

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: RK3399 R Player

Trade Mark: STRATATACHE/SCALA

Test Model: SMPR

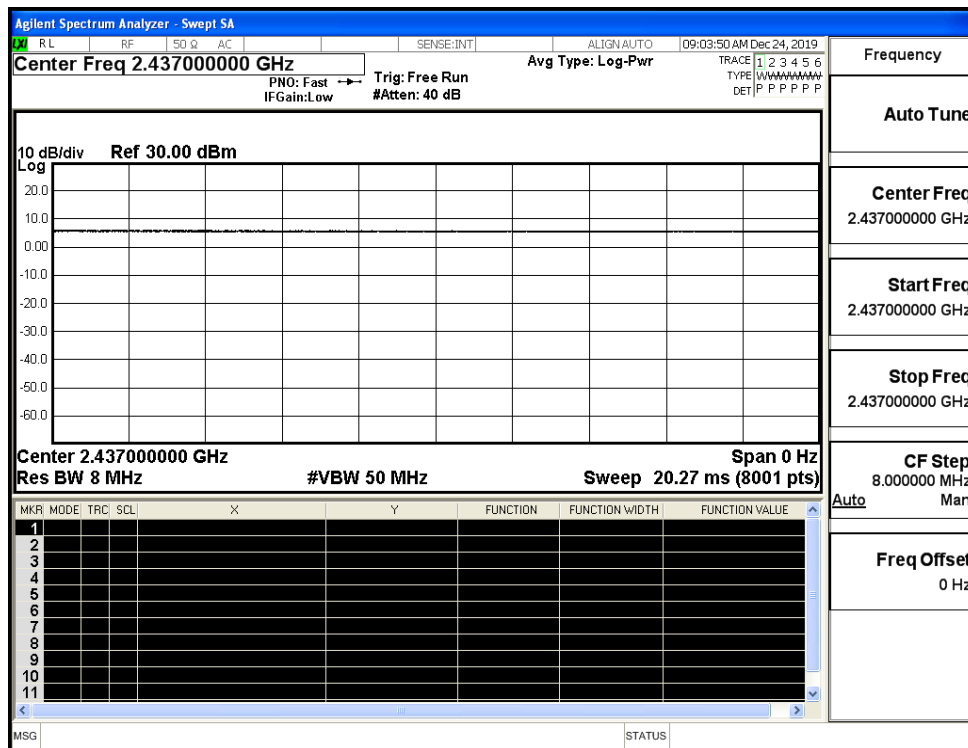
Environmental Conditions

Temperature:	25.1 °C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Scout Wu
Supervised by:	Tom.Liu

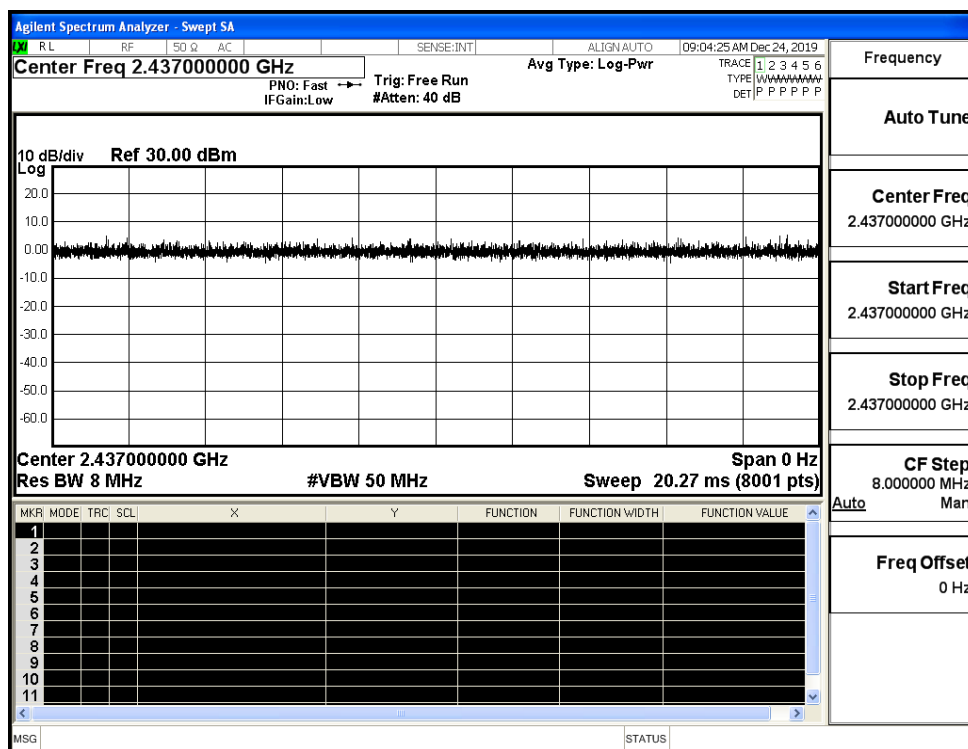
C.1 Duty Cycle

Test Mode	Test Channel	Duty Cycle[%]	Verdict
11B	2437	100	PASS
11G	2437	100	PASS
11N20SISO	2437	100	PASS
11N40SISO	2437	100	PASS

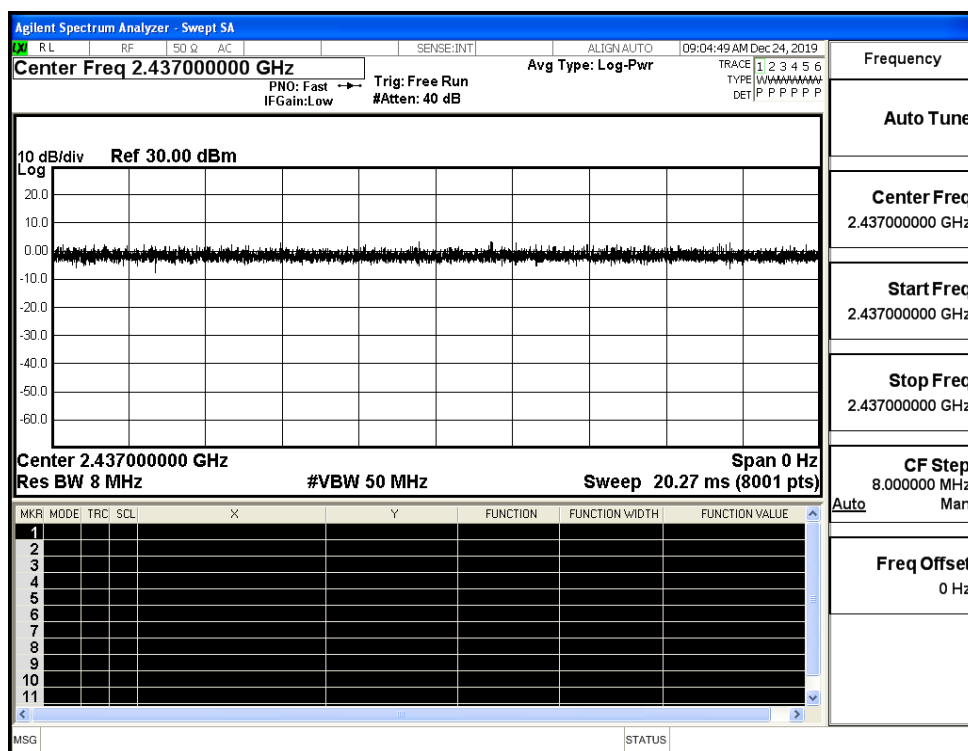
Duty Cycle_11B_2437



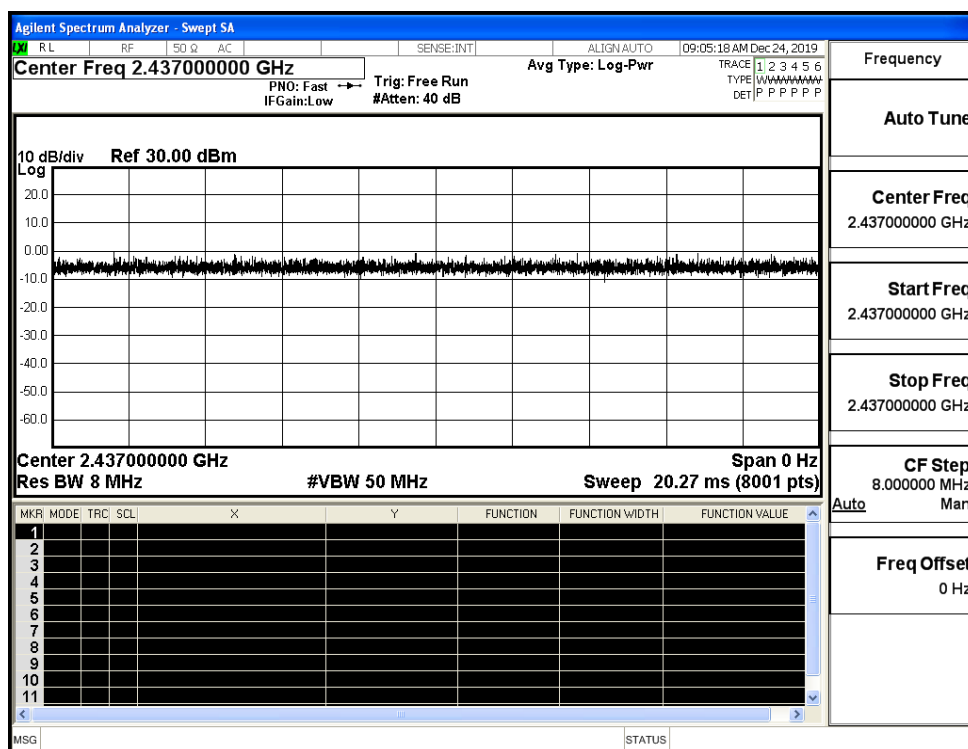
Duty Cycle_11G_2437



Duty Cycle_11N20SISO_2437



Duty Cycle_11N40SISO_2437

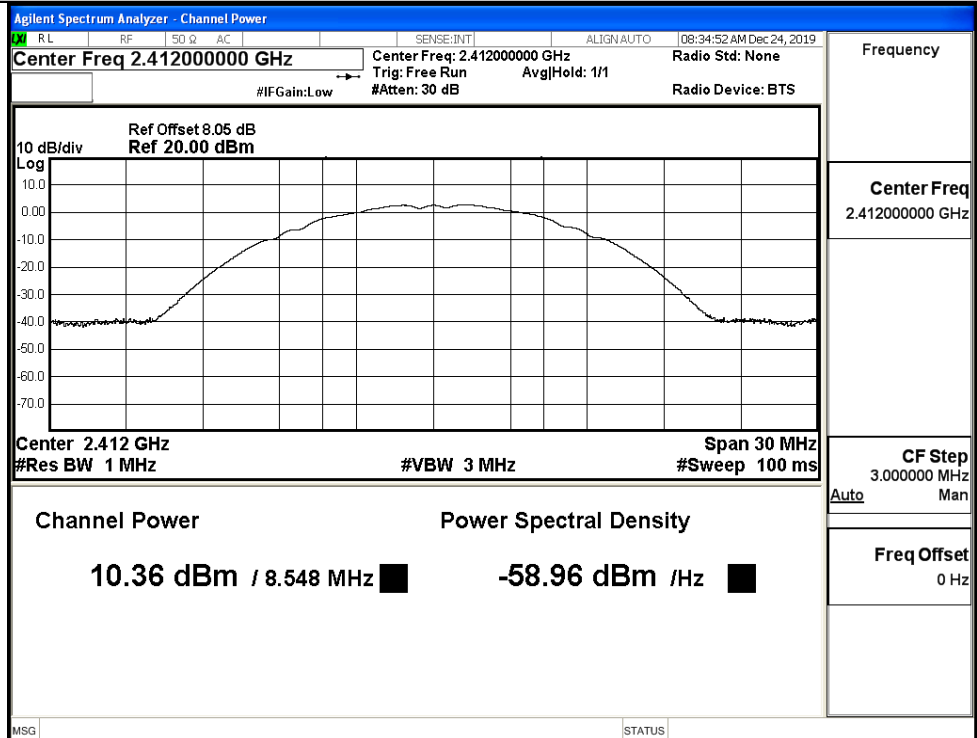


C.2 Maximum Conducted Output Power

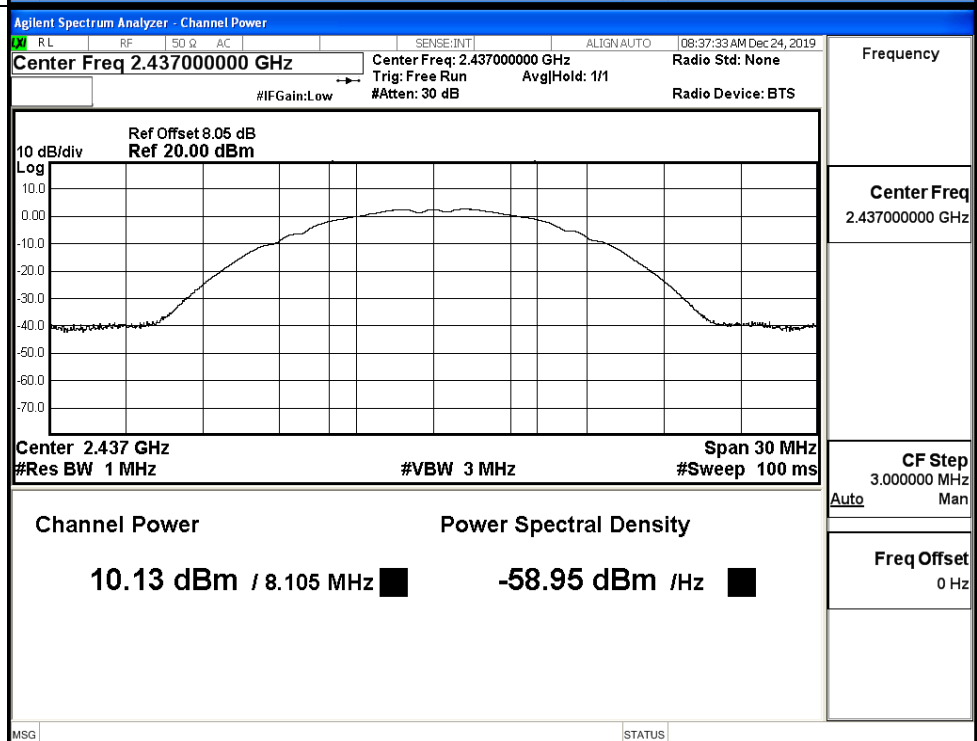
Mode	Channel	Meas. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	10.36	30	PASS
	MCH	10.13	30	PASS
	HCH	10.67	30	PASS
11G	LCH	13.28	30	PASS
	MCH	13.33	30	PASS
	HCH	13.62	30	PASS
11N20SISO	LCH	12.19	30	PASS
	MCH	12.49	30	PASS
	HCH	12.86	30	PASS
11N40SISO	LCH	11.71	30	PASS
	MCH	11.88	30	PASS
	HCH	12.09	30	PASS

