

Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart Tiny Pet Feeder

Trade Mark: EYENIMAL

Test Model: NGDISCRO006

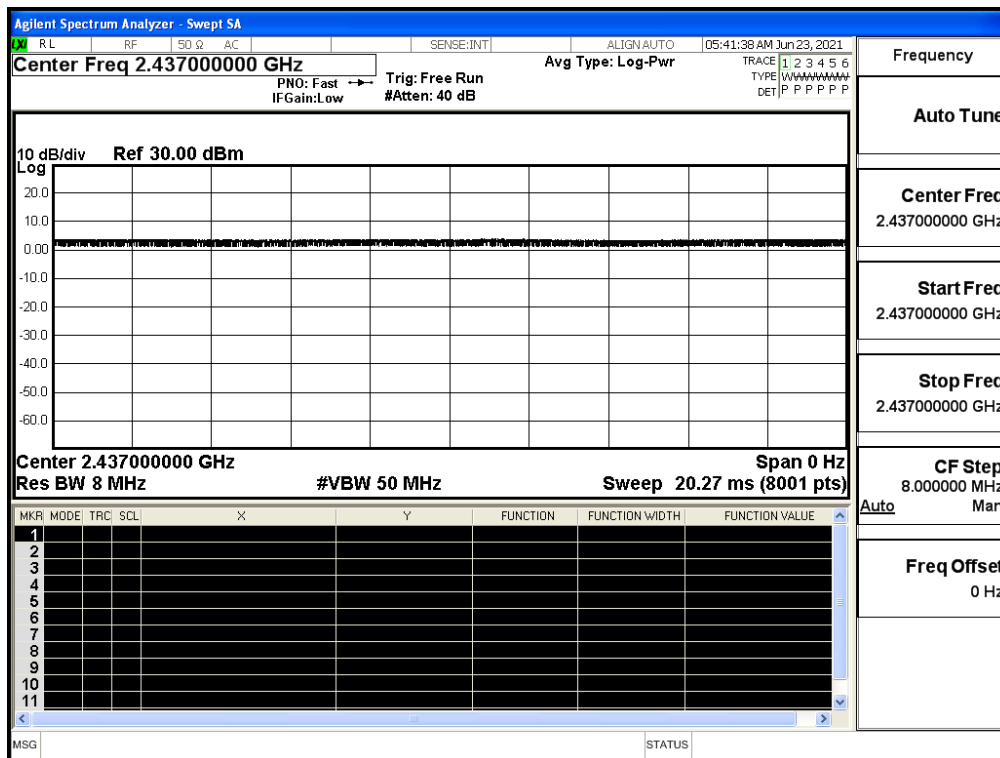
Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

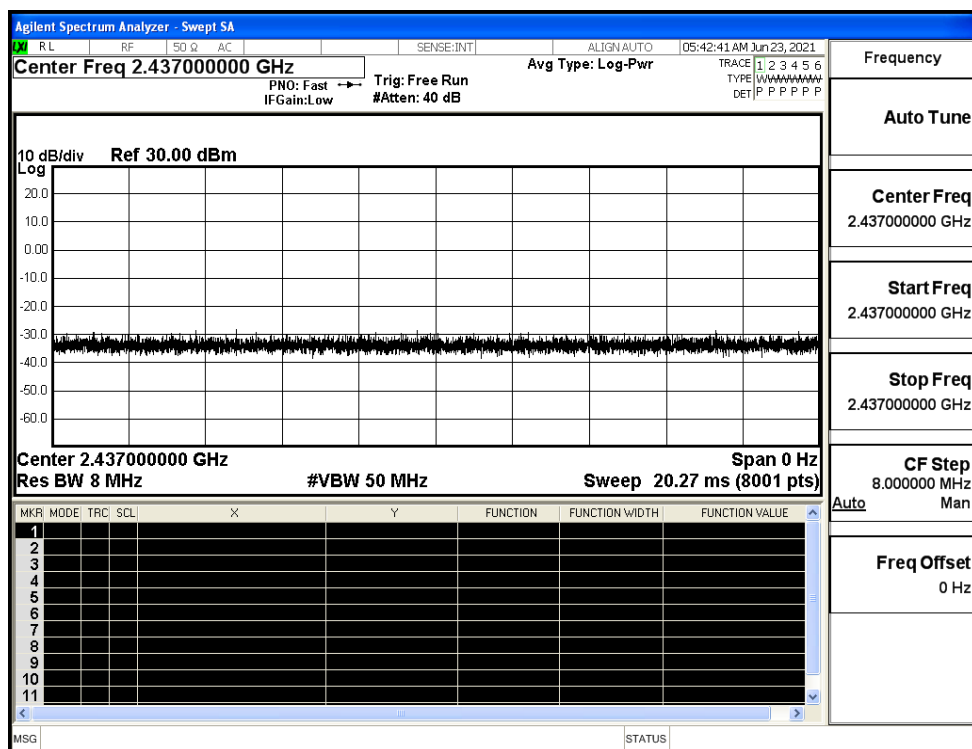
A.1 Duty Cycle

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

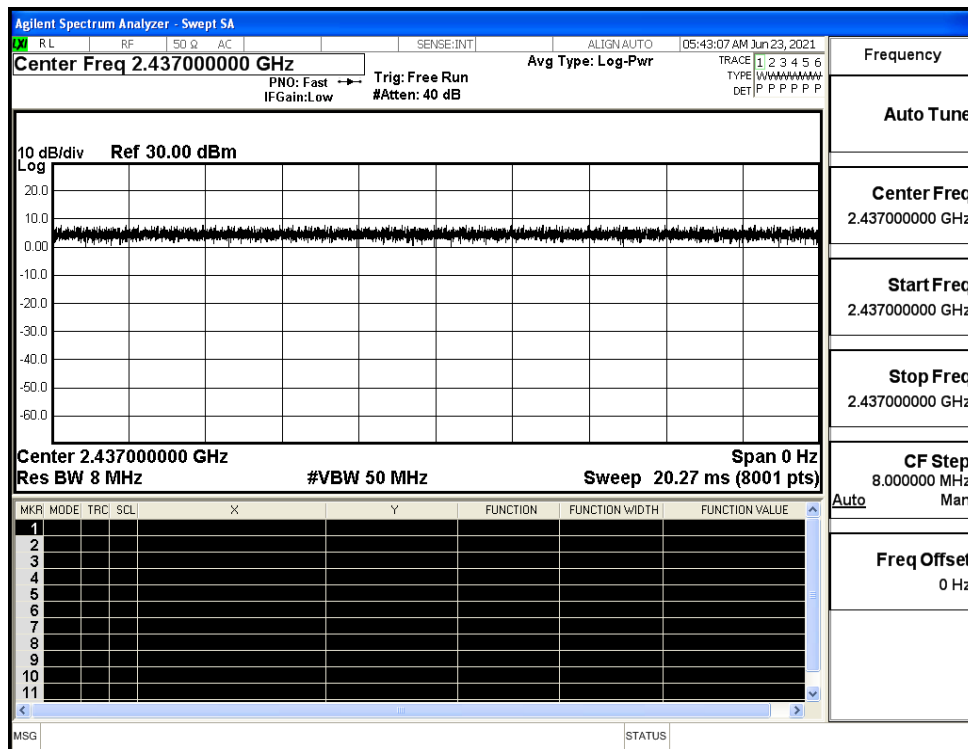
Duty Cycle_11B_2437_Ant1



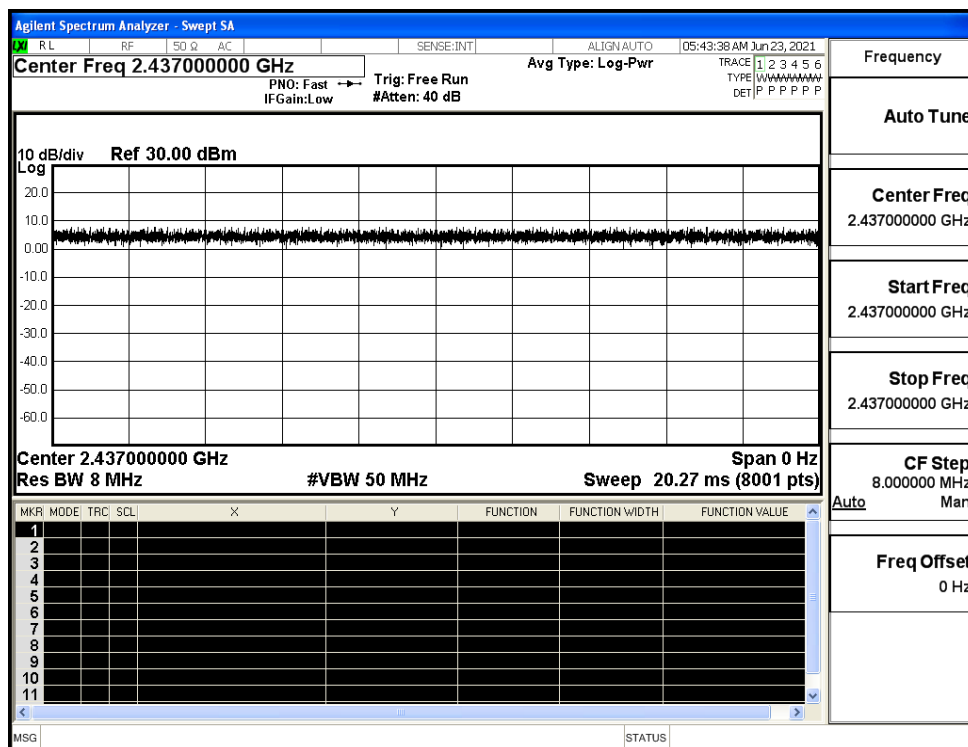
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1



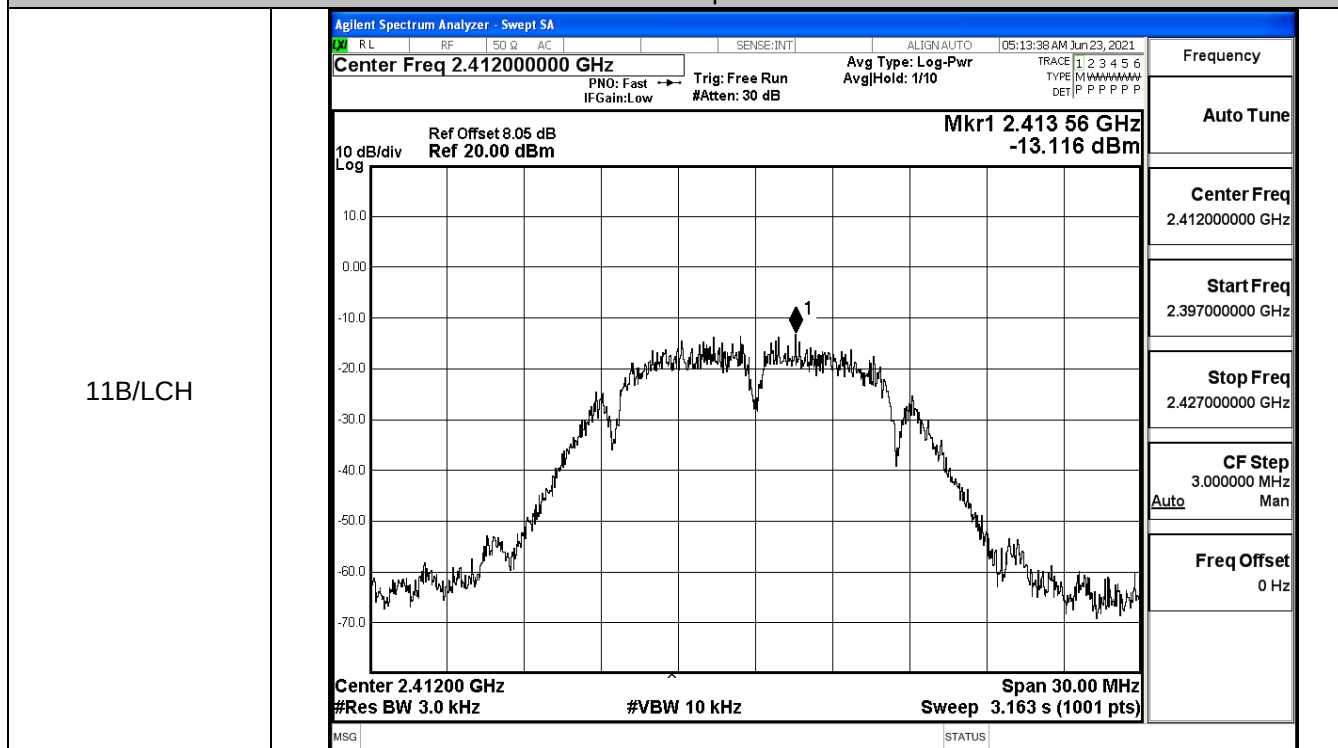
A.2 Maximum Peak Conducted Peak Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	13.13	30	PASS
	MCH	13.18	30	PASS
	HCH	12.58	30	PASS
11G	LCH	14.31	30	PASS
	MCH	16.4	30	PASS
	HCH	15.73	30	PASS
11N20SISO	LCH	14.16	30	PASS
	MCH	16.33	30	PASS
	HCH	15.96	30	PASS
11N40SISO	LCH	16.67	30	PASS
	MCH	16.39	30	PASS
	HCH	15.88	30	PASS

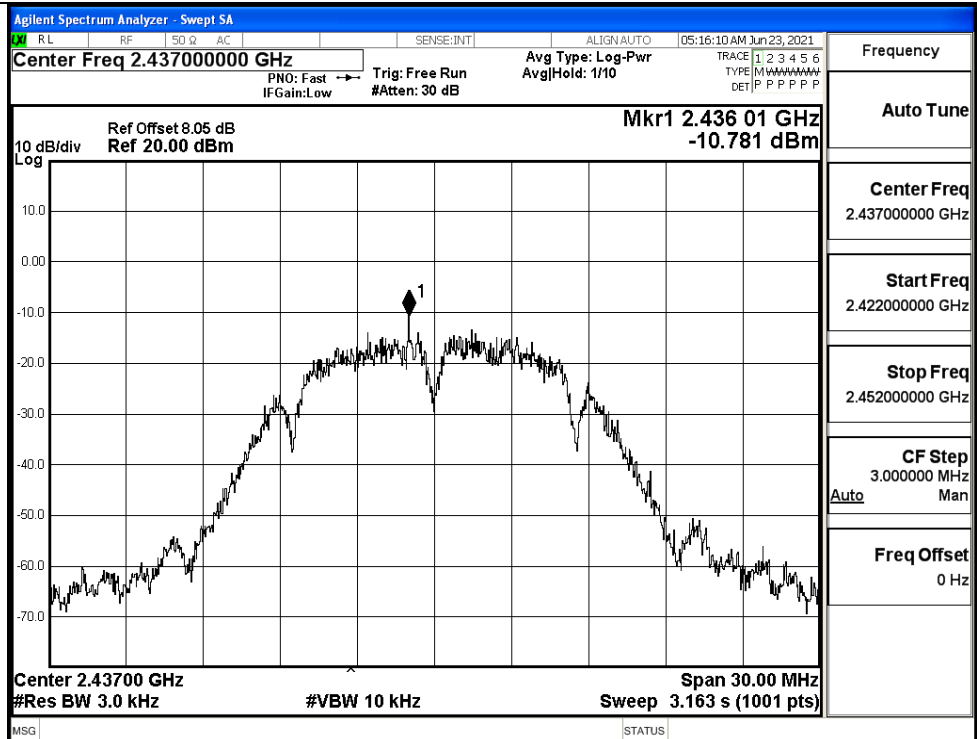
A.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-13.116	8	PASS
	MCH	-10.781	8	PASS
	HCH	-13.503	8	PASS
11G	LCH	-19.160	8	PASS
	MCH	-17.098	8	PASS
	HCH	-17.743	8	PASS
11N20SISO	LCH	-19.796	8	PASS
	MCH	-17.009	8	PASS
	HCH	-16.855	8	PASS
11N40SISO	LCH	-17.35	8	PASS
	MCH	-17.92	8	PASS
	HCH	-16.87	8	PASS

