Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: WiFi mesh MT1

Trade Mark: KINGSIGNAL

Test Model: MT1

Environmental Conditions

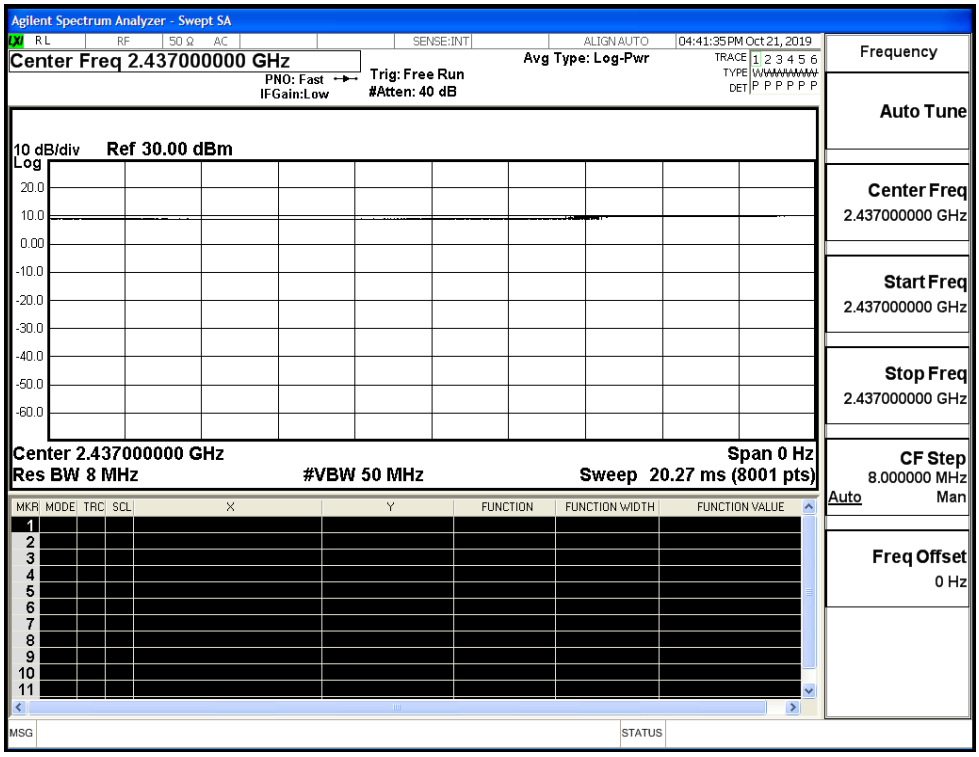
Temperature:	23.5 ° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom.Liu
Supervised by:	Wang.Chuang

A.1 Duty Cycle

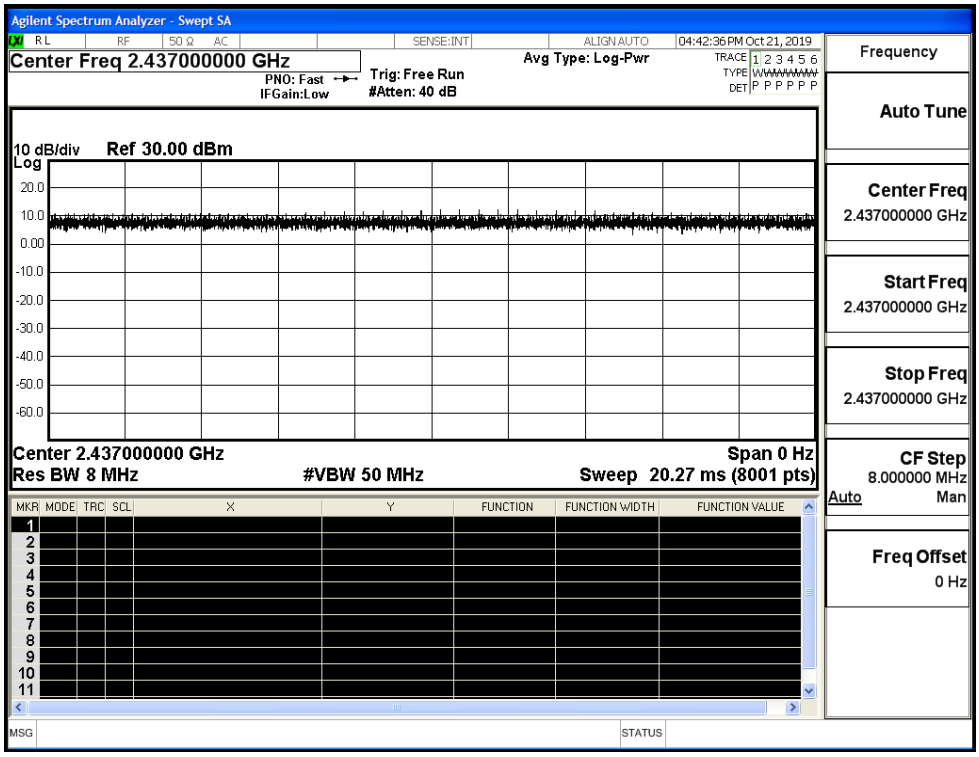
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	100	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS
11N40SISO	2437	Ant1	100	PASS

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant2	100	PASS
11G	2437	Ant2	100	PASS
11N20SISO	2437	Ant2	100	PASS
11N40SISO	2437	Ant2	100	PASS

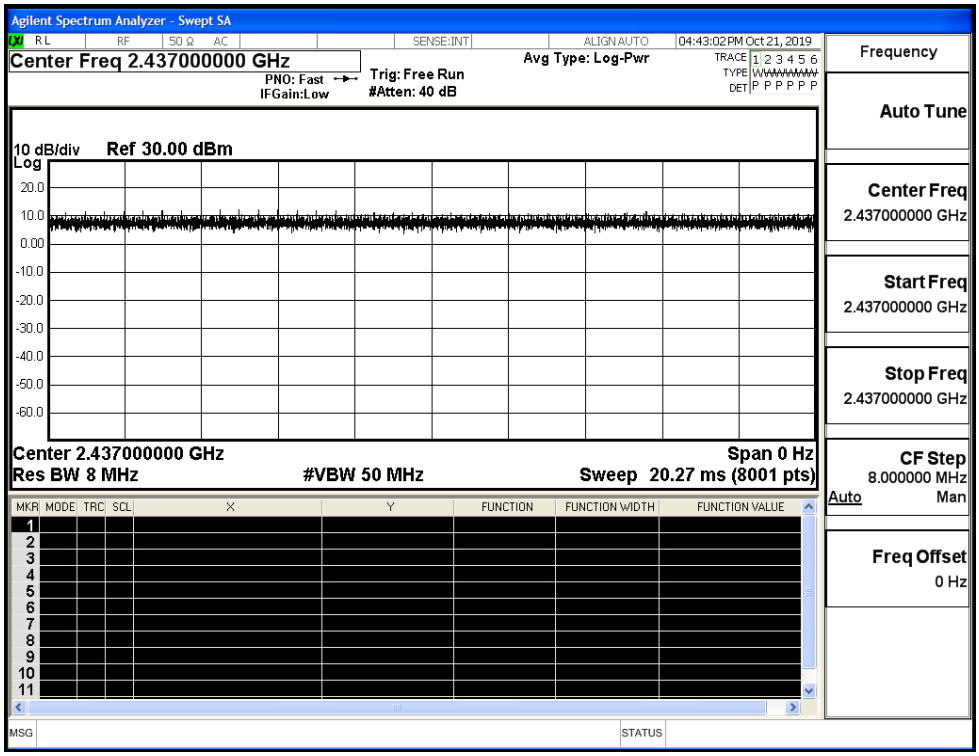
Duty Cycle_11B_2437_Ant1



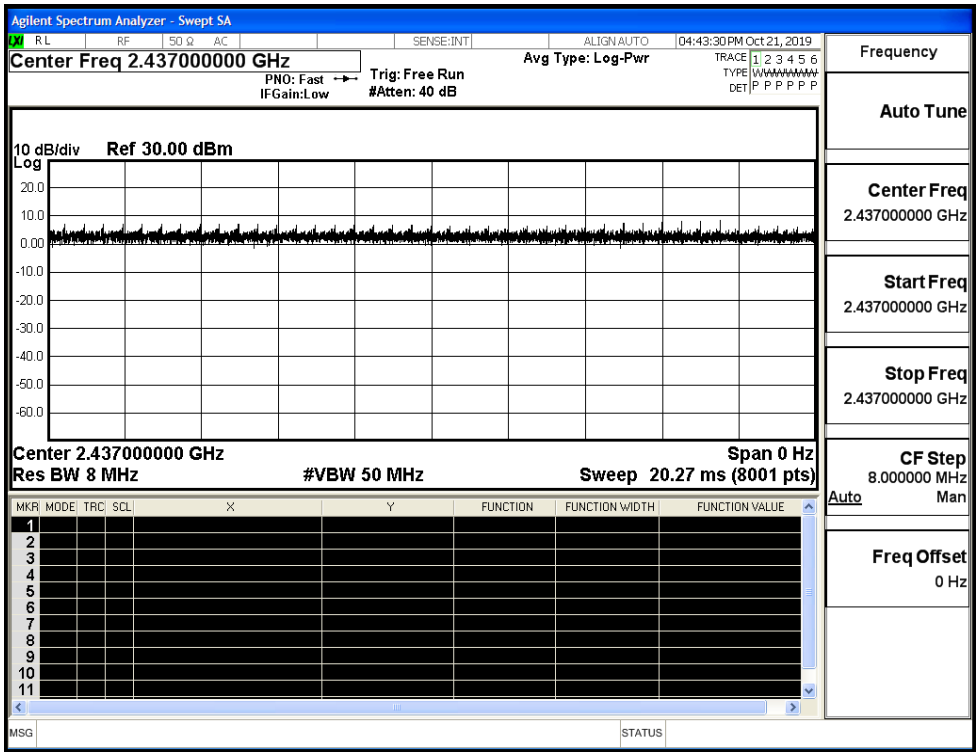
Duty Cycle_11G_2437_Ant1



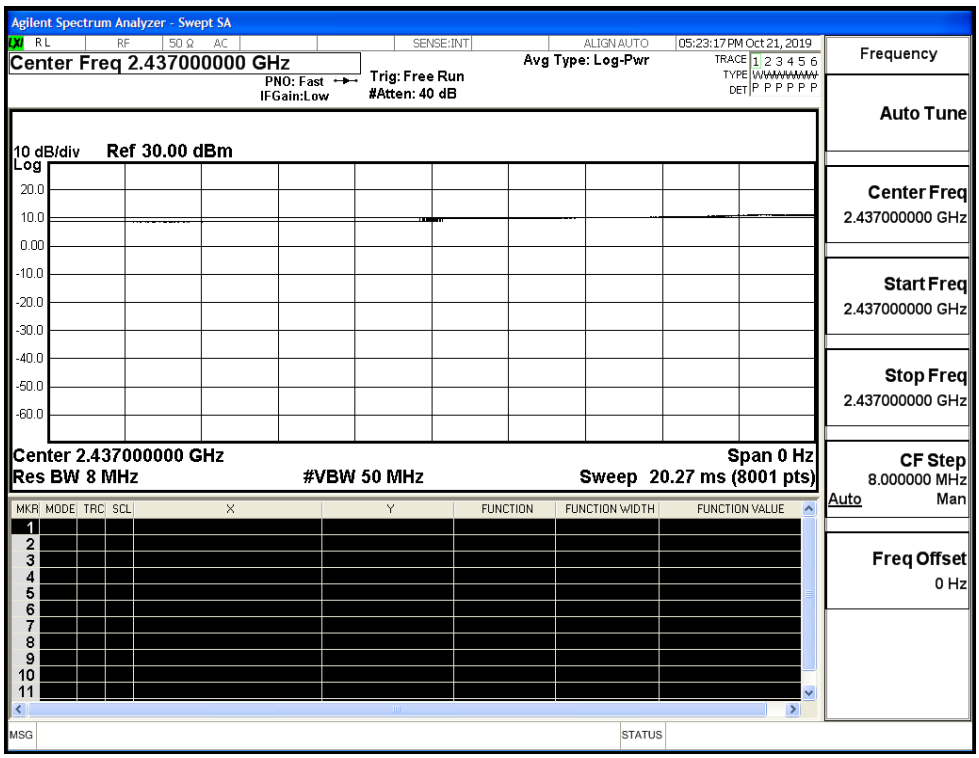
Duty Cycle_11N20SISO_2437_Ant1



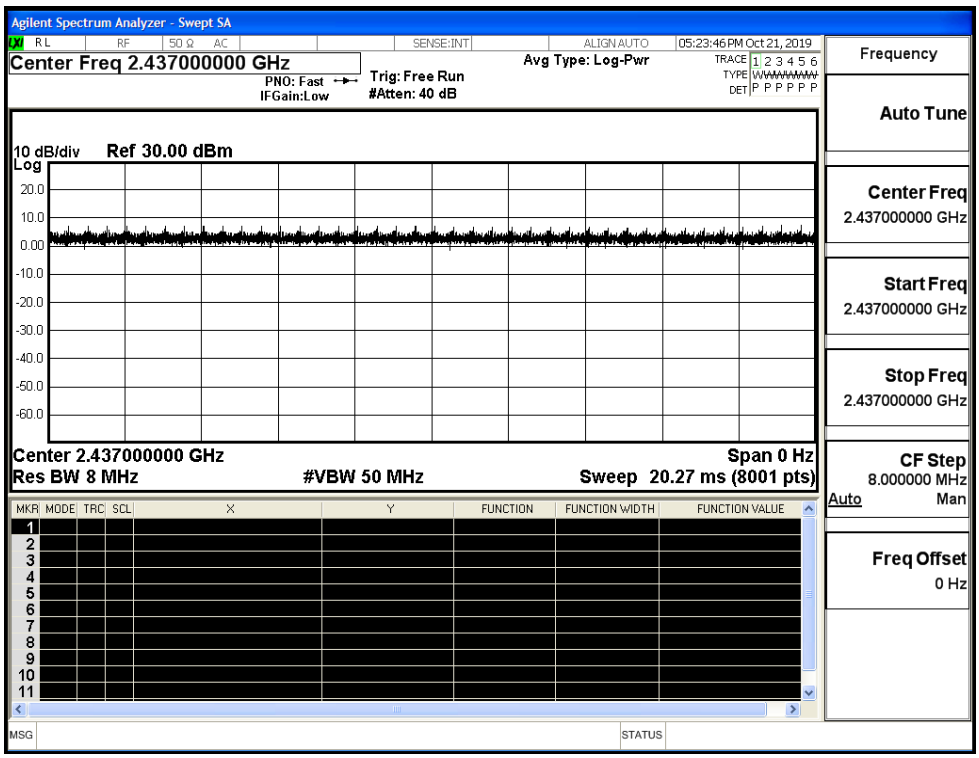
Duty Cycle_11N40SISO_2437_Ant1



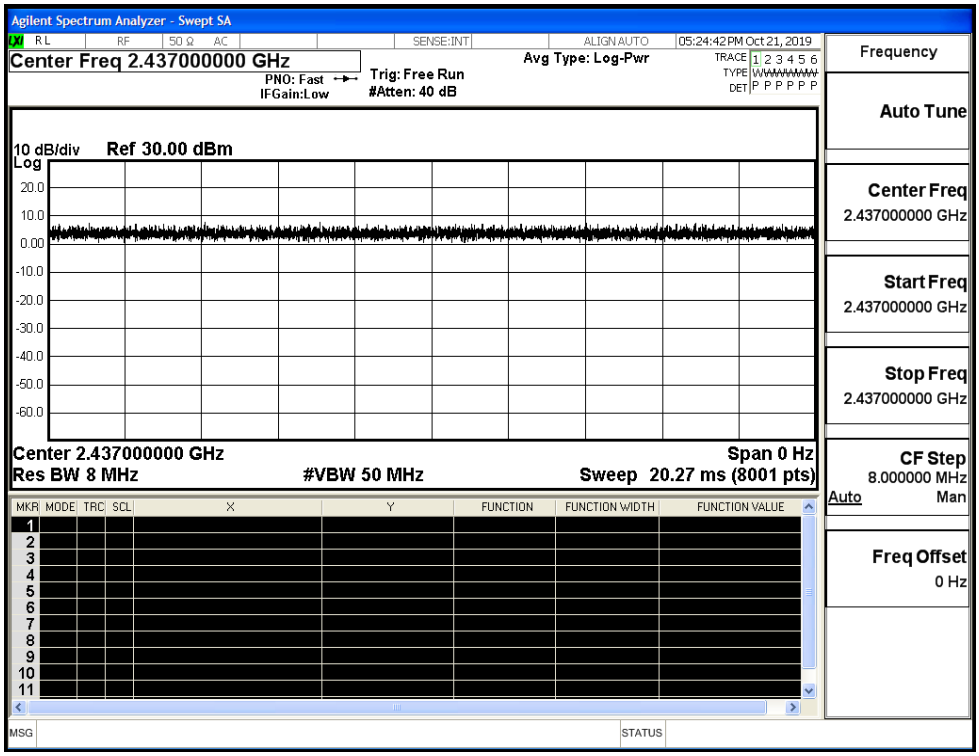
Duty Cycle_11B_2437_Ant2



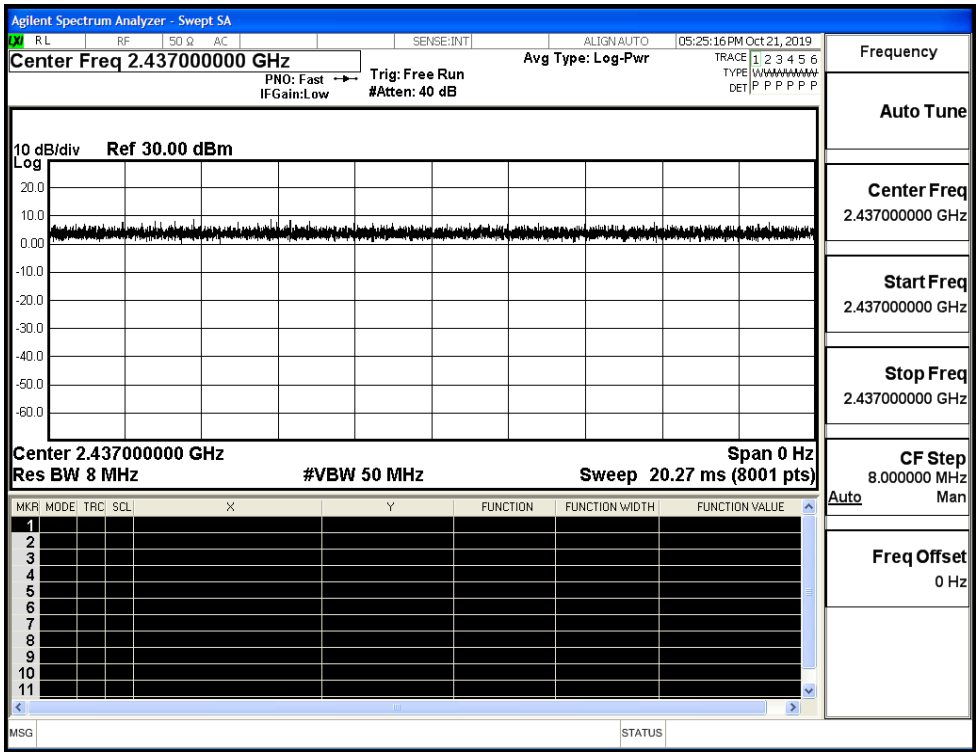
Duty Cycle_11G_2437_Ant2



Duty Cycle_11N20SISO_2437_Ant2



Duty Cycle_11N40SISO_2437_Ant2



A.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]			Limit [dBm]	Verdict
		Ant_1	Ant_2	Sum		
11B	LCH	13.39	13.52	/	30	PASS
	MCH	13.15	13.55	/	30	PASS
	HCH	13.06	13.68	/	30	PASS
11G	LCH	14.5	14.2	/	30	PASS
	MCH	14.17	13.65	/	30	PASS
	HCH	14.09	13.5	/	30	PASS
11N20	LCH	14.53	13.93	17.25	29.99	PASS
	MCH	14.23	13.86	17.06	29.99	PASS
	HCH	14.11	13.93	17.03	29.99	PASS
11N40	LCH	14.52	13.90	17.23	29.99	PASS
	MCH	14.36	13.71	17.06	29.99	PASS
	HCH	14.33	13.88	17.12	29.99	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	-4.484	-10	-14.484	8	PASS
	MCH	-4.723	-10	-14.723	8	PASS
	HCH	-4.816	-10	-14.816	8	PASS
11G	LCH	-9.823	-10	-19.823	8	PASS
	MCH	-9.278	-10	-19.278	8	PASS
	HCH	-10.139	-10	-20.139	8	PASS
11N20SISO	LCH	-9.137	-10	-19.137	8	PASS
	MCH	-9.127	-10	-19.127	8	PASS
	HCH	-9.316	-10	-19.316	8	PASS
11N40SISO	LCH	-12.760	-10	-22.760	8	PASS
	MCH	-13.236	-10	-23.236	8	PASS
	HCH	-13.053	-10	-23.053	8	PASS

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

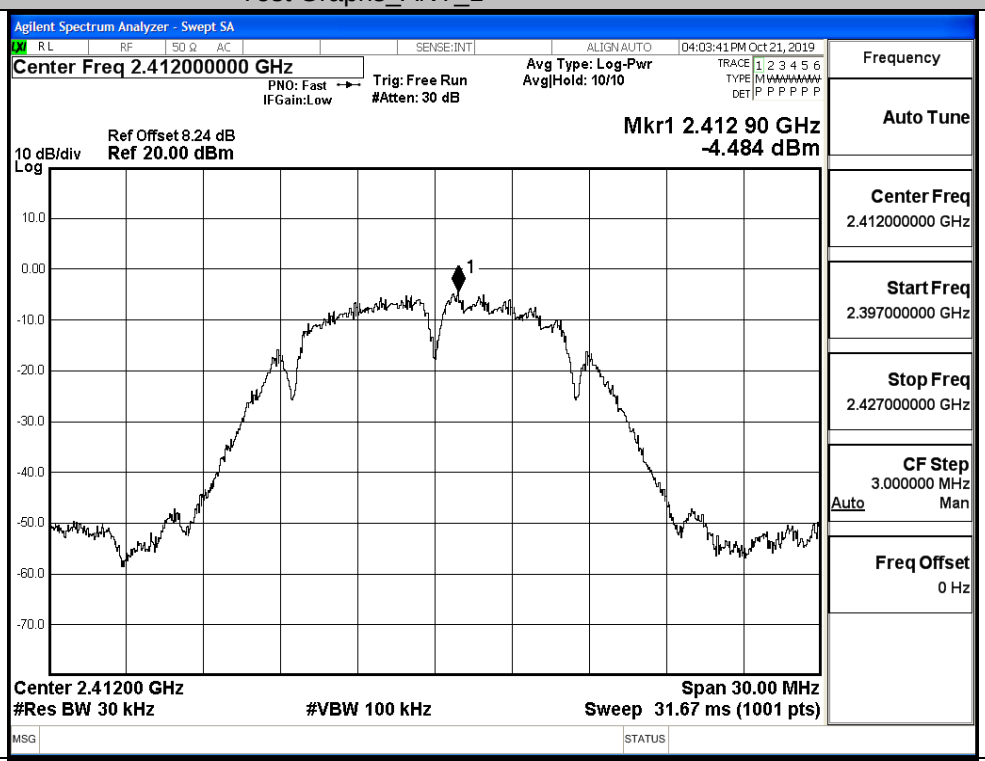
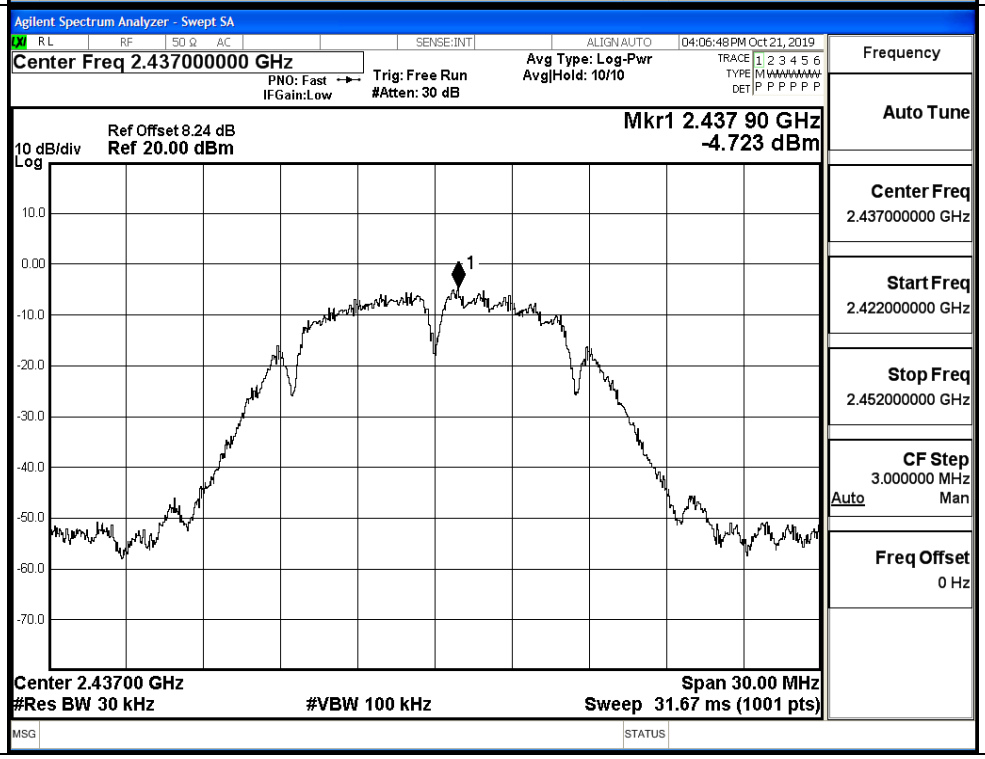
ANT_2

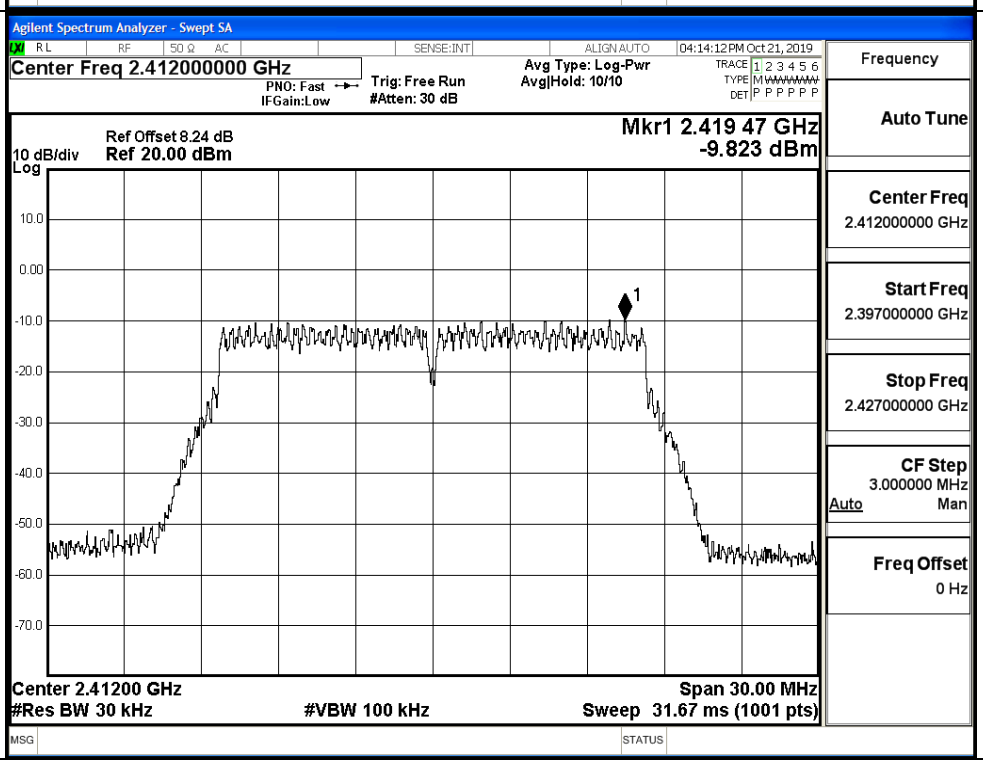
Mode	Channel	Meas.Level [dBm/30KHz]	Convert Factor	Result [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-4.347	-10	-14.347	8	PASS
	MCH	-4.342	-10	-14.342	8	PASS
	HCH	-4.171	-10	-14.171	8	PASS
11G	LCH	-10.491	-10	-20.491	8	PASS
	MCH	-11.292	-10	-21.292	8	PASS
	HCH	-11.342	-10	-21.342	8	PASS
11N20SISO	LCH	-10.521	-10	-20.521	8	PASS
	MCH	-10.887	-10	-20.887	8	PASS
	HCH	-10.451	-10	-20.451	8	PASS
11N40SISO	LCH	-14.050	-10	-24.050	8	PASS
	MCH	-14.548	-10	-24.548	8	PASS
	HCH	-13.750	-10	-23.750	8	PASS

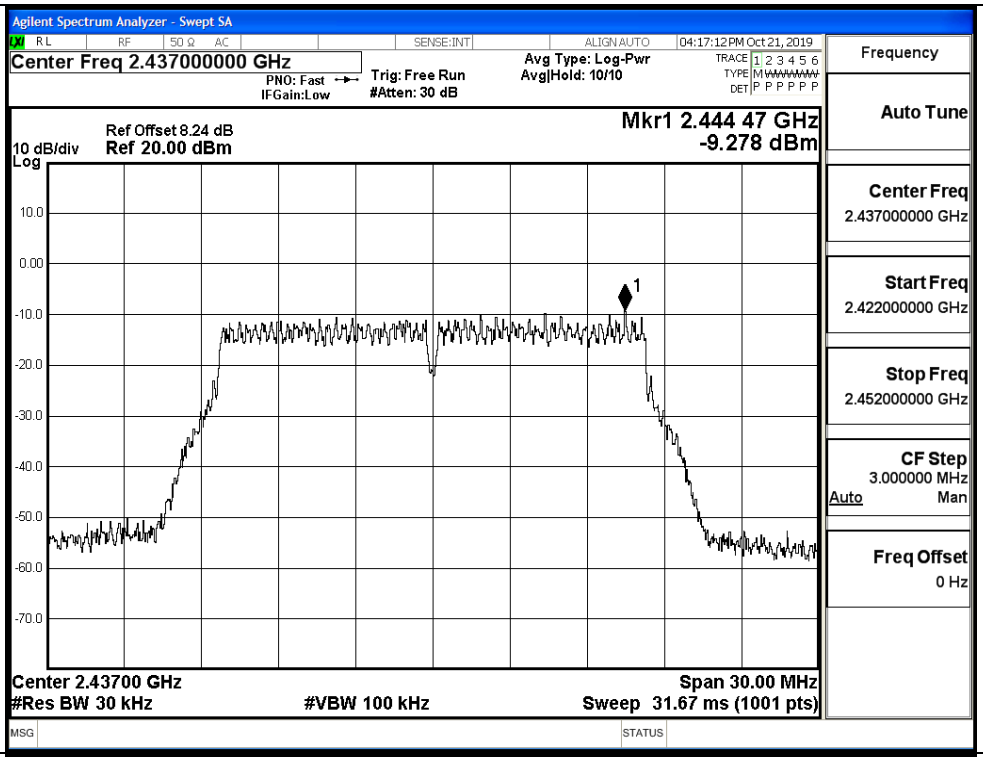
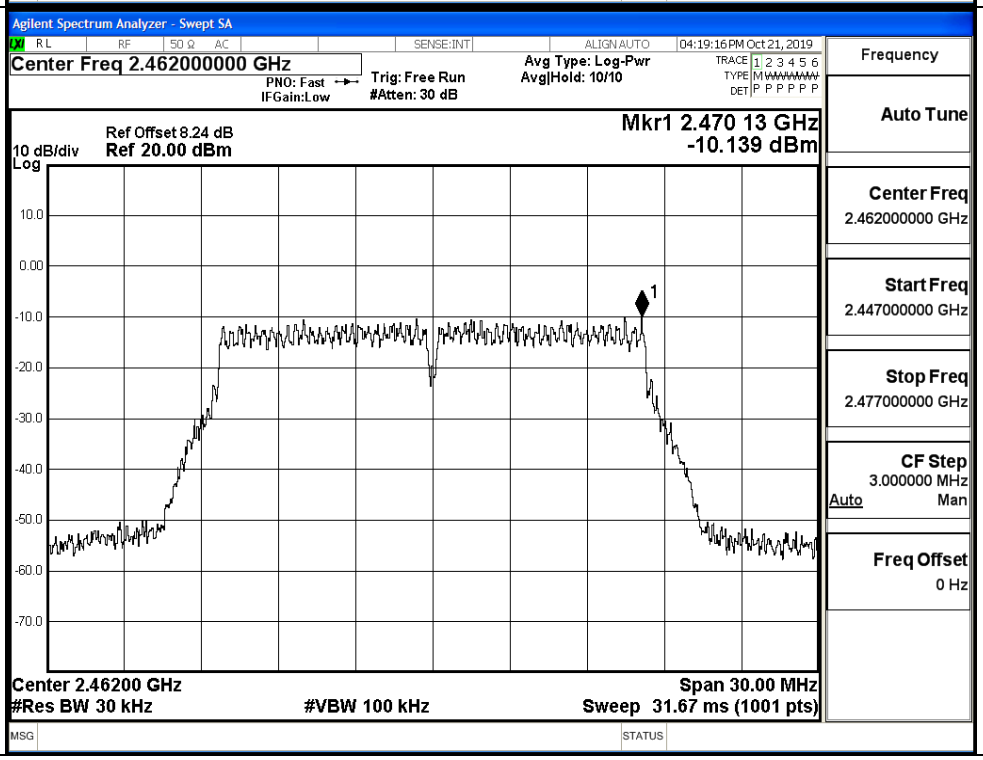
***Note: The Convert Factor = 10*log(3KHz/30KHz) = -10

