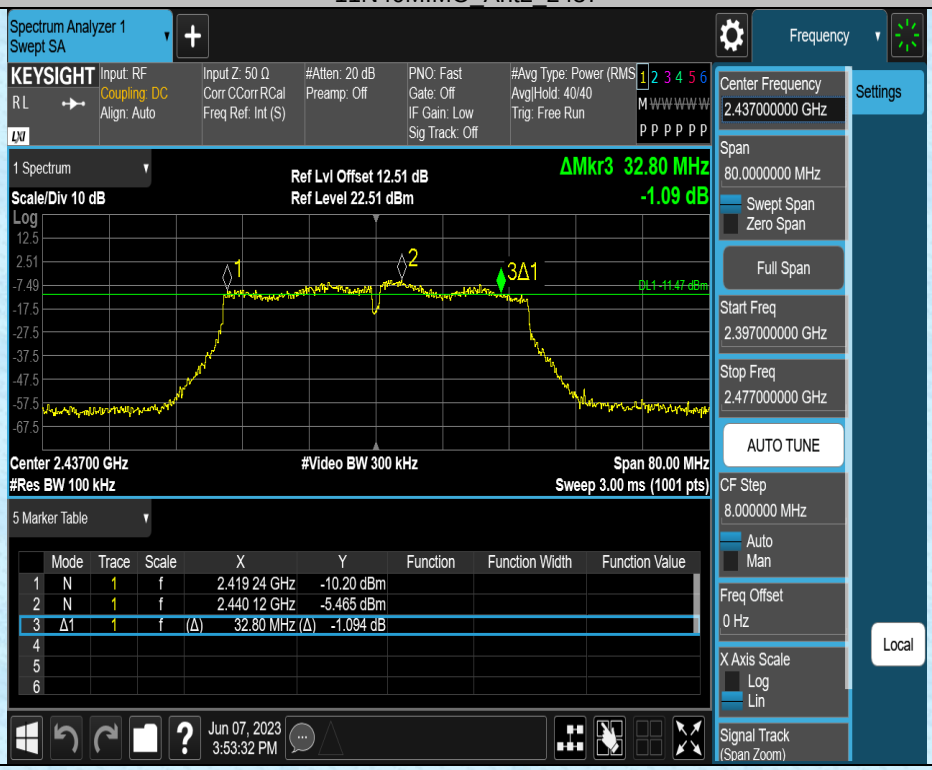
11N40MIMO_Ant1_2437

11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452

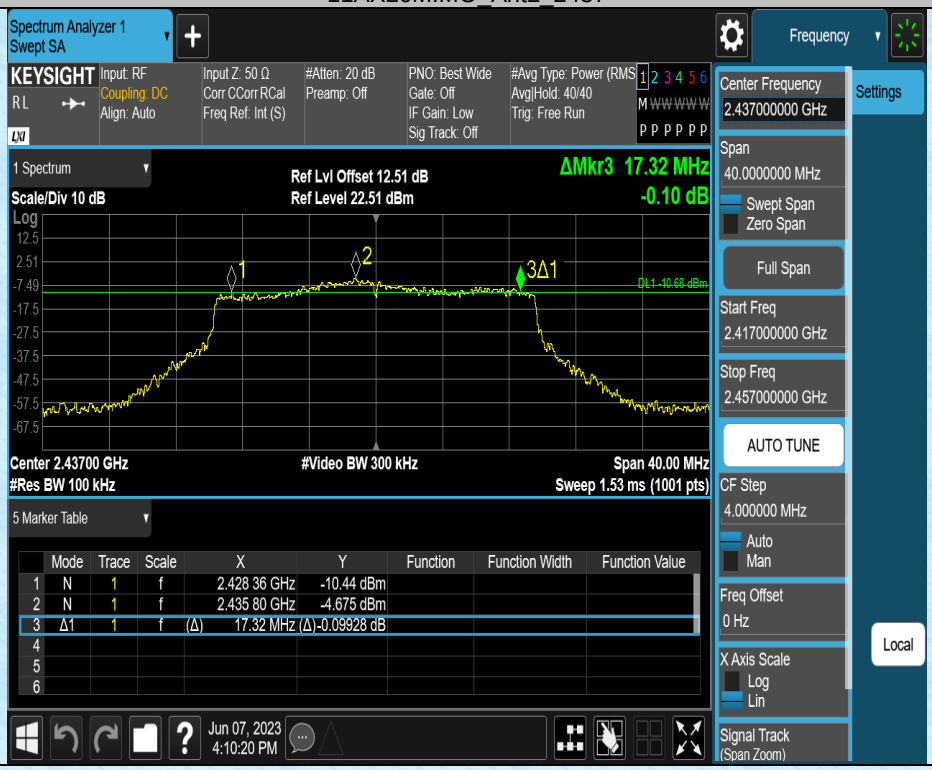
11N40MIMO_Ant2_2452

11AX20MIMO_Ant1_2412

11AX20MIMO_Ant2_2412

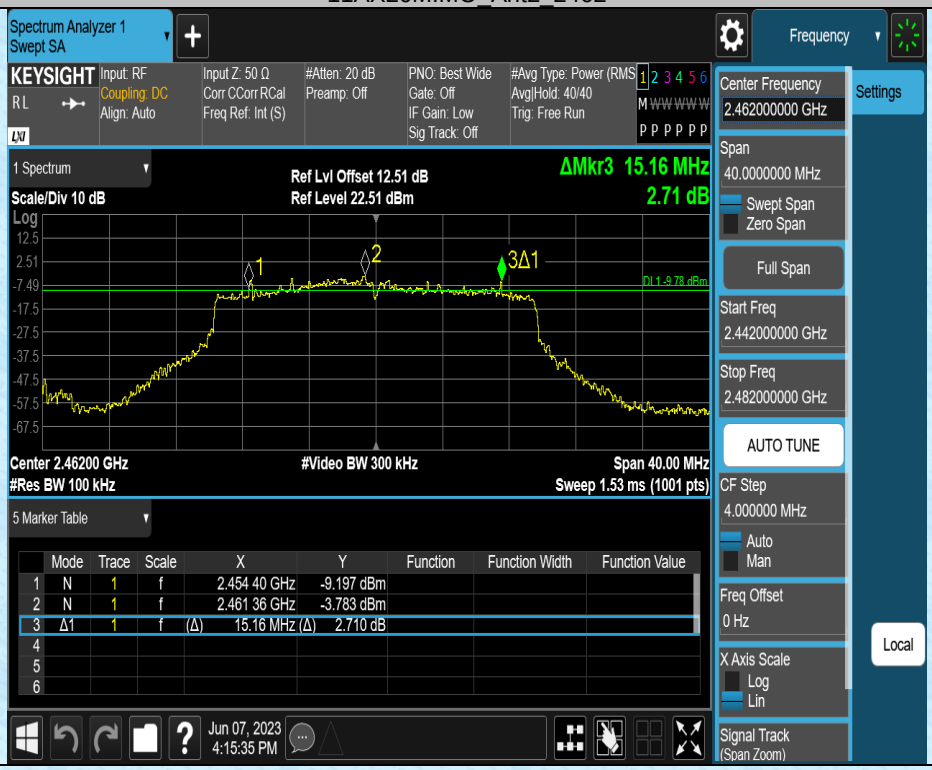
11AX20MIMO_Ant1_2437

11AX20MIMO_Ant2_2437



11AX20MIMO_Ant1_2462

11AX20MIMO_Ant2_2462



11AX40MIMO_Ant1_2422

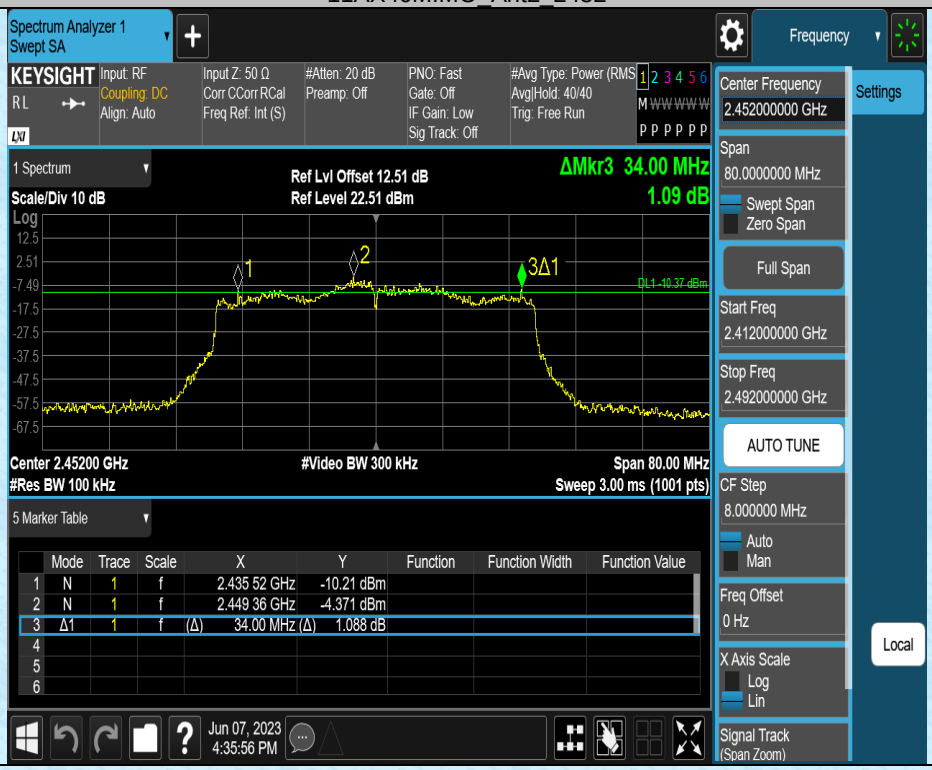
11AX40MIMO_Ant2_2422

11AX40MIMO_Ant1_2437

11AX40MIMO_Ant2_2437

11AX40MIMO_Ant1_2452

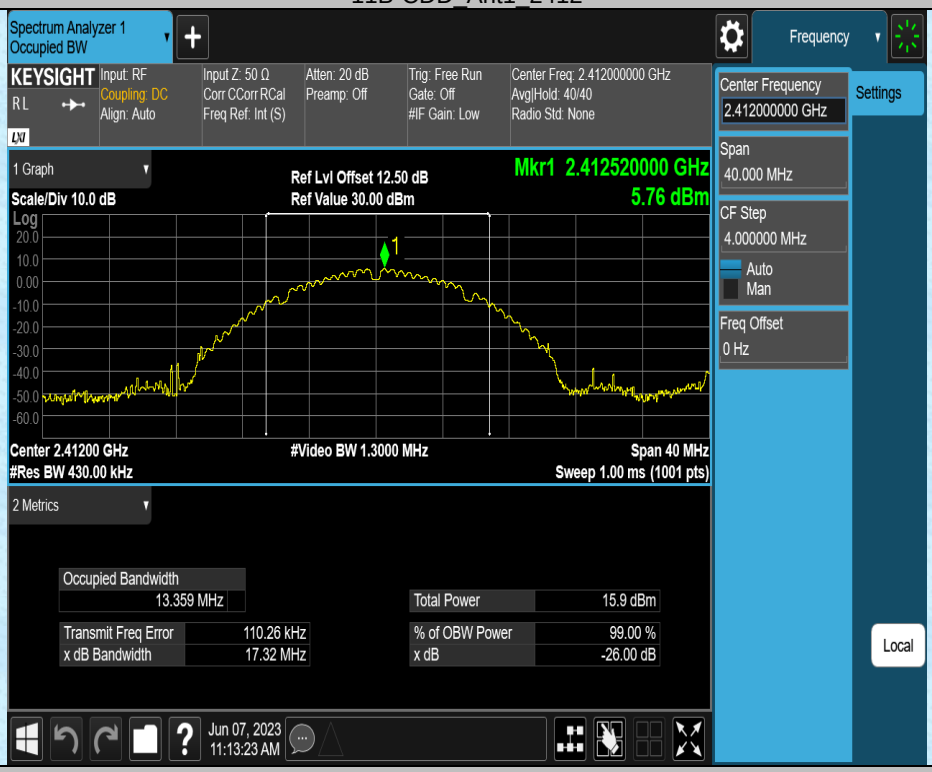
11AX40MIMO_Ant2_2452



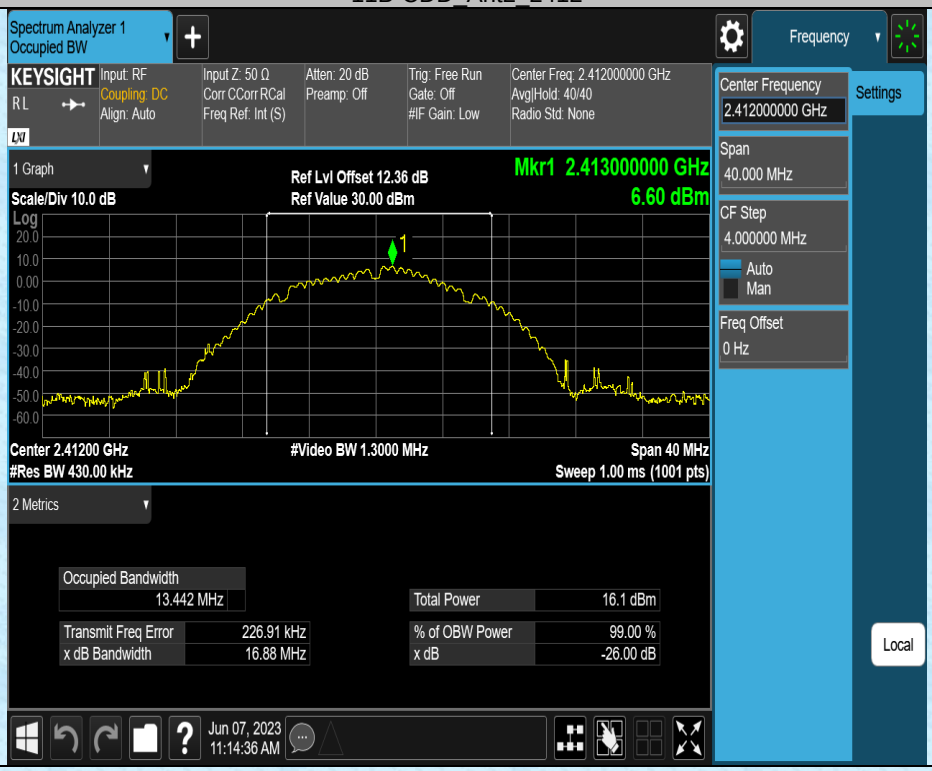
Occupied Channel Bandwidth

Test Mode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B-CDD	Ant1	2412	13.359	2405.4308	2418.7898	---	---
	Ant2	2412	13.442	2405.5059	2418.9479	---	---
	Ant1	2437	13.263	2430.2201	2443.4831	---	---
	Ant2	2437	13.422	2430.4893	2443.9113	---	---
	Ant1	2462	13.289	2455.1170	2468.4060	---	---
	Ant2	2462	12.897	2455.4840	2468.3810	---	---
11G-CDD	Ant1	2412	16.332	2403.8742	2420.2062	---	---
	Ant2	2412	16.248	2403.9894	2420.2374	---	---
	Ant1	2437	16.168	2428.6897	2444.8577	---	---
	Ant2	2437	16.308	2428.8994	2445.2074	---	---
	Ant1	2462	16.357	2453.8199	2470.1769	---	---
	Ant2	2462	16.264	2453.7531	2470.0171	---	---
11N20MIMO	Ant1	2412	17.590	2403.2352	2420.8252	---	---
	Ant2	2412	17.593	2403.2946	2420.8876	---	---
	Ant1	2437	17.561	2428.2455	2445.8065	---	---
	Ant2	2437	17.564	2428.2828	2445.8468	---	---
	Ant1	2462	17.432	2453.3187	2470.7507	---	---
	Ant2	2462	17.414	2453.3047	2470.7187	---	---
11N40MIMO	Ant1	2422	35.499	2404.1447	2439.6437	---	---
	Ant2	2422	35.579	2404.1483	2439.7273	---	---
	Ant1	2437	35.942	2418.9412	2454.8832	---	---
	Ant2	2437	35.852	2418.9807	2454.8327	---	---
	Ant1	2452	35.736	2433.9937	2469.7297	---	---
	Ant2	2452	35.710	2433.9614	2469.6714	---	---
11AX20MIMO	Ant1	2412	18.668	2402.6915	2421.3595	---	---
	Ant2	2412	18.759	2402.6242	2421.3832	---	---
	Ant1	2437	18.822	2427.5934	2446.4154	---	---
	Ant2	2437	18.841	2427.5813	2446.4223	---	---
	Ant1	2462	18.710	2452.5843	2471.2943	---	---
	Ant2	2462	18.725	2452.5894	2471.3144	---	---
11AX40MIMO	Ant1	2422	37.220	2403.3916	2440.6116	---	---
	Ant2	2422	37.231	2403.3858	2440.6168	---	---
	Ant1	2437	37.684	2418.1869	2455.8709	---	---
	Ant2	2437	37.531	2418.2656	2455.7966	---	---
	Ant1	2452	37.178	2433.4288	2470.6068	---	---
	Ant2	2452	37.302	2433.3463	2470.6483	---	---