Test Graphs

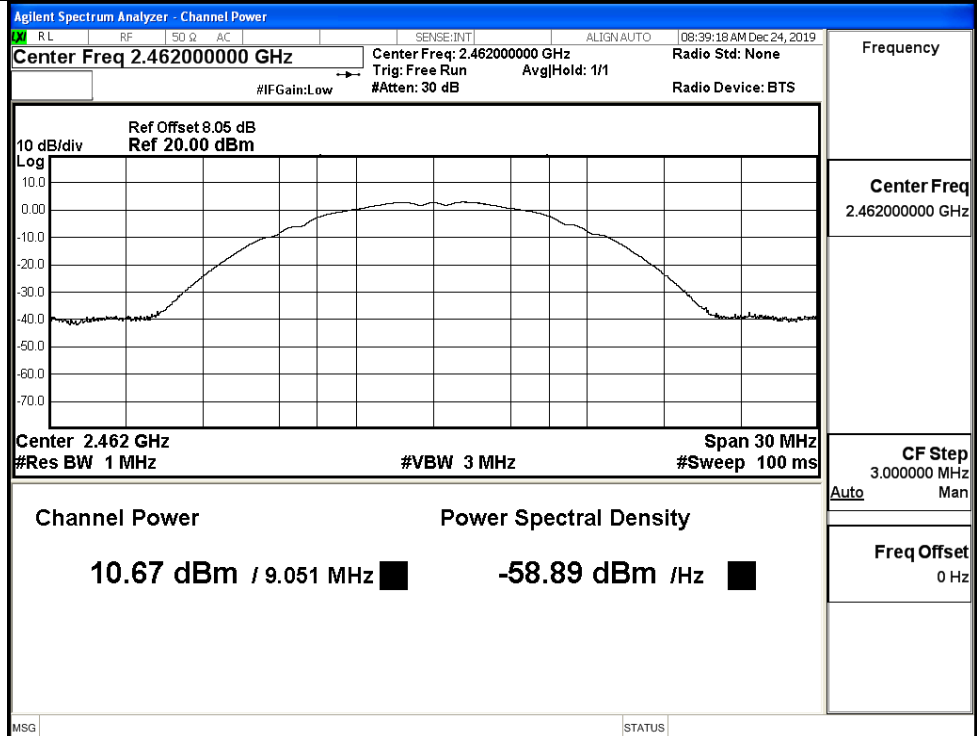
11B/LCH



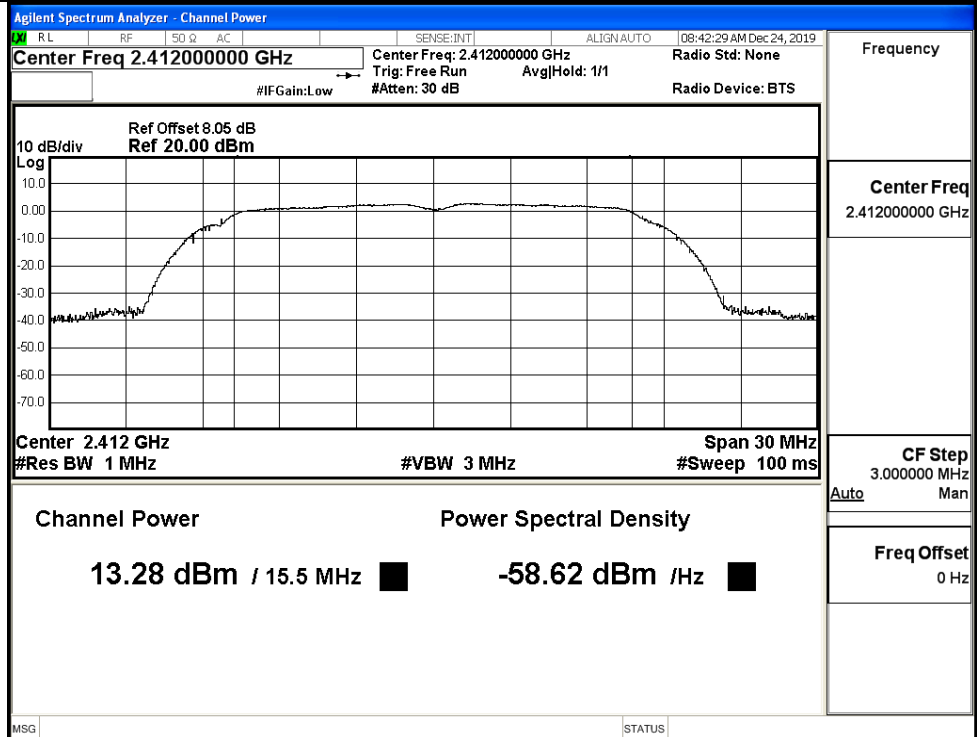
11B/MCH



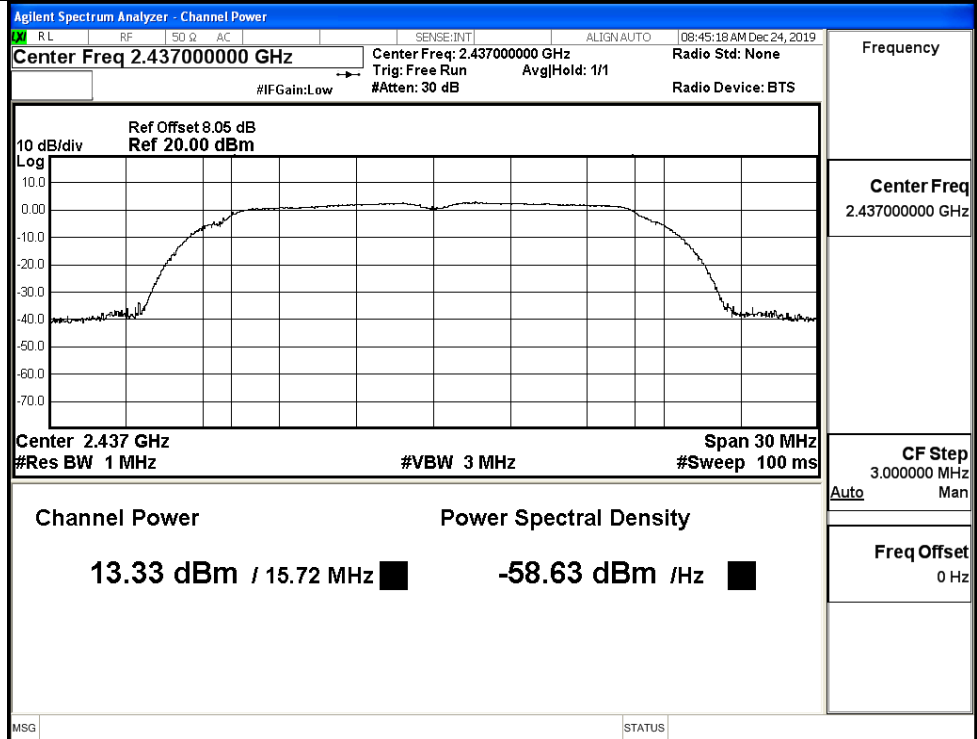
11B/HCH



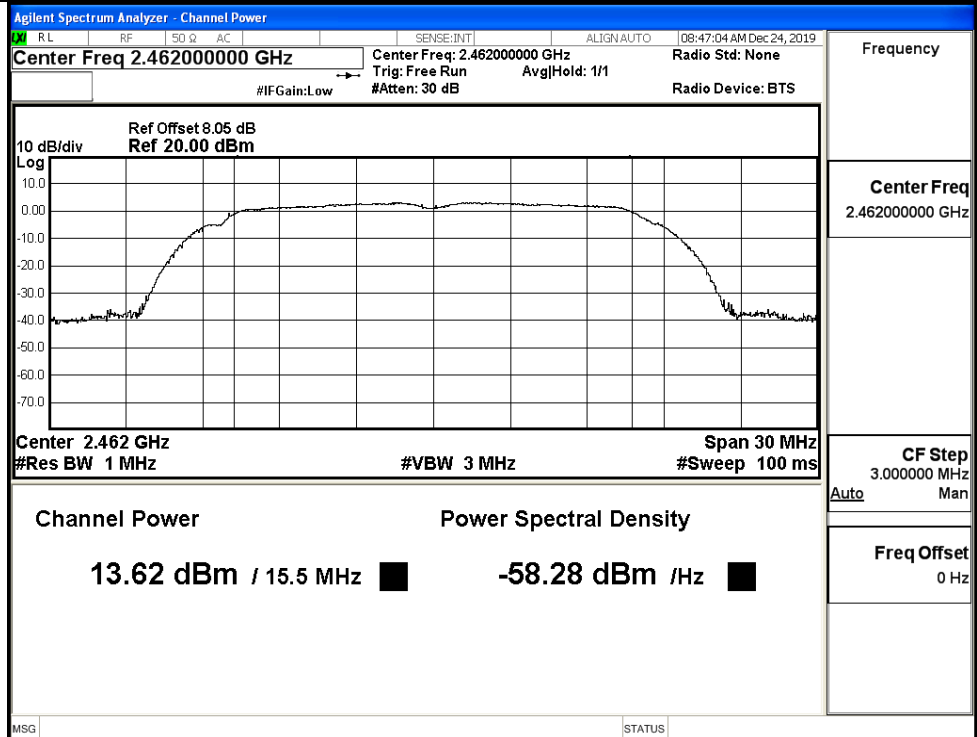
11G/LCH



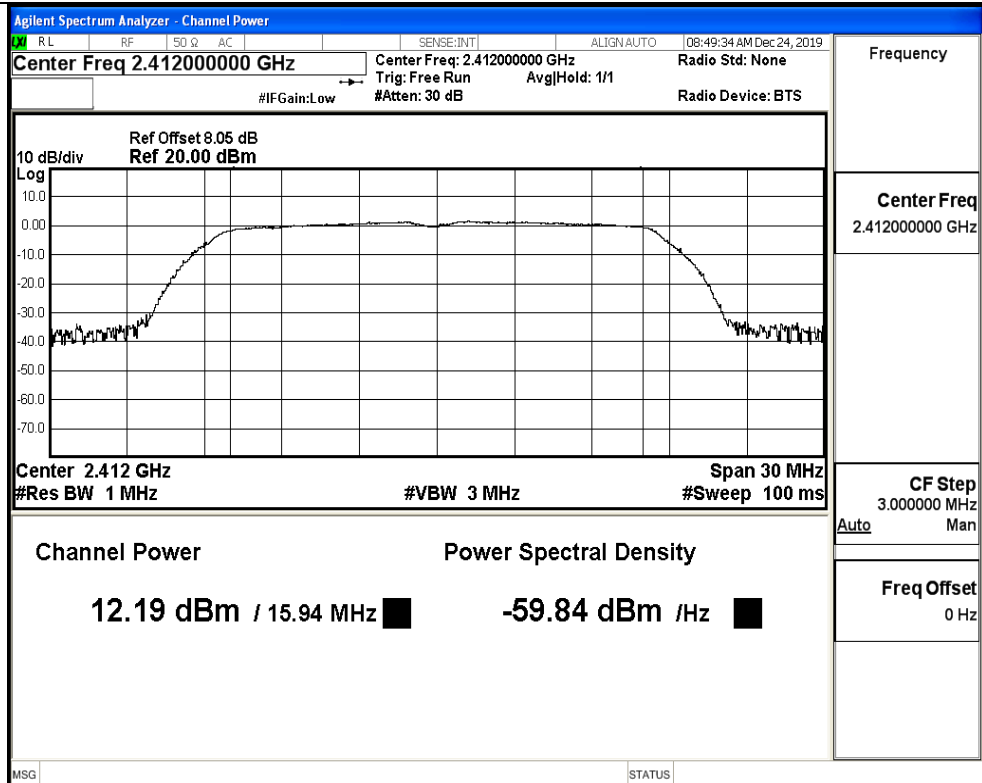
11G/MCH



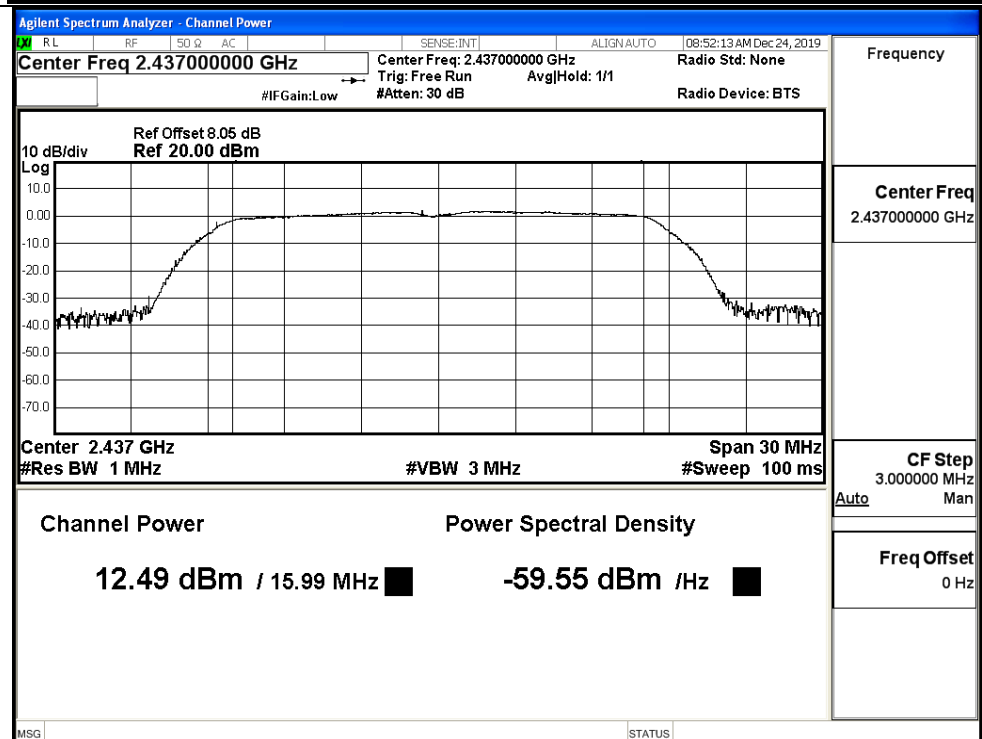
11G/HCH



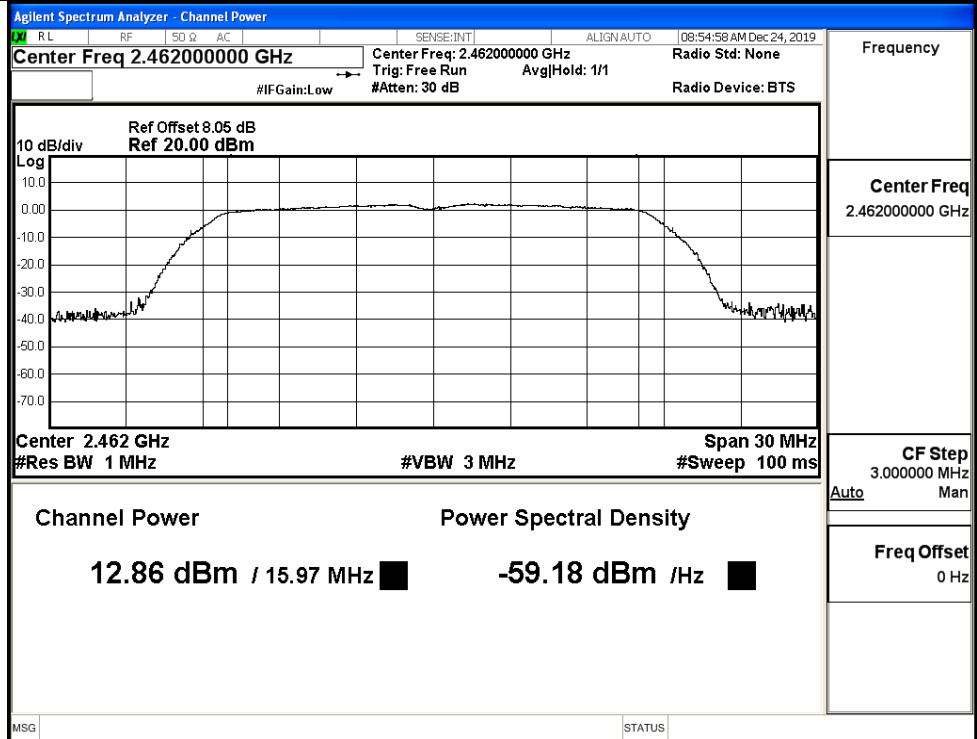
11N20SISO/LCH



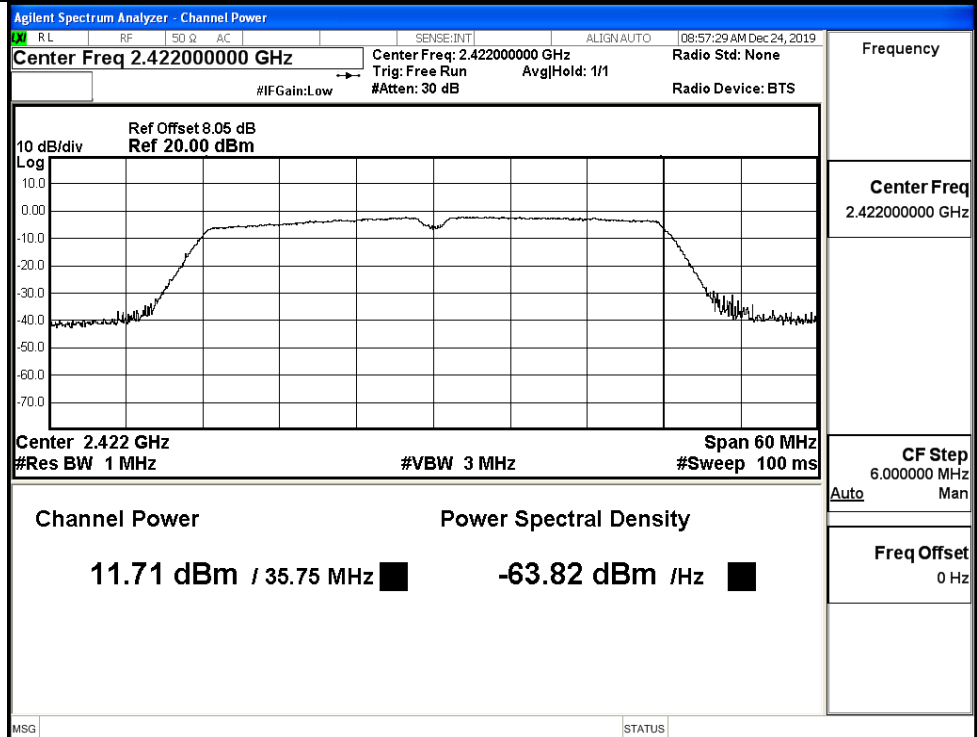
11N20SISO/MCH



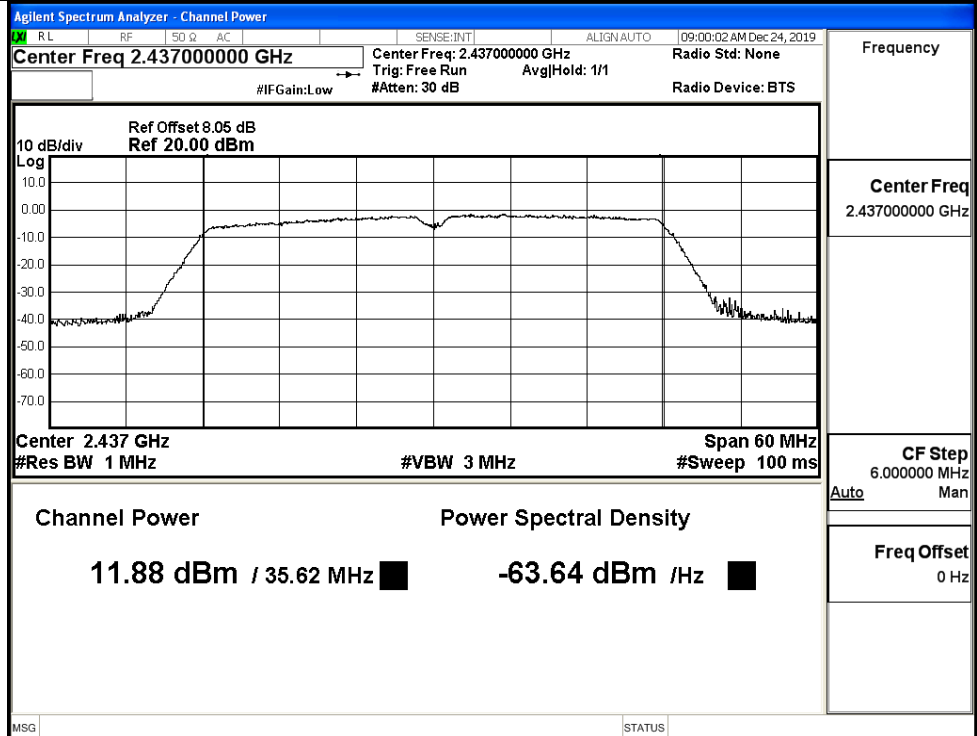
11N20SISO/HCH



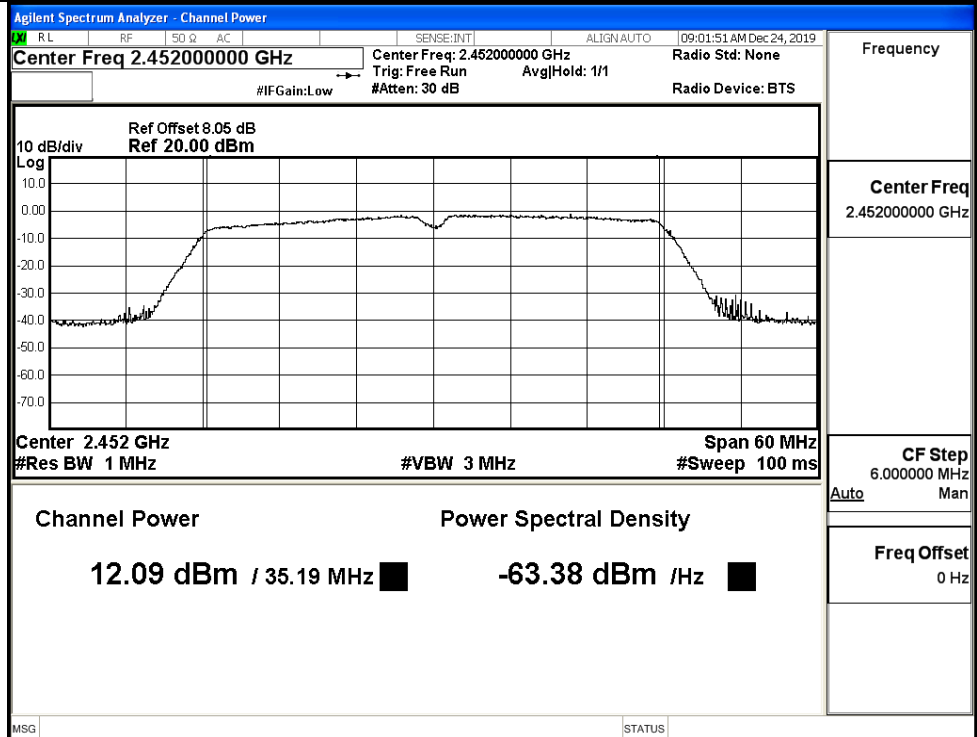
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH



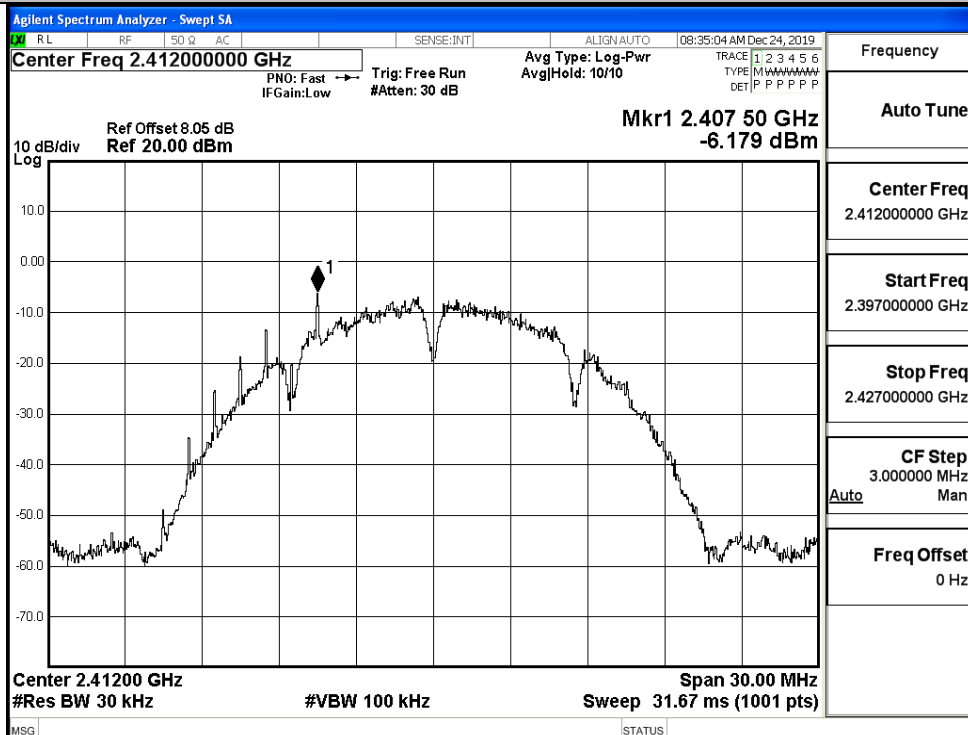
C.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Convert Factor	Result [dBm/30KHz]	Limit [dBm/30KHz]	Verdict
11B	LCH	-6.179	-10	-16.179	8	PASS
	MCH	-0.581	-10	-10.581	8	PASS
	HCH	-6.443	-10	-16.443	8	PASS
11G	LCH	-10.519	-10	-20.519	8	PASS
	MCH	-10.205	-10	-20.205	8	PASS
	HCH	-10.256	-10	-20.256	8	PASS
11N20SISO	LCH	-10.750	-10	-20.75	8	PASS
	MCH	-10.245	-10	-20.245	8	PASS
	HCH	-10.361	-10	-20.361	8	PASS
11N40SISO	LCH	-15.016	-10	-25.016	8	PASS
	MCH	-15.262	-10	-25.262	8	PASS
	HCH	-14.534	-10	-24.534	8	PASS

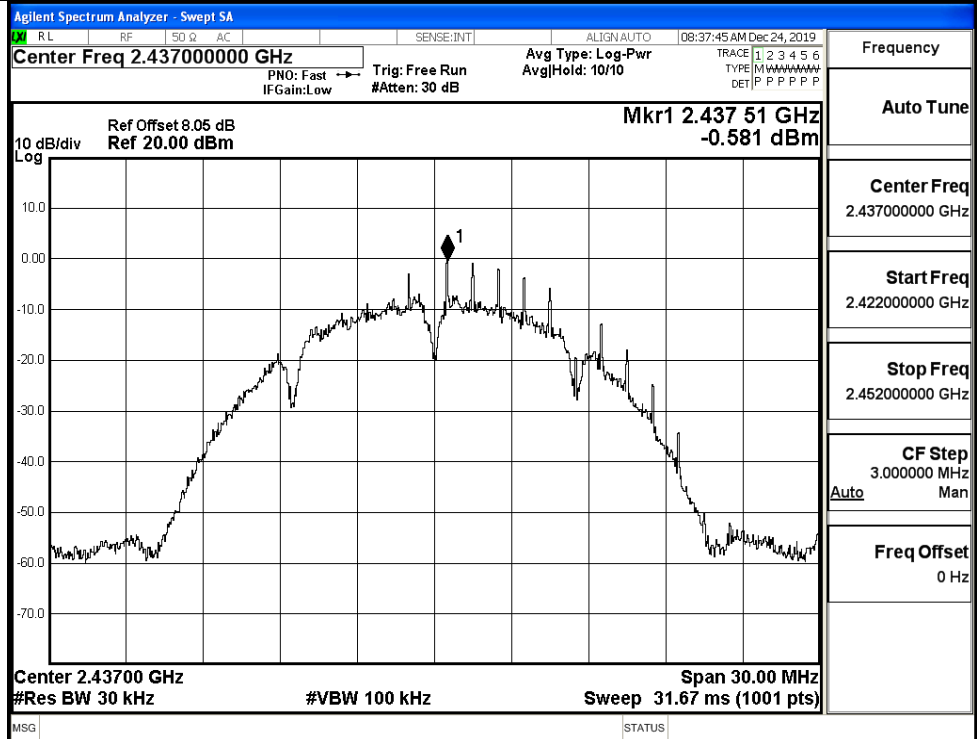
***Note: The Convert Factor = $10 \cdot \log(3\text{KHz}/30\text{KHz}) = -10$

