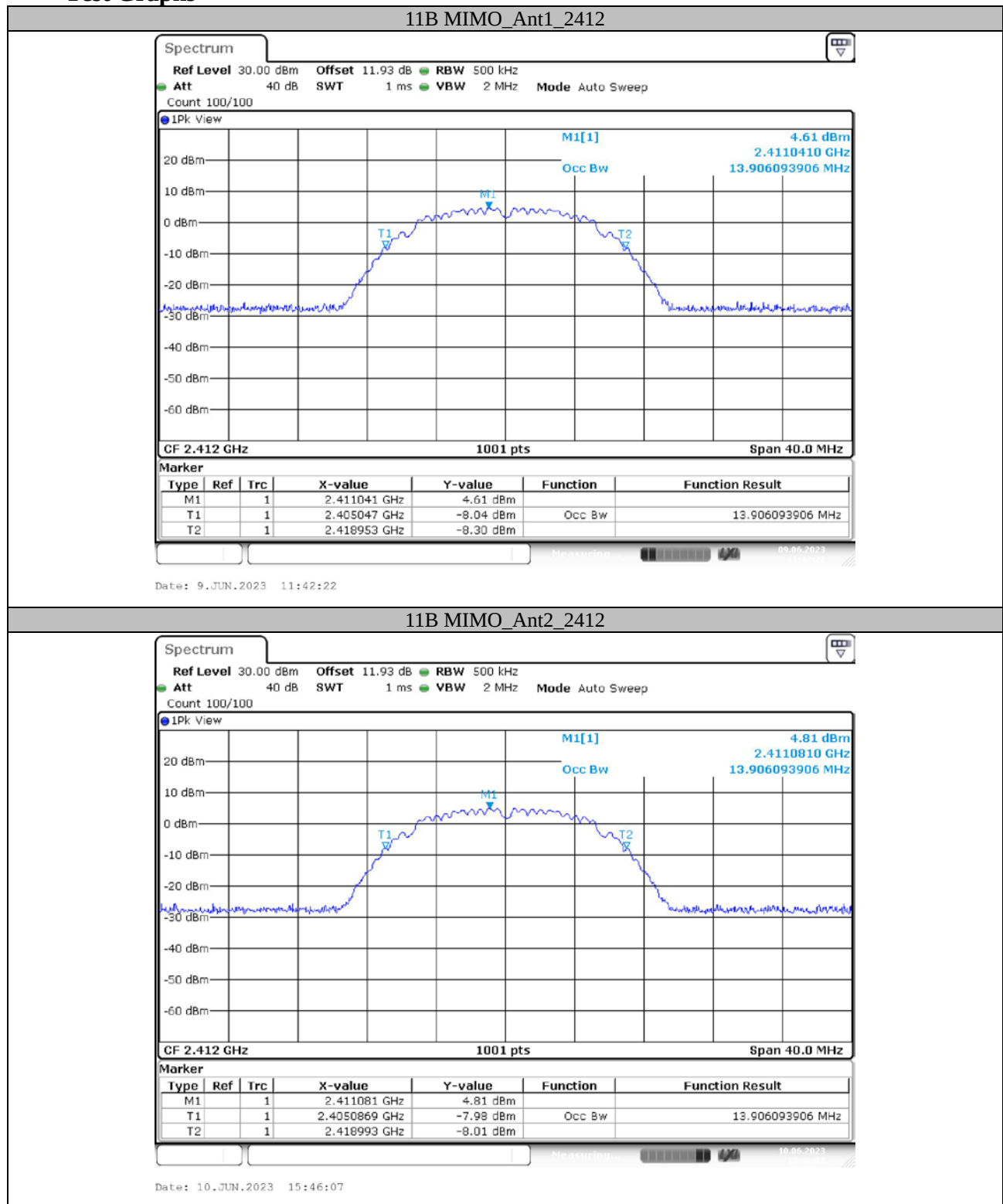


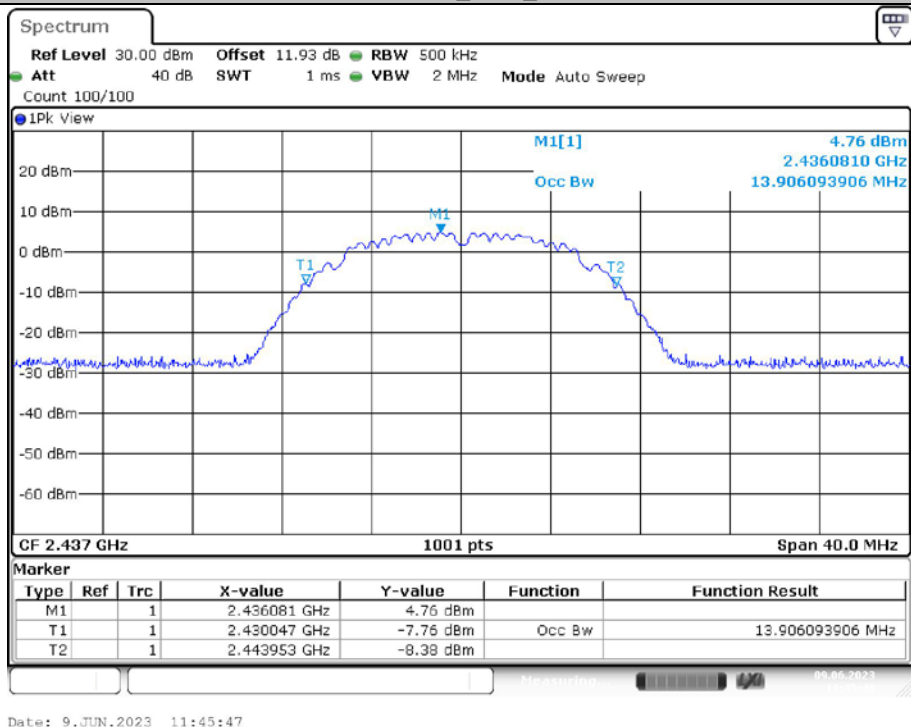
Appendix B: Occupied Channel Bandwidth**Test Result**

Test Mode	Channel	Antenna	OCB [MHz]	Limit[MHz]	Verdict
11B MIMO	2412	Ant1	13.906	---	PASS
		Ant2	13.906	---	PASS
	2437	Ant1	13.906	---	PASS
		Ant2	13.946	---	PASS
	2462	Ant1	13.946	---	PASS
		Ant2	13.946	---	PASS
11G MIMO	2412	Ant1	17.463	---	PASS
		Ant2	17.463	---	PASS
	2437	Ant1	17.423	---	PASS
		Ant2	17.502	---	PASS
	2462	Ant1	17.463	---	PASS
		Ant2	17.502	---	PASS
11N20 MIMO	2412	Ant1	18.541	---	PASS
		Ant2	18.541	---	PASS
	2437	Ant1	18.581	---	PASS
		Ant2	18.541	---	PASS
	2462	Ant1	18.621	---	PASS
		Ant2	18.581	---	PASS
11N40 MIMO	2422	Ant1	36.683	---	PASS
		Ant2	36.603	---	PASS
	2437	Ant1	36.603	---	PASS
		Ant2	36.603	---	PASS
	2452	Ant1	36.683	---	PASS
		Ant2	36.603	---	PASS
11AX20 MIMO	2412	Ant1	19.141	---	PASS
		Ant2	19.141	---	PASS
	2437	Ant1	18.981	---	PASS
		Ant2	18.941	---	PASS
	2462	Ant1	19.021	---	PASS
		Ant2	19.021	---	PASS
11AX40 MIMO	2422	Ant1	37.722	---	PASS
		Ant2	37.722	---	PASS
	2437	Ant1	37.642	---	PASS
		Ant2	37.722	---	PASS
	2452	Ant1	37.802	---	PASS
		Ant2	37.722	---	PASS

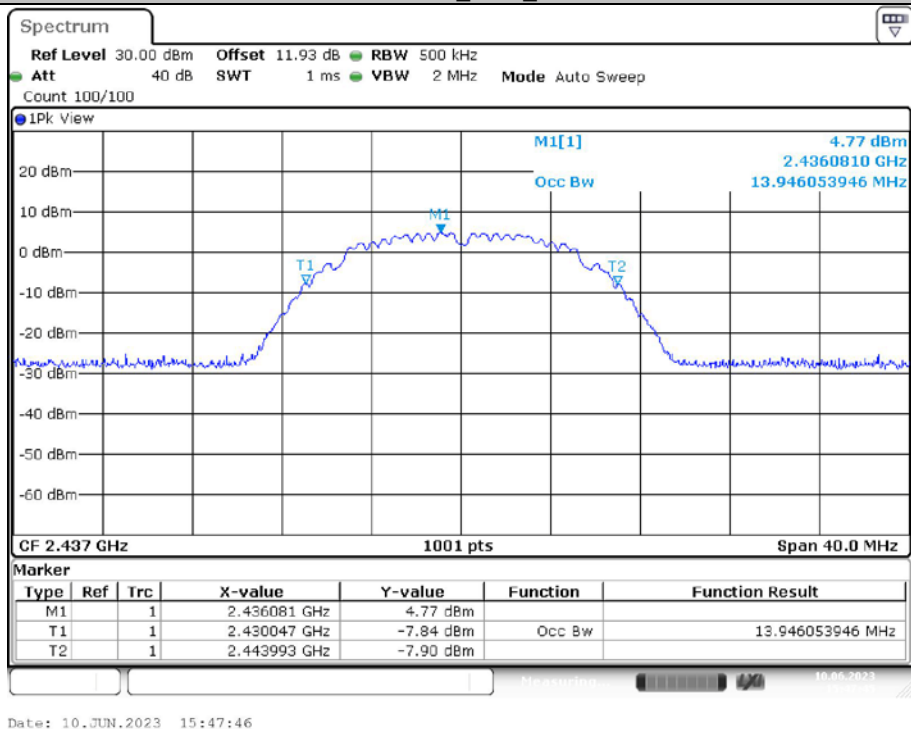
Test Graphs

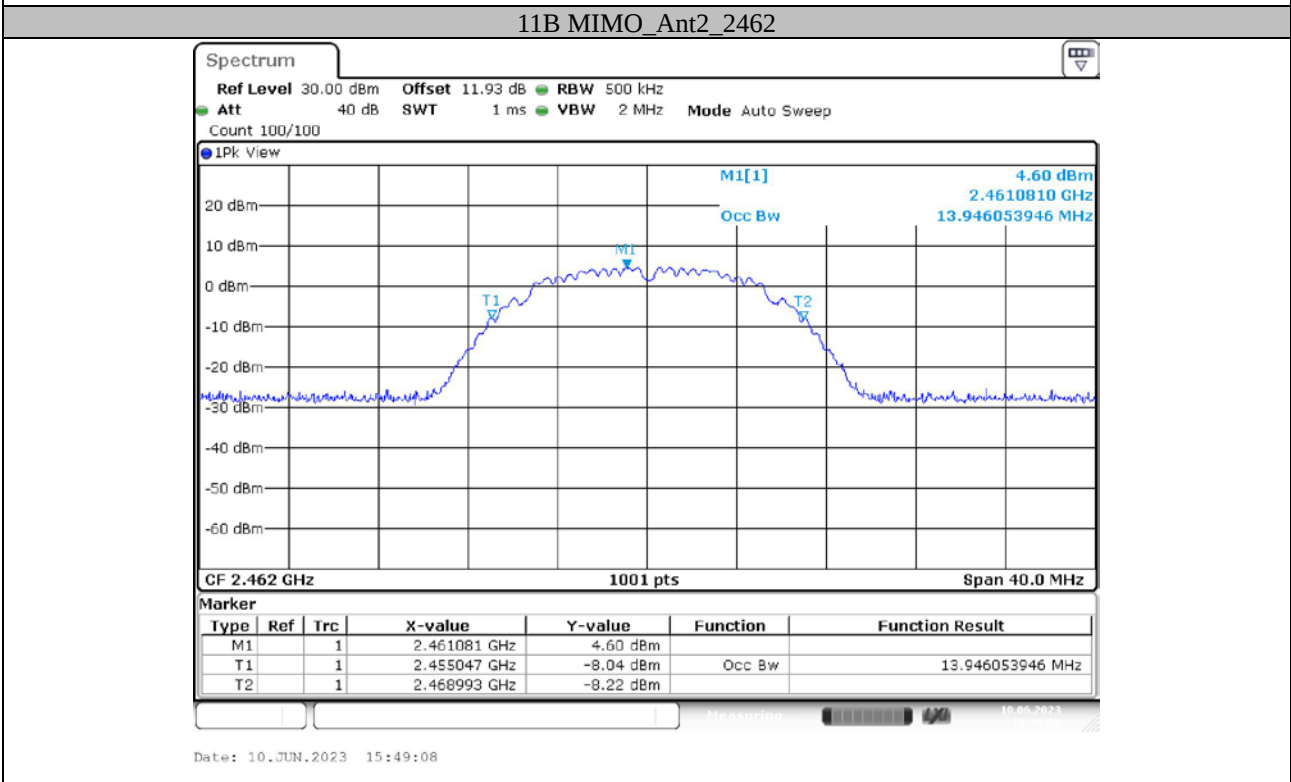
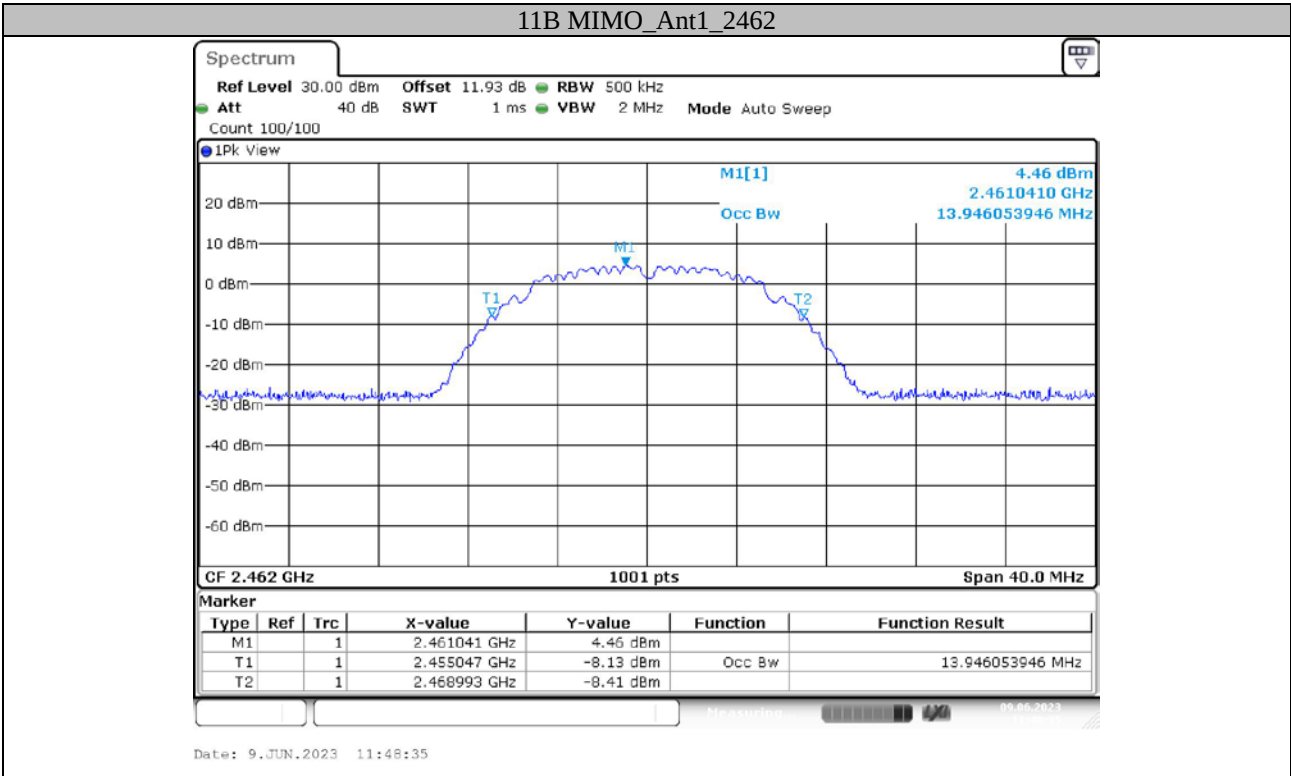