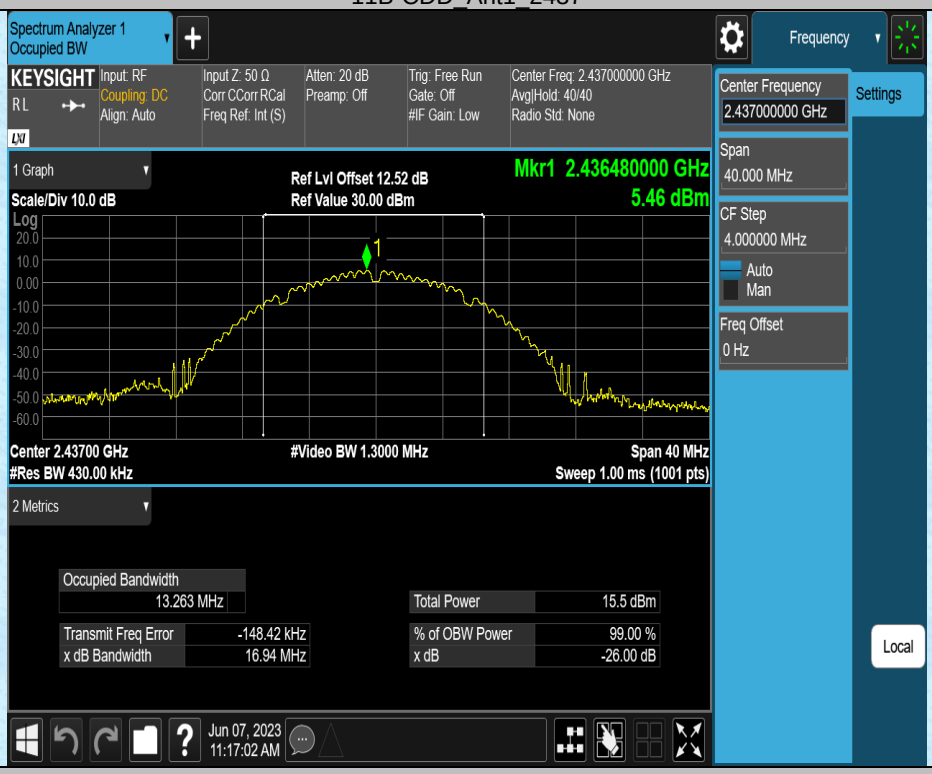
11B-CDD_Ant1_2412



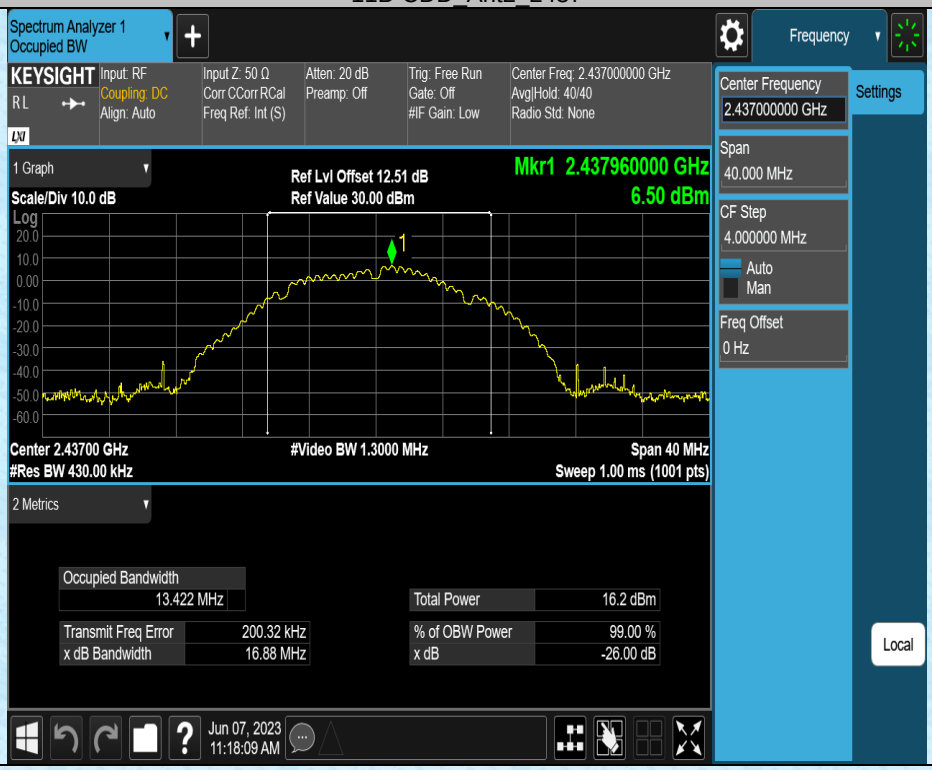
11B-CDD_Ant2_2412



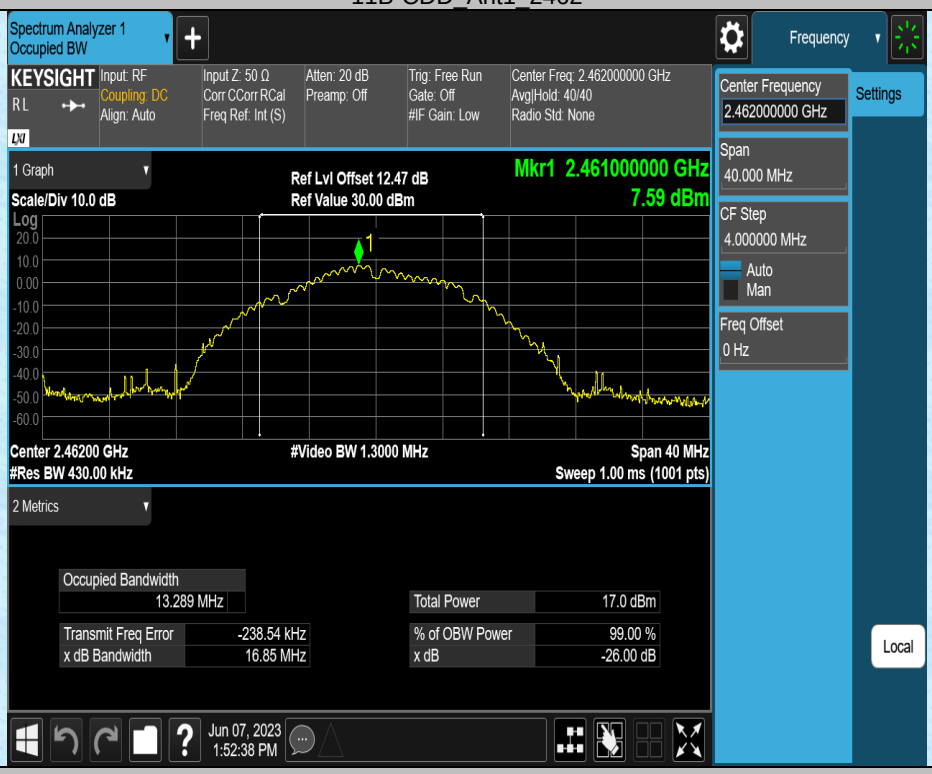
11B-CDD_Ant1_2437



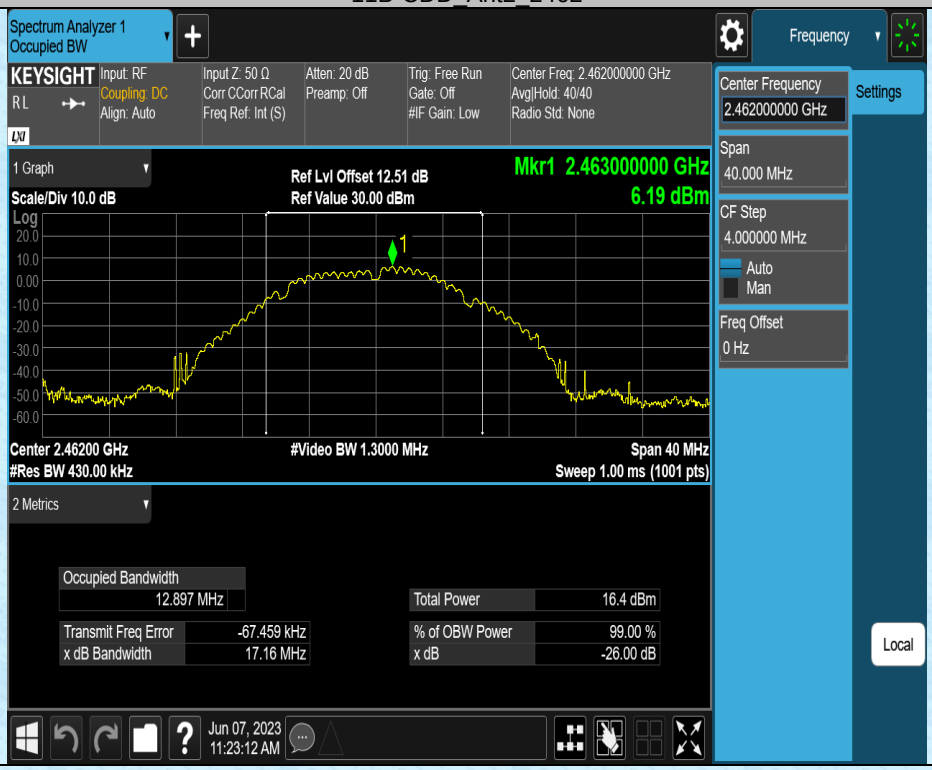
11B-CDD_Ant2_2437



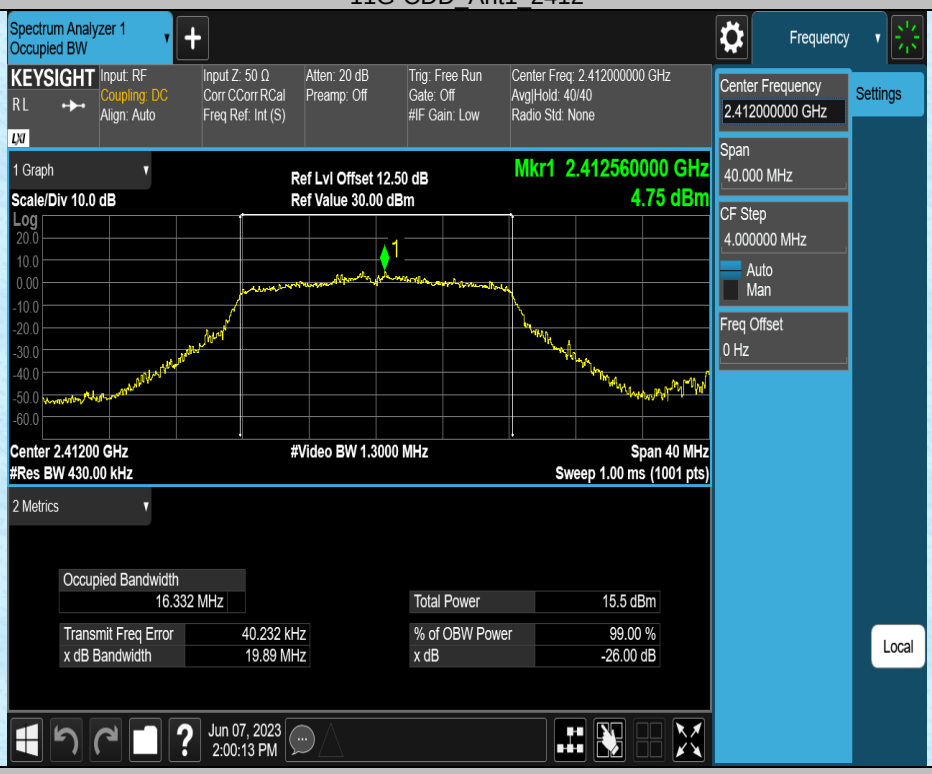
11B-CDD_Ant1_2462



11B-CDD_Ant2_2462



11G-CDD_Ant1_2412



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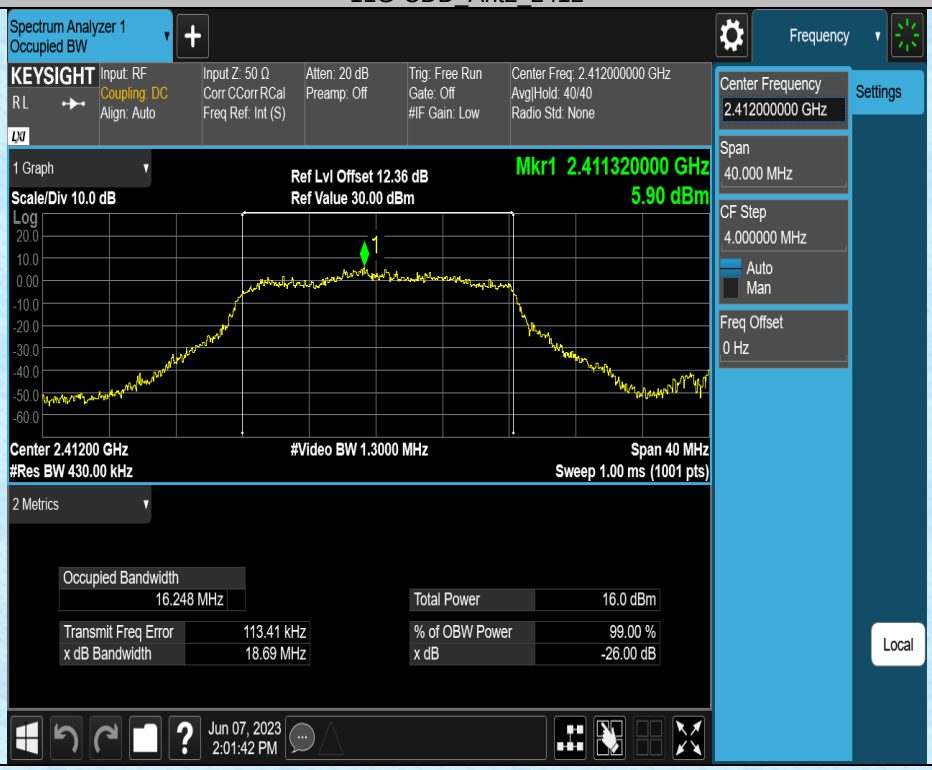

