

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart Phone

Trade Mark: XTRATECH

Test Model: Brio X31

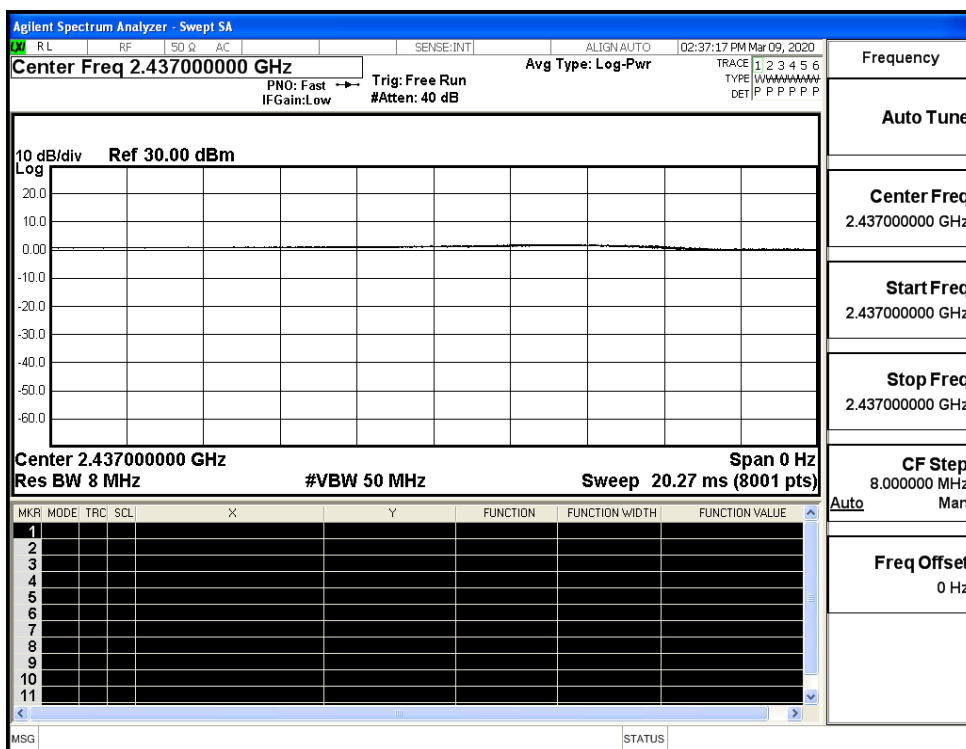
Environmental Conditions

Temperature:	23.4 ° C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Tom.Liu

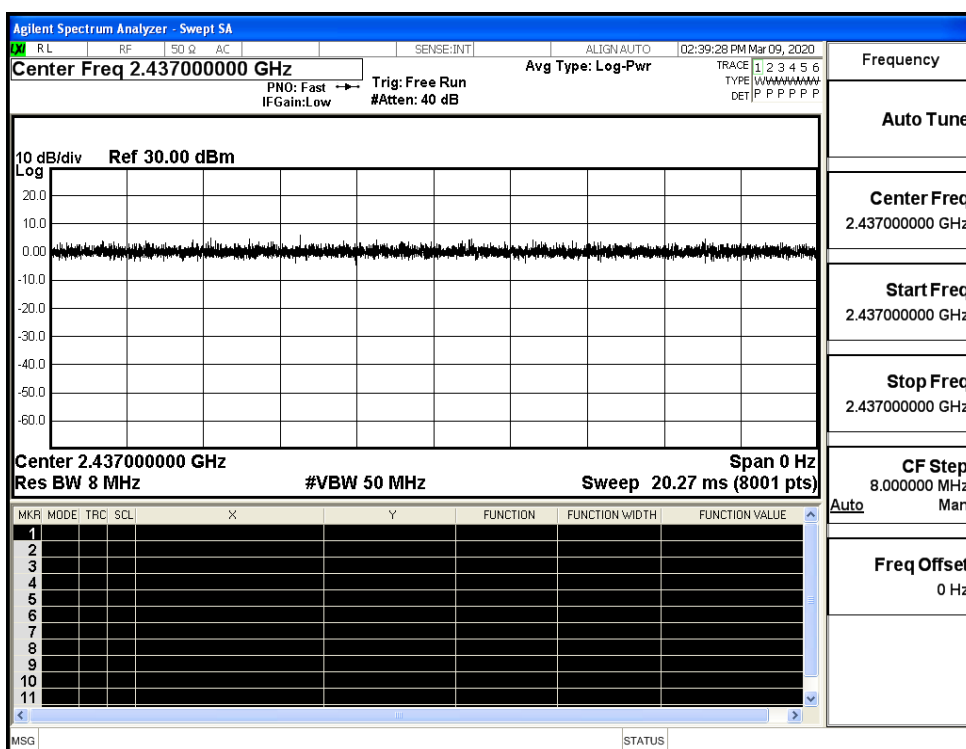
C.1 Duty Cycle

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

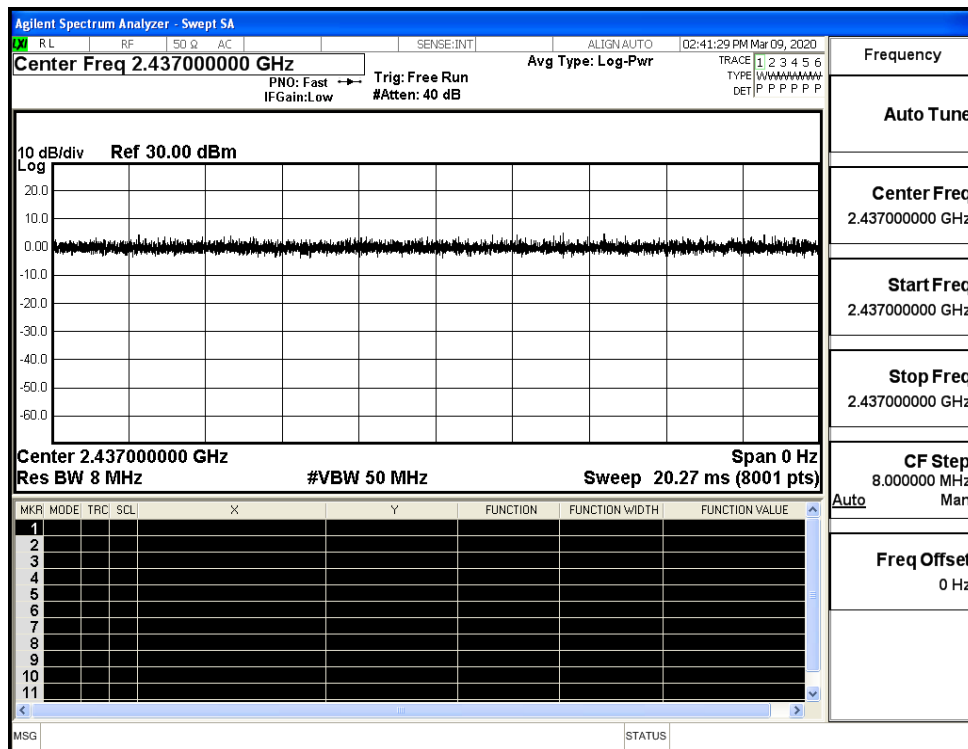
Duty Cycle_11B_2437_Ant1



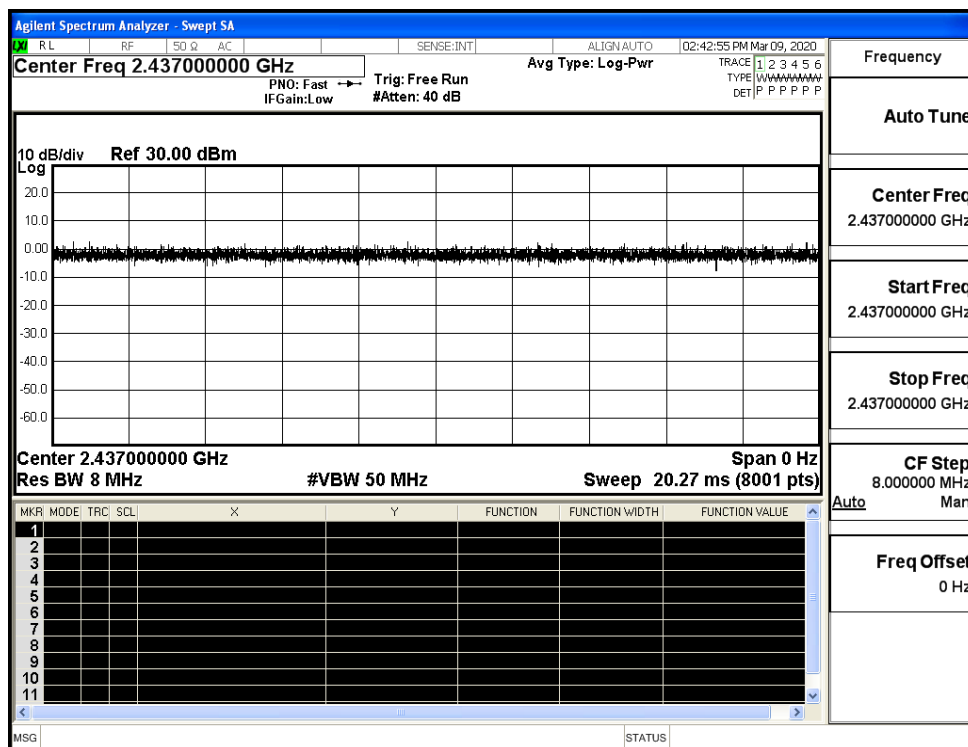
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1



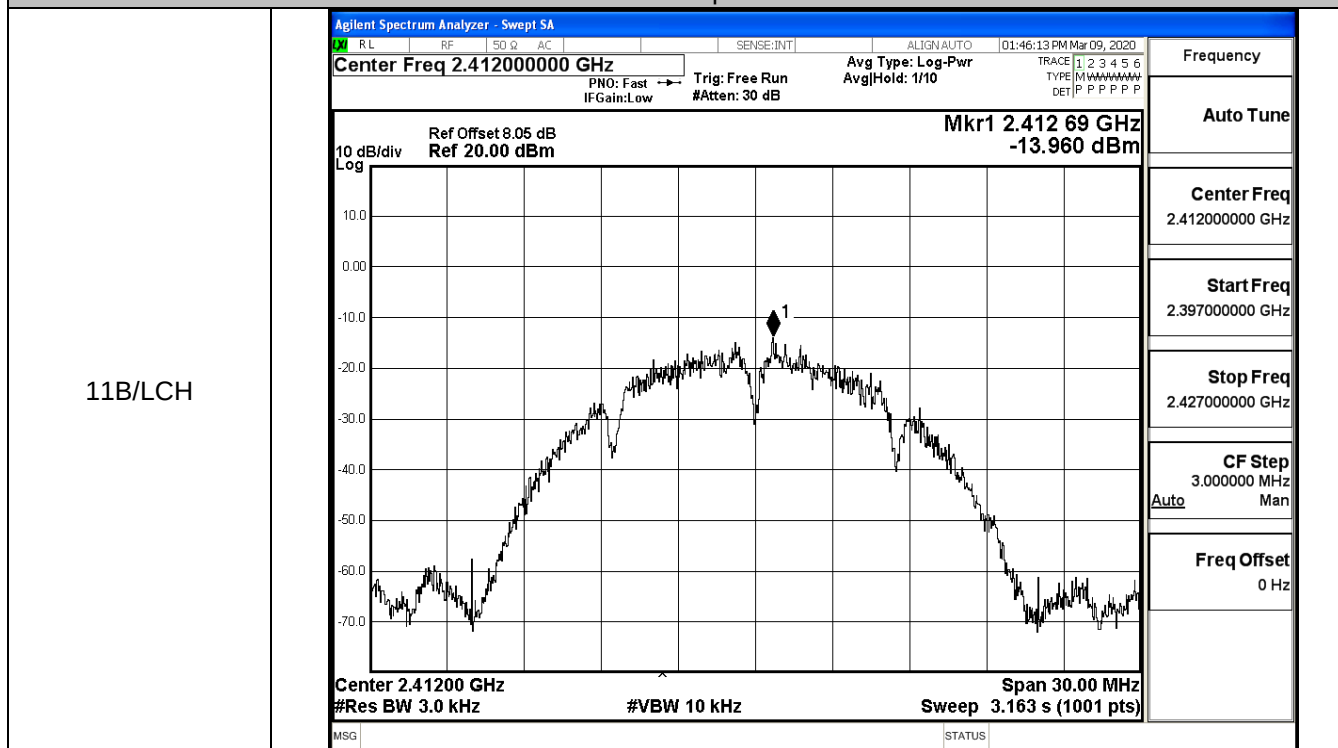
C.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	11.04	30	PASS
	MCH	11.02	30	PASS
	HCH	12.33	30	PASS
11G	LCH	12.19	30	PASS
	MCH	12.36	30	PASS
	HCH	12.43	30	PASS
11N20SISO	LCH	12.21	30	PASS
	MCH	11.86	30	PASS
	HCH	12.27	30	PASS
11N40SISO	LCH	12.69	30	PASS
	MCH	12.06	30	PASS
	HCH	12.2	30	PASS

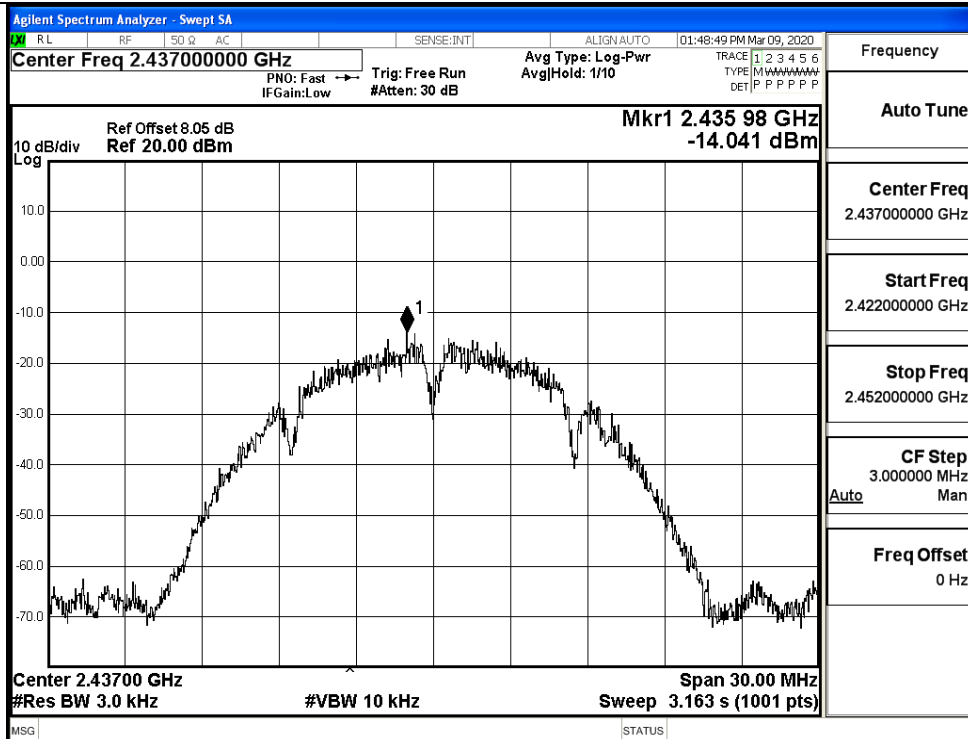
C.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-13.960	8	PASS
	MCH	-14.041	8	PASS
	HCH	-13.896	8	PASS
11G	LCH	-21.418	8	PASS
	MCH	-21.543	8	PASS
	HCH	-21.087	8	PASS
11N20SISO	LCH	-21.656	8	PASS
	MCH	-21.312	8	PASS
	HCH	-21.502	8	PASS
11N40SISO	LCH	-22.275	8	PASS
	MCH	-22.088	8	PASS
	HCH	-22.860	8	PASS