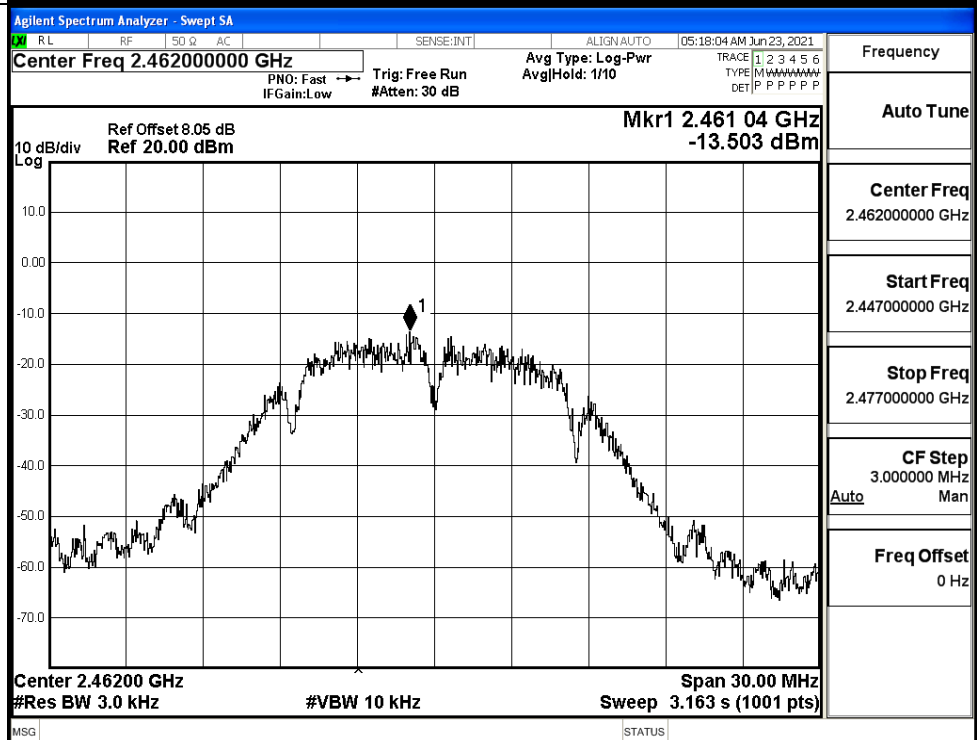
Test Graphs



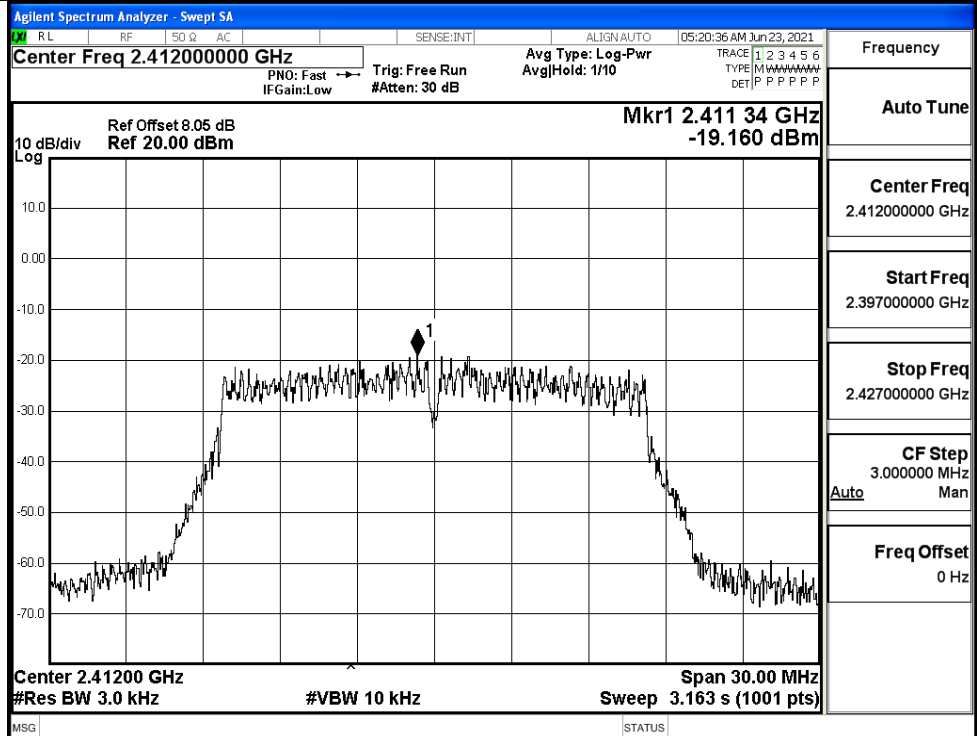
11B/MCH



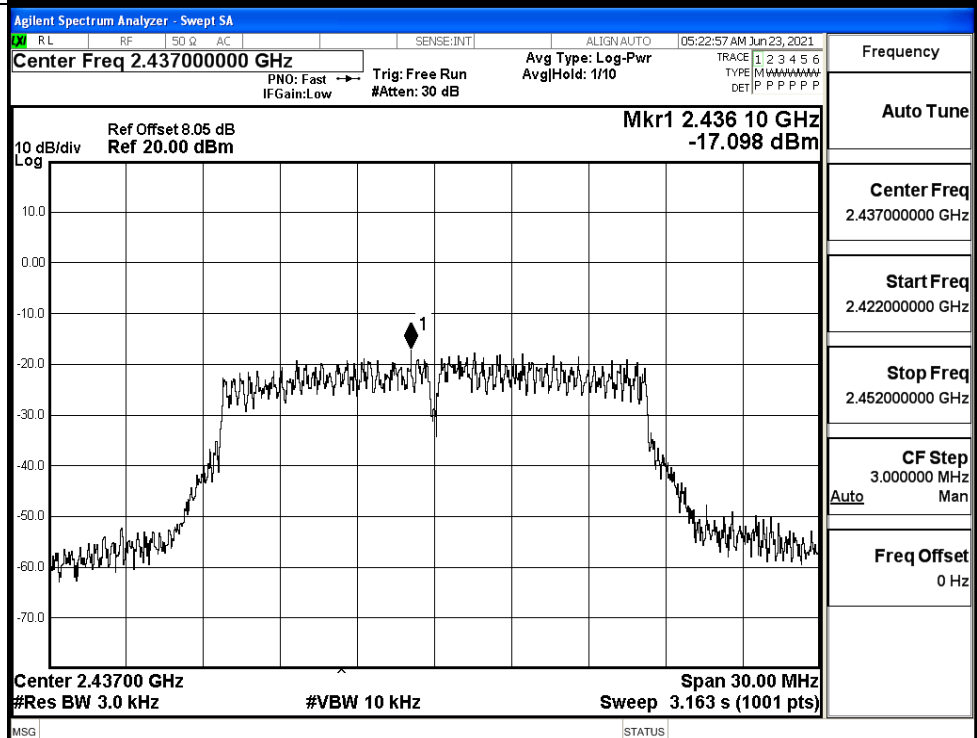
11B/HCH



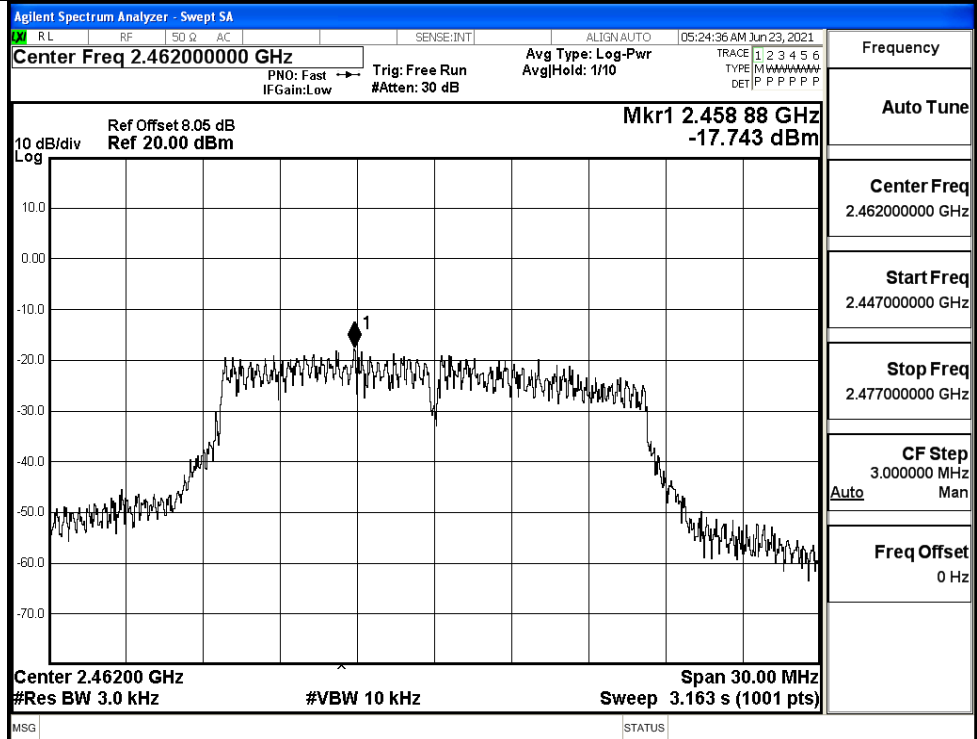
11G/LCH



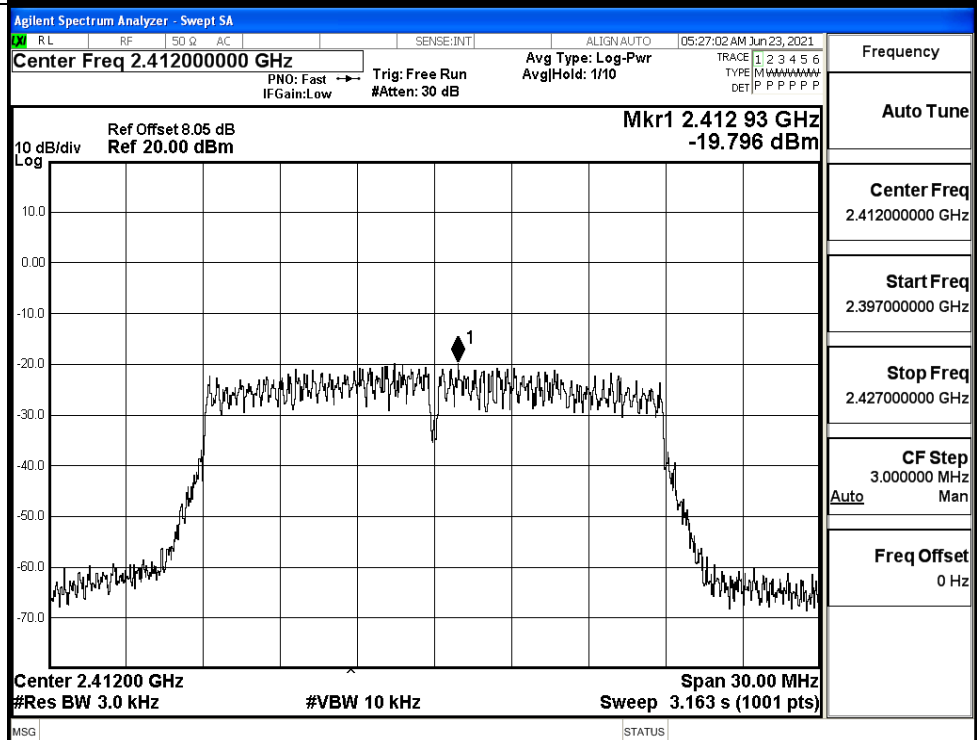
11G/MCH



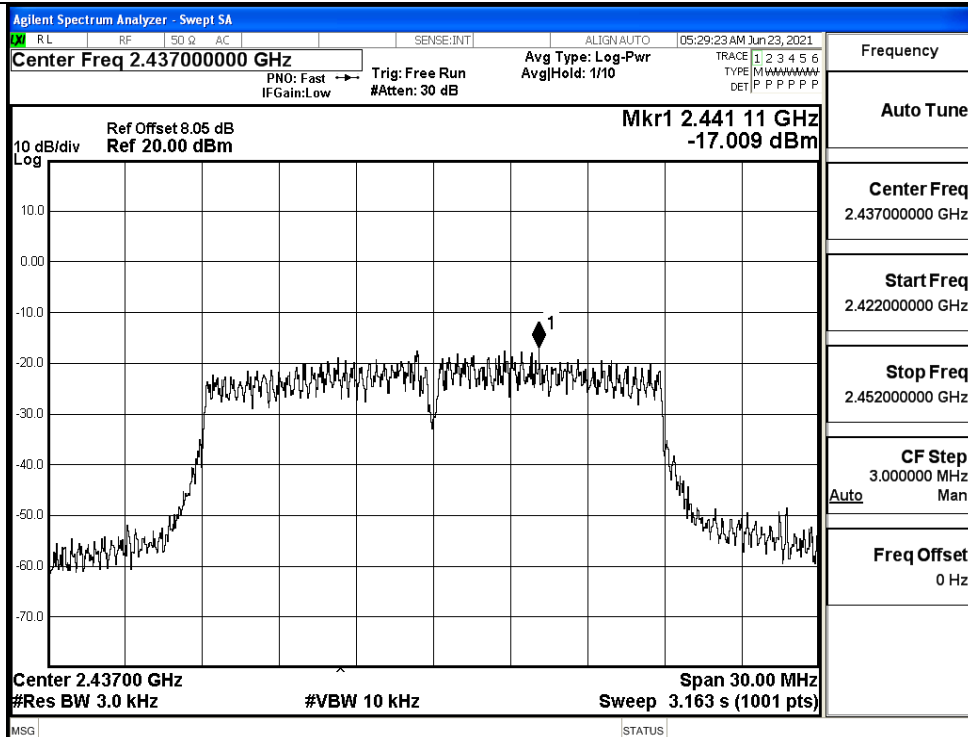
11G/HCH



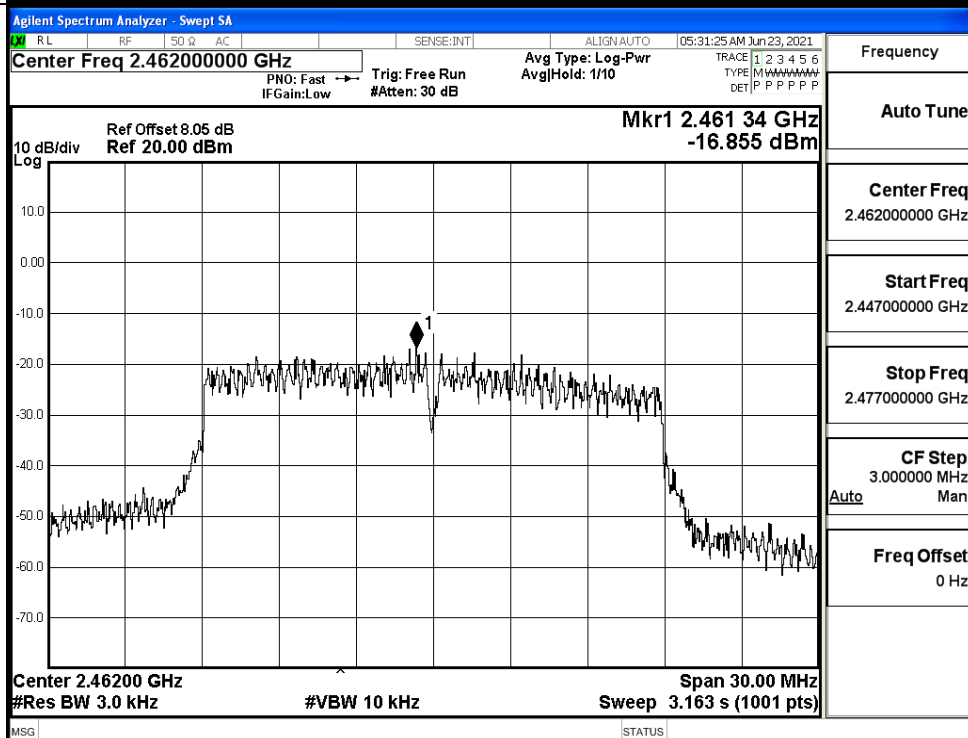
11N20SISO/LCH



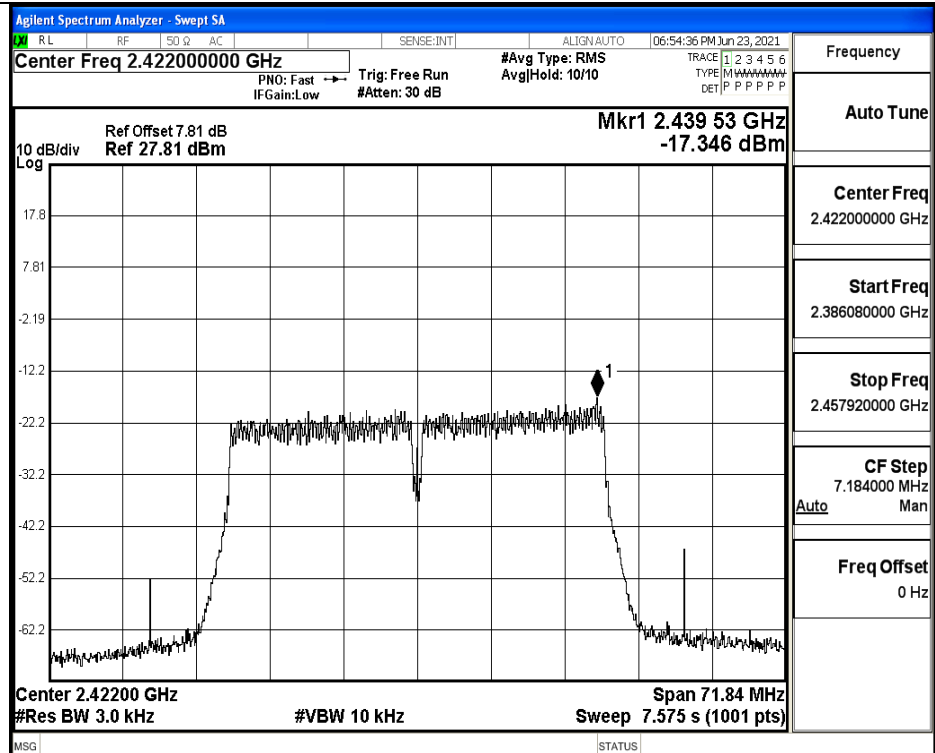
11N20SISO/MCH



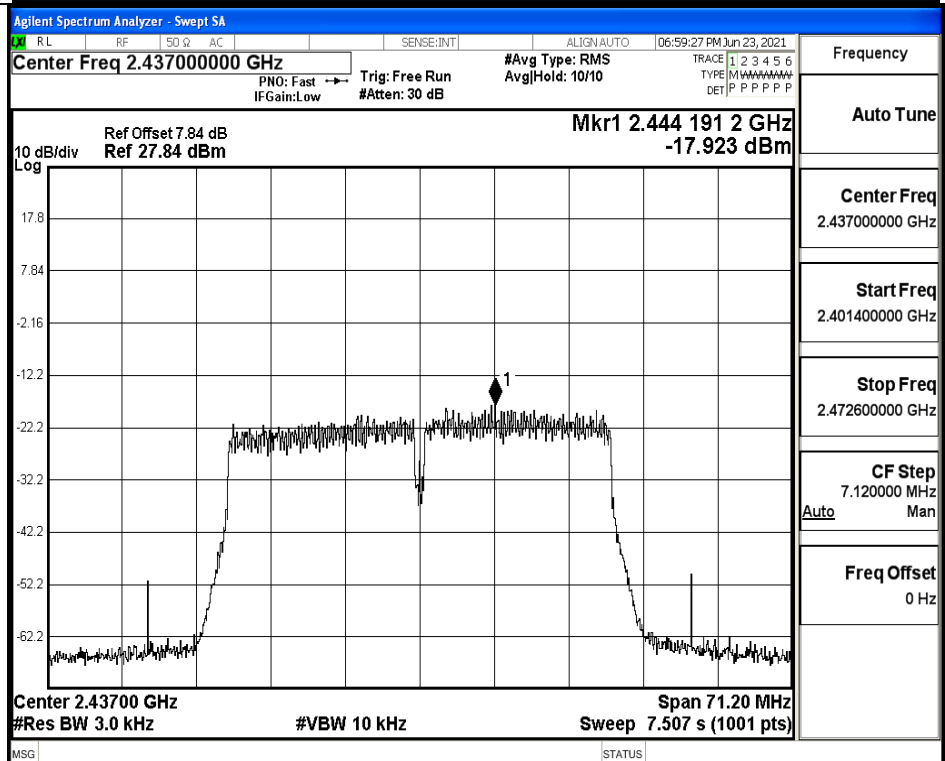
11N20SISO/HCH



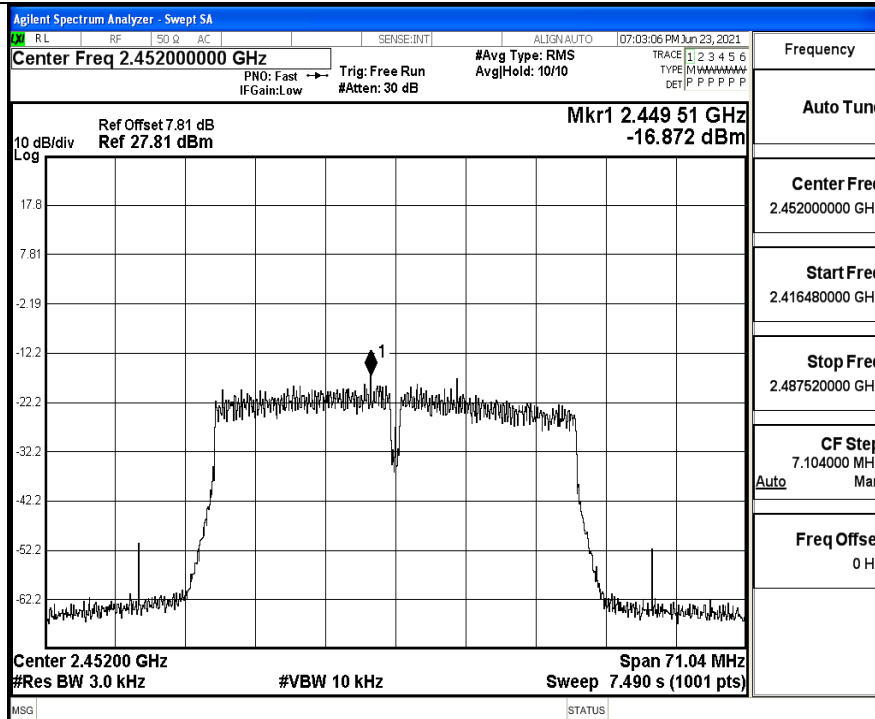
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

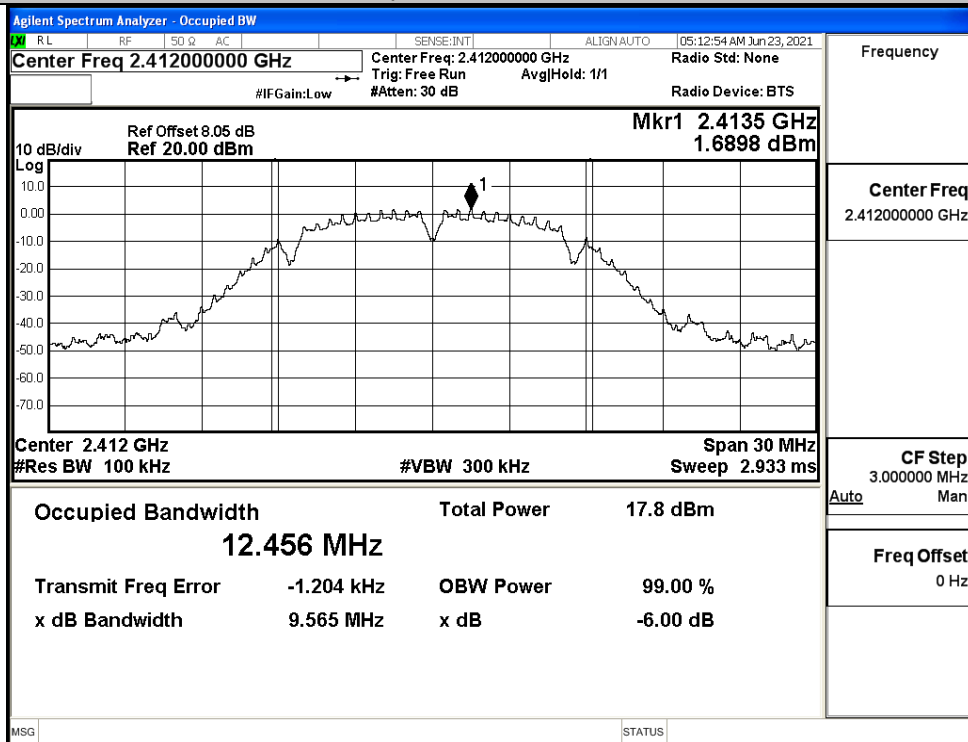


A.4 6dB Bandwidth

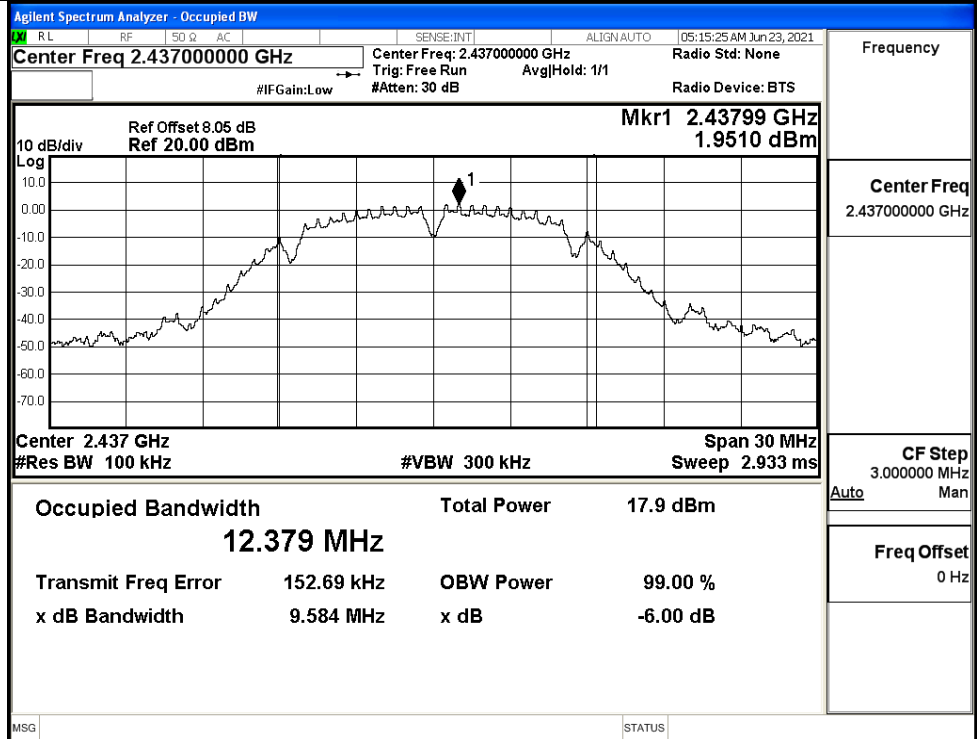
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.565	≥ 0.5	PASS
	MCH	9.584	≥ 0.5	PASS
	HCH	9.594	≥ 0.5	PASS
11G	LCH	15.15	≥ 0.5	PASS
	MCH	15.72	≥ 0.5	PASS
	HCH	15.73	≥ 0.5	PASS
11N20SISO	LCH	15.13	≥ 0.5	PASS
	MCH	16.00	≥ 0.5	PASS
	HCH	16.36	≥ 0.5	PASS
11N40SISO	LCH	36.08	≥ 0.5	PASS
	MCH	35.85	≥ 0.5	PASS
	HCH	35.81	≥ 0.5	PASS

