

Appendix A
RF Test Data for 2.4G WIFI (Conducted Measurement)
Product Name: WIFI CLOUD DIGITAL PHOTO FRAME
Trade Mark: SYLVANIA
Test Model: SDPF1095-C

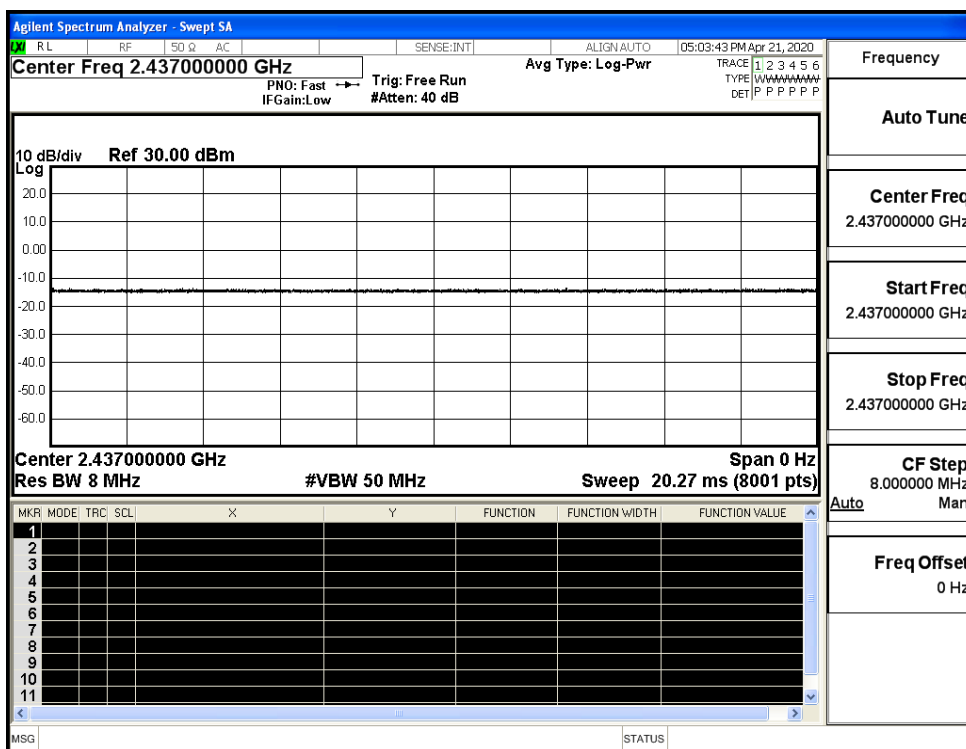
Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	53.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Qu Xin
Supervised by:	Li Huan

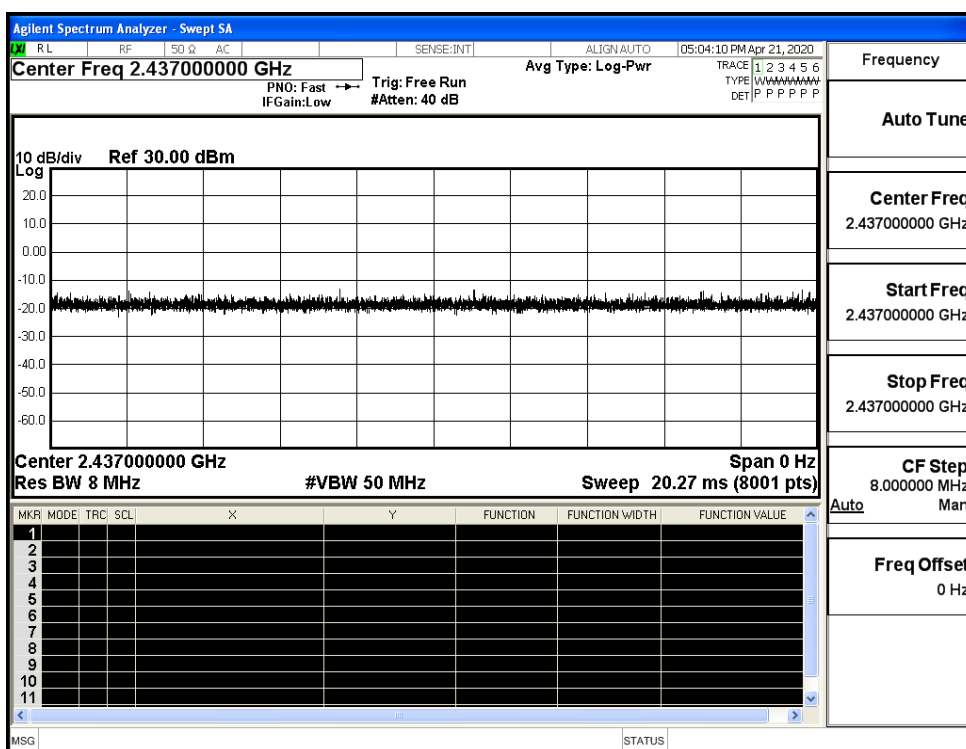
A.1 Duty Cycle

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

Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1



Agilent Spectrum Analyzer - Swept SA

☒ R L RF SQ AC SENSE:INT ALIGN:AUTO 05:04:35 PM Apr 21, 2020
Center Freq 2.437000000 GHz Avg Type: Log-Pwr TRACE 1: 2 3 4 5 6
 PNO: Fast Trig: Free Run TYPE: WWWWWWWW
 IF Gain: Low #Atten: 40 dB DET: P P P P P

10 dB/div Ref 30.00 dBm

Log

Center 2.437000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 50 MHz Sweep 20.27 ms (8001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

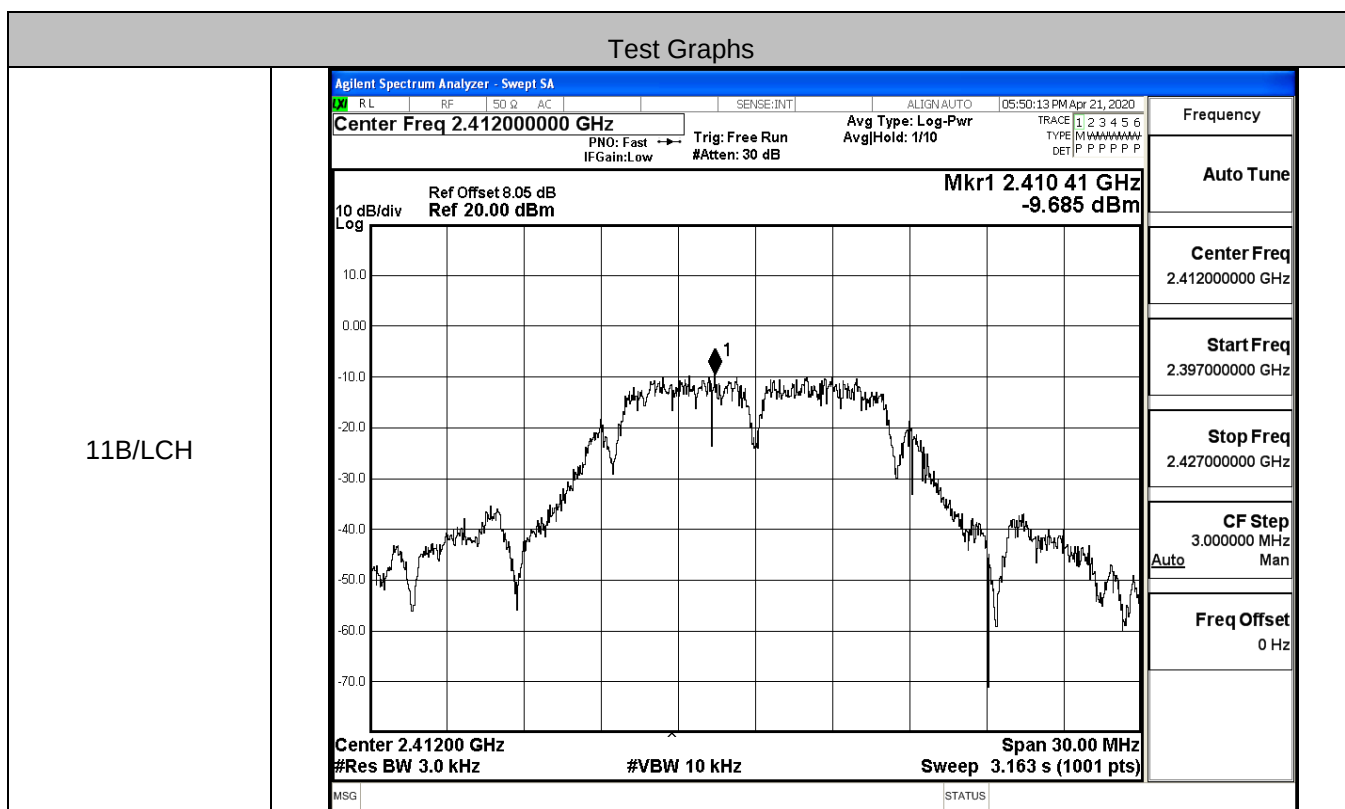
Frequency
 Auto Tune
 Center Freq
 2.437000000 GHz
 Start Freq
 2.437000000 GHz
 Stop Freq
 2.437000000 GHz
 CF Step
 8.000000 MHz
 Auto Man
 Freq Offset
 0 Hz

A.2 Maximum Conducted Output Power

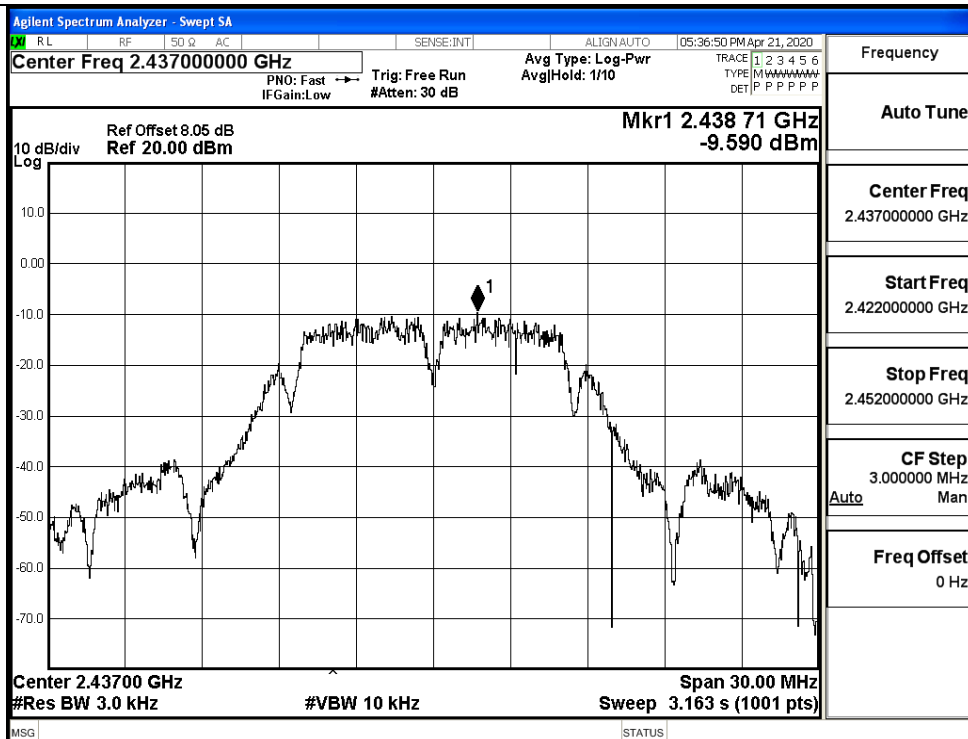
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	9.73	30	PASS
	MCH	10.56	30	PASS
	HCH	10.82	30	PASS
11G	LCH	11.53	30	PASS
	MCH	11.19	30	PASS
	HCH	11.47	30	PASS
11N20SISO	LCH	11.86	30	PASS
	MCH	11.53	30	PASS
	HCH	11.66	30	PASS

A.3 Maximum Power Spectral Density

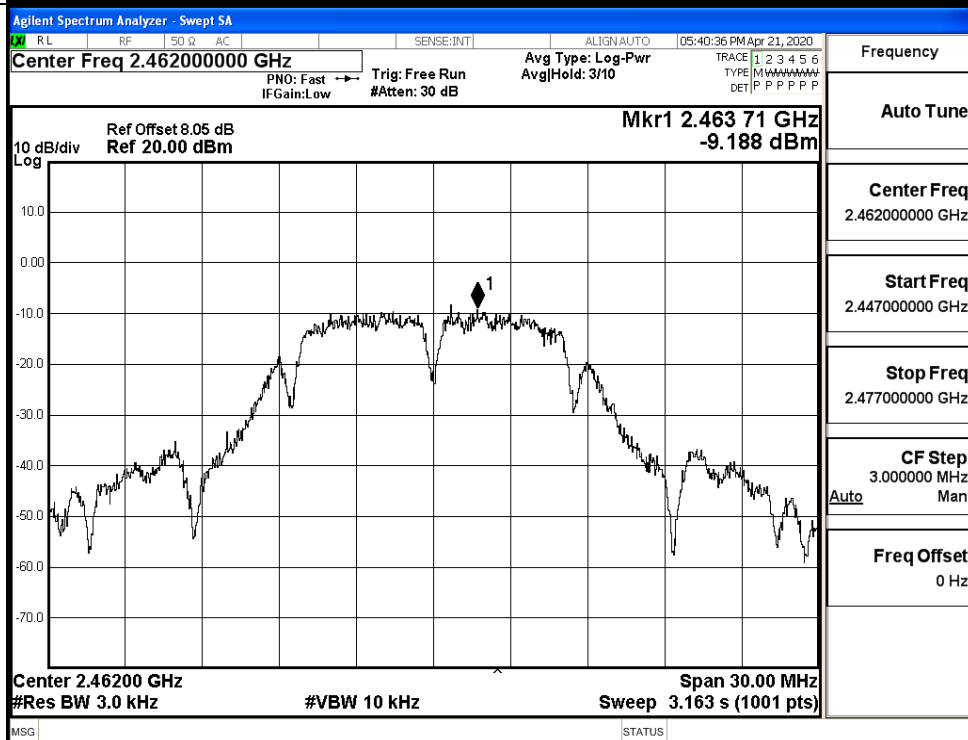
Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-9.685	8	PASS
	MCH	-9.590	8	PASS
	HCH	-9.188	8	PASS
11G	LCH	-11.177	8	PASS
	MCH	-11.774	8	PASS
	HCH	-11.484	8	PASS
11N20SISO	LCH	-9.883	8	PASS
	MCH	-10.126	8	PASS
	HCH	-11.236	8	PASS



