Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Vivi Wireless Presentation

Trade Mark: Vivi

Test Model: VWP-200-16

Environmental Conditions

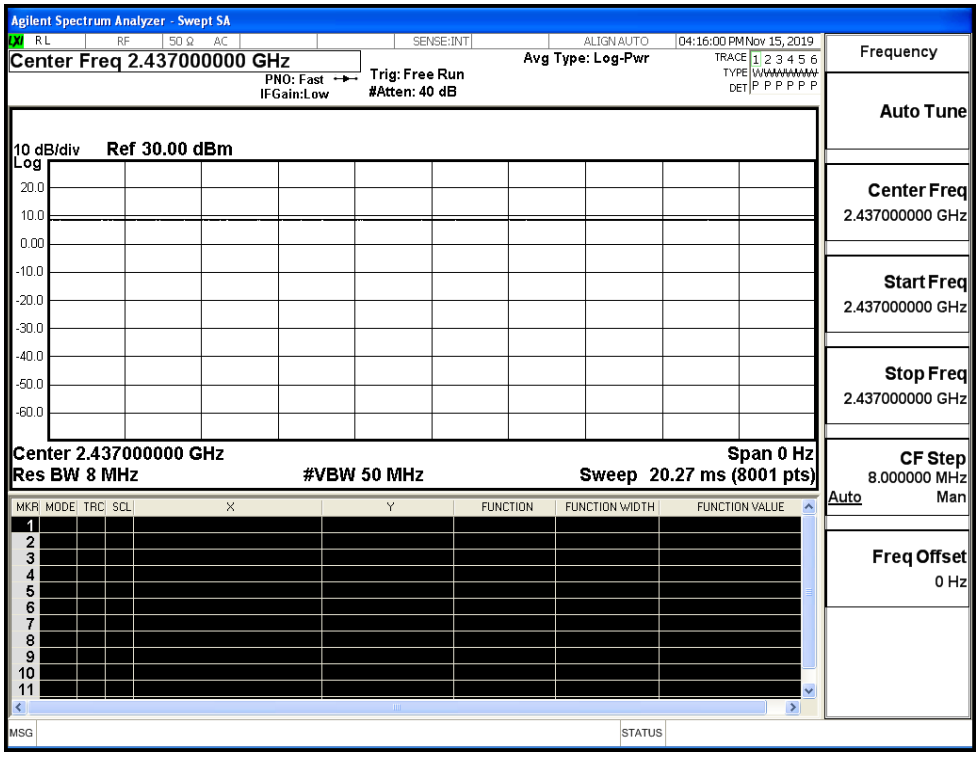
Temperature:	23.9°C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Wang Chuang

C.1 Duty Cycle

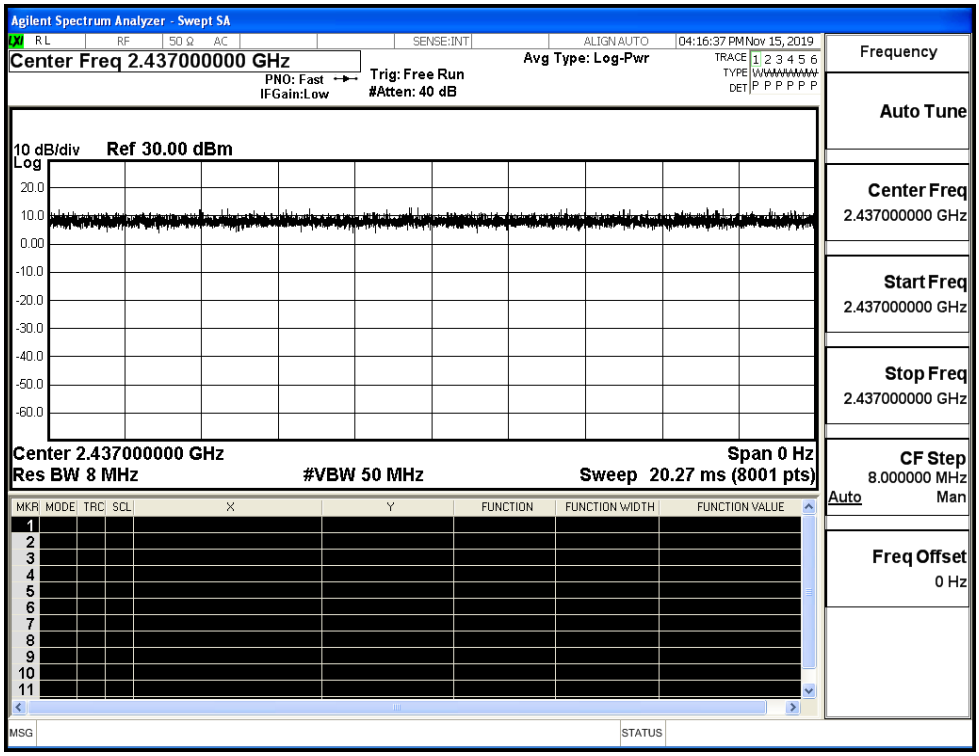
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant_0	100	PASS
11G	2437	Ant_0	100	PASS
11N20	2437	Ant_0	100	PASS
11N40	2437	Ant_0	100	PASS

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

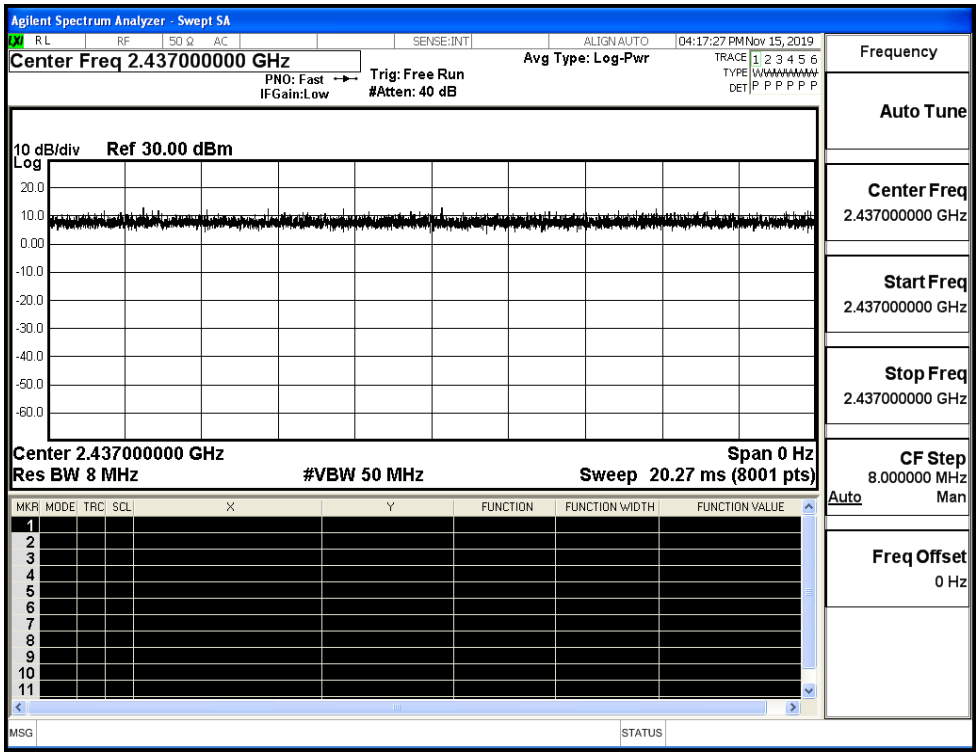
Duty Cycle_11B_2437_Ant_0



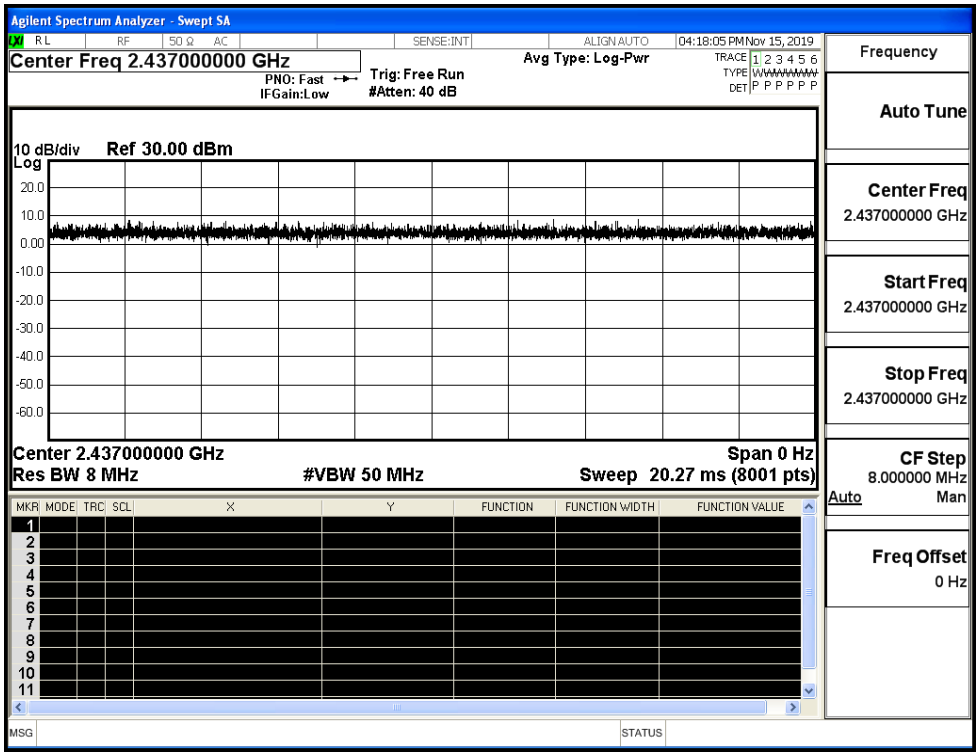
Duty Cycle_11G_2437_Ant_0



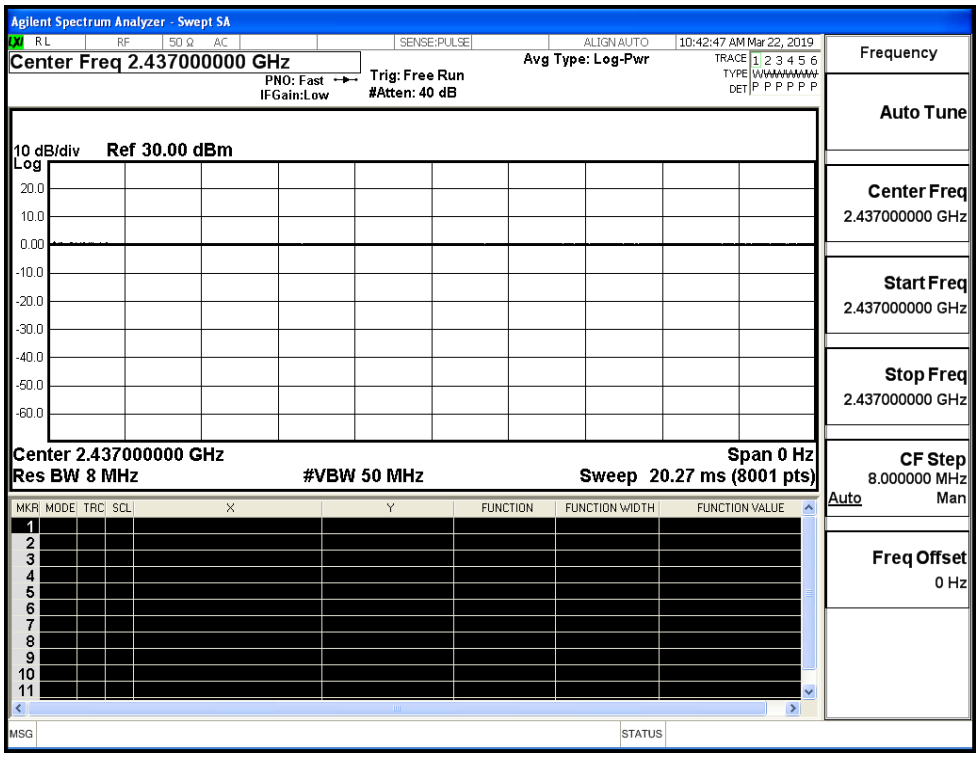
Duty Cycle_11N20_2437_Ant_0



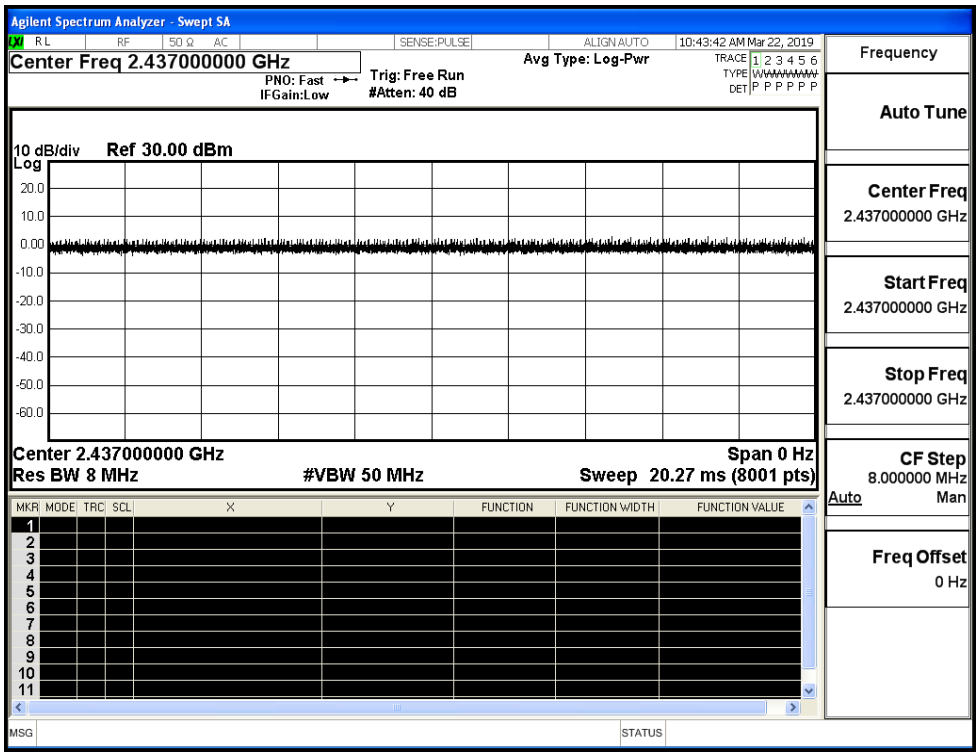
Duty Cycle_11N40_2437_Ant_0



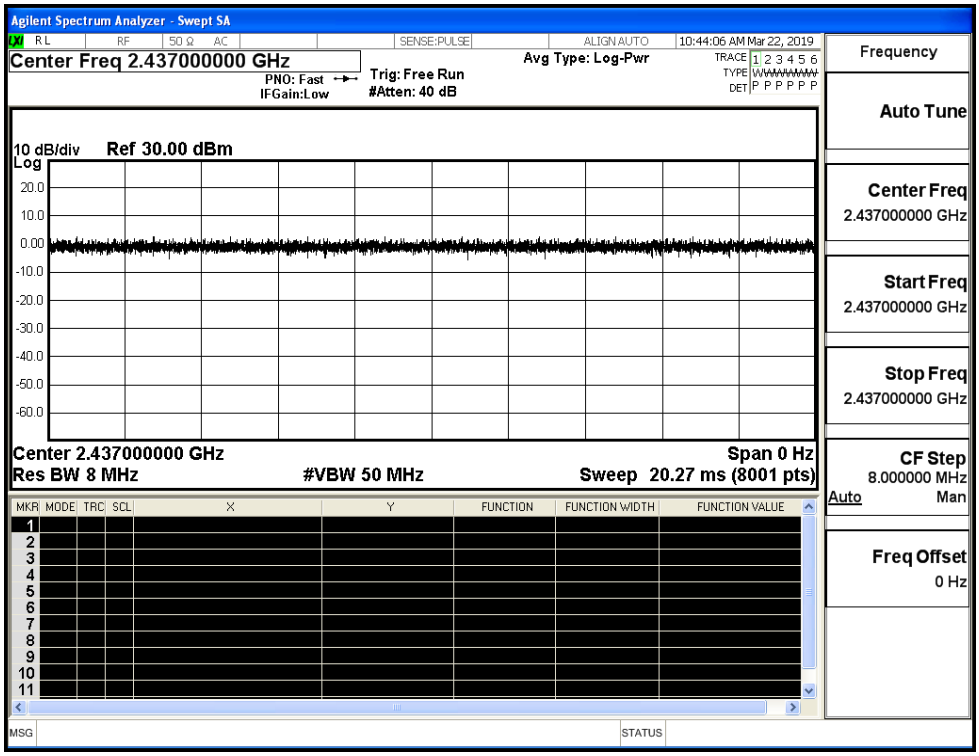
Duty Cycle_11B_2437_Ant_1



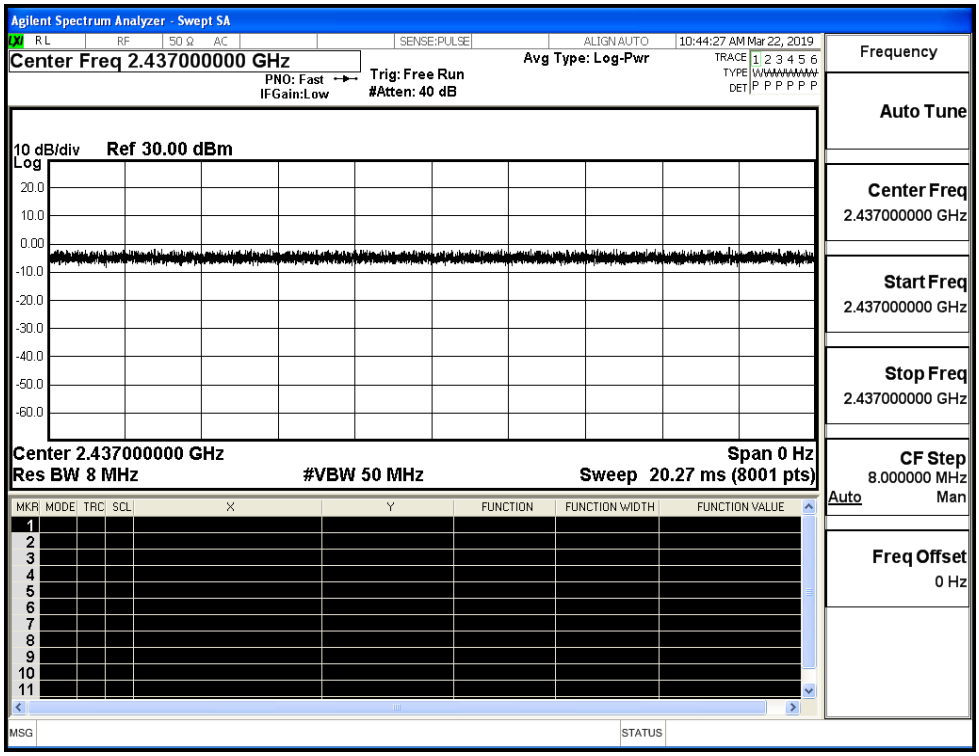
Duty Cycle_11G_2437_Ant_1



Duty Cycle_11N20_2437_Ant_1



Duty Cycle_11N40_2437_Ant_1



C.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]			Limit [dBm]	Verdict
		Ant_0	Ant_1	Sum		
11B	LCH	15	8.16	/	30	PASS
	MCH	15.12	7.74	/	30	PASS
	HCH	14.25	7.57	/	30	PASS
11G	LCH	15.08	9.42	/	30	PASS
	MCH	15.11	10.73	/	30	PASS
	HCH	14.3	10.51	/	30	PASS
11N20	LCH	13.86	9.39	15.19	29.99	PASS
	MCH	14.04	10.85	15.74	29.99	PASS
	HCH	13.32	10.82	15.26	29.99	PASS
11N40	LCH	14.21	11.31	16.01	29.99	PASS
	MCH	14.09	10.78	15.75	29.99	PASS
	HCH	13.38	10.5	15.18	29.99	PASS

C.3 Maximum Power Spectral Density

Ant_0

Mode	Channel	Meas.Level [dBm/30KHz]	Convert Factor	Result [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-0.056	-10	-10.056	8	PASS
	MCH	-0.034	-10	-10.034	8	PASS
	HCH	-0.779	-10	-10.779	8	PASS
11G	LCH	-7.278	-10	-17.278	8	PASS
	MCH	-8.972	-10	-18.972	8	PASS
	HCH	-8.222	-10	-18.222	8	PASS
11N20	LCH	-8.938	-10	-18.938	8	PASS
	MCH	-9.517	-10	-19.517	8	PASS
	HCH	-9.357	-10	-19.357	8	PASS
11N40	LCH	-10.737	-10	-20.737	8	PASS
	MCH	-13.436	-10	-23.436	8	PASS
	HCH	-10.497	-10	-20.497	8	PASS

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

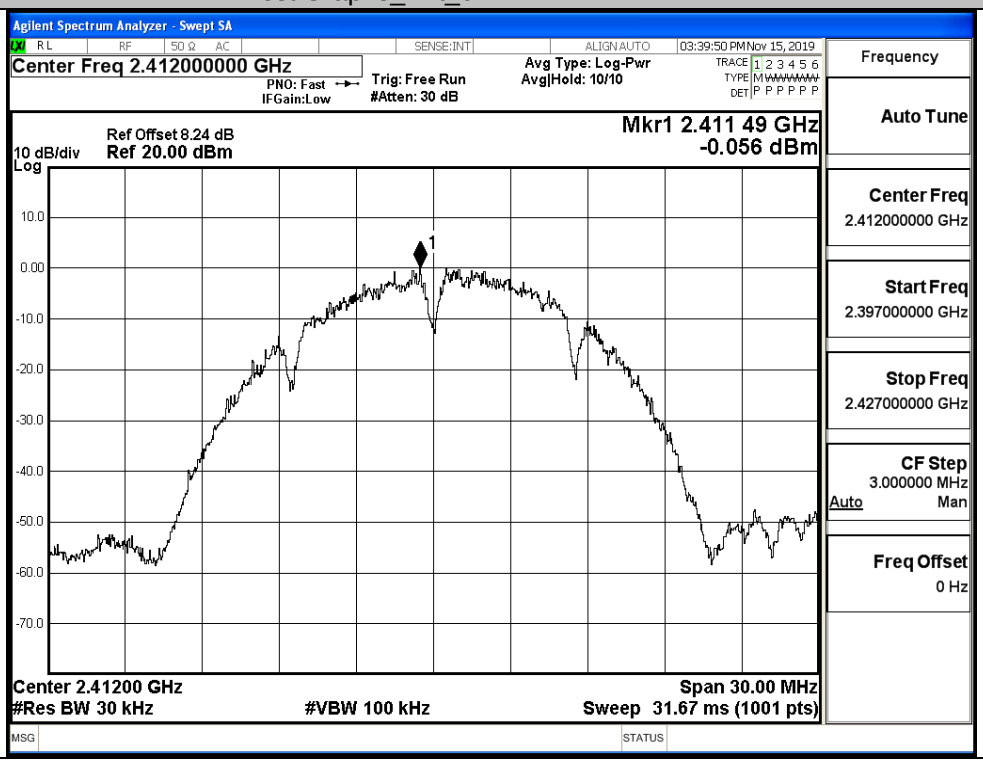
Ant_1

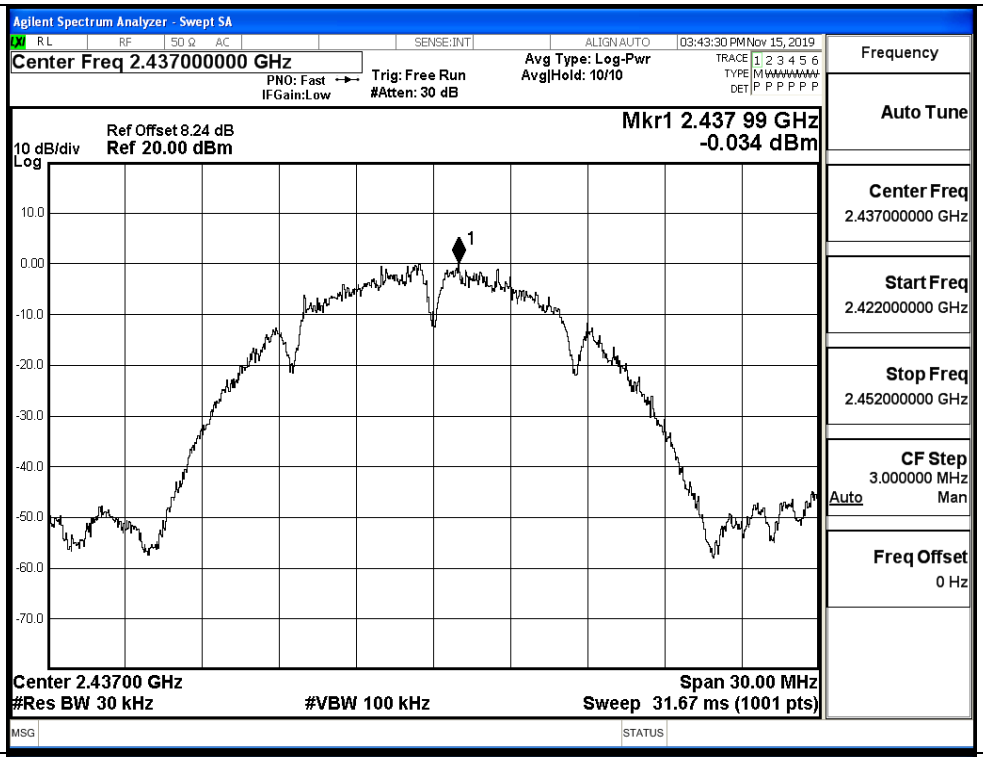
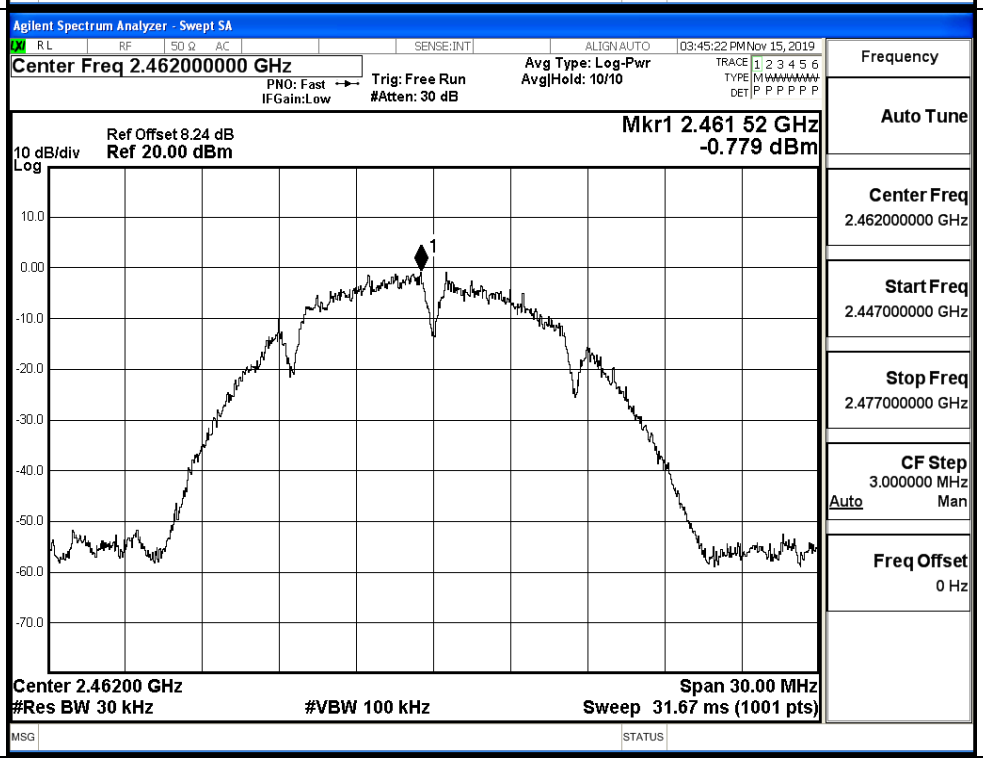
Mode	Channel	Meas.Level [dBm/30KHz]	Convert Factor	Result [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-3.369	-10	-13.369	8	PASS
	MCH	-3.979	-10	-13.979	8	PASS
	HCH	-7.912	-10	-17.912	8	PASS
11G	LCH	-13.257	-10	-23.257	8	PASS
	MCH	-12.073	-10	-22.073	8	PASS
	HCH	-12.331	-10	-22.331	8	PASS
11N20	LCH	-12.963	-10	-22.963	8	PASS
	MCH	-12.419	-10	-22.419	8	PASS
	HCH	-10.772	-10	-20.772	8	PASS
11N40	LCH	-14.239	-10	-24.239	8	PASS
	MCH	-15.004	-10	-25.004	8	PASS
	HCH	-14.622	-10	-24.622	8	PASS

