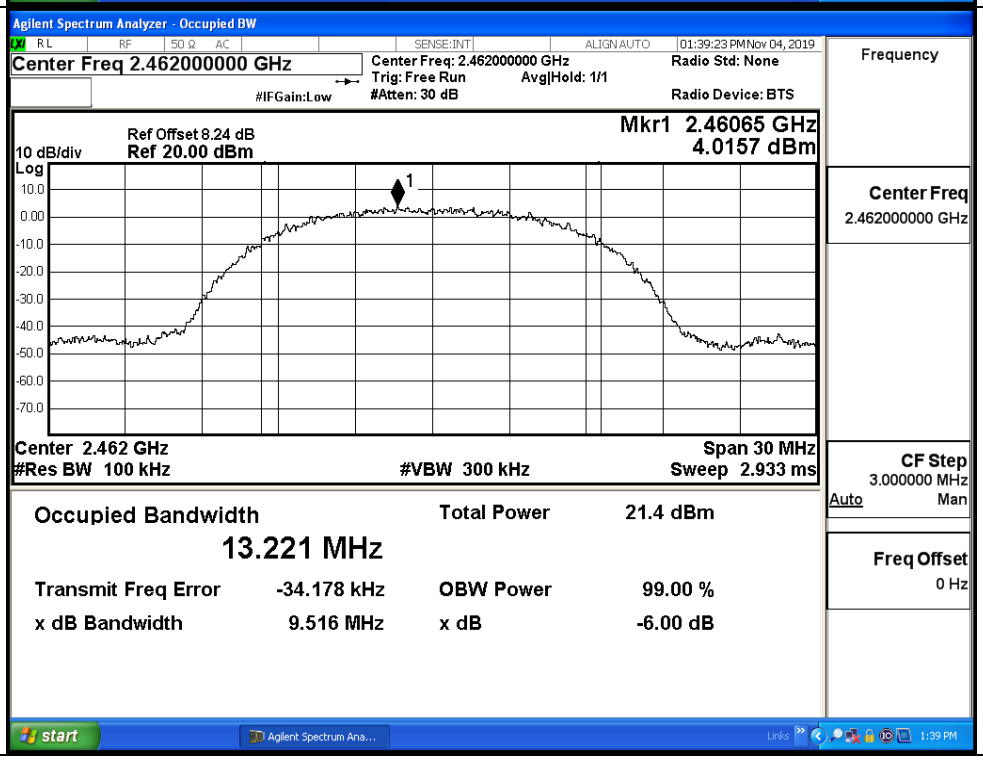
A.4 6dB Bandwidth

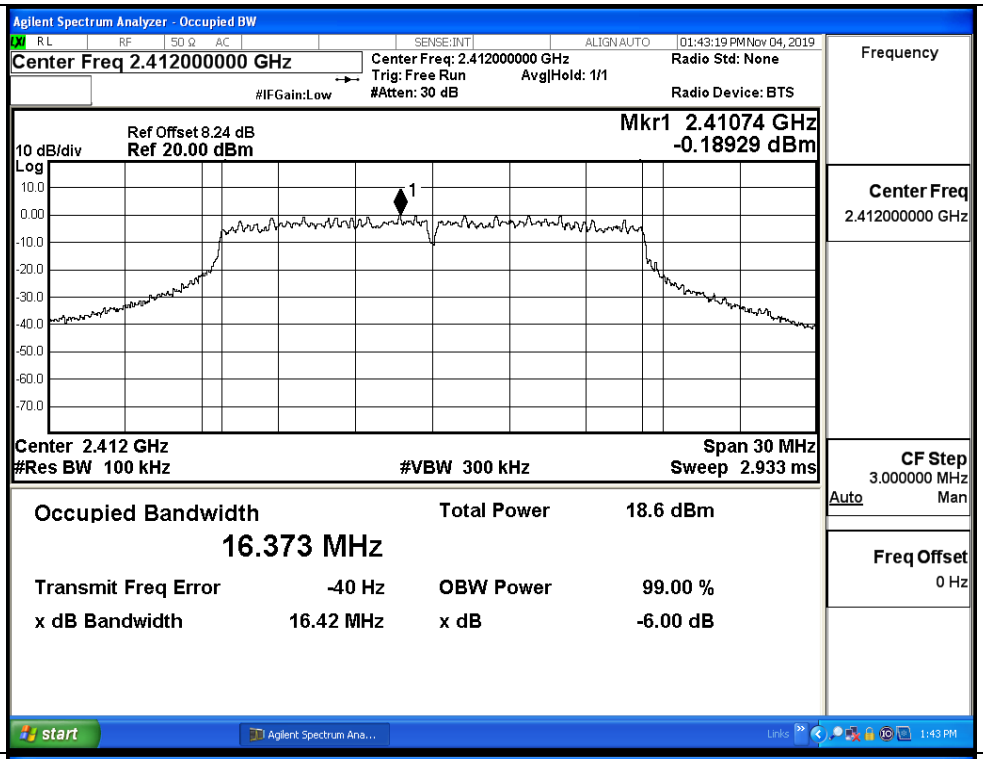
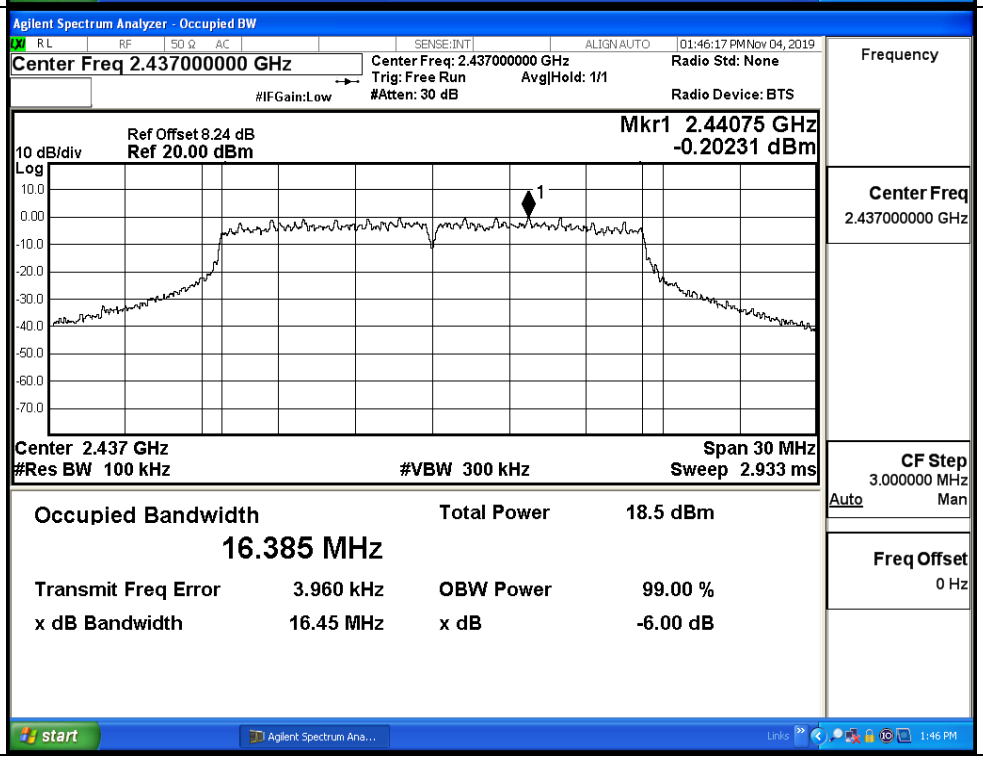
Mode	Channel	6dB Bandwidth [MHz]		Limit [MHz]	Verdict
		Ant_1	Ant_2		
11B	LCH	10.10	9.785	≥0.5	PASS
	MCH	10.14	10.32	≥0.5	PASS
	HCH	9.516	10.30	≥0.5	PASS
11G	LCH	16.42	16.35	≥0.5	PASS
	MCH	16.45	16.40	≥0.5	PASS
	HCH	16.28	16.33	≥0.5	PASS
11N20	LCH	15.12	15.13	≥0.5	PASS
	MCH	15.09	15.08	≥0.5	PASS
	HCH	15.09	15.04	≥0.5	PASS
11N40	LCH	35.05	31.39	≥0.5	PASS
	MCH	33.84	35.07	≥0.5	PASS
	HCH	33.87	35.07	≥0.5	PASS

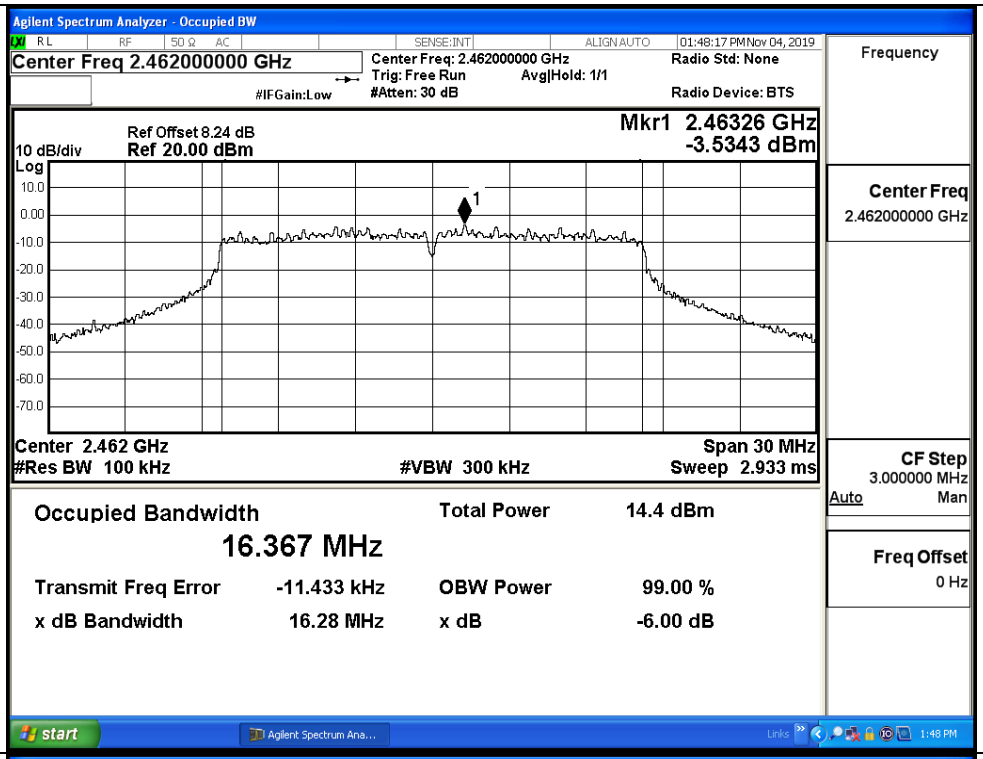
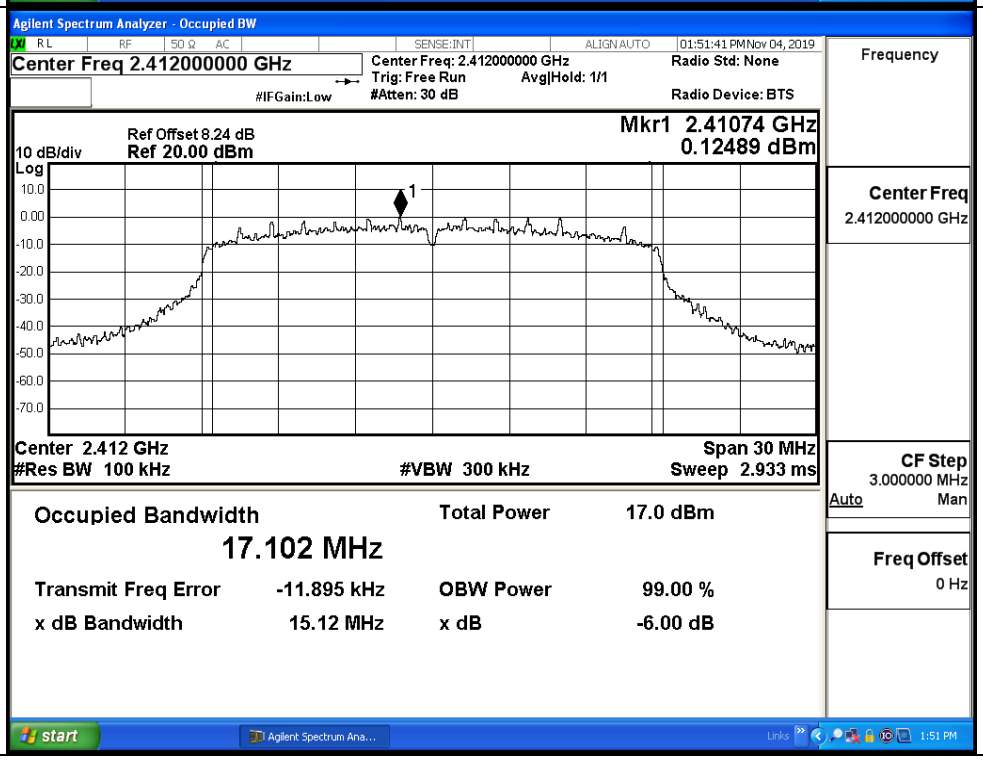
Test Graphs_Ant_1

