

Appendix B

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: PORTABLE MONITOR

Trade Mark: N/A

Test Model: PM1507

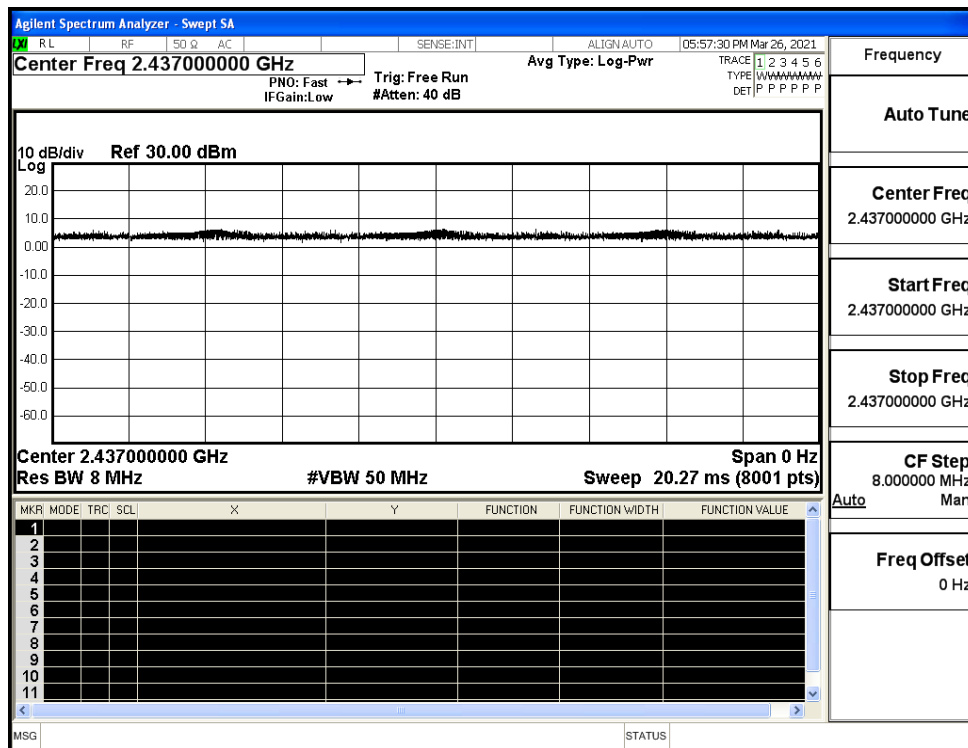
Environmental Conditions

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

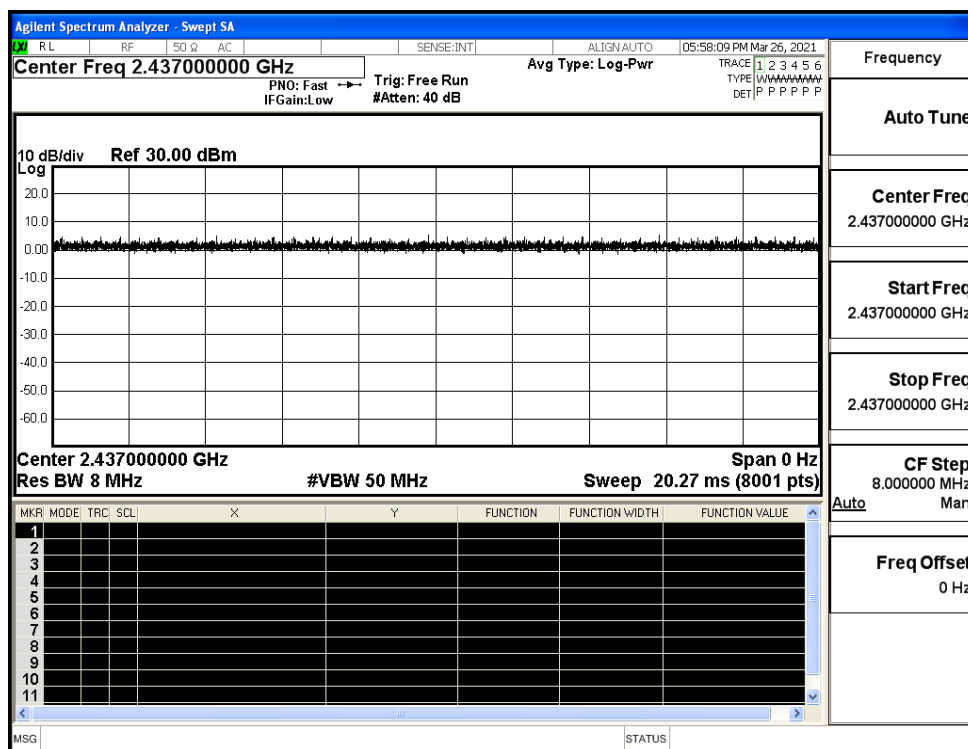
B.1 Duty Cycle

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

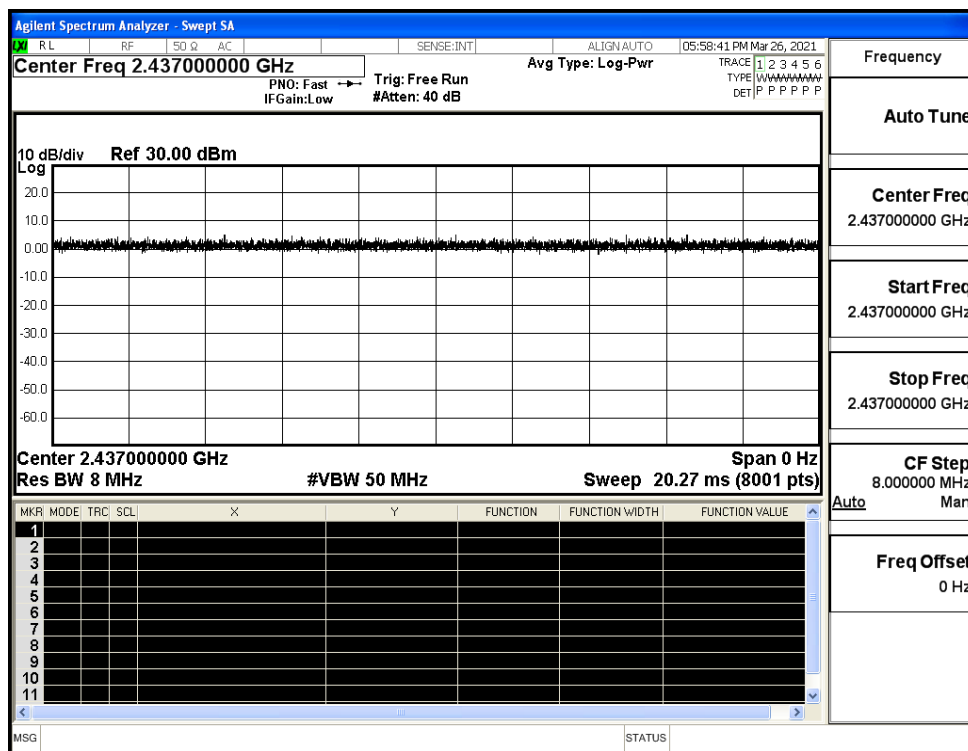
Duty Cycle_11B_2437_Ant1



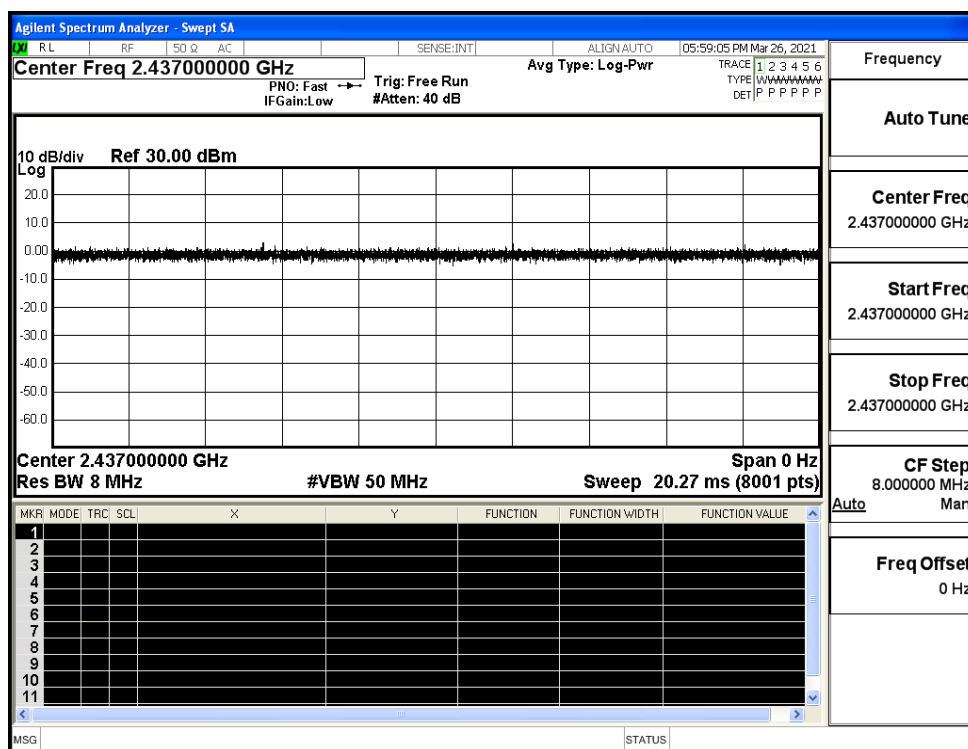
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1



B.2 Maximum Conducted Output Power

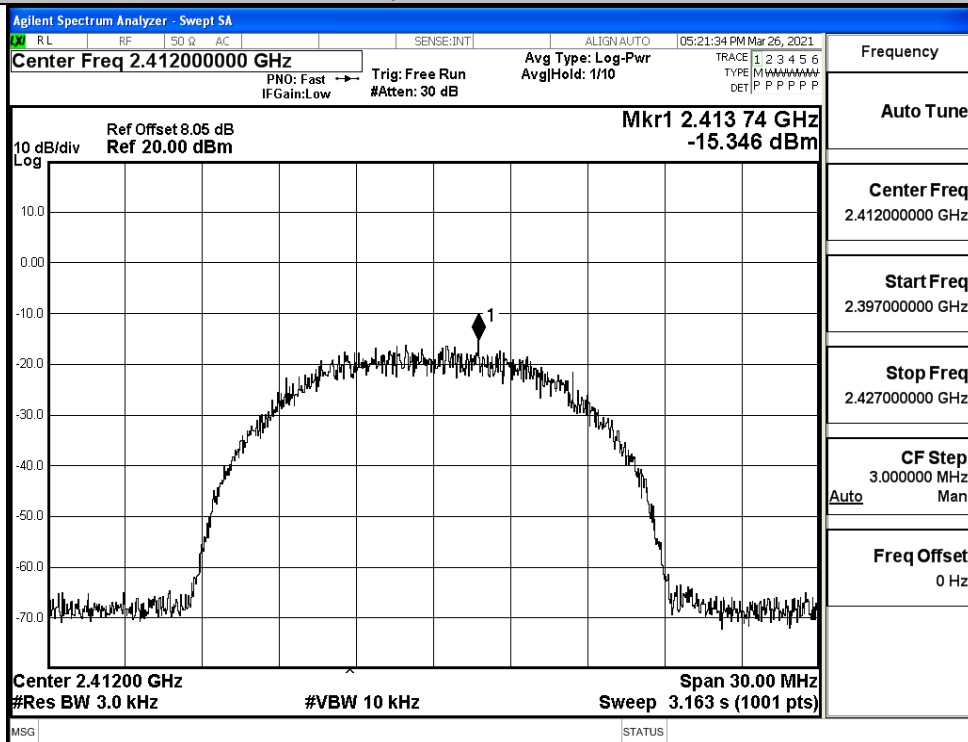
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	9.07	30	PASS
	MCH	8.94	30	PASS
	HCH	8.38	30	PASS
11G	LCH	8.57	30	PASS
	MCH	9.40	30	PASS
	HCH	8.90	30	PASS
11N20SISO	LCH	8.80	30	PASS
	MCH	8.70	30	PASS
	HCH	9.24	30	PASS
11N40SISO	LCH	8.49	30	PASS
	MCH	9.10	30	PASS
	HCH	8.91	30	PASS

B.3 Maximum Power Spectral Density

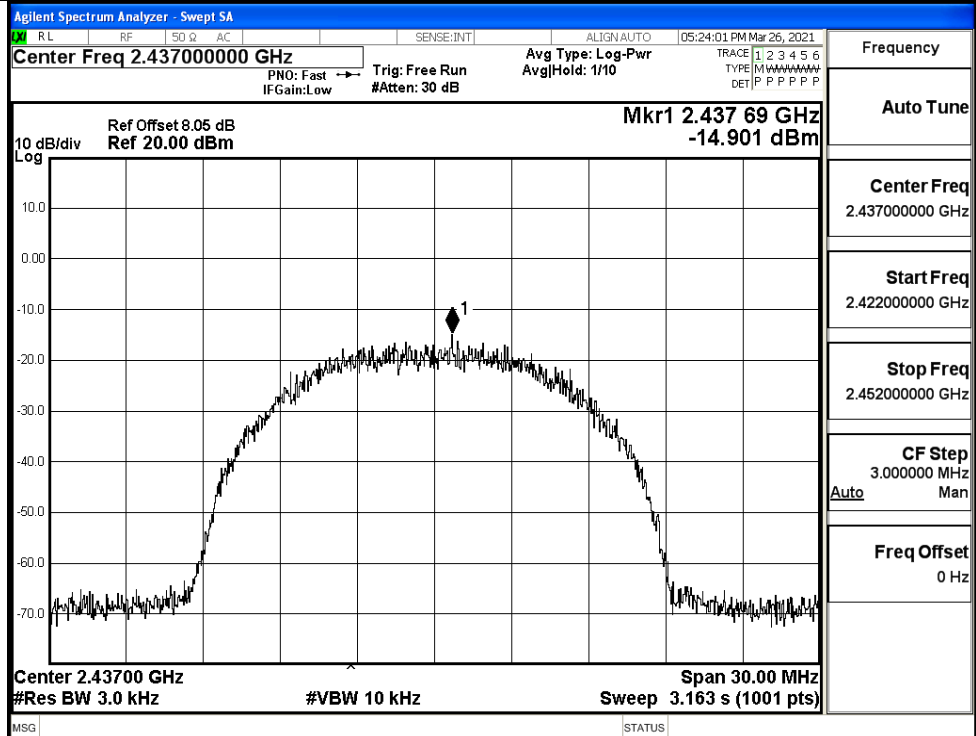
Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-15.346	8	PASS
	MCH	-14.901	8	PASS
	HCH	-16.132	8	PASS
11G	LCH	-20.756	8	PASS
	MCH	-21.089	8	PASS
	HCH	-21.386	8	PASS
11N20SISO	LCH	-20.520	8	PASS
	MCH	-20.680	8	PASS
	HCH	-20.848	8	PASS
11N40SISO	LCH	-22.380	8	PASS
	MCH	-21.490	8	PASS
	HCH	-21.736	8	PASS

