Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: IPTV Set-Top Box
Trade Mark: N/A
Test Model: SML-5041W

Environmental Conditions

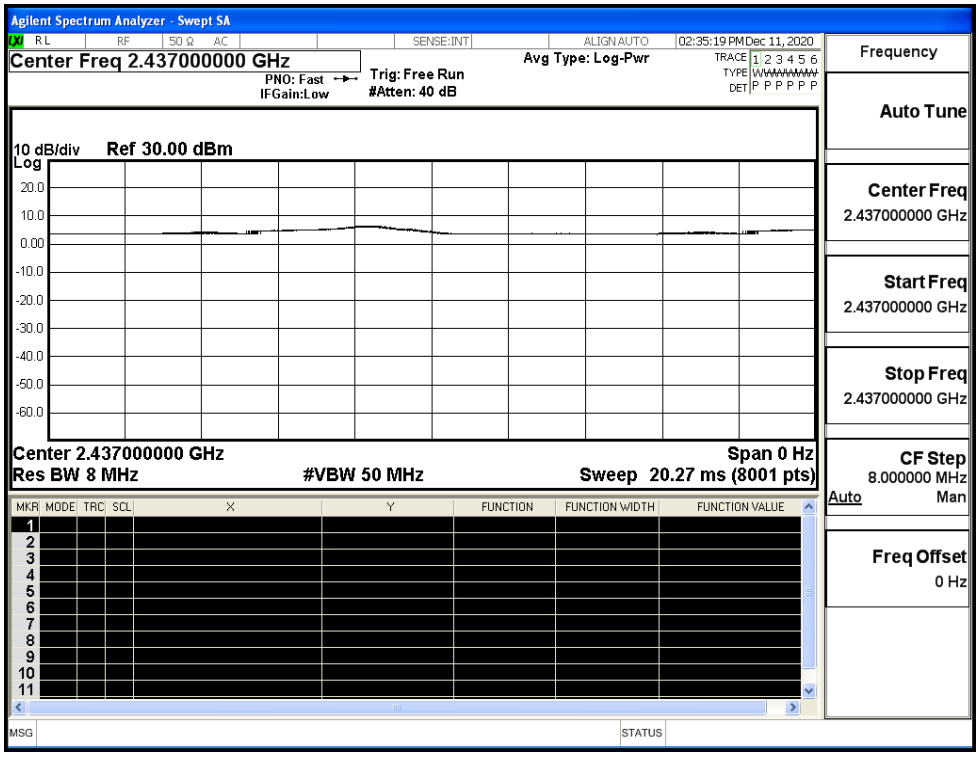
Temperature:	22.3° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

C.1 Duty Cycle

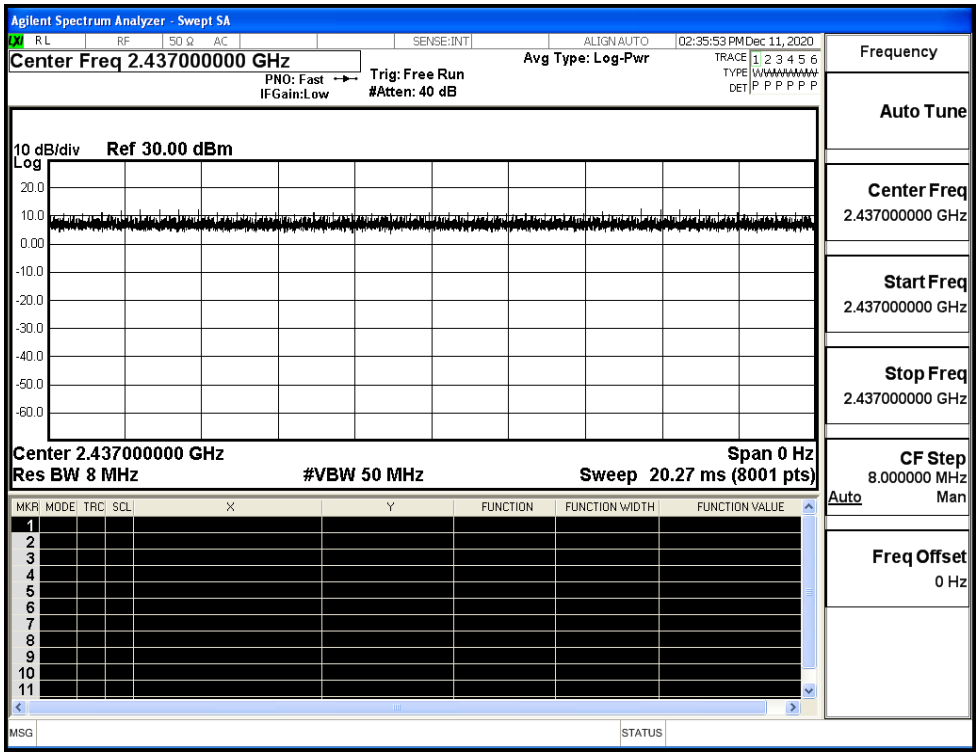
ANT0

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

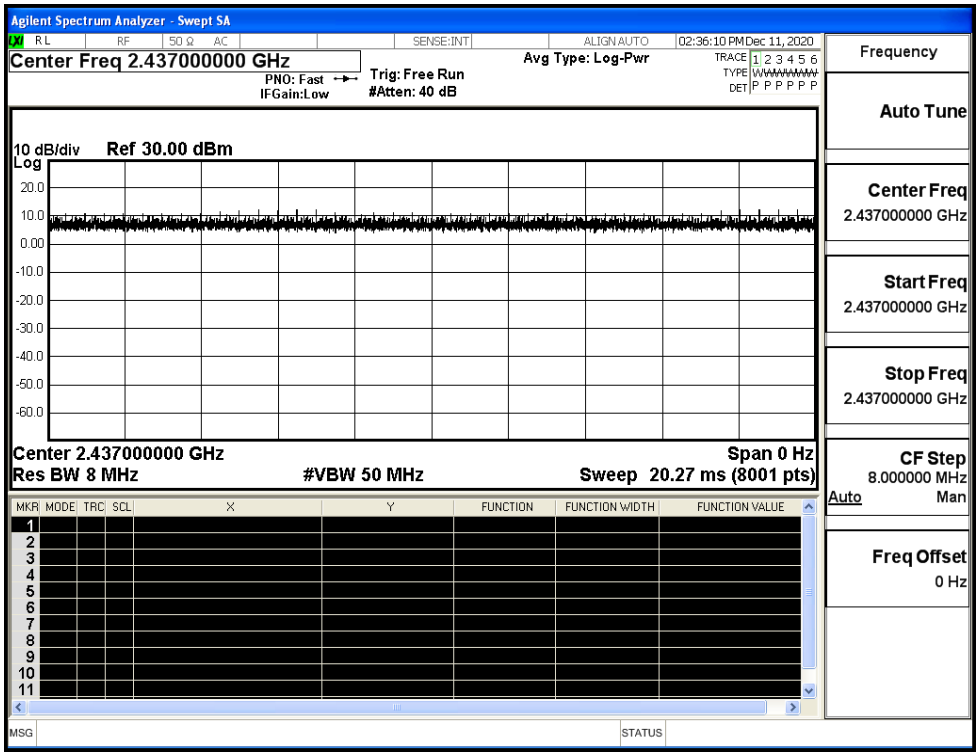
Duty Cycle_11B_2437_Ant1



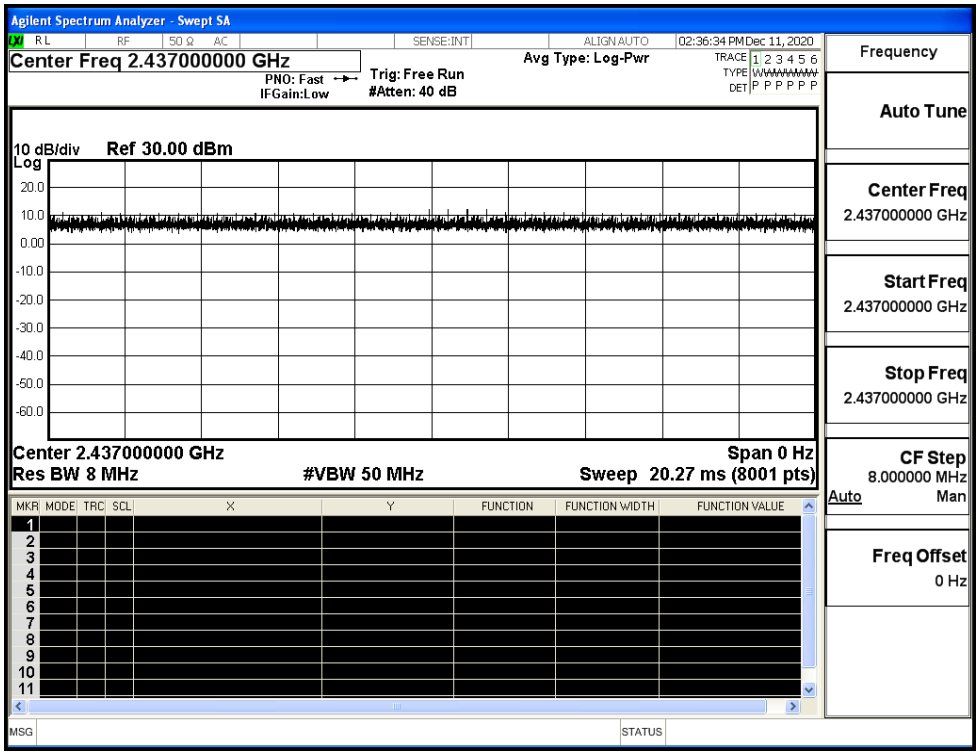
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



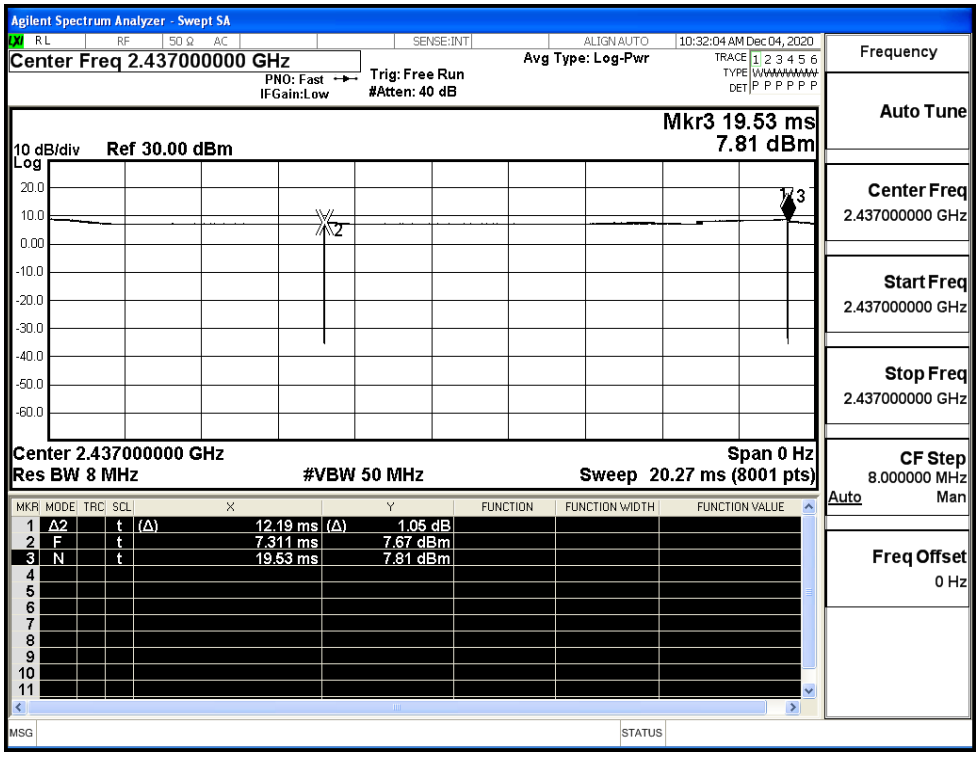
Duty Cycle_11N40SISO_2437_Ant1



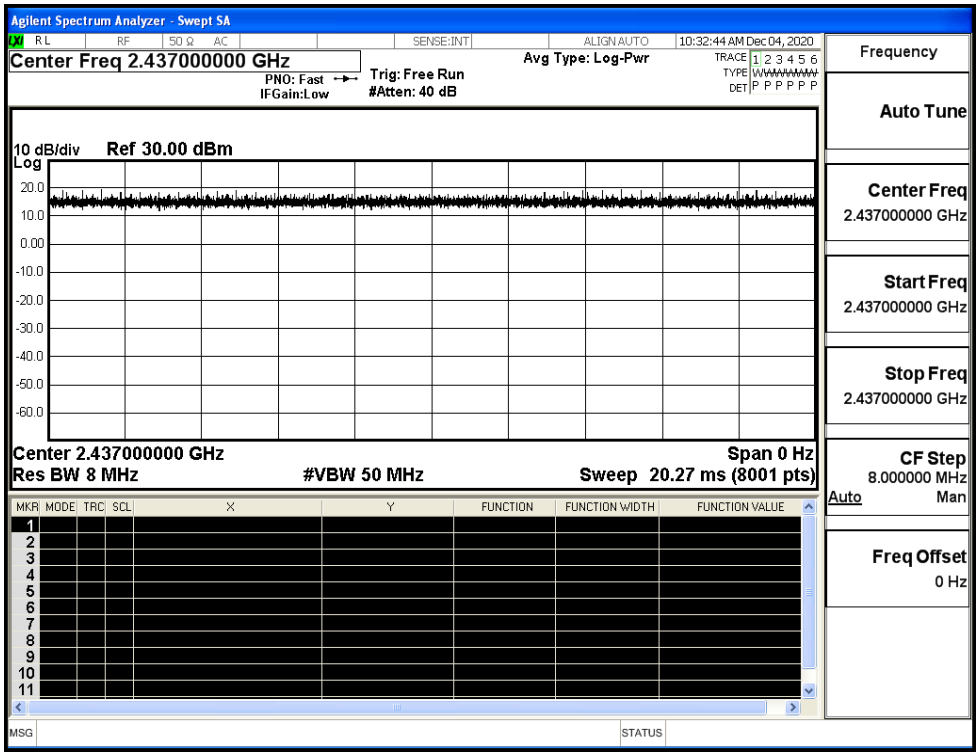
ANT1

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	99.73	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS
11N40SISO	2437	Ant1	100	PASS

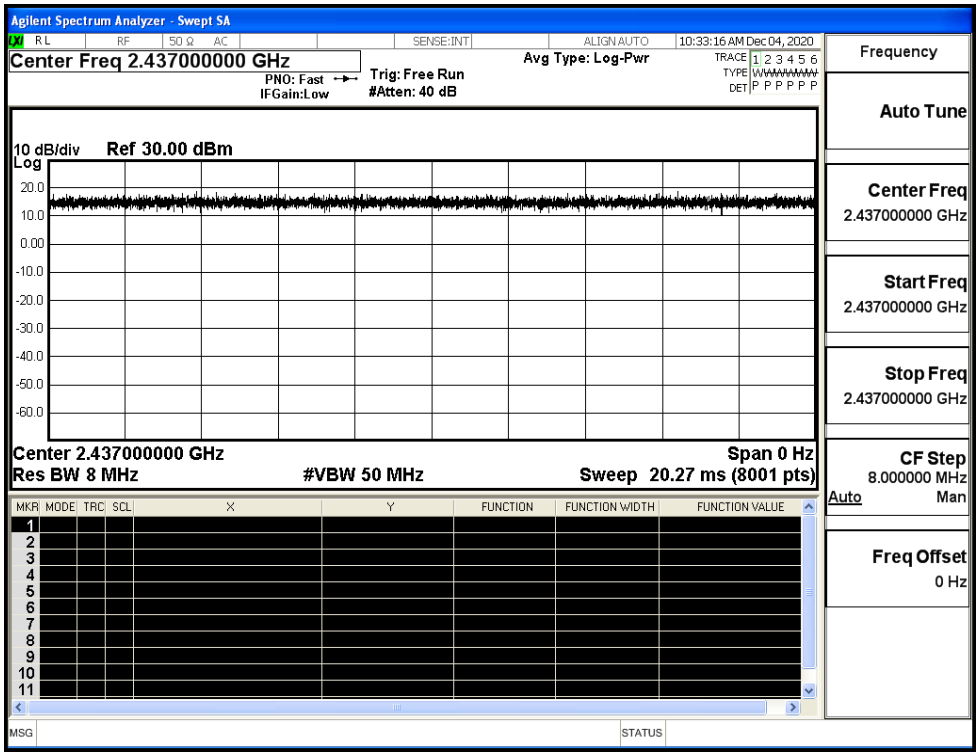
Duty Cycle_11B_2437_Ant1



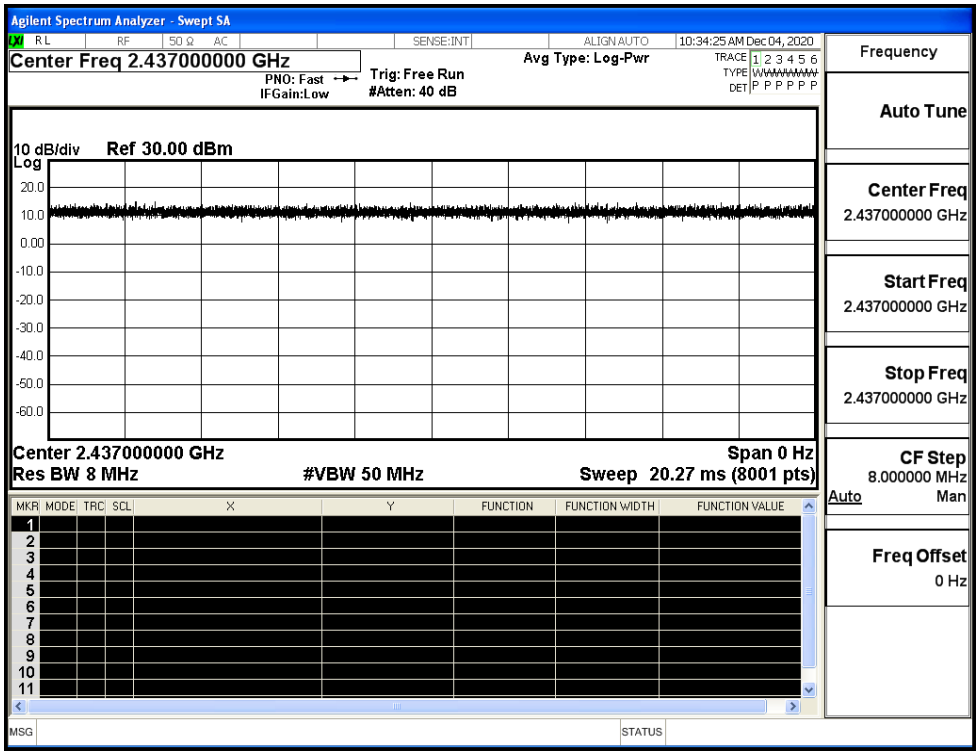
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



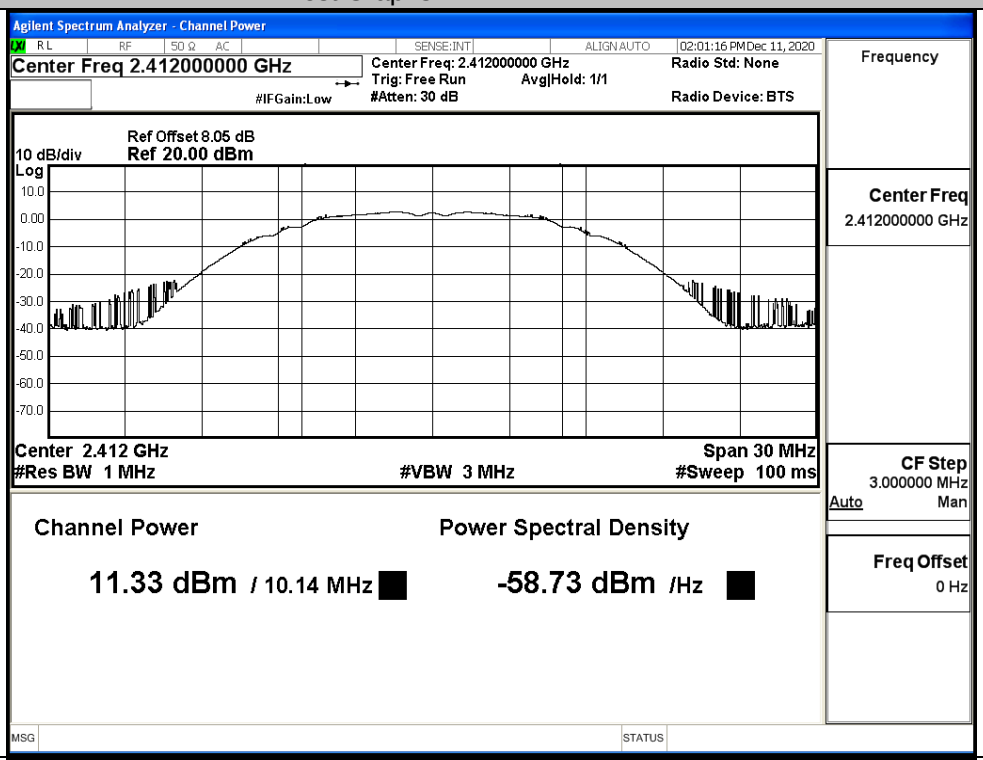
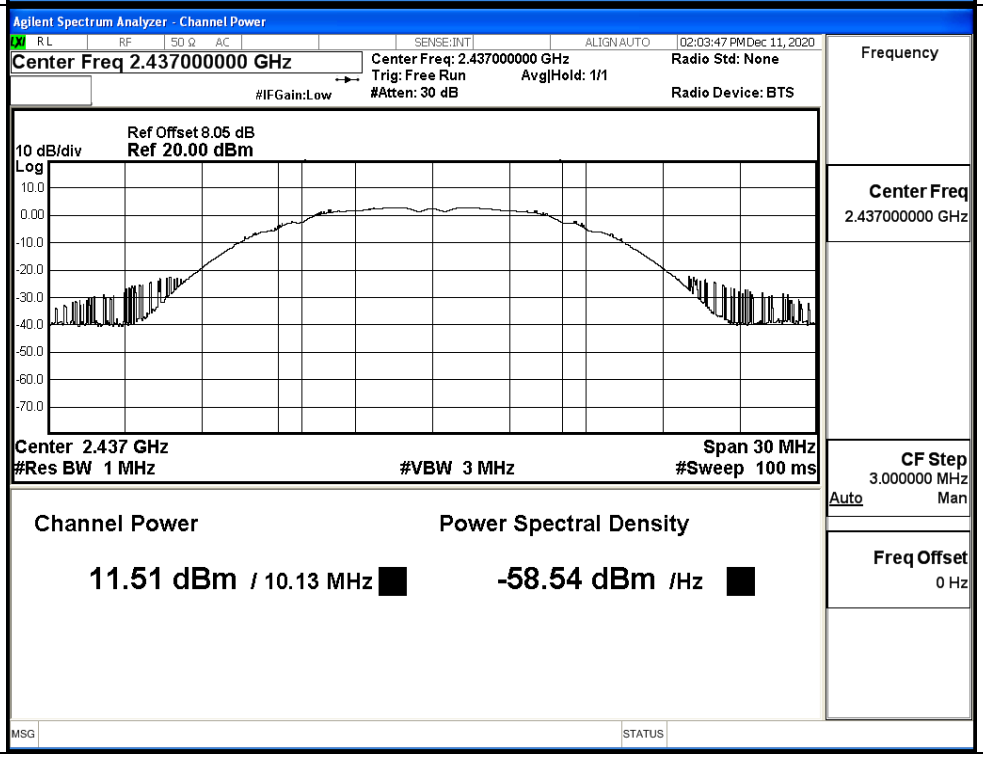
Duty Cycle_11N40SISO_2437_Ant1

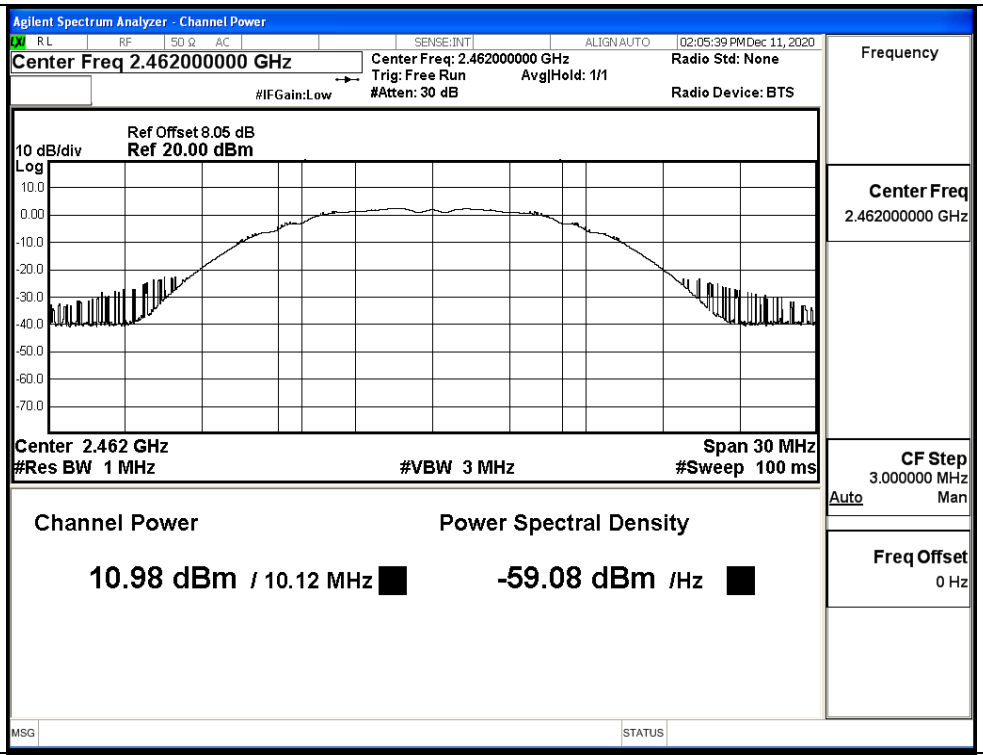
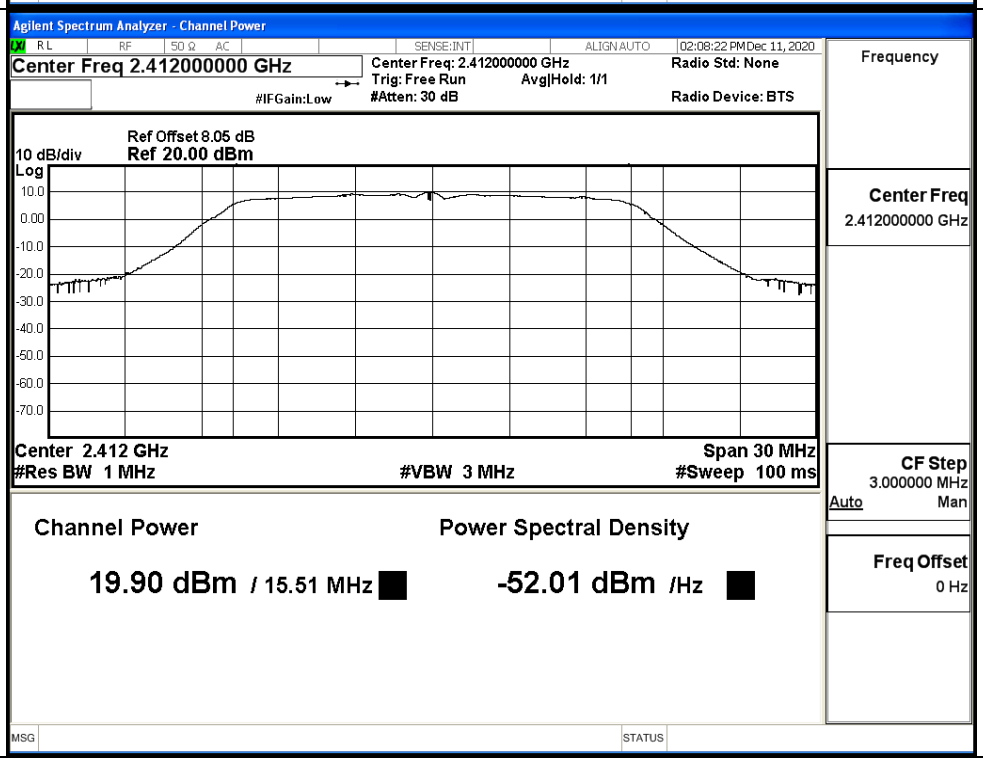


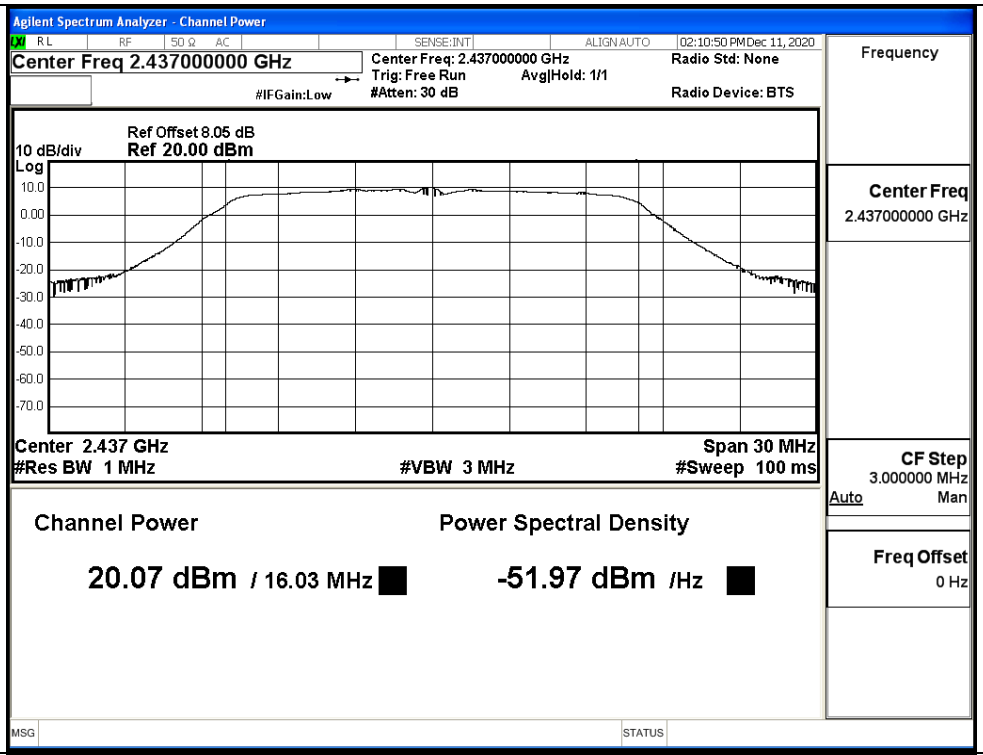
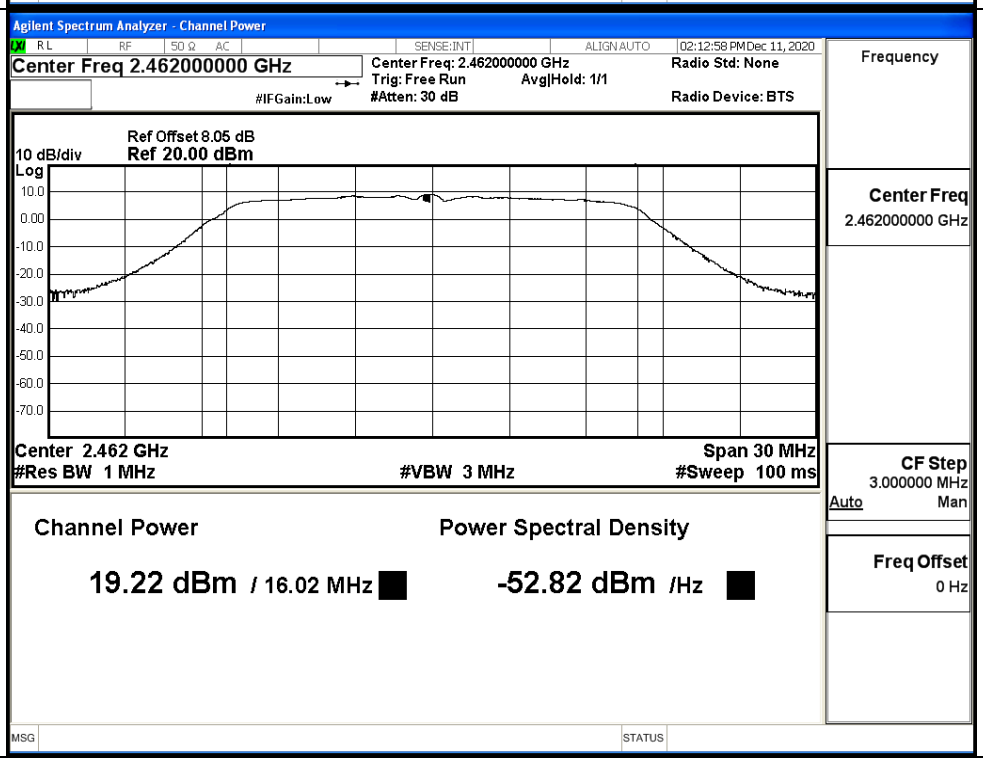
C.2 Maximum Conducted Output Power

