



11BE40MIMO-Ant0-2452-PASS



11BE40MIMO-Ant1-2452-PASS



11BE40MIMO-Ant2-2452-PASS



11BE40MIMO-Ant3-2452-PASS

Occupied Channel Bandwidth

TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B-CDD	Ant0	2412	10.801	2406.6046	2417.4056	---	---
11B-CDD	Ant1	2412	10.848	2406.5998	2417.4478	---	---
11B-CDD	Ant2	2412	11.009	2406.4890	2417.4980	---	---
11B-CDD	Ant3	2412	10.973	2406.5532	2417.5262	---	---
11B-CDD	Ant0	2437	10.688	2431.6979	2442.3859	---	---
11B-CDD	Ant1	2437	10.610	2431.7260	2442.3360	---	---
11B-CDD	Ant2	2437	10.669	2431.7093	2442.3783	---	---
11B-CDD	Ant3	2437	10.680	2431.6393	2442.3193	---	---
11B-CDD	Ant0	2462	10.998	2456.3678	2467.3658	---	---
11B-CDD	Ant1	2462	10.965	2456.4126	2467.3776	---	---
11B-CDD	Ant2	2462	10.987	2456.3834	2467.3704	---	---
11B-CDD	Ant3	2462	11.164	2456.3478	2467.5118	---	---
11G-CDD	Ant0	2412	17.768	2403.2221	2420.9901	---	---
11G-CDD	Ant1	2412	17.948	2403.2418	2421.1898	---	---
11G-CDD	Ant2	2412	17.748	2403.2719	2421.0199	---	---
11G-CDD	Ant3	2412	17.646	2403.2334	2420.8794	---	---
11G-CDD	Ant0	2437	17.622	2428.2759	2445.8979	---	---
11G-CDD	Ant1	2437	17.710	2428.2496	2445.9596	---	---
11G-CDD	Ant2	2437	17.565	2428.3377	2445.9027	---	---
11G-CDD	Ant3	2437	17.468	2428.2615	2445.7295	---	---
11G-CDD	Ant0	2462	17.944	2452.8800	2470.8240	---	---
11G-CDD	Ant1	2462	18.038	2452.8541	2470.8921	---	---
11G-CDD	Ant2	2462	17.796	2452.8984	2470.6944	---	---
11G-CDD	Ant3	2462	17.813	2452.8887	2470.7017	---	---
11N20MIMO	Ant0	2412	18.327	2402.9037	2421.2307	---	---
11N20MIMO	Ant1	2412	18.673	2402.7423	2421.4153	---	---
11N20MIMO	Ant2	2412	18.450	2402.8486	2421.2986	---	---
11N20MIMO	Ant3	2412	18.467	2402.8495	2421.3165	---	---
11N20MIMO	Ant0	2437	18.213	2427.9318	2446.1448	---	---
11N20MIMO	Ant1	2437	18.602	2427.6709	2446.2729	---	---
11N20MIMO	Ant2	2437	18.315	2427.9010	2446.2160	---	---
11N20MIMO	Ant3	2437	18.393	2427.7650	2446.1580	---	---
11N20MIMO	Ant0	2462	18.415	2452.6972	2471.1122	---	---
11N20MIMO	Ant1	2462	18.821	2452.3863	2471.2073	---	---
11N20MIMO	Ant2	2462	18.473	2452.6632	2471.1362	---	---
11N20MIMO	Ant3	2462	18.553	2452.6437	2471.1967	---	---
11N40MIMO	Ant0	2422	36.717	2403.7361	2440.4531	---	---
11N40MIMO	Ant1	2422	36.904	2403.6406	2440.5446	---	---

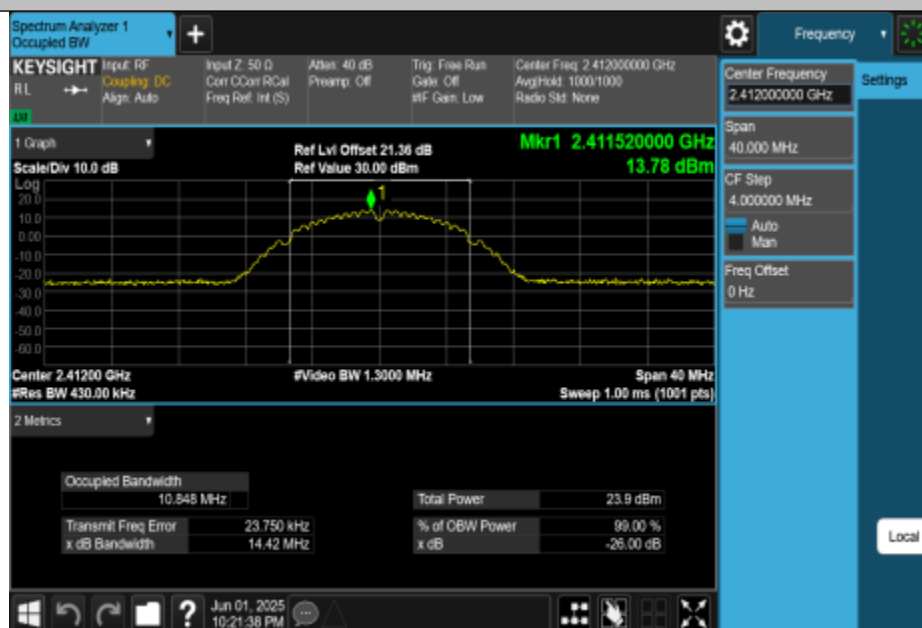
11N40MIMO	Ant2	2422	36.810	2403.6634	2440.4734	---	---
11N40MIMO	Ant3	2422	36.750	2403.7314	2440.4814	---	---
11N40MIMO	Ant0	2437	36.742	2418.6967	2455.4387	---	---
11N40MIMO	Ant1	2437	36.947	2418.5838	2455.5308	---	---
11N40MIMO	Ant2	2437	36.696	2418.7128	2455.4088	---	---
11N40MIMO	Ant3	2437	36.786	2418.6079	2455.3939	---	---
11N40MIMO	Ant0	2452	36.634	2433.6304	2470.2644	---	---
11N40MIMO	Ant1	2452	36.708	2433.5215	2470.2295	---	---
11N40MIMO	Ant2	2452	36.609	2433.6588	2470.2678	---	---
11N40MIMO	Ant3	2452	36.703	2433.5796	2470.2826	---	---
11AX20MIMO	Ant0	2412	19.360	2402.3589	2421.7189	---	---
11AX20MIMO	Ant1	2412	19.382	2402.3717	2421.7537	---	---
11AX20MIMO	Ant2	2412	19.382	2402.3467	2421.7287	---	---
11AX20MIMO	Ant3	2412	19.471	2402.3183	2421.7893	---	---
11AX20MIMO	Ant0	2437	19.269	2427.3855	2446.6545	---	---
11AX20MIMO	Ant1	2437	19.361	2427.3547	2446.7157	---	---
11AX20MIMO	Ant2	2437	19.255	2427.4008	2446.6558	---	---
11AX20MIMO	Ant3	2437	19.325	2427.3470	2446.6720	---	---
11AX20MIMO	Ant0	2462	19.416	2452.1966	2471.6126	---	---
11AX20MIMO	Ant1	2462	19.495	2452.2135	2471.7085	---	---
11AX20MIMO	Ant2	2462	19.432	2452.2279	2471.6599	---	---
11AX20MIMO	Ant3	2462	19.451	2452.2174	2471.6684	---	---
11AX40MIMO	Ant0	2422	37.989	2403.0588	2441.0478	---	---
11AX40MIMO	Ant1	2422	38.009	2403.0832	2441.0922	---	---
11AX40MIMO	Ant2	2422	37.986	2403.0577	2441.0437	---	---
11AX40MIMO	Ant3	2422	37.935	2403.0696	2441.0046	---	---
11AX40MIMO	Ant0	2437	38.019	2418.0057	2456.0247	---	---
11AX40MIMO	Ant1	2437	38.033	2417.9946	2456.0276	---	---
11AX40MIMO	Ant2	2437	37.913	2418.0708	2455.9838	---	---
11AX40MIMO	Ant3	2437	38.030	2417.9608	2455.9908	---	---
11AX40MIMO	Ant0	2452	37.903	2433.0061	2470.9091	---	---
11AX40MIMO	Ant1	2452	37.952	2432.9426	2470.8946	---	---
11AX40MIMO	Ant2	2452	37.936	2432.9874	2470.9234	---	---
11AX40MIMO	Ant3	2452	38.037	2432.8575	2470.8945	---	---
11BE20MIMO	Ant0	2412	19.284	2402.3773	2421.6613	---	---
11BE20MIMO	Ant1	2412	19.367	2402.3202	2421.6872	---	---
11BE20MIMO	Ant2	2412	19.233	2402.4146	2421.6476	---	---
11BE20MIMO	Ant3	2412	19.296	2402.4203	2421.7163	---	---
11BE20MIMO	Ant0	2437	19.226	2427.4077	2446.6337	---	---
11BE20MIMO	Ant1	2437	19.262	2427.3326	2446.5946	---	---
11BE20MIMO	Ant2	2437	19.278	2427.4030	2446.6810	---	---
11BE20MIMO	Ant3	2437	19.206	2427.3919	2446.5979	---	---

11BE20MIMO	Ant0	2462	19.365	2452.2668	2471.6318	---	---
11BE20MIMO	Ant1	2462	19.311	2452.2826	2471.5936	---	---
11BE20MIMO	Ant2	2462	19.302	2452.2846	2471.5866	---	---
11BE20MIMO	Ant3	2462	19.283	2452.2811	2471.5641	---	---
11BE40MIMO	Ant0	2422	38.084	2402.9879	2441.0719	---	---
11BE40MIMO	Ant1	2422	37.907	2403.0954	2441.0024	---	---
11BE40MIMO	Ant2	2422	38.050	2403.0114	2441.0614	---	---
11BE40MIMO	Ant3	2422	37.926	2403.0915	2441.0175	---	---
11BE40MIMO	Ant0	2437	37.853	2418.0662	2455.9192	---	---
11BE40MIMO	Ant1	2437	37.953	2417.9928	2455.9458	---	---
11BE40MIMO	Ant2	2437	37.927	2418.0709	2455.9979	---	---
11BE40MIMO	Ant3	2437	37.977	2418.0298	2456.0068	---	---
11BE40MIMO	Ant0	2452	37.933	2432.9380	2470.8710	---	---
11BE40MIMO	Ant1	2452	37.906	2432.9500	2470.8560	---	---
11BE40MIMO	Ant2	2452	37.928	2432.9871	2470.9151	---	---
11BE40MIMO	Ant3	2452	38.021	2432.8815	2470.9025	---	---

