APPENDIX B: TEST RESULTS OF WI-FI 802.11 B/G/N/AX

APPENDIX B: TEST RESULTS OF WI-FI 802.11 B/G/N/AX **1**

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APPENDIX B.1: CONDUCTED PEAK POWER SPECTRAL DENSITY

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-1.37	≤8.00	PASS
		2437	-0.64	≤8.00	PASS
		2462	-0.75	≤8.00	PASS
11G	Ant1	2412	-4.98	≤8.00	PASS
		2437	-5.72	≤8.00	PASS
		2462	-3.54	≤8.00	PASS
11N20SISO	Ant1	2412	-5.04	≤8.00	PASS
		2437	-5.64	≤8.00	PASS
		2462	-1.72	≤8.00	PASS
11AX20SISO	Ant1	2412	-8.10	≤8.00	PASS
		2437	-5.41	≤8.00	PASS
		2462	-5.61	≤8.00	PASS

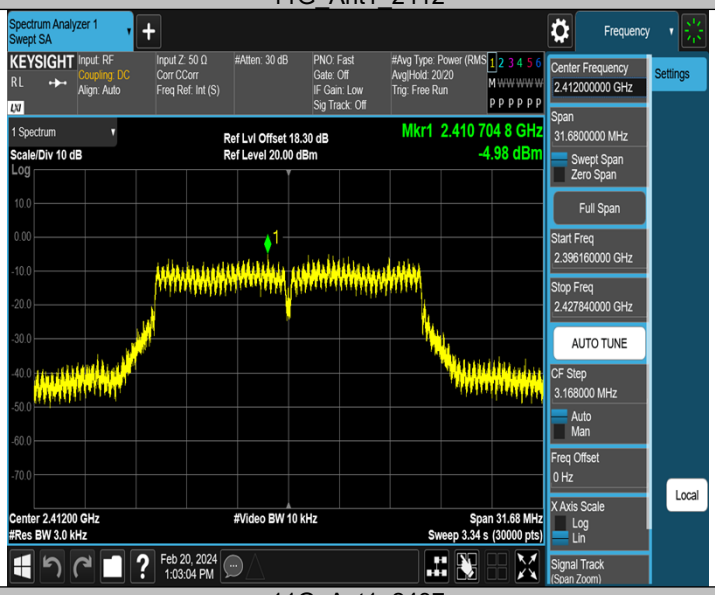
Test Graphs

11B_Ant1_2412

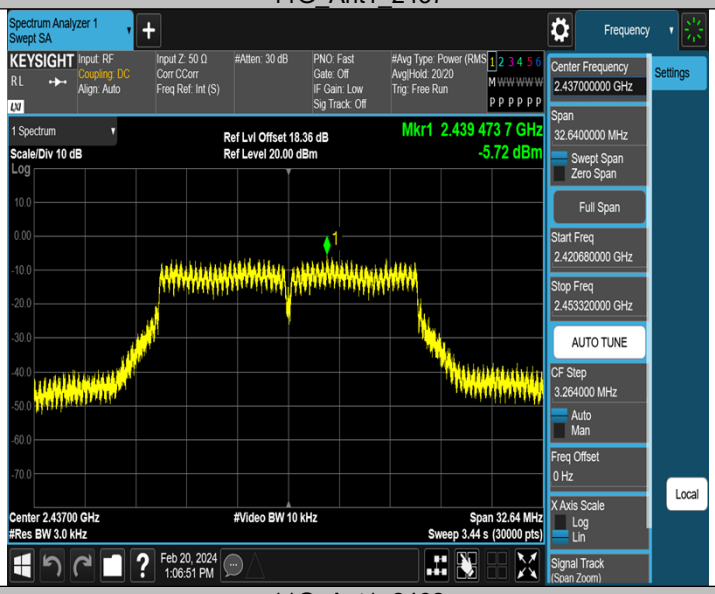
11B_Ant1_2437

11B_Ant1_2462

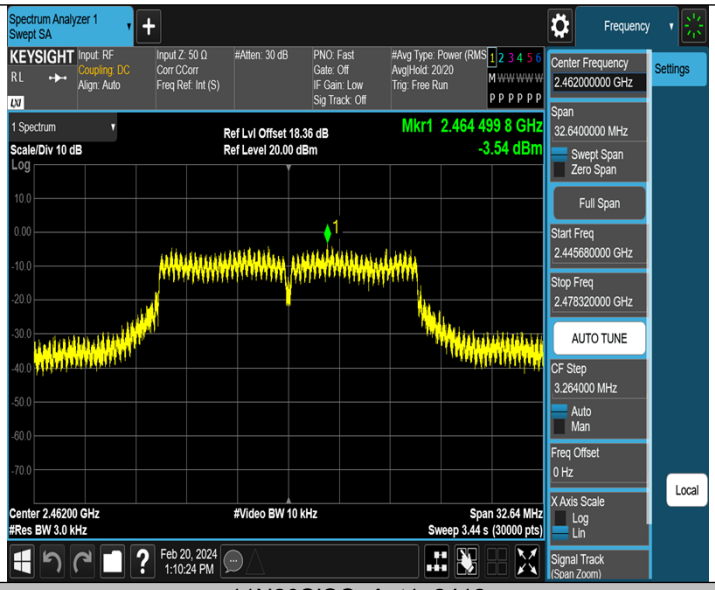
11G_Ant1_2412



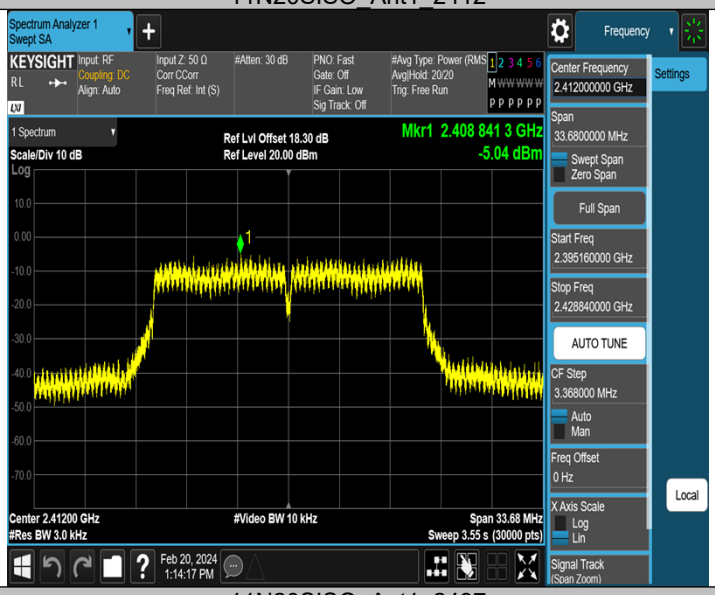
11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



