

Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart Power Plug

Trade Mark: Xenon/Jinvoo

Test Model: SM-PW712U-A

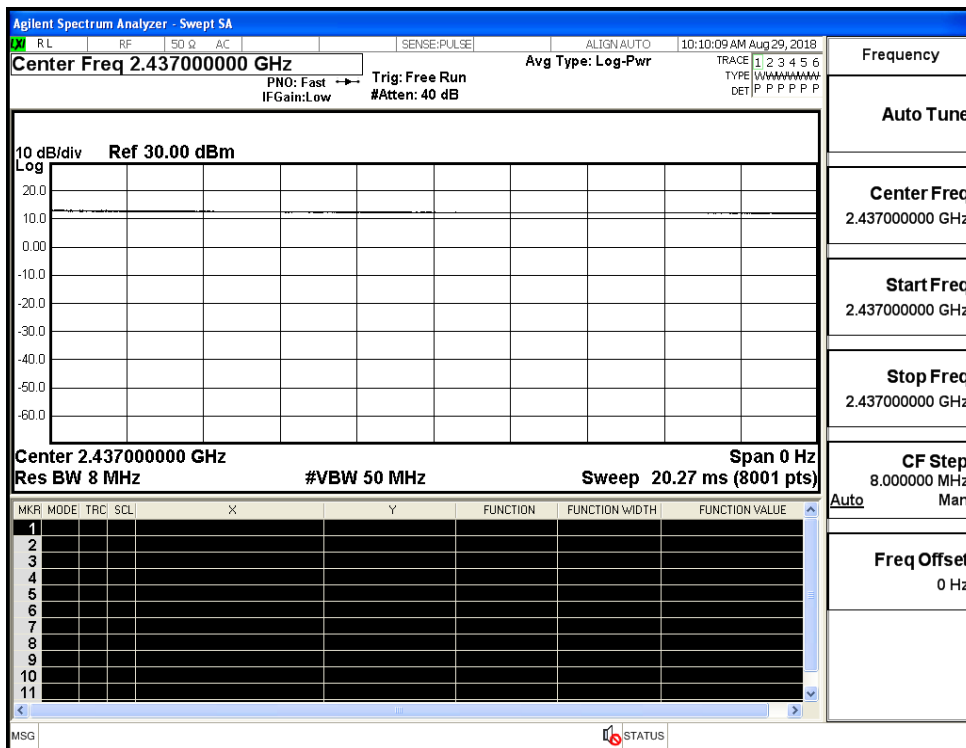
Environmental Conditions

Temperature:	24.3 ° C
Relative Humidity:	52.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Jayden.Zhuo

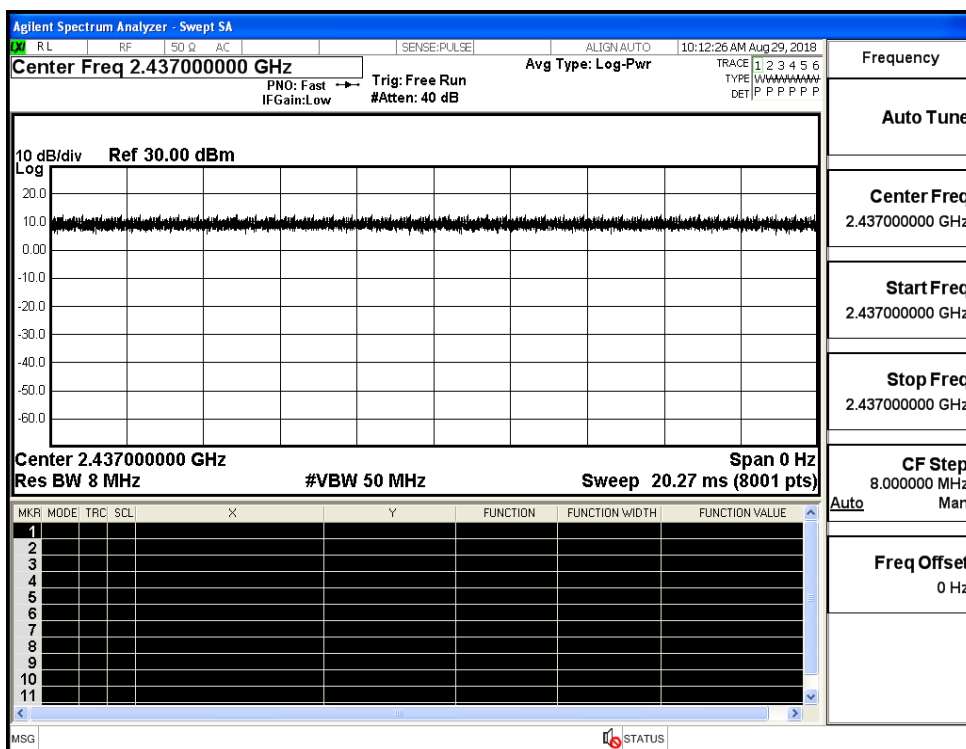
A.1 Duty Cycle

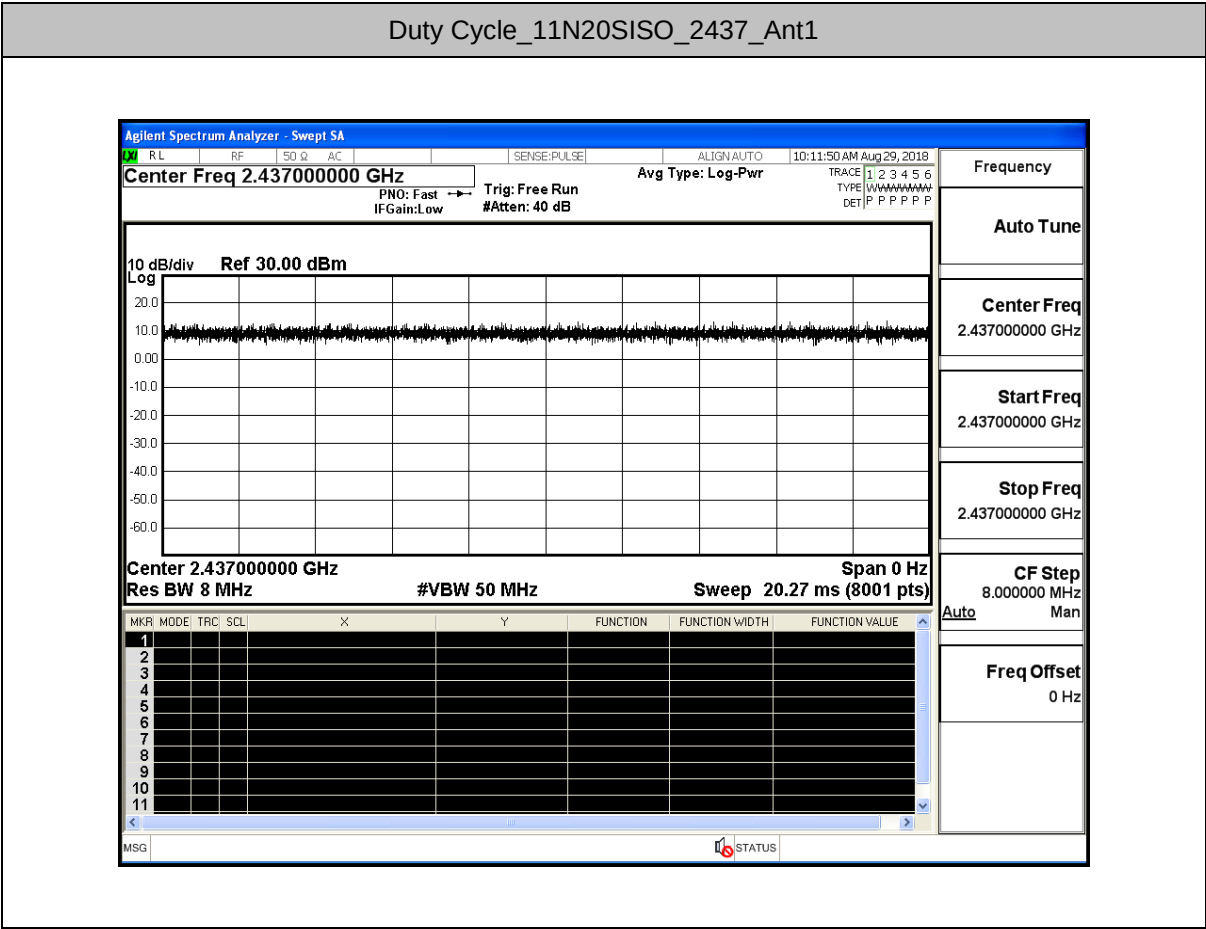
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	100	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS

Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1





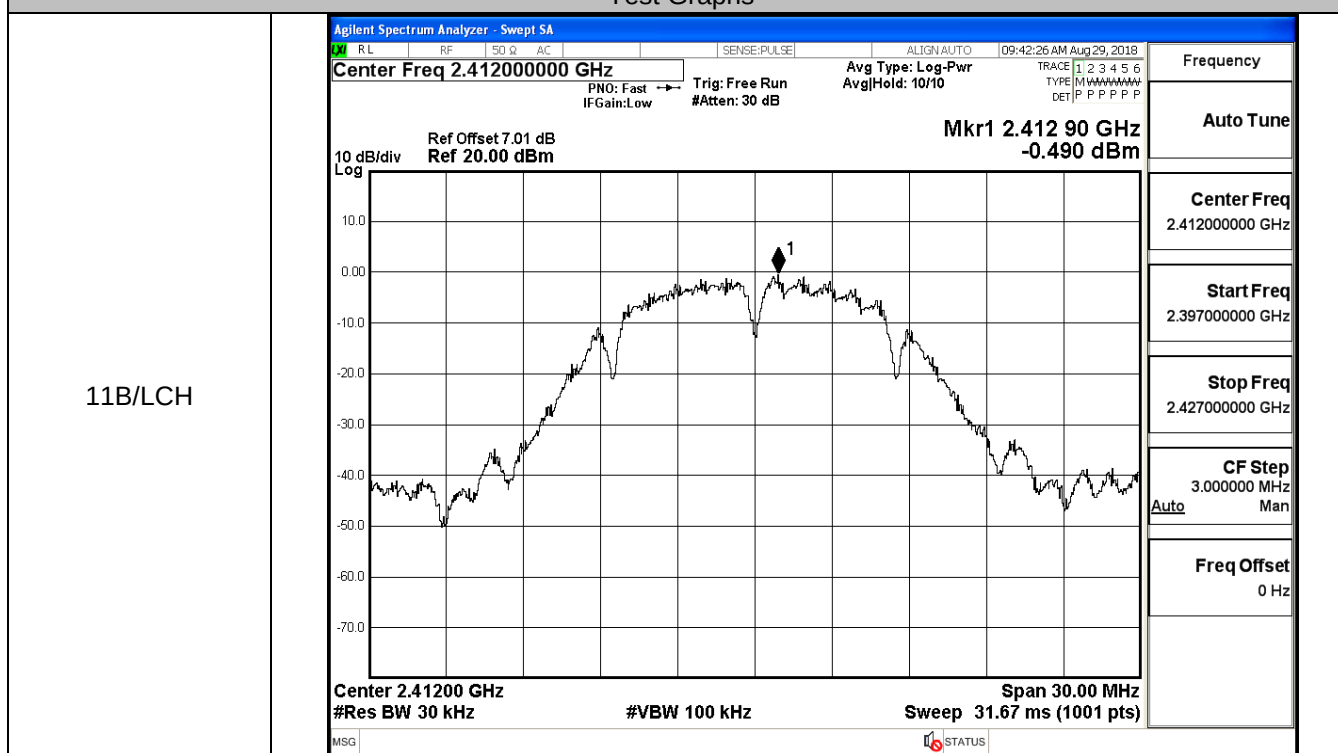
A.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	17.52	30	PASS
	MCH	17.61	30	PASS
	HCH	17.12	30	PASS
11G	LCH	17.29	30	PASS
	MCH	17.48	30	PASS
	HCH	17.16	30	PASS
11N20SISO	LCH	17.43	30	PASS
	MCH	17.64	30	PASS
	HCH	16.82	30	PASS

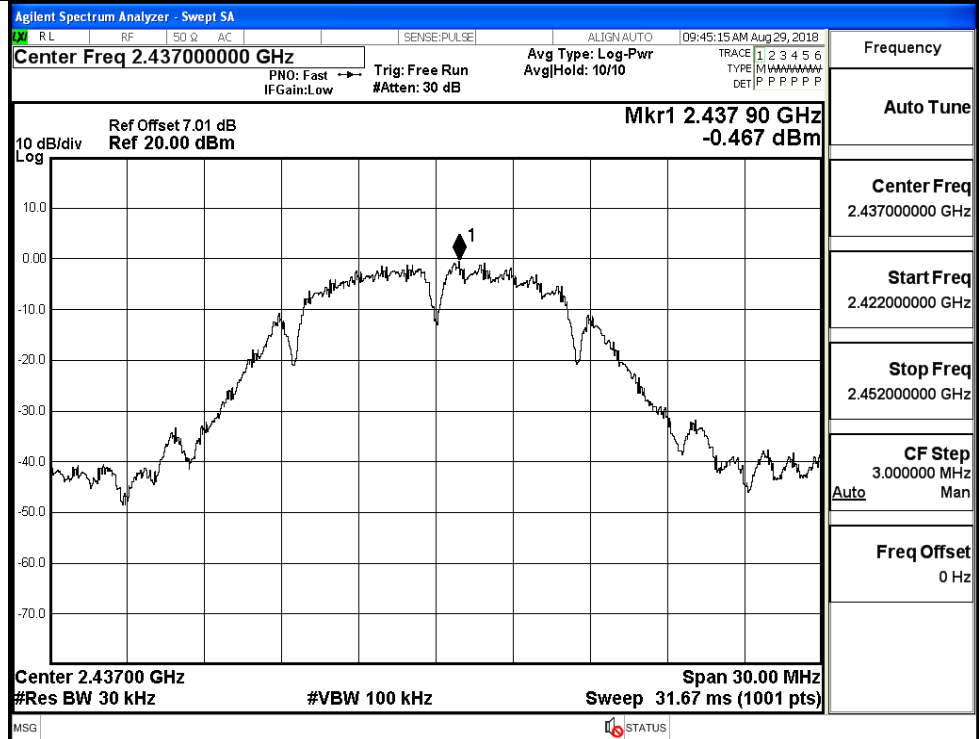
A.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-0.490	8	PASS
	MCH	-0.467	8	PASS
	HCH	-0.947	8	PASS
11G	LCH	-6.695	8	PASS
	MCH	-6.414	8	PASS
	HCH	-6.774	8	PASS
11N20SISO	LCH	-5.680	8	PASS
	MCH	-5.284	8	PASS
	HCH	-6.307	8	PASS

