

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart Phone

Test Model: ELUGA RAY 800

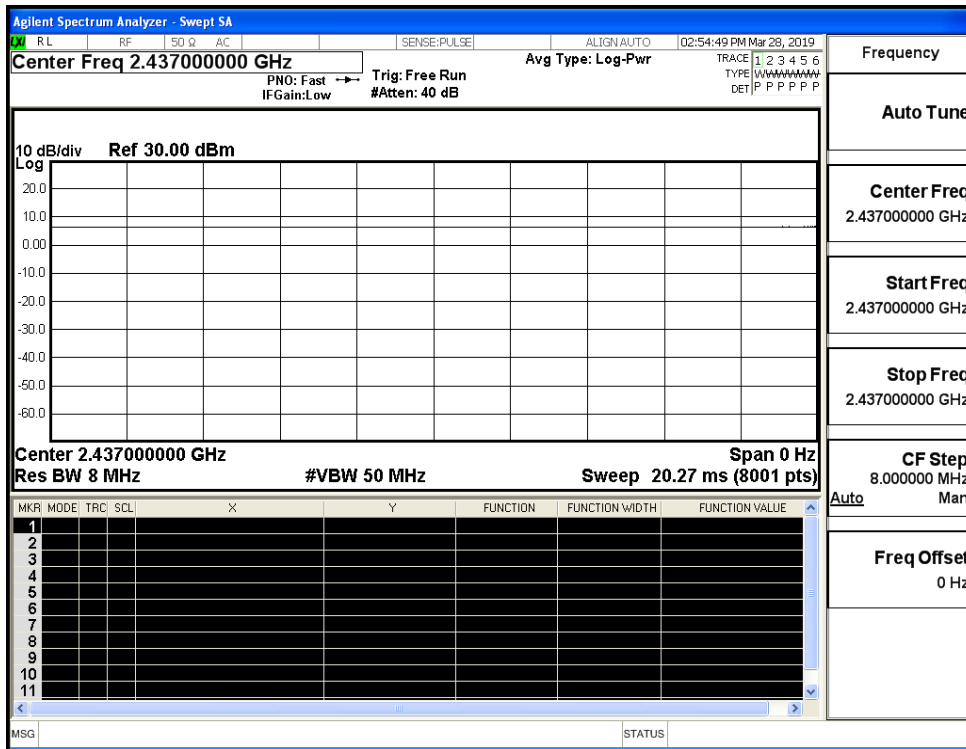
Environmental Conditions

Temperature:	24.5 ° C
Relative Humidity:	52.9%
ATM Pressure:	100.0 kPa
Test Engineer:	Wang Chuang
Supervised by:	Calvin Weng

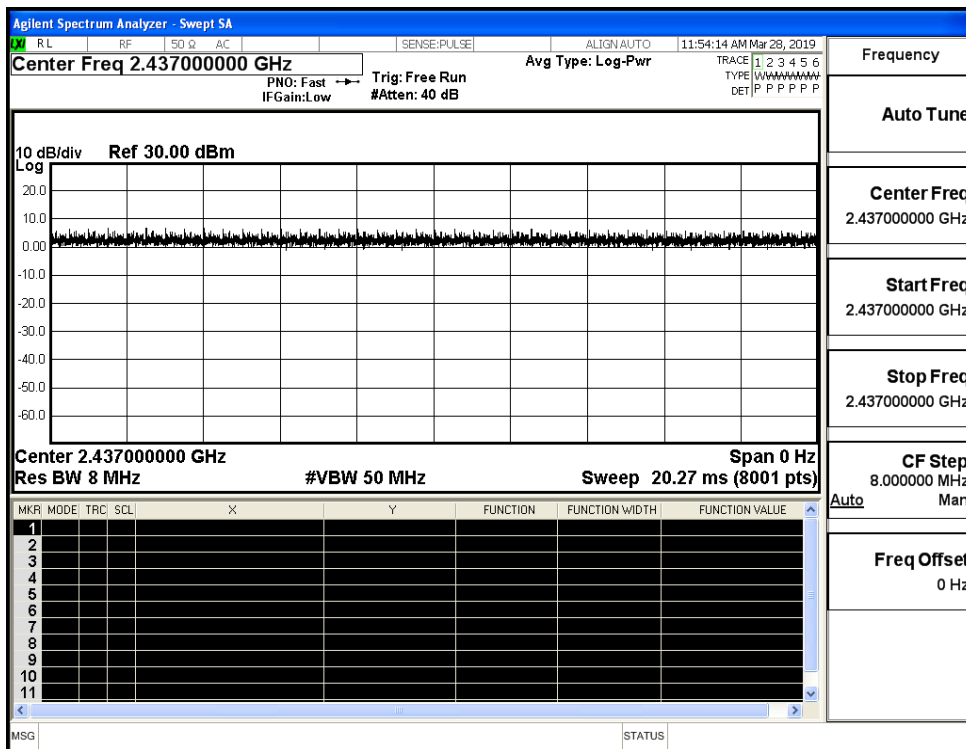
C.1 Duty Cycle

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

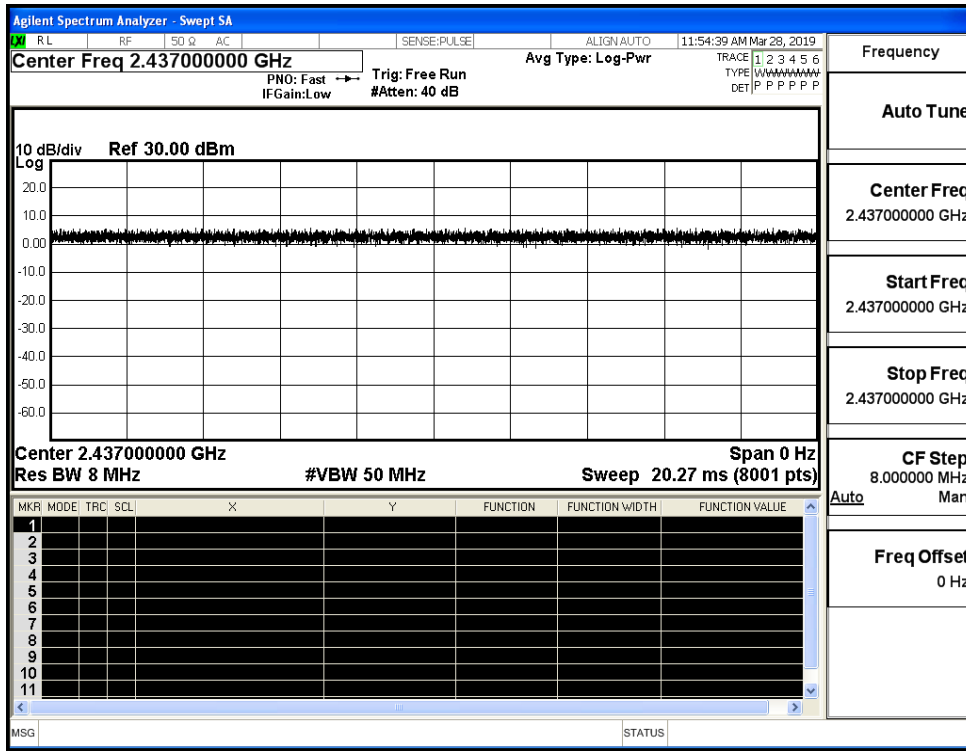
Duty Cycle_11B_2437_Ant1



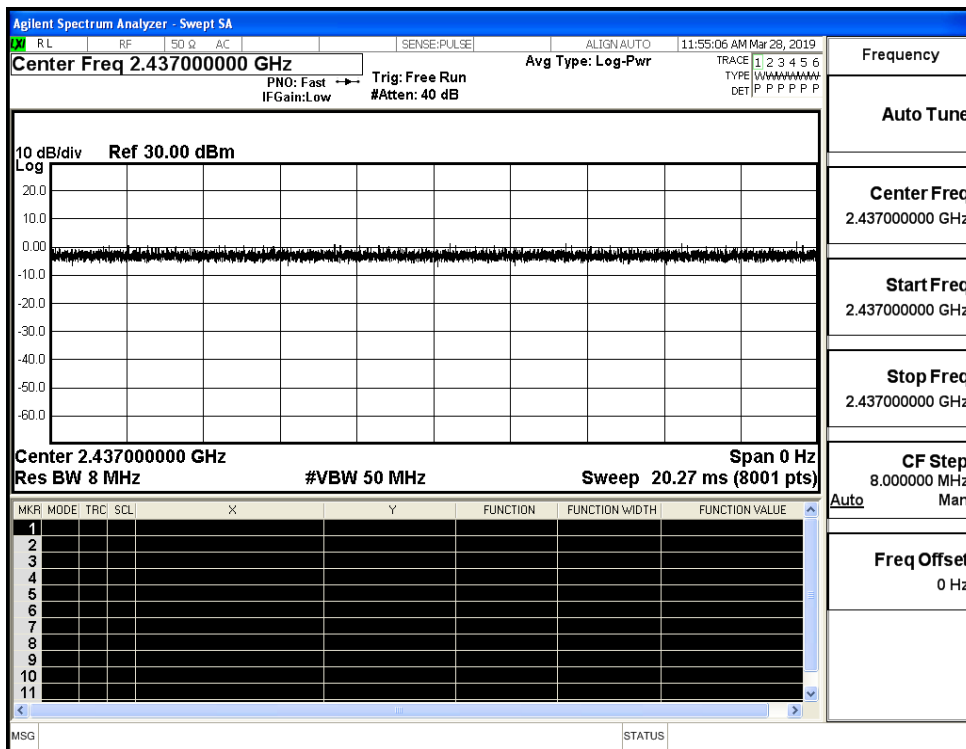
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1



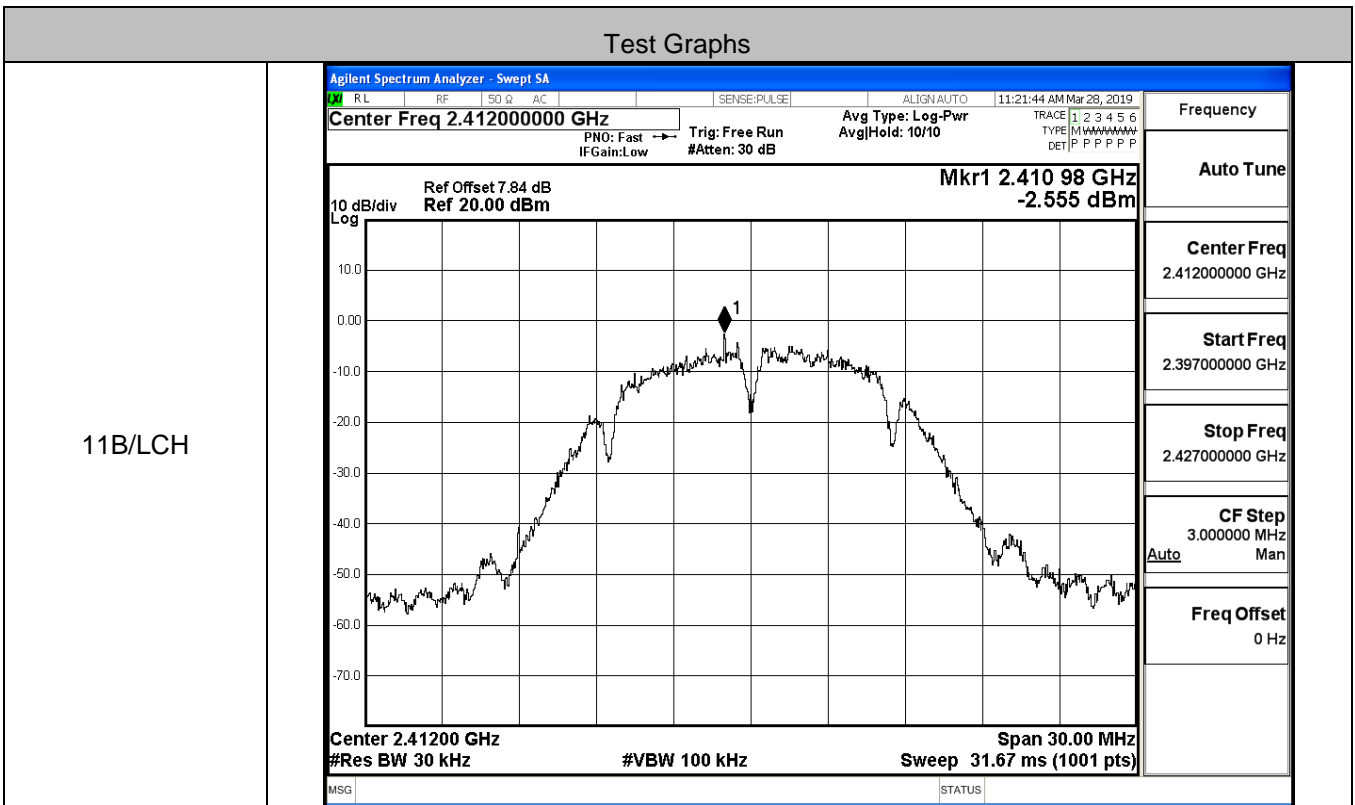
C.2 Maximum Conducted Output Power

Mode	Channel	Meas. Peak Level [dBm]	Meas. Average Level [dBm]	Limit [dBm]	Verdict
11B	LCH	11.49	9.34	30	PASS
	MCH	11.12	8.97	30	PASS
	HCH	10.36	8.22	30	PASS
11G	LCH	12.45	9.16	30	PASS
	MCH	13.95	10.64	30	PASS
	HCH	13.52	10.07	30	PASS
11N20SISO	LCH	12.81	9.36	30	PASS
	MCH	13.80	10.21	30	PASS
	HCH	13.23	9.72	30	PASS
11N40SISO	LCH	14.20	8.80	30	PASS
	MCH	13.44	8.16	30	PASS
	HCH	14.08	8.74	30	PASS

C.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Convert Factor	Result [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-2.555	-10	-12.555	8	PASS
	MCH	-3.956	-10	-13.956	8	PASS
	HCH	-0.481	-10	-10.481	8	PASS
11G	LCH	-10.526	-10	-20.526	8	PASS
	MCH	-8.907	-10	-18.907	8	PASS
	HCH	-9.790	-10	-19.790	8	PASS
11N20SISO	LCH	-10.816	-10	-20.816	8	PASS
	MCH	-8.935	-10	-18.935	8	PASS
	HCH	-7.992	-10	-17.992	8	PASS
11N40SISO	LCH	-11.734	-10	-21.734	8	PASS
	MCH	-13.137	-10	-23.137	8	PASS
	HCH	-11.092	-10	-21.092	8	PASS

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

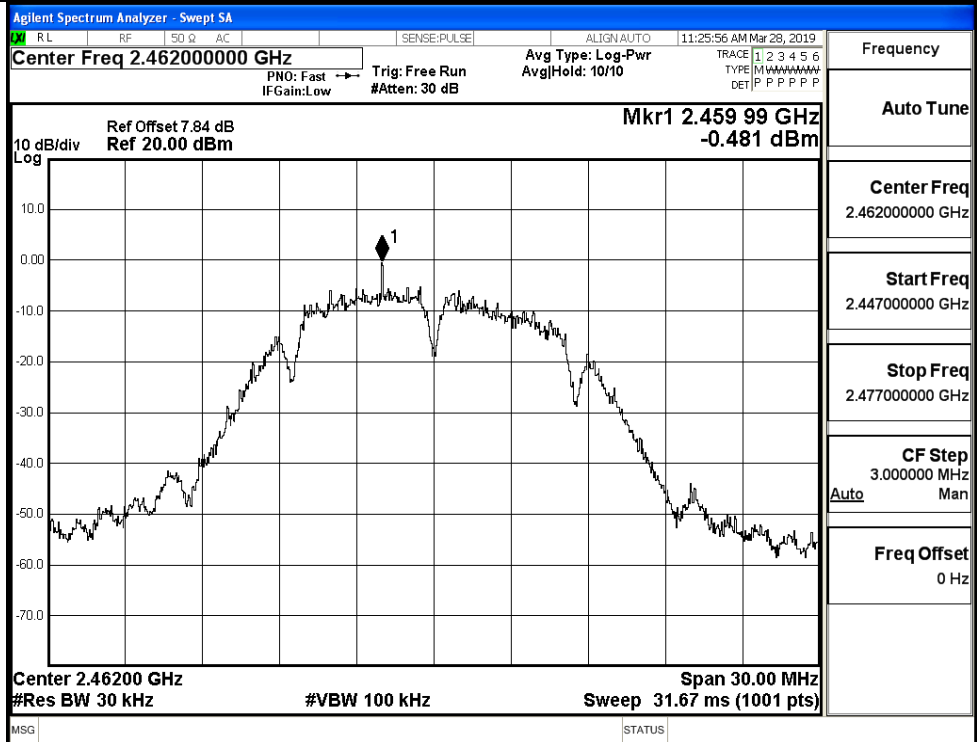


11B/MCH



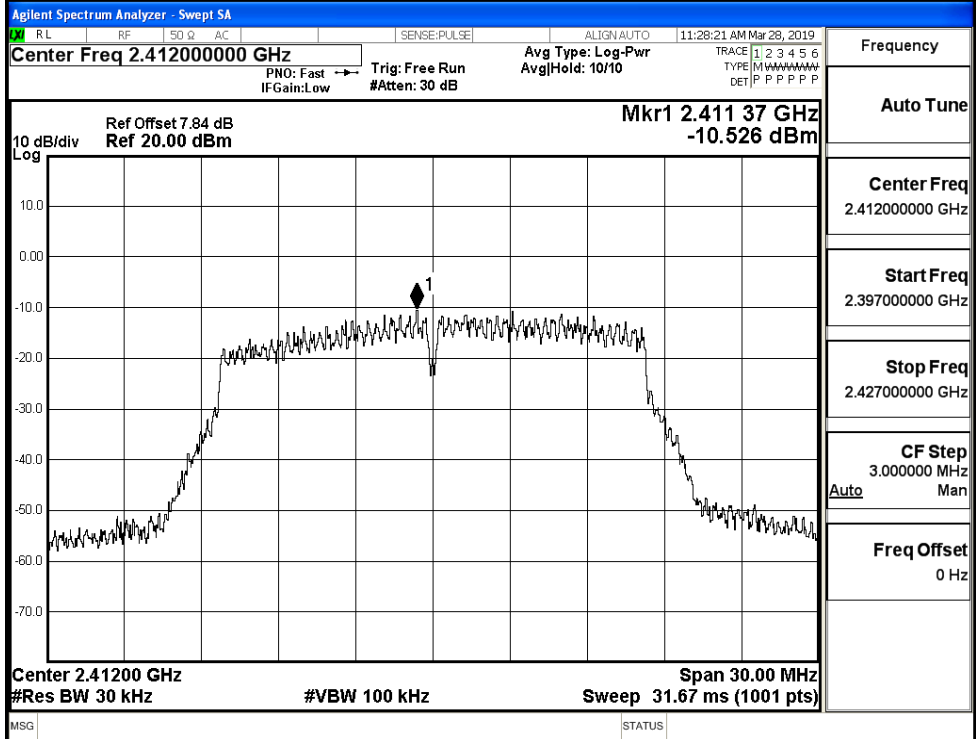
Frequency
Auto Tune
Center Freq 2.43700000 GHz
Start Freq 2.422000000 GHz
Stop Freq 2.452000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11B/HCH

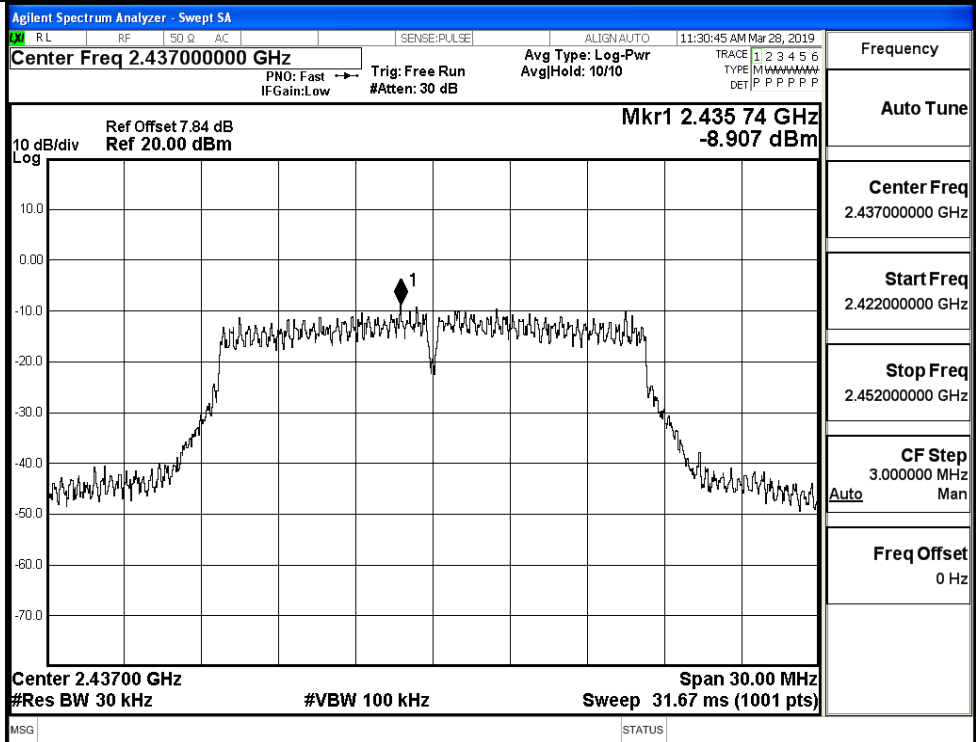


Frequency
Auto Tune
Center Freq 2.46200000 GHz
Start Freq 2.447000000 GHz
Stop Freq 2.477000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

