

APPENDIX C: Maximum Conducted Output Power

Test Result

Test Mode	Channel	Antenna	Average Power[dBm]	Limit[dBm]	Verdict
11B MIMO	2412	Ant1	11.37	<=30	PASS
		Ant2	9.58	<=30	PASS
		total	13.58	<=30	PASS
	2437	Ant1	11.42	<=30	PASS
		Ant2	9.23	<=30	PASS
		total	13.47	<=30	PASS
	2462	Ant1	11.36	<=30	PASS
		Ant2	10.55	<=30	PASS
		total	13.98	<=30	PASS
11G MIMO	2412	Ant1	7.12	<=30	PASS
		Ant2	5.29	<=30	PASS
		total	9.31	<=30	PASS
	2437	Ant1	7.16	<=30	PASS
		Ant2	4.97	<=30	PASS
		total	9.21	<=30	PASS
	2462	Ant1	7.08	<=30	PASS
		Ant2	6.26	<=30	PASS
		total	9.70	<=30	PASS
11N20 MIMO	2412	Ant1	7.13	<=30	PASS
		Ant2	5.20	<=30	PASS
		total	9.28	<=30	PASS
	2437	Ant1	7.05	<=30	PASS
		Ant2	4.91	<=30	PASS
		total	9.12	<=30	PASS
	2462	Ant1	7.05	<=30	PASS
		Ant2	6.15	<=30	PASS
		total	9.63	<=30	PASS
11N40 MIMO	2422	Ant1	7.41	<=30	PASS
		Ant2	5.39	<=30	PASS
		total	9.53	<=30	PASS
	2437	Ant1	7.42	<=30	PASS
		Ant2	5.43	<=30	PASS
		total	9.55	<=30	PASS
	2452	Ant1	7.37	<=30	PASS
		Ant2	6.10	<=30	PASS
		total	9.79	<=30	PASS

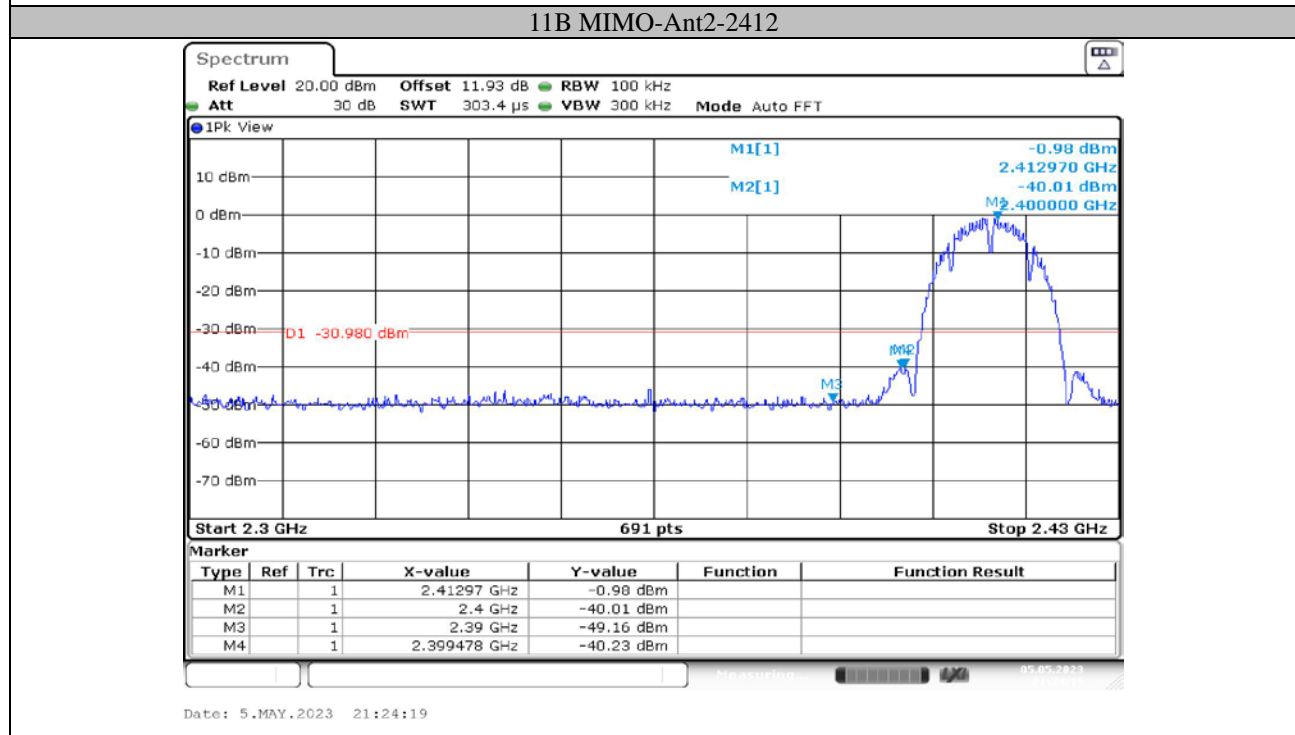