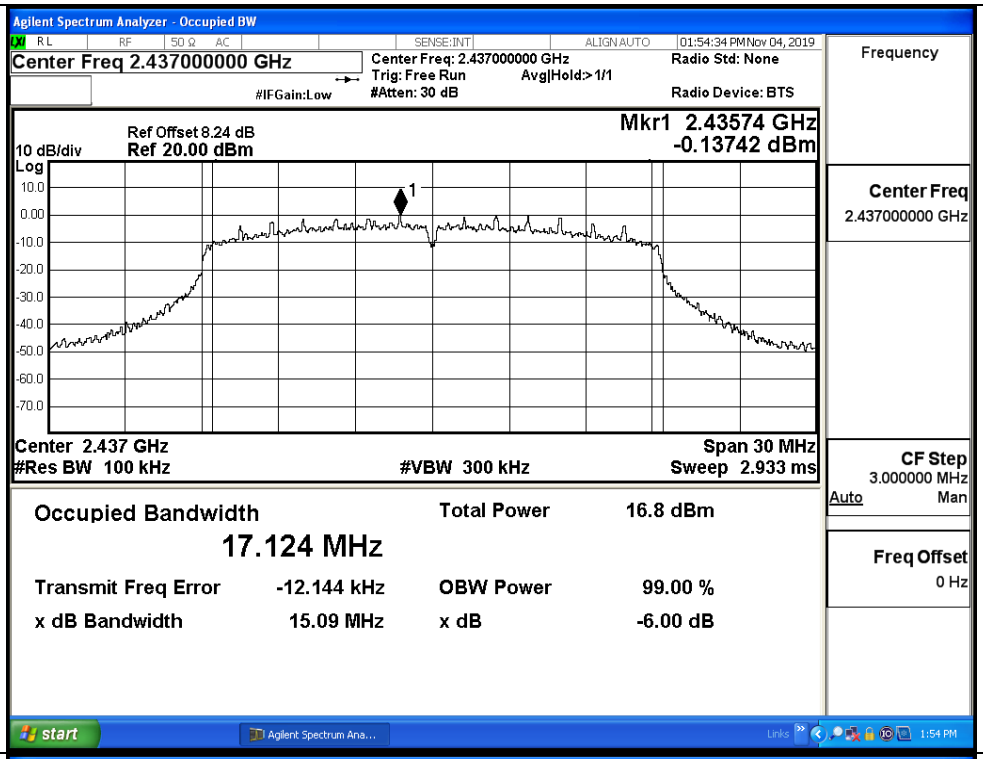
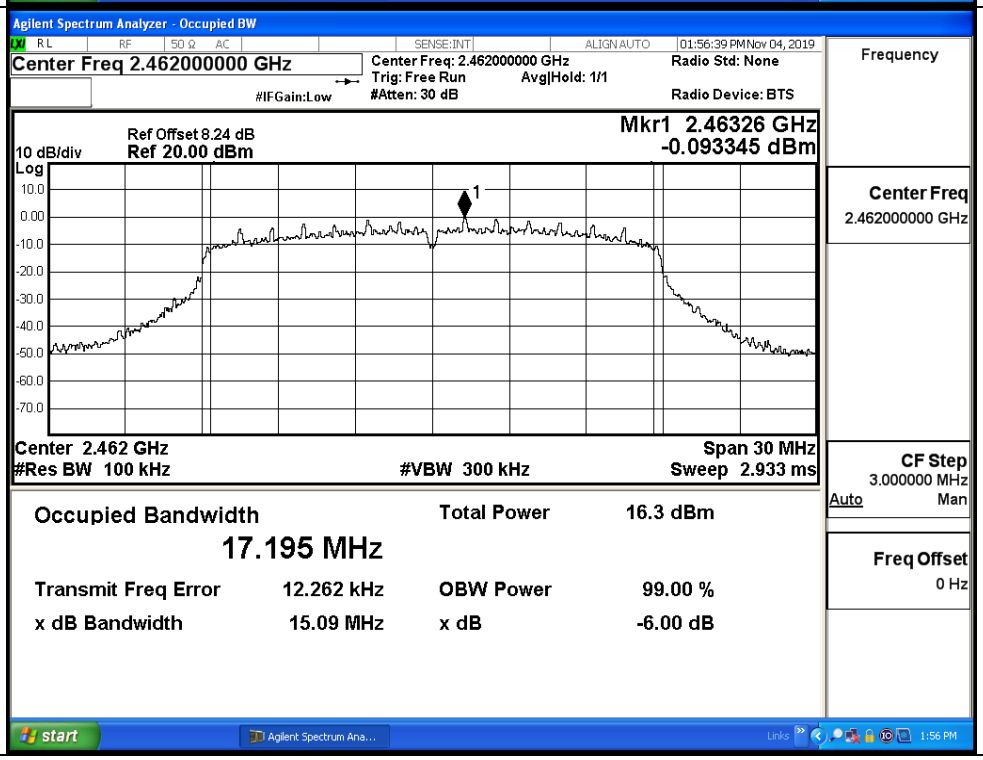
11B/LCH

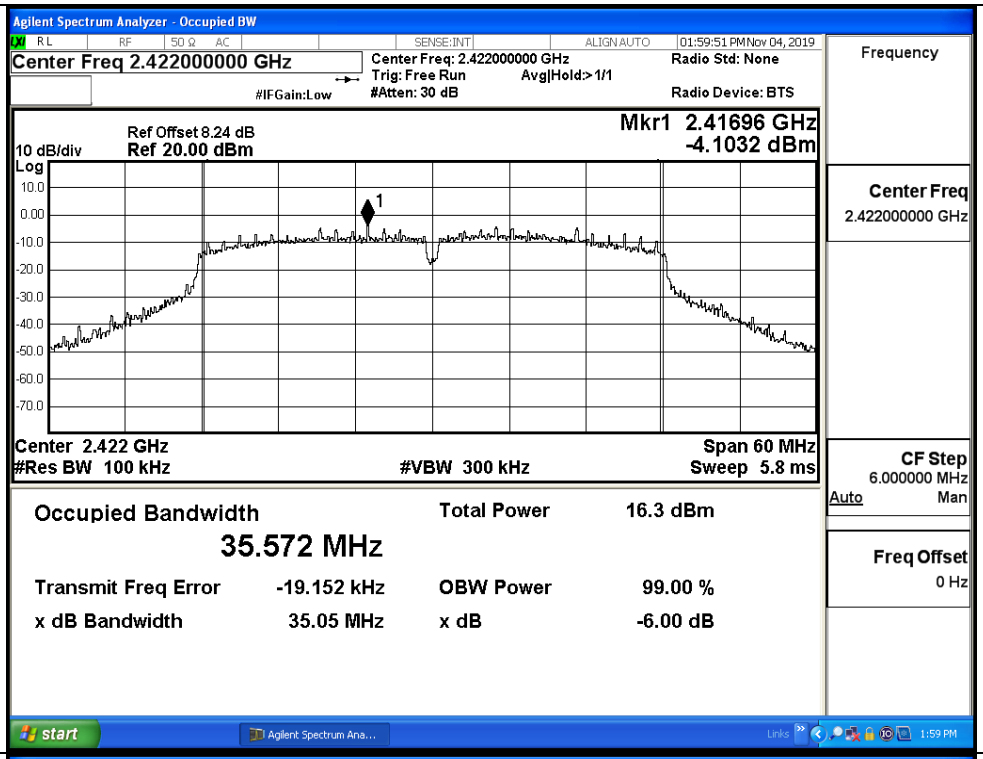
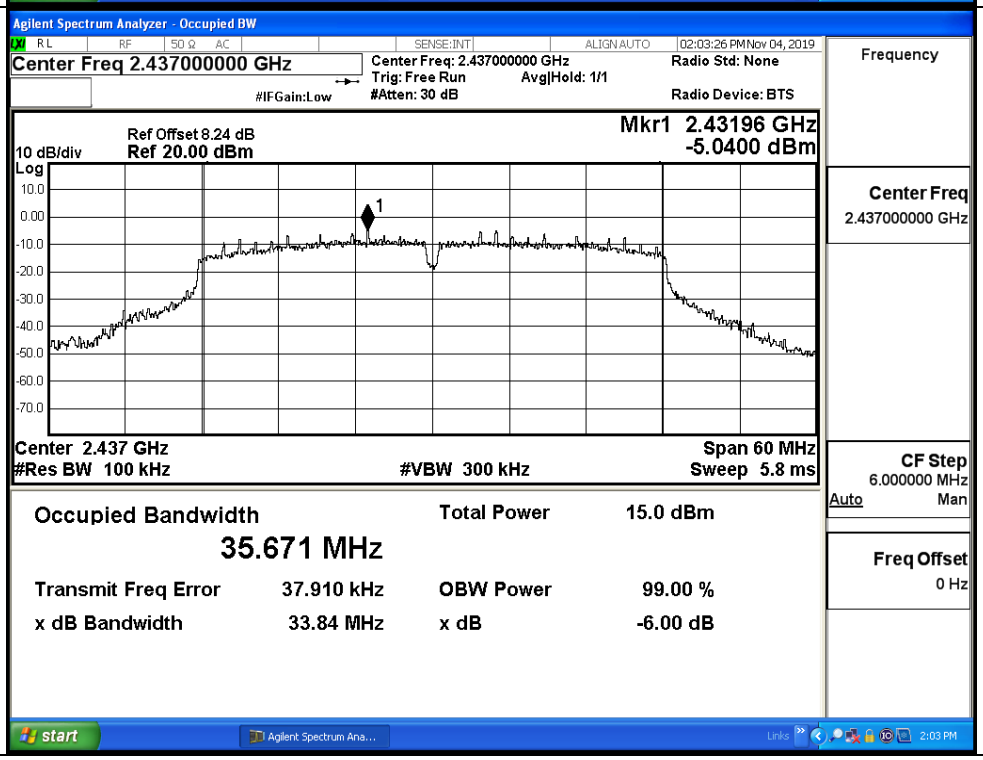


