

Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: shoplight

Trade Mark: Bravoled

Test Model: BL-LKSA4F-42W-XX-(WIFI)

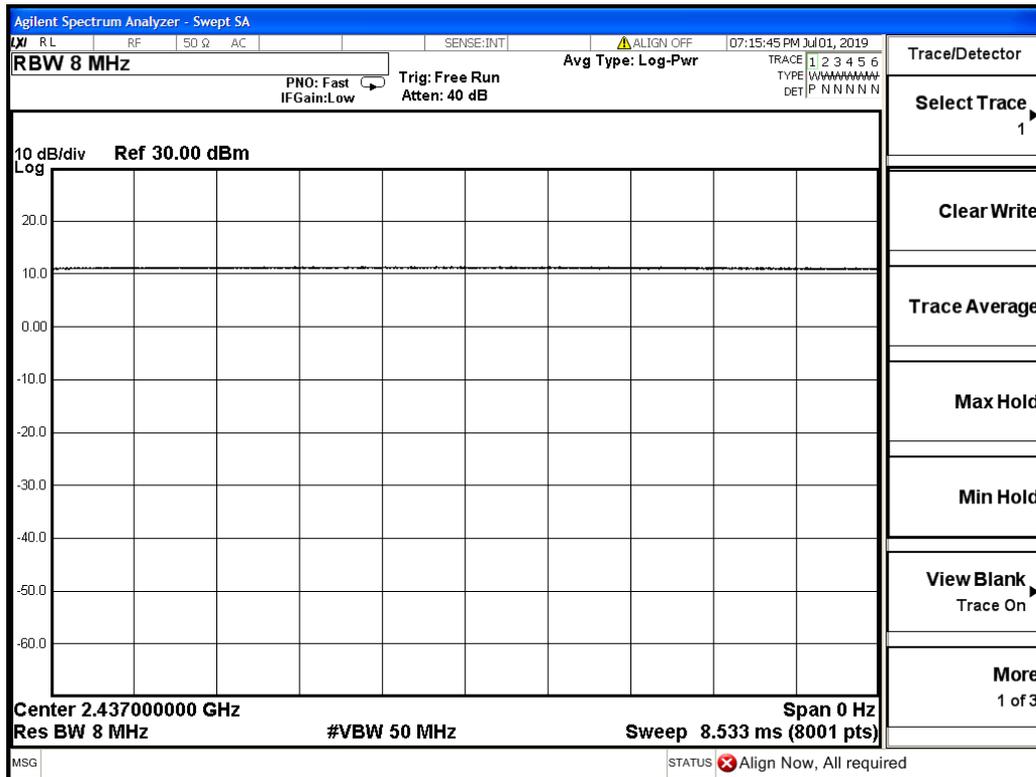
Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	54%
ATM Pressure:	100.0 kPa
Test Engineer:	CHUANG WANG
Supervised by:	JAYDEN ZHUO

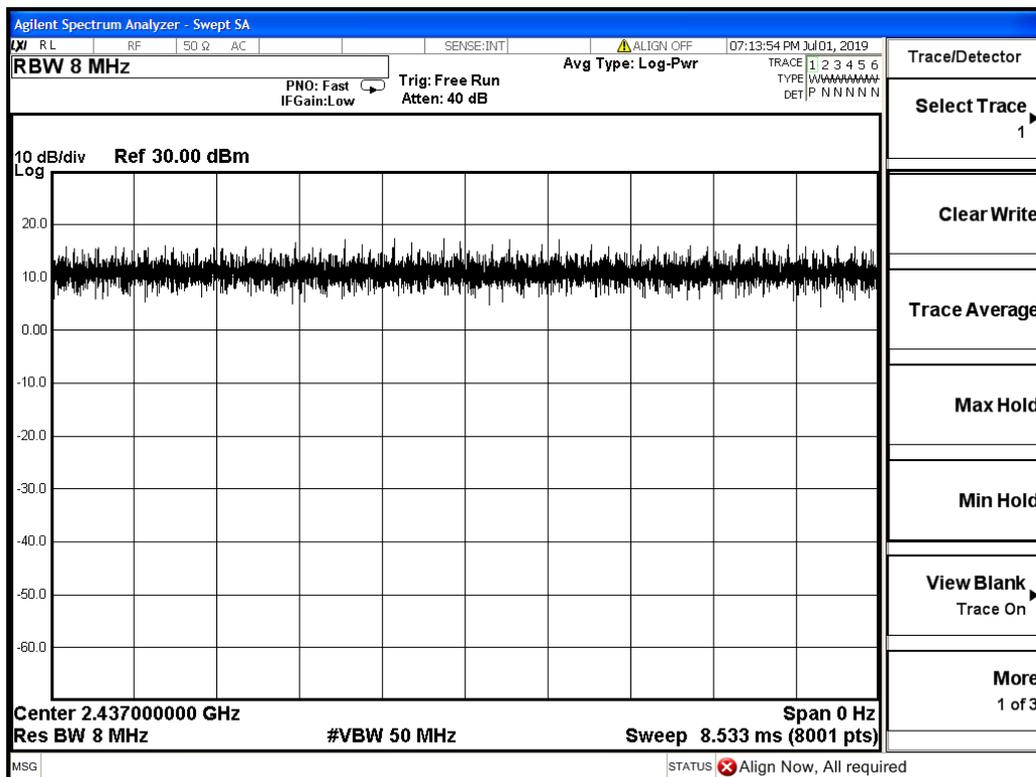
A.1 Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2412	Ant1	100	PASS
11G	2412	Ant1	100	PASS
11N20SISO	2412	Ant1	100	PASS
11N40SISO	2412	Ant1	100	PASS

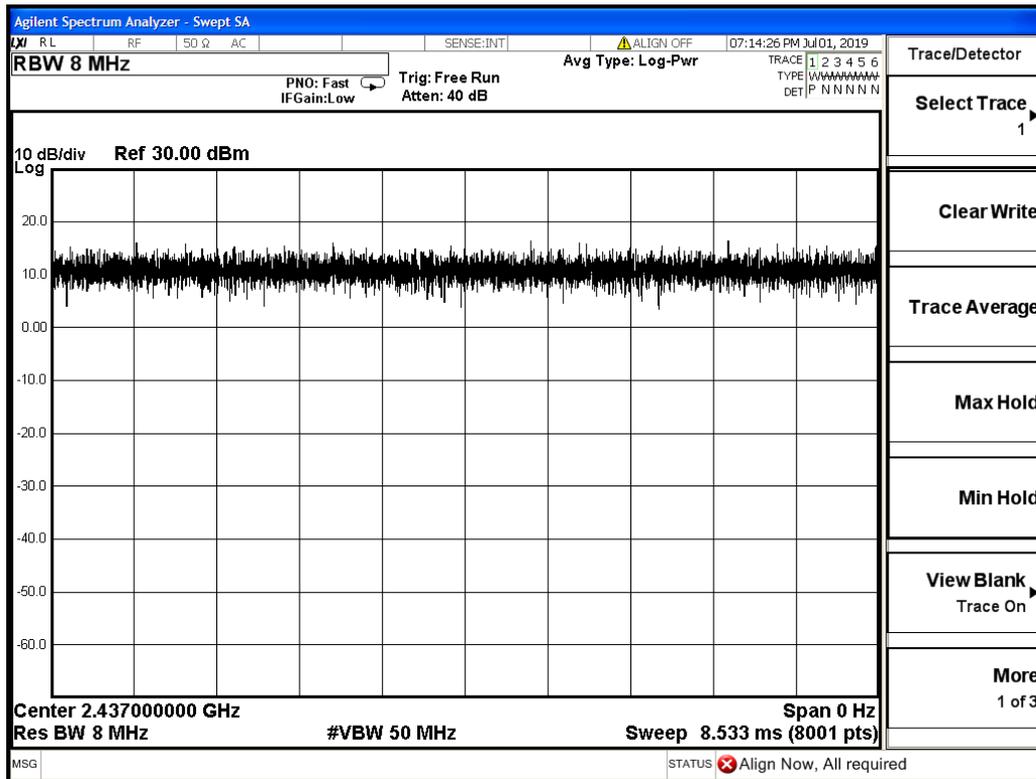
Duty Cycle_11B_2437_Ant1



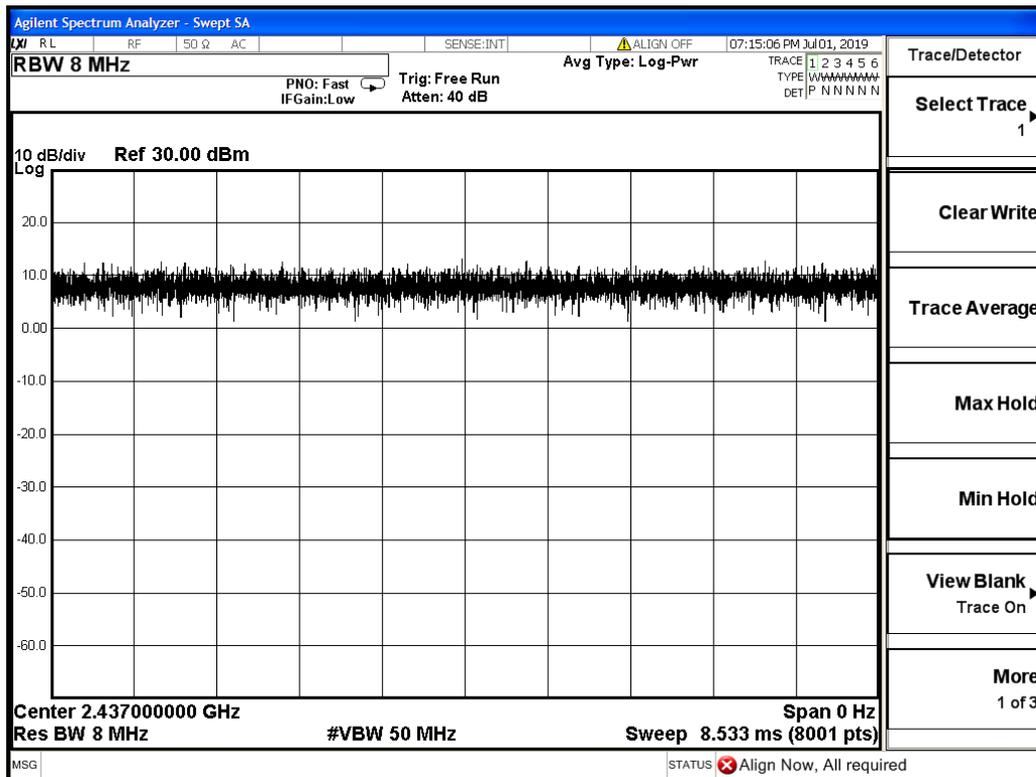
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1

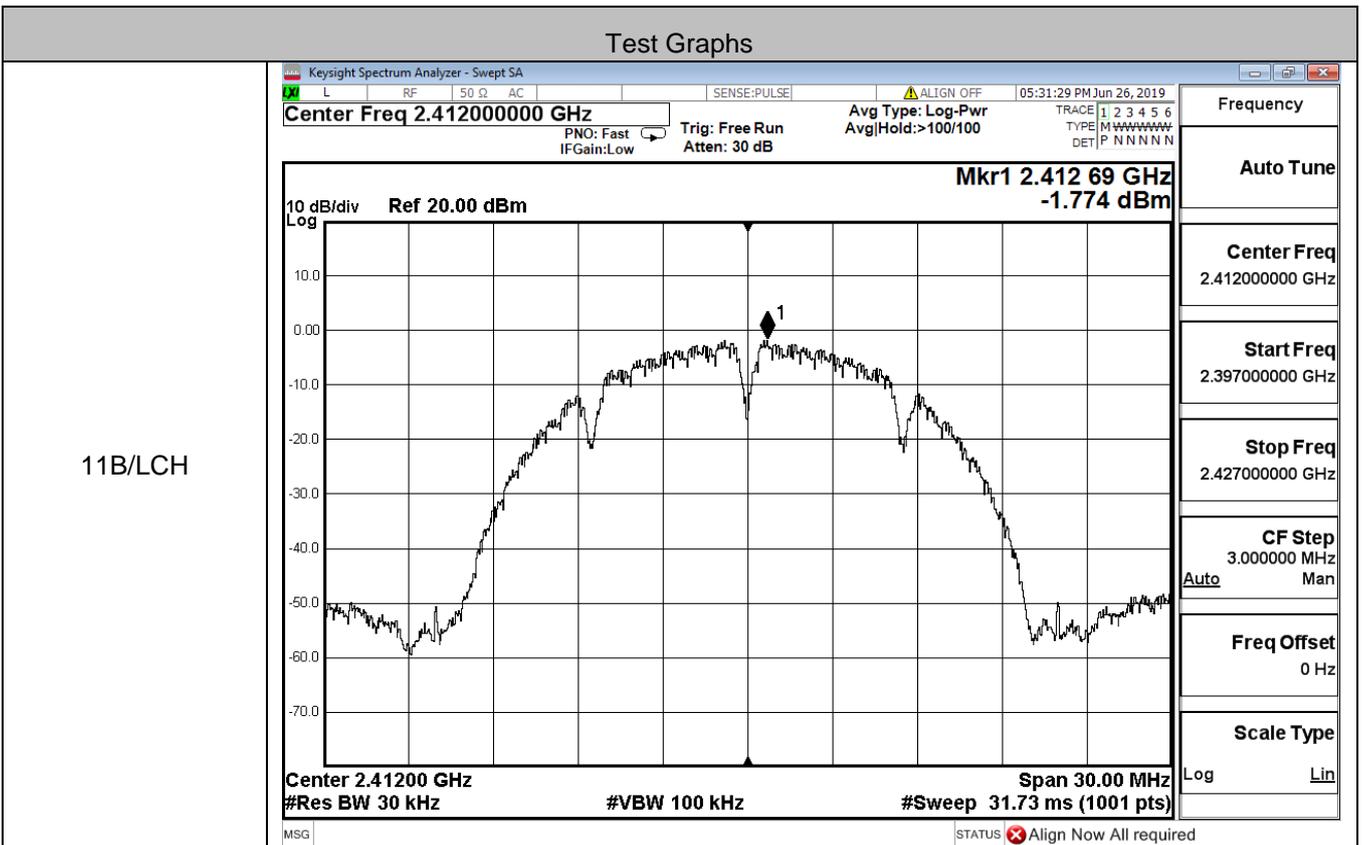


A.2 Maximum Conducted Output Power

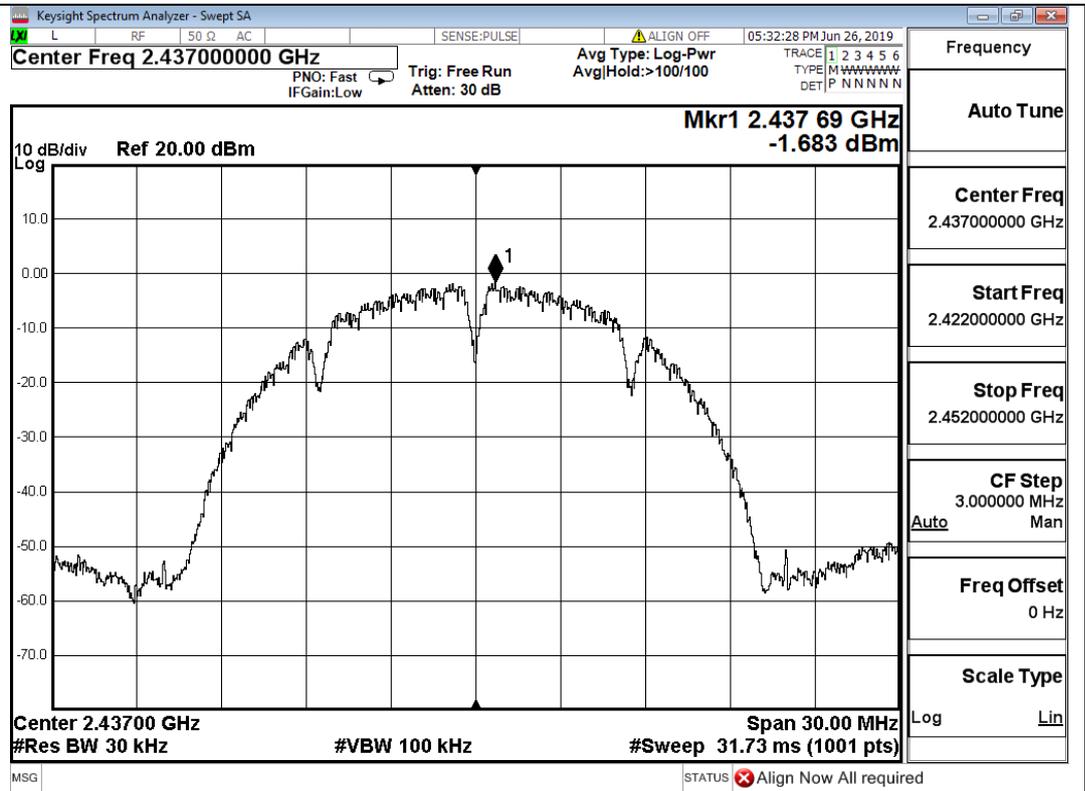
Mode	Channel	Meas. Peak Level [dBm]	Limit [dBm]	Verdict
11B	LCH	17.91	30	PASS
	MCH	18.19	30	PASS
	HCH	18.38	30	PASS
11G	LCH	18.44	30	PASS
	MCH	18.63	30	PASS
	HCH	17.09	30	PASS
11N20SISO	LCH	17.68	30	PASS
	MCH	17.40	30	PASS
	HCH	17.72	30	PASS
11N40SISO	LCH	15.81	30	PASS
	MCH	15.81	30	PASS
	HCH	16.28	30	PASS

A.3 Maximum Power Spectral Density

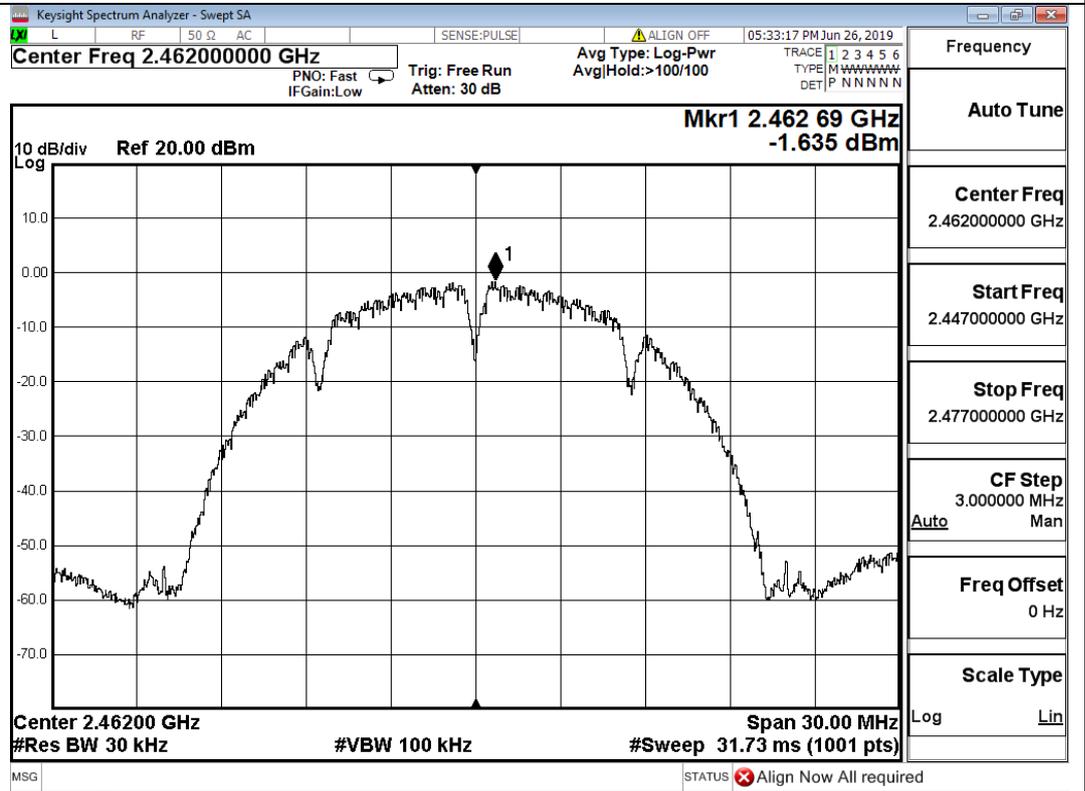
Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-1.774	8	PASS
	MCH	-1.683	8	PASS
	HCH	-1.635	8	PASS
11G	LCH	-7.131	8	PASS
	MCH	-7.035	8	PASS
	HCH	-6.479	8	PASS
11N20SISO	LCH	-7.150	8	PASS
	MCH	-7.117	8	PASS
	HCH	-7.017	8	PASS
11N40SISO	LCH	-8.933	8	PASS
	MCH	-9.399	8	PASS
	HCH	-8.993	8	PASS