Test Graphs

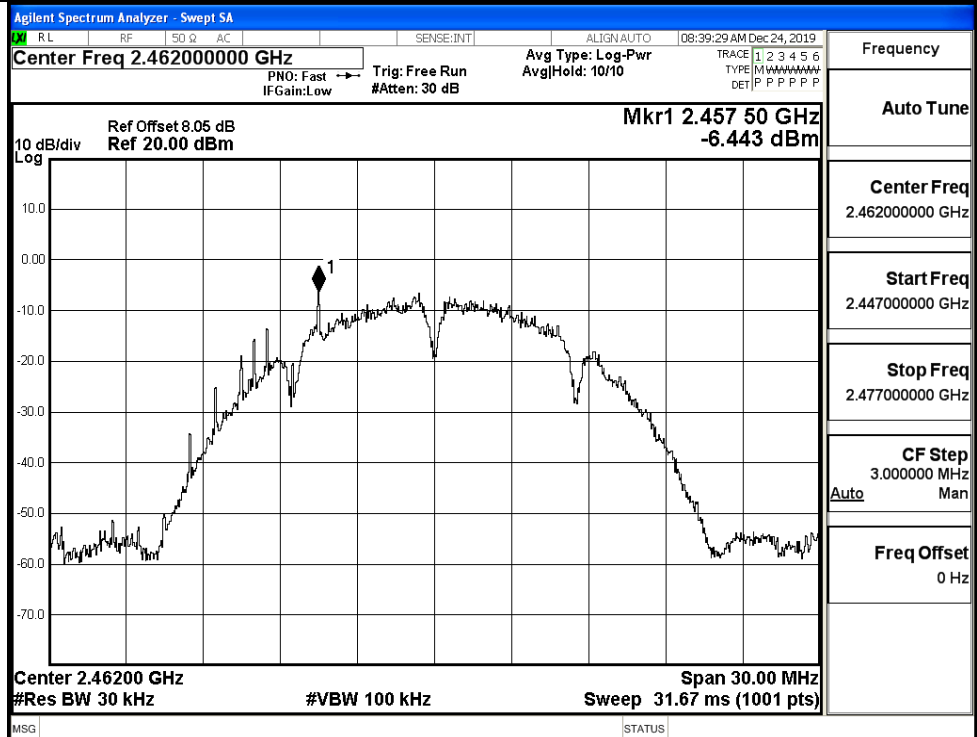
11B/LCH



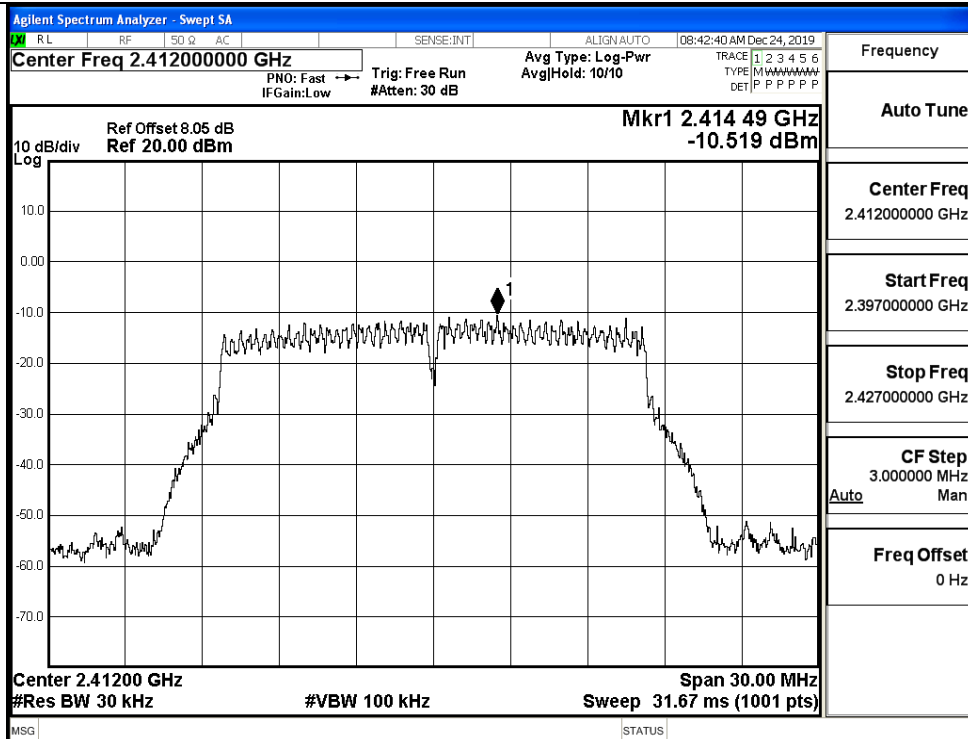
11B/MCH



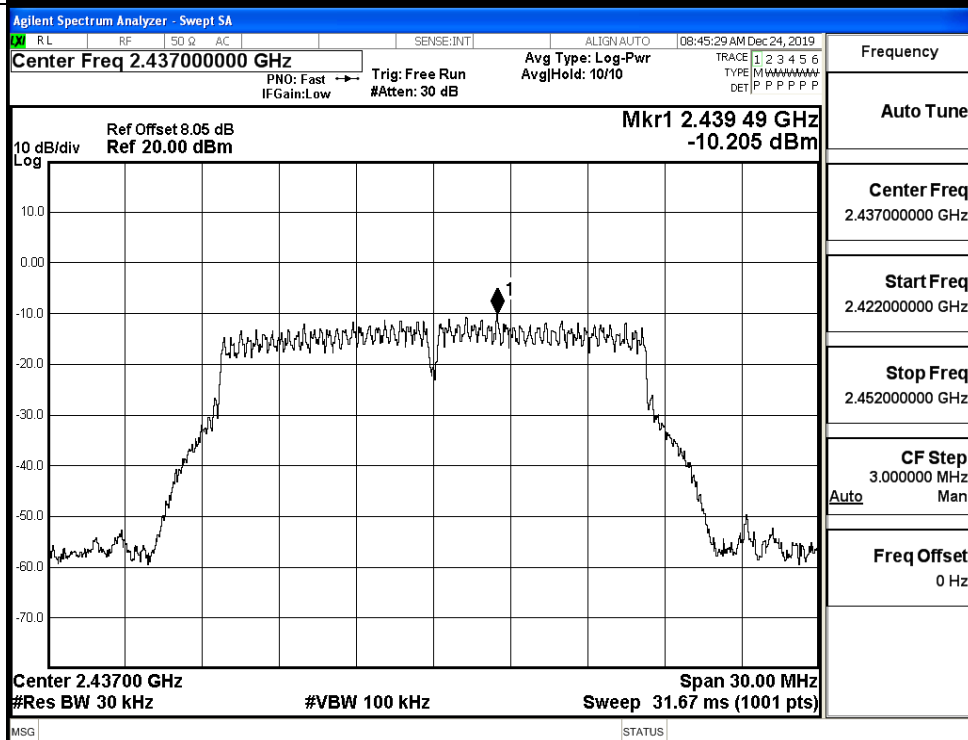
11B/HCH



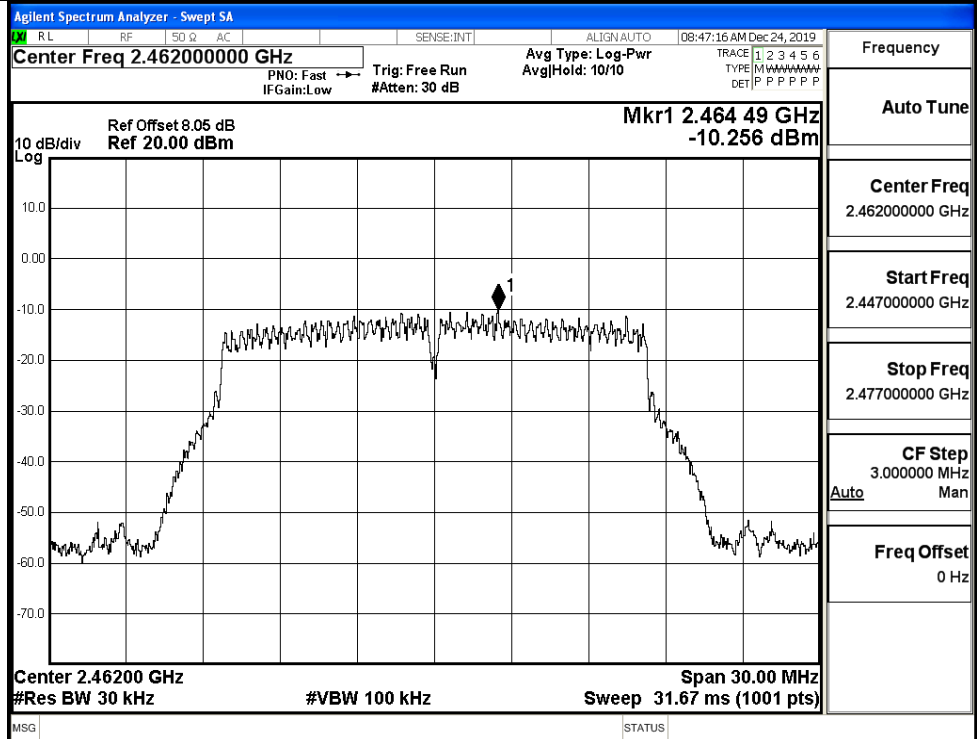
11G/LCH



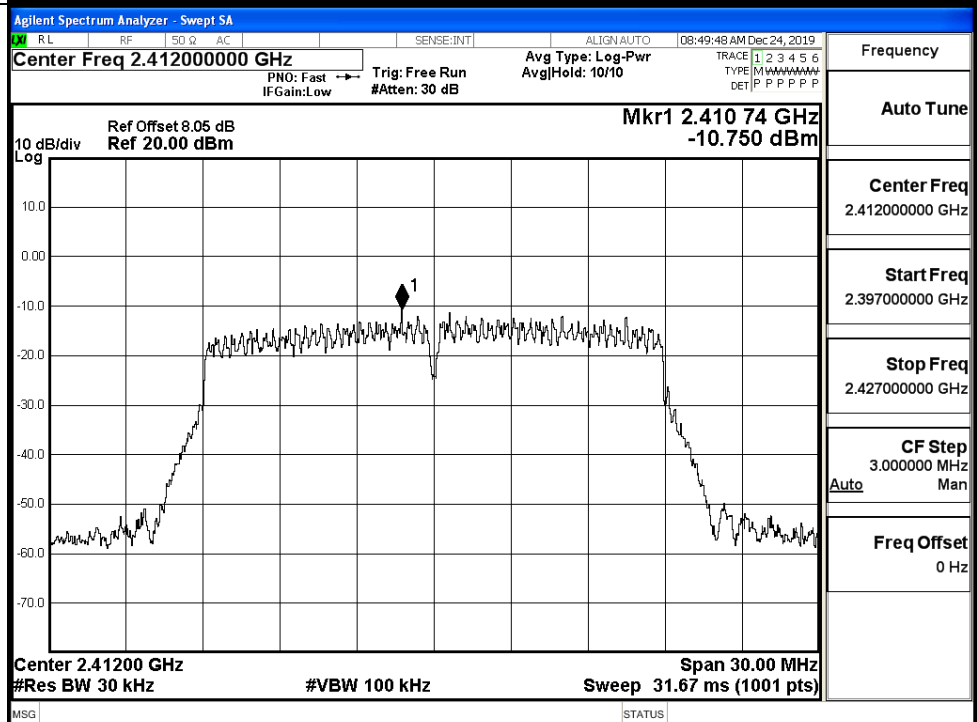
11G/MCH



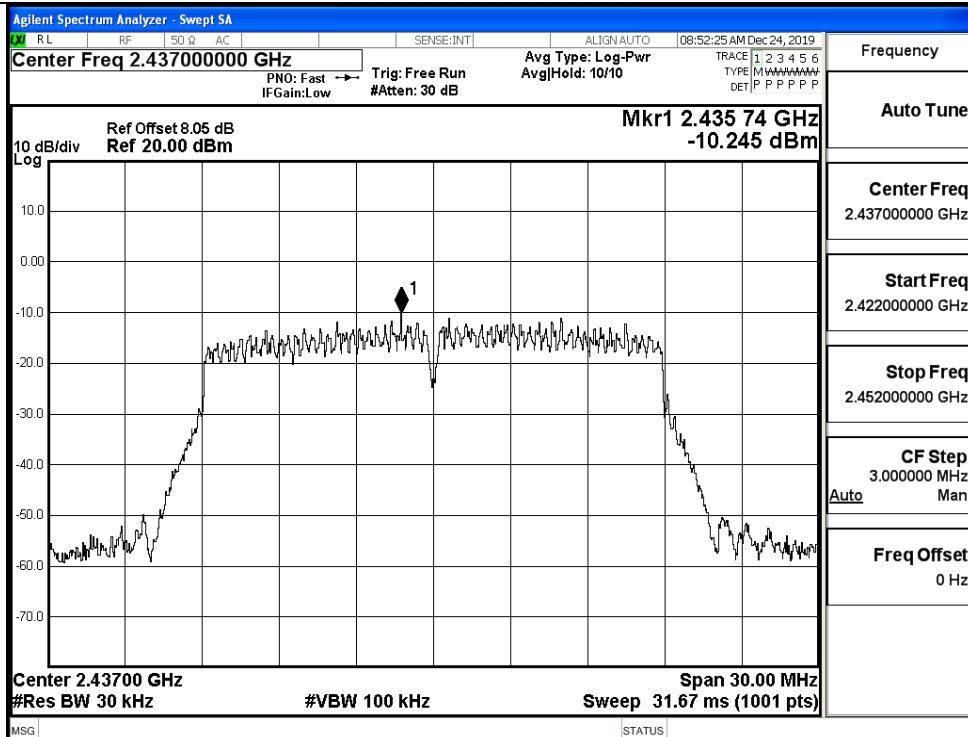
11G/HCH



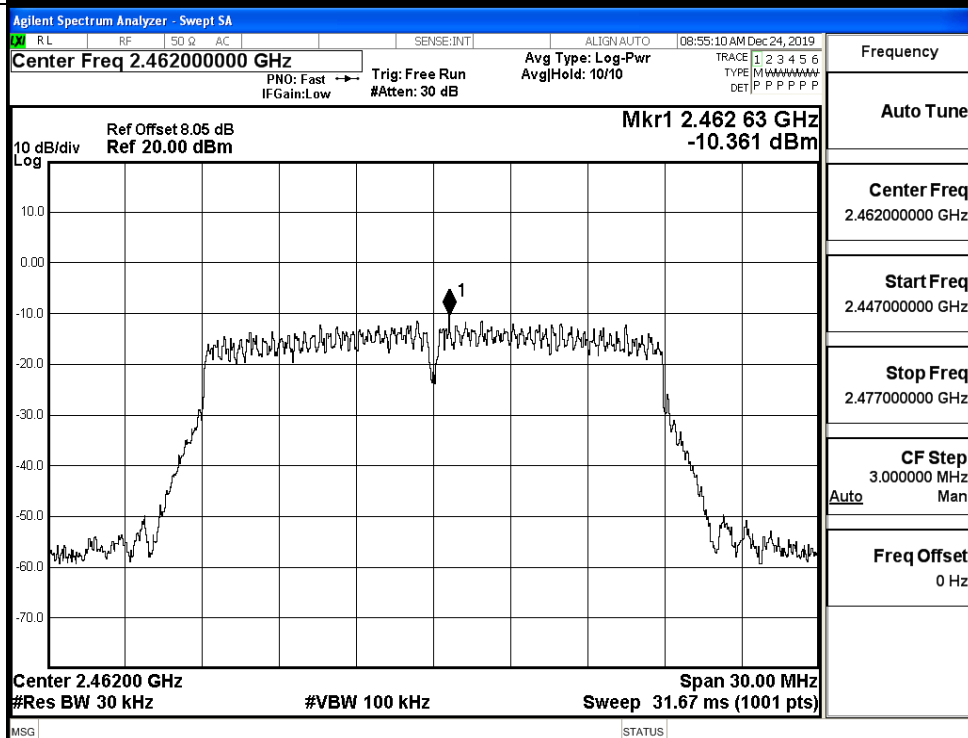
11N20SISO/LCH



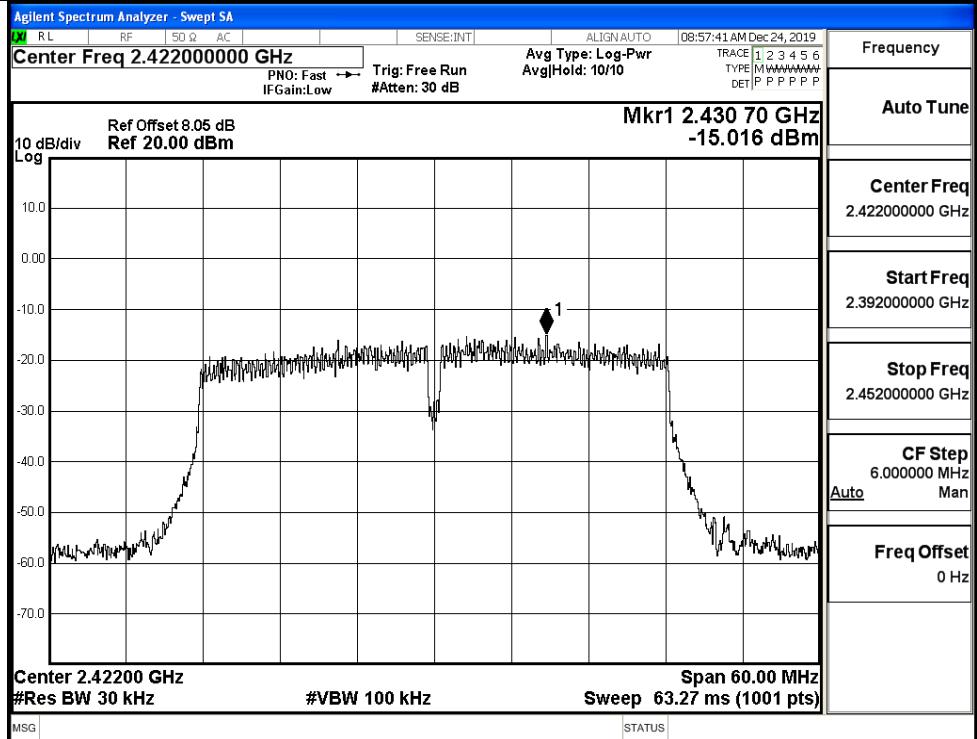
11N20SISO/MCH



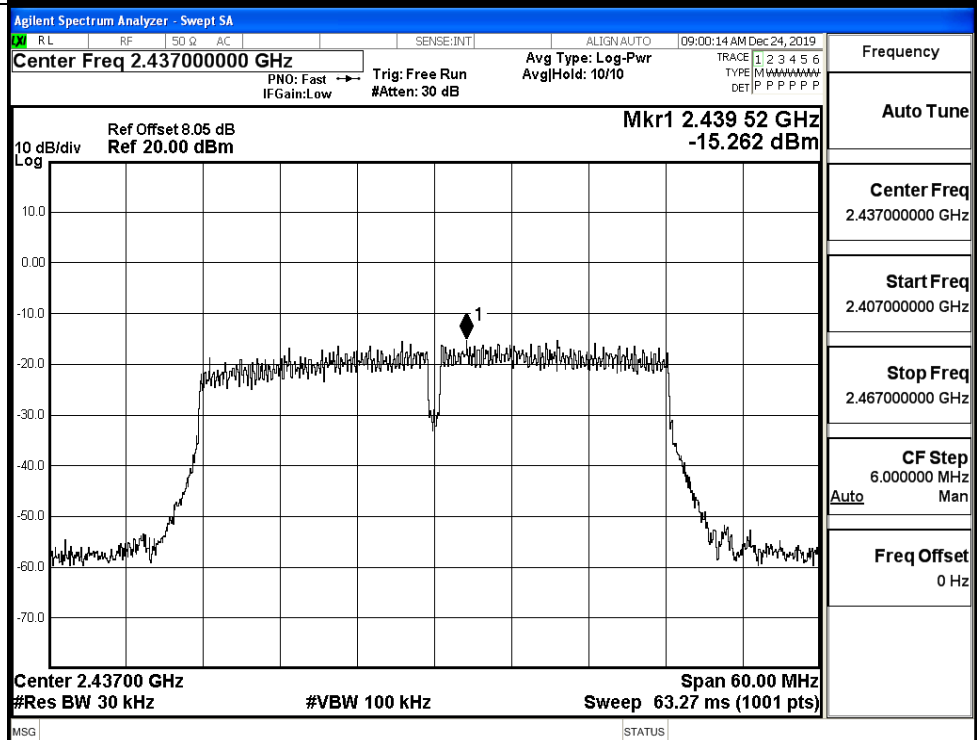
11N20SISO/HCH



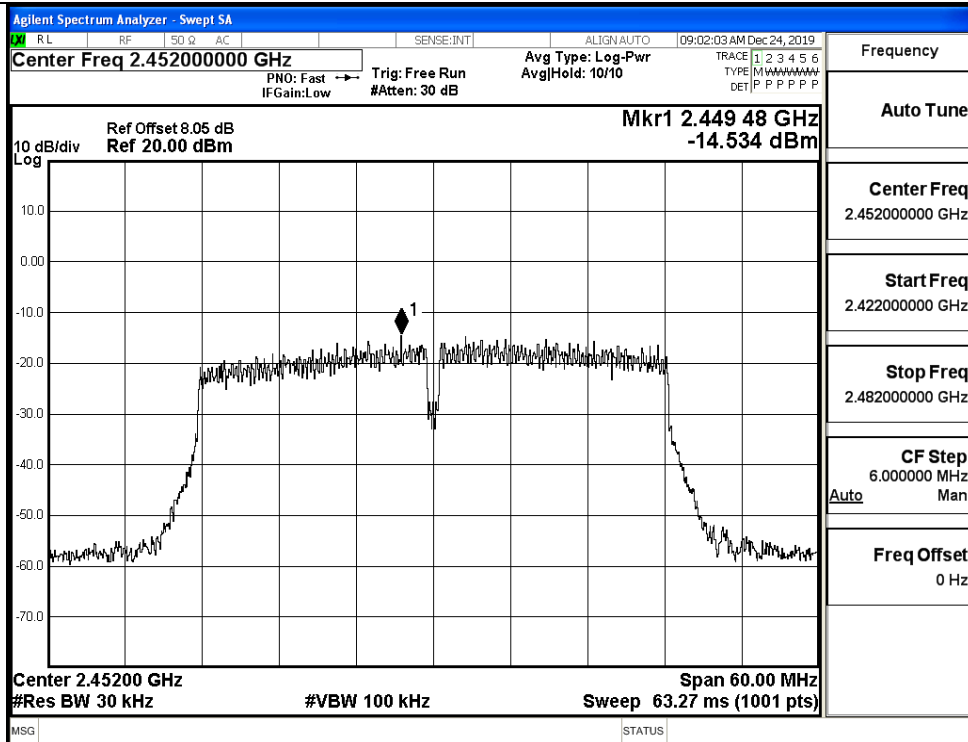
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

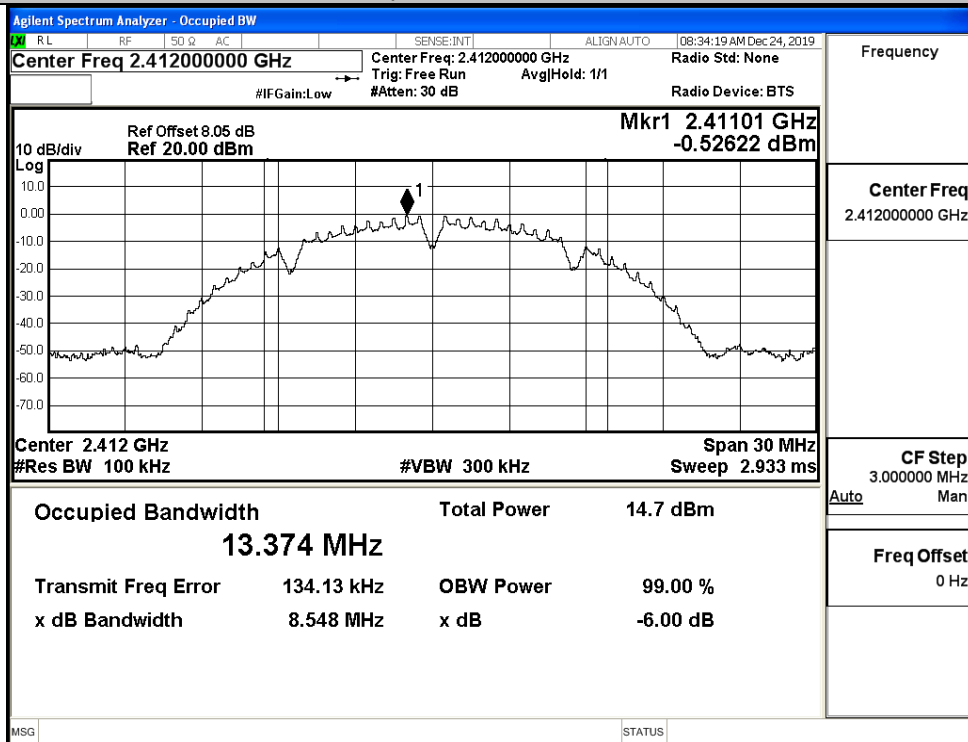


C.4 6dB Bandwidth

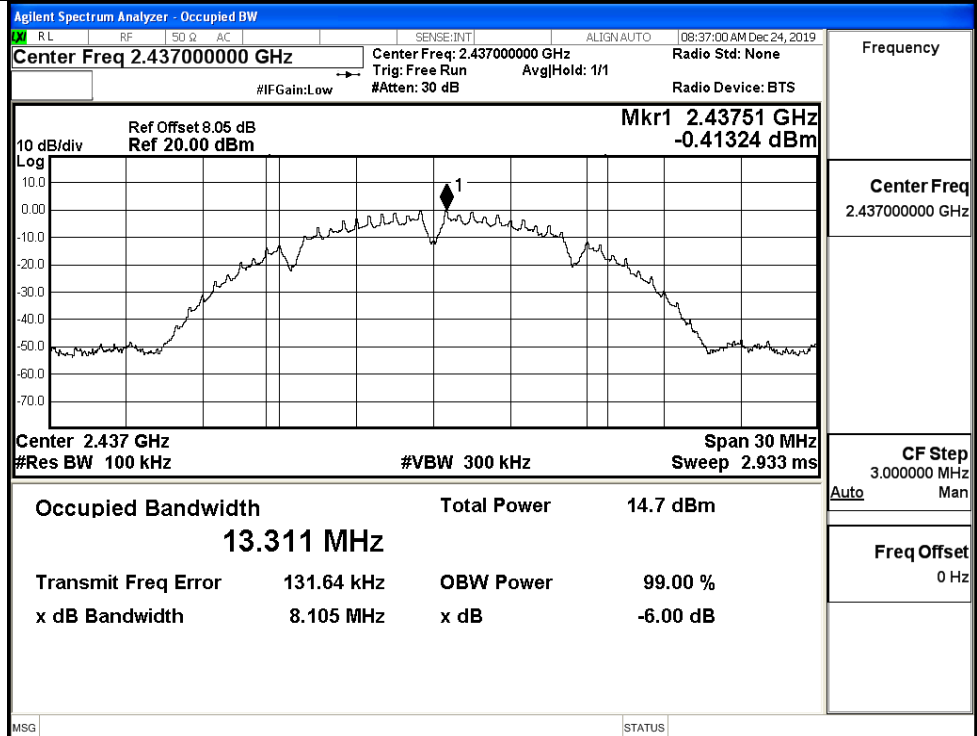
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	8.548	≥ 0.5	PASS
	MCH	8.105	≥ 0.5	PASS
	HCH	9.051	≥ 0.5	PASS
11G	LCH	15.50	≥ 0.5	PASS
	MCH	15.72	≥ 0.5	PASS
	HCH	15.50	≥ 0.5	PASS
11N20SISO	LCH	15.94	≥ 0.5	PASS
	MCH	15.99	≥ 0.5	PASS
	HCH	15.97	≥ 0.5	PASS
11N40SISO	LCH	35.75	≥ 0.5	PASS
	MCH	35.62	≥ 0.5	PASS
	HCH	35.19	≥ 0.5	PASS