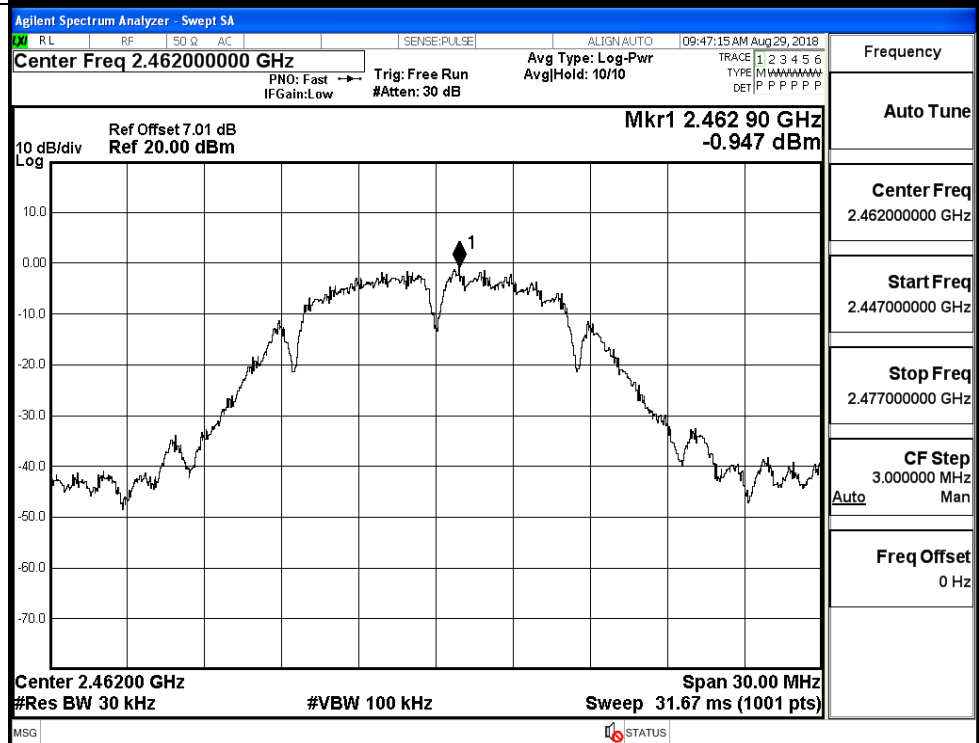
Test Graphs



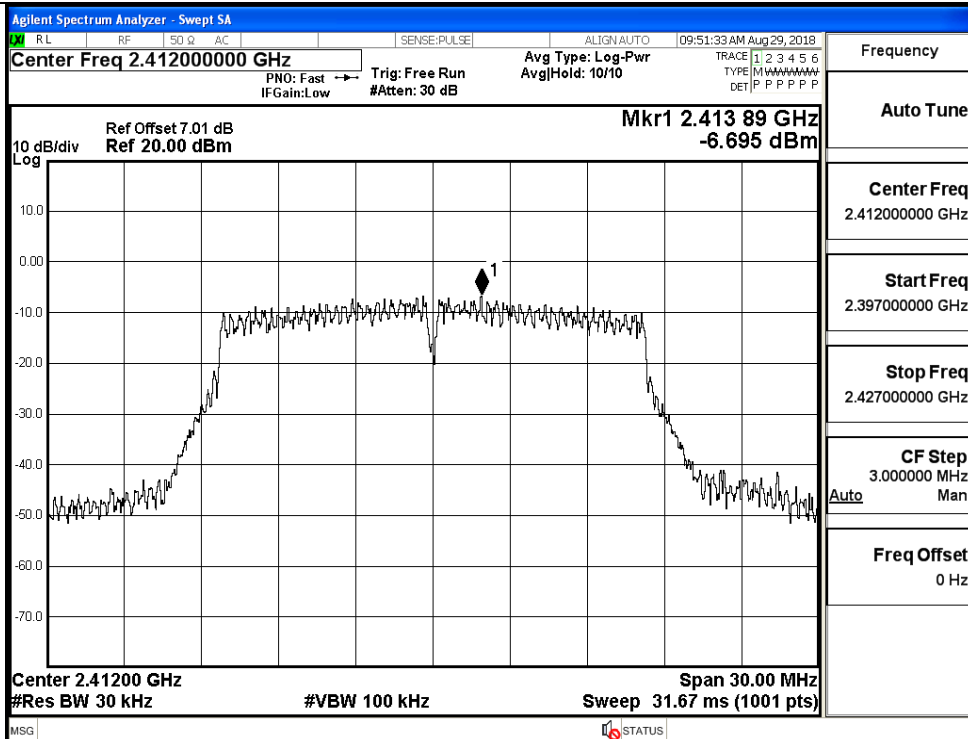
11B/MCH



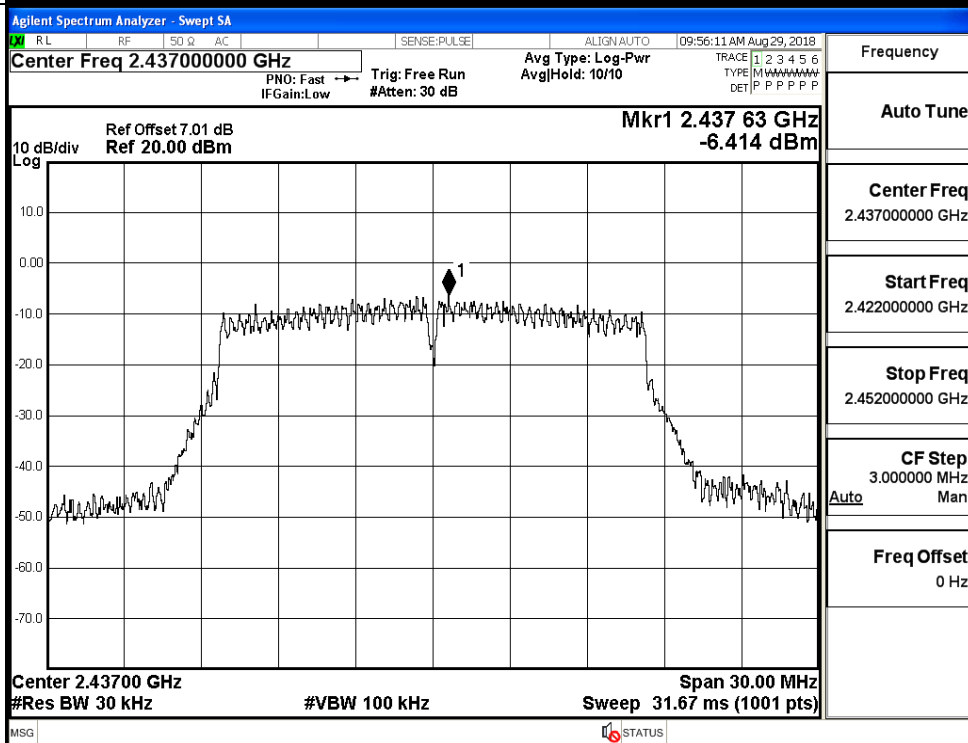
11B/HCH



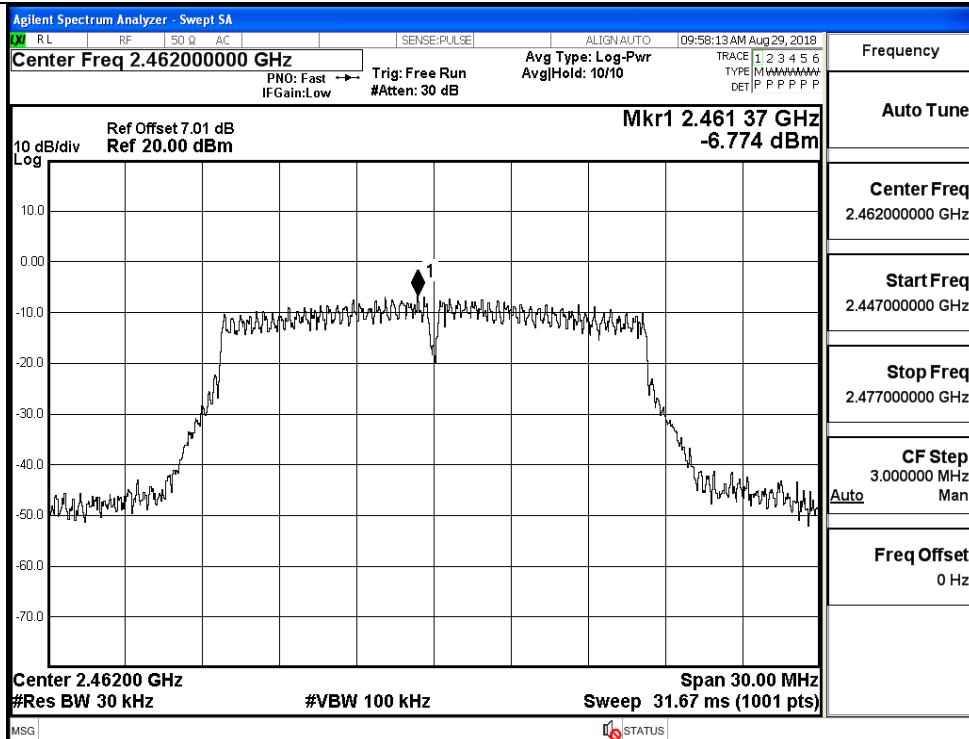
11G/LCH



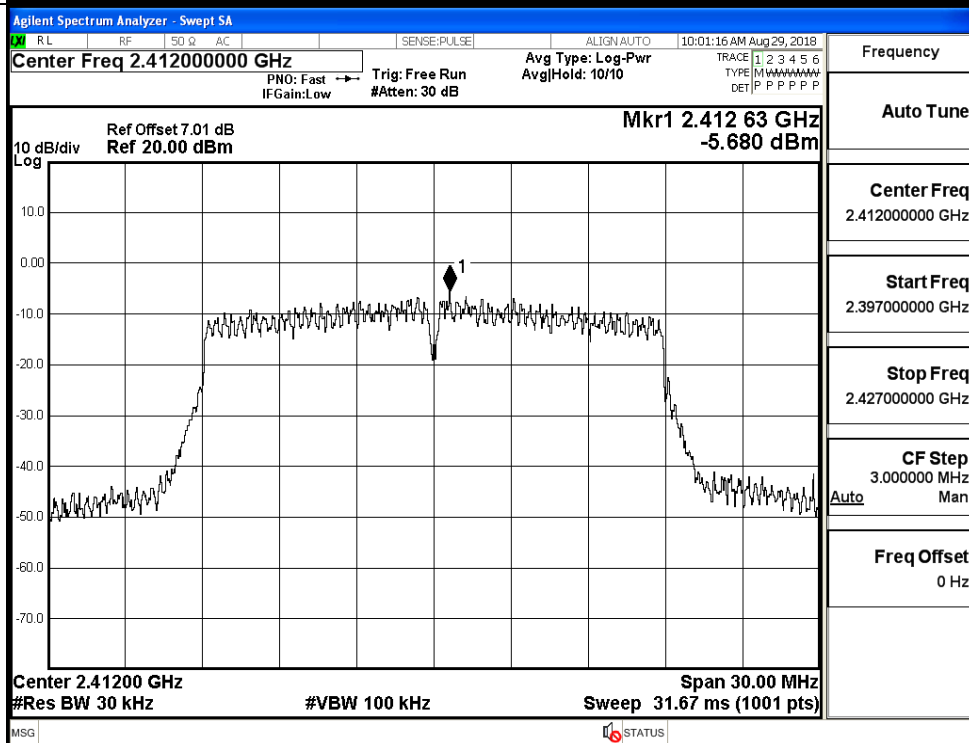
11G/MCH



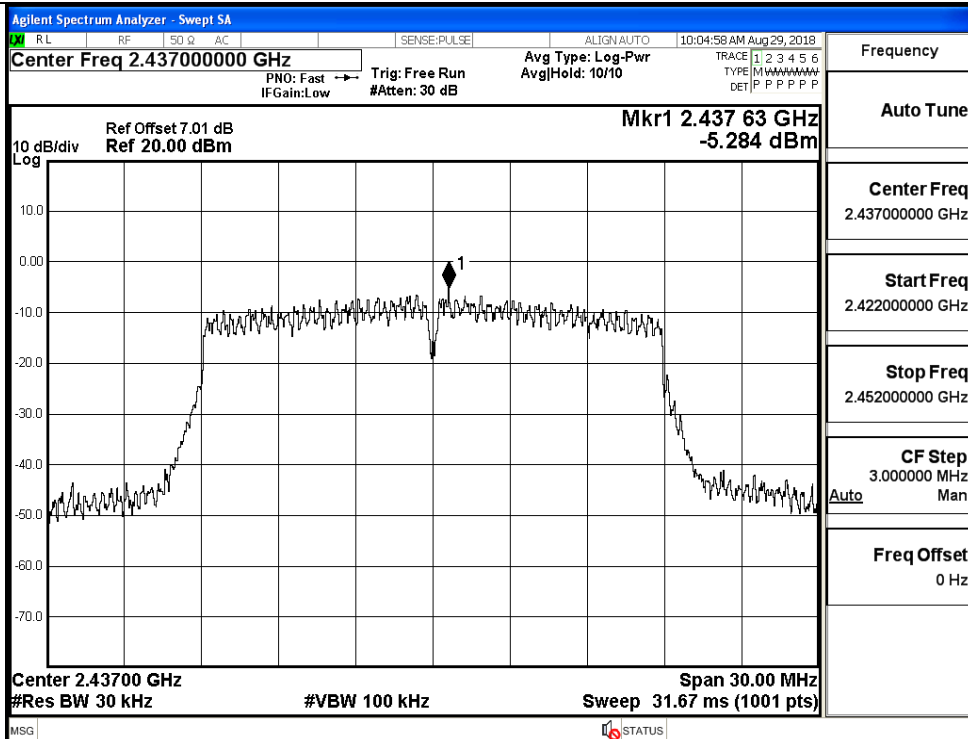
11G/HCH



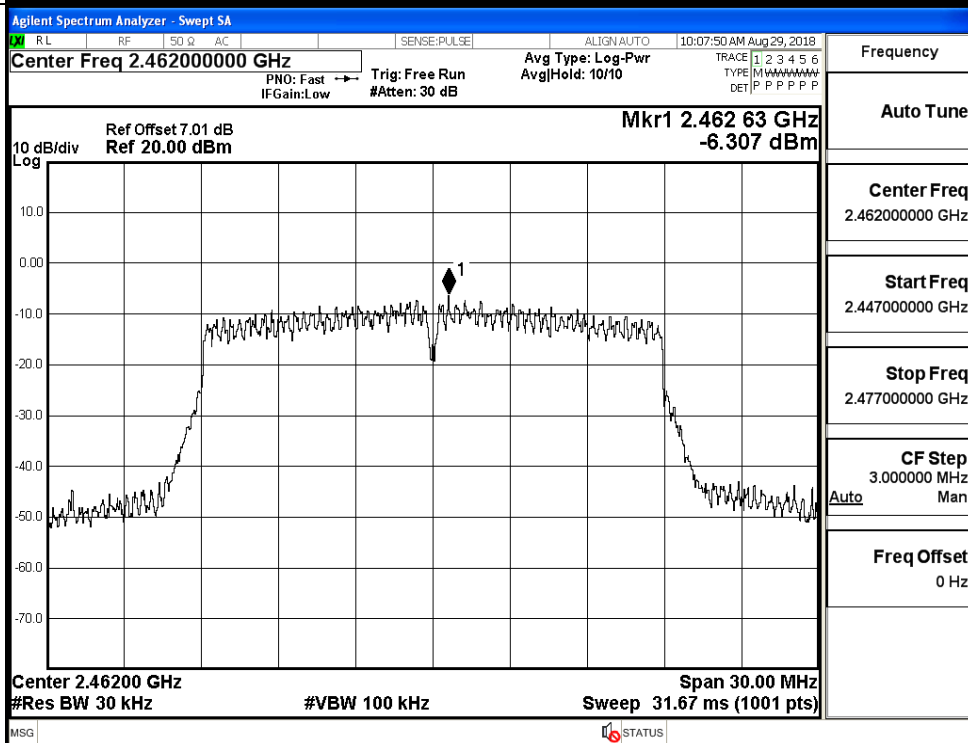
11N20SISO/LCH



11N20SISO/MCH



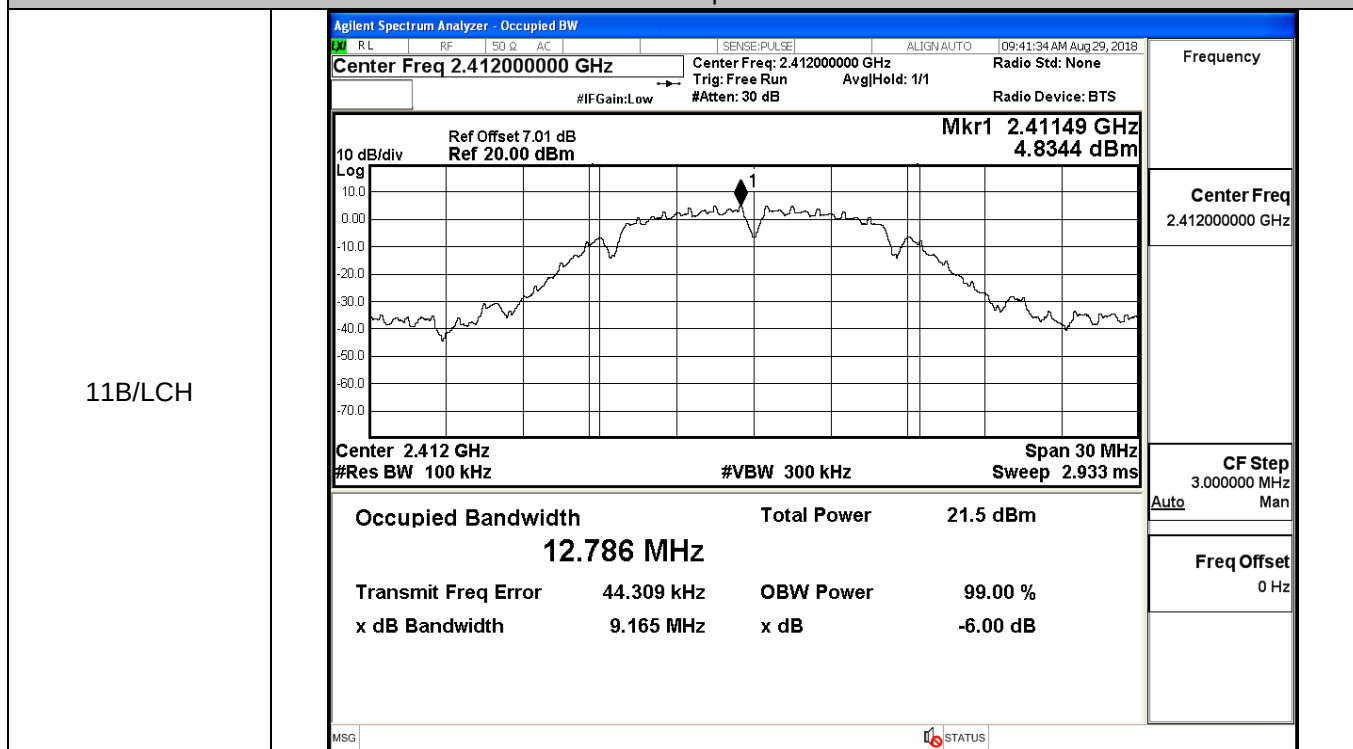
11N20SISO/HCH



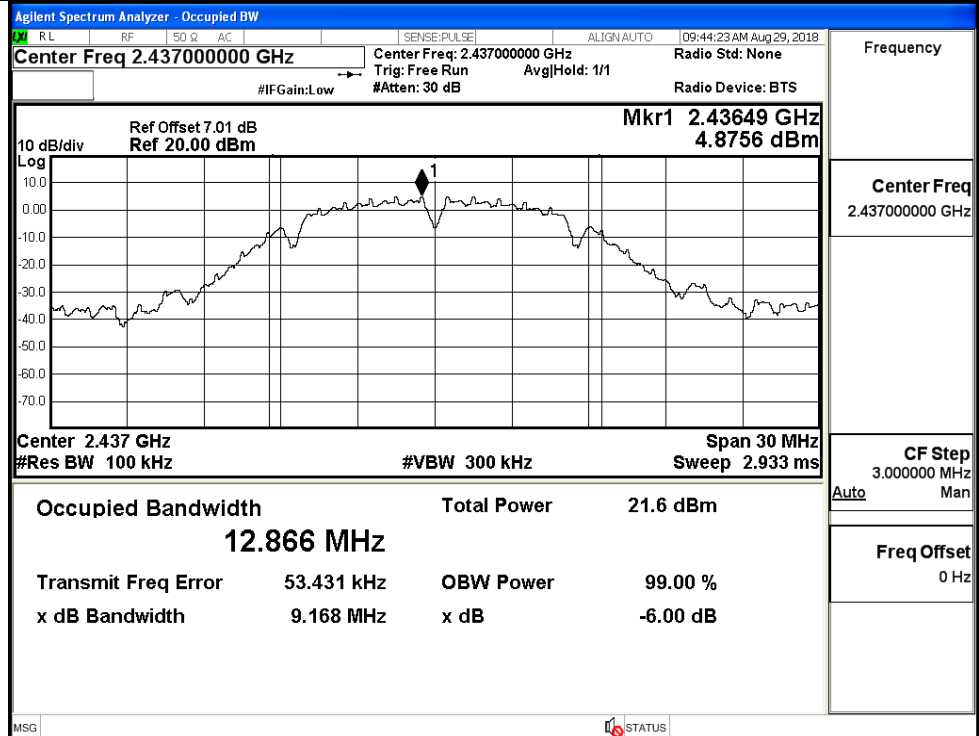
A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.165	≥ 0.5	PASS
	MCH	9.168	≥ 0.5	PASS
	HCH	9.165	≥ 0.5	PASS
11G	LCH	16.41	≥ 0.5	PASS
	MCH	16.41	≥ 0.5	PASS
	HCH	16.39	≥ 0.5	PASS
11N20SISO	LCH	17.63	≥ 0.5	PASS
	MCH	17.63	≥ 0.5	PASS
	HCH	17.64	≥ 0.5	PASS