Test Graphs

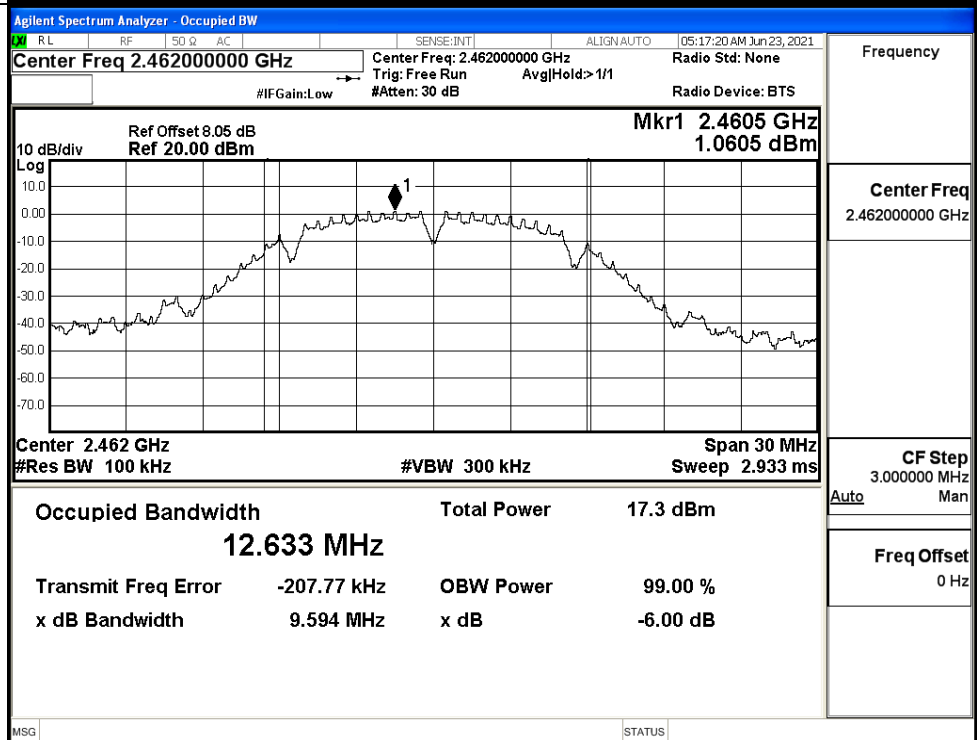
11B/LCH



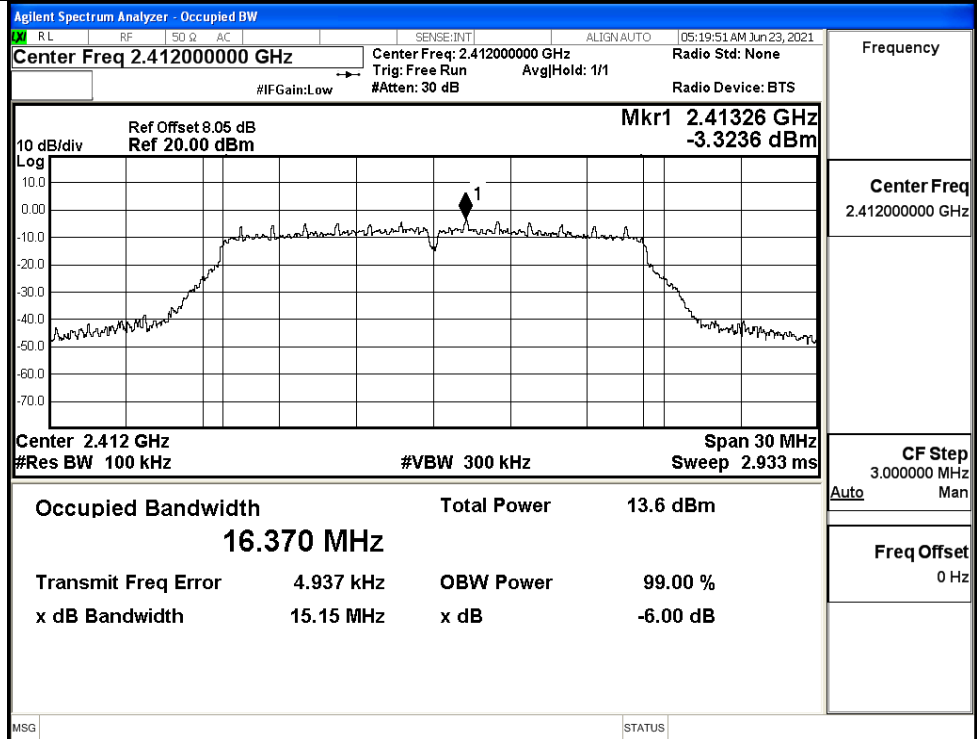
11B/MCH



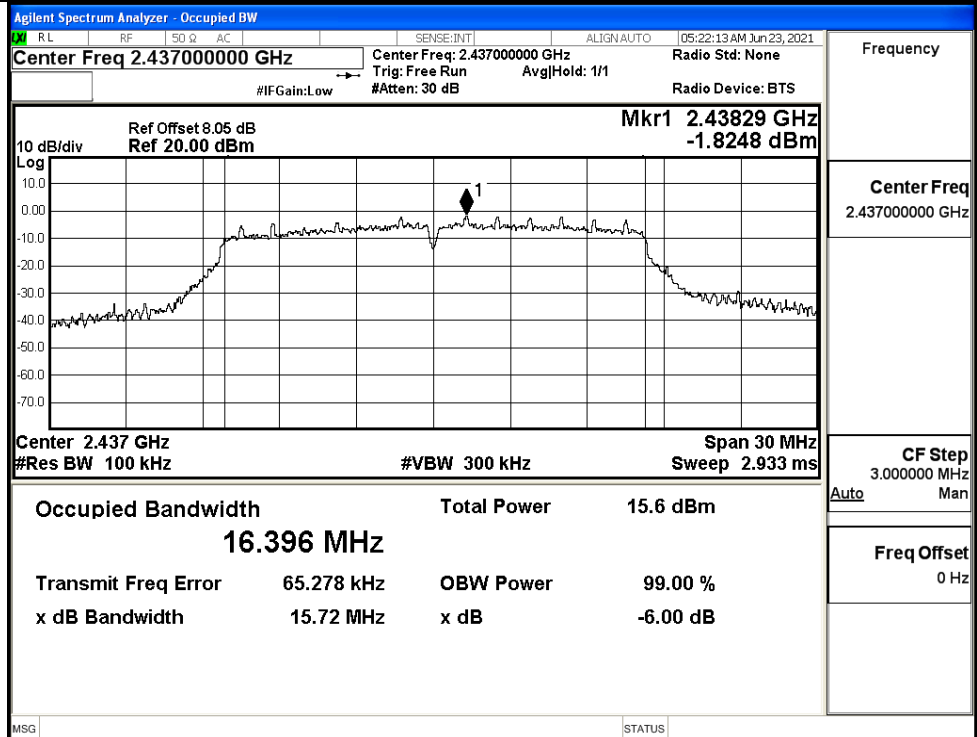
11B/HCH



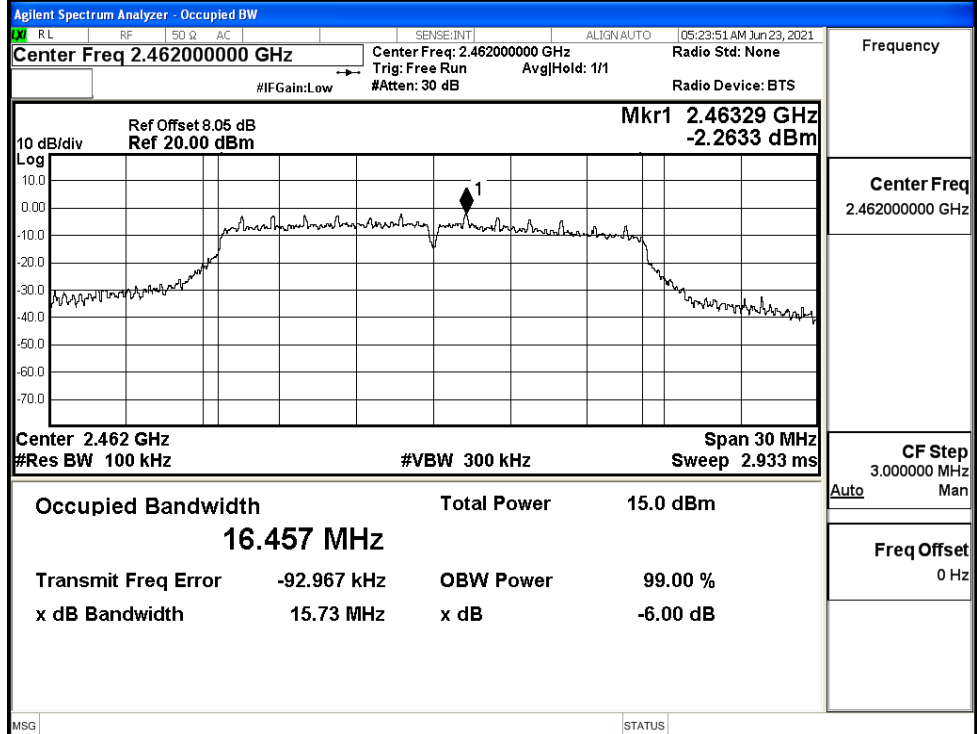
11G/LCH



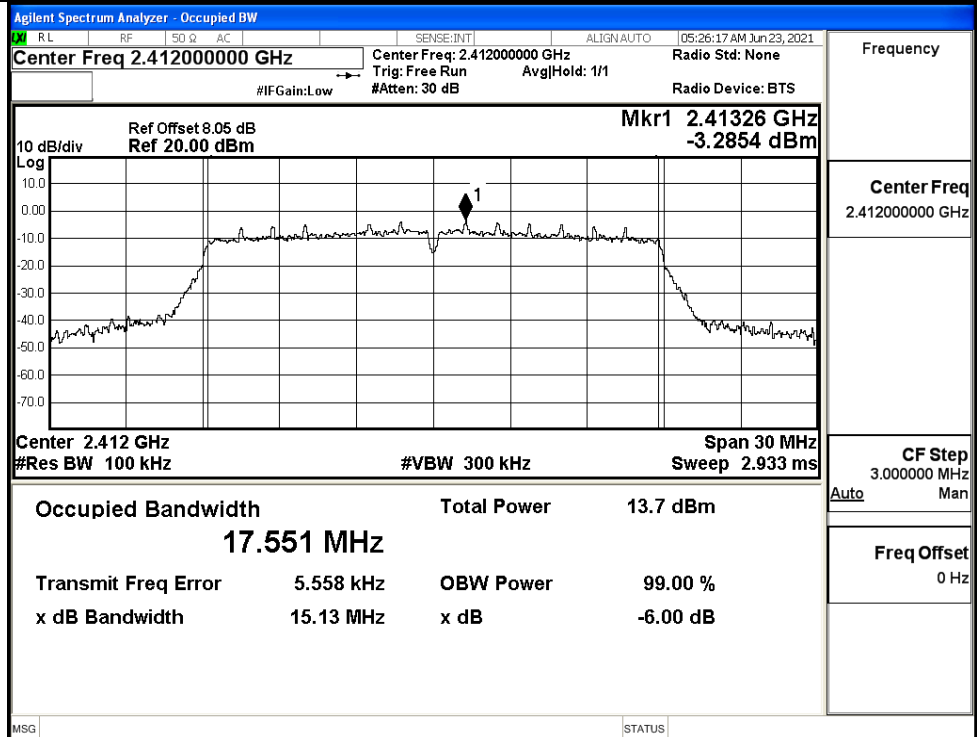
11G/MCH



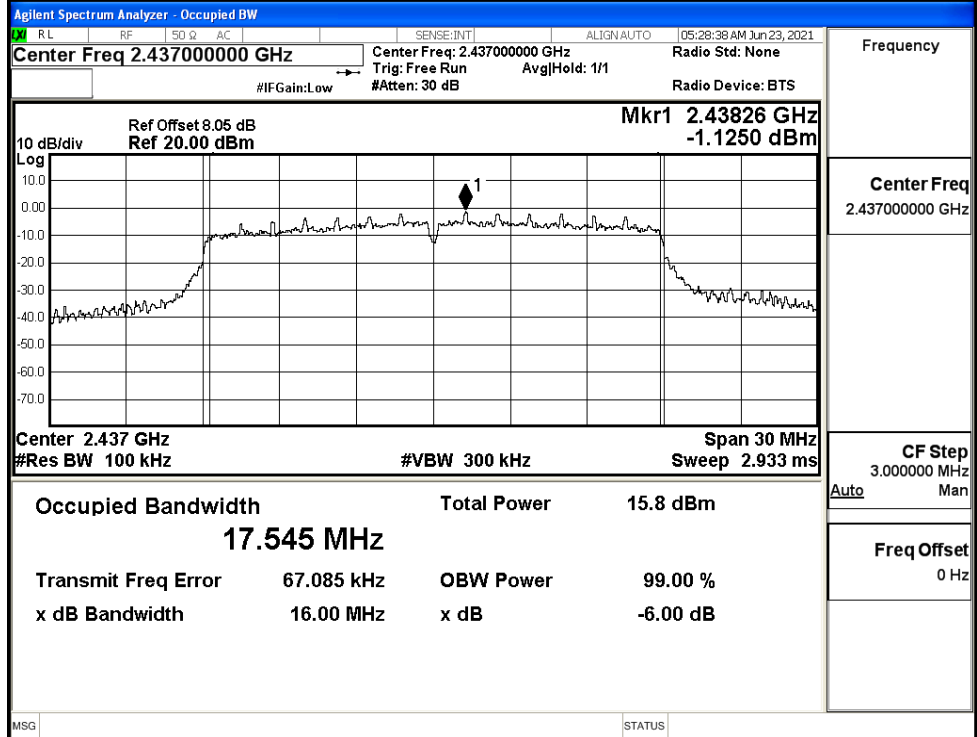
11G/HCH



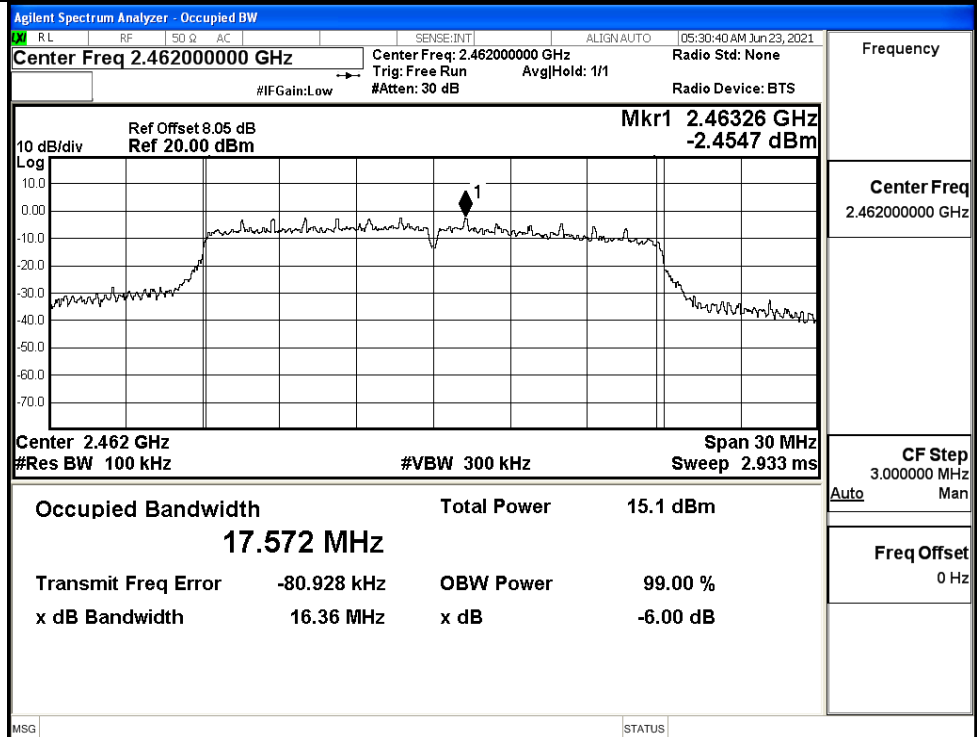
11N20SISO/LCH



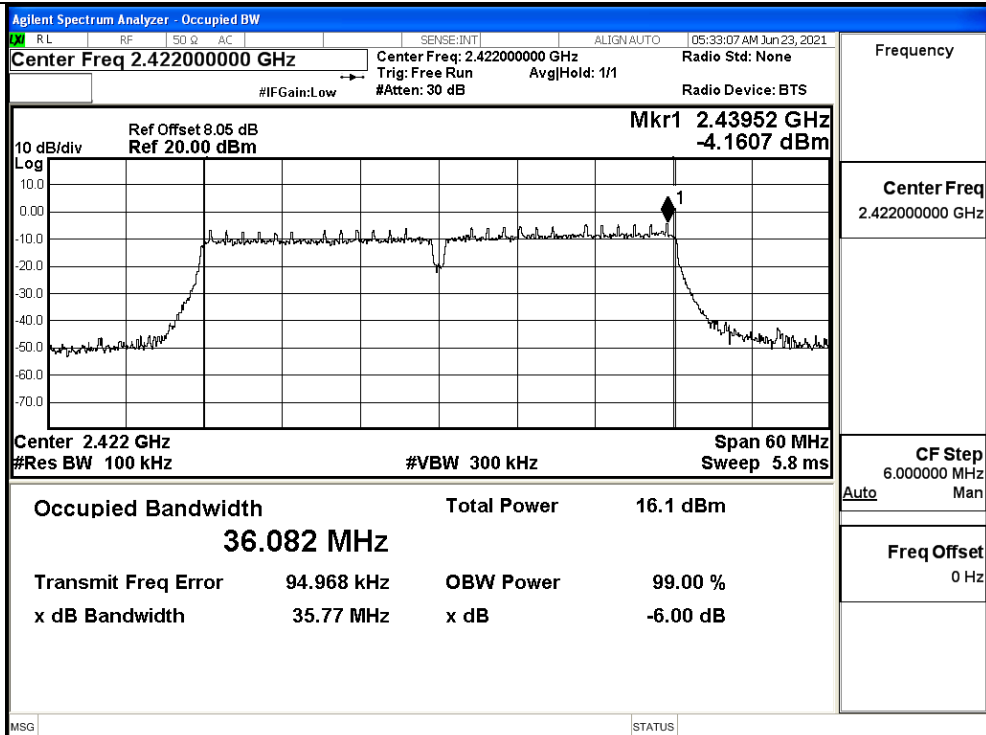
11N20SISO/MCH



11N20SISO/HCH



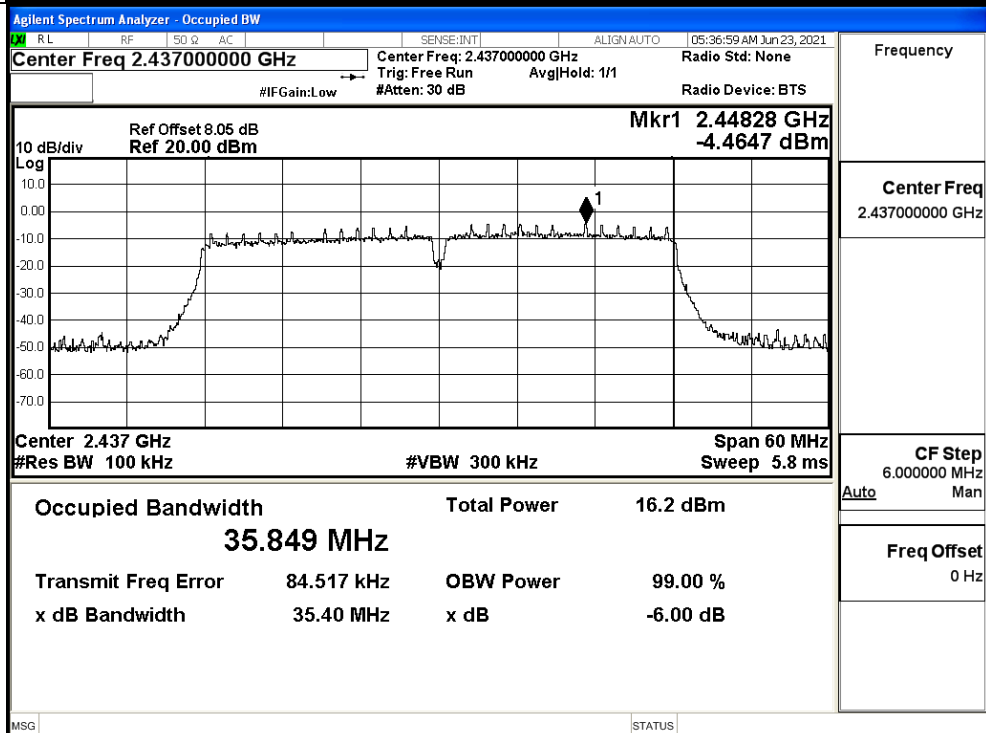
11N40SISO/LCH



Frequency

Center Freq
2.422000000 GHzCF Step
6.000000 MHz
Auto ManFreq Offset
0 Hz

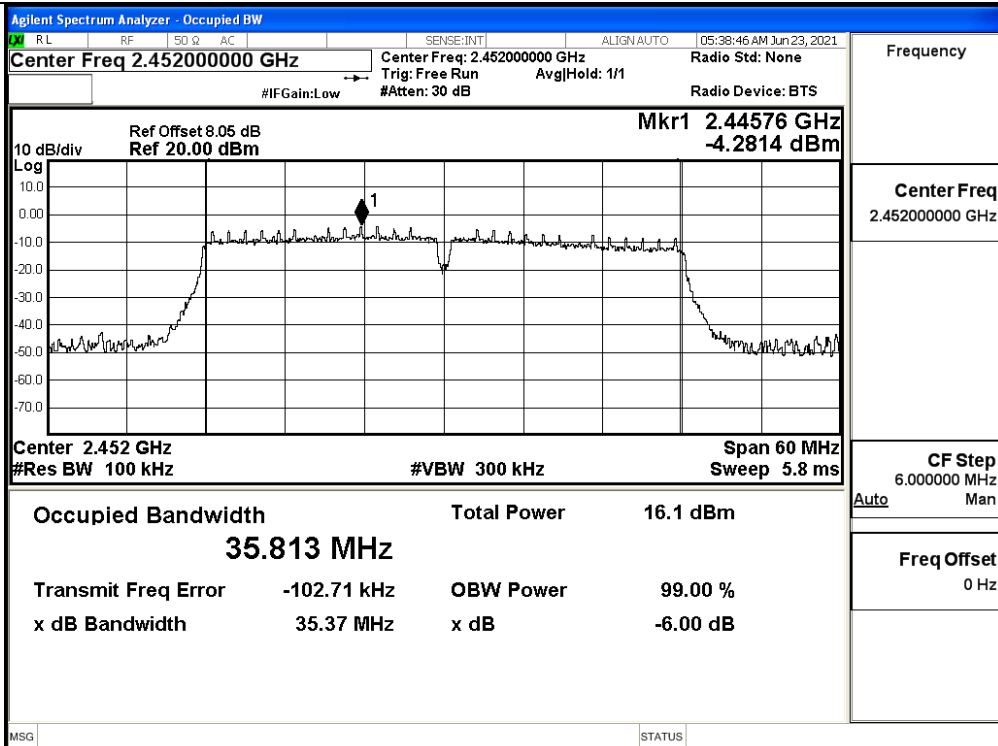
11N40SISO/MCH



Frequency

Center Freq
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6.000000 MHz
Auto ManFreq Offset
0 Hz

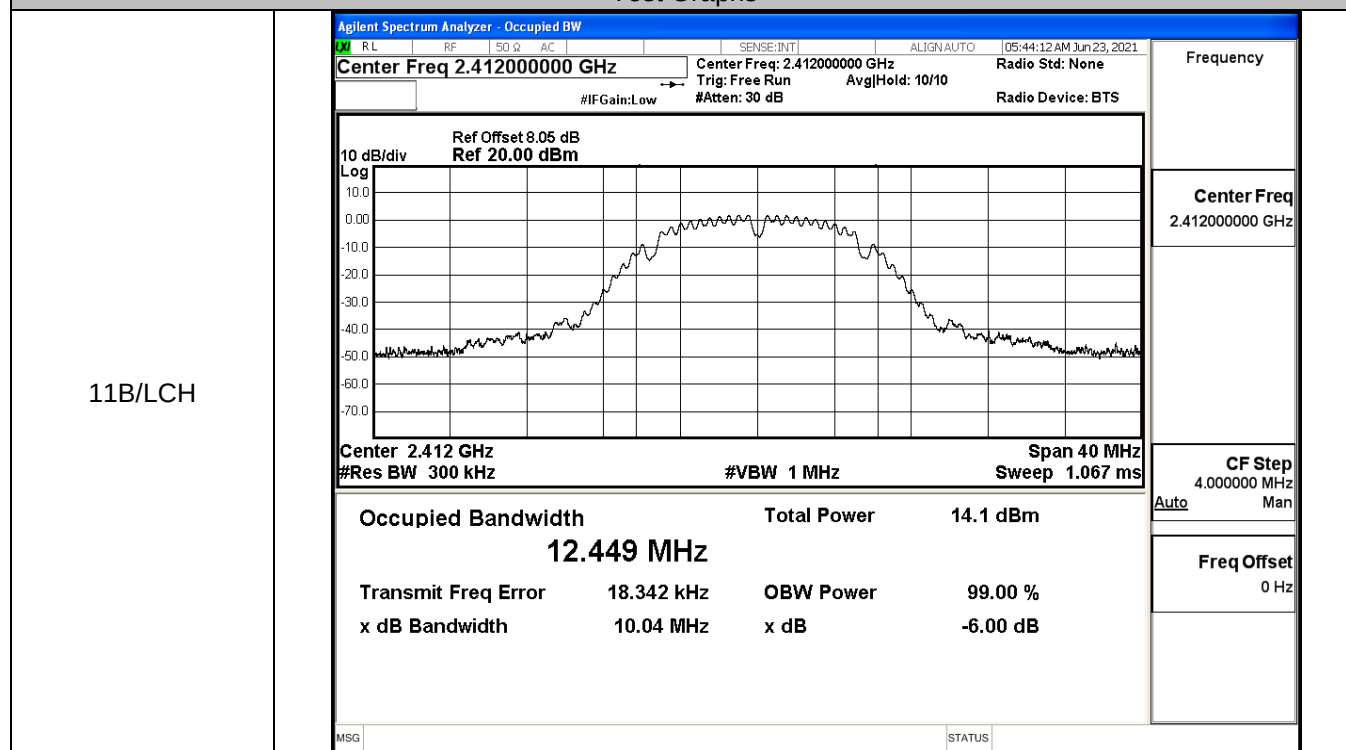
11N40SISO/HCH



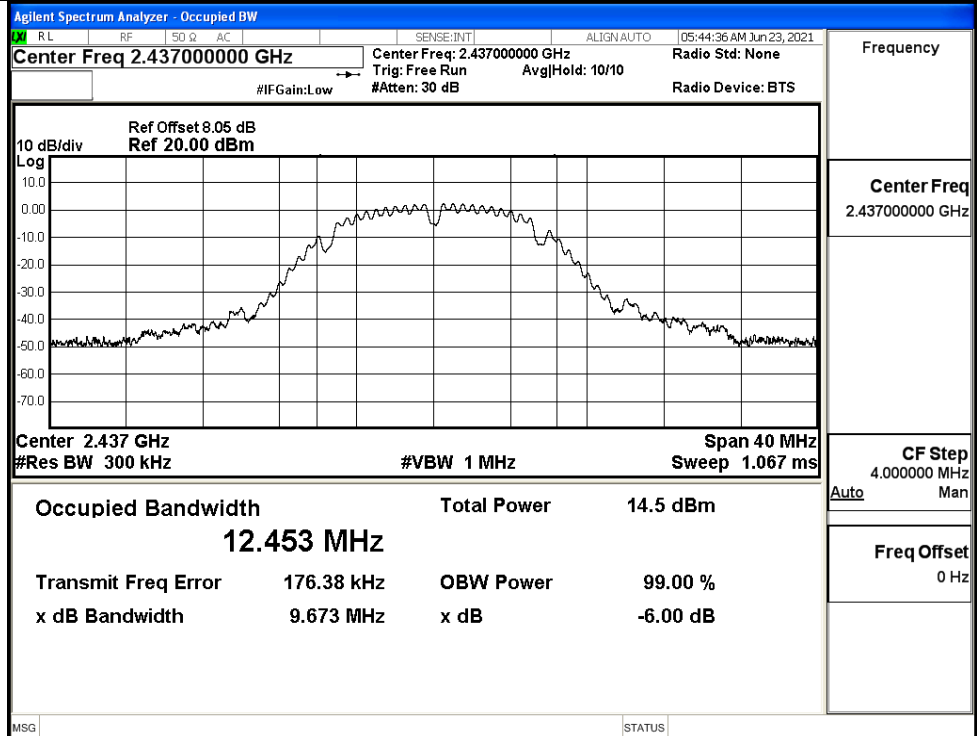
A.5 Occupied Bandwidth

Mode	Channel	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	12.449	≥ 0.5	PASS
	MCH	12.453	≥ 0.5	PASS
	HCH	12.710	≥ 0.5	PASS
11G	LCH	16.689	≥ 0.5	PASS
	MCH	16.730	≥ 0.5	PASS
	HCH	16.917	≥ 0.5	PASS
11N20SISO	LCH	17.656	≥ 0.5	PASS
	MCH	17.690	≥ 0.5	PASS
	HCH	17.813	≥ 0.5	PASS
11N40SISO	LCH	34.581	≥ 0.5	PASS
	MCH	34.643	≥ 0.5	PASS
	HCH	34.536	≥ 0.5	PASS