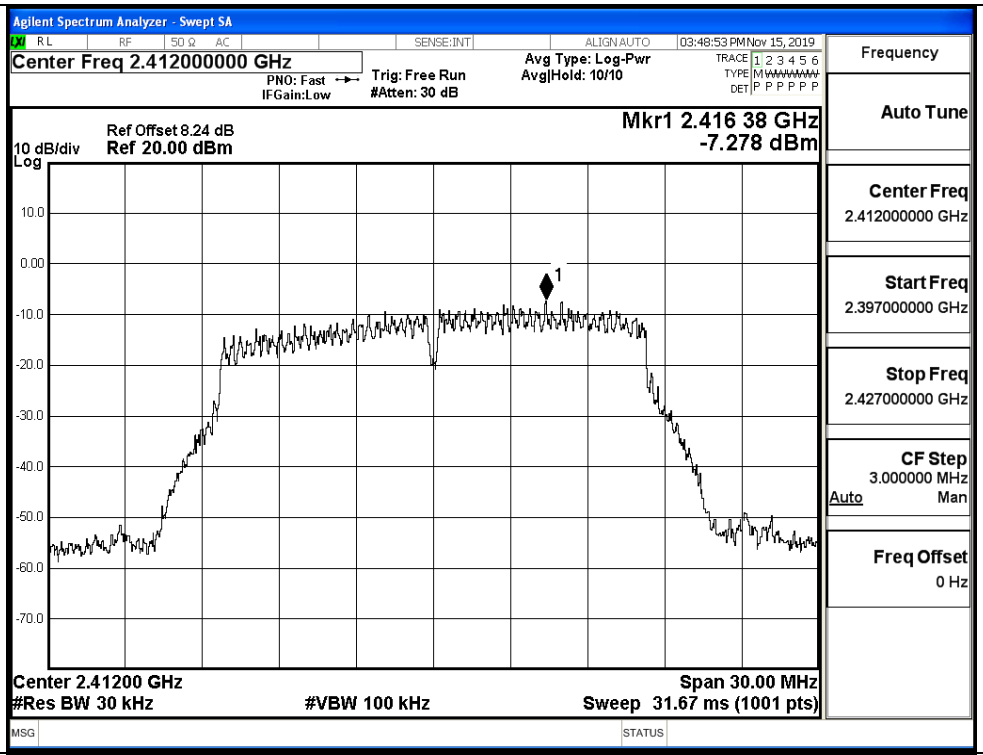
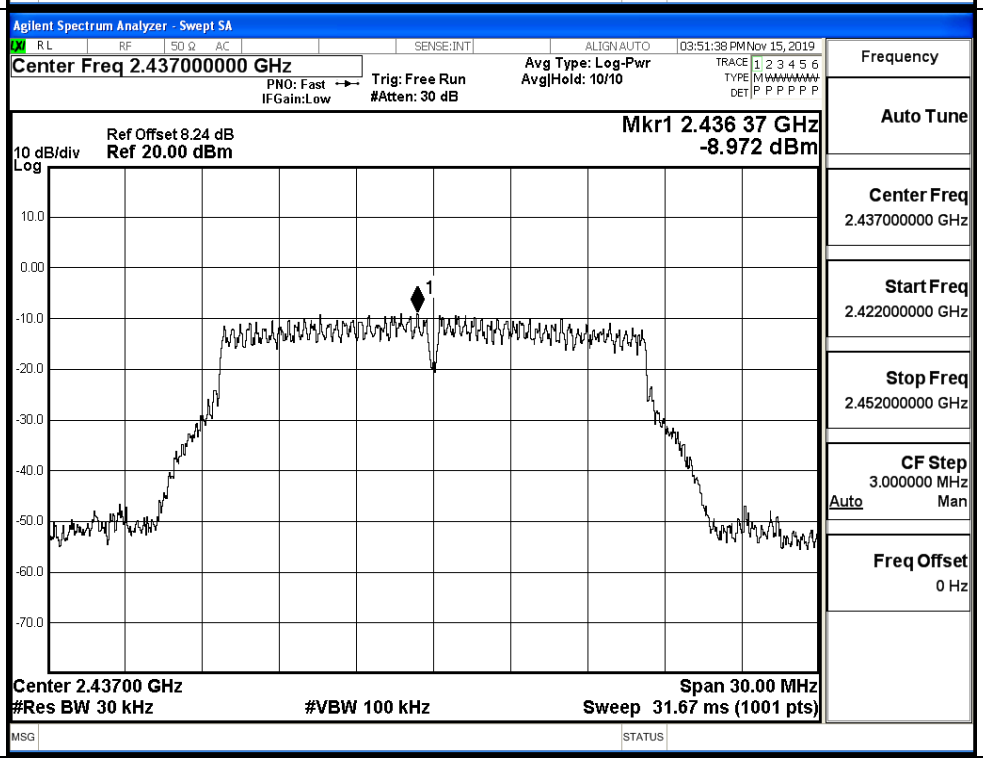
***Note: The Convert Factor = 10*log(3KHz/30KHz) = -10

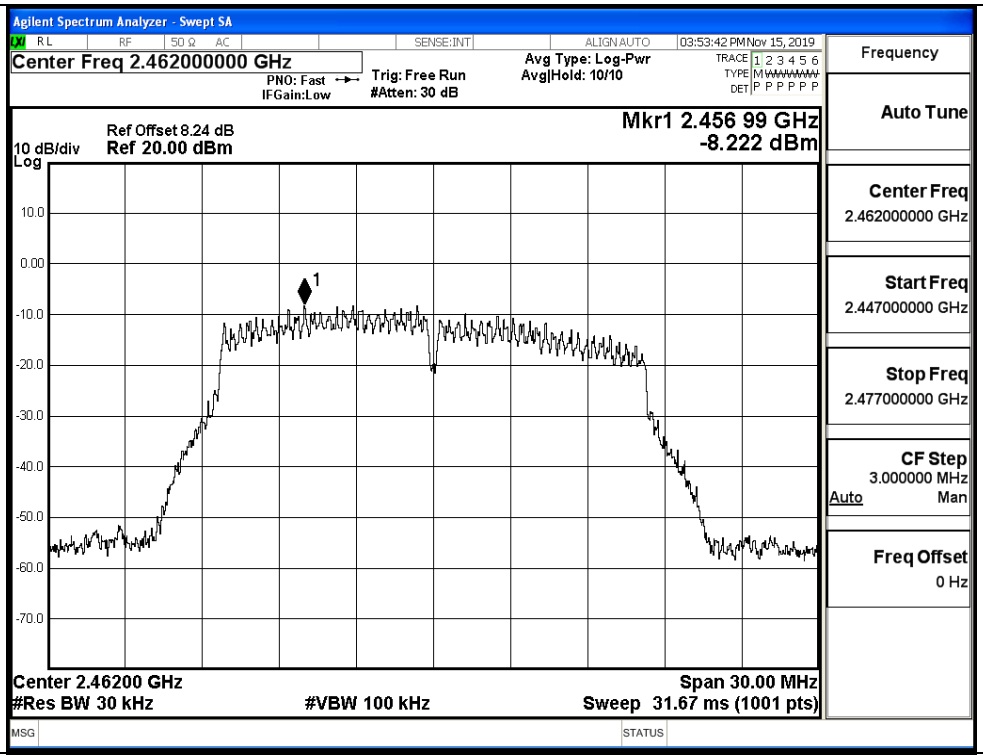
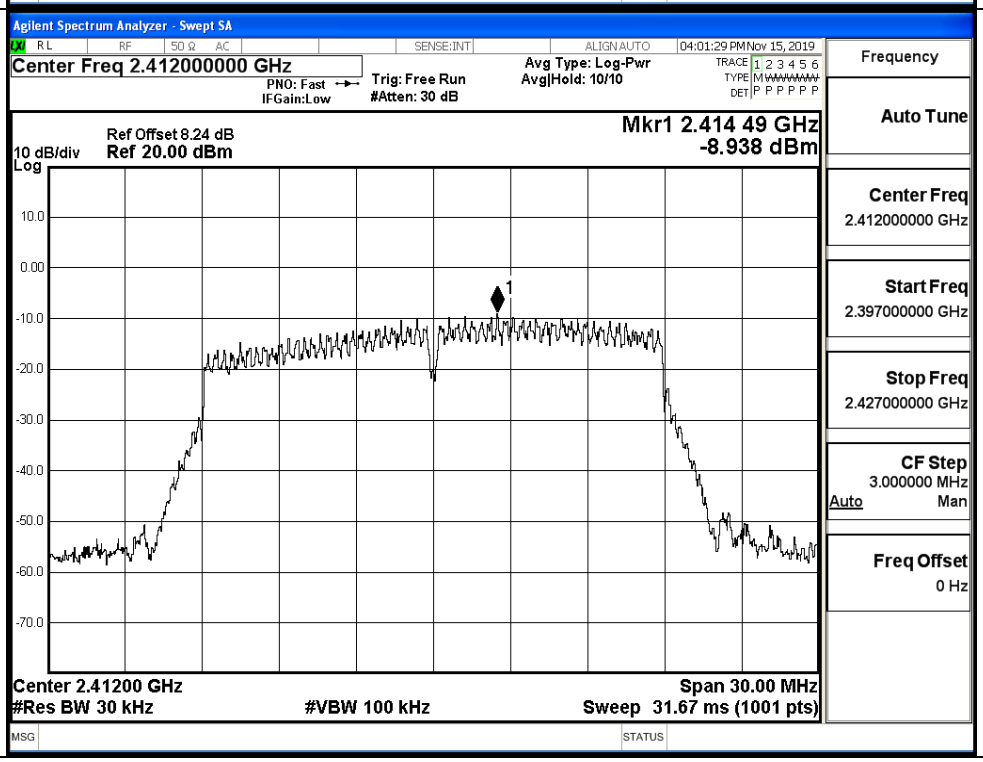
Combined Ant_0 and Ant_1

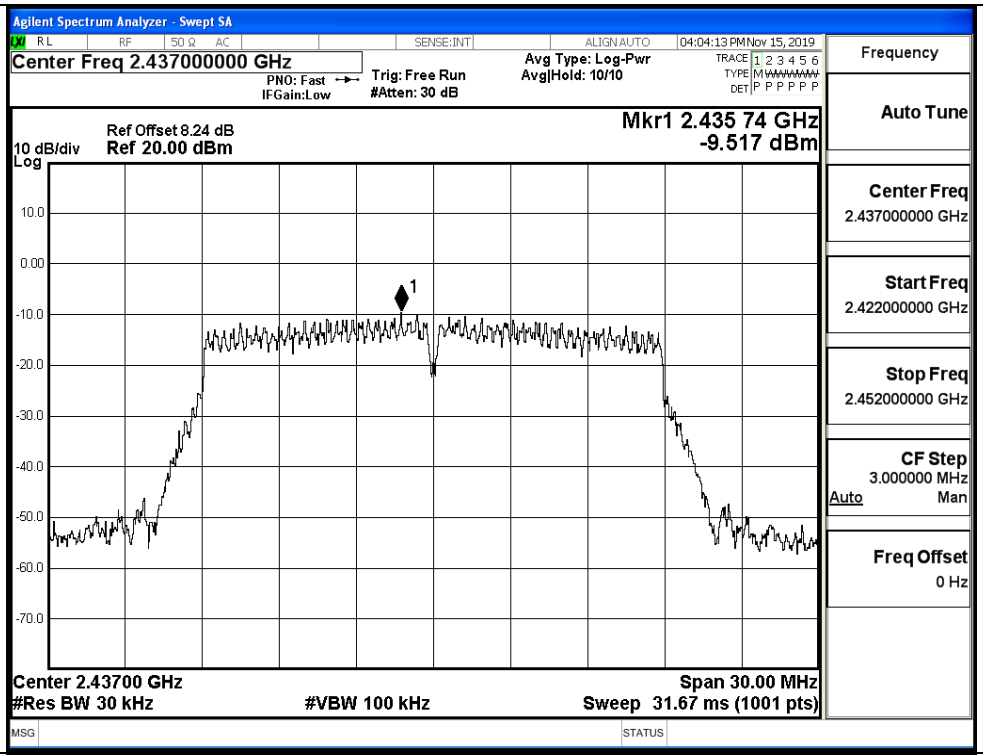
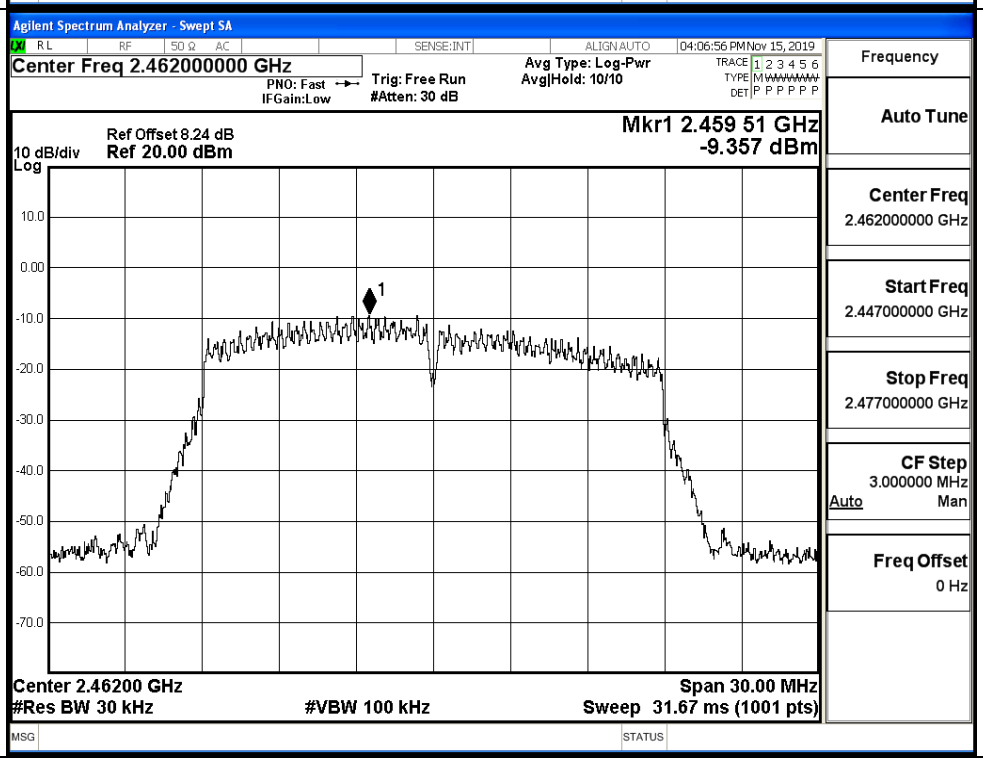
Mode	Channel	Result [dBm/3KHz]			Limit [dBm/3KHz]	Verdict
		Ant_0	Ant_1	Sum		
11N20	LCH	-18.938	-22.963	-17.490	7.99	PASS
	MCH	-19.517	-22.419	-17.720	7.99	PASS
	HCH	-19.357	-20.772	-16.997	7.99	PASS
11N40	LCH	-20.737	-24.239	-19.134	7.99	PASS
	MCH	-23.436	-25.004	-21.139	7.99	PASS
	HCH	-20.497	-24.622	-19.077	7.99	PASS

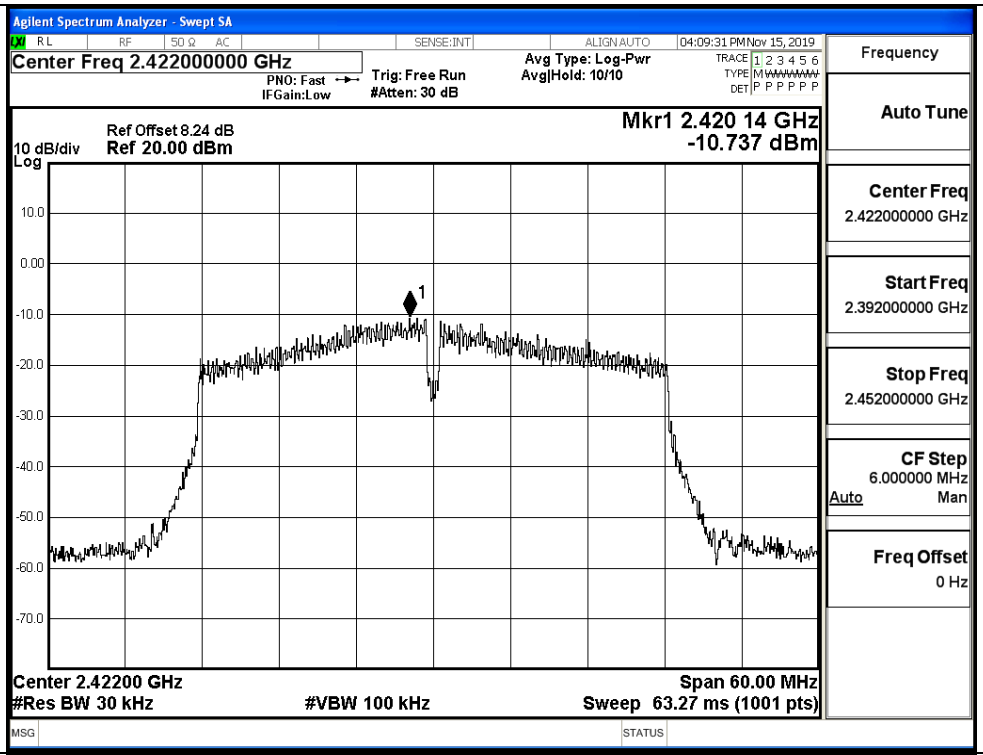
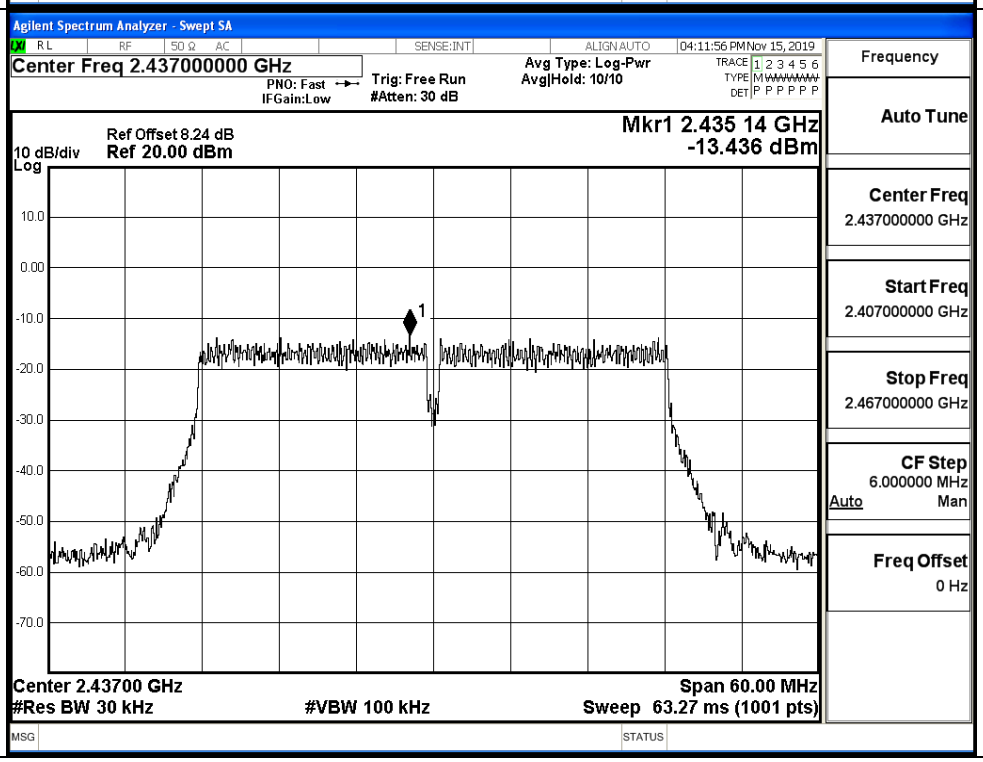
Test Graphs_Ant_0	
11B/LCH	

