

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: WIFI Smart Light Bulb

Trade Mark: LOGIC, iSWAG, UNONU

Test Model: SMART BRIGHT LIGHT

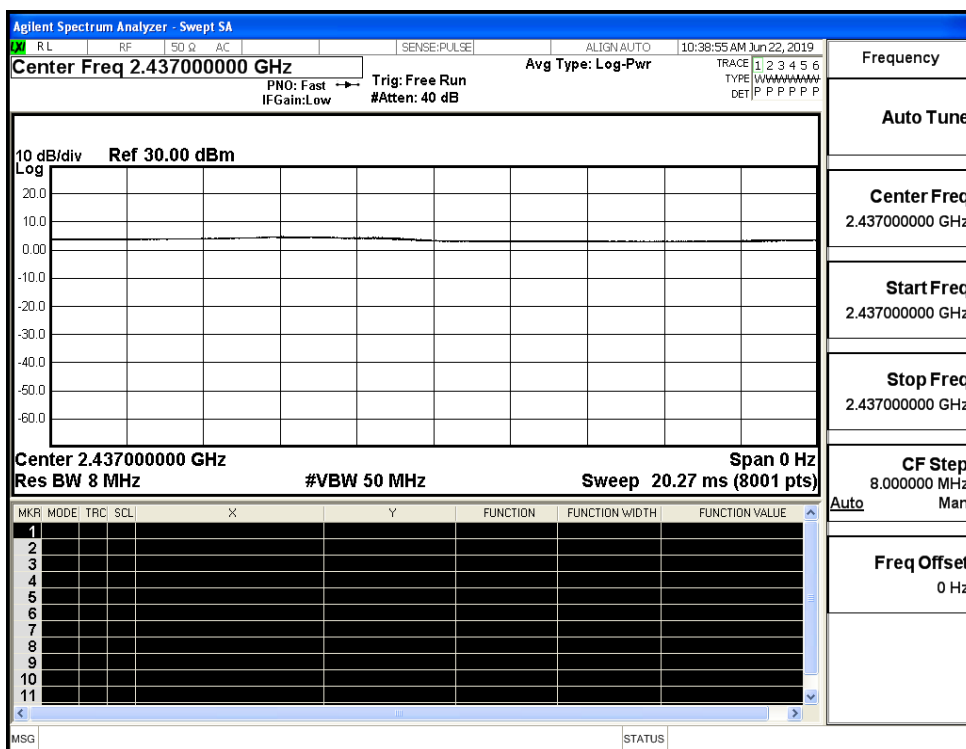
Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.8%
ATM Pressure:	100.0 kPa
Test Engineer:	JERRY.ZENG
Supervised by:	Tom.Liu

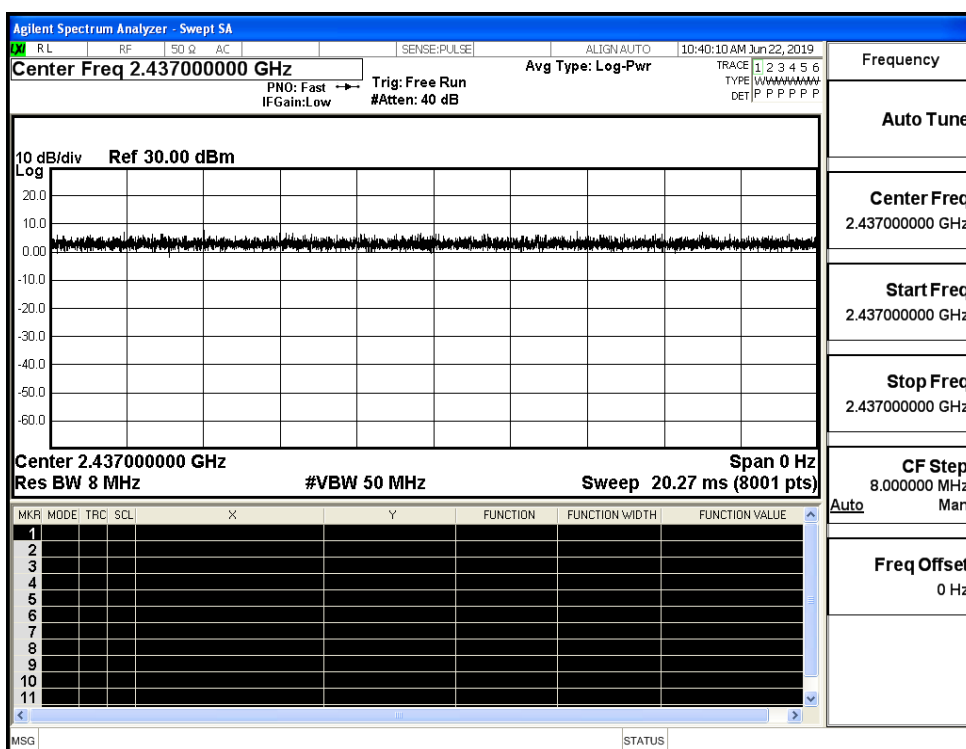
C.1 Duty Cycle

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

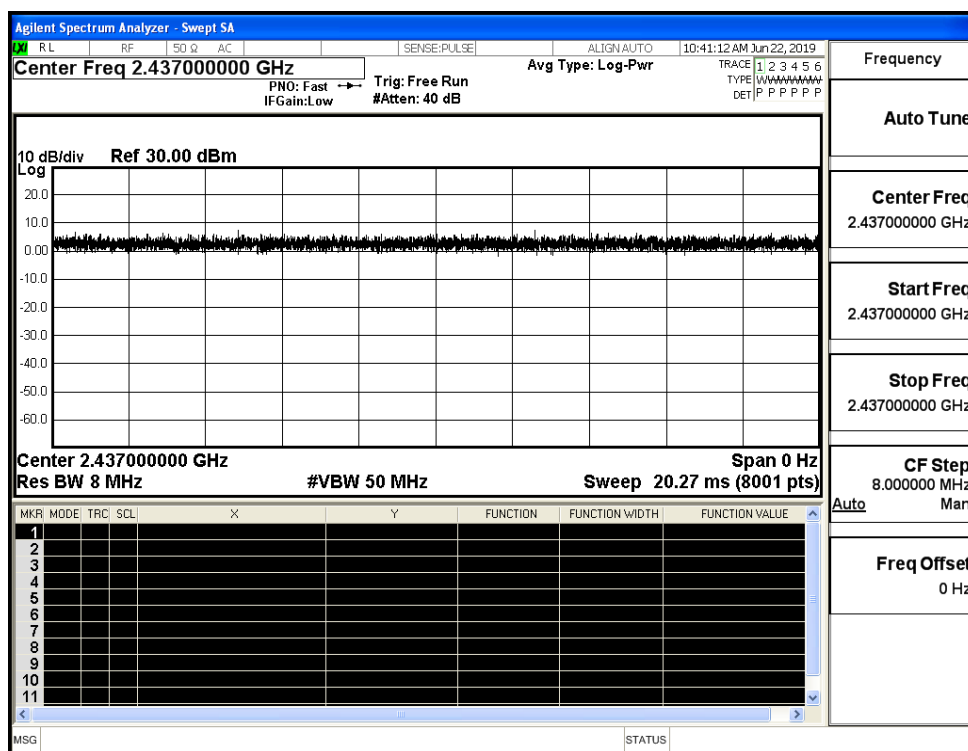
Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



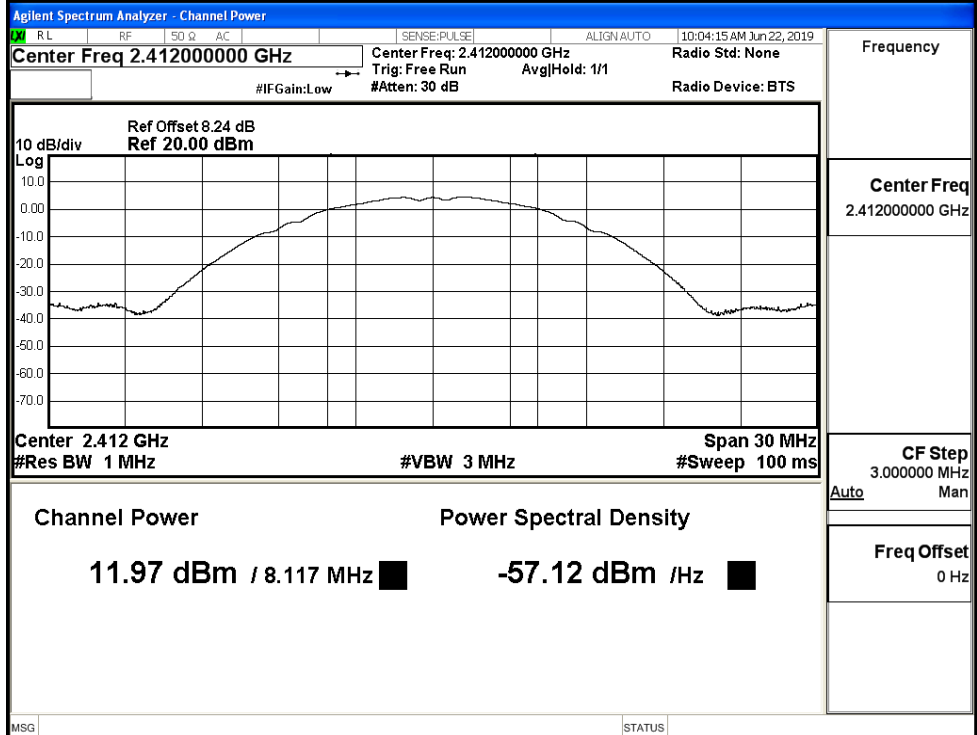
Duty Cycle_11N40SISO_2437_Ant1

C.2 Maximum Conducted Output Power

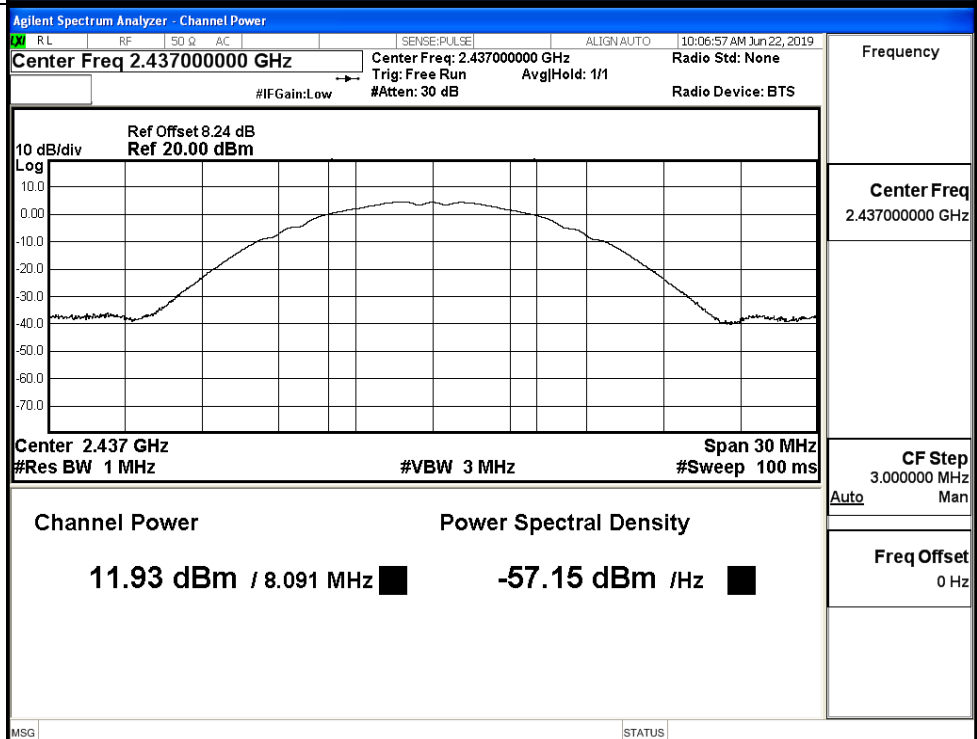
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	11.97	30	PASS
	MCH	11.93	30	PASS
	HCH	12.04	30	PASS
11G	LCH	15.27	30	PASS
	MCH	15.06	30	PASS
	HCH	15.38	30	PASS
11N20SISO	LCH	16.54	30	PASS
	MCH	16.62	30	PASS
	HCH	16.55	30	PASS