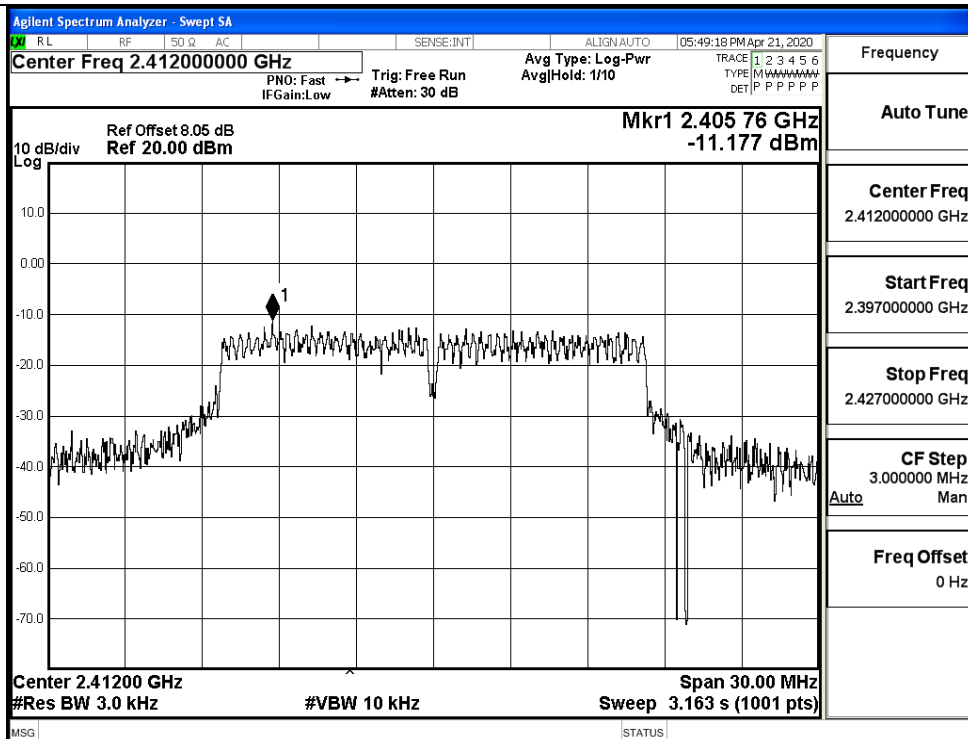
11B/MCH



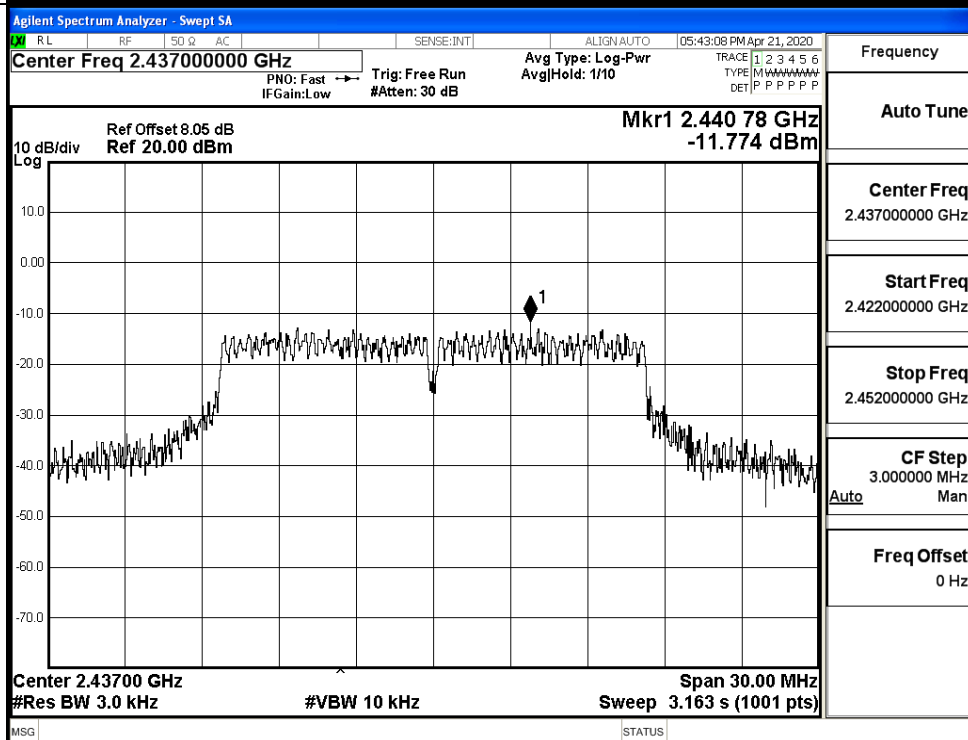
11B/HCH



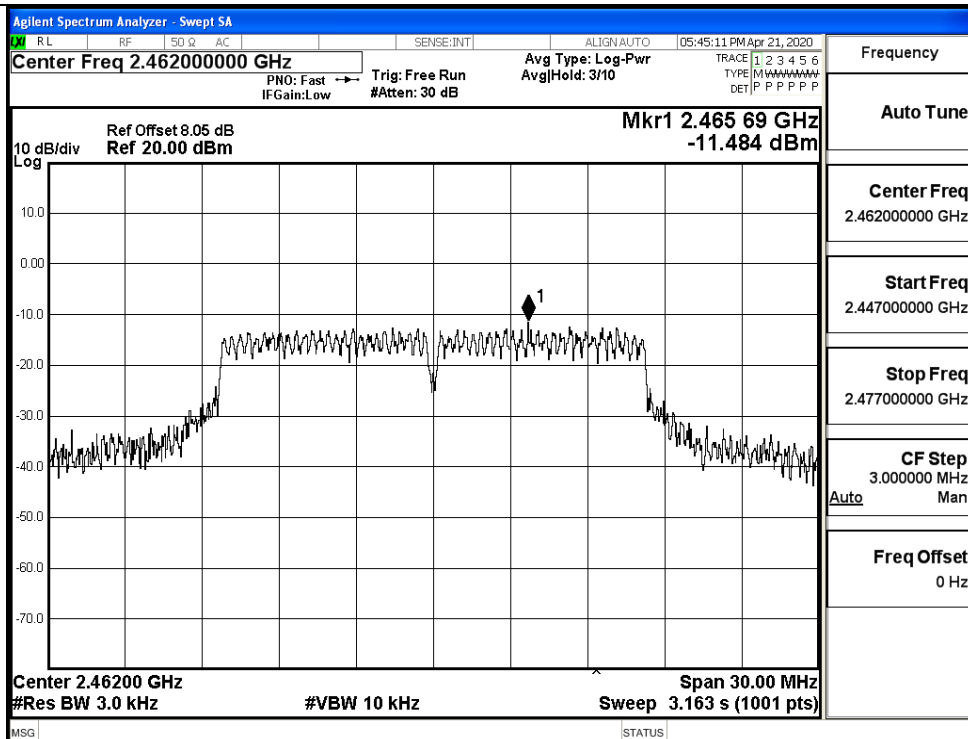
11G/LCH



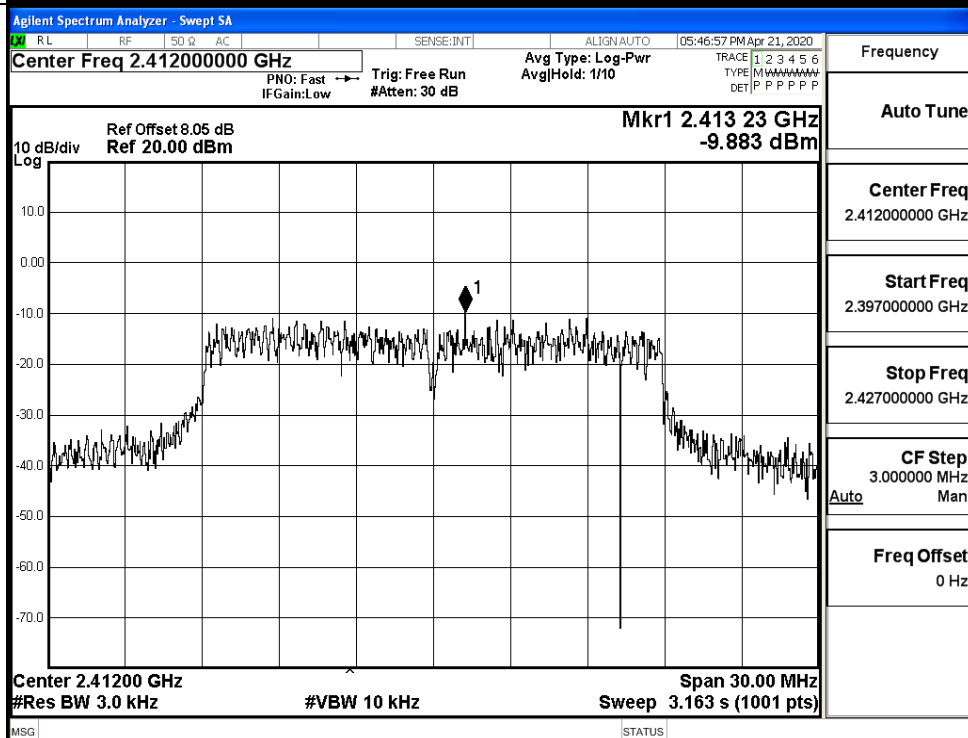
11G/MCH

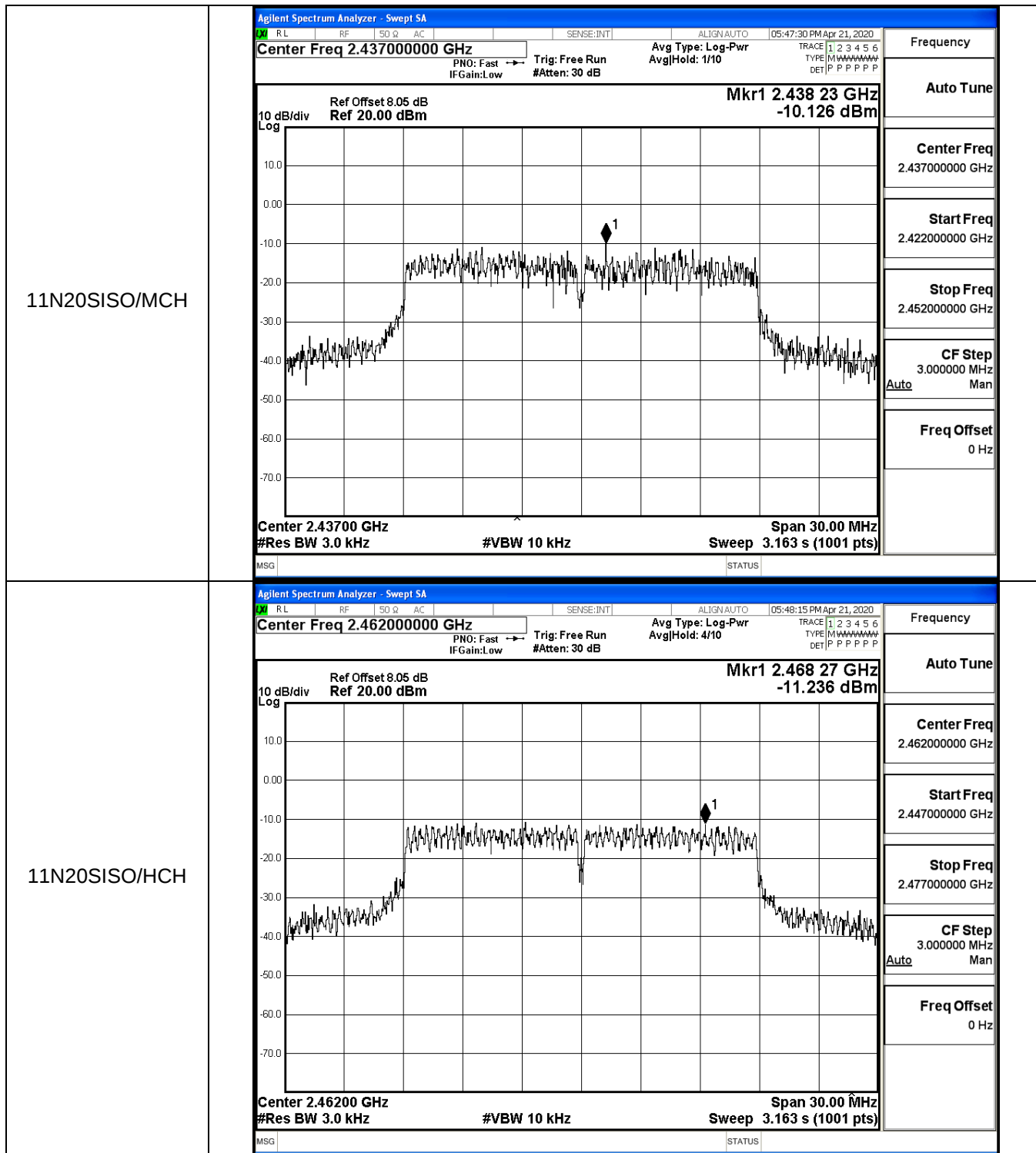


11G/HCH



11N20SISO/LCH

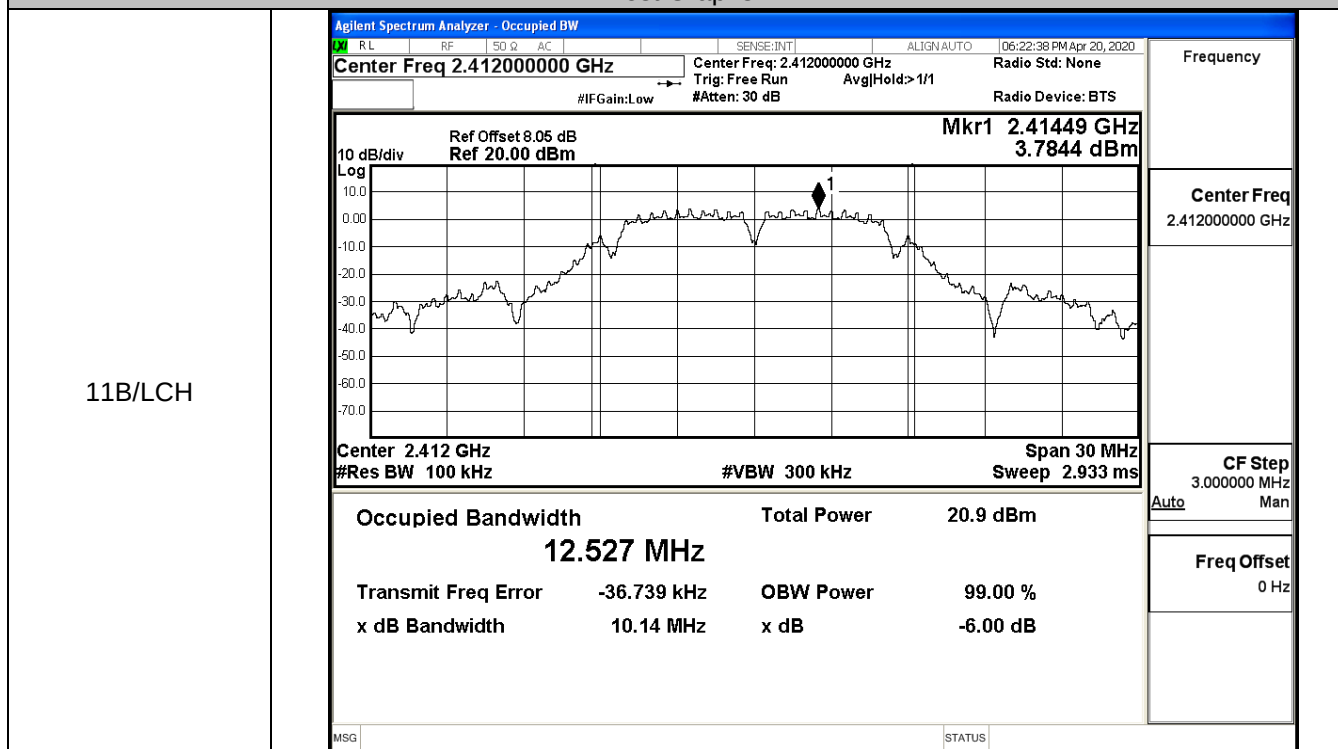




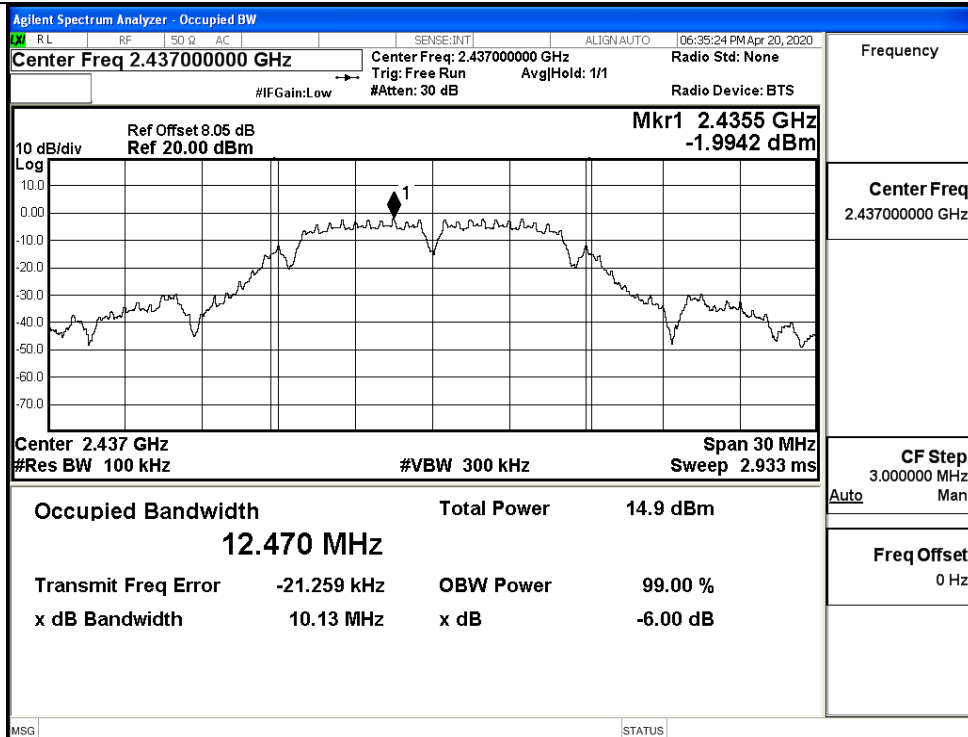
A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	10.14	≥ 0.5	PASS
	MCH	10.13	≥ 0.5	PASS
	HCH	10.13	≥ 0.5	PASS
11G	LCH	16.33	≥ 0.5	PASS
	MCH	16.33	≥ 0.5	PASS
	HCH	16.34	≥ 0.5	PASS
11N20SISO	LCH	17.18	≥ 0.5	PASS
	MCH	17.30	≥ 0.5	PASS
	HCH	17.10	≥ 0.5	PASS

