

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: WIFI Module

Trade Mark: N/A

Test Model: ESP-M2

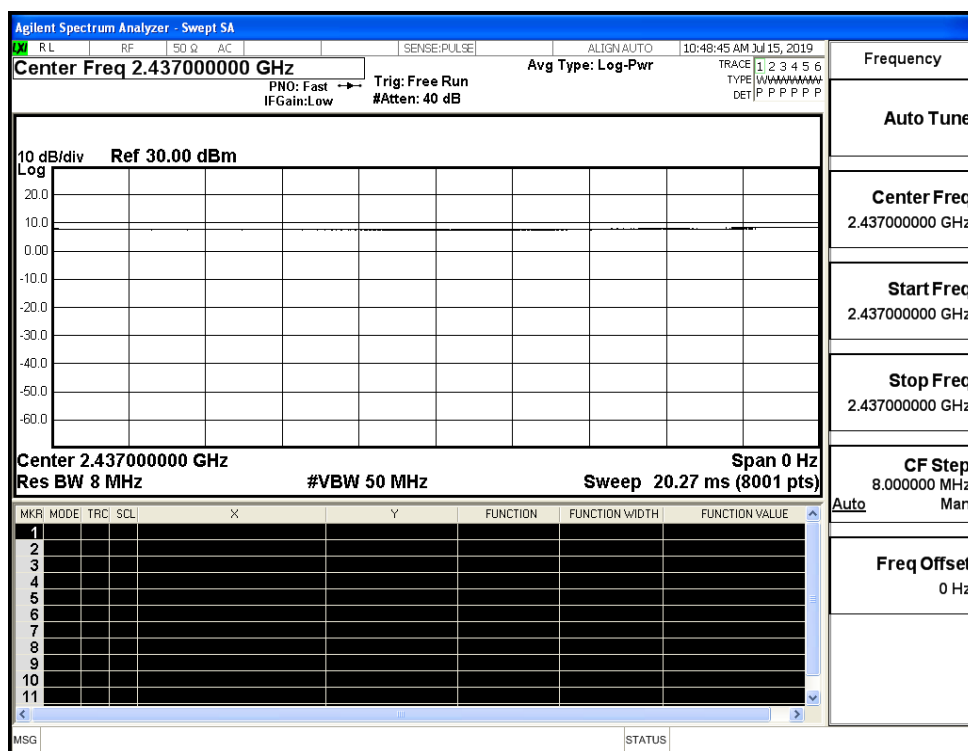
Environmental Conditions

Temperature:	24.1°C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Wang.Chuang

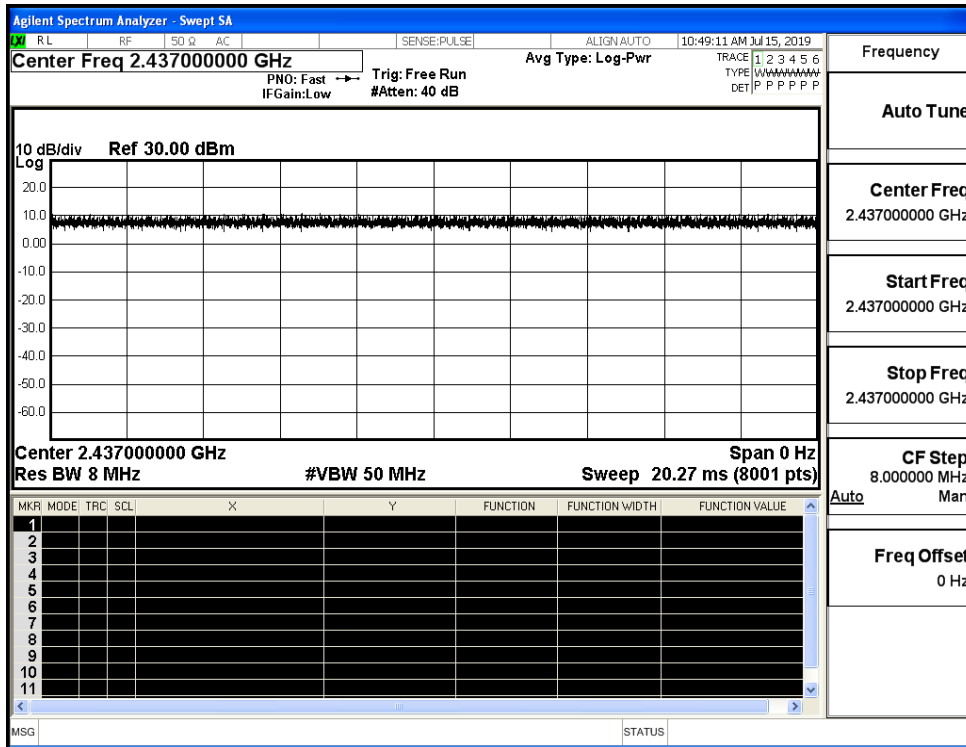
A.1 Duty Cycle

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

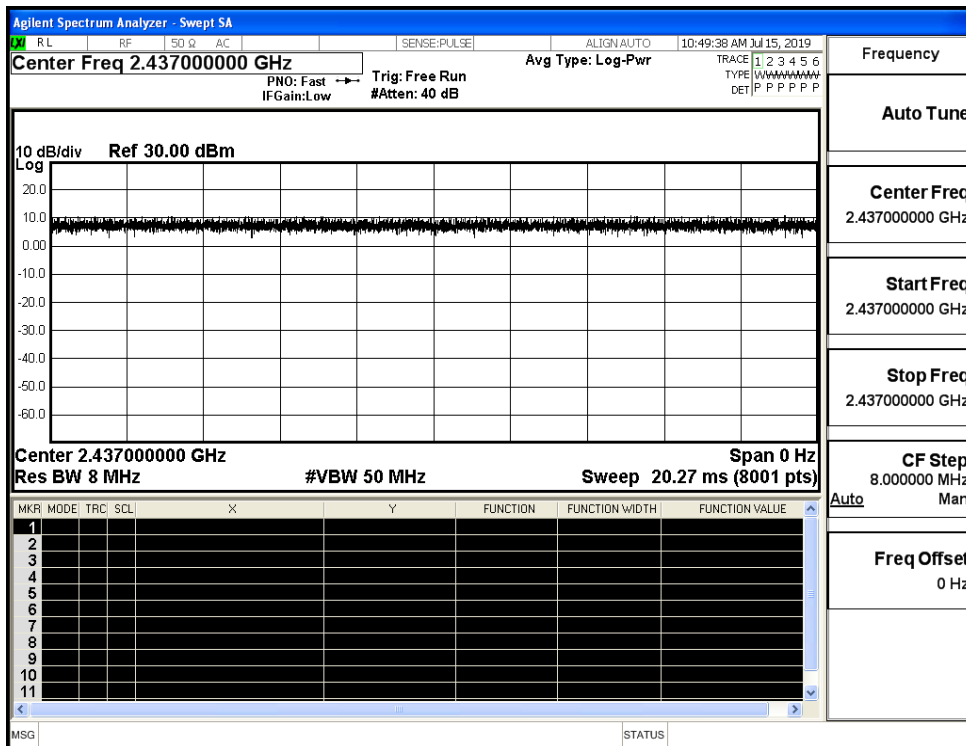
Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1

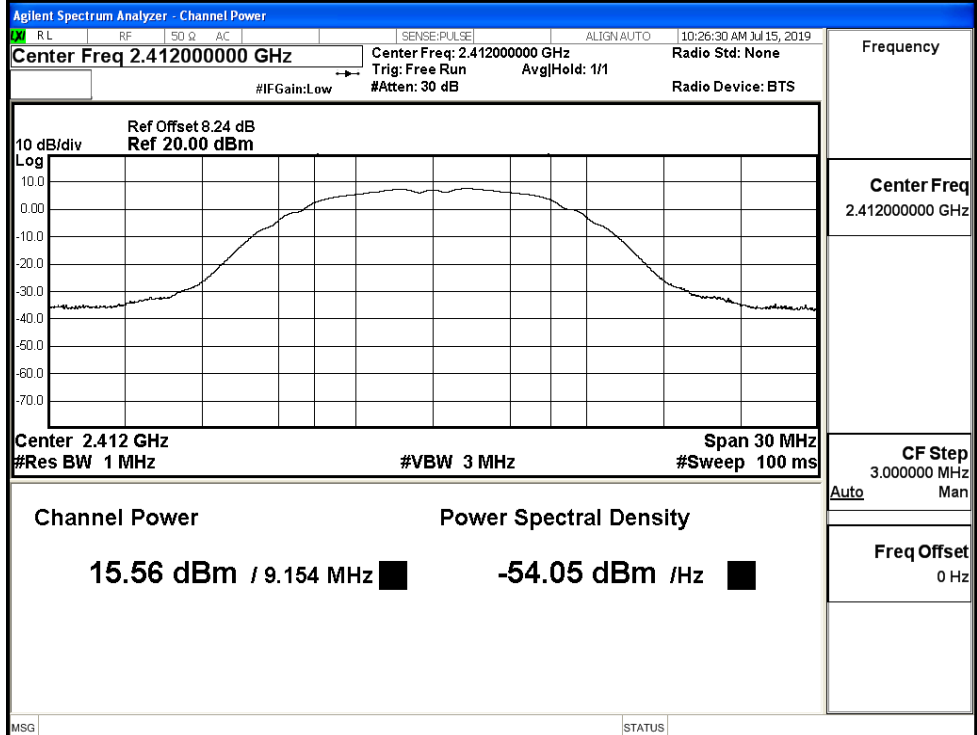


A.2 Maximum Conducted Output Power

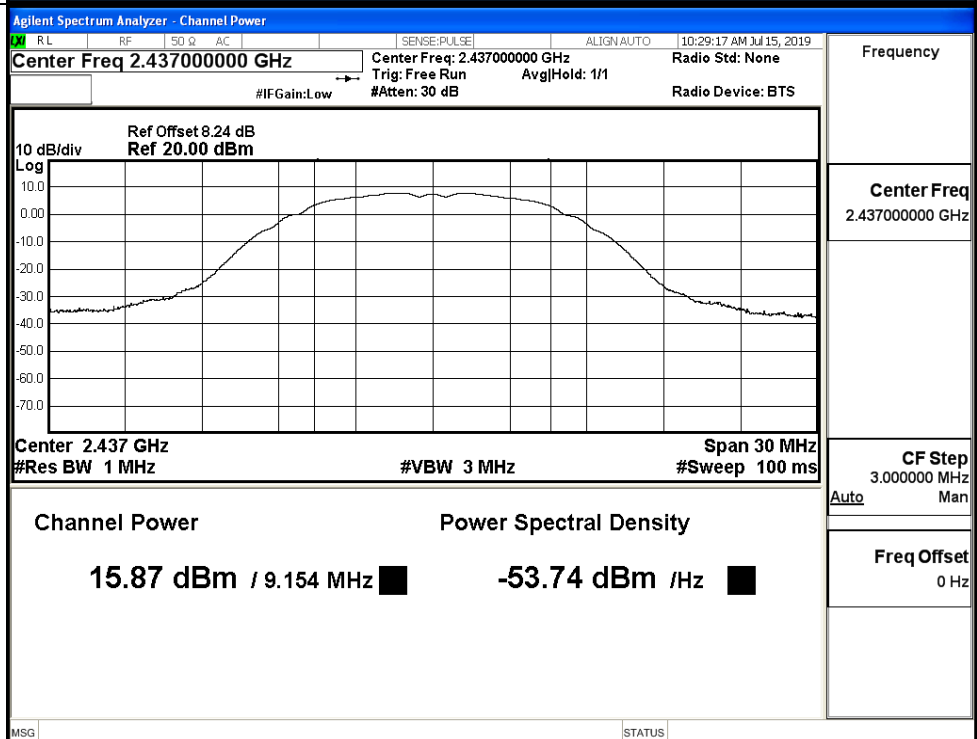
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	15.56	30	PASS
	MCH	15.87	30	PASS
	HCH	15.50	30	PASS
11G	LCH	14.87	30	PASS
	MCH	15.22	30	PASS
	HCH	14.82	30	PASS
11N20SISO	LCH	14.83	30	PASS
	MCH	15.63	30	PASS
	HCH	14.96	30	PASS