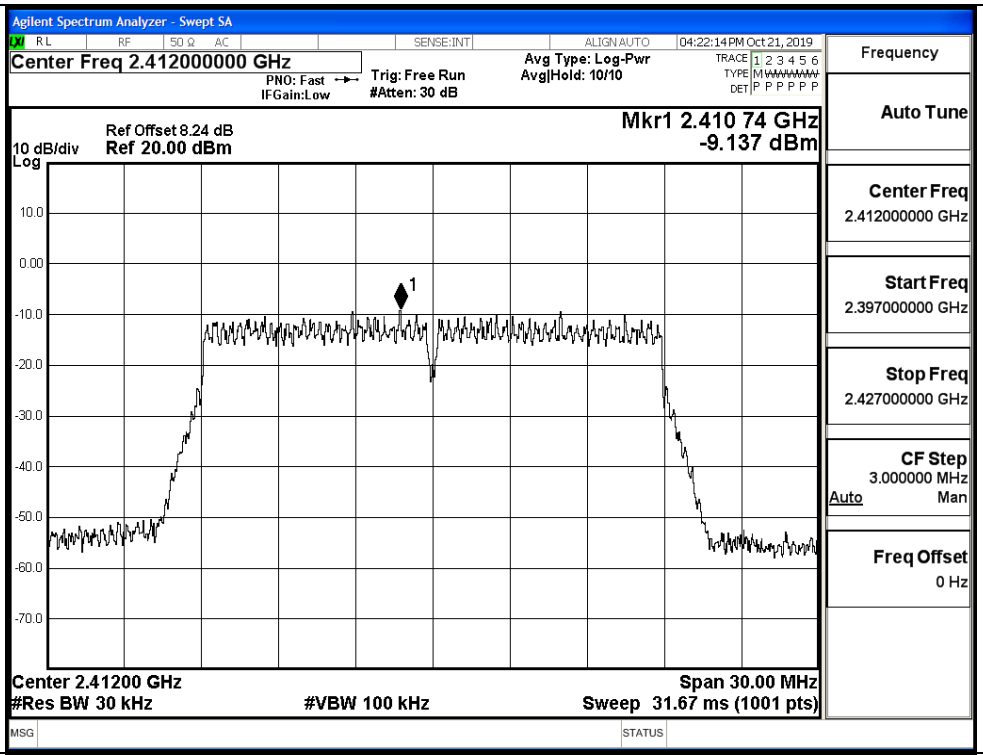
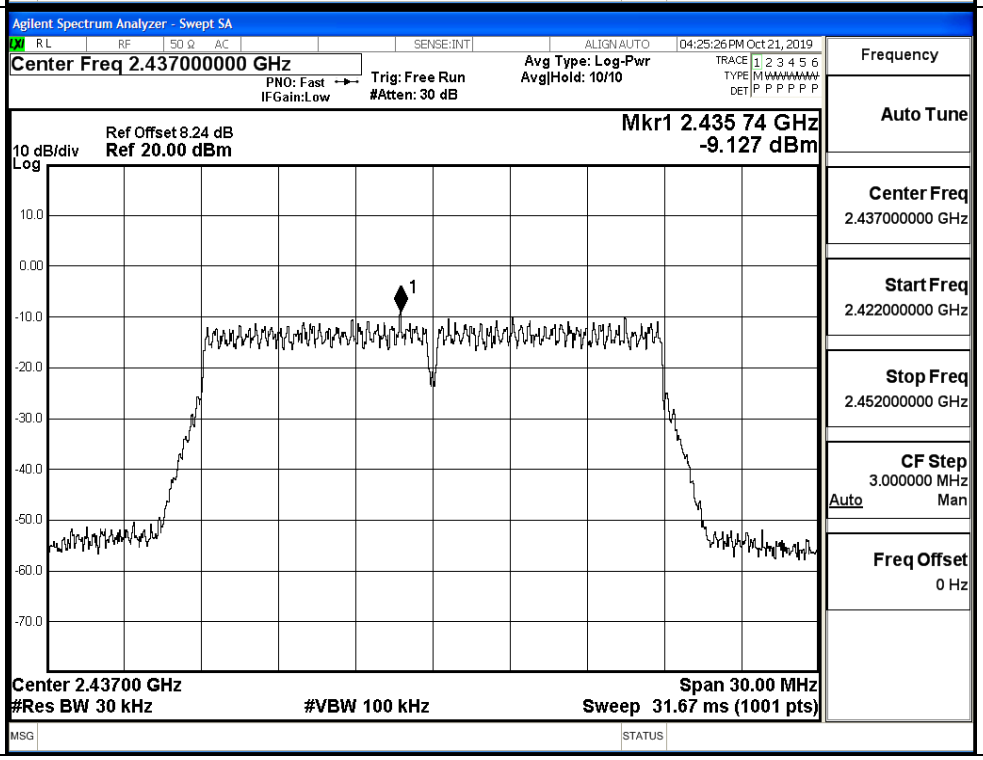
Combined Ant_1 and Ant_2

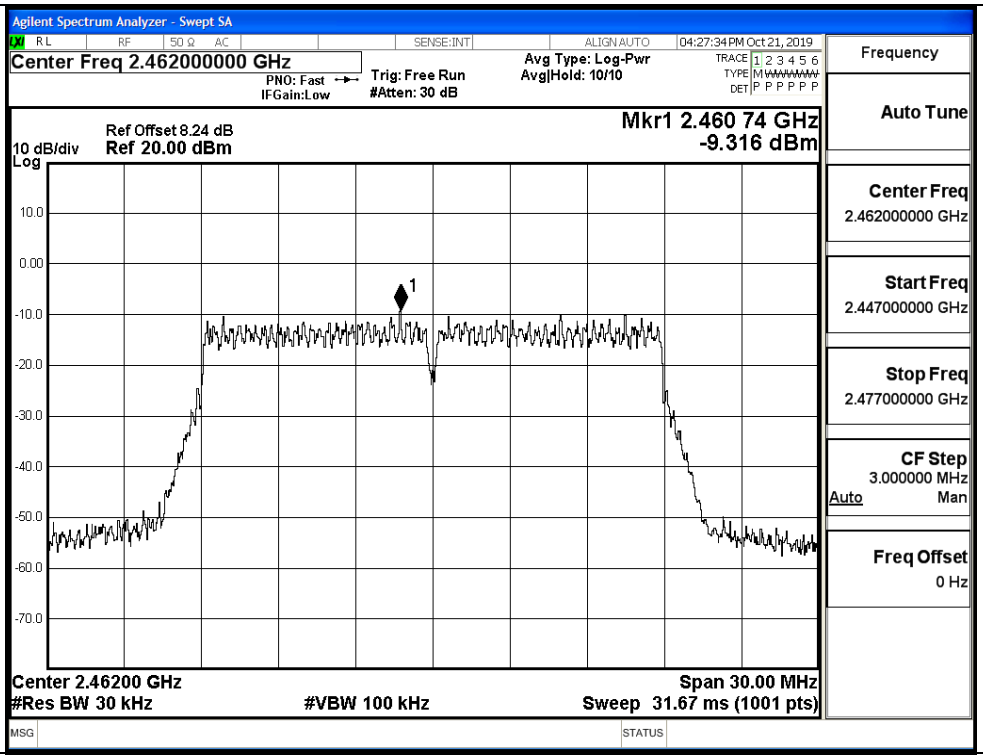
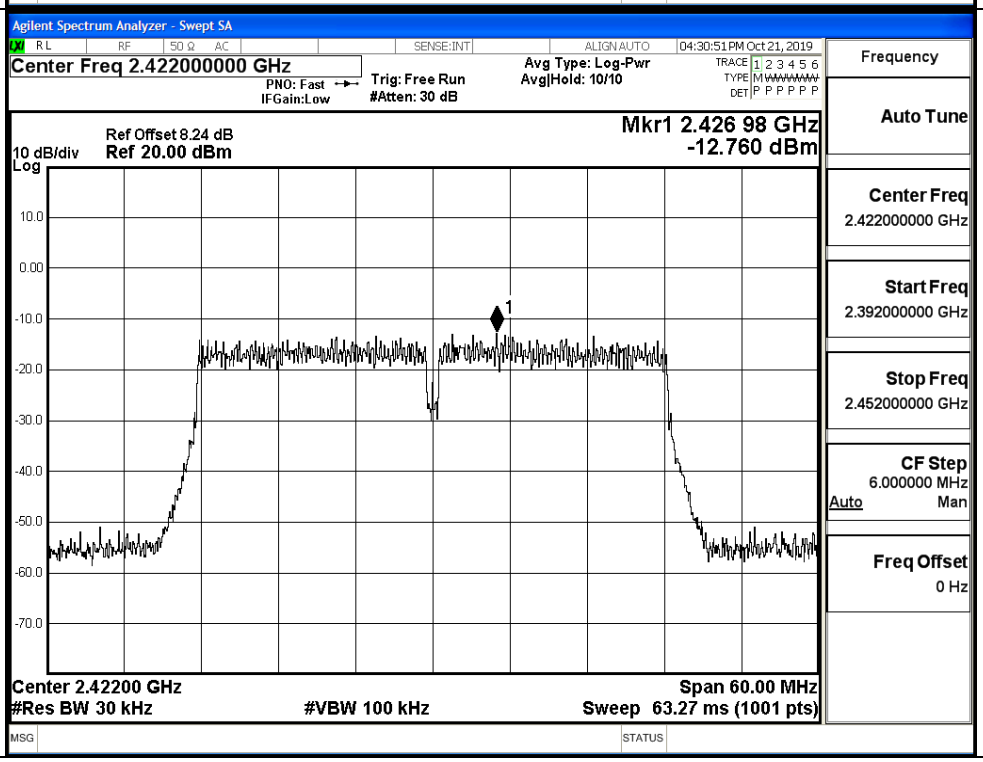
Mode	Channel	Result [dBm/3KHz]			Limit [dBm/3KHz]	Verdict
		Ant_1	Ant_2	Sum		
11N20	LCH	-19.137	-20.521	-16.76	7.99	PASS
	MCH	-19.127	-20.887	-16.91	7.99	PASS
	HCH	-19.316	-20.451	-16.84	7.99	PASS
11N40	LCH	-22.760	-24.050	-20.35	7.99	PASS
	MCH	-23.236	-24.548	-20.83	7.99	PASS
	HCH	-23.053	-23.750	-20.38	7.99	PASS

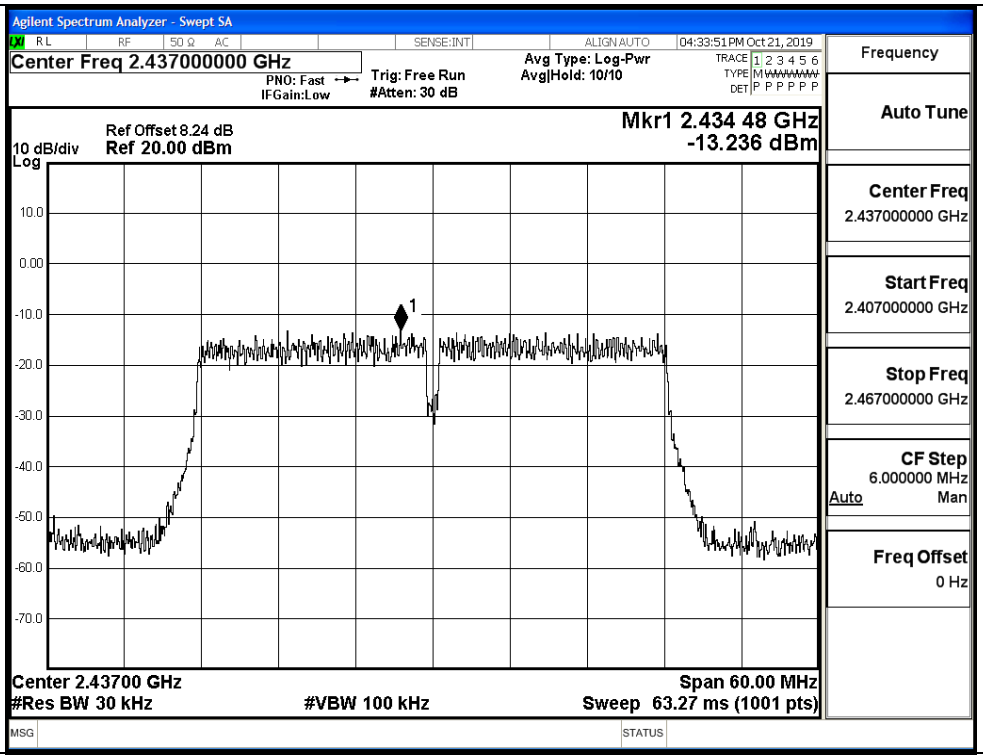
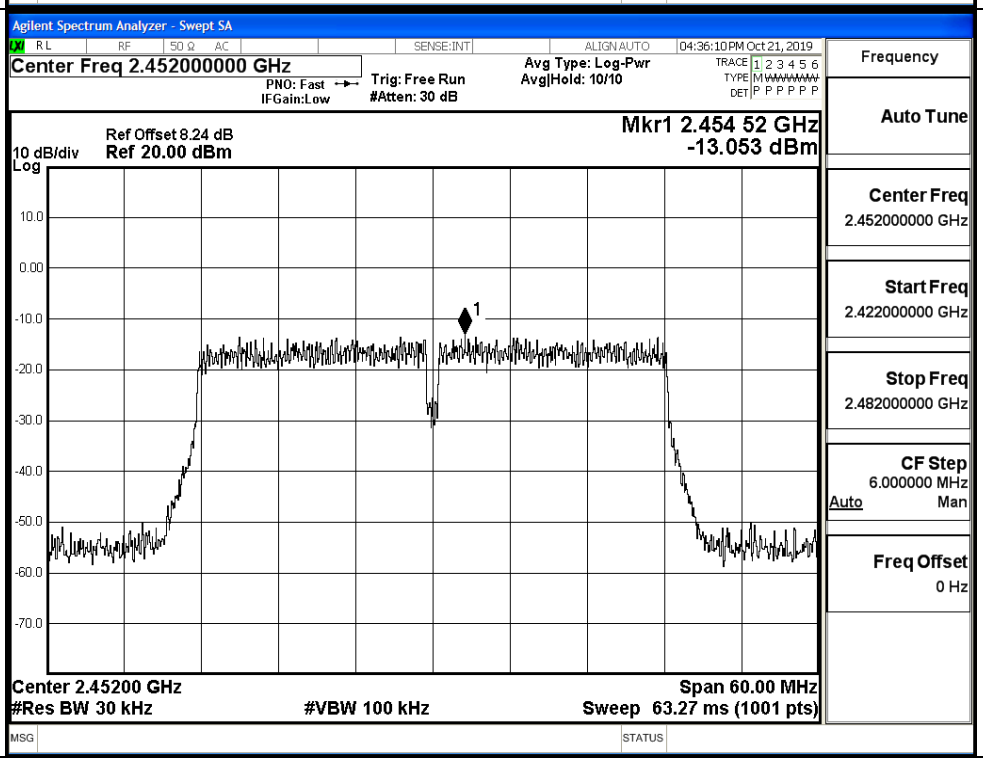
Test Graphs_ANT_1		
11B/LCH		
11B/MCH		

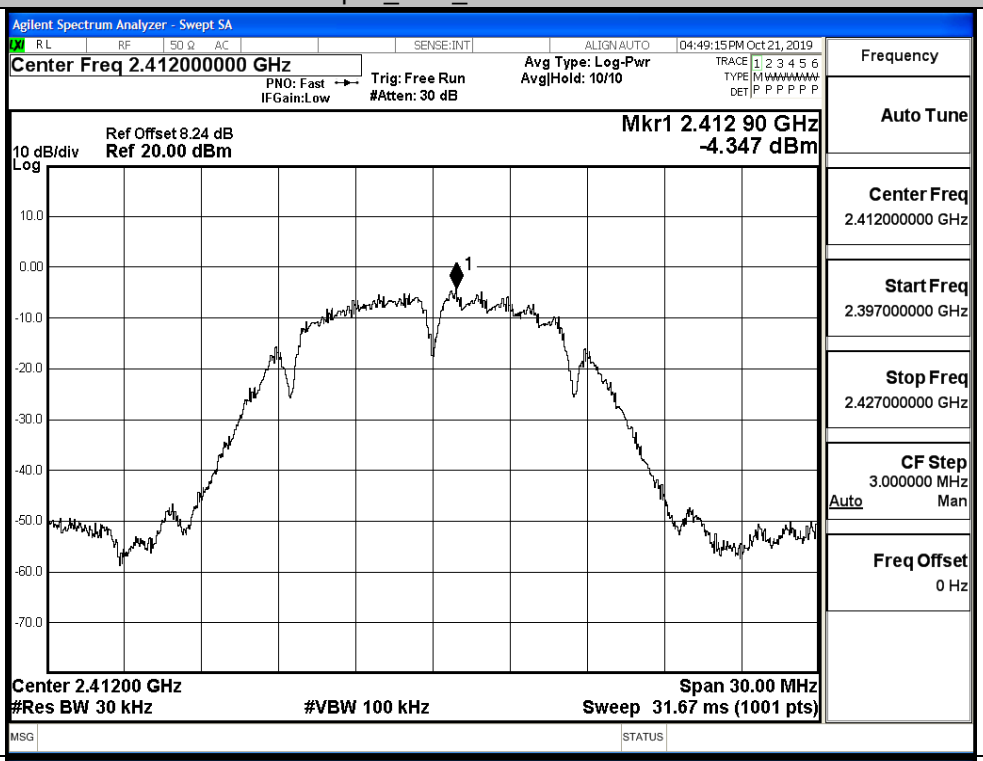
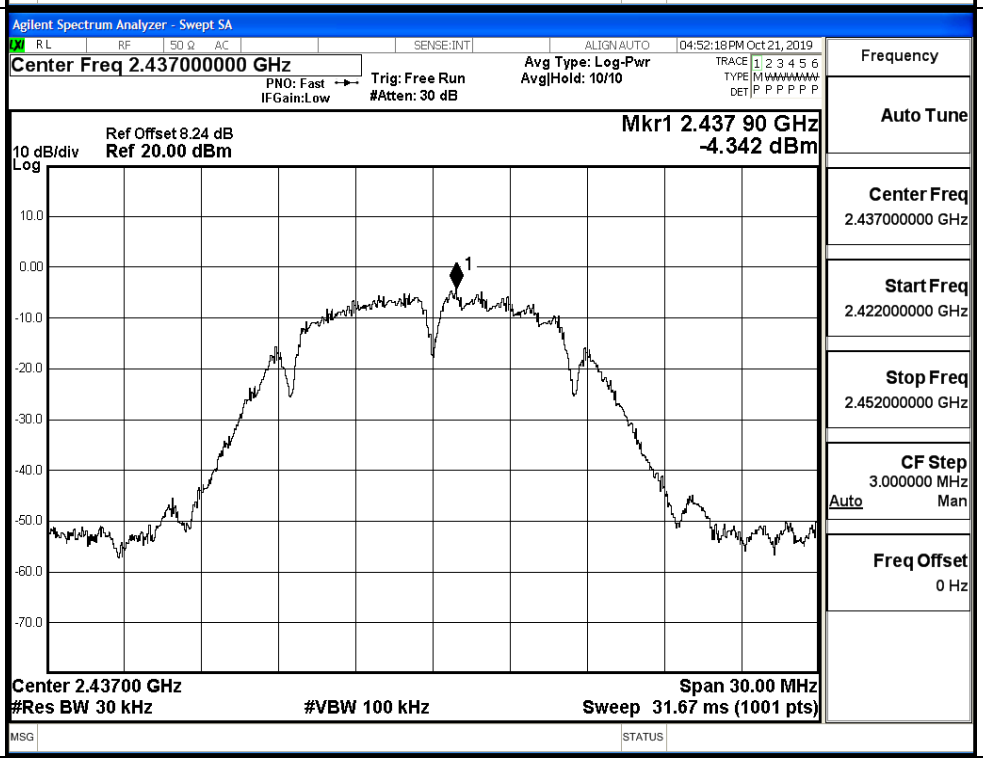
11B/HCH		
11G/LCH		

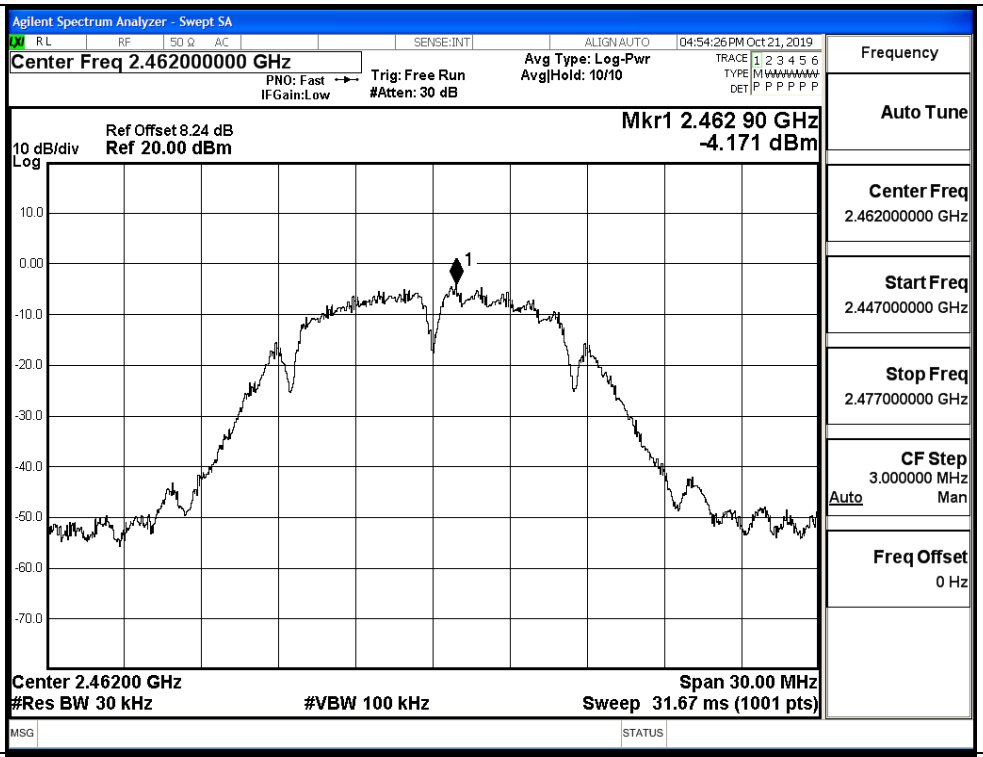
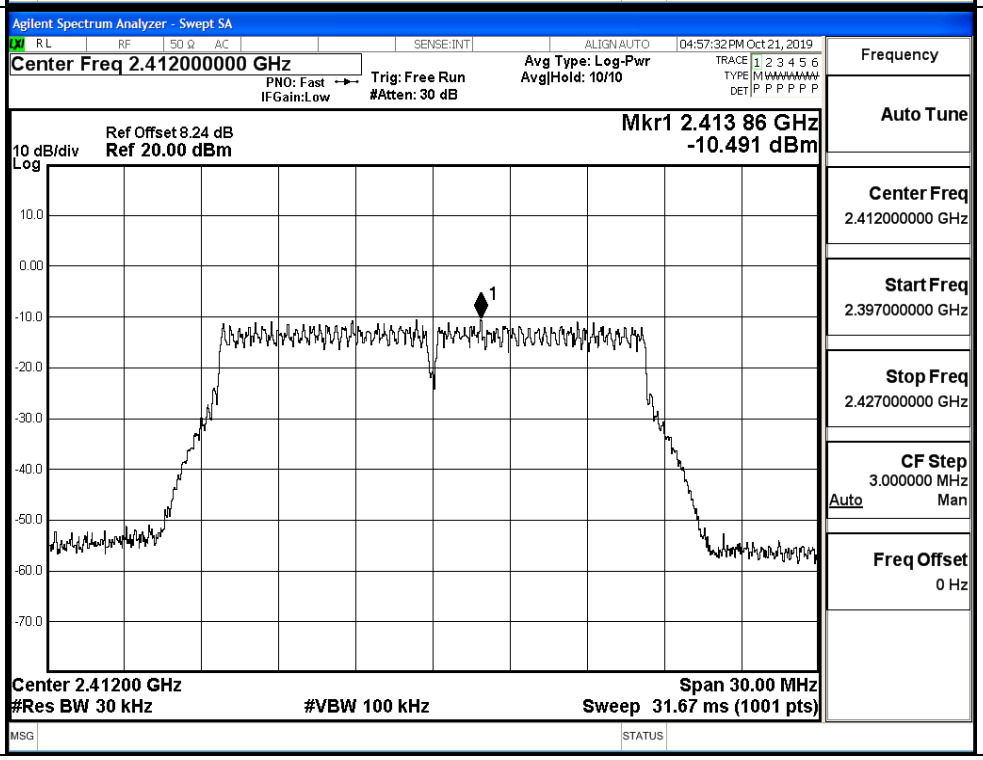
11G/MCH		
11G/HCH		

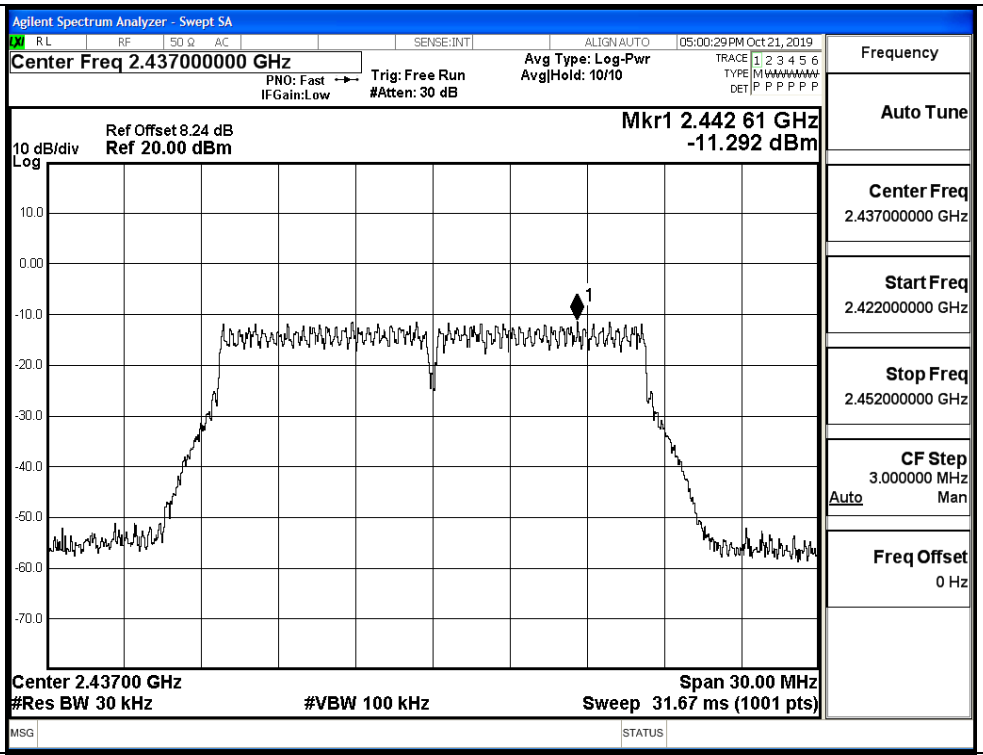
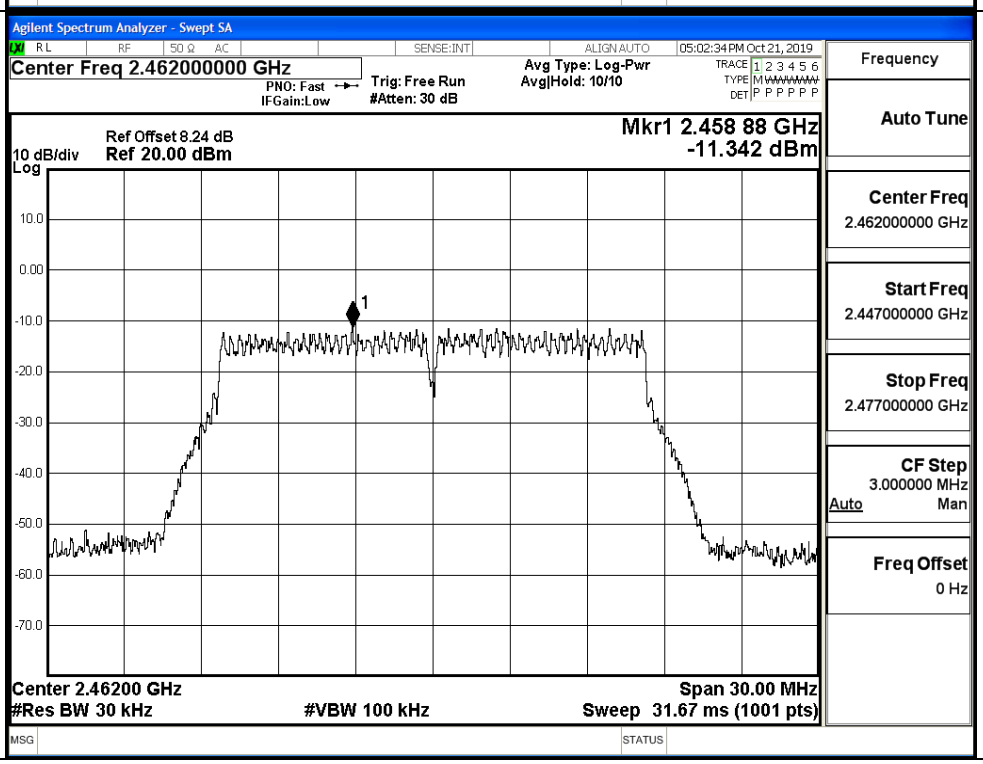
11N20SISO/LCH		
11N20SISO/MCH		

