

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smartphone

Trade Mark: Hyundai

Test Model: Eternity G50W

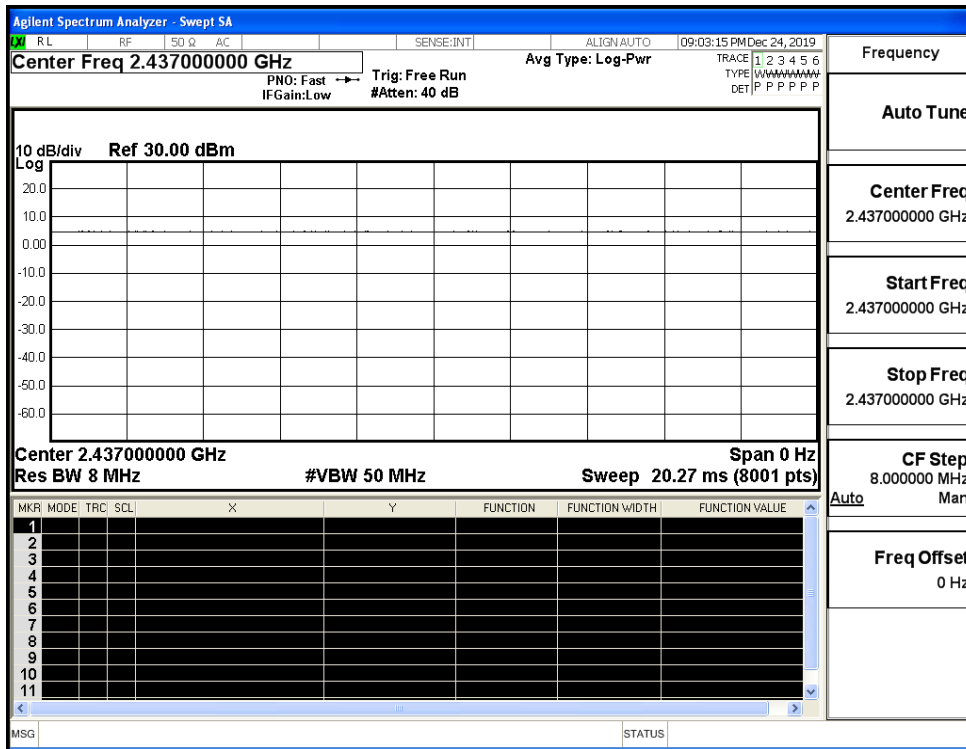
Environmental Conditions

Temperature:	24.3°C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

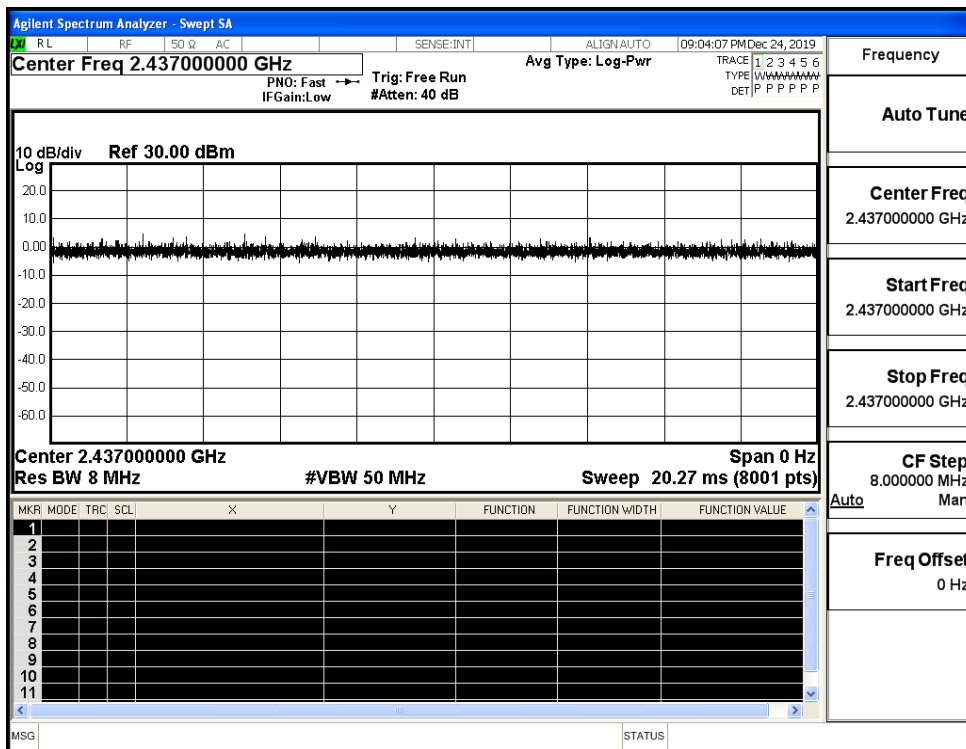
C.1 Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	100	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS
11N40SISO	2437	Ant1	100	PASS

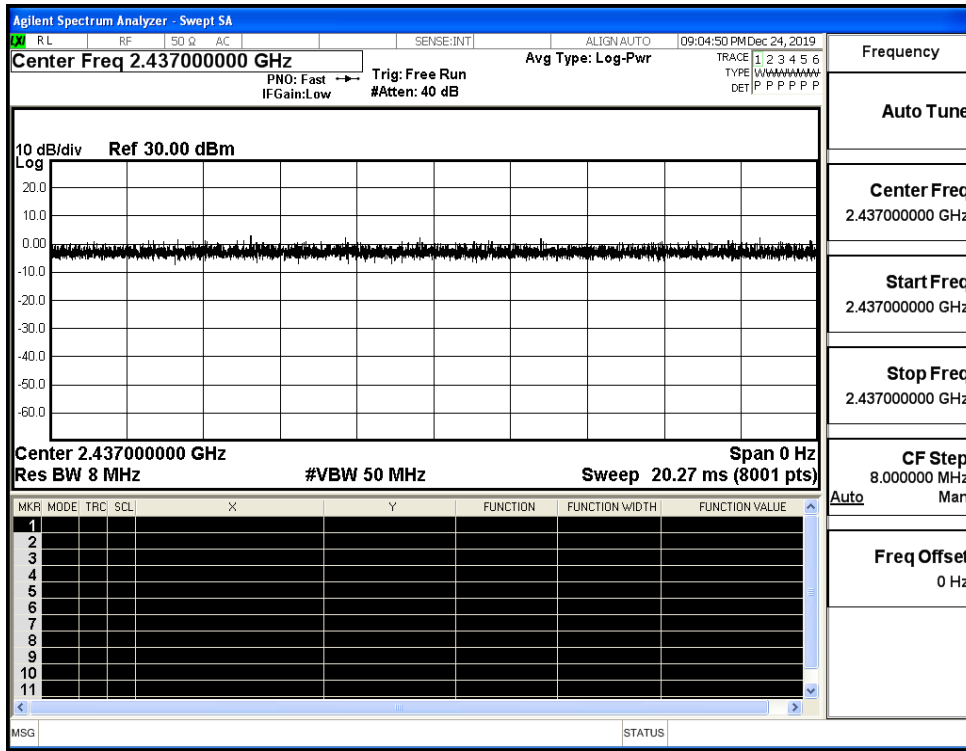
Duty Cycle_11B_2437_Ant1



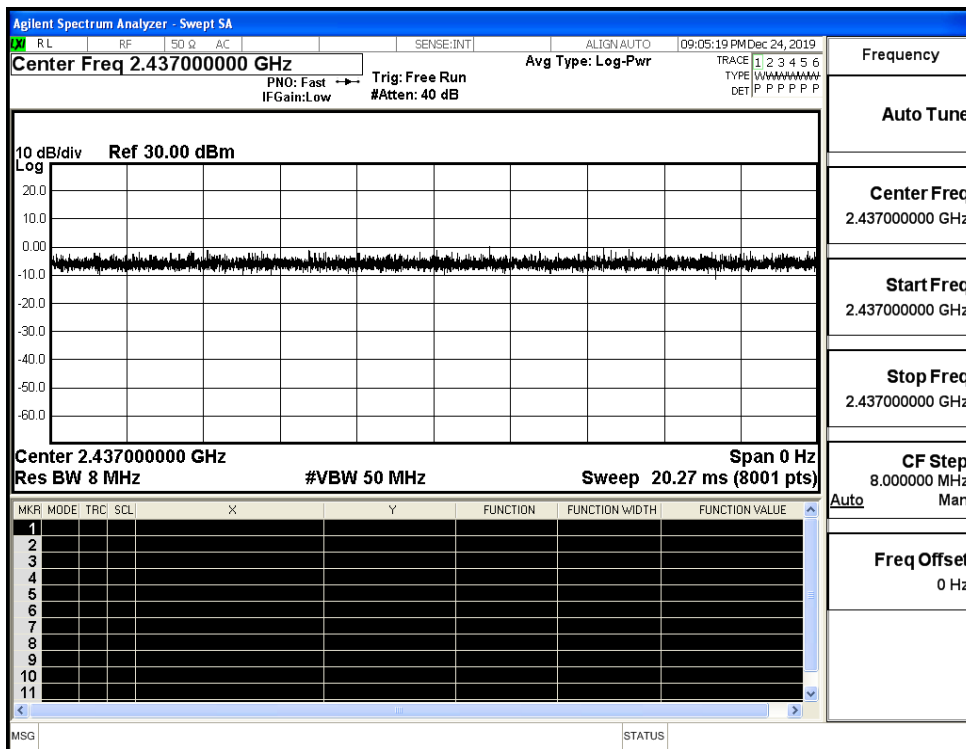
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1



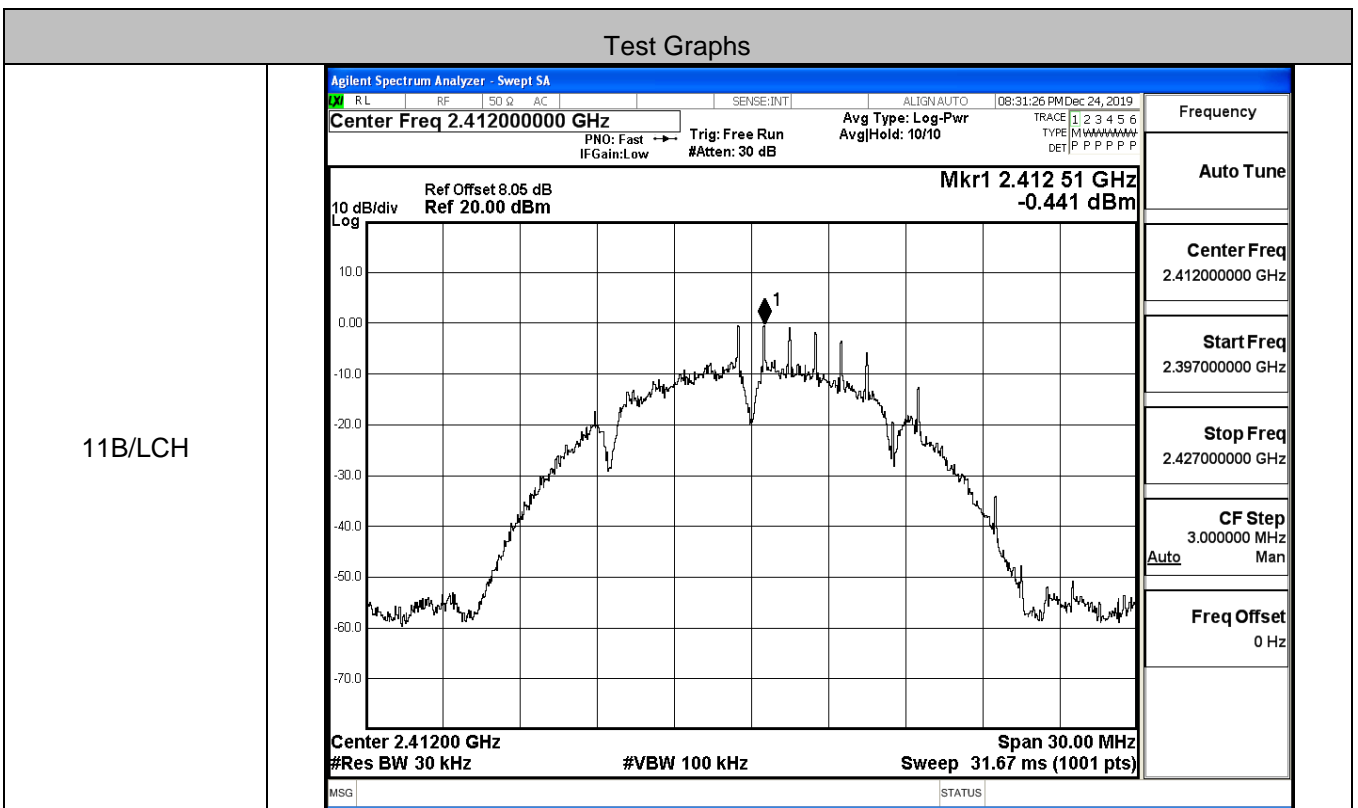
C.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	10.29	30	PASS
	MCH	10.03	30	PASS
	HCH	10.55	30	PASS
11G	LCH	11.27	30	PASS
	MCH	11.33	30	PASS
	HCH	11.66	30	PASS
11N20SISO	LCH	11.27	30	PASS
	MCH	11.33	30	PASS
	HCH	11.67	30	PASS
11N40SISO	LCH	11.5	30	PASS
	MCH	11.58	30	PASS
	HCH	11.74	30	PASS

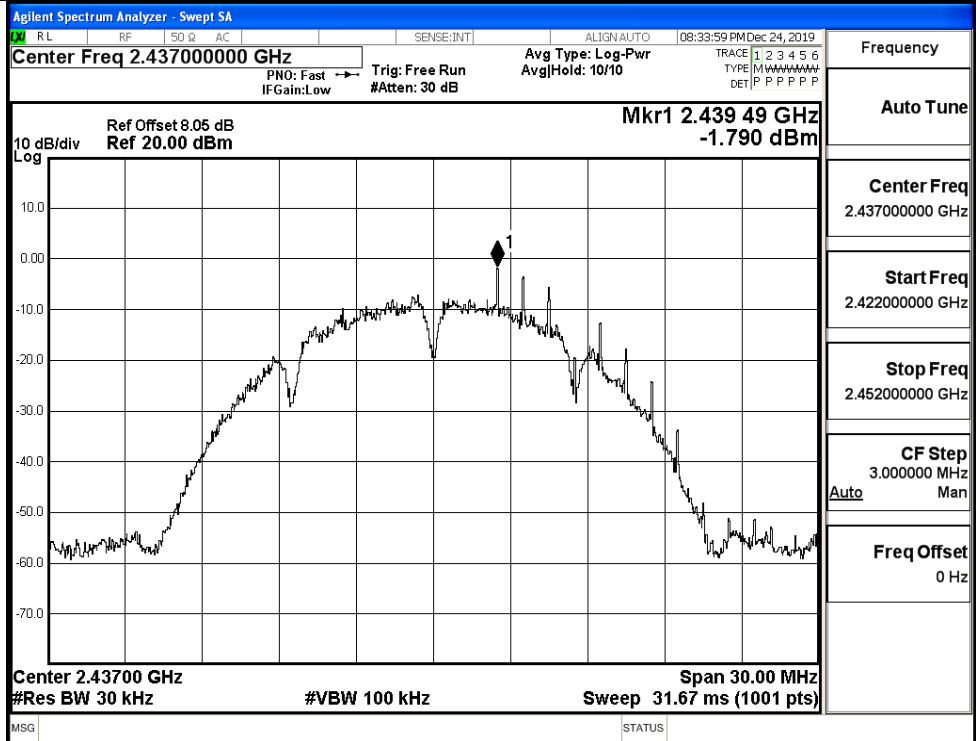
C.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-0.441	-10.441	8	PASS
	MCH	-1.790	-11.790	8	PASS
	HCH	-1.657	-11.657	8	PASS
11G	LCH	-12.349	-22.349	8	PASS
	MCH	-12.819	-22.819	8	PASS
	HCH	-11.607	-21.607	8	PASS
11N20SISO	LCH	-11.465	-21.465	8	PASS
	MCH	-12.199	-22.199	8	PASS
	HCH	-11.772	-21.772	8	PASS
11N40SISO	LCH	-15.669	-25.669	8	PASS
	MCH	-15.163	-25.163	8	PASS
	HCH	-14.970	-24.970	8	PASS

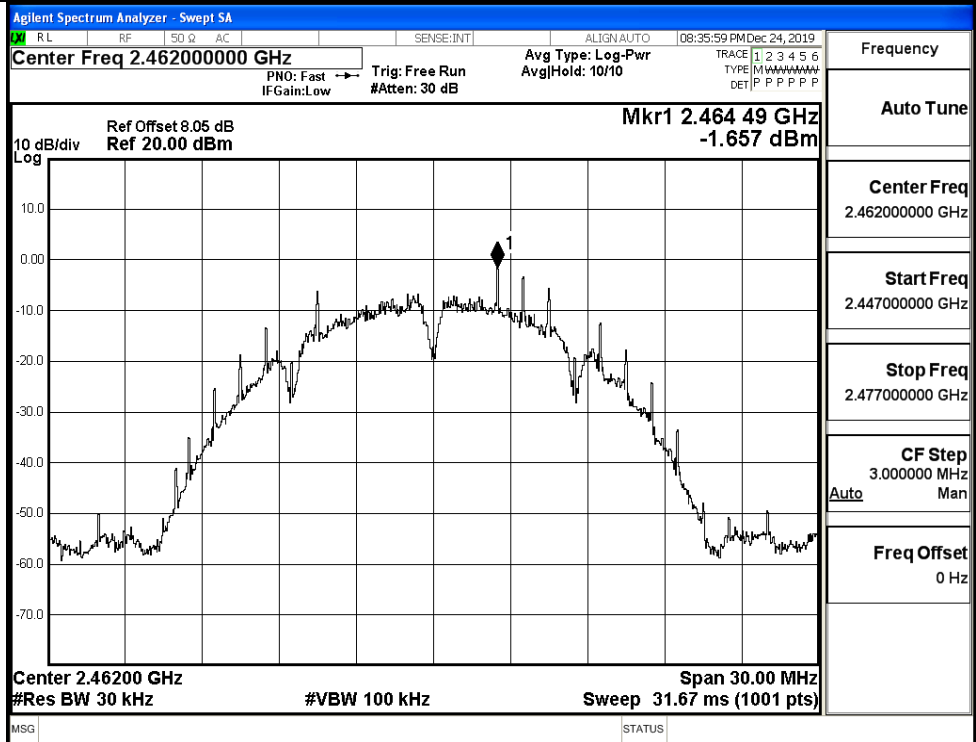
***Note: The Convert Factor = $10 \cdot \log(3\text{KHz}/30\text{KHz}) = -10$



