Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart dimmer switch

Trade Mark: ISH

Test Model: SDS100

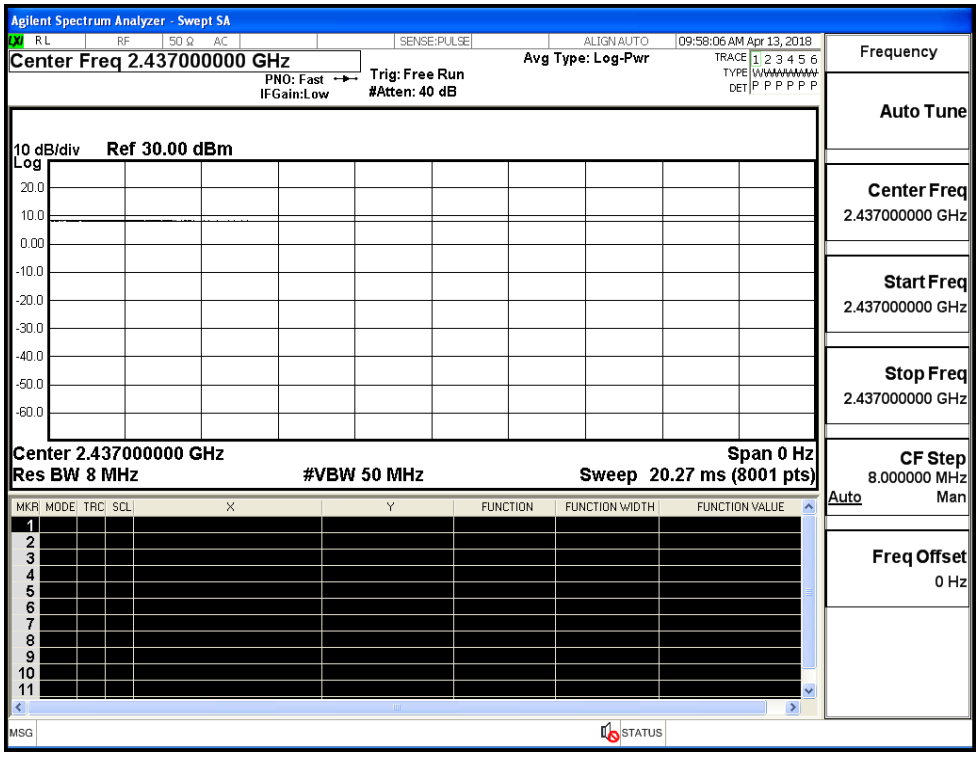
Environmental Conditions

Temperature:	21.6 ° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Wangchuang
Supervised by:	Jayden Zhuo

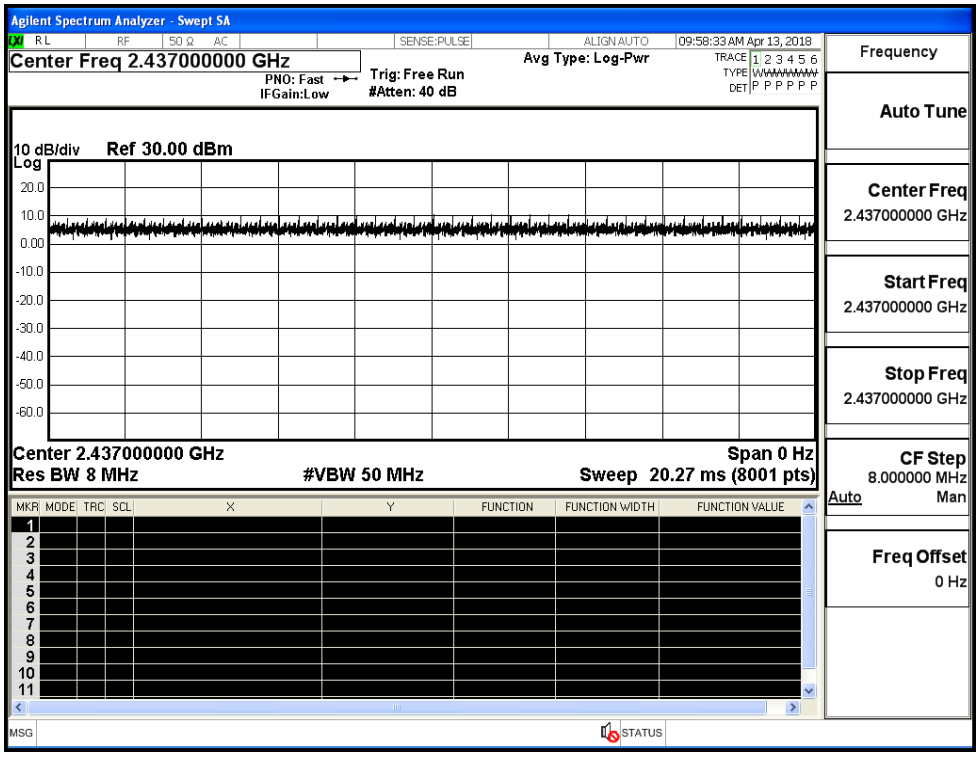
A.1 Duty Cycle

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

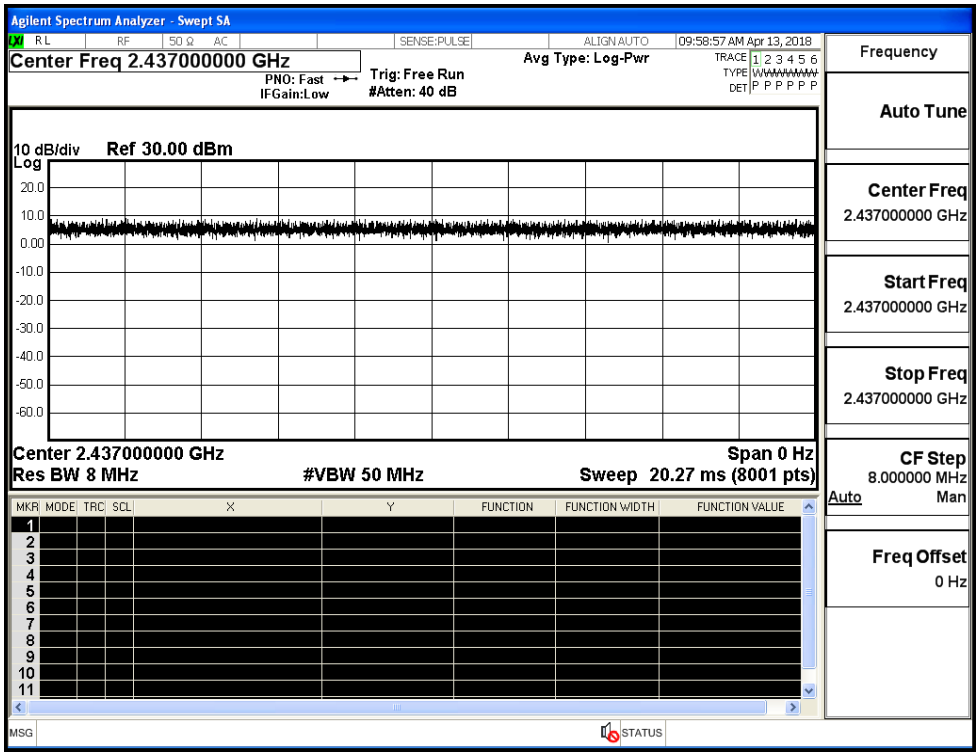
Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1

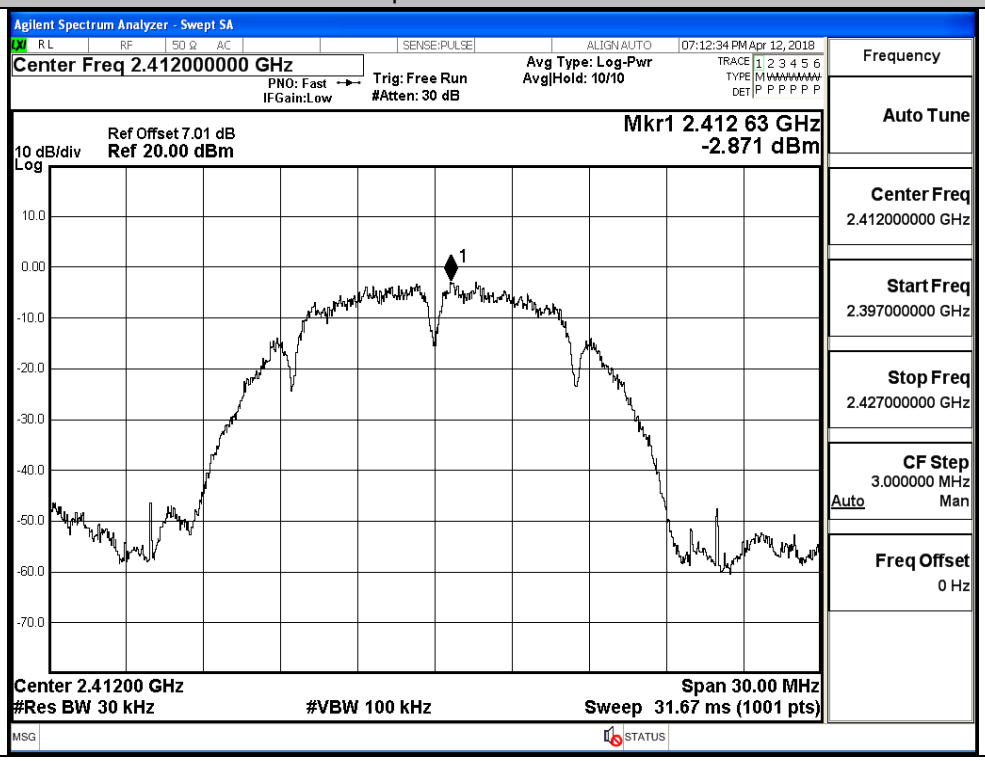


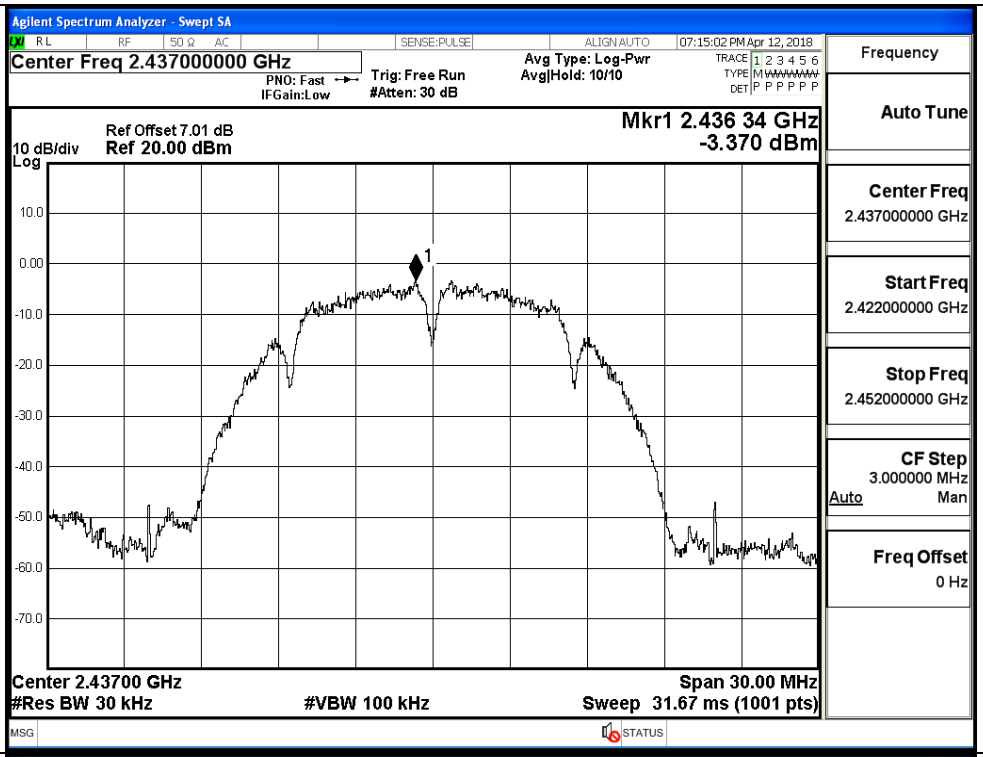
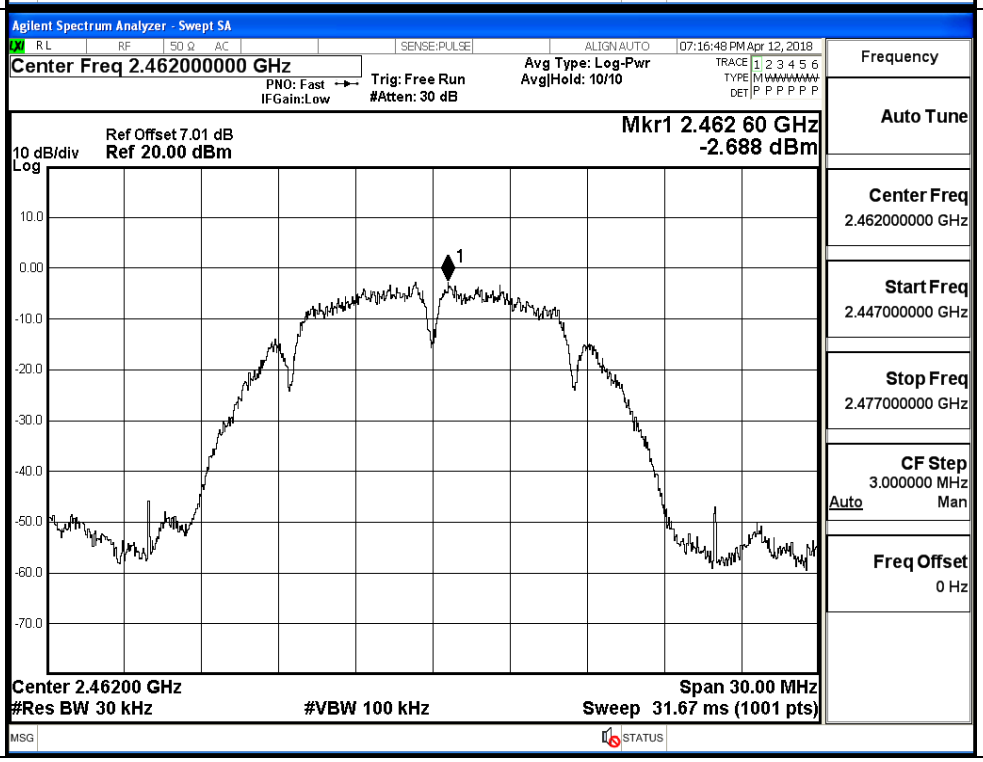
Duty Cycle_11N20SISO_2437_Ant1

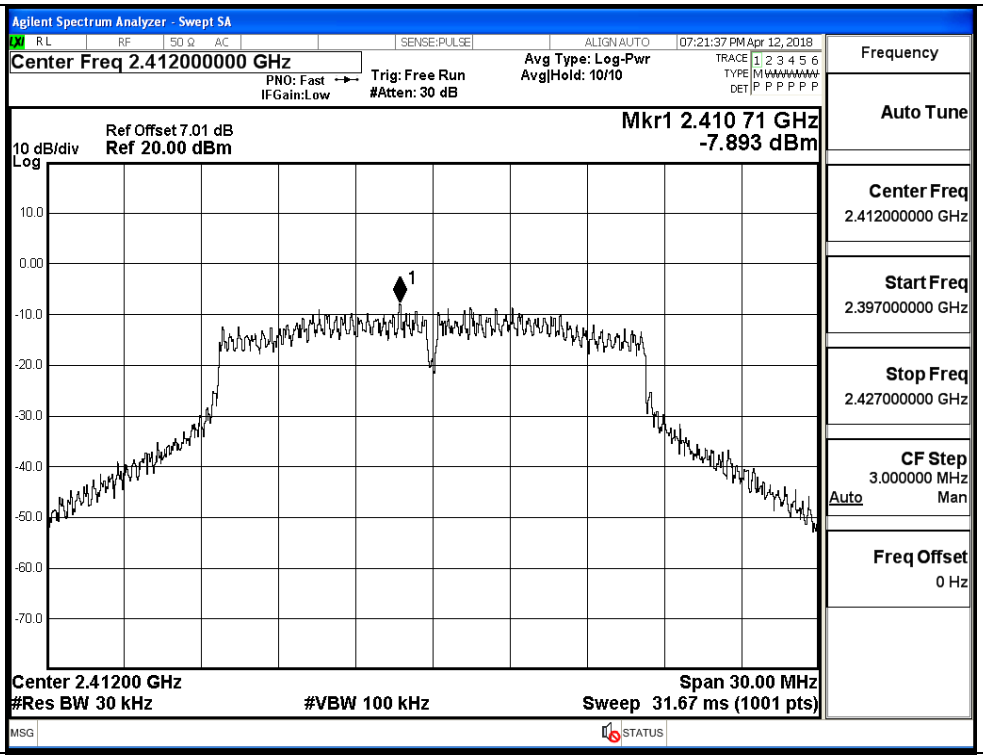
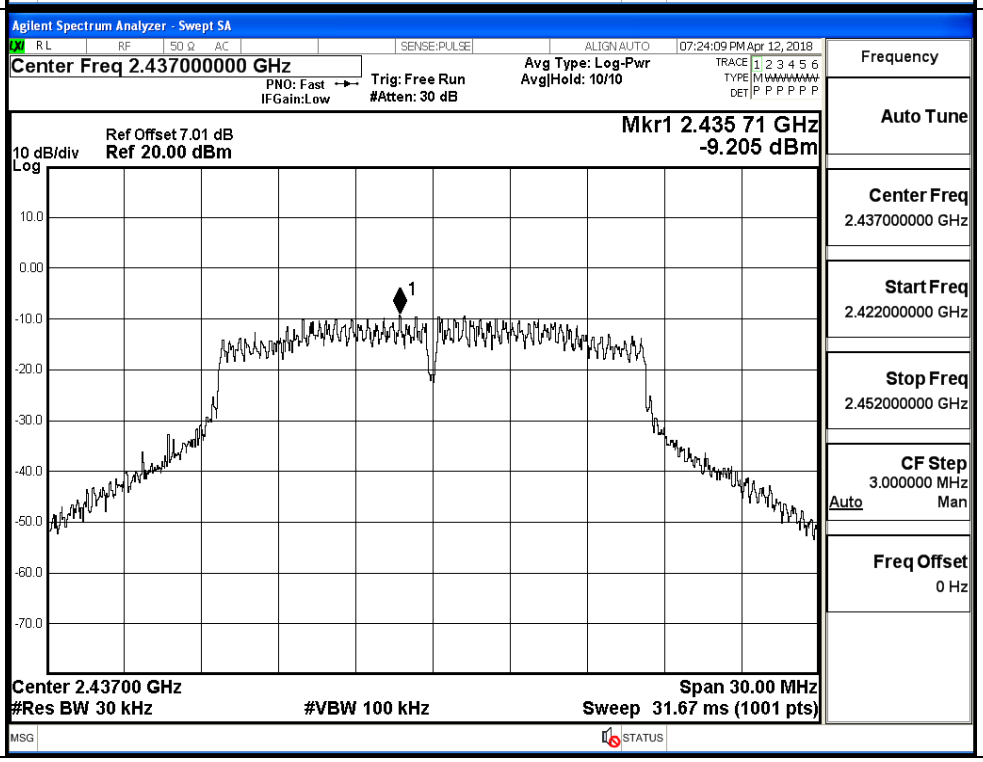