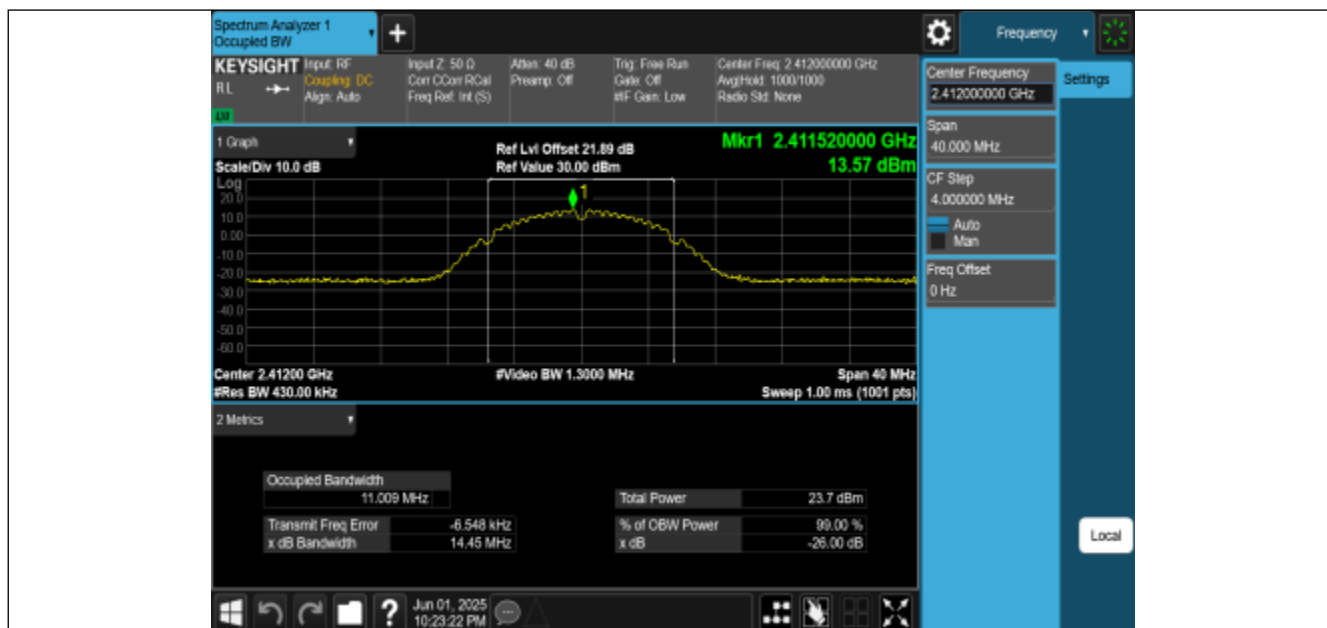
Test Graphs



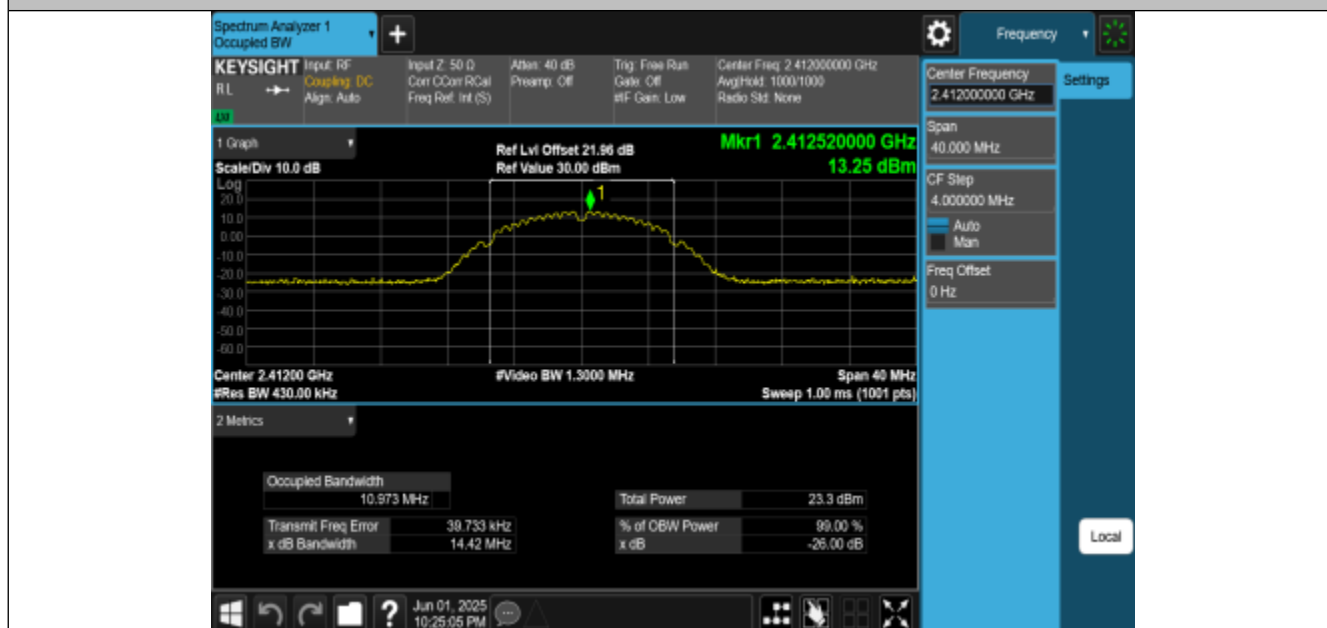
11B-CDD-Ant0-2412



11B-CDD-Ant1-2412



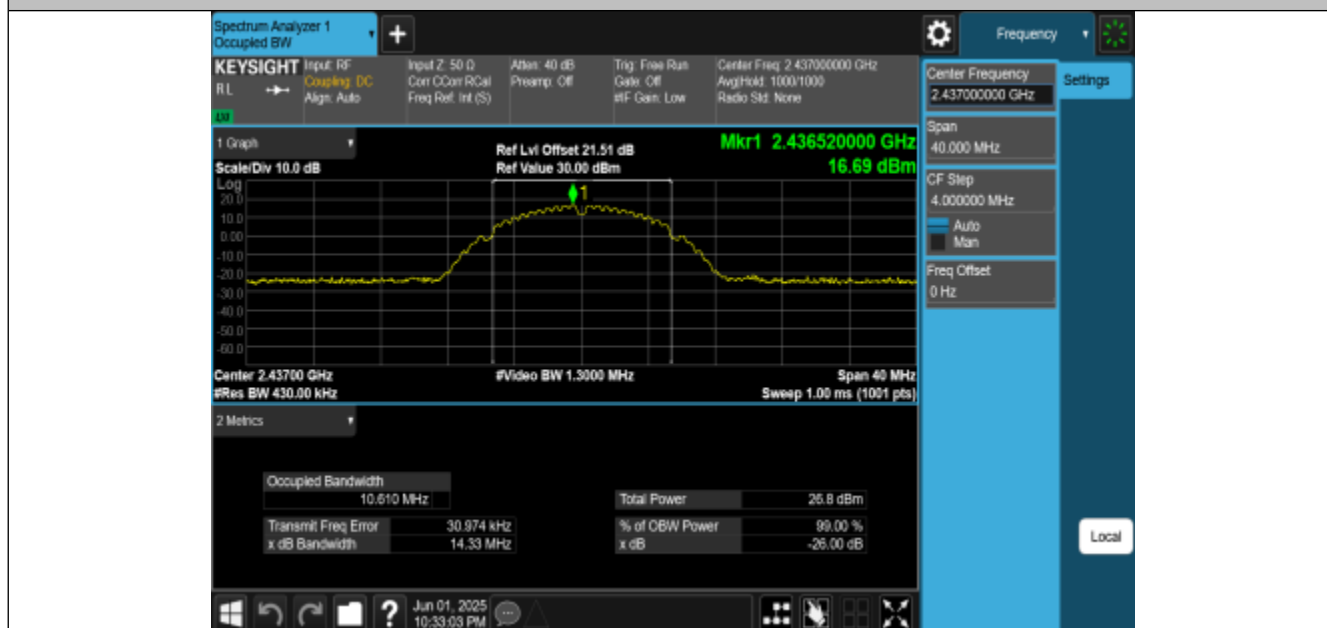
11B-CDD-Ant2-2412



11B-CDD-Ant3-2412



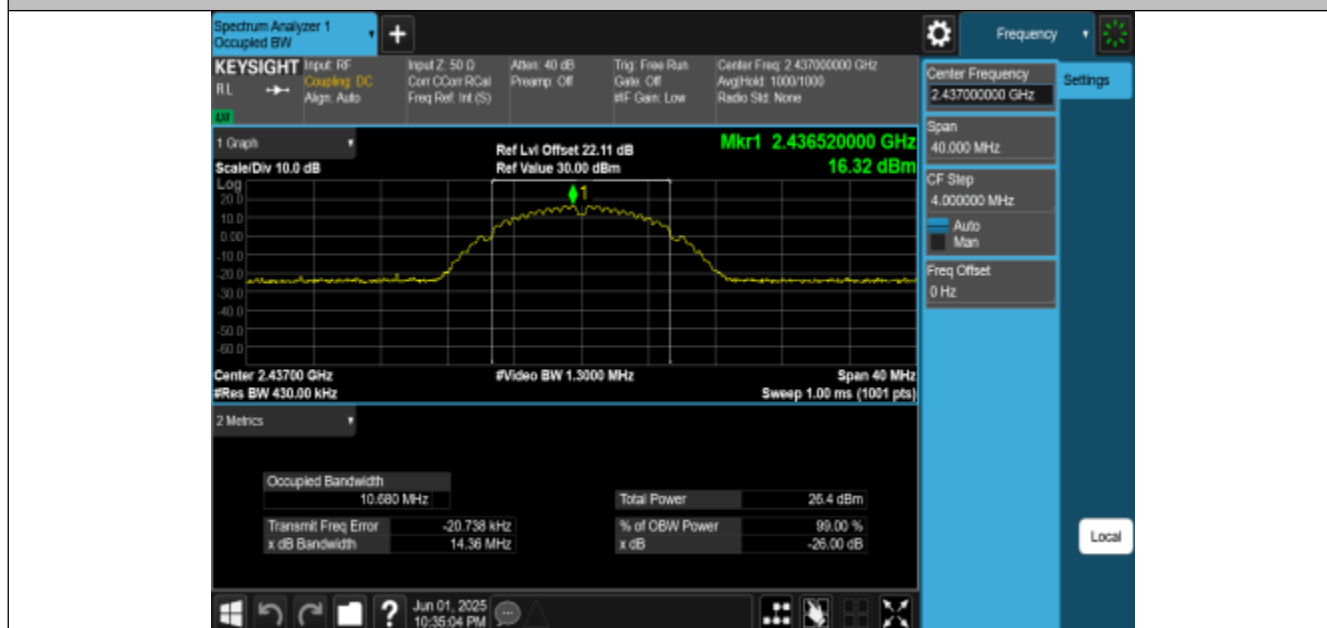
11B-CDD-Ant0-2437



11B-CDD-Ant1-2437



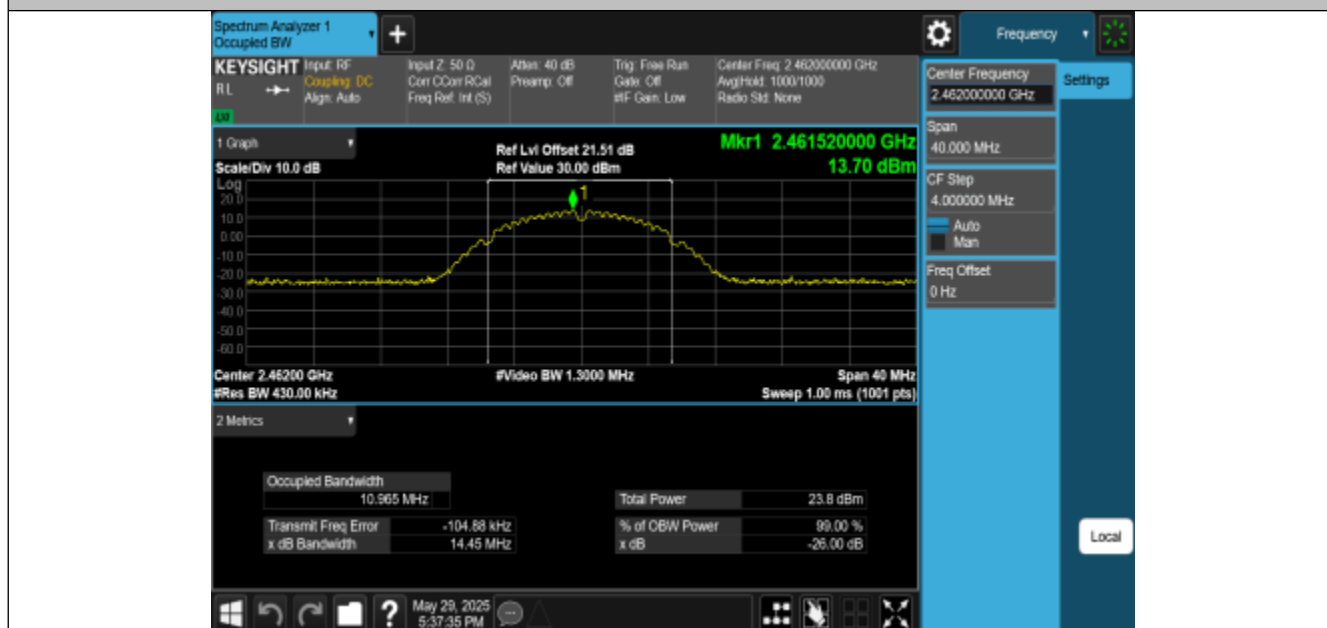
11B-CDD-Ant2-2437



11B-CDD-Ant3-2437



11B-CDD-Ant0-2462



11B-CDD-Ant1-2462



11B-CDD-Ant2-2462



11B-CDD-Ant3-2462



11G-CDD-Ant0-2412



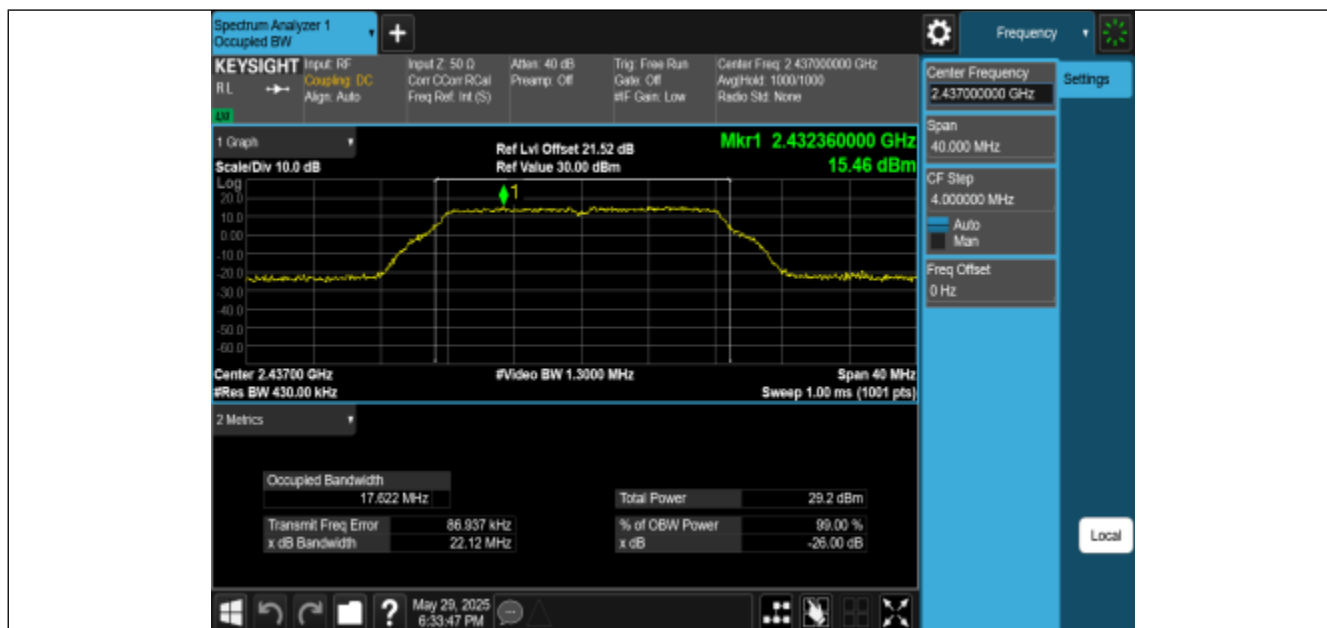
11G-CDD-Ant1-2412



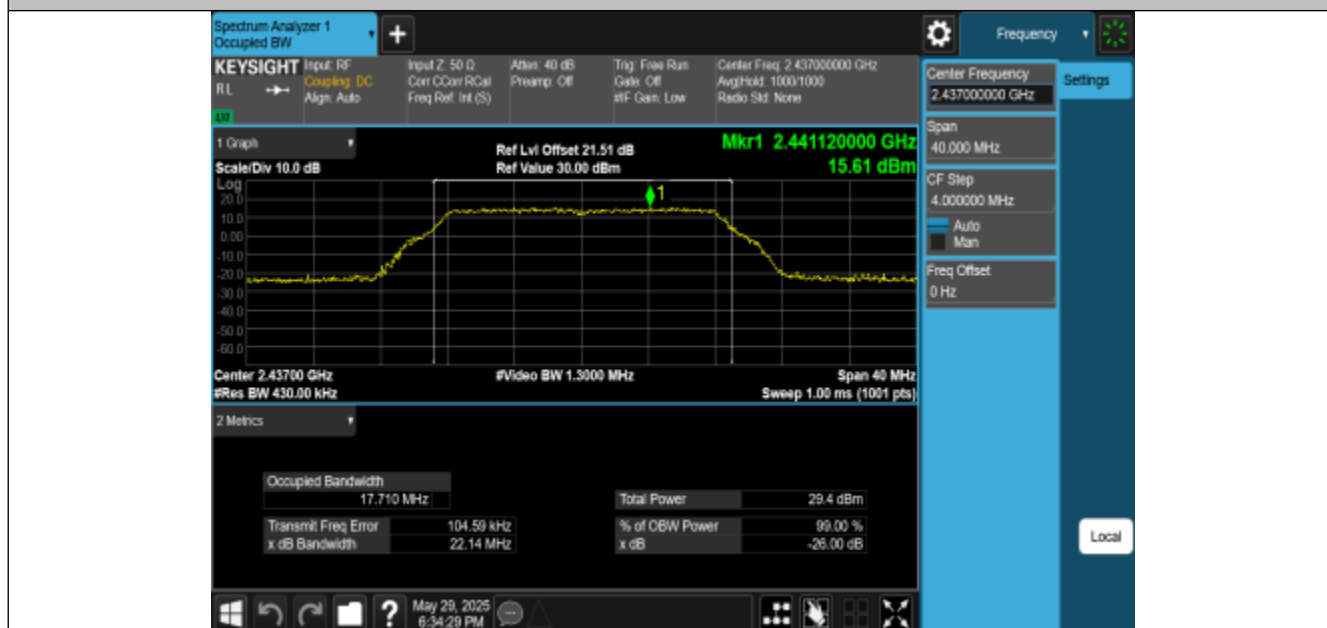
11G-CDD-Ant2-2412



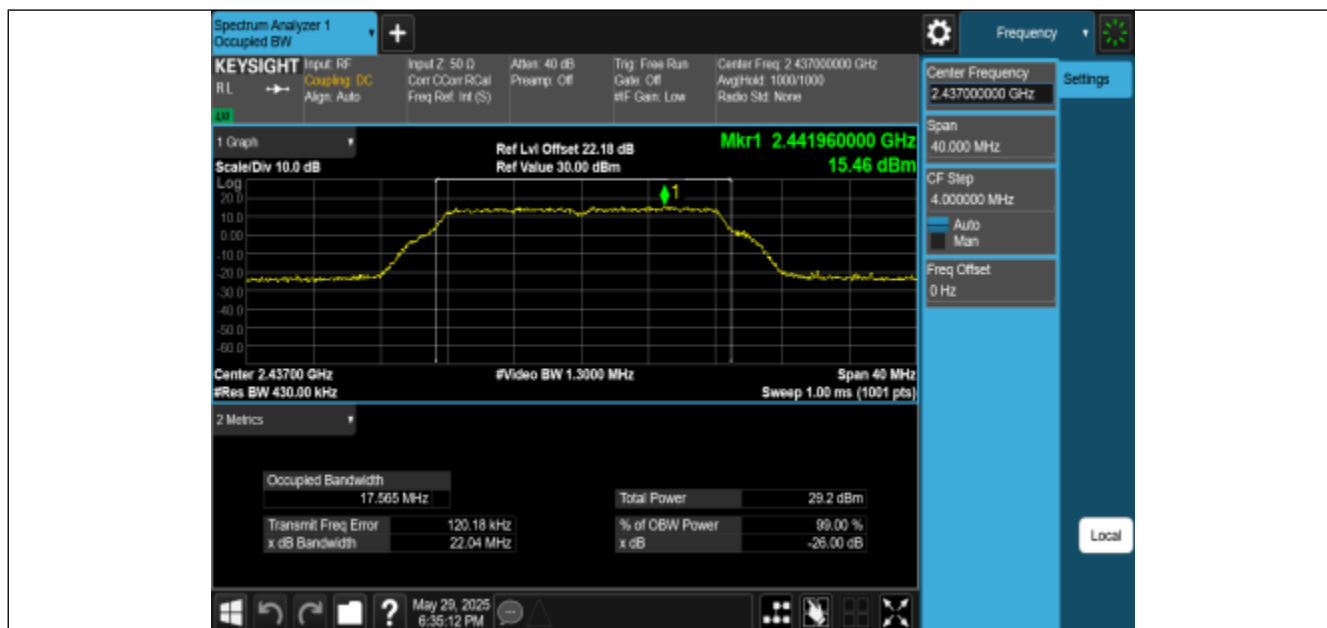
11G-CDD-Ant3-2412



11G-CDD-Ant0-2437



11G-CDD-Ant1-2437



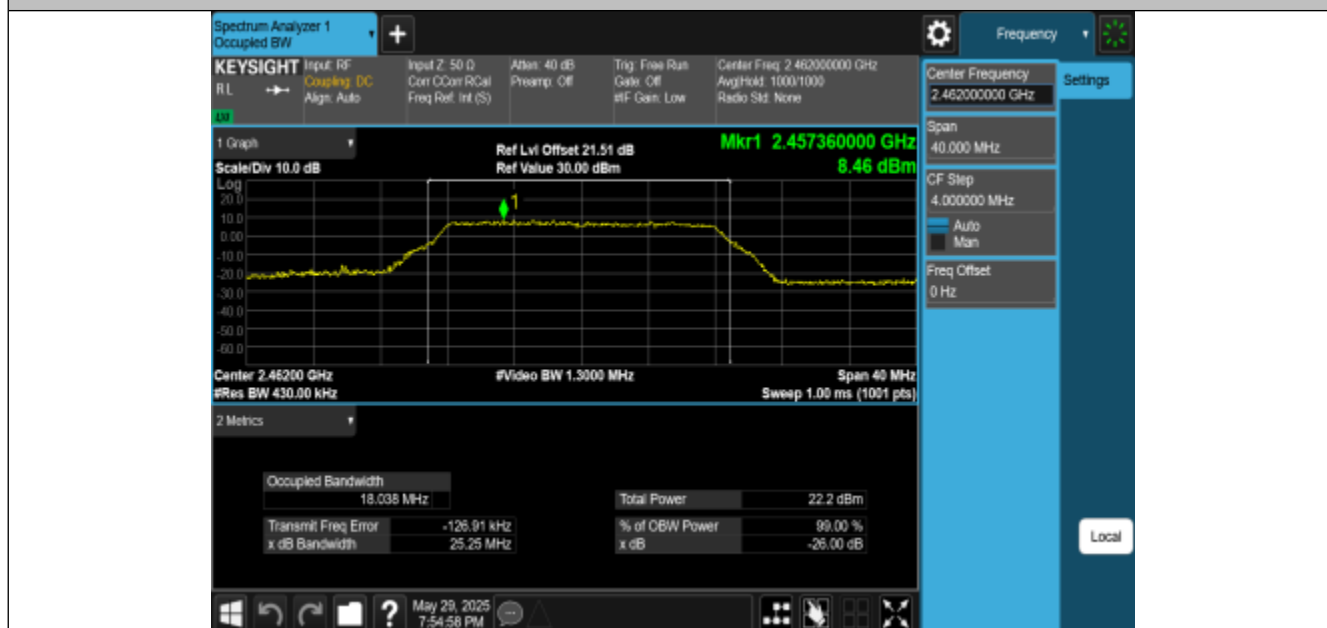
11G-CDD-Ant2-2437



11G-CDD-Ant3-2437



11G-CDD-Ant0-2462



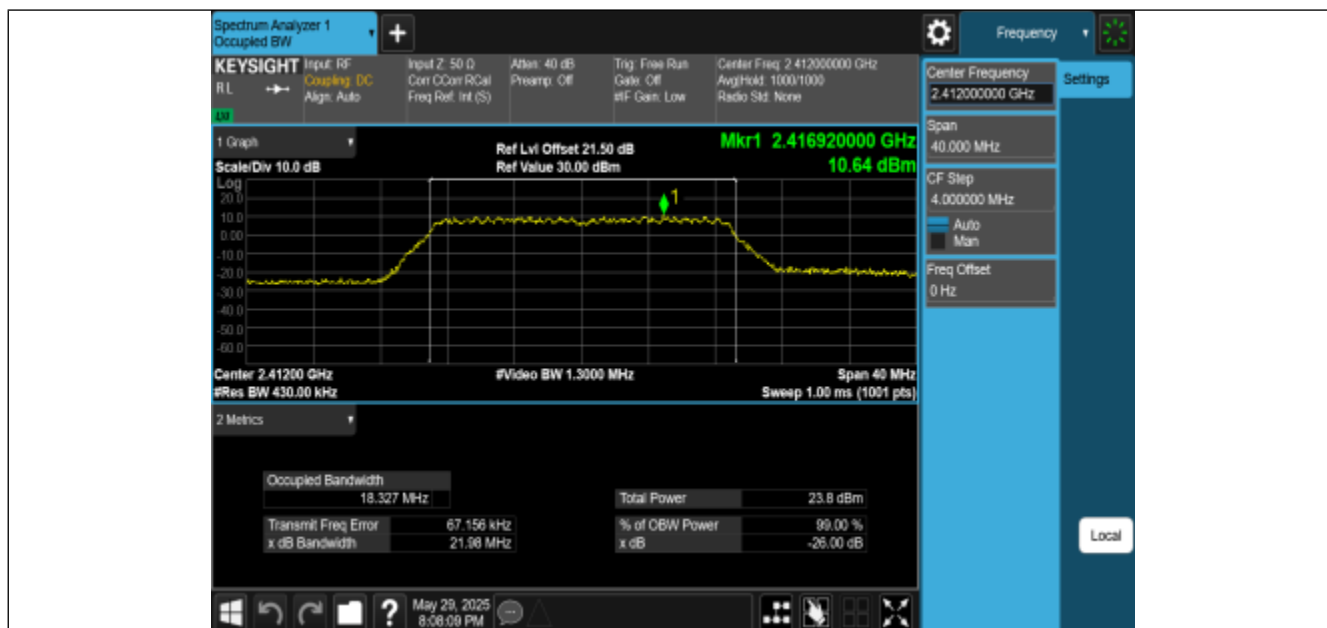
11G-CDD-Ant1-2462



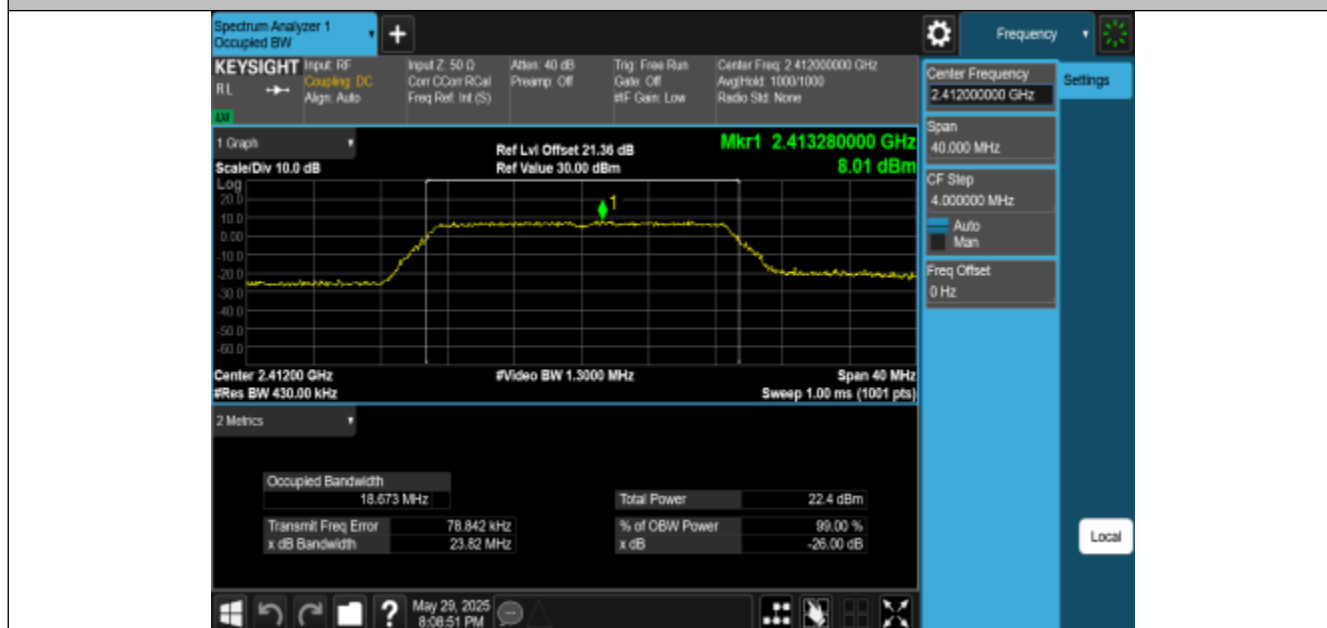
11G-CDD-Ant2-2462



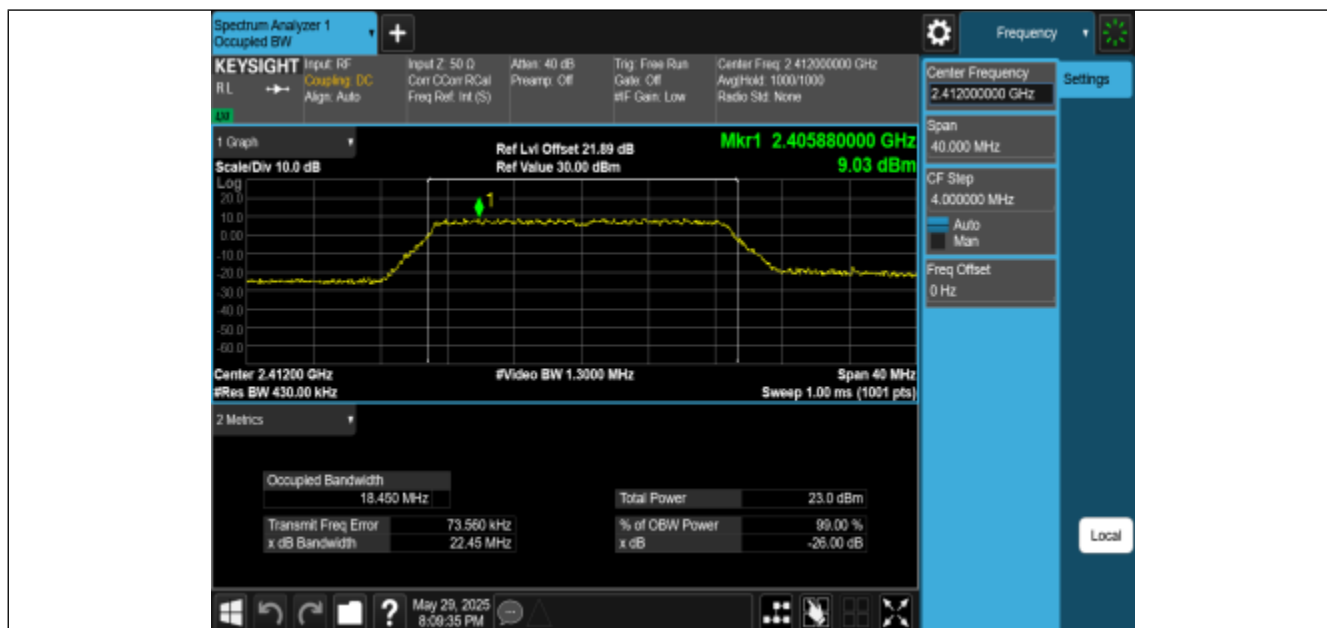
11G-CDD-Ant3-2462



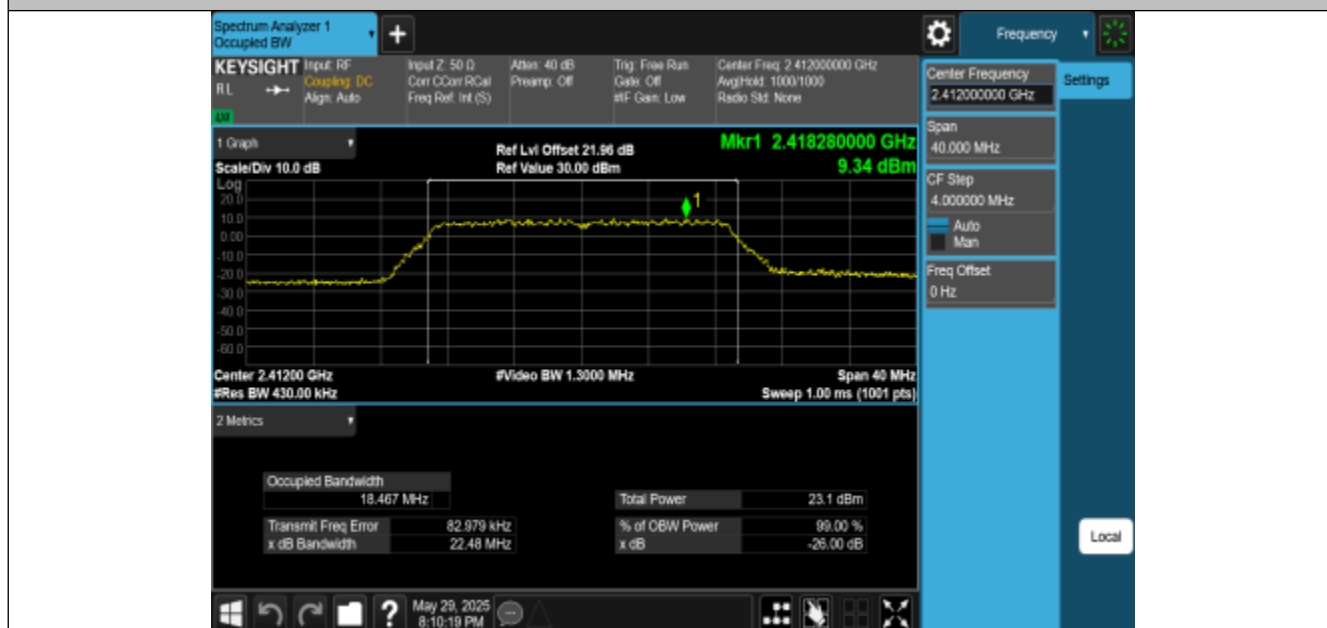
11N20MIMO-Ant0-2412



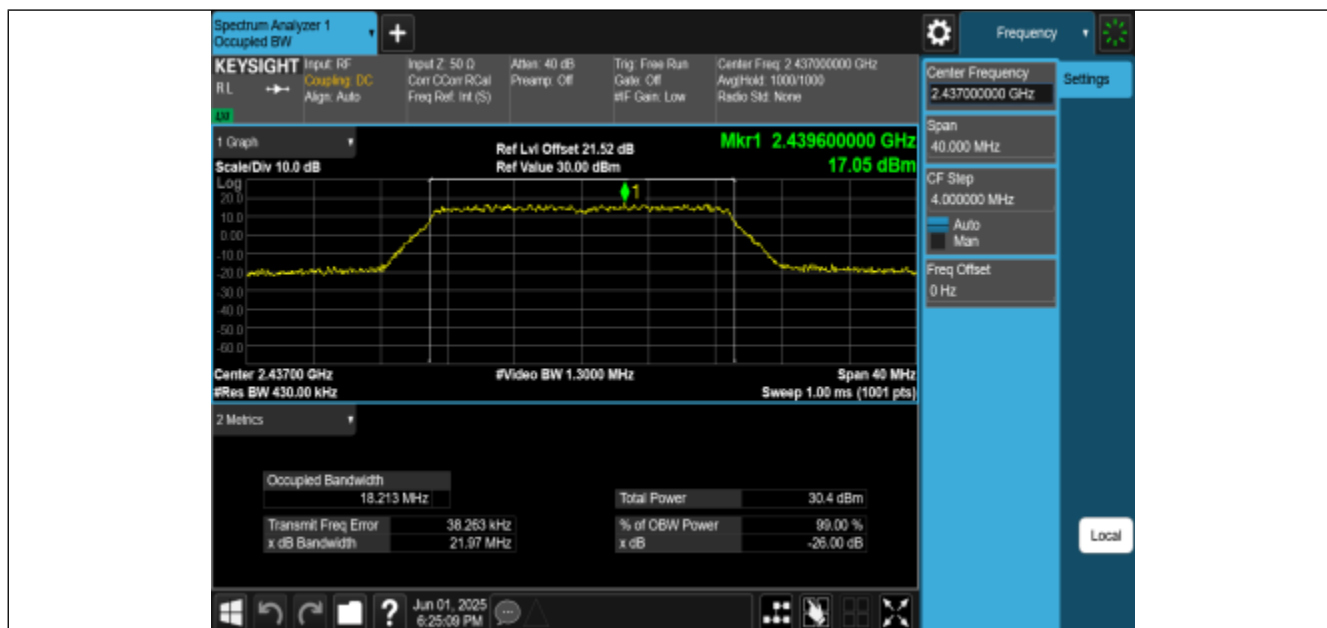
11N20MIMO-Ant1-2412