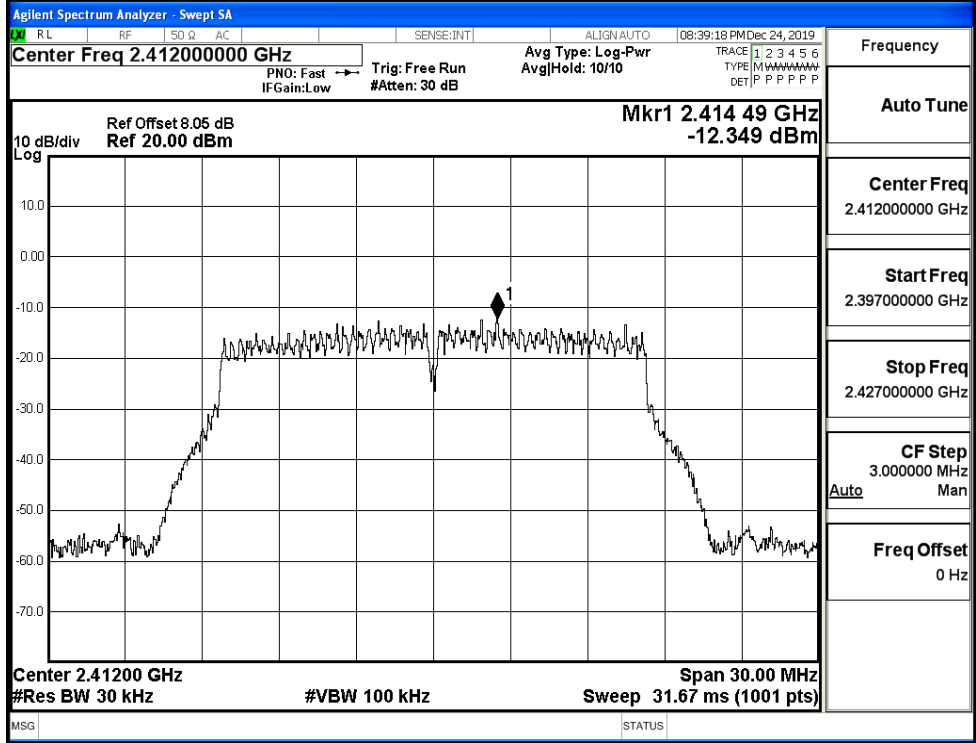
11B/MCH



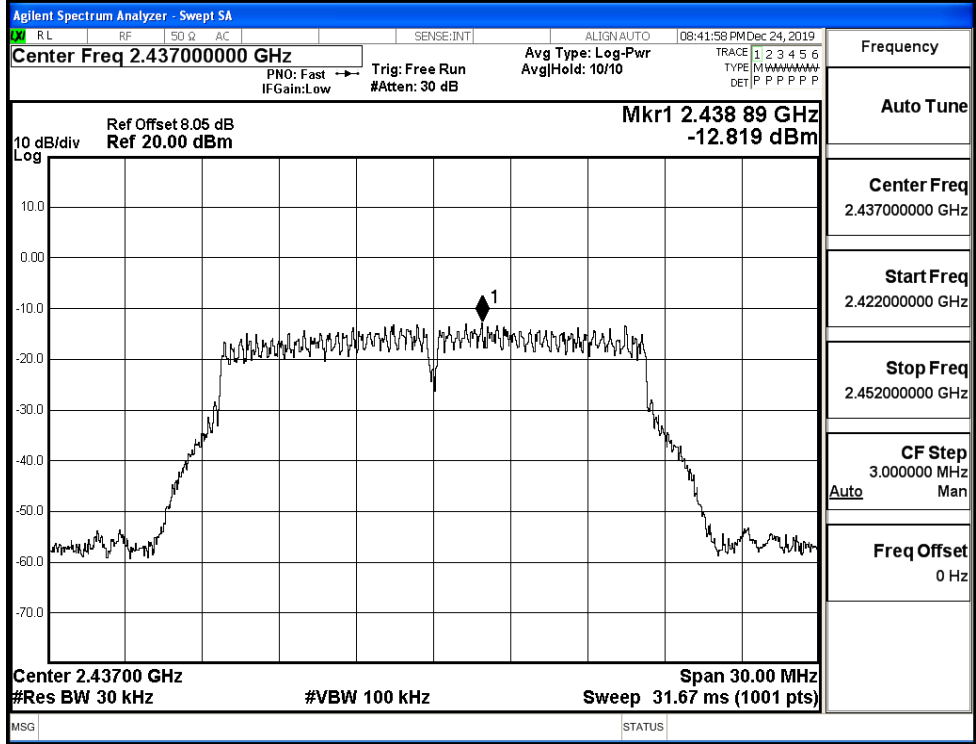
11B/HCH



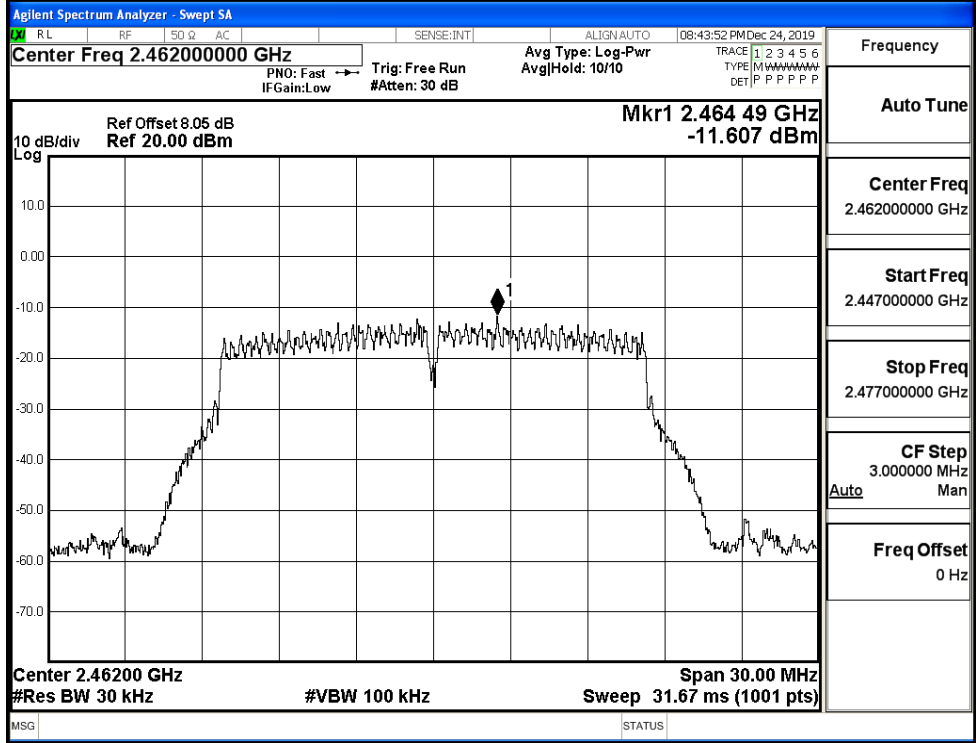
11G/LCH



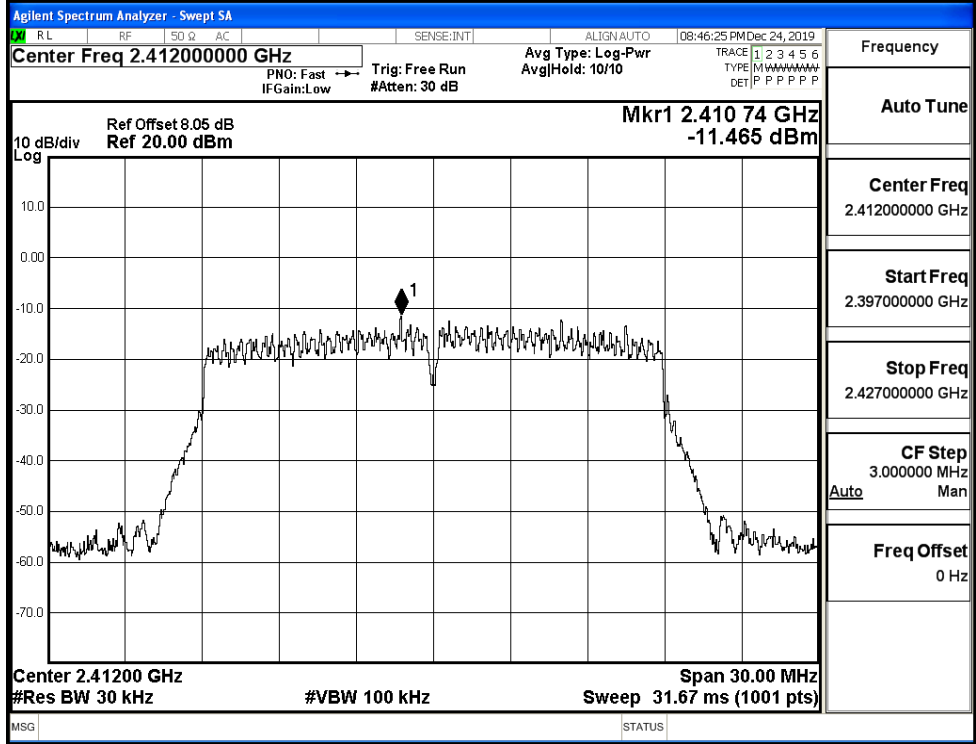
11G/MCH



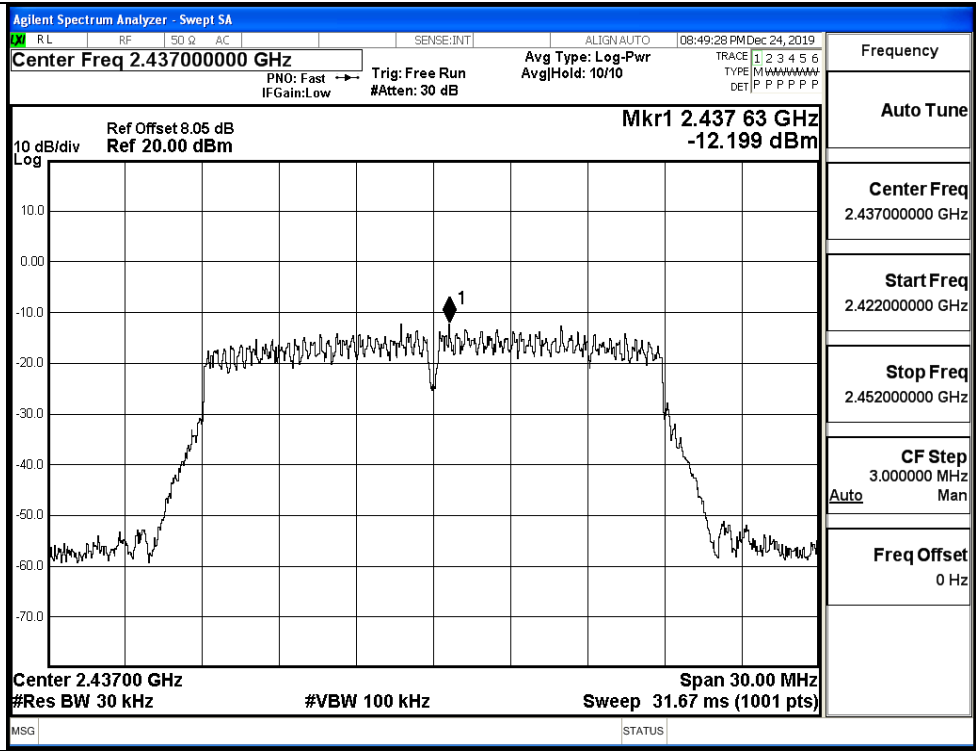
11G/HCH



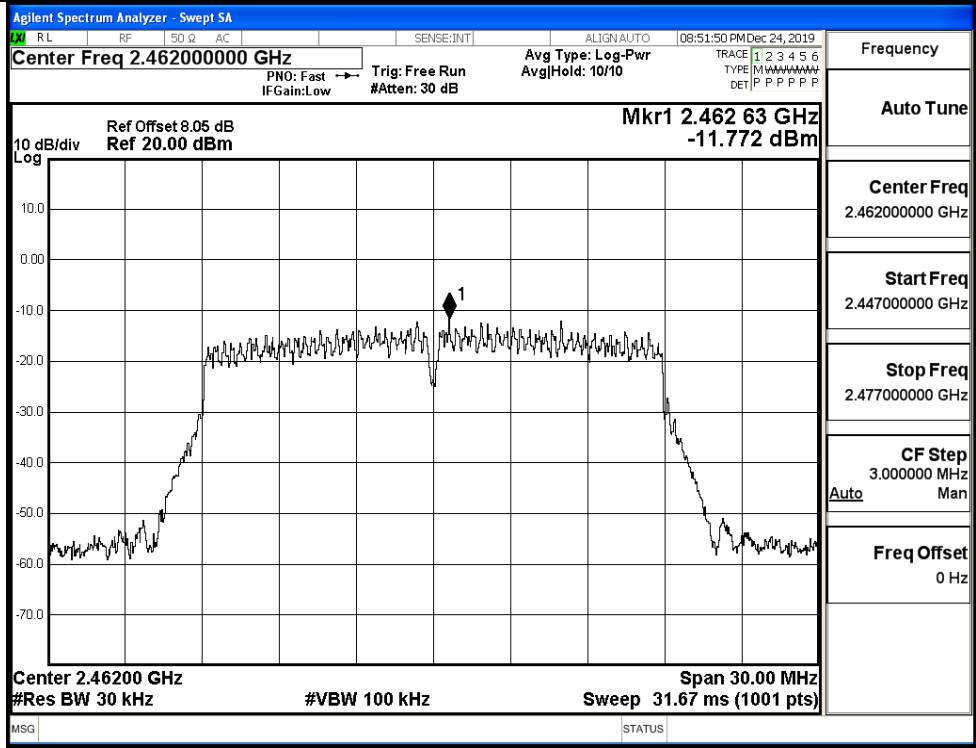
11N20SISO/LCH



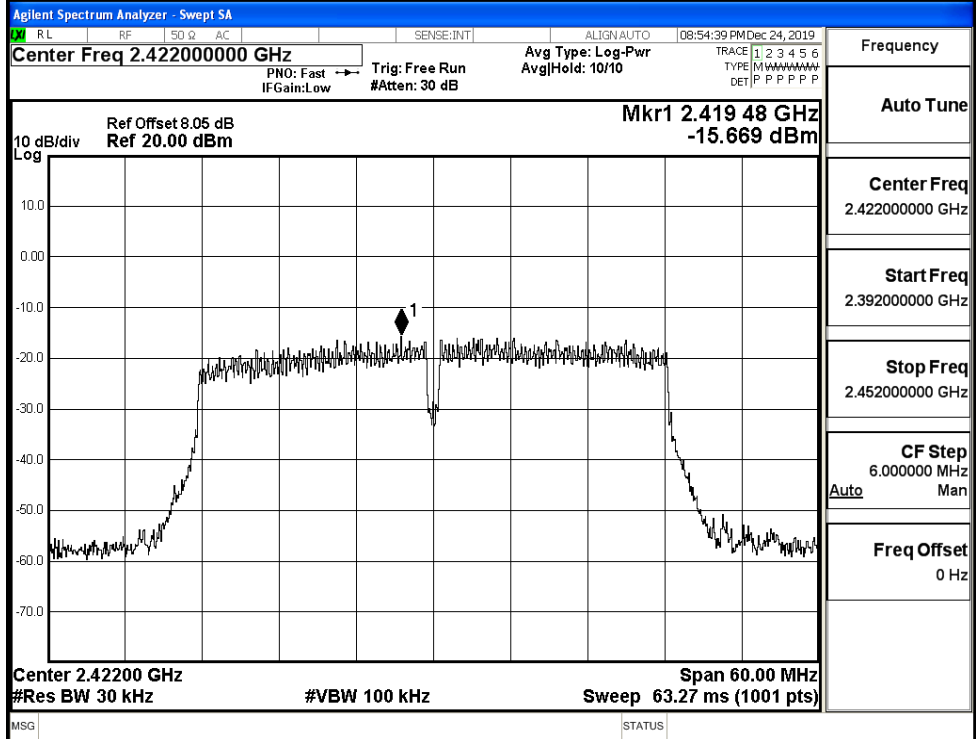
11N20SISO/MCH



11N20SISO/HCH

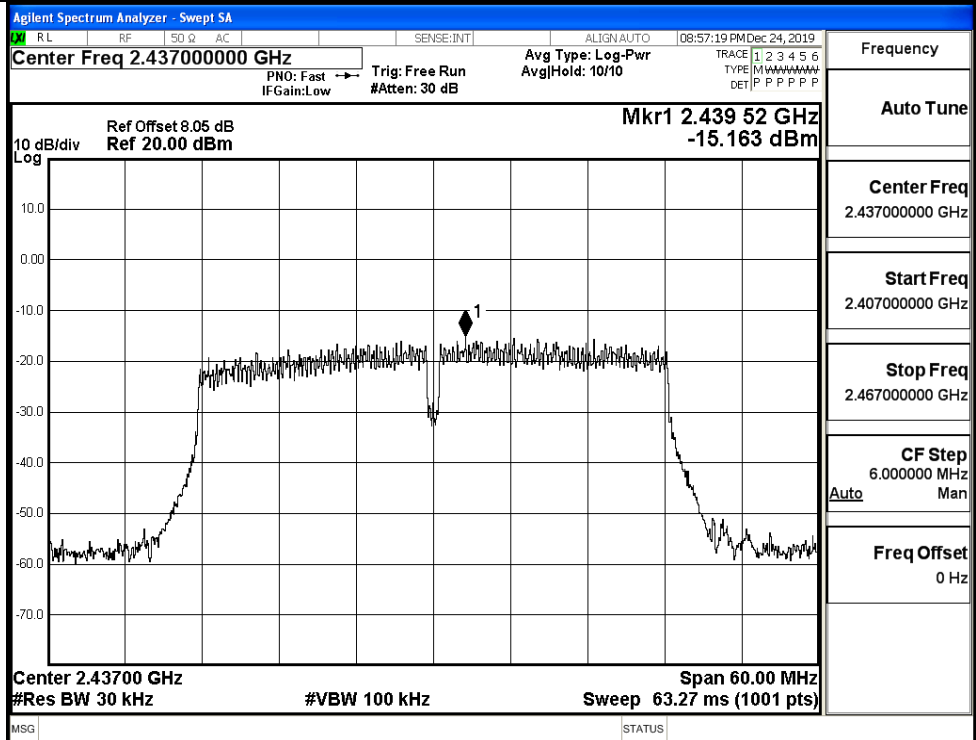


11N40SISO/LCH

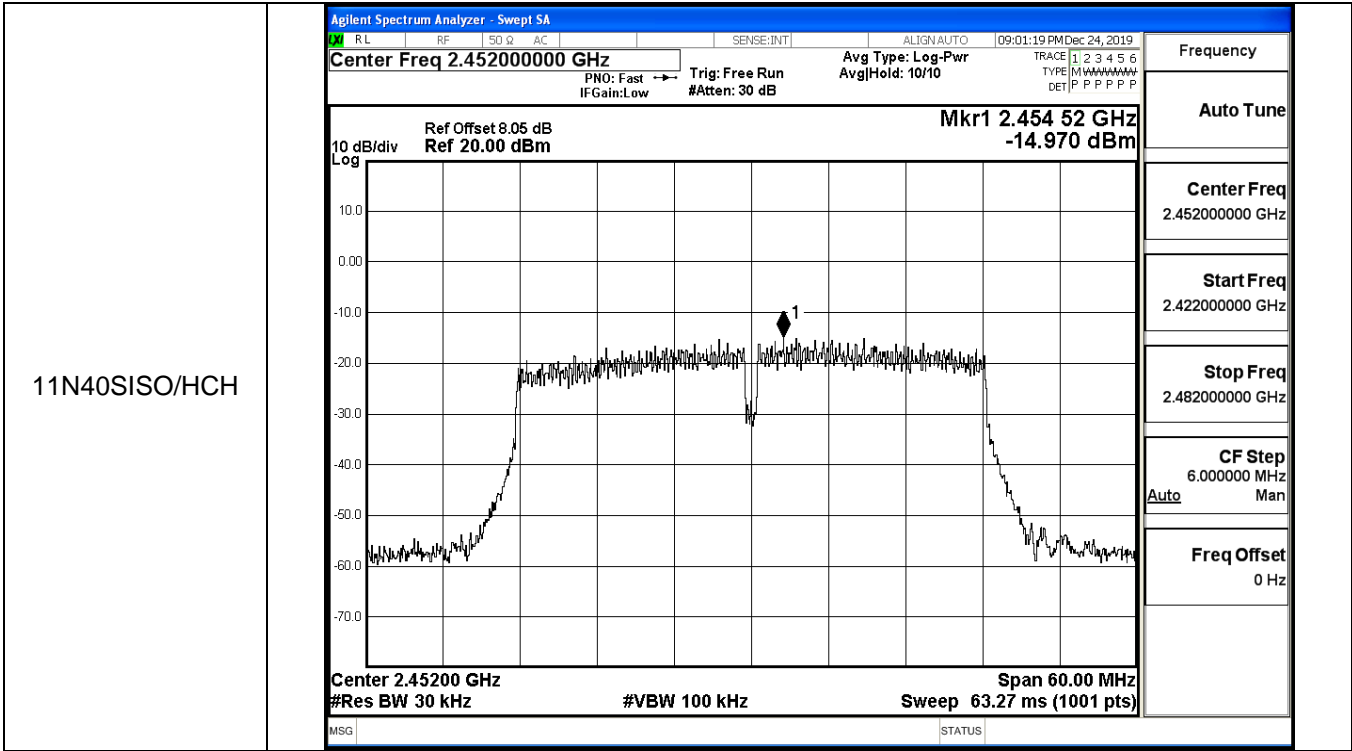


Frequency	2.422000000 GHz
Auto Tune	
Center Freq	2.422000000 GHz
Start Freq	2.392000000 GHz
Stop Freq	2.452000000 GHz
CF Step	6.000000 MHz Auto Man
Freq Offset	0 Hz

11N40SISO/MCH

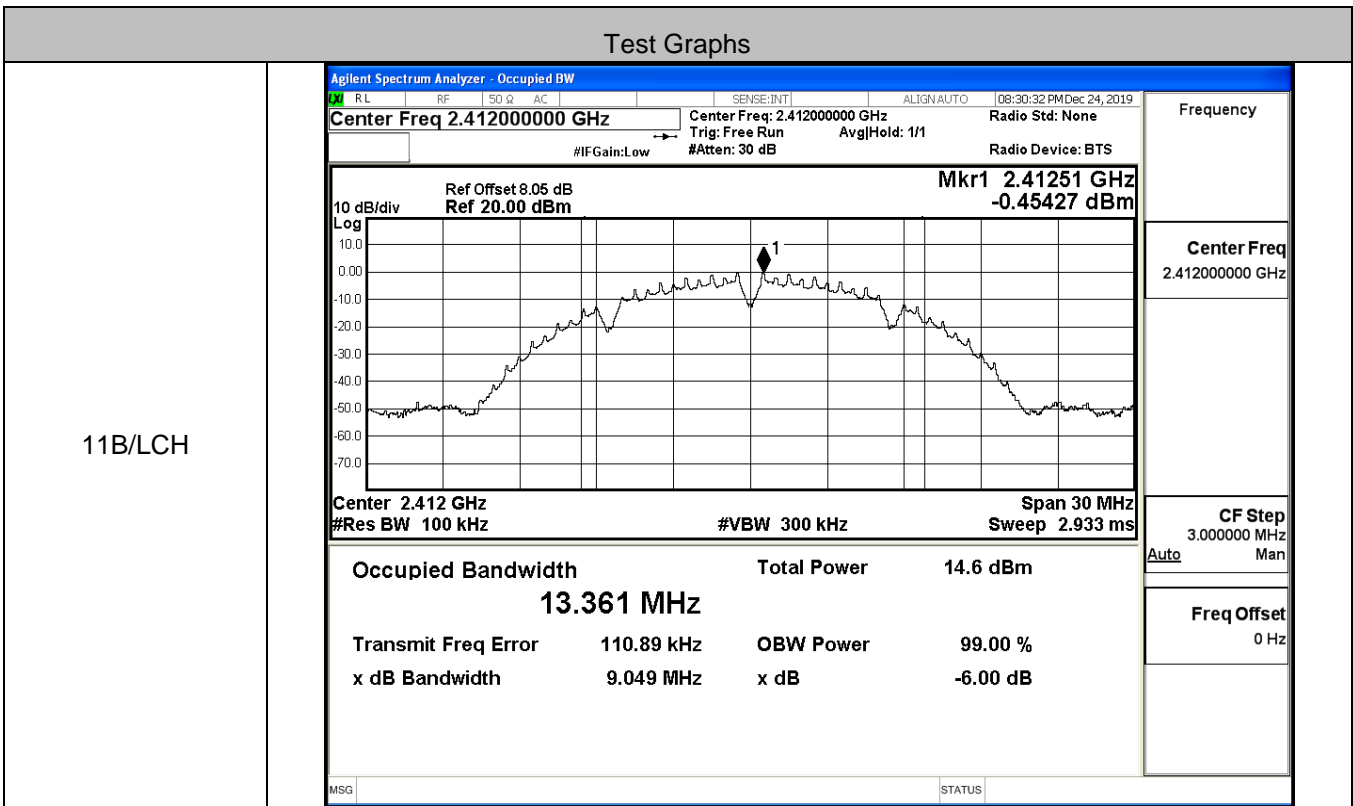


Frequency	2.437000000 GHz
Auto Tune	
Center Freq	2.437000000 GHz
Start Freq	2.407000000 GHz
Stop Freq	2.467000000 GHz
CF Step	6.000000 MHz Auto Man
Freq Offset	0 Hz

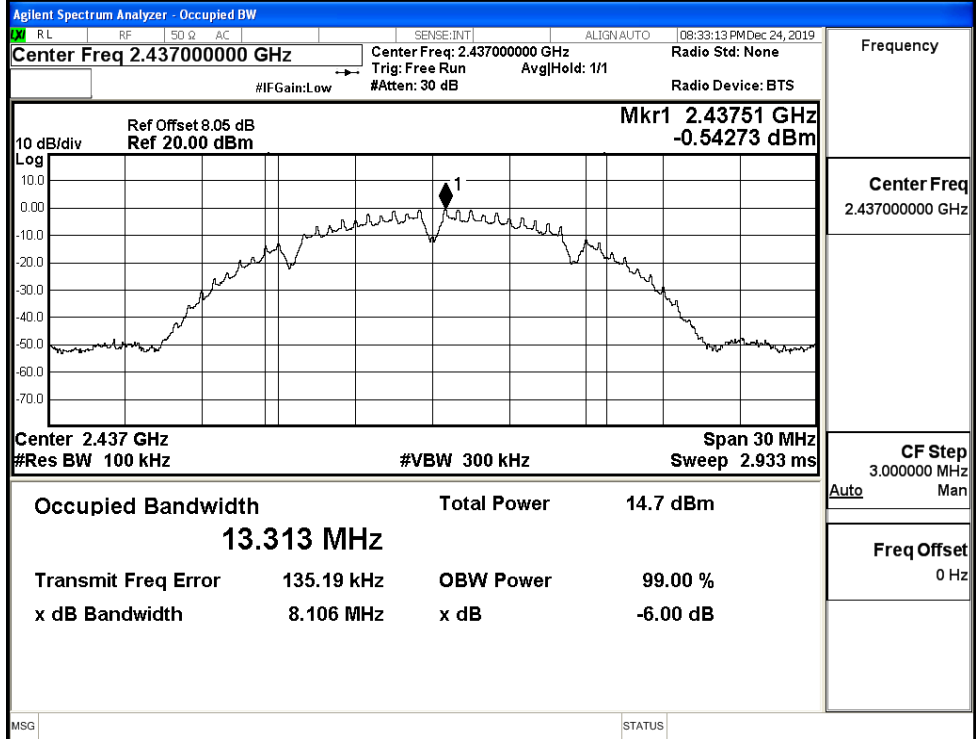


C.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.049	≥0.5	PASS
	MCH	8.106	≥0.5	PASS
	HCH	9.043	≥0.5	PASS
11G	LCH	15.51	≥0.5	PASS
	MCH	15.51	≥0.5	PASS
	HCH	15.75	≥0.5	PASS
11N20SISO	LCH	16.00	≥0.5	PASS
	MCH	16.07	≥0.5	PASS
	HCH	16.31	≥0.5	PASS
11N40SISO	LCH	35.20	≥0.5	PASS
	MCH	35.39	≥0.5	PASS
	HCH	35.17	≥0.5	PASS



