9. 6 dB DTS Bandwidth and 99 % Occupied Bandwidth

9.1. Block diagram of test setup

Same as section 8.1

9.2. Limits

CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 3			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(a)(2) ISED RSS-247 5.2 (a)	6 dB Bandwidth	≥ 500 kHz	2400-2483.5
ISED RSS-Gen Clause 6.7	99 % Occupied Bandwidth	For reporting purposes only.	2400-2483.5

9.3. Test Procedure

Connect the UUT to the spectrum analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 6 dB Bandwidth :100 kHz For 99 % Occupied Bandwidth :1 % to 5 % of the occupied bandwidth
VBW	For 6 dB Bandwidth: ≥ 3 × RBW For 99 % Occupied Bandwidth : ≥ 3×RBW
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB and 99 % relative to the maximum level measured in the fundamental emission.

9.4. Results

6dB bandwidth:

Test Mode	Ant.	Freq. (MHz)	DTS BW (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11B	Ant1	2412	12.080	2405.960	2418.040	0.5	PASS
	Ant2	2412	10.080	2406.960	2417.040	0.5	PASS
	Ant1	2437	12.560	2430.960	2443.520	0.5	PASS
	Ant2	2437	13.040	2430.480	2443.520	0.5	PASS
	Ant1	2462	13.040	2455.480	2468.520	0.5	PASS
	Ant2	2462	13.040	2455.480	2468.520	0.5	PASS
11G	Ant1	2412	16.360	2403.800	2420.160	0.5	PASS
	Ant2	2412	16.360	2403.800	2420.160	0.5	PASS
	Ant1	2437	16.320	2428.840	2445.160	0.5	PASS
	Ant2	2437	16.320	2428.840	2445.160	0.5	PASS
	Ant1	2462	16.320	2453.840	2470.160	0.5	PASS
	Ant2	2462	16.320	2453.840	2470.160	0.5	PASS
11N20MIMO	Ant1	2412	17.640	2403.160	2420.800	0.5	PASS
	Ant2	2412	17.280	2403.240	2420.520	0.5	PASS
	Ant1	2437	17.560	2428.200	2445.760	0.5	PASS
	Ant2	2437	17.560	2428.200	2445.760	0.5	PASS
	Ant1	2462	17.560	2453.200	2470.760	0.5	PASS
	Ant2	2462	17.280	2453.240	2470.520	0.5	PASS
11N40MIMO	Ant1	2422	35.280	2404.240	2439.520	0.5	PASS
	Ant2	2422	35.440	2404.080	2439.520	0.5	PASS
	Ant1	2437	35.680	2419.160	2454.840	0.5	PASS

	Ant2	2437	36.000	2418.840	2454.840	0.5	PASS
	Ant1	2452	35.360	2434.400	2469.760	0.5	PASS
	Ant2	2452	35.360	2434.400	2469.760	0.5	PASS