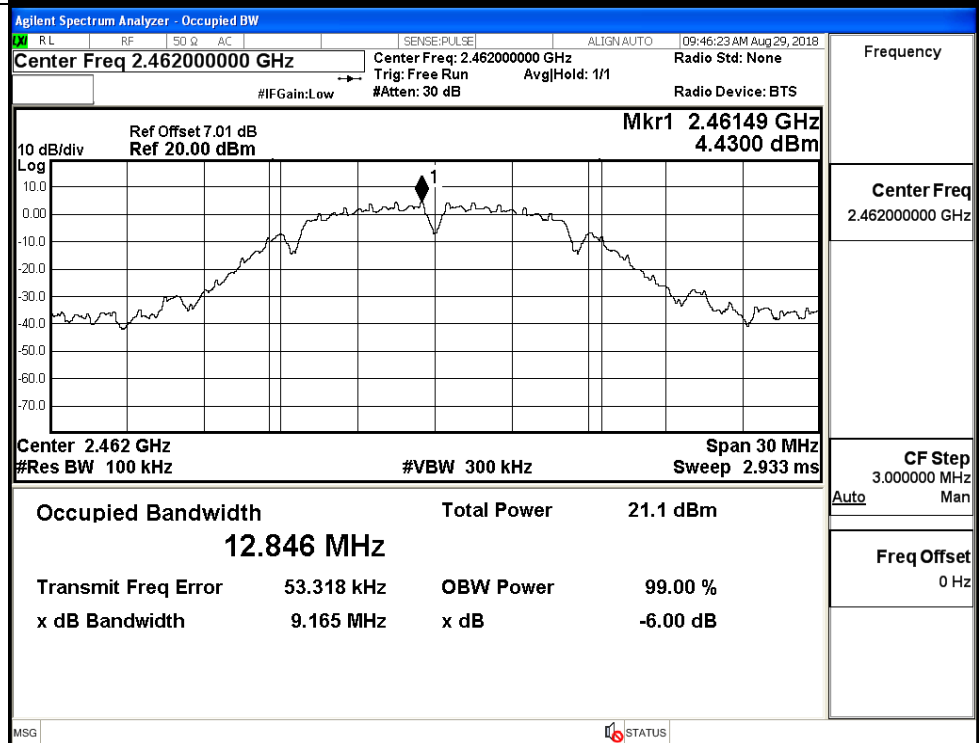
Test Graphs



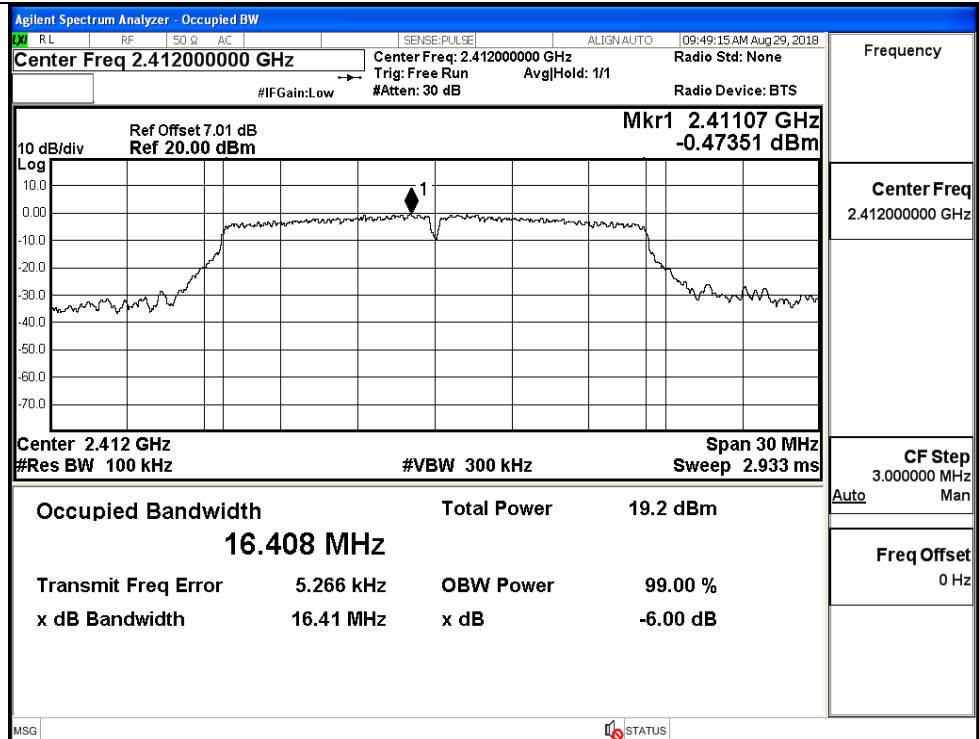
11B/MCH



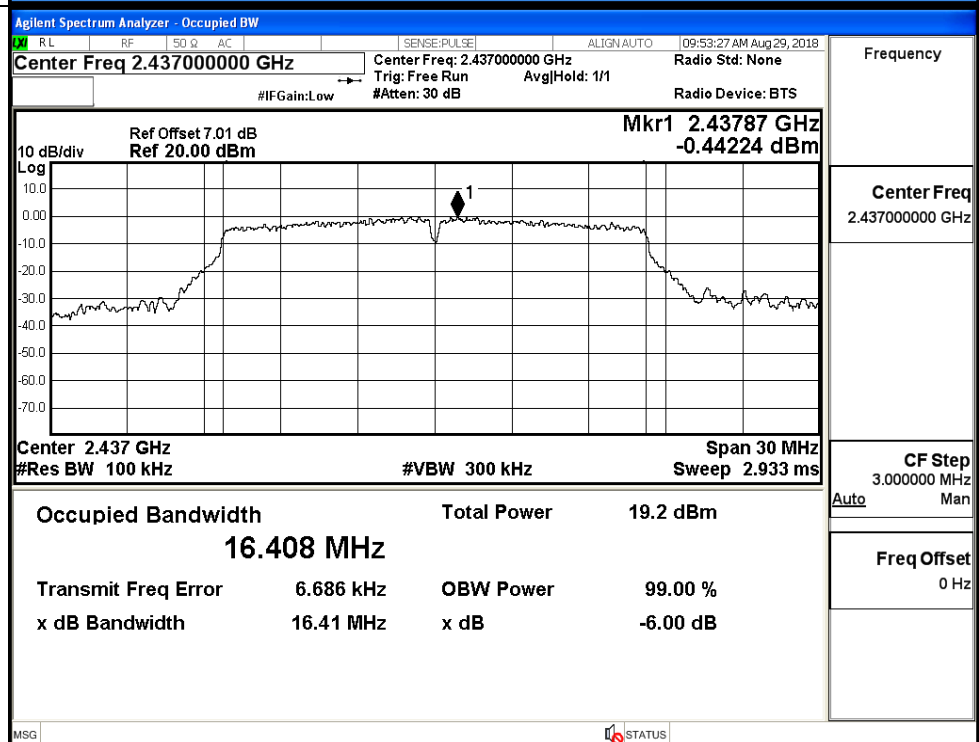
11B/HCH



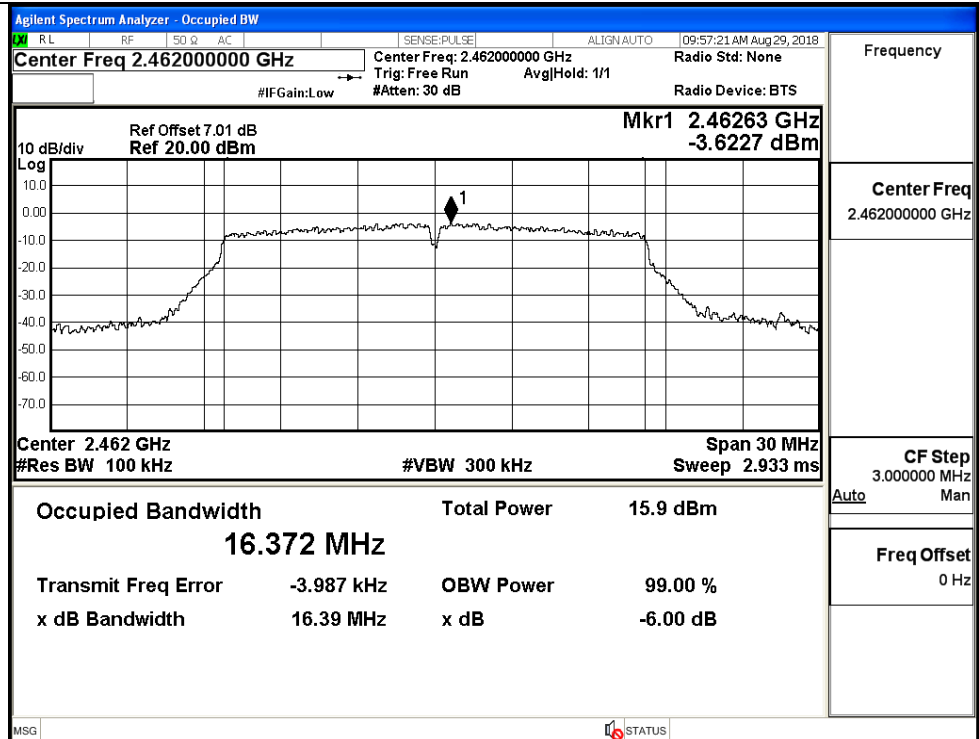
11G/LCH



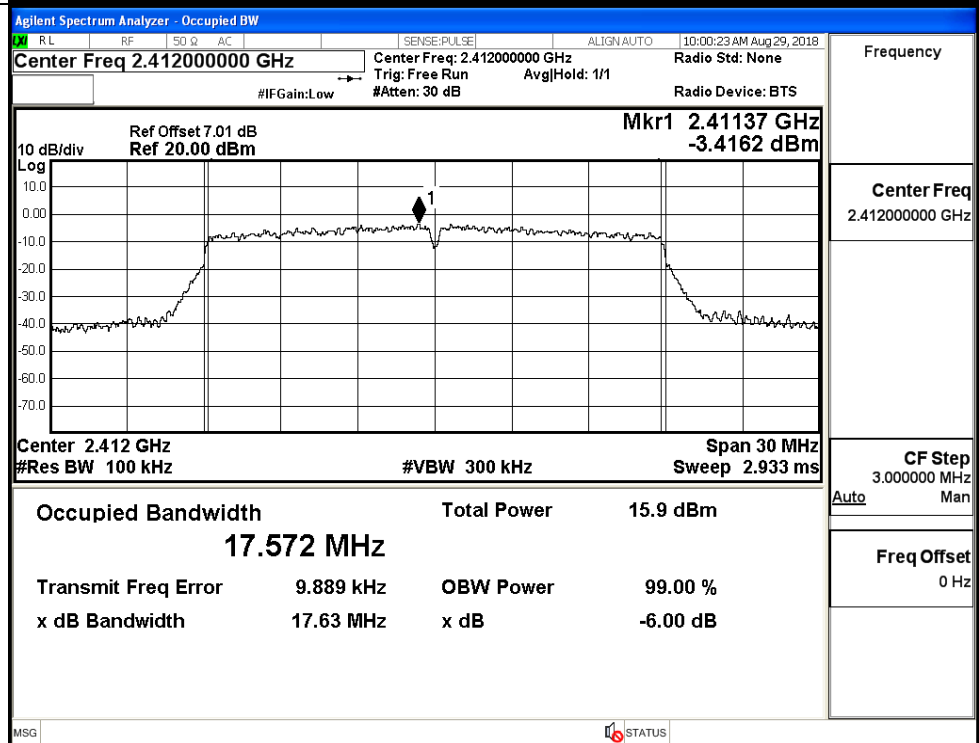
11G/MCH



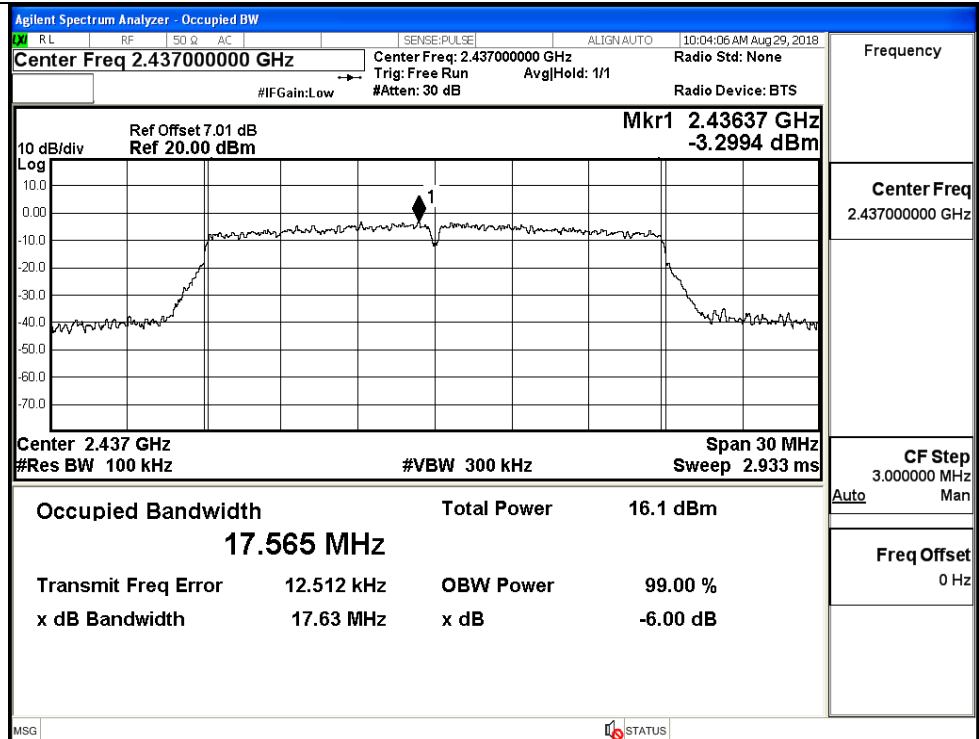
11G/HCH



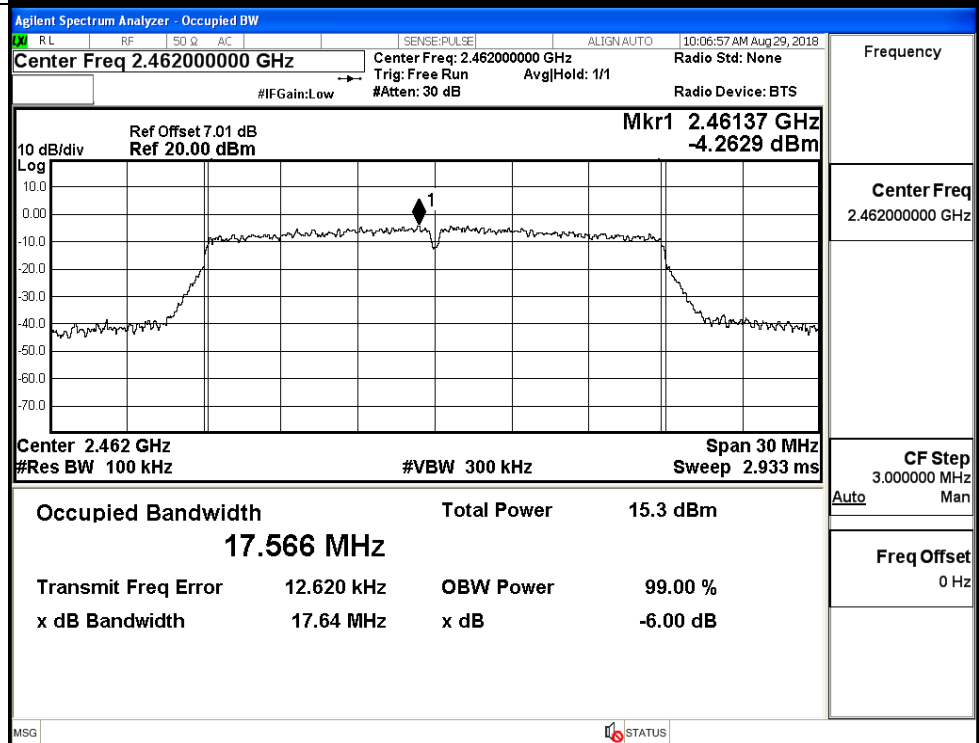
11N20SISO/LCH



11N20SISO/MCH



11N20SISO/HCH

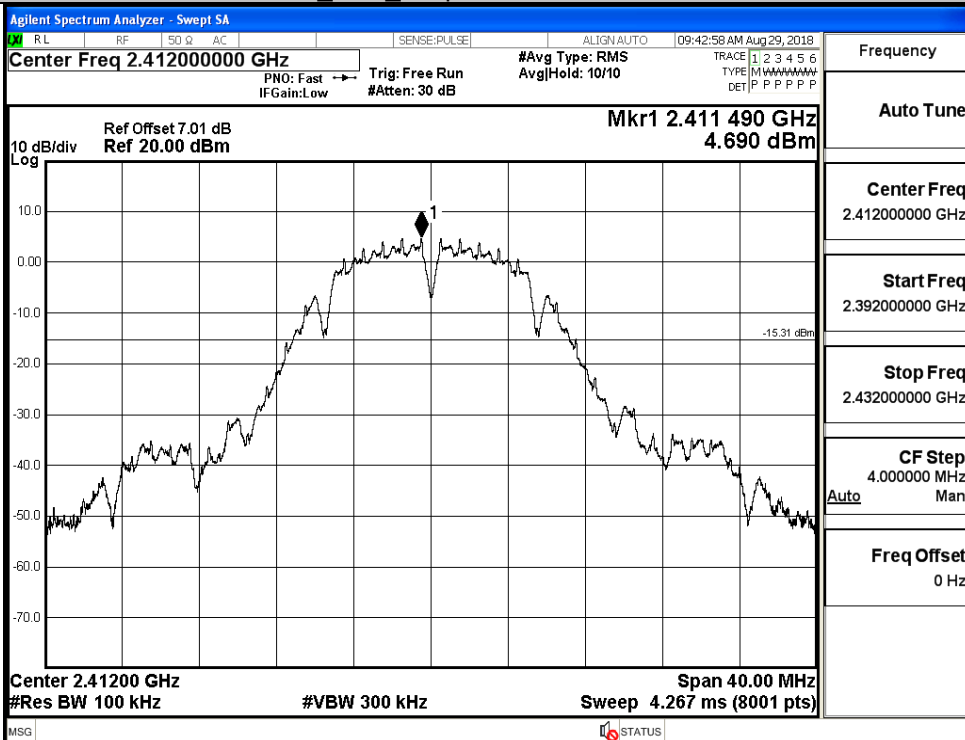


A.5 RF Conducted Spurious Emissions

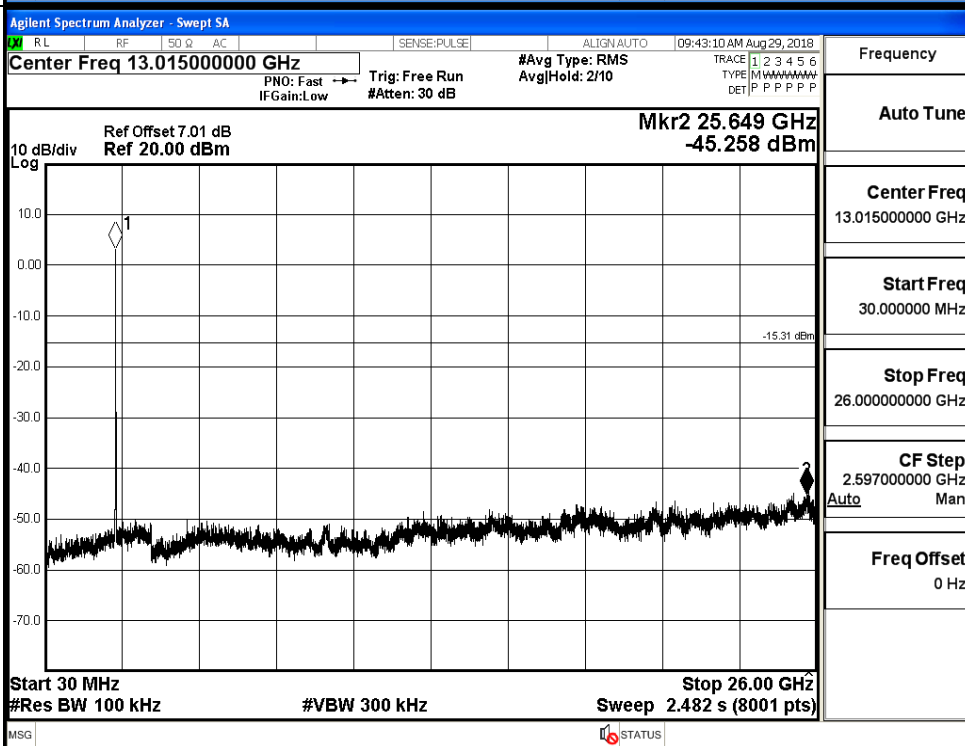
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	4.69	-45.258	-15.310	PASS
	MCH	4.815	-44.958	-15.185	PASS
	HCH	4.348	-45.199	-15.652	PASS
11G	LCH	-3.56	-44.236	-23.560	PASS
	MCH	-3.42	-43.713	-23.420	PASS
	HCH	-3.652	-44.862	-23.652	PASS
11N20 SISO	LCH	-3.749	-43.950	-23.749	PASS
	MCH	-3.596	-45.362	-23.596	PASS
	HCH	-4.356	-45.056	-24.356	PASS