Test Graphs

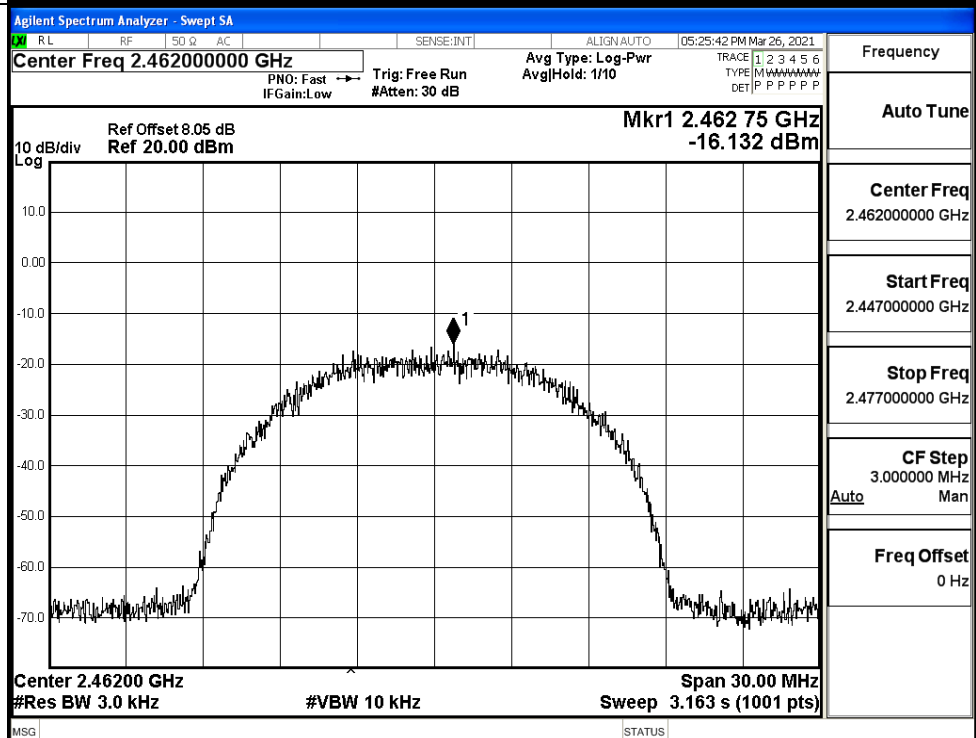
11B/LCH



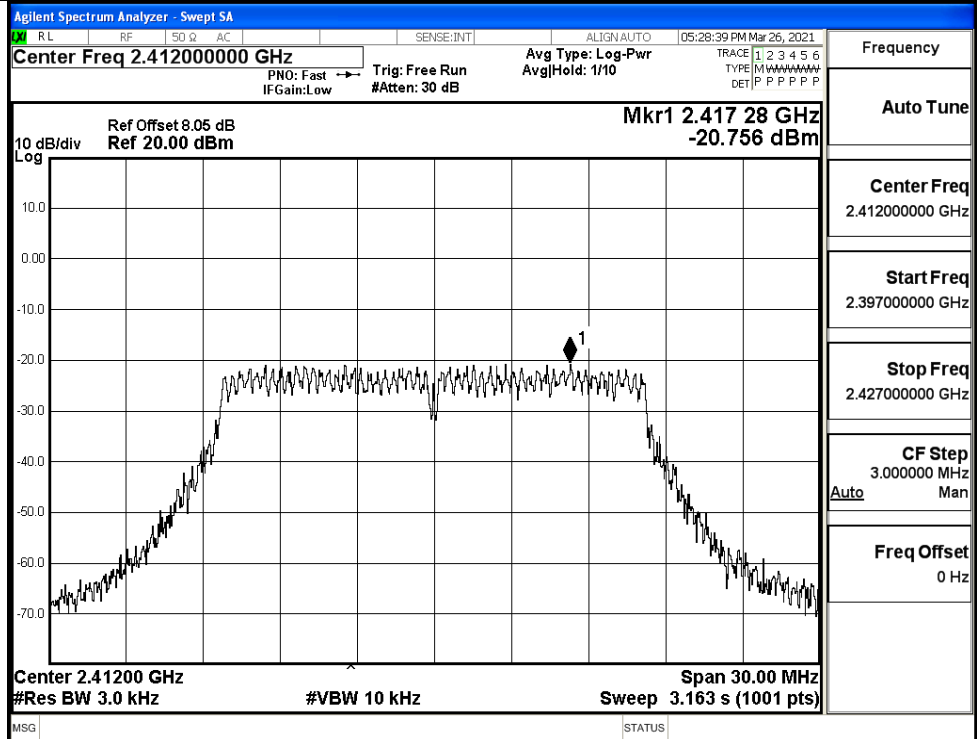
11B/MCH



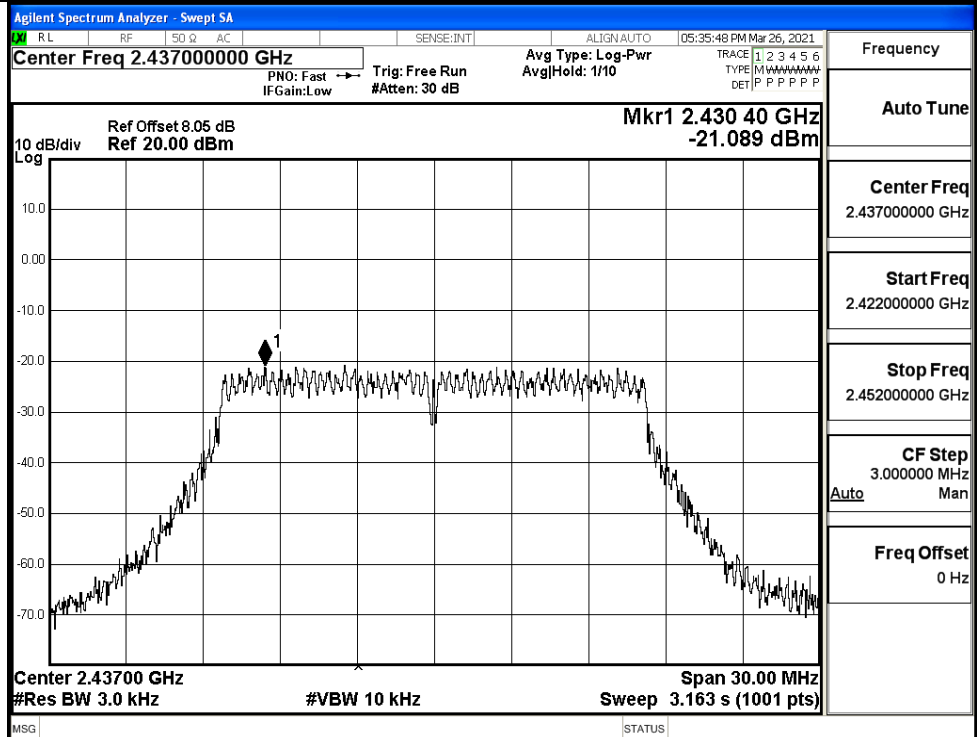
11B/HCH



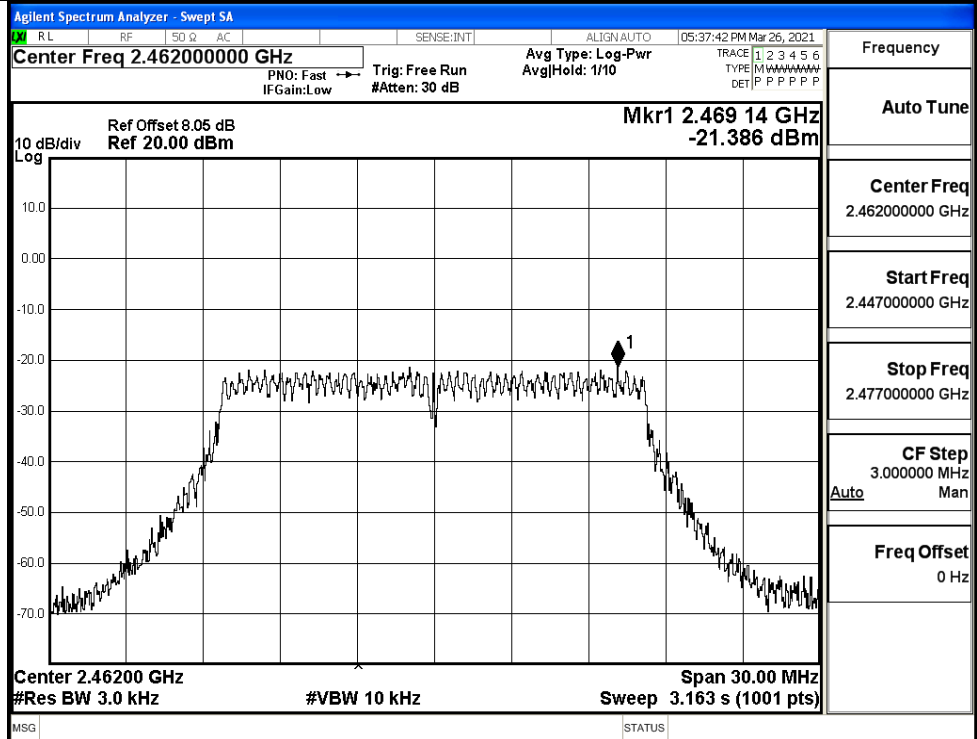
11G/LCH



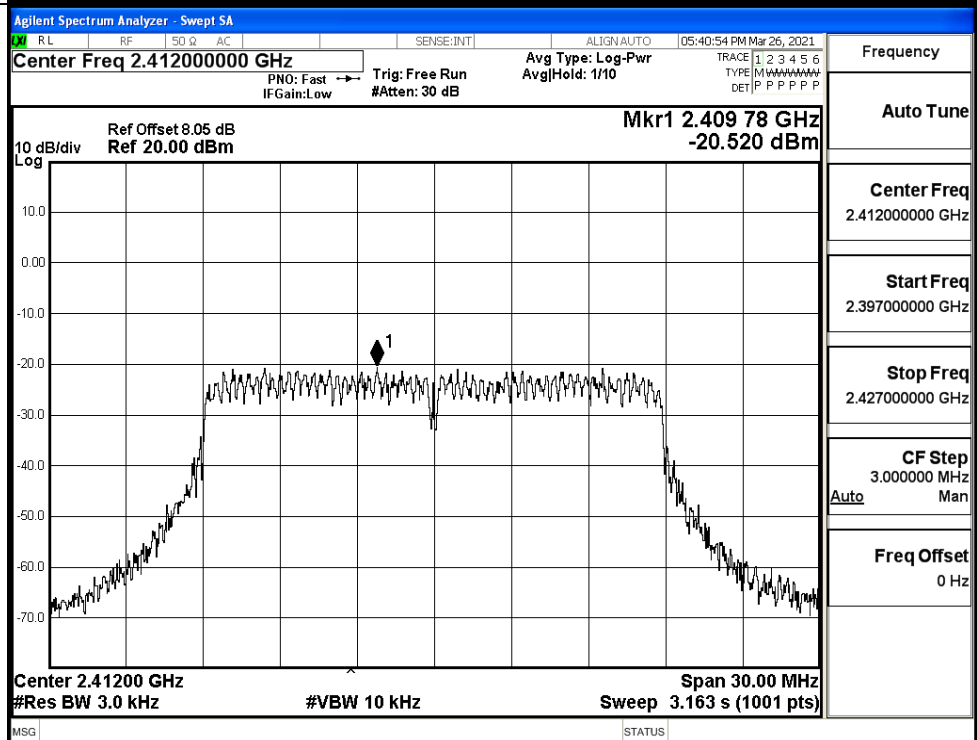
11G/MCH



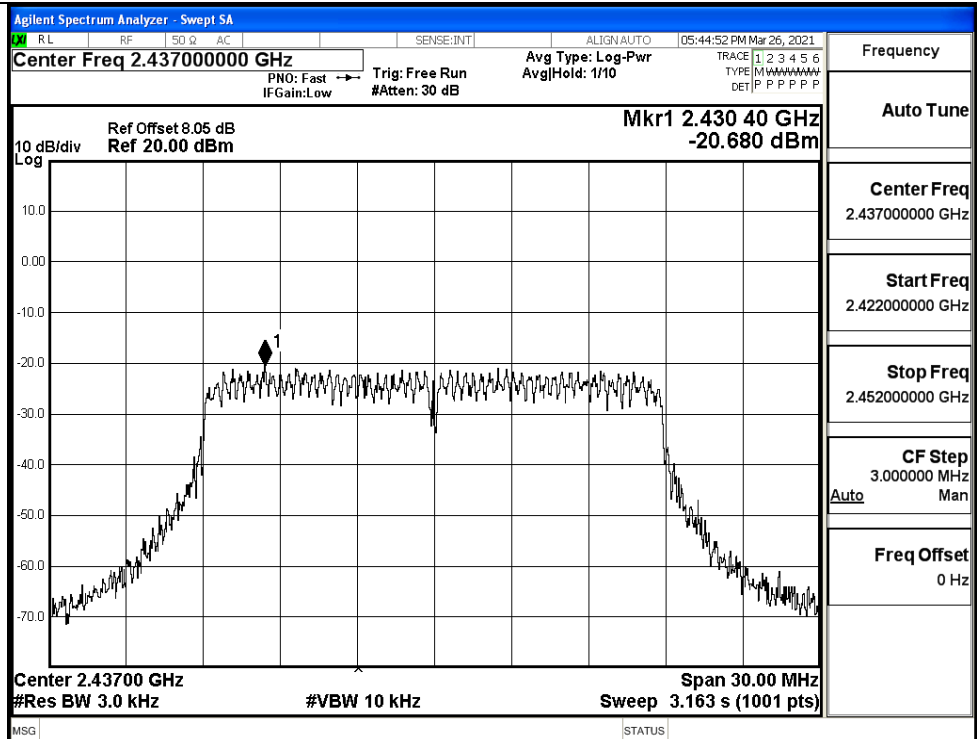
11G/HCH



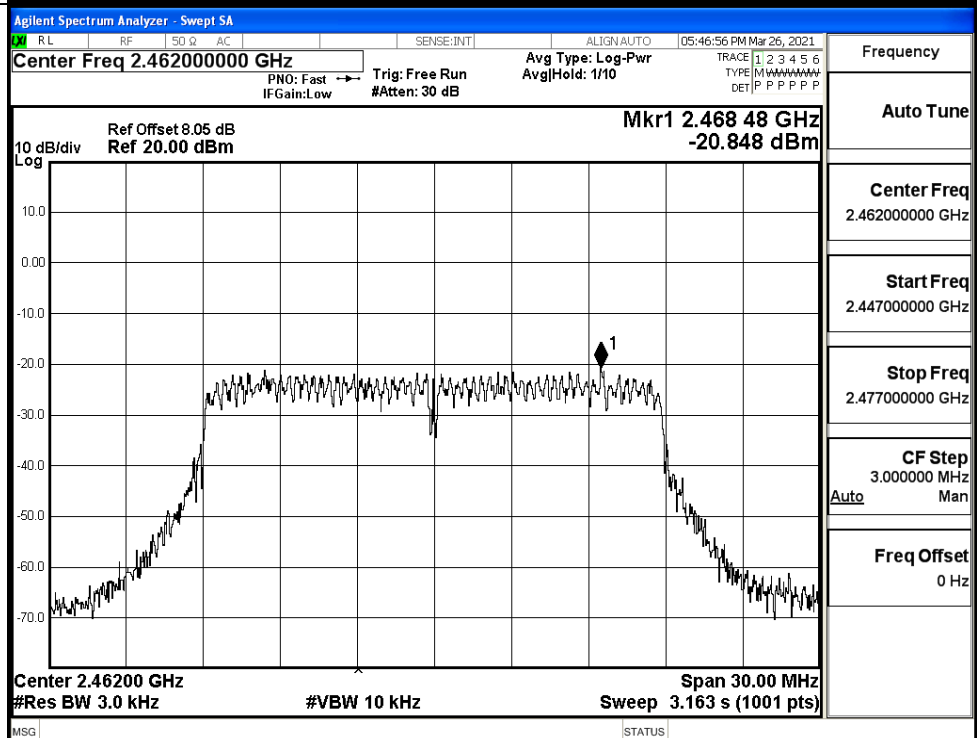
11N20SISO/LCH



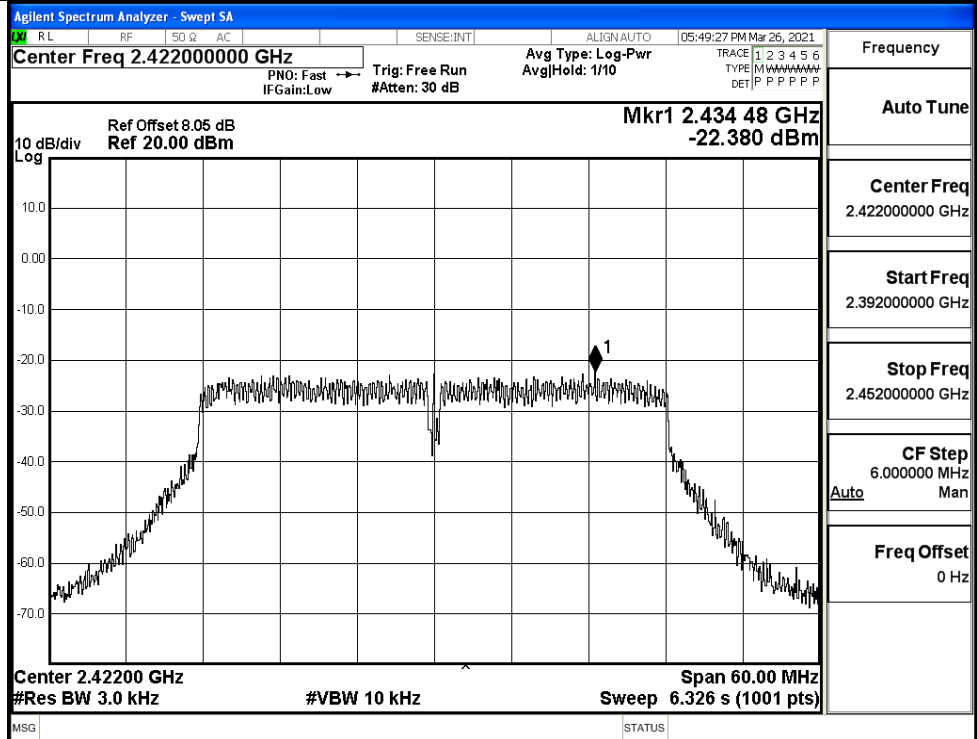
11N20SISO/MCH



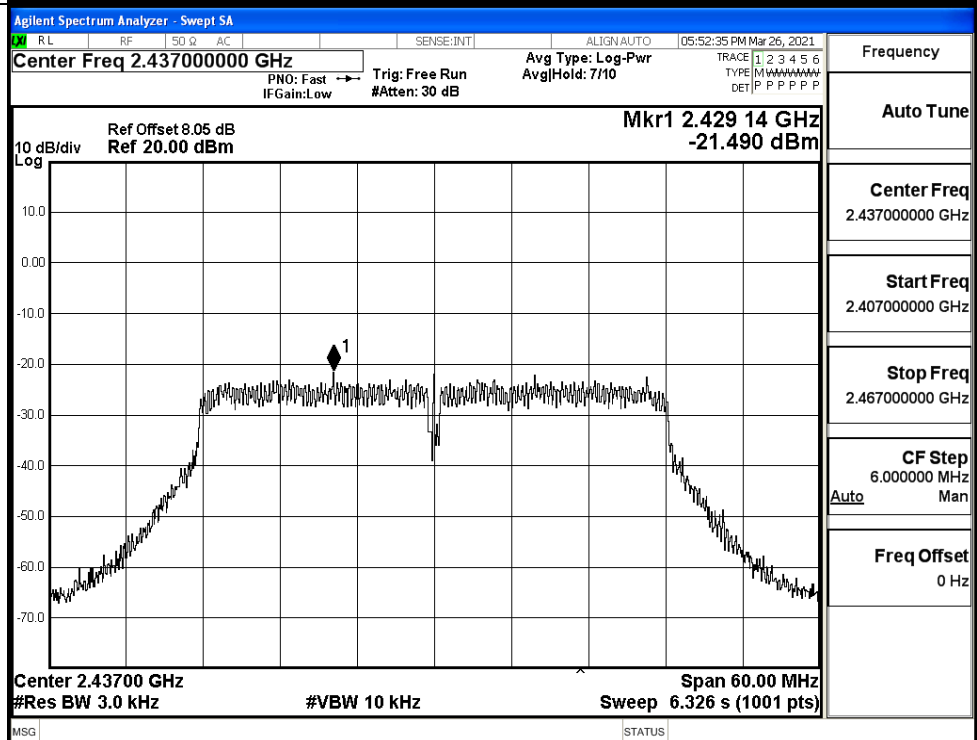
11N20SISO/HCH



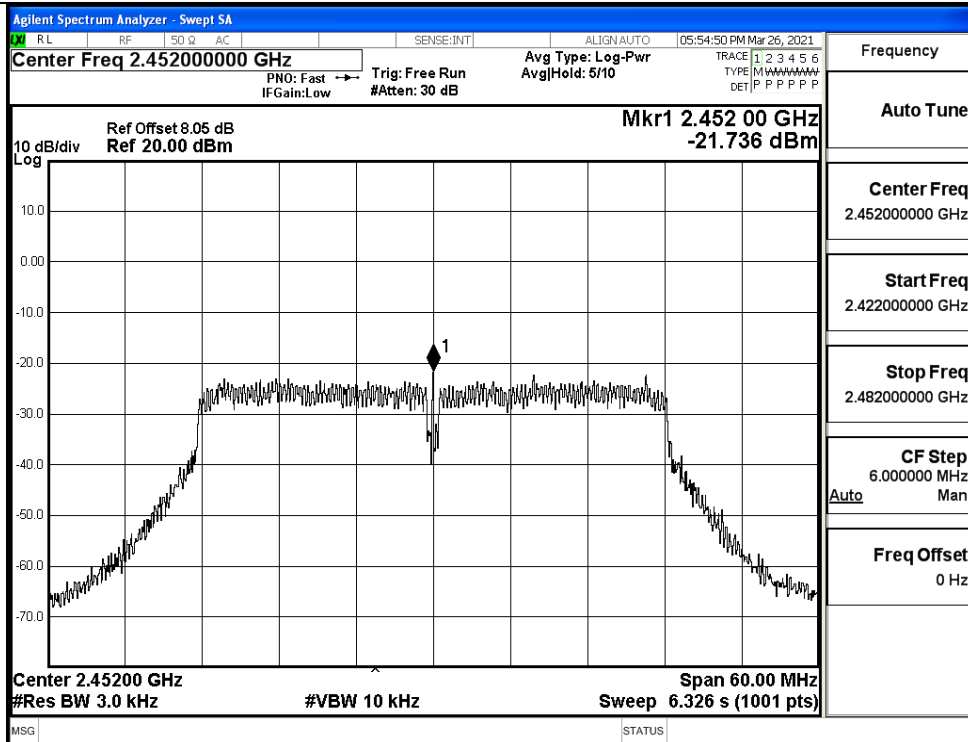
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

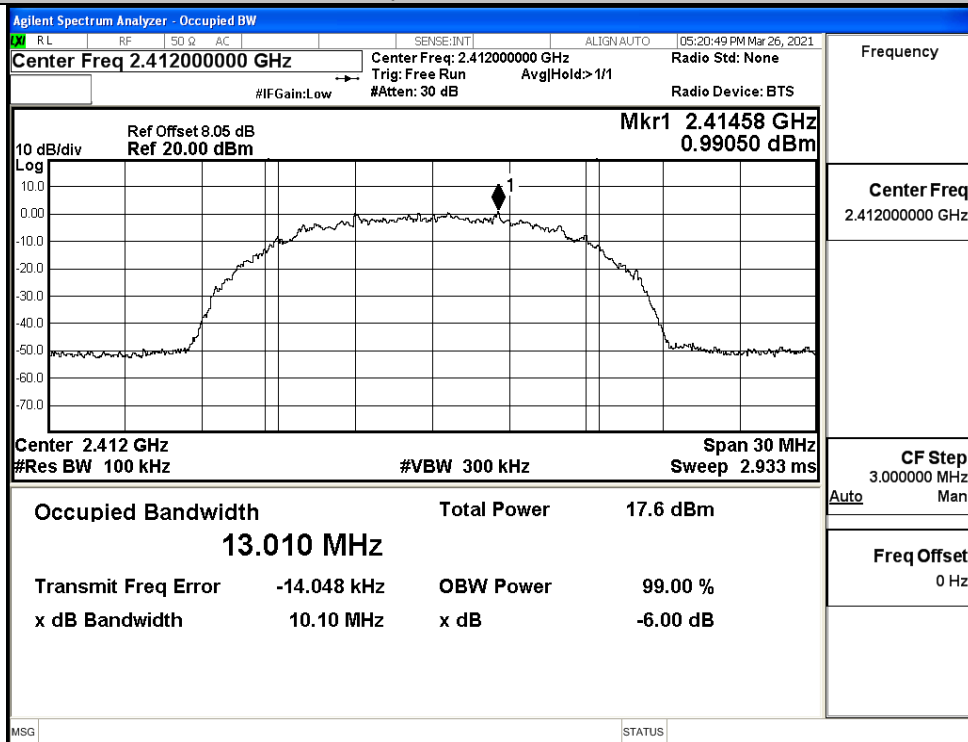


B.4 6dB Bandwidth

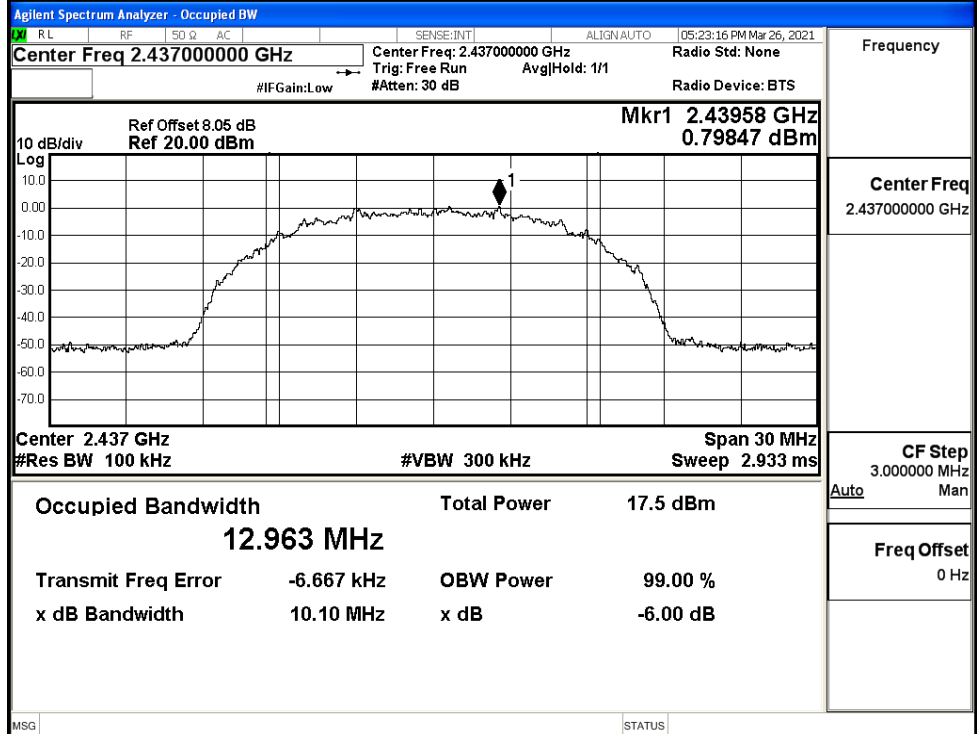
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	10.10	≥ 0.5	PASS
	MCH	10.10	≥ 0.5	PASS
	HCH	10.07	≥ 0.5	PASS
11G	LCH	16.48	≥ 0.5	PASS
	MCH	16.48	≥ 0.5	PASS
	HCH	16.48	≥ 0.5	PASS
11N20SISO	LCH	17.61	≥ 0.5	PASS
	MCH	17.61	≥ 0.5	PASS
	HCH	17.63	≥ 0.5	PASS
11N40SISO	LCH	36.53	≥ 0.5	PASS
	MCH	36.49	≥ 0.5	PASS
	HCH	36.52	≥ 0.5	PASS