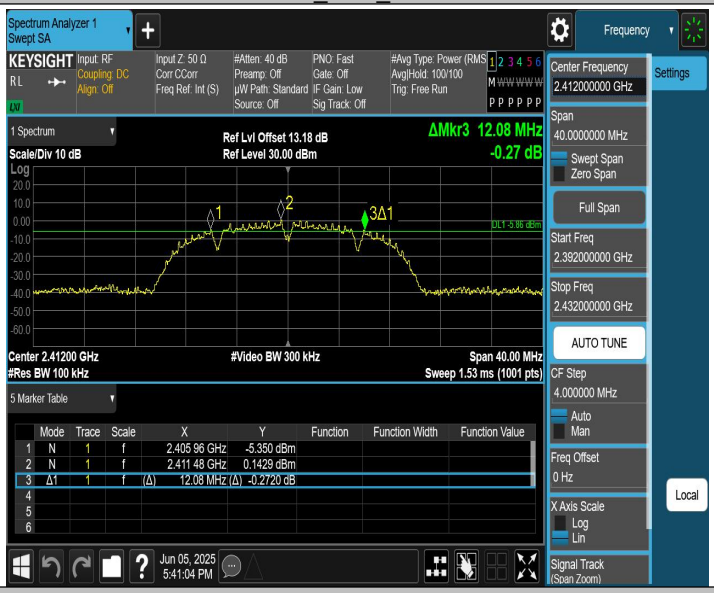
99 % bandwidth：

Test Mode	Ant.	Channel Freq. (MHz)	OCB (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11B	Ant1	2412	16.723	2403.5975	2420.3205	---	---
	Ant2	2412	16.720	2403.5775	2420.2975	---	---
	Ant1	2437	16.752	2428.6404	2445.3924	---	---
	Ant2	2437	16.835	2428.5649	2445.3999	---	---
	Ant1	2462	16.723	2453.6283	2470.3513	---	---
	Ant2	2462	16.815	2453.5725	2470.3875	---	---
11G	Ant1	2412	17.052	2403.4382	2420.4902	---	---
	Ant2	2412	16.941	2403.5047	2420.4457	---	---
	Ant1	2437	17.075	2428.4581	2445.5331	---	---
	Ant2	2437	17.042	2428.4730	2445.5150	---	---
	Ant1	2462	17.134	2453.4167	2470.5507	---	---
	Ant2	2462	17.006	2453.4822	2470.4882	---	---
11N20MIMO	Ant1	2412	17.847	2403.0565	2420.9035	---	---
	Ant2	2412	17.786	2403.0665	2420.8525	---	---
	Ant1	2437	17.847	2428.0689	2445.9159	---	---
	Ant2	2437	17.813	2428.1039	2445.9169	---	---
	Ant1	2462	17.831	2453.0885	2470.9195	---	---
	Ant2	2462	17.829	2453.0777	2470.9067	---	---
11N40MIMO	Ant1	2422	36.512	2403.6790	2440.1910	---	---
	Ant2	2422	36.517	2403.6946	2440.2116	---	---
	Ant1	2437	36.578	2418.6637	2455.2417	---	---
	Ant2	2437	36.641	2418.6060	2455.2470	---	---
	Ant1	2452	36.500	2433.7933	2470.2933	---	---
	Ant2	2452	36.641	2433.7217	2470.3627	---	---

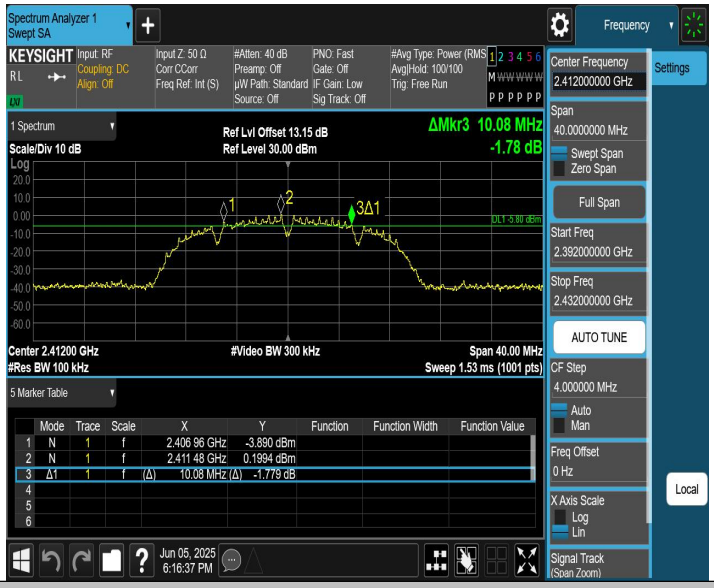
9.5. Original test data

6dB bandwidth:

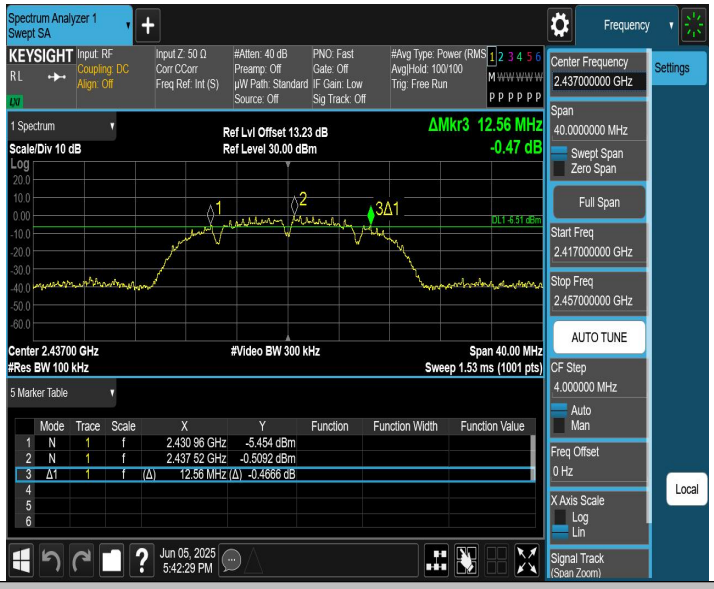
11B_Ant1_2412



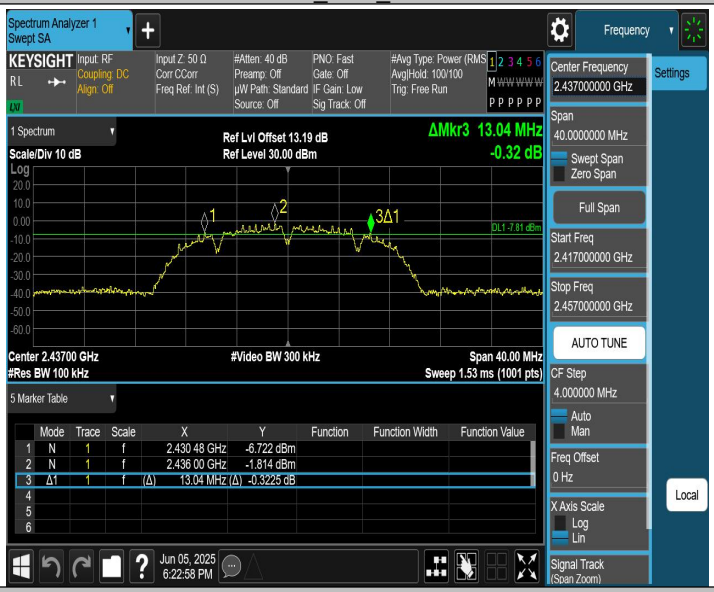
11B_Ant2_2412



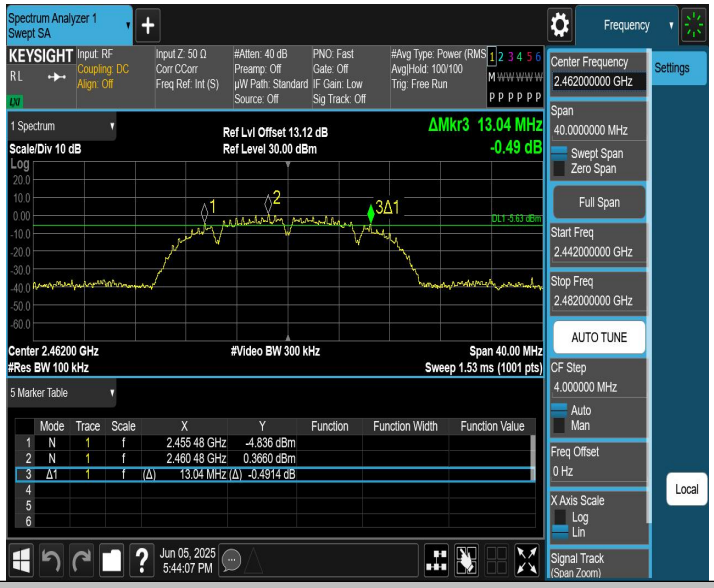
11B_Ant1_2437



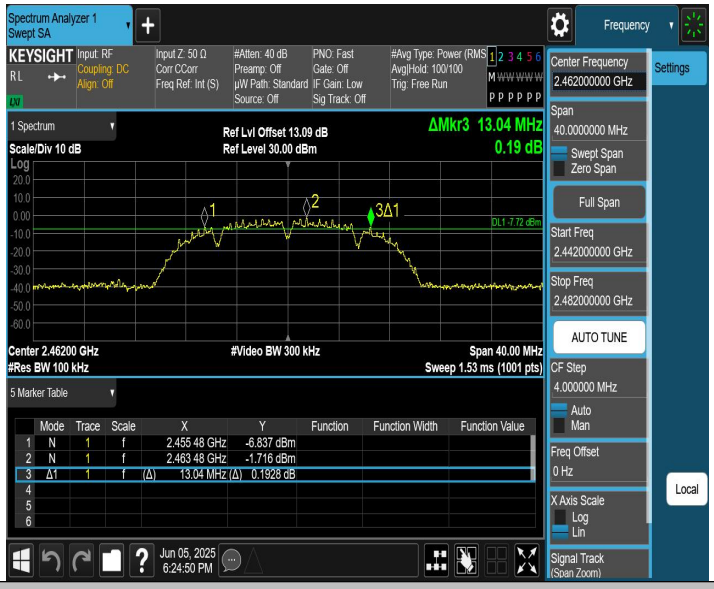
11B_Ant2_2437