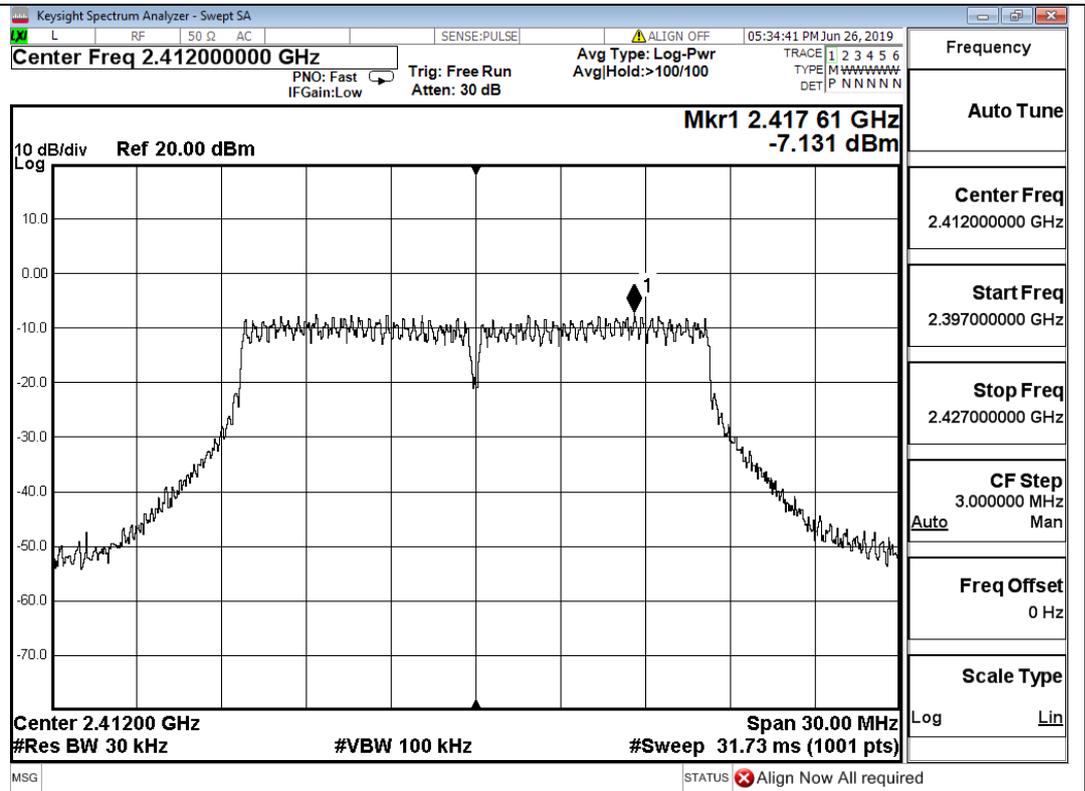
11B/MCH



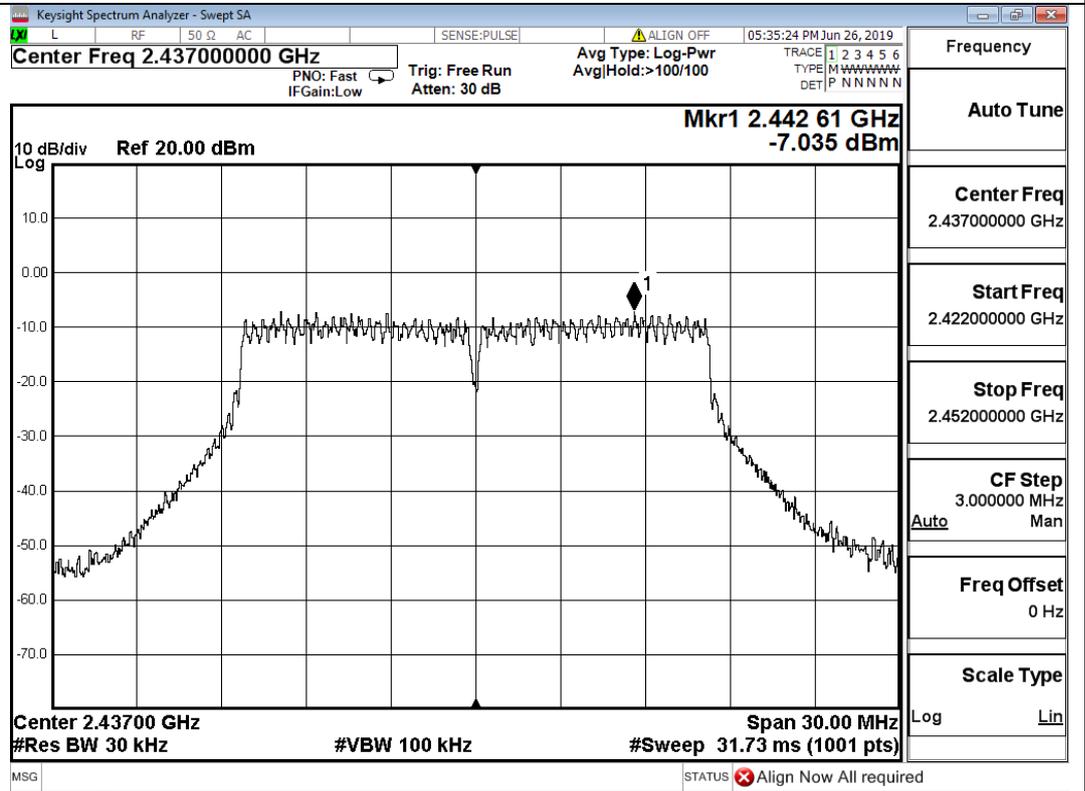
11B/HCH



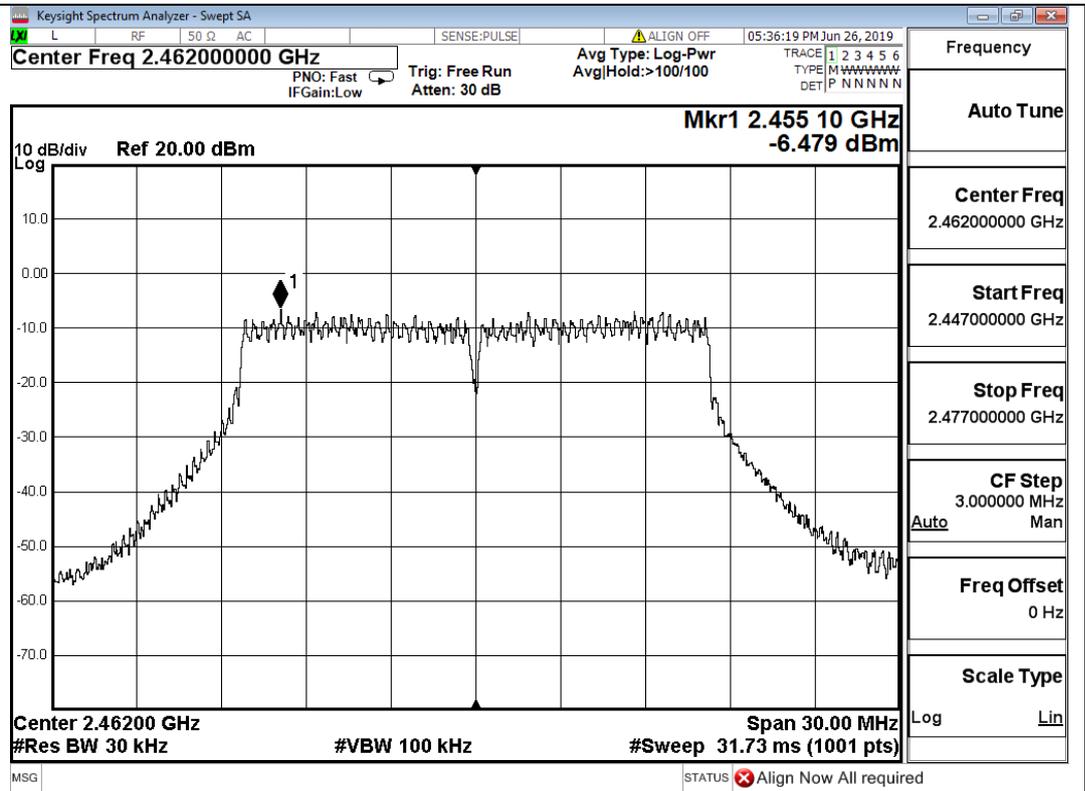
11G/LCH



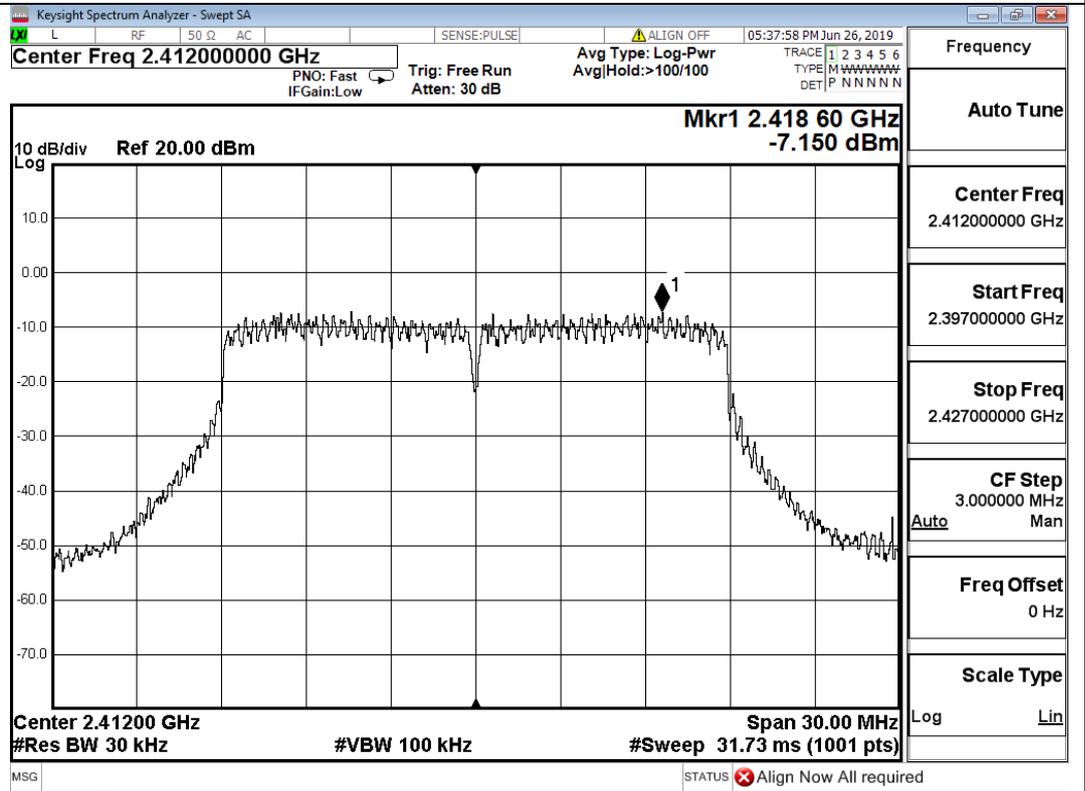
11G/MCH



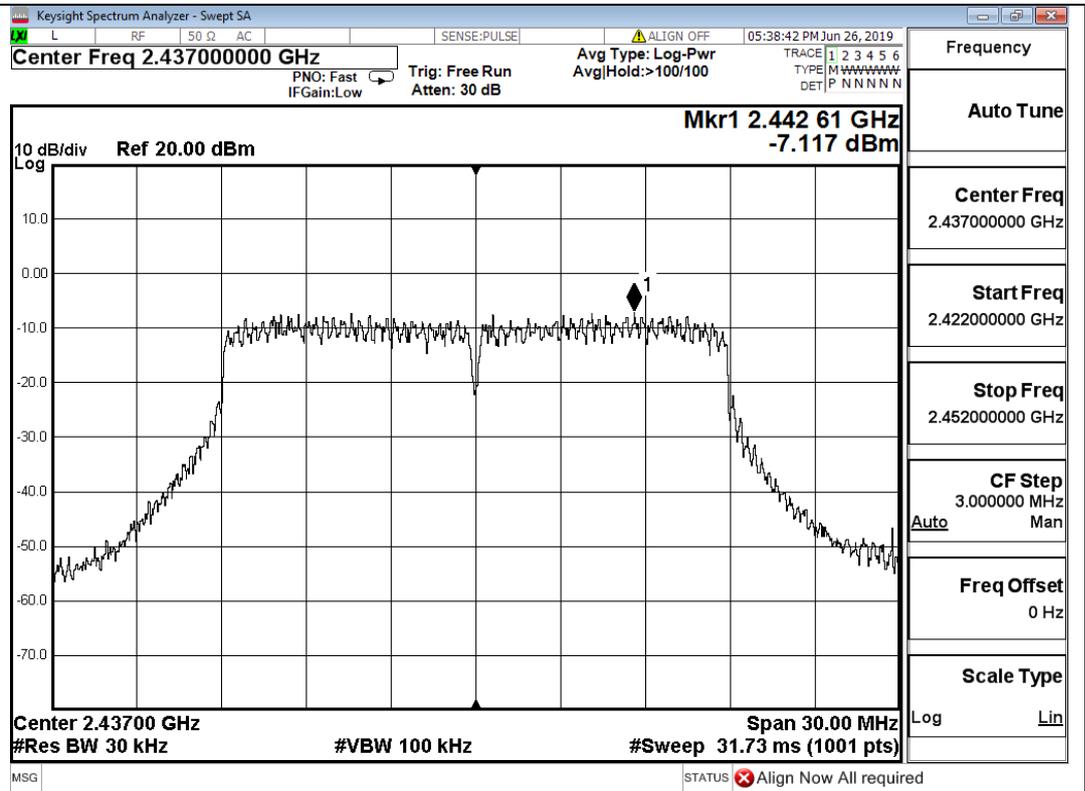
11G/HCH



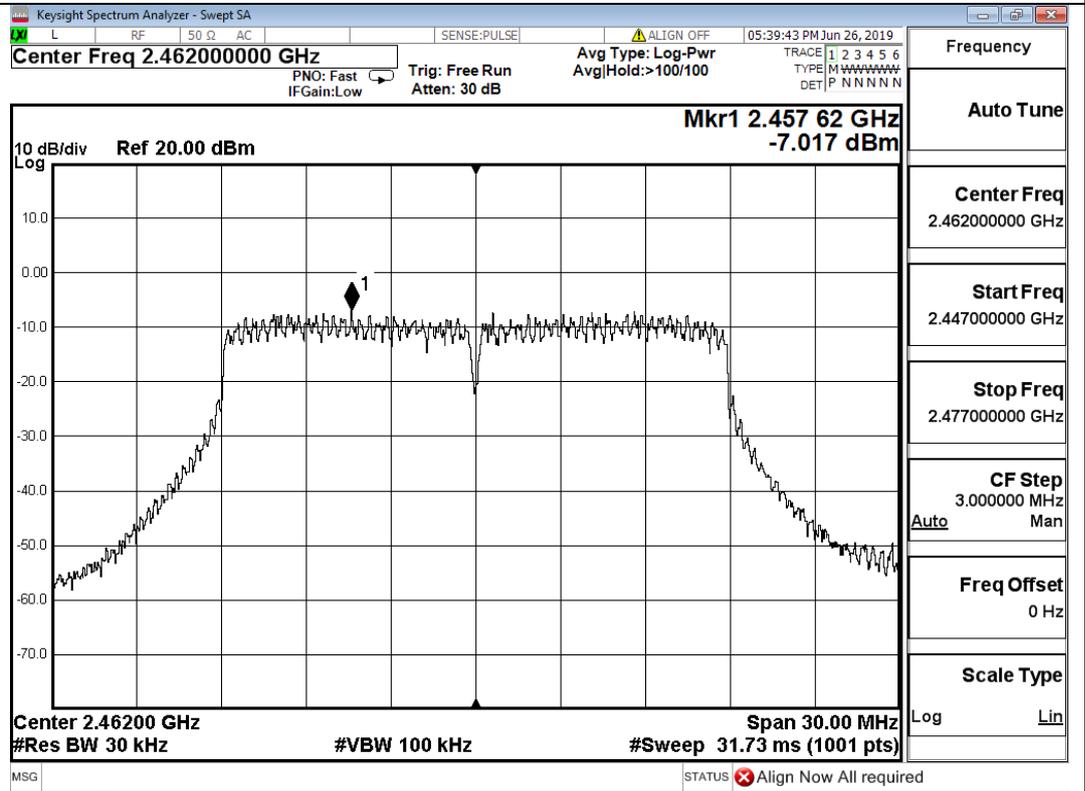
11N20SISO/LCH



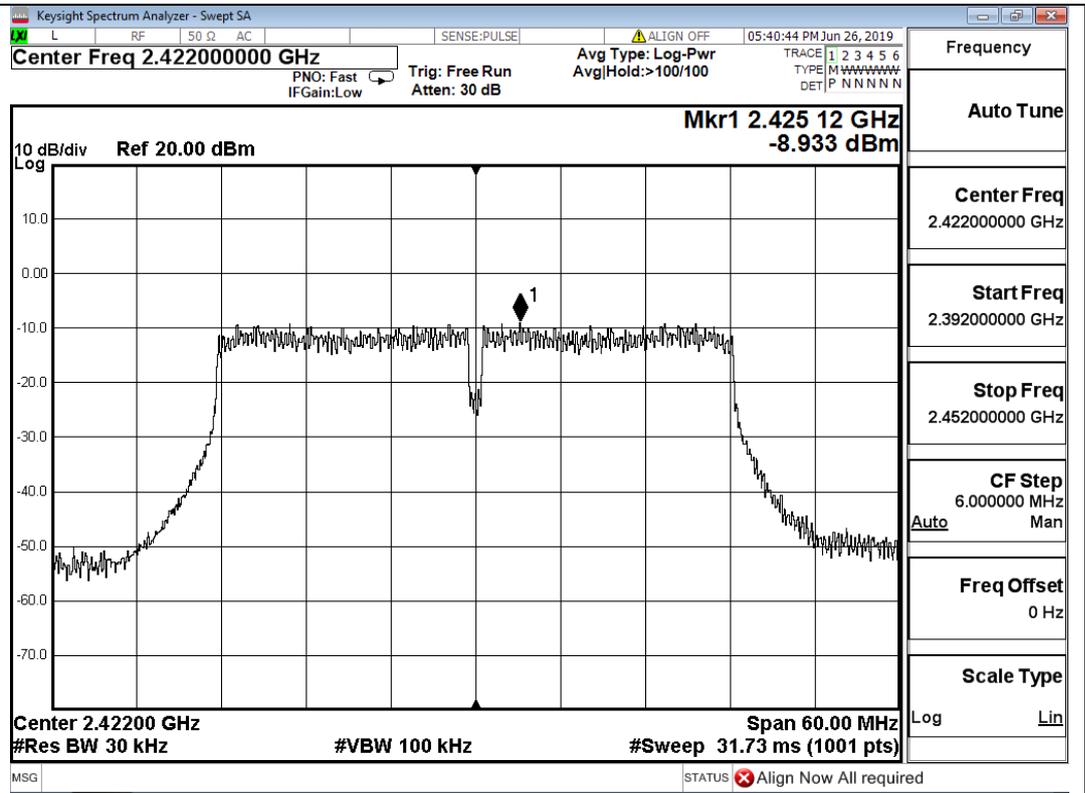
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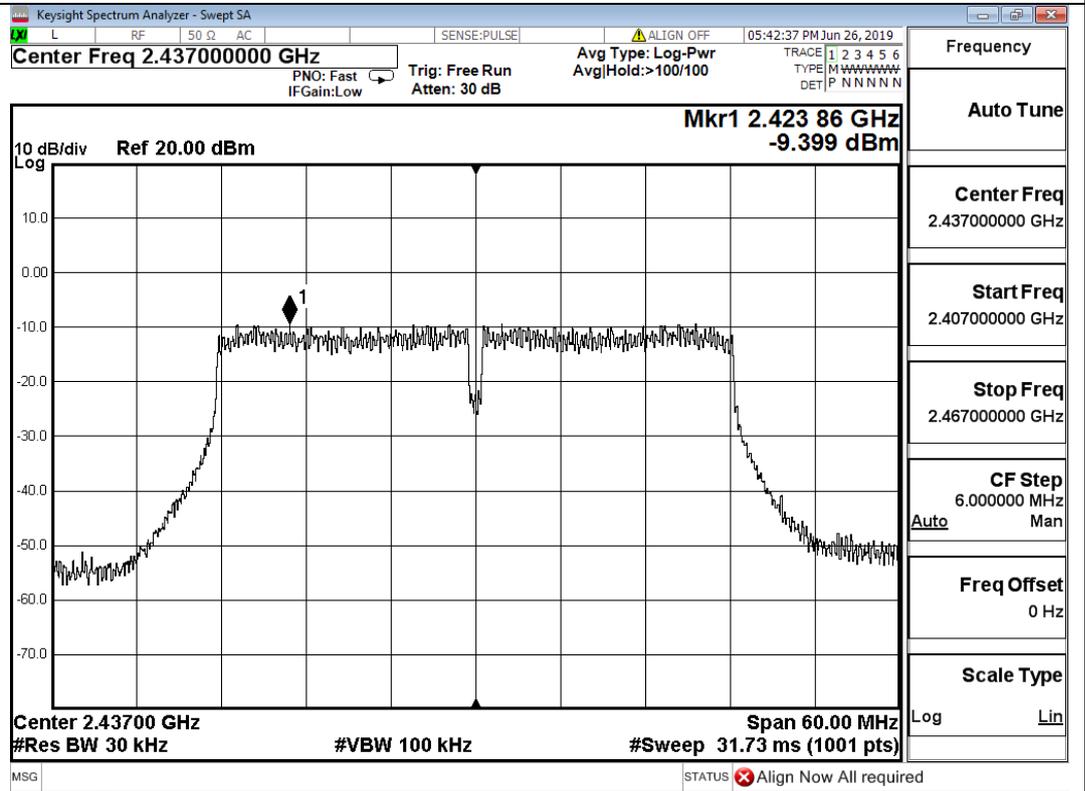
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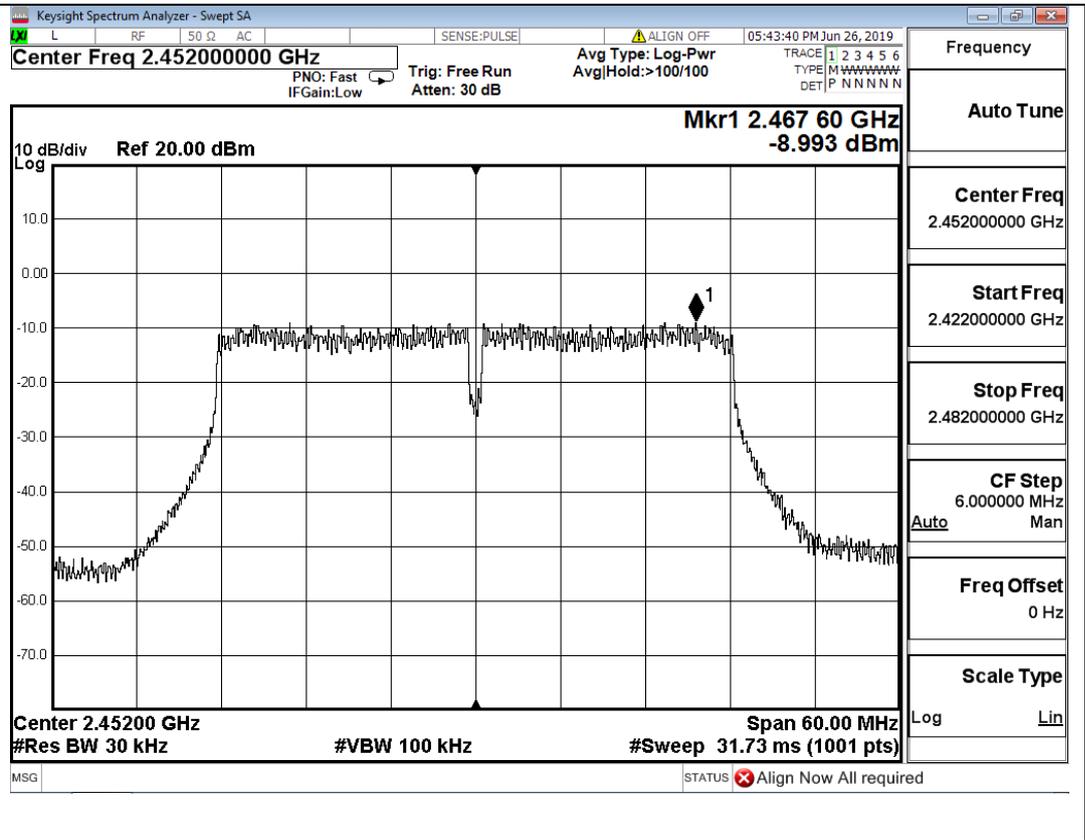
11N40SISO/LCH



11N40SISO/MCH

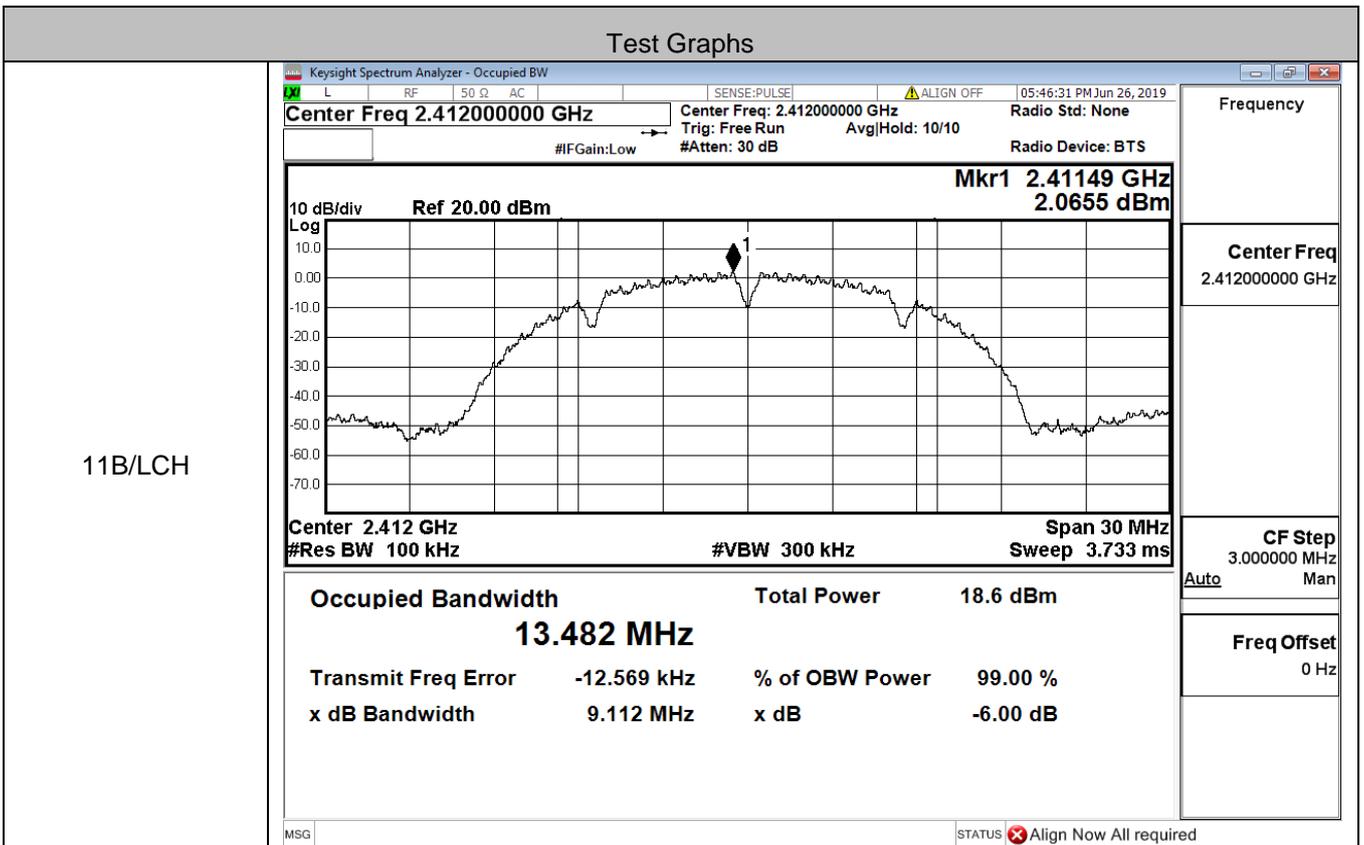


11N40SISO/HCH

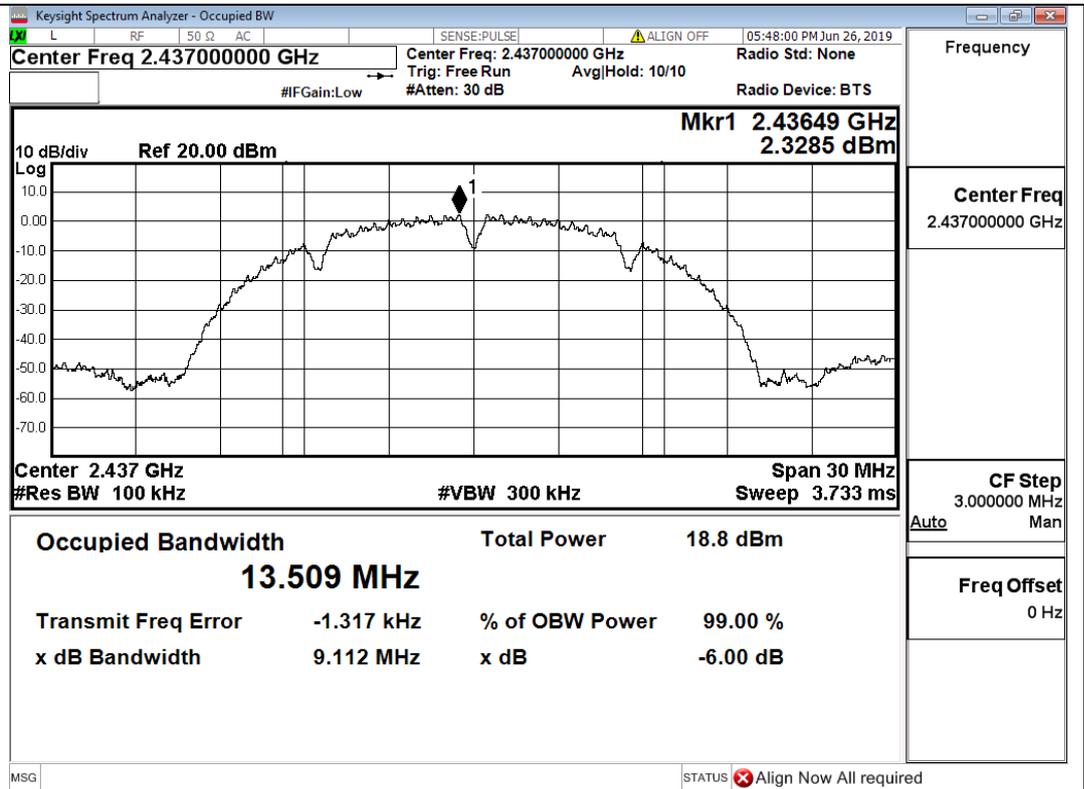


A.4 6dB Bandwidth

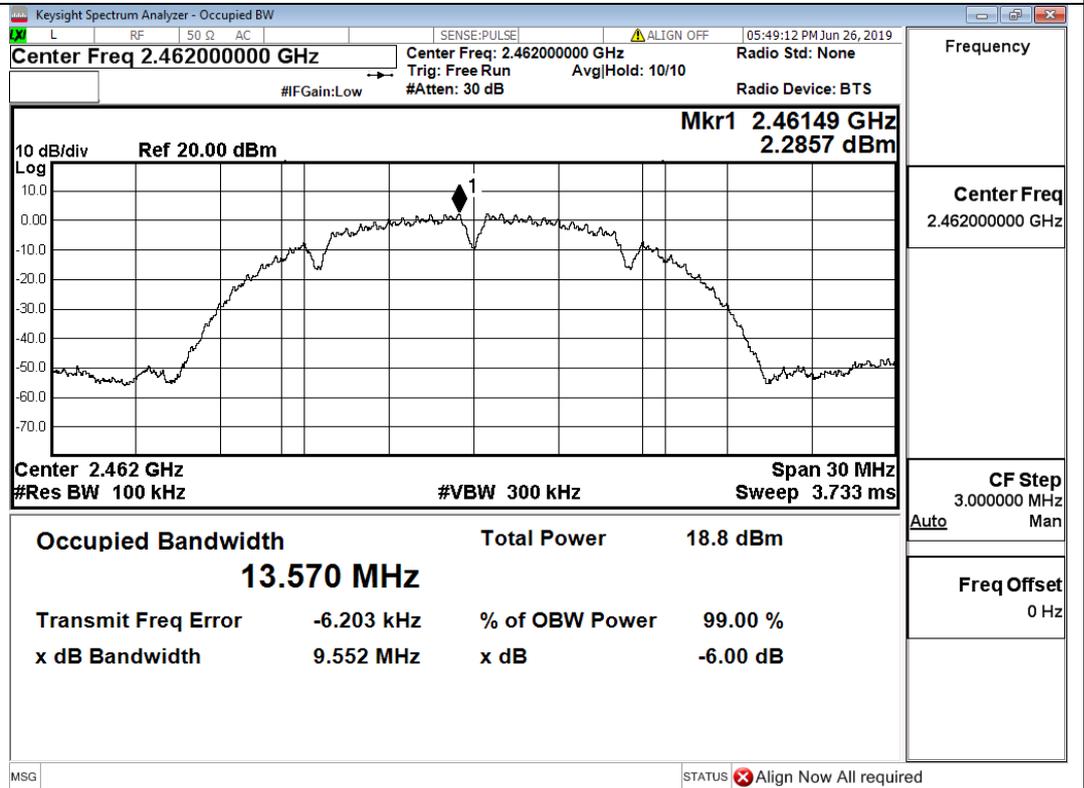
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.11	≥0.5	PASS
	MCH	9.11	≥0.5	PASS
	HCH	9.55	≥0.5	PASS
11G	LCH	16.53	≥0.5	PASS
	MCH	16.55	≥0.5	PASS
	HCH	16.55	≥0.5	PASS
11N20SISO	LCH	17.67	≥0.5	PASS
	MCH	17.66	≥0.5	PASS
	HCH	17.66	≥0.5	PASS
11N40SISO	LCH	36.47	≥0.5	PASS
	MCH	36.49	≥0.5	PASS
	HCH	36.50	≥0.5	PASS