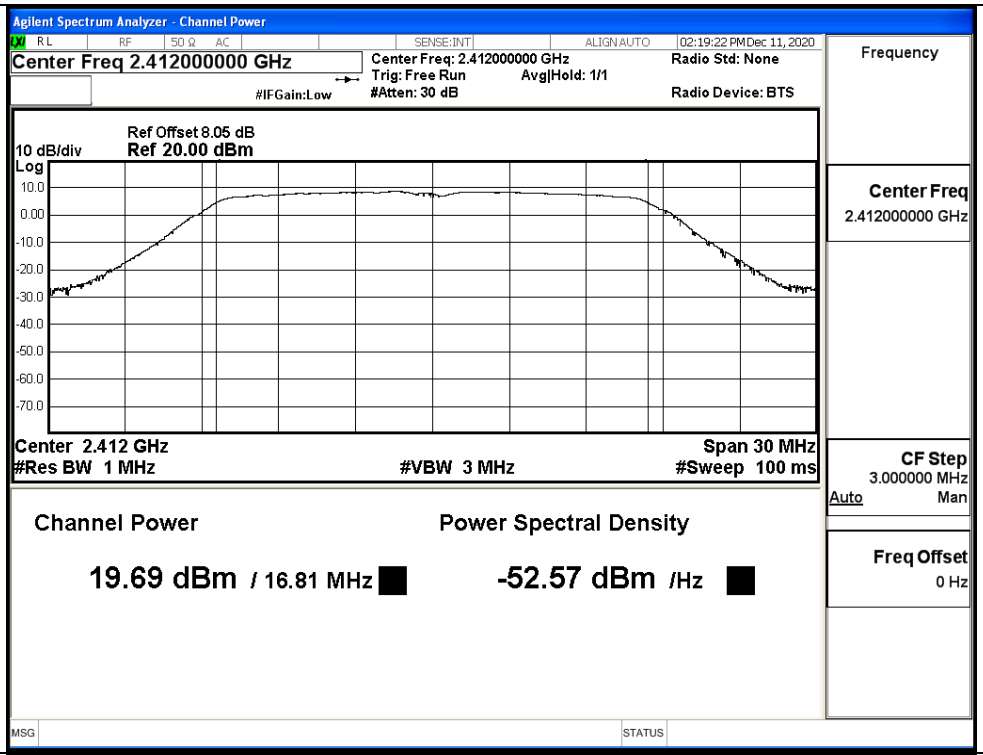
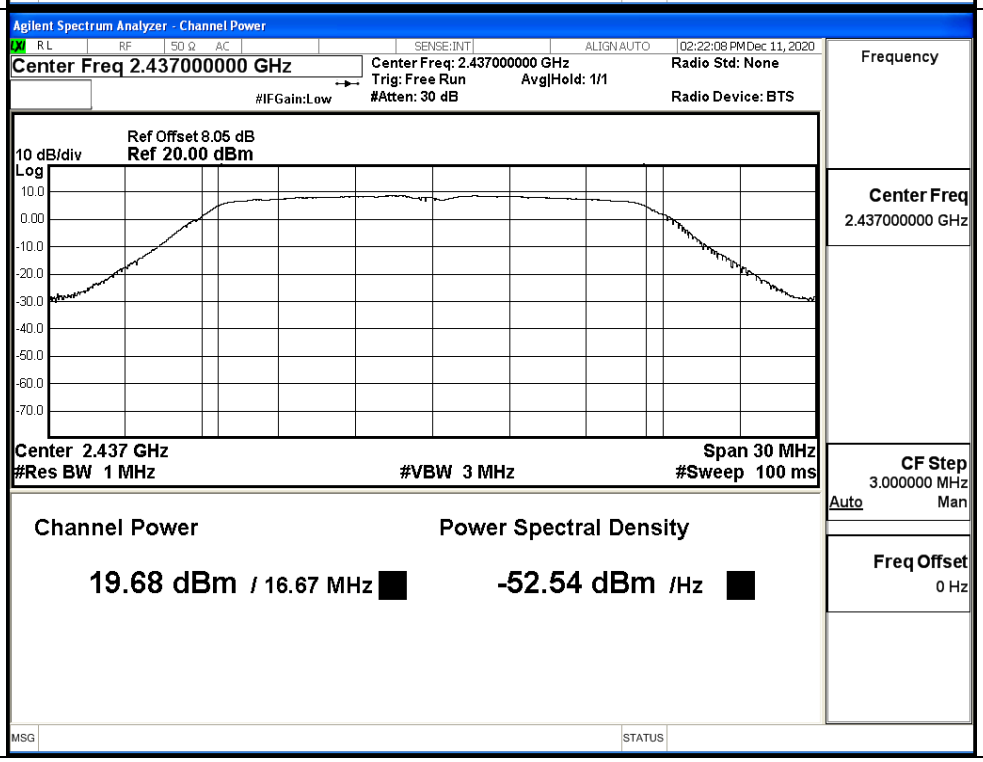
ANT0

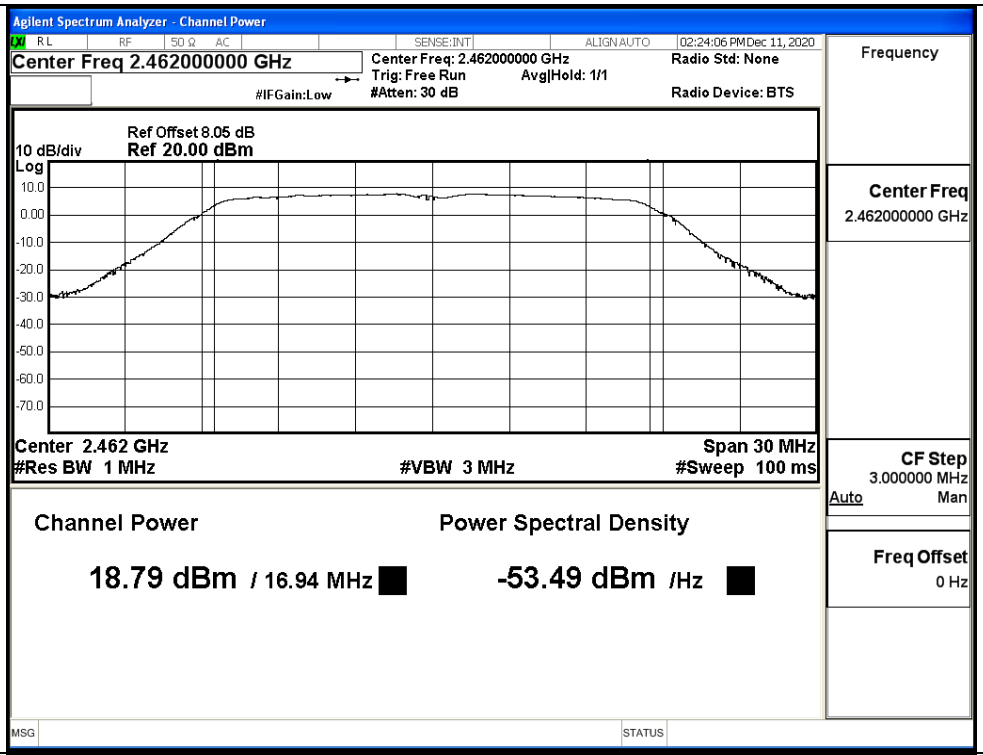
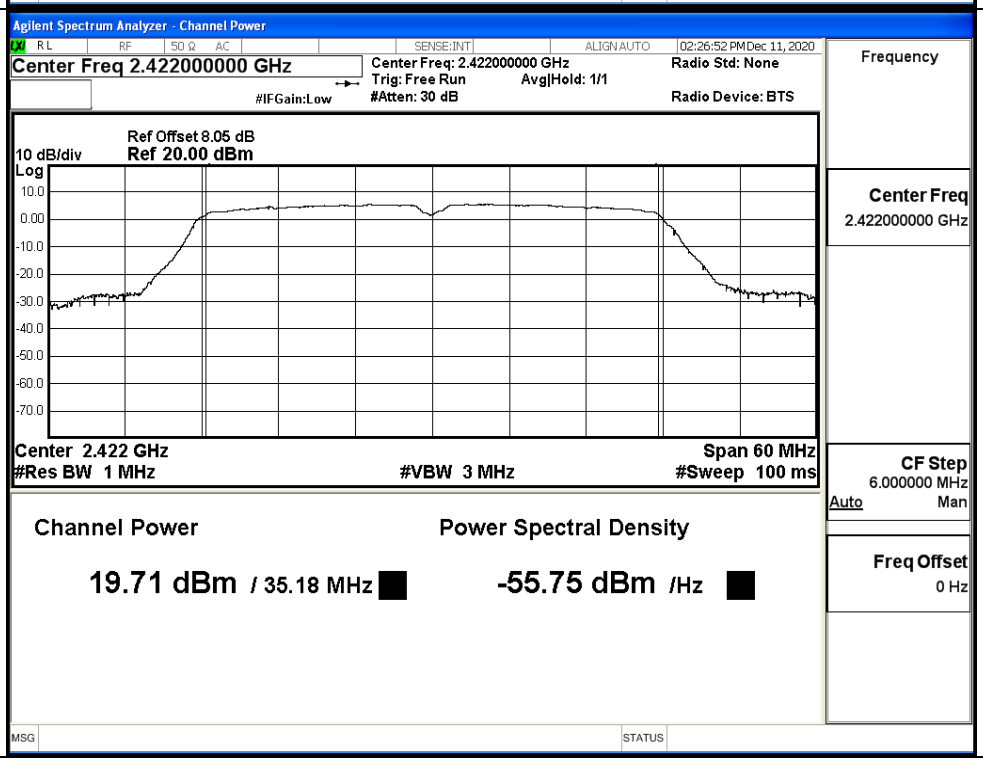
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	11.33	30	PASS
	MCH	11.51	30	PASS
	HCH	10.98	30	PASS
11G	LCH	19.9	30	PASS
	MCH	20.07	30	PASS
	HCH	19.22	30	PASS
11N20SISO	LCH	19.69	30	PASS
	MCH	19.68	30	PASS
	HCH	18.79	30	PASS
11N40SISO	LCH	19.71	30	PASS
	MCH	19.75	30	PASS
	HCH	19.28	30	PASS

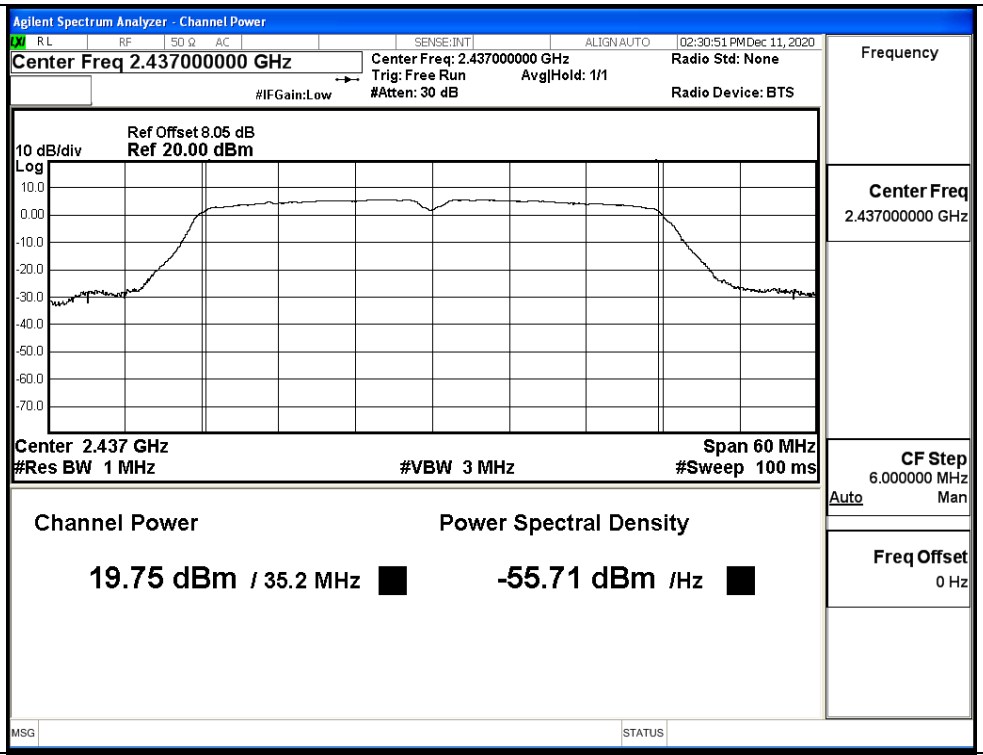
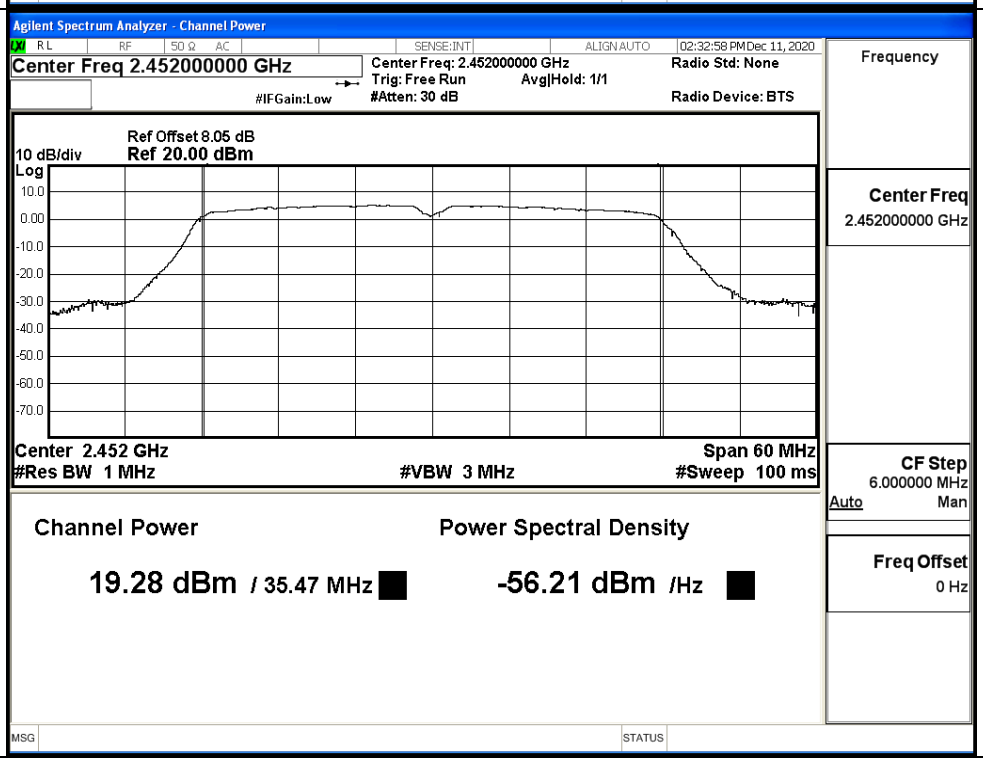
Test Graphs		
11B/LCH		
11B/MCH		

11B/HCH		
11G/LCH		

11G/MCH	
11G/HCH	

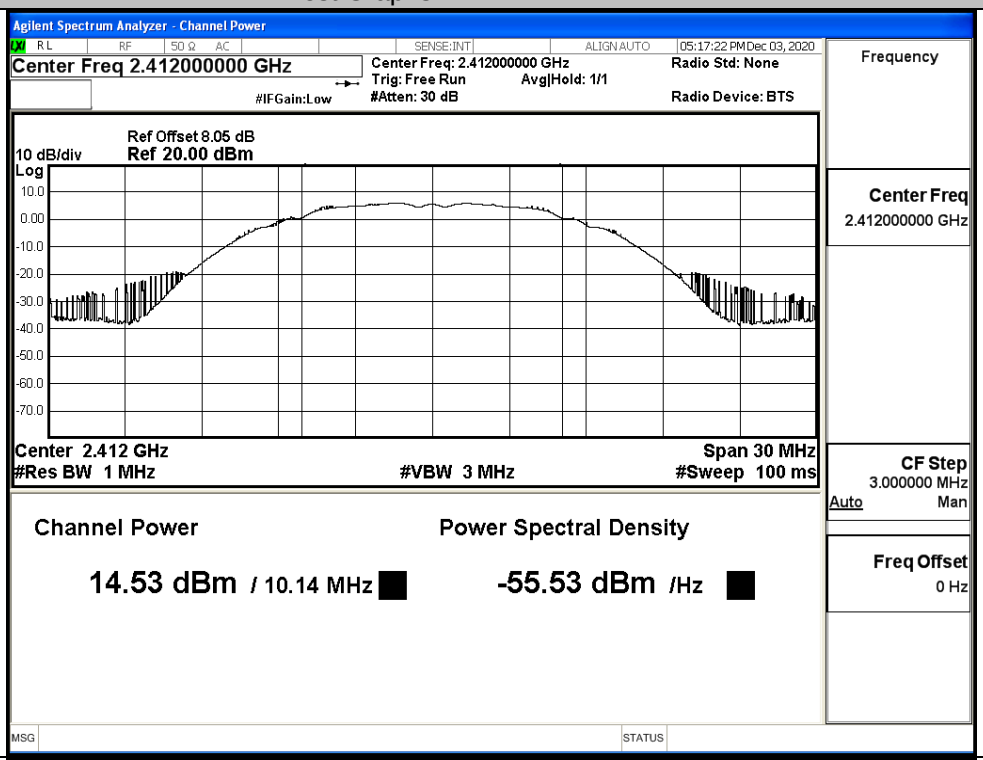
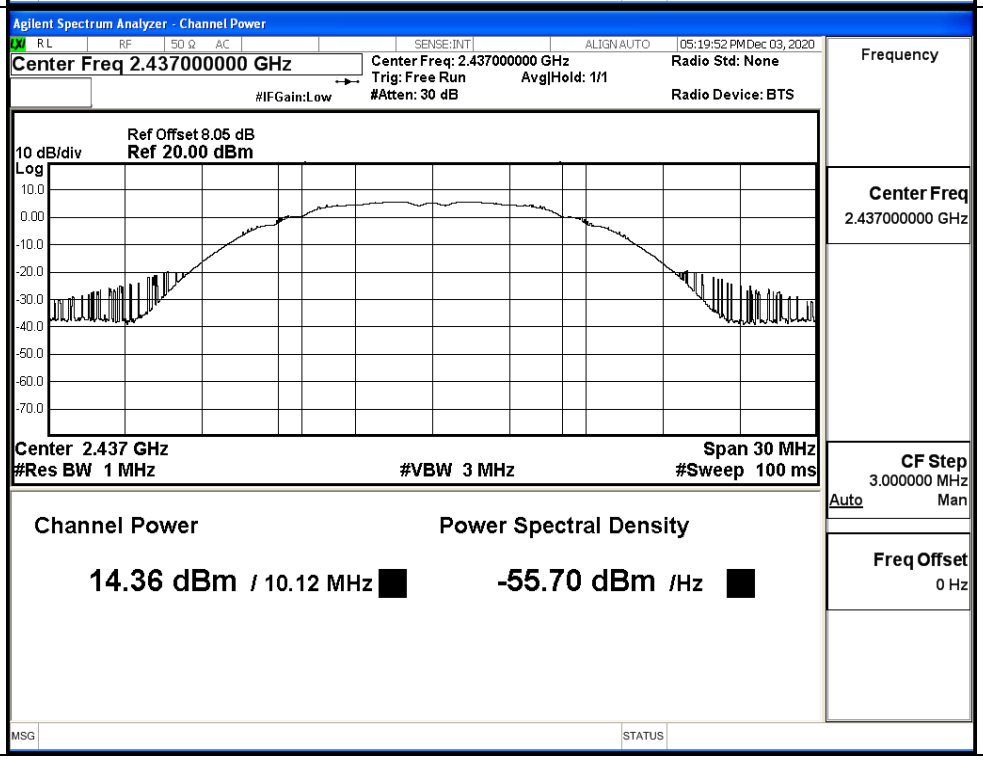
11N20SISO/LCH		
11N20SISO/MCH		

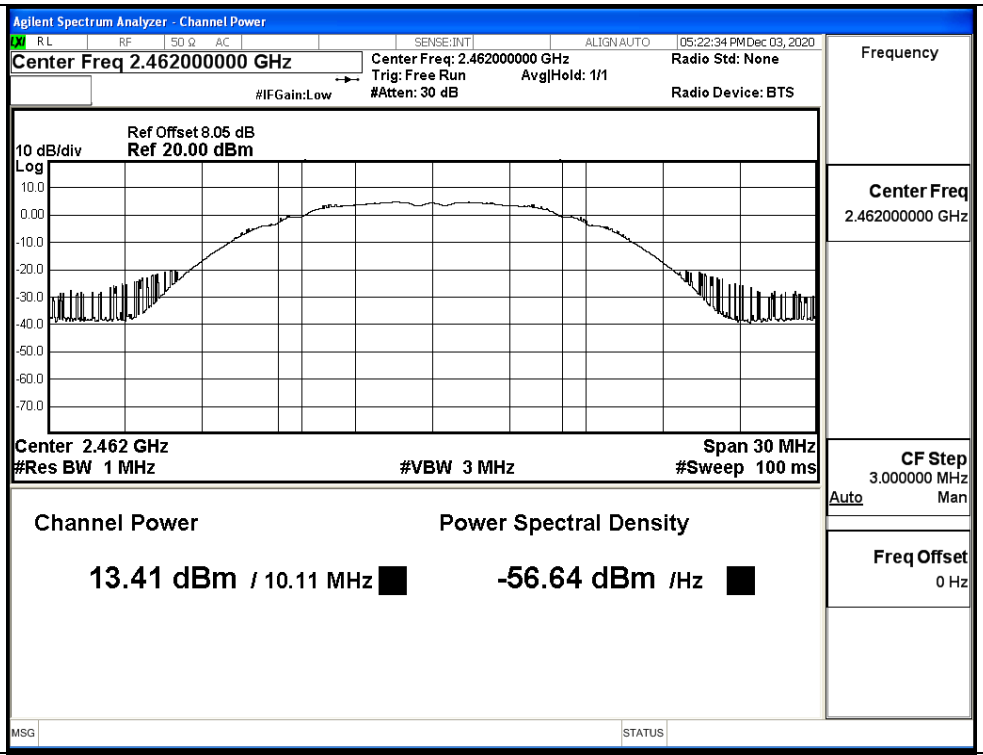
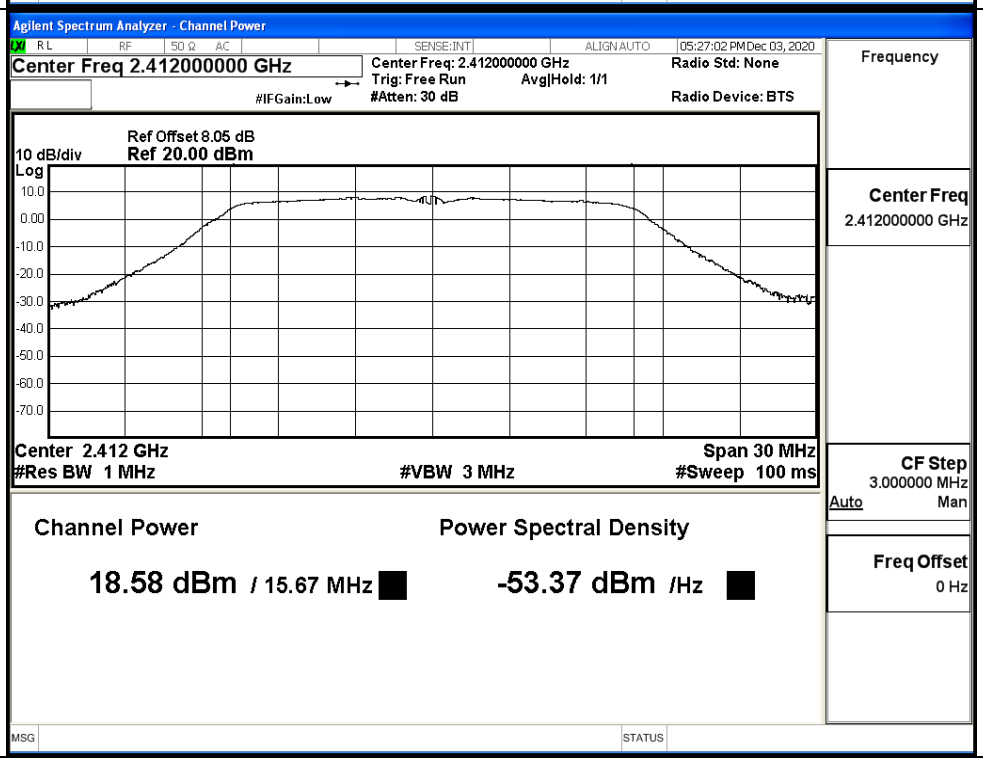
11N20SISO/HCH		
11N40SISO/LCH		

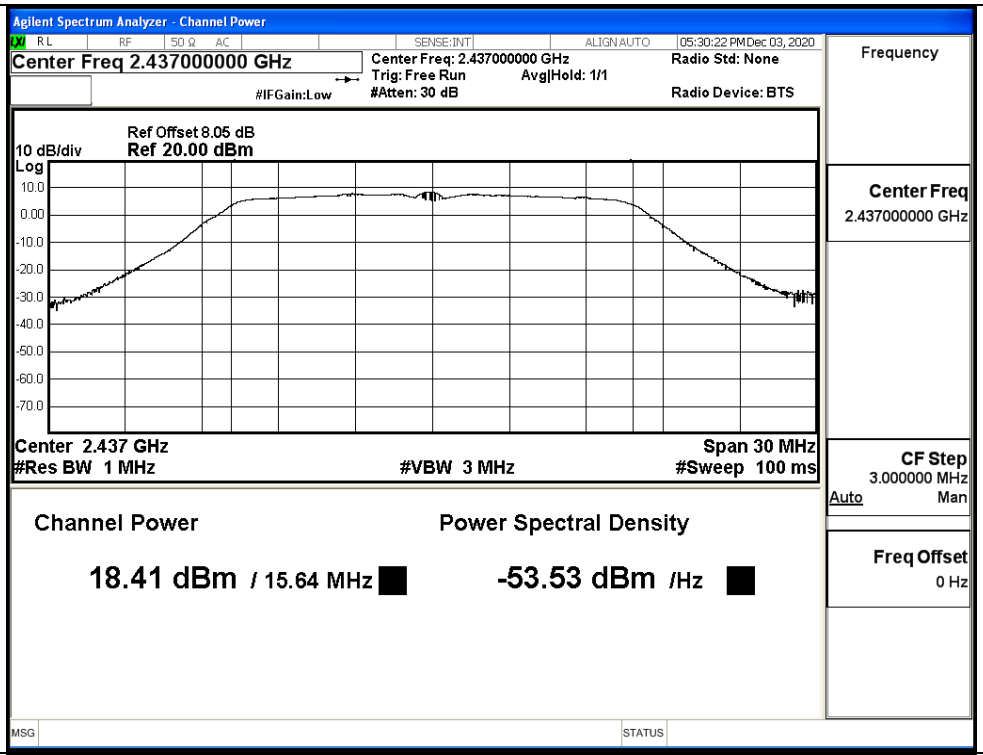
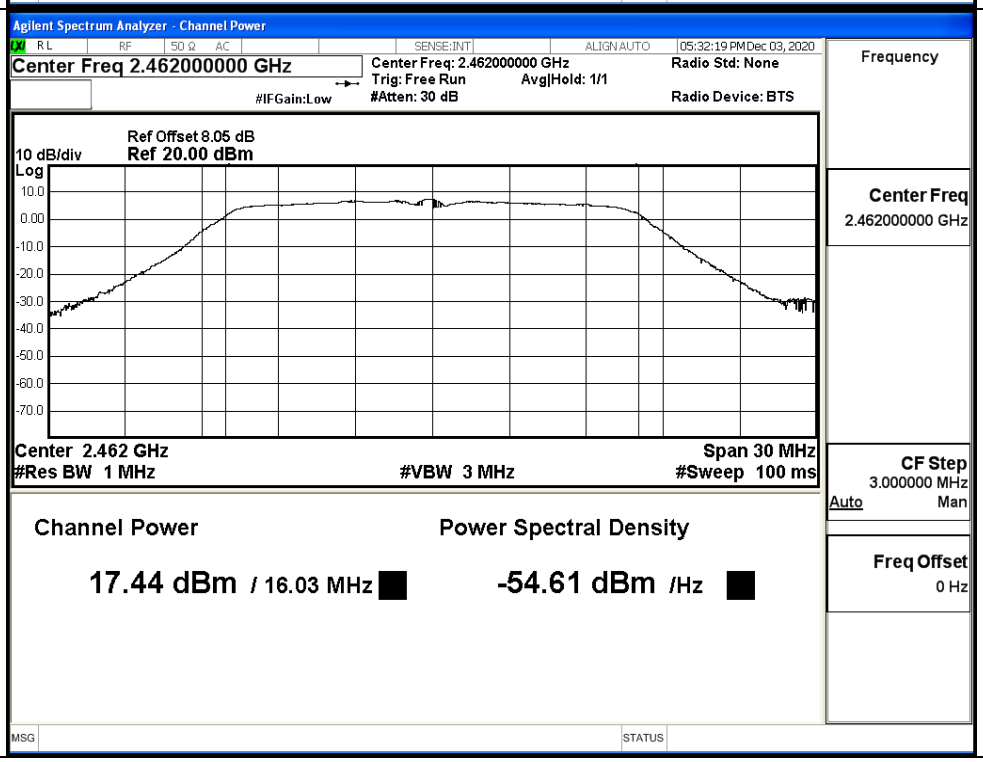
11N40SISO/MCH		
11N40SISO/HCH		