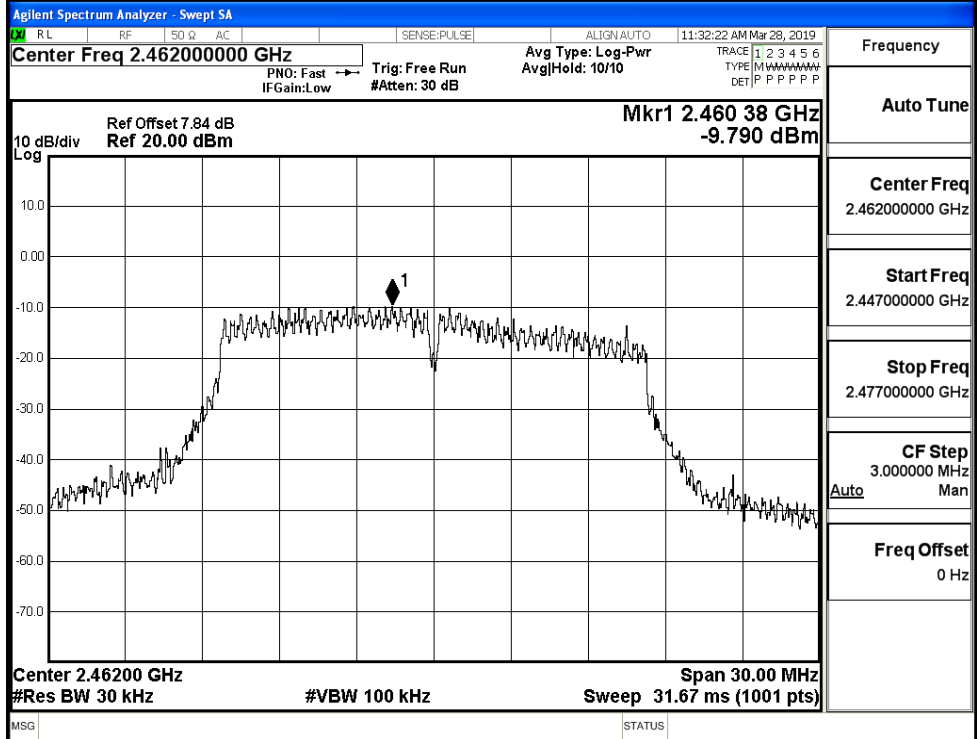
11G/LCH



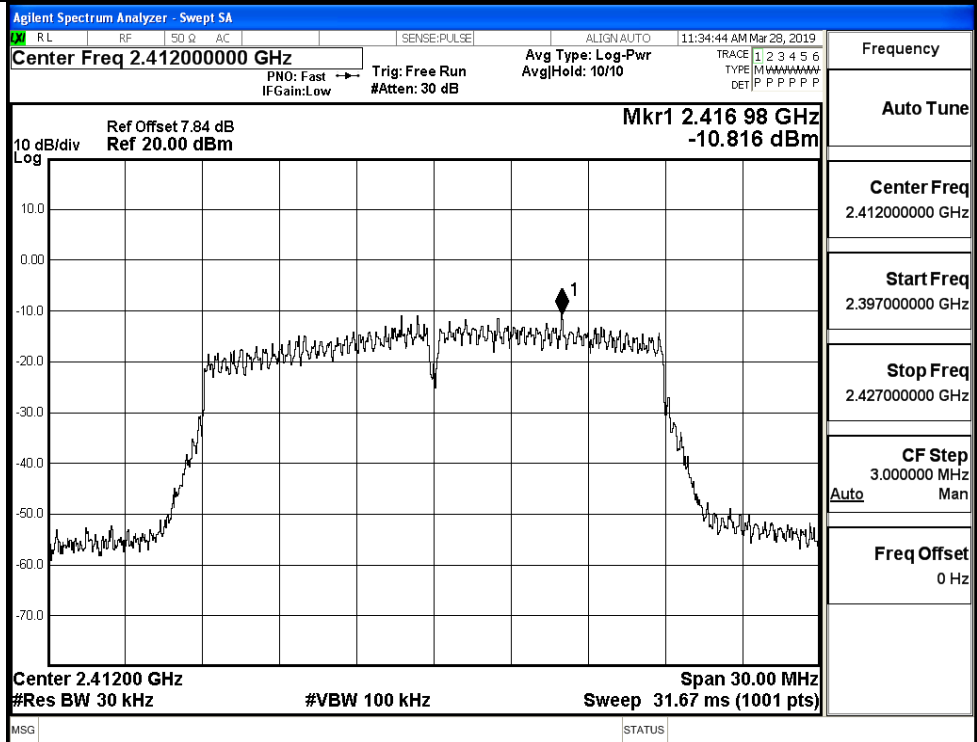
11G/MCH



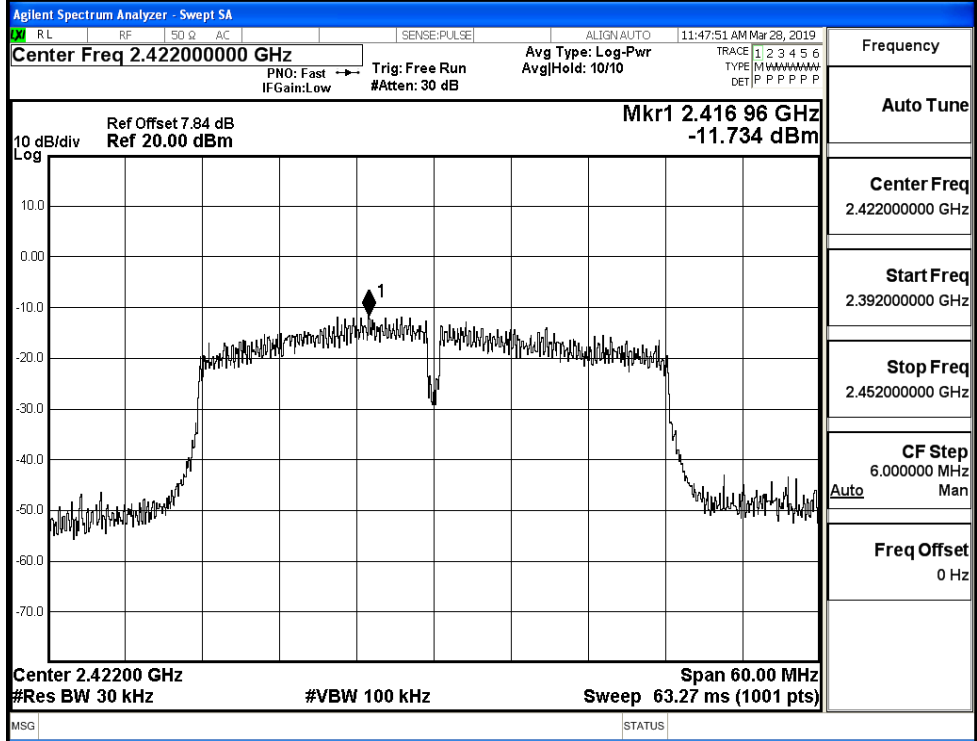
11G/HCH



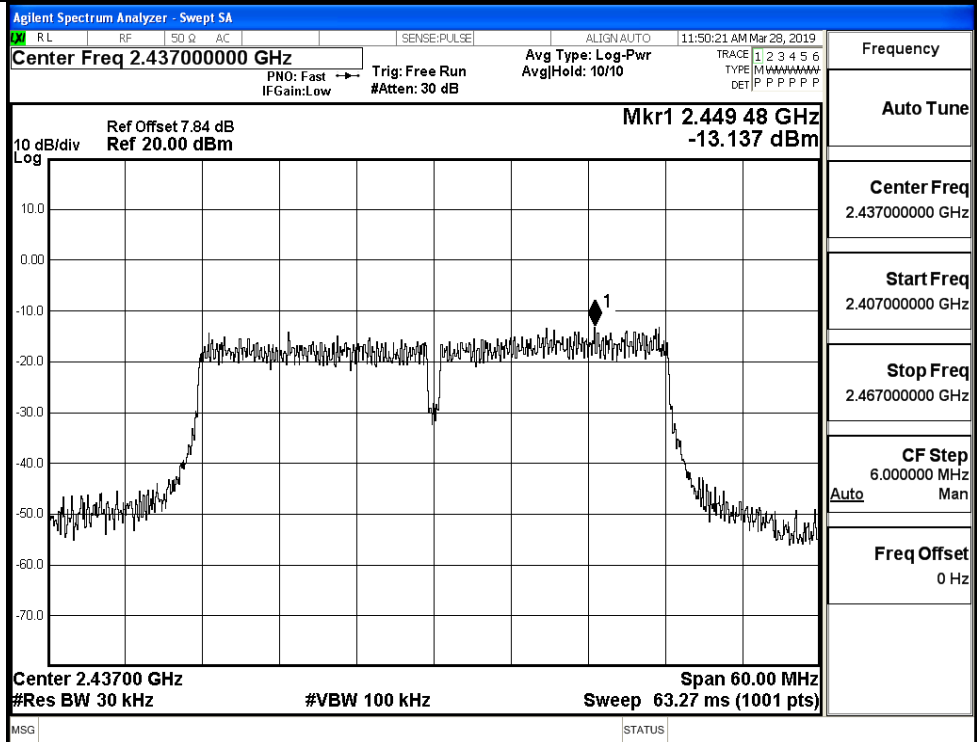
11N20SISO/LCH



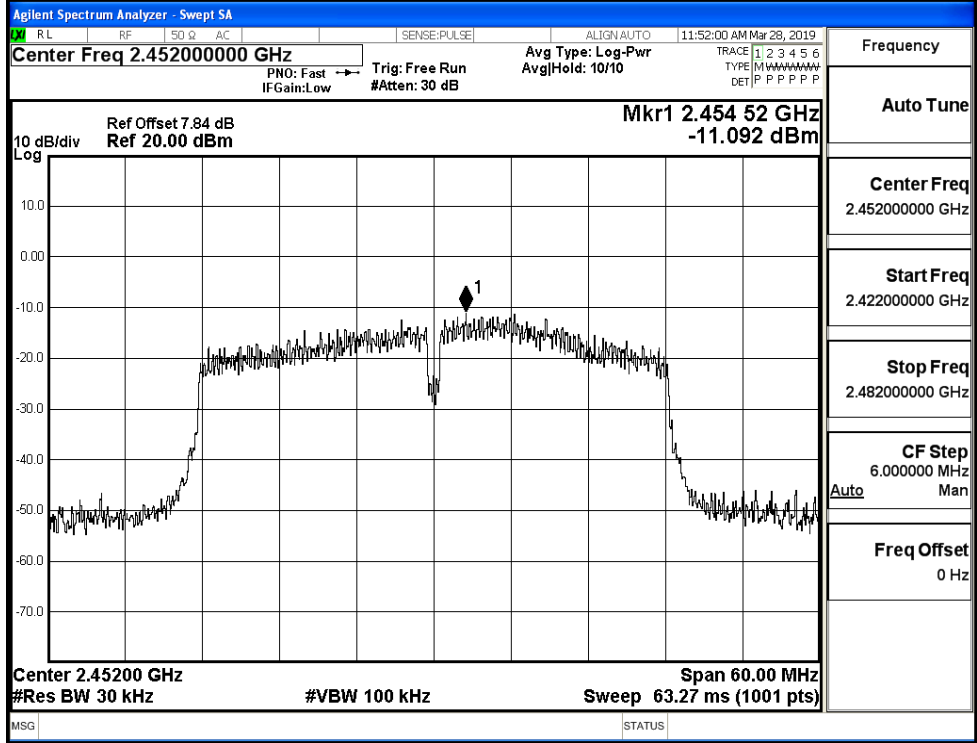
11N40SISO/LCH



11N40SISO/MCH

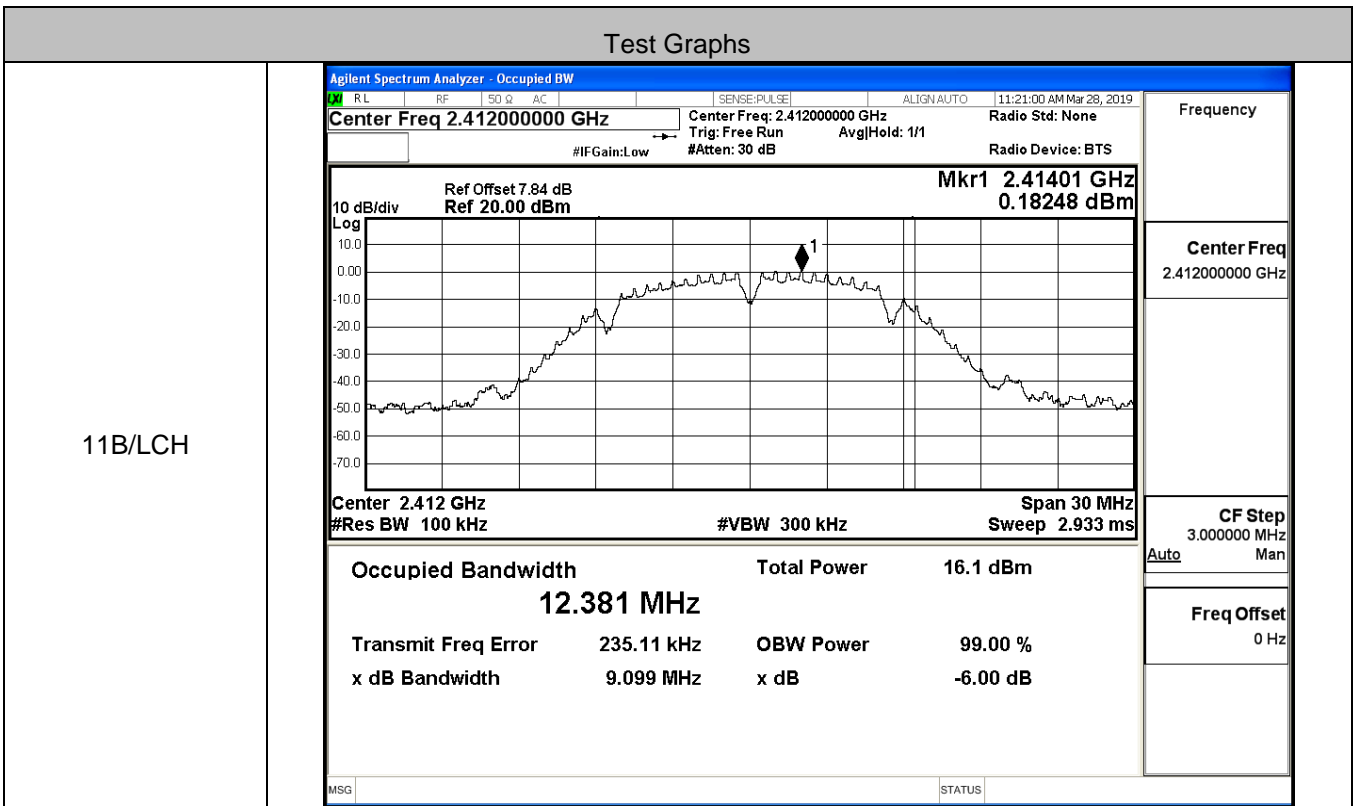


11N40SISO/HCH

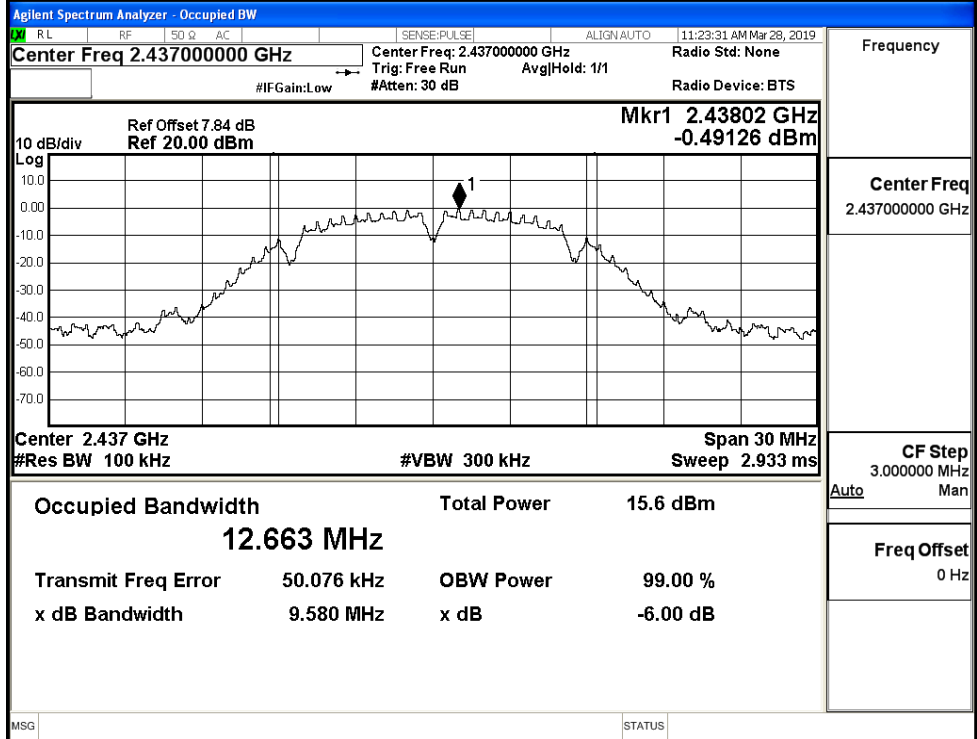


C.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.099	≥0.5	PASS
	MCH	9.580	≥0.5	PASS
	HCH	9.057	≥0.5	PASS
11G	LCH	15.43	≥0.5	PASS
	MCH	16.07	≥0.5	PASS
	HCH	15.44	≥0.5	PASS
11N20SISO	LCH	15.29	≥0.5	PASS
	MCH	16.35	≥0.5	PASS
	HCH	14.22	≥0.5	PASS
11N40SISO	LCH	33.90	≥0.5	PASS
	MCH	35.60	≥0.5	PASS
	HCH	32.55	≥0.5	PASS



11B/MCH



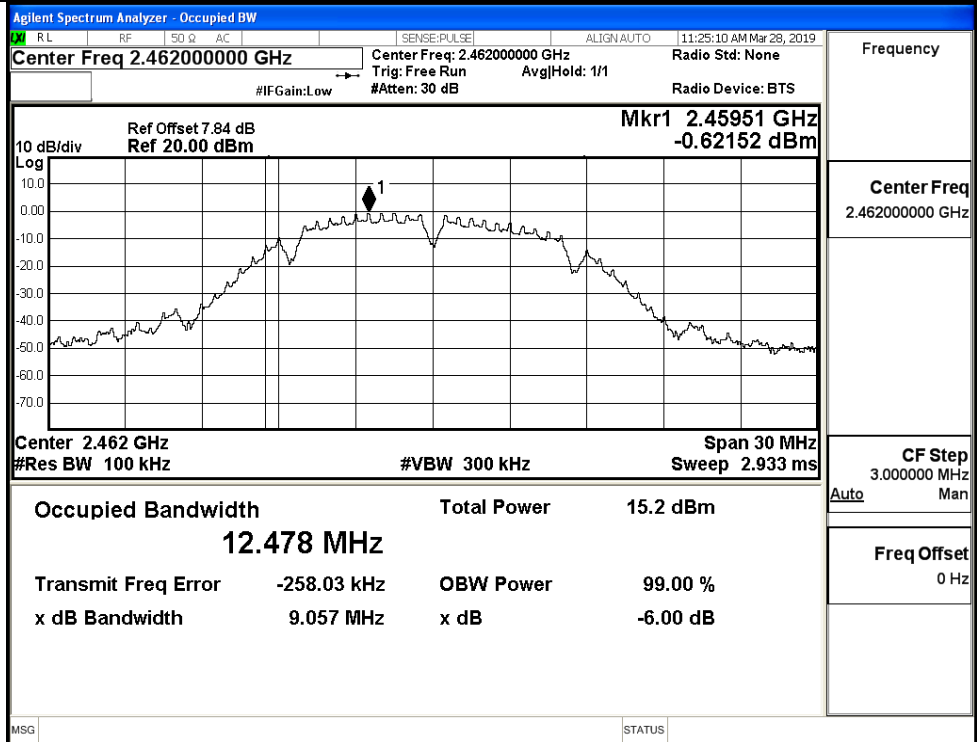
Frequency

Center Freq
2.43700000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11B/HCH



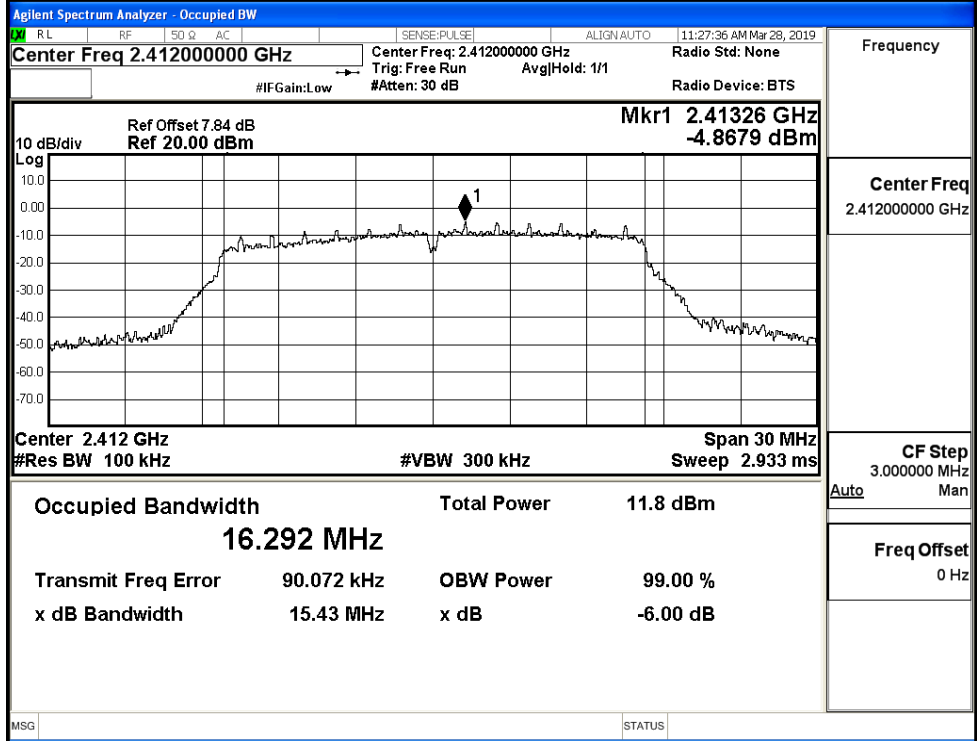
Frequency

Center Freq
2.46200000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11G/LCH