11B LCH Graphs

Pref/11B/LCH

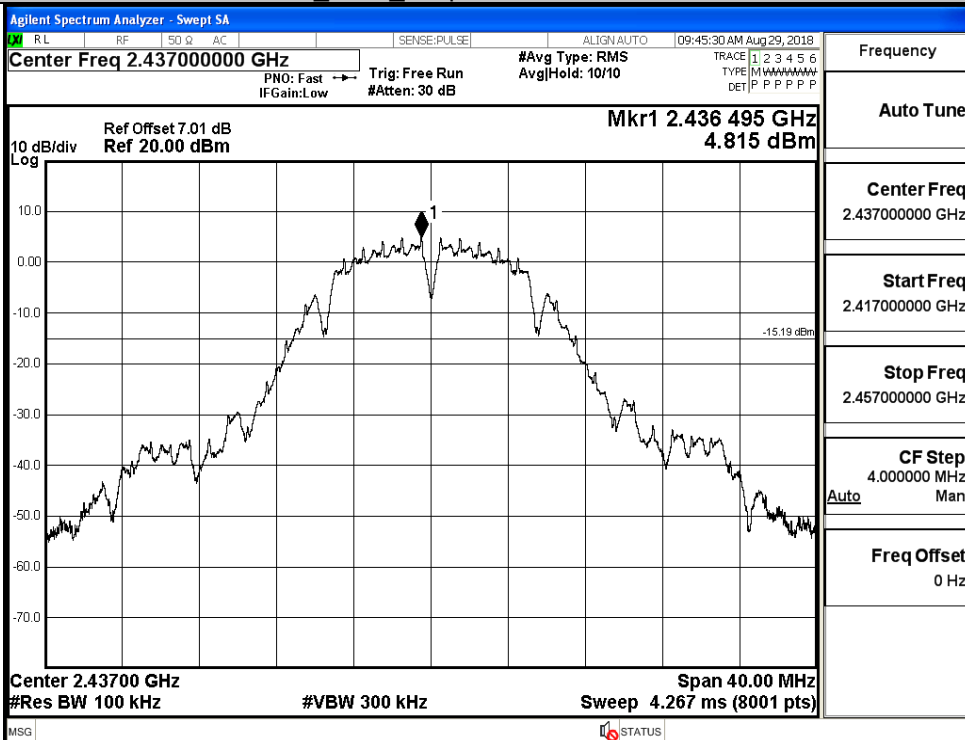


Puw/11B/LCH

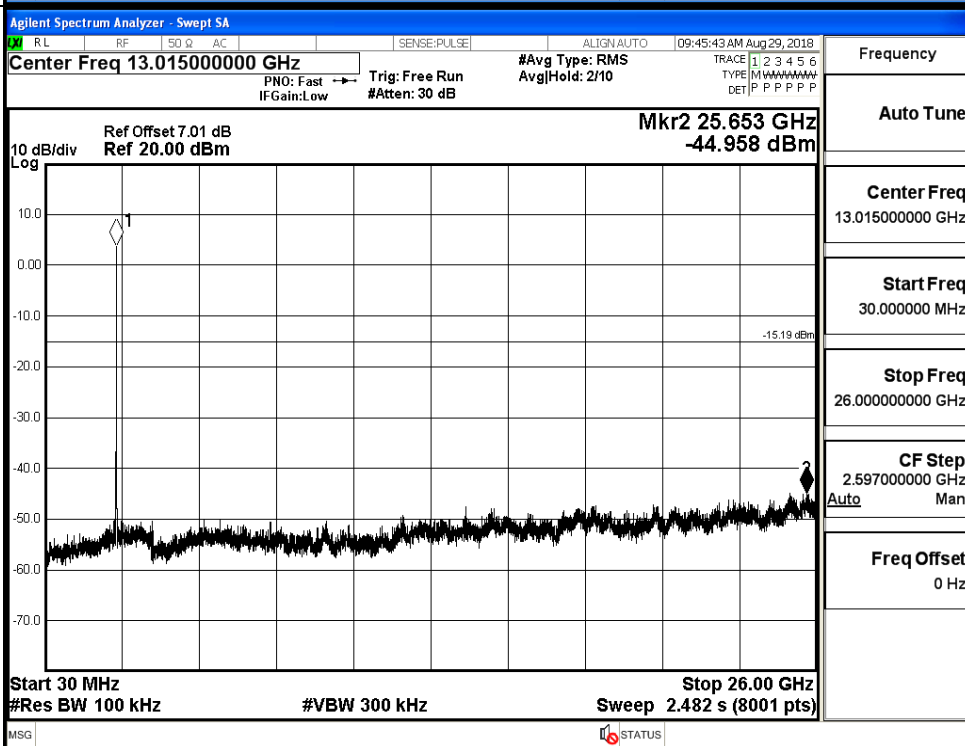


11B MCH Graphs

Pref/11B/MCH

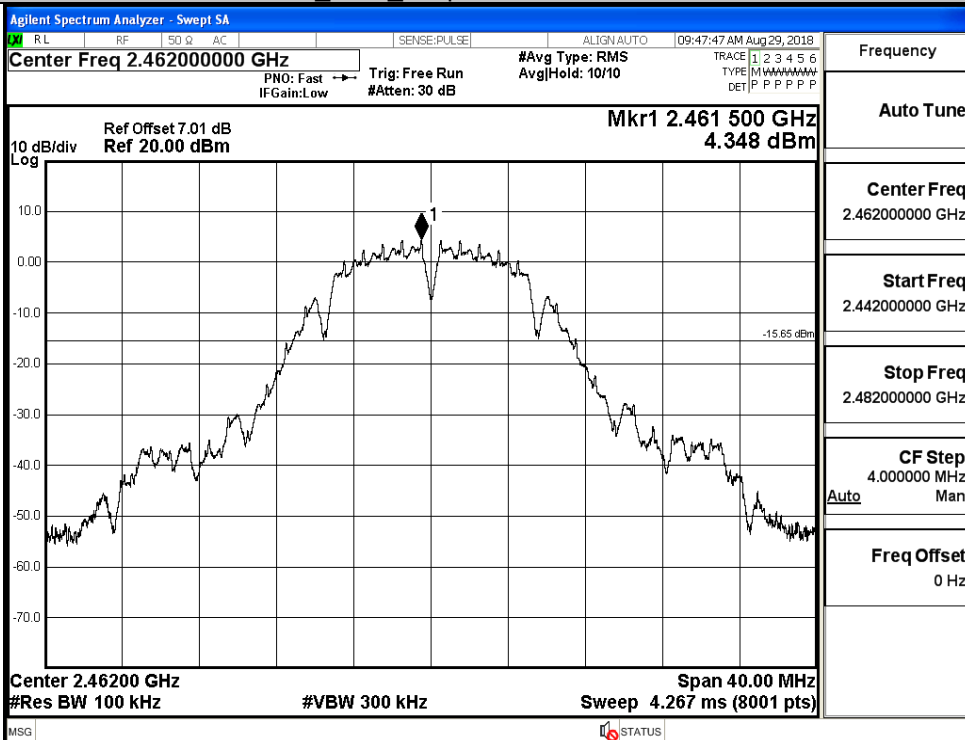


Puw/11B/MCH

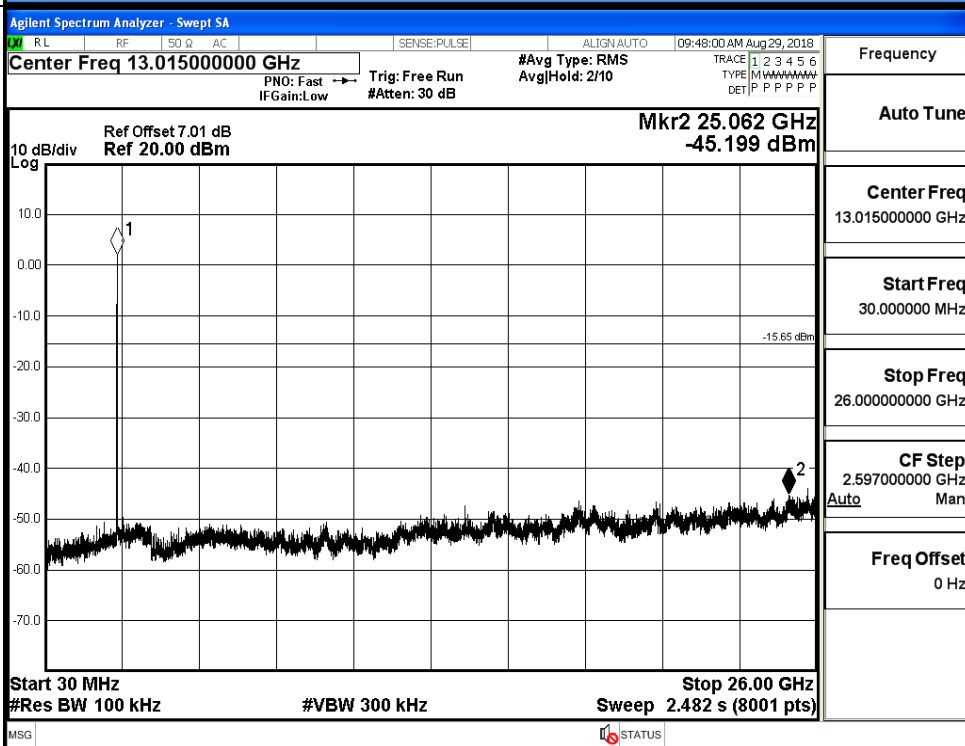


11B HCH Graphs

Pref/11B/HCH

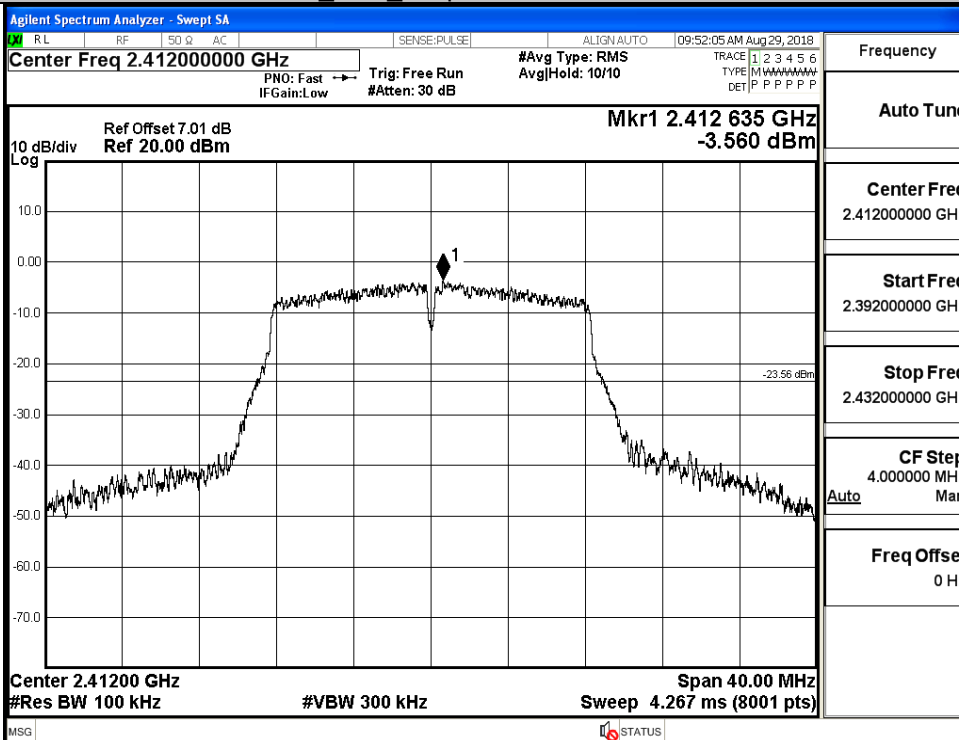


Puw/11B/HCH

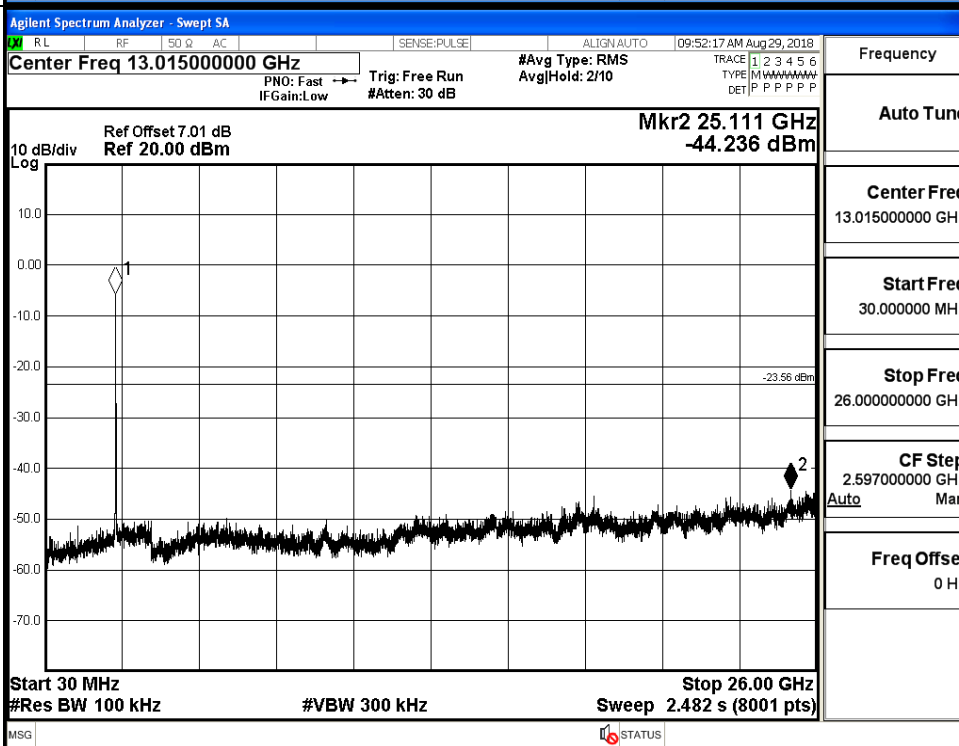


11G LCH Graphs

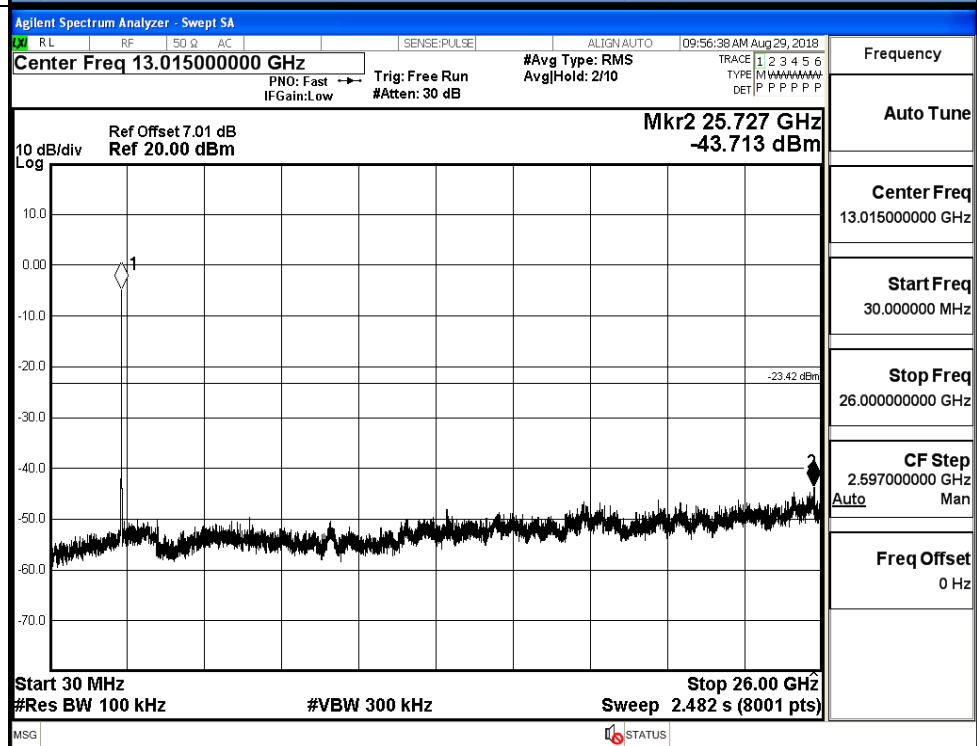
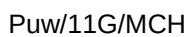
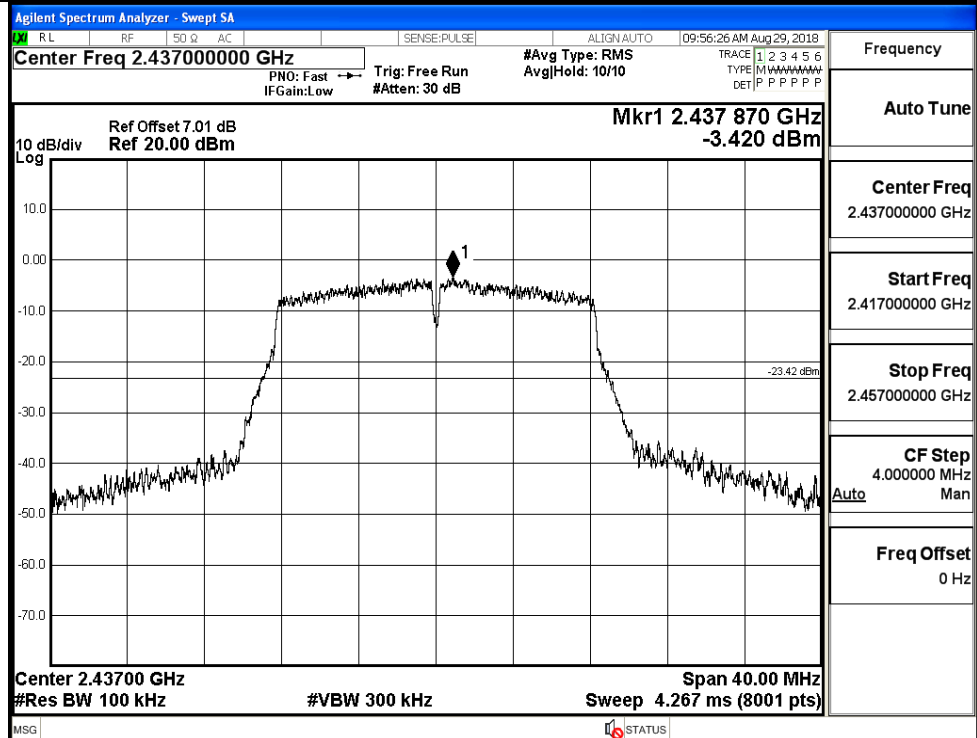
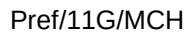
Pref/11G/LCH