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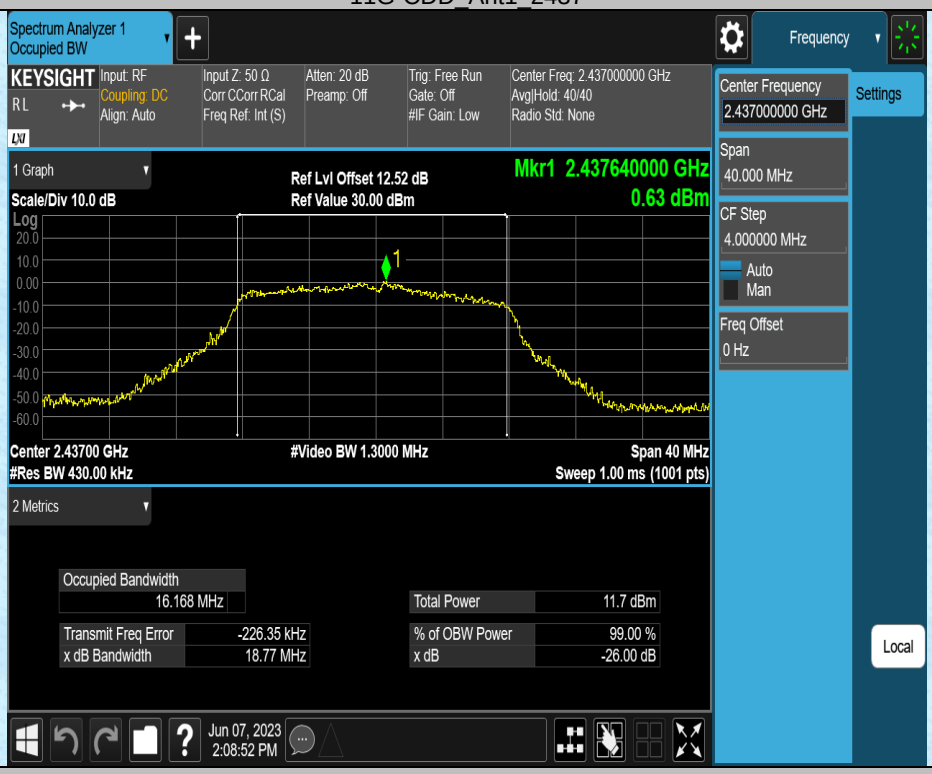

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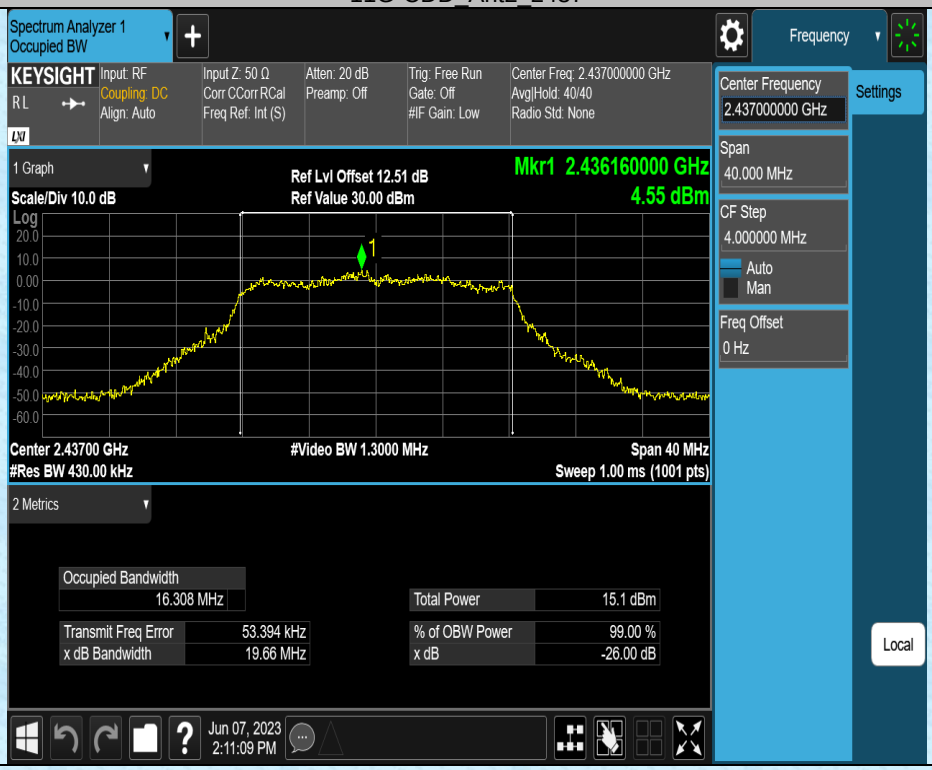

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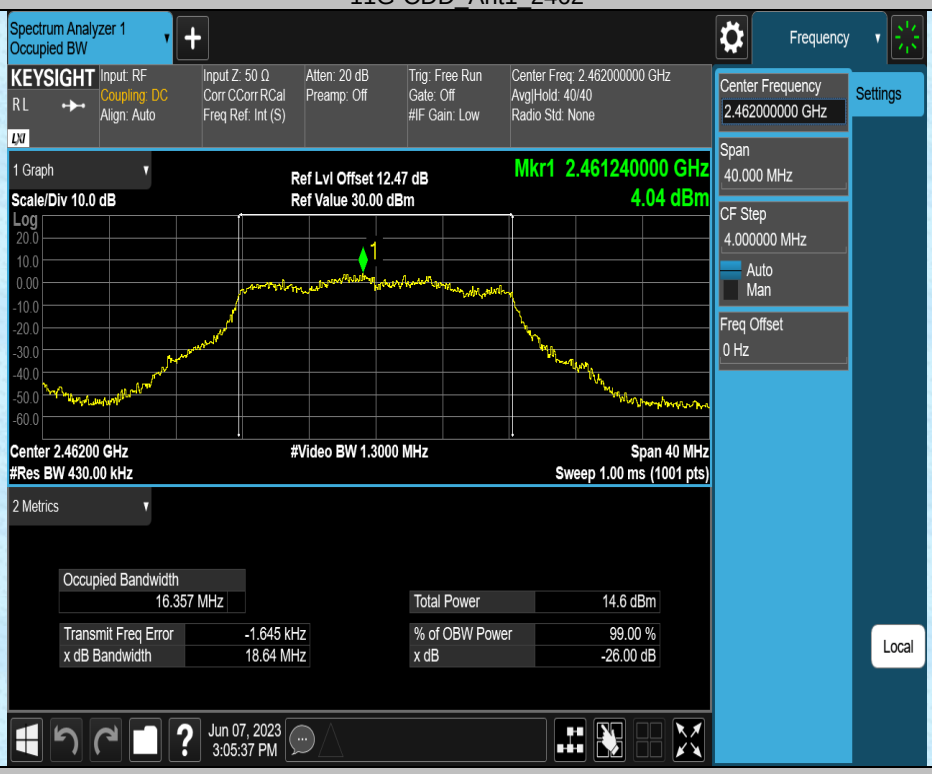
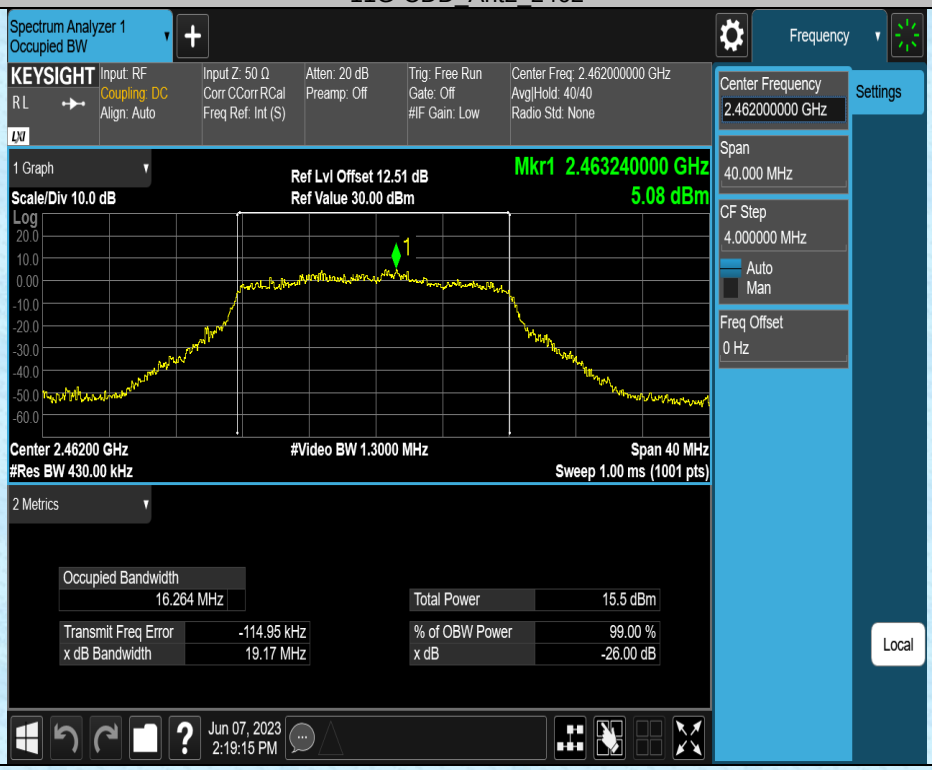
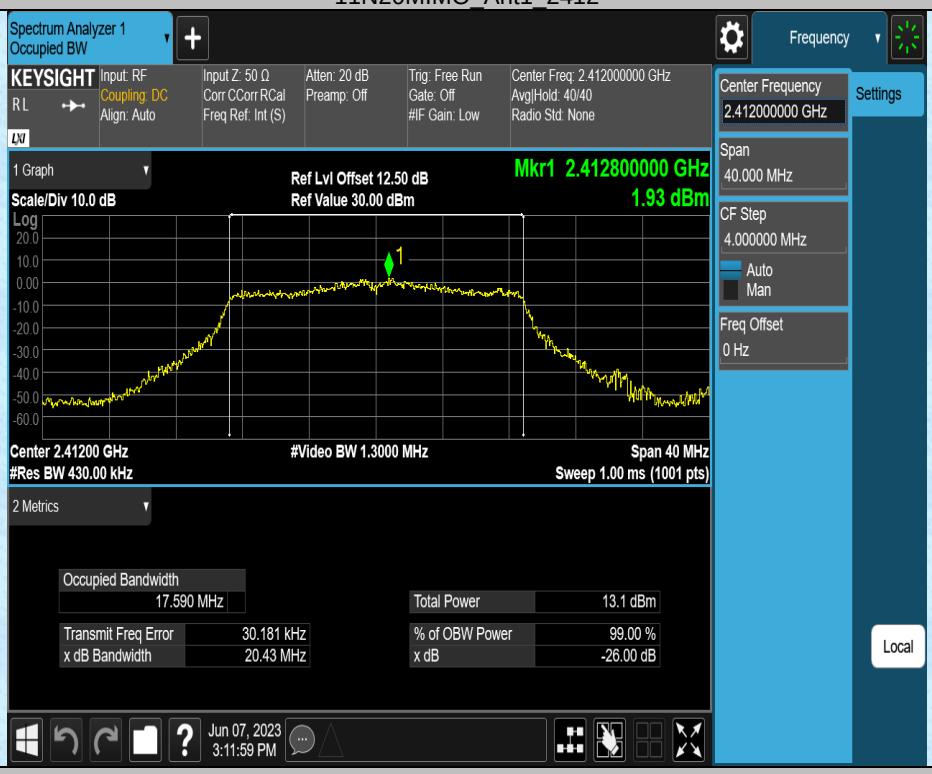