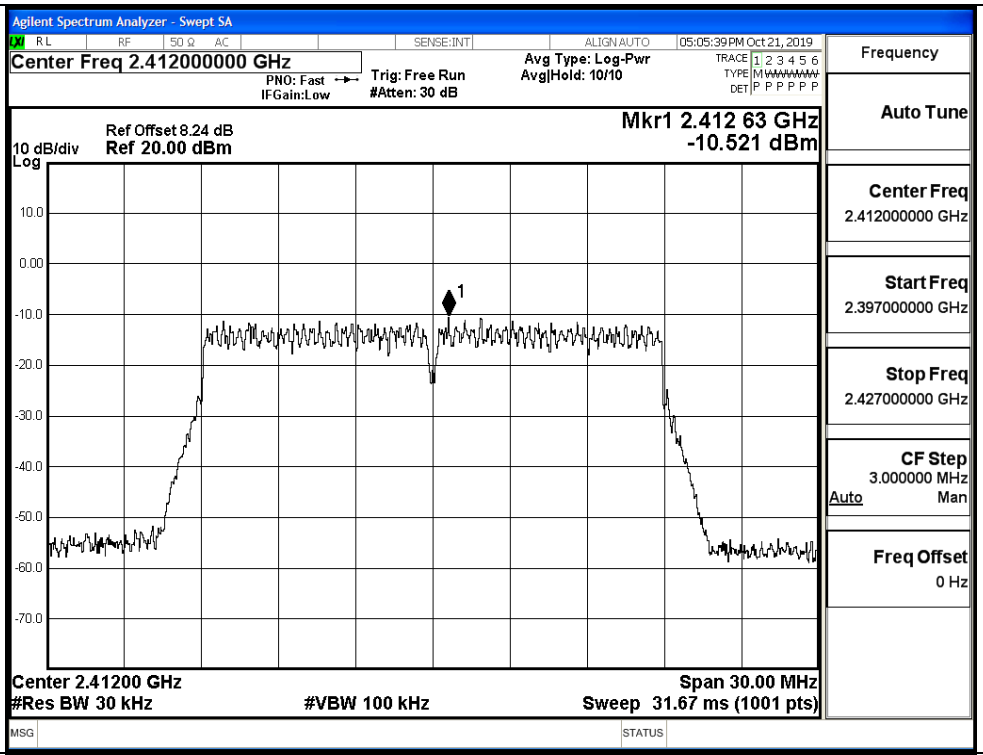
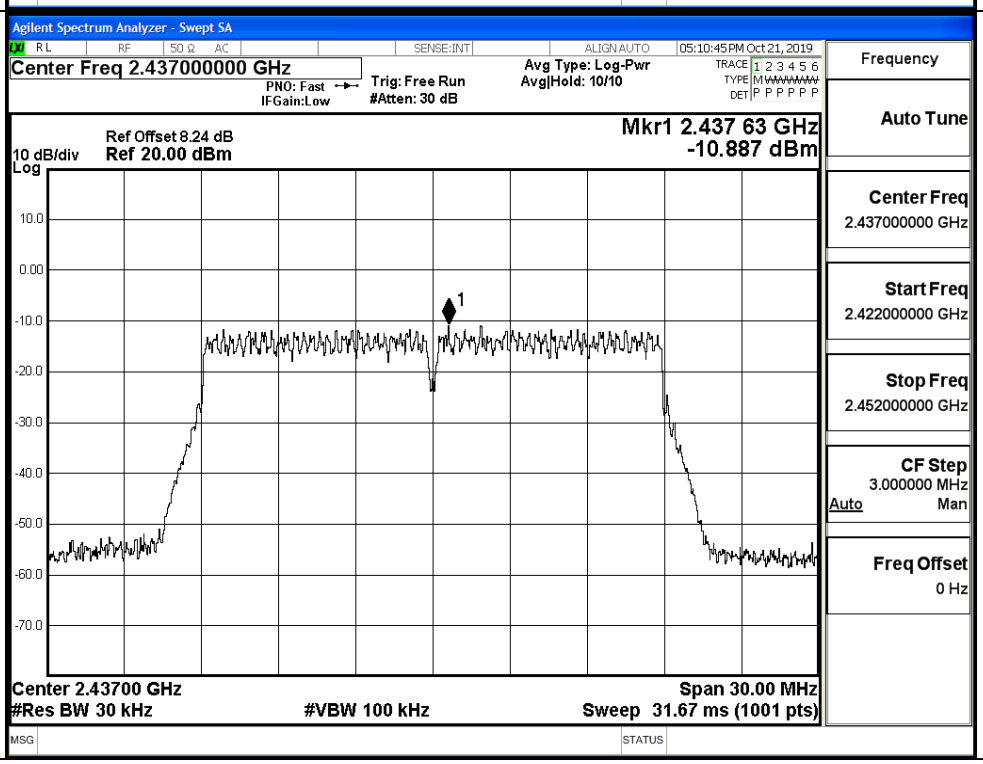
11N20SISO/HCH		
11N40SISO/LCH		

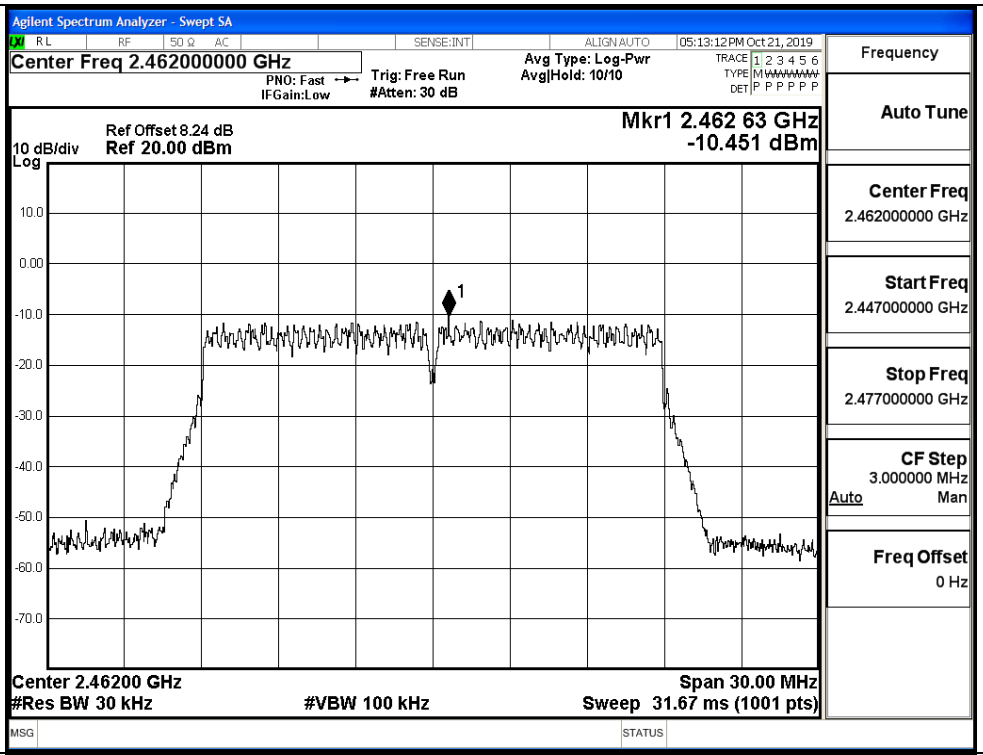
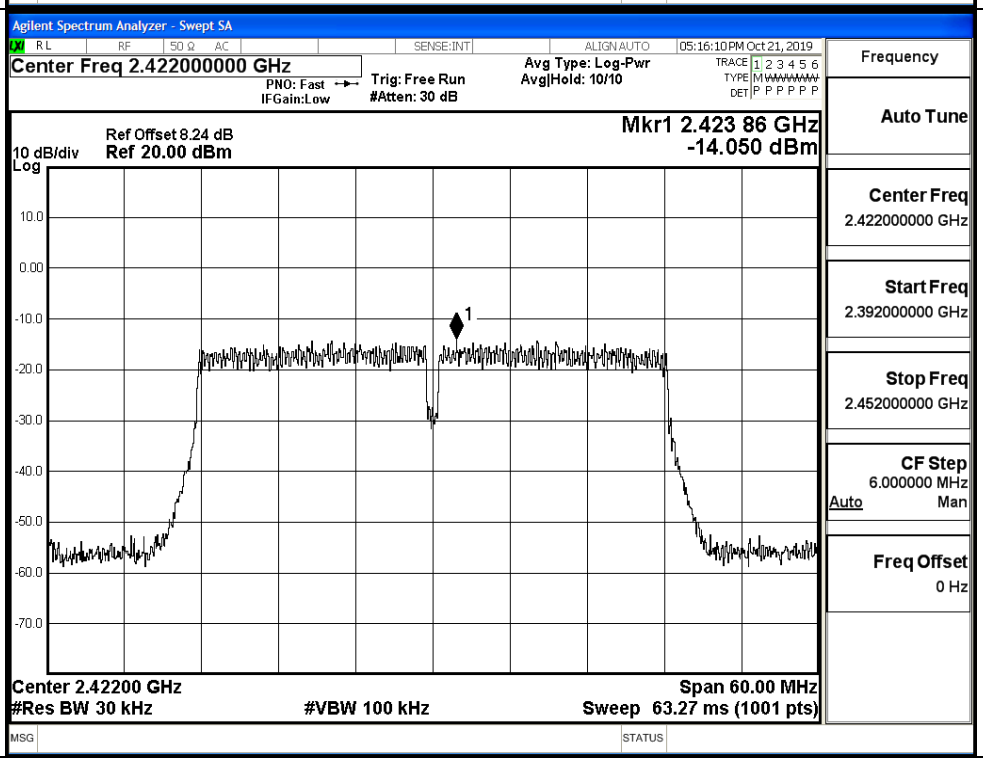
11N40SISO/MCH		
11N40SISO/HCH		

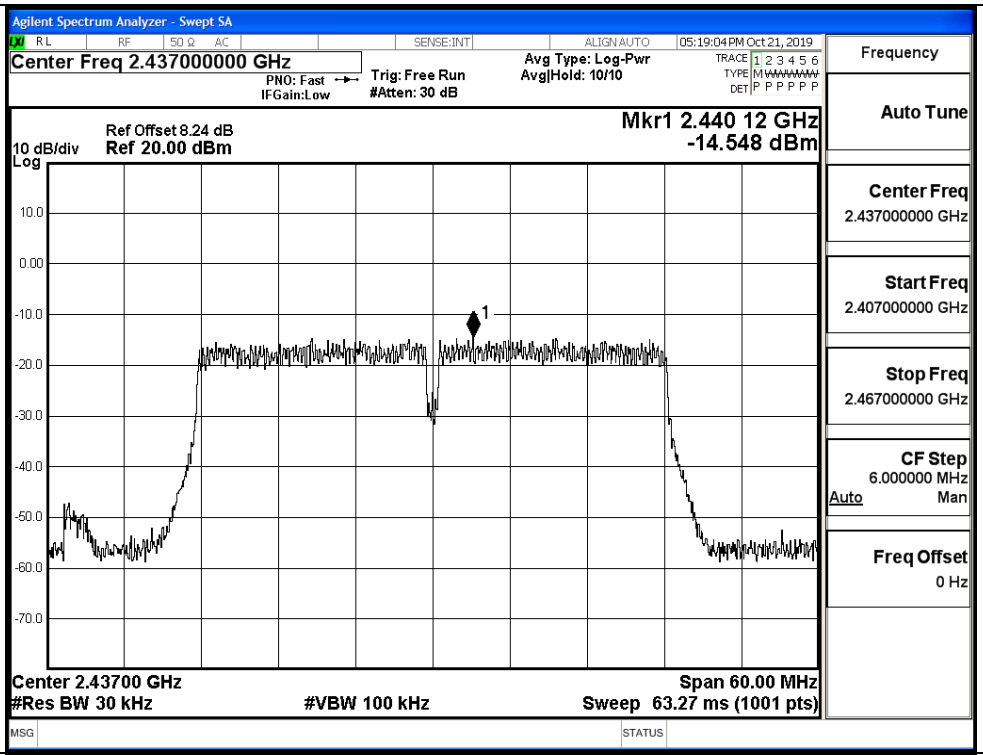
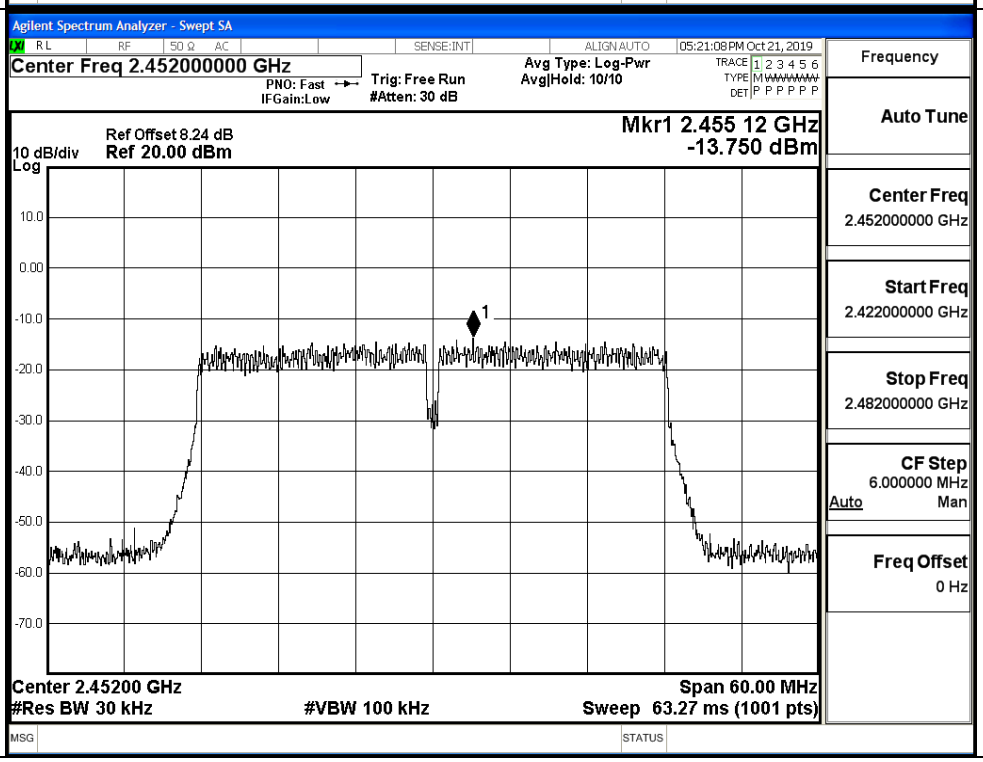
Test Graphs_ANT_2		
11B/LCH		
11B/MCH		

11B/HCH		
11G/LCH		

11G/MCH		
11G/HCH		

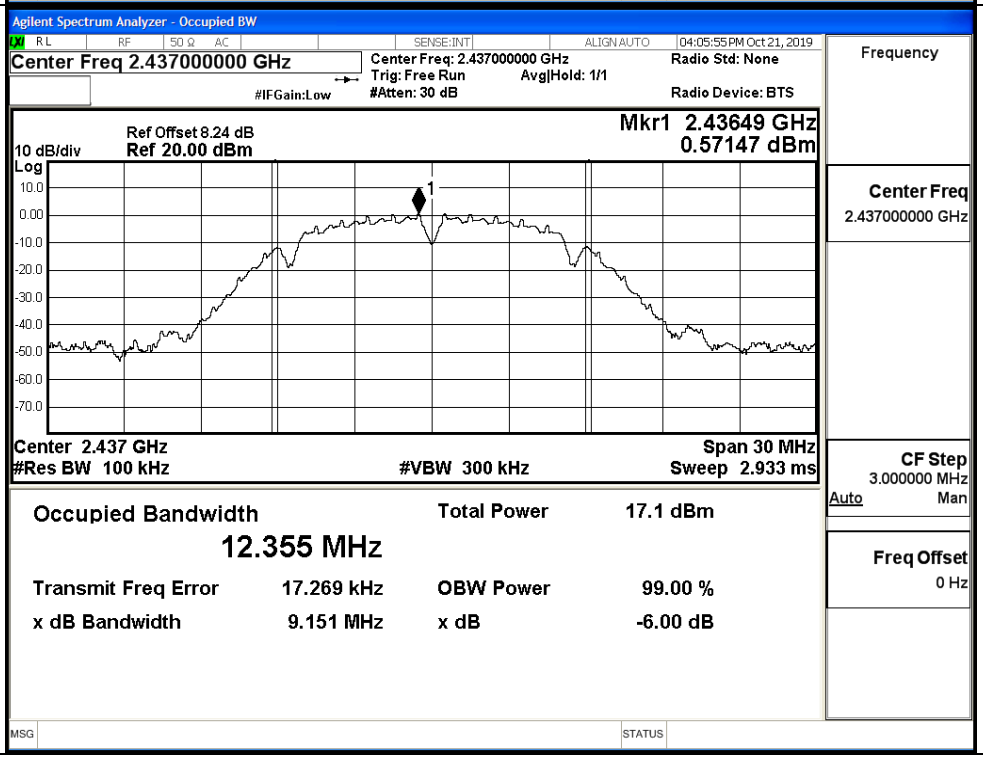
11N20SISO/LCH		
11N20SISO/MCH		

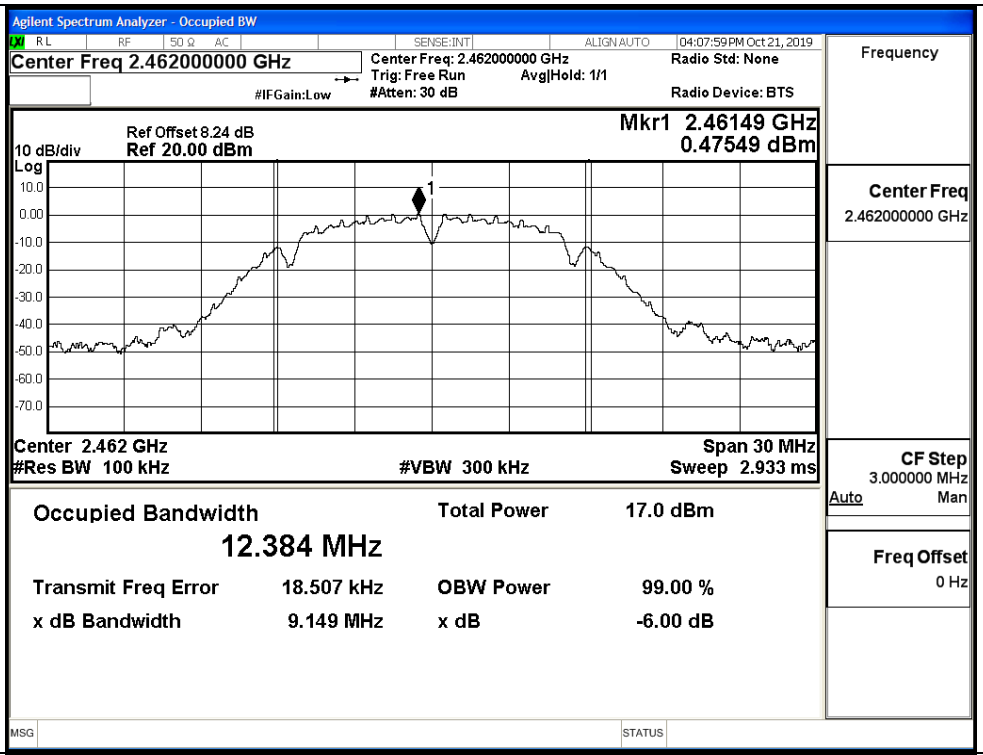
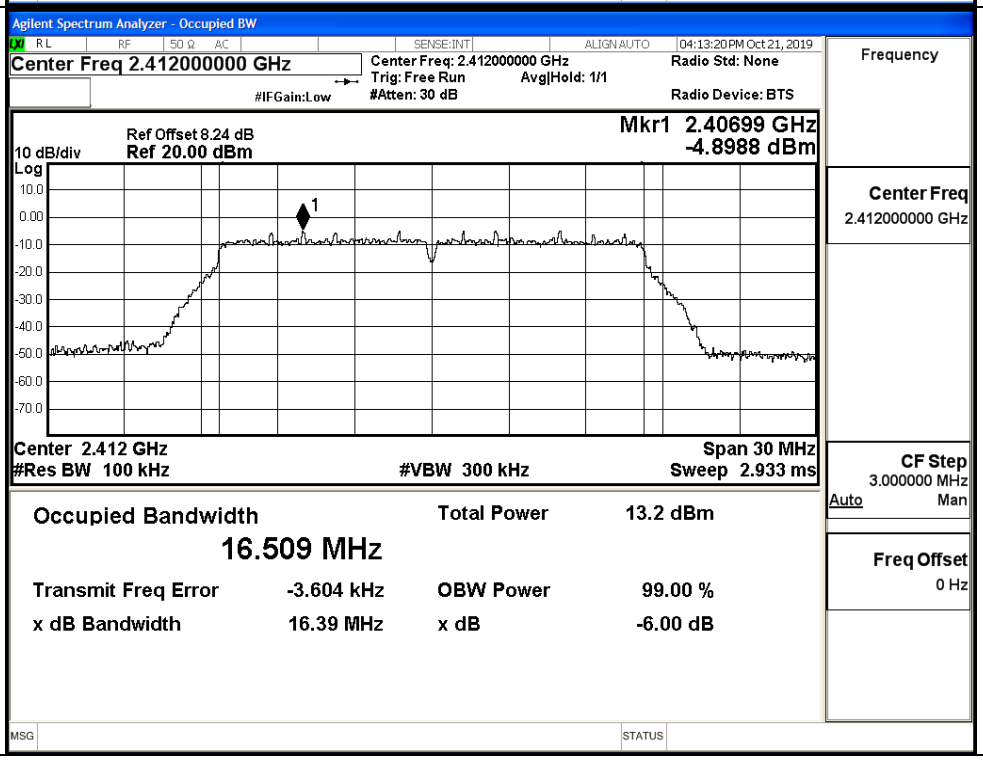
11N20SISO/HCH		
11N40SISO/LCH		

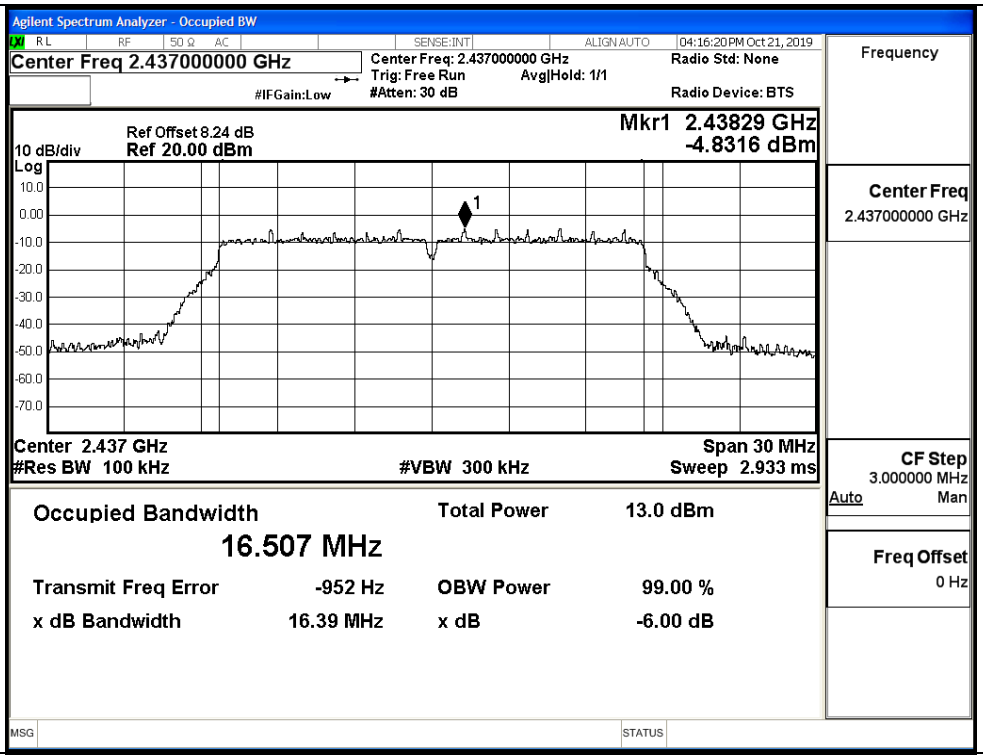
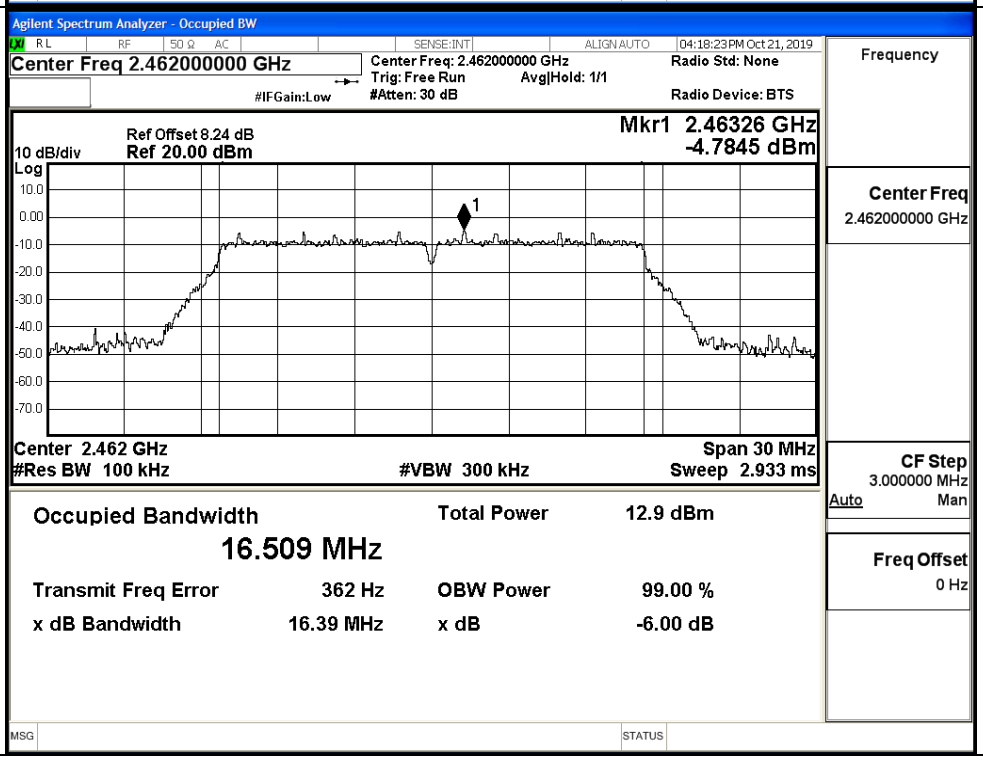
11N40SISO/MCH		
11N40SISO/HCH		

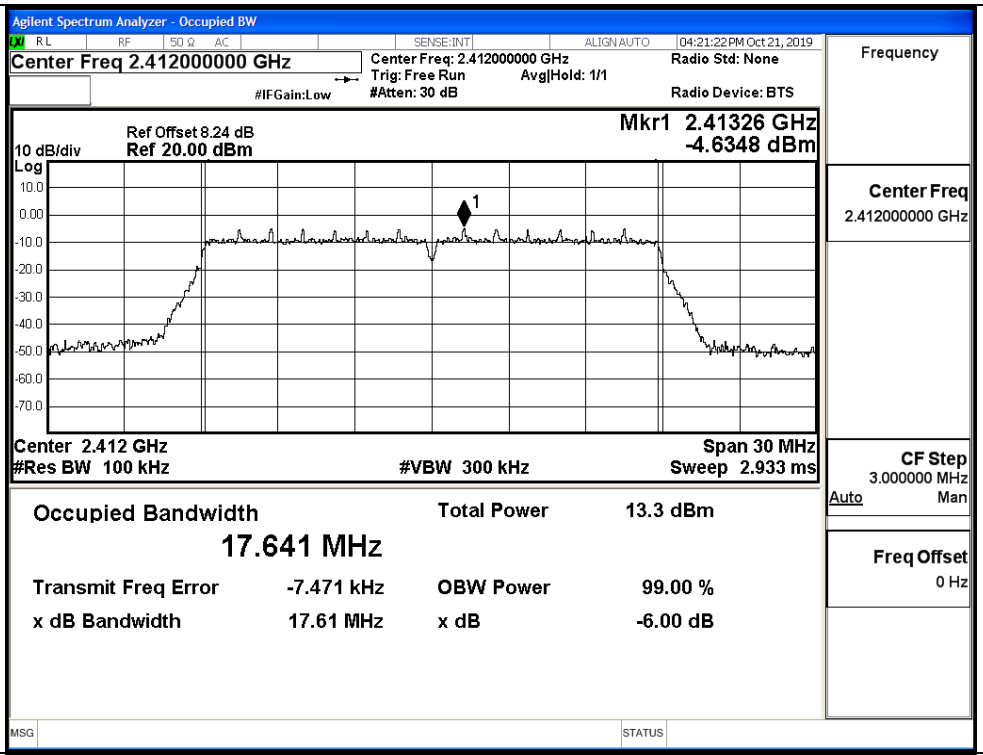
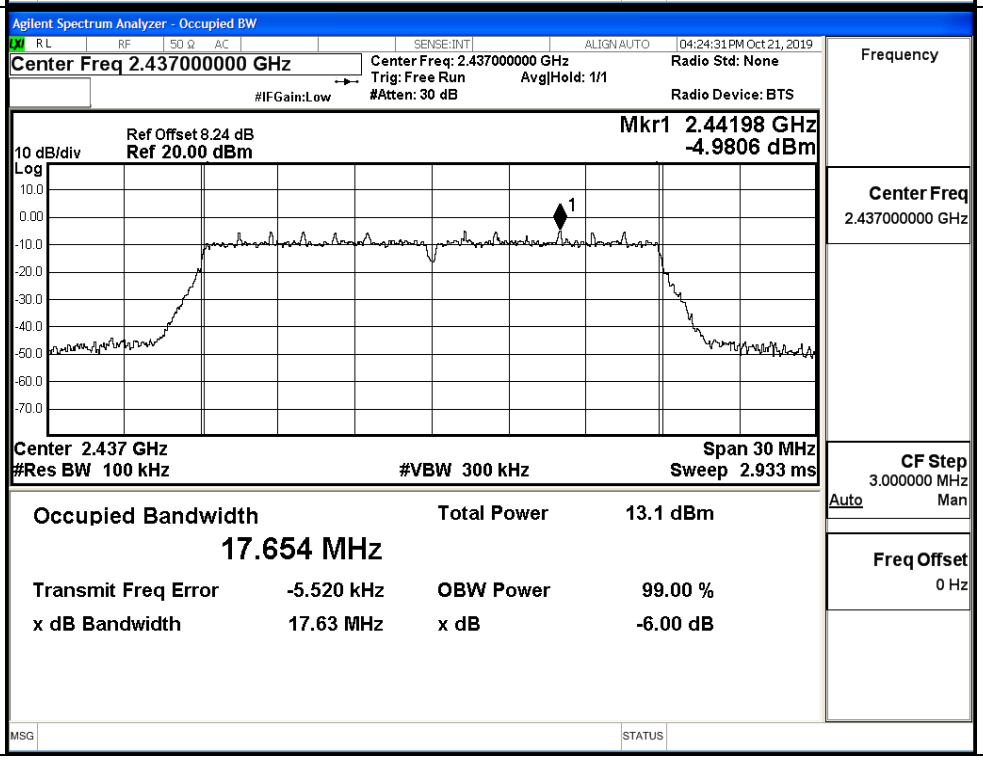
A.4 6dB Bandwidth