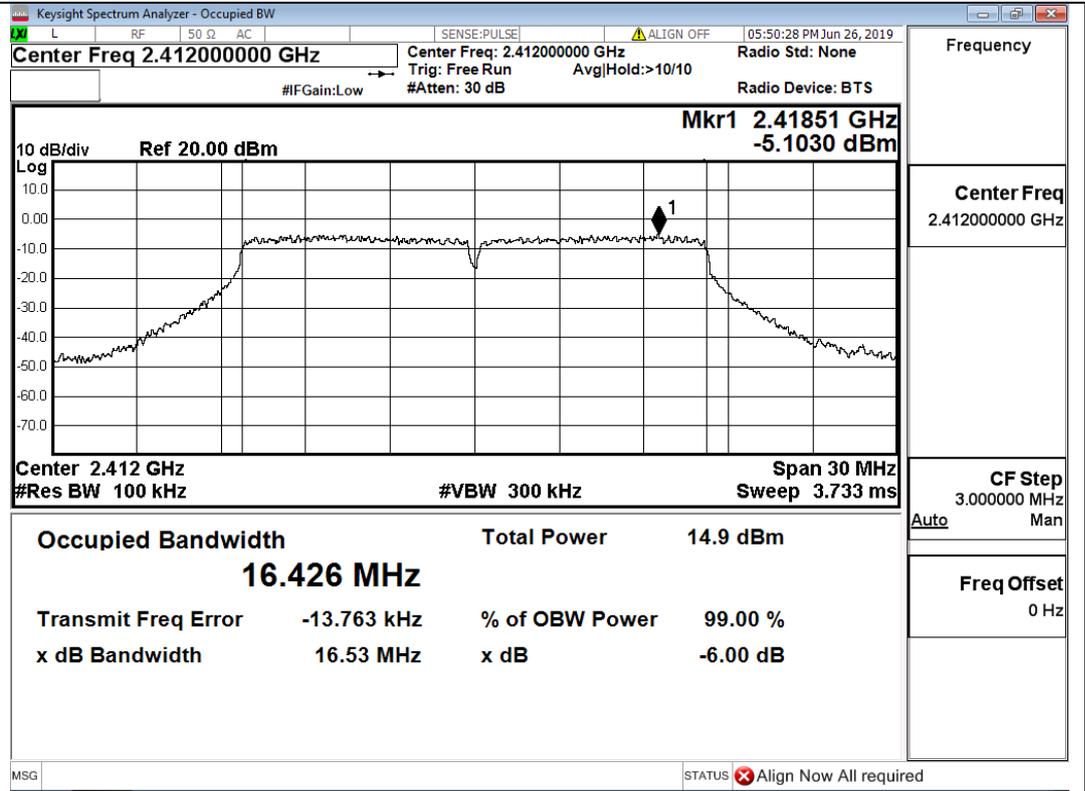
11B/MCH



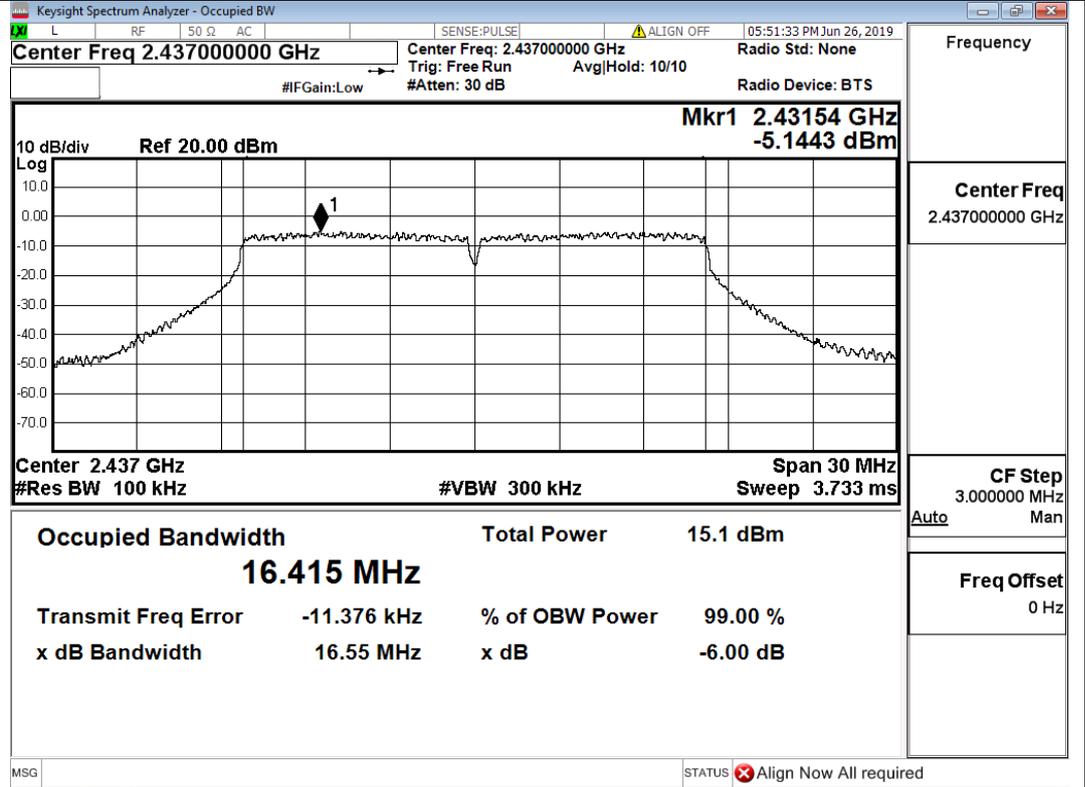
11B/HCH



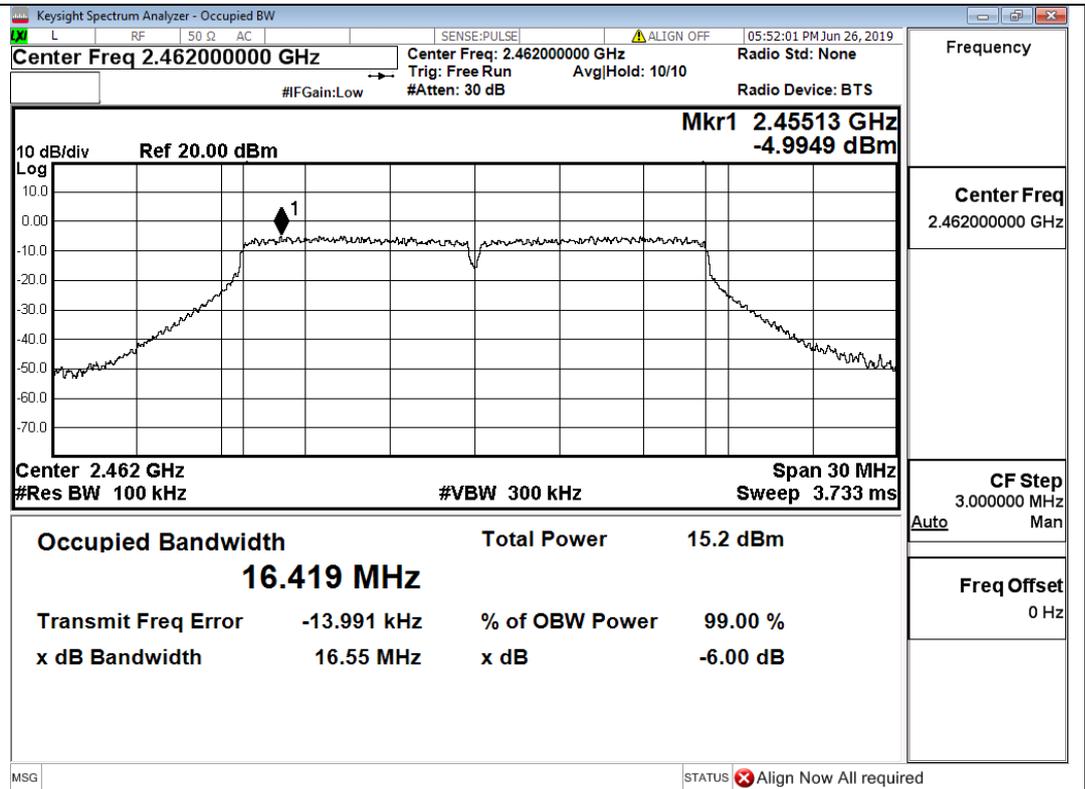
11G/LCH



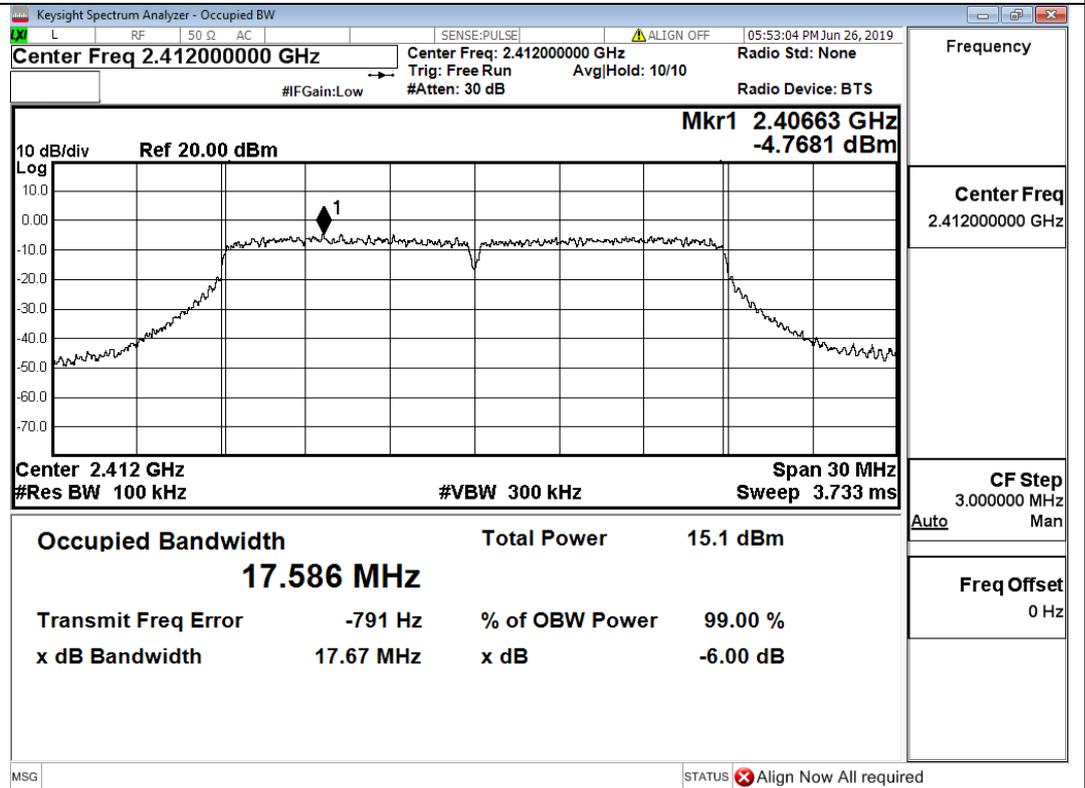
11G/MCH



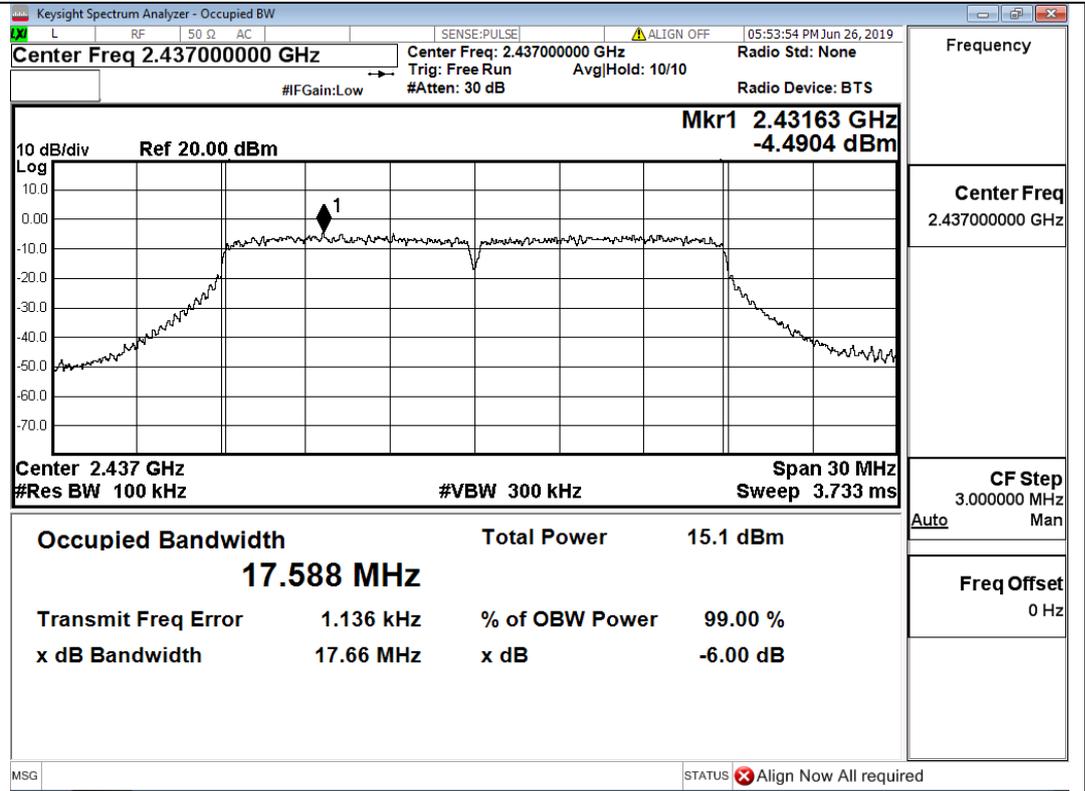
11G/HCH



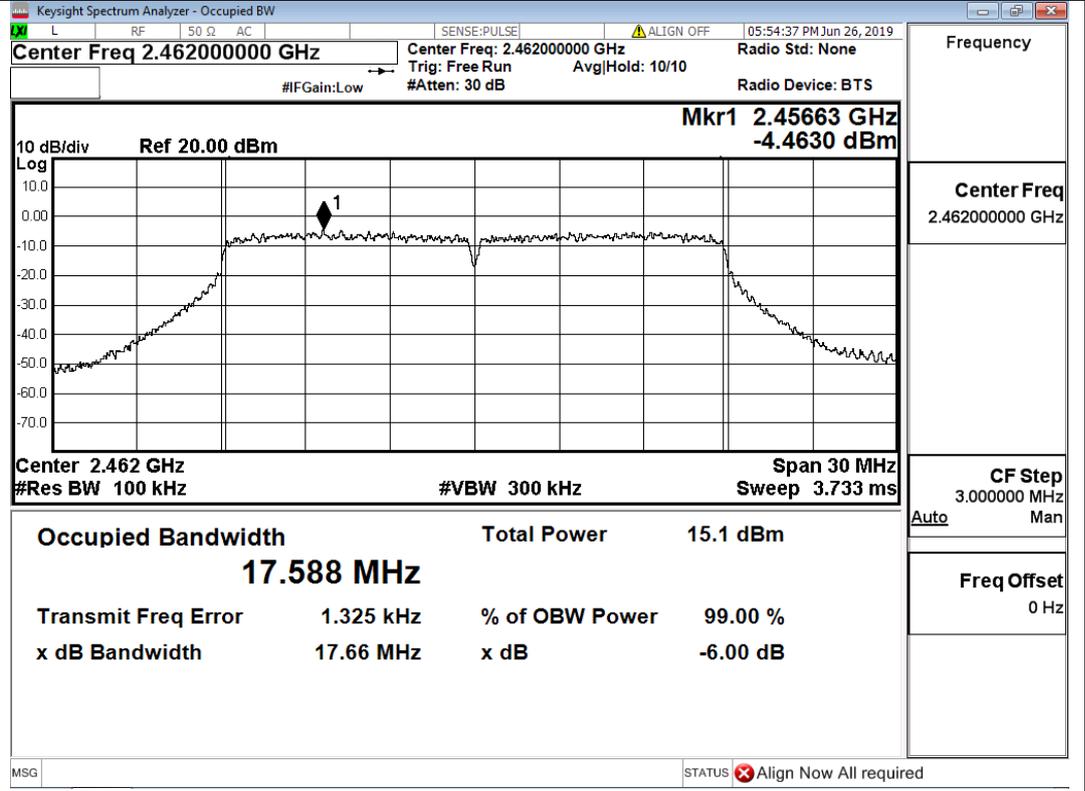
11N20SISO/LCH



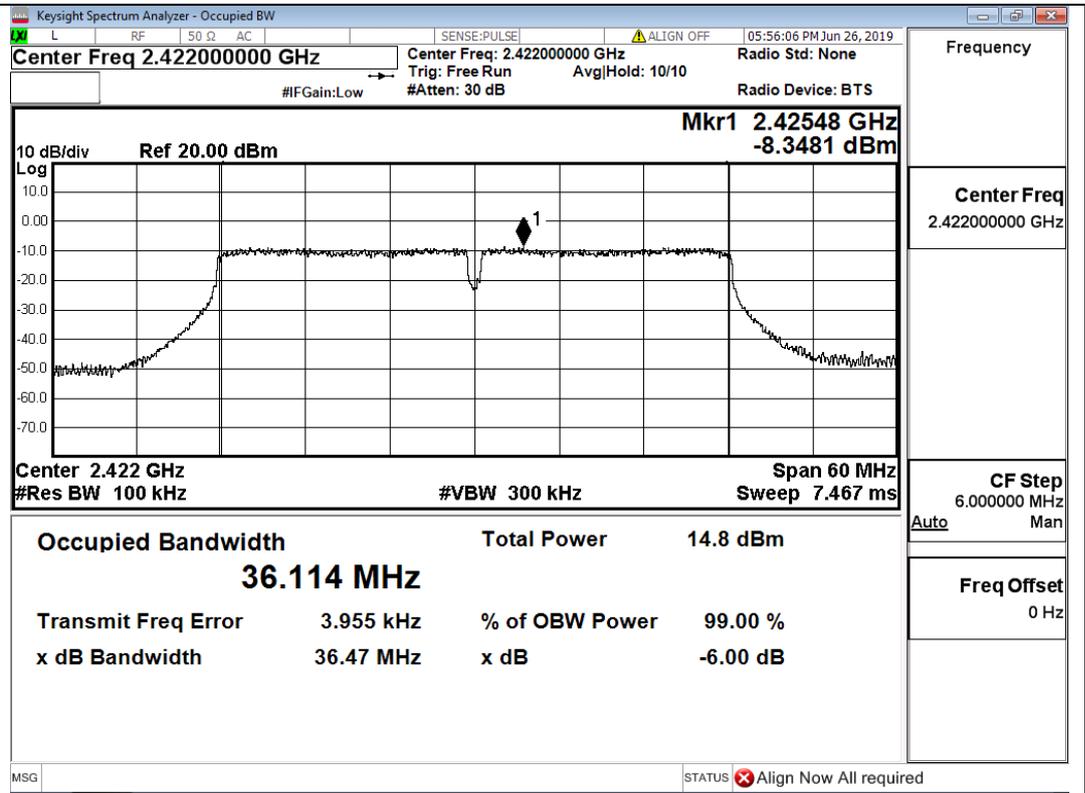
11N20SISO/MCH



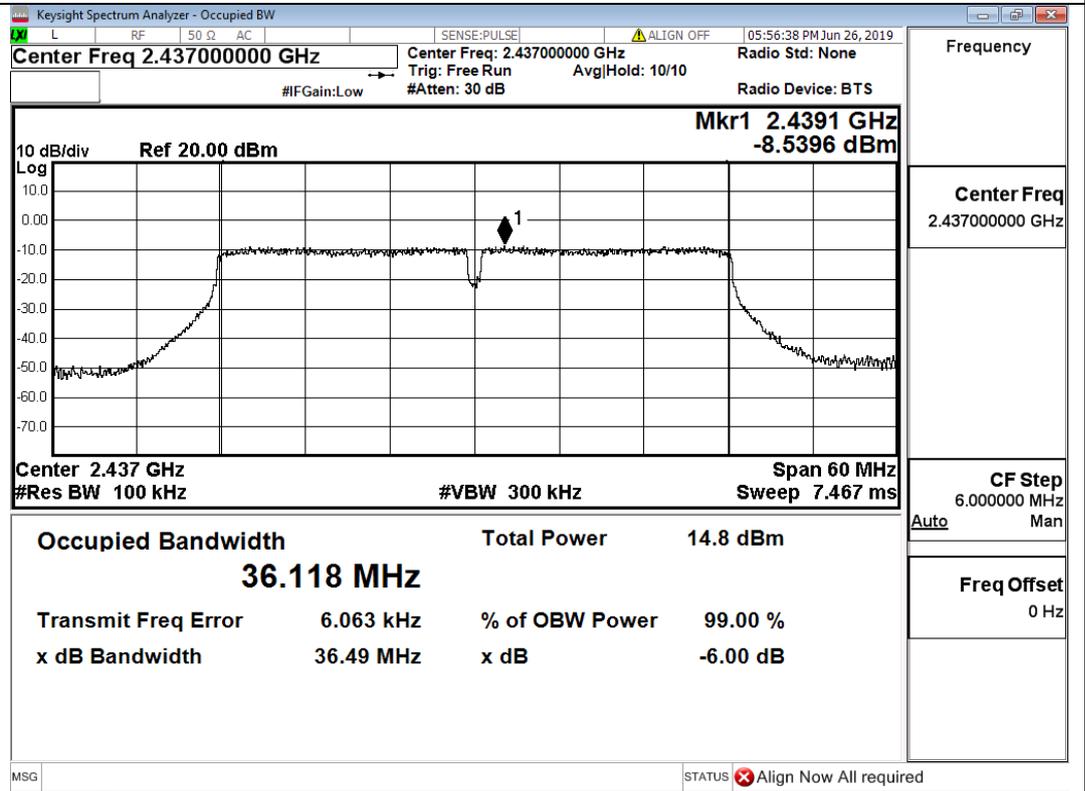
11N20SISO/HCH



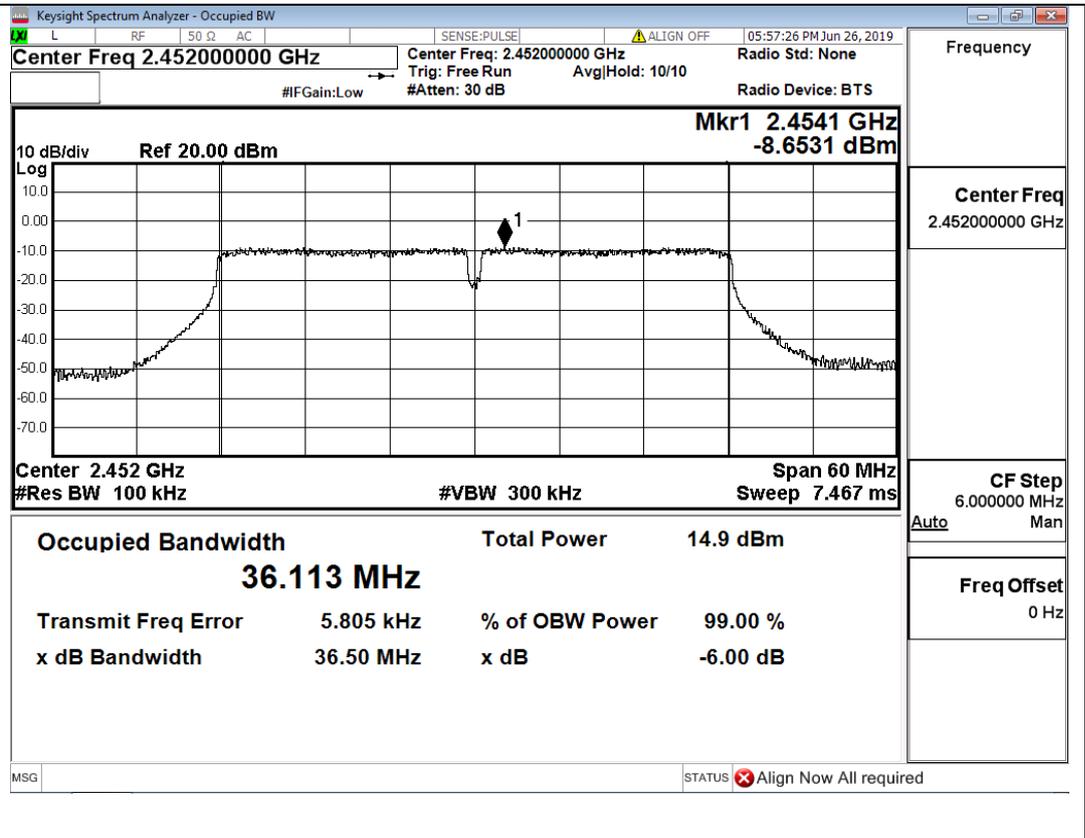
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