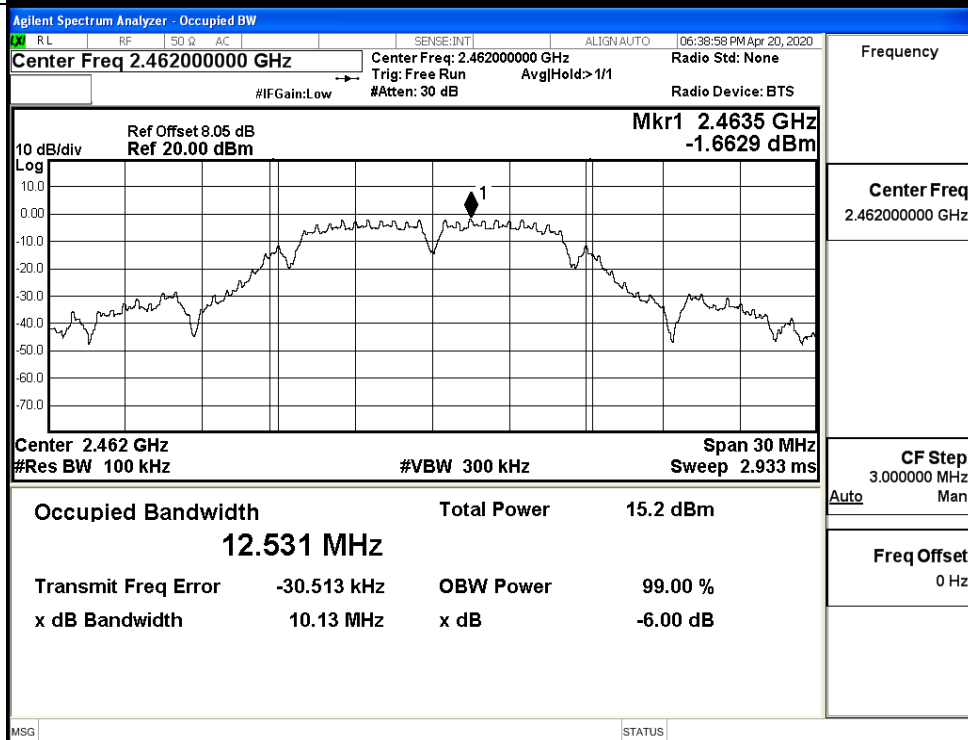
Test Graphs



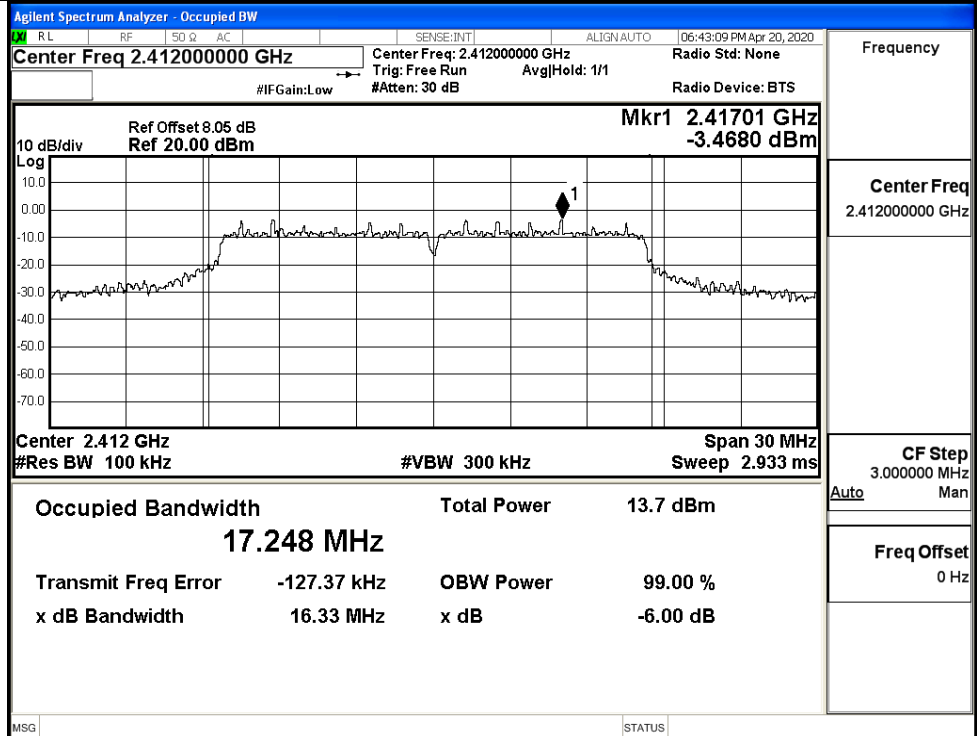
11B/MCH



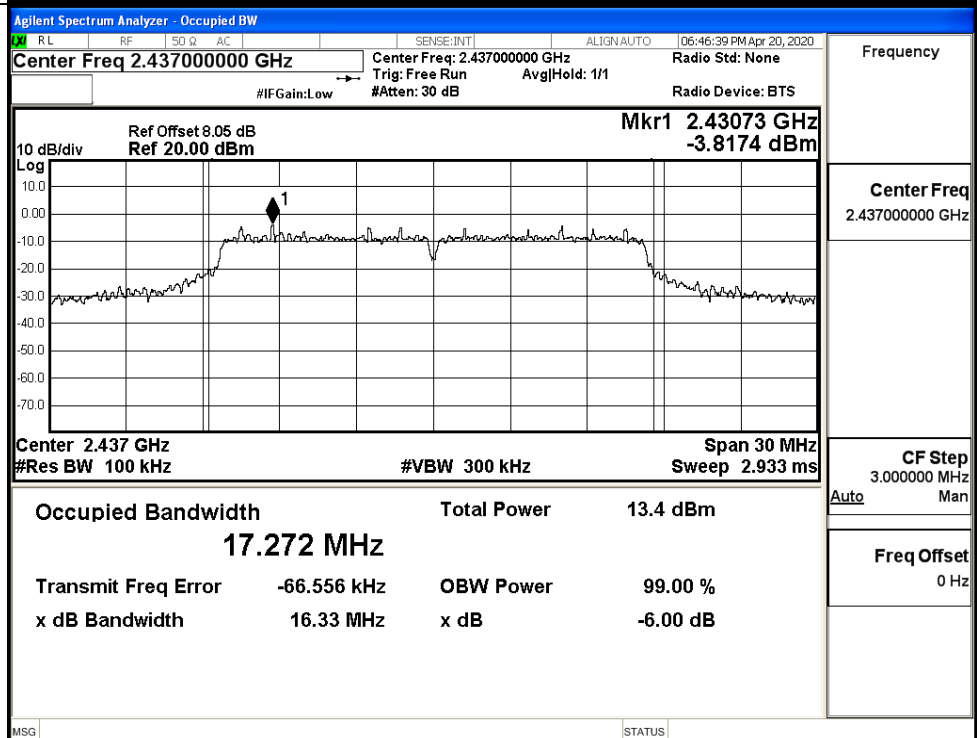
11B/HCH



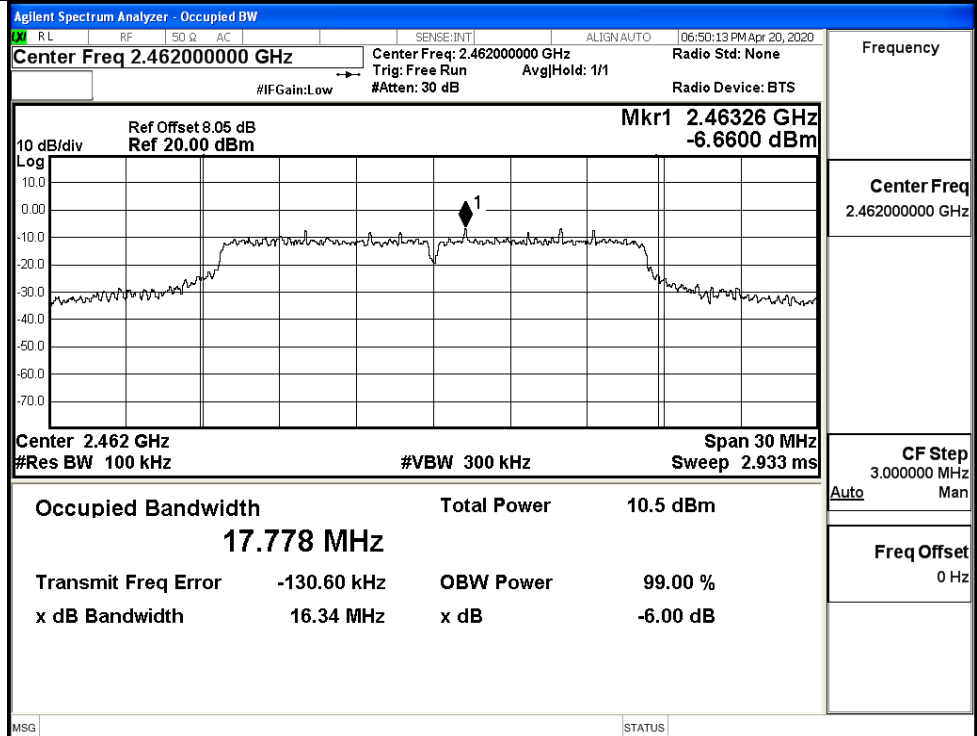
11G/LCH



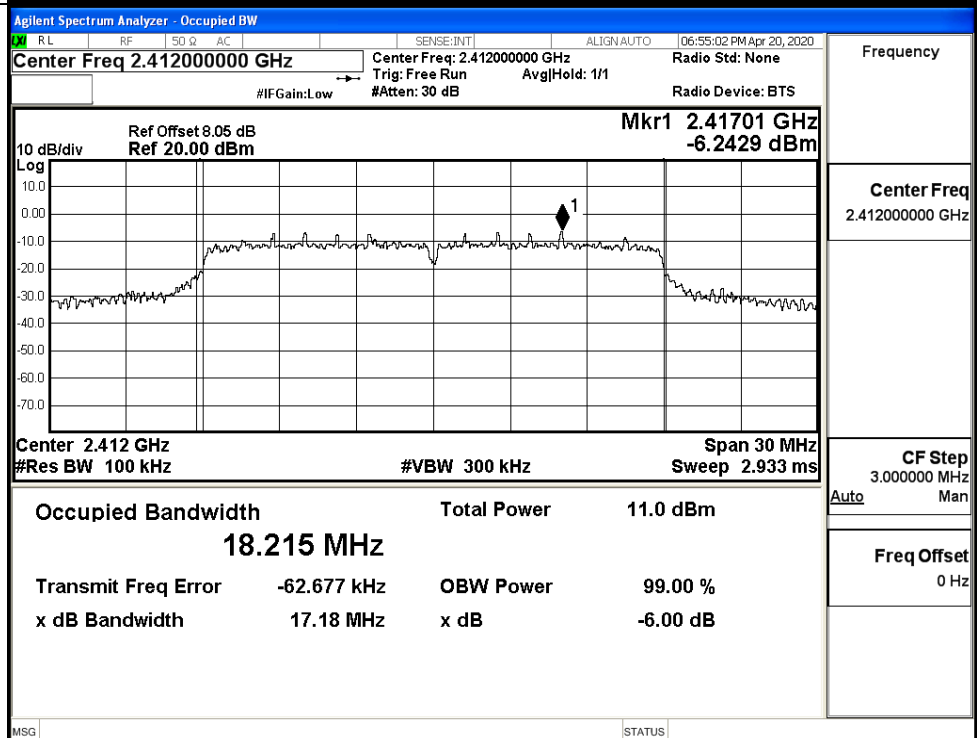
11G/MCH

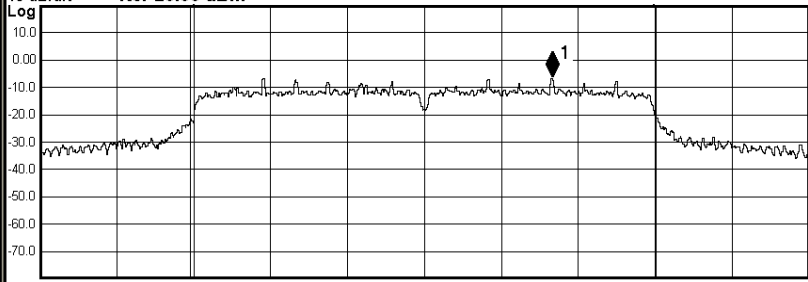
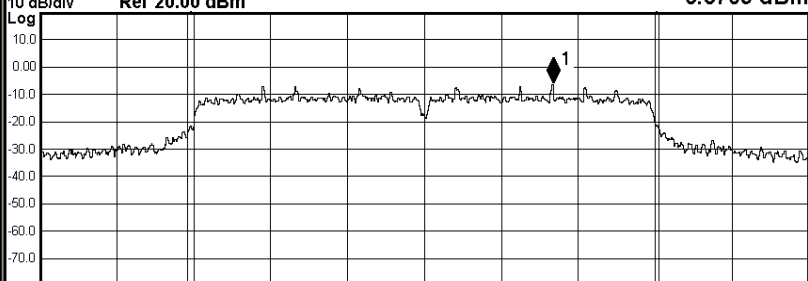


11G/HCH



11N20SISO/LCH



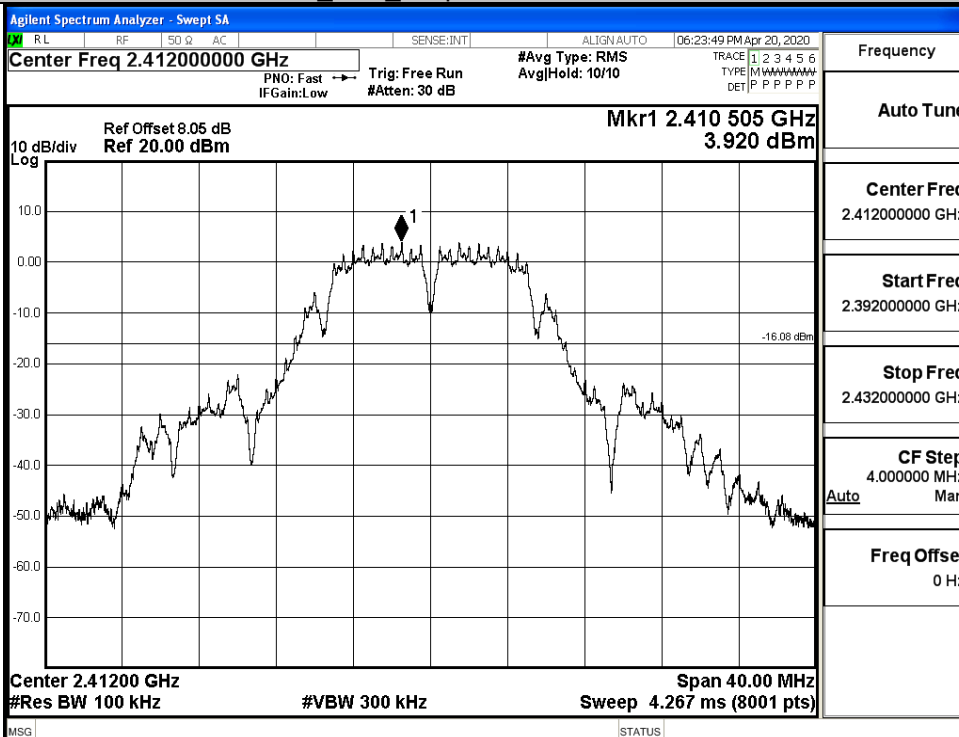
11N20SISO/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN AUTO 06:58:12 PM Apr 20, 2020 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Trig: Free Run Avg Hold: 1/1 Radio Std: None #IFGain:Low #Atten: 30 dB Radio Device: BTS 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.44198 GHz -6.6050 dBm  Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 18.130 MHz Total Power 10.7 dBm Transmit Freq Error -30.606 kHz OBW Power 99.00 % x dB Bandwidth 17.30 MHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.437000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
11N20SISO/HCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN AUTO 07:01:38 PM Apr 20, 2020 Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Trig: Free Run Avg Hold: 1/1 Radio Std: None #IFGain:Low #Atten: 30 dB Radio Device: BTS 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.46701 GHz -6.3709 dBm  Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 18.340 MHz Total Power 10.8 dBm Transmit Freq Error -32.045 kHz OBW Power 99.00 % x dB Bandwidth 17.10 MHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.462000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz

A.5 RF Conducted Spurious Emissions

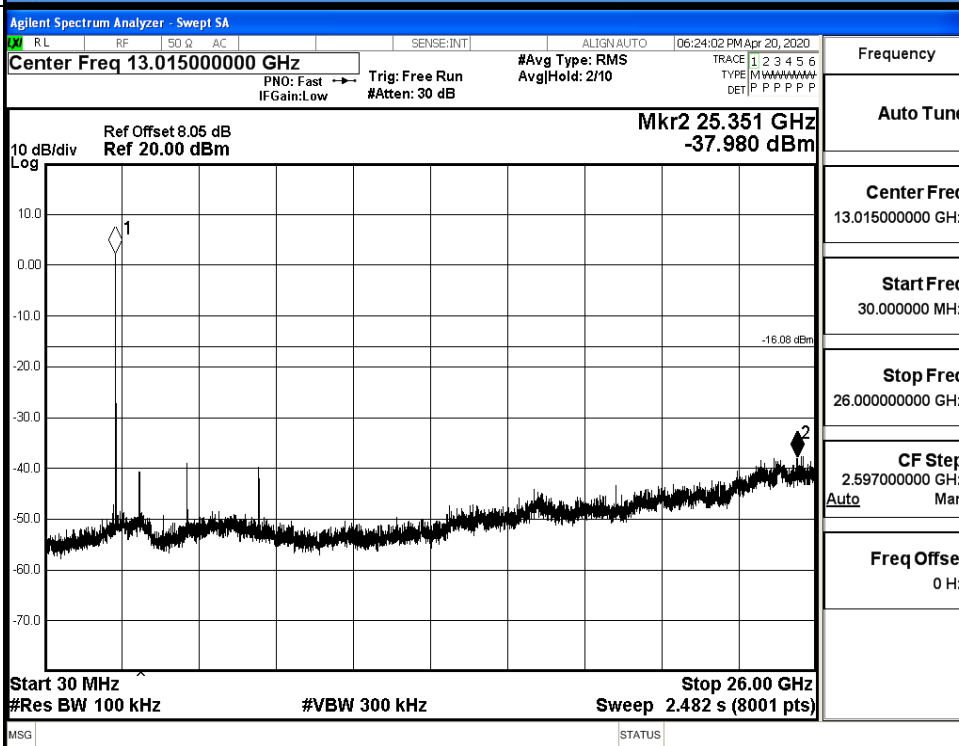
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	3.92	-37.980	-16.080	PASS
	MCH	-2.002	-38.436	-22.002	PASS
	HCH	-2.645	-38.394	-22.645	PASS
11G	LCH	-3.806	-38.206	-23.806	PASS
	MCH	-7.041	-37.755	-27.041	PASS
	HCH	-6.397	-38.470	-26.397	PASS
11N20 SISO	LCH	-7.077	-37.930	-27.077	PASS
	MCH	-6.436	-37.715	-26.436	PASS
	HCH	-6.834	-38.151	-26.834	PASS