Test Graphs

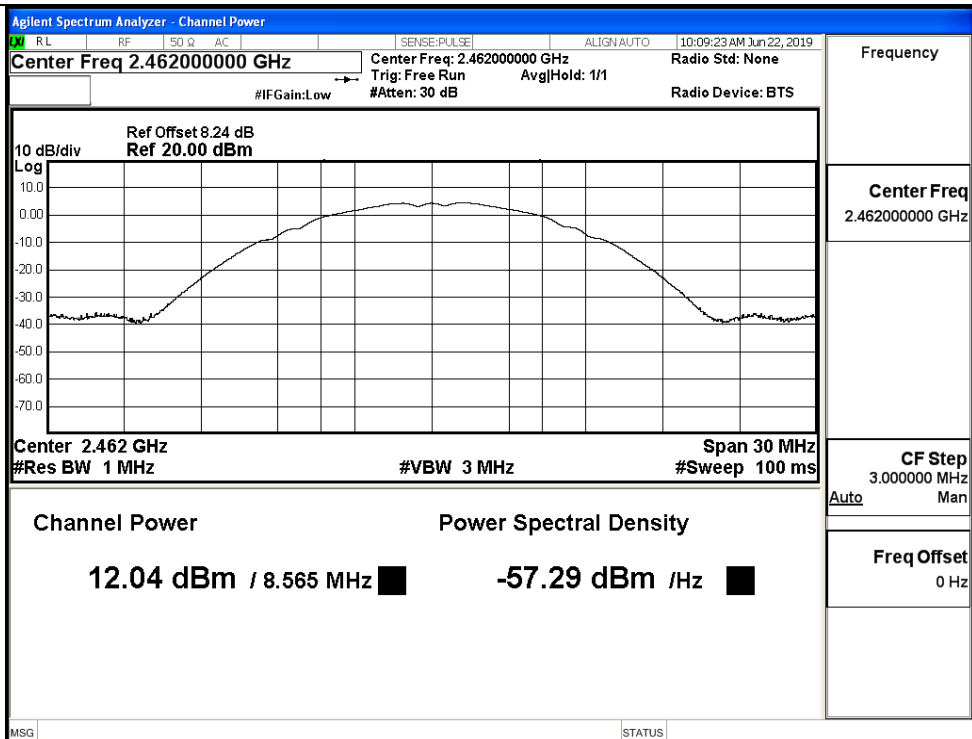
11B/LCH



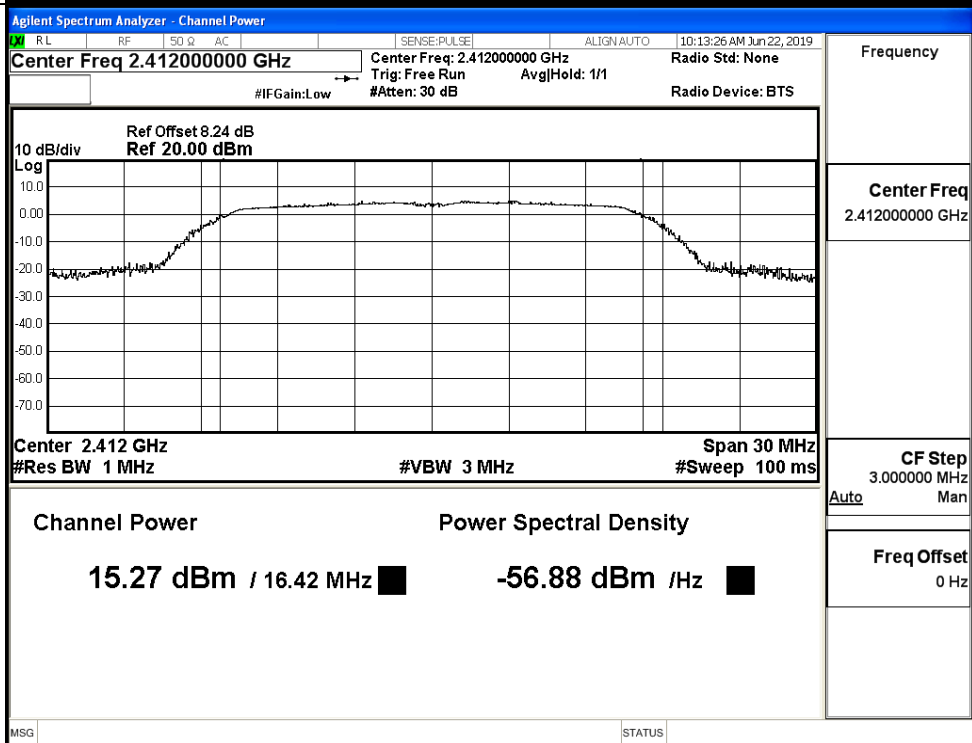
11B/MCH



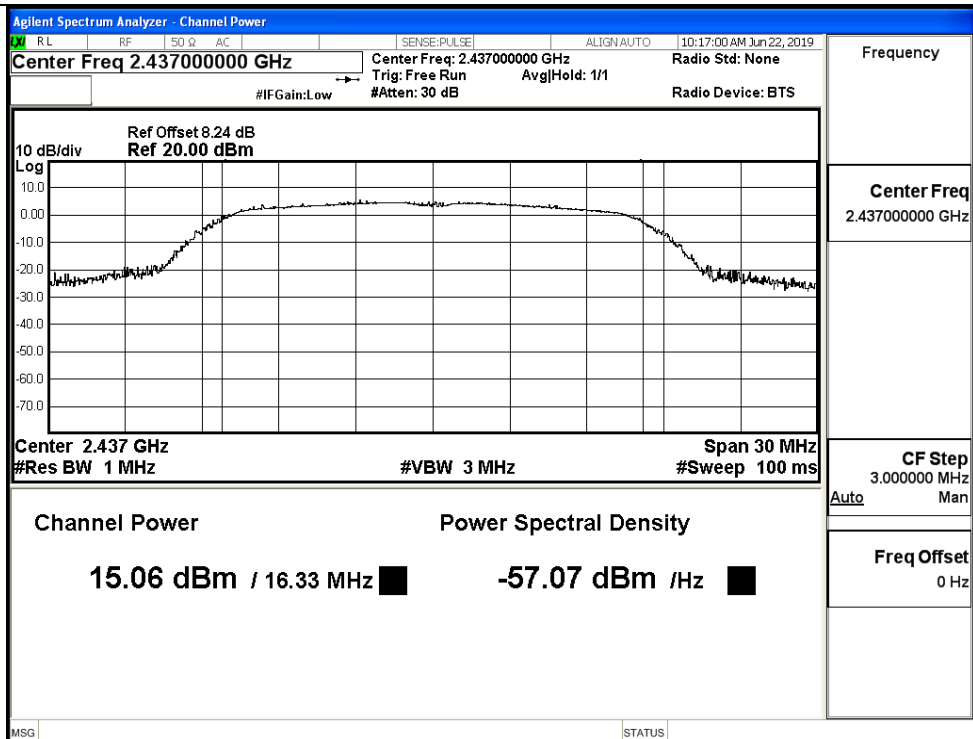
11B/HCH



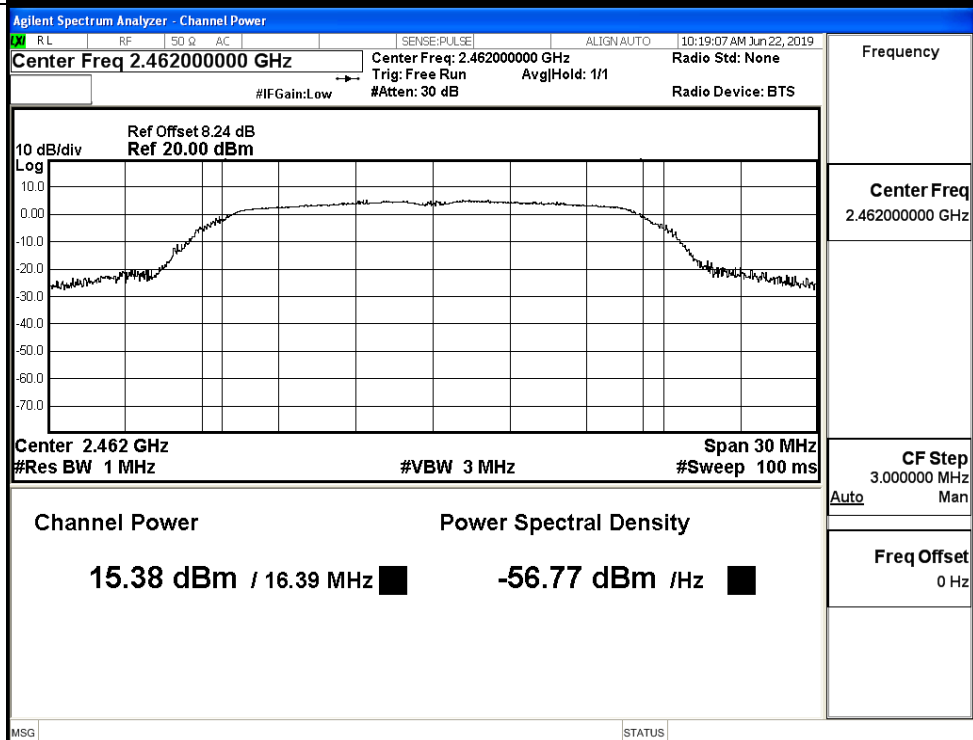
11G/LCH



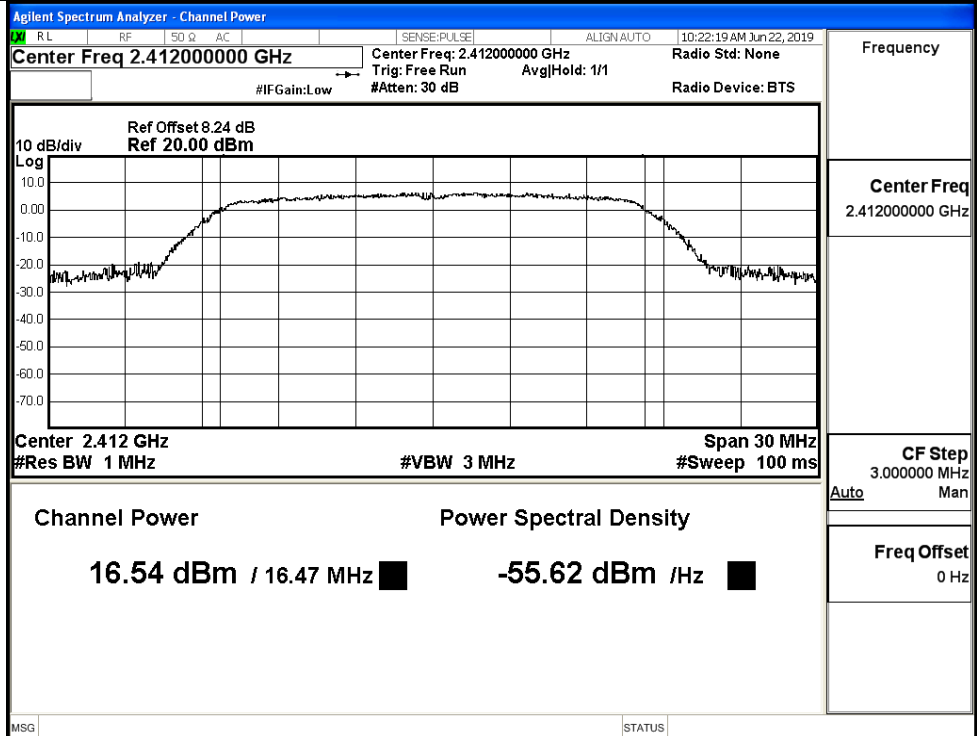
11G/MCH



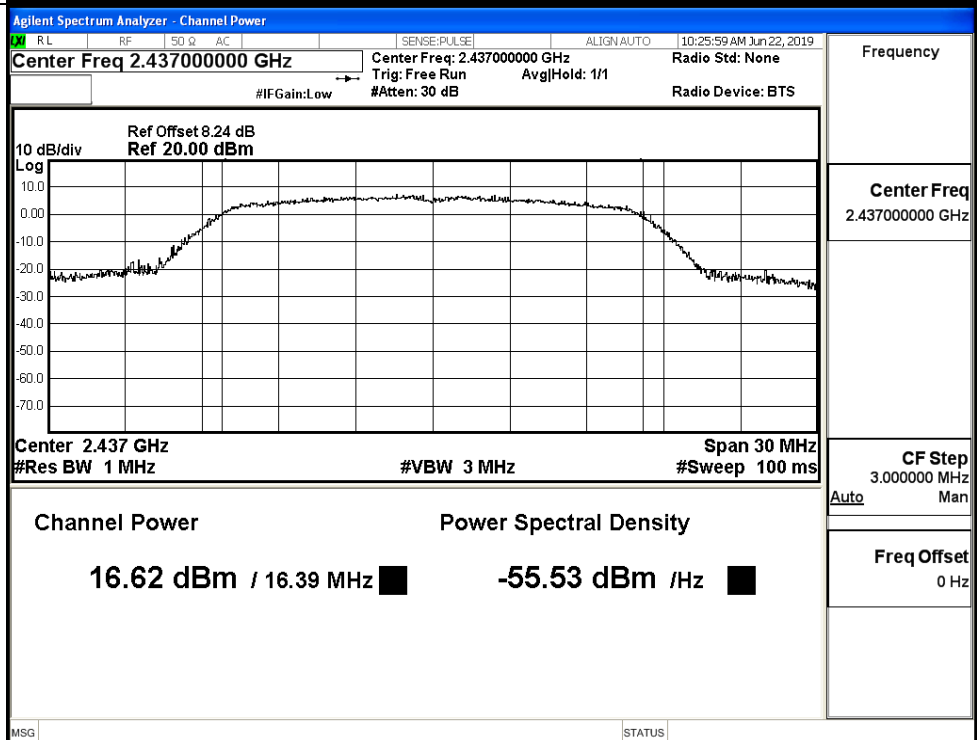
11G/HCH

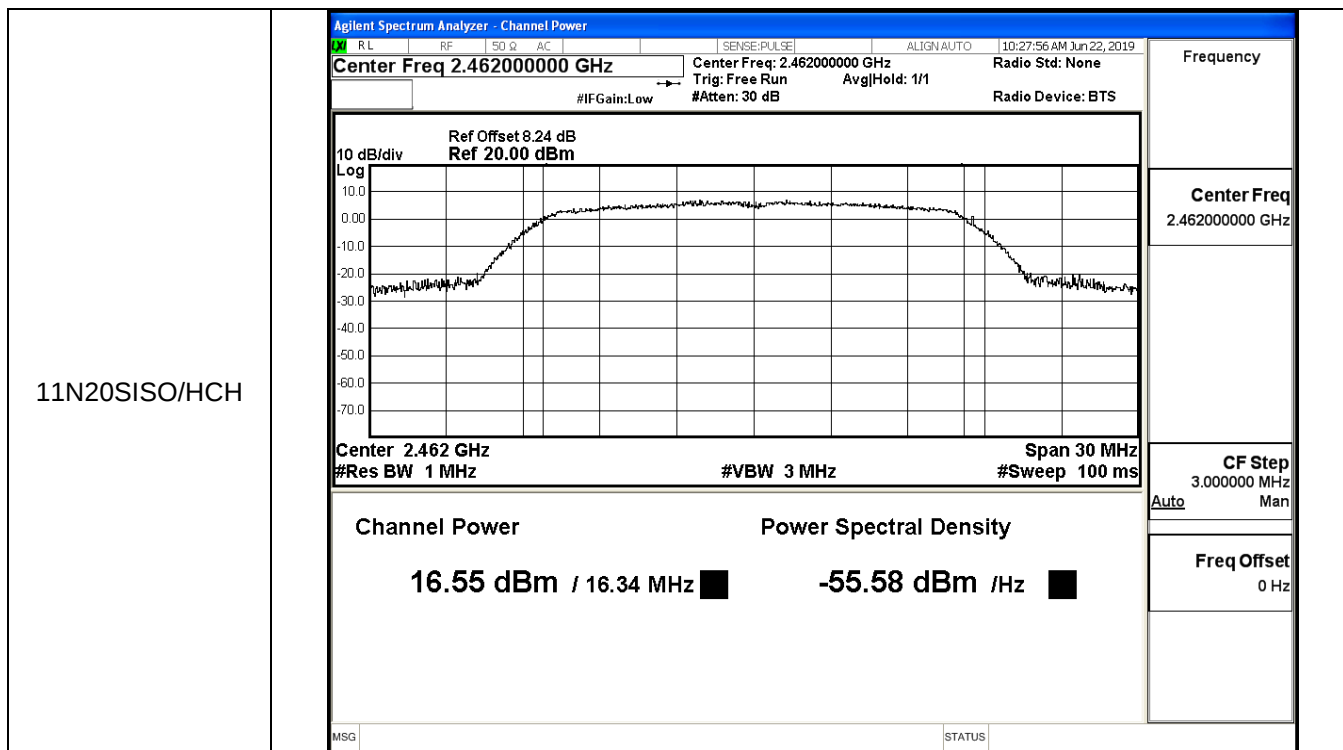


11N20SISO/LCH



11N20SISO/MCH



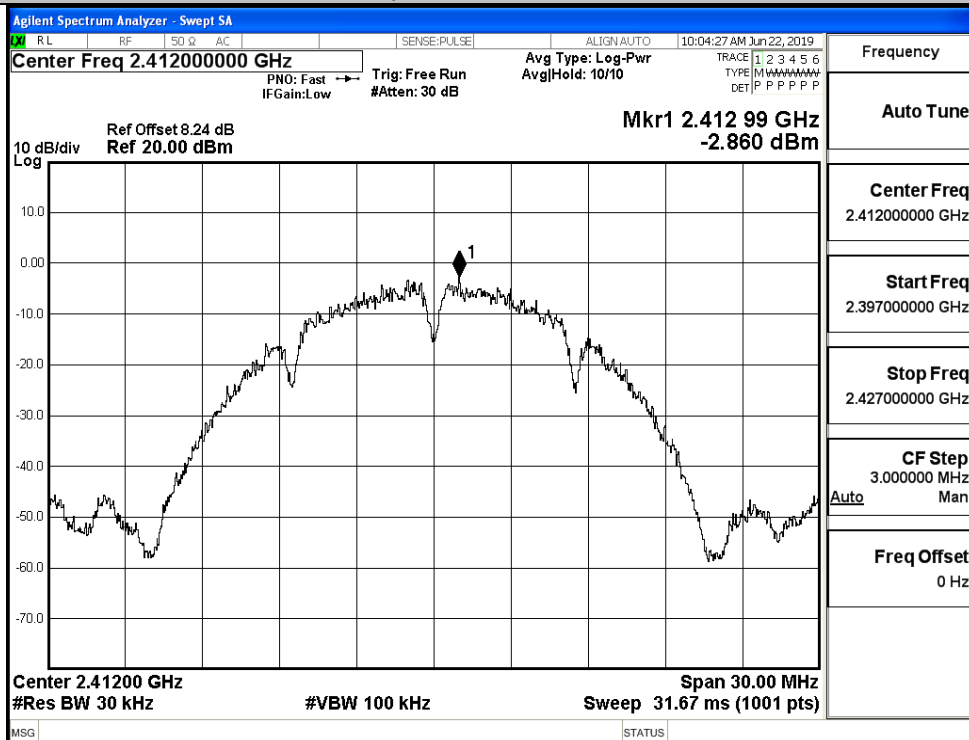


C.3 Maximum Power Spectral Density

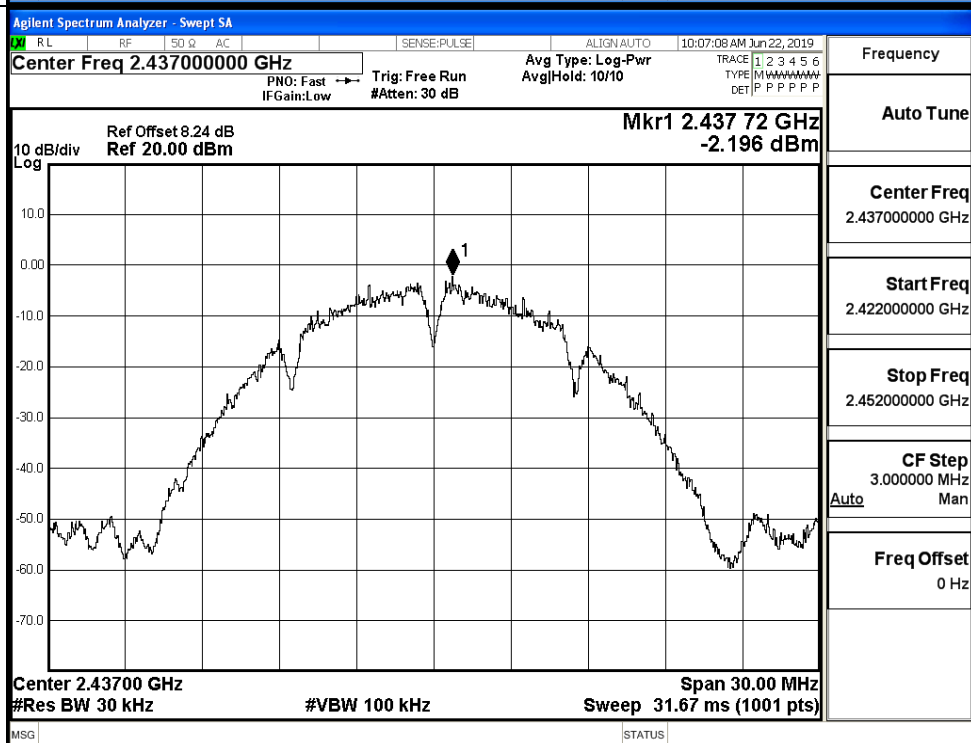
Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-2.860	8	PASS
	MCH	-2.196	8	PASS
	HCH	-3.100	8	PASS
11G	LCH	-8.322	8	PASS
	MCH	-7.897	8	PASS
	HCH	-7.967	8	PASS
11N20SISO	LCH	-7.529	8	PASS
	MCH	-7.030	8	PASS
	HCH	-7.246	8	PASS