11B MIMO_Ant1_2437

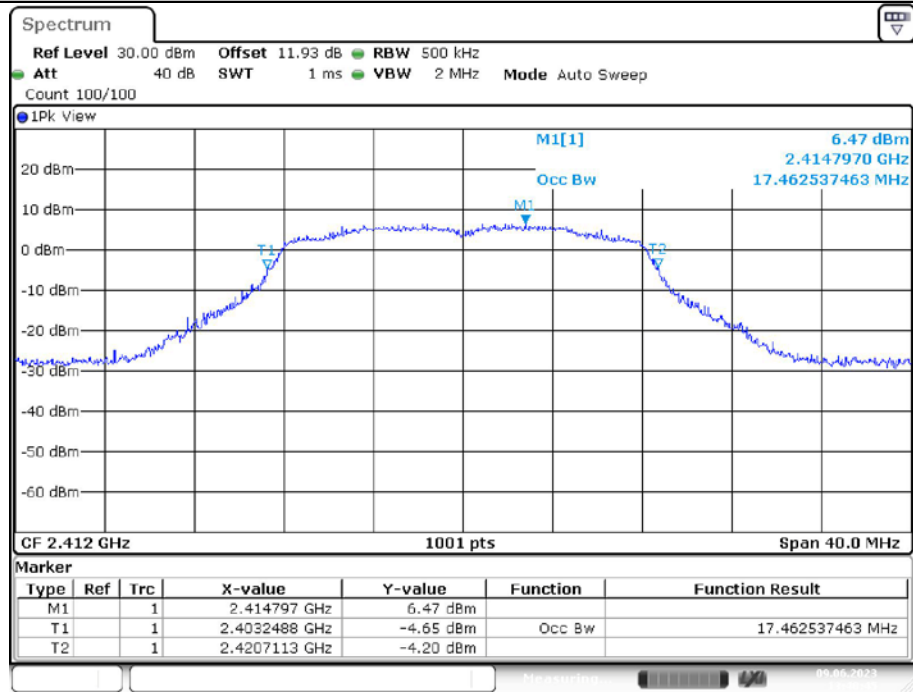


11B MIMO_Ant2_2437

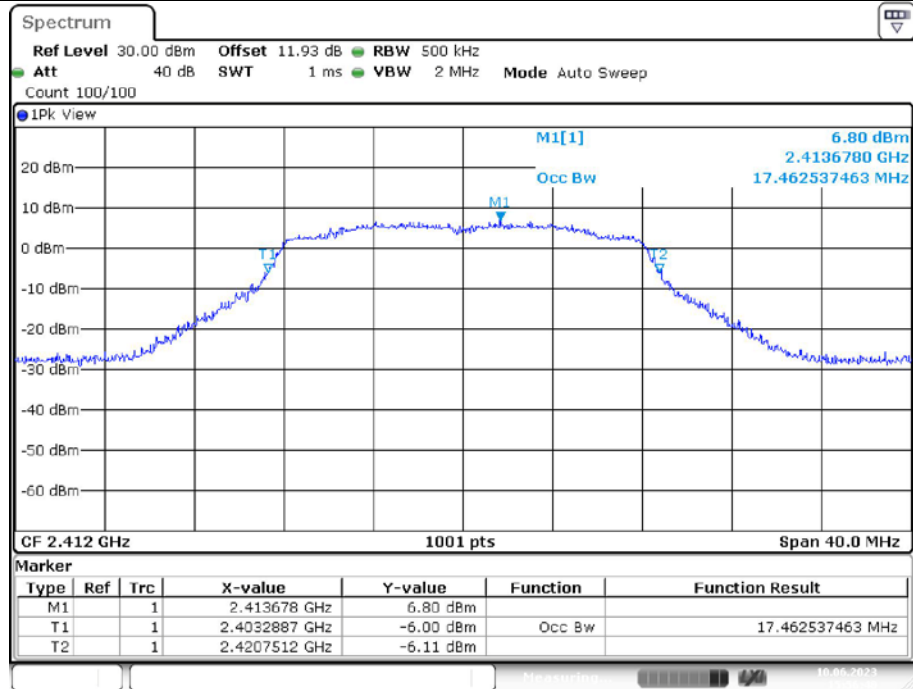




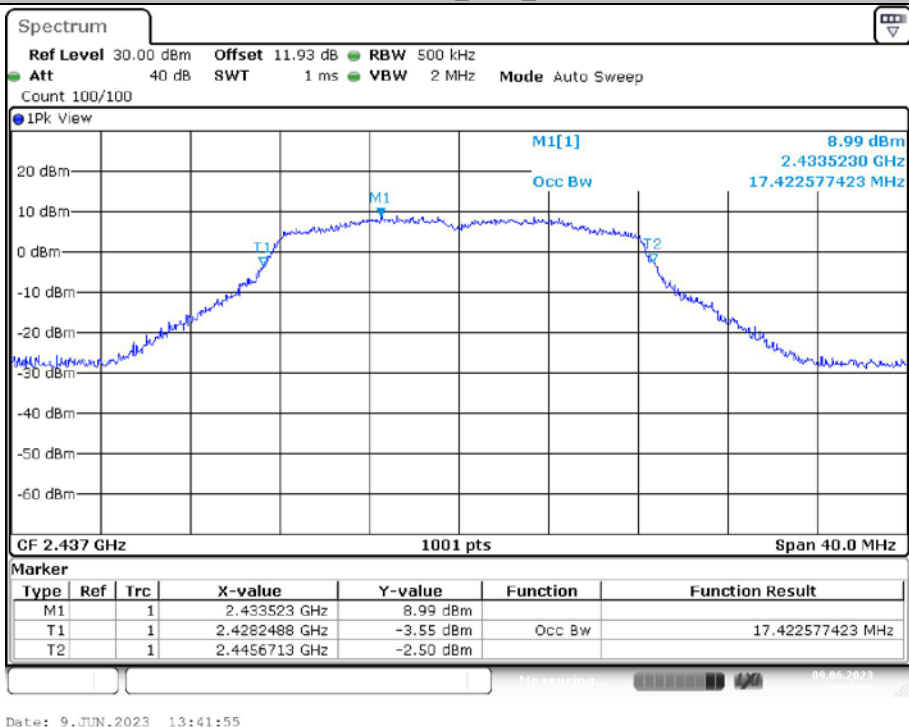
11G MIMO_Ant1_2412



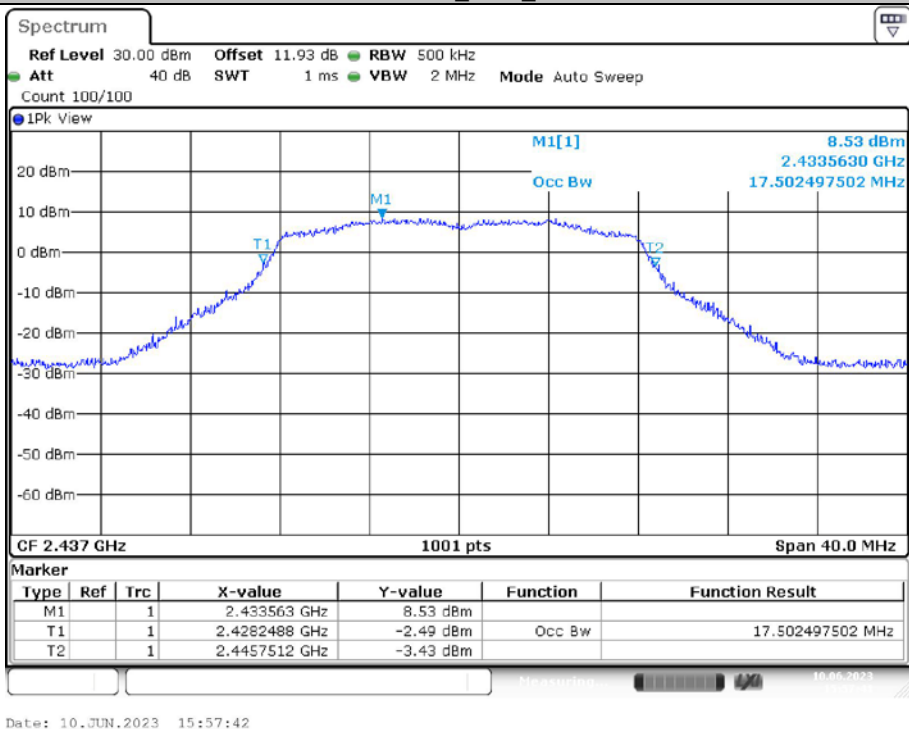
11G MIMO_Ant2_2412



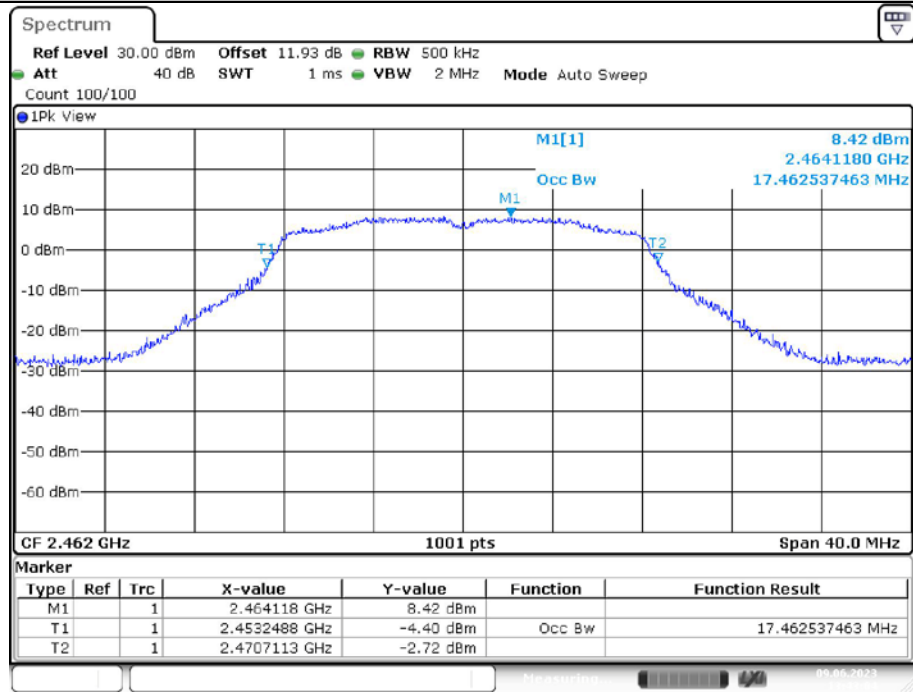
11G MIMO_Ant1_2437



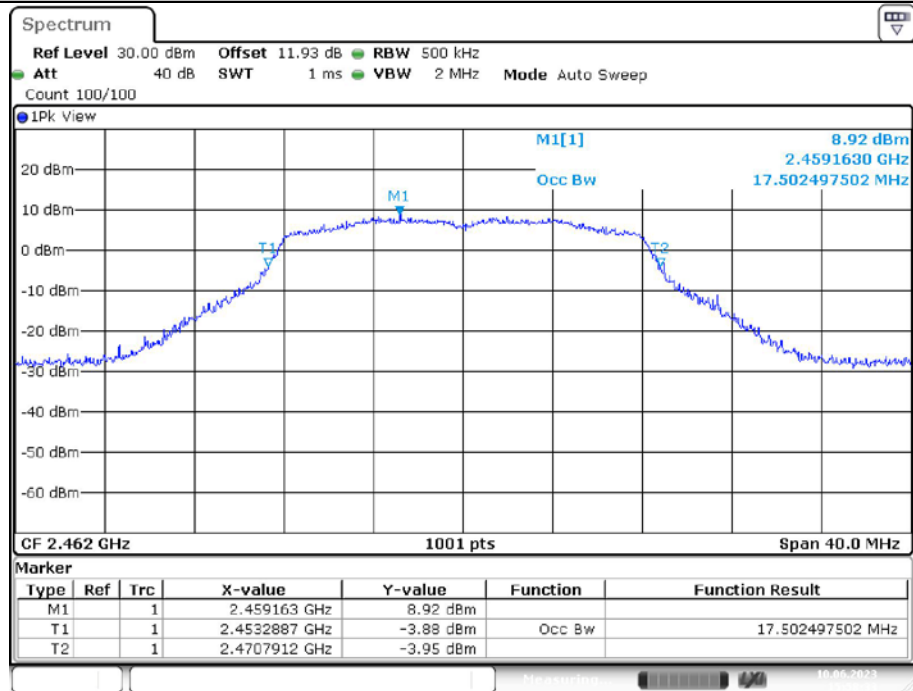
11G MIMO_Ant2_2437



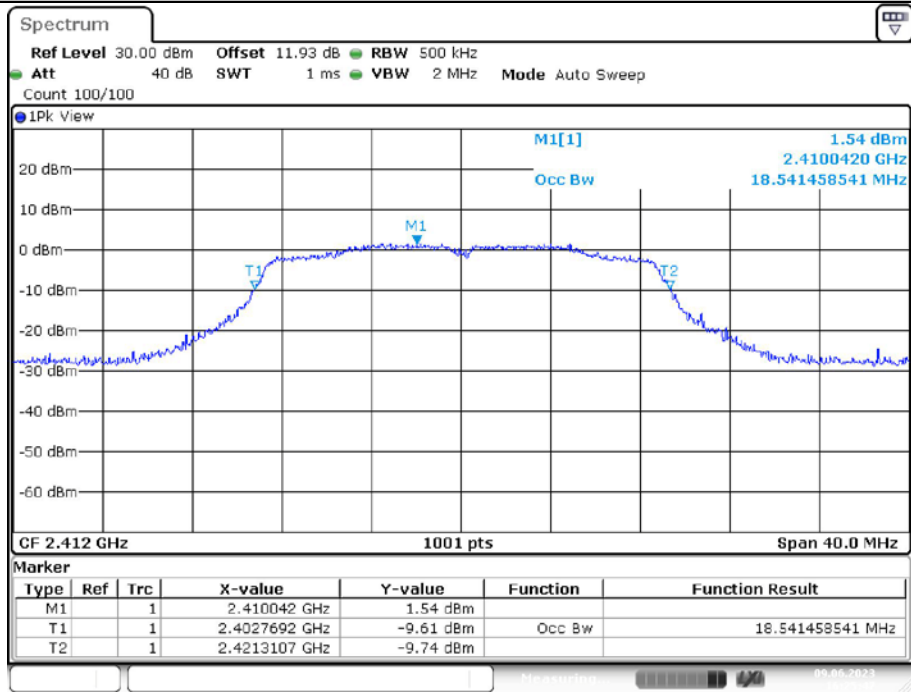
11G MIMO_Ant1_2462