11B LCH Graphs

Pref/11B/LCH

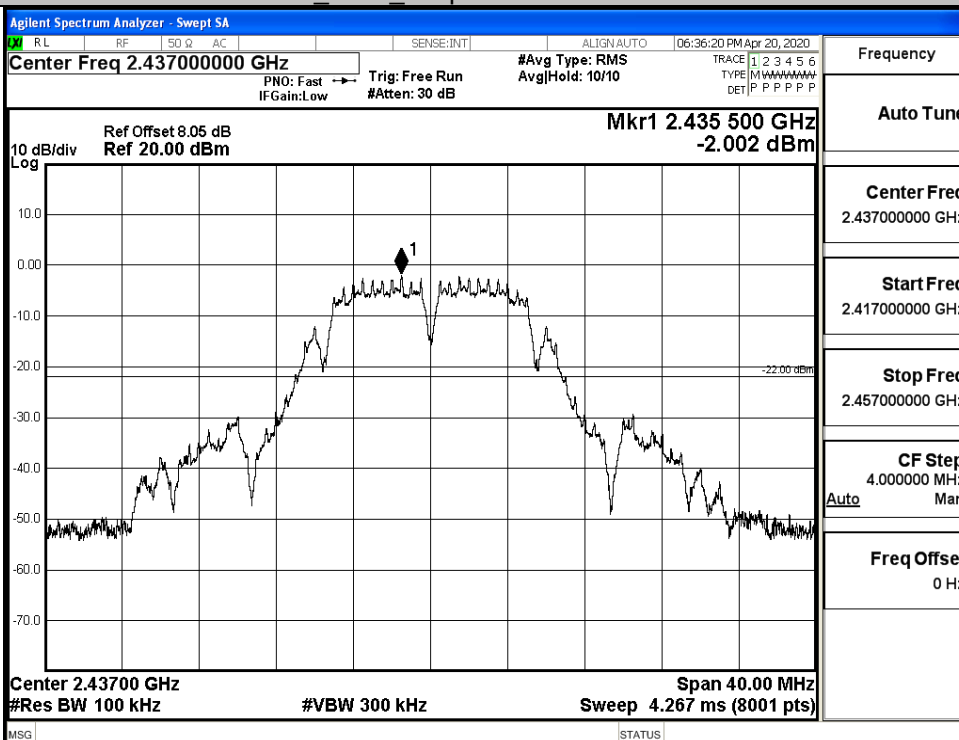


Puw/11B/LCH

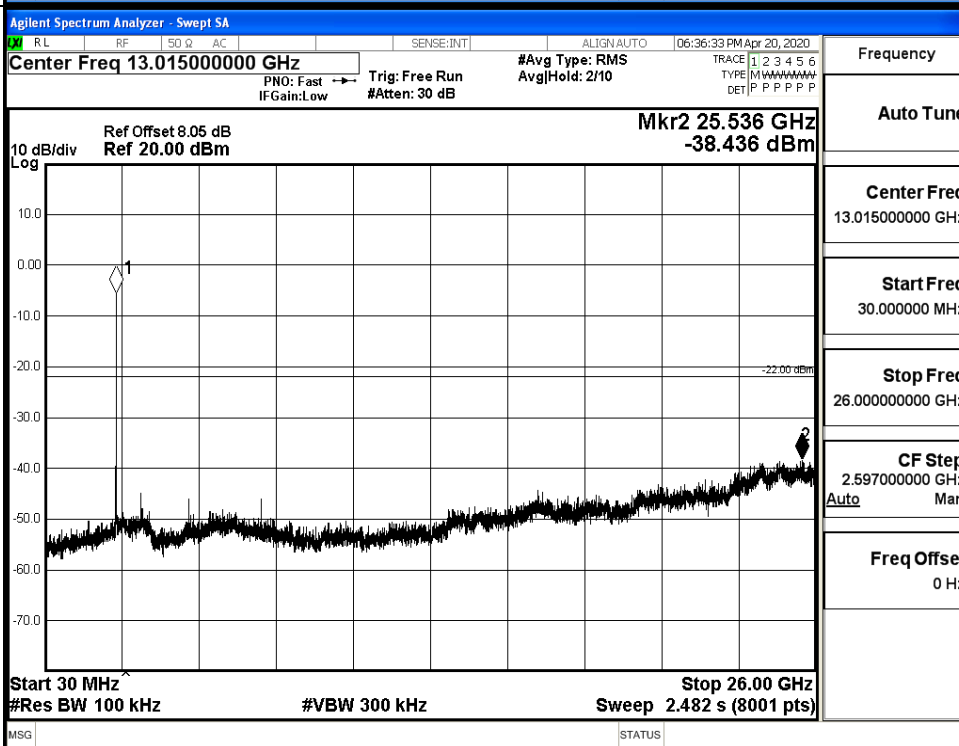


11B MCH Graphs

Pref/11B/MCH

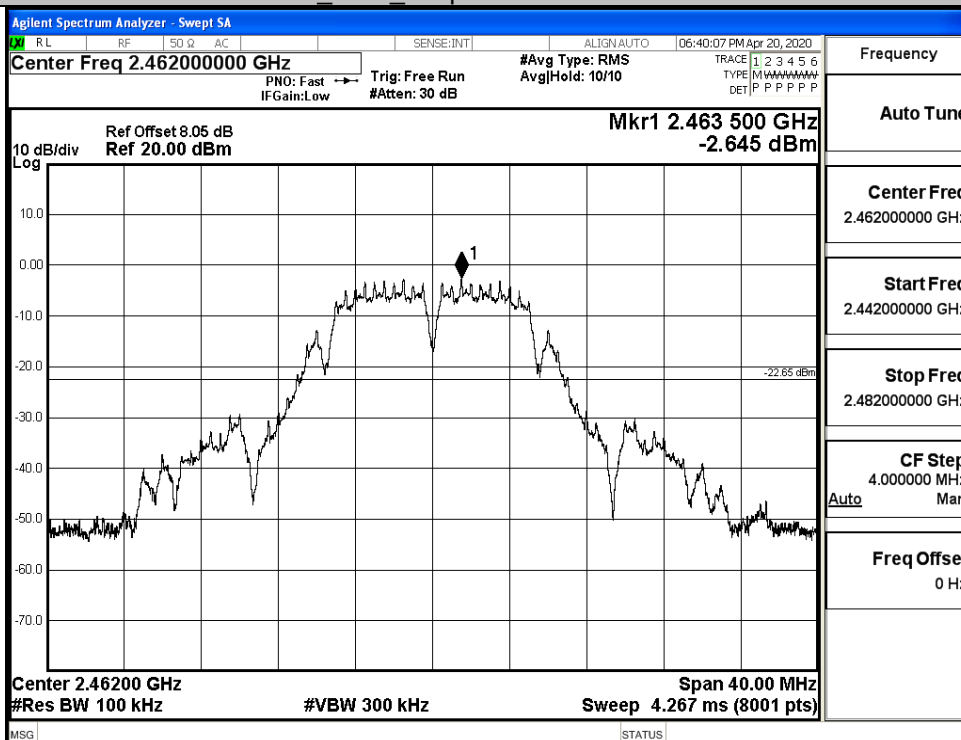


Puw/11B/MCH

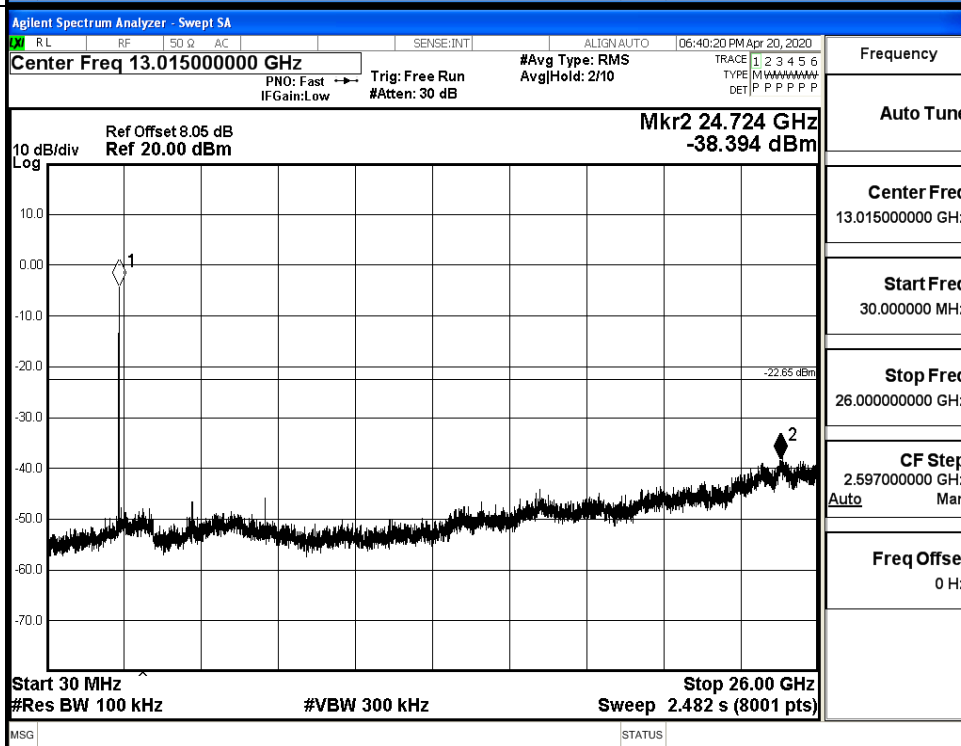


11B HCH Graphs

Pref/11B/HCH

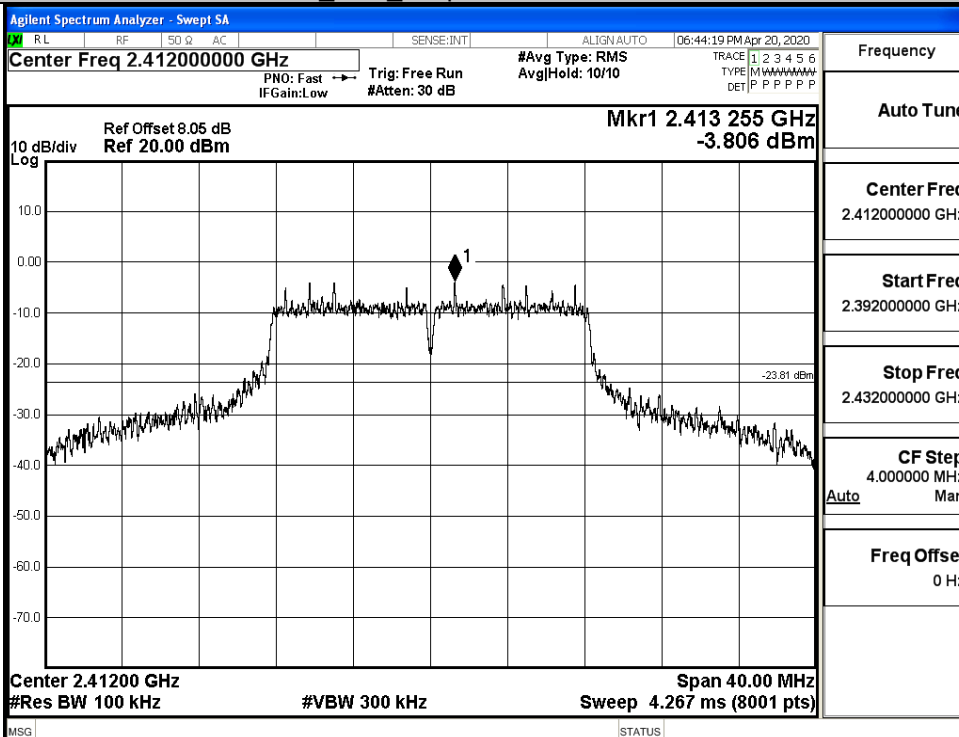


Puw/11B/HCH

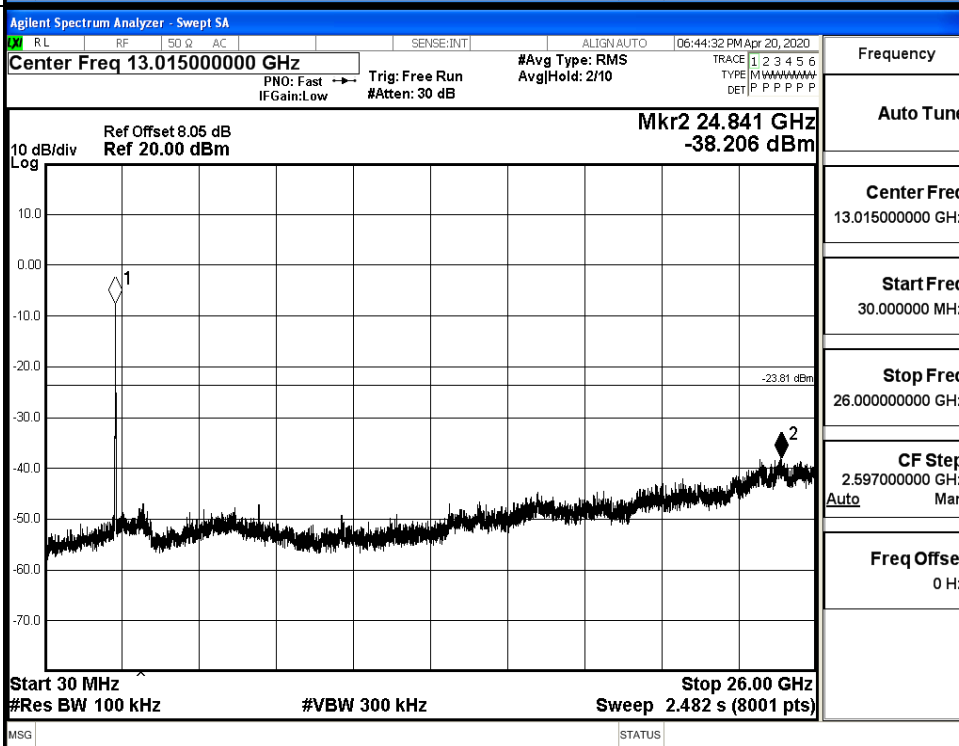


11G_LCH_Graphs

Pref/11G/LCH

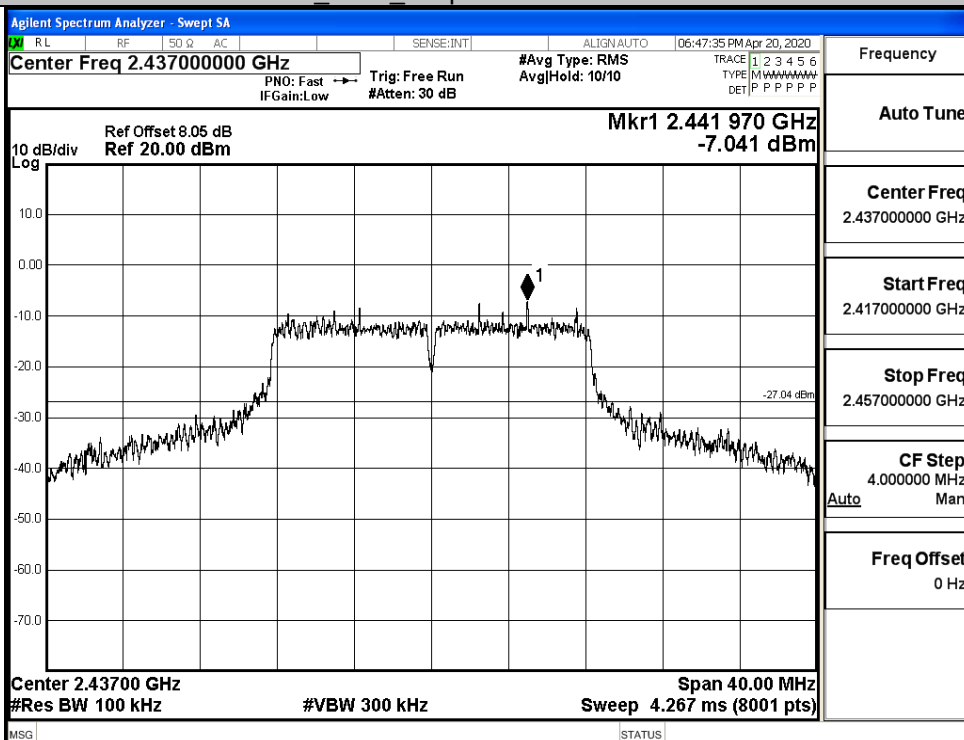


Puw/11G/LCH

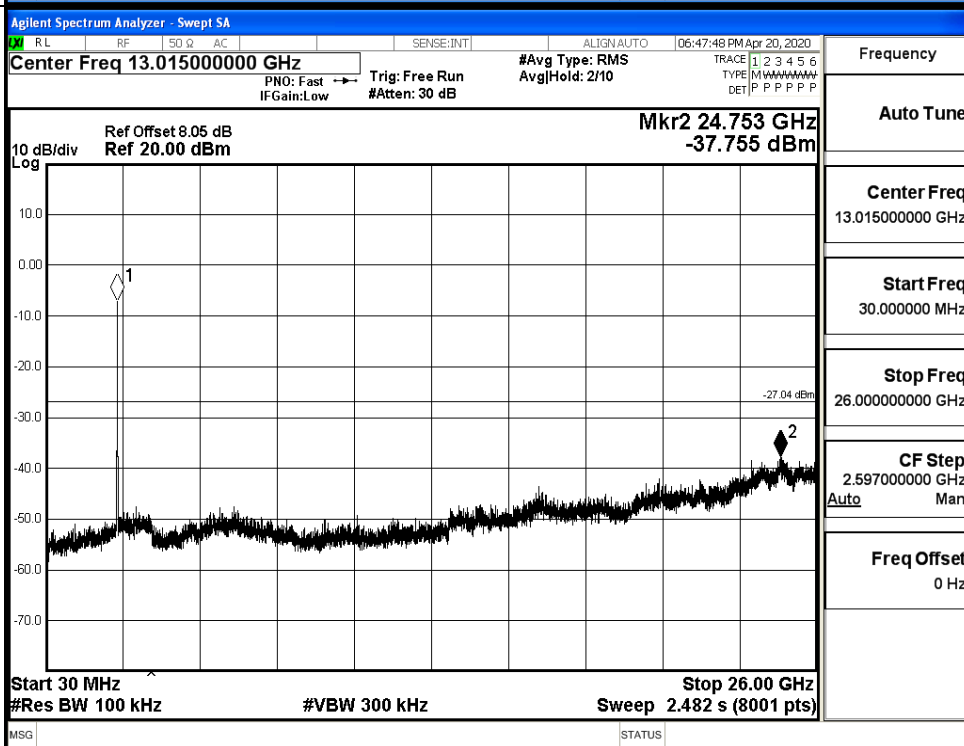


11G MCH Graphs

Pref/11G/MCH

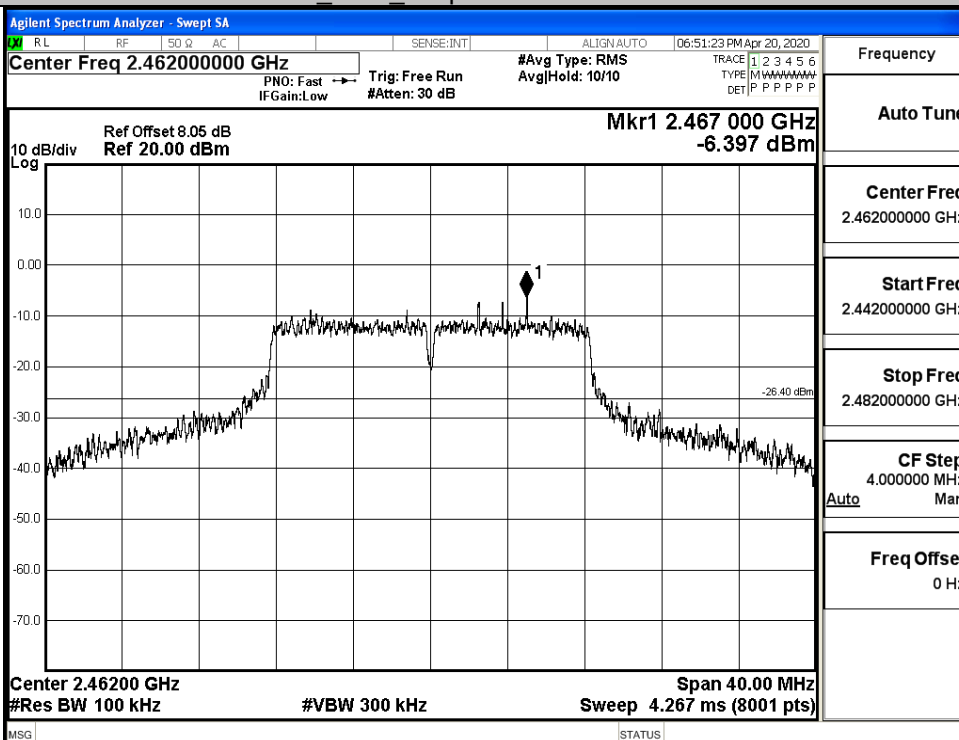


Puw/11G/MCH

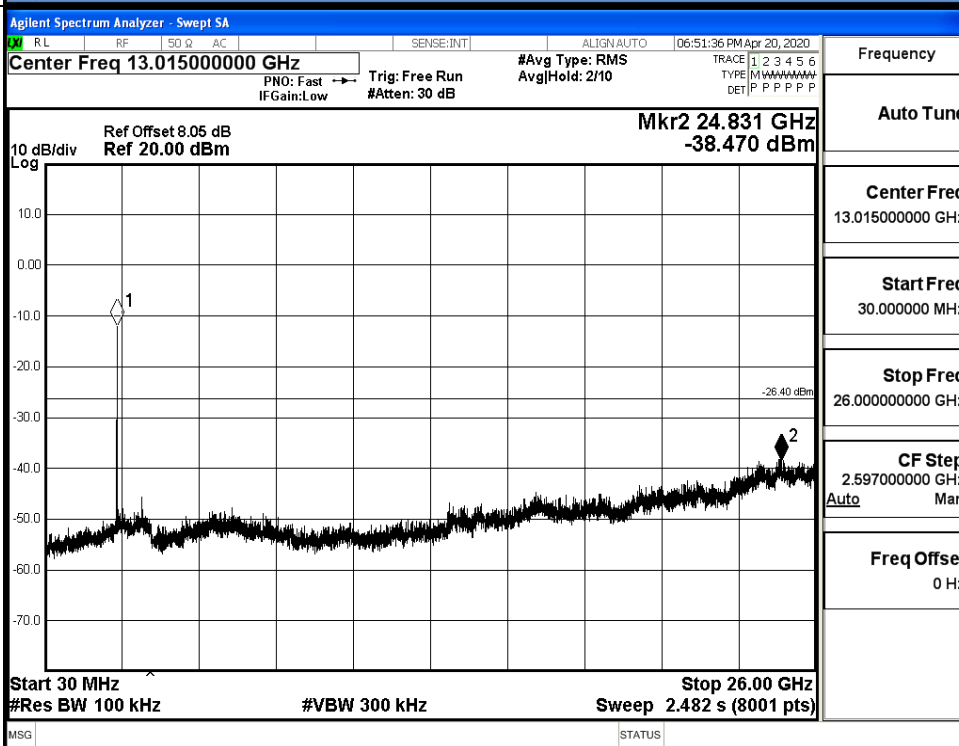


11G HCH Graphs

Pref/11G/HCH

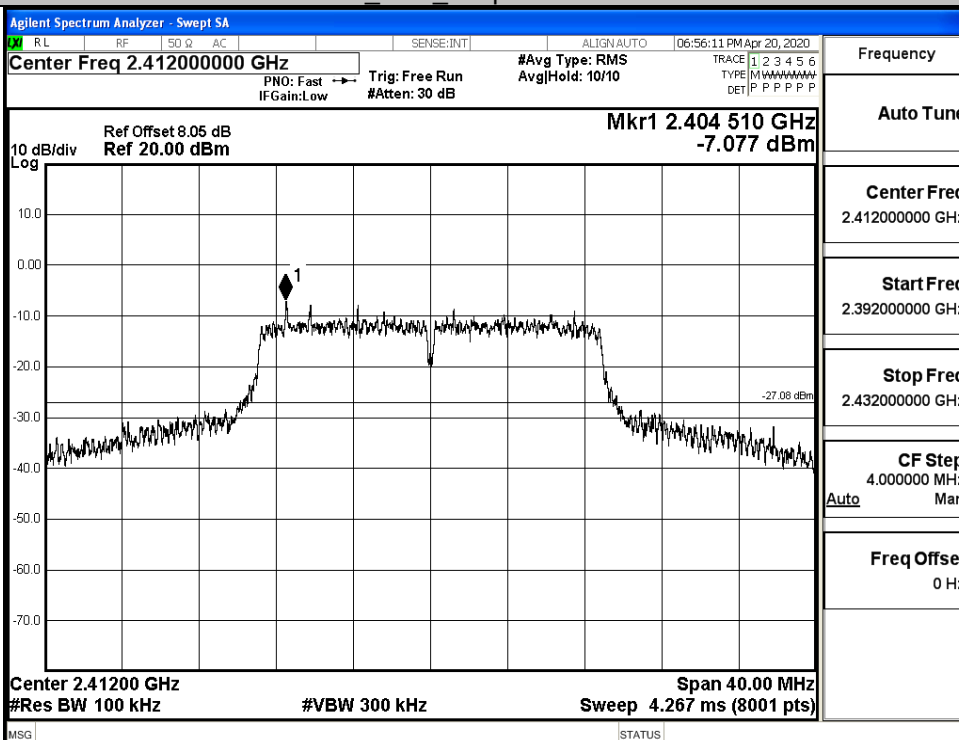


Puw/11G/HCH