Test Graphs

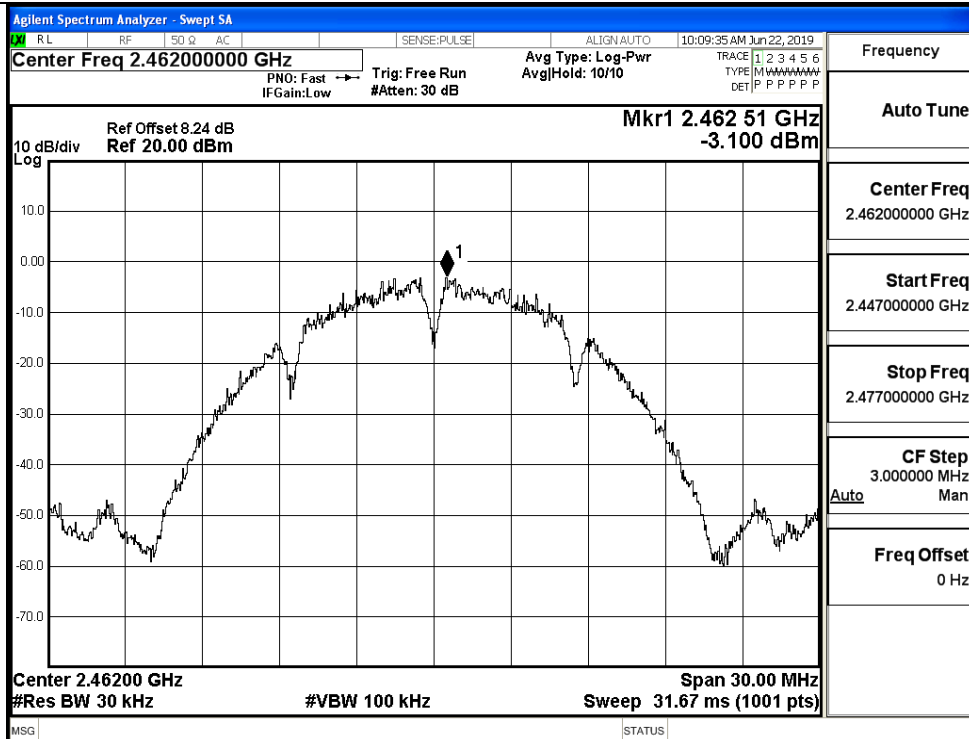
11B/LCH



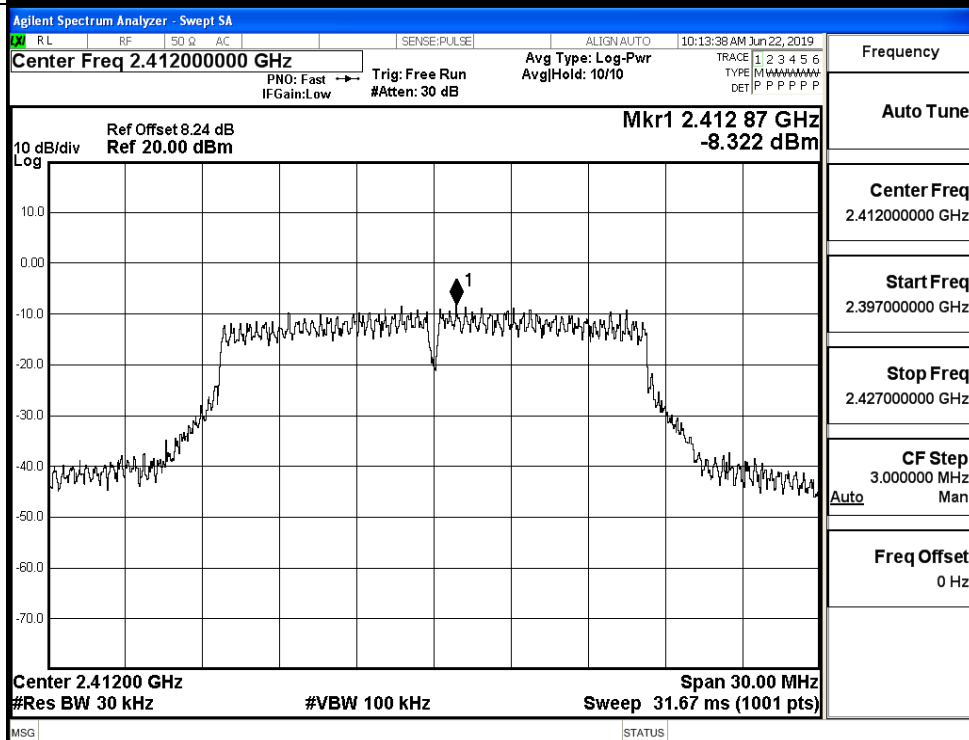
11B/MCH



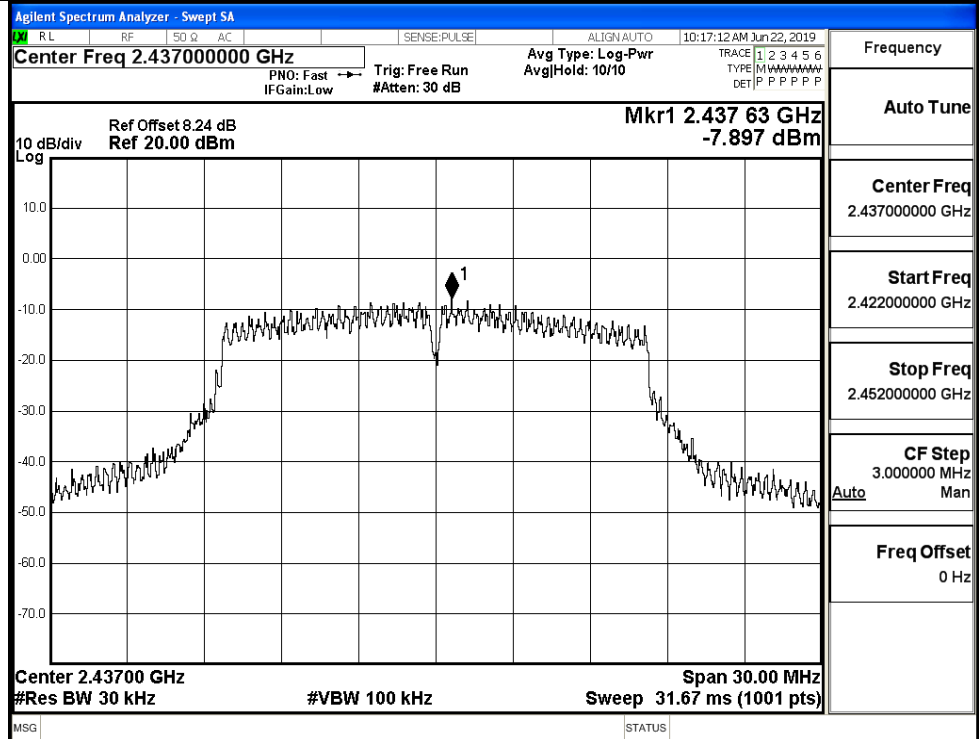
11B/HCH



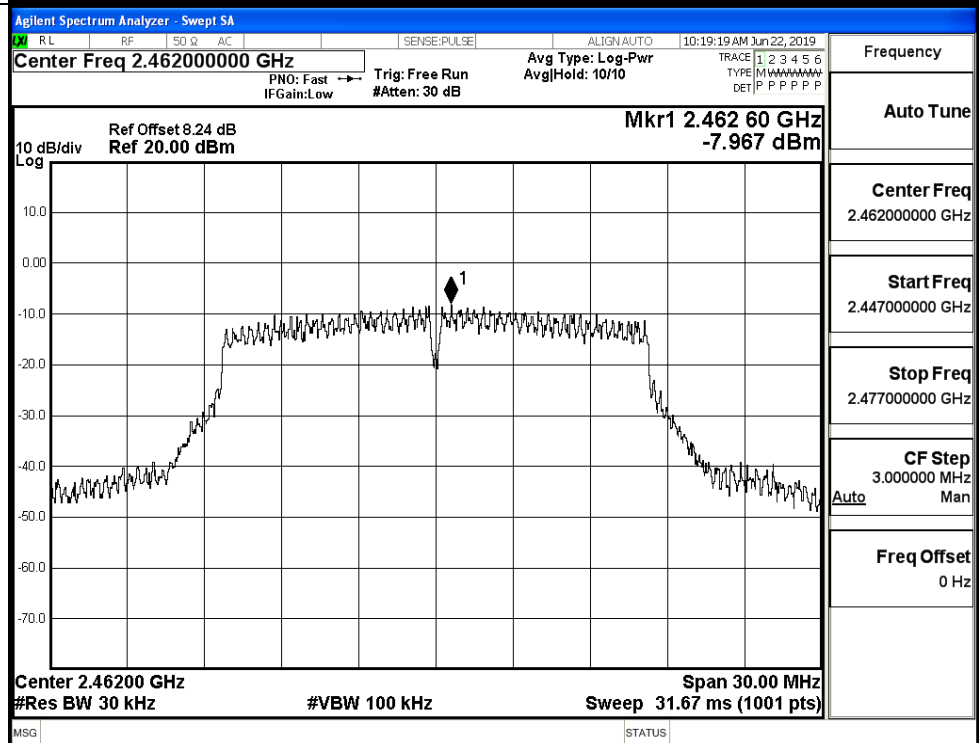
11G/LCH



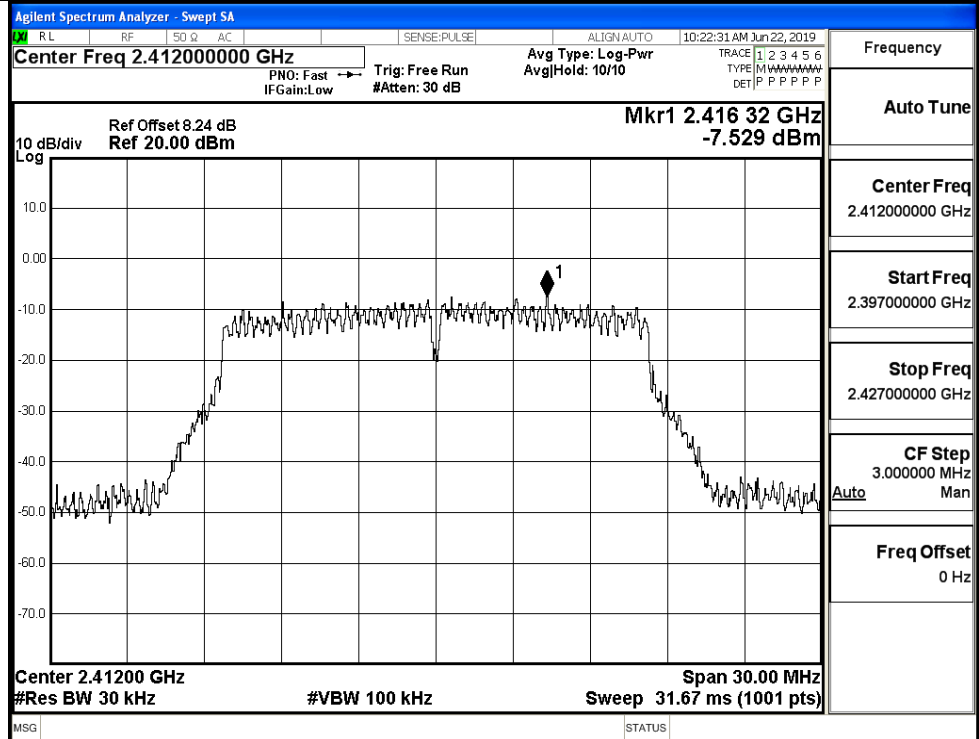
11G/MCH



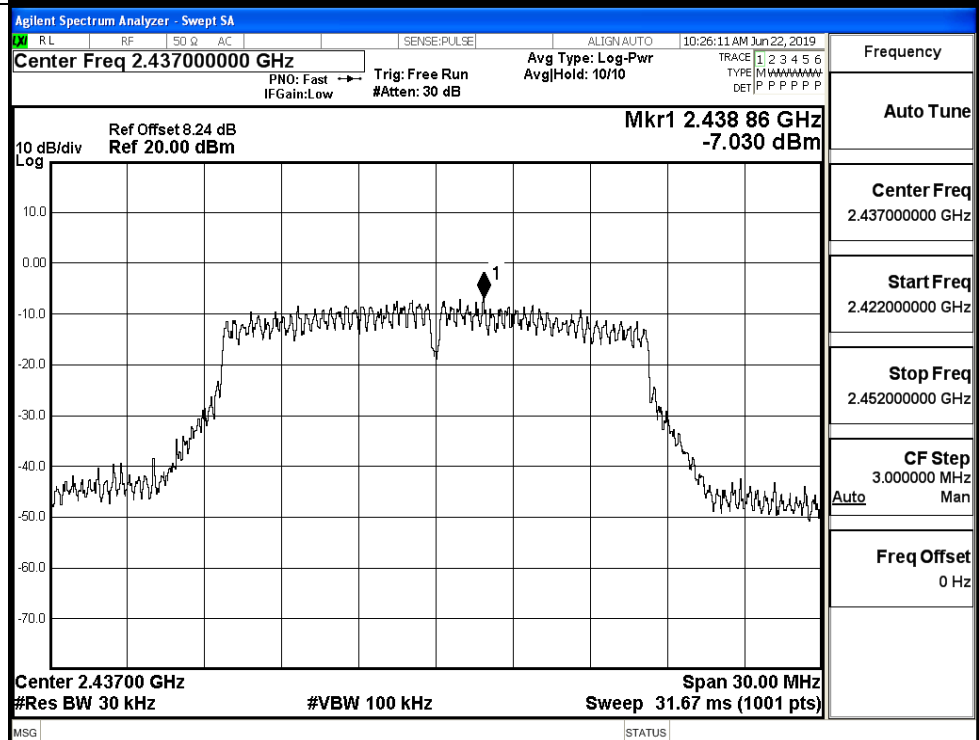
11G/HCH

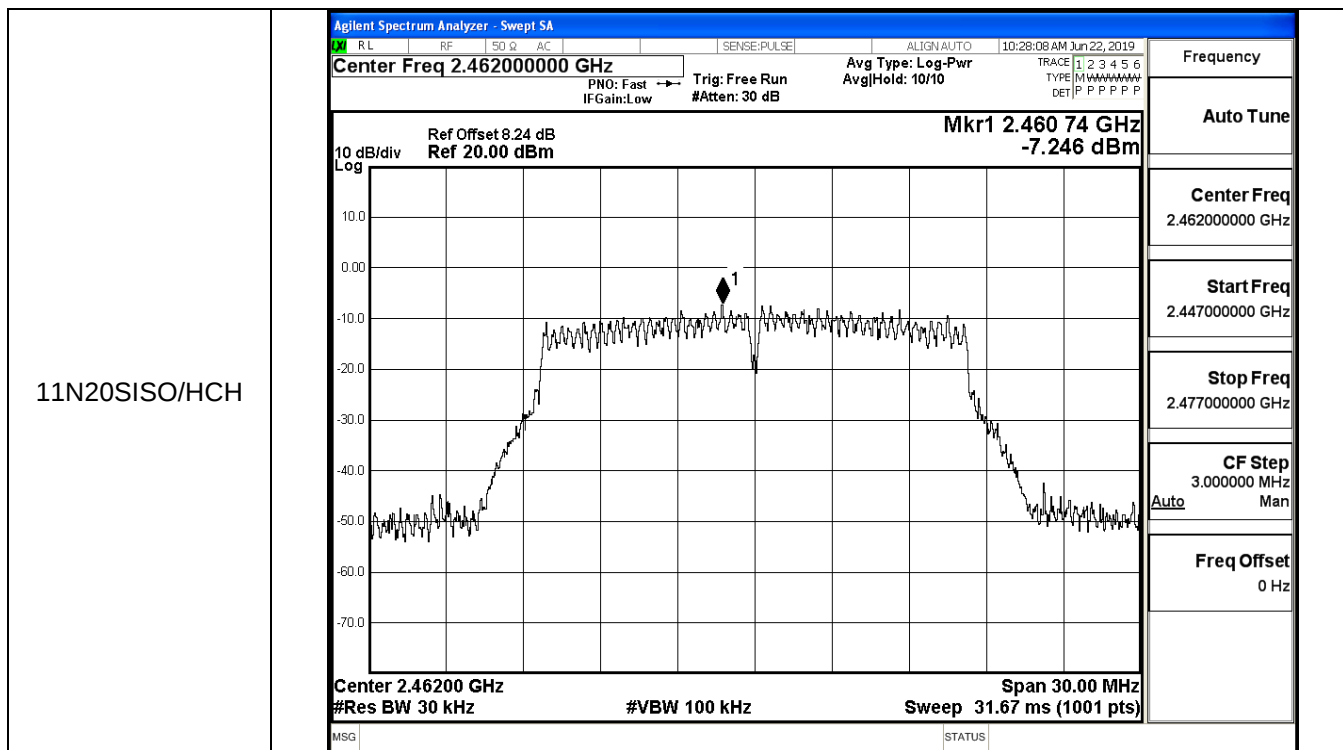


11N20SISO/LCH