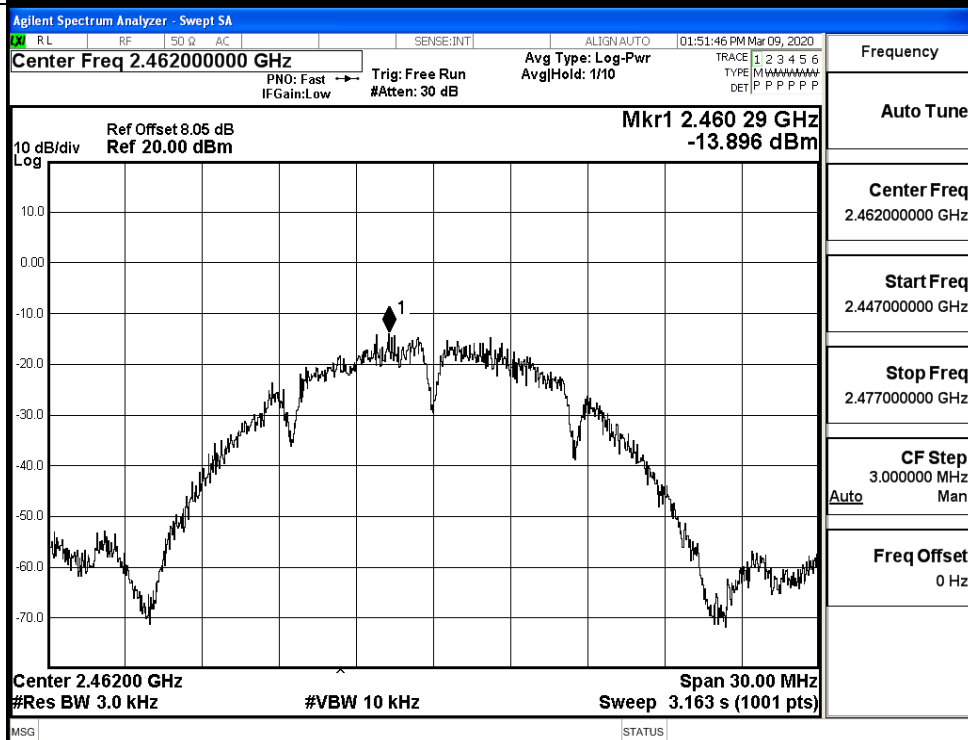
Test Graphs



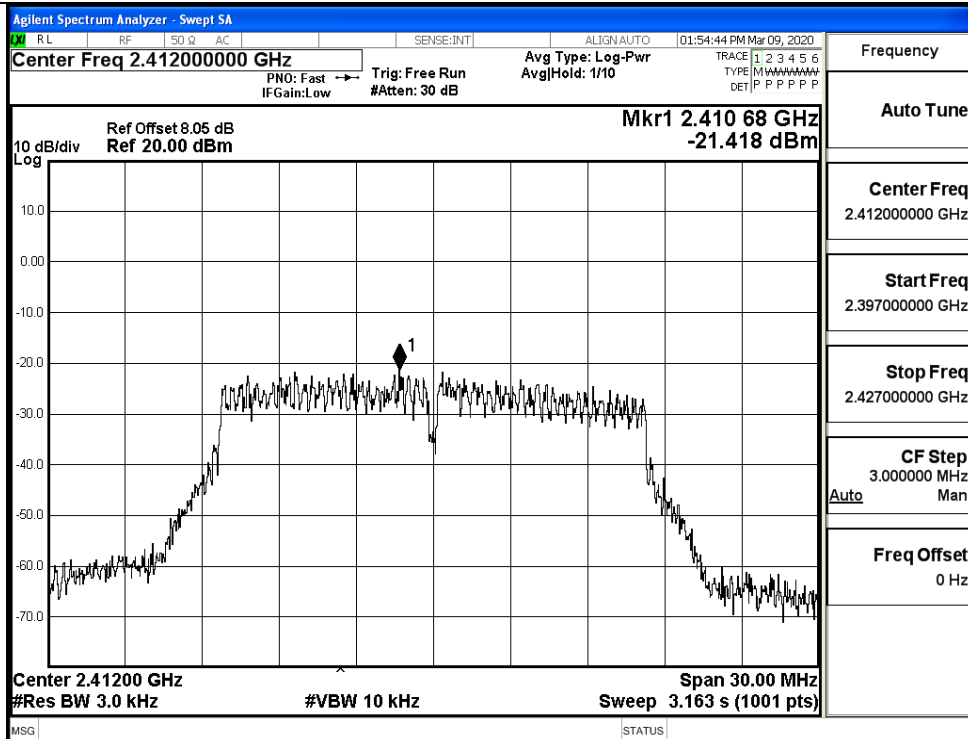
11B/MCH



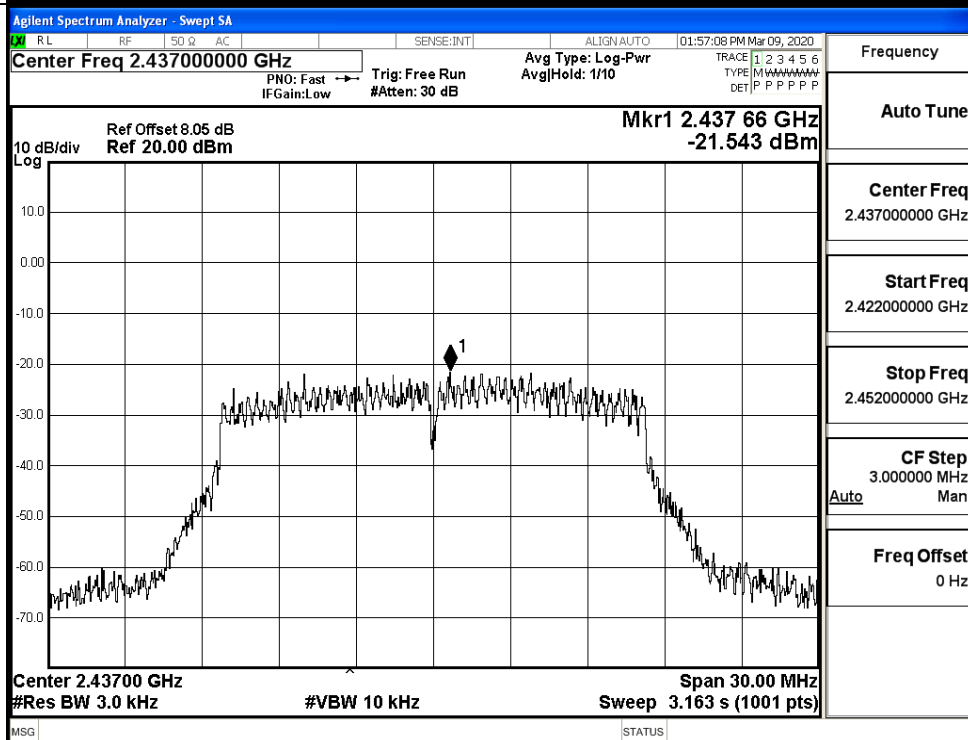
11B/HCH



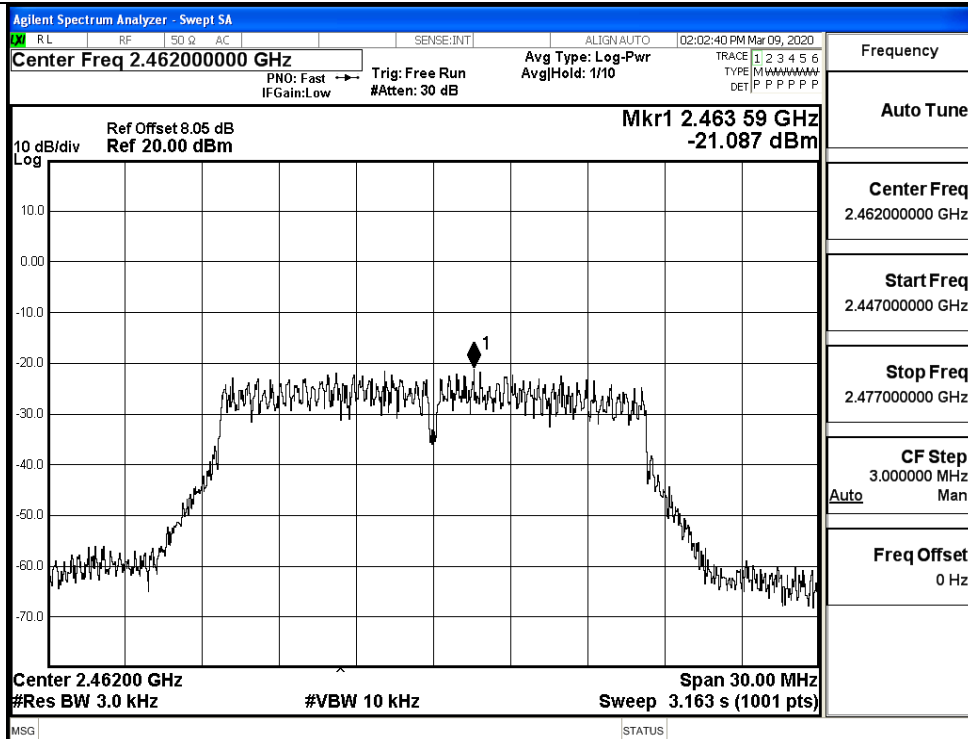
11G/LCH



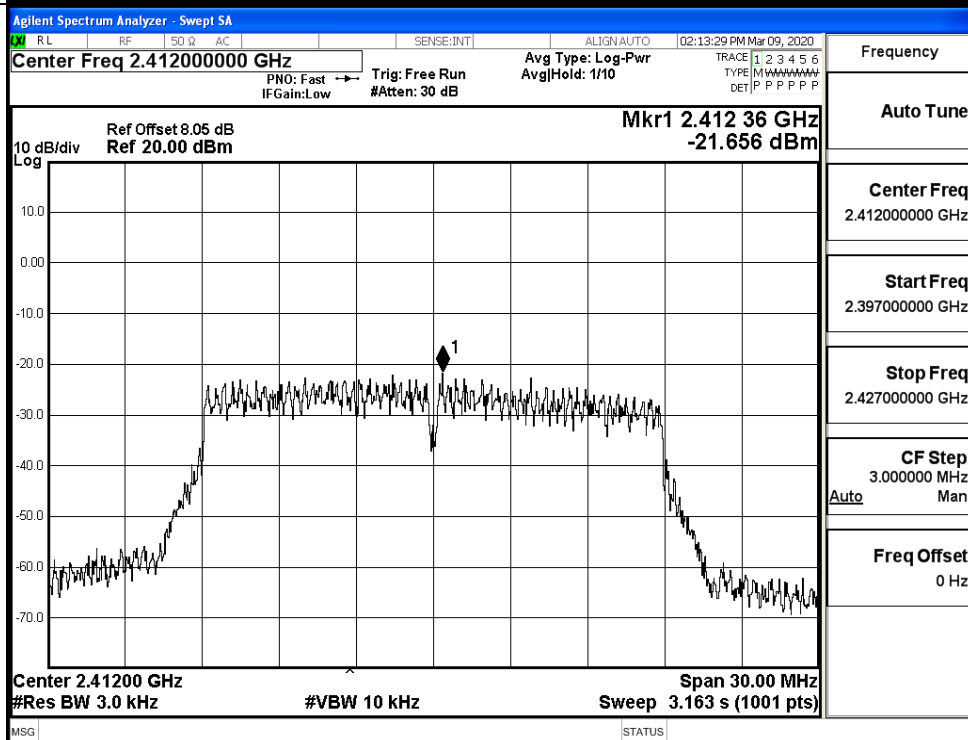
11G/MCH

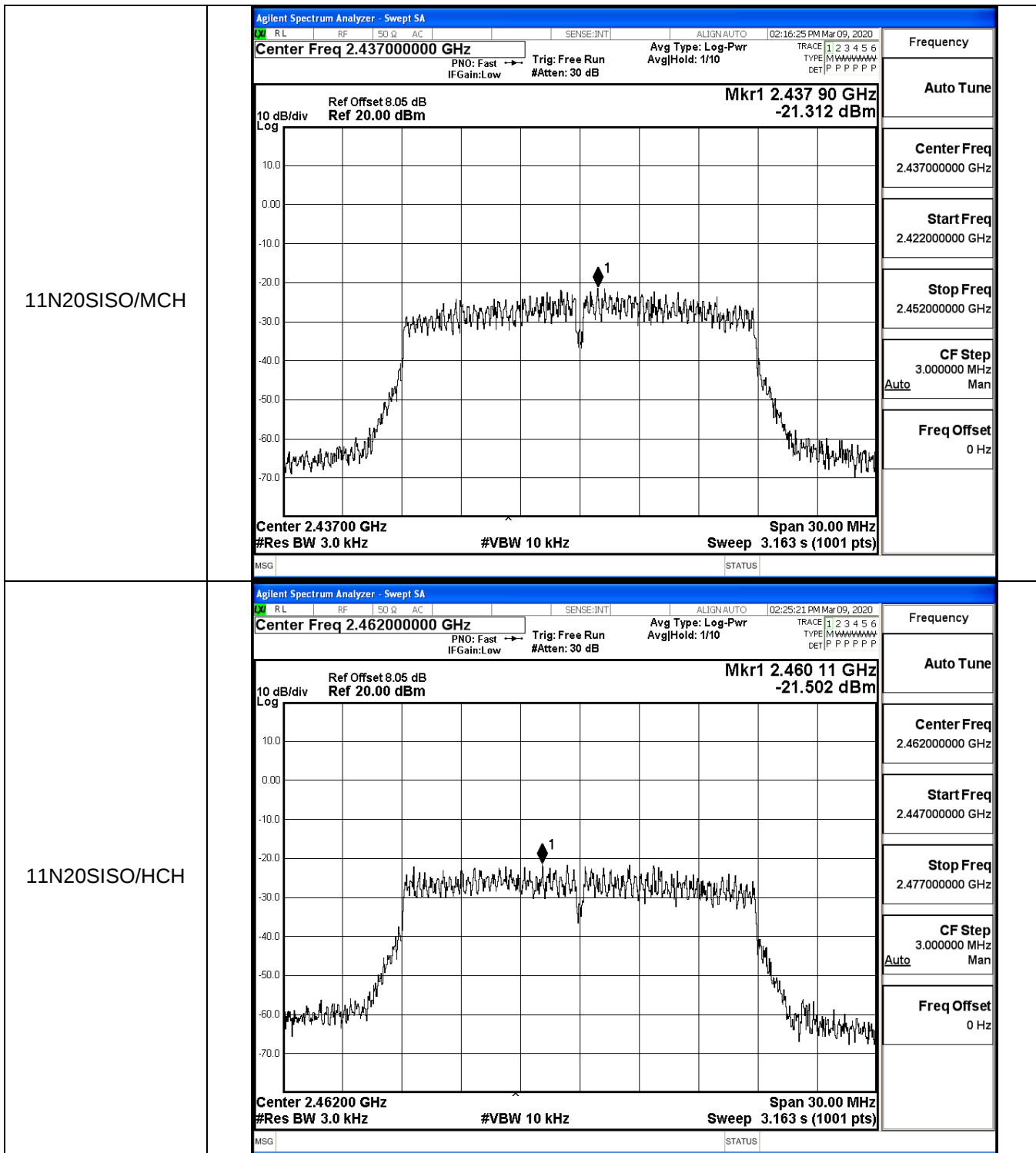


11G/HCH



11N20SISO/LCH





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.42200000 GHz

Ref Offset 8.05 dB
Ref 20.00 dBm

Mkr1 2.427 94 GHz
-22.275 dBm

10 dB/div
Log

Center 2.42200 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Sweep 6.326 s (1001 pts)

Frequency

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/LCH

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.437000000 GHz

Ref Offset 8.05 dB
Ref 20.00 dBm

Mkr1 2.438 50 GHz
-22.088 dBm

10 dB/div
Log

Center 2.43700 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Sweep 6.326 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.437000000 GHz

Start Freq
2.407000000 GHz

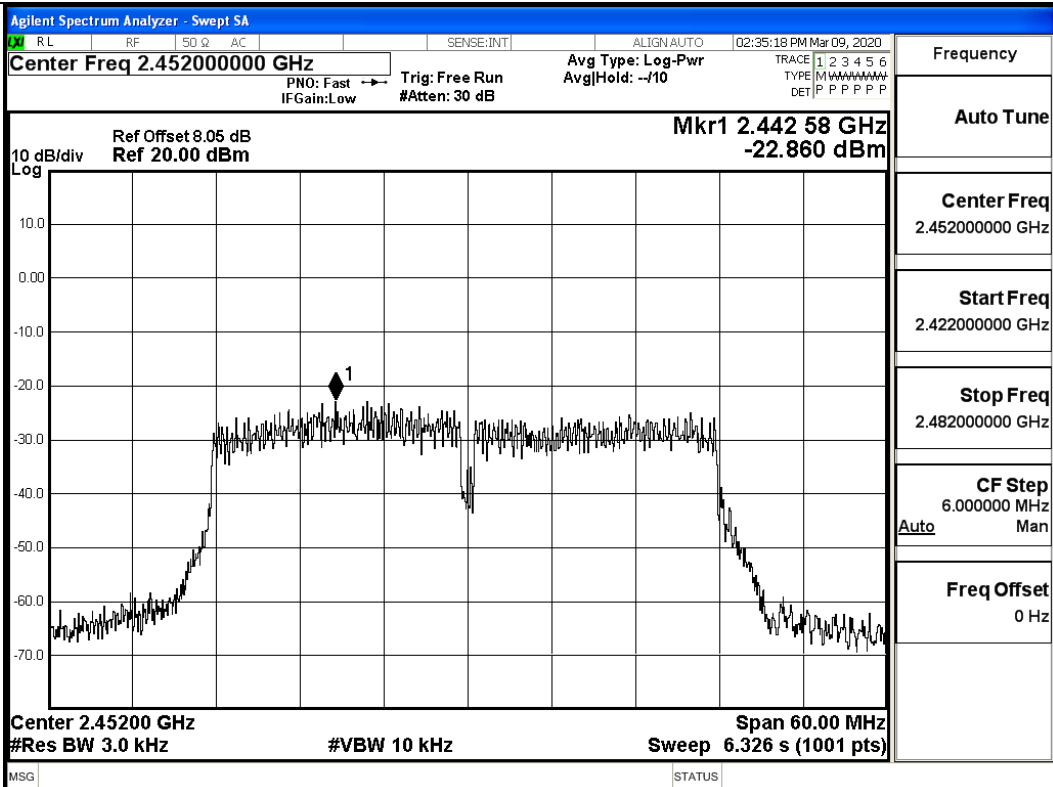
Stop Freq
2.467000000 GHz

CF Step
6.000000 MHz
Auto Man

Freq Offset
0 Hz

11N40SISO/MCH

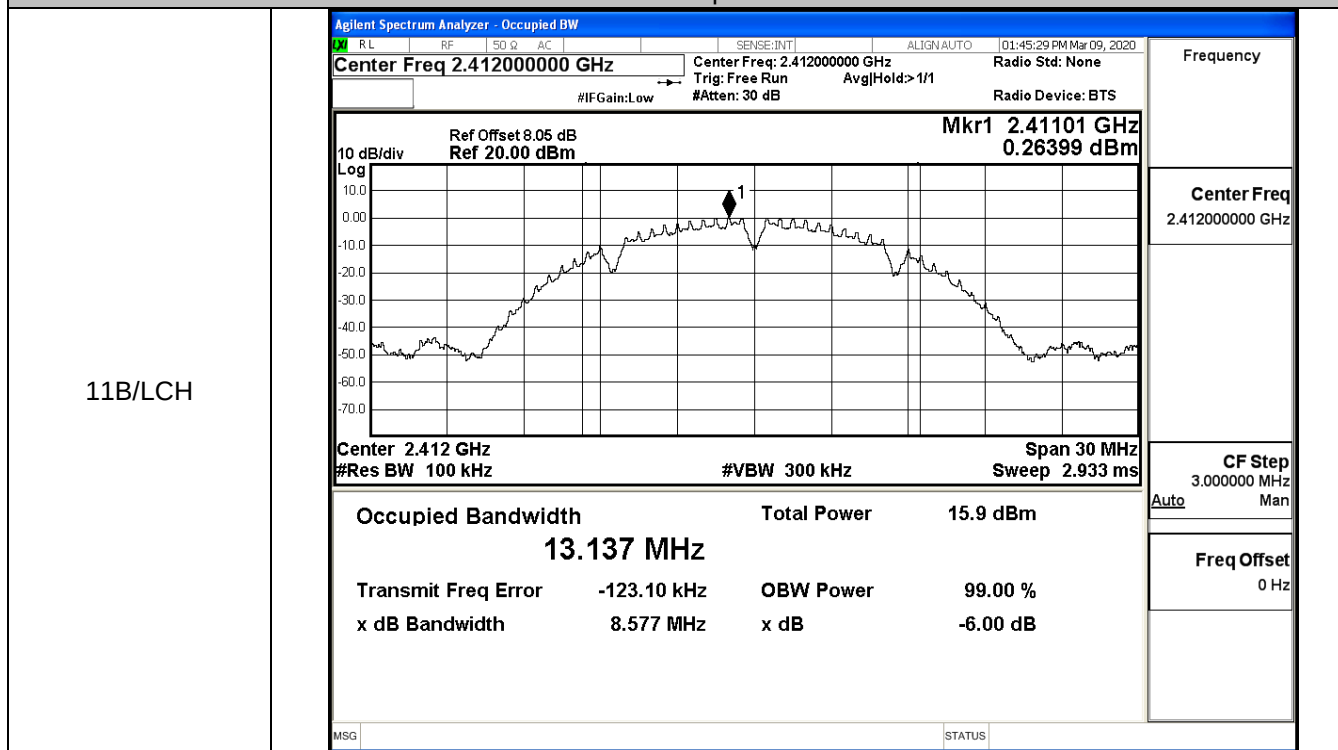
11N40SISO/HCH



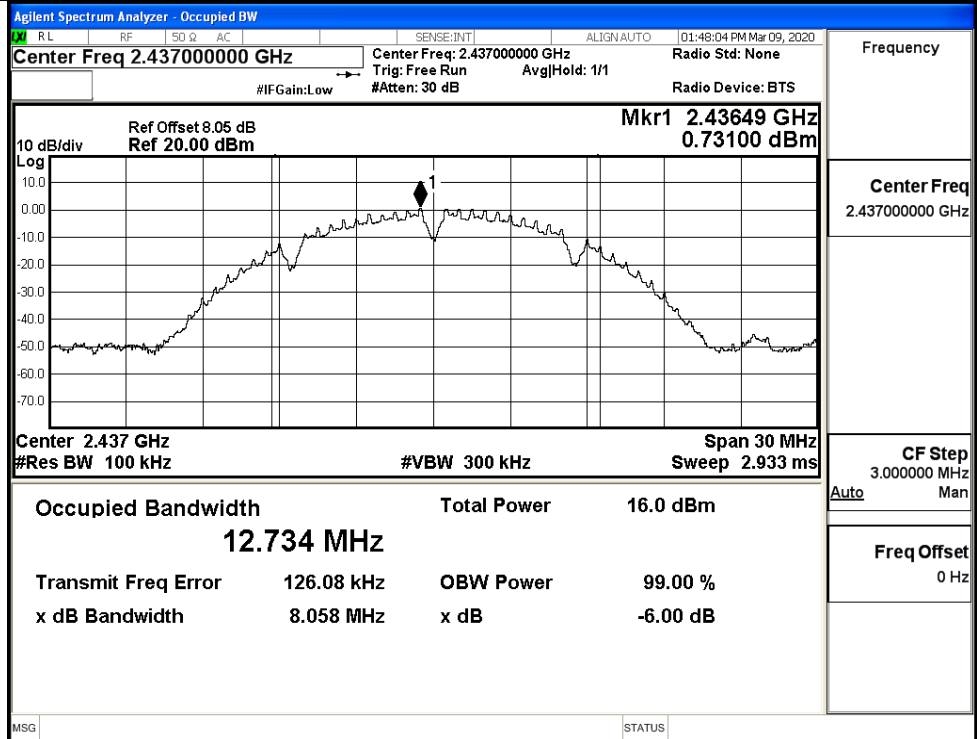
C.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	8.577	≥ 0.5	PASS
	MCH	8.058	≥ 0.5	PASS
	HCH	9.034	≥ 0.5	PASS
11G	LCH	16.45	≥ 0.5	PASS
	MCH	15.70	≥ 0.5	PASS
	HCH	16.50	≥ 0.5	PASS
11N20SISO	LCH	17.68	≥ 0.5	PASS
	MCH	16.35	≥ 0.5	PASS
	HCH	17.71	≥ 0.5	PASS
11N40SISO	LCH	36.54	≥ 0.5	PASS
	MCH	24.86	≥ 0.5	PASS
	HCH	31.67	≥ 0.5	PASS