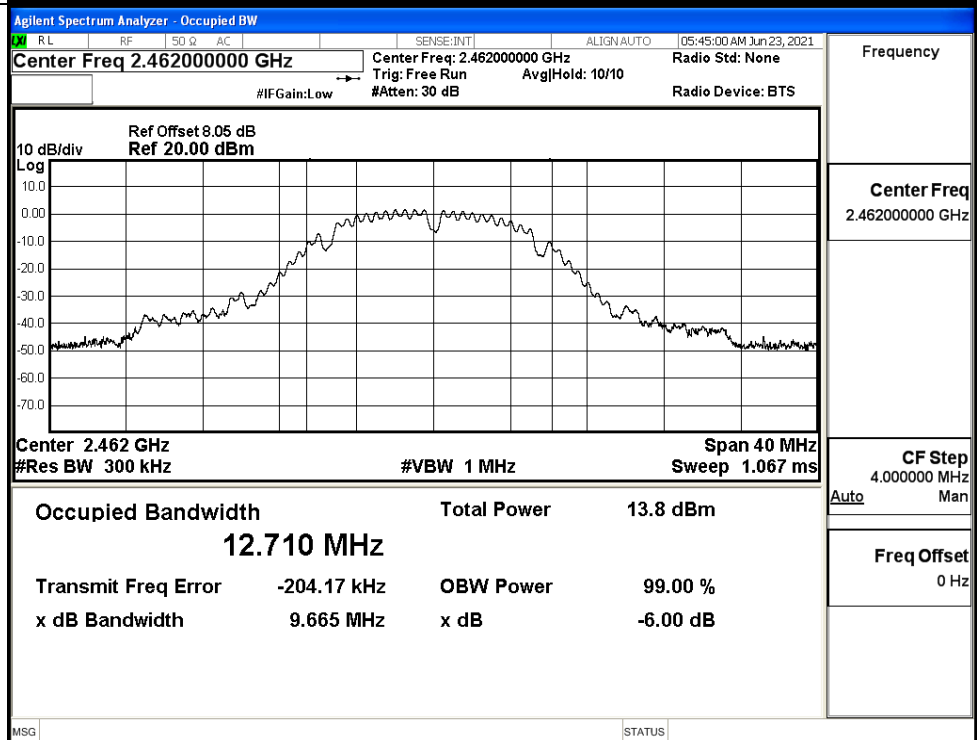
Test Graphs



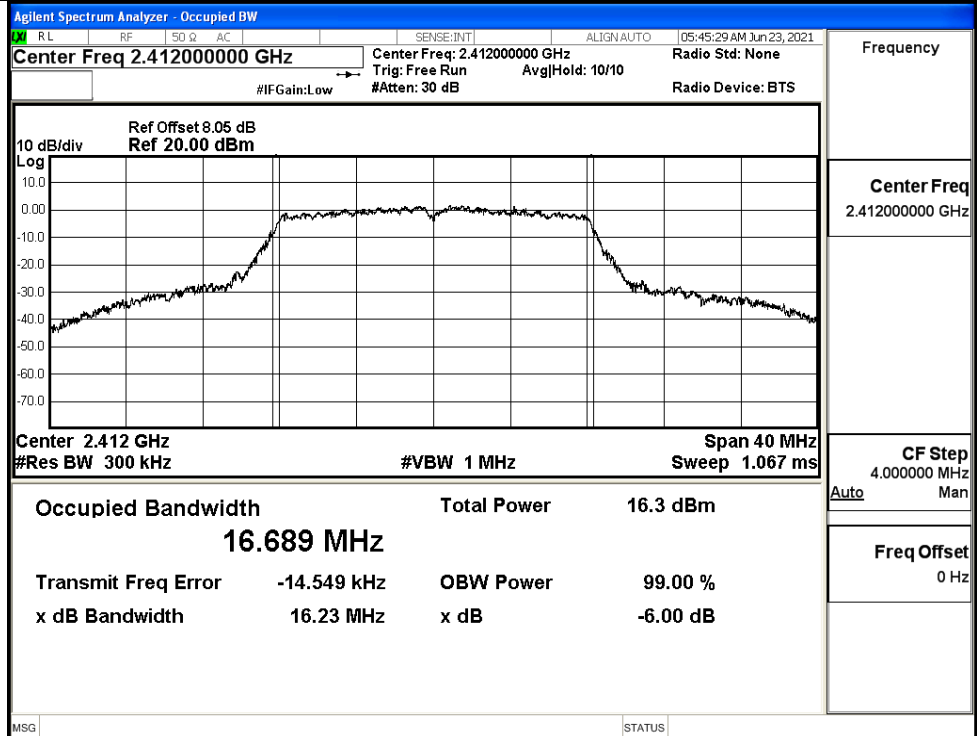
11B/MCH



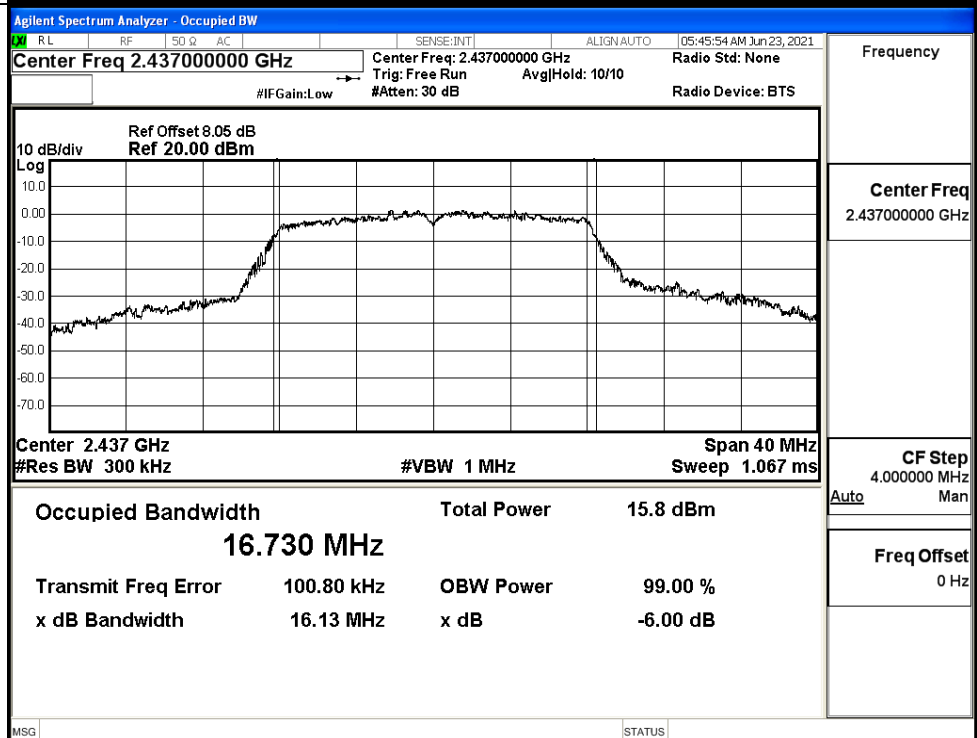
11B/HCH



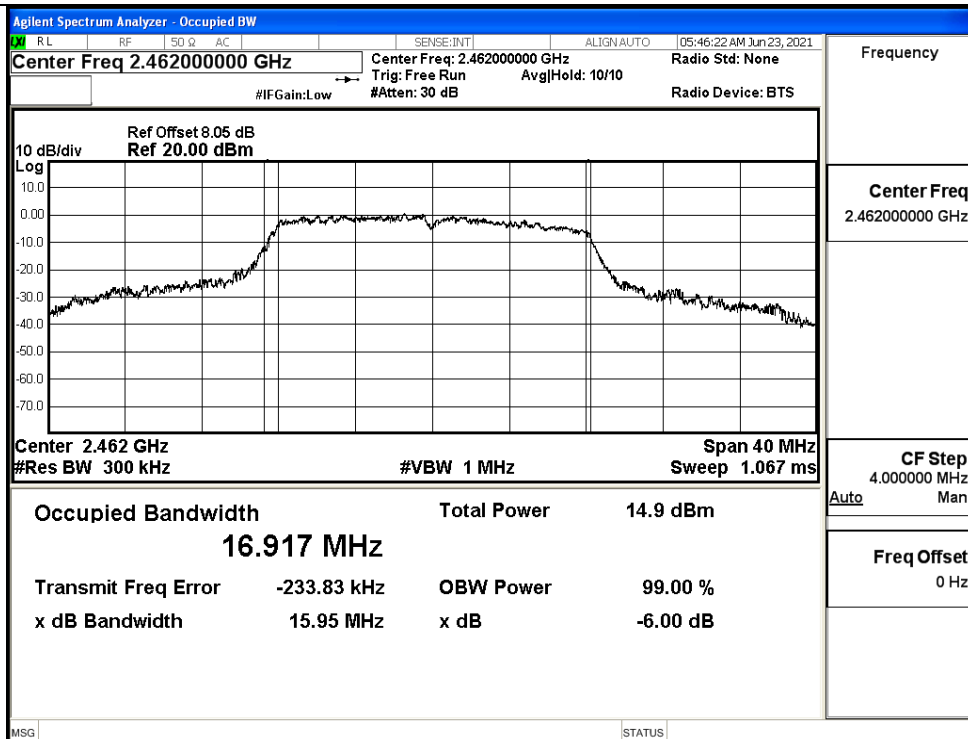
11G/LCH



11G/MCH



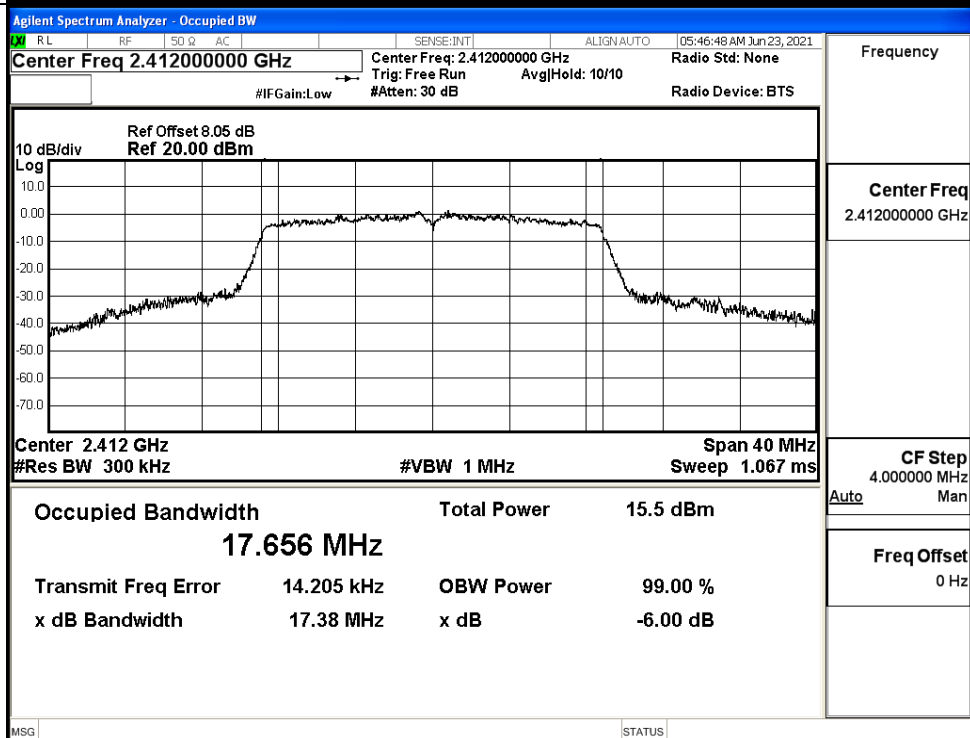
11G/HCH



Frequency

Center Freq
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4.000000 MHz
Auto ManFreq Offset
0 Hz

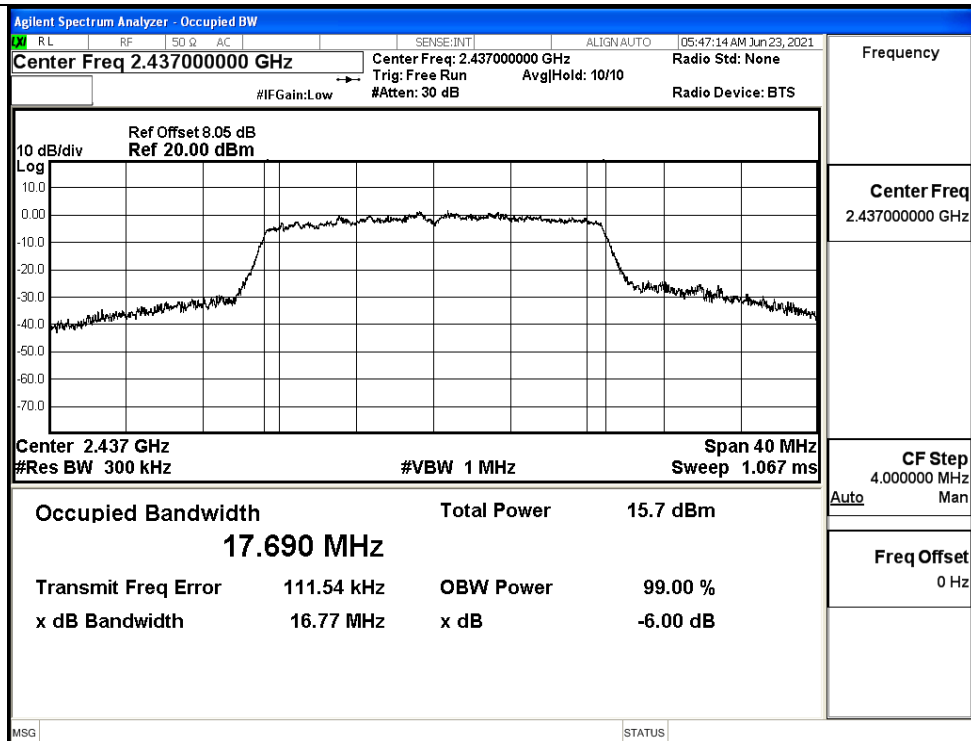
11N20SISO/LCH



Frequency

Center Freq
2.412000000 GHzCF Step
4.000000 MHz
Auto ManFreq Offset
0 Hz

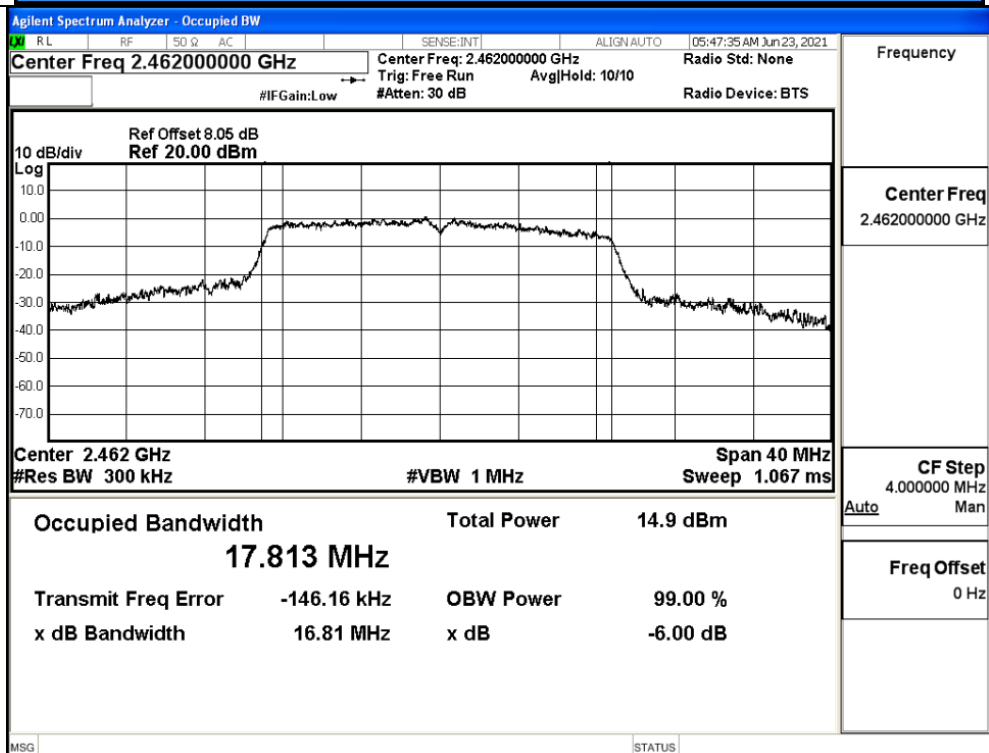
11N20SISO/MCH



Frequency

Center Freq
2.437000000 GHzCF Step
4.000000 MHz
Auto ManFreq Offset
0 Hz

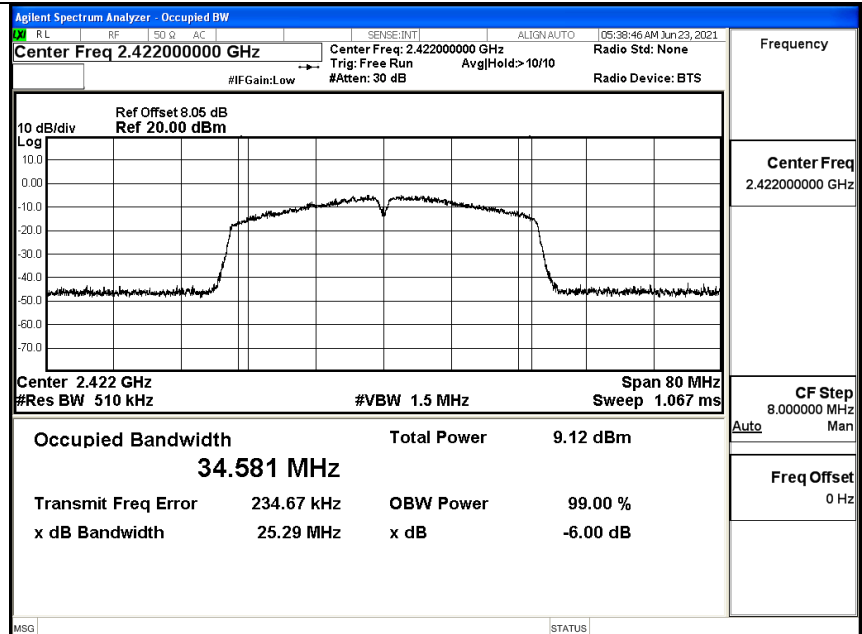
11N20SISO/HCH



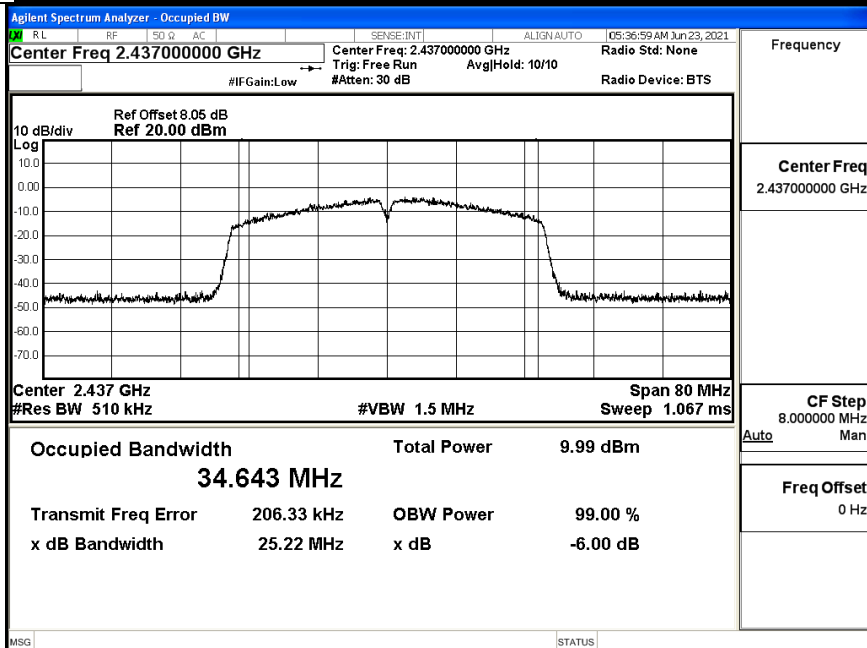
Frequency

Center Freq
2.462000000 GHzCF Step
4.000000 MHz
Auto ManFreq Offset
0 Hz

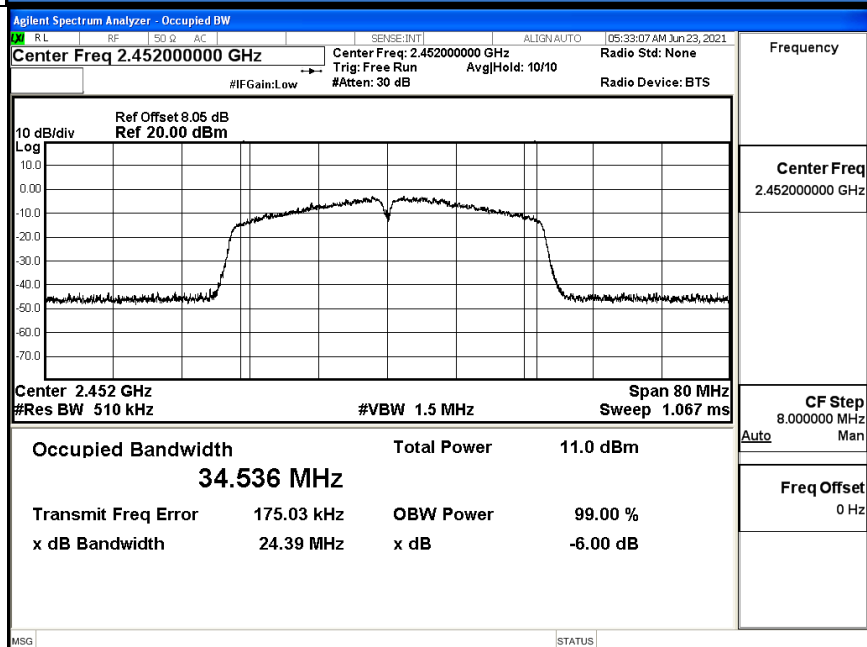
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

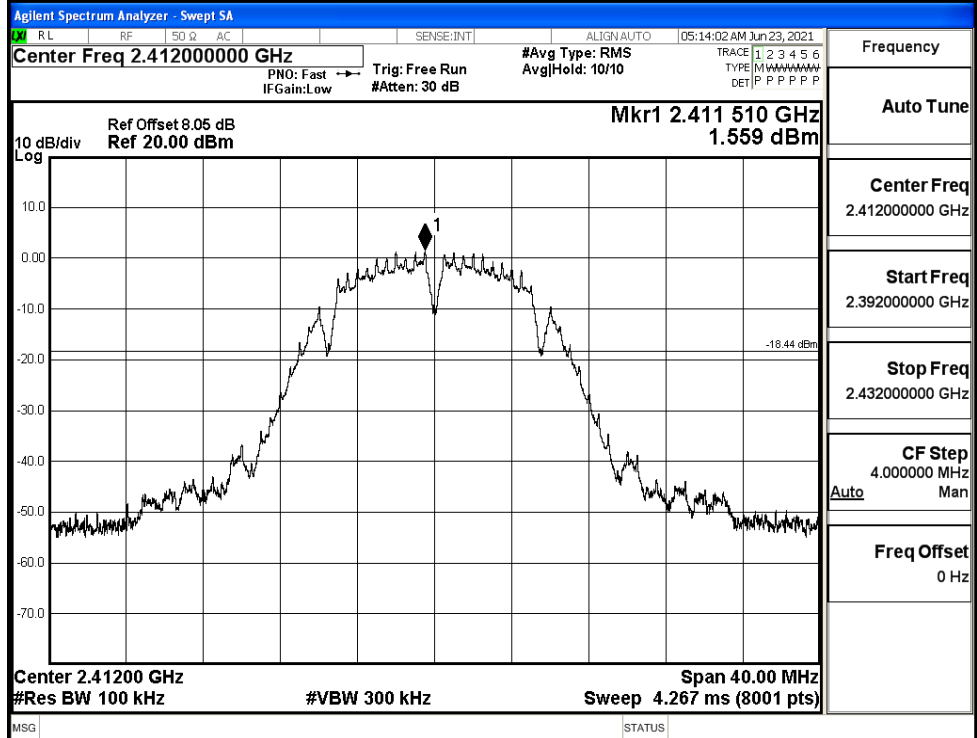


A.6 RF Conducted Spurious Emissions

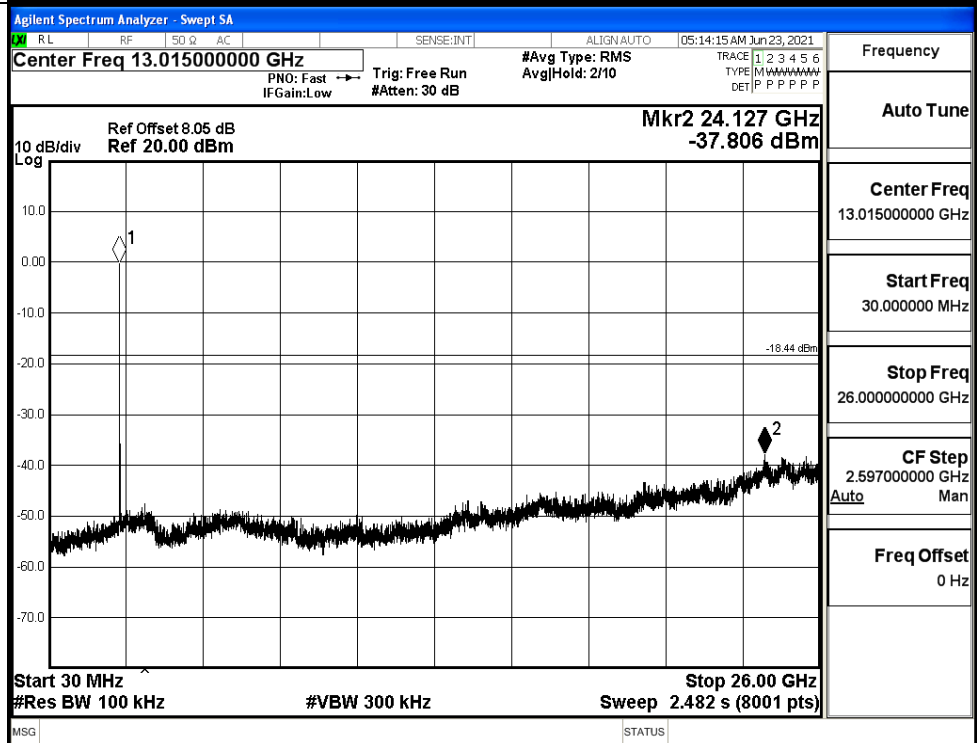
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	1.559	-37.806	-18.441	PASS
	MCH	1.97	-37.866	-18.030	PASS
	HCH	1.005	-37.660	-18.995	PASS
11G	LCH	-4.497	-37.760	-24.497	PASS
	MCH	-2.055	-38.202	-22.055	PASS
	HCH	-2.475	-38.297	-22.475	PASS
11N20 SISO	LCH	-4.034	-38.183	-24.034	PASS
	MCH	-1.243	-38.211	-21.243	PASS
	HCH	-2.275	-37.737	-22.275	PASS
11N40 SISO	LCH	-4.24	-46.67	-24.24	PASS
	MCH	-4.47	-47.64	-24.47	PASS
	HCH	-4.20	-47.97	-24.2	PASS