11N20SISO/MCH



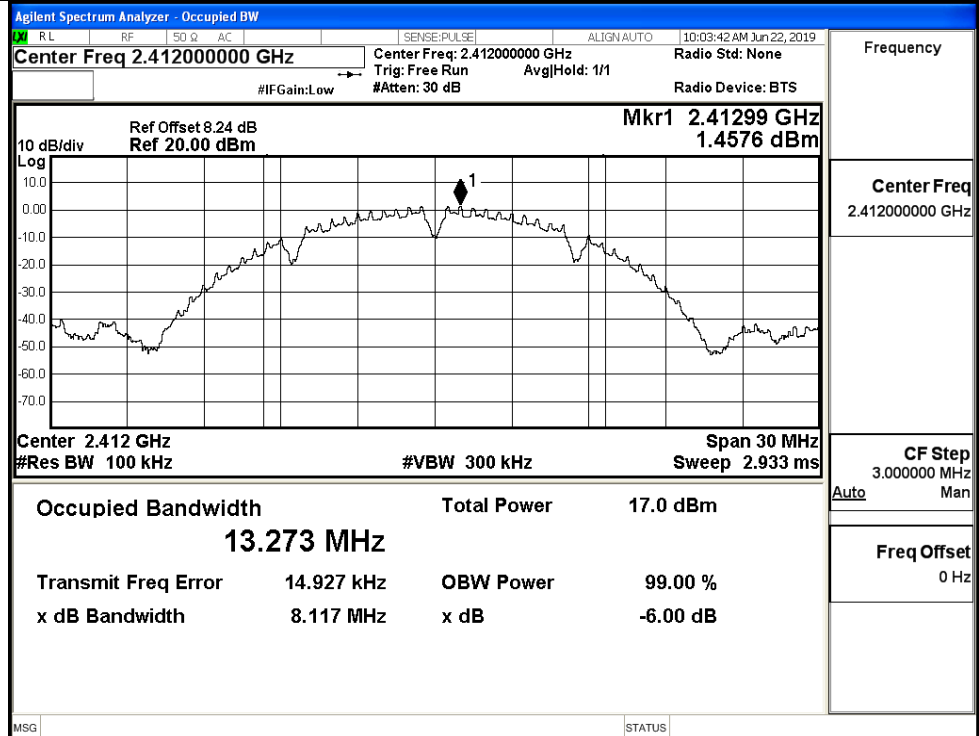


C.4 6dB Bandwidth

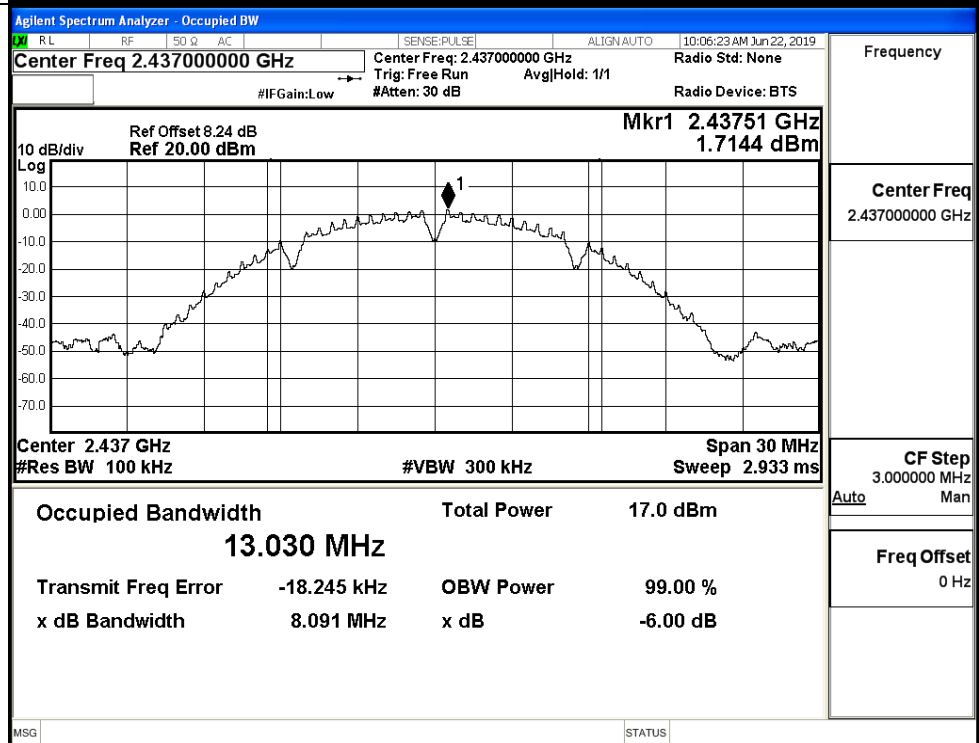
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	8.117	≥ 0.5	PASS
	MCH	8.091	≥ 0.5	PASS
	HCH	8.565	≥ 0.5	PASS
11G	LCH	16.42	≥ 0.5	PASS
	MCH	16.33	≥ 0.5	PASS
	HCH	16.39	≥ 0.5	PASS
11N20SISO	LCH	16.47	≥ 0.5	PASS
	MCH	16.39	≥ 0.5	PASS
	HCH	16.34	≥ 0.5	PASS