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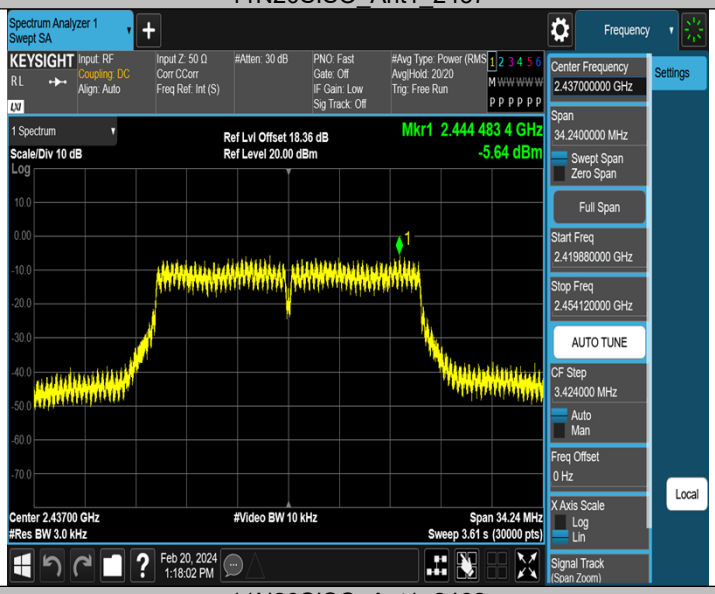
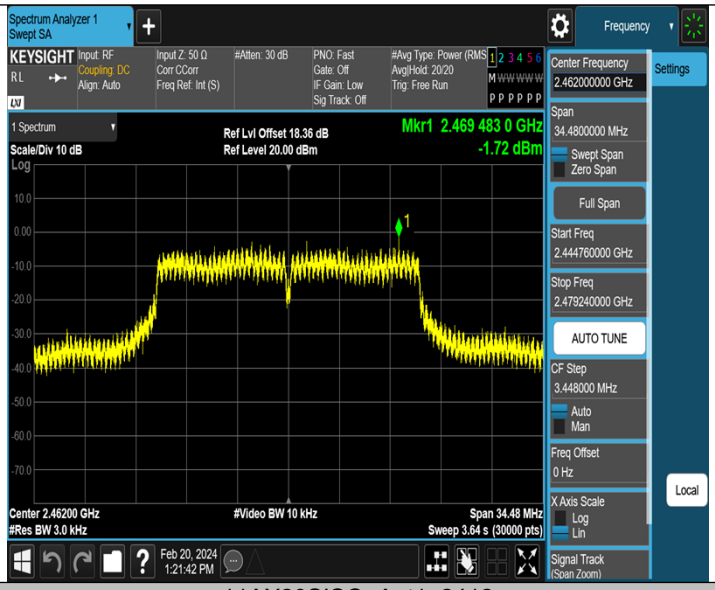
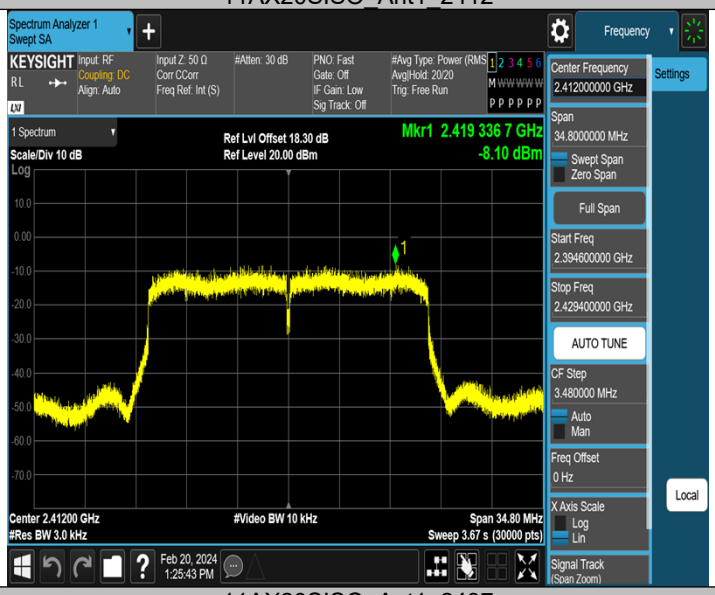