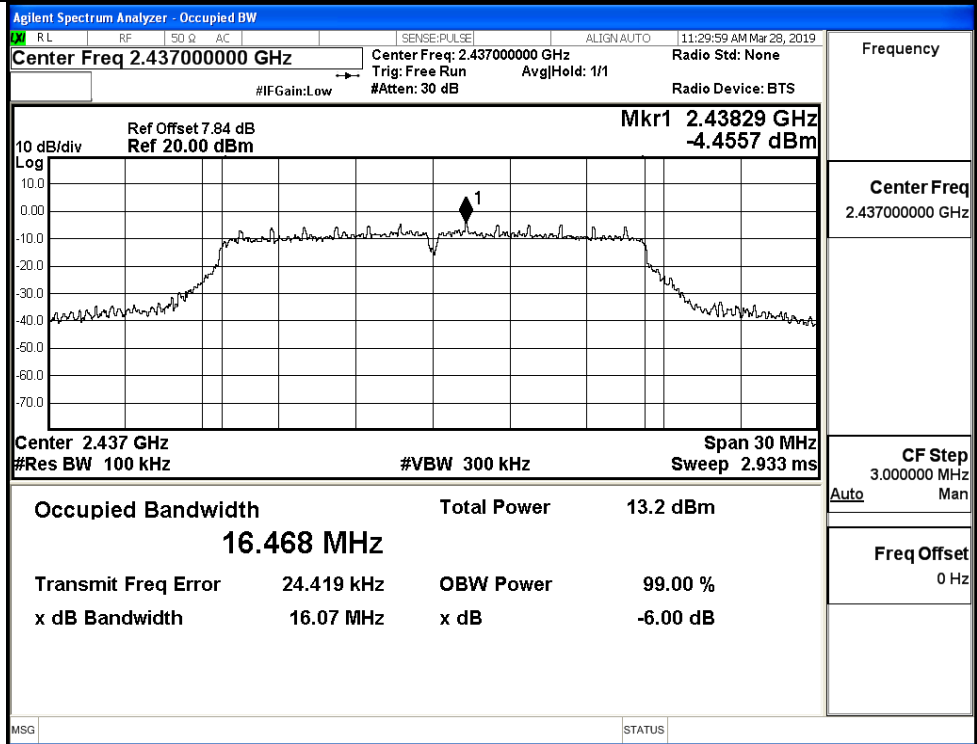
Frequency

Center Freq
2.41200000 GHz

CF Step
3.000000 MHz

Freq Offset
0 Hz

11G/MCH



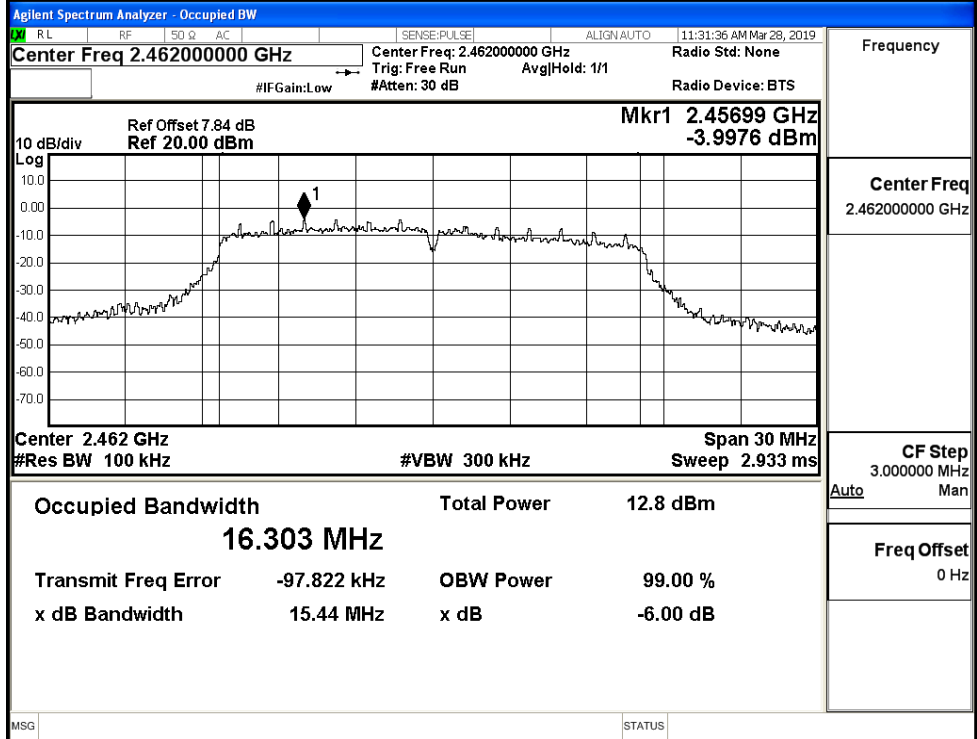
Frequency

Center Freq
2.43700000 GHz

CF Step
3.000000 MHz

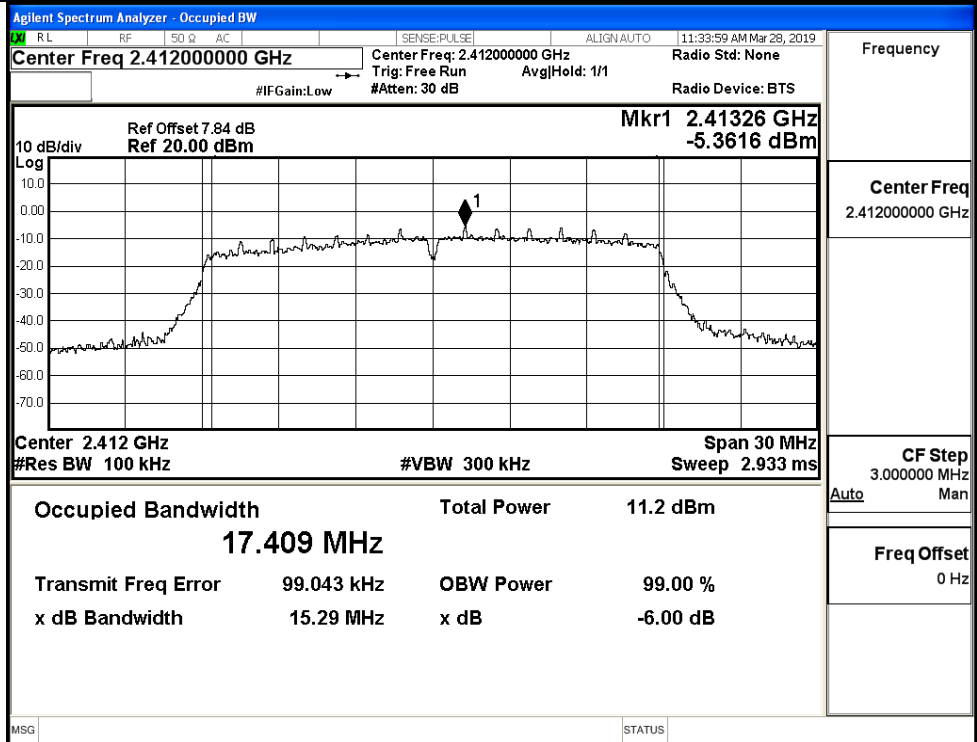
Freq Offset
0 Hz

11G/HCH

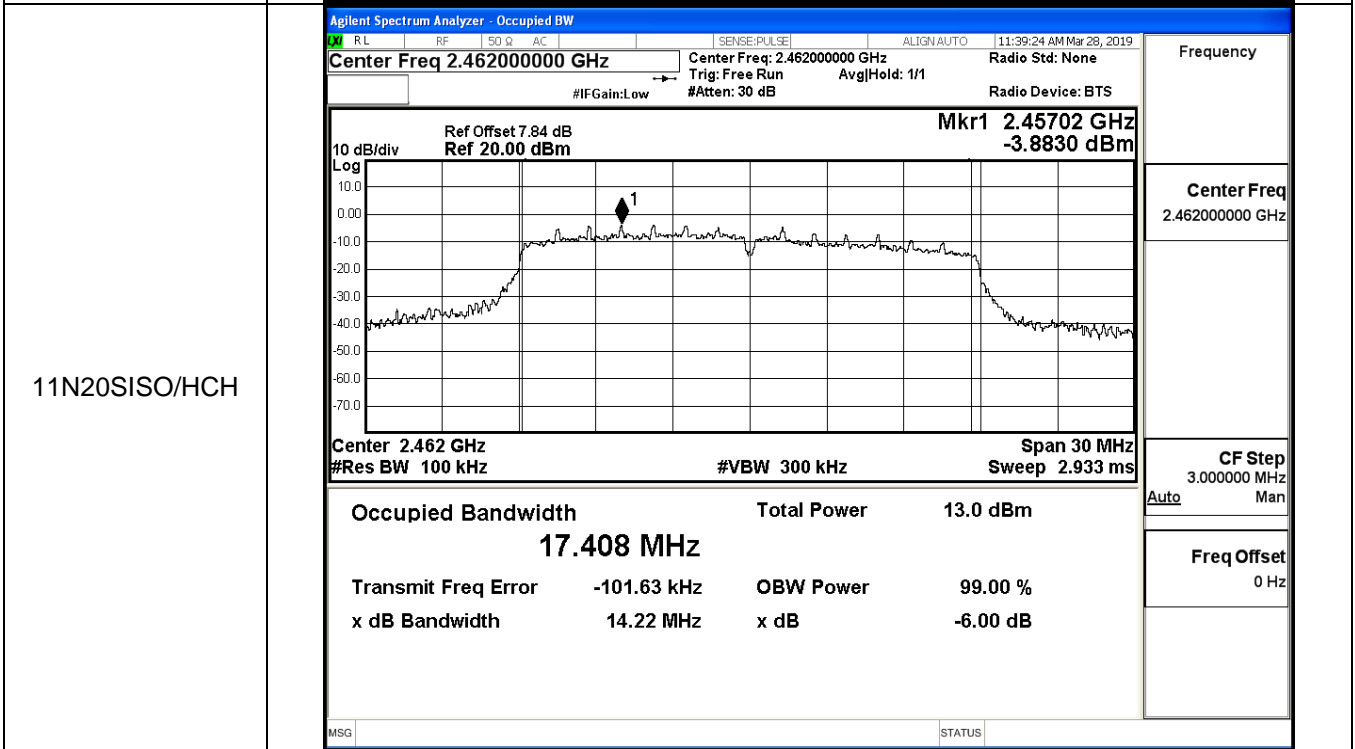
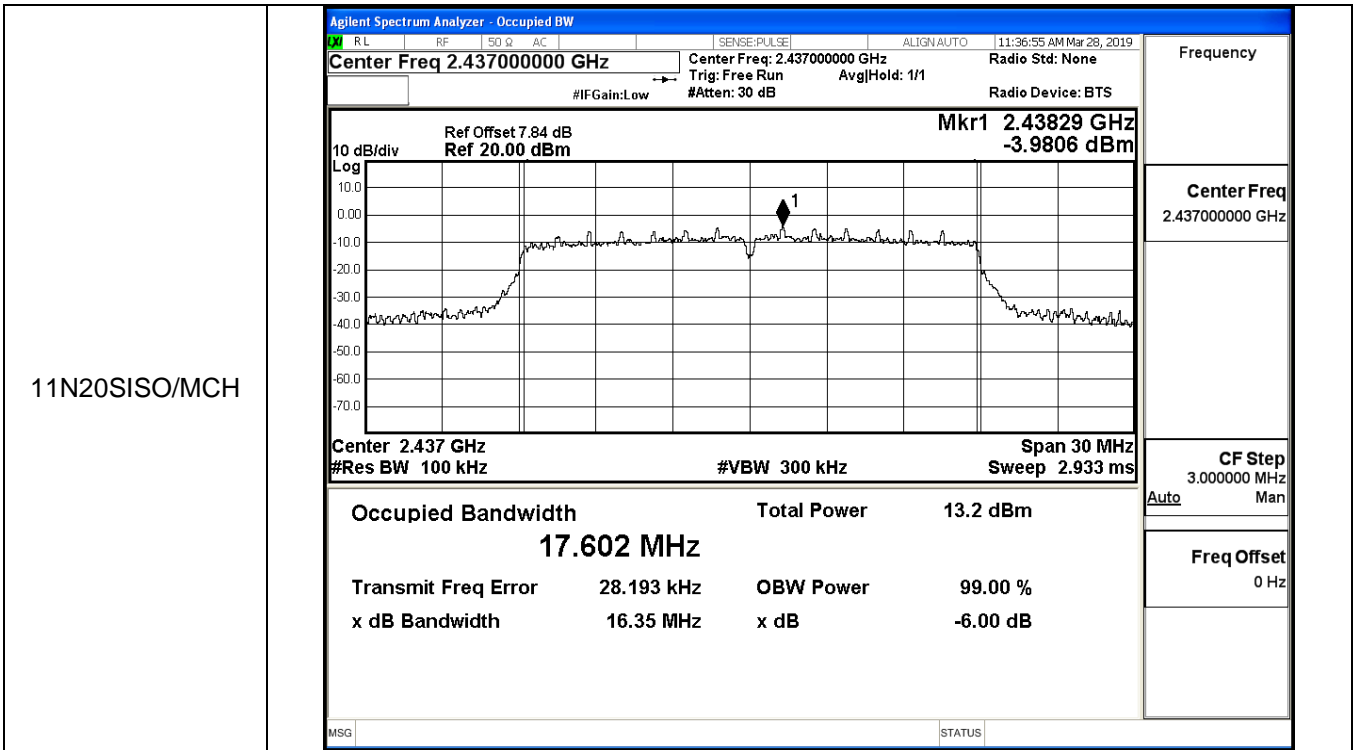


Frequency	2.46200000 GHz
Center Freq	2.46200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

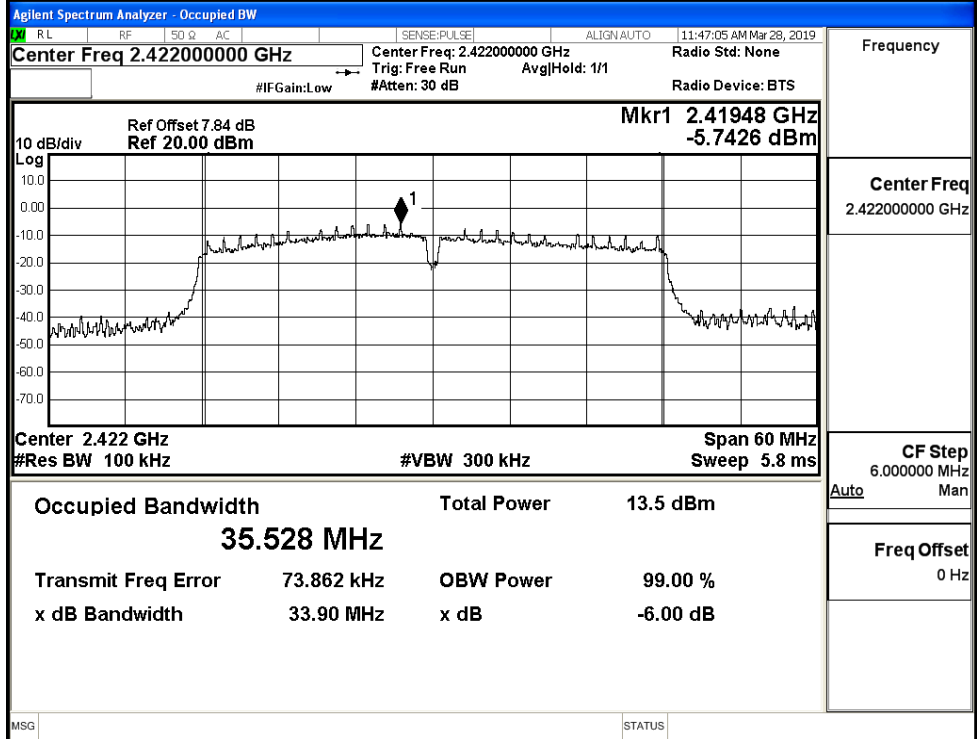
11N20SISO/LCH



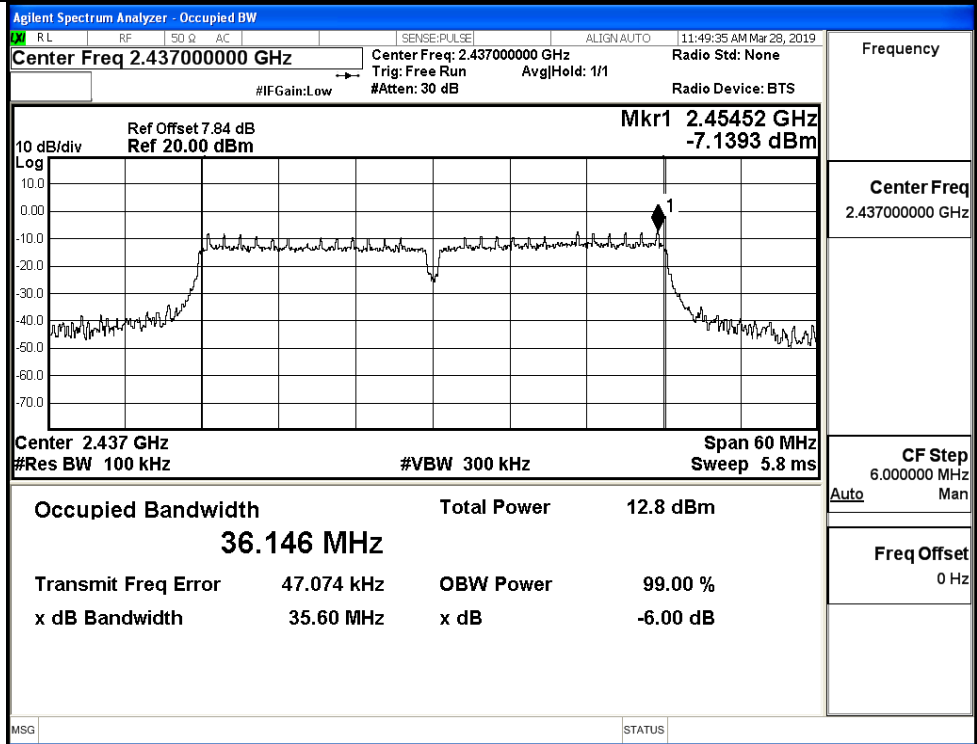
Frequency	2.41200000 GHz
Center Freq	2.41200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz



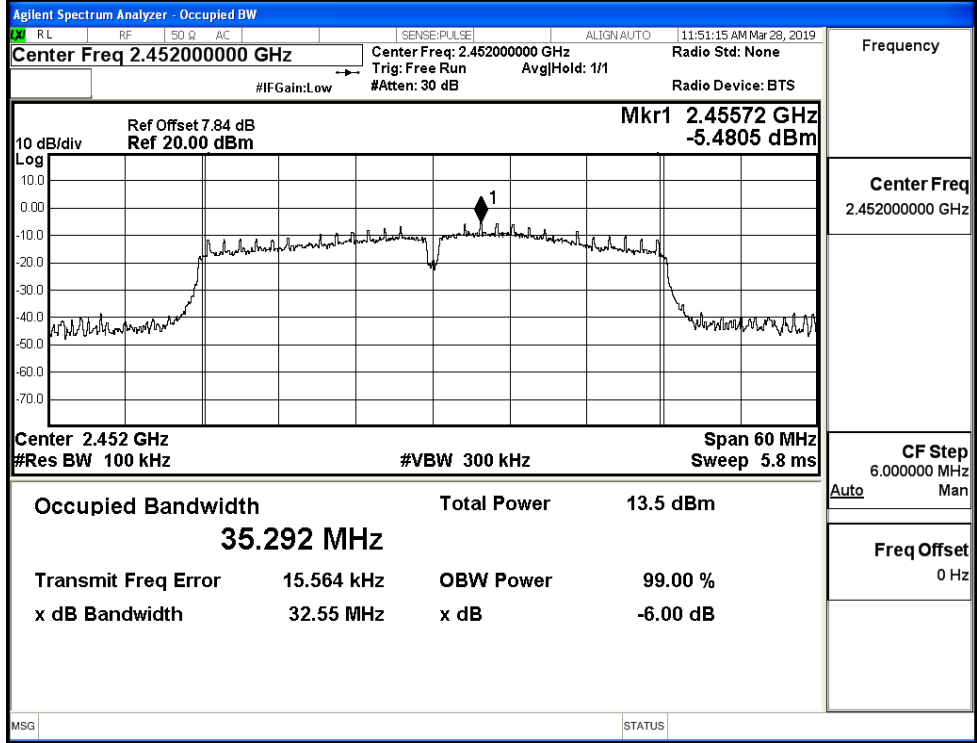
11N40SISO/LCH



11N40SISO/MCH



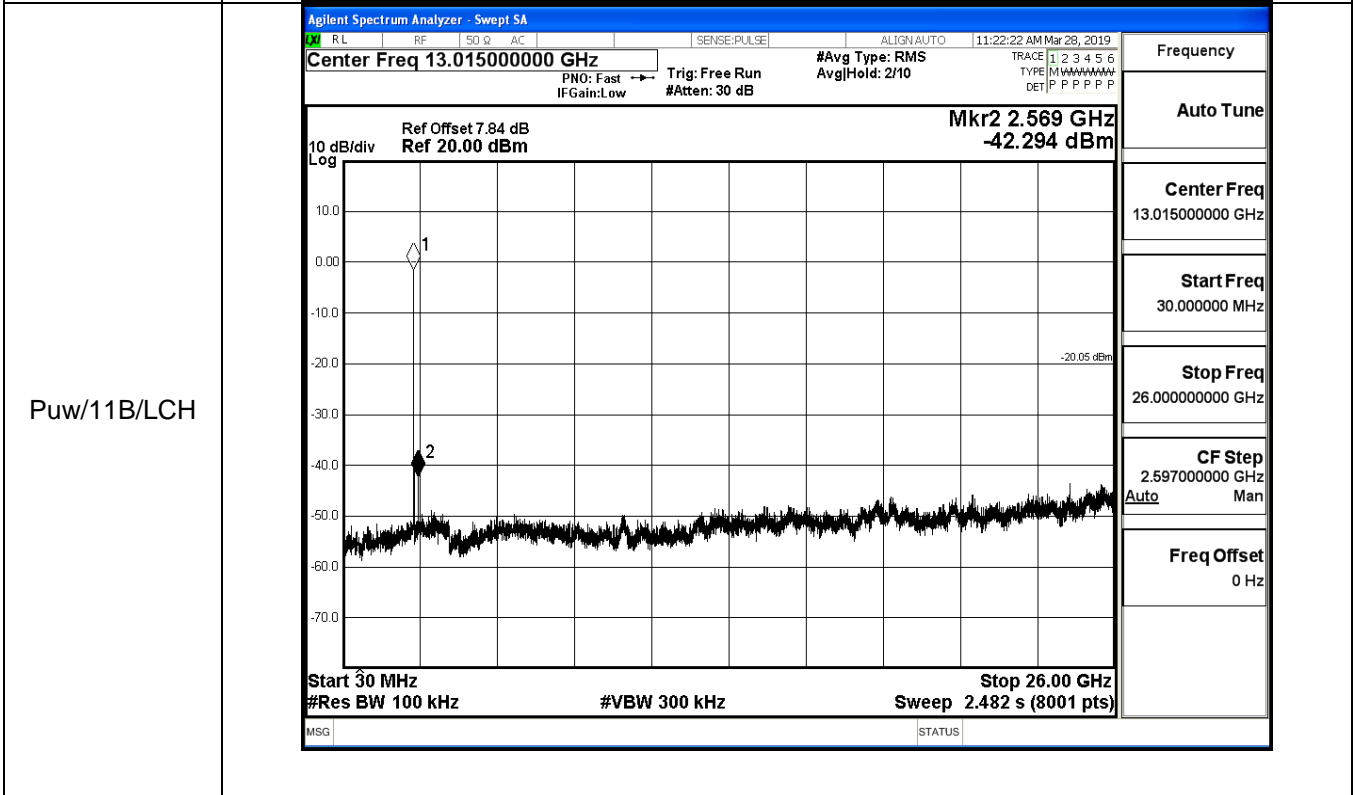
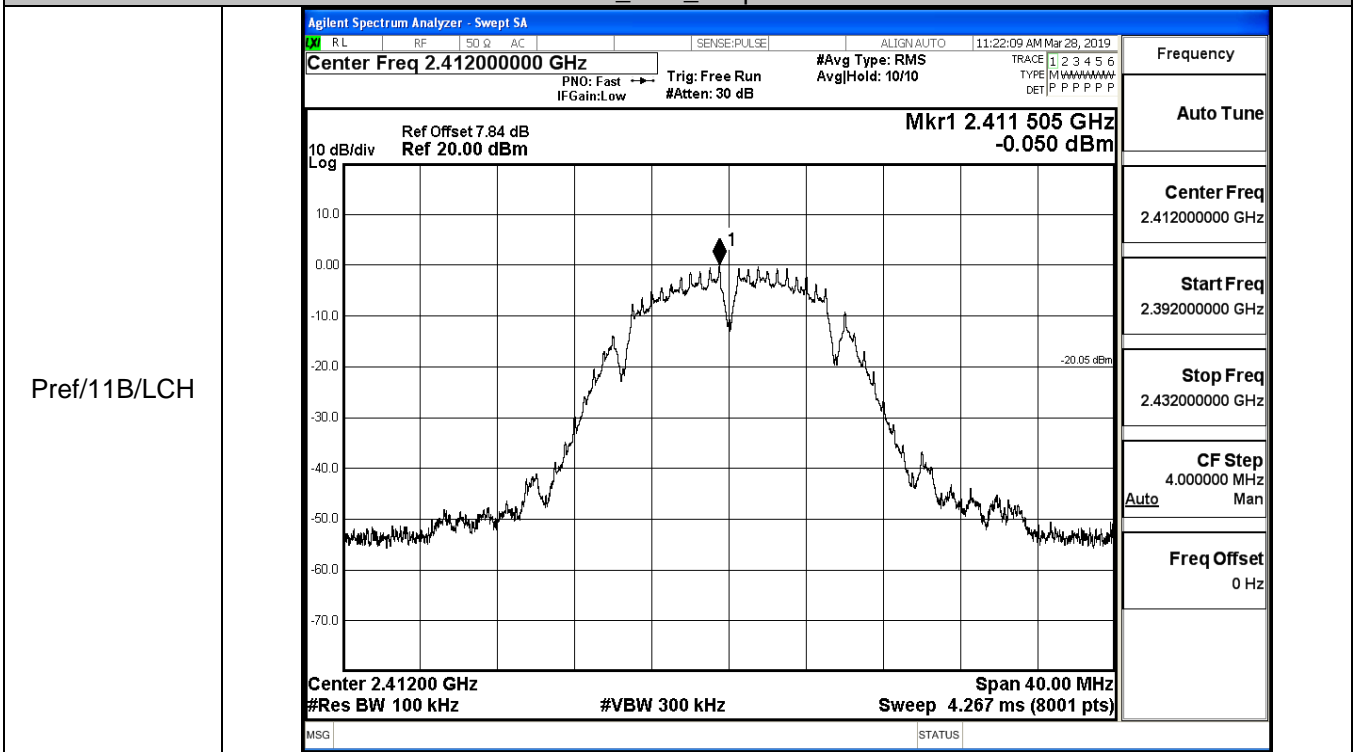
11N40SISO/HCH