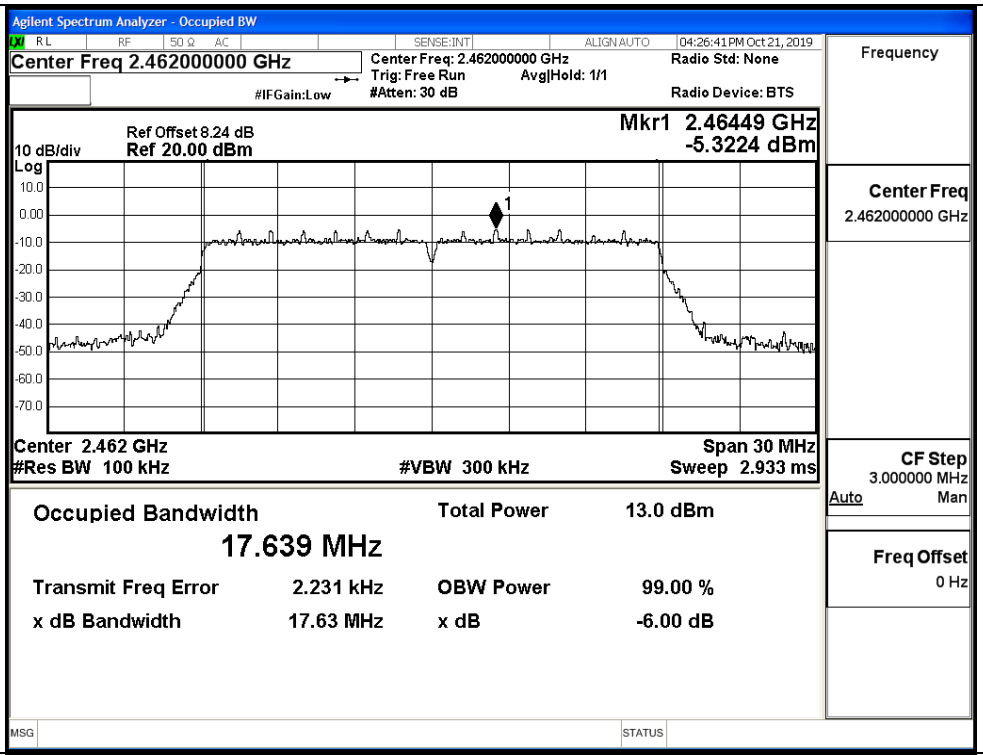
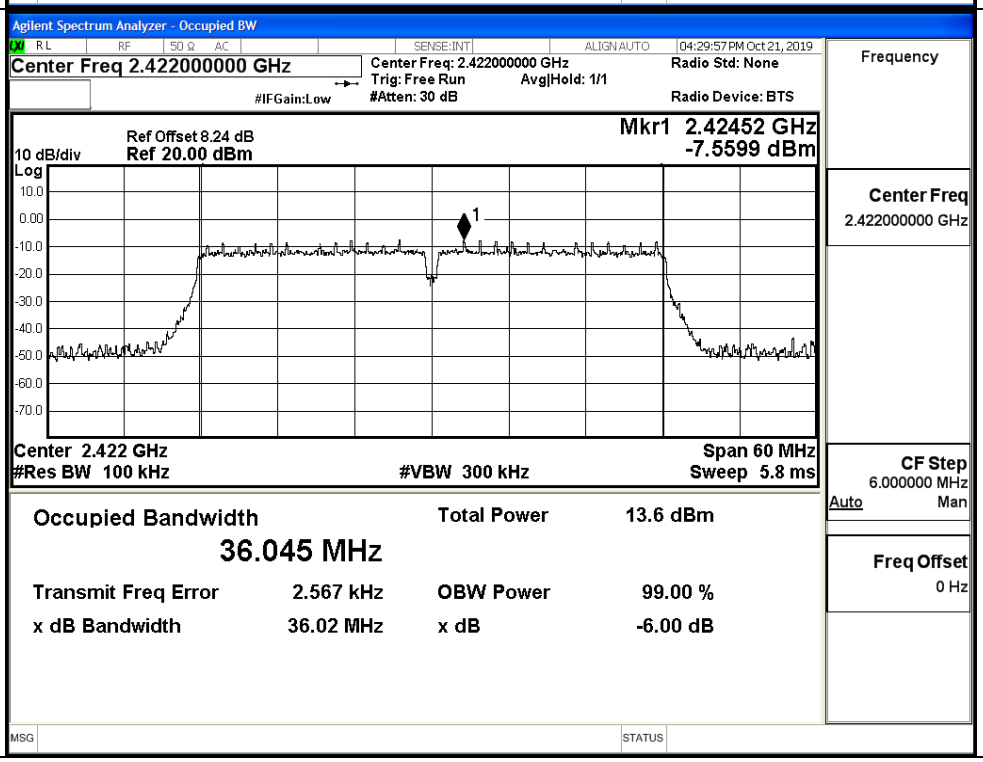
Mode	Channel	6dB Bandwidth [MHz]		Limit [MHz]	Verdict
		Ant_1	Ant_2		
11B	LCH	9.150	9.151	⩾0.5	PASS
	MCH	9.151	9.150	⩾0.5	PASS
	HCH	9.149	9.150	⩾0.5	PASS
11G	LCH	16.39	16.60	⩾0.5	PASS
	MCH	16.39	16.61	⩾0.5	PASS
	HCH	16.39	16.61	⩾0.5	PASS
11N20	LCH	17.61	17.83	⩾0.5	PASS
	MCH	17.63	17.84	⩾0.5	PASS
	HCH	17.63	17.82	⩾0.5	PASS
11N40	LCH	36.02	36.49	⩾0.5	PASS
	MCH	36.14	36.52	⩾0.5	PASS
	HCH	36.04	36.49	⩾0.5	PASS

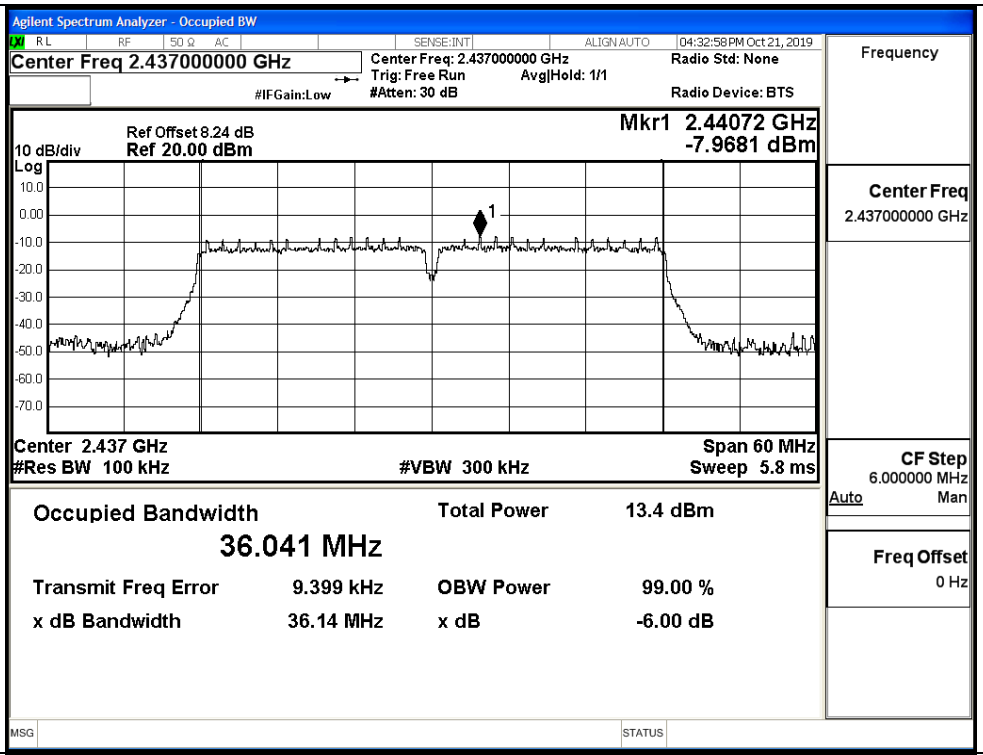
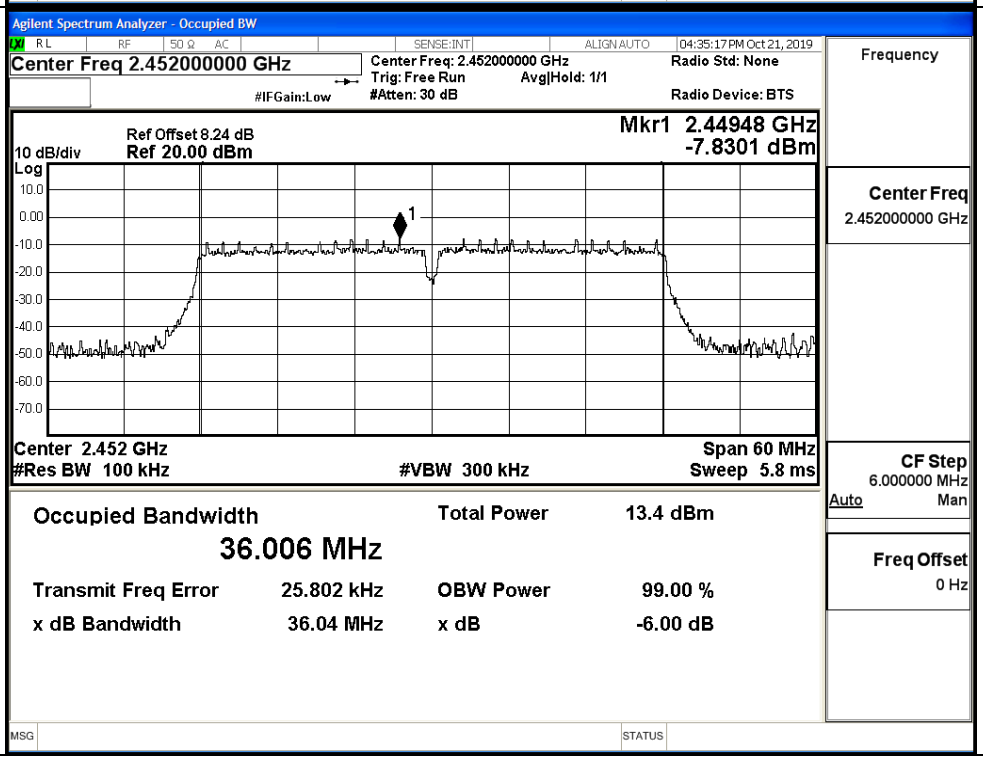
Test Graphs_ANT_1		
11B/LCH		
11B/MCH		

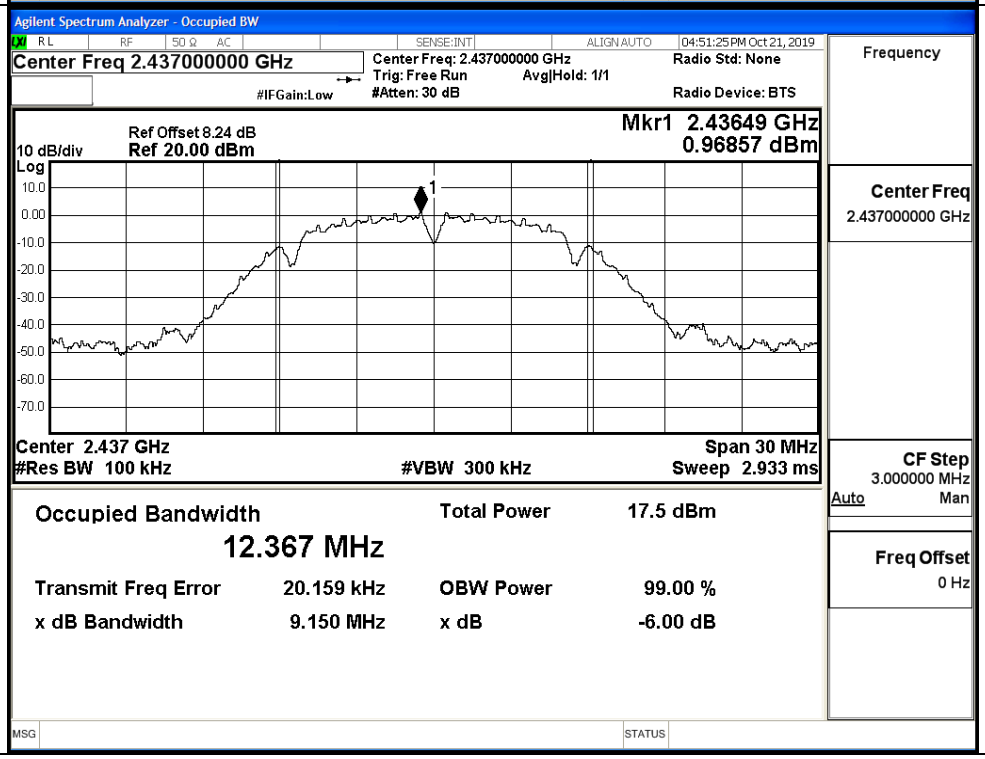
11B/HCH		
11G/LCH		

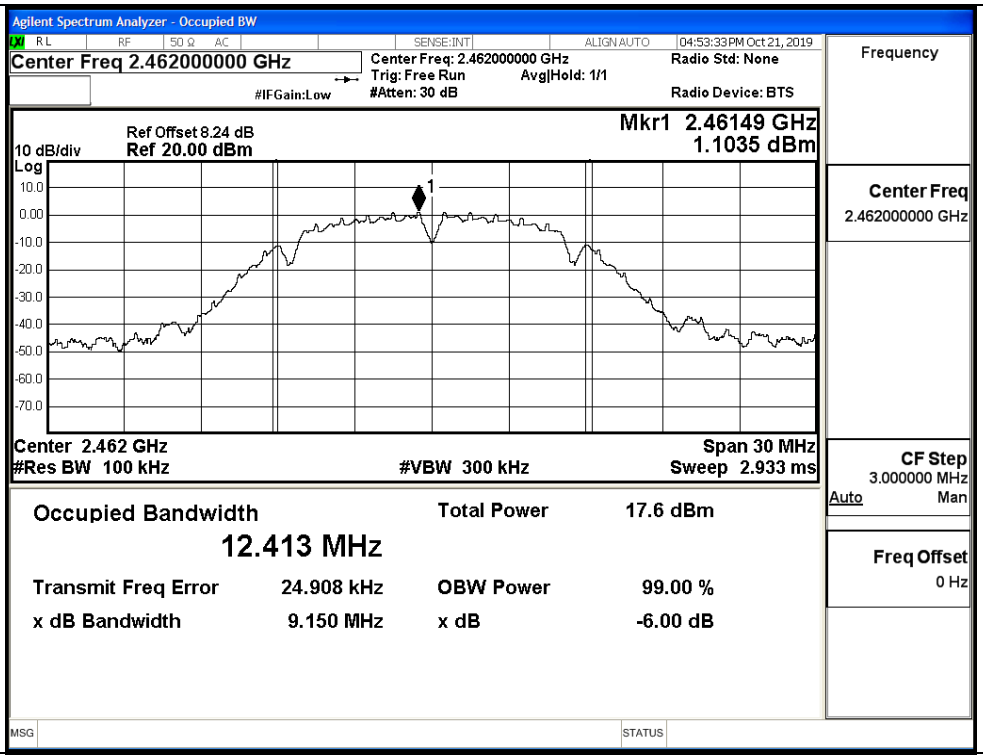
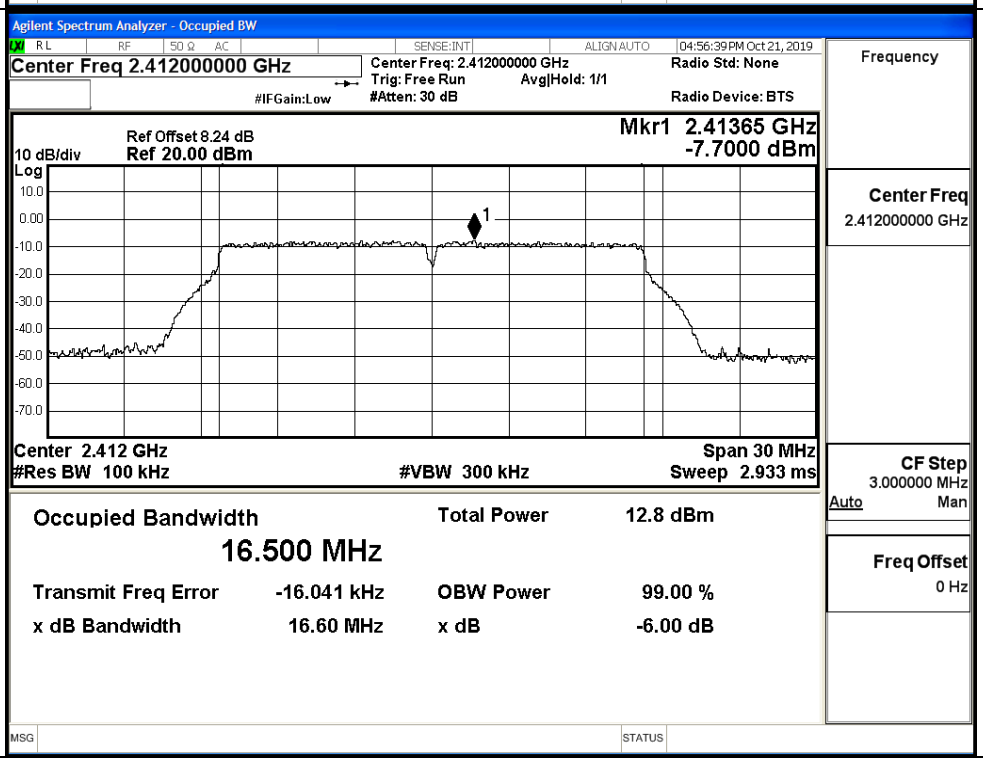
11G/MCH	
11G/HCH	

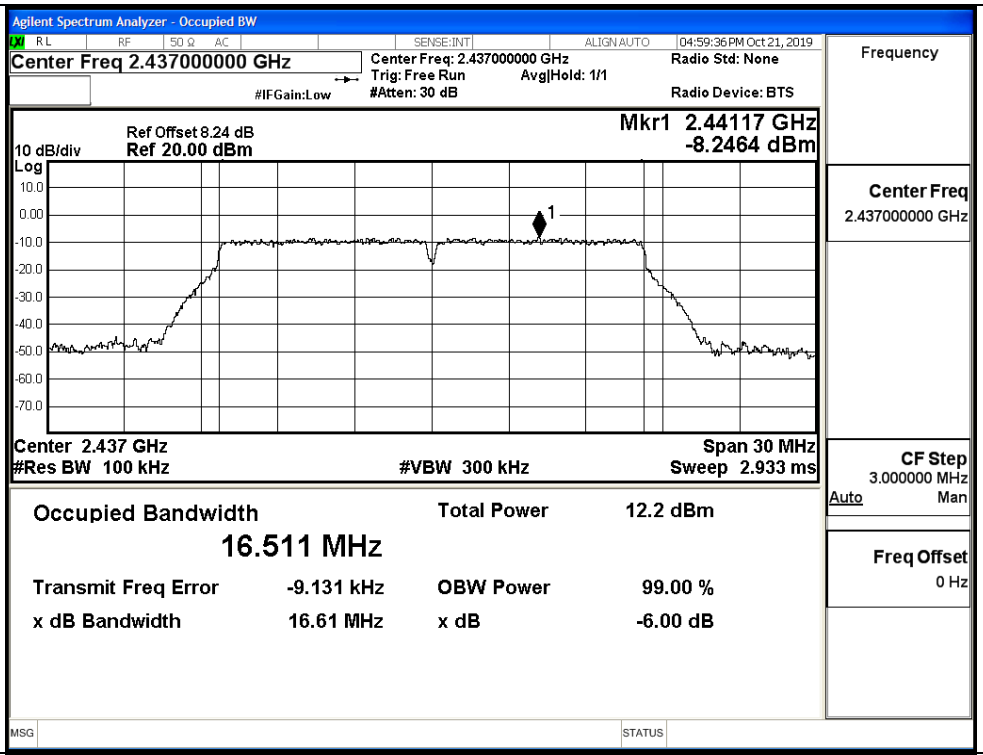
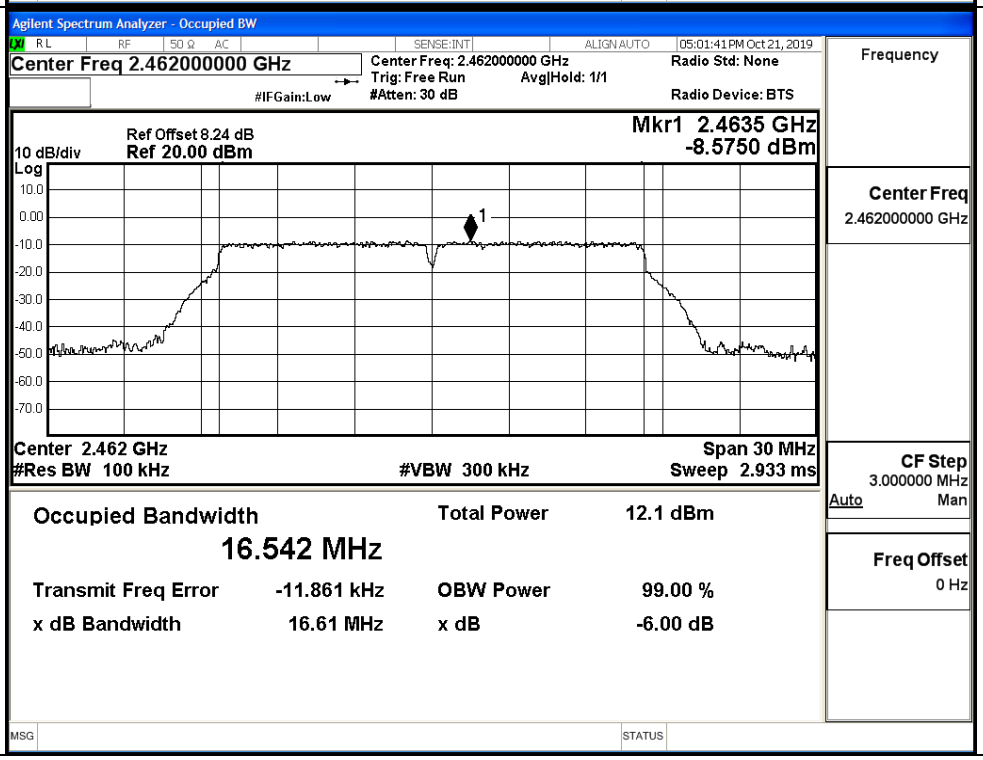
11N20SISO/LCH	
11N20SISO/MCH	

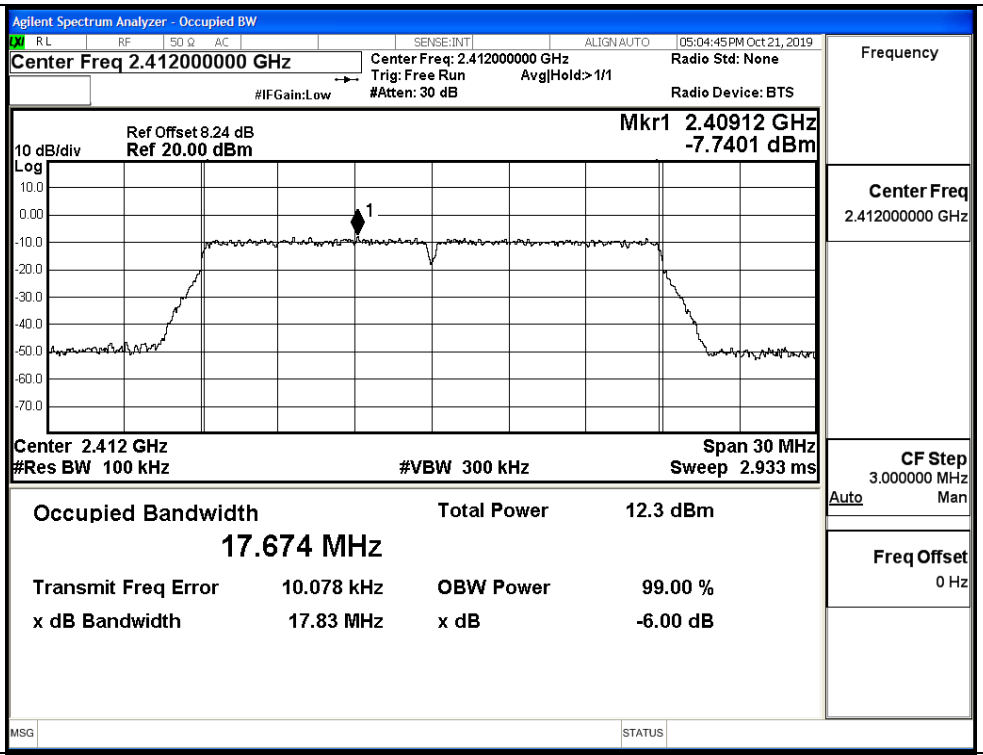
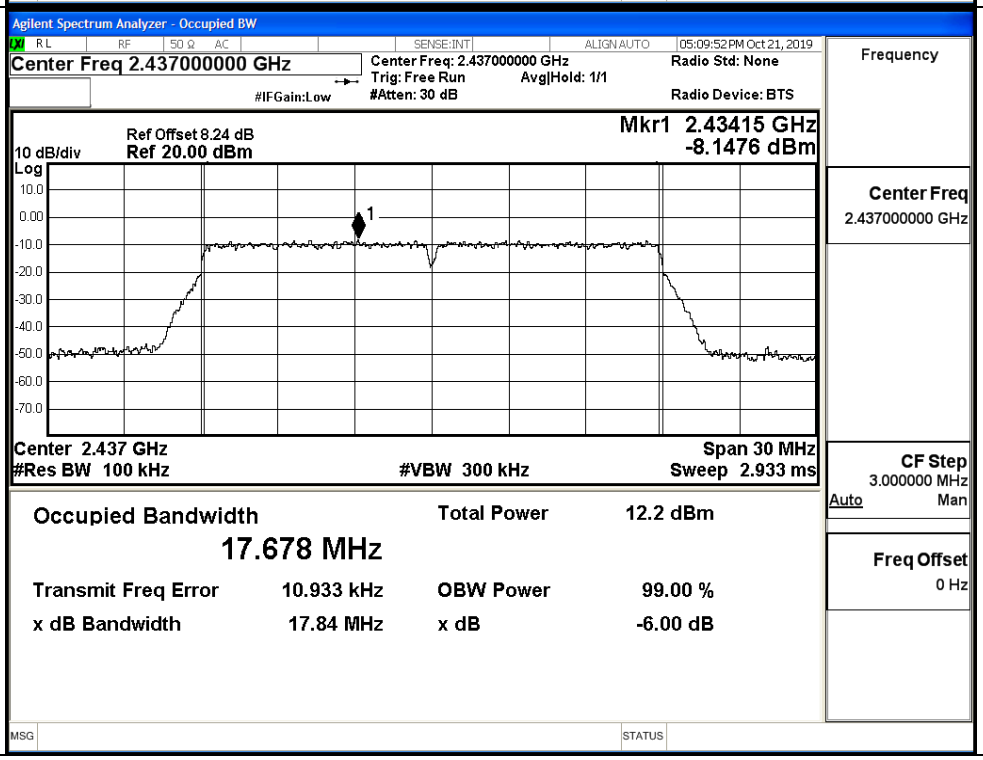
11N20SISO/HCH		
11N40SISO/LCH		

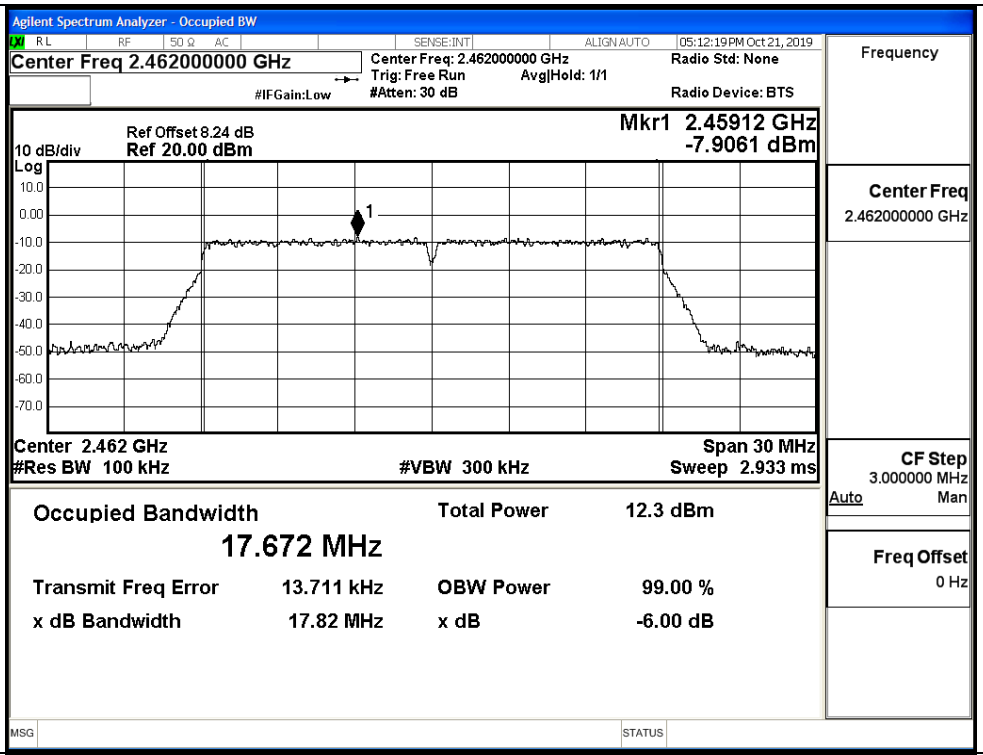
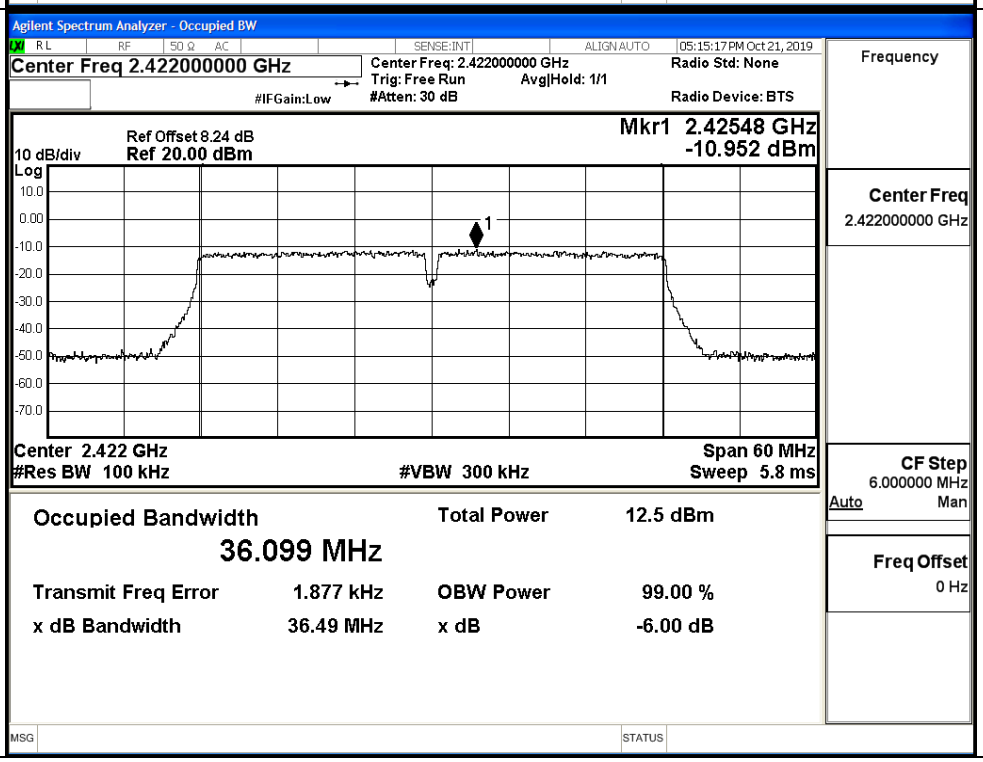
11N40SISO/MCH		
11N40SISO/HCH		