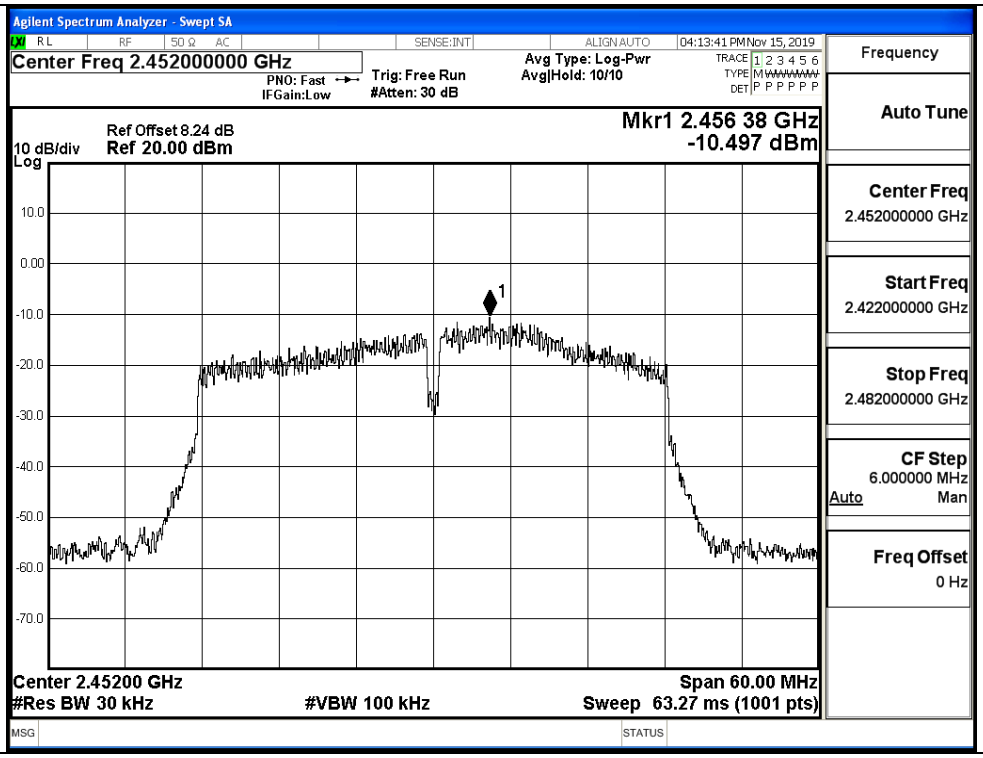
11B/MCH		
11B/HCH		

11G/LCH		
11G/MCH		

11G/HCH		
11N20/LCH		

11N20/MCH		
11N20/HCH		

11N40/LCH		
11N40/MCH		

11N40/HCH		

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.452000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
04:13:41 PM Nov 15, 2019
Ref Offset 8.24 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.456 38 GHz
-10.497 dBm
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
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CF Step
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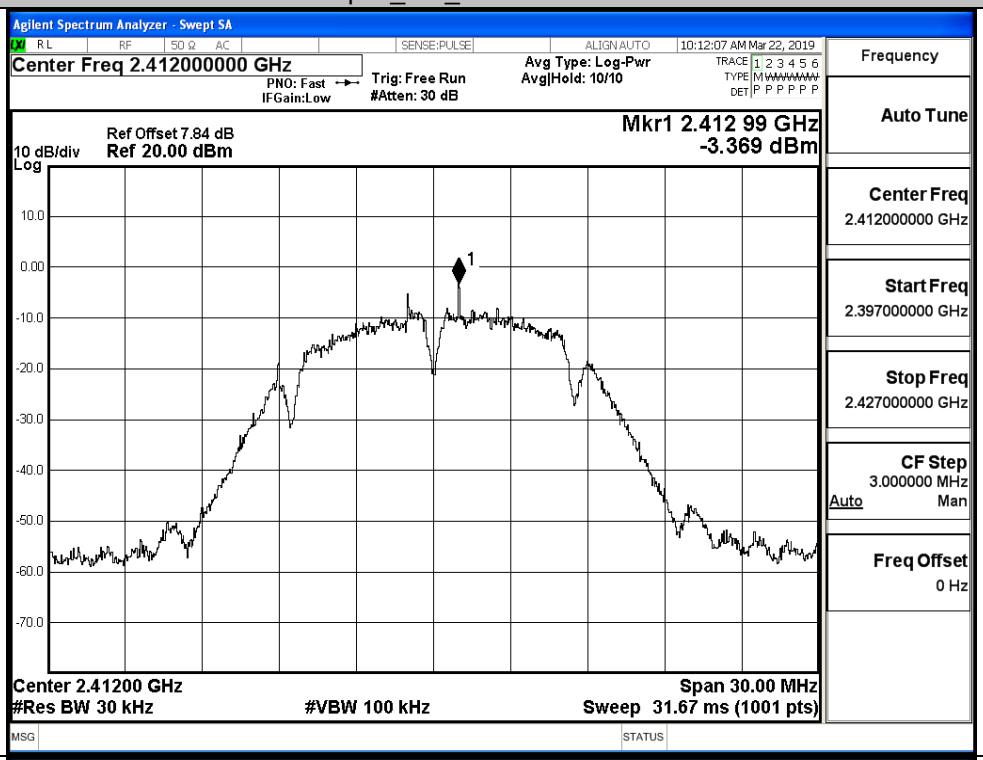
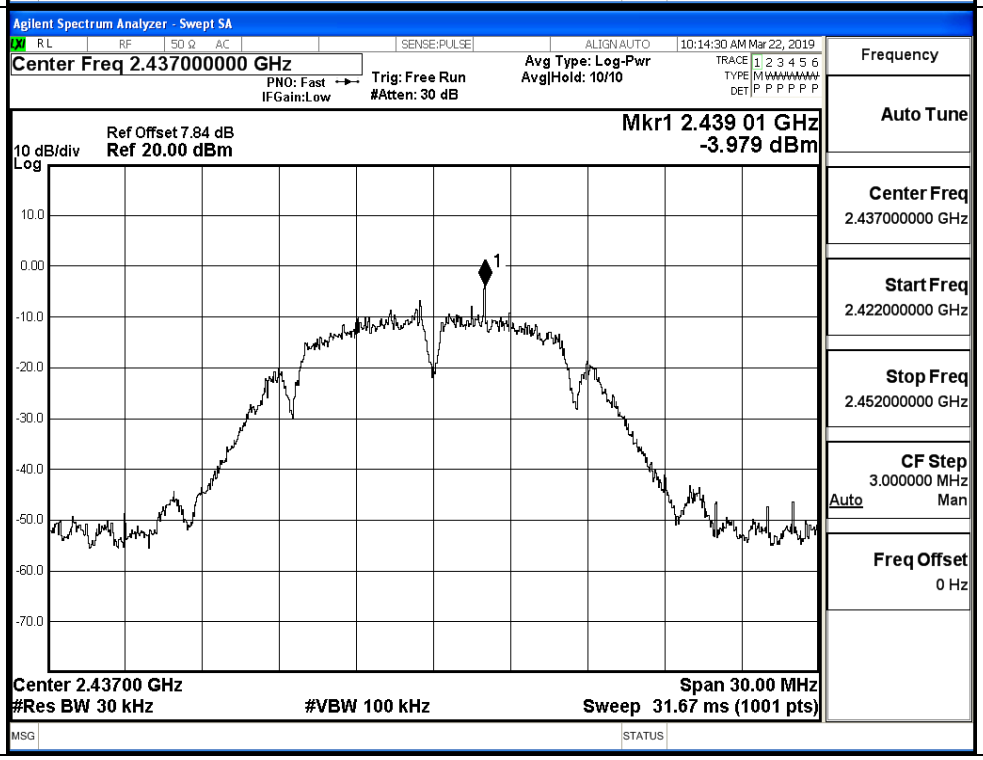
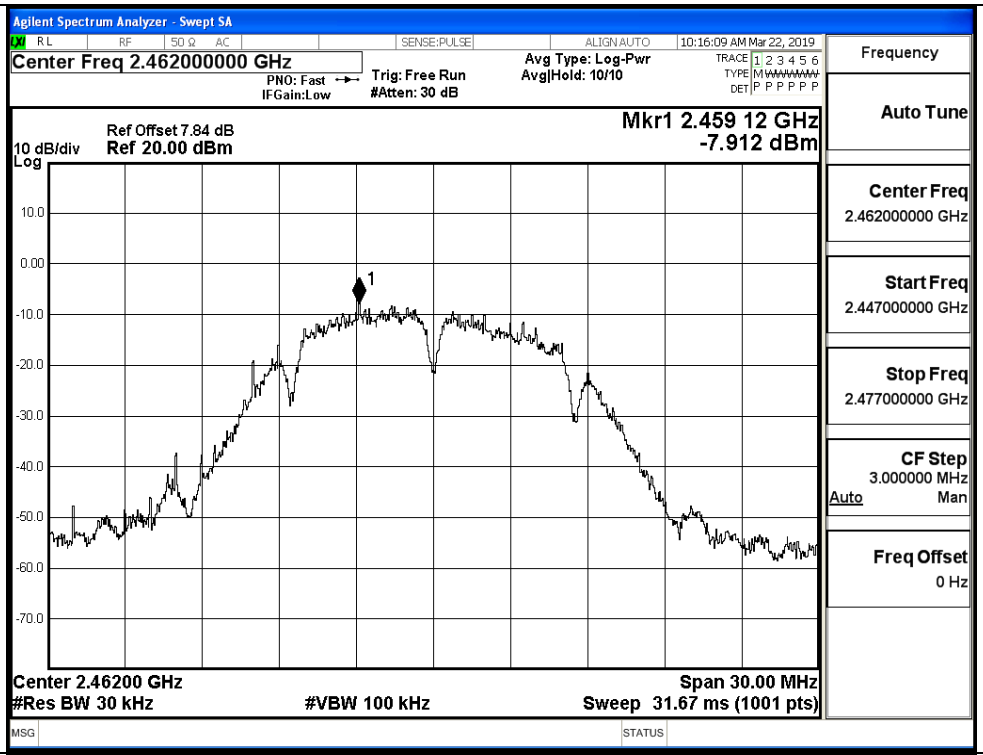
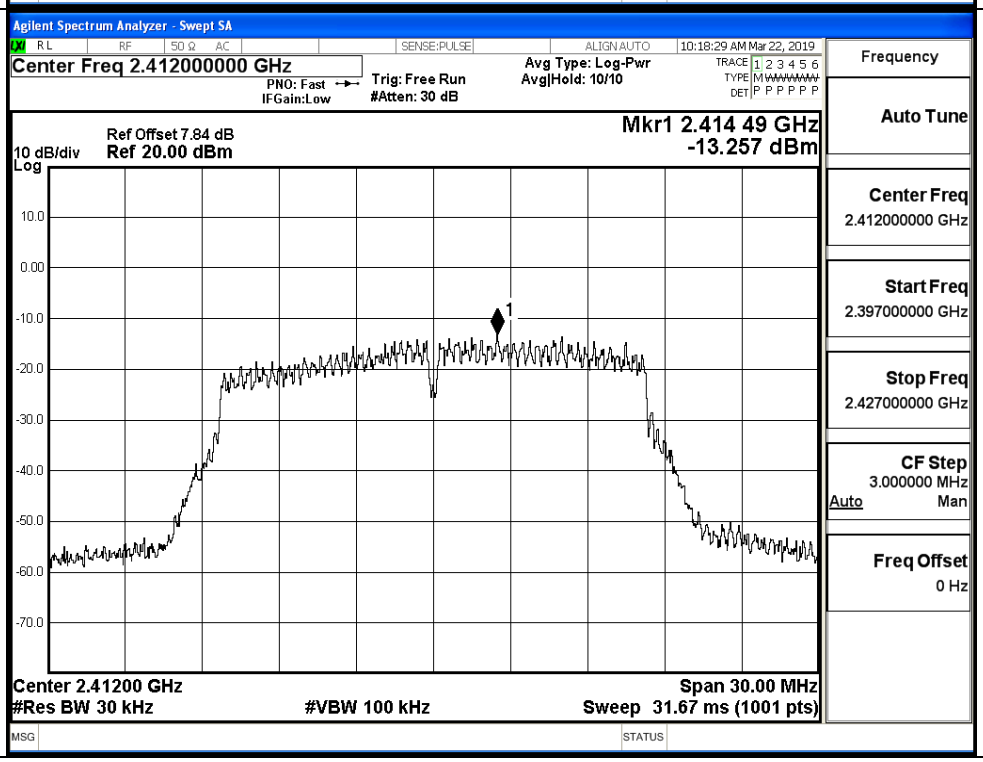
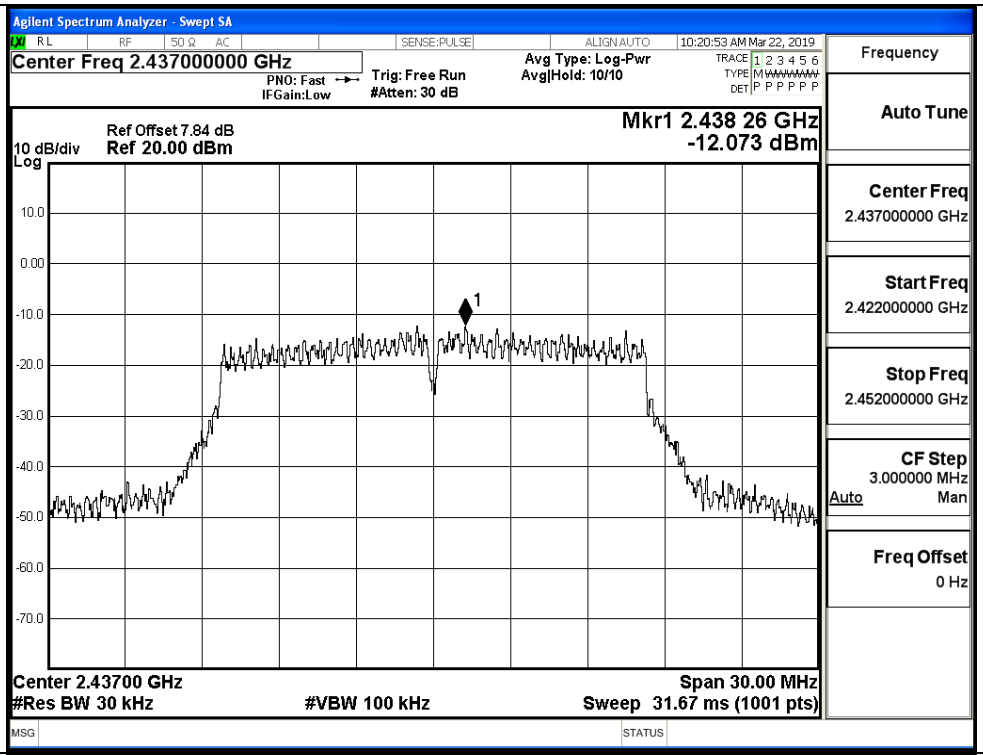
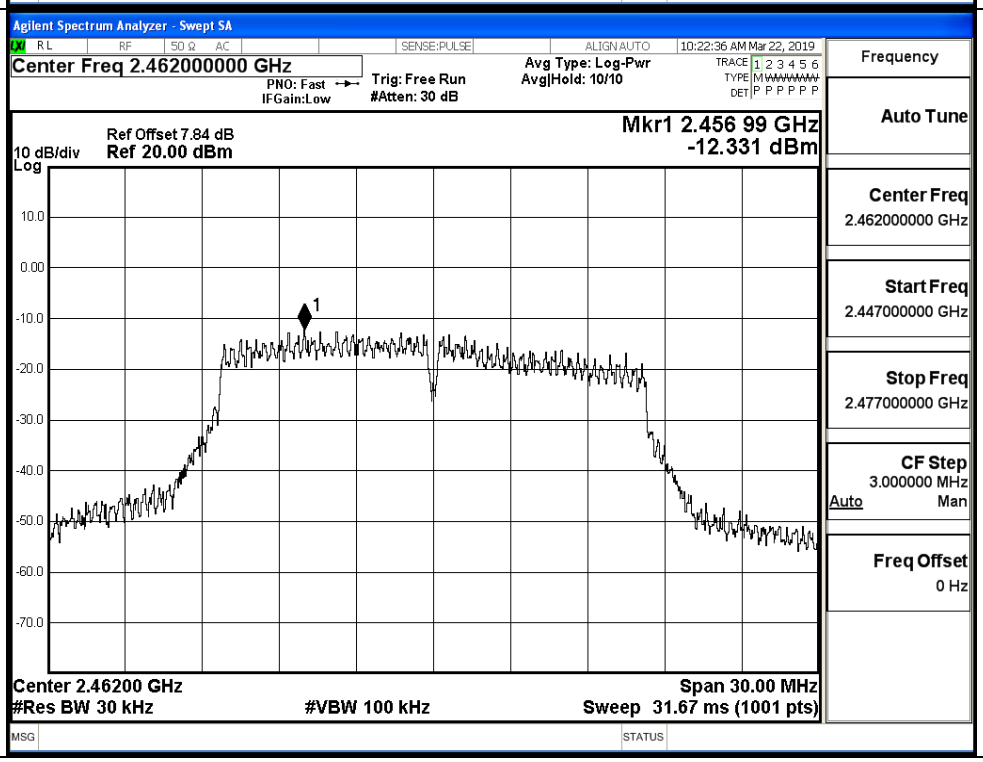
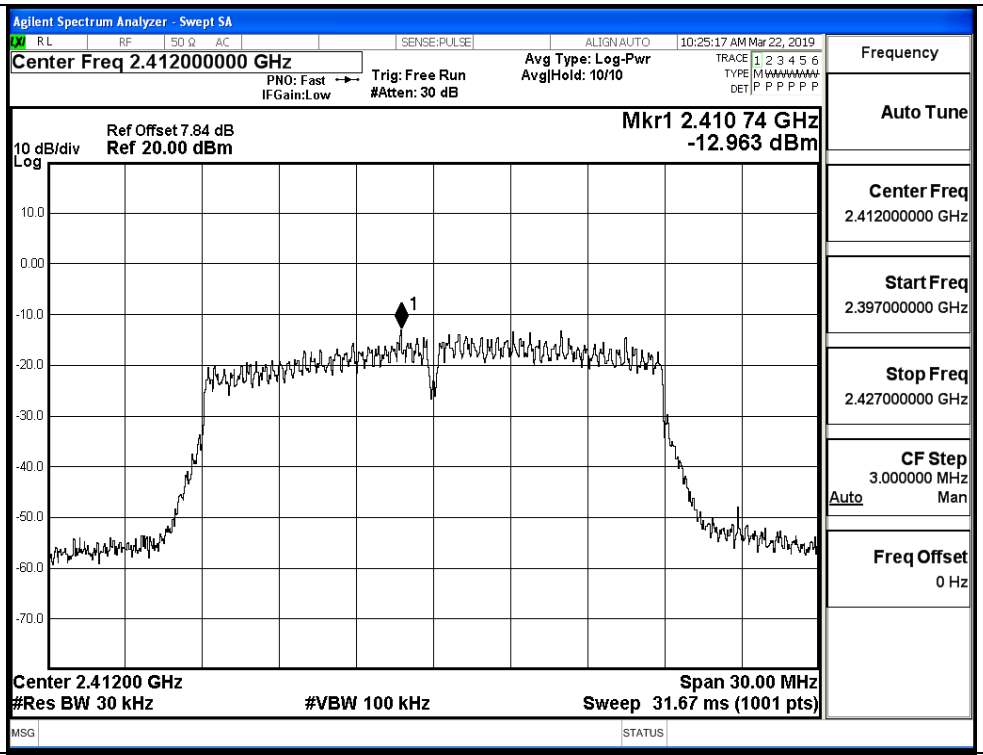
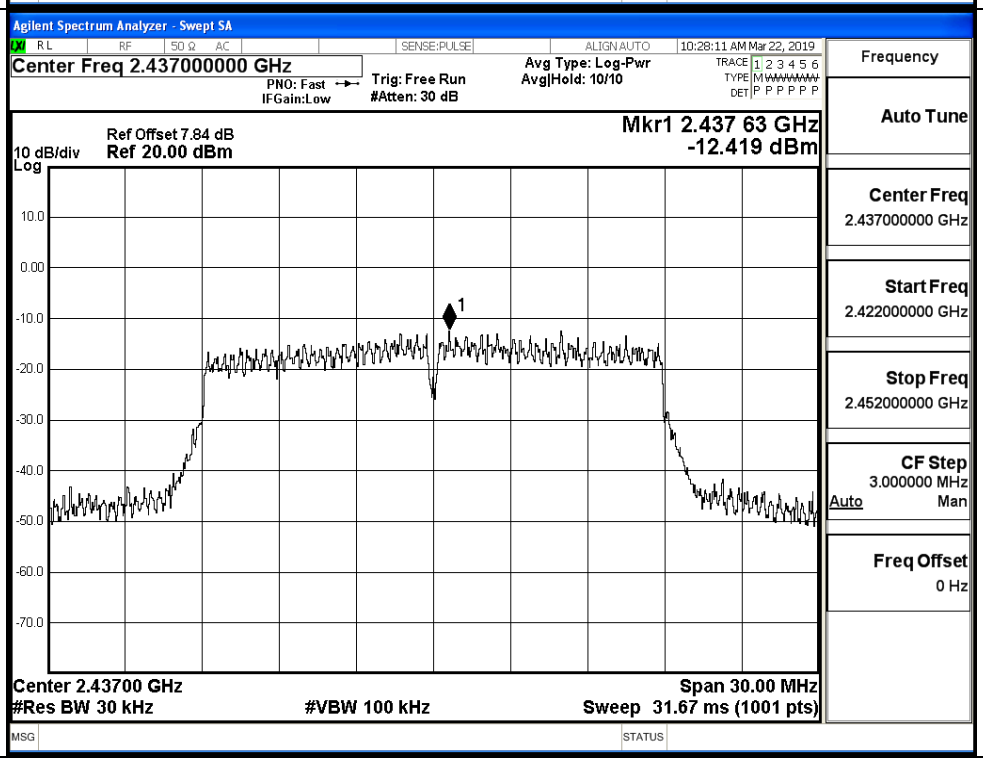
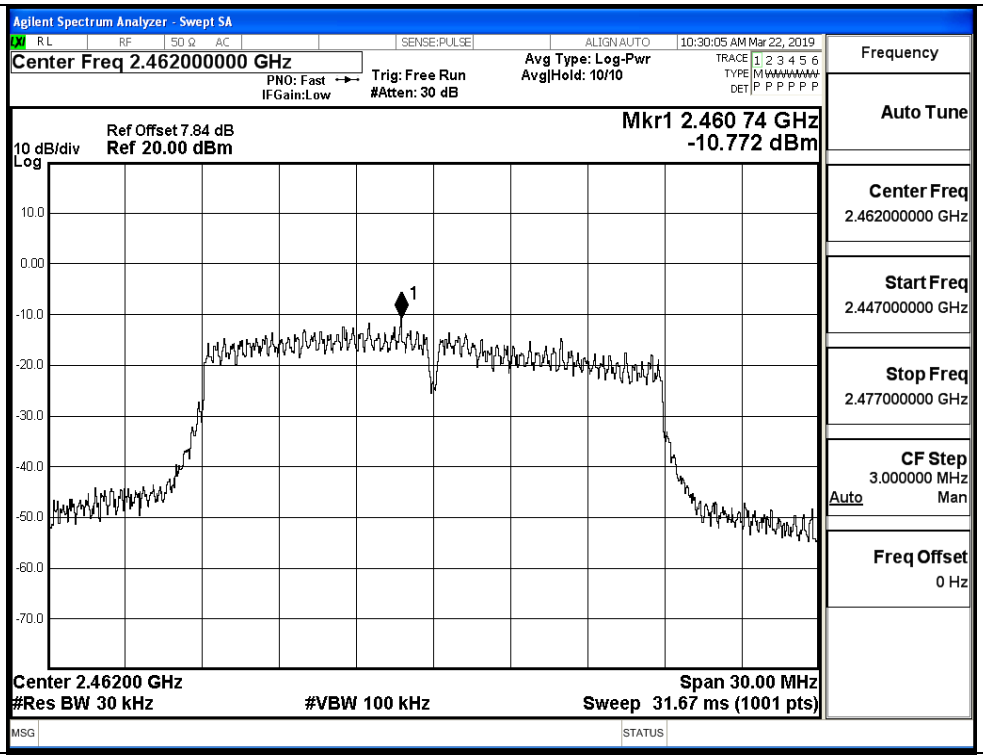
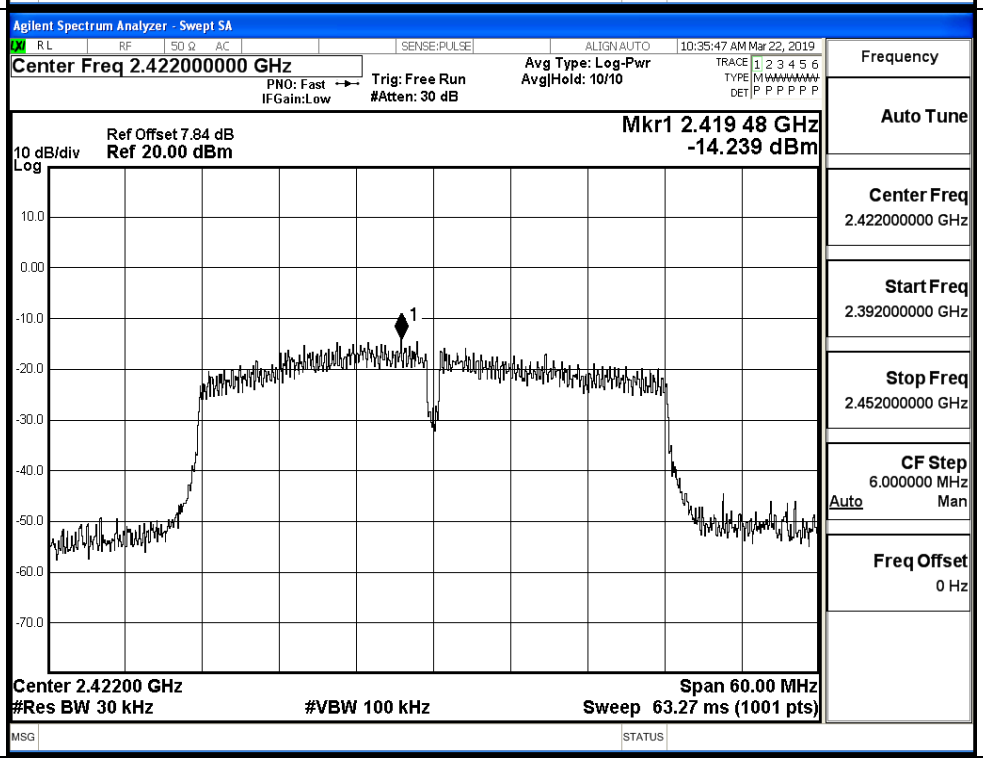
Auto
Man
Freq Offset
0 Hz

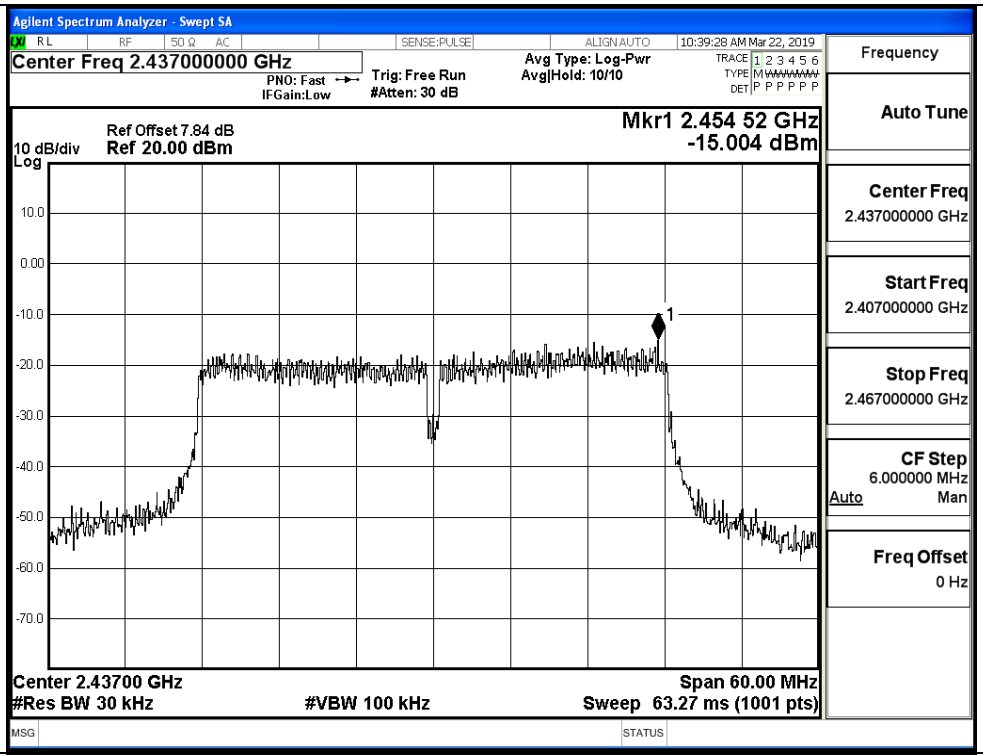
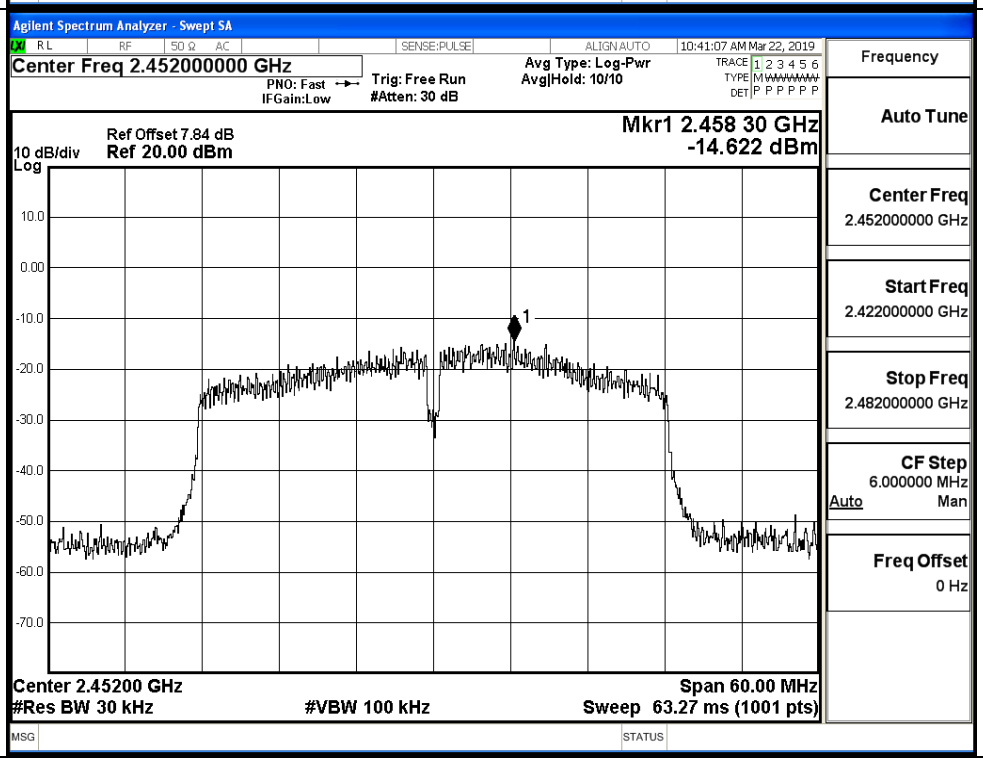
Test Graphs_Ant_1		
11B/LCH		
11B/MCH		