Puw/11G/LCH

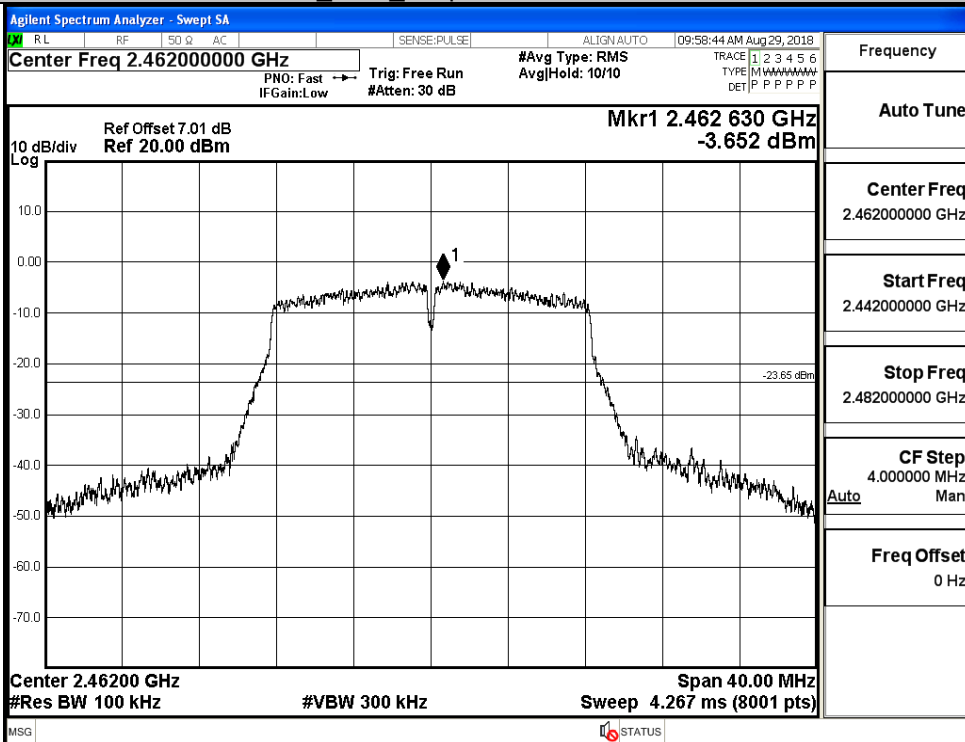


11G MCH Graphs

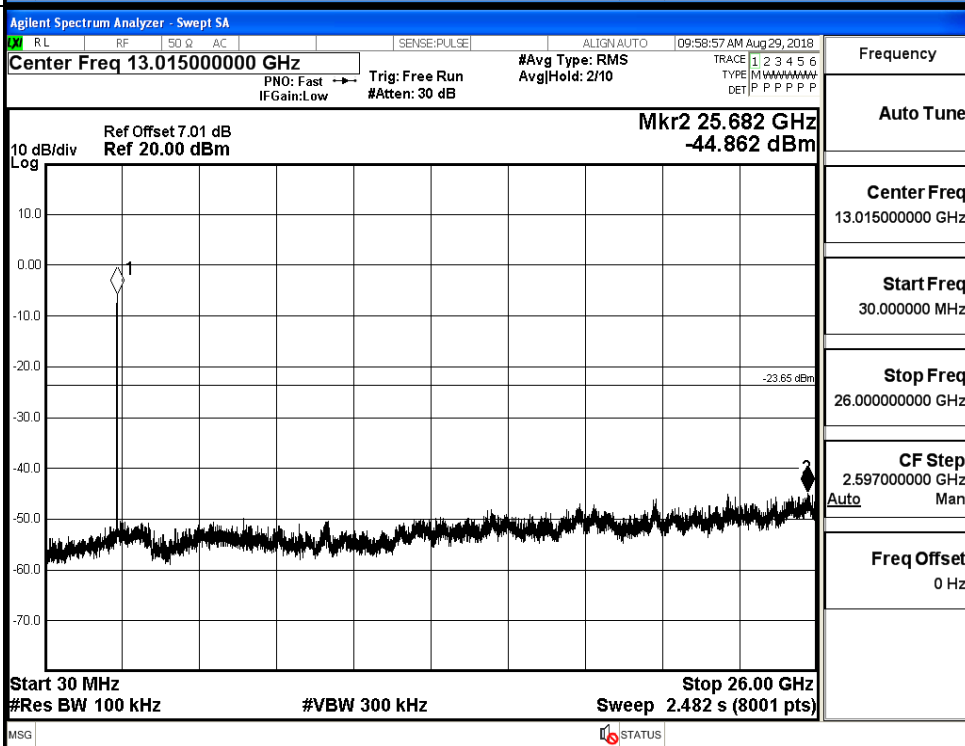


11G HCH Graphs

Pref/11G/HCH

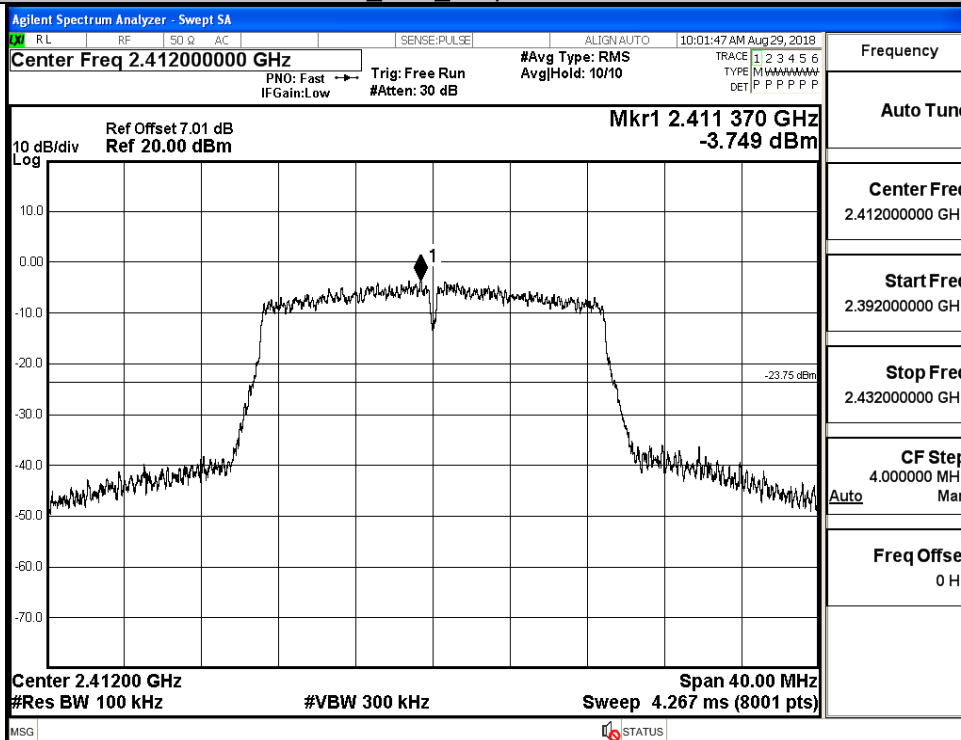


Puw/11G/HCH

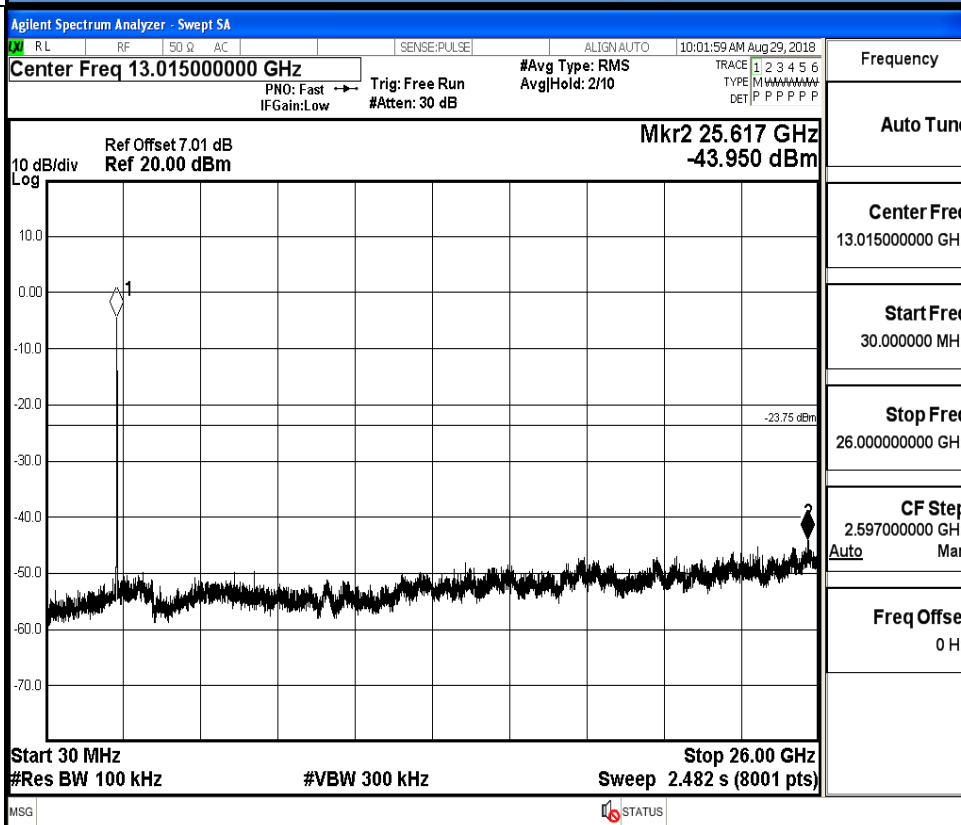


11N20SISO LCH Graphs

Pref/11N20SIS
O/LCH

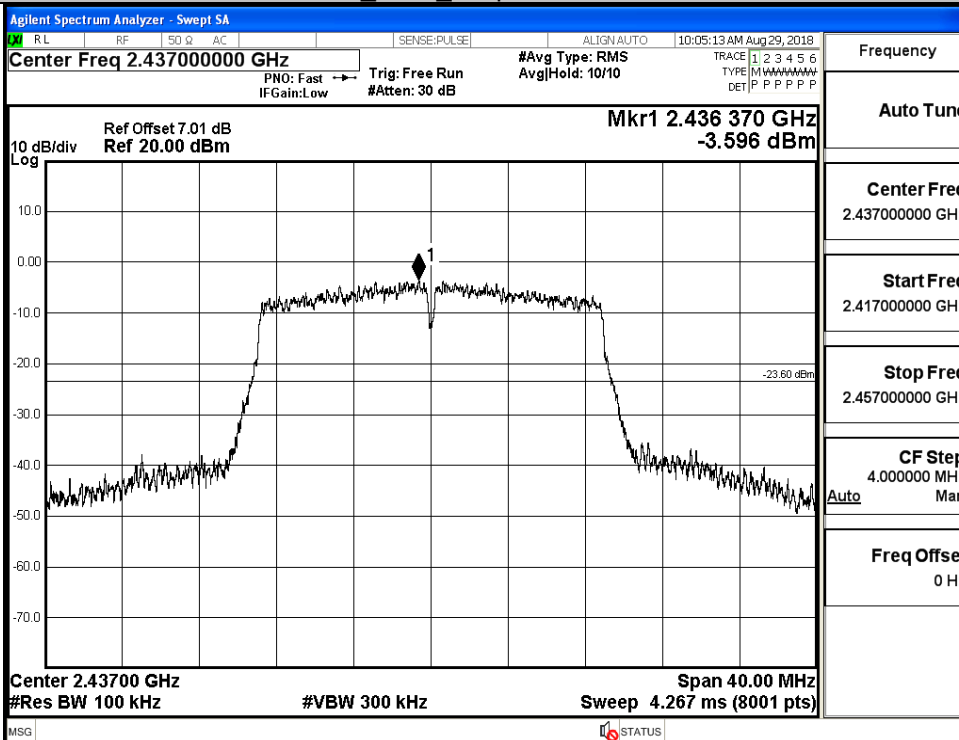


Puw/11N20
SISO/LCH

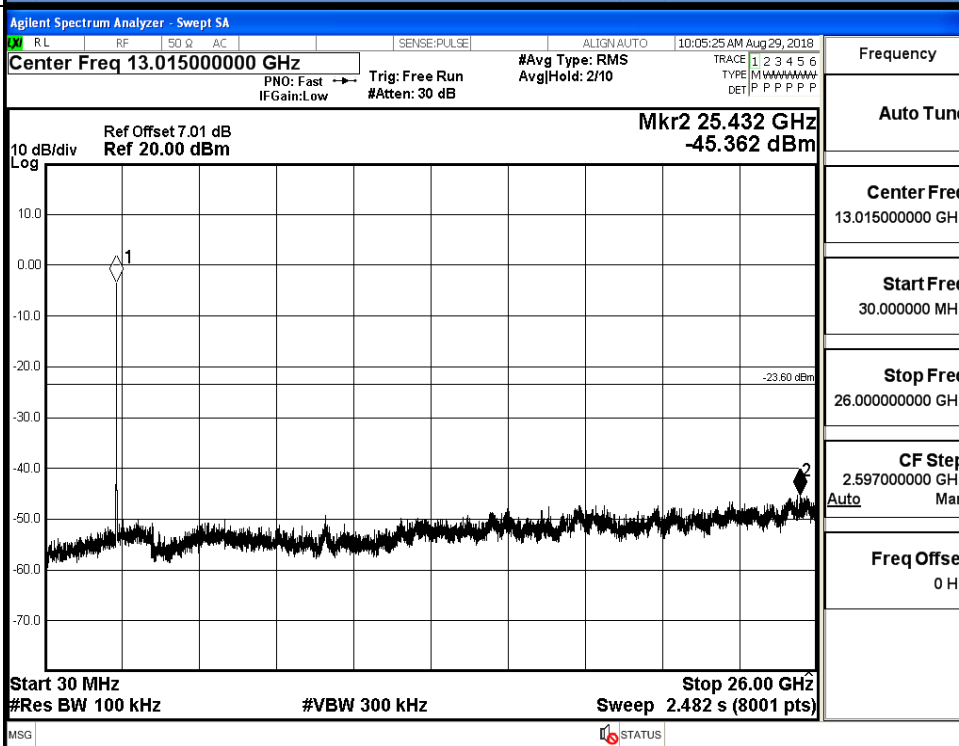


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

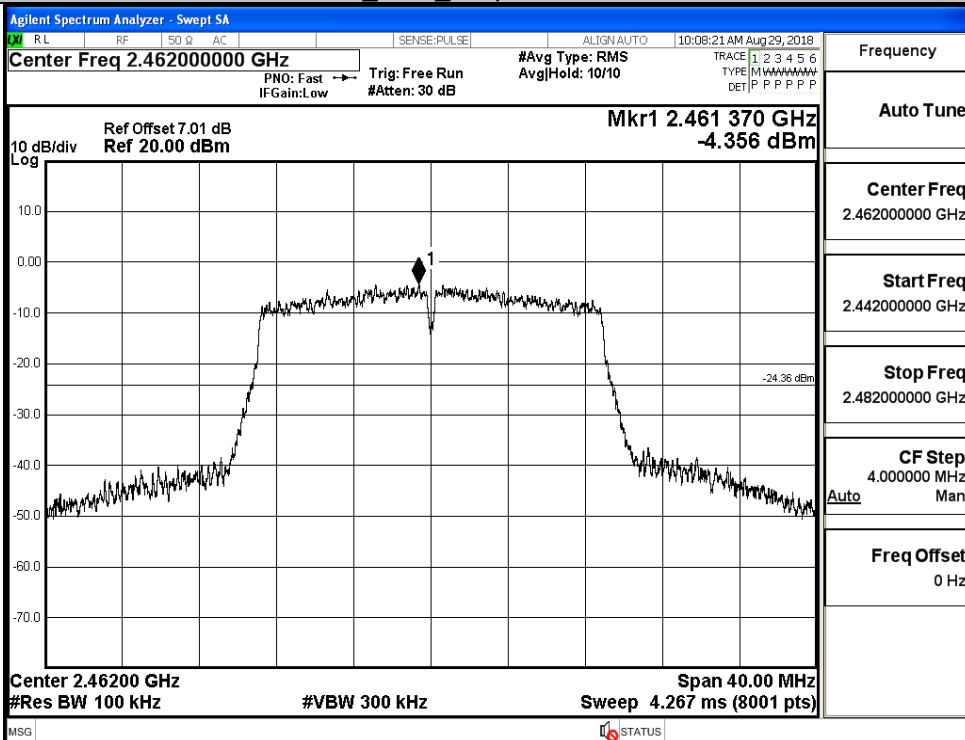


Puw/11N20
SISO/MCH