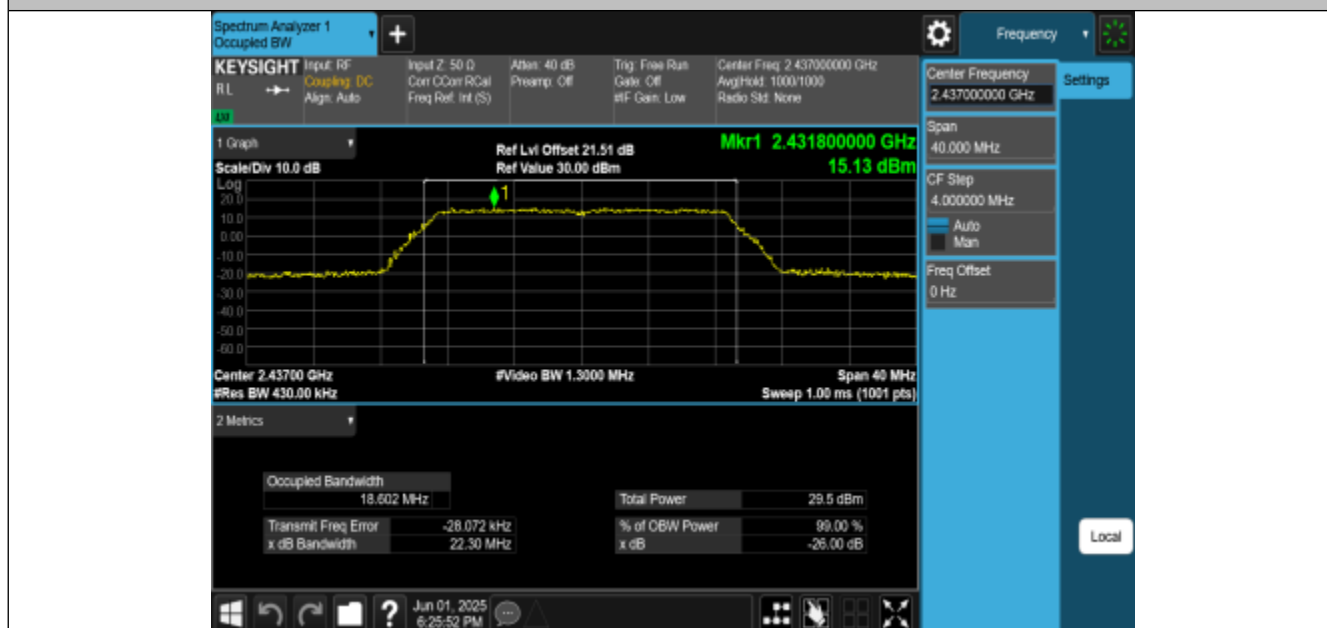
11N20MIMO-Ant2-2412



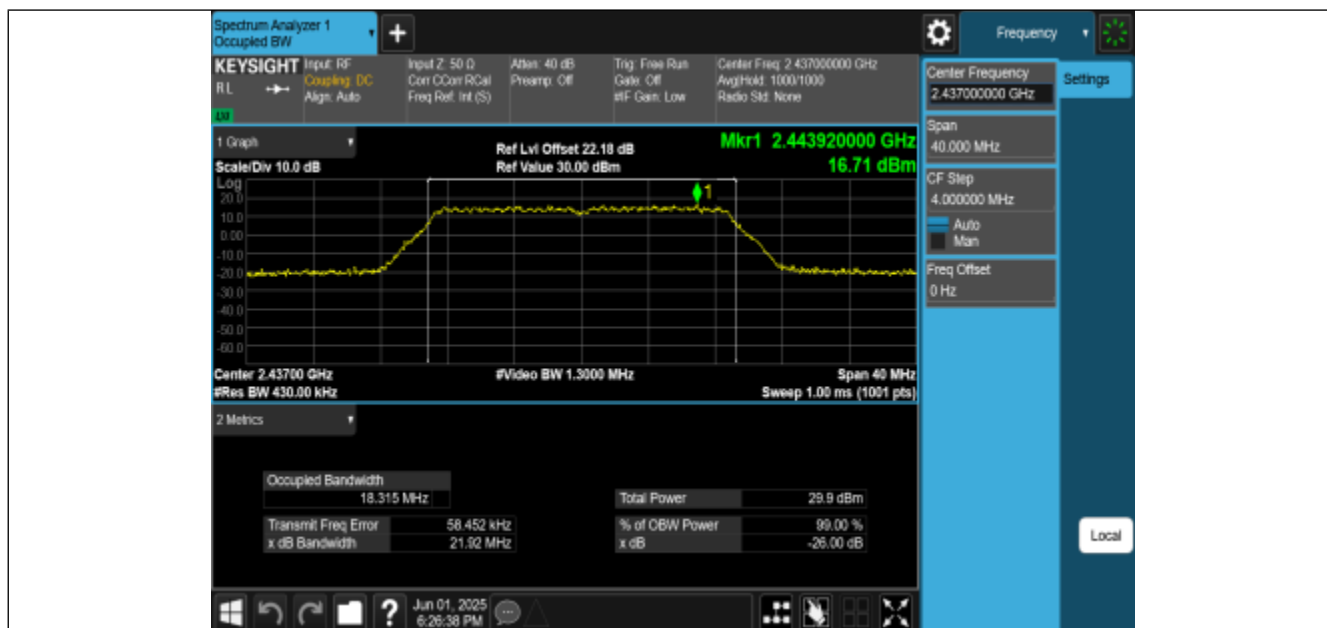
11N20MIMO-Ant3-2412



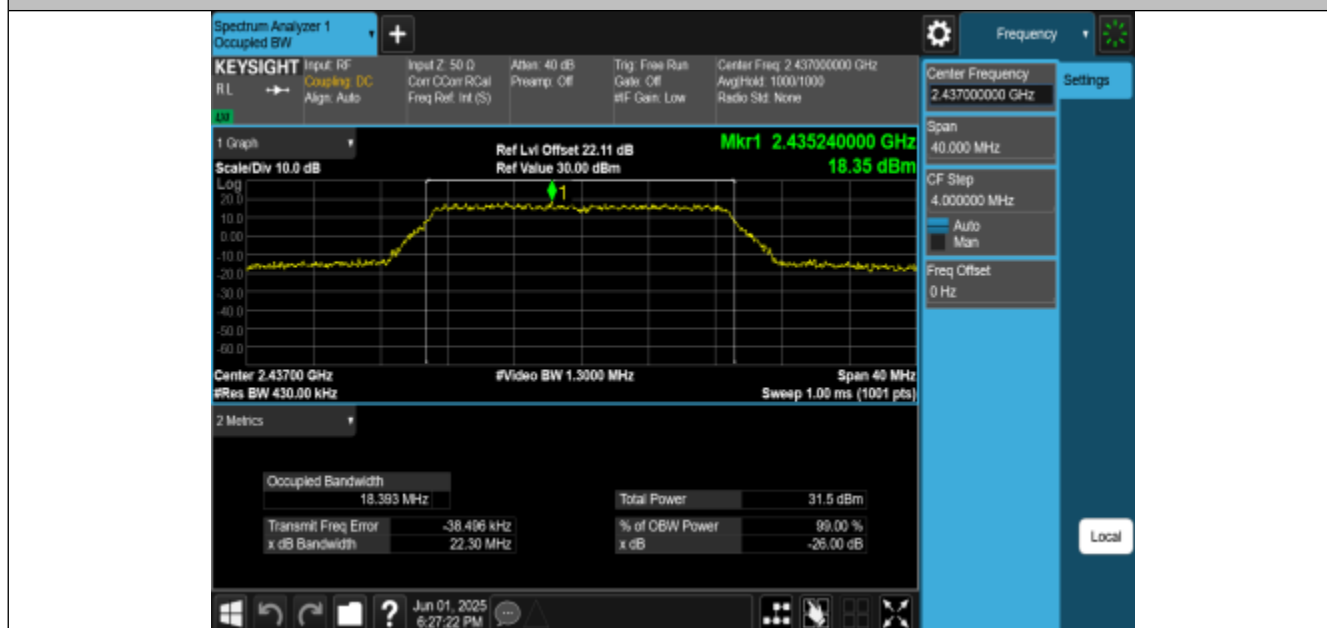
11N20MIMO-Ant0-2437



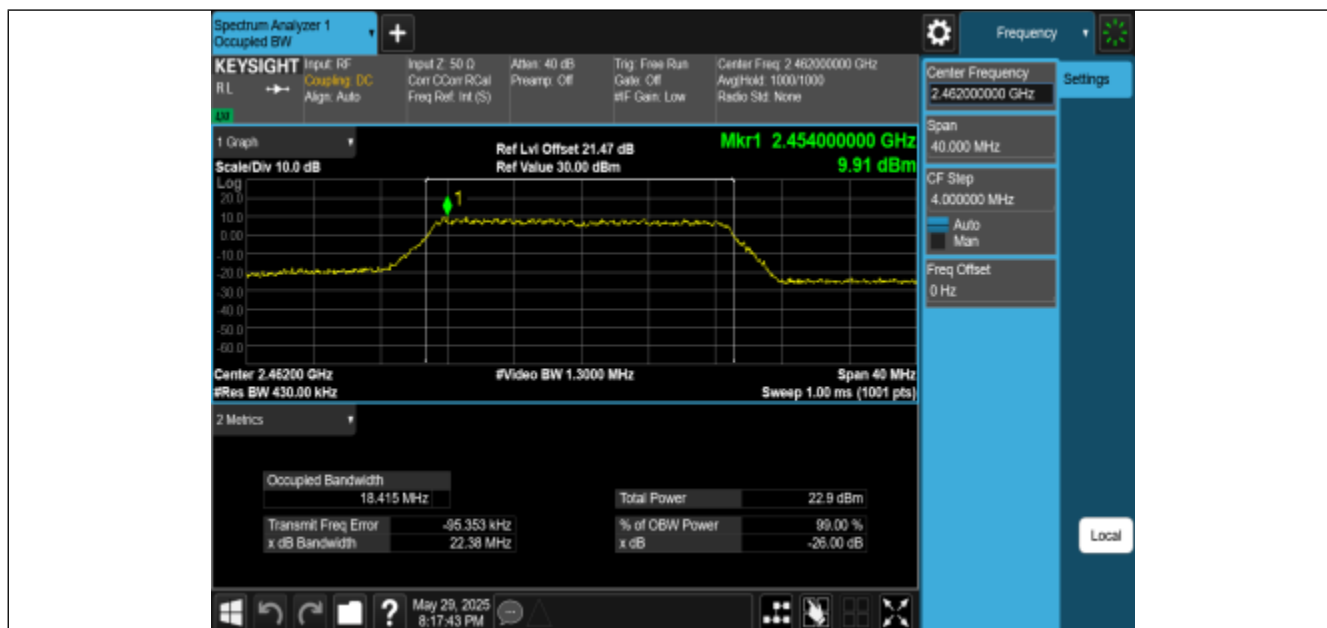
11N20MIMO-Ant1-2437



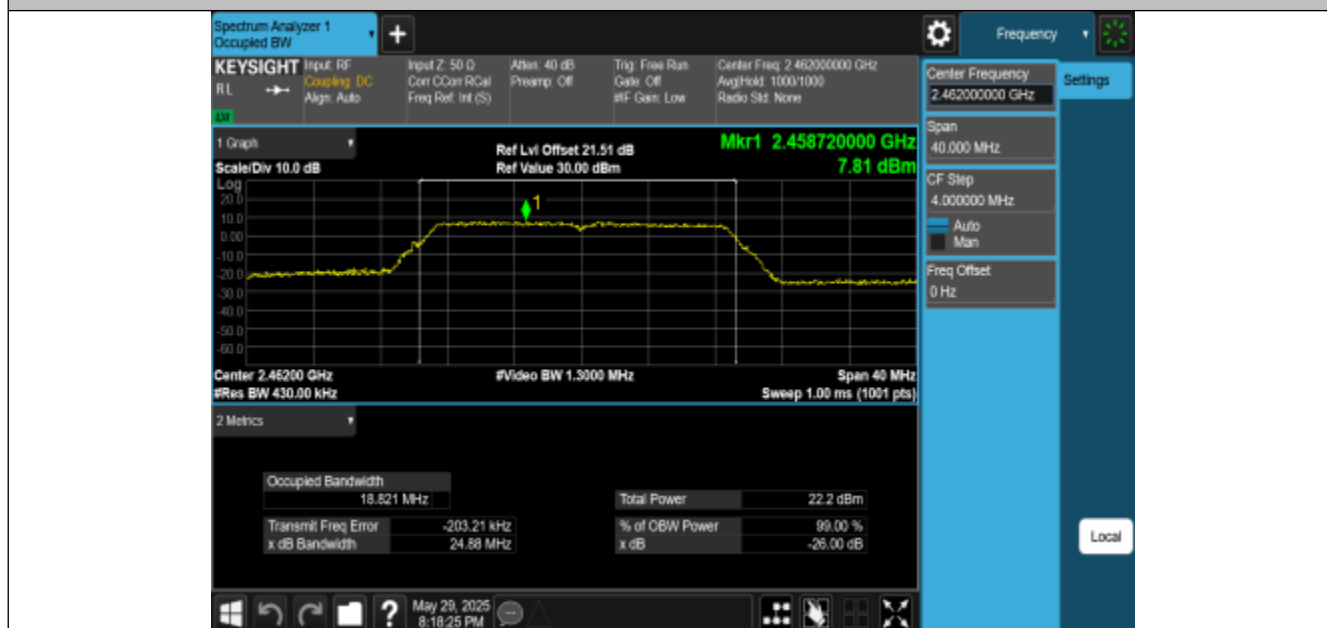
11N20MIMO-Ant2-2437



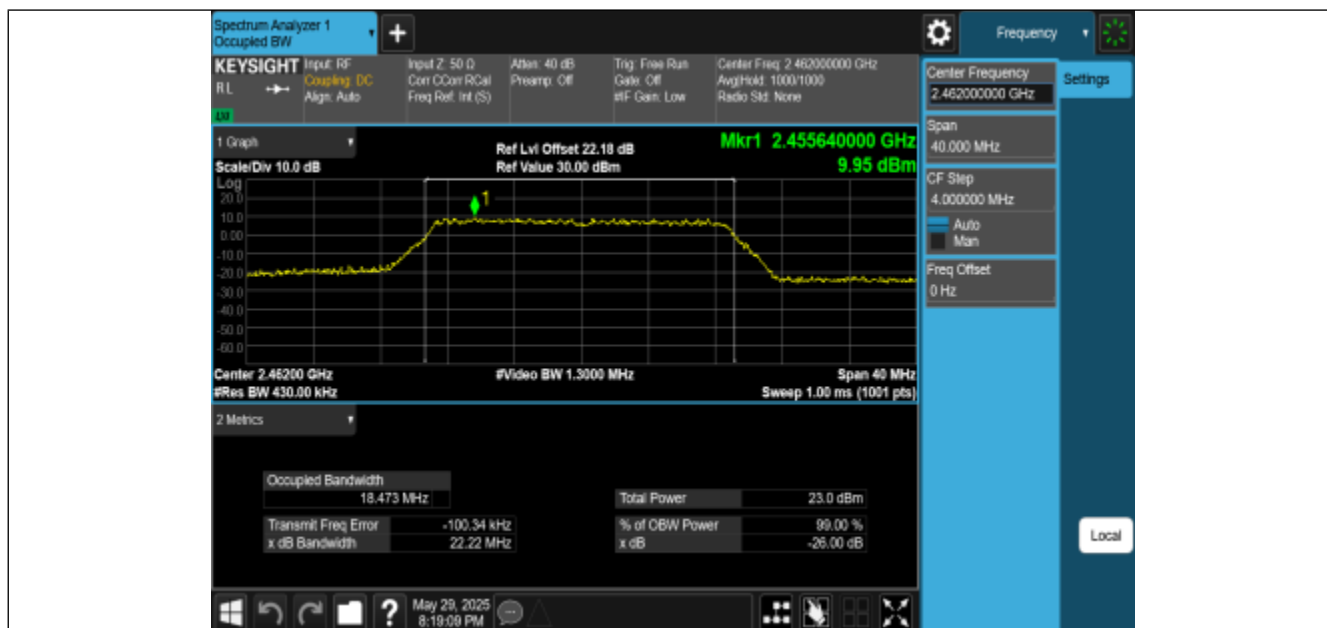
11N20MIMO-Ant3-2437



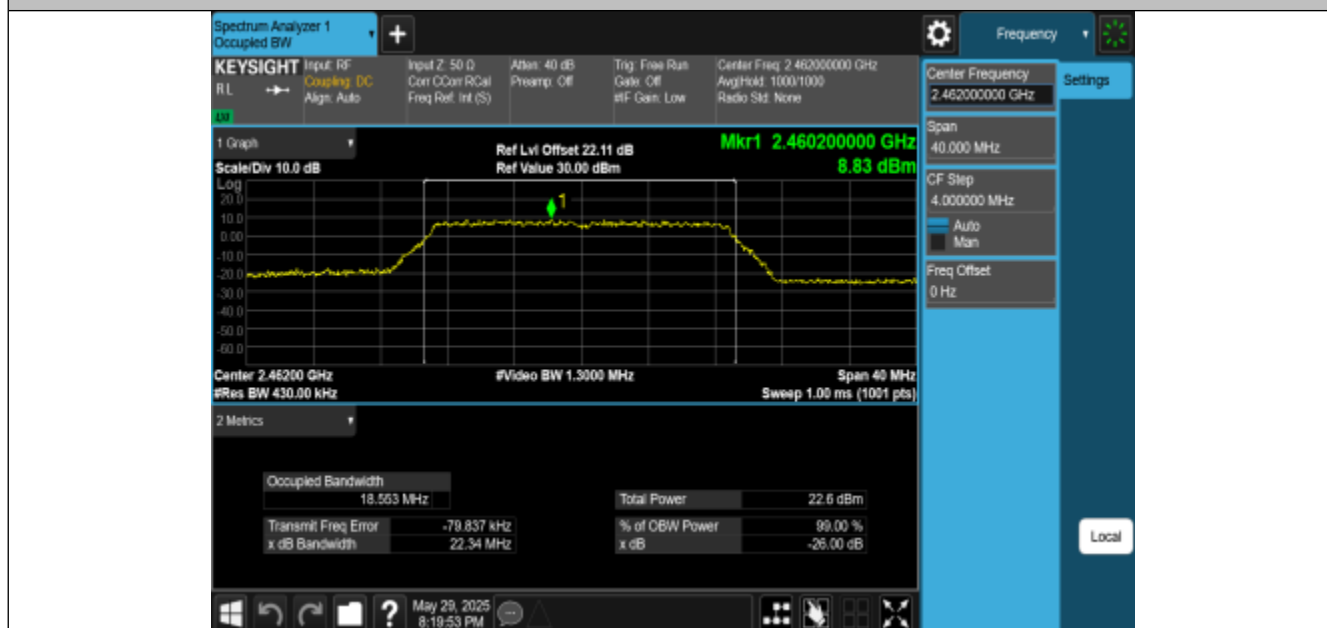
11N20MIMO-Ant0-2462



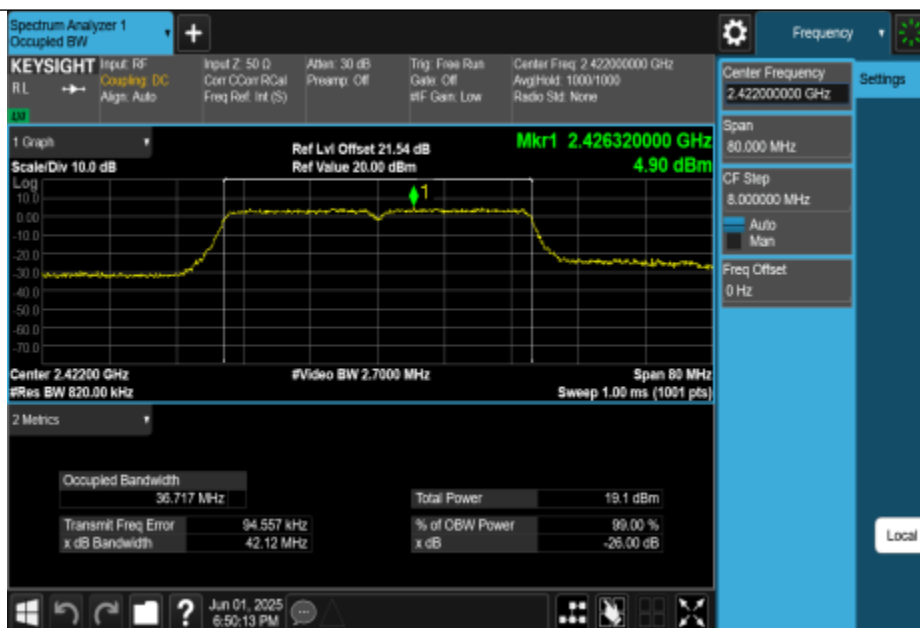
11N20MIMO-Ant1-2462



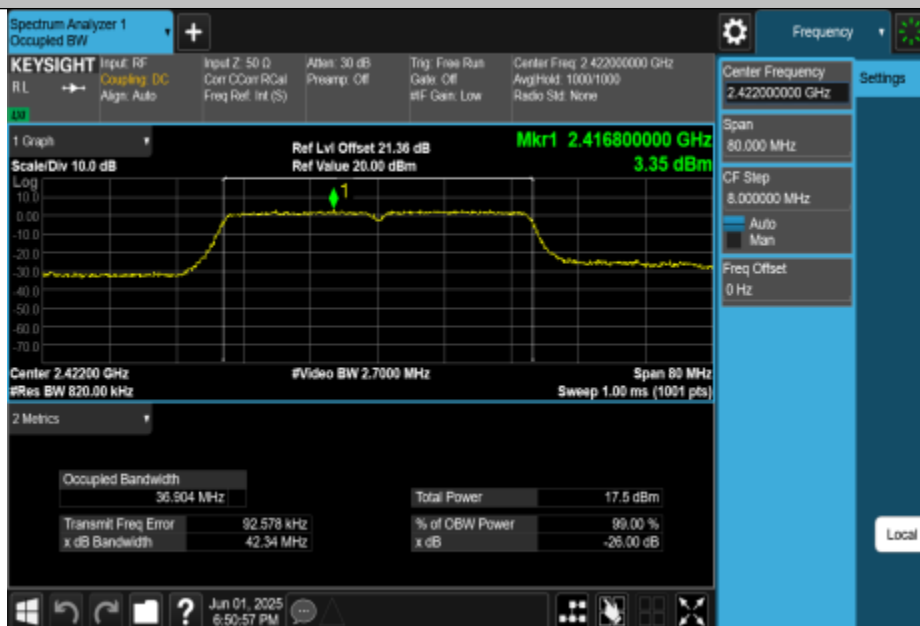
11N20MIMO-Ant2-2462



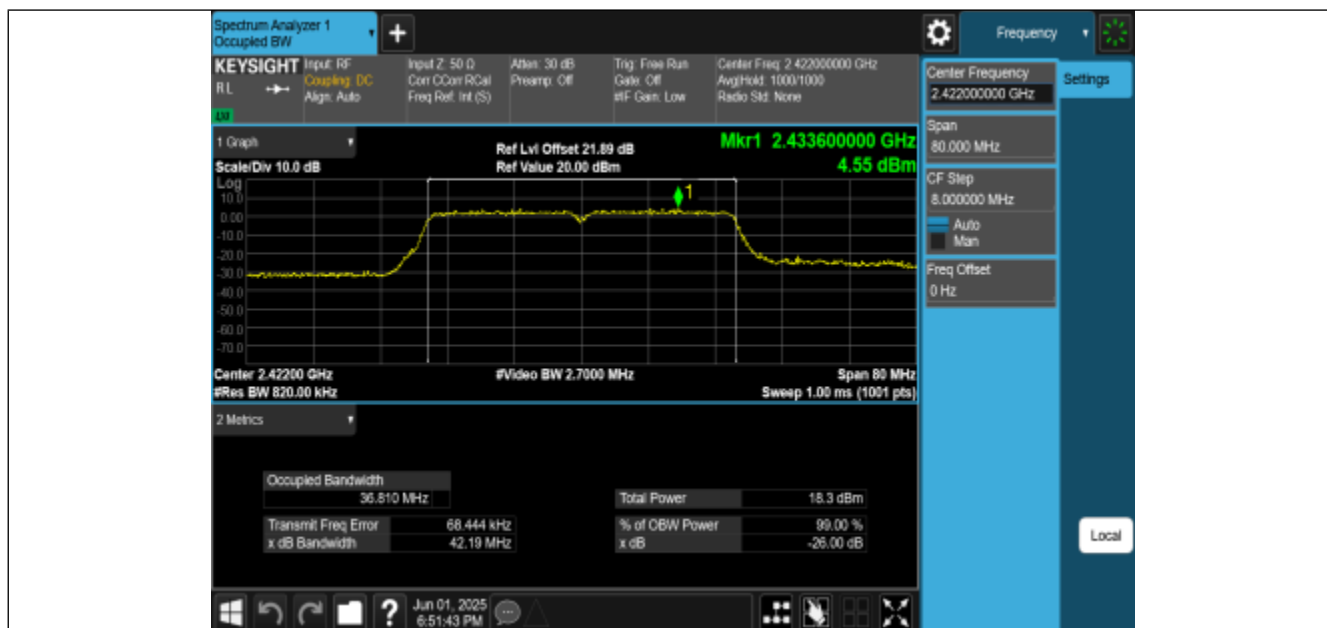
11N20MIMO-Ant3-2462



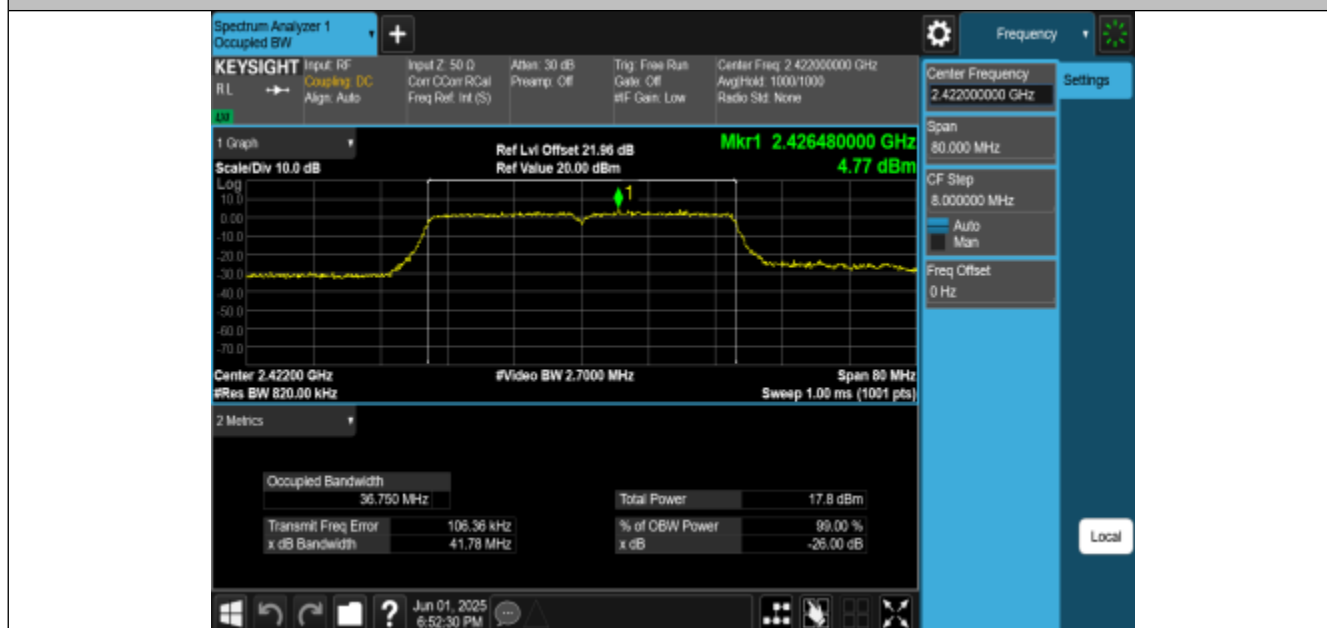
11N40MIMO-Ant0-2422



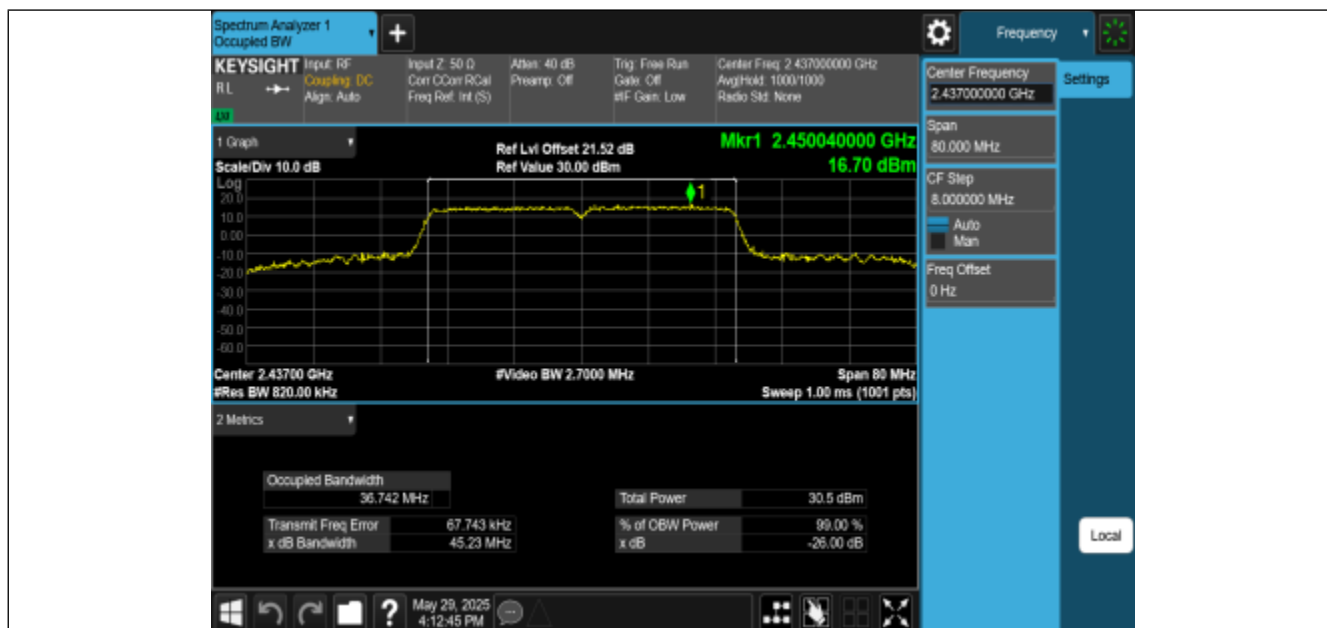
11N40MIMO-Ant1-2422



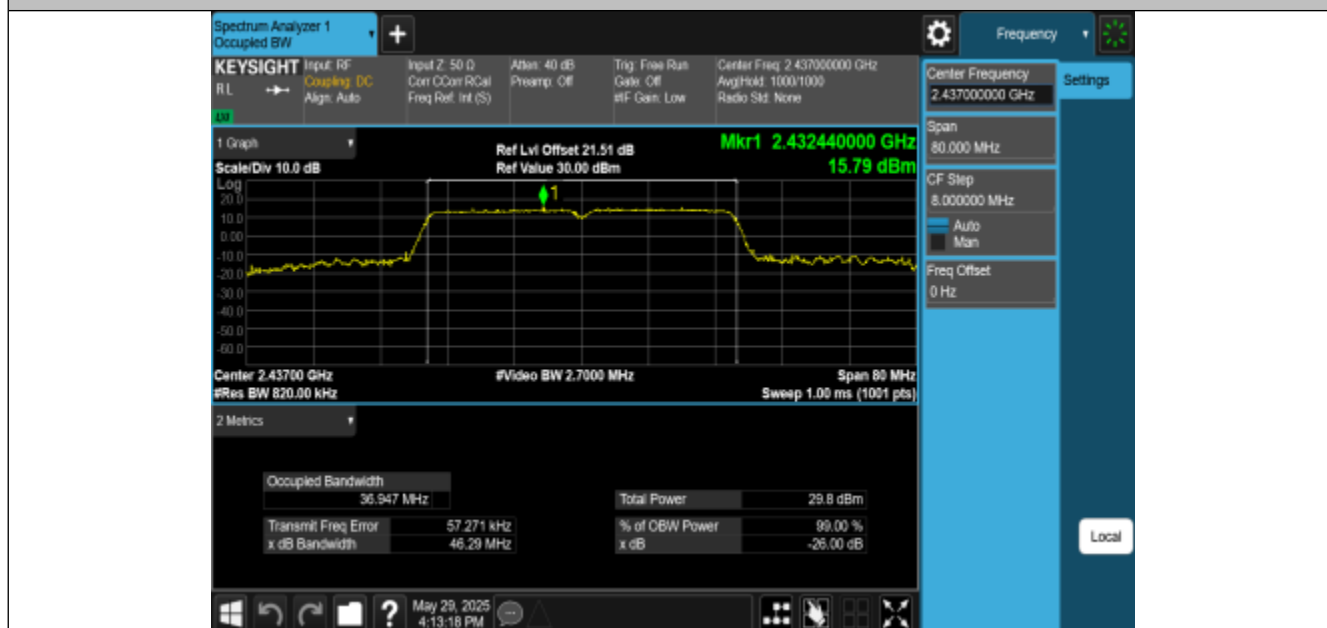
11N40MIMO-Ant2-2422



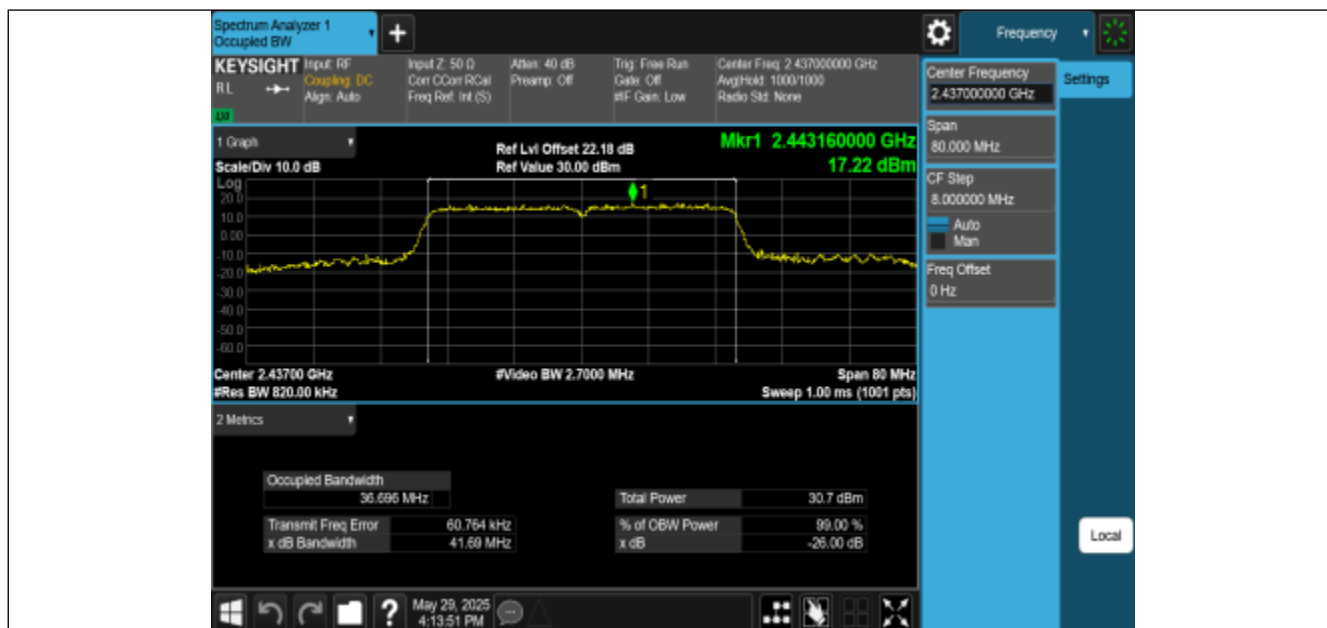
11N40MIMO-Ant3-2422



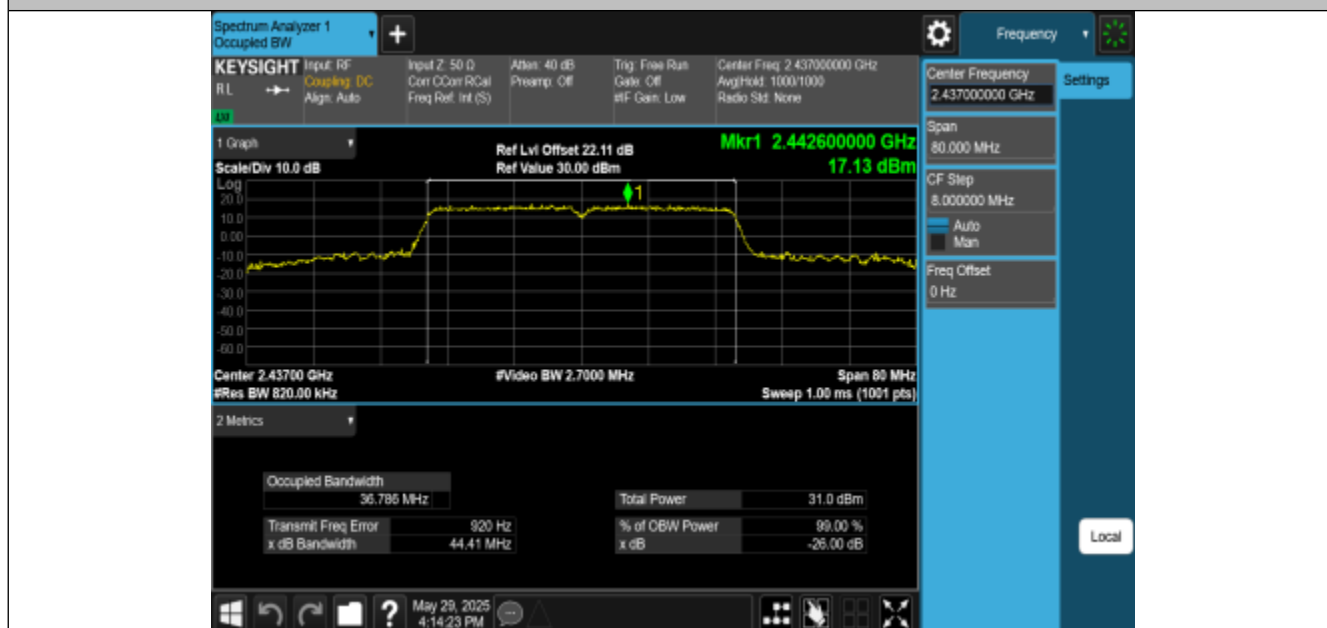
11N40MIMO-Ant0-2437



11N40MIMO-Ant1-2437



11N40MIMO-Ant2-2437



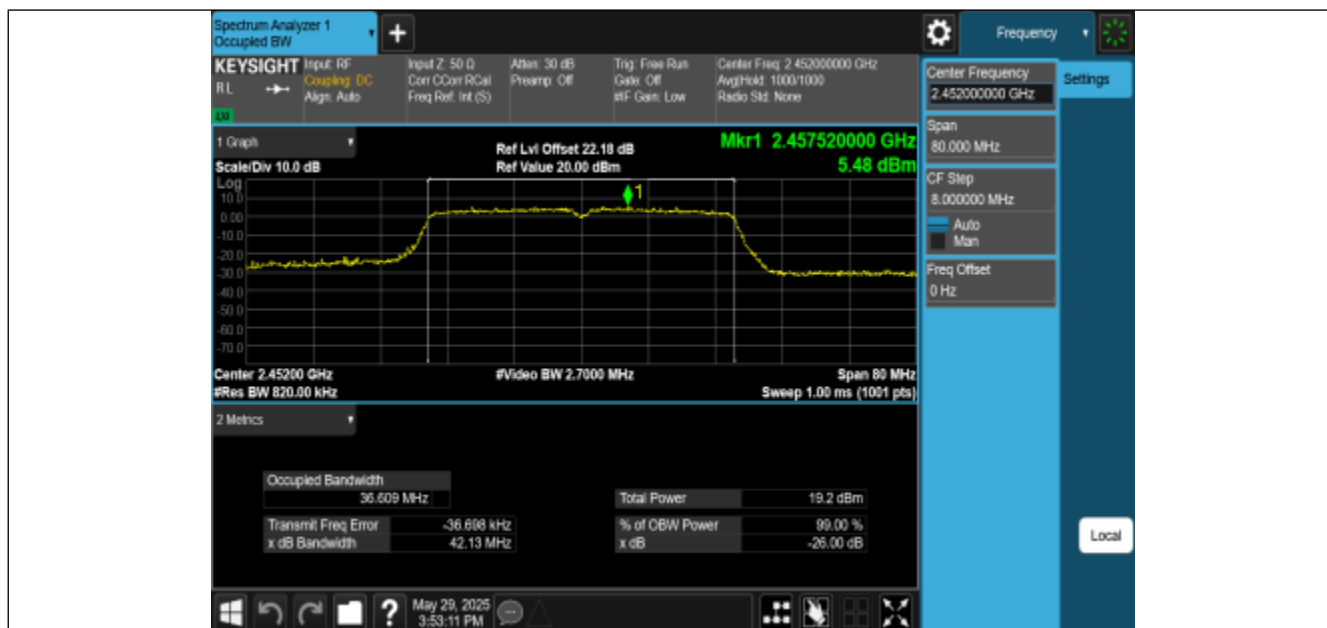
11N40MIMO-Ant3-2437



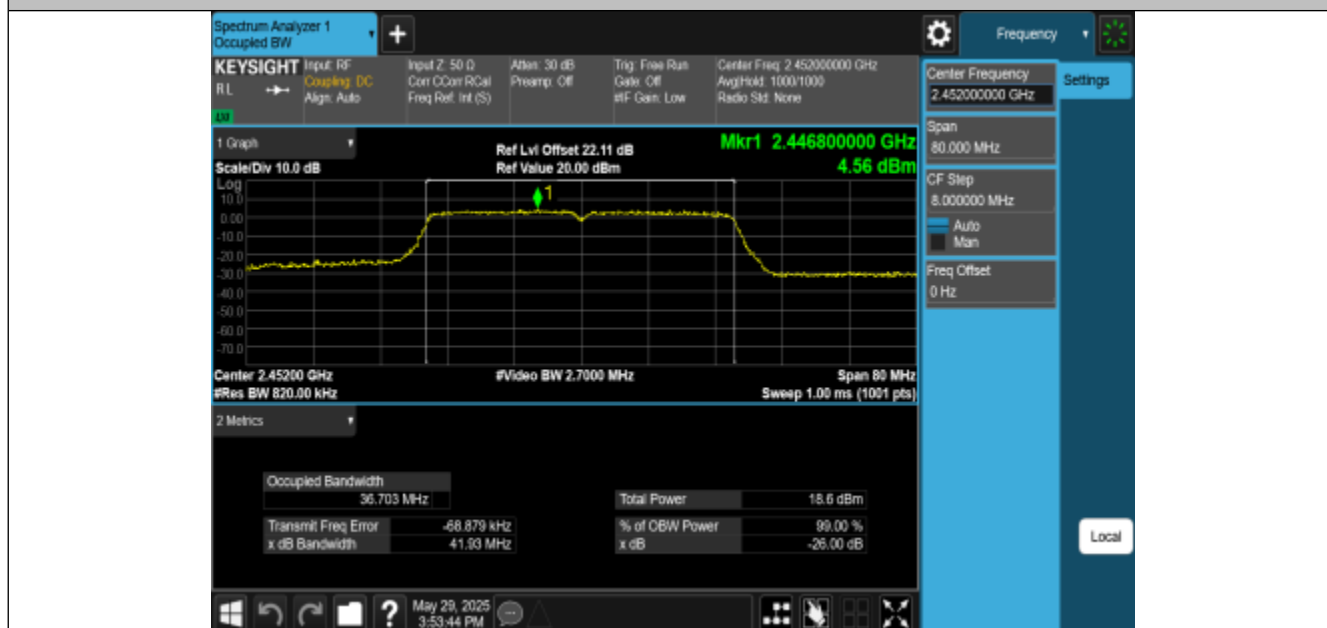
11N40MIMO-Ant0-2452



11N40MIMO-Ant1-2452