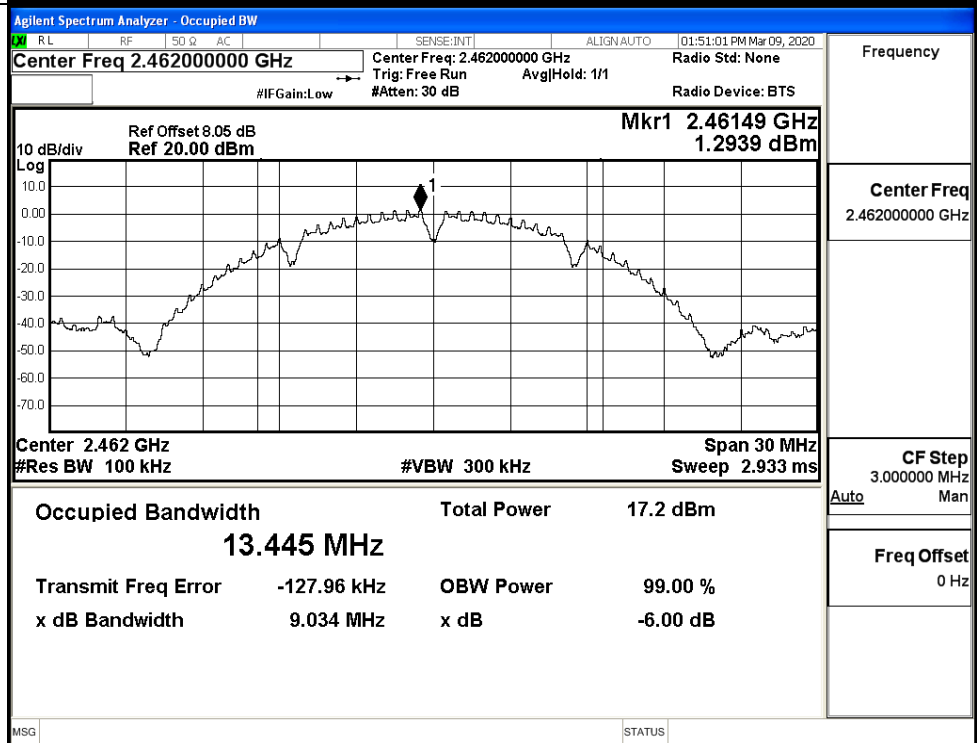
Test Graphs



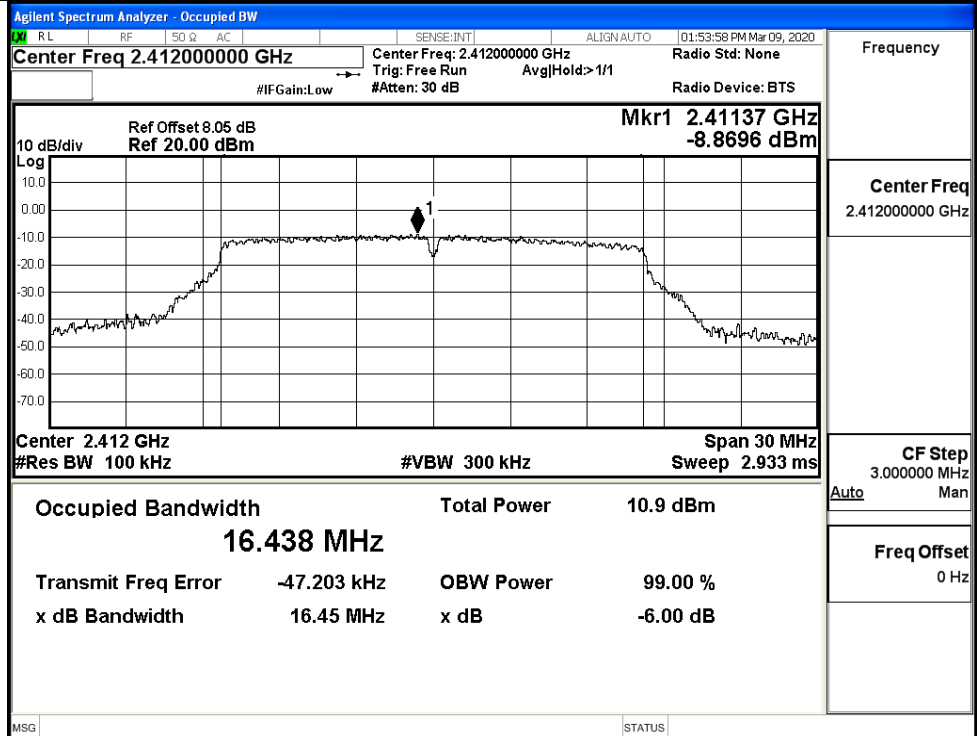
11B/MCH



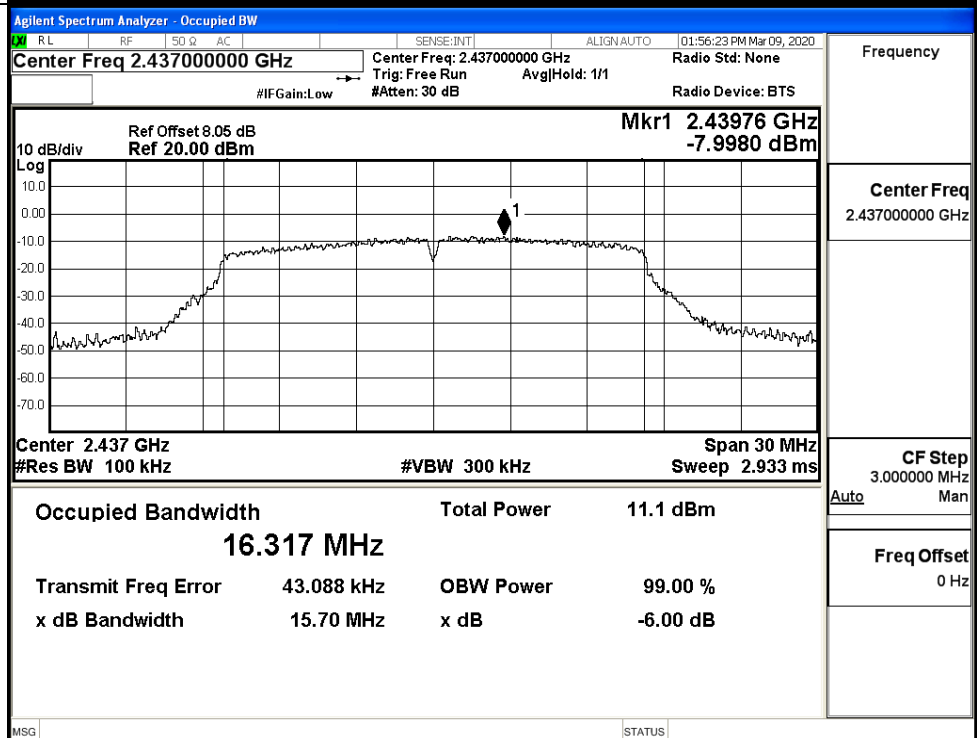
11B/HCH



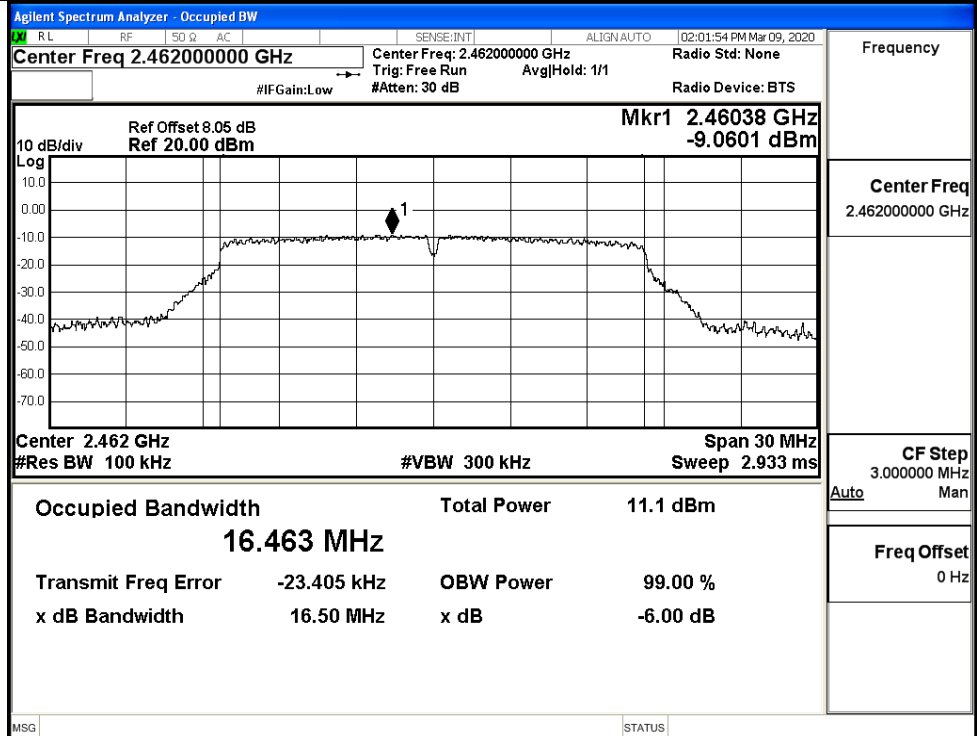
11G/LCH



11G/MCH



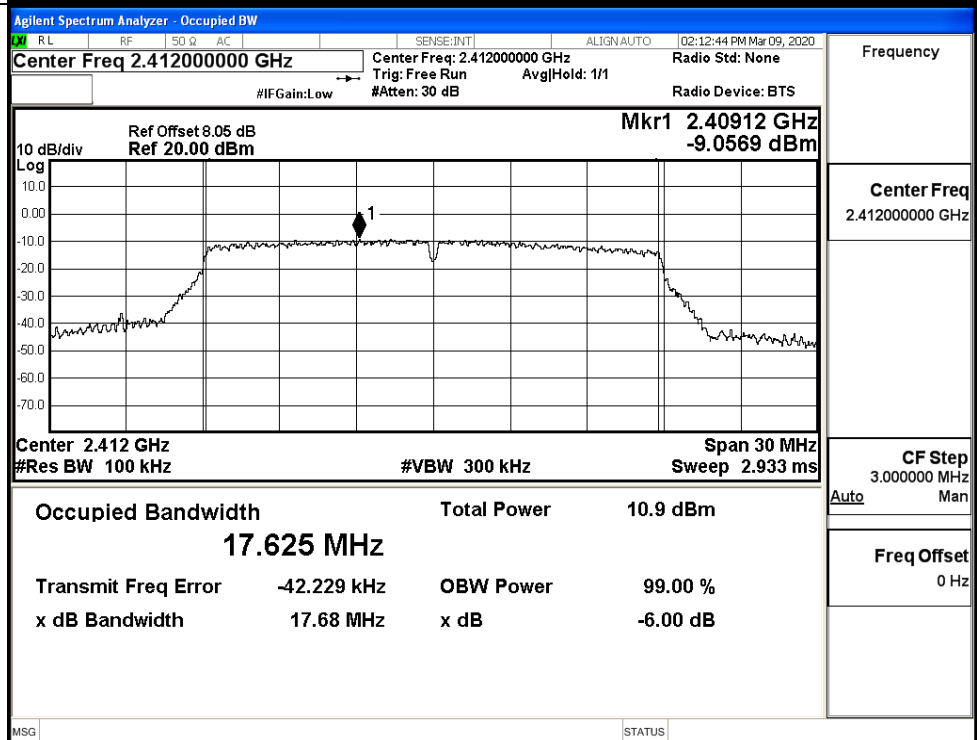
11G/HCH



Frequency

Center Freq
2.462000000 GHzCF Step
3.000000 MHz
Auto ManFreq Offset
0 Hz

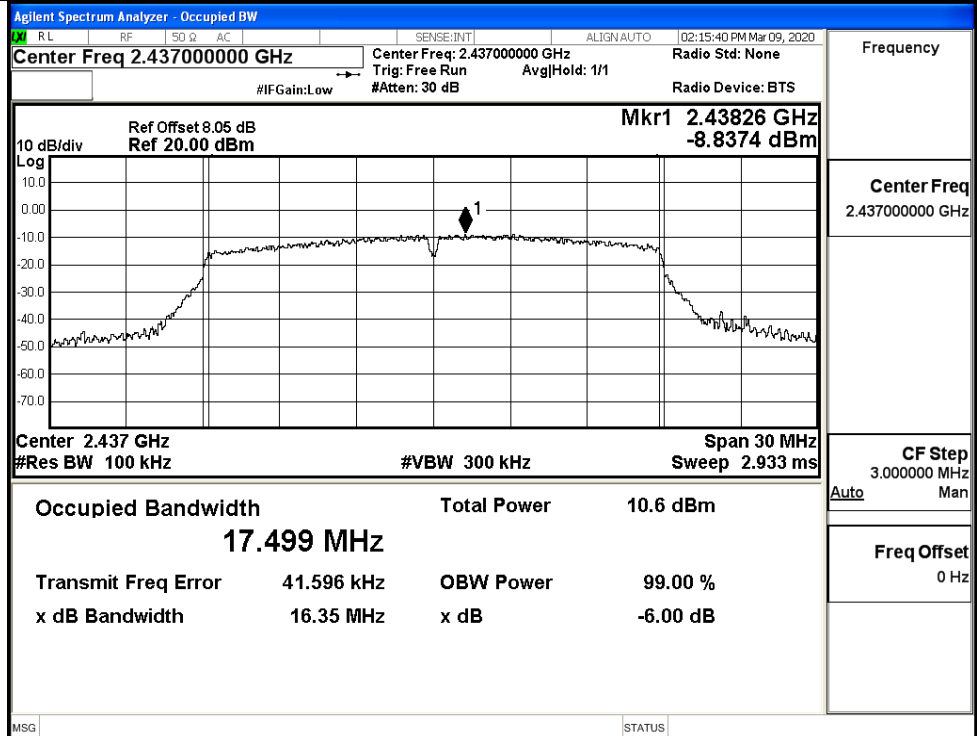
11N20SISO/LCH



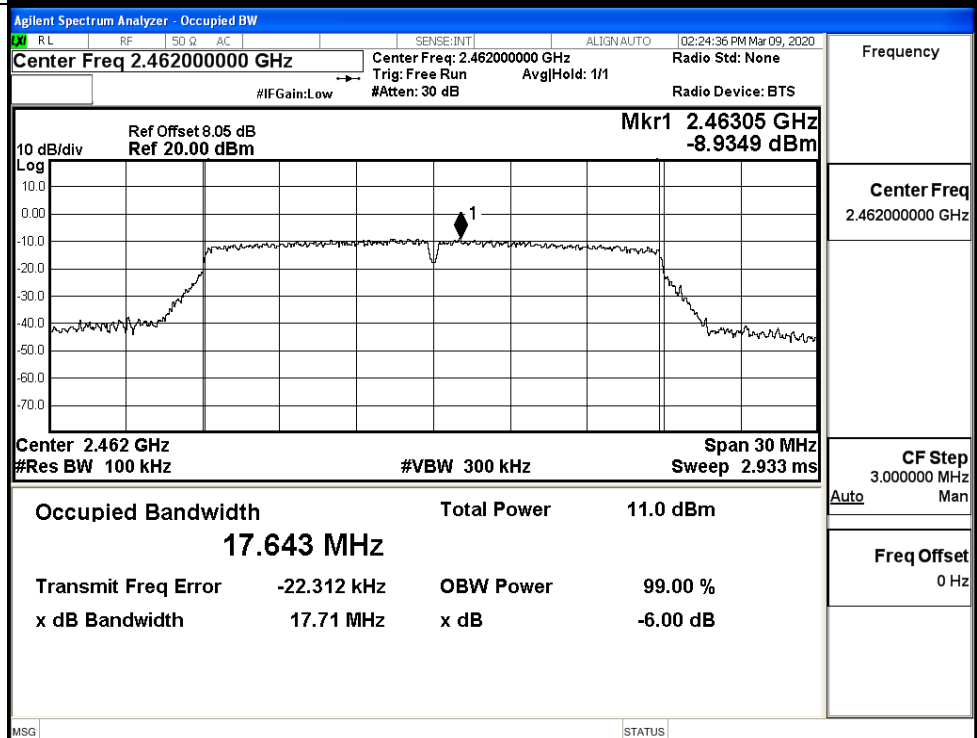
Frequency

Center Freq
2.412000000 GHzCF Step
3.000000 MHz
Auto ManFreq Offset
0 Hz

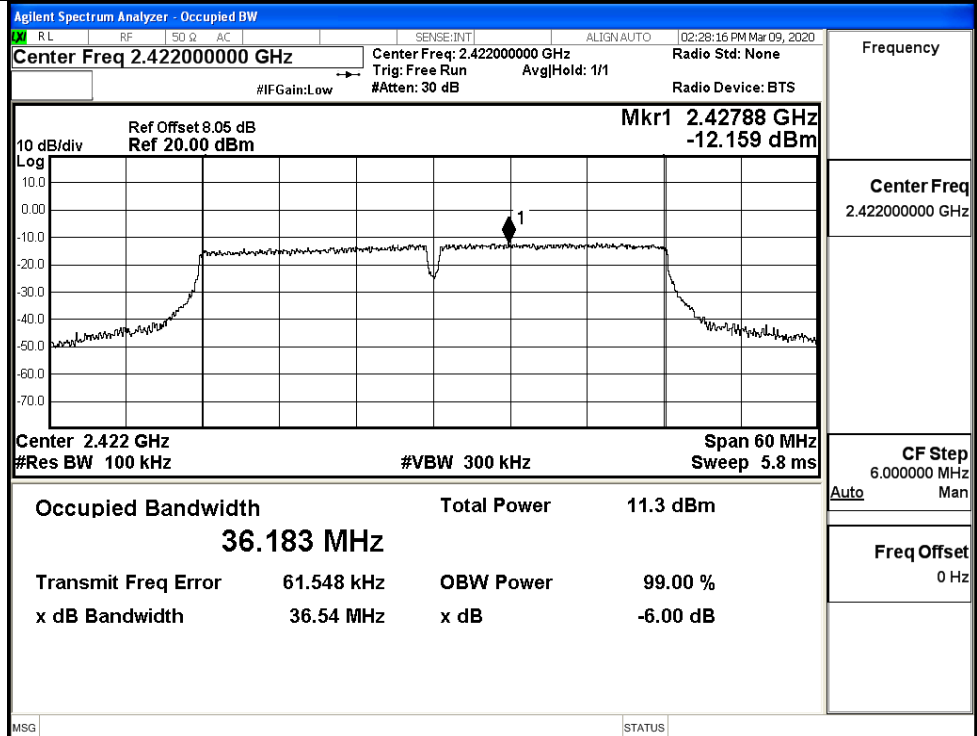
11N20SISO/MCH



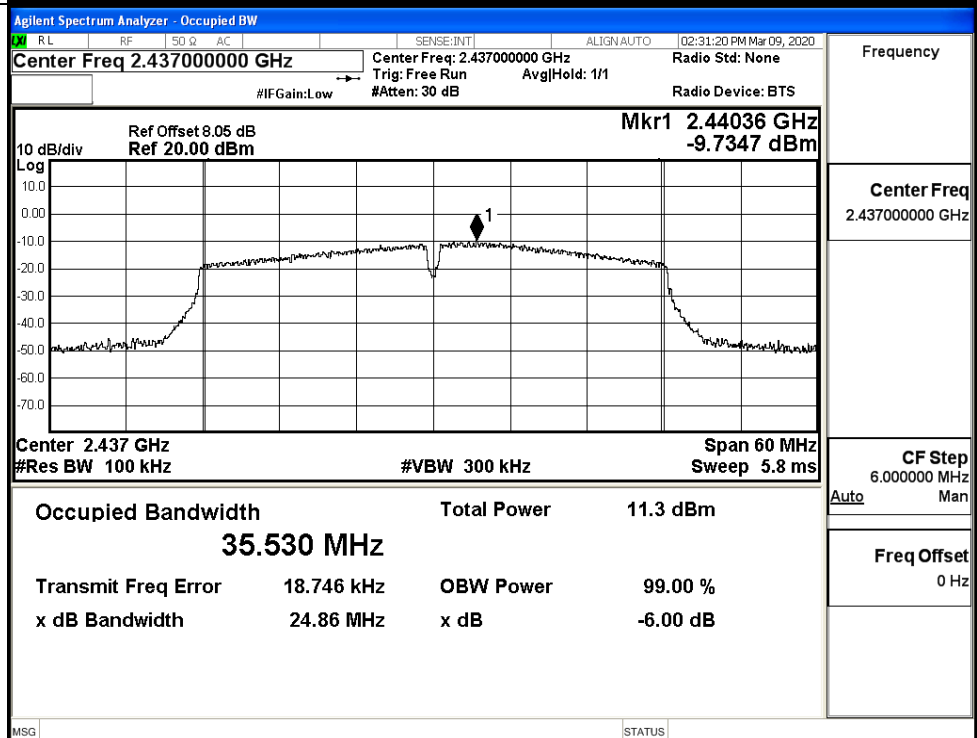
11N20SISO/HCH

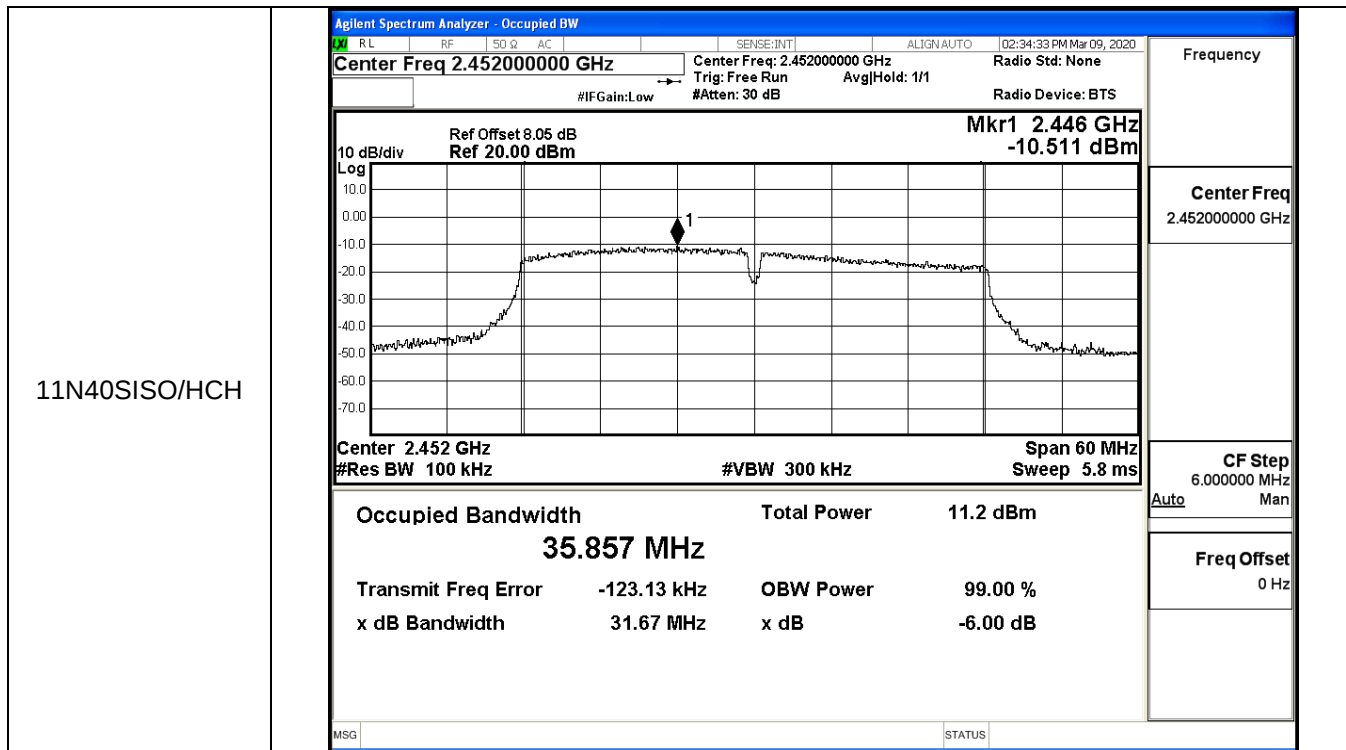


11N40SISO/LCH



11N40SISO/MCH





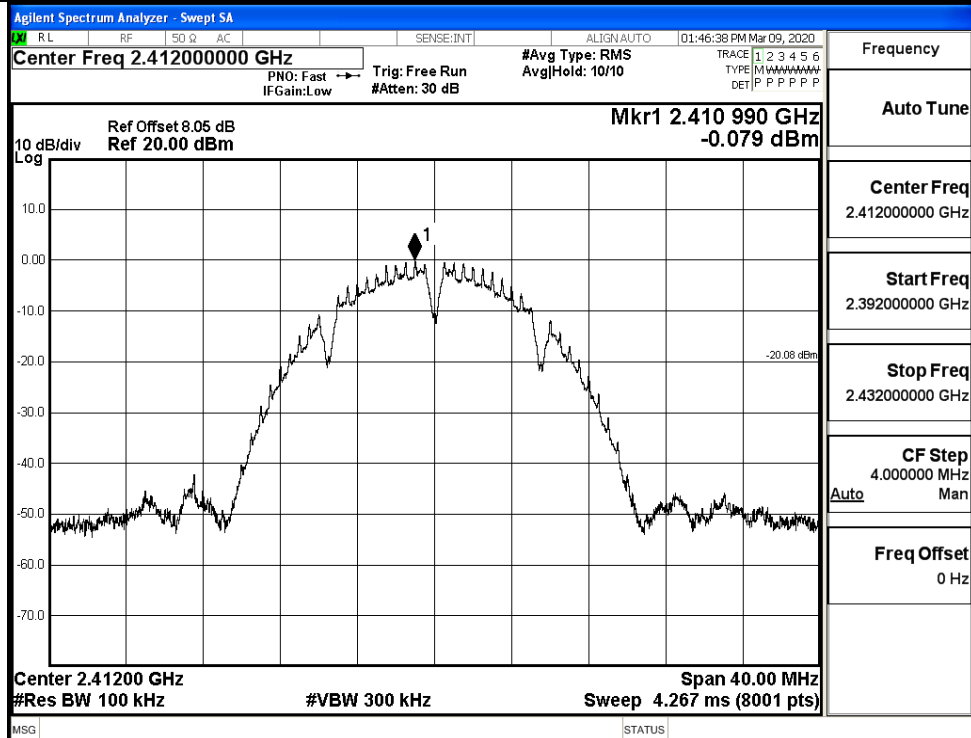
C.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdic
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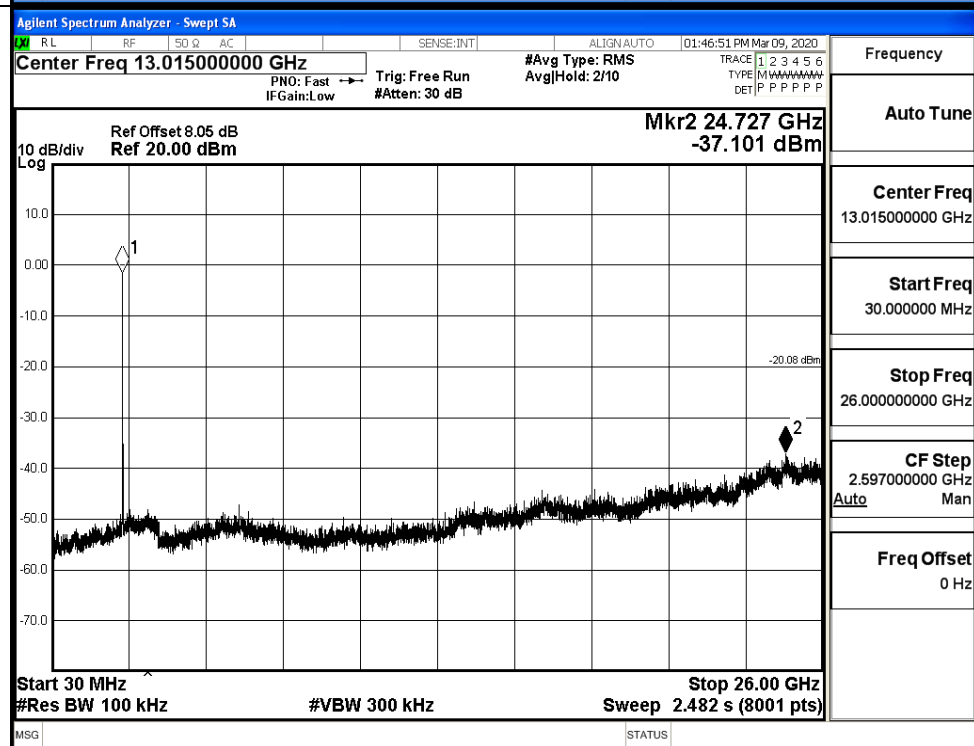
					t
11B	LCH	-0.079	-37.101	-20.079	PASS
	MCH	0.529	-36.790	-19.471	PASS
	HCH	1.434	-38.263	-18.566	PASS
11G	LCH	-9.018	-37.134	-29.018	PASS
	MCH	-8.186	-36.788	-28.186	PASS
	HCH	-8.989	-37.786	-28.989	PASS
11N20 SISO	LCH	-9.056	-37.981	-29.056	PASS
	MCH	-8.721	-37.977	-28.721	PASS
	HCH	-9.209	-37.836	-29.209	PASS
11N40 SISO	LCH	-12.041	-37.871	-32.041	PASS
	MCH	-10.345	-37.496	-30.345	PASS
	HCH	-11.009	-37.016	-31.009	PASS