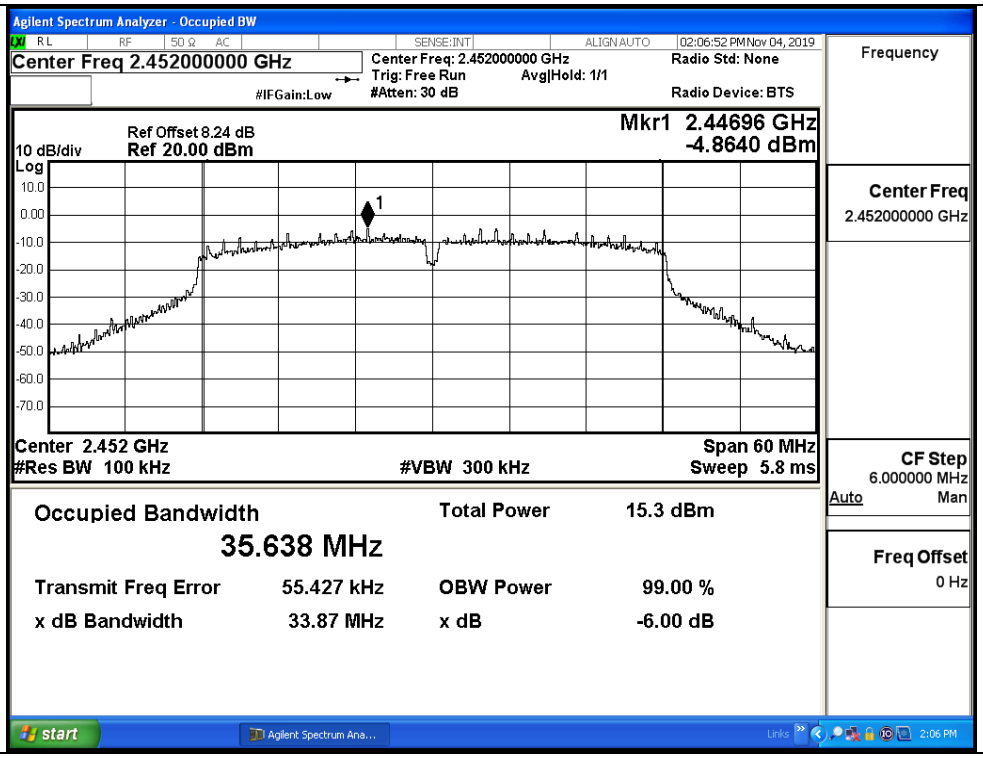
11B/MCH	
11B/HCH	

11G/LCH	
11G/MCH	

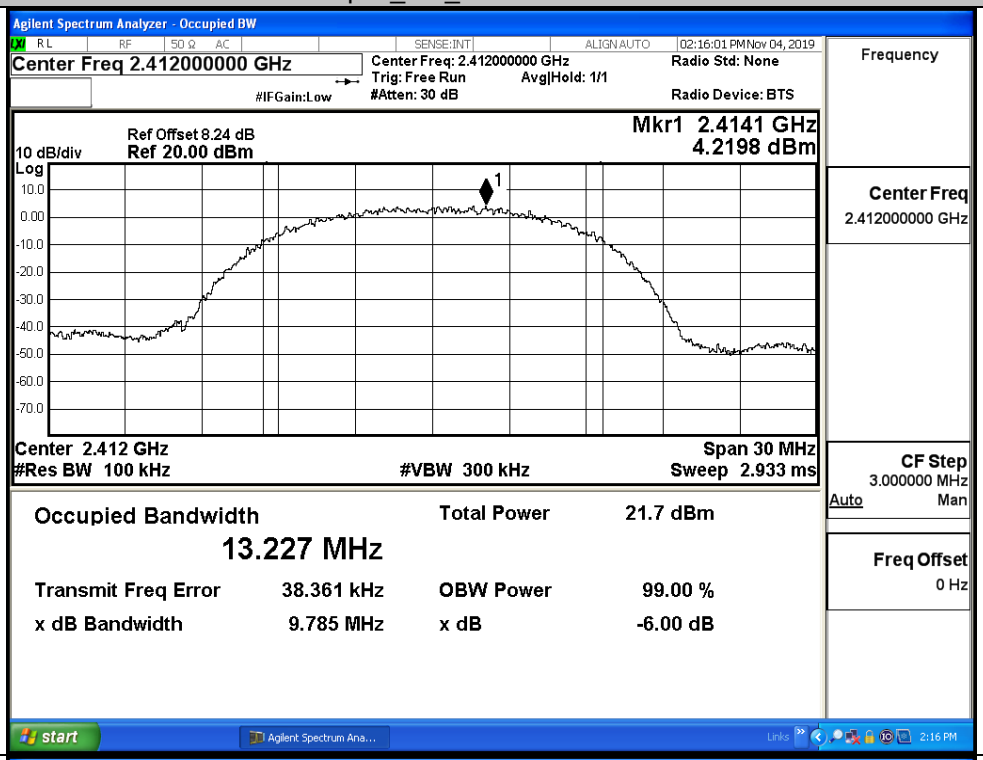
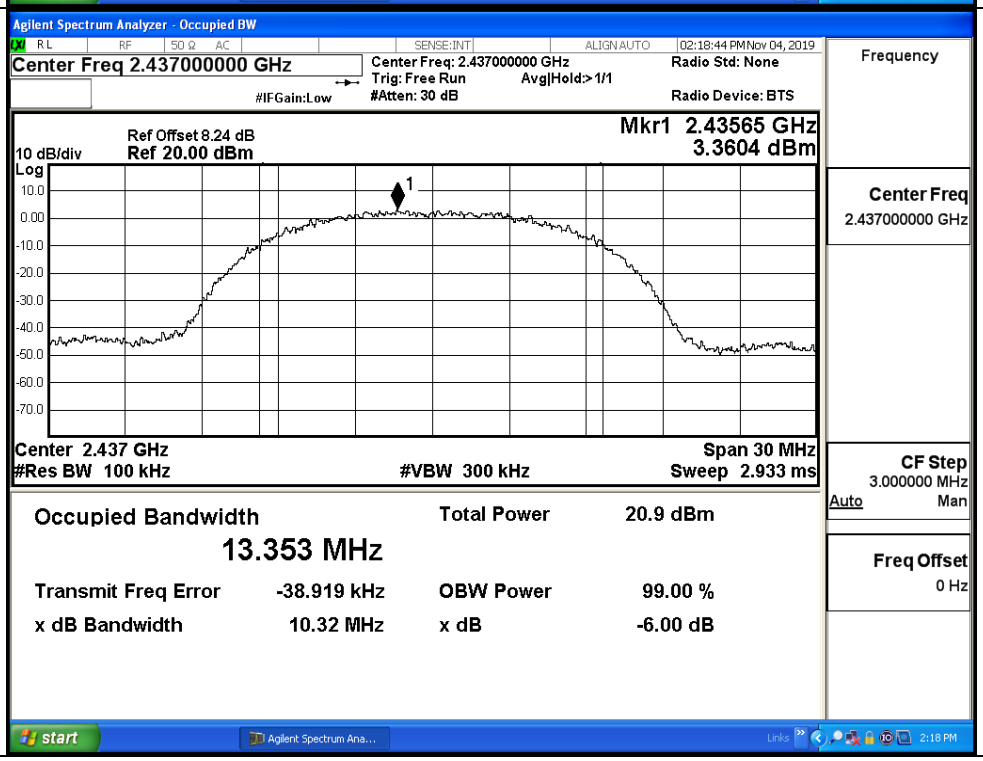
11G/HCH		
11N20/LCH		

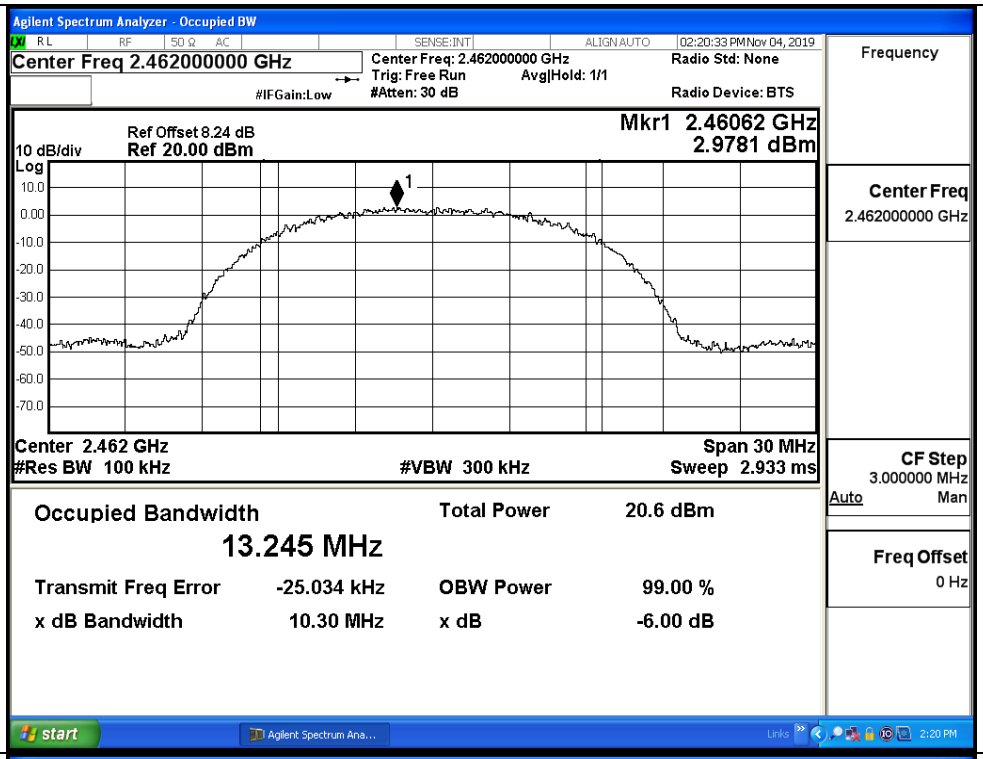
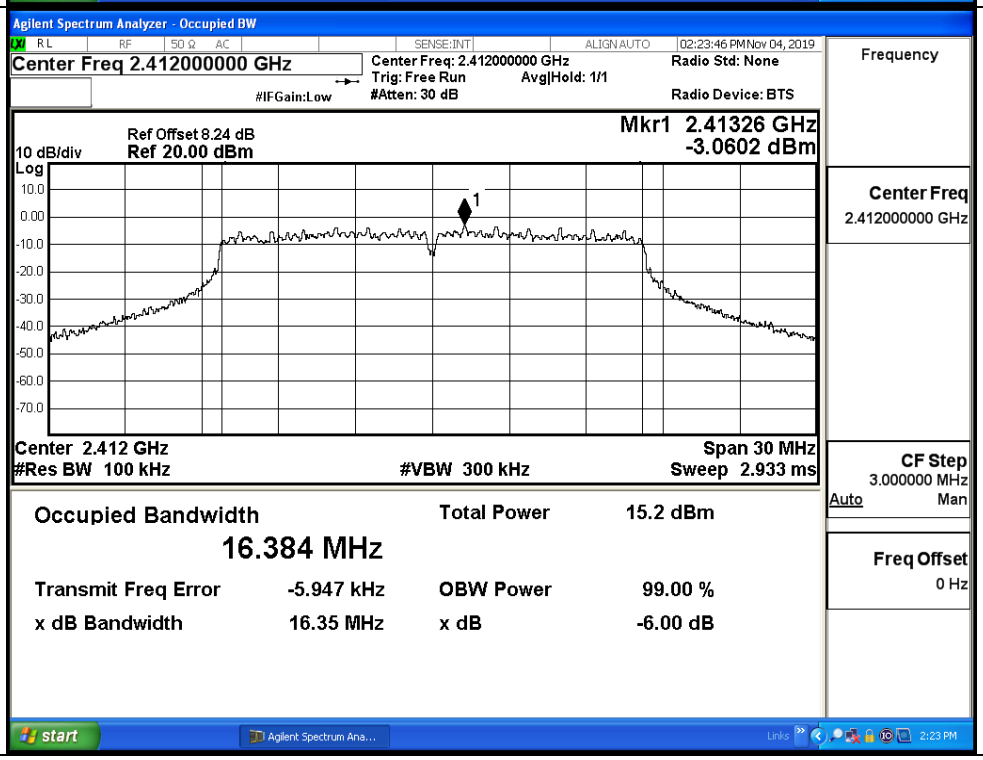
11N20/MCH	
11N20/HCH	