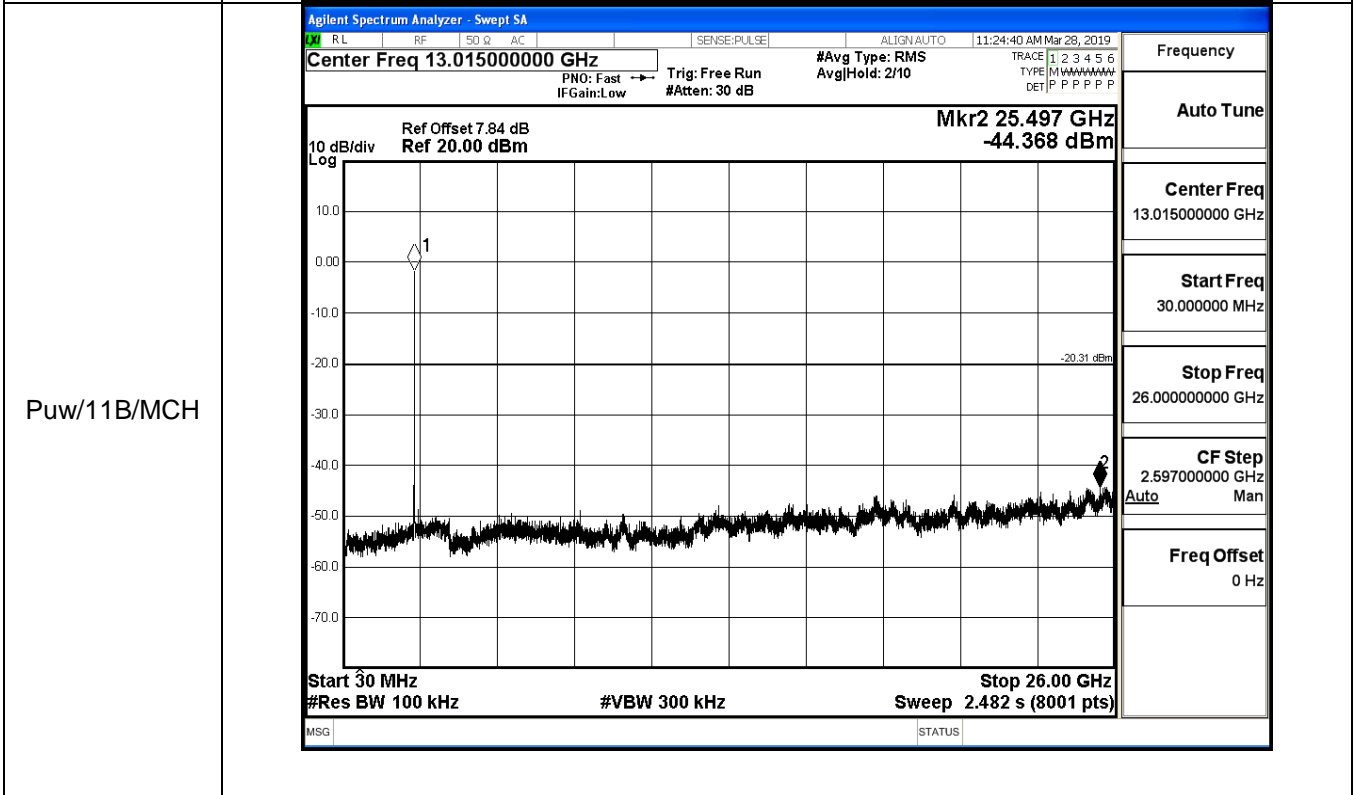
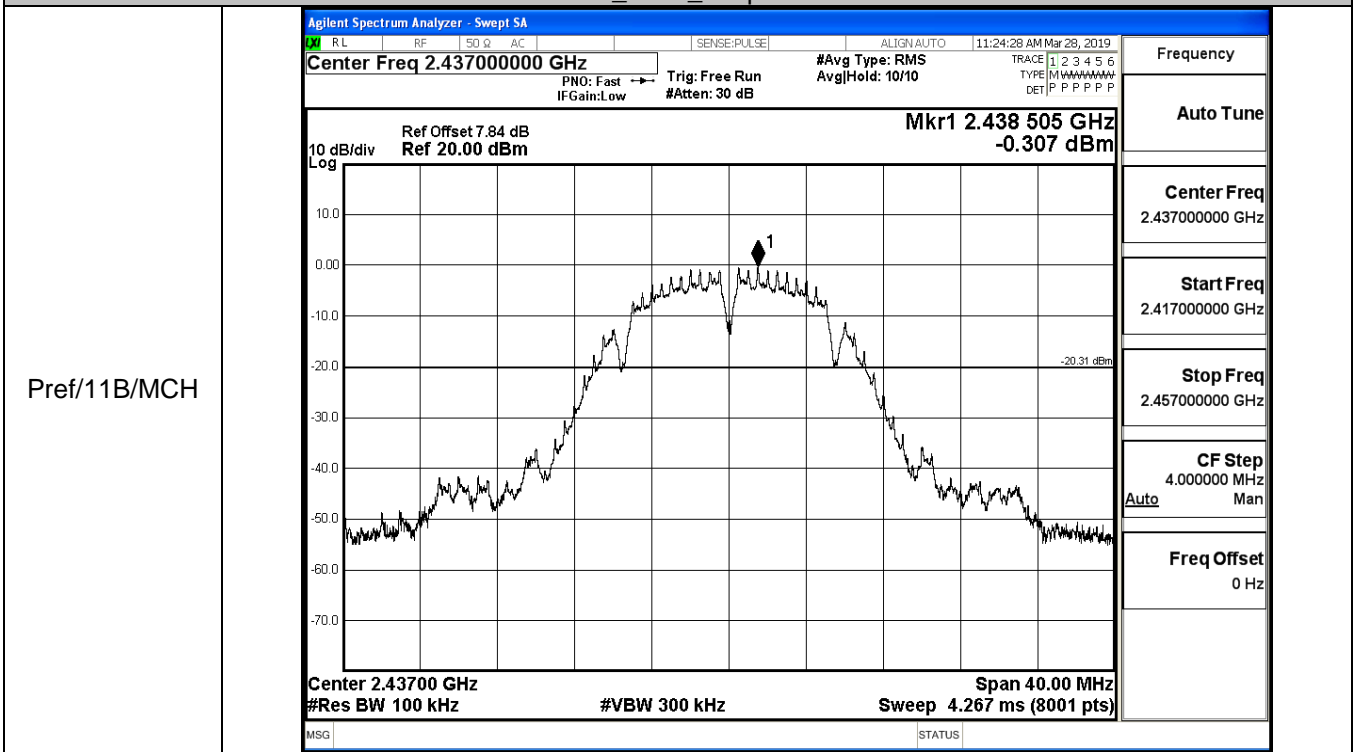
C.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.05	-42.294	-20.050	PASS
	MCH	-0.307	-44.368	-20.307	PASS
	HCH	-0.751	-42.655	-20.751	PASS
11G	LCH	-5.143	-36.404	-25.143	PASS
	MCH	-4.638	-39.380	-24.638	PASS
	HCH	-4.312	-44.114	-24.312	PASS
11N20 SISO	LCH	-5.494	-44.373	-25.494	PASS
	MCH	-4.158	-44.495	-24.158	PASS
	HCH	-3.705	-39.017	-23.705	PASS
11N40 SISO	LCH	-6.011	-32.538	-26.011	PASS
	MCH	-7.128	-37.334	-27.128	PASS
	HCH	-5.53	-41.441	-25.530	PASS