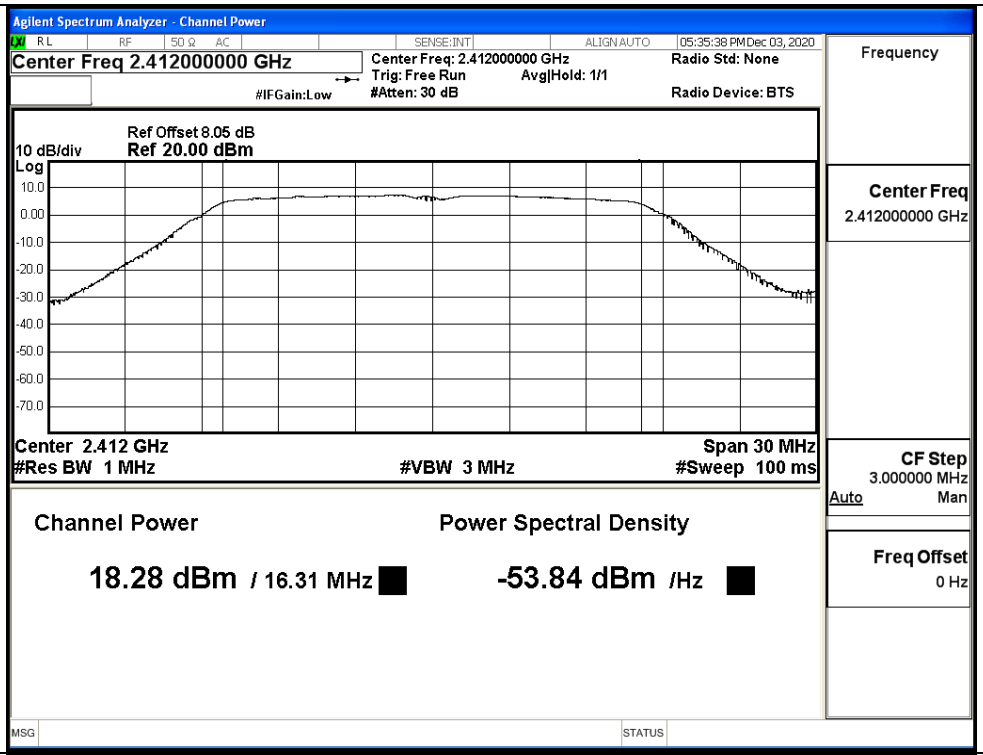
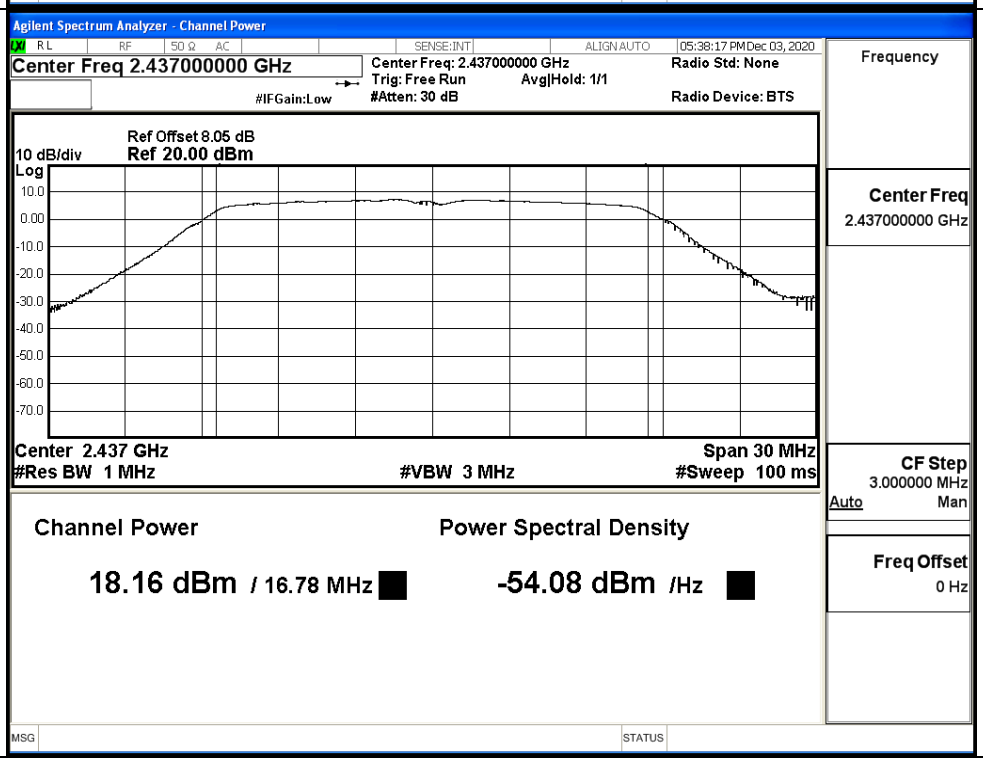
ANT1

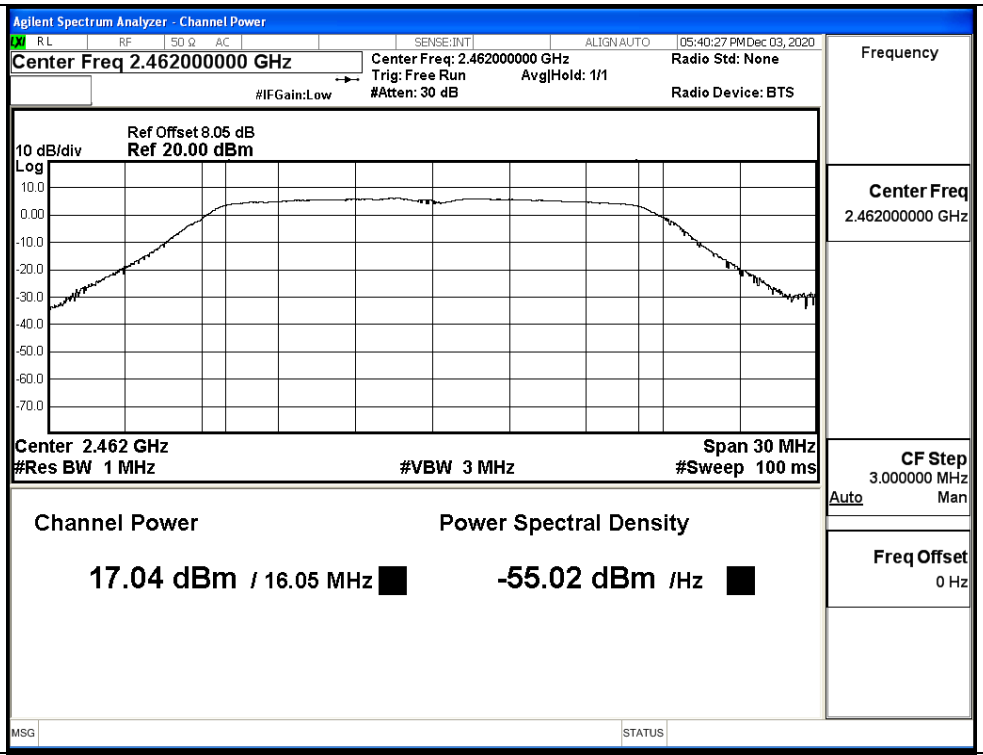
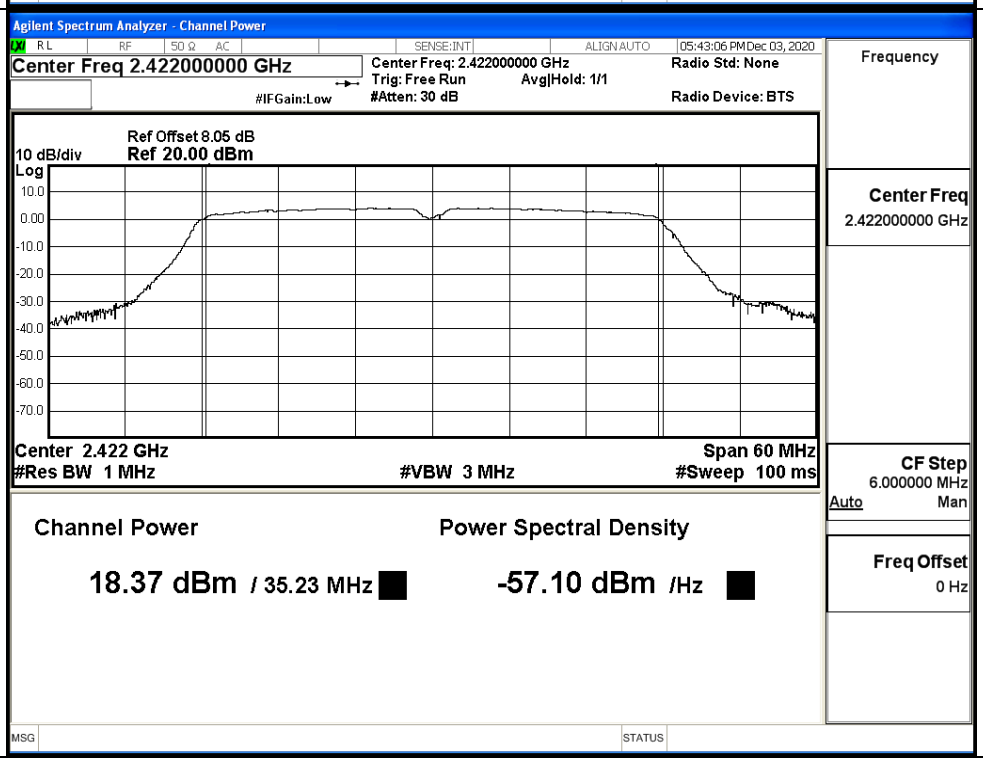
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	14.53	30	PASS
	MCH	14.36	30	PASS
	HCH	13.41	30	PASS
11G	LCH	18.58	30	PASS
	MCH	18.41	30	PASS
	HCH	17.44	30	PASS
11N20SISO	LCH	18.28	30	PASS
	MCH	18.16	30	PASS
	HCH	17.04	30	PASS
11N40SISO	LCH	18.37	30	PASS
	MCH	18.21	30	PASS
	HCH	17.52	30	PASS

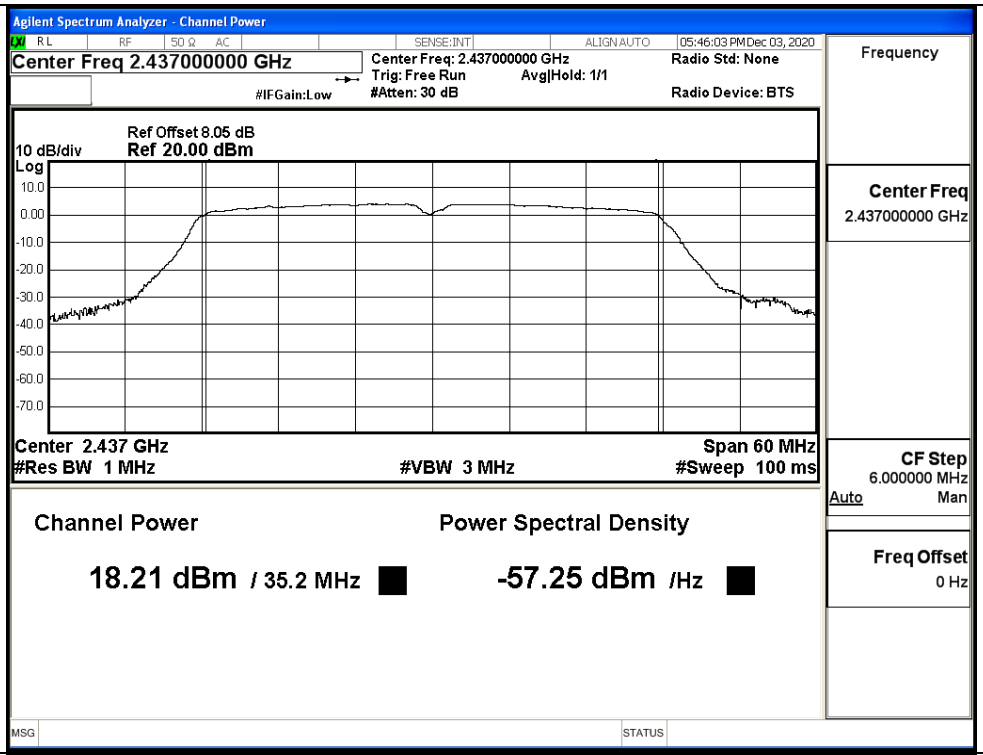
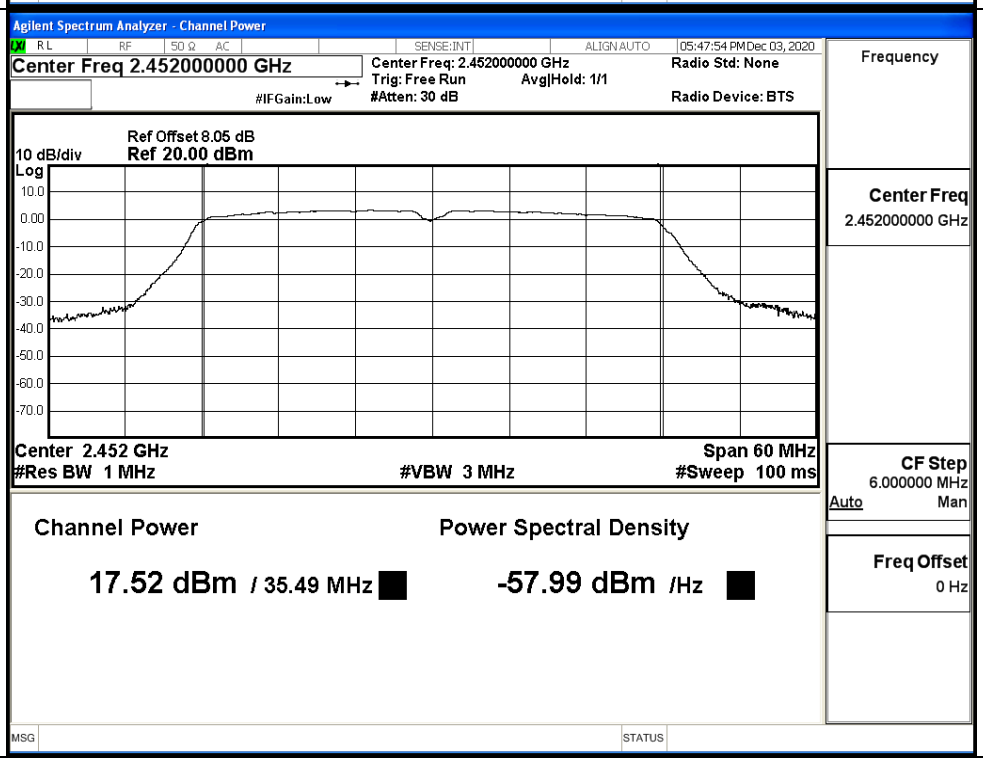
Test Graphs		
11B/LCH		
11B/MCH		

11B/HCH		
11G/LCH		

11G/MCH	
11G/HCH	

11N20SISO/LCH		
11N20SISO/MCH		

11N20SISO/HCH		
11N40SISO/LCH		

11N40SISO/MCH		
11N40SISO/HCH		

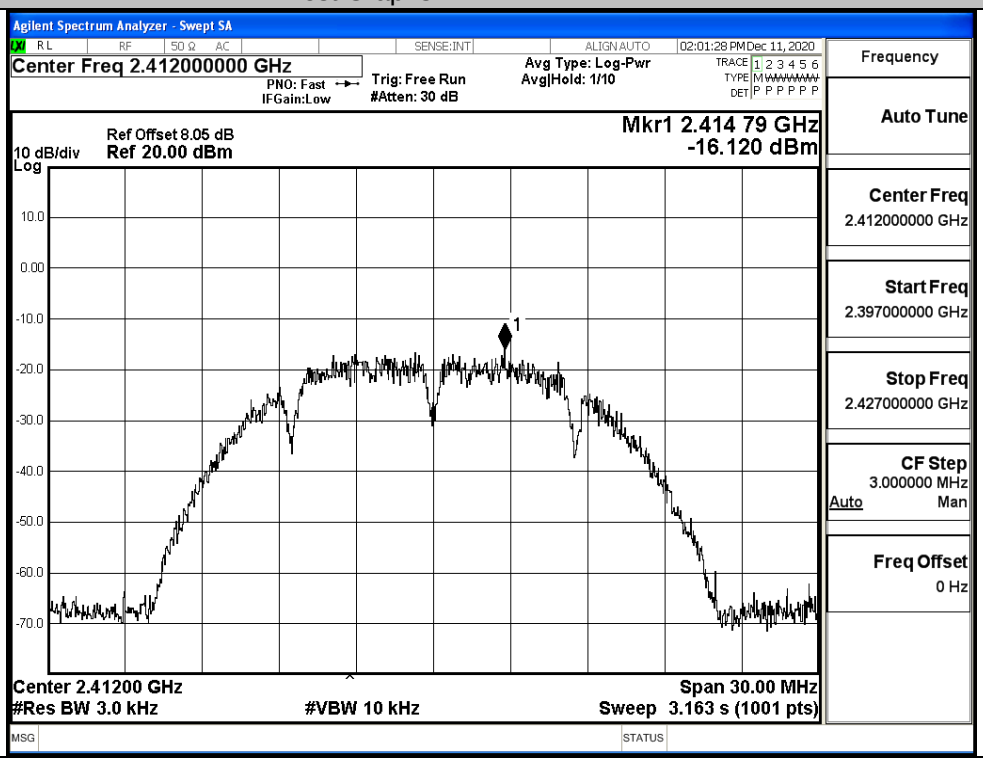
MIMO

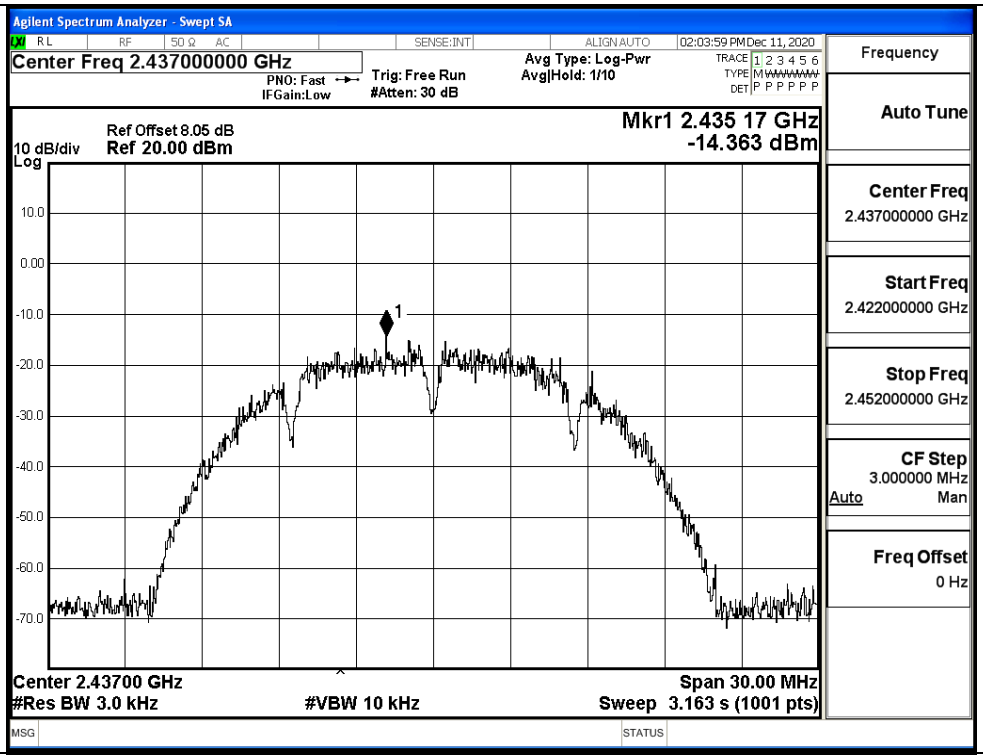
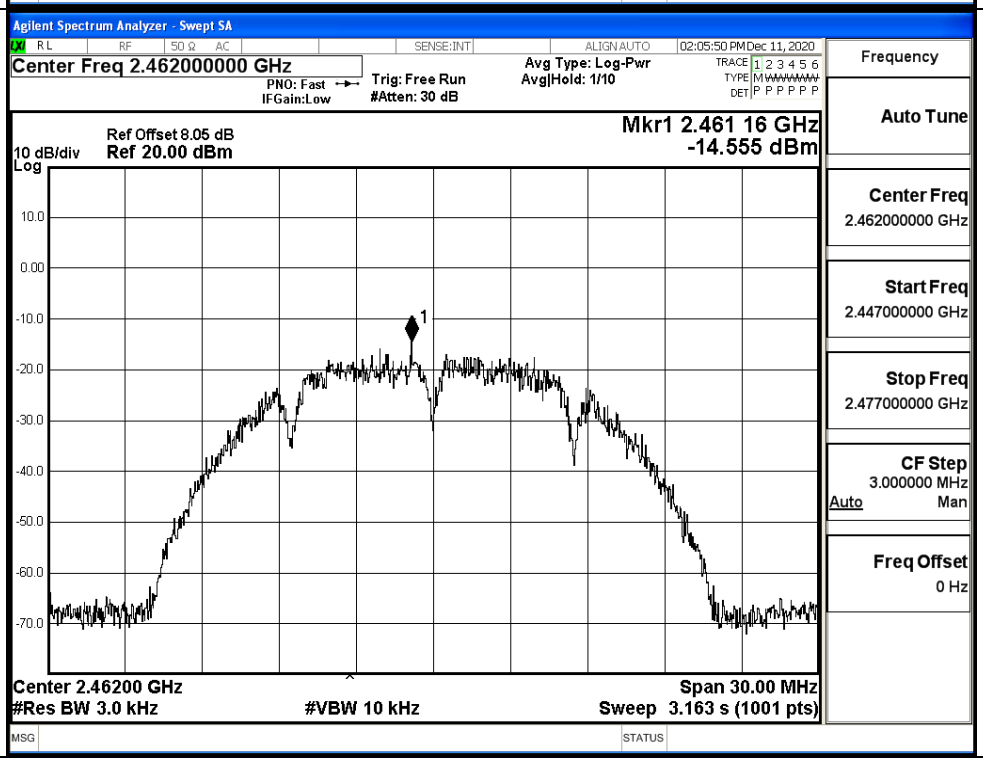
Mode	Channel	ANT 0 [dBm]	ANT 1 [dBm]	MIMO [dBm]	Limit [dBm]	Verdict
11N20	LCH	19.69	18.28	22.05	30	PASS
	MCH	19.68	18.16	22.00	30	PASS
	HCH	18.79	17.04	21.01	30	PASS
11N40	LCH	19.71	18.37	22.10	30	PASS
	MCH	19.75	18.21	22.06	30	PASS
	HCH	19.28	17.52	21.50	30	PASS

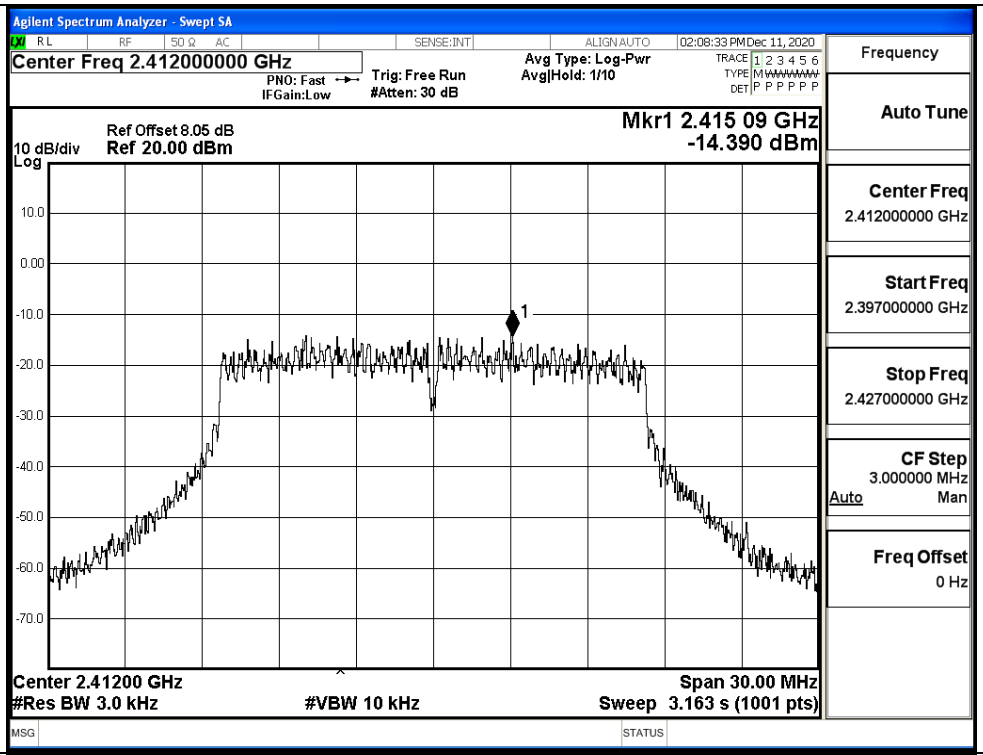
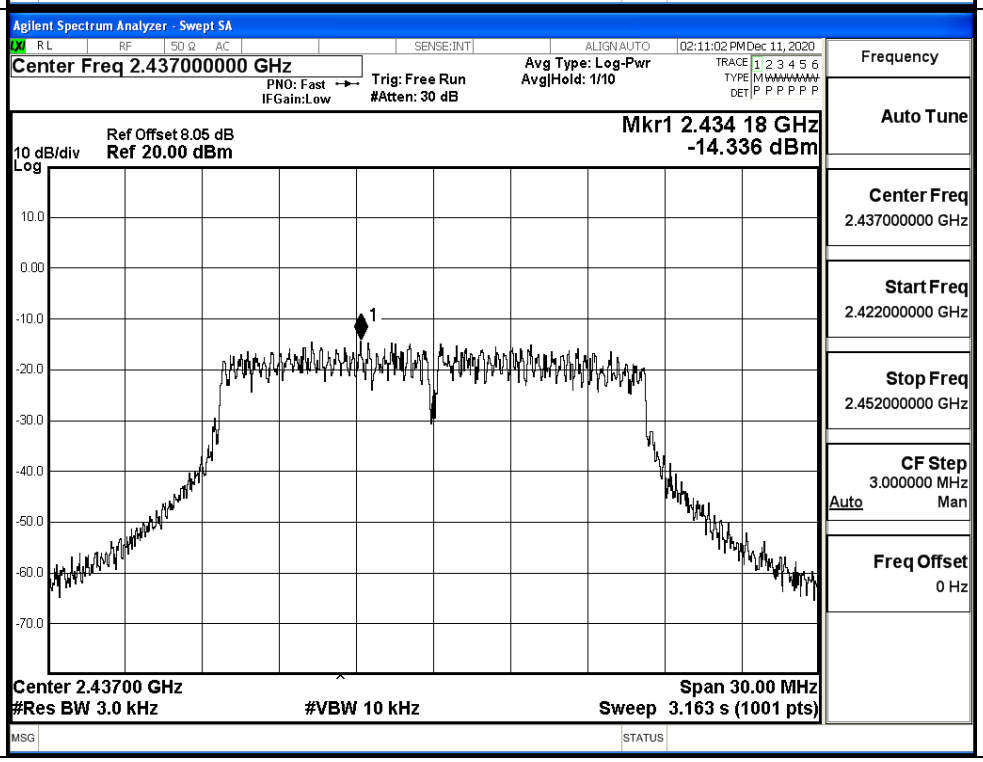
C.3 Maximum Power Spectral Density

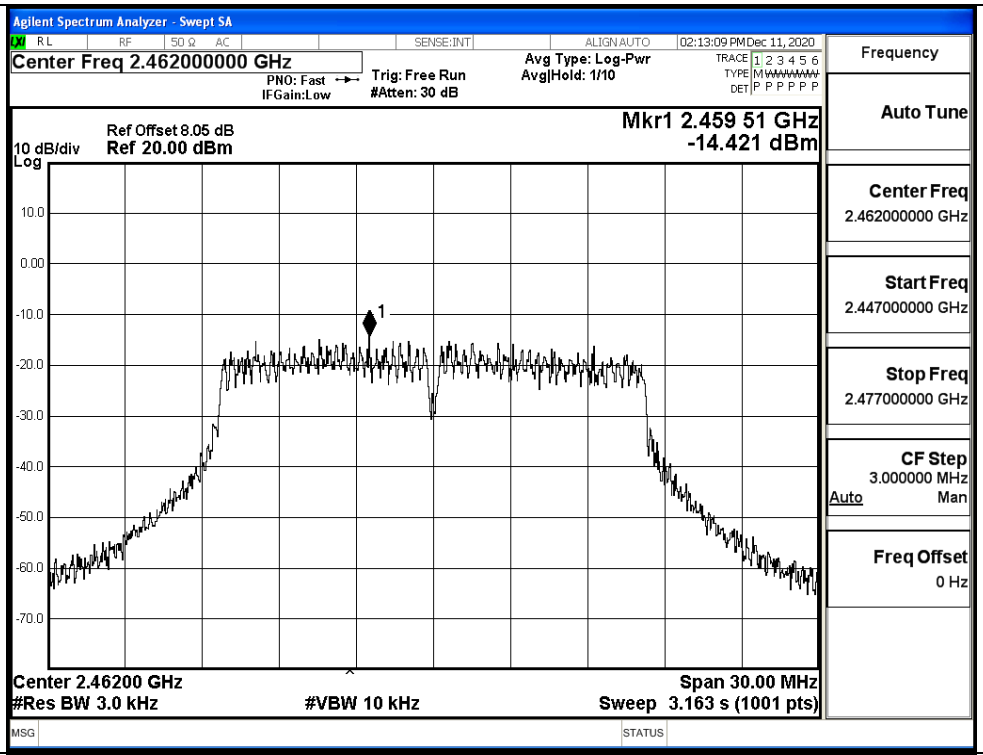
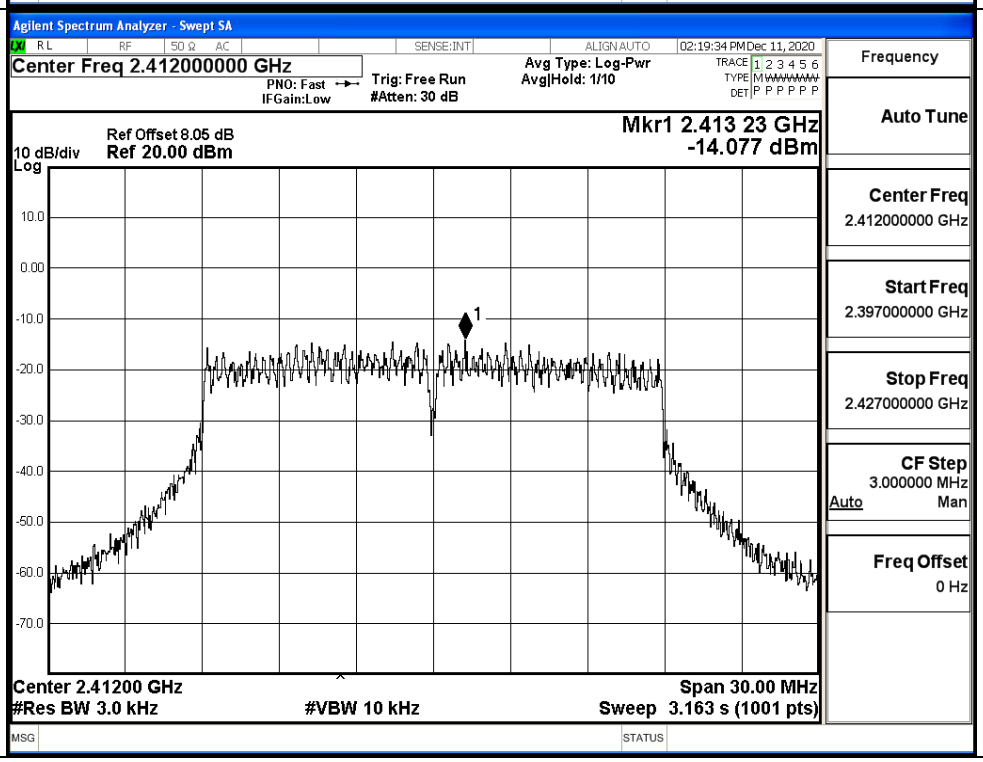
ANT0