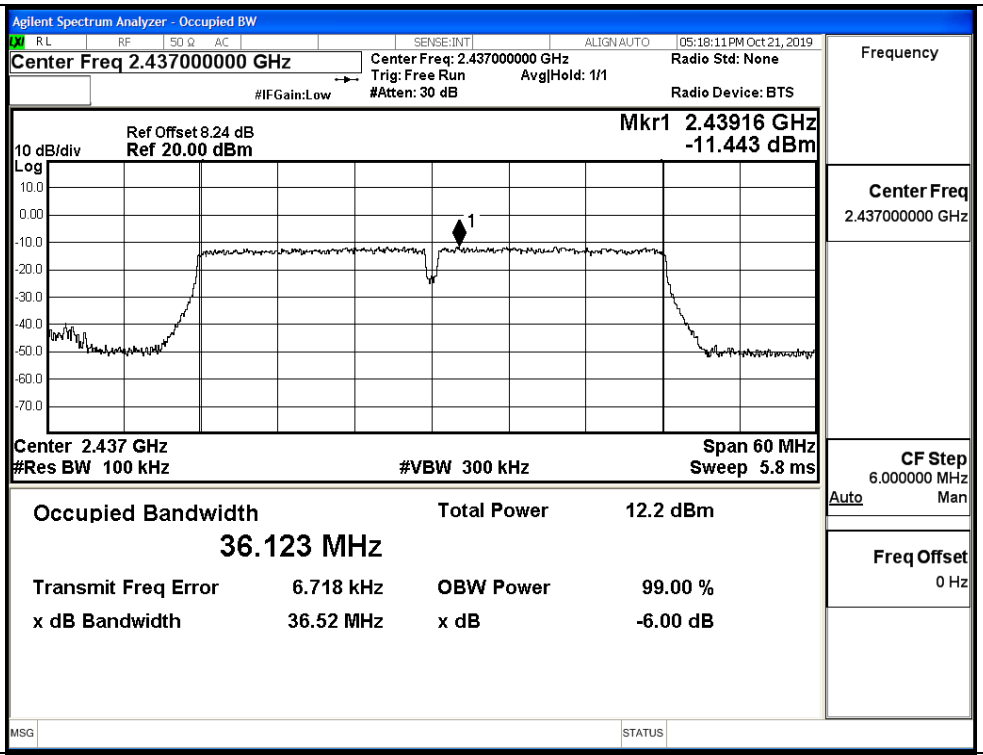
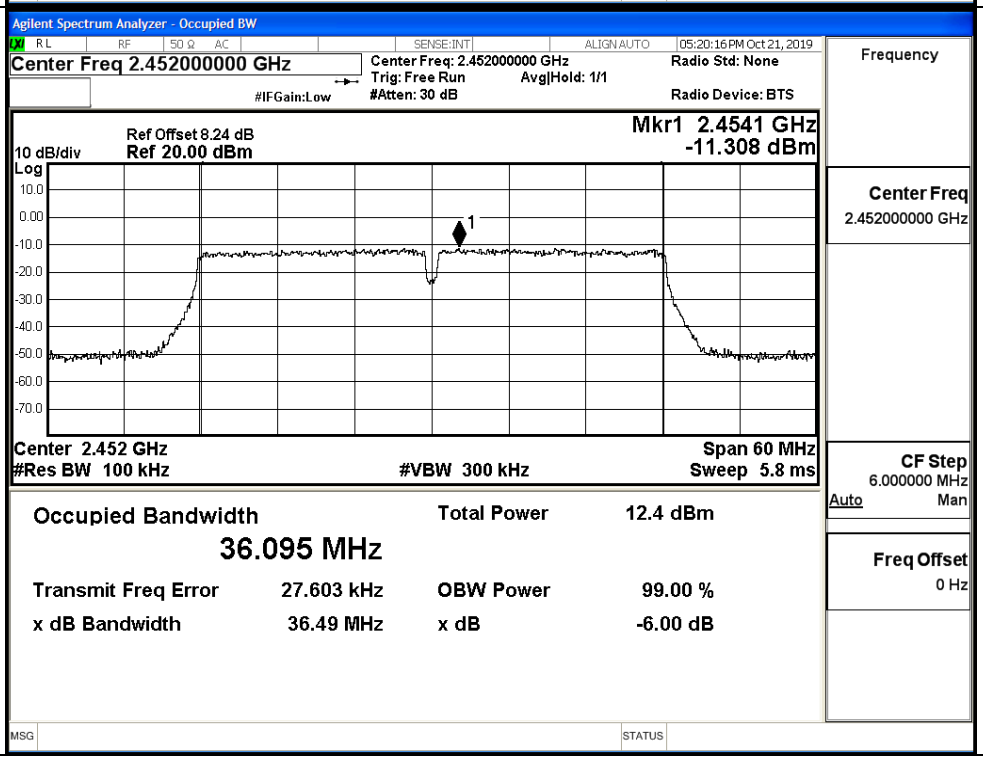
Test Graphs_ANT_2	
11B/LCH	
11B/MCH	

11B/HCH		
11G/LCH		

11G/MCH		
11G/HCH		

11N20SISO/LCH	
11N20SISO/MCH	

11N20SISO/HCH		
11N40SISO/LCH		

11N40SISO/MCH		
11N40SISO/HCH		

A.5 RF Conducted Spurious Emissions

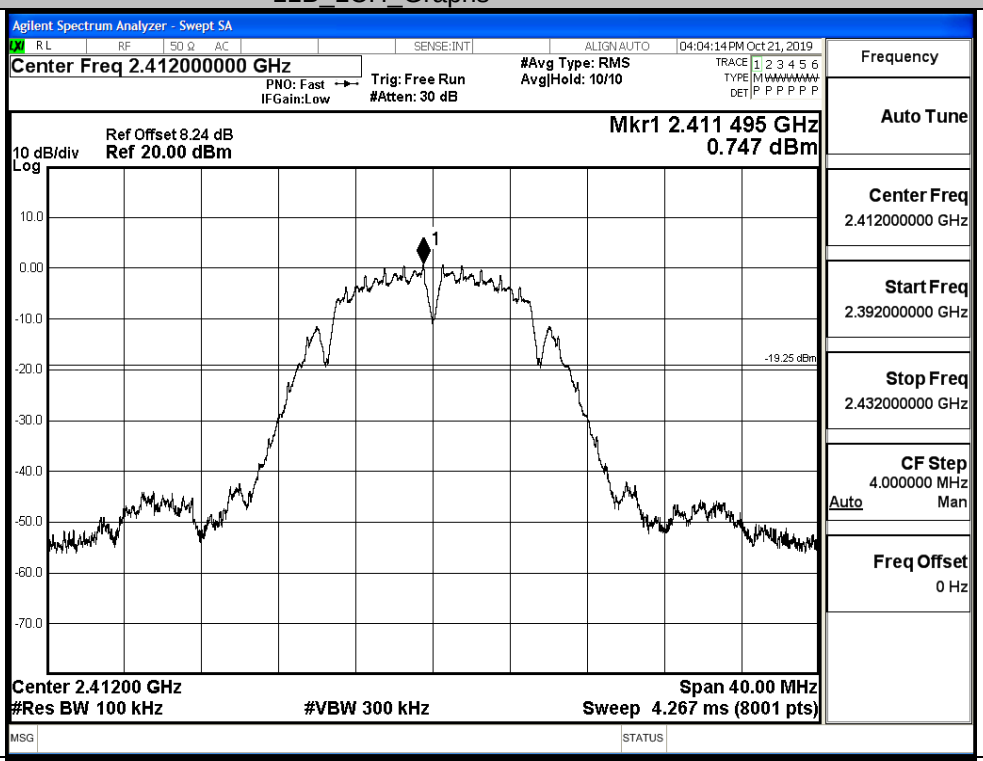
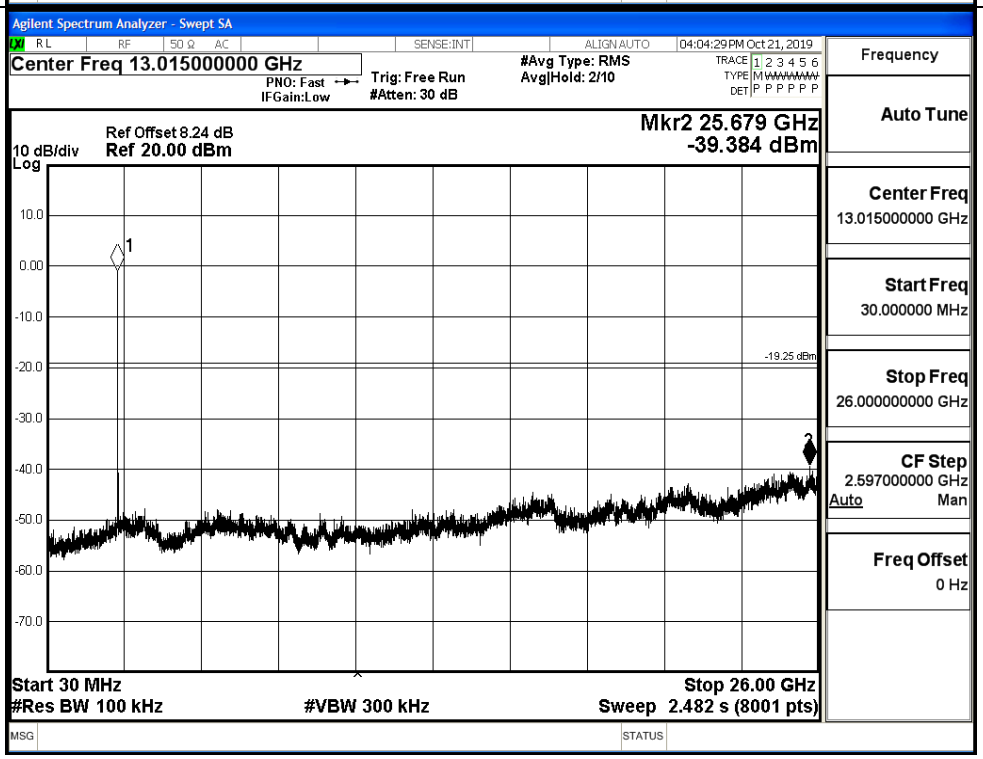
Ant_1

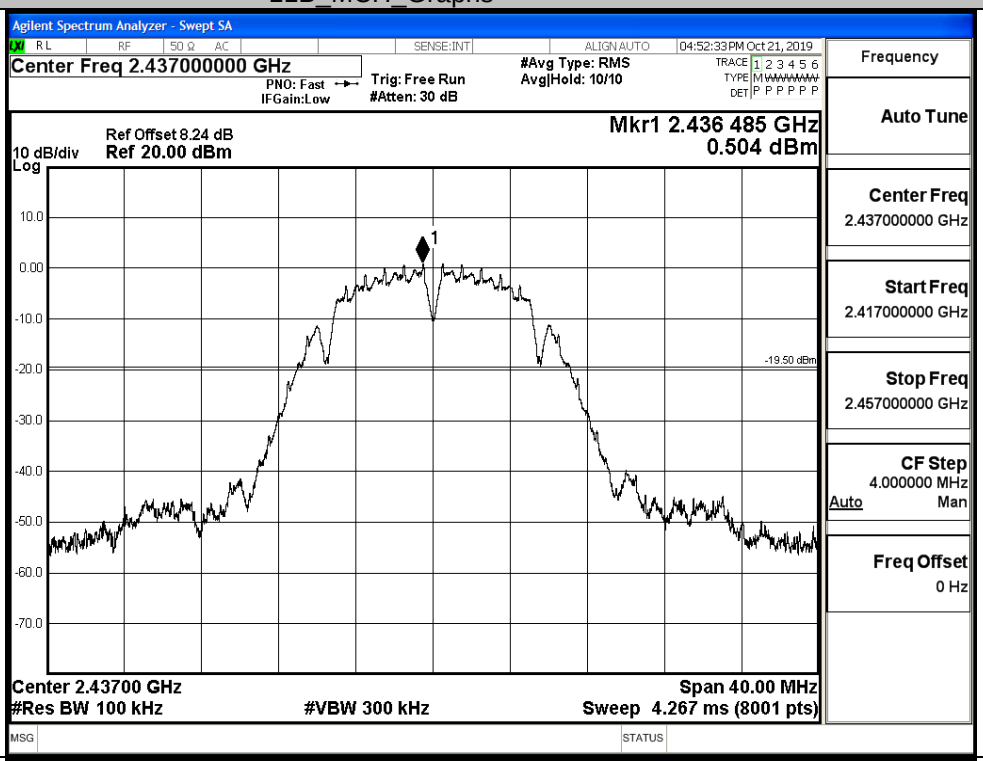
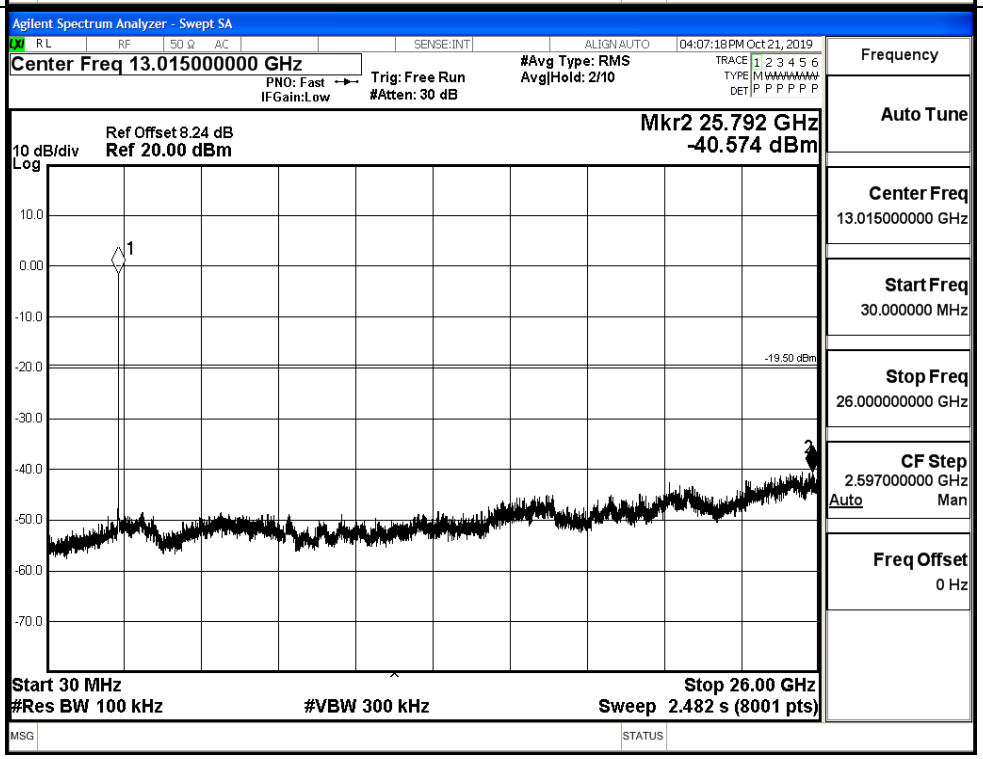
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	0.747	-39.384	-19.253	PASS
	MCH	0.5	-40.574	-19.500	PASS
	HCH	0.418	-39.793	-19.582	PASS
11G	LCH	-4.769	-40.027	-24.769	PASS
	MCH	-5.244	-39.616	-25.244	PASS
	HCH	-5.287	-39.955	-25.287	PASS
11N20 SISO	LCH	-5.072	-39.233	-25.072	PASS
	MCH	-5.23	-40.213	-25.230	PASS
	HCH	-4.826	-40.516	-24.826	PASS
11N40 SISO	LCH	-7.73	-39.533	-27.730	PASS
	MCH	-7.812	-40.498	-27.812	PASS
	HCH	-8.093	-40.139	-28.093	PASS

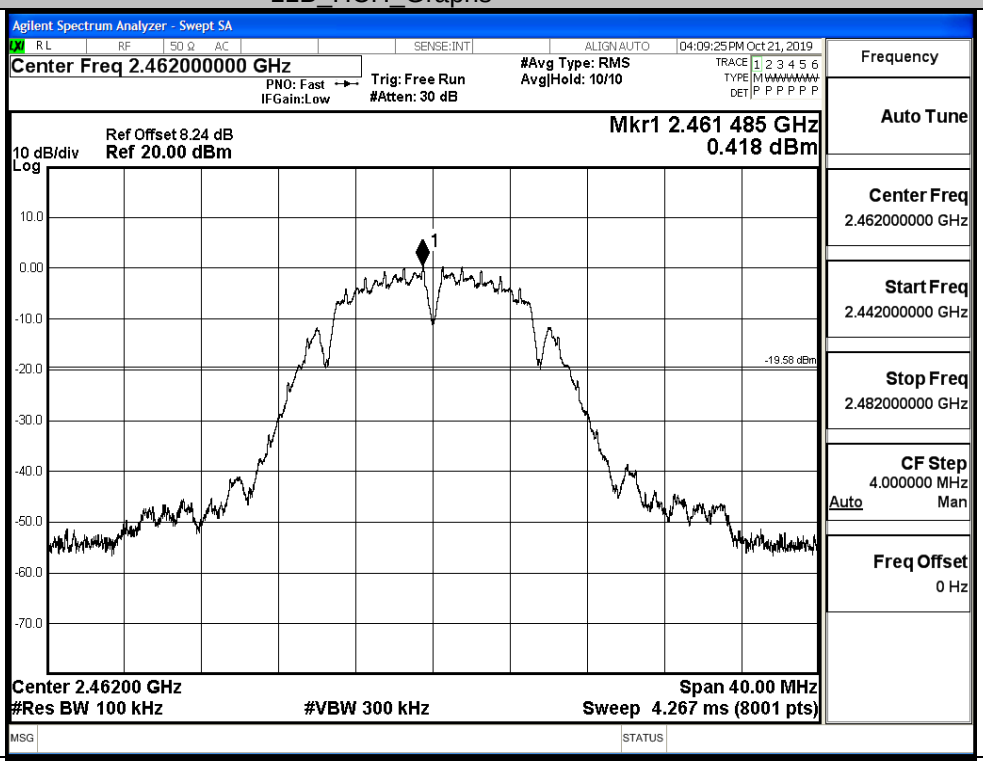
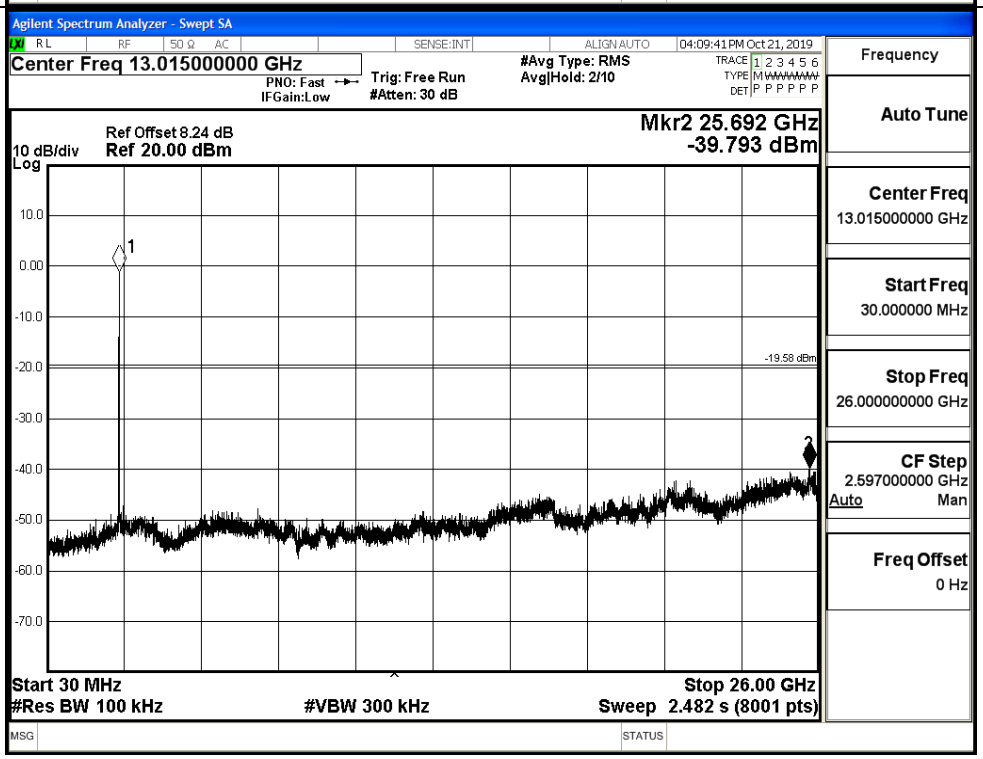
Ant_2

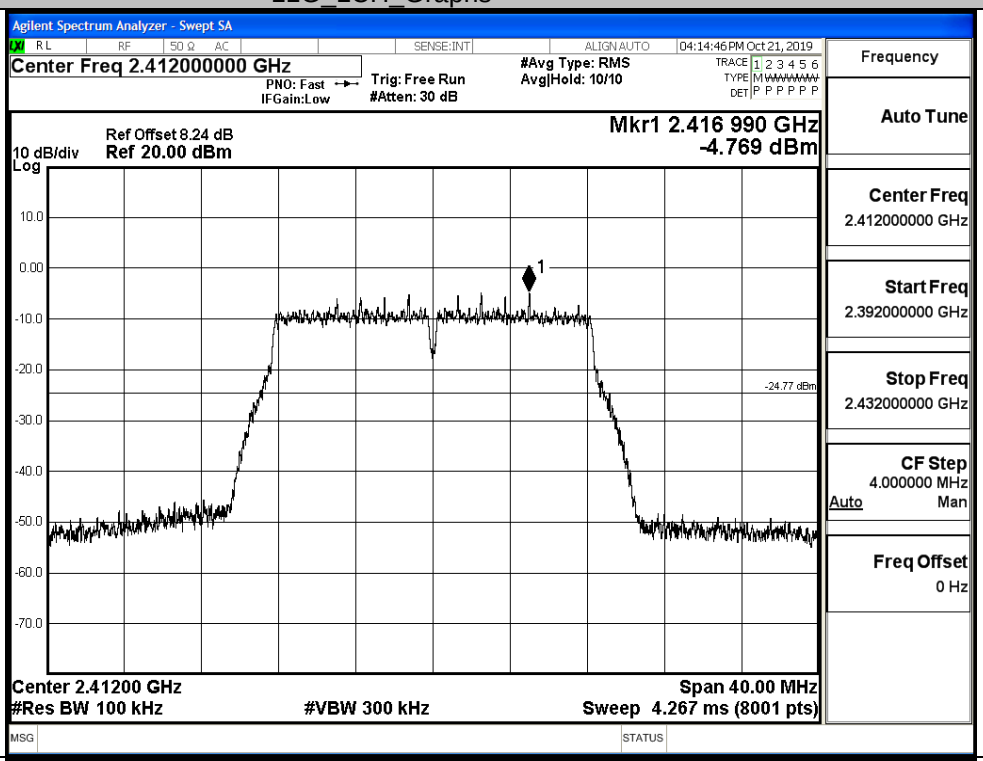
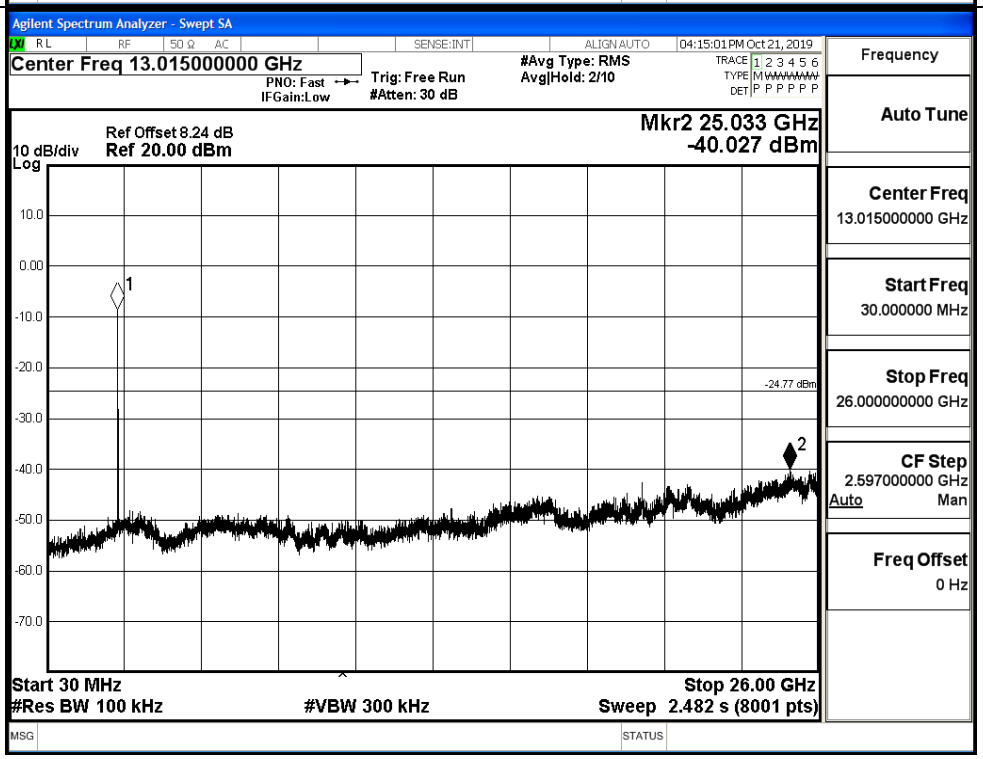
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	0.919	-39.936	-19.081	PASS
	MCH	0.894	-38.940	-19.106	PASS
	HCH	1.025	-39.227	-18.975	PASS
11G	LCH	-7.875	-40.308	-27.875	PASS
	MCH	-8.322	-40.562	-28.322	PASS
	HCH	-8.608	-40.678	-28.608	PASS
11N20 SISO	LCH	-7.806	-38.801	-27.806	PASS
	MCH	-8.035	-39.955	-28.035	PASS
	HCH	-7.817	-39.487	-27.817	PASS
11N40 SISO	LCH	-11.019	-39.232	-31.019	PASS
	MCH	-11.515	-38.963	-31.515	PASS
	HCH	-11.097	-39.767	-31.097	PASS

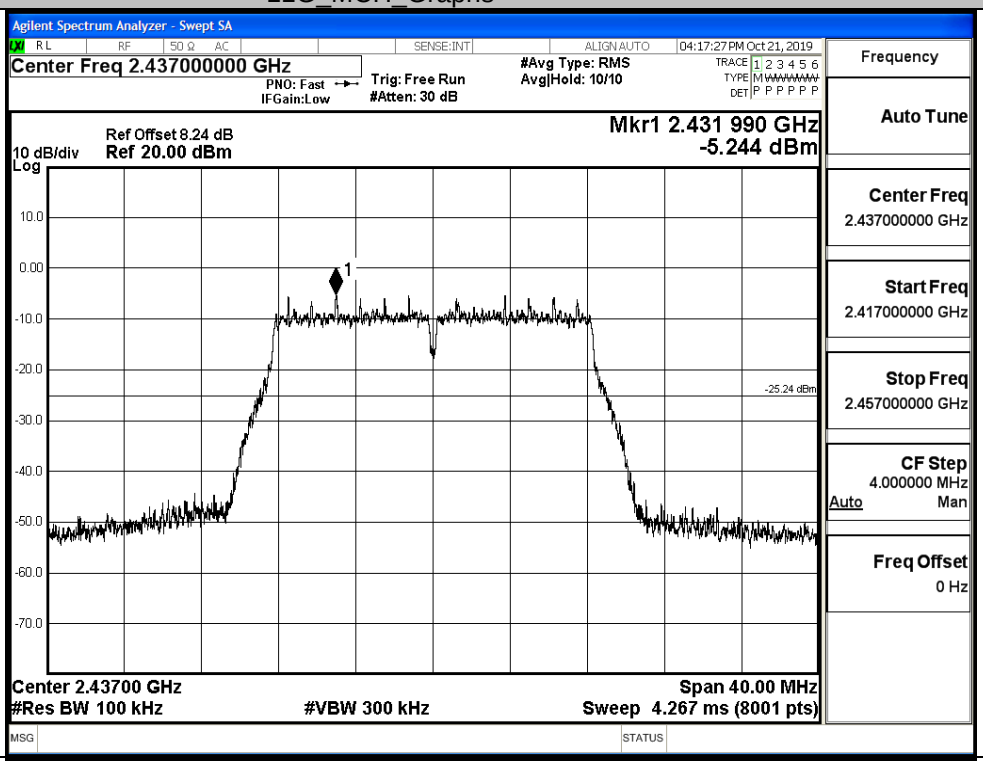
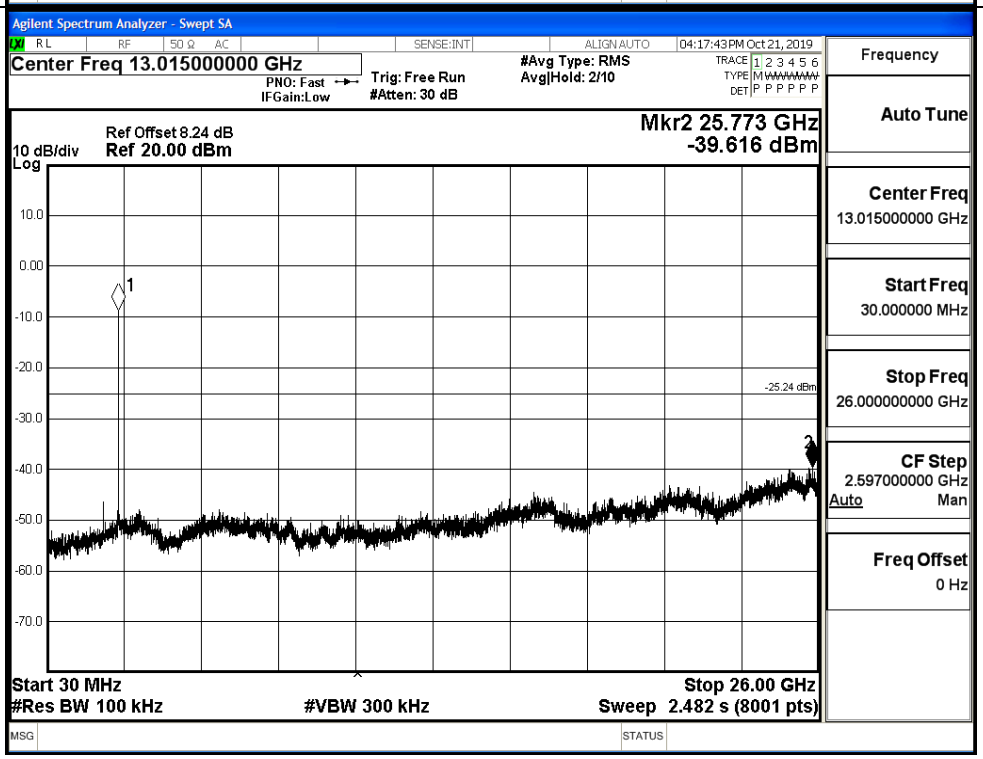
Ant_1

