





11G_Ant2_2437



11G_Ant1_2462



11G_Ant2_2462



11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412



11N20MIMO_Ant1_2437







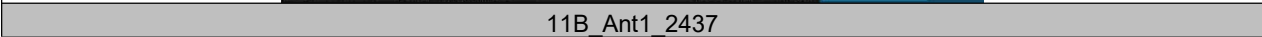
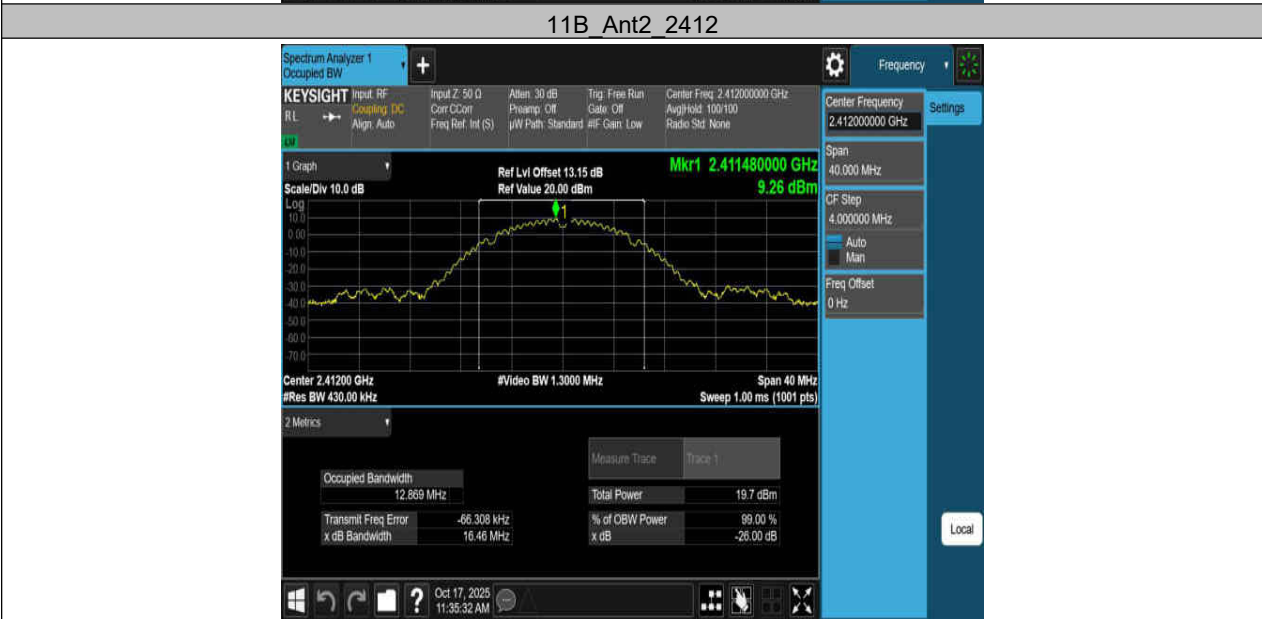