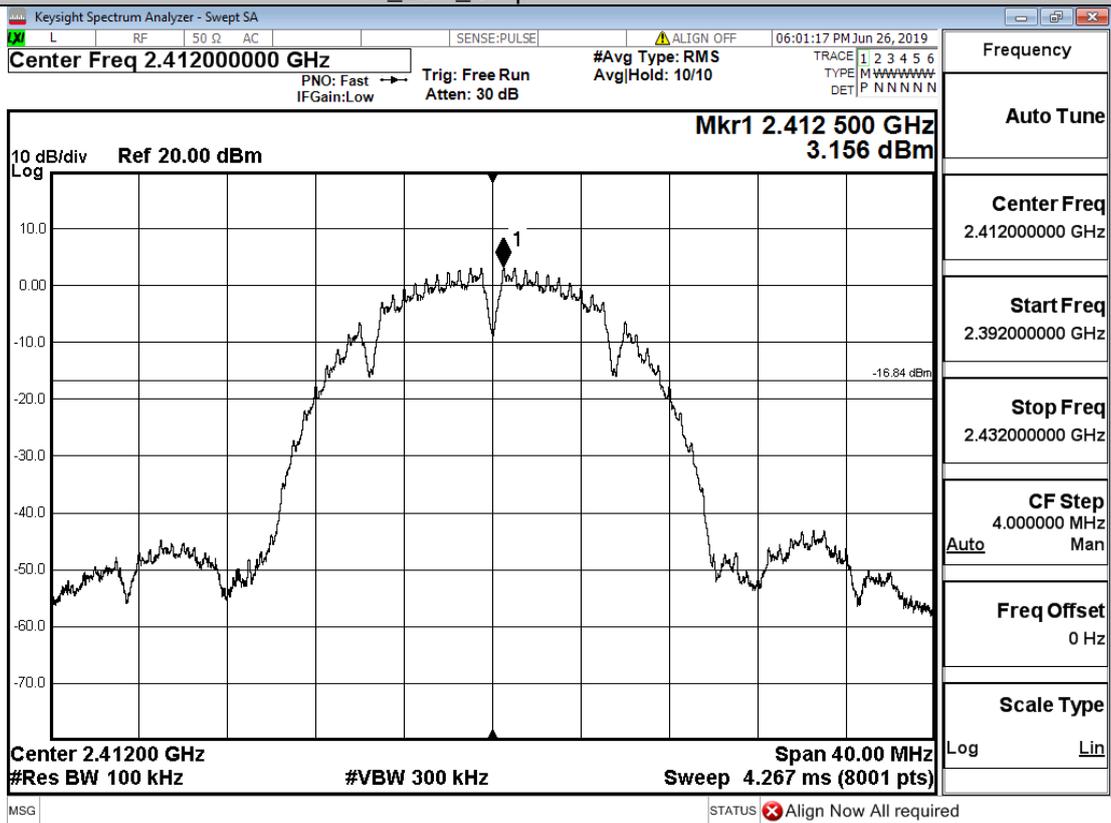


A.5 RF Conducted Spurious Emissions

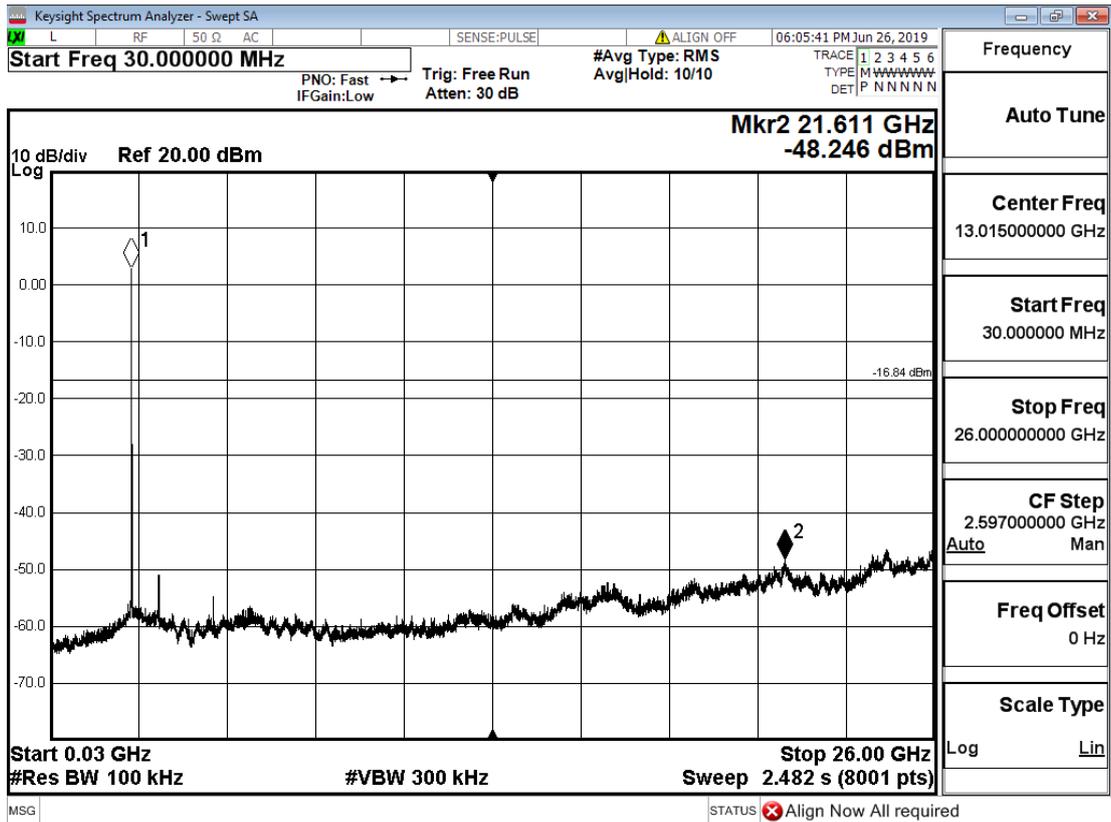
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	3.156	-48.246	-16.84	PASS
	MCH	3.102	-49.392	-16.90	PASS
	HCH	3.358	-48.848	-16.64	PASS
11G	LCH	-4.101	-49.303	-24.10	PASS
	MCH	-4.278	-48.996	-24.28	PASS
	HCH	-4.167	-49.155	-24.17	PASS
11N20 SISO	LCH	-3.942	-49.493	-23.94	PASS
	MCH	-3.738	-46.932	-23.74	PASS
	HCH	-3.674	-49.921	-23.67	PASS
11N40 SISO	LCH	-6.979	-49.564	-26.98	PASS
	MCH	-7.026	-49.376	-27.03	PASS
	HCH	-7.018	-45.852	-27.02	PASS