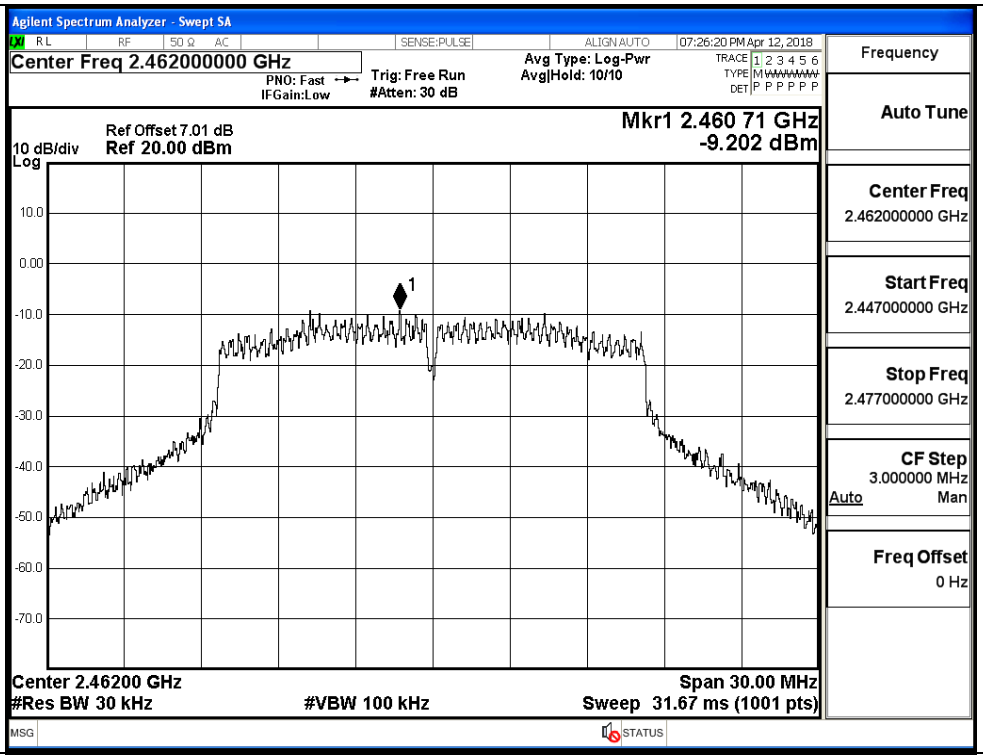
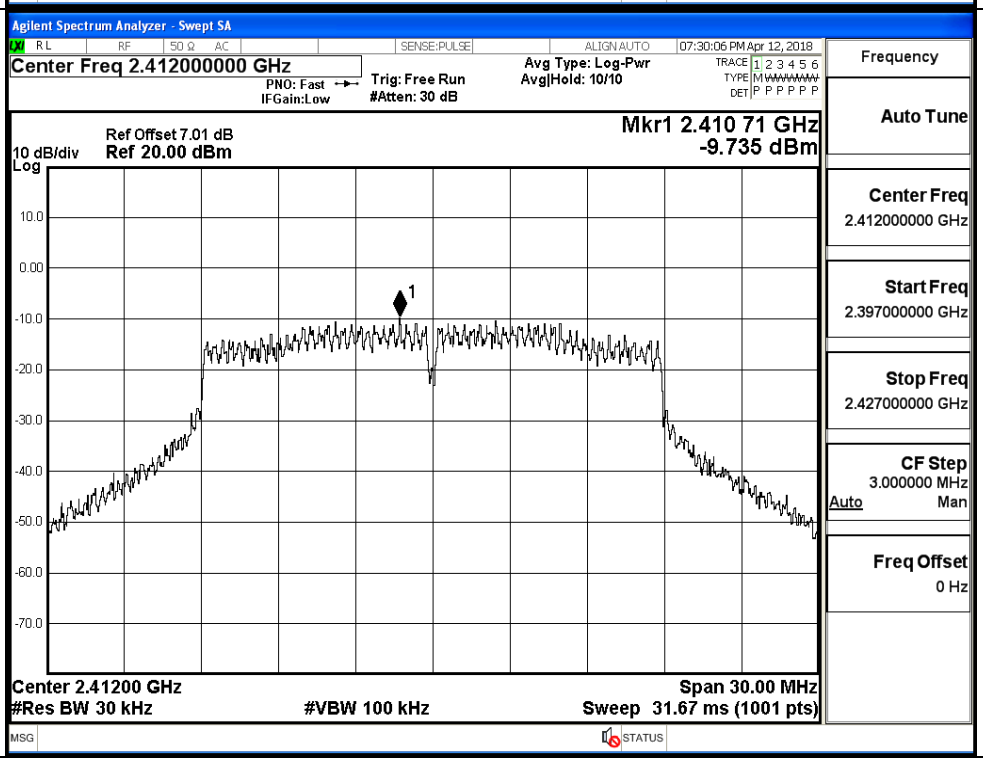
A.2 Maximum Power Spectral Density

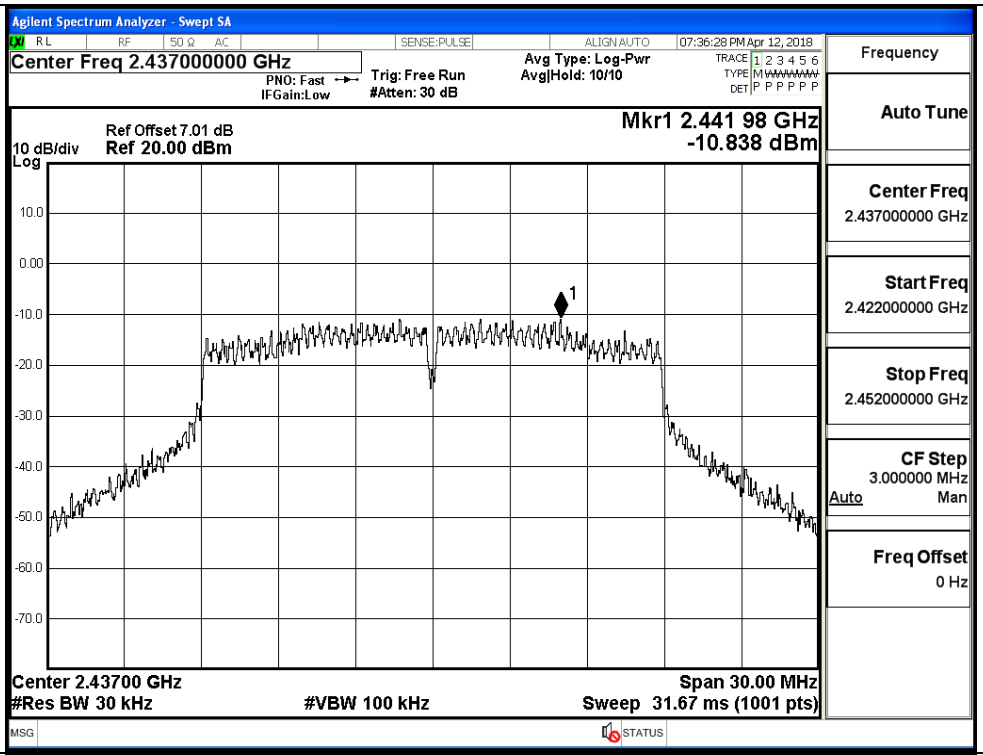
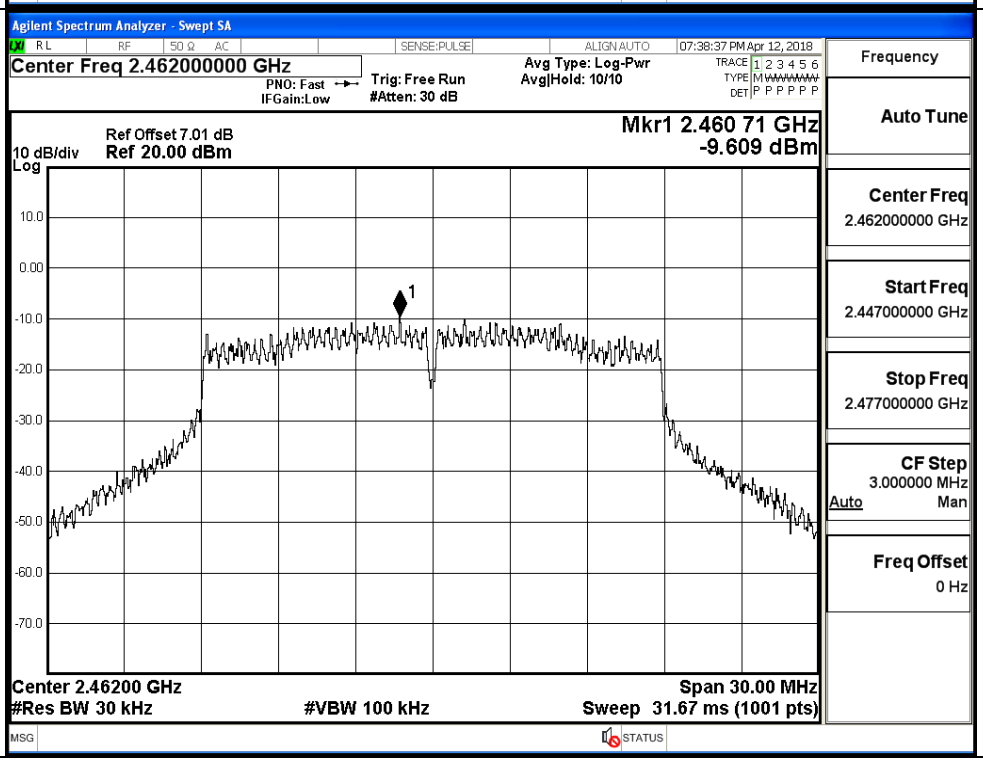
Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-2.871	8	PASS
	MCH	-3.370	8	PASS
	HCH	-2.688	8	PASS
11G	LCH	-7.893	8	PASS
	MCH	-9.205	8	PASS
	HCH	-9.202	8	PASS
11N20SISO	LCH	-9.735	8	PASS
	MCH	-10.838	8	PASS
	HCH	-9.609	8	PASS

Test Graphs	
11B/LCH	

11B/MCH		
11B/HCH		

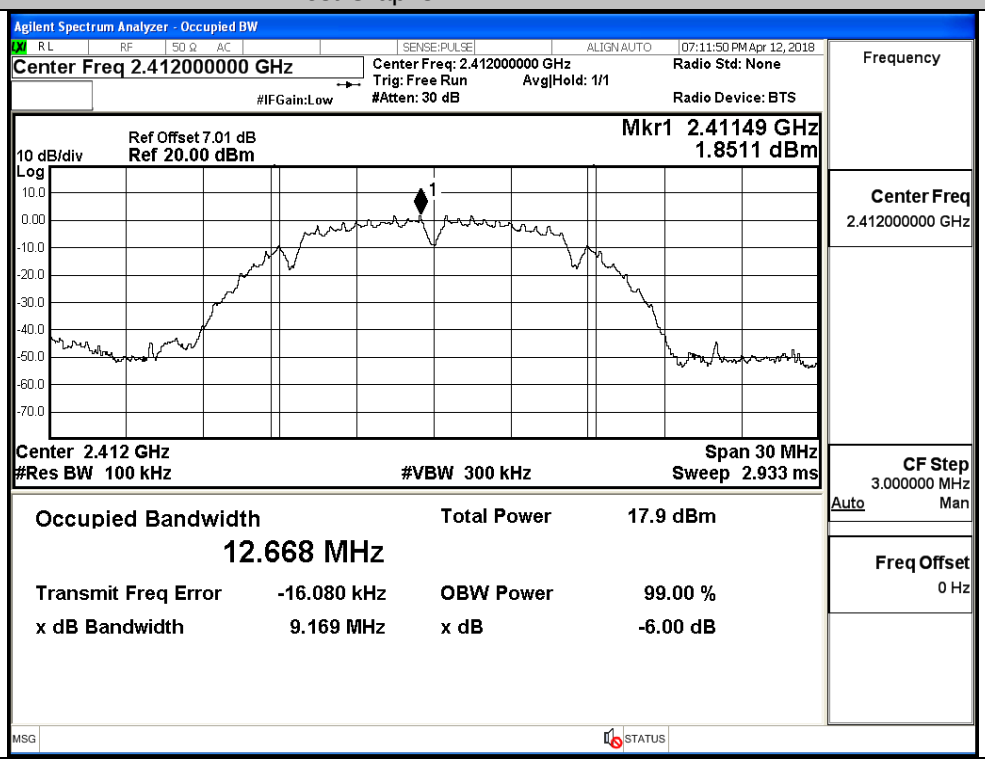
11G/LCH		
11G/MCH		

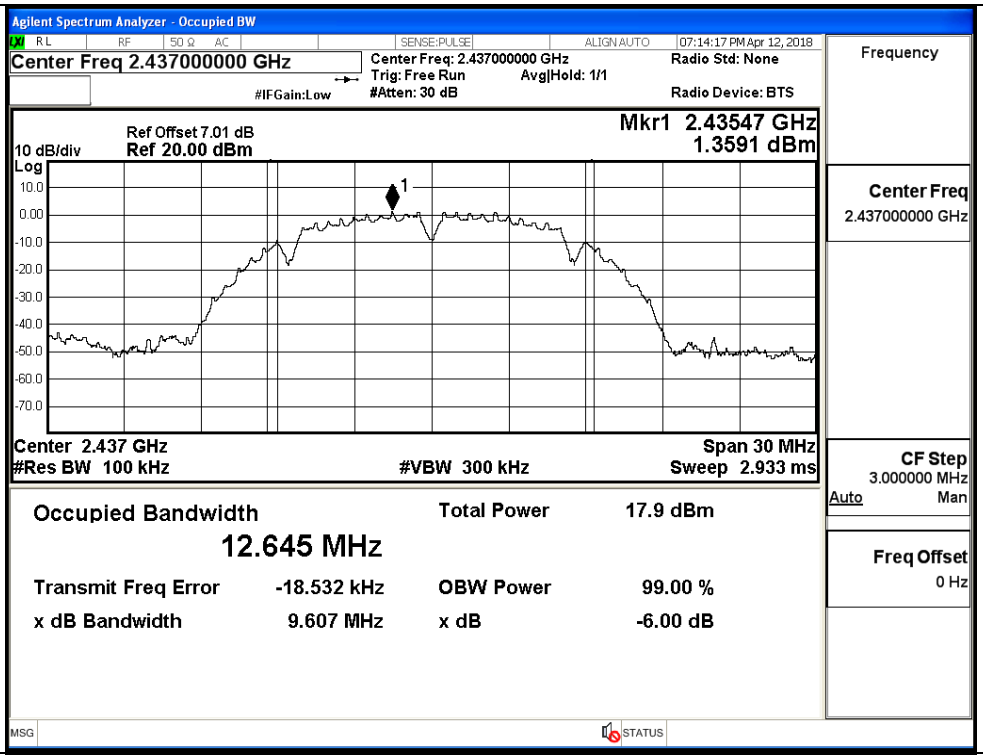
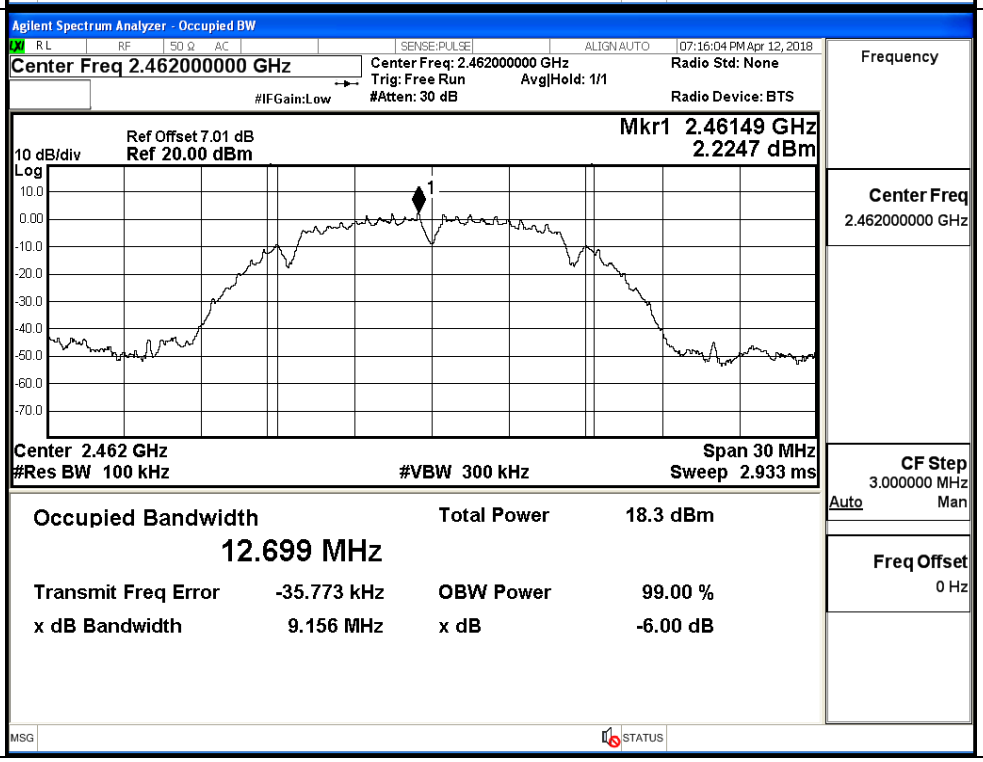
11G/HCH		
11N20SISO/LCH		