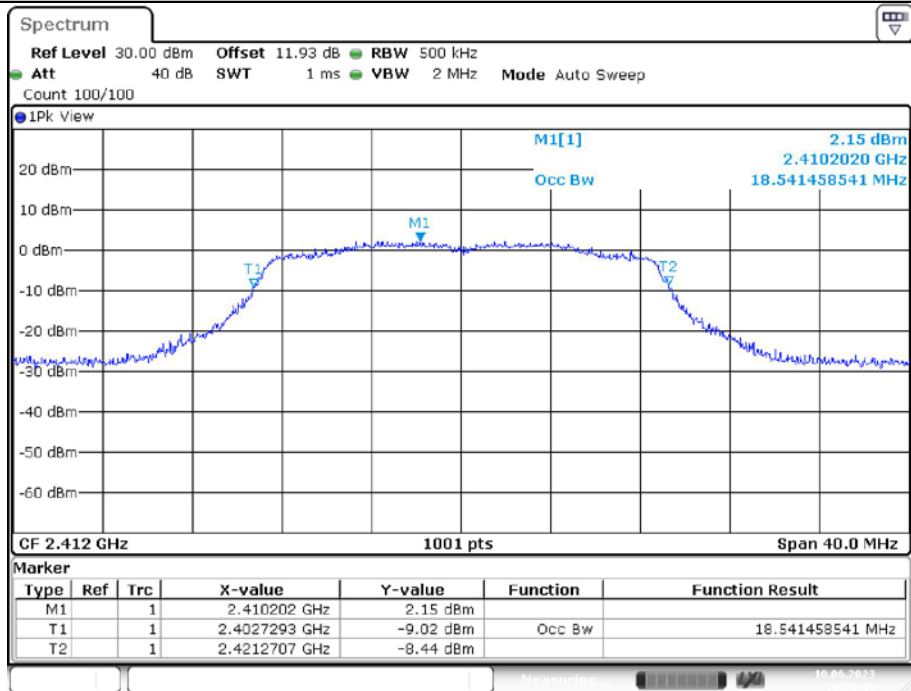
11G MIMO_Ant2_2462

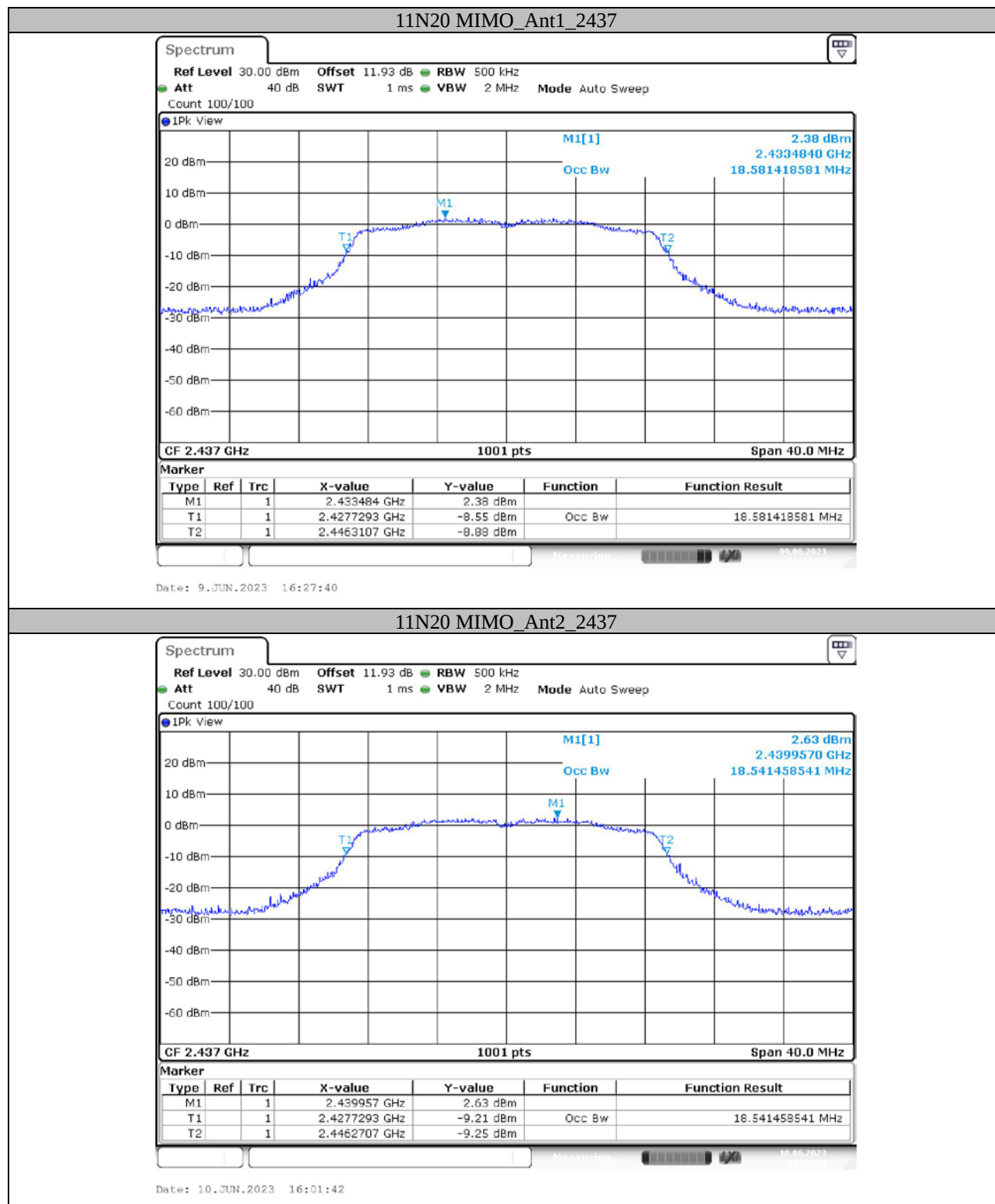


11N20 MIMO_Ant1_2412

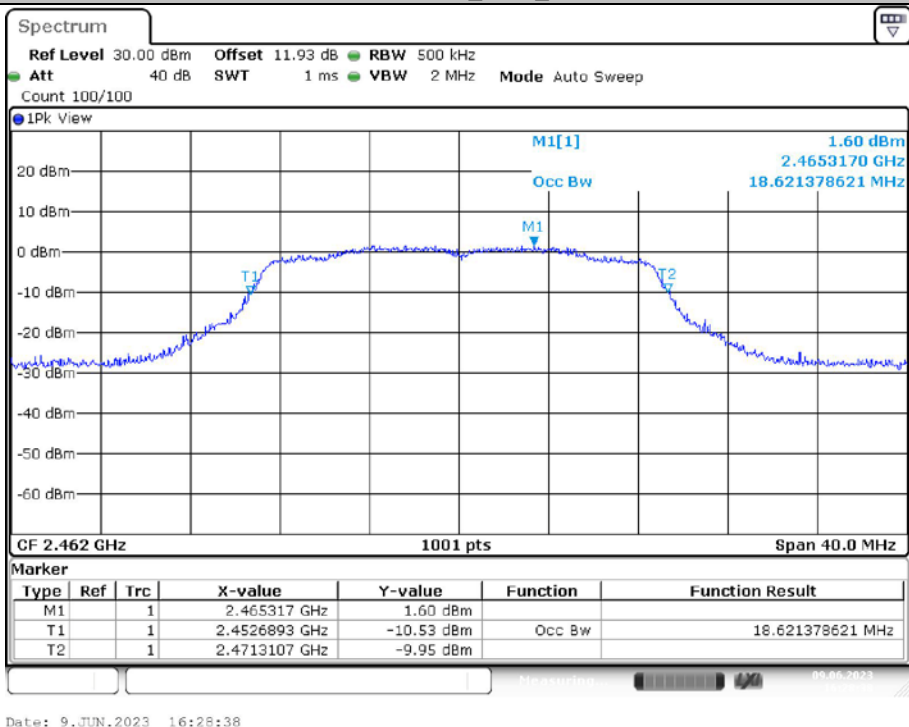


11N20 MIMO_Ant2_2412

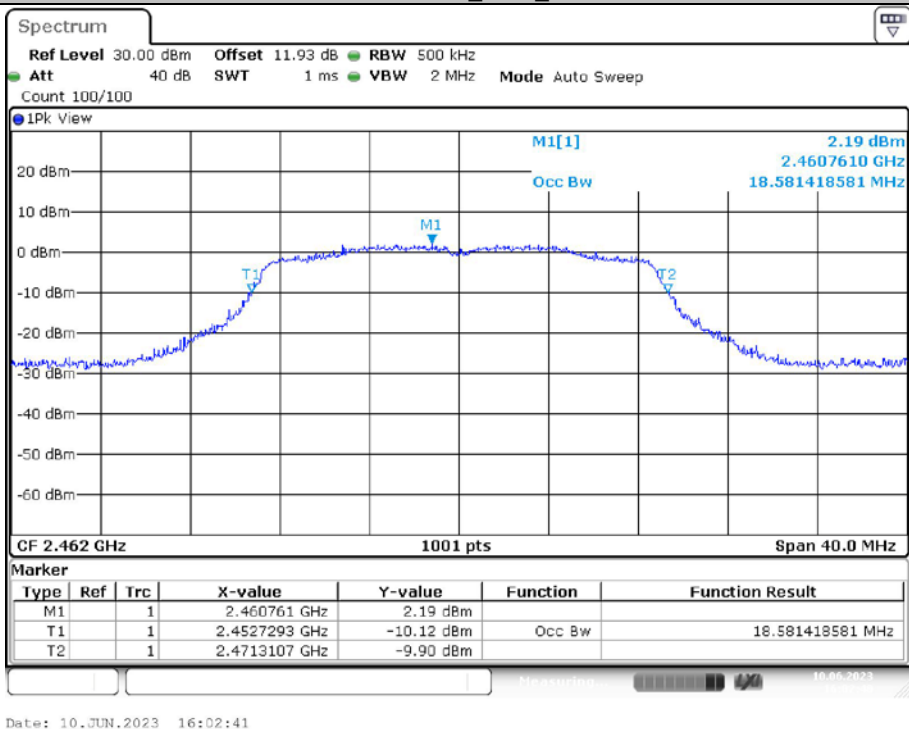




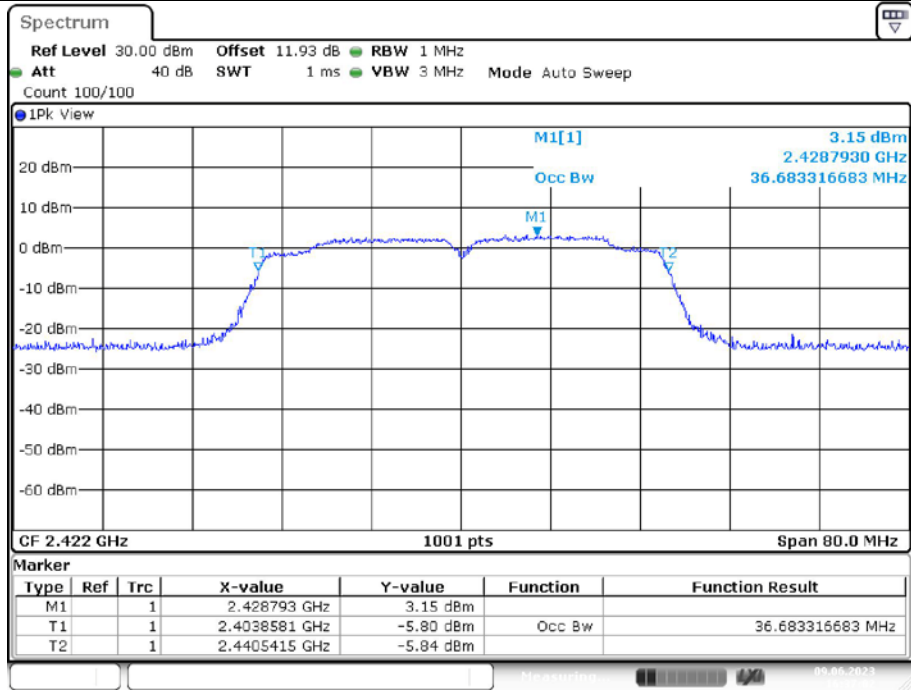
11N20 MIMO_Ant1_2462



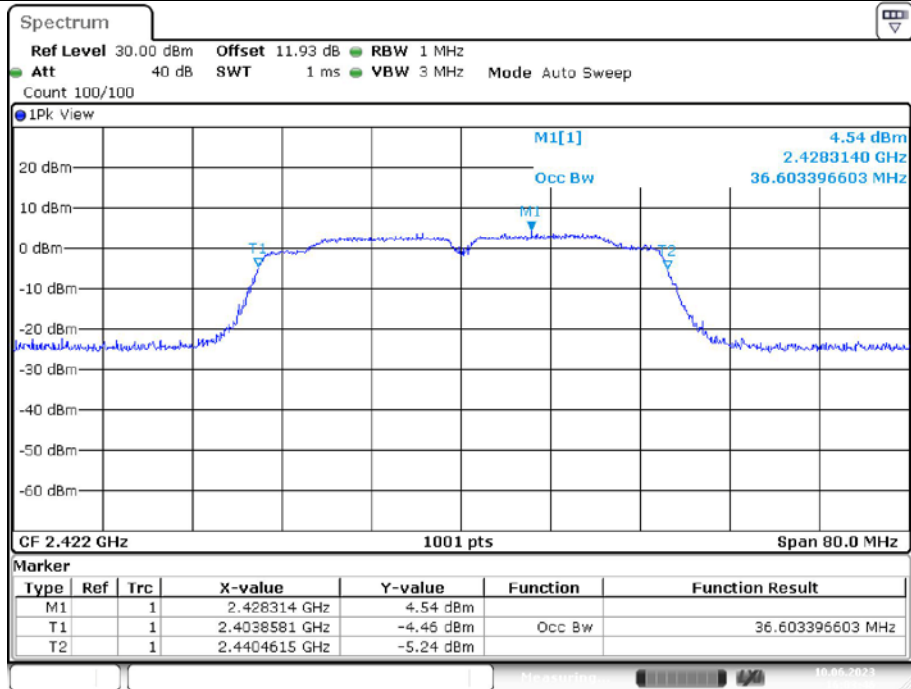
11N20 MIMO_Ant2_2462



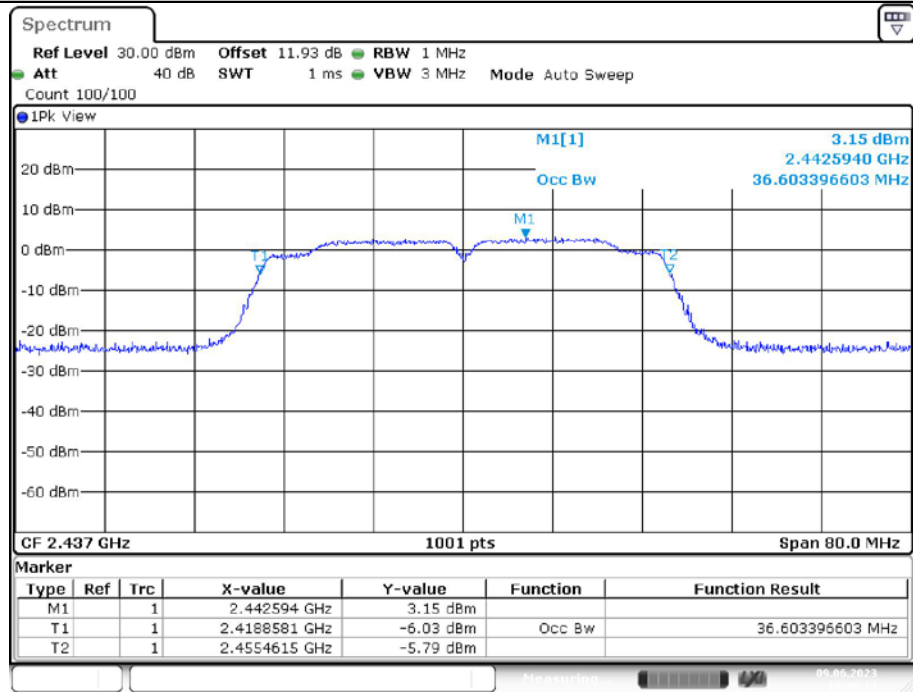
11N40 MIMO_Ant1_2422