Test Graphs

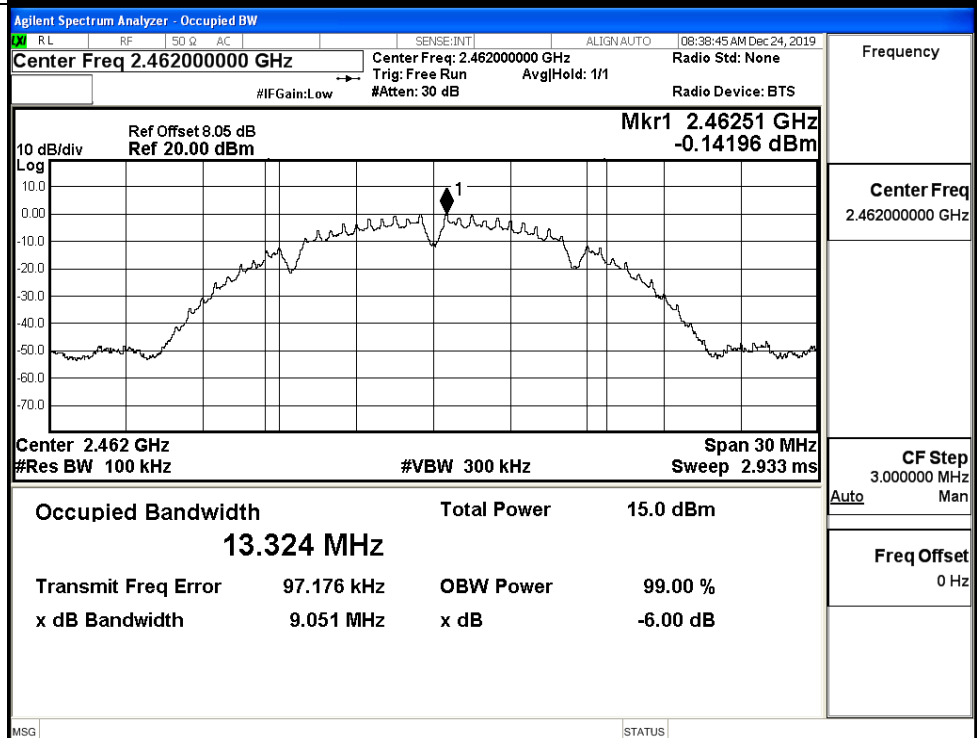
11B/LCH



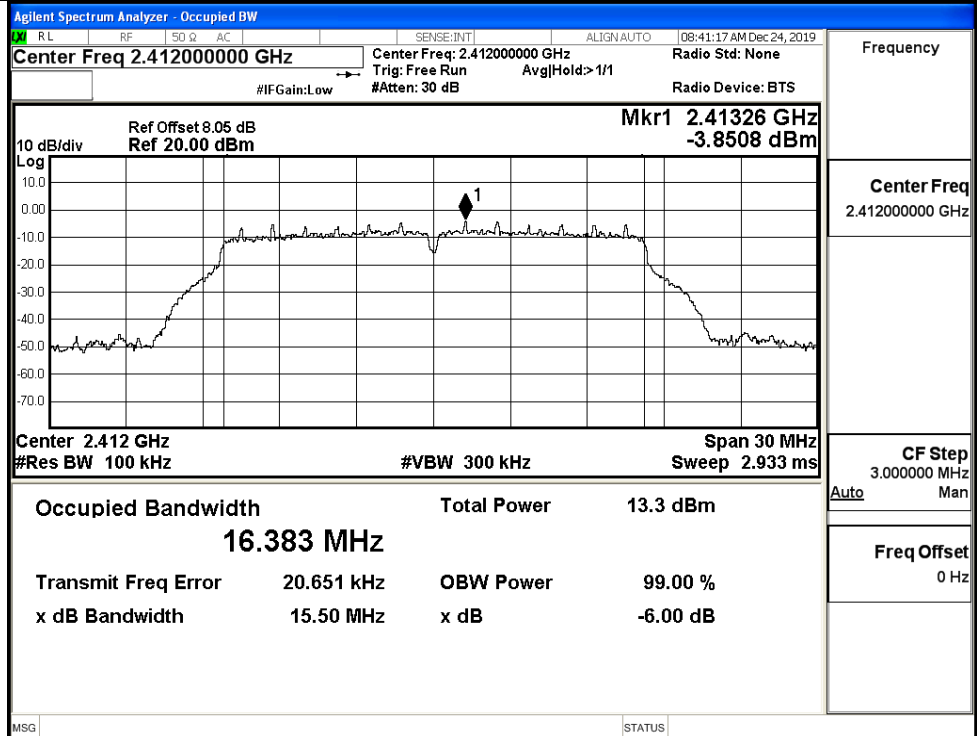
11B/MCH



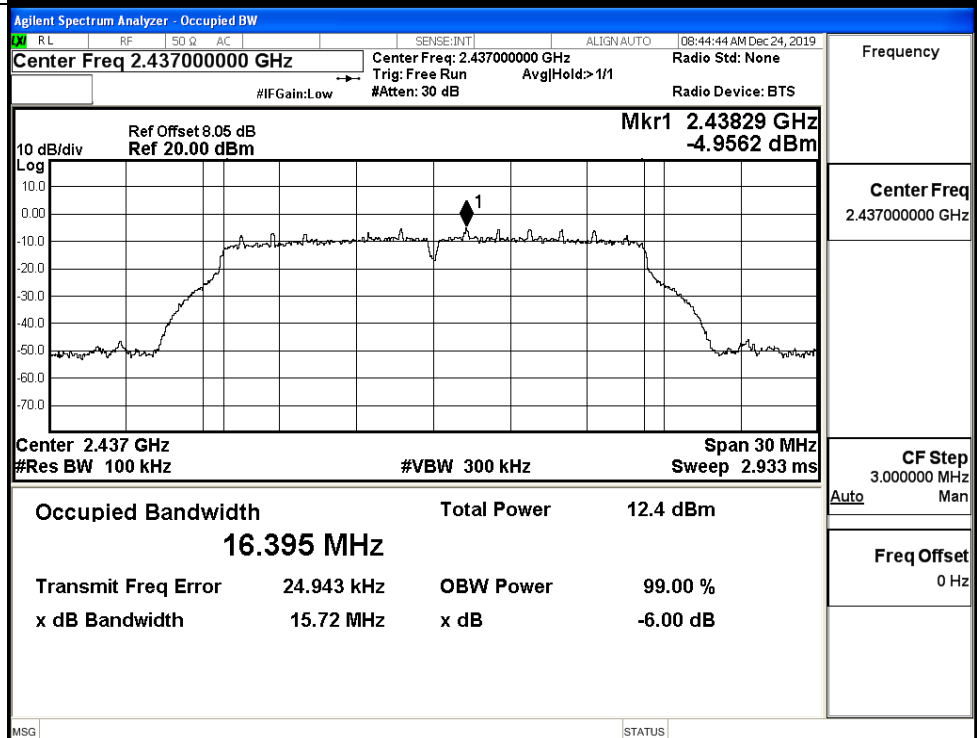
11B/HCH



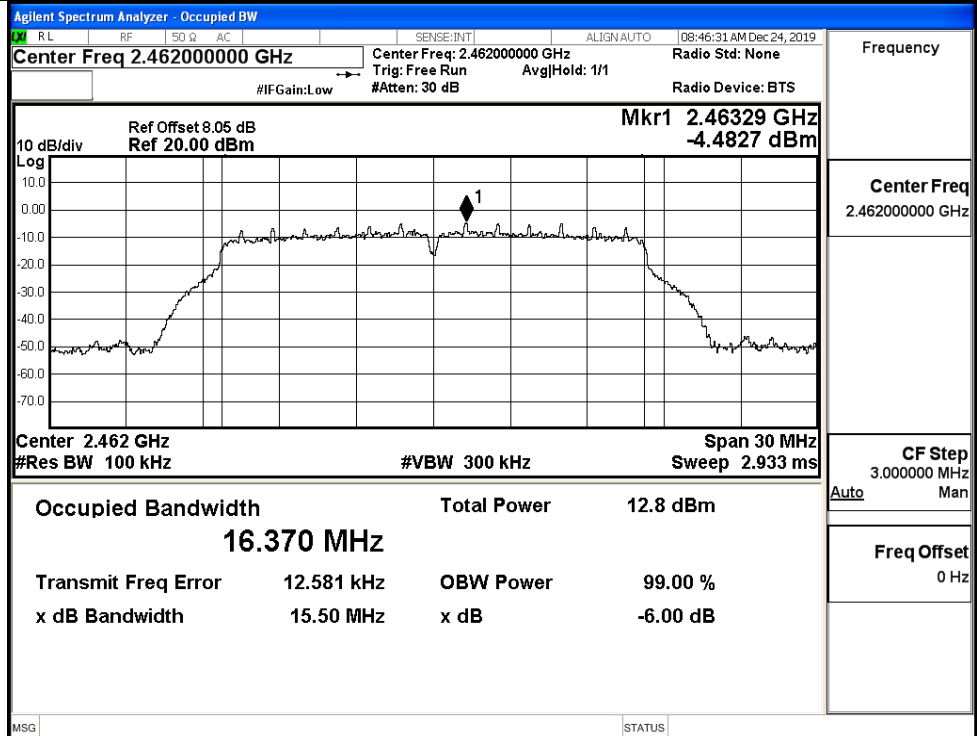
11G/LCH



11G/MCH



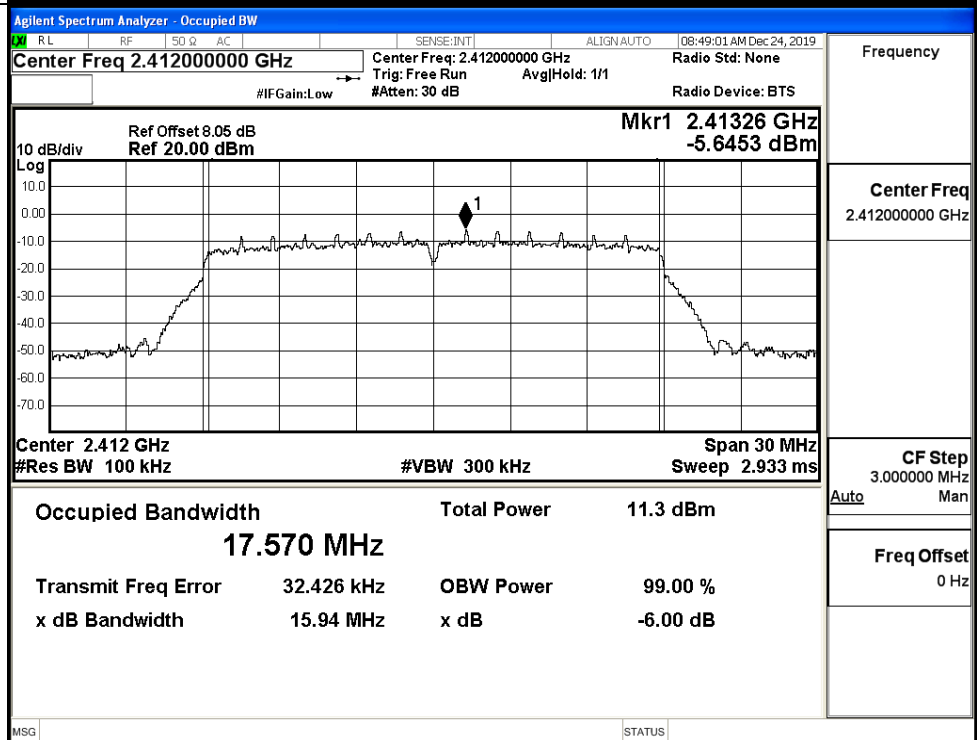
11G/HCH



Frequency

Center Freq
2.46200000 GHzCF Step
3.000000 MHz
Auto ManFreq Offset
0 Hz

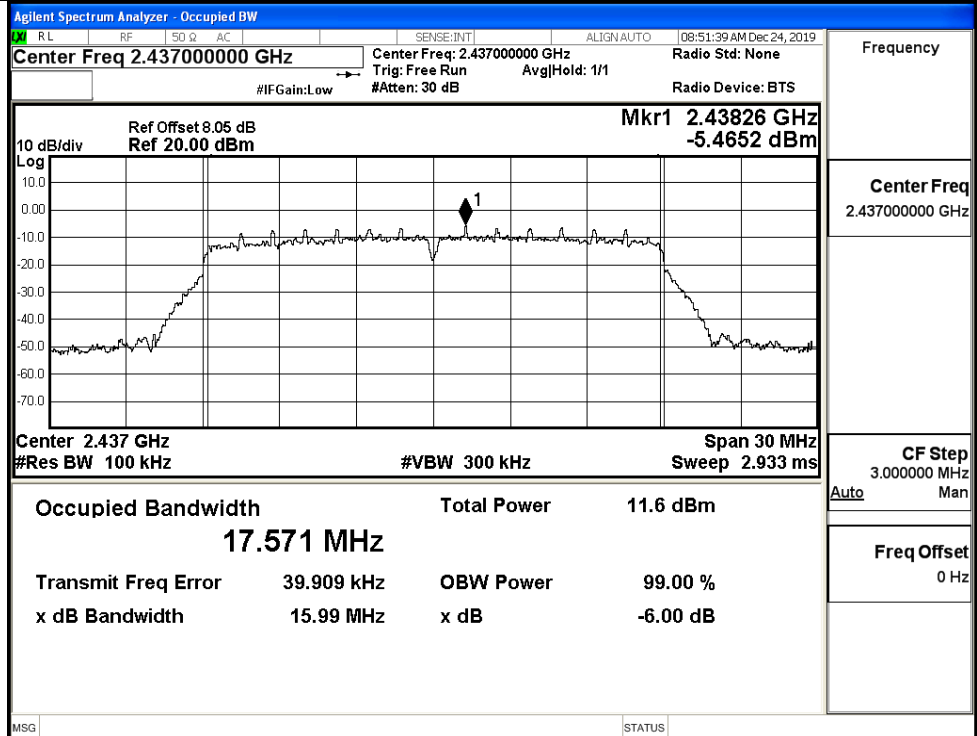
11N20SISO/LCH



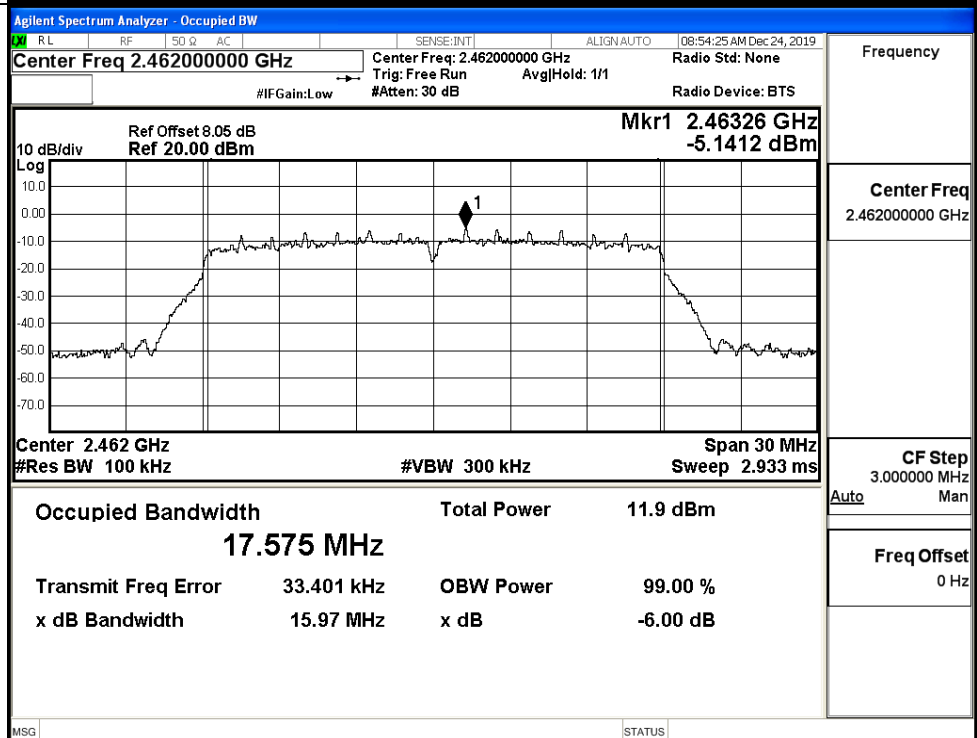
Frequency

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

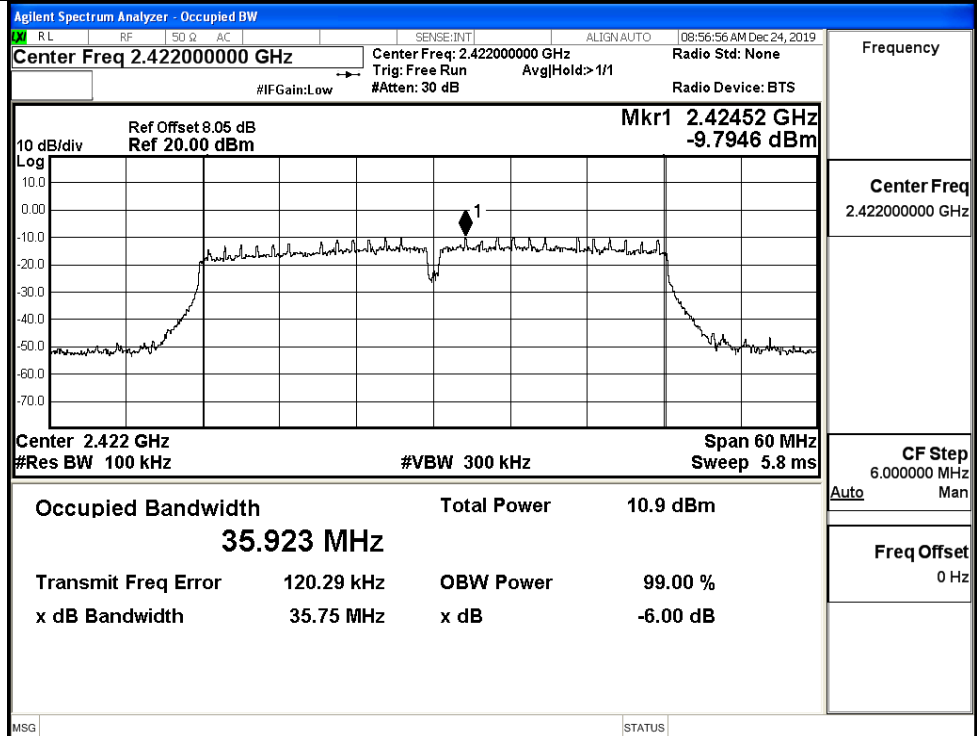
11N20SISO/MCH



11N20SISO/HCH



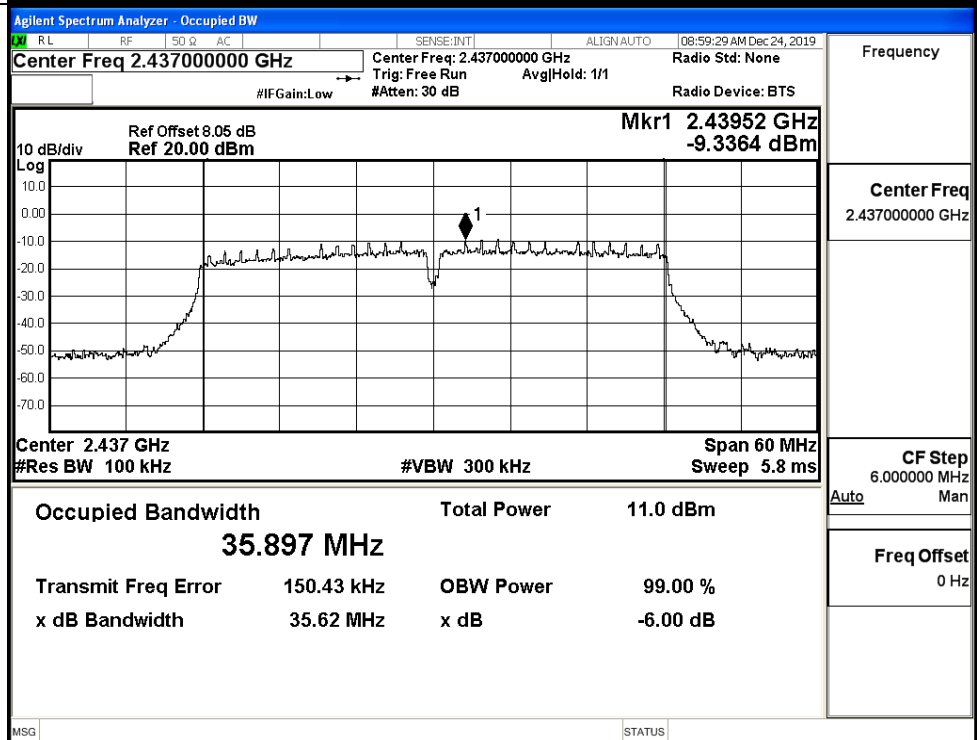
11N40SISO/LCH



Frequency

Center Freq
2.422000000 GHzCF Step
6.000000 MHz
Auto ManFreq Offset
0 Hz

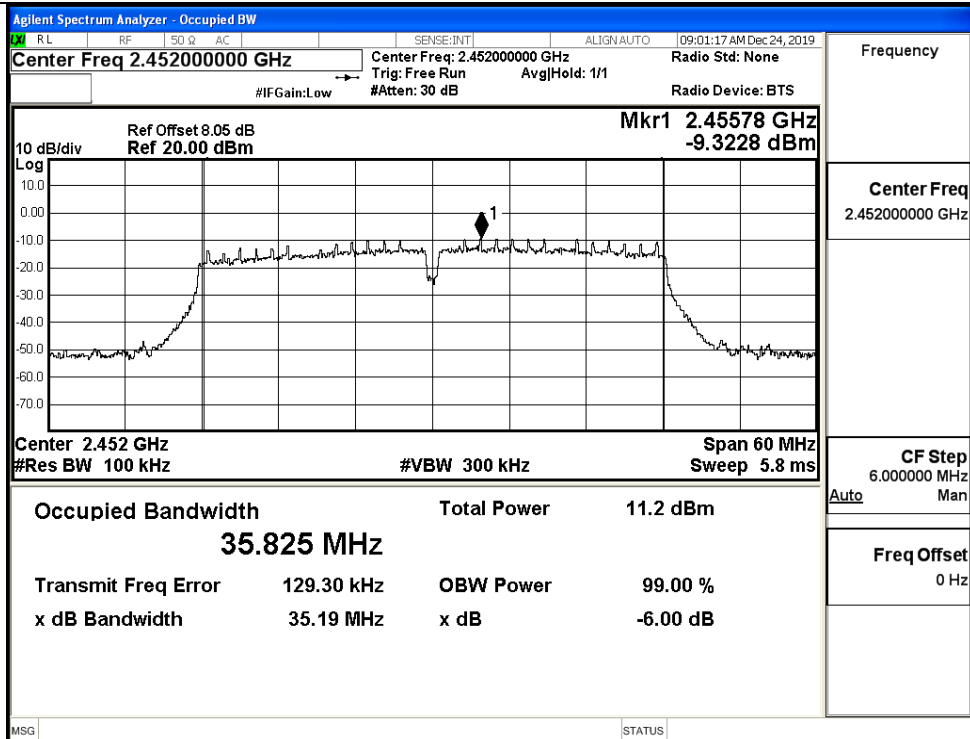
11N40SISO/MCH



Frequency

Center Freq
2.437000000 GHzCF Step
6.000000 MHz
Auto ManFreq Offset
0 Hz

11N40SISO/HCH

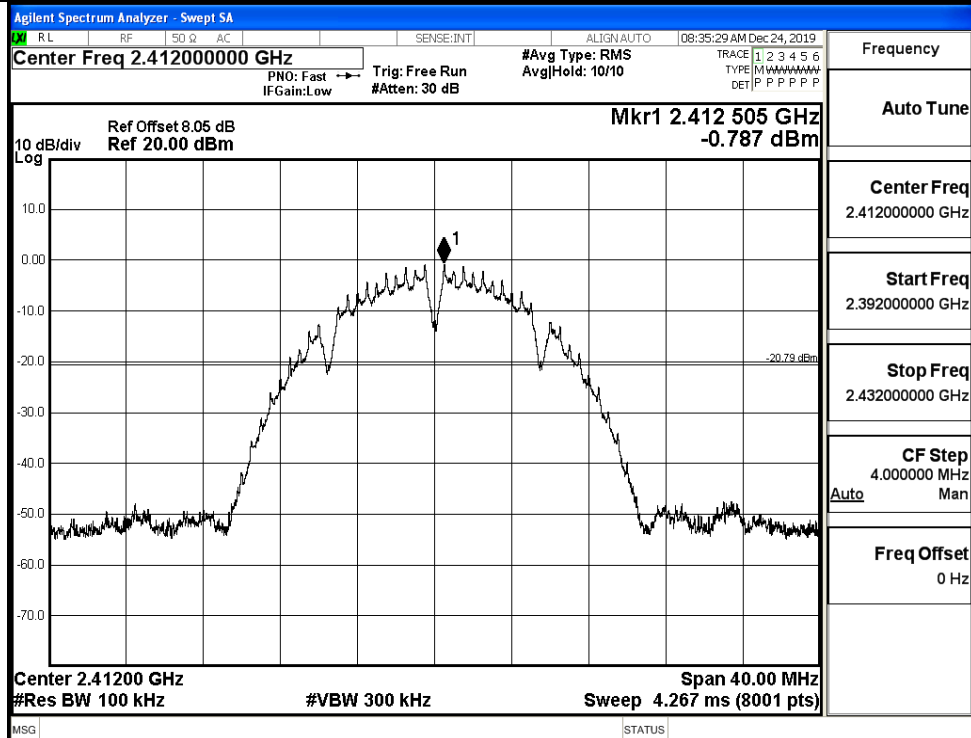


C.5 RF Conducted Spurious Emissions

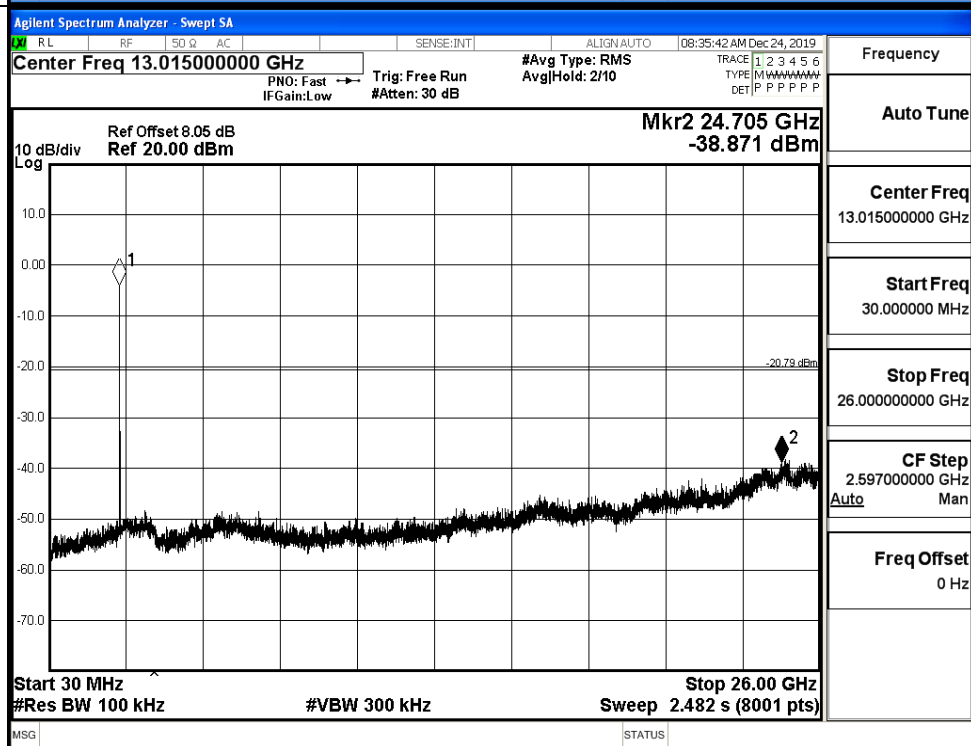
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.787	-38.871	-20.787	PASS
	MCH	-0.348	-36.997	-20.348	PASS
	HCH	-0.059	-38.406	-20.059	PASS
11G	LCH	-5.559	-38.490	-25.559	PASS
	MCH	-5.626	-37.989	-25.626	PASS
	HCH	-4.977	-37.241	-24.977	PASS
11N20 SISO	LCH	-5.368	-38.113	-25.368	PASS
	MCH	-5.33	-37.965	-25.330	PASS
	HCH	-5.639	-37.465	-25.639	PASS
11N40 SISO	LCH	-9.37	-37.126	-29.370	PASS
	MCH	-9.471	-37.309	-29.471	PASS
	HCH	-8.70	-38.155	-28.700	PASS