11B_LCH_Graphs

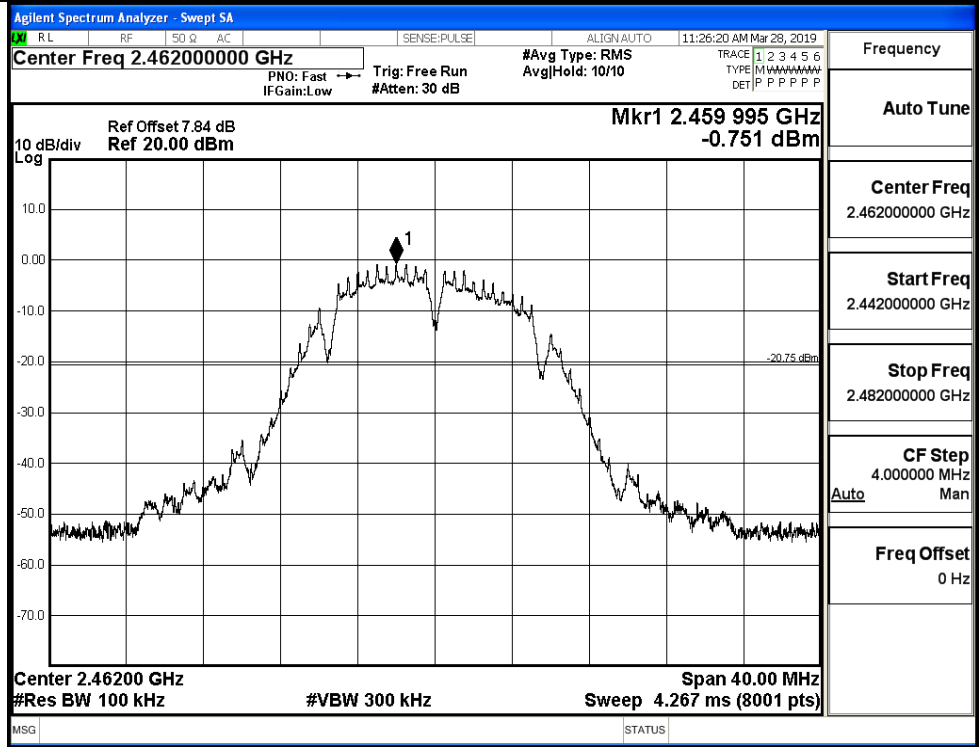


11B_MCH_Graphs

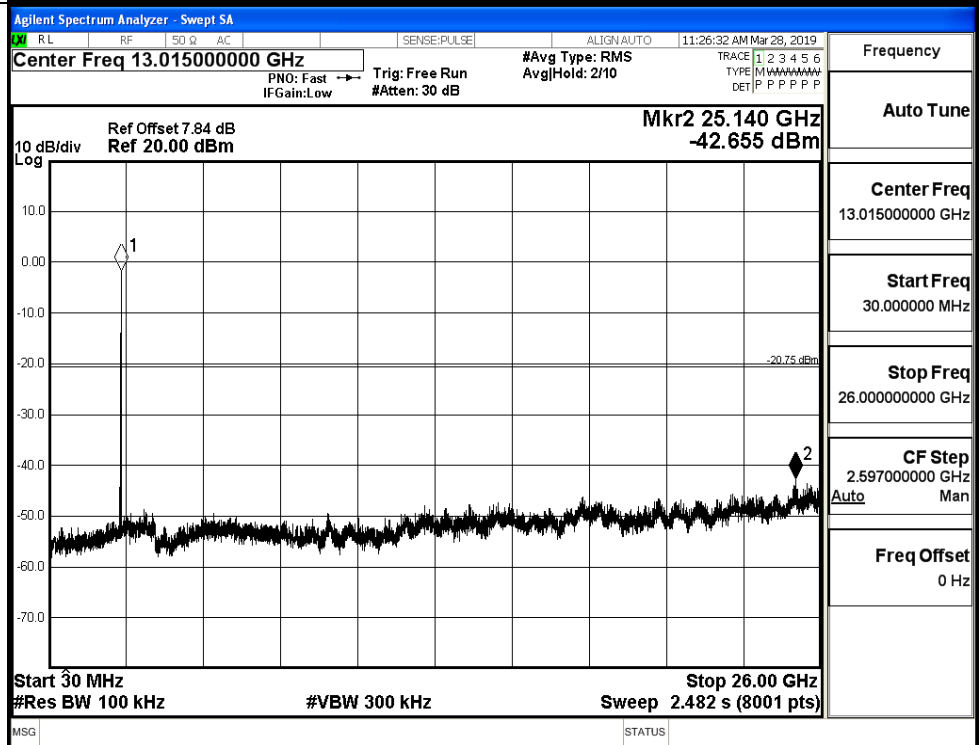


11B_HCH_Graphs

Pref/11B/HCH

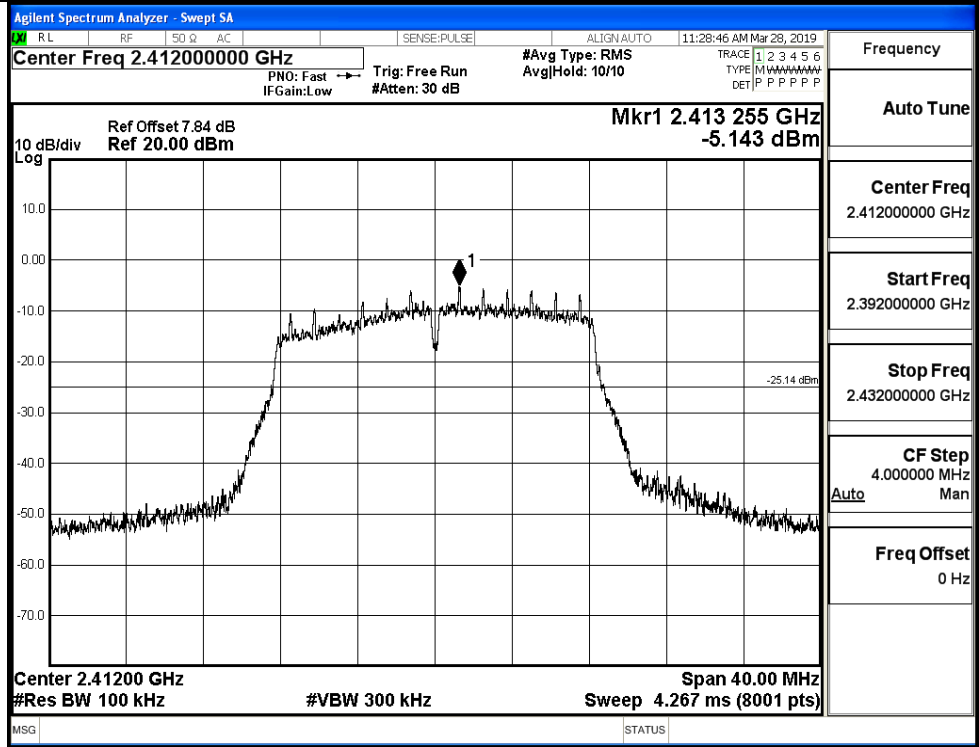


Puw/11B/HCH

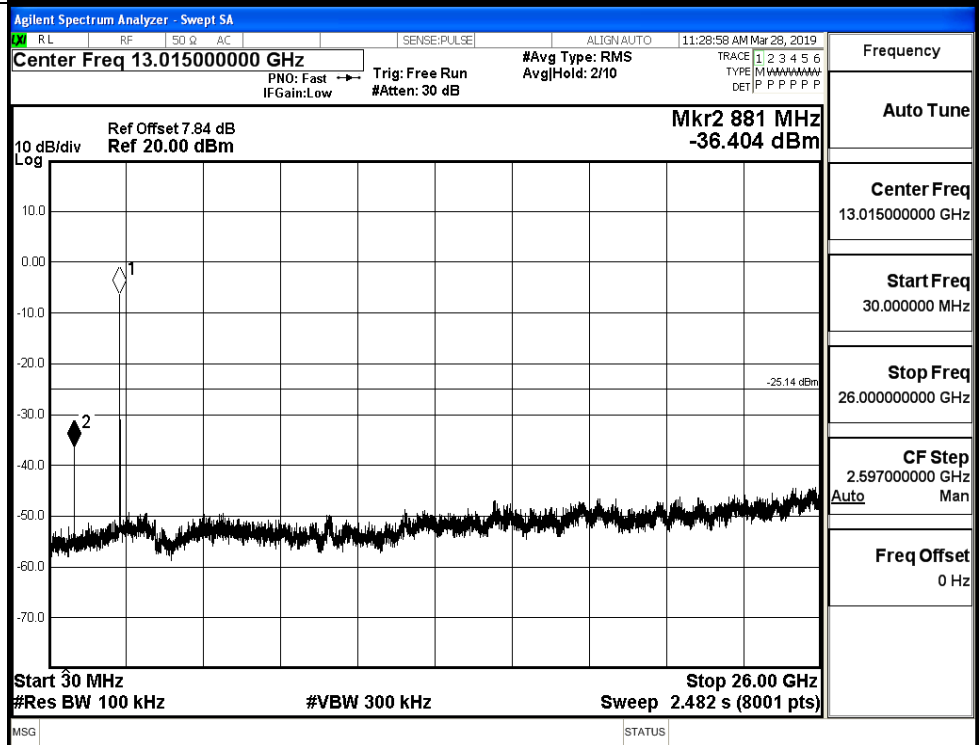


11G_LCH_Graphs

Pref/11G/LCH

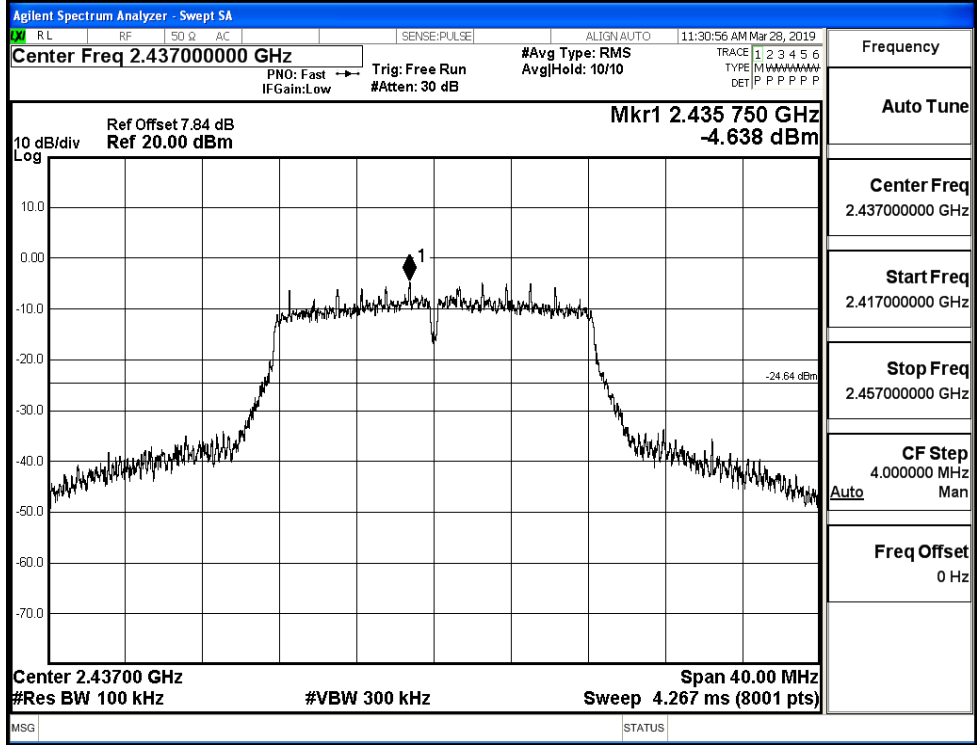


Puw/11G/LCH

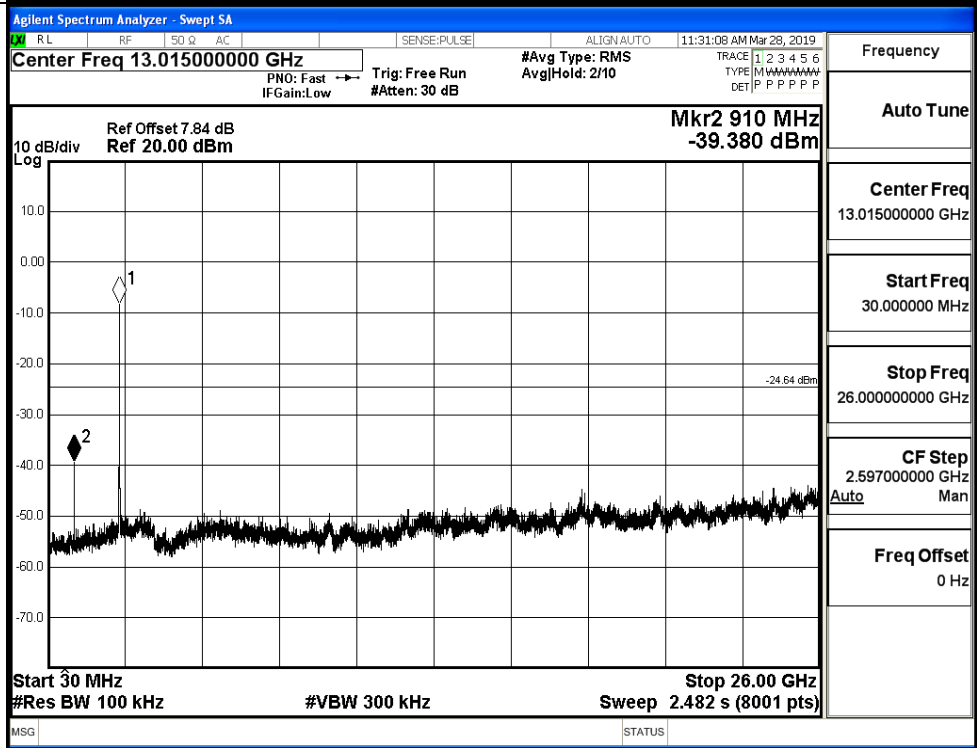


11G_MCH_Graphs

Pref/11G/MCH

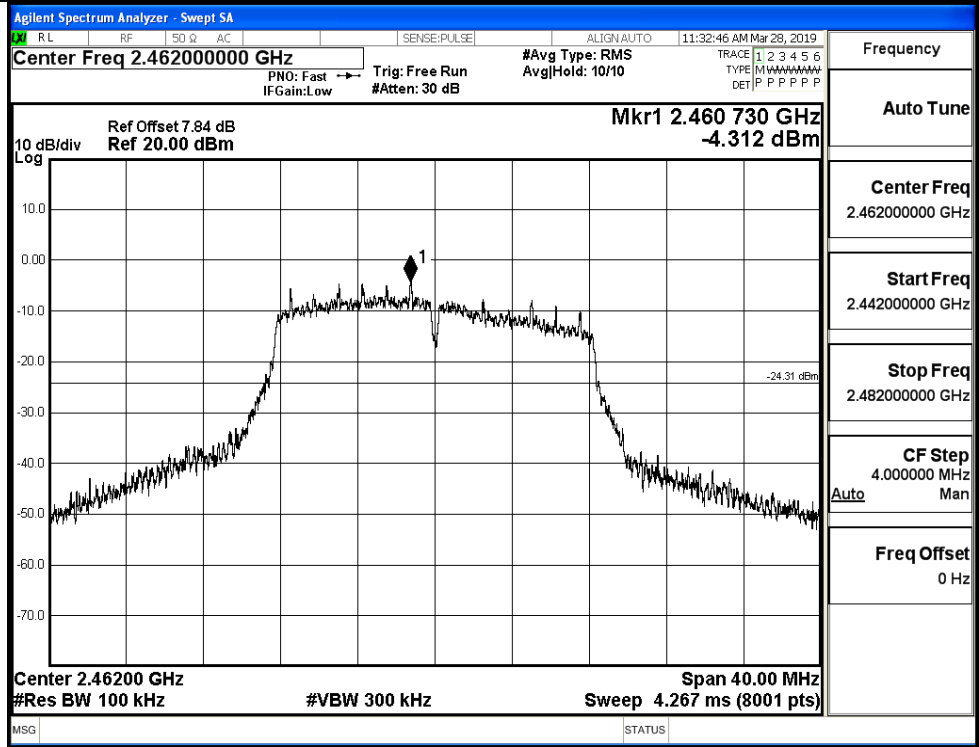


Puw/11G/MCH

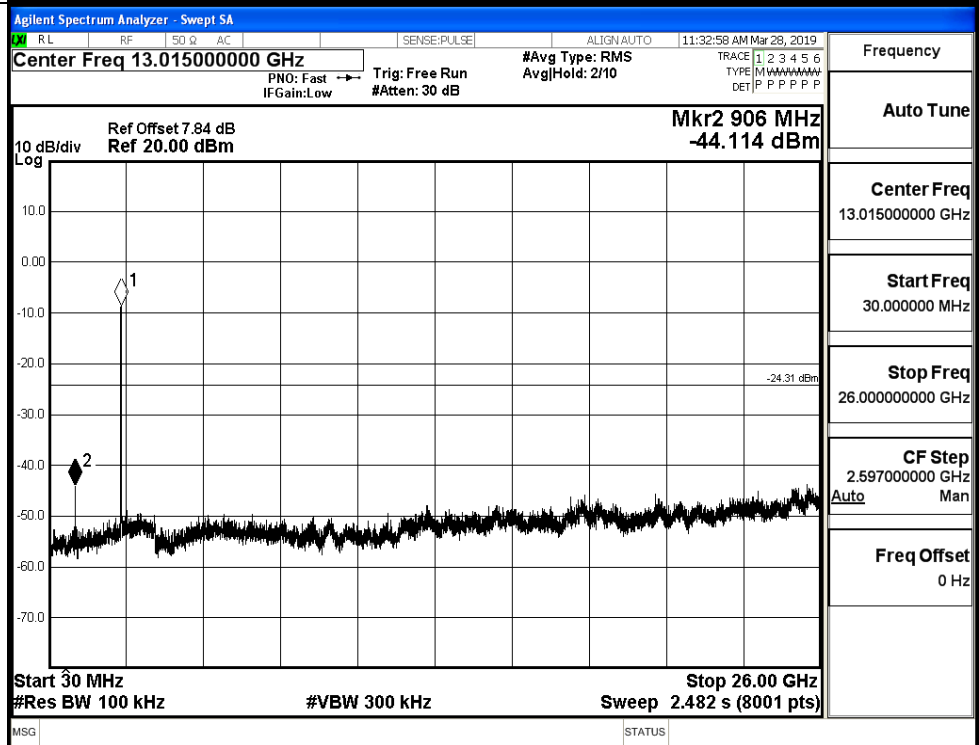


11G_HCH_Graphs

Pref/11G/HCH

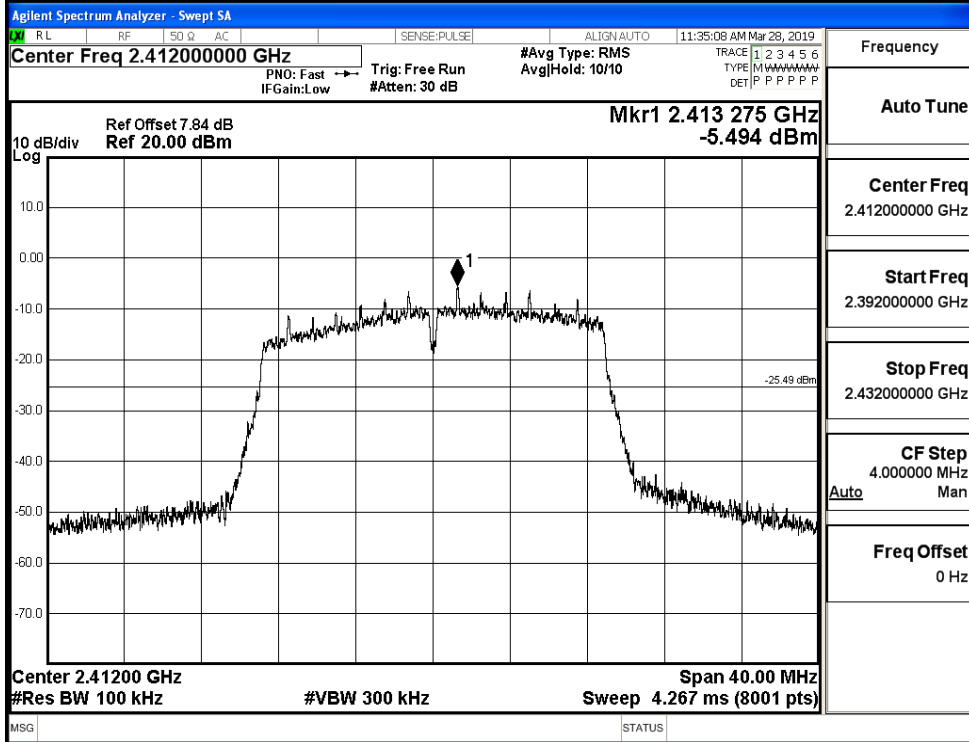


Puw/11G/HCH

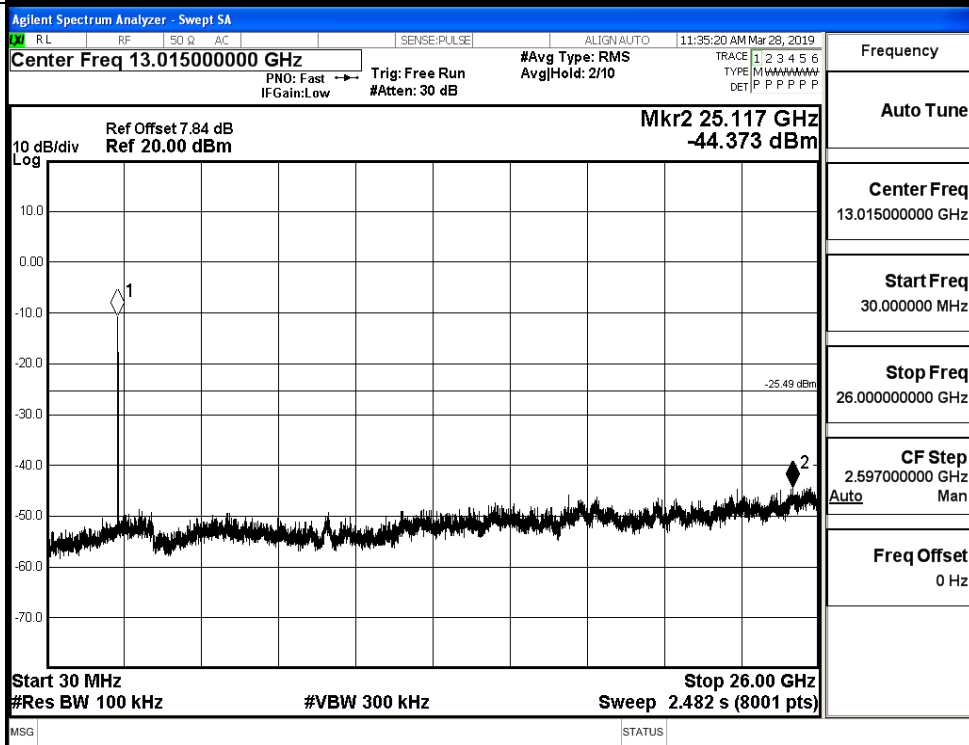


11N20SISO_LCH_Graphs

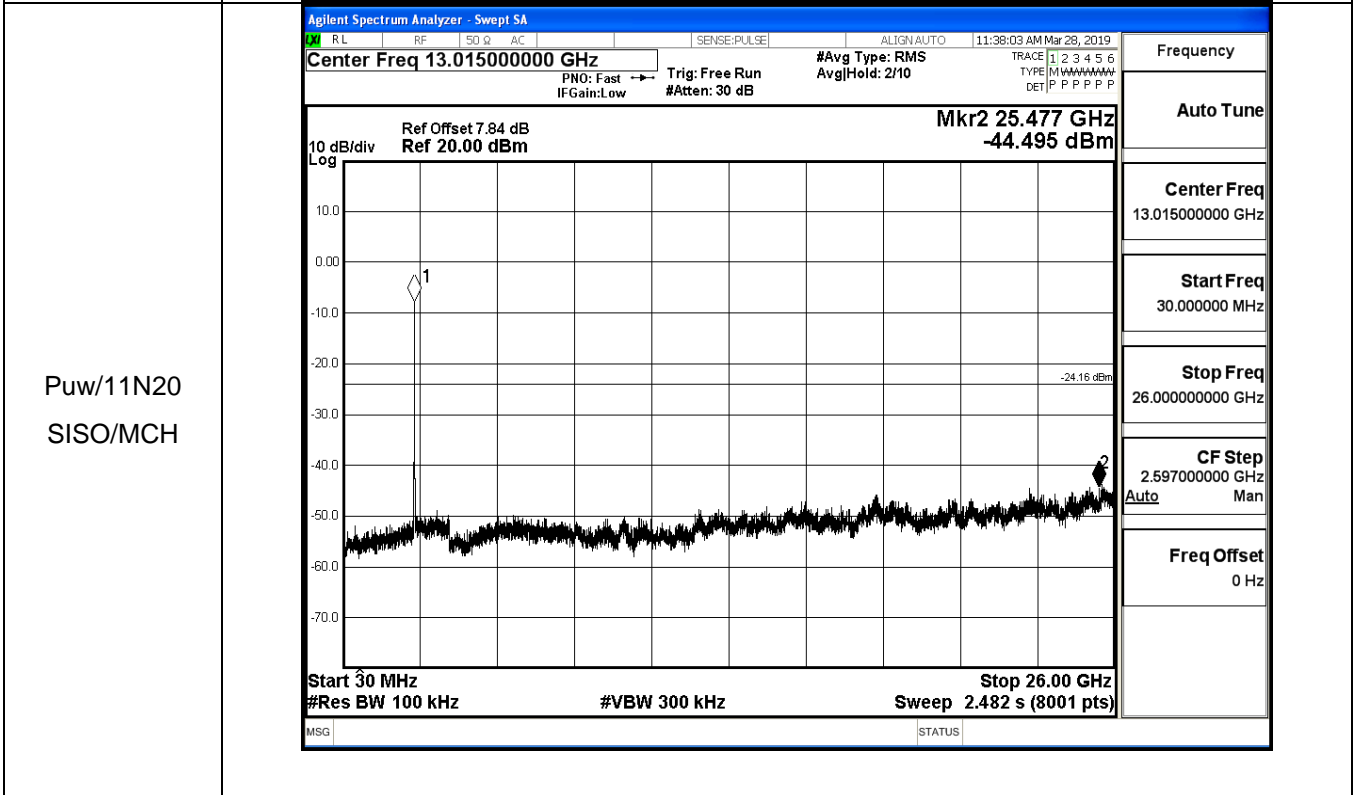
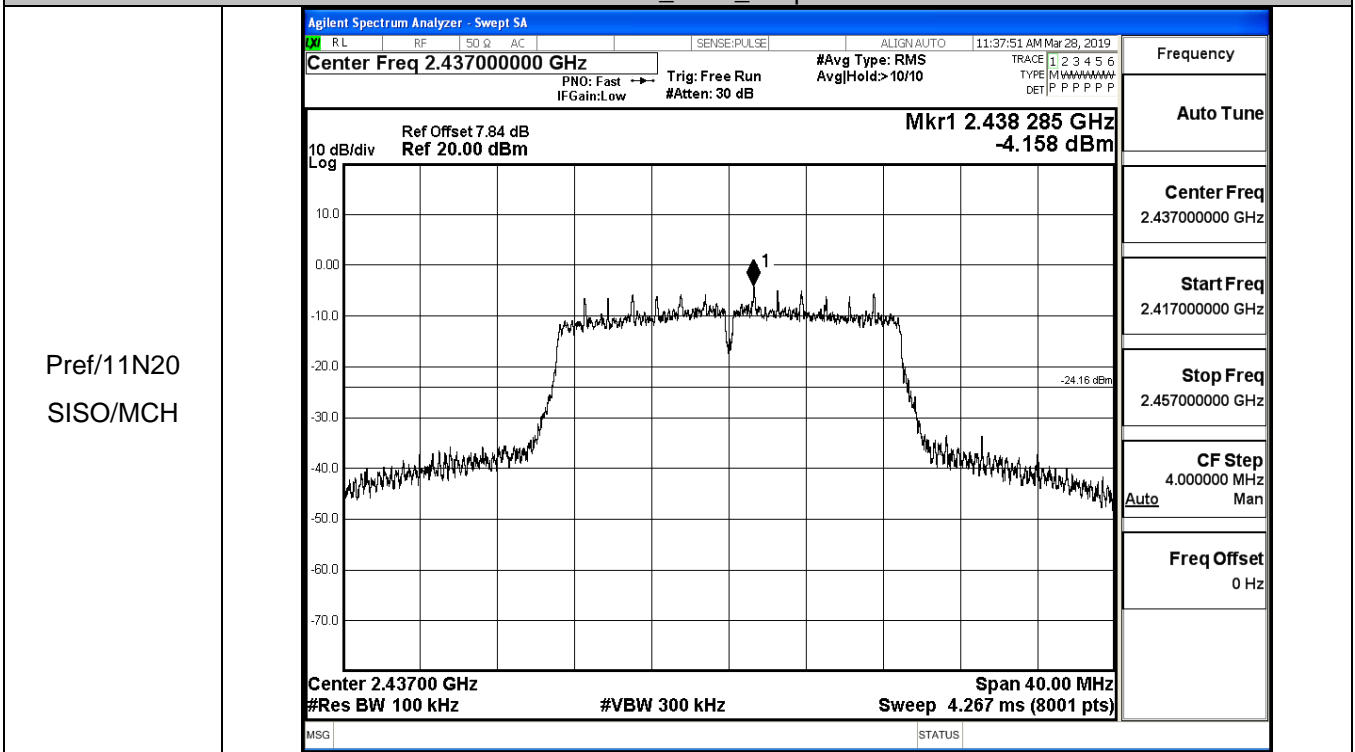
Pref/11N20SIS
O/LCH