11B LCH Graphs

Pref/11B/LCH

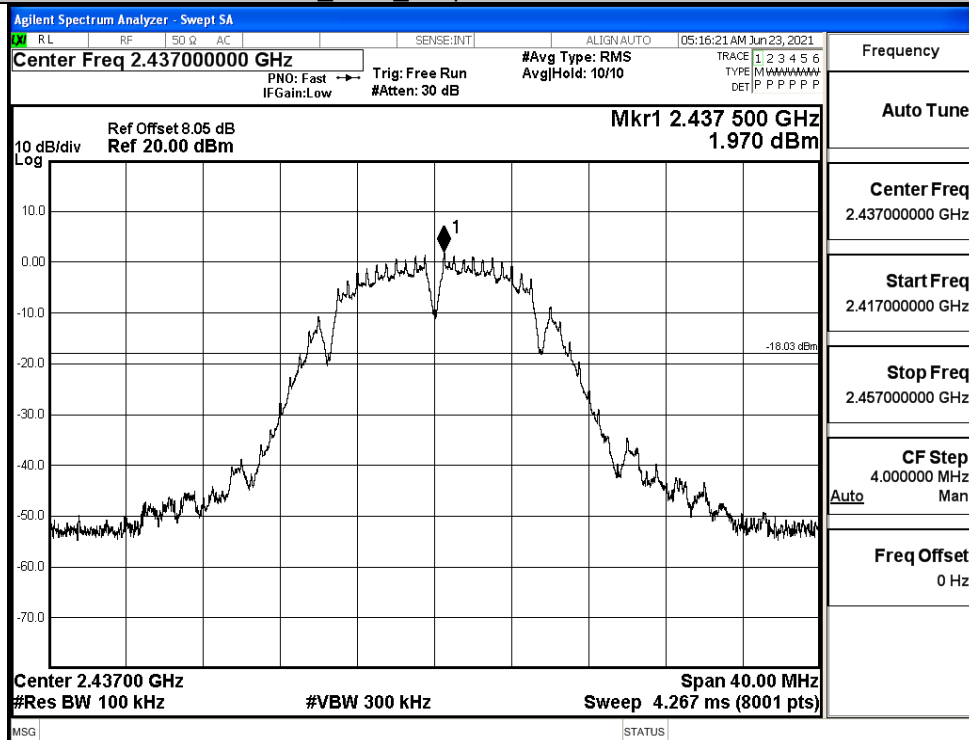


Puw/11B/LCH

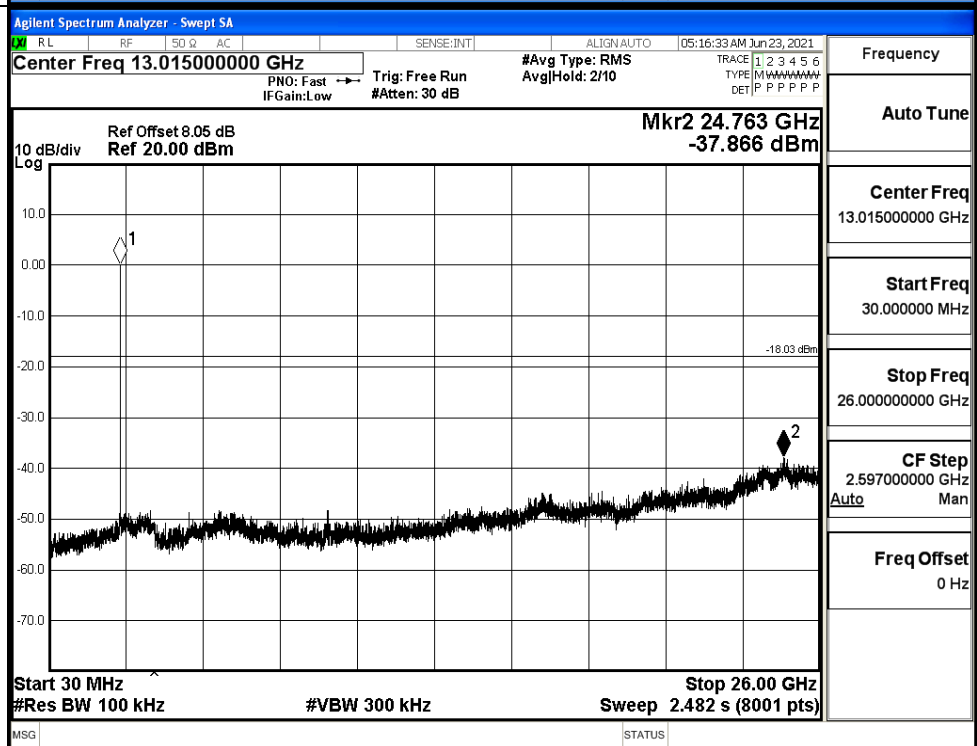


11B MCH Graphs

Pref/11B/MCH

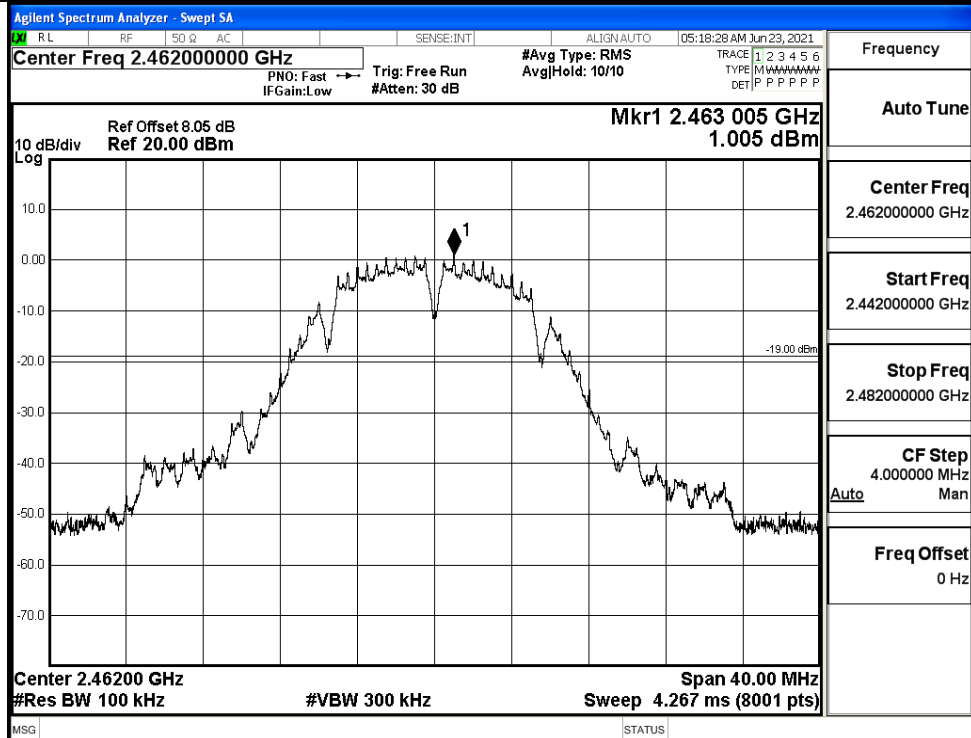


Puw/11B/MCH

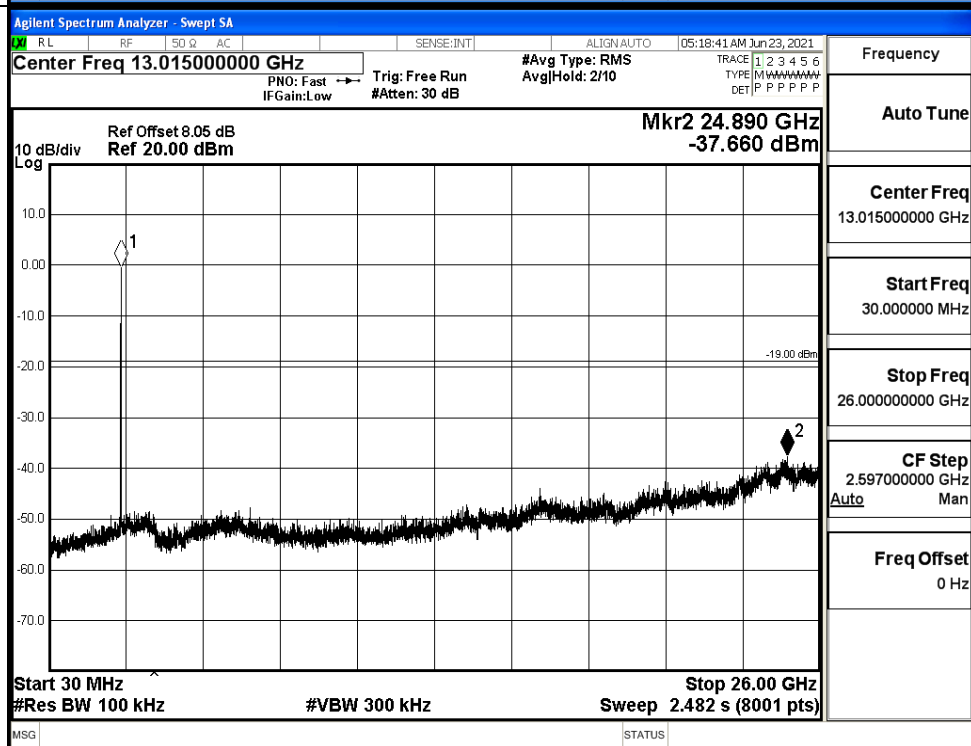


11B HCH Graphs

Pref/11B/HCH

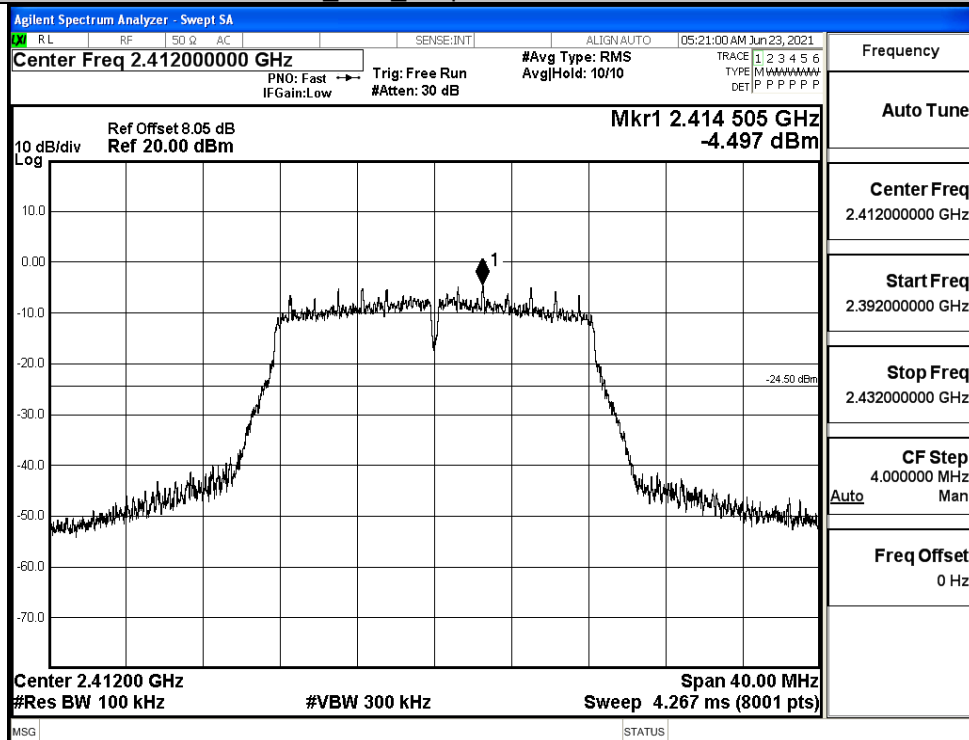


Puw/11B/HCH

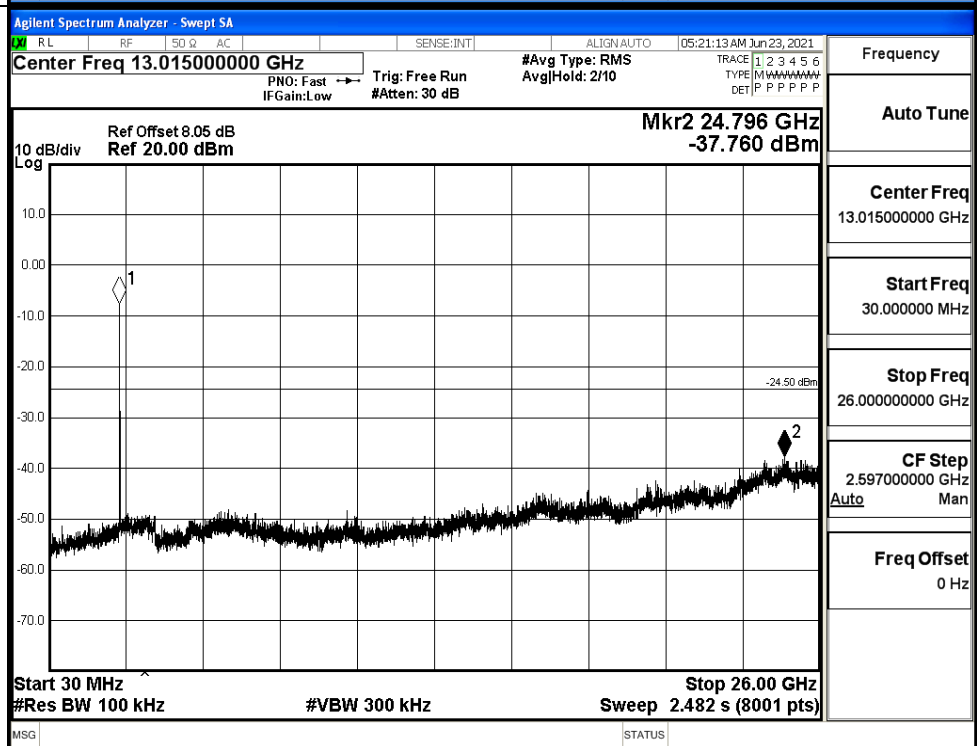


11G LCH Graphs

Pref/11G/LCH

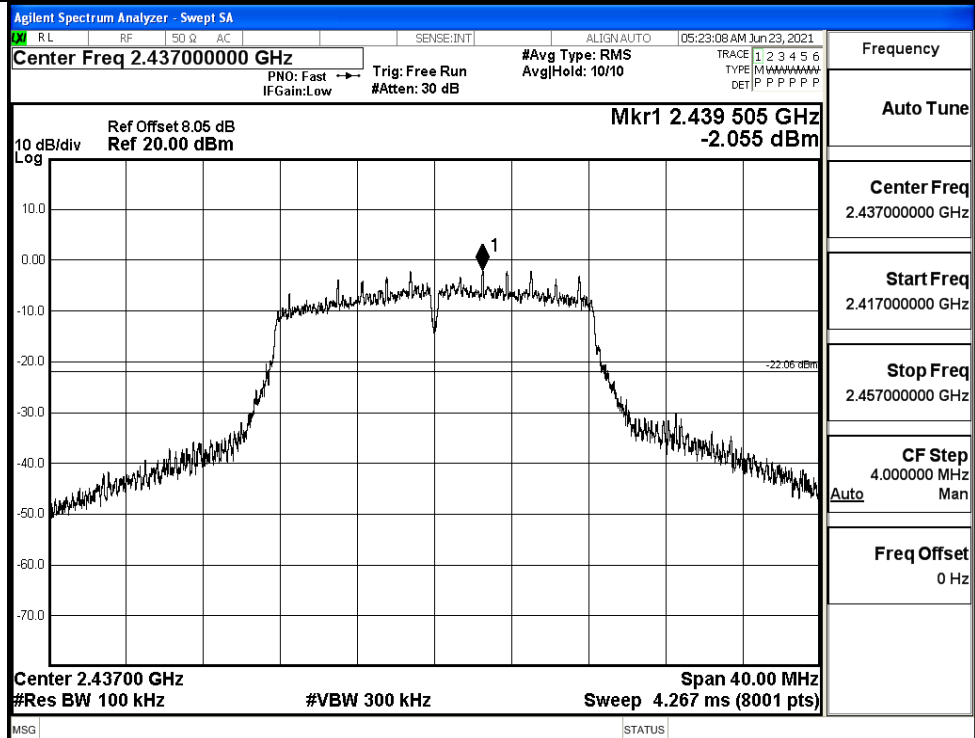


Puw/11G/LCH

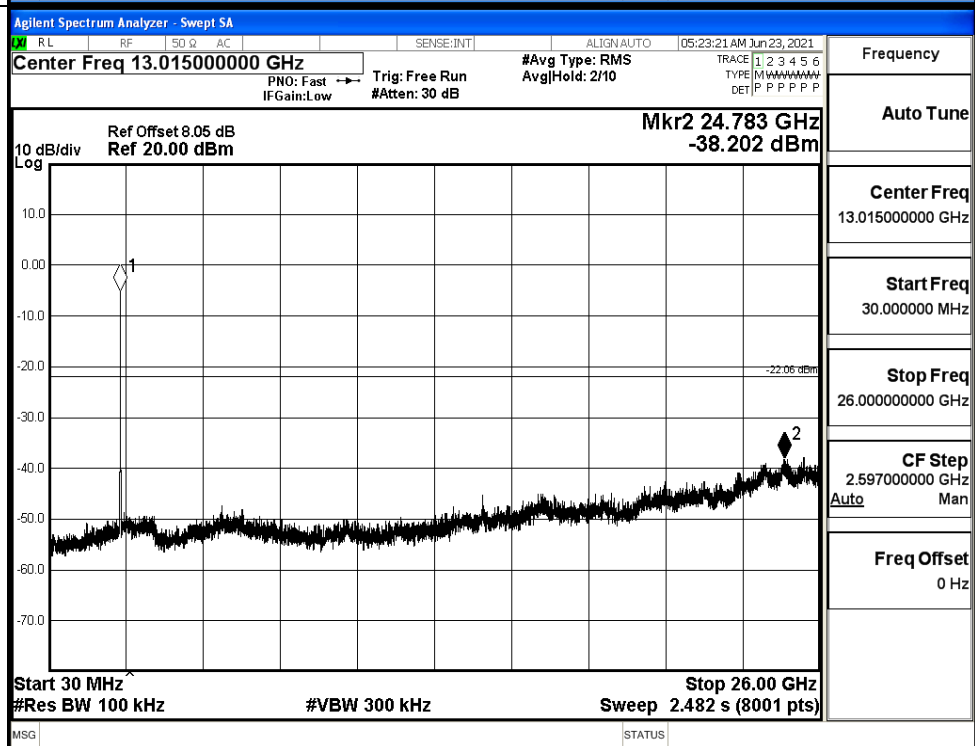


11G MCH Graphs

Pref/11G/MCH

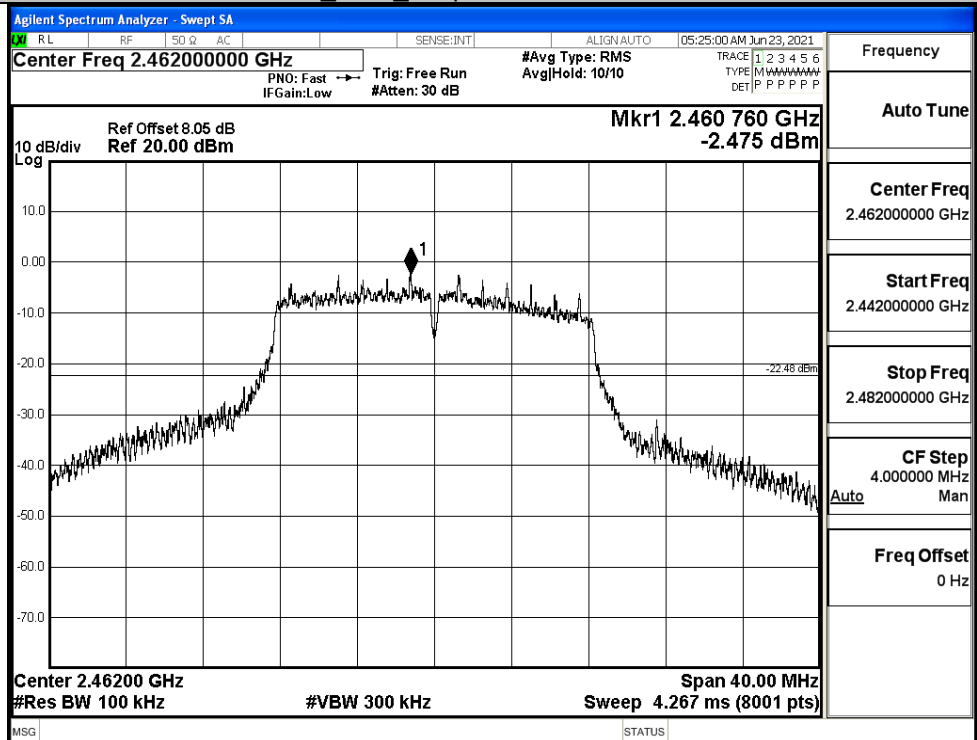


Puw/11G/MCH

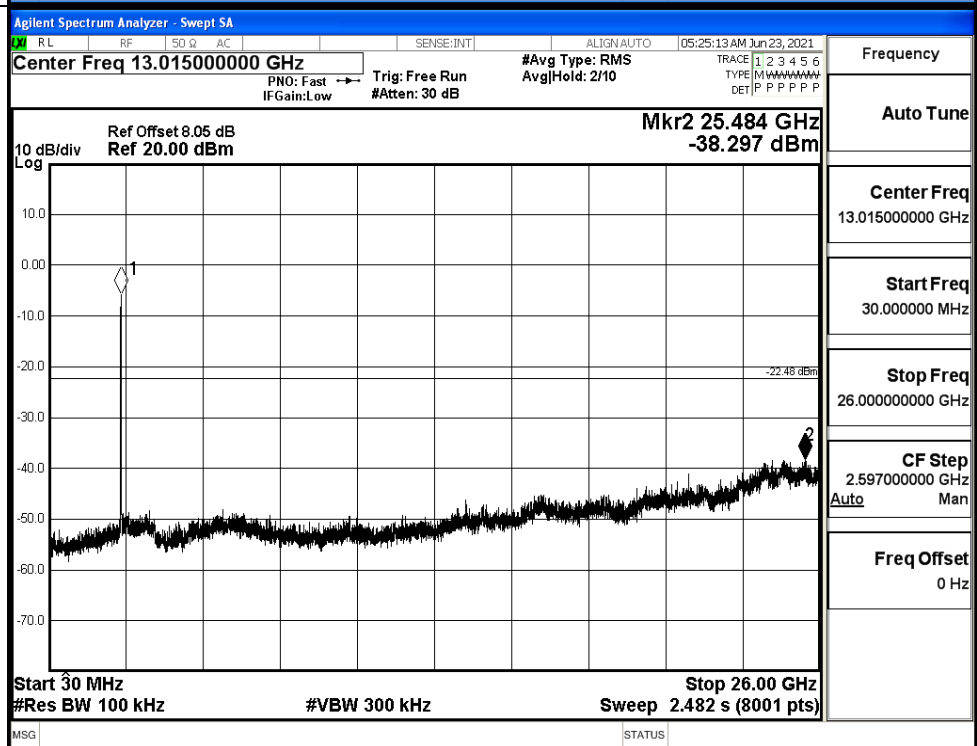


11G HCH Graphs

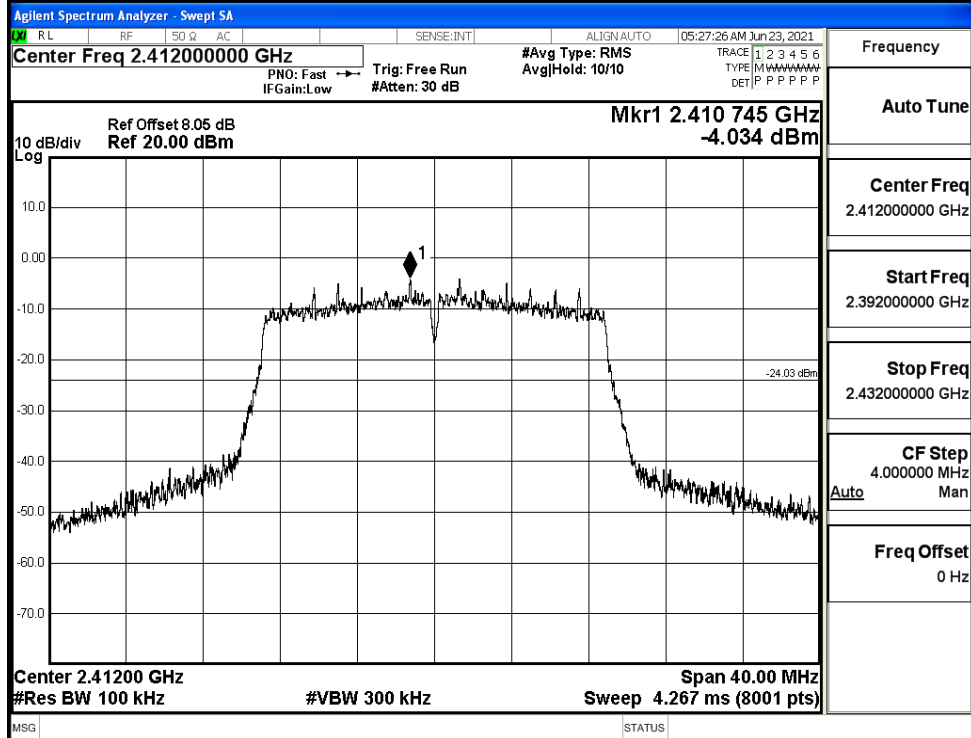
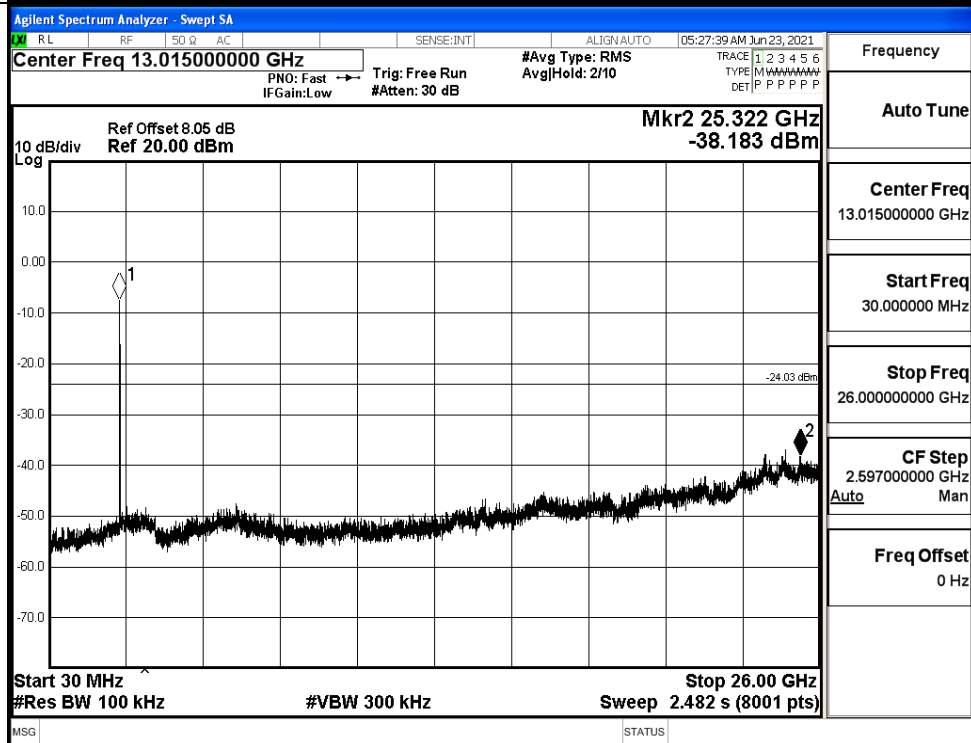
Pref/11G/HCH



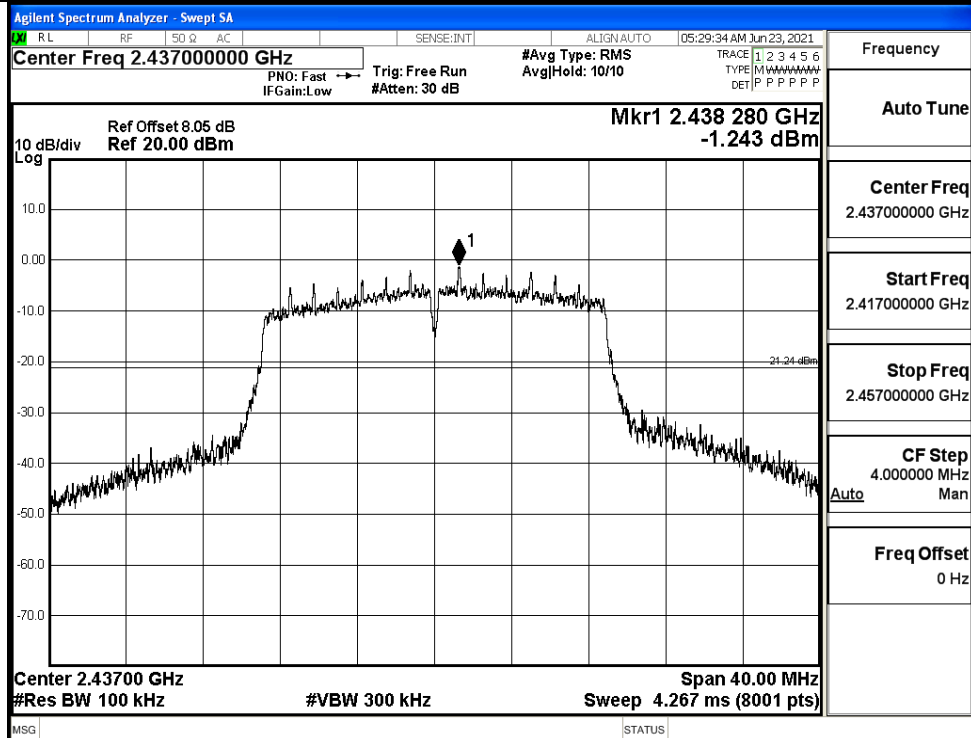
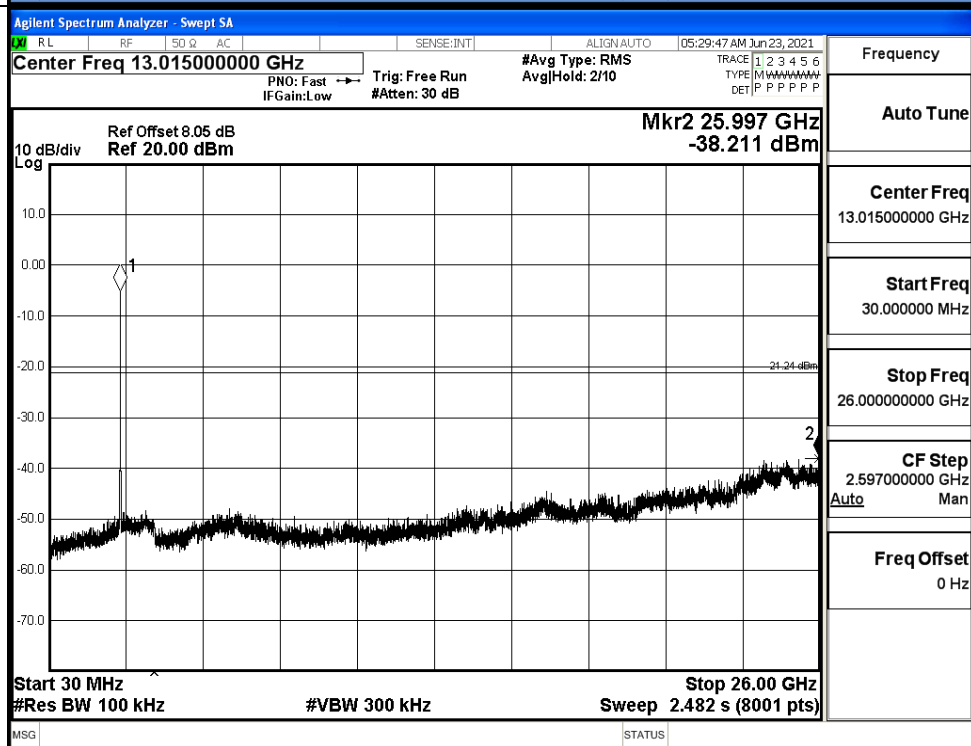
Puw/11G/HCH