11B/MCH



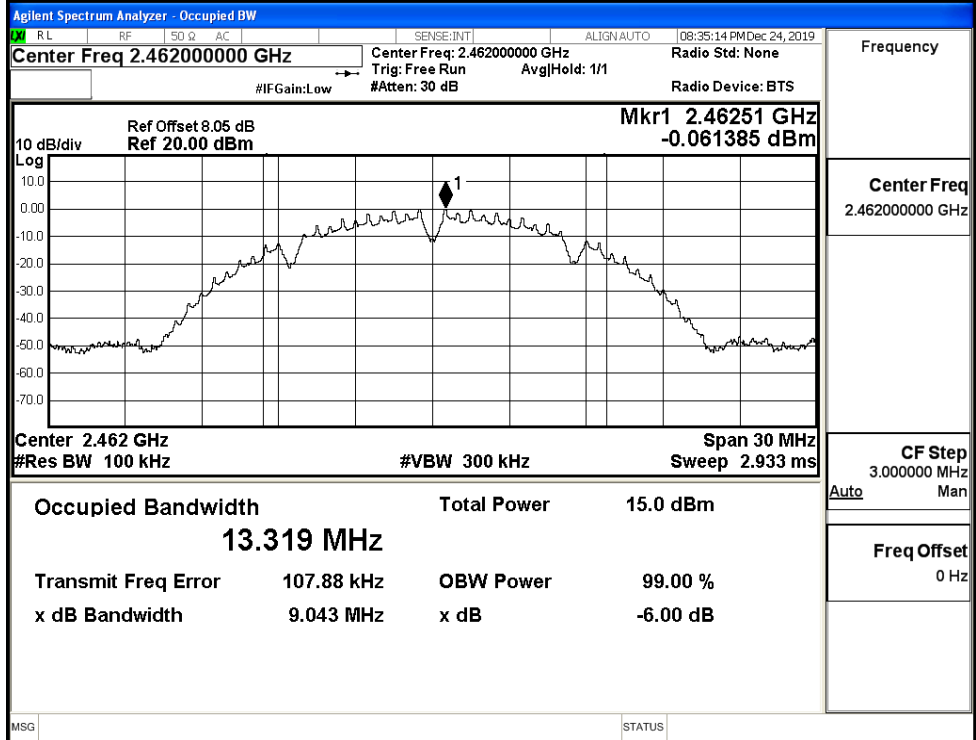
Frequency

Center Freq
2.43700000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11B/HCH



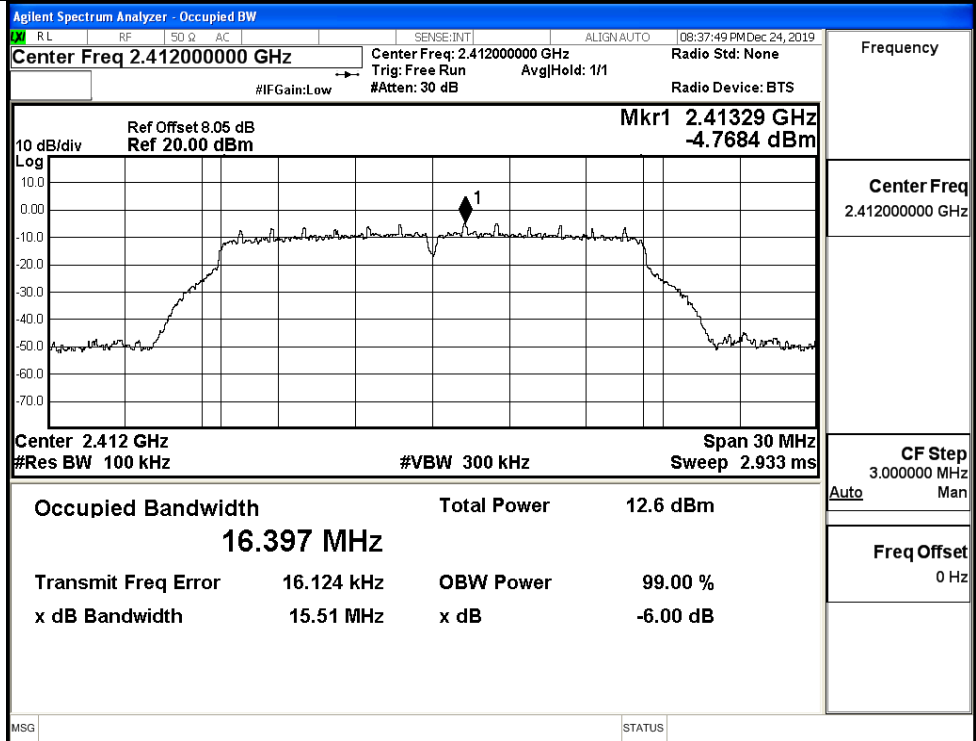
Frequency

Center Freq
2.46200000 GHz

CF Step
3.000000 MHz
Auto Man

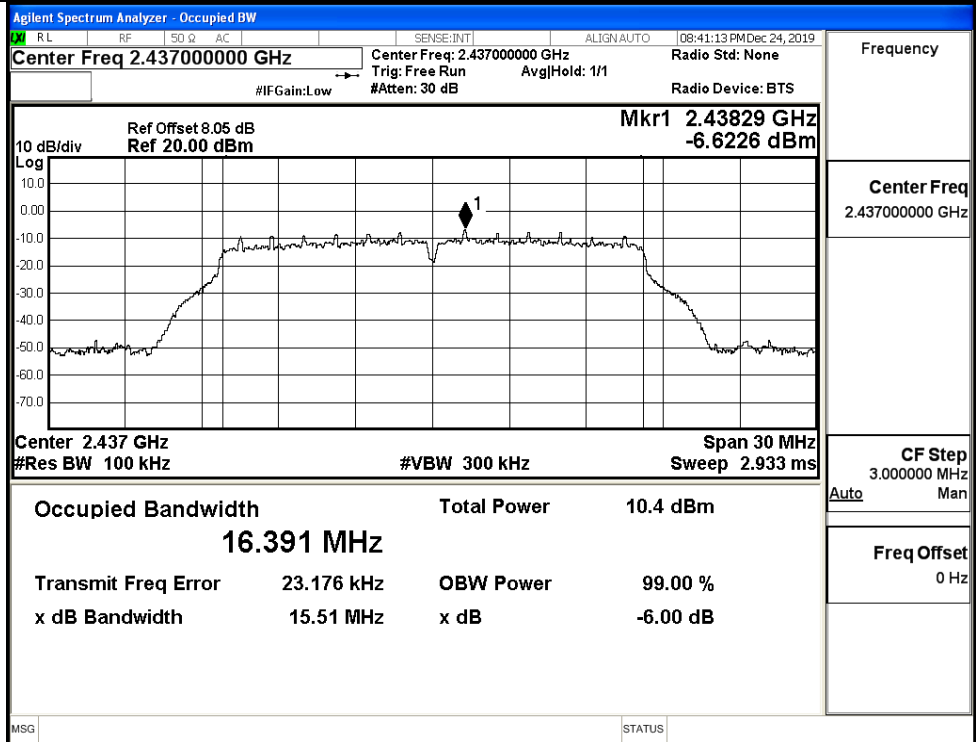
Freq Offset
0 Hz

11G/LCH



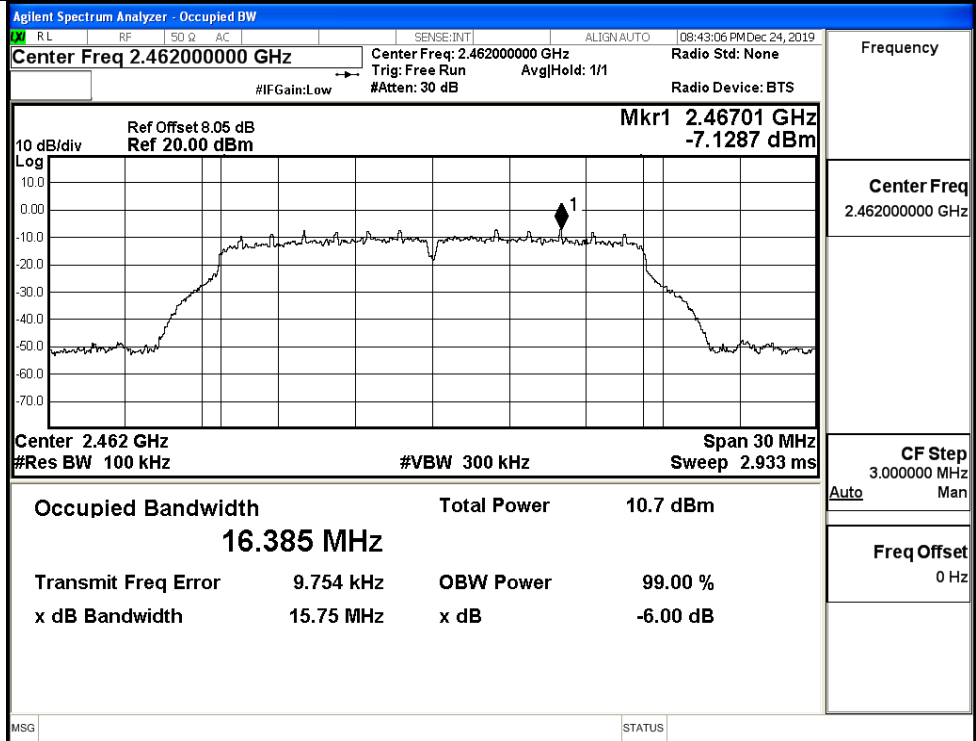
Frequency	2.41200000 GHz
Center Freq	2.41200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11G/MCH



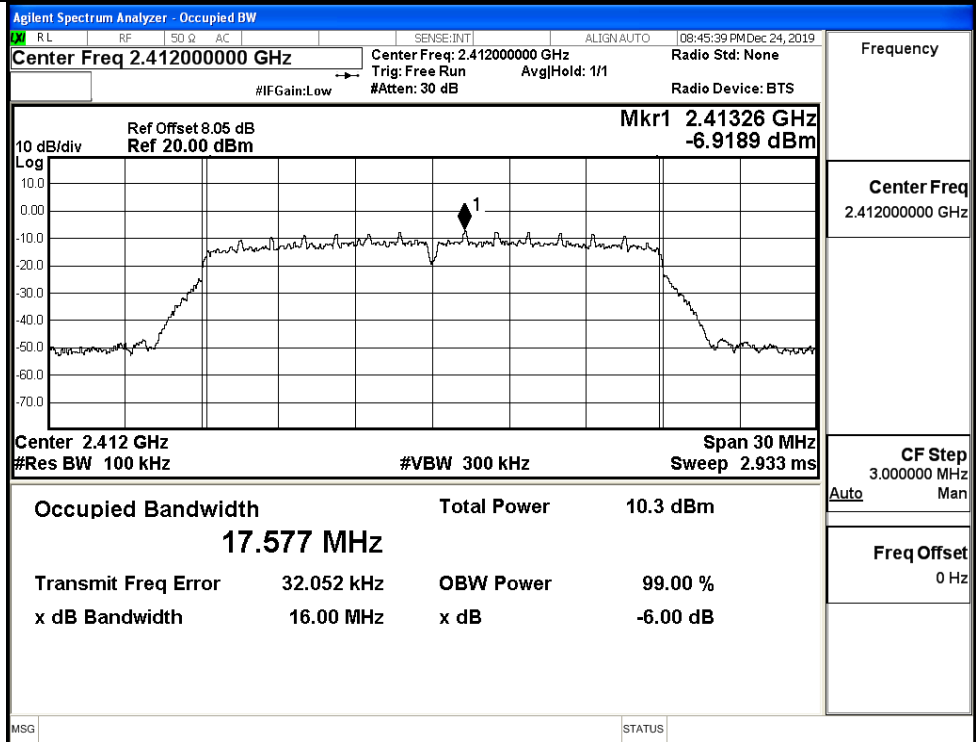
Frequency	2.43700000 GHz
Center Freq	2.43700000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11G/HCH



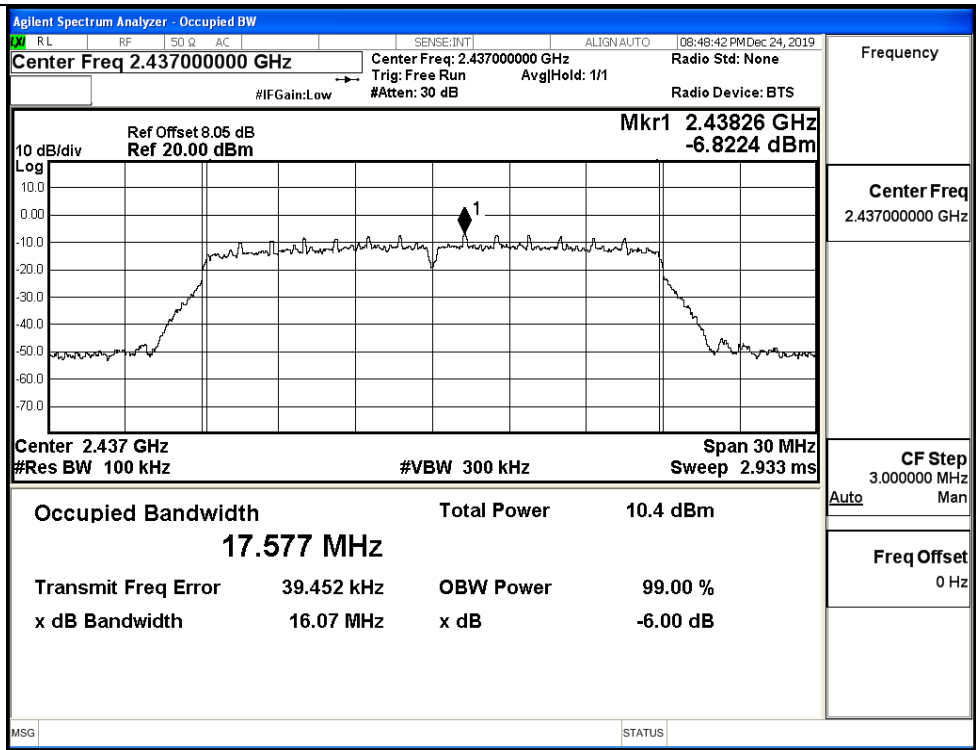
Frequency	2.46200000 GHz
Center Freq	2.46200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N20SISO/LCH

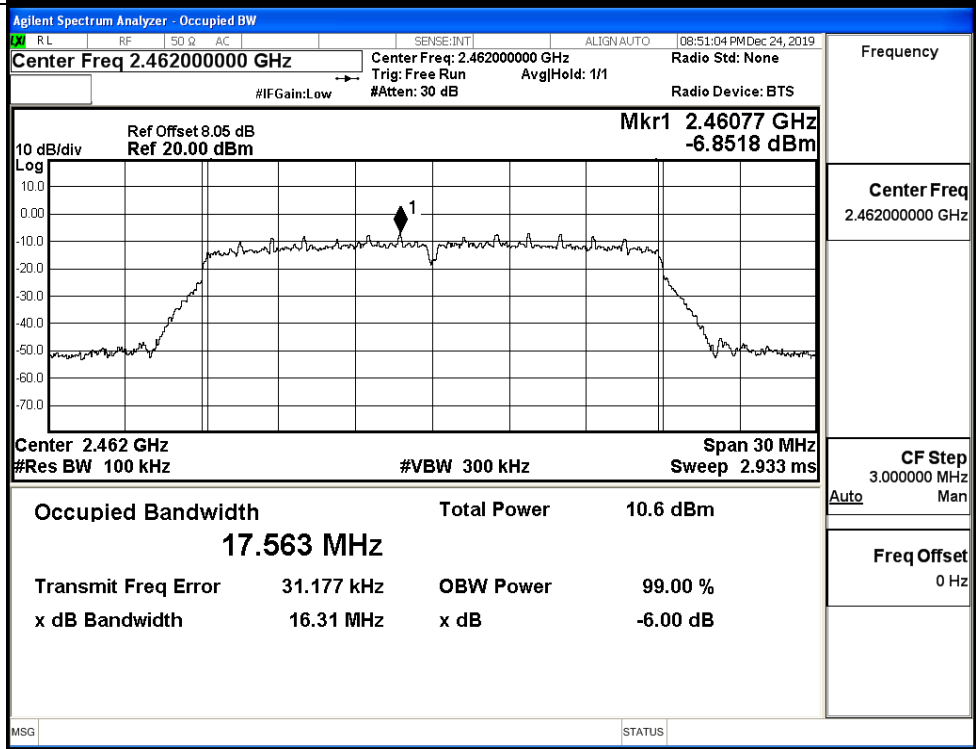


Frequency	2.41200000 GHz
Center Freq	2.41200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

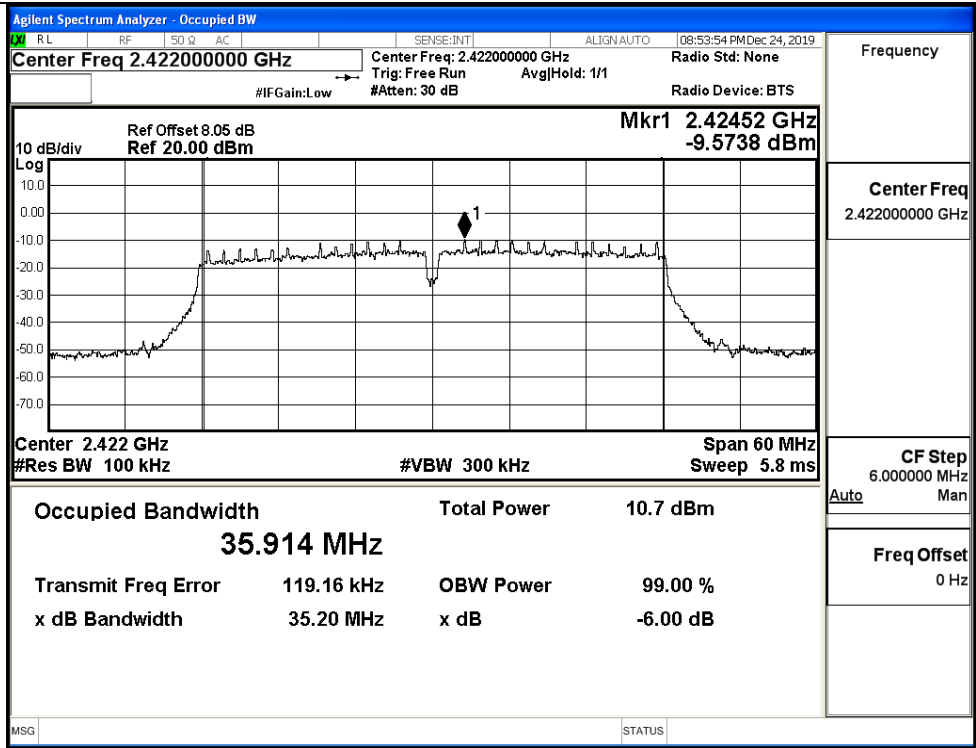
11N20SISO/MCH



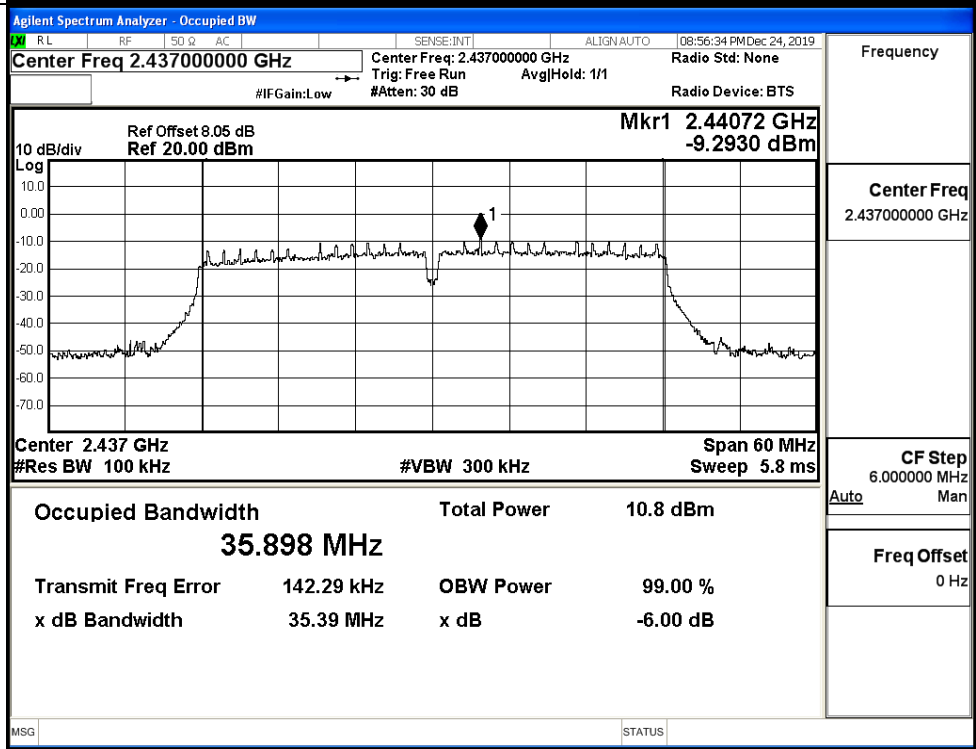
11N20SISO/HCH



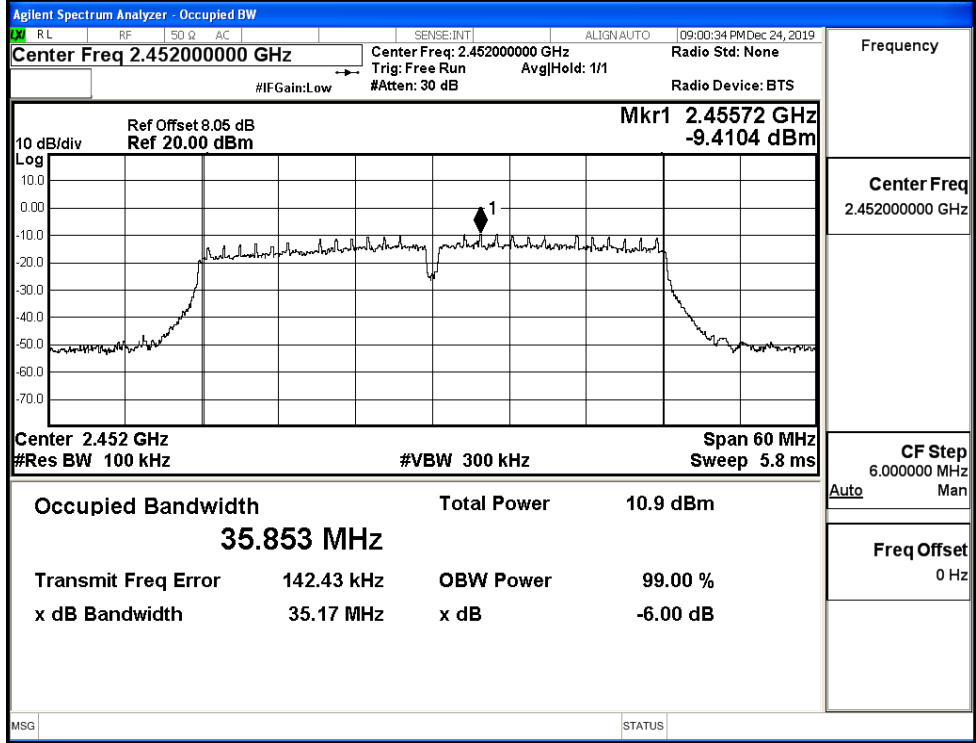
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