Test Graphs

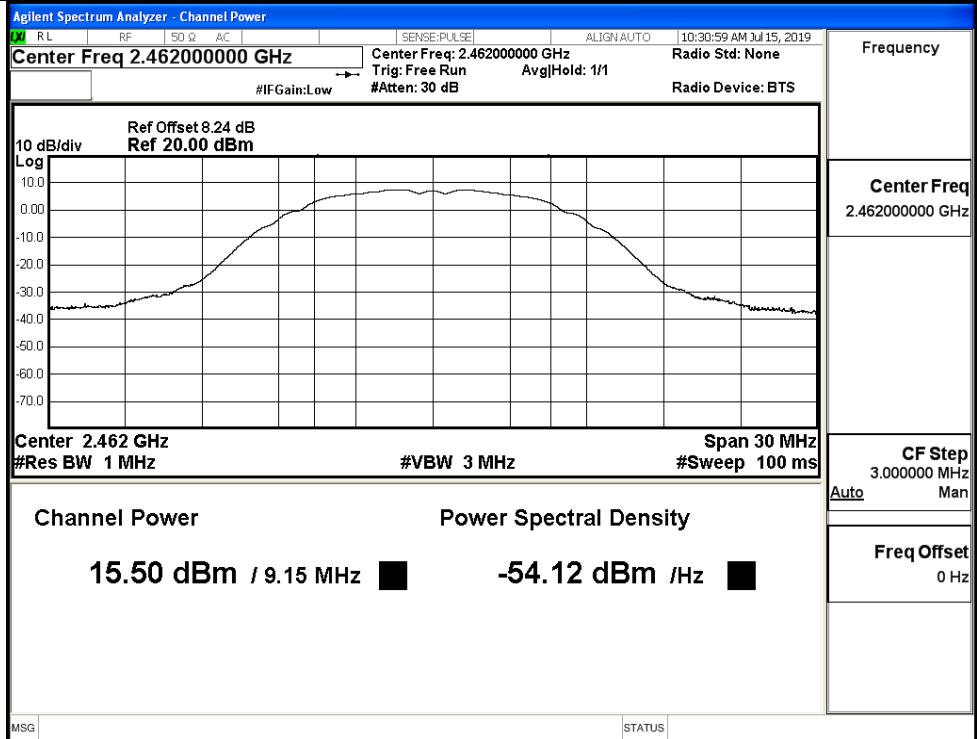
11B/LCH



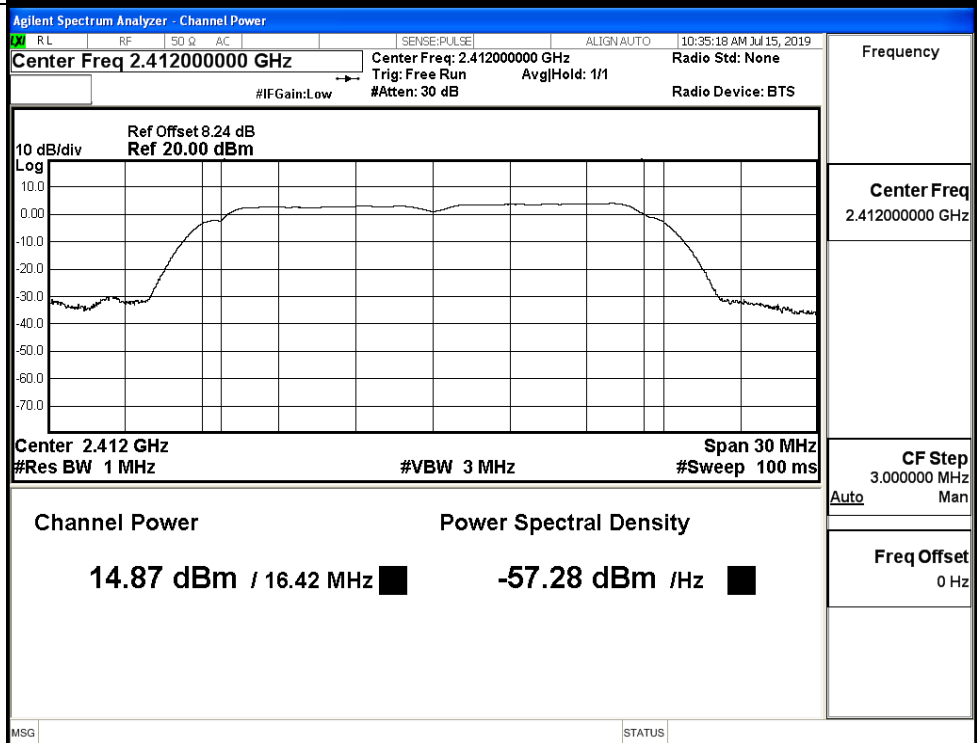
11B/MCH



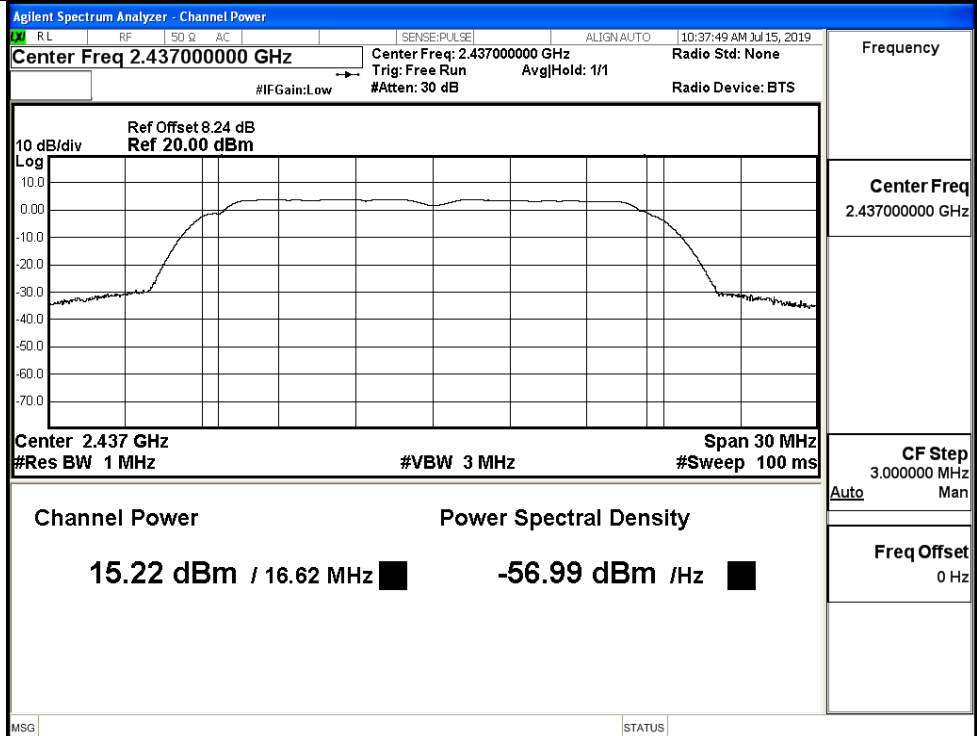
11B/HCH



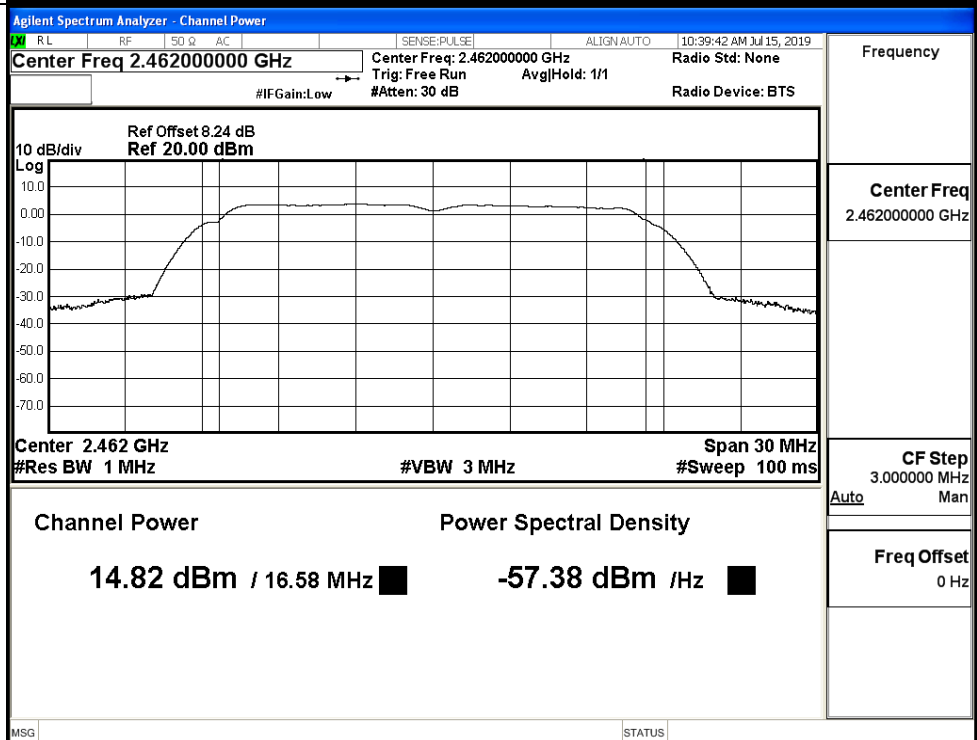
11G/LCH



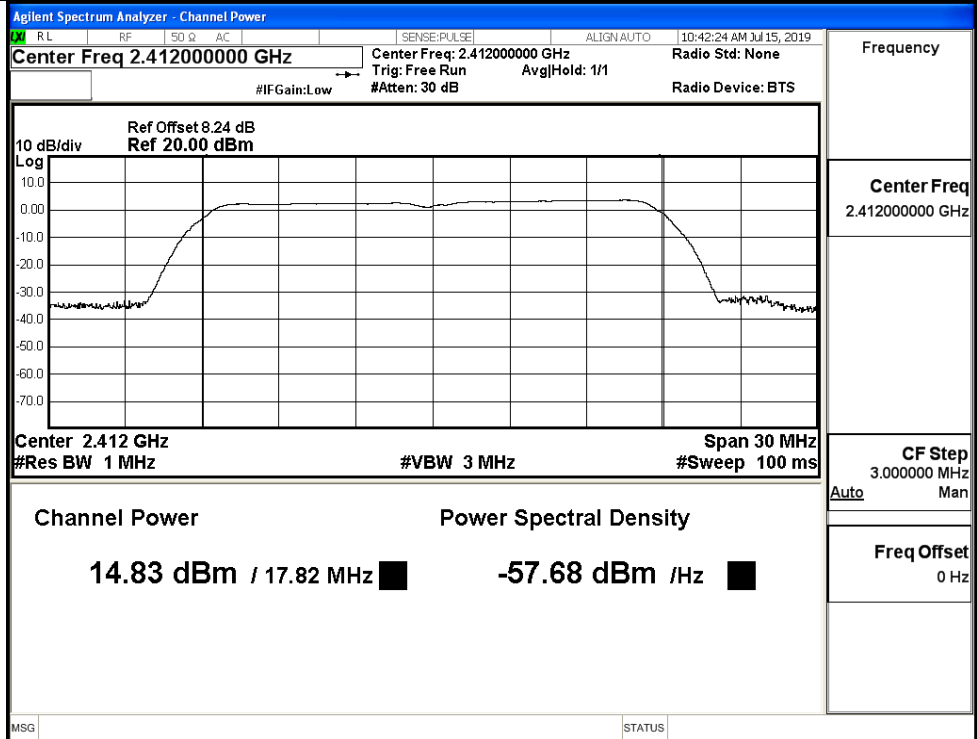
11G/MCH



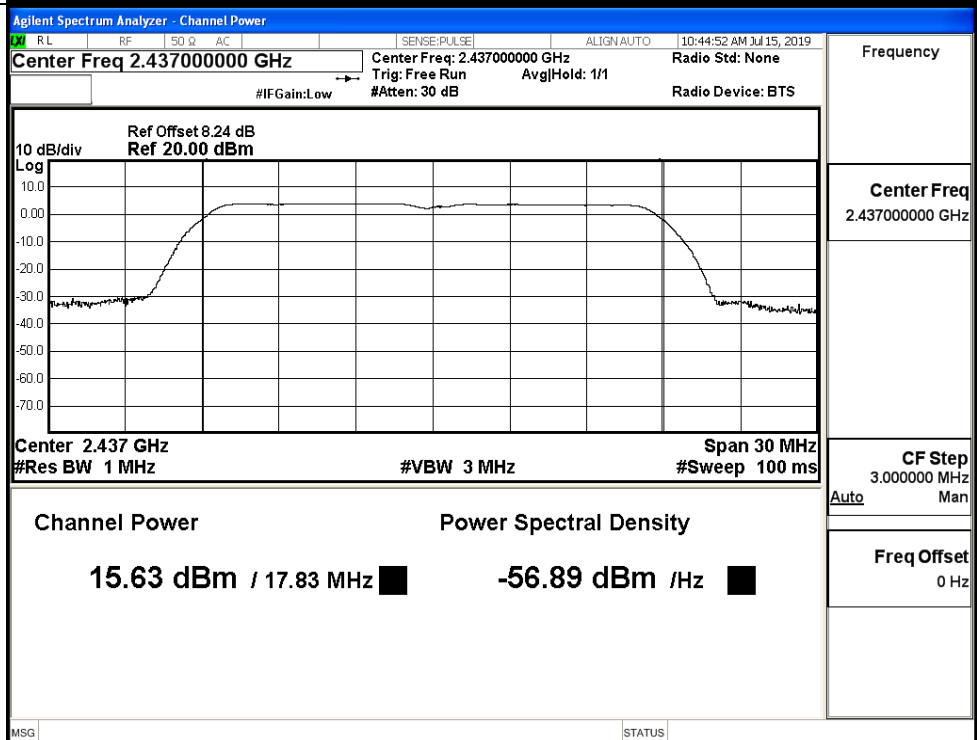
11G/HCH



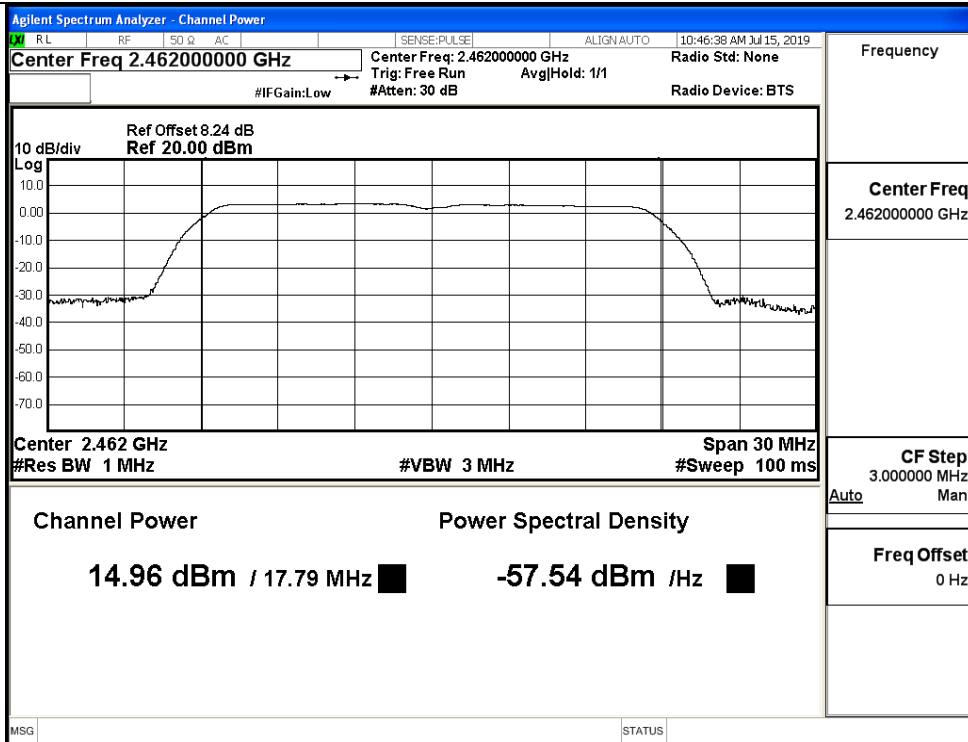
11N20SISO/LCH



11N20SISO/MCH



11N20SISO/HCH

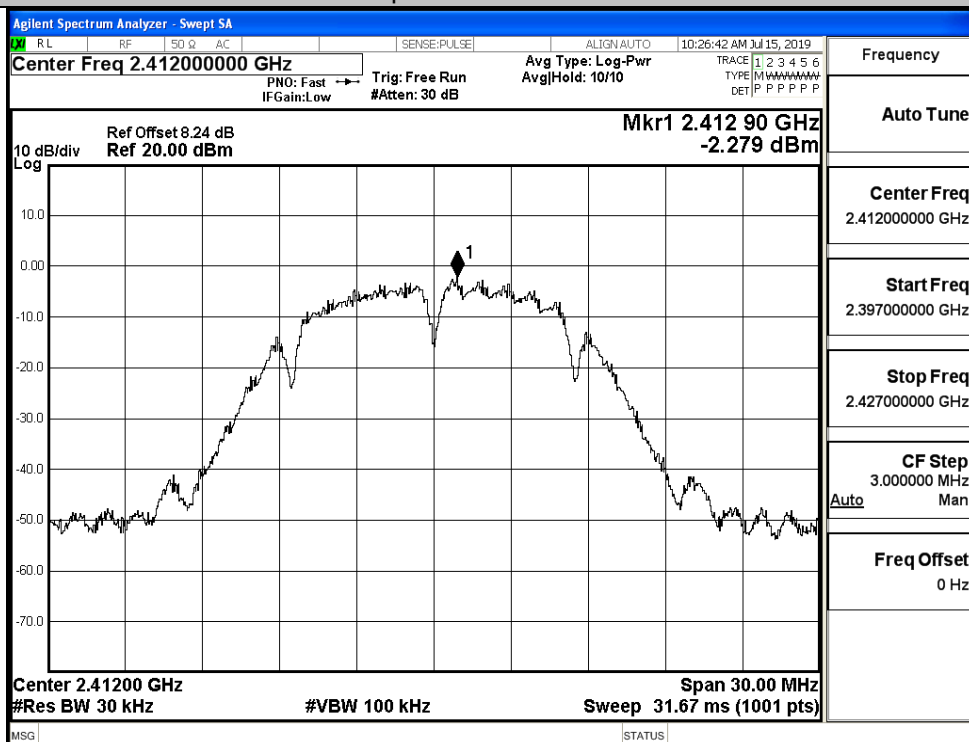


A.3 Maximum Power Spectral Density

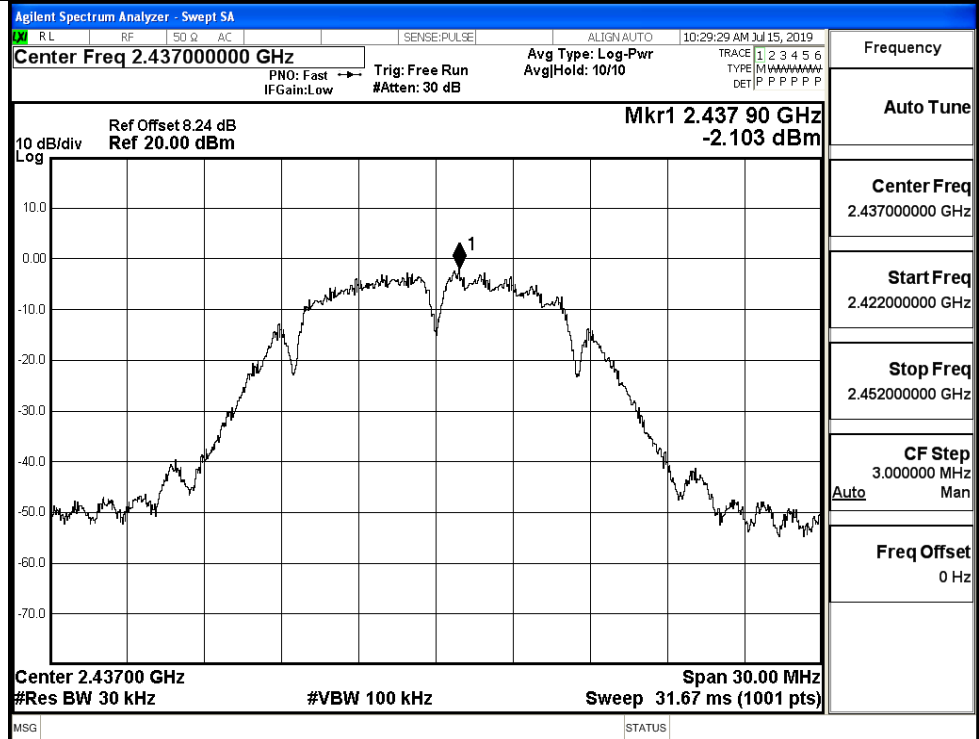
Mode	Channel	Meas.Level [dBm/30KHz]	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-2.279	-12.279	8	PASS
	MCH	-2.103	-12.103	8	PASS
	HCH	-2.464	-12.464	8	PASS
11G	LCH	-9.472	-19.472	8	PASS
	MCH	-9.295	-19.295	8	PASS
	HCH	-9.541	-19.541	8	PASS
11N20SISO	LCH	-9.625	-19.625	8	PASS
	MCH	-4.323	-14.323	8	PASS
	HCH	-9.731	-19.731	8	PASS