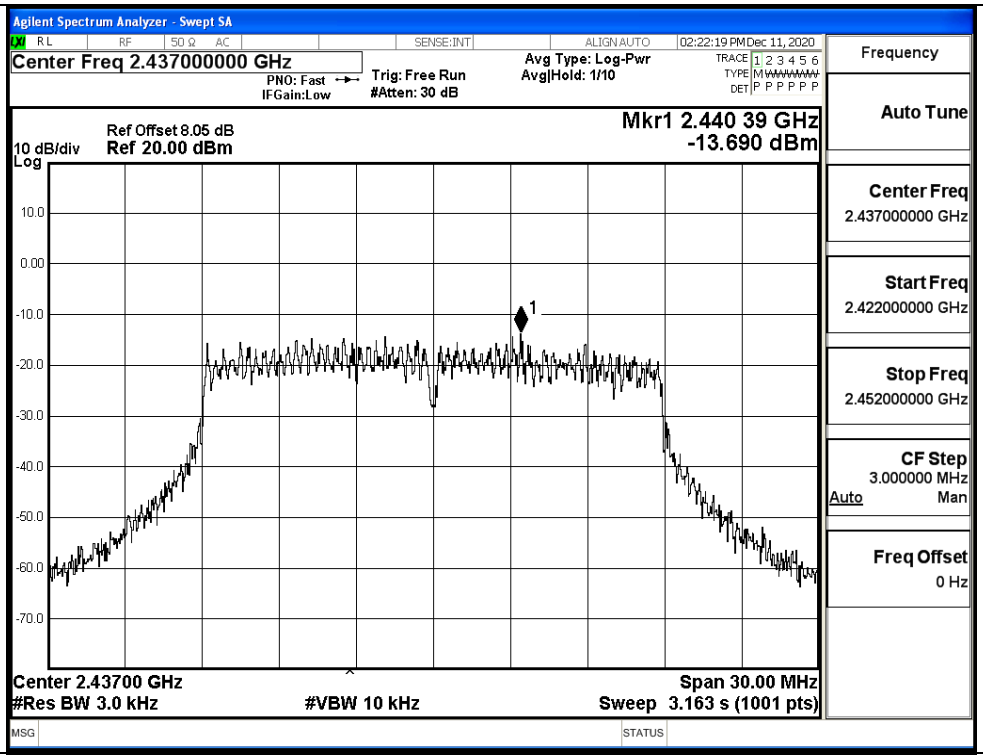
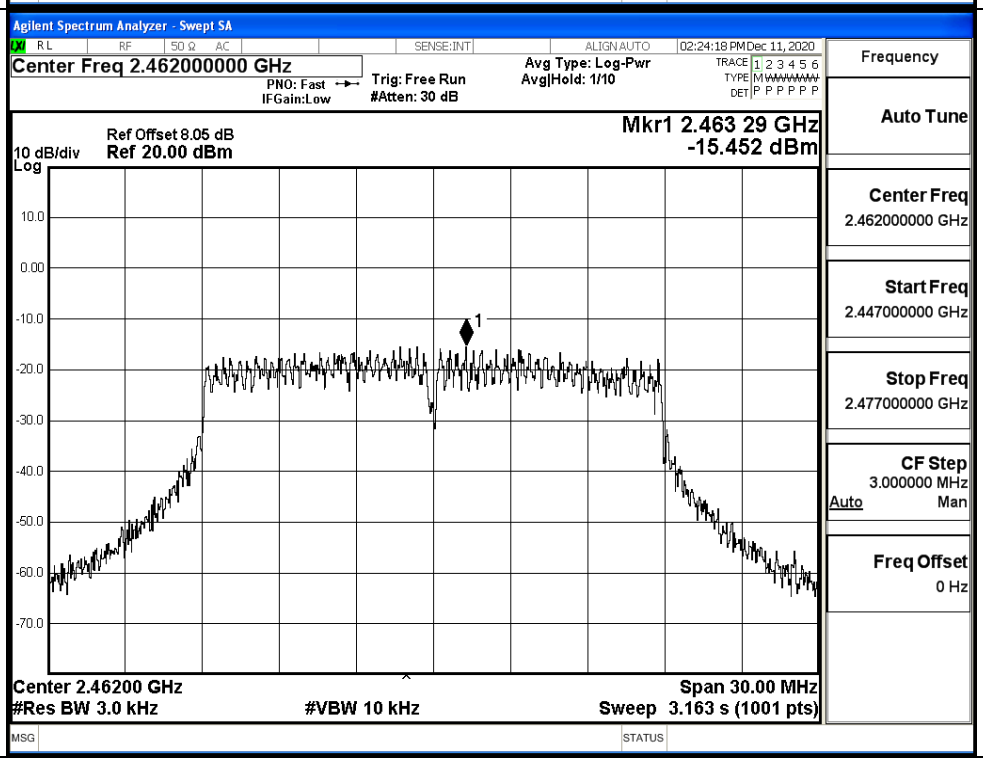
Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-16.120	8	PASS
	MCH	-14.363	8	PASS
	HCH	-14.555	8	PASS
11G	LCH	-14.390	8	PASS
	MCH	-14.336	8	PASS
	HCH	-14.421	8	PASS
11N20SISO	LCH	-14.077	8	PASS
	MCH	-13.690	8	PASS
	HCH	-15.452	8	PASS
11N40SISO	LCH	-16.060	8	PASS
	MCH	-17.051	8	PASS
	HCH	-15.666	8	PASS

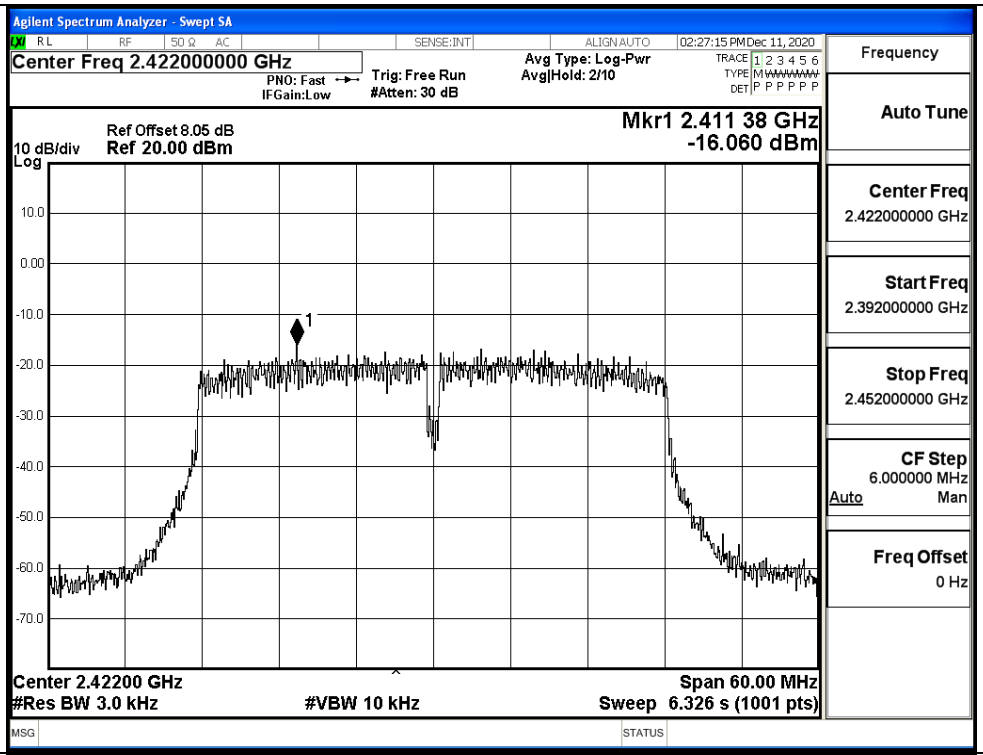
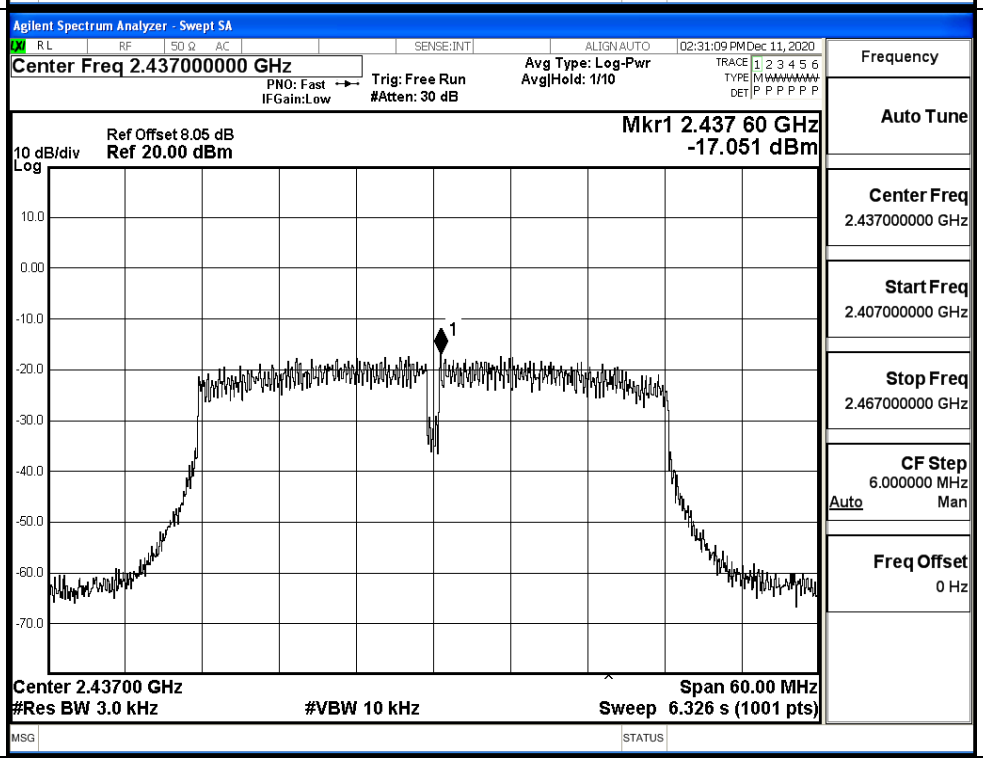
Test Graphs	
11B/LCH	

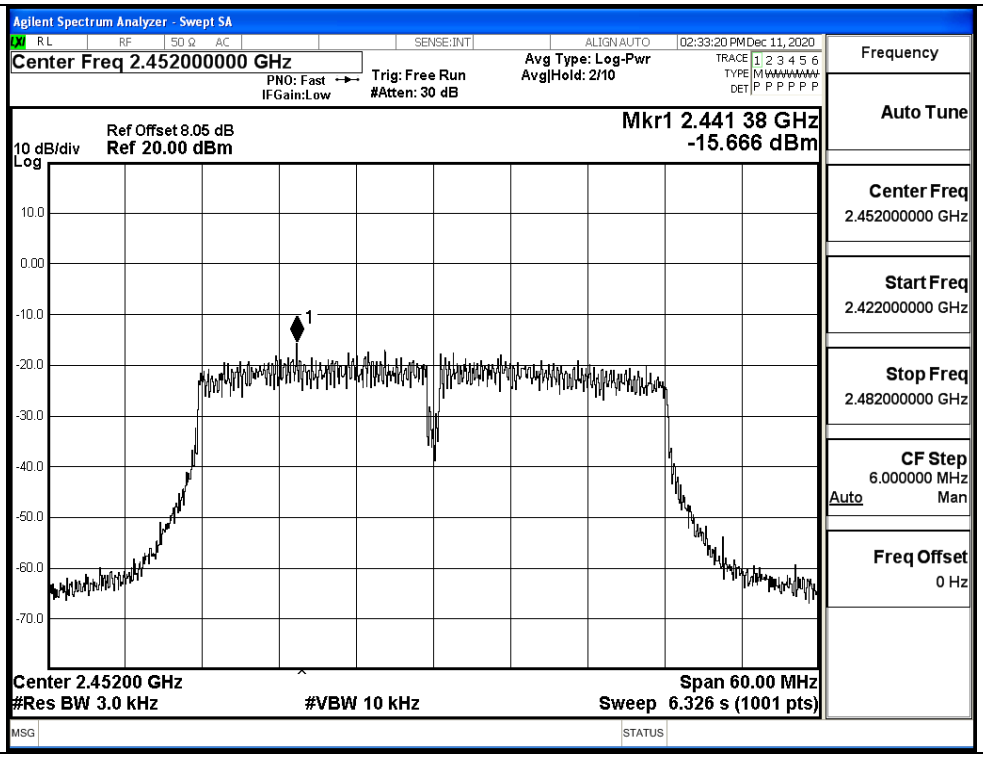
11B/MCH		
11B/HCH		

11G/LCH		
11G/MCH		

11G/HCH		
11N20SISO/LCH		

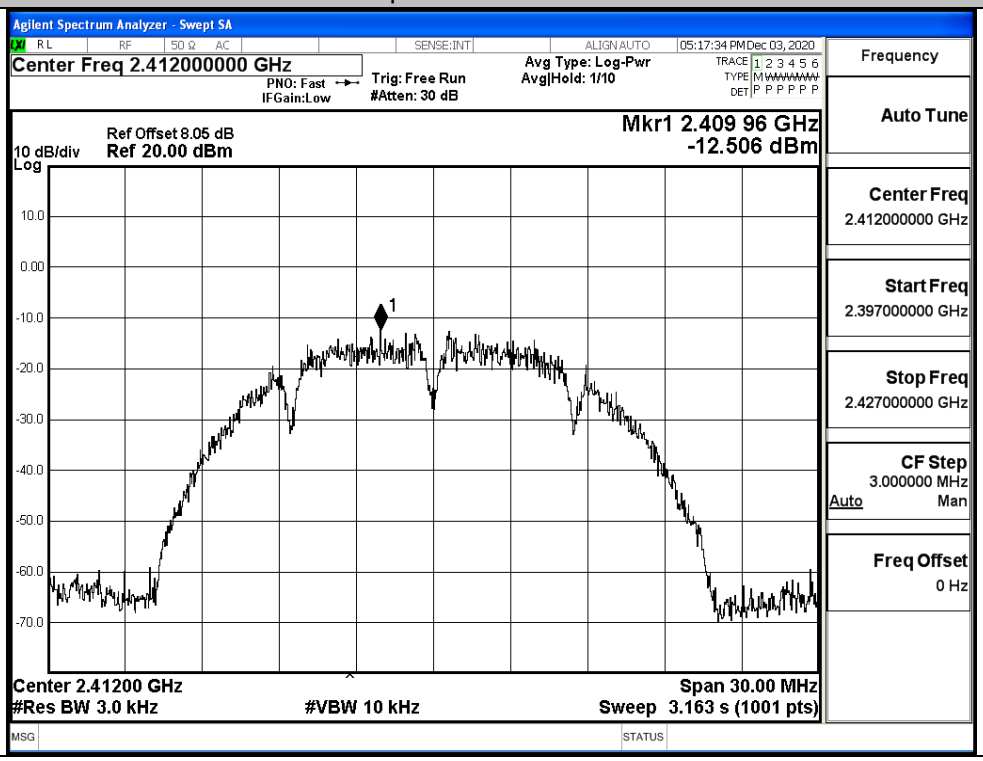
11N20SISO/MCH		
11N20SISO/HCH		

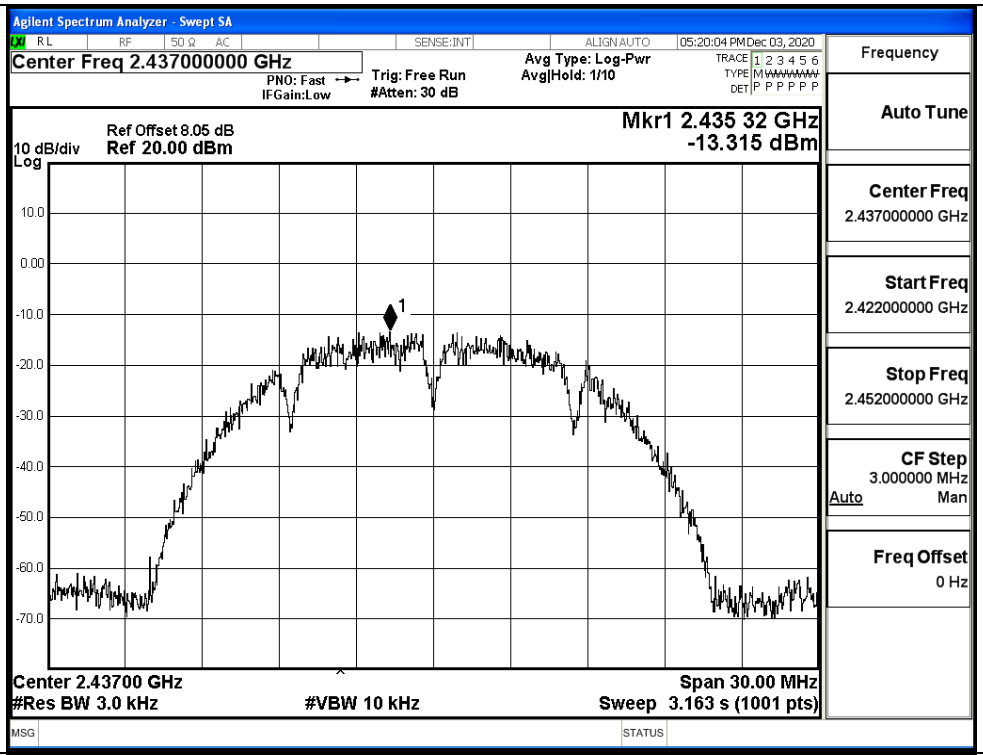
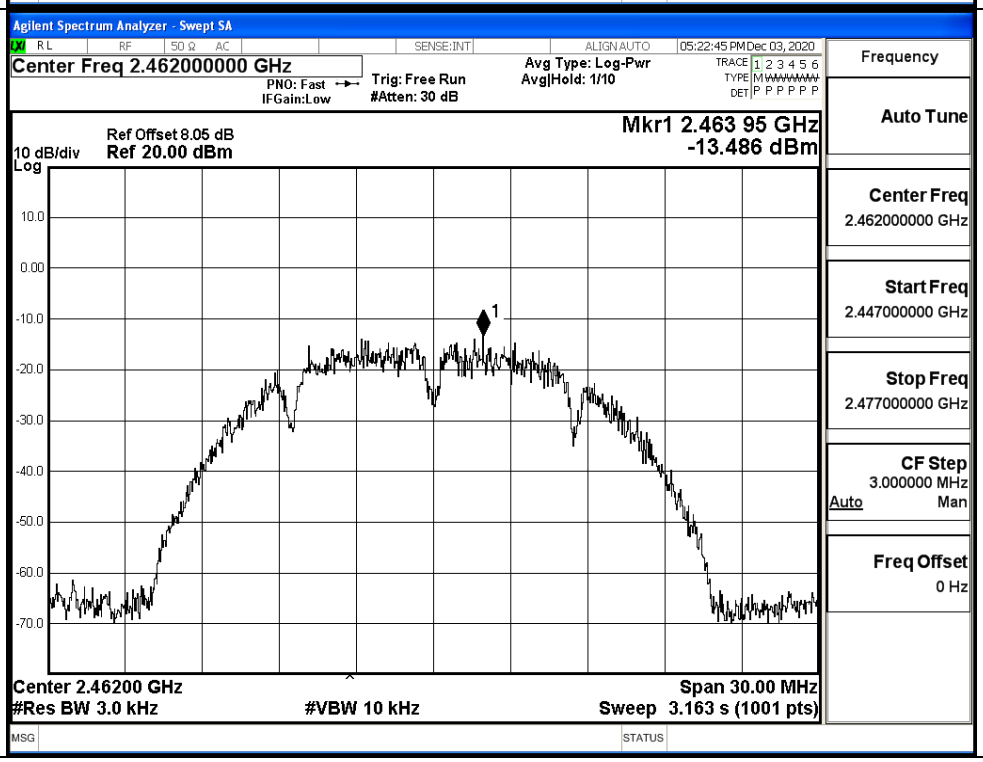
11N40SISO/LCH		
11N40SISO/MCH		

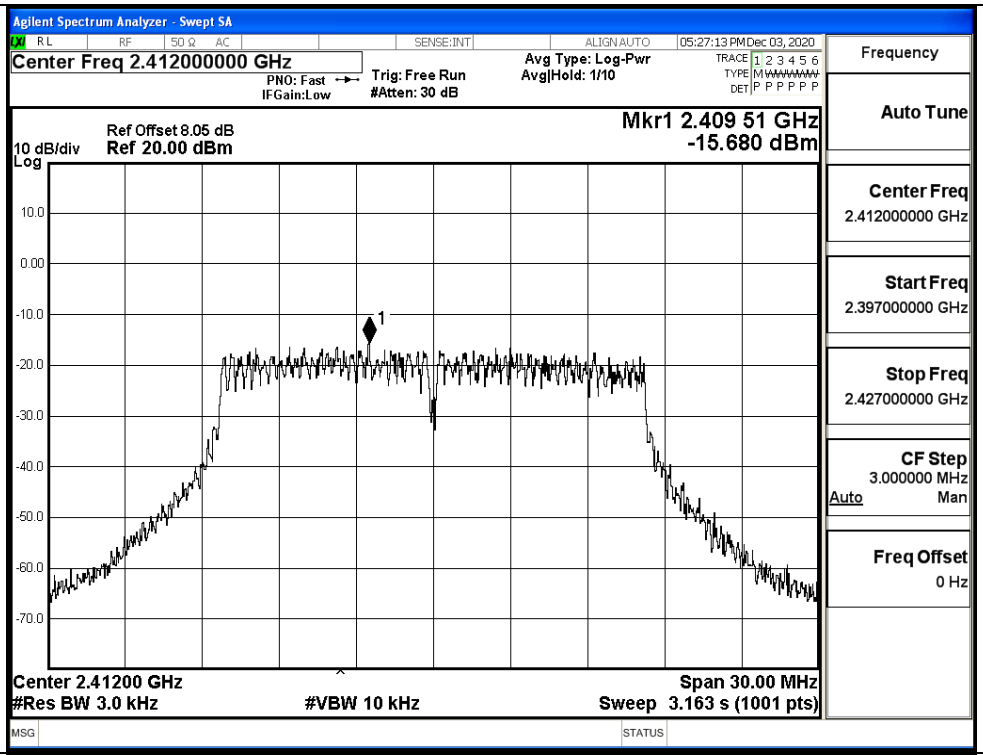
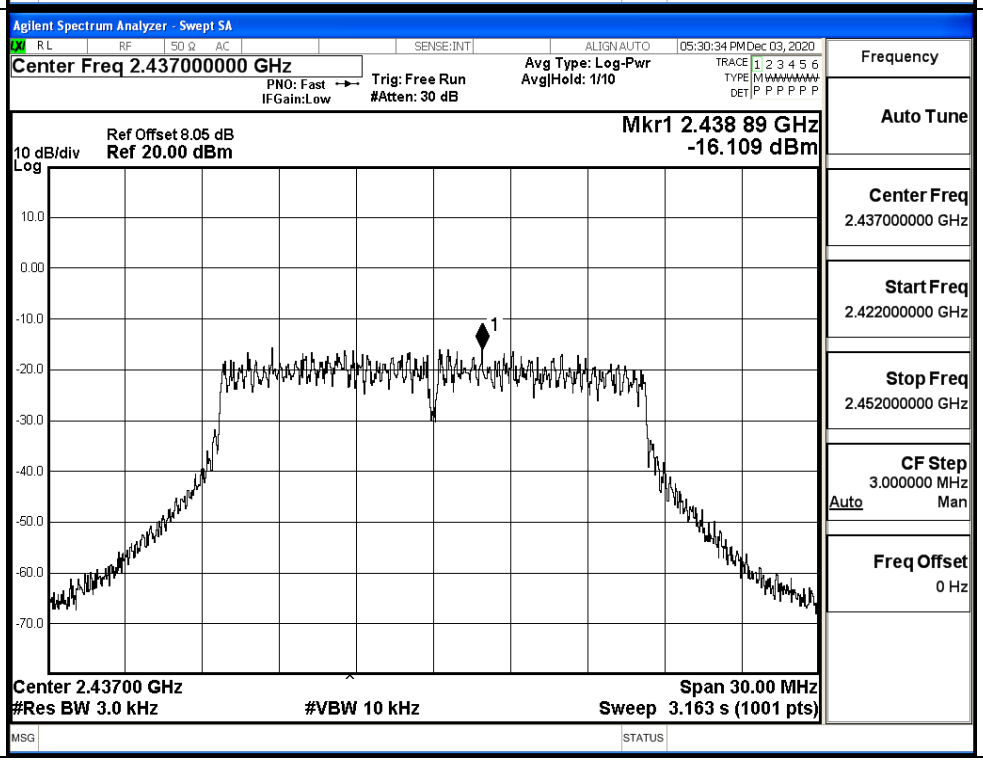
11N40SISO/HCH		

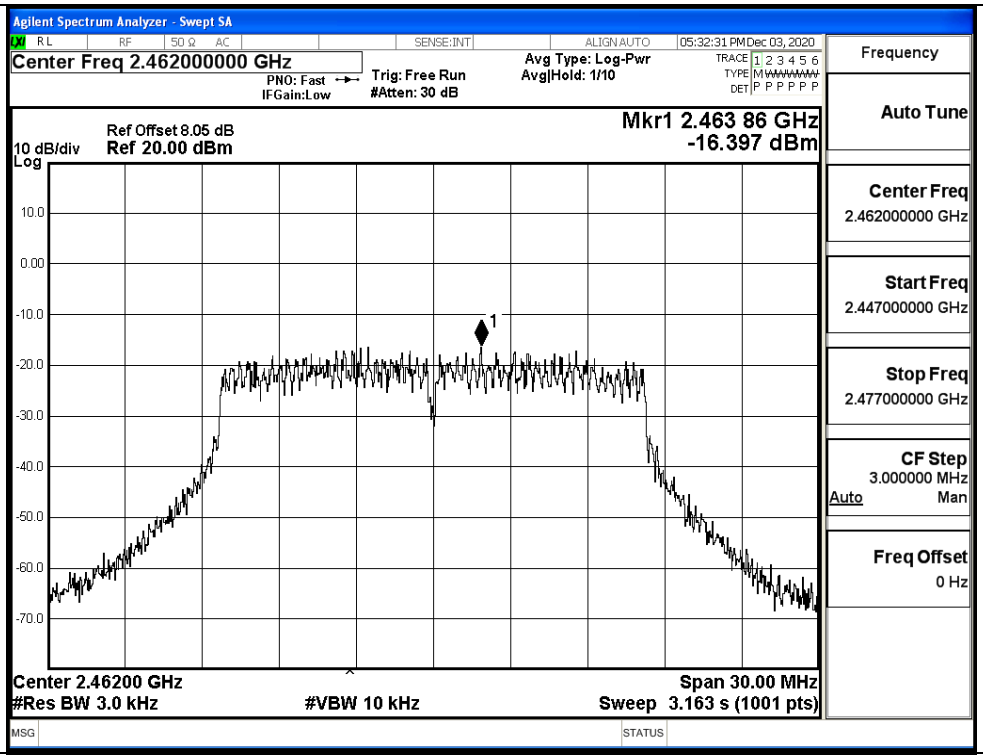
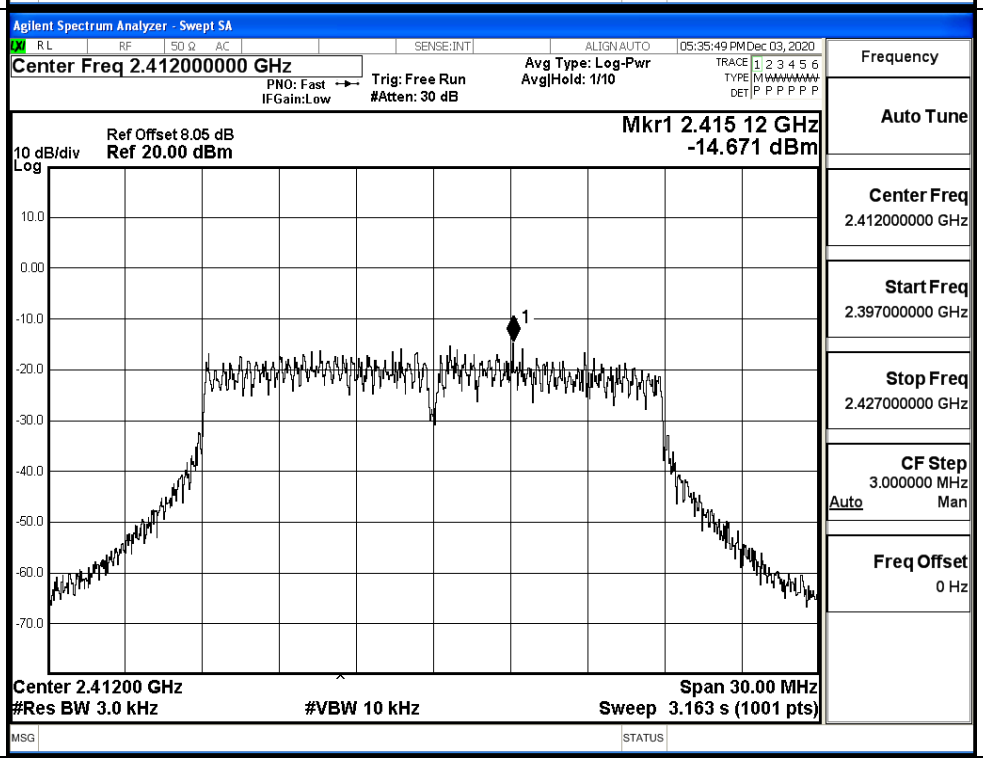
ANT1