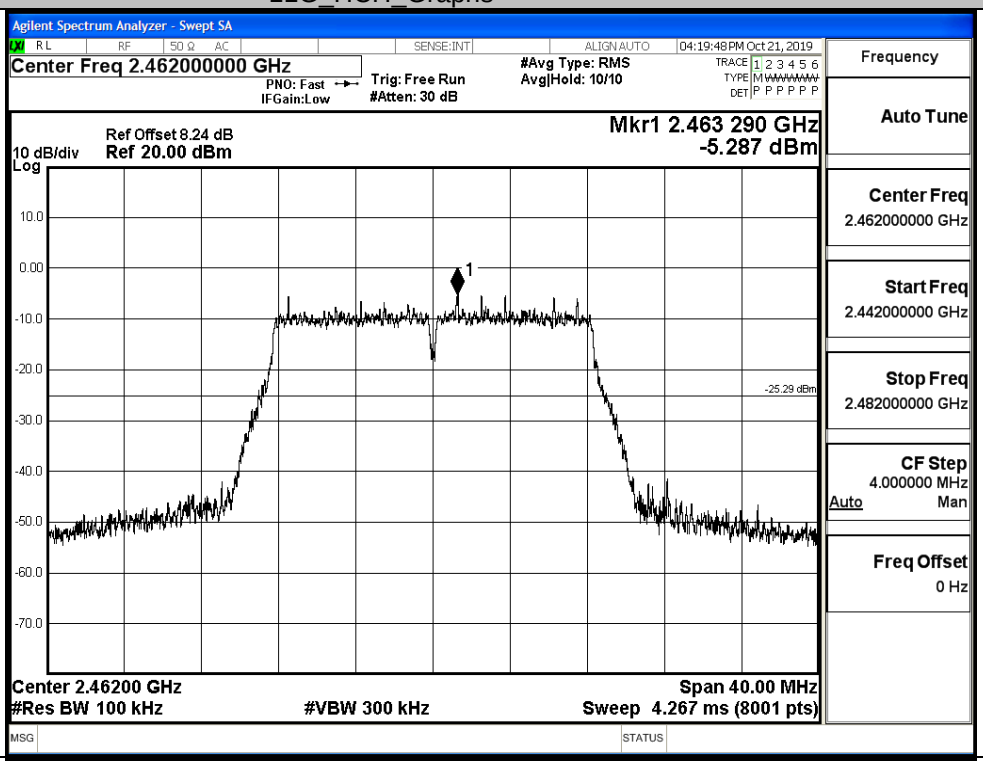
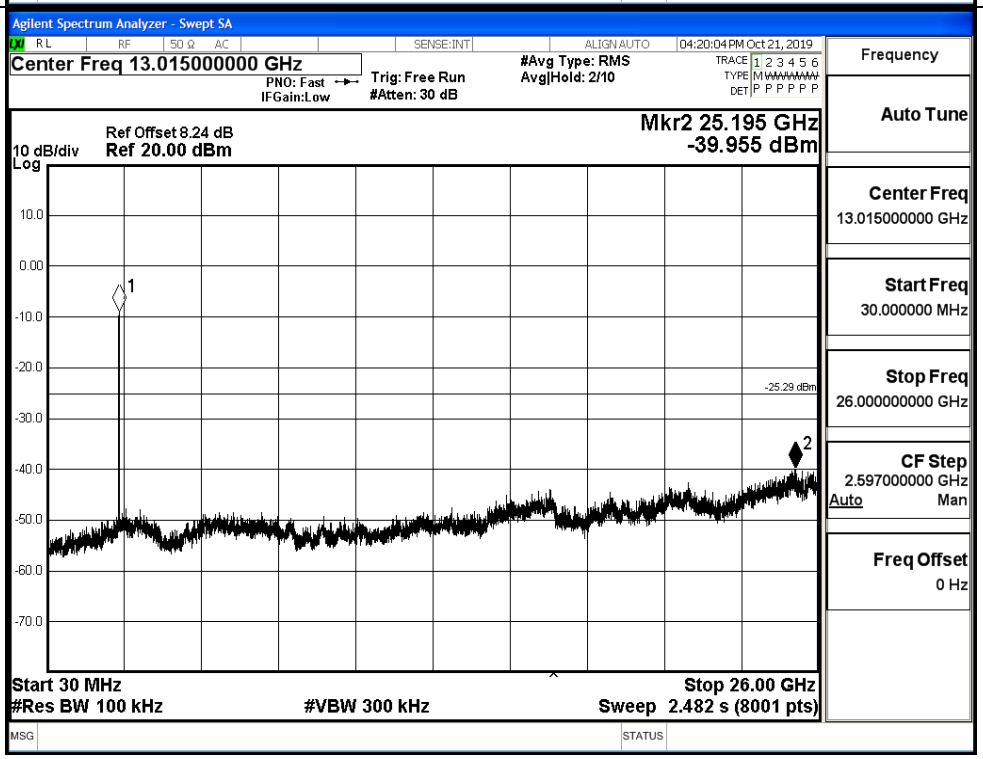
11B_LCH_Graphs		
Pref/11B/LCH		
Puw/11B/LCH		

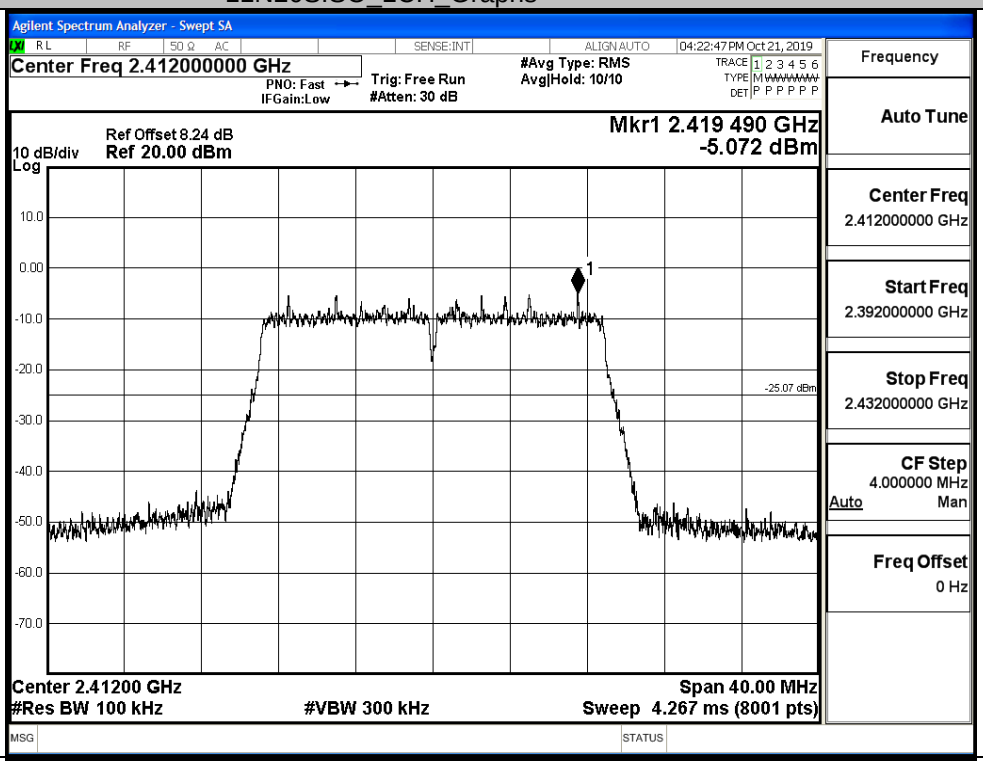
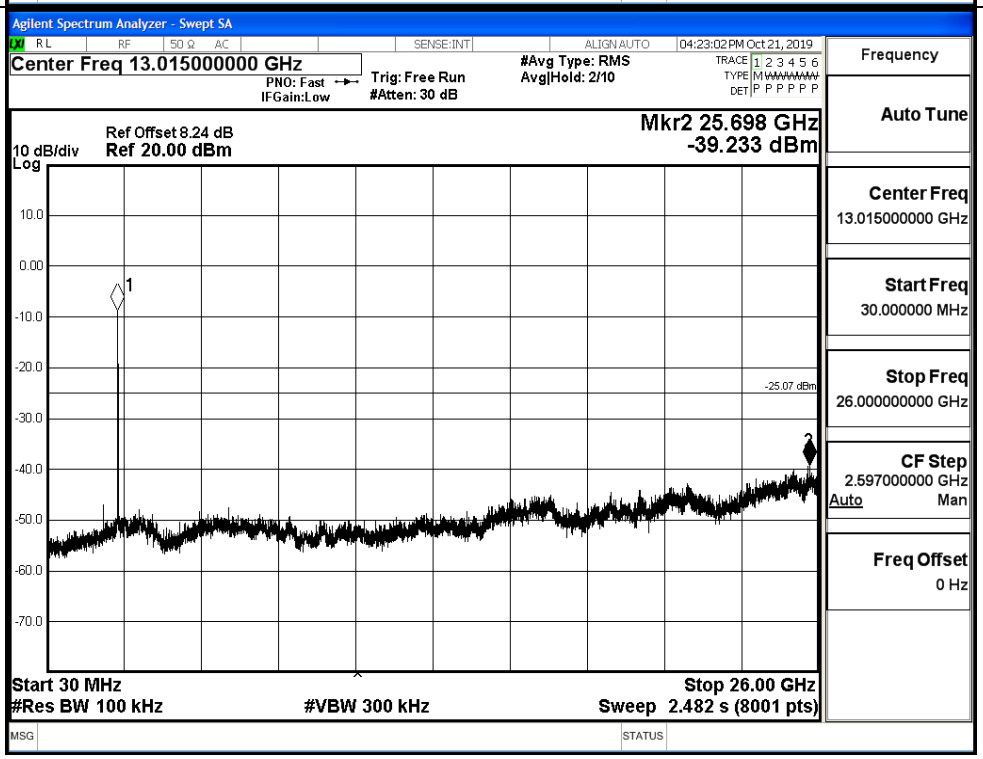
11B_MCH_Graphs		
Pref/11B/MCH		
Puw/11B/MCH		

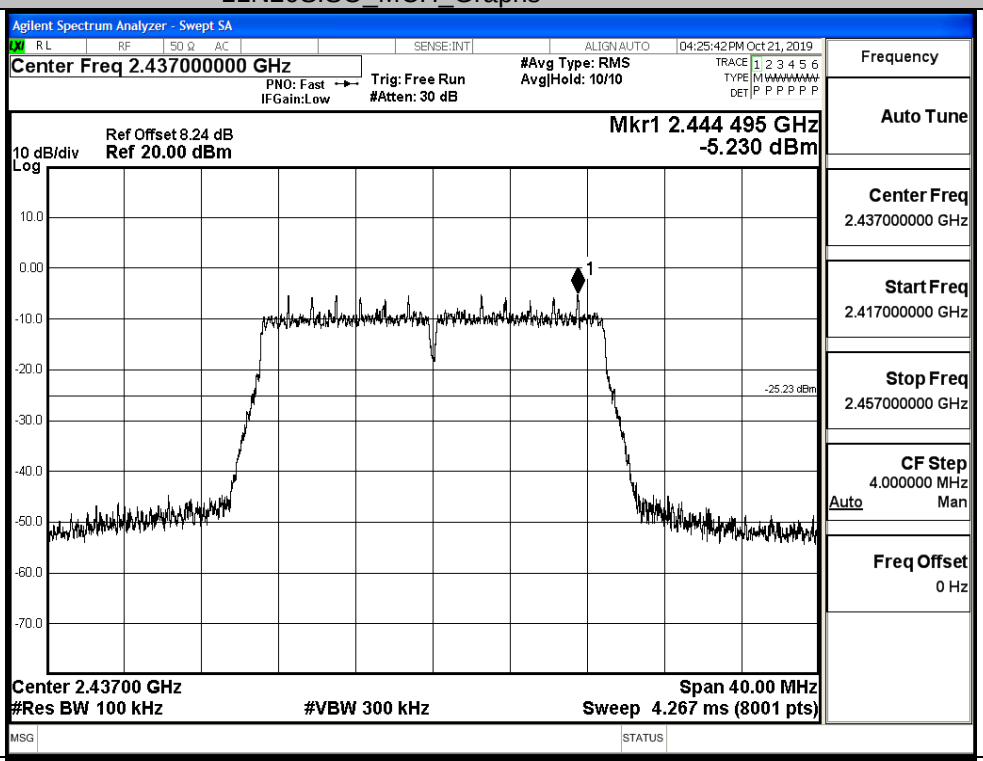
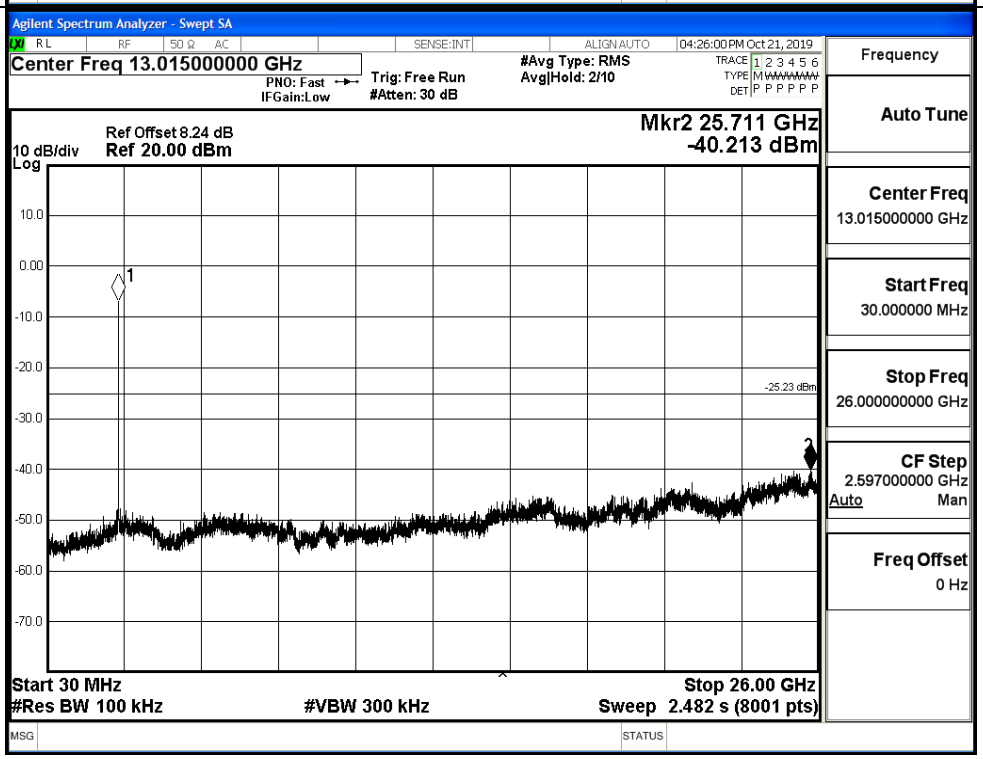
11B_HCH_Graphs		
Pref/11B/HCH		
Puw/11B/HCH		

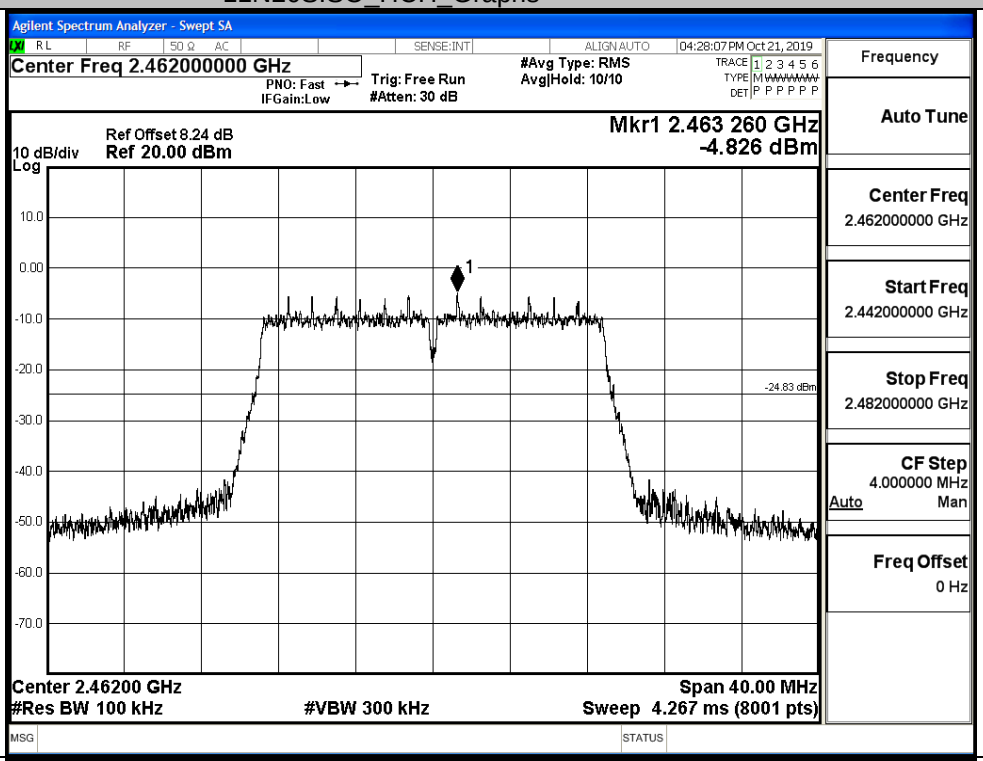
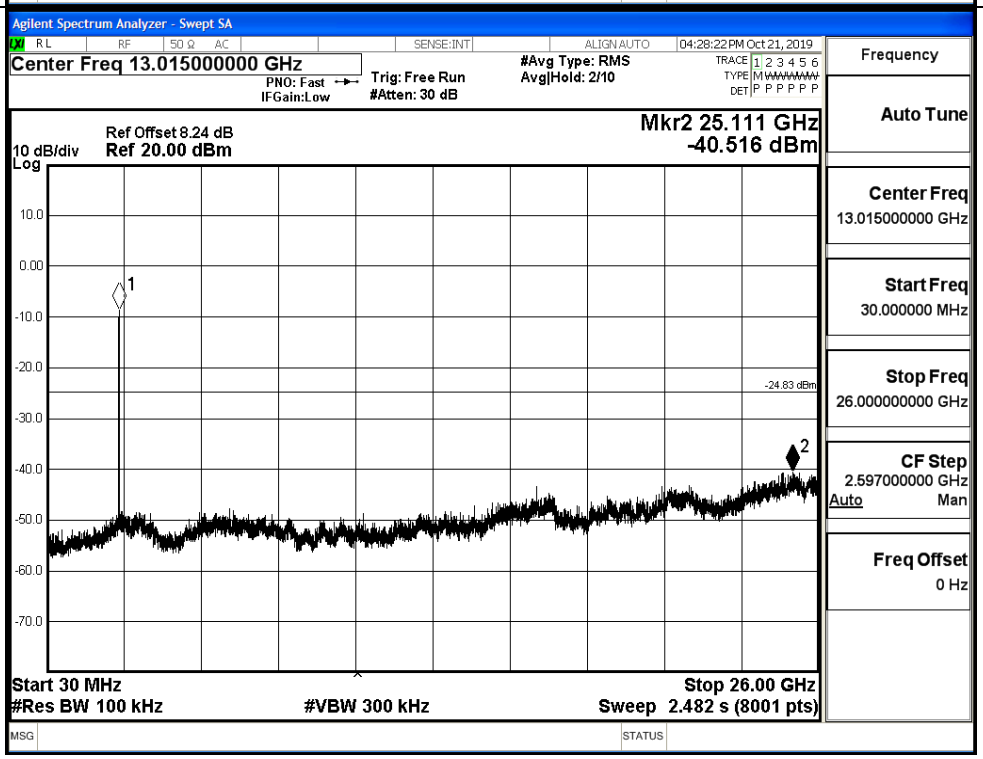
11G_LCH_Graphs		
Pref/11G/LCH		
Puw/11G/LCH		

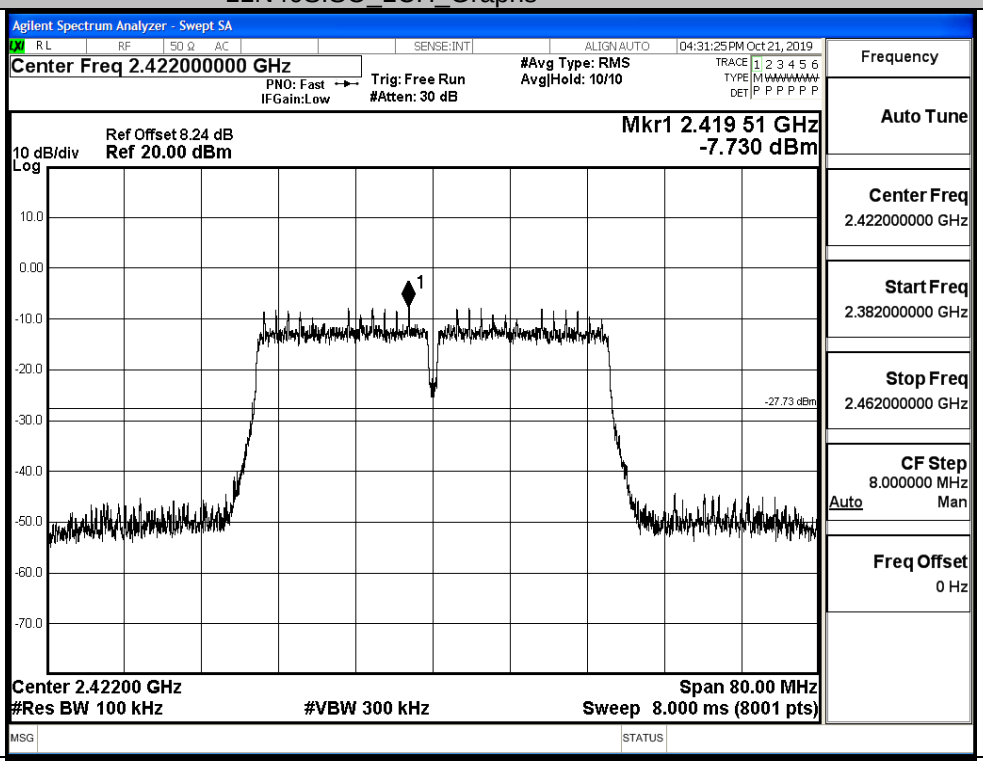
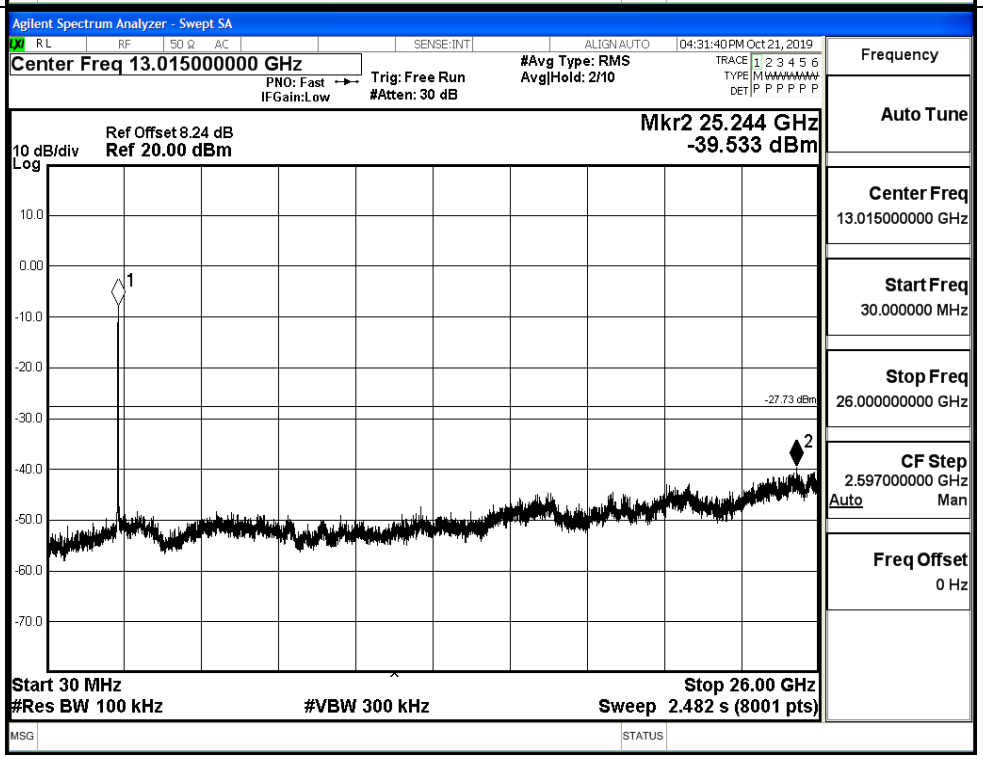
11G_MCH_Graphs		
Pref/11G/MCH		
Puw/11G/MCH		

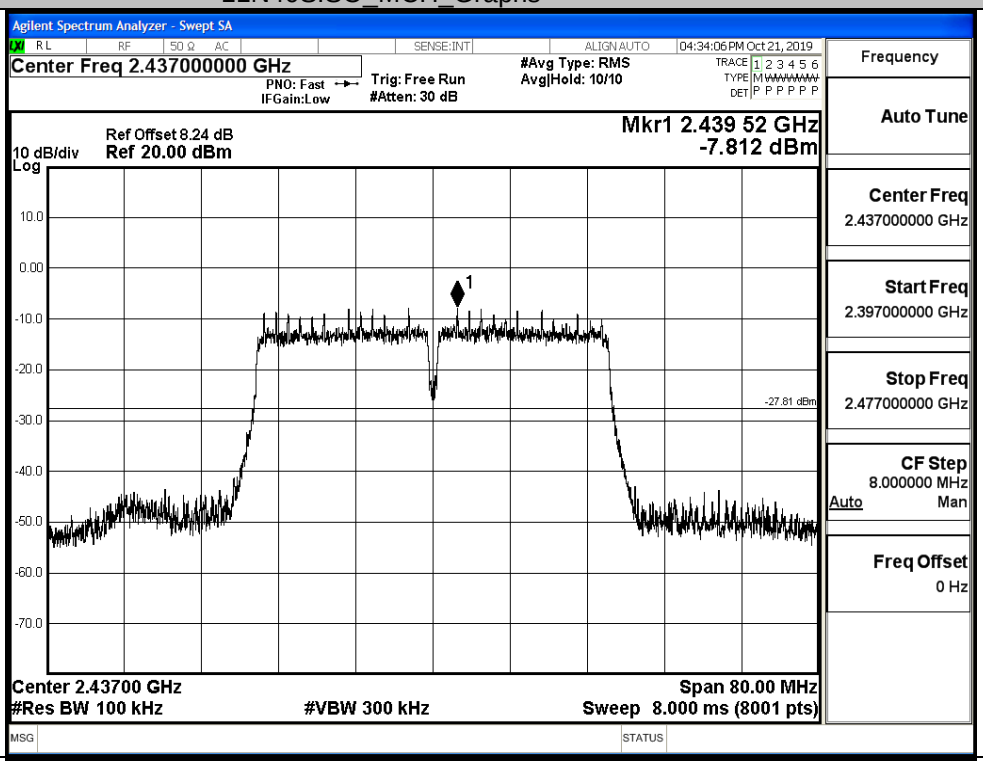
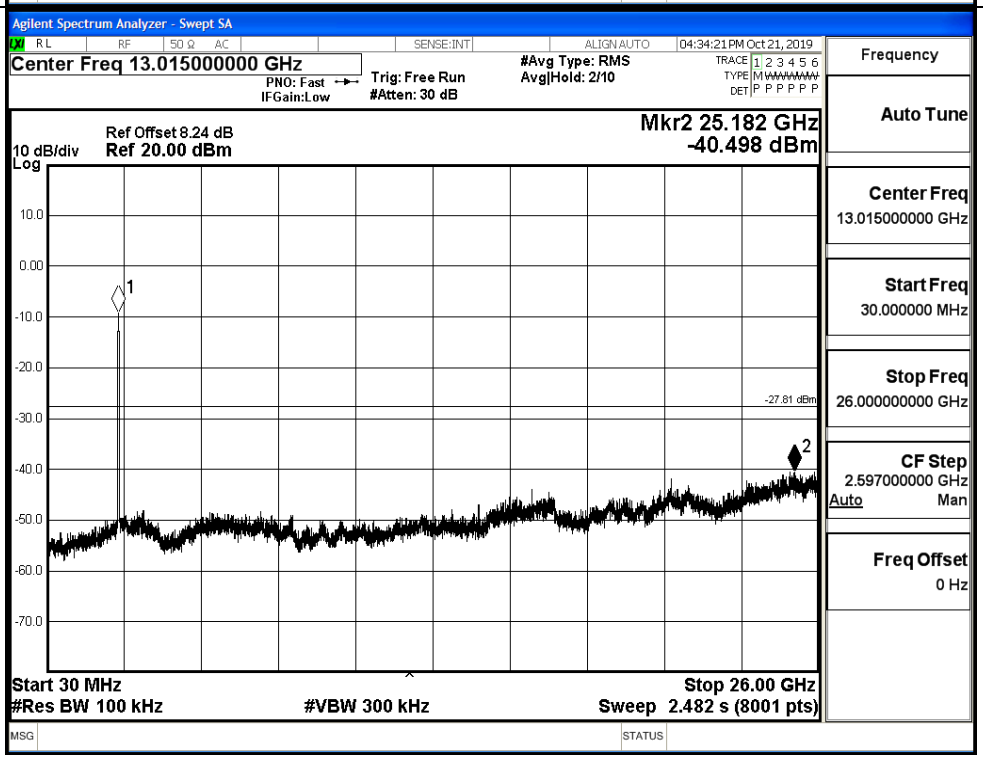
11G_HCH_Graphs		
Pref/11G/HCH		
Puw/11G/HCH		