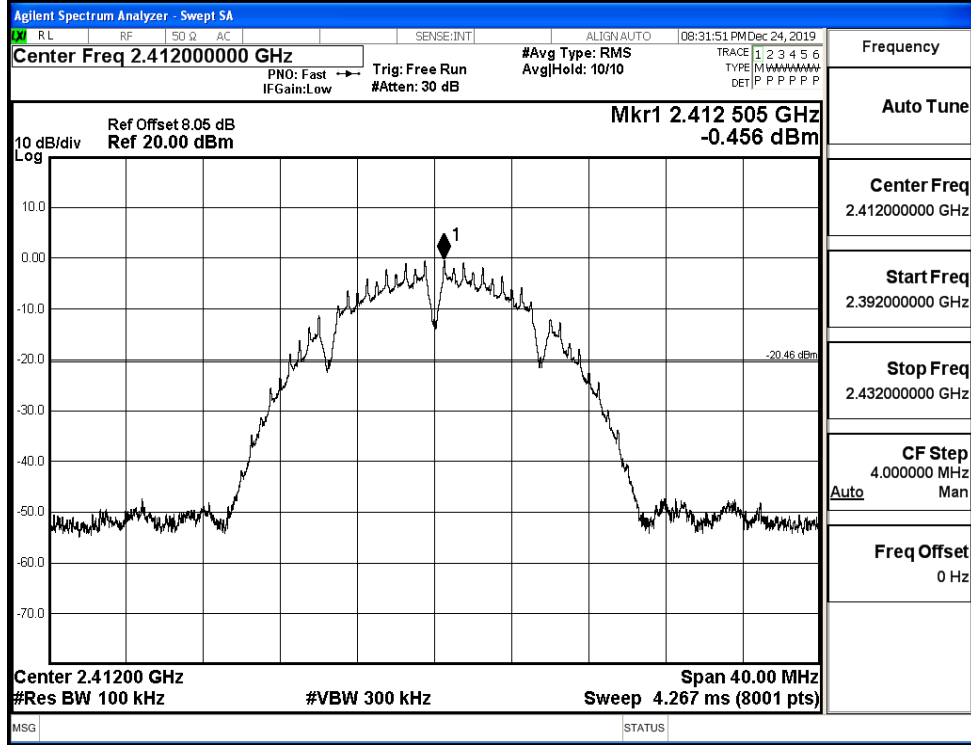


C.5 RF Conducted Spurious Emissions

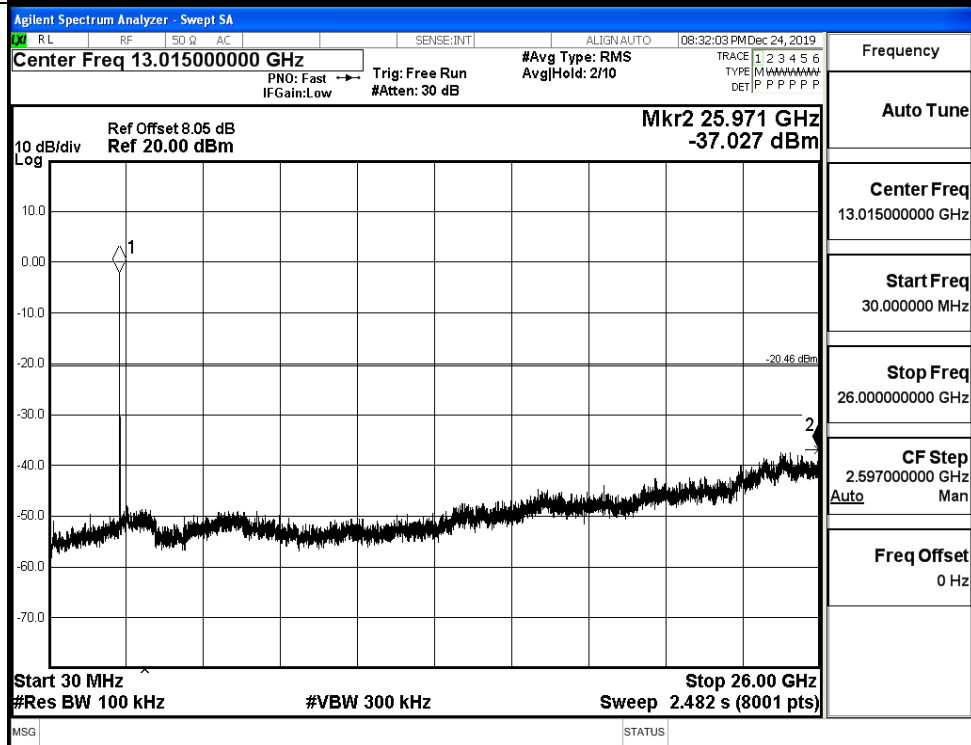
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.456	-37.027	-20.456	PASS
	MCH	-0.418	-36.409	-20.418	PASS
	HCH	-0.249	-37.078	-20.249	PASS
11G	LCH	-6.923	-38.019	-26.923	PASS
	MCH	-7.066	-38.227	-27.066	PASS
	HCH	-7.22	-37.724	-27.220	PASS
11N20 SISO	LCH	-6.87	-36.791	-26.870	PASS
	MCH	-7.005	-37.819	-27.005	PASS
	HCH	-7.132	-37.178	-27.132	PASS
11N40 SISO	LCH	-9.855	-36.893	-29.855	PASS
	MCH	-9.354	-38.053	-29.354	PASS
	HCH	-9.44	-38.381	-29.440	PASS