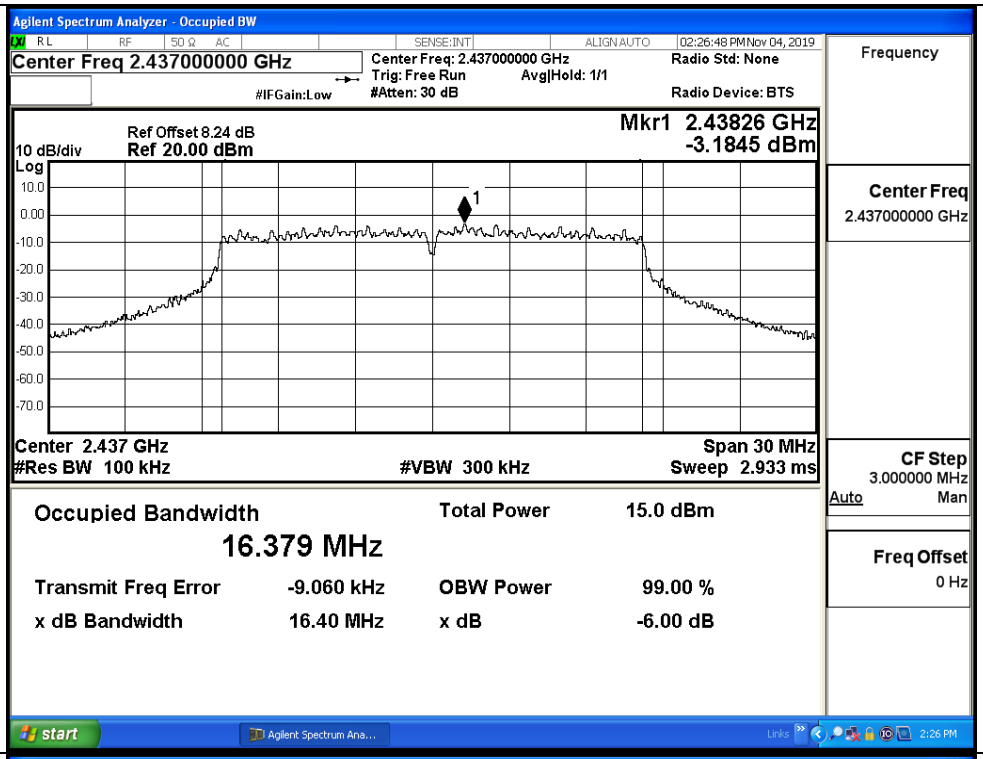
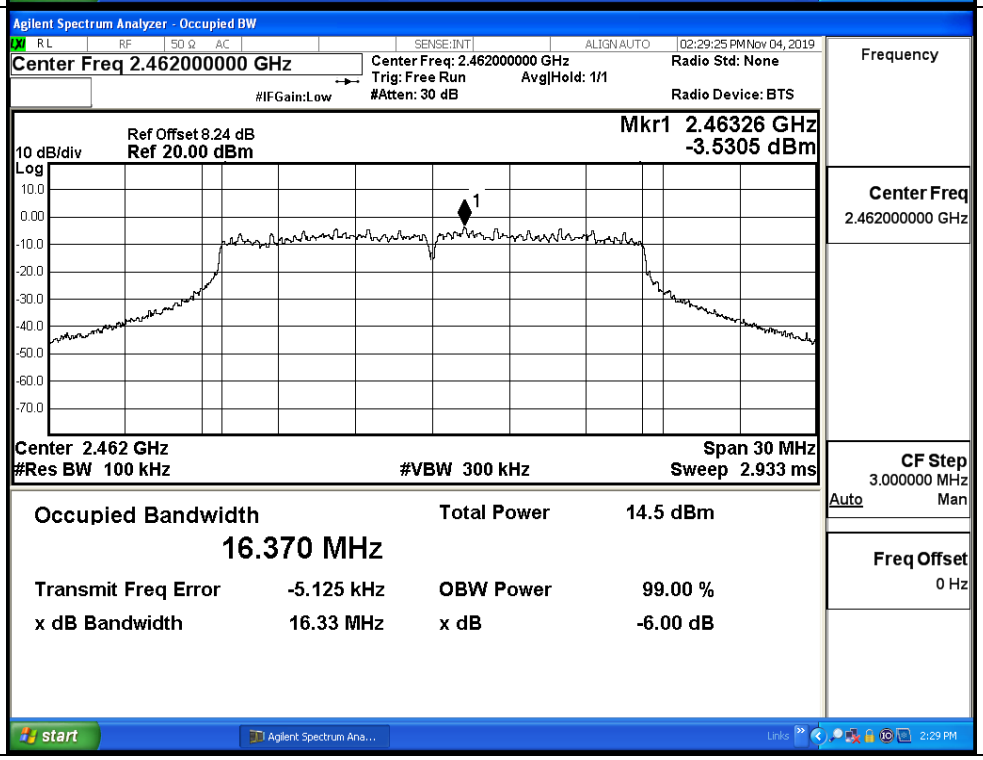
11N40/LCH	
11N40/MCH	

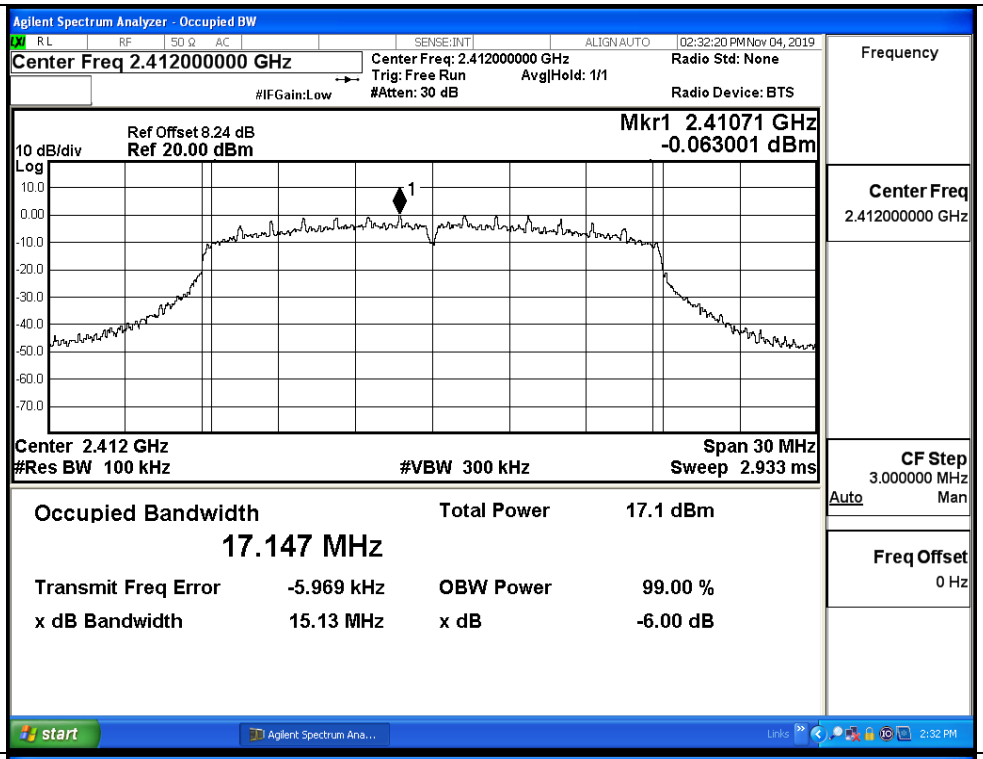
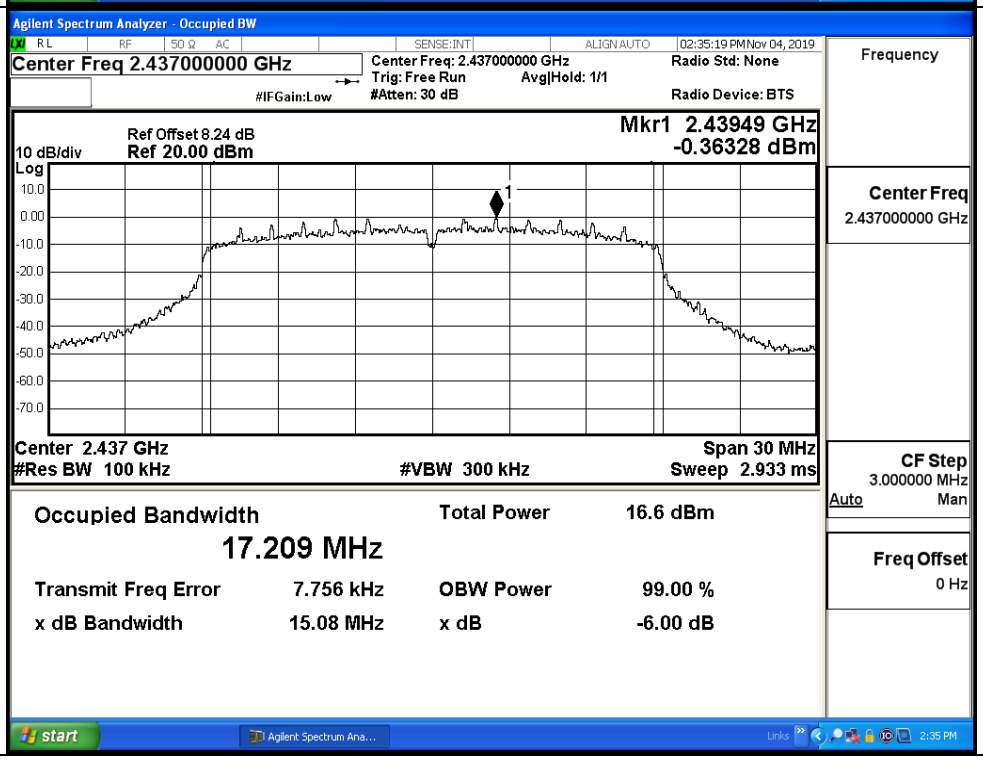
11N40/HCH		