11B_LCH_Graphs

Pref/11B/LCH

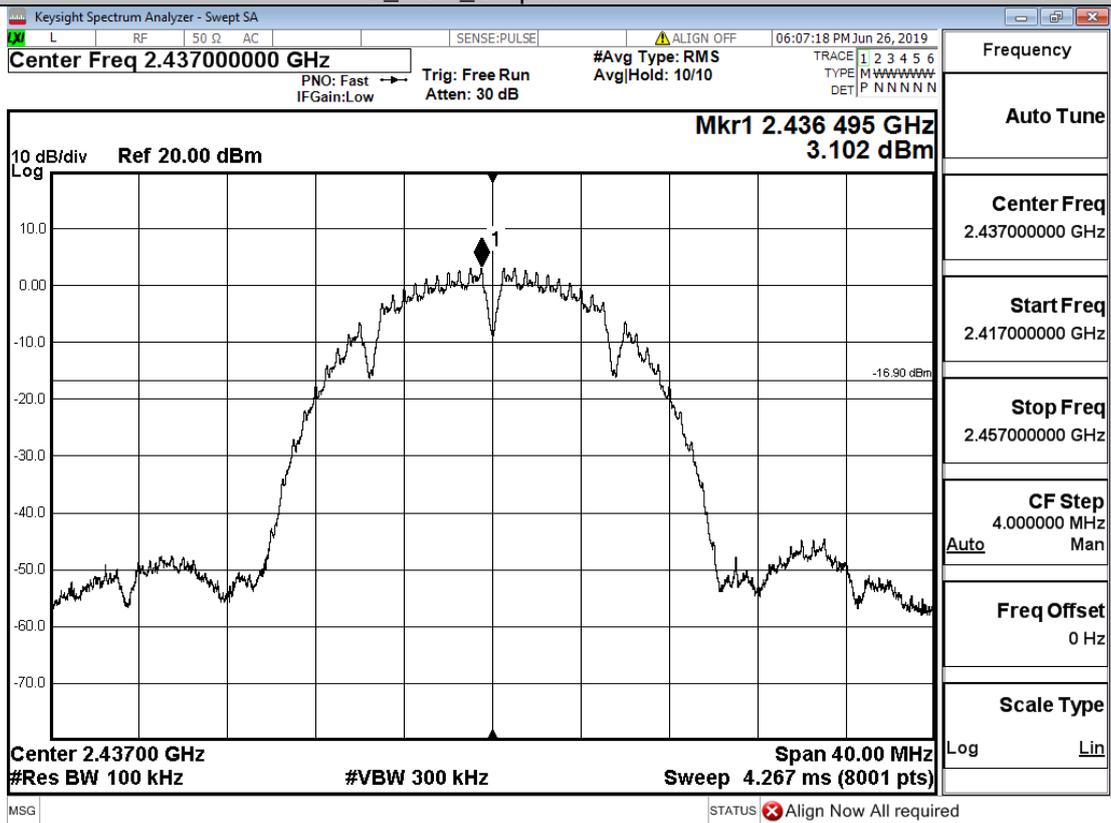


Puw/11B/LCH

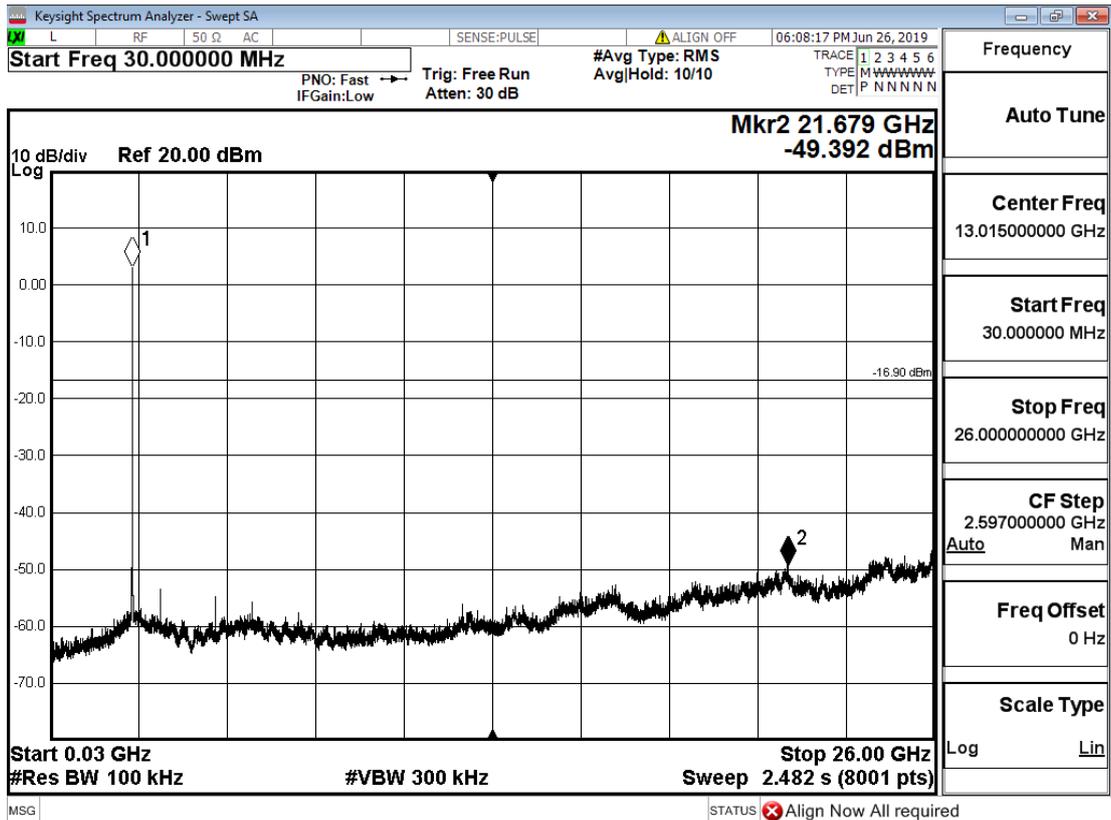


11B_MCH_Graphs

Pref/11B/MCH

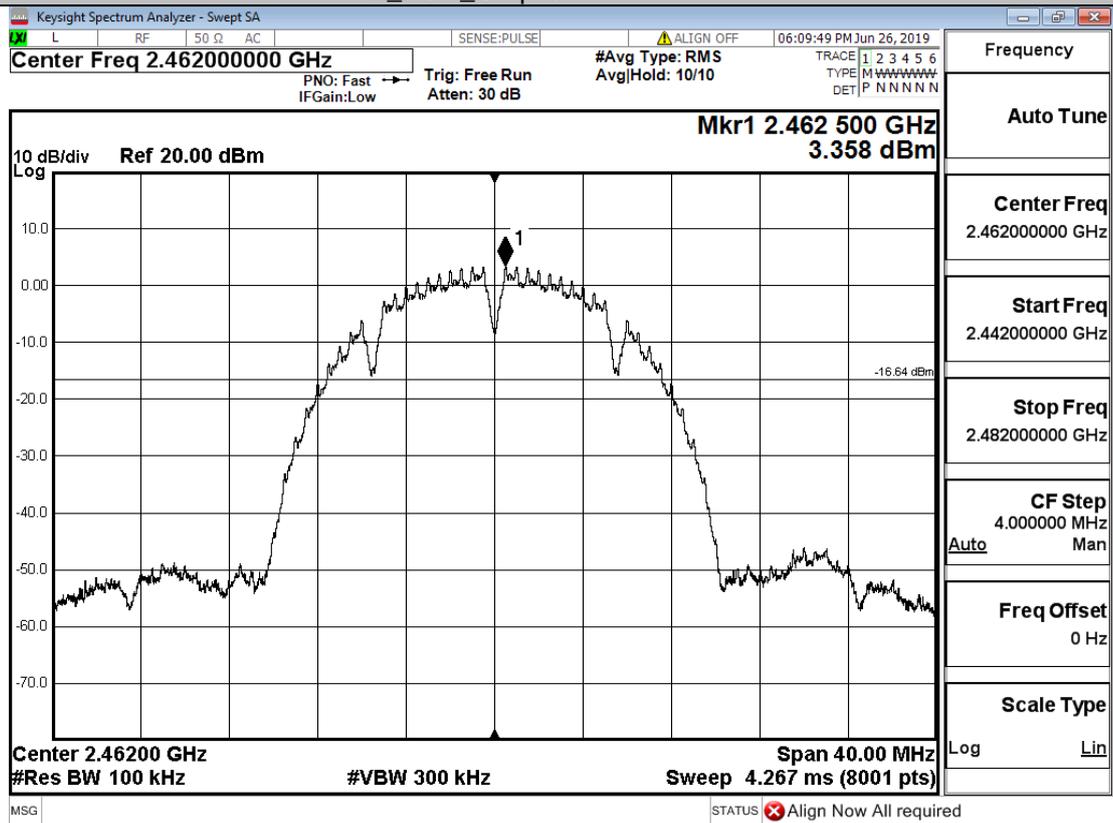


Puw/11B/MCH

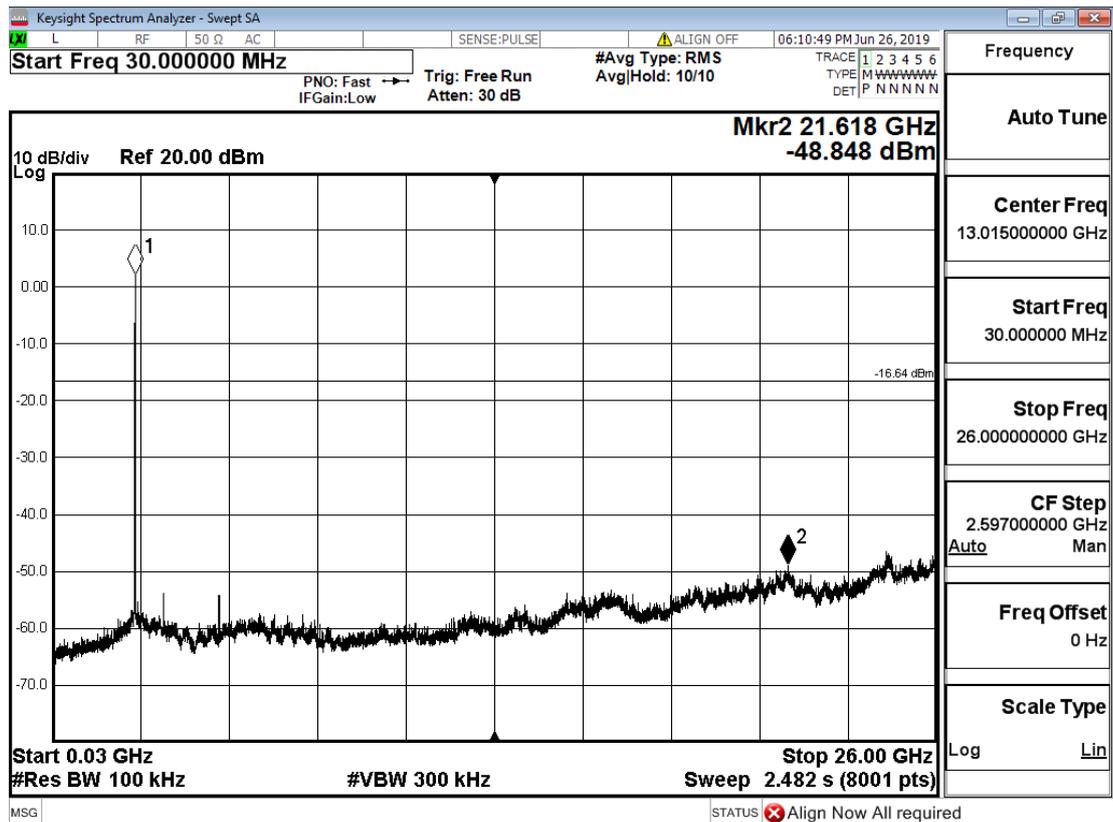


11B_HCH_Graphs

Pref/11B/HCH

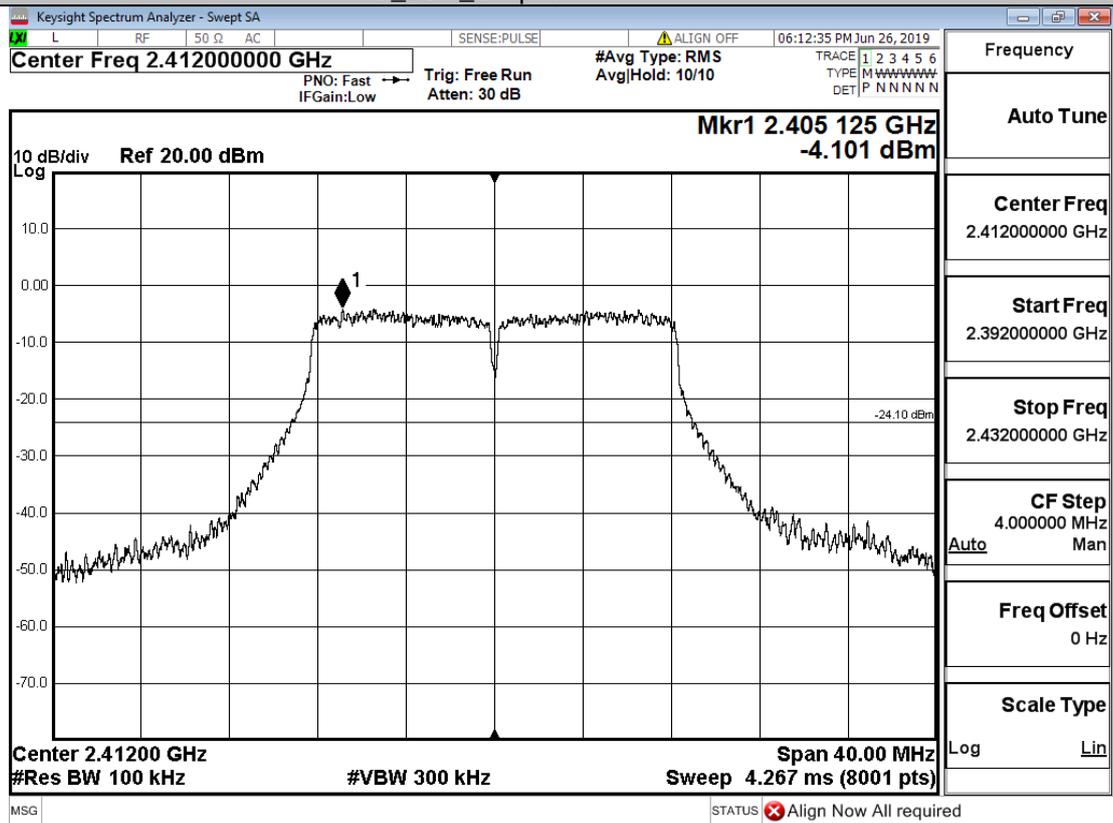


Puw/11B/HCH

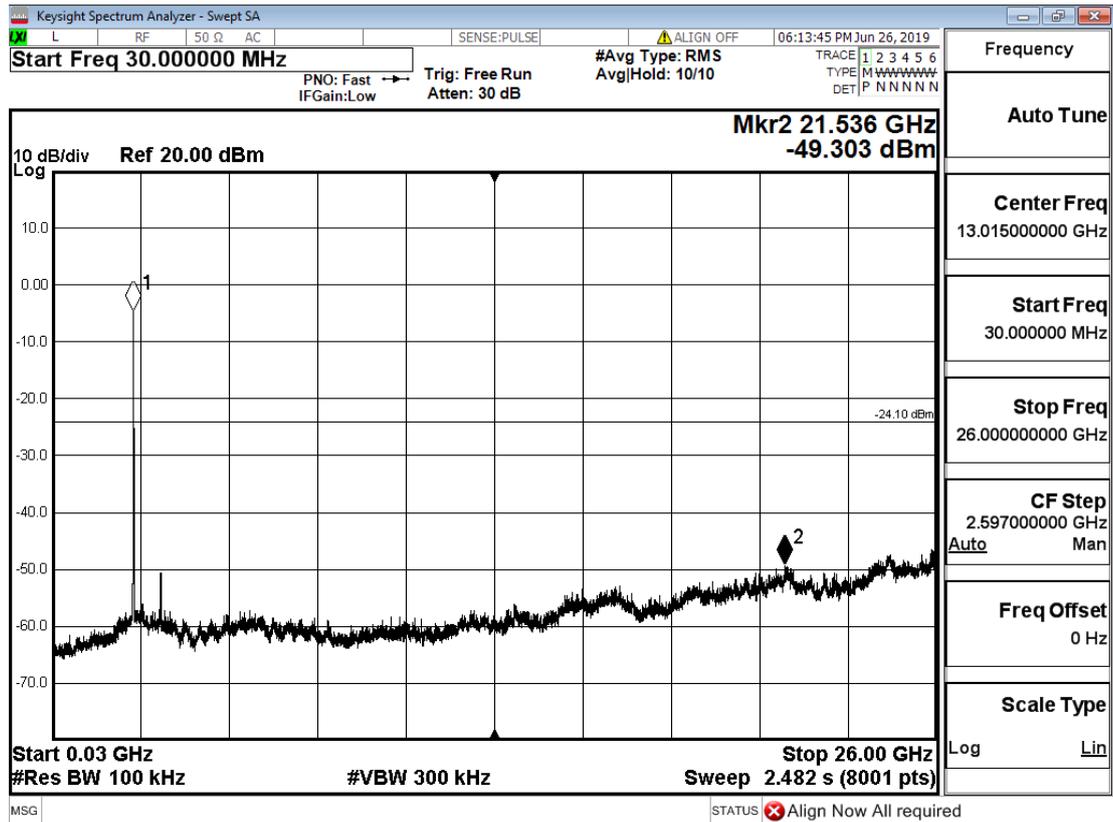


11G_LCH_Graphs

Pref/11G/LCH

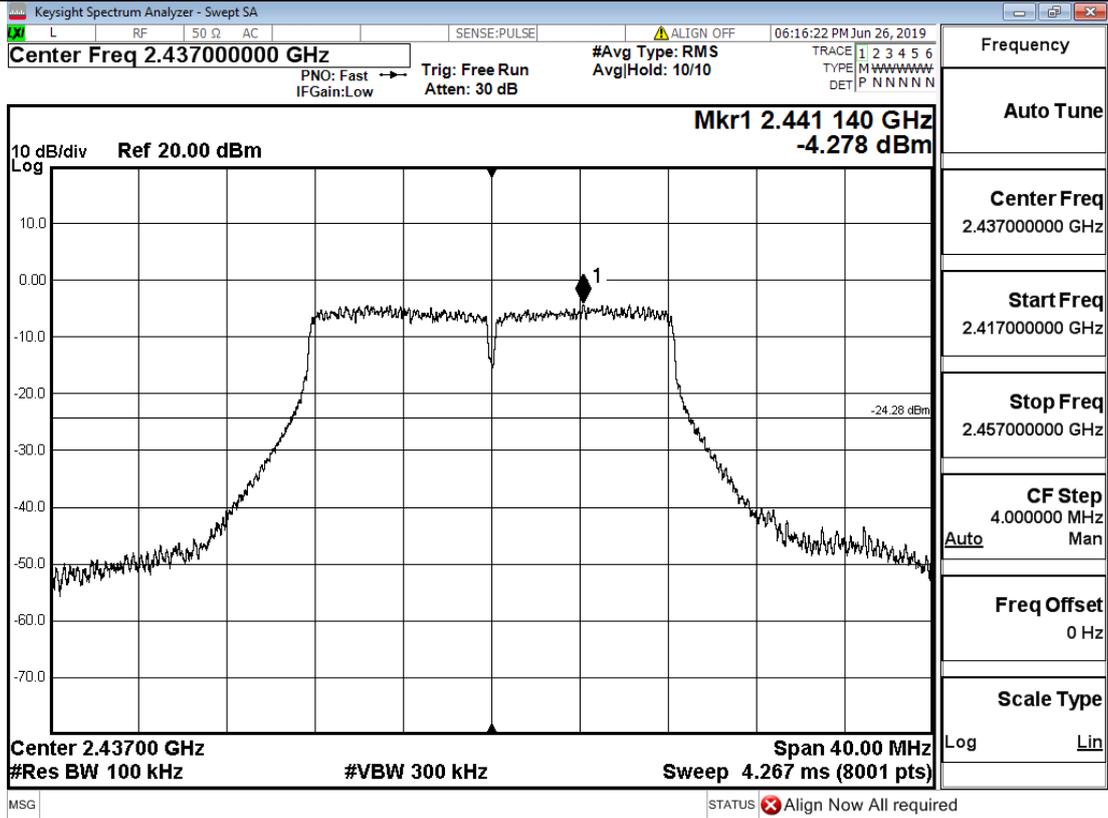


Puw/11G/LCH

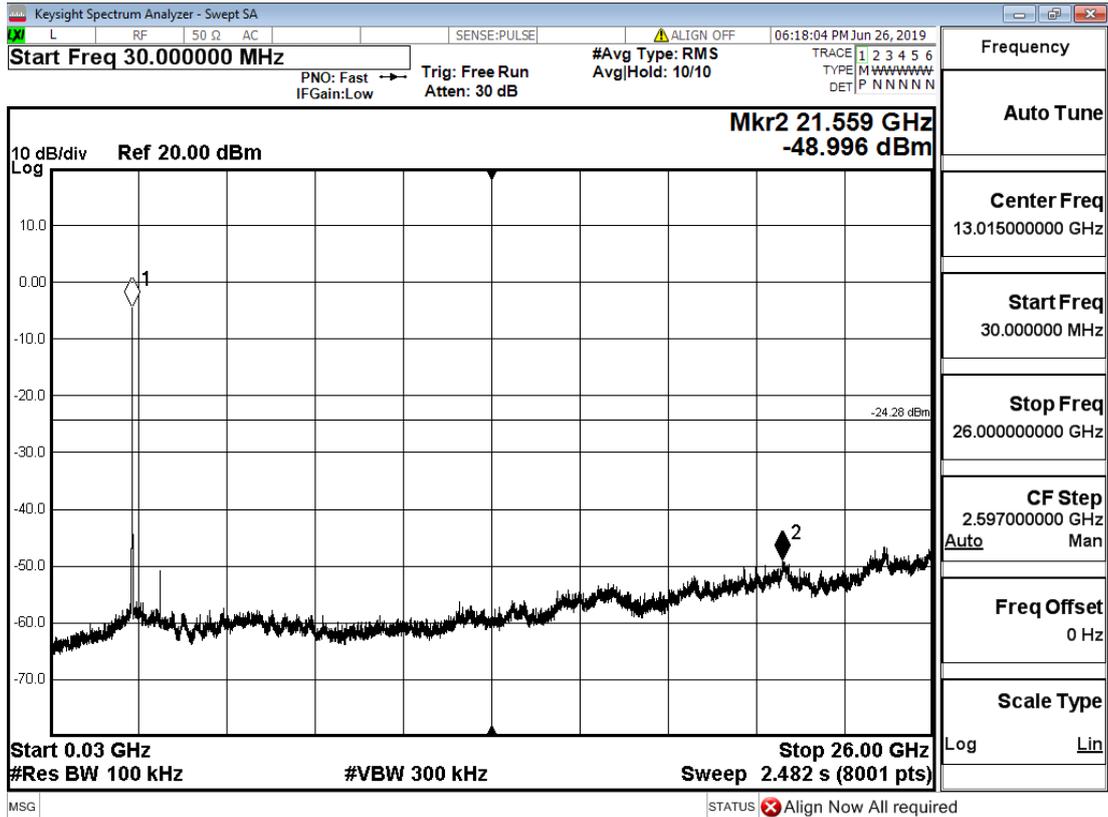


11G_MCH_Graphs

Pref/11G/MCH

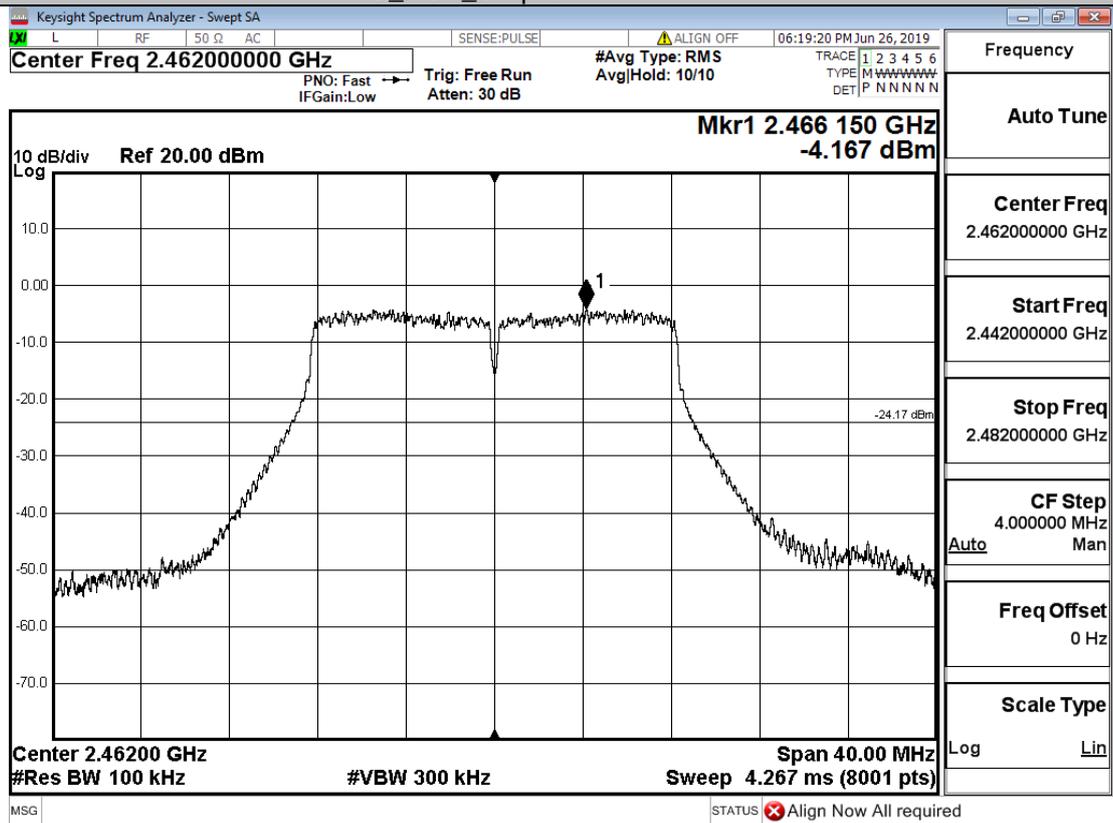


Puw/11G/MCH

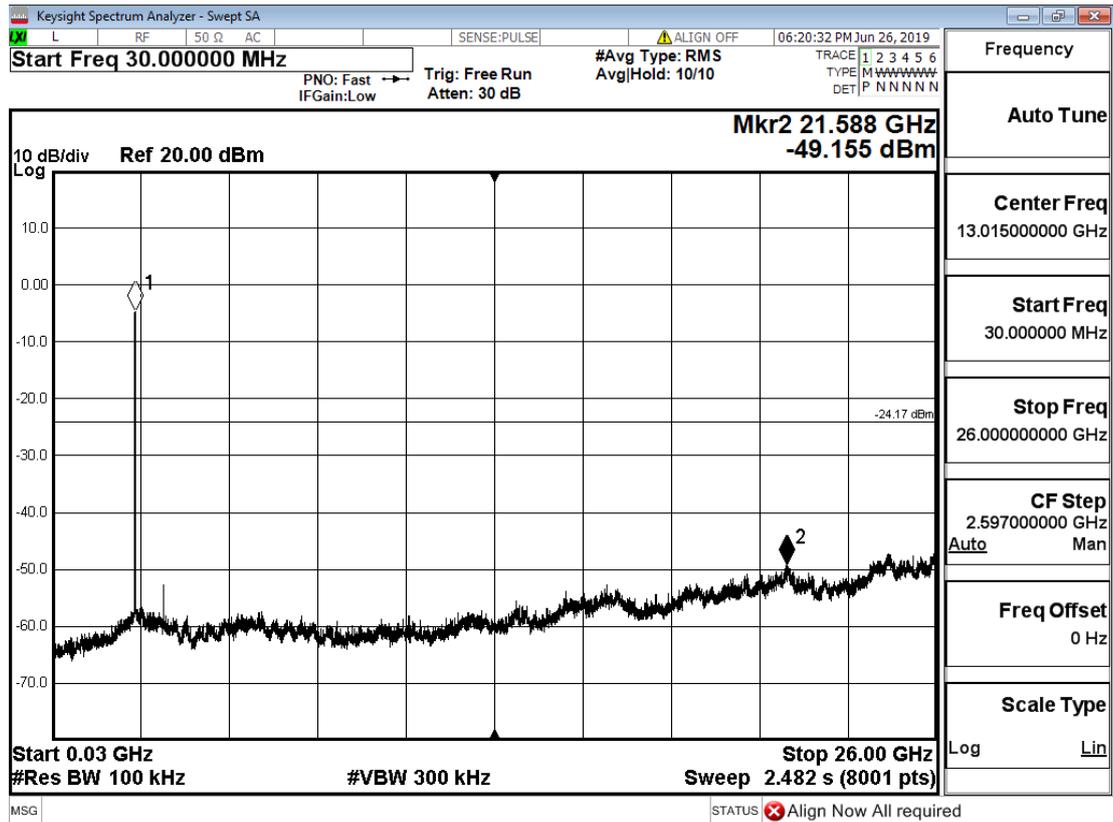


11G_HCH_Graphs

Pref/11G/HCH

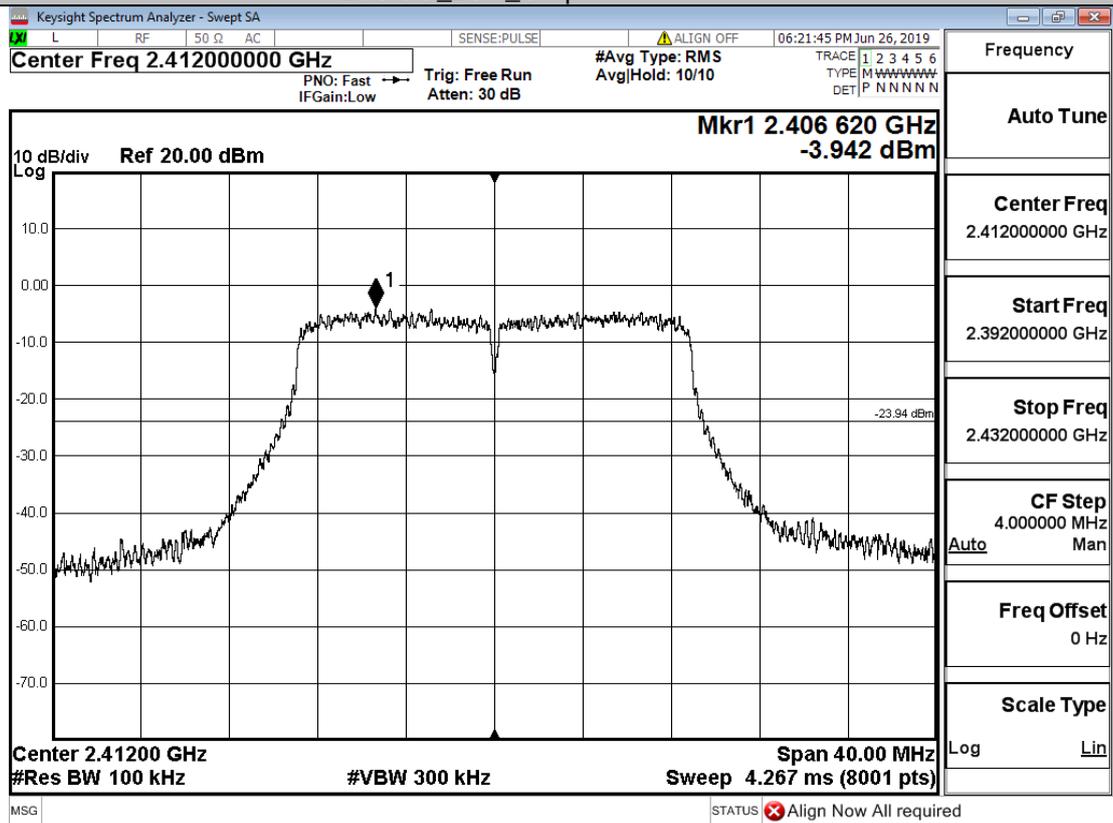


Puw/11G/HCH

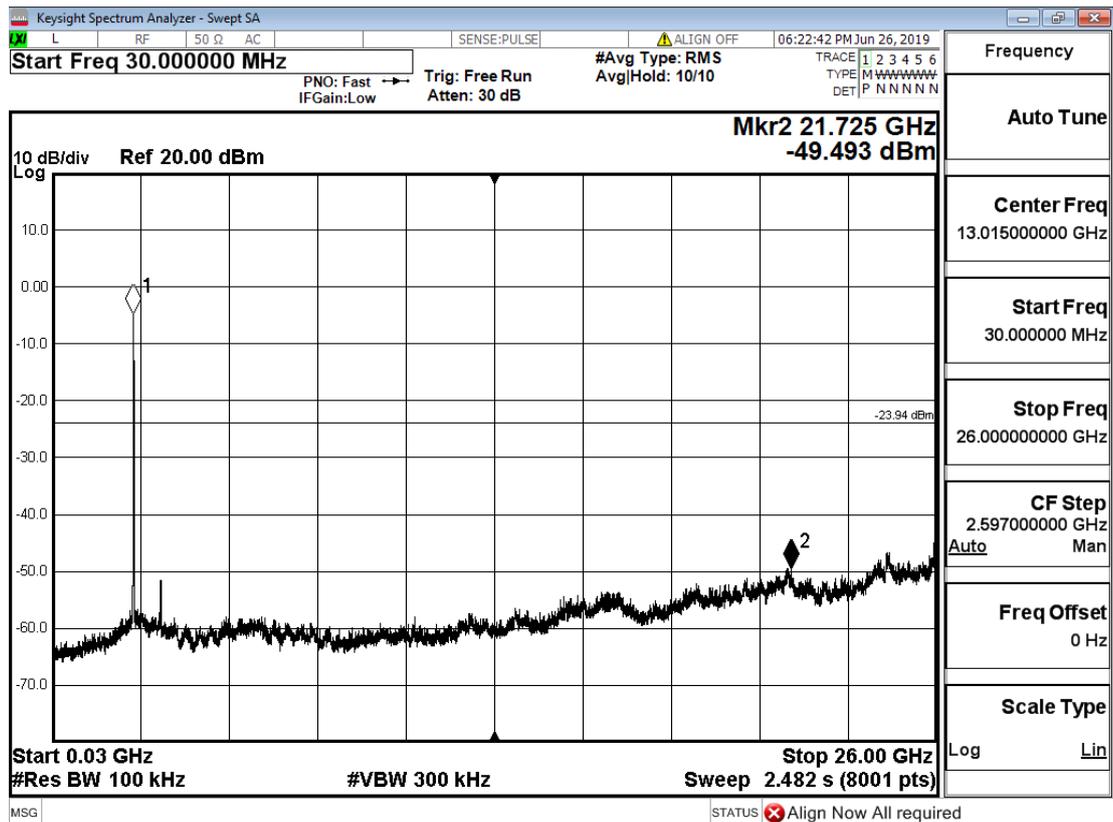


11N20SISO_LCH_Graphs

Pref/11N20SIS
O/LCH

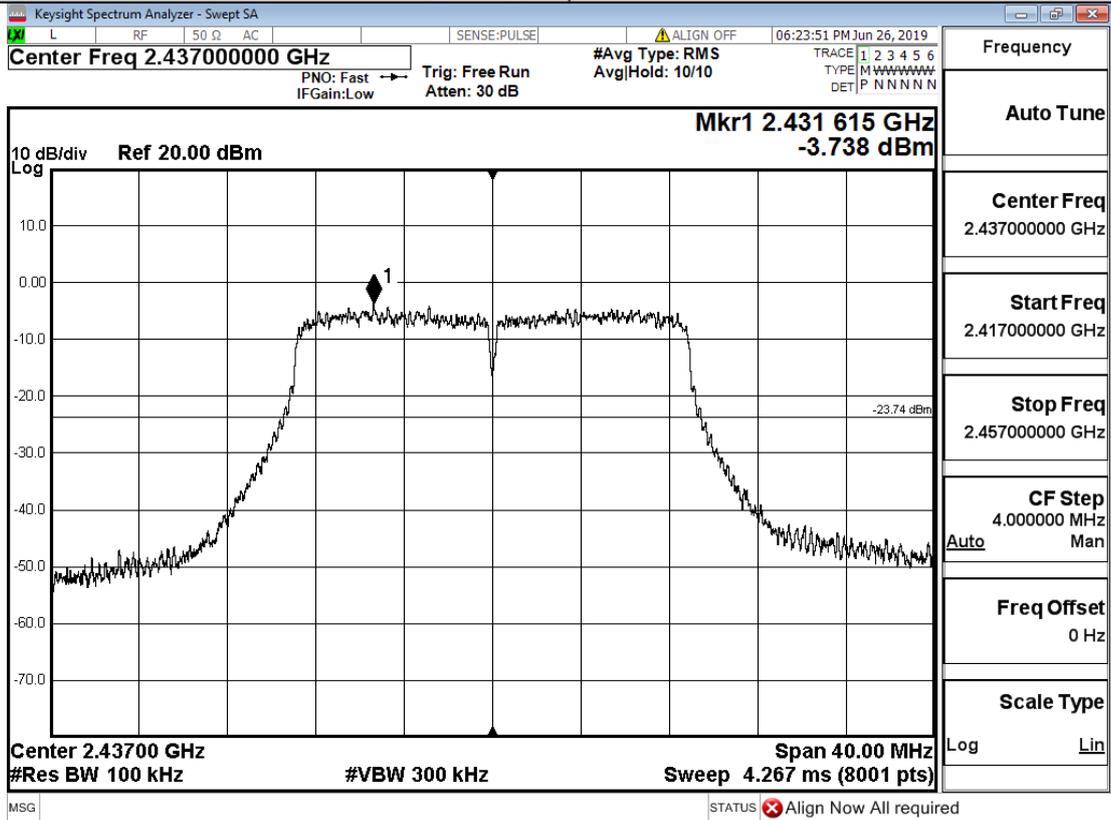


Puw/11N20
SISO/LCH



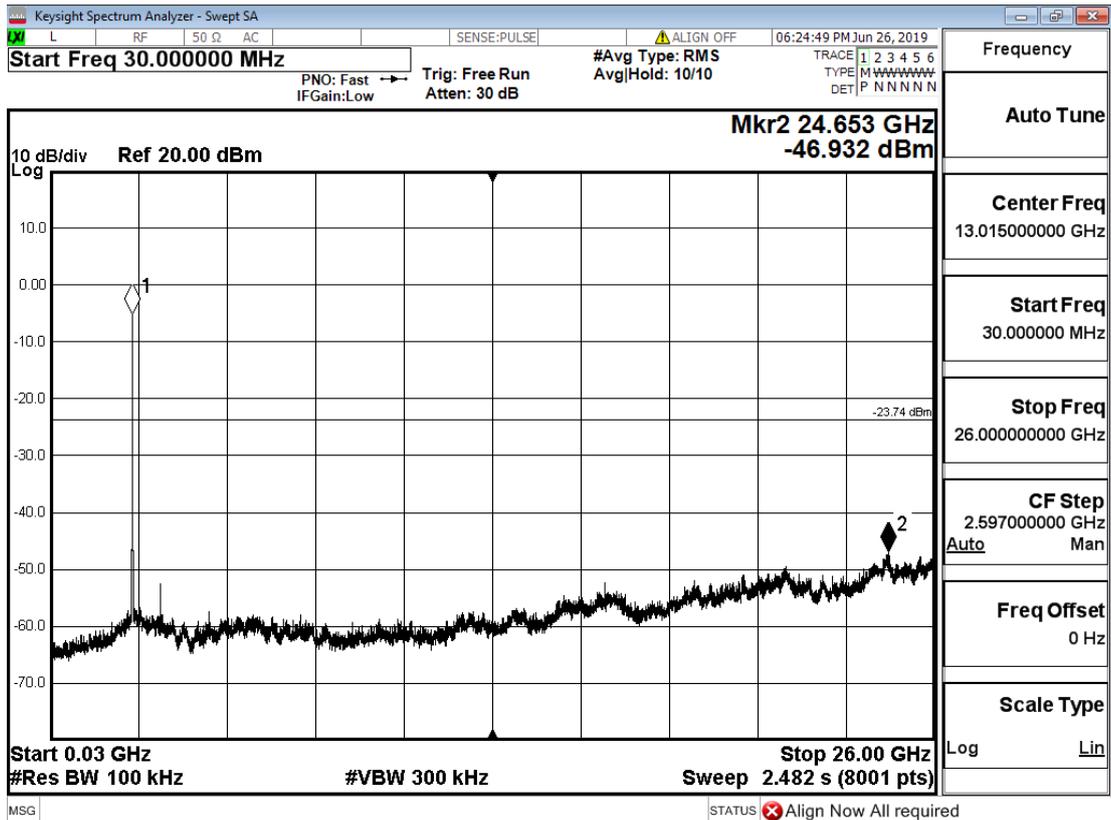
11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH



Frequency
Auto Tune
Center Freq 2.437000000 GHz
Start Freq 2.417000000 GHz
Stop Freq 2.457000000 GHz
CF Step 4.000000 MHz Auto Man
Freq Offset 0 Hz
Scale Type Log Lin

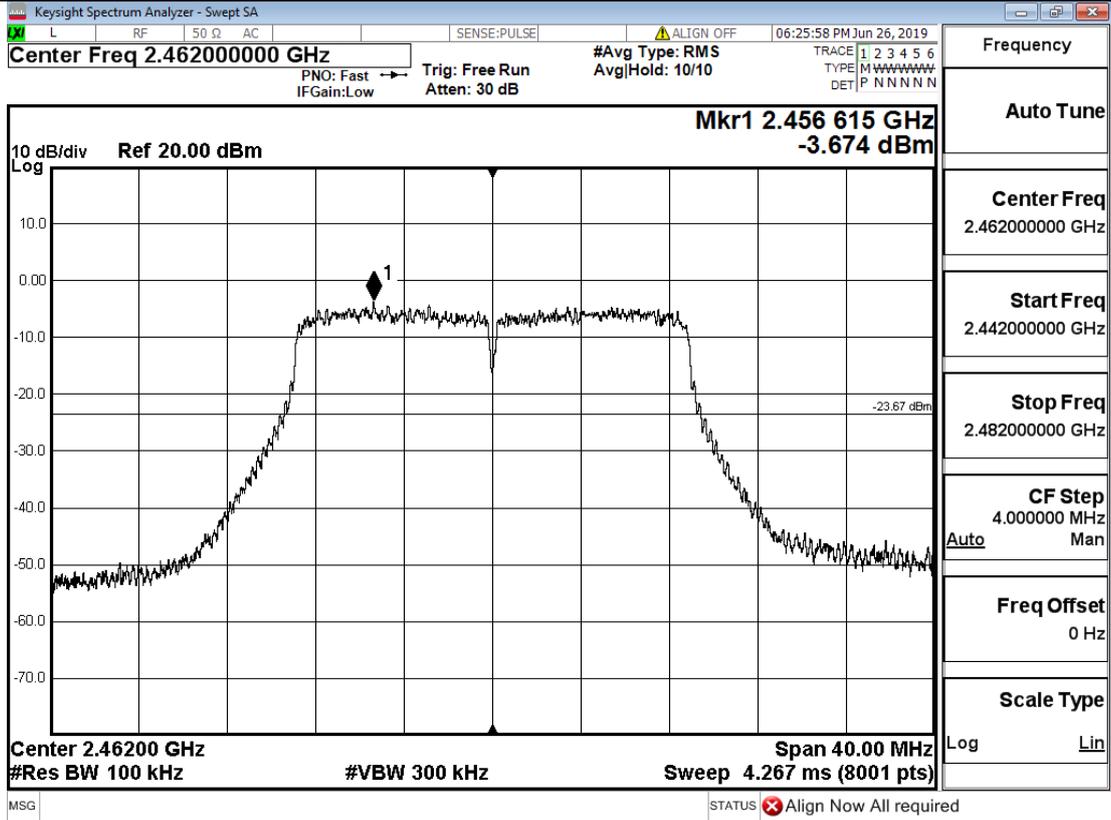
Puw/11N20
SISO/MCH



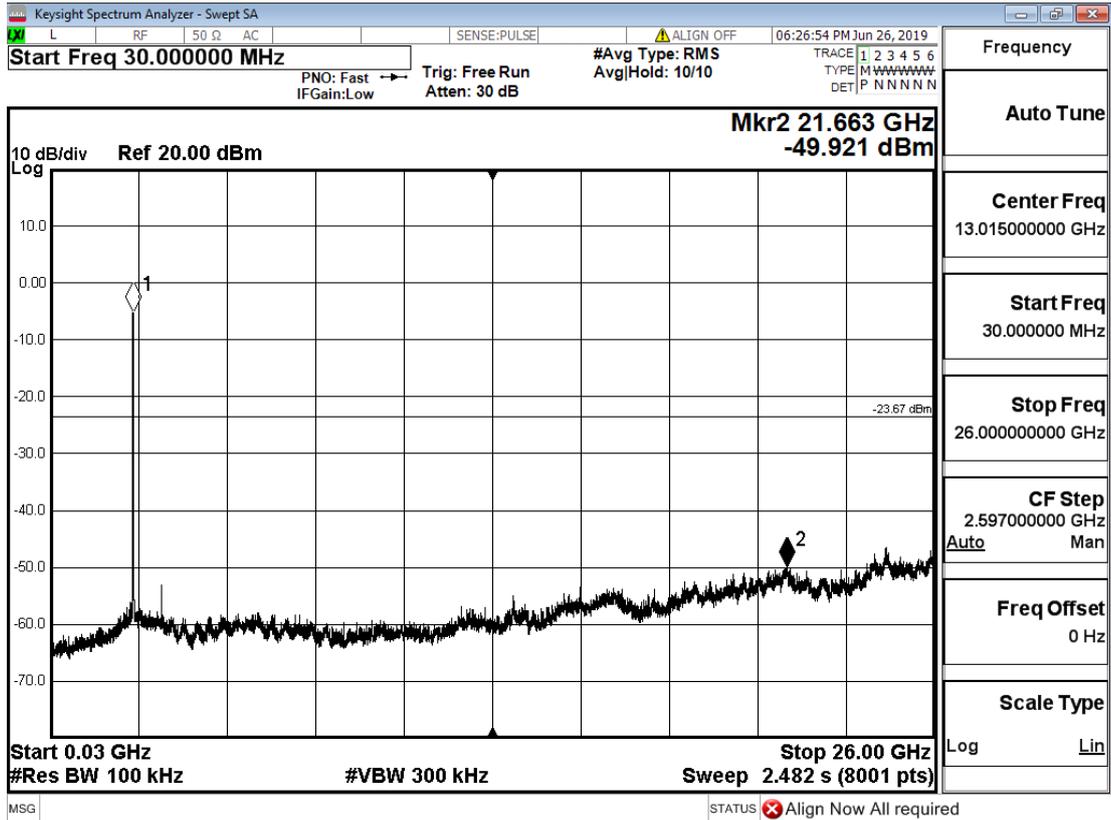
Frequency
Auto Tune
Center Freq 13.015000000 GHz
Start Freq 30.000000 MHz
Stop Freq 26.000000000 GHz
CF Step 2.597000000 GHz Auto Man
Freq Offset 0 Hz
Scale Type Log Lin