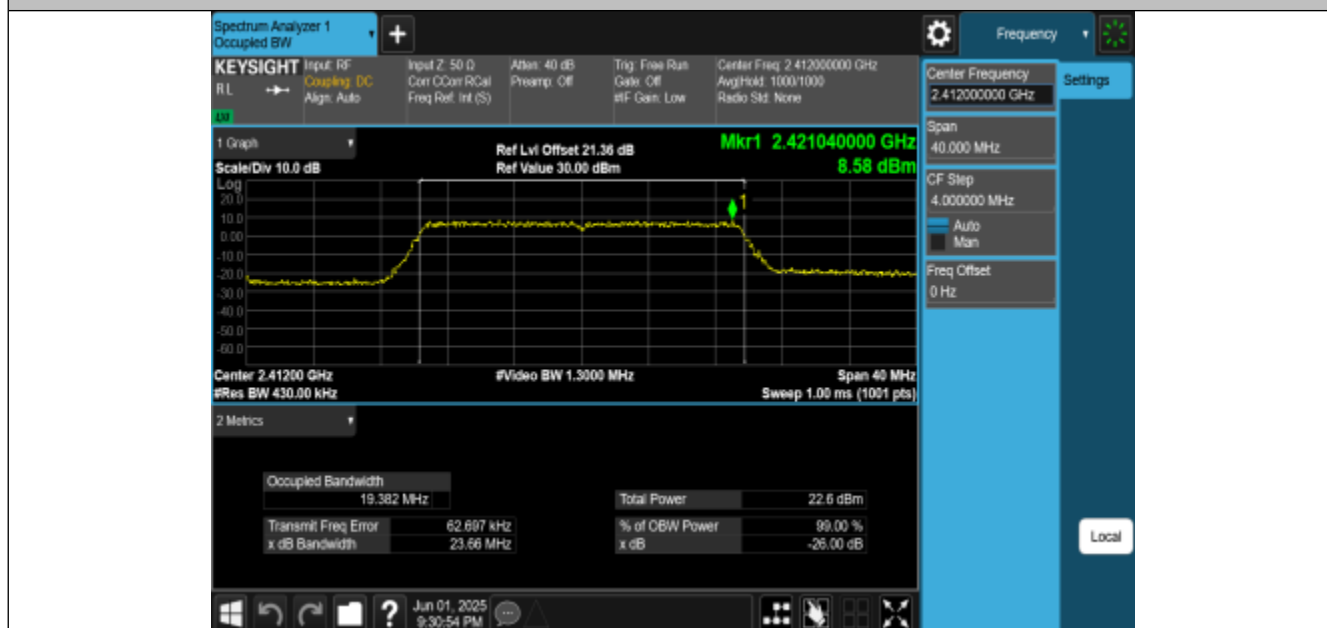
11N40MIMO-Ant2-2452



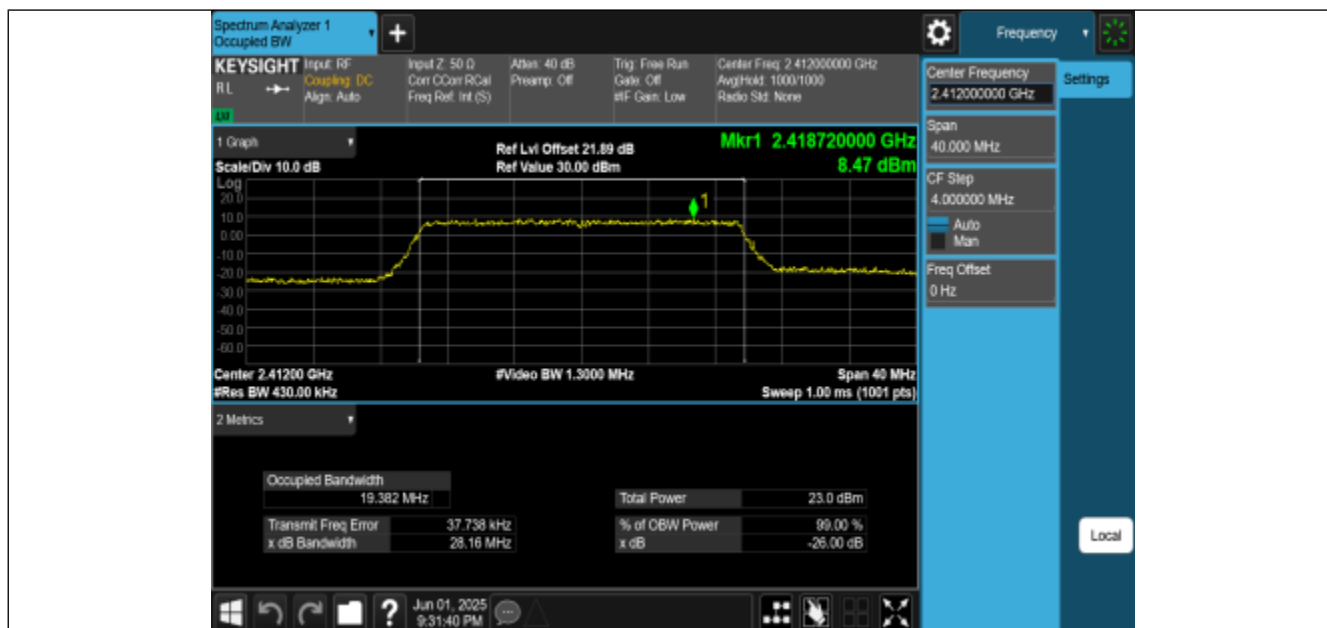
11N40MIMO-Ant3-2452



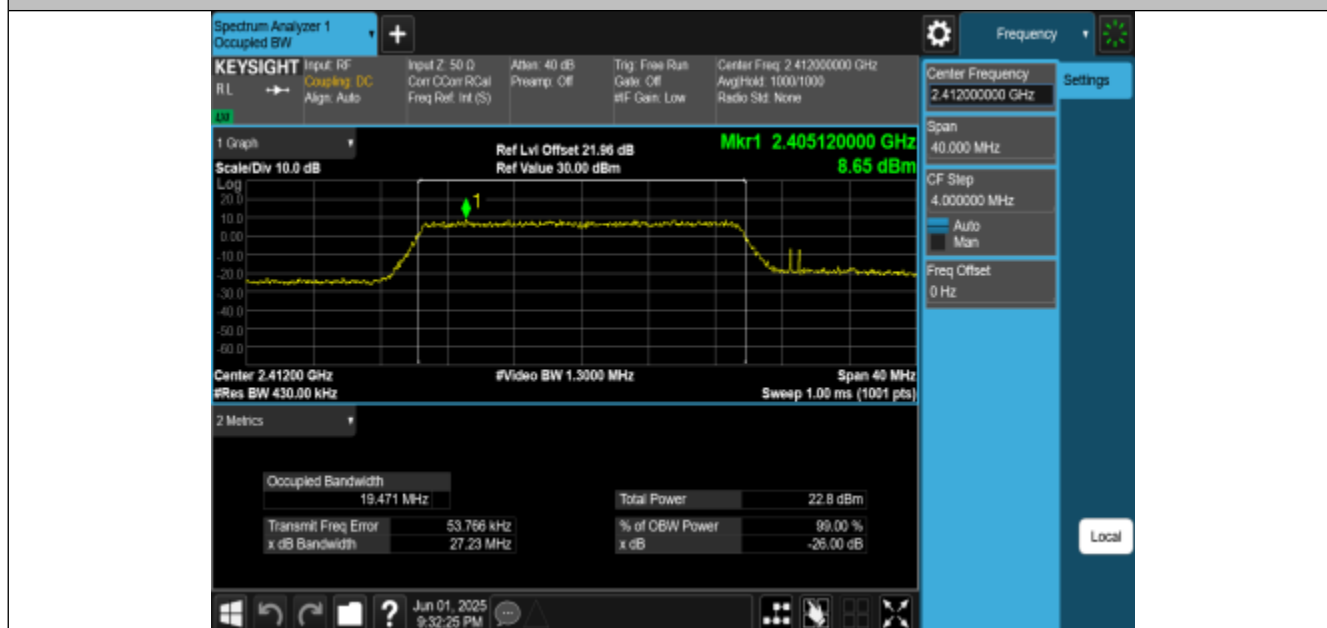
11AX20MIMO-Ant0-2412



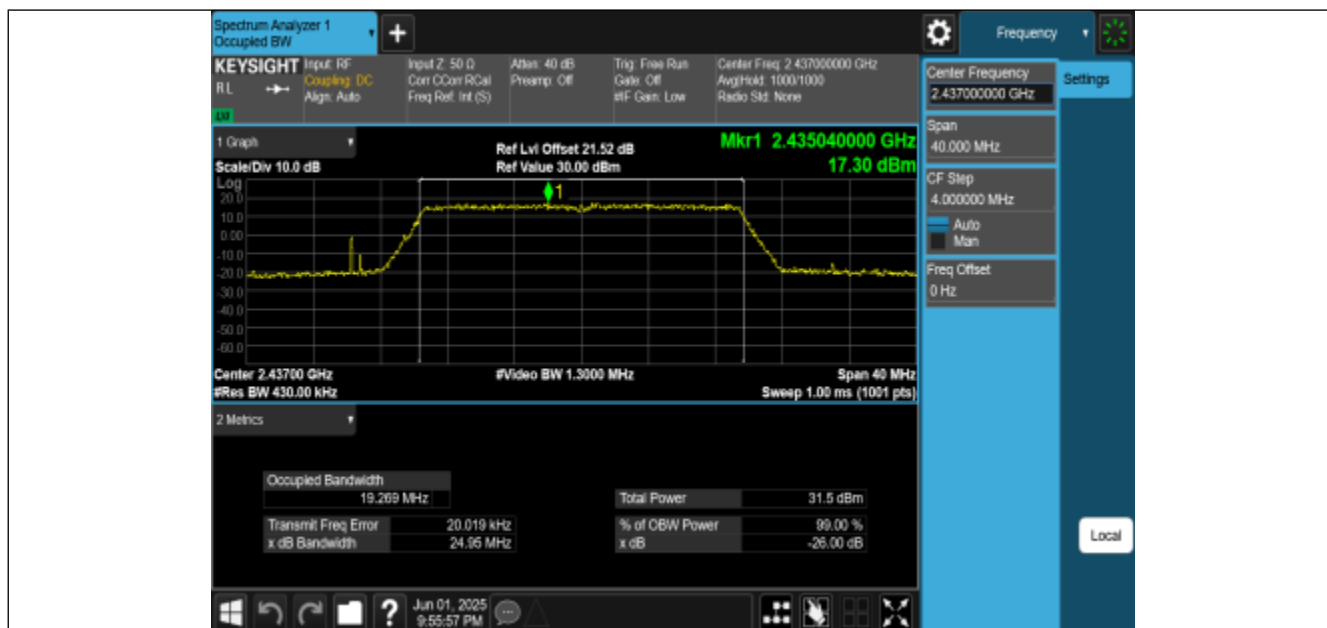
11AX20MIMO-Ant1-2412



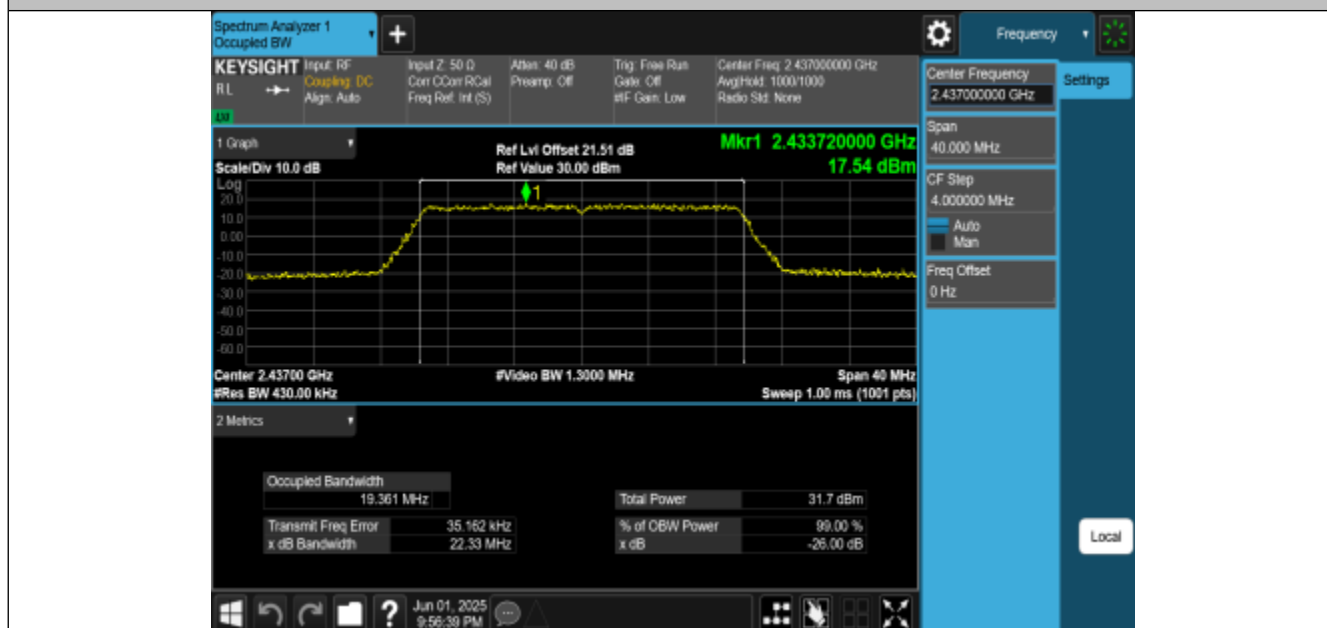
11AX20MIMO-Ant2-2412



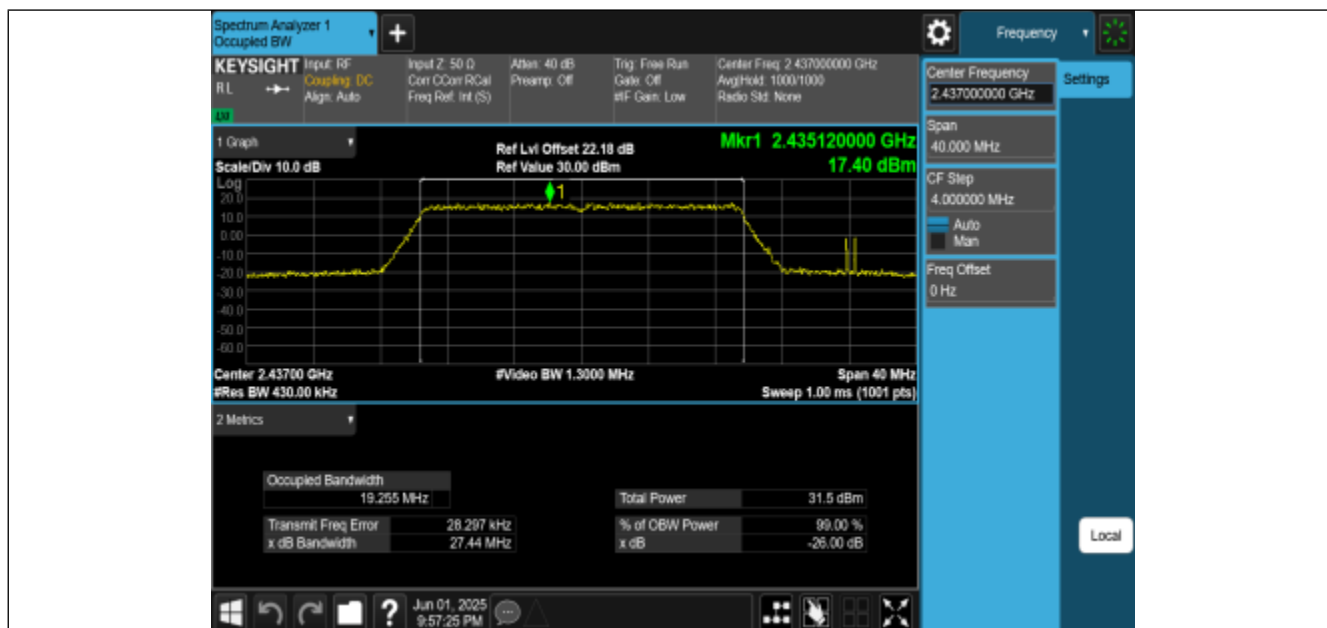
11AX20MIMO-Ant3-2412



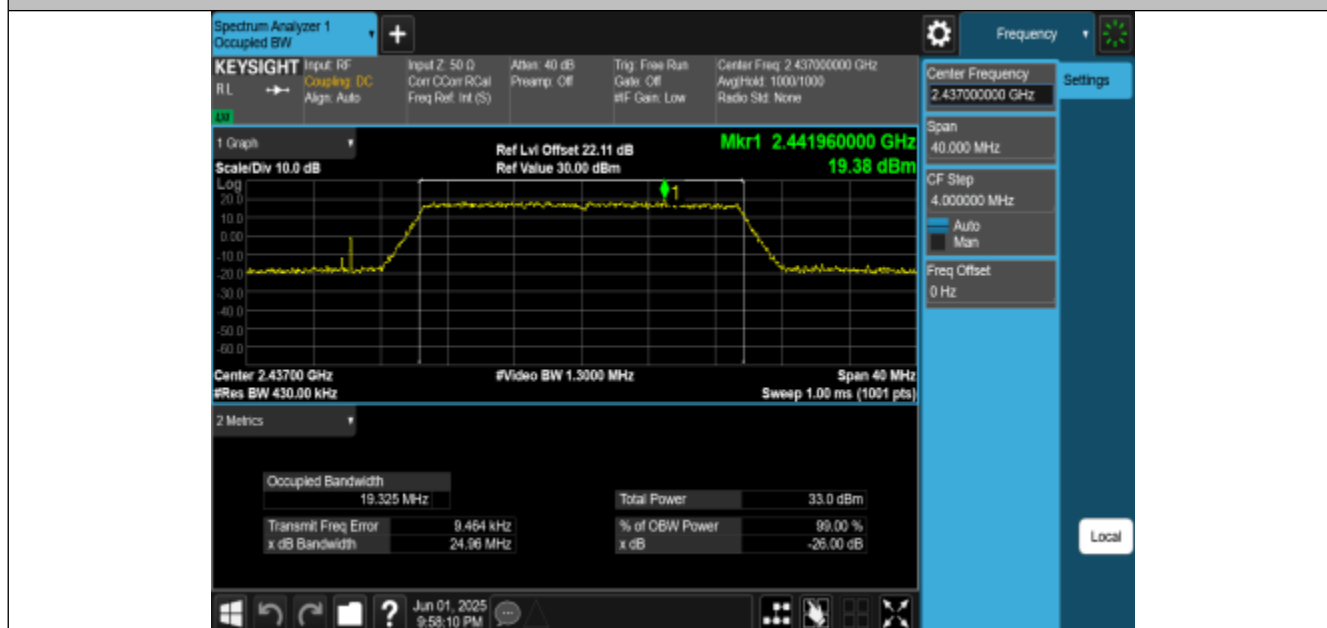
11AX20MIMO-Ant0-2437



11AX20MIMO-Ant1-2437



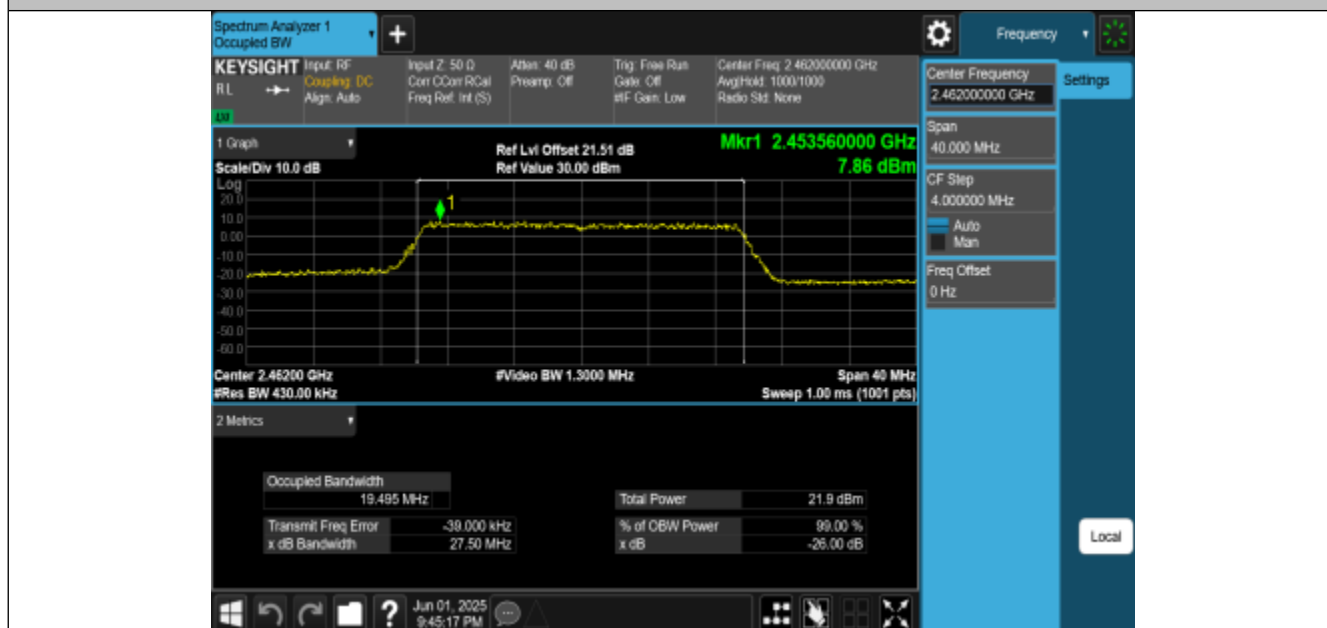
11AX20MIMO-Ant2-2437



11AX20MIMO-Ant3-2437



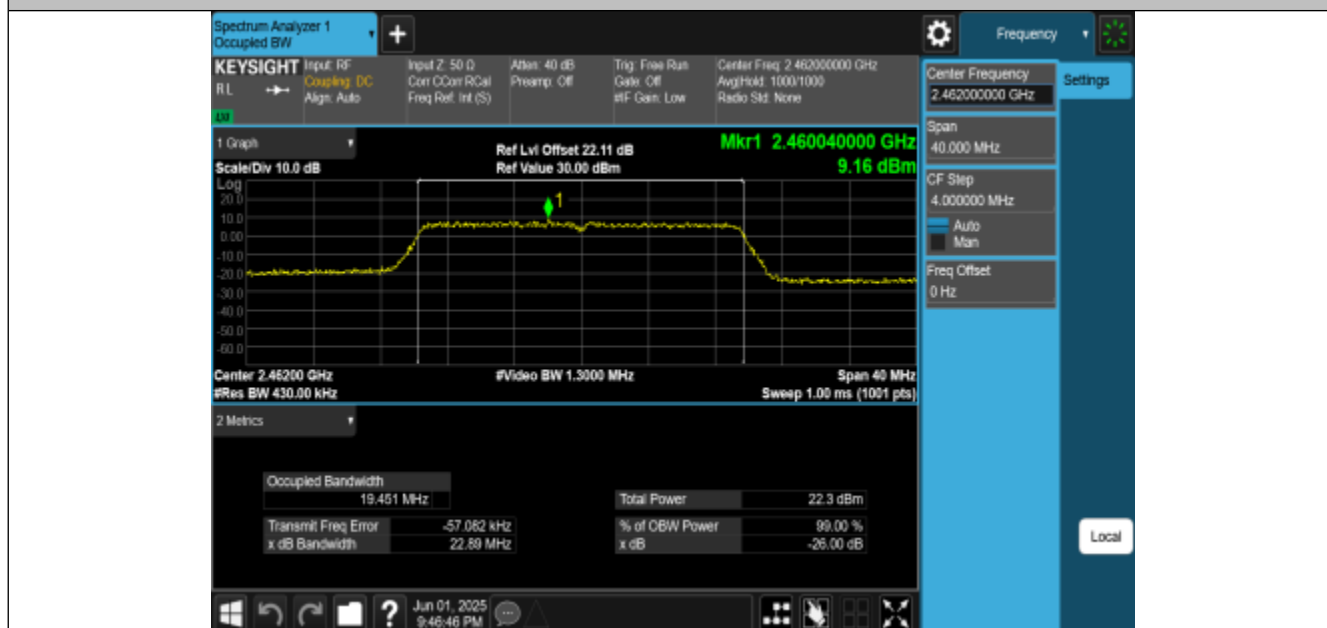
11AX20MIMO-Ant0-2462



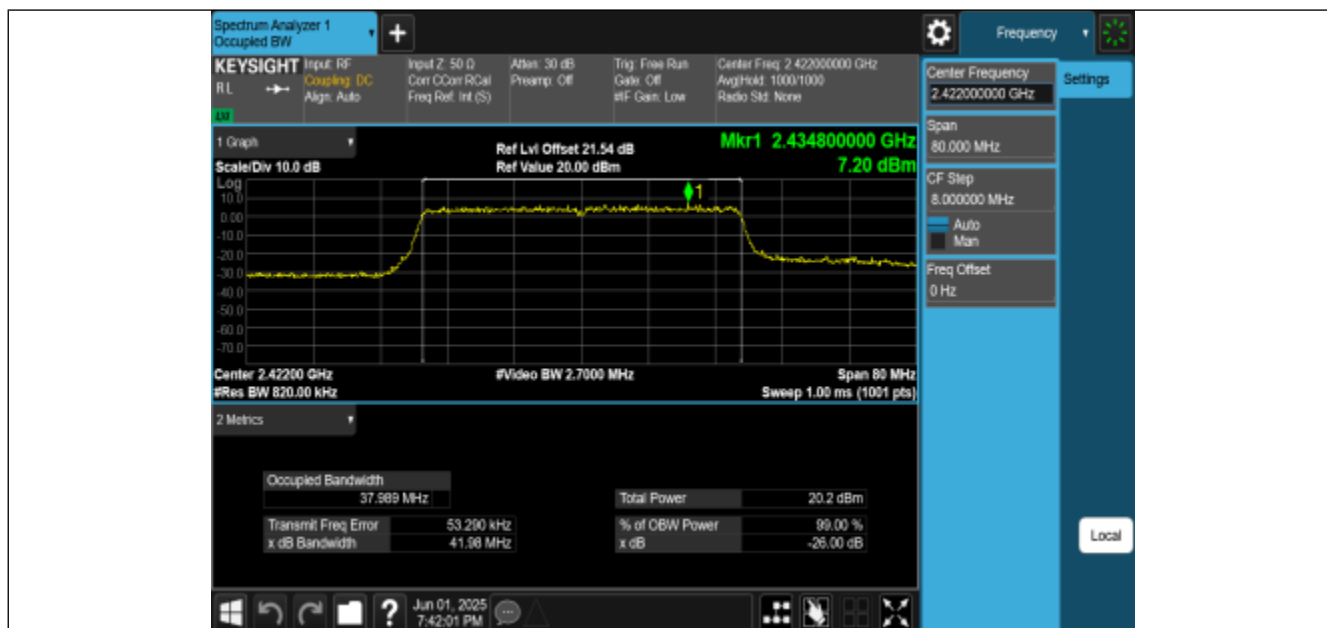
11AX20MIMO-Ant1-2462



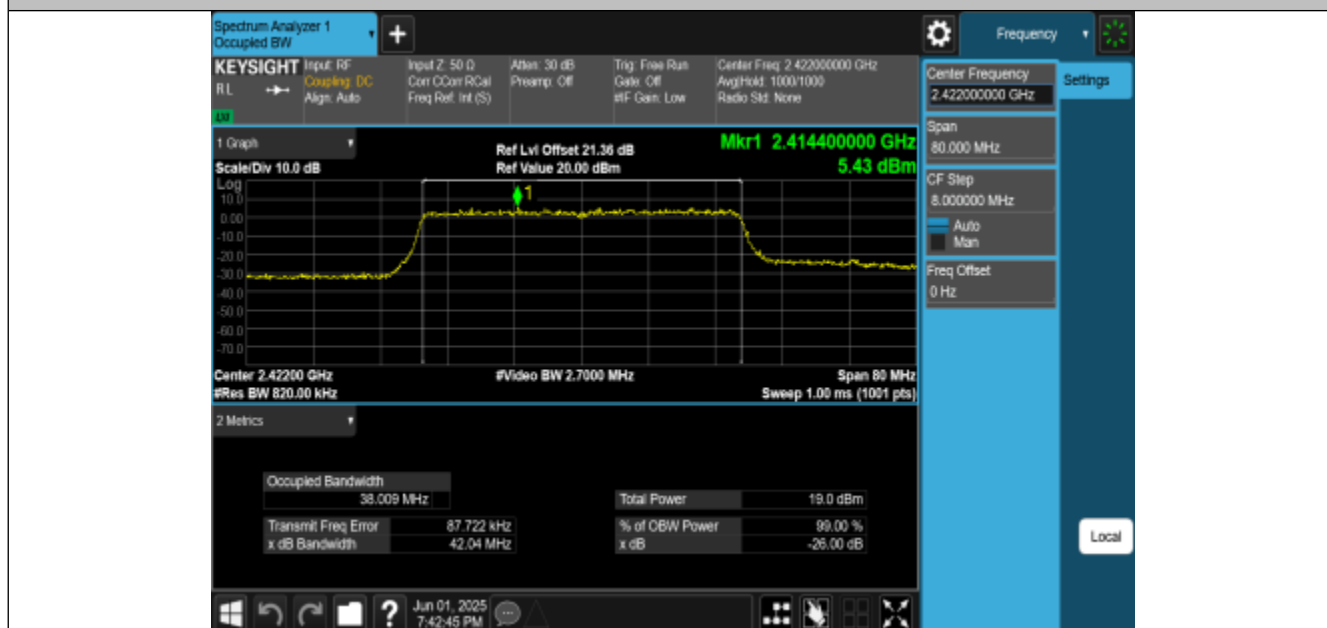
11AX20MIMO-Ant2-2462



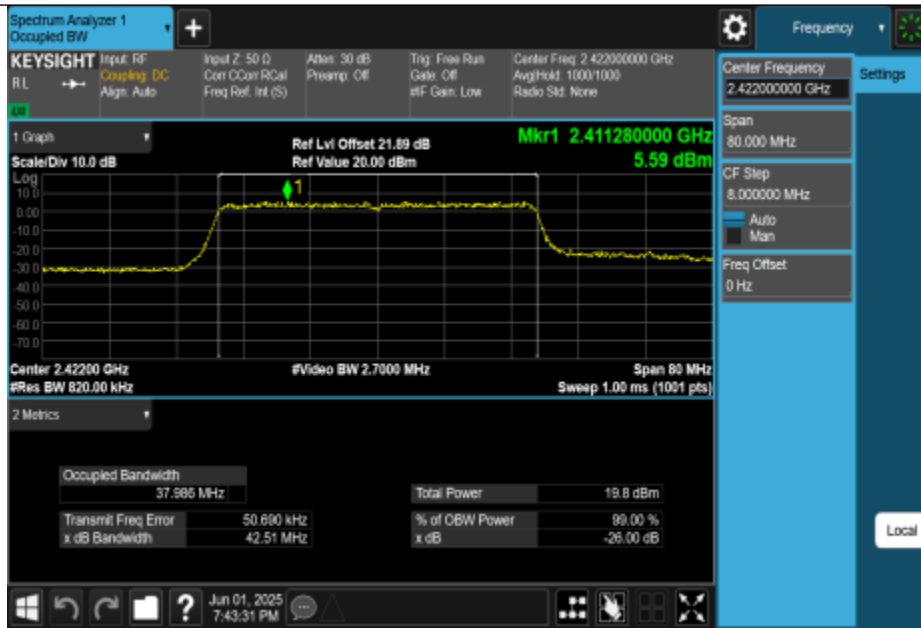
11AX20MIMO-Ant3-2462



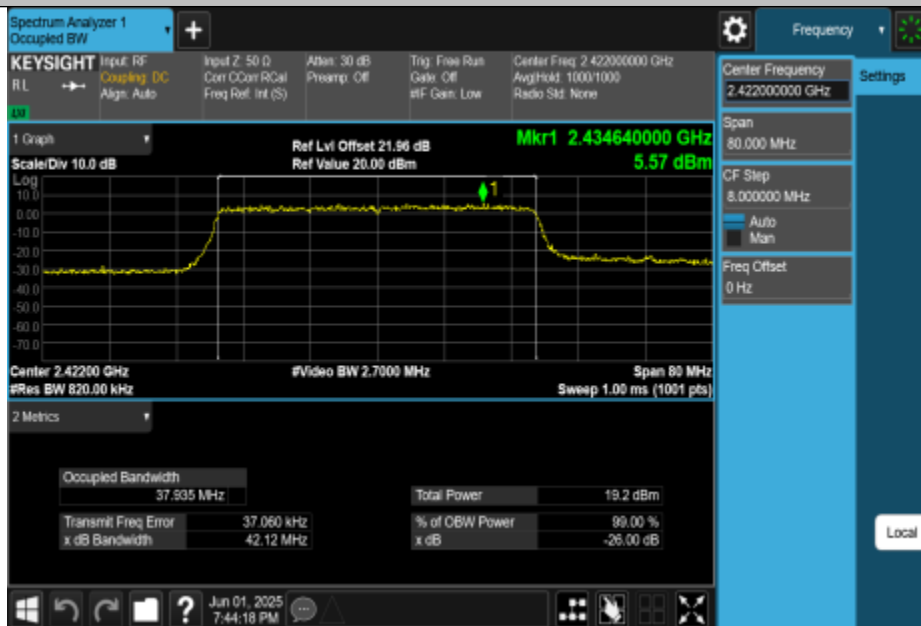
11AX40MIMO-Ant0-2422



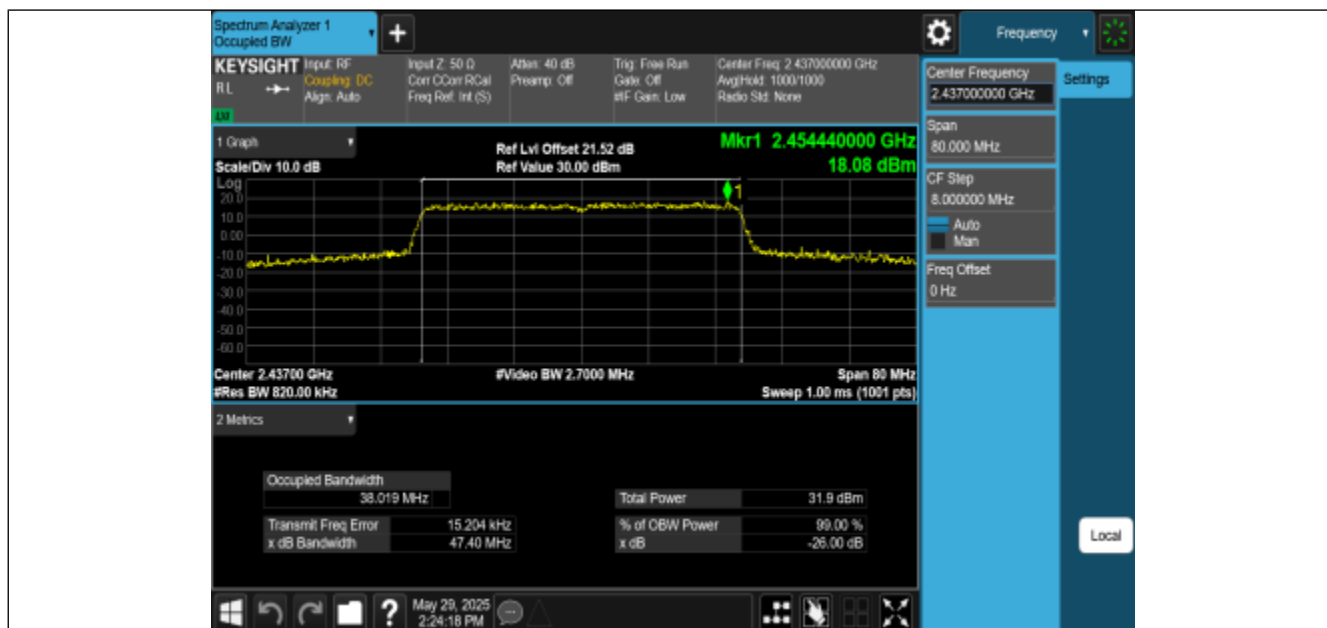
11AX40MIMO-Ant1-2422



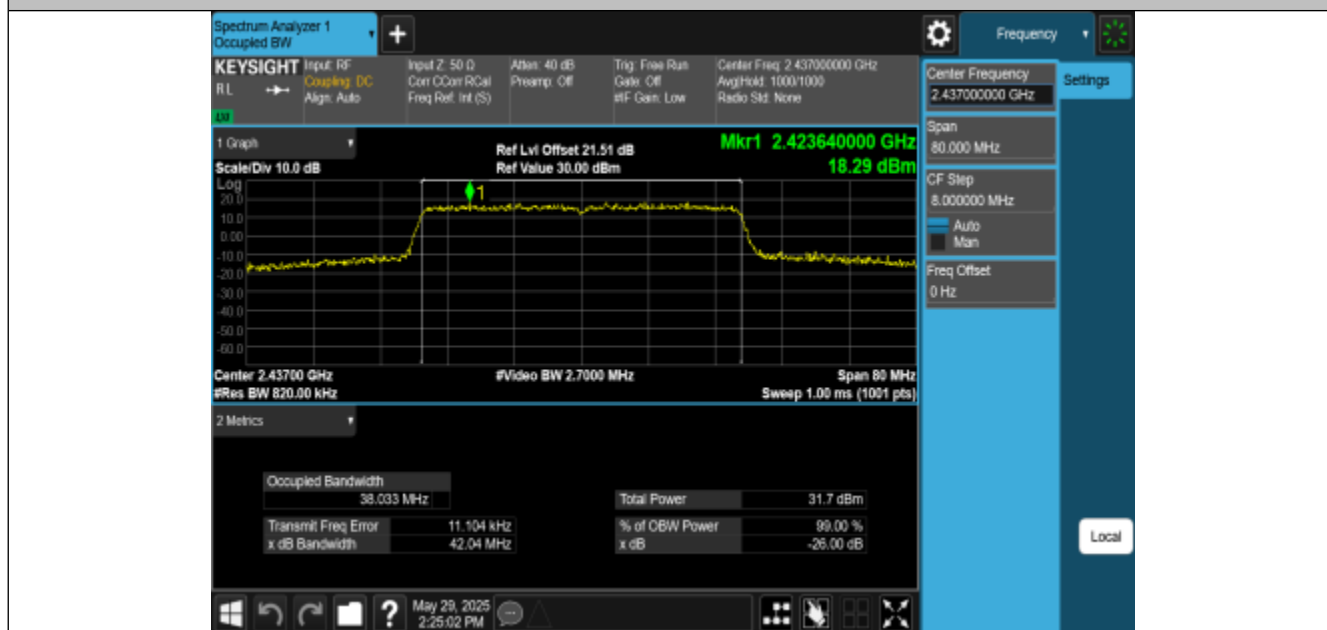
11AX40MIMO-Ant2-2422



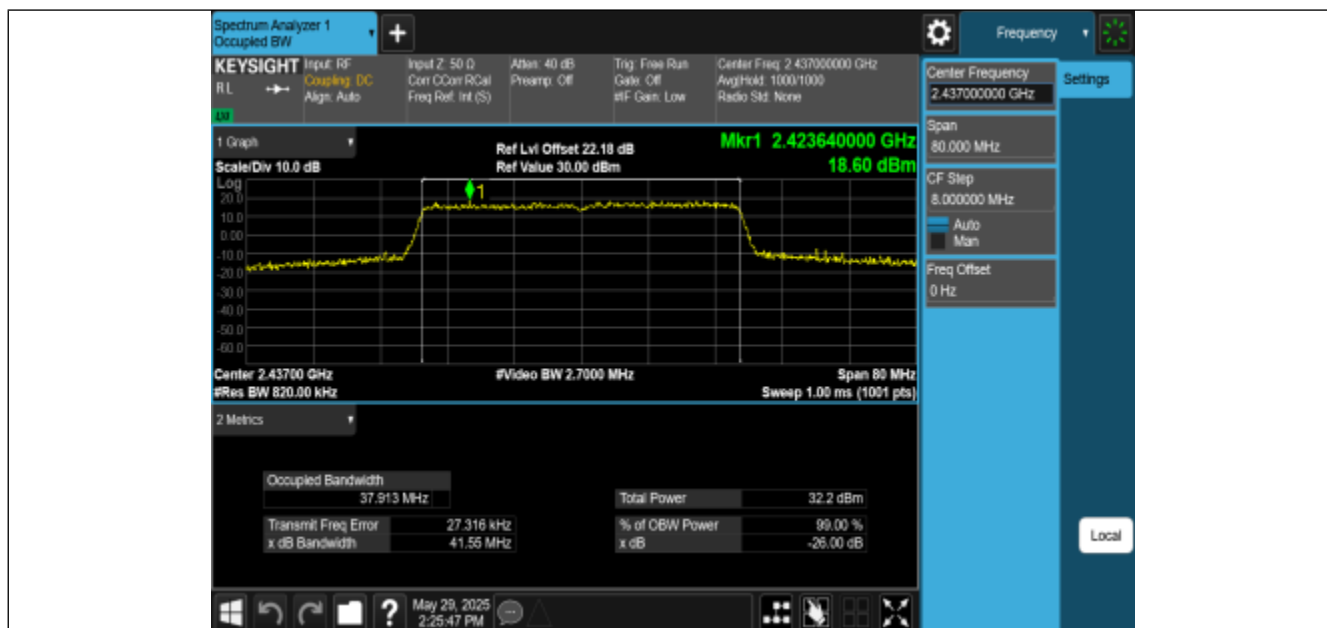
11AX40MIMO-Ant3-2422



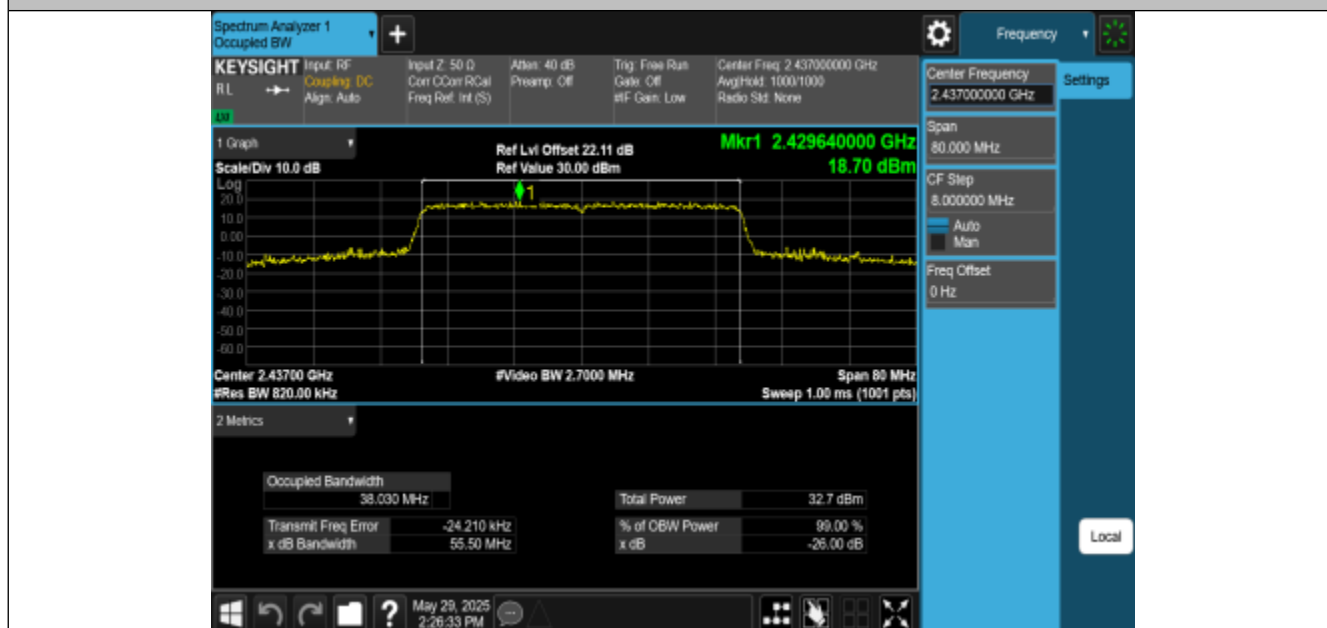
11AX40MIMO-Ant0-2437