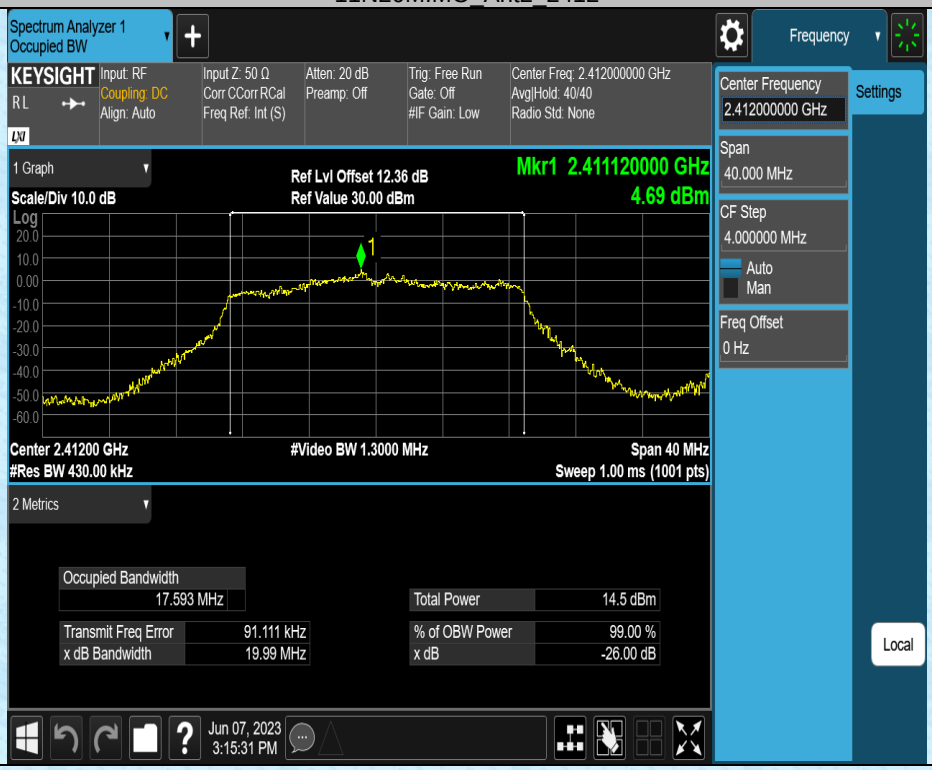
11G-CDD_Ant2_2462



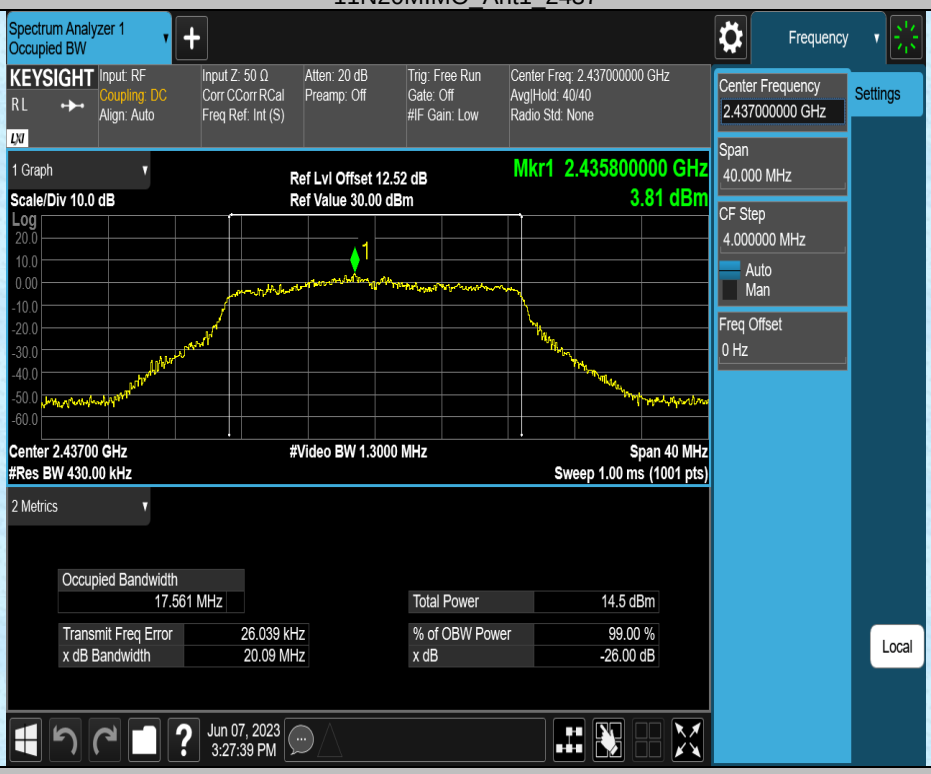
11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412



11N20MIMO_Ant1_2437



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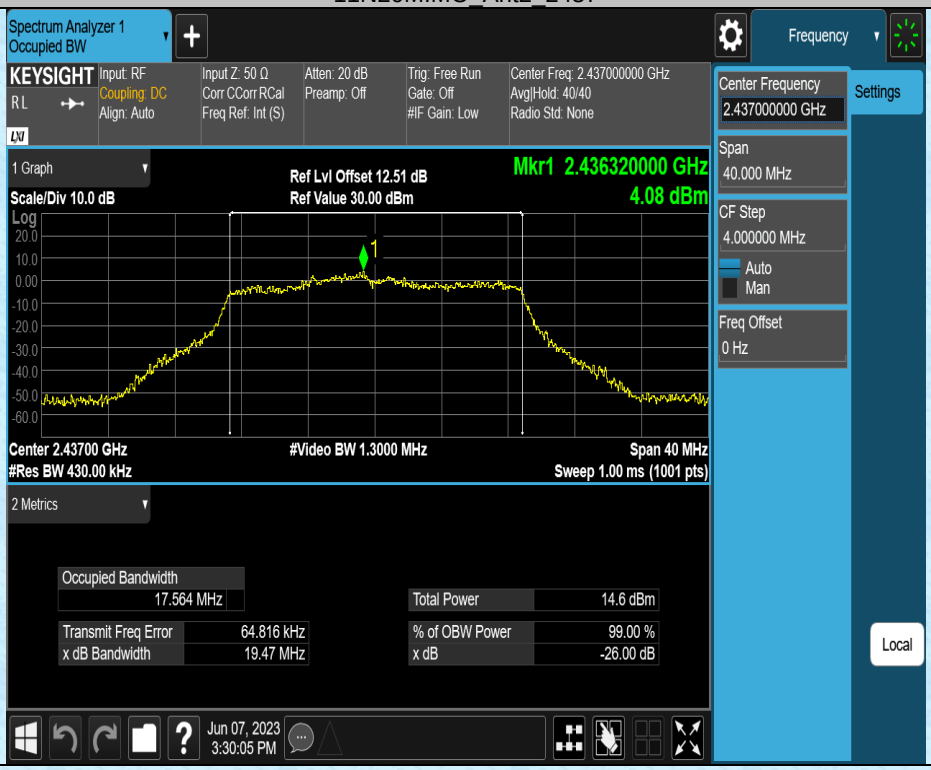

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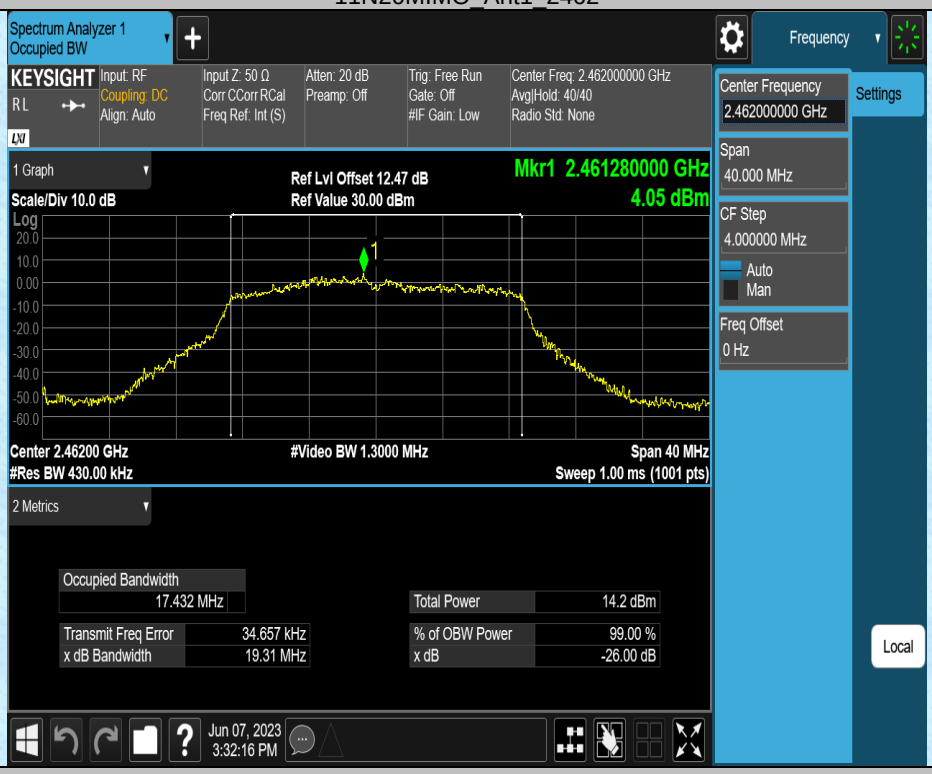