11B LCH Graphs

Pref/11B/LCH

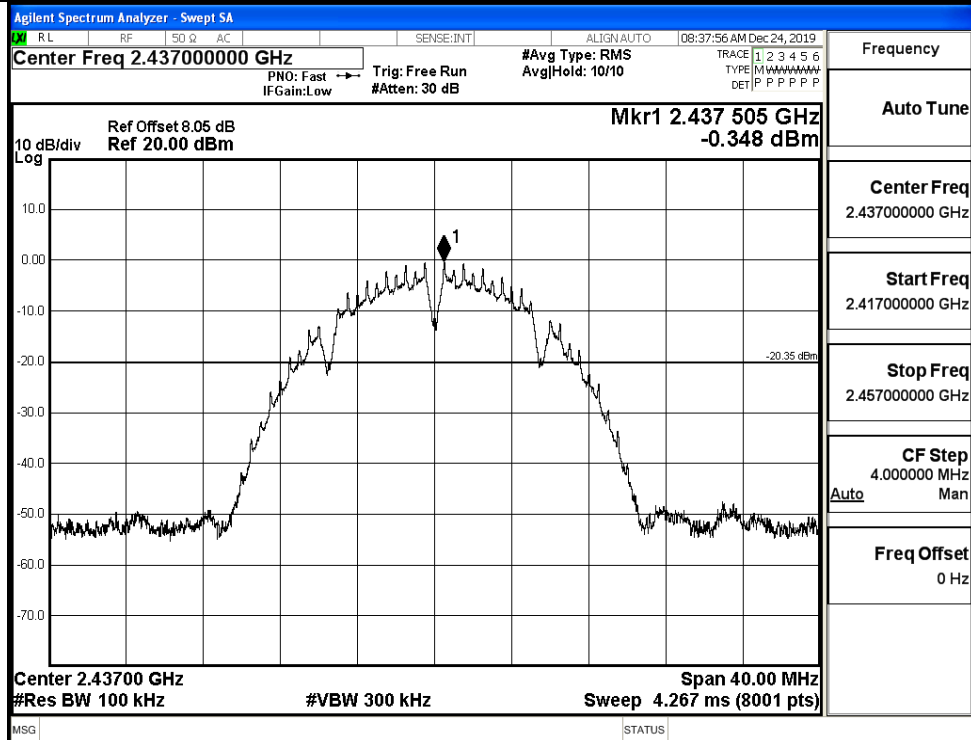


Puw/11B/LCH

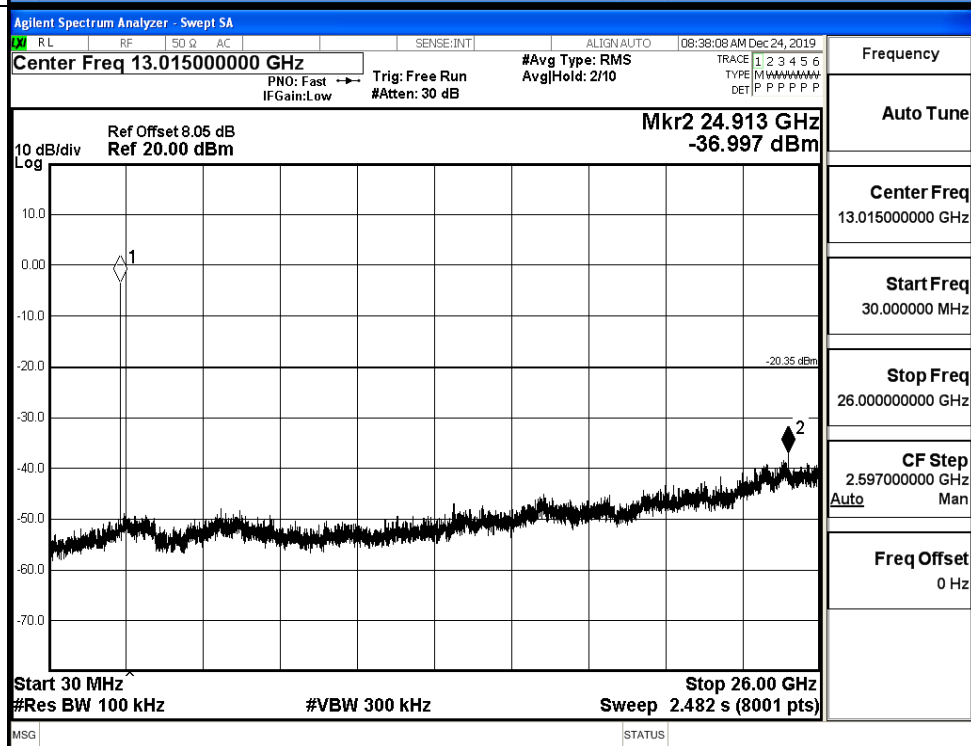


11B MCH Graphs

Pref/11B/MCH

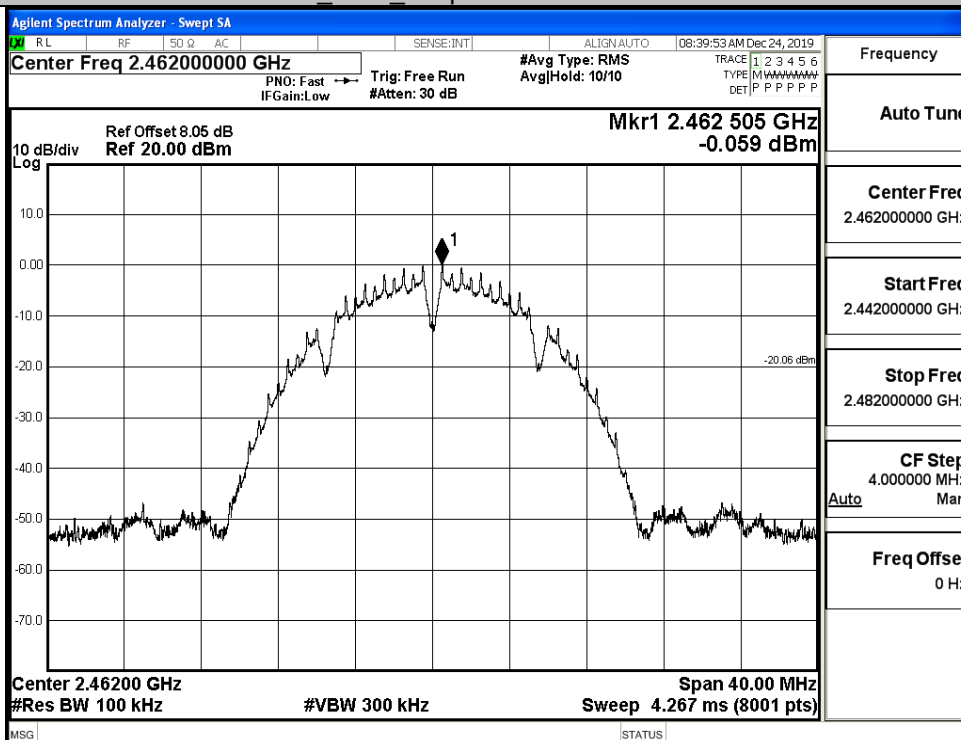


Puw/11B/MCH

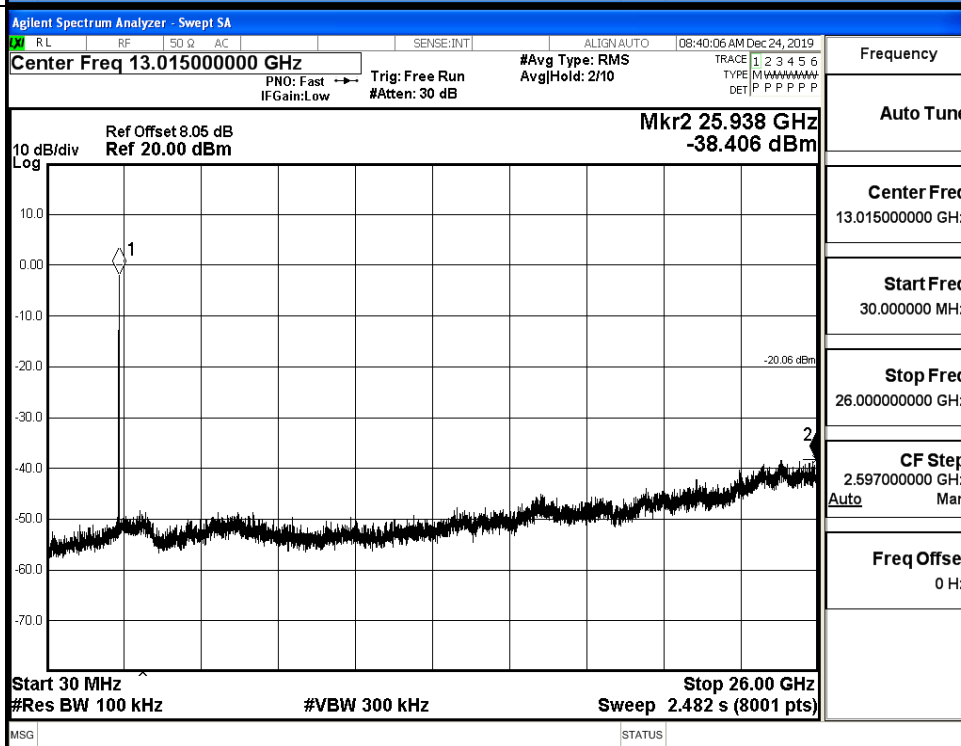


11B HCH Graphs

Pref/11B/HCH

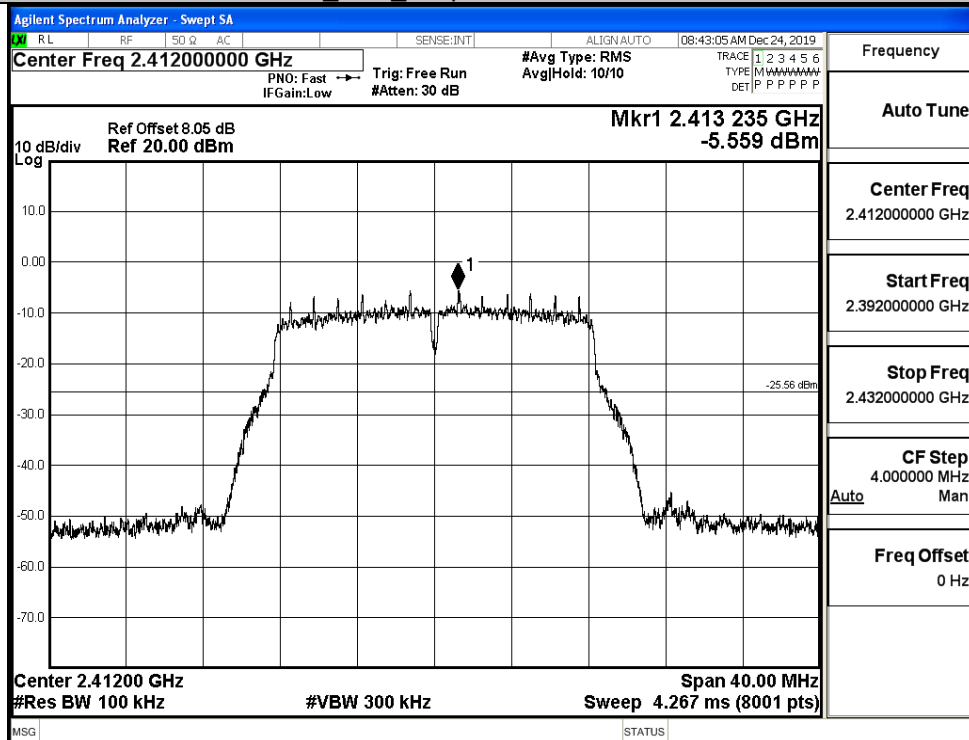


Puw/11B/HCH

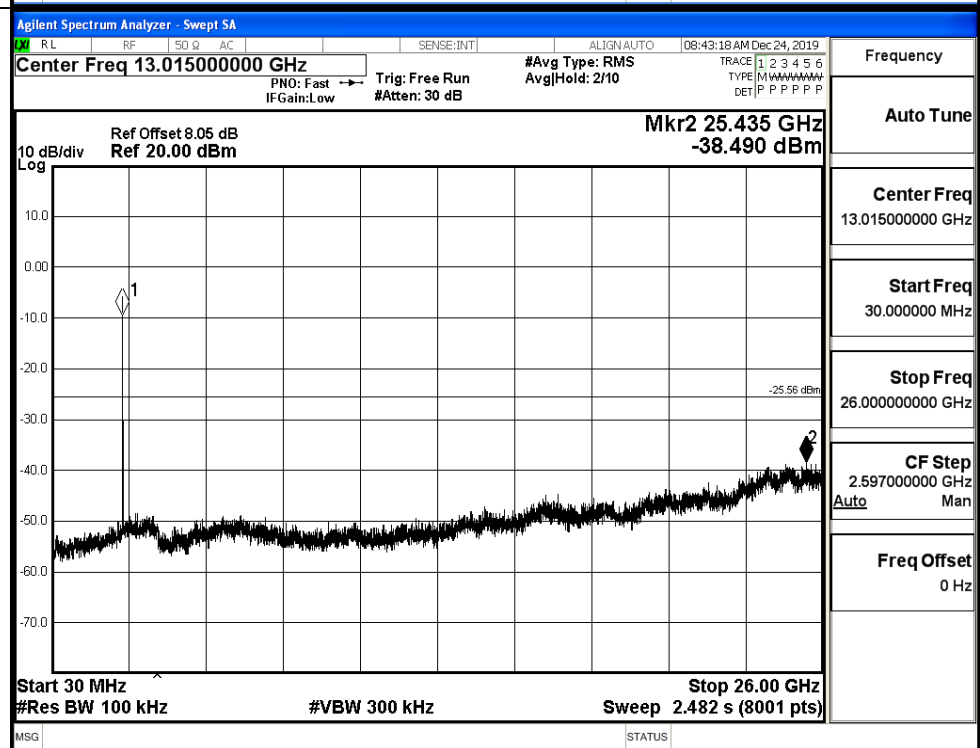


11G LCH Graphs

Pref/11G/LCH

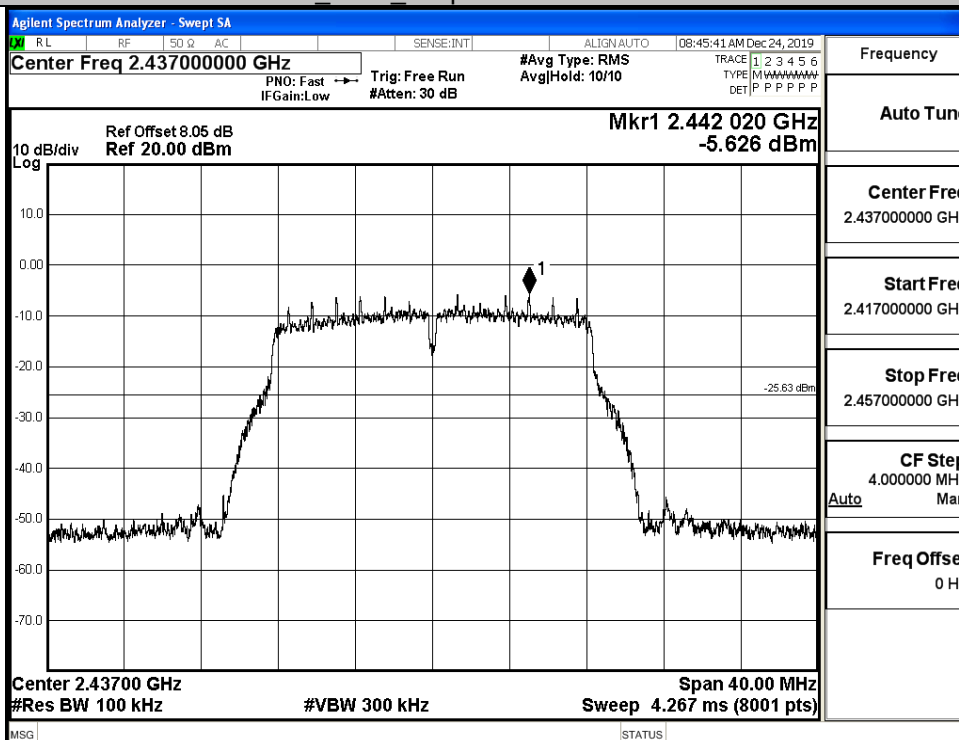


Puw/11G/LCH

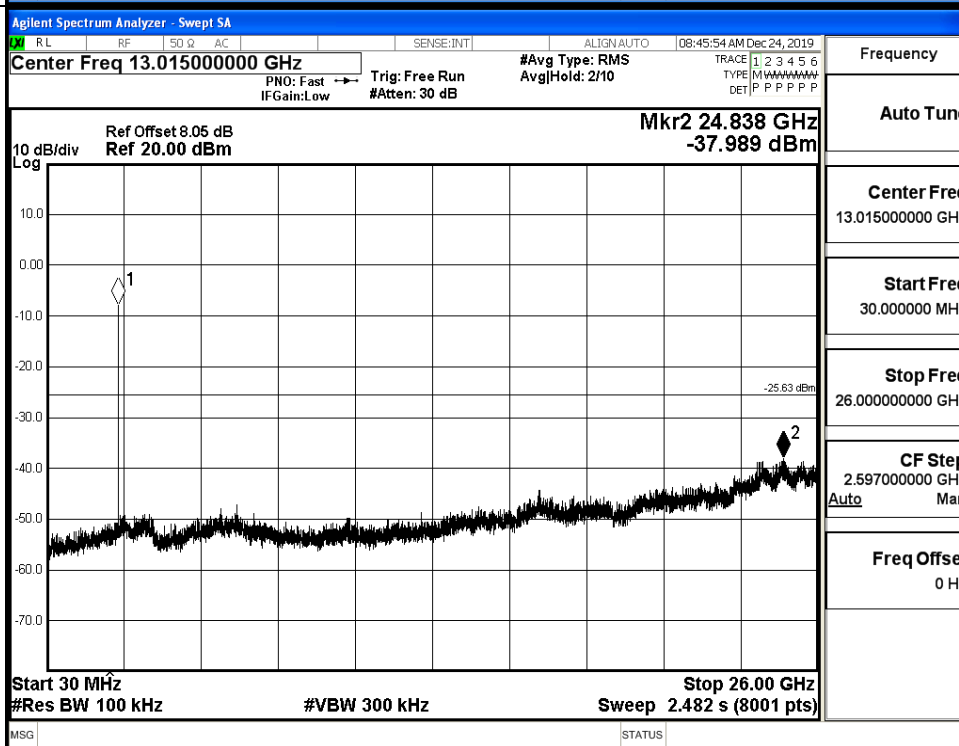


11G MCH Graphs

Pref/11G/MCH

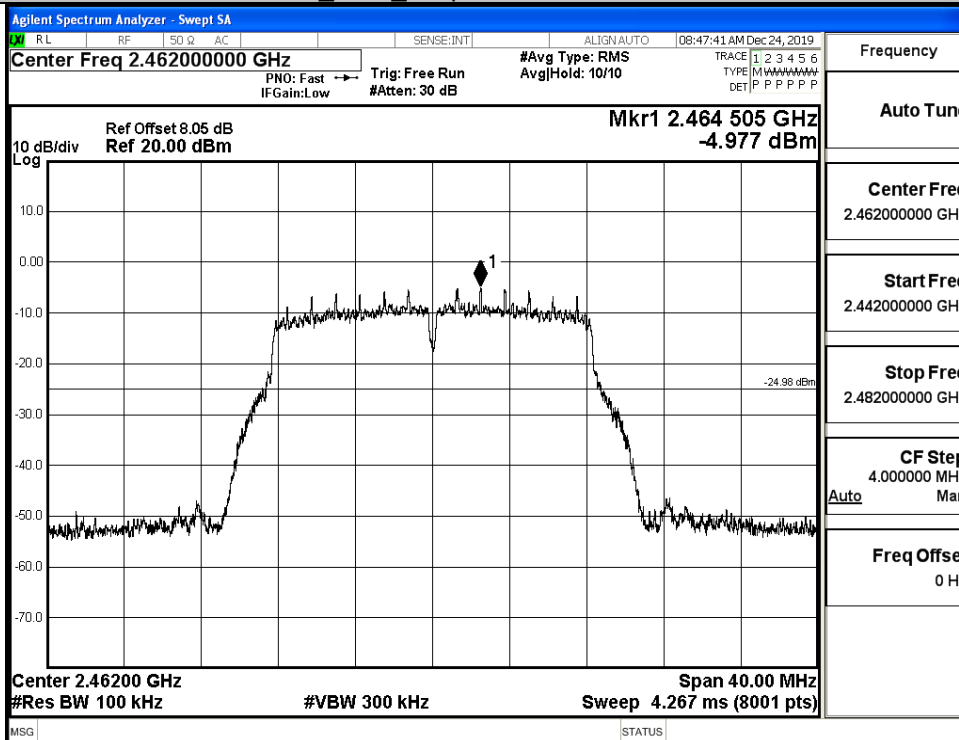


Puw/11G/MCH

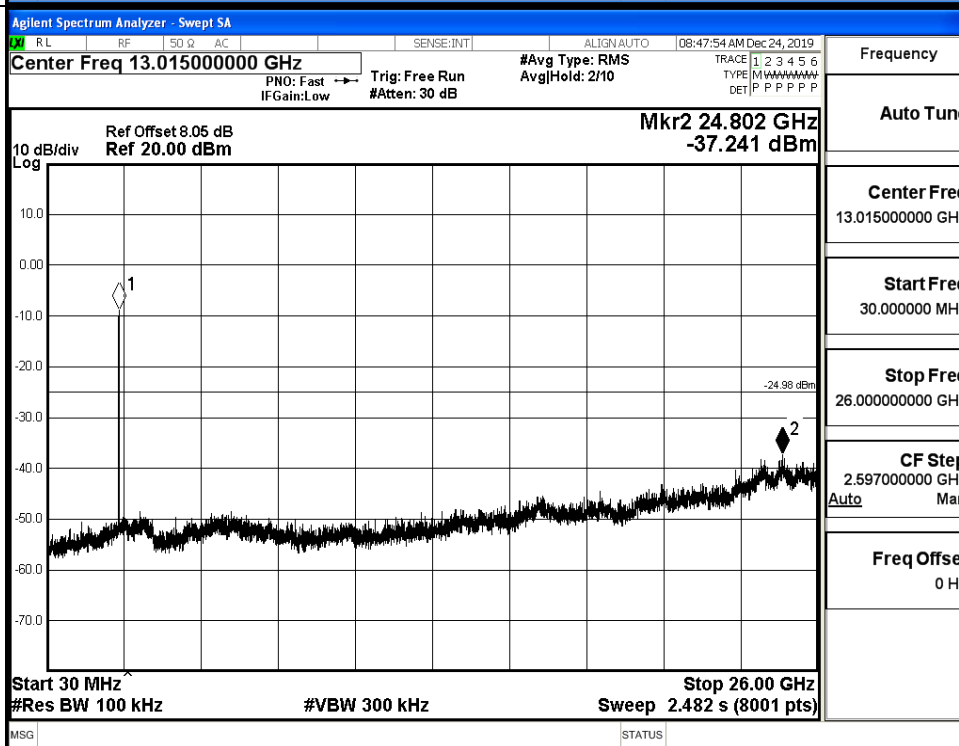


11G HCH Graphs

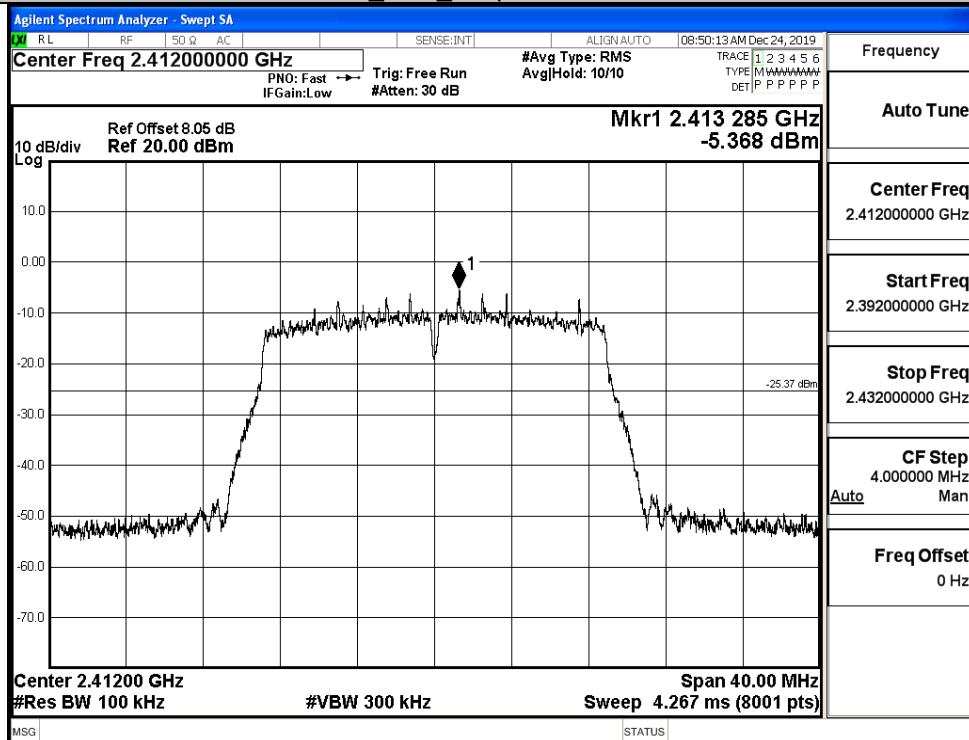
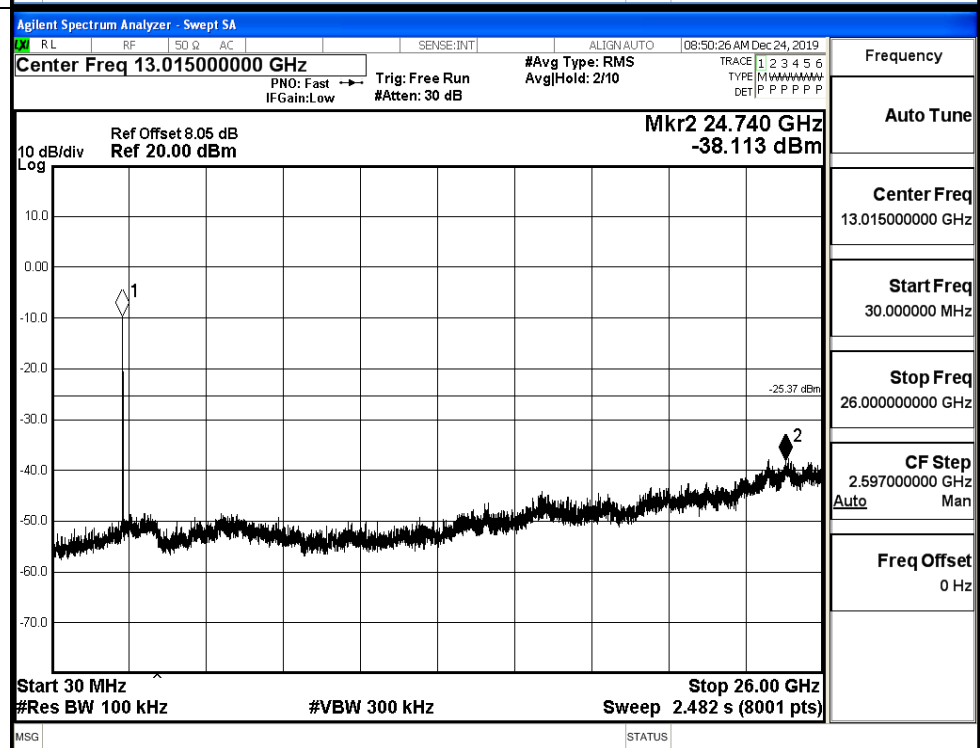
Pref/11G/HCH



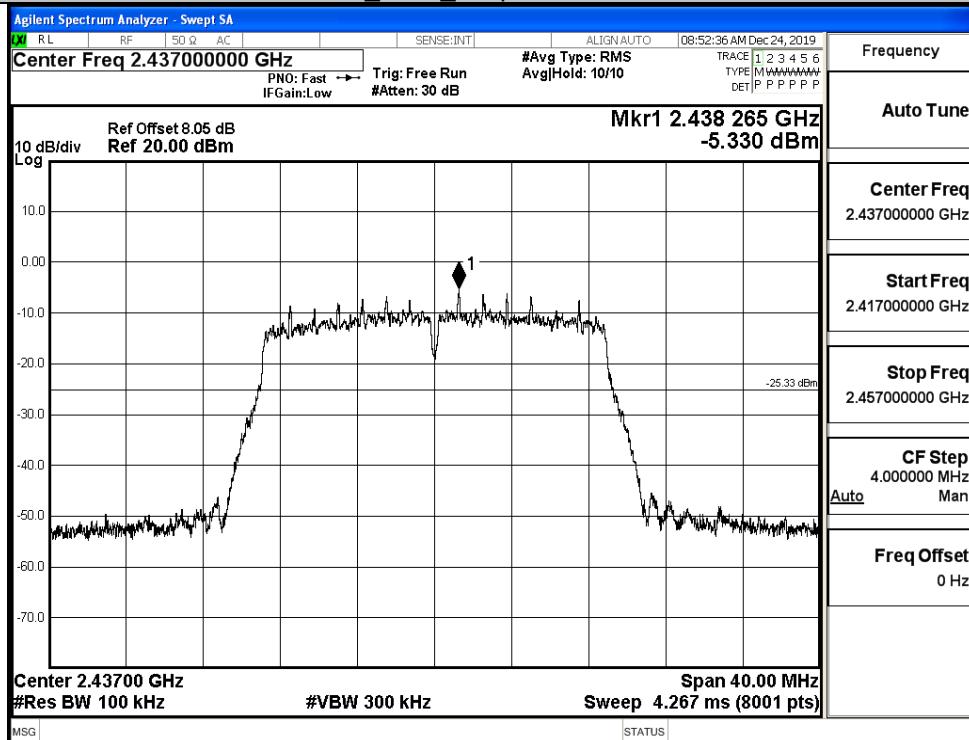
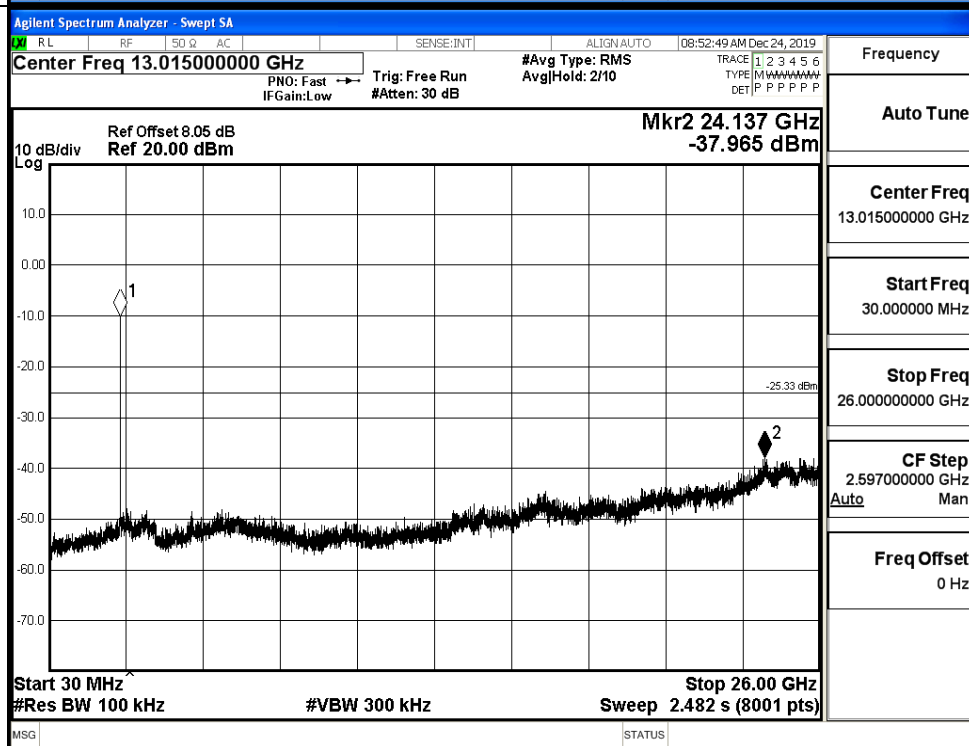
Puw/11G/HCH