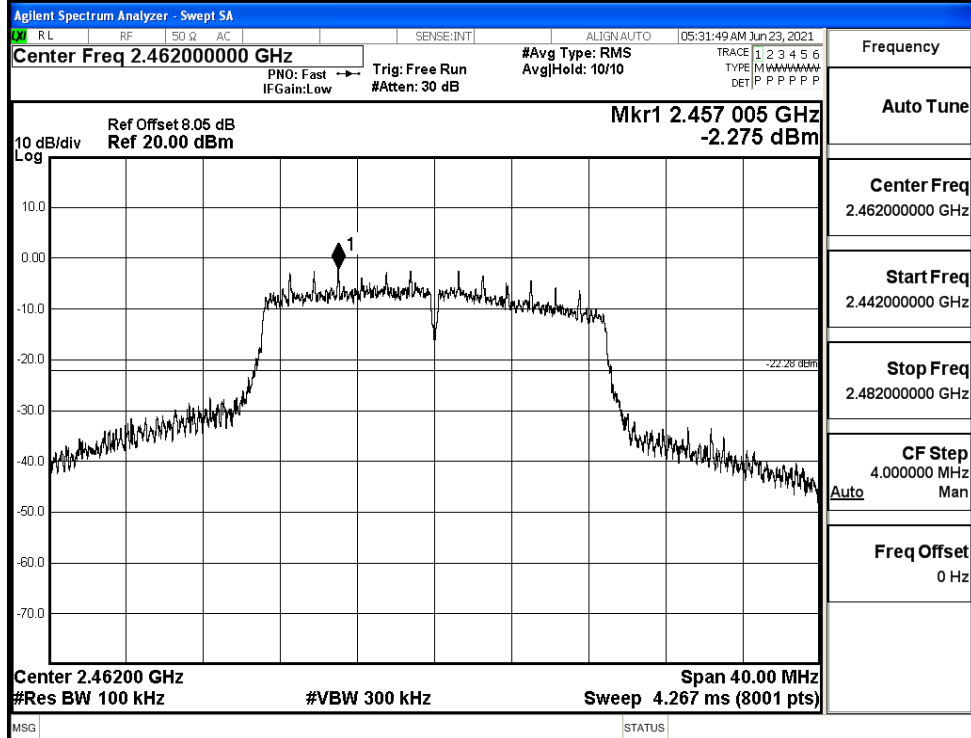
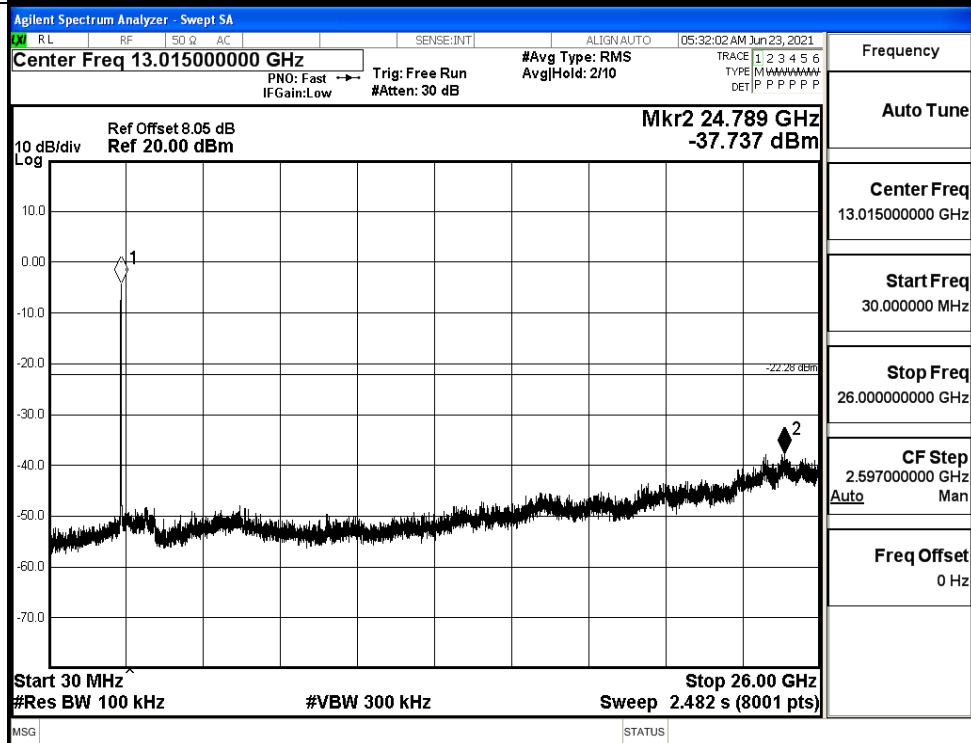
11N20SISO LCH Graphs

Pref/11N20SIS
O/LCHPuw/11N20
SISO/LCH

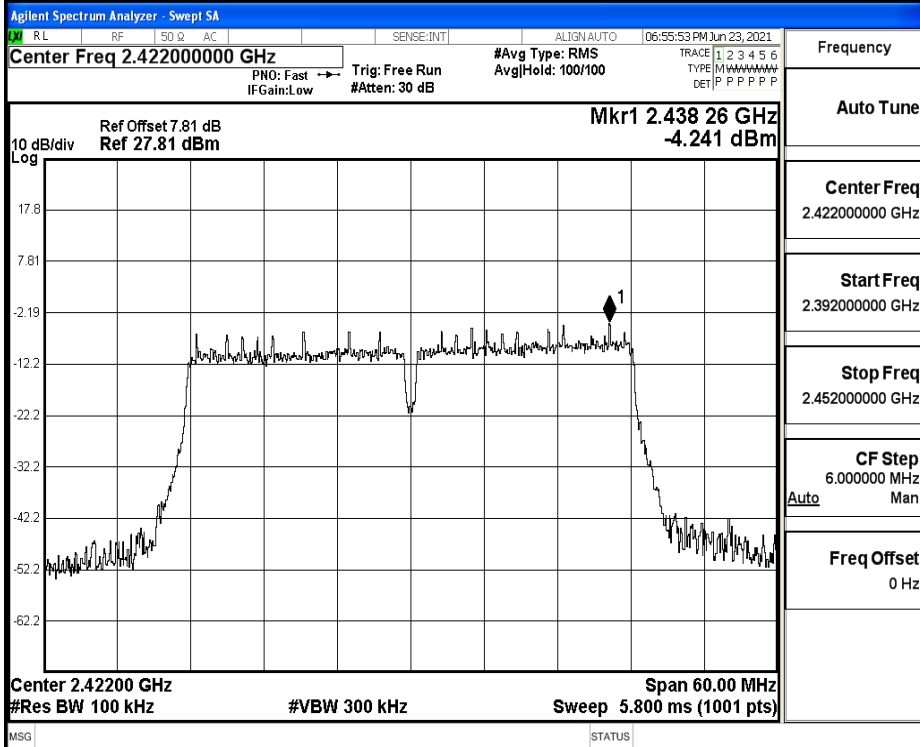
11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCHPuw/11N20
SISO/MCH

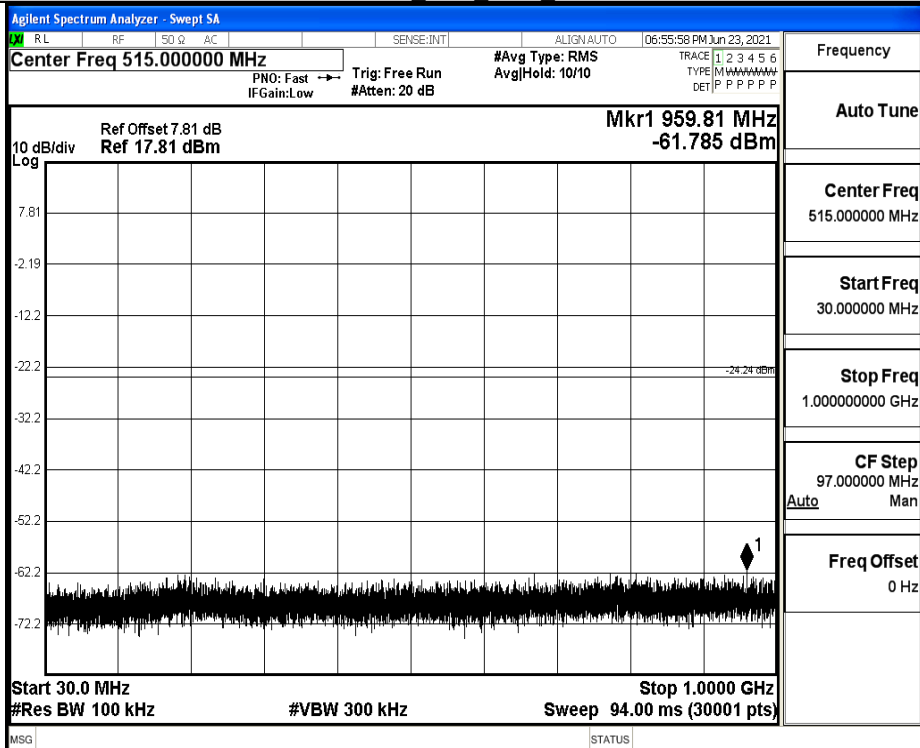
11N20SISO HCH Graphs

Pref/11N20
SISO/HCHPuw/11N20
SISO/HCH

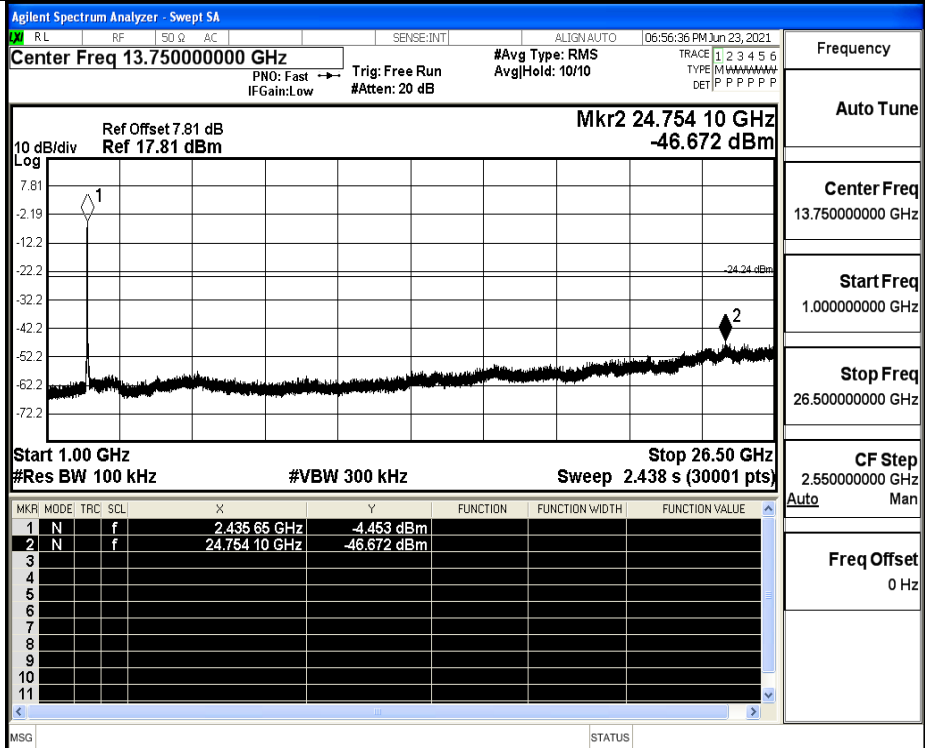
11N40SISO_Ant1_2422_0~Reference



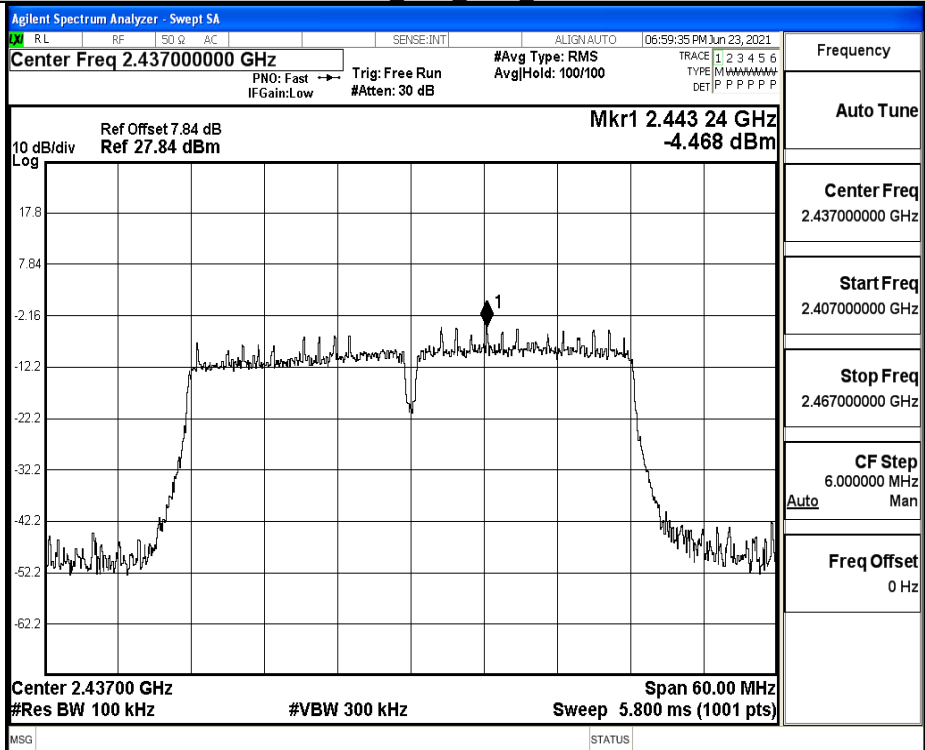
11N40SISO_Ant1_2422_30~1000



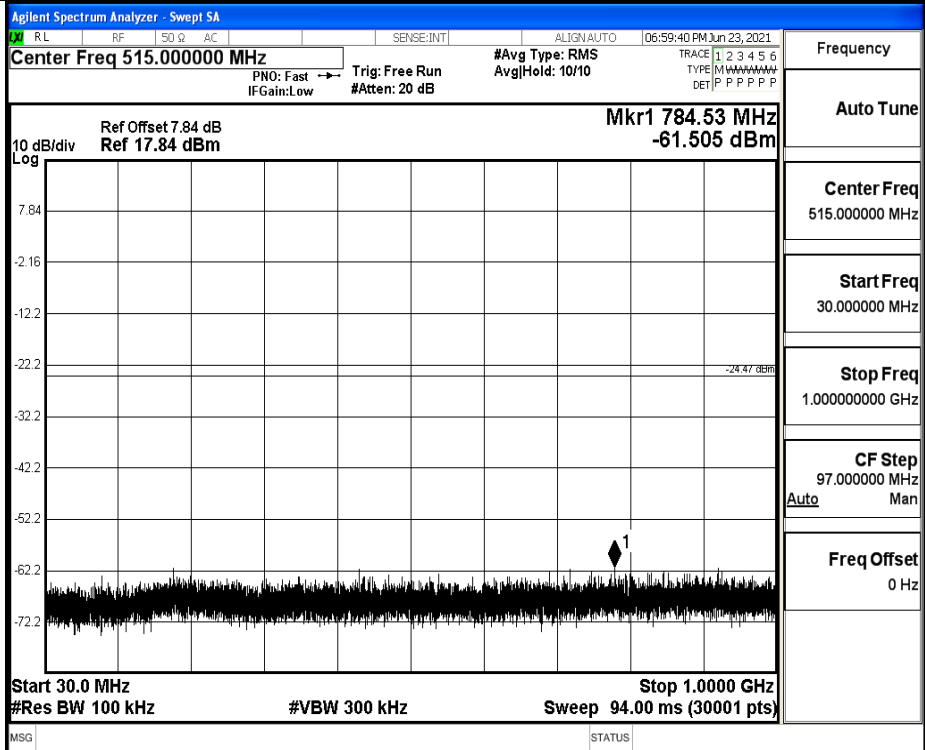
11N40SISO_Ant1_2422_1000~26500



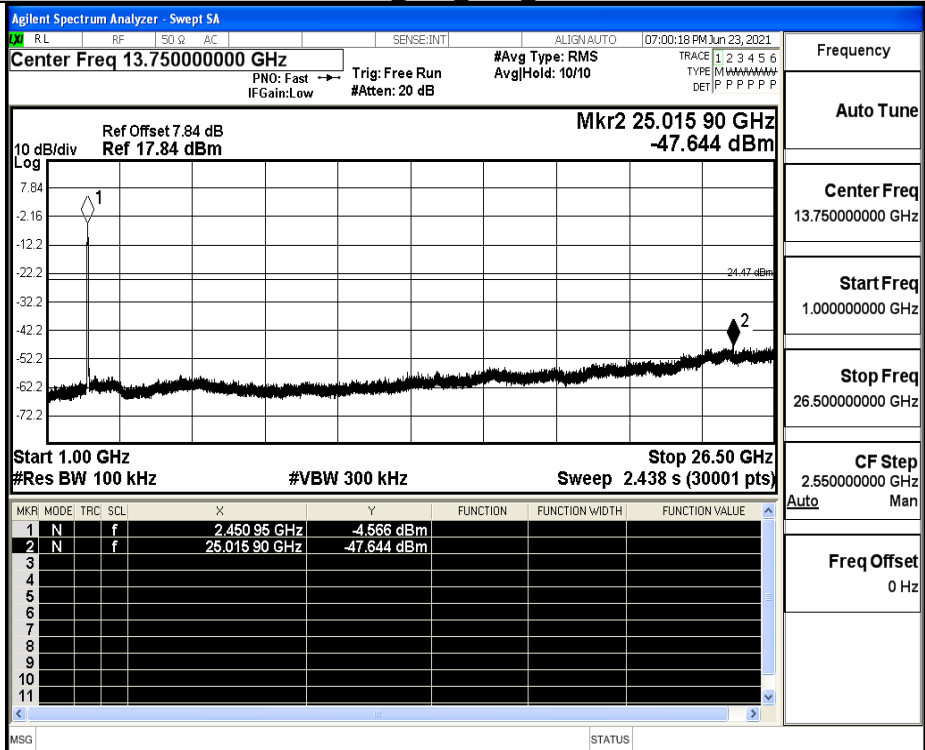
11N40SISO Ant1 2437 0~Reference



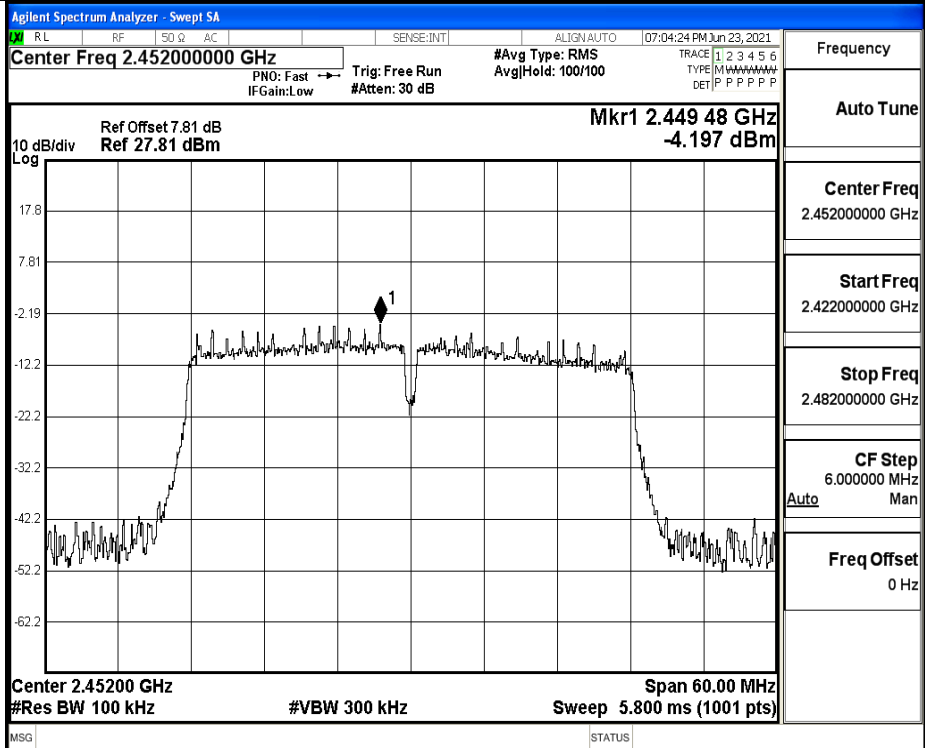
11N40SISO Ant1 2437 30~1000



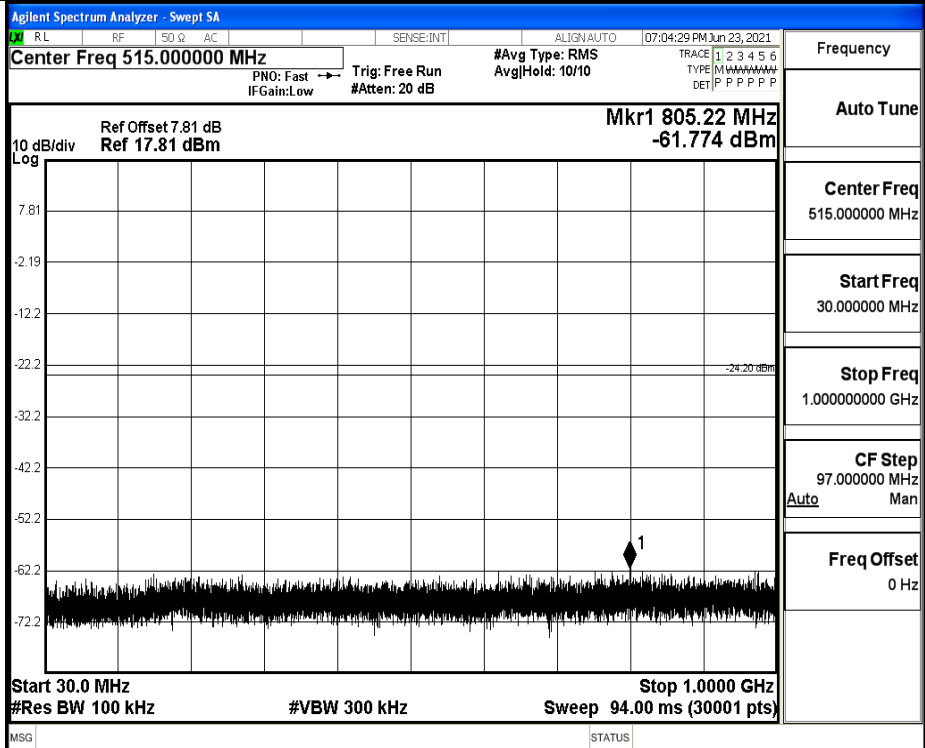
11N40SISO Ant1 2437 1000~26500



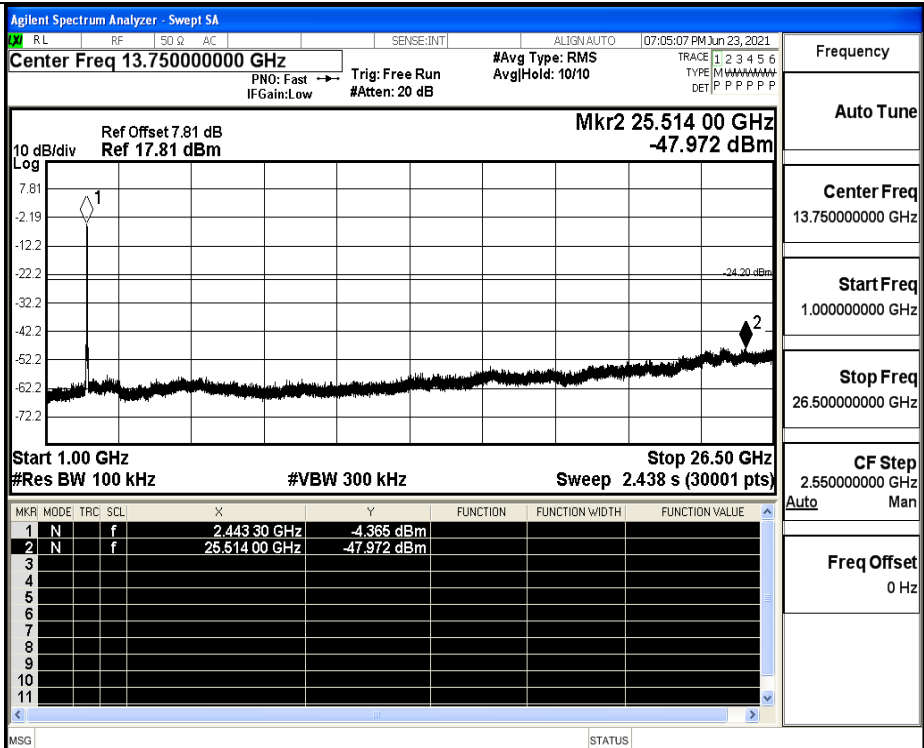
11N40SISO Ant1 2452 0~Reference



11N40SISO Ant1 2452 30~1000



11N40SISO Ant1 2452 1000~26500

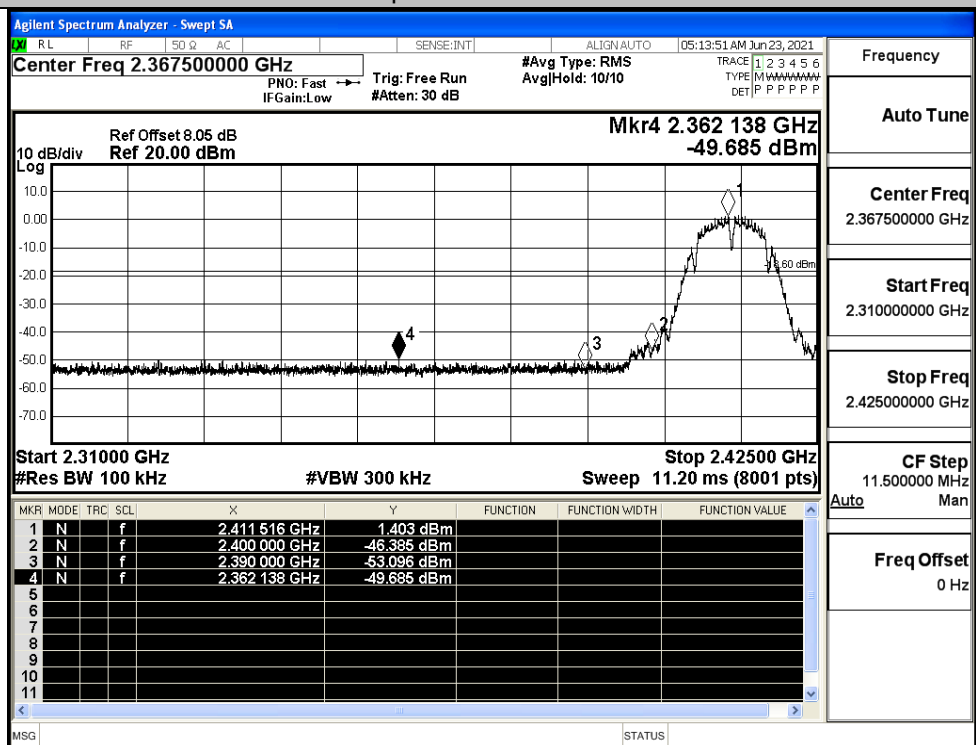


A.7 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	1.403	-49.685	-18.6	PASS
	HCH	1.051	-47.162	-18.95	PASS
11G	LCH	-4.423	-50.398	-24.42	PASS
	HCH	-2.222	-46.120	-22.22	PASS
11N20SISO	LCH	-3.521	-50.247	-23.52	PASS
	HCH	-2.193	-45.548	-22.19	PASS
11N40SISO	LCH	-5.17	-44.18	-25.17	PASS
	HCH	-4.06	-42.44	-24.06	PASS