11B/HCH		
11G/LCH		

11G/MCH		
11G/HCH		

11N20/LCH		
11N20/MCH		

11N20/HCH		
11N40/LCH		

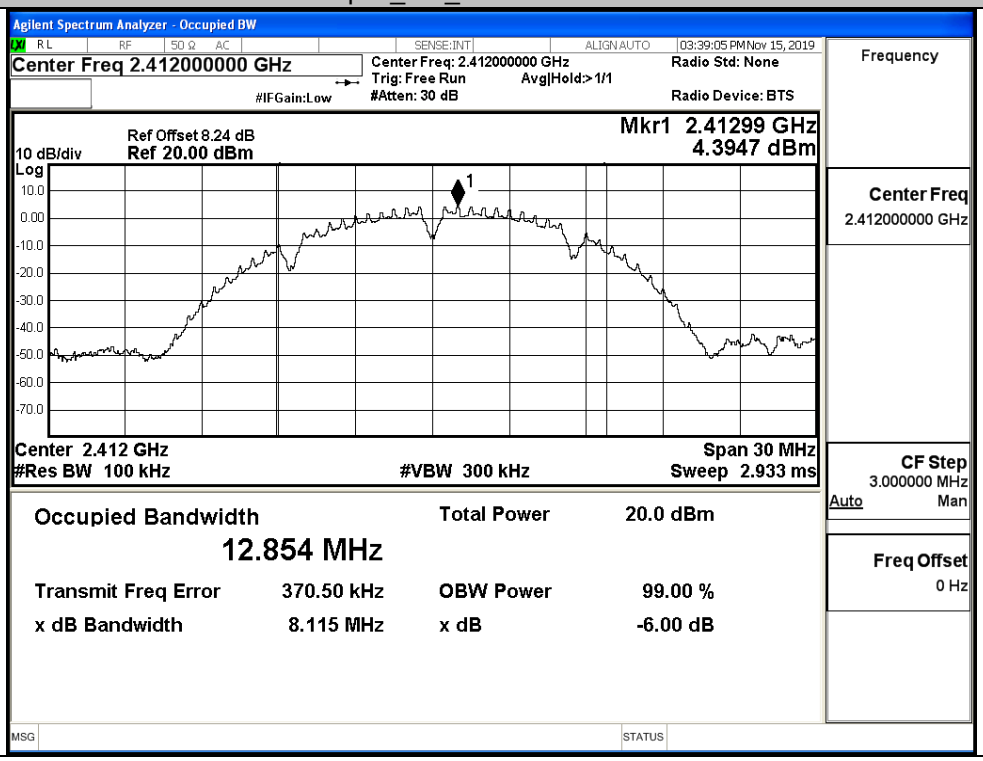
11N40/MCH		
11N40/HCH		

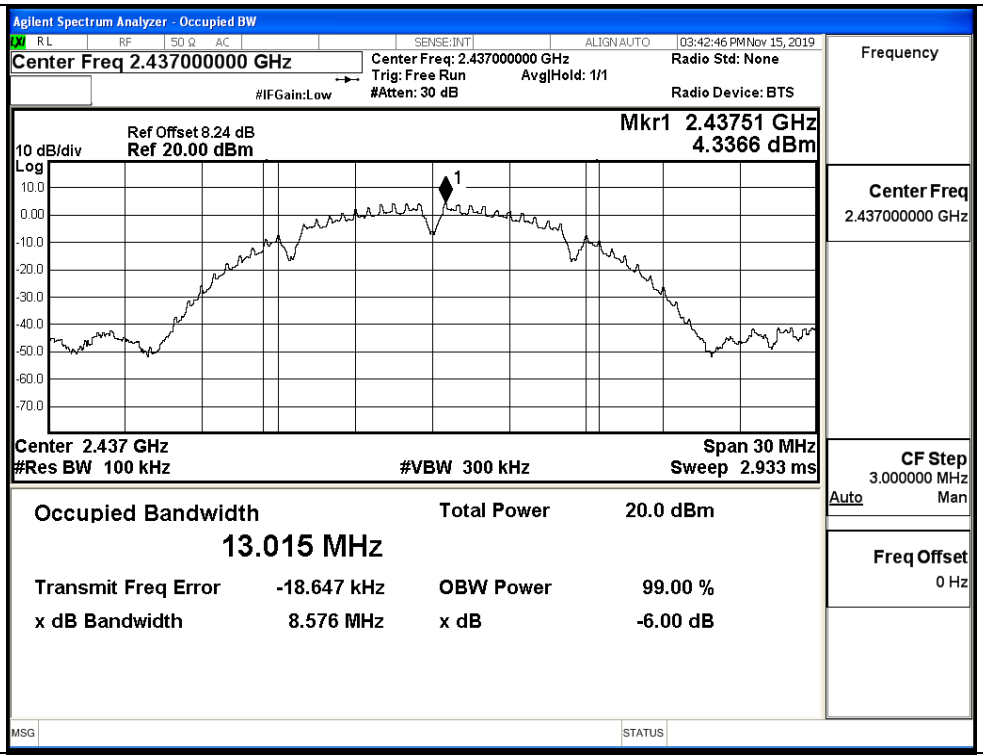
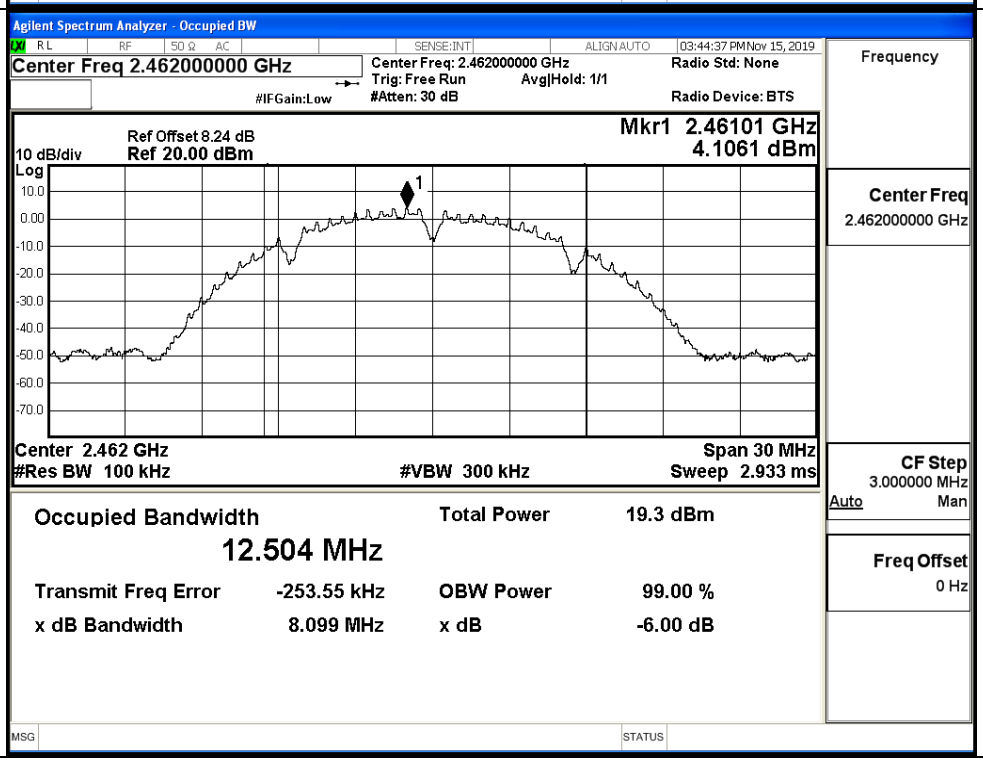
C.4 6dB Bandwidth

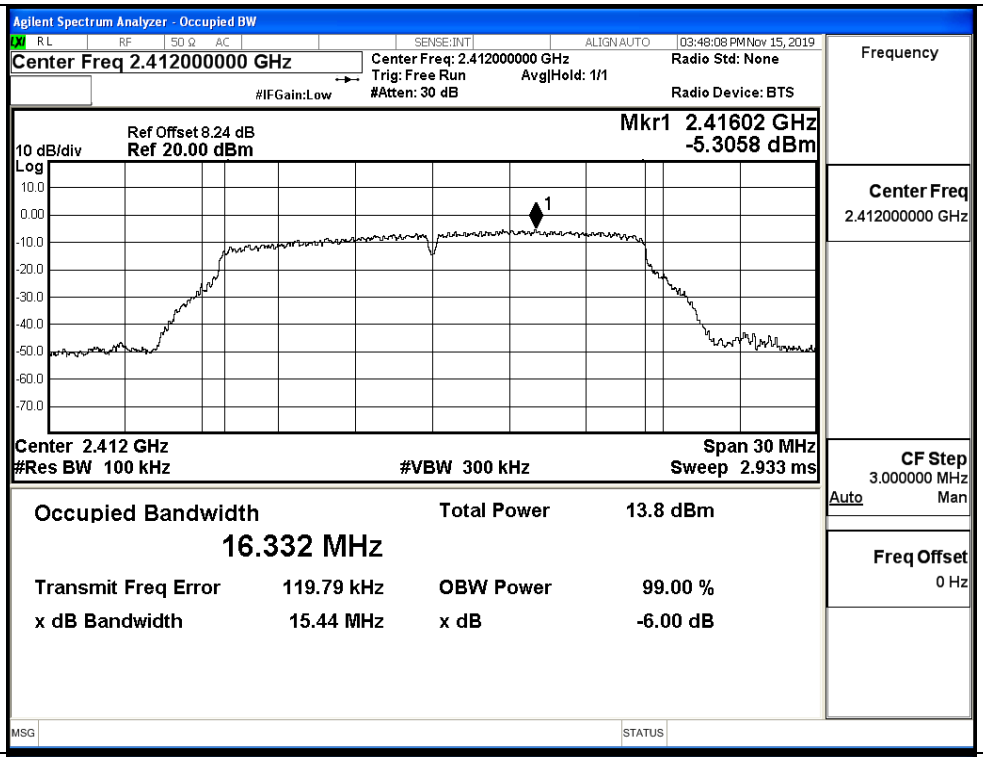
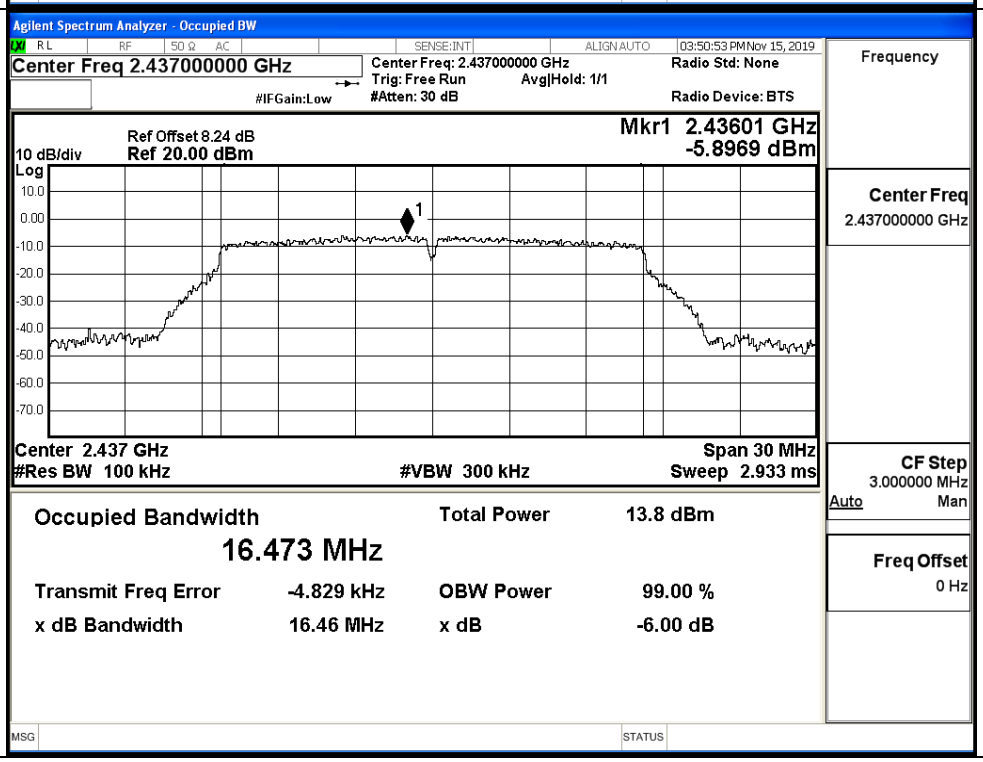
Mode	Channel	6dB Bandwidth [MHz]		Limit [MHz]	Verdict
		Ant_0	Ant_1		
11B	LCH	8.115	9.553	⩾0.5	PASS
	MCH	8.576	10.06	⩾0.5	PASS
	HCH	8.099	9.098	⩾0.5	PASS
11G	LCH	15.44	15.35	⩾0.5	PASS
	MCH	16.46	15.72	⩾0.5	PASS
	HCH	14.73	15.46	⩾0.5	PASS
11N20	LCH	15.74	15.41	⩾0.5	PASS
	MCH	17.68	16.38	⩾0.5	PASS
	HCH	15.29	16.05	⩾0.5	PASS
11N40	LCH	25.52	33.89	⩾0.5	PASS
	MCH	36.59	35.92	⩾0.5	PASS
	HCH	24.47	27.59	⩾0.5	PASS

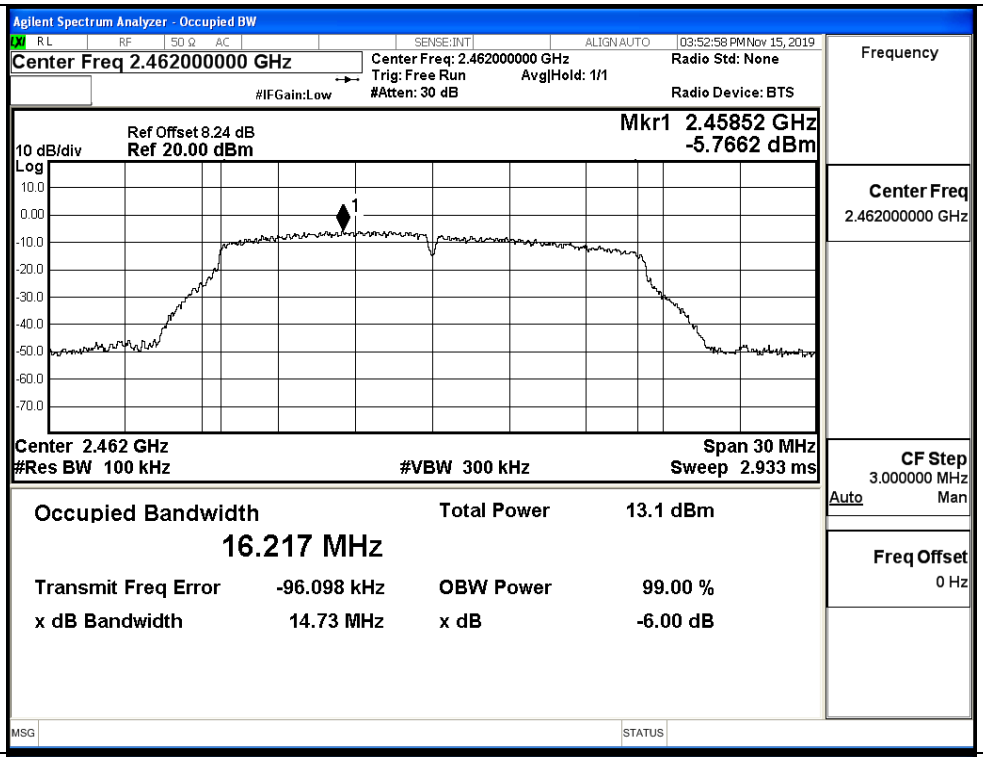
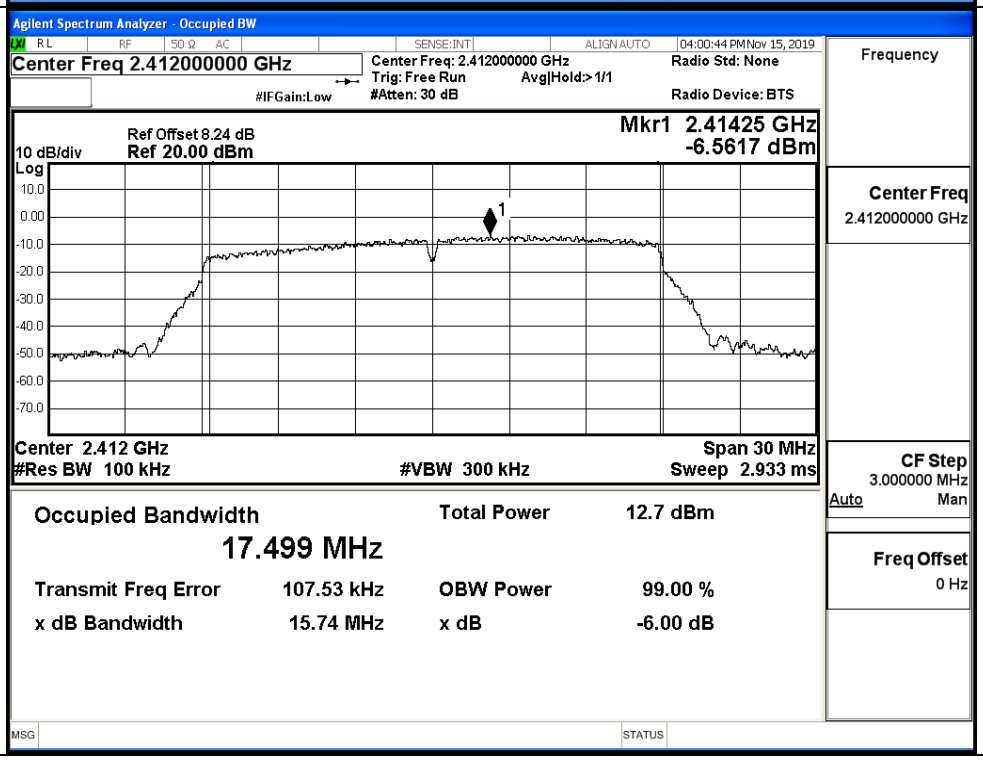
Test Graphs_Ant_0

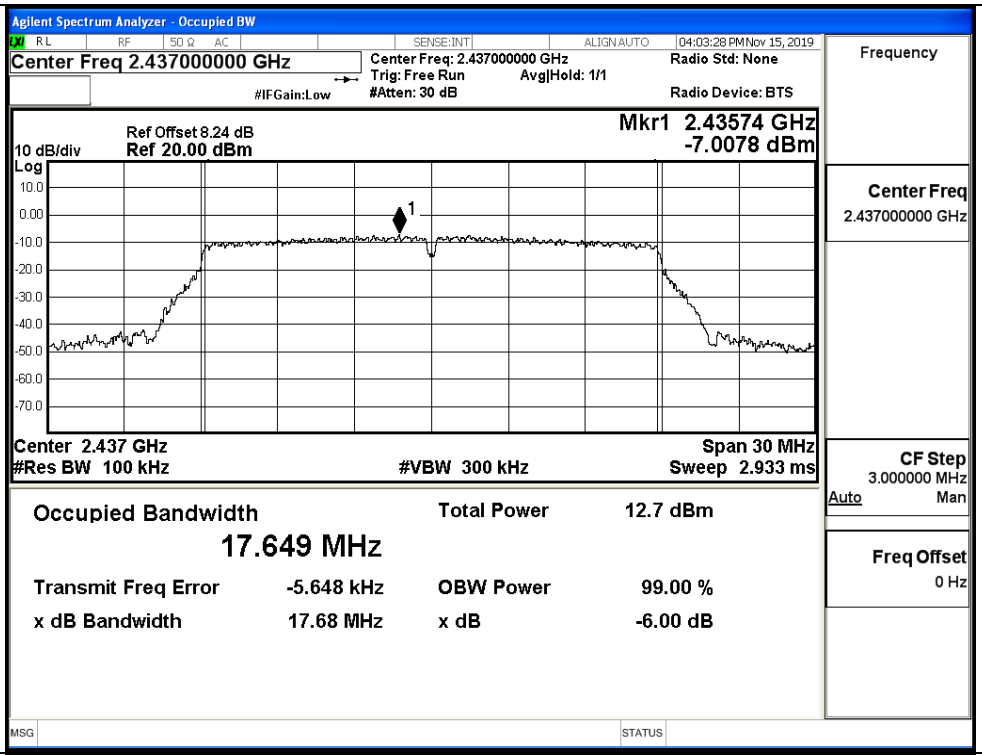
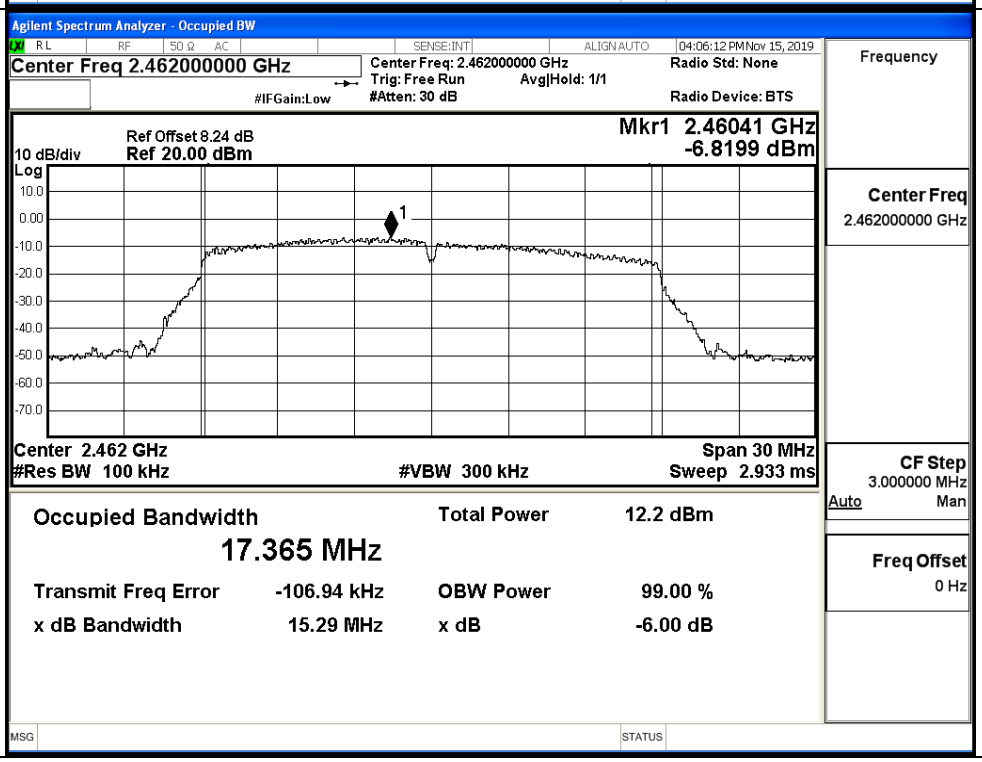
11B/LCH