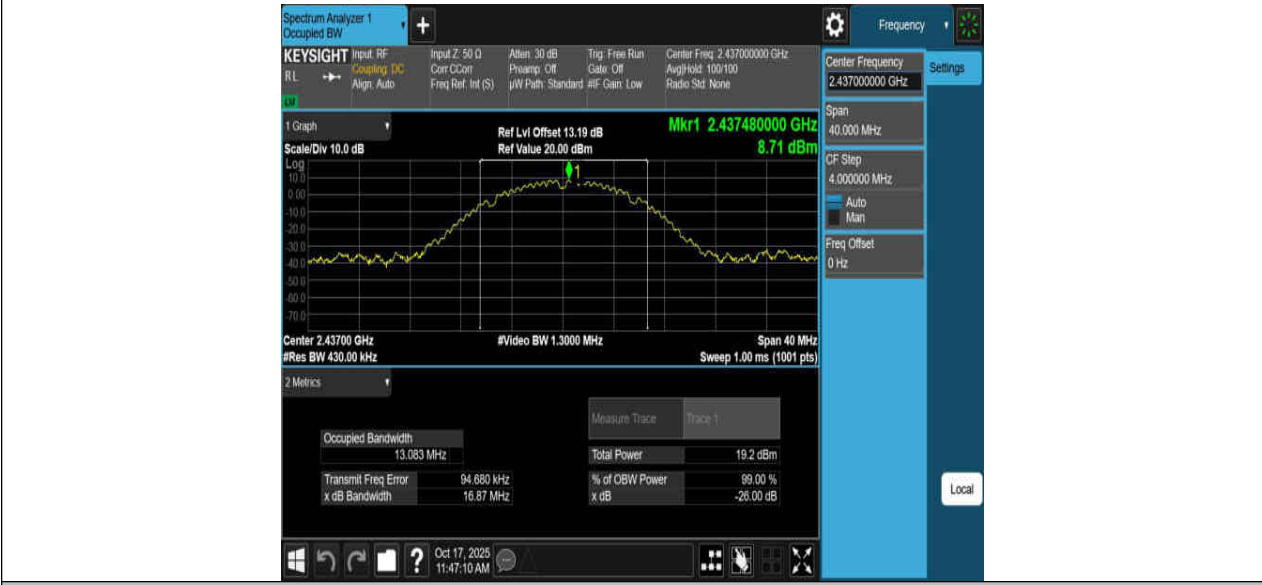


99 % bandwidth:





11B_Ant2_2437



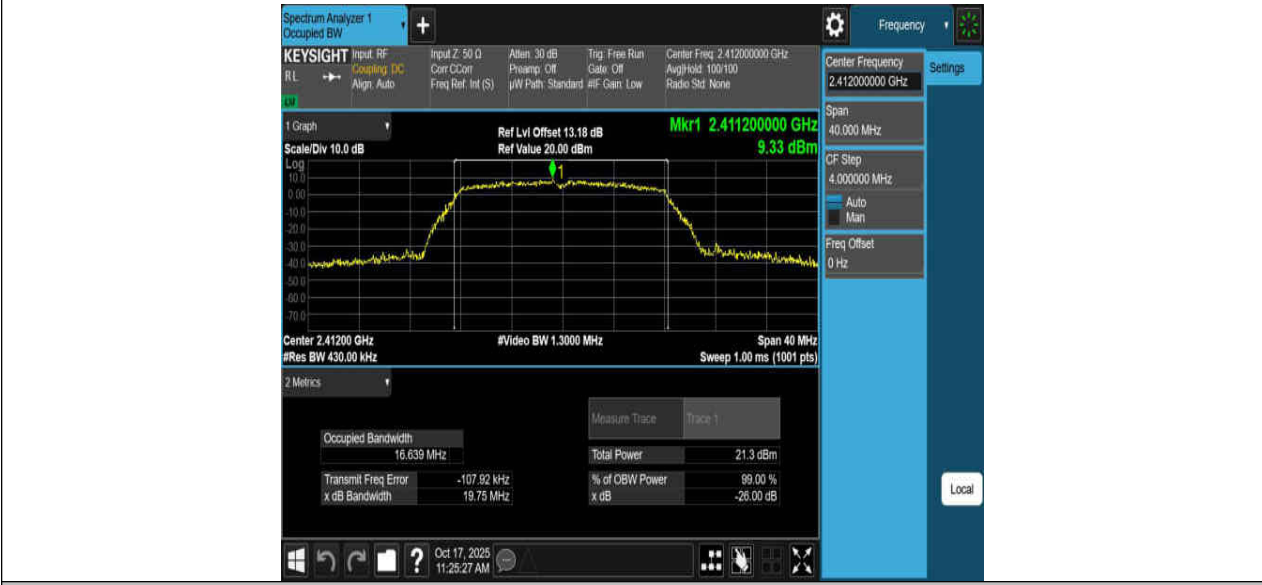
11B_Ant1_2462



11B_Ant2_2462



11G_Ant1_2412



11G_Ant2_2412



11G_Ant1_2437



11G_Ant2_2437



11G_Ant1_2462



11G_Ant2_2462



11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412



11N20MIMO_Ant1_2437



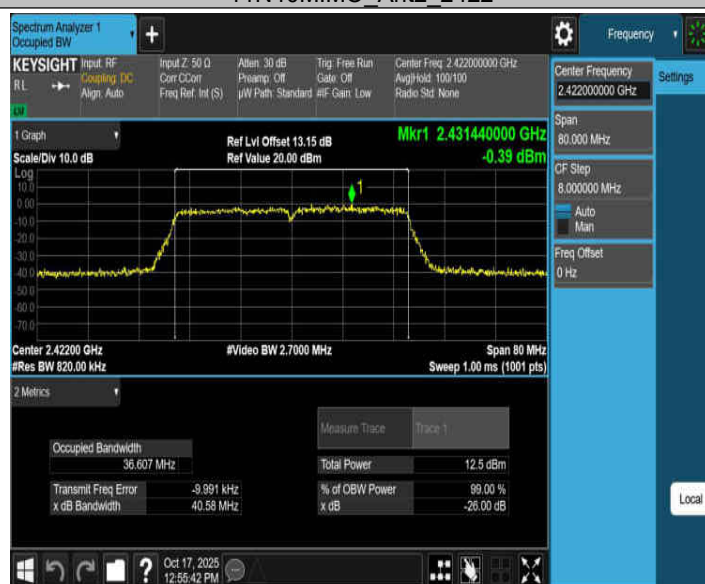
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11N20MIMO_Ant1_2462