Test Graphs

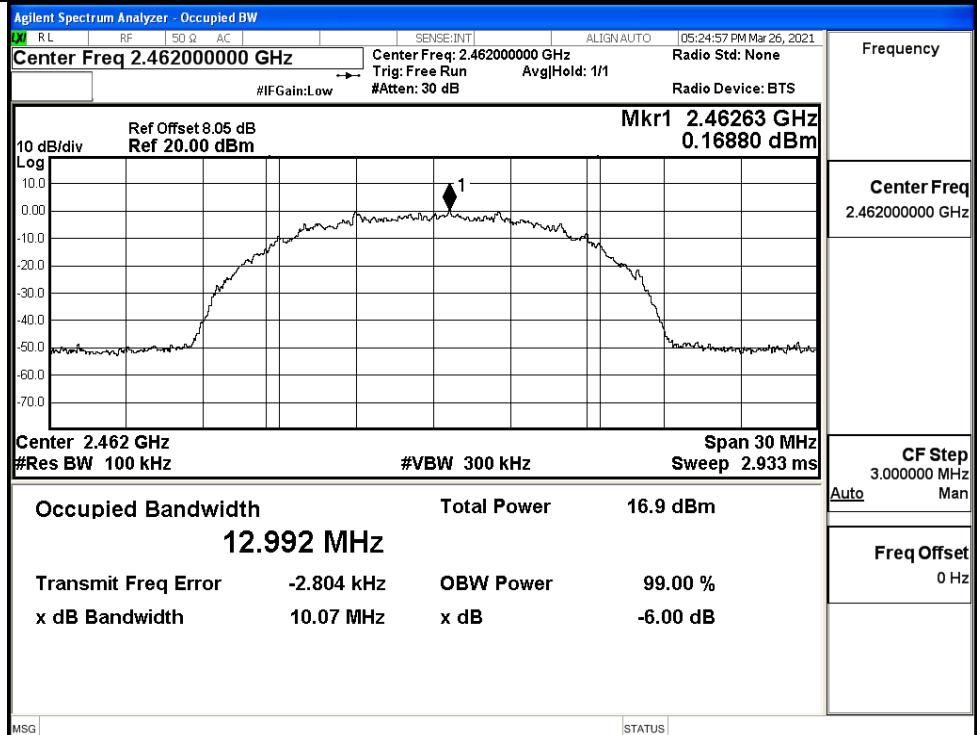
11B/LCH



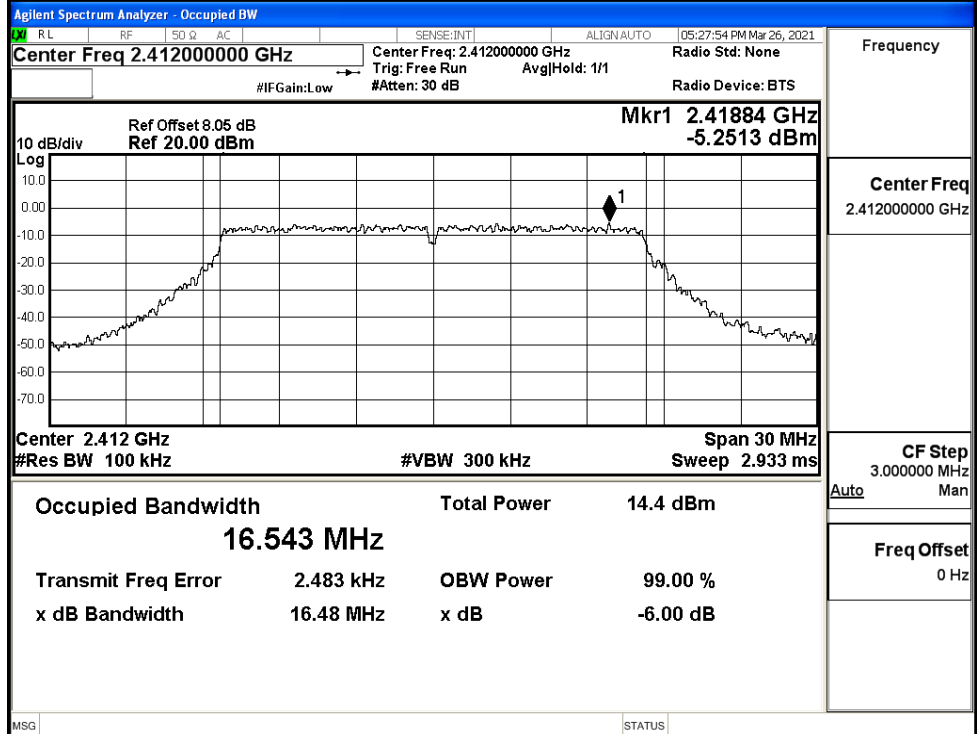
11B/MCH



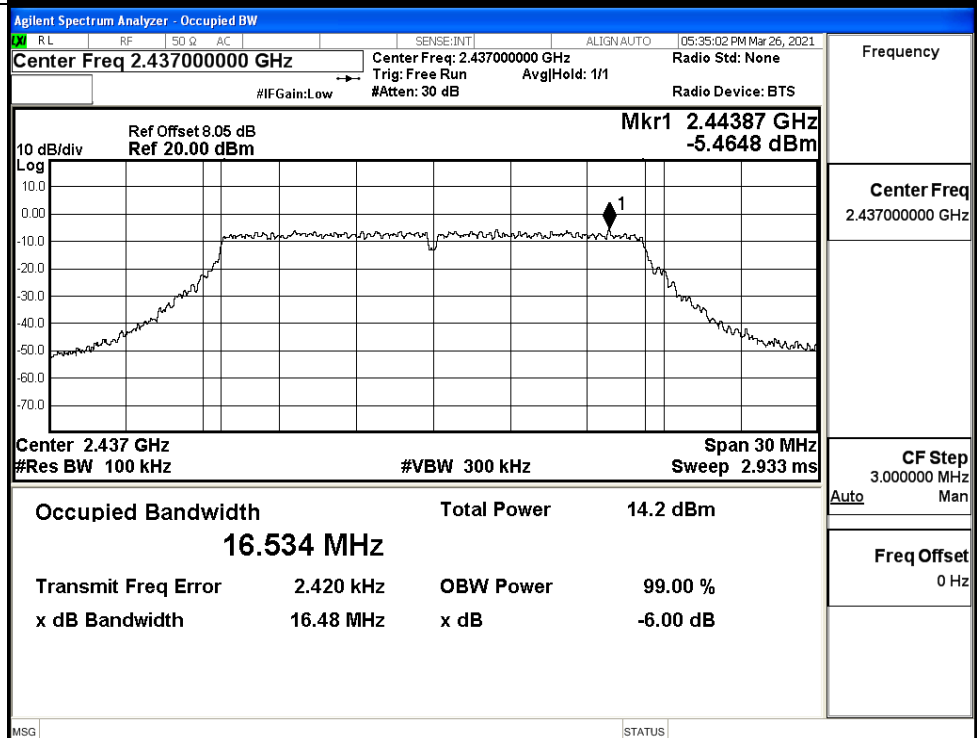
11B/HCH



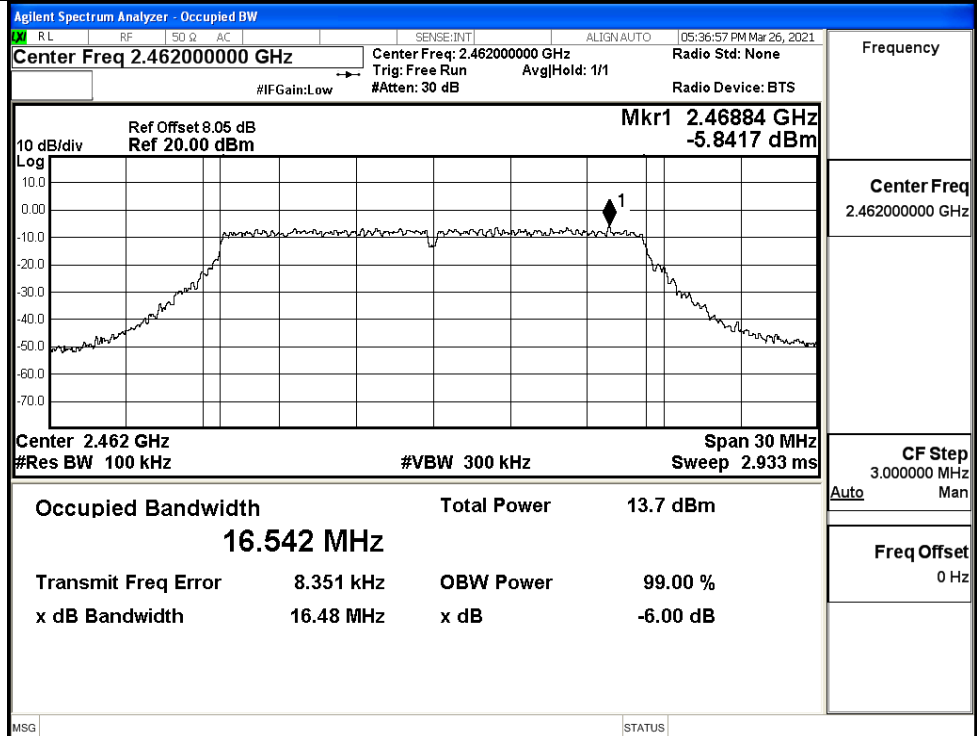
11G/LCH



11G/MCH



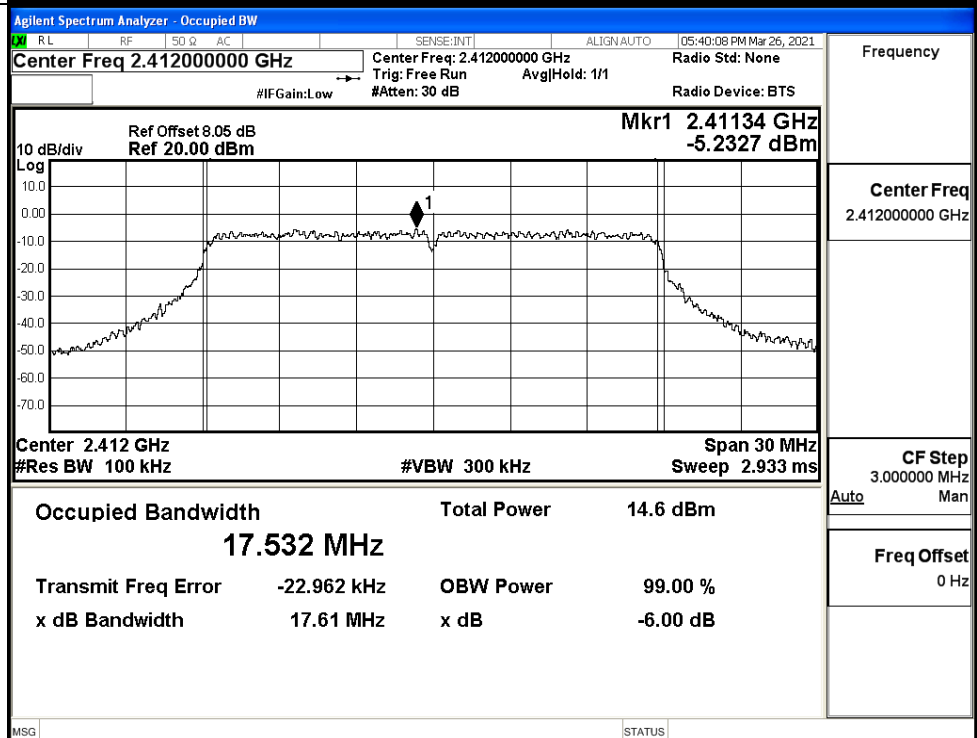
11G/HCH



Frequency

Center Freq
2.46200000 GHzCF Step
3.000000 MHz
Auto ManFreq Offset
0 Hz

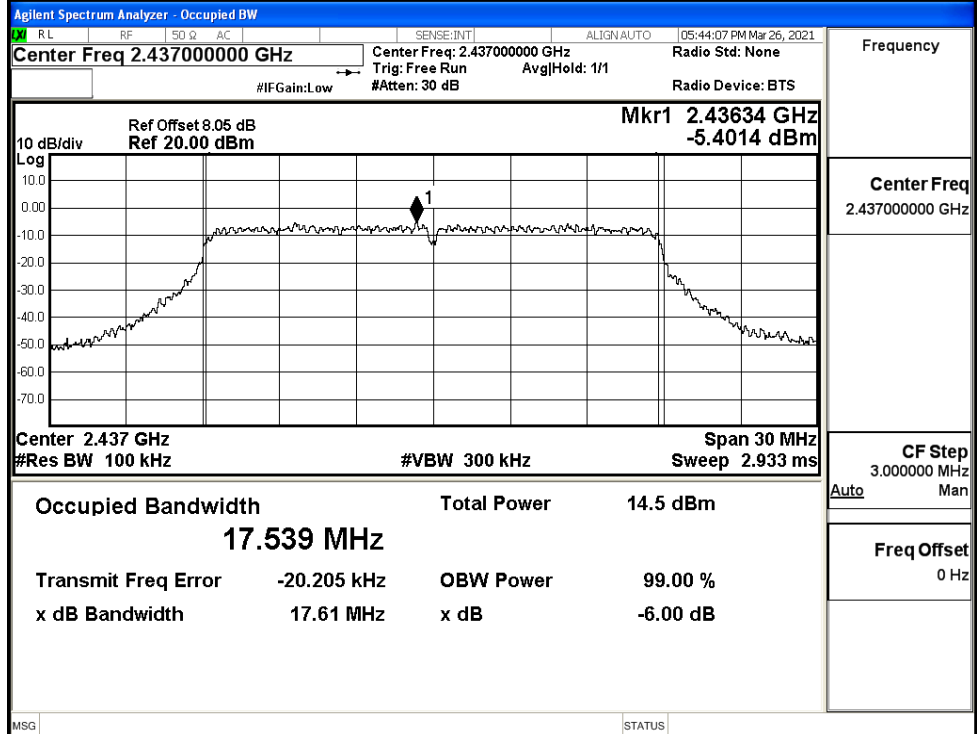
11N20SISO/LCH



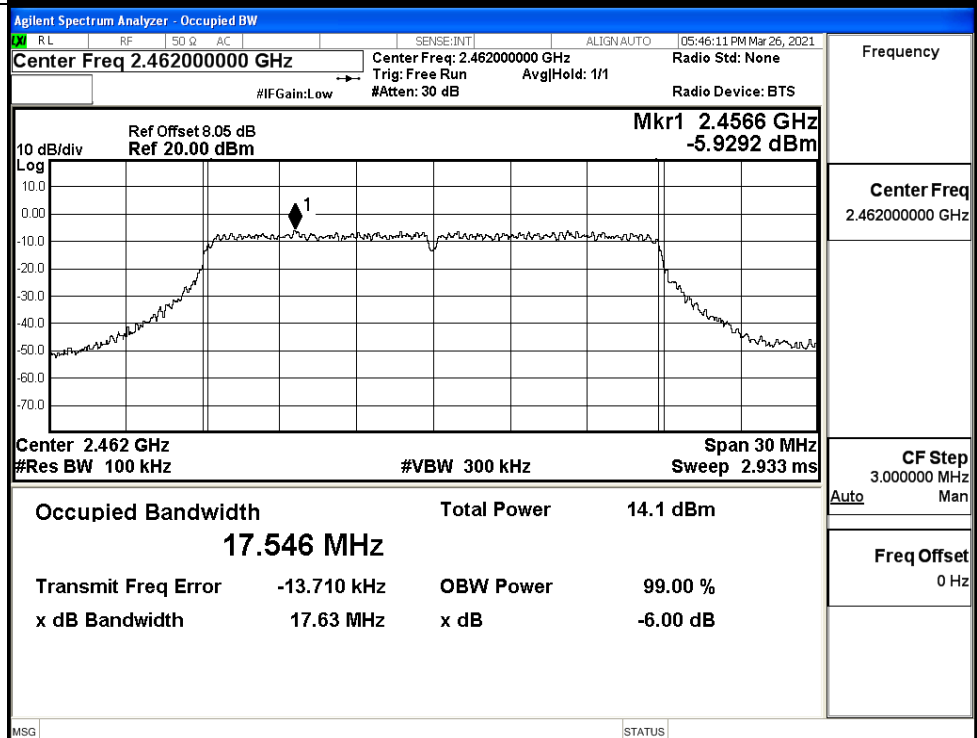
Frequency

Center Freq
2.41200000 GHzCF Step
3.000000 MHz
Auto ManFreq Offset
0 Hz

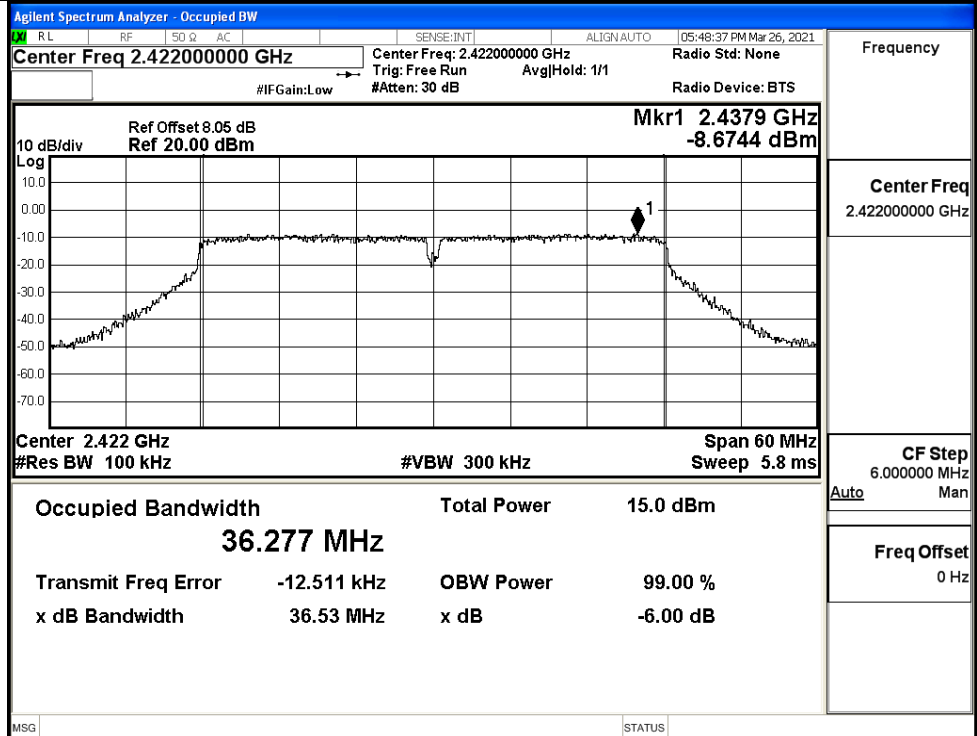
11N20SISO/MCH



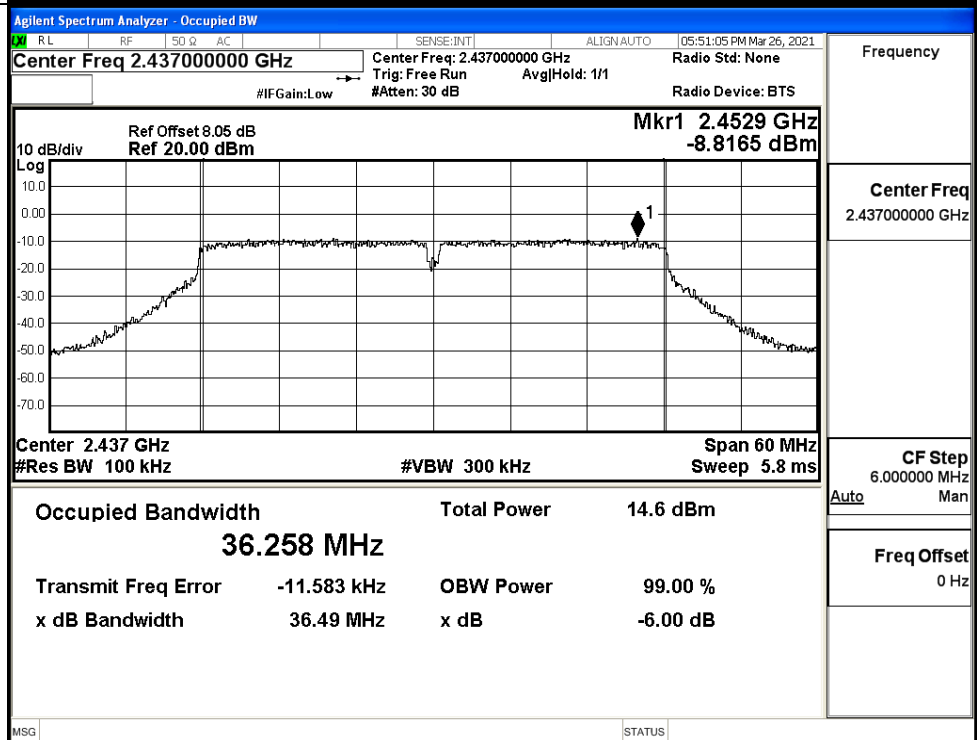
11N20SISO/HCH



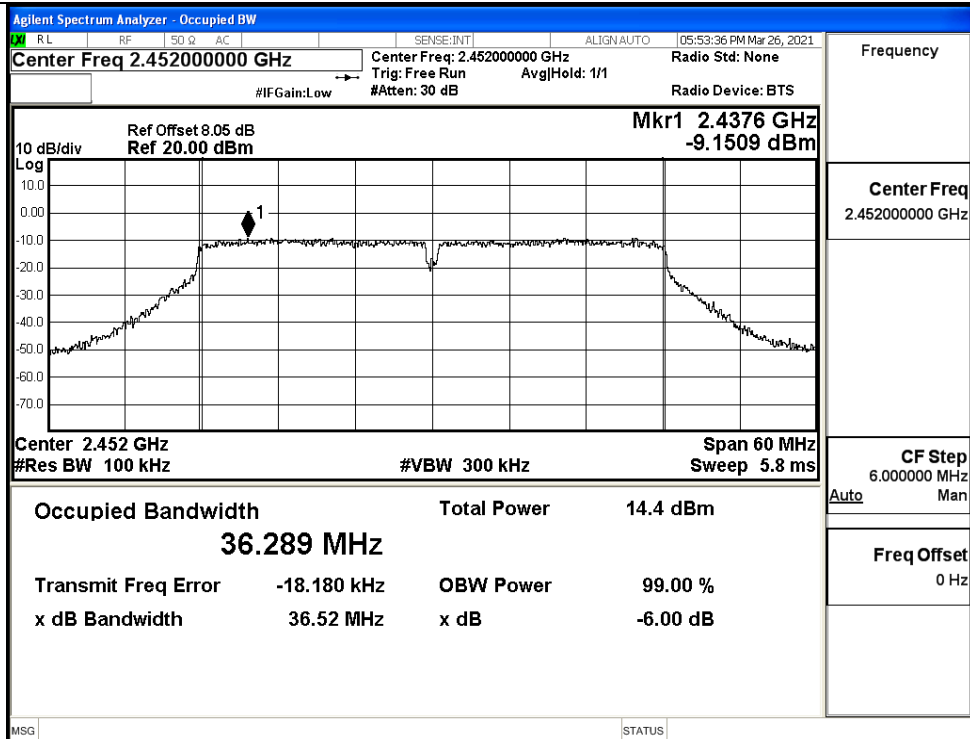
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