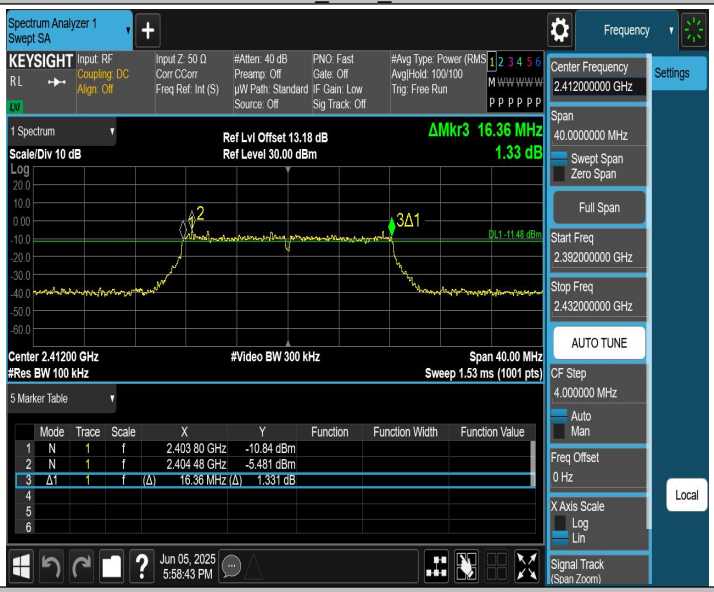
11B_Ant1_2462



11B_Ant2_2462



11G_Ant1_2412



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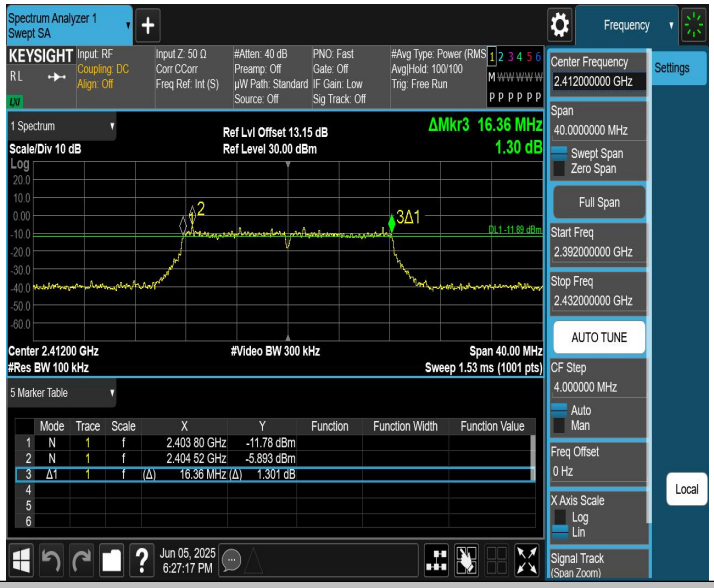
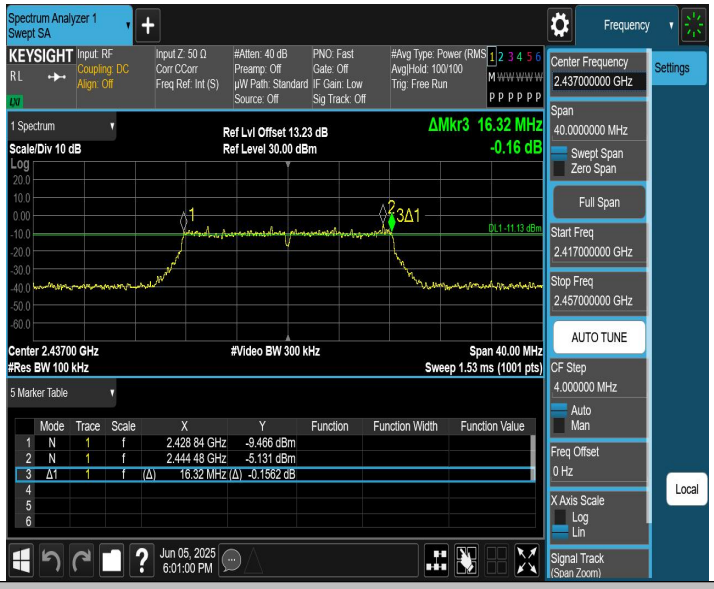
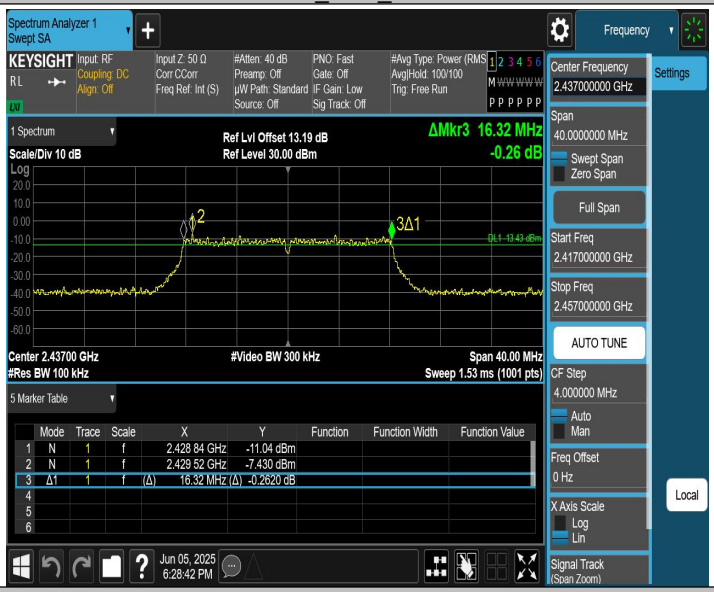