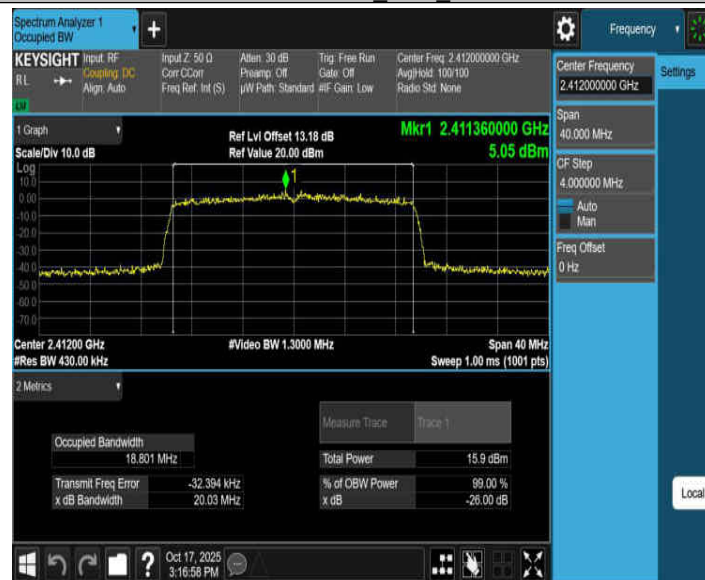
11N20MIMO_Ant2_2462







11AX20MIMO_Ant1_2412



11AX20MIMO_Ant2_2412



11AX20MIMO Ant1 2437



11AX20MIMO_Ant2_2437



11AX20MIMO_Ant1_2462



11AX20MIMO_Ant2_2462







10. Conducted Output Power

10.1. Block diagram of test setup

Same as section 8.1

10.2. 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(b)(3) ISED RSS-247 5.4 (d)	Peak Output Power	1 watt or 30 dBm	2400-2483.5
Note: For 802.11n/11ax , the EUT incorporates a MIMO function. The Antenna directional gain is 7.09 dBi. The Conducted Output Power limit is the above limits-(7.09-6)			

10.3. Test Procedure

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast responding diode detector. See Figure 24.

10.4. Results

Test Mode	Ant.	Freq. (MHz)	Peak Power (dBm)	Conducted Limit (dBm)	Gain(dBm)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
11B	Ant1	2412	20.40	≤30.00	4.08	24.48	≤36.00	PASS
	Ant2	2412	19.36	≤30.00	4.08	23.44	≤36.00	PASS
	Ant1	2437	20.06	≤30.00	4.08	24.14	≤36.00	PASS
	Ant2	2437	18.83	≤30.00	4.08	22.91	≤36.00	PASS
	Ant1	2462	20.22	≤30.00	4.08	24.30	≤36.00	PASS
	Ant2	2462	19.00	≤30.00	4.08	23.08	≤36.00	PASS
11G	Ant1	2412	21.64	≤30.00	4.08	25.72	≤36.00	PASS
	Ant2	2412	21.28	≤30.00	4.08	25.36	≤36.00	PASS
	Ant1	2437	21.97	≤30.00	4.08	26.05	≤36.00	PASS
	Ant2	2437	20.76	≤30.00	4.08	24.84	≤36.00	PASS
	Ant1	2462	20.74	≤30.00	4.08	24.82	≤36.00	PASS
	Ant2	2462	19.94	≤30.00	4.08	24.02	≤36.00	PASS
11N20MIMO	Ant1	2412	21.84	≤30.00	4.08	25.92	≤36.00	PASS
	Ant2	2412	20.95	≤30.00	4.08	25.03	≤36.00	PASS
	total	2412	24.43	≤28.91	7.09	31.52	≤34.91	PASS
	Ant1	2437	20.98	≤30.00	4.08	25.06	≤36.00	PASS
	Ant2	2437	20.70	≤30.00	4.08	24.78	≤36.00	PASS
	total	2437	23.85	≤28.91	7.09	30.94	≤34.91	PASS
	Ant1	2462	19.30	≤30.00	4.08	23.38	≤36.00	PASS
	Ant2	2462	19.28	≤30.00	4.08	23.36	≤36.00	PASS
	total	2462	22.30	≤28.91	7.09	29.39	≤34.91	PASS
11N40MIMO	Ant1	2422	19.20	≤30.00	4.08	23.28	≤36.00	PASS
	Ant2	2422	18.77	≤30.00	4.08	22.85	≤36.00	PASS
	total	2422	22.00	≤28.91	7.09	29.09	≤34.91	PASS
	Ant1	2437	18.59	≤30.00	4.08	22.67	≤36.00	PASS
	Ant2	2437	17.58	≤30.00	4.08	21.66	≤36.00	PASS
	total	2437	21.12	≤28.91	7.09	28.21	≤34.91	PASS
	Ant1	2452	18.93	≤30.00	4.08	23.01	≤36.00	PASS
	Ant2	2452	18.59	≤30.00	4.08	22.67	≤36.00	PASS
	total	2452	21.77	≤28.91	7.09	28.86	≤34.91	PASS
11AX20MIMO	Ant1	2412	20.45	≤30.00	4.08	24.53	≤36.00	PASS