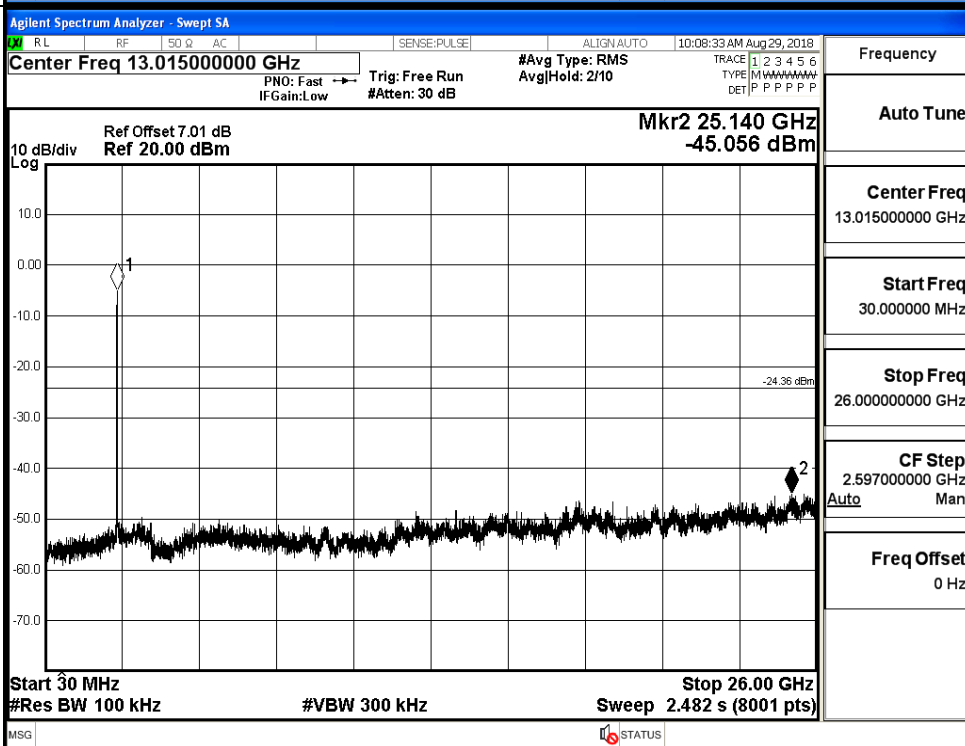


11N20SISO HCH Graphs

Pref/11N20
SISO/HCH

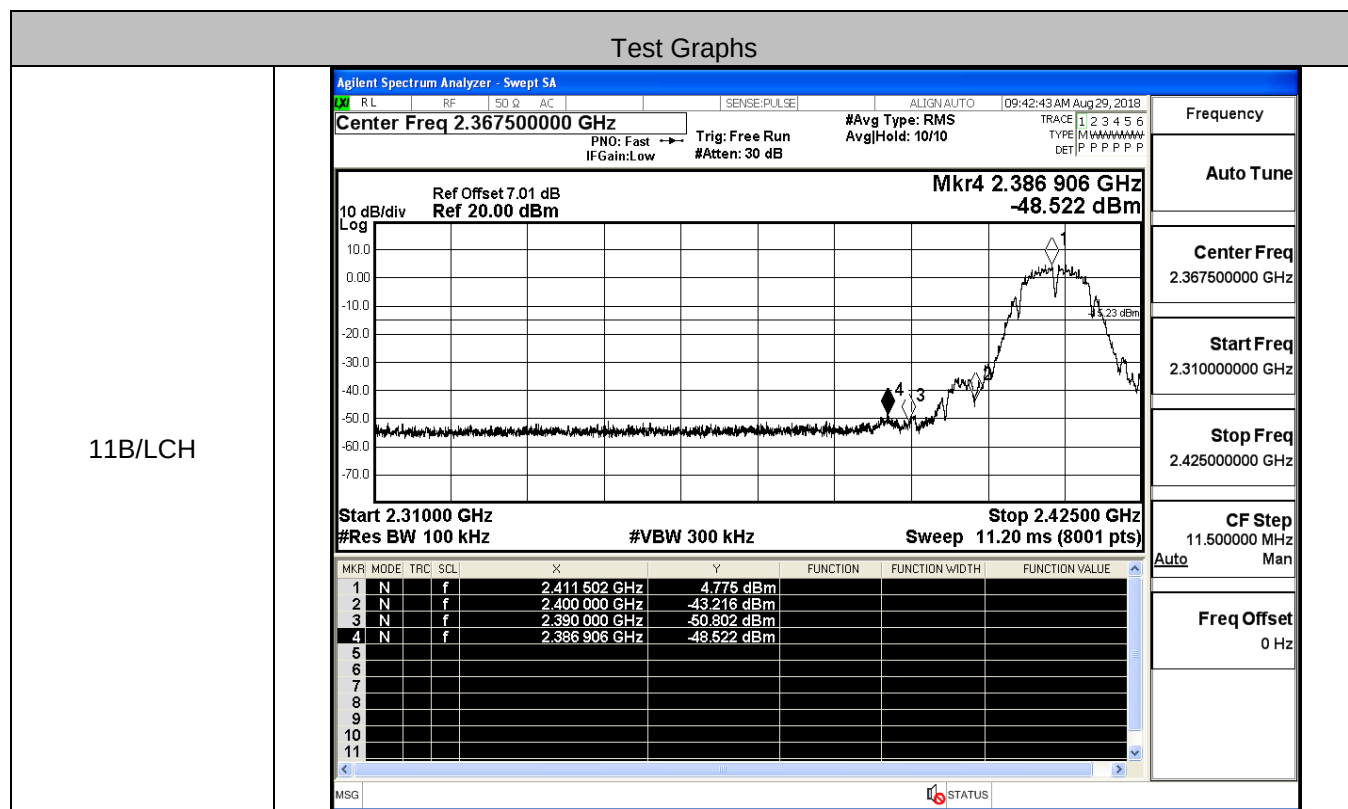


Puw/11N20
SISO/HCH

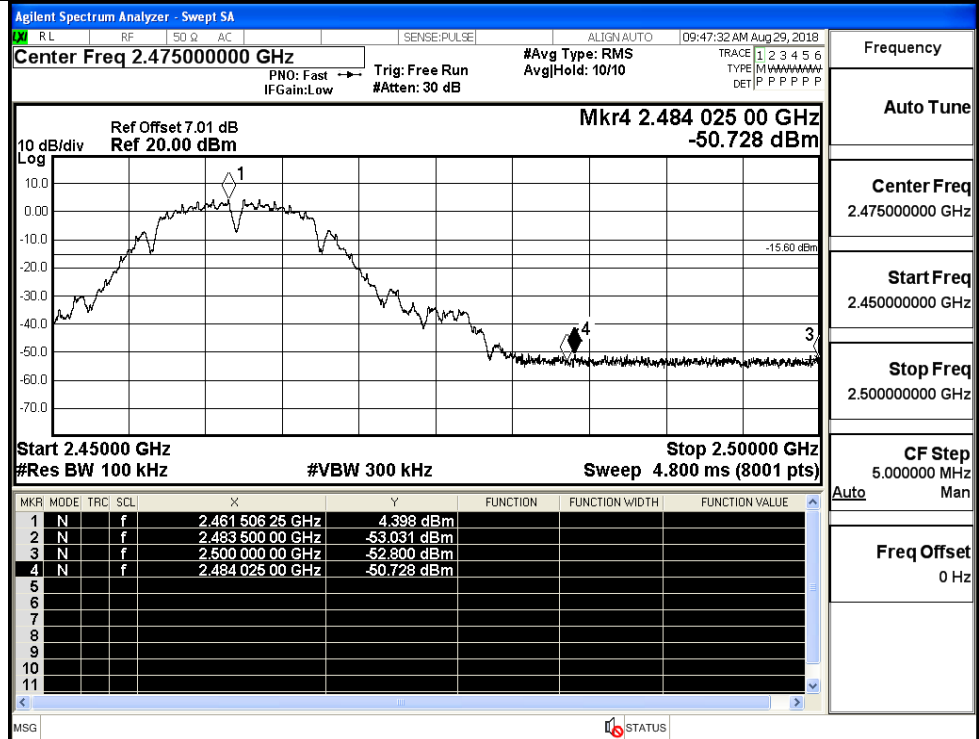


A.6 Band-edge for RF Conducted Emissions

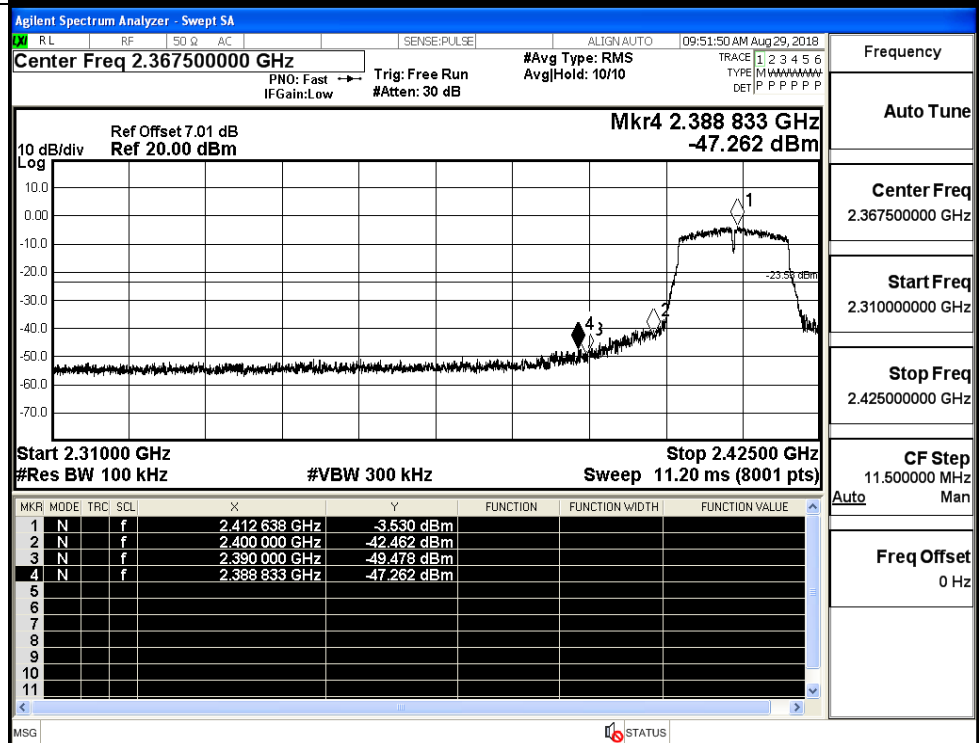
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	4.775	-48.522	-15.23	PASS
	HCH	4.398	-50.728	-15.6	PASS
11G	LCH	-3.530	-47.262	-23.53	PASS
	HCH	-3.607	-48.087	-23.61	PASS
11N20SISO	LCH	-3.652	-48.139	-23.65	PASS
	HCH	-4.142	-48.270	-24.14	PASS