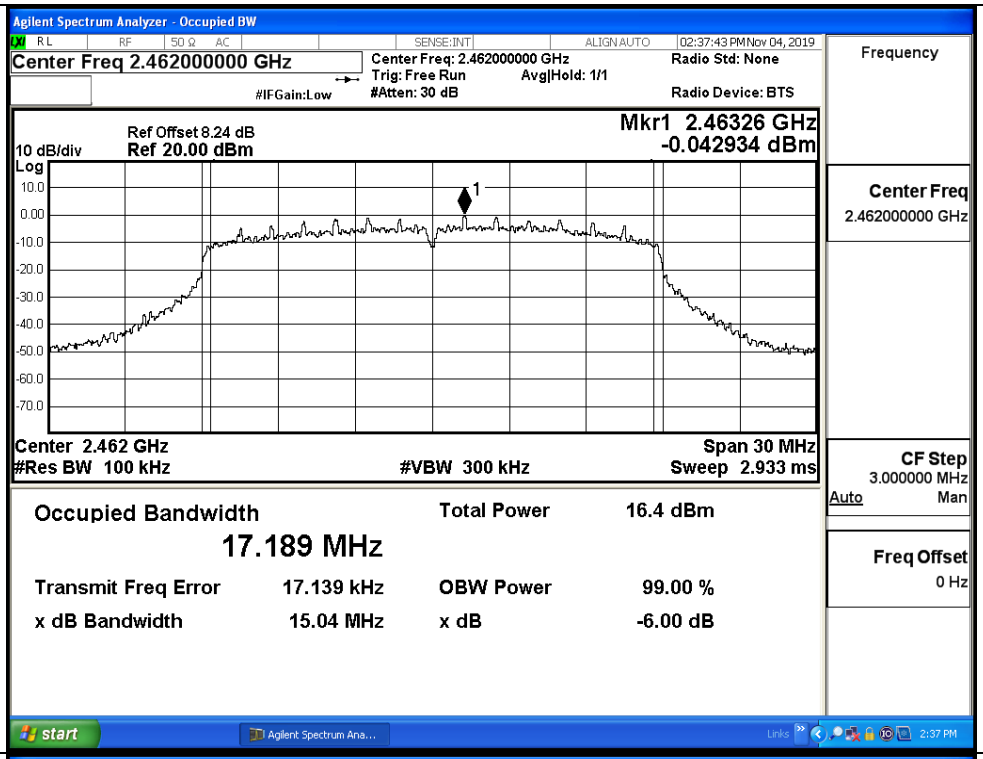
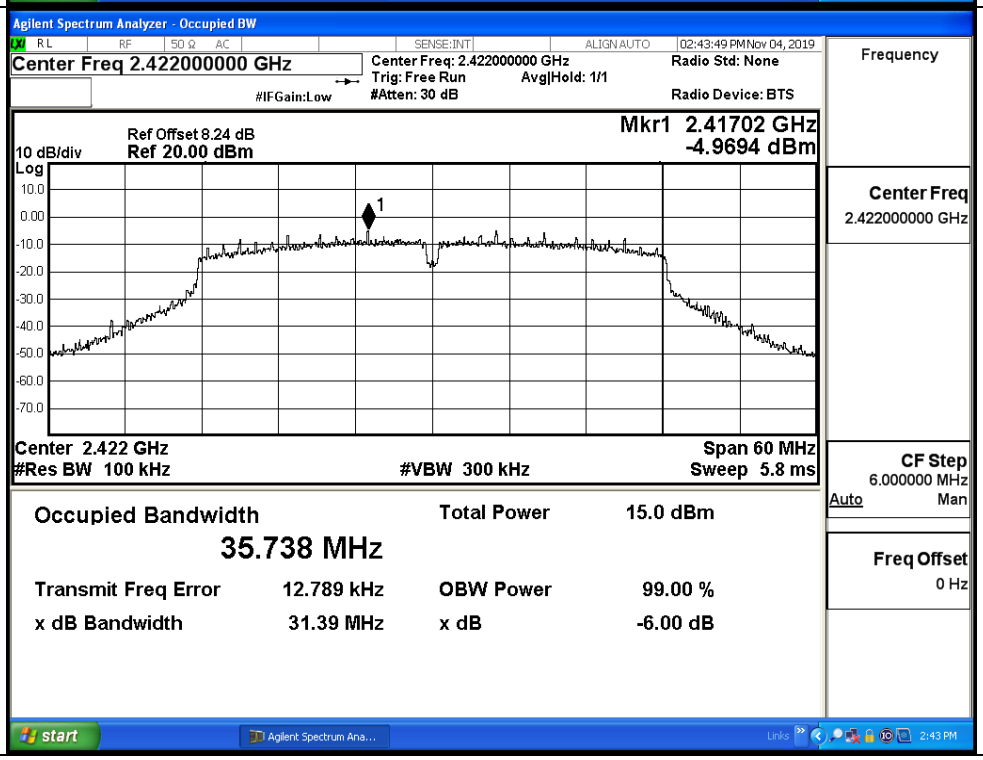
Agilent Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
02:06:52 PM Nov 04, 2019
Center Freq 2.452000000 GHz
Center Freq: 2.452000000 GHz
Trig: Free Run
Avg|Hold: 1/1
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 8.24 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.44696 GHz
-4.8640 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 2.452 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 5.8 ms
Occupied Bandwidth
35.638 MHz
Total Power
15.3 dBm
Transmit Freq Error
55.427 kHz
OBW Power
99.00 %
x dB Bandwidth
33.87 MHz
x dB
-6.00 dB
Center Freq
2.452000000 GHz
CF Step
6.000000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
Links
2:06 PM

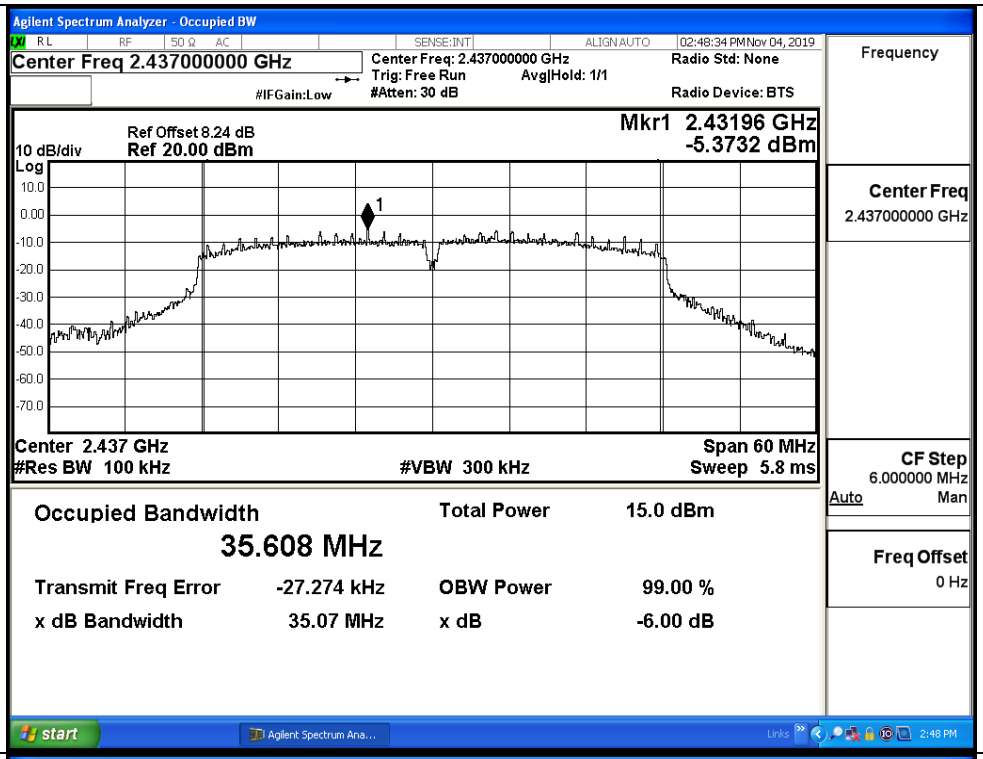
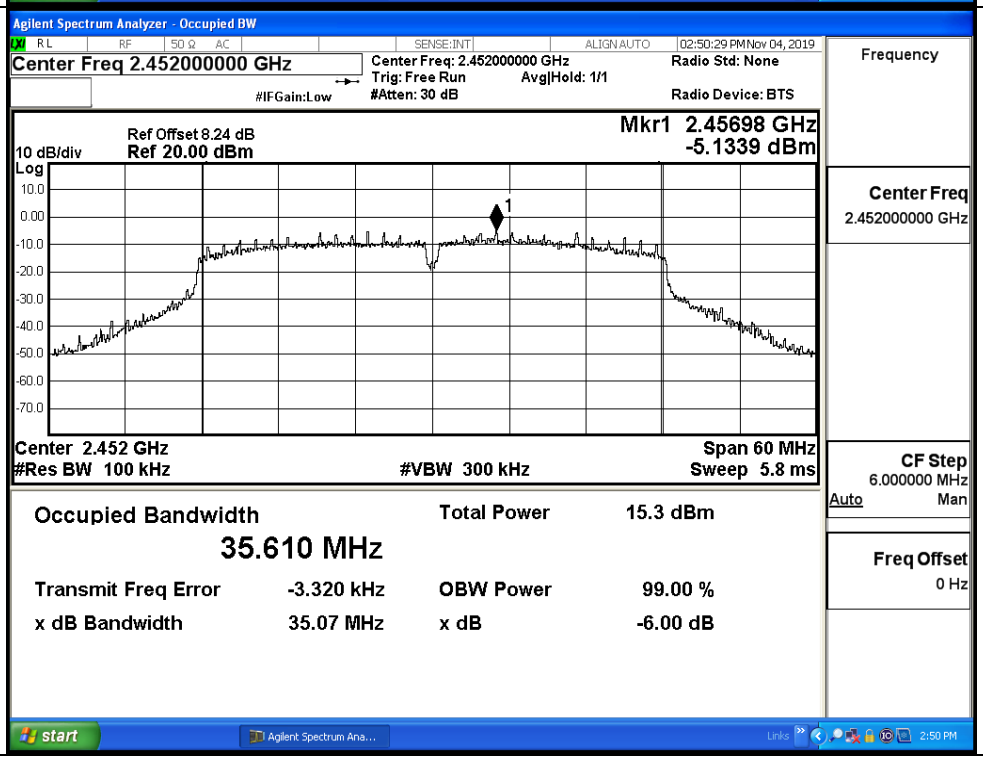
Test Graphs_Ant_2		
11B/LCH		
11B/MCH		

11B/HCH	
11G/LCH	

11G/MCH	
11G/HCH	

11N20/LCH	
11N20/MCH	

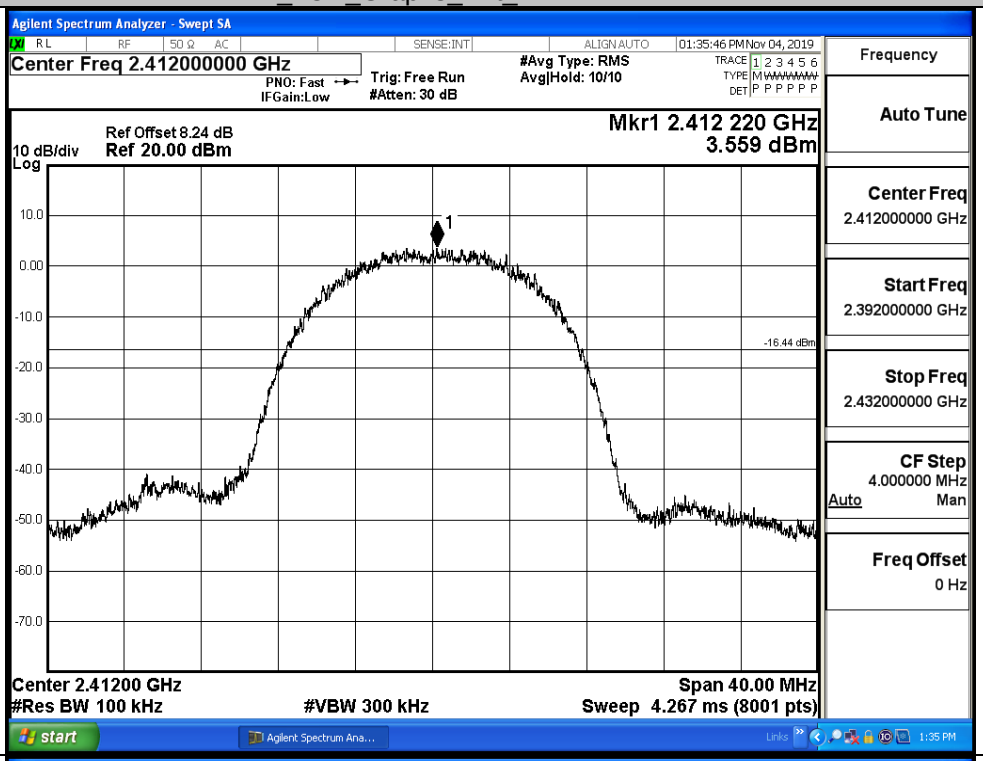
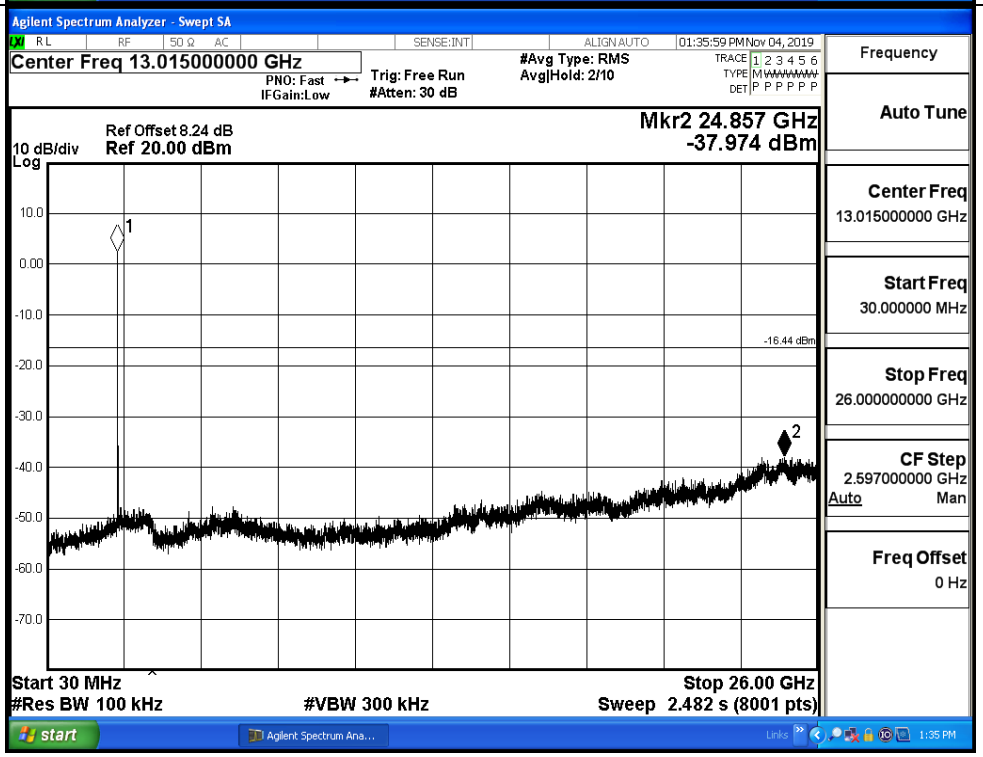
11N20/HCH	
11N40/LCH	