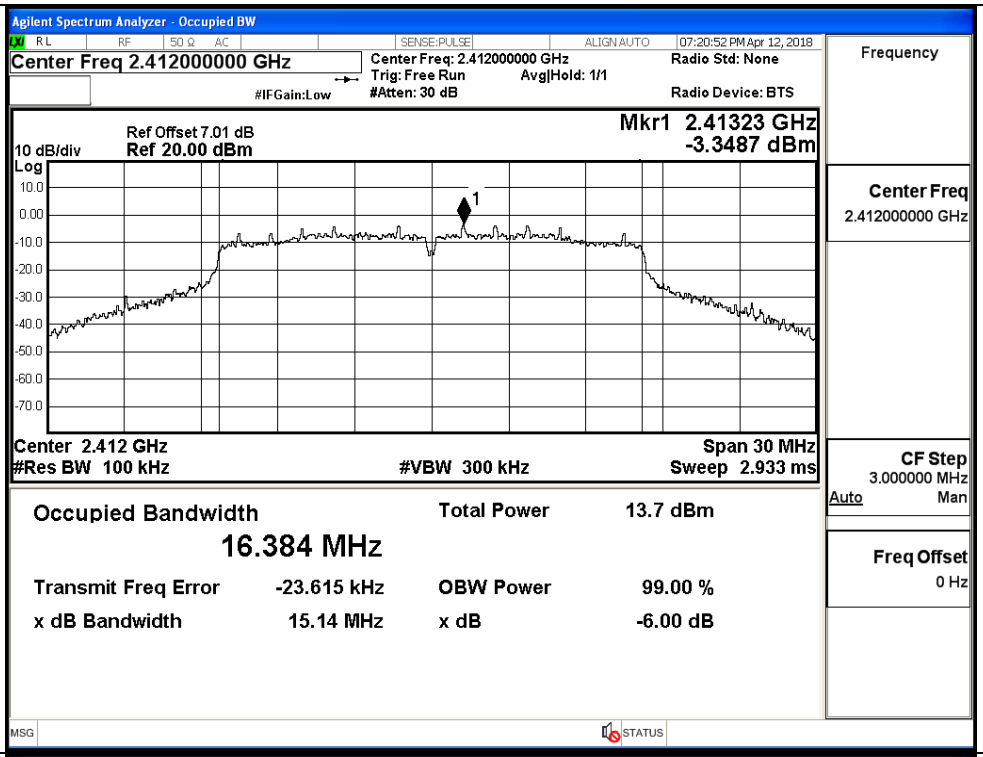
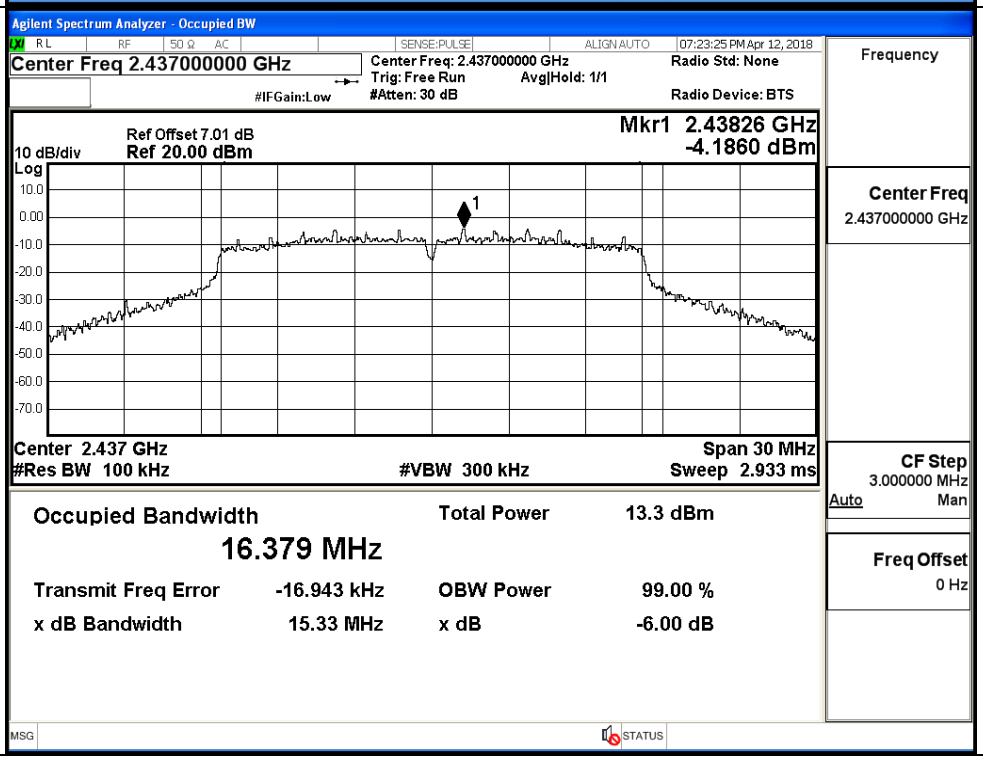
11N20SISO/MCH		
11N20SISO/HCH		

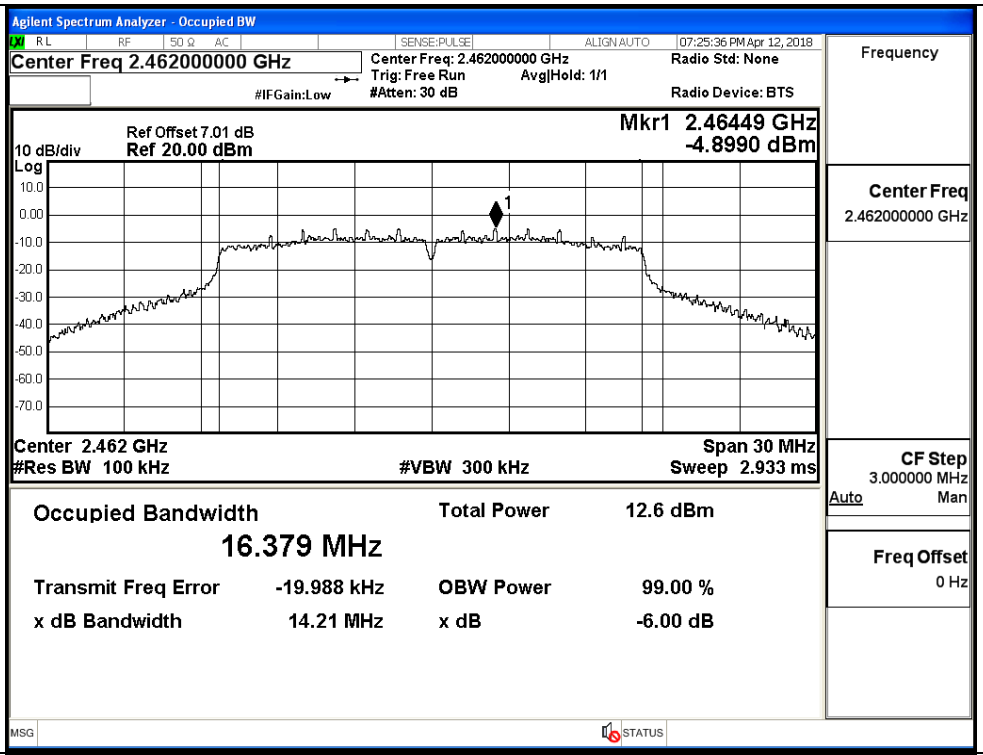
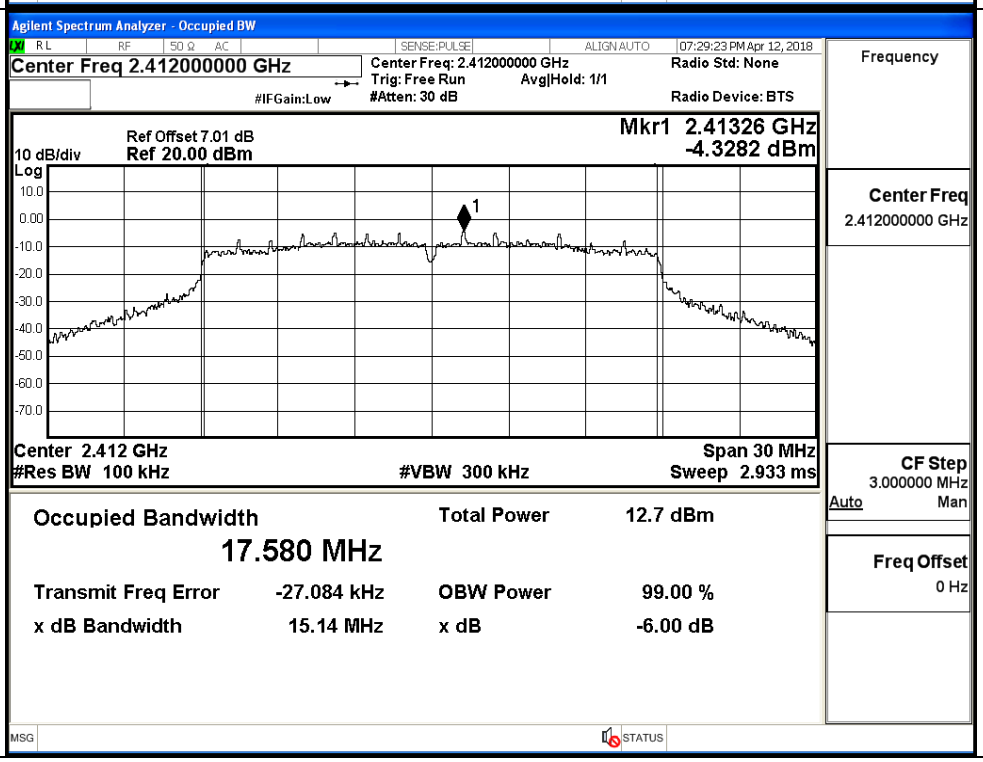
A.3 6dB Bandwidth

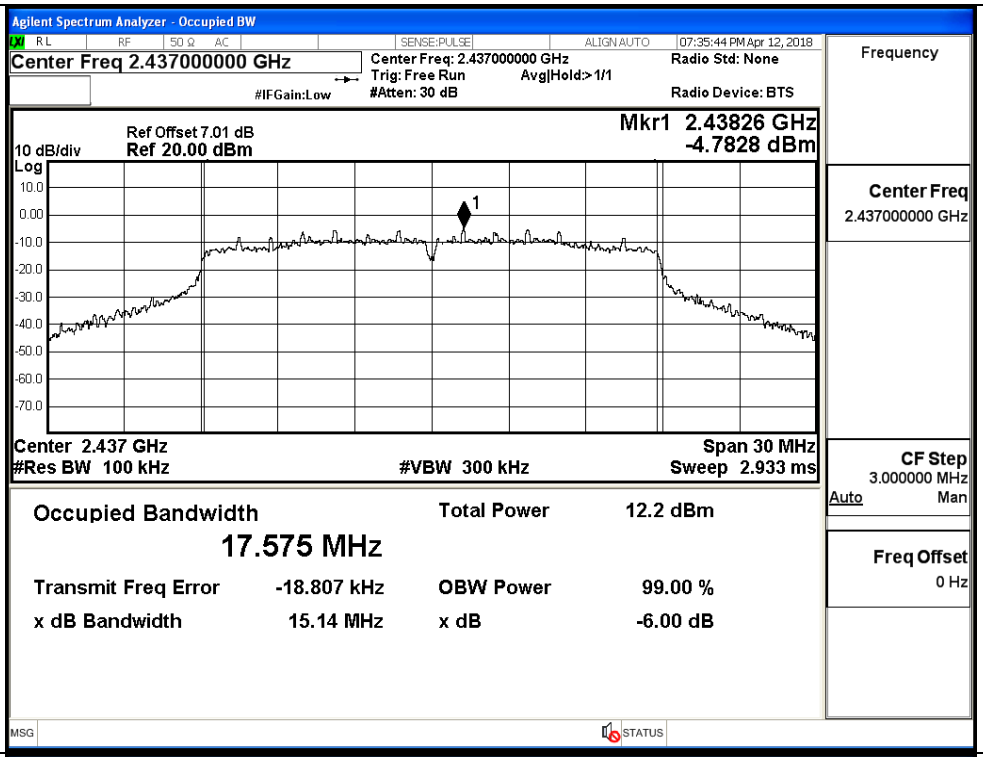
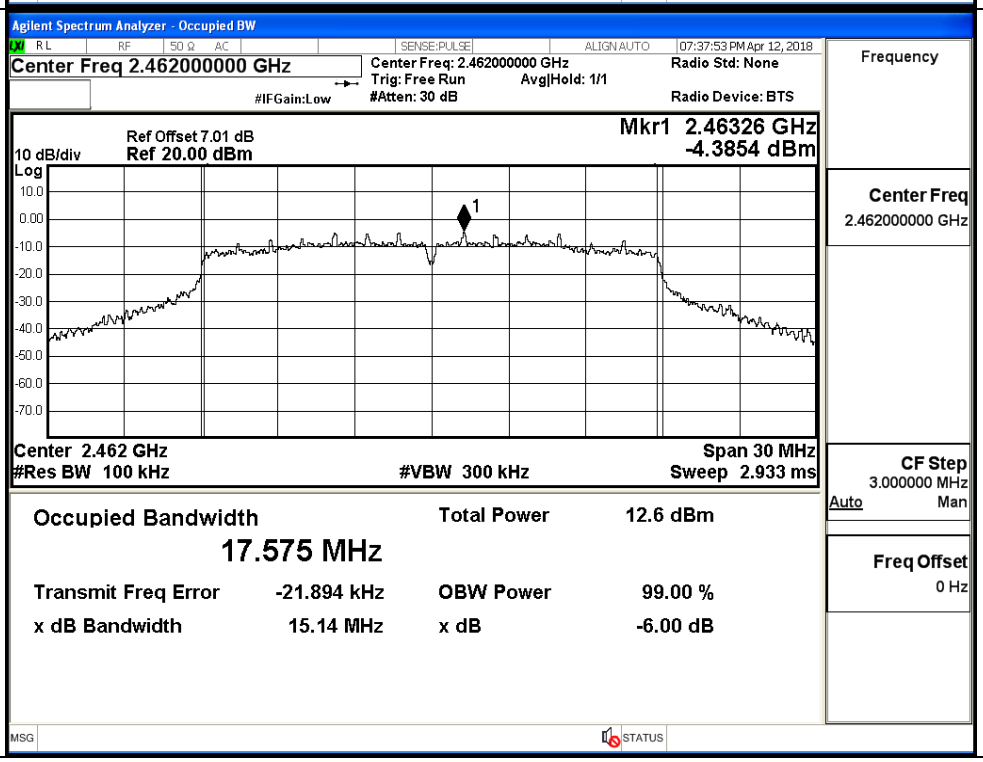
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.169	≥0.5	PASS
	MCH	9.607	≥0.5	PASS
	HCH	9.156	≥0.5	PASS
11G	LCH	15.14	≥0.5	PASS
	MCH	15.33	≥0.5	PASS
	HCH	14.21	≥0.5	PASS
11N20SISO	LCH	15.14	≥0.5	PASS
	MCH	15.14	≥0.5	PASS
	HCH	15.14	≥0.5	PASS