11B LCH Graphs

Pref/11B/LCH

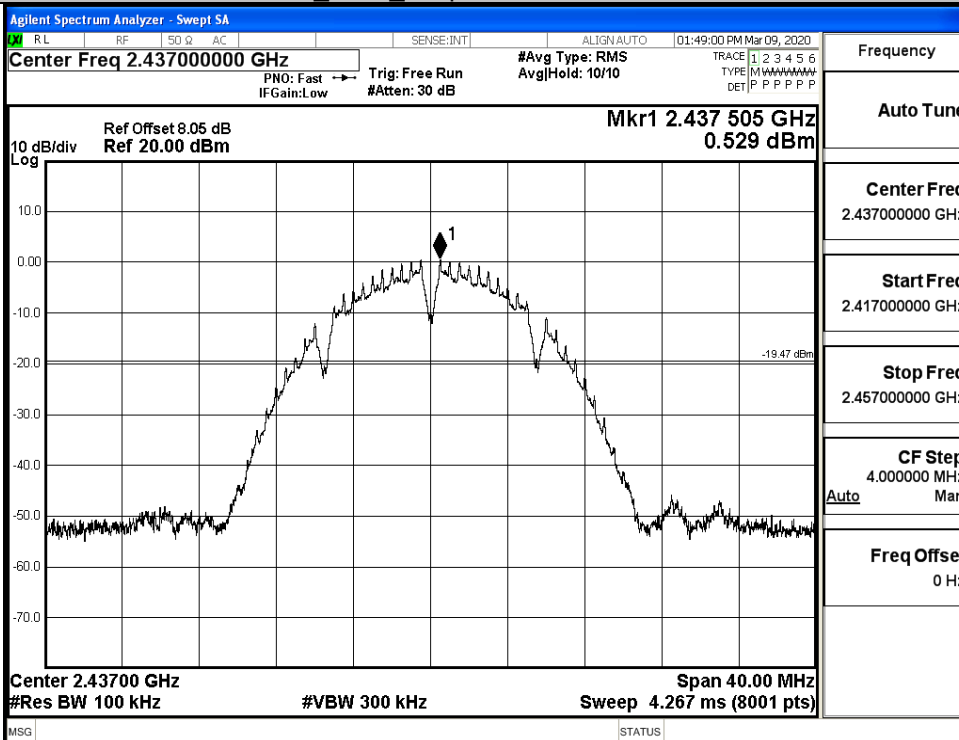


Puw/11B/LCH

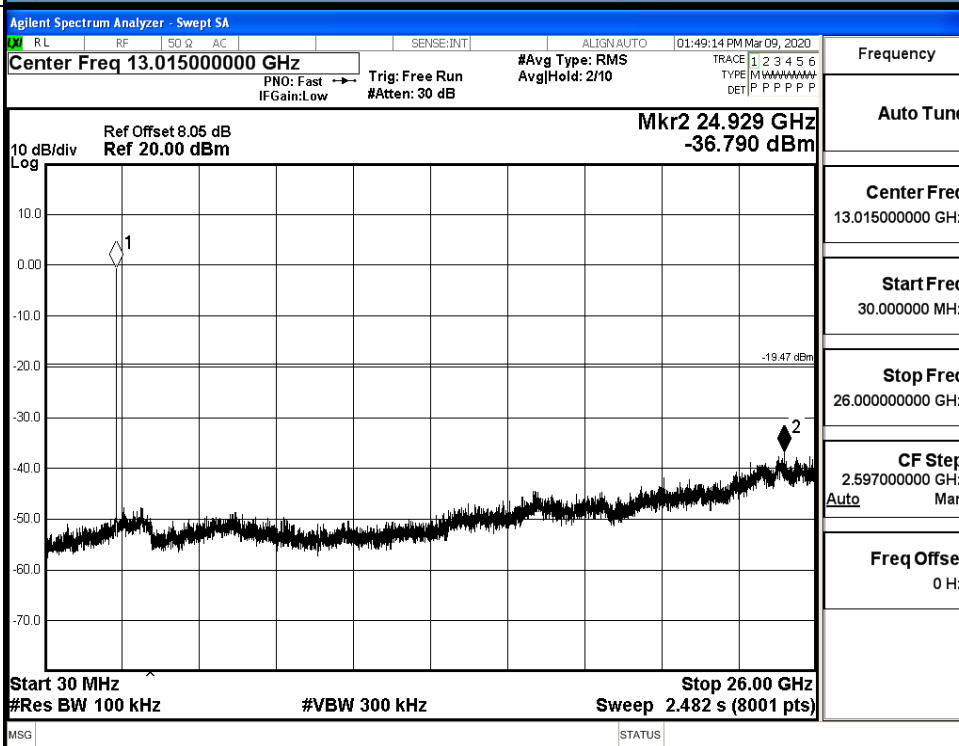


11B MCH Graphs

Pref/11B/MCH

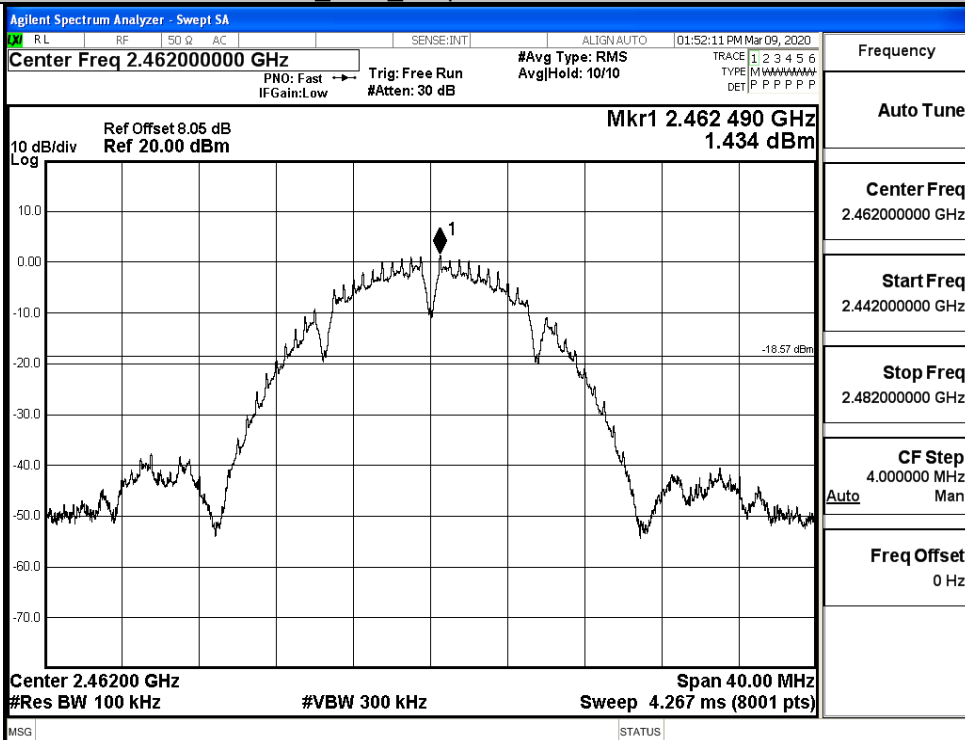


Puw/11B/MCH

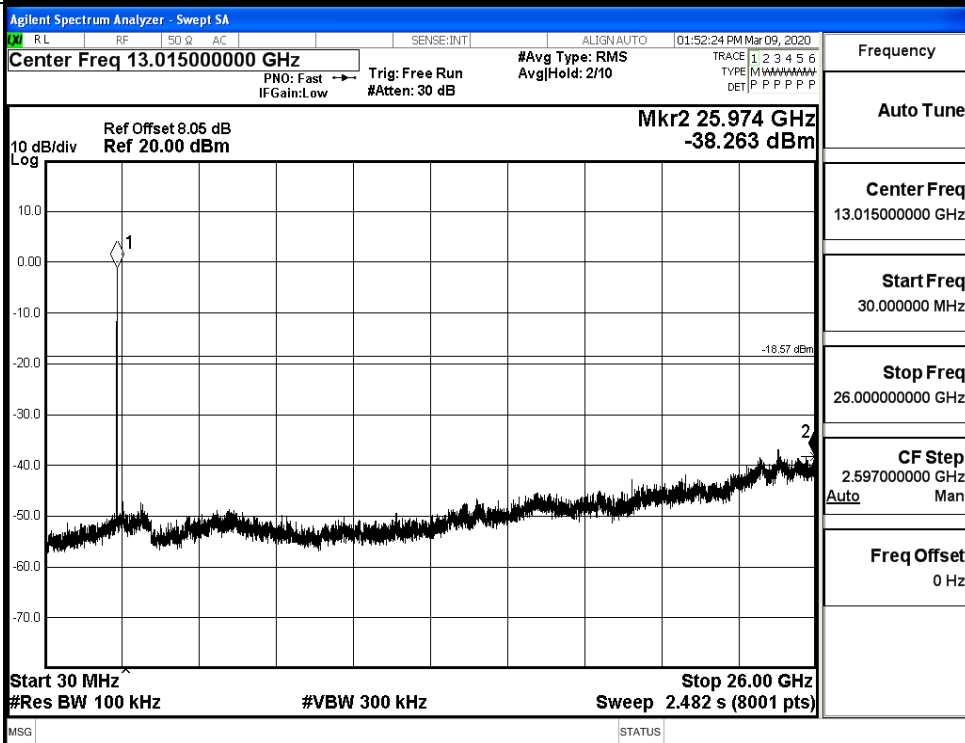


11B HCH Graphs

Pref/11B/HCH

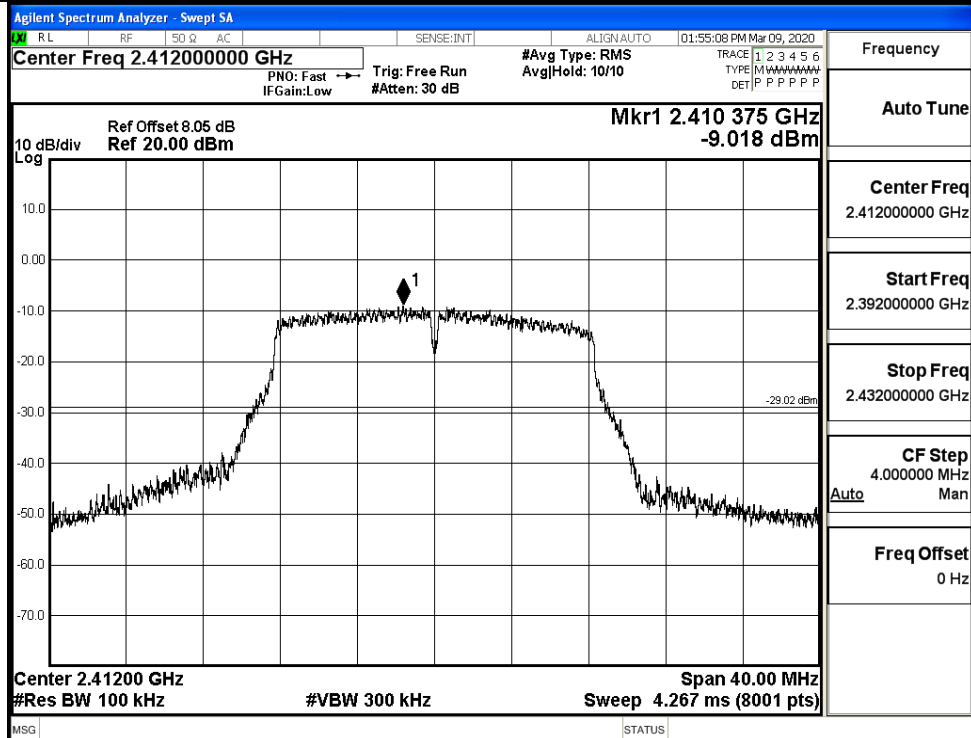


Puw/11B/HCH

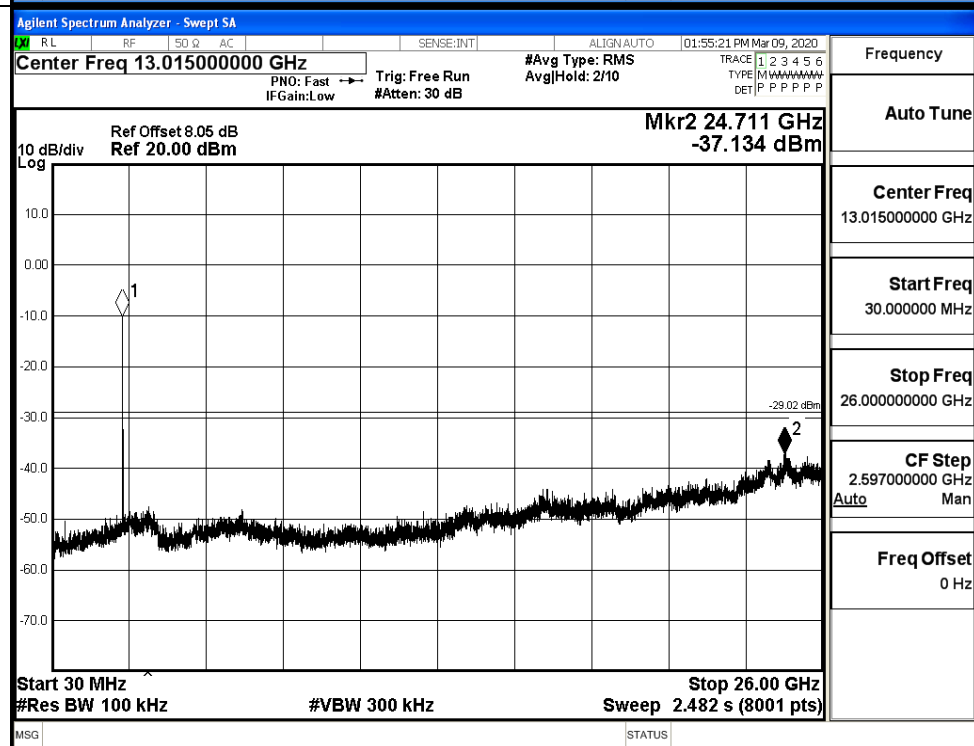


11G LCH Graphs

Pref/11G/LCH

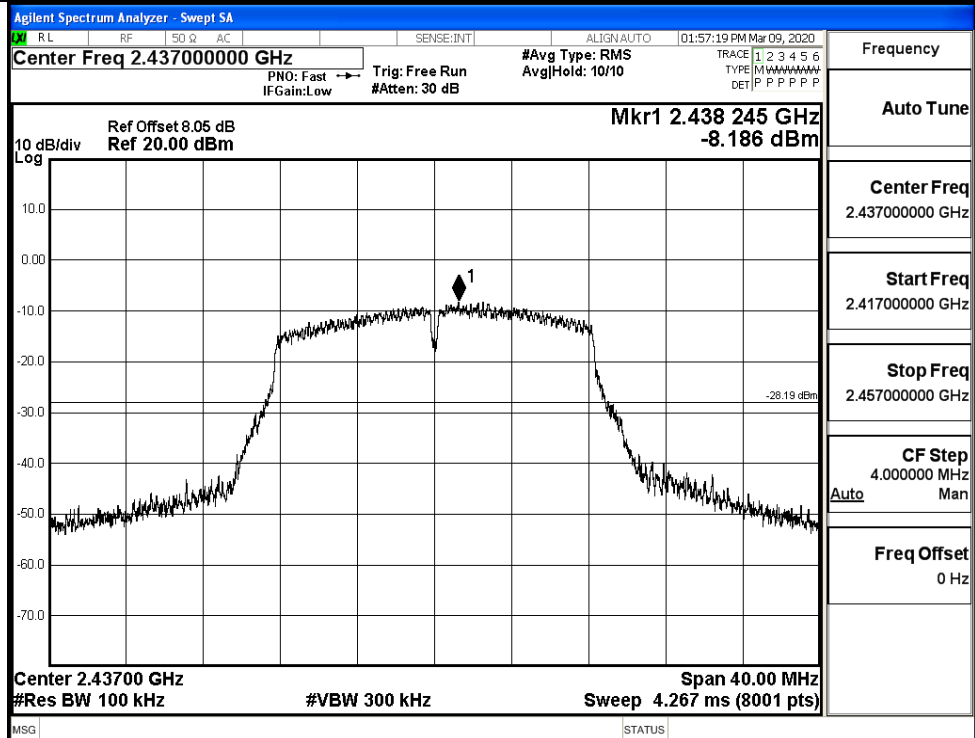


Puw/11G/LCH

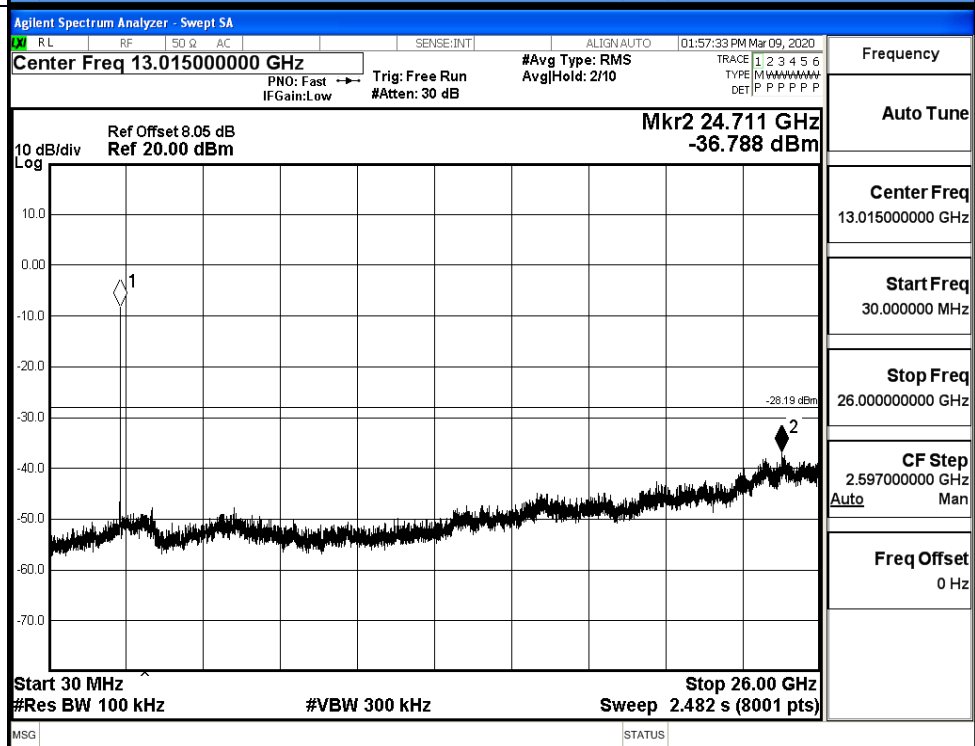


11G MCH Graphs

Pref/11G/MCH

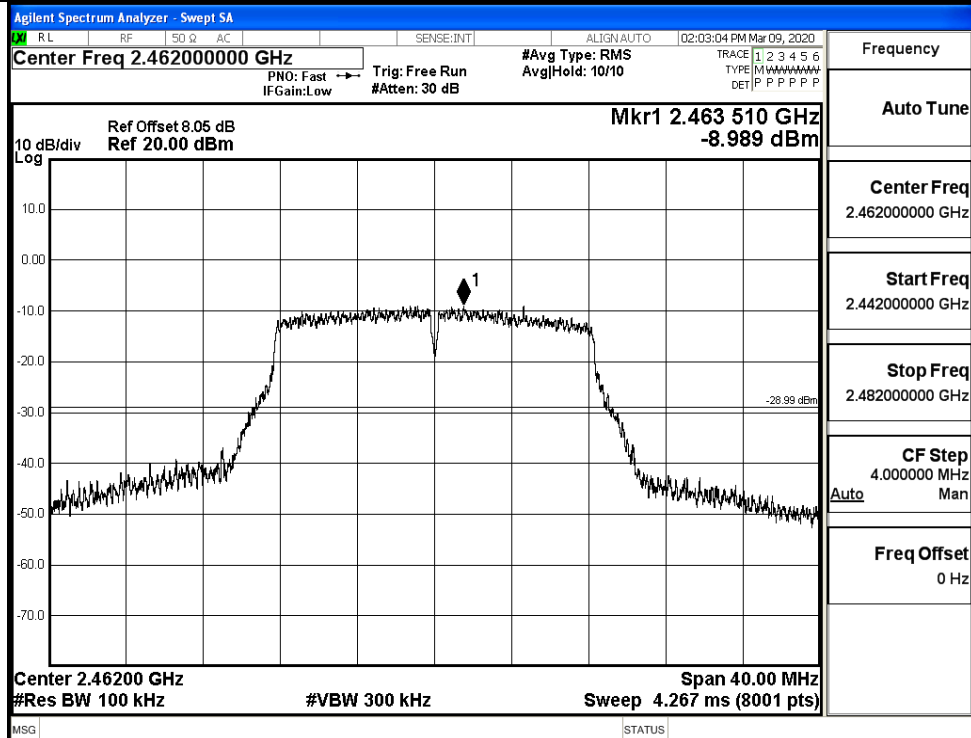


Puw/11G/MCH