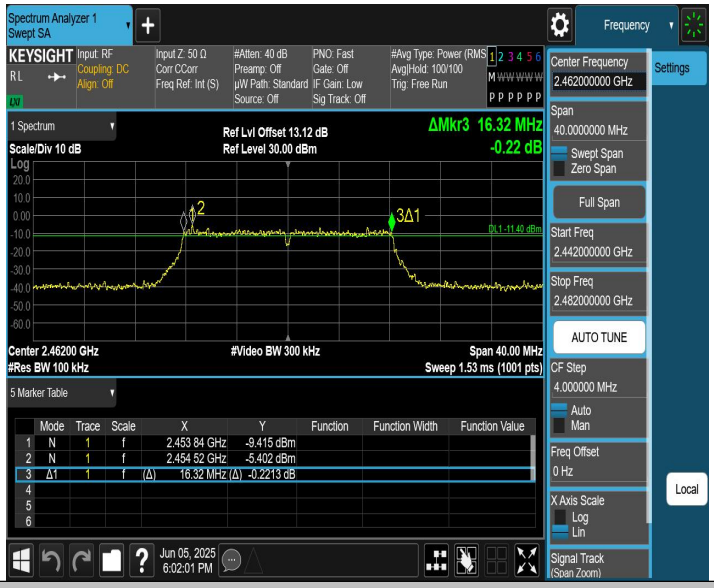
11G_Ant1_2437



11G_Ant2_2437



11G_Ant1_2462



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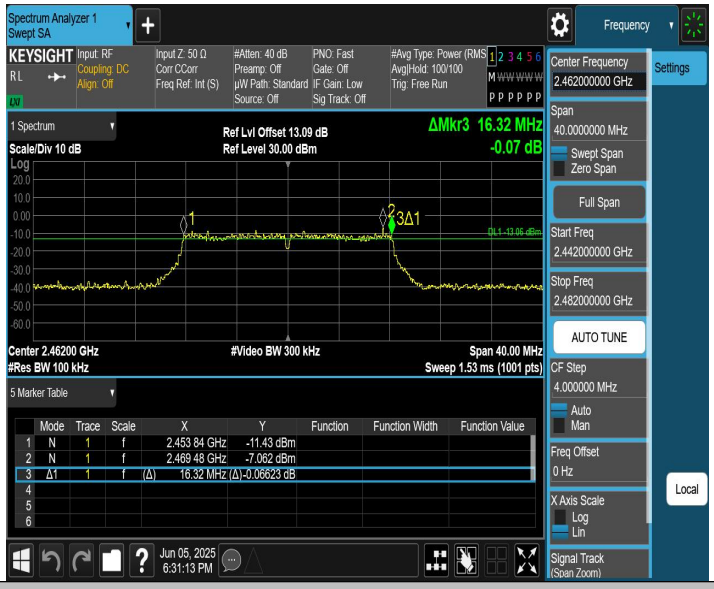
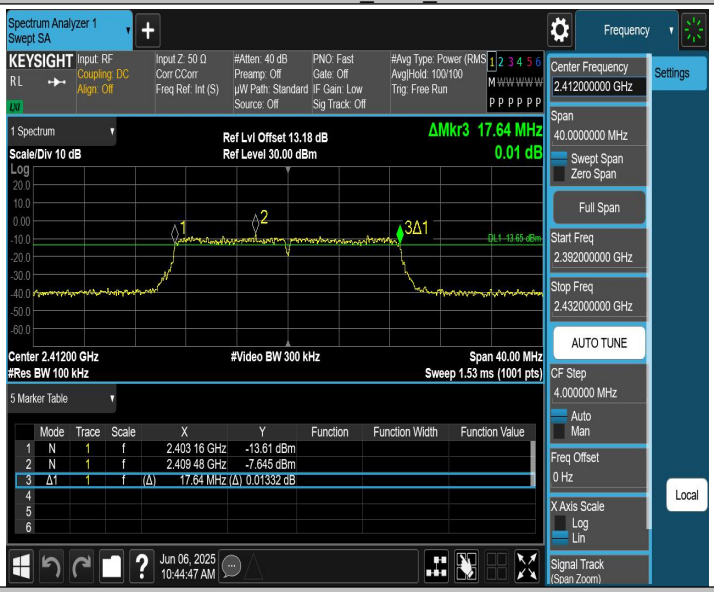
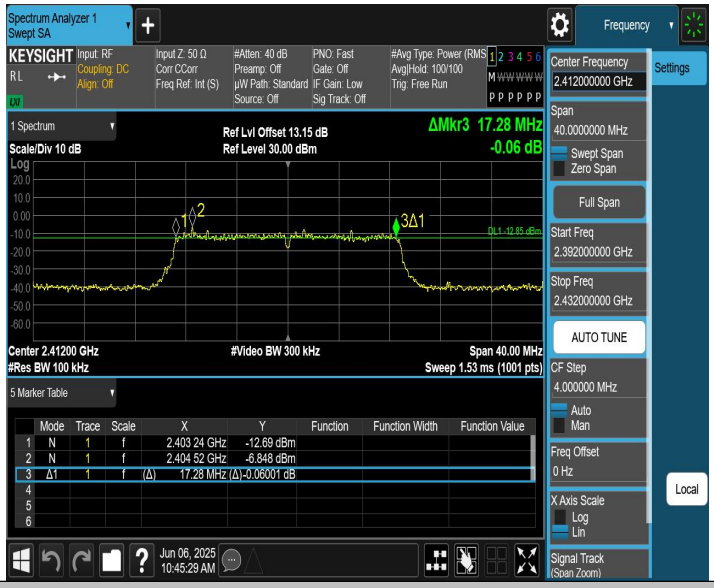