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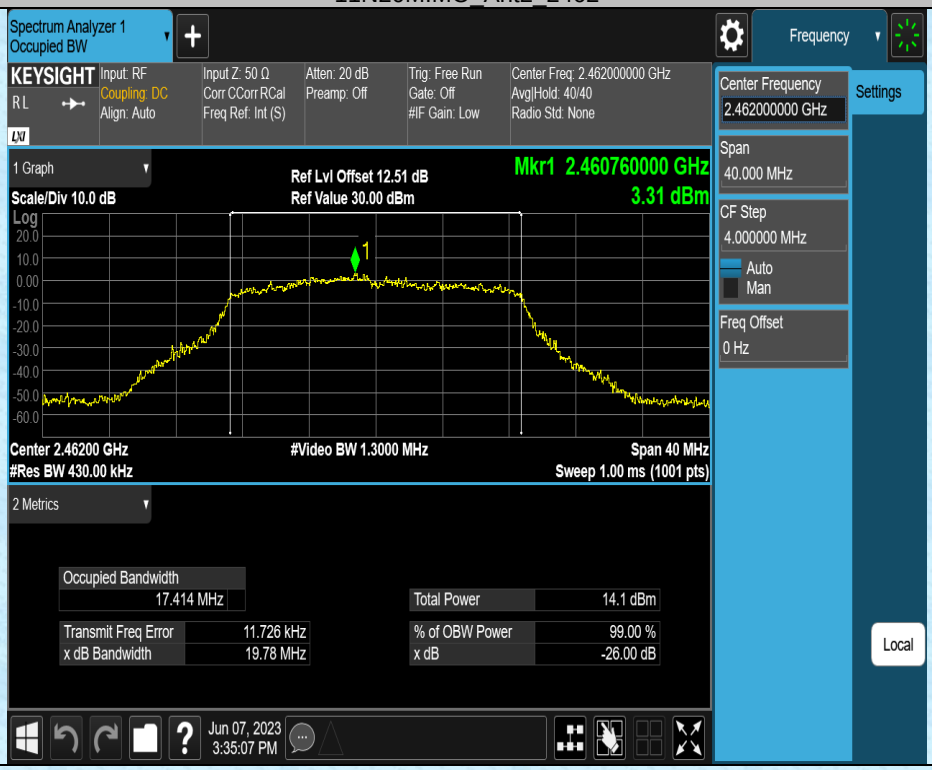
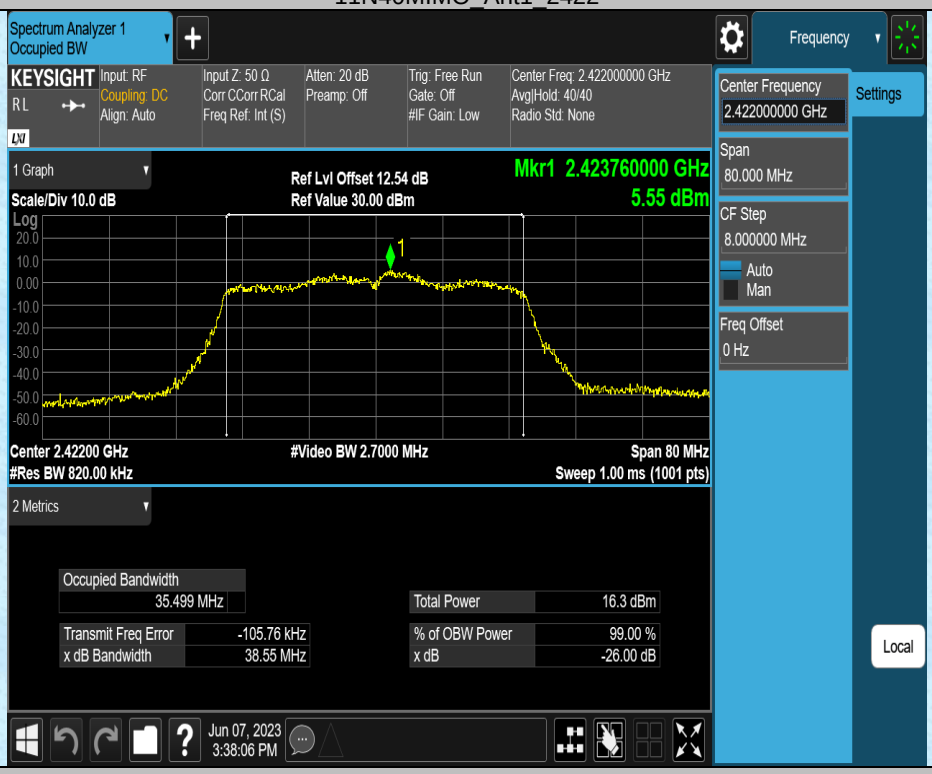
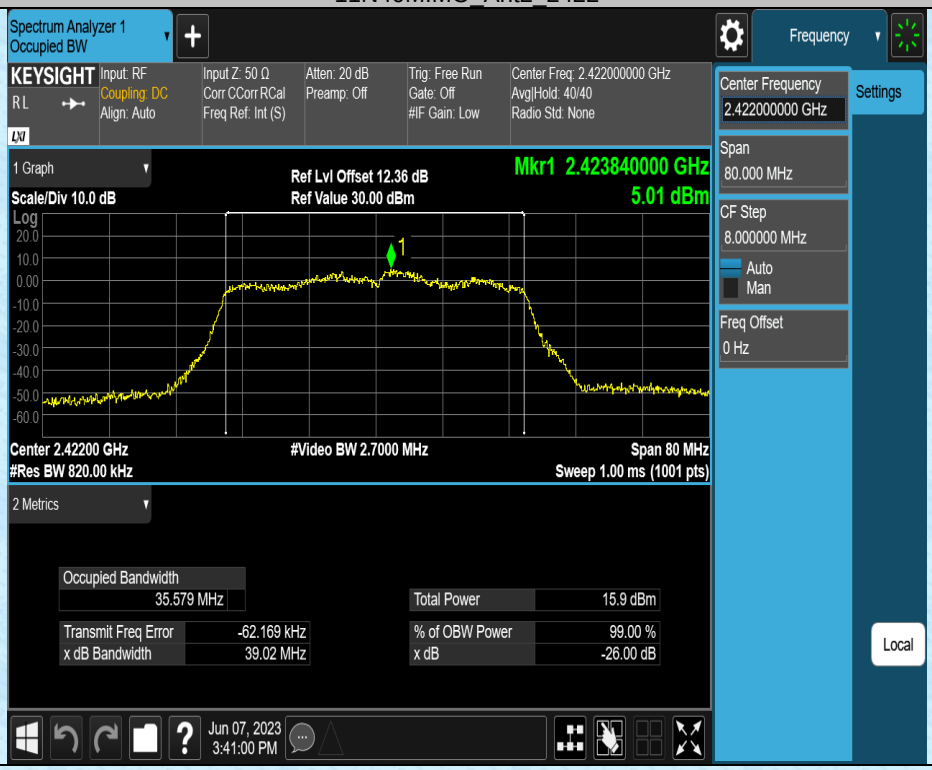


11N40MIMO_Ant1_2422



11N40MIMO_Ant2_2422



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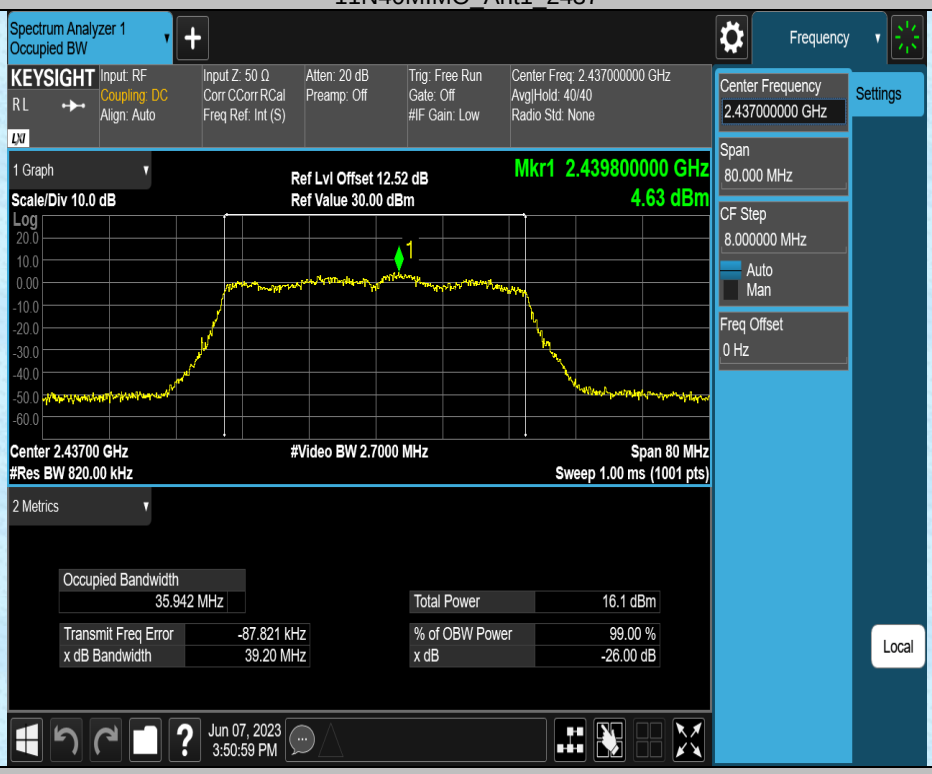
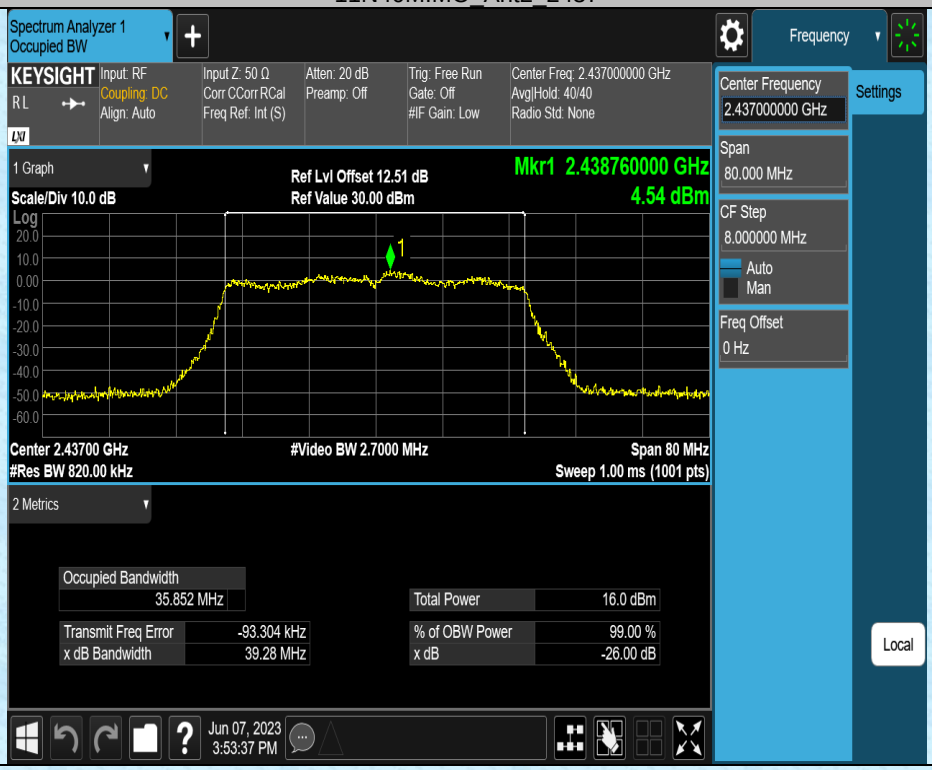
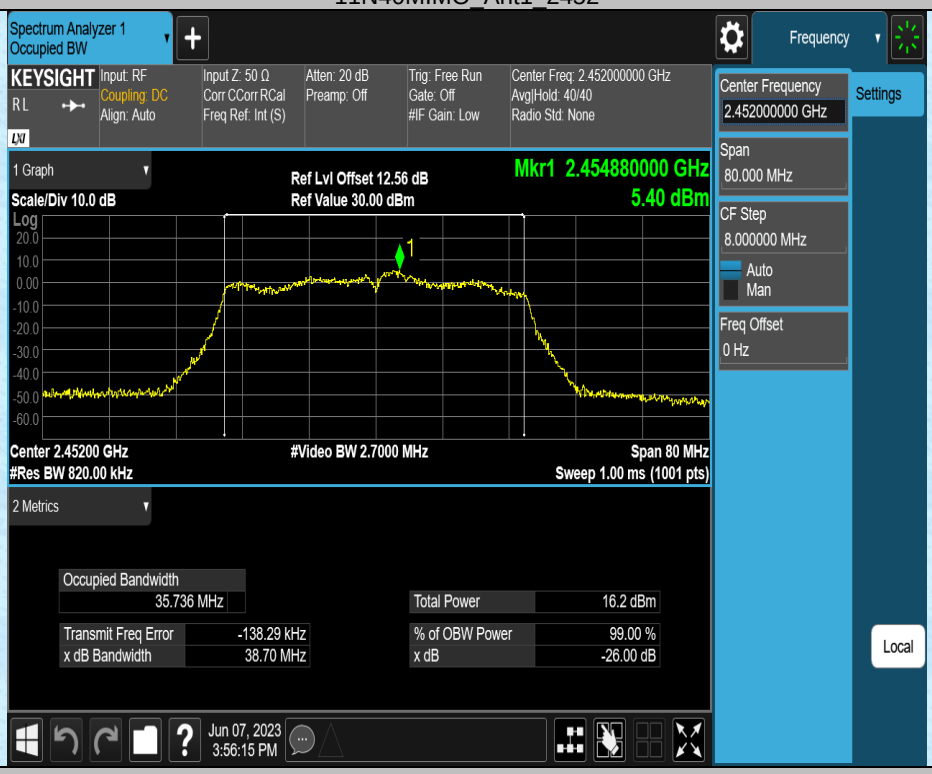