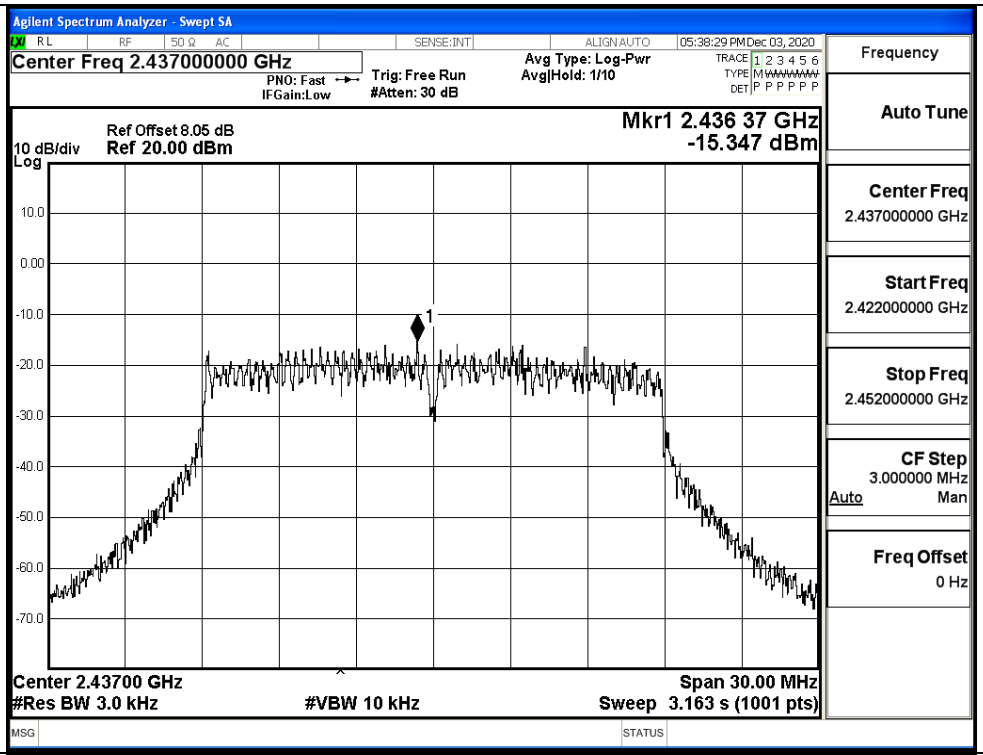
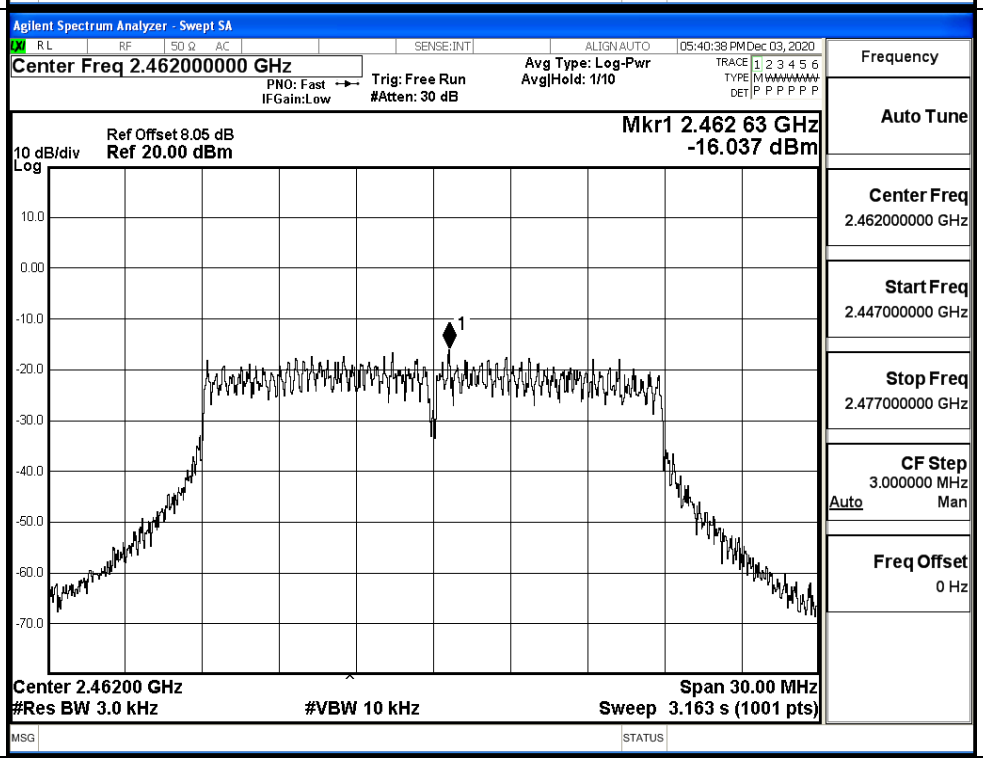
Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-12.506	8	PASS
	MCH	-13.315	8	PASS
	HCH	-13.486	8	PASS
11G	LCH	-15.680	8	PASS
	MCH	-16.109	8	PASS
	HCH	-16.397	8	PASS
11N20SISO	LCH	-14.671	8	PASS
	MCH	-15.347	8	PASS
	HCH	-16.037	8	PASS
11N40SISO	LCH	-17.814	8	PASS
	MCH	-17.384	8	PASS
	HCH	-17.423	8	PASS

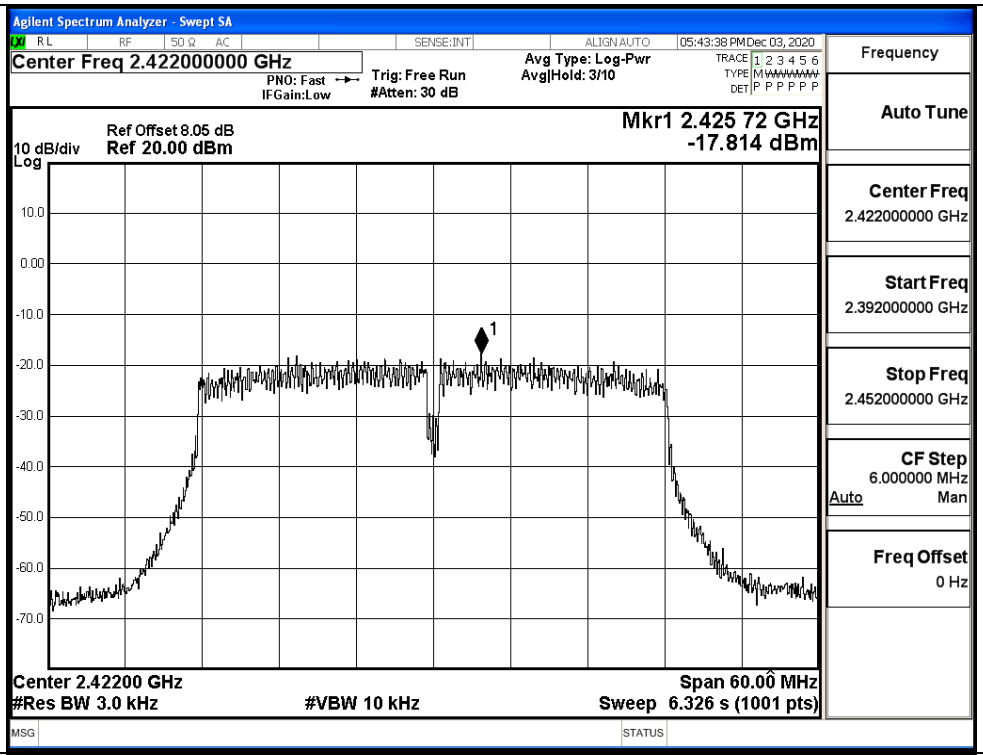
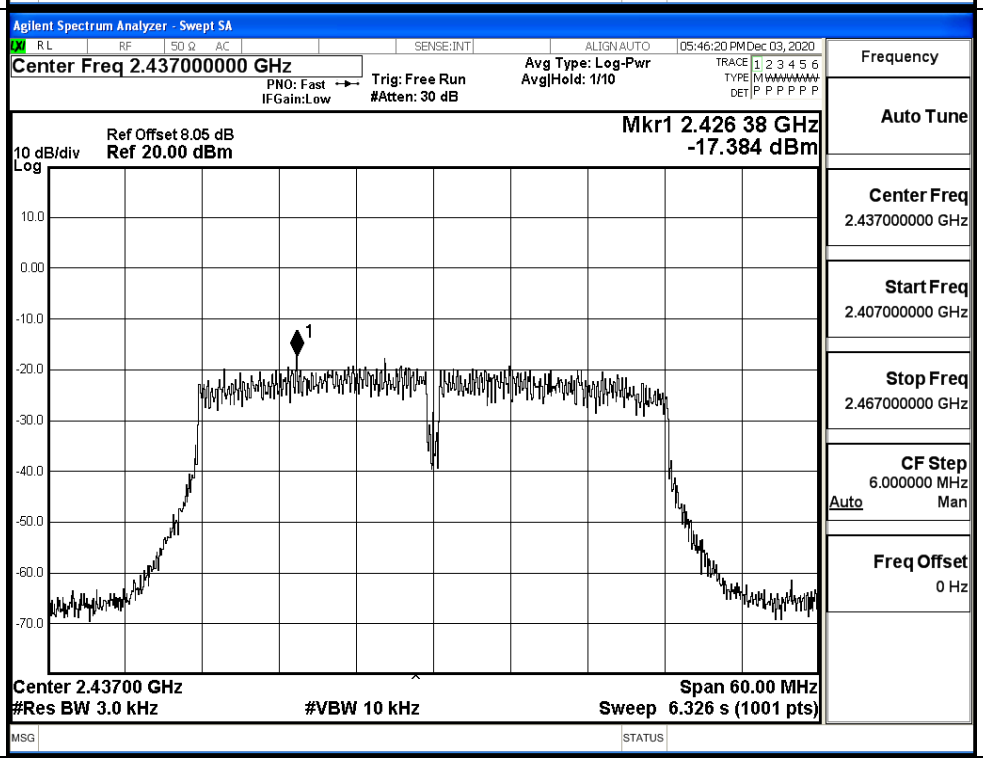
Test Graphs		
11B/LCH		

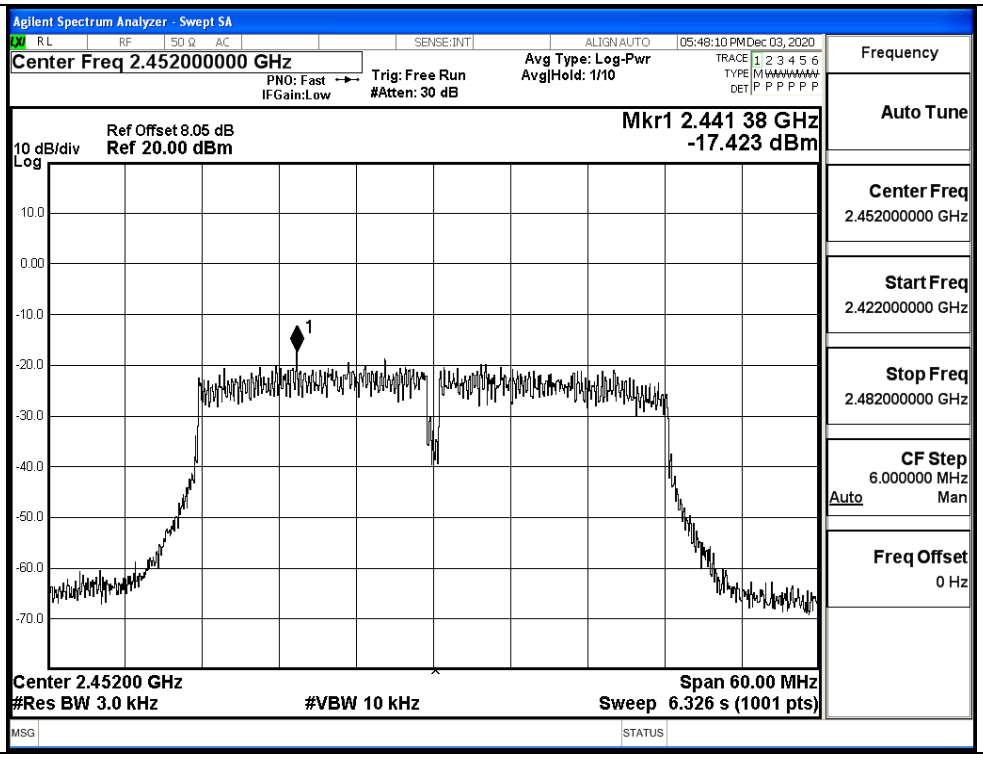
11B/MCH		
11B/HCH		

11G/LCH		
11G/MCH		

11G/HCH		
11N20SISO/LCH		

11N20SISO/MCH		
11N20SISO/HCH		

11N40SISO/LCH		
11N40SISO/MCH		

11N40SISO/HCH		

MIMO

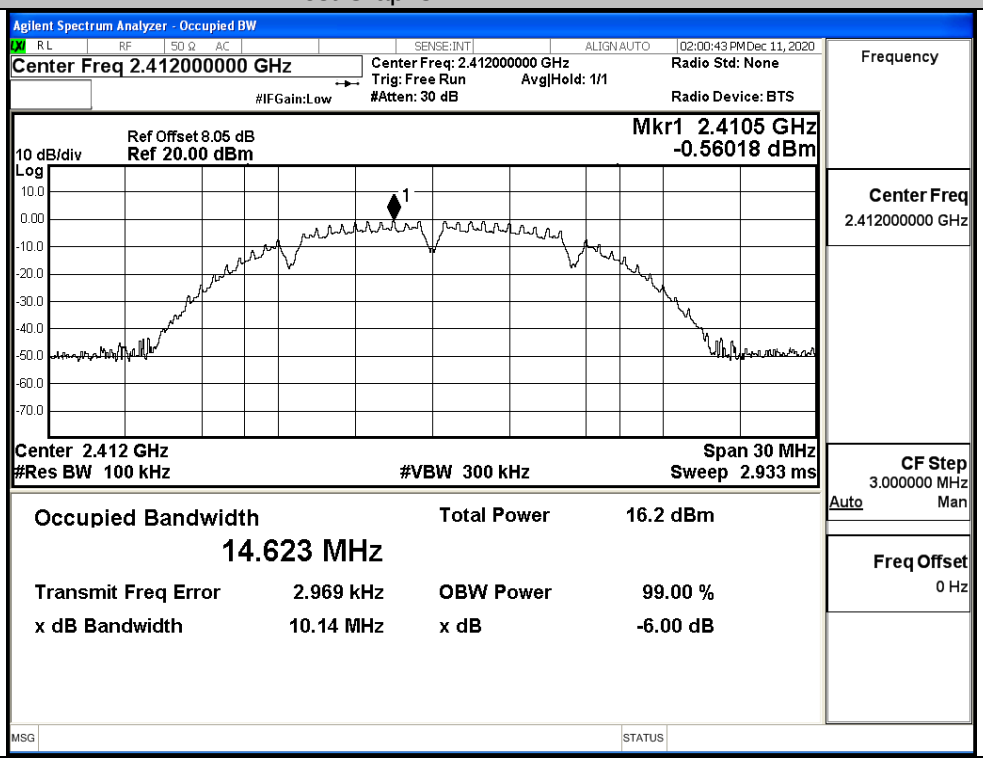
Mode	Channel	ANT 0 [dBm/3KHz]	ANT 1 [dBm/3KHz]	MIMO [dBm/3KHz]	10log(N-3)dB	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11N20	LCH	-14.077	-14.671	-11.35	3.01	-8.34	7.99	PASS
	MCH	-13.690	-15.347	-11.43	3.01	-8.42	7.99	PASS
	HCH	-15.452	-16.037	-12.72	3.01	-9.71	7.99	PASS
11N40	LCH	-16.060	-17.814	-13.84	3.01	-10.83	7.99	PASS
	MCH	-17.051	-17.384	-14.20	3.01	-11.19	7.99	PASS
	HCH	-15.666	-17.423	-13.45	3.01	-10.44	7.99	PASS

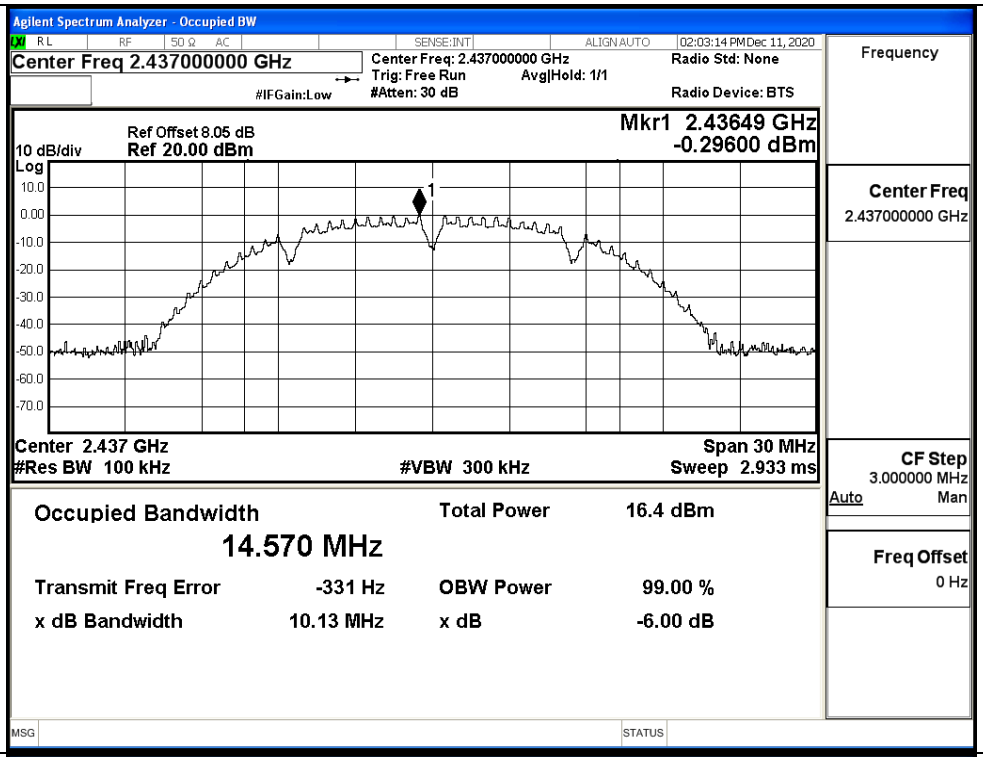
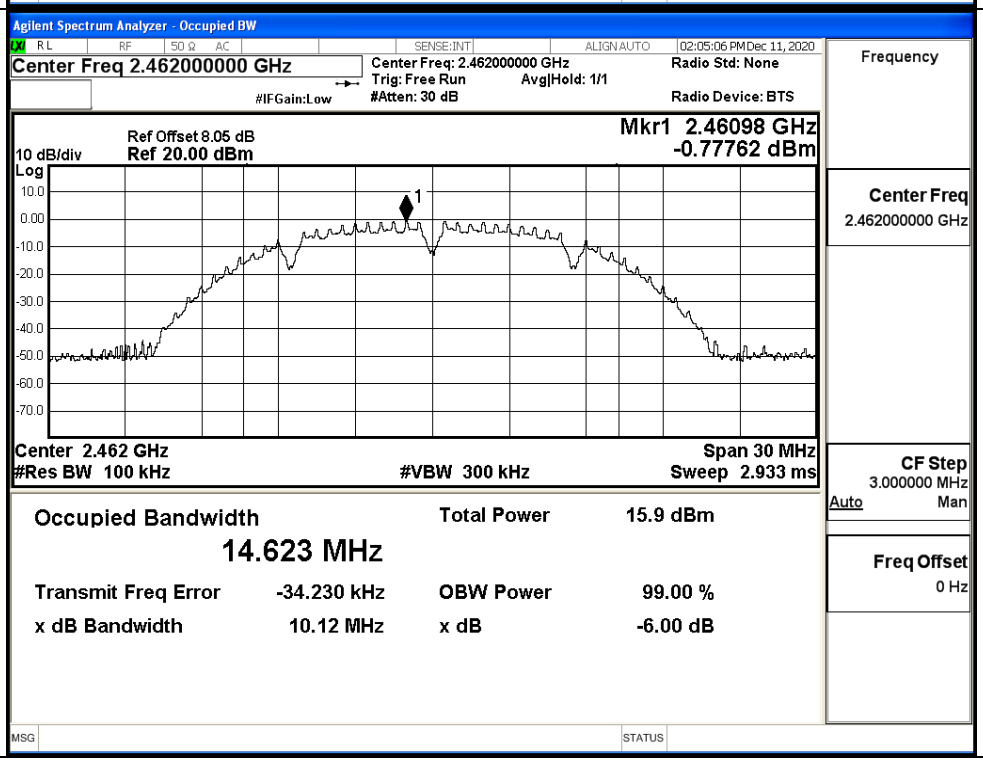
Directional gain=3dBi+10 log (2) = 6.01dBi > 6dBi, So the power density limit shall be reduced to 8-(6.01-6) = 7.99

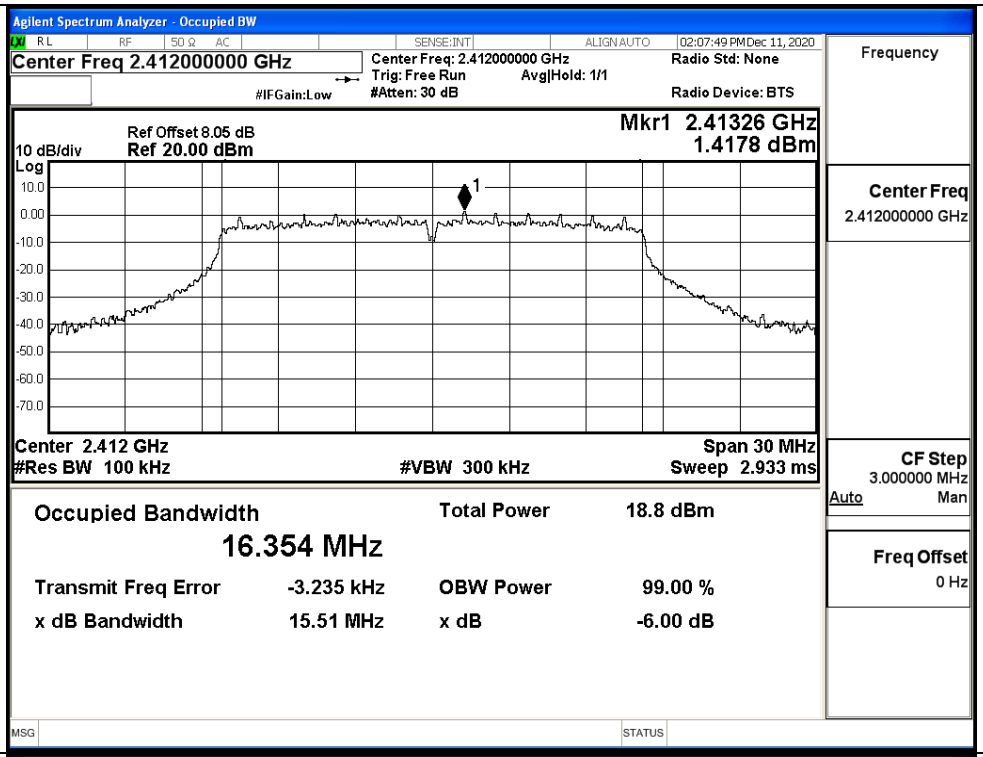
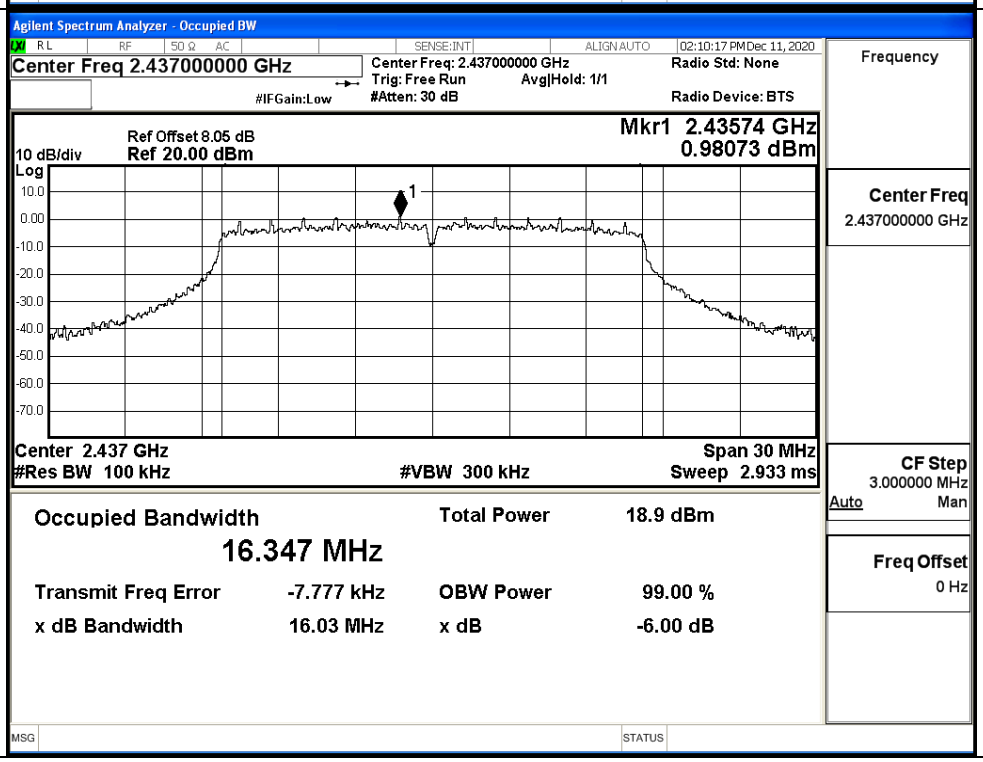
C.4 6dB Bandwidth

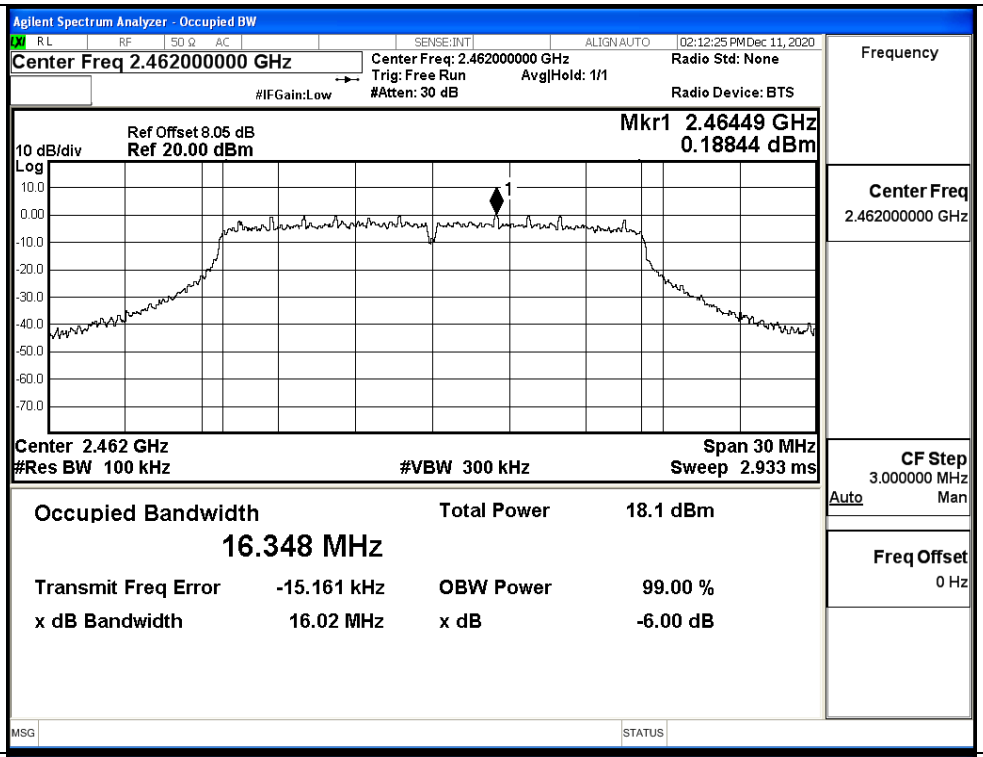
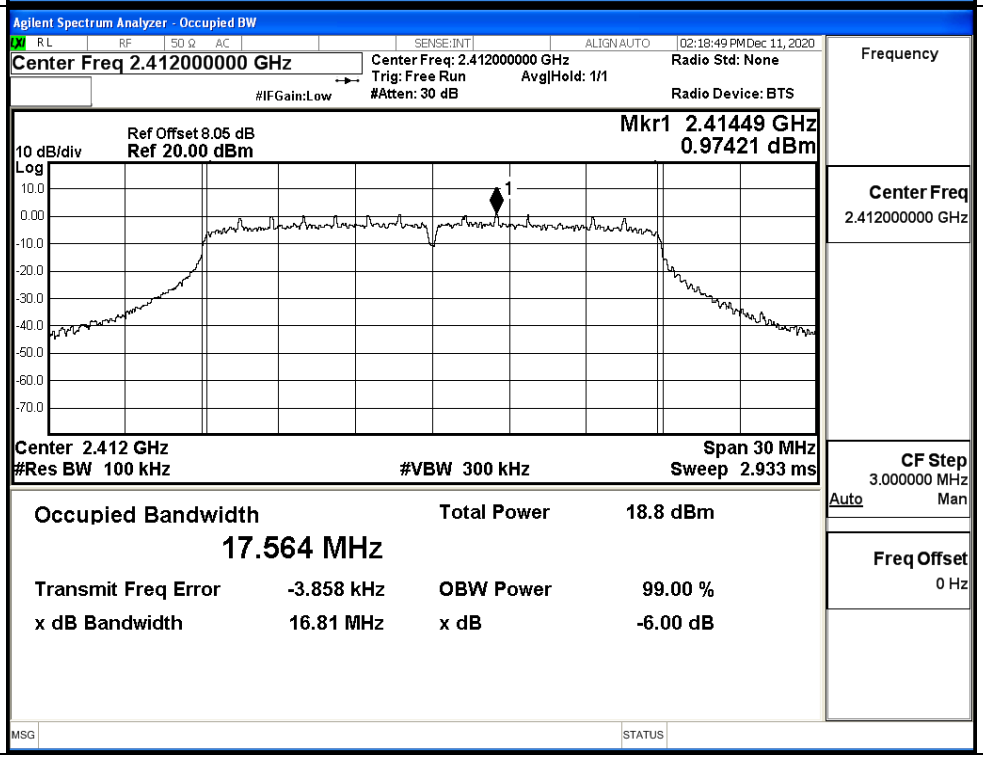
ANT0

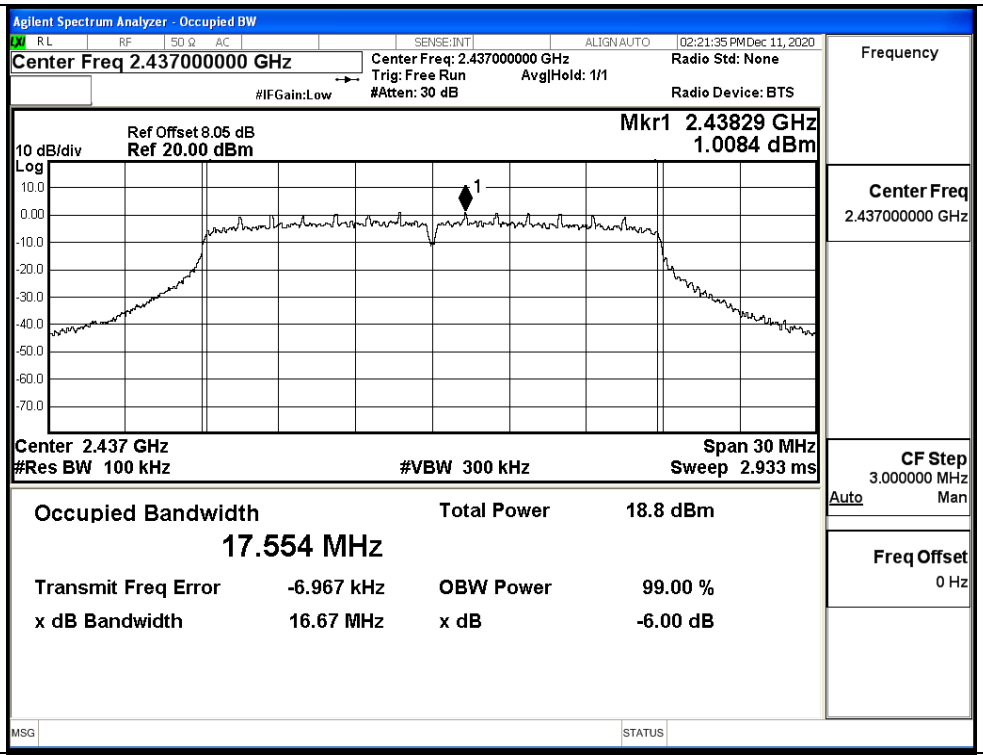
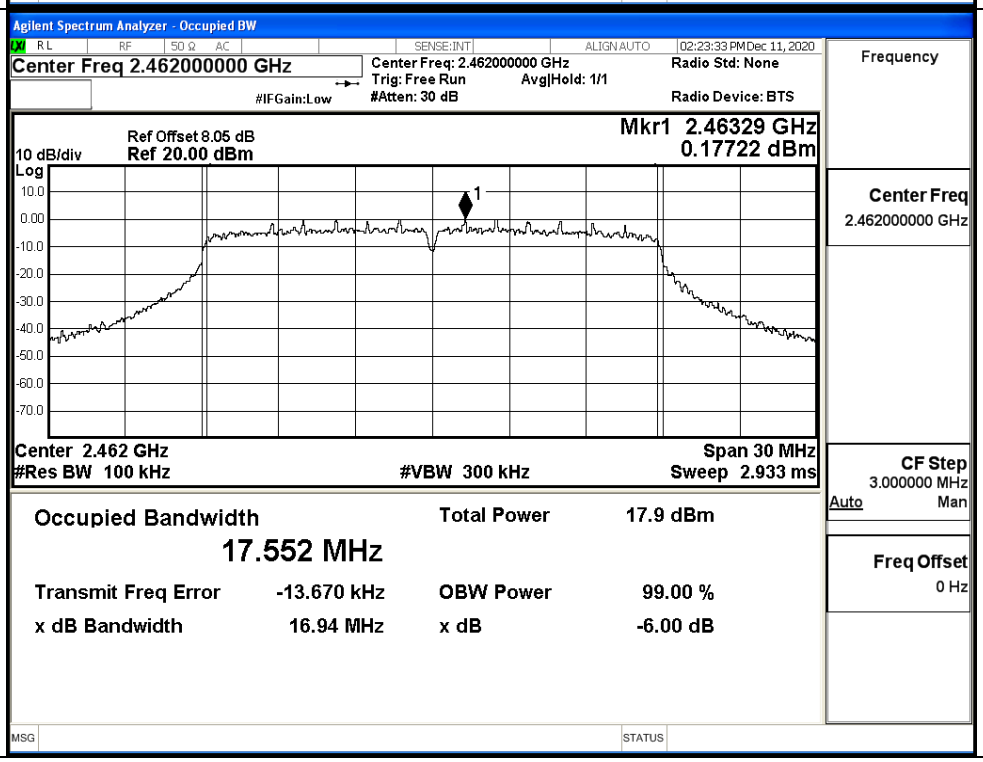
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	10.14	⩾0.5	PASS
	MCH	10.13	⩾0.5	PASS
	HCH	10.12	⩾0.5	PASS
11G	LCH	15.51	⩾0.5	PASS
	MCH	16.03	⩾0.5	PASS
	HCH	16.02	⩾0.5	PASS
11N20SISO	LCH	16.81	⩾0.5	PASS
	MCH	16.67	⩾0.5	PASS
	HCH	16.94	⩾0.5	PASS
11N40SISO	LCH	35.18	⩾0.5	PASS
	MCH	35.20	⩾0.5	PASS
	HCH	35.47	⩾0.5	PASS