	Ant2	2412	19.91	≤30.00	4.08	23.99	≤36.00	PASS
	total	2412	23.20	≤28.91	7.09	30.29	≤34.91	PASS
	Ant1	2437	20.08	≤30.00	4.08	24.16	≤36.00	PASS
	Ant2	2437	19.06	≤30.00	4.08	23.14	≤36.00	PASS
	total	2437	22.61	≤28.91	7.09	29.7	≤34.91	PASS
	Ant1	2462	20.15	≤30.00	4.08	24.23	≤36.00	PASS
	Ant2	2462	19.13	≤30.00	4.08	23.21	≤36.00	PASS
	total	2462	22.68	≤28.91	7.09	29.77	≤34.91	PASS
11AX40MIMO	Ant1	2422	22.39	≤30.00	4.08	26.47	≤36.00	PASS
	Ant2	2422	21.43	≤30.00	4.08	25.51	≤36.00	PASS
	total	2422	24.95	≤28.91	7.09	32.04	≤34.91	PASS
	Ant1	2437	22.40	≤30.00	4.08	26.48	≤36.00	PASS
	Ant2	2437	20.51	≤30.00	4.08	24.59	≤36.00	PASS
	total	2437	24.57	≤28.91	7.09	31.66	≤34.91	PASS
	Ant1	2452	21.43	≤30.00	4.08	25.51	≤36.00	PASS
	Ant2	2452	20.21	≤30.00	4.08	24.29	≤36.00	PASS
	total	2452	23.87	≤28.91	7.09	30.96	≤34.91	PASS

Note: The EIRP = Peak Power + Ant. Gain

11. Power Spectral Density

11.1. Block diagram of test setup

Same as section 8.1

11.2. 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 (e) ISED RSS-247 5.2 (b)	Power Spectral Density	8 dBm/3 kHz	2400-2483.5
Note: For 802.11n/11ax, the EUT incorporates a MIMO function. The Antenna directional gain is 7.09 dBi. The Power Spectral Density limit is the above limits-(7.09-6)			

11.3. Test Procedure

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

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	3 kHz ≤ RBW ≤ 100 kHz
VBW	≥ 3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

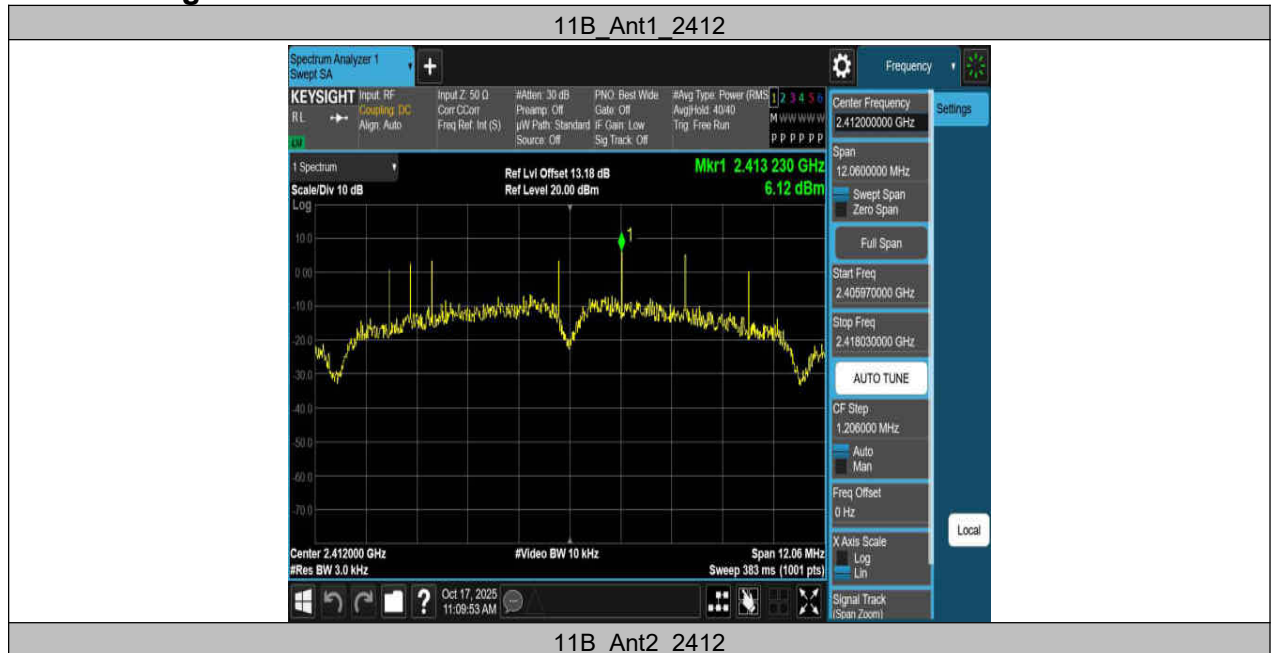
If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