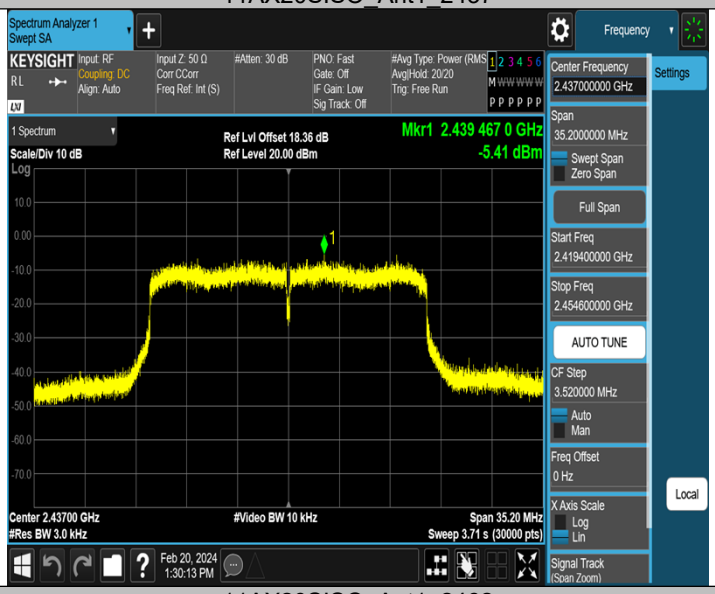
11N20SISO_Ant1_2462



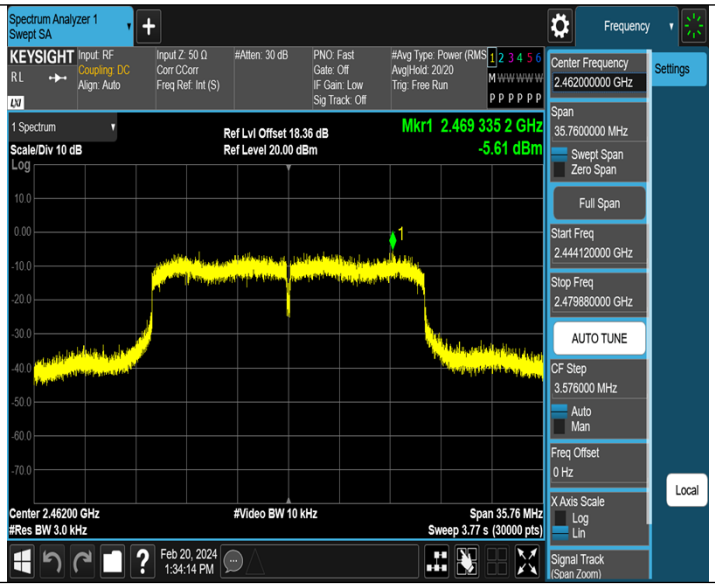
11AX20SISO_Ant1_2412



11AX20SISO_Ant1_2437



11AX20SISO_Ant1_2462


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS
Avg|Hold: 20/20
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 18.36 dB
Ref Level 20.00 dBm
Mkr1 2.469 335 2 GHz
-5.61 dBm
Center 2.46200 GHz
#Res BW 3.0 kHz
#Video BW 10 kHz
Span 35.76 MHz
Sweep 3.77 s (30000 pts)
Feb 20, 2024
1:34:14 PM
Frequency
Settings
Center Frequency
2.462000000 GHz
Span
35.7600000 MHz
Swept Span
Zero Span
Full Span
Start Freq
2.444120000 GHz
Stop Freq
2.479880000 GHz
AUTO TUNE
CF Step
3.576000 MHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Signal Track
(Span Zoom)
Local

APPENDIX B.2: 6DB BANDWIDTH

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.080	2406.960	2417.040	0.5	PASS
		2437	9.600	2432.440	2442.040	0.5	PASS
		2462	10.080	2456.960	2467.040	0.5	PASS
11G	Ant1	2412	15.840	2404.040	2419.880	0.5	PASS
		2437	16.320	2428.840	2445.160	0.5	PASS
		2462	16.320	2453.840	2470.160	0.5	PASS
11N20SISO	Ant1	2412	16.840	2403.600	2420.440	0.5	PASS
		2437	17.120	2428.640	2445.760	0.5	PASS
		2462	17.240	2453.240	2470.480	0.5	PASS
11AX20SISO	Ant1	2412	17.400	2403.200	2420.600	0.5	PASS
		2437	17.600	2428.280	2445.880	0.5	PASS
		2462	17.880	2452.960	2470.840	0.5	PASS