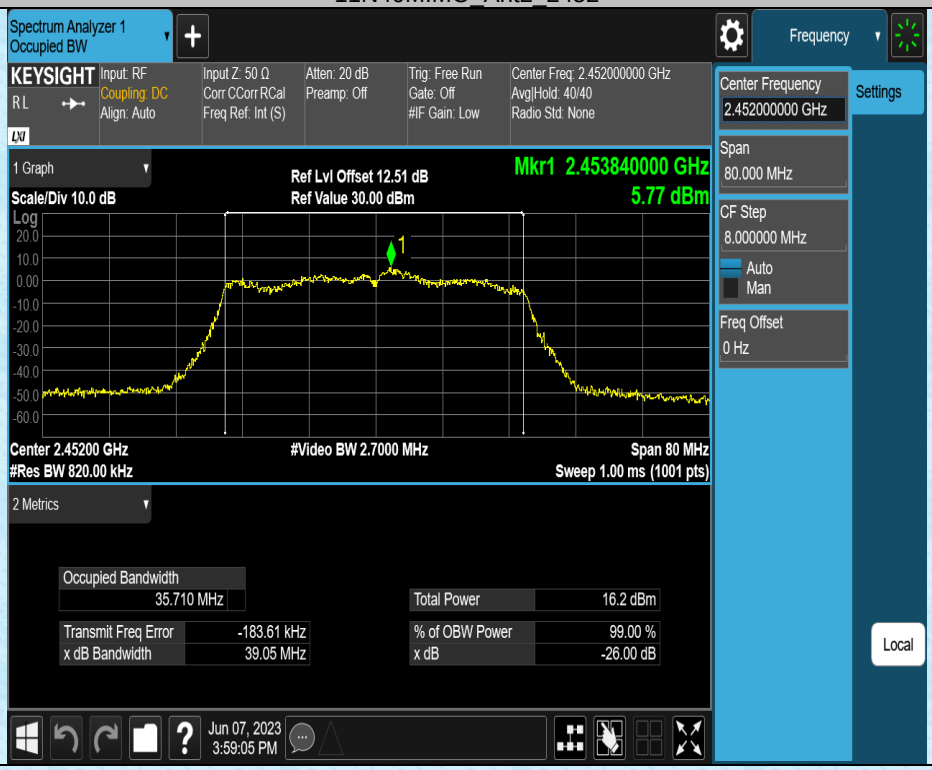
11N40MIMO_Ant2_2437



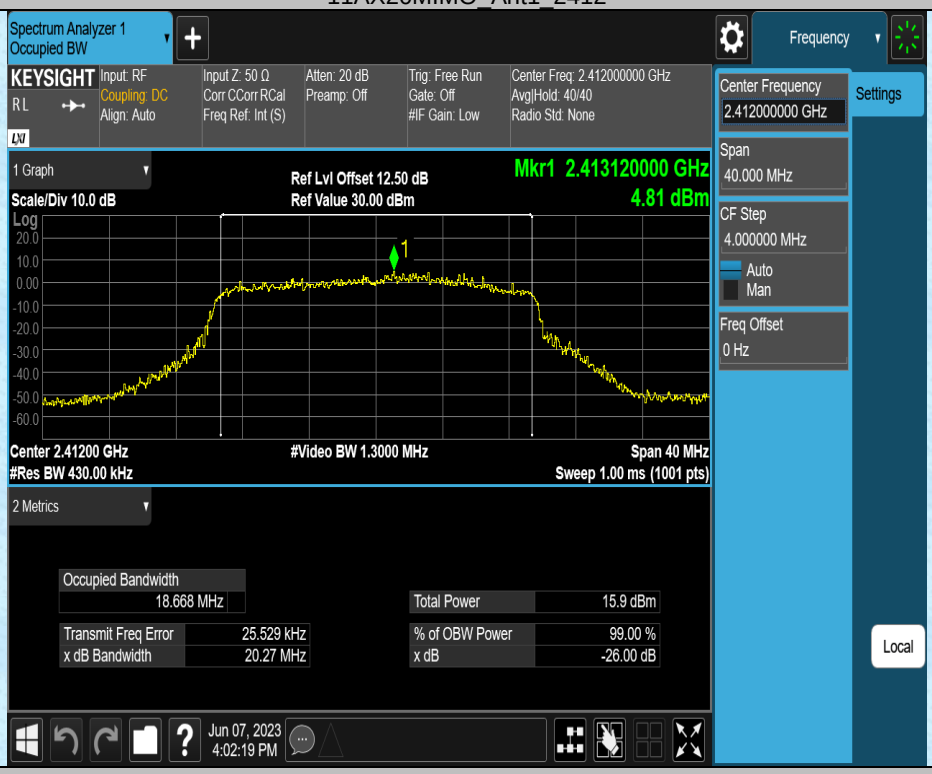
11N40MIMO_Ant1_2452



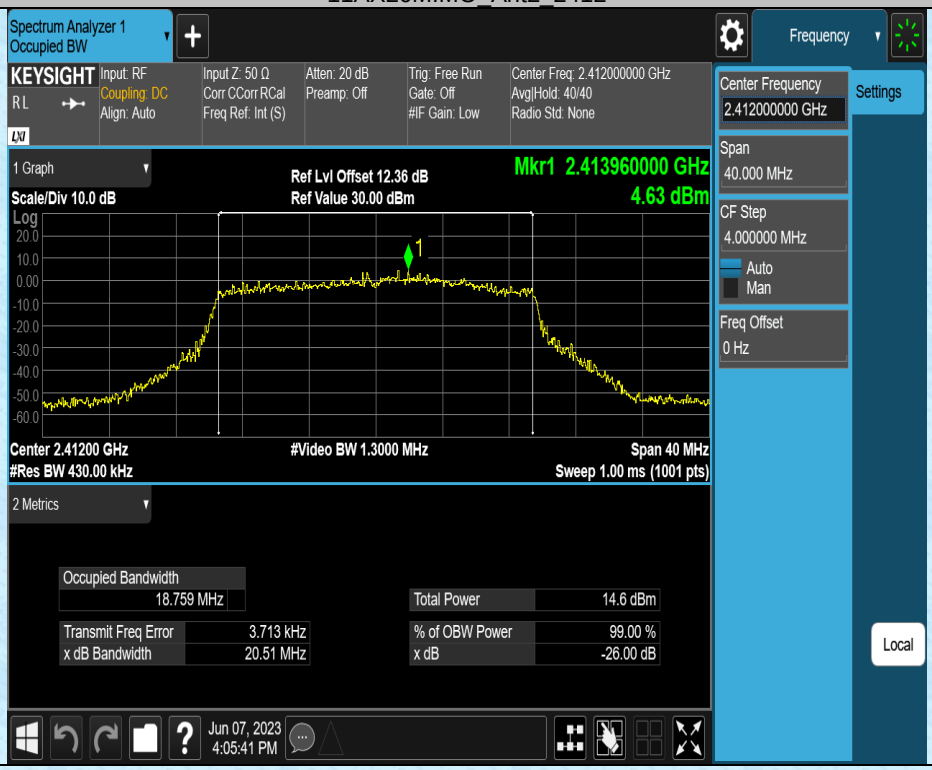
11N40MIMO_Ant2_2452



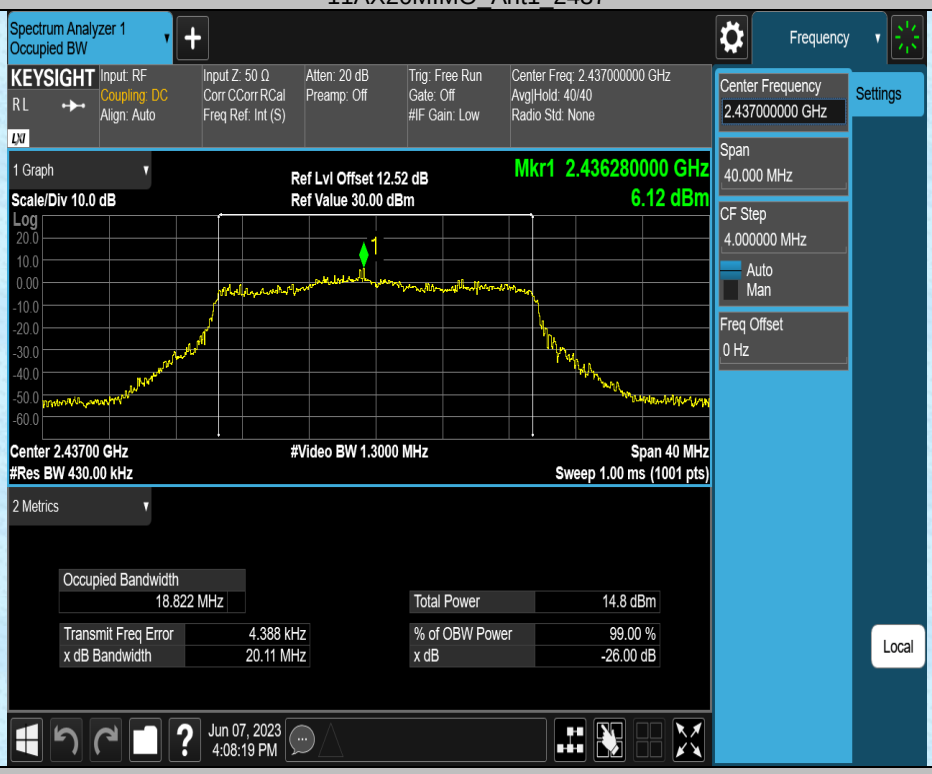
11AX20MIMO_Ant1_2412



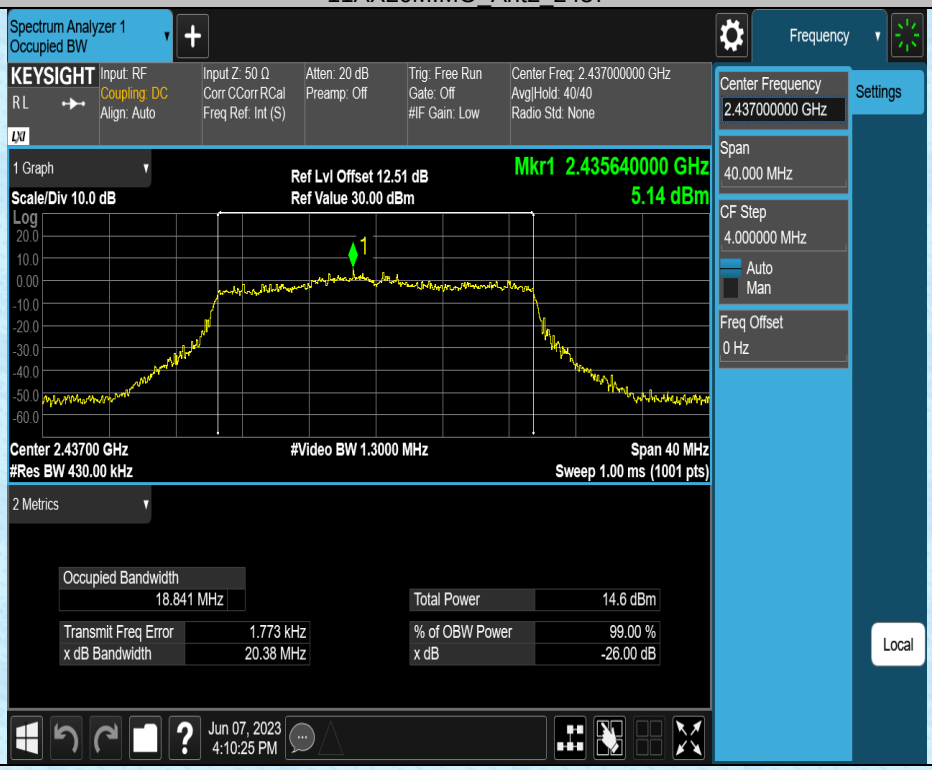
11AX20MIMO_Ant2_2412



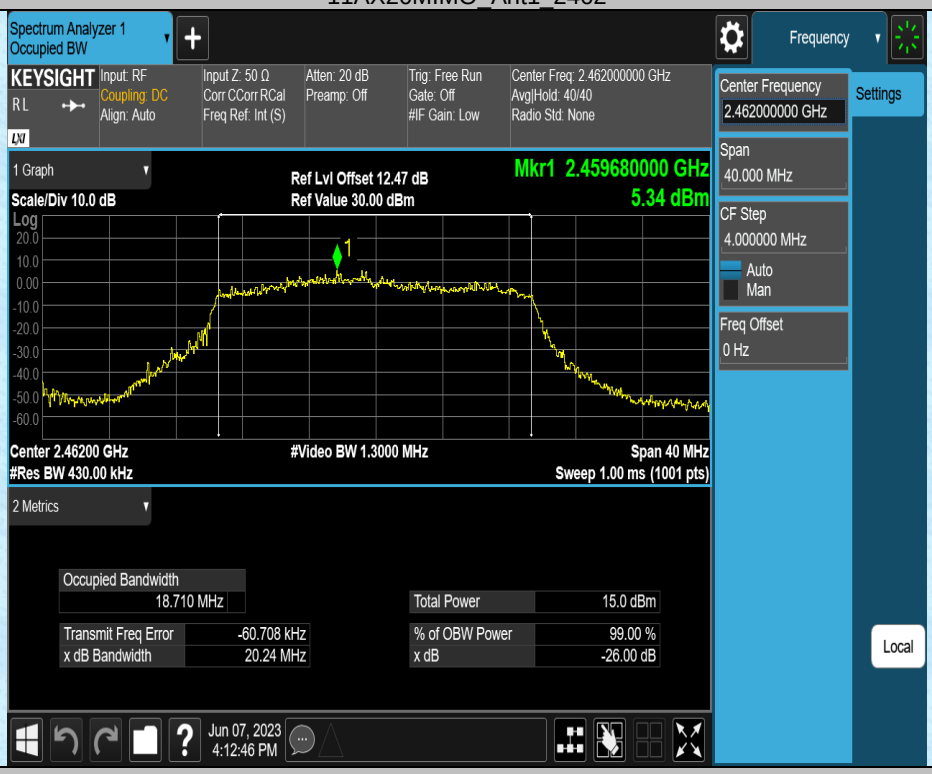
11AX20MIMO_Ant1_2437