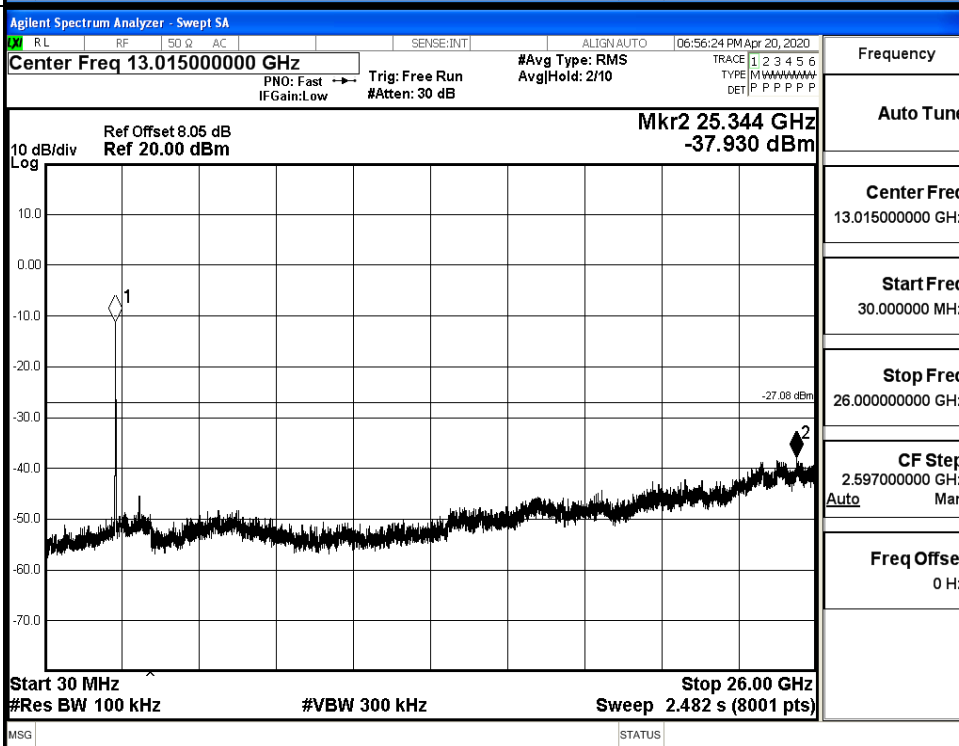


11N20SISO LCH Graphs

Pref/11N20SIS
O/LCH

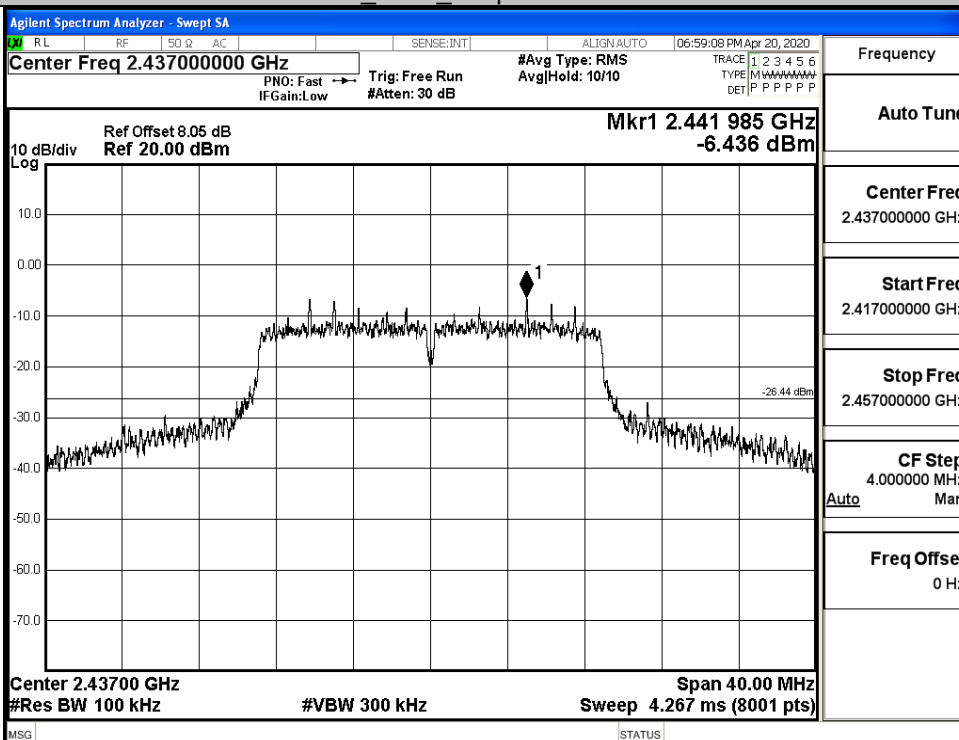


Puw/11N20
SISO/LCH

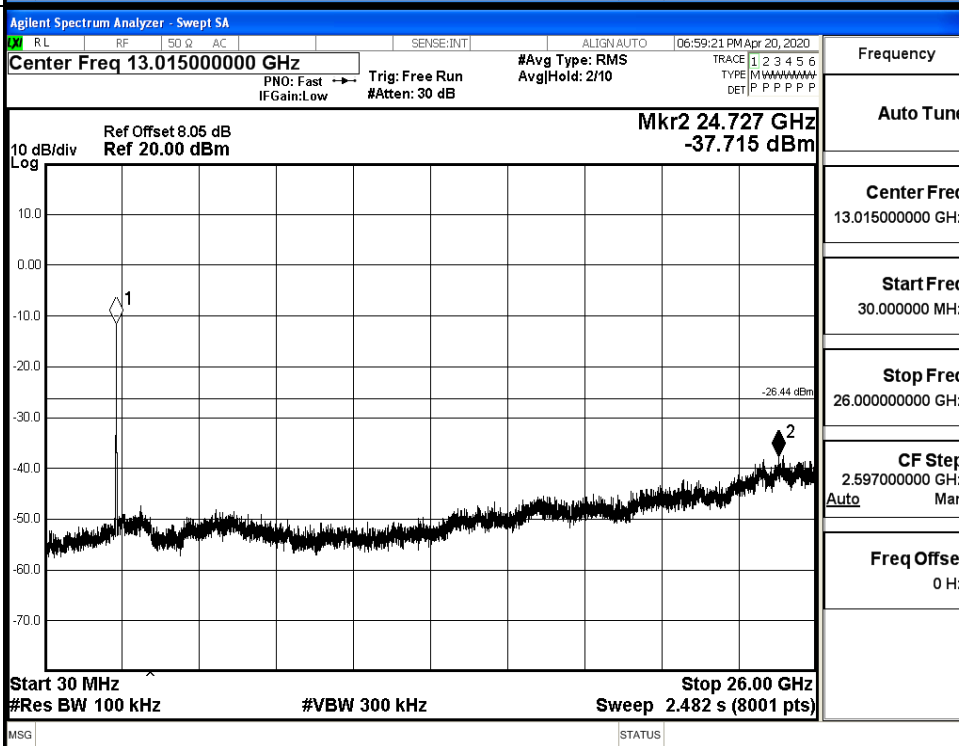


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

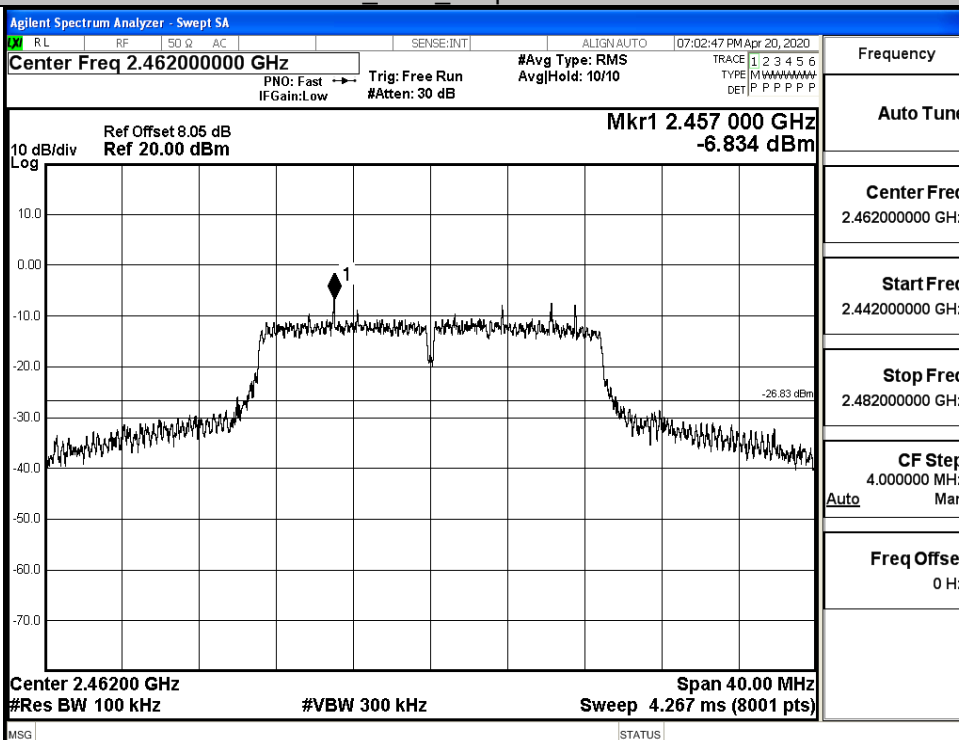


Puw/11N20
SISO/MCH

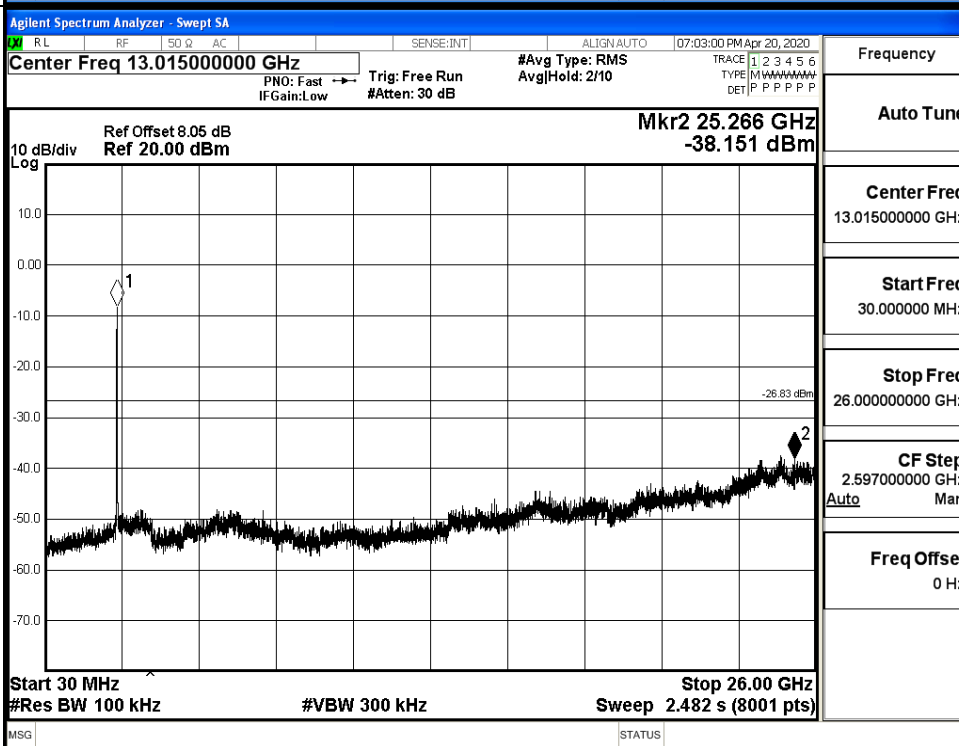


11N20SISO HCH Graphs

Pref/11N20
SISO/HCH



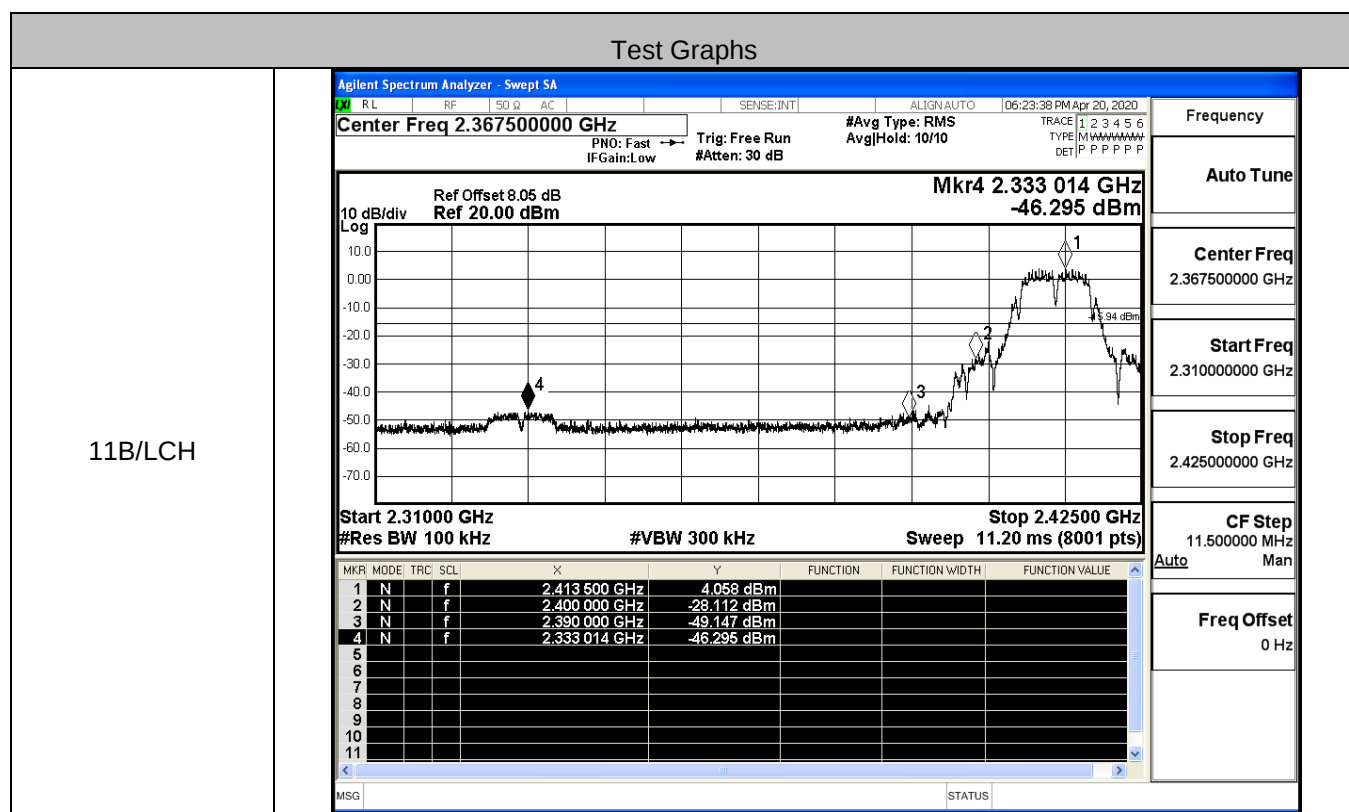
Puw/11N20
SISO/HCH



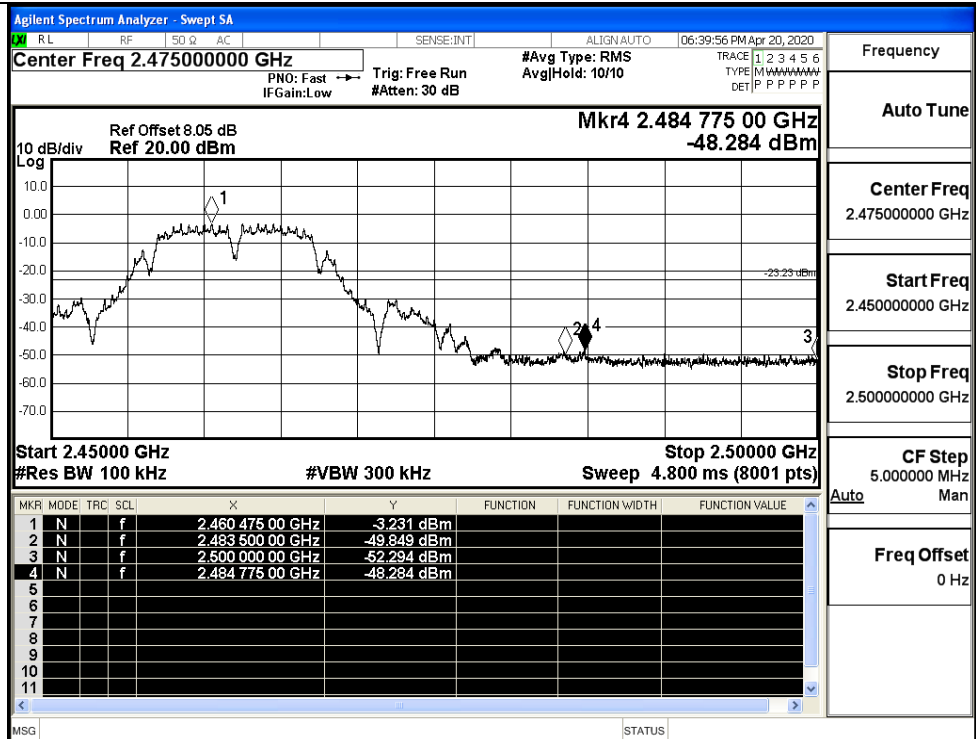
A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	4.058	-46.295	-15.94	PASS
	HCH	-3.231	-48.284	-23.23	PASS
11G	LCH	-4.142	-38.477	-24.14	PASS
	HCH	-6.777	-40.011	-26.78	PASS
11N20SISO	LCH	-7.223	-39.533	-27.22	PASS
	HCH	-6.640	-38.578	-26.64	PASS