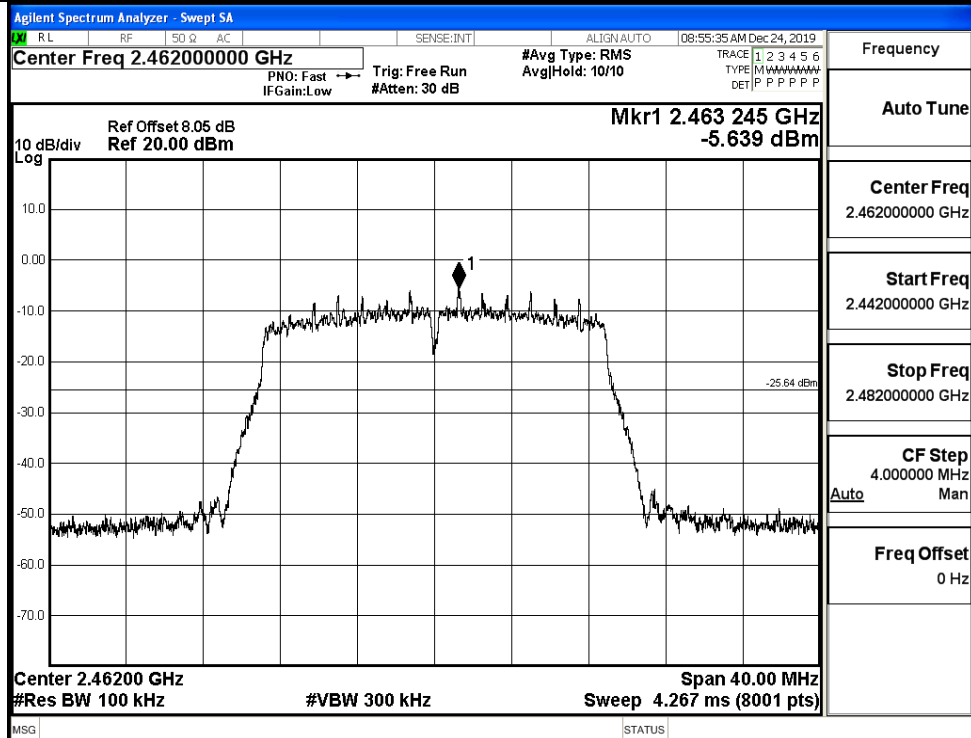
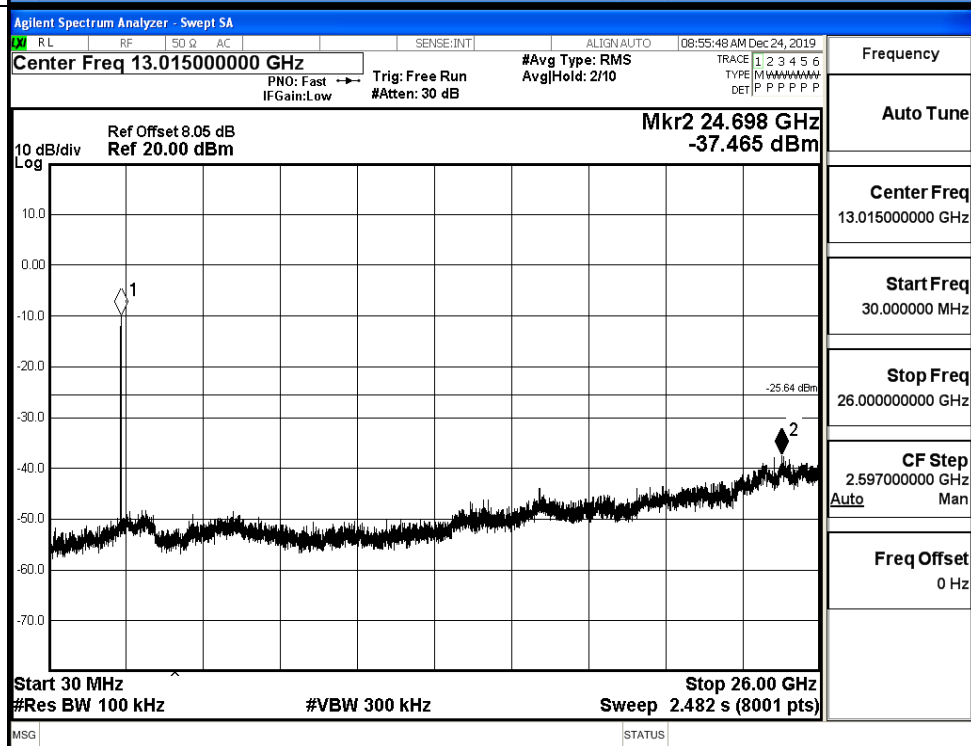
11N20SISO LCH Graphs

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

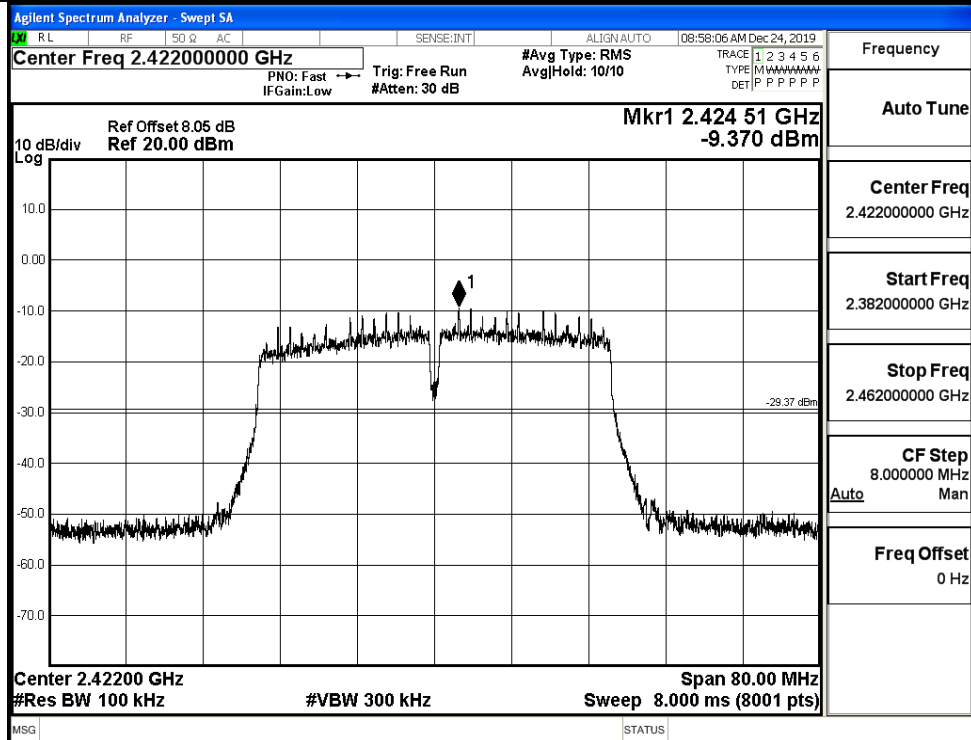
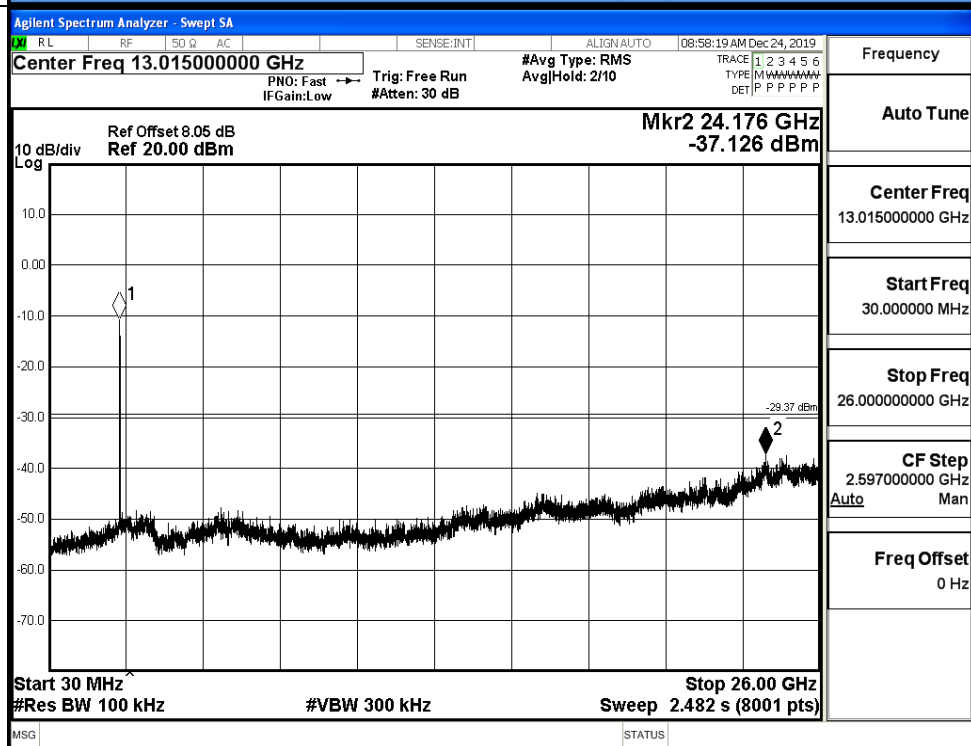
11N20SISO_MCH_Graphs

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

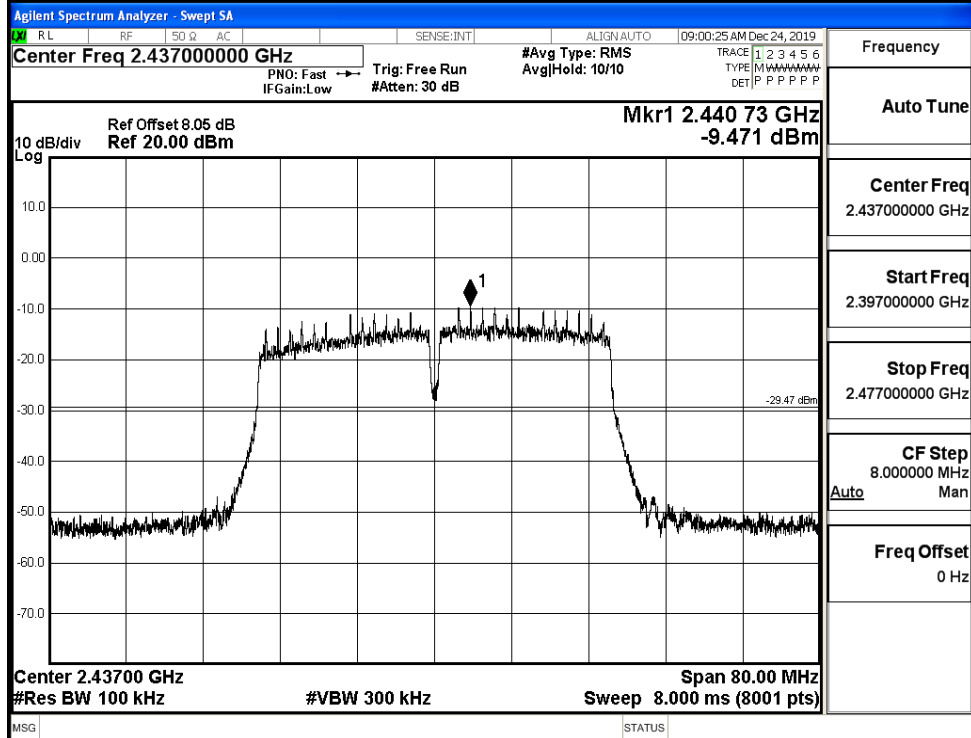
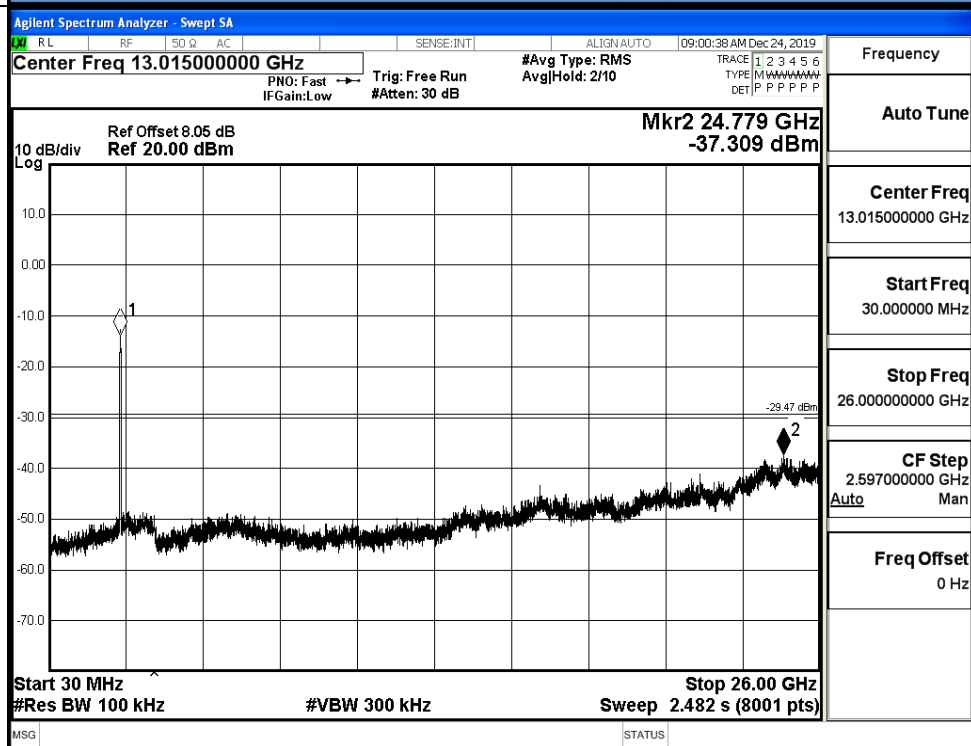
11N20SISO HCH Graphs

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

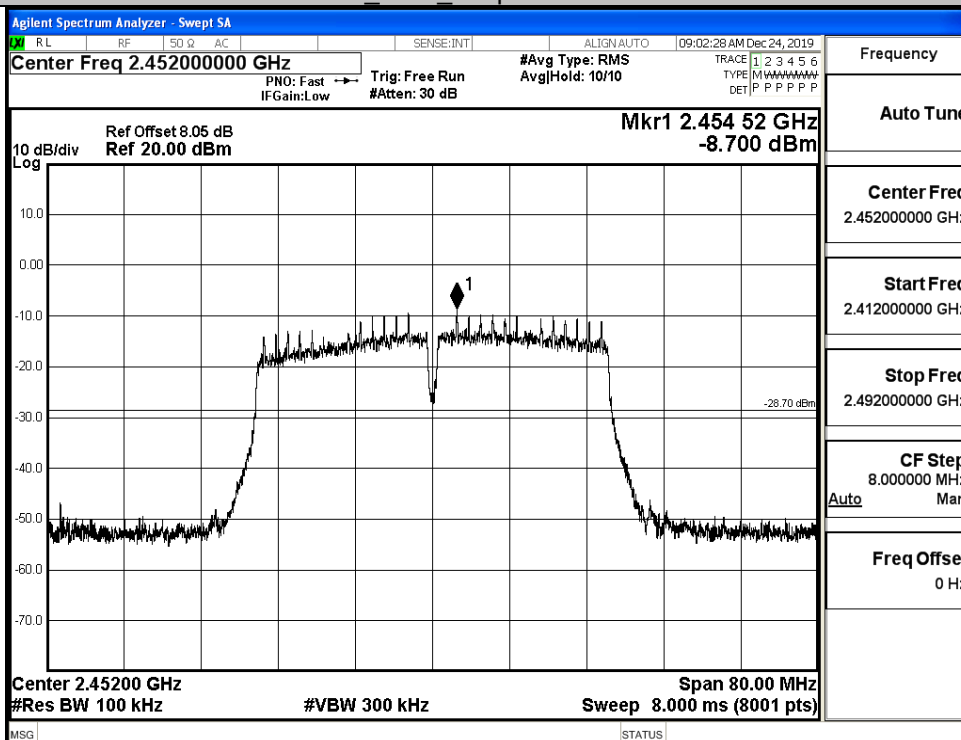
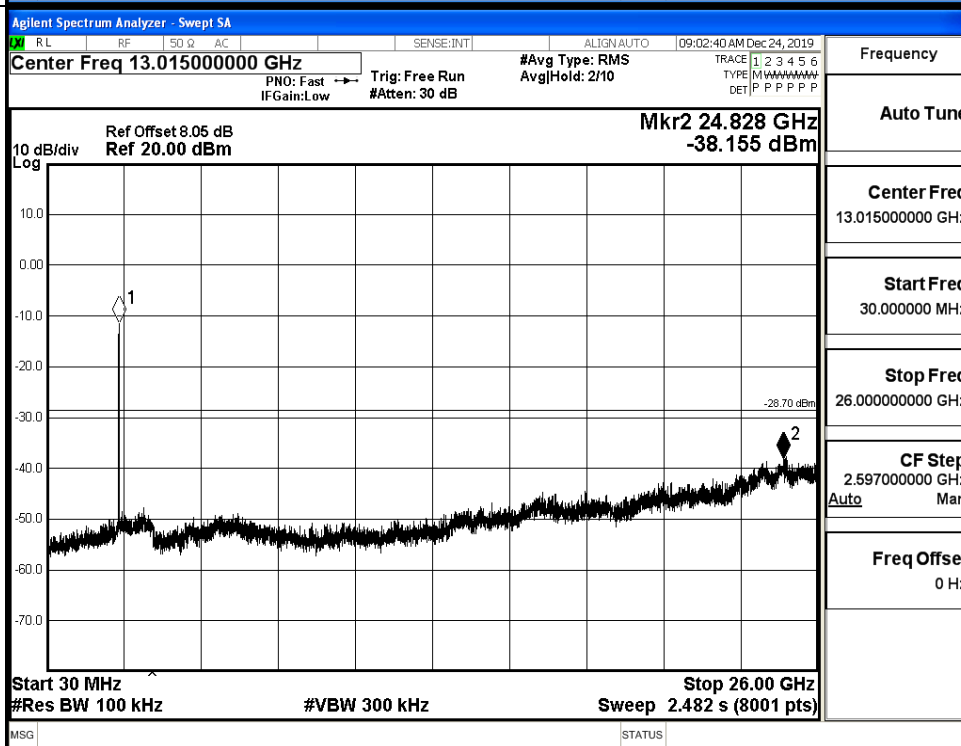
11N40SISO LCH Graphs

Pref/11N40
SISO/LCHPuw/11N40
SISO/LCH

11N40SISO_MCH_Graphs

Pref/11N40
SISO/MCHPuw/11N40
SISO/MCH

11N40SISO HCH Graphs

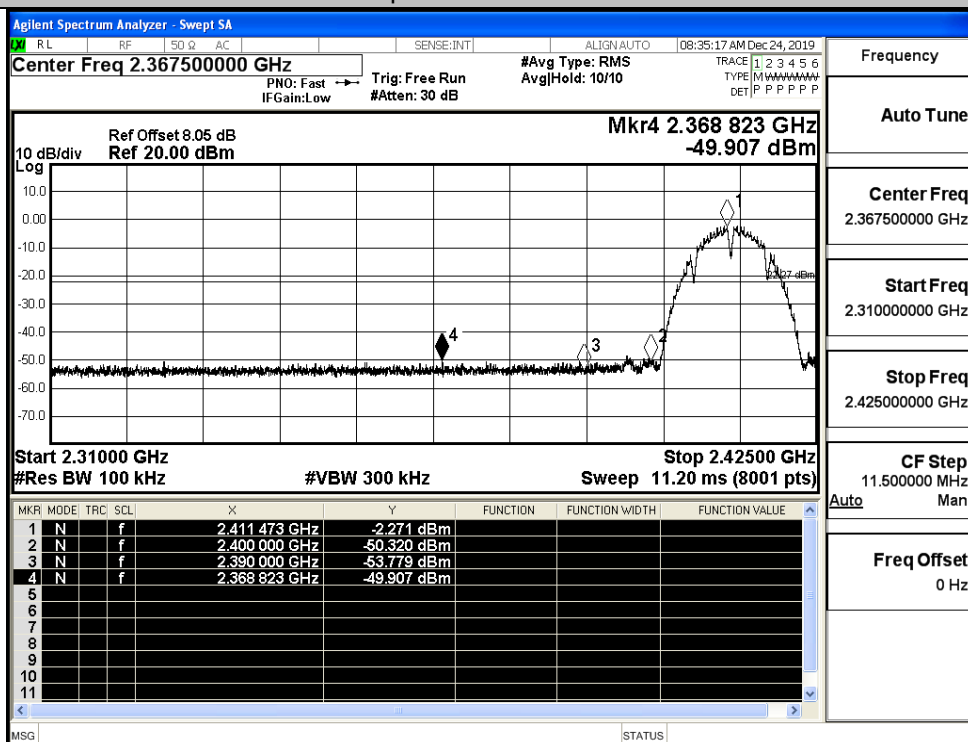
Pref/11N40
SISO/HCHPuw/11N40
SISO/HCH

C.6 Band-edge for RF Conducted Emissions

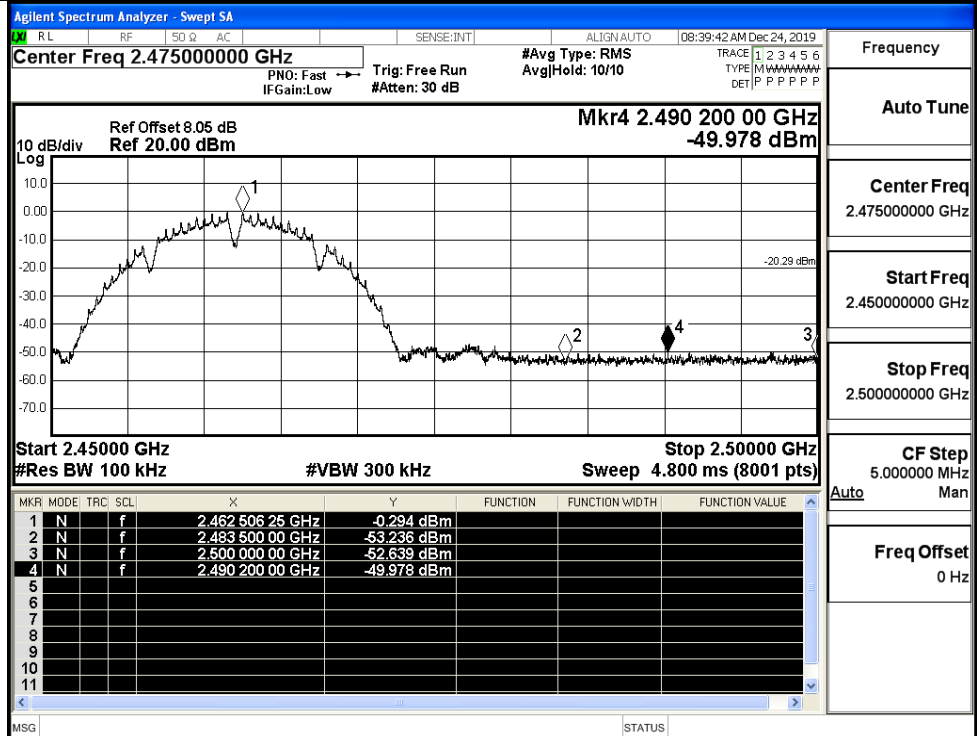
Mode	Channel	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-2.271	-49.907	-22.27	PASS
	HCH	-0.294	-49.978	-20.29	PASS
11G	LCH	-4.839	-49.427	-24.84	PASS
	HCH	-4.539	-49.402	-24.54	PASS
11N20SISO	LCH	-5.554	-49.823	-25.55	PASS
	HCH	-5.467	-50.066	-25.47	PASS
11N40SISO	LCH	-9.875	-49.838	-29.88	PASS
	HCH	-9.072	-49.010	-29.07	PASS