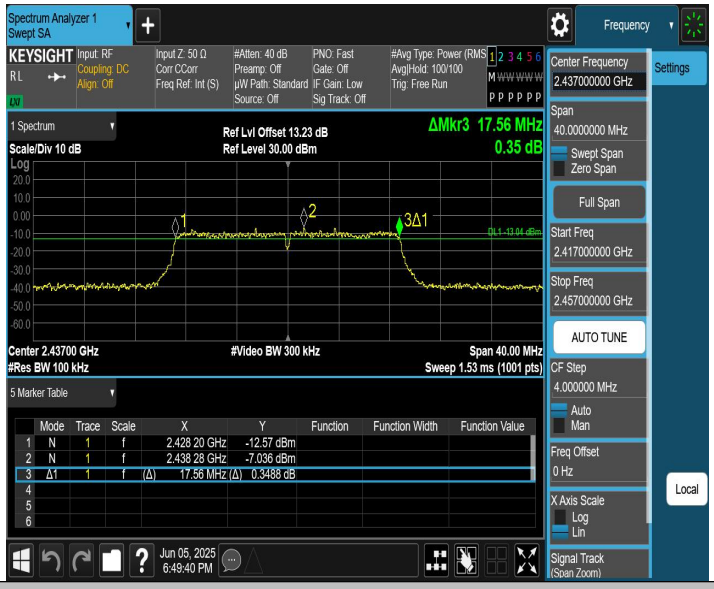
11N20MIMO_Ant1_2412



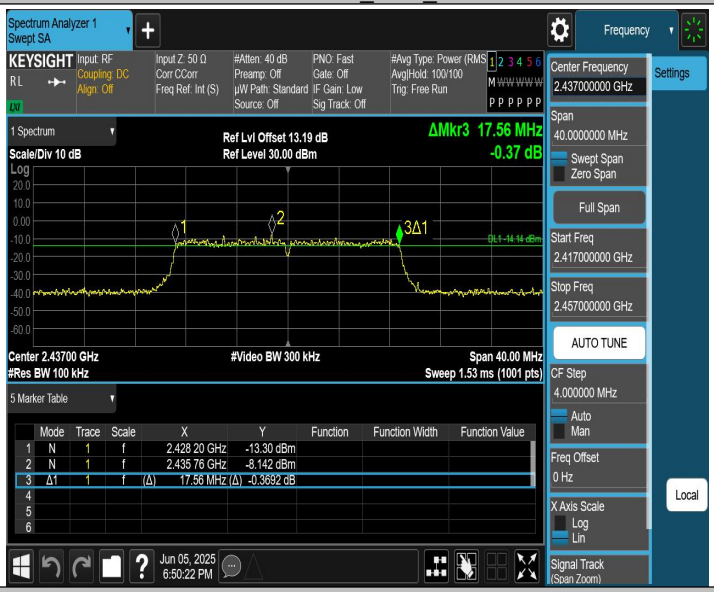
11N20MIMO_Ant2_2412



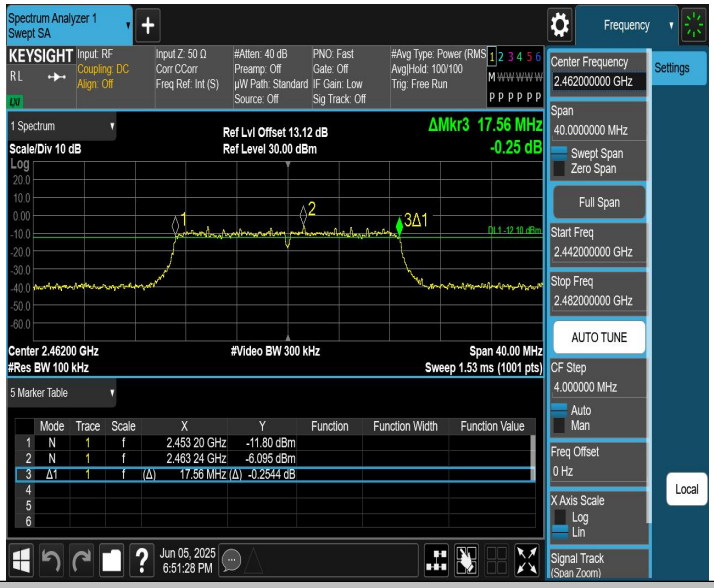
11N20MIMO_Ant1_2437



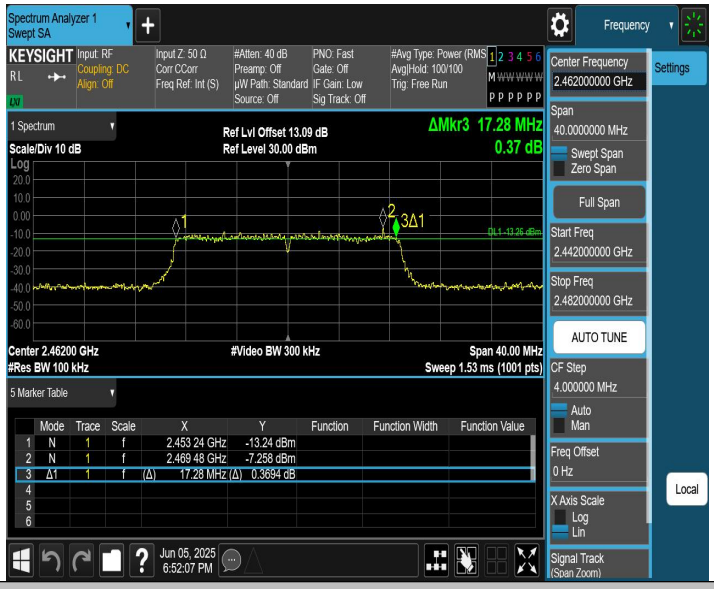
11N20MIMO_Ant2_2437