Test Graphs

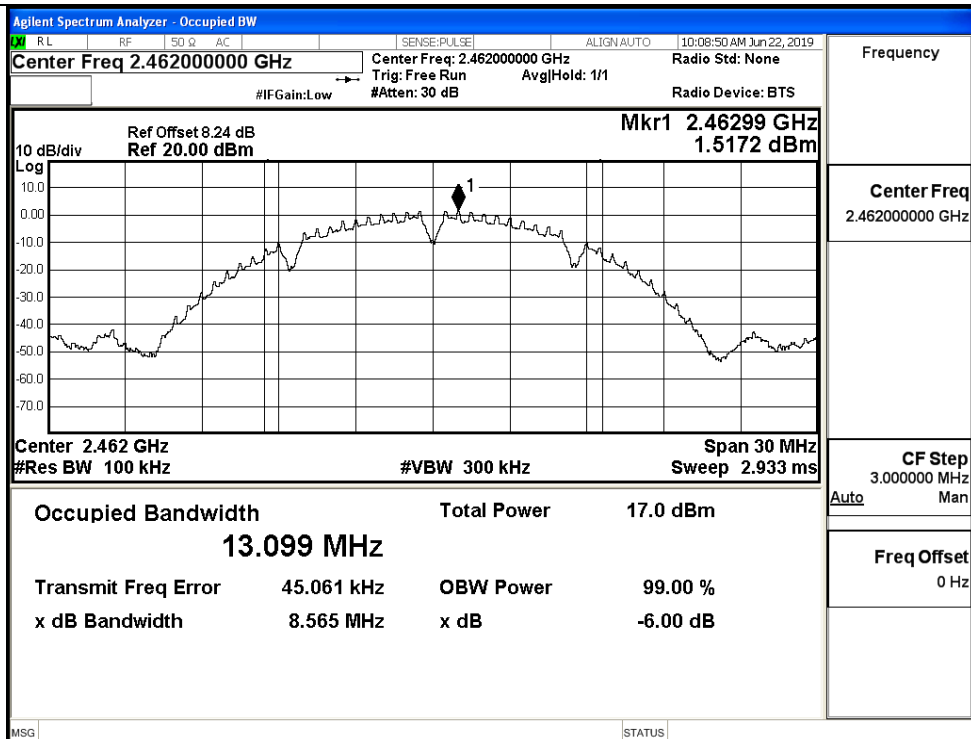
11B/LCH



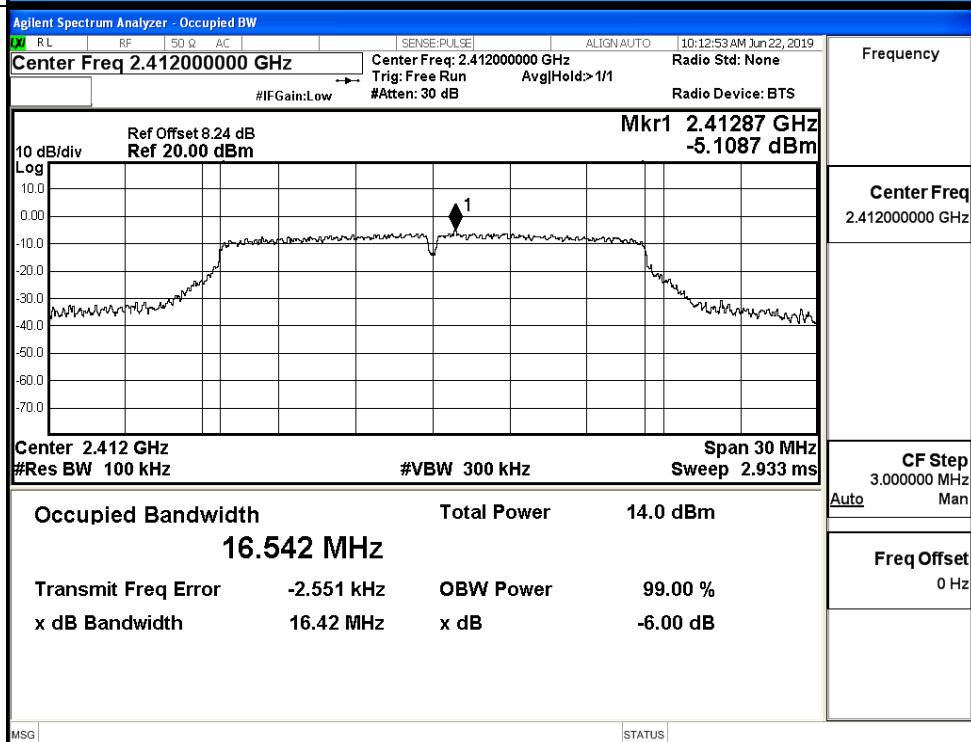
11B/MCH



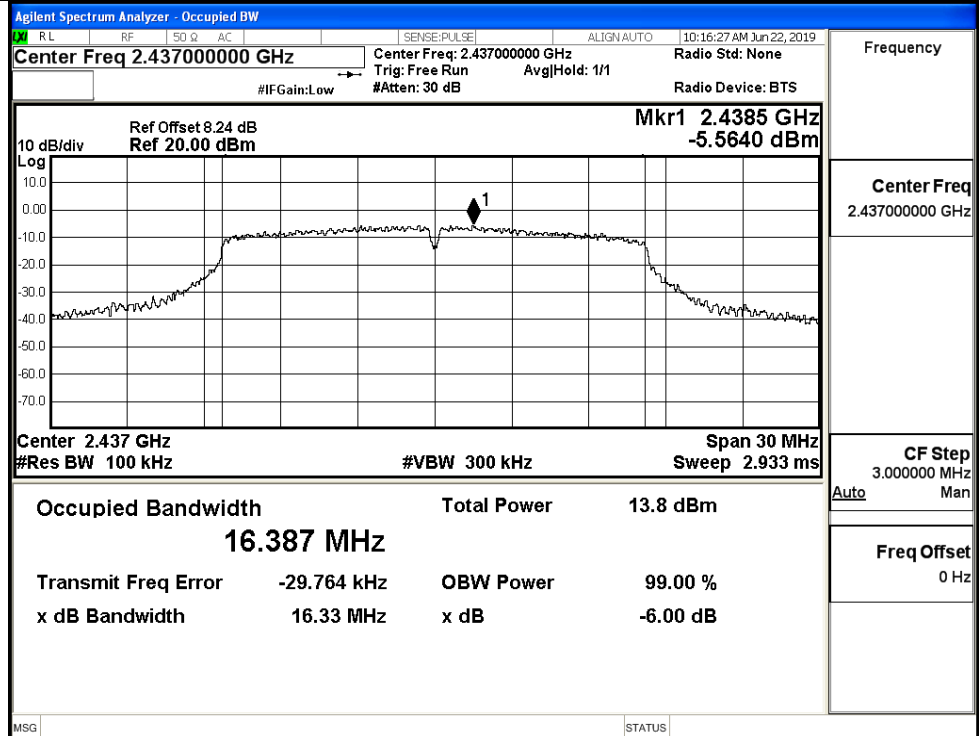
11B/HCH



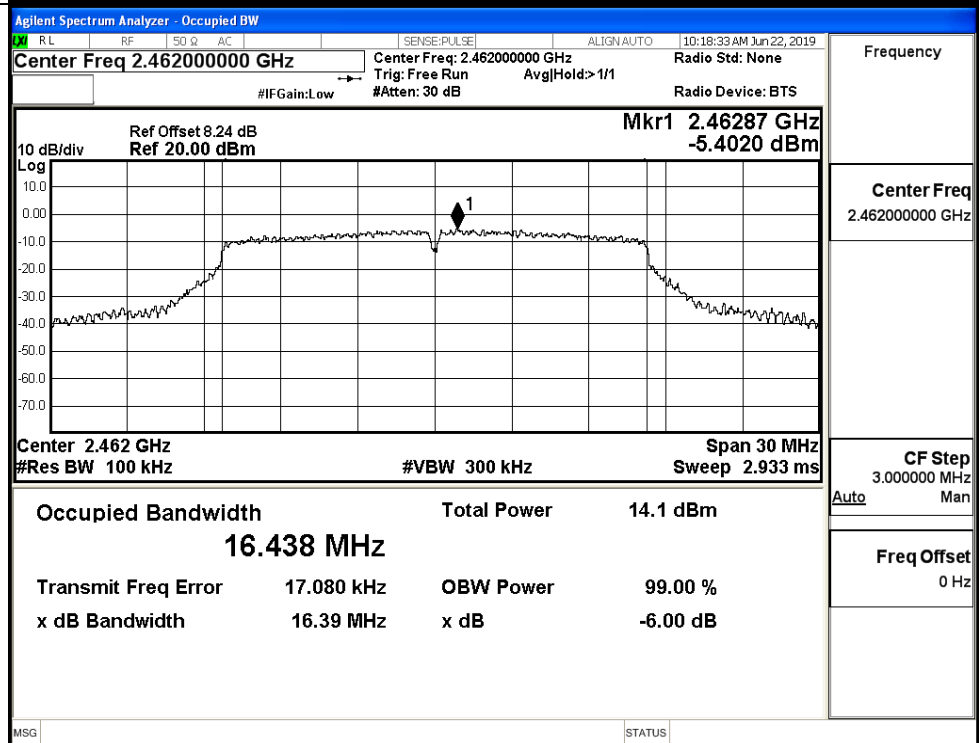
11G/LCH



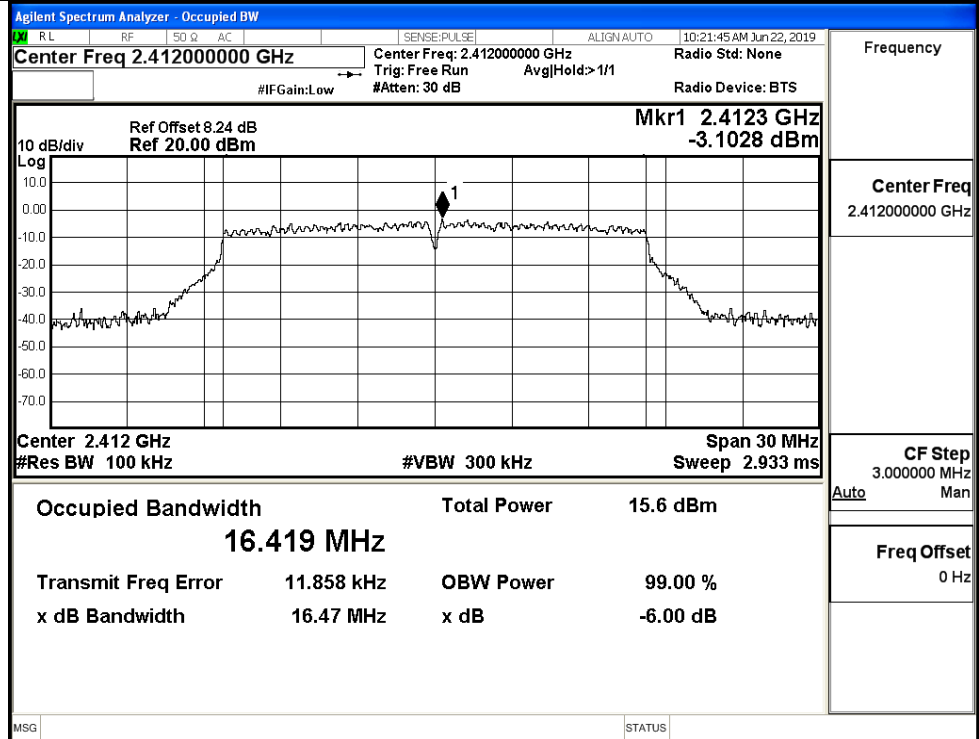
11G/MCH



11G/HCH



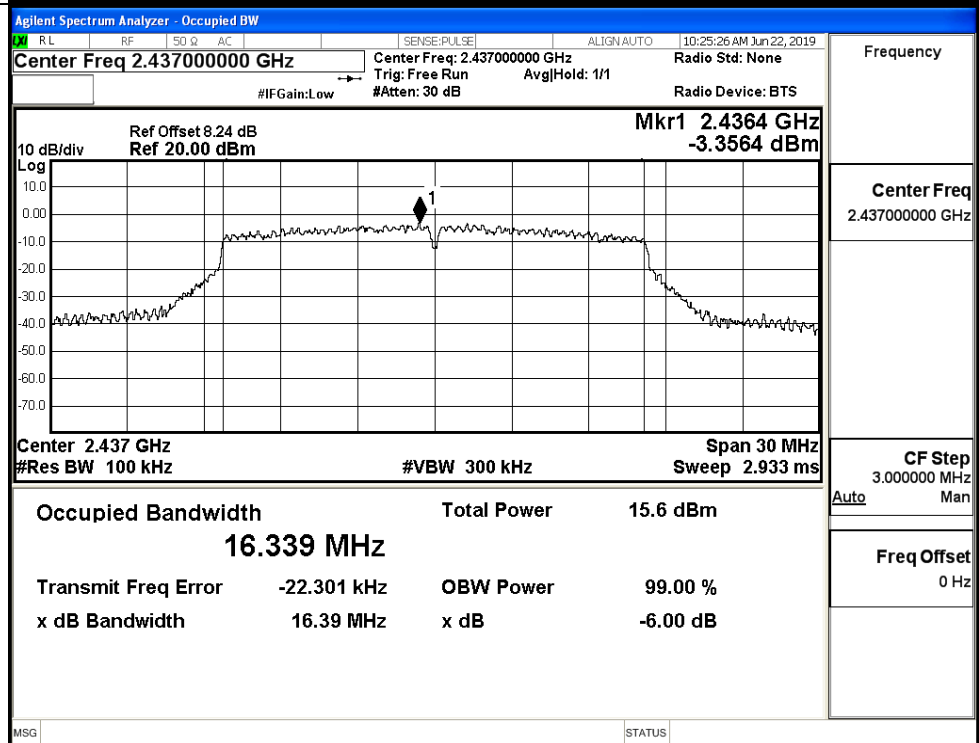
11N20SISO/LCH



Frequency

Center Freq
2.41200000 GHzCF Step
3.000000 MHz
Auto ManFreq Offset
0 Hz

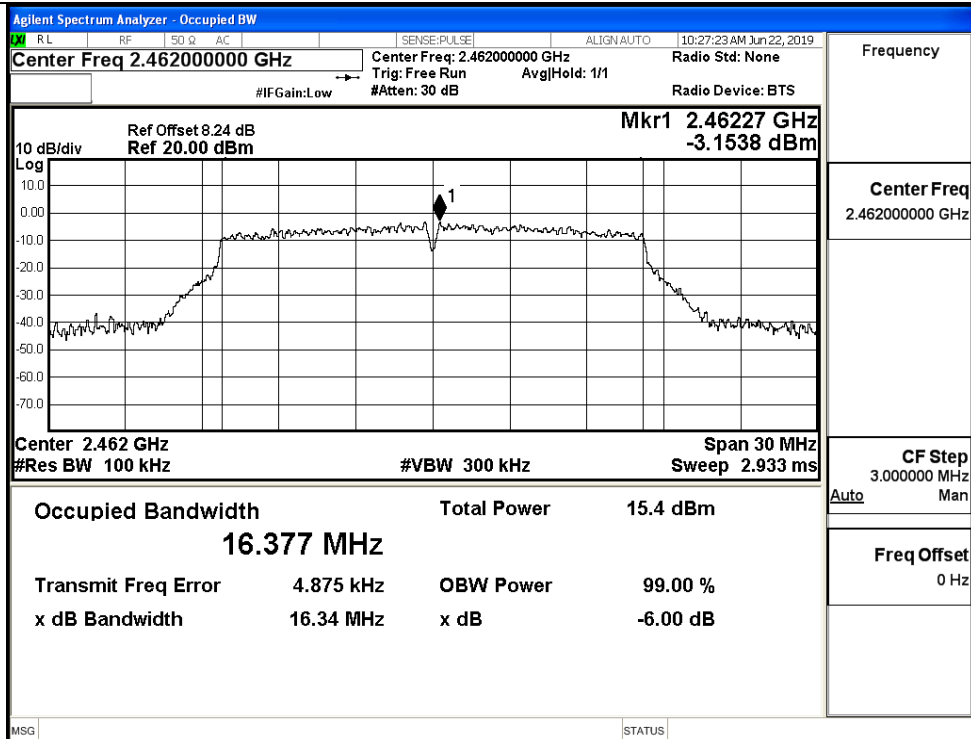
11N20SISO/MCH



Frequency

Center Freq
2.43700000 GHzCF Step
3.000000 MHz
Auto ManFreq Offset
0 Hz

11N20SISO/HCH

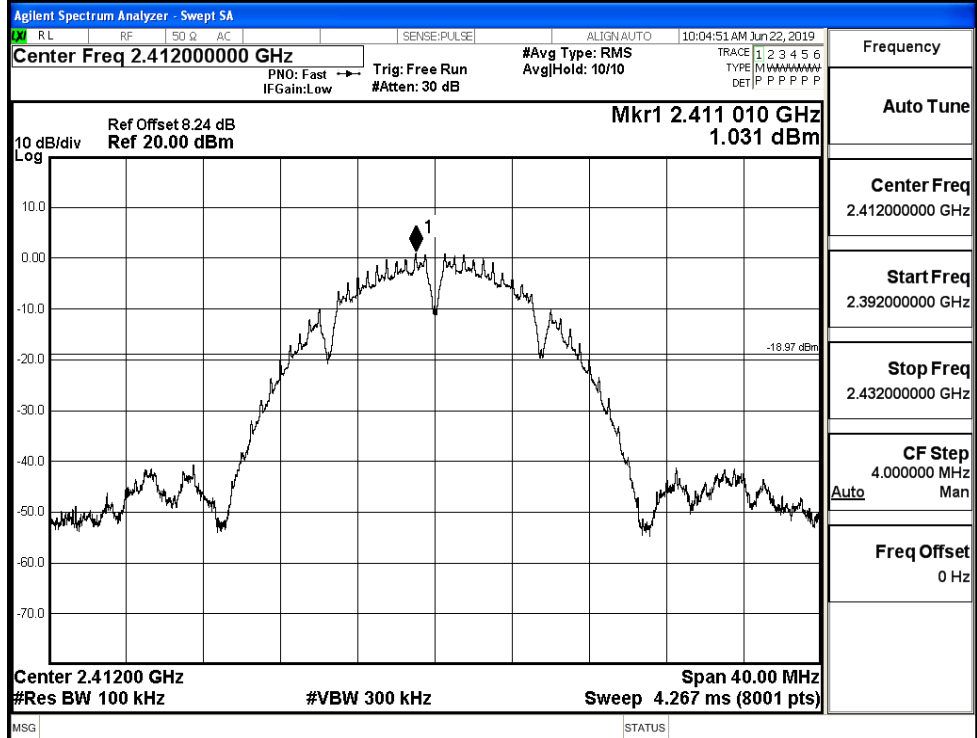


C.5 RF Conducted Spurious Emissions

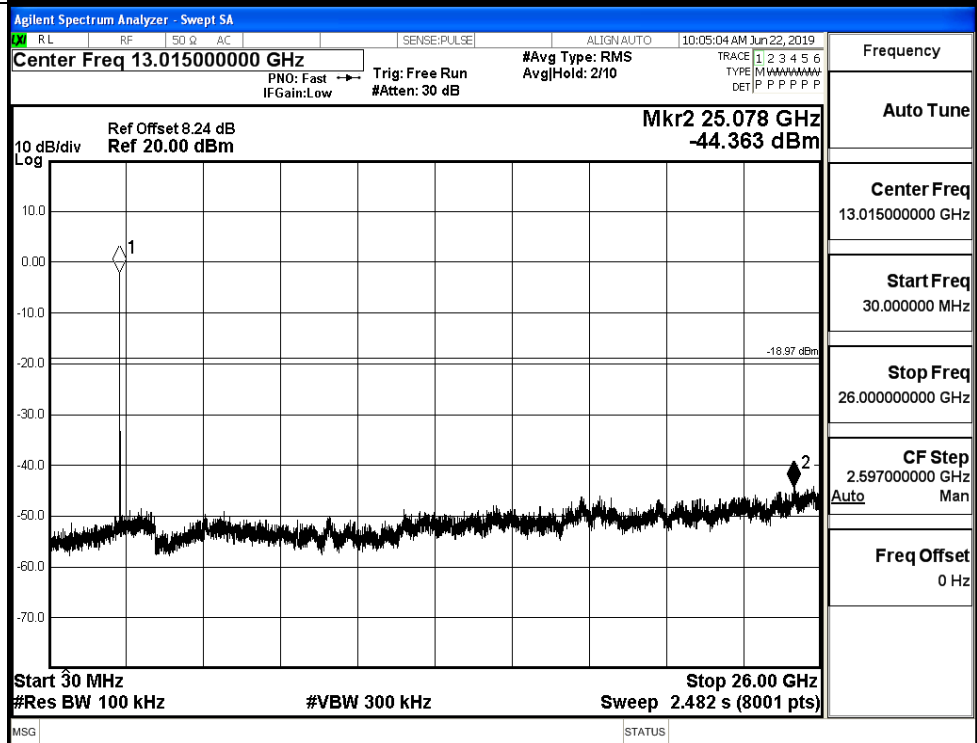
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	1.031	-44.363	-18.969	PASS
	MCH	1.237	-43.436	-18.763	PASS
	HCH	0.909	-43.585	-19.091	PASS
11G	LCH	-5.906	-43.995	-25.906	PASS
	MCH	-6.022	-42.956	-26.022	PASS
	HCH	-5.496	-43.133	-25.496	PASS
11N20 SISO	LCH	-4.476	-42.141	-24.476	PASS
	MCH	-3.533	-43.019	-23.533	PASS
	HCH	-3.75	-43.694	-23.750	PASS