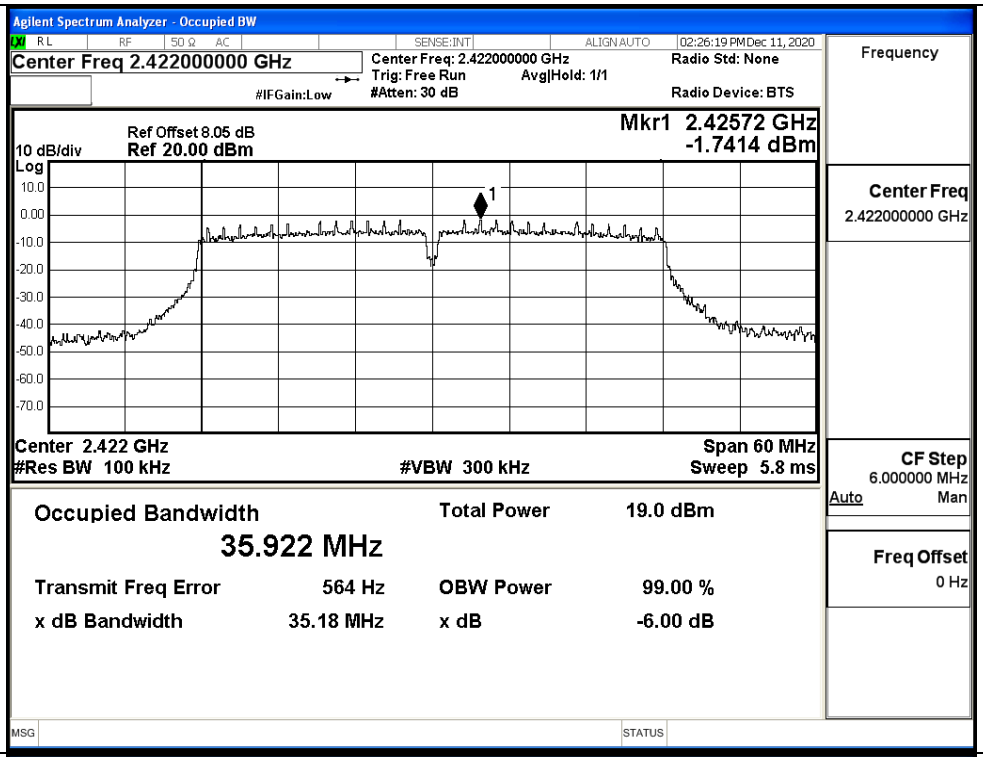
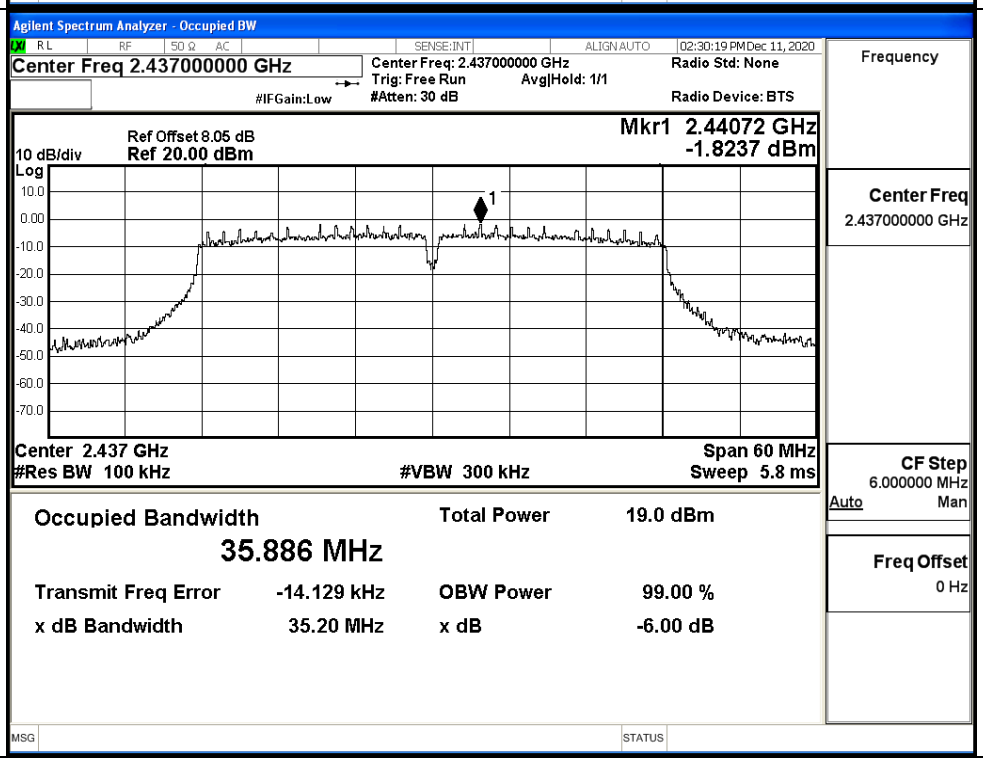
Test Graphs	
11B/LCH	

11B/MCH		
11B/HCH		

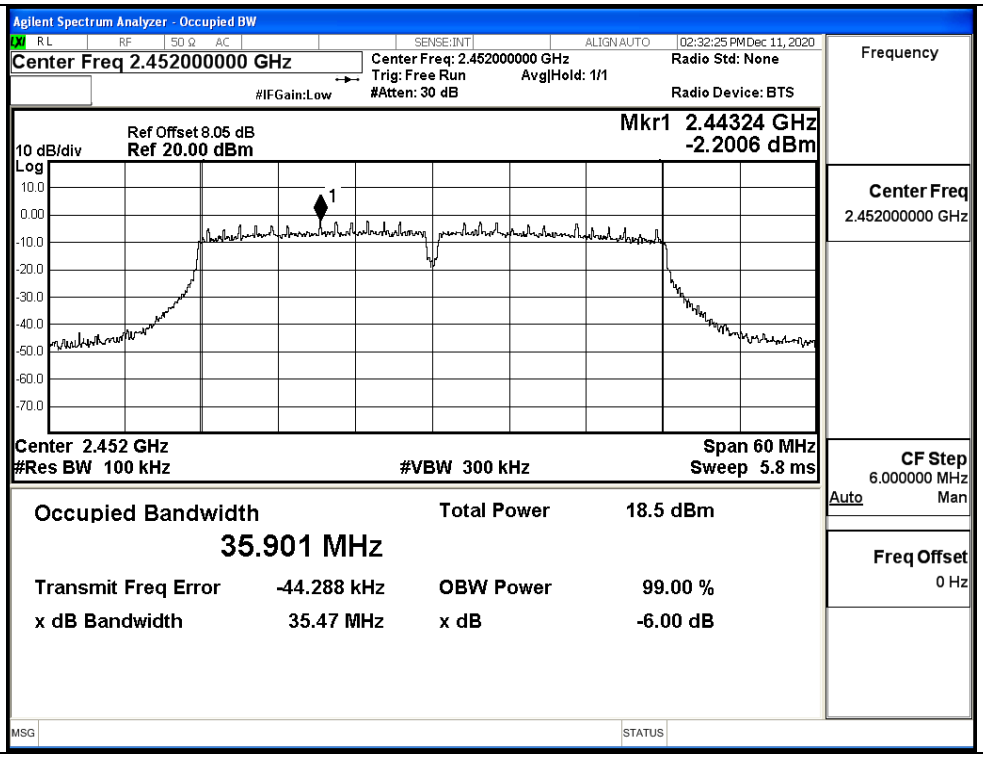
11G/LCH	
11G/MCH	

11G/HCH		
11N20SISO/LCH		

11N20SISO/MCH		
11N20SISO/HCH		

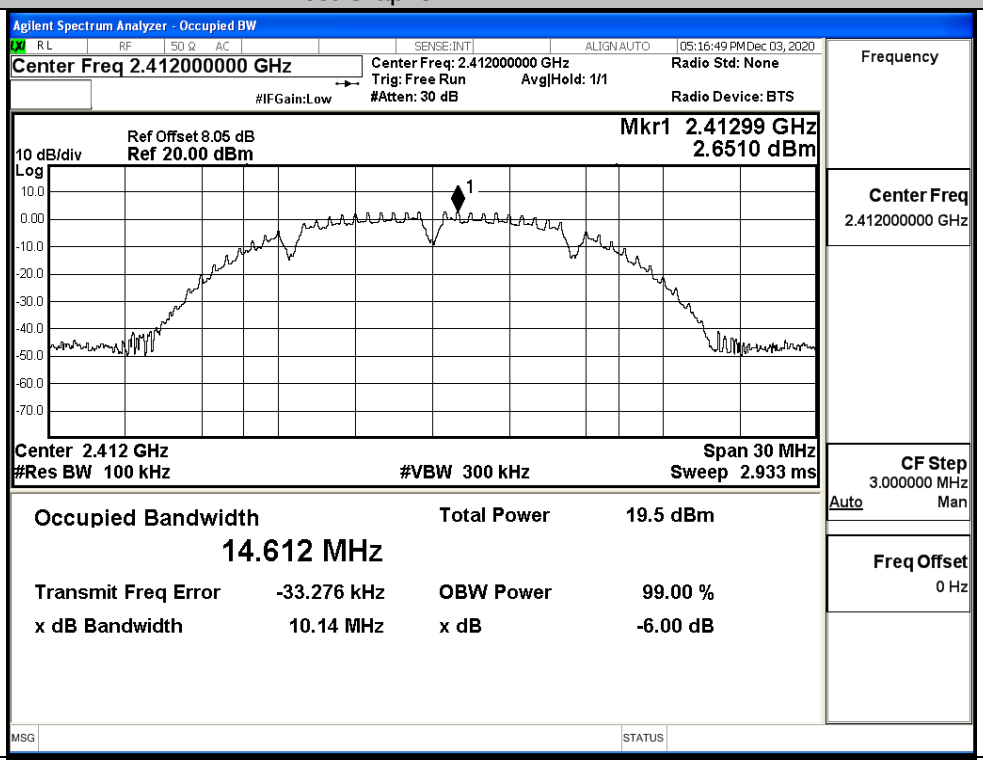
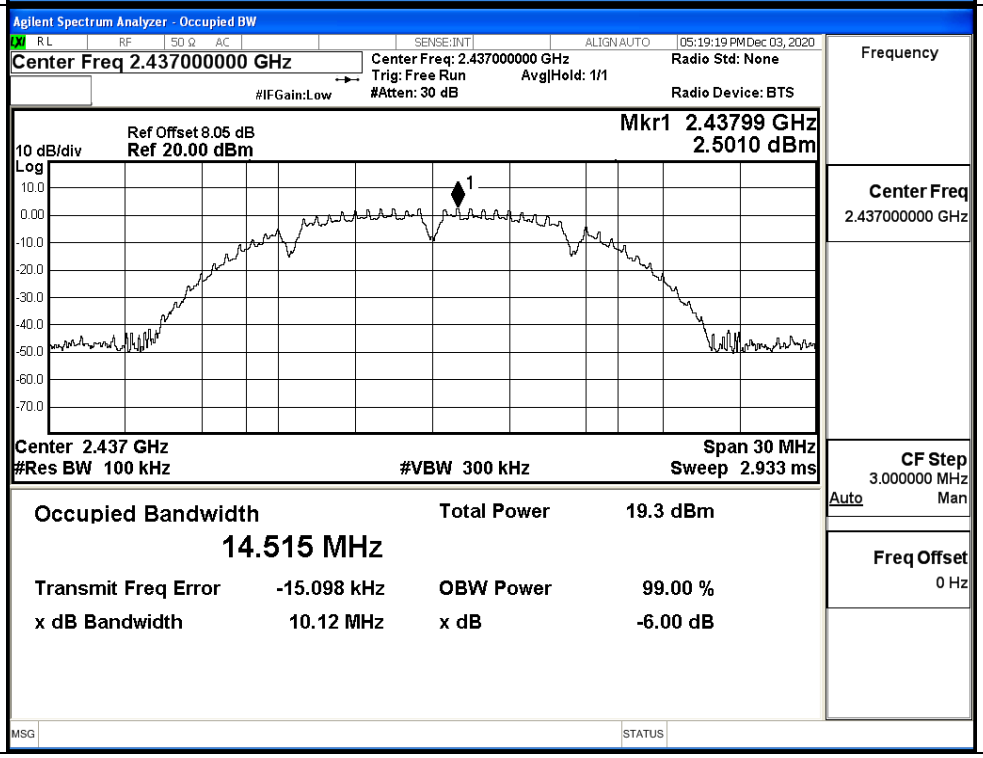
11N40SISO/LCH		
11N40SISO/MCH		

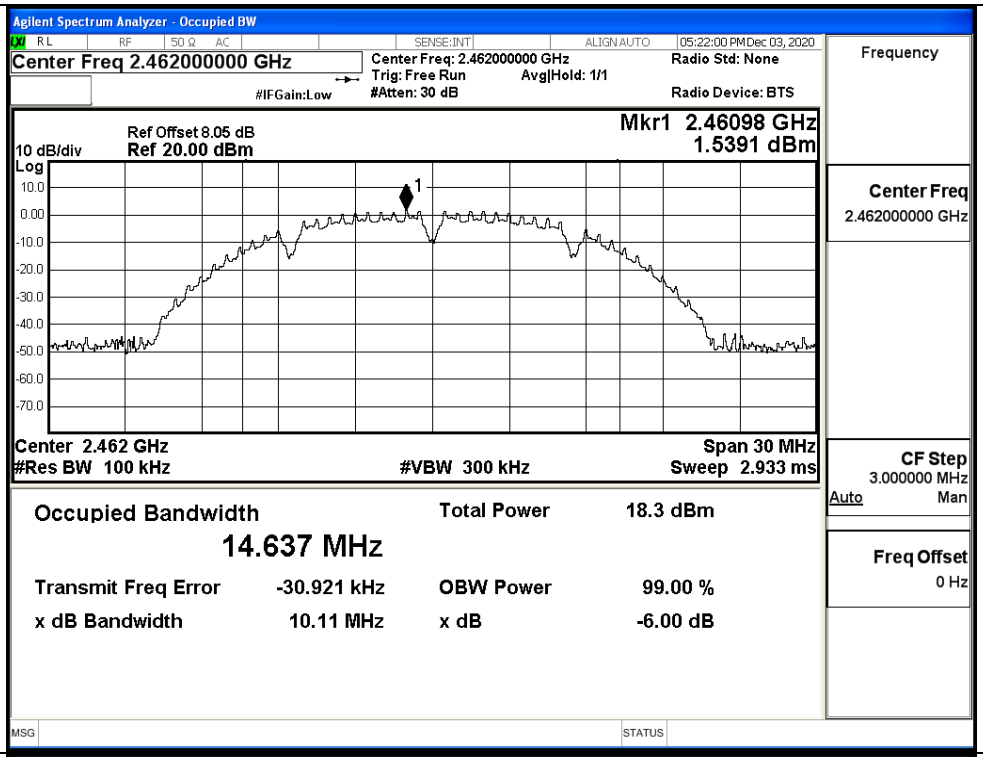
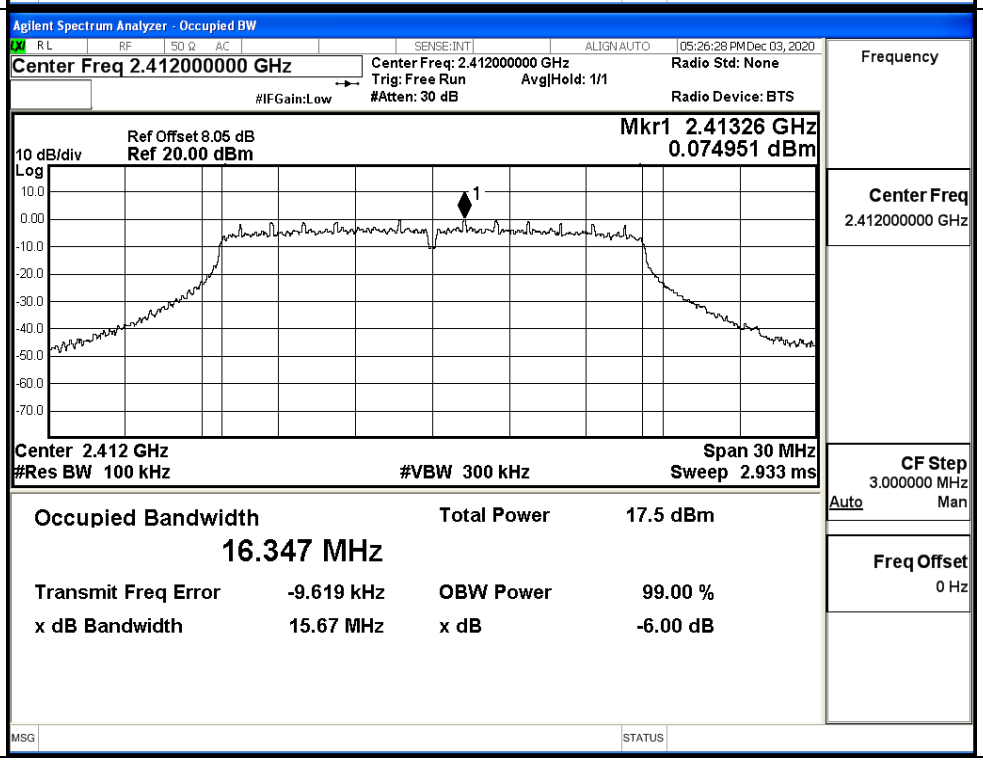
11N40SISO/HCH

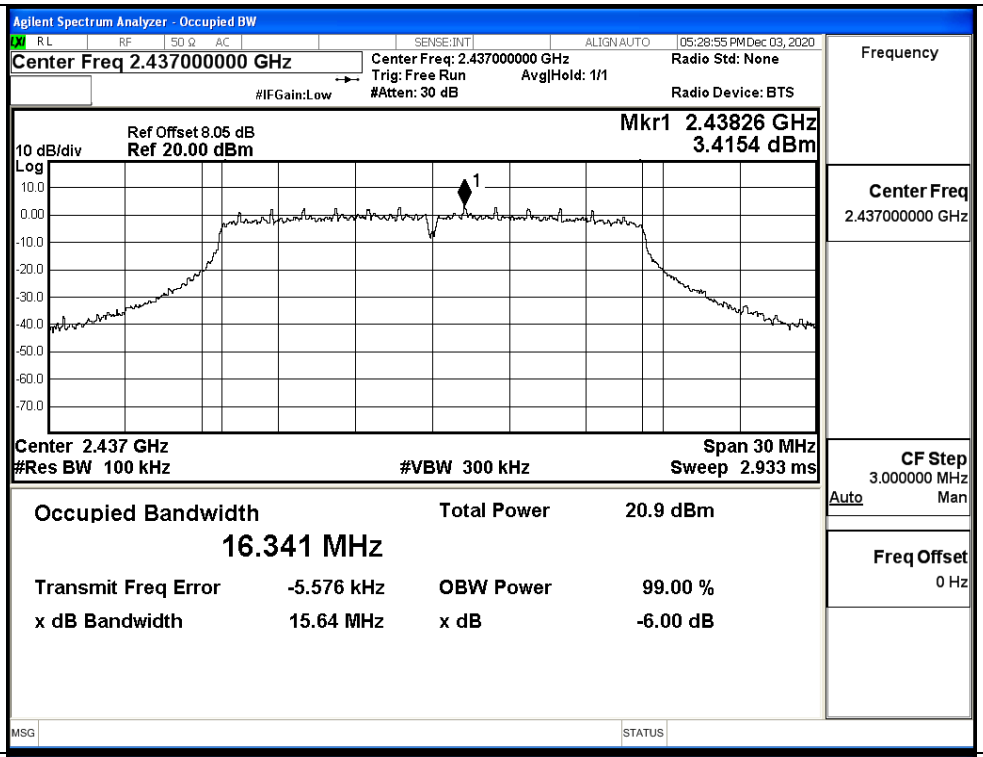
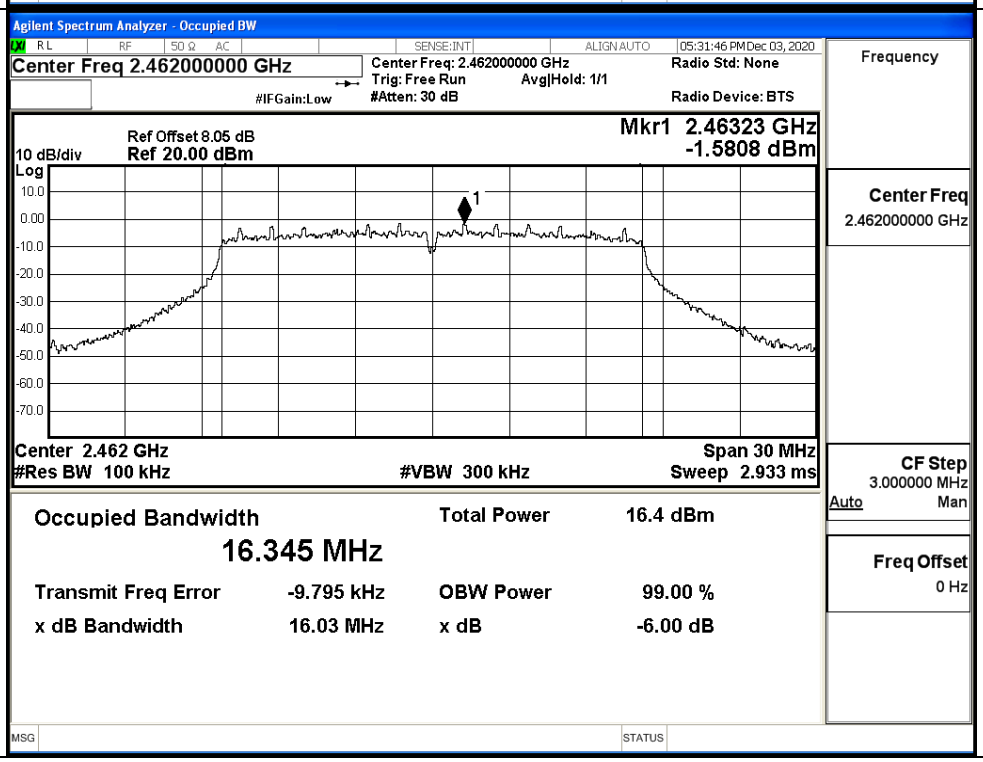


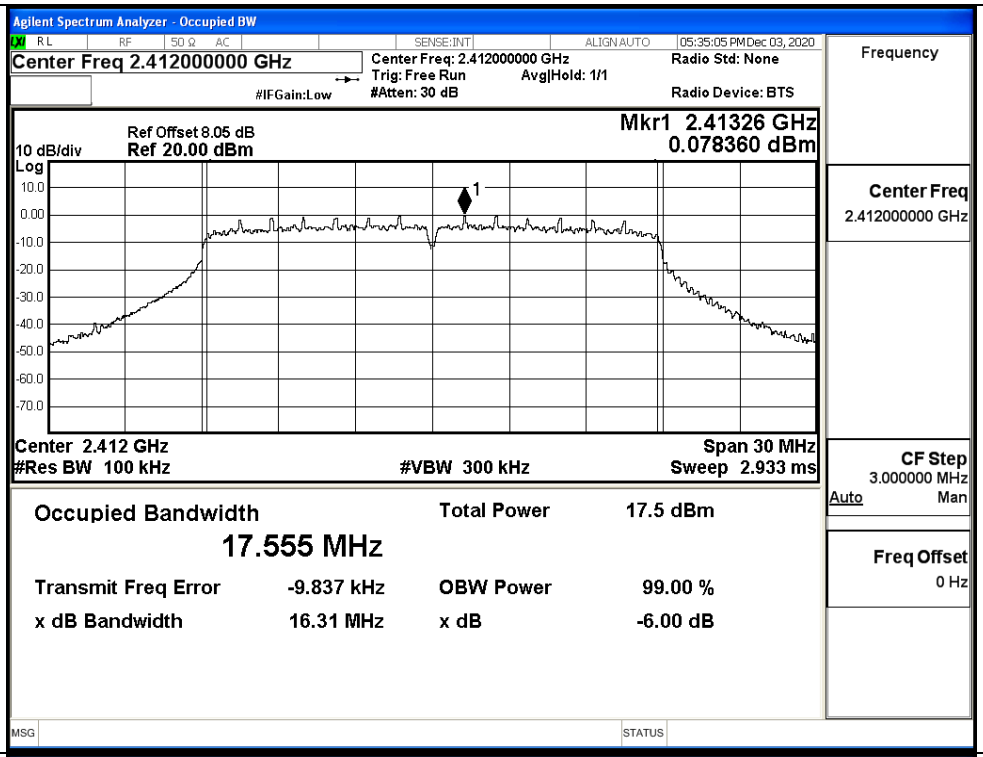
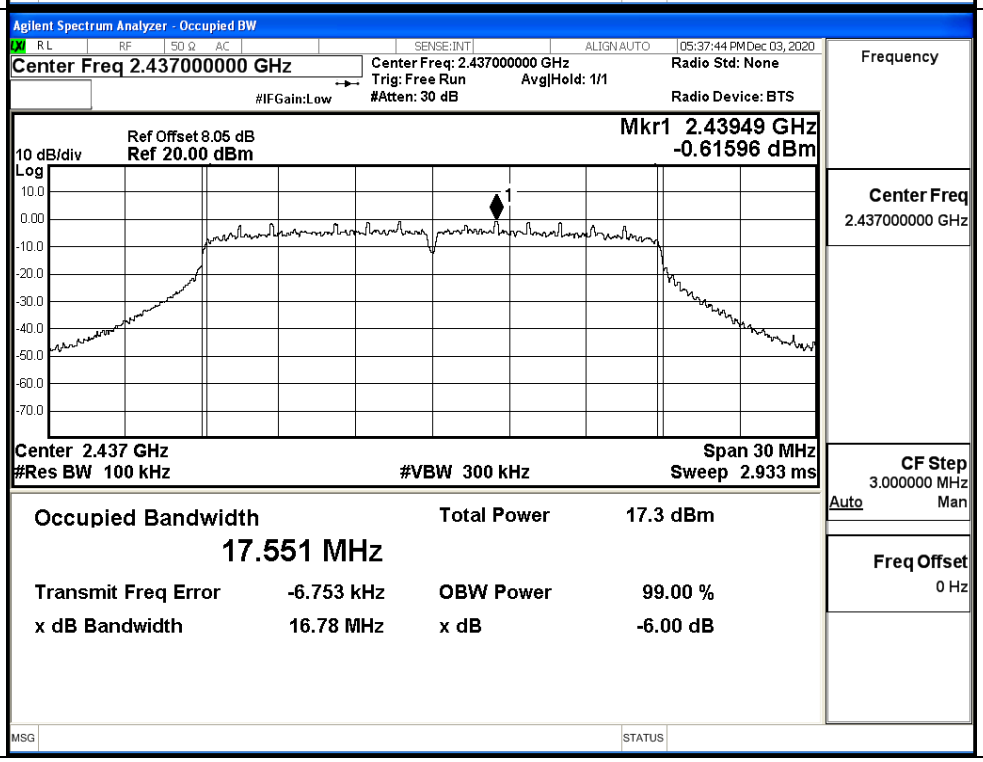
ANT1