11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH

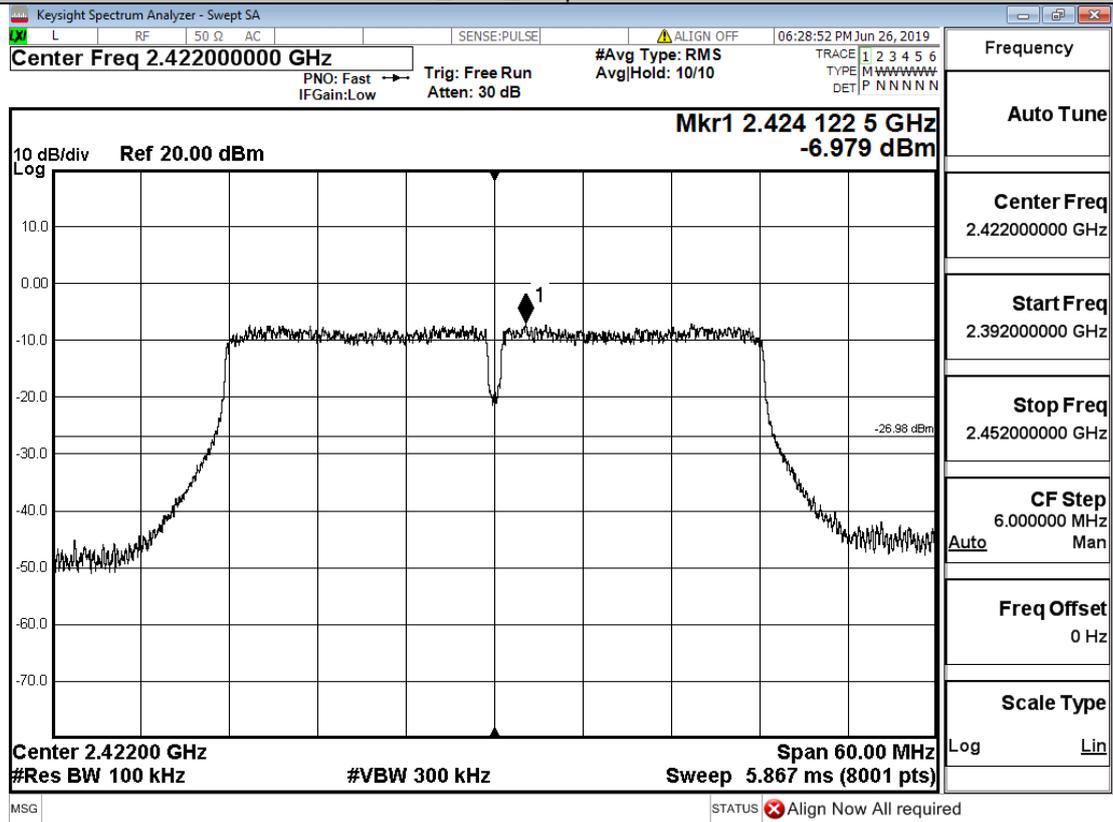


Puw/11N20
SISO/HCH

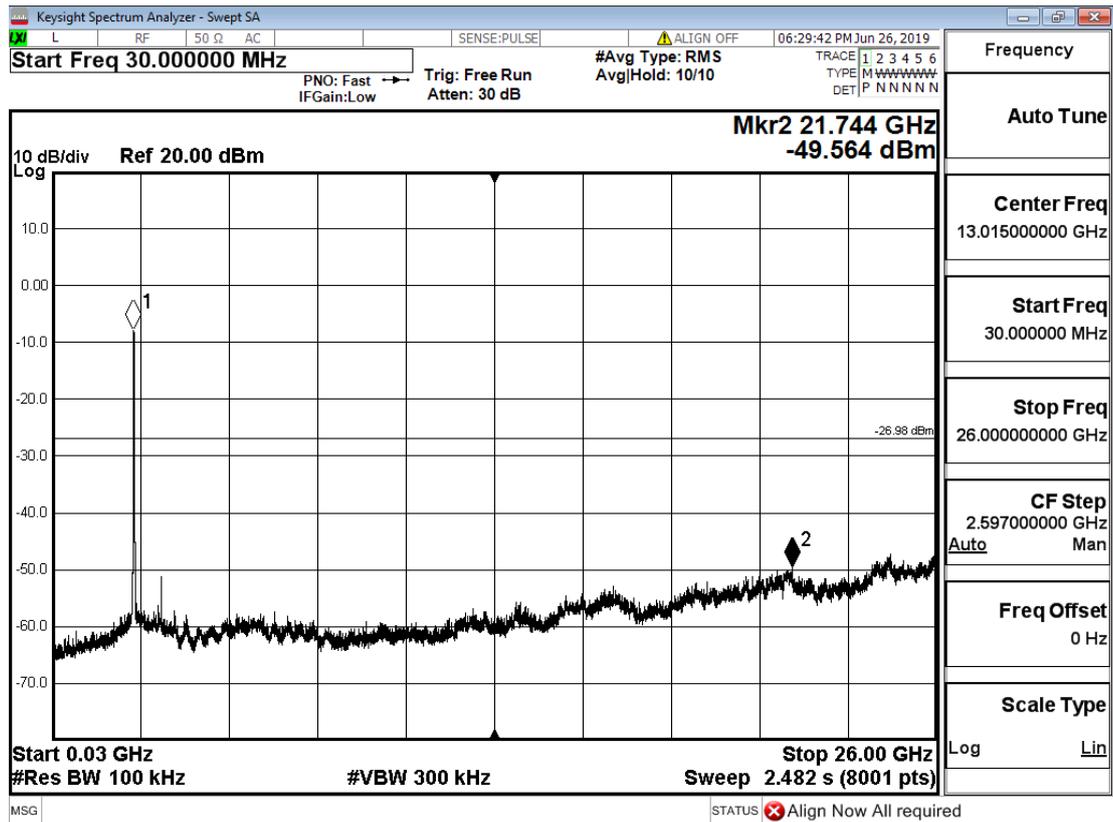


11N40SISO_LCH_Graphs

Pref/11N40SIS
O/LCH

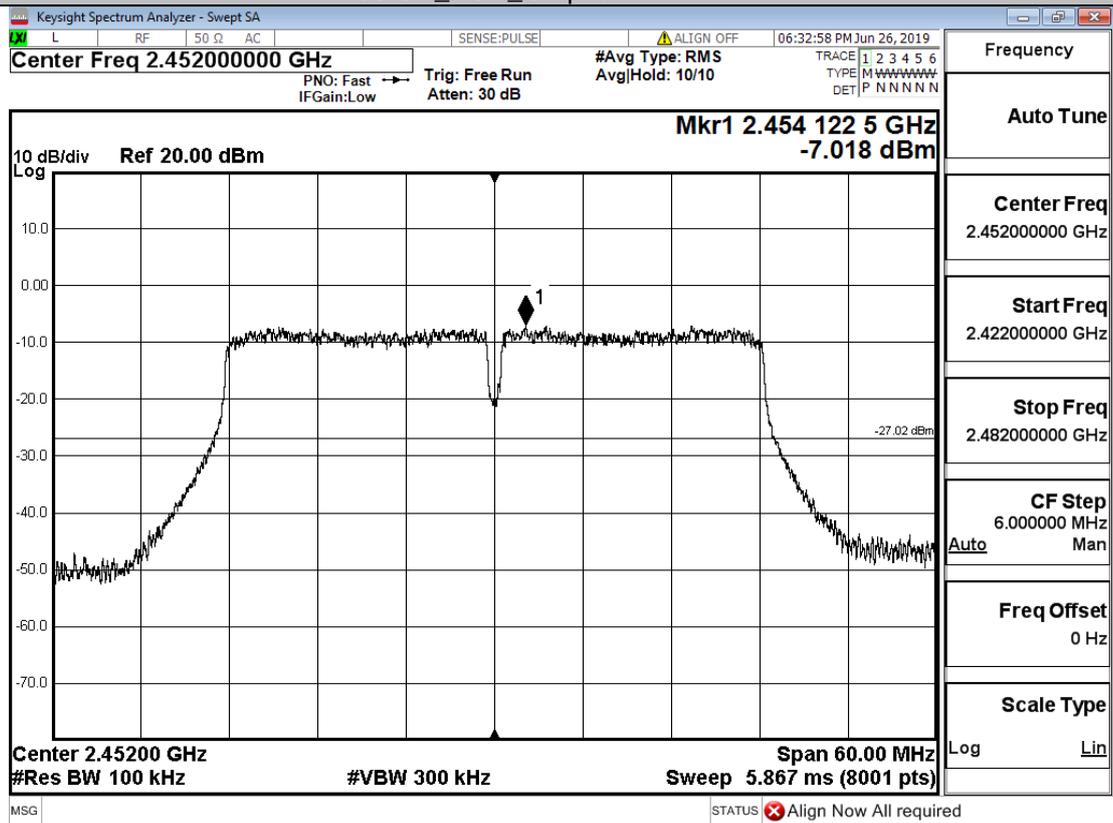


Puw/11N40
SISO/LCH

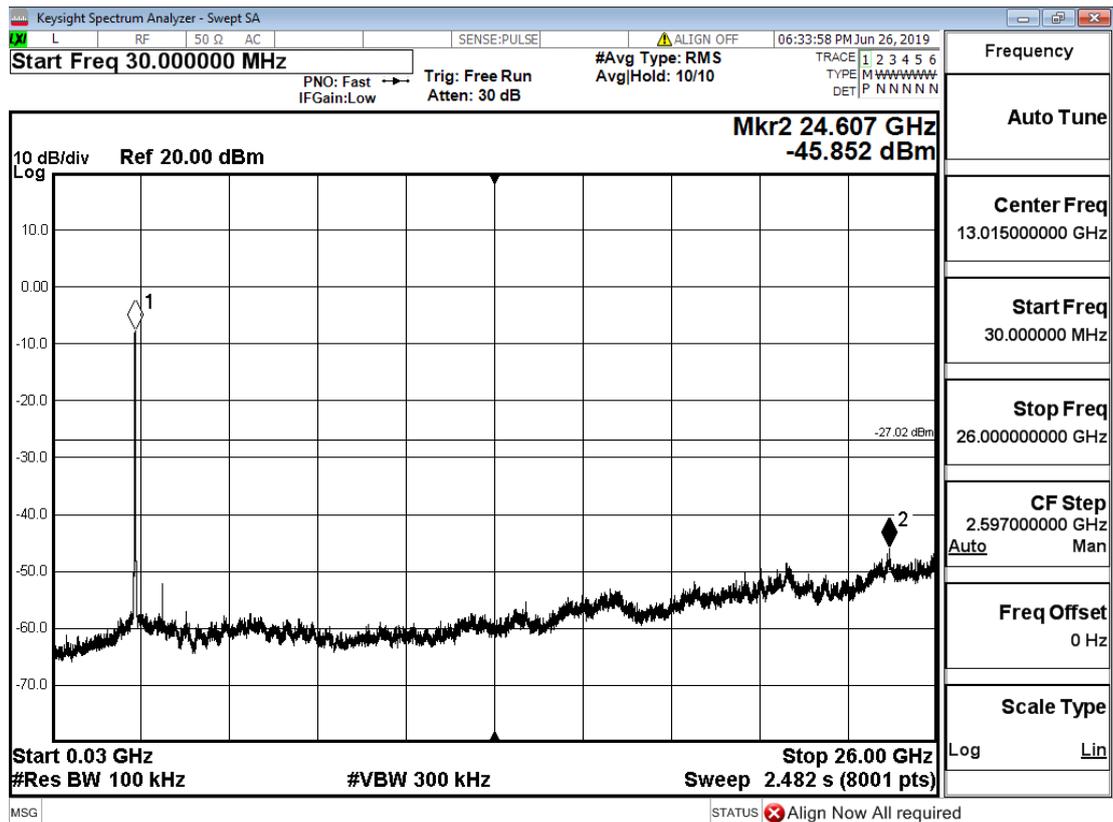


11N40SISO_HCH_Graphs

Pref/11N40
SISO/HCH



Puw/11N40
SISO/HCH

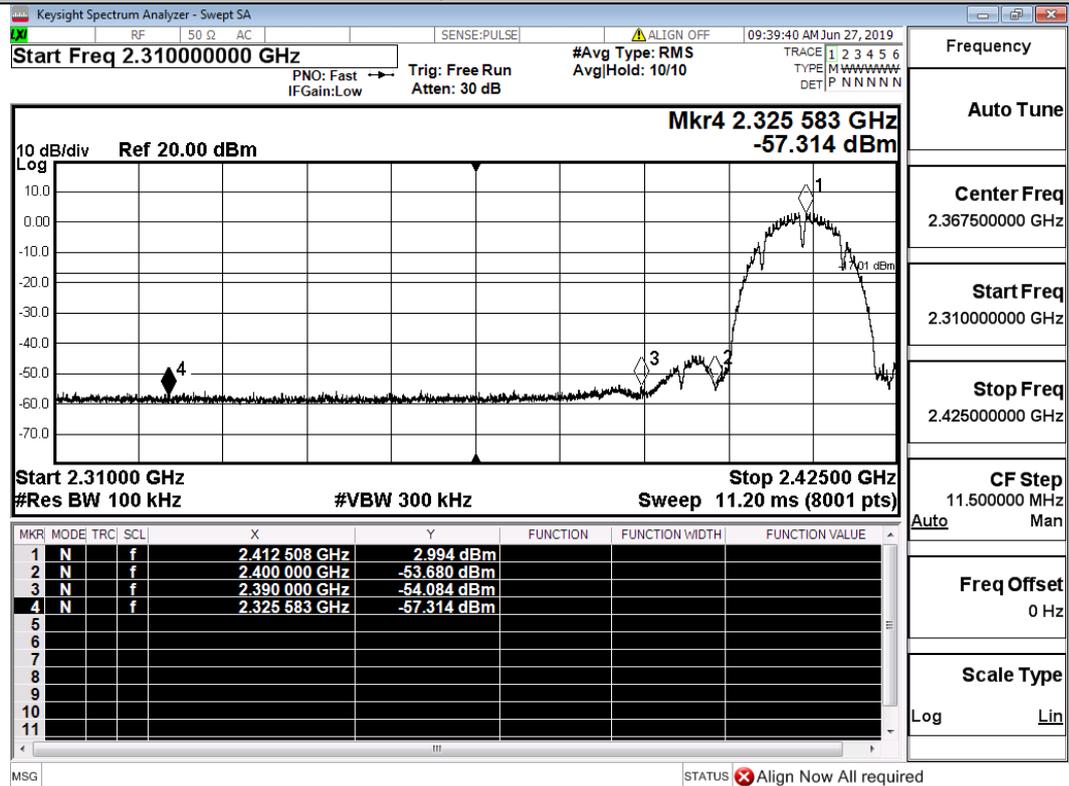


A.6 Band-edge for RF Conducted Emissions

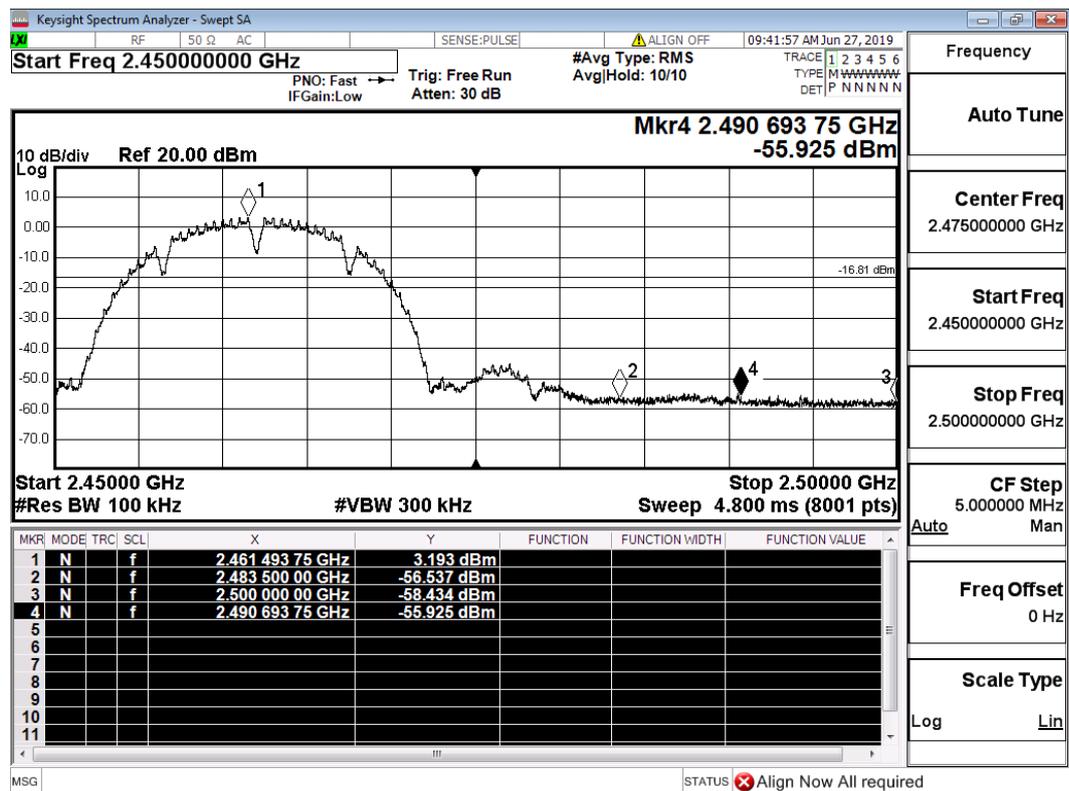
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.994	-53.680	-17.01	PASS
	HCH	3.193	-55.925	-16.81	PASS
11G	LCH	-4.644	-40.699	-24.64	PASS
	HCH	-4.310	-52.943	-24.31	PASS
11N20SISO	LCH	-3.551	-40.509	-23.55	PASS
	HCH	-3.480	-44.233	-23.48	PASS
11N40SISO	LCH	-6.993	-50.116	-26.99	PASS
	HCH	-7.486	-45.465	-27.49	PASS