Test Graphs

11B_Ant1_2412

11B_Ant1_2437

11B_Ant1_2462

11G_Ant1_2412

11G_Ant1_2437

11G_Ant1_2462

11N20SISO_Ant1_2412

11N20SISO_Ant1_2437

11N20SISO_Ant1_2462

11AX20SISO_Ant1_2412

11AX20SISO_Ant1_2437

11AX20SISO_Ant1_2462

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 40 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS)
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 18.36 dB
Ref Level 30.00 dBm
ΔMkr3 17.88 MHz
0.14 dB
Center 2.46200 GHz
#Res BW 100 kHz
#Video BW 300 kHz
Span 40.00 MHz
Sweep 3.87 ms (1001 pts)
5 Marker Table
Mode Trace Scale X Y Function Function Width Function Value
1 N 1 f 2.452 96 GHz 2.141 dBm
2 N 1 f 2.459 48 GHz 7.638 dBm
3 Δ1 1 f (Δ) 17.88 MHz (Δ) 0.1380 dB
Feb 19, 2024
3:34:56 PM
Frequency
Center Frequency
2.462000000 GHz
Settings
Span
40.0000000 MHz
Swept Span
Zero Span
Full Span
Start Freq
2.442000000 GHz
Stop Freq
2.482000000 GHz
AUTO TUNE
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
Local
X Axis Scale
Log
Lin
Signal Track
(Span Zoom)

APPENDIX B.3: 99% BANDWIDTH

Test Result

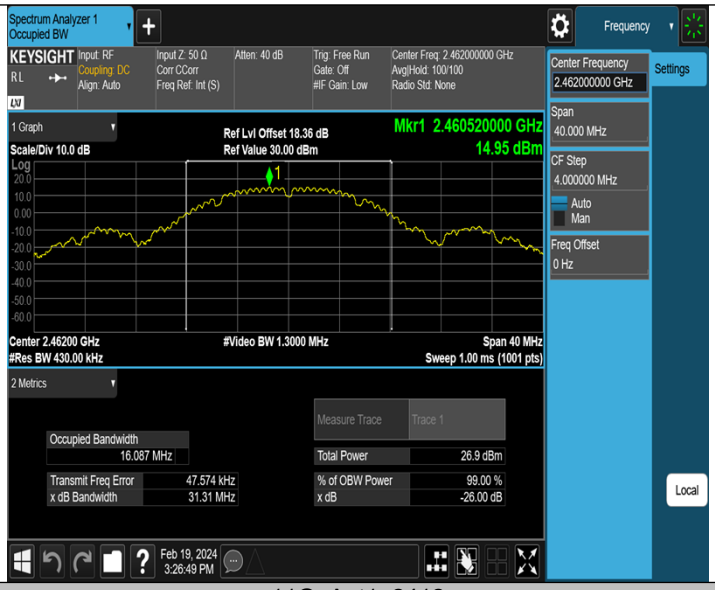
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	15.301	2404.4072	2419.7082	---	---
		2437	14.980	2429.5460	2444.5260	---	---
		2462	16.087	2454.0041	2470.0911	---	---
11G	Ant1	2412	16.994	2403.5374	2420.5314	---	---
		2437	16.951	2428.5296	2445.4806	---	---
		2462	17.087	2453.4975	2470.5845	---	---
11N20SISO	Ant1	2412	17.819	2403.1201	2420.9391	---	---
		2437	17.879	2428.0829	2445.9619	---	---
		2462	17.954	2453.0283	2470.9823	---	---
11AX20SISO	Ant1	2412	18.853	2402.5904	2421.4434	---	---
		2437	18.840	2427.6038	2446.4438	---	---
		2462	18.949	2452.5404	2471.4894	---	---