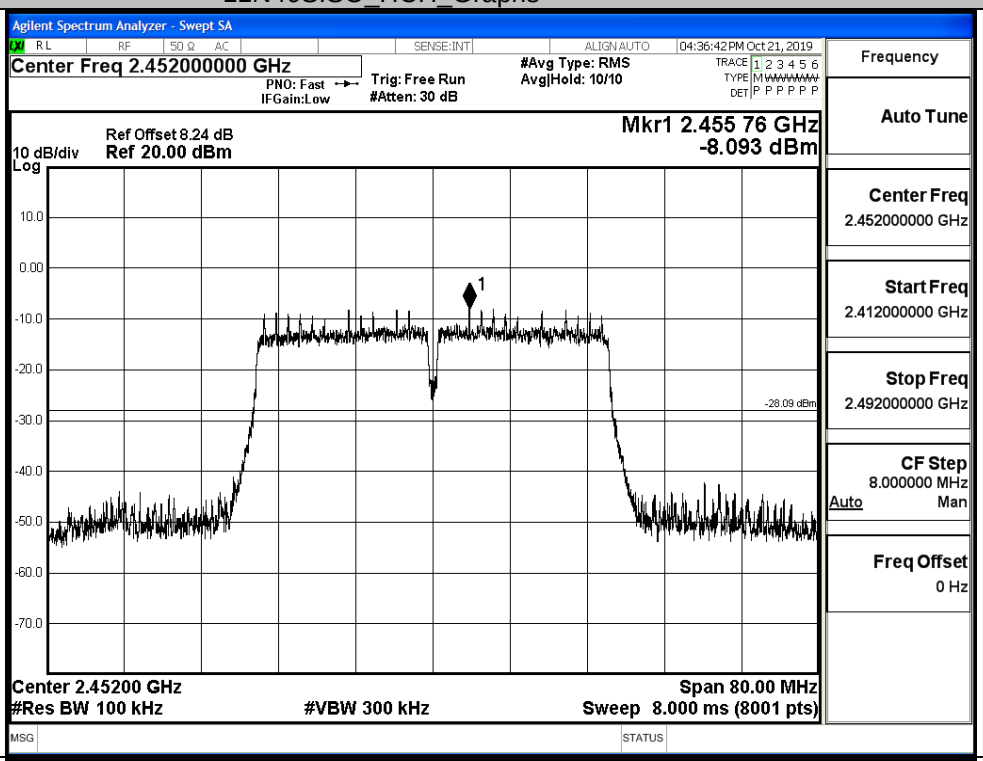
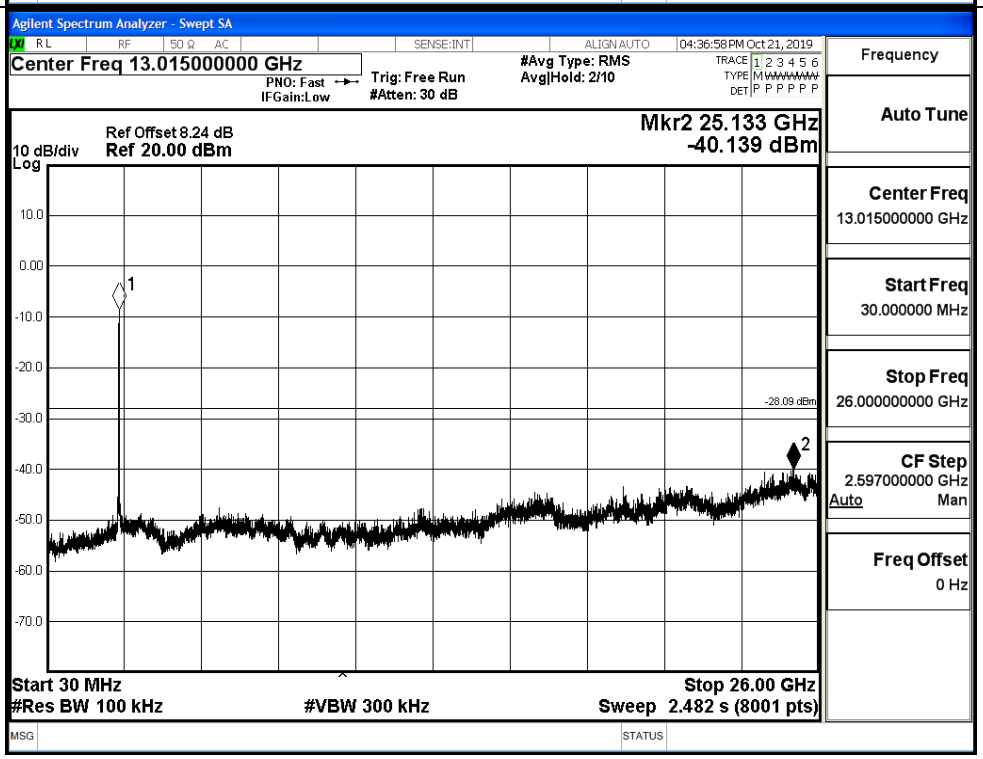
11N20SISO_LCH_Graphs		
Pref/11N20SISO/LCH		
Puw/11N20SISO/LCH		

11N20SISO_MCH_Graphs	
Pref/11N20 SISO/MCH	
Puw/11N20 SISO/MCH	

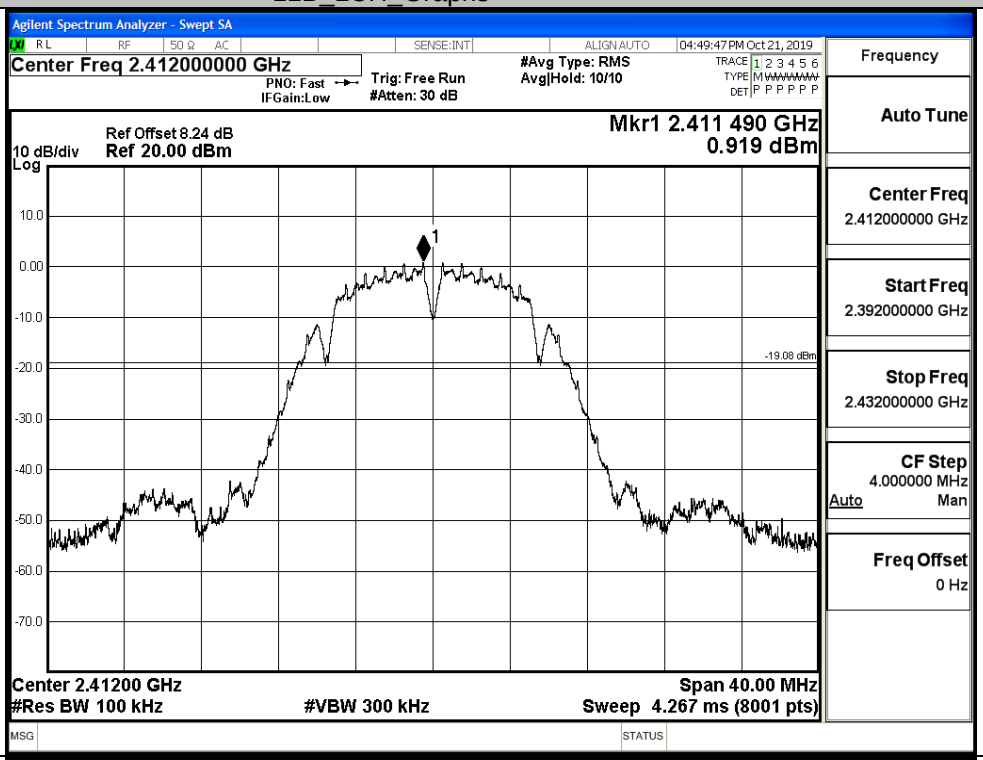
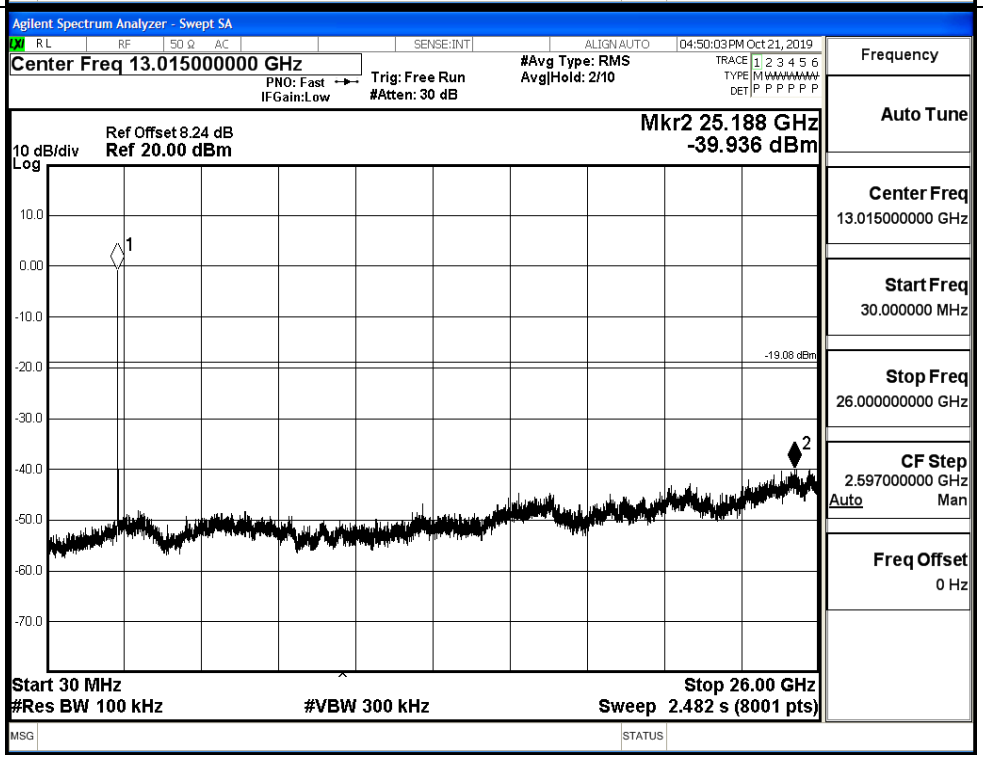
11N20SISO_HCH_Graphs	
Pref/11N20 SISO/HCH	
Puw/11N20 SISO/HCH	

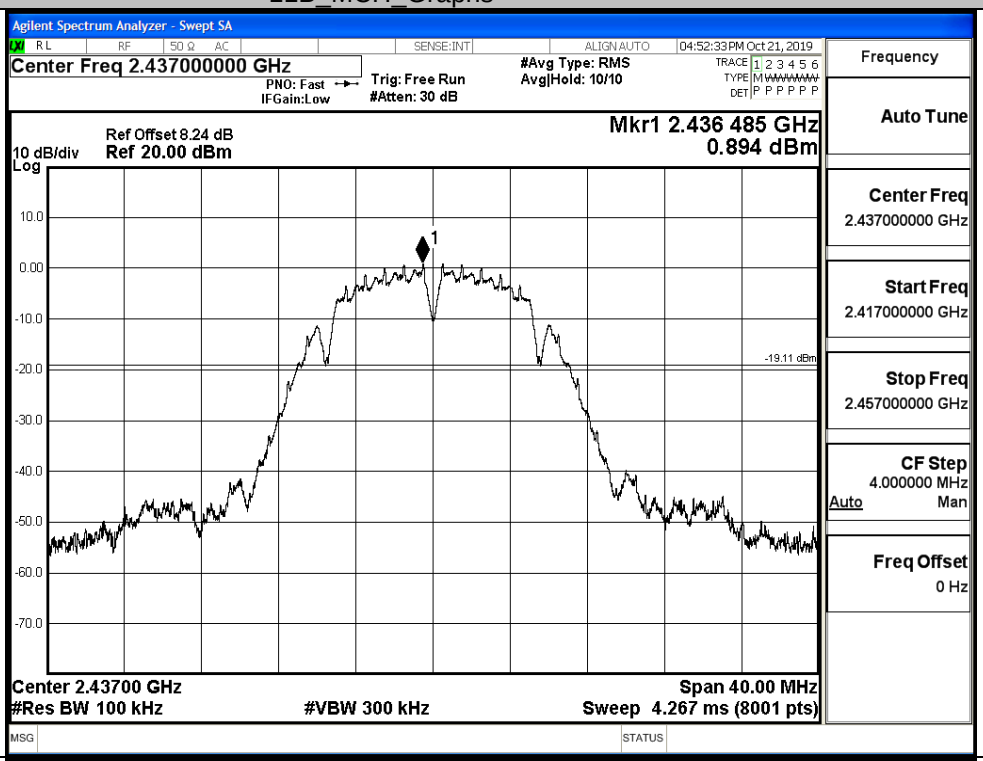
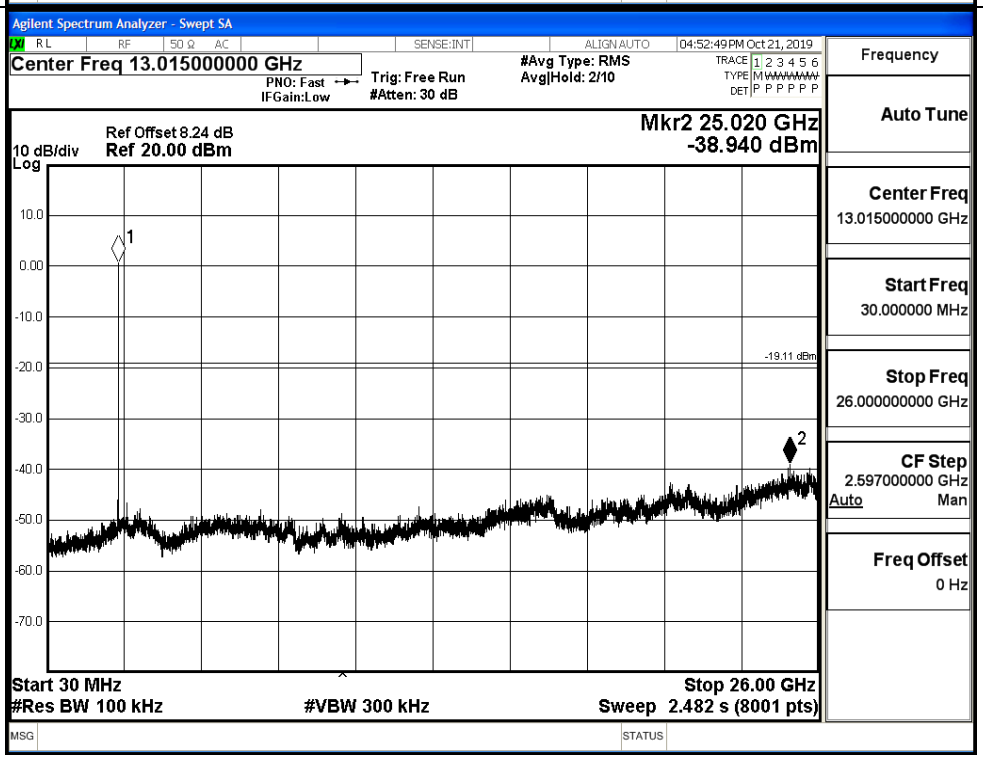
11N40SISO_LCH_Graphs	
Pref/11N40 SISO/LCH	
Puw/11N40 SISO/LCH	

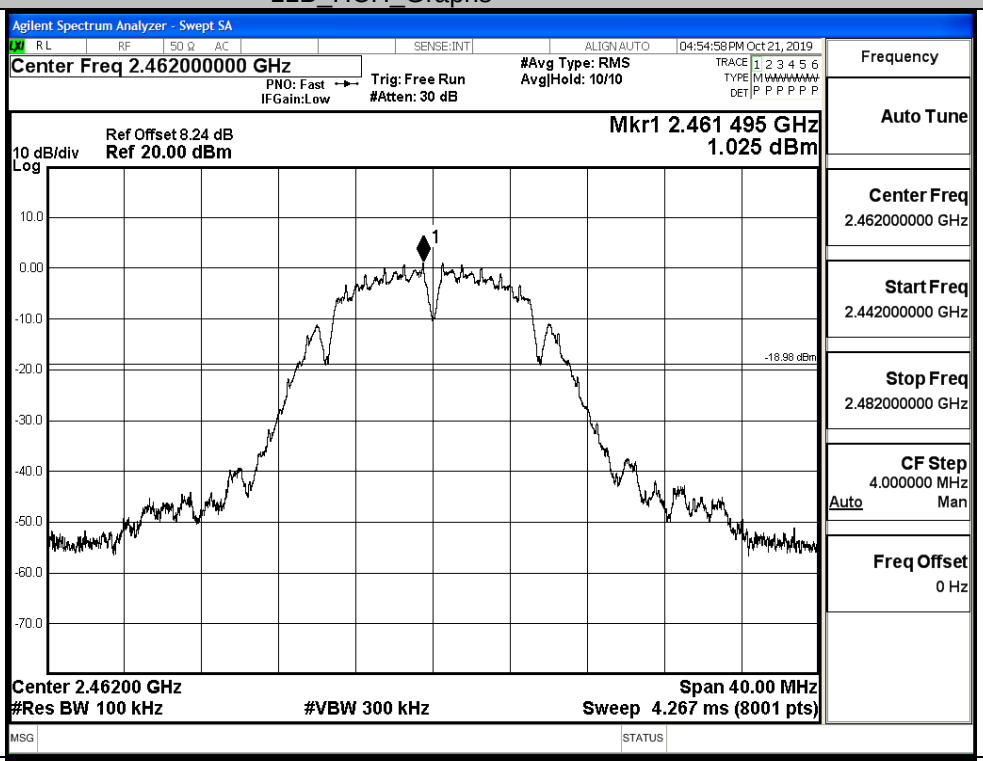
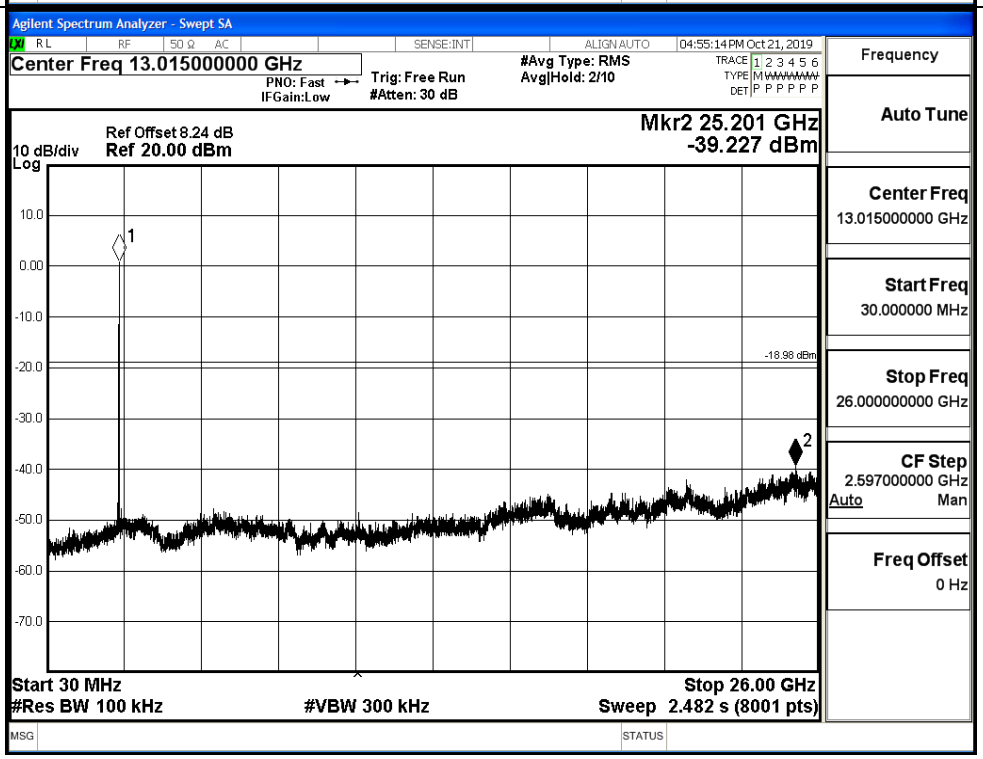
11N40SISO_MCH_Graphs	
Pref/11N40 SISO/MCH	
Puw/11N40 SISO/MCH	

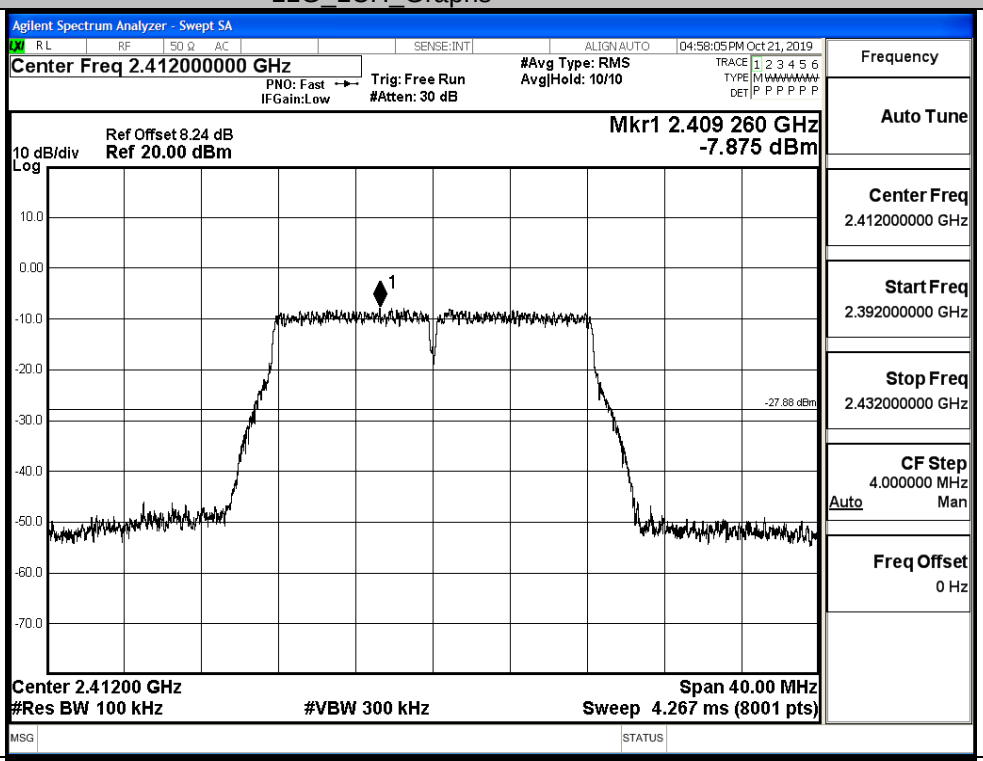
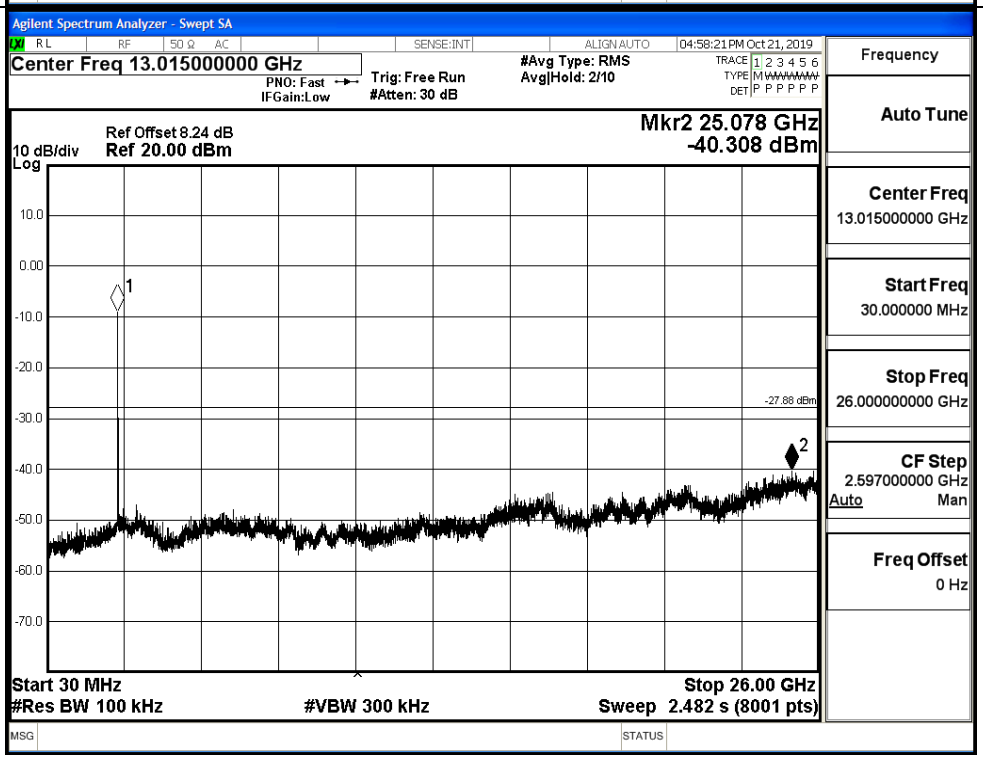
11N40SISO_HCH_Graphs	
Pref/11N40 SISO/HCH	
Puw/11N40 SISO/HCH	

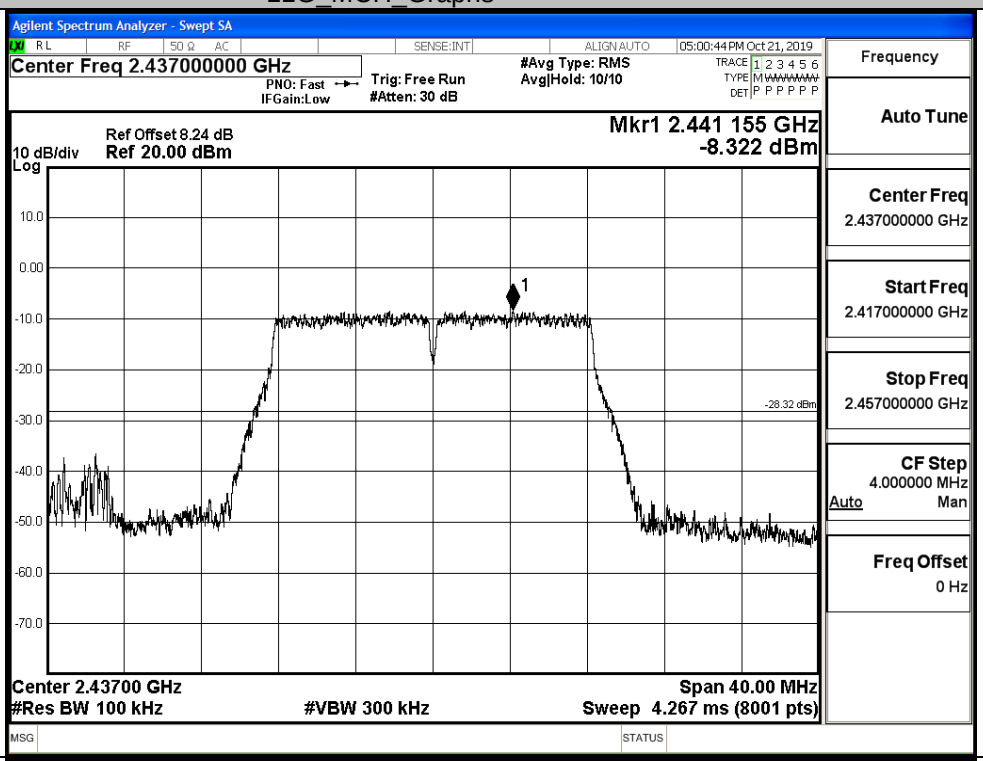
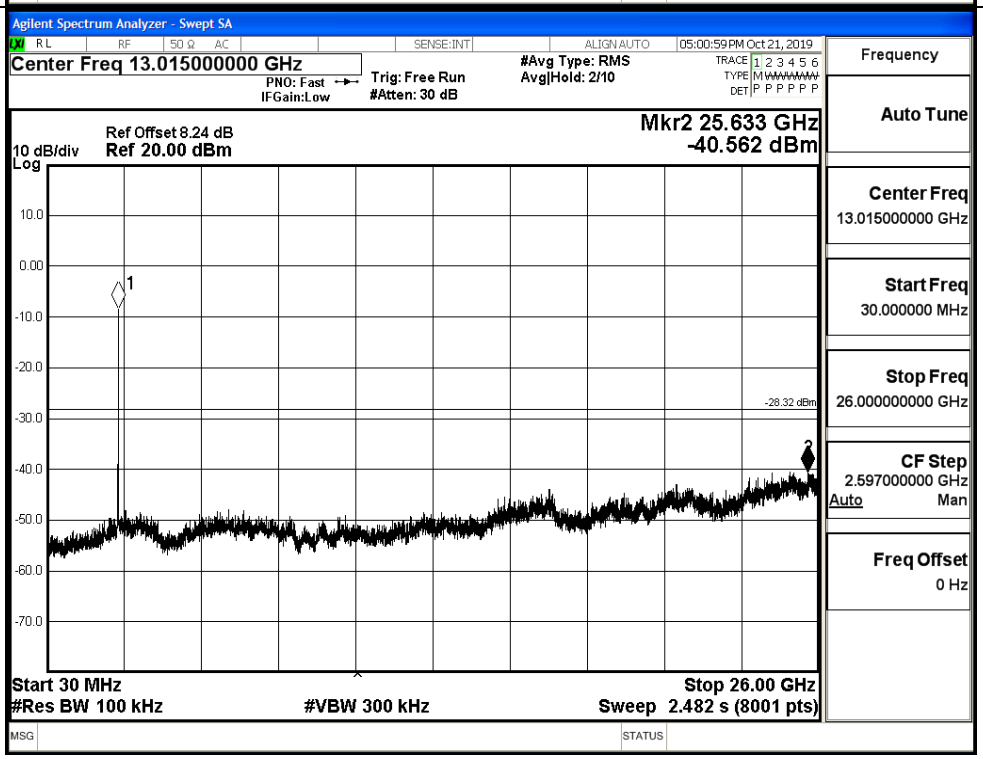
Ant_2

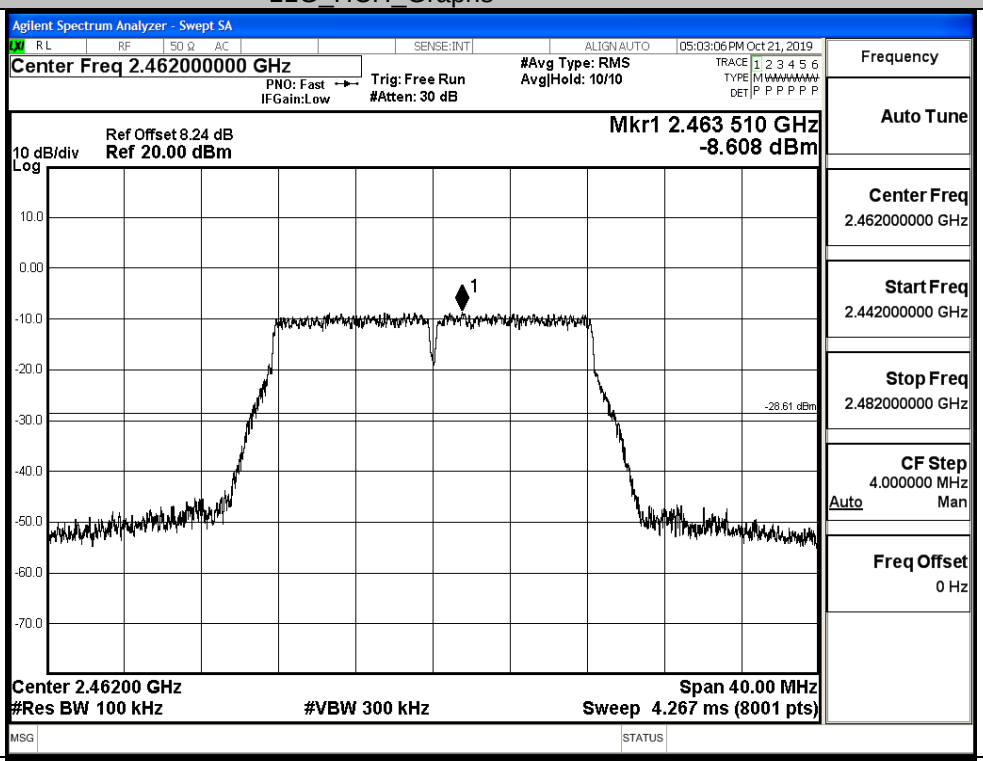
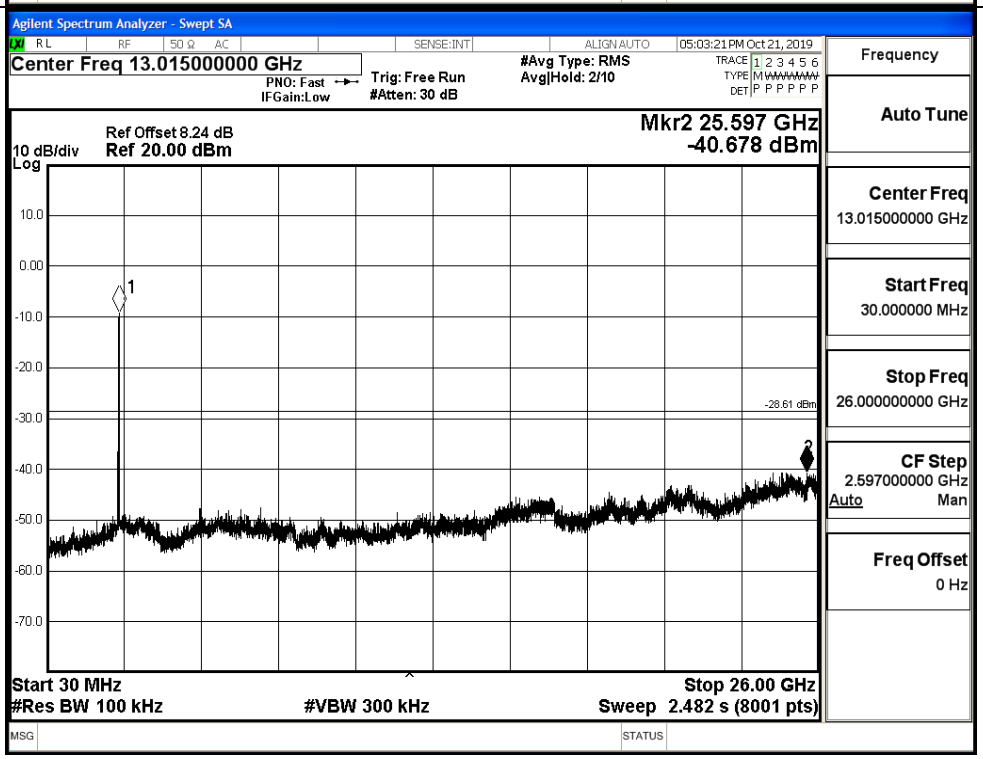
11B_LCH_Graphs		
Pref/11B/LCH		
Puw/11B/LCH		