Puw/11N20
SISO/LCH

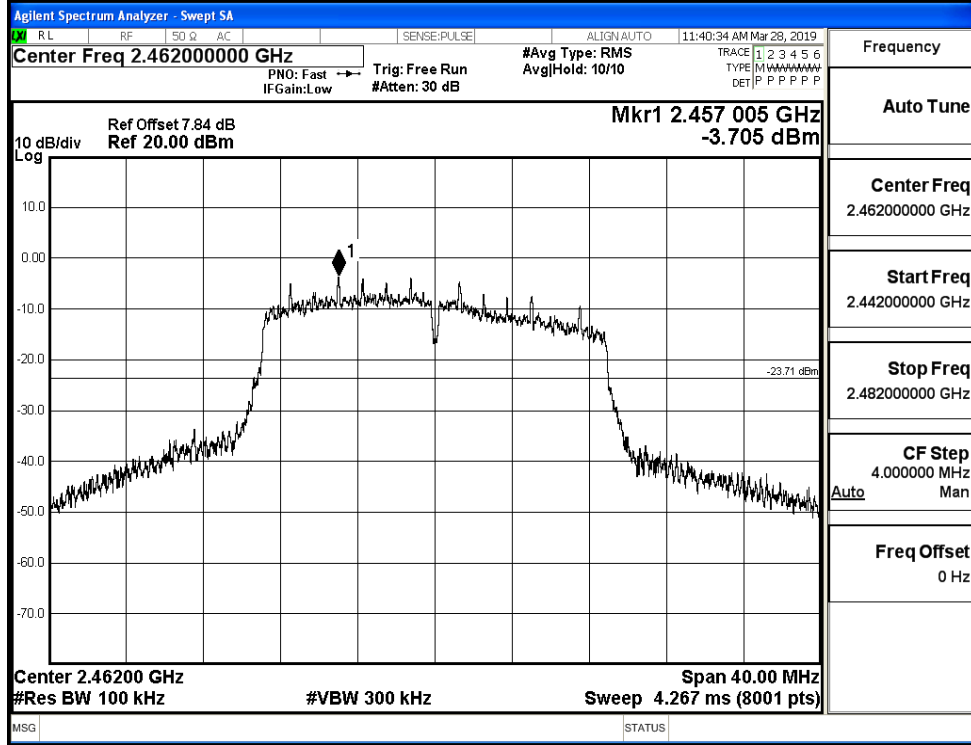


11N20SISO_MCH_Graphs

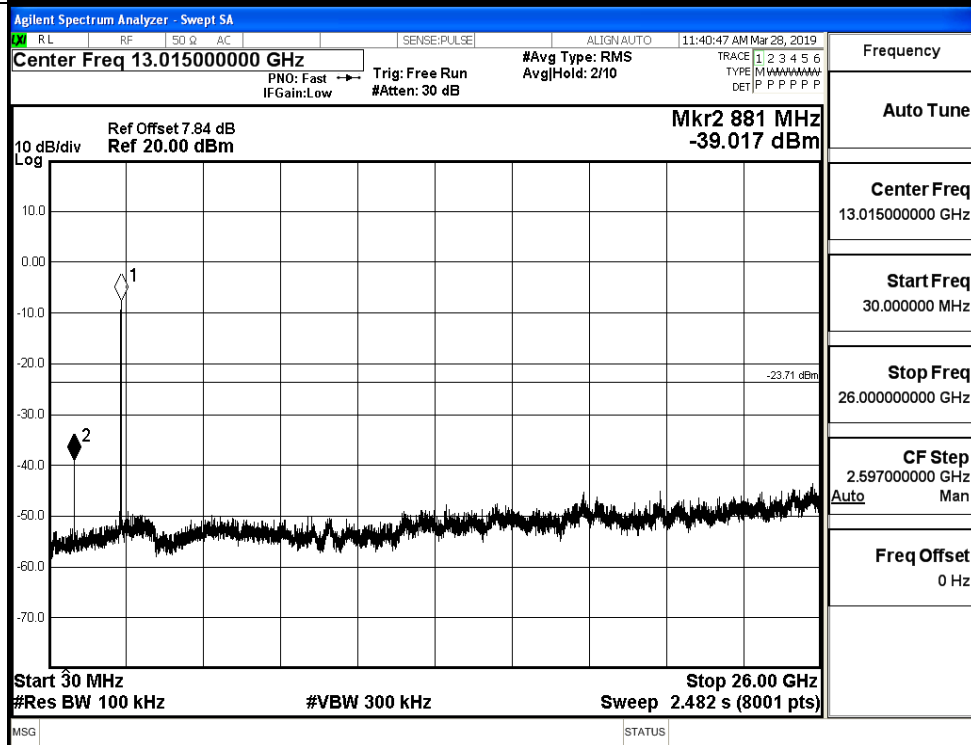


11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH

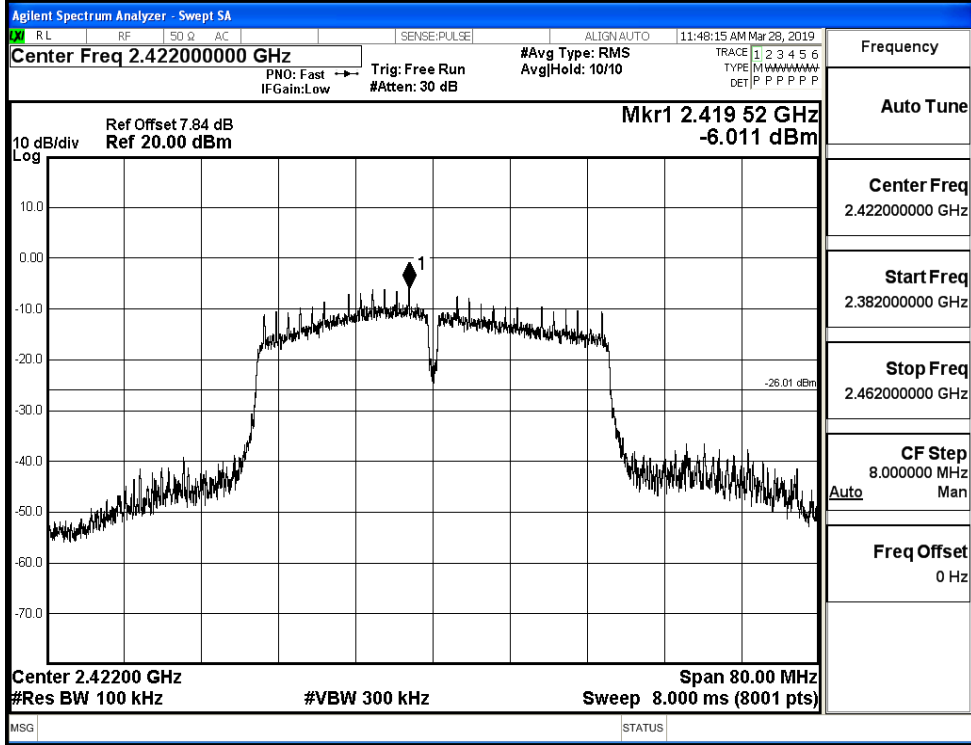


Puw/11N20
SISO/HCH

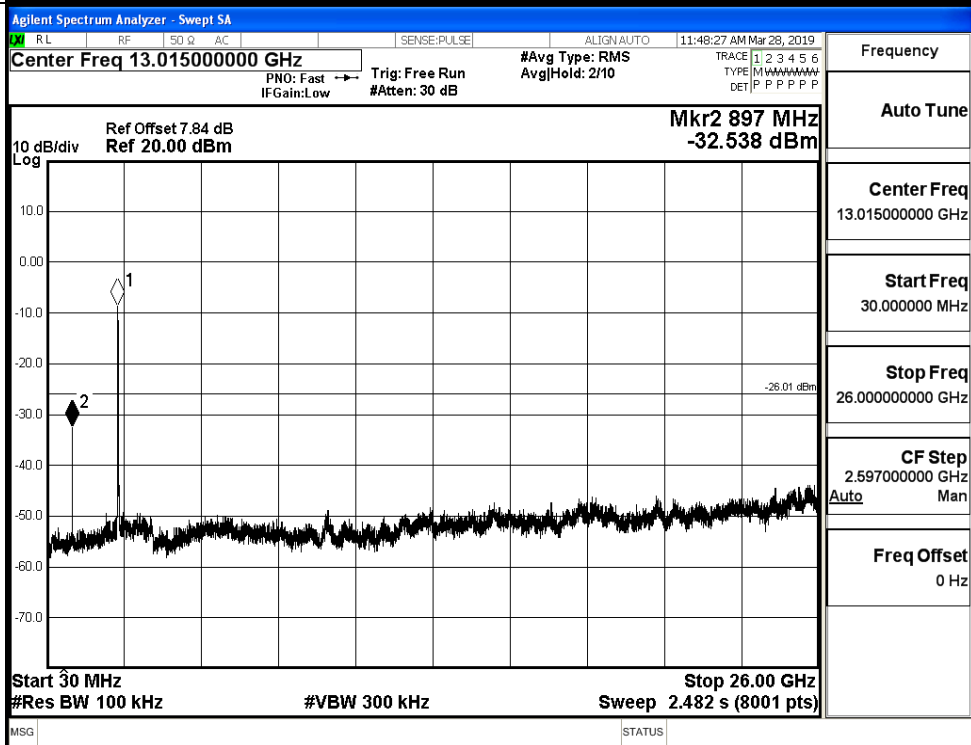


11N40SISO_LCH_Graphs

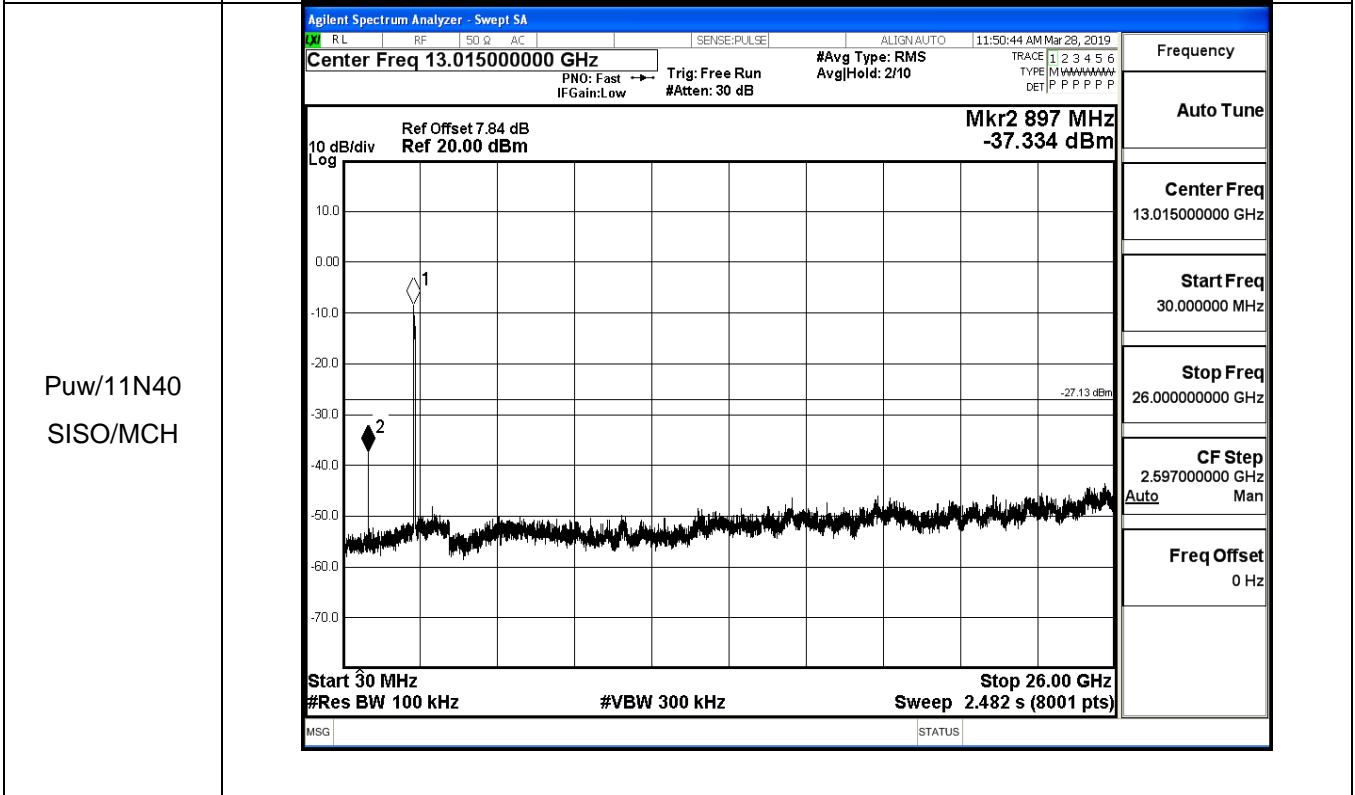
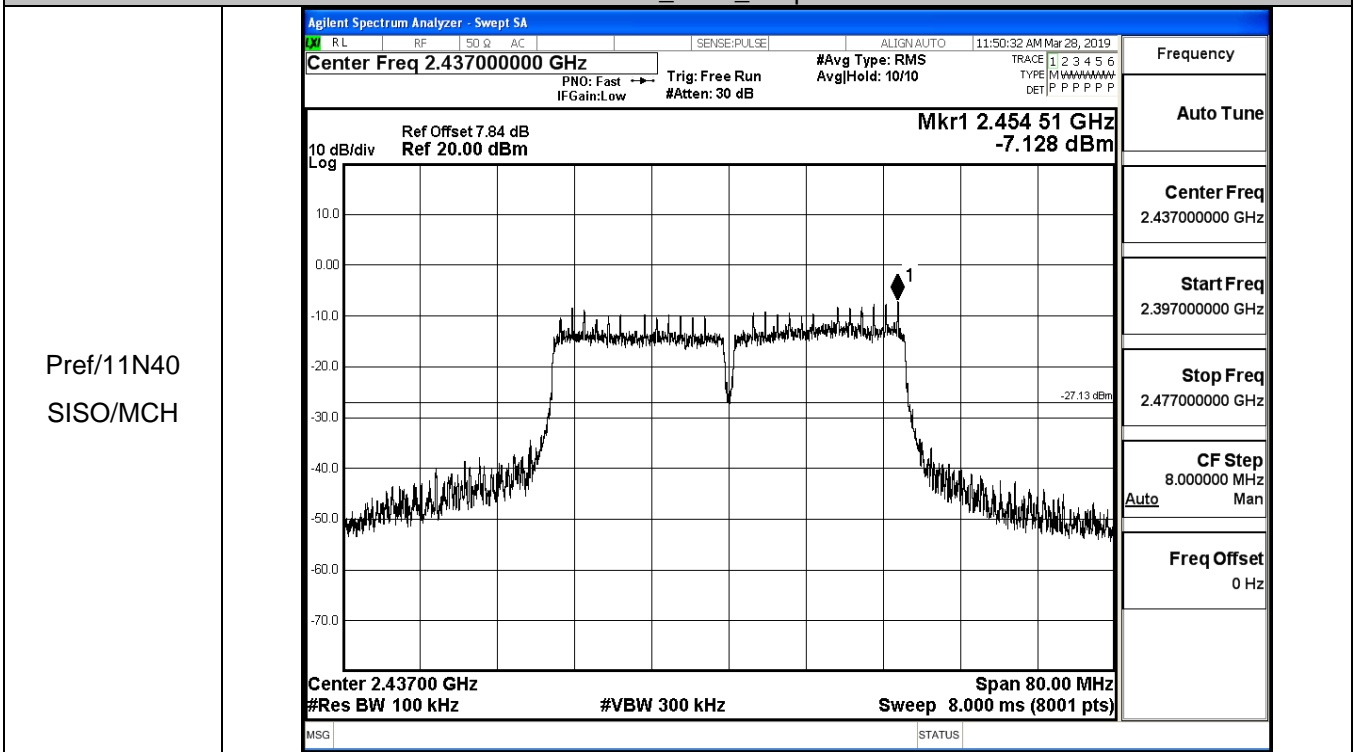
Pref/11N40
SISO/LCH



Puw/11N40
SISO/LCH

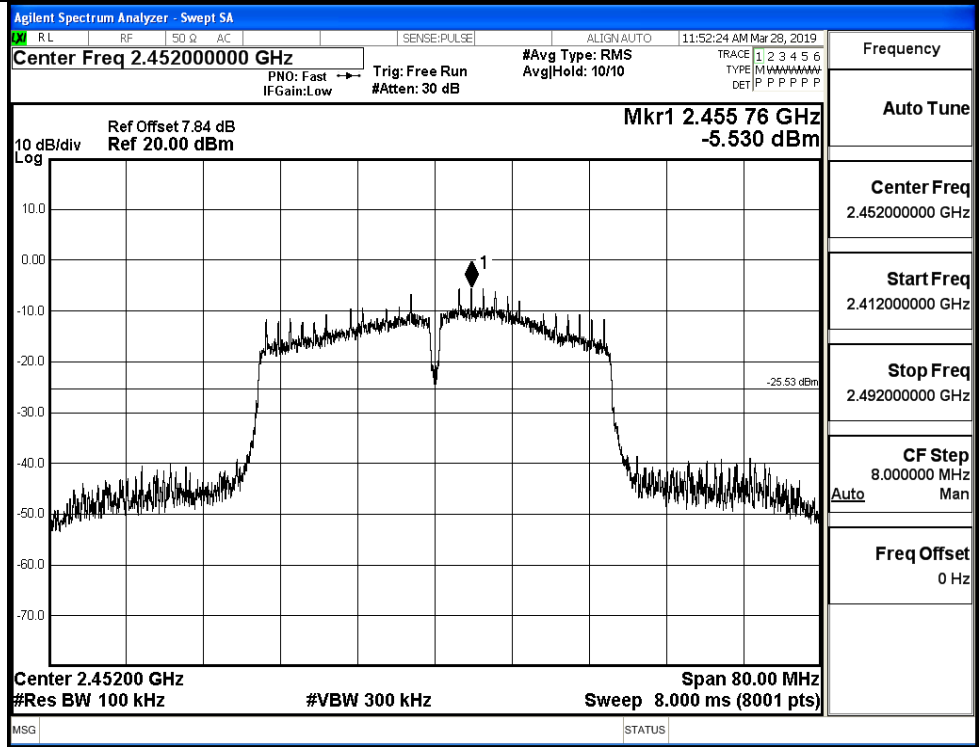


11N40SISO_MCH_Graphs

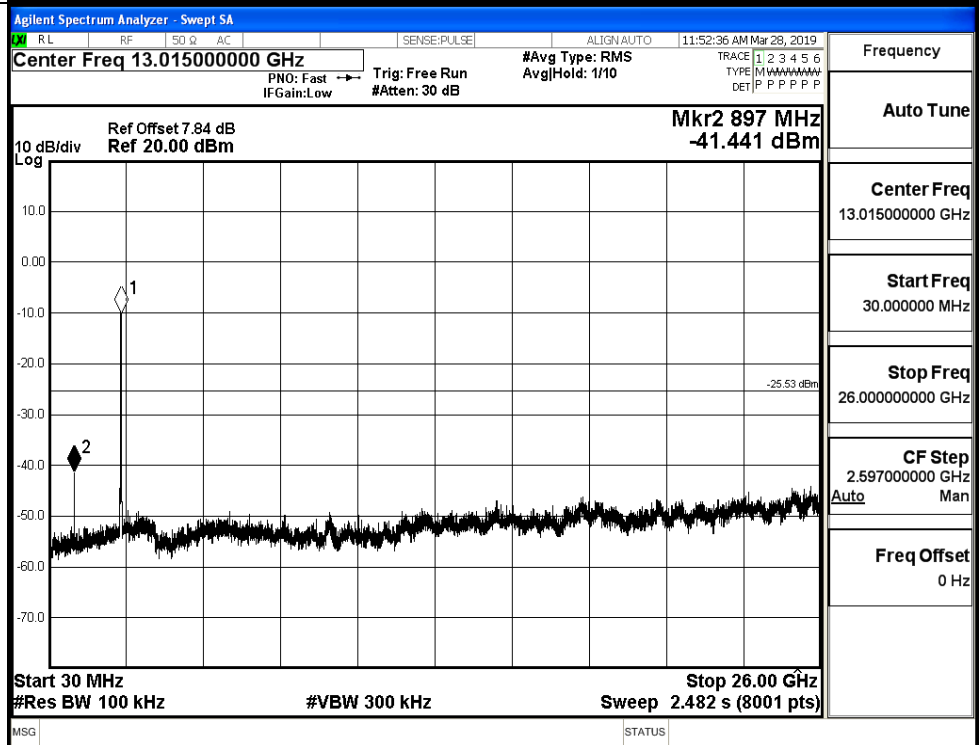


11N40SISO_HCH_Graphs

Pref/11N40
SISO/HCH

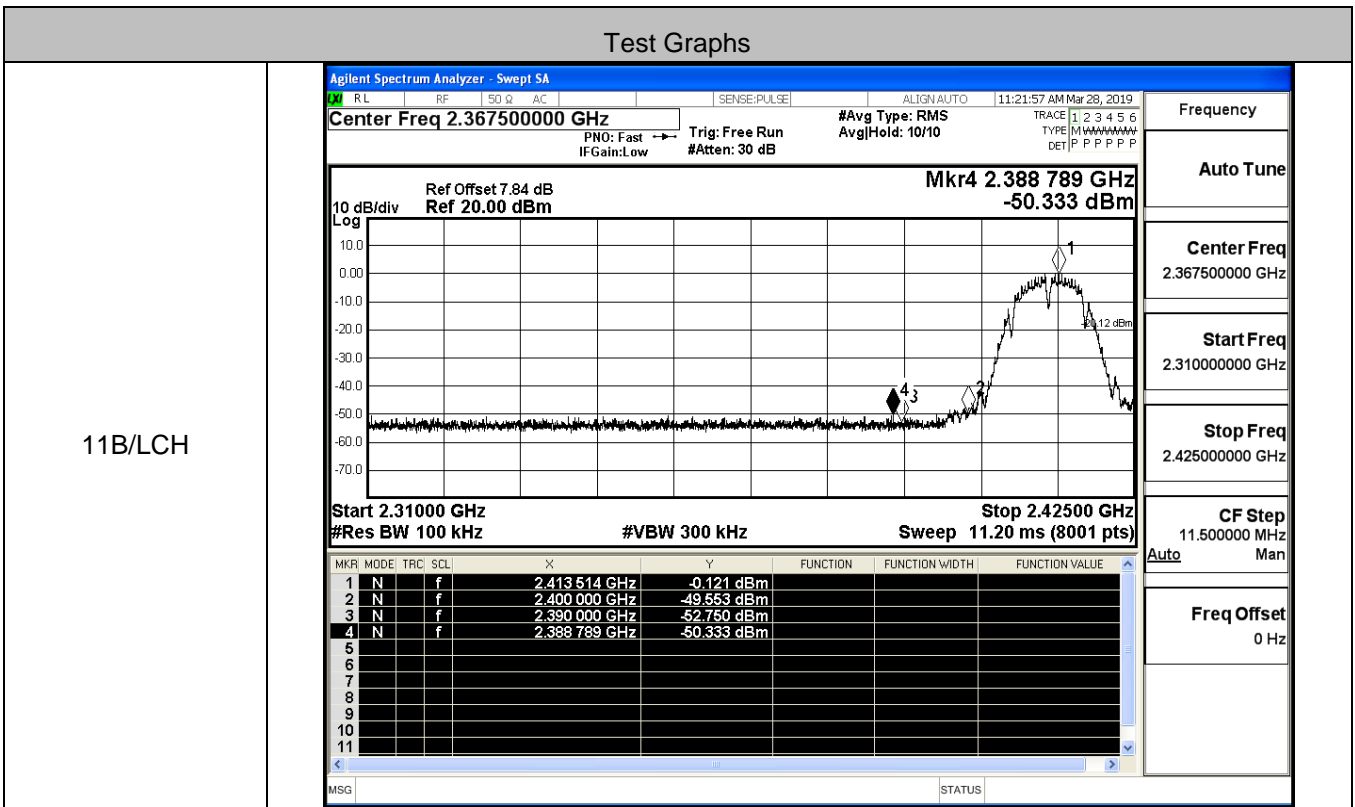


Puw/11N40
SISO/HCH

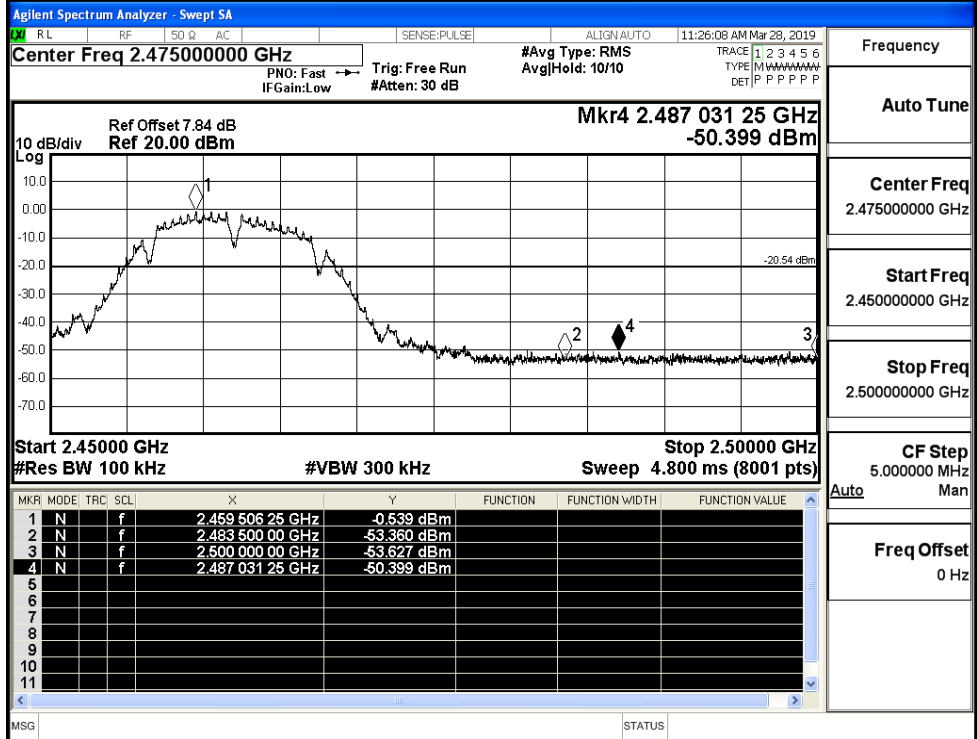


C.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.121	-50.333	-20.12	PASS
	HCH	-0.539	-50.399	-20.54	PASS
11G	LCH	-5.664	-50.352	-25.66	PASS
	HCH	-4.158	-49.865	-24.16	PASS
11N20SISO	LCH	-6.276	-49.915	-26.28	PASS
	HCH	-4.020	-48.280	-24.02	PASS
11N40SISO	LCH	-6.007	-45.618	-26.01	PASS
	HCH	-5.510	-40.671	-25.51	PASS