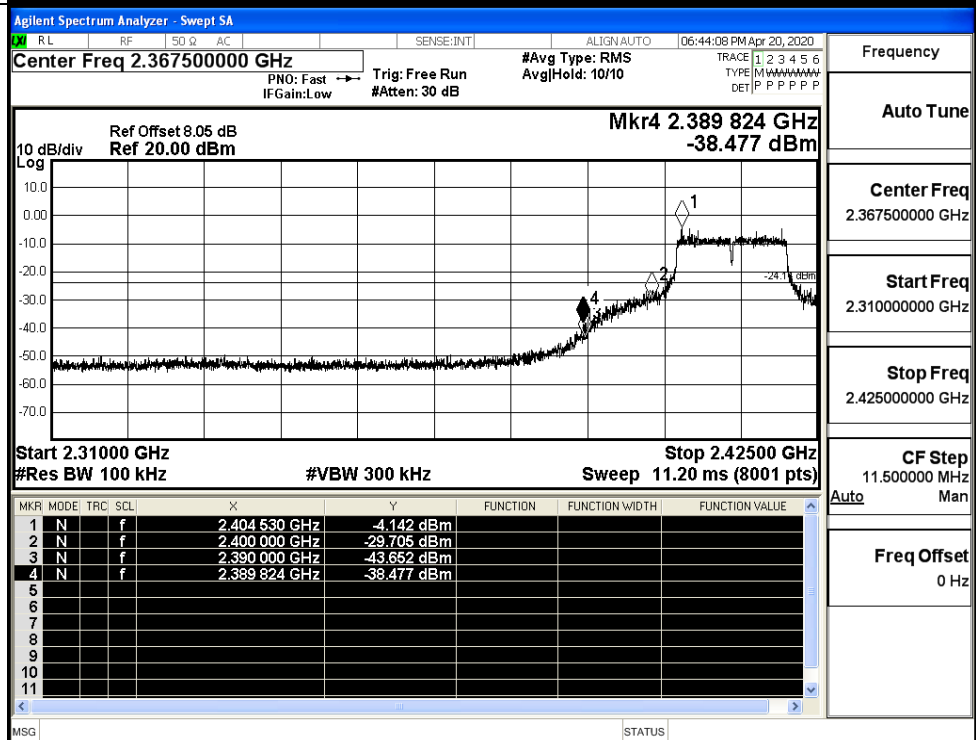
Test Graphs



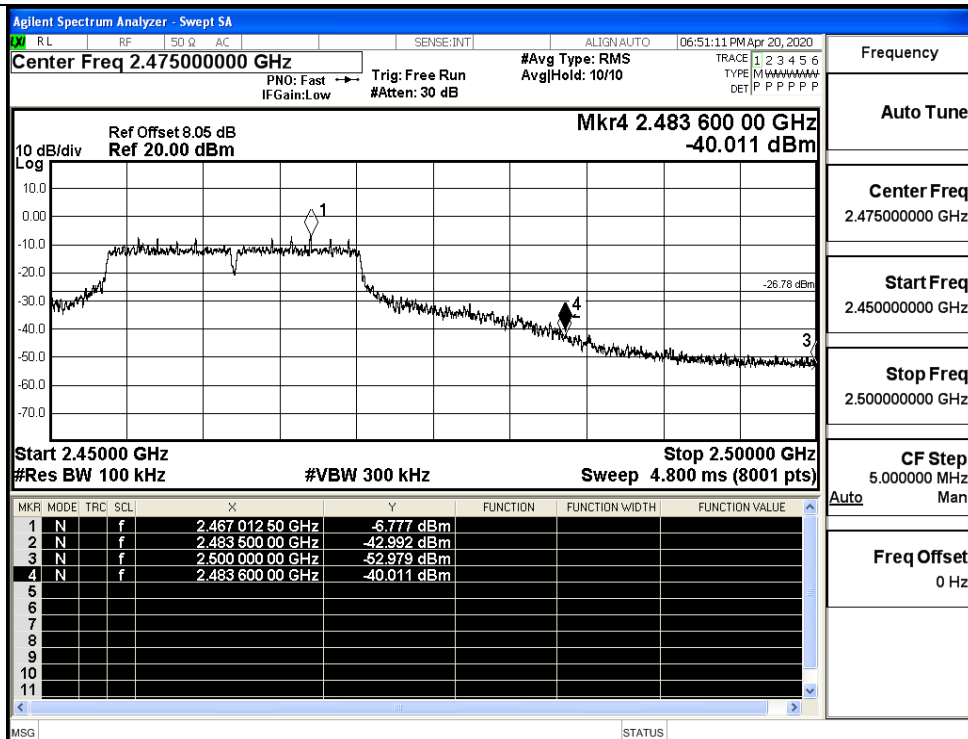
11B/HCH



11G/LCH



11G/HCH



Frequency

Auto Tune

Center Freq
2.475000000 GHz

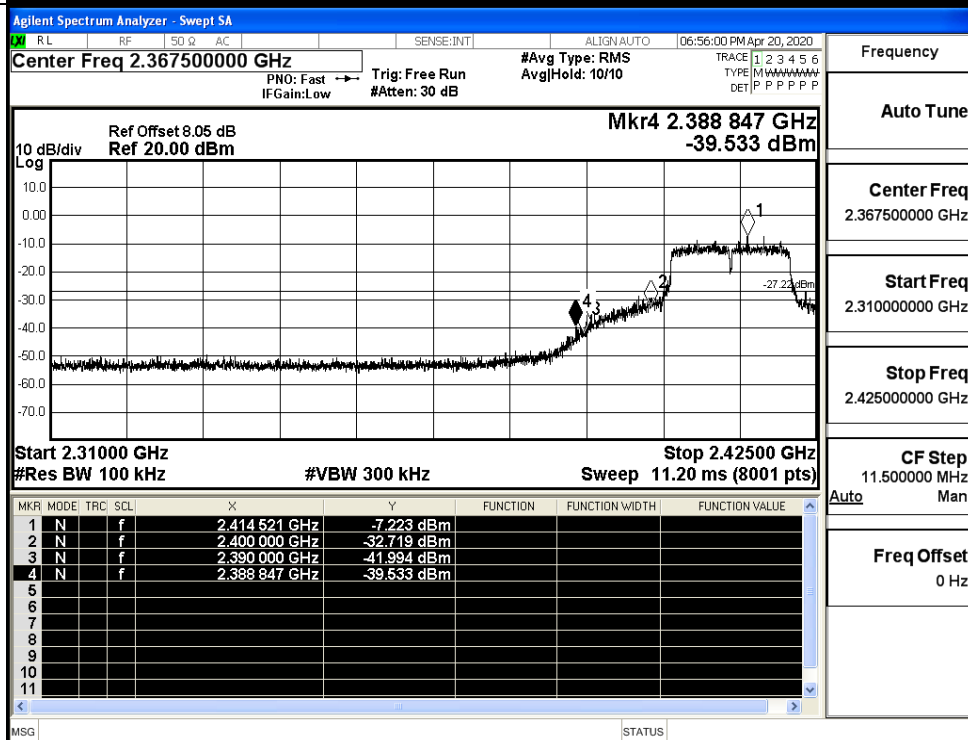
Start Freq
2.450000000 GHz

Stop Freq
2.500000000 GHz

CF Step
5.000000 MHz

Freq Offset
0 Hz

11N20SISO/LCH



Frequency

Auto Tune

Center Freq
2.367500000 GHz

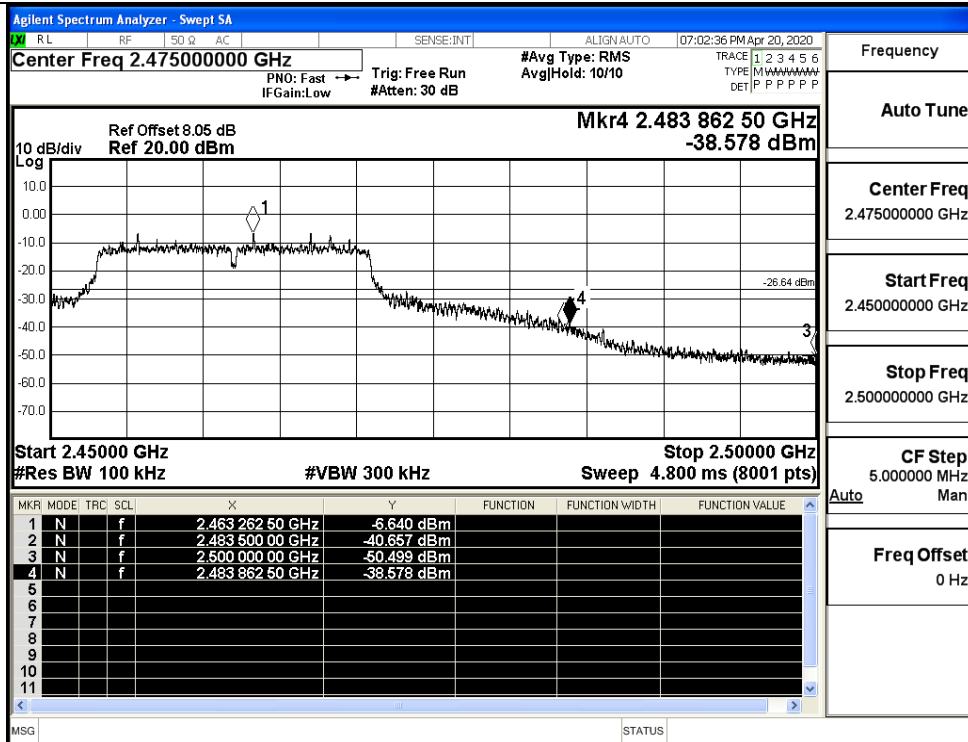
Start Freq
2.310000000 GHz

Stop Freq
2.425000000 GHz

CF Step
11.500000 MHz

Freq Offset
0 Hz

11N20SISO/HCH



Frequency

Auto Tune

Center Freq
2.475000000 GHz

Start Freq
2.450000000 GHz

Stop Freq
2.500000000 GHz

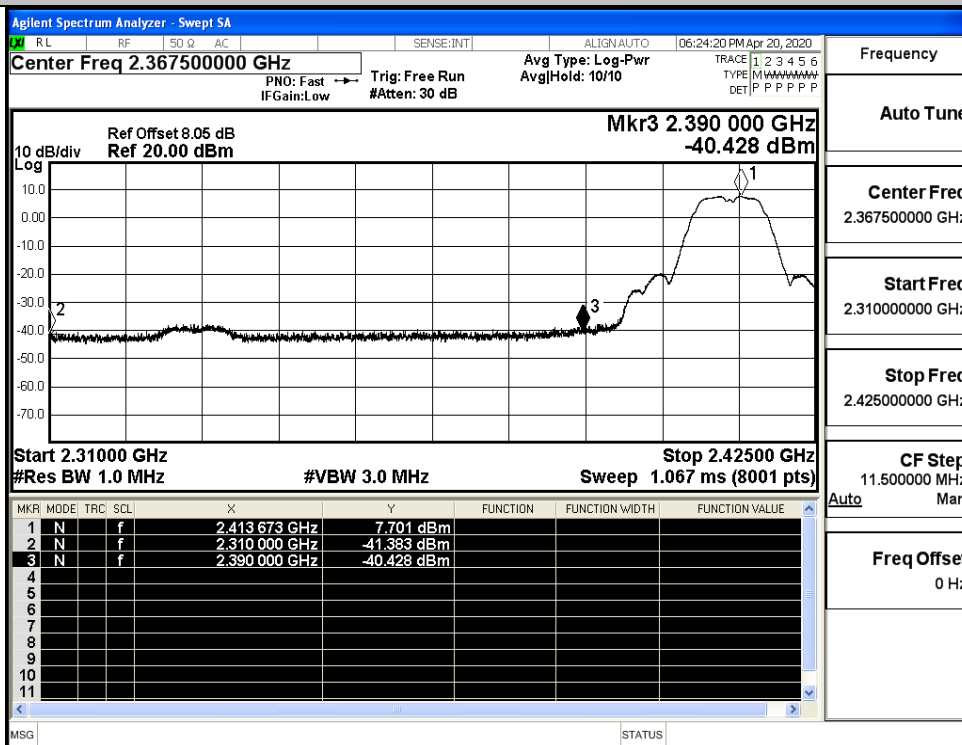
CF Step
5.000000 MHz
Auto Man

Freq Offset
0 Hz

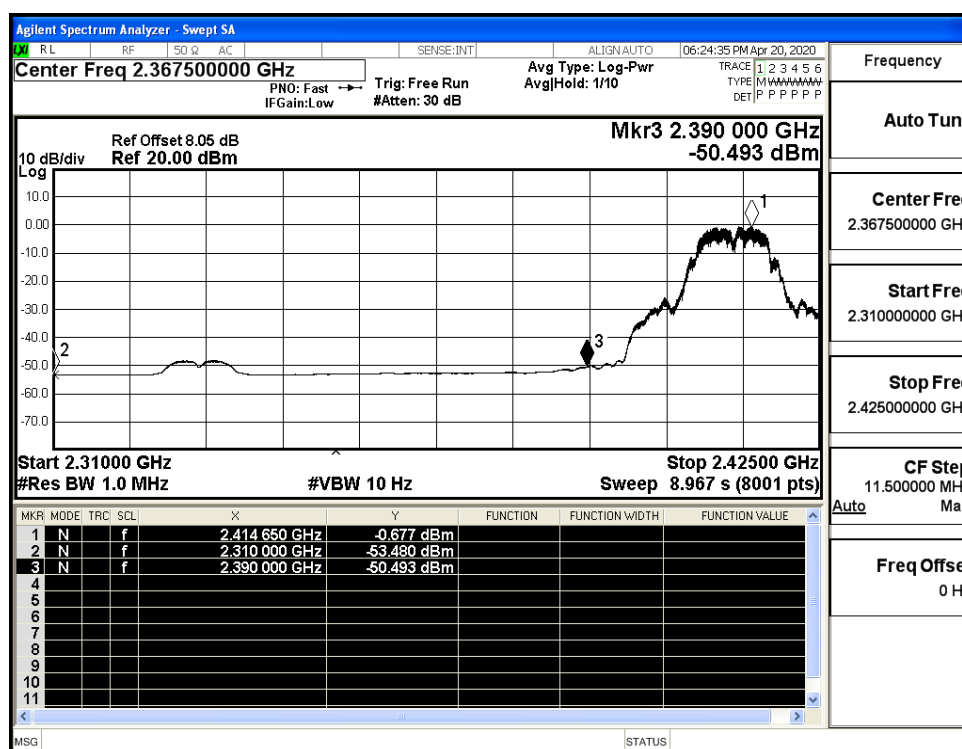
A.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-41.38	2.0	0	55.85	PEAK	74	PASS
	2412	Ant1	2310.0	-53.48	2.0	0	43.75	AV	54	PASS
	2412	Ant1	2390.0	-40.43	2.0	0	56.80	PEAK	74	PASS
	2412	Ant1	2390.0	-50.49	2.0	0	46.74	AV	54	PASS
	2462	Ant1	2483.5	-39.55	2.0	0	57.68	PEAK	74	PASS
	2462	Ant1	2483.5	-50.76	2.0	0	46.47	AV	54	PASS
	2462	Ant1	2500.0	-41.24	2.0	0	55.99	PEAK	74	PASS
	2462	Ant1	2500.0	-52.59	2.0	0	44.64	AV	54	PASS
11G	2412	Ant1	2310.0	-43.41	2.0	0	53.82	PEAK	74	PASS
	2412	Ant1	2310.0	-53.64	2.0	0	43.59	AV	54	PASS
	2412	Ant1	2390.0	-27.10	2.0	0	70.13	PEAK	74	PASS
	2412	Ant1	2390.0	-47.17	2.0	0	50.06	AV	54	PASS
	2462	Ant1	2483.5	-29.52	2.0	0	67.71	PEAK	74	PASS
	2462	Ant1	2483.5	-47.10	2.0	0	50.13	AV	54	PASS
	2462	Ant1	2500.0	-41.86	2.0	0	55.37	PEAK	74	PASS
	2462	Ant1	2500.0	-52.46	2.0	0	44.77	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-42.44	2.0	0	54.79	PEAK	74	PASS
	2412	Ant1	2310.0	-53.71	2.0	0	43.52	AV	54	PASS
	2412	Ant1	2390.0	-26.82	2.0	0	70.41	PEAK	74	PASS
	2412	Ant1	2390.0	-47.55	2.0	0	49.68	AV	54	PASS
	2462	Ant1	2483.5	-29.37	2.0	0	67.86	PEAK	74	PASS
	2462	Ant1	2483.5	-45.84	2.0	0	51.39	AV	54	PASS
	2462	Ant1	2500.0	-42.75	2.0	0	54.48	PEAK	74	PASS
	2462	Ant1	2500.0	-52.39	2.0	0	44.84	AV	54	PASS

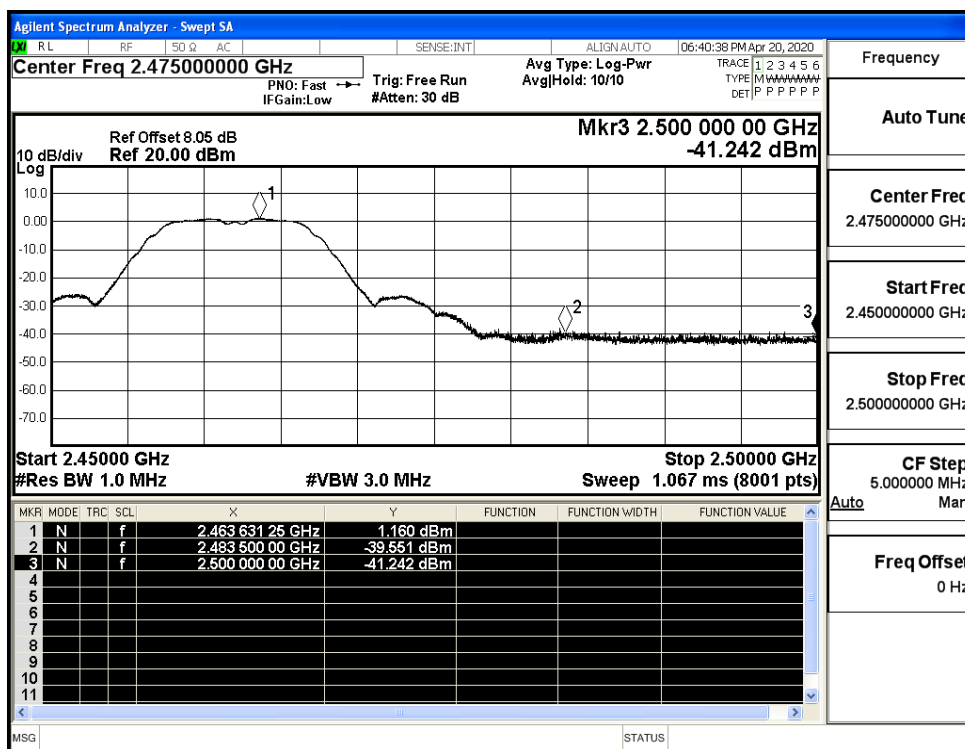
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



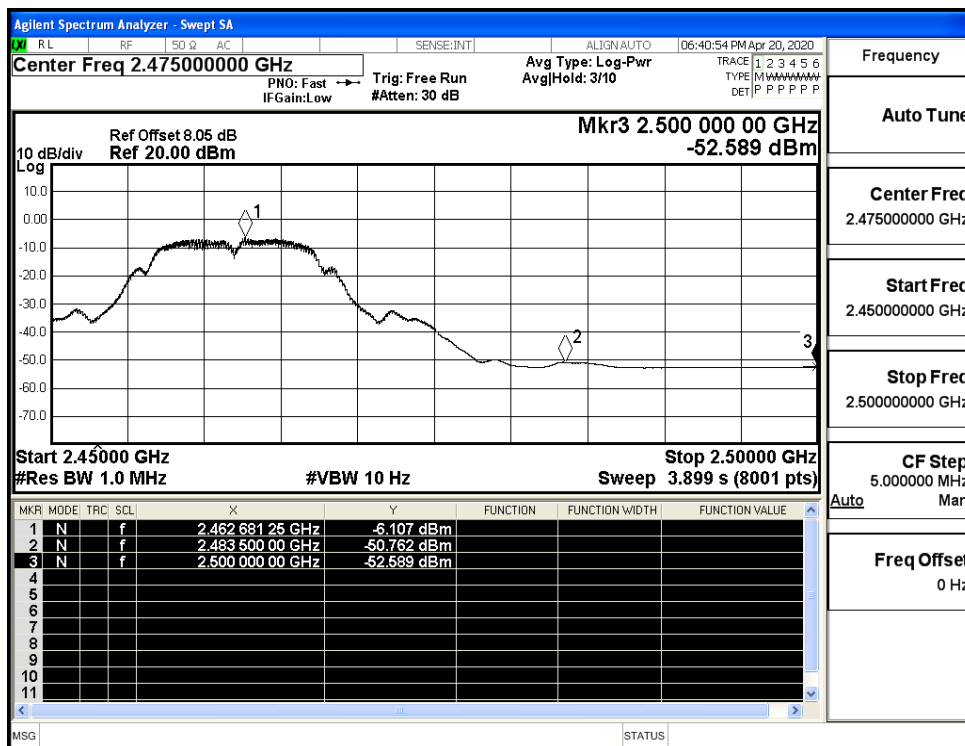
Restrict-band band-edge measurements_11B_2412_Ant1_AV