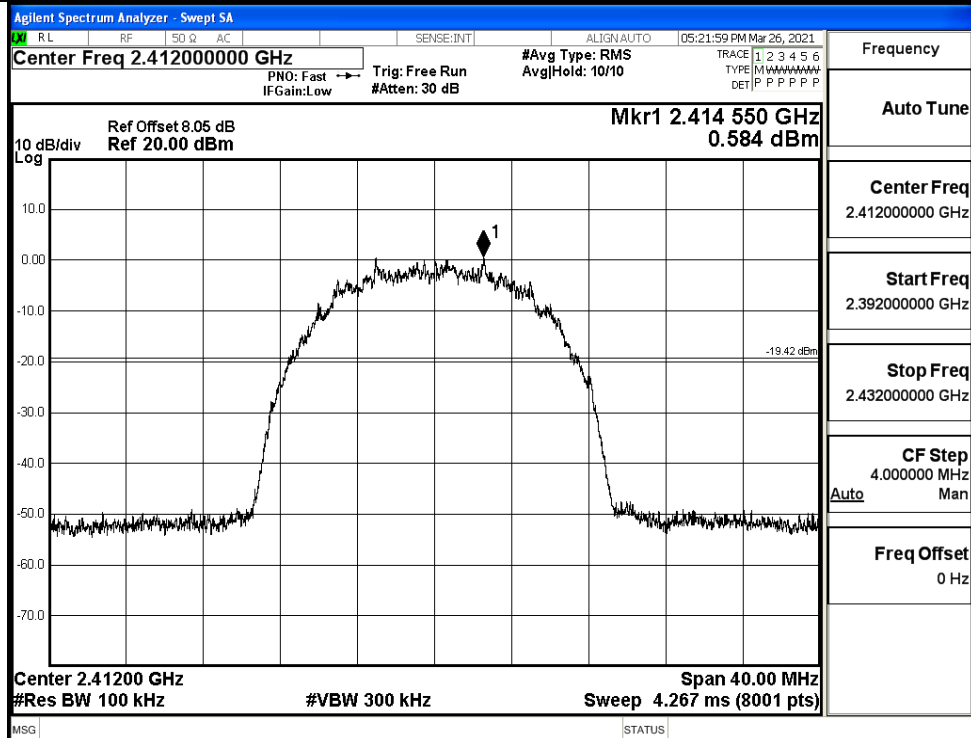


B.5 RF Conducted Spurious Emissions

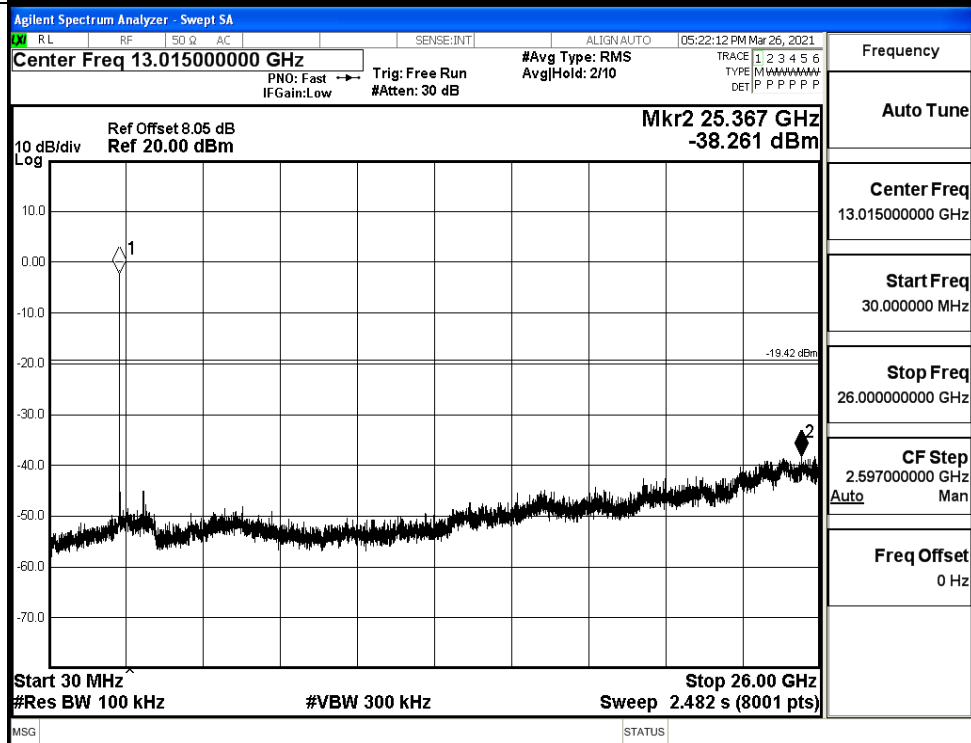
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	0.584	-38.261	-19.416	PASS
	MCH	0.271	-38.512	-19.729	PASS
	HCH	0.149	-37.582	-19.851	PASS
11G	LCH	-5.316	-38.151	-25.316	PASS
	MCH	-5.852	-38.075	-25.852	PASS
	HCH	-5.886	-37.485	-25.886	PASS
11N20 SISO	LCH	-5.665	-37.571	-25.665	PASS
	MCH	-5.696	-37.090	-25.696	PASS
	HCH	-5.802	-38.321	-25.802	PASS
11N40 SISO	LCH	-8.492	-37.623	-28.492	PASS
	MCH	-9.261	-38.056	-29.261	PASS
	HCH	-8.984	-37.330	-28.984	PASS