11B/HCH



Frequency

Auto Tune

Center Freq
2.47500000 GHz

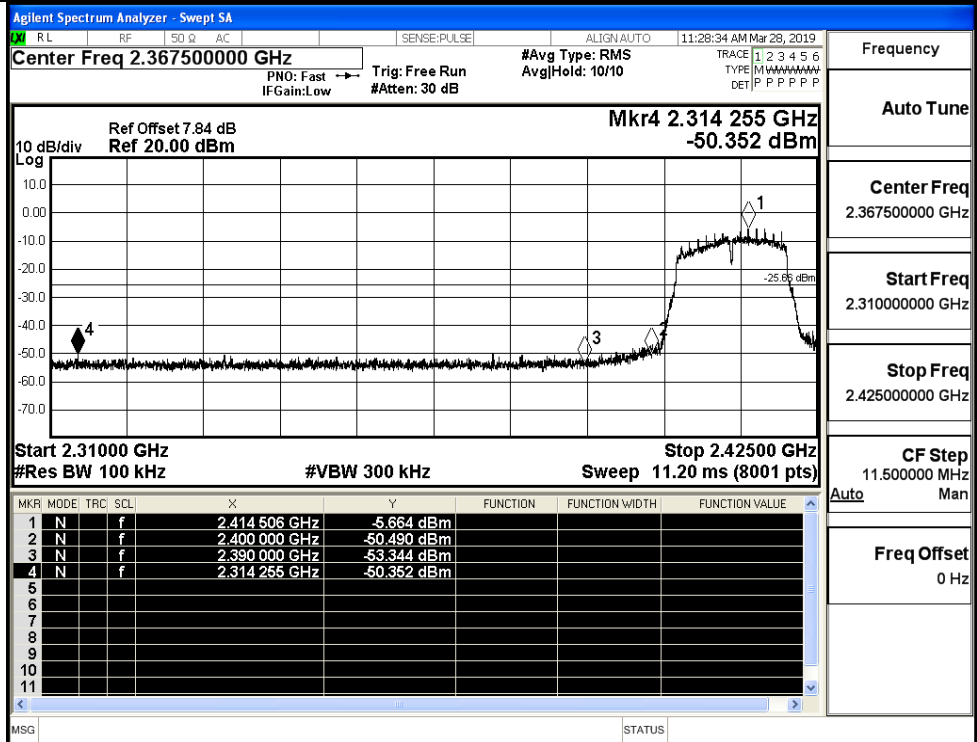
Start Freq
2.45000000 GHz

Stop Freq
2.50000000 GHz

CF Step
5.000000 MHz

Freq Offset
0 Hz

11G/LCH



Frequency

Auto Tune

Center Freq
2.36750000 GHz

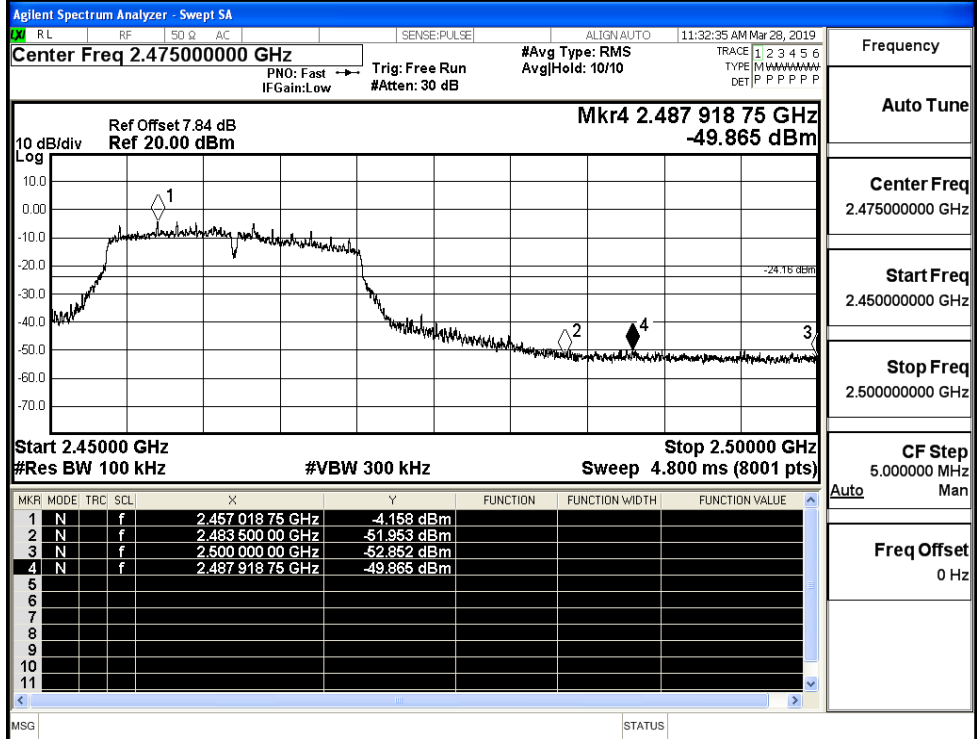
Start Freq
2.31000000 GHz

Stop Freq
2.42500000 GHz

CF Step
11.500000 MHz

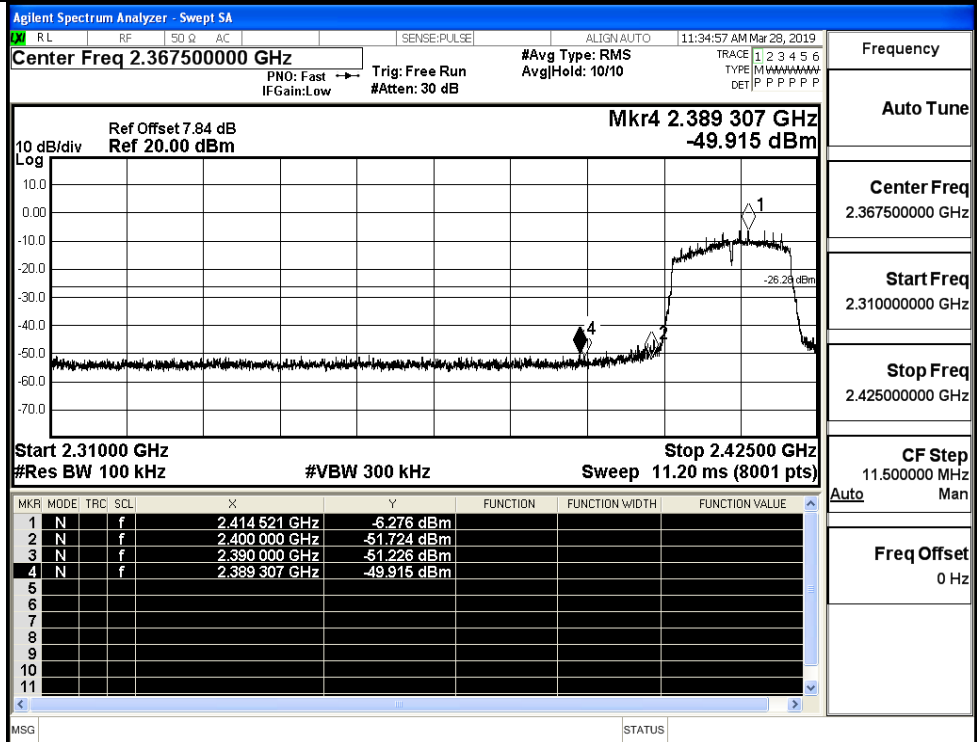
Freq Offset
0 Hz

11G/HCH



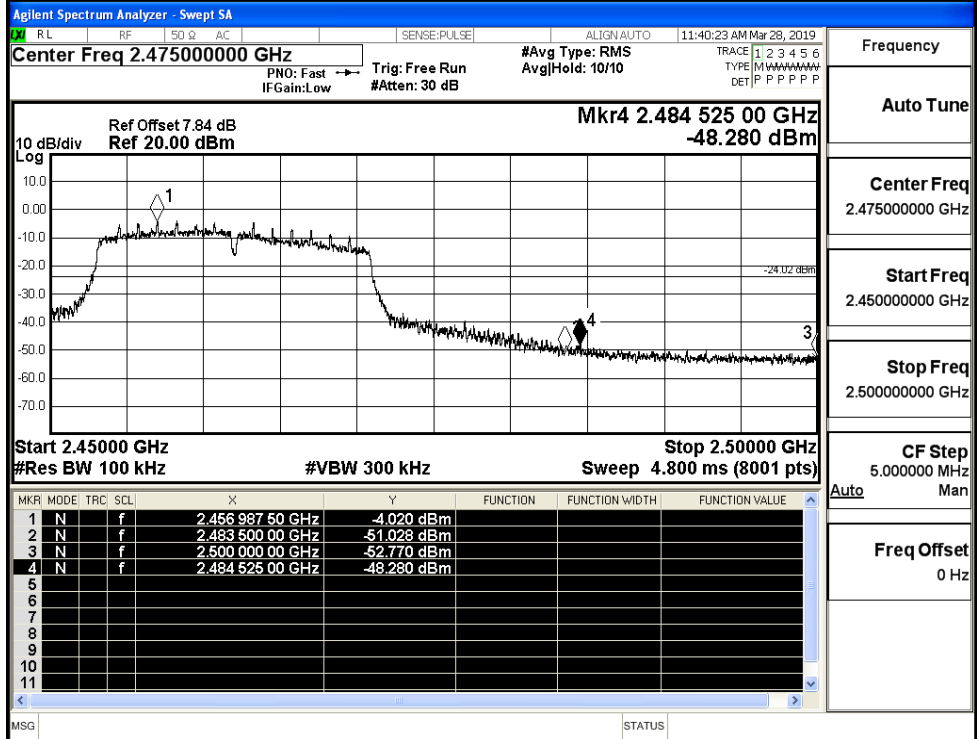
Frequency	2.47500000 GHz
Auto Tune	
Center Freq	2.47500000 GHz
Start Freq	2.45000000 GHz
Stop Freq	2.50000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

11N20SISO/LCH



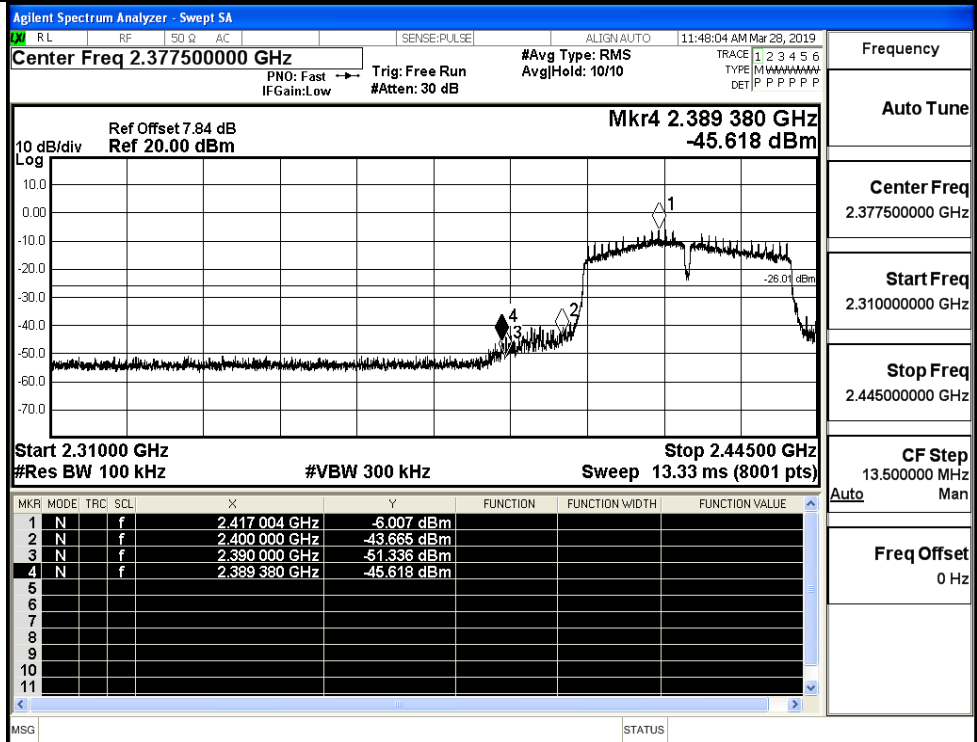
Frequency	2.36750000 GHz
Auto Tune	
Center Freq	2.36750000 GHz
Start Freq	2.31000000 GHz
Stop Freq	2.42500000 GHz
CF Step	11.500000 MHz
Freq Offset	0 Hz

11N20SISO/HCH



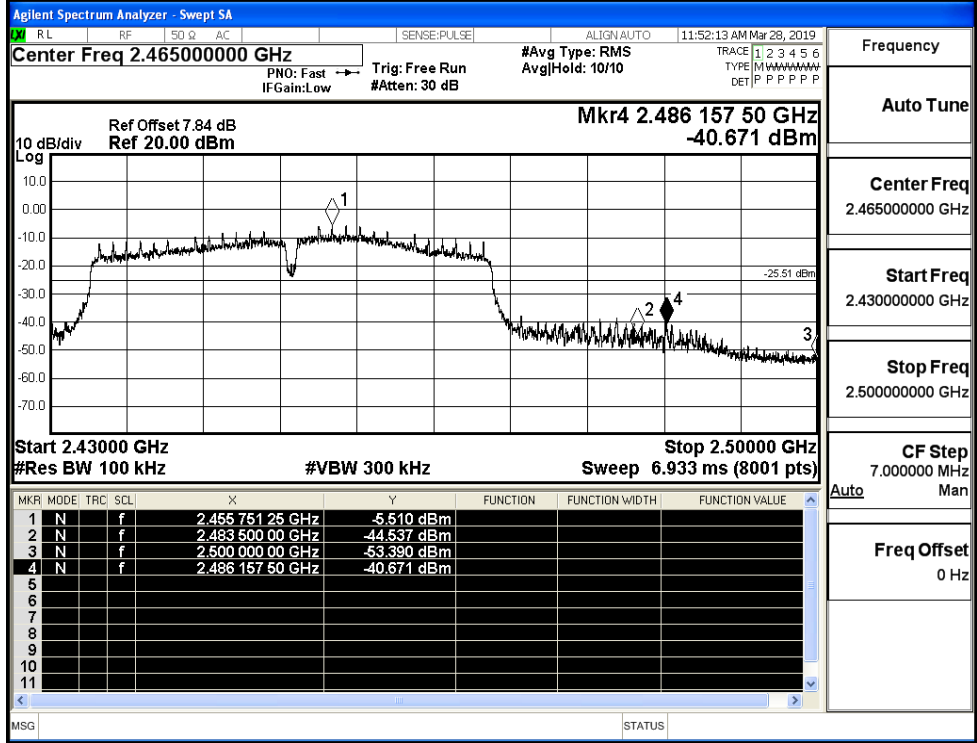
Frequency	
Auto Tune	
Center Freq	2.47500000 GHz
Start Freq	2.45000000 GHz
Stop Freq	2.50000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

11N40SISO/LCH



Frequency	
Auto Tune	
Center Freq	2.37750000 GHz
Start Freq	2.31000000 GHz
Stop Freq	2.44500000 GHz
CF Step	13.500000 MHz
Freq Offset	0 Hz

11N40SISO/HCH

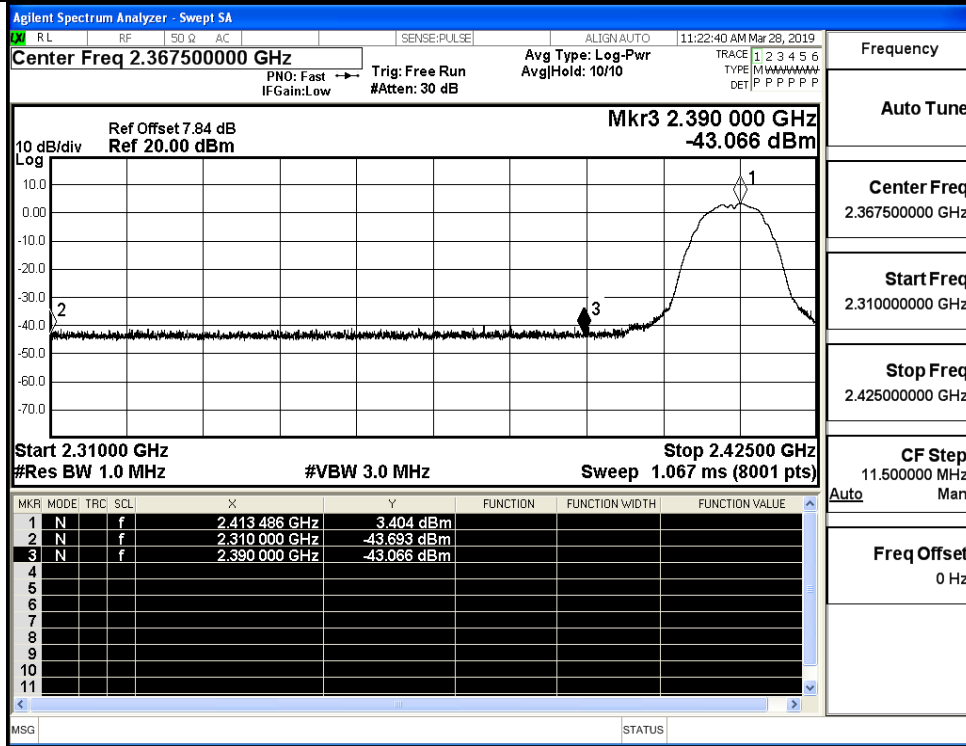


C.7 Restrict-band band-edge measurements

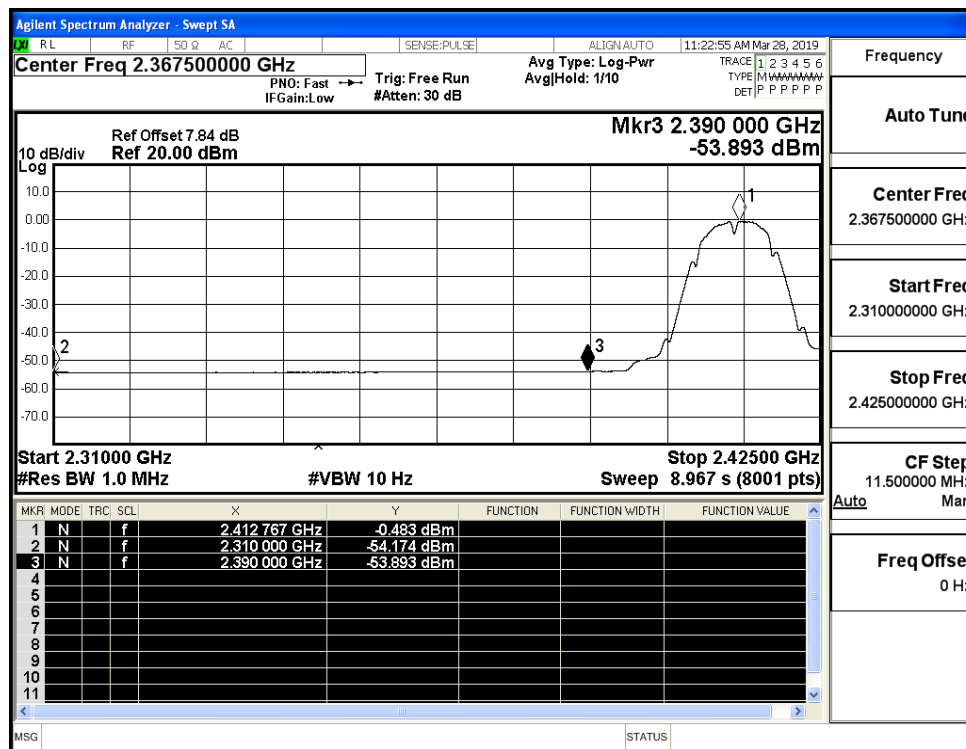
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBu V/m]	Verdict
11B	2412	Ant1	2310.0	-43.69	2.0	0	53.56	PEAK	74	PASS
	2412	Ant1	2310.0	-54.17	2.0	0	43.08	AV	54	PASS
	2412	Ant1	2390.0	-43.07	2.0	0	54.19	PEAK	74	PASS
	2412	Ant1	2390.0	-53.89	2.0	0	43.36	AV	54	PASS
	2462	Ant1	2483.5	-42.97	2.0	0	54.29	PEAK	74	PASS
	2462	Ant1	2483.5	-53.51	2.0	0	43.75	AV	54	PASS
	2462	Ant1	2500.0	-42.25	2.0	0	55.01	PEAK	74	PASS
	2462	Ant1	2500.0	-53.55	2.0	0	43.71	AV	54	PASS
11G	2412	Ant1	2310.0	-42.74	2.0	0	54.52	PEAK	74	PASS
	2412	Ant1	2310.0	-54.18	2.0	0	43.08	AV	54	PASS
	2412	Ant1	2390.0	-42.64	2.0	0	54.62	PEAK	74	PASS
	2412	Ant1	2390.0	-53.61	2.0	0	43.65	AV	54	PASS
	2462	Ant1	2483.5	-41.27	2.0	0	55.99	PEAK	74	PASS
	2462	Ant1	2483.5	-52.22	2.0	0	45.04	AV	54	PASS
	2462	Ant1	2500.0	-42.17	2.0	0	55.09	PEAK	74	PASS
	2462	Ant1	2500.0	-53.39	2.0	0	43.86	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-43.34	2.0	0	53.92	PEAK	74	PASS
	2412	Ant1	2310.0	-54.18	2.0	0	43.08	AV	54	PASS
	2412	Ant1	2390.0	-43.13	2.0	0	54.13	PEAK	74	PASS
	2412	Ant1	2390.0	-53.62	2.0	0	43.64	AV	54	PASS
	2462	Ant1	2483.5	-38.12	2.0	0	59.13	PEAK	74	PASS
	2462	Ant1	2483.5	-51.12	2.0	0	46.13	AV	54	PASS
	2462	Ant1	2500.0	-43.44	2.0	0	53.82	PEAK	74	PASS
	2462	Ant1	2500.0	-53.45	2.0	0	43.81	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-44.63	2.0	0	52.63	PEAK	74	PASS
	2422	Ant1	2310.0	-54.19	2.0	0	43.07	AV	54	PASS

	2422	Ant1	2390.0	-34.42	2.0	0	62.84	PEAK	74	PASS
	2422	Ant1	2390.0	-50.56	2.0	0	46.69	AV	54	PASS
	2452	Ant1	2483.5	-28.03	2.0	0	69.23	PEAK	74	PASS
	2452	Ant1	2483.5	-48.34	2.0	0	48.92	AV	54	PASS
	2452	Ant1	2500.0	-42.37	2.0	0	54.88	PEAK	74	PASS
	2452	Ant1	2500.0	-53.34	2.0	0	43.92	AV	54	PASS