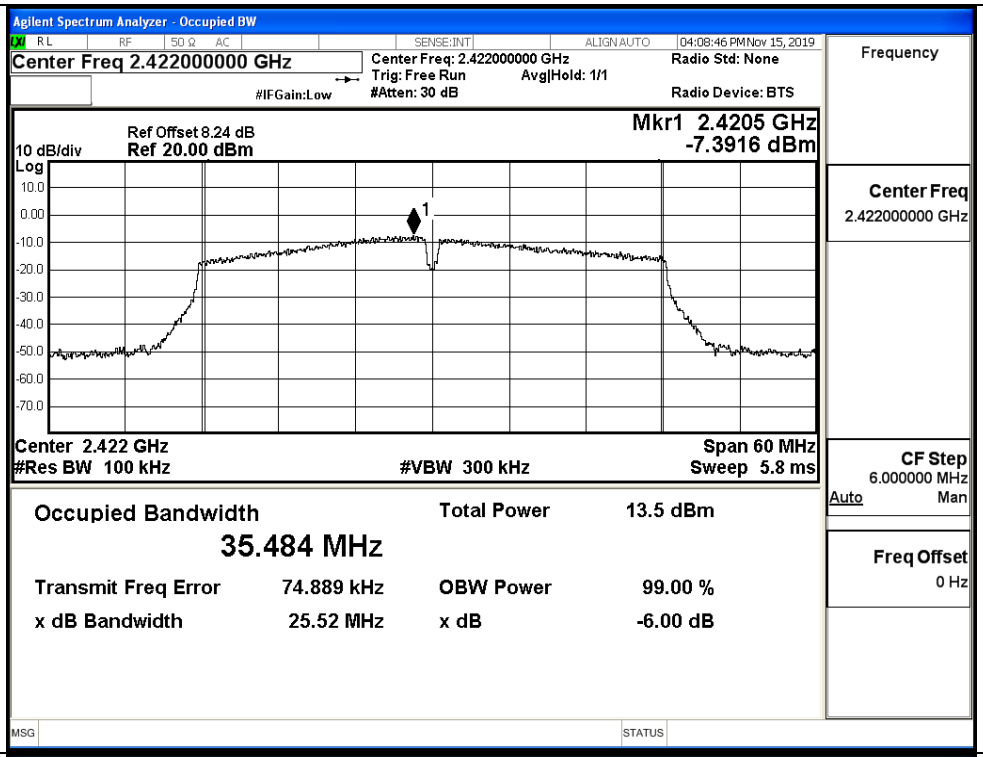
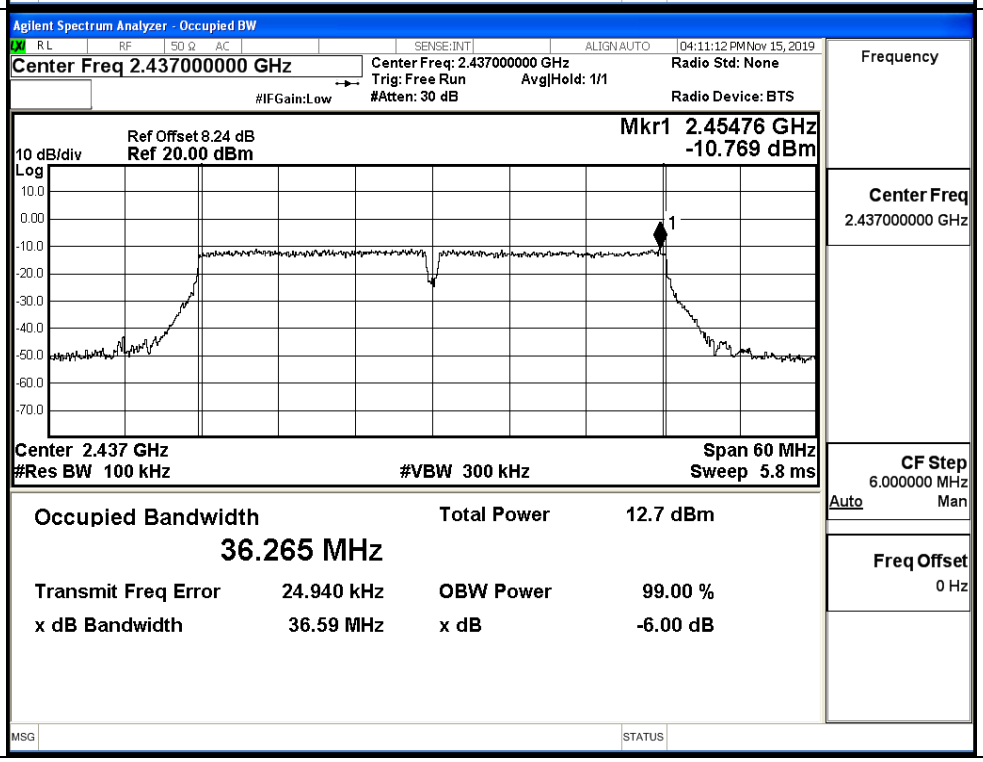


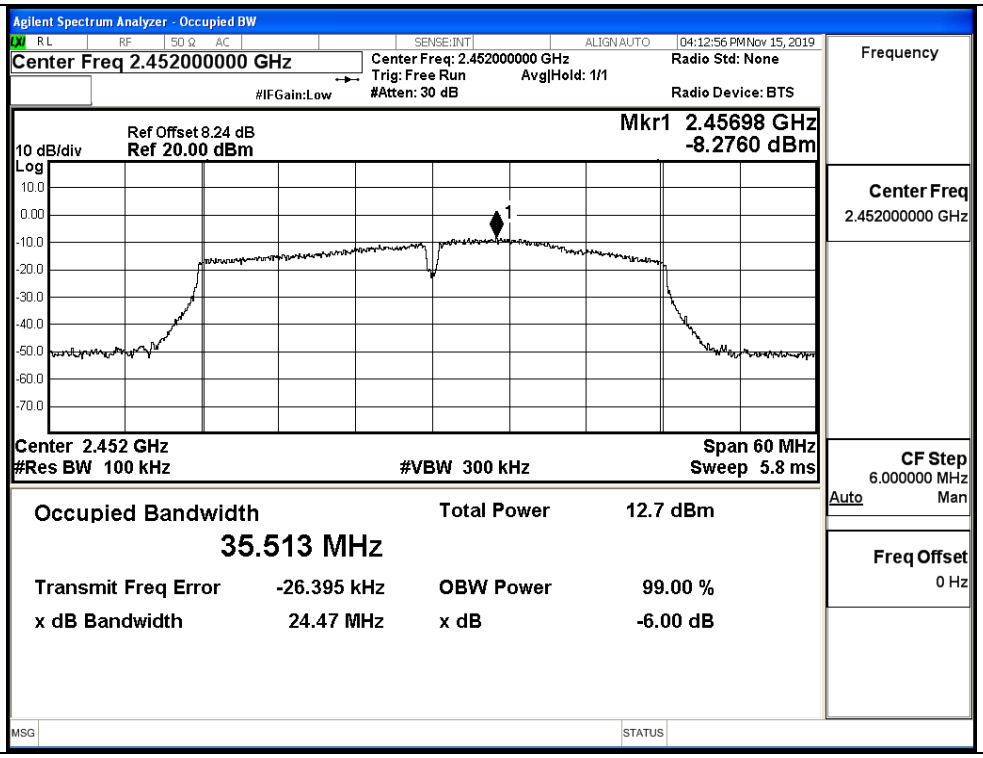
11B/MCH	
11B/HCH	

11G/LCH		
11G/MCH		

11G/HCH		
11N20/LCH		

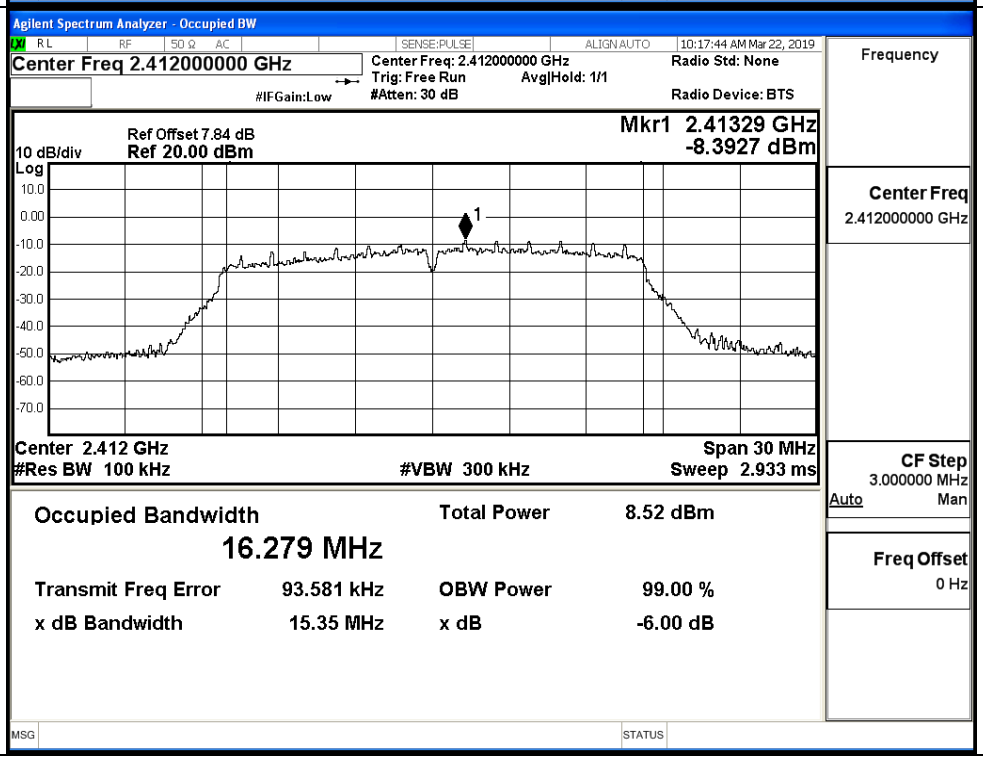
11N20/MCH		
11N20/HCH		

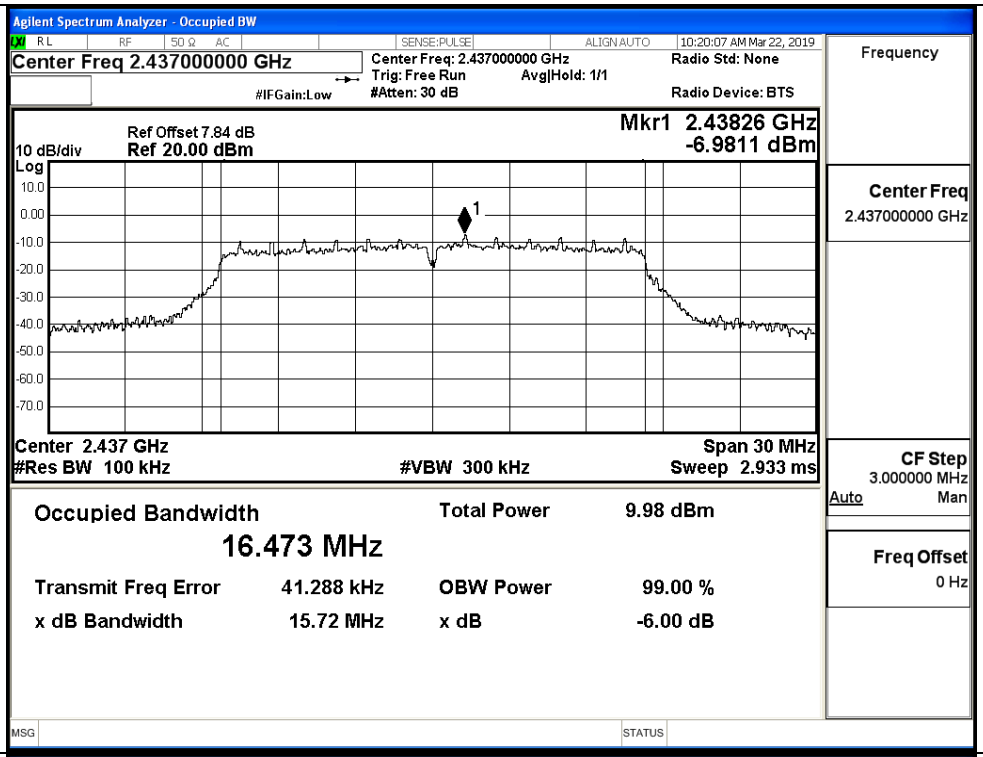
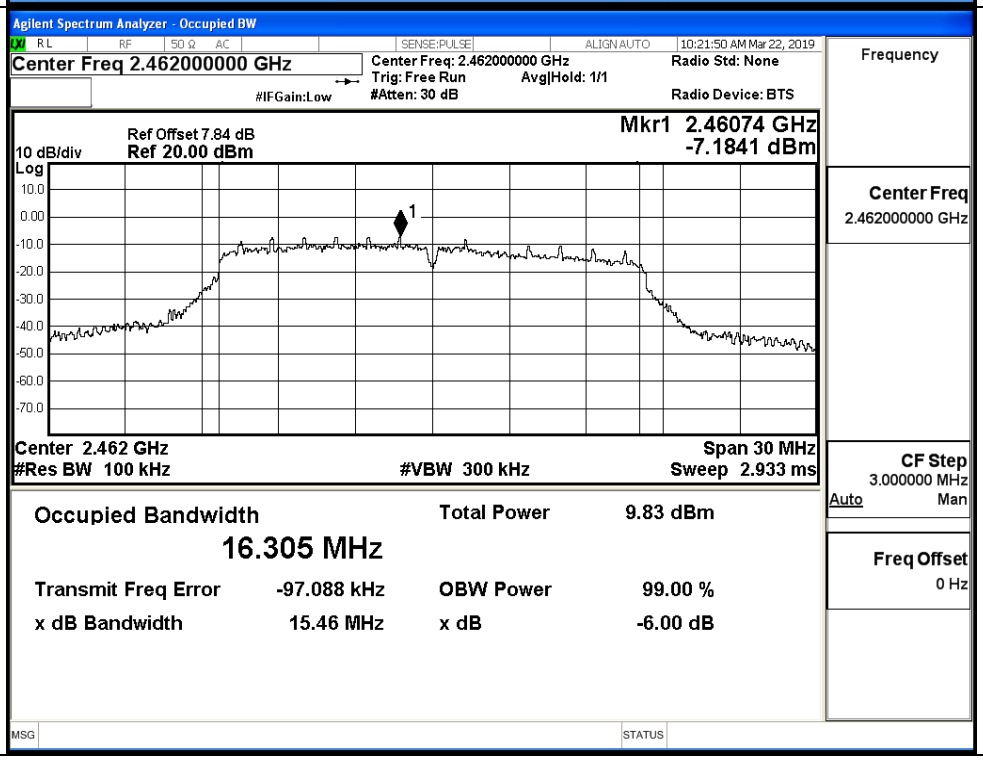
11N40/LCH		
11N40/MCH		

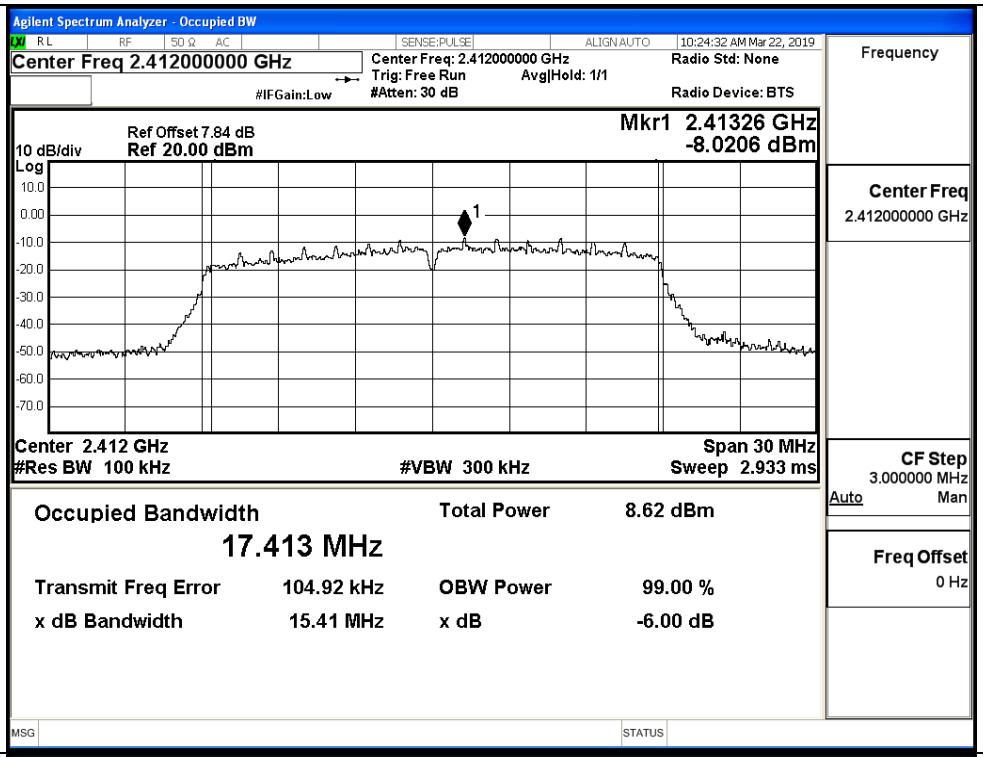
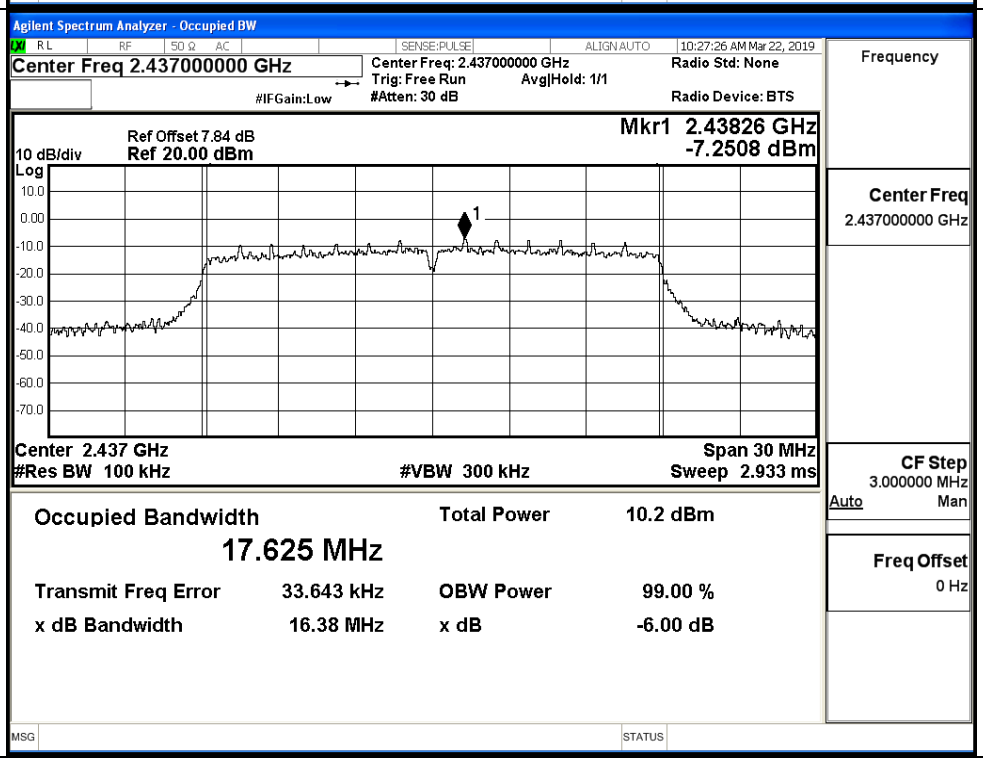
11N40/HCH		

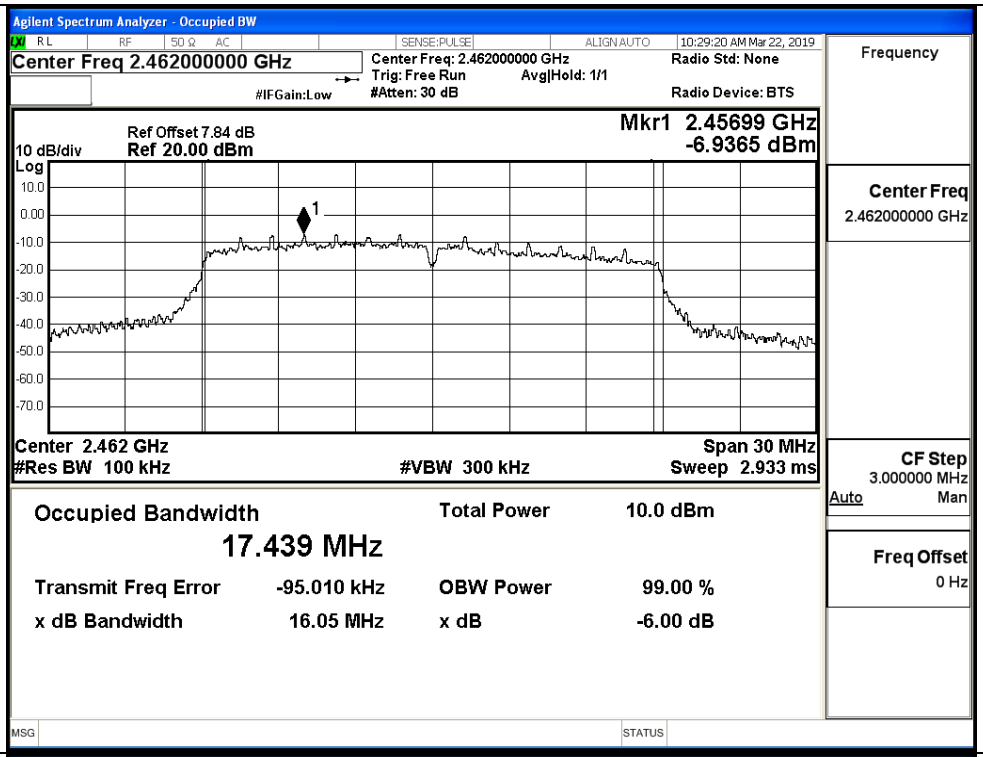
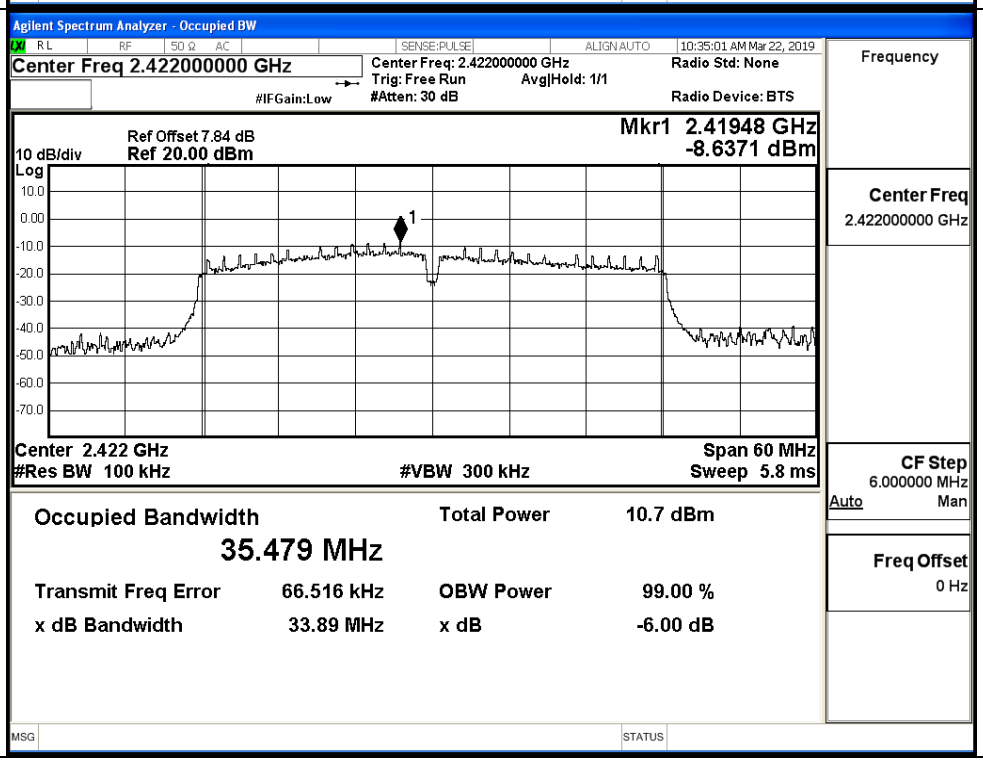
Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.452000000 GHz
Center Freq: 2.452000000 GHz
Trig: Free Run
Avg|Hold: 1/1
#Atten: 30 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
04:12:56 PM Nov 15, 2019
Frequency
Ref Offset 8.24 dB
10 dB/div
Ref 20.00 dBm
Mkr1 2.45698 GHz
-8.2760 dBm
Center Freq
2.452000000 GHz
Center 2.452 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 5.8 ms
CF Step
6.000000 MHz
Auto
Man
Occupied Bandwidth
35.513 MHz
Total Power 12.7 dBm
Transmit Freq Error -26.395 kHz
OBW Power 99.00 %
x dB Bandwidth 24.47 MHz
x dB -6.00 dB
Freq Offset
0 Hz
MSG
STATUS