Test Graphs

11B/LCH



[illegible]

Agilent Spectrum Analyzer - Swept SA

IM RL RF SO Q AC SENSE:INT ALIGN AUTO 05:20:49 AM Jun 23, 2021
Center Freq 2.367500000 GHz #Avg Type: RMS Avg/Hold: 10/10 PNO: Fast IF Gain: Low Trigg: Free Run #Atten: 30 dB TRACE 1 2 3 4 5 6 TYPE M W I D E T P P P P P P

Ref Offset 8.05 dB Mkr4 2.320 652 GHz
 Ref 20.00 dBm -50.398 dBm

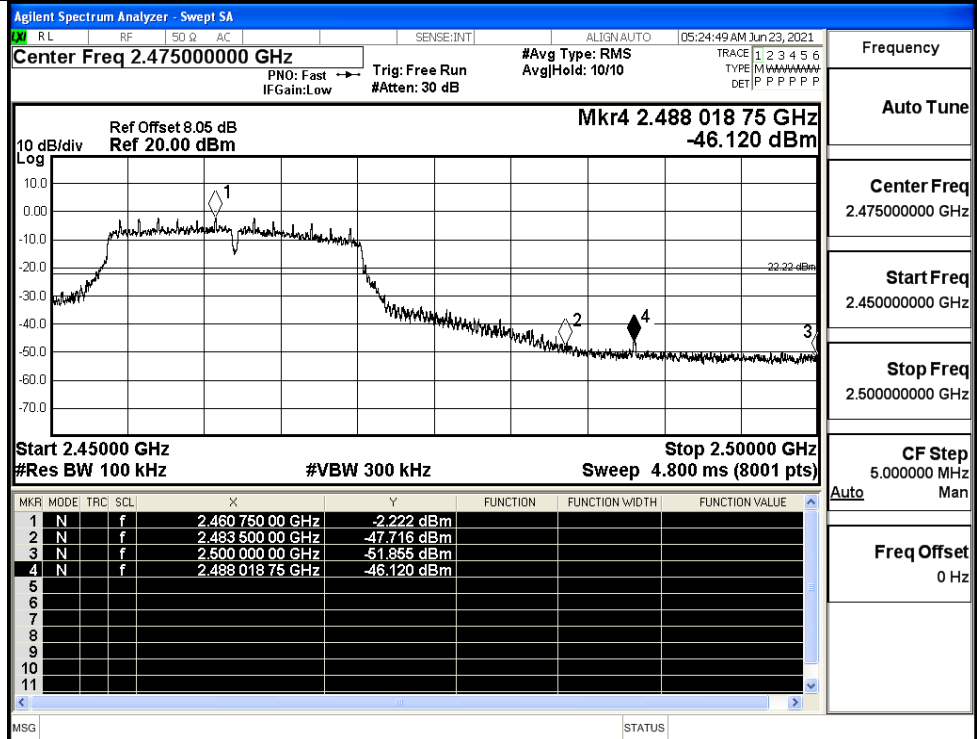
Start 2.31000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 11.20 ms (8001 pts) Stop 2.42500 GHz

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		f	2.414 506 GHz	-4.423 dBm			
2	N		f	2.400 000 GHz	-43.515 dBm			
3	N		f	2.390 000 GHz	-52.112 dBm			
4	N		f	2.320 652 GHz	-50.398 dBm			
5								
6								
7								
8								
9								
10								
11								

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

MSG STATUS

11G/HCH



Frequency

Auto Tune

Center Freq

2.475000000 GHz

Start Freq

2.450000000 GHz

Stop Freq

2.500000000 GHz

CF Step

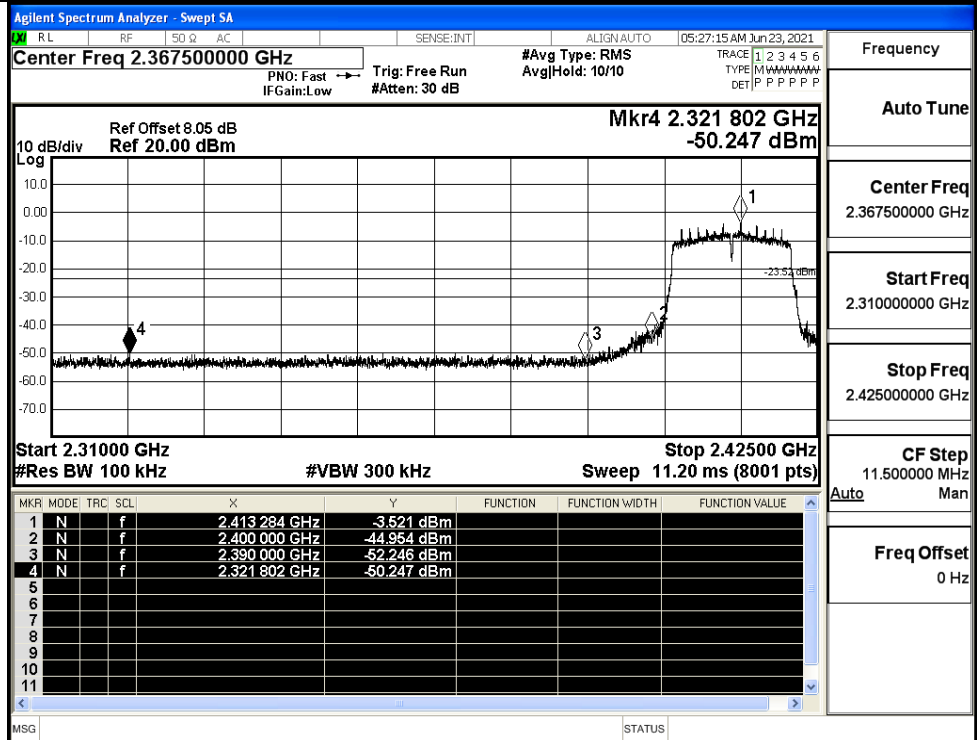
5.000000 MHz

Auto

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

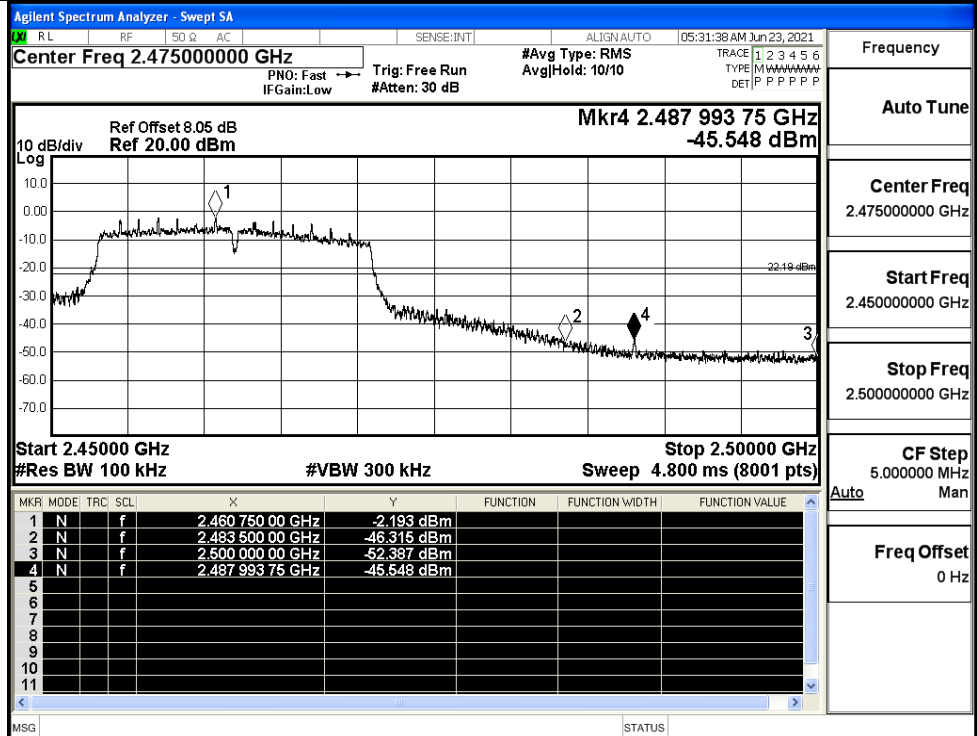
11.500000 MHz

Auto

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

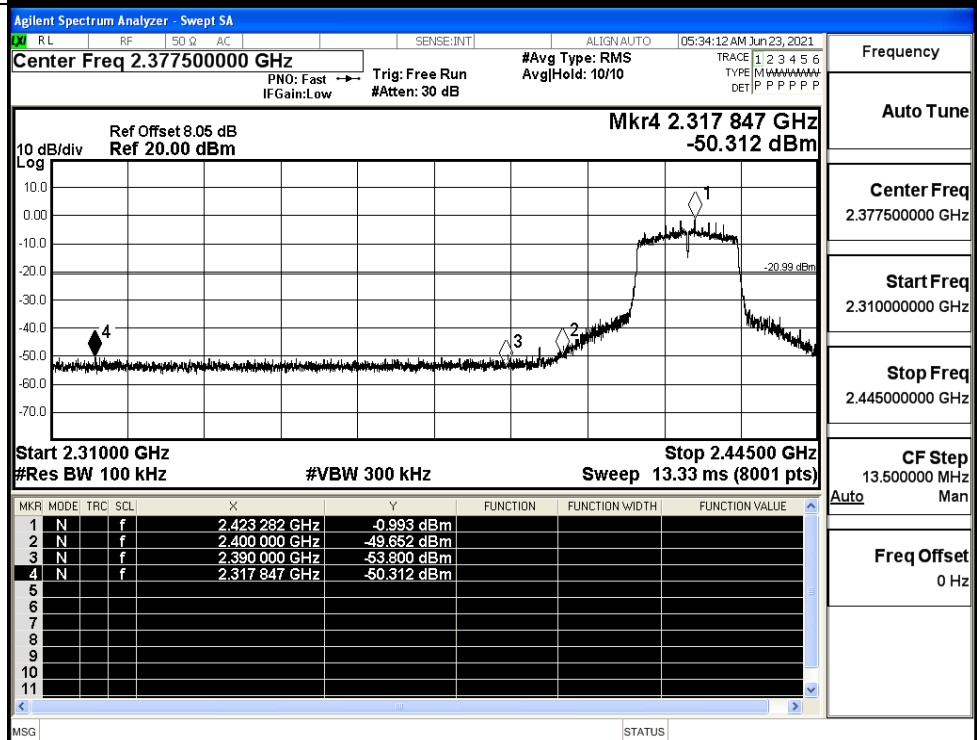
5.000000 MHz

Auto

Freq Offset

0 Hz

11N40SISO/LCH



Frequency

Auto Tune

Center Freq

2.377500000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.445000000 GHz

CF Step

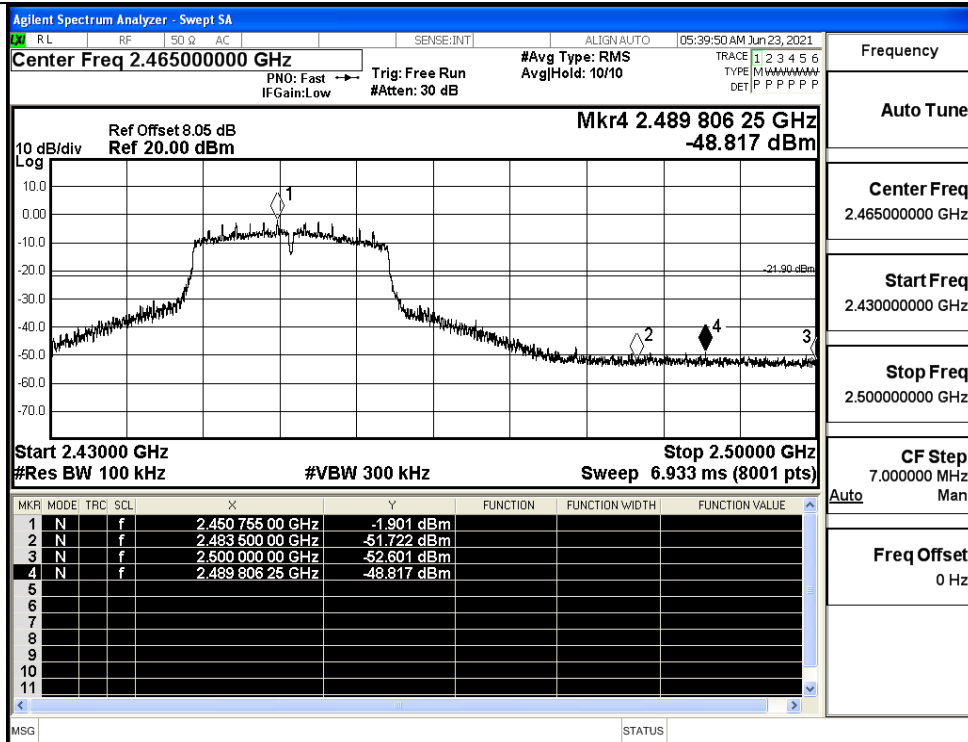
13.500000 MHz

Auto

Freq Offset

0 Hz

11N40SISO/HCH

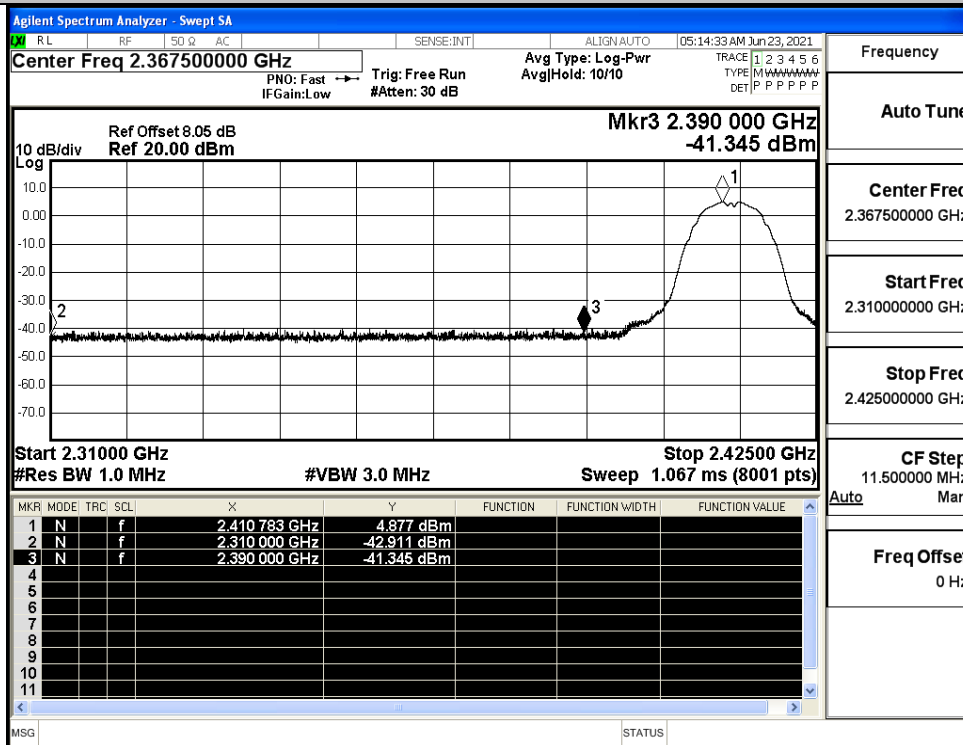


A.8 Restrict-band band-edge measurements

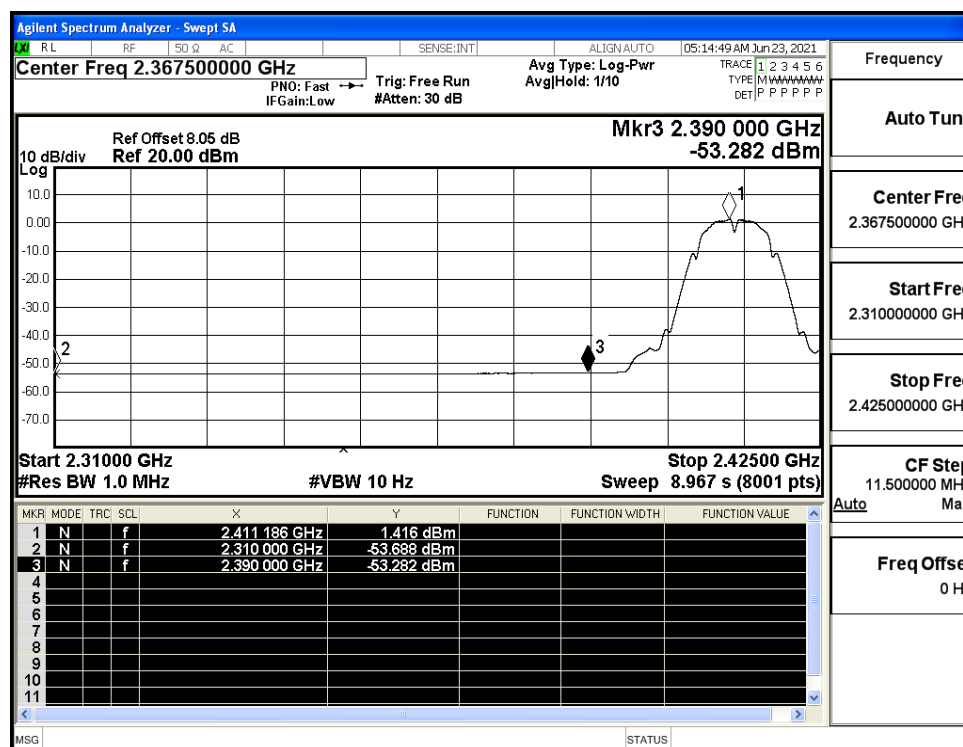
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-42.91	2.0	0	54.35	PEAK	74	PASS
	2412	Ant1	2310.0	-53.69	2.0	0	43.57	AV	54	PASS
	2412	Ant1	2390.0	-41.35	2.0	0	55.91	PEAK	74	PASS
	2412	Ant1	2390.0	-53.28	2.0	0	43.98	AV	54	PASS
	2462	Ant1	2483.5	-41.24	2.0	0	56.01	PEAK	74	PASS
	2462	Ant1	2483.5	-51.96	2.0	0	45.3	AV	54	PASS
	2462	Ant1	2500.0	-41.01	2.0	0	56.24	PEAK	74	PASS
	2462	Ant1	2500.0	-52.74	2.0	0	44.52	AV	54	PASS
11G	2412	Ant1	2310.0	-43.32	2.0	0	53.94	PEAK	74	PASS
	2412	Ant1	2310.0	-53.68	2.0	0	43.58	AV	54	PASS
	2412	Ant1	2390.0	-43.50	2.0	0	53.76	PEAK	74	PASS
	2412	Ant1	2390.0	-53.21	2.0	0	44.05	AV	54	PASS
	2462	Ant1	2483.5	-32.44	2.0	0	64.82	PEAK	74	PASS
	2462	Ant1	2483.5	-49.67	2.0	0	47.59	AV	54	PASS
	2462	Ant1	2500.0	-41.24	2.0	0	56.02	PEAK	74	PASS
	2462	Ant1	2500.0	-52.72	2.0	0	44.54	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-44.59	2.0	0	52.66	PEAK	74	PASS
	2412	Ant1	2310.0	-53.69	2.0	0	43.57	AV	54	PASS
	2412	Ant1	2390.0	-42.98	2.0	0	54.28	PEAK	74	PASS
	2412	Ant1	2390.0	-53.12	2.0	0	44.14	AV	54	PASS
	2462	Ant1	2483.5	-35.03	2.0	0	62.23	PEAK	74	PASS
	2462	Ant1	2483.5	-48.47	2.0	0	48.79	AV	54	PASS
	2462	Ant1	2500.0	-42.26	2.0	0	55.00	PEAK	74	PASS
	2462	Ant1	2500.0	-52.72	2.0	0	44.53	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-41.48	2.0	0	55.75	PEAK	74	PASS
	2422	Ant1	2310.0	-48.60	2.0	0	48.63	AV	54	PASS

	2422	Ant1	2390.0	-40.45	2.0	0	56.78	PEAK	74	PASS
	2422	Ant1	2390.0	-48.12	2.0	0	49.11	AV	54	PASS
	2452	Ant1	2483.5	-33.12	2.0	0	64.11	PEAK	74	PASS
	2452	Ant1	2483.5	-43.90	2.0	0	53.33	AV	54	PASS
	2452	Ant1	2500.0	-38.59	2.0	0	58.64	PEAK	74	PASS
	2452	Ant1	2500.0	-47.50	2.0	0	49.73	AV	54	PASS

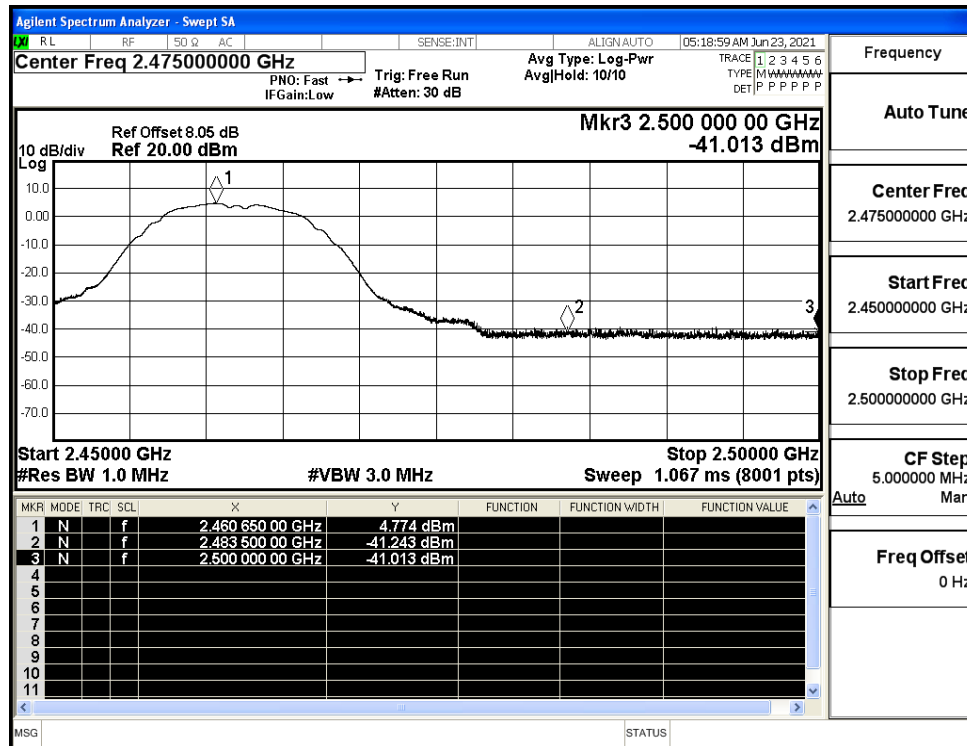
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



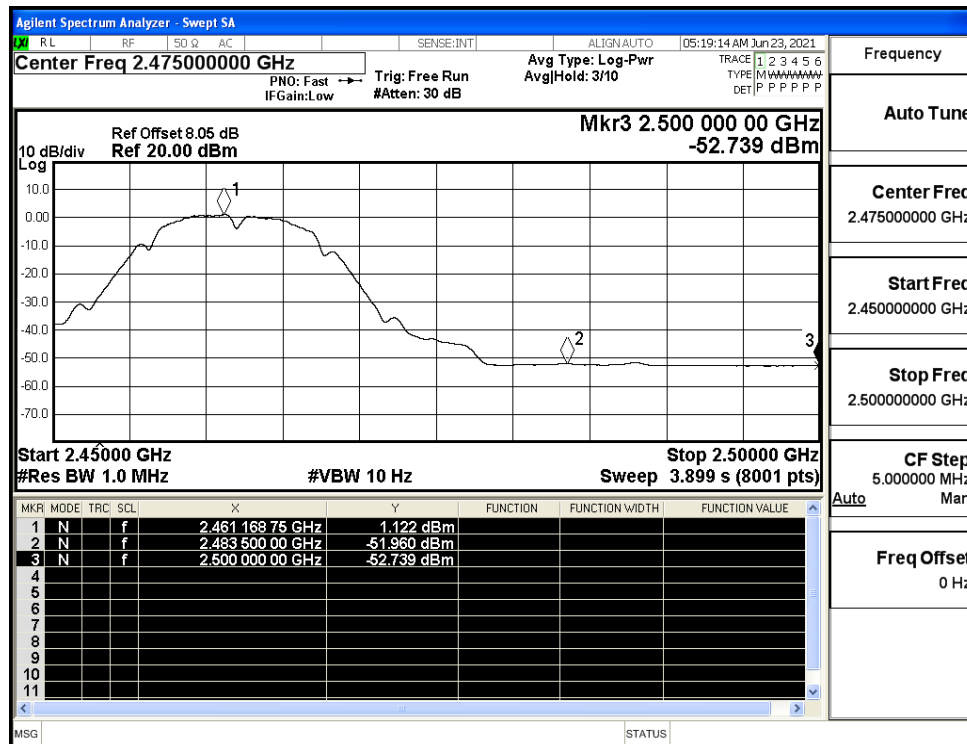
Restrict-band band-edge measurements_11B_2412_Ant1_AV