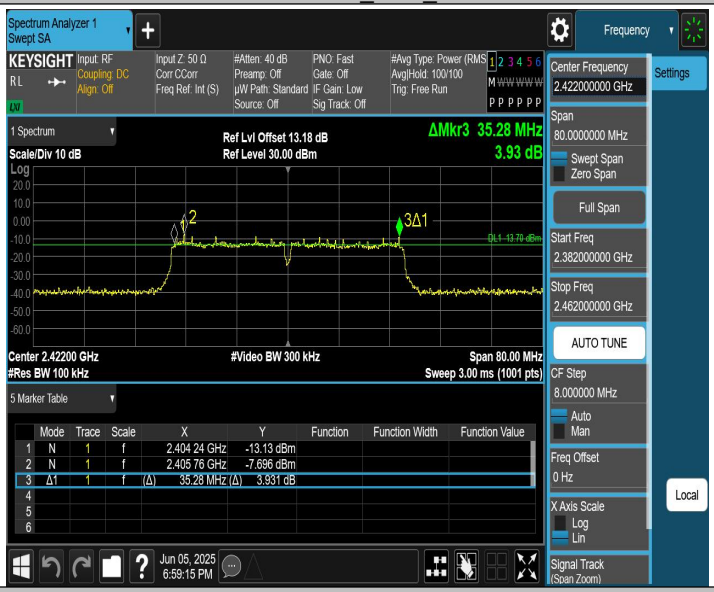
11N20MIMO_Ant1_2462



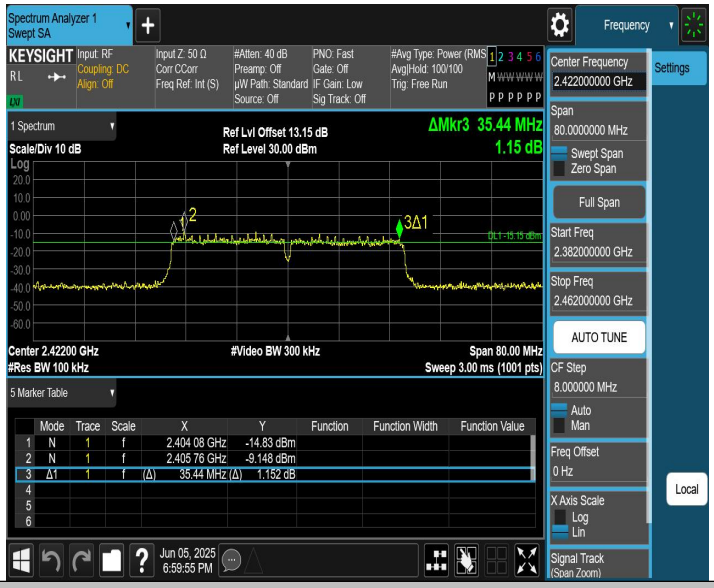
11N20MIMO_Ant2_2462



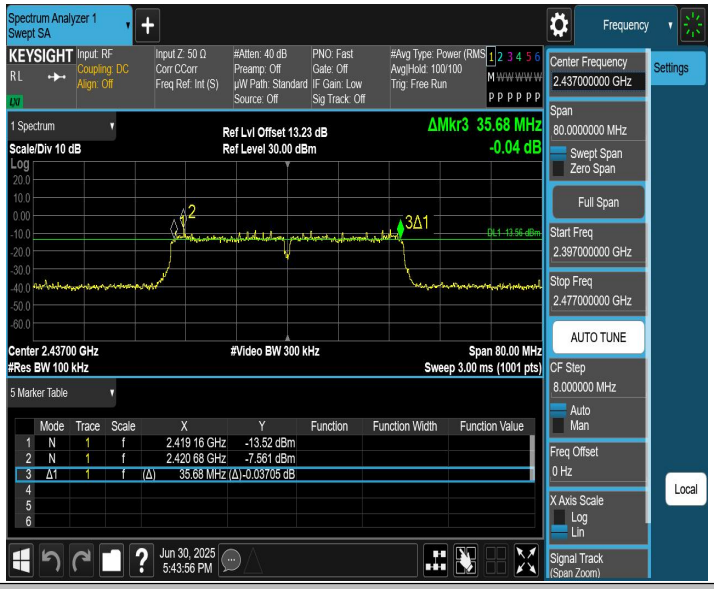
11N40MIMO_Ant1_2422



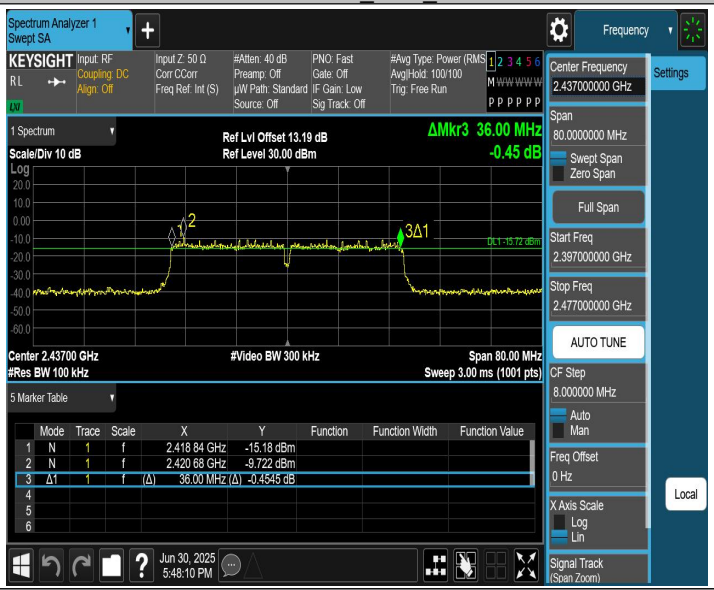
11N40MIMO_Ant2_2422