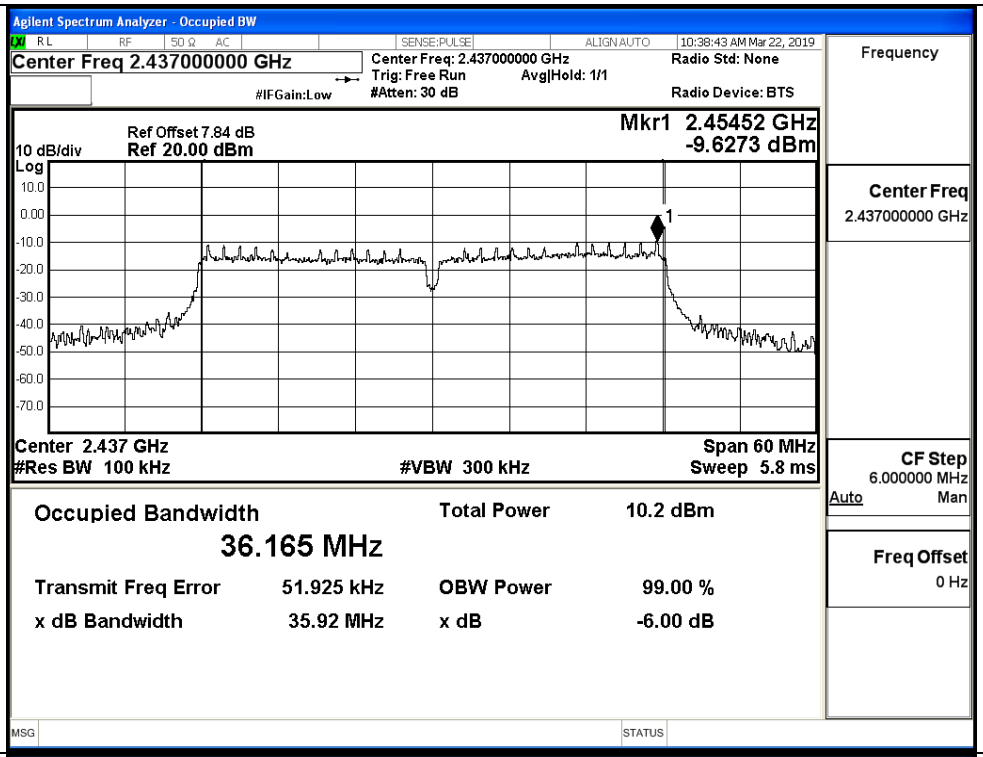
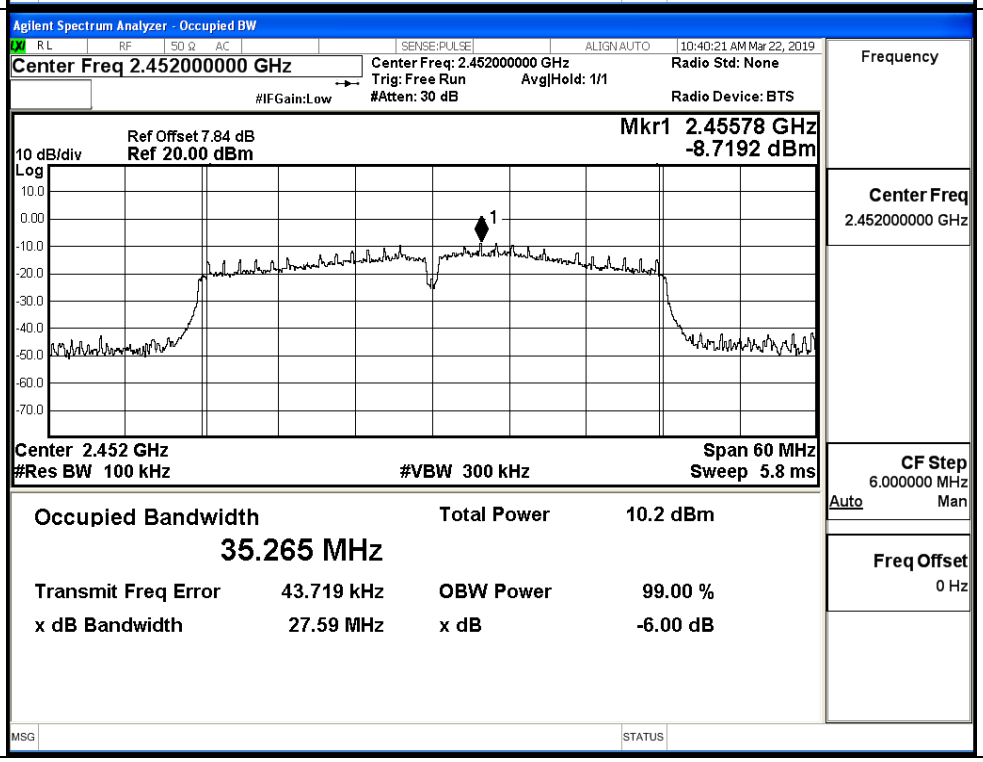
Test Graphs_Ant_1	
11B/LCH	
11B/MCH	

11B/HCH		
11G/LCH		

11G/MCH	
11G/HCH	

11N20/LCH		
11N20/MCH		

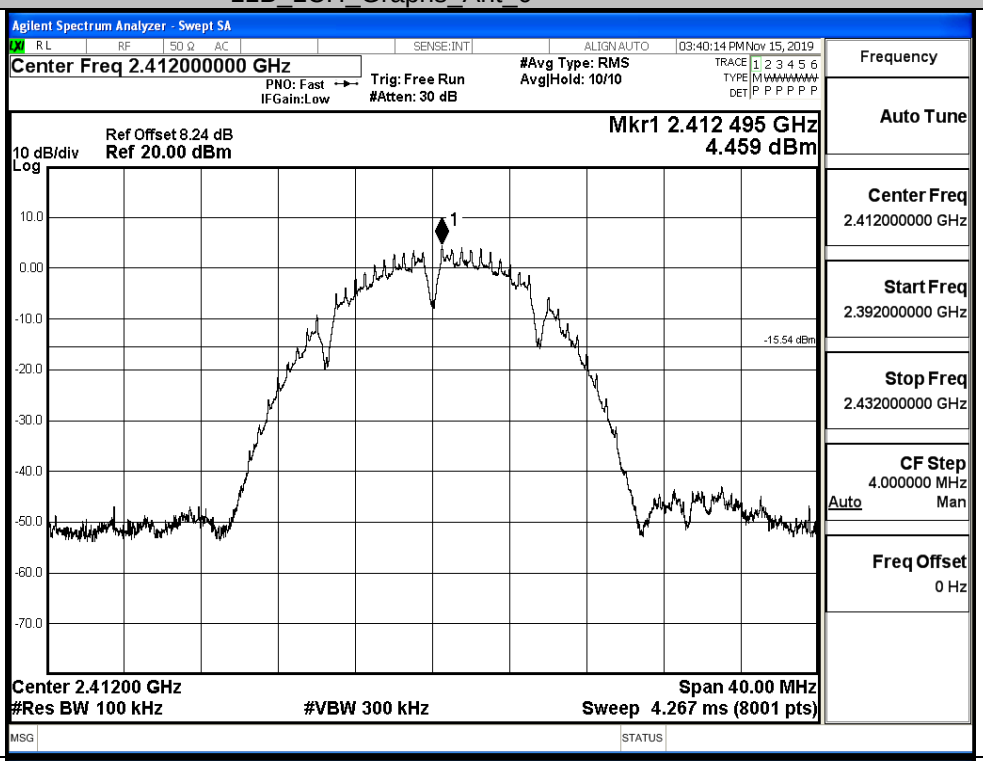
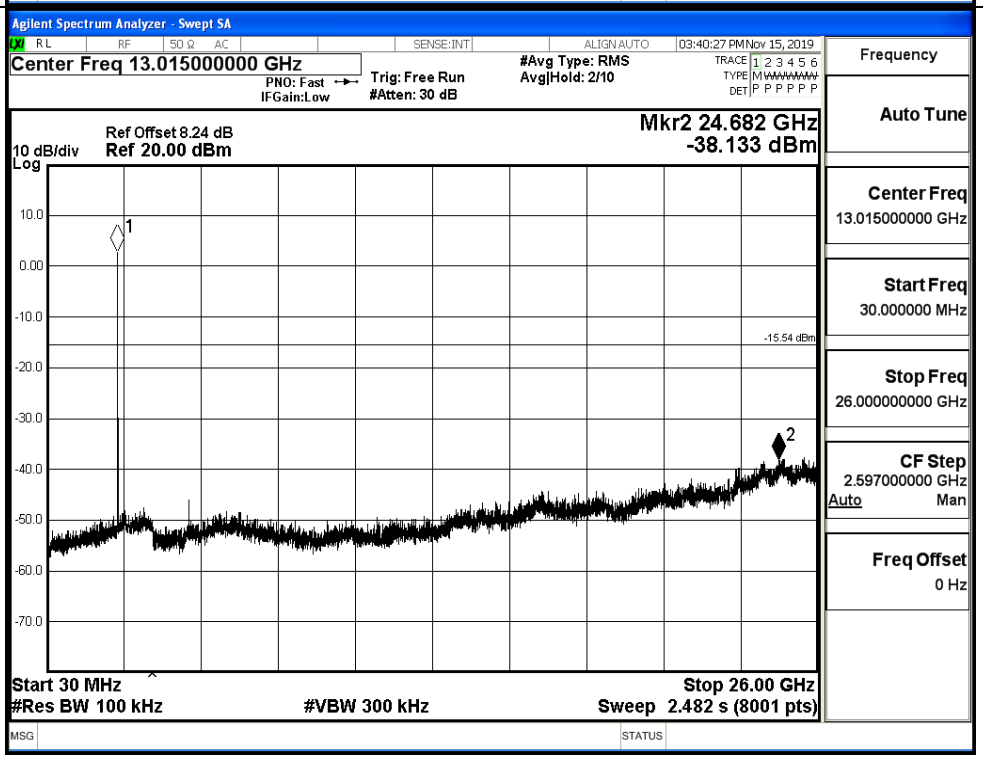
11N20/HCH	
11N40/LCH	

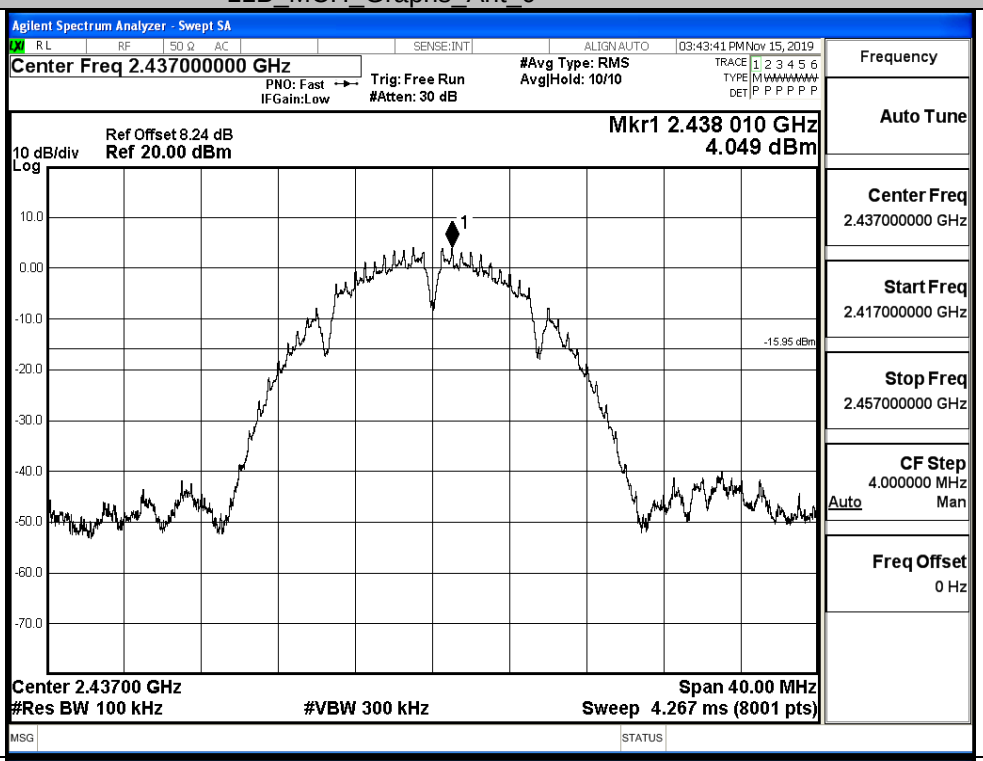
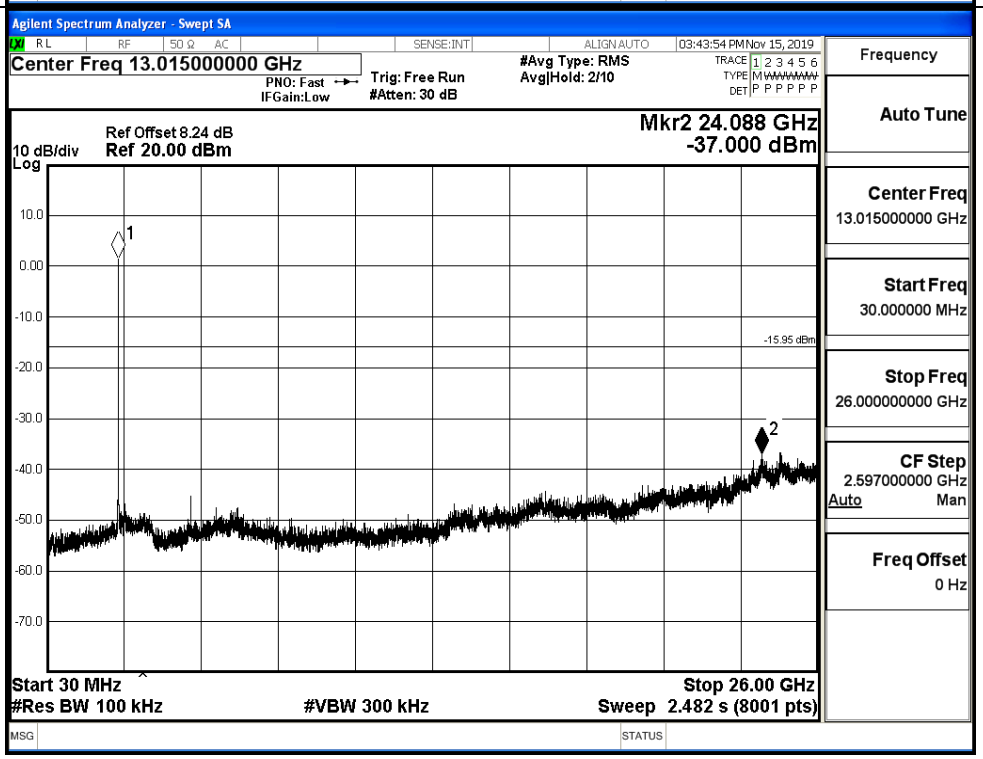
11N40/MCH	
11N40/HCH	

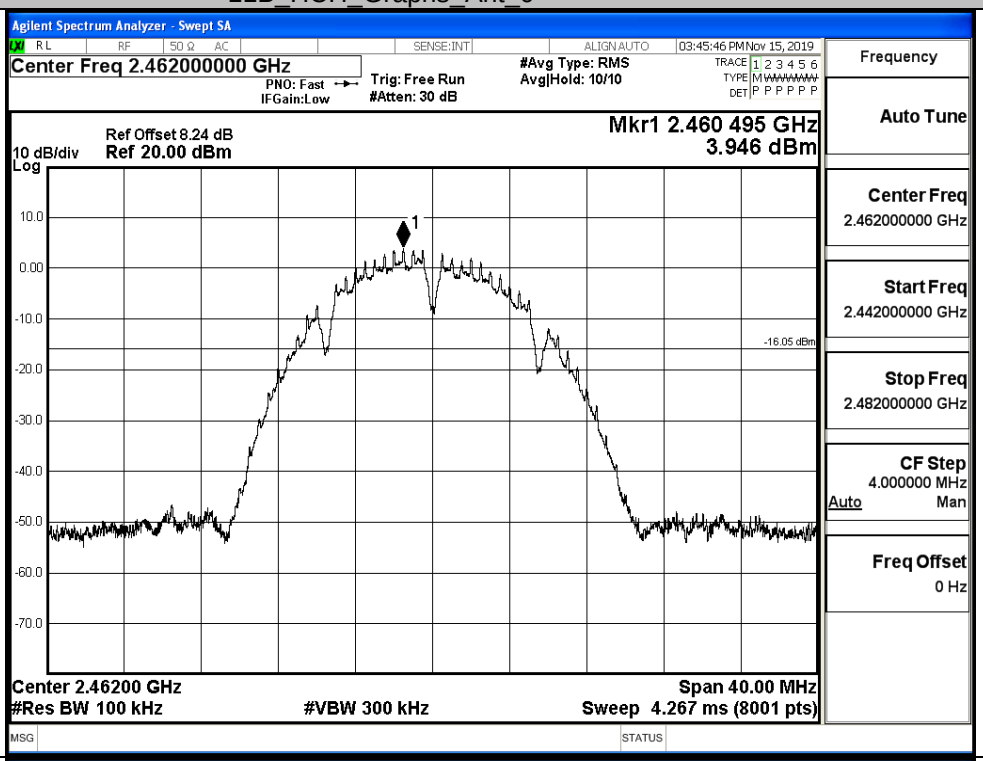
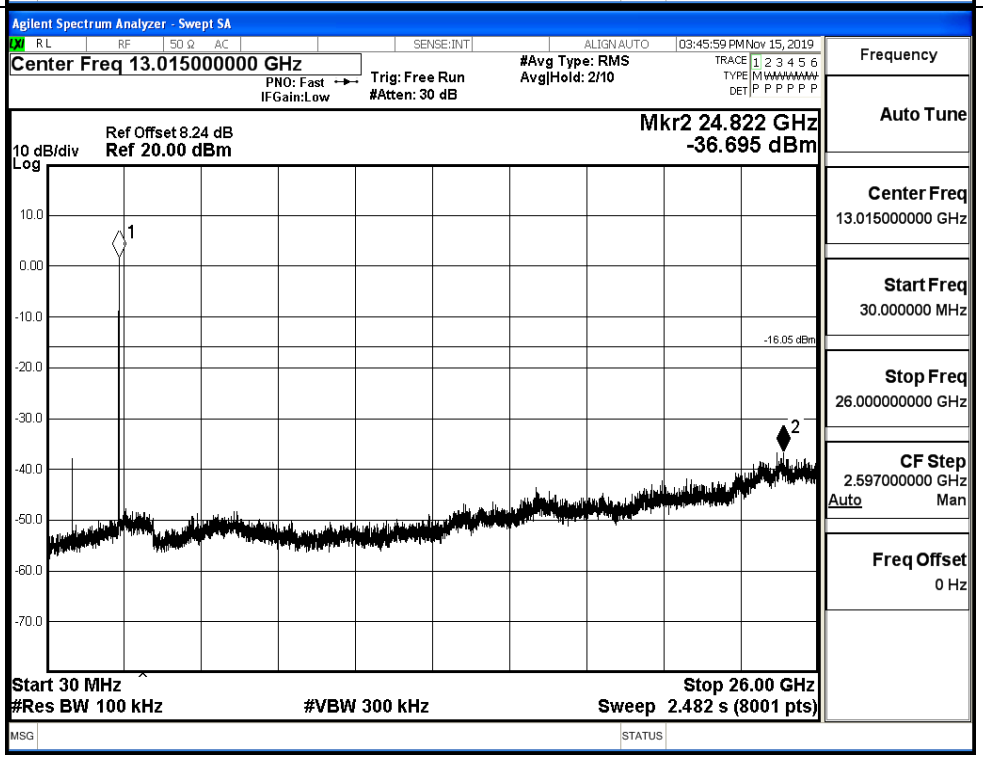
C.5 RF Conducted Spurious Emissions

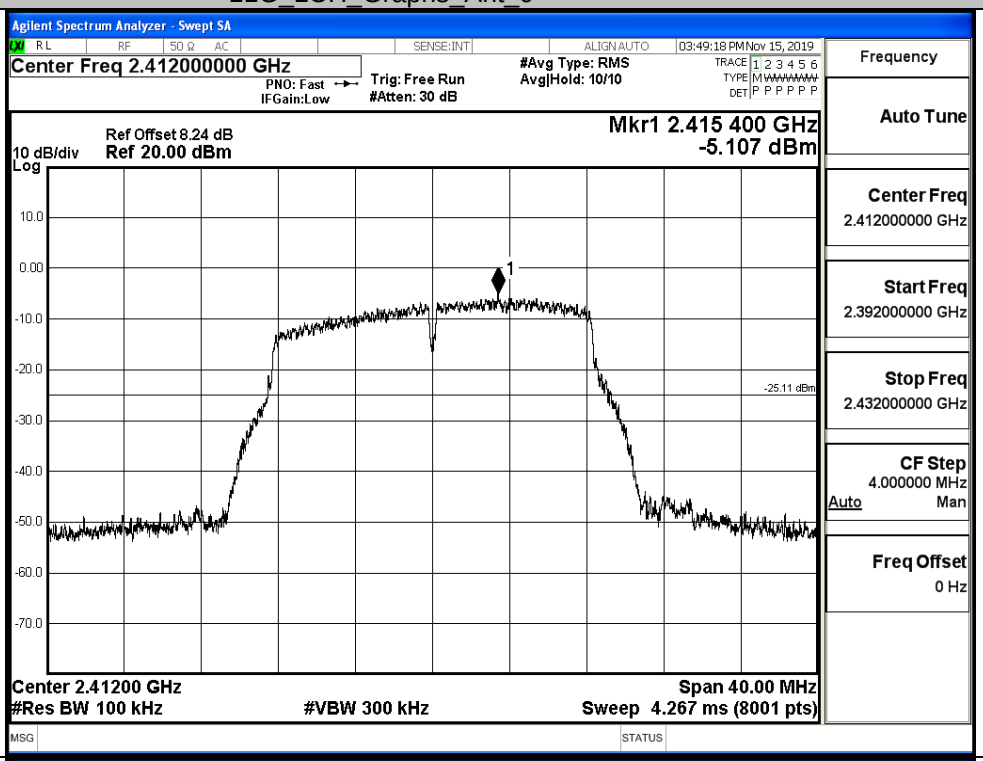
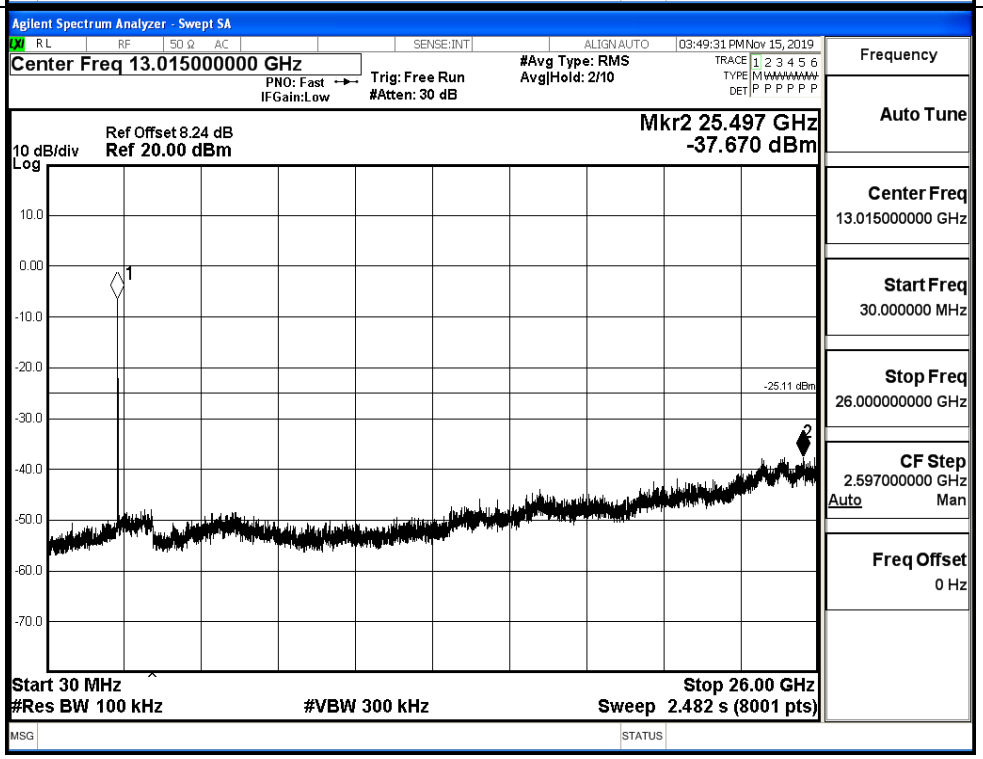
Ant_0

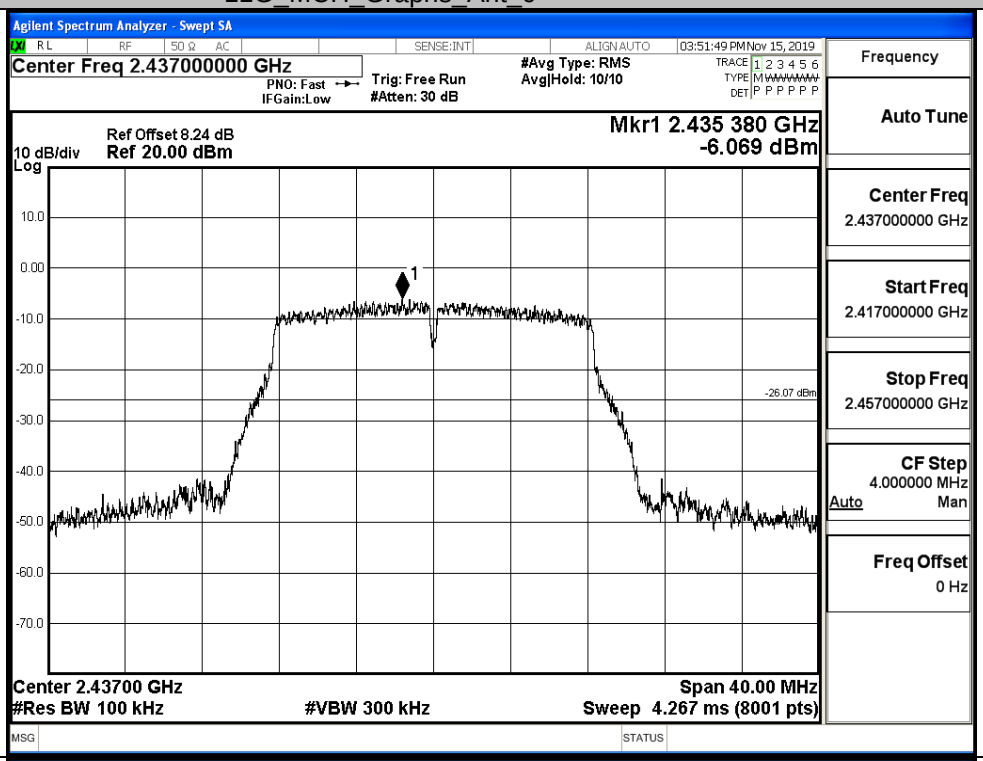
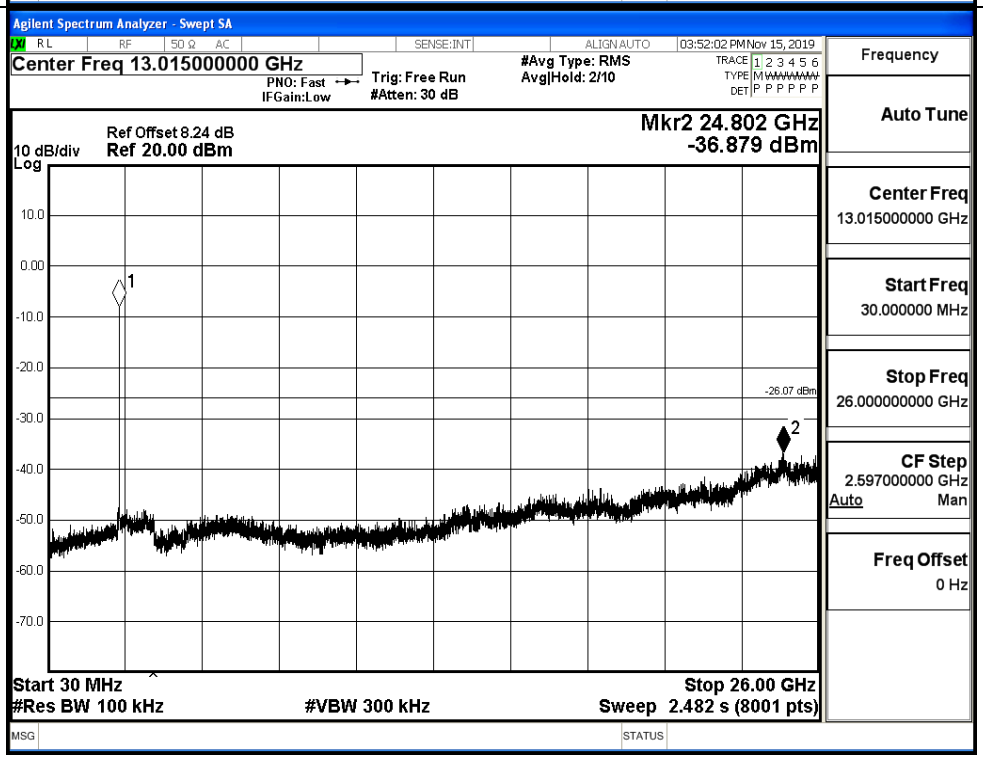
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	4.459	-38.133	-15.541	PASS
	MCH	4.049	-37.000	-15.951	PASS
	HCH	3.946	-36.695	-16.054	PASS
11G	LCH	-5.107	-37.670	-25.107	PASS
	MCH	-6.069	-36.879	-26.069	PASS
	HCH	-6.099	-37.322	-26.099	PASS
11N20	LCH	-6.35	-37.705	-26.350	PASS
	MCH	-7.383	-37.712	-27.383	PASS
	HCH	-6.84	-37.134	-26.840	PASS
11N40	LCH	-7.851	-37.042	-27.851	PASS
	MCH	-11.185	-37.910	-31.185	PASS
	HCH	-8.125	-36.744	-28.125	PASS