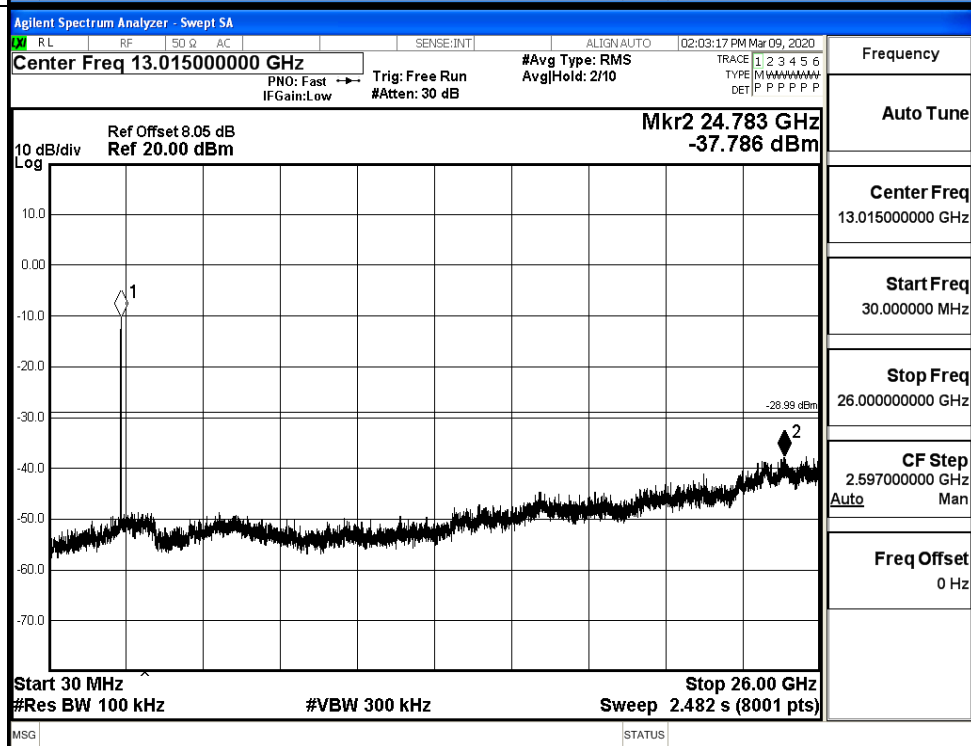


11G HCH Graphs

Pref/11G/HCH

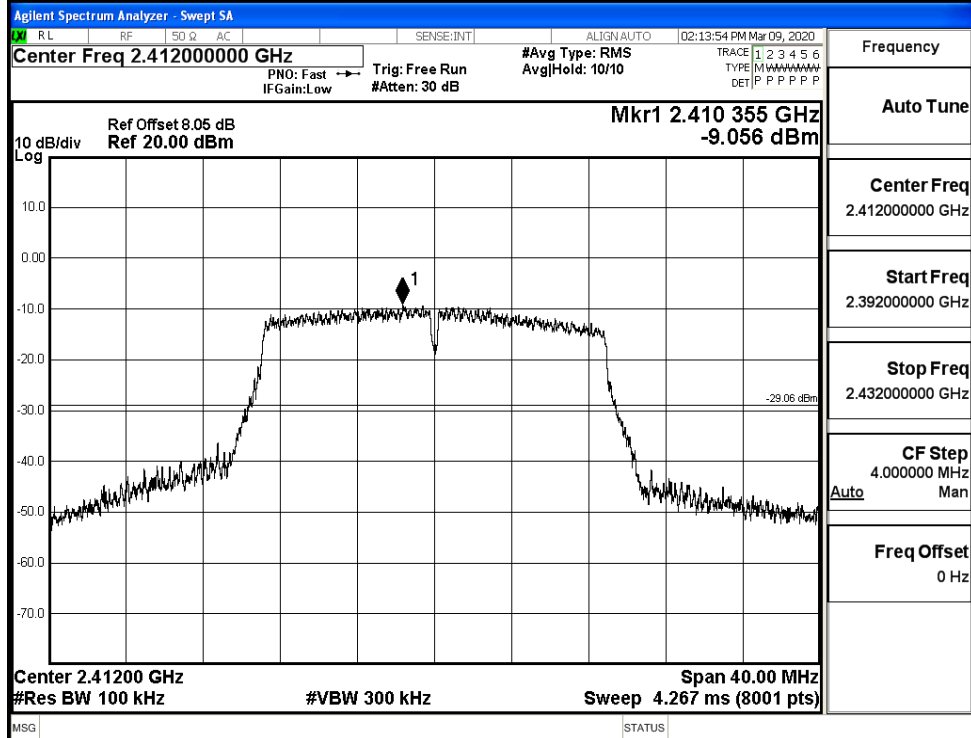


Puw/11G/HCH

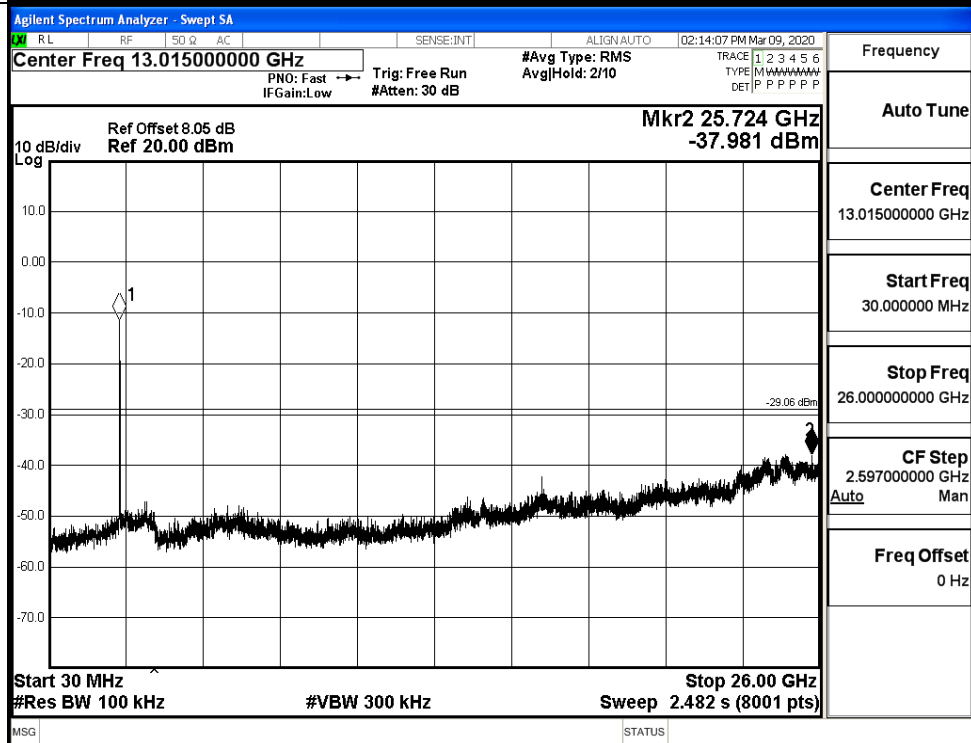


11N20SISO LCH Graphs

Pref/11N20SIS
O/LCH

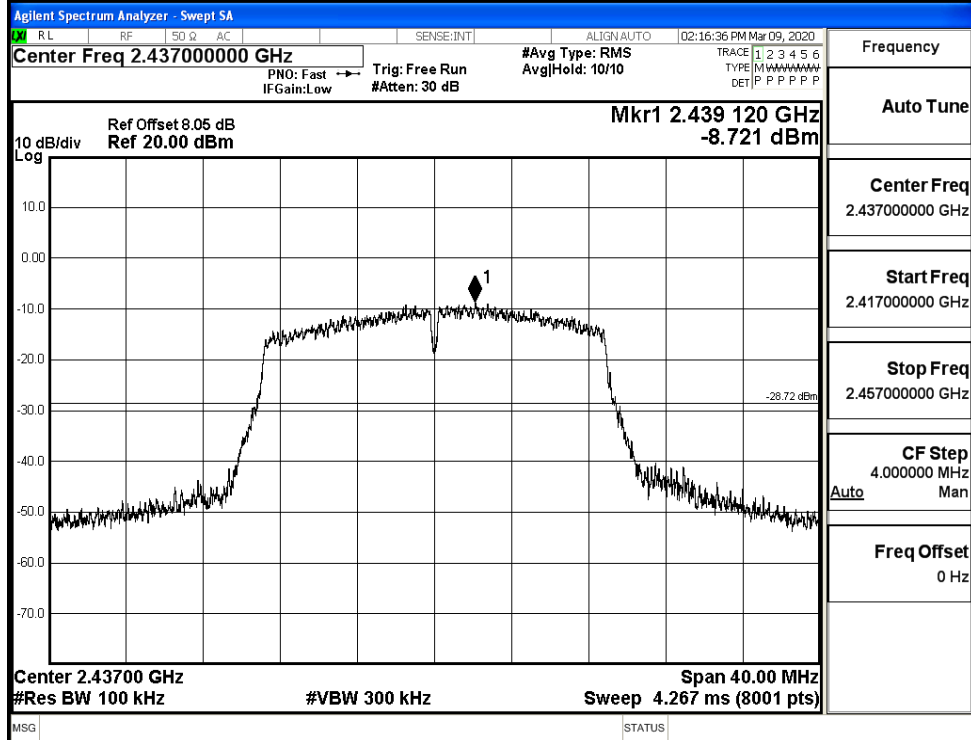


Puw/11N20
SISO/LCH

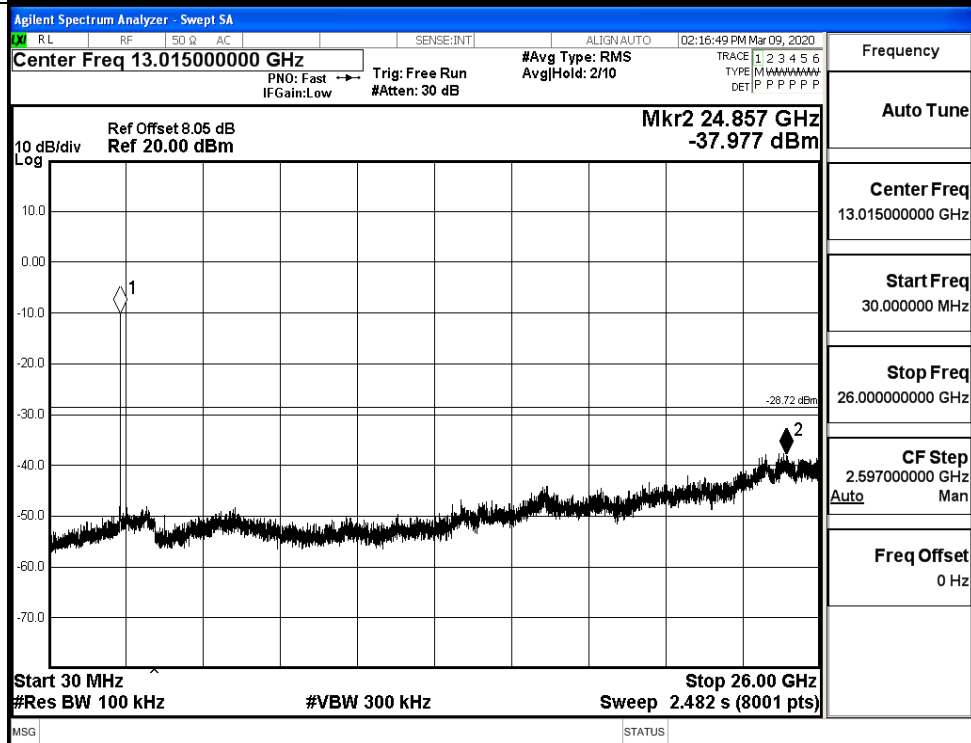


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

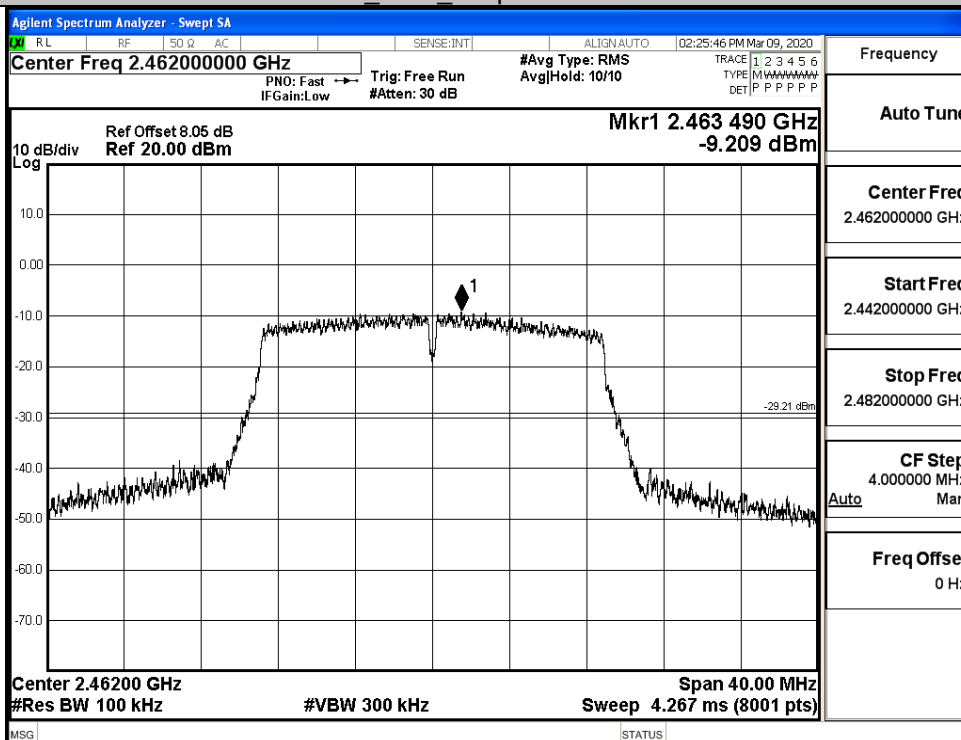


Puw/11N20
SISO/MCH

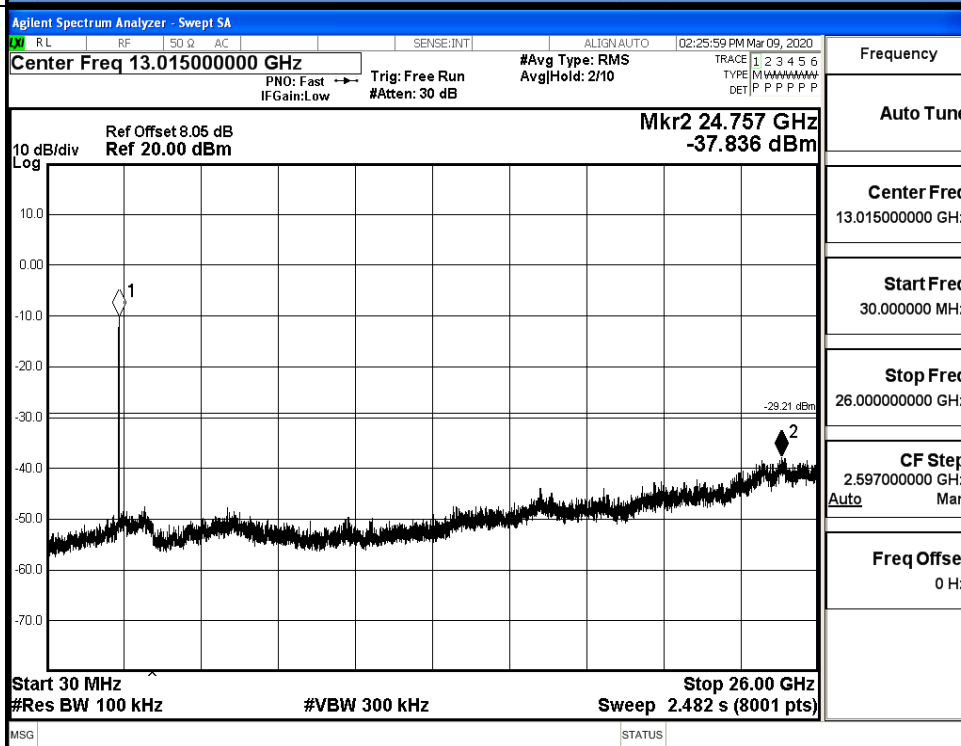


11N20SISO HCH Graphs

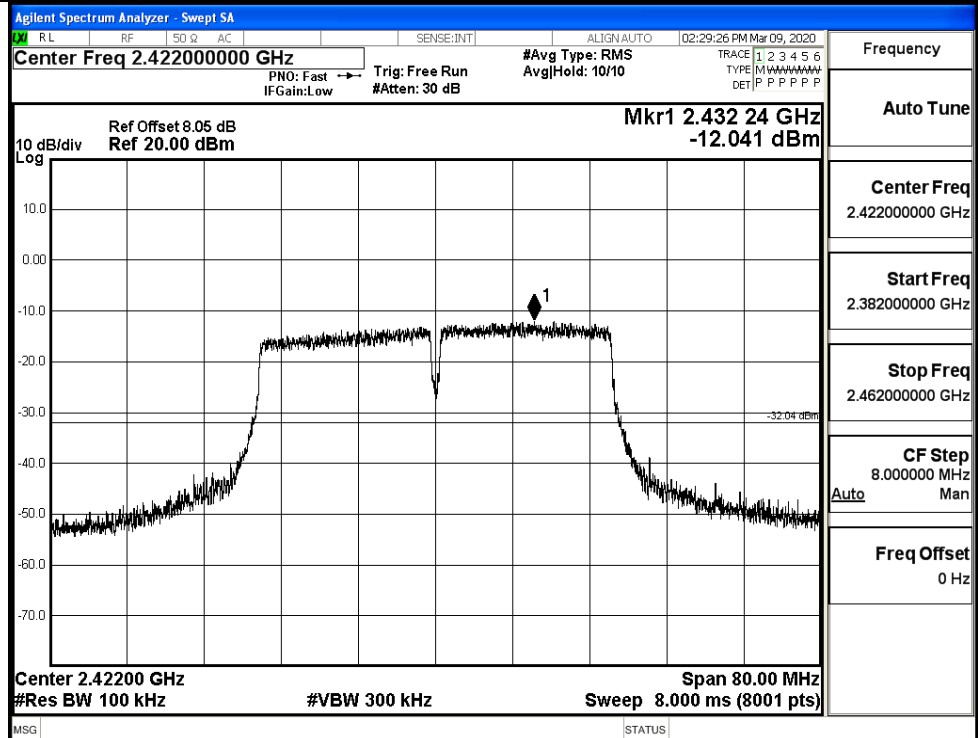
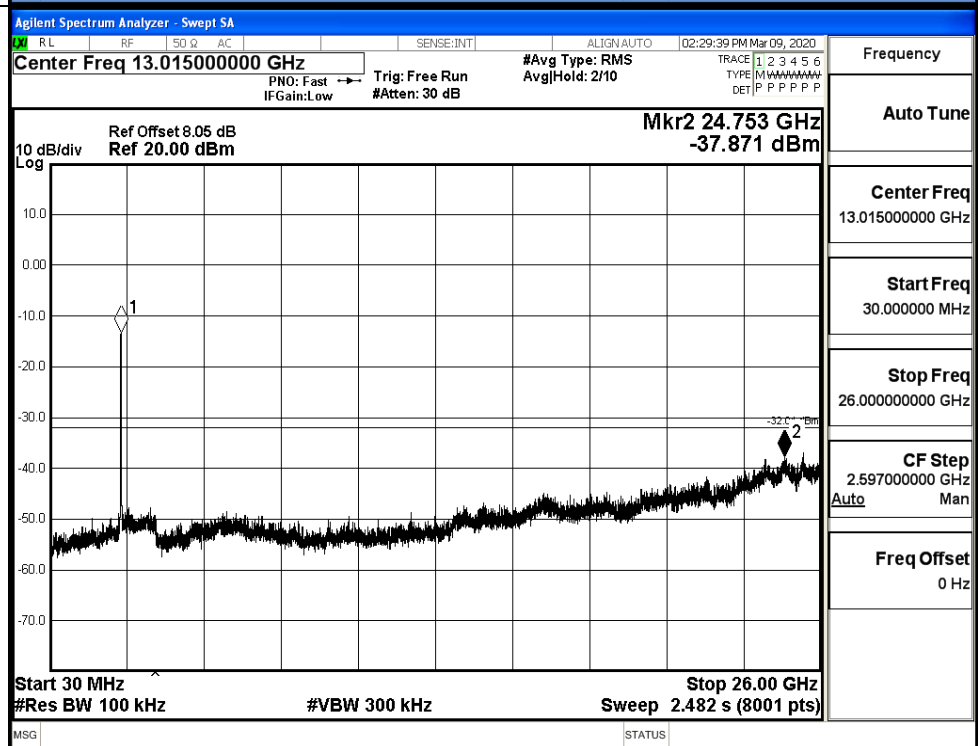
Pref/11N20
SISO/HCH