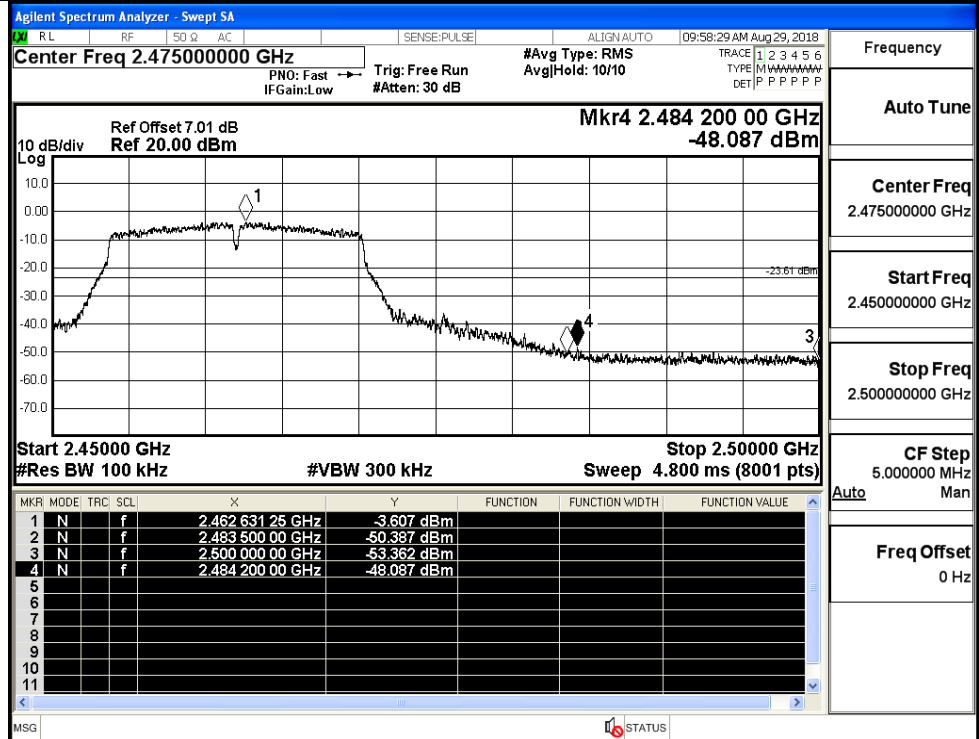
11B/HCH



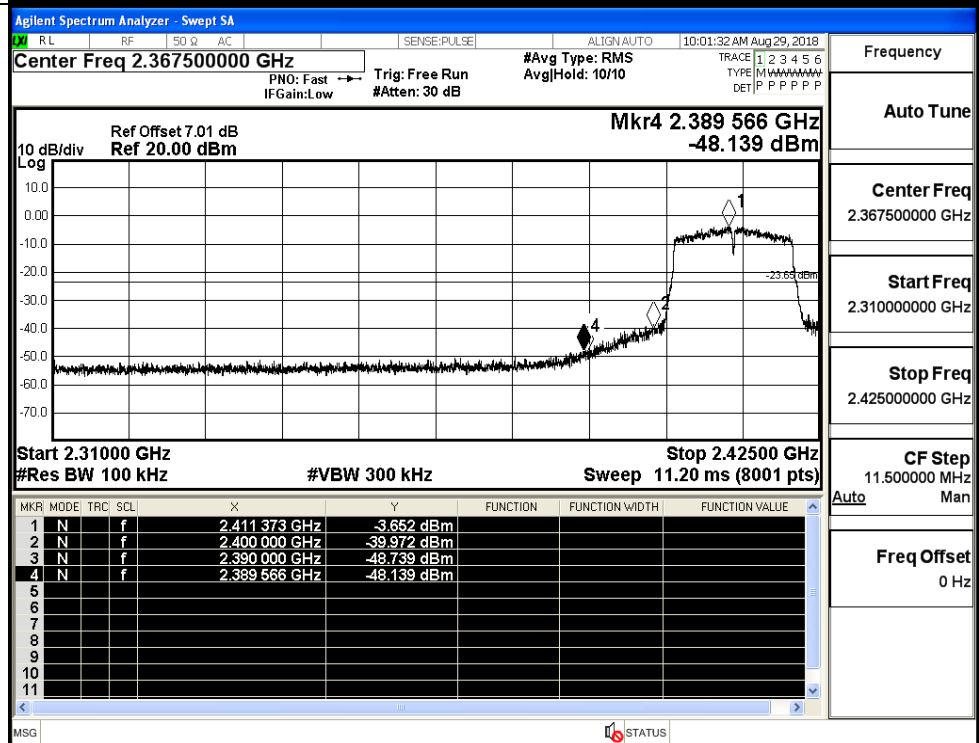
11G/LCH



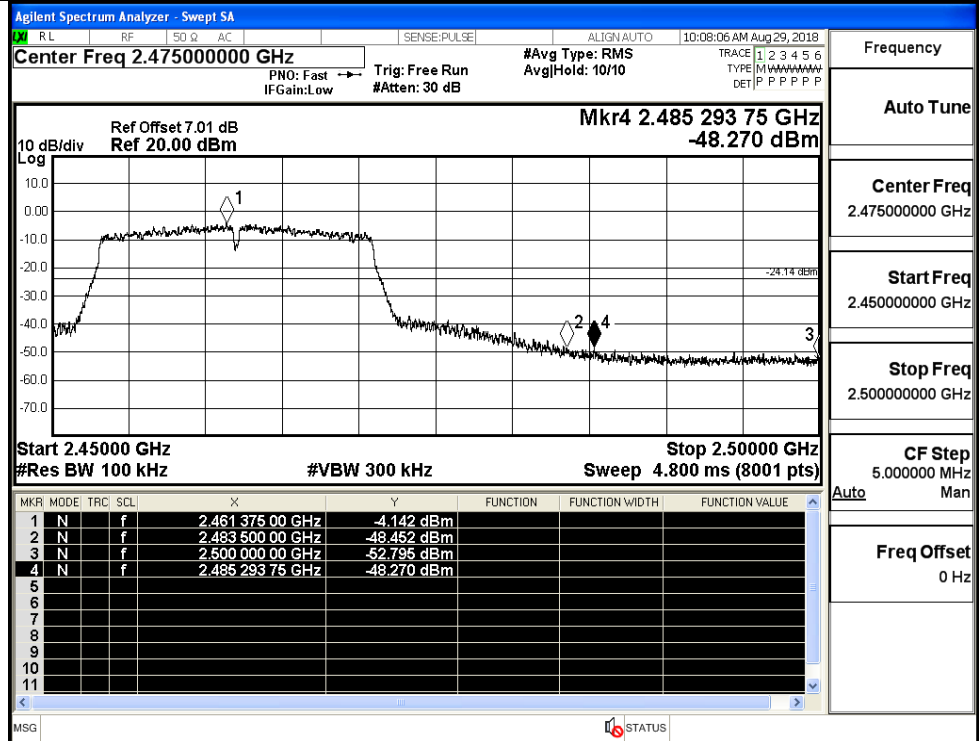
11G/HCH



11N20SISO/LCH



11N20SISO/HCH



Frequency

Auto Tune

Center Freq

2.475000000 GHz

Start Freq

2.450000000 GHz

Stop Freq

2.500000000 GHz

CF Step

5.000000 MHz

Auto Man

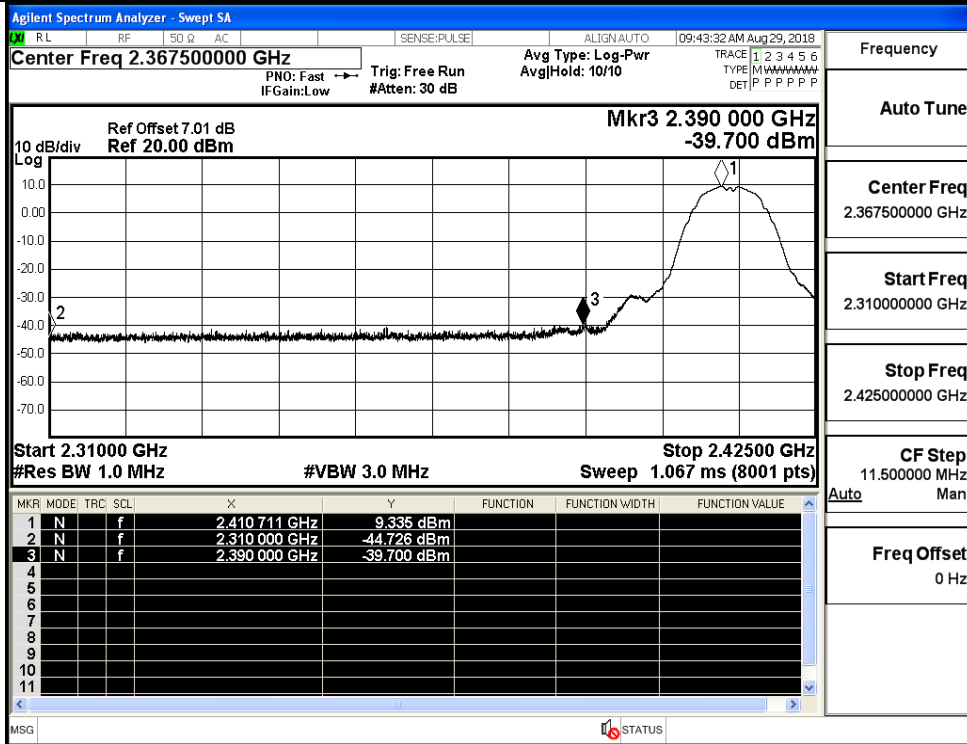
Freq Offset

0 Hz

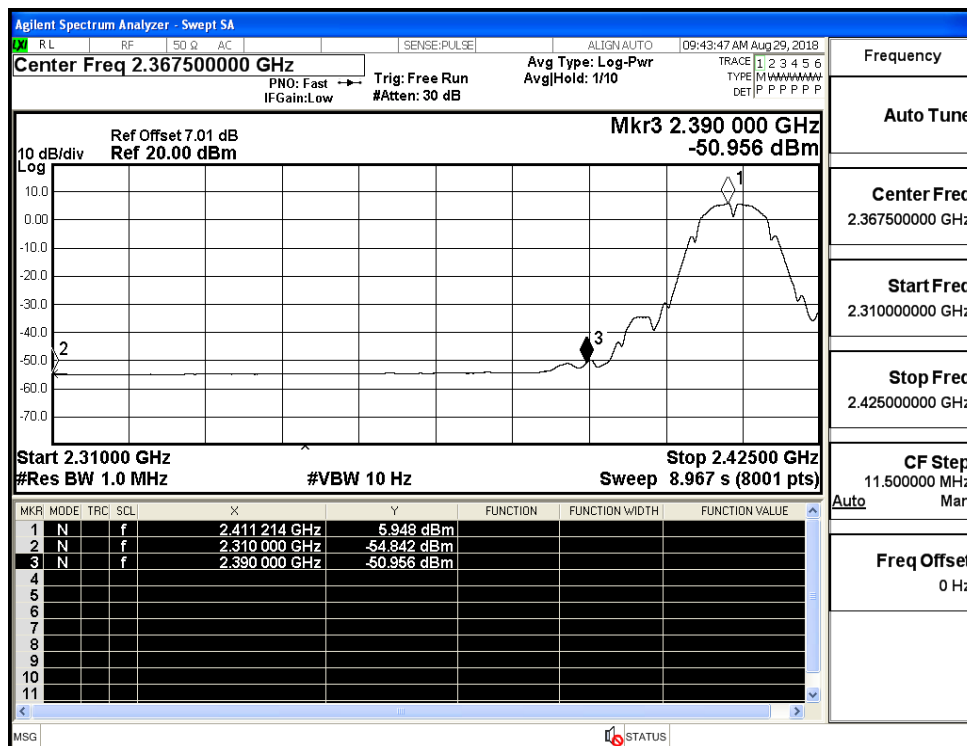
A.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-44.726	2.50	0	53.002	PEAK	74	PASS
	2412	Ant1	2310.0	-54.842	2.50	0	42.886	AV	54	PASS
	2412	Ant1	2390.0	-39.700	2.50	0	58.028	PEAK	74	PASS
	2412	Ant1	2390.0	-50.956	2.50	0	46.772	AV	54	PASS
	2462	Ant1	2483.5	-43.441	2.50	0	54.287	PEAK	74	PASS
	2462	Ant1	2483.5	-53.328	2.50	0	44.400	AV	54	PASS
	2462	Ant1	2500.0	-44.058	2.50	0	53.670	PEAK	74	PASS
	2462	Ant1	2500.0	-53.707	2.50	0	44.021	AV	54	PASS
11G	2412	Ant1	2310.0	-43.559	2.50	0	54.169	PEAK	74	PASS
	2412	Ant1	2310.0	-54.892	2.50	0	42.836	AV	54	PASS
	2412	Ant1	2390.0	-36.491	2.50	0	61.237	PEAK	74	PASS
	2412	Ant1	2390.0	-51.219	2.50	0	46.509	AV	54	PASS
	2462	Ant1	2483.5	-39.729	2.50	0	57.999	PEAK	74	PASS
	2462	Ant1	2483.5	-51.390	2.50	0	46.338	AV	54	PASS
	2462	Ant1	2500.0	-42.705	2.50	0	55.023	PEAK	74	PASS
	2462	Ant1	2500.0	-53.323	2.50	0	44.405	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-45.308	2.50	0	52.420	PEAK	74	PASS
	2412	Ant1	2310.0	-54.835	2.50	0	42.893	AV	54	PASS
	2412	Ant1	2390.0	-33.591	2.50	0	64.137	PEAK	74	PASS
	2412	Ant1	2390.0	-50.078	2.50	0	47.650	AV	54	PASS
	2462	Ant1	2483.5	-37.623	2.50	0	60.105	PEAK	74	PASS
	2462	Ant1	2483.5	-50.779	2.50	0	46.949	AV	54	PASS
	2462	Ant1	2500.0	-41.997	2.50	0	55.731	PEAK	74	PASS
	2462	Ant1	2500.0	-53.334	2.50	0	44.394	AV	54	PASS

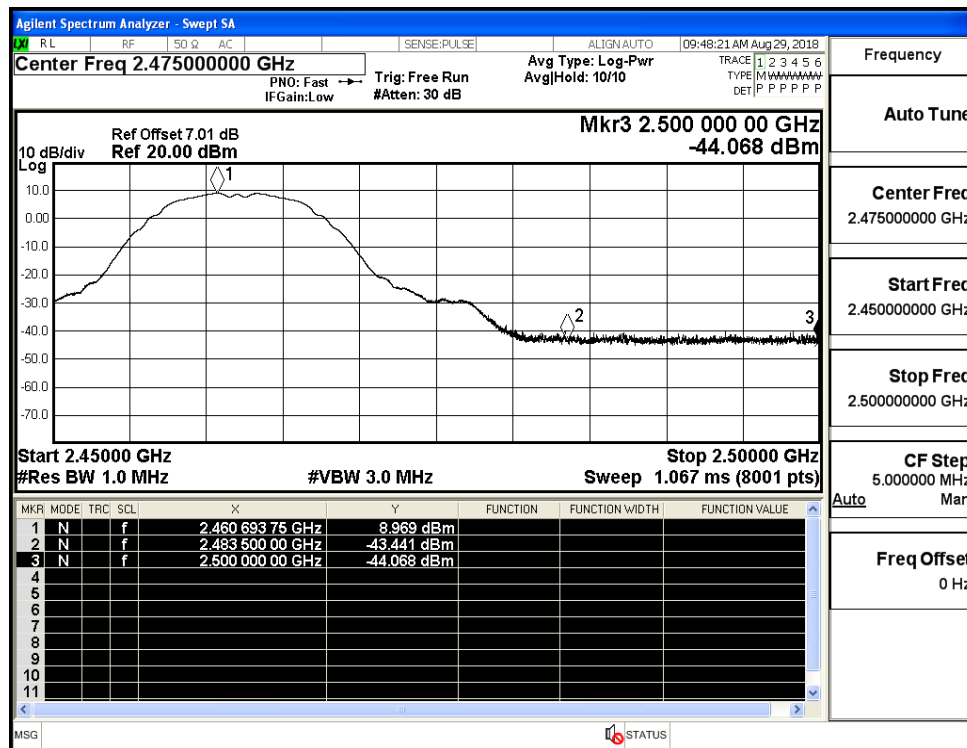
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



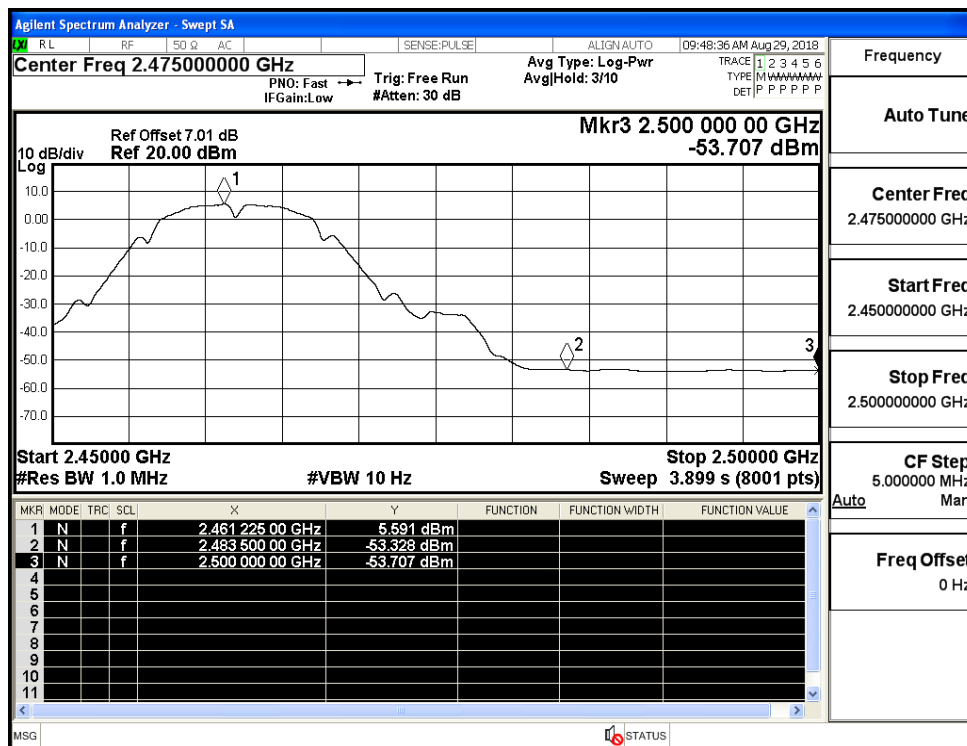
Restrict-band band-edge measurements_11B_2412_Ant1_AV