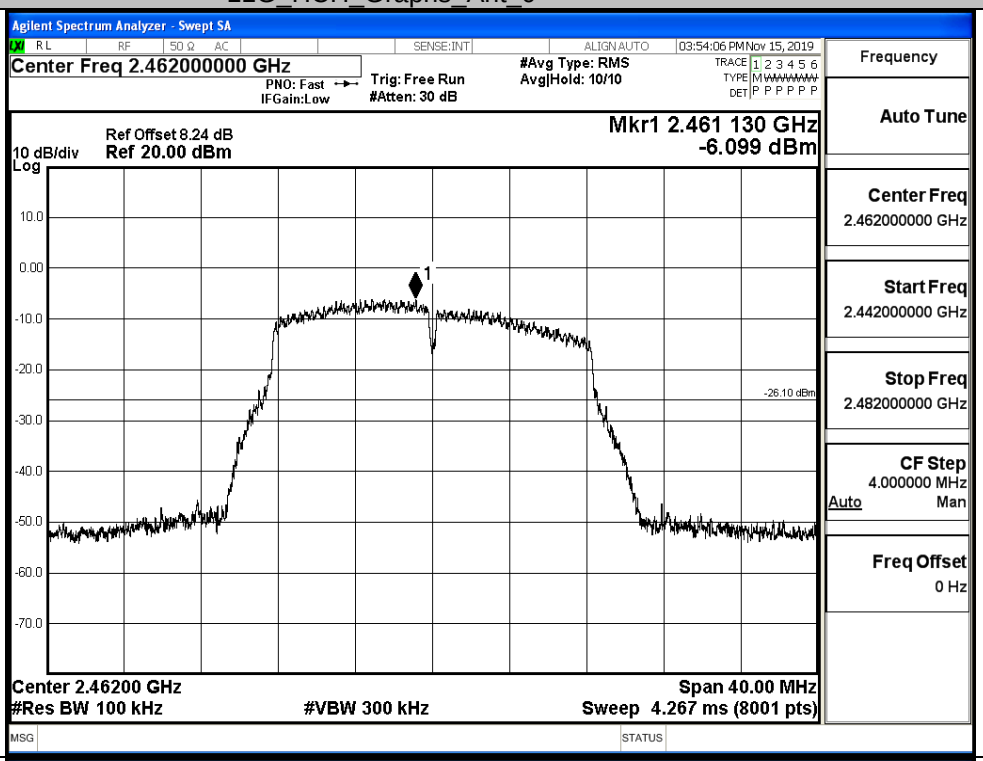
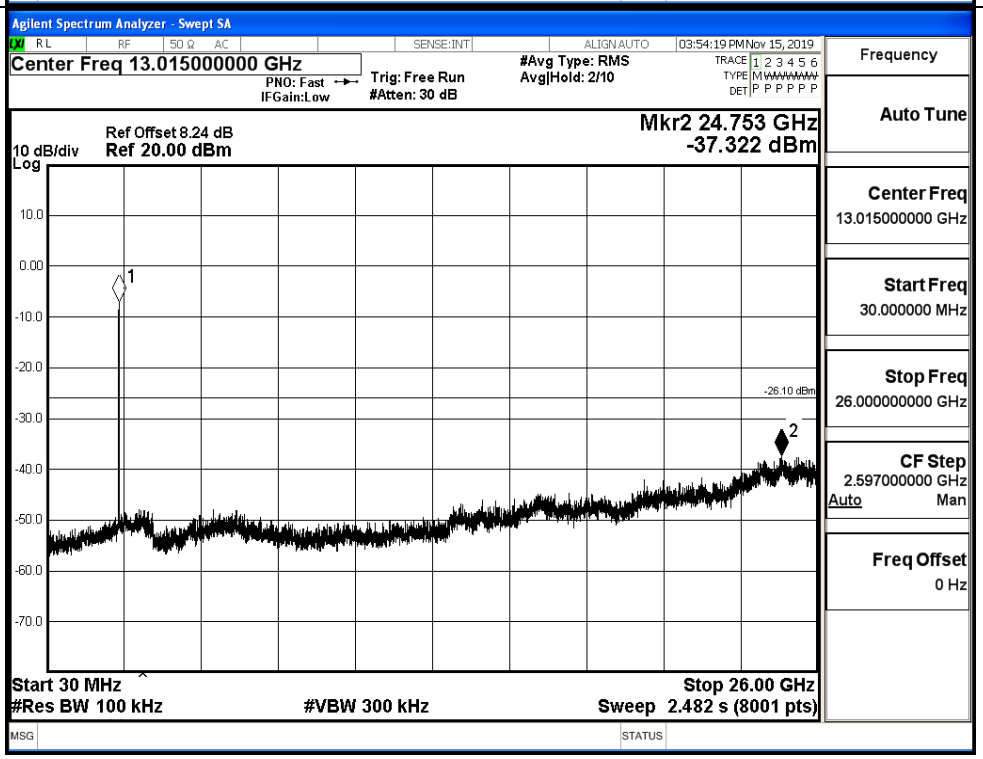
11B_LCH_Graphs_Ant_0		
Pref/11B/LCH		
Puw/11B/LCH		

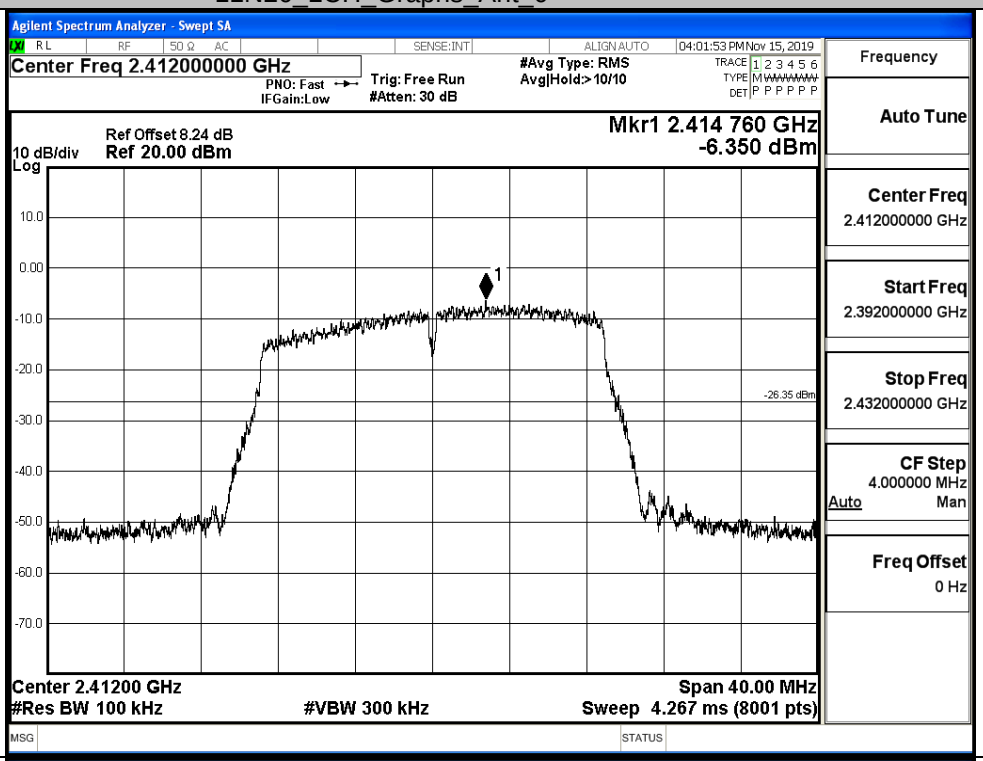
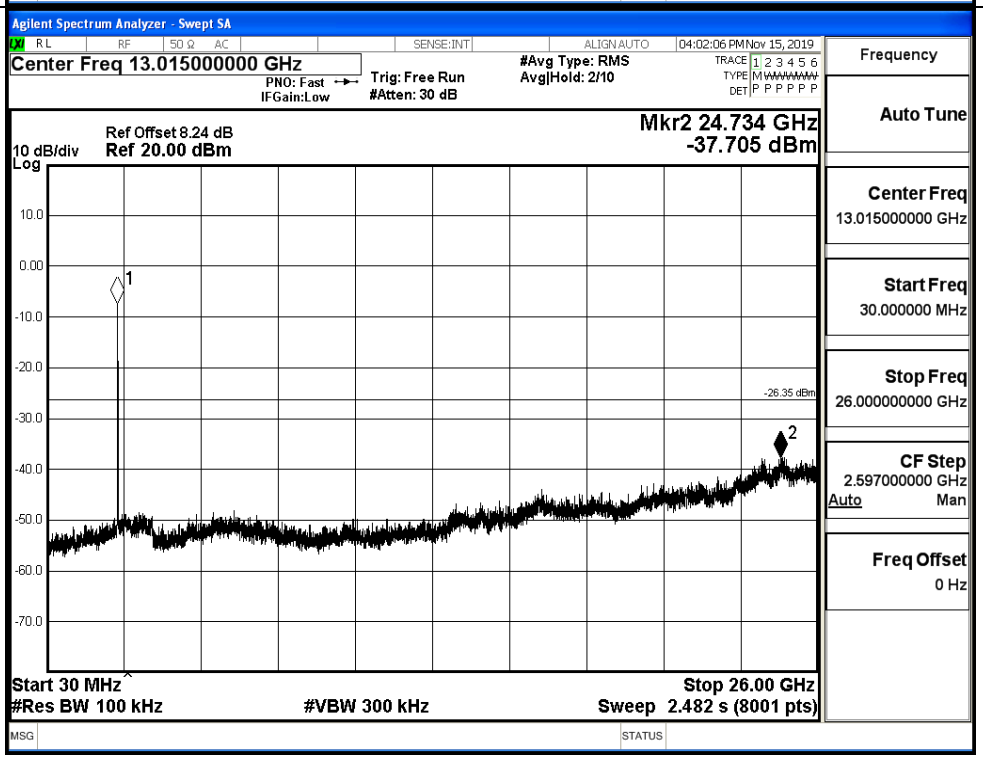
11B_MCH_Graphs_Ant_0	
Pref/11B/MCH	
Puw/11B/MCH	

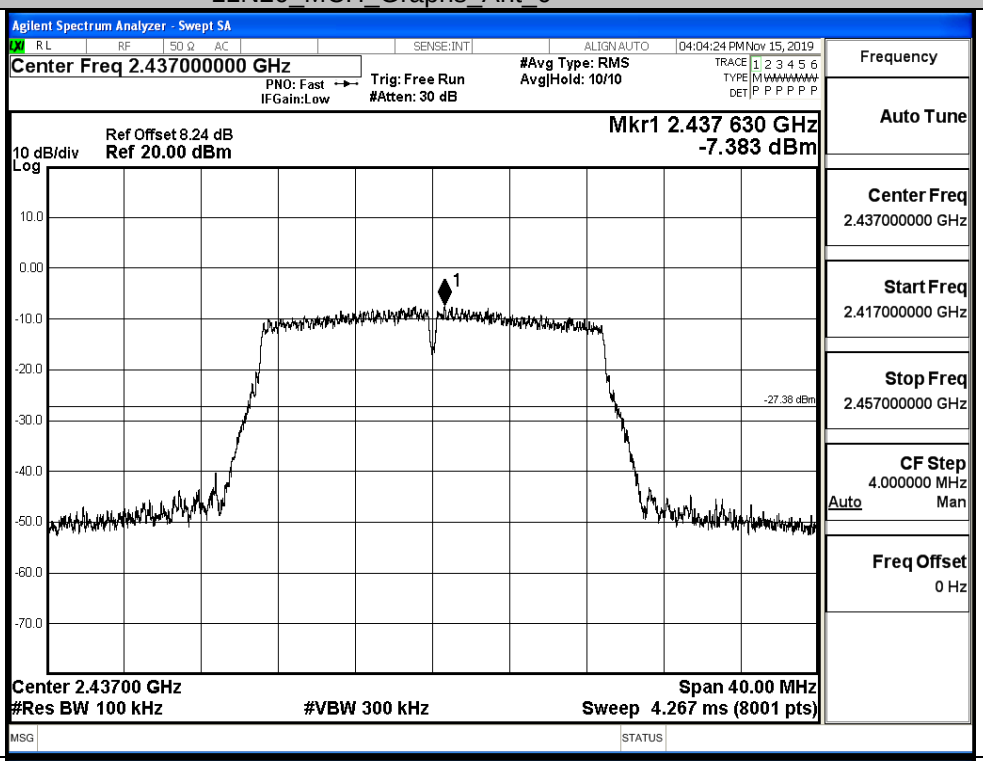
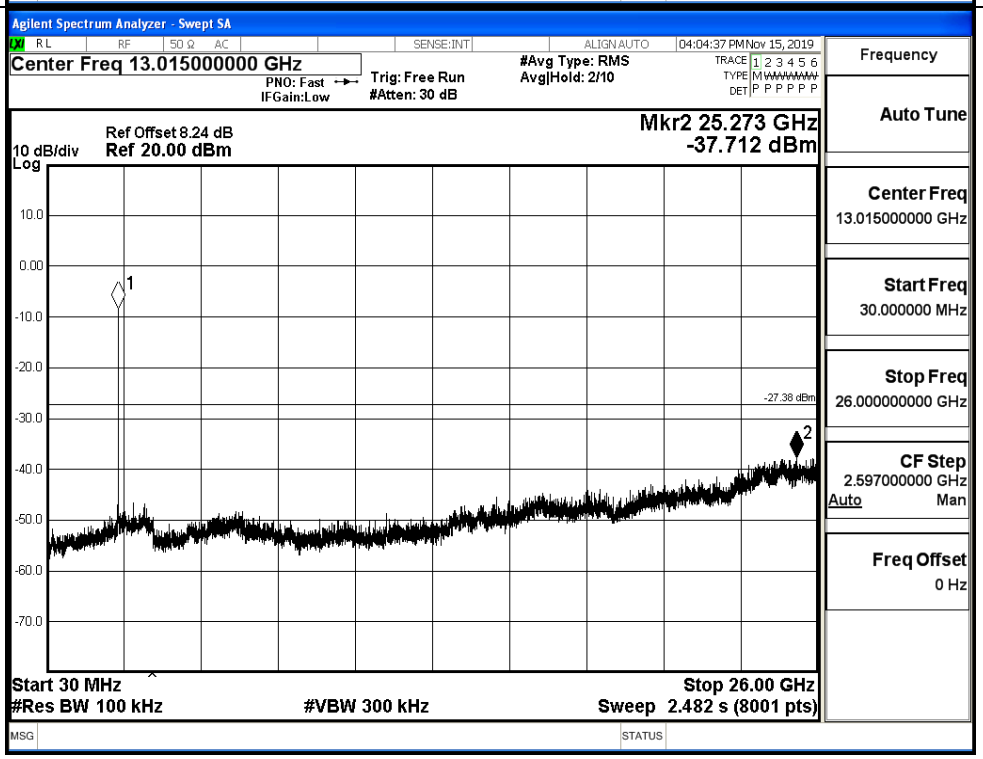
11B_HCH_Graphs_Ant_0		
Pref/11B/HCH		
Puw/11B/HCH		

11G_LCH_Graphs_Ant_0		
Pref/11G/LCH		
Puw/11G/LCH		

11G_MCH_Graphs_Ant_0	
Pref/11G/MCH	
Puw/11G/MCH	

11G_HCH_Graphs_Ant_0		
Pref/11G/HCH		
Puw/11G/HCH		

11N20_LCH_Graphs_Ant_0		
Pref/11N20/ LCH		
Puw/11N20/ LCH		

11N20_MCH_Graphs_Ant_0		
Pref/11N20/ MCH		
Puw/11N20/ MCH		

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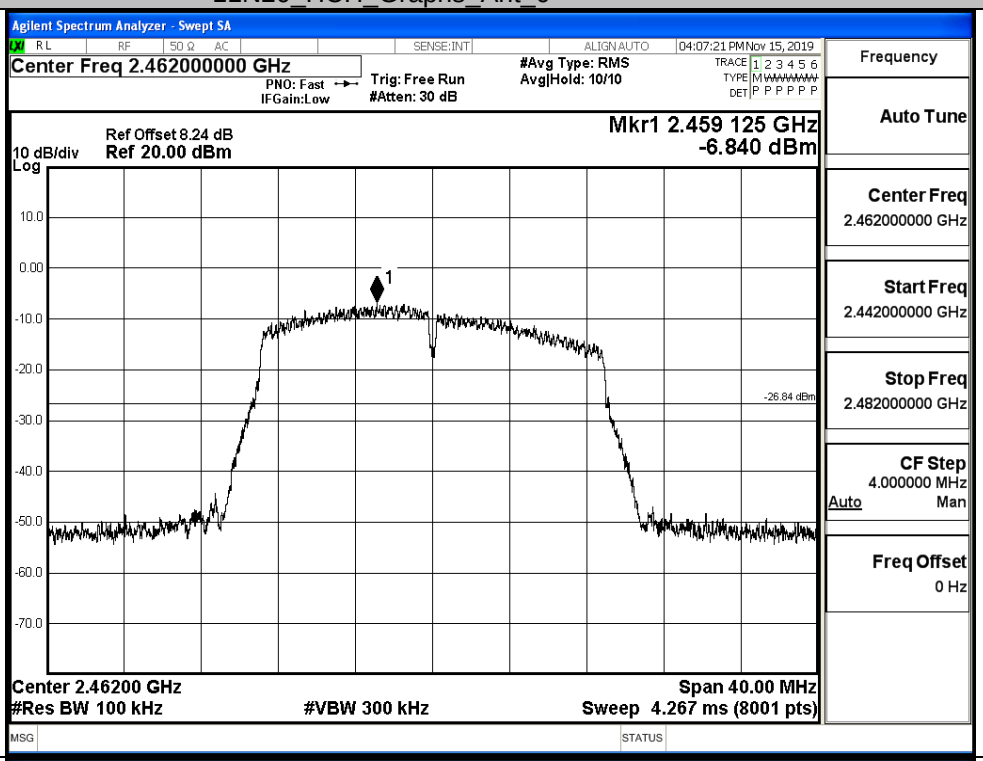
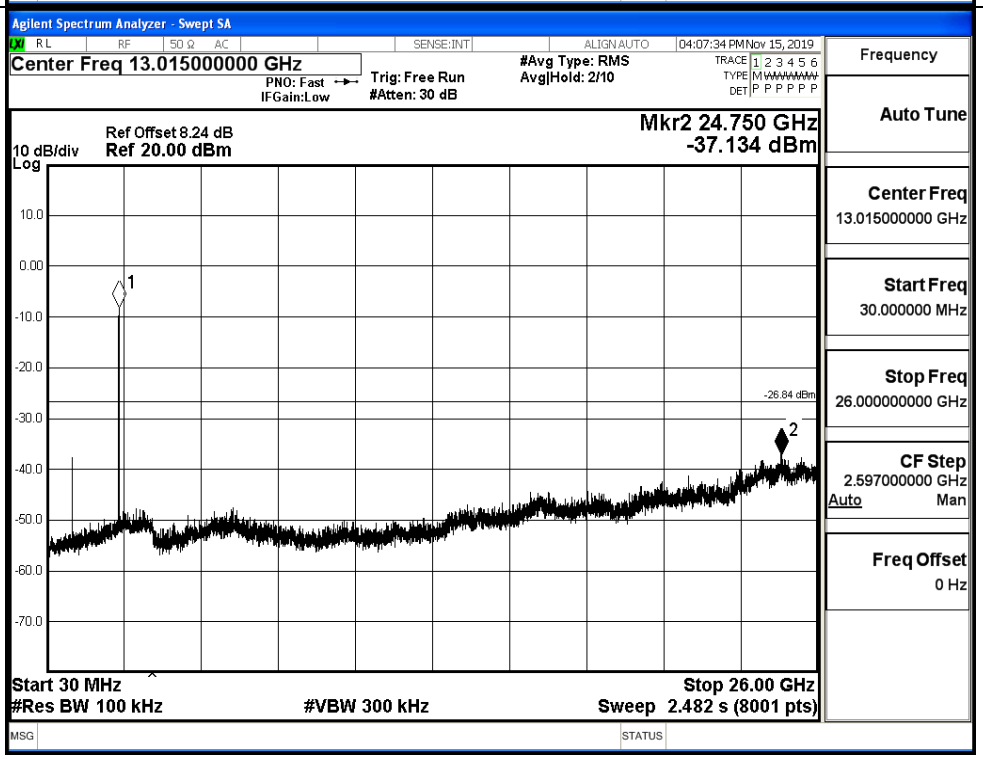
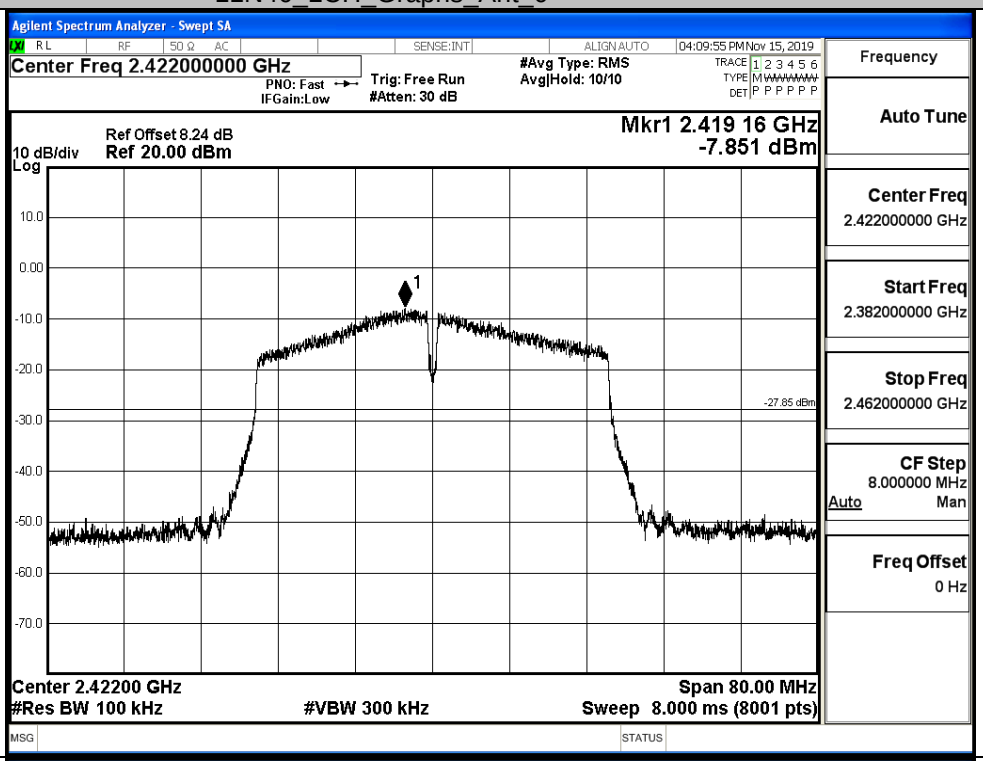
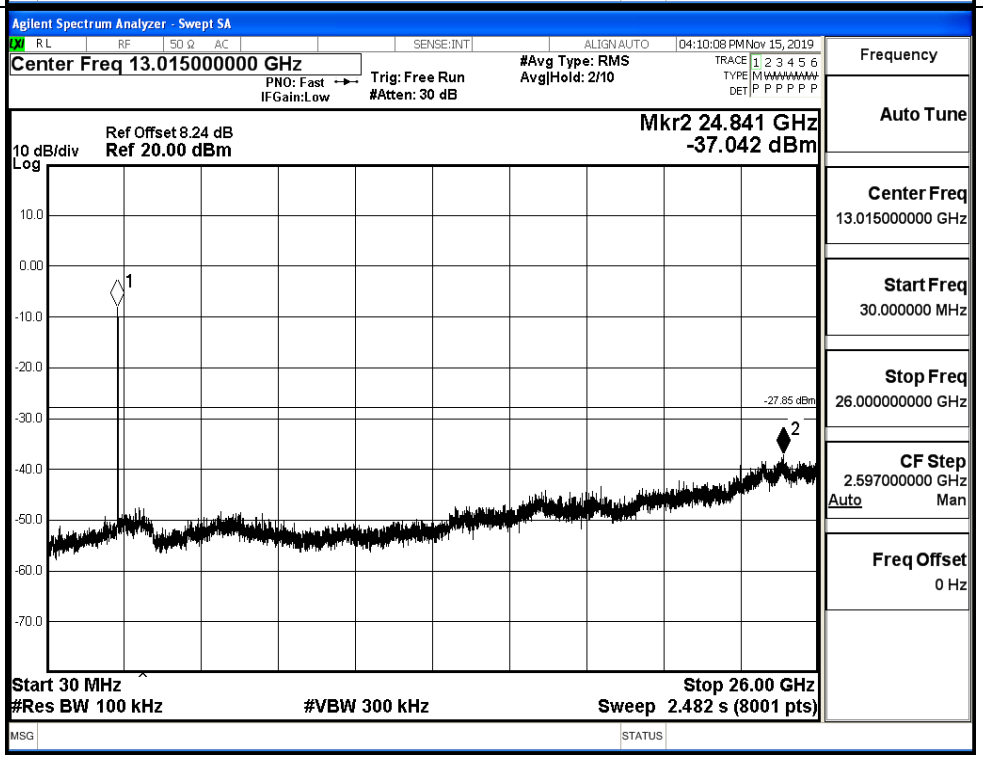
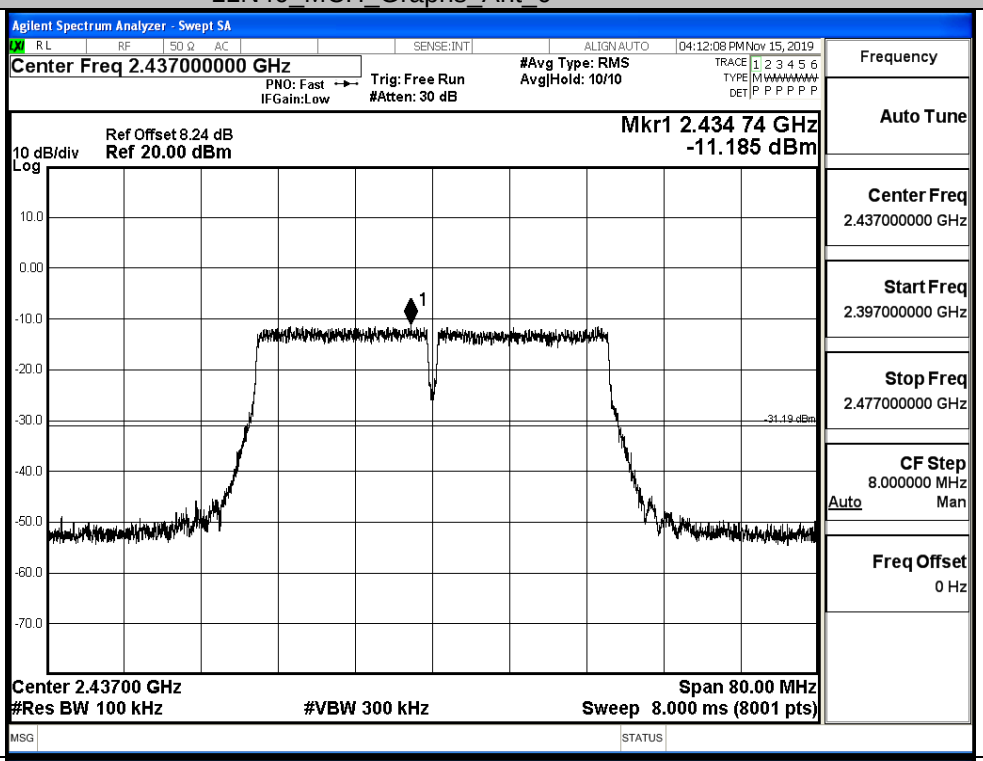
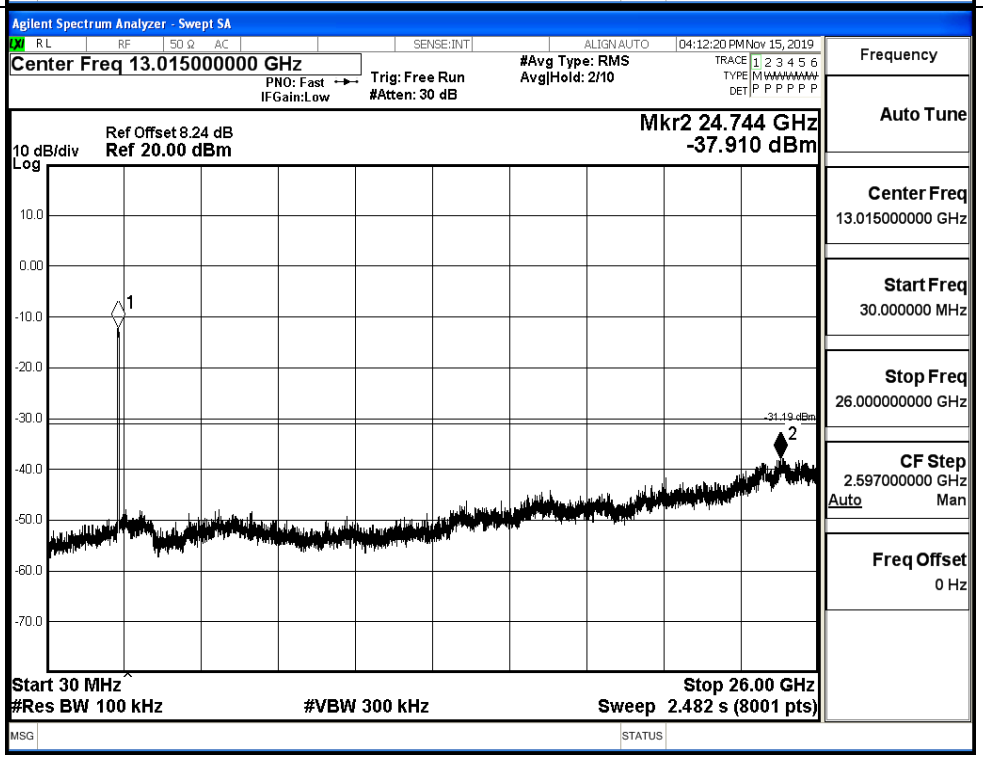
Pref/11N20/ HCH		
Puw/11N20/ HCH		