Test Graphs

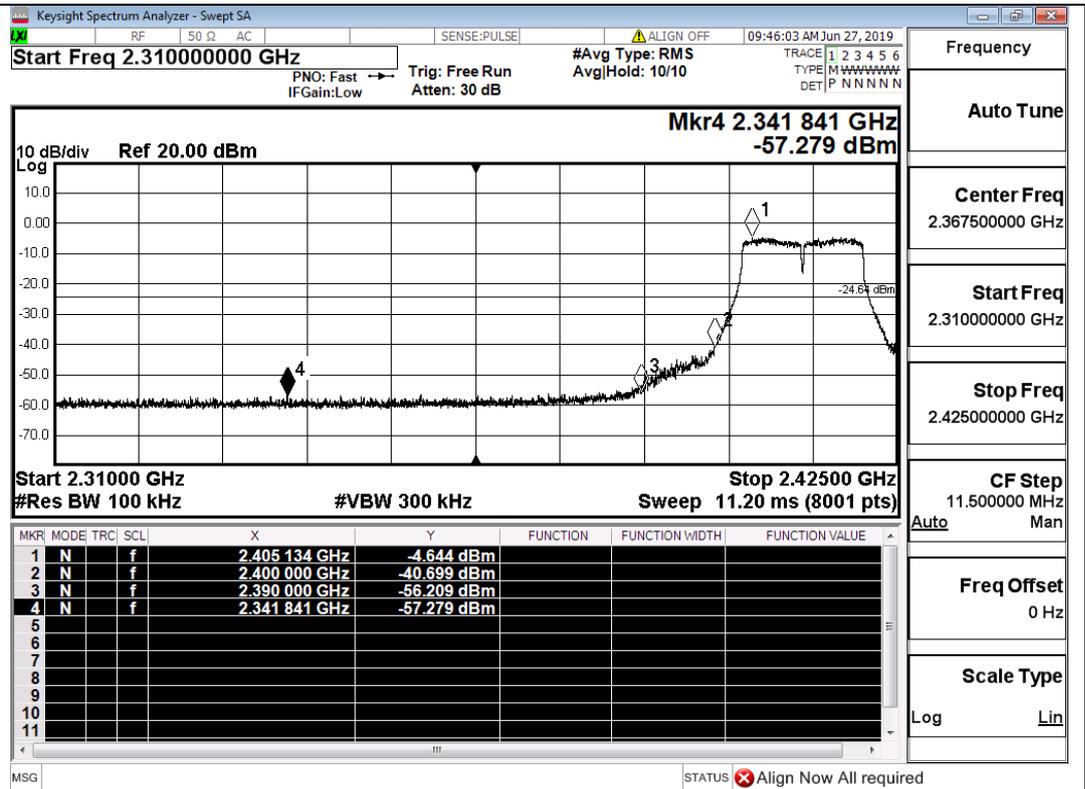
11B/LCH



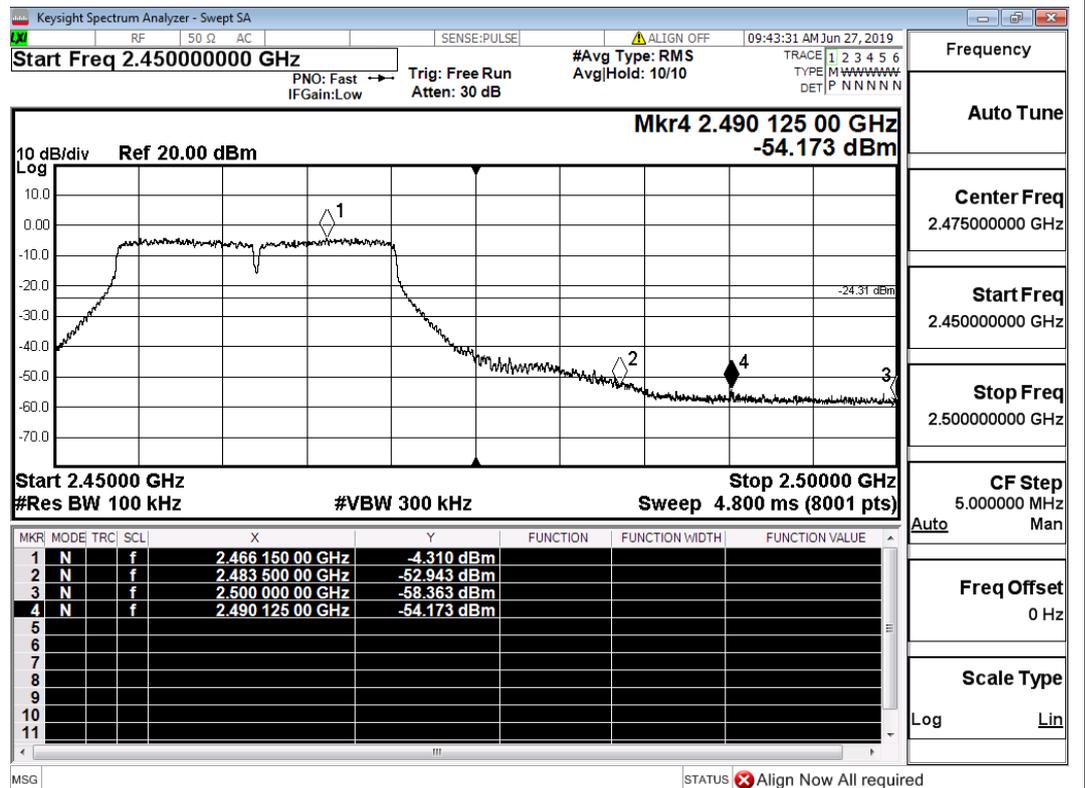
11B/HCH



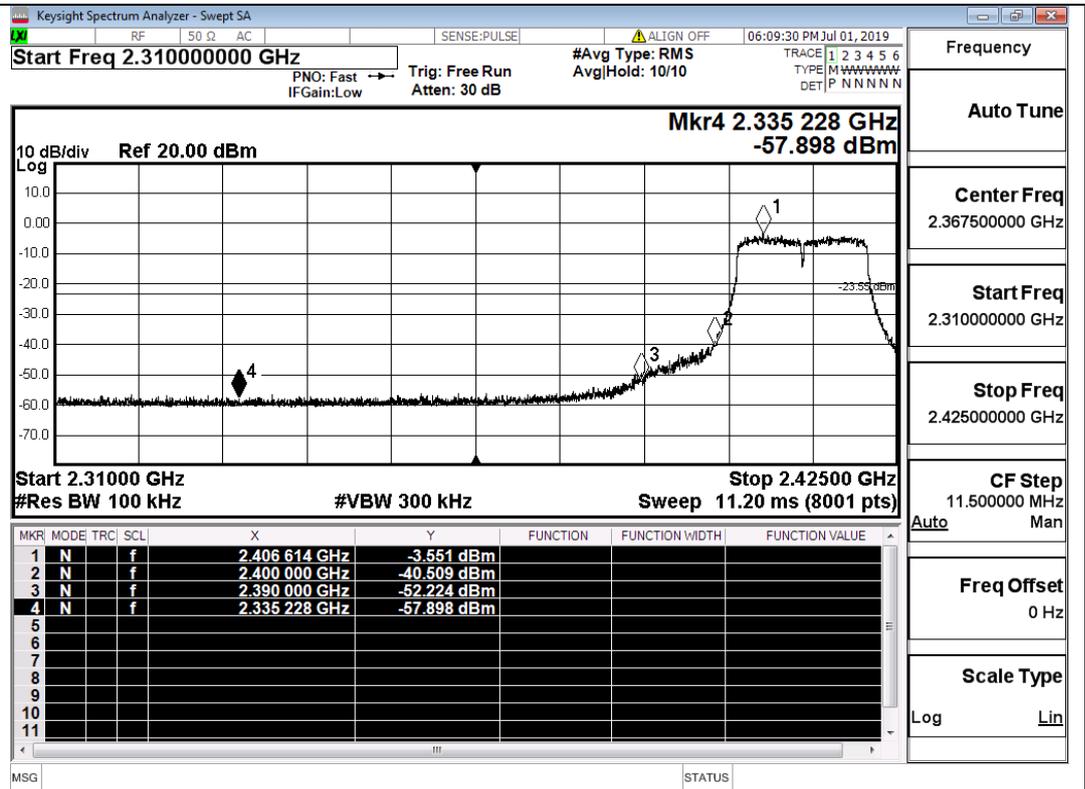
11G/LCH



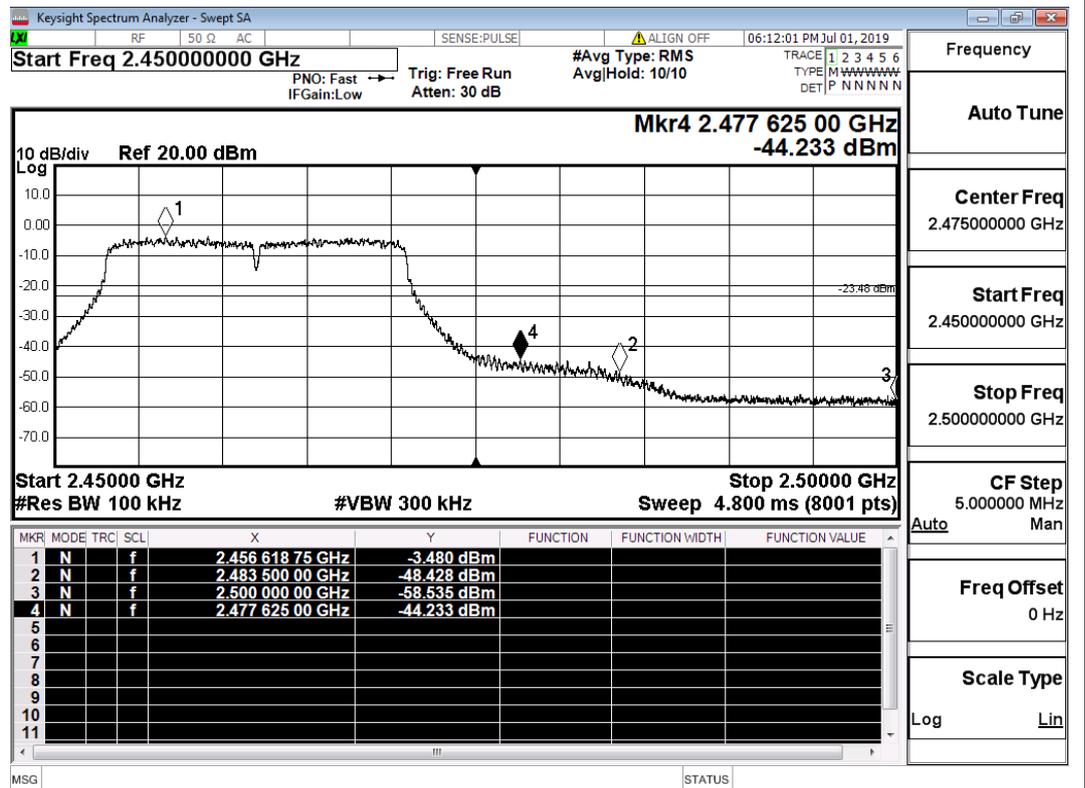
11G/HCH



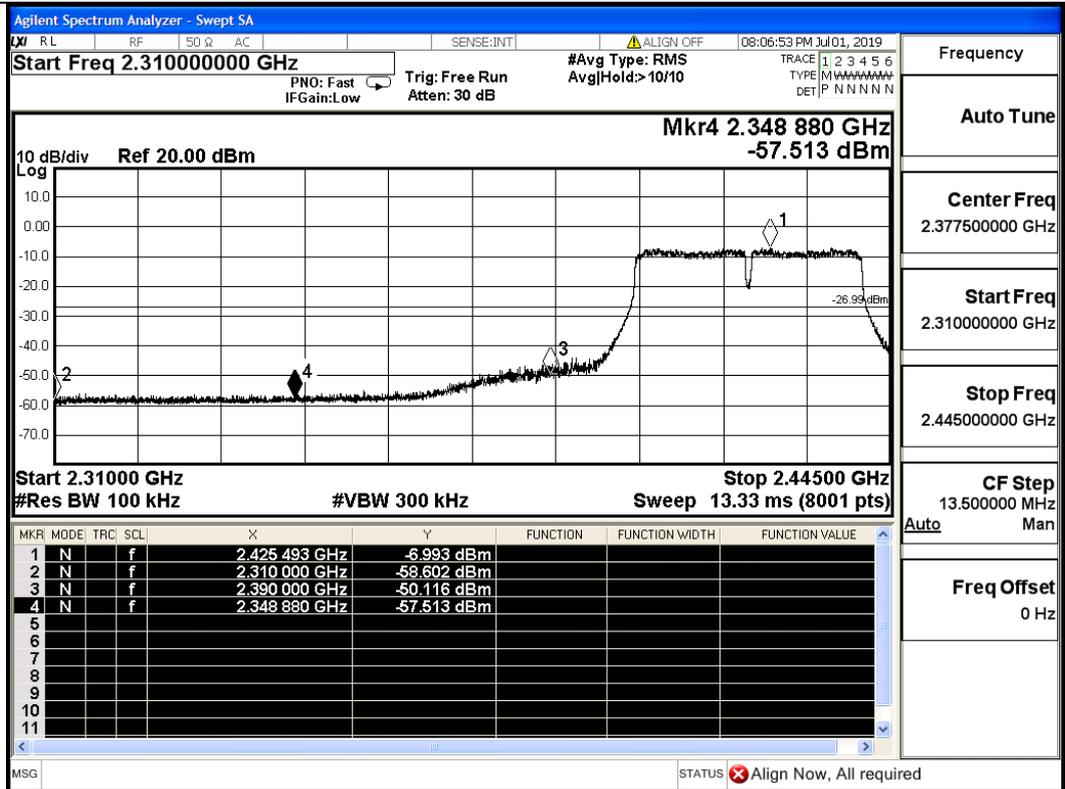
11N20SISO/LCH



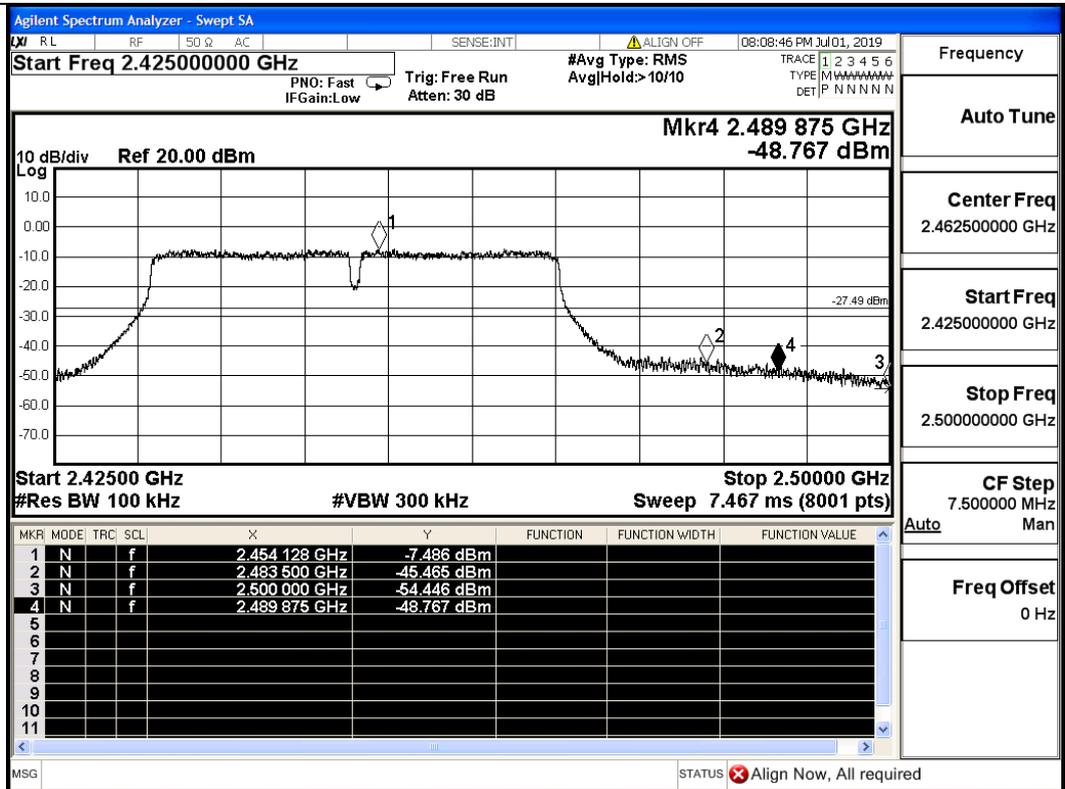
11N20SISO/HCH



11N40SISO/LCH



11N40SISO/HCH

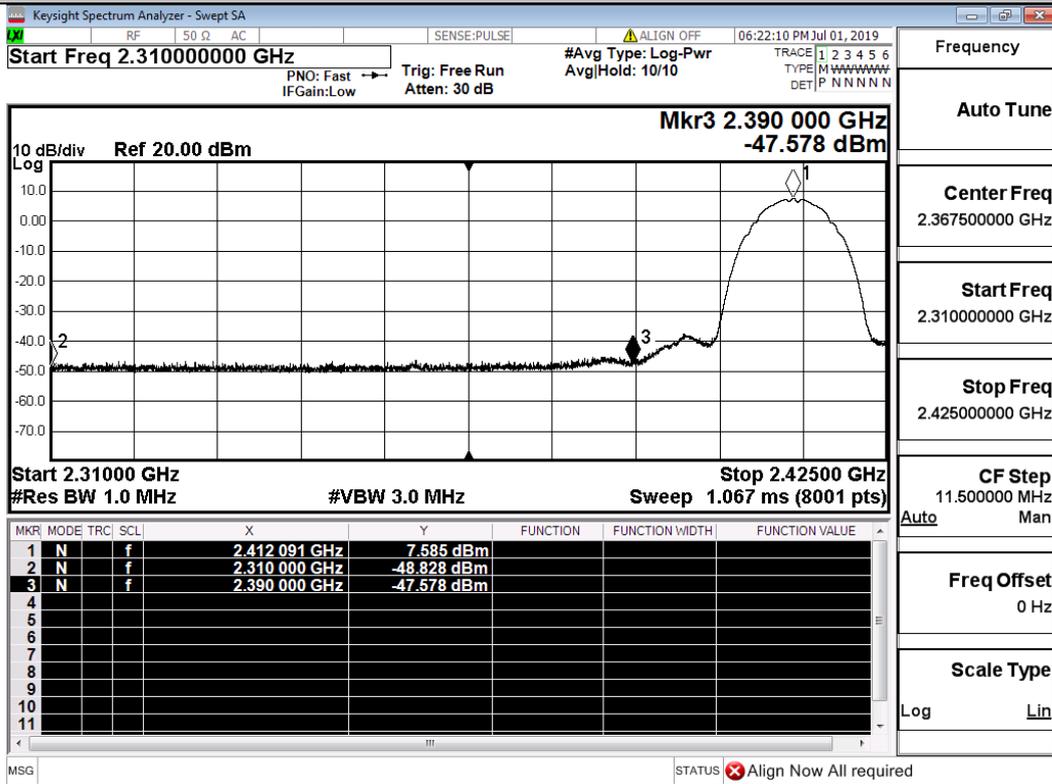


A.7 Restrict-band band-edge measurements

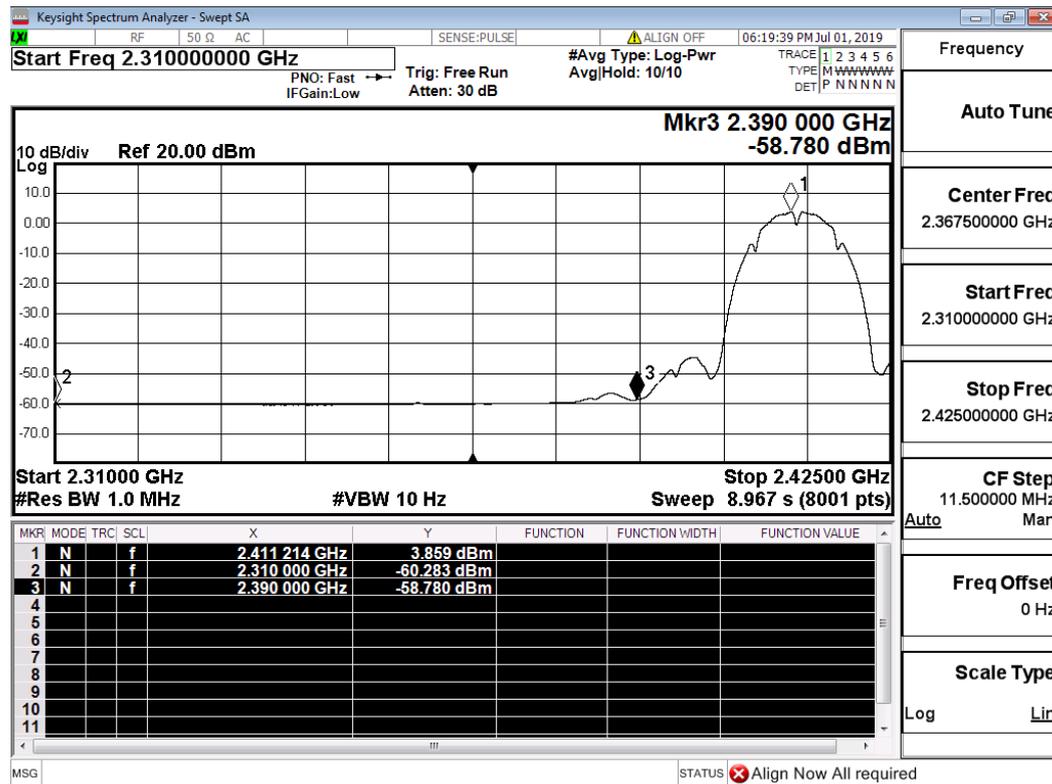
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBu V/m]	Verdict
11B	2412	Ant1	2310.0	-48.83	2.5	0	48.90	PEAK	74	PASS
	2412	Ant1	2310.0	-60.28	2.5	0	37.45	AV	54	PASS
	2412	Ant1	2390.0	-47.58	2.5	0	50.15	PEAK	74	PASS
	2412	Ant1	2390.0	-58.78	2.5	0	38.95	AV	54	PASS
	2462	Ant1	2483.5	-47.17	2.5	0	50.56	PEAK	74	PASS
	2462	Ant1	2483.5	-56.74	2.5	0	40.99	AV	54	PASS
	2462	Ant1	2500.0	-49.16	2.5	0	48.57	PEAK	74	PASS
	2462	Ant1	2500.0	-58.73	2.5	0	39.00	AV	54	PASS
11G	2412	Ant1	2310.0	-49.12	2.5	0	48.61	PEAK	74	PASS
	2412	Ant1	2310.0	-60.33	2.5	0	37.40	AV	54	PASS
	2412	Ant1	2390.0	-42.65	2.5	0	55.08	PEAK	74	PASS
	2412	Ant1	2390.0	-55.67	2.5	0	42.06	AV	54	PASS
	2462	Ant1	2483.5	-39.10	2.5	0	58.63	PEAK	74	PASS
	2462	Ant1	2483.5	-49.92	2.5	0	47.81	AV	54	PASS
	2462	Ant1	2500.0	-48.47	2.5	0	49.26	PEAK	74	PASS
	2462	Ant1	2500.0	-59.52	2.5	0	38.21	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-49.75	2.5	0	47.98	PEAK	74	PASS
	2412	Ant1	2310.0	-60.32	2.5	0	37.41	AV	54	PASS
	2412	Ant1	2390.0	-37.26	2.5	0	60.47	PEAK	74	PASS
	2412	Ant1	2390.0	-54.14	2.5	0	43.59	AV	54	PASS
	2462	Ant1	2483.5	-36.28	2.5	0	61.45	PEAK	74	PASS
	2462	Ant1	2483.5	-47.81	2.5	0	49.92	AV	54	PASS
	2462	Ant1	2500.0	-48.81	2.5	0	48.92	PEAK	74	PASS
	2462	Ant1	2500.0	-59.39	2.5	0	38.34	AV	54	PASS
11N40 SISO	2412	Ant1	2310.0	-48.19	2.5	0	49.54	PEAK	74	PASS
	2412	Ant1	2310.0	-60.40	2.5	0	37.33	AV	54	PASS

	2412	Ant1	2390.0	-40.05	2.5	0	57.68	PEAK	74	PASS
	2412	Ant1	2390.0	-51.03	2.5	0	46.70	AV	54	PASS
	2462	Ant1	2483.5	-35.80	2.5	0	61.93	PEAK	74	PASS
	2462	Ant1	2483.5	-49.29	2.5	0	48.44	AV	54	PASS
	2462	Ant1	2500.0	-40.61	2.5	0	57.12	PEAK	74	PASS
	2462	Ant1	2500.0	-56.17	2.5	0	41.56	AV	54	PASS