11B LCH Graphs

Pref/11B/LCH

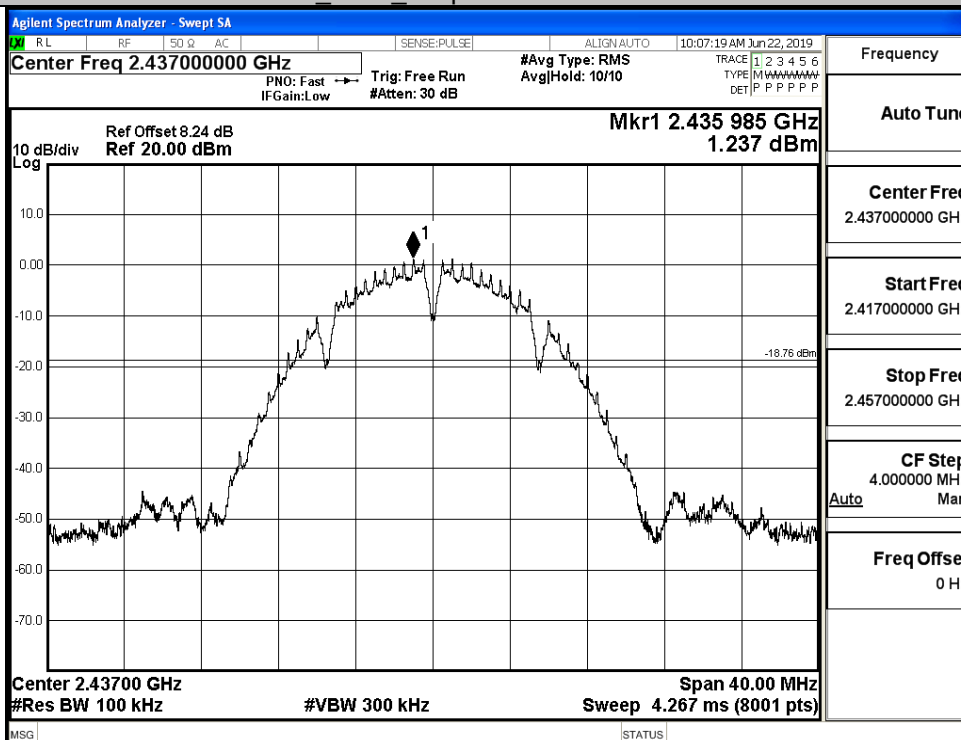


Puw/11B/LCH

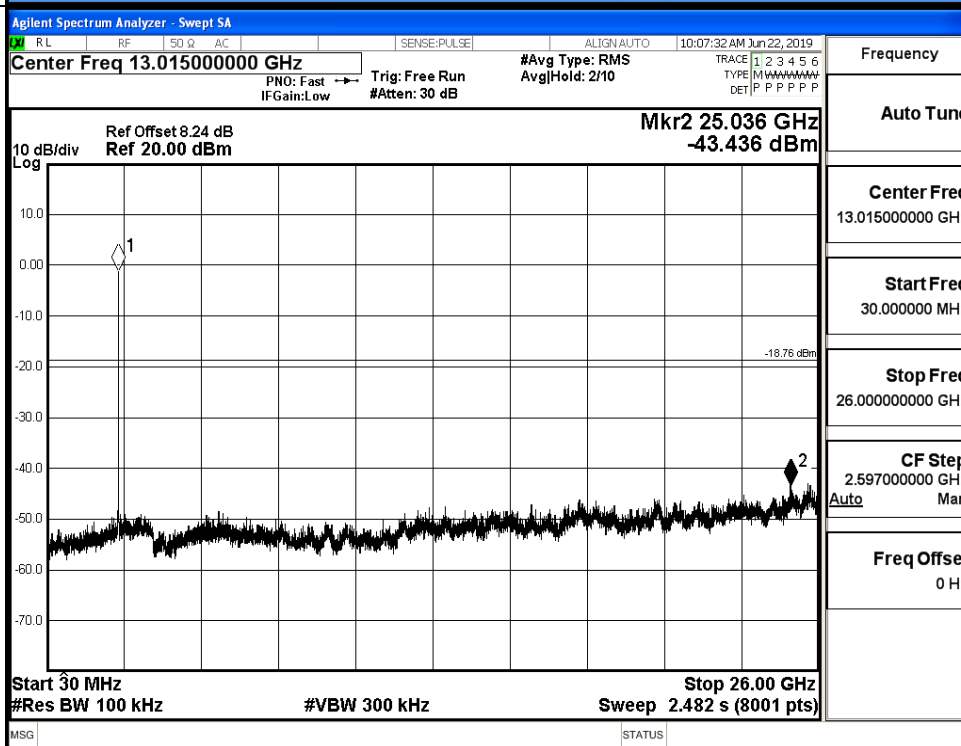


11B MCH Graphs

Pref/11B/MCH

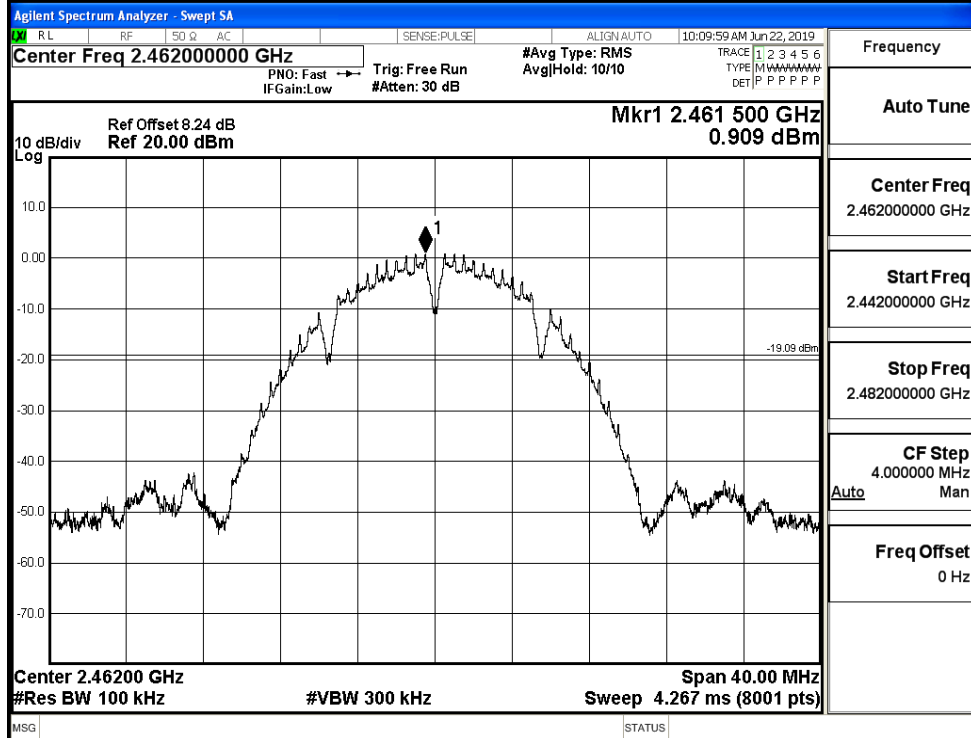


Puw/11B/MCH

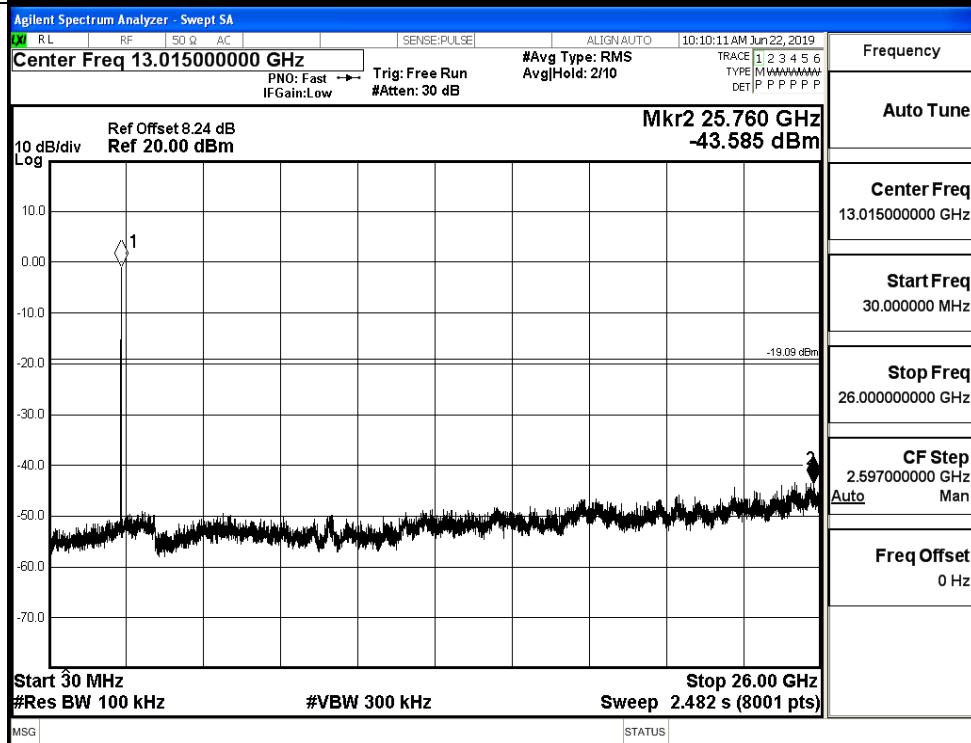


11B HCH Graphs

Pref/11B/HCH

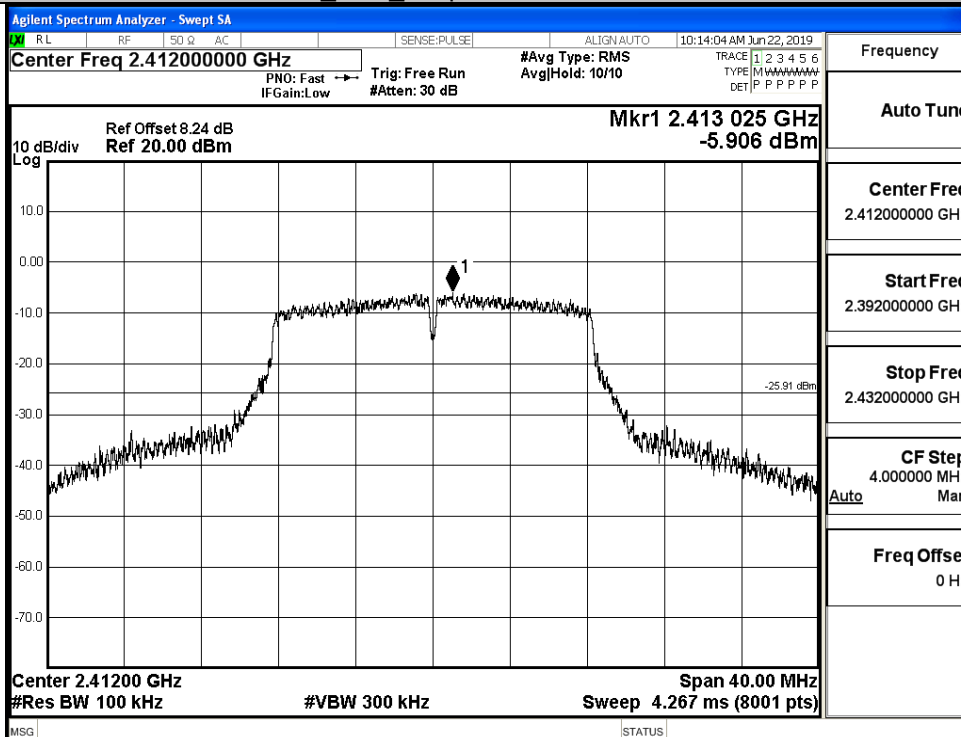


Puw/11B/HCH

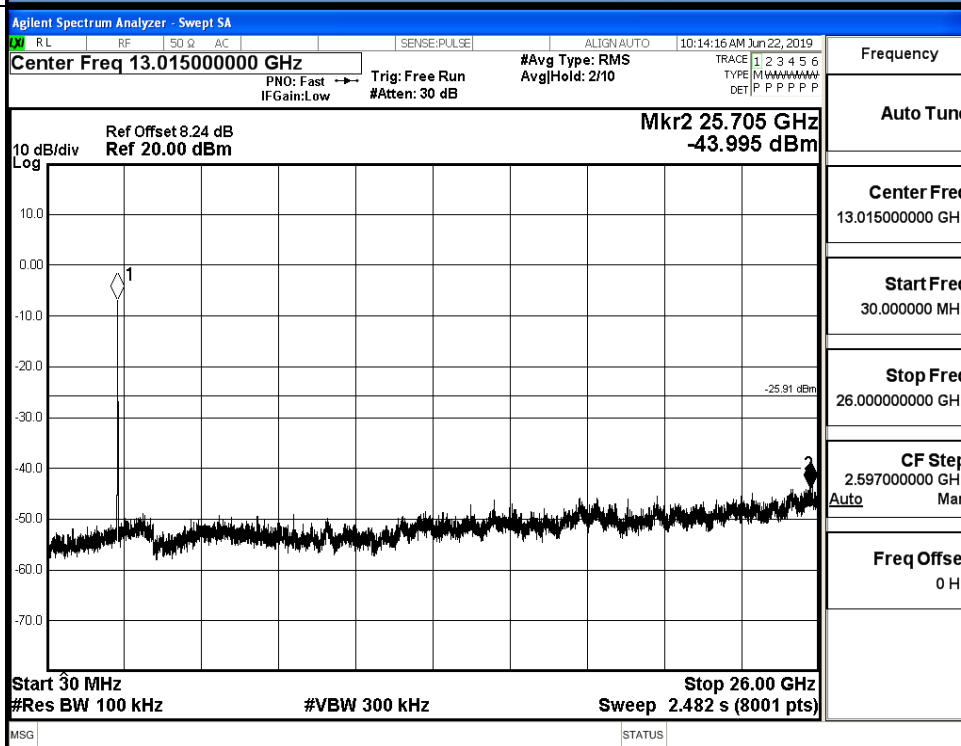


11G LCH Graphs

Pref/11G/LCH

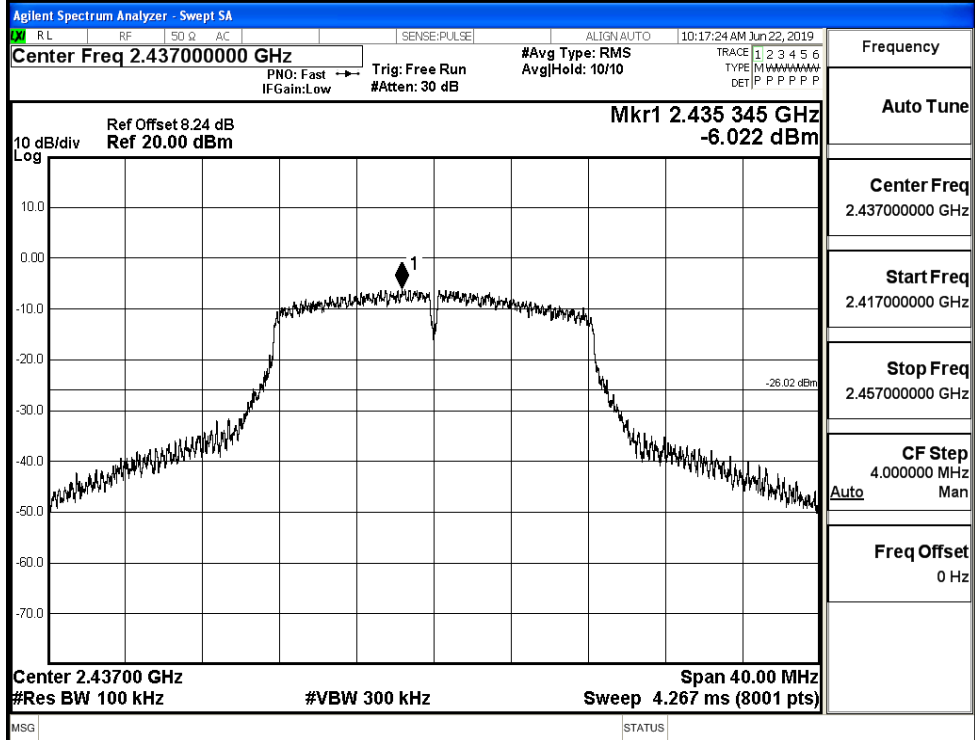


Puw/11G/LCH