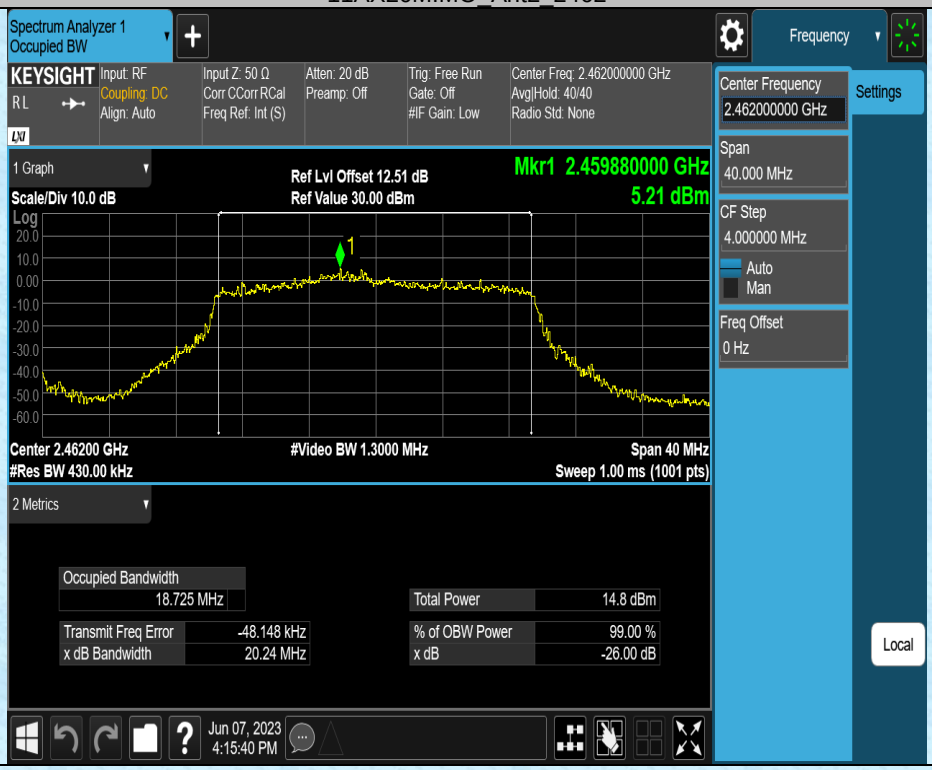
11AX20MIMO_Ant2_2437



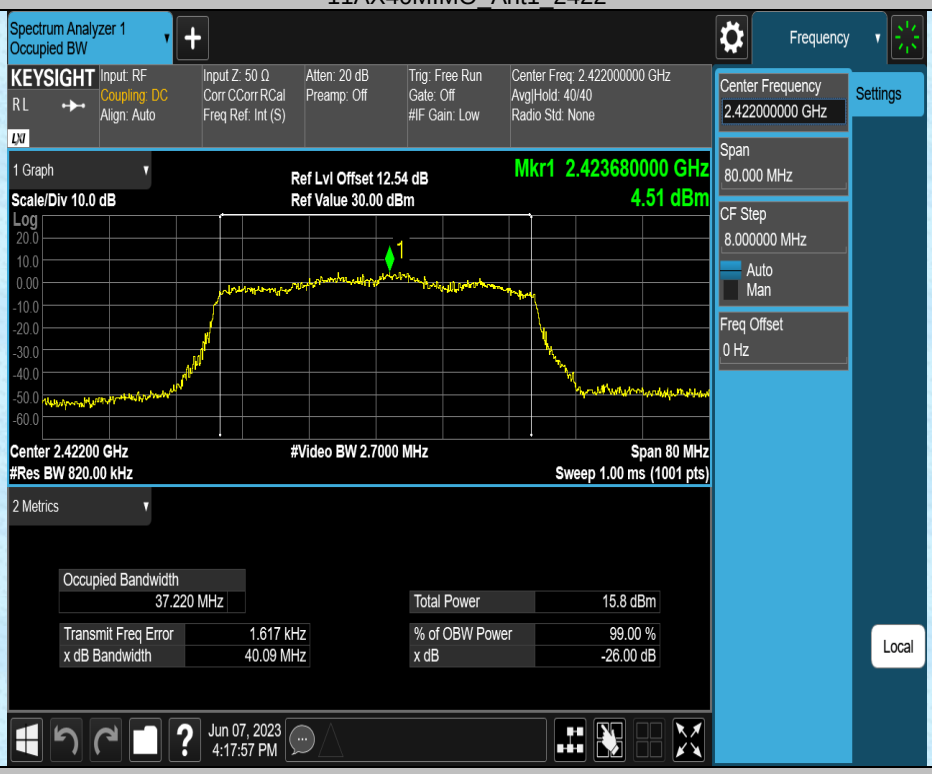
11AX20MIMO_Ant1_2462



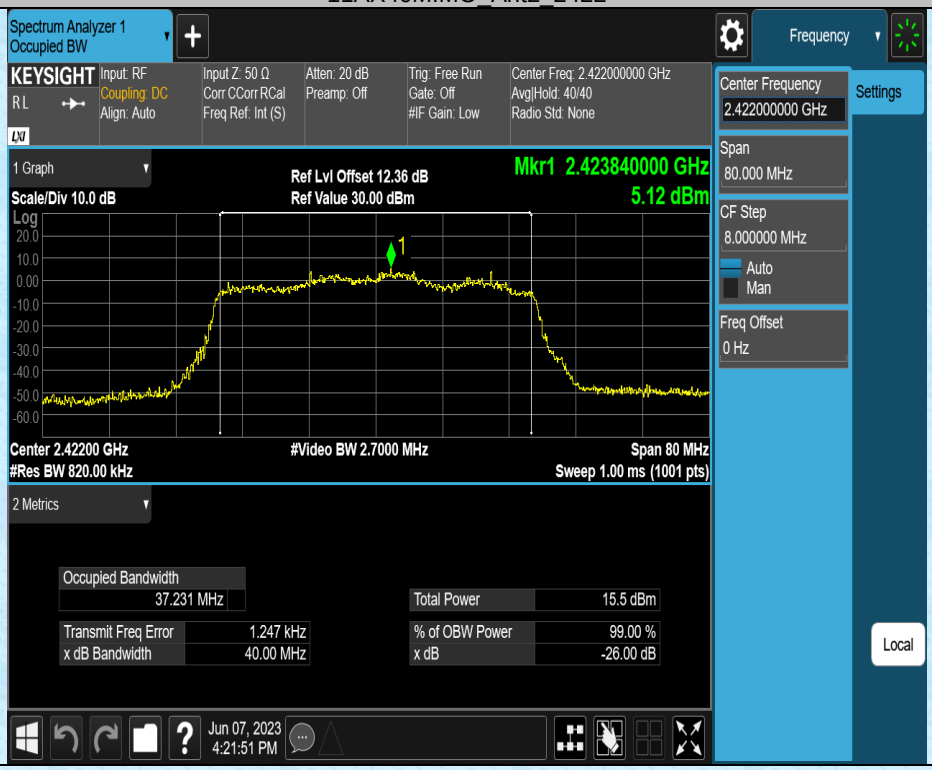
11AX20MIMO_Ant2_2462



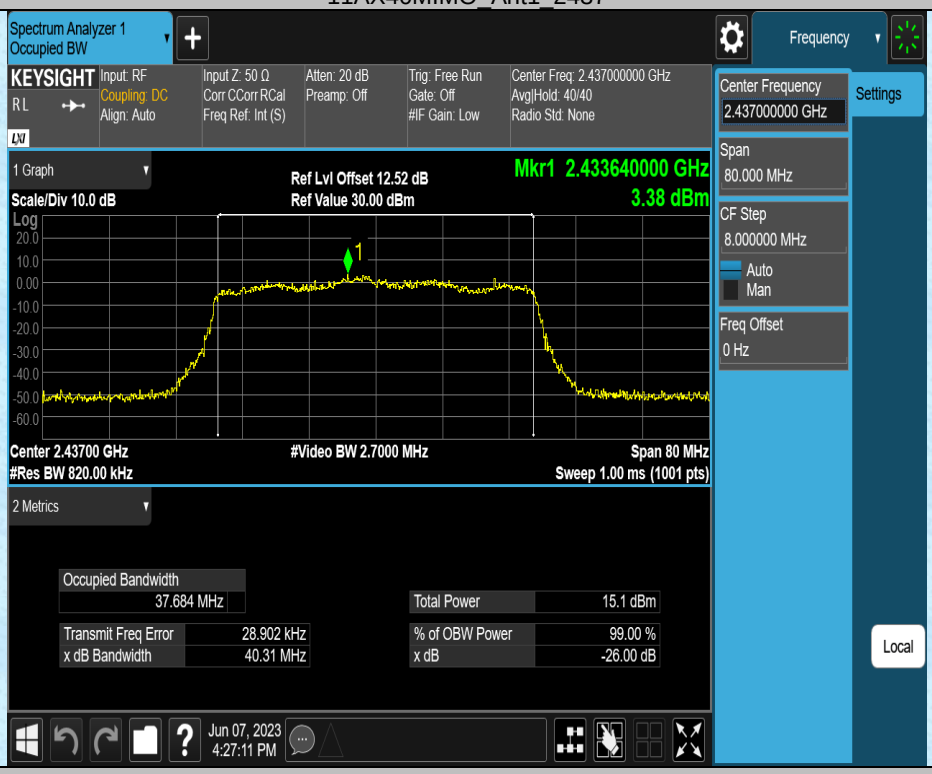
11AX40MIMO_Ant1_2422



11AX40MIMO_Ant2_2422



11AX40MIMO_Ant1_2437



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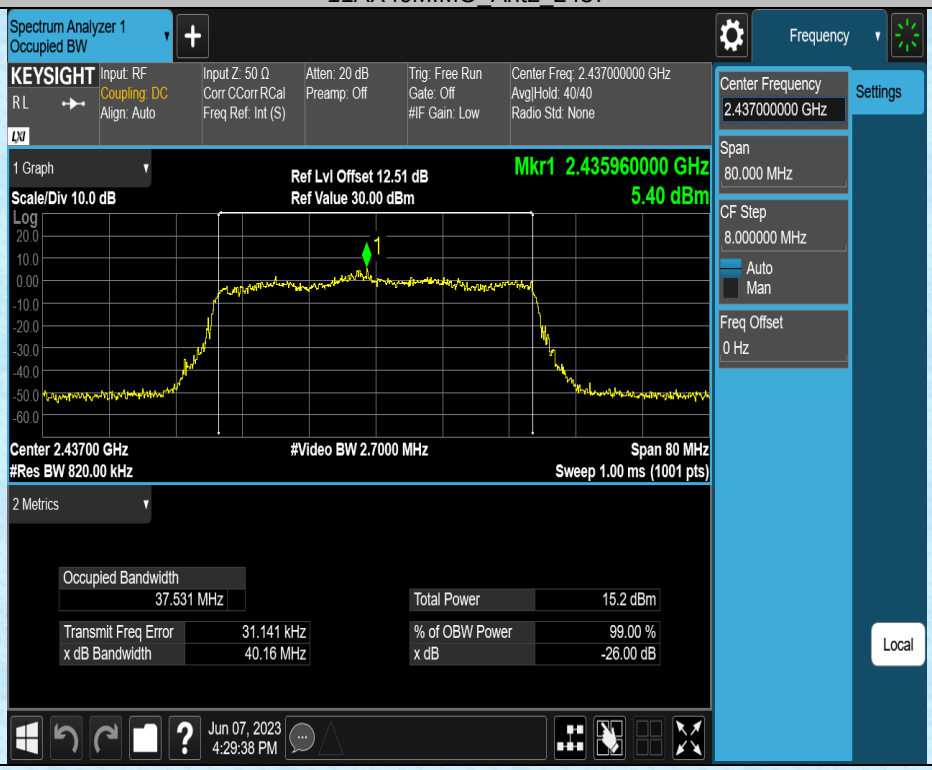