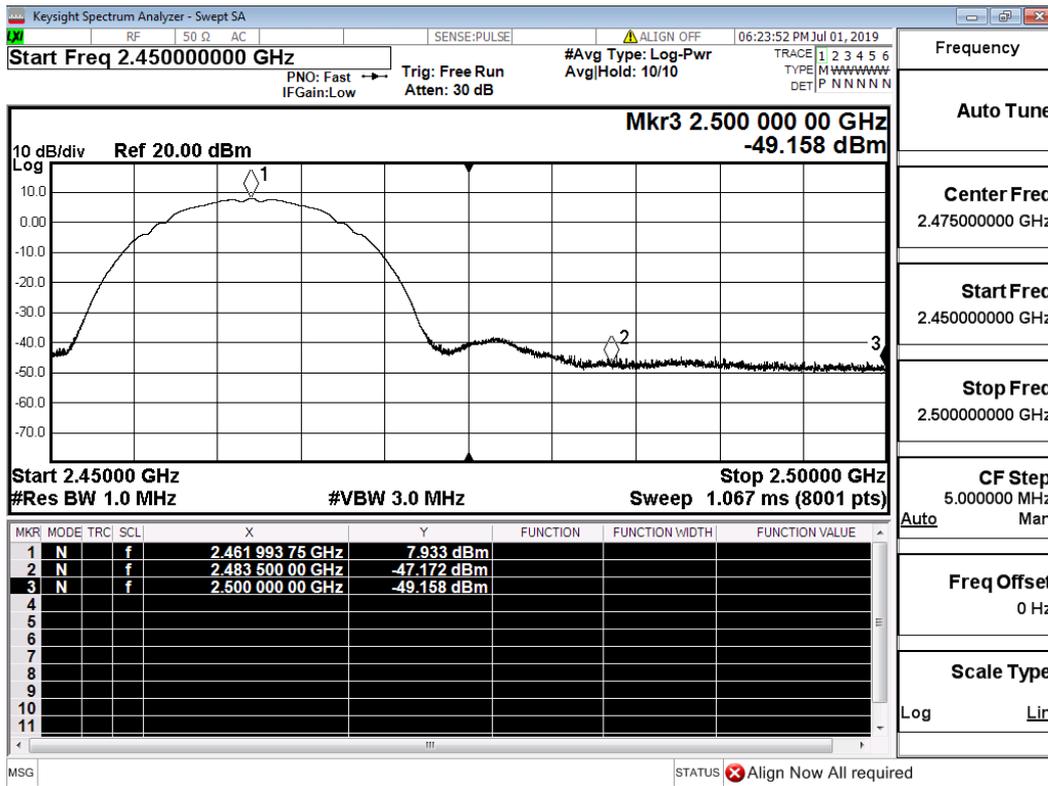
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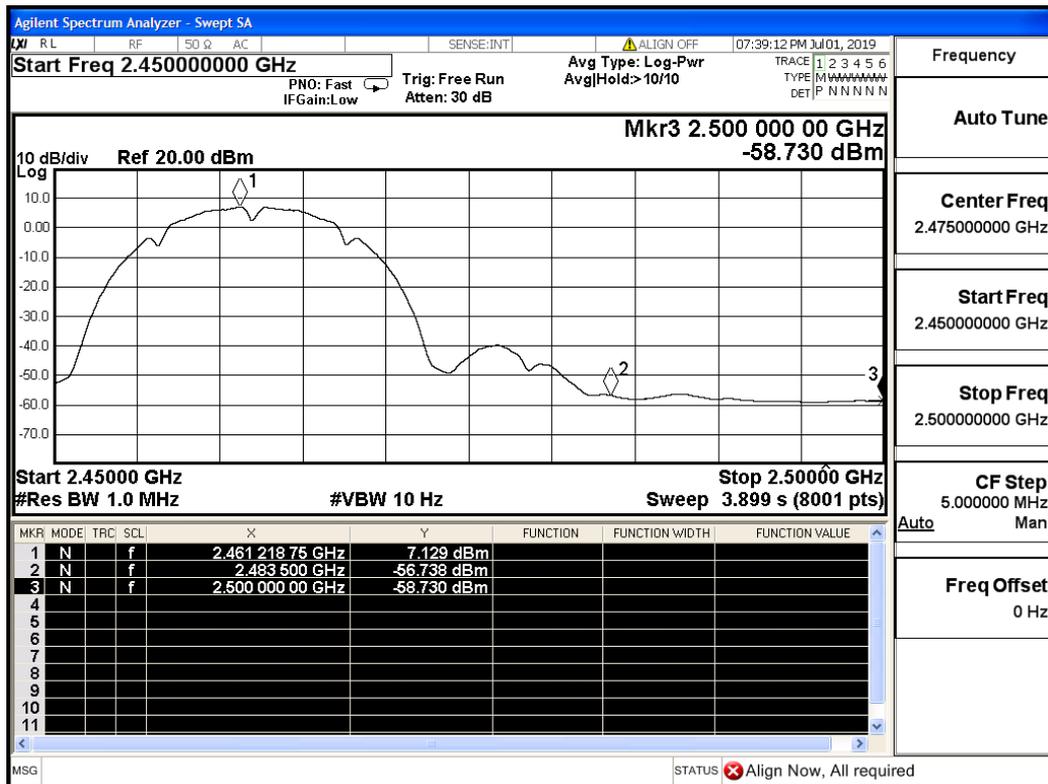
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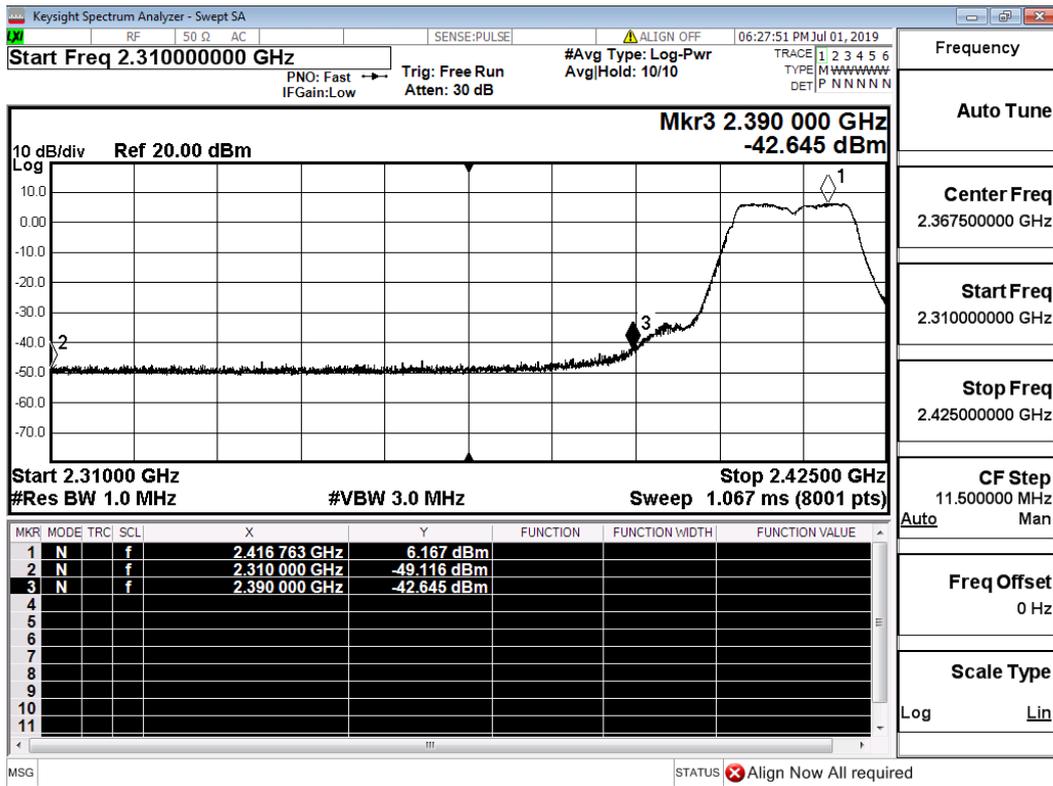
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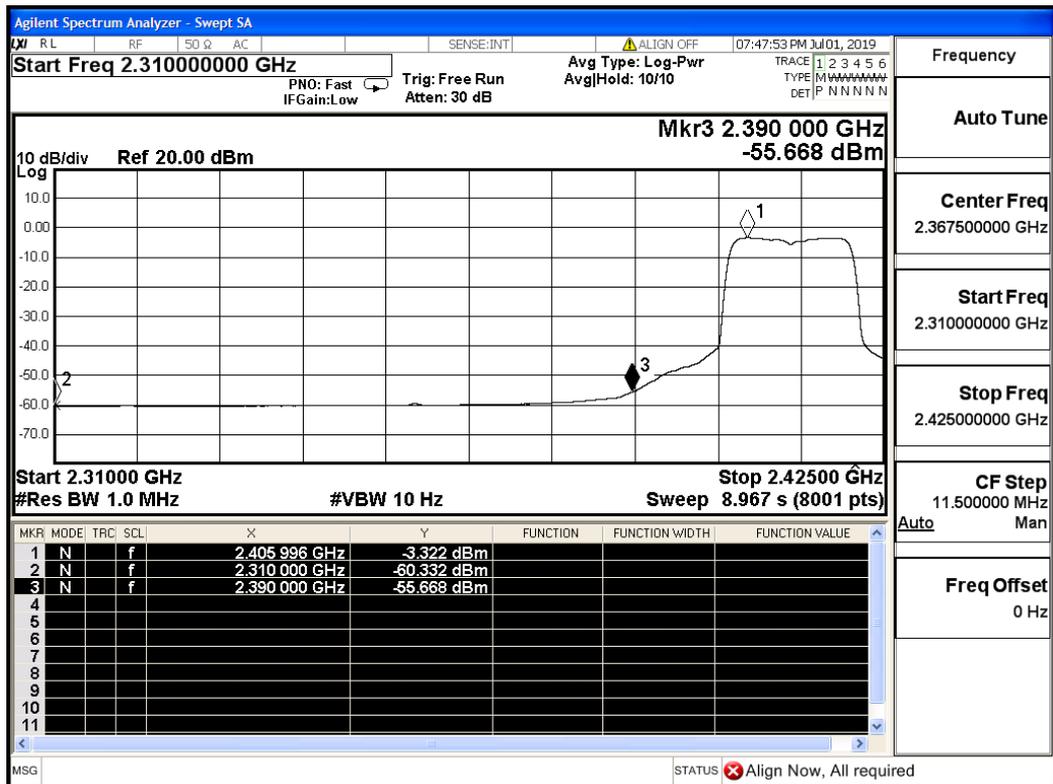
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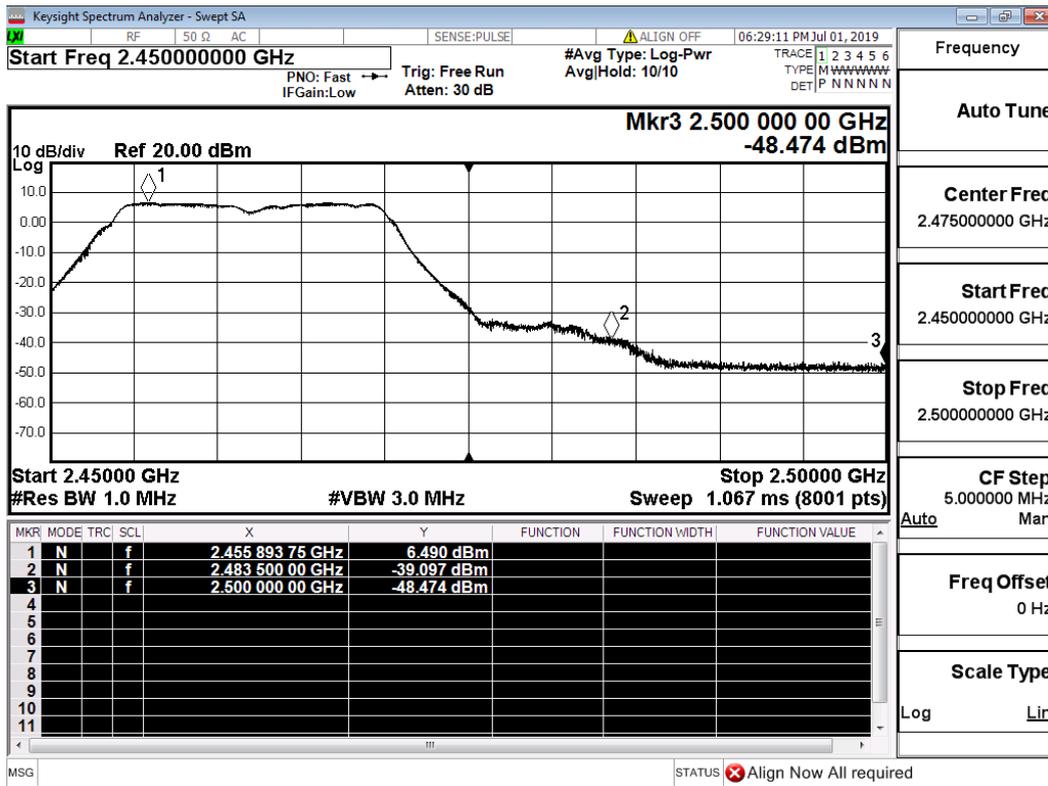
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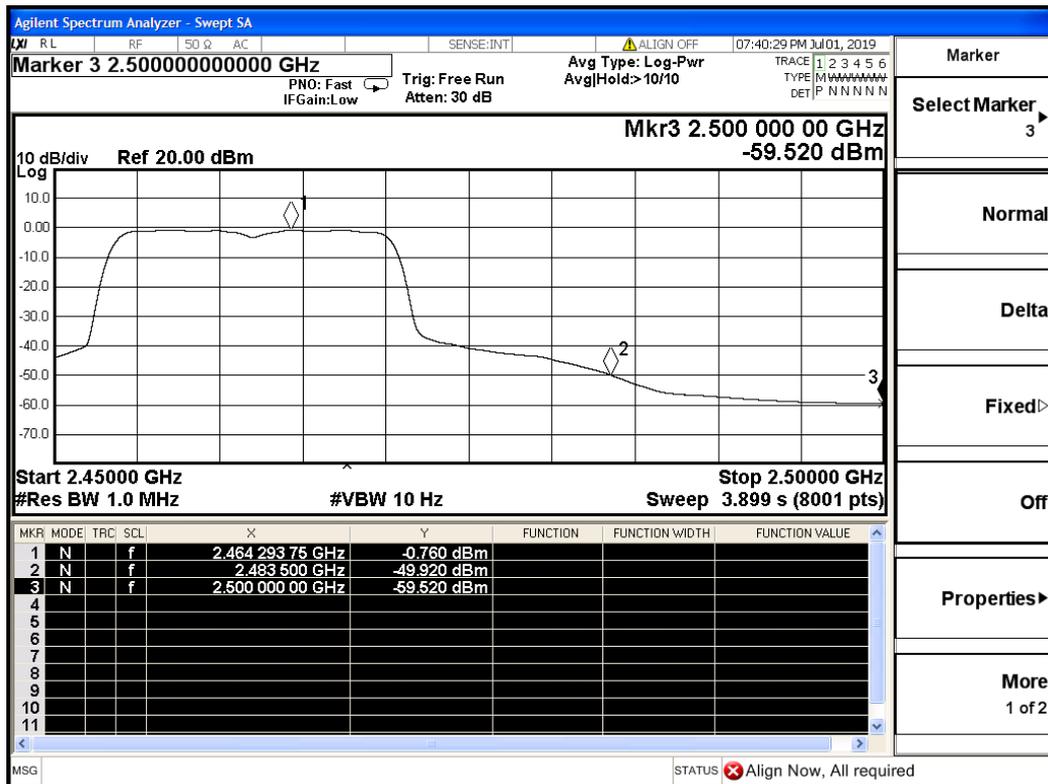
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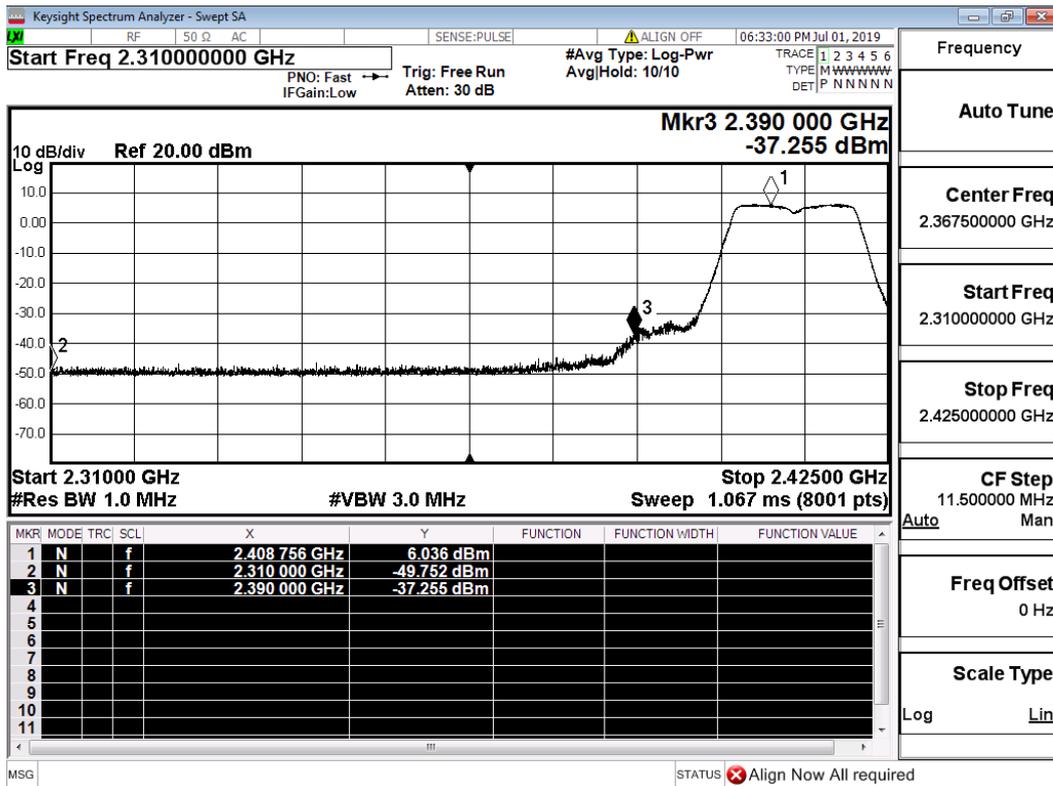
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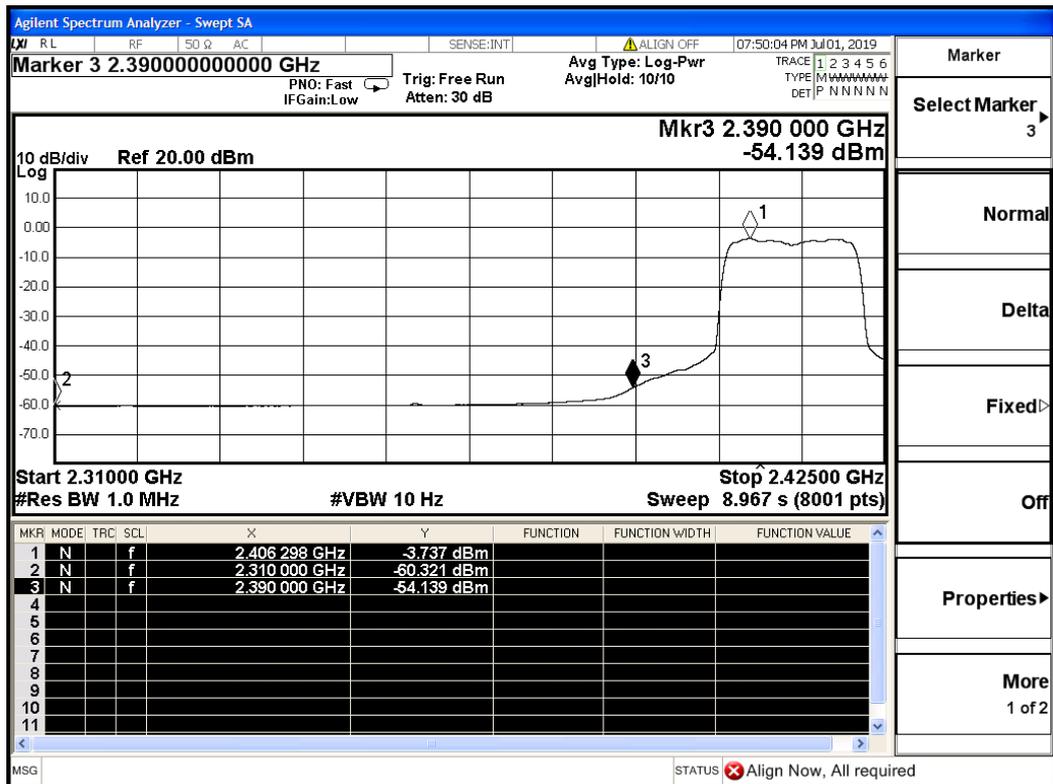
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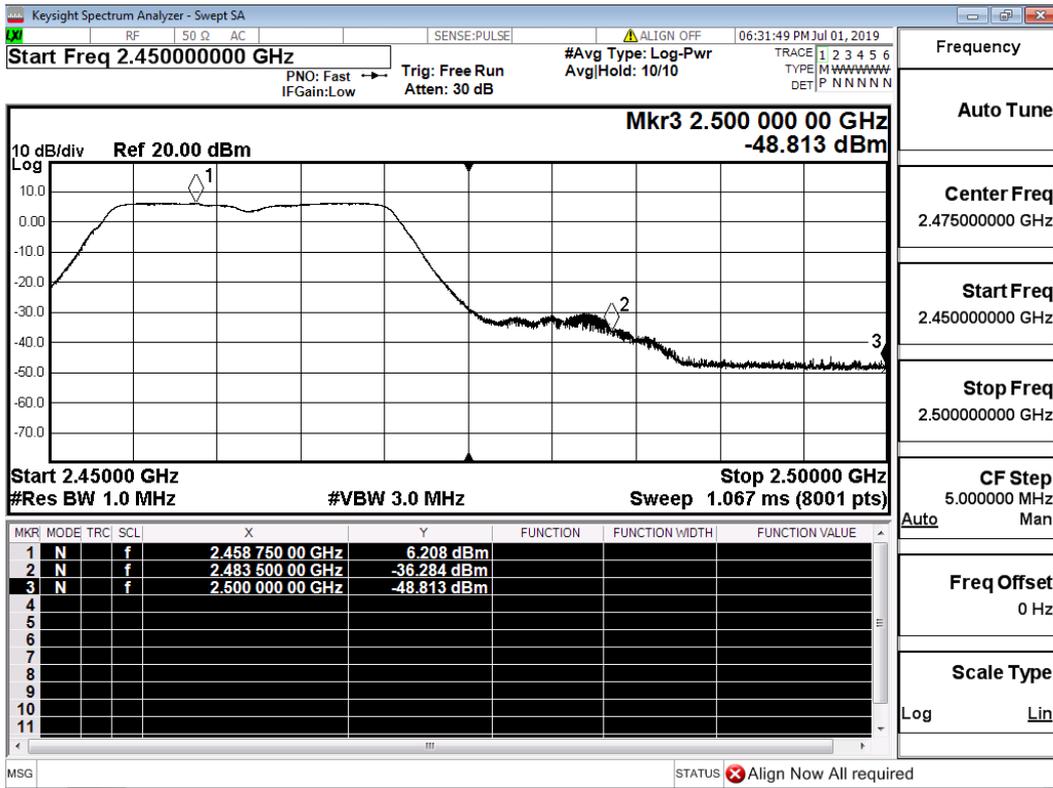
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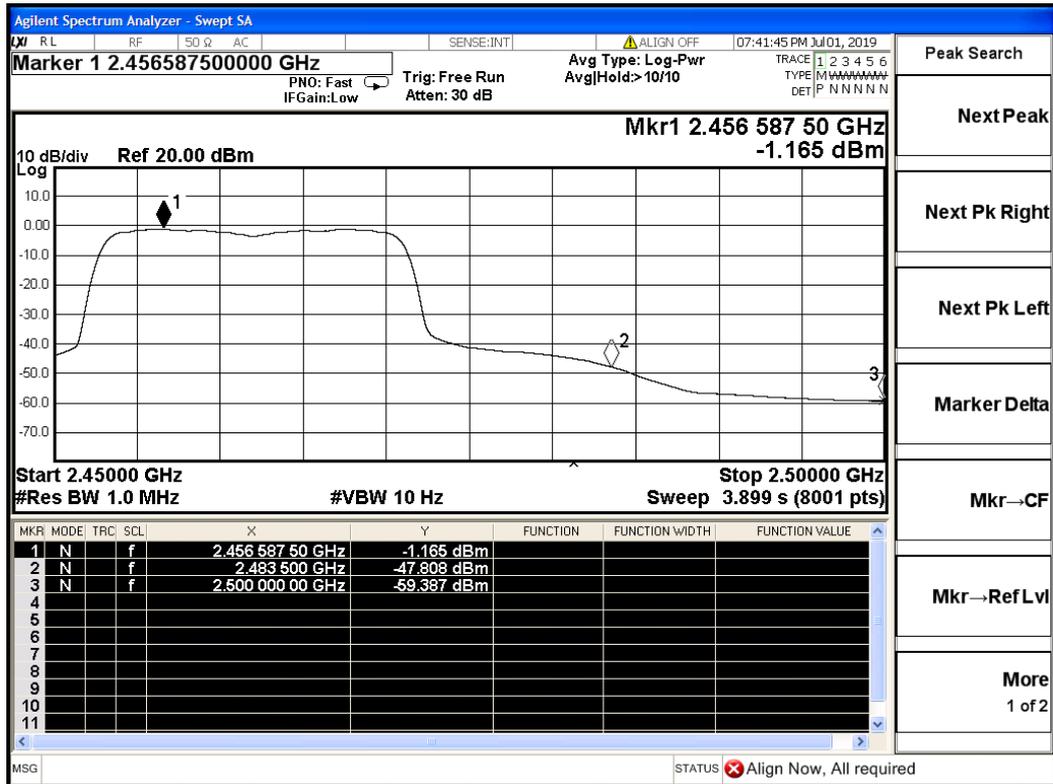
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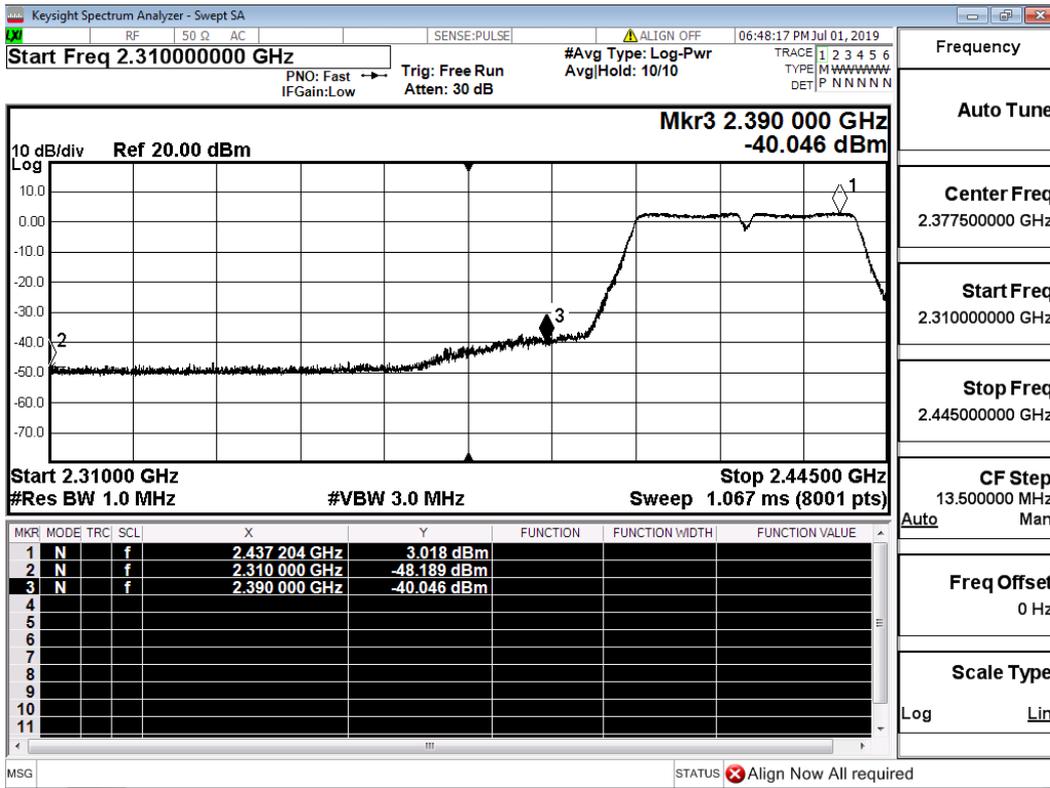
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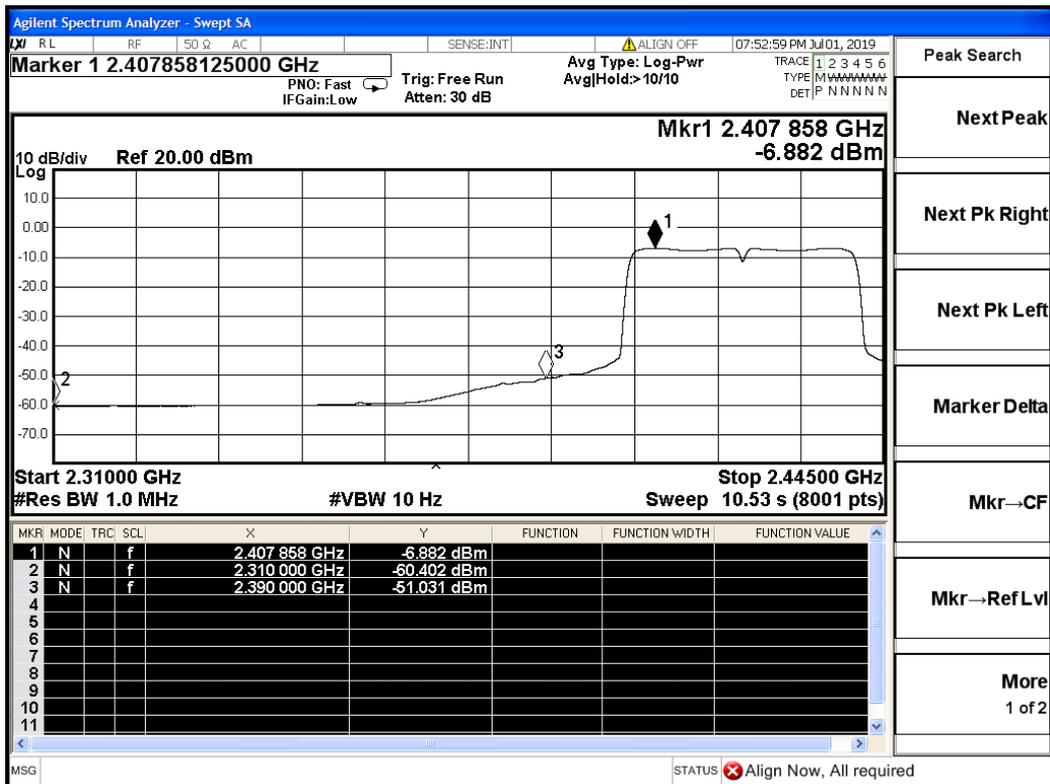
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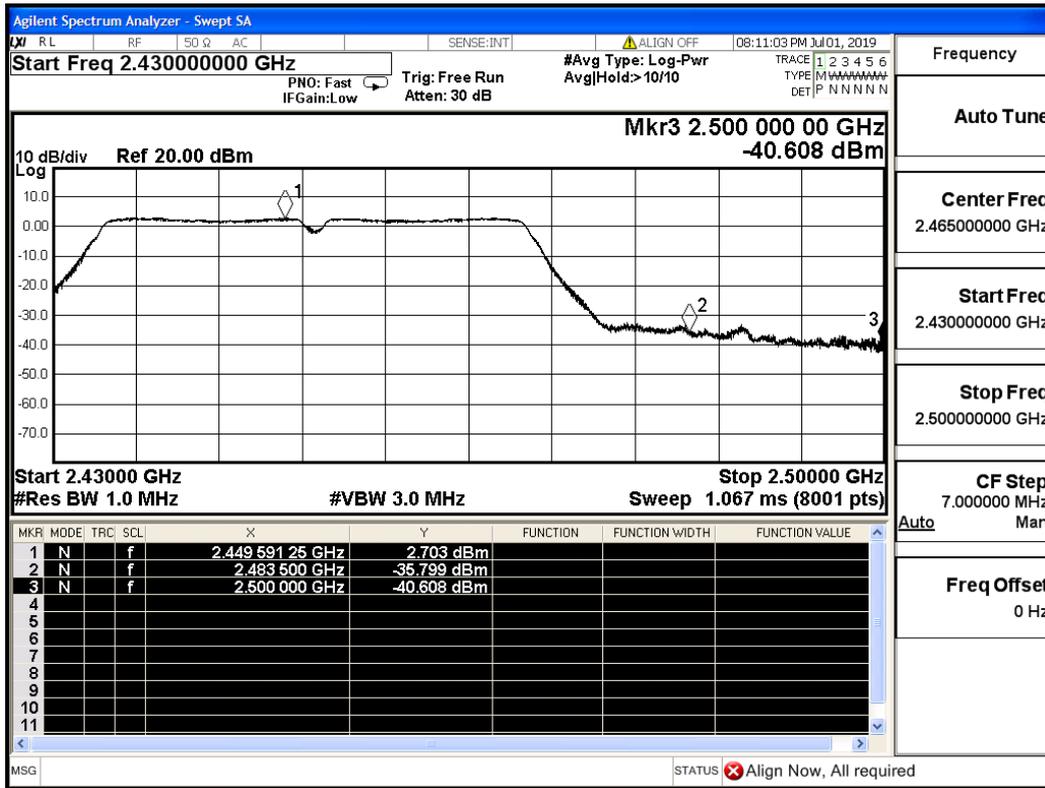
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Restrict-band band-edge measurements_11N40SISO_2422_Ant1_AV



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_PEAK



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_AV