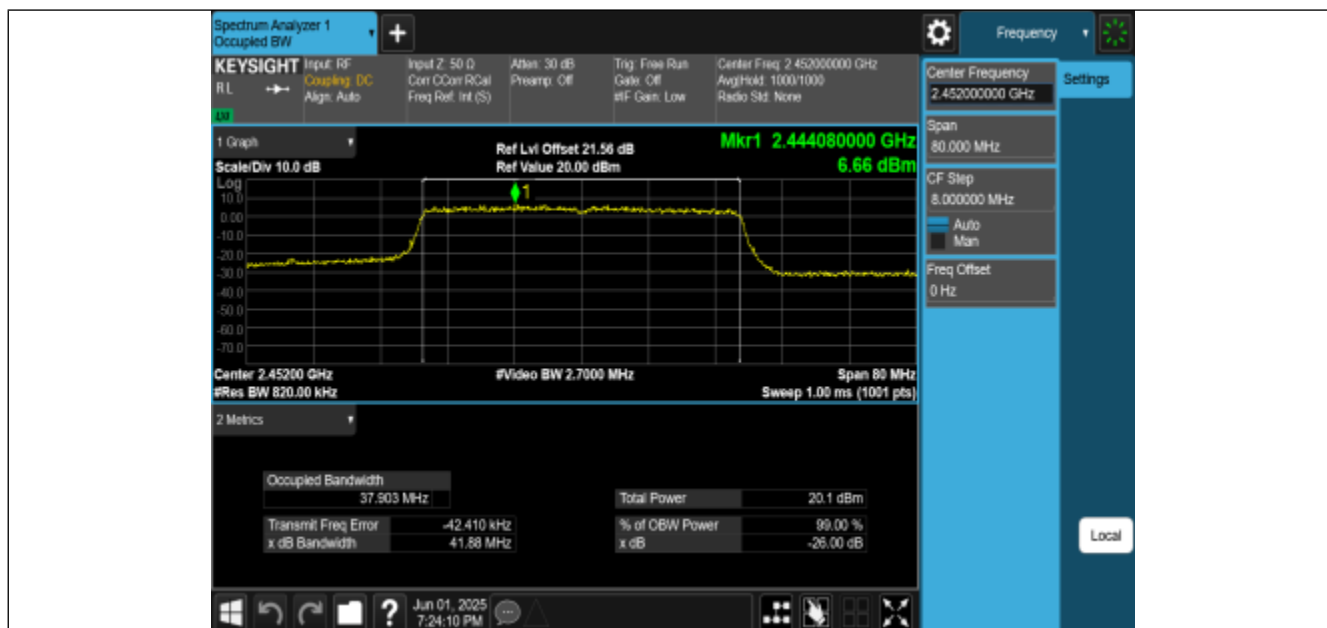
11AX40MIMO-Ant1-2437



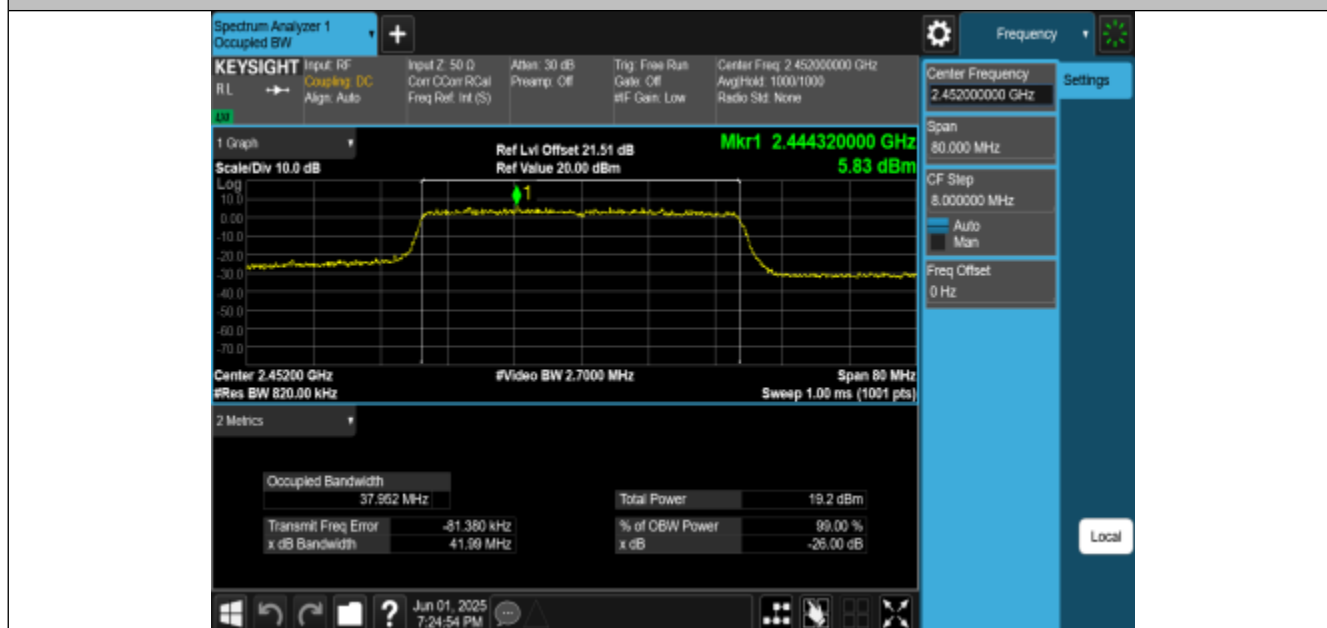
11AX40MIMO-Ant2-2437



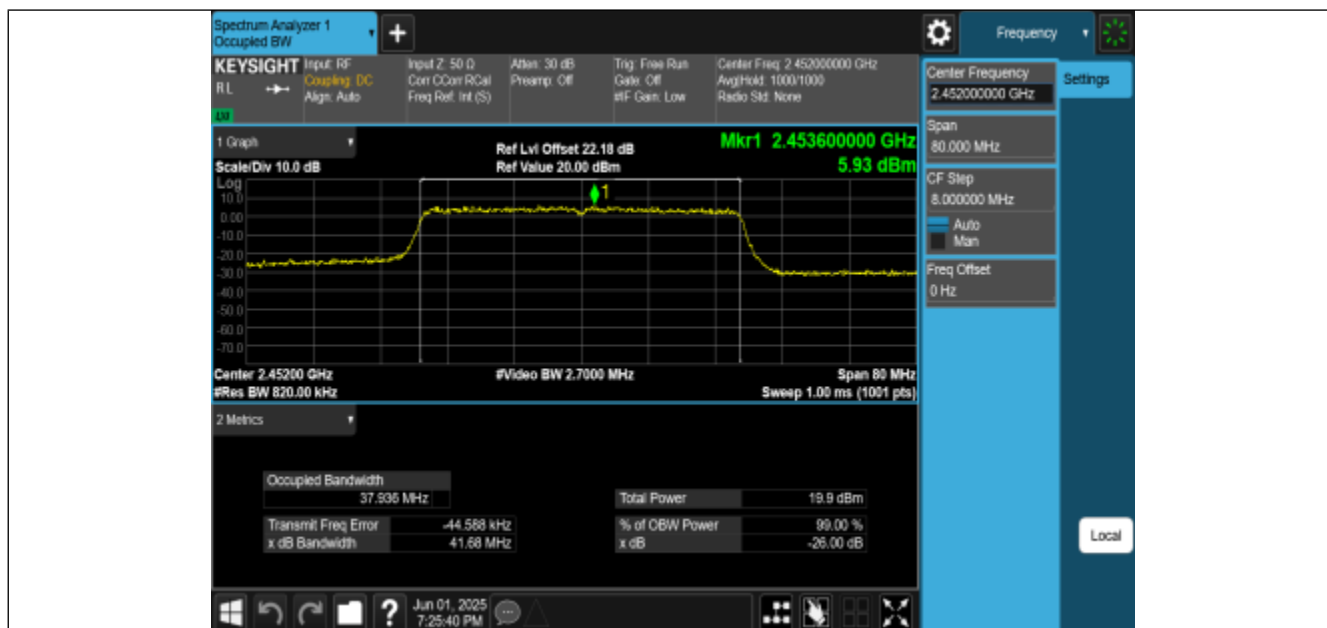
11AX40MIMO-Ant3-2437



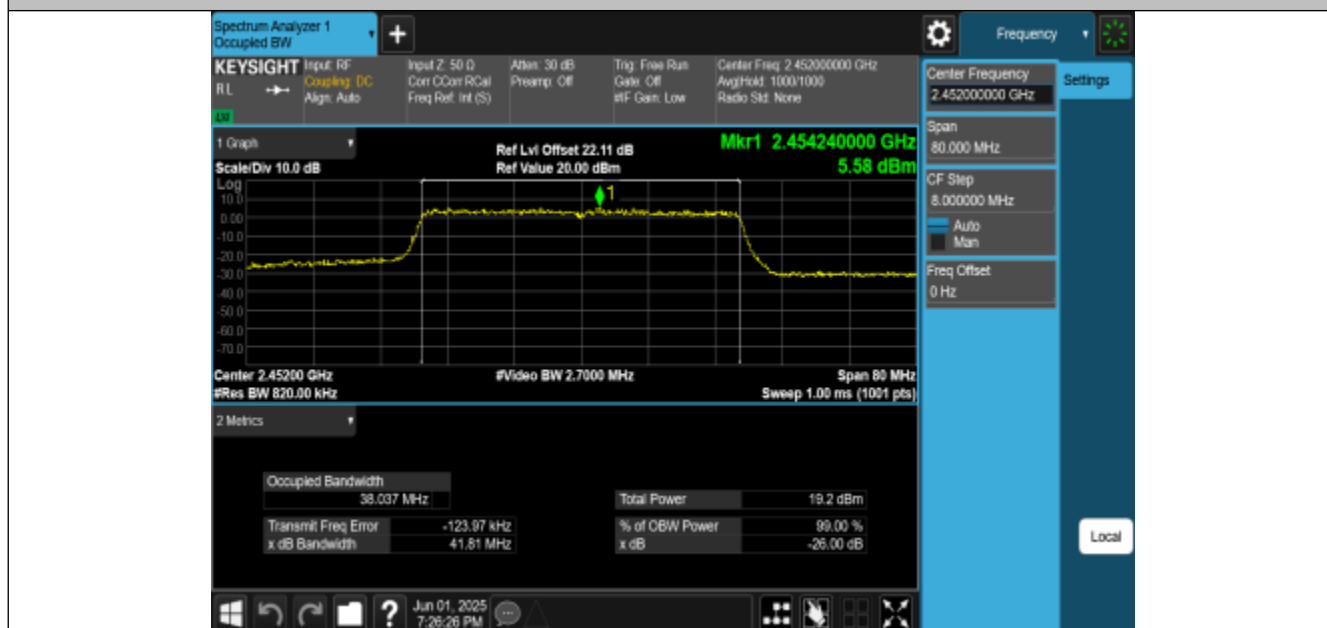
11AX40MIMO-Ant0-2452



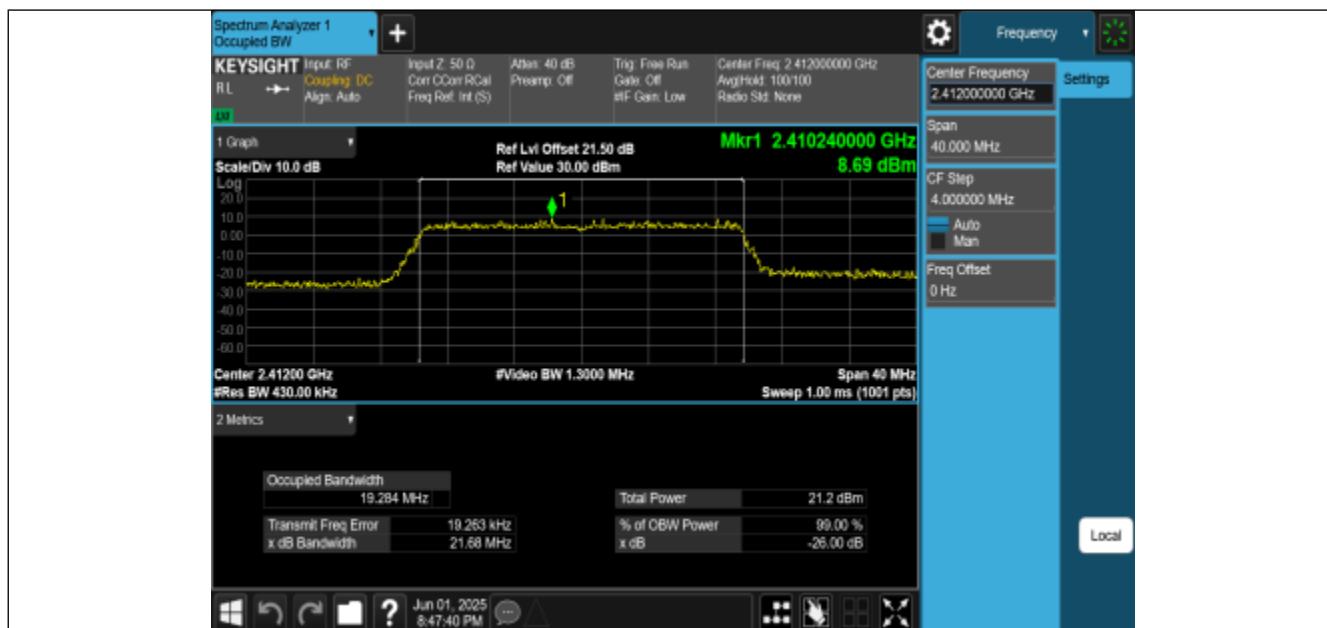
11AX40MIMO-Ant1-2452



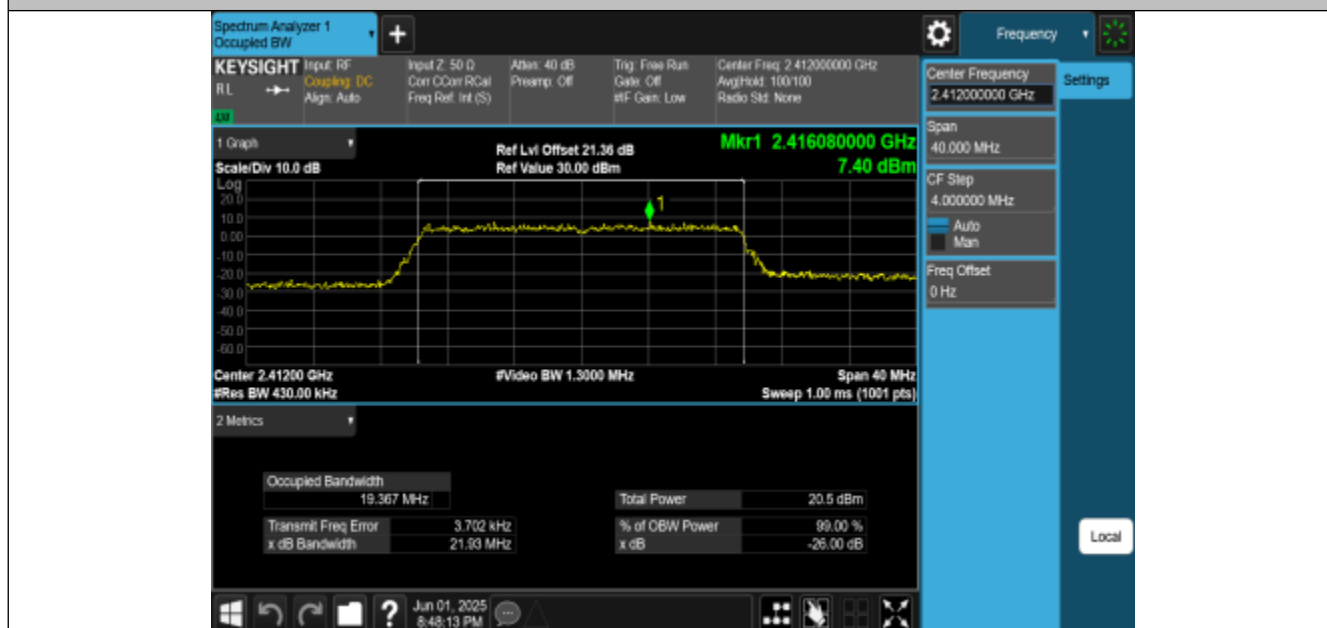
11AX40MIMO-Ant2-2452



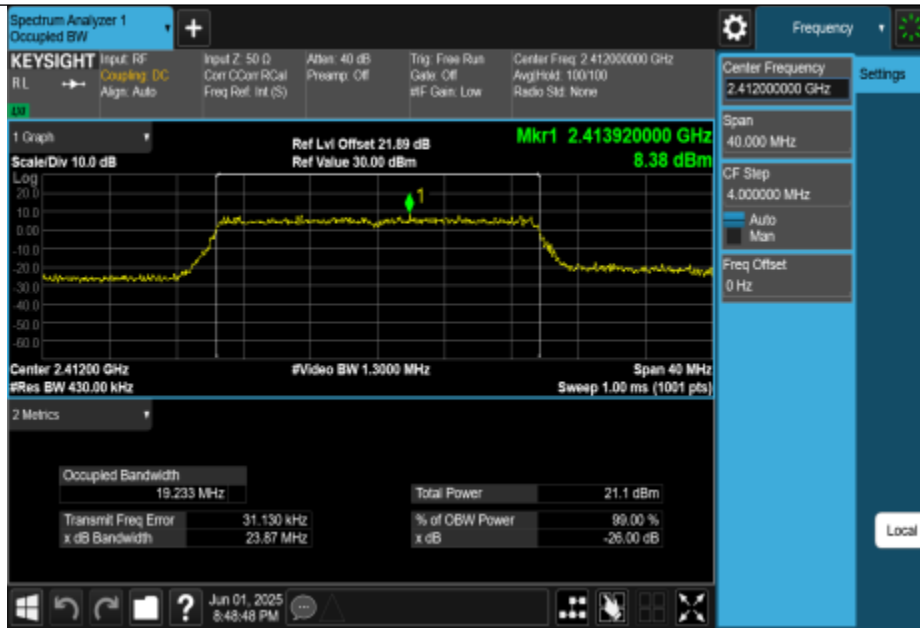
11AX40MIMO-Ant3-2452



11BE20MIMO-Ant0-2412



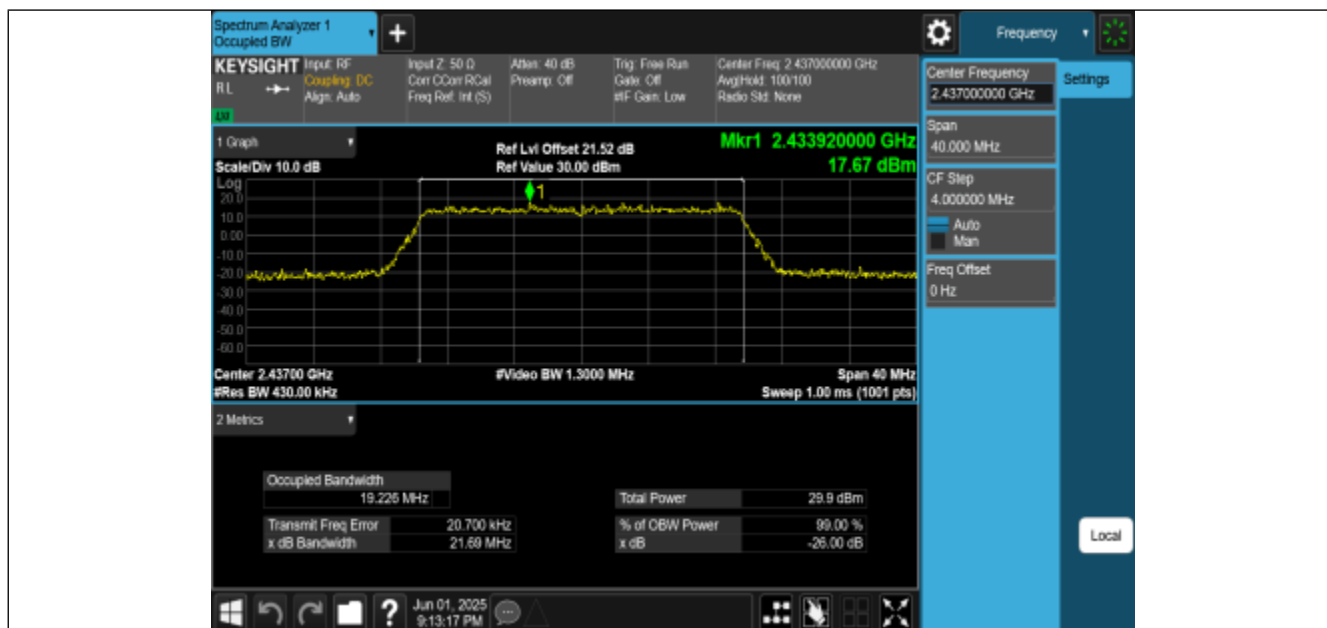
11BE20MIMO-Ant1-2412



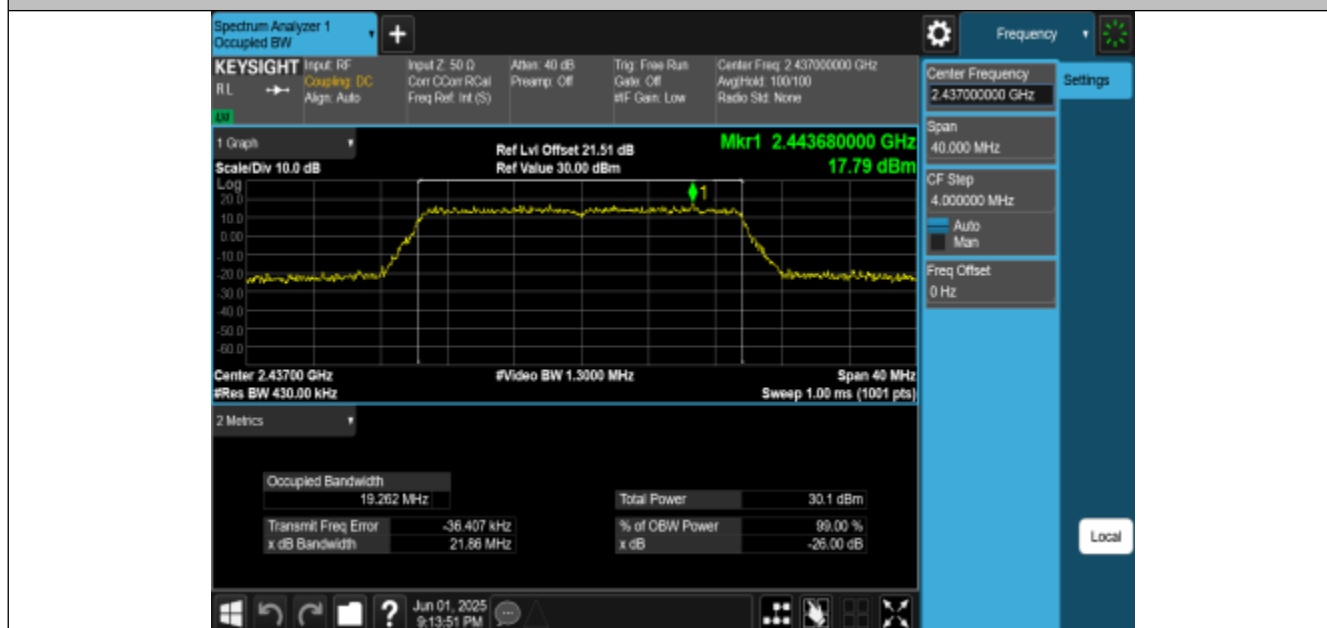
11BE20MIMO-Ant2-2412



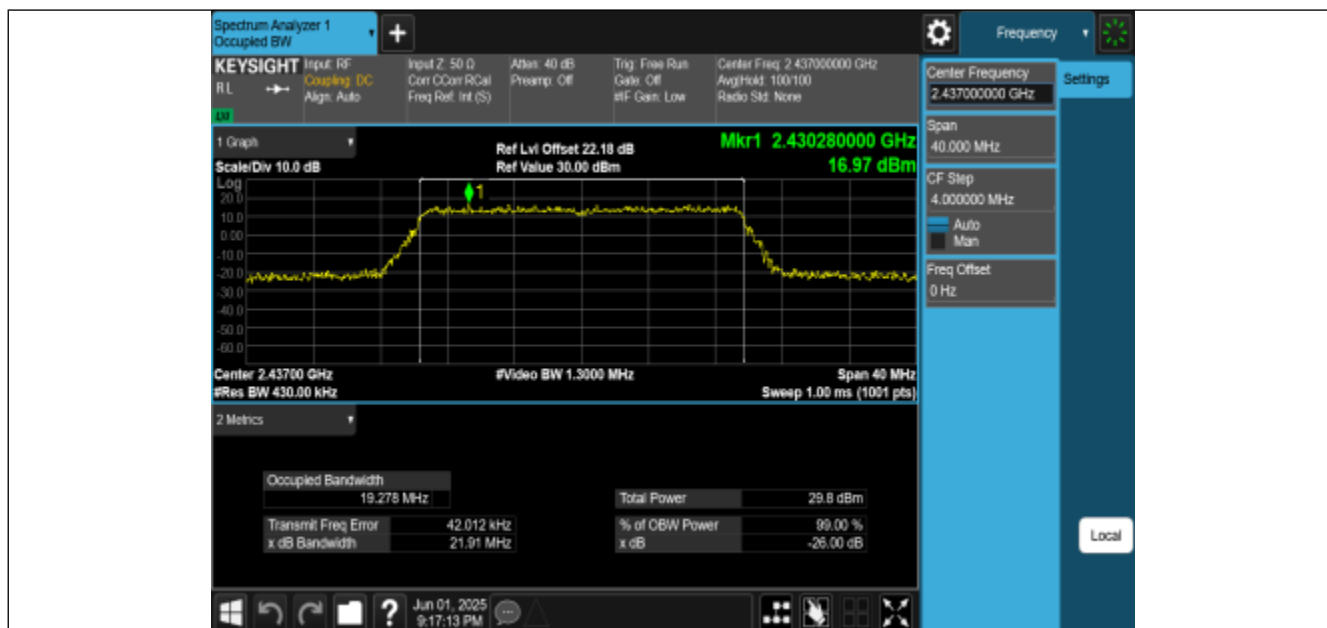
11BE20MIMO-Ant3-2412



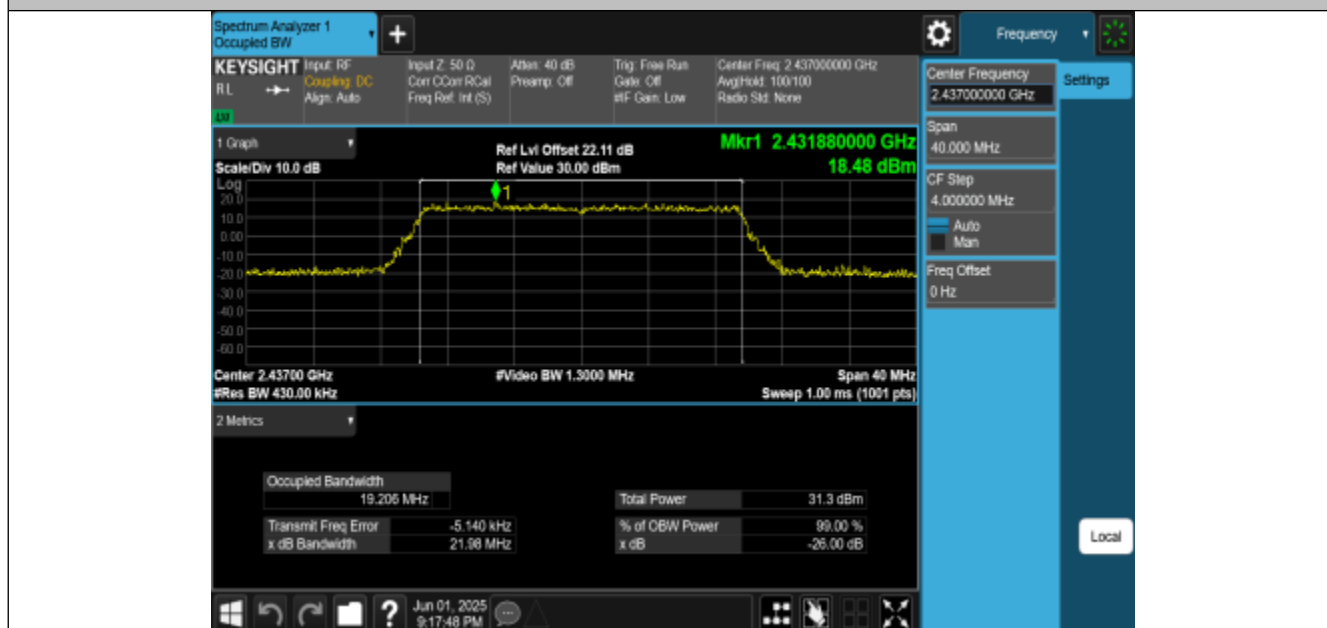
11BE20MIMO-Ant0-2437



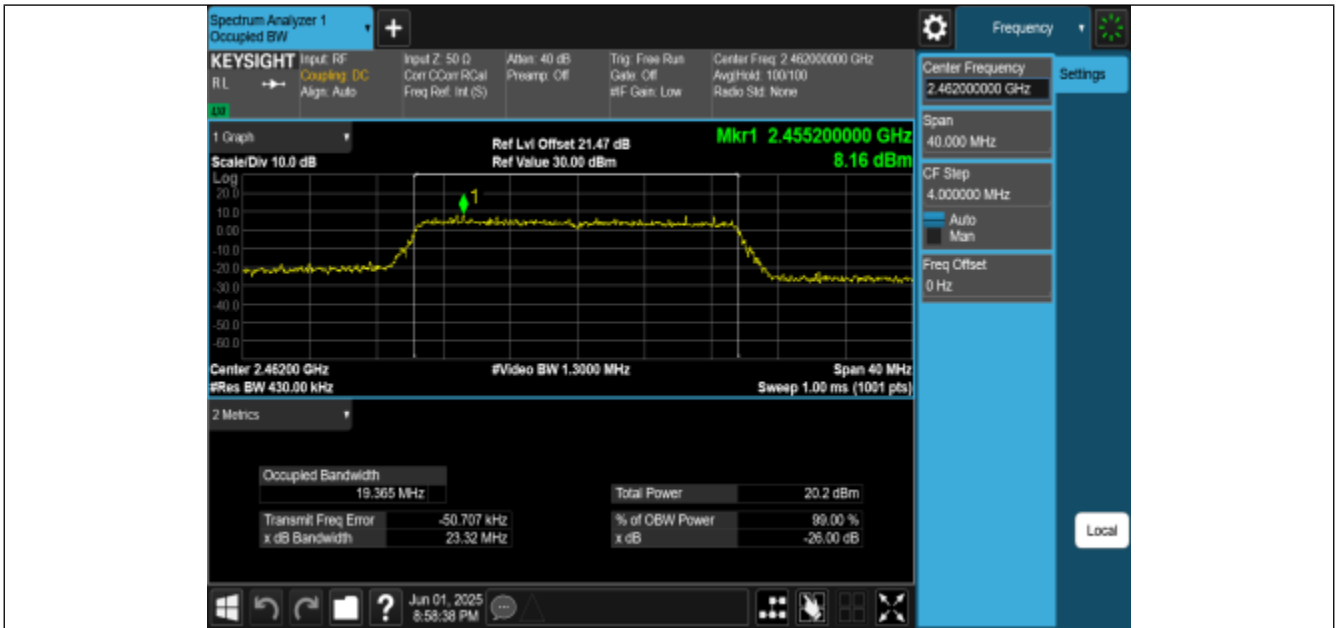
11BE20MIMO-Ant1-2437



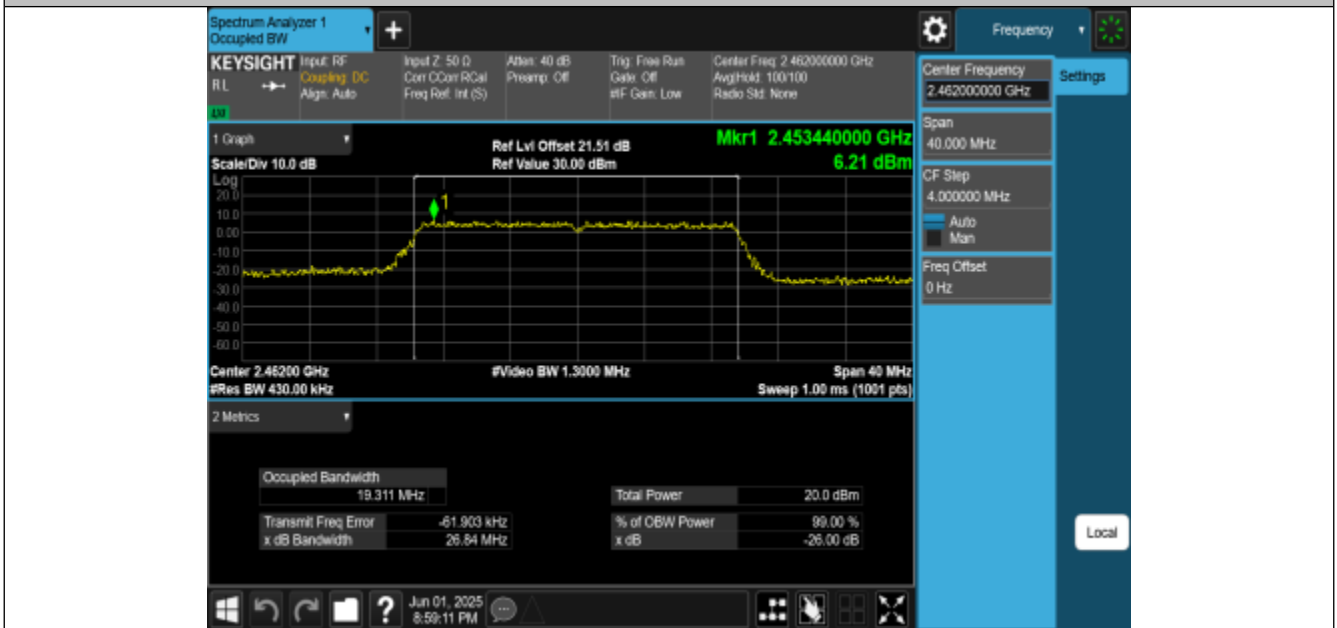
11BE20MIMO-Ant2-2437



11BE20MIMO-Ant3-2437



11BE20MIMO-Ant0-2462



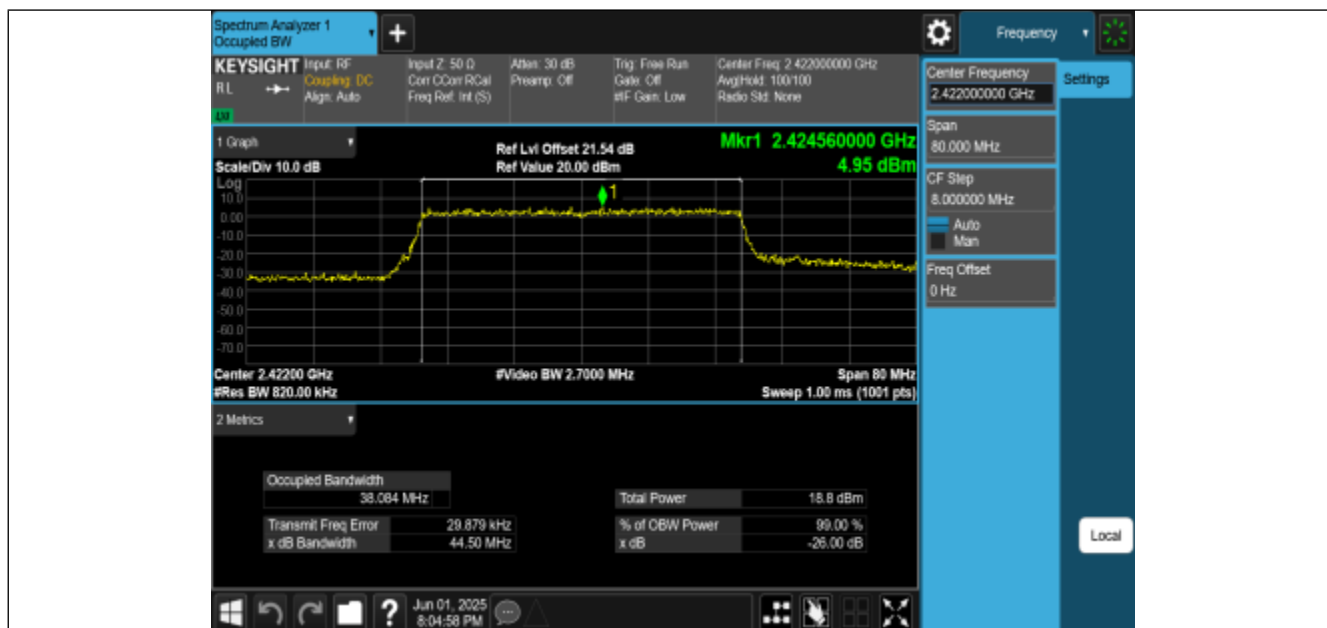
11BE20MIMO-Ant1-2462



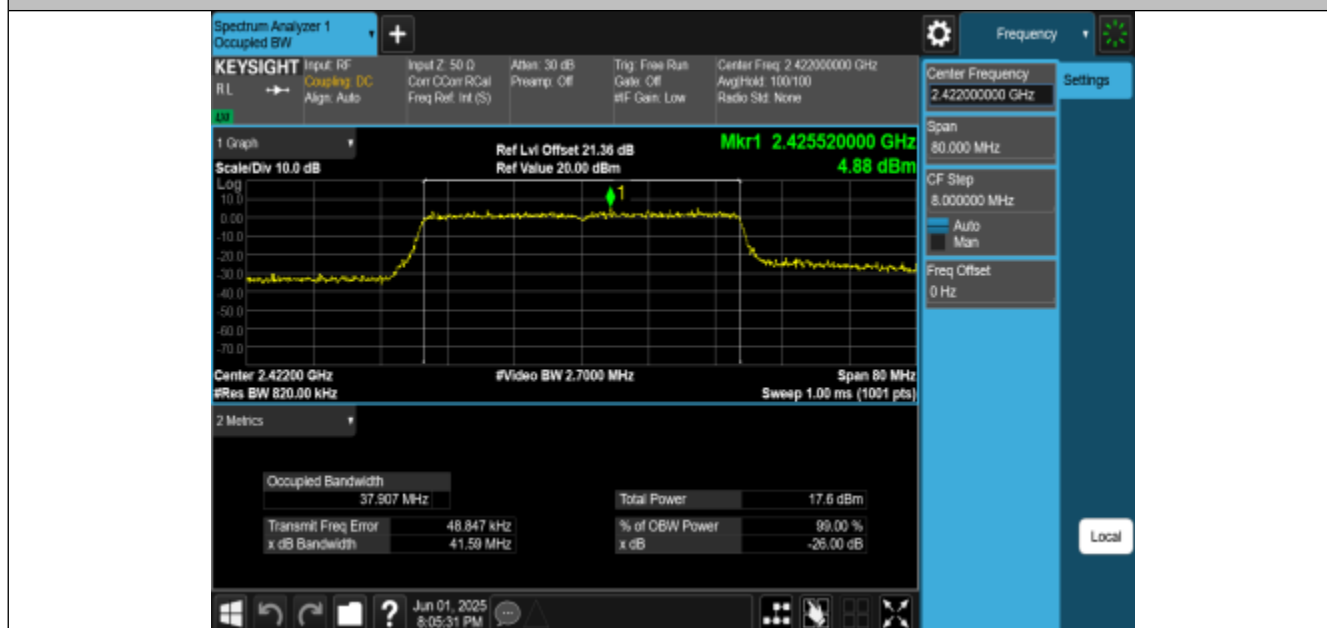
11BE20MIMO-Ant2-2462



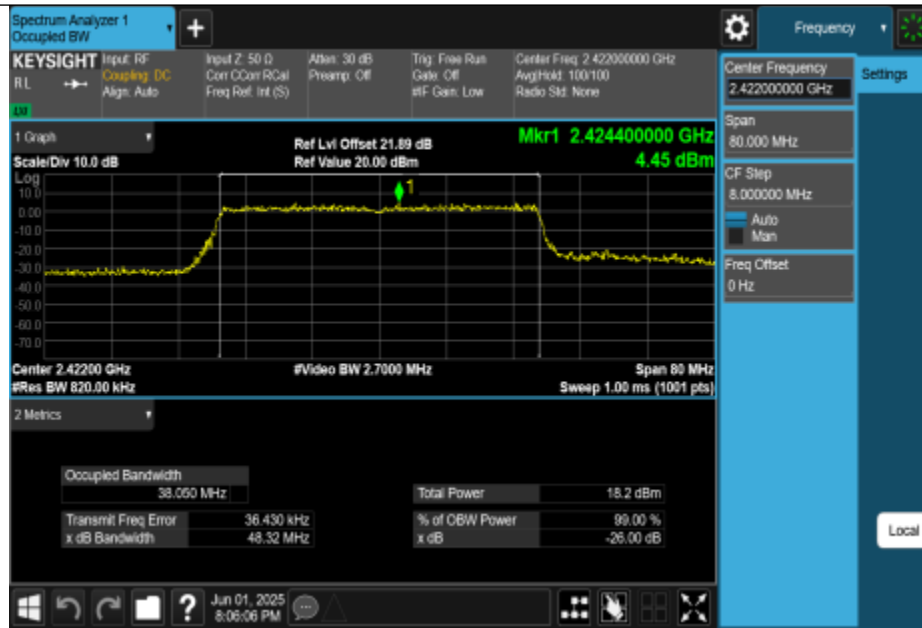
11BE20MIMO-Ant3-2462



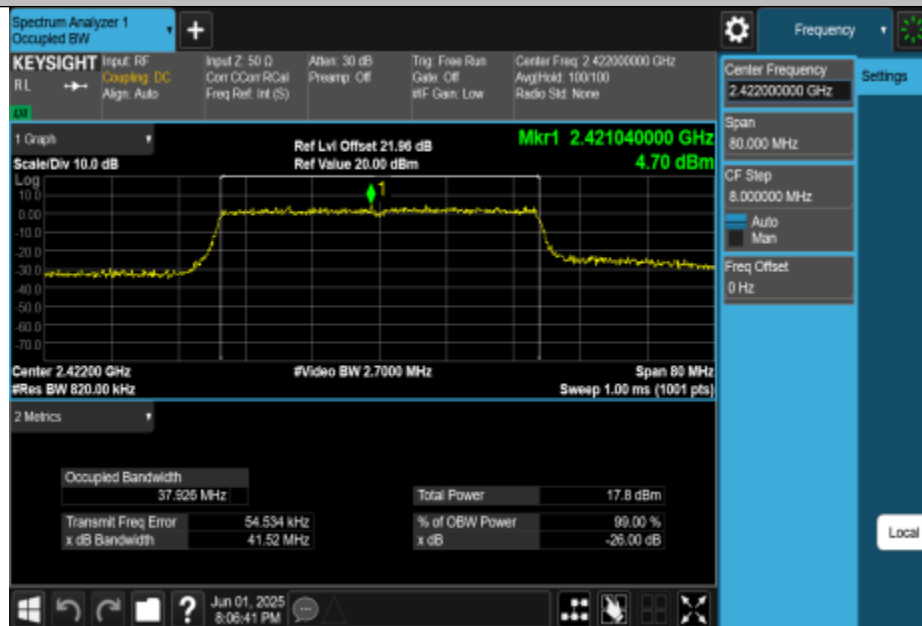