11B_LCH_Graphs

Pref/11B/LCH

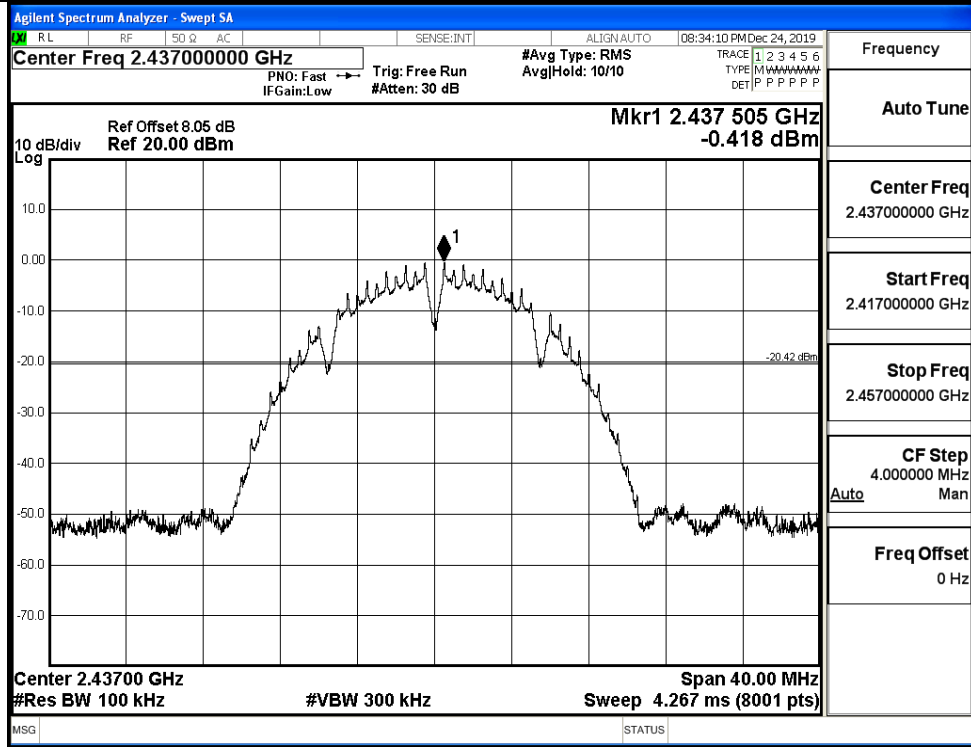


Puw/11B/LCH

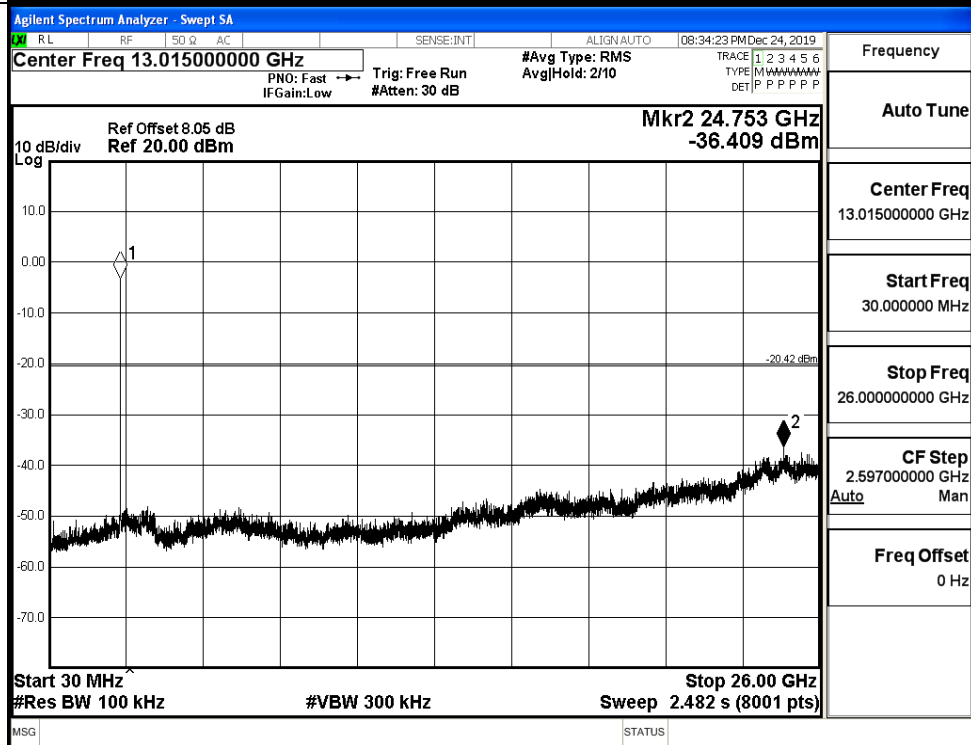


11B_MCH_Graphs

Pref/11B/MCH

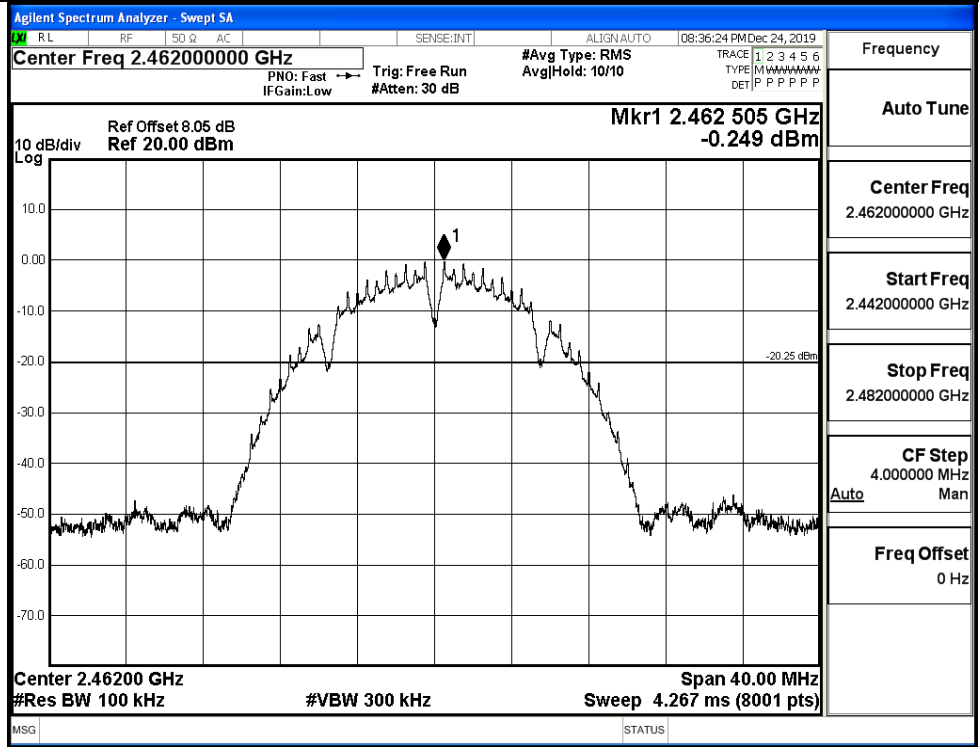


Puw/11B/MCH

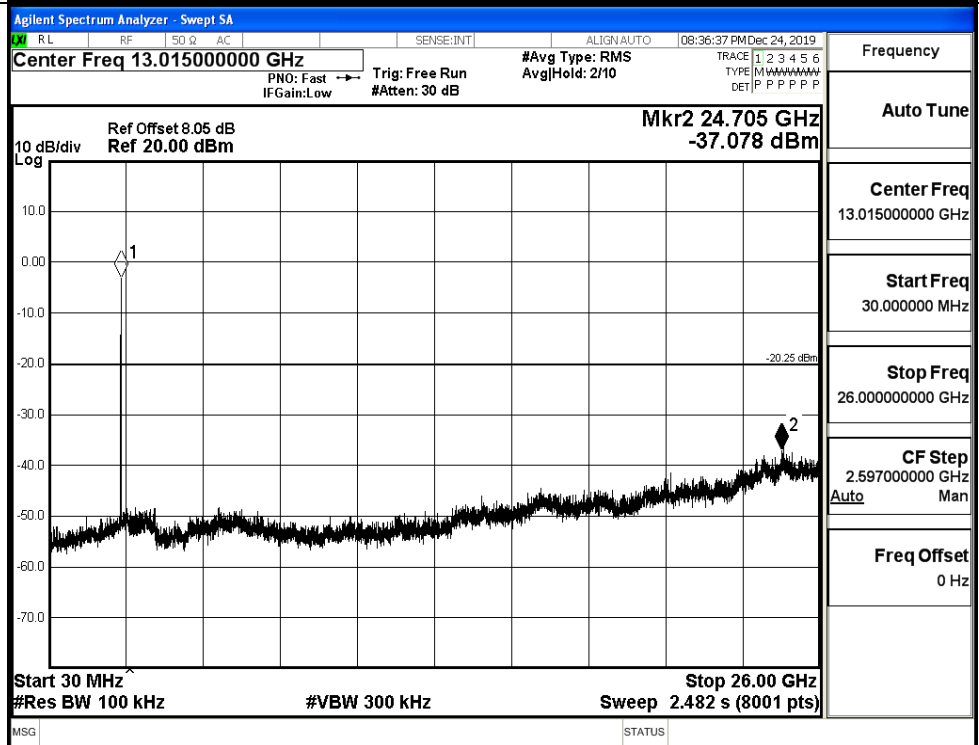


11B_HCH_Graphs

Pref/11B/HCH

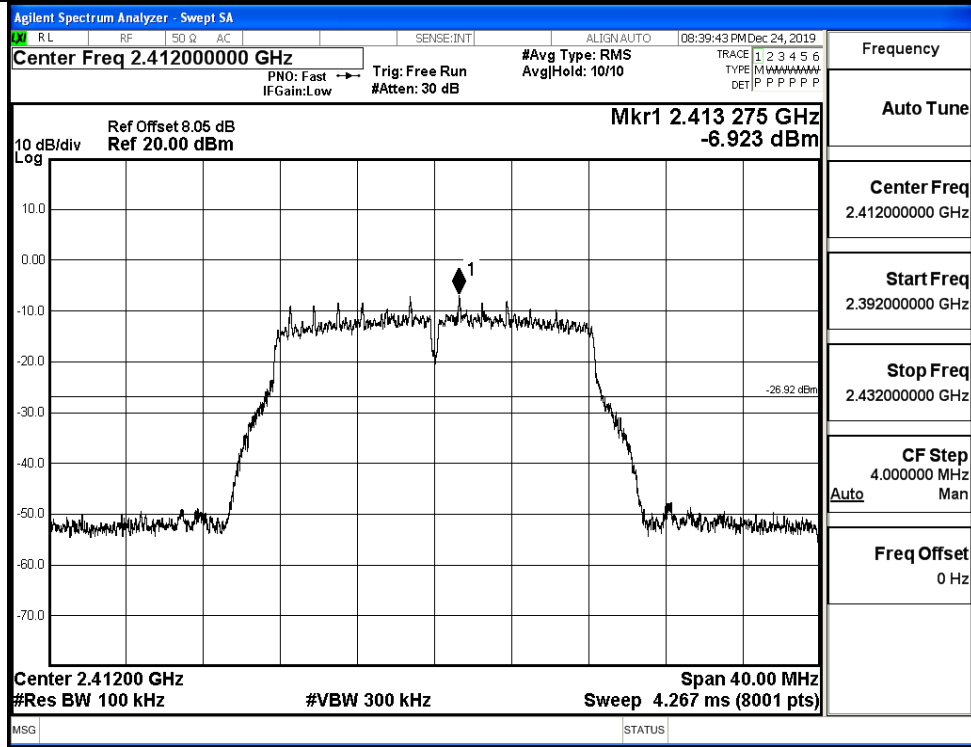


Puw/11B/HCH

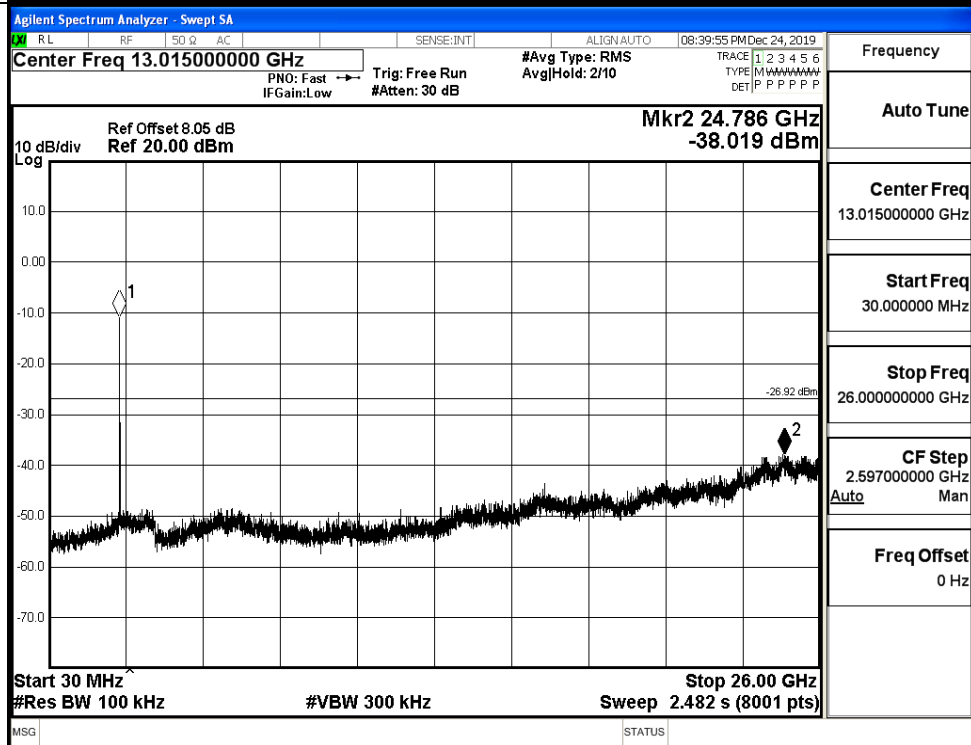


11G_LCH_Graphs

Pref/11G/LCH

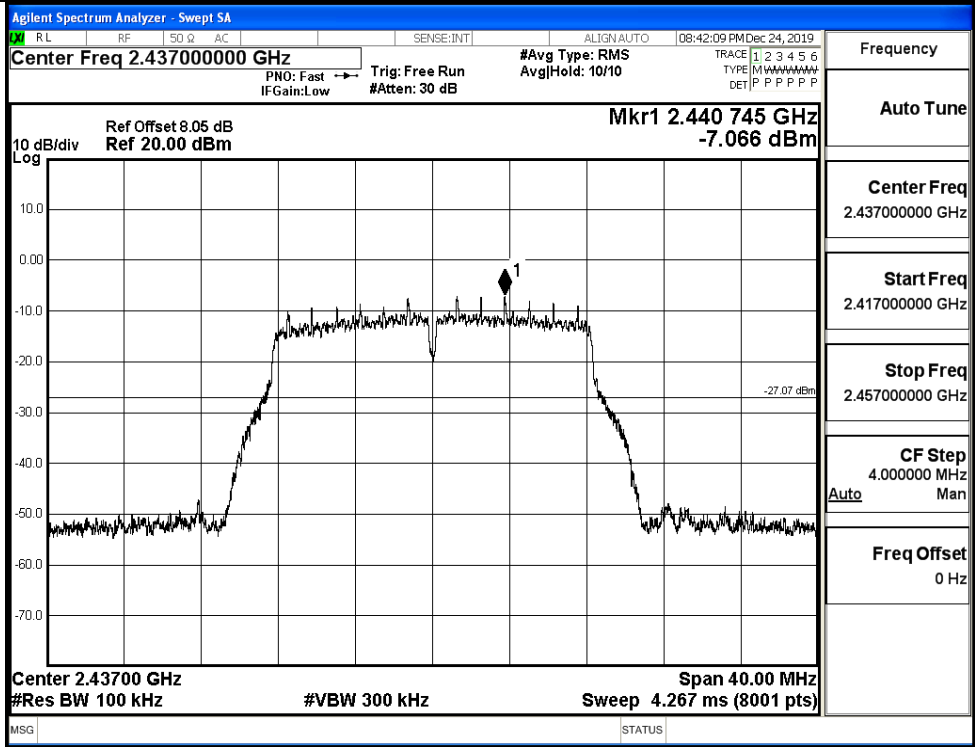


Puw/11G/LCH

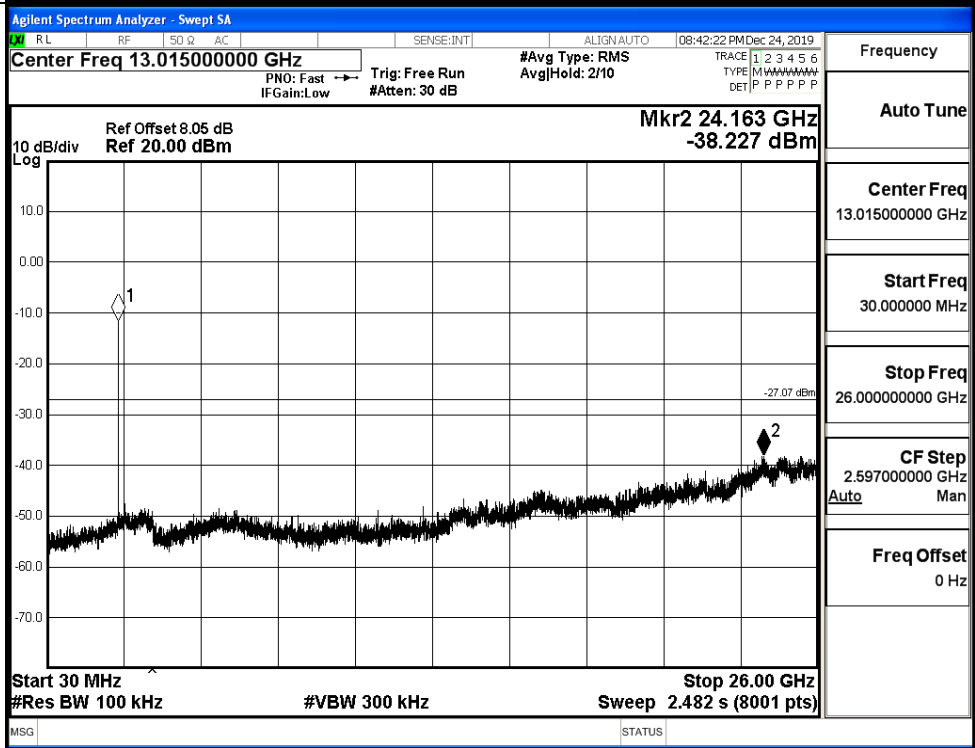


11G_MCH_Graphs

Pref/11G/MCH

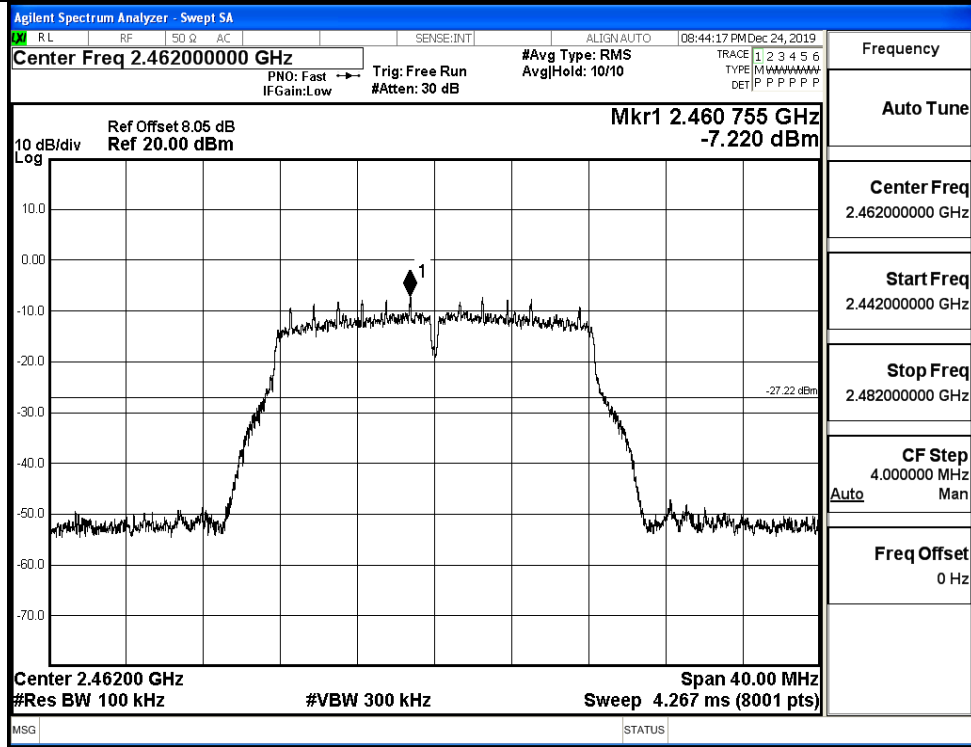


Puw/11G/MCH

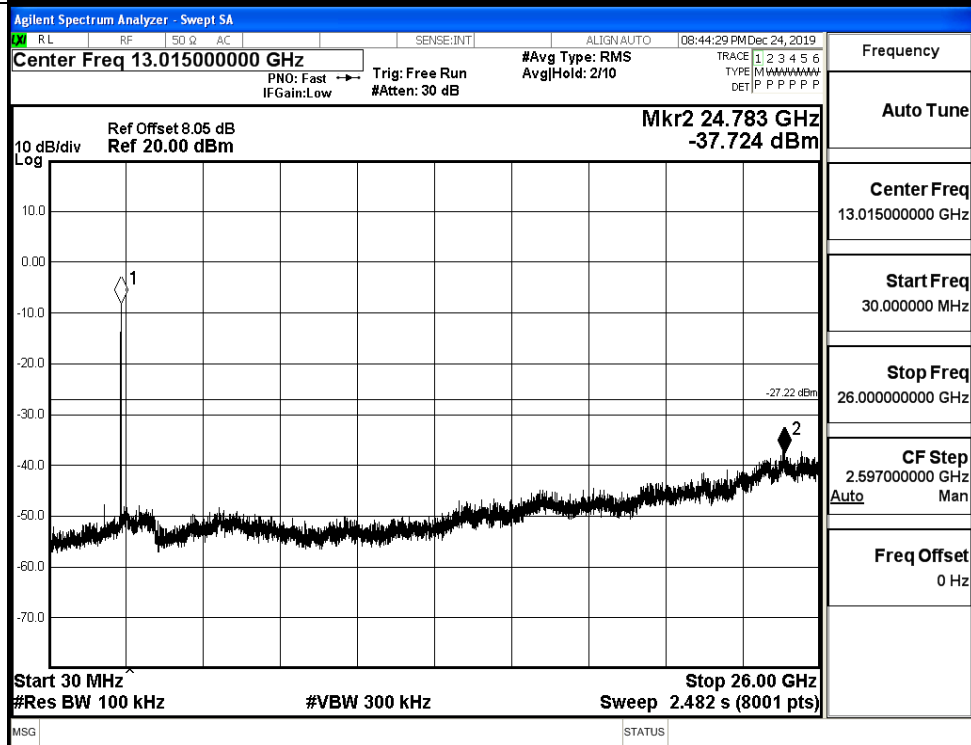


11G_HCH_Graphs

Pref/11G/HCH

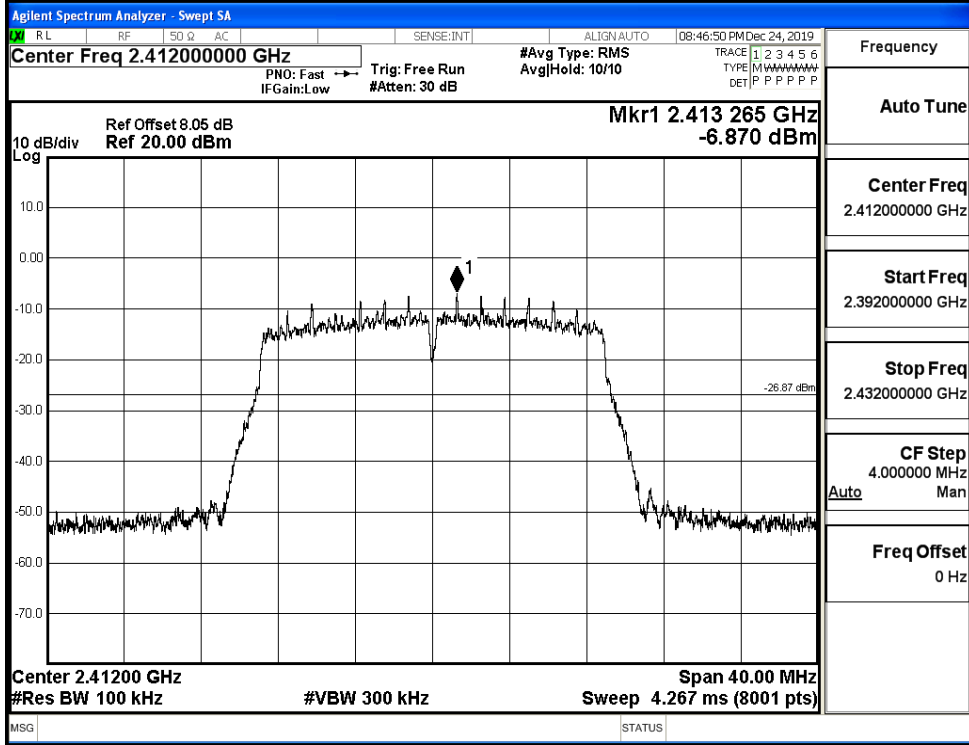


Puw/11G/HCH

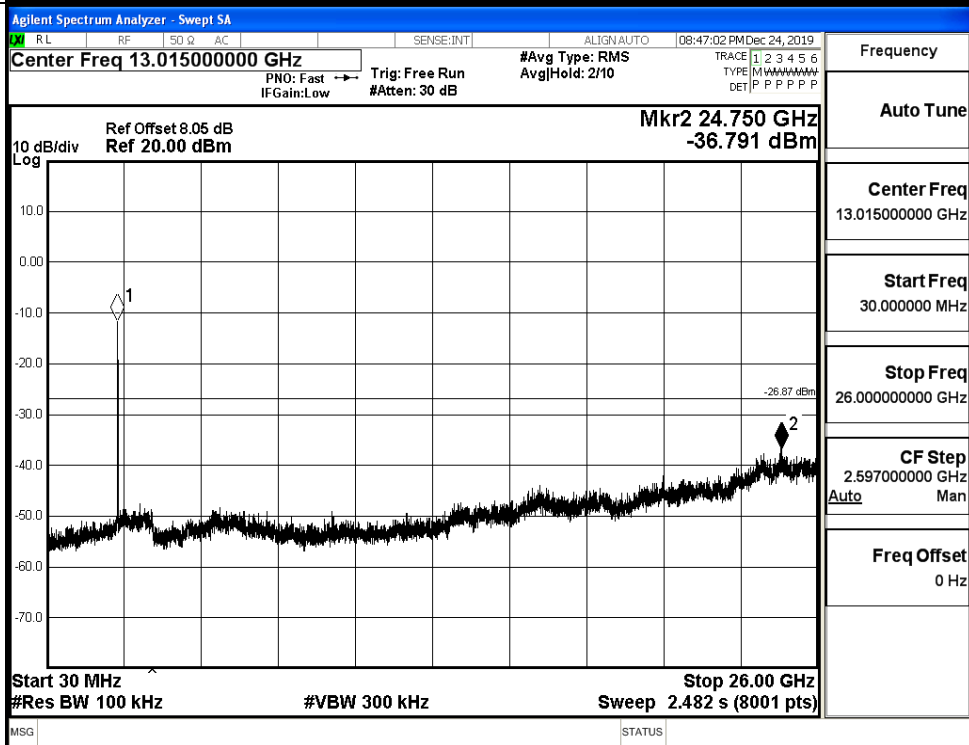


11N20SISO_LCH_Graphs

Pref/11N20SIS
O/LCH

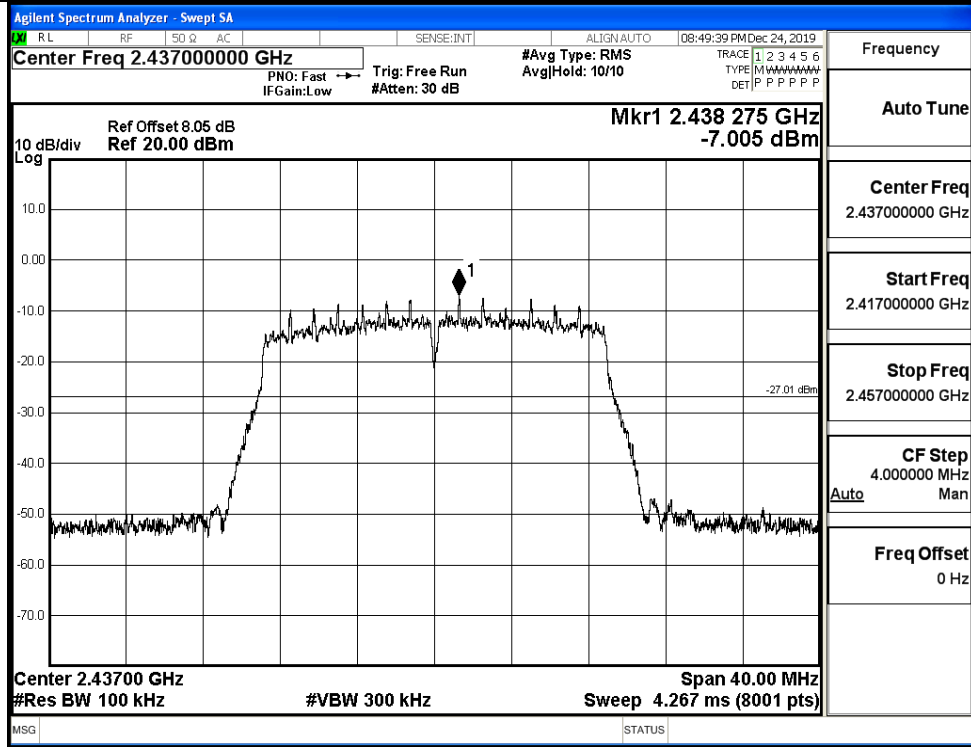


Puw/11N20
SISO/LCH

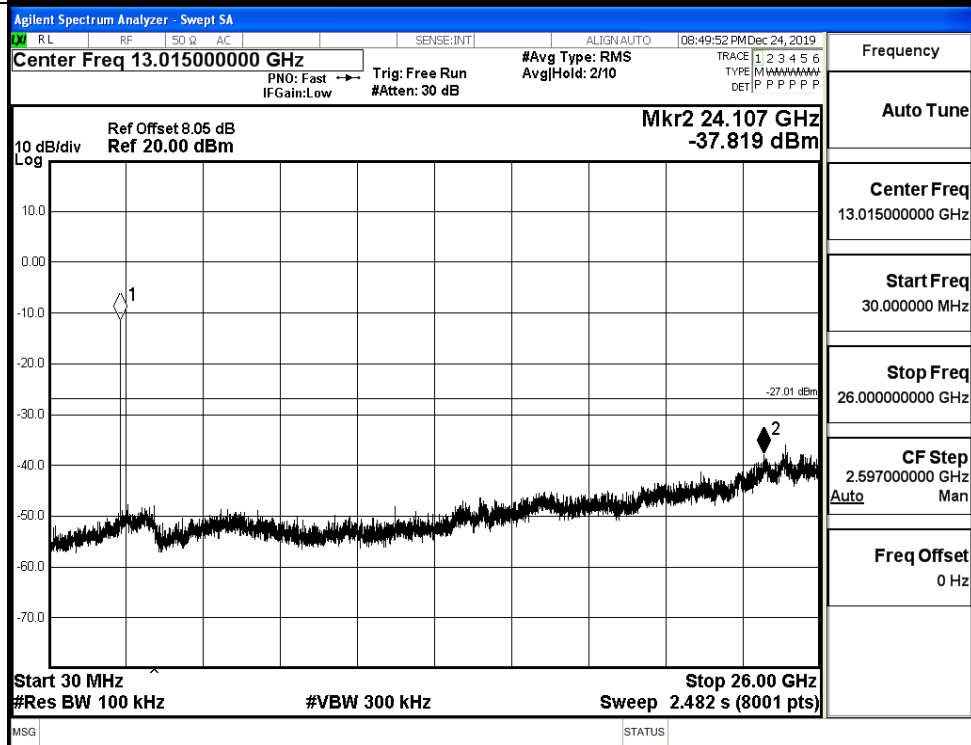


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

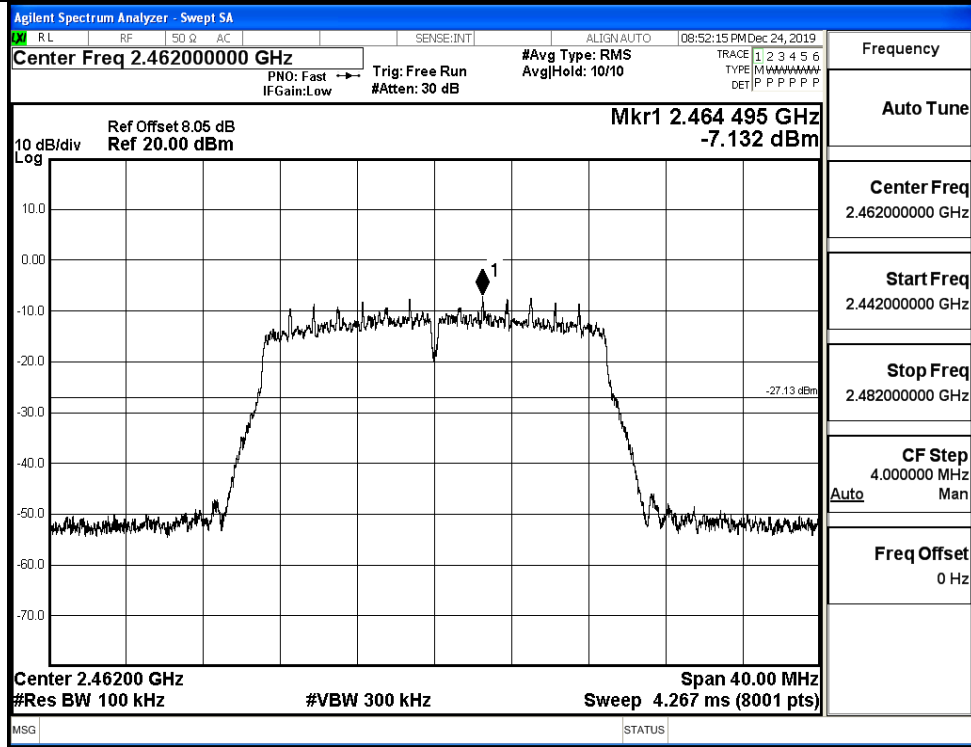


Puw/11N20
SISO/MCH