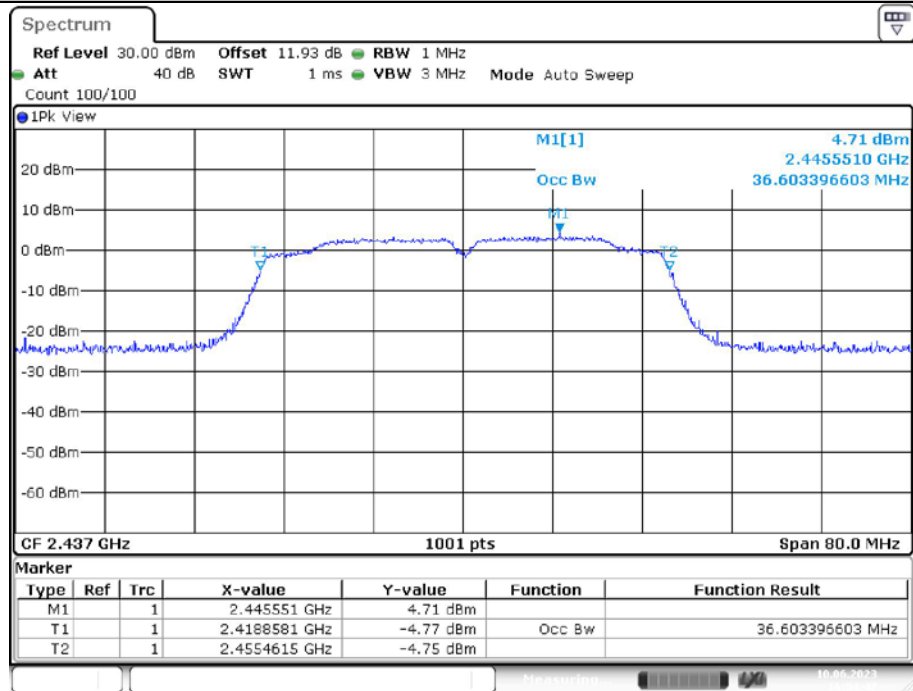
11N40 MIMO_Ant2_2422



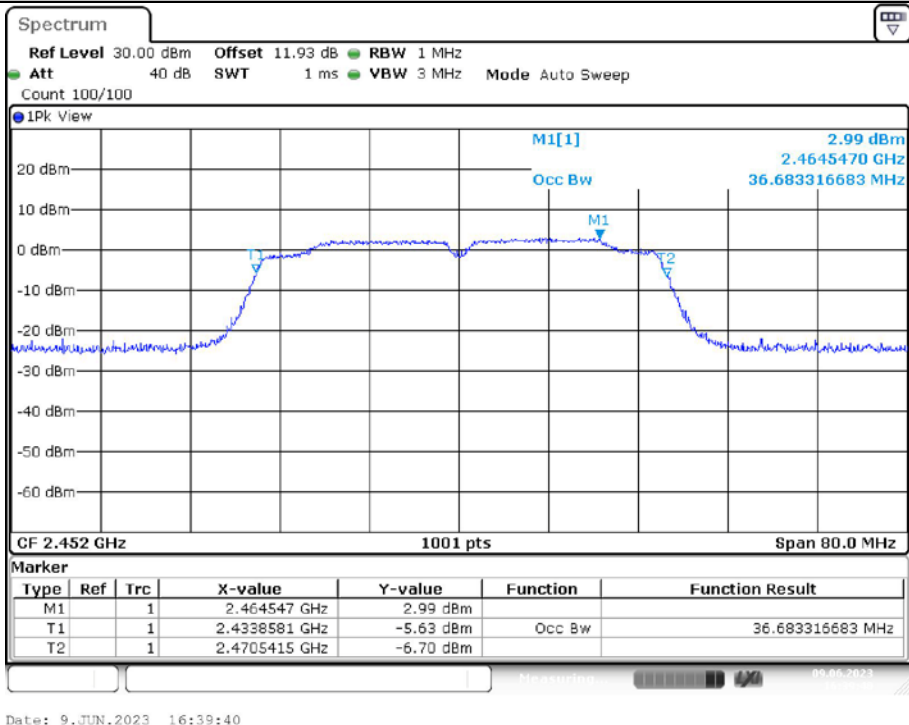
11N40 MIMO_Ant1_2437



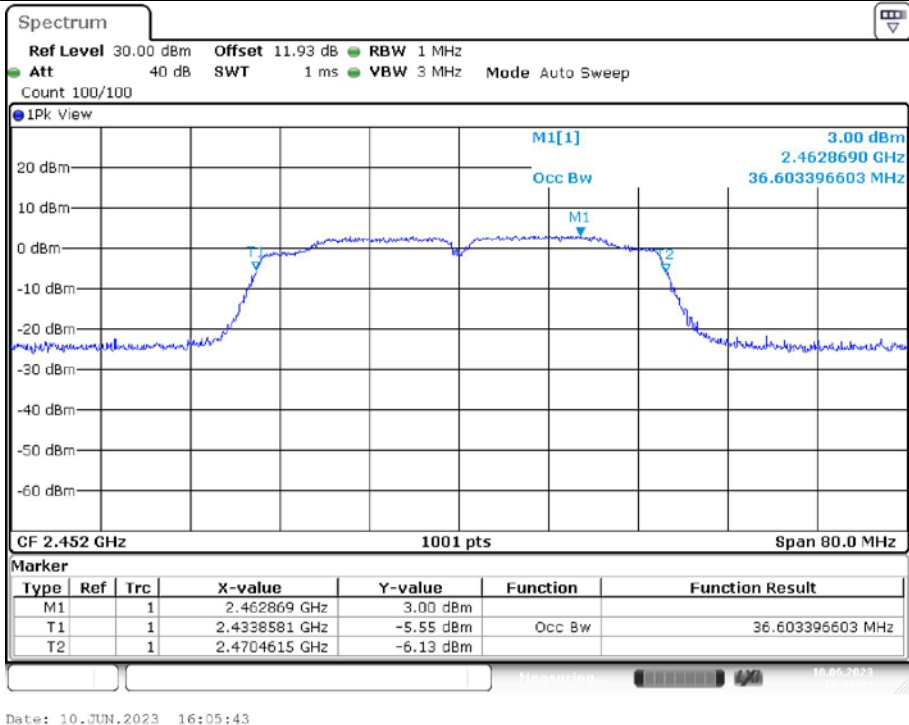
11N40 MIMO_Ant2_2437



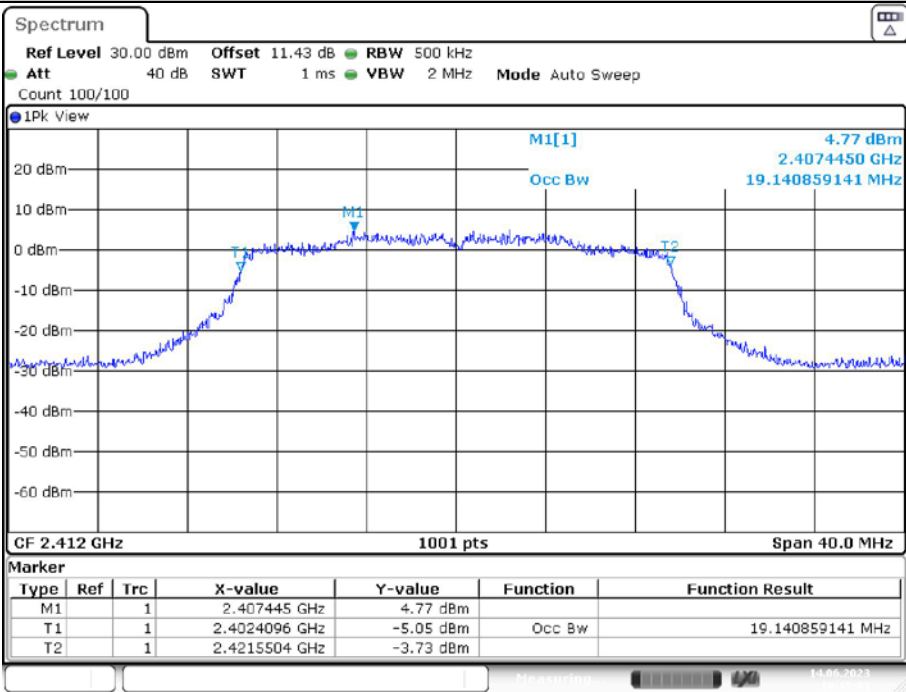
11N40 MIMO_Ant1_2452



11N40 MIMO_Ant2_2452

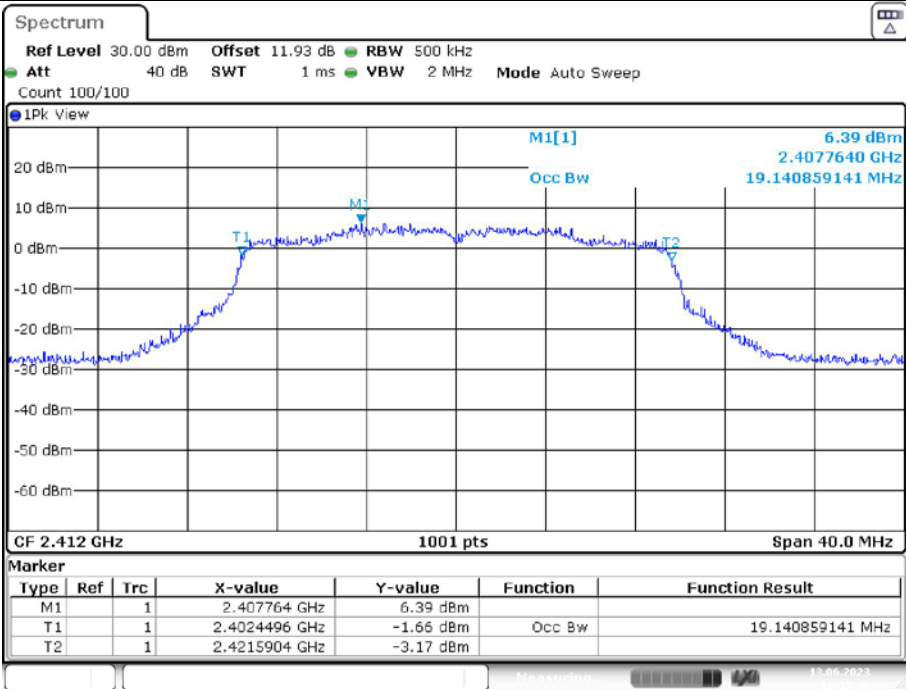


11AX20 MIMO_Ant1_2412

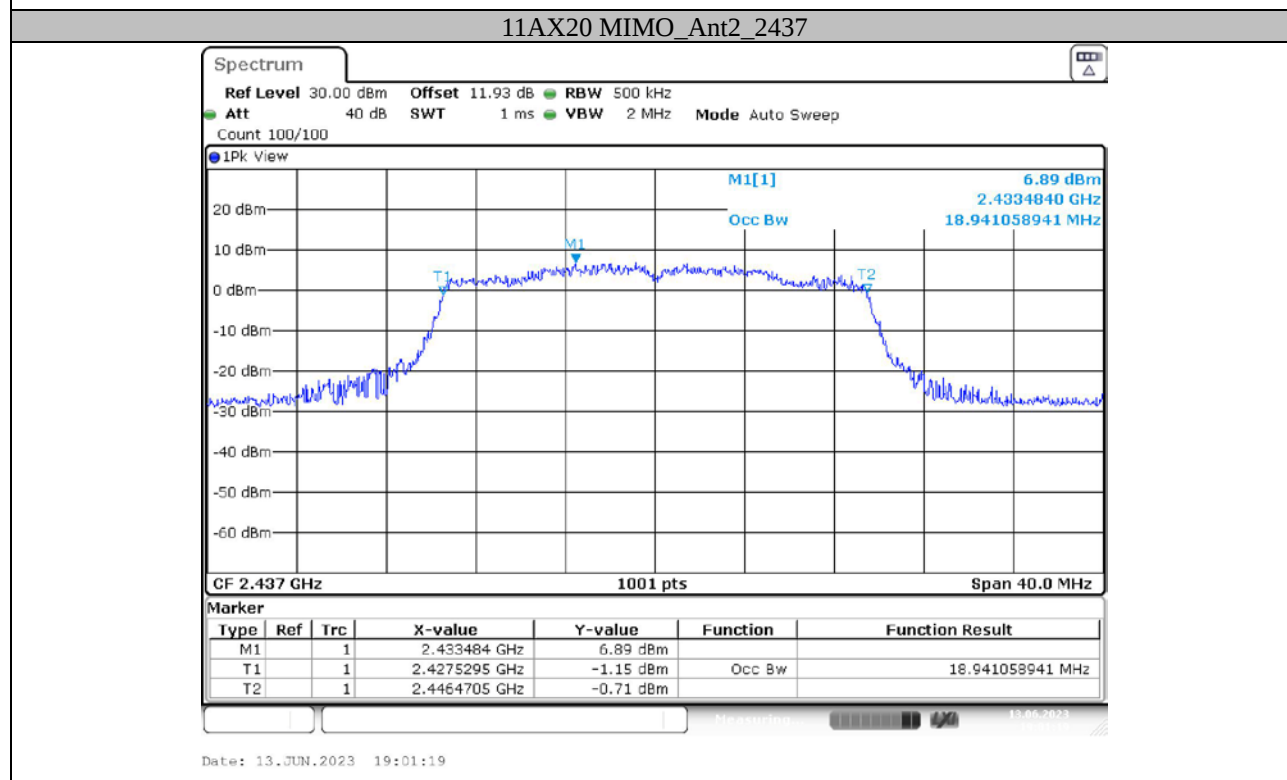
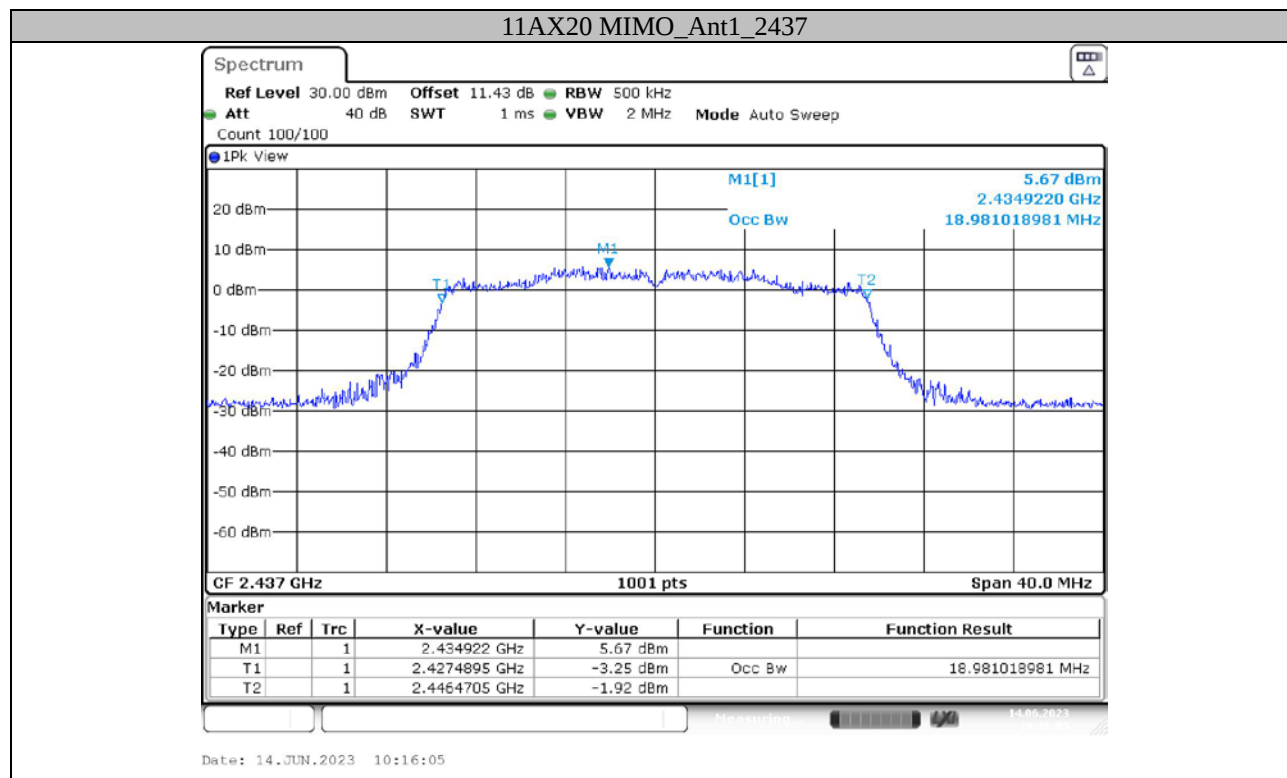