Test Graphs	
11B/LCH	

11B/MCH	
11B/HCH	

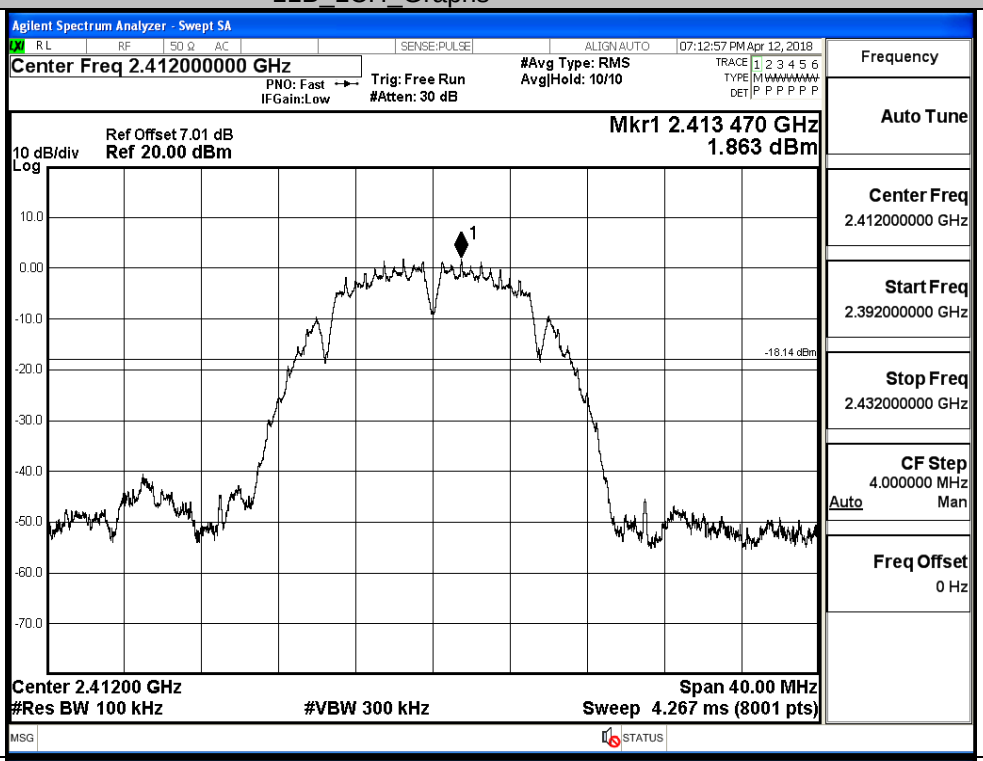
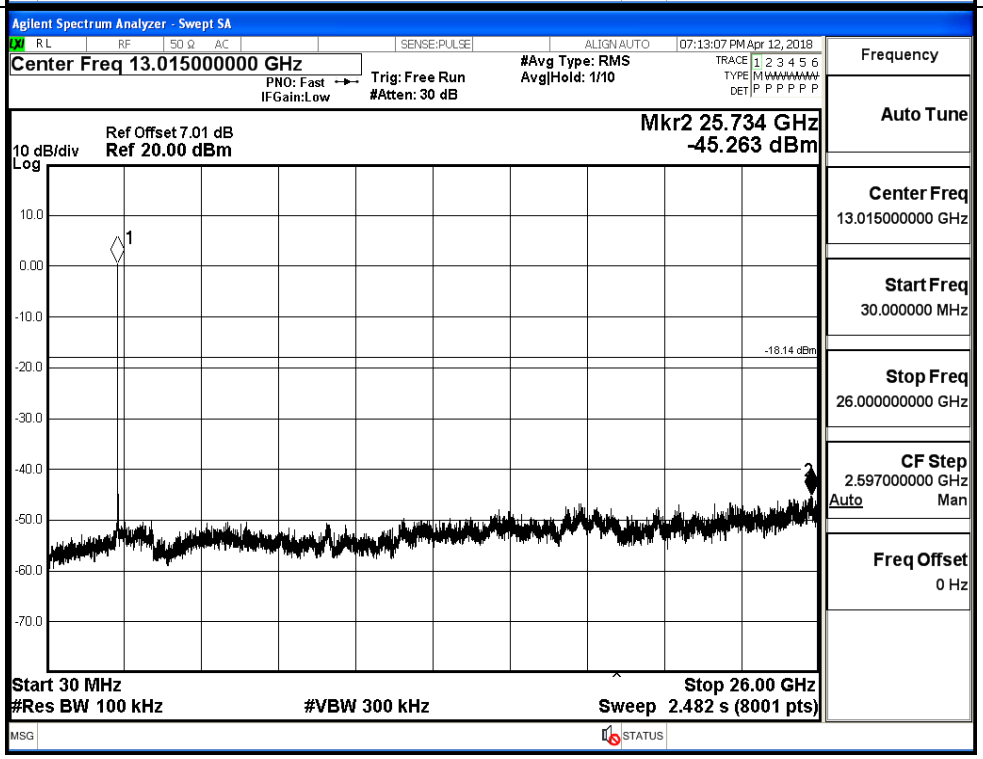
11G/LCH		
11G/MCH		

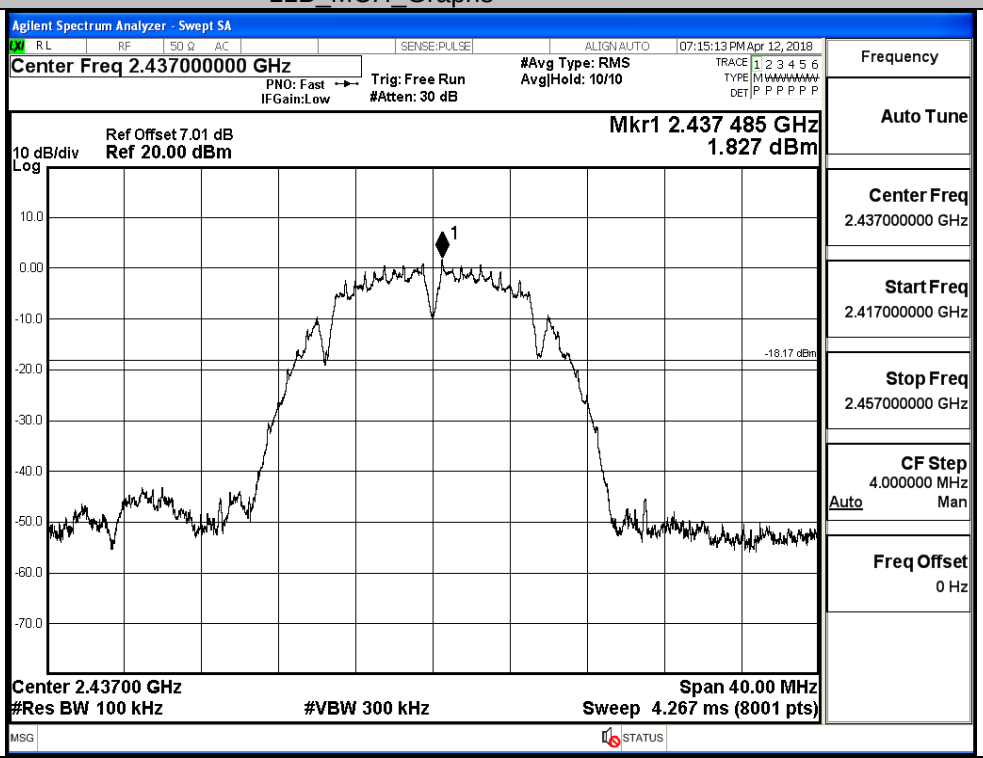
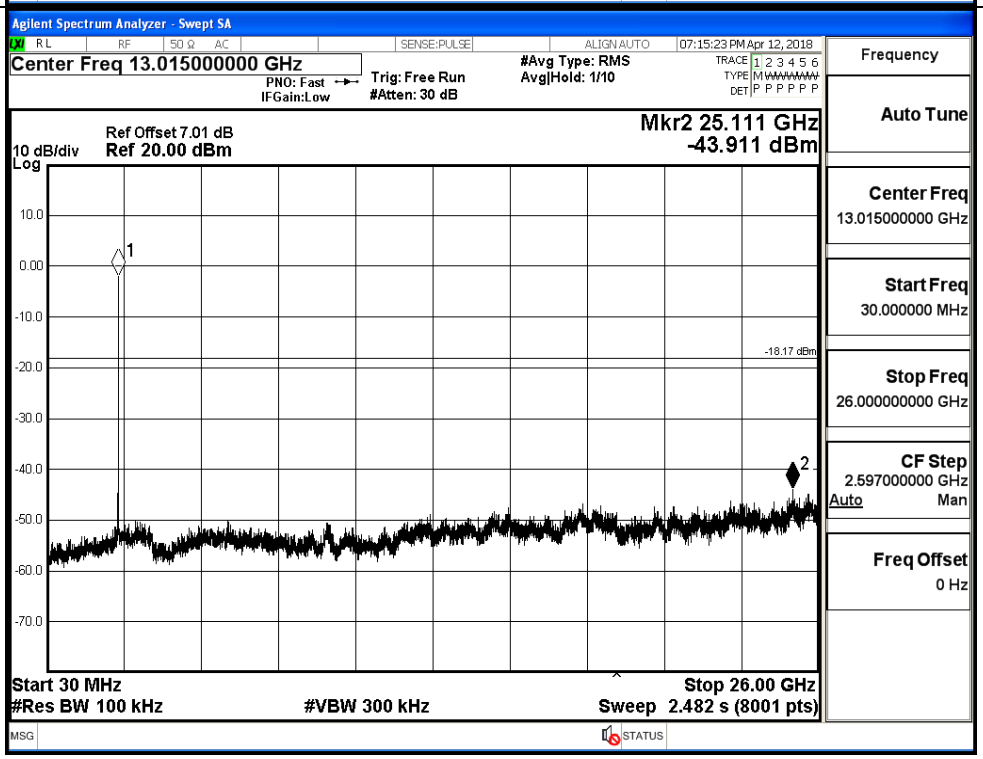
11G/HCH		
11N20SISO/LCH		

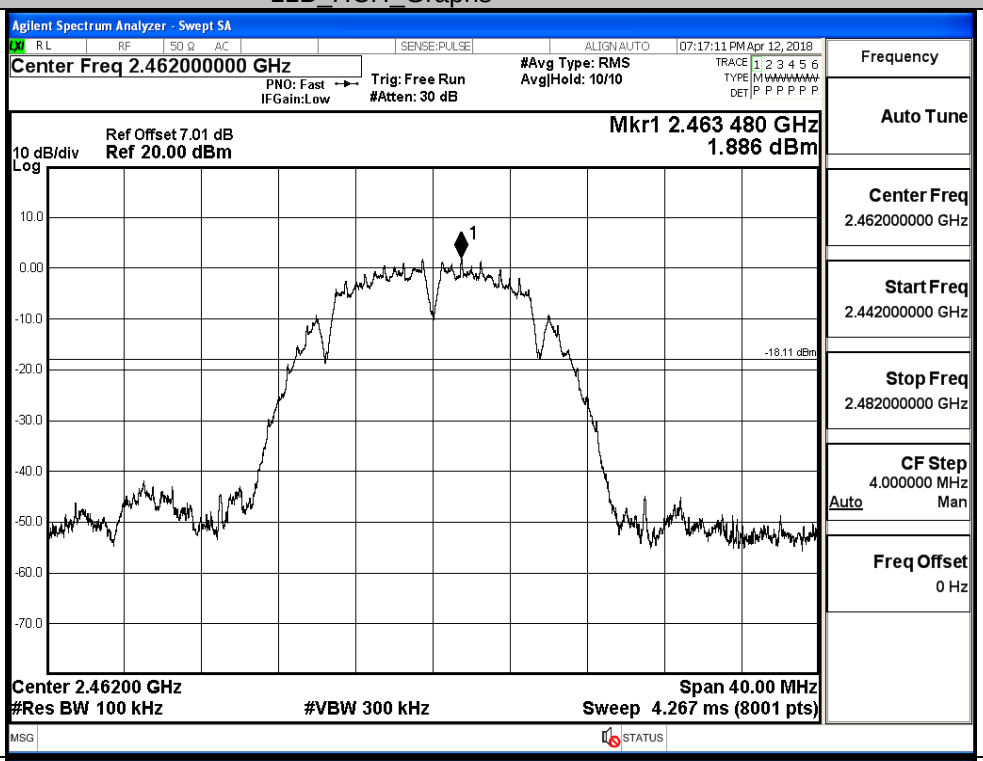
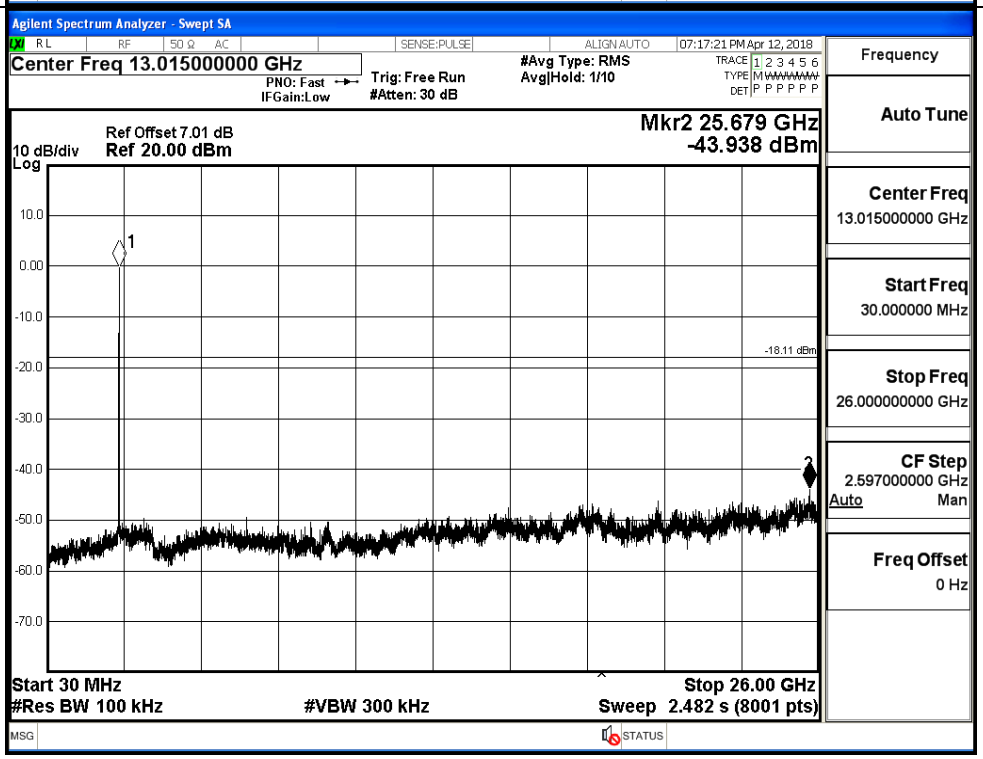
11N20SISO/MCH		
11N20SISO/HCH		

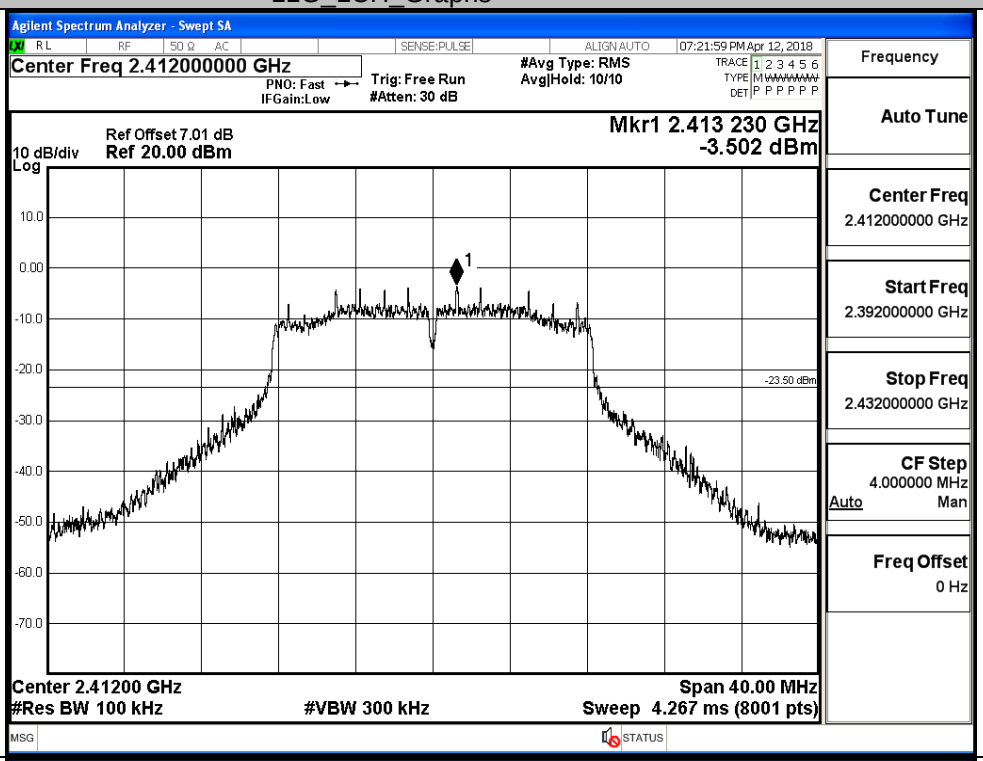
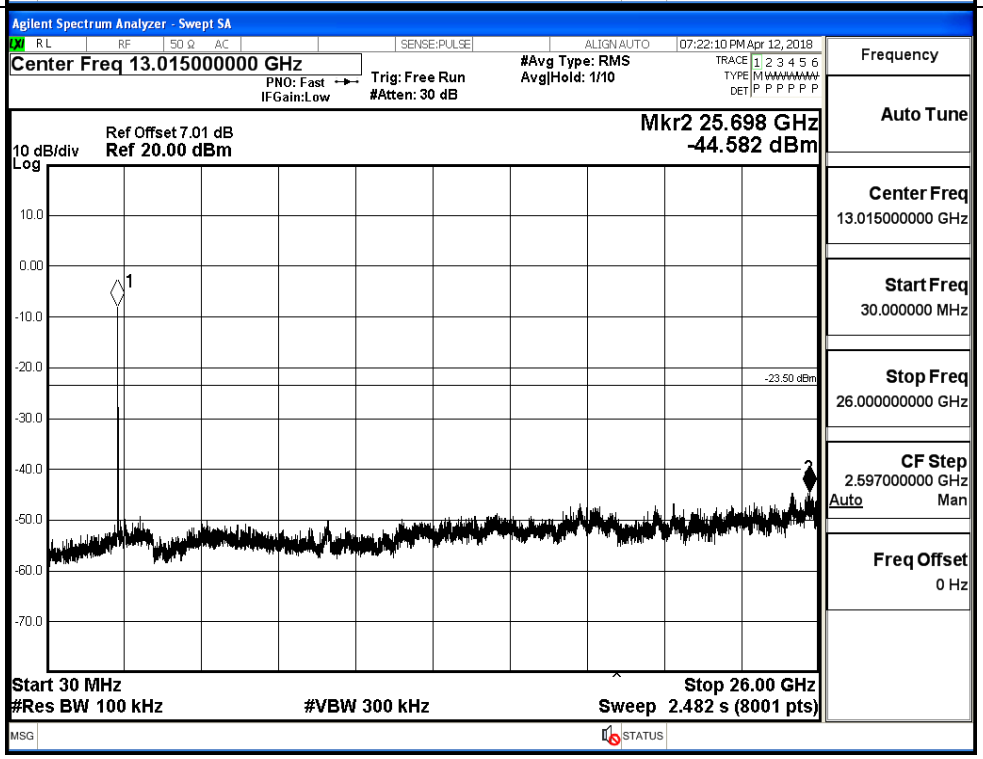
A.4 RF Conducted Spurious Emissions