11B LCH Graphs

Pref/11B/LCH

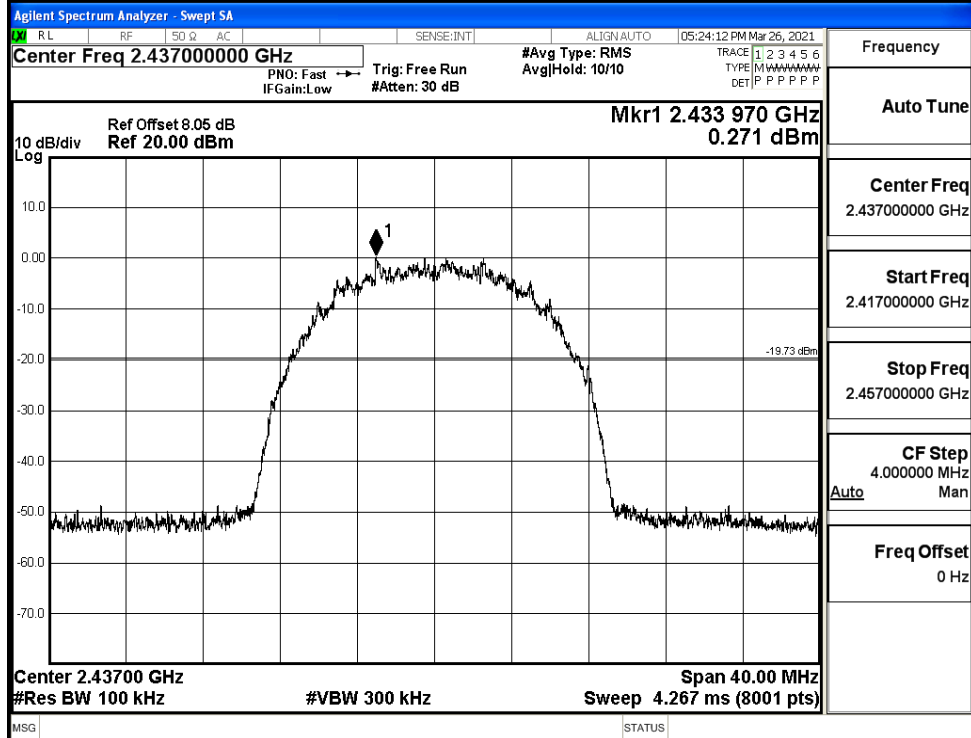


Puw/11B/LCH

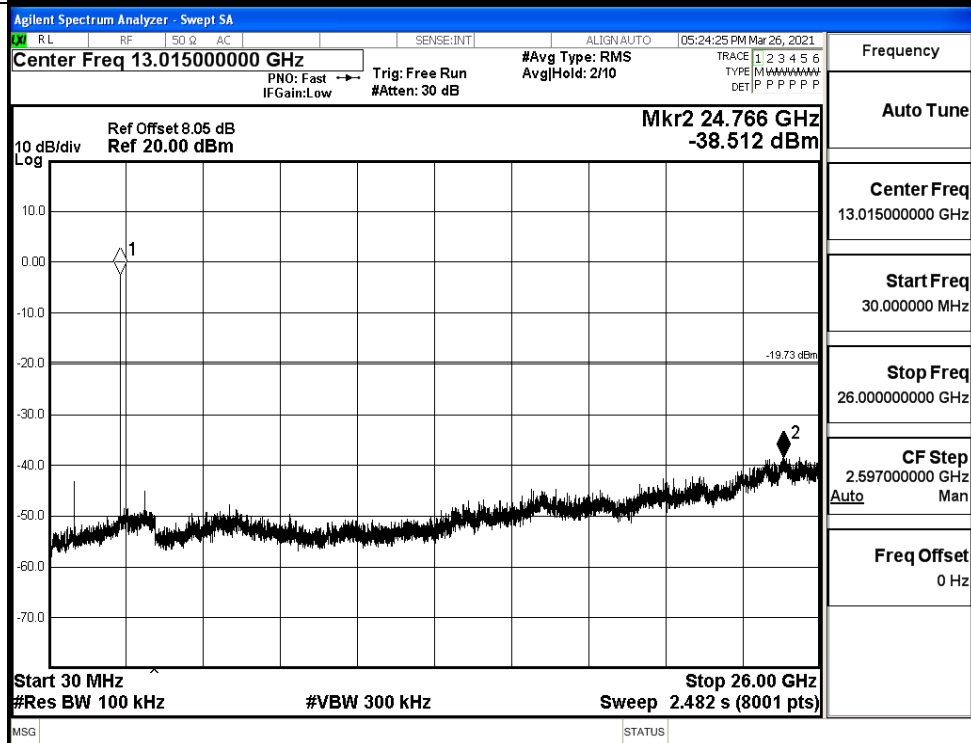


11B MCH Graphs

Pref/11B/MCH

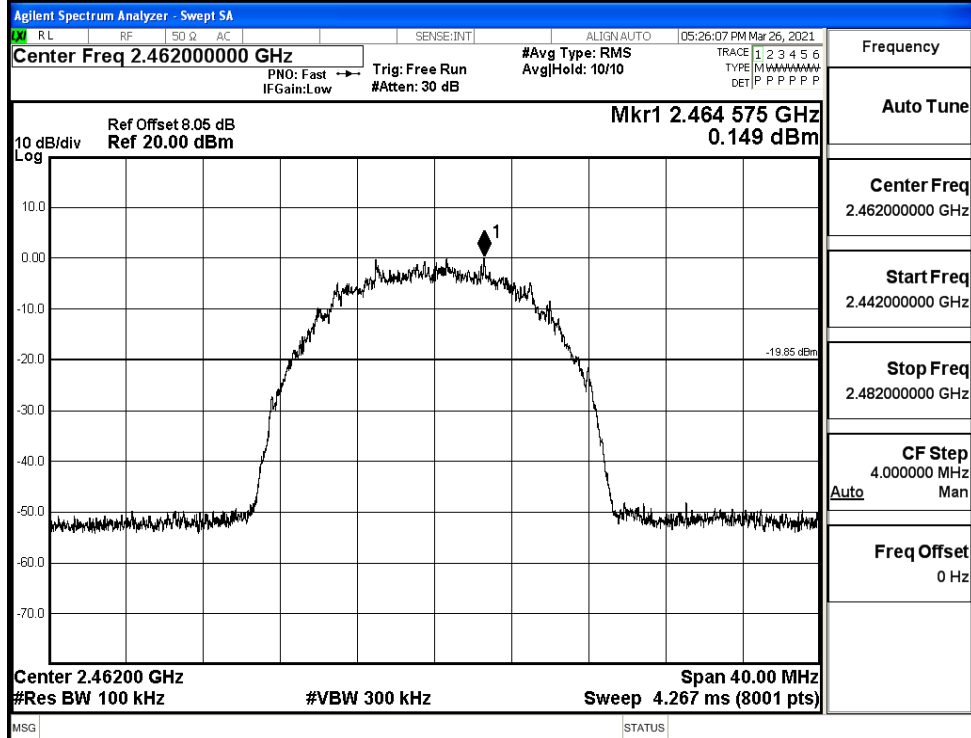


Puw/11B/MCH

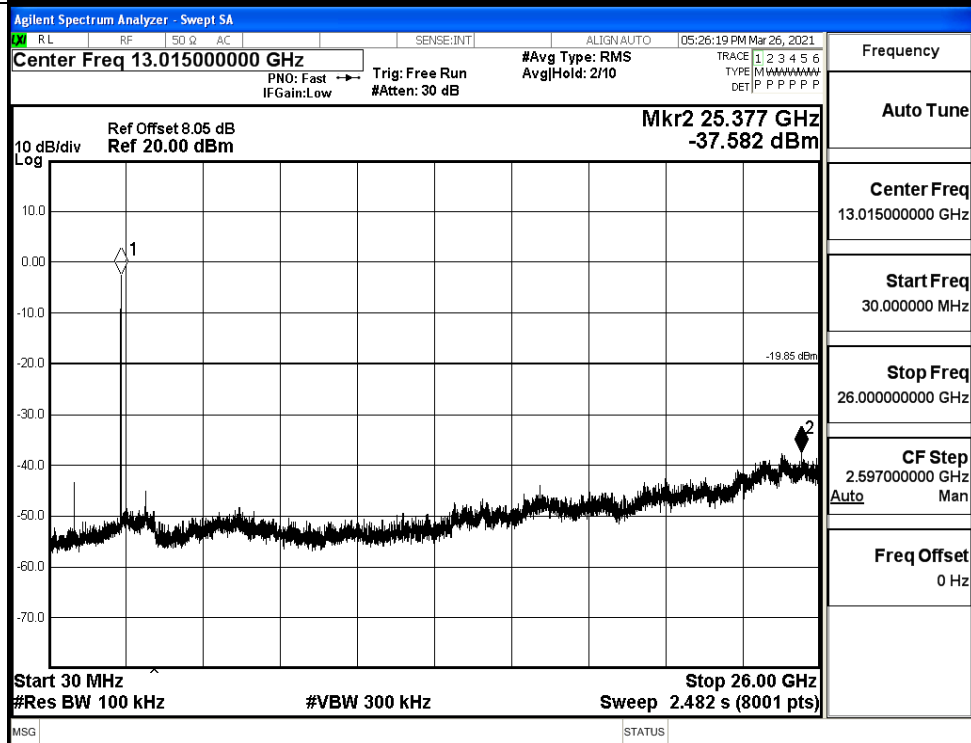


11B HCH Graphs

Pref/11B/HCH

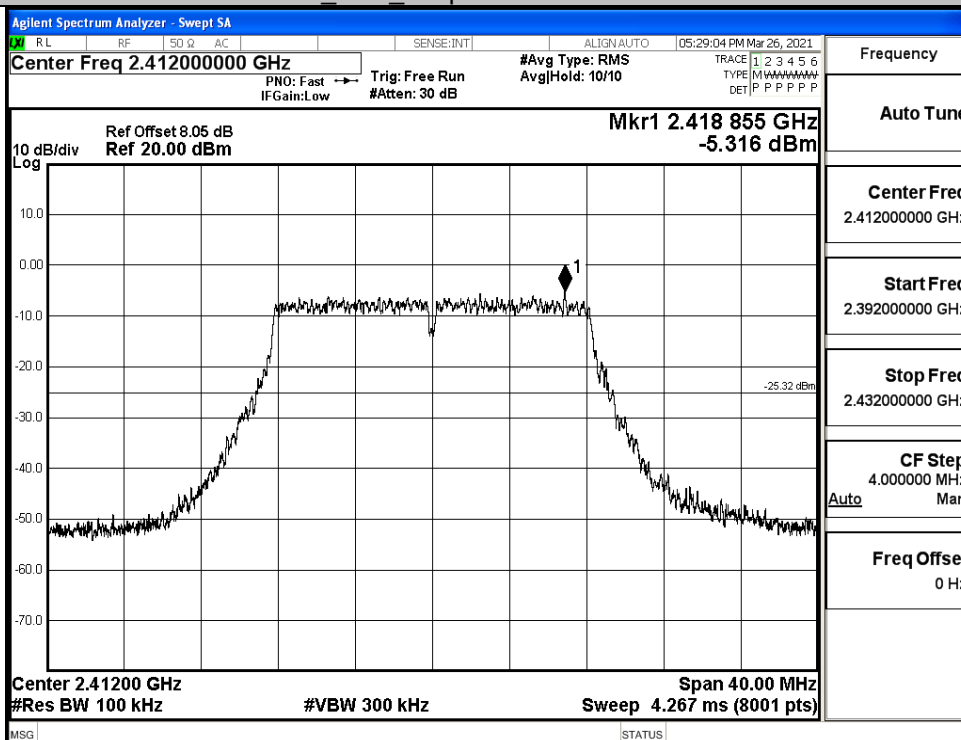


Puw/11B/HCH

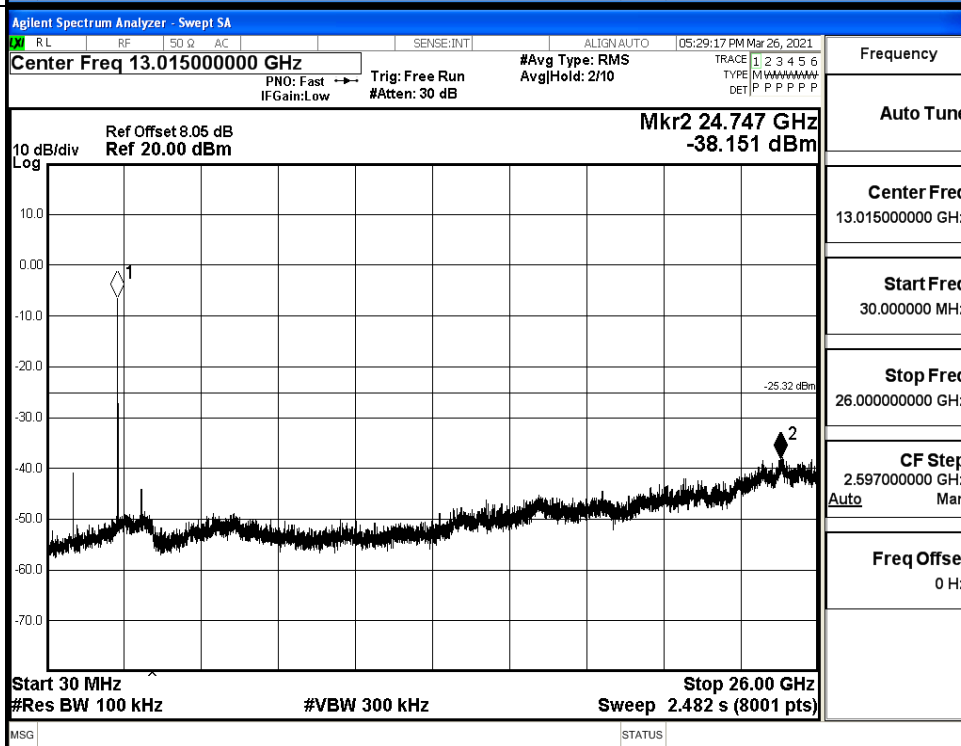


11G_LCH_Graphs

Pref/11G/LCH

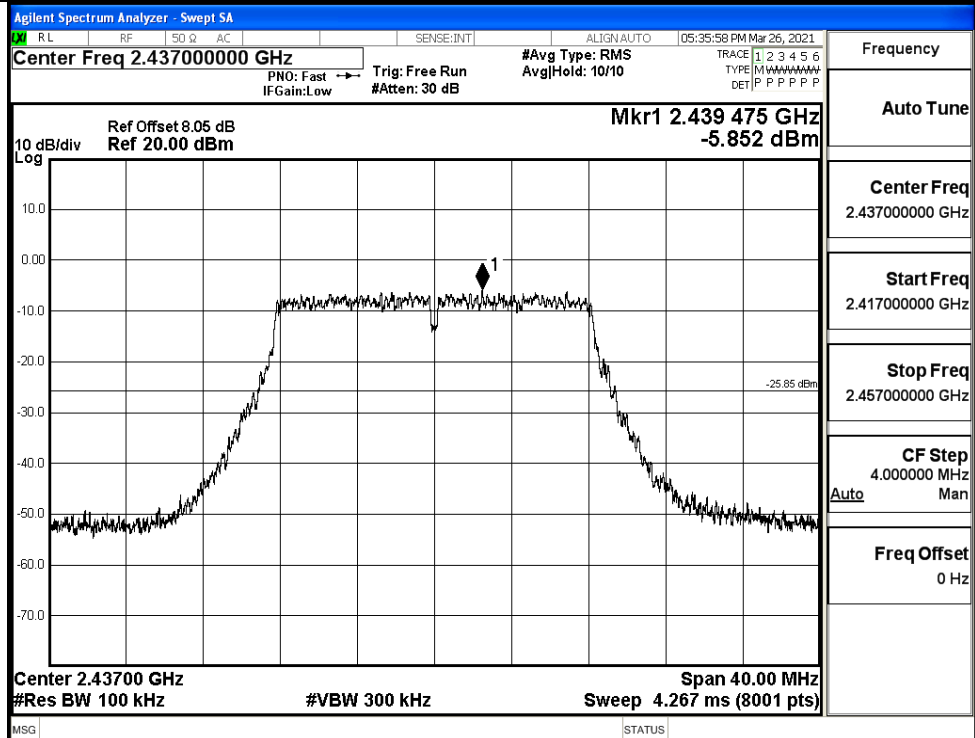


Puw/11G/LCH

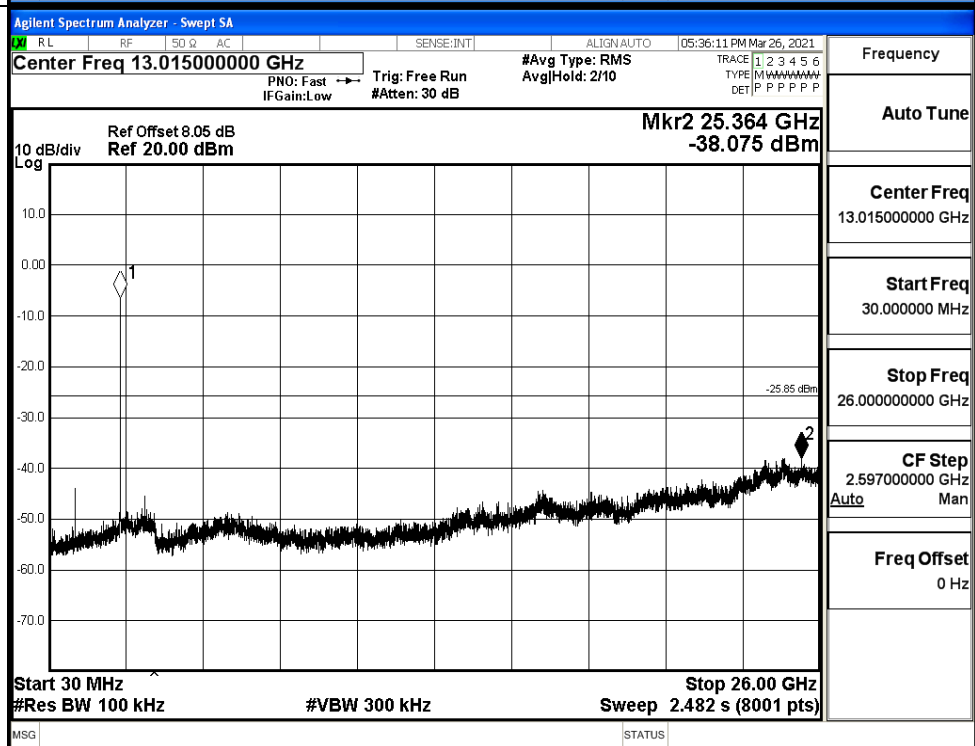


11G MCH Graphs

Pref/11G/MCH

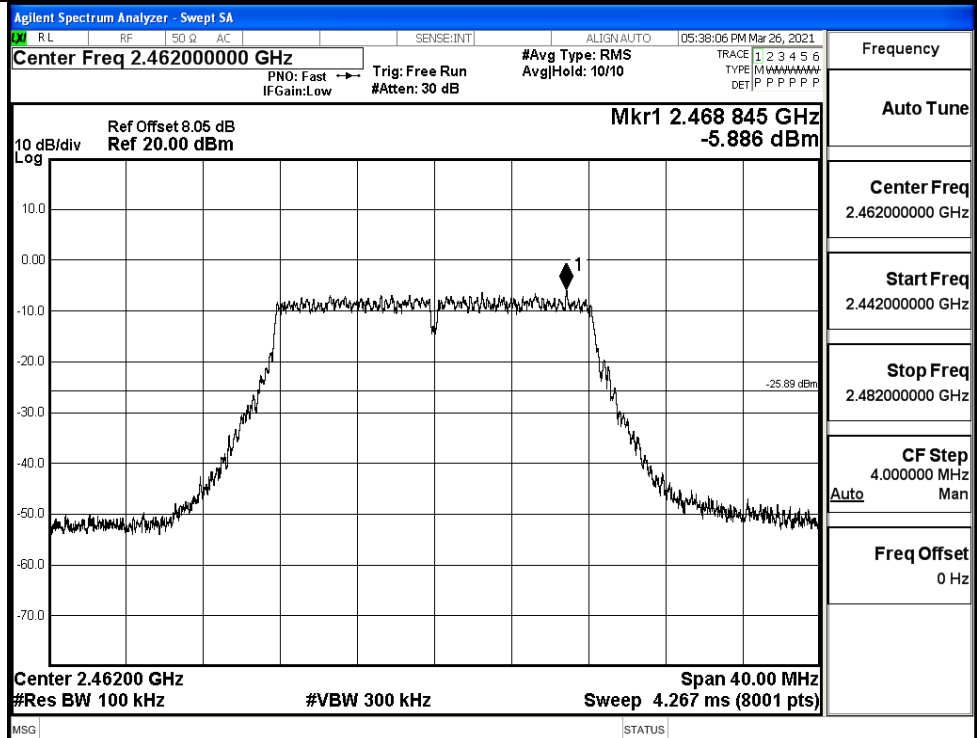


Puw/11G/MCH

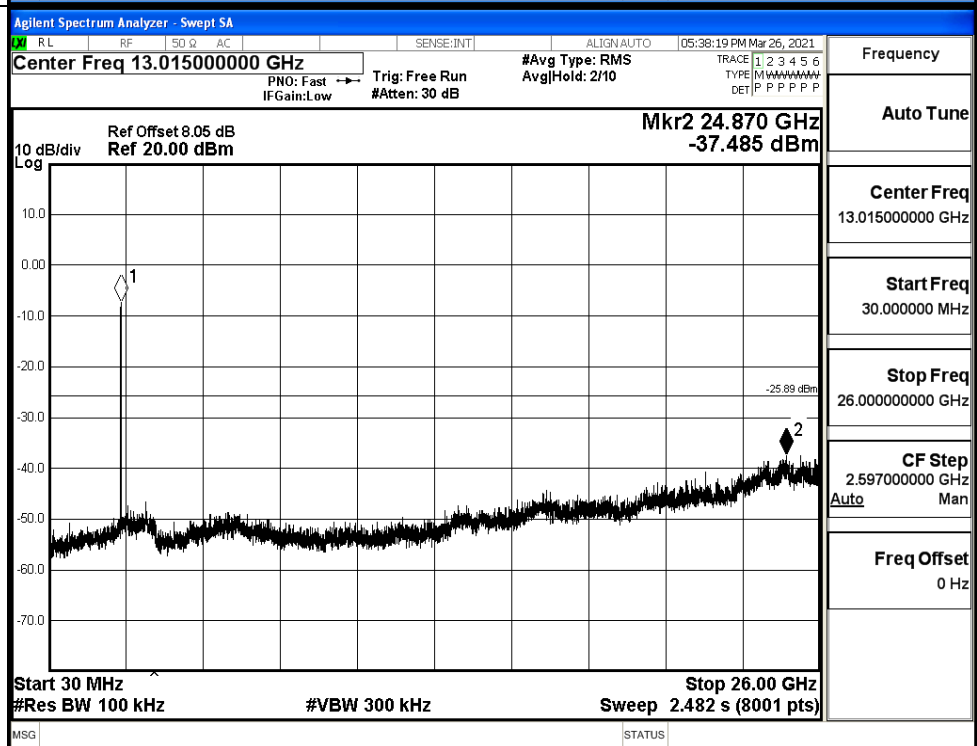


11G HCH Graphs

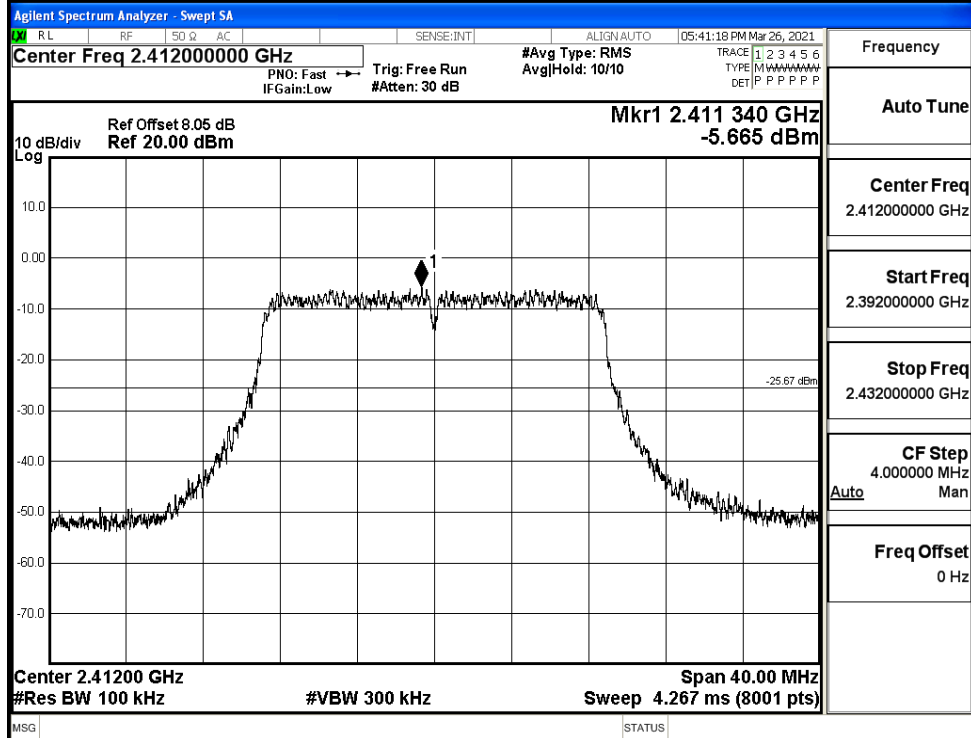
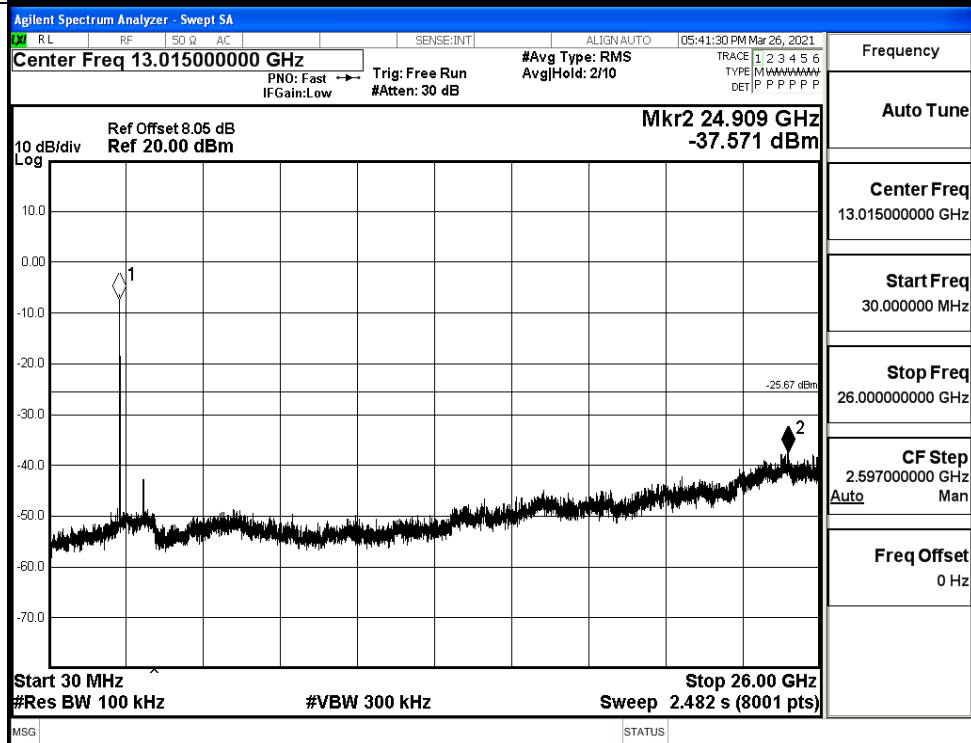
Pref/11G/HCH



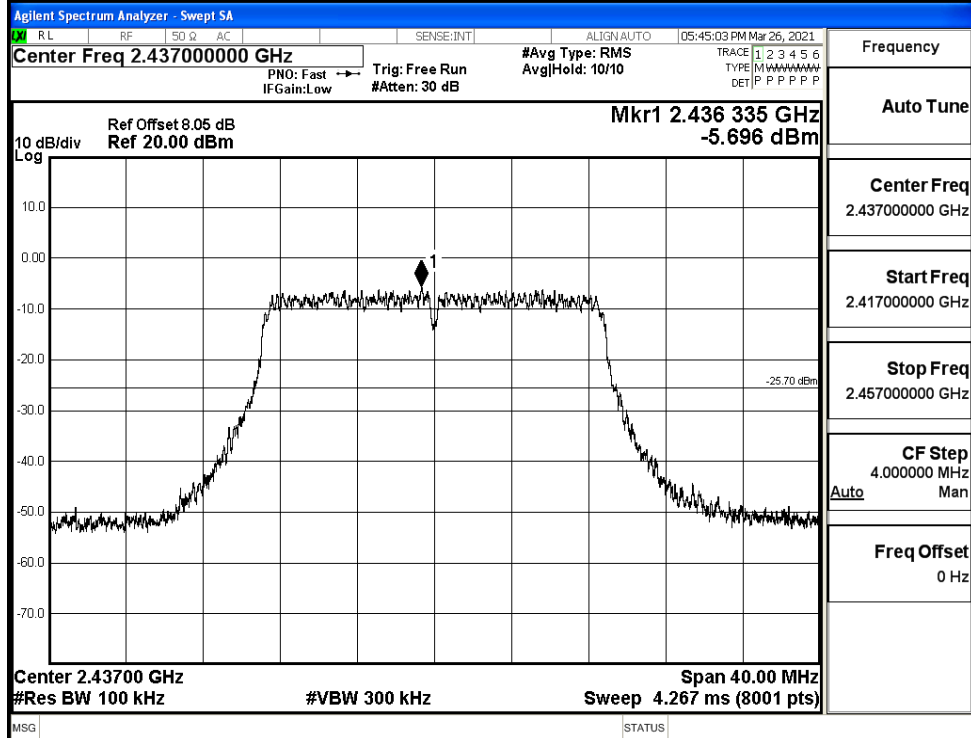
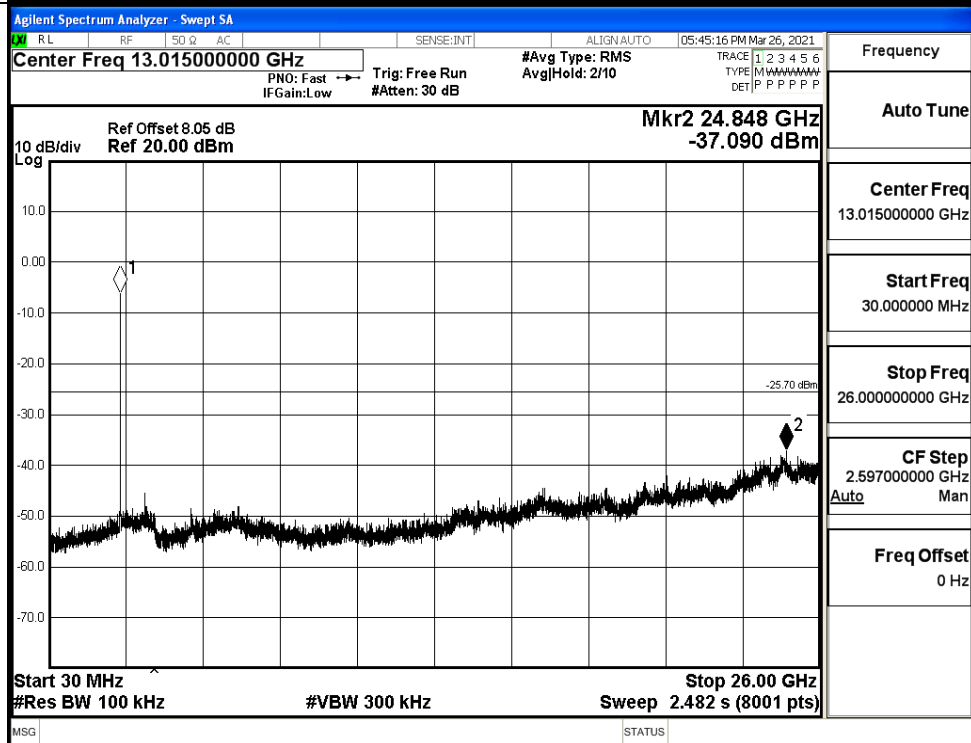
Puw/11G/HCH



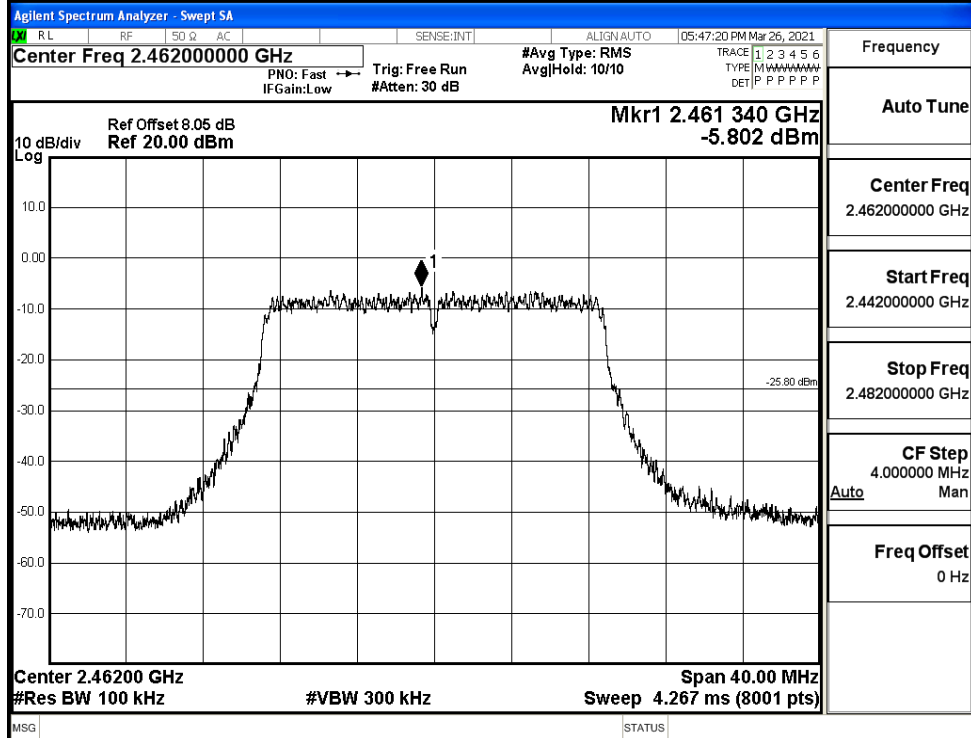
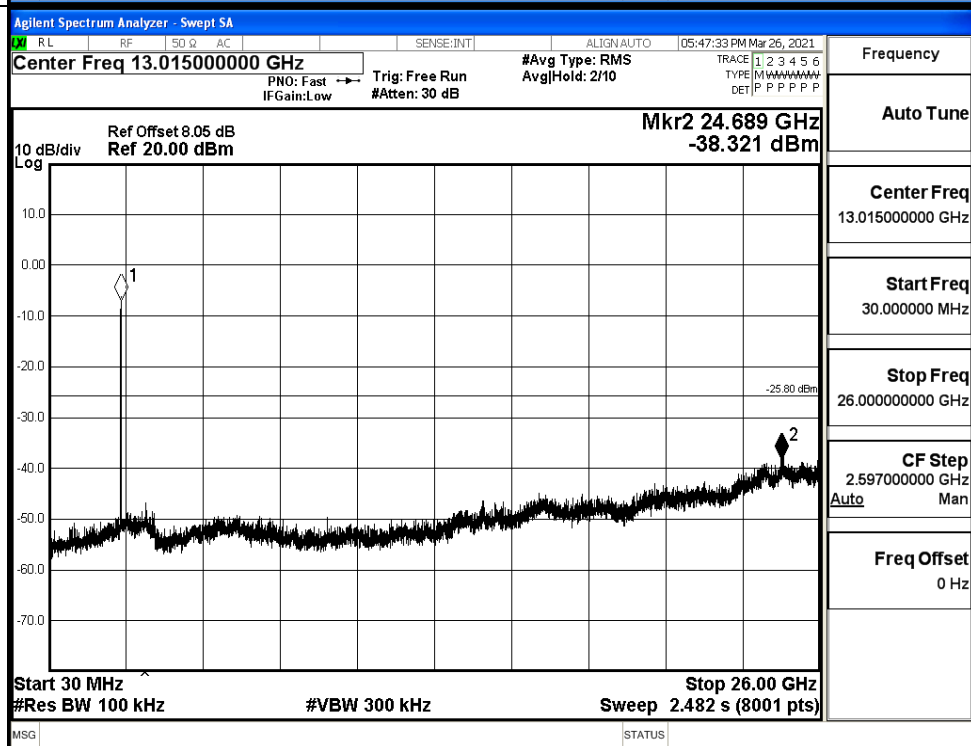
11N20SISO LCH Graphs