Puw/11N20
SISO/HCH

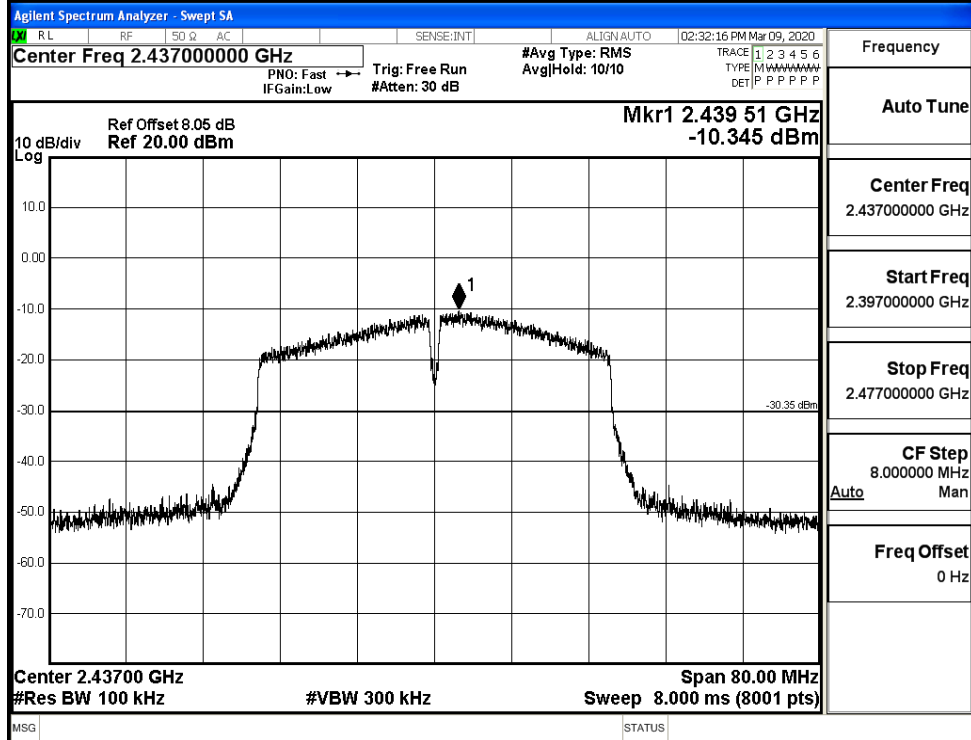


11N40SISO LCH Graphs

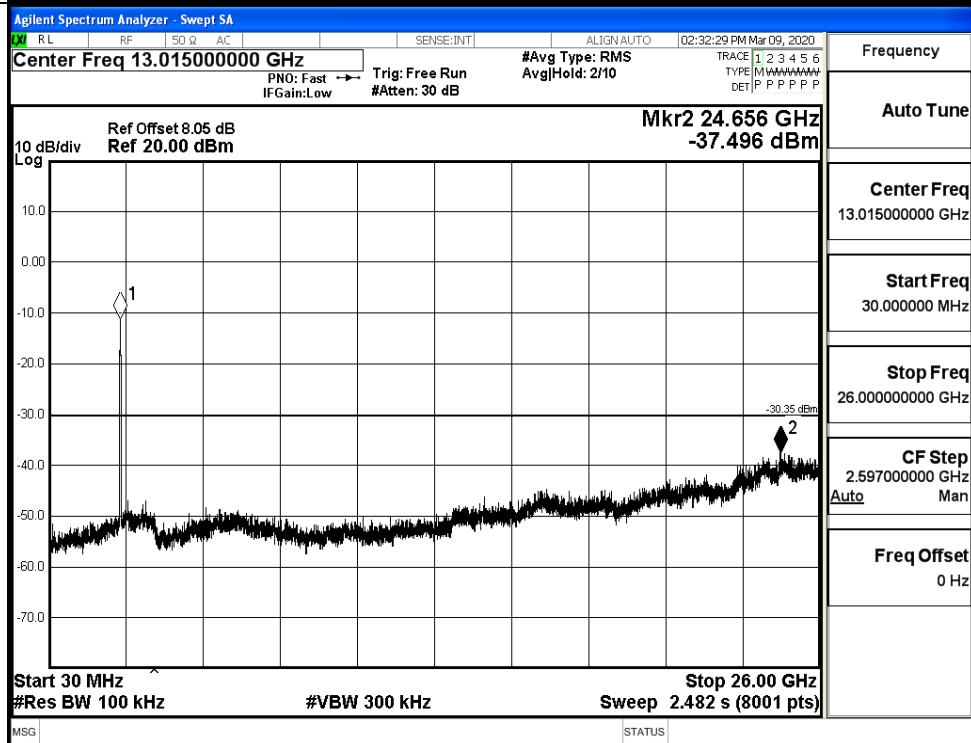
Pref/11N40
SISO/LCHPuw/11N40
SISO/LCH

11N40SISO_MCH_Graphs

Pref/11N40
SISO/MCH

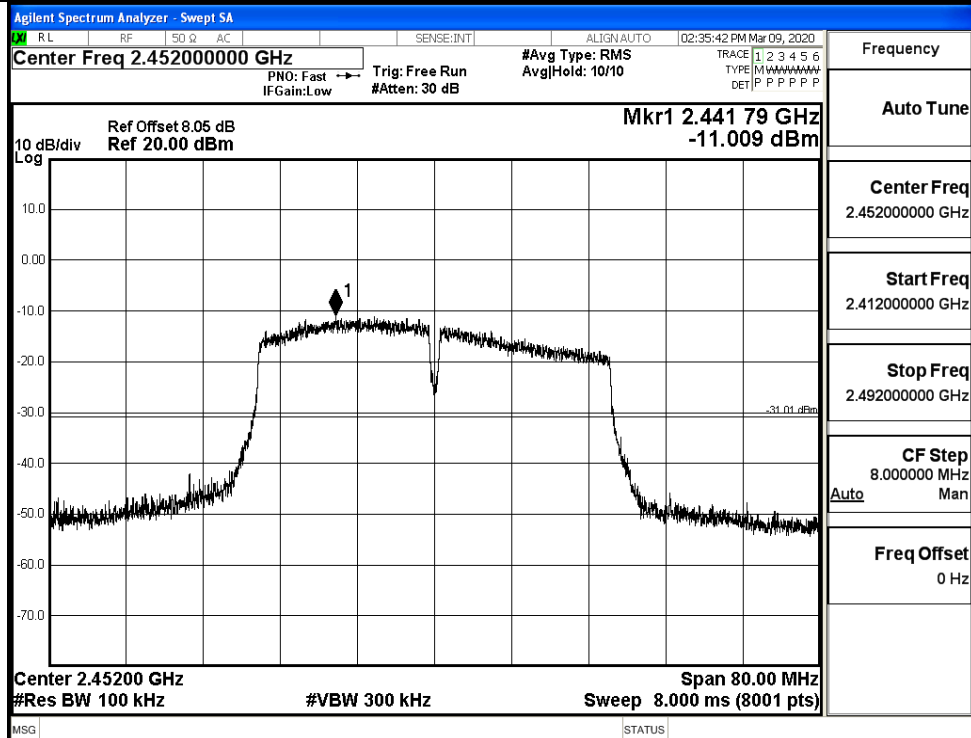


Puw/11N40
SISO/MCH

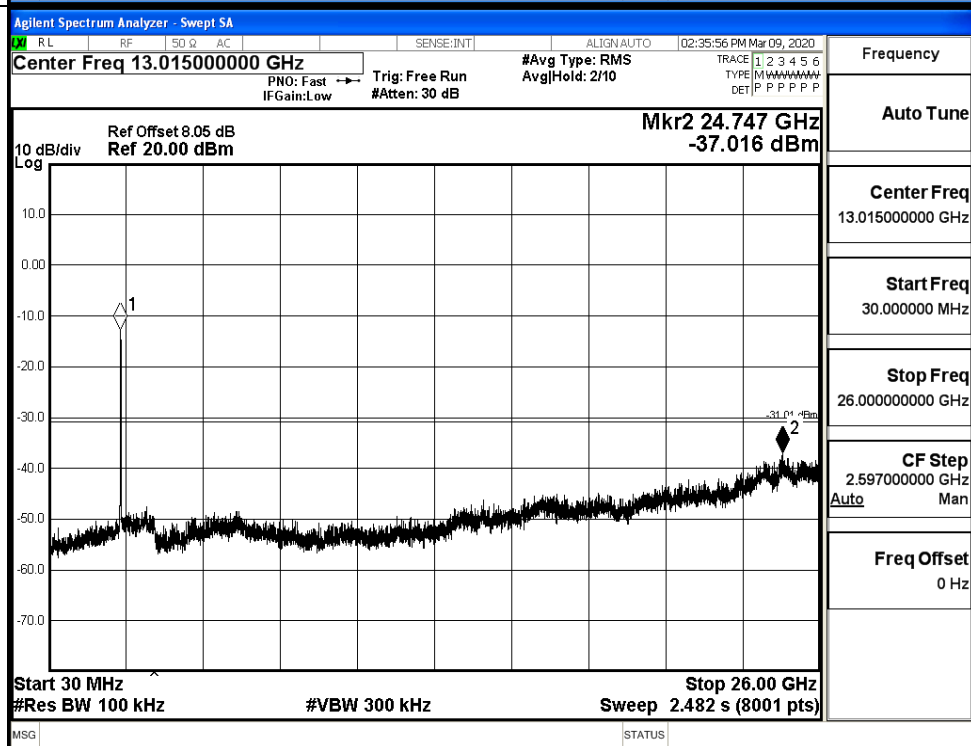


11N40SISO HCH Graphs

Pref/11N40
SISO/HCH



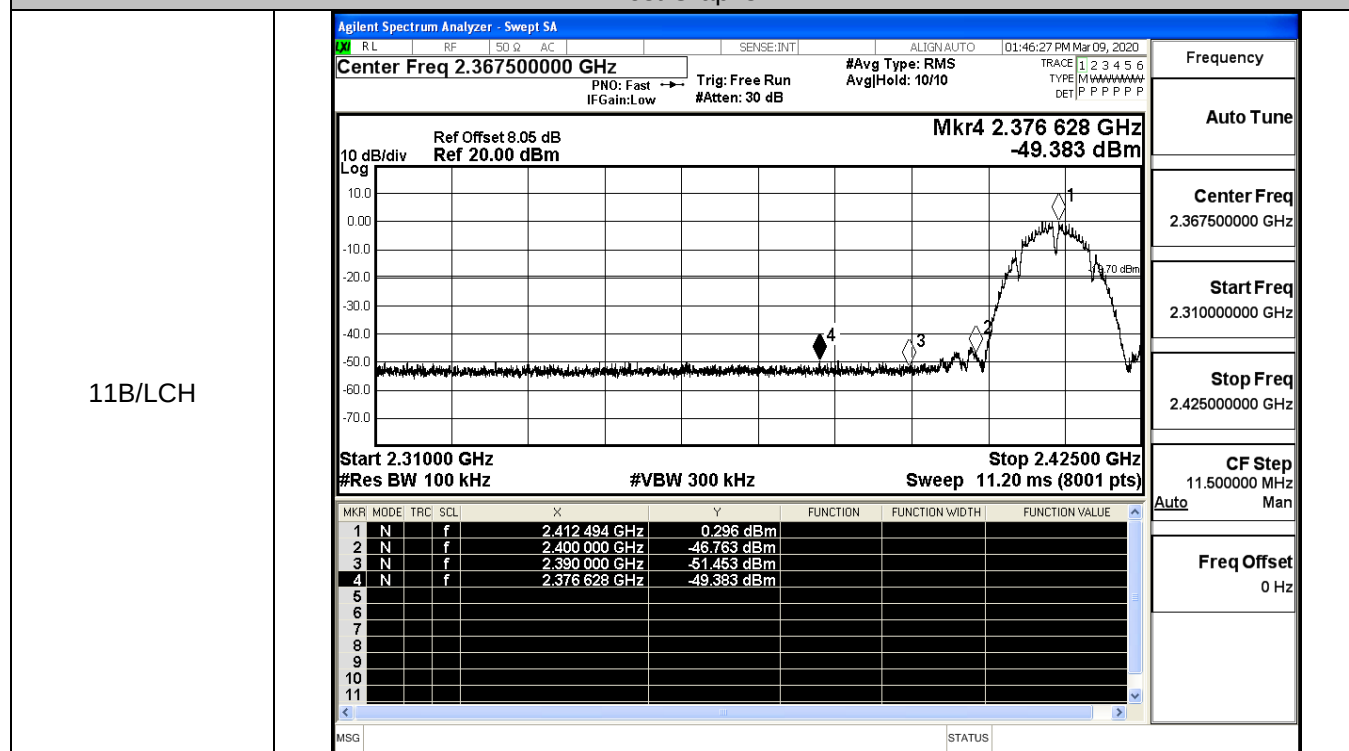
Puw/11N40
SISO/HCH



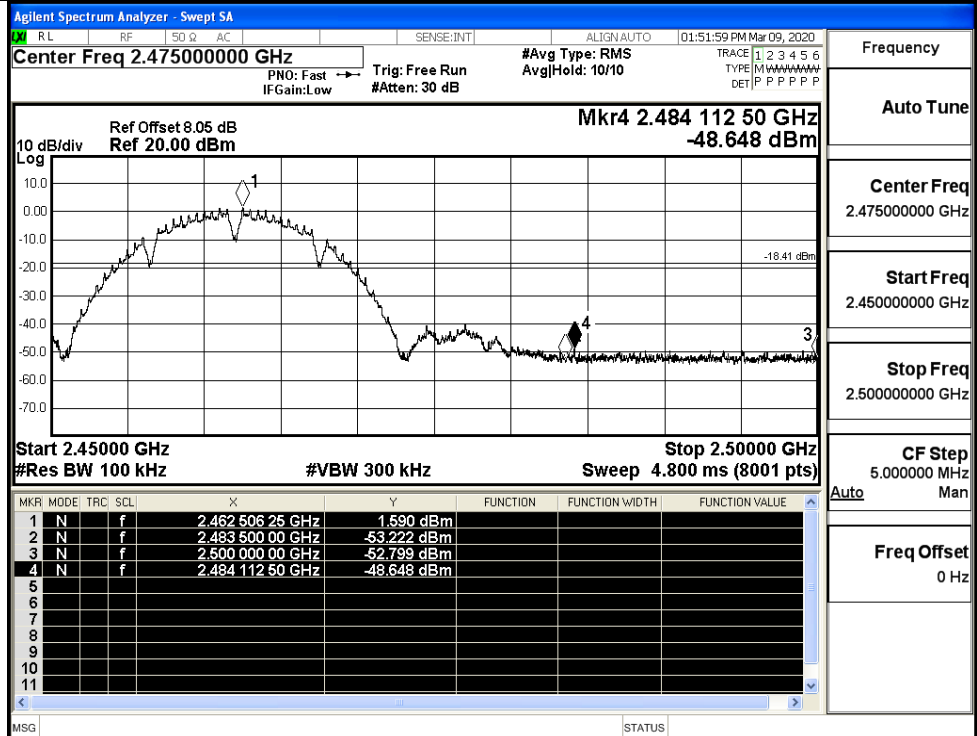
C.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	0.296	-49.383	-19.7	PASS
	HCH	1.590	-48.648	-18.41	PASS
11G	LCH	-8.930	-49.056	-28.93	PASS
	HCH	-8.840	-48.638	-28.84	PASS
11N20SISO	LCH	-9.243	-49.530	-29.24	PASS
	HCH	-9.343	-48.731	-29.34	PASS
11N40SISO	LCH	-11.759	-49.171	-31.76	PASS
	HCH	-10.787	-48.861	-30.79	PASS