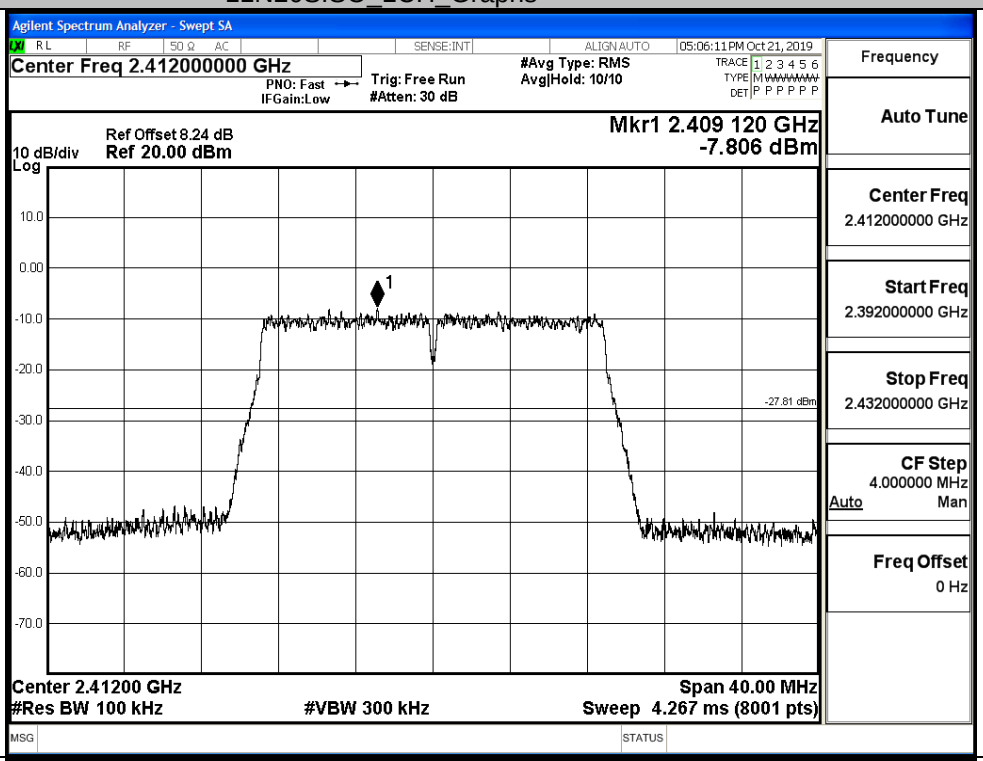
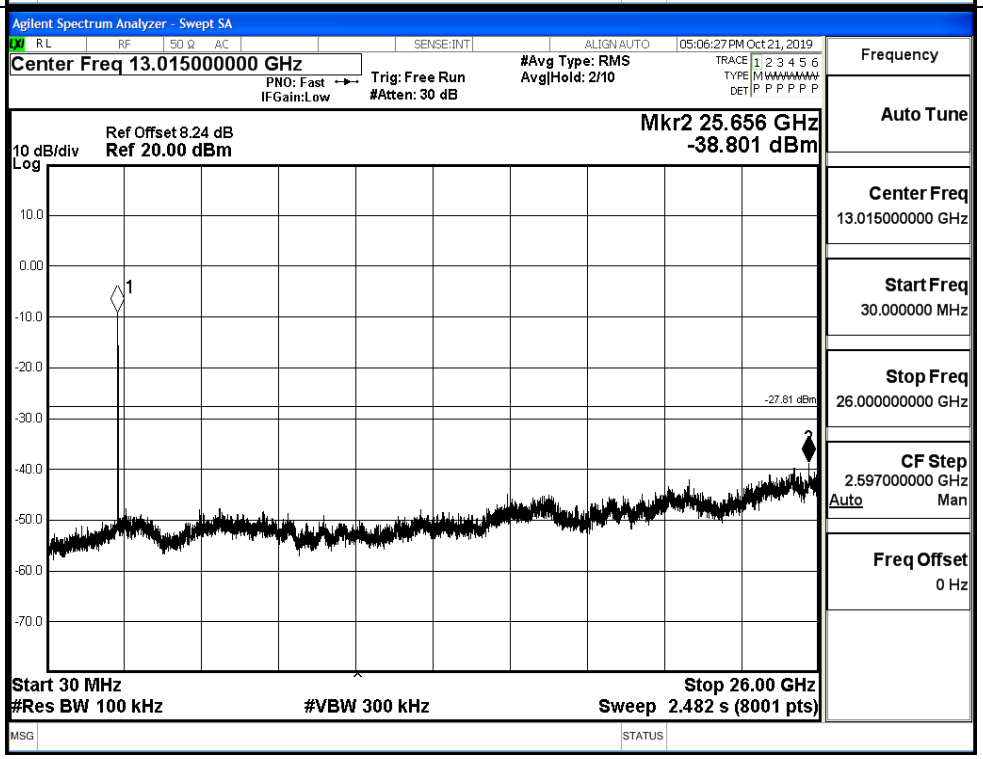
11B_MCH_Graphs		
Pref/11B/MCH		
Puw/11B/MCH		

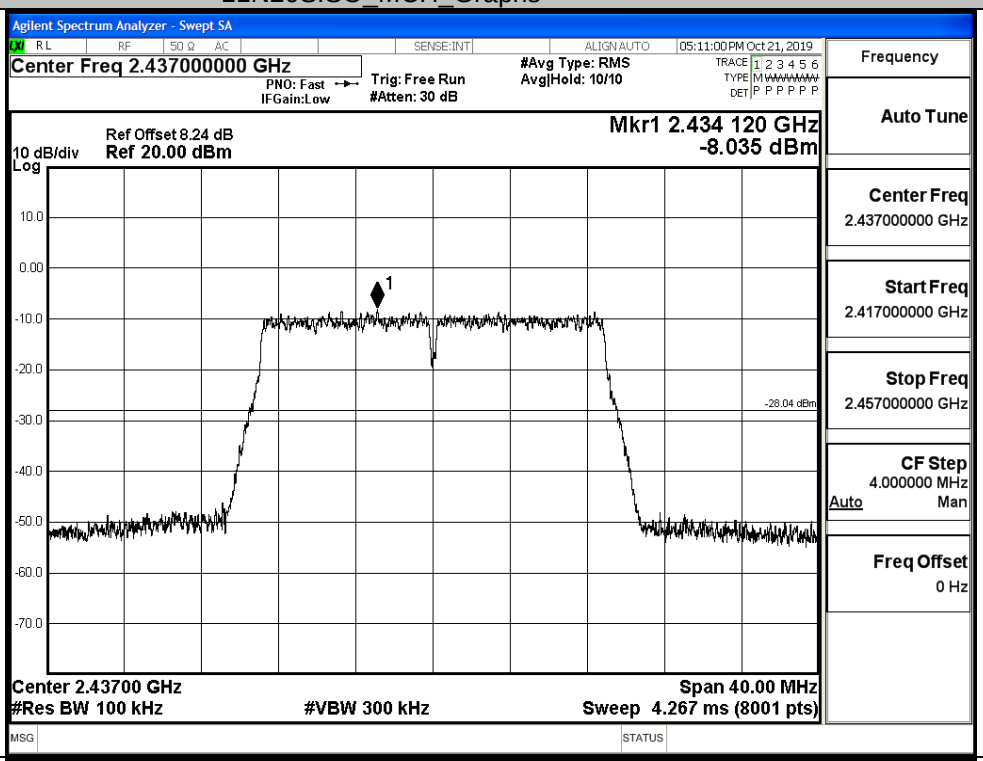
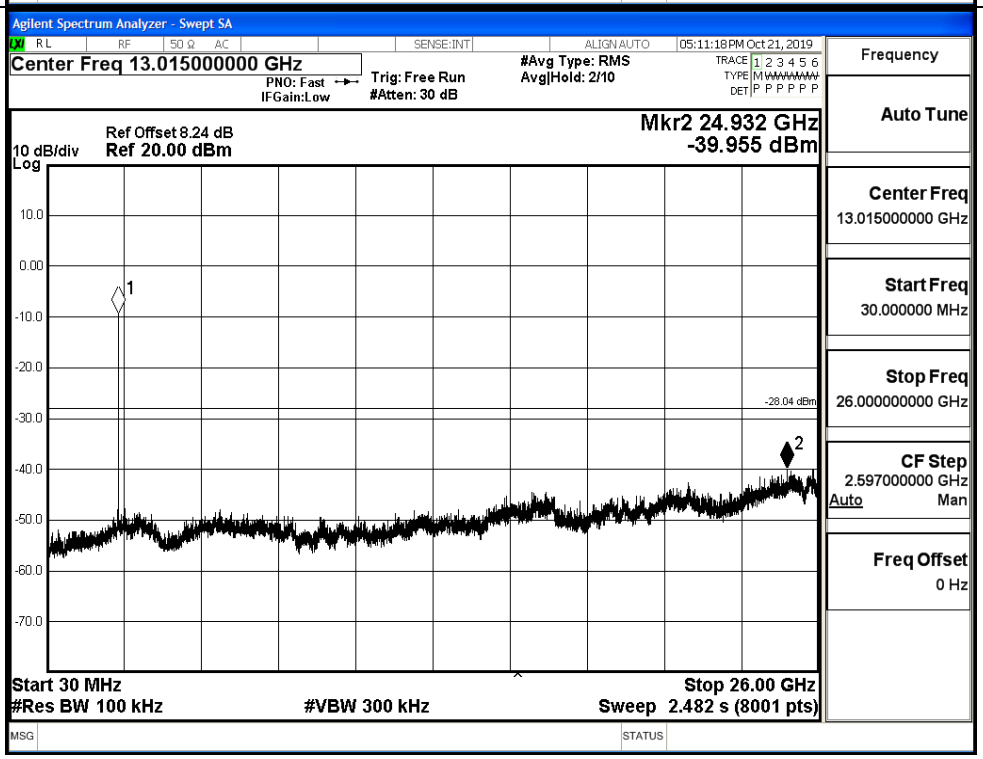
11B_HCH_Graphs		
Pref/11B/HCH		
Puw/11B/HCH		

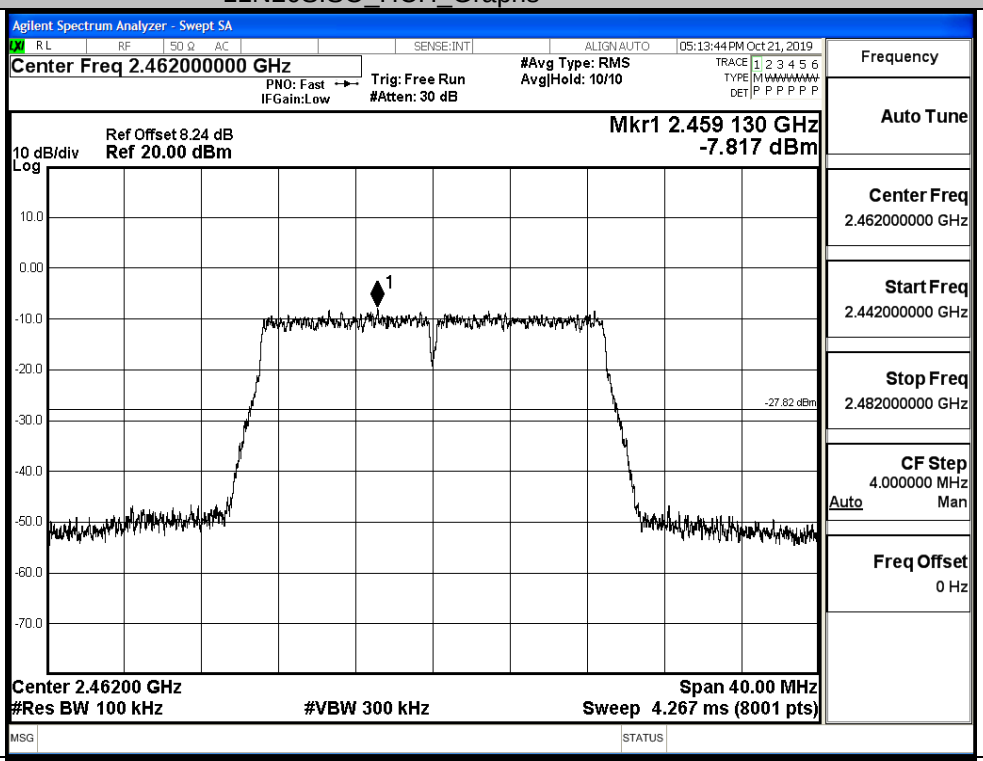
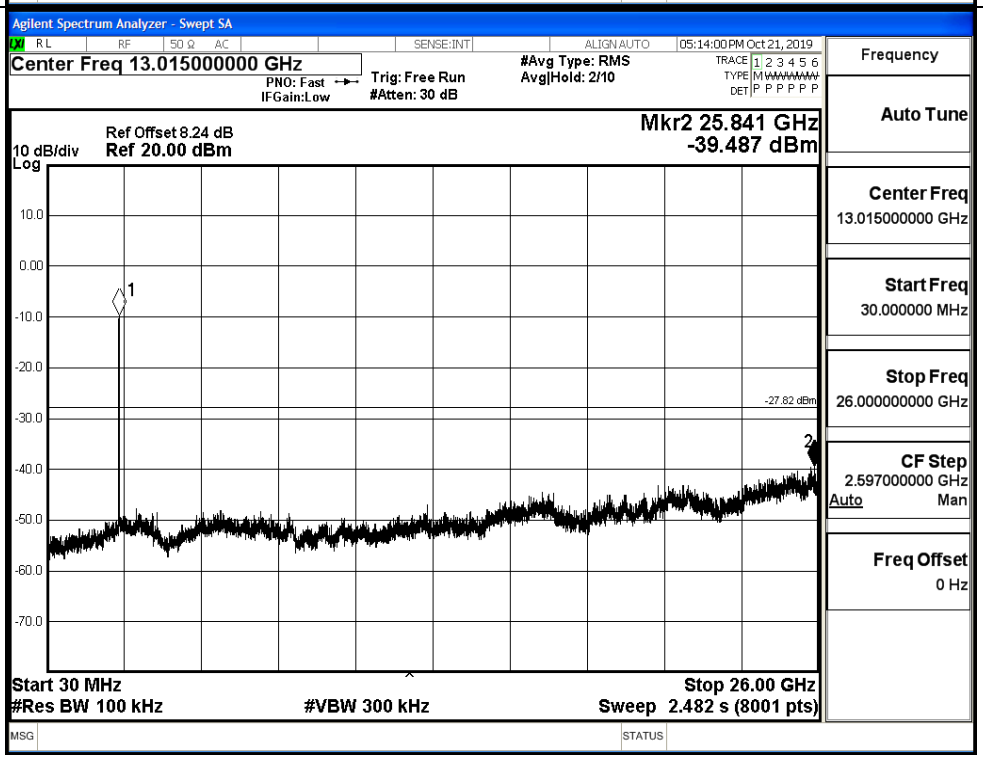
11G_LCH_Graphs		
Pref/11G/LCH		
Puw/11G/LCH		

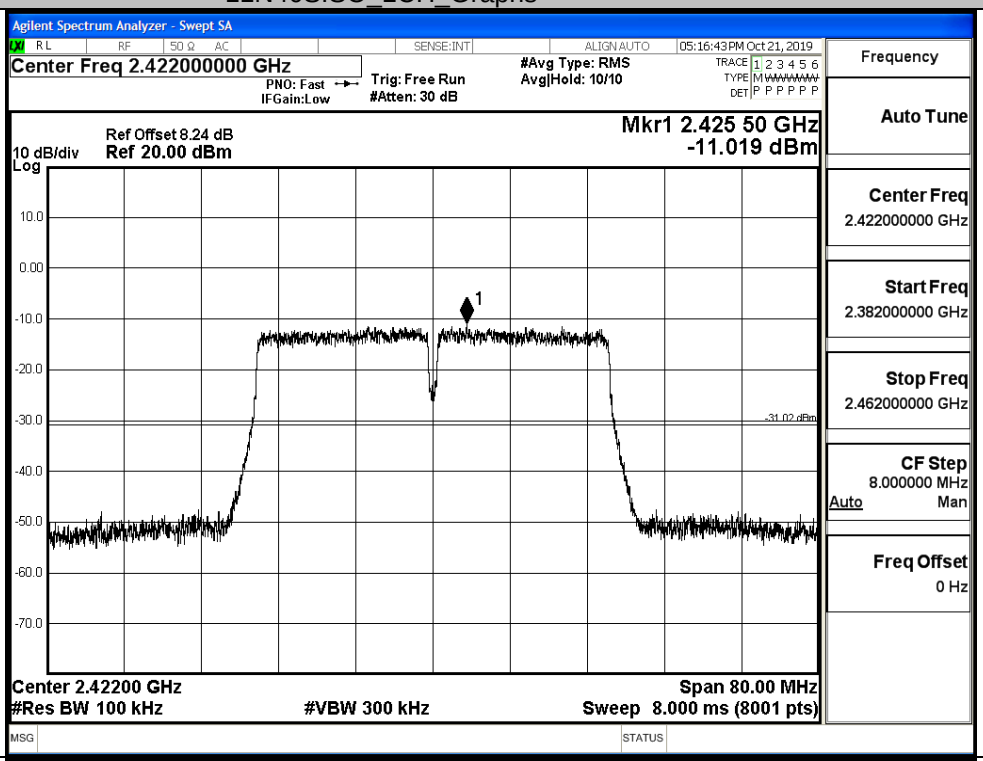
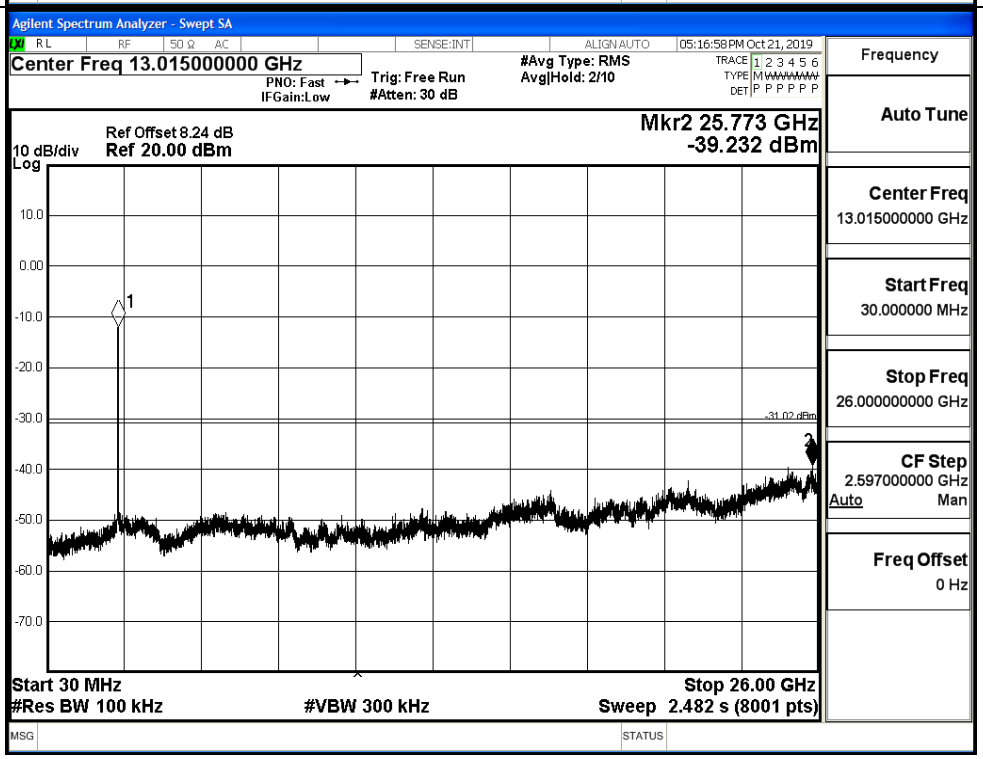
11G_MCH_Graphs	
Pref/11G/MCH	
Puw/11G/MCH	

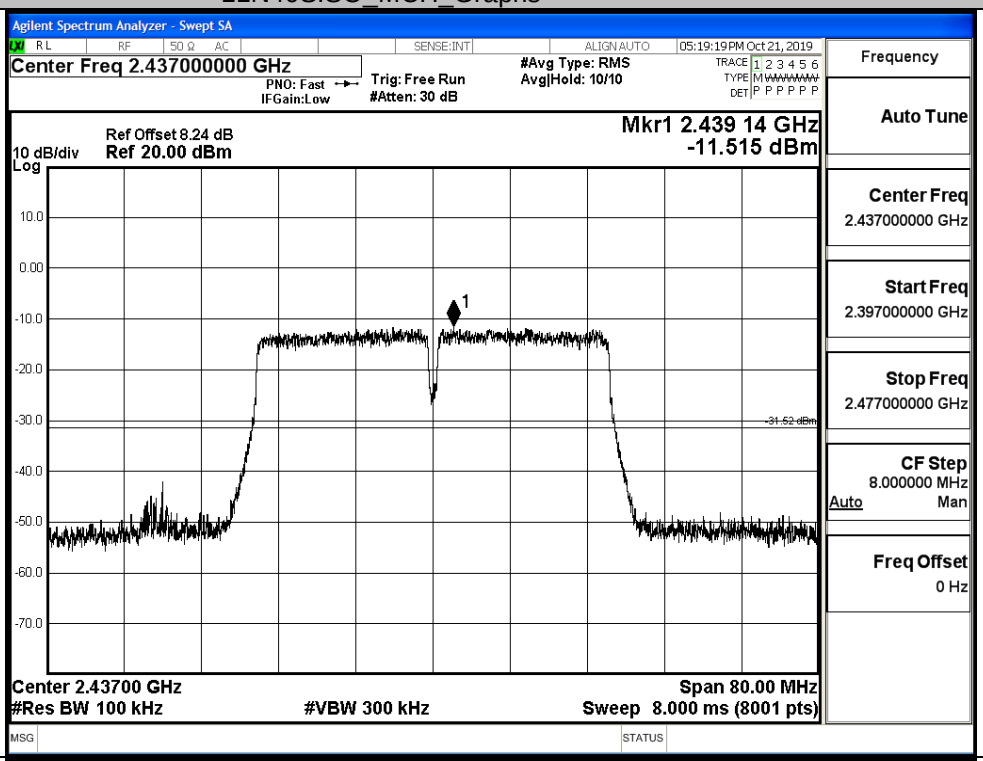
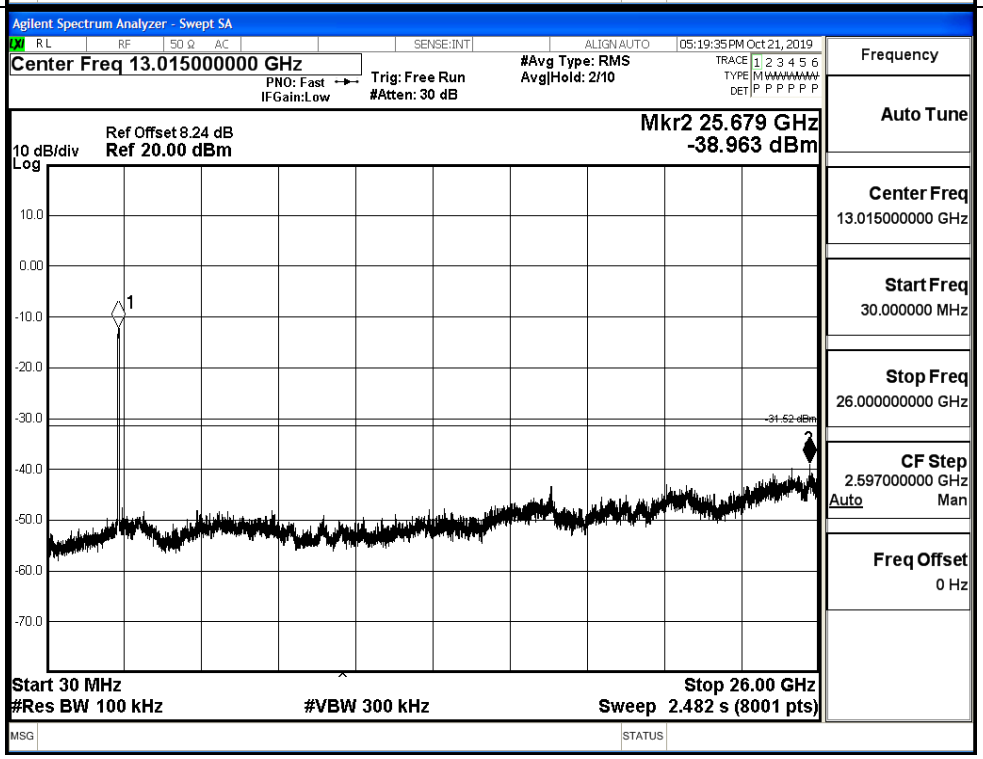
11G_HCH_Graphs		
Pref/11G/HCH		
Puw/11G/HCH		

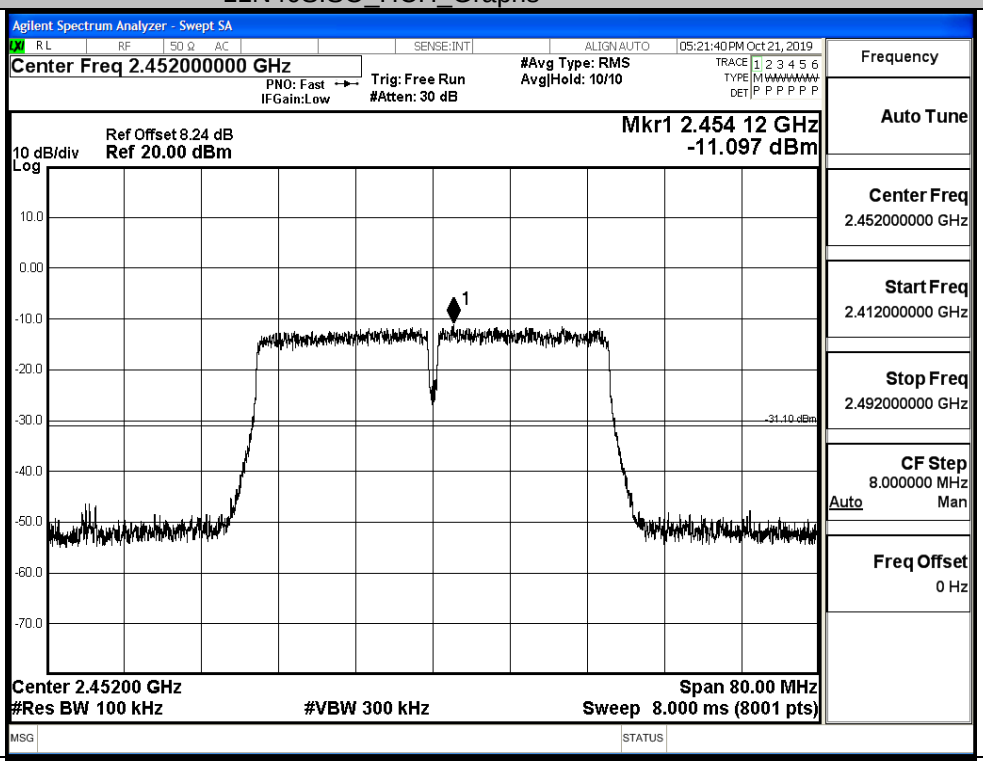
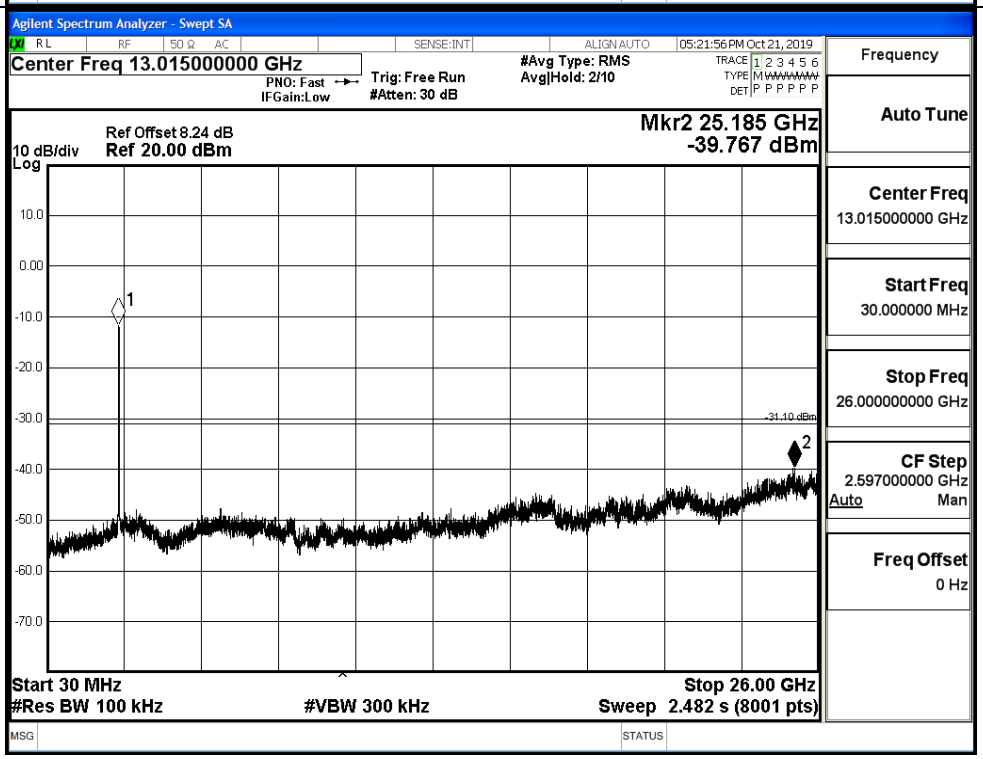
11N20SISO_LCH_Graphs		
Pref/11N20SISO/LCH		
Puw/11N20SISO/LCH		

11N20SISO_MCH_Graphs	
Pref/11N20 SISO/MCH	
Puw/11N20 SISO/MCH	

11N20SISO_HCH_Graphs	
Pref/11N20 SISO/HCH	
Puw/11N20 SISO/HCH	

11N40SISO_LCH_Graphs	
Pref/11N40 SISO/LCH	
Puw/11N40 SISO/LCH	

11N40SISO_MCH_Graphs	
Pref/11N40 SISO/MCH	
Puw/11N40 SISO/MCH	

11N40SISO_HCH_Graphs	
Pref/11N40 SISO/HCH	
Puw/11N40 SISO/HCH