Test Graphs

11B/LCH



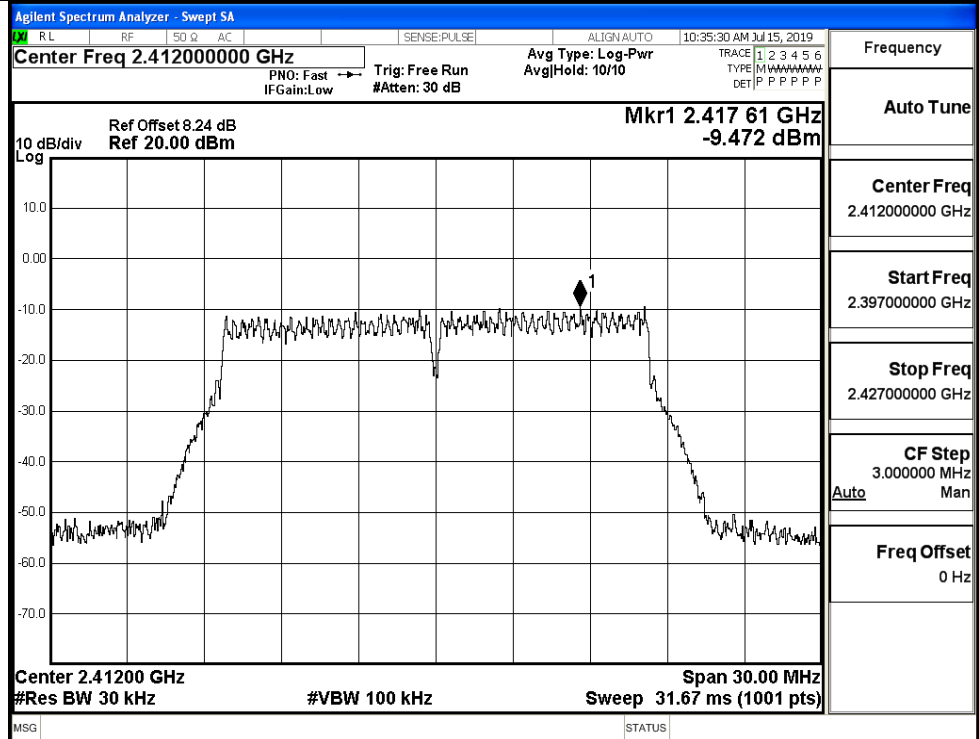
11B/MCH



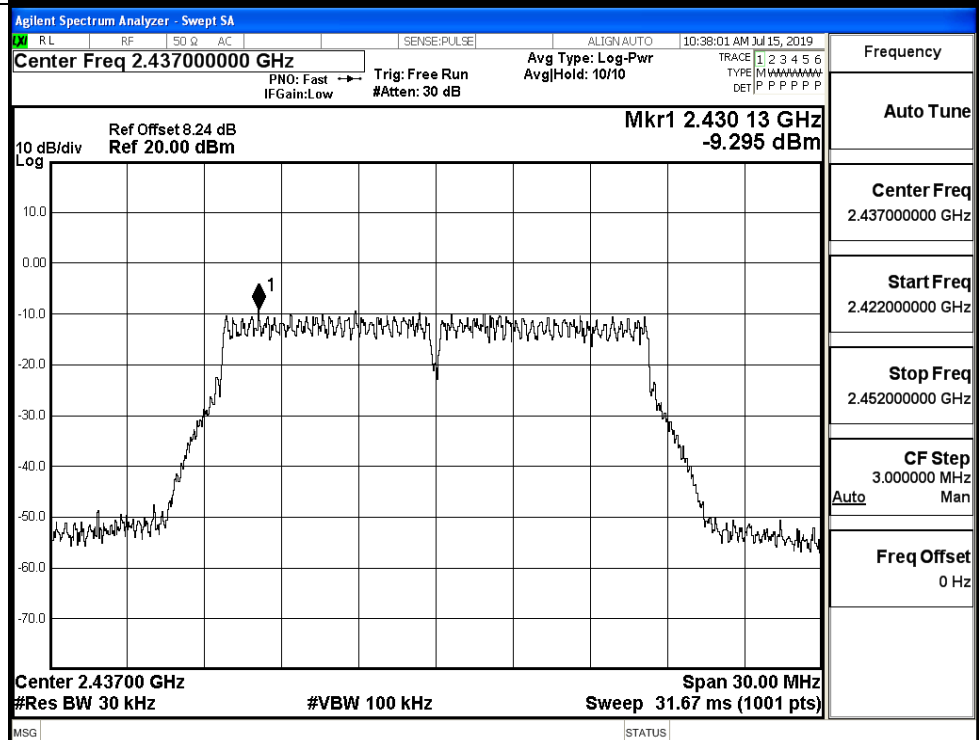
11B/HCH



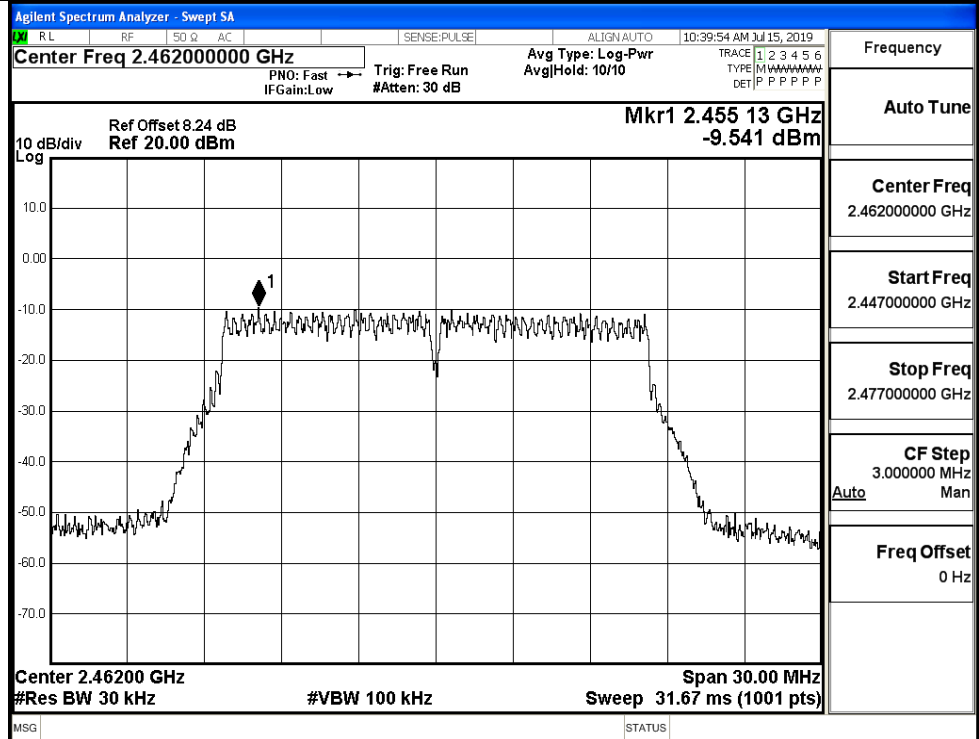
11G/LCH



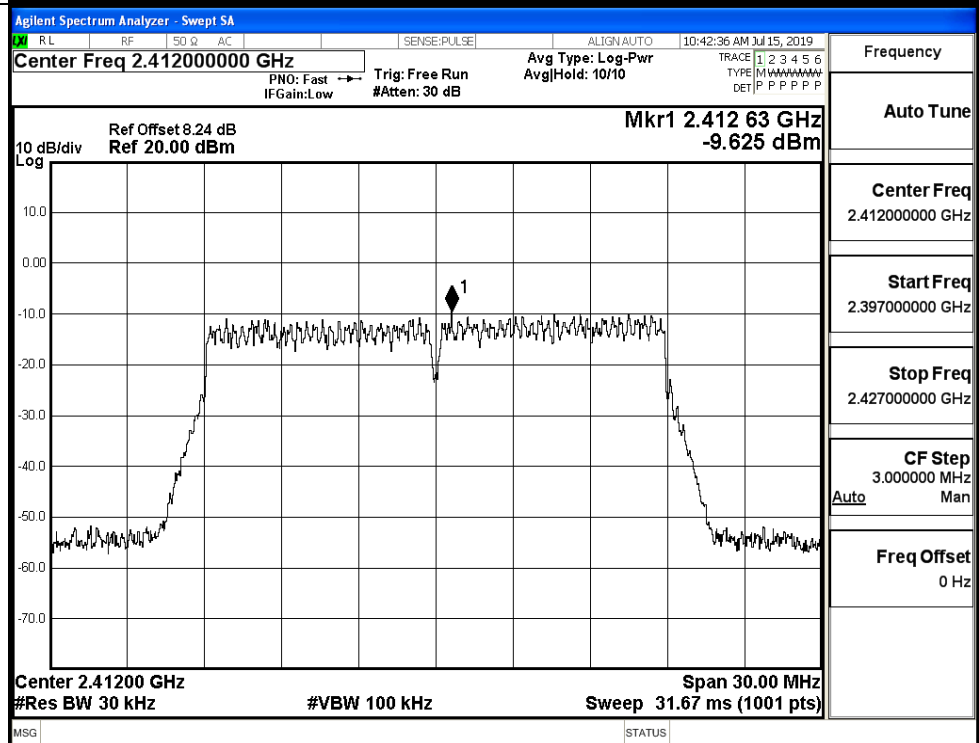
11G/MCH



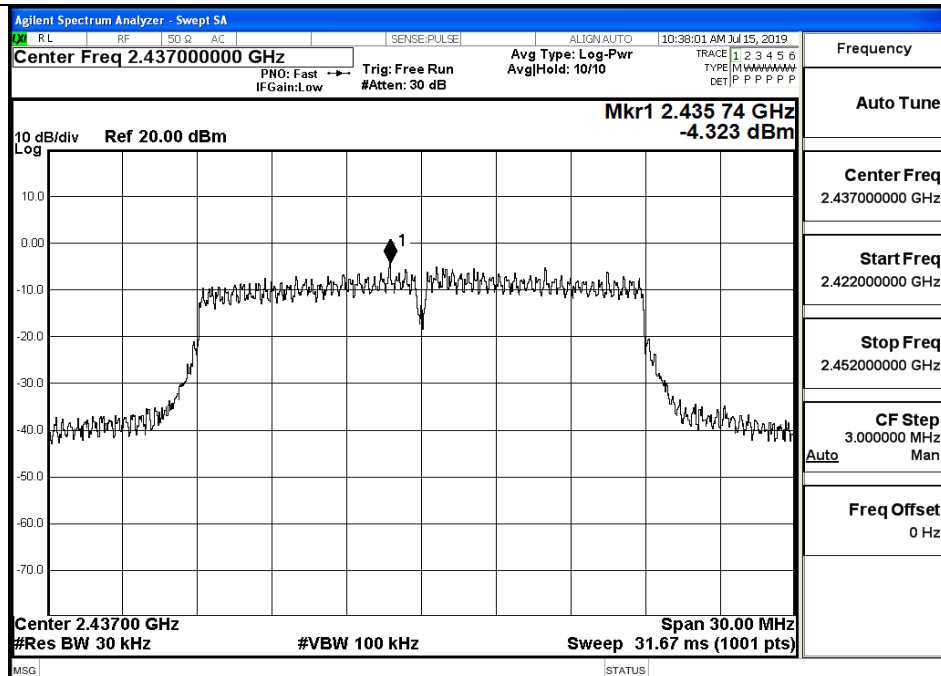
11G/HCH



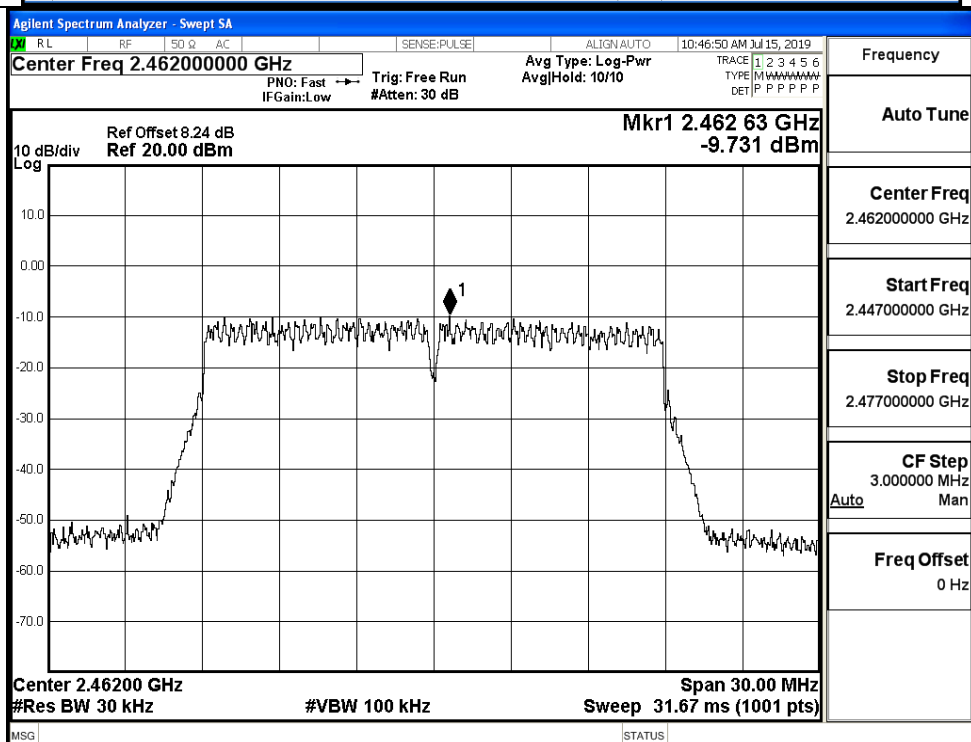
11N20SISO/LCH



11N20SISO/MCH



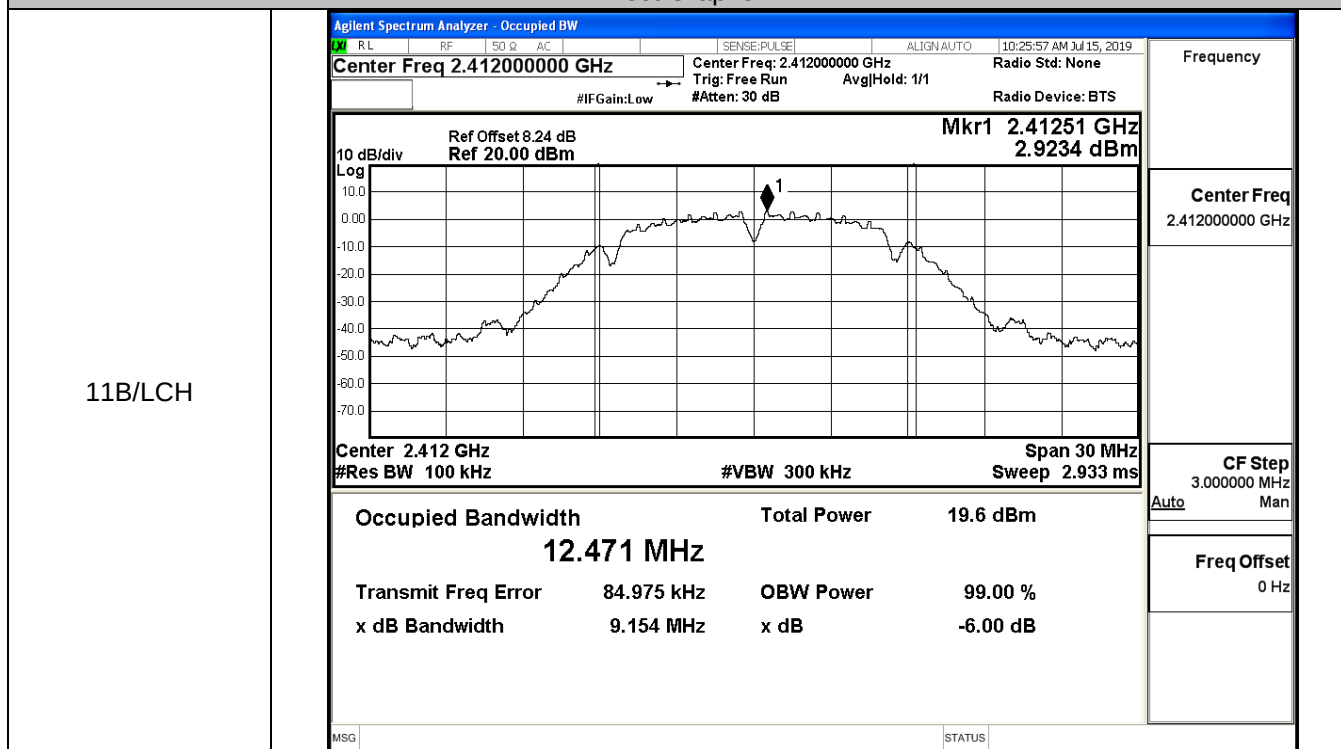
11N20SISO/HCH



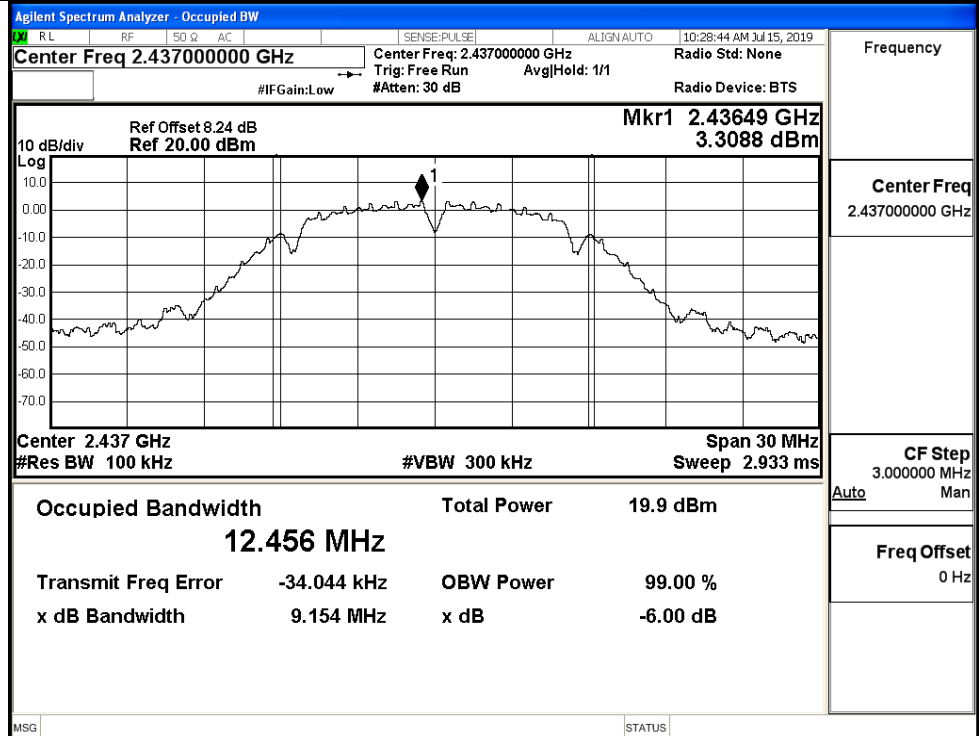
A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.154	≥ 0.5	PASS
	MCH	9.154	≥ 0.5	PASS
	HCH	9.150	≥ 0.5	PASS
11G	LCH	16.42	≥ 0.5	PASS
	MCH	16.62	≥ 0.5	PASS
	HCH	16.58	≥ 0.5	PASS
11N20SISO	LCH	17.82	≥ 0.5	PASS
	MCH	17.83	≥ 0.5	PASS
	HCH	17.79	≥ 0.5	PASS