Test Graphs

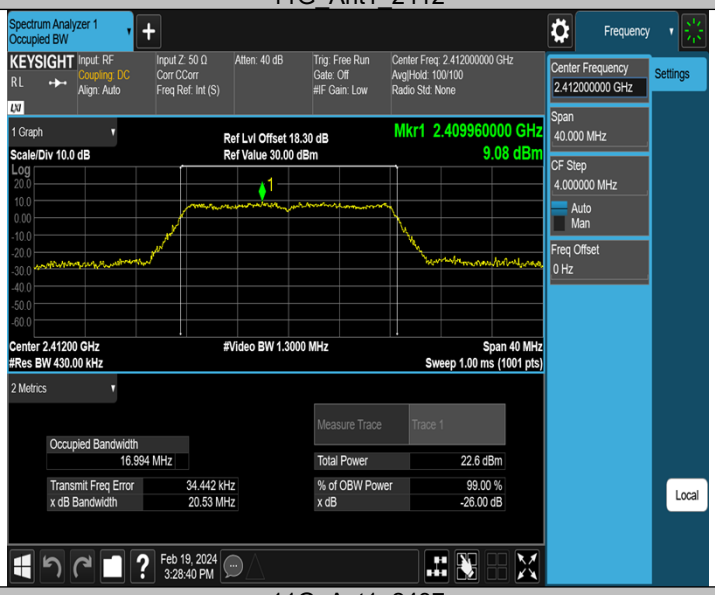
11B_Ant1_2412

11B_Ant1_2437

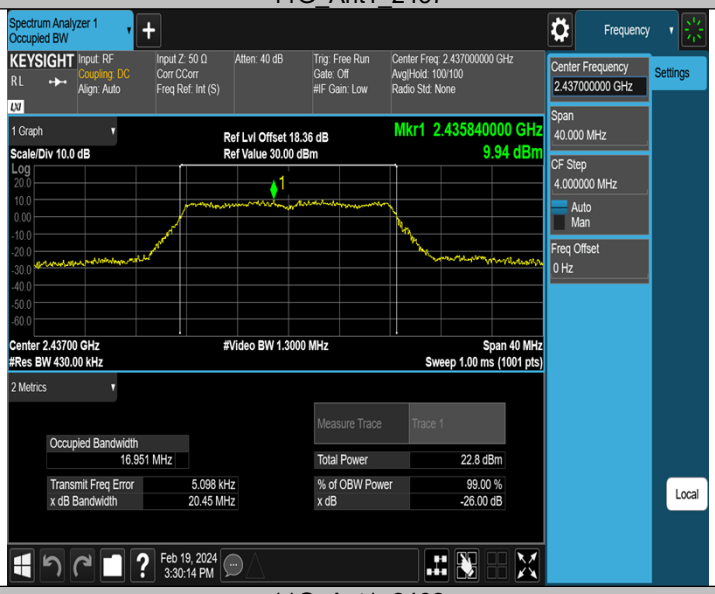
11B_Ant1_2462



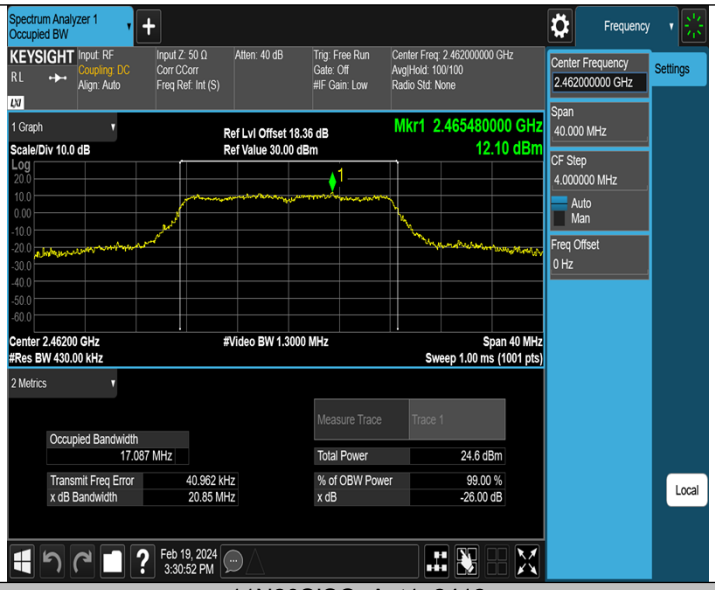
11G_Ant1_2412