11BE40MIMO-Ant0-2422



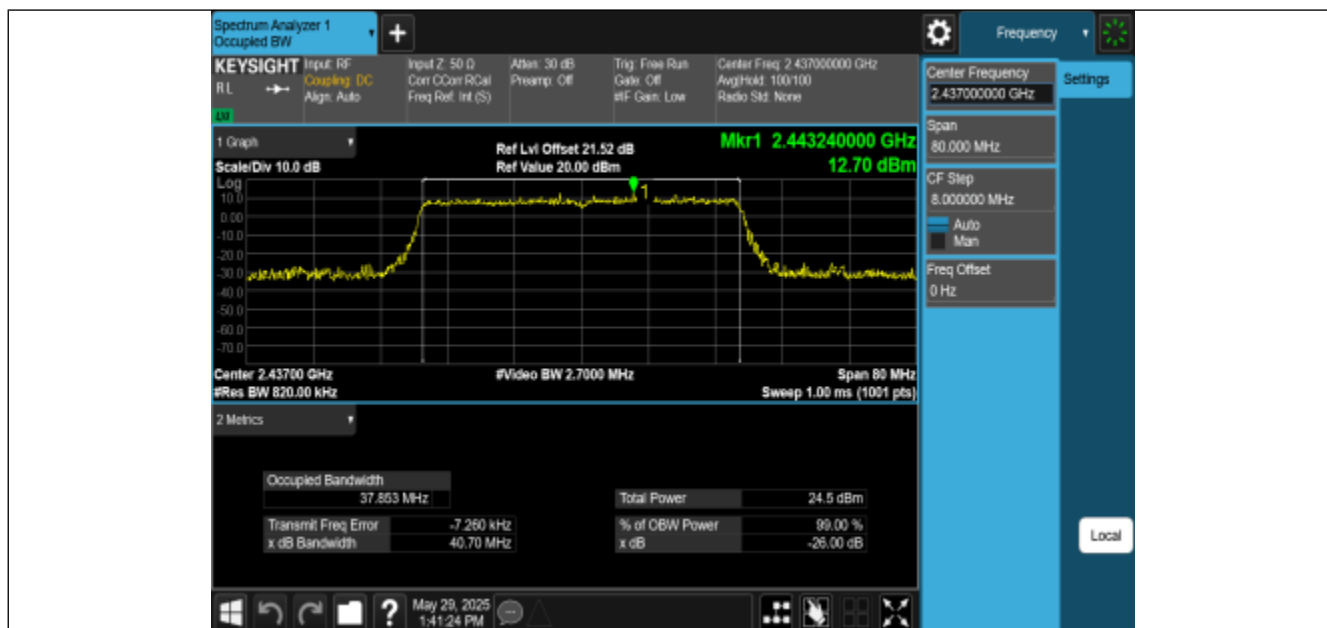
11BE40MIMO-Ant1-2422



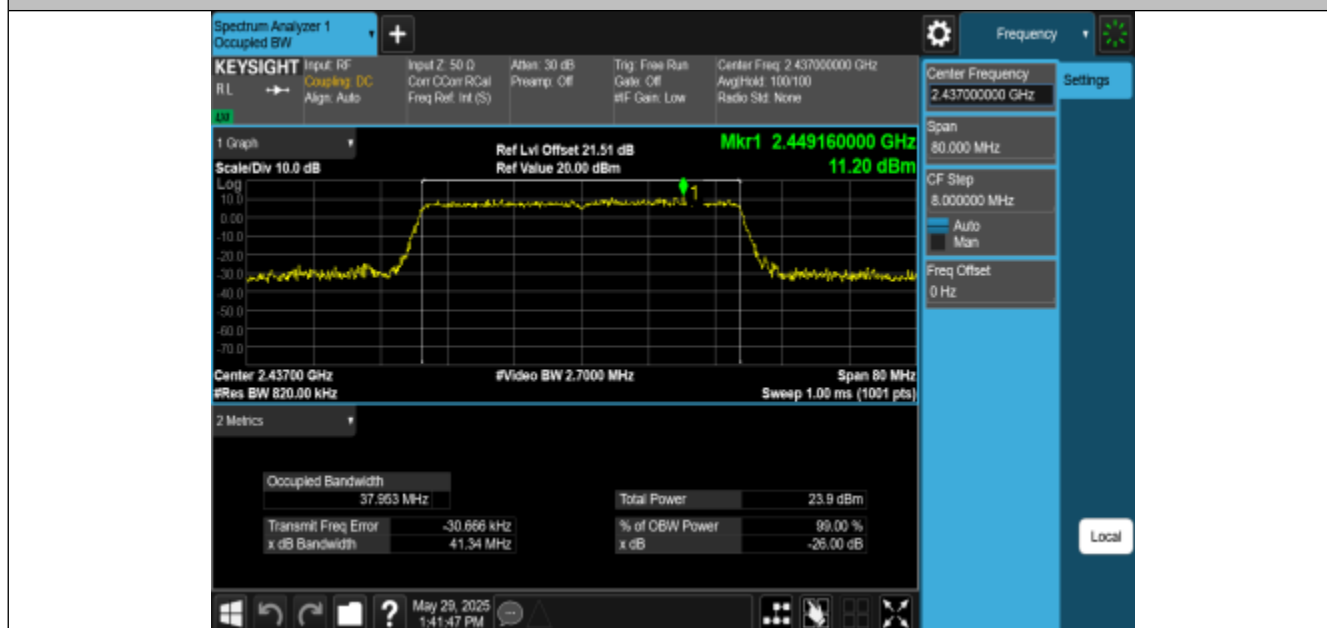
11BE40MIMO-Ant2-2422



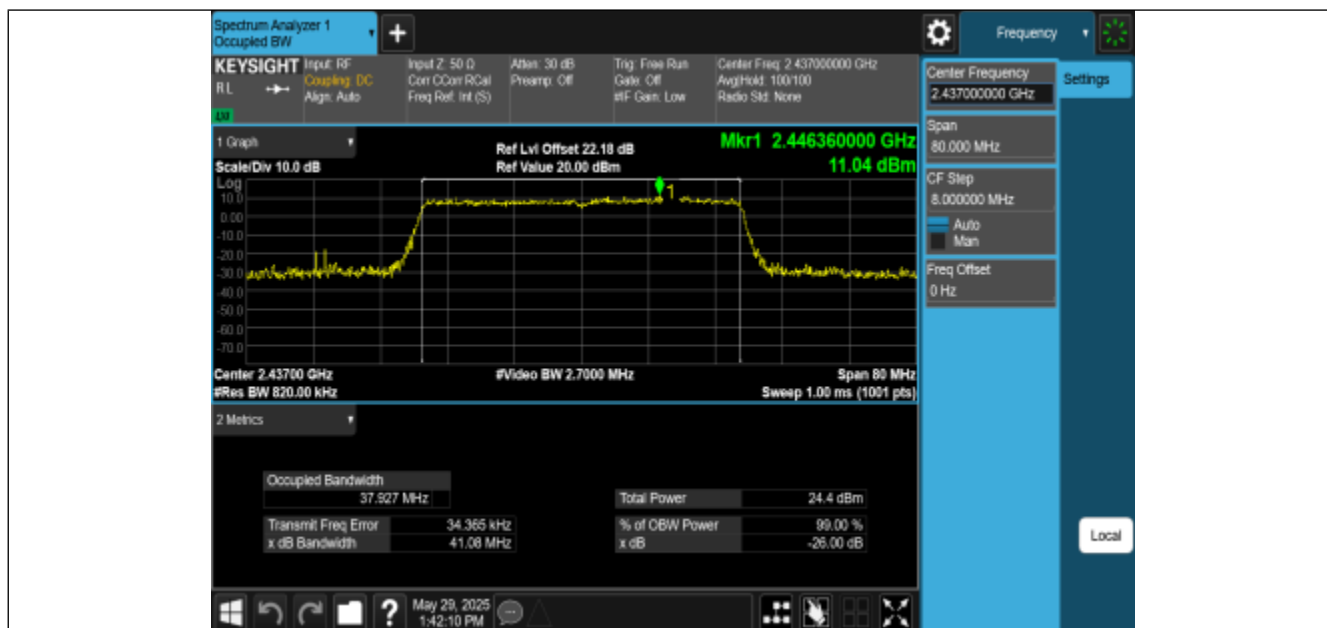
11BE40MIMO-Ant3-2422



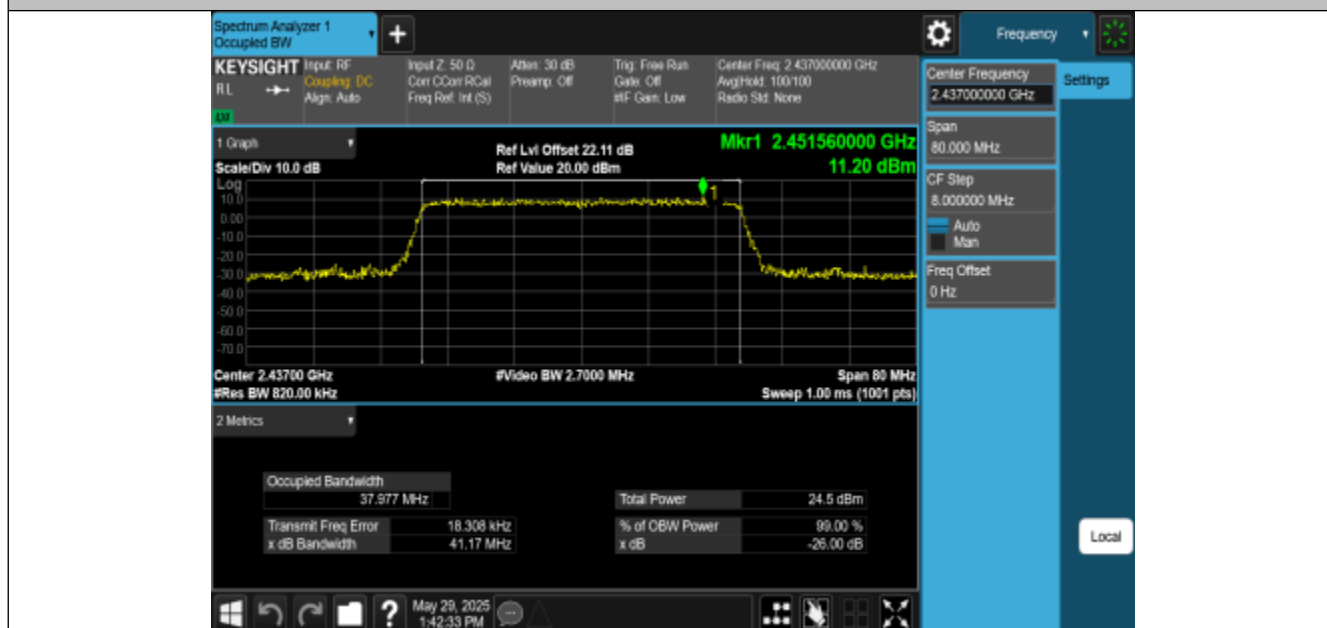
11BE40MIMO-Ant0-2437



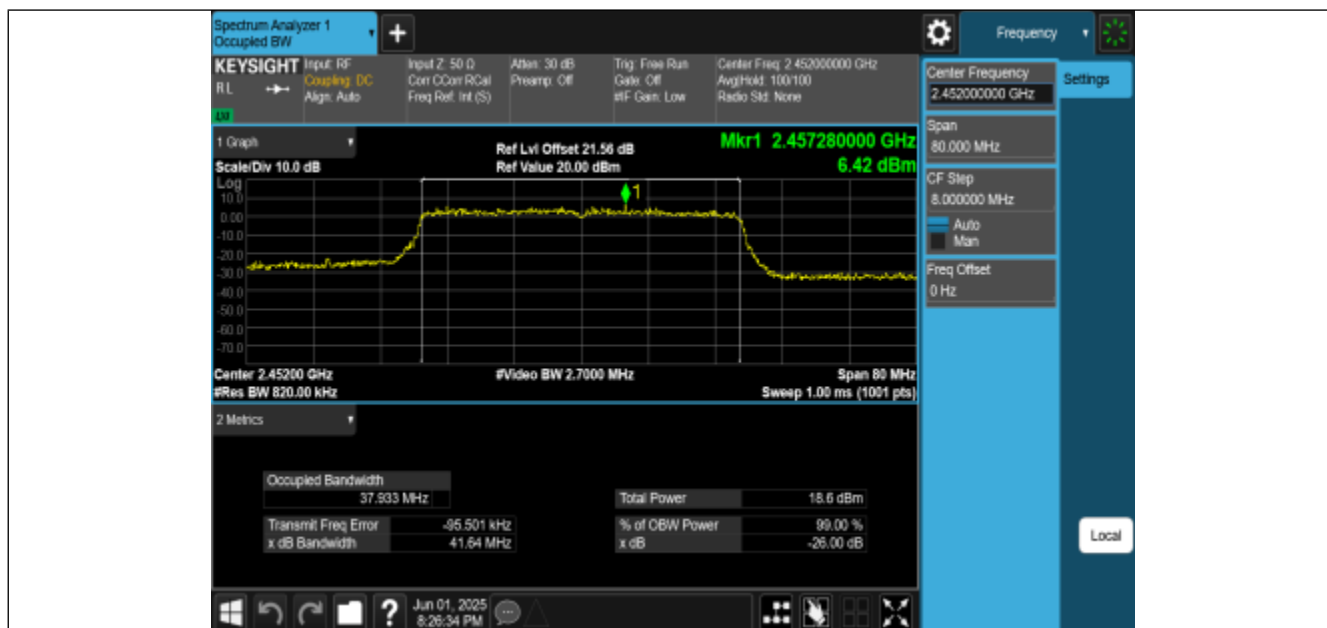
11BE40MIMO-Ant1-2437



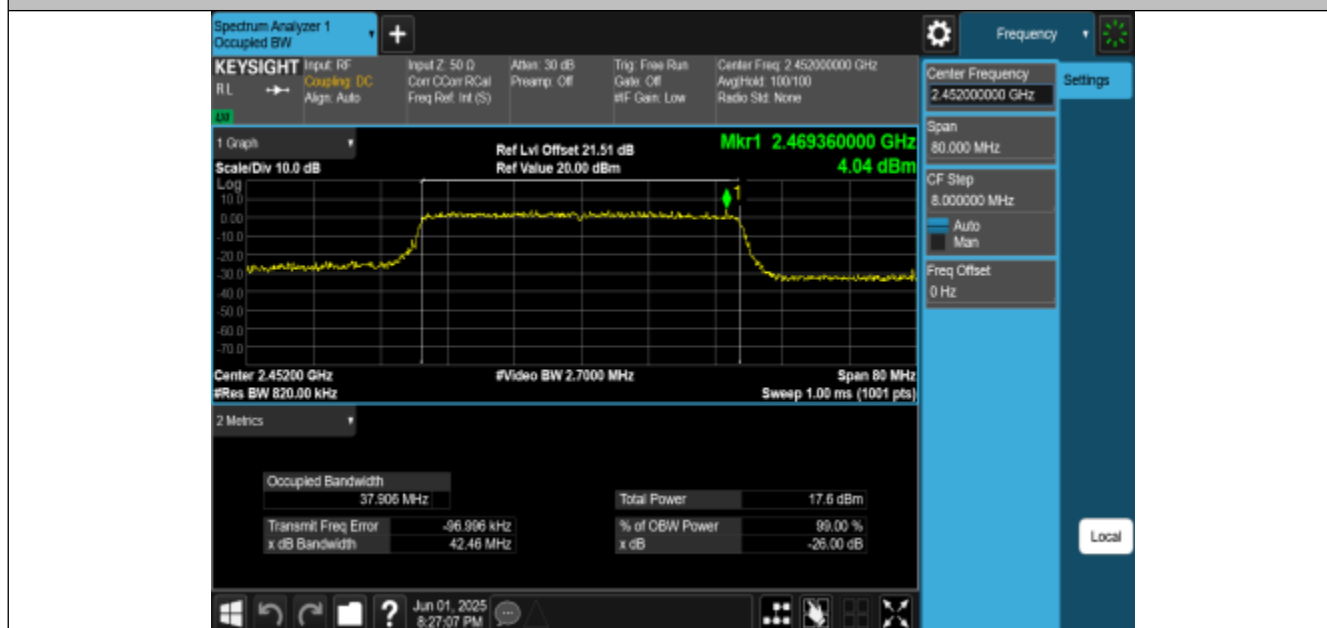
11BE40MIMO-Ant2-2437



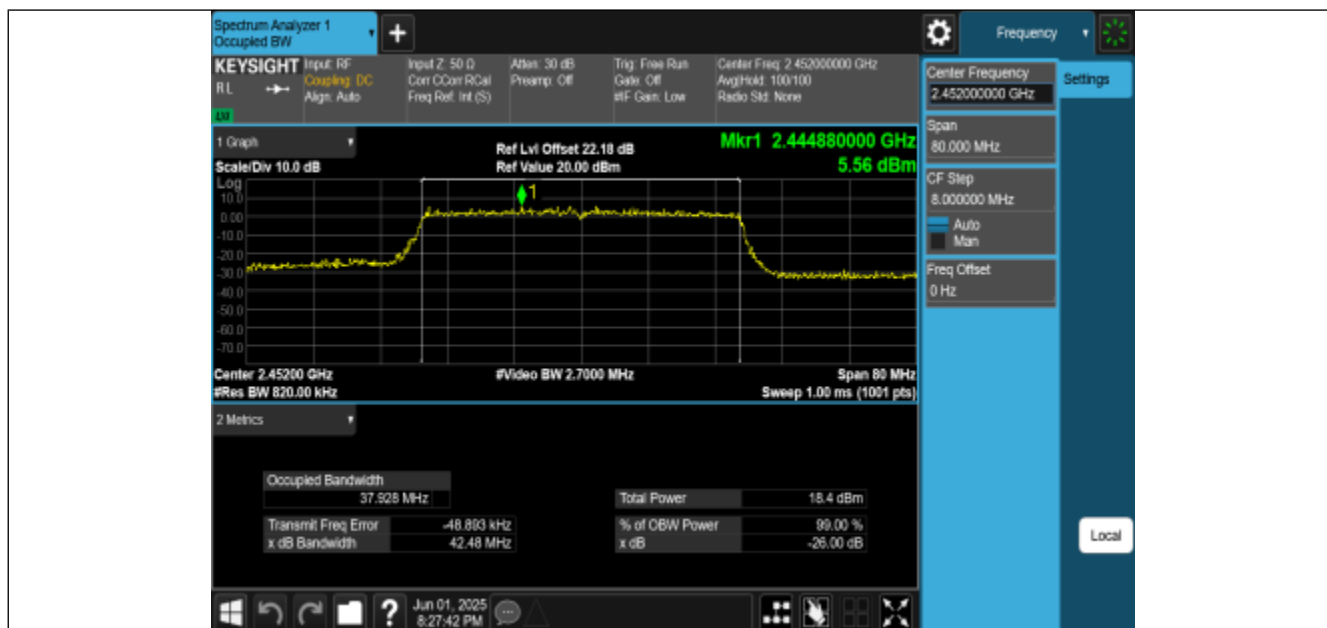
11BE40MIMO-Ant3-2437



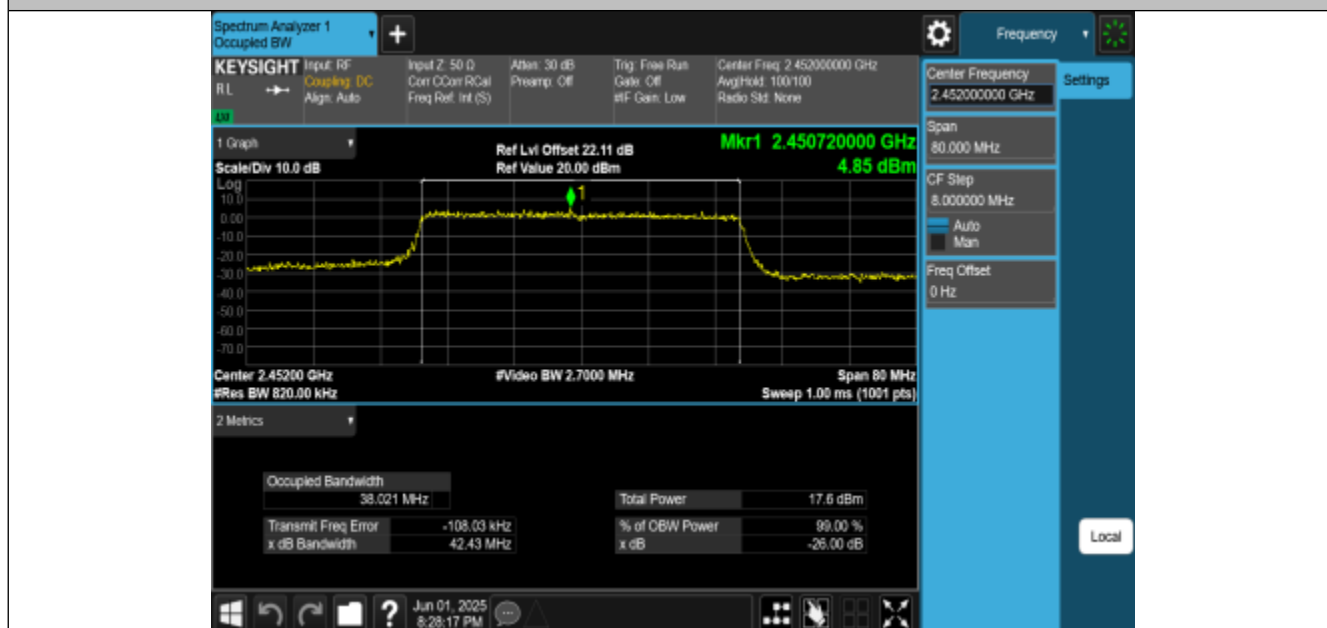
11BE40MIMO-Ant0-2452



11BE40MIMO-Ant1-2452



11BE40MIMO-Ant2-2452



11BE40MIMO-Ant3-2452

3.5 Maximum conducted output power

3.5.1 Limit

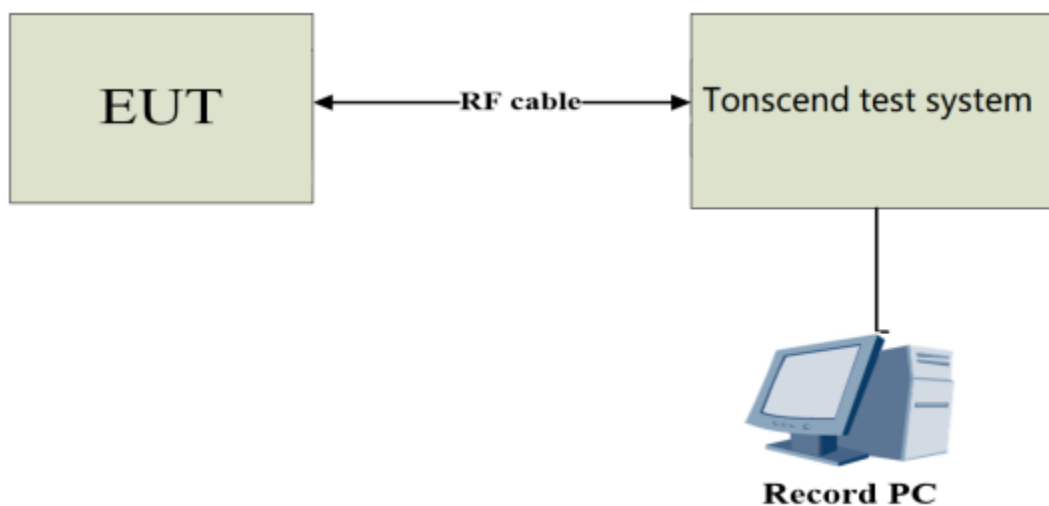
For systems using digital modulation in the 2400~2483.5MHz, The Maximum output Power shall not exceed 1W(30dBm)

3.5.2 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

- The EUT was directly connected to the tonscend test system and antenna output port as show in the block diagram below.
- The maximum conducted output power was performed in accordance with method 11.9.2.3.1 (for method AVGPM)of ANSI C63.10-2013.