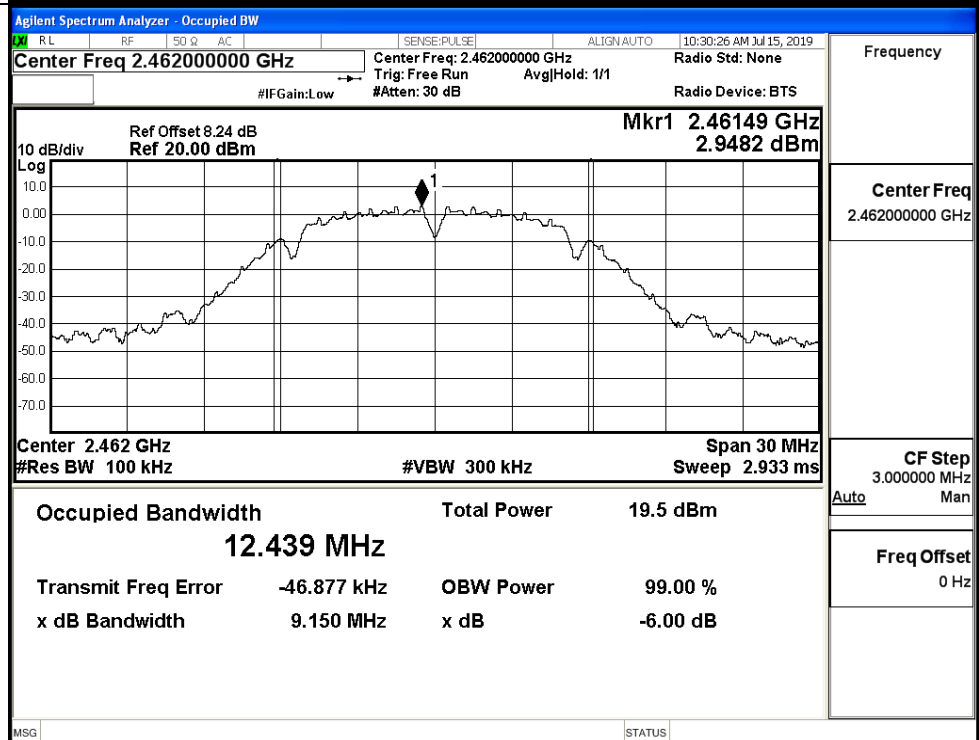
Test Graphs



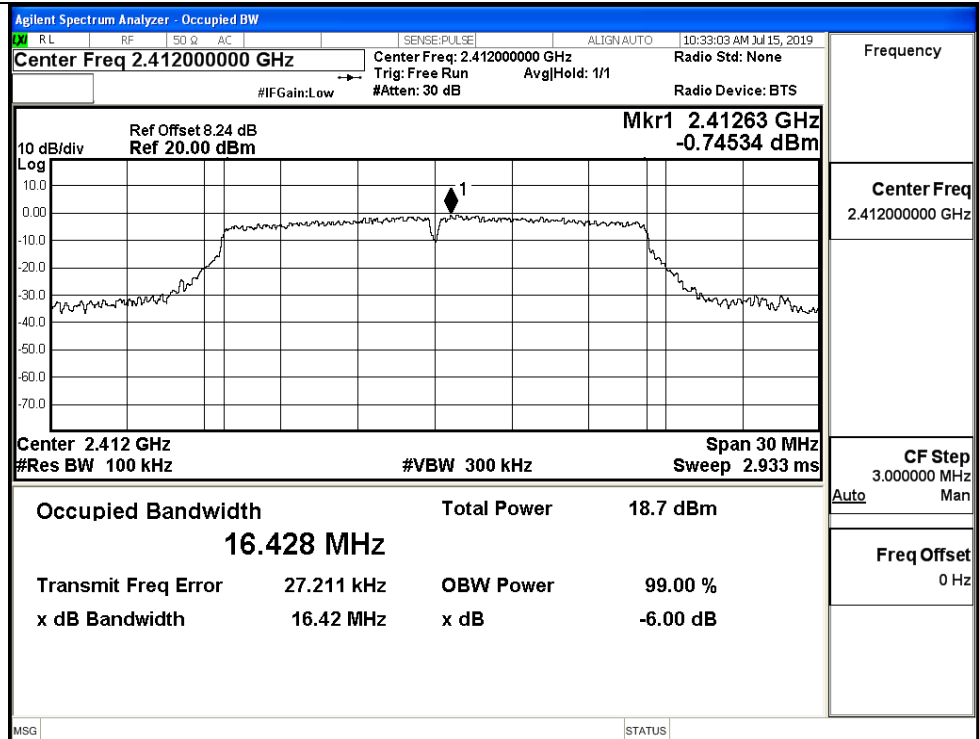
11B/MCH



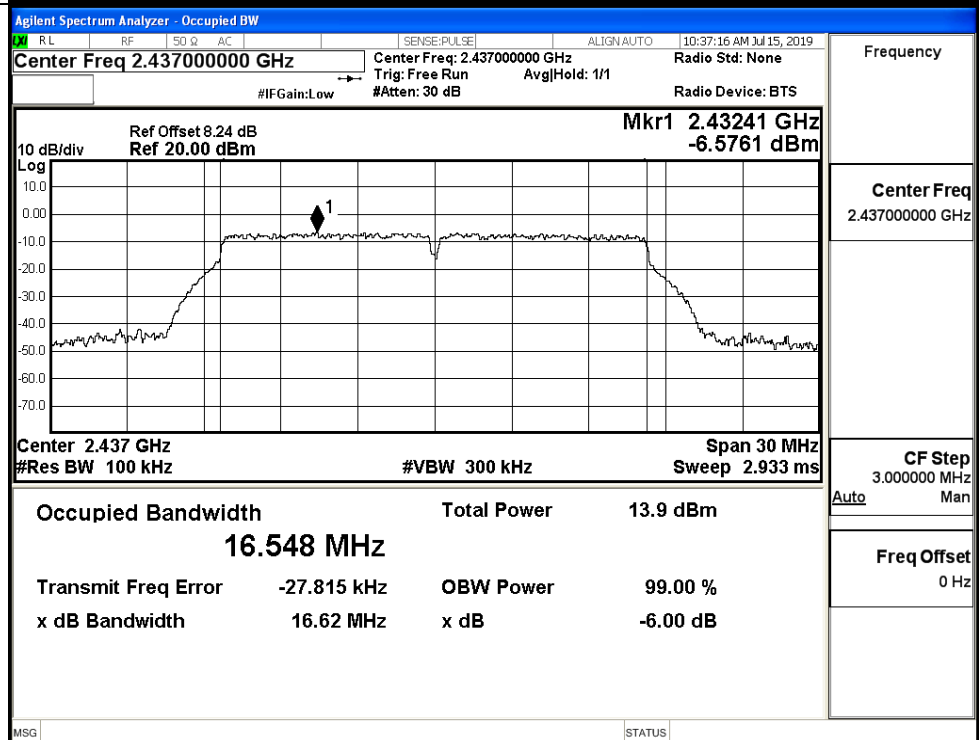
11B/HCH



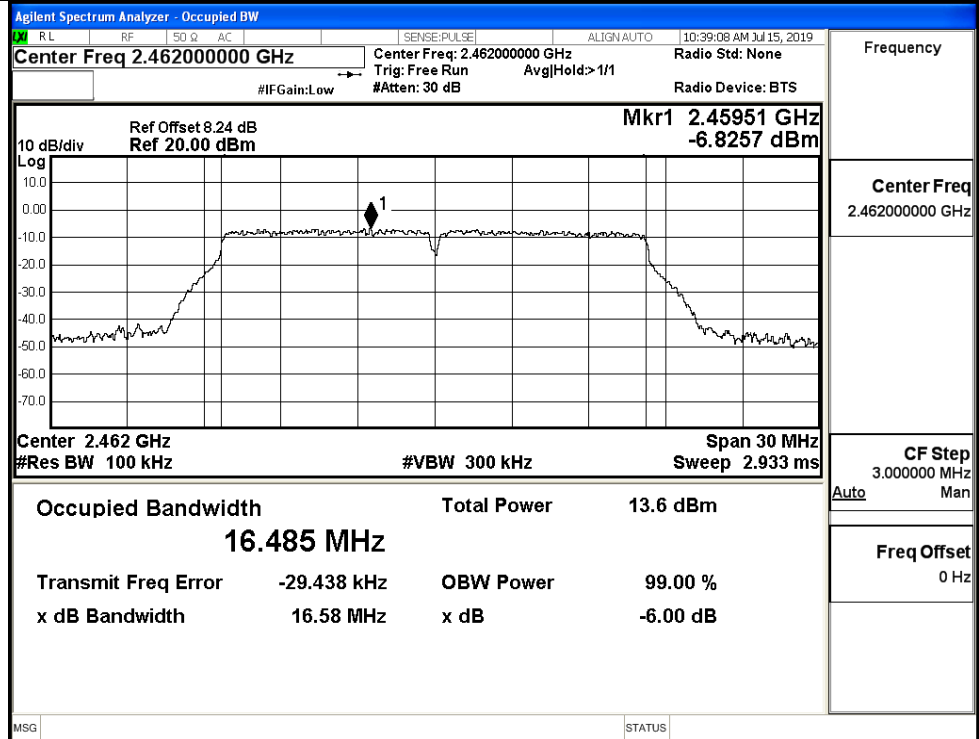
11G/LCH



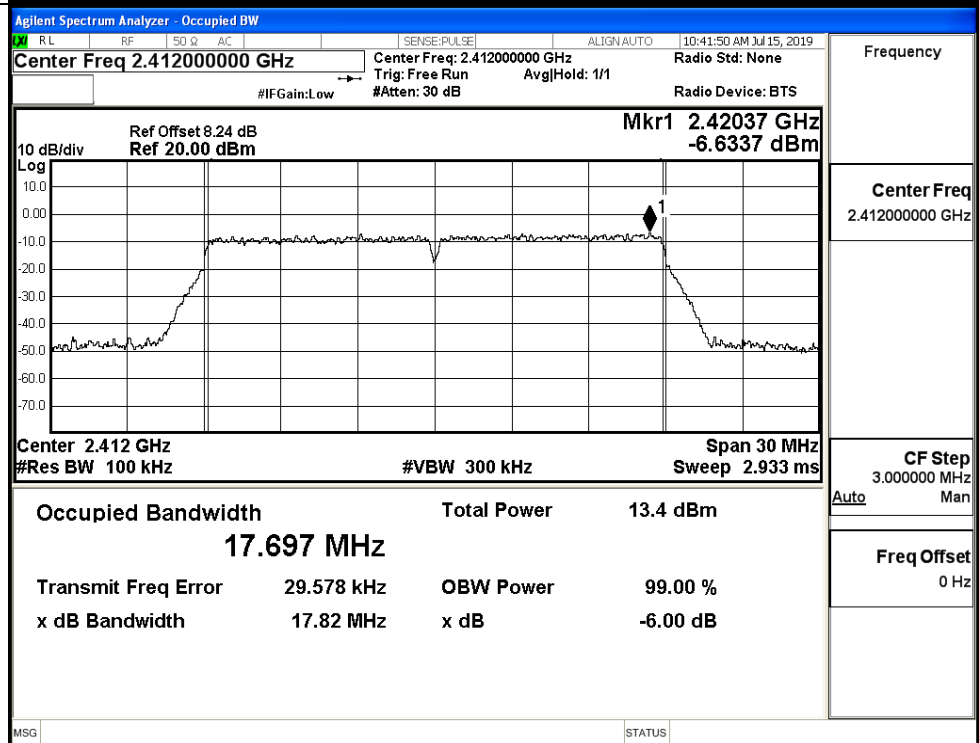
11G/MCH



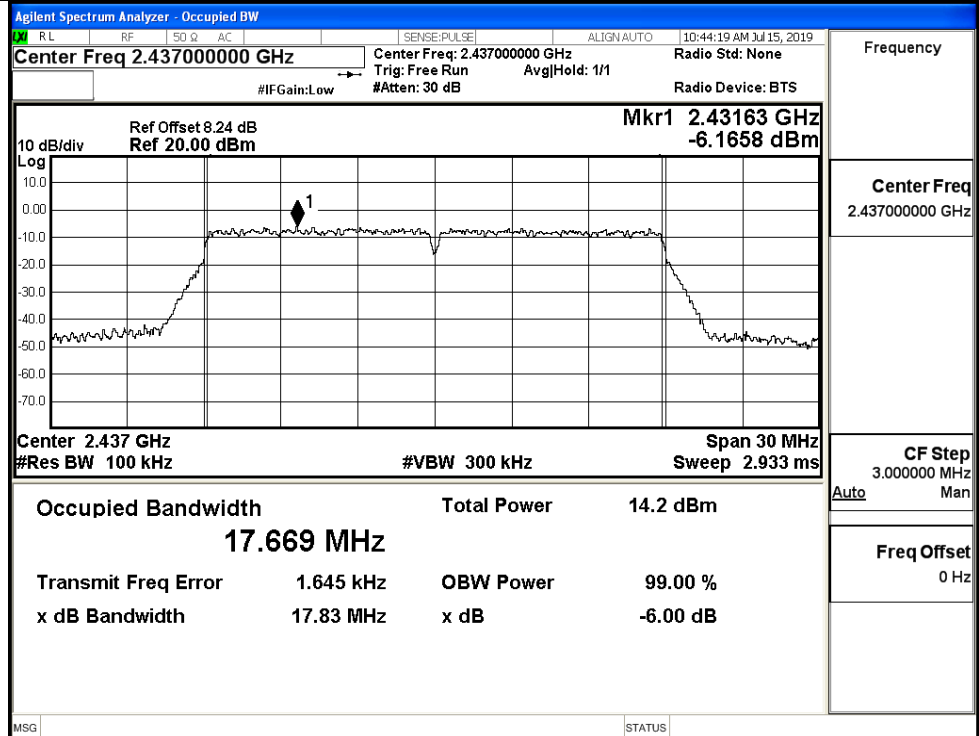
11G/HCH



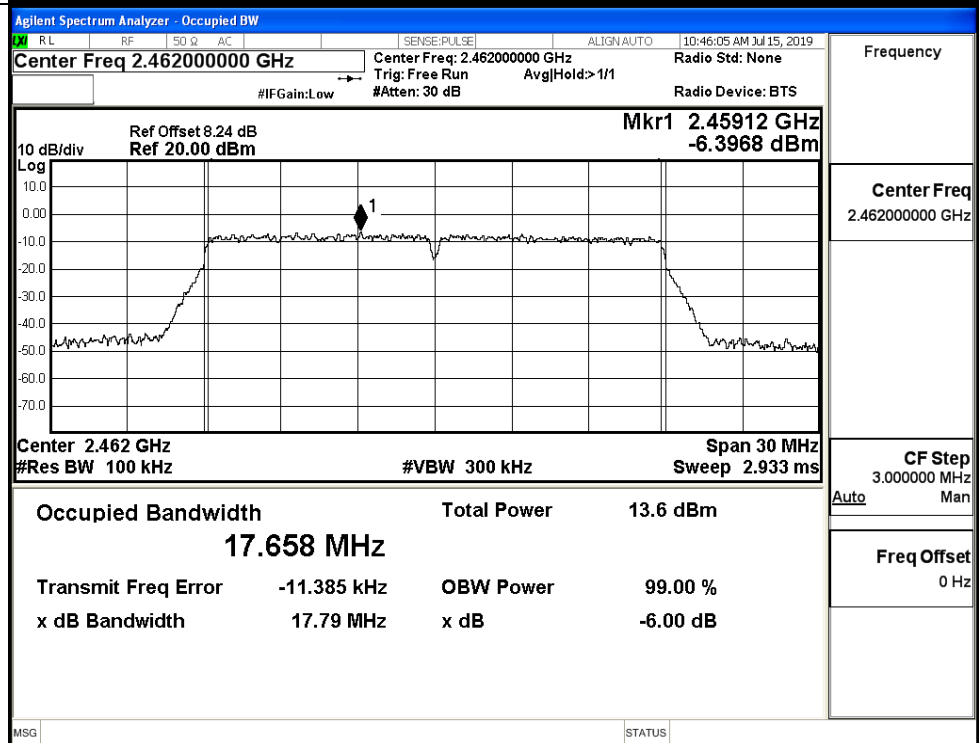
11N20SISO/LCH



11N20SISO/MCH



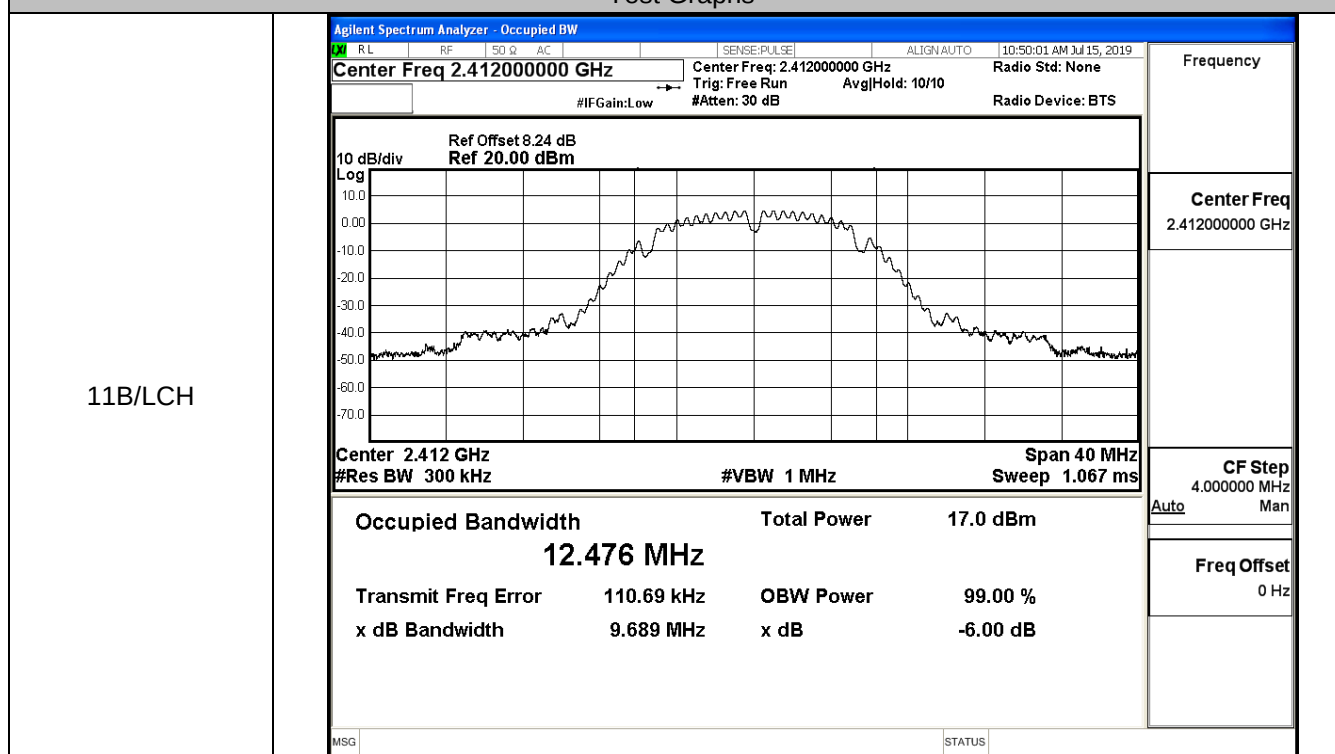
11N20SISO/HCH



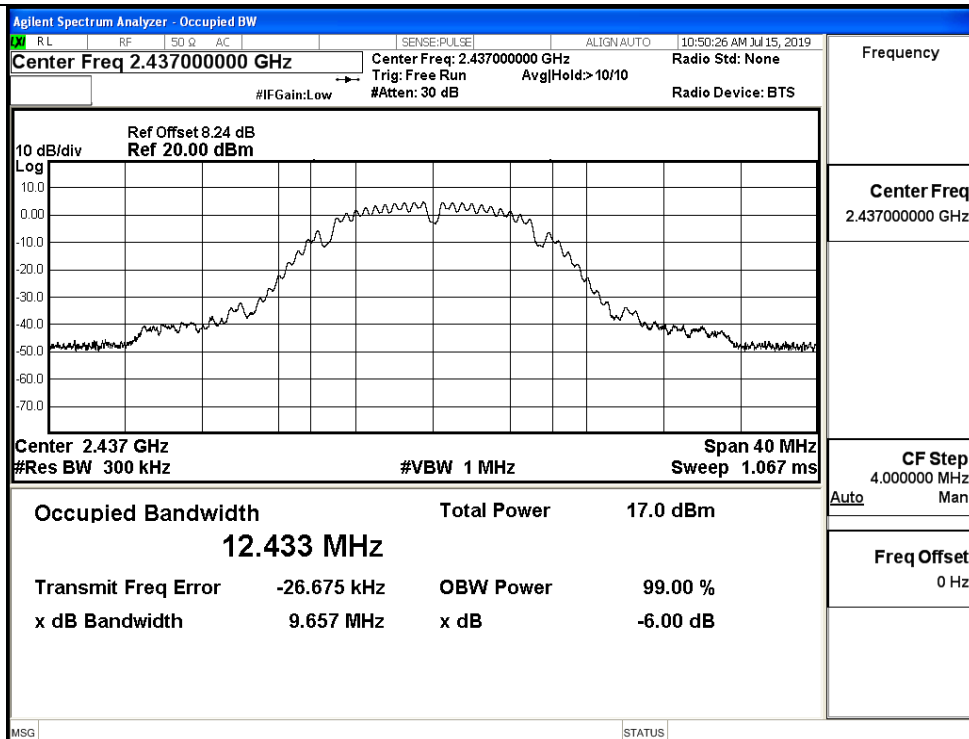
A.5 Occupied Bandwidth

Mode	Channel	Occupied Bandwidth [MHz]	Verdict
11B	LCH	12.476	PASS
	MCH	12.433	PASS
	HCH	12.434	PASS
11G	LCH	16.748	PASS
	MCH	16.690	PASS
	HCH	16.370	PASS
11N20SISO	LCH	17.379	PASS
	MCH	17.600	PASS
	HCH	17.466	PASS