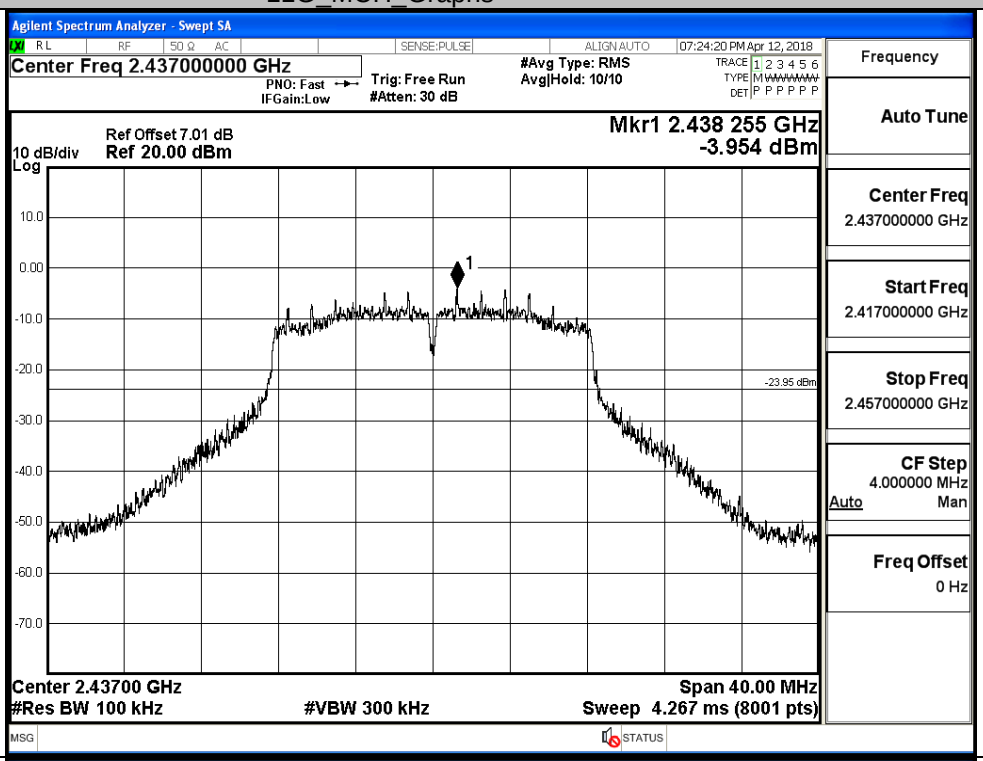
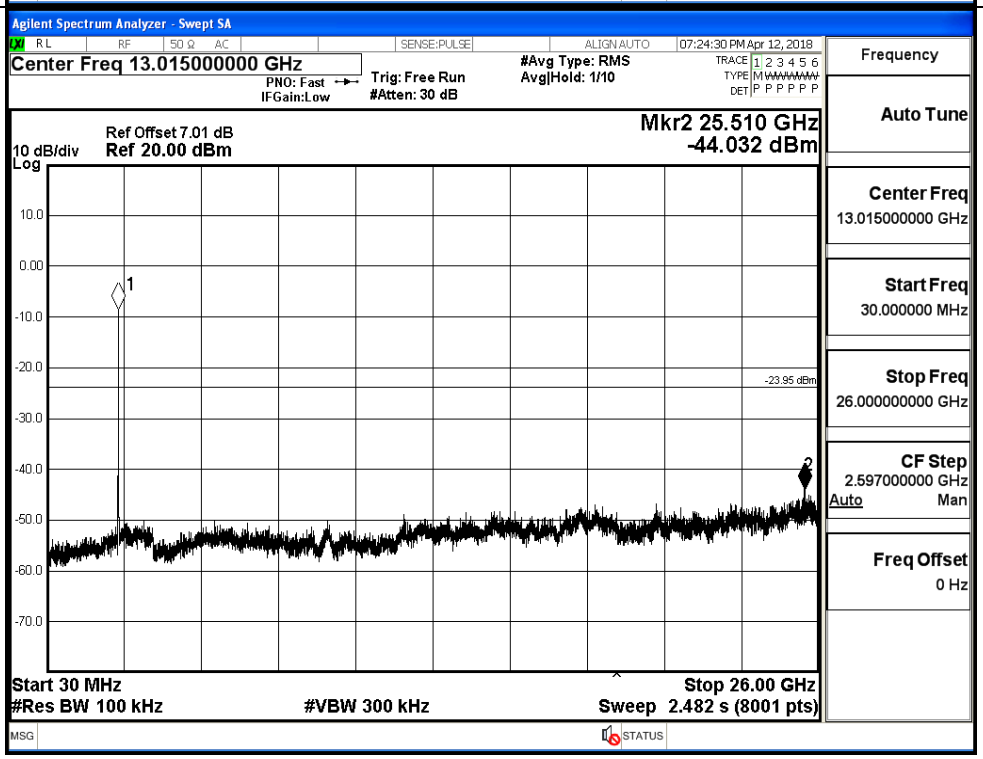
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	1.863	-45.263	-18.137	PASS
	MCH	1.827	-43.911	-18.173	PASS
	HCH	1.886	-43.938	-18.114	PASS
11G	LCH	-3.502	-44.582	-23.502	PASS
	MCH	-3.954	-44.032	-23.954	PASS
	HCH	-5.148	-44.286	-25.148	PASS
11N20 SISO	LCH	-4.729	-45.358	-24.729	PASS
	MCH	-5.308	-44.552	-25.308	PASS
	HCH	-5.559	-45.331	-25.559	PASS

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	

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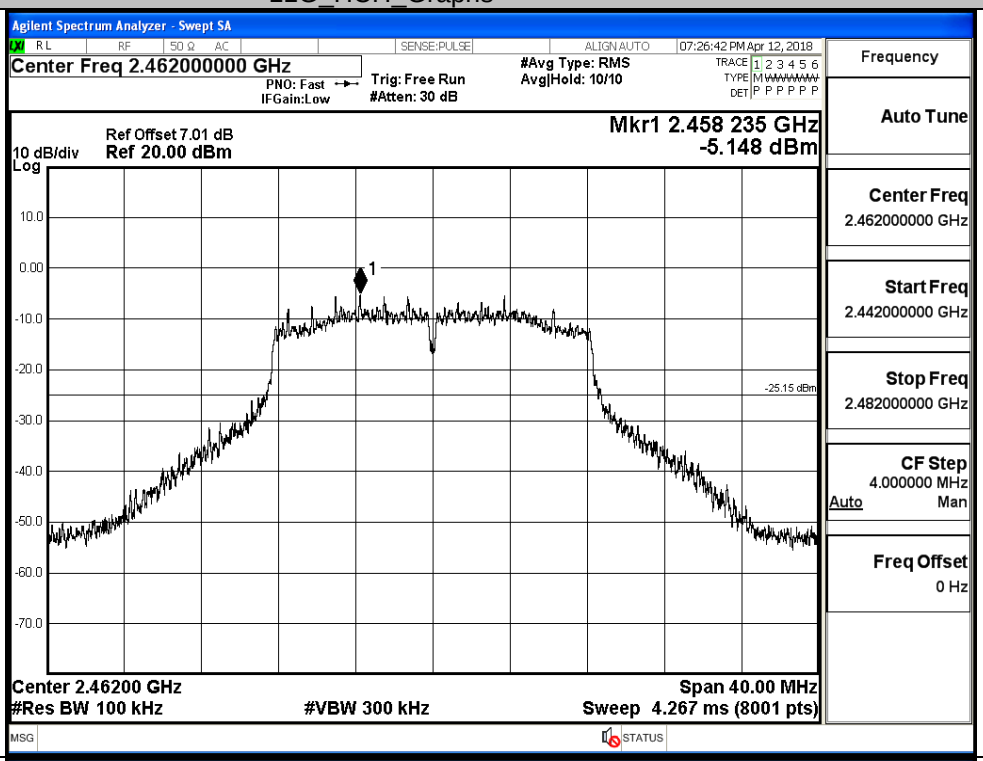
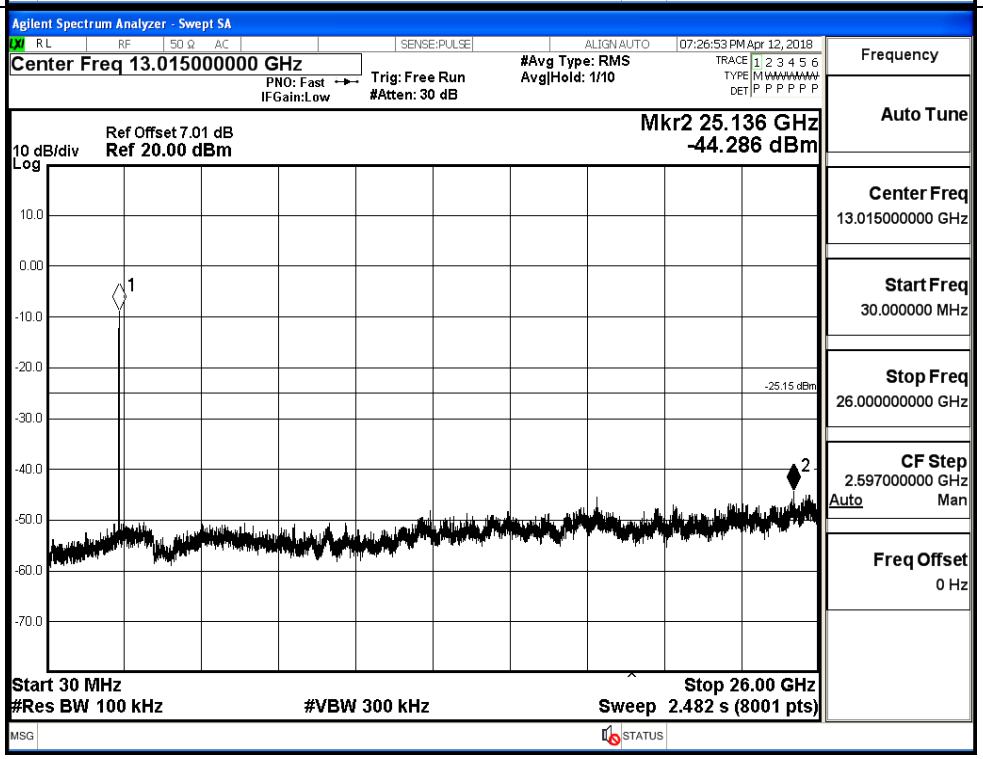
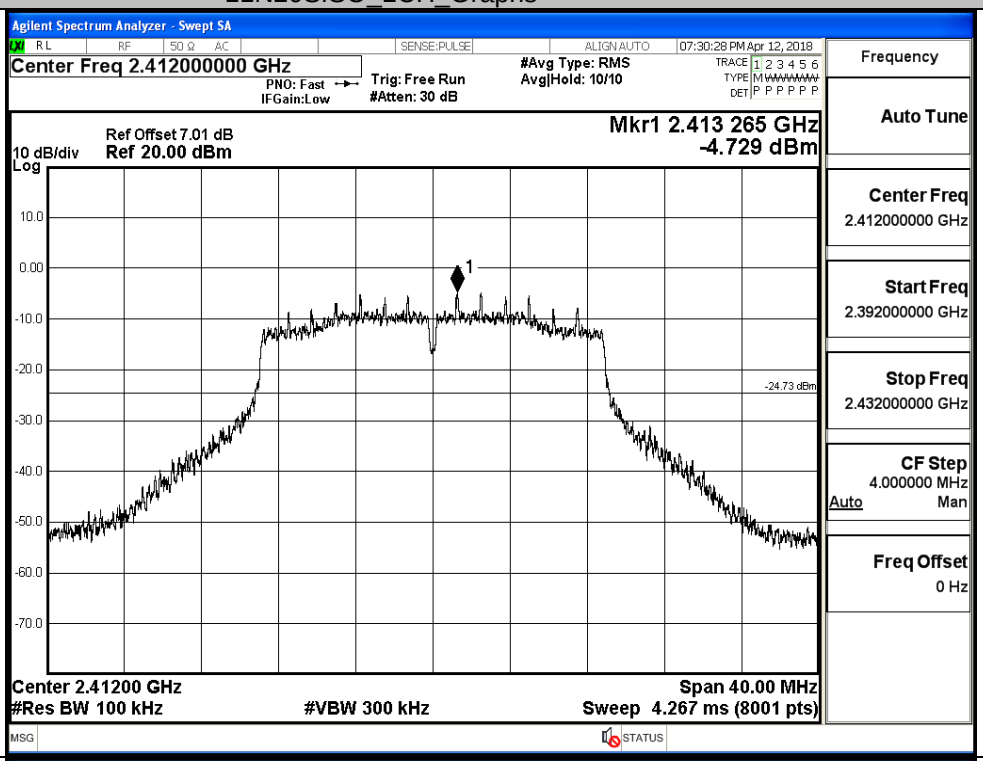
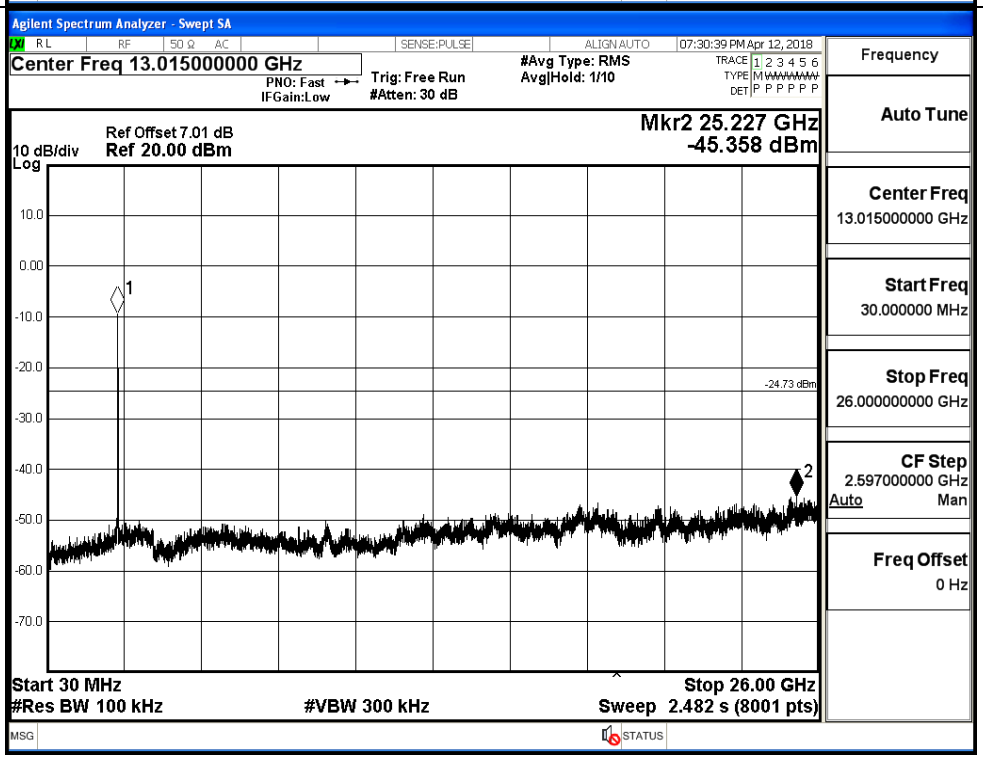
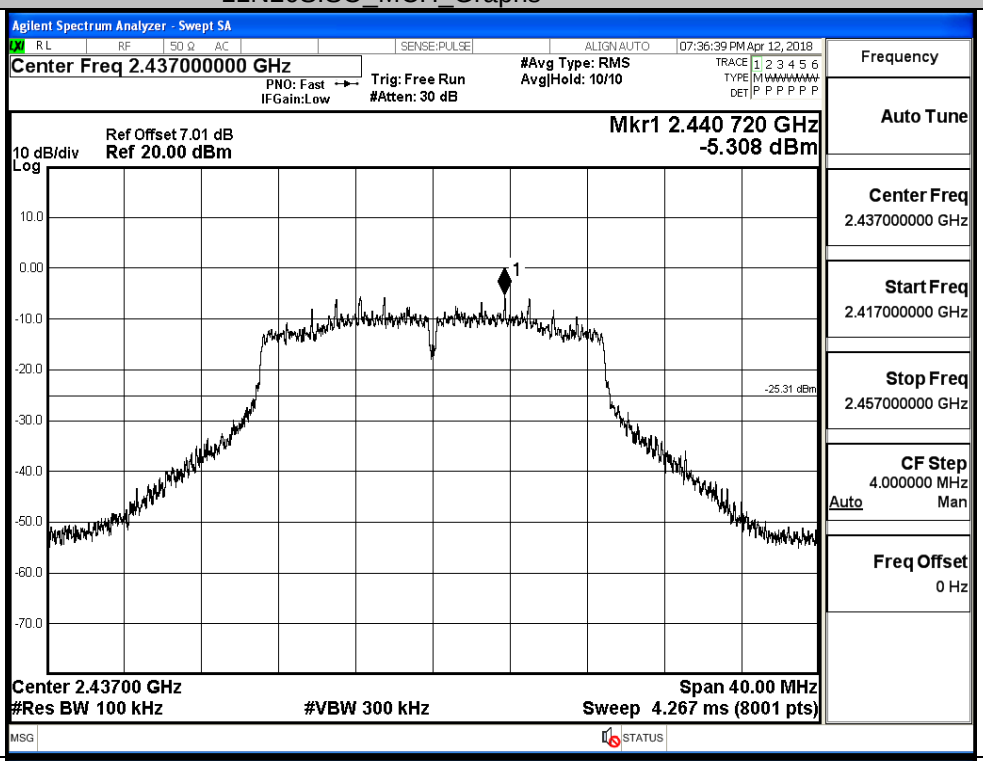
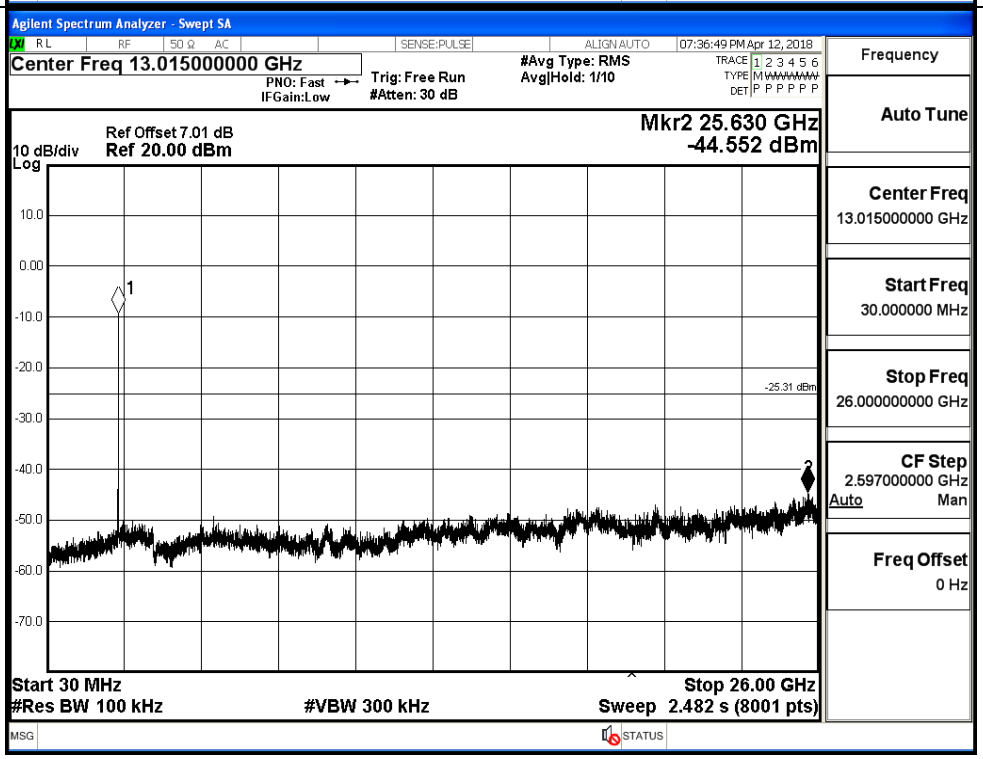
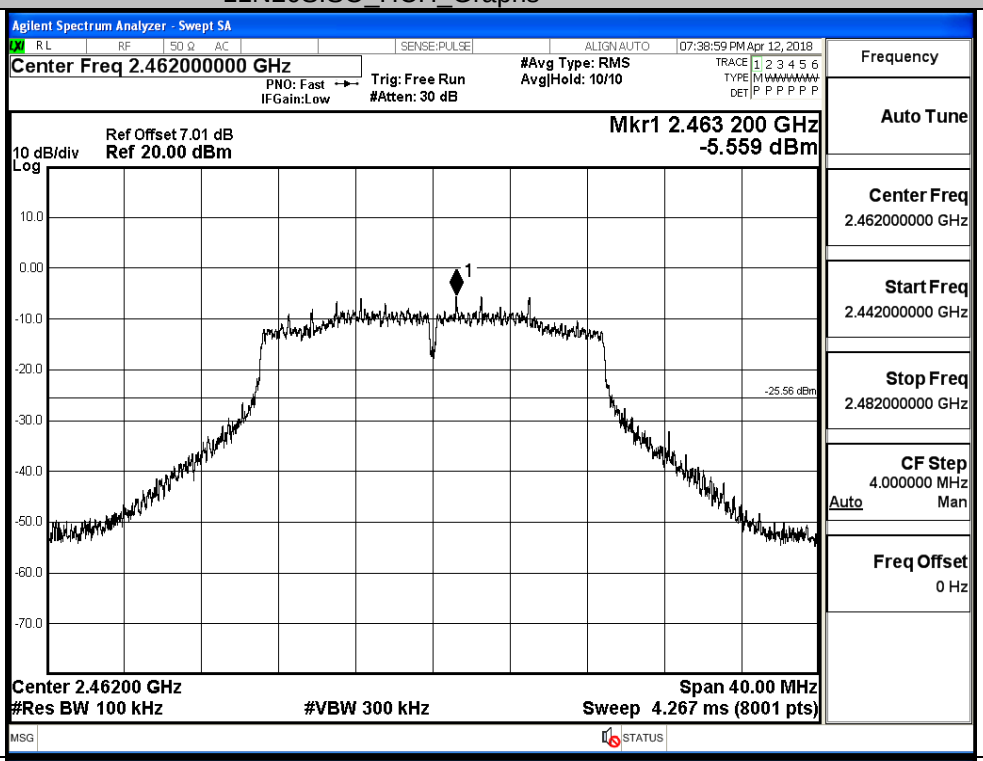
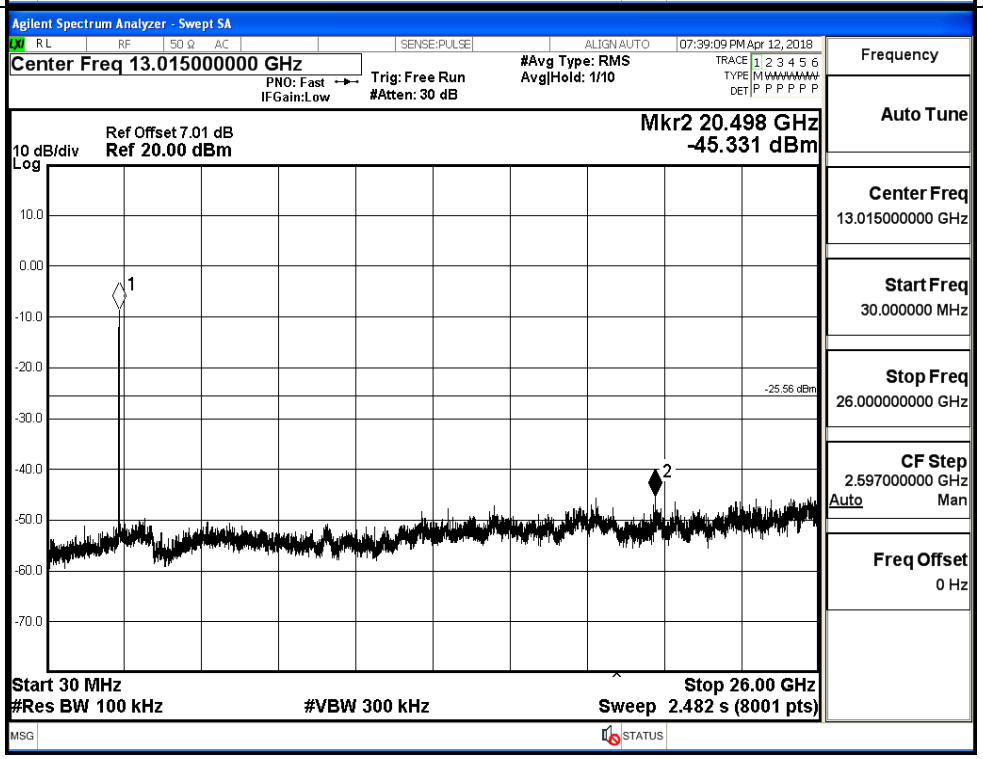
Pref/11G/HCH	
Puw/11G/HCH	