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

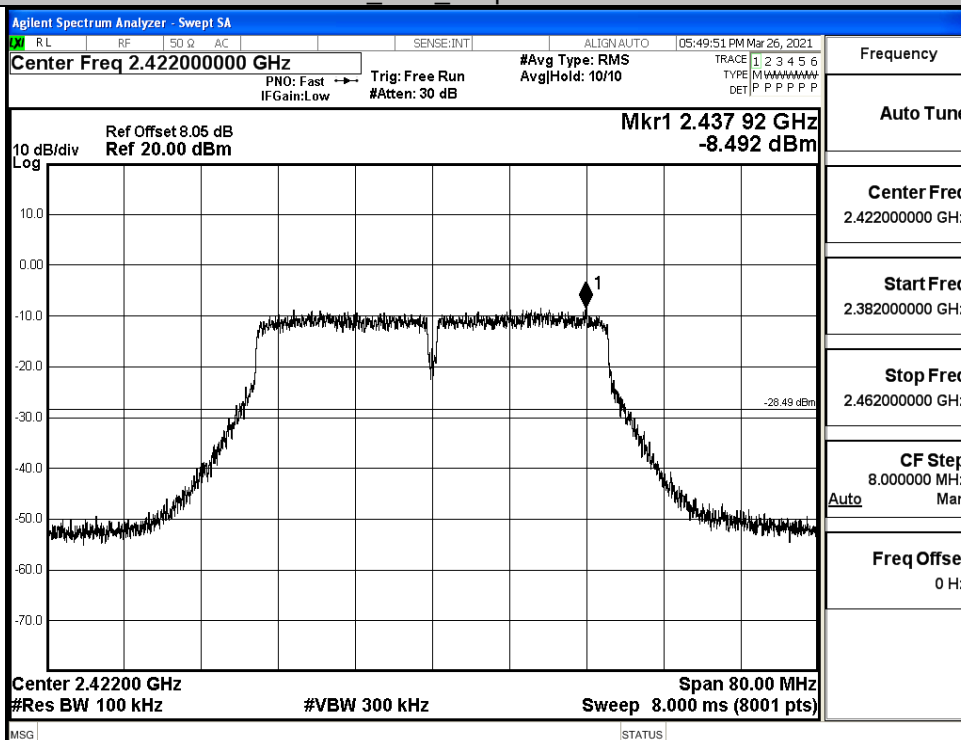
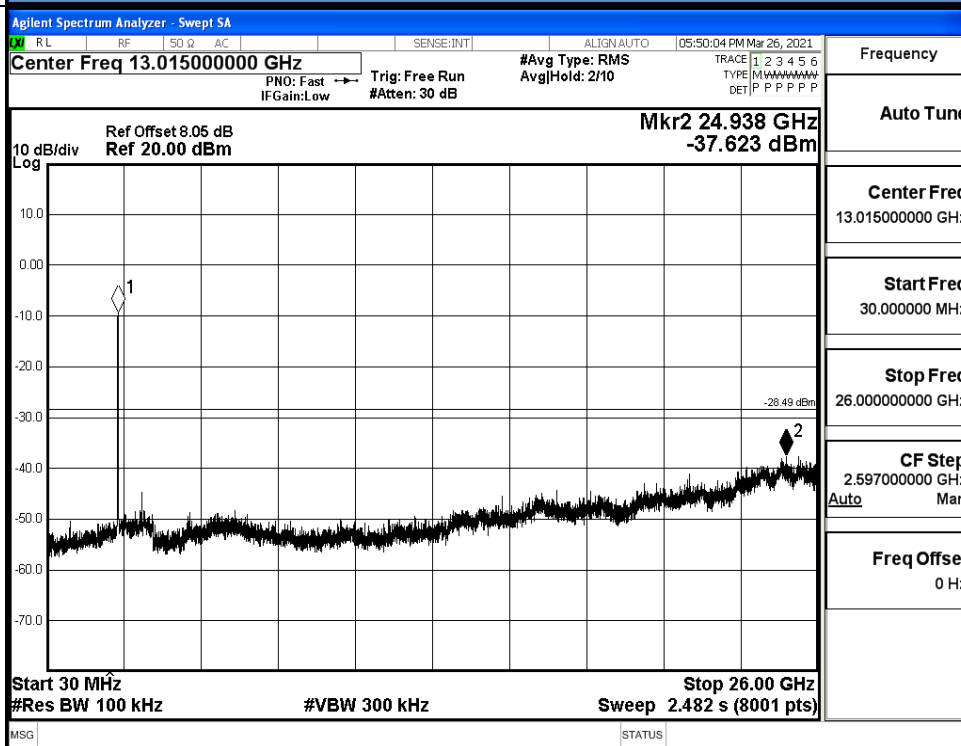
11N20SISO_MCH_Graphs

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

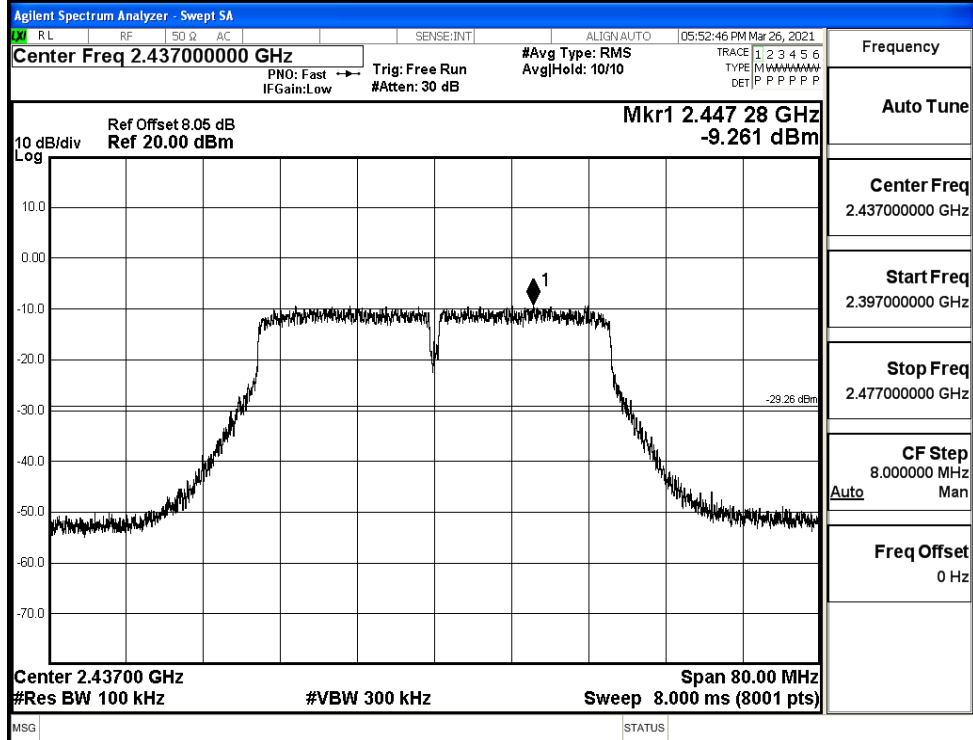
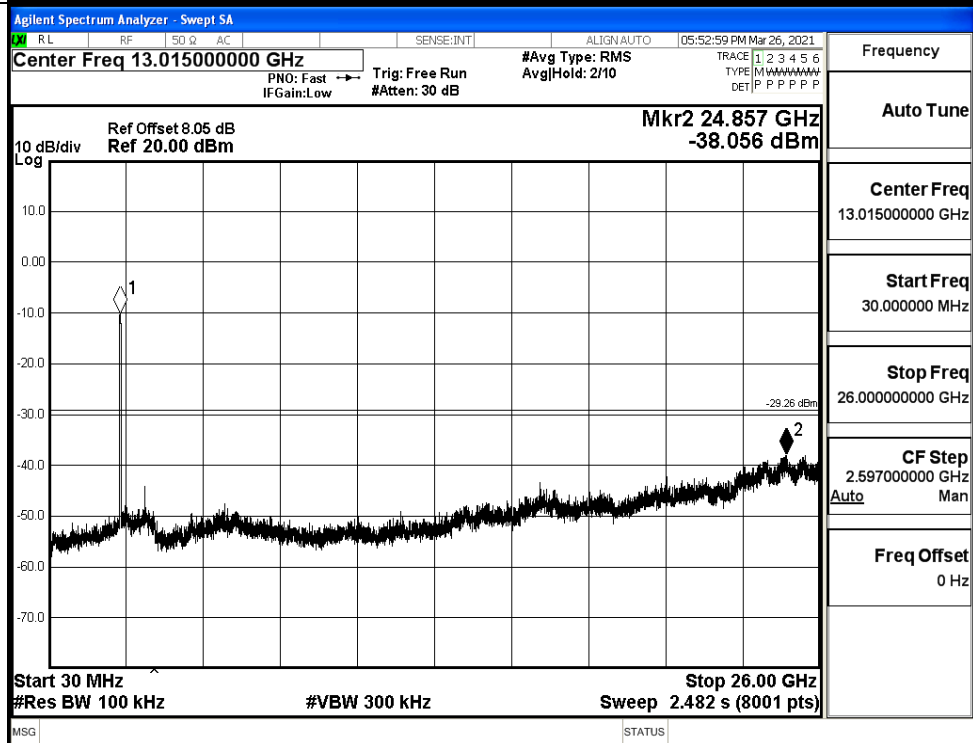
11N20SISO HCH Graphs

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

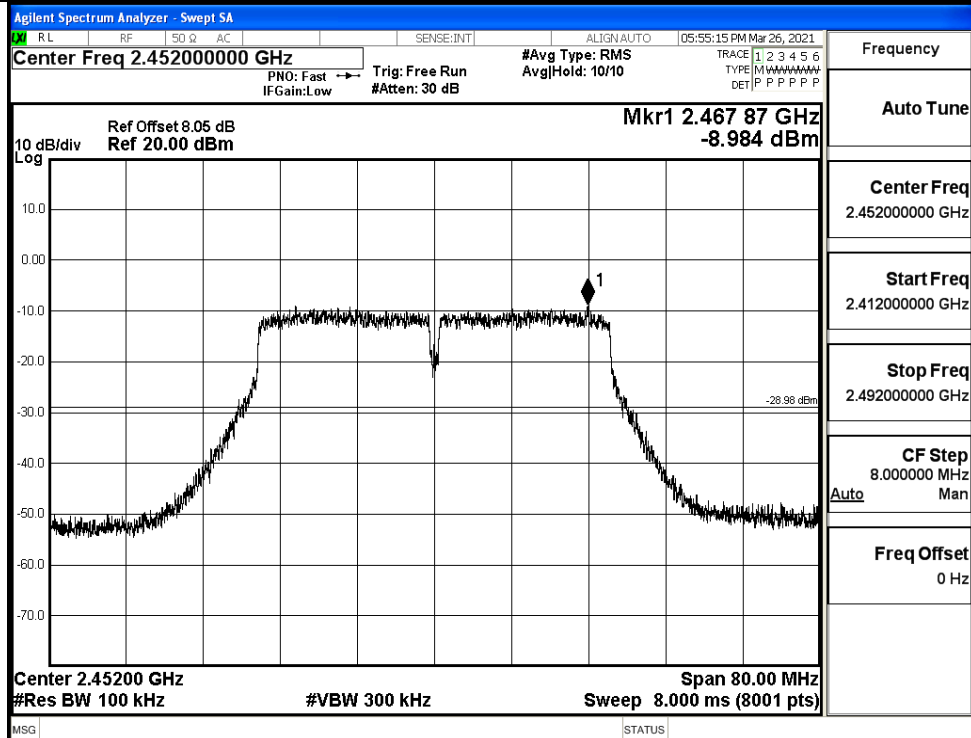
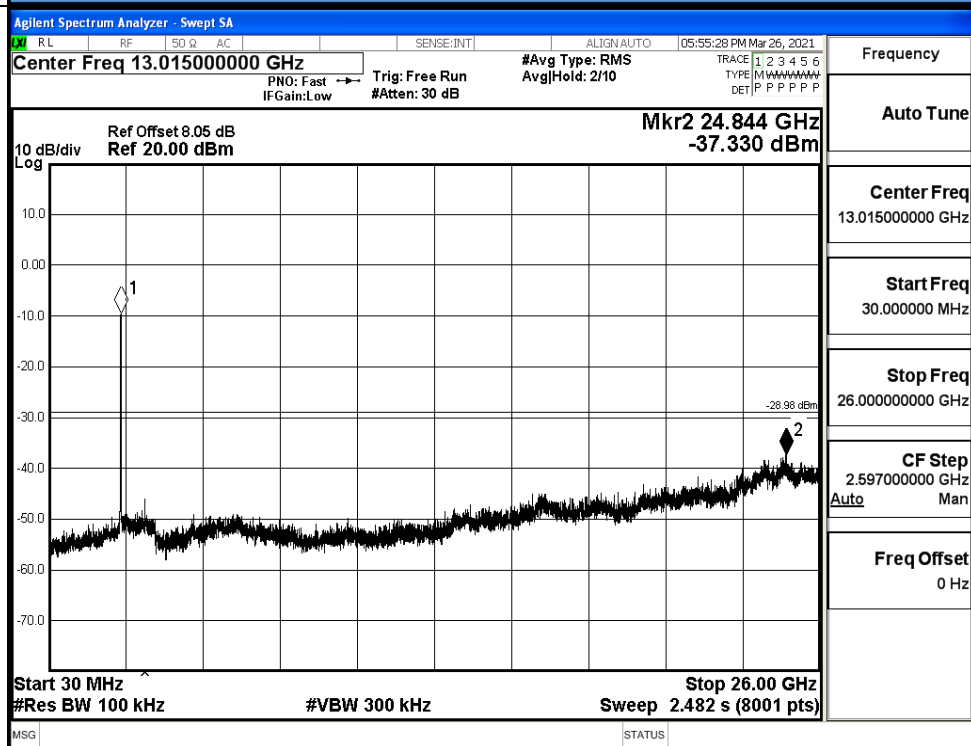
11N40SISO LCH Graphs

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

11N40SISO_MCH_Graphs

Pref/11N40
SISO/MCHPuw/11N40
SISO/MCH

11N40SISO HCH Graphs

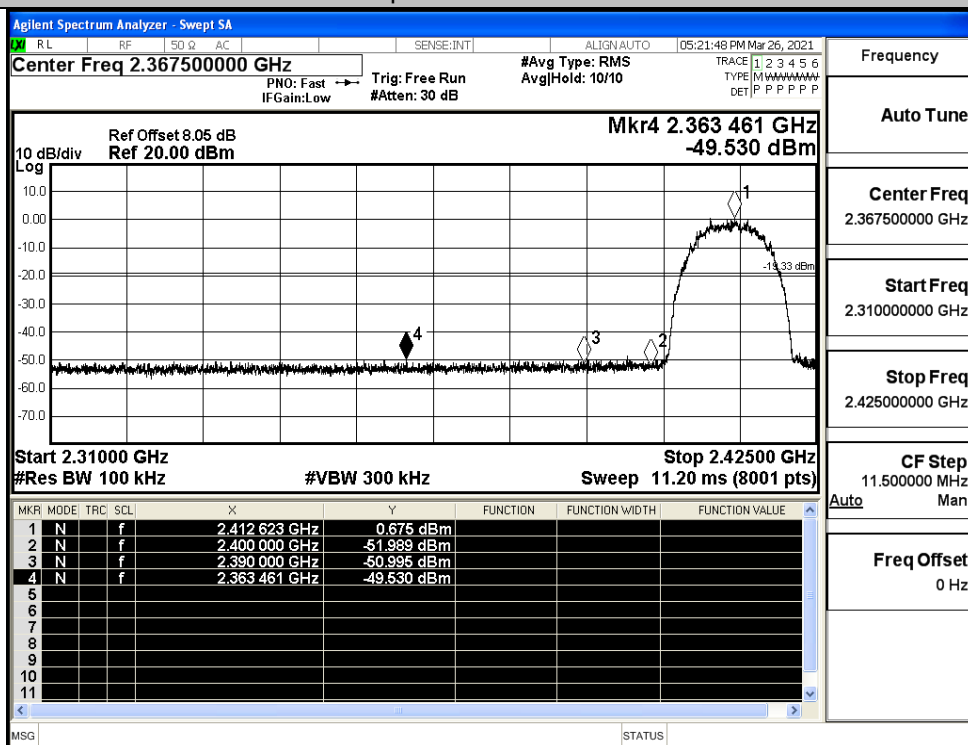
Pref/11N40
SISO/HCHPuw/11N40
SISO/HCH

B.6 Band-edge for RF Conducted Emissions

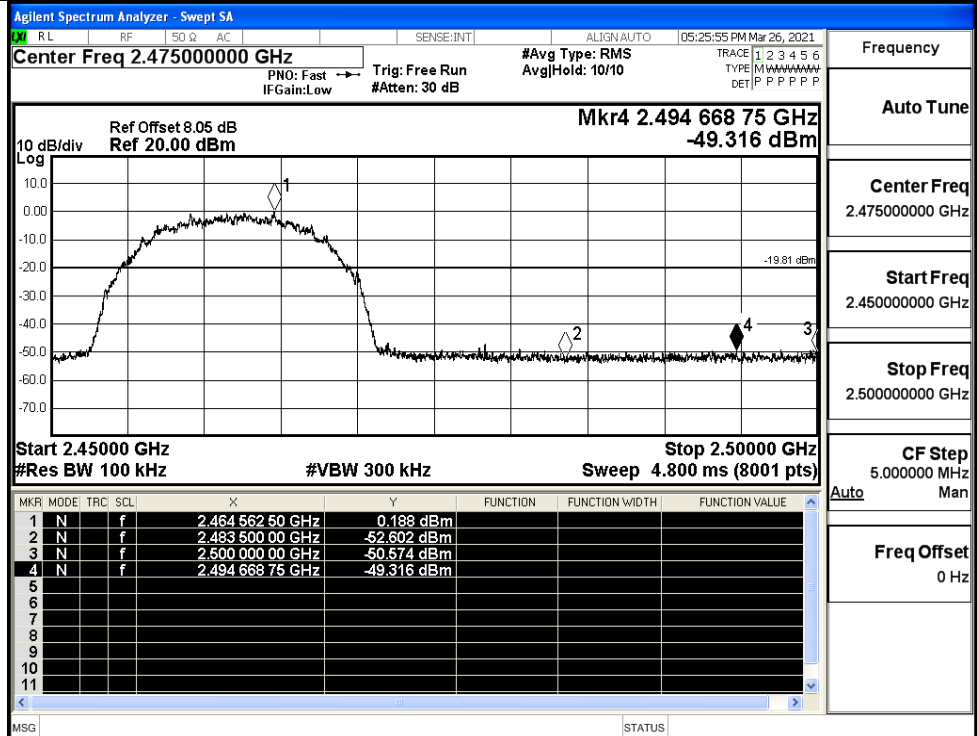
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	0.675	-49.530	-19.33	PASS
	HCH	0.188	-49.316	-19.81	PASS
11G	LCH	-5.322	-49.269	-25.32	PASS
	HCH	-5.812	-48.629	-25.81	PASS
11N20SISO	LCH	-5.379	-49.739	-25.38	PASS
	HCH	-5.864	-48.756	-25.86	PASS
11N40SISO	LCH	-8.657	-50.095	-28.66	PASS
	HCH	-9.306	-47.971	-29.31	PASS

Test Graphs

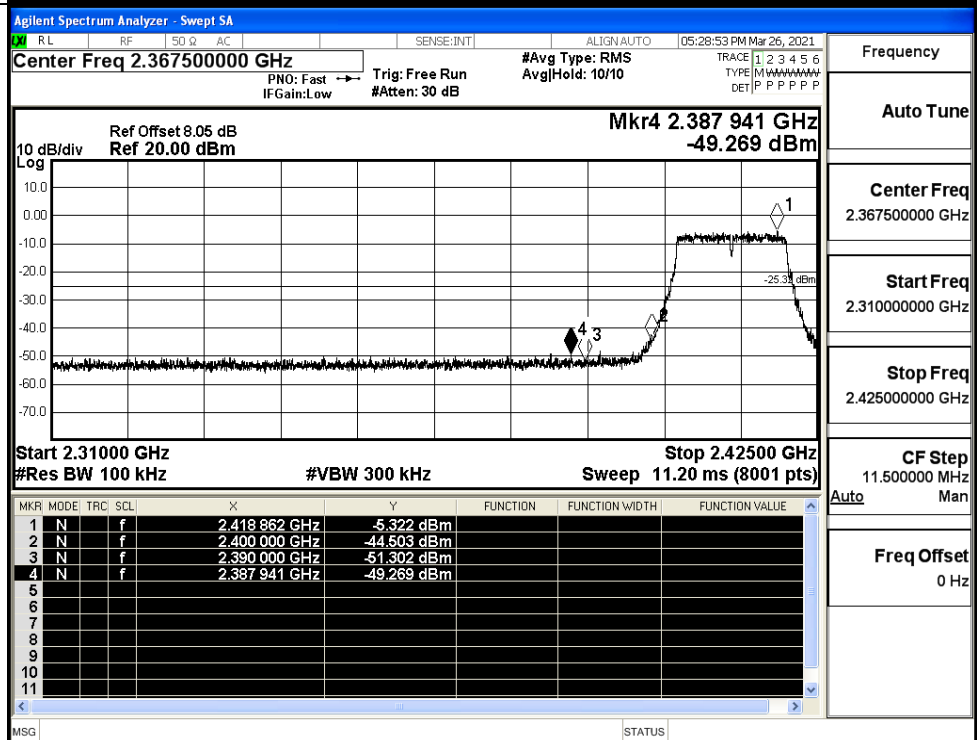
11B/LCH



11B/HCH



11G/LCH



Agilent Spectrum Analyzer - Swept SA

M R L RF SO Q AC SENSE:INT ALIGN AUTO 05:37:55 PM Mar 26, 2021

Center Freq 2.475000000 GHz

PNO: Fast → Trig: Free Run
IF Gain: Low #Atten: 30 dB

#Avg Type: RMS Avg|Hold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W A V I N N DET P P P P P P

Frequency Auto Tune

Ref Offset 8.05 dB Ref 20.00 dBm

Mkr4 2.487 356 25 GHz -48.629 dBm

Log

-25.81 dBm

Start 2.45000 kHz Stop 2.50000 MHz

#Res BW 100 kHz #VBW 300 kHz Sweep 4.800 ms (8001 pts)

MKR MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f	2.468 856 25 GHz	-5.812 dBm			
2	N	f	2.483 500 00 GHz	-51.533 dBm			
3	N	f	2.500 000 00 GHz	-51.066 dBm			
4	N	f	2.487 356 25 GHz	-48.629 dBm			
5							
6							
7							
8							
9							
10							
11							