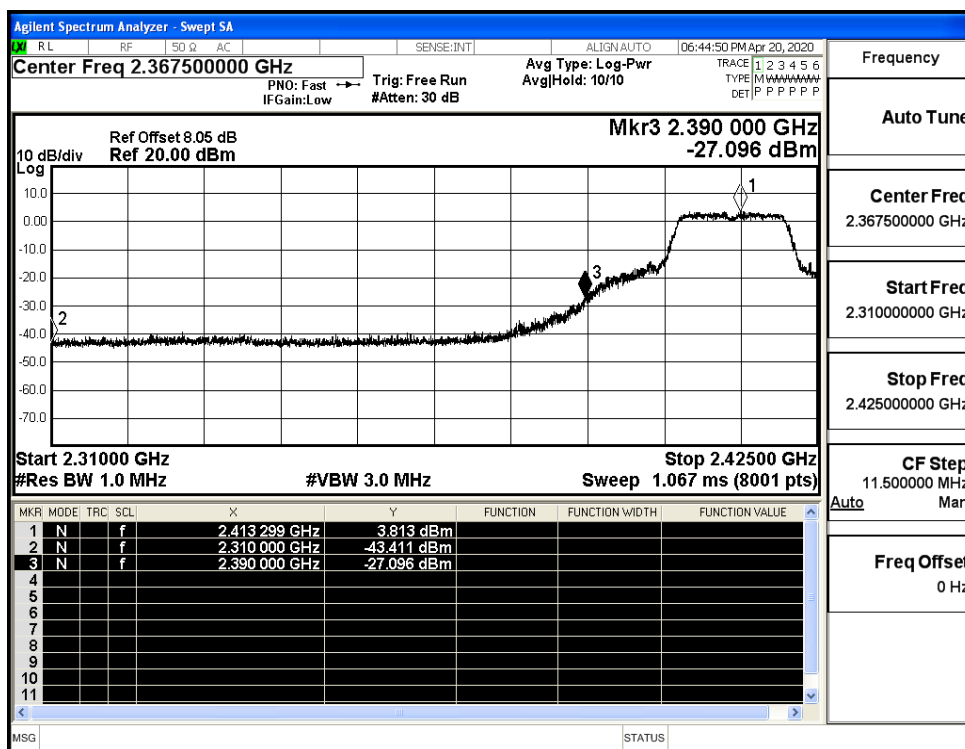
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



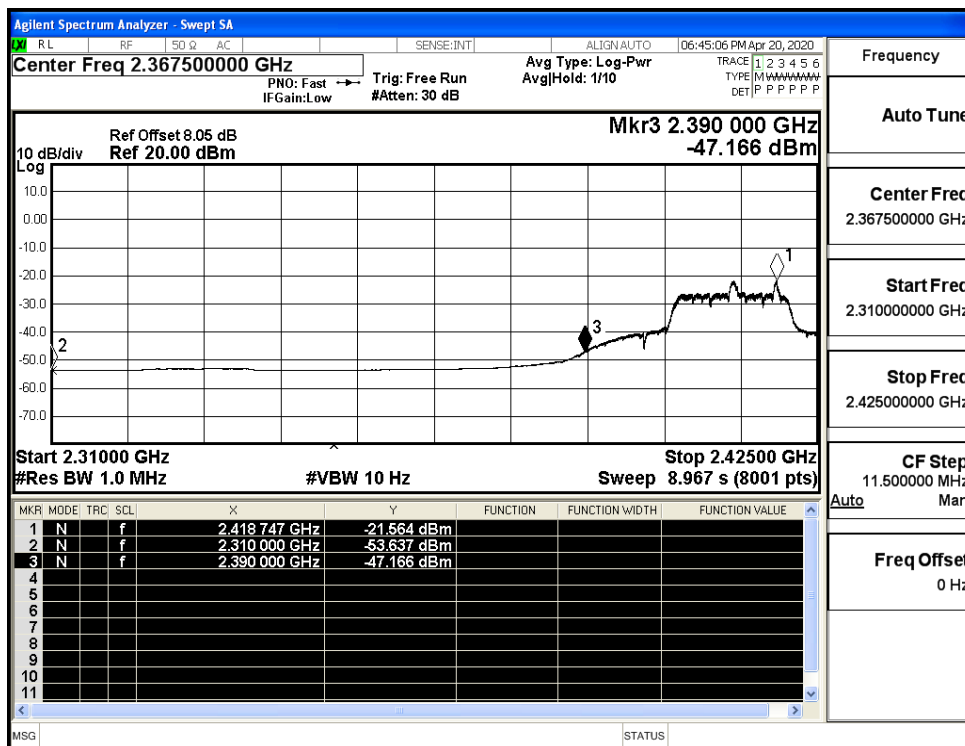
Restrict-band band-edge measurements_11B_2462_Ant1_AV



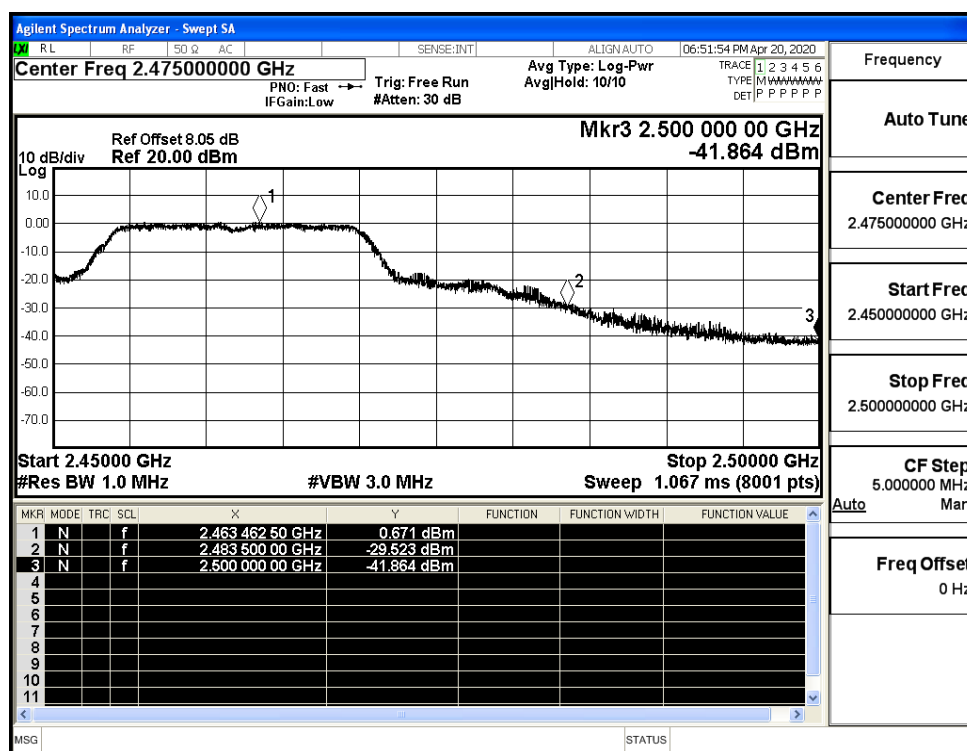
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



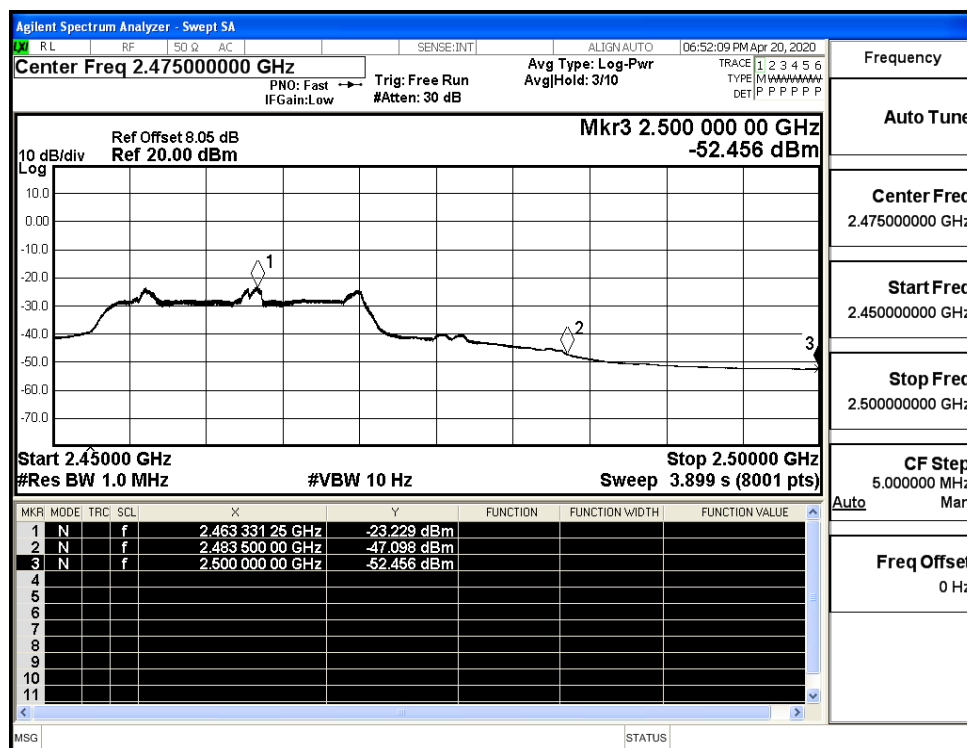
Restrict-band band-edge measurements_11G_2412_Ant1_AV



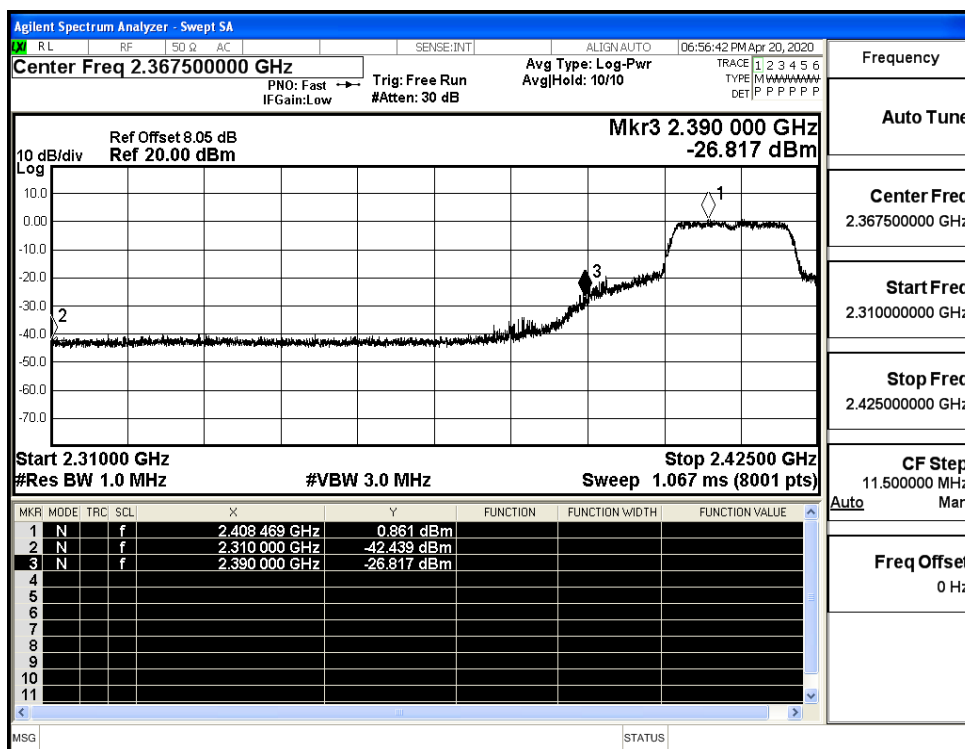
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



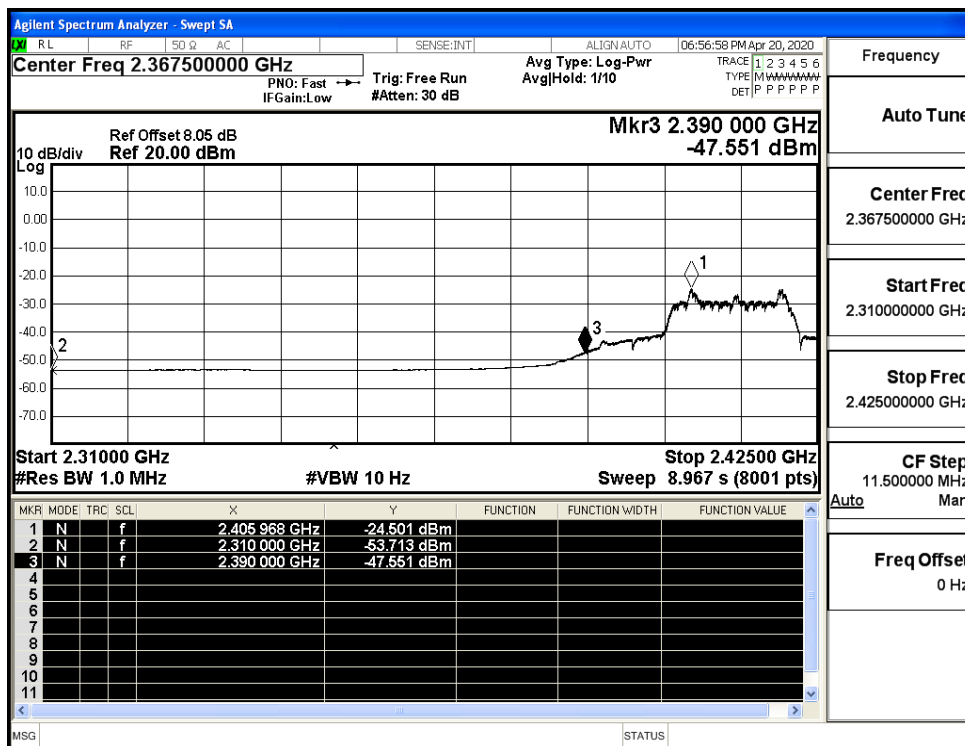
Restrict-band band-edge measurements_11G_2462_Ant1_AV



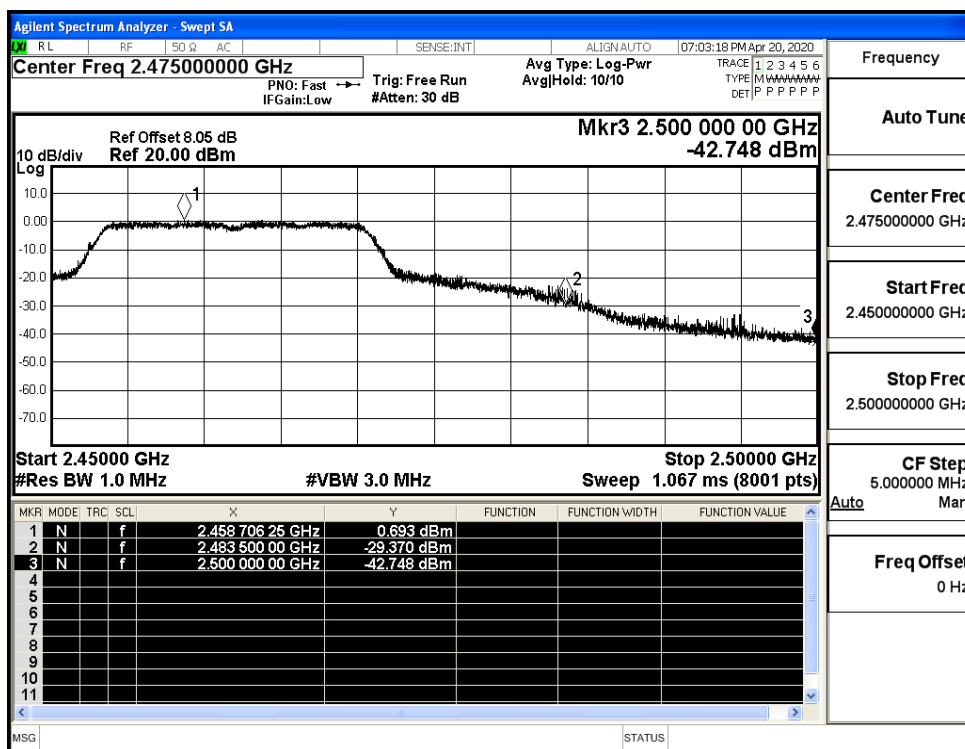
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV