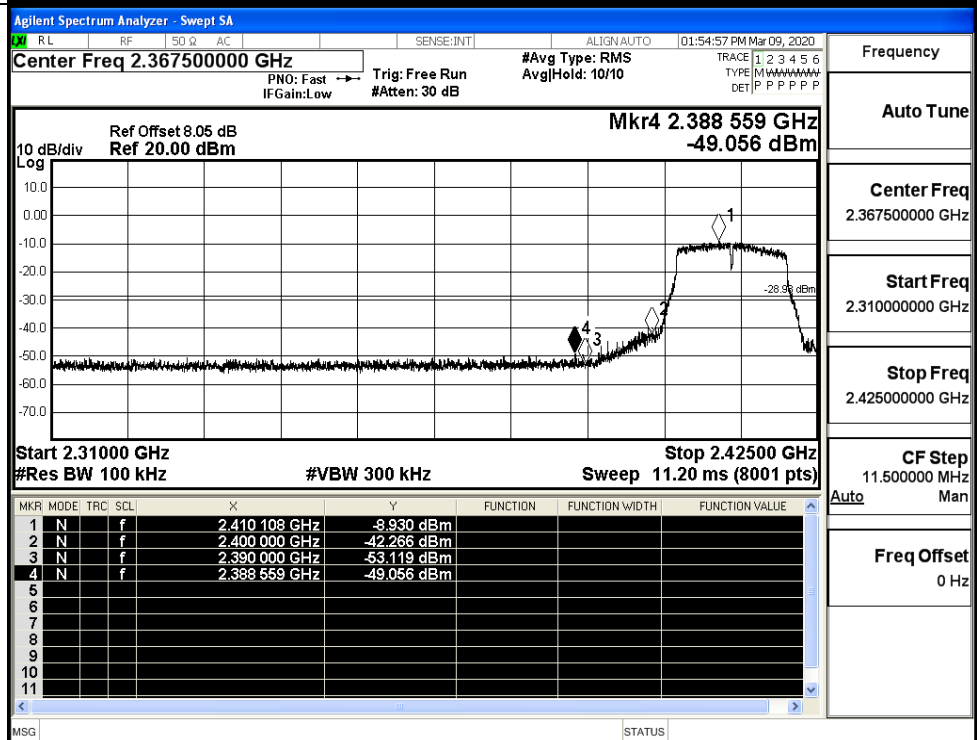
Test Graphs



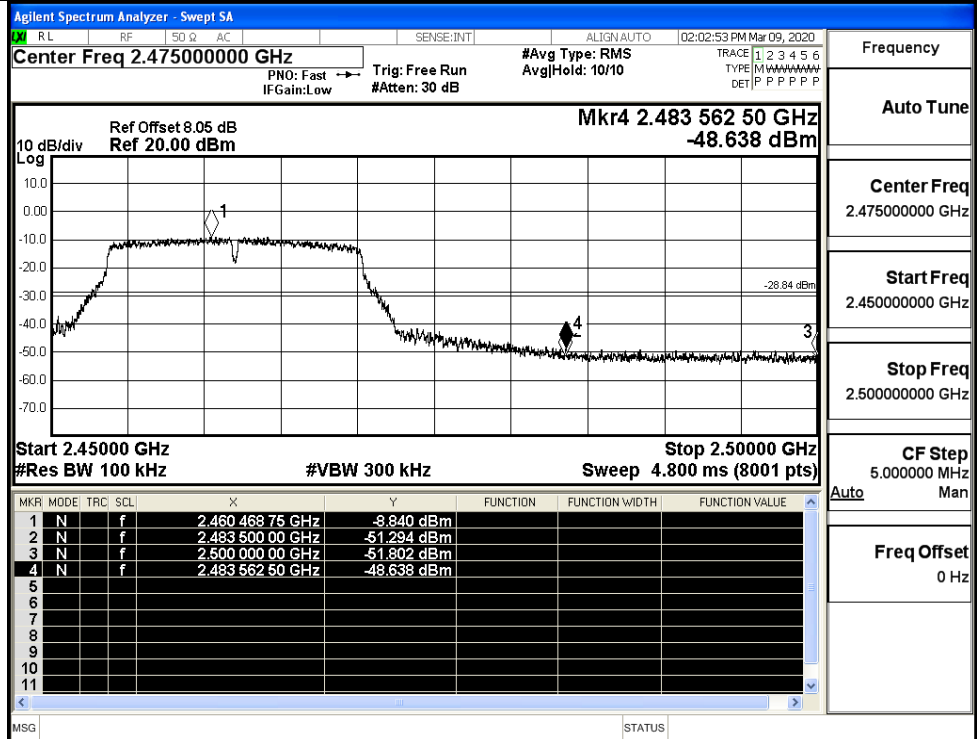
11B/HCH



11G/LCH



11G/HCH



Frequency

Auto Tune

Center Freq
2.475000000 GHz

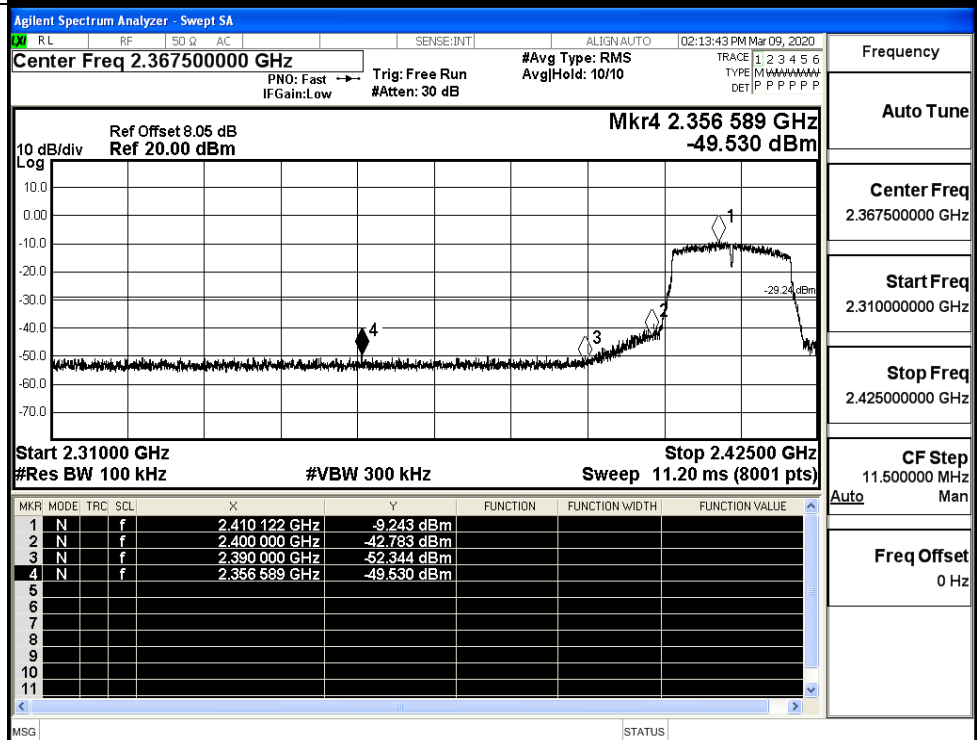
Start Freq
2.450000000 GHz

Stop Freq
2.500000000 GHz

CF Step
5.000000 MHz

Freq Offset
0 Hz

11N20SISO/LCH



Frequency

Auto Tune

Center Freq
2.367500000 GHz

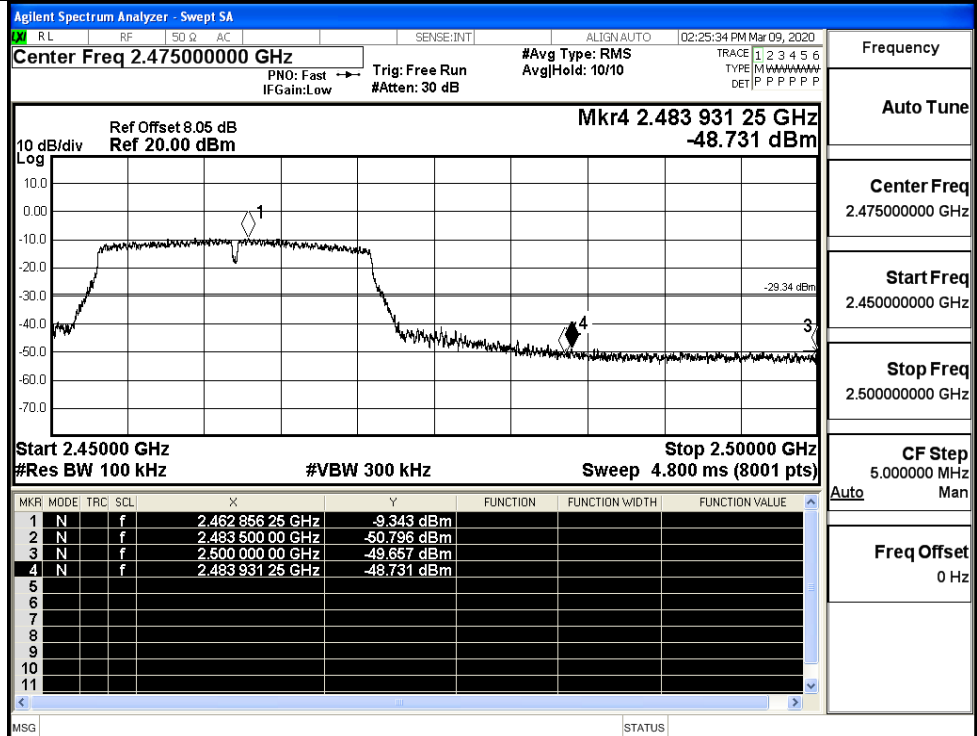
Start Freq
2.310000000 GHz

Stop Freq
2.425000000 GHz

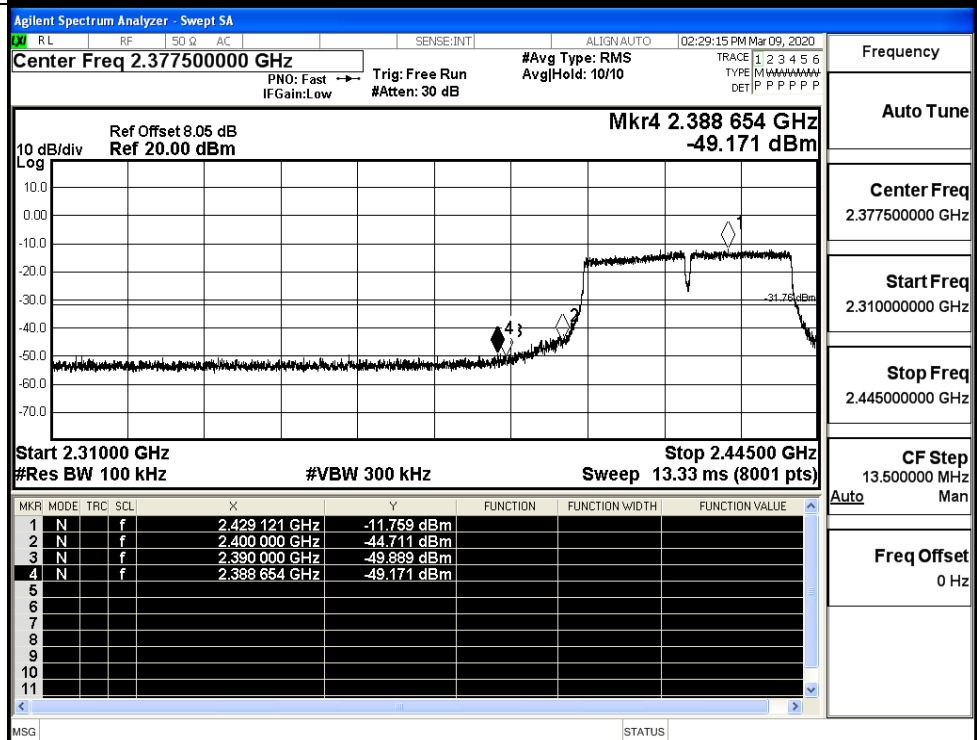
CF Step
11.500000 MHz

Freq Offset
0 Hz

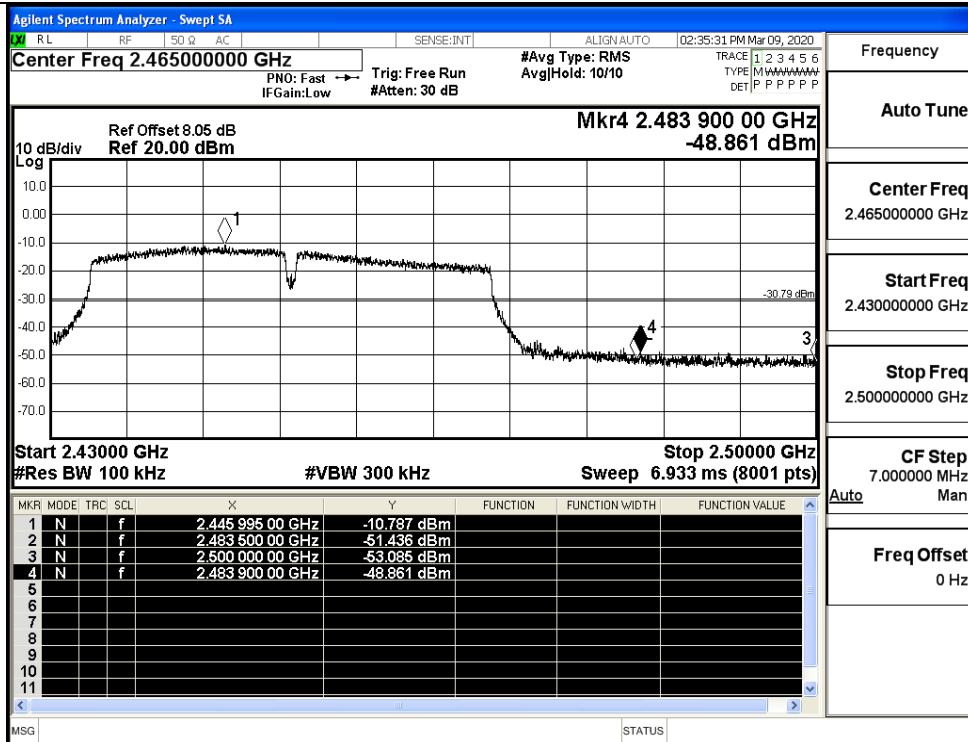
11N20SISO/HCH



11N40SISO/LCH



11N40SISO/HCH



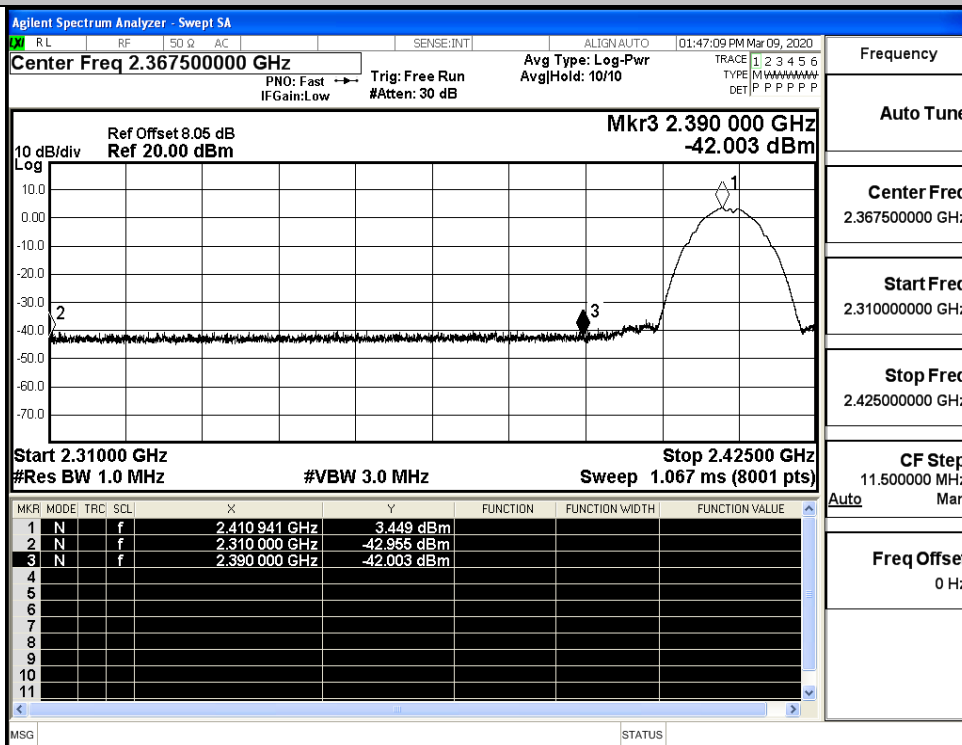
Frequency
Auto Tune
Center Freq 2.465000000 GHz
Start Freq 2.430000000 GHz
Stop Freq 2.500000000 GHz
CF Step 7.000000 MHz
Auto Man
Freq Offset 0 Hz

C.7 Restrict-band band-edge measurements

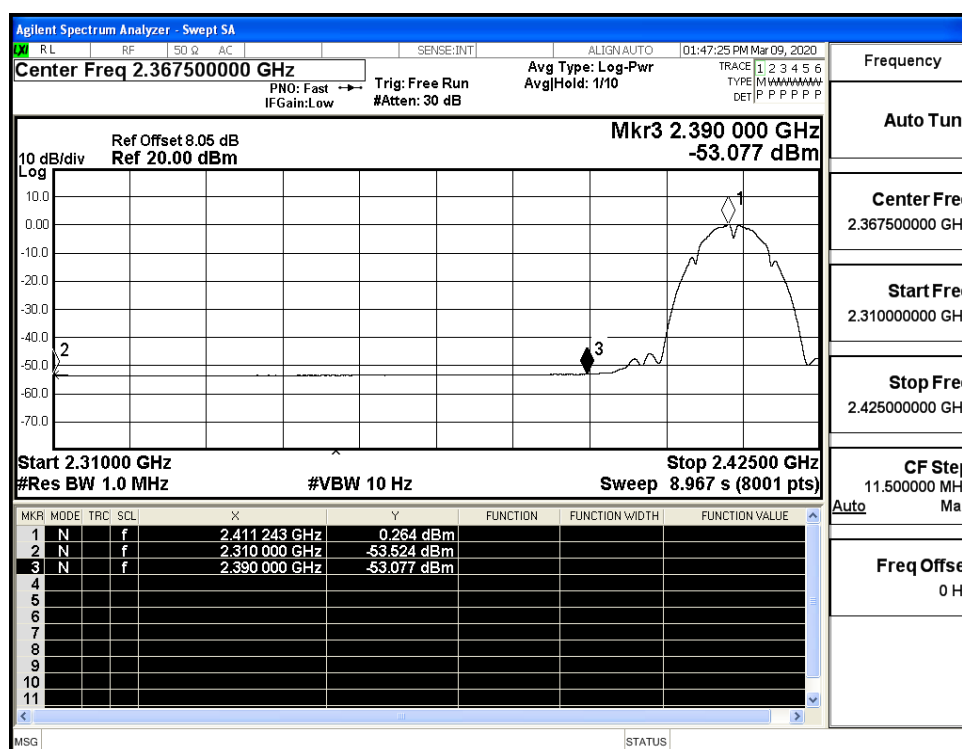
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-42.96	2.0	0	52.30	PEAK	74	PASS
	2412	Ant1	2310.0	-53.52	2.0	0	41.73	AV	54	PASS
	2412	Ant1	2390.0	-42.00	2.0	0	53.25	PEAK	74	PASS
	2412	Ant1	2390.0	-53.08	2.0	0	42.18	AV	54	PASS
	2462	Ant1	2483.5	-42.12	2.0	0	53.14	PEAK	74	PASS
	2462	Ant1	2483.5	-52.12	2.0	0	43.14	AV	54	PASS
	2462	Ant1	2500.0	-40.54	2.0	0	54.71	PEAK	74	PASS
	2462	Ant1	2500.0	-52.51	2.0	0	42.75	AV	54	PASS
11G	2412	Ant1	2310.0	-42.94	2.0	0	52.32	PEAK	74	PASS
	2412	Ant1	2310.0	-53.50	2.0	0	41.76	AV	54	PASS
	2412	Ant1	2390.0	-40.77	2.0	0	54.49	PEAK	74	PASS
	2412	Ant1	2390.0	-52.78	2.0	0	42.48	AV	54	PASS
	2462	Ant1	2483.5	-40.05	2.0	0	55.21	PEAK	74	PASS
	2462	Ant1	2483.5	-51.38	2.0	0	43.88	AV	54	PASS
	2462	Ant1	2500.0	-41.45	2.0	0	53.81	PEAK	74	PASS
	2462	Ant1	2500.0	-52.53	2.0	0	42.73	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-43.47	2.0	0	51.79	PEAK	74	PASS
	2412	Ant1	2310.0	-53.48	2.0	0	41.78	AV	54	PASS
	2412	Ant1	2390.0	-41.21	2.0	0	54.04	PEAK	74	PASS
	2412	Ant1	2390.0	-52.55	2.0	0	42.71	AV	54	PASS
	2462	Ant1	2483.5	-39.30	2.0	0	55.95	PEAK	74	PASS
	2462	Ant1	2483.5	-51.18	2.0	0	44.08	AV	54	PASS
	2462	Ant1	2500.0	-41.35	2.0	0	53.91	PEAK	74	PASS
	2462	Ant1	2500.0	-52.53	2.0	0	42.72	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-43.09	2.0	0	52.17	PEAK	74	PASS
	2422	Ant1	2310.0	-53.48	2.0	0	41.78	AV	54	PASS

	2422	Ant1	2390.0	-40.45	2.0	0	54.81	PEAK	74	PASS
	2422	Ant1	2390.0	-51.70	2.0	0	43.56	AV	54	PASS
	2452	Ant1	2483.5	-40.55	2.0	0	54.71	PEAK	74	PASS
	2452	Ant1	2483.5	-51.49	2.0	0	43.77	AV	54	PASS
	2452	Ant1	2500.0	-42.69	2.0	0	52.56	PEAK	74	PASS
	2452	Ant1	2500.0	-52.50	2.0	0	42.76	AV	54	PASS