3.5.3 Test Setup



3.5.4 Table of Parameters of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

No beamforming

Test Software Version	accessMTool_REL_3_3_0_2		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	82	90	82
IEEE 802.11g	65	92	65
IEEE 802.11n(20)	65	93	65
IEEE 802.11ax(20)	60	92	59
IEEE 802.11be(20)	59	92	58
Frequency (MHz)	2422	2437	2452
IEEE 802.11n(40)	58	95	57
IEEE 802.11ax(40)	52	90	53
IEEE 802.11be(40)	55	90	55

Beamforming

Test Software Version	accessMTool_REL_3_3_0_2		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	72	79	72
IEEE 802.11g	56	82	55
IEEE 802.11n(20)	55	83	55
IEEE 802.11ax(20)	51	82	49
IEEE 802.11be(20)	49	82	48
Frequency (MHz)	2422	2437	2452
IEEE 802.11n(40)	49	85	47
IEEE 802.11ax(40)	42	79	43
IEEE 802.11be(40)	45	80	46

3.5.5 The Result

No beamforming

Test Mode	Antenna	Frequency [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B-CDD	Ant0	2412	21.01	≤30.00	PASS
11B-CDD	Ant1	2412	20.92	≤30.00	PASS
11B-CDD	Ant2	2412	20.67	≤30.00	PASS
11B-CDD	Ant3	2412	20.31	≤30.00	PASS
11B-CDD	total	2412	26.76	≤30.00	PASS
11B-CDD	Ant0	2437	23.45	≤30.00	PASS
11B-CDD	Ant1	2437	23.86	≤30.00	PASS
11B-CDD	Ant2	2437	23.39	≤30.00	PASS
11B-CDD	Ant3	2437	23.49	≤30.00	PASS
11B-CDD	total	2437	29.57	≤30.00	PASS
11B-CDD	Ant0	2462	20.28	≤30.00	PASS
11B-CDD	Ant1	2462	20.86	≤30.00	PASS
11B-CDD	Ant2	2462	20.60	≤30.00	PASS
11B-CDD	Ant3	2462	20.09	≤30.00	PASS
11B-CDD	total	2462	26.49	≤30.00	PASS
11G-CDD	Ant0	2412	16.49	≤30.00	PASS
11G-CDD	Ant1	2412	15.55	≤30.00	PASS
11G-CDD	Ant2	2412	15.73	≤30.00	PASS
11G-CDD	Ant3	2412	15.62	≤30.00	PASS
11G-CDD	total	2412	21.88	≤30.00	PASS
11G-CDD	Ant0	2437	22.97	≤30.00	PASS
11G-CDD	Ant1	2437	22.87	≤30.00	PASS
11G-CDD	Ant2	2437	22.62	≤30.00	PASS
11G-CDD	Ant3	2437	24.13	≤30.00	PASS
11G-CDD	total	2437	29.21	≤30.00	PASS
11G-CDD	Ant0	2462	15.42	≤30.00	PASS
11G-CDD	Ant1	2462	15.23	≤30.00	PASS
11G-CDD	Ant2	2462	15.69	≤30.00	PASS
11G-CDD	Ant3	2462	15.26	≤30.00	PASS
11G-CDD	total	2462	21.42	≤30.00	PASS
11N20MIMO	Ant0	2412	16.07	≤30.00	PASS
11N20MIMO	Ant1	2412	15.66	≤30.00	PASS
11N20MIMO	Ant2	2412	15.56	≤30.00	PASS
11N20MIMO	Ant3	2412	15.58	≤30.00	PASS
11N20MIMO	total	2412	21.74	≤30.00	PASS
11N20MIMO	Ant0	2437	22.79	≤30.00	PASS
11N20MIMO	Ant1	2437	22.91	≤30.00	PASS
11N20MIMO	Ant2	2437	22.65	≤30.00	PASS

11N20MIMO	Ant3	2437	24.11	≤30.00	PASS
11N20MIMO	total	2437	29.18	≤30.00	PASS
11N20MIMO	Ant0	2462	15.40	≤30.00	PASS
11N20MIMO	Ant1	2462	15.20	≤30.00	PASS
11N20MIMO	Ant2	2462	15.82	≤30.00	PASS
11N20MIMO	Ant3	2462	15.23	≤30.00	PASS
11N20MIMO	total	2462	21.44	≤30.00	PASS
11N40MIMO	Ant0	2422	13.84	≤30.00	PASS
11N40MIMO	Ant1	2422	13.06	≤30.00	PASS
11N40MIMO	Ant2	2422	13.73	≤30.00	PASS
11N40MIMO	Ant3	2422	13.63	≤30.00	PASS
11N40MIMO	total	2422	19.60	≤30.00	PASS
11N40MIMO	Ant0	2437	23.55	≤30.00	PASS
11N40MIMO	Ant1	2437	23.58	≤30.00	PASS
11N40MIMO	Ant2	2437	24.13	≤30.00	PASS
11N40MIMO	Ant3	2437	24.39	≤30.00	PASS
11N40MIMO	total	2437	29.95	≤30.00	PASS
11N40MIMO	Ant0	2452	13.24	≤30.00	PASS
11N40MIMO	Ant1	2452	12.79	≤30.00	PASS
11N40MIMO	Ant2	2452	13.41	≤30.00	PASS
11N40MIMO	Ant3	2452	12.97	≤30.00	PASS
11N40MIMO	total	2452	19.13	≤30.00	PASS
11AX20MIMO	Ant0	2412	14.55	≤30.00	PASS
11AX20MIMO	Ant1	2412	13.87	≤30.00	PASS
11AX20MIMO	Ant2	2412	14.28	≤30.00	PASS
11AX20MIMO	Ant3	2412	14.18	≤30.00	PASS
11AX20MIMO	total	2412	20.25	≤30.00	PASS
11AX20MIMO	Ant0	2437	22.88	≤30.00	PASS
11AX20MIMO	Ant1	2437	23.15	≤30.00	PASS
11AX20MIMO	Ant2	2437	22.82	≤30.00	PASS
11AX20MIMO	Ant3	2437	24.43	≤30.00	PASS
11AX20MIMO	total	2437	29.39	≤30.00	PASS
11AX20MIMO	Ant0	2462	13.37	≤30.00	PASS
11AX20MIMO	Ant1	2462	13.27	≤30.00	PASS
11AX20MIMO	Ant2	2462	13.90	≤30.00	PASS
11AX20MIMO	Ant3	2462	13.55	≤30.00	PASS
11AX20MIMO	total	2462	19.55	≤30.00	PASS
11AX40MIMO	Ant0	2422	12.40	≤30.00	PASS
11AX40MIMO	Ant1	2422	11.75	≤30.00	PASS
11AX40MIMO	Ant2	2422	12.28	≤30.00	PASS
11AX40MIMO	Ant3	2422	11.92	≤30.00	PASS
11AX40MIMO	total	2422	18.12	≤30.00	PASS

11AX40MIMO	Ant0	2437	22.82	≤30.00	PASS
11AX40MIMO	Ant1	2437	22.73	≤30.00	PASS
11AX40MIMO	Ant2	2437	23.22	≤30.00	PASS
11AX40MIMO	Ant3	2437	23.65	≤30.00	PASS
11AX40MIMO	total	2437	29.14	≤30.00	PASS
11AX40MIMO	Ant0	2452	12.51	≤30.00	PASS
11AX40MIMO	Ant1	2452	11.96	≤30.00	PASS
11AX40MIMO	Ant2	2452	12.84	≤30.00	PASS
11AX40MIMO	Ant3	2452	11.90	≤30.00	PASS
11AX40MIMO	total	2452	18.34	≤30.00	PASS
11BE20MIMO	Ant0	2412	14.24	≤30.00	PASS
11BE20MIMO	Ant1	2412	13.42	≤30.00	PASS
11BE20MIMO	Ant2	2412	14.00	≤30.00	PASS
11BE20MIMO	Ant3	2412	13.86	≤30.00	PASS
11BE20MIMO	total	2412	19.91	≤30.00	PASS
11BE20MIMO	Ant0	2437	22.85	≤30.00	PASS
11BE20MIMO	Ant1	2437	23.14	≤30.00	PASS
11BE20MIMO	Ant2	2437	22.77	≤30.00	PASS
11BE20MIMO	Ant3	2437	24.30	≤30.00	PASS
11BE20MIMO	total	2437	29.33	≤30.00	PASS
11BE20MIMO	Ant0	2462	13.18	≤30.00	PASS
11BE20MIMO	Ant1	2462	12.90	≤30.00	PASS
11BE20MIMO	Ant2	2462	13.65	≤30.00	PASS
11BE20MIMO	Ant3	2462	13.11	≤30.00	PASS
11BE20MIMO	total	2462	19.24	≤30.00	PASS
11BE40MIMO	Ant0	2422	13.24	≤30.00	PASS
11BE40MIMO	Ant1	2422	12.31	≤30.00	PASS
11BE40MIMO	Ant2	2422	13.10	≤30.00	PASS
11BE40MIMO	Ant3	2422	12.81	≤30.00	PASS
11BE40MIMO	total	2422	18.90	≤30.00	PASS
11BE40MIMO	Ant0	2437	22.81	≤30.00	PASS
11BE40MIMO	Ant1	2437	22.72	≤30.00	PASS
11BE40MIMO	Ant2	2437	23.24	≤30.00	PASS
11BE40MIMO	Ant3	2437	23.52	≤30.00	PASS
11BE40MIMO	total	2437	29.11	≤30.00	PASS
11BE40MIMO	Ant0	2452	13.04	≤30.00	PASS
11BE40MIMO	Ant1	2452	12.26	≤30.00	PASS
11BE40MIMO	Ant2	2452	13.02	≤30.00	PASS
11BE40MIMO	Ant3	2452	12.52	≤30.00	PASS
11BE40MIMO	total	2452	18.74	≤30.00	PASS

Note: The duty cycle factor is compensated in the average conducted output power.

Beamforming

Test Mode	Antenna	Frequency [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B-CDD	Ant0	2412	18.63	≤30.00	PASS
11B-CDD	Ant1	2412	18.54	≤30.00	PASS
11B-CDD	Ant2	2412	18.31	≤30.00	PASS
11B-CDD	Ant3	2412	17.83	≤30.00	PASS
11B-CDD	total	2412	24.36	≤30.00	PASS
11B-CDD	Ant0	2437	21.02	≤30.00	PASS
11B-CDD	Ant1	2437	21.34	≤30.00	PASS
11B-CDD	Ant2	2437	20.99	≤30.00	PASS
11B-CDD	Ant3	2437	21.02	≤30.00	PASS
11B-CDD	total	2437	27.12	≤30.00	PASS
11B-CDD	Ant0	2462	17.85	≤30.00	PASS
11B-CDD	Ant1	2462	18.43	≤30.00	PASS
11B-CDD	Ant2	2462	18.07	≤30.00	PASS
11B-CDD	Ant3	2462	17.62	≤30.00	PASS
11B-CDD	total	2462	24.02	≤30.00	PASS
11G-CDD	Ant0	2412	14.08	≤30.00	PASS
11G-CDD	Ant1	2412	13.20	≤30.00	PASS
11G-CDD	Ant2	2412	13.24	≤30.00	PASS
11G-CDD	Ant3	2412	13.26	≤30.00	PASS
11G-CDD	total	2412	19.48	≤30.00	PASS
11G-CDD	Ant0	2437	20.60	≤30.00	PASS
11G-CDD	Ant1	2437	20.44	≤30.00	PASS
11G-CDD	Ant2	2437	20.19	≤30.00	PASS
11G-CDD	Ant3	2437	21.64	≤30.00	PASS
11G-CDD	total	2437	26.77	≤30.00	PASS
11G-CDD	Ant0	2462	13.09	≤30.00	PASS
11G-CDD	Ant1	2462	12.72	≤30.00	PASS
11G-CDD	Ant2	2462	13.38	≤30.00	PASS
11G-CDD	Ant3	2462	12.95	≤30.00	PASS
11G-CDD	total	2462	19.06	≤30.00	PASS
11N20MIMO	Ant0	2412	13.53	≤30.00	PASS
11N20MIMO	Ant1	2412	13.16	≤30.00	PASS
11N20MIMO	Ant2	2412	13.15	≤30.00	PASS
11N20MIMO	Ant3	2412	13.14	≤30.00	PASS
11N20MIMO	total	2412	19.27	≤30.00	PASS
11N20MIMO	Ant0	2437	20.30	≤30.00	PASS
11N20MIMO	Ant1	2437	20.39	≤30.00	PASS
11N20MIMO	Ant2	2437	20.34	≤30.00	PASS

11N20MIMO	Ant3	2437	21.66	≤30.00	PASS
11N20MIMO	total	2437	26.73	≤30.00	PASS
11N20MIMO	Ant0	2462	12.95	≤30.00	PASS
11N20MIMO	Ant1	2462	12.67	≤30.00	PASS
11N20MIMO	Ant2	2462	13.50	≤30.00	PASS
11N20MIMO	Ant3	2462	12.70	≤30.00	PASS
11N20MIMO	total	2462	18.99	≤30.00	PASS
11N40MIMO	Ant0	2422	11.54	≤30.00	PASS
11N40MIMO	Ant1	2422	10.52	≤30.00	PASS
11N40MIMO	Ant2	2422	11.26	≤30.00	PASS
11N40MIMO	Ant3	2422	11.11	≤30.00	PASS
11N40MIMO	total	2422	17.14	≤30.00	PASS
11N40MIMO	Ant0	2437	21.08	≤30.00	PASS
11N40MIMO	Ant1	2437	21.26	≤30.00	PASS
11N40MIMO	Ant2	2437	21.81	≤30.00	PASS
11N40MIMO	Ant3	2437	21.87	≤30.00	PASS
11N40MIMO	total	2437	27.75	≤30.00	PASS
11N40MIMO	Ant0	2452	10.78	≤30.00	PASS
11N40MIMO	Ant1	2452	10.39	≤30.00	PASS
11N40MIMO	Ant2	2452	11.01	≤30.00	PASS
11N40MIMO	Ant3	2452	10.55	≤30.00	PASS
11N40MIMO	total	2452	16.71	≤30.00	PASS
11AX20MIMO	Ant0	2412	12.09	≤30.00	PASS
11AX20MIMO	Ant1	2412	11.32	≤30.00	PASS
11AX20MIMO	Ant2	2412	11.82	≤30.00	PASS
11AX20MIMO	Ant3	2412	11.79	≤30.00	PASS
11AX20MIMO	total	2412	17.78	≤30.00	PASS
11AX20MIMO	Ant0	2437	20.35	≤30.00	PASS
11AX20MIMO	Ant1	2437	20.70	≤30.00	PASS
11AX20MIMO	Ant2	2437	20.51	≤30.00	PASS
11AX20MIMO	Ant3	2437	22.09	≤30.00	PASS
11AX20MIMO	total	2437	26.99	≤30.00	PASS
11AX20MIMO	Ant0	2462	10.84	≤30.00	PASS
11AX20MIMO	Ant1	2462	10.92	≤30.00	PASS
11AX20MIMO	Ant2	2462	11.48	≤30.00	PASS
11AX20MIMO	Ant3	2462	11.20	≤30.00	PASS
11AX20MIMO	total	2462	17.14	≤30.00	PASS
11AX40MIMO	Ant0	2422	9.9	≤30.00	PASS
11AX40MIMO	Ant1	2422	9.35	≤30.00	PASS
11AX40MIMO	Ant2	2422	9.74	≤30.00	PASS
11AX40MIMO	Ant3	2422	9.58	≤30.00	PASS
11AX40MIMO	total	2422	15.67	≤30.00	PASS

11AX40MIMO	Ant0	2437	20.29	≤30.00	PASS
11AX40MIMO	Ant1	2437	20.43	≤30.00	PASS
11AX40MIMO	Ant2	2437	20.86	≤30.00	PASS
11AX40MIMO	Ant3	2437	21.25	≤30.00	PASS
11AX40MIMO	total	2437	26.74	≤30.00	PASS
11AX40MIMO	Ant0	2452	10.02	≤30.00	PASS
11AX40MIMO	Ant1	2452	9.52	≤30.00	PASS
11AX40MIMO	Ant2	2452	10.49	≤30.00	PASS
11AX40MIMO	Ant3	2452	9.53	≤30.00	PASS
11AX40MIMO	total	2452	15.93	≤30.00	PASS
11BE20MIMO	Ant0	2412	11.93	≤30.00	PASS
11BE20MIMO	Ant1	2412	11.05	≤30.00	PASS
11BE20MIMO	Ant2	2412	11.65	≤30.00	PASS
11BE20MIMO	Ant3	2412	11.34	≤30.00	PASS
11BE20MIMO	total	2412	17.53	≤30.00	PASS
11BE20MIMO	Ant0	2437	20.42	≤30.00	PASS
11BE20MIMO	Ant1	2437	20.65	≤30.00	PASS
11BE20MIMO	Ant2	2437	20.28	≤30.00	PASS
11BE20MIMO	Ant3	2437	21.76	≤30.00	PASS
11BE20MIMO	total	2437	26.84	≤30.00	PASS
11BE20MIMO	Ant0	2462	10.83	≤30.00	PASS
11BE20MIMO	Ant1	2462	10.46	≤30.00	PASS
11BE20MIMO	Ant2	2462	11.19	≤30.00	PASS
11BE20MIMO	Ant3	2462	10.58	≤30.00	PASS
11BE20MIMO	total	2462	16.79	≤30.00	PASS
11BE40MIMO	Ant0	2422	10.93	≤30.00	PASS
11BE40MIMO	Ant1	2422	9.78	≤30.00	PASS
11BE40MIMO	Ant2	2422	10.73	≤30.00	PASS
11BE40MIMO	Ant3	2422	10.27	≤30.00	PASS
11BE40MIMO	total	2422	16.47	≤30.00	PASS
11BE40MIMO	Ant0	2437	20.42	≤30.00	PASS
11BE40MIMO	Ant1	2437	20.21	≤30.00	PASS
11BE40MIMO	Ant2	2437	21.73	≤30.00	PASS
11BE40MIMO	Ant3	2437	21.16	≤30.00	PASS
11BE40MIMO	total	2437	26.67	≤30.00	PASS
11BE40MIMO	Ant0	2452	10.63	≤30.00	PASS
11BE40MIMO	Ant1	2452	9.82	≤30.00	PASS
11BE40MIMO	Ant2	2452	10.62	≤30.00	PASS
11BE40MIMO	Ant3	2452	10.10	≤30.00	PASS
11BE40MIMO	total	2452	16.33	≤30.00	PASS

Note: The duty cycle factor is compensated in the average conducted output power.

3.6 Power Spectral Density

3.6.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmitting.

3.6.2 Test Procedure

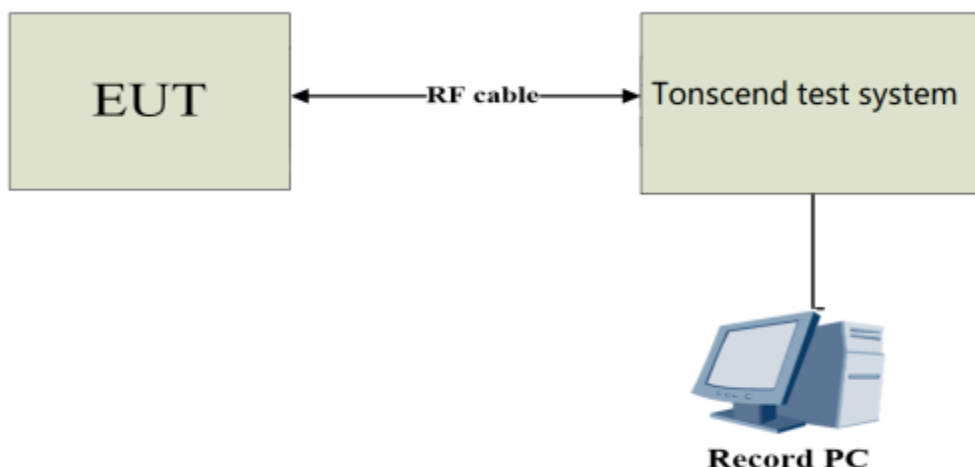
Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

a) The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below.

b) Spectrum analyser settings as following:

Spectrum Parameters	Setting
Span Frequency	2 times the OBW bandwidth
RBW	3 kHz
VBW	10 kHz
Detector	AVGPM
Trace	Max Hold
Sweep Time	Auto

3.6.3 Test Setup



3.6.4 The Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B-CDD	Ant0	2412	-8.45	≤8.00	PASS
11B-CDD	Ant1	2412	-8.08	≤8.00	PASS
11B-CDD	Ant2	2412	-7.83	≤8.00	PASS
11B-CDD	Ant3	2412	-8.29	≤8.00	PASS
11B-CDD	total	2412	-2.14	≤8.00	PASS
11B-CDD	Ant0	2437	-5.27	≤8.00	PASS
11B-CDD	Ant1	2437	-5.85	≤8.00	PASS
11B-CDD	Ant2	2437	-4.67	≤8.00	PASS
11B-CDD	Ant3	2437	-5.39	≤8.00	PASS
11B-CDD	total	2437	0.75	≤8.00	PASS
11B-CDD	Ant0	2462	-8.25	≤8.00	PASS
11B-CDD	Ant1	2462	-8.42	≤8.00	PASS
11B-CDD	Ant2	2462	-8.47	≤8.00	PASS
11B-CDD	Ant3	2462	-8.48	≤8.00	PASS
11B-CDD	total	2462	-2.38	≤8.00	PASS
11G-CDD	Ant1	2412	-13.47	≤8.00	PASS
11G-CDD	Ant2	2412	-13.30	≤8.00	PASS
11G-CDD	Ant3	2412	-12.94	≤8.00	PASS
11G-CDD	total	2412	-7.04	≤8.00	PASS
11G-CDD	Ant0	2412	-12.60	≤8.00	PASS
11G-CDD	Ant0	2437	-5.40	≤8.00	PASS
11G-CDD	Ant1	2437	-5.64	≤8.00	PASS
11G-CDD	Ant2	2437	-5.54	≤8.00	PASS
11G-CDD	Ant3	2437	-4.11	≤8.00	PASS
11G-CDD	total	2437	0.89	≤8.00	PASS
11G-CDD	Ant0	2462	-13.32	≤8.00	PASS
11G-CDD	Ant1	2462	-13.47	≤8.00	PASS
11G-CDD	Ant2	2462	-13.69	≤8.00	PASS
11G-CDD	Ant3	2462	-13.42	≤8.00	PASS
11G-CDD	total	2462	-7.45	≤8.00	PASS
11N20MIMO	Ant0	2412	-13.09	≤8.00	PASS
11N20MIMO	Ant1	2412	-12.76	≤8.00	PASS
11N20MIMO	Ant2	2412	-13.09	≤8.00	PASS
11N20MIMO	Ant3	2412	-12.81	≤8.00	PASS
11N20MIMO	total	2412	-6.91	≤8.00	PASS
11N20MIMO	Ant0	2437	-6.02	≤8.00	PASS
11N20MIMO	Ant1	2437	-6.29	≤8.00	PASS
11N20MIMO	Ant2	2437	-6.21	≤8.00	PASS
11N20MIMO	Ant3	2437	-5.33	≤8.00	PASS
11N20MIMO	total	2437	0.07	≤8.00	PASS

11N20MIMO	Ant0	2462	-13.26	≤8.00	PASS
11N20MIMO	Ant1	2462	-13.85	≤8.00	PASS
11N20MIMO	Ant2	2462	-13.02	≤8.00	PASS
11N20MIMO	Ant3	2462	-13.71	≤8.00	PASS
11N20MIMO	total	2462	-7.43	≤8.00	PASS
11N40MIMO	Ant0	2422	-17.89	≤8.00	PASS
11N40MIMO	Ant1	2422	-18.40	≤8.00	PASS
11N40MIMO	total	2422	-11.90	≤8.00	PASS
11N40MIMO	Ant2	2422	-17.51	≤8.00	PASS
11N40MIMO	Ant3	2422	-17.93	≤8.00	PASS
11N40MIMO	Ant0	2437	-7.85	≤8.00	PASS
11N40MIMO	Ant1	2437	-8.40	≤8.00	PASS
11N40MIMO	Ant2	2437	-6.97	≤8.00	PASS
11N40MIMO	total	2437	-1.58	≤8.00	PASS
11N40MIMO	Ant3	2437	-7.33	≤8.00	PASS
11N40MIMO	Ant0	2452	-18.34	≤8.00	PASS
11N40MIMO	Ant1	2452	-18.98	≤8.00	PASS
11N40MIMO	Ant2	2452	-17.82	≤8.00	PASS
11N40MIMO	Ant3	2452	-18.48	≤8.00	PASS
11N40MIMO	total	2452	-12.36	≤8.00	PASS
11AX20MIMO	Ant0	2412	-16.49	≤8.00	PASS
11AX20MIMO	Ant1	2412	-17.65	≤8.00	PASS
11AX20MIMO	Ant2	2412	-16.32	≤8.00	PASS
11AX20MIMO	Ant3	2412	-16.22	≤8.00	PASS
11AX20MIMO	total	2412	-10.61	≤8.00	PASS
11AX20MIMO	Ant0	2437	-8.42	≤8.00	PASS
11AX20MIMO	Ant1	2437	-8.56	≤8.00	PASS
11AX20MIMO	Ant2	2437	-7.82	≤8.00	PASS
11AX20MIMO	Ant3	2437	-7.05	≤8.00	PASS
11AX20MIMO	total	2437	-1.90	≤8.00	PASS
11AX20MIMO	Ant0	2462	-17.36	≤8.00	PASS
11AX20MIMO	Ant1	2462	-18.40	≤8.00	PASS
11AX20MIMO	Ant2	2462	-16.98	≤8.00	PASS
11AX20MIMO	Ant3	2462	-18.35	≤8.00	PASS
11AX20MIMO	total	2462	-11.71	≤8.00	PASS
11AX40MIMO	Ant1	2422	-22.31	≤8.00	PASS
11AX40MIMO	Ant2	2422	-21.86	≤8.00	PASS
11AX40MIMO	Ant3	2422	-22.97	≤8.00	PASS
11AX40MIMO	total	2422	-16.18	≤8.00	PASS
11AX40MIMO	Ant0	2422	-21.75	≤8.00	PASS
11AX40MIMO	Ant0	2437	-12.58	≤8.00	PASS
11AX40MIMO	Ant1	2437	-11.49	≤8.00	PASS

11AX40MIMO	Ant2	2437	-10.28	≤8.00	PASS
11AX40MIMO	Ant3	2437	-11.11	≤8.00	PASS
11AX40MIMO	total	2437	-5.27	≤8.00	PASS
11AX40MIMO	Ant1	2452	-21.98	≤8.00	PASS
11AX40MIMO	Ant2	2452	-21.52	≤8.00	PASS
11AX40MIMO	Ant3	2452	-22.43	≤8.00	PASS
11AX40MIMO	total	2452	-15.80	≤8.00	PASS
11AX40MIMO	Ant0	2452	-21.43	≤8.00	PASS
11BE20MIMO	Ant0	2412	-17.39	≤8.00	PASS
11BE20MIMO	Ant1	2412	-17.91	≤8.00	PASS
11BE20MIMO	Ant2	2412	-16.83	≤8.00	PASS
11BE20MIMO	Ant3	2412	-17.82	≤8.00	PASS
11BE20MIMO	total	2412	-11.45	≤8.00	PASS
11BE20MIMO	Ant0	2437	-8.25	≤8.00	PASS
11BE20MIMO	Ant1	2437	-8.27	≤8.00	PASS
11BE20MIMO	Ant2	2437	-8.37	≤8.00	PASS
11BE20MIMO	Ant3	2437	-7.00	≤8.00	PASS
11BE20MIMO	total	2437	-1.91	≤8.00	PASS
11BE20MIMO	Ant0	2462	-18.72	≤8.00	PASS
11BE20MIMO	Ant1	2462	-19.13	≤8.00	PASS
11BE20MIMO	Ant2	2462	-17.53	≤8.00	PASS
11BE20MIMO	Ant3	2462	-18.05	≤8.00	PASS
11BE20MIMO	total	2462	-12.29	≤8.00	PASS
11BE40MIMO	Ant0	2422	-21.42	≤8.00	PASS
11BE40MIMO	Ant1	2422	-20.86	≤8.00	PASS
11BE40MIMO	Ant2	2422	-19.83	≤8.00	PASS
11BE40MIMO	Ant3	2422	-20.13	≤8.00	PASS
11BE40MIMO	total	2422	-14.50	≤8.00	PASS
11BE40MIMO	Ant0	2437	-11.87	≤8.00	PASS
11BE40MIMO	Ant1	2437	-10.71	≤8.00	PASS
11BE40MIMO	Ant2	2437	-9.33	≤8.00	PASS
11BE40MIMO	Ant3	2437	-10.17	≤8.00	PASS
11BE40MIMO	total	2437	-4.40	≤8.00	PASS
11BE40MIMO	Ant0	2452	-21.63	≤8.00	PASS
11BE40MIMO	Ant1	2452	-20.90	≤8.00	PASS
11BE40MIMO	Ant2	2452	-19.76	≤8.00	PASS
11BE40MIMO	Ant3	2452	-21.18	≤8.00	PASS
11BE40MIMO	total	2452	-14.79	≤8.00	PASS

Note: The line loss are compensated in the test graph.