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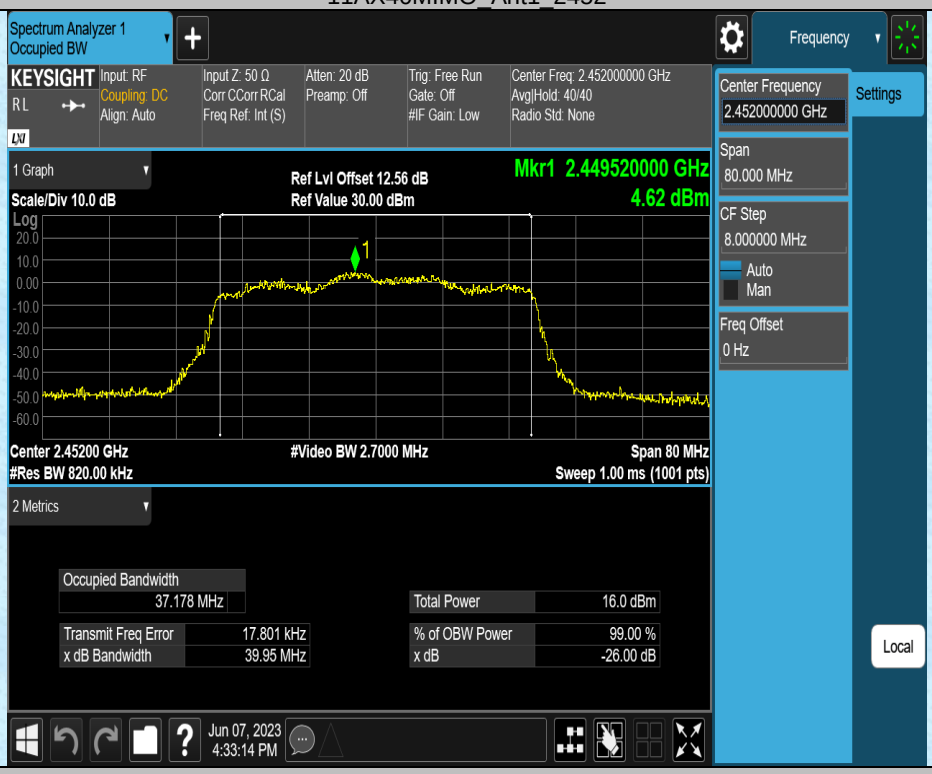
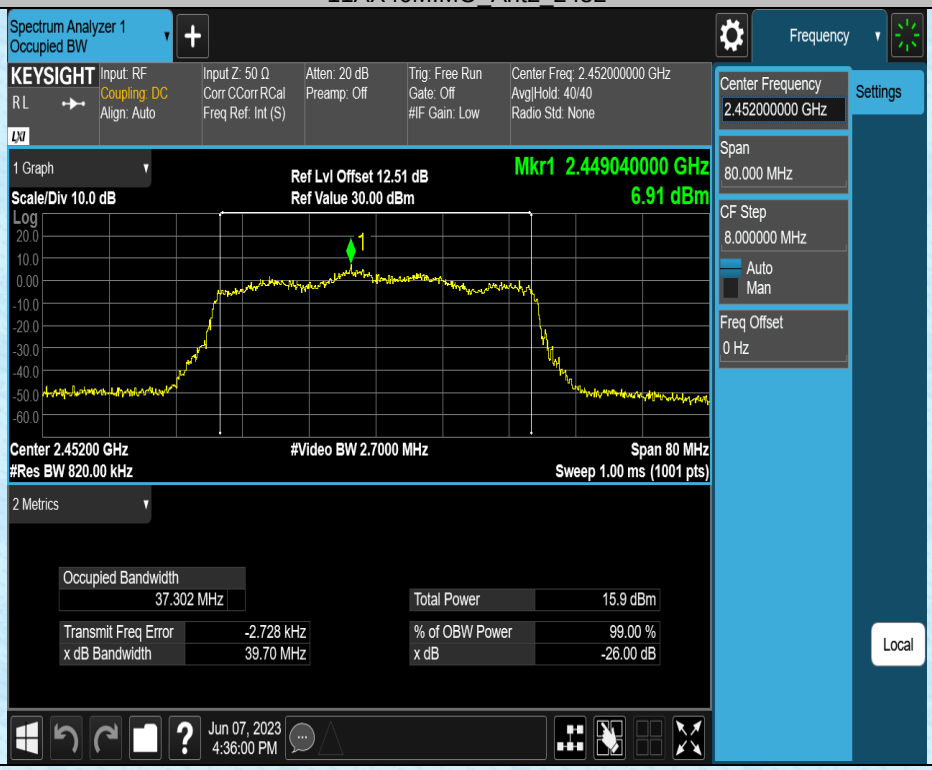
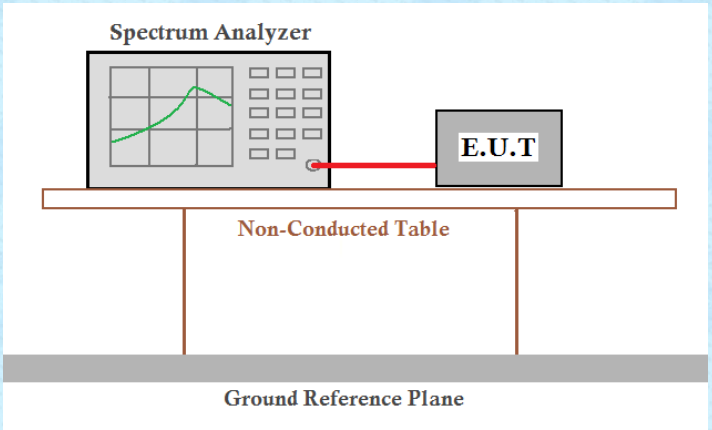


11AX40MIMO_Ant2_2452



7.5 Power Spectral Density

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02 FCC KDB 662911 D01 Multiple Transmitter Output v02r01
Limit:	8dBm/3kHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data:

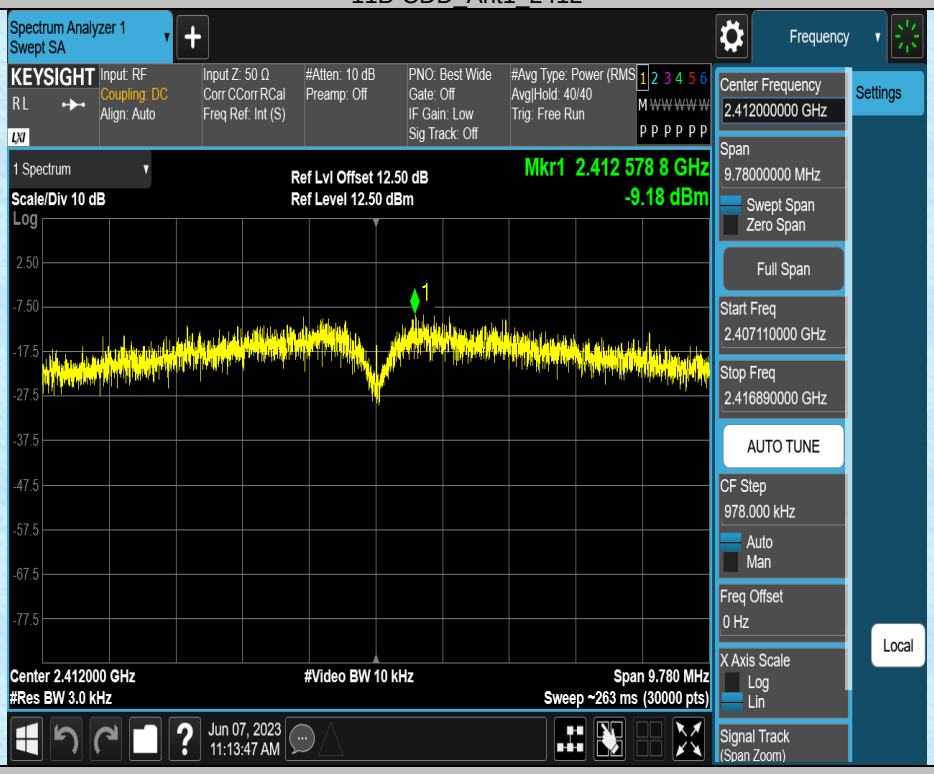
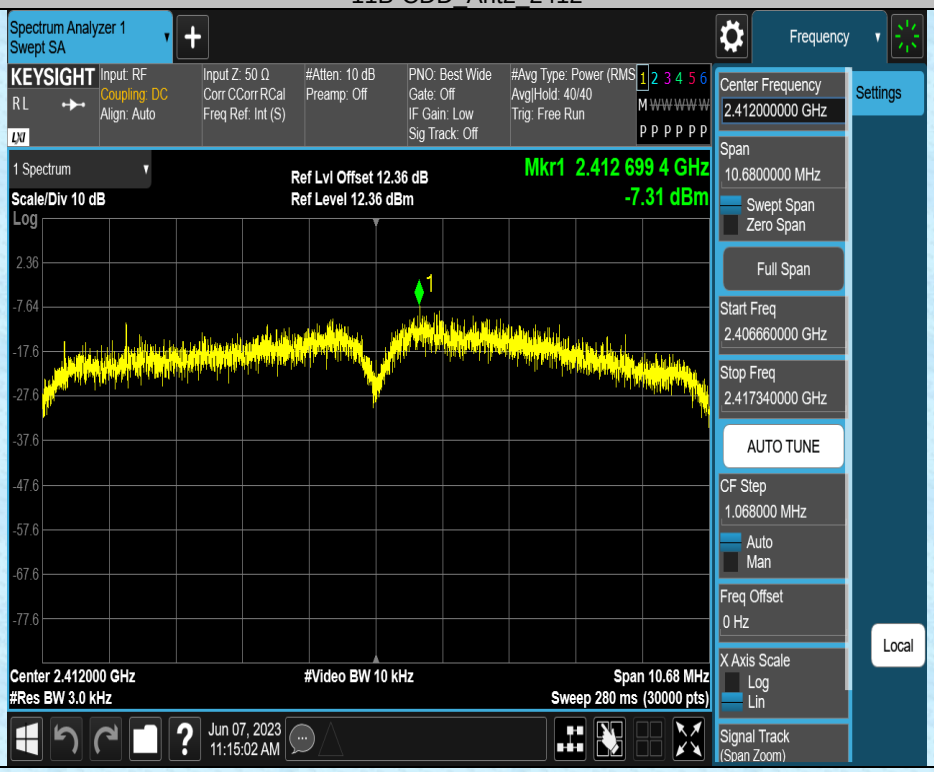
Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B-CDD	Ant1	2412	-9.18	≤7.34	PASS
	Ant2	2412	-7.31	≤7.34	PASS
	total	2412	-5.13	≤7.34	PASS
	Ant1	2437	-8.9	≤7.34	PASS
	Ant2	2437	-8.56	≤7.34	PASS
	total	2437	-5.72	≤7.34	PASS
	Ant1	2462	-7.63	≤7.34	PASS
	Ant2	2462	-6.3	≤7.34	PASS
	total	2462	-3.90	≤7.34	PASS
11G-CDD	Ant1	2412	-16.7	≤7.34	PASS
	Ant2	2412	-15.83	≤7.34	PASS
	total	2412	-13.23	≤7.34	PASS
	Ant1	2437	-15.11	≤7.34	PASS
	Ant2	2437	-14.61	≤7.34	PASS
	total	2437	-11.84	≤7.34	PASS
	Ant1	2462	-15.68	≤7.34	PASS
	Ant2	2462	-16.77	≤7.34	PASS
	total	2462	-13.18	≤7.34	PASS
11N20MIMO	Ant1	2412	-15.99	≤7.34	PASS
	Ant2	2412	-15.59	≤7.34	PASS
	total	2412	-12.78	≤7.34	PASS
	Ant1	2437	-15.39	≤7.34	PASS
	Ant2	2437	-15.09	≤7.34	PASS

	total	2437	-12.23	≤7.34	PASS
	Ant1	2462	-15.63	≤7.34	PASS
	Ant2	2462	-15.79	≤7.34	PASS
	total	2462	-12.70	≤7.34	PASS
11N40MIMO	Ant1	2422	-17.03	≤7.34	PASS
	Ant2	2422	-17.05	≤7.34	PASS
	total	2422	-14.03	≤7.34	PASS
	Ant1	2437	-17.3	≤7.34	PASS
	Ant2	2437	-18.1	≤7.34	PASS
	total	2437	-14.67	≤7.34	PASS
	Ant1	2452	-15.37	≤7.34	PASS
	Ant2	2452	-15.74	≤7.34	PASS
	total	2452	-12.54	≤7.34	PASS
11AX20MIMO	Ant1	2412	-17.03	≤7.34	PASS
	Ant2	2412	-15.79	≤7.34	PASS
	total	2412	-13.36	≤7.34	PASS
	Ant1	2437	-16.44	≤7.34	PASS
	Ant2	2437	-16.42	≤7.34	PASS
	total	2437	-13.42	≤7.34	PASS
	Ant1	2462	-16.91	≤7.34	PASS
	Ant2	2462	-16.32	≤7.34	PASS
	total	2462	-13.59	≤7.34	PASS
11AX40MIMO	Ant1	2422	-17.42	≤7.34	PASS
	Ant2	2422	-16.93	≤7.34	PASS
	total	2422	-14.16	≤7.34	PASS
	Ant1	2437	-18.58	≤7.34	PASS
	Ant2	2437	-18.98	≤7.34	PASS
	total	2437	-15.77	≤7.34	PASS
	Ant1	2452	-16.47	≤7.34	PASS
	Ant2	2452	-16.31	≤7.34	PASS
	total	2452	-13.38	≤7.34	PASS

Frequency[MHz]	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)	Correlated chains directional gain (dBi)	Peak Power Limit (dBm)
2412-2462	4.39	2.75	6.66	7.34
Unequal antenna gains, with equal transmit powers. For antenna gains given by G_1, G_2, …, G_N dBi If transmit signals are correlated, then Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}$] dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]				
2412-2462: Directional gain = 10log[$(10^{4.39/20} + 10^{2.75/20})^2/N_{ANT}$] dBi=6.66				

Note: Beamforming conducted power less than no beamforming conducted power, so only no beamforming conducted power spectral density was recored.

11B-CDD_Ant1_2412



11B-CDD_Ant2_2412