Date: 14.JUN.2023 10:15:03

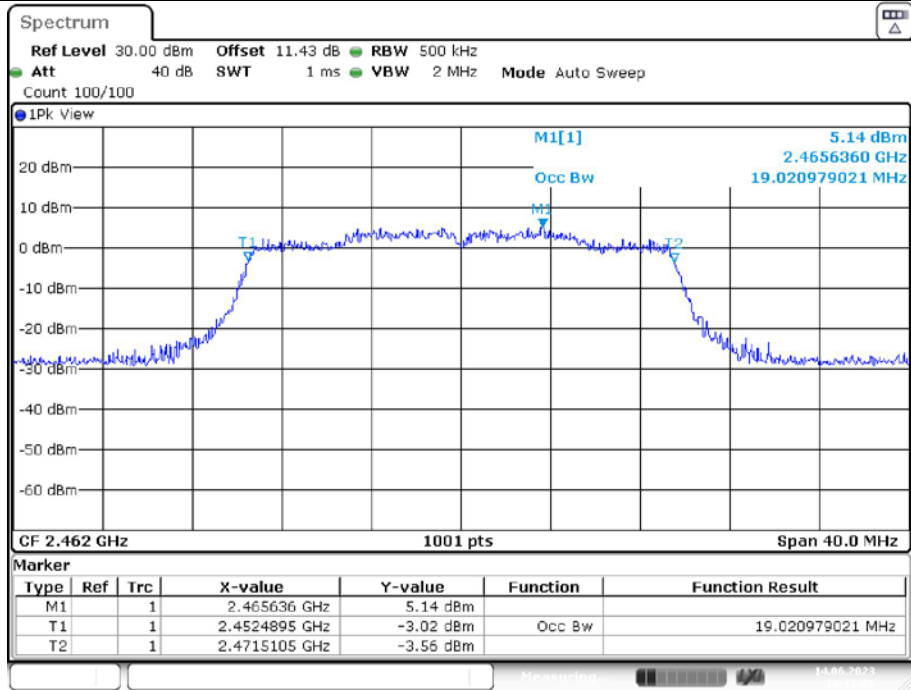
11AX20 MIMO_Ant2_2412



Date: 13.JUN.2023 18:59:33

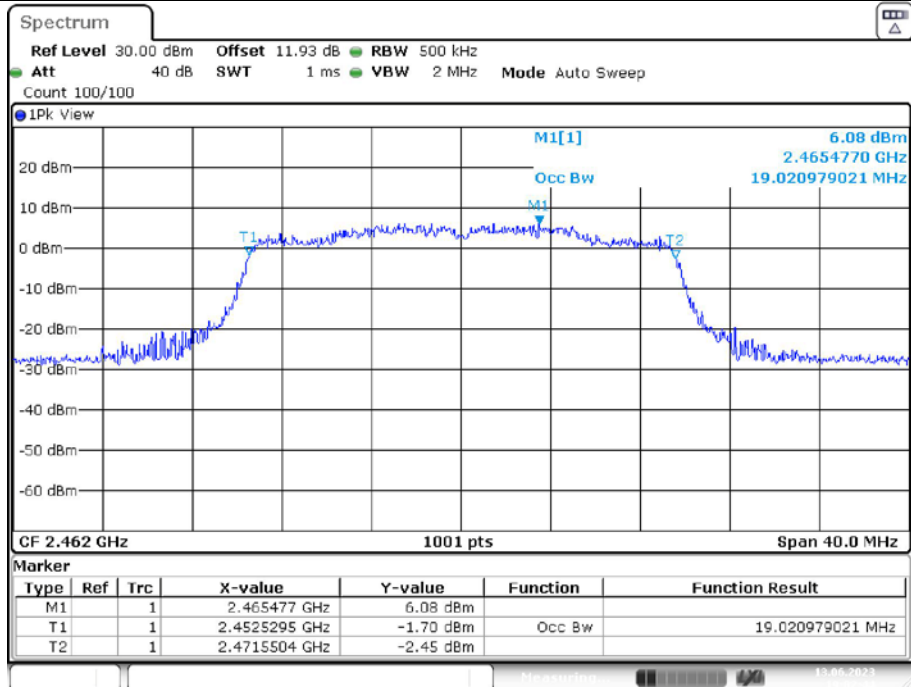


11AX20 MIMO_Ant1_2462



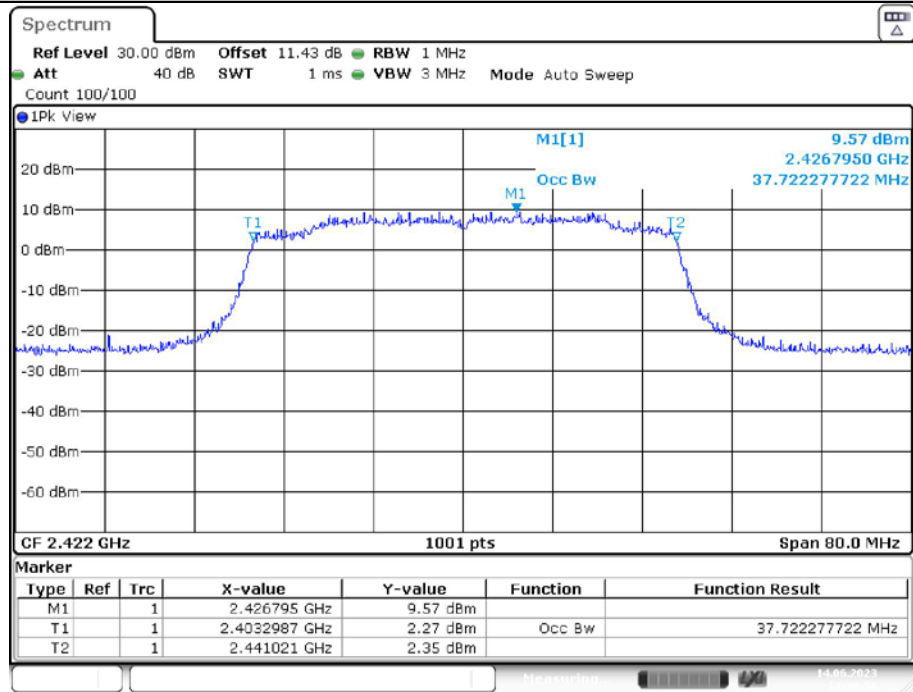
Date: 14.JUN.2023 10:17:28

11AX20 MIMO_Ant2_2462



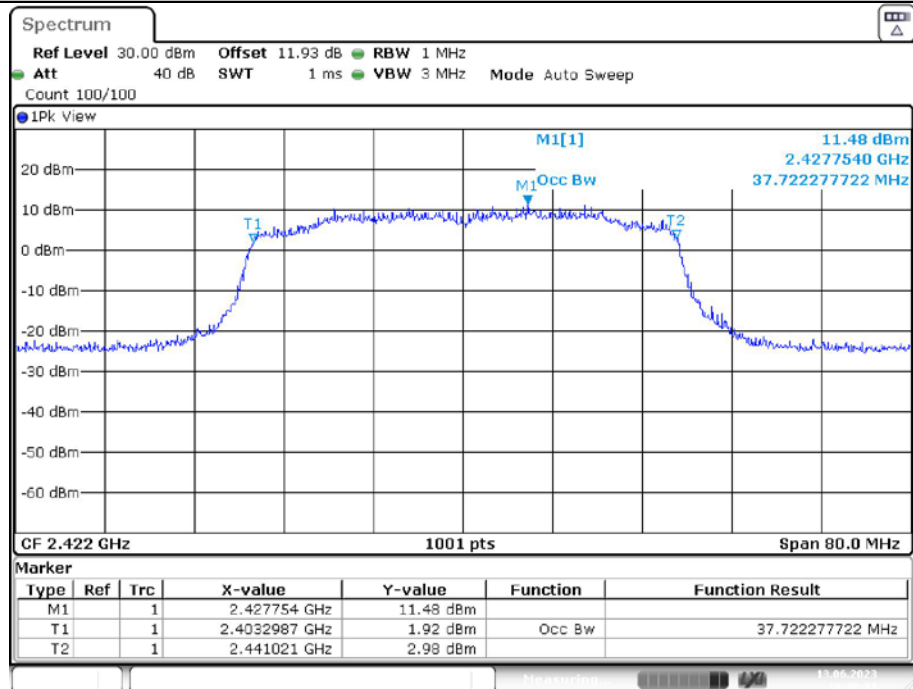
Date: 13.JUN.2023 19:02:44

11AX40 MIMO_Ant1_2422



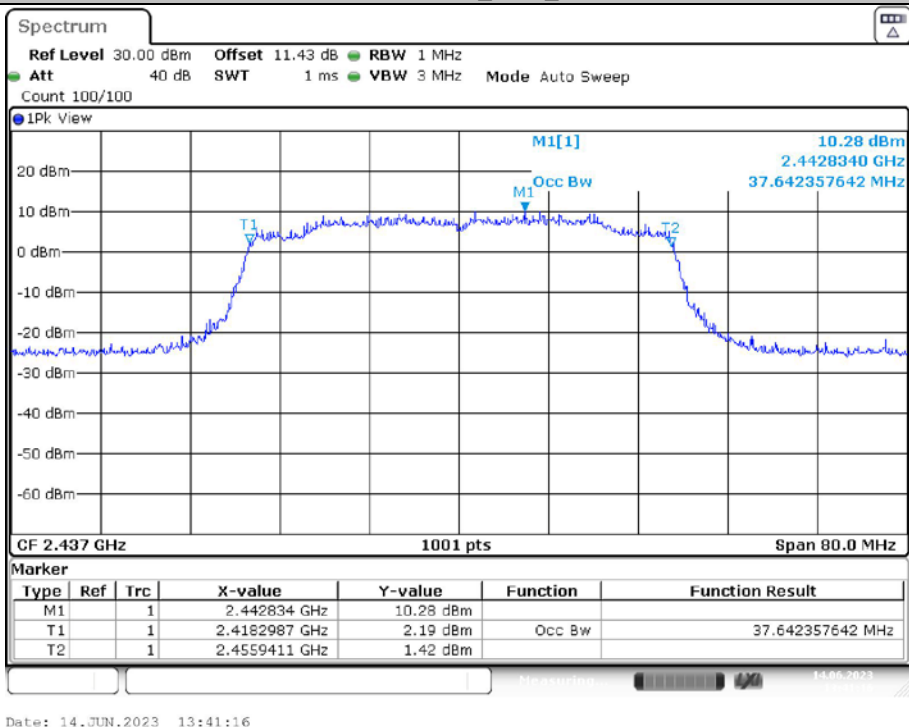
Date: 14.JUN.2023 13:39:58

11AX40 MIMO_Ant2_2422

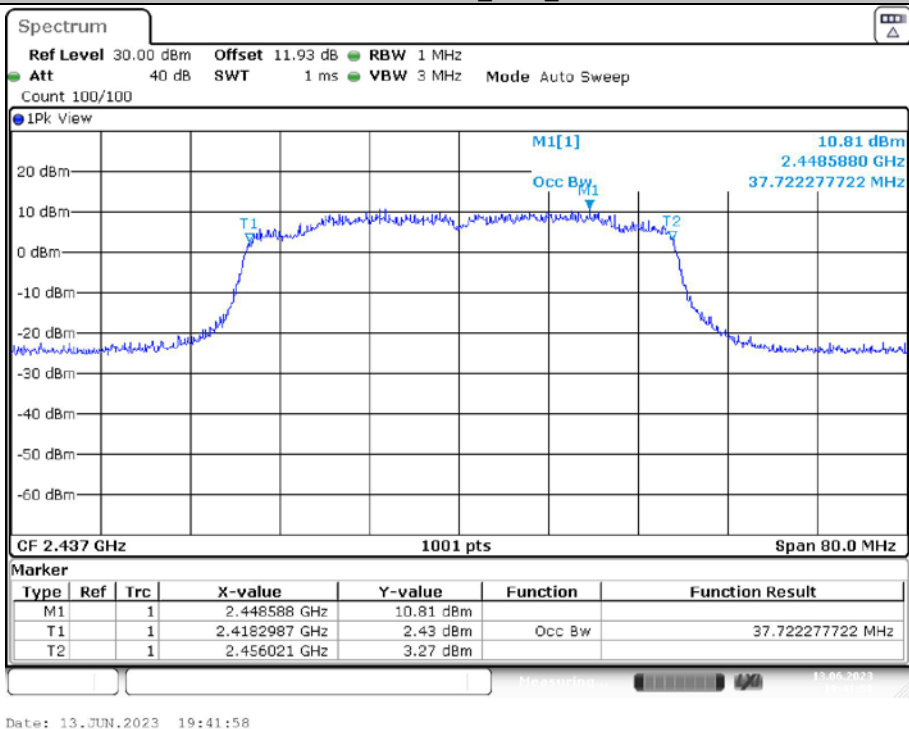


Date: 13.JUN.2023 19:40:31

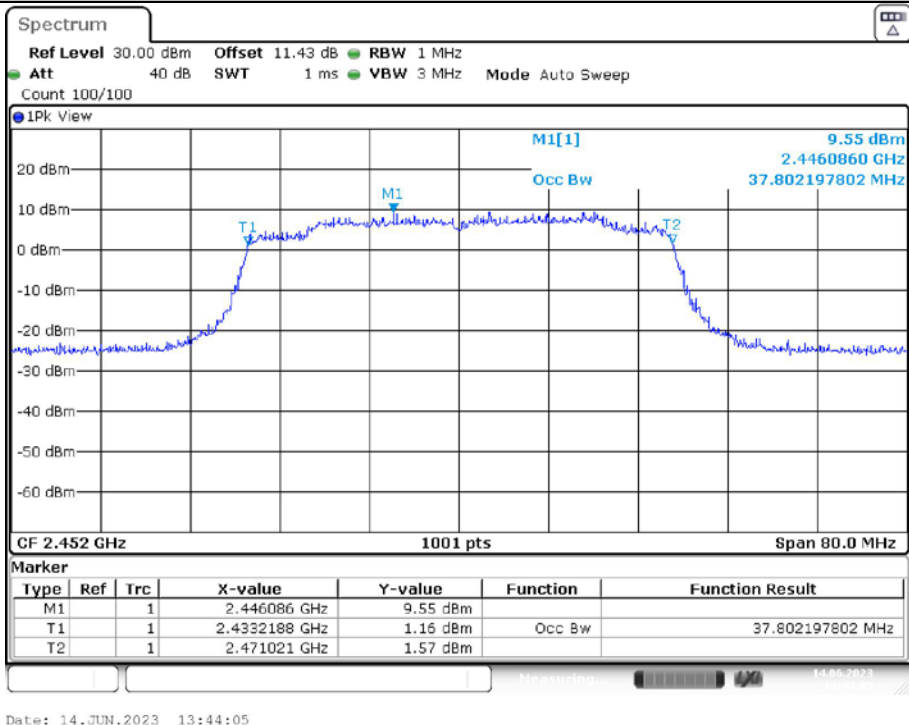
11AX40 MIMO_Ant1_2437



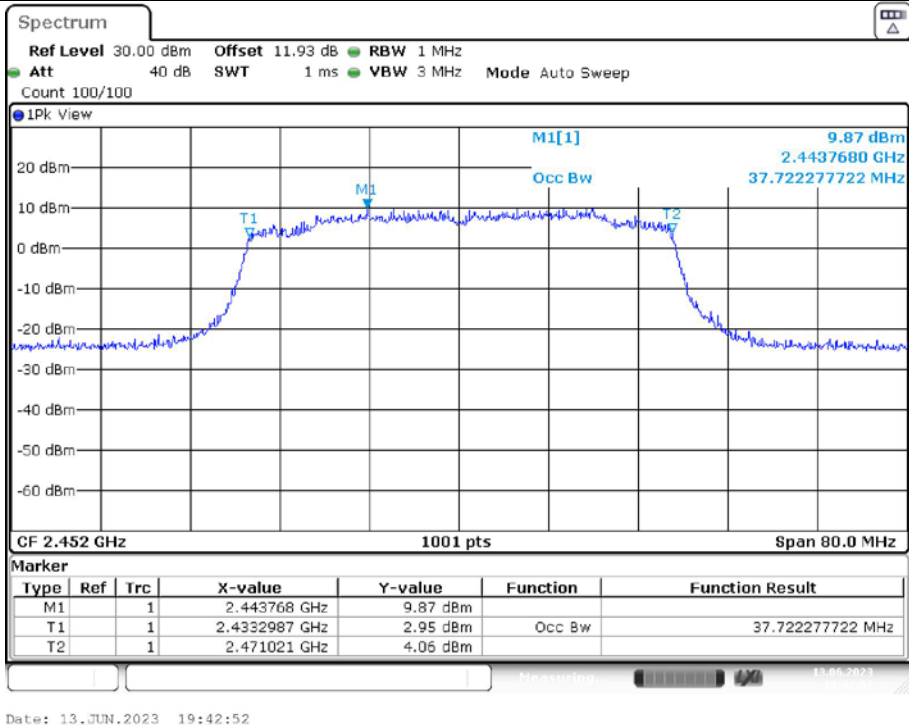
11AX40 MIMO_Ant2_2437



11AX40 MIMO_Ant1_2452



11AX40 MIMO_Ant2_2452



Appendix C: Maximum Conducted Output Power

Test Result

Test Mode	Channel	Antenna	Average Power[dBm]	Limit[dBm]	Verdict
11B MIMO	2412	Ant1	13.52	<=30	PASS
		Ant2	13.73	<=30	PASS
		total	16.64	<=30	PASS
	2437	Ant1	13.61	<=30	PASS
		Ant2	13.68	<=30	PASS
		total	16.66	<=30	PASS
	2462	Ant1	13.38	<=30	PASS
		Ant2	13.47	<=30	PASS
		total	16.44	<=30	PASS
11G MIMO	2412	Ant1	11.83	<=30	PASS
		Ant2	12.14	<=30	PASS
		total	15.00	<=30	PASS
	2437	Ant1	14.03	<=30	PASS
		Ant2	14.09	<=30	PASS
		total	17.07	<=30	PASS
	2462	Ant1	13.76	<=30	PASS
		Ant2	13.91	<=30	PASS
		total	16.85	<=30	PASS
11N20 MIMO	2412	Ant1	7.63	<=30	PASS
		Ant2	8.05	<=30	PASS
		total	10.86	<=30	PASS
	2437	Ant1	7.73	<=30	PASS
		Ant2	7.98	<=30	PASS
		total	10.87	<=30	PASS
	2462	Ant1	7.52	<=30	PASS
		Ant2	7.8	<=30	PASS
		total	10.67	<=30	PASS
11N40 MIMO	2422	Ant1	8.23	<=30	PASS
		Ant2	8.71	<=30	PASS
		total	11.49	<=30	PASS
	2437	Ant1	8.31	<=30	PASS
		Ant2	8.7	<=30	PASS
		total	11.52	<=30	PASS
	2452	Ant1	8.25	<=30	PASS
		Ant2	8.52	<=30	PASS
		total	11.40	<=30	PASS

Test Mode	Tone	RU Index	Channel	Antenna	Result[dBm]	Limit[dBm]	Verdict
11AX20MIMO	26	0	2412	Ant1	-0.7	<=30	PASS
				Ant2	0.01	<=30	PASS
				Total	2.68	<=30	PASS
			2437	Ant1	-0.36	<=30	PASS
				Ant2	0.31	<=30	PASS
				Total	3	<=30	PASS
		8	2462	Ant1	-1.03	<=30	PASS
				Ant2	0.32	<=30	PASS
				Total	2.71	<=30	PASS
	52	37	2412	Ant1	2.4	<=30	PASS
				Ant2	3.27	<=30	PASS
				Total	5.87	<=30	PASS
			2437	Ant1	2.42	<=30	PASS
				Ant2	3.27	<=30	PASS
				Total	5.88	<=30	PASS
		40	2462	Ant1	1.38	<=30	PASS
				Ant2	3.68	<=30	PASS
				Total	5.69	<=30	PASS
	106	53	2412	Ant1	5.63	<=30	PASS
				Ant2	6.32	<=30	PASS
				Total	9	<=30	PASS
			2437	Ant1	5.83	<=30	PASS
				Ant2	6.3	<=30	PASS
				Total	9.08	<=30	PASS
		54	2462	Ant1	4.95	<=30	PASS
				Ant2	6.62	<=30	PASS
				Total	8.88	<=30	PASS
	242	61	2412	Ant1	8.26	<=30	PASS
				Ant2	9.64	<=30	PASS
				Total	12.01	<=30	PASS
			2437	Ant1	8.96	<=30	PASS
				Ant2	10.13	<=30	PASS
				Total	12.59	<=30	PASS
			2462	Ant1	8.48	<=30	PASS
				Ant2	9.62	<=30	PASS
				Total	12.1	<=30	PASS

Test Mode	Tone	RU Index	Channel	Antenna	Result[dBm]	Limit[dBm]	Verdict
11AX40MIMO	26	0	2422	Ant1	0.56	<=30	PASS
				Ant2	1.54	<=30	PASS
				Total	4.09	<=30	PASS
			2437	Ant1	0.62	<=30	PASS
				Ant2	1.27	<=30	PASS
				Total	3.97	<=30	PASS
		17	2452	Ant1	0.68	<=30	PASS
				Ant2	1.57	<=30	PASS