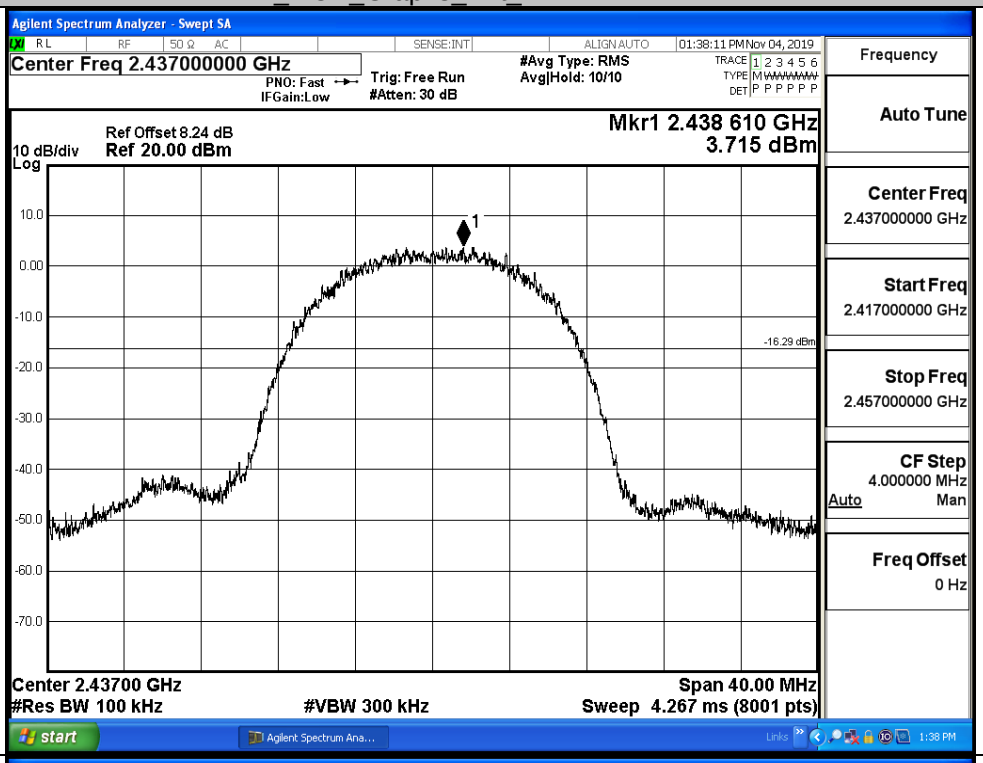
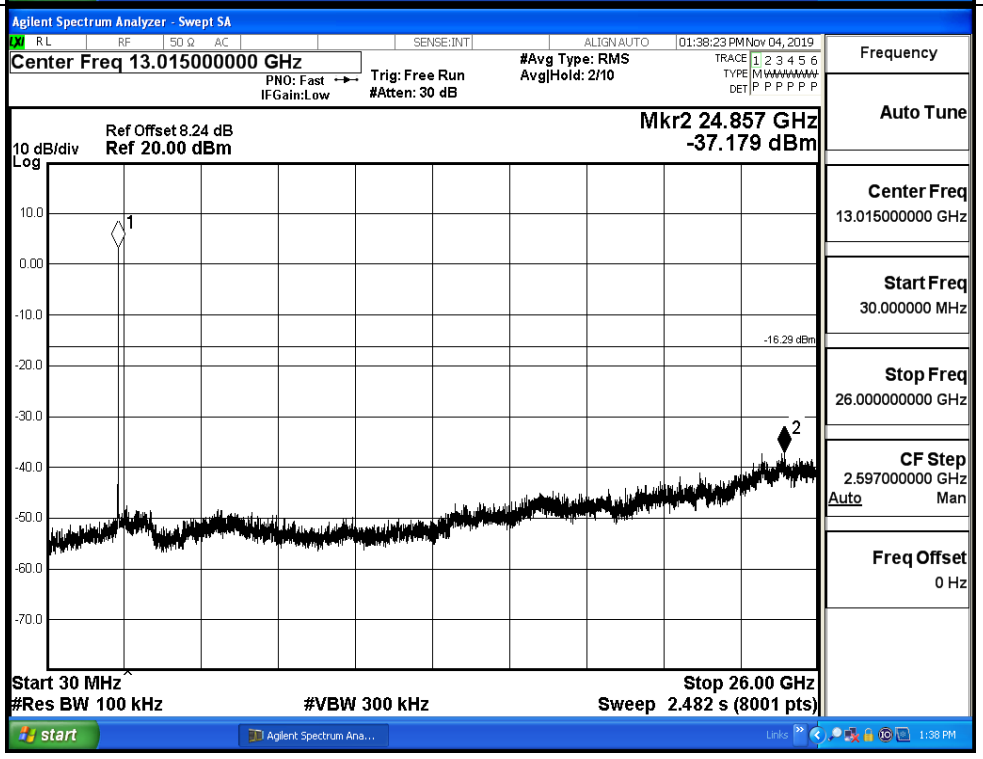
11N40/MCH	
11N40/HCH	

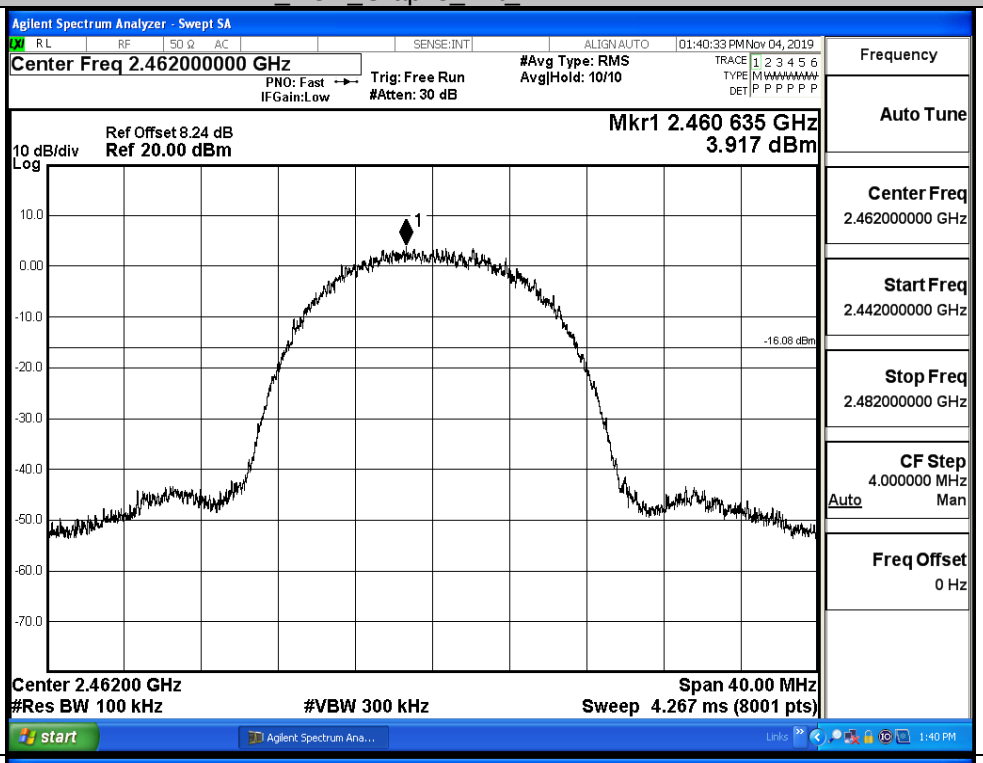
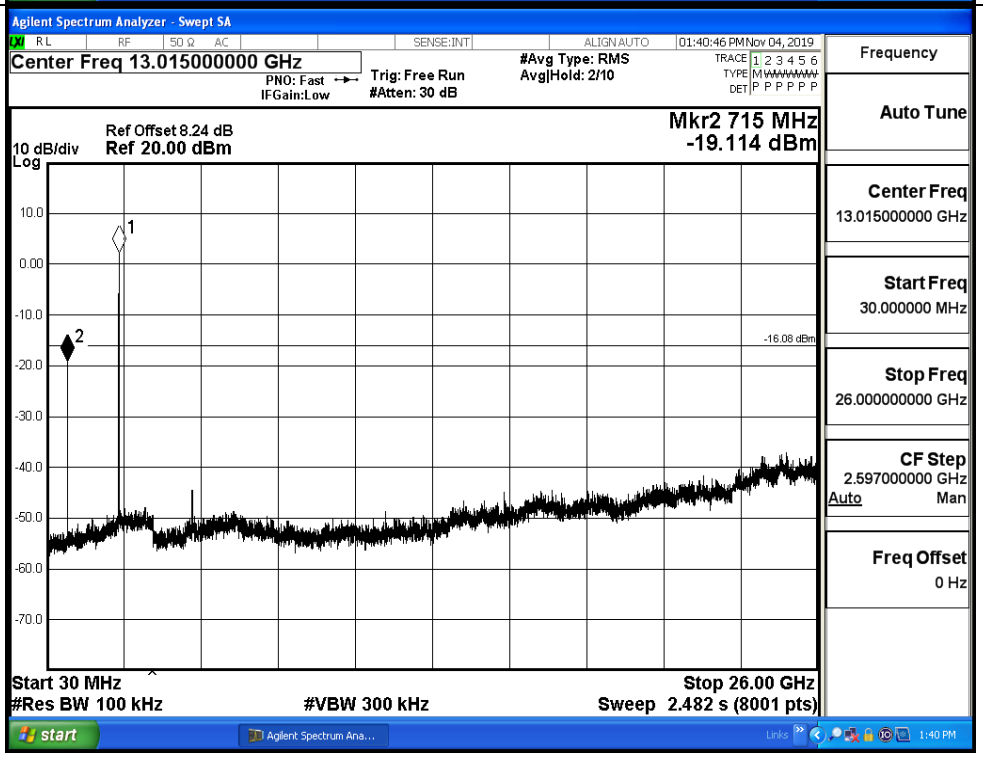
A.5 RF Conducted Spurious Emissions