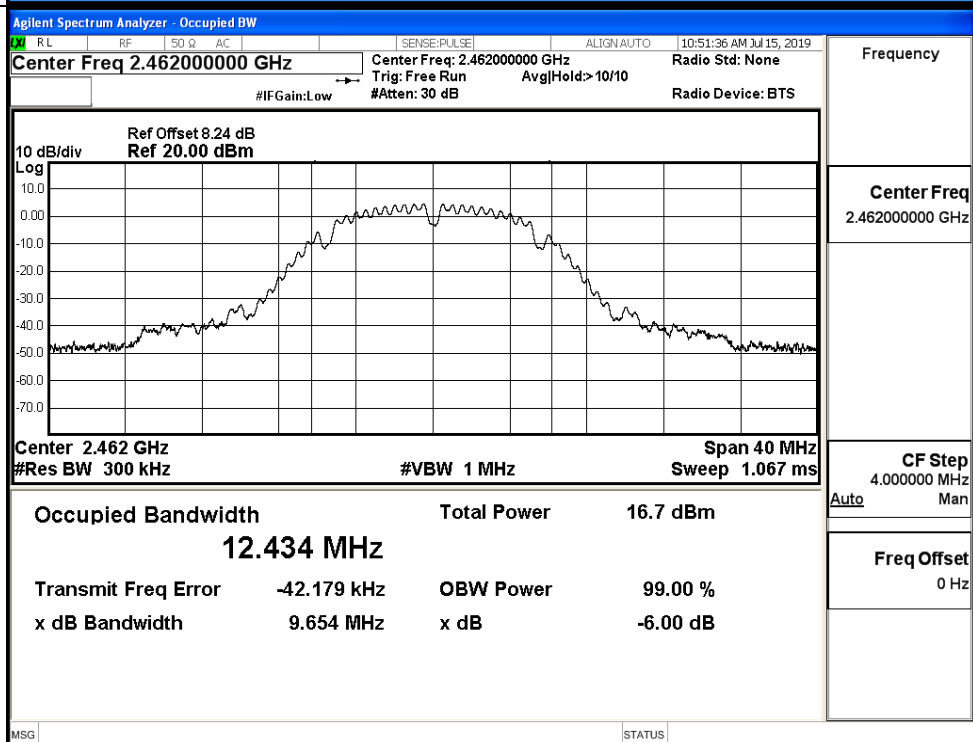
Test Graphs



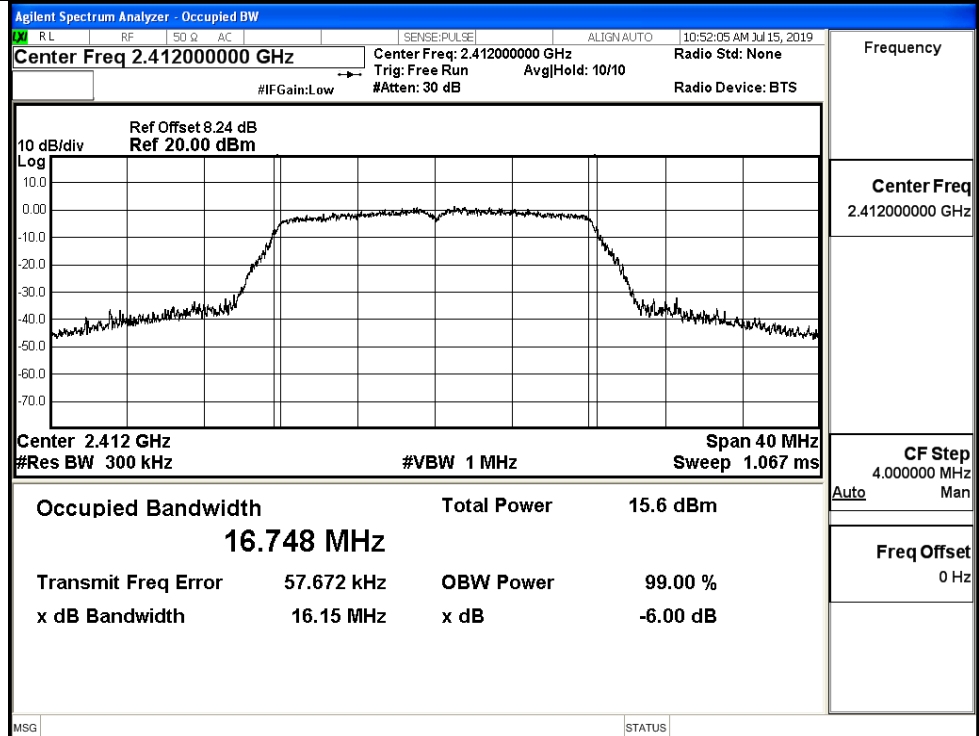
11B/MCH



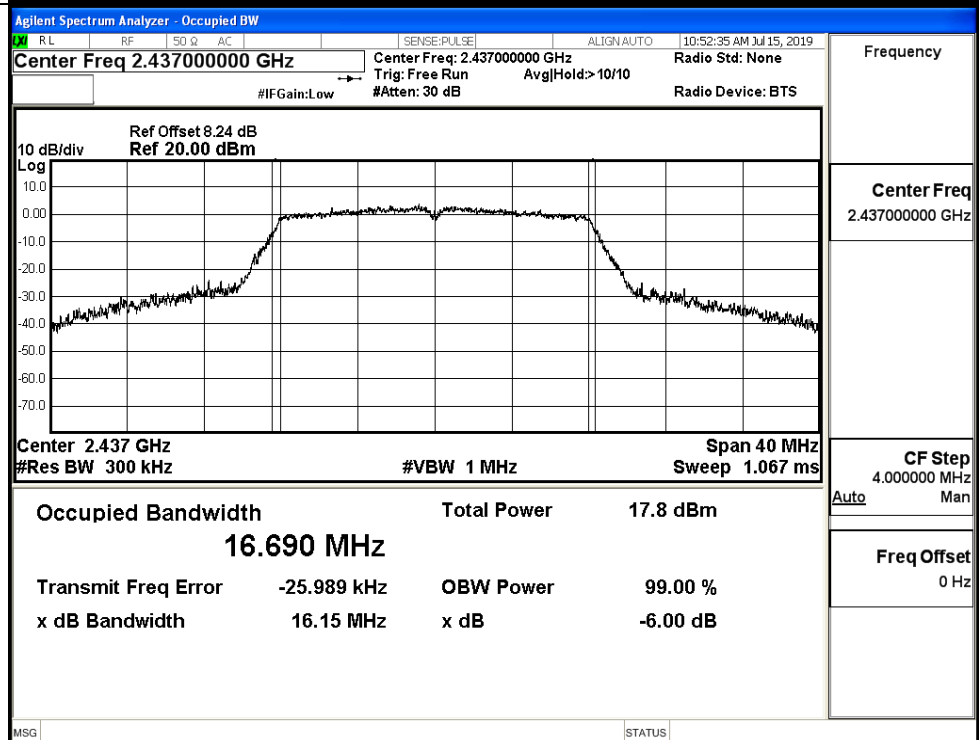
11B/HCH



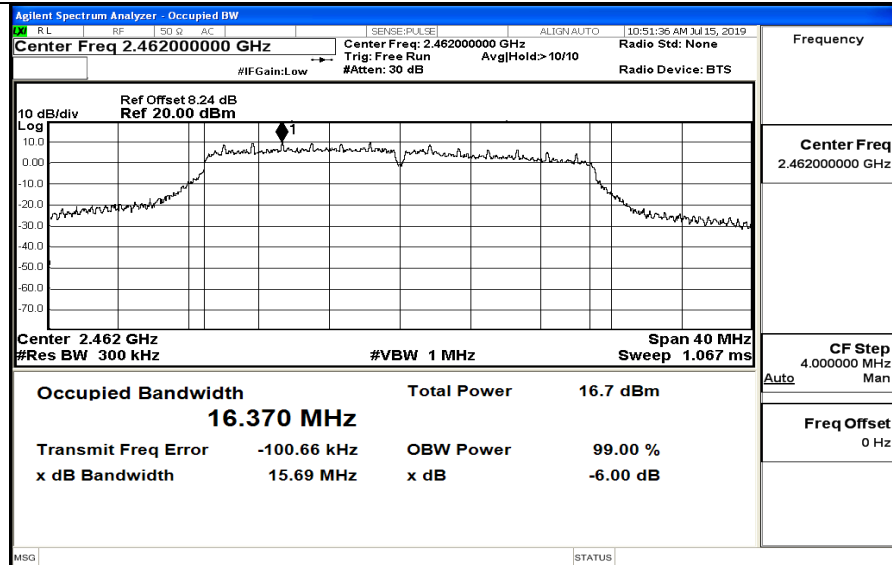
11G/LCH



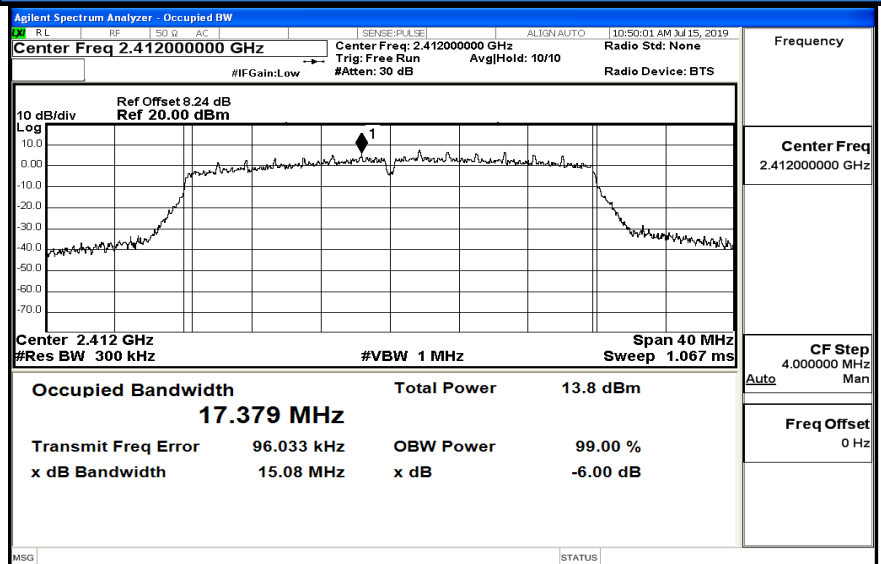
11G/MCH



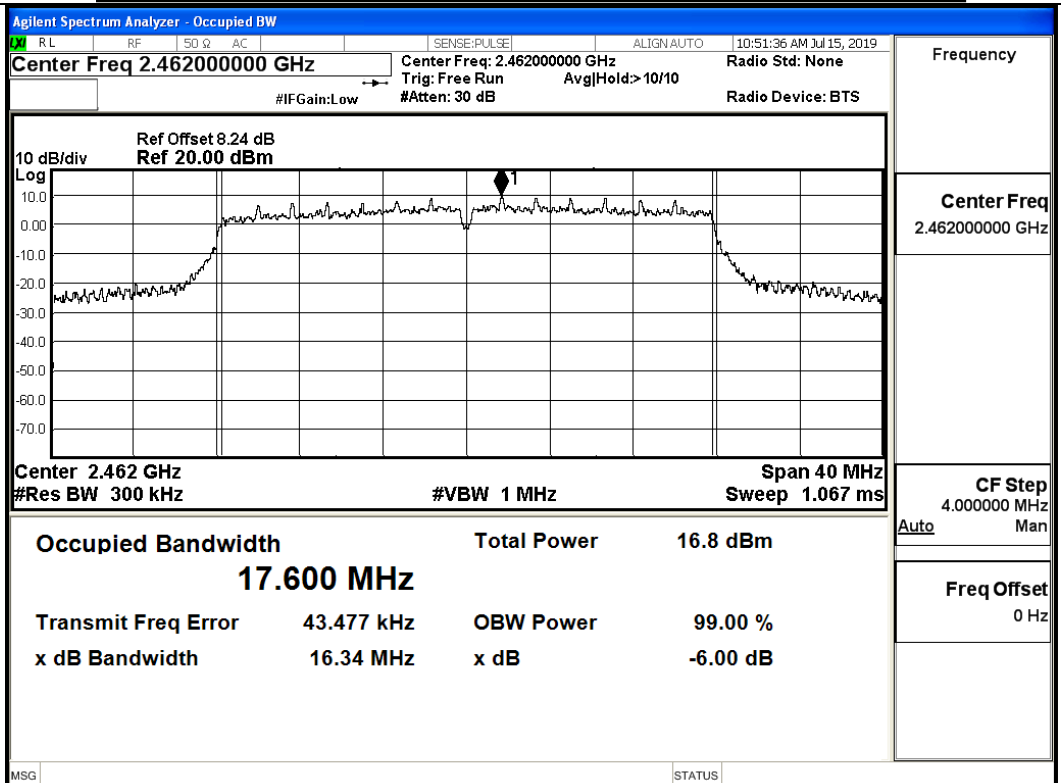
11G/HCH

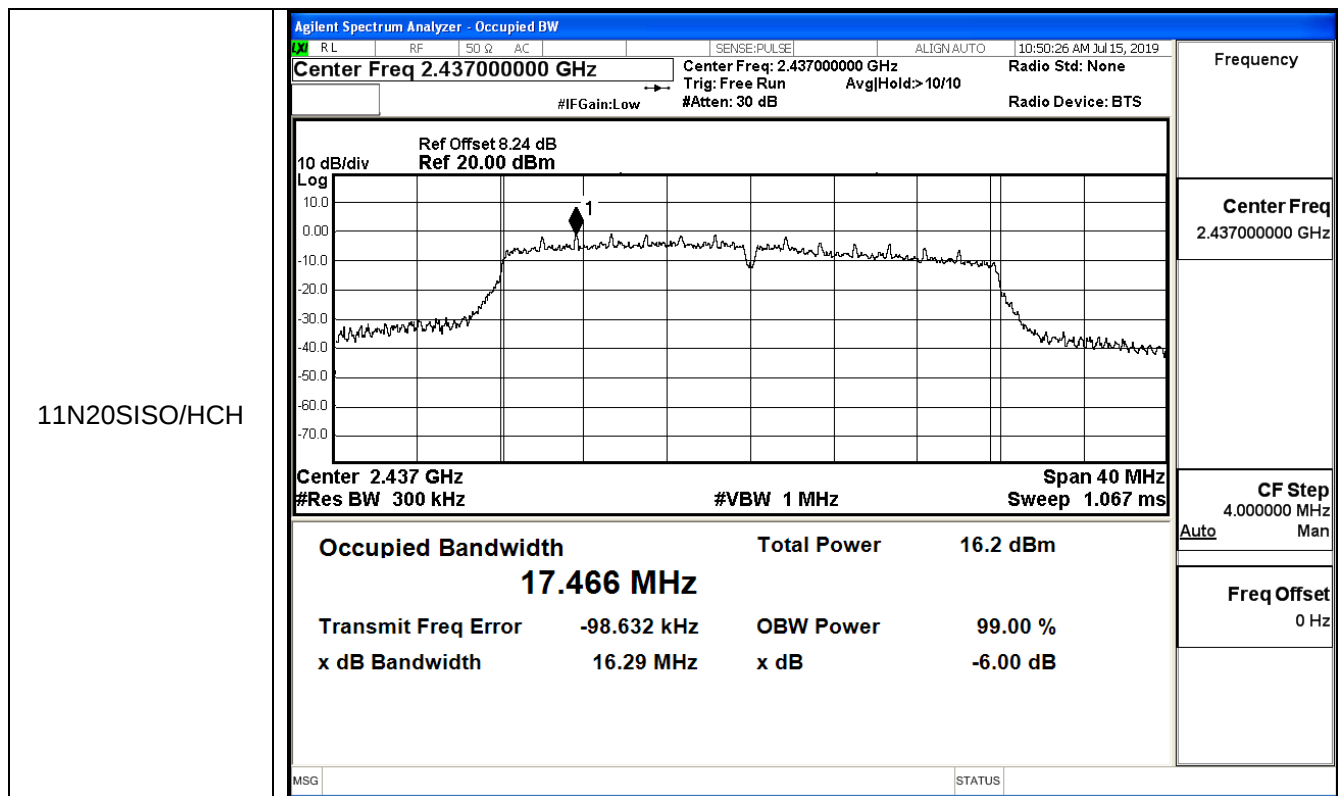


11N20SISO/LCH



11N20SISO/MCH



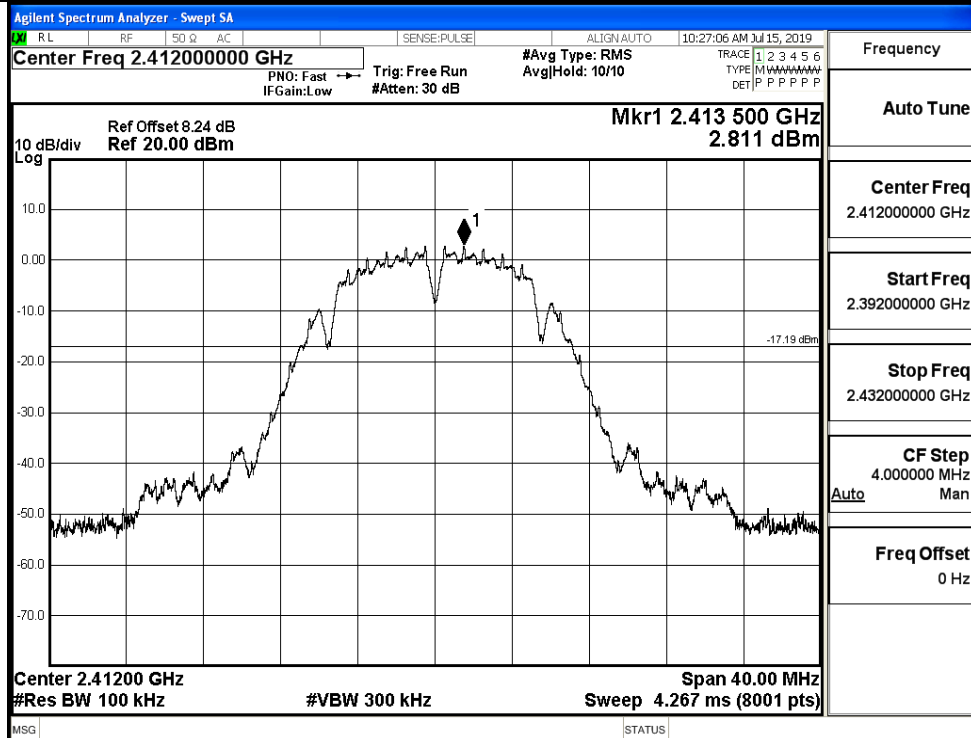


A.6 RF Conducted Spurious Emissions

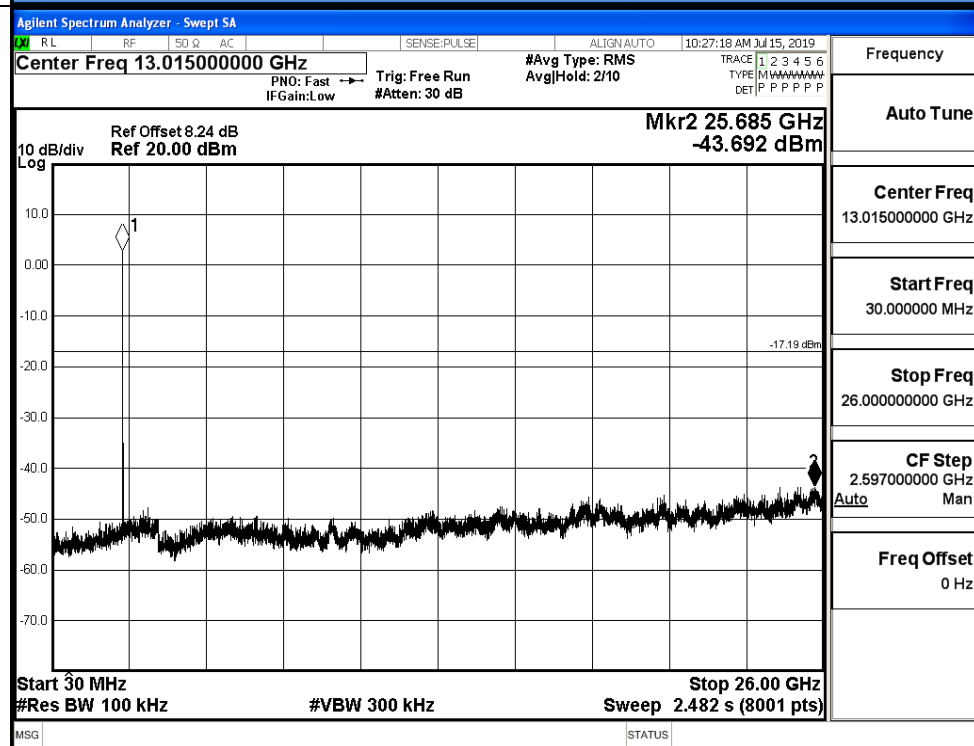
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.811	-43.692	-17.189	PASS
	MCH	3.227	-43.218	-16.773	PASS
	HCH	2.877	-43.615	-17.123	PASS
11G	LCH	-6.892	-43.156	-26.892	PASS
	MCH	-6.779	-43.312	-26.779	PASS
	HCH	-6.986	-43.453	-26.986	PASS
11N20 SISO	LCH	-6.723	-42.978	-26.723	PASS
	MCH	-6.364	-43.799	-26.364	PASS
	HCH	-6.870	-43.008	-26.870	PASS