Test Graphs

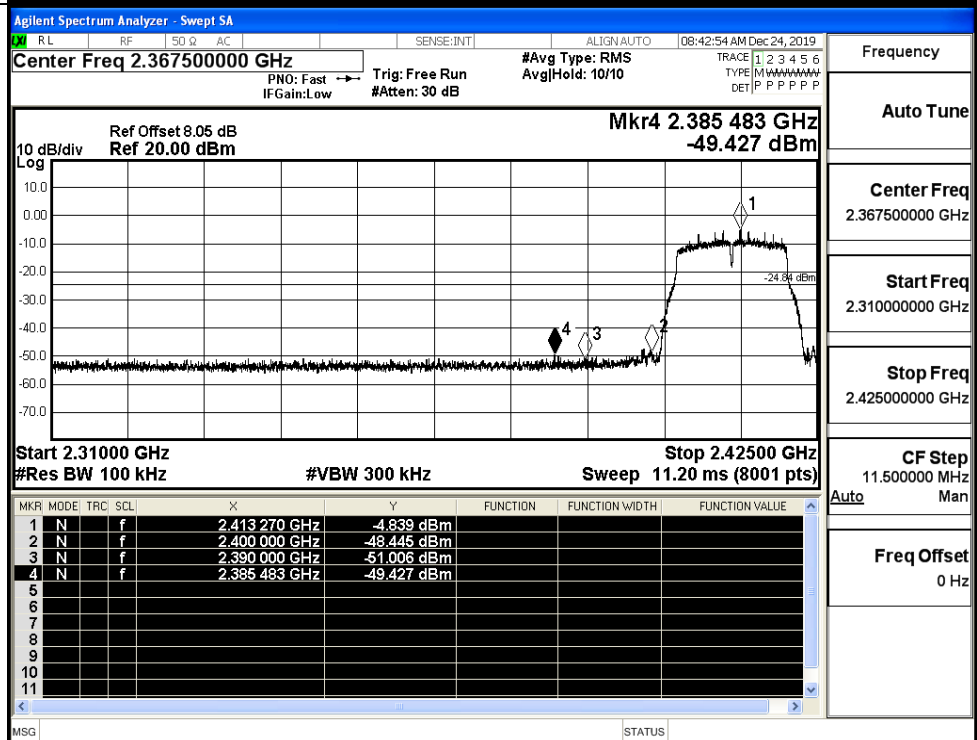
11B/LCH



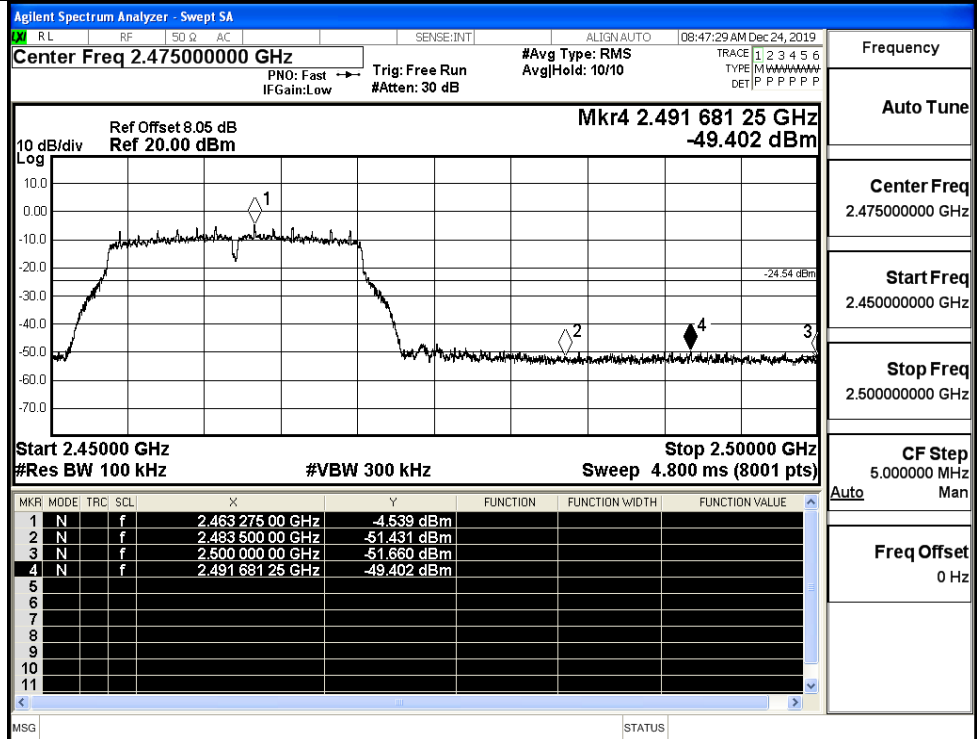
11B/HCH



11G/LCH



11G/HCH

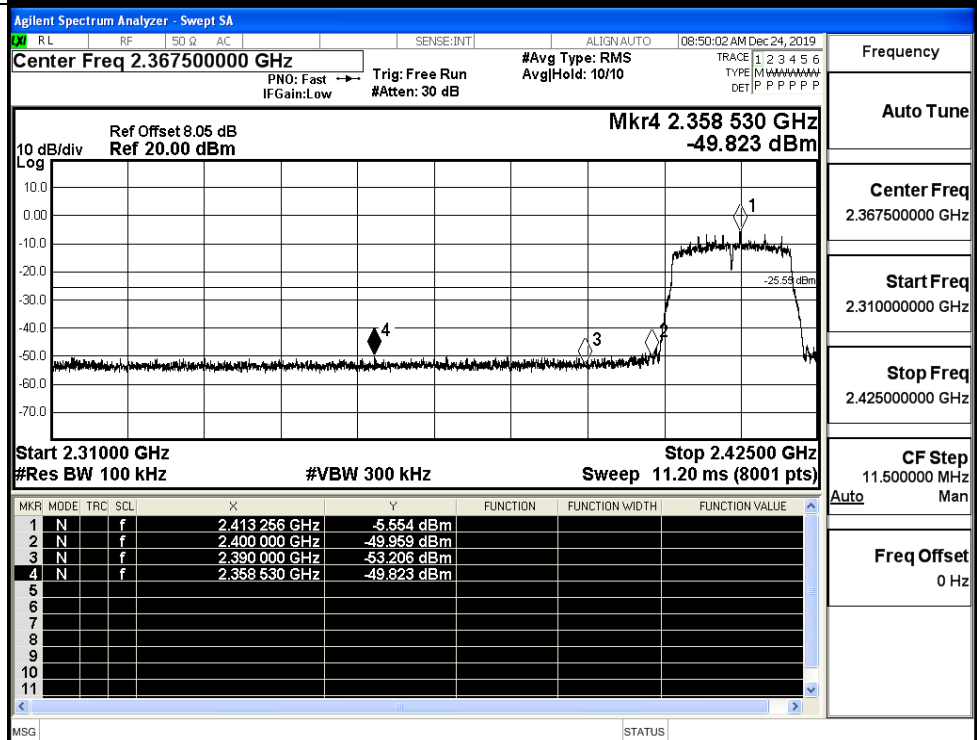


Frequency

Auto Tune

Center Freq
2.475000000 GHzStart Freq
2.450000000 GHzStop Freq
2.500000000 GHzCF Step
5.000000 MHz
Auto ManFreq Offset
0 Hz

11N20SISO/LCH

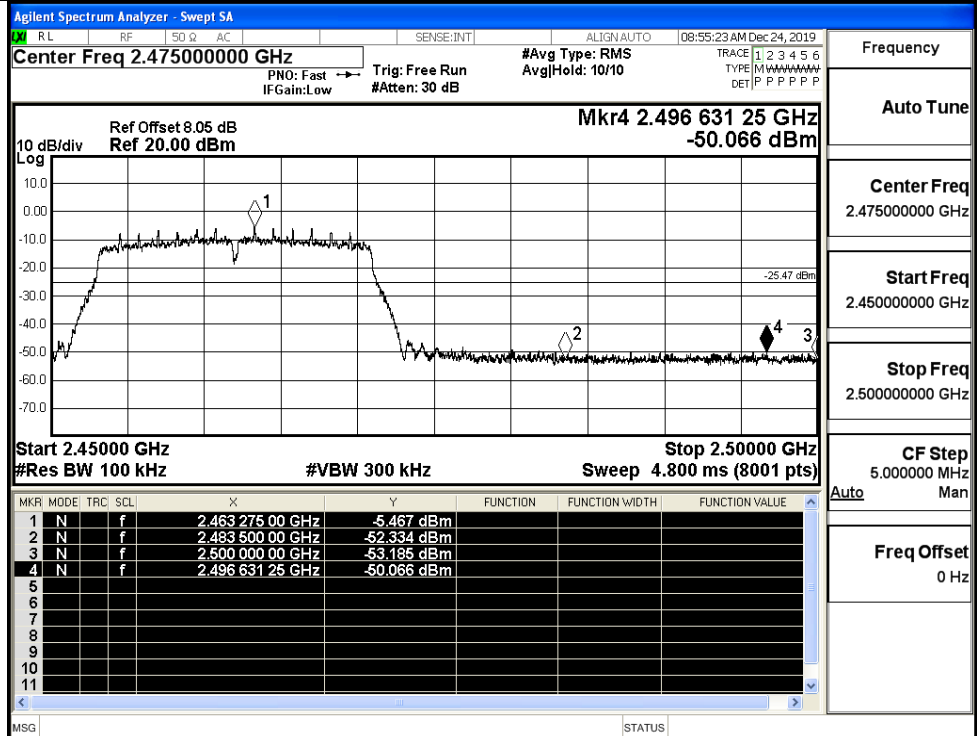


Frequency

Auto Tune

Center Freq
2.367500000 GHzStart Freq
2.310000000 GHzStop Freq
2.425000000 GHzCF Step
11.500000 MHz
Auto ManFreq Offset
0 Hz

11N20SISO/HCH



Frequency

Auto Tune

Center Freq

2.475000000 GHz

Start Freq

2.450000000 GHz

Stop Freq

2.500000000 GHz

CF Step

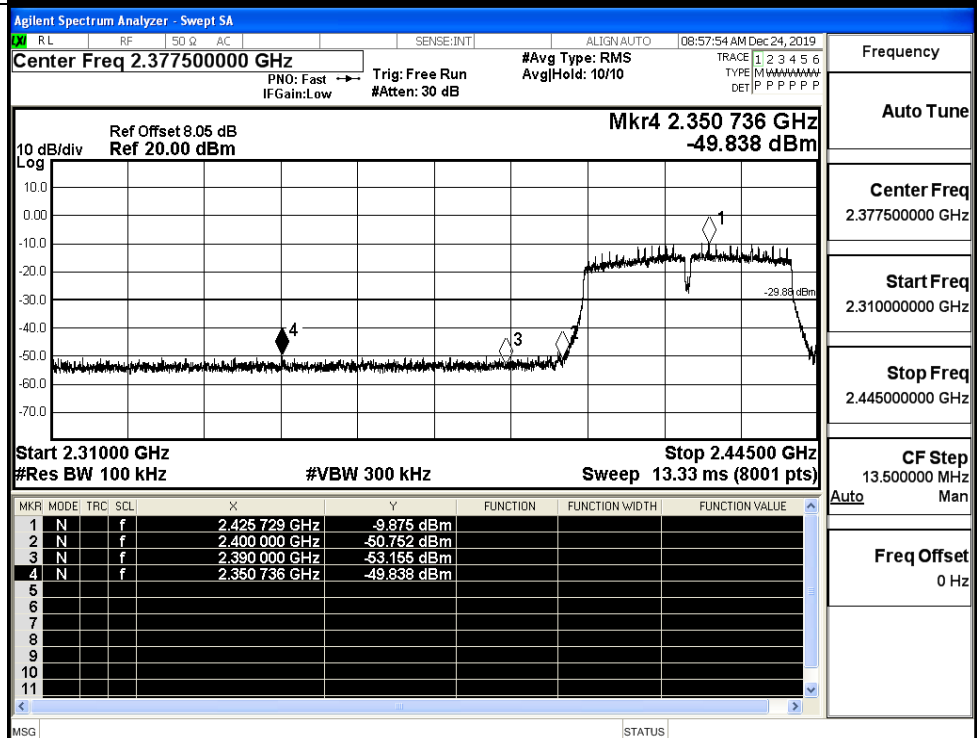
5.000000 MHz

Auto Man

Freq Offset

0 Hz

11N40SISO/LCH



Frequency

Auto Tune

Center Freq

2.377500000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.445000000 GHz

CF Step

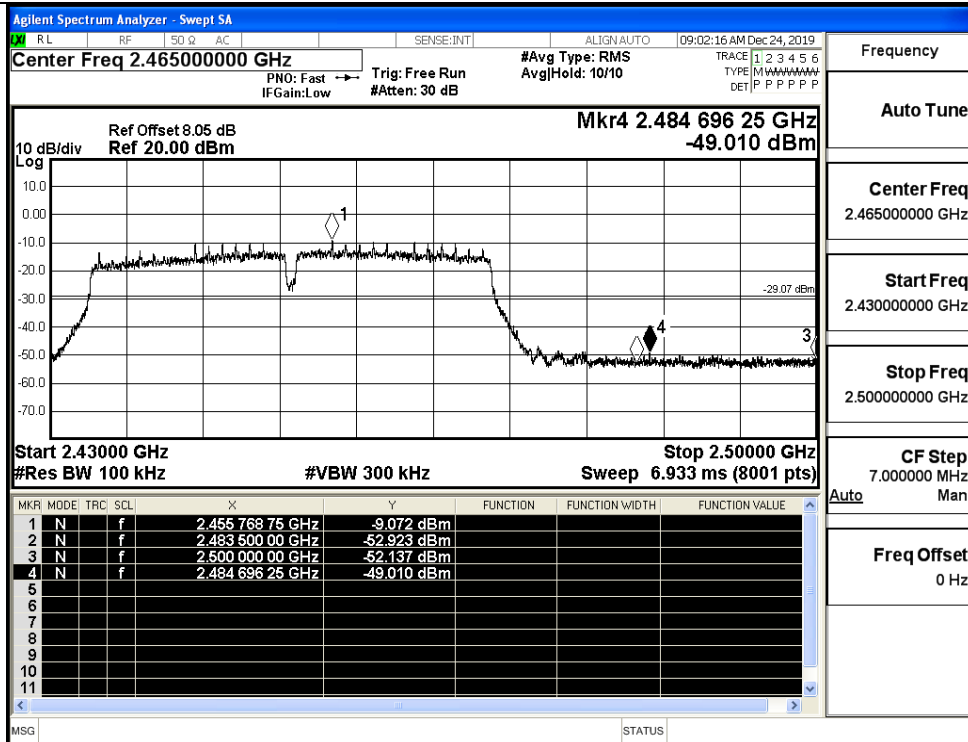
13.500000 MHz

Auto Man

Freq Offset

0 Hz

11N40SISO/HCH

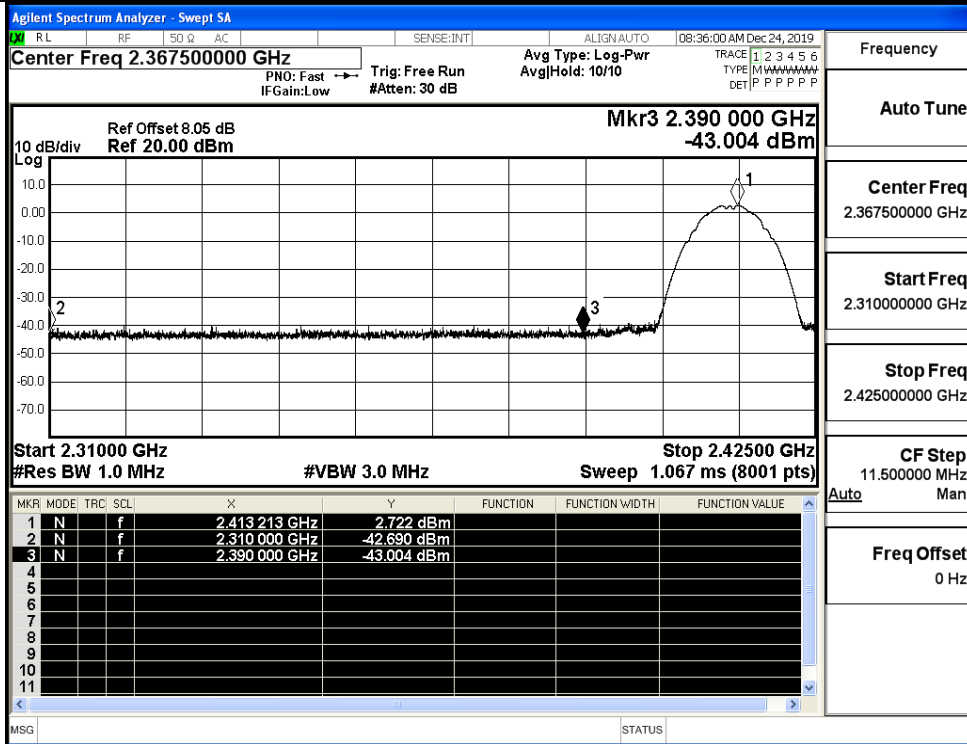


C.7 Restrict-band band-edge measurements

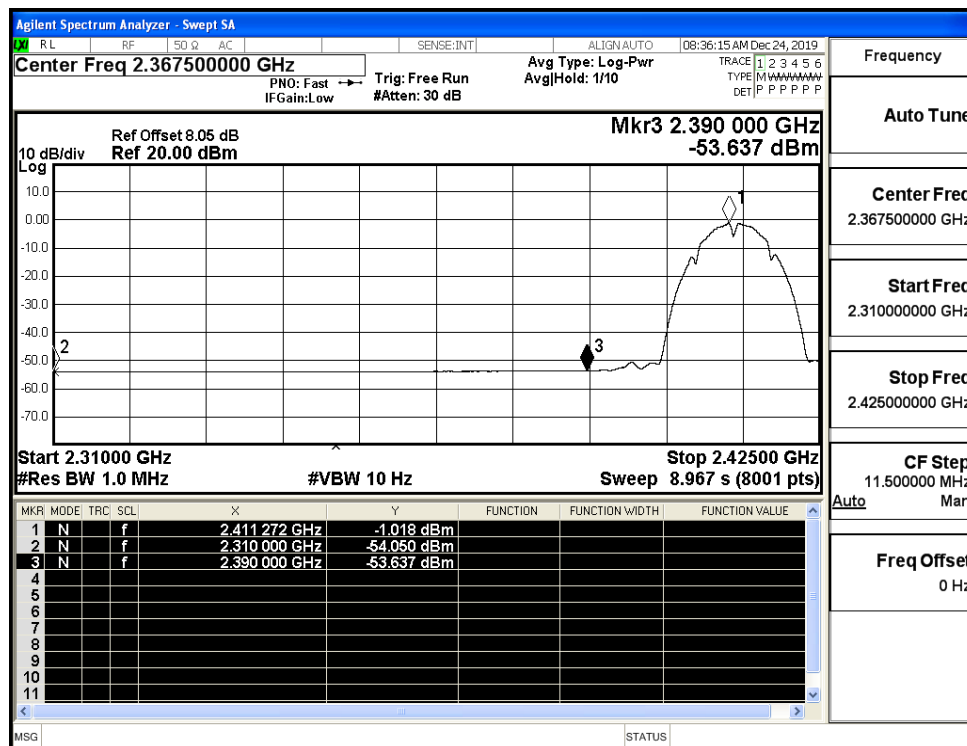
Test Mode	Test Channel	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	2310.0	-42.69	2.0	0	54.57	PEAK	74	PASS
	2412	2310.0	-54.05	2.0	0	43.21	AV	54	PASS
	2412	2390.0	-43.00	2.0	0	54.25	PEAK	74	PASS
	2412	2390.0	-53.64	2.0	0	43.62	AV	54	PASS
	2462	2483.5	-40.69	2.0	0	56.57	PEAK	74	PASS
	2462	2483.5	-53.26	2.0	0	43.99	AV	54	PASS
	2462	2500.0	-41.61	2.0	0	55.64	PEAK	74	PASS
	2462	2500.0	-53.06	2.0	0	44.20	AV	54	PASS
11G	2412	2310.0	-43.46	2.0	0	53.80	PEAK	74	PASS
	2412	2310.0	-53.94	2.0	0	43.32	AV	54	PASS
	2412	2390.0	-43.07	2.0	0	54.19	PEAK	74	PASS
	2412	2390.0	-53.31	2.0	0	43.95	AV	54	PASS
	2462	2483.5	-41.83	2.0	0	55.43	PEAK	74	PASS
	2462	2483.5	-52.94	2.0	0	44.31	AV	54	PASS
	2462	2500.0	-42.11	2.0	0	55.15	PEAK	74	PASS
	2462	2500.0	-52.91	2.0	0	44.35	AV	54	PASS
11N20 SISO	2412	2310.0	-43.61	2.0	0	53.65	PEAK	74	PASS
	2412	2310.0	-53.74	2.0	0	43.52	AV	54	PASS
	2412	2390.0	-42.73	2.0	0	54.52	PEAK	74	PASS
	2412	2390.0	-53.21	2.0	0	44.05	AV	54	PASS
	2462	2483.5	-41.24	2.0	0	56.02	PEAK	74	PASS
	2462	2483.5	-52.74	2.0	0	44.52	AV	54	PASS
	2462	2500.0	-41.92	2.0	0	55.34	PEAK	74	PASS
	2462	2500.0	-52.67	2.0	0	44.59	AV	54	PASS
11N40 SISO	2422	2310.0	-42.56	2.0	0	54.70	PEAK	74	PASS
	2422	2310.0	-53.70	2.0	0	43.56	AV	54	PASS
	2422	2390.0	-43.37	2.0	0	53.89	PEAK	74	PASS
	2422	2390.0	-53.12	2.0	0	44.14	AV	54	PASS

	2452	2483.5	-42.35	2.0	0	54.91	PEAK	74	PASS
	2452	2483.5	-52.56	2.0	0	44.70	AV	54	PASS
	2452	2500.0	-41.09	2.0	0	56.17	PEAK	74	PASS
	2452	2500.0	-52.59	2.0	0	44.67	AV	54	PASS

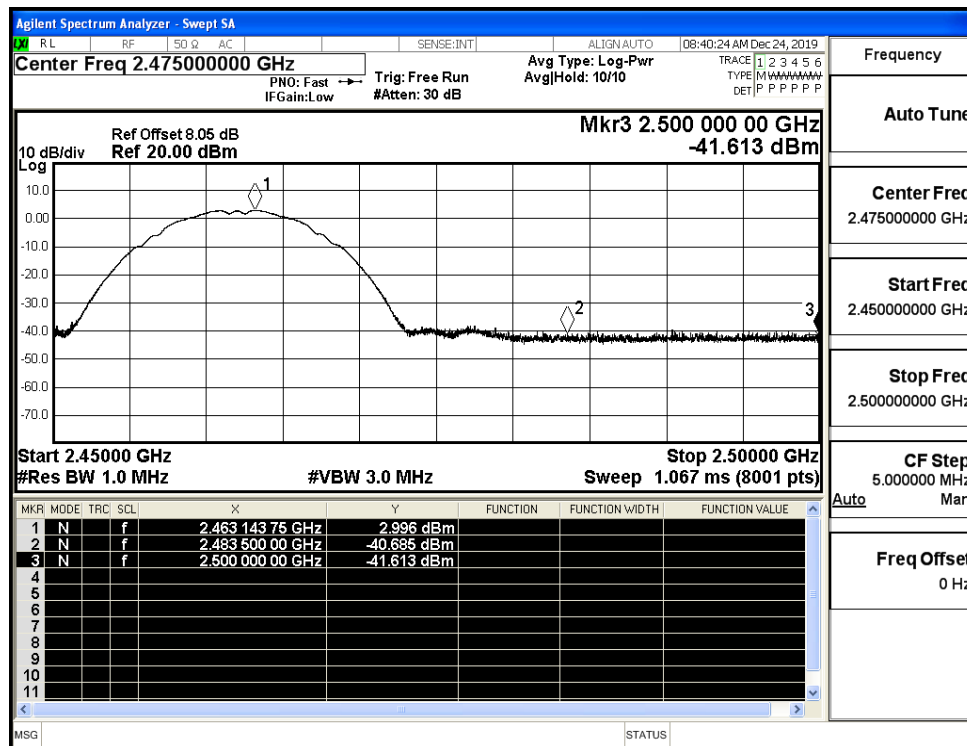
Restrict-band band-edge measurements_11B_2412 _PEAK



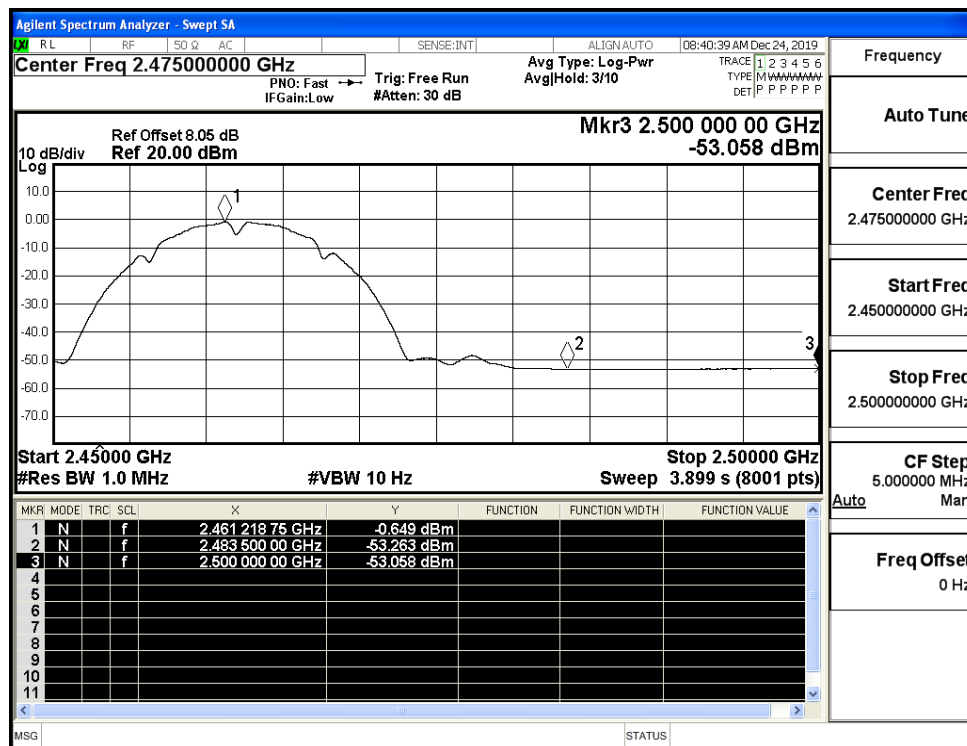
Restrict-band band-edge measurements_11B_2412 _AV