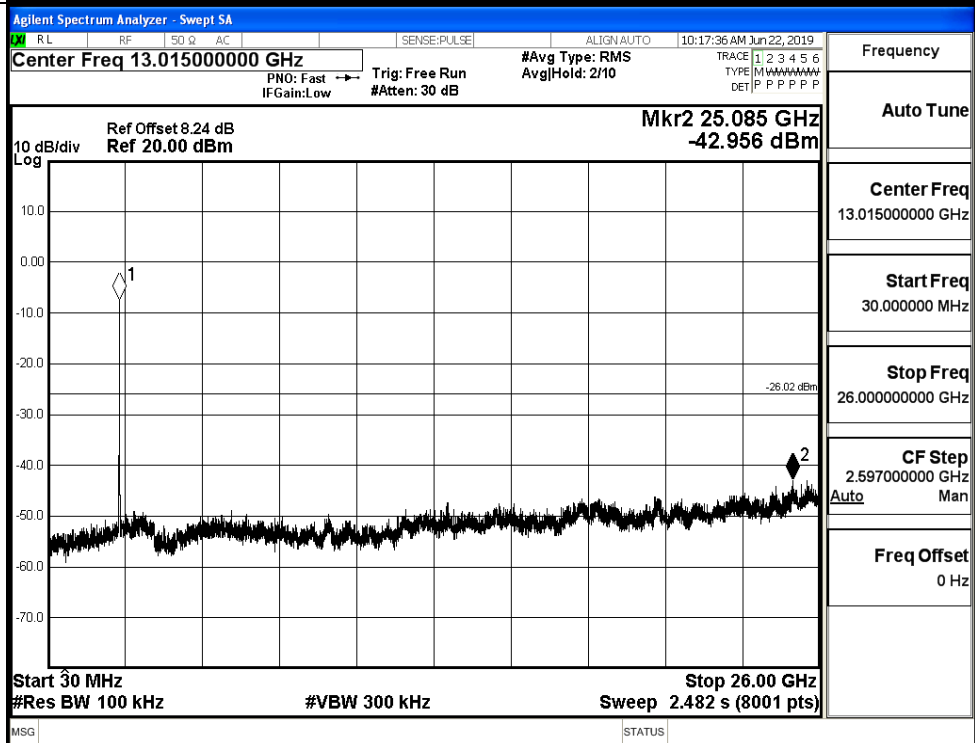


11G MCH Graphs

Pref/11G/MCH

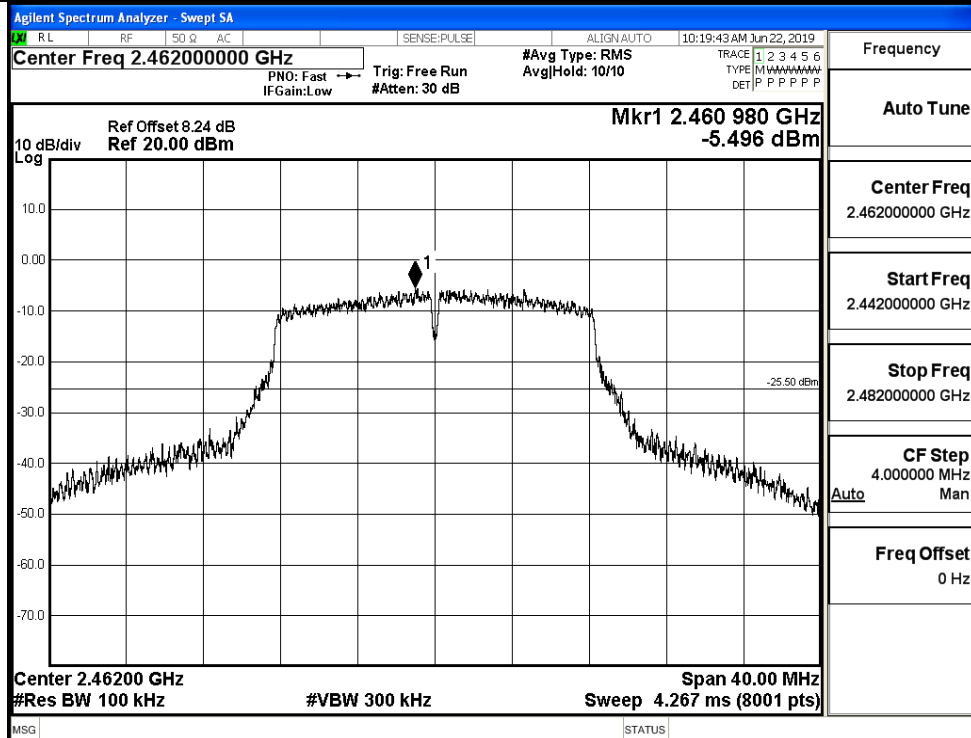


Puw/11G/MCH

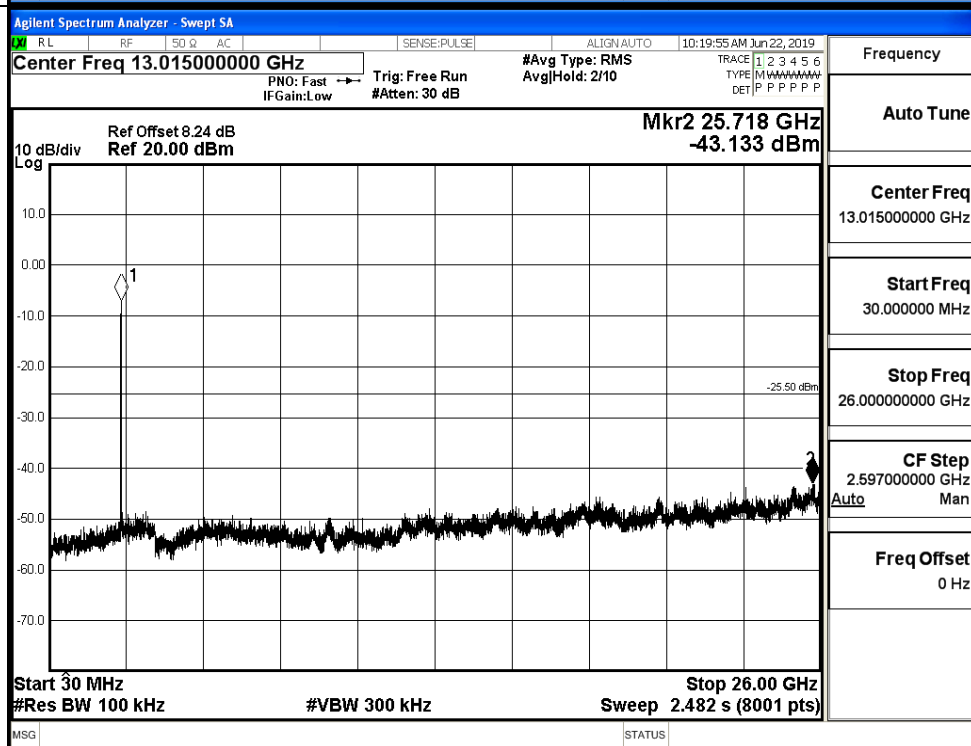


11G HCH Graphs

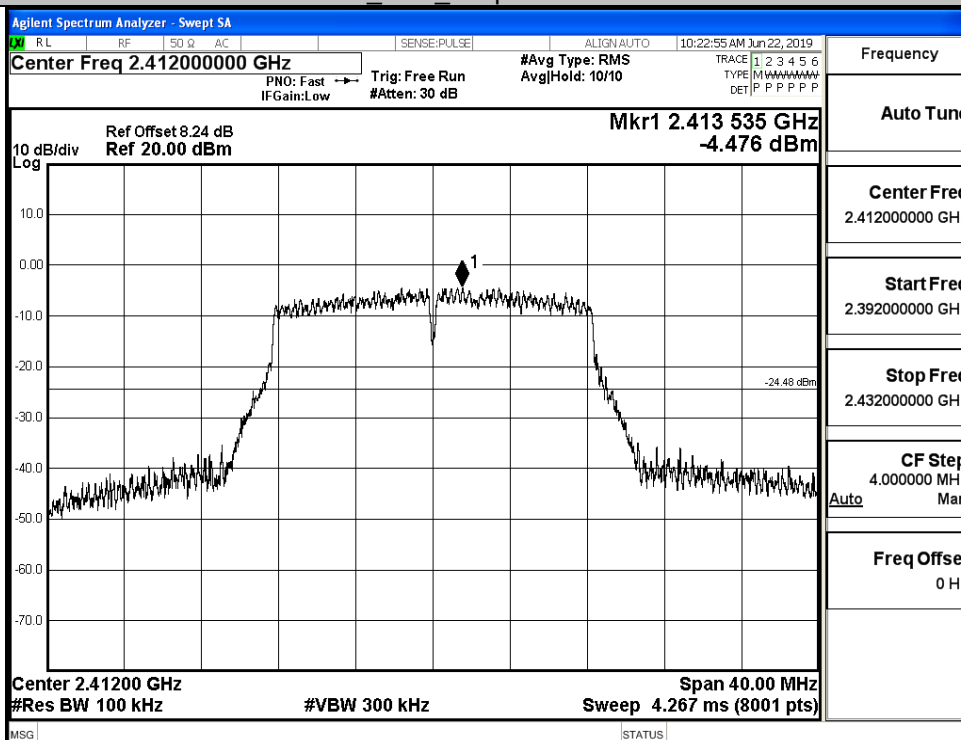
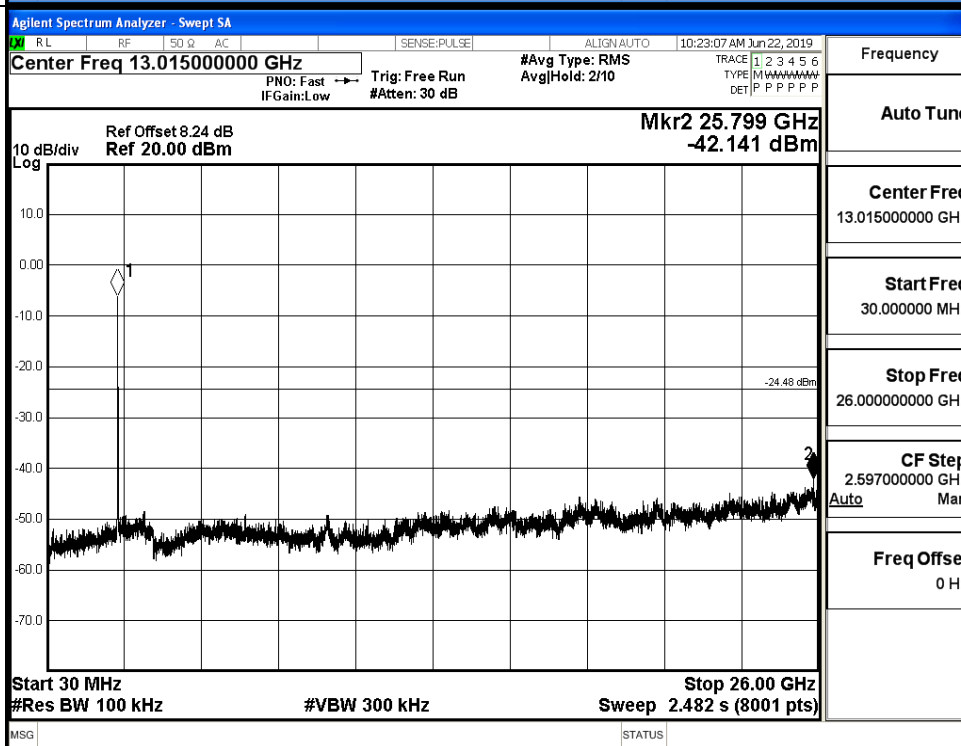
Pref/11G/HCH



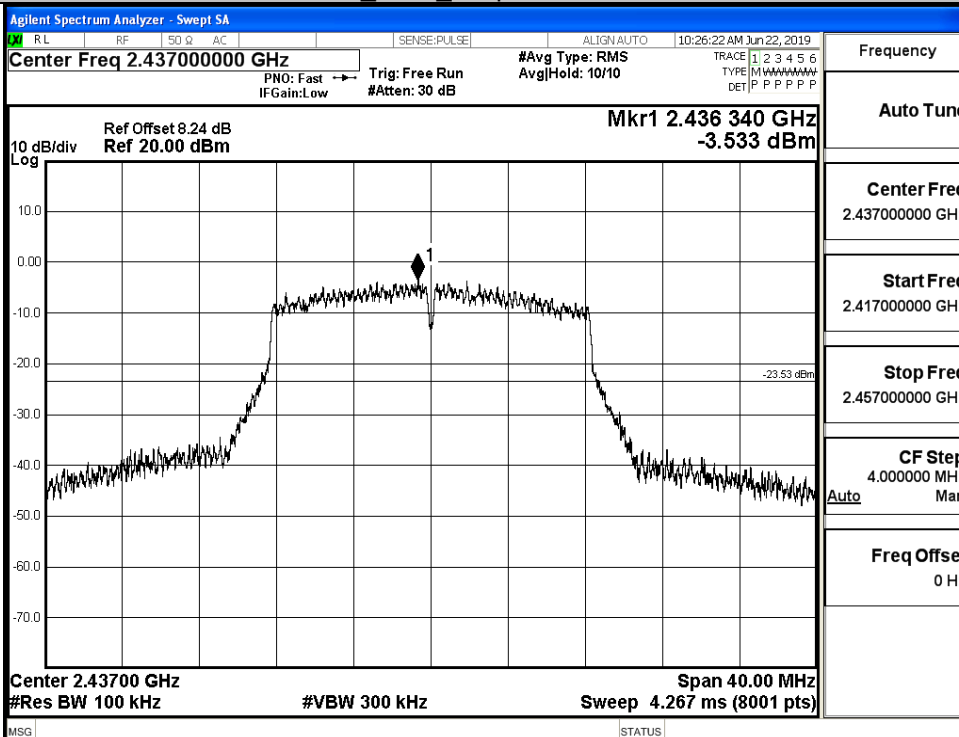
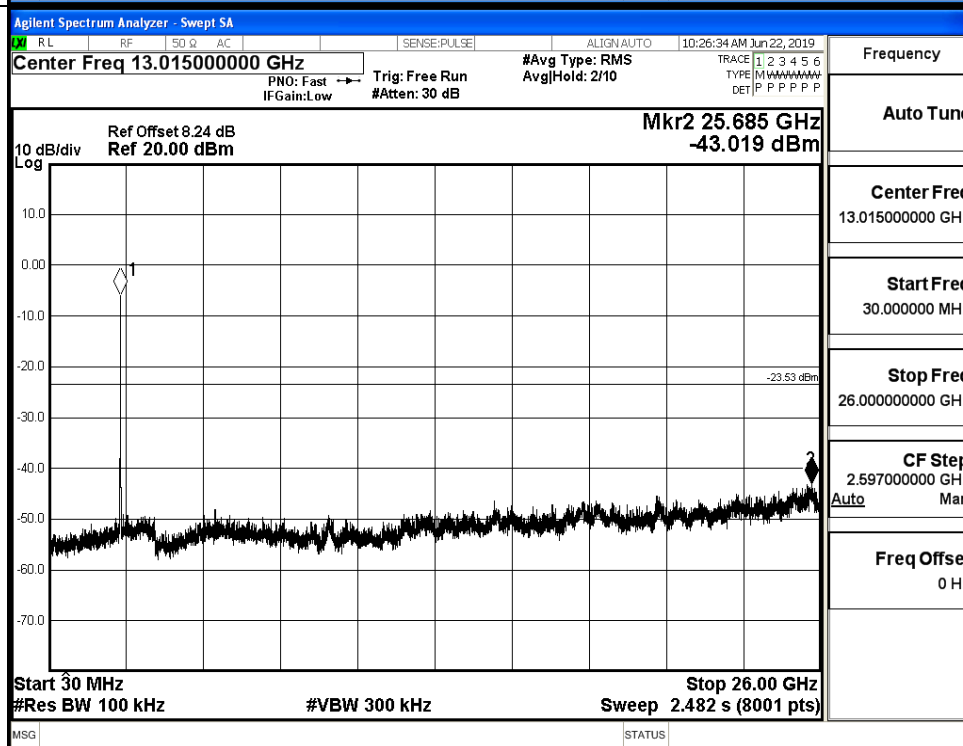
Puw/11G/HCH



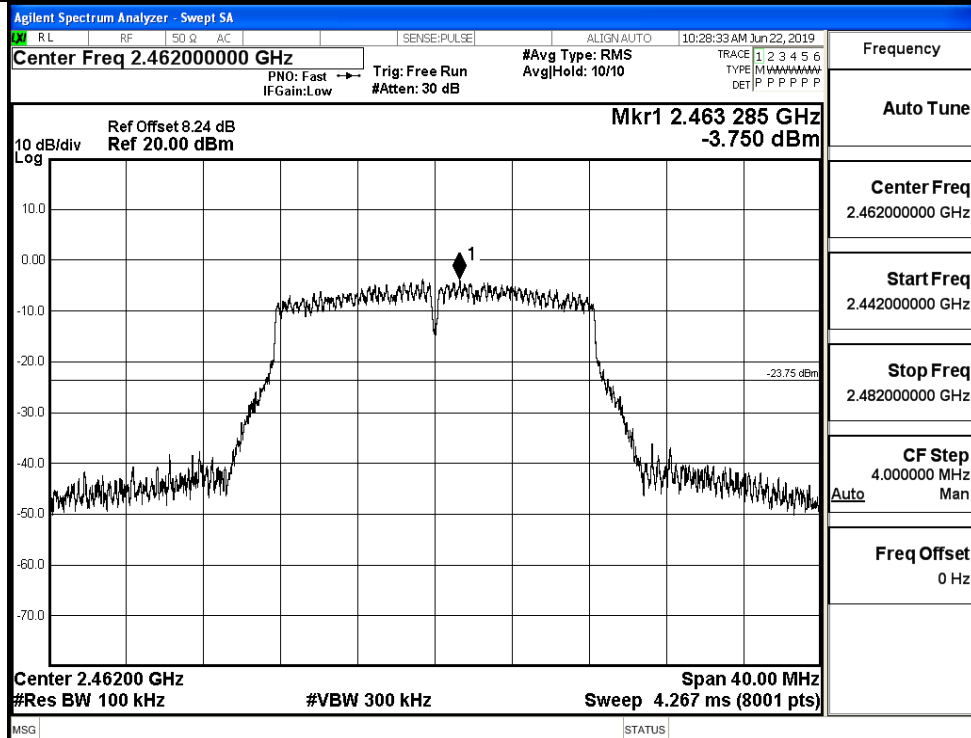
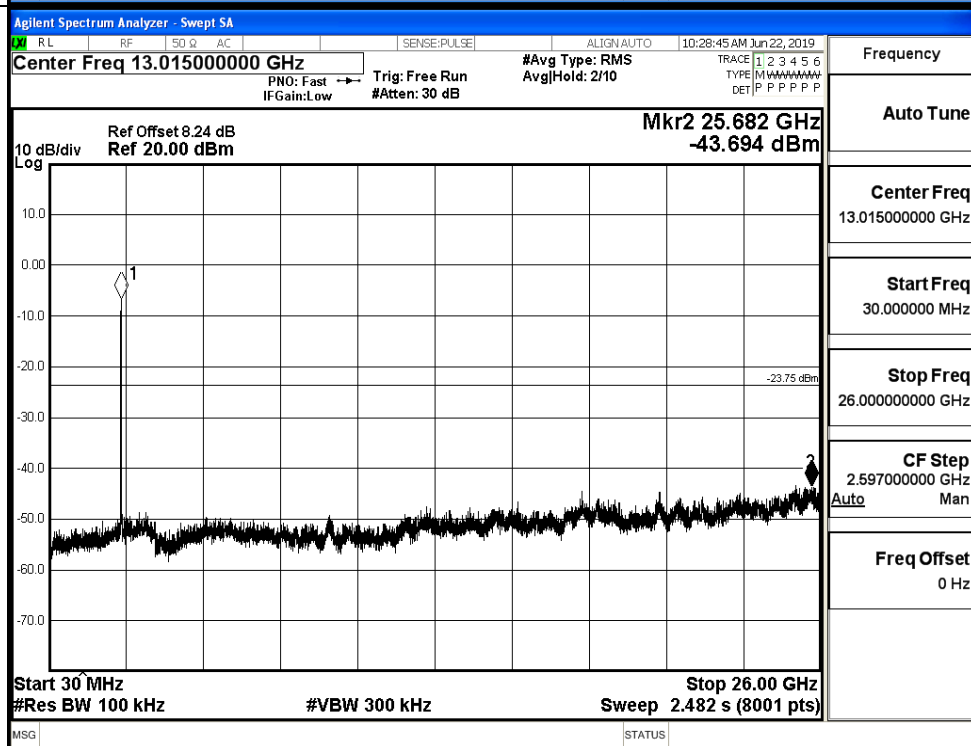
11N20SISO LCH Graphs