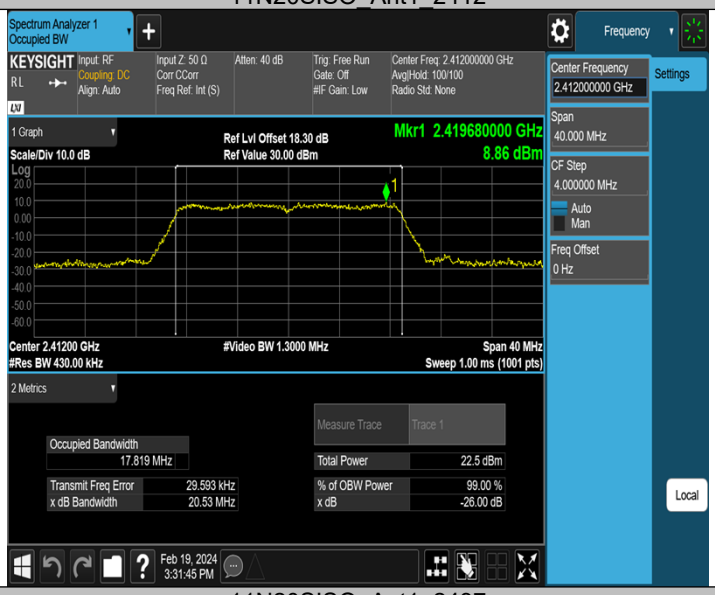
11G_Ant1_2437



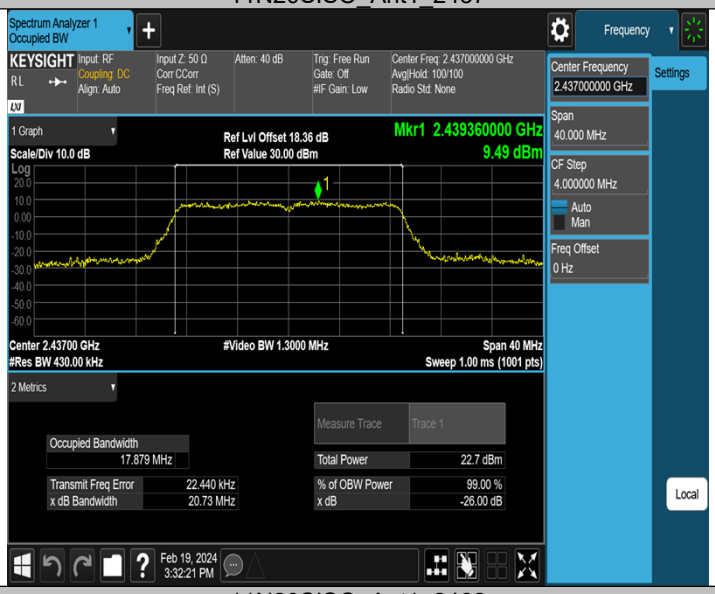
11G_Ant1_2462



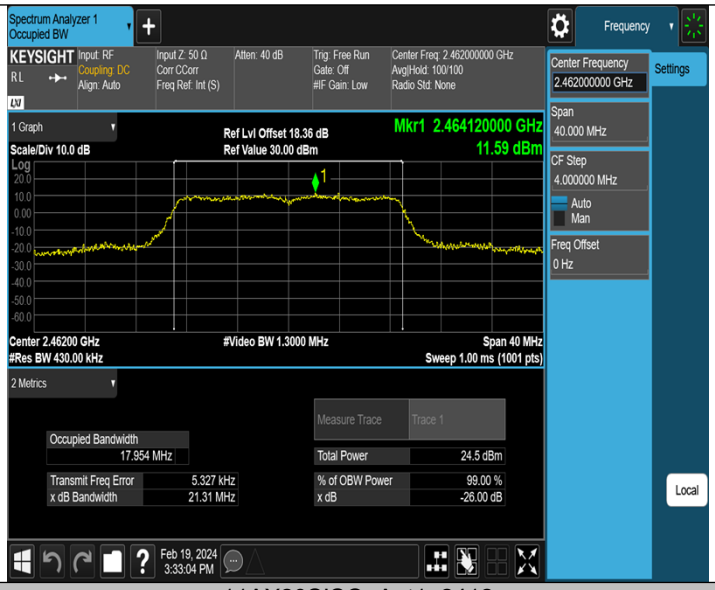
11N20SISO_Ant1_2412