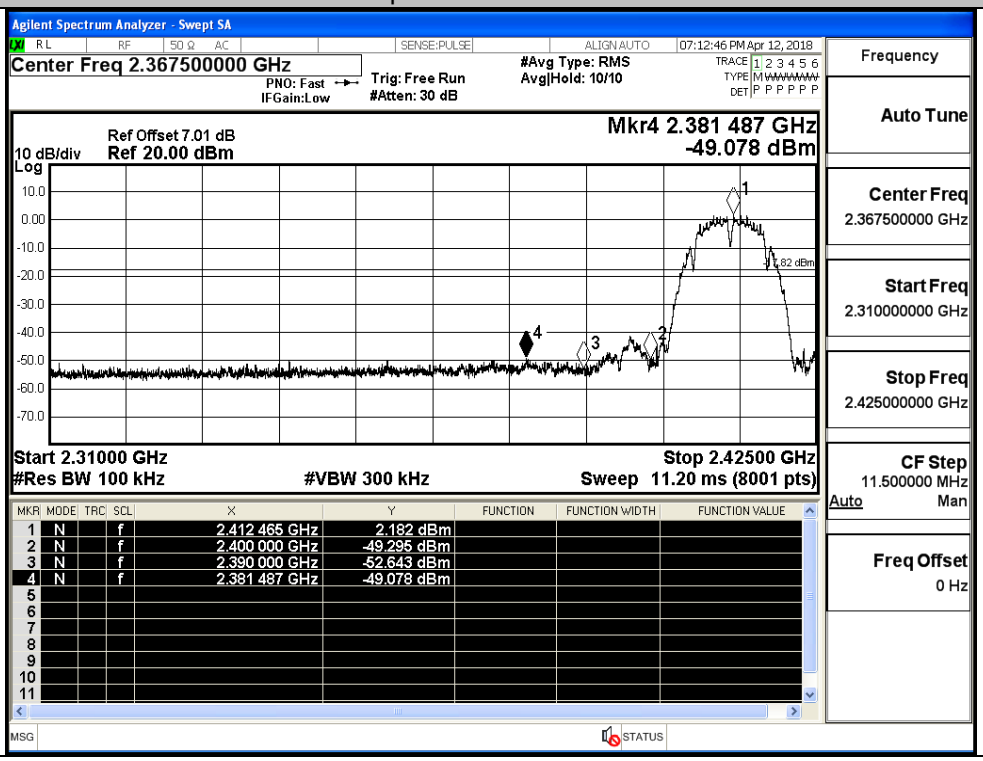
11N20SISO_LCH_Graphs		
Pref/11N20SISO/LCH		
Puw/11N20SISO/LCH		

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

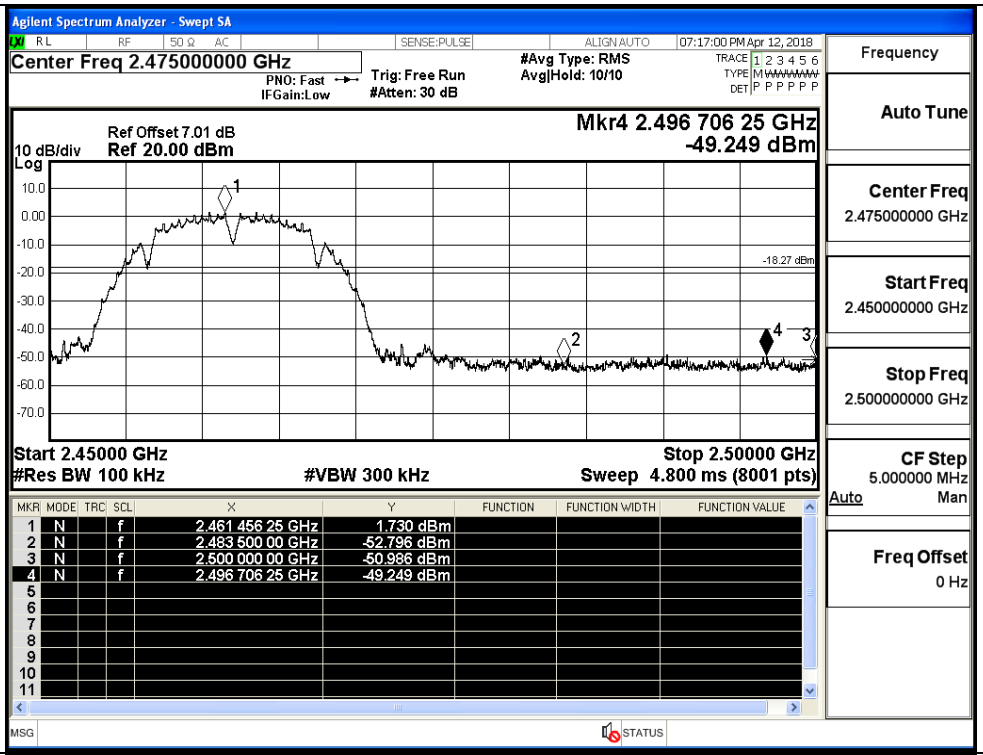
11N20SISO_HCH_Graphs	
Pref/11N20 SISO/HCH	
Puw/11N20 SISO/HCH	

A.5 Band-edge for RF Conducted Emissions

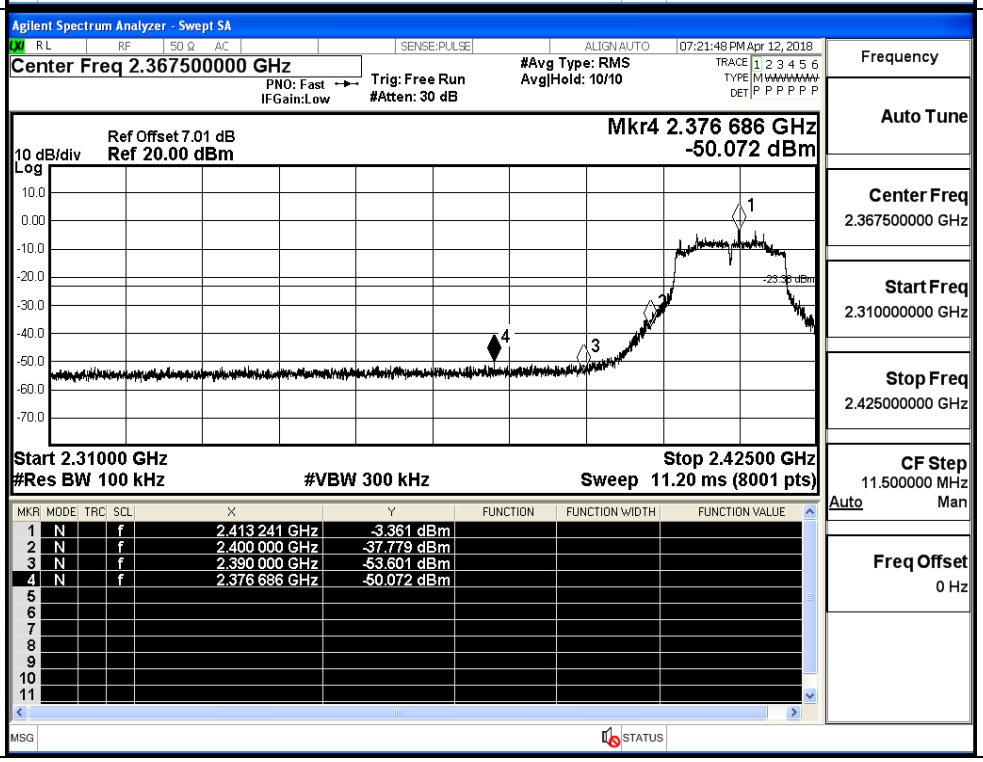
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.182	-49.078	-17.82	PASS
	HCH	1.730	-49.249	-18.27	PASS
11G	LCH	-3.361	-50.072	-23.36	PASS
	HCH	-4.560	-50.595	-24.56	PASS
11N20SISO	LCH	-4.801	-50.498	-24.8	PASS
	HCH	-4.923	-50.331	-24.92	PASS