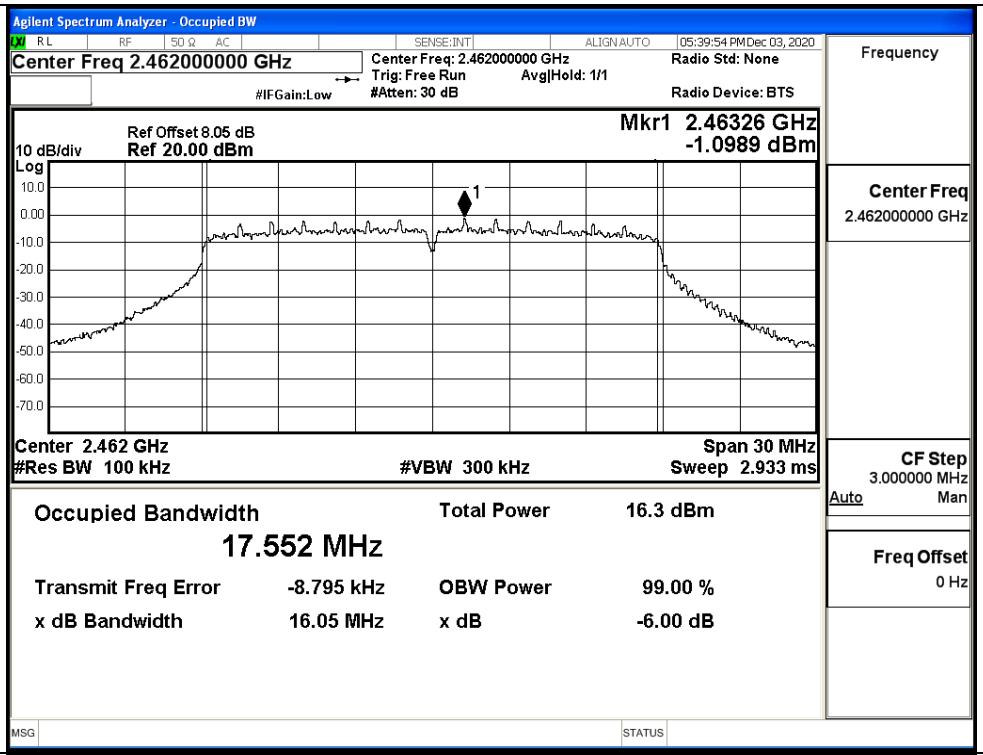
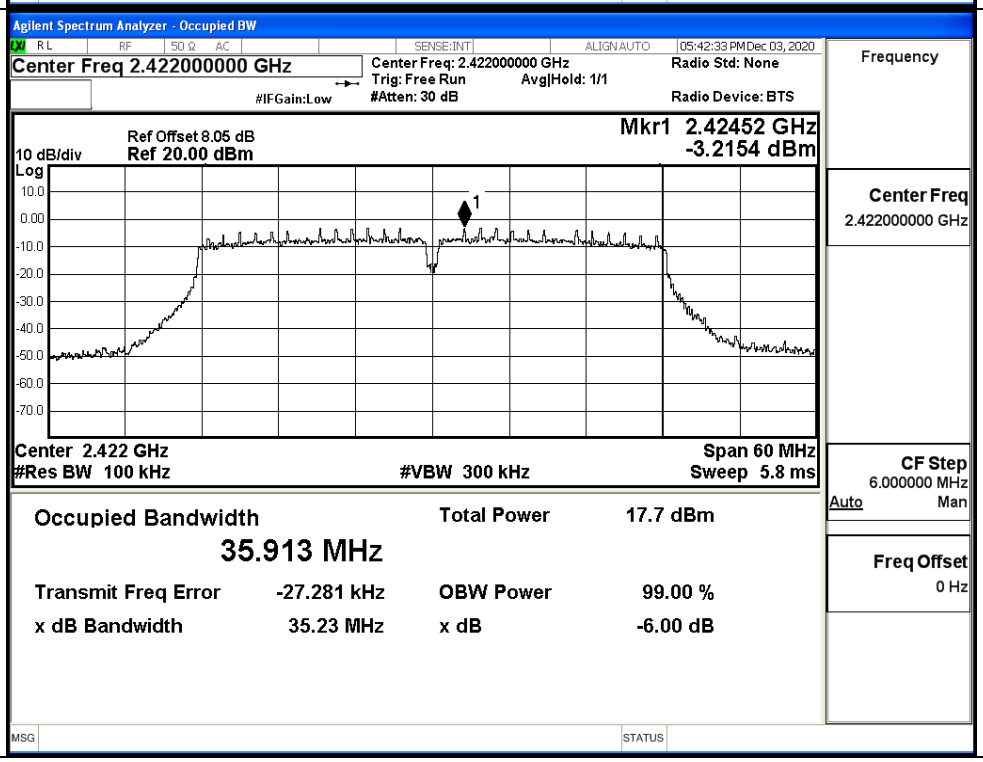
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	10.14	⩾0.5	PASS
	MCH	10.12	⩾0.5	PASS
	HCH	10.11	⩾0.5	PASS
11G	LCH	15.67	⩾0.5	PASS
	MCH	15.64	⩾0.5	PASS
	HCH	16.03	⩾0.5	PASS
11N20SISO	LCH	16.31	⩾0.5	PASS
	MCH	16.78	⩾0.5	PASS
	HCH	16.05	⩾0.5	PASS
11N40SISO	LCH	35.23	⩾0.5	PASS
	MCH	35.20	⩾0.5	PASS
	HCH	35.49	⩾0.5	PASS

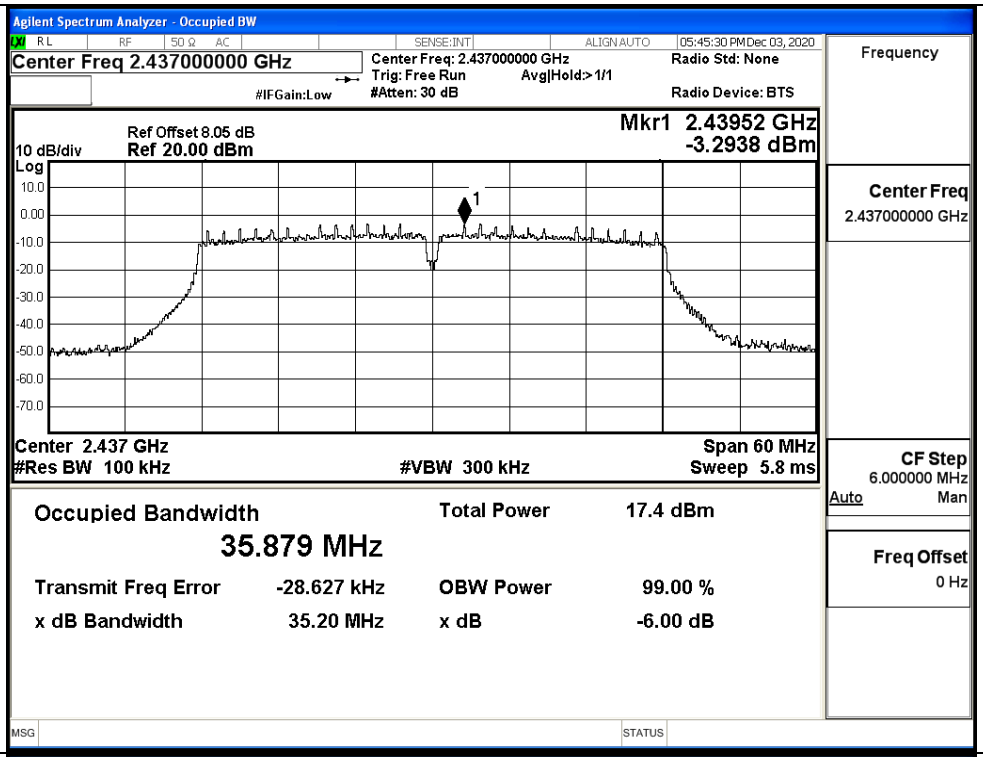
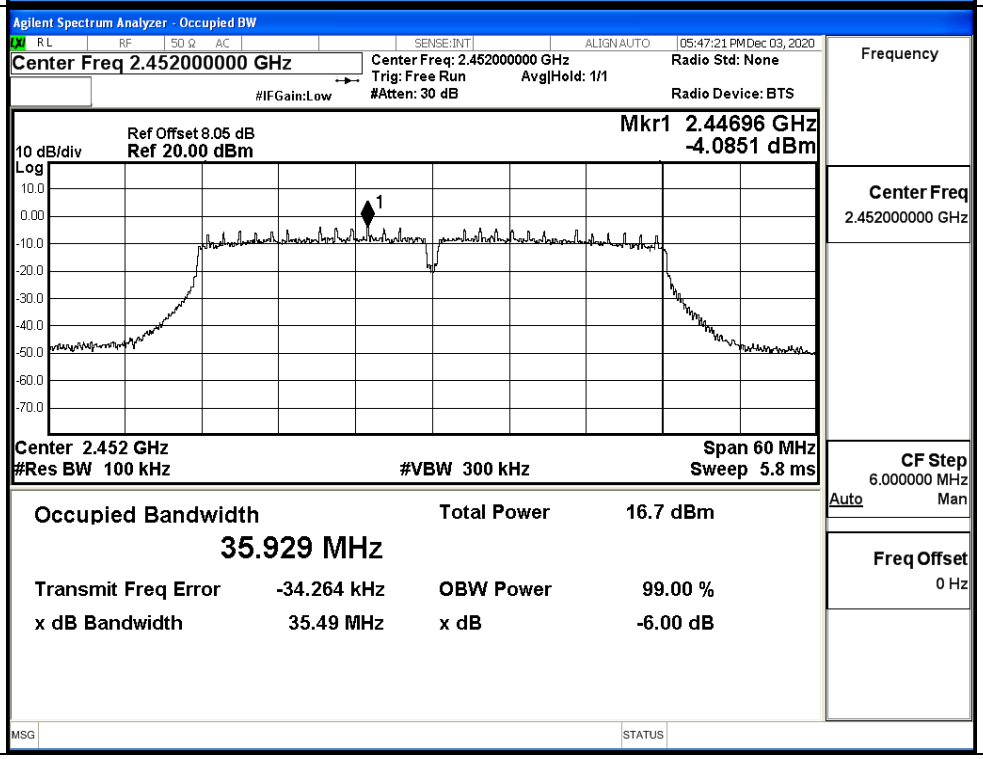
Test Graphs	
11B/LCH	
11B/MCH	

11B/HCH		
11G/LCH		

11G/MCH	
11G/HCH	

11N20SISO/LCH		
11N20SISO/MCH		

11N20SISO/HCH	
11N40SISO/LCH	

11N40SISO/MCH	
11N40SISO/HCH	

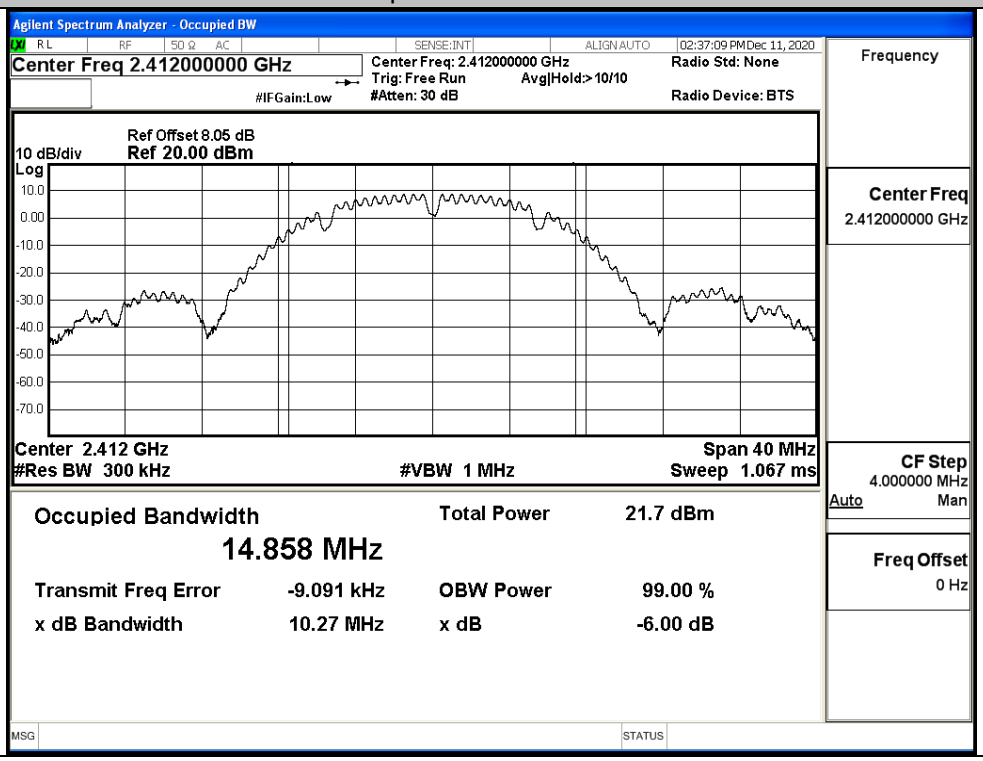
C.5 Occupied Bandwidth

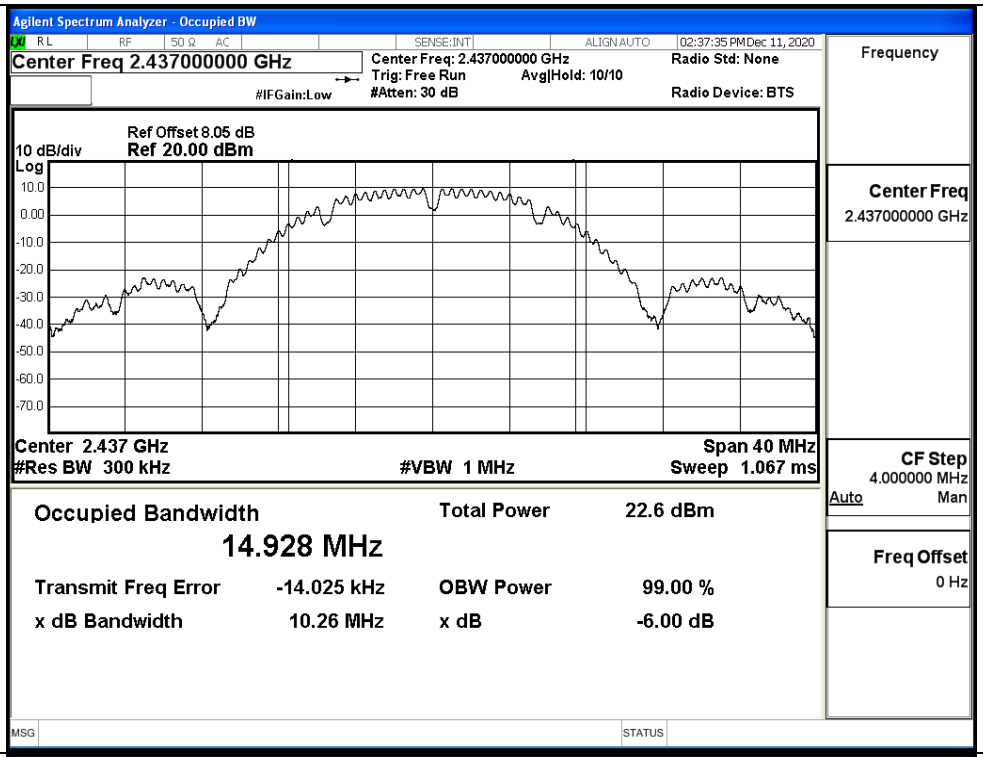
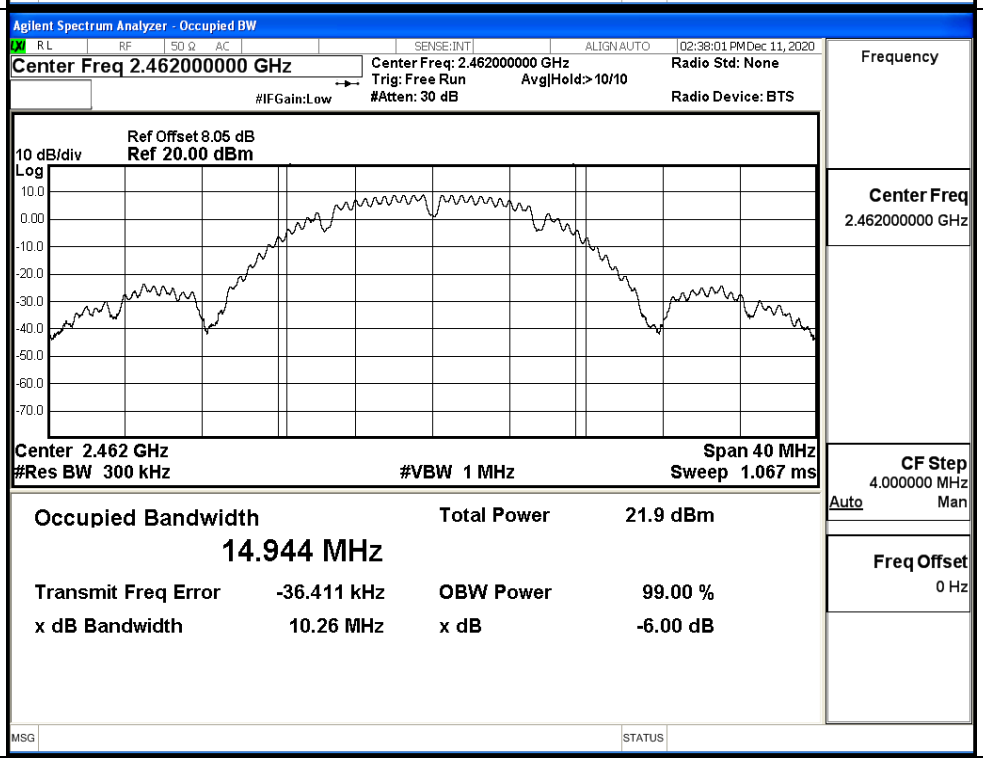
ANT0

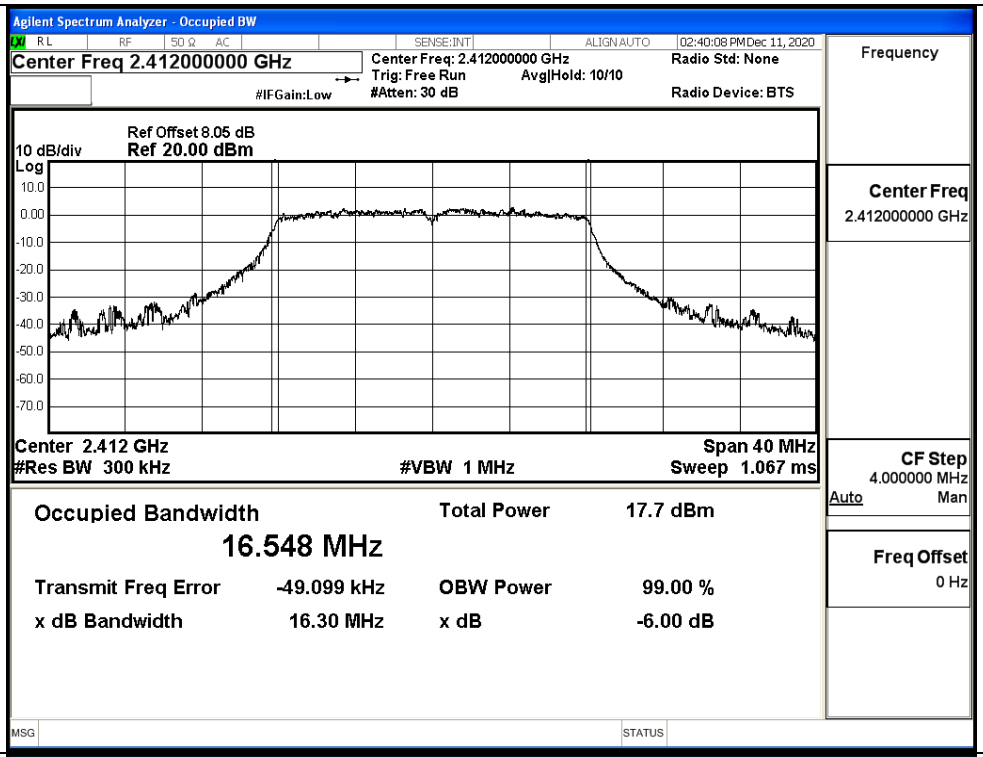
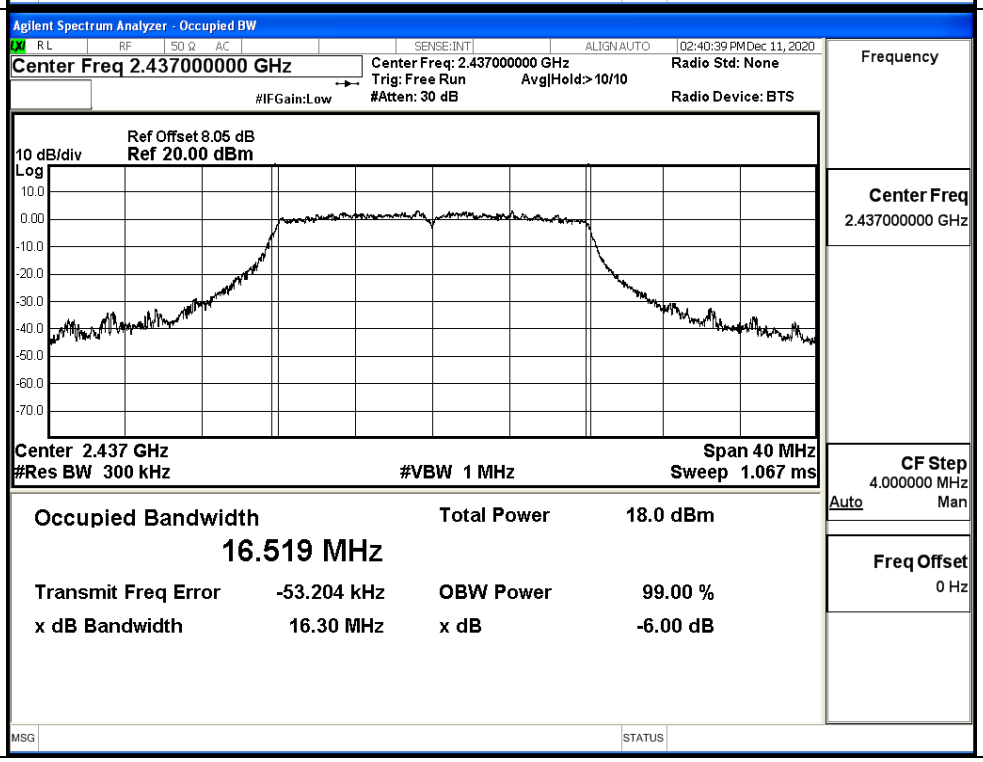
Mode	Channel	Occupied Bandwidth [MHz]	Verdict
11B	LCH	14.858	PASS
	MCH	14.928	PASS
	HCH	14.944	PASS
11G	LCH	16.548	PASS
	MCH	16.519	PASS
	HCH	16.549	PASS
11N20SISO	LCH	17.699	PASS
	MCH	17.675	PASS
	HCH	17.684	PASS
11N40SISO	LCH	36.098	PASS
	MCH	36.028	PASS
	HCH	36.094	PASS

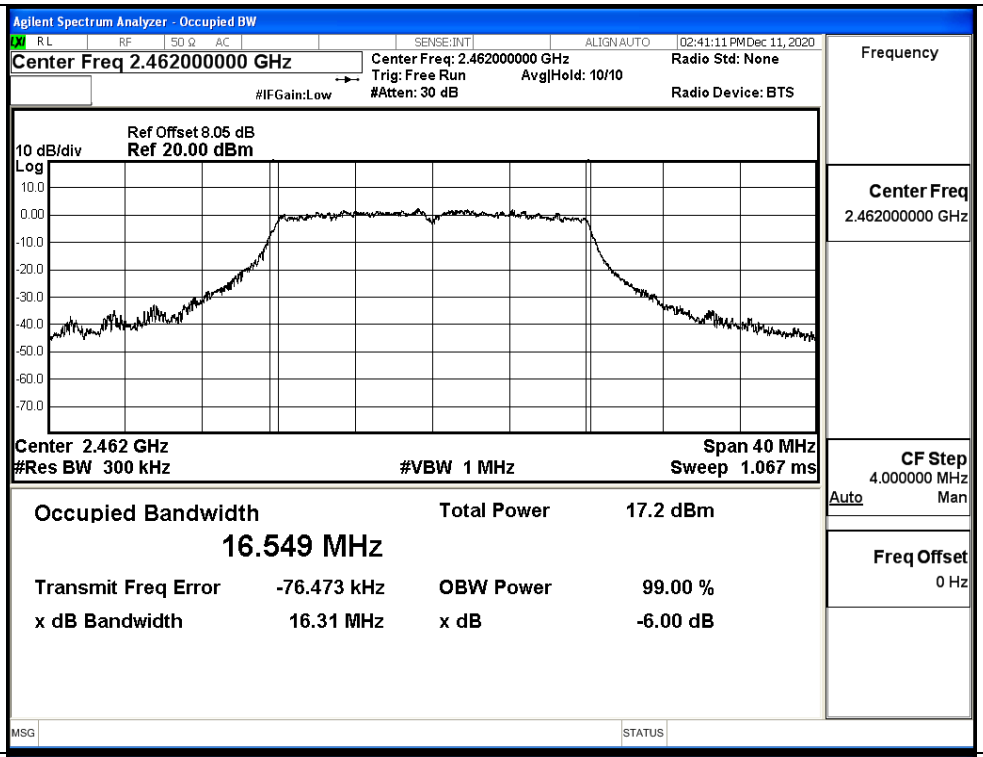
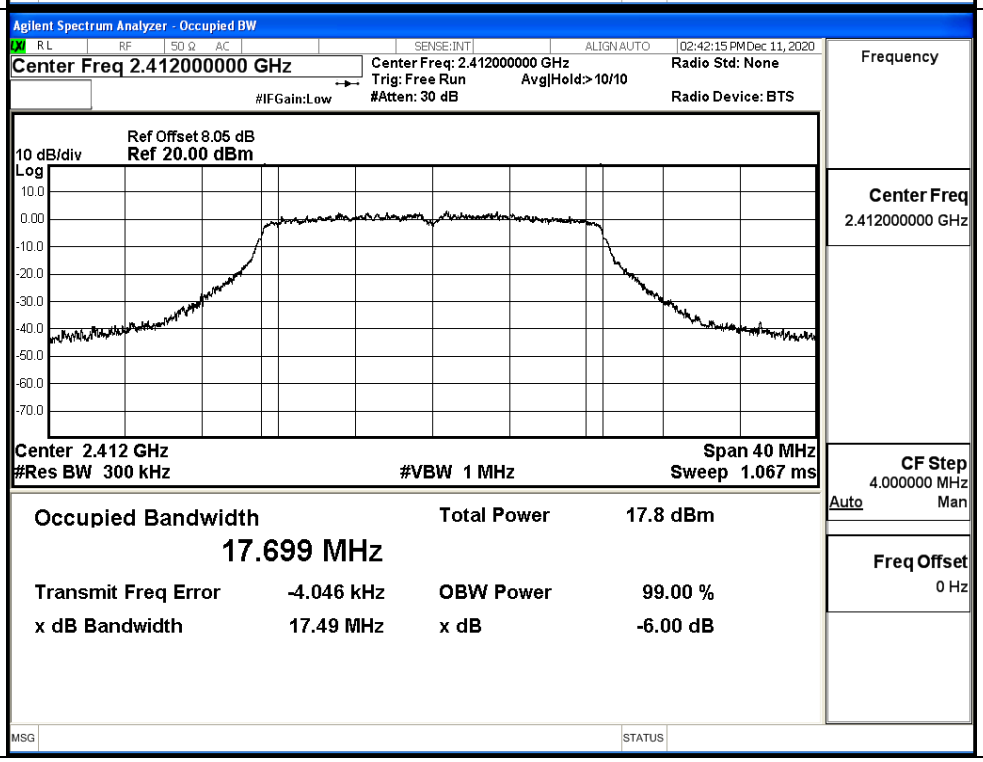
Test Graphs

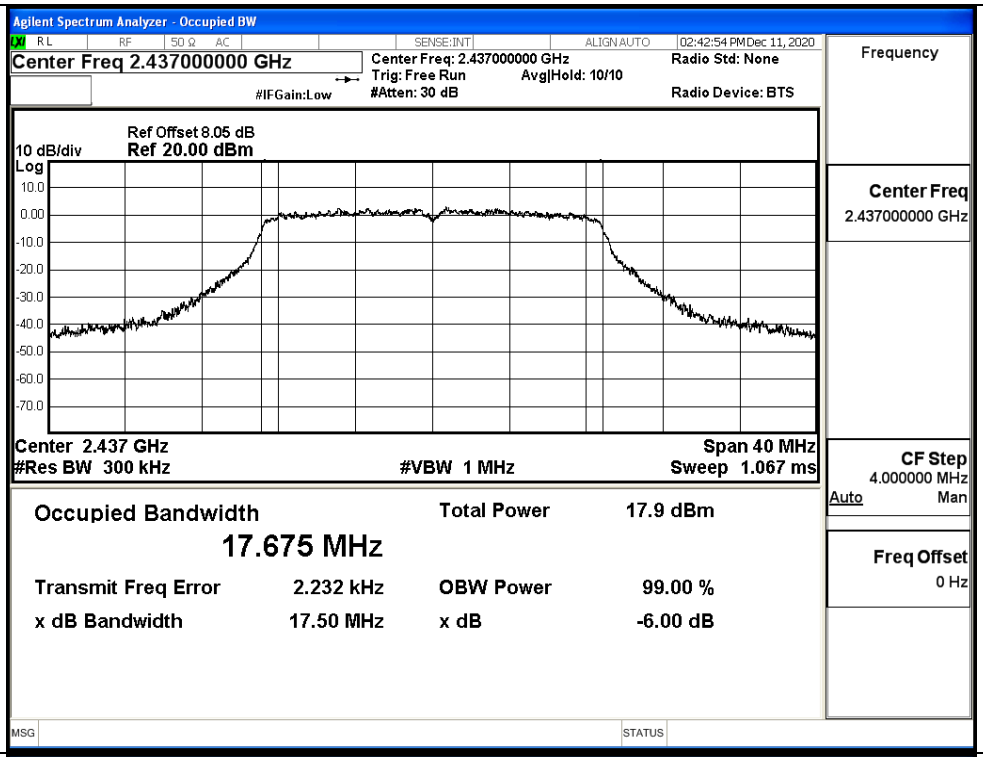
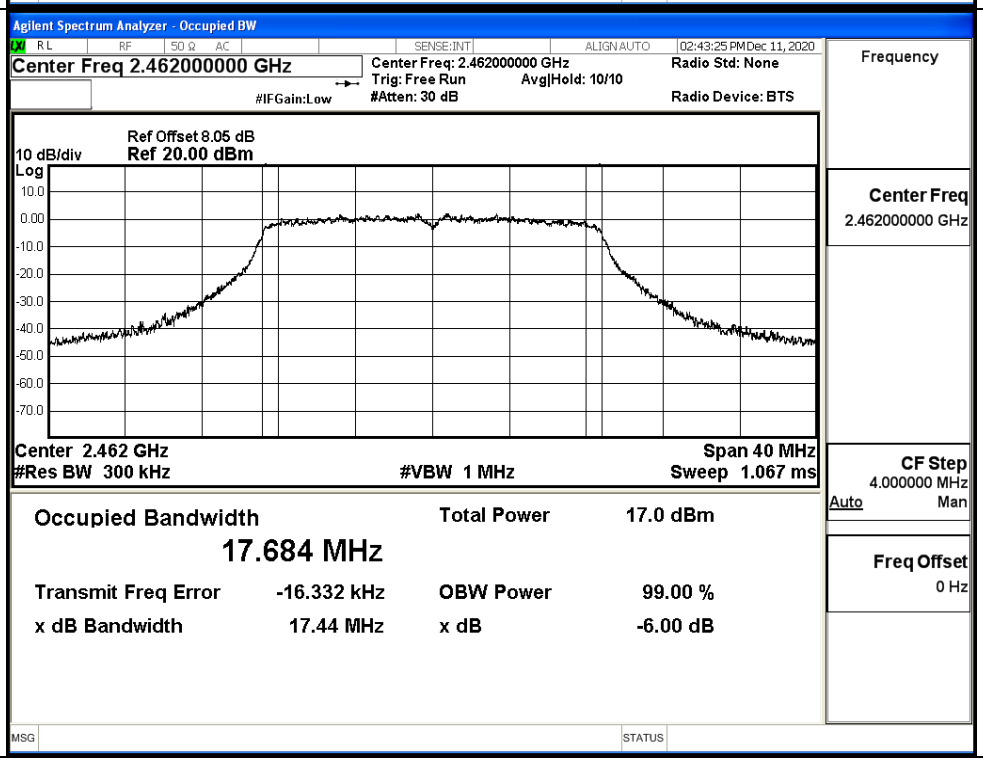
11B/LCH