11B LCH Graphs

Pref/11B/LCH

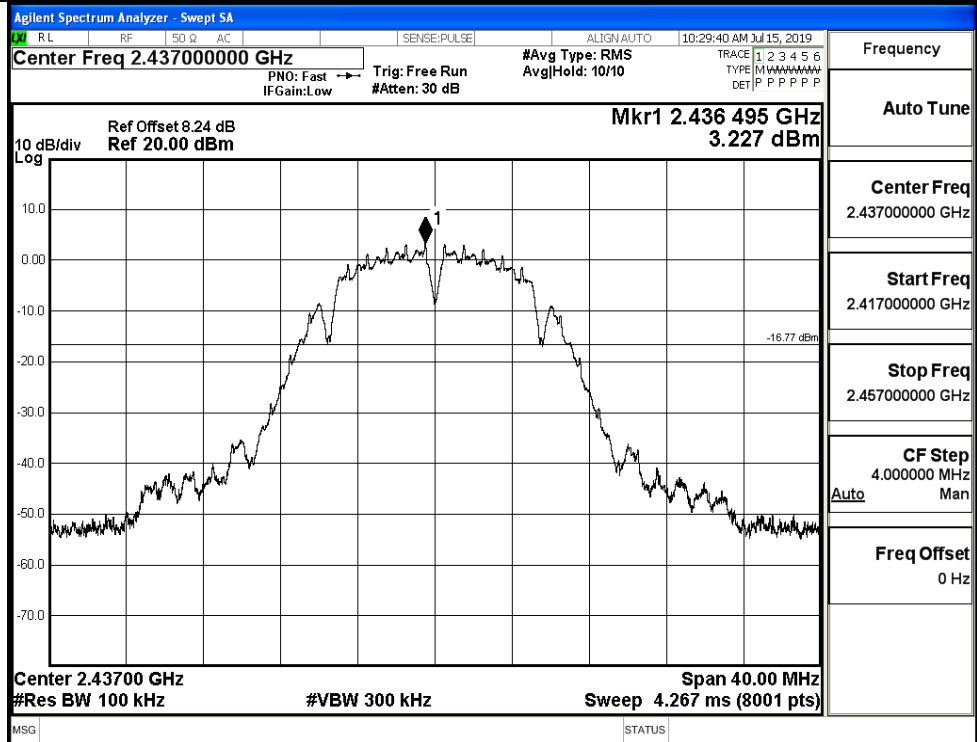


Puw/11B/LCH

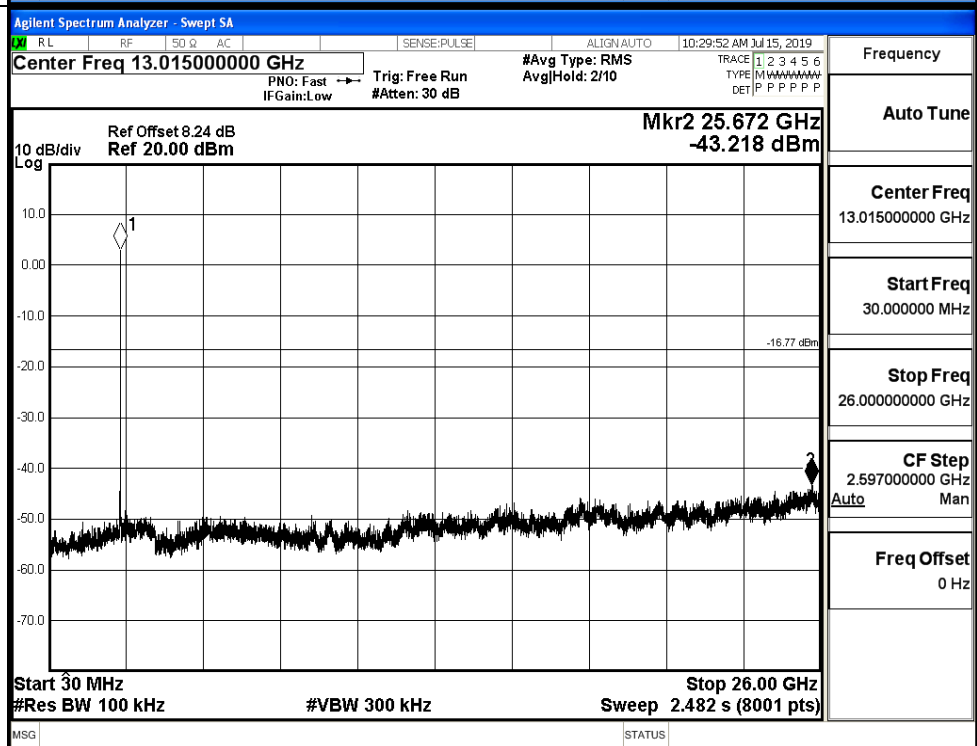


11B MCH Graphs

Pref/11B/MCH

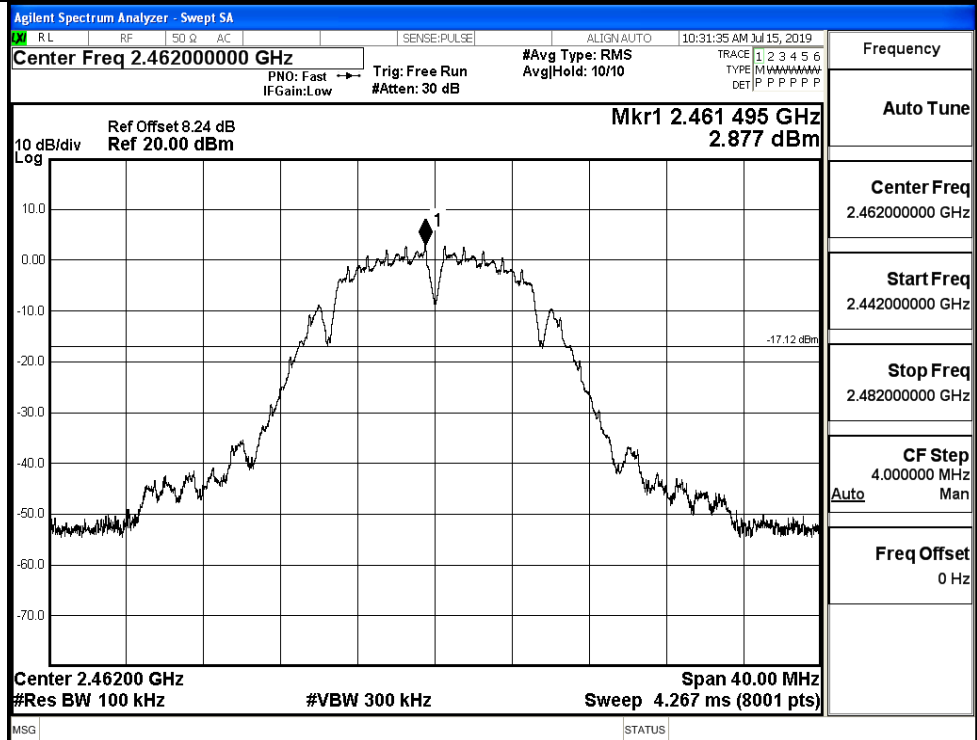


Puw/11B/MCH

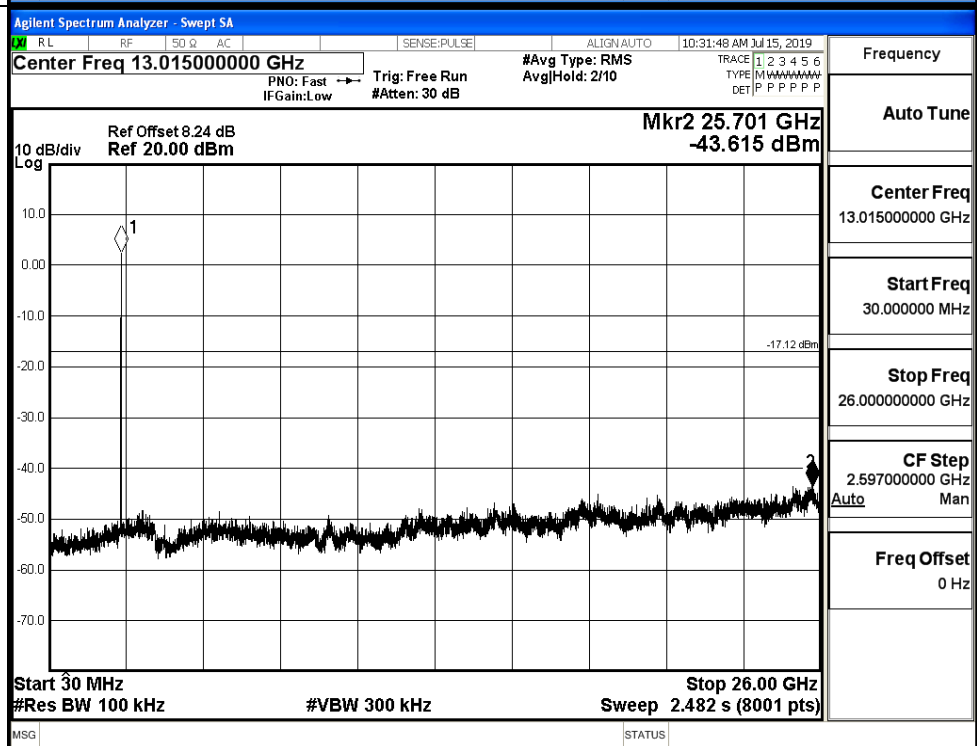


11B HCH Graphs

Pref/11B/HCH

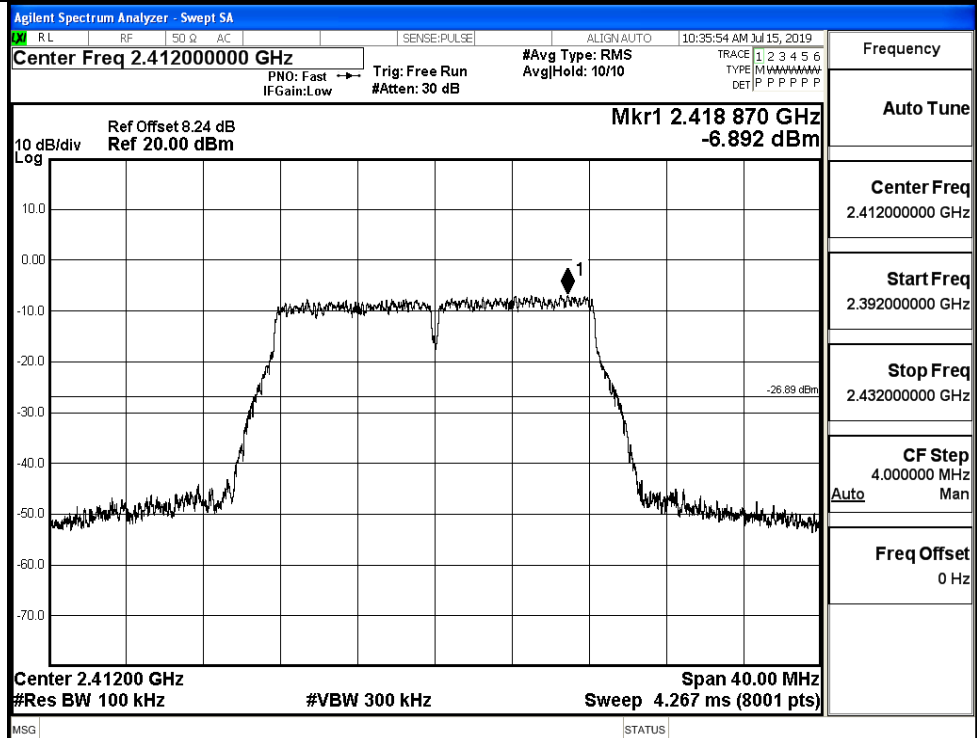


Puw/11B/HCH

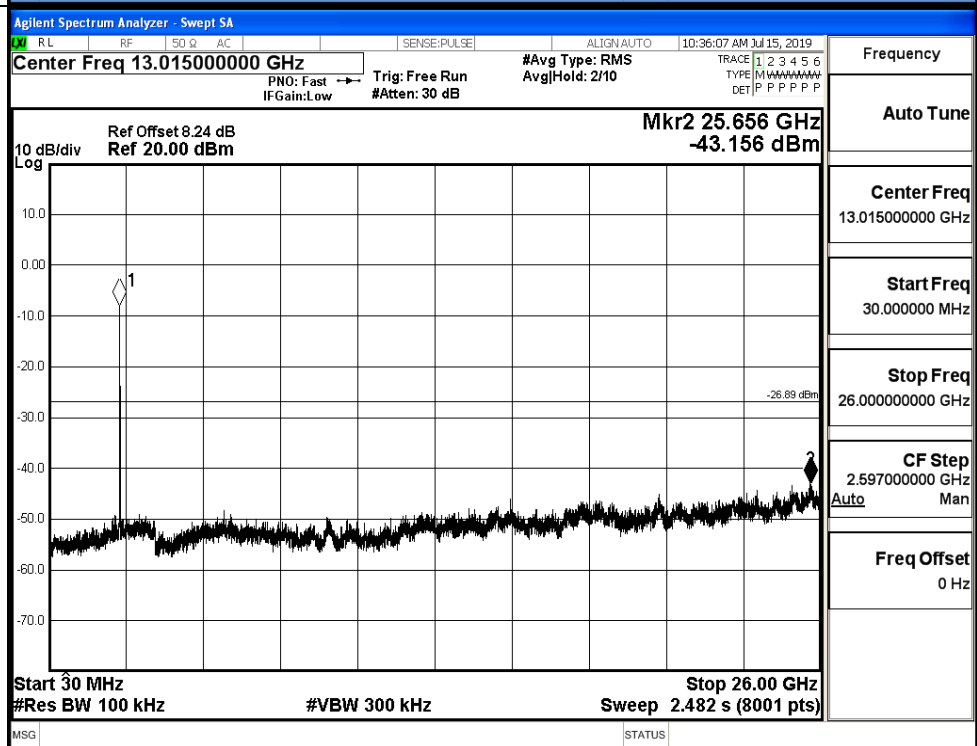


11G_LCH_Graphs

Pref/11G/LCH

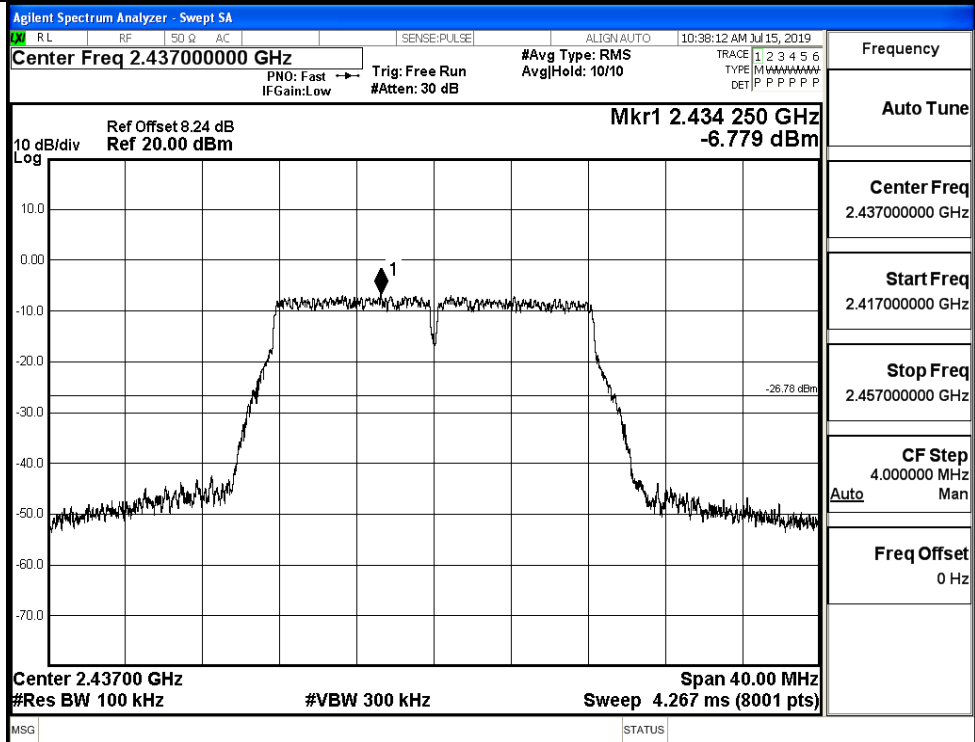


Puw/11G/LCH

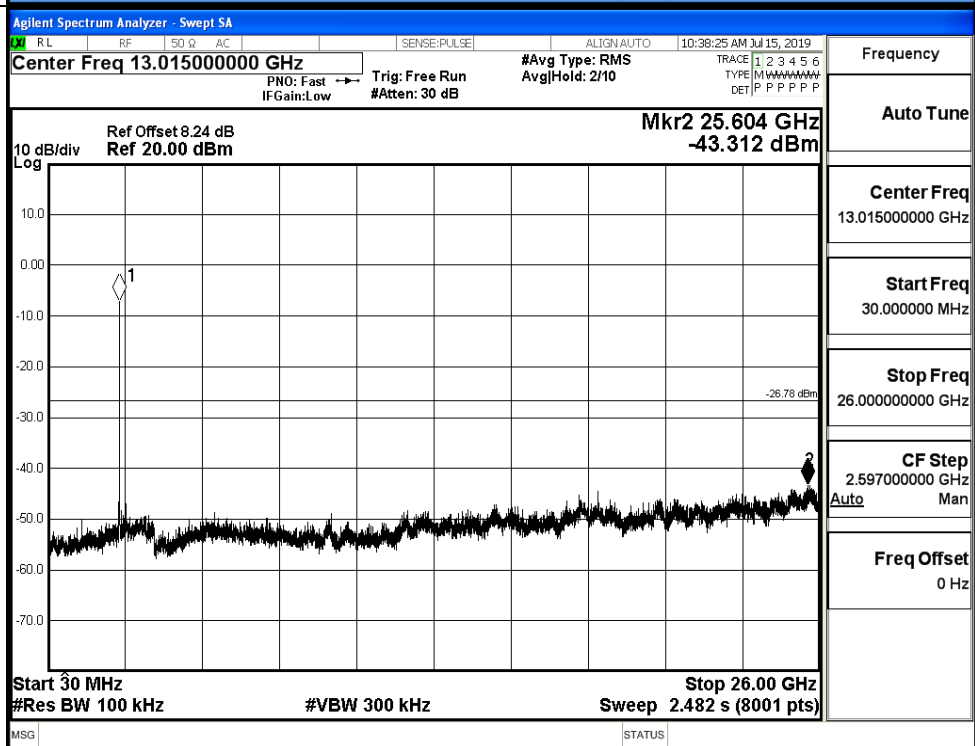


11G MCH Graphs

Pref/11G/MCH

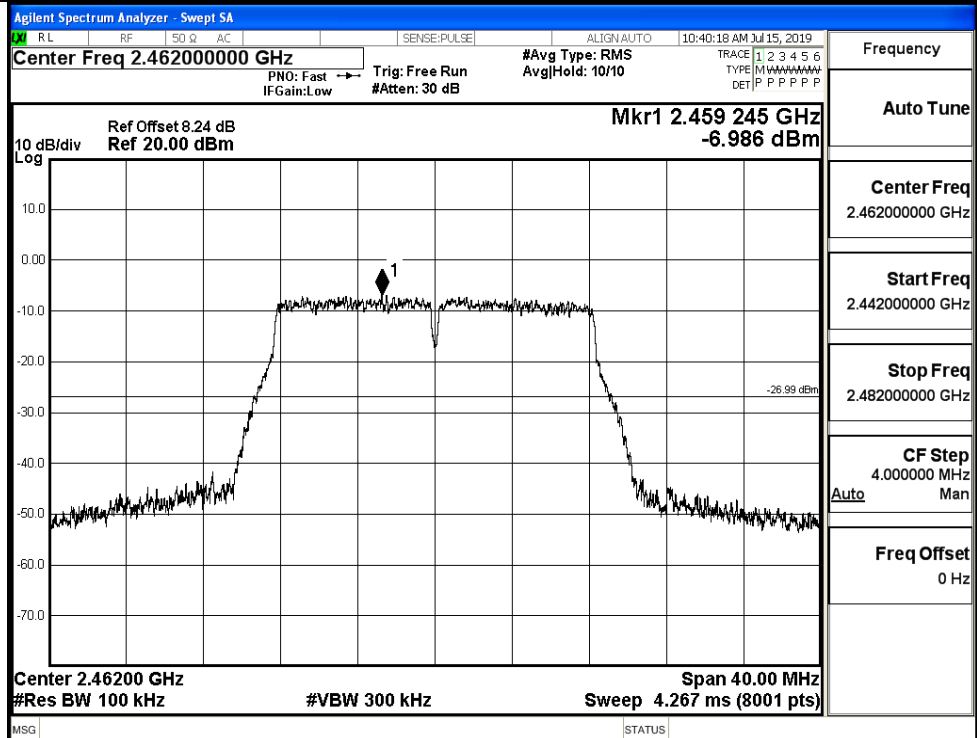


Puw/11G/MCH

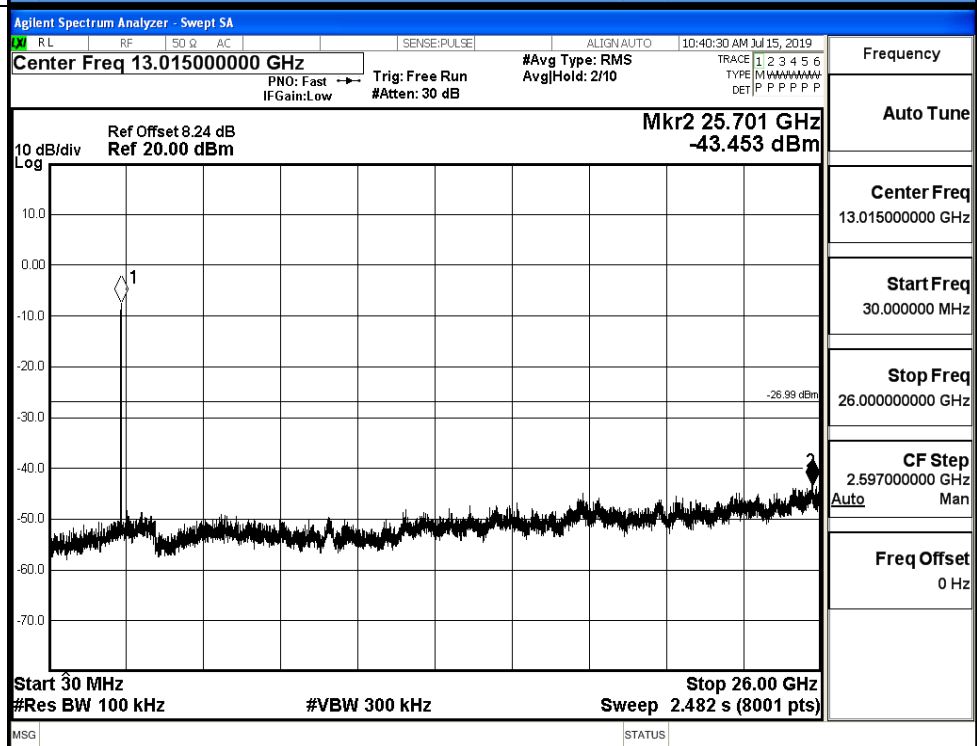


11G HCH Graphs

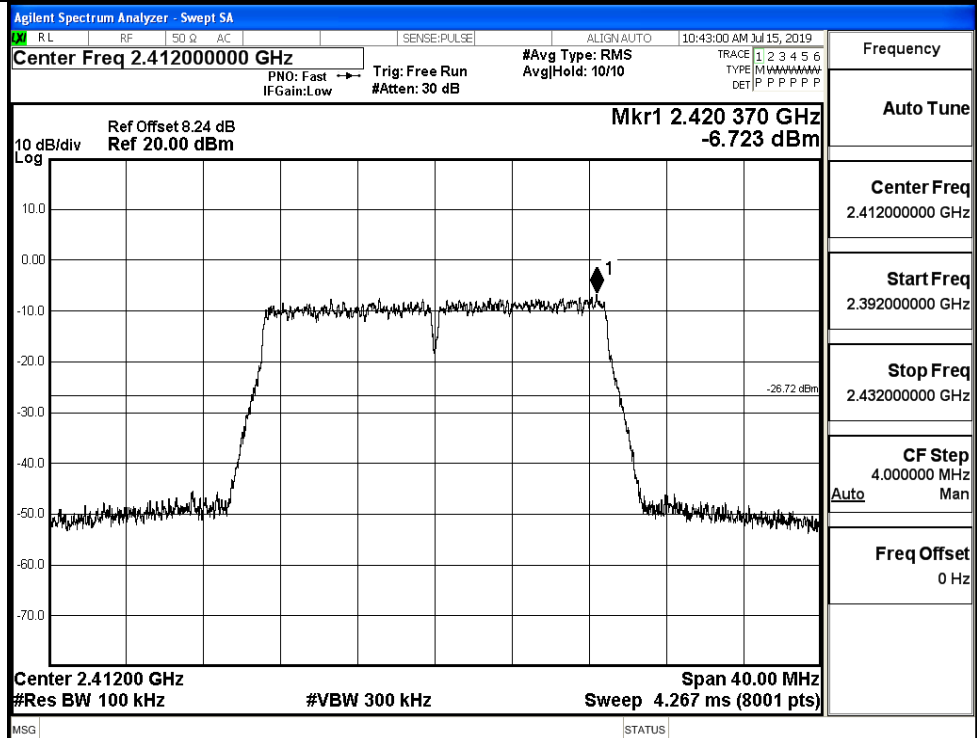
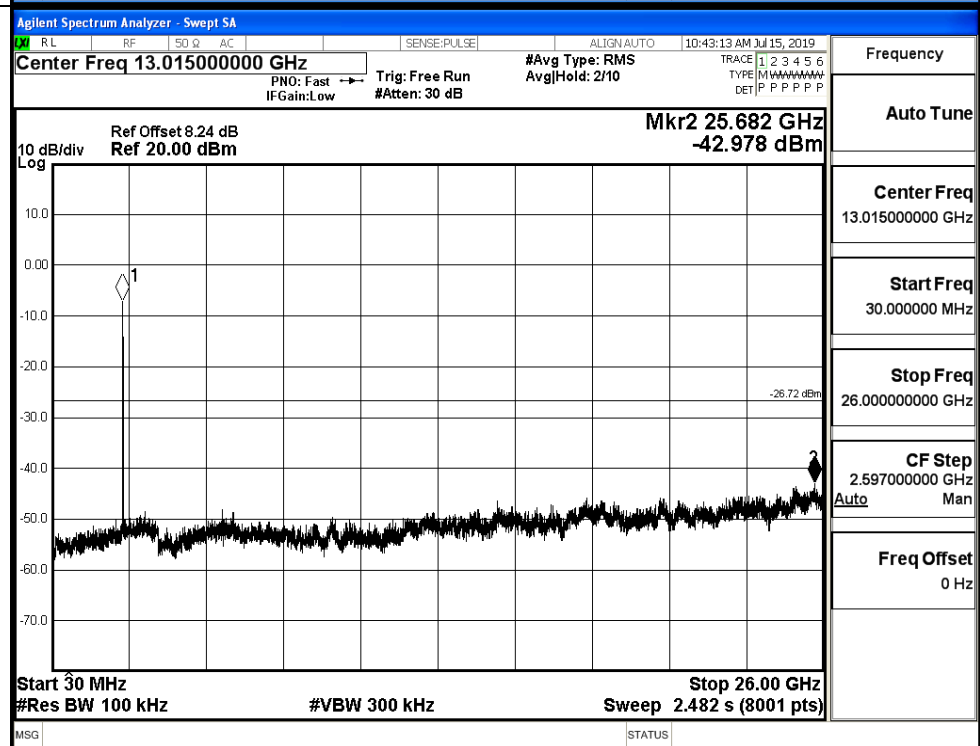
Pref/11G/HCH



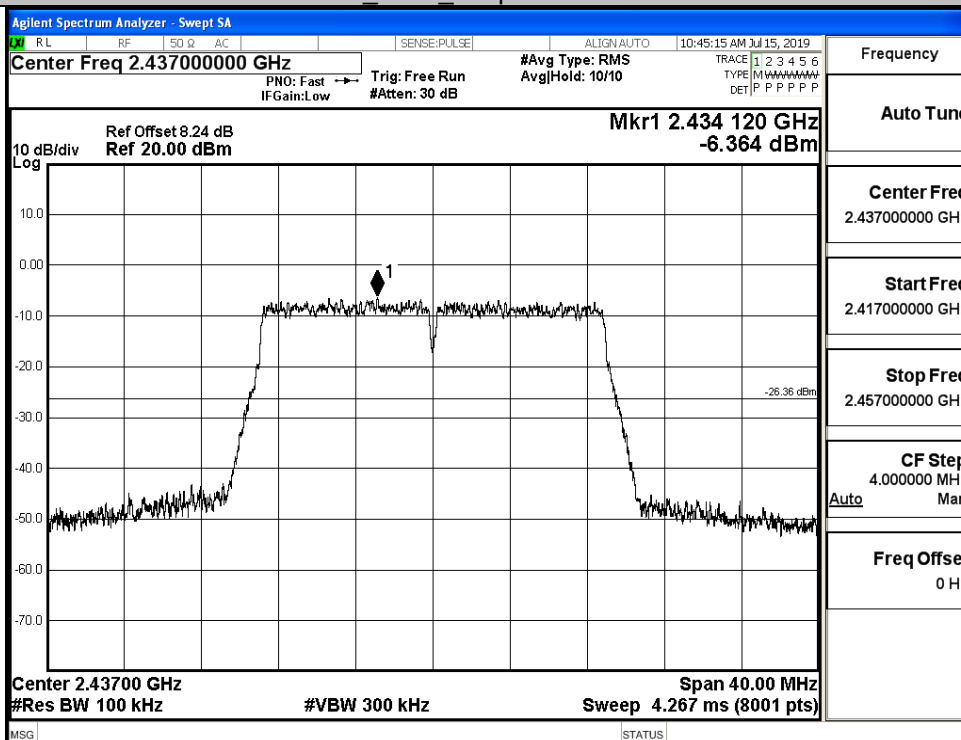
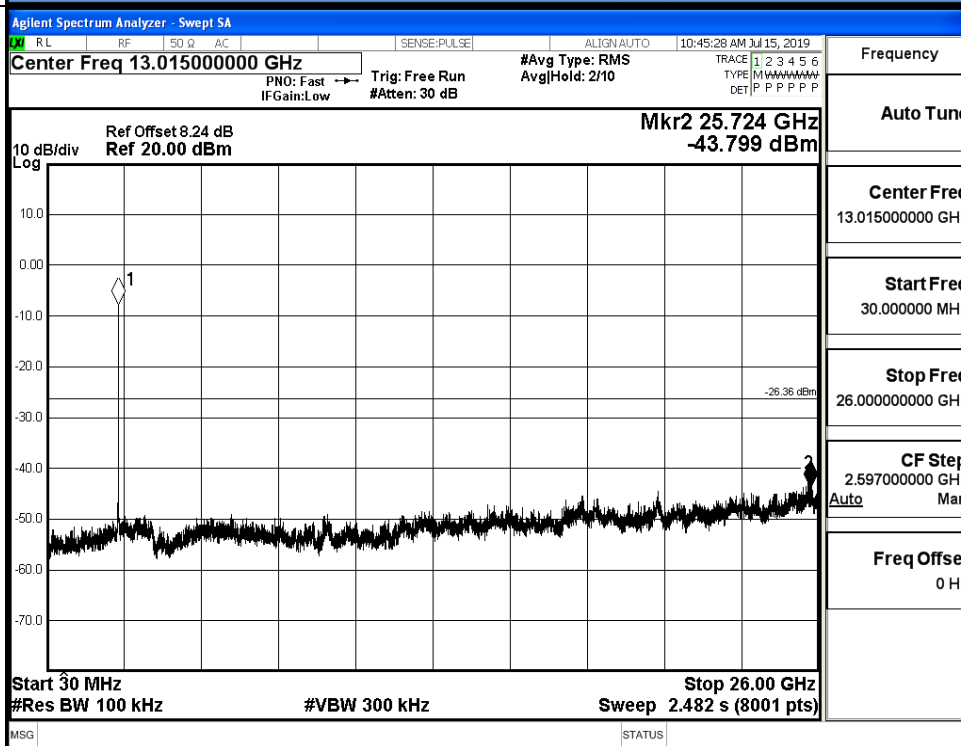
Puw/11G/HCH



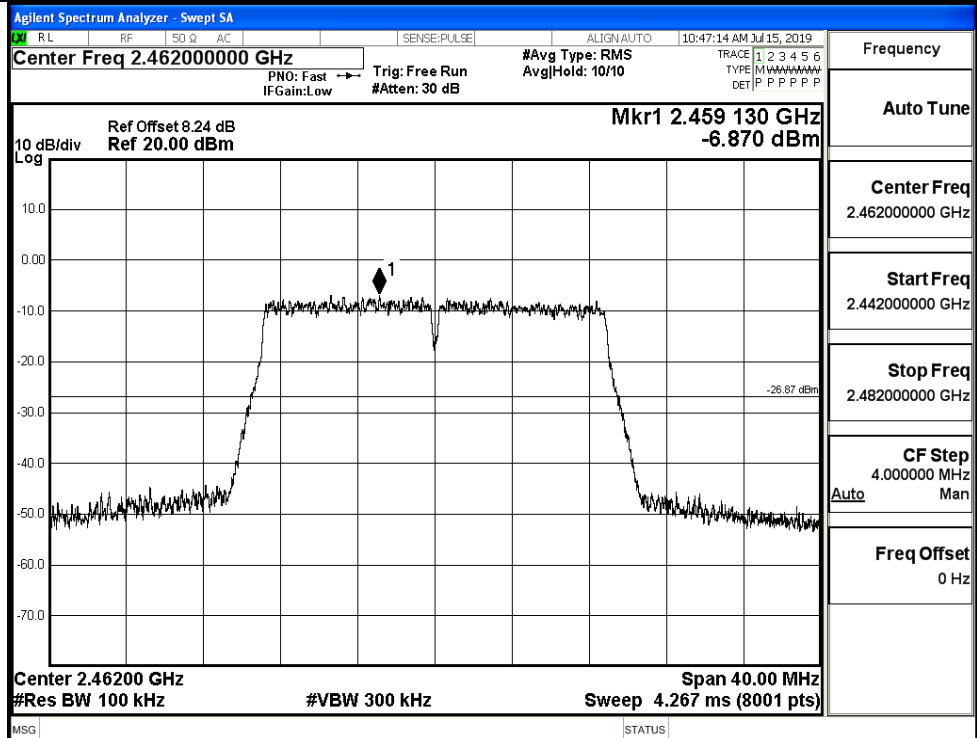
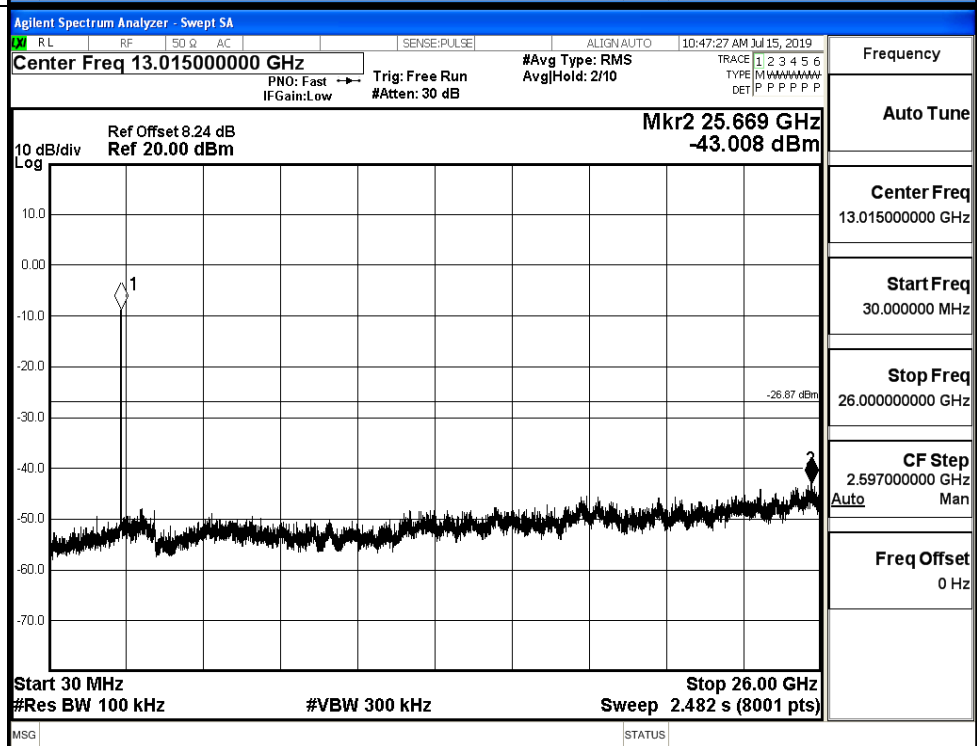
11N20SISO LCH Graphs