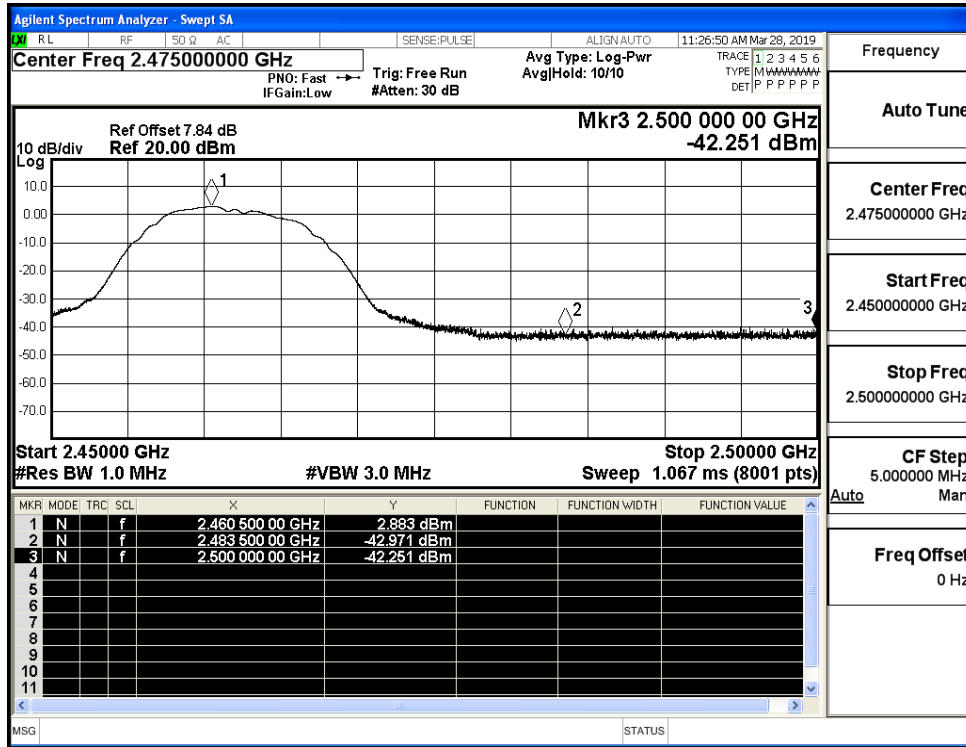
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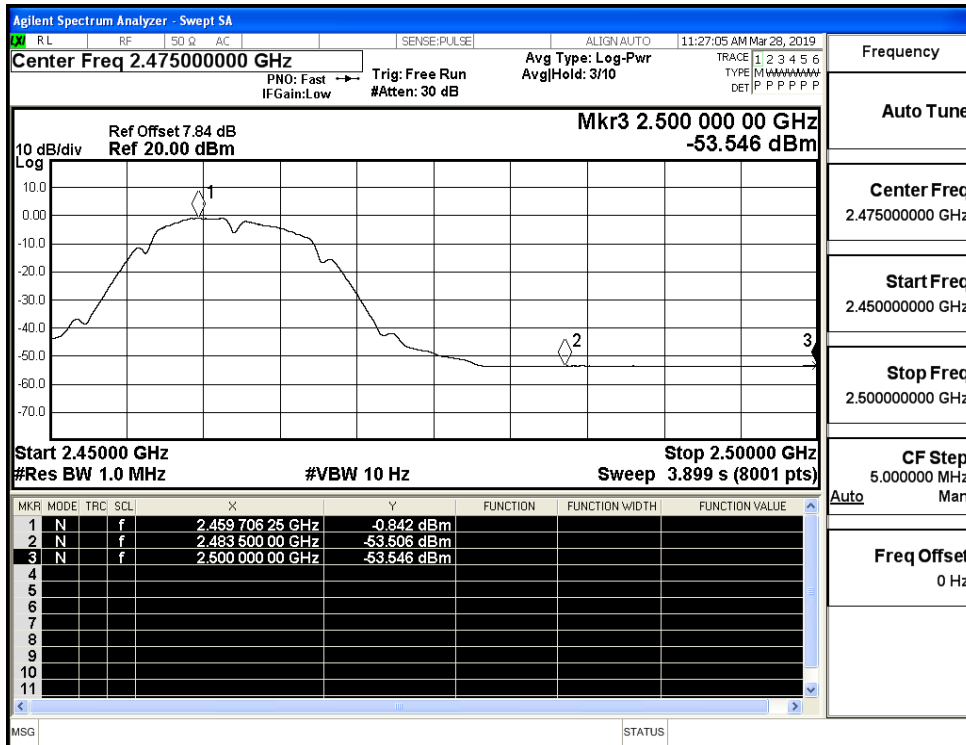
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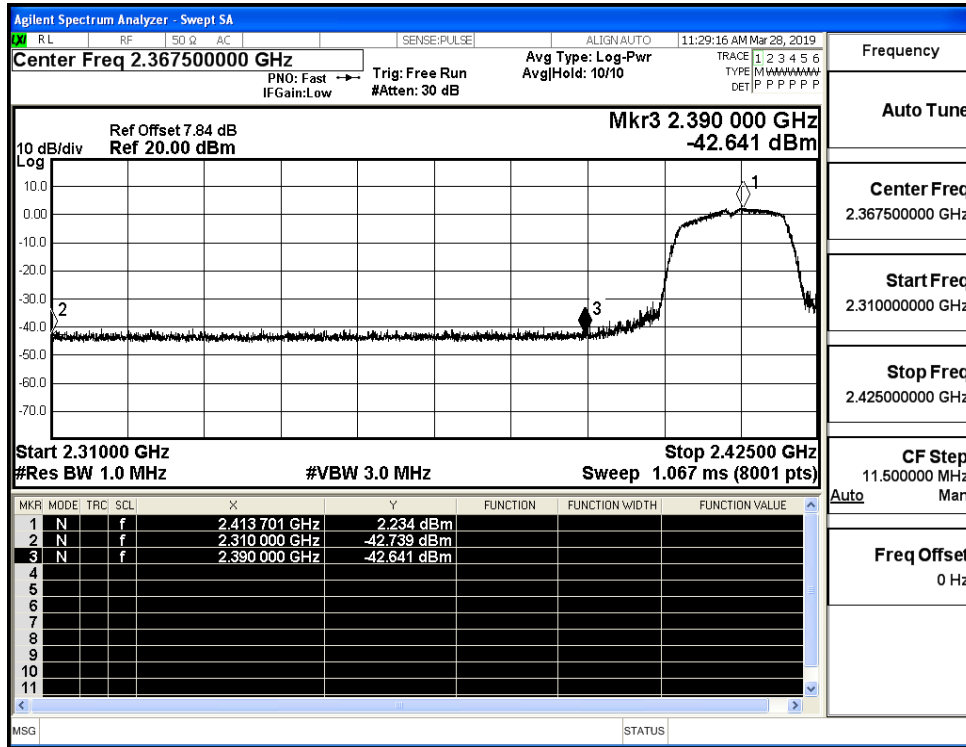
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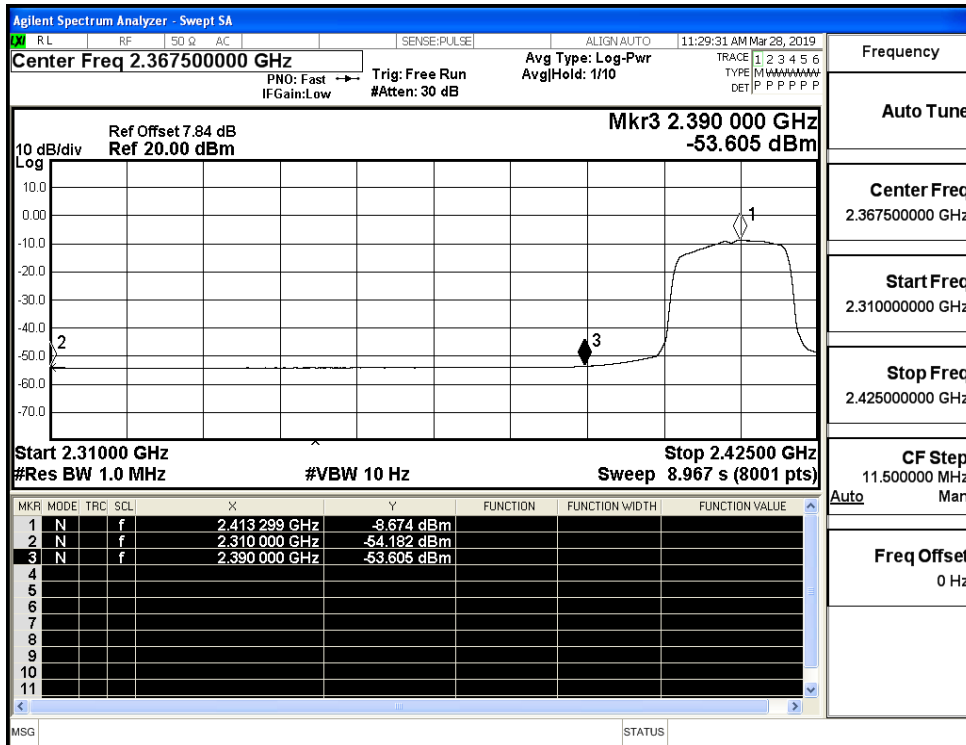
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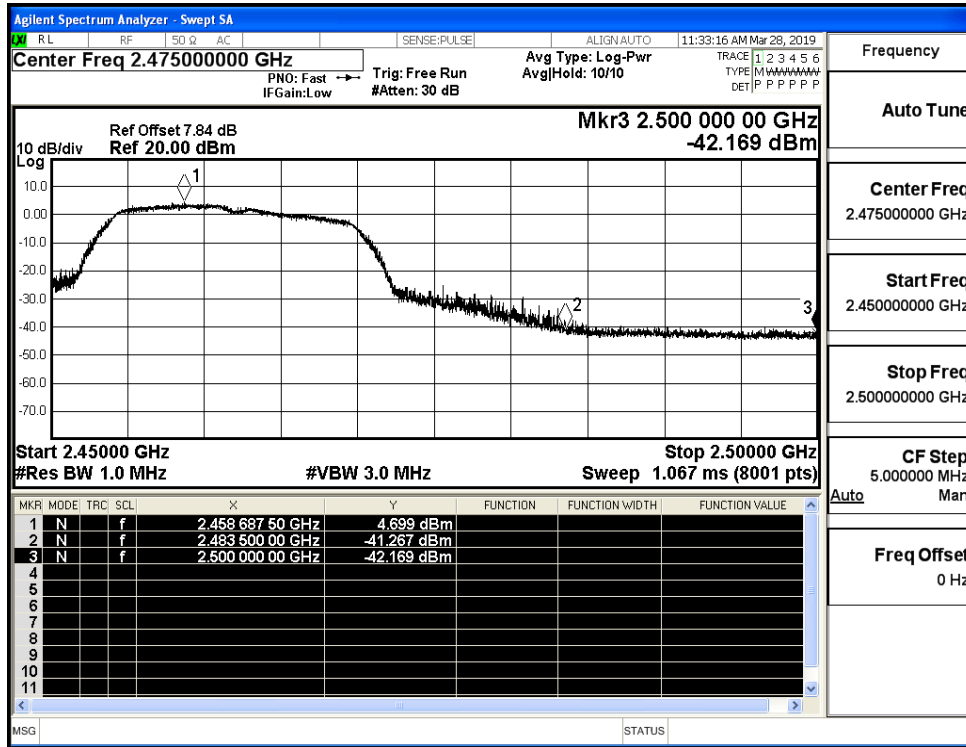
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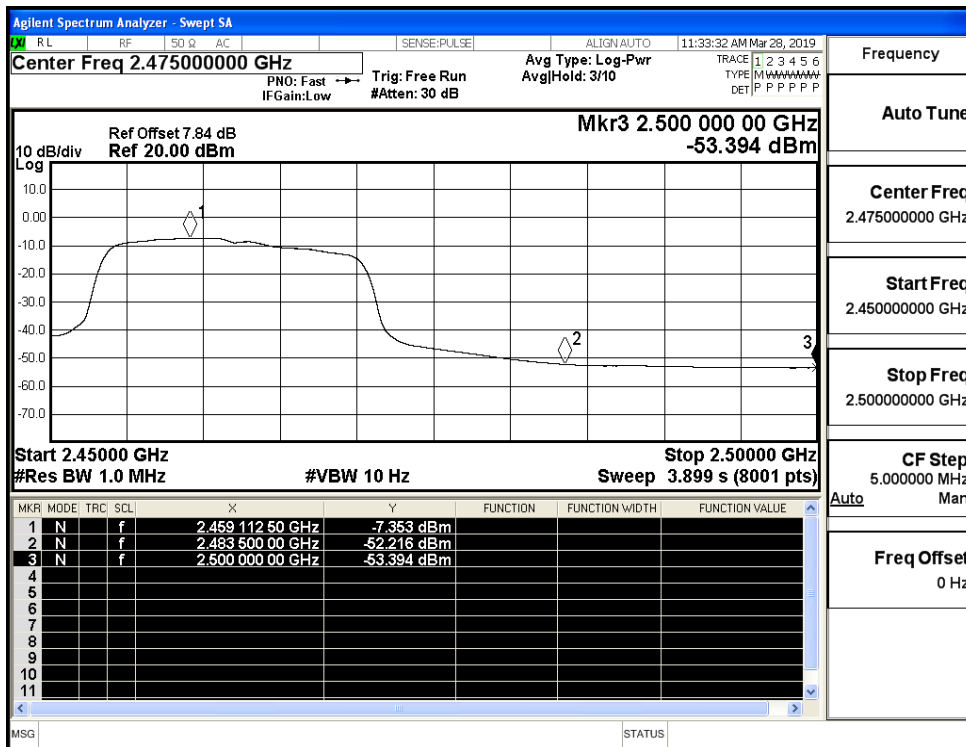
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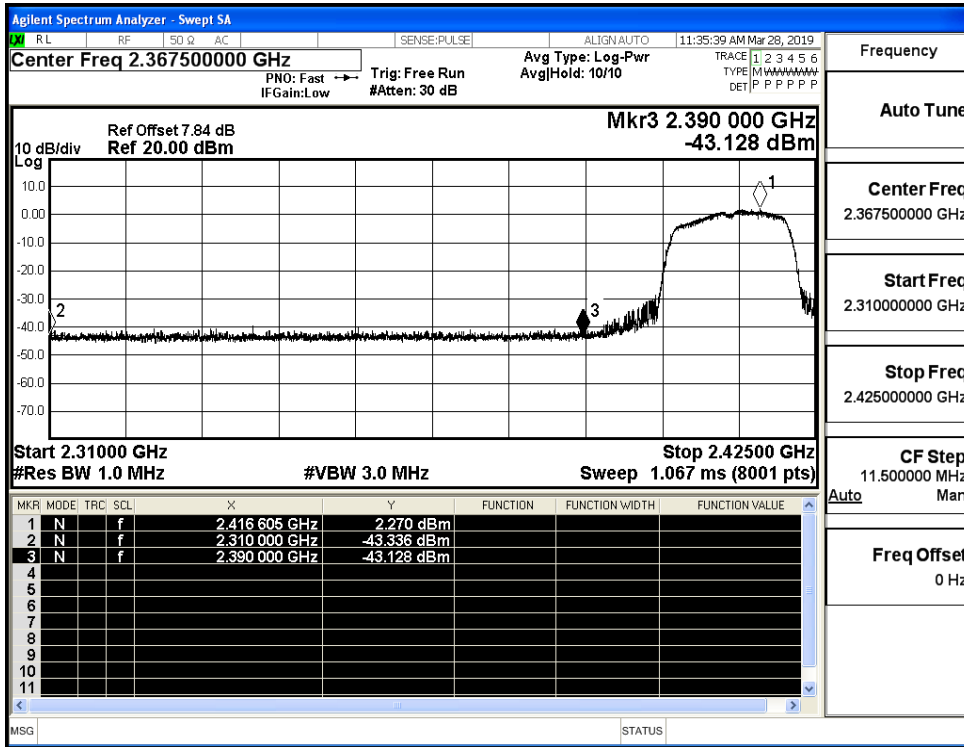
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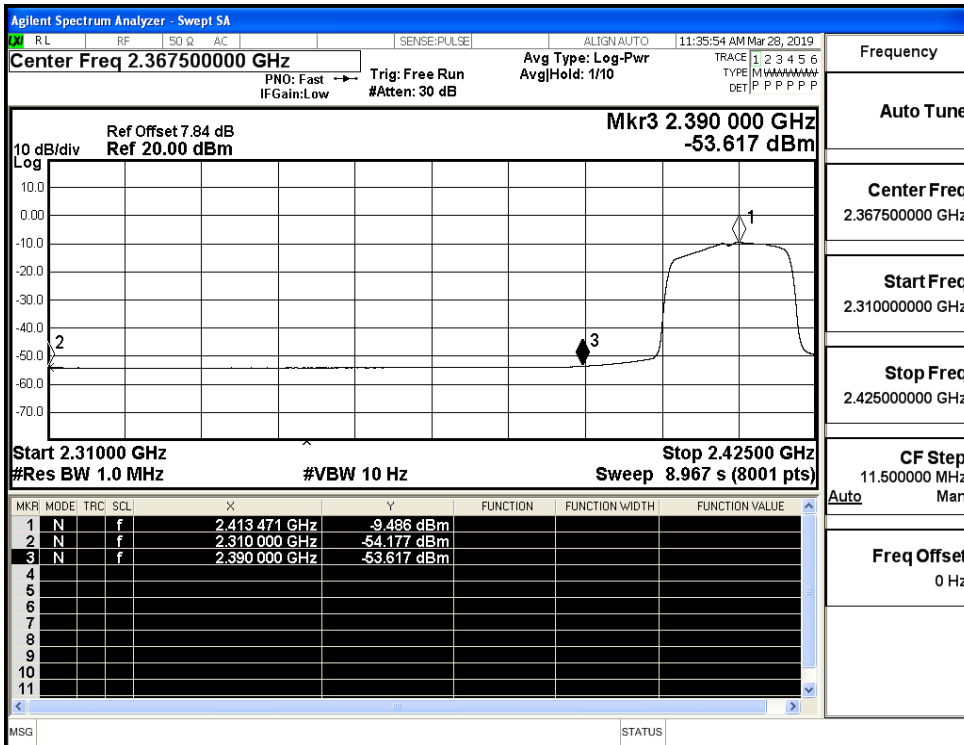
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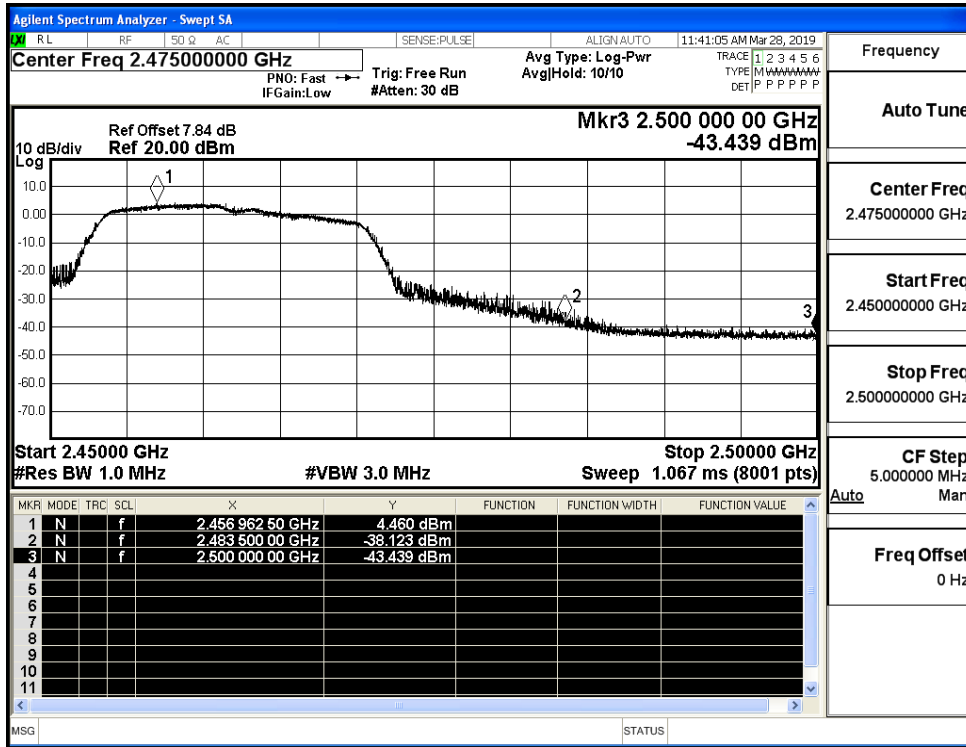
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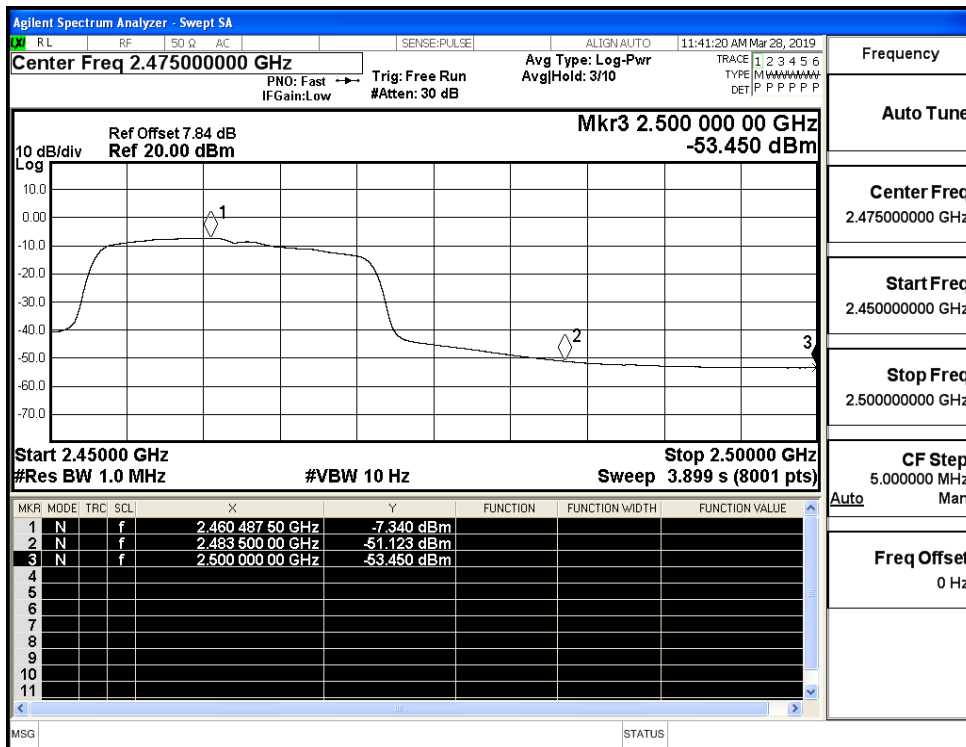
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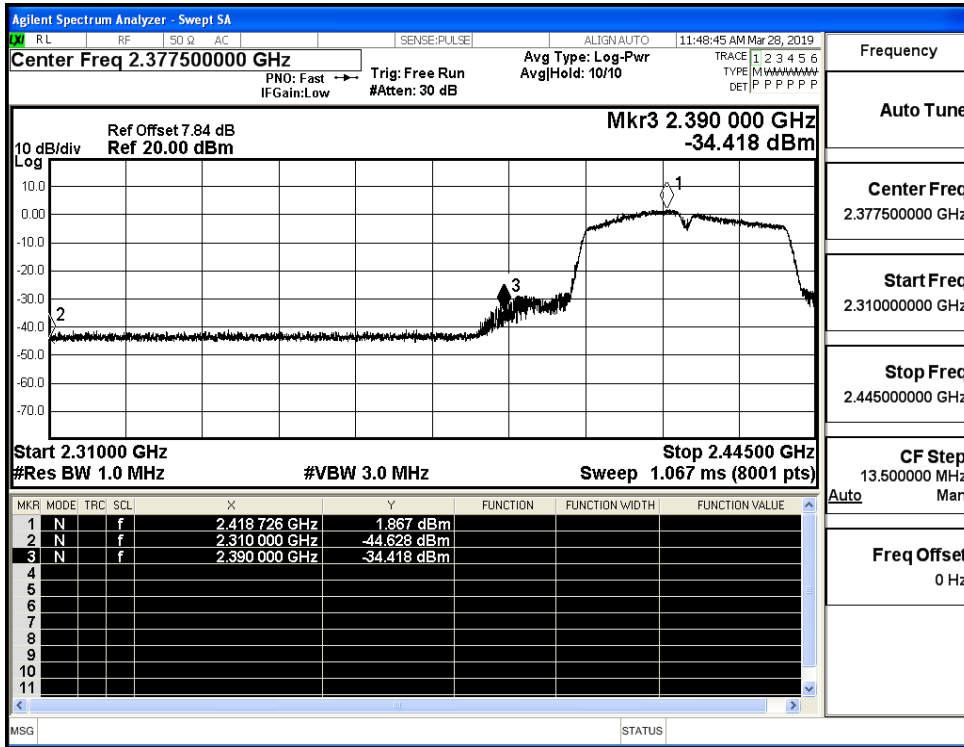
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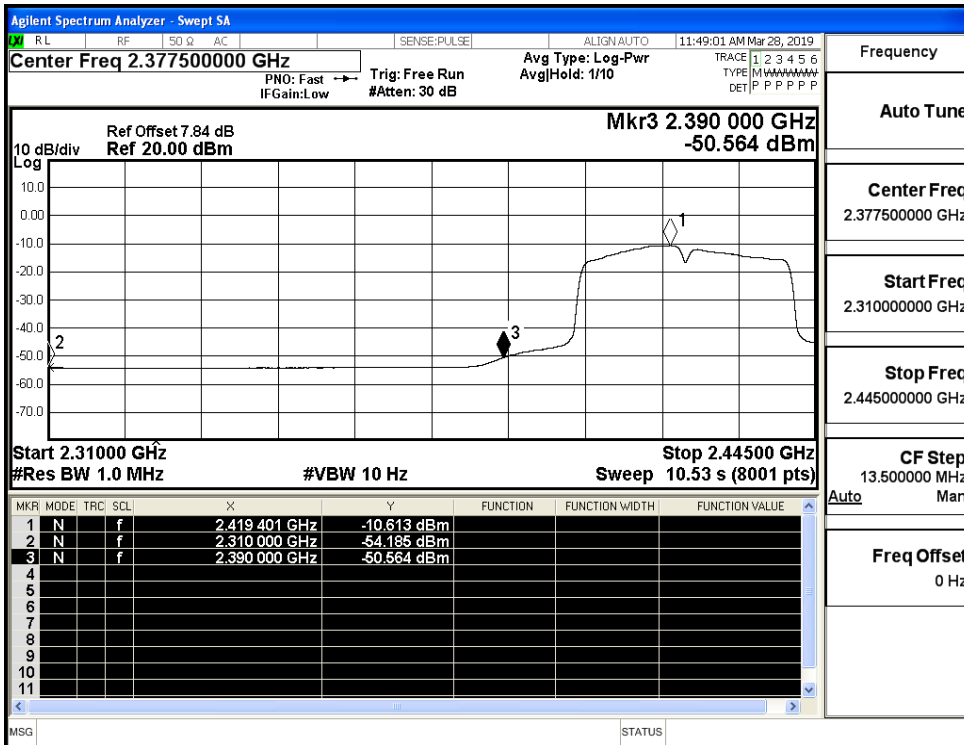
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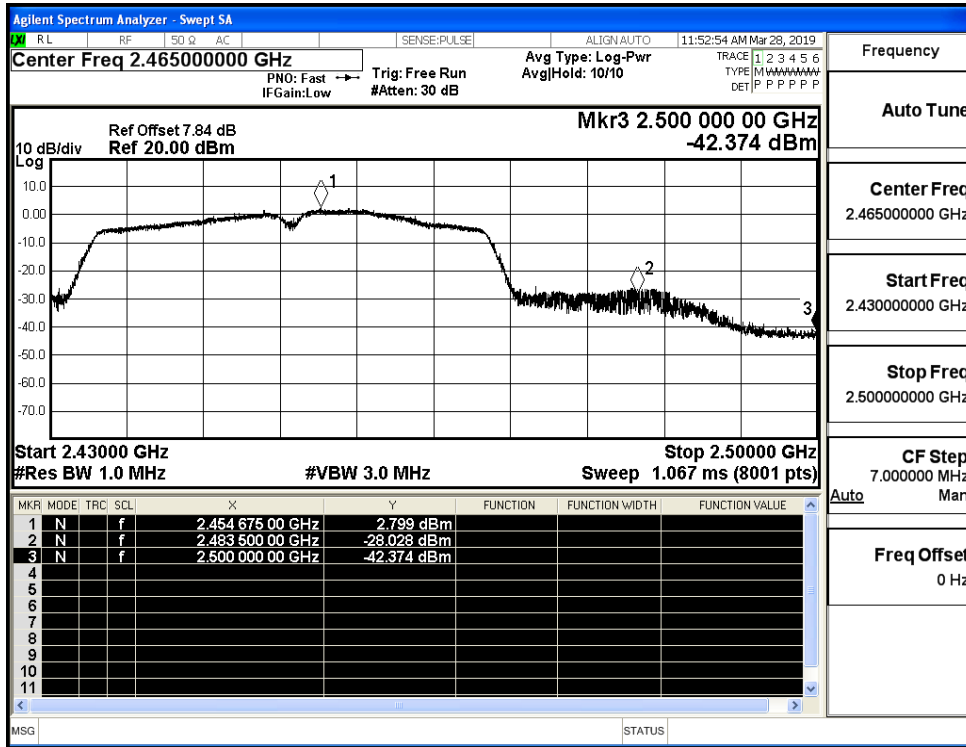
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



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