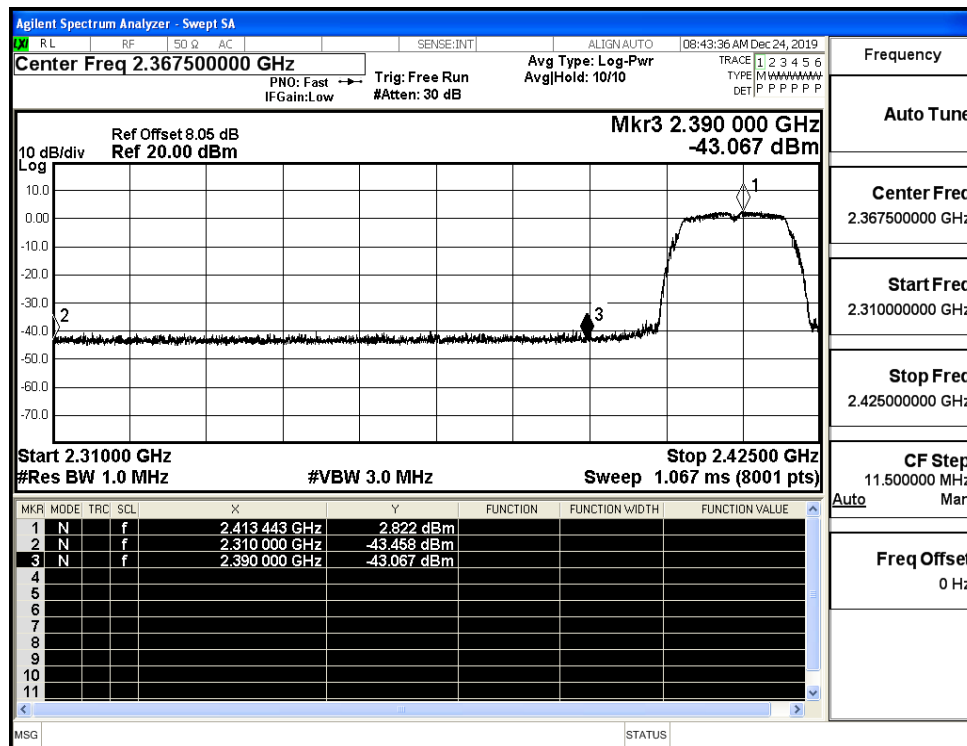
Restrict-band band-edge measurements_11B_2462 _PEAK



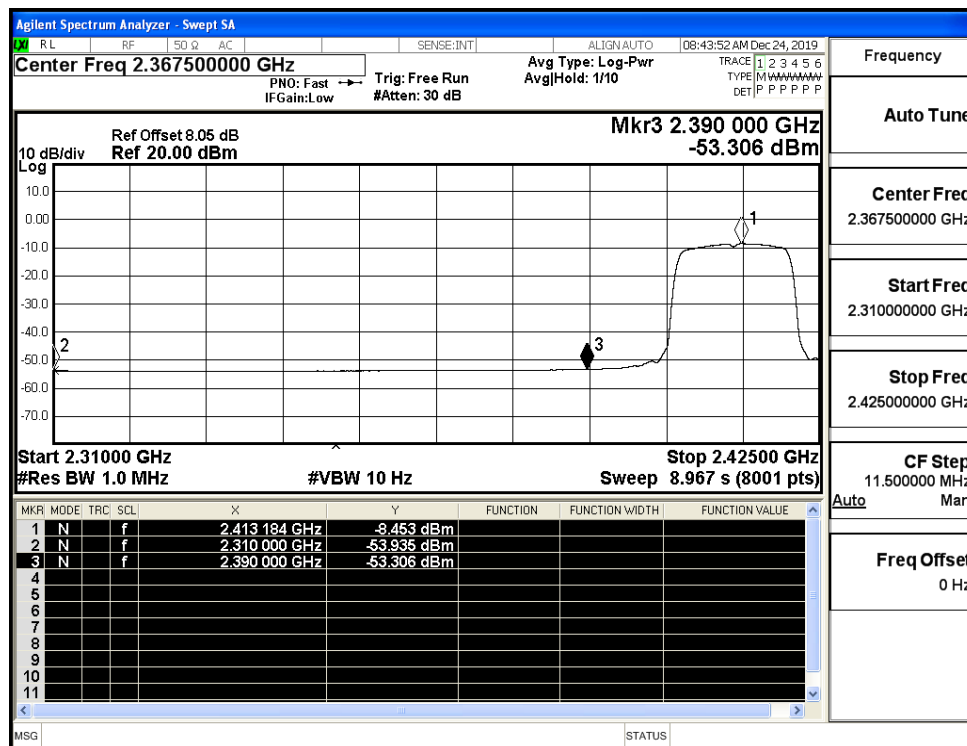
Restrict-band band-edge measurements_11B_2462 _AV



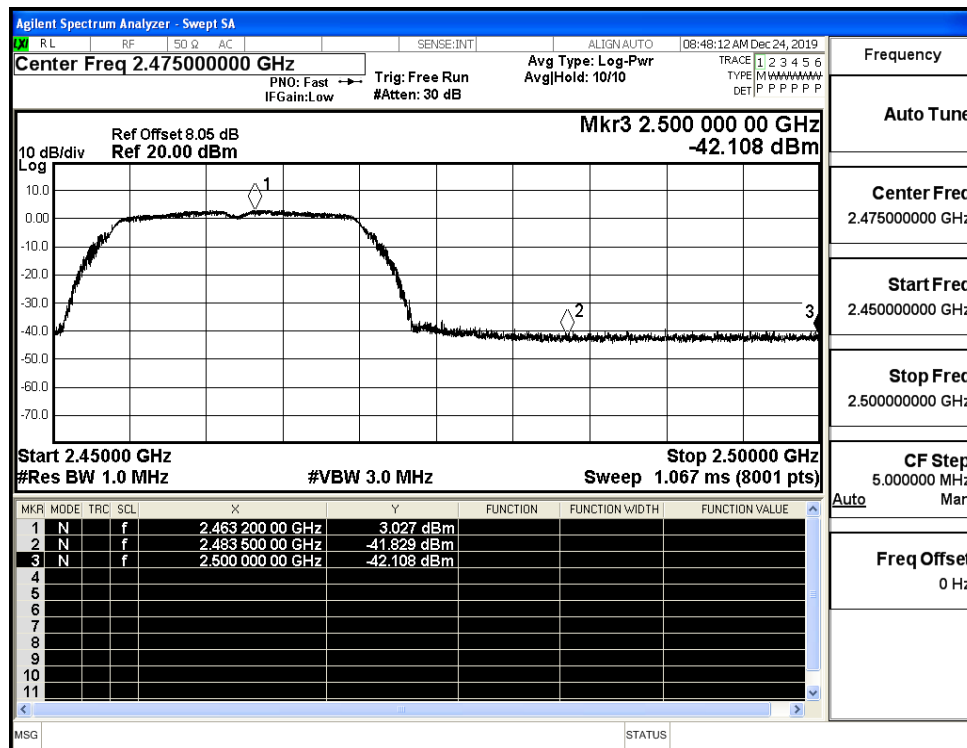
Restrict-band band-edge measurements_11G_2412_PEAK



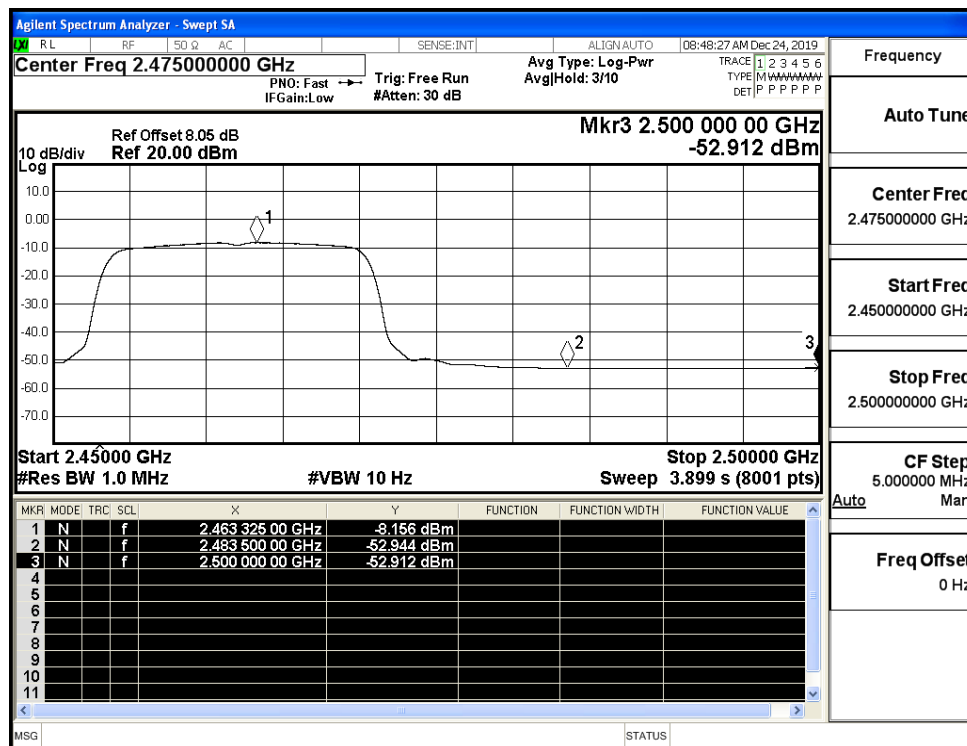
Restrict-band band-edge measurements_11G_2412_AV



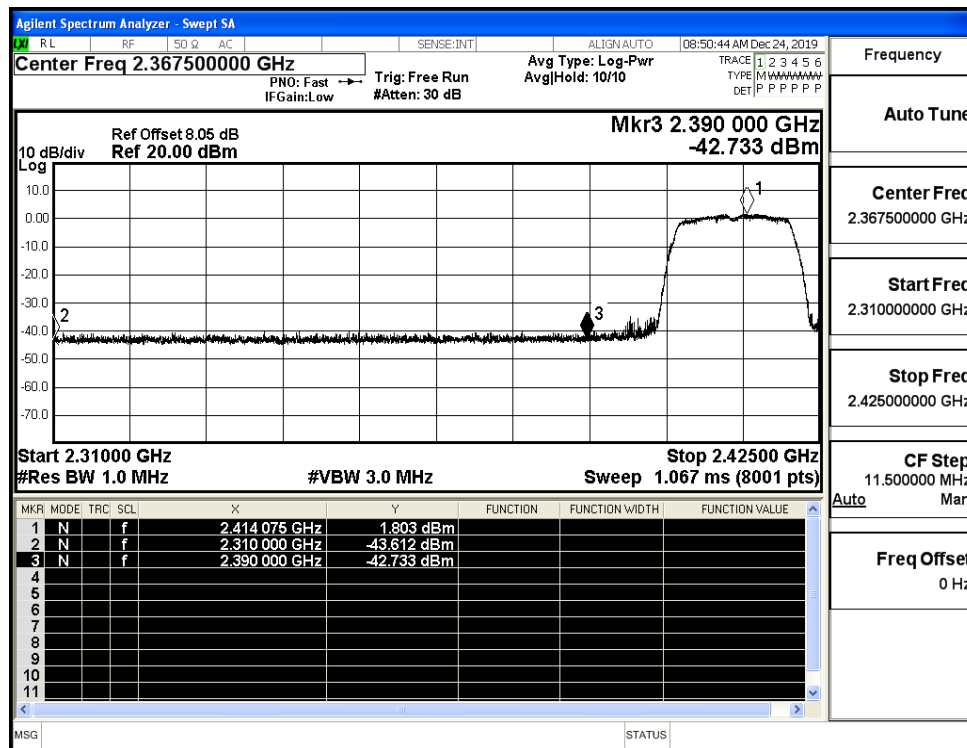
Restrict-band band-edge measurements_11G_2462 _PEAK



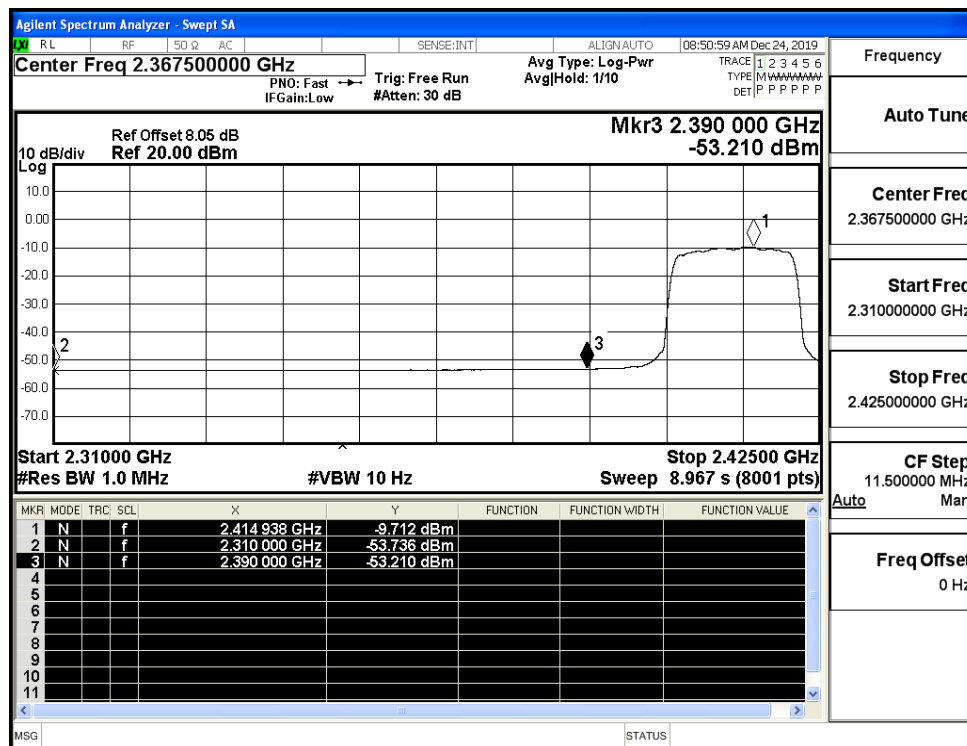
Restrict-band band-edge measurements_11G_2462 _AV



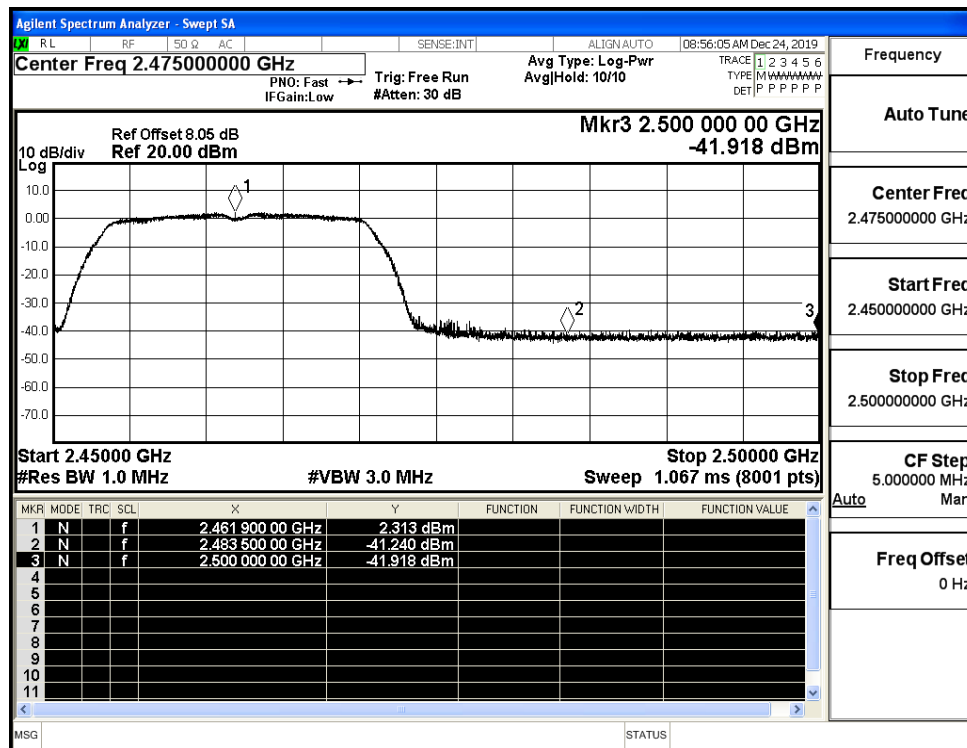
Restrict-band band-edge measurements_11N20SISO_2412 _PEAK



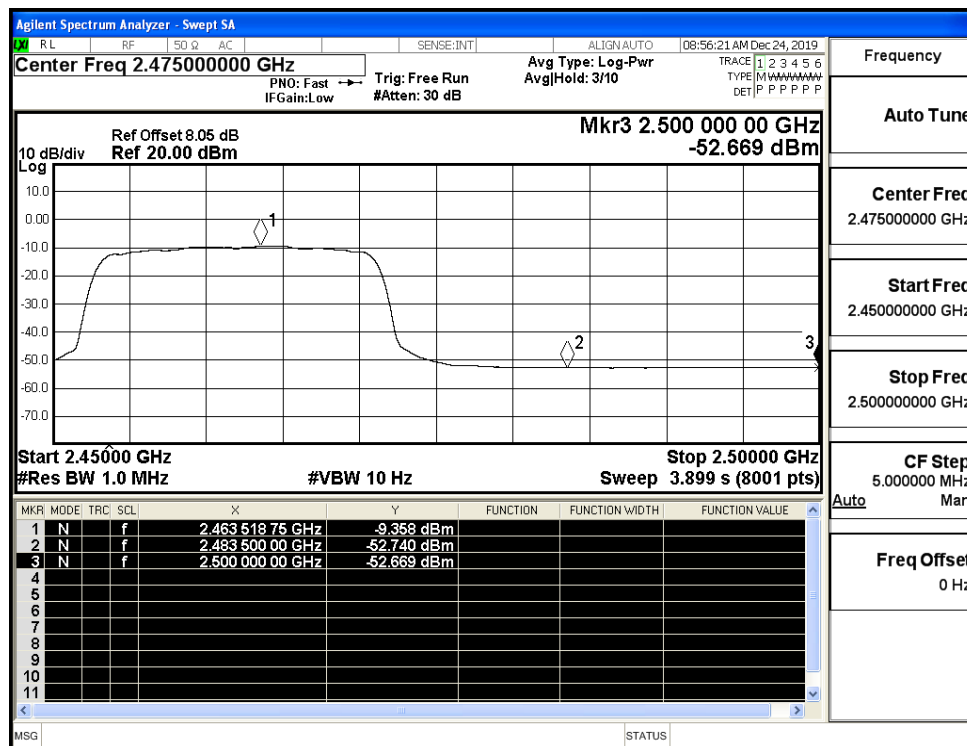
Restrict-band band-edge measurements_11N20SISO_2412 _AV



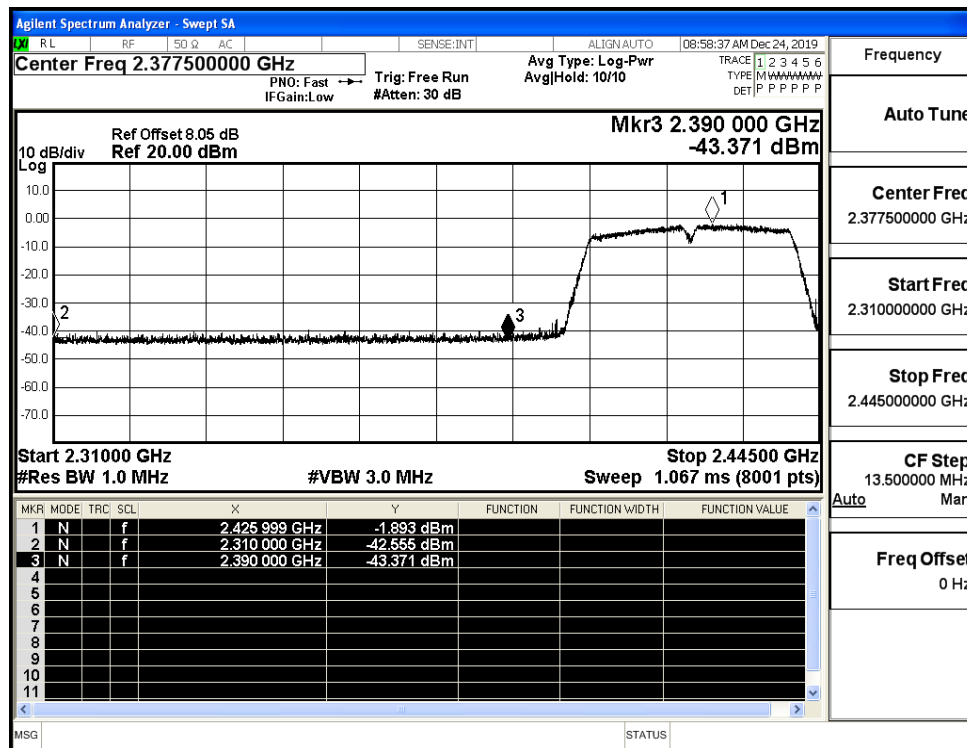
Restrict-band band-edge measurements_11N20SISO_2462 _PEAK



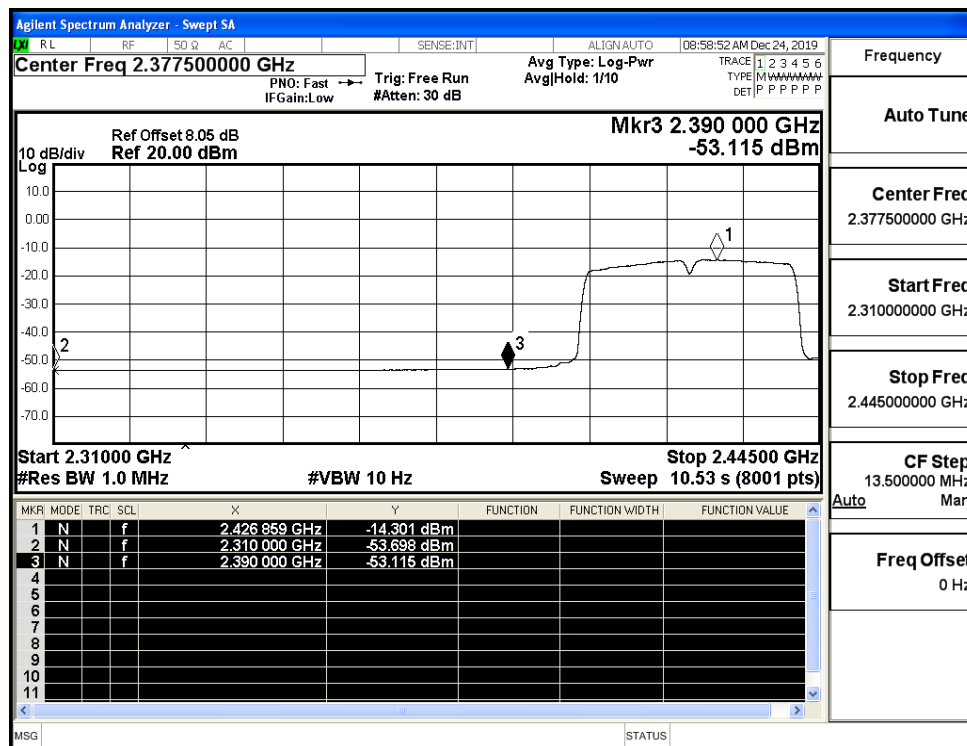
Restrict-band band-edge measurements_11N20SISO_2462 _AV



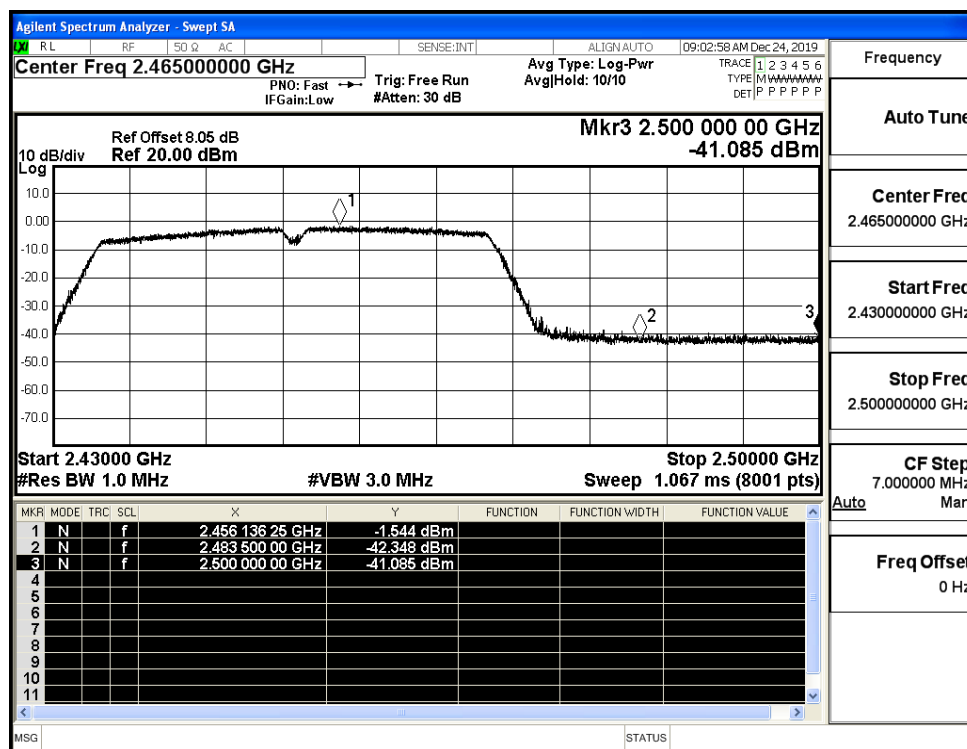
Restrict-band band-edge measurements_11N40SISO_2422 _PEAK



Restrict-band band-edge measurements_11N40SISO_2422 _AV



Restrict-band band-edge measurements_11N40SISO_2452 _PEAK



Restrict-band band-edge measurements_11N40SISO_2452 _AV