				Total	4.16	<=30	PASS
		52	2422	Ant1	3.47	<=30	PASS
				Ant2	4.38	<=30	PASS
				Total	6.96	<=30	PASS
			2437	Ant1	3.76	<=30	PASS
				Ant2	4.41	<=30	PASS
				Total	7.11	<=30	PASS
		44	2452	Ant1	3.87	<=30	PASS
				Ant2	4.43	<=30	PASS
				Total	7.17	<=30	PASS
	106	53	2422	Ant1	6.9	<=30	PASS
				Ant2	7.52	<=30	PASS
				Total	10.23	<=30	PASS
			2437	Ant1	7.06	<=30	PASS
				Ant2	7.44	<=30	PASS
				Total	10.26	<=30	PASS
		56	2452	Ant1	7.07	<=30	PASS
				Ant2	6.55	<=30	PASS
				Total	9.8	<=30	PASS
		242	2422	Ant1	9.86	<=30	PASS
				Ant2	10.69	<=30	PASS
				Total	13.31	<=30	PASS
			2437	Ant1	9.89	<=30	PASS
				Ant2	10.59	<=30	PASS
				Total	13.26	<=30	PASS
		62	2452	Ant1	9.74	<=30	PASS
				Ant2	10.21	<=30	PASS
				Total	12.99	<=30	PASS
	484	65	2422	Ant1	12.96	<=30	PASS
				Ant2	13.83	<=30	PASS
				Total	16.43	<=30	PASS
			2437	Ant1	13.06	<=30	PASS
				Ant2	13.48	<=30	PASS
				Total	16.29	<=30	PASS
			2452	Ant1	12.96	<=30	PASS
				Ant2	13.44	<=30	PASS
				Total	16.22	<=30	PASS

Note: The maximum antenna gain is 1.45dBi. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

Array Gain = 0dB (i.e., no array gain) For $N_{\text{ANT}} \leq 4$;

So: Directional gain < 6dBi, the limit is not reduced.

Appendix D: Power Spectral Density**Test Result**

Test Mode	Channel	Antenna	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B MIMO	2412	Ant1	-17.00	<=8	PASS
		Ant2	-16.98	<=8	PASS
		total	-13.98	<=8	PASS
	2437	Ant1	-17.52	<=8	PASS
		Ant2	-17.52	<=8	PASS
		total	-14.51	<=8	PASS
	2462	Ant1	-17.34	<=8	PASS
		Ant2	-17.42	<=8	PASS
		total	-14.37	<=8	PASS
11G MIMO	2412	Ant1	-21.62	<=8	PASS
		Ant2	-21.49	<=8	PASS
		total	-18.54	<=8	PASS
	2437	Ant1	-19.43	<=8	PASS
		Ant2	-19.16	<=8	PASS
		total	-16.28	<=8	PASS
	2462	Ant1	-19.66	<=8	PASS
		Ant2	-19.55	<=8	PASS
		total	-16.59	<=8	PASS
11N20 MIMO	2412	Ant1	-26.15	<=8	PASS
		Ant2	-25.92	<=8	PASS
		total	-23.02	<=8	PASS
	2437	Ant1	-25.92	<=8	PASS
		Ant2	-25.78	<=8	PASS
		total	-22.84	<=8	PASS
	2462	Ant1	-26.05	<=8	PASS
		Ant2	-25.77	<=8	PASS
		total	-22.9	<=8	PASS
11N40 MIMO	2422	Ant1	-23.48	<=8	PASS
		Ant2	-23.07	<=8	PASS
		total	-20.26	<=8	PASS
	2437	Ant1	-23.51	<=8	PASS
		Ant2	-23.25	<=8	PASS
		total	-20.37	<=8	PASS
	2452	Ant1	-23.41	<=8	PASS
		Ant2	-23.54	<=8	PASS
		total	-20.46	<=8	PASS

Test Mode	Channel	Antenna	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11AX20 MIMO	2412	Ant1	-23.54	<=8	PASS
		Ant2	-22.55	<=8	PASS
		total	-20.01	<=8	PASS
	2437	Ant1	-23.22	<=8	PASS
		Ant2	-22.30	<=8	PASS
		total	-19.73	<=8	PASS
	2462	Ant1	-23.45	<=8	PASS
		Ant2	-22.52	<=8	PASS
		total	-19.95	<=8	PASS
11AX40 MIMO	2422	Ant1	-23.88	<=8	PASS
		Ant2	-23.17	<=8	PASS
		total	-20.50	<=8	PASS
	2437	Ant1	-23.54	<=8	PASS
		Ant2	-22.91	<=8	PASS
		total	-20.20	<=8	PASS
	2452	Ant1	-23.69	<=8	PASS
		Ant2	-23.01	<=8	PASS
		total	-20.33	<=8	PASS

Note:

The result unit for 802.11n-HT40/802.11ax-HE40 mode is dBm/10kHz.

The Duty Cycle Factor is compensated in the graph.

The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:

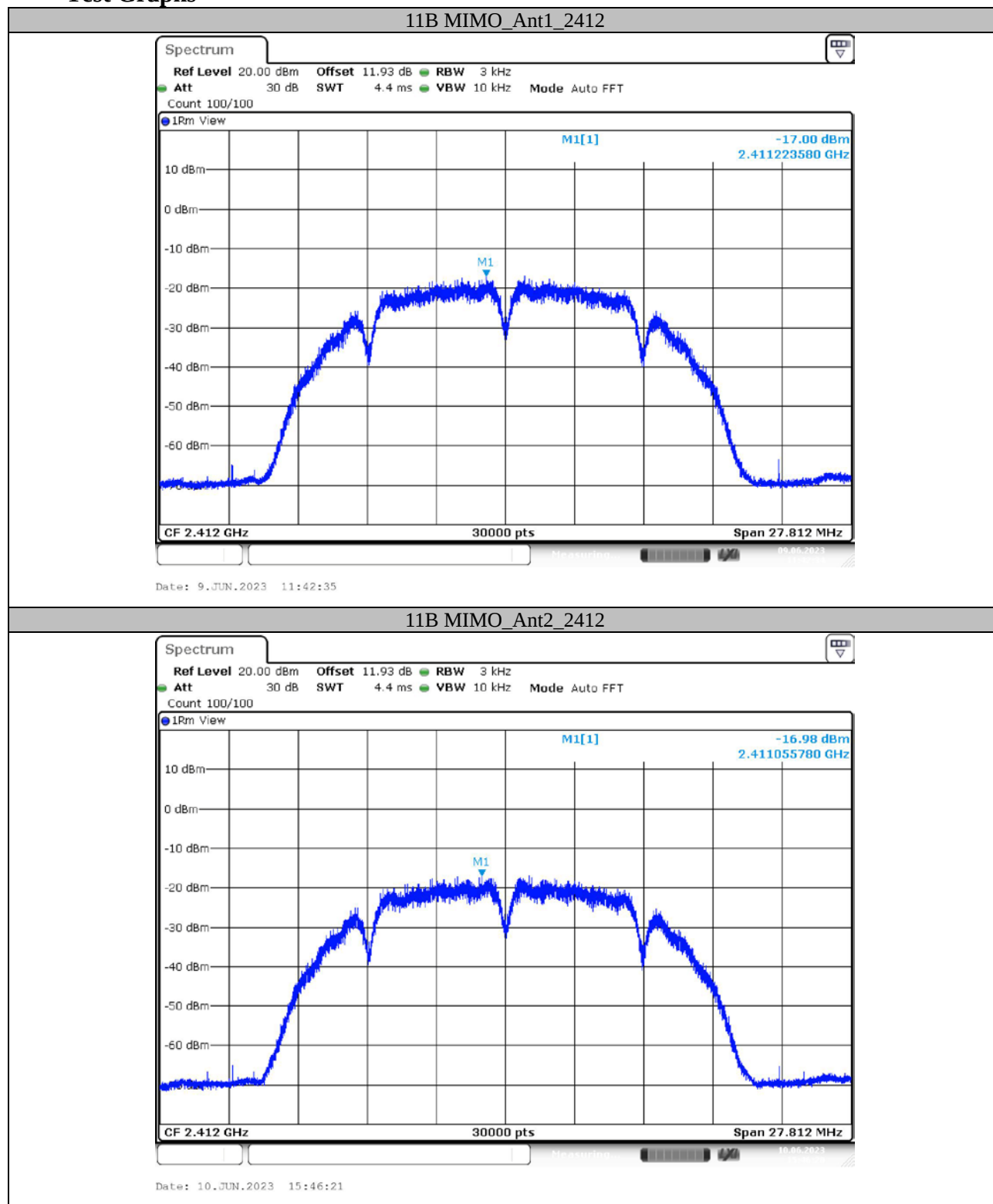
Array Gain = $10 \log(N_{\text{ANT}}/N_{\text{ss}})$ dB