The duty cycle factor has been compensated internally in the software.

Beamforming conducted power less than no beamforming conducted power, so only no beamforming conducted power spectral density was recorded.

Test Graphs



11B-CDD-Ant0-2412-PASS



11B-CDD-Ant1-2412-PASS



11B-CDD-Ant2-2412-PASS



11B-CDD-Ant3-2412-PASS



11B-CDD-Ant0-2437-PASS



11B-CDD-Ant1-2437-PASS



11B-CDD-Ant2-2437-PASS



11B-CDD-Ant3-2437-PASS



11B-CDD-Ant0-2462-PASS



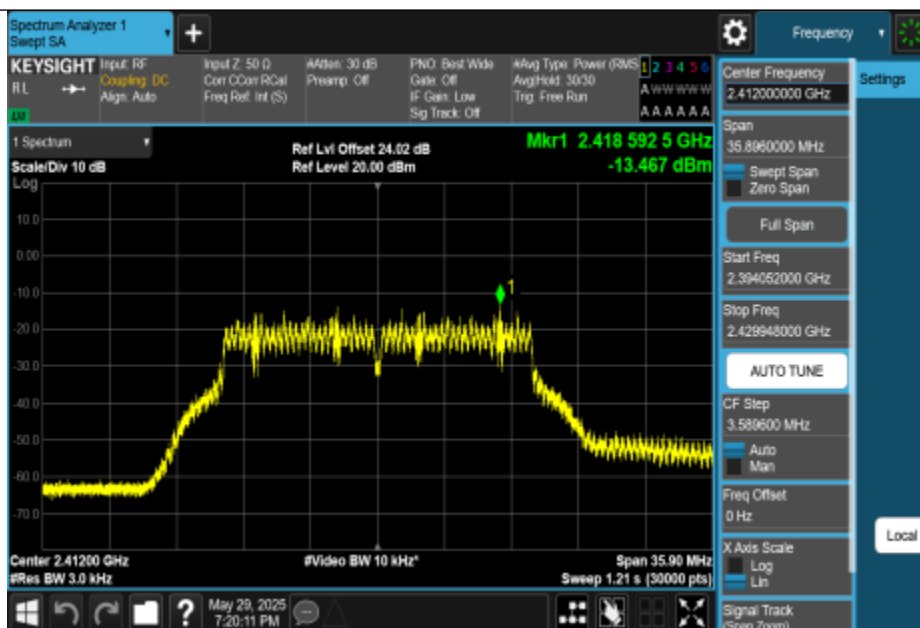
11B-CDD-Ant1-2462-PASS



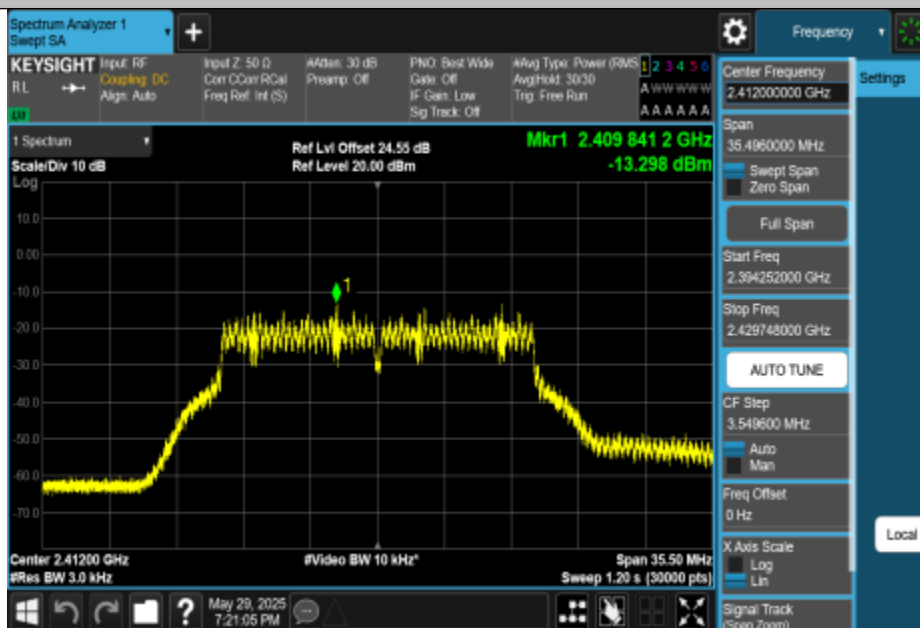
11B-CDD-Ant2-2462-PASS



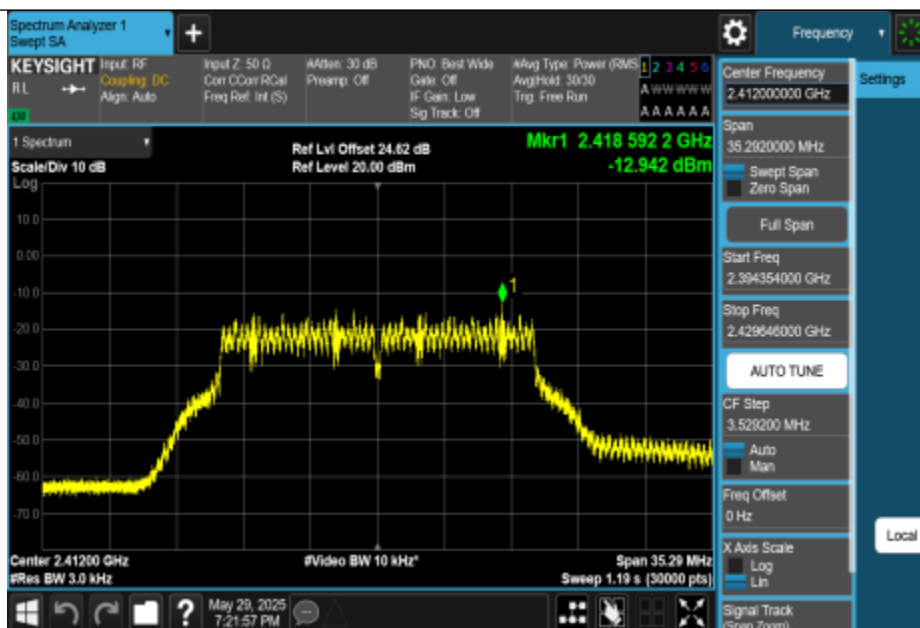
11B-CDD-Ant3-2462-PASS



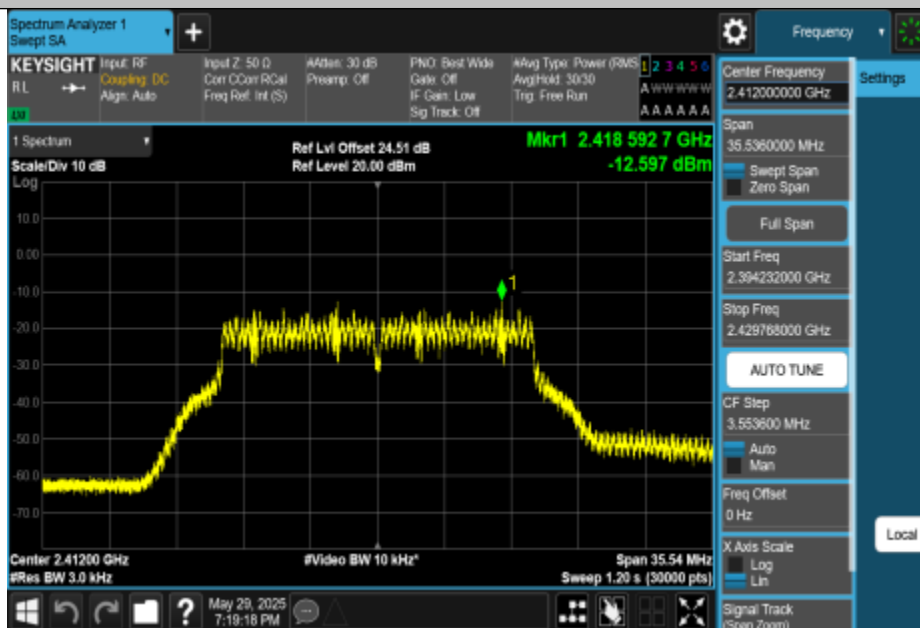
11G-CDD-Ant1-2412-PASS



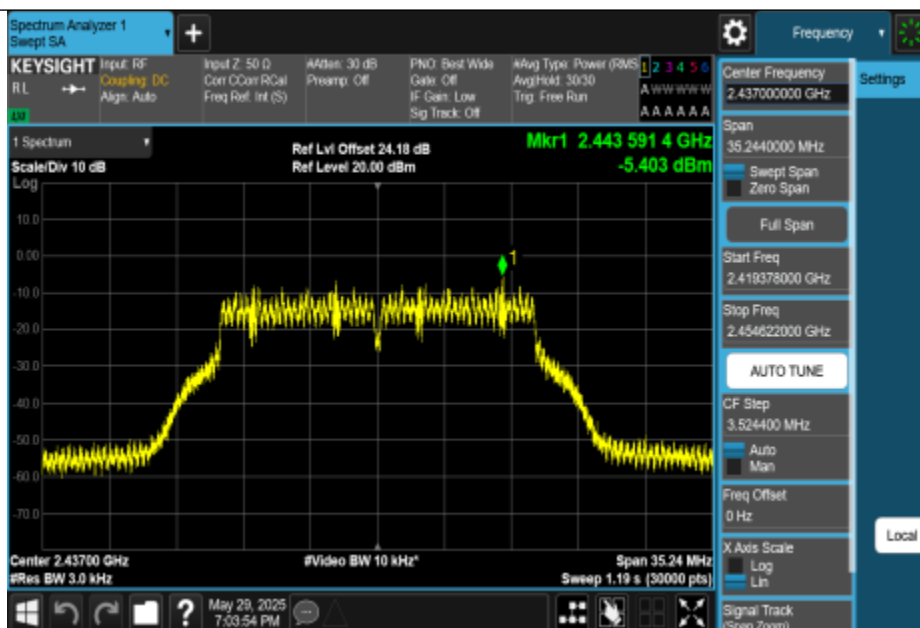
11G-CDD-Ant2-2412-PASS



11G-CDD-Ant3-2412-PASS



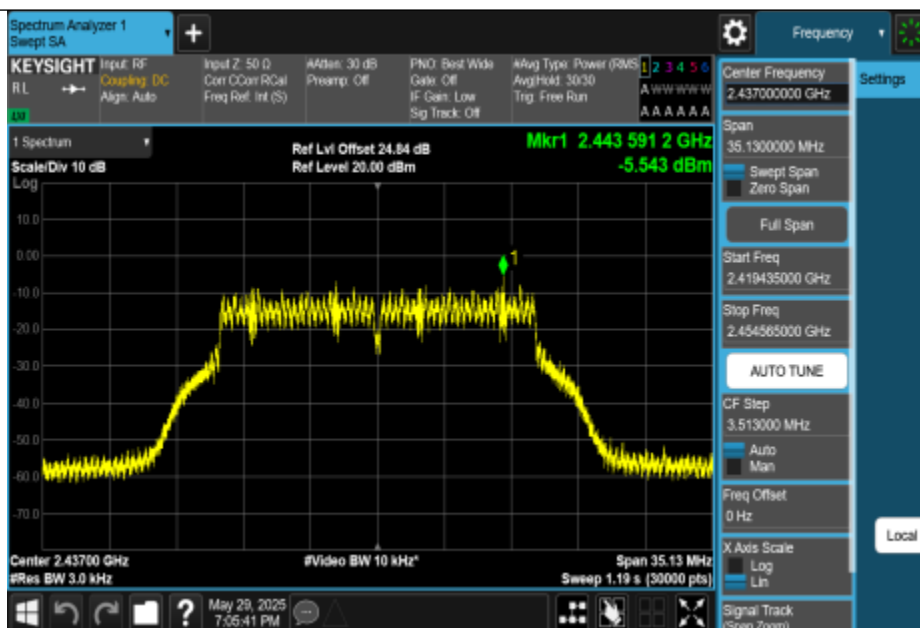
11G-CDD-Ant0-2412-PASS



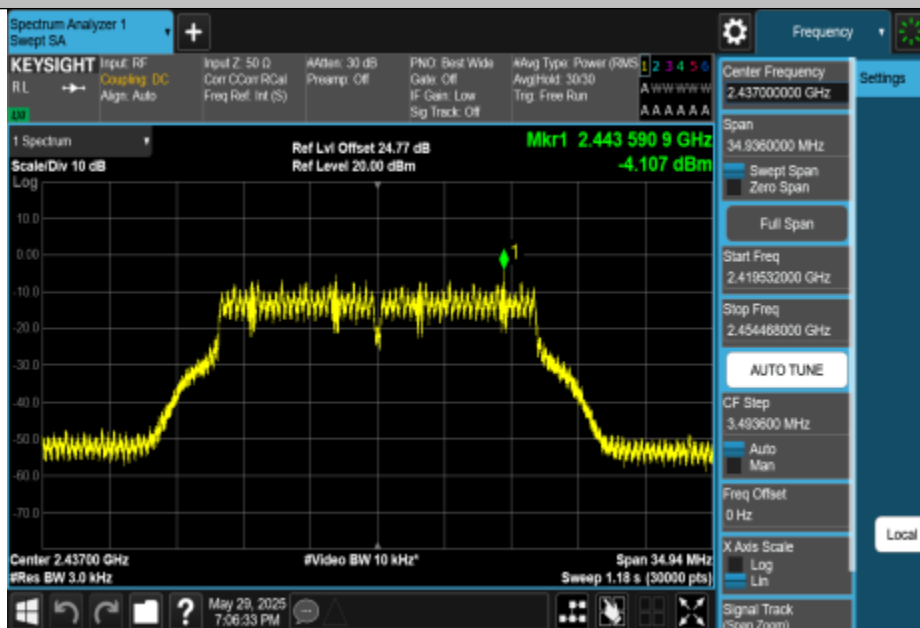
11G-CDD-Ant0-2437-PASS



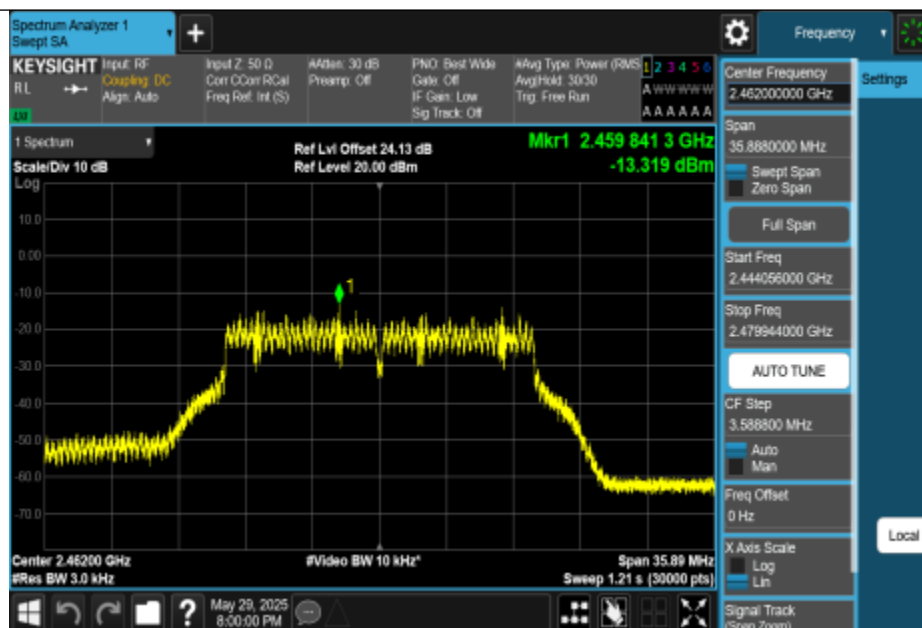
11G-CDD-Ant1-2437-PASS



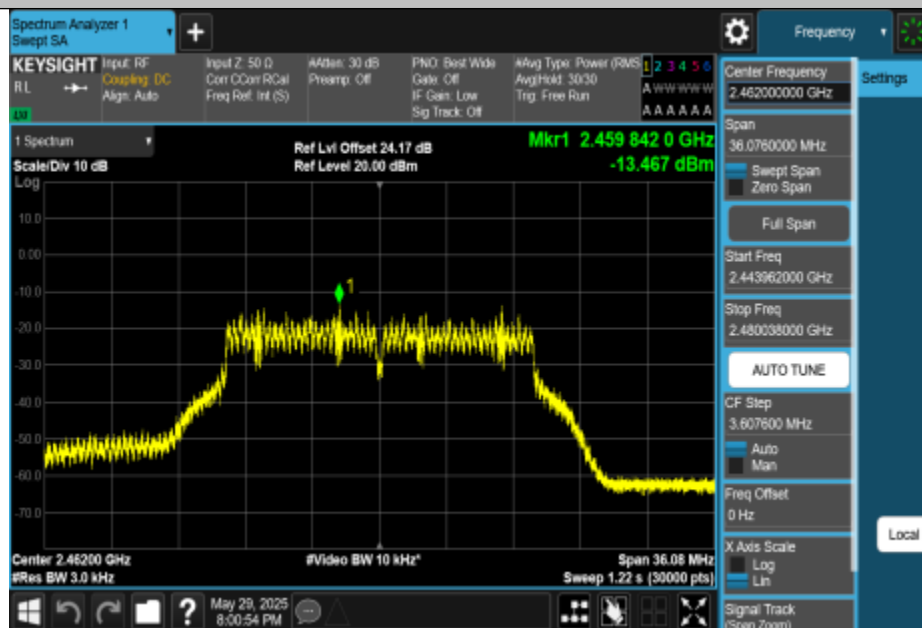
11G-CDD-Ant2-2437-PASS



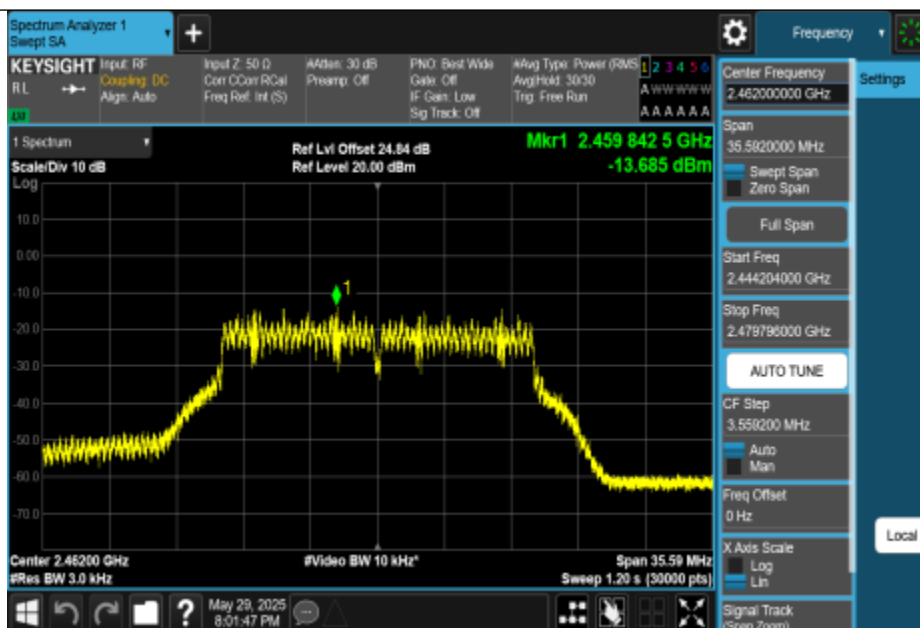
11G-CDD-Ant3-2437-PASS



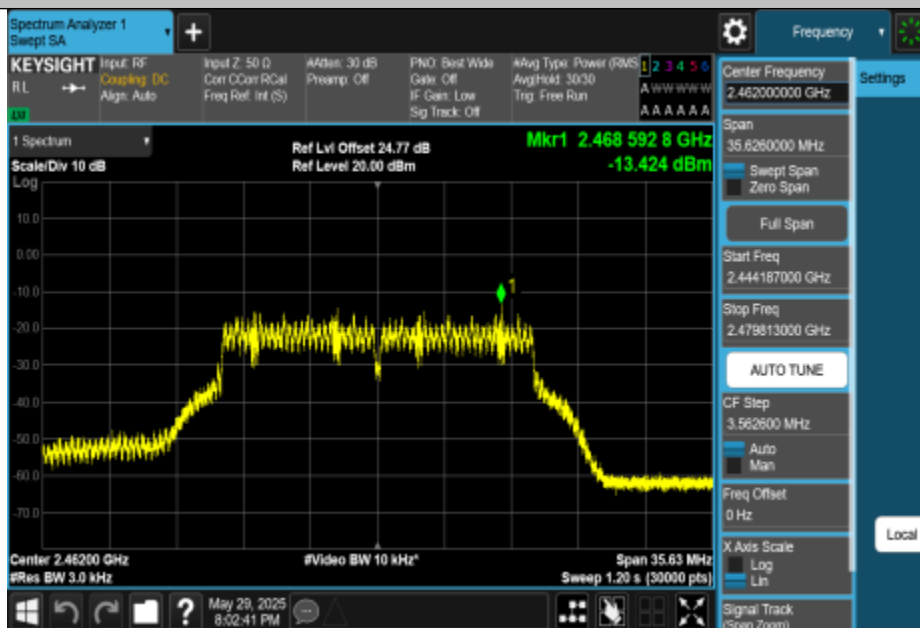
11G-CDD-Ant0-2462-PASS



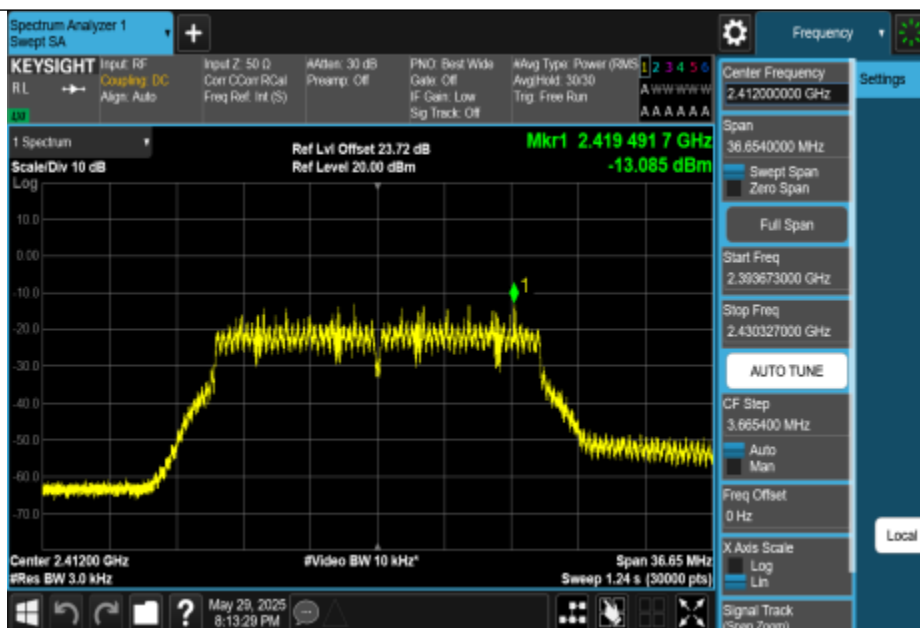
11G-CDD-Ant1-2462-PASS



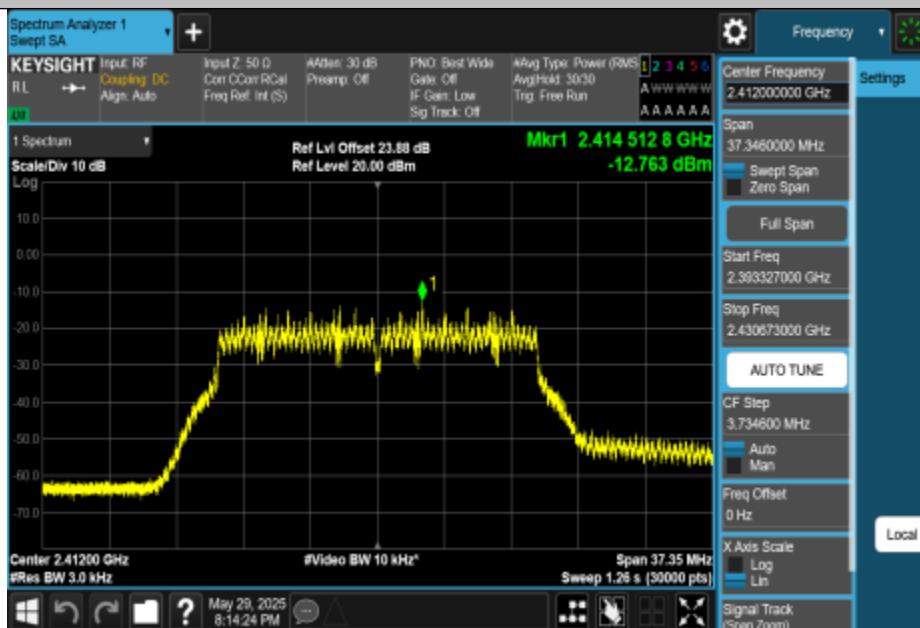
11G-CDD-Ant2-2462-PASS



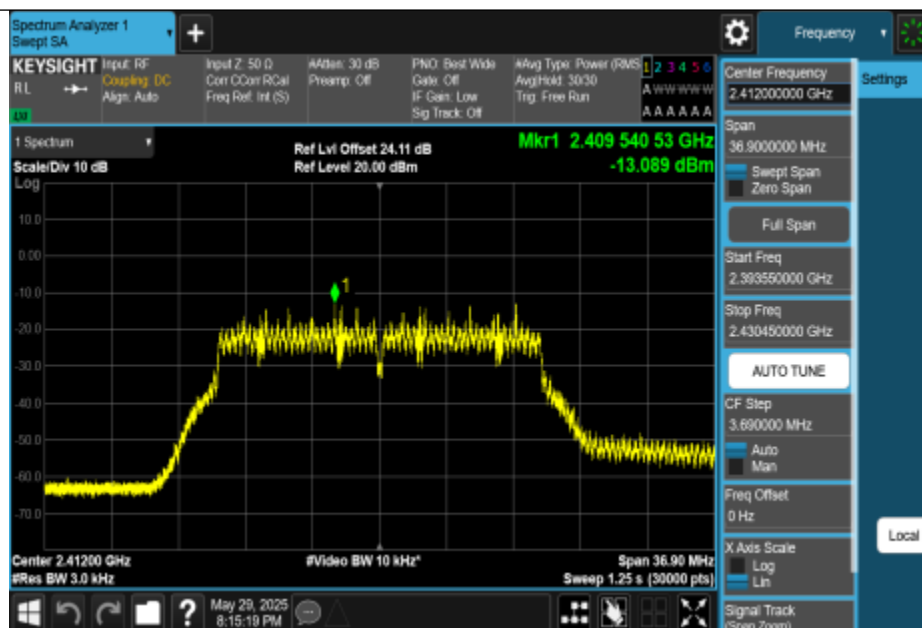
11G-CDD-Ant3-2462-PASS



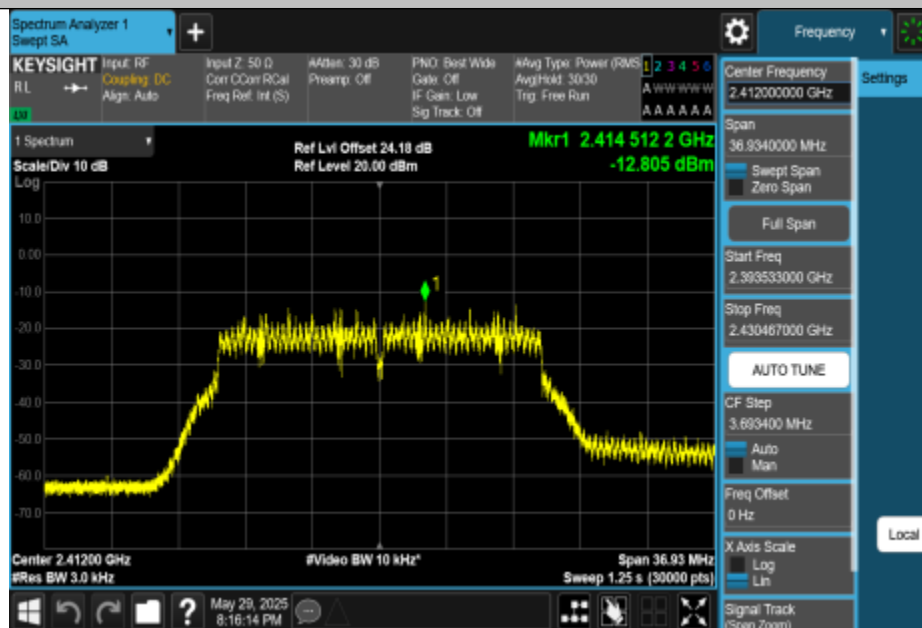
11N20MIMO-Ant0-2412-PASS



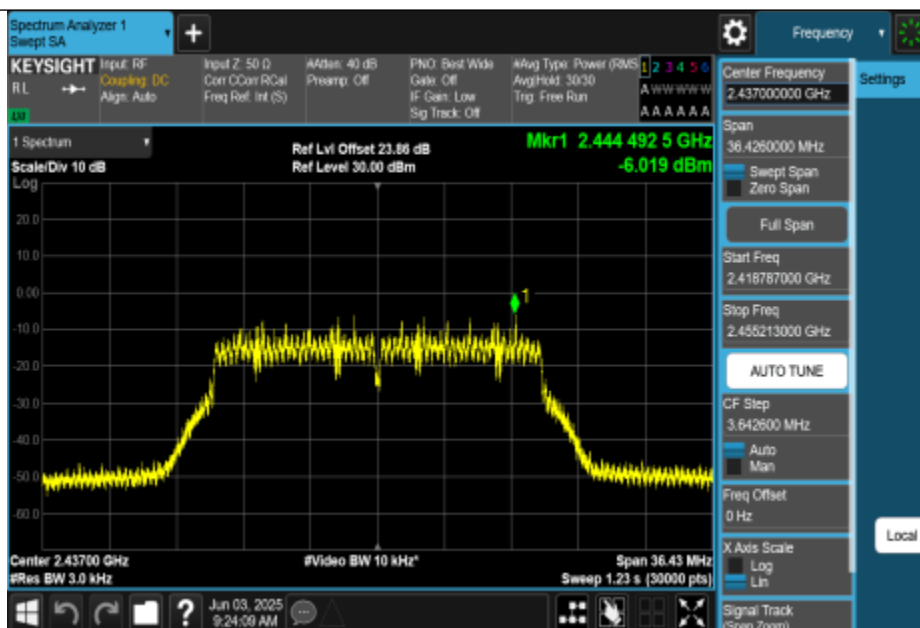
11N20MIMO-Ant1-2412-PASS



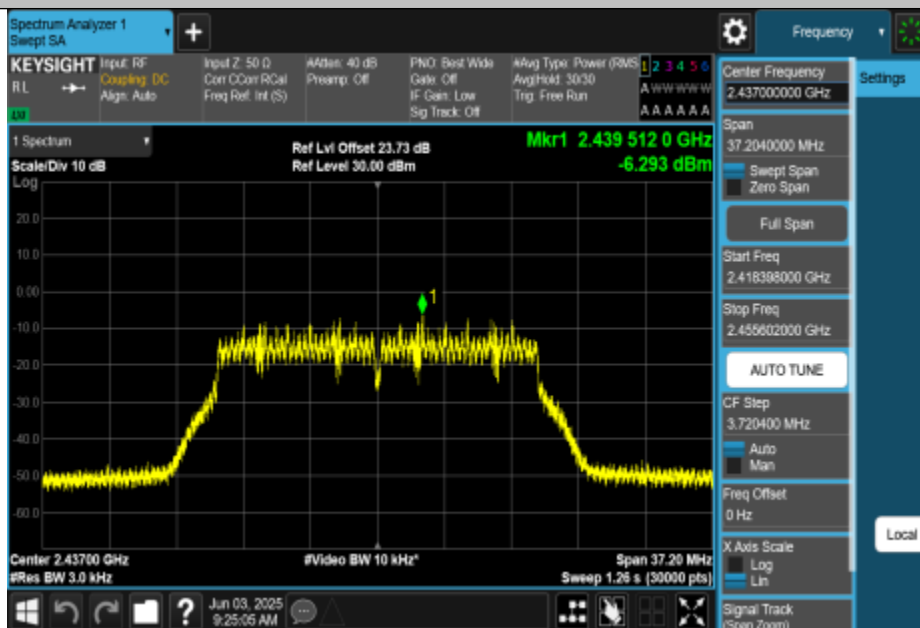
11N20MIMO-Ant2-2412-PASS



11N20MIMO-Ant3-2412-PASS



11N20MIMO-Ant0-2437-PASS



11N20MIMO-Ant1-2437-PASS