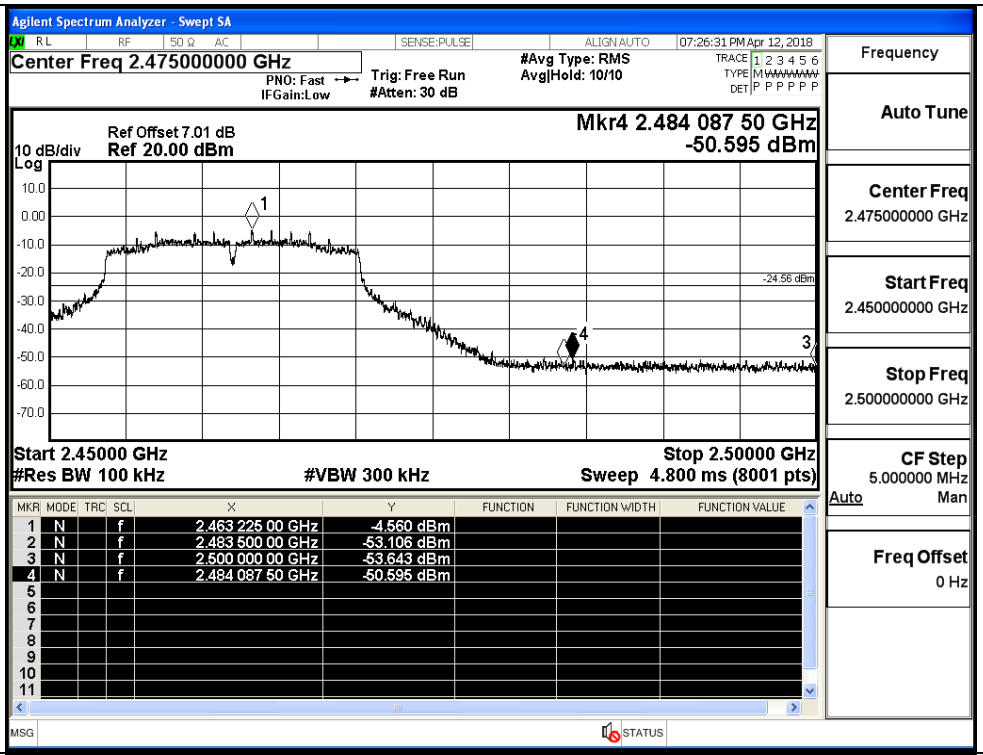
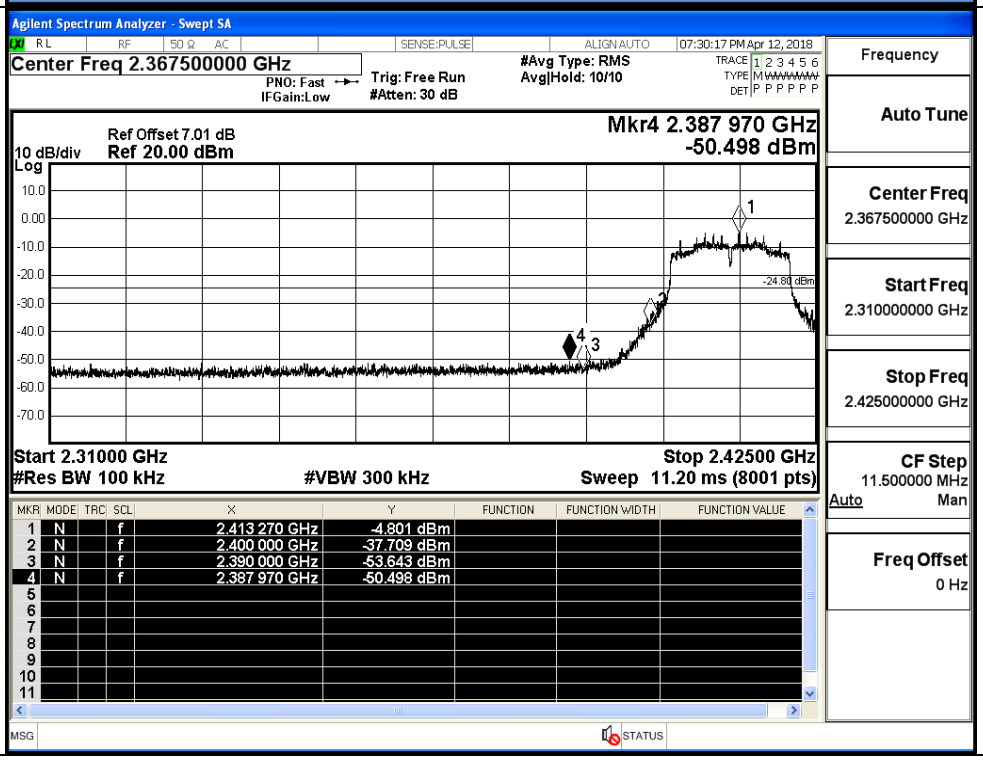
Test Graphs	
11B/LCH	

11B/HCH

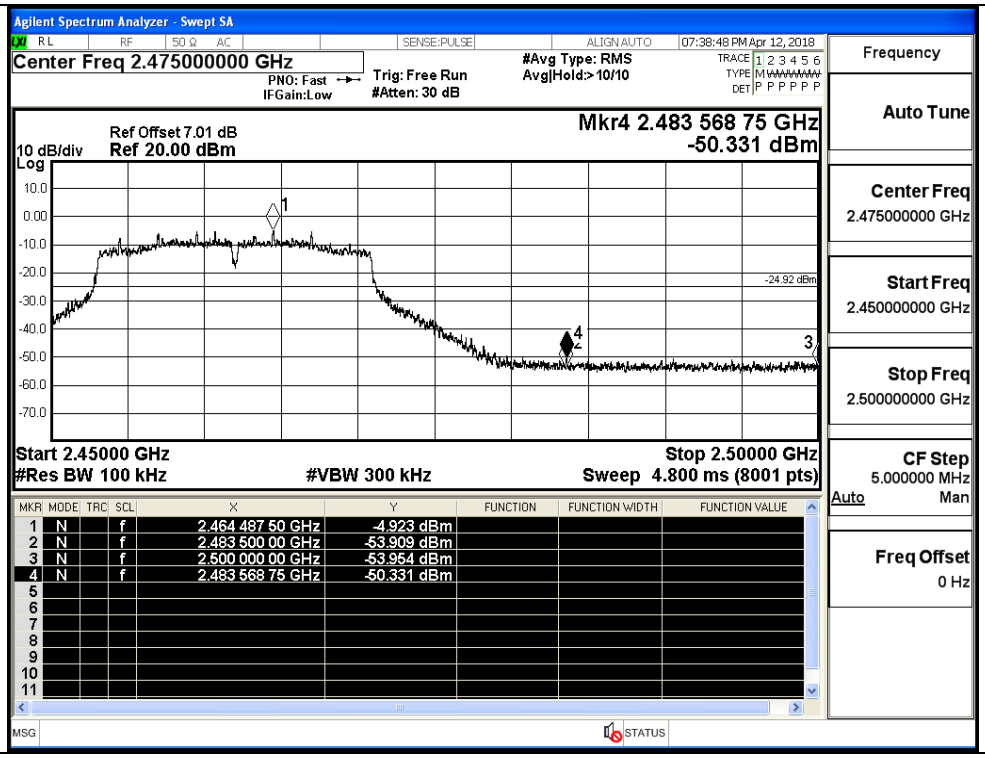


11G/LCH



11G/HCH		
11N20SISO/LCH		

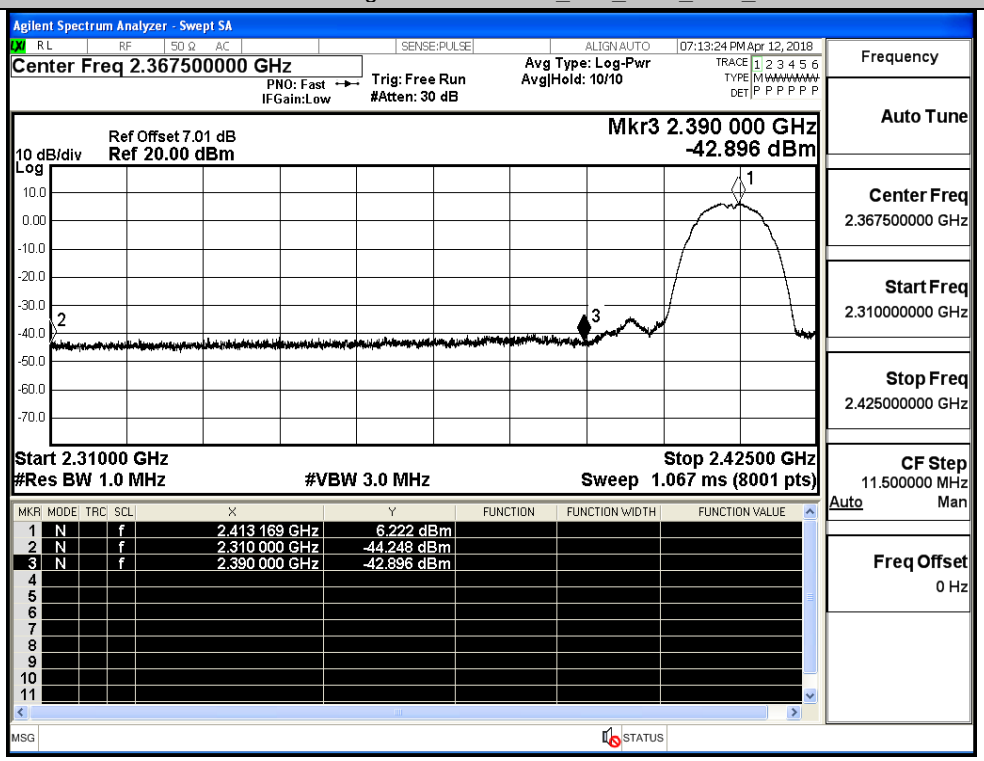
11N20SISO/HCH



A.6 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-44.25	2.0	0	51.01	PEAK	74	PASS
	2412	Ant1	2310.0	-54.97	2.0	0	40.29	AV	54	PASS
	2412	Ant1	2390.0	-42.90	2.0	0	52.36	PEAK	74	PASS
	2412	Ant1	2390.0	-53.69	2.0	0	41.57	AV	54	PASS
	2462	Ant1	2483.5	-42.03	2.0	0	53.23	PEAK	74	PASS
	2462	Ant1	2483.5	-53.53	2.0	0	41.73	AV	54	PASS
	2462	Ant1	2500.0	-42.68	2.0	0	52.58	PEAK	74	PASS
	2462	Ant1	2500.0	-53.20	2.0	0	42.06	AV	54	PASS
11G	2412	Ant1	2310.0	-44.97	2.0	0	50.28	PEAK	74	PASS
	2412	Ant1	2310.0	-54.99	2.0	0	40.27	AV	54	PASS
	2412	Ant1	2390.0	-43.20	2.0	0	52.06	PEAK	74	PASS
	2412	Ant1	2390.0	-53.03	2.0	0	42.23	AV	54	PASS
	2462	Ant1	2483.5	-43.52	2.0	0	51.74	PEAK	74	PASS
	2462	Ant1	2483.5	-53.50	2.0	0	41.76	AV	54	PASS
	2462	Ant1	2500.0	-44.46	2.0	0	50.80	PEAK	74	PASS
	2462	Ant1	2500.0	-53.86	2.0	0	41.40	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-45.08	2.0	0	50.18	PEAK	74	PASS
	2412	Ant1	2310.0	-54.99	2.0	0	40.27	AV	54	PASS
	2412	Ant1	2390.0	-41.94	2.0	0	53.32	PEAK	74	PASS
	2412	Ant1	2390.0	-53.08	2.0	0	42.18	AV	54	PASS
	2462	Ant1	2483.5	-42.53	2.0	0	52.72	PEAK	74	PASS
	2462	Ant1	2483.5	-53.32	2.0	0	41.94	AV	54	PASS
	2462	Ant1	2500.0	-42.47	2.0	0	52.79	PEAK	74	PASS
	2462	Ant1	2500.0	-53.78	2.0	0	41.48	AV	54	PASS

Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



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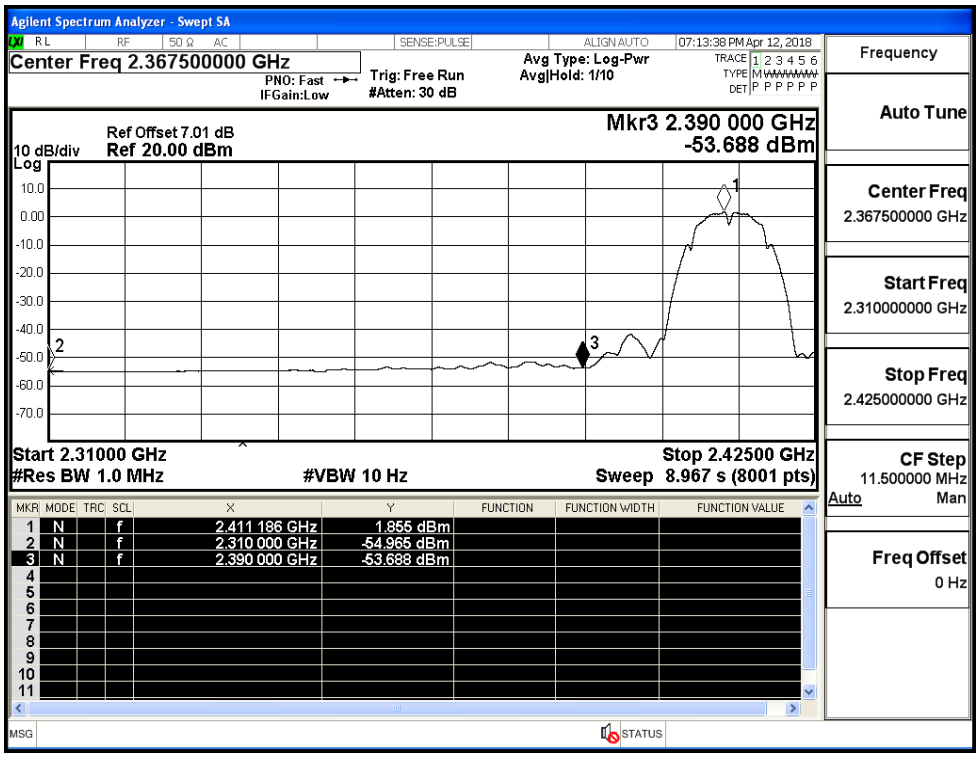

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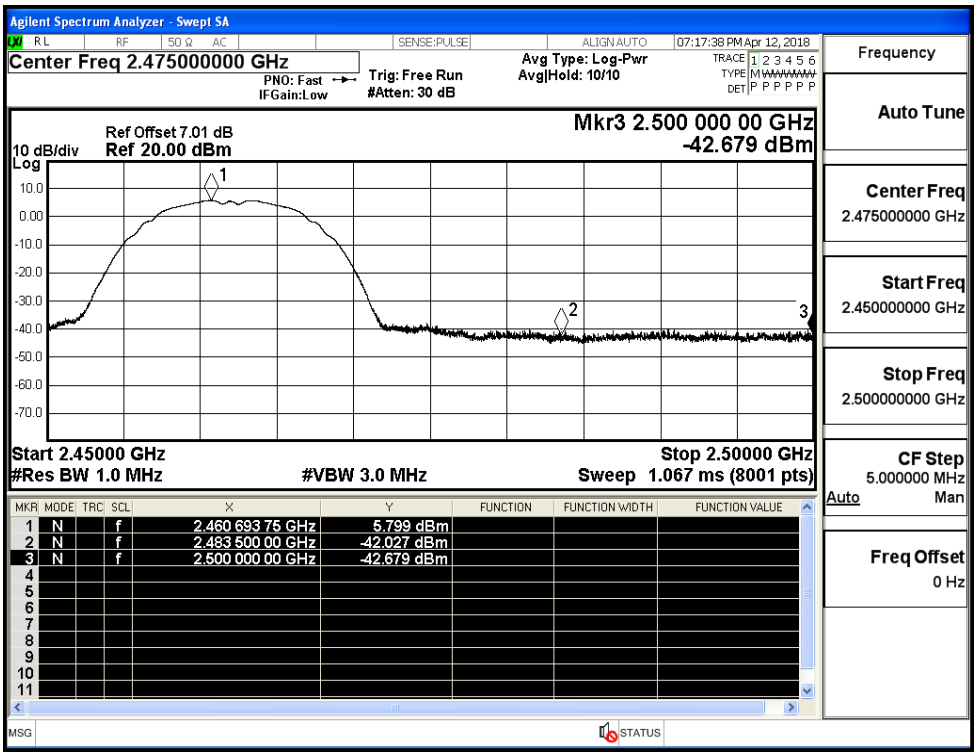

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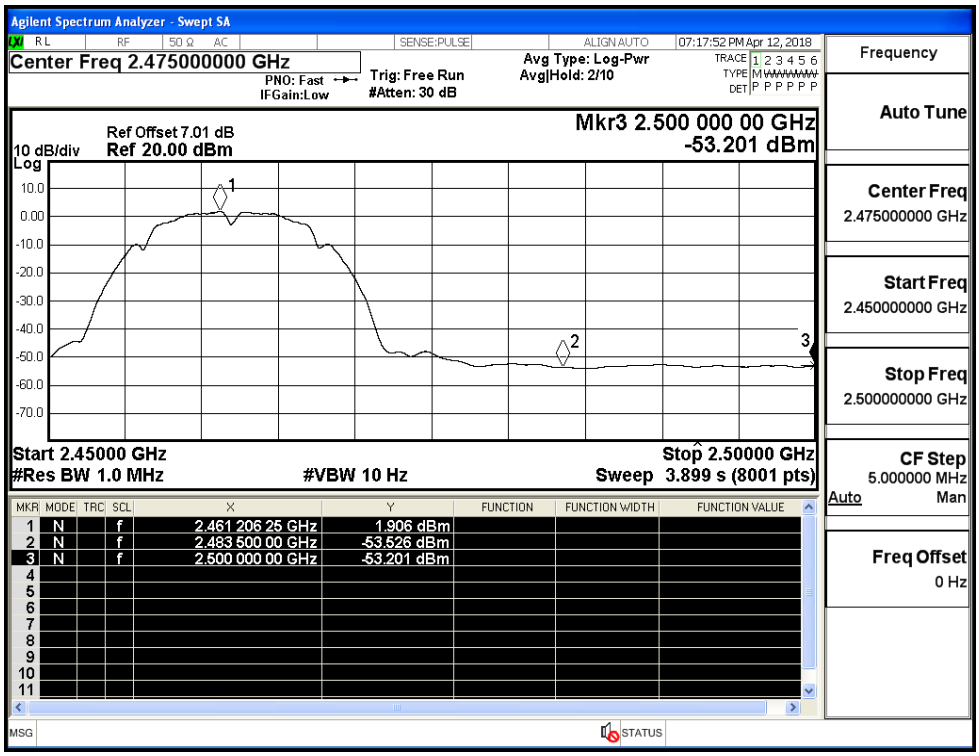