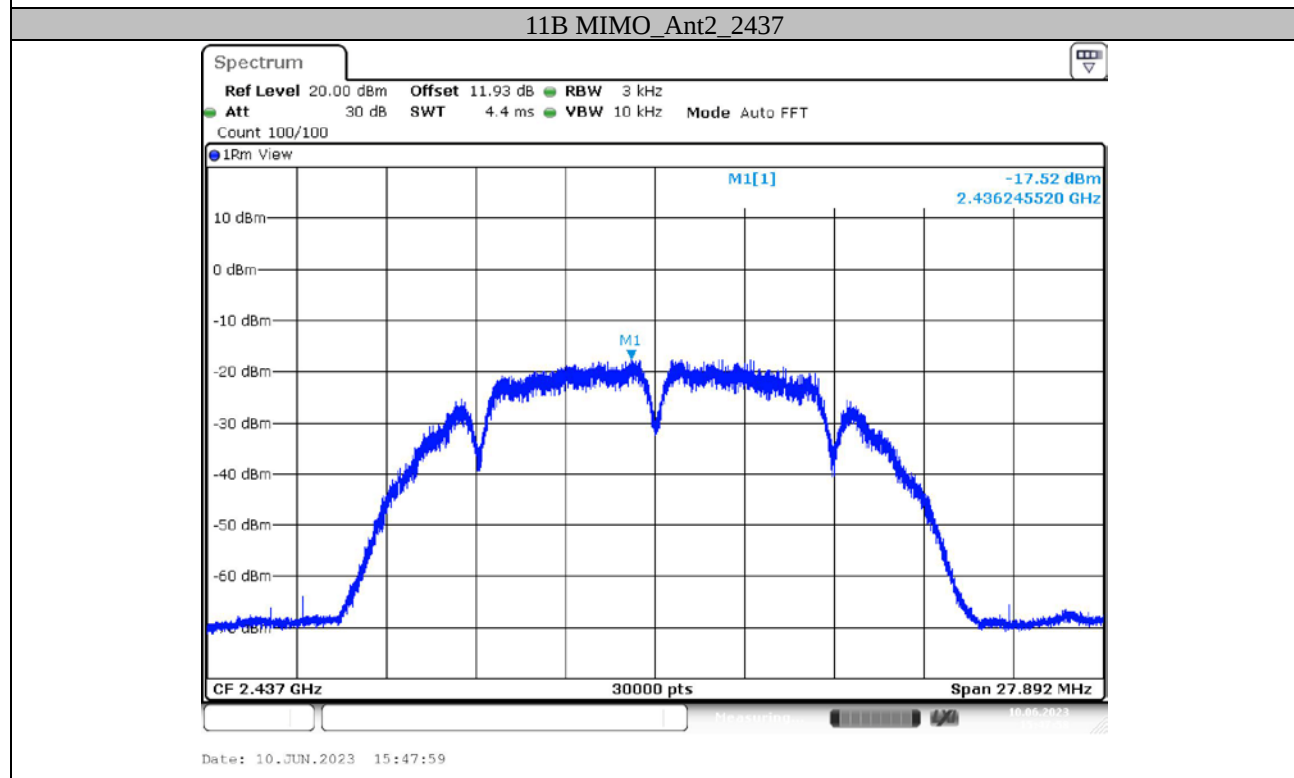
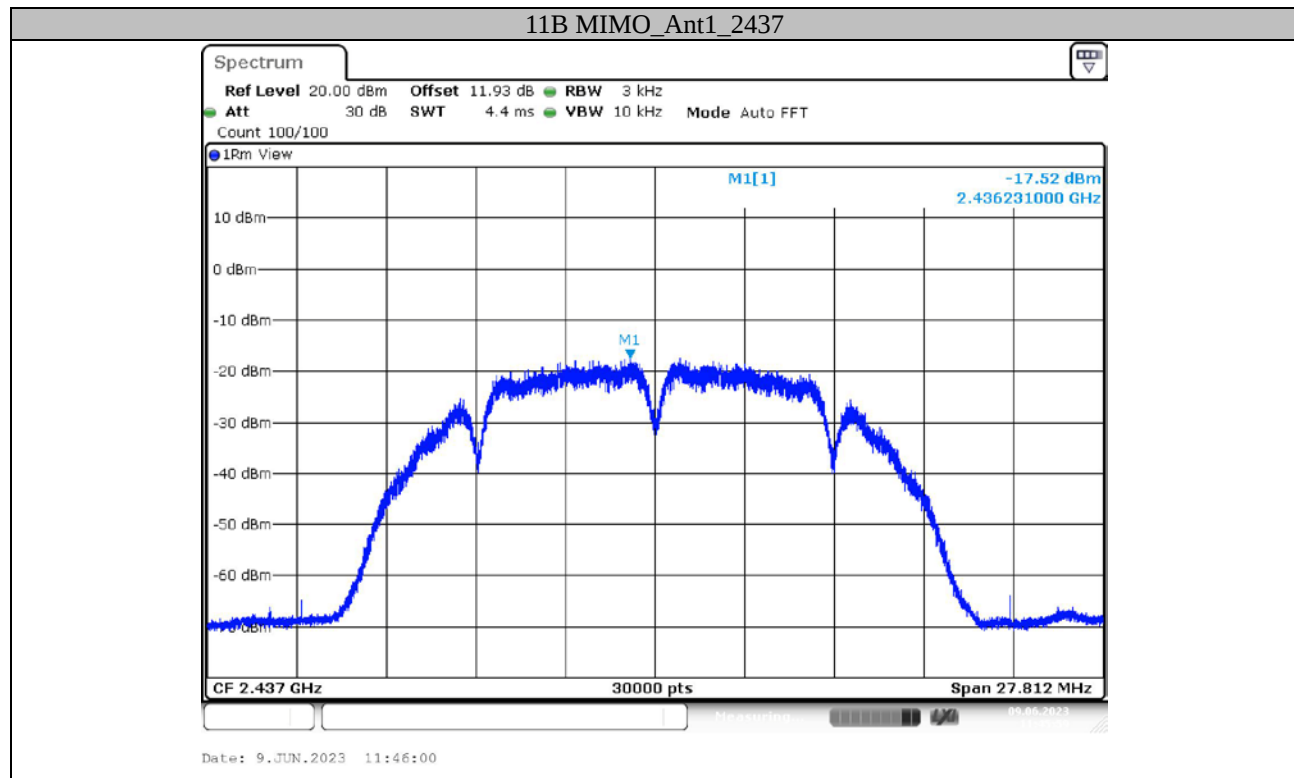
Directional gain = $G_{\text{ANT}} + \text{Array Gain}$

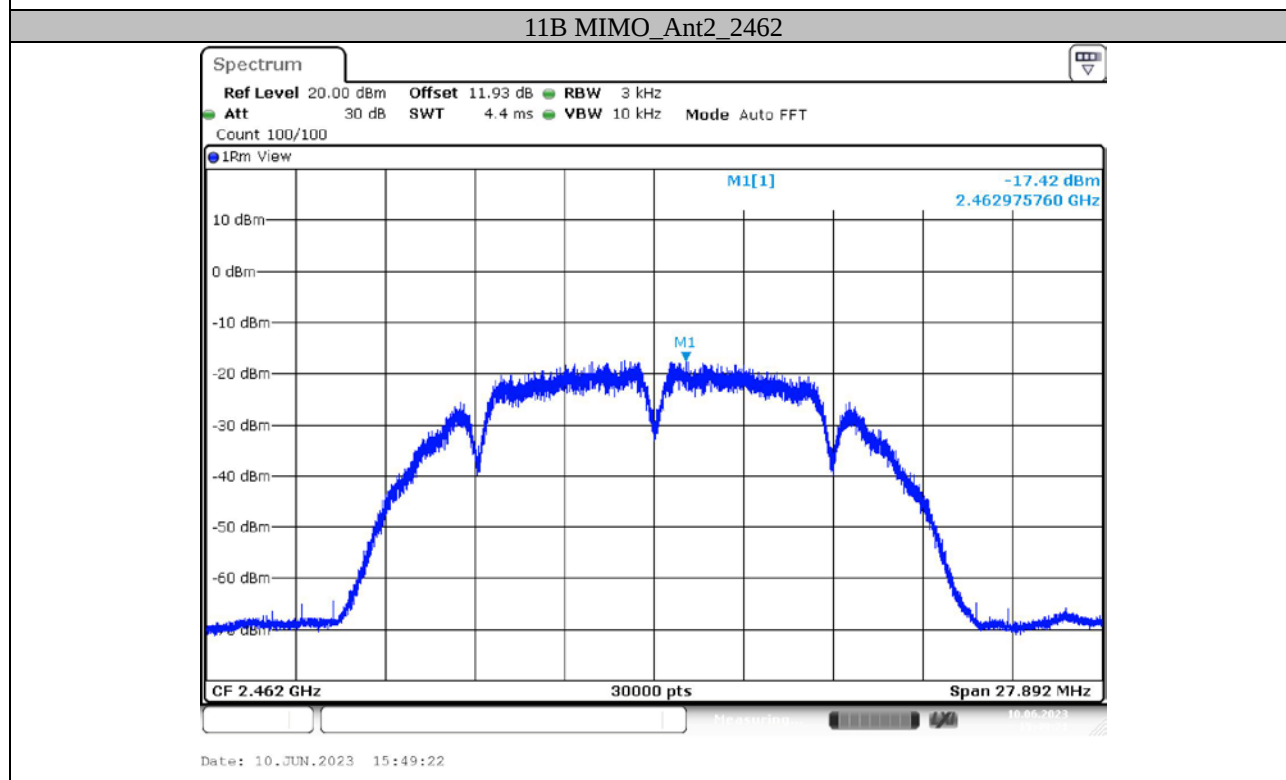
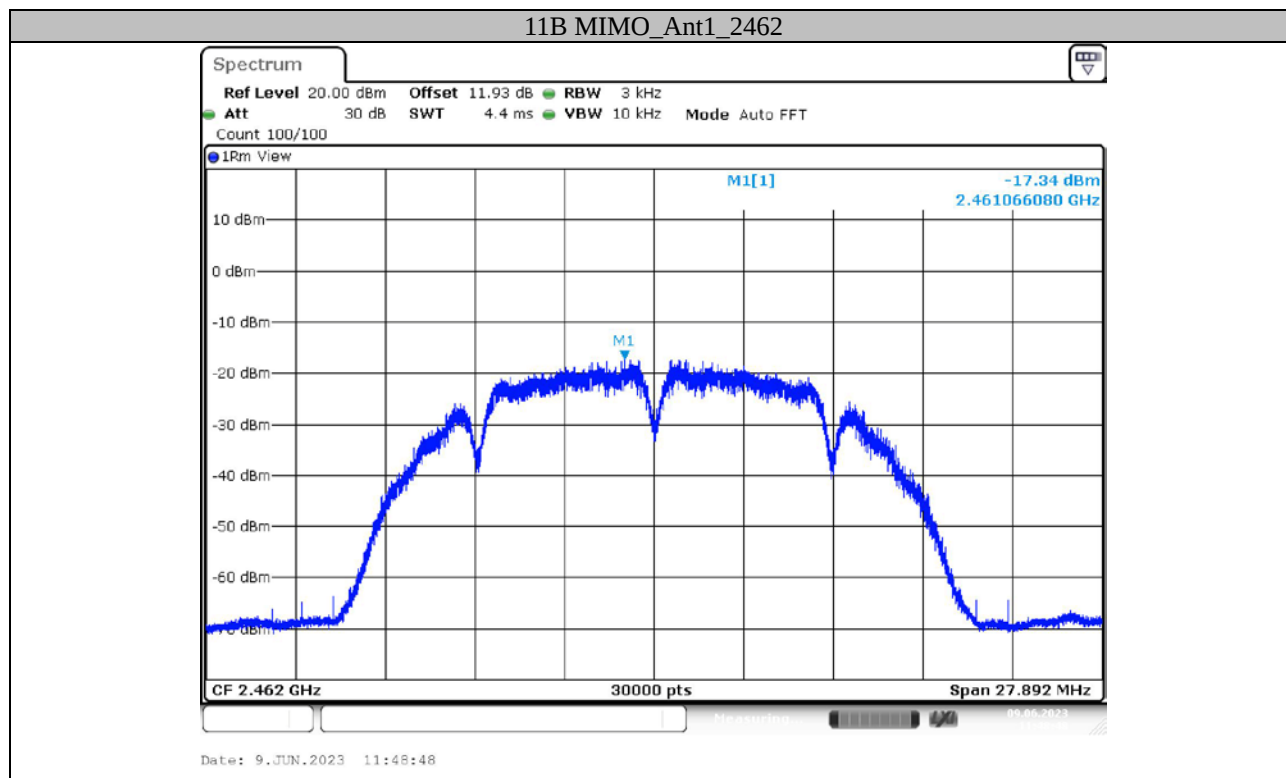
The $G_{\text{ANT}1}$ = 1.45dBi (MAX)

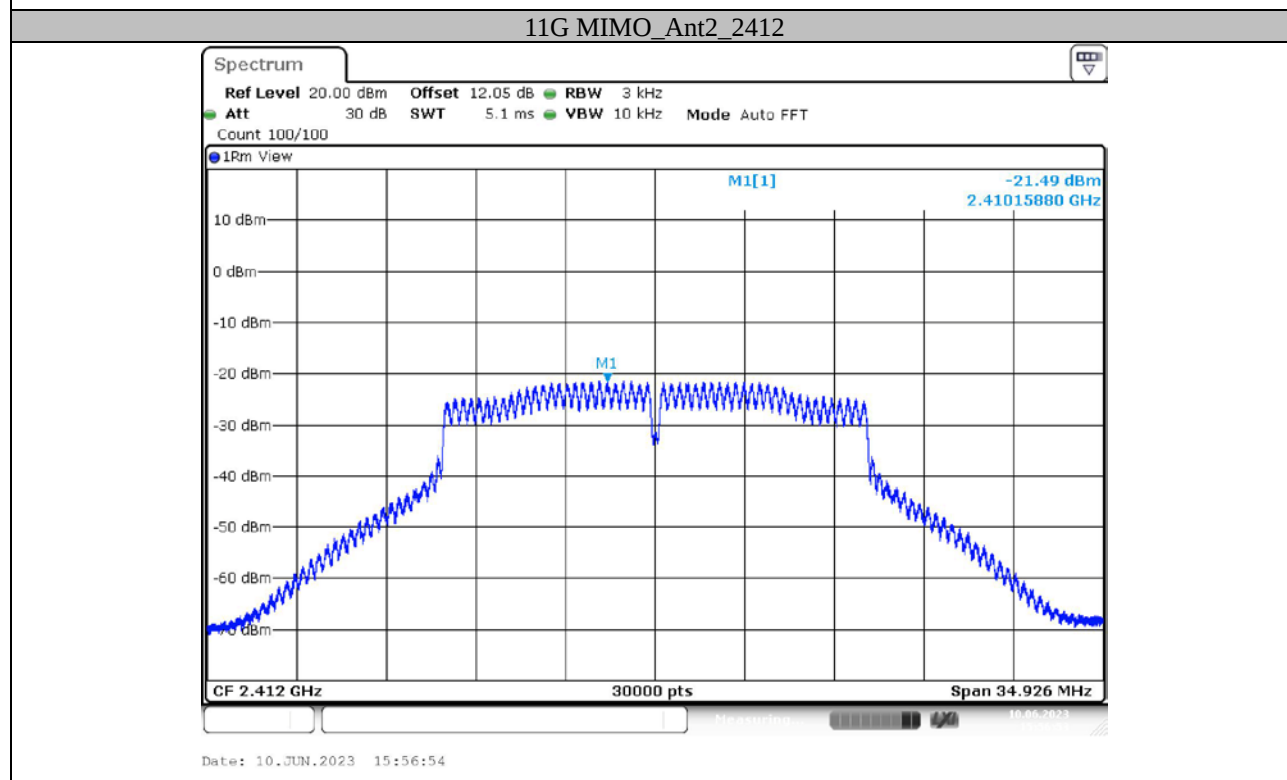
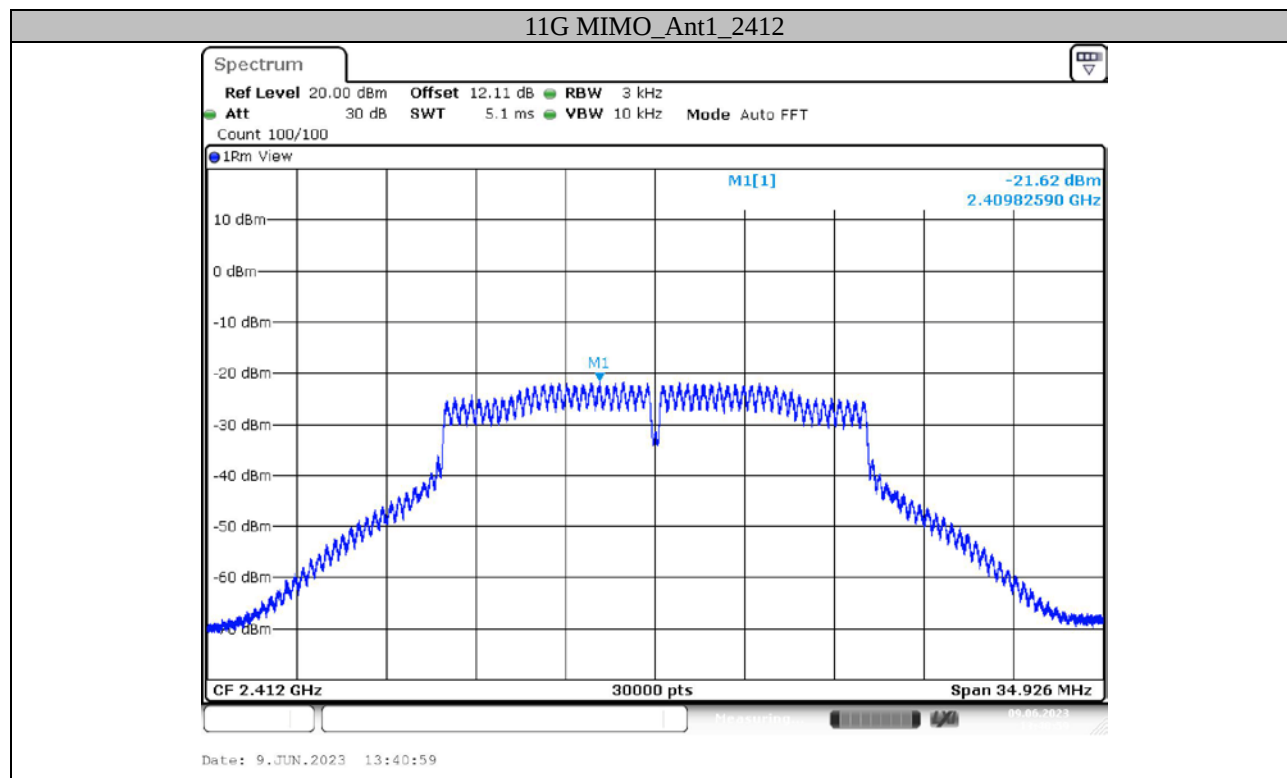
Directional gain = $1.45\text{dBi} + 10 * \log(2/1) = 4.46\text{dBi} < 6\text{dBi}$