Freq Offsetset 0 Hz

Agilent Spectrum Analyzer - Swept SA

RL RF SO Q AC SENSE:INT ALIGN AUTO 05:41:06 PM Mar 26, 2021

Center Freq 2.367500000 GHz

PNO: Fast → Trig: Free Run
IF Gain: Low #Atten: 30 dB

#Avg Type: RMS Avg/Hold: 10/10

TRACE 1 2 3 4 5 6
TYPE M W I N A V T
DET P P P P P P

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

Mkr4 2.361 060 GHz
-49.739 dBm

Ref Offset 8.05 dB
Ref 20.00 dBm

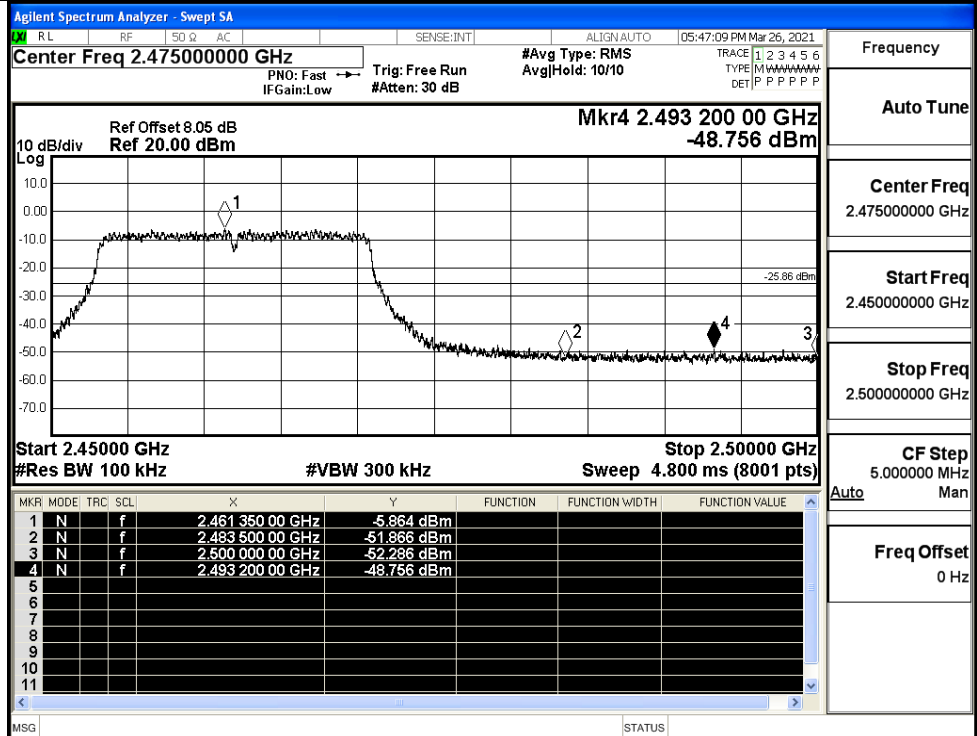
MKR MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f	2.406 600 GHz	-5.379 dBm			
2	N	f	2.400 000 GHz	-44.332 dBm			
3	N	f	2.390 000 GHz	-51.388 dBm			
4	N	f	2.361 060 GHz	-49.739 dBm			
5							
6							
7							
8							
9							
10							
11							

Start 2.31000 GHz
#Res BW 100 kHz

Stop 2.42500 GHz
Sweep 11.20 ms (8001 pts)

#VBW 300 kHz

11N20SISO/HCH

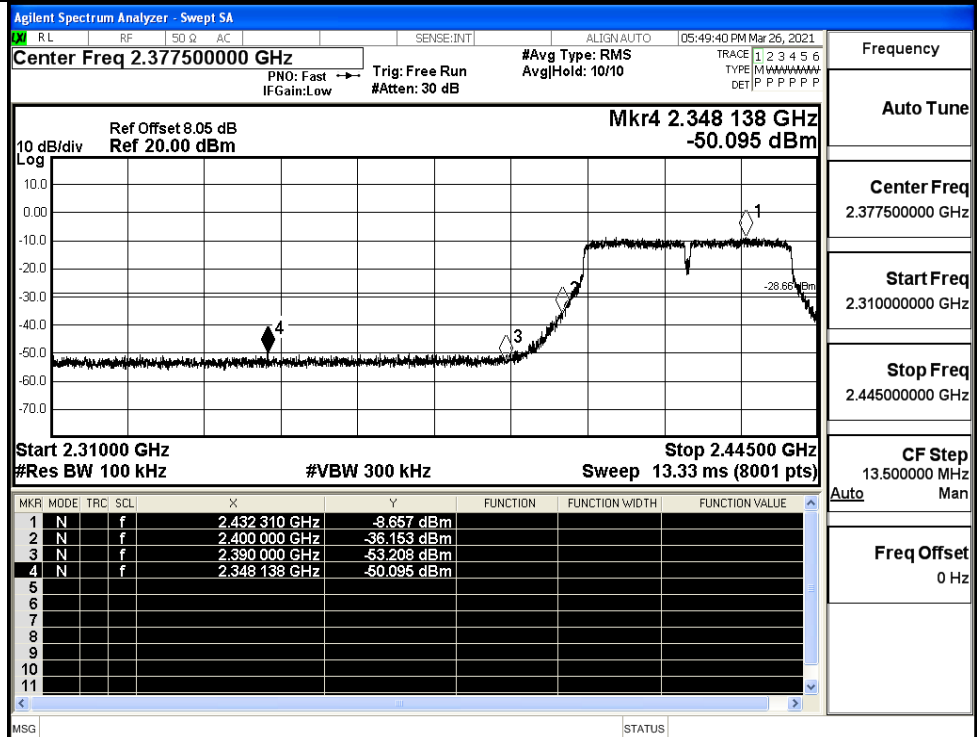


Frequency

Auto Tune

Center Freq
2.475000000 GHzStart Freq
2.450000000 GHzStop Freq
2.500000000 GHzCF Step
5.000000 MHz
Auto ManFreq Offset
0 Hz

11N40SISO/LCH

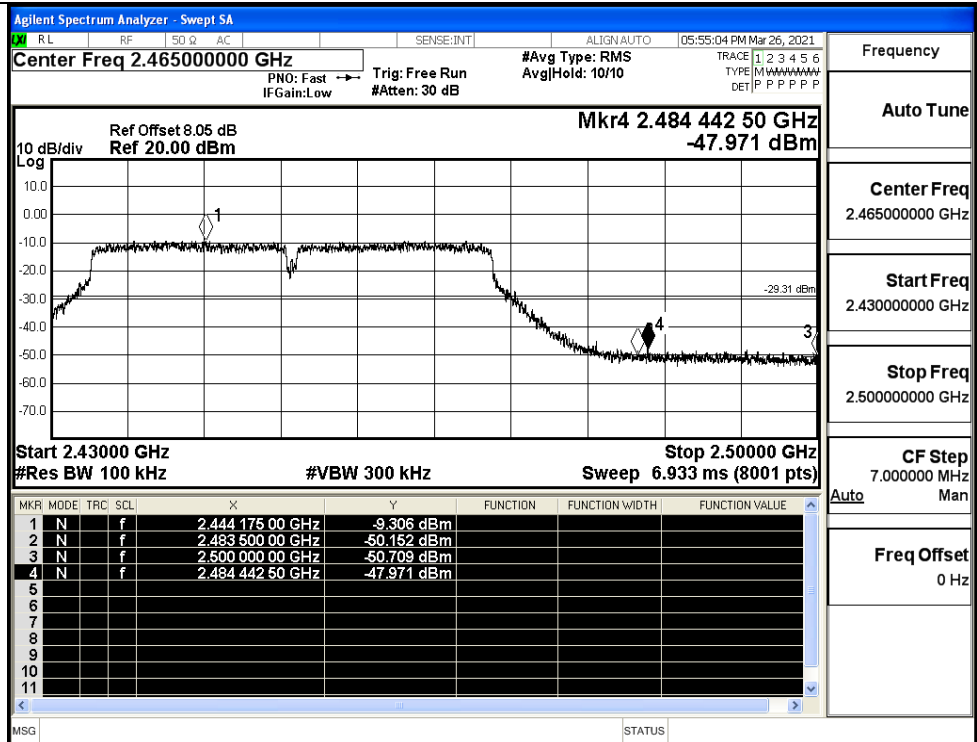


Frequency

Auto Tune

Center Freq
2.377500000 GHzStart Freq
2.310000000 GHzStop Freq
2.445000000 GHzCF Step
13.500000 MHz
Auto ManFreq Offset
0 Hz

11N40SISO/HCH

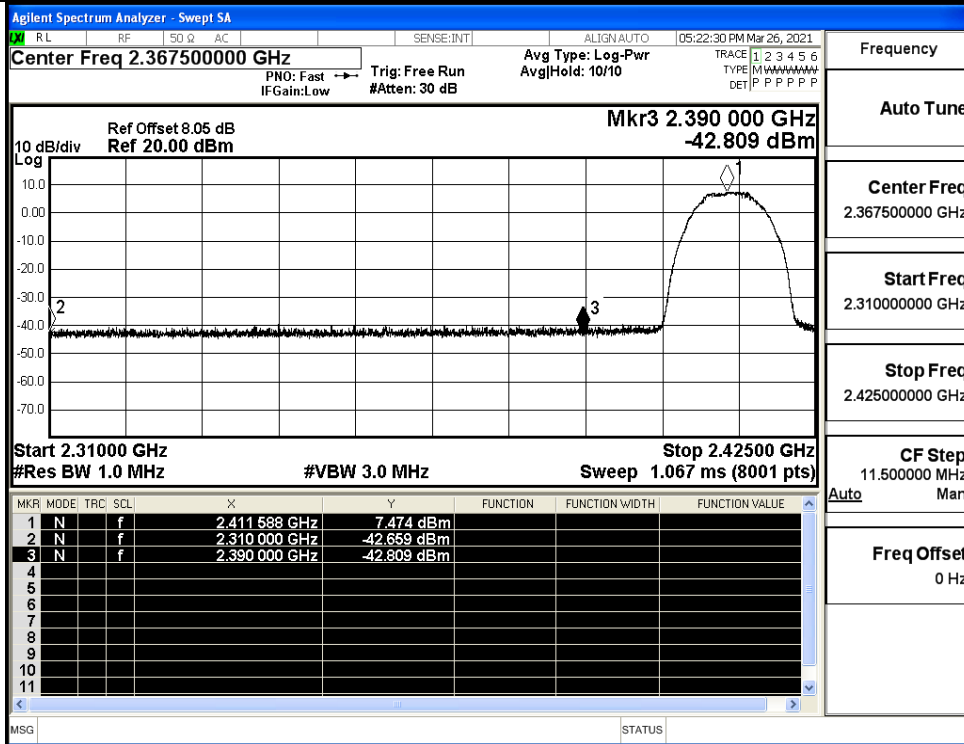


B.7 Restrict-band band-edge measurements

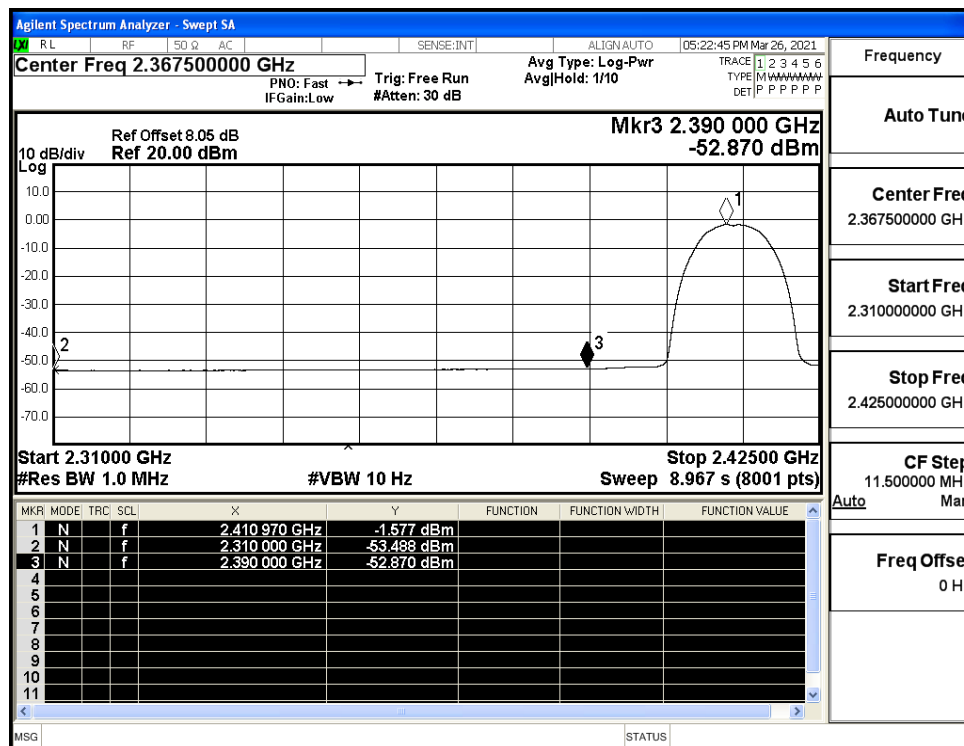
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-42.66	2.0	0	54.6	PEAK	74	PASS
	2412	Ant1	2310.0	-53.49	2.0	0	43.77	AV	54	PASS
	2412	Ant1	2390.0	-42.81	2.0	0	54.45	PEAK	74	PASS
	2412	Ant1	2390.0	-52.87	2.0	0	44.39	AV	54	PASS
	2462	Ant1	2483.5	-42.96	2.0	0	54.3	PEAK	74	PASS
	2462	Ant1	2483.5	-52.45	2.0	0	44.81	AV	54	PASS
	2462	Ant1	2500.0	-41.05	2.0	0	56.21	PEAK	74	PASS
	2462	Ant1	2500.0	-52.27	2.0	0	44.99	AV	54	PASS
11G	2412	Ant1	2310.0	-42.70	2.0	0	54.56	PEAK	74	PASS
	2412	Ant1	2310.0	-53.53	2.0	0	43.73	AV	54	PASS
	2412	Ant1	2390.0	-43.15	2.0	0	54.11	PEAK	74	PASS
	2412	Ant1	2390.0	-52.71	2.0	0	44.55	AV	54	PASS
	2462	Ant1	2483.5	-42.23	2.0	0	55.03	PEAK	74	PASS
	2462	Ant1	2483.5	-52.01	2.0	0	45.25	AV	54	PASS
	2462	Ant1	2500.0	-42.01	2.0	0	55.25	PEAK	74	PASS
	2462	Ant1	2500.0	-52.26	2.0	0	45	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-42.68	2.0	0	54.58	PEAK	74	PASS
	2412	Ant1	2310.0	-53.55	2.0	0	43.71	AV	54	PASS
	2412	Ant1	2390.0	-43.41	2.0	0	53.85	PEAK	74	PASS
	2412	Ant1	2390.0	-52.62	2.0	0	44.64	AV	54	PASS
	2462	Ant1	2483.5	-41.64	2.0	0	55.62	PEAK	74	PASS
	2462	Ant1	2483.5	-51.81	2.0	0	45.45	AV	54	PASS
	2462	Ant1	2500.0	-41.84	2.0	0	55.42	PEAK	74	PASS
	2462	Ant1	2500.0	-52.26	2.0	0	45	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-42.32	2.0	0	54.94	PEAK	74	PASS
	2422	Ant1	2310.0	-53.50	2.0	0	43.76	AV	54	PASS

	2422	Ant1	2390.0	-42.00	2.0	0	55.26	PEAK	74	PASS
	2422	Ant1	2390.0	-52.37	2.0	0	44.89	AV	54	PASS
	2452	Ant1	2483.5	-39.52	2.0	0	57.74	PEAK	74	PASS
	2452	Ant1	2483.5	-50.43	2.0	0	46.83	AV	54	PASS
	2452	Ant1	2500.0	-40.66	2.0	0	56.6	PEAK	74	PASS
	2452	Ant1	2500.0	-51.93	2.0	0	45.33	AV	54	PASS

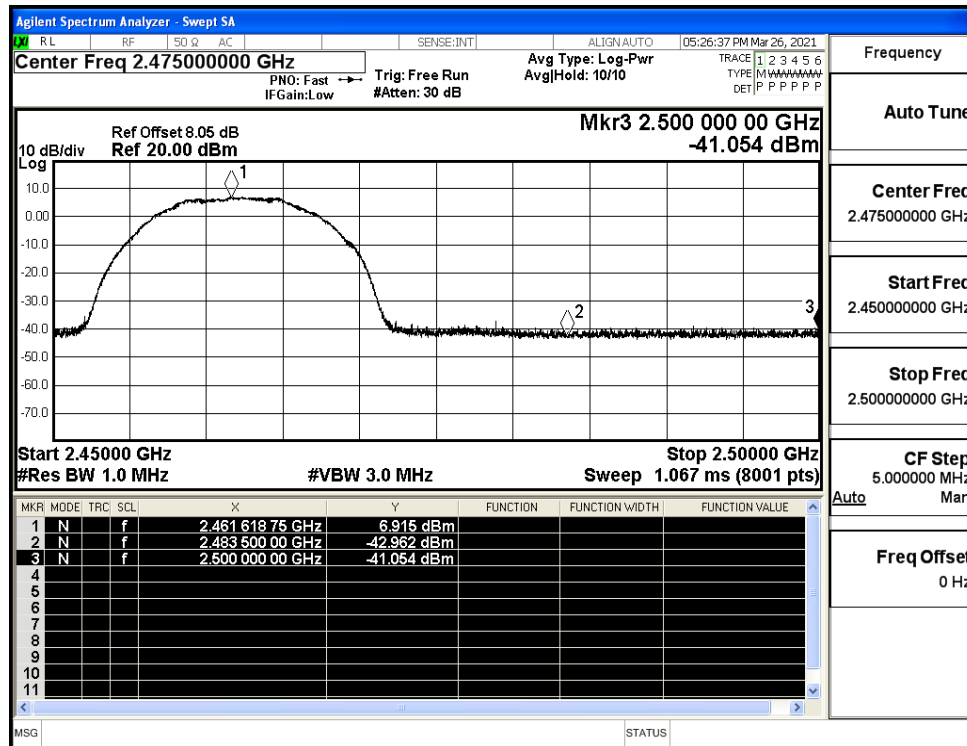
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



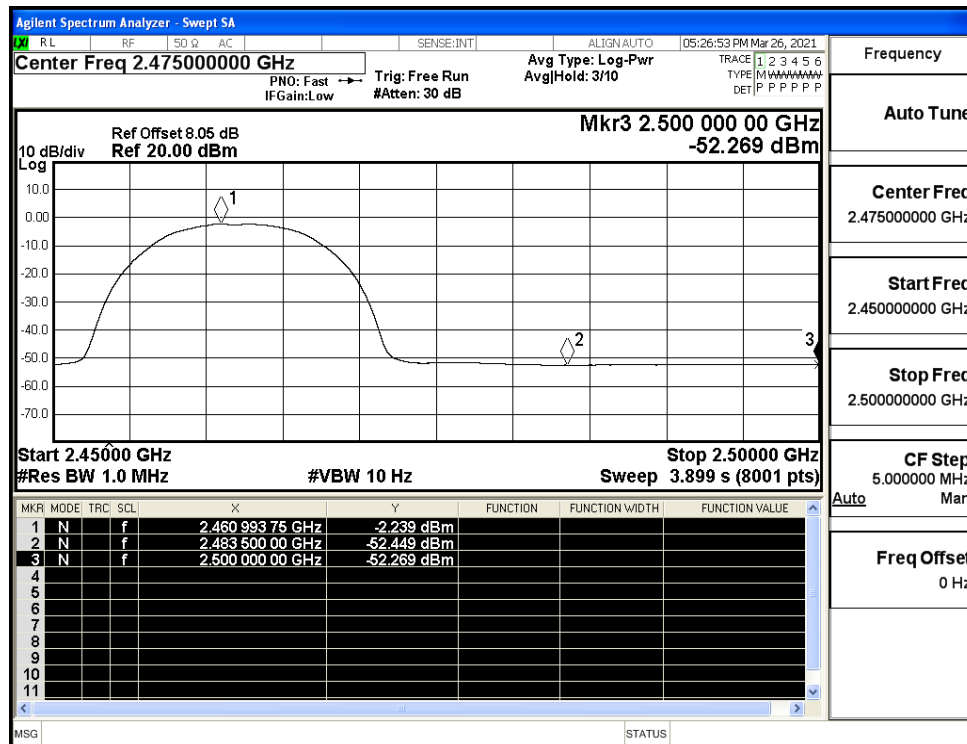
Restrict-band band-edge measurements_11B_2412_Ant1_AV



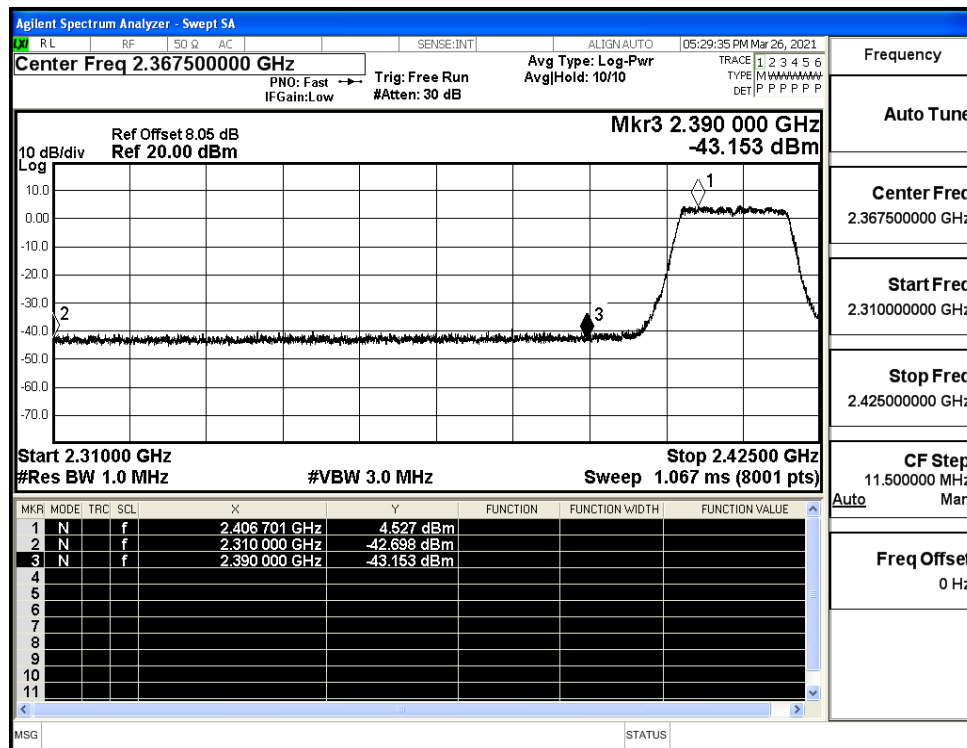
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