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

11N20SISO_MCH_Graphs

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

11N20SISO HCH Graphs

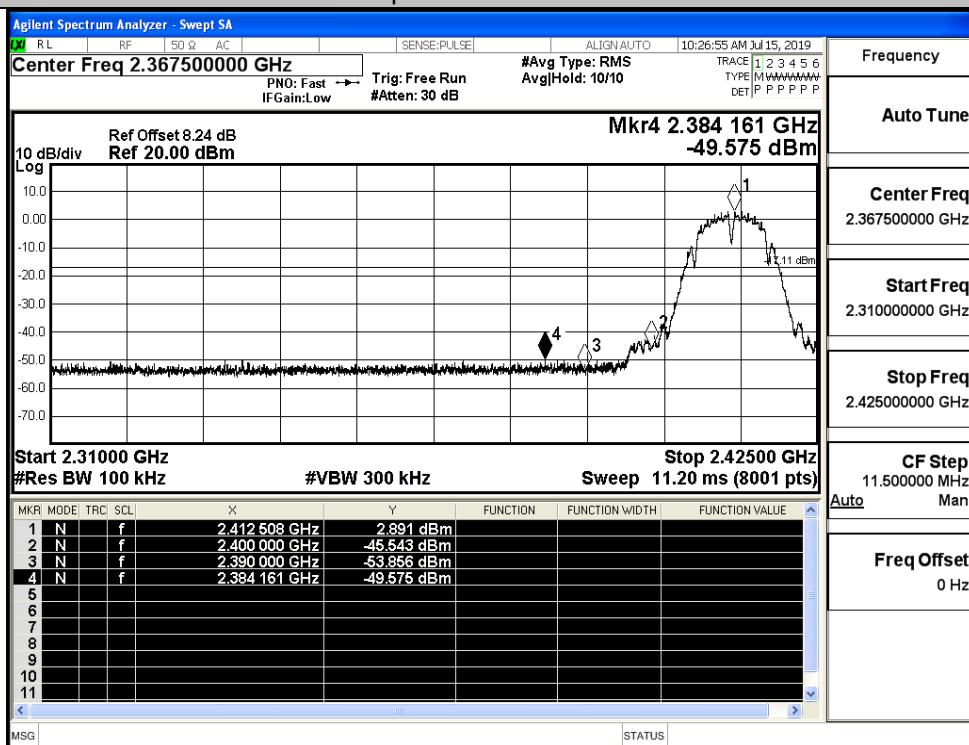
Pref/11N20
SISO/HCHPuw/11N20
SISO/HCH

A.7 Band-edge for RF Conducted Emissions

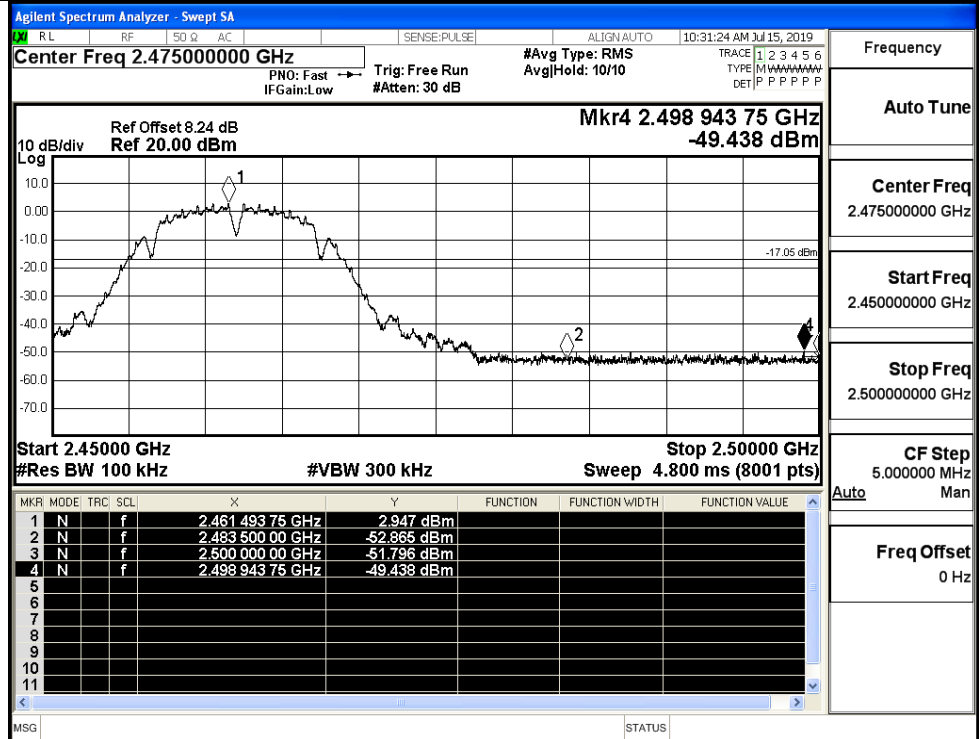
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.891	-49.575	-17.11	PASS
	HCH	2.947	-49.438	-17.05	PASS
11G	LCH	-6.846	-49.511	-26.85	PASS
	HCH	-6.980	-50.204	-26.98	PASS
11N20SISO	LCH	-6.759	-50.011	-26.76	PASS
	HCH	-6.772	-49.129	-26.77	PASS

Test Graphs

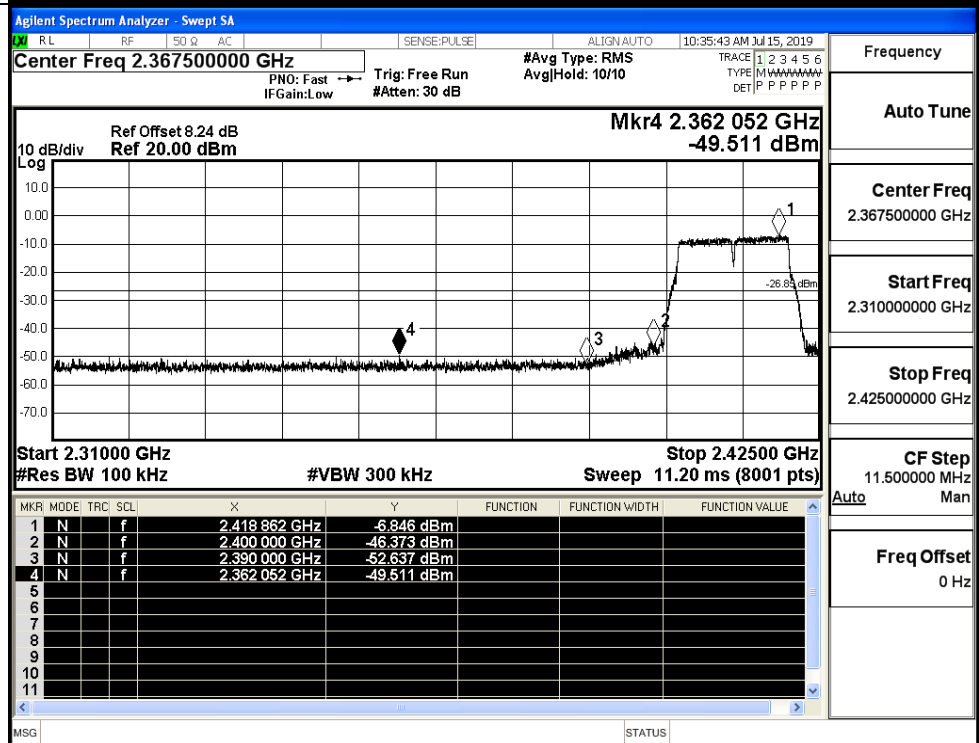
11B/LCH



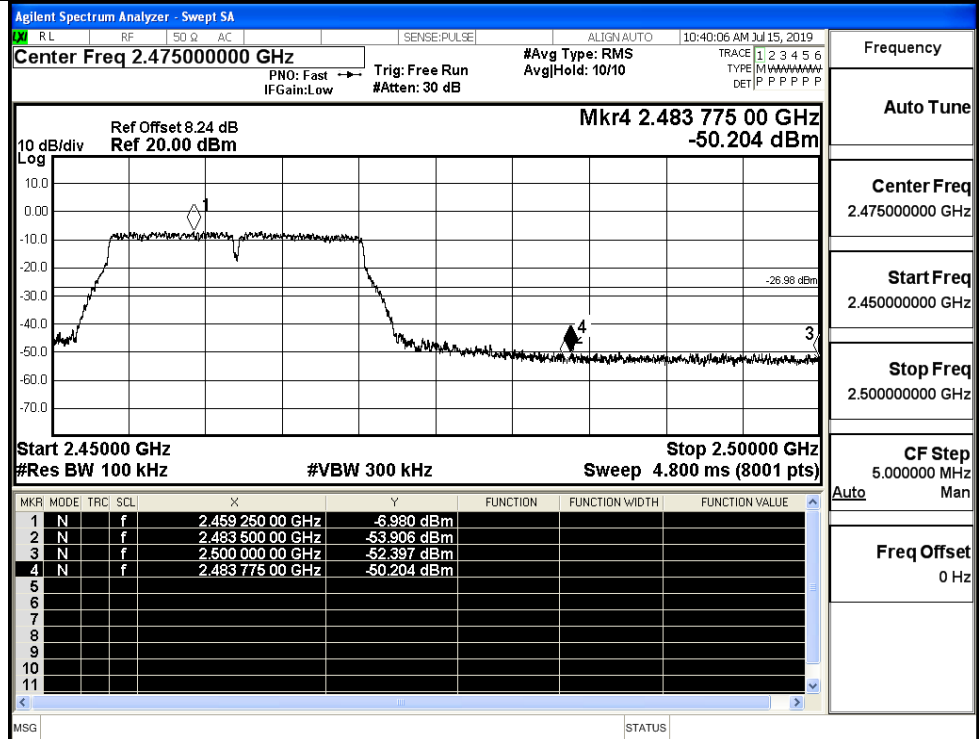
11B/HCH



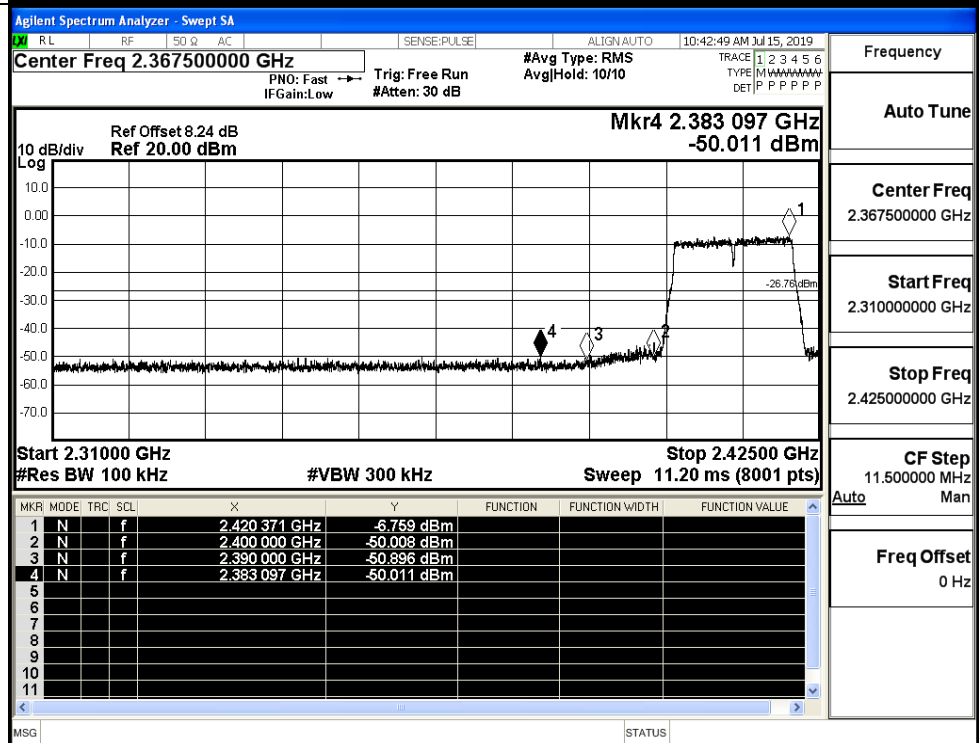
11G/LCH



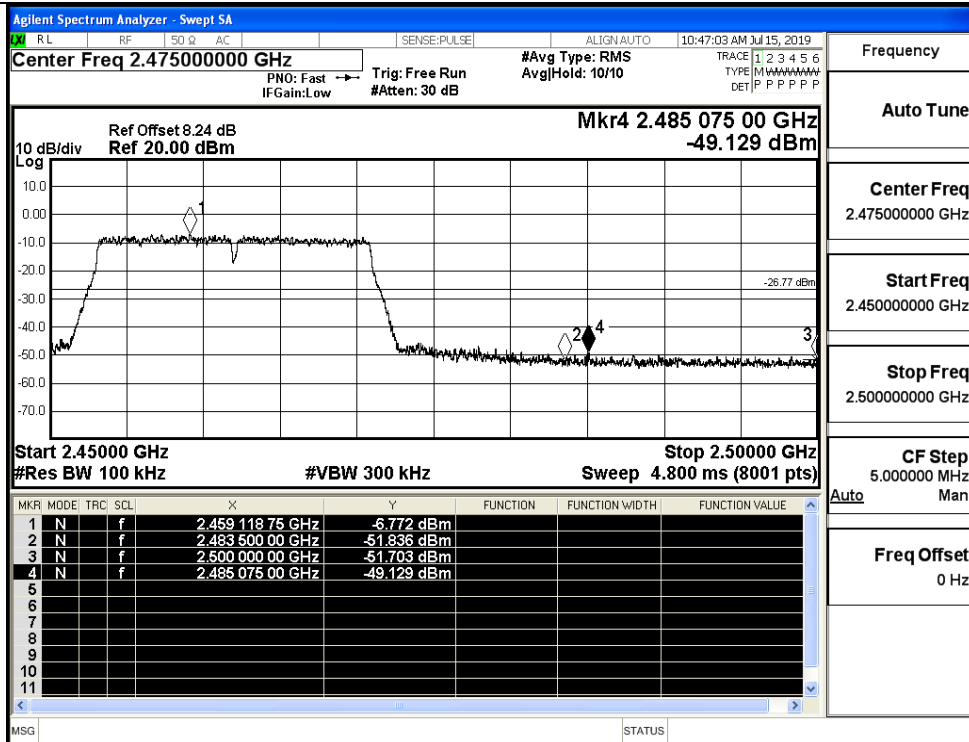
11G/HCH



11N20SISO/LCH



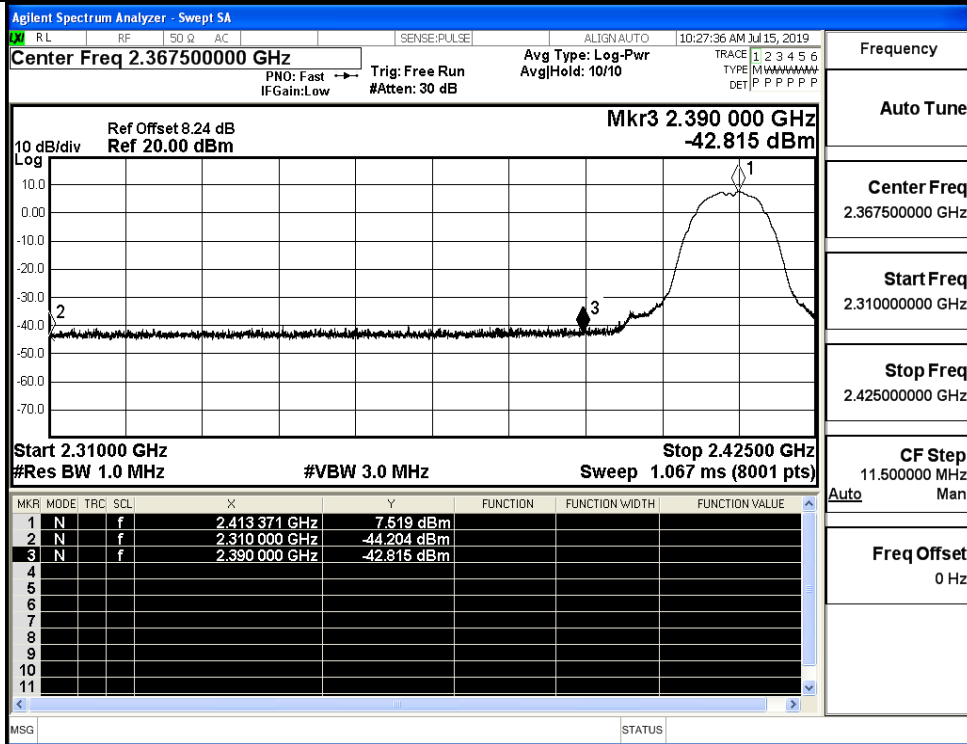
11N20SISO/HCH



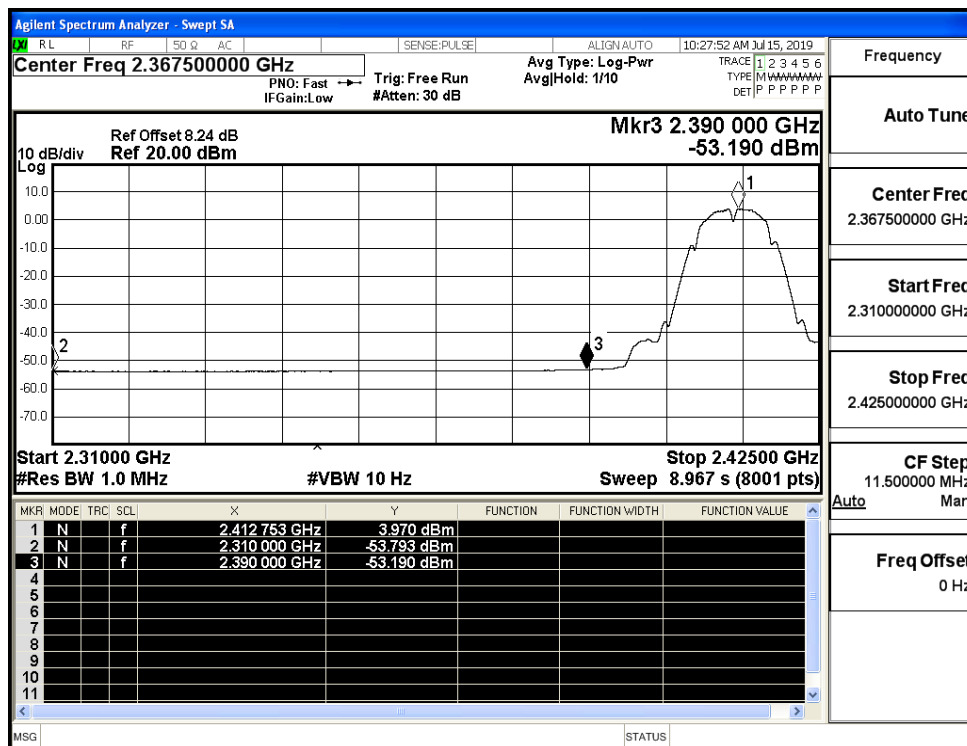
A.8 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-44.20	2.0	0	51.05	PEAK	74	PASS
	2412	Ant1	2310.0	-53.79	2.0	0	41.46	AV	54	PASS
	2412	Ant1	2390.0	-42.82	2.0	0	52.44	PEAK	74	PASS
	2412	Ant1	2390.0	-53.19	2.0	0	42.07	AV	54	PASS
	2462	Ant1	2483.5	-42.80	2.0	0	52.46	PEAK	74	PASS
	2462	Ant1	2483.5	-52.95	2.0	0	42.31	AV	54	PASS
	2462	Ant1	2500.0	-42.80	2.0	0	52.46	PEAK	74	PASS
	2462	Ant1	2500.0	-53.22	2.0	0	42.04	AV	54	PASS
11G	2412	Ant1	2310.0	-43.38	2.0	0	51.88	PEAK	74	PASS
	2412	Ant1	2310.0	-53.81	2.0	0	41.45	AV	54	PASS
	2412	Ant1	2390.0	-42.58	2.0	0	52.68	PEAK	74	PASS
	2412	Ant1	2390.0	-52.86	2.0	0	42.40	AV	54	PASS
	2462	Ant1	2483.5	-40.42	2.0	0	54.84	PEAK	74	PASS
	2462	Ant1	2483.5	-52.58	2.0	0	42.68	AV	54	PASS
	2462	Ant1	2500.0	-42.54	2.0	0	52.72	PEAK	74	PASS
	2462	Ant1	2500.0	-53.18	2.0	0	42.07	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-41.93	2.0	0	53.32	PEAK	74	PASS
	2412	Ant1	2310.0	-53.84	2.0	0	41.42	AV	54	PASS
	2412	Ant1	2390.0	-41.77	2.0	0	53.49	PEAK	74	PASS
	2412	Ant1	2390.0	-52.79	2.0	0	42.47	AV	54	PASS
	2462	Ant1	2483.5	-41.35	2.0	0	53.91	PEAK	74	PASS
	2462	Ant1	2483.5	-52.43	2.0	0	42.83	AV	54	PASS
	2462	Ant1	2500.0	-42.99	2.0	0	52.27	PEAK	74	PASS
	2462	Ant1	2500.0	-53.21	2.0	0	42.05	AV	54	PASS