11N40_LCH_Graphs_Ant_0	
Pref/11N40/ LCH	
Puw/11N40/ LCH	

11N40_MCH_Graphs_Ant_0		
Pref/11N40/ MCH		
Puw/11N40/ MCH		

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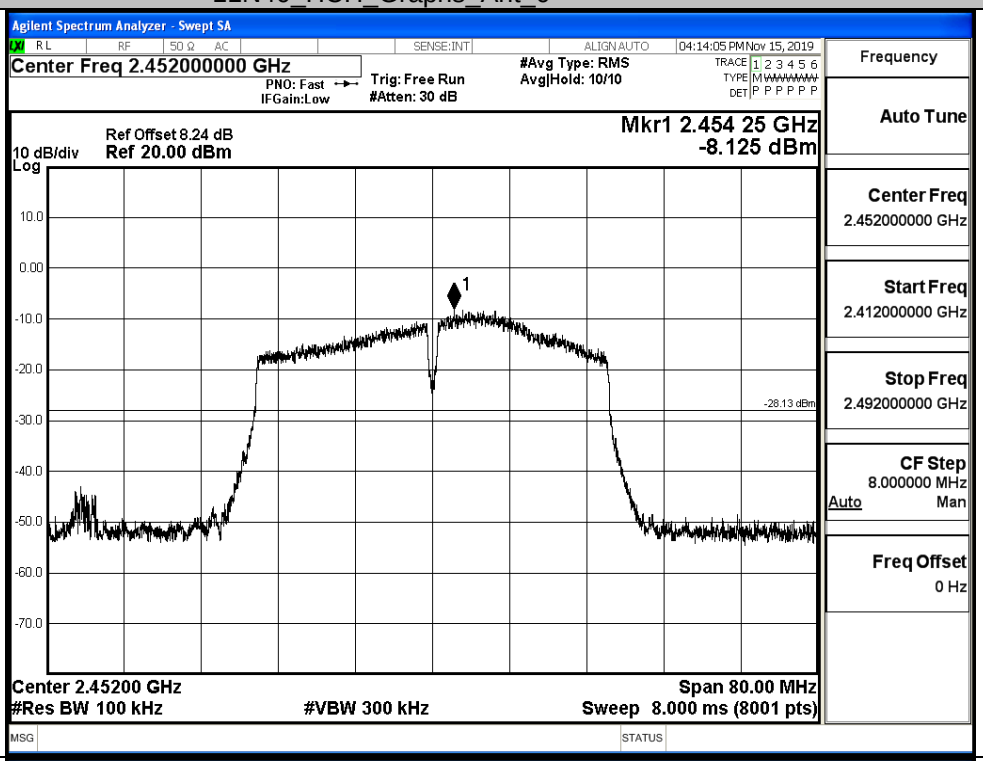
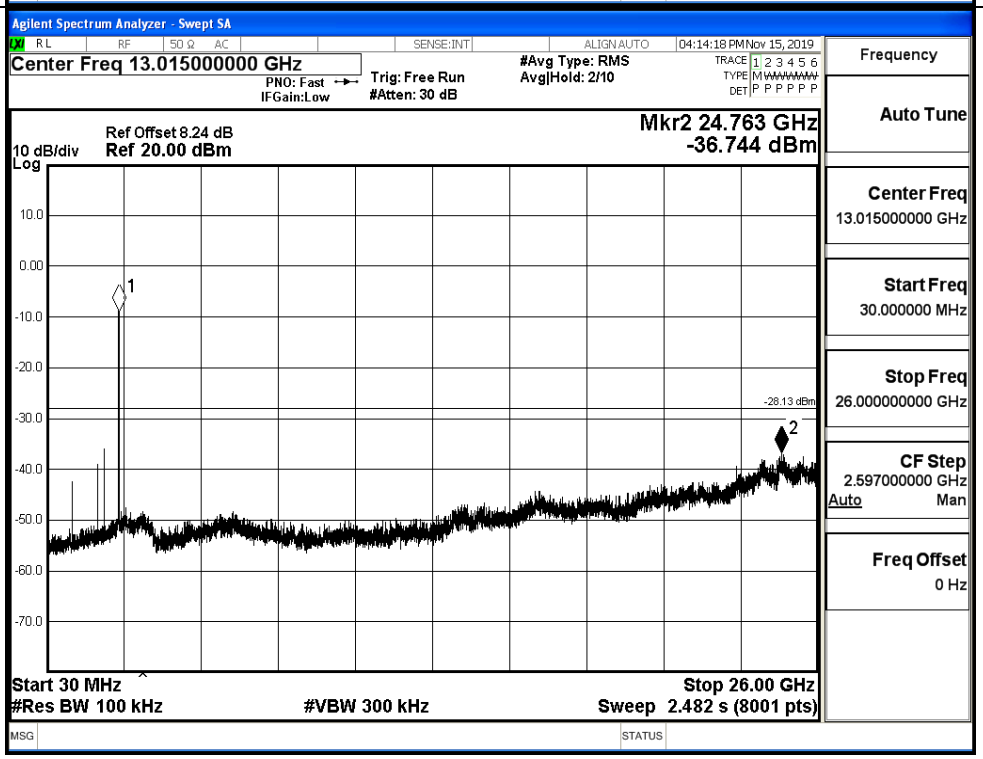
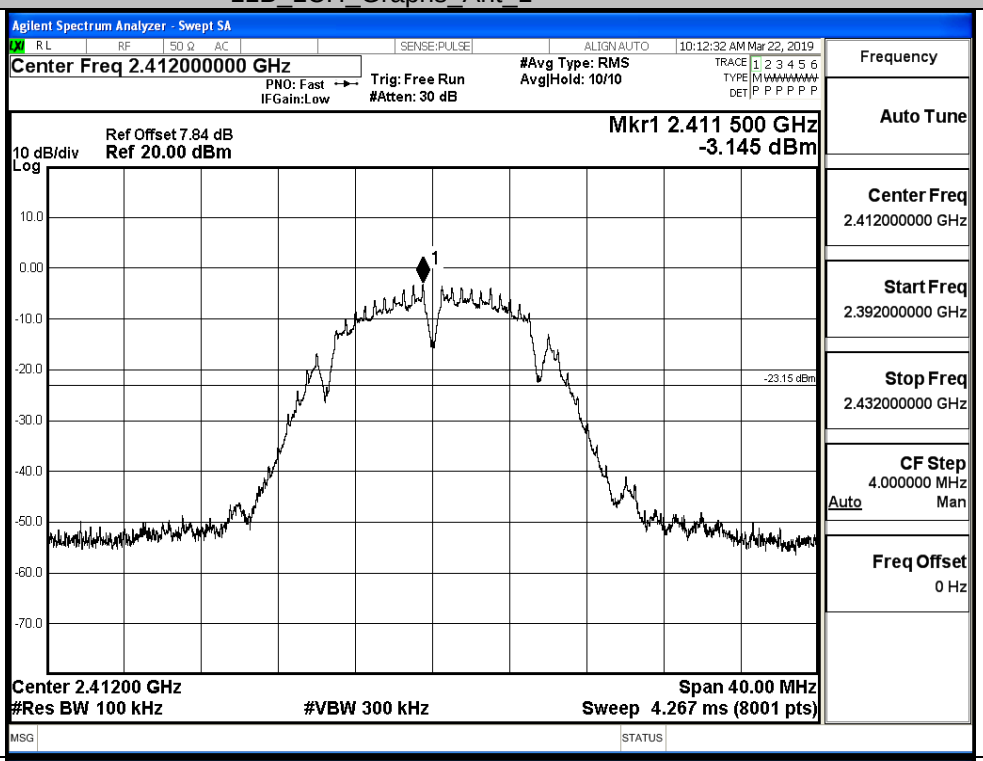
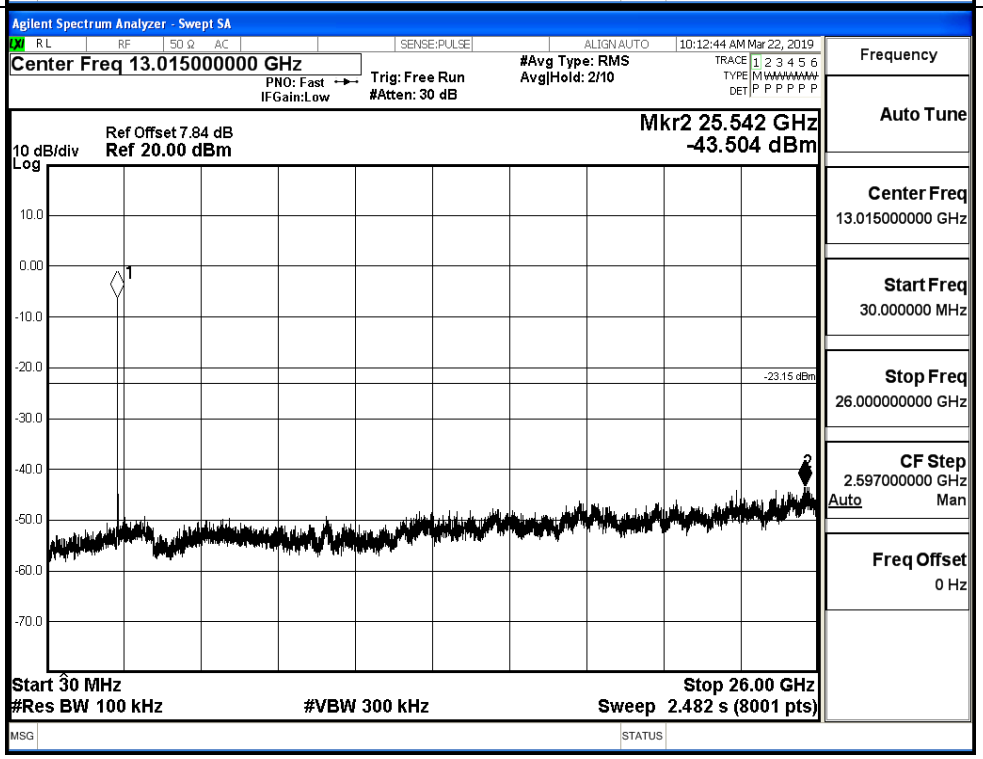
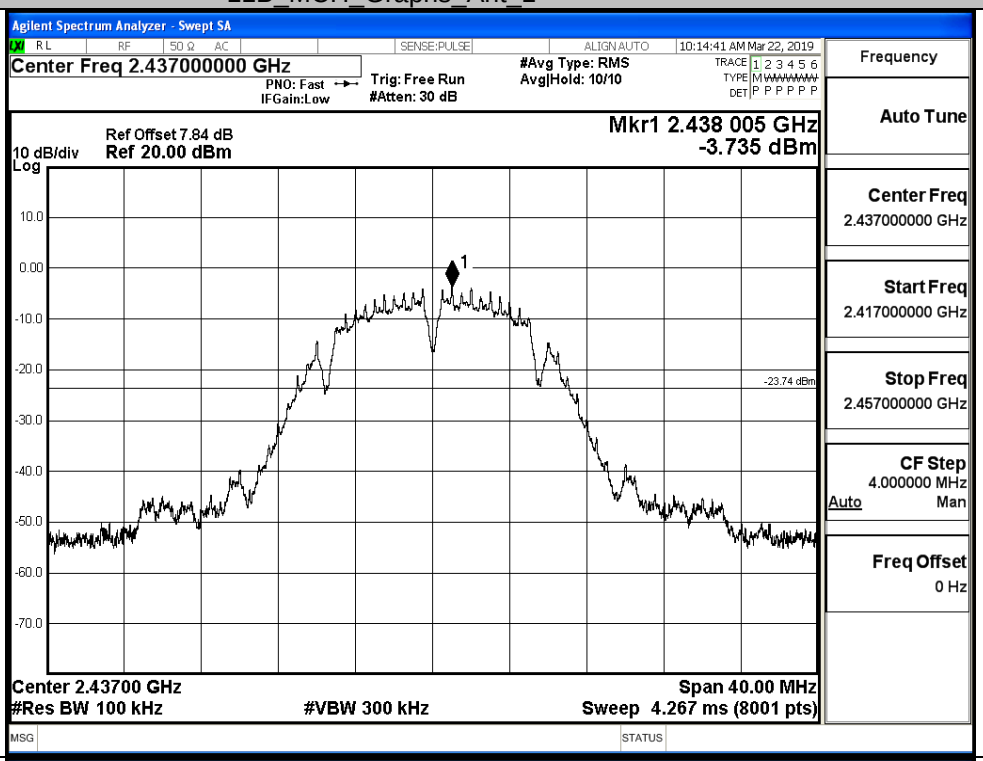
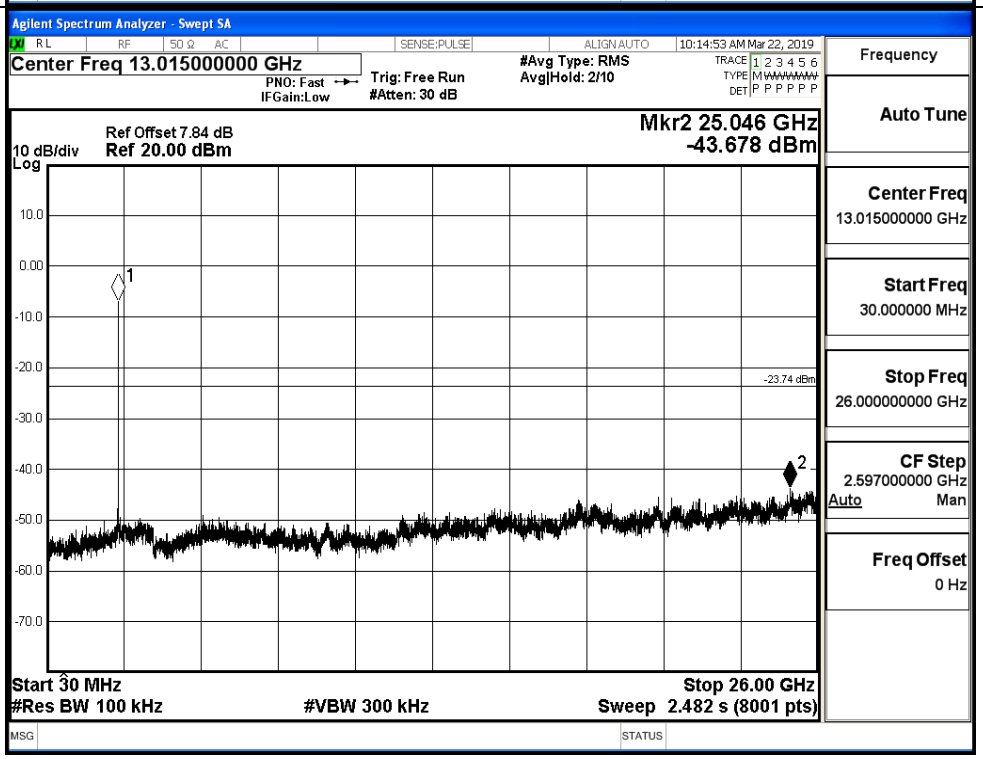
Pref/11N40/ HCH	
Puw/11N40/ HCH	

Ant_1

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-3.145	-43.504	-23.145	PASS
	MCH	-3.735	-43.678	-23.735	PASS
	HCH	-3.688	-43.700	-23.688	PASS
11G	LCH	-7.798	-43.509	-27.798	PASS
	MCH	-7.233	-44.035	-27.233	PASS
	HCH	-7.179	-43.245	-27.179	PASS
11N20	LCH	-8.533	-42.898	-28.533	PASS
	MCH	-6.998	-43.213	-26.998	PASS
	HCH	-6.748	-43.177	-26.748	PASS
11N40	LCH	-8.871	-43.757	-28.871	PASS
	MCH	-9.649	-44.250	-29.649	PASS
	HCH	-8.823	-44.136	-28.823	PASS

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

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

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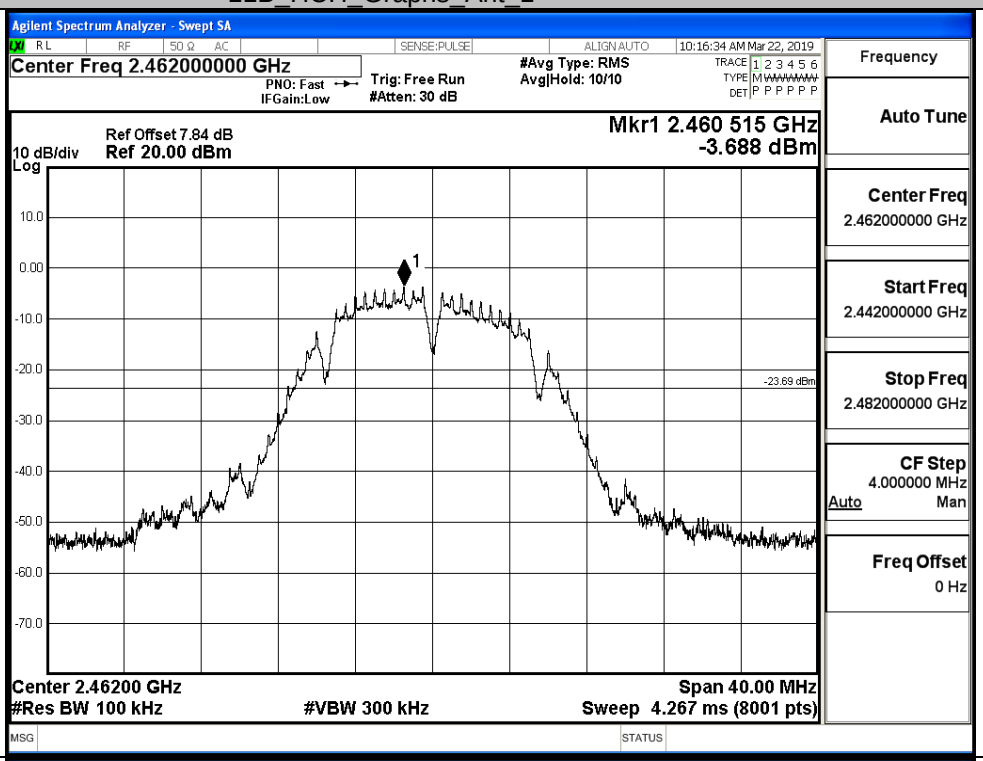
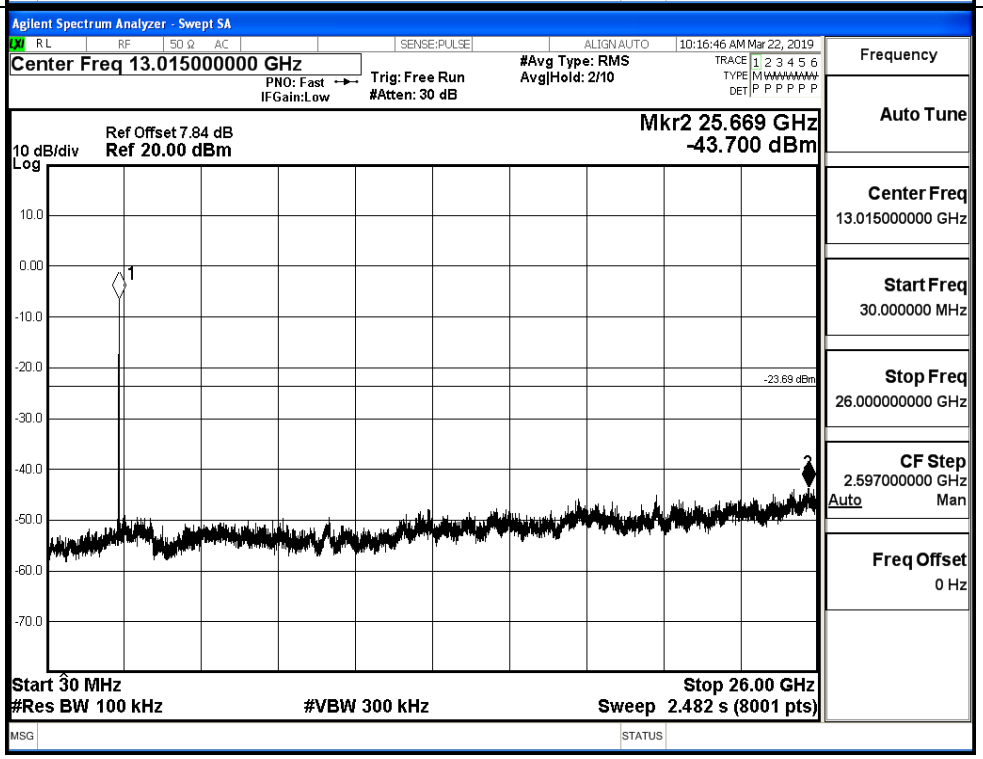
Pref/11B/HCH	
Puw/11B/HCH