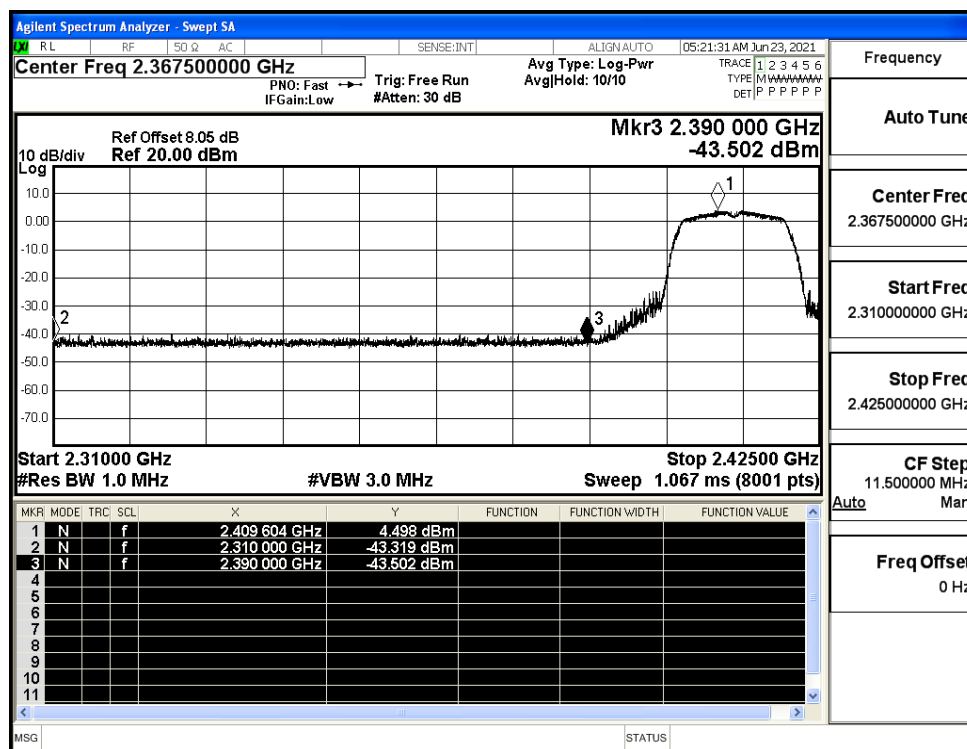
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



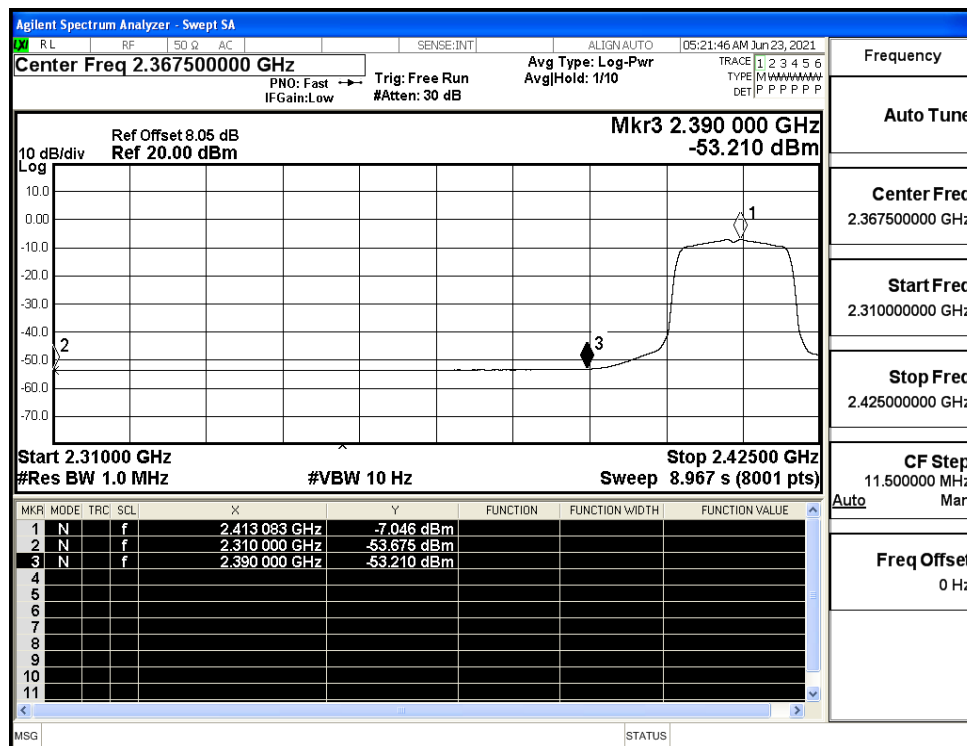
Restrict-band band-edge measurements_11B_2462_Ant1_AV



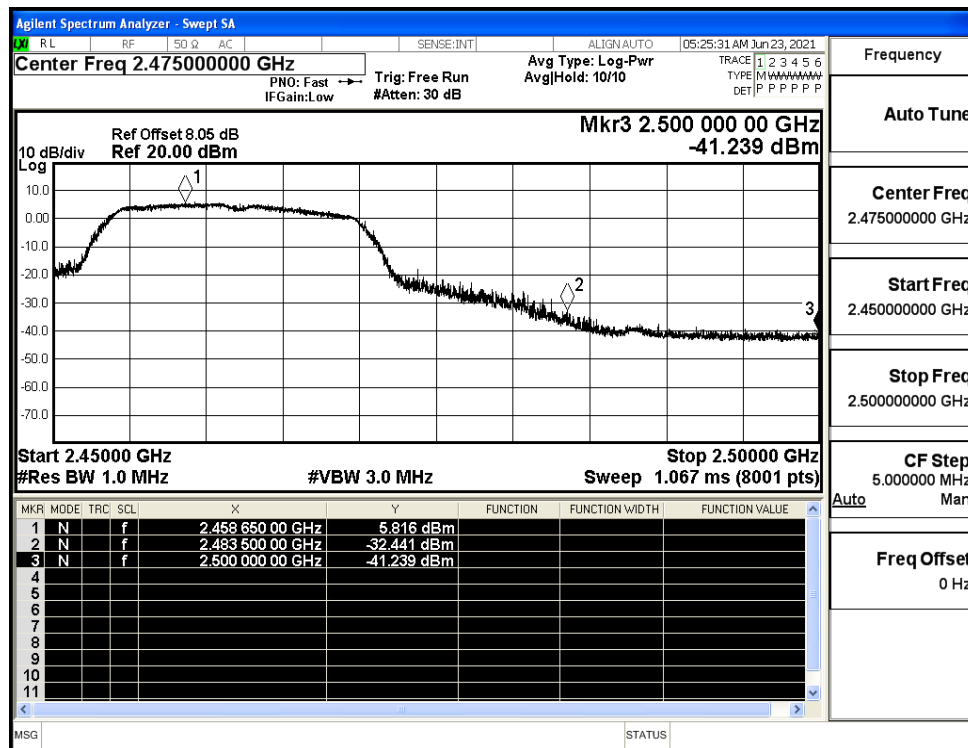
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



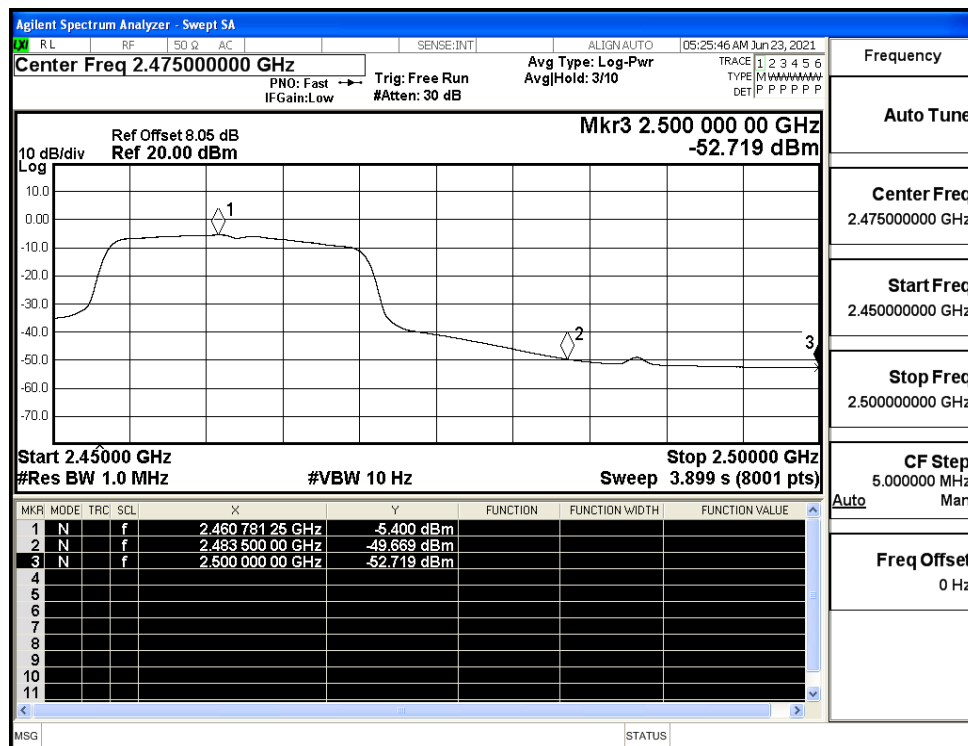
Restrict-band band-edge measurements_11G_2412_Ant1_AV



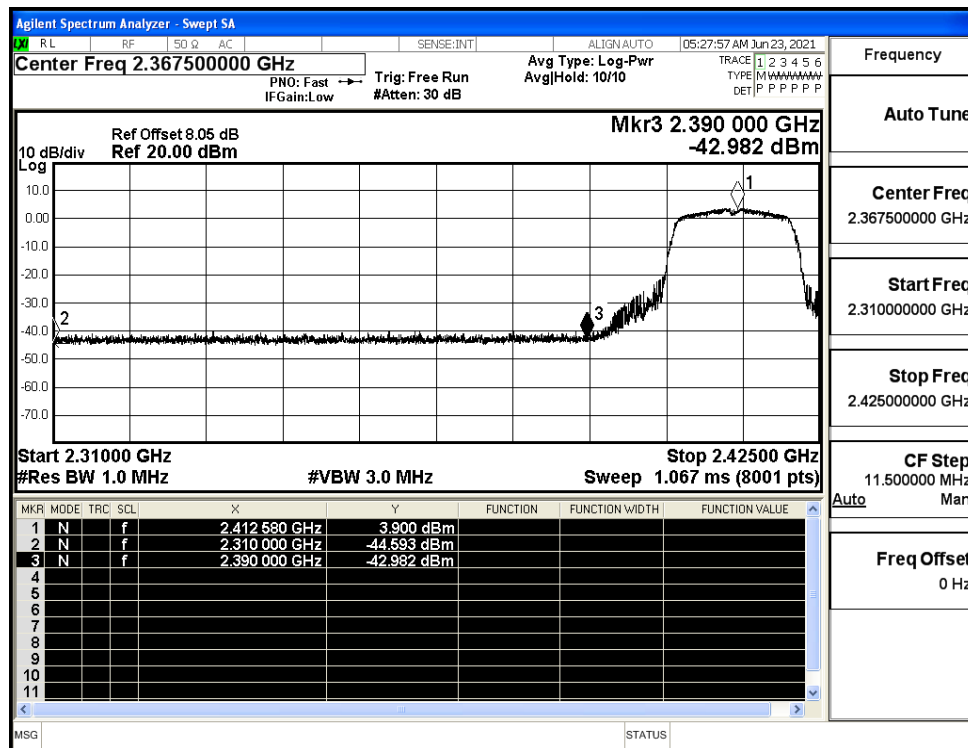
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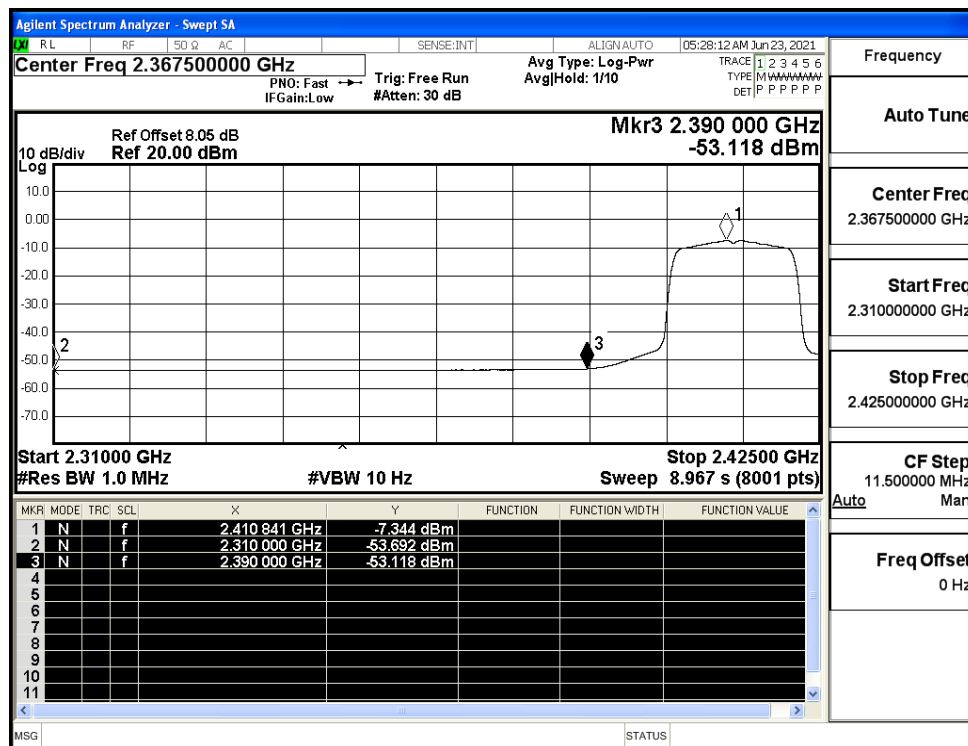
Restrict-band band-edge measurements_11G_2462_Ant1_AV



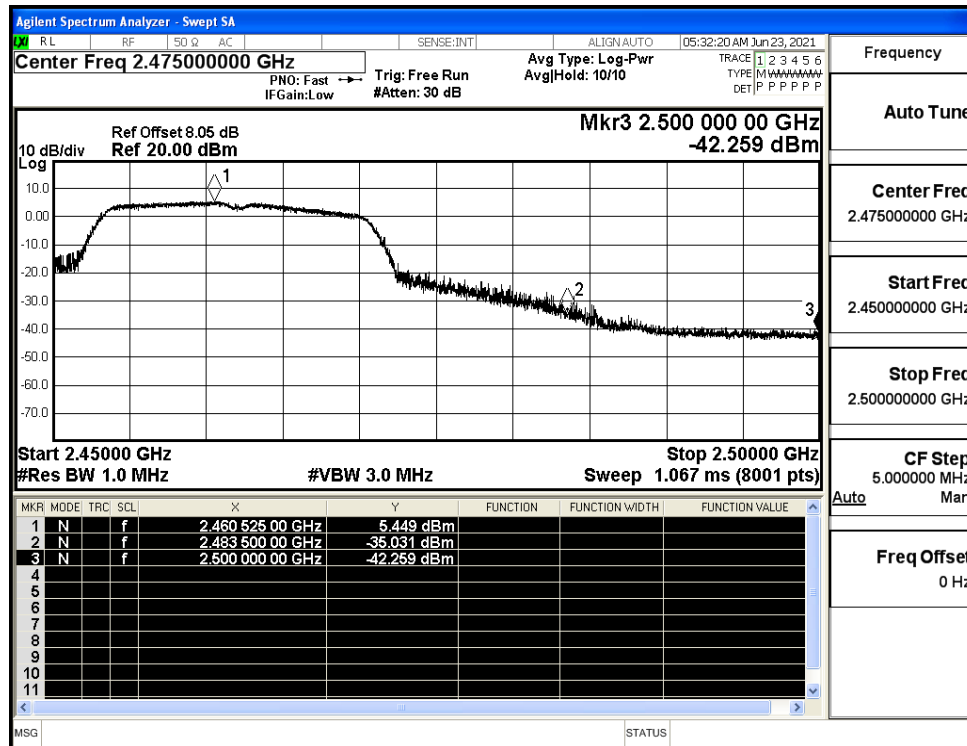
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



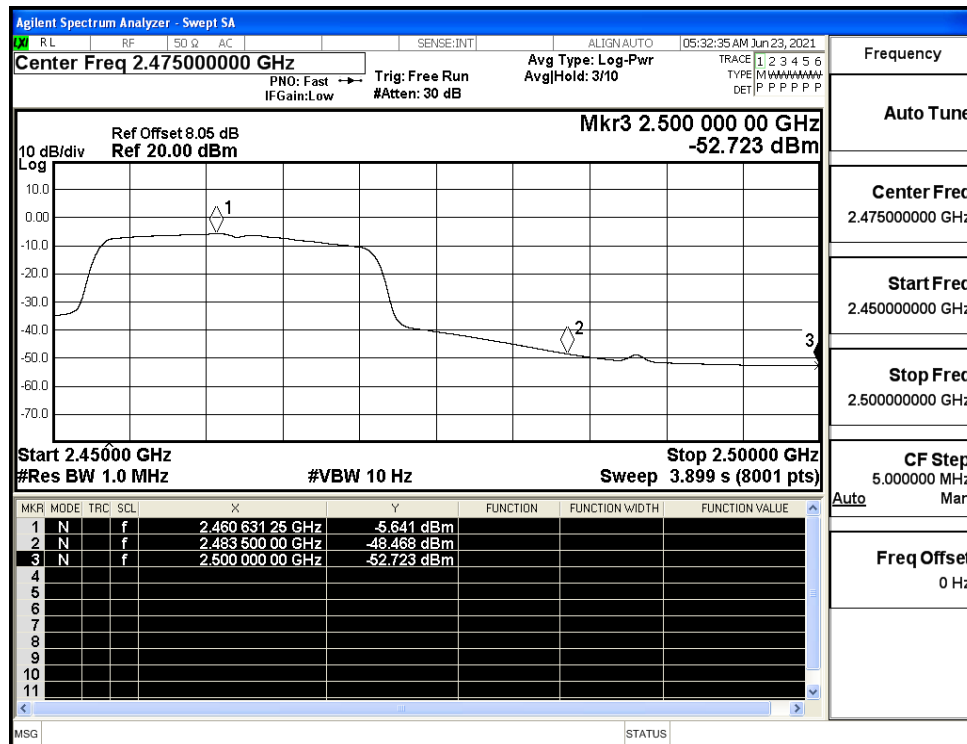
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



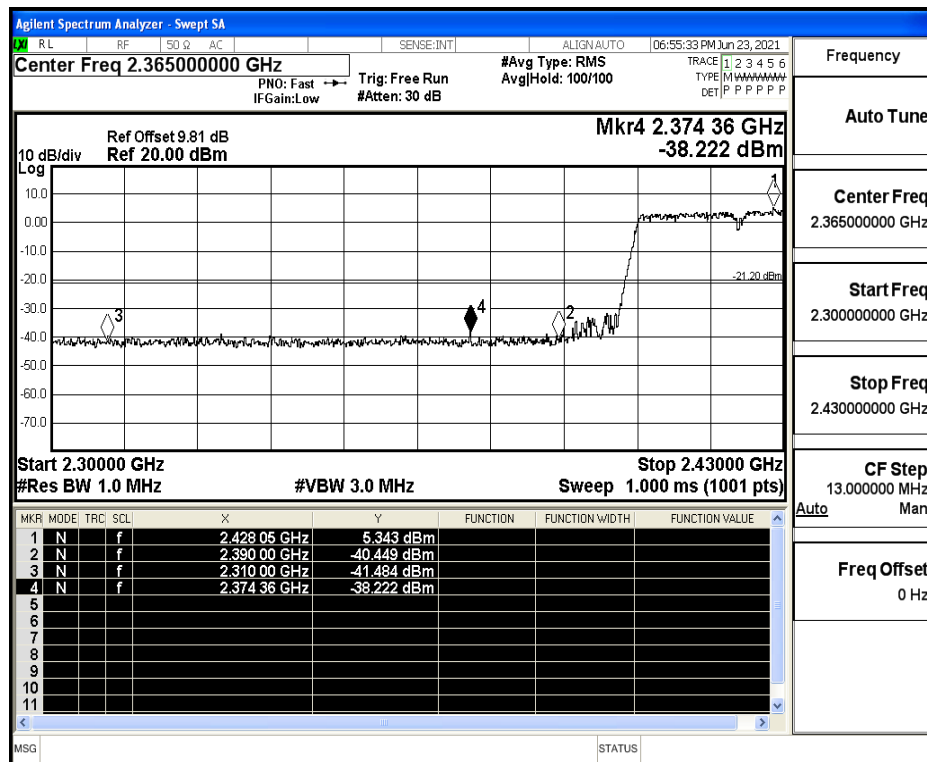
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



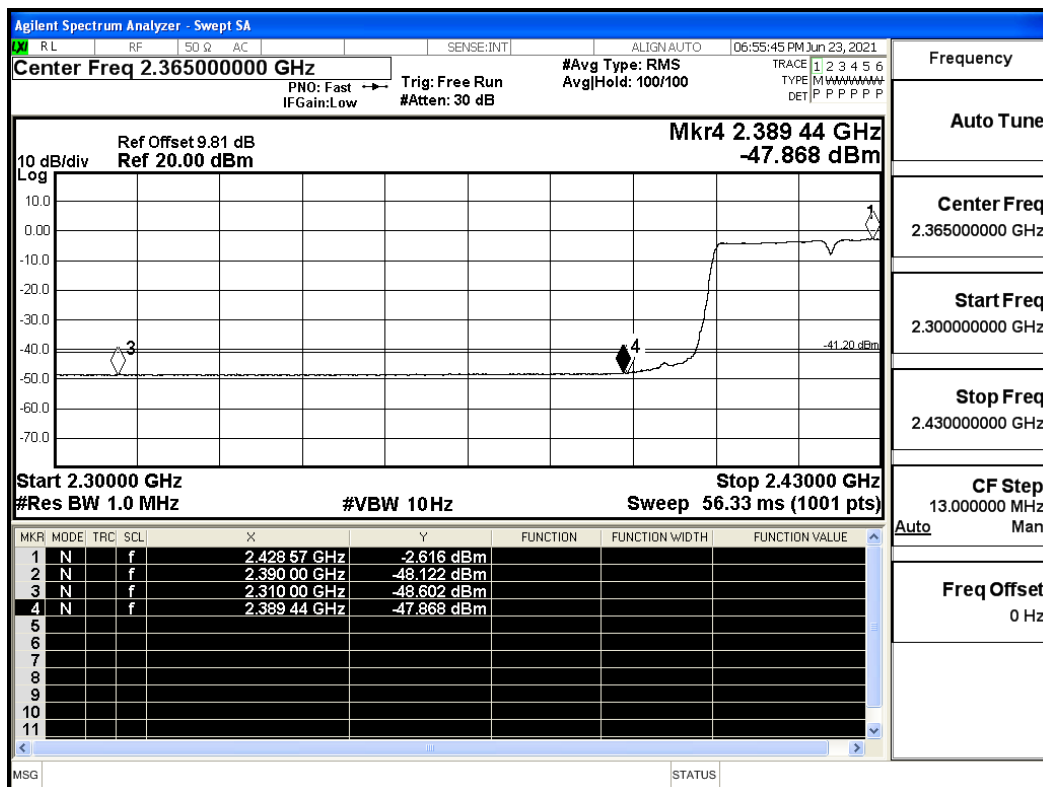
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



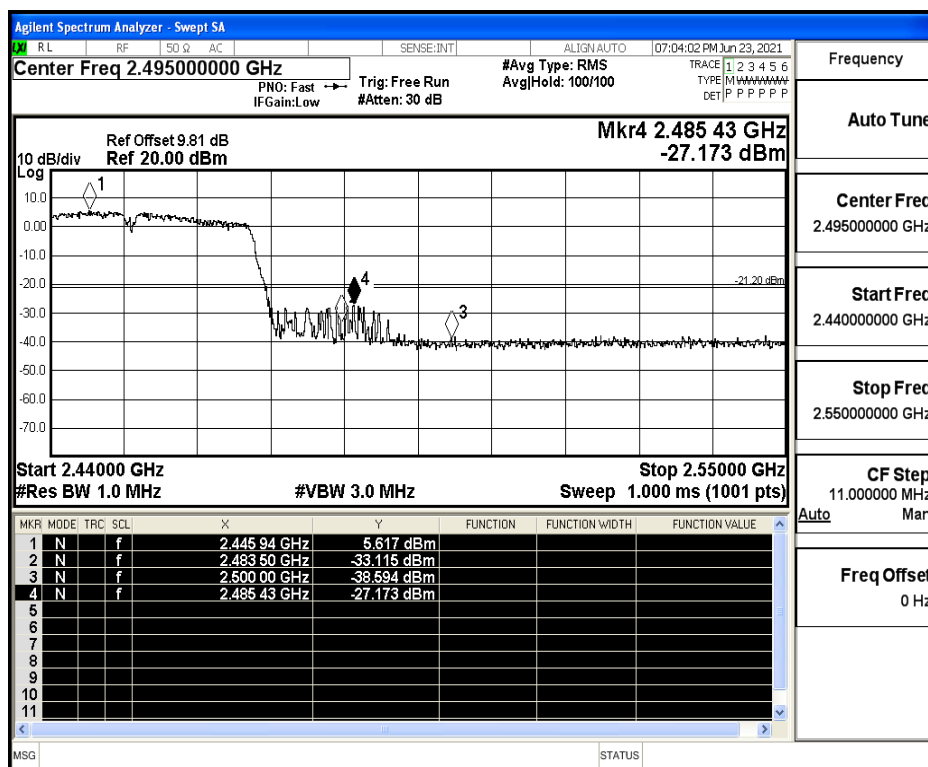
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



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