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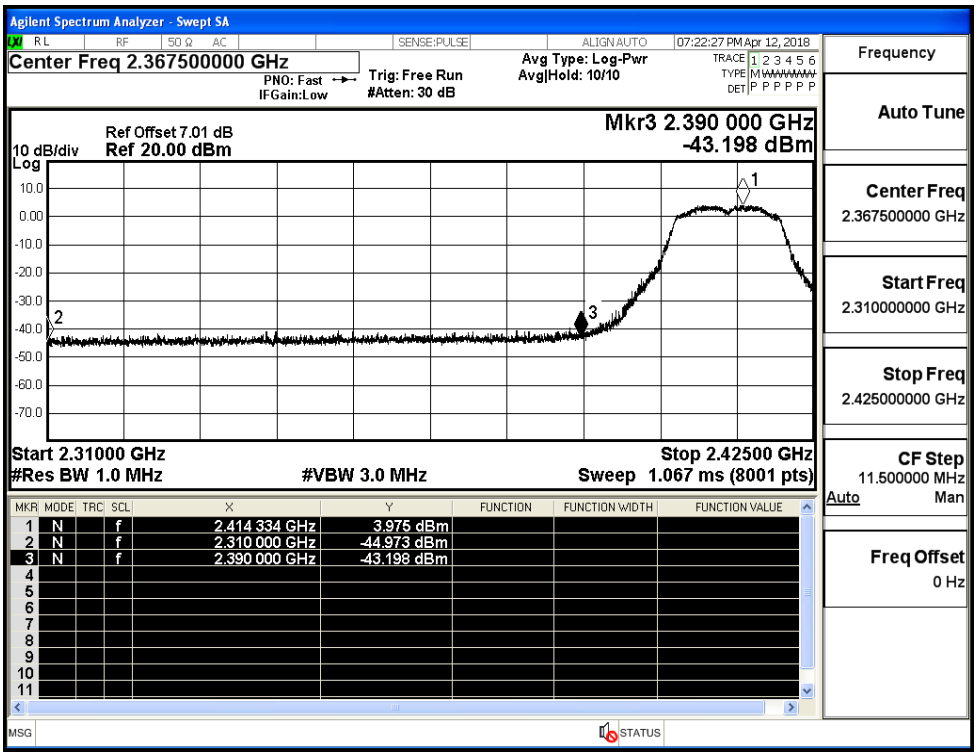

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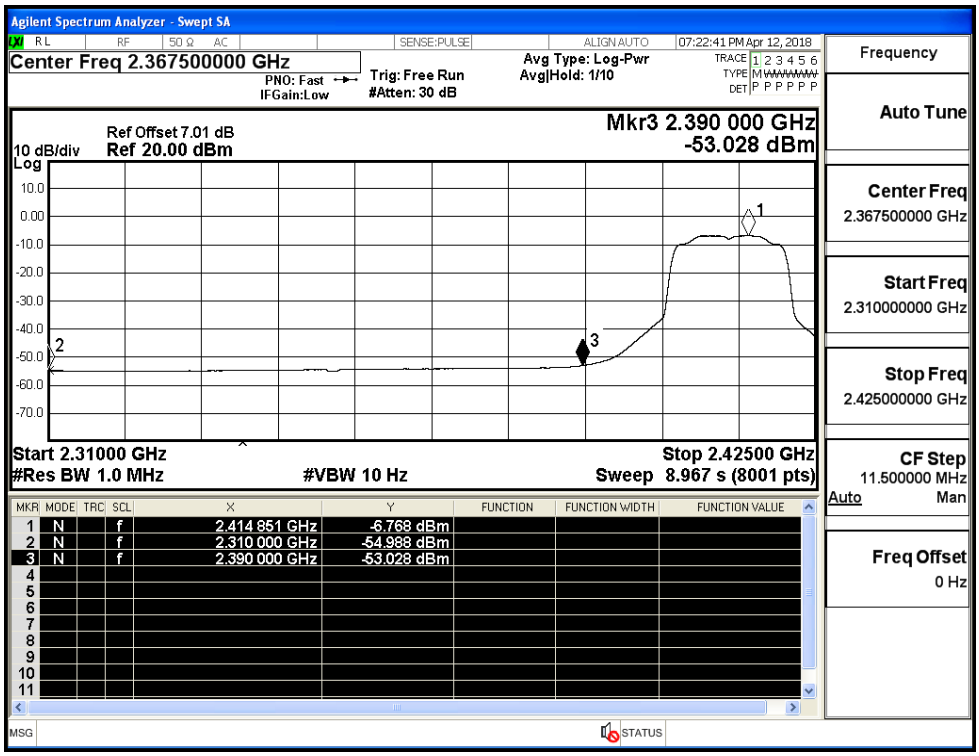

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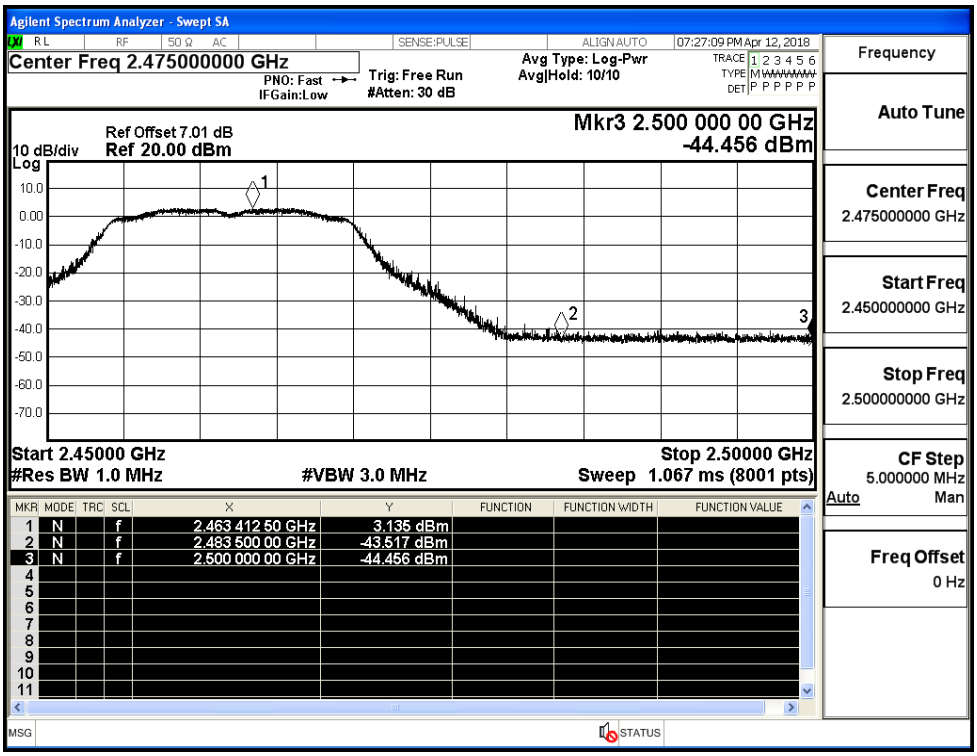

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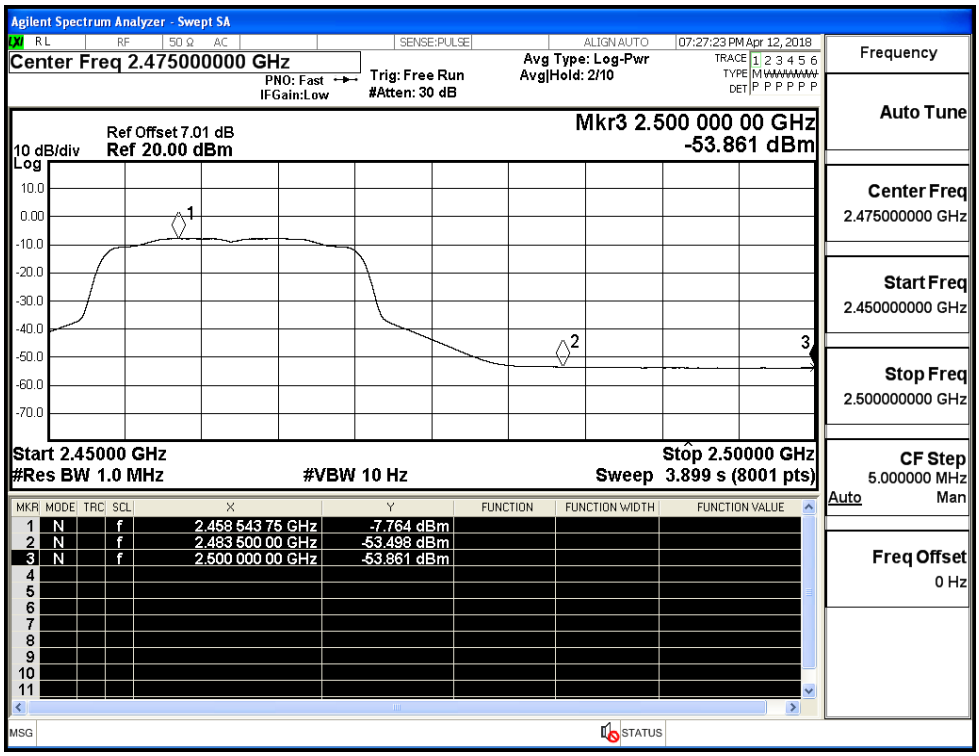

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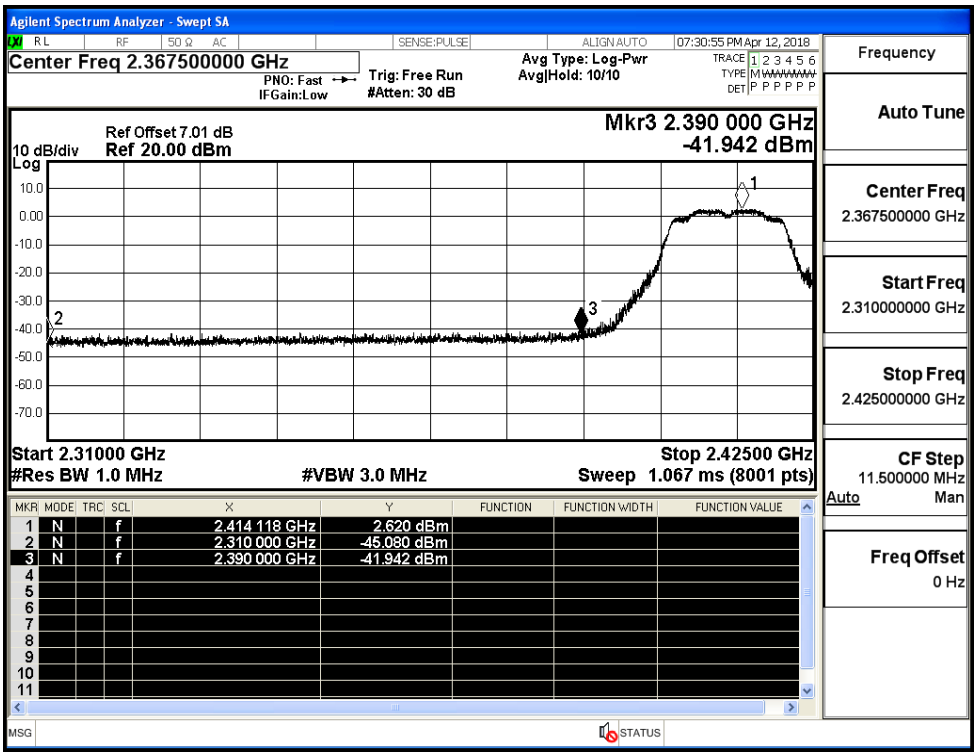

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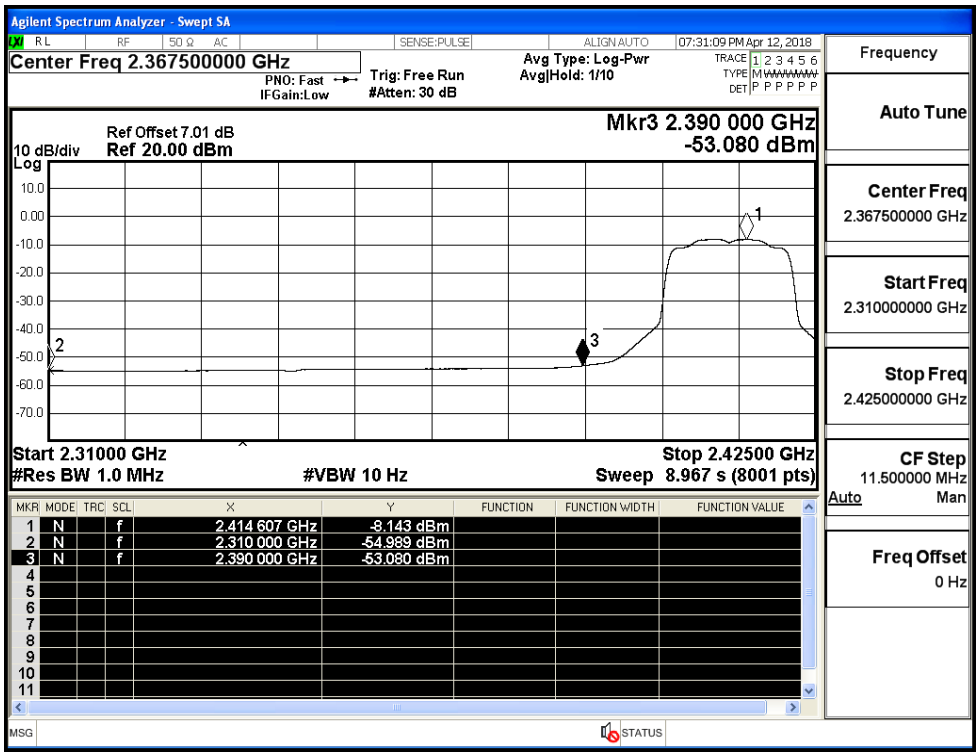

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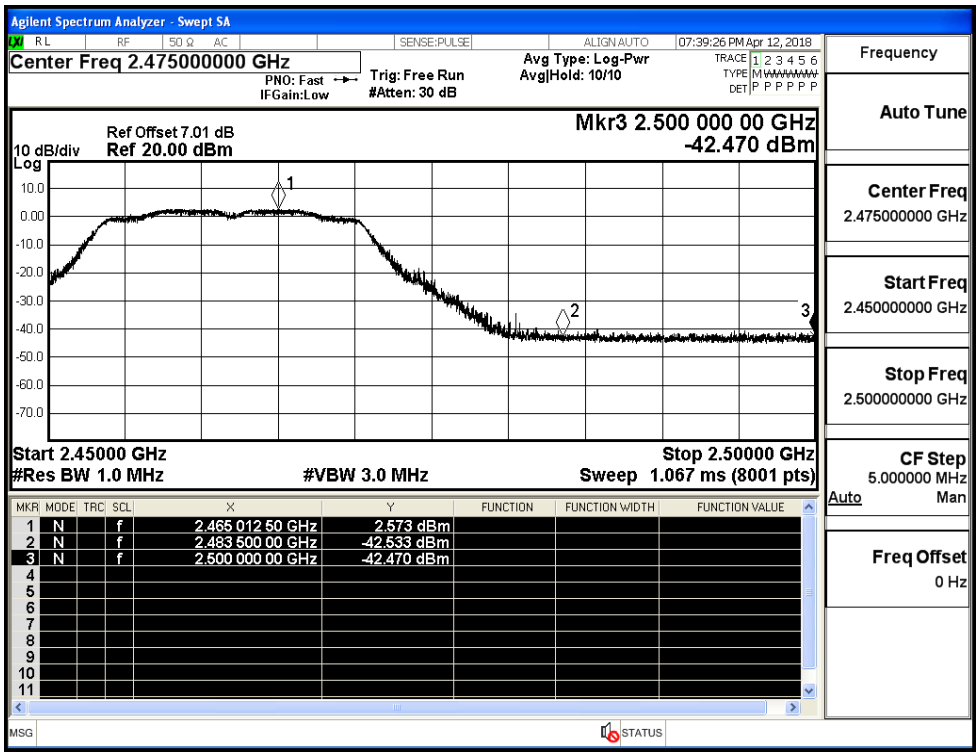
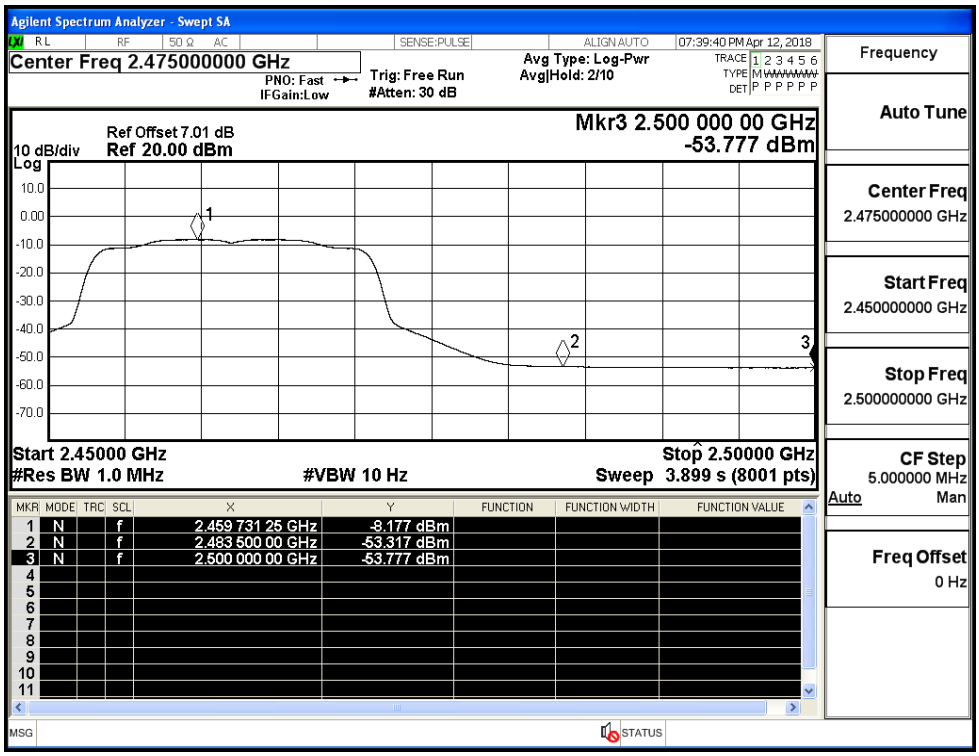
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