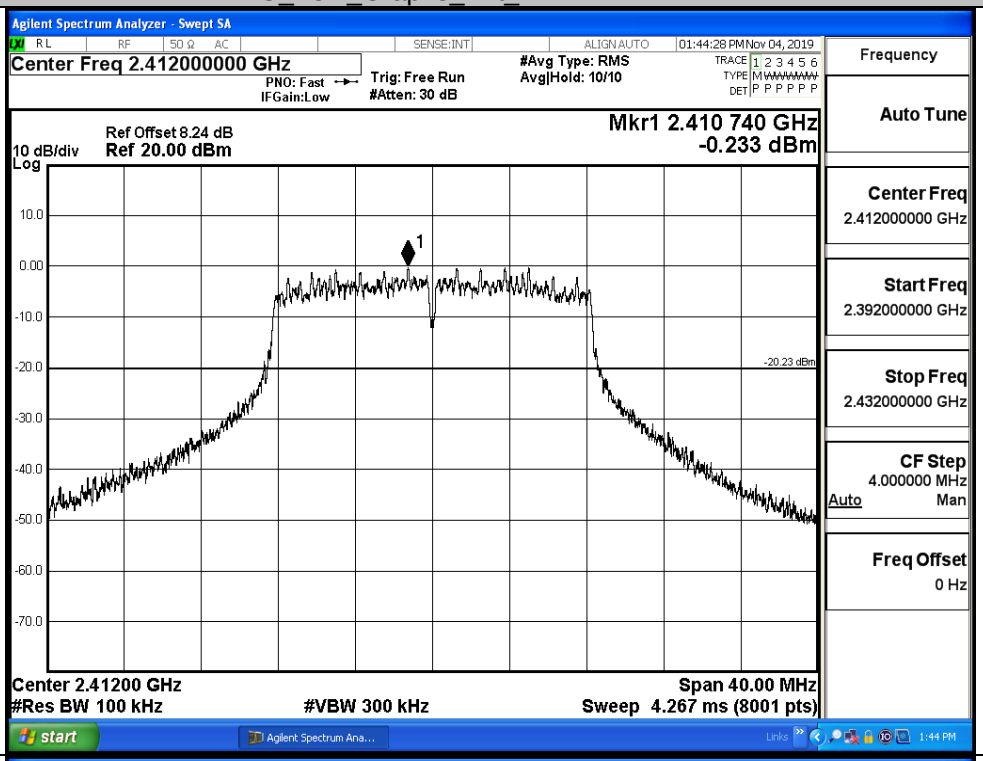
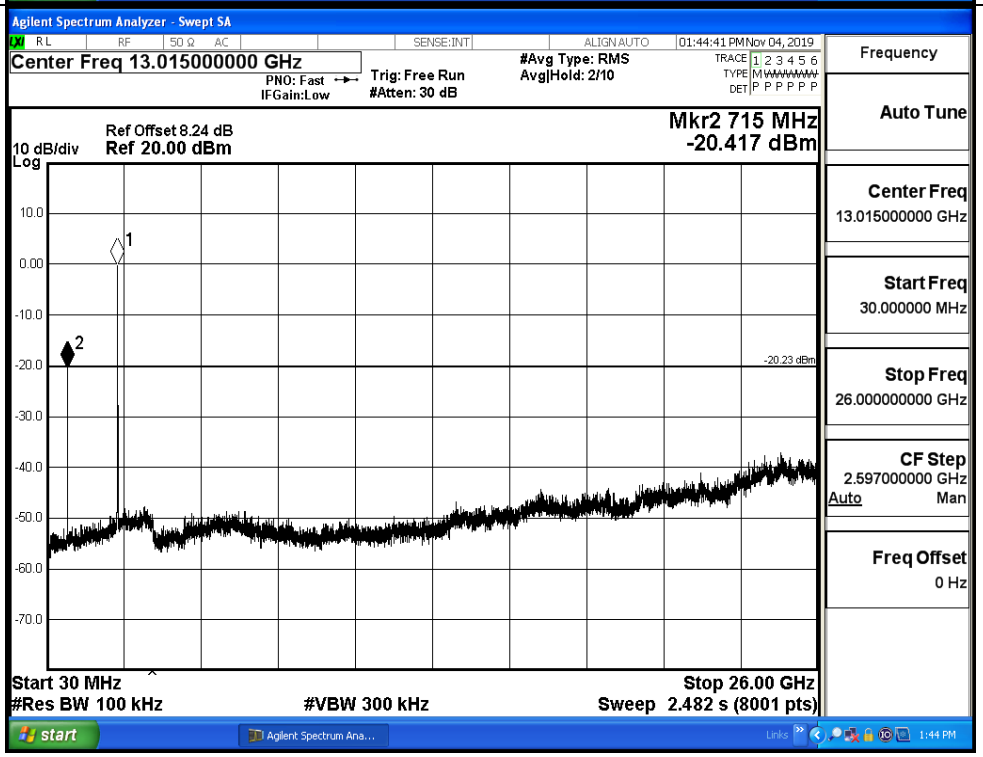
Ant_1

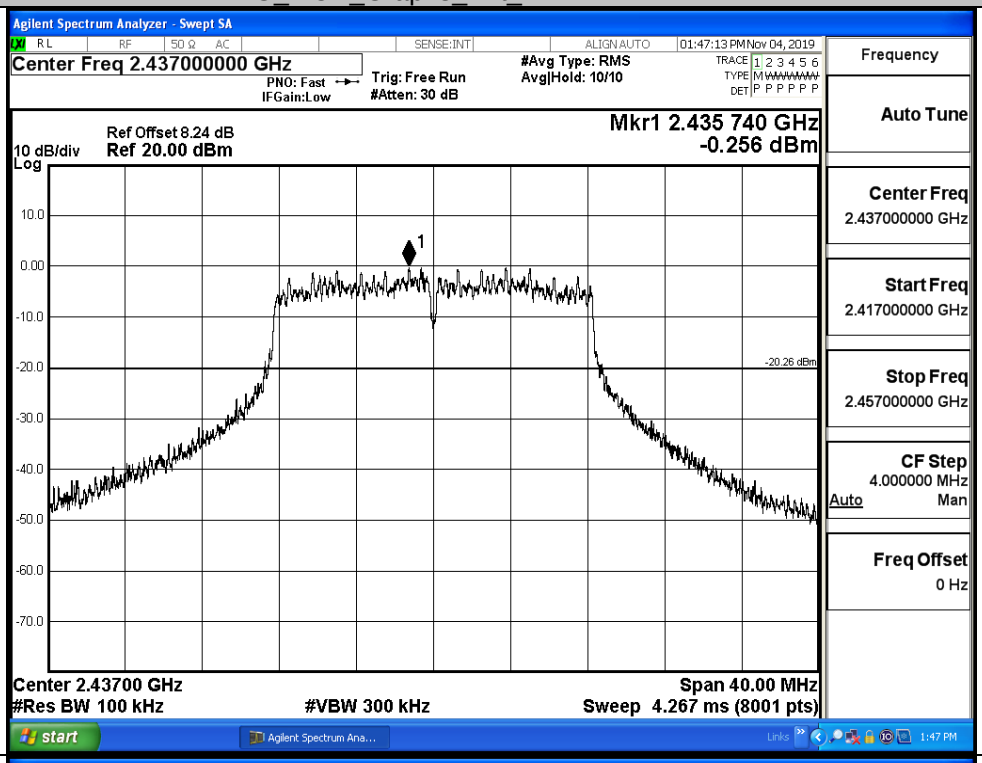
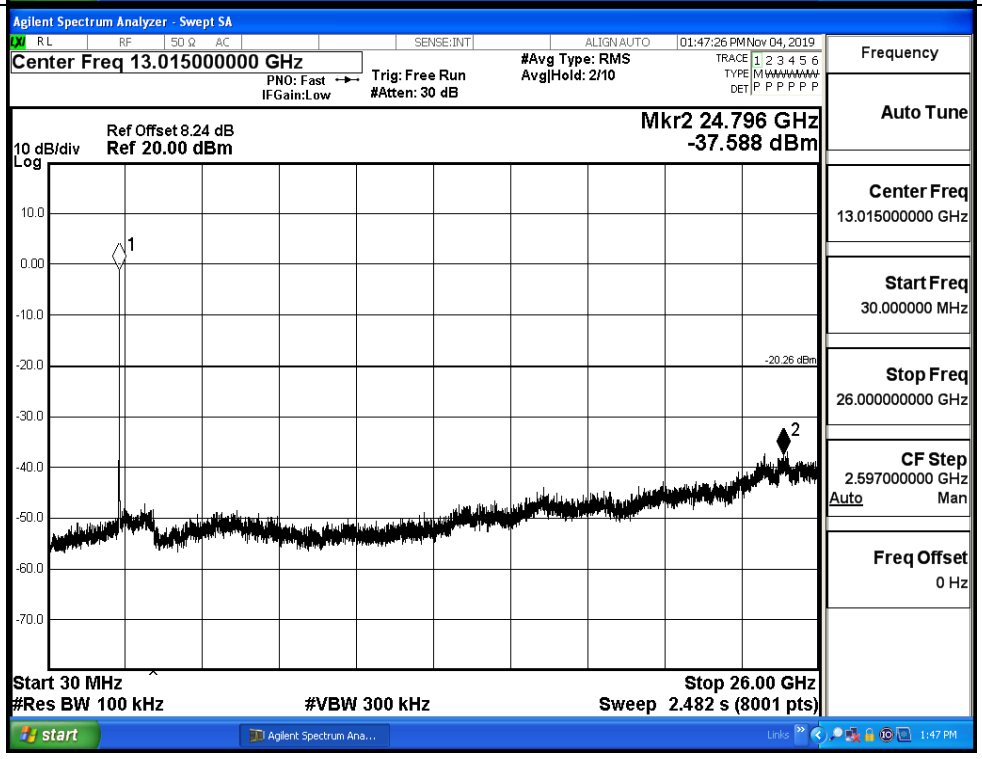
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	3.559	-37.974	-16.441	PASS
	MCH	3.715	-37.179	-16.285	PASS
	HCH	3.917	-19.114	-16.083	PASS
11G	LCH	-0.233	-20.417	-20.233	PASS
	MCH	-0.256	-37.588	-20.256	PASS
	HCH	-3.688	-37.249	-23.688	PASS
11N20	LCH	-0.287	-37.413	-20.287	PASS
	MCH	-0.289	-37.745	-20.289	PASS
	HCH	-0.398	-37.523	-20.398	PASS
11N40	LCH	-4.313	-38.020	-24.313	PASS
	MCH	-5.239	-37.876	-25.239	PASS
	HCH	-5.062	-37.240	-25.062	PASS