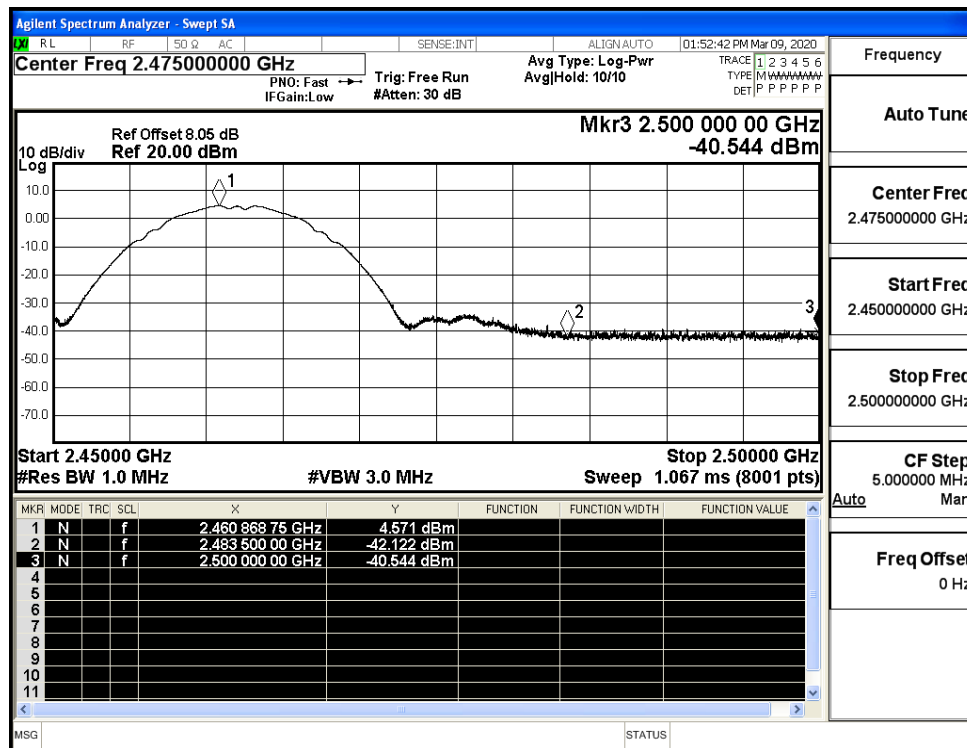
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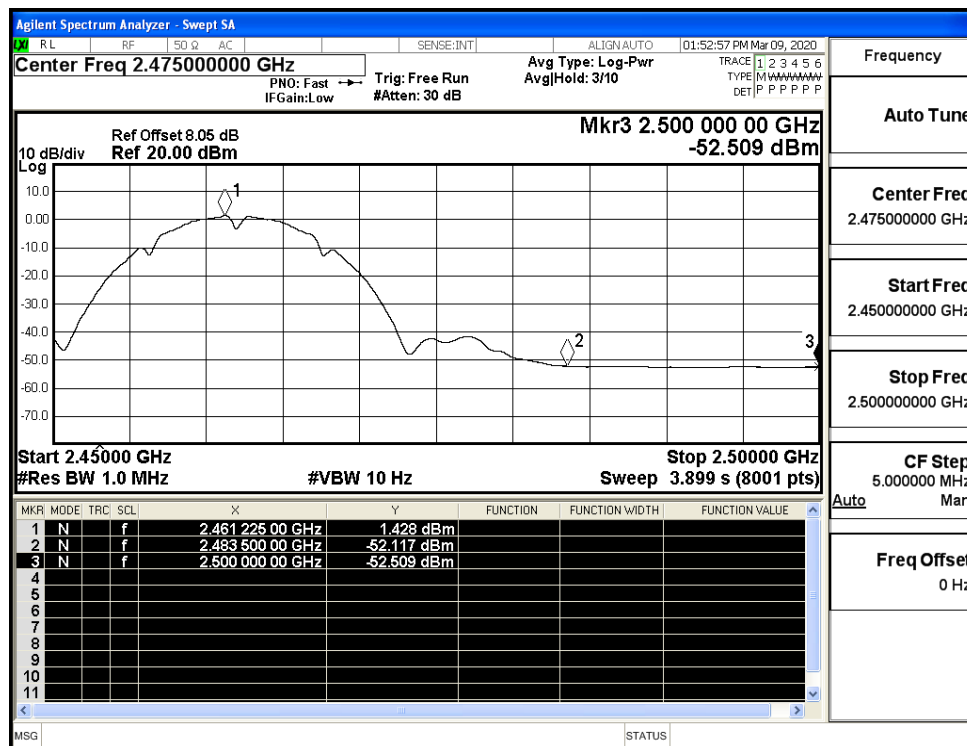
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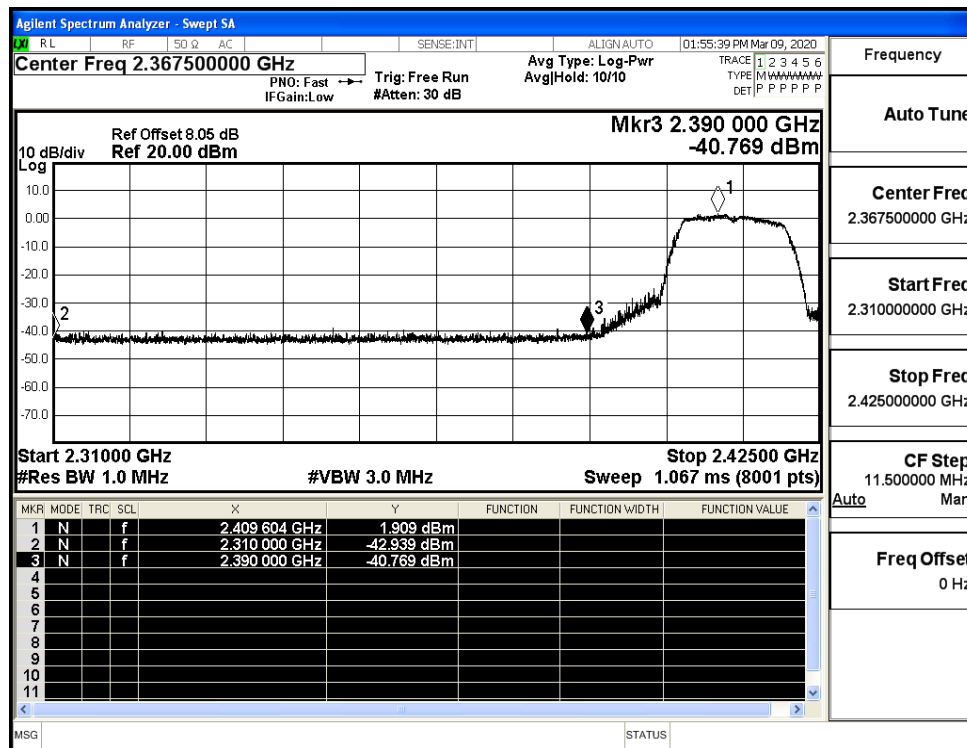
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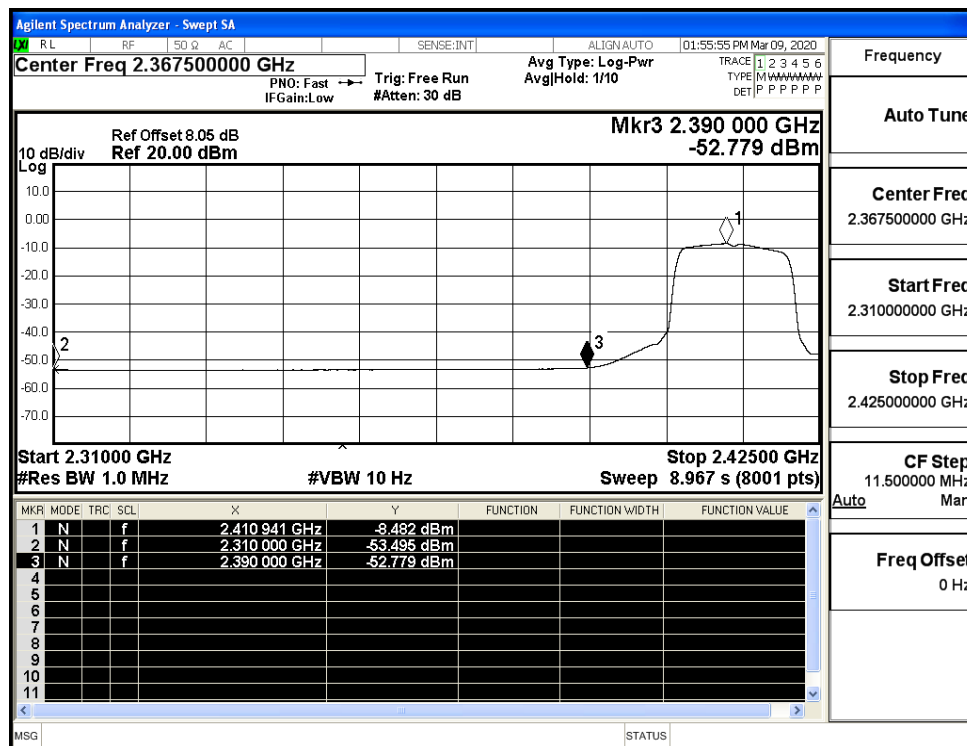
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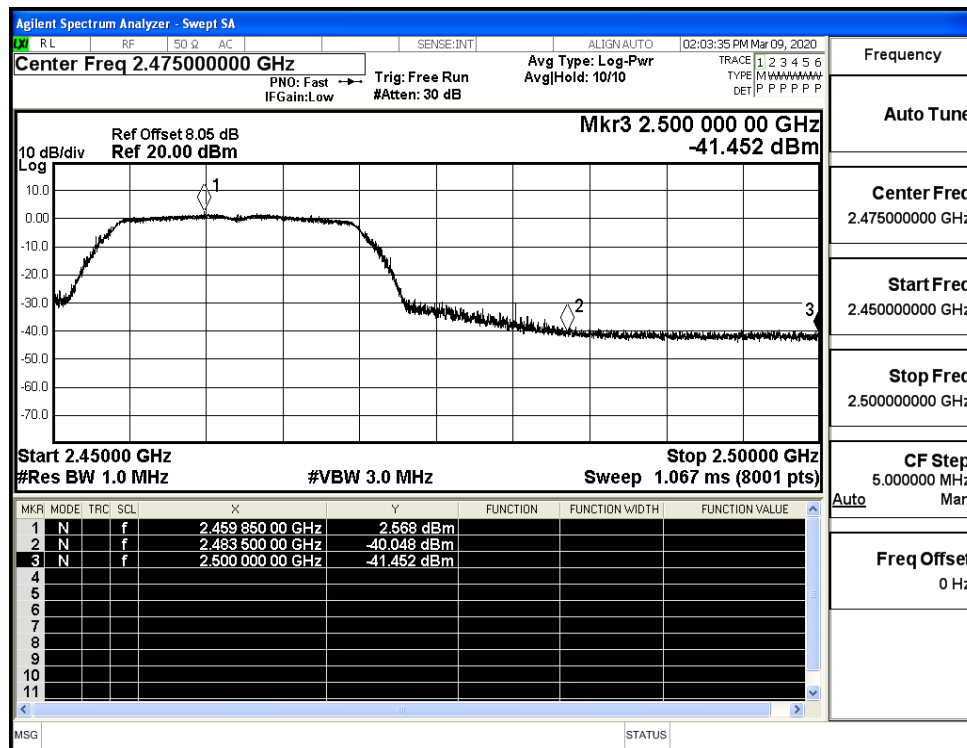
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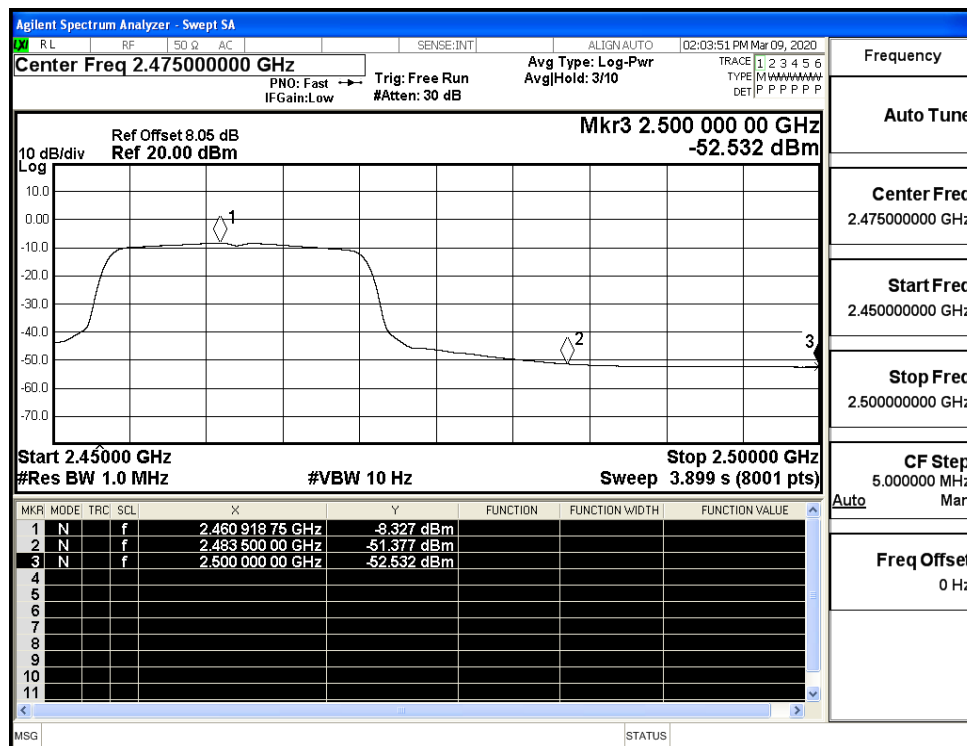
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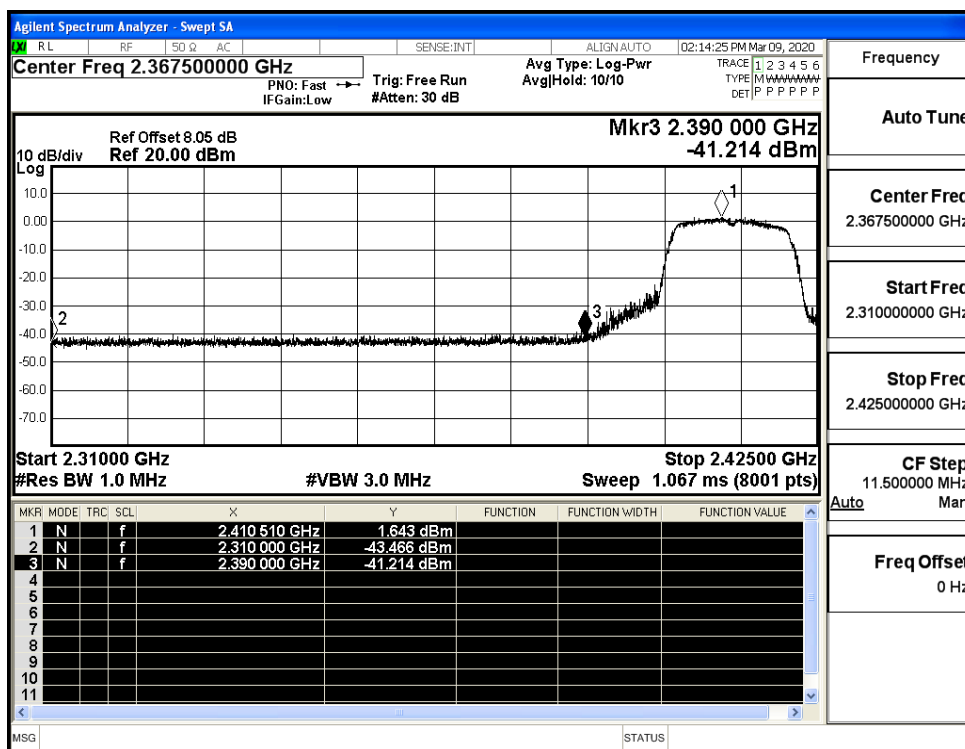
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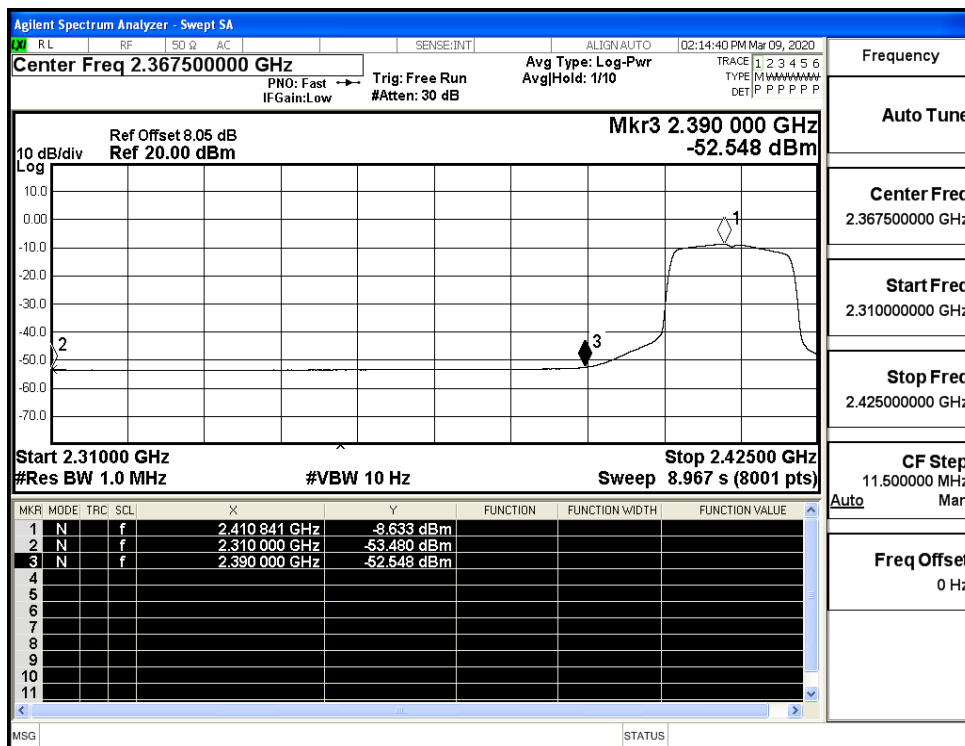
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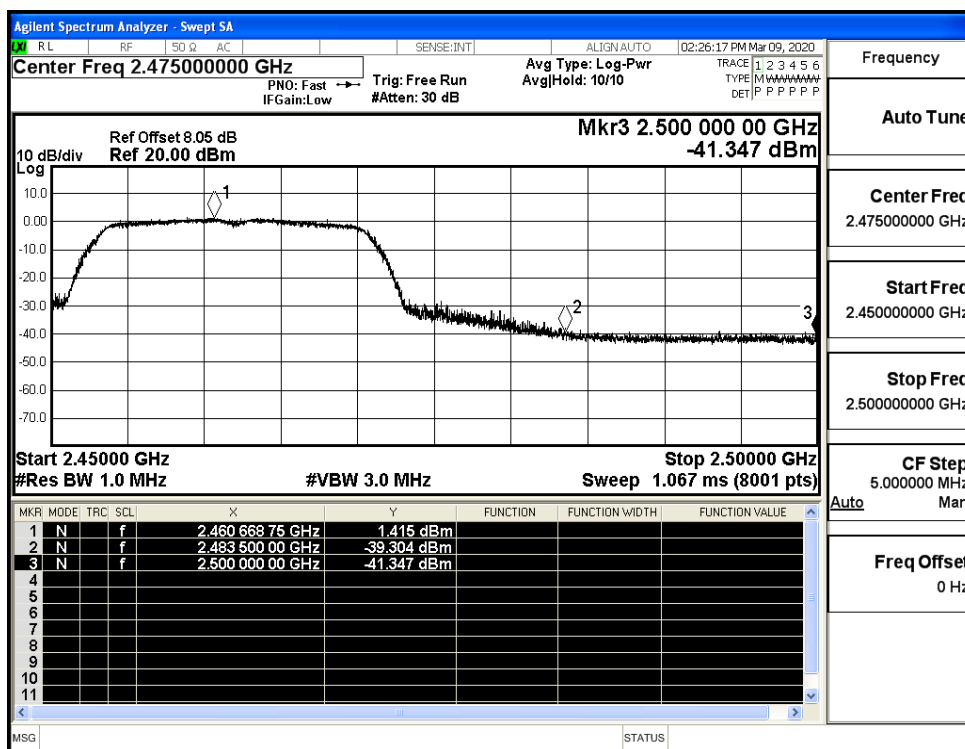
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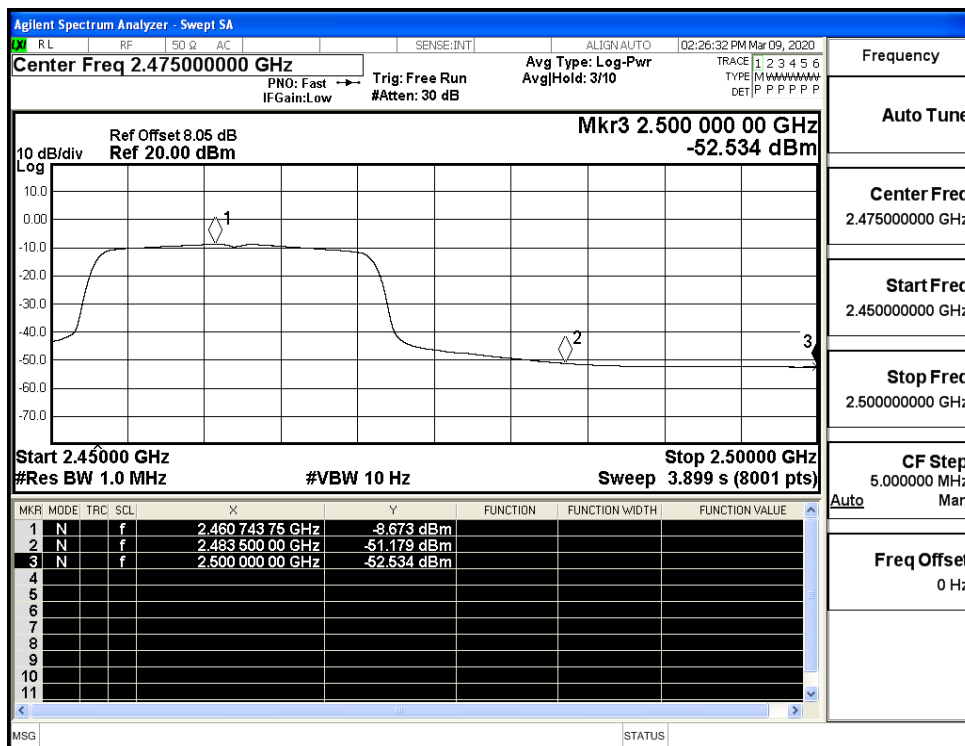
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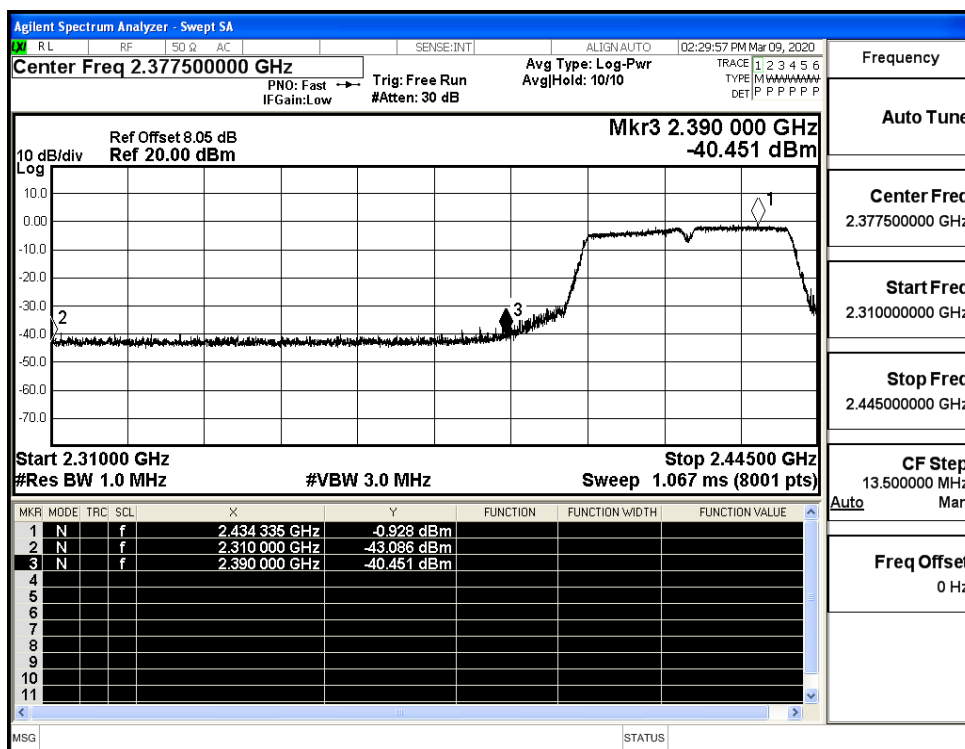
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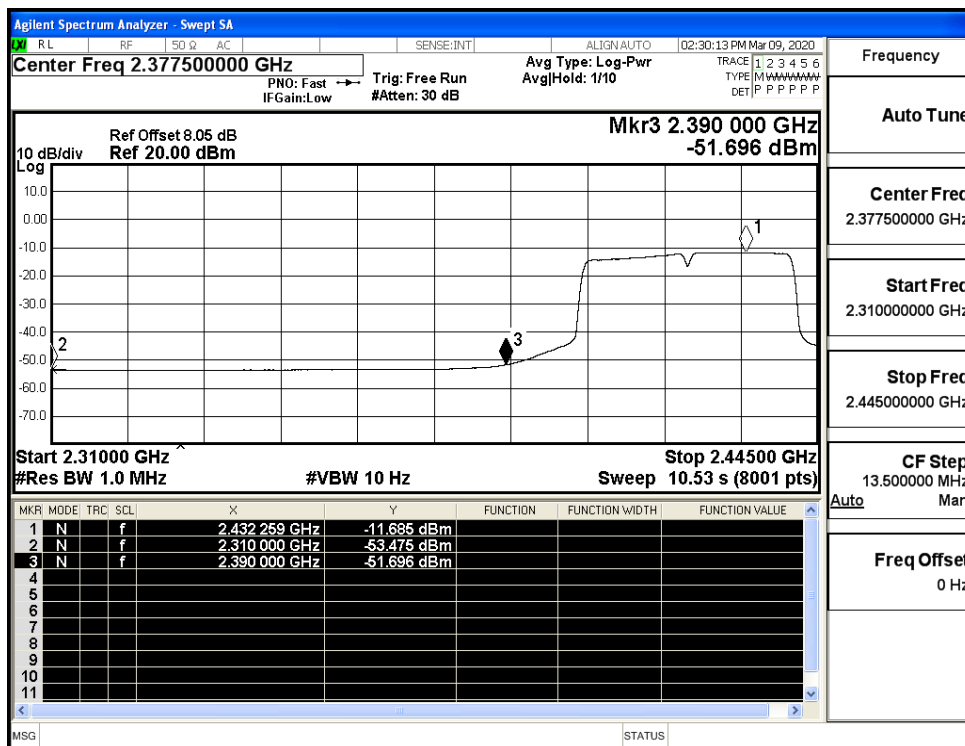
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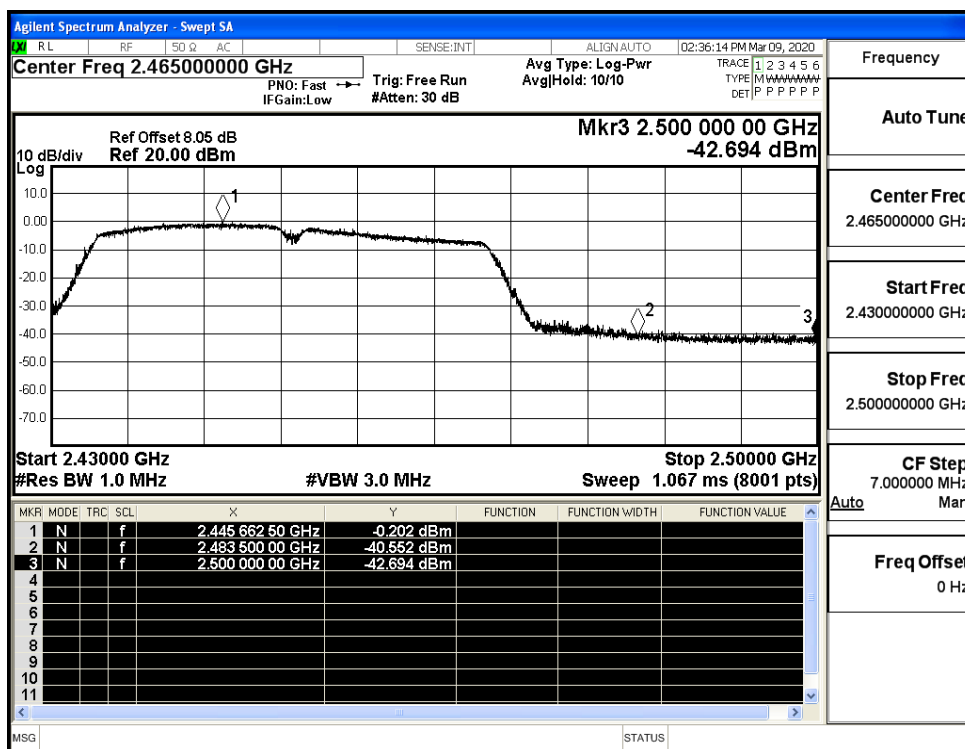
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Restrict-band band-edge measurements_11N40SISO_2422_Ant1_AV



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_PEAK



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_AV