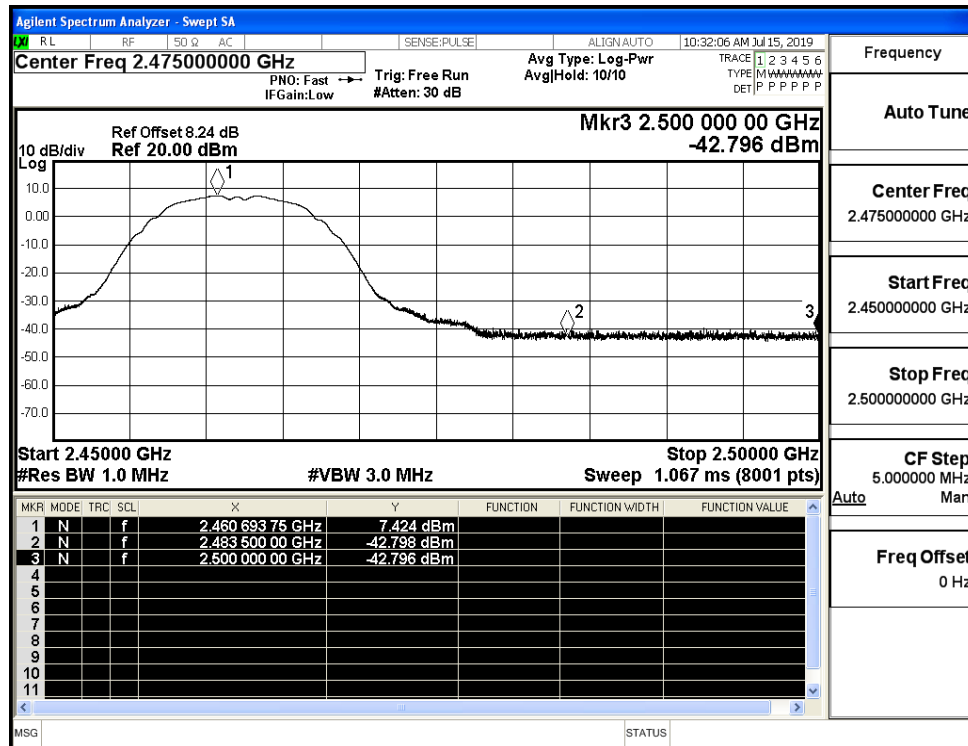
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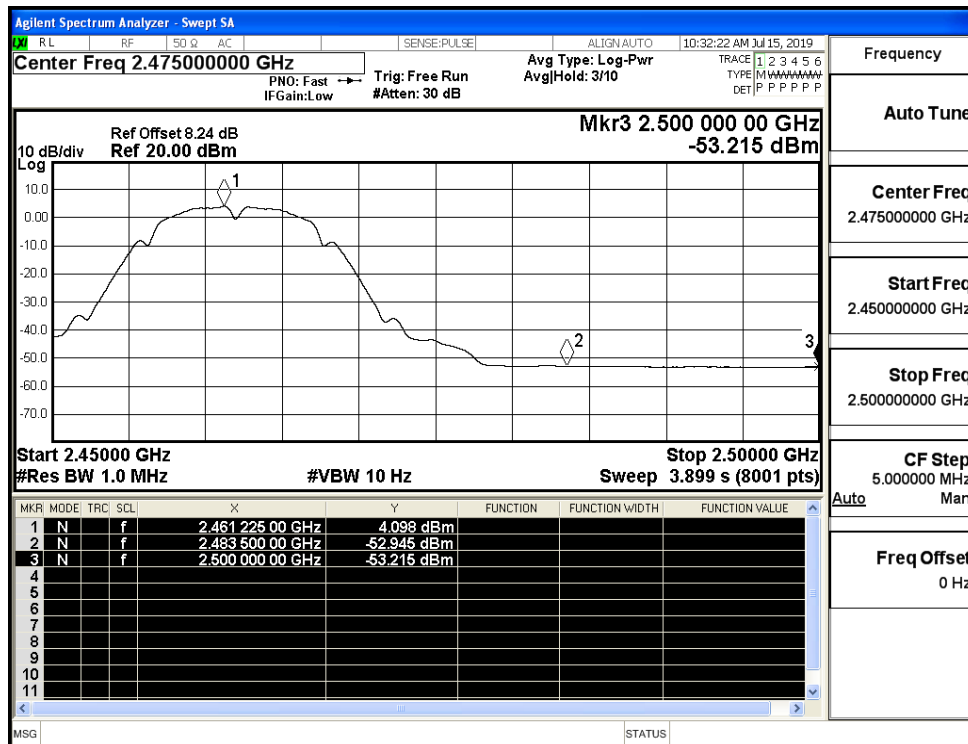
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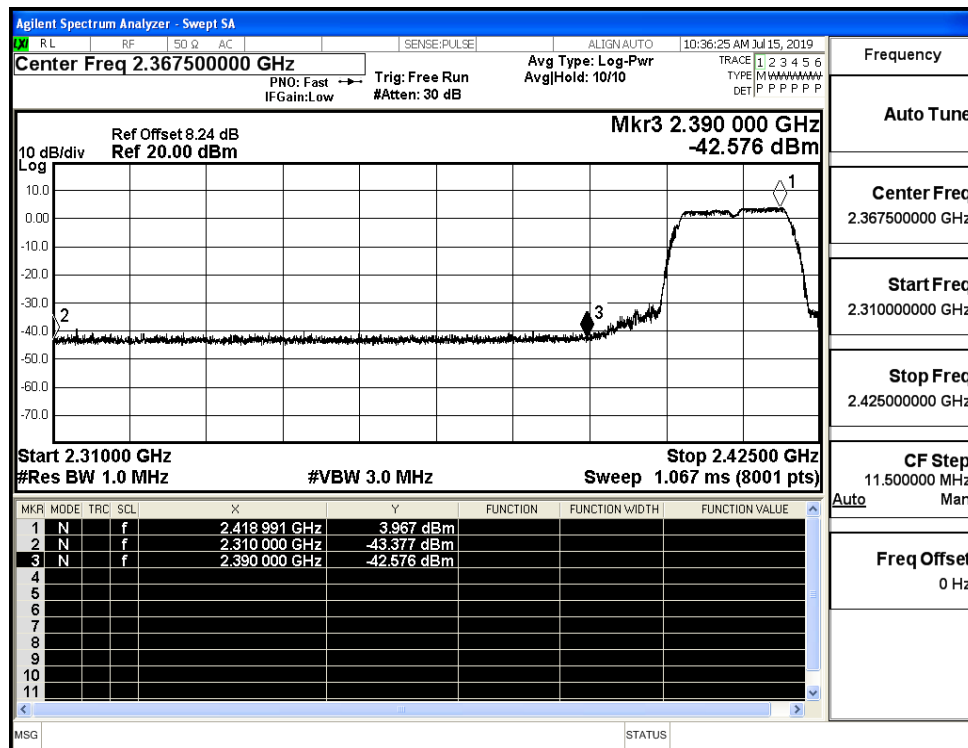
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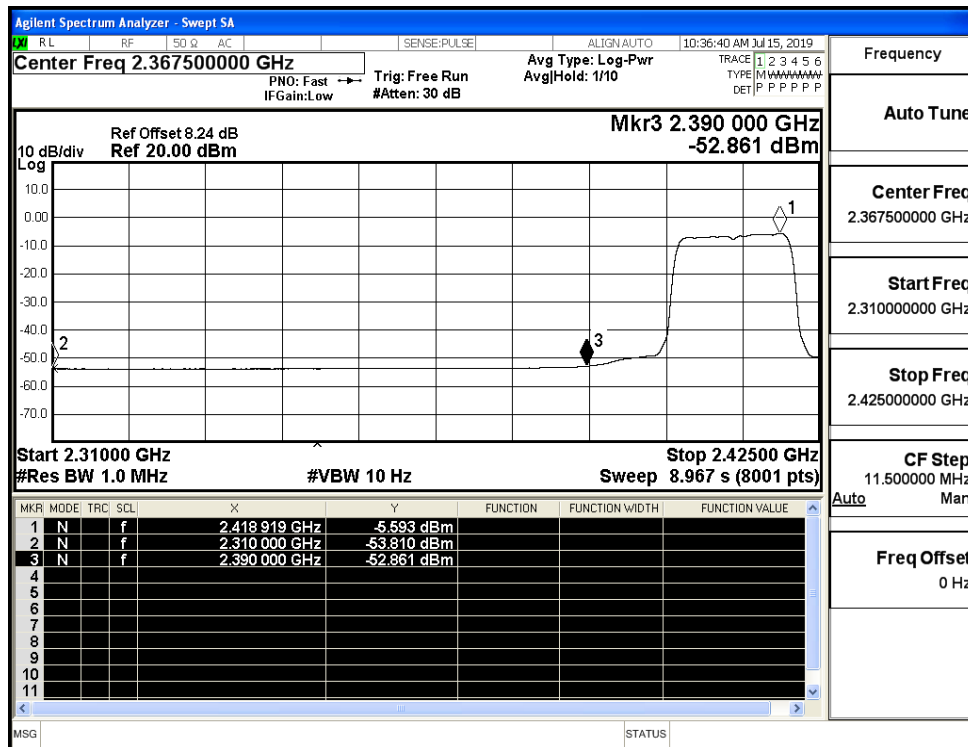
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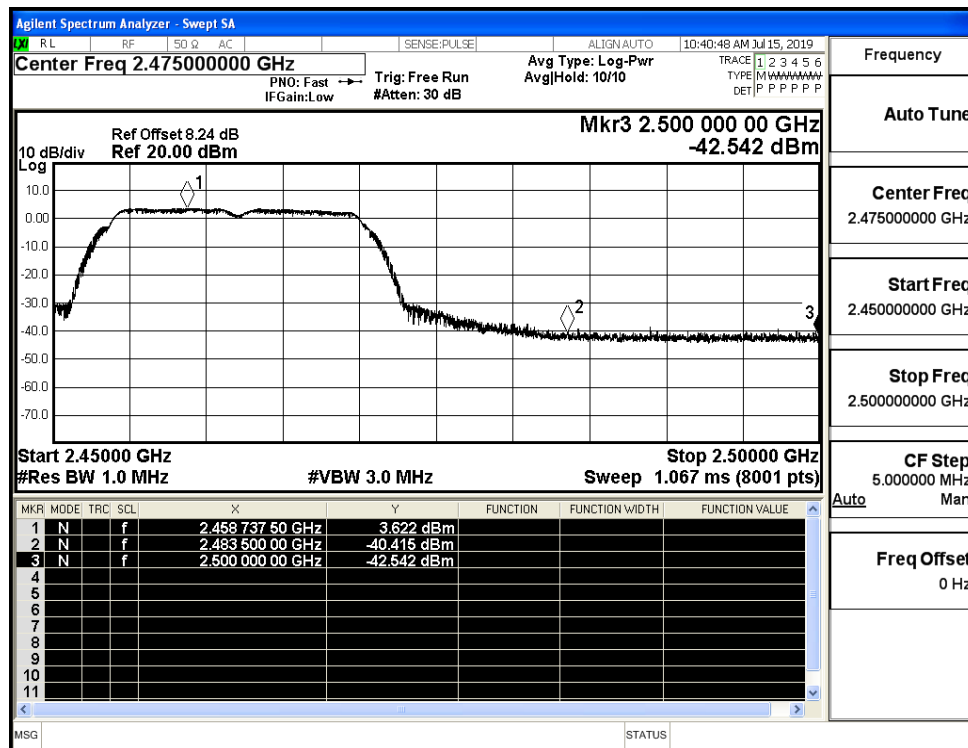
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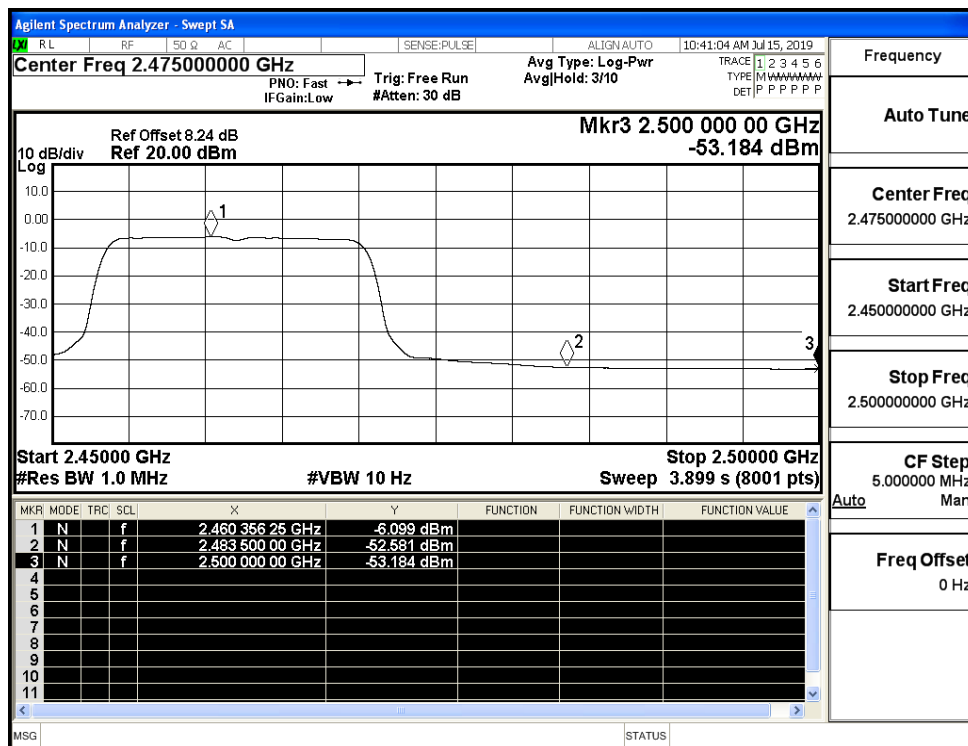
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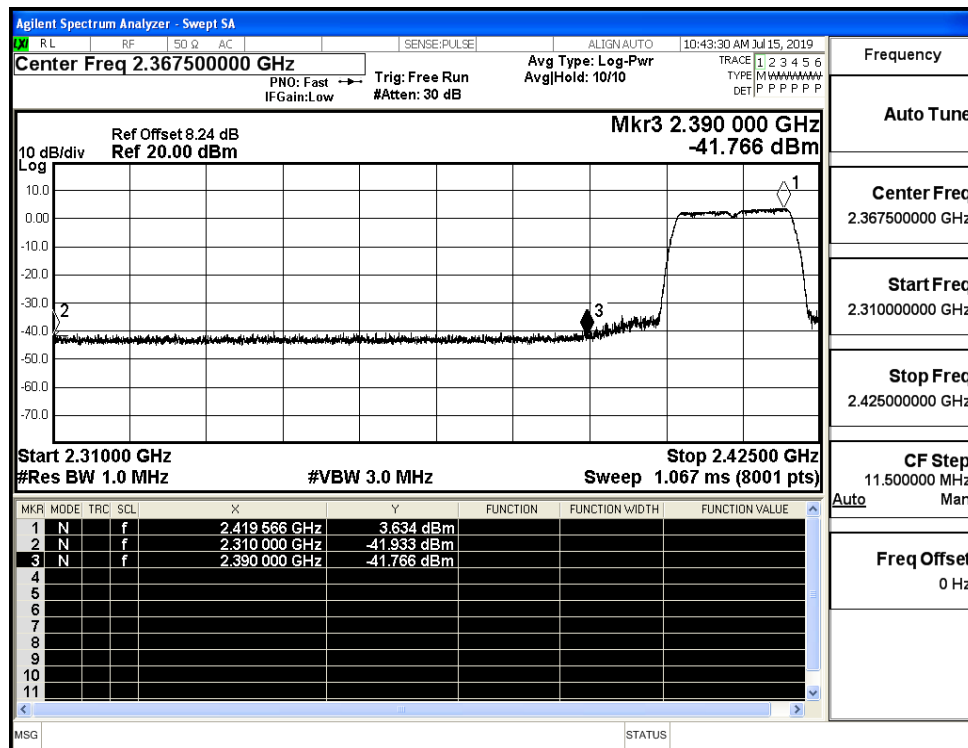
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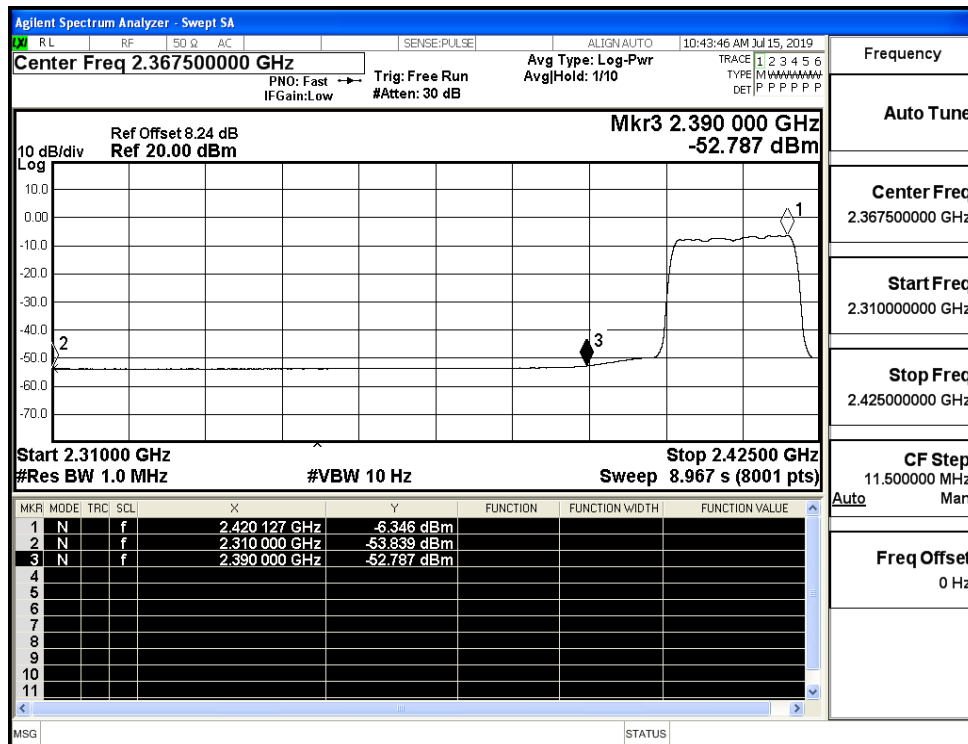
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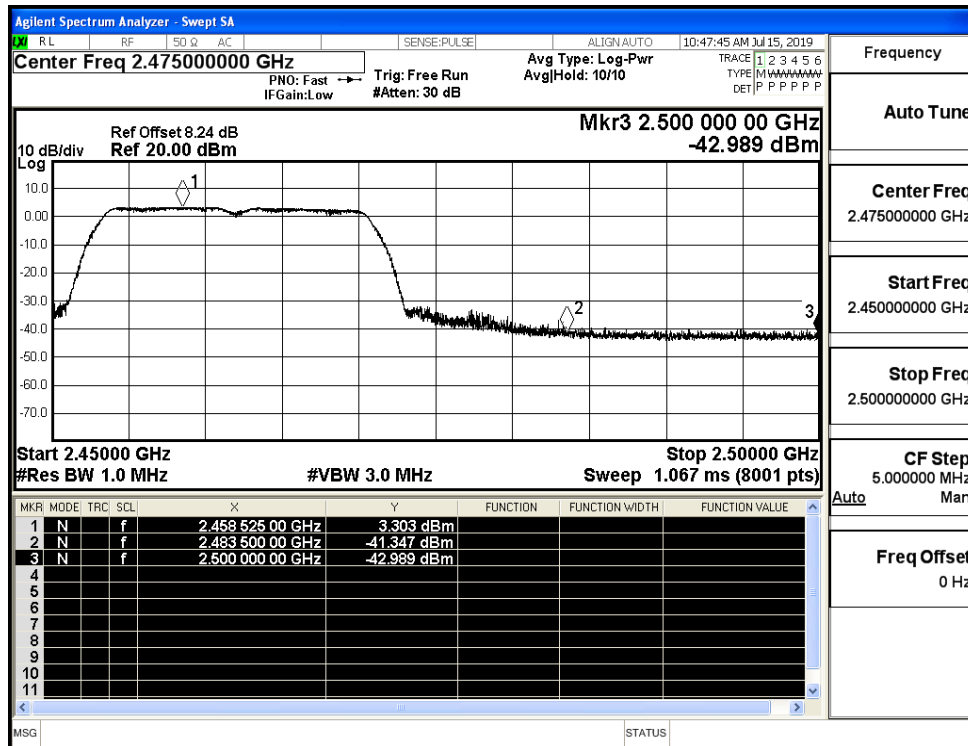
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



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