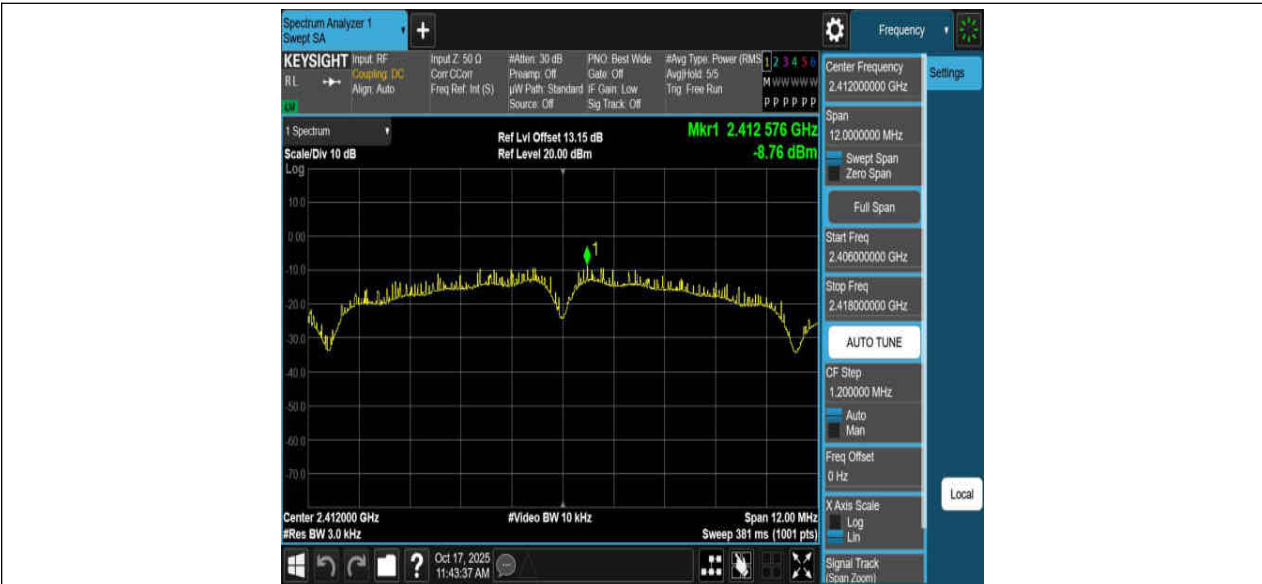
11.4. Results

Test Mode	Ant.	Freq. (MHz)	Result (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
11B	Ant1	2412	6.13	≤8.00	PASS
	Ant2	2412	-8.76	≤8.00	PASS
	Ant1	2437	6.52	≤8.00	PASS
	Ant2	2437	5.46	≤8.00	PASS
	Ant1	2462	7.77	≤8.00	PASS
	Ant2	2462	3.97	≤8.00	PASS
11G	Ant1	2412	-10.27	≤8.00	PASS
	Ant2	2412	-10.77	≤8.00	PASS
	Ant1	2437	-10.28	≤8.00	PASS
	Ant2	2437	-11.70	≤8.00	PASS
	Ant1	2462	-10.01	≤8.00	PASS
	Ant2	2462	-11.85	≤8.00	PASS
11N20MIMO	Ant1	2412	-10.06	≤8.00	PASS
	Ant2	2412	-9.95	≤8.00	PASS
	total	2412	-6.99	≤6.91	PASS
	Ant1	2437	-11.66	≤8.00	PASS
	Ant2	2437	-11.28	≤8.00	PASS
	total	2437	-8.46	≤6.91	PASS
	Ant1	2462	-12.72	≤8.00	PASS
	Ant2	2462	-12.85	≤8.00	PASS
	total	2462	-9.77	≤6.91	PASS