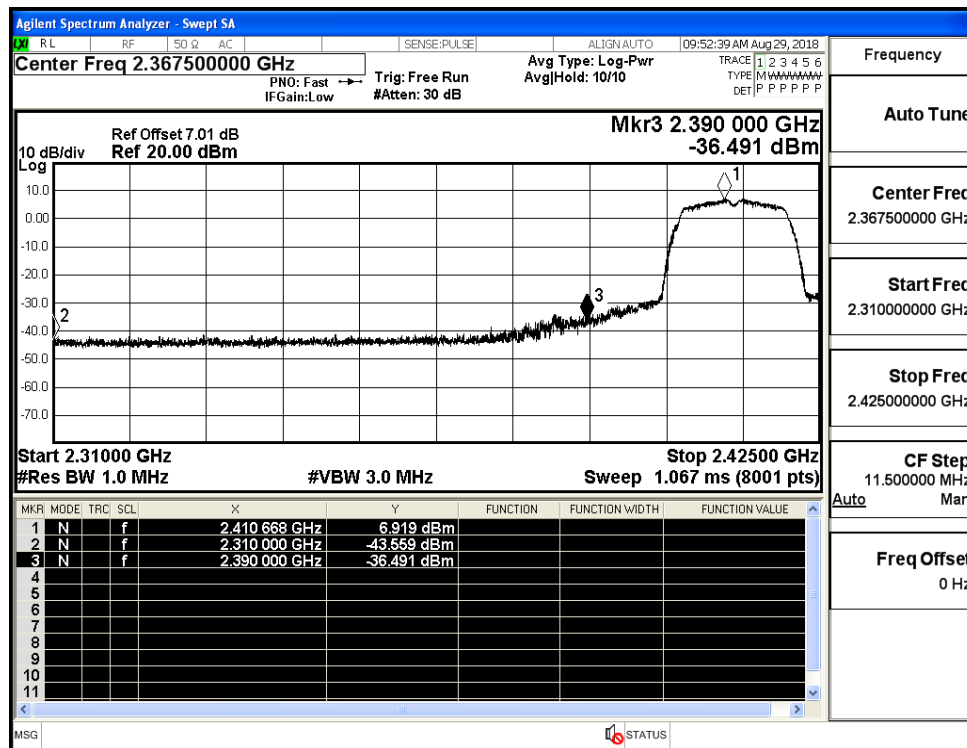
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



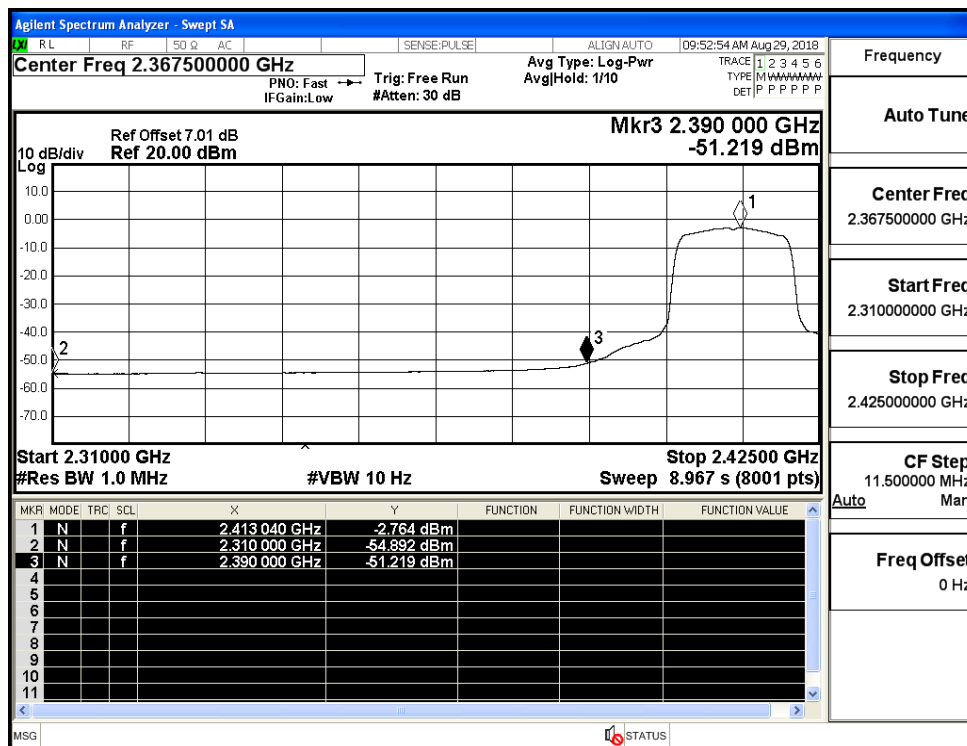
Restrict-band band-edge measurements_11B_2462_Ant1_AV



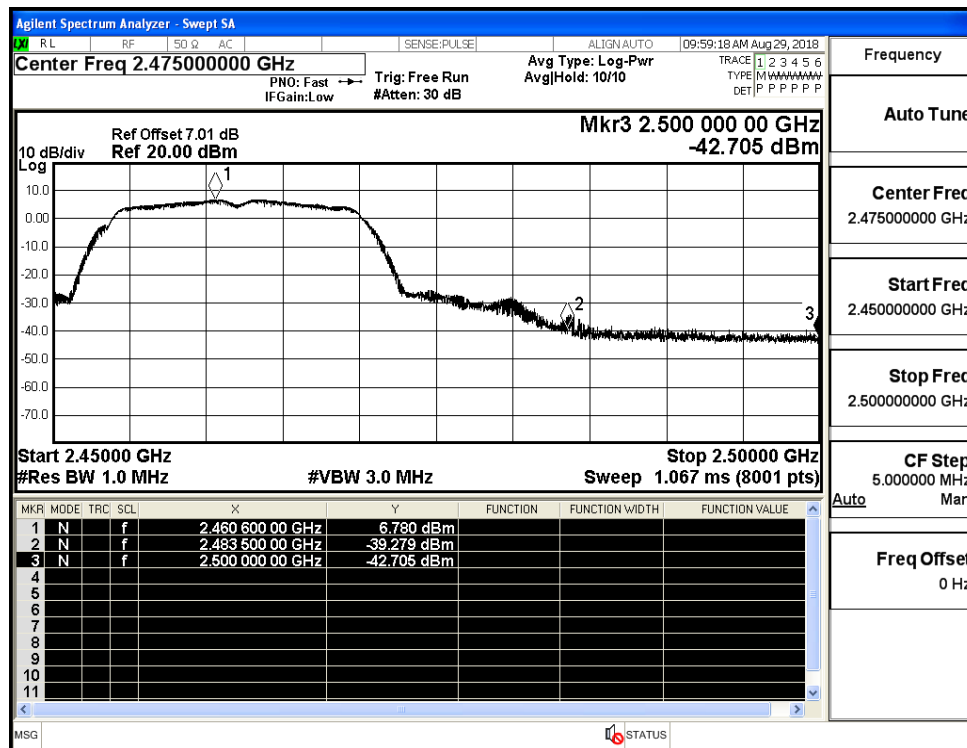
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



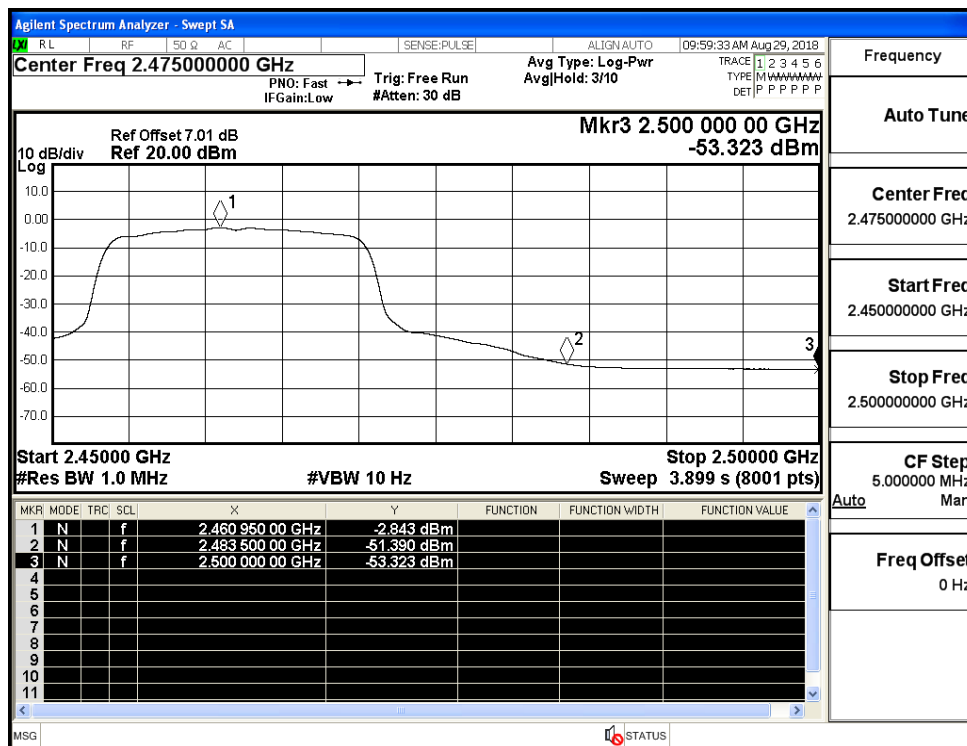
Restrict-band band-edge measurements_11G_2412_Ant1_AV



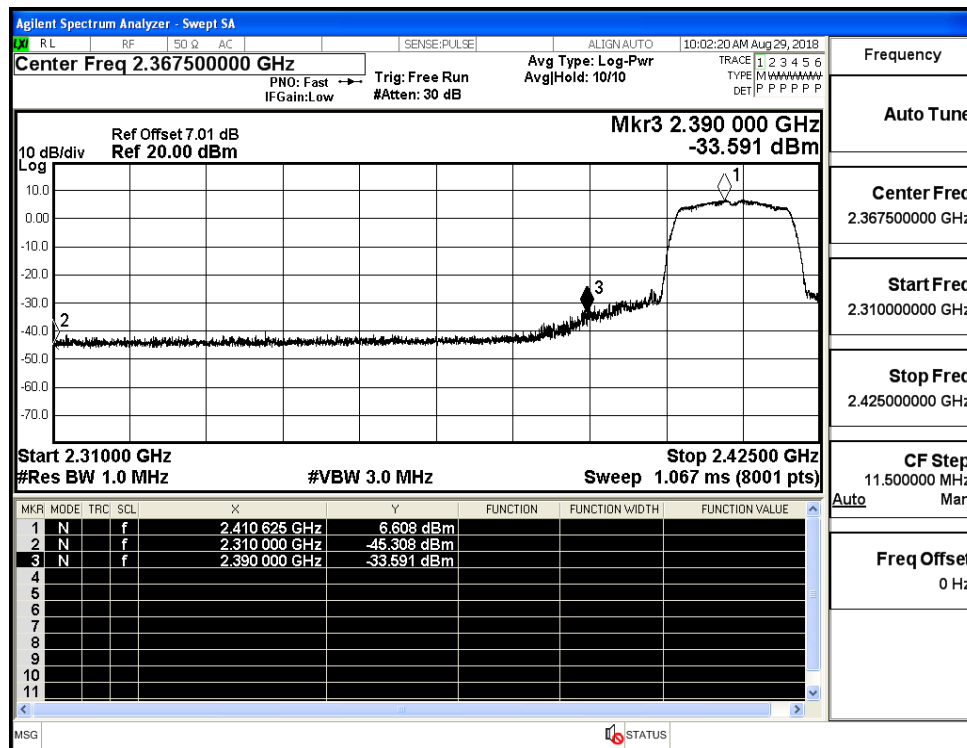
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



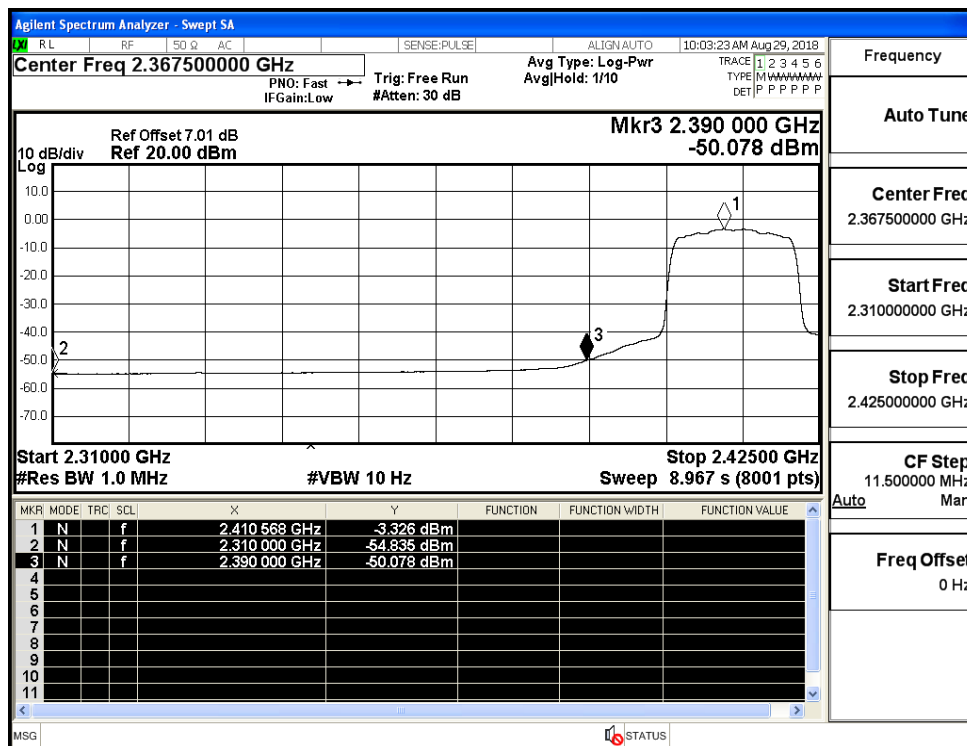
Restrict-band band-edge measurements_11G_2462_Ant1_AV



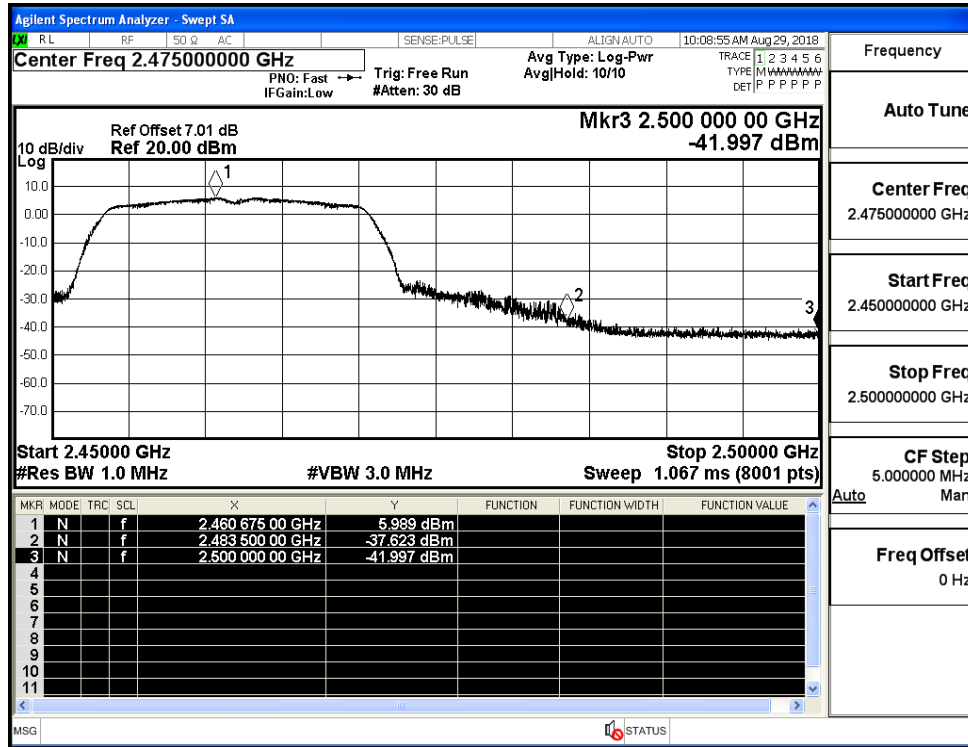
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV