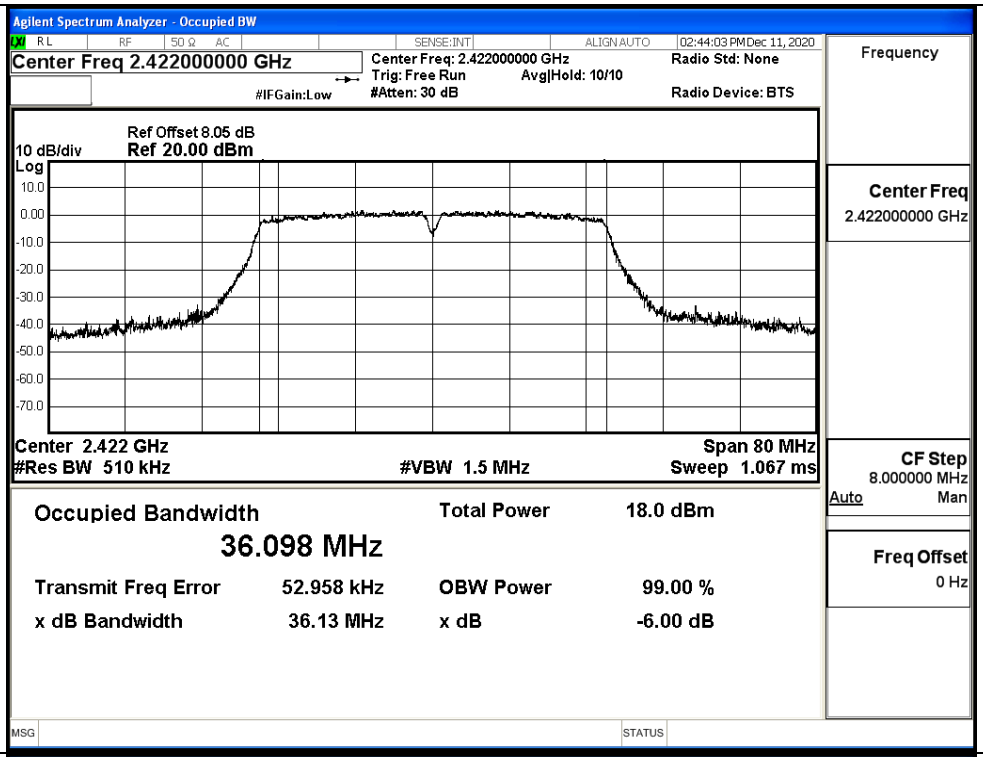
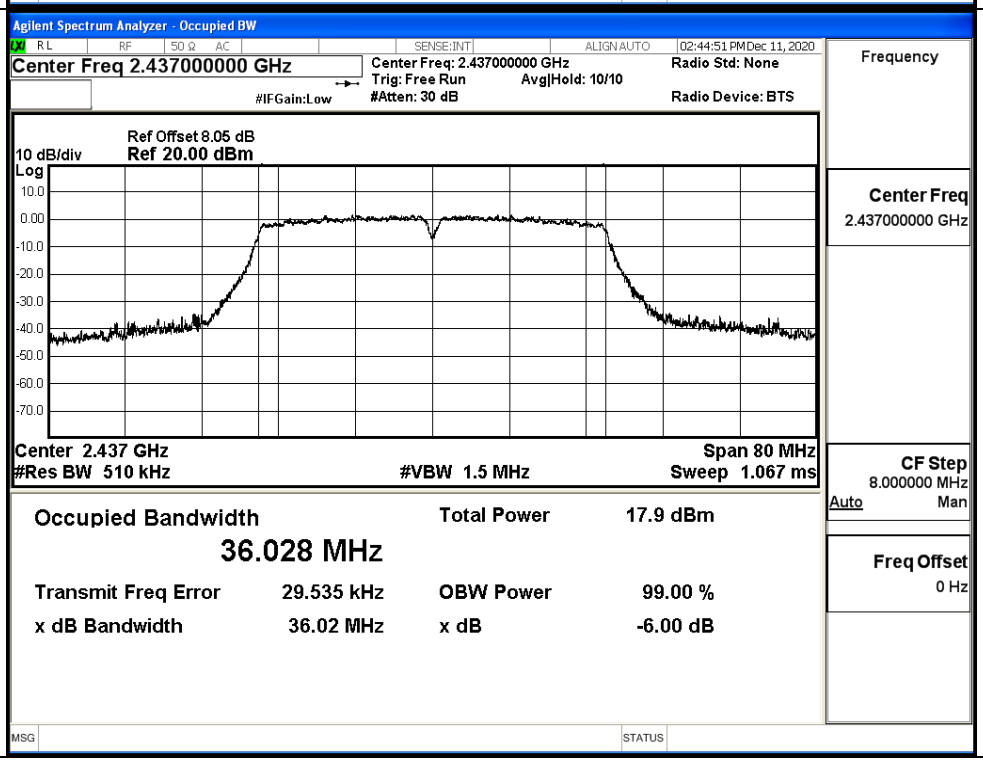


11B/MCH		
11B/HCH		

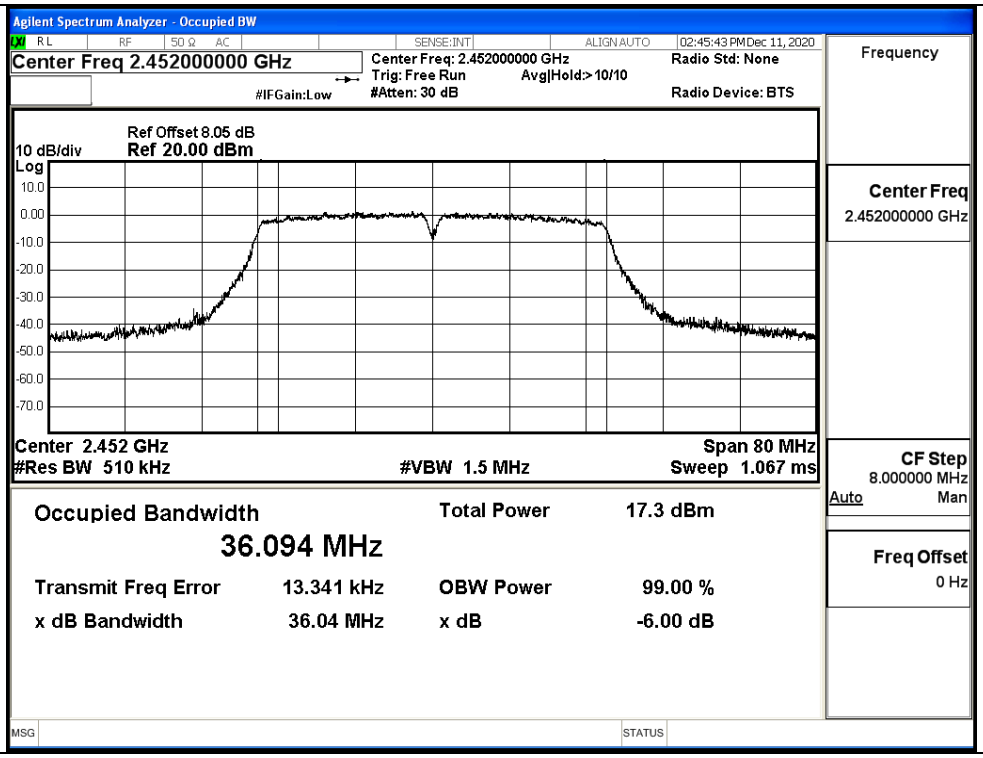
11G/LCH		
11G/MCH		

11G/HCH	
11N20SISO/LCH	

11N20SISO/MCH	
11N20SISO/HCH	

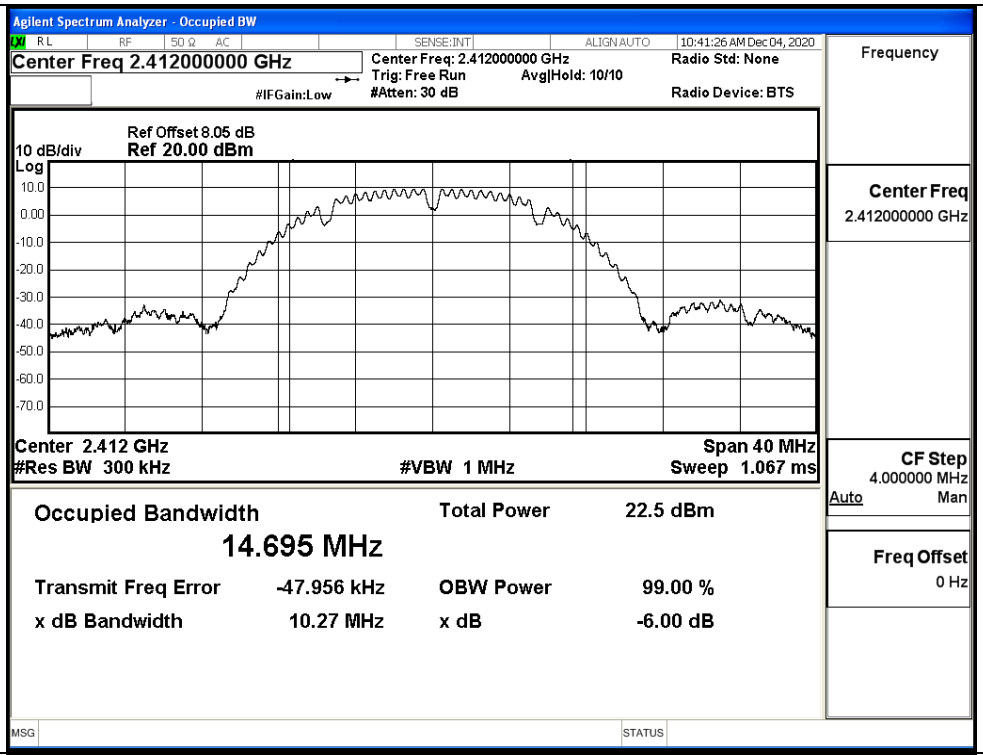
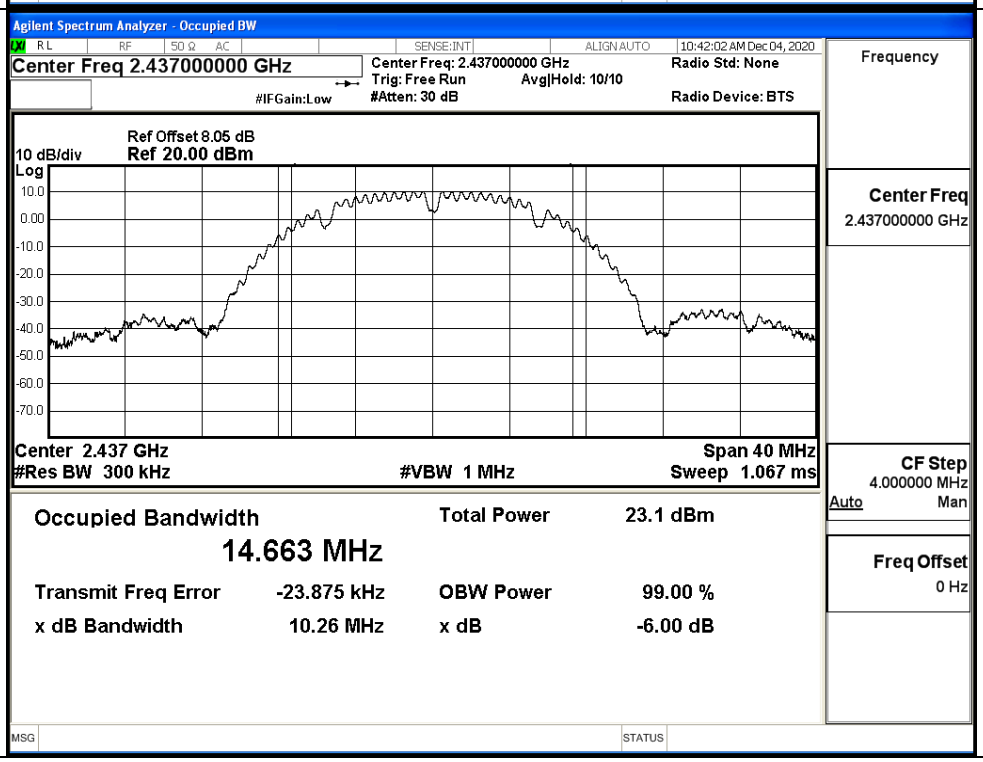
11N40SISO/LCH		
11N40SISO/MCH		

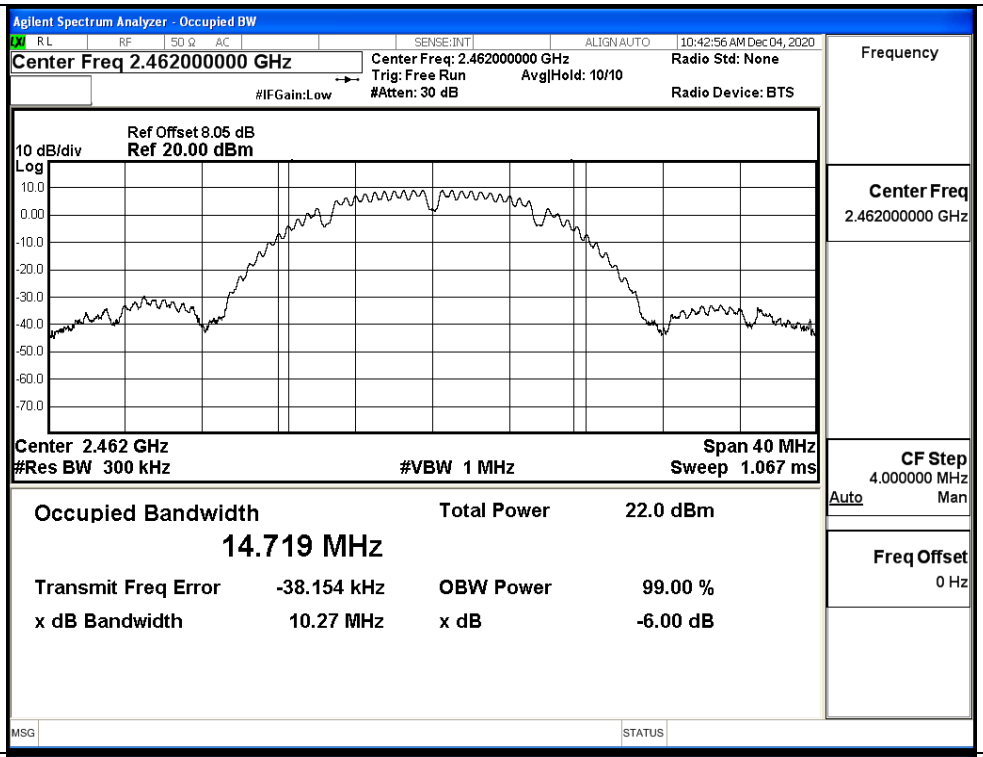
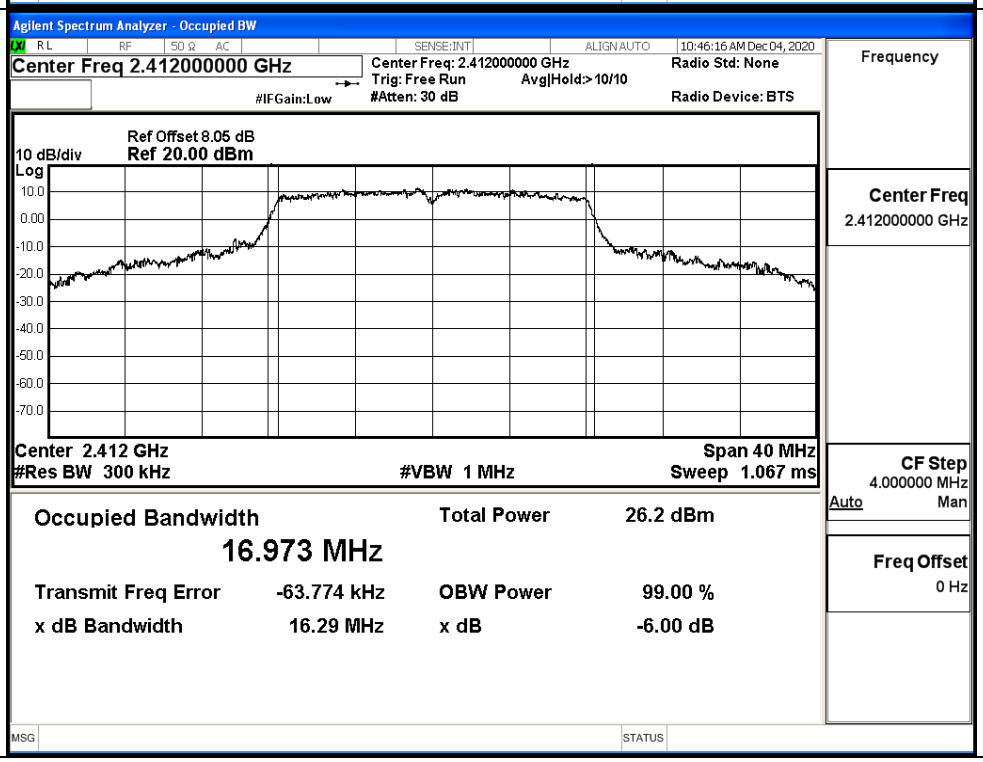
11N40SISO/HCH

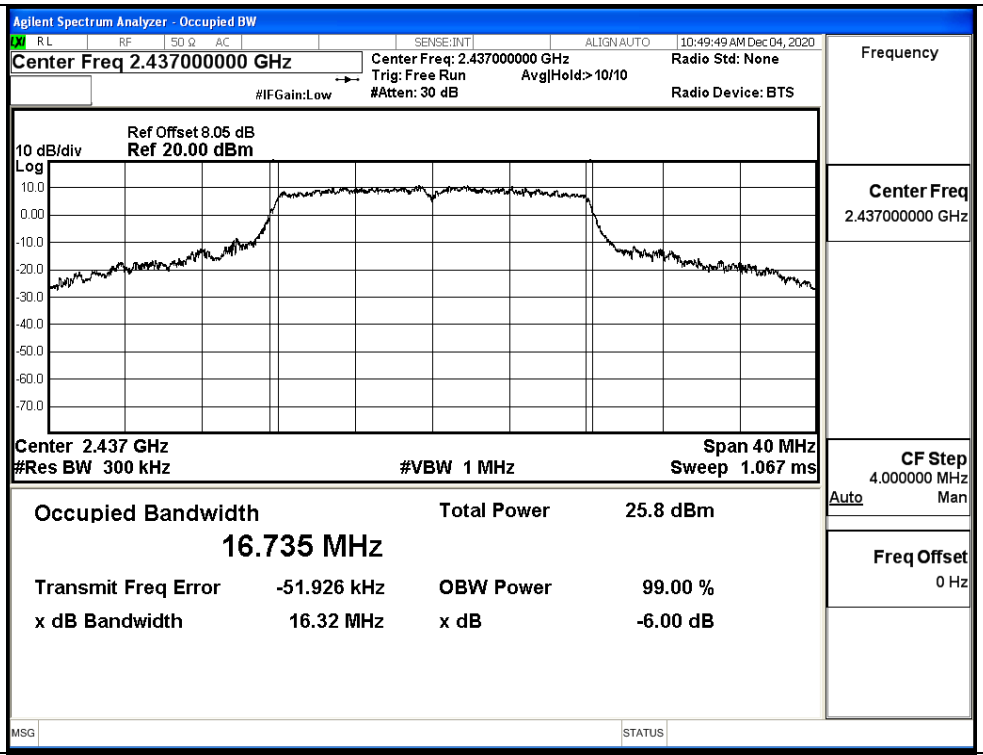
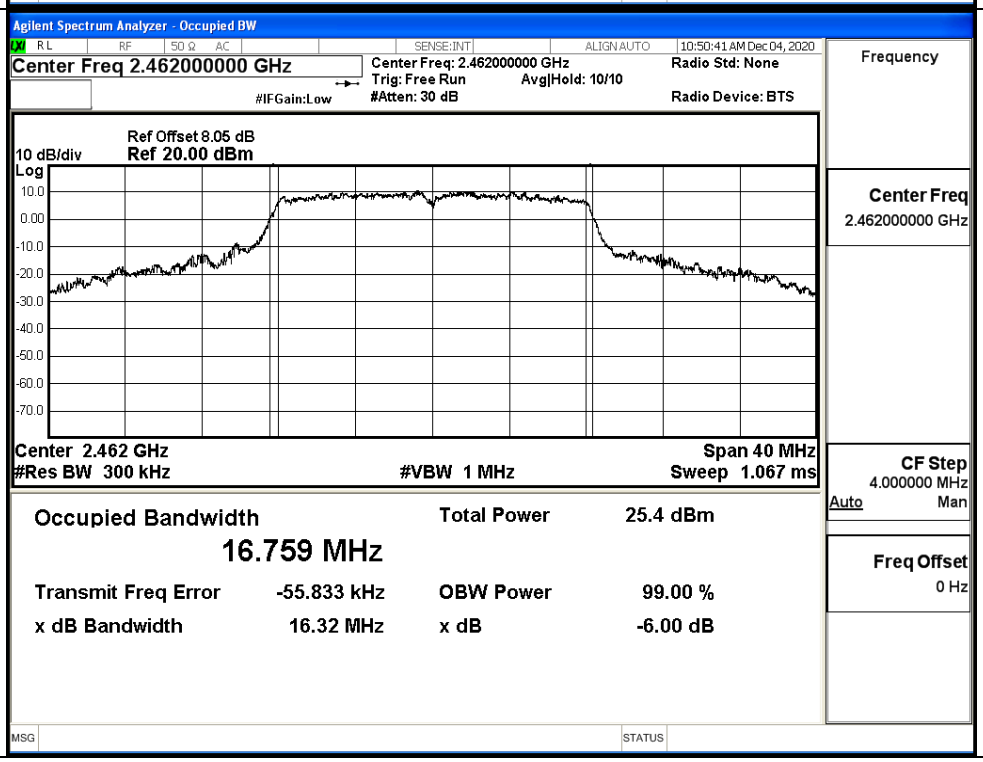


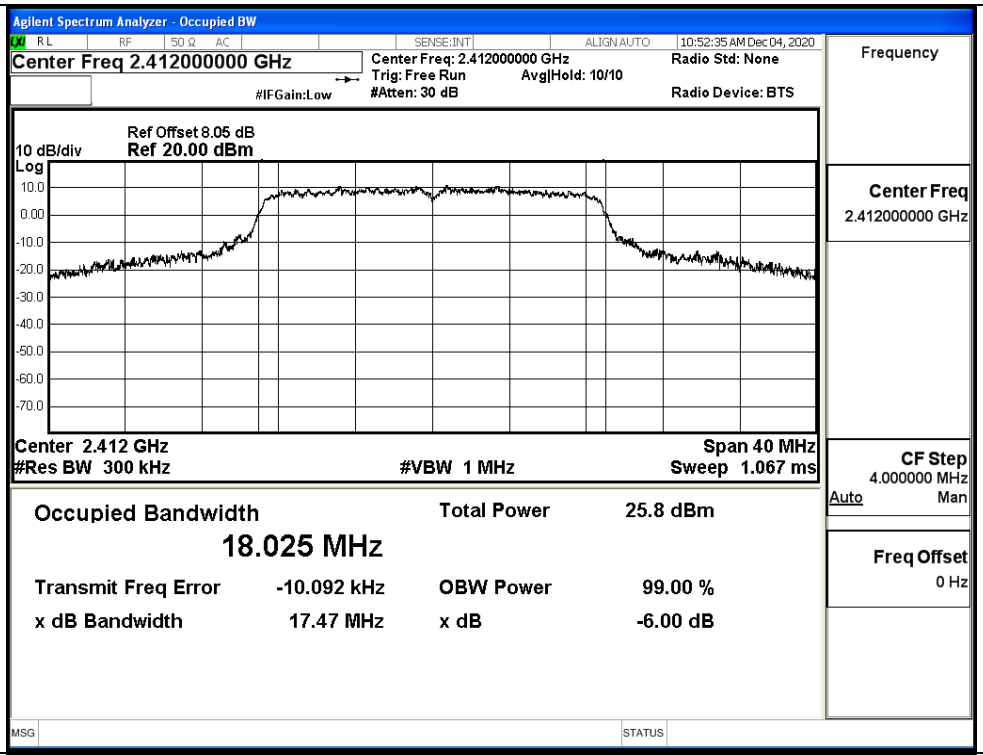
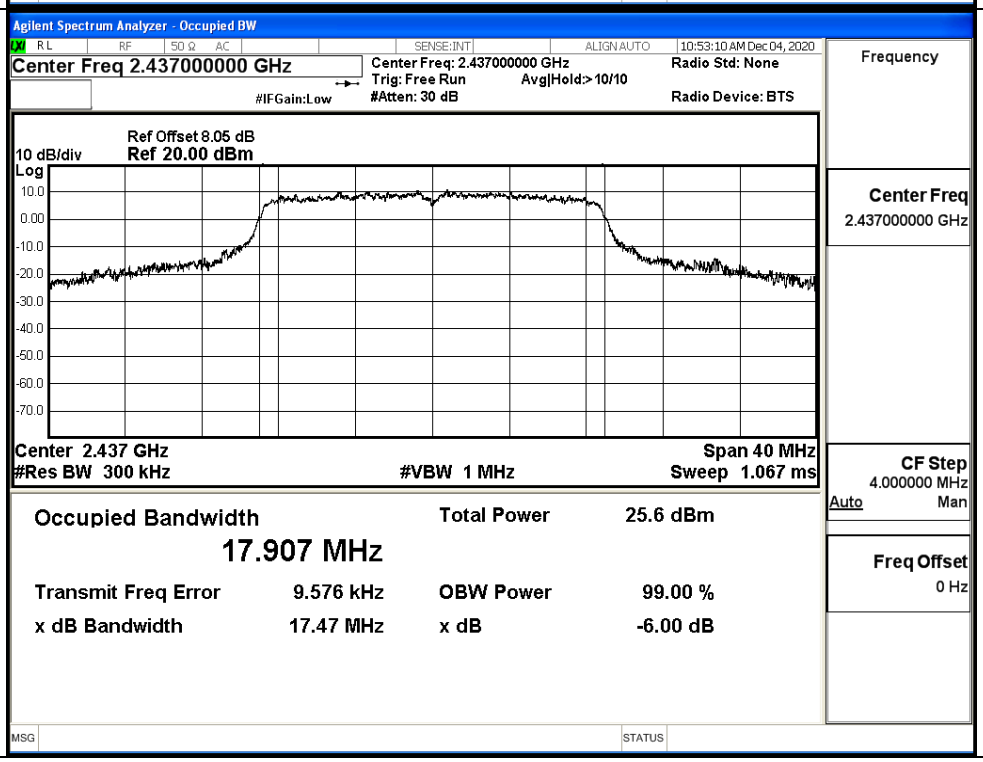
ANT1

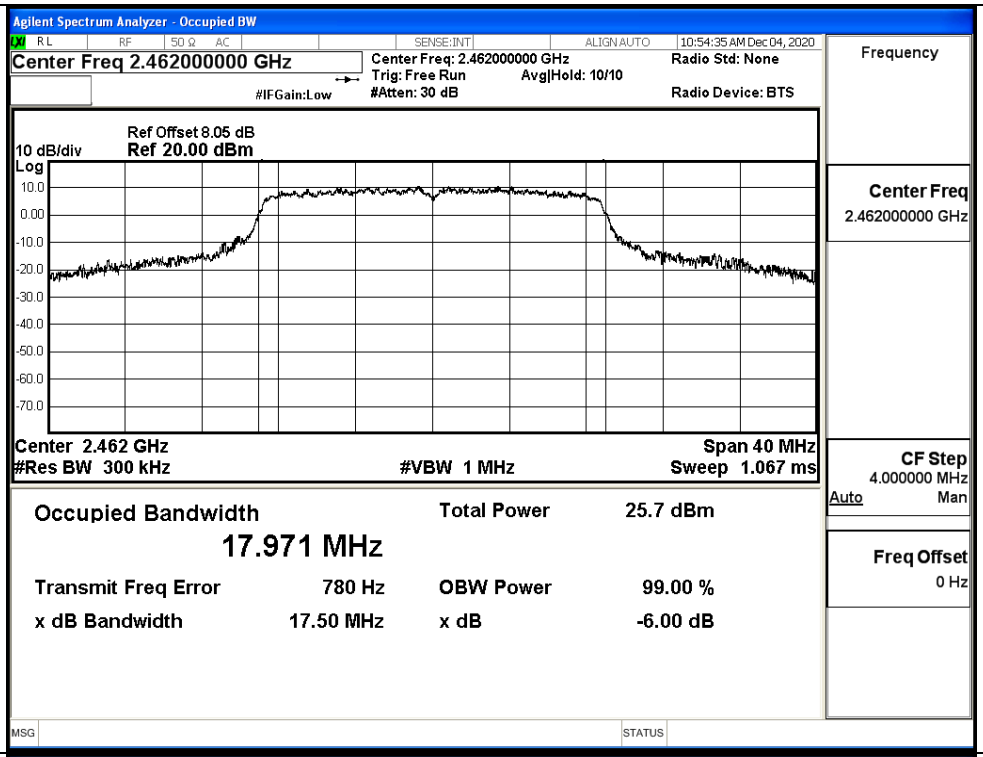
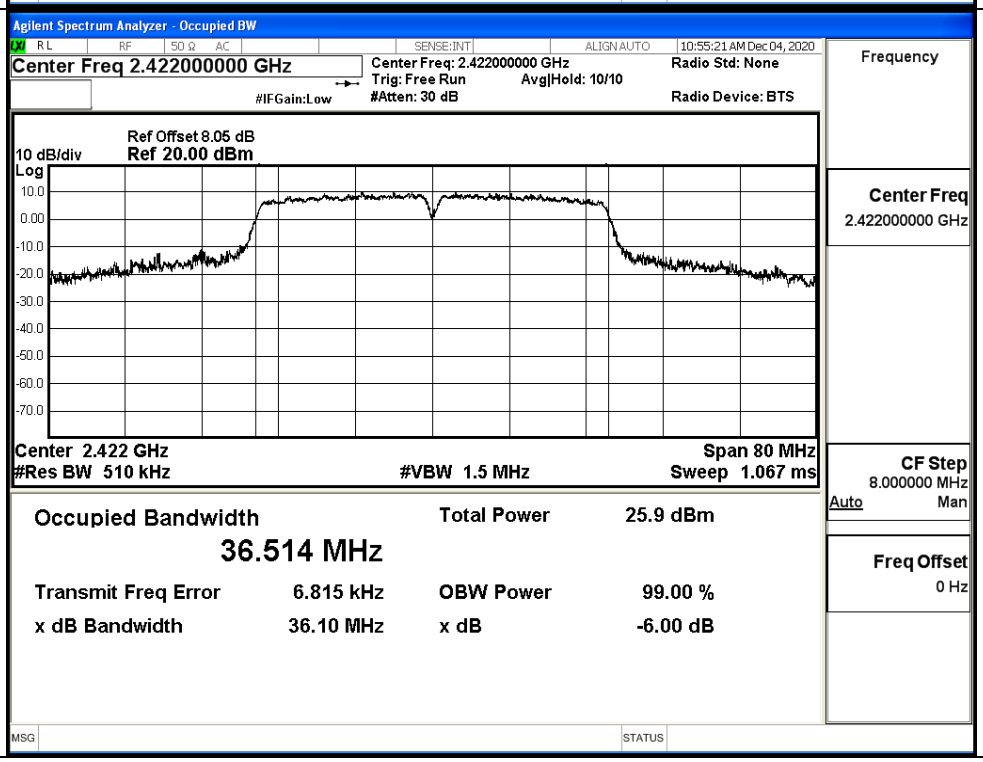
Mode	Channel	Occupied Bandwidth [MHz]	Verdict
11B	LCH	14.695	PASS
	MCH	14.663	PASS
	HCH	14.719	PASS
11G	LCH	16.973	PASS
	MCH	16.735	PASS
	HCH	16.759	PASS
11N20SISO	LCH	18.025	PASS
	MCH	17.907	PASS
	HCH	17.971	PASS
11N40SISO	LCH	36.514	PASS
	MCH	36.385	PASS
	HCH	36.395	PASS
Test Graphs			

11B/LCH		
11B/MCH		

11B/HCH		
11G/LCH		

11G/MCH	
11G/HCH	

11N20SISO/LCH		
11N20SISO/MCH		

11N20SISO/HCH		
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