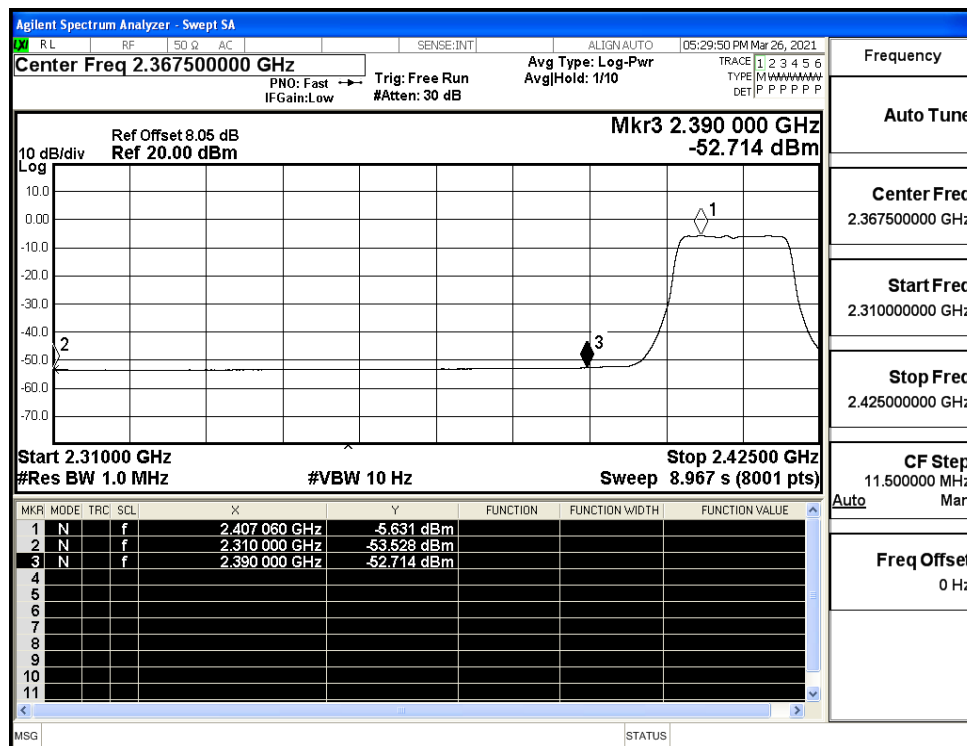
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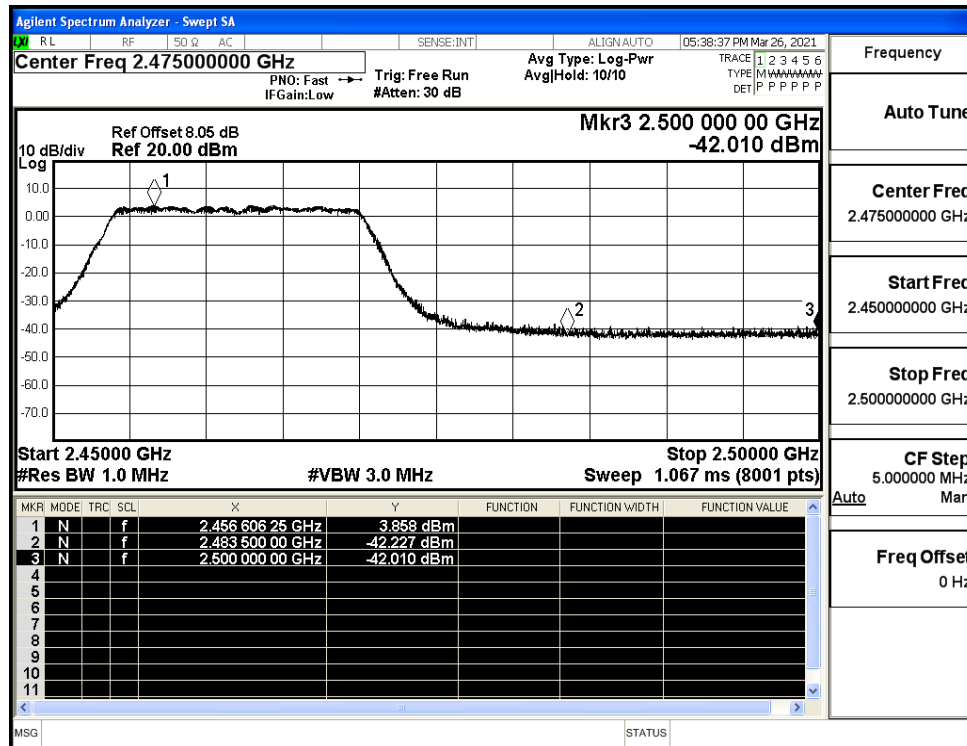
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



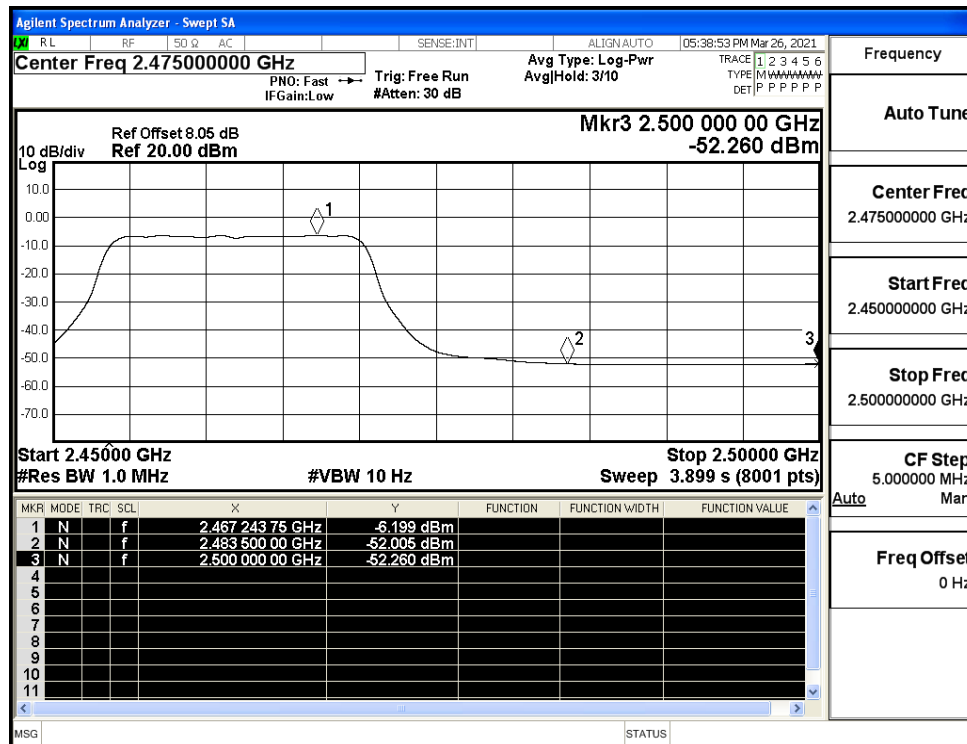
Restrict-band band-edge measurements_11G_2412_Ant1_AV



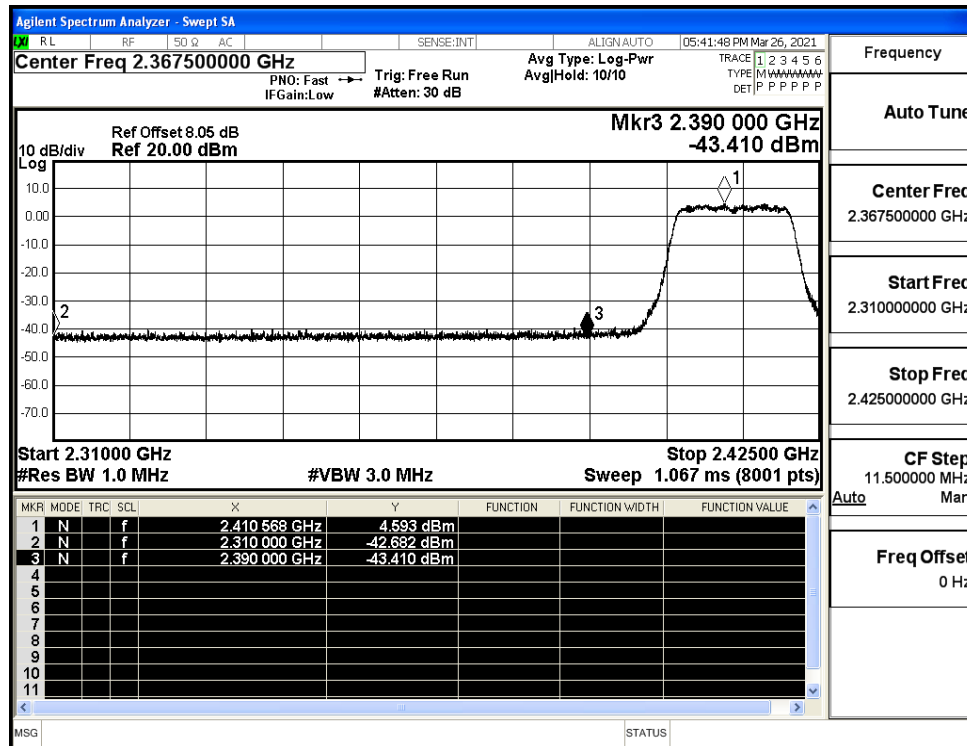
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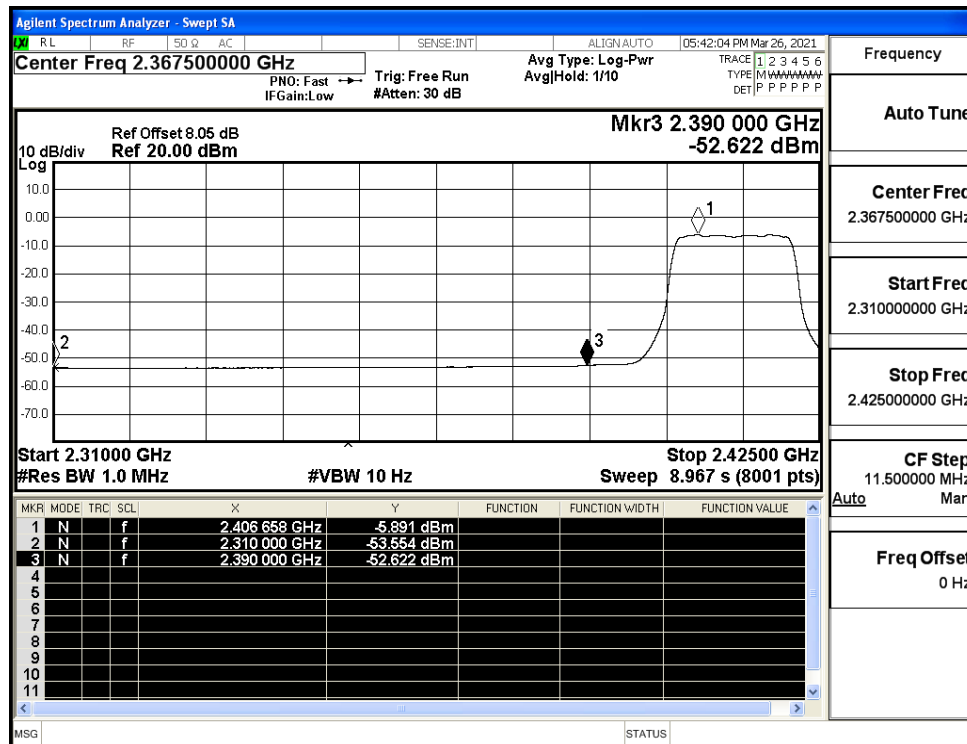
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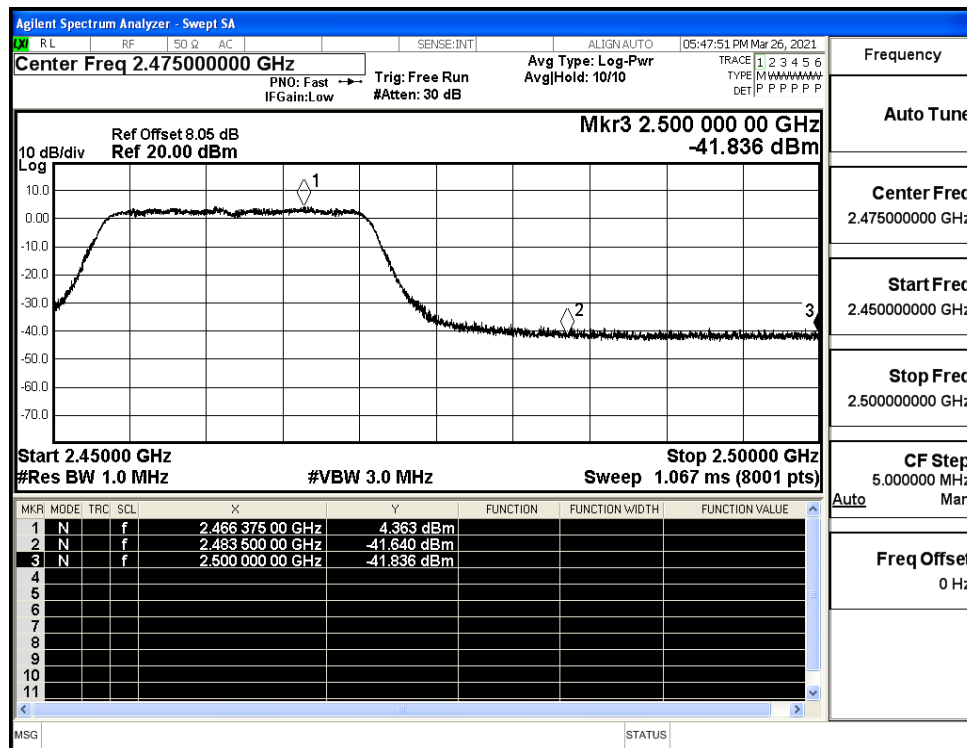
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



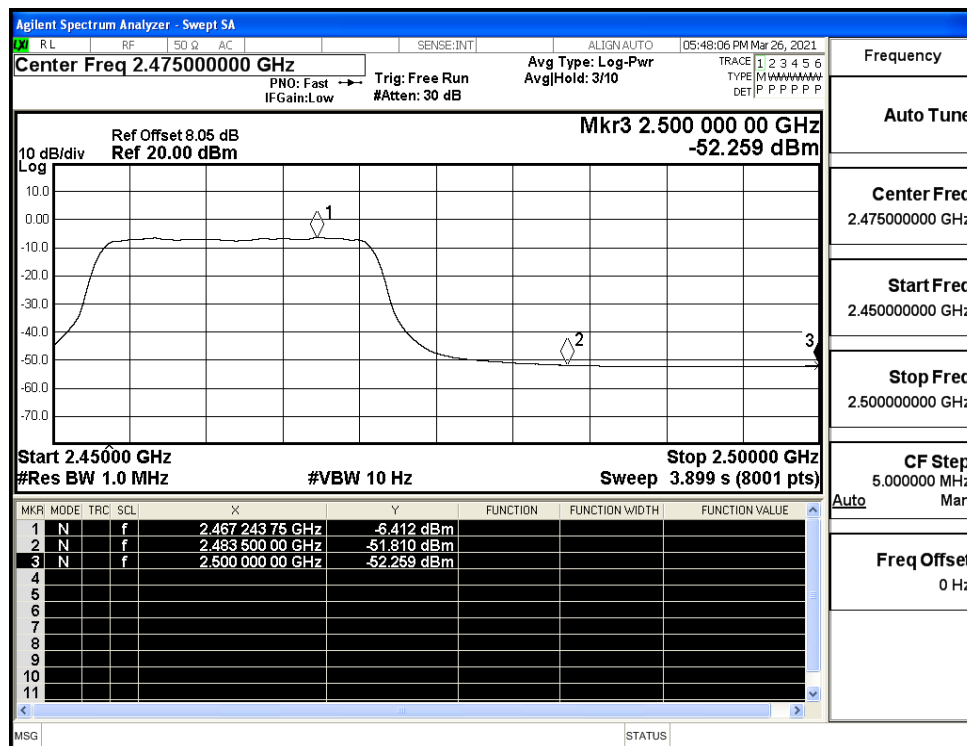
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



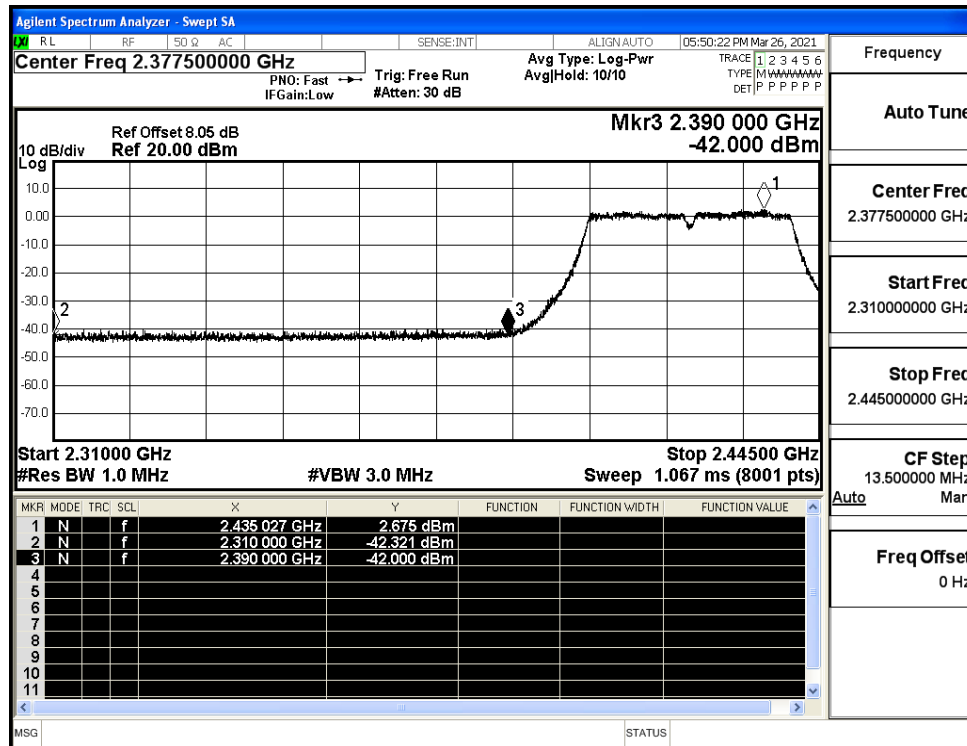
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



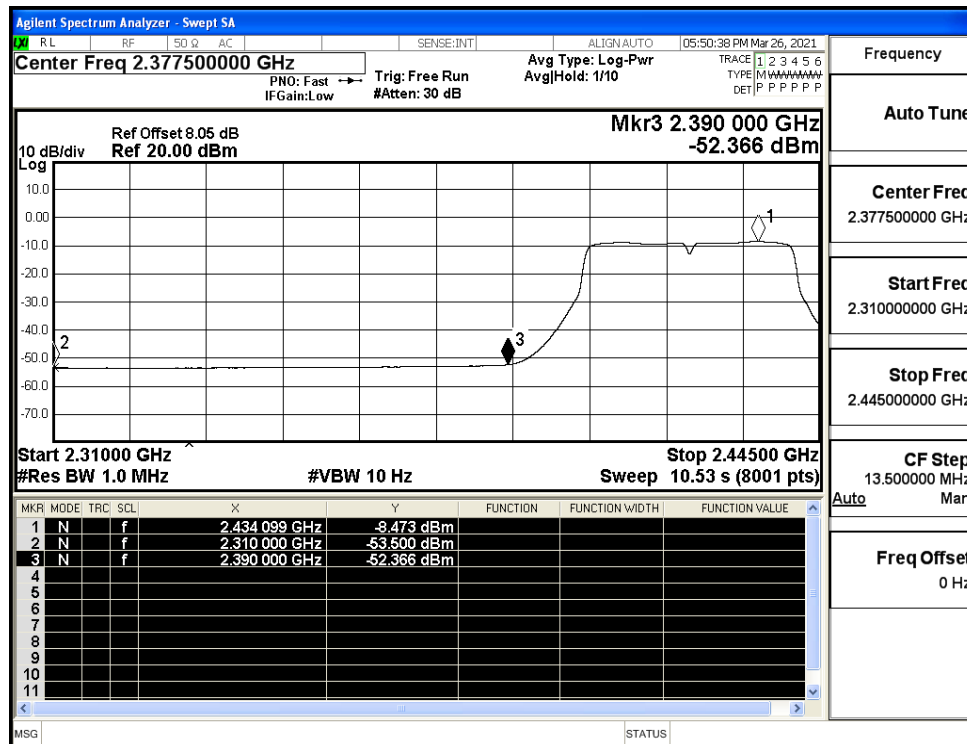
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



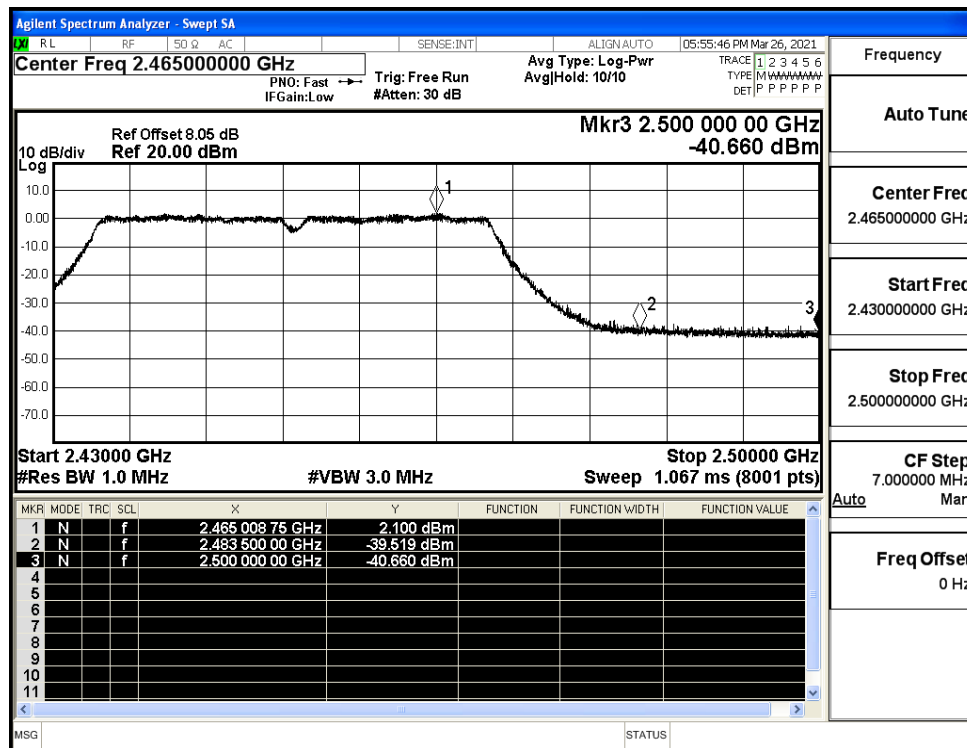
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



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