11N40MIMO	Ant1	2422	-14.98	≤8.00	PASS
	Ant2	2422	-16.19	≤8.00	PASS
	total	2422	-12.53	≤6.91	PASS
	Ant1	2437	-16.10	≤8.00	PASS
	Ant2	2437	-17.10	≤8.00	PASS
	total	2437	-13.56	≤6.91	PASS
	Ant1	2452	-14.81	≤8.00	PASS
	Ant2	2452	-16.43	≤8.00	PASS
	total	2452	-12.53	≤6.91	PASS
11AX20MIMO	Ant1	2412	-12.83	≤8.00	PASS
	Ant2	2412	-13.26	≤8.00	PASS
	total	2412	-10.03	≤6.91	PASS
	Ant1	2437	-12.83	≤8.00	PASS
	Ant2	2437	-14.51	≤8.00	PASS
	total	2437	-10.58	≤6.91	PASS
	Ant1	2462	-12.82	≤8.00	PASS
	Ant2	2462	-13.53	≤8.00	PASS
	total	2462	-10.15	≤6.91	PASS
11AX40MIMO	Ant1	2422	-18.94	≤8.00	PASS
	Ant2	2422	-8.95	≤8.00	PASS
	total	2422	-8.54	≤6.91	PASS
	Ant1	2437	-7.46	≤8.00	PASS
	Ant2	2437	-9.84	≤8.00	PASS
	total	2437	-5.48	≤6.91	PASS
	Ant1	2452	-8.81	≤8.00	PASS
	Ant2	2452	-9.79	≤8.00	PASS
	total	2452	-6.26	≤6.91	PASS