Pref/11N20SIS
O/LCHPuw/11N20
SISO/LCH

11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCHPuw/11N20
SISO/MCH

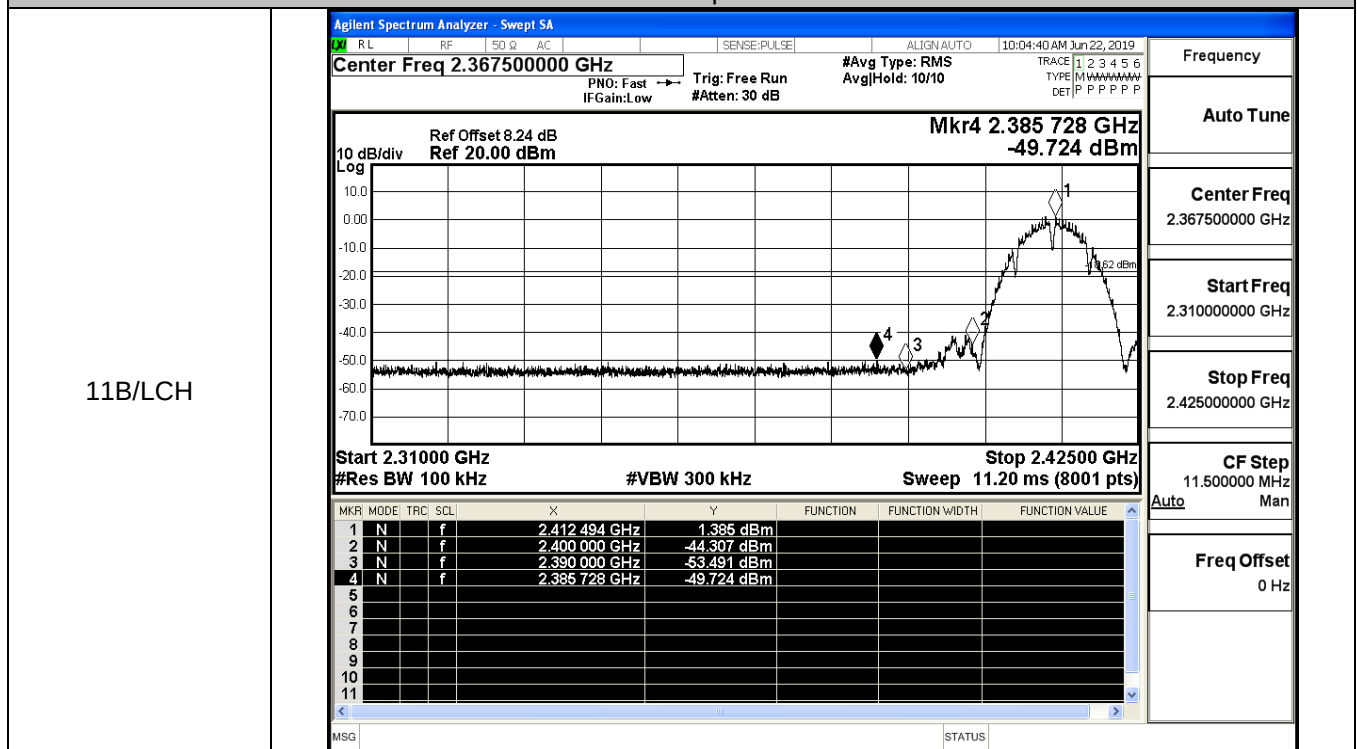
11N20SISO HCH Graphs

Pref/11N20
SISO/HCHPuw/11N20
SISO/HCH

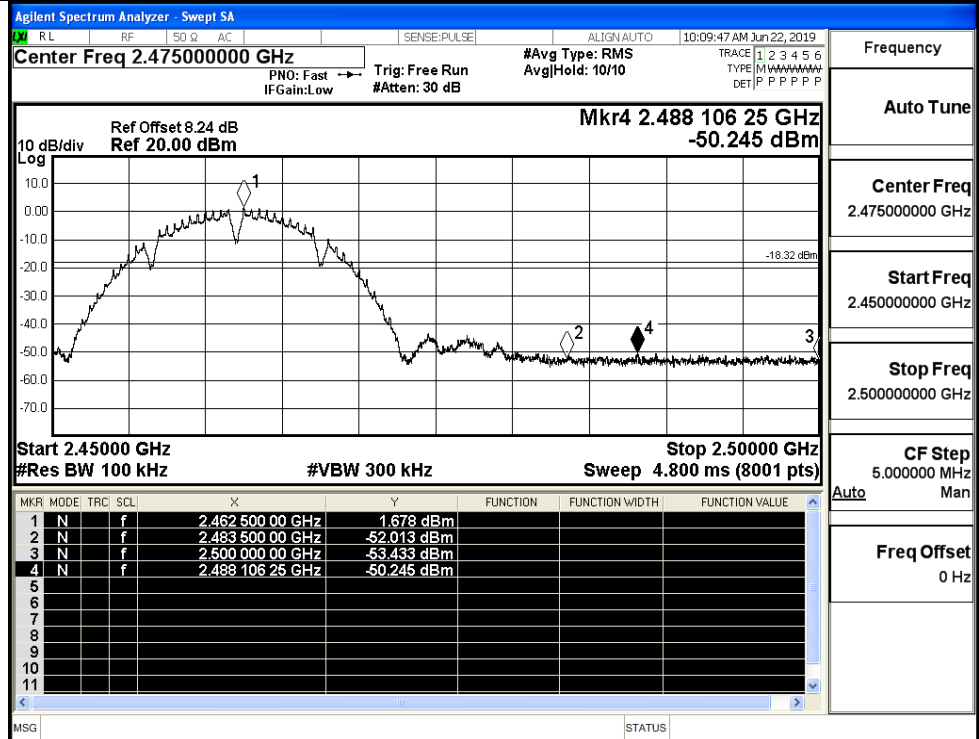
C.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	1.385	-49.724	-18.62	PASS
	HCH	1.678	-50.245	-18.32	PASS
11G	LCH	-6.092	-47.261	-26.09	PASS
	HCH	-5.669	-48.150	-25.67	PASS
11N20SISO	LCH	-4.507	-47.620	-24.51	PASS
	HCH	-3.923	-45.829	-23.92	PASS

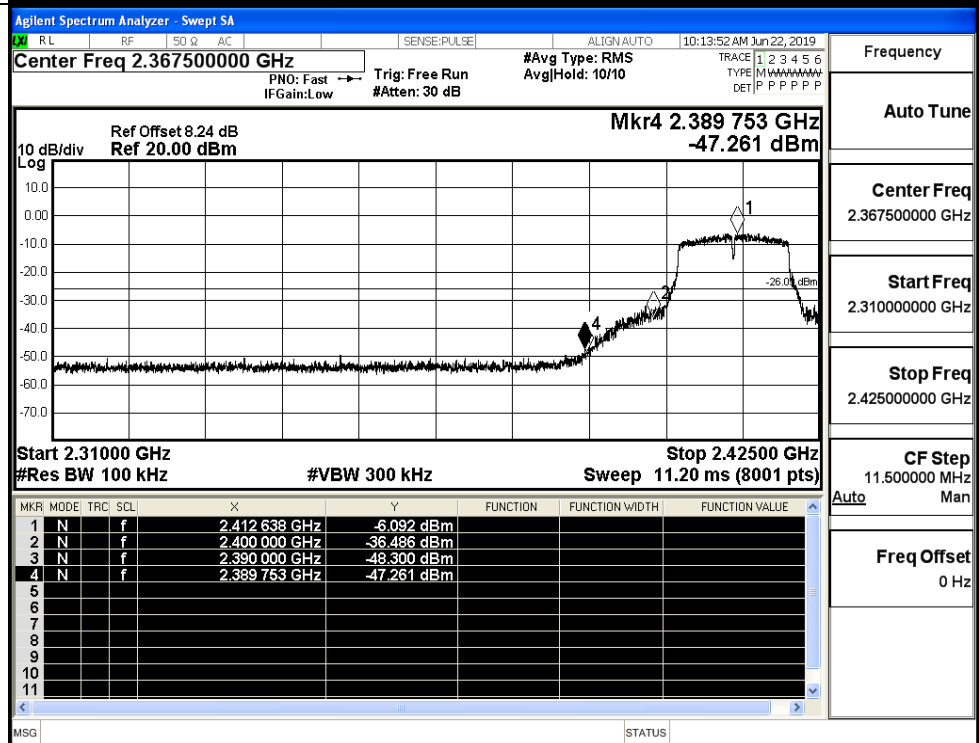
Test Graphs



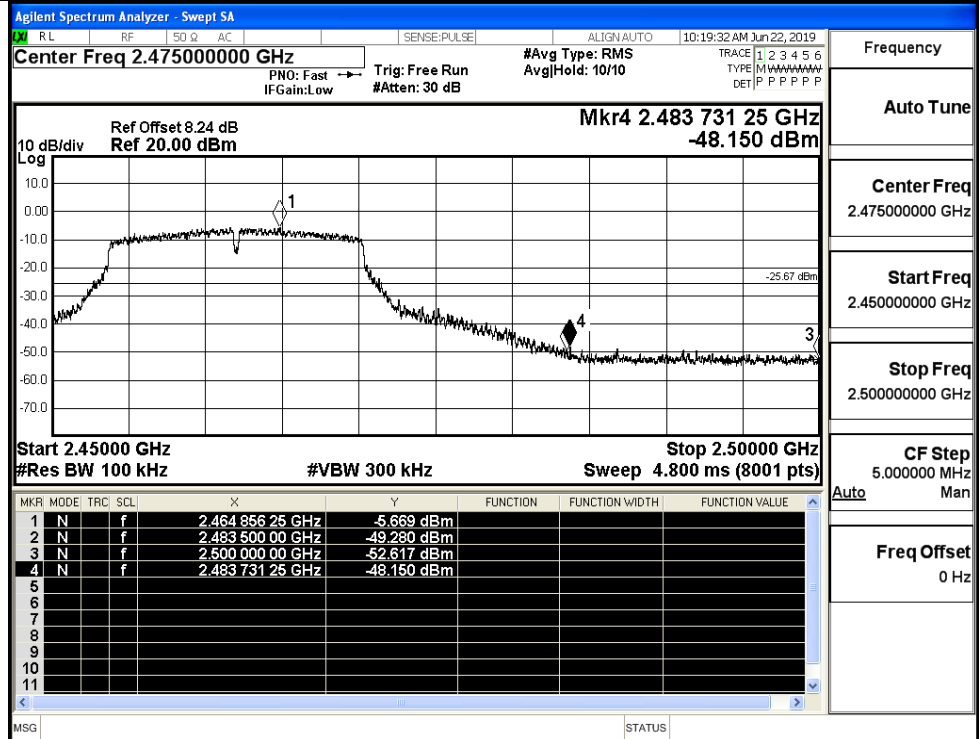
11B/HCH



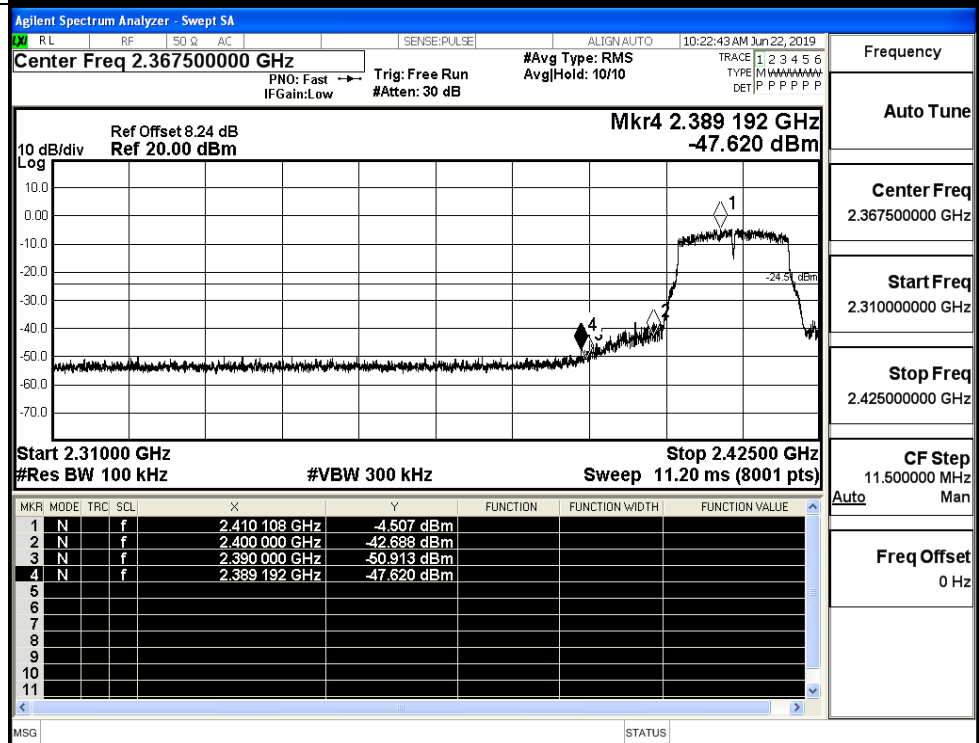
11G/LCH

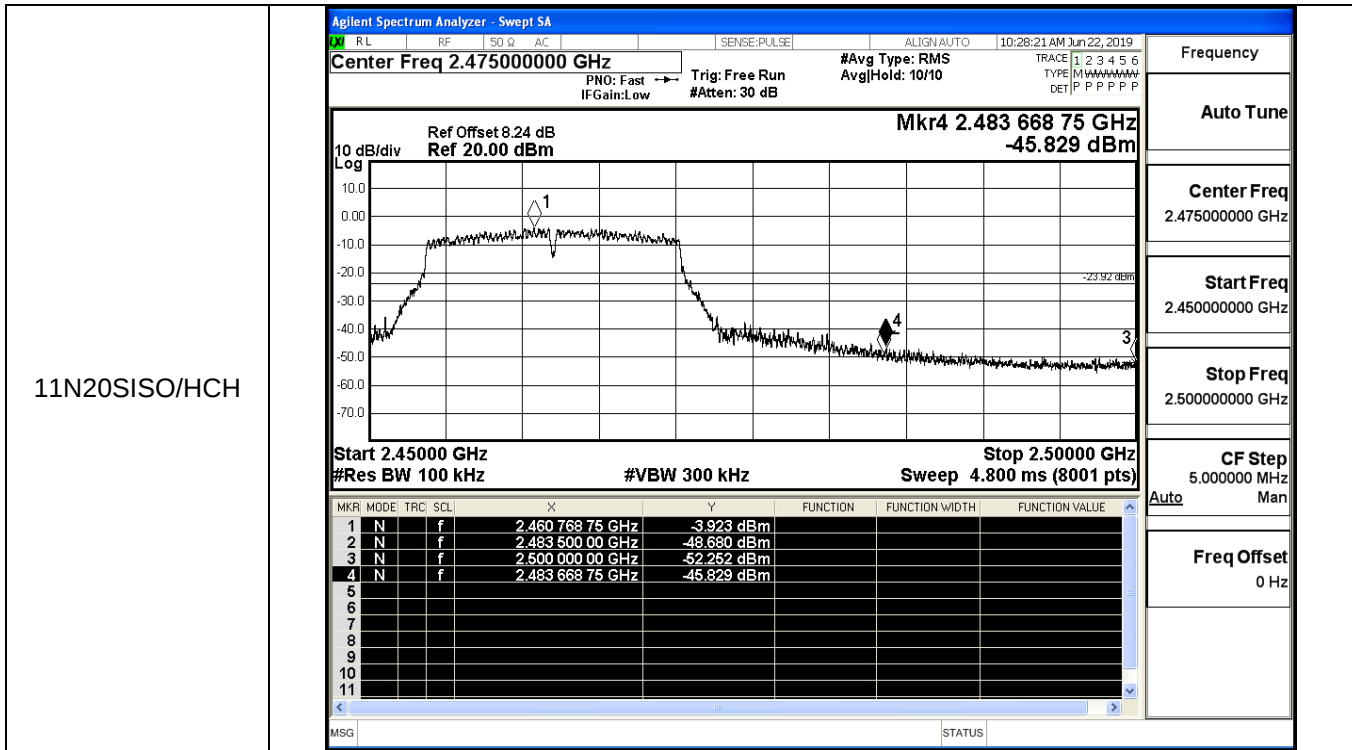


11G/HCH



11N20SISO/LCH





C.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	-45.04	2.0	0	52.22	PEAK	74	PASS
	2412	Ant1	2310.0	-54.11	2.0	0	43.14	AV	54	PASS
	2412	Ant1	2390.0	-44.22	2.0	0	53.04	PEAK	74	PASS
	2412	Ant1	2390.0	-53.46	2.0	0	43.80	AV	54	PASS
	2462	Ant1	2483.5	-42.21	2.0	0	55.05	PEAK	74	PASS
	2462	Ant1	2483.5	-53.37	2.0	0	43.89	AV	54	PASS
	2462	Ant1	2500.0	-42.22	2.0	0	55.03	PEAK	74	PASS
	2462	Ant1	2500.0	-53.47	2.0	0	43.79	AV	54	PASS
11G	2412	Ant1	2310.0	-43.76	2.0	0	53.50	PEAK	74	PASS
	2412	Ant1	2310.0	-54.07	2.0	0	43.19	AV	54	PASS
	2412	Ant1	2390.0	-36.35	2.0	0	60.91	PEAK	74	PASS
	2412	Ant1	2390.0	-49.76	2.0	0	47.50	AV	54	PASS
	2462	Ant1	2483.5	-37.98	2.0	0	59.28	PEAK	74	PASS
	2462	Ant1	2483.5	-51.28	2.0	0	45.97	AV	54	PASS

	2462	Ant1	2500.0	-43.00	2.0	0	54.26	PEAK	74	PASS
	2462	Ant1	2500.0	-53.19	2.0	0	44.07	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-42.99	2.0	0	54.27	PEAK	74	PASS
	2412	Ant1	2310.0	-53.81	2.0	0	43.44	AV	54	PASS
	2412	Ant1	2390.0	-39.15	2.0	0	58.11	PEAK	74	PASS
	2412	Ant1	2390.0	-50.92	2.0	0	46.33	AV	54	PASS
	2462	Ant1	2483.5	-35.75	2.0	0	61.51	PEAK	74	PASS
	2462	Ant1	2483.5	-50.74	2.0	0	46.52	AV	54	PASS
	2462	Ant1	2500.0	-42.65	2.0	0	54.61	PEAK	74	PASS
	2462	Ant1	2500.0	-53.17	2.0	0	44.09	AV	54	PASS