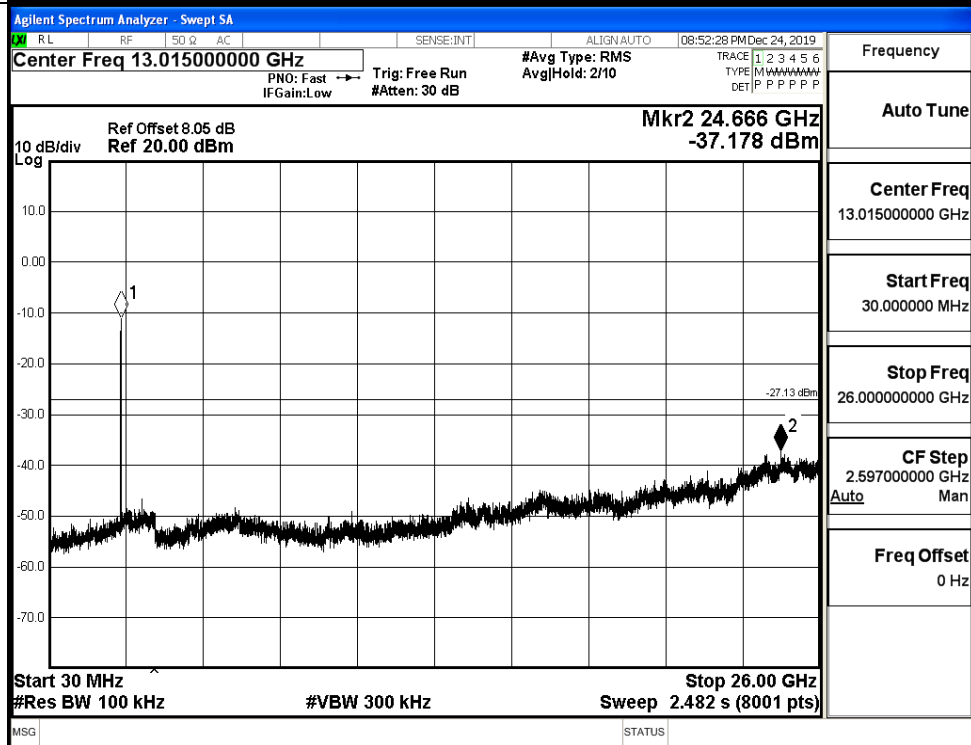


11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH

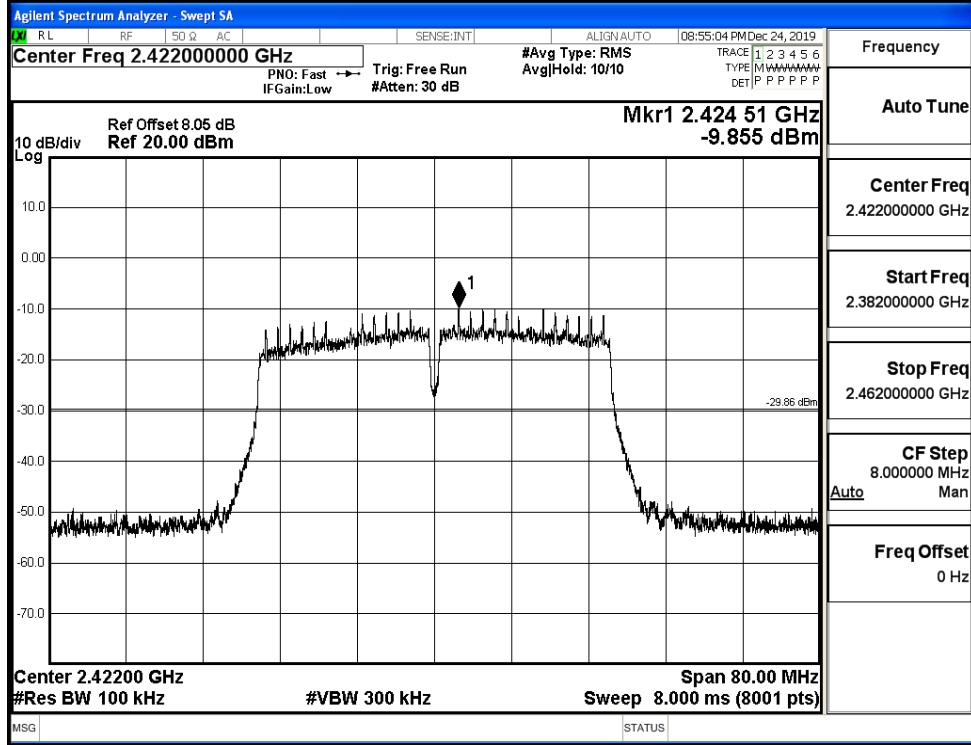


Puw/11N20
SISO/HCH

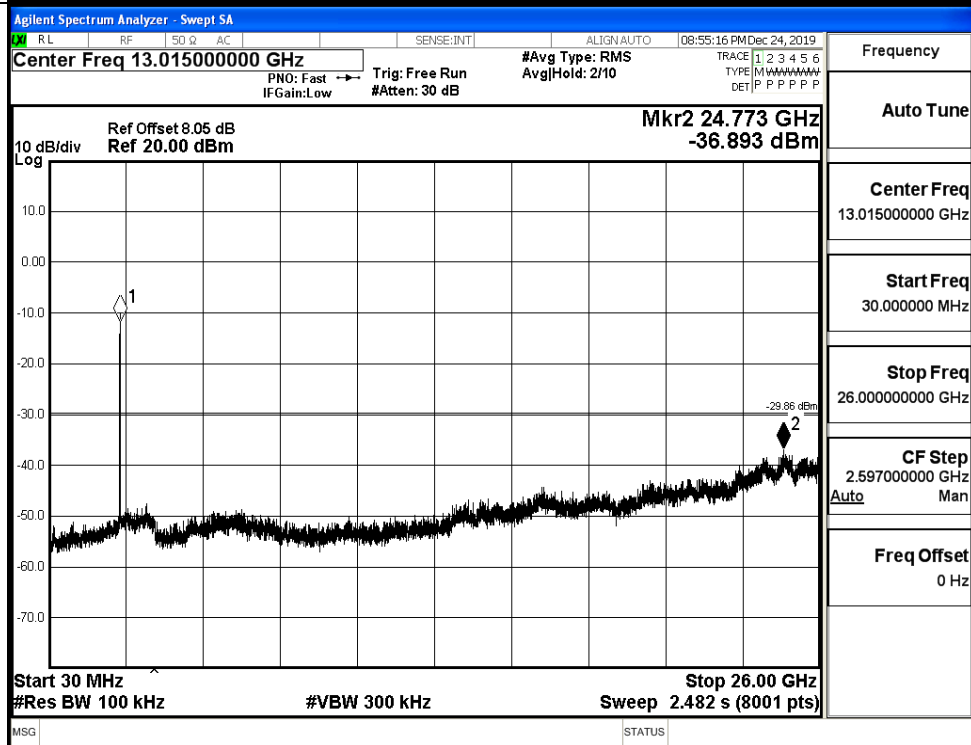


11N40SISO_LCH_Graphs

Pref/11N40
SISO/LCH

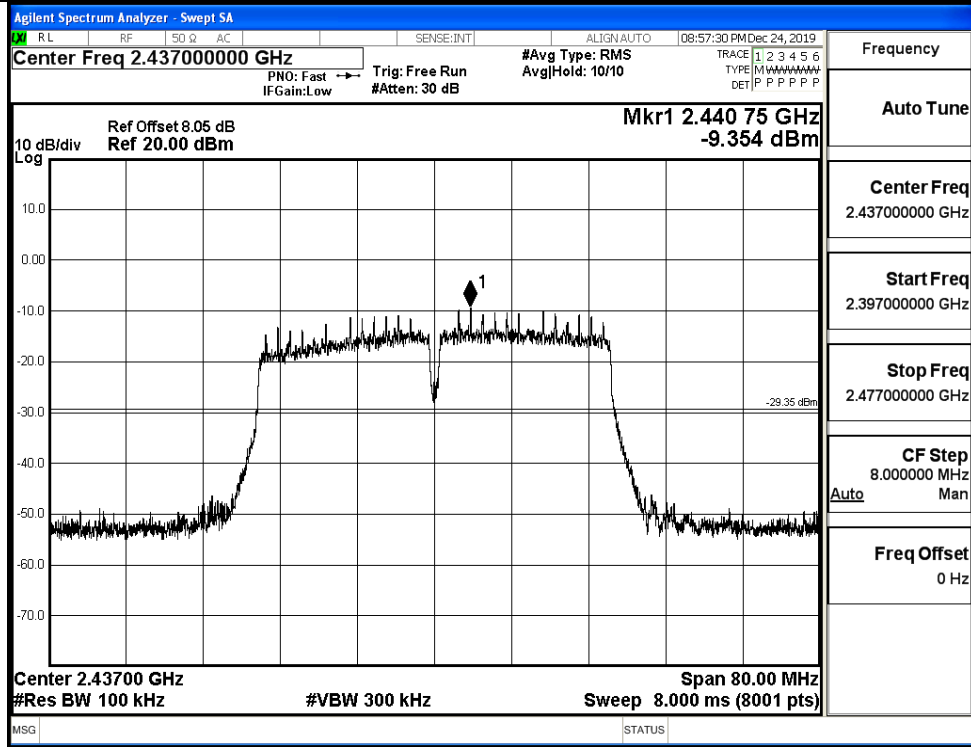


Puw/11N40
SISO/LCH

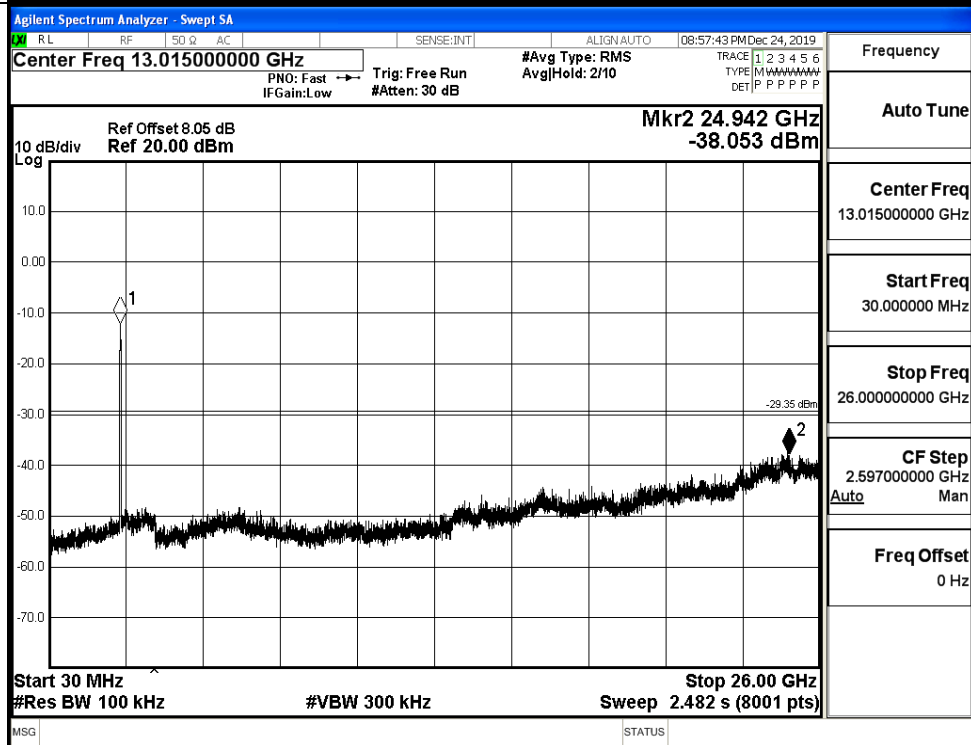


11N40SISO_MCH_Graphs

Pref/11N40
SISO/MCH

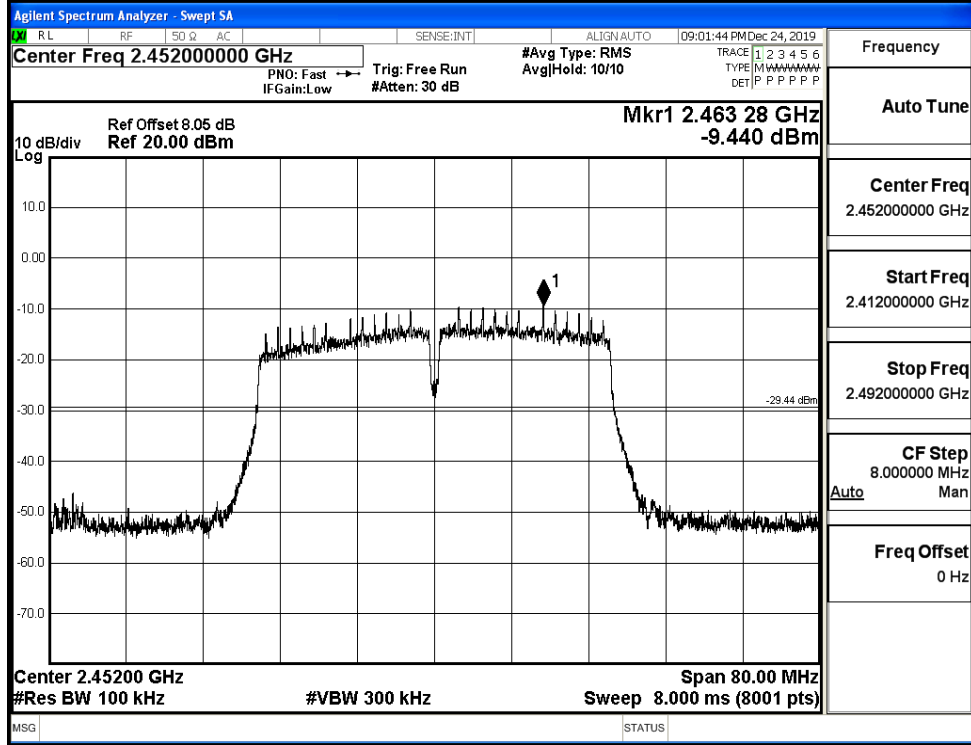


Puw/11N40
SISO/MCH

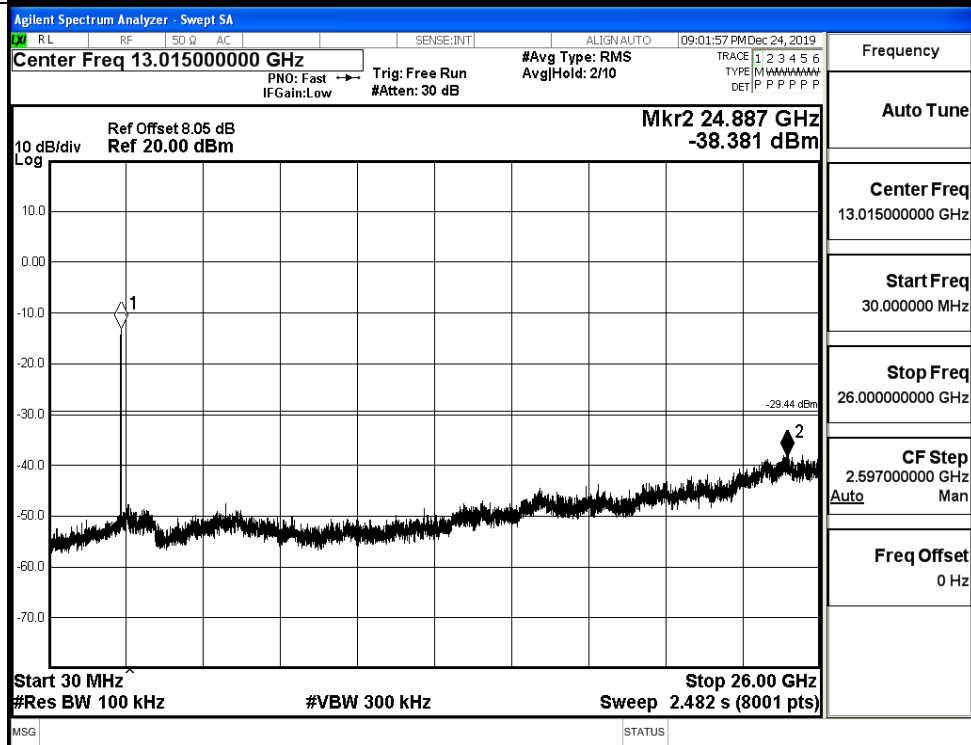


11N40SISO_HCH_Graphs

Pref/11N40
SISO/HCH

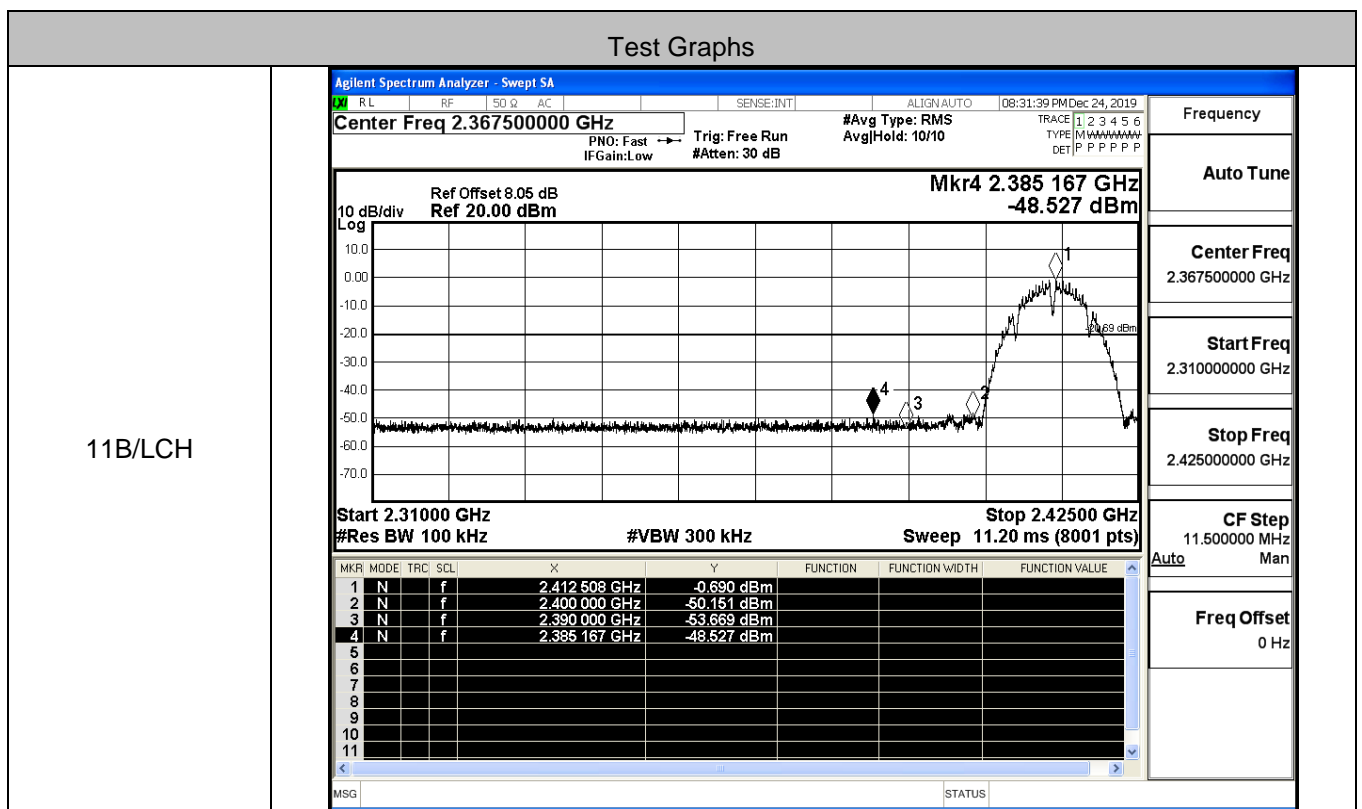


Puw/11N40
SISO/HCH

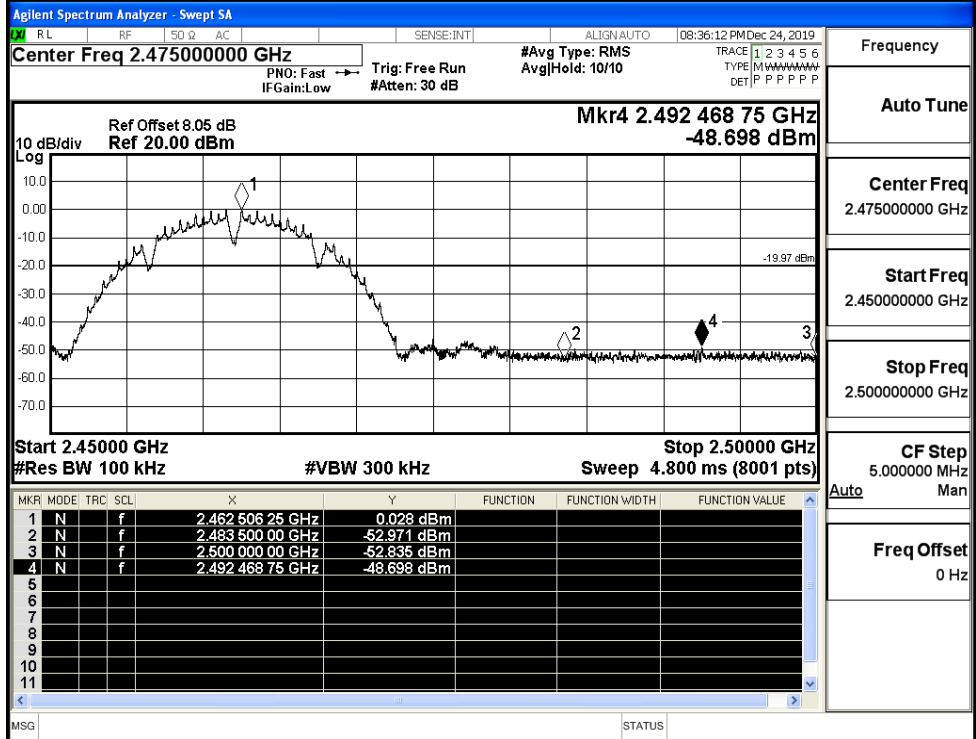


C.6 Band-edge for RF Conducted Emissions

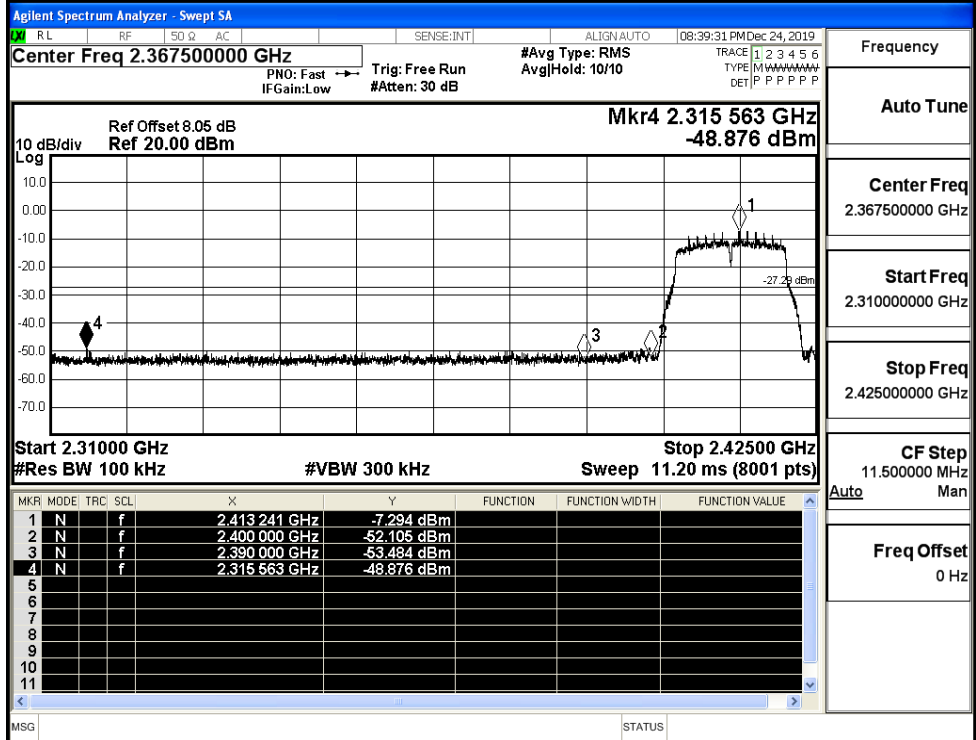
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.690	-48.527	-20.69	PASS
	HCH	0.028	-48.698	-19.97	PASS
11G	LCH	-7.294	-48.876	-27.29	PASS
	HCH	-7.478	-49.184	-27.48	PASS
11N20SISO	LCH	-6.847	-48.950	-26.85	PASS
	HCH	-6.488	-48.681	-26.49	PASS
11N40SISO	LCH	-9.859	-49.252	-29.86	PASS
	HCH	-8.986	-49.129	-28.99	PASS