Test Graphs

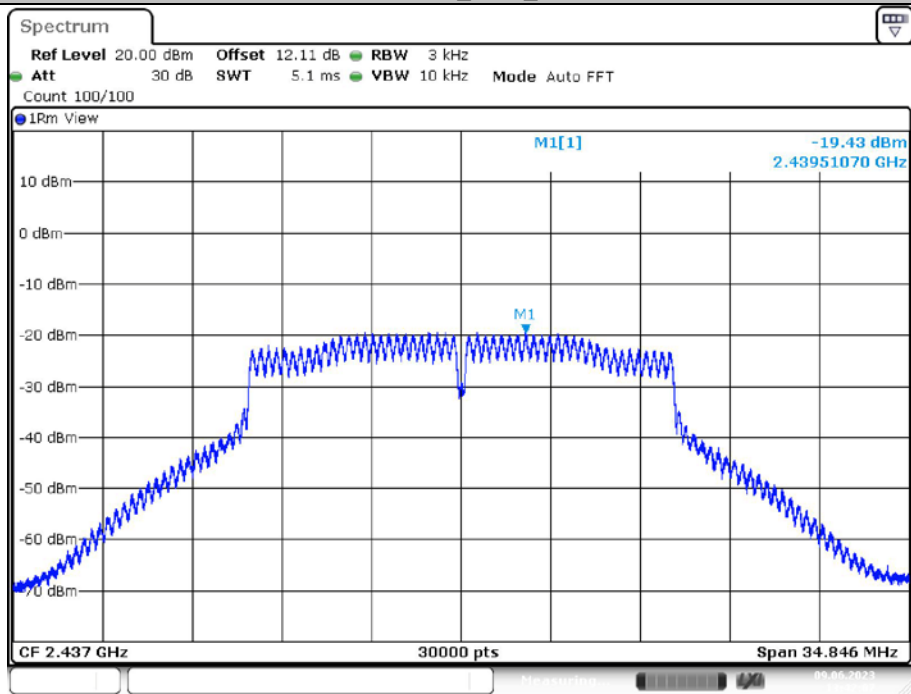






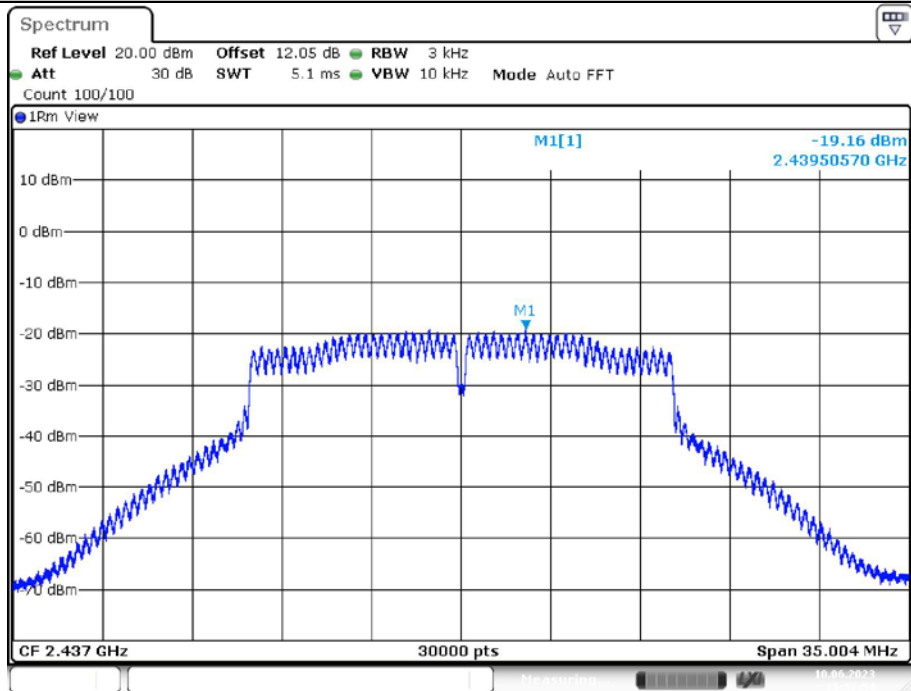


11G MIMO_Ant1_2437

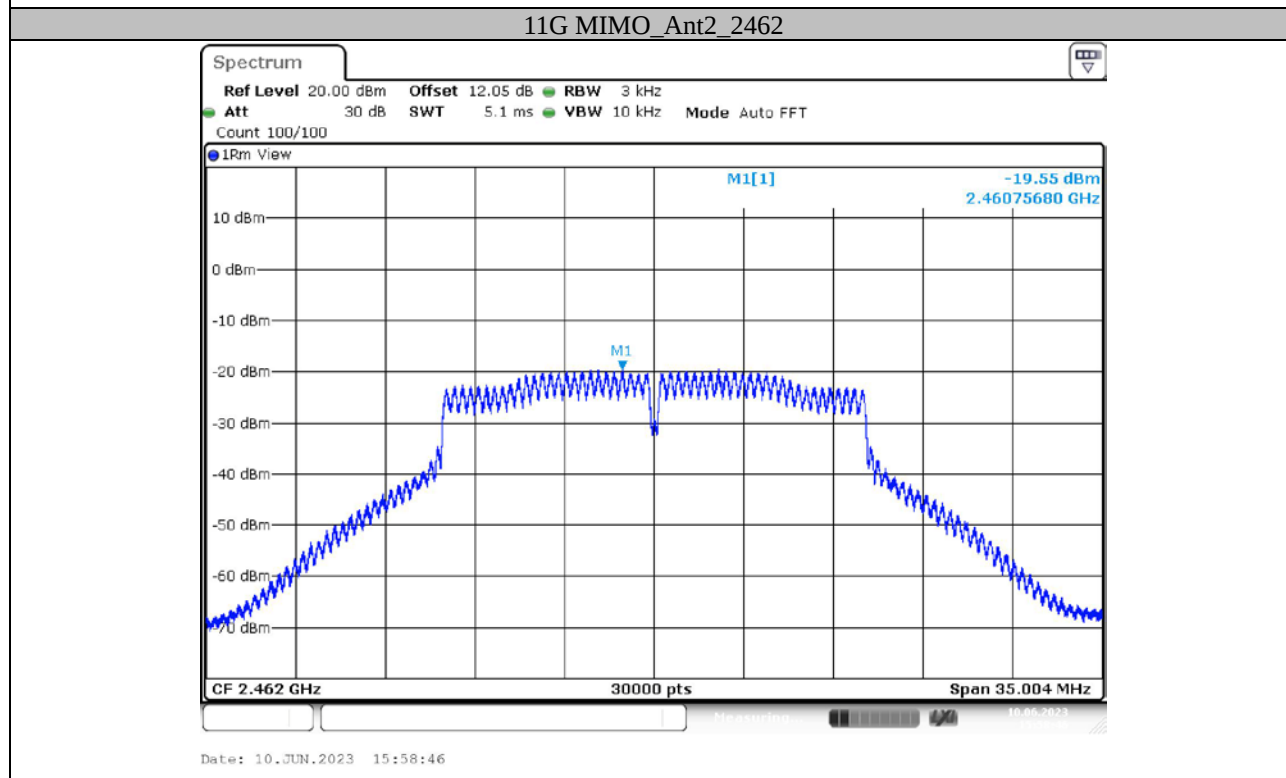
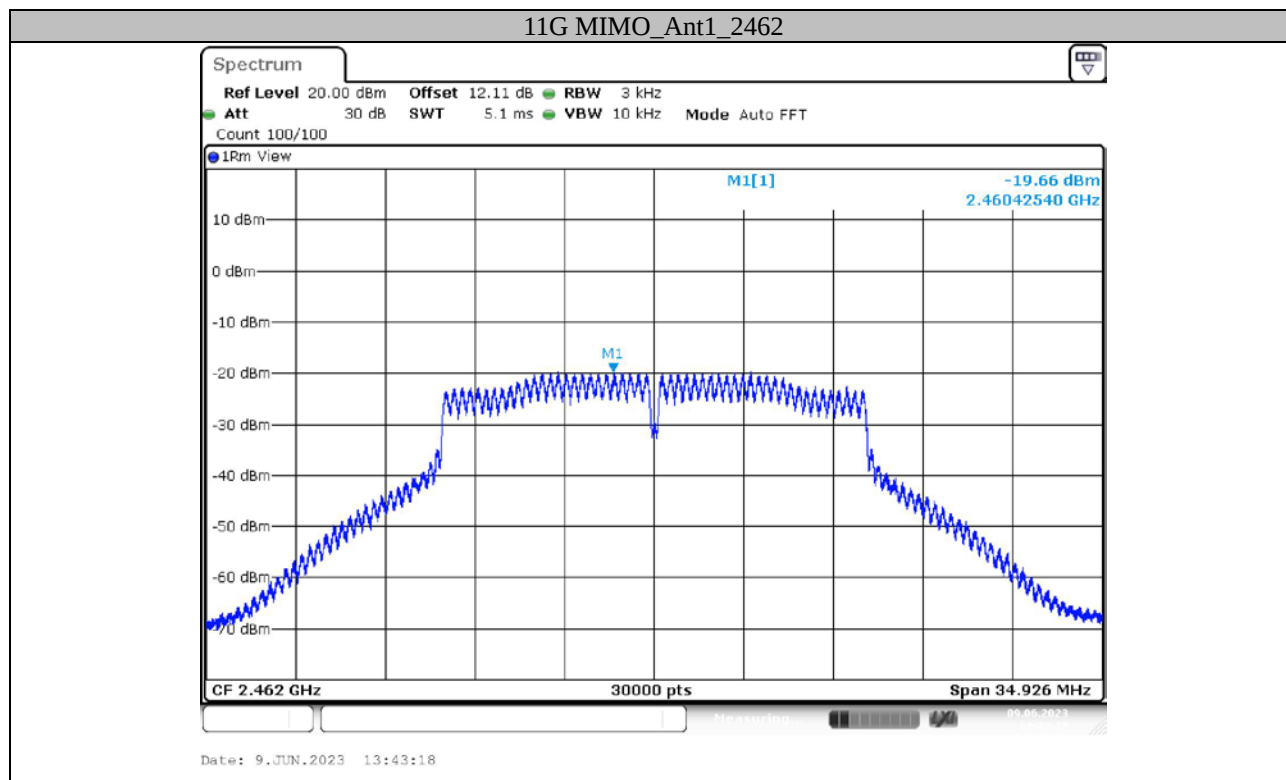


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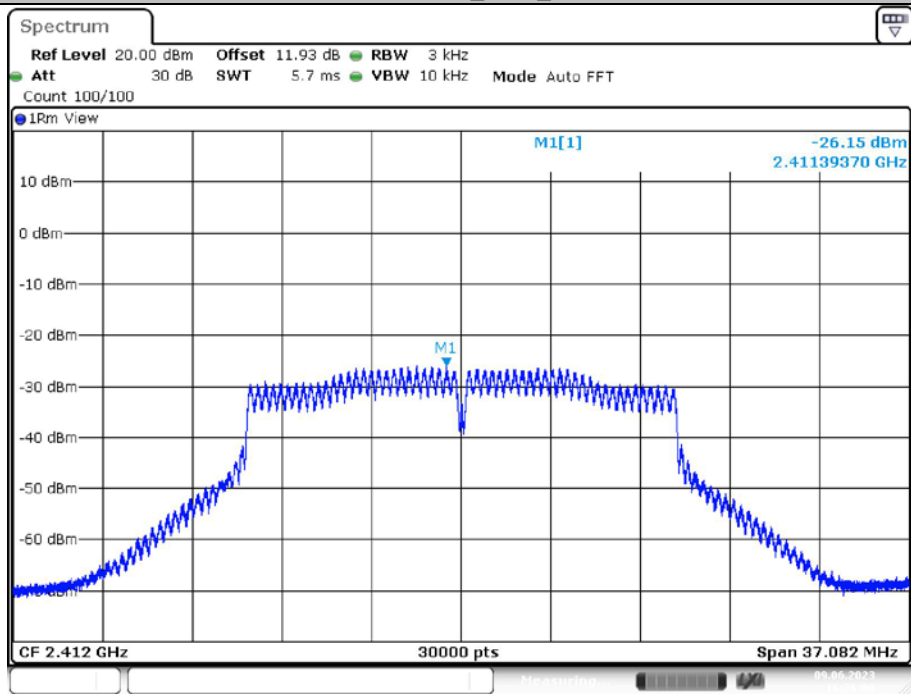
11G MIMO_Ant2_2437



Date: 10.JUN.2023 15:57:55

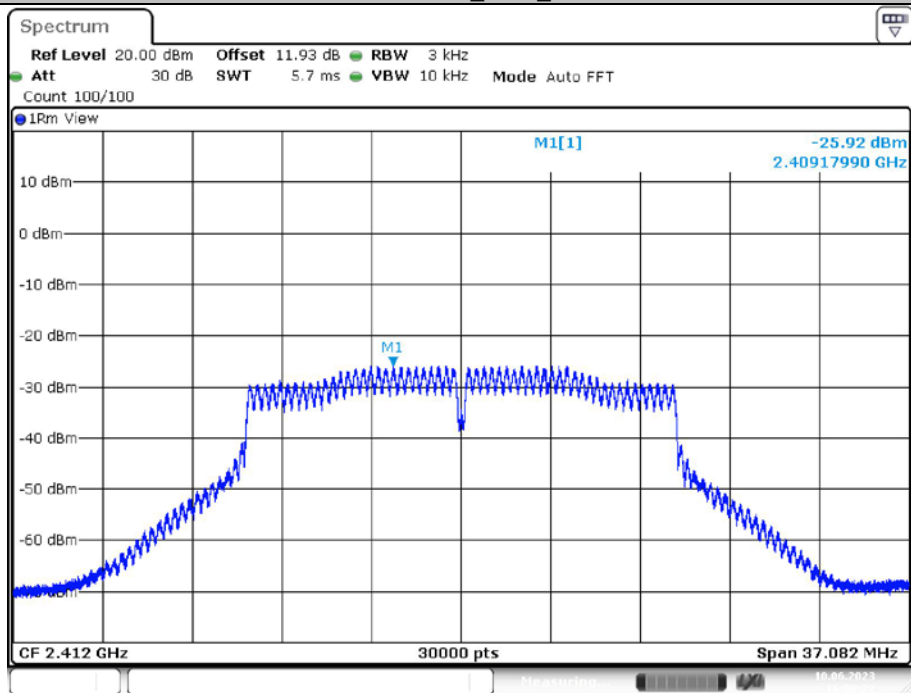


11N20 MIMO_Ant1_2412



Date: 9.JUN.2023 16:26:01

11N20 MIMO_Ant2_2412



Date: 10.JUN.2023 16:00:23