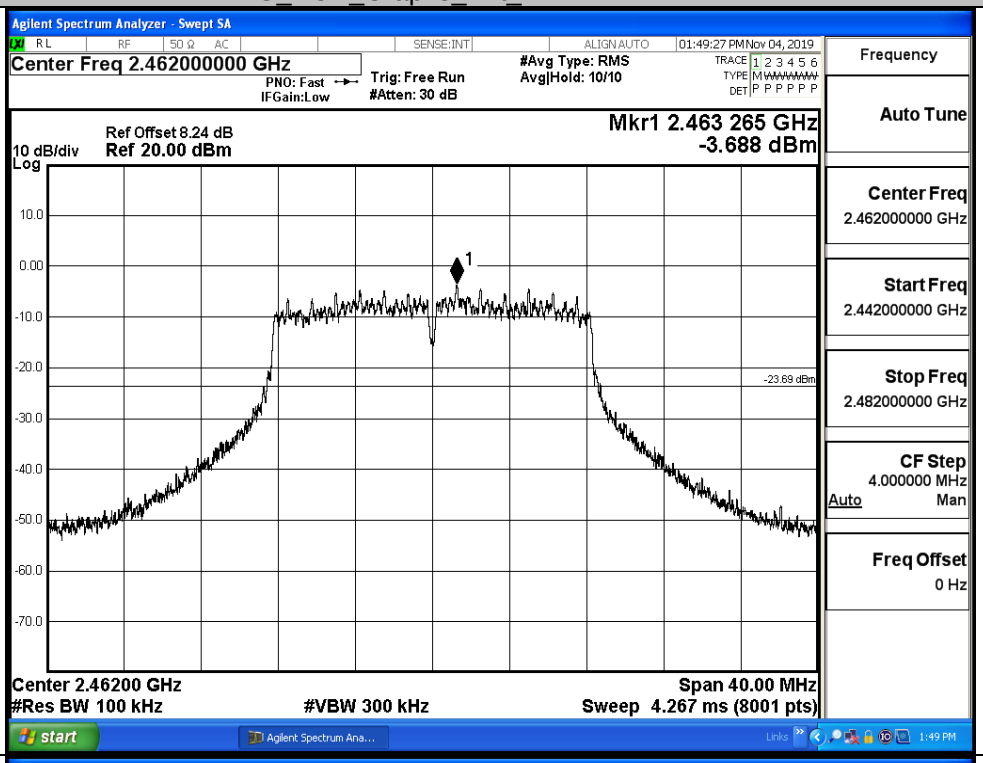
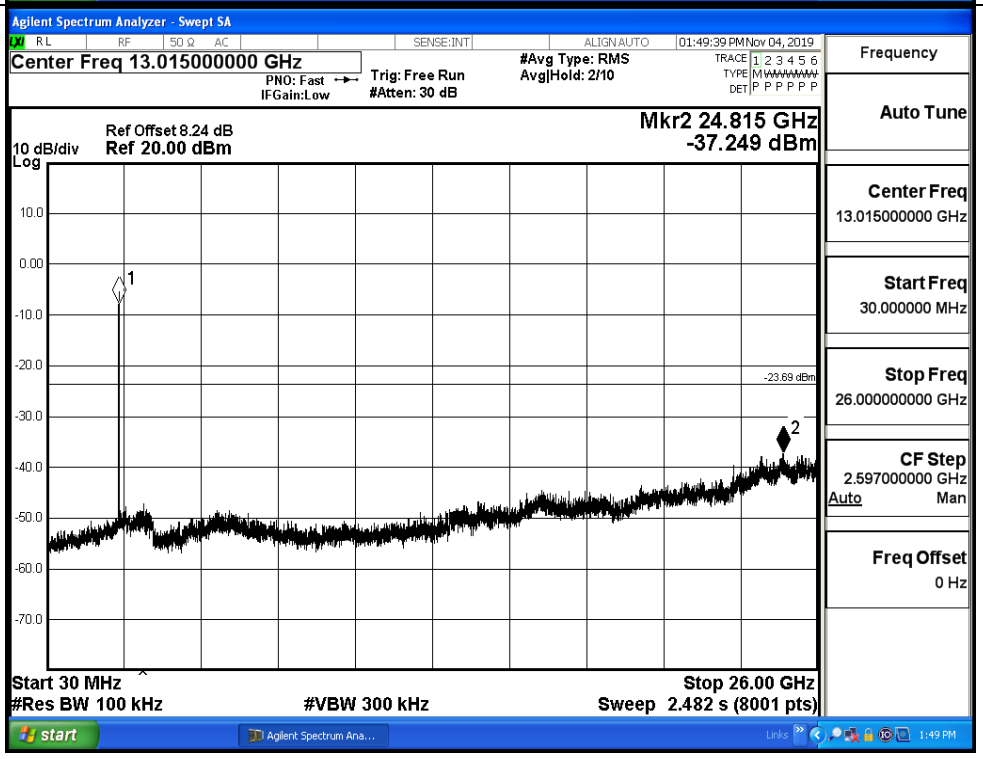
11B_LCH_Graphs_Ant_1	
Pref/11B/LCH	
Puw/11B/LCH	

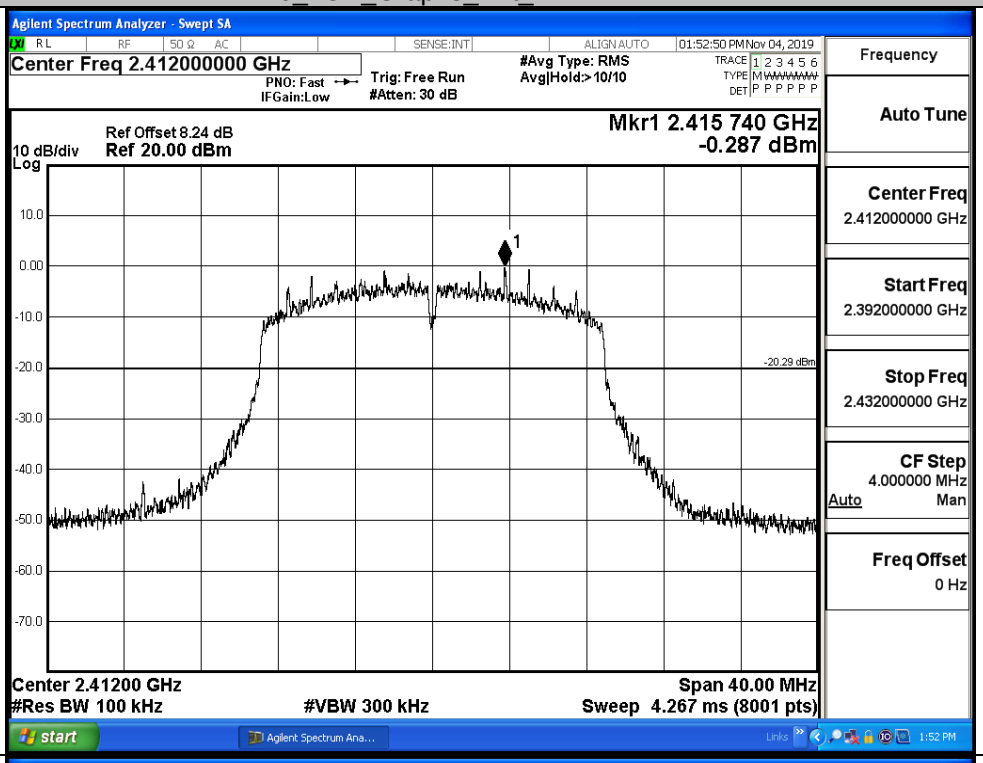
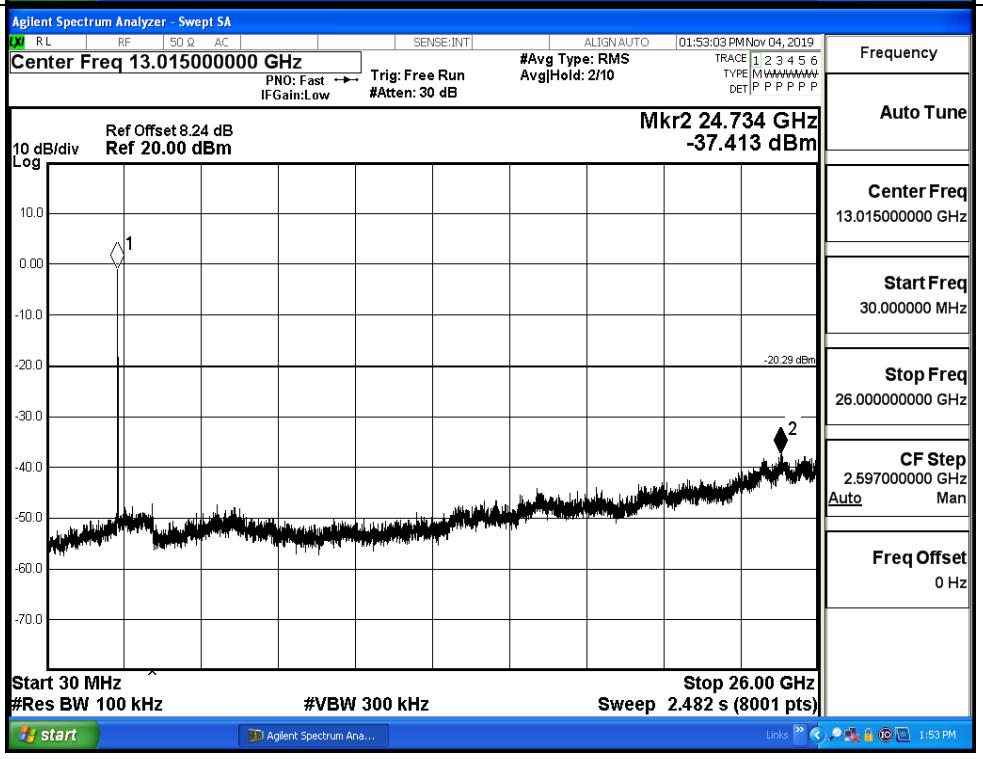
11B_MCH_Graphs_Ant_1	
Pref/11B/MCH	
Puw/11B/MCH	

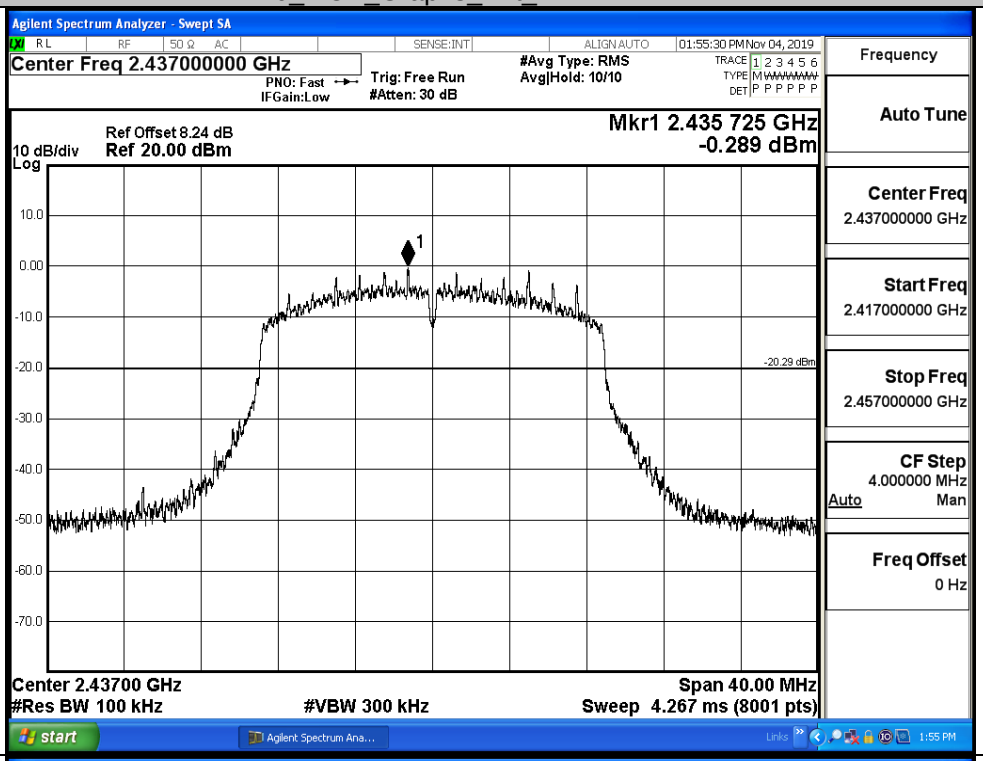
11B_HCH_Graphs_Ant_1	
Pref/11B/HCH	
Puw/11B/HCH	

11G_LCH_Graphs_Ant_1	
Pref/11G/LCH	
Puw/11G/LCH	

11G_MCH_Graphs_Ant_1	
Pref/11G/MCH	
Puw/11G/MCH	

11G_HCH_Graphs_Ant_1	
Pref/11G/HCH	
Puw/11G/HCH	

11N20_LCH_Graphs_Ant_1	
Pref/11N20/ LCH	
Puw/11N20/ LCH	

11N20_MCH_Graphs_Ant_1	
Pref/11N20/ MCH	
Puw/11N20/ MCH