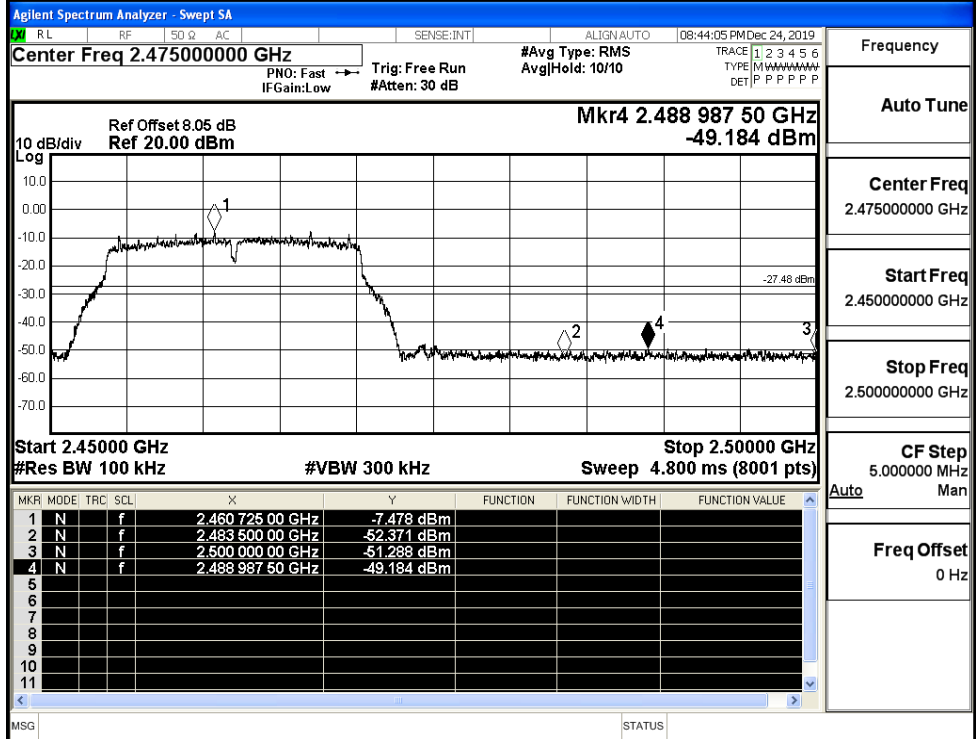
11B/HCH



11G/LCH

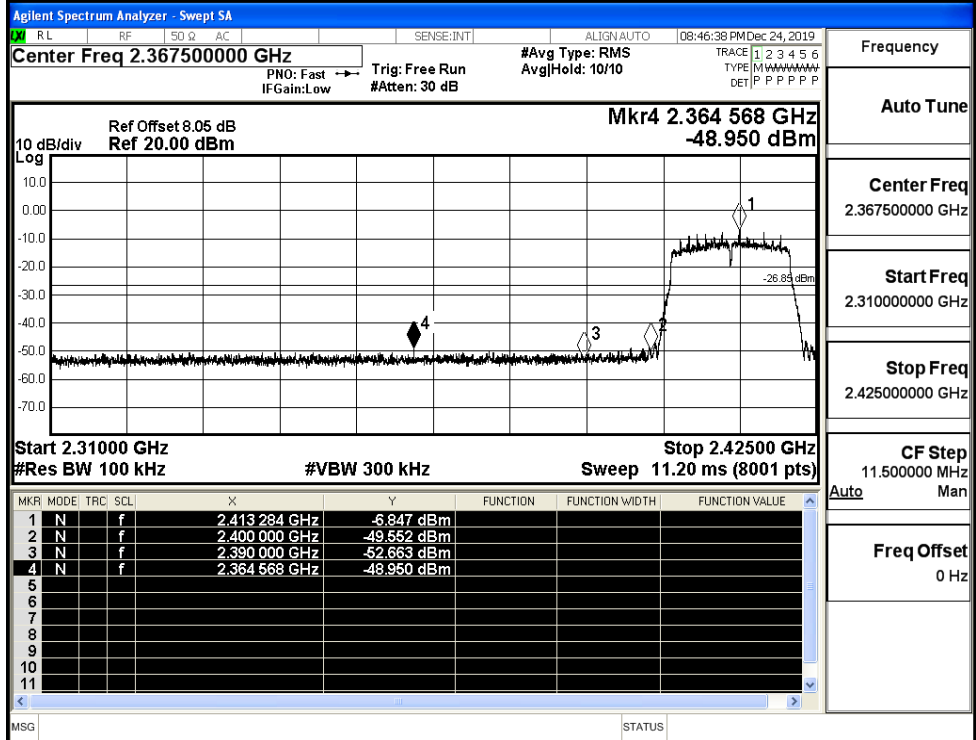


11G/HCH



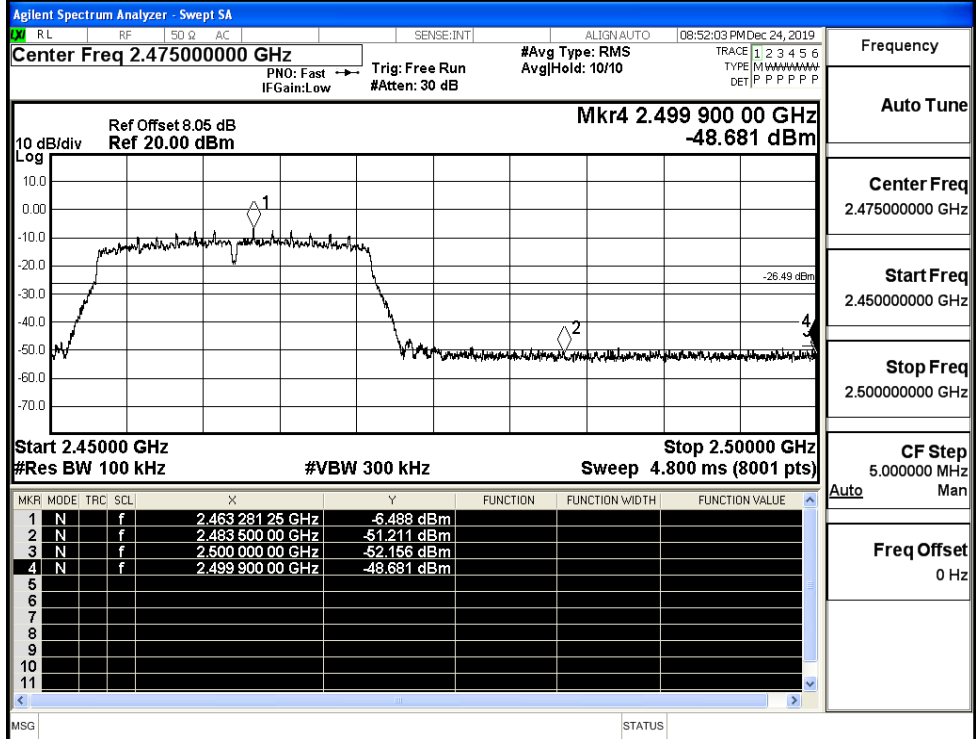
Frequency	2.475000000 GHz
Auto Tune	
Center Freq	2.475000000 GHz
Start Freq	2.450000000 GHz
Stop Freq	2.500000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

11N20SISO/LCH

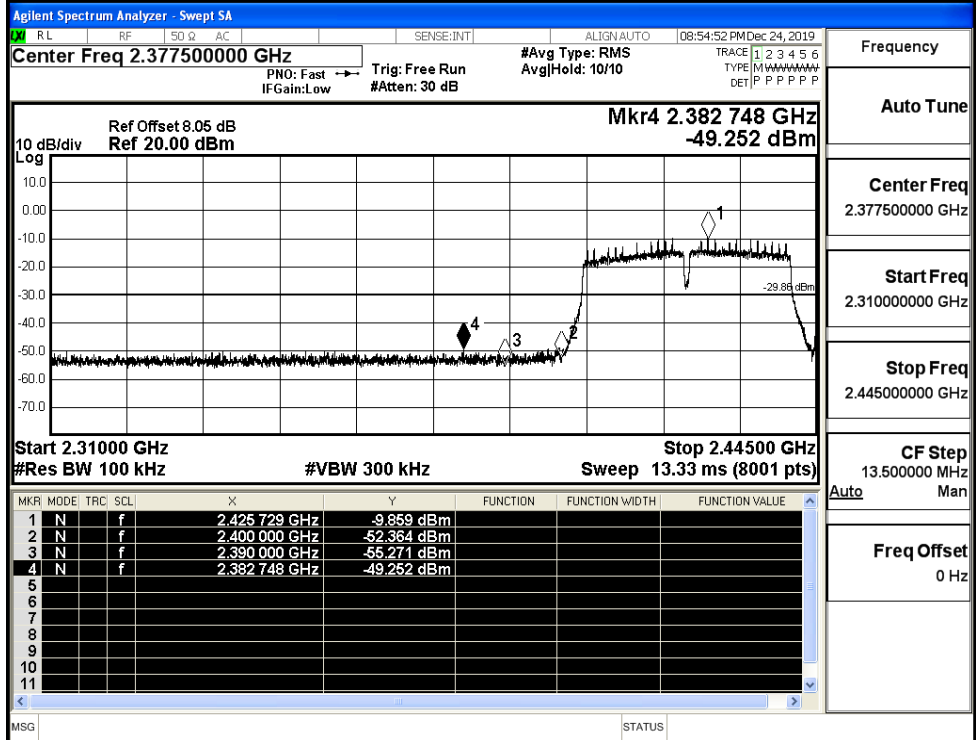


Frequency	2.367500000 GHz
Auto Tune	
Center Freq	2.367500000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.425000000 GHz
CF Step	11.500000 MHz
Freq Offset	0 Hz

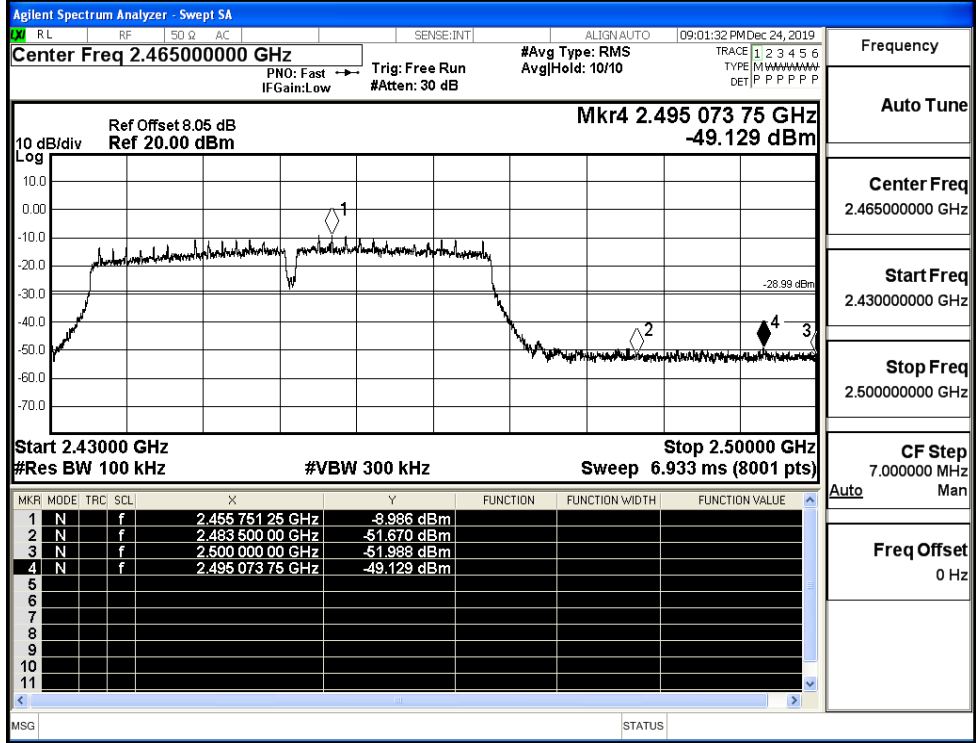
11N20SISO/HCH



11N40SISO/LCH



11N40SISO/HCH

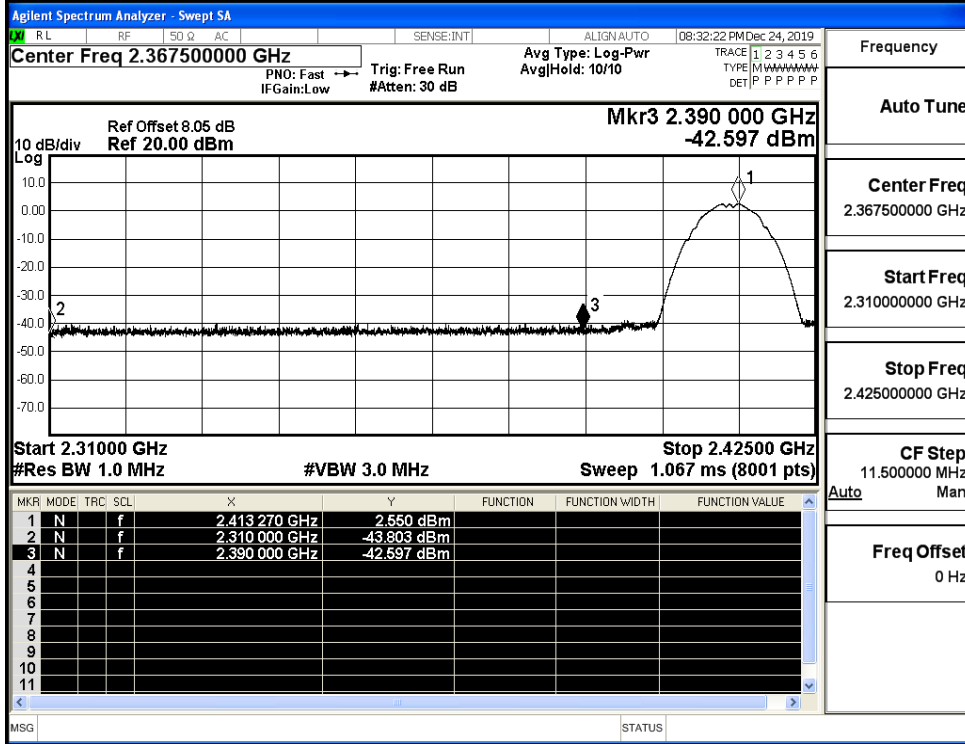


C.7 Restrict-band band-edge measurements

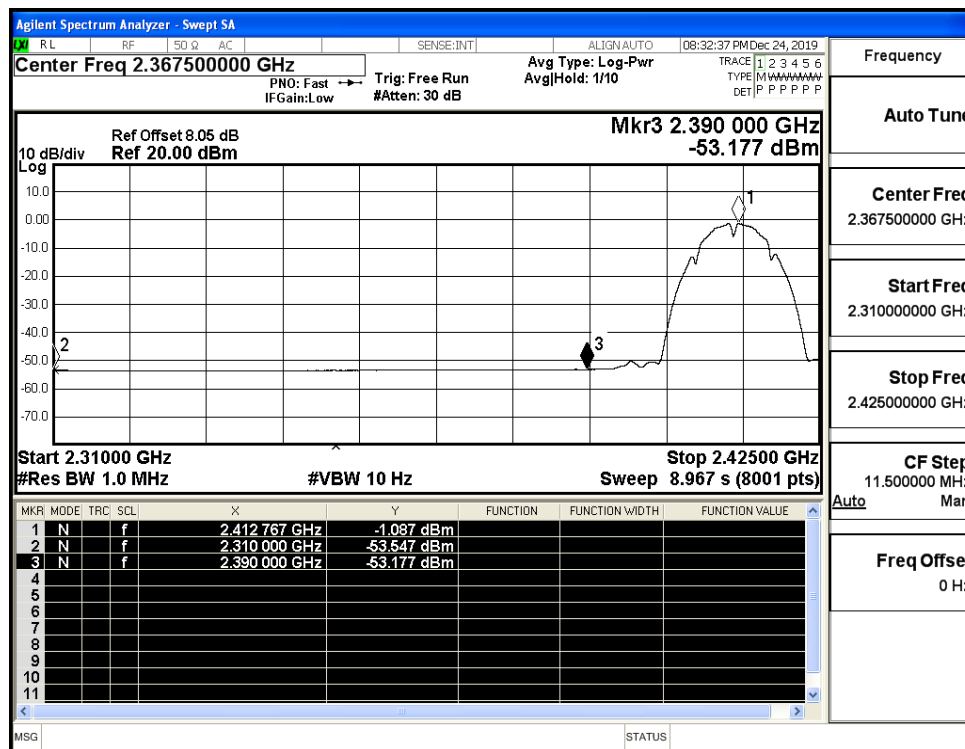
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-43.80	2.0	0	53.43	PEAK	74	PASS
	2412	Ant1	2310.0	-53.55	2.0	0	43.68	AV	54	PASS
	2412	Ant1	2390.0	-42.60	2.0	0	54.63	PEAK	74	PASS
	2412	Ant1	2390.0	-53.18	2.0	0	44.05	AV	54	PASS
	2462	Ant1	2483.5	-42.66	2.0	0	54.57	PEAK	74	PASS
	2462	Ant1	2483.5	-52.73	2.0	0	44.50	AV	54	PASS
	2462	Ant1	2500.0	-41.73	2.0	0	55.50	PEAK	74	PASS
	2462	Ant1	2500.0	-52.58	2.0	0	44.65	AV	54	PASS
11G	2412	Ant1	2310.0	-42.64	2.0	0	54.59	PEAK	74	PASS
	2412	Ant1	2310.0	-53.51	2.0	0	43.72	AV	54	PASS
	2412	Ant1	2390.0	-40.77	2.0	0	56.46	PEAK	74	PASS
	2412	Ant1	2390.0	-53.03	2.0	0	44.20	AV	54	PASS
	2462	Ant1	2483.5	-42.62	2.0	0	54.61	PEAK	74	PASS
	2462	Ant1	2483.5	-52.56	2.0	0	44.67	AV	54	PASS
	2462	Ant1	2500.0	-41.81	2.0	0	55.42	PEAK	74	PASS
	2462	Ant1	2500.0	-52.47	2.0	0	44.76	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-42.74	2.0	0	54.49	PEAK	74	PASS
	2412	Ant1	2310.0	-53.49	2.0	0	43.74	AV	54	PASS
	2412	Ant1	2390.0	-42.35	2.0	0	54.88	PEAK	74	PASS
	2412	Ant1	2390.0	-53.05	2.0	0	44.18	AV	54	PASS
	2462	Ant1	2483.5	-41.77	2.0	0	55.46	PEAK	74	PASS
	2462	Ant1	2483.5	-52.57	2.0	0	44.66	AV	54	PASS
	2462	Ant1	2500.0	-41.35	2.0	0	55.88	PEAK	74	PASS
	2462	Ant1	2500.0	-52.44	2.0	0	44.79	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-43.94	2.0	0	53.29	PEAK	74	PASS
	2422	Ant1	2310.0	-53.55	2.0	0	43.68	AV	54	PASS

	2422	Ant1	2390.0	-42.74	2.0	0	54.49	PEAK	74	PASS
	2422	Ant1	2390.0	-52.98	2.0	0	44.25	AV	54	PASS
	2452	Ant1	2483.5	-42.31	2.0	0	54.92	PEAK	74	PASS
	2452	Ant1	2483.5	-52.44	2.0	0	44.79	AV	54	PASS
	2452	Ant1	2500.0	-42.01	2.0	0	55.22	PEAK	74	PASS
	2452	Ant1	2500.0	-52.49	2.0	0	44.74	AV	54	PASS

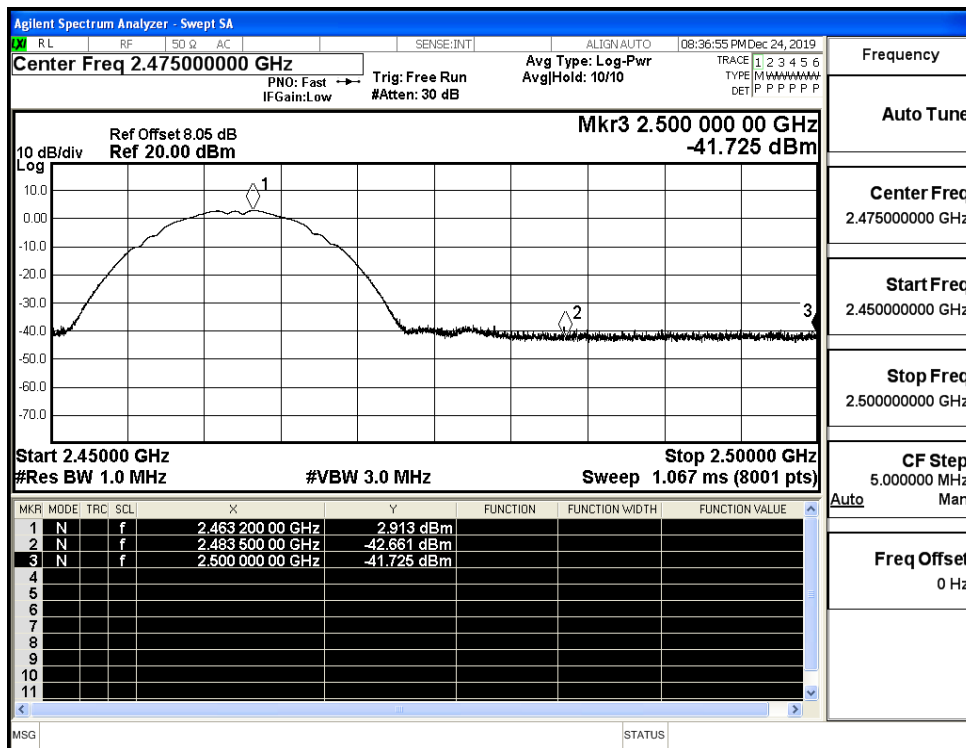
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