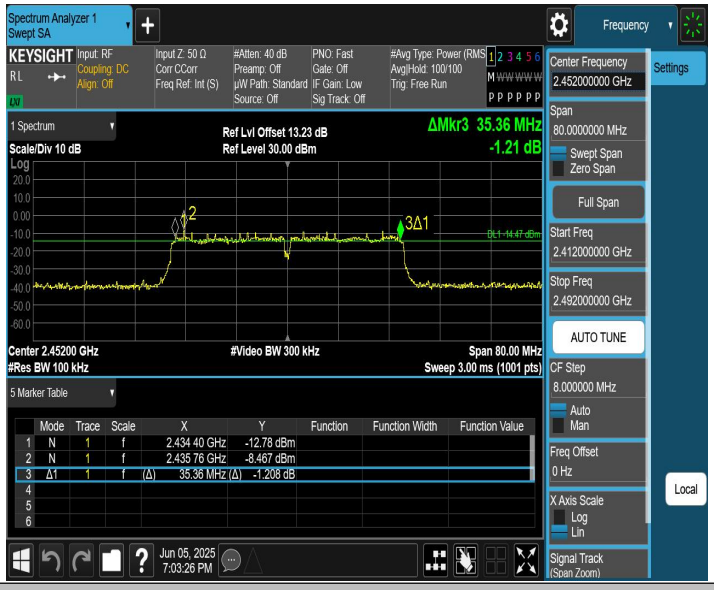
11N40MIMO_Ant1_2437



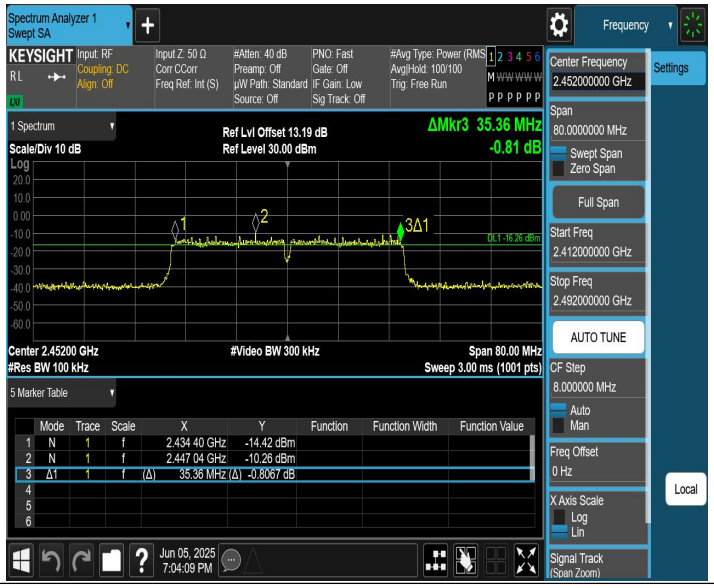
11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452

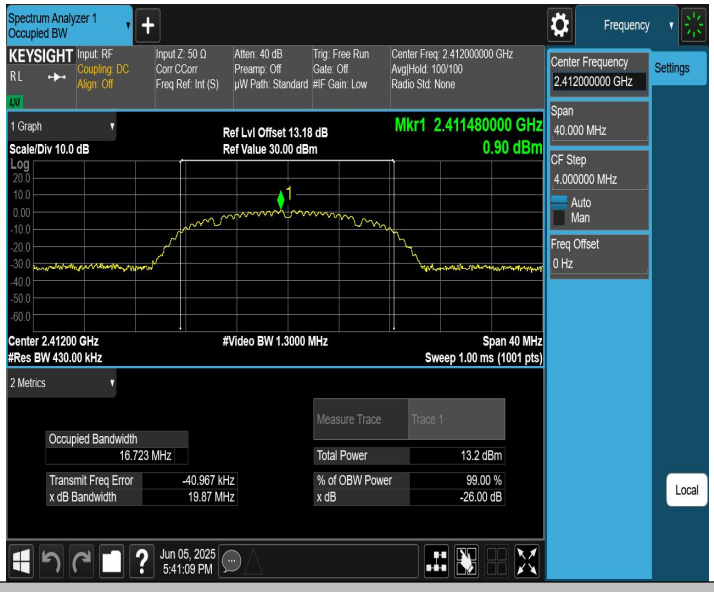


11N40MIMO_Ant2_2452



99 % bandwidth：

11B_Ant1_2412



11B_Ant2_2412