11.5. Original test data





11B_Ant1_2437



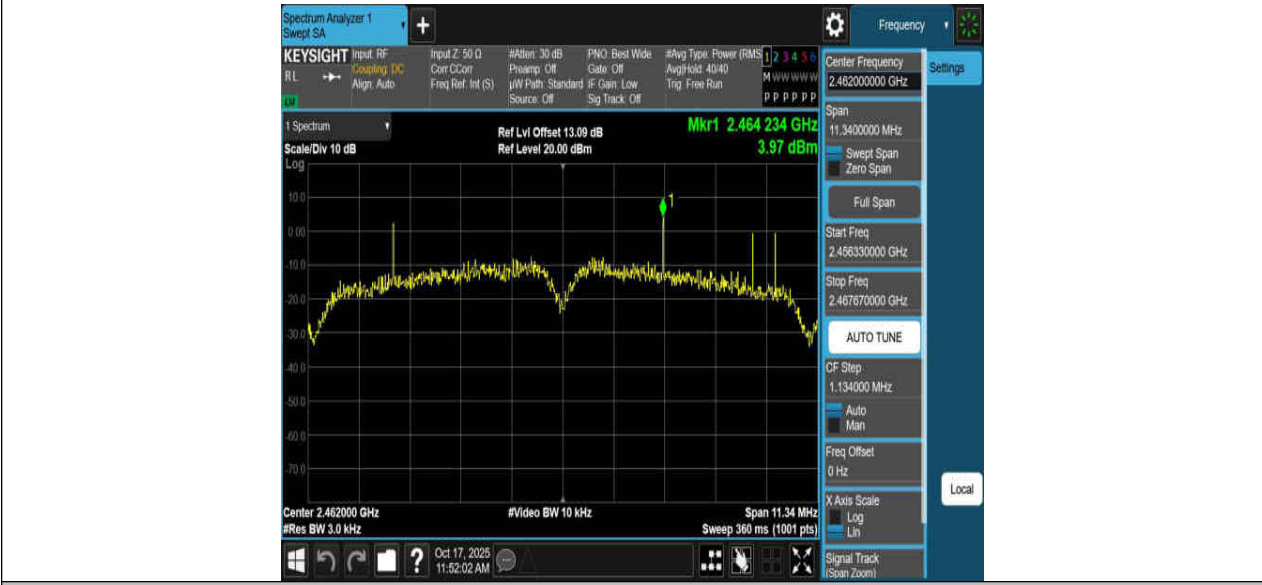
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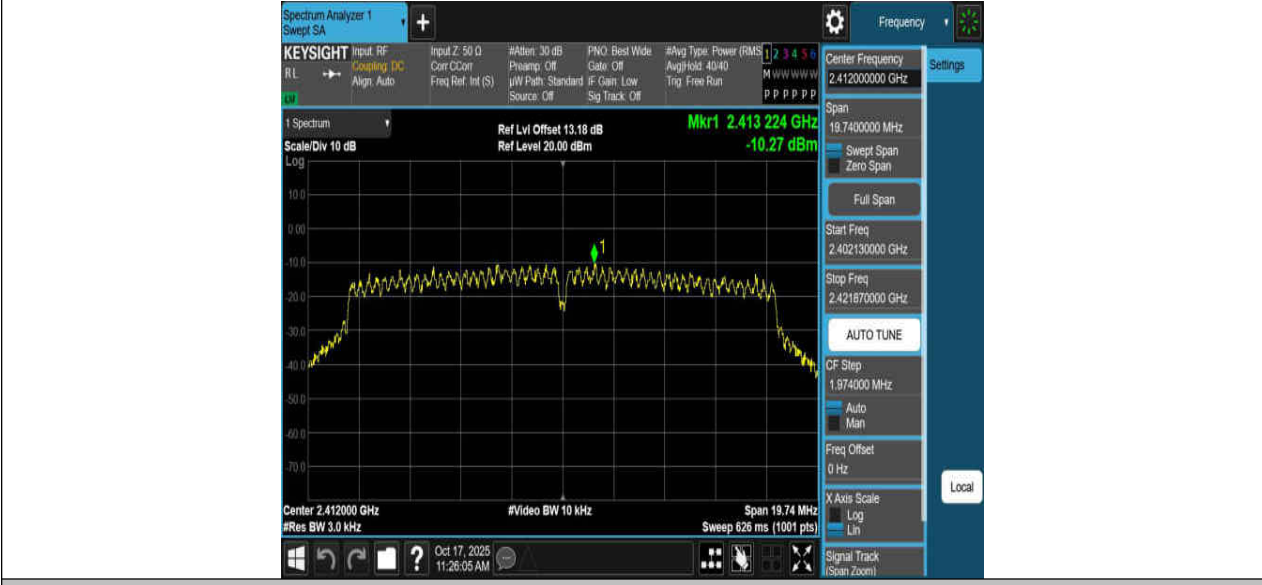
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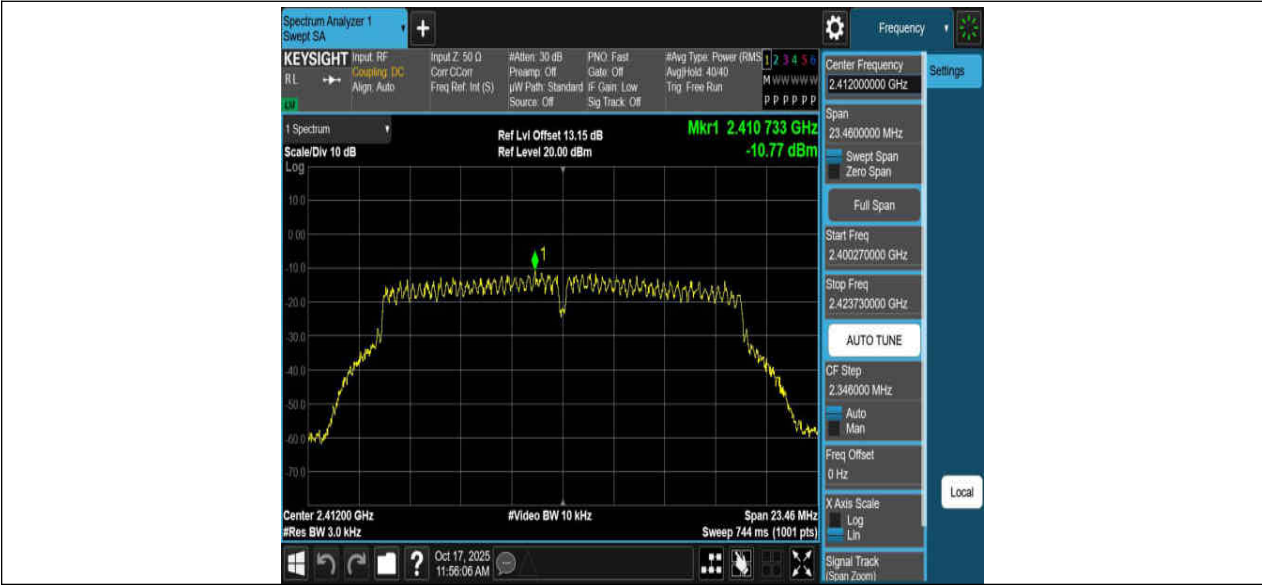