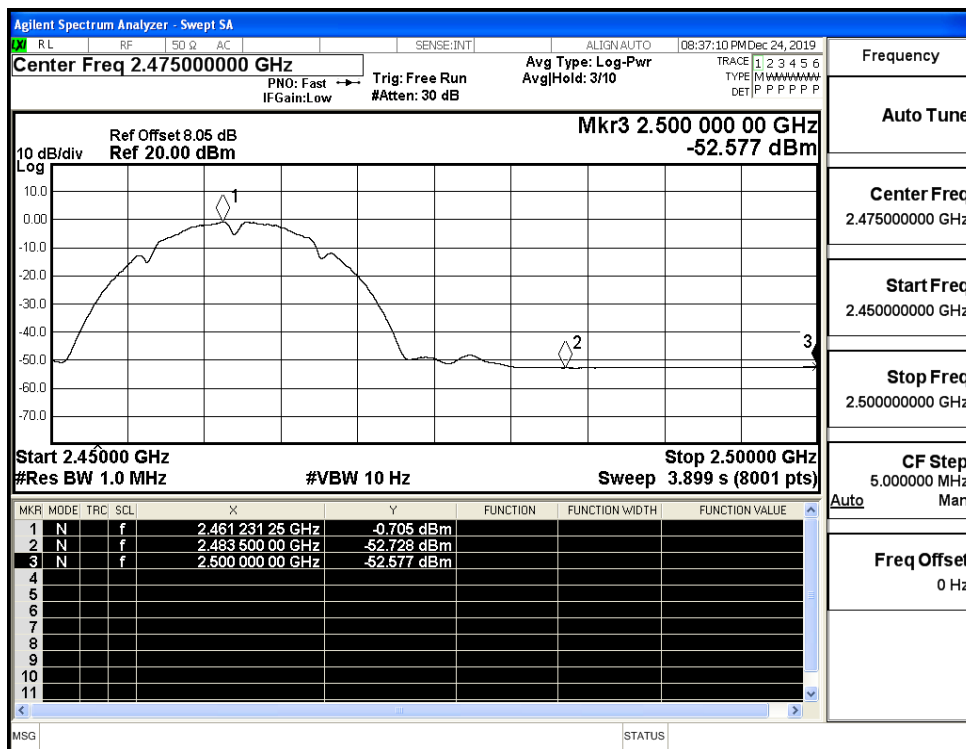
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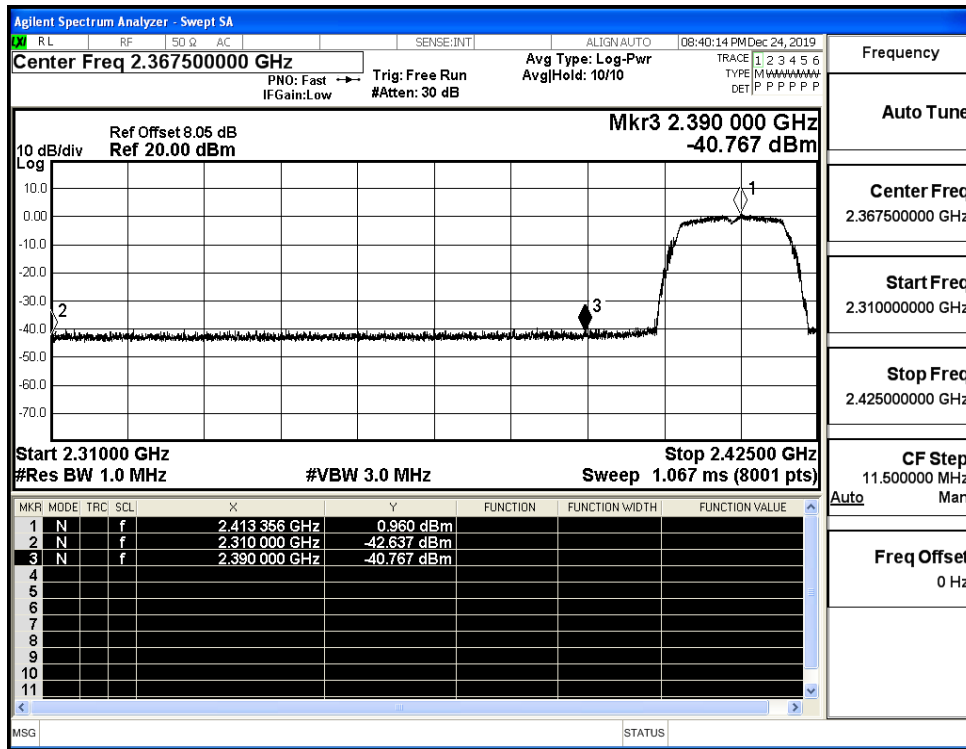
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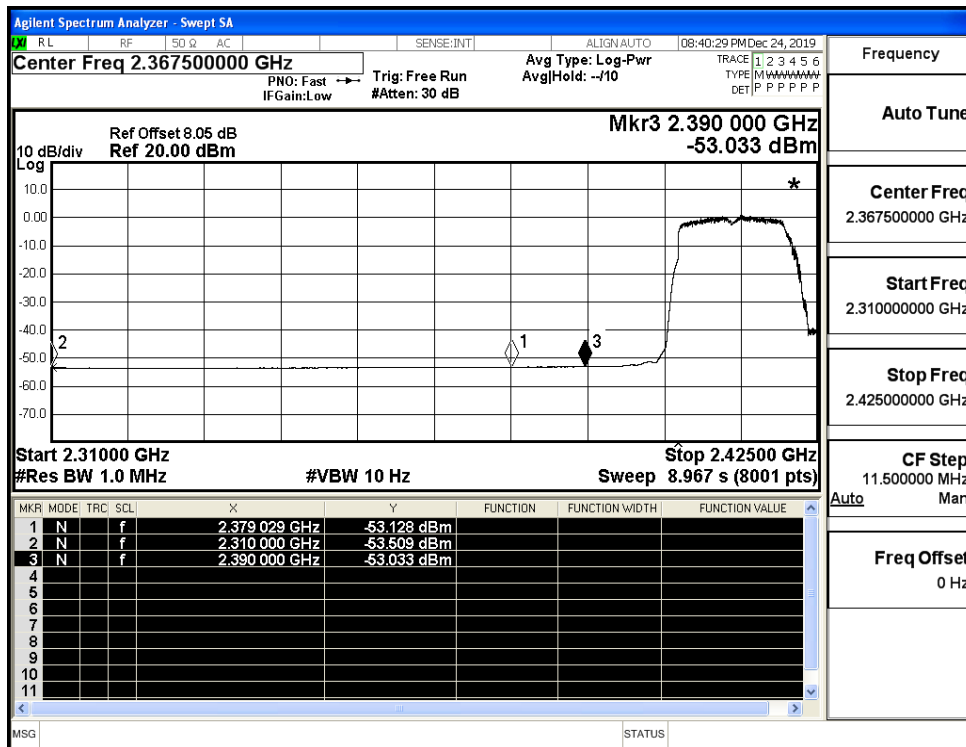
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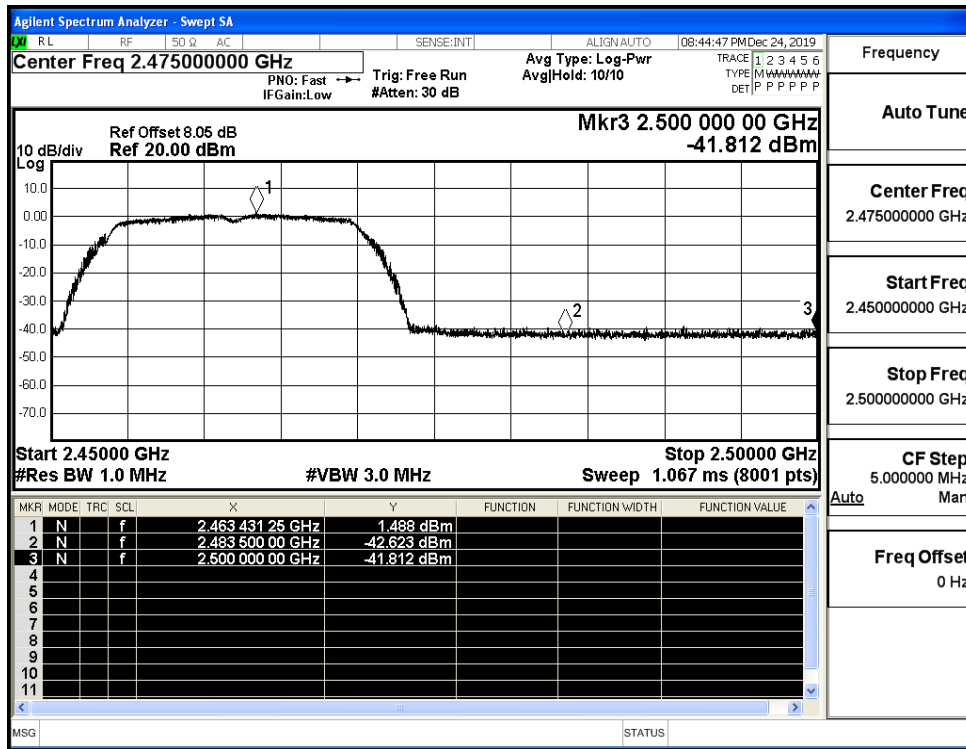
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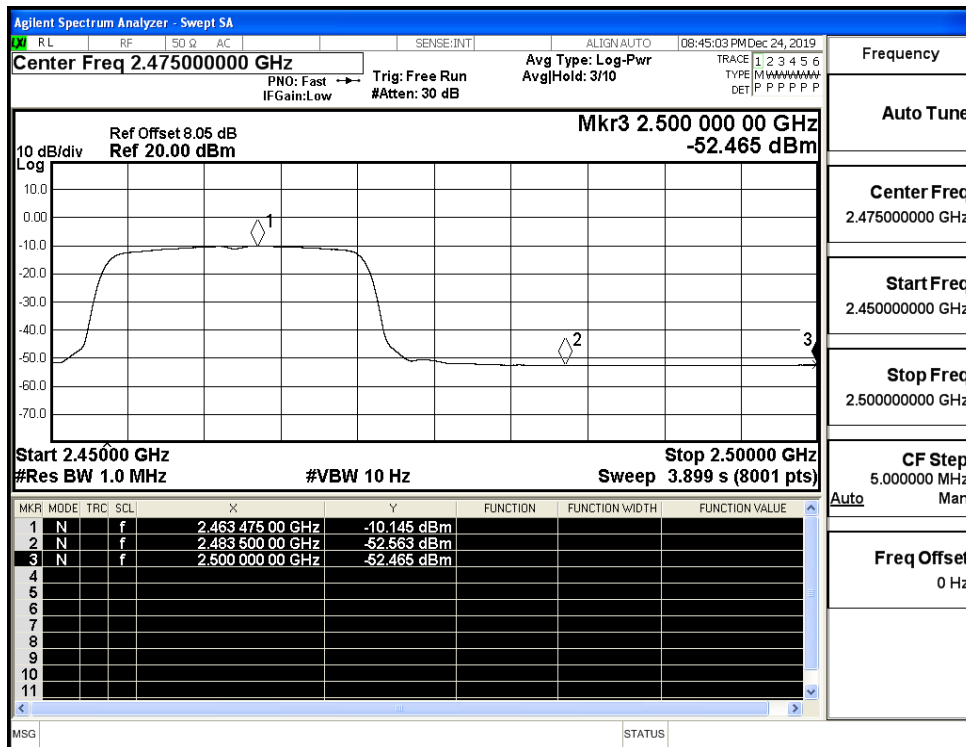
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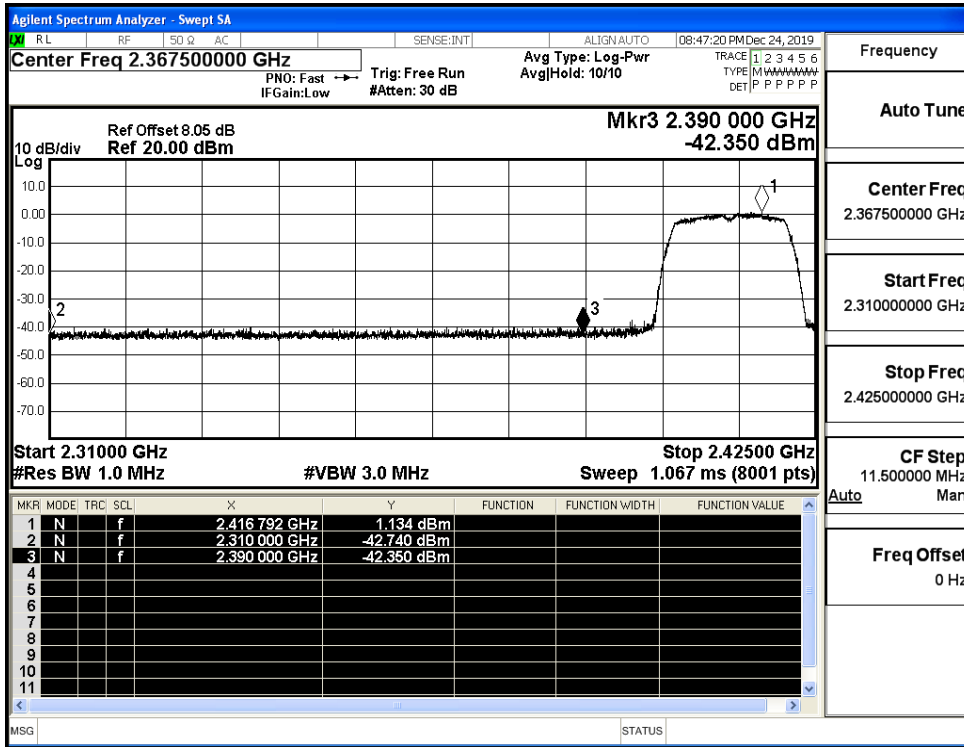
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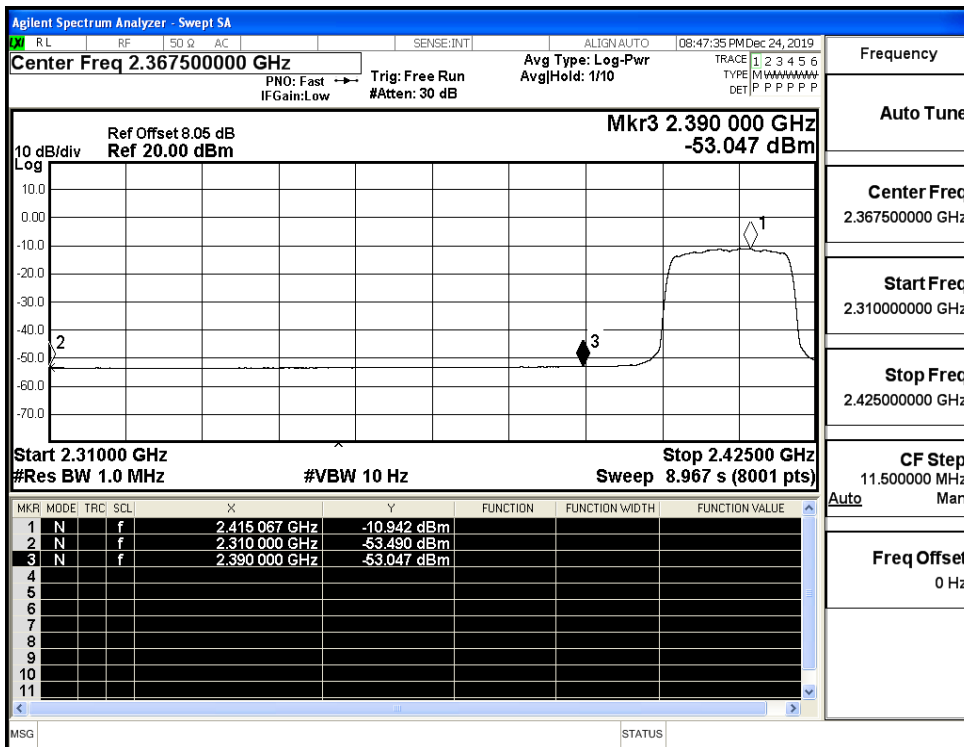
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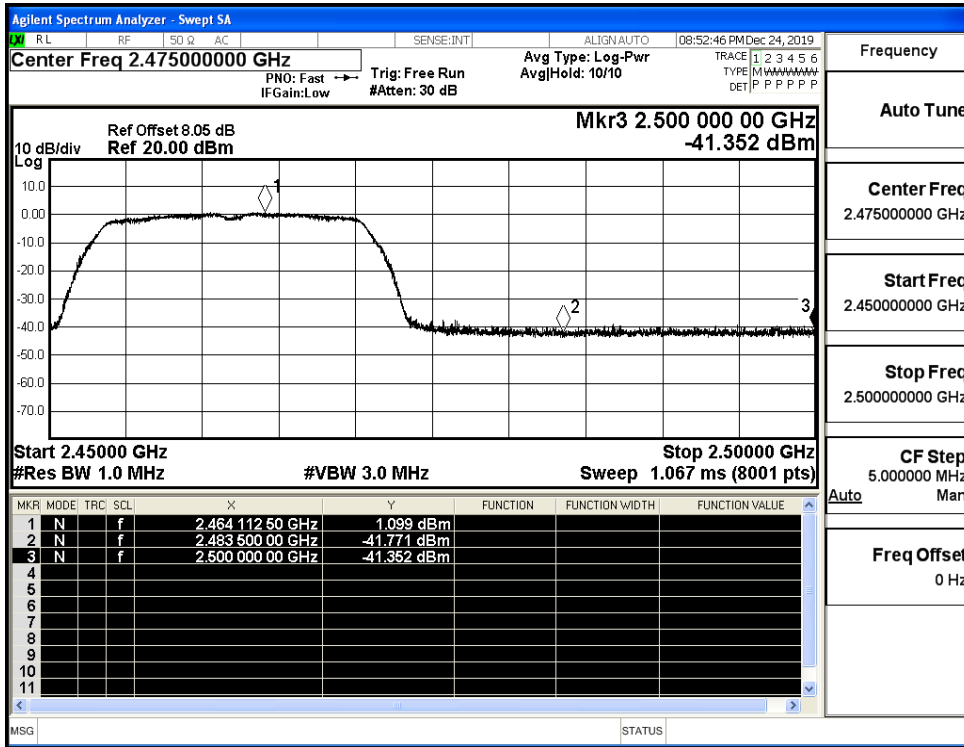
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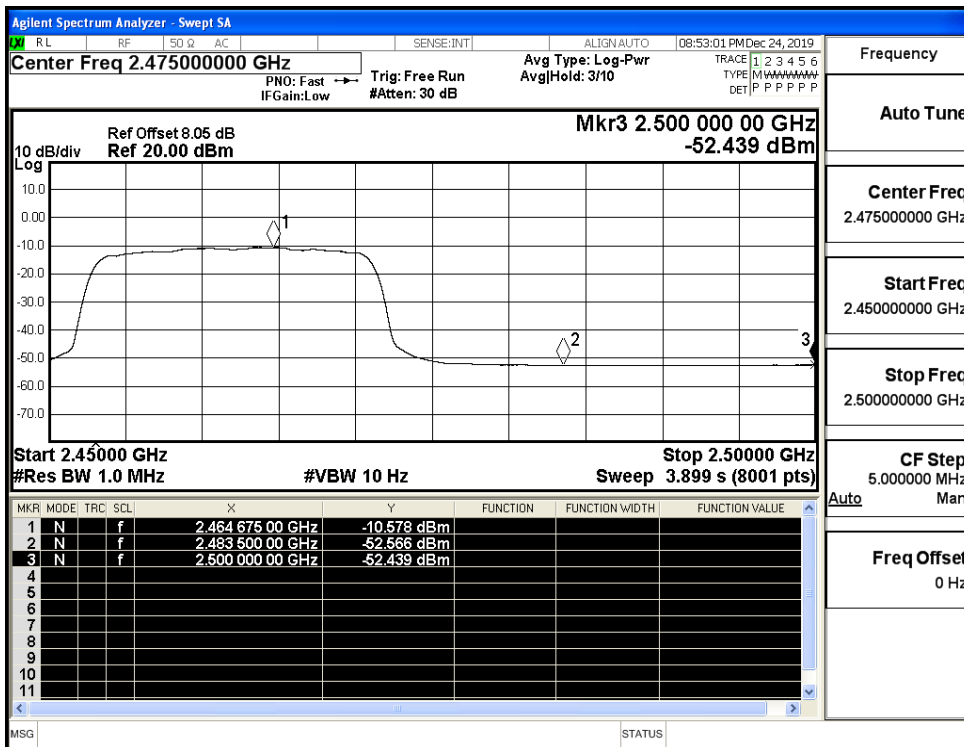
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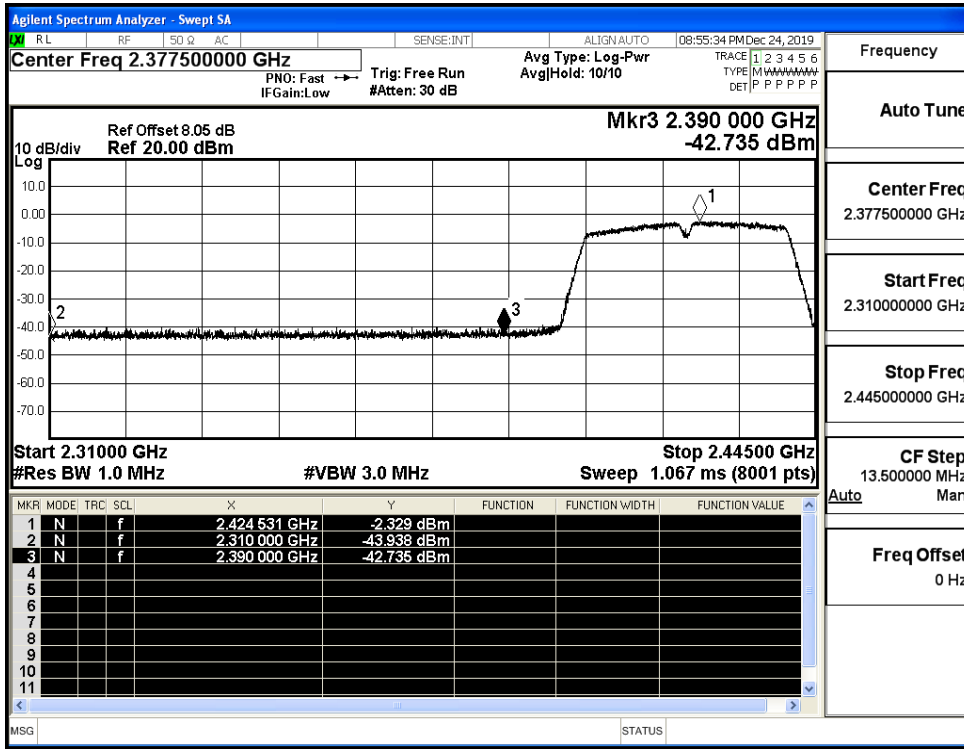
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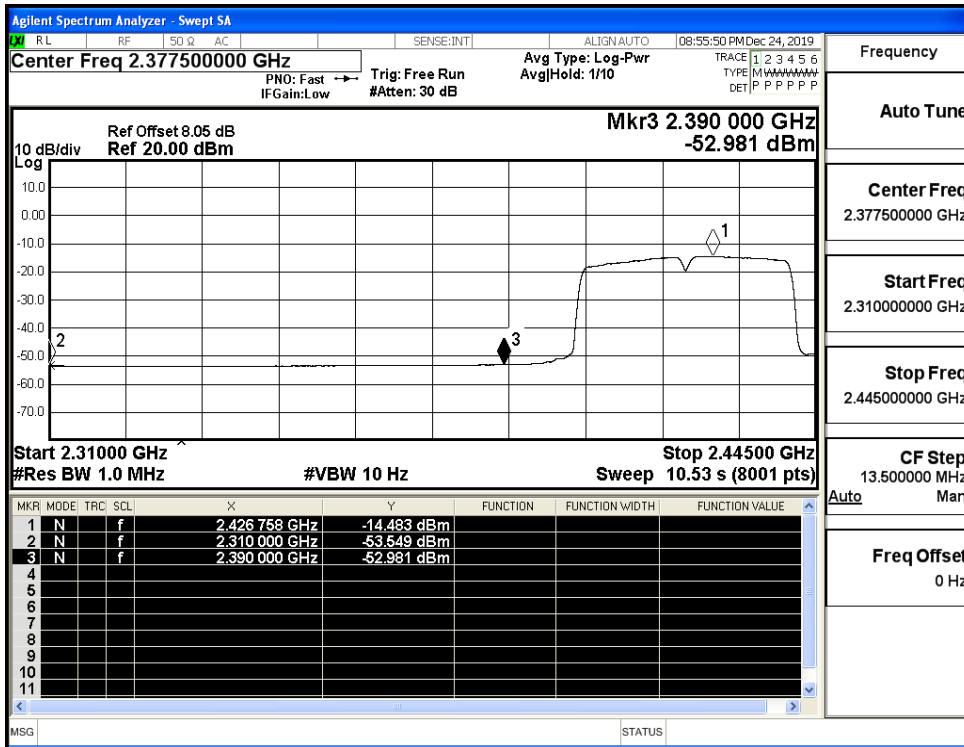
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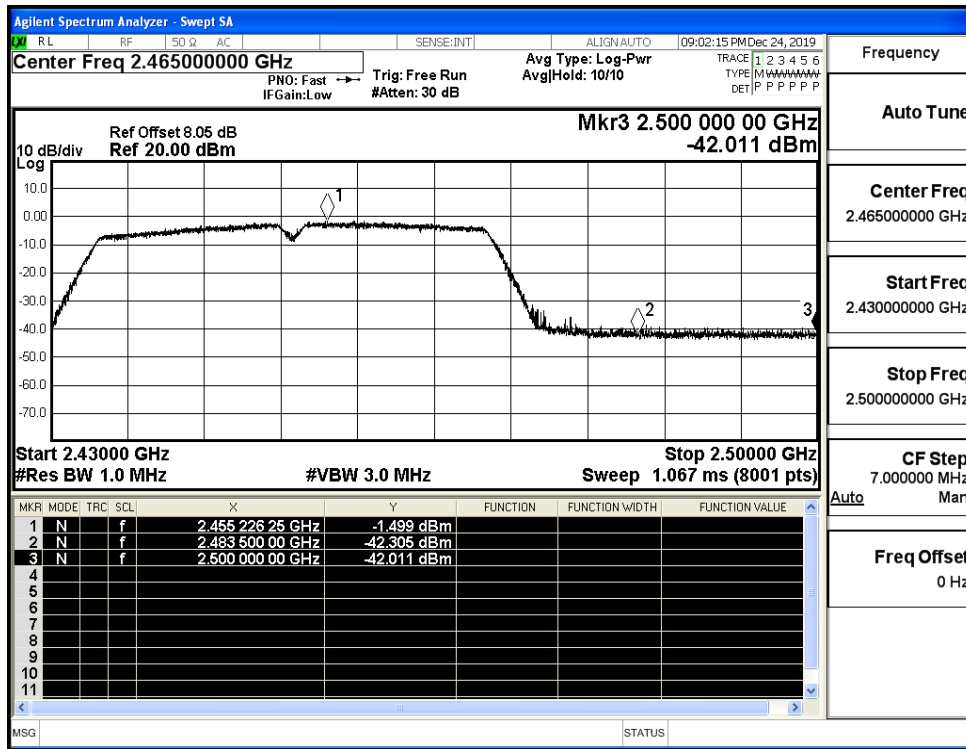
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



Restrict-band band-edge measurements_11N40SISO_2422_Ant1_AV



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_PEAK



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_AV