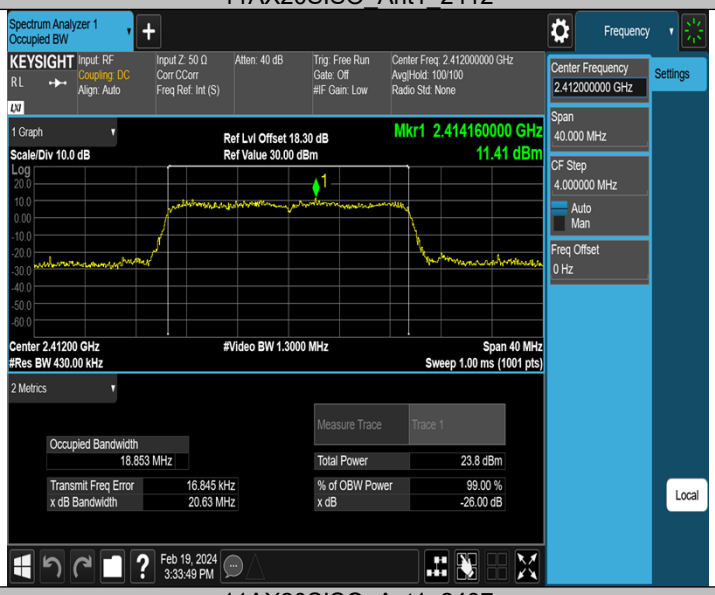
11N20SISO_Ant1_2437



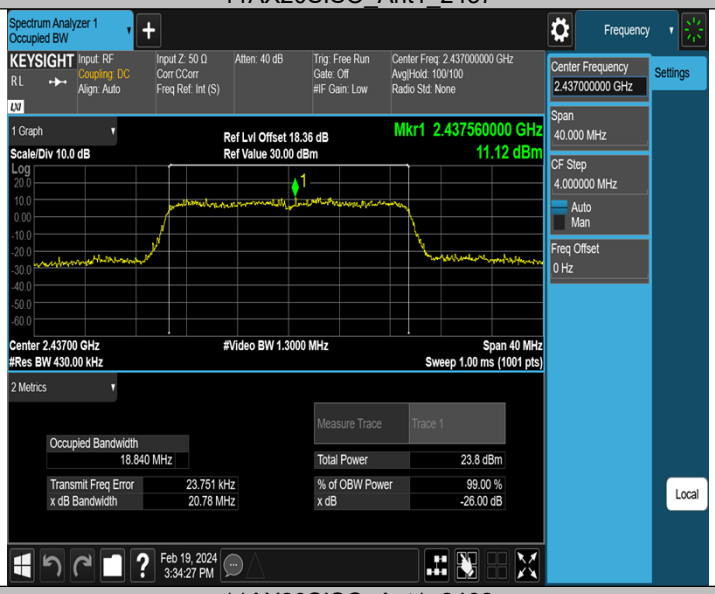
11N20SISO_Ant1_2462



11AX20SISO_Ant1_2412



11AX20SISO_Ant1_2437



11AX20SISO_Ant1_2462