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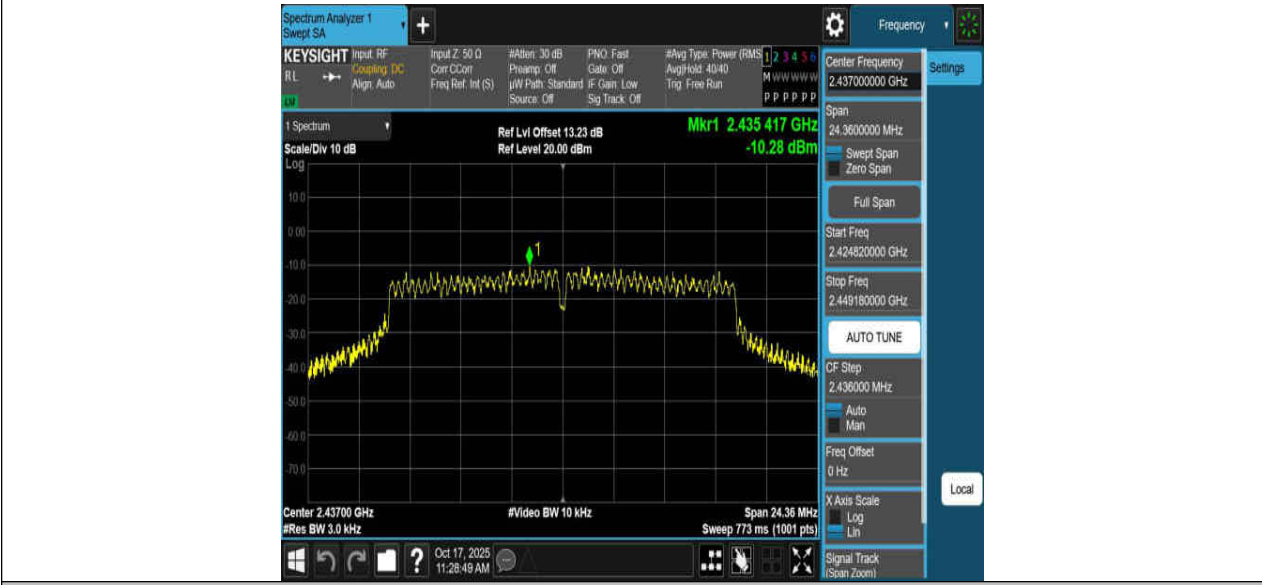
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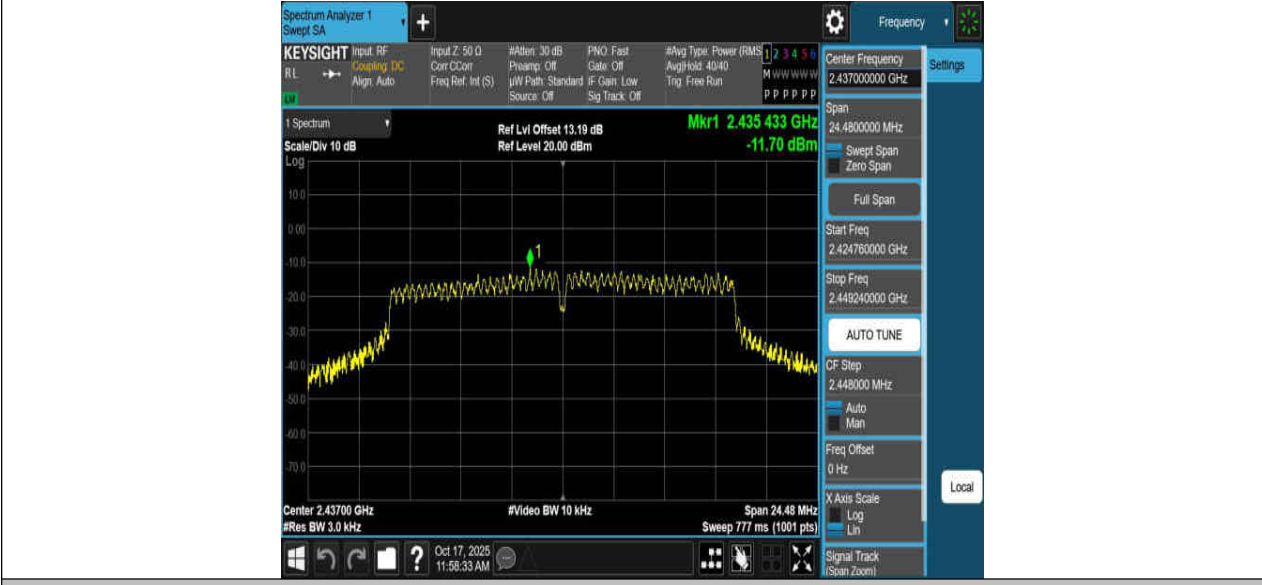
11G_Ant2_2412



11G_Ant1_2437



11G_Ant2_2437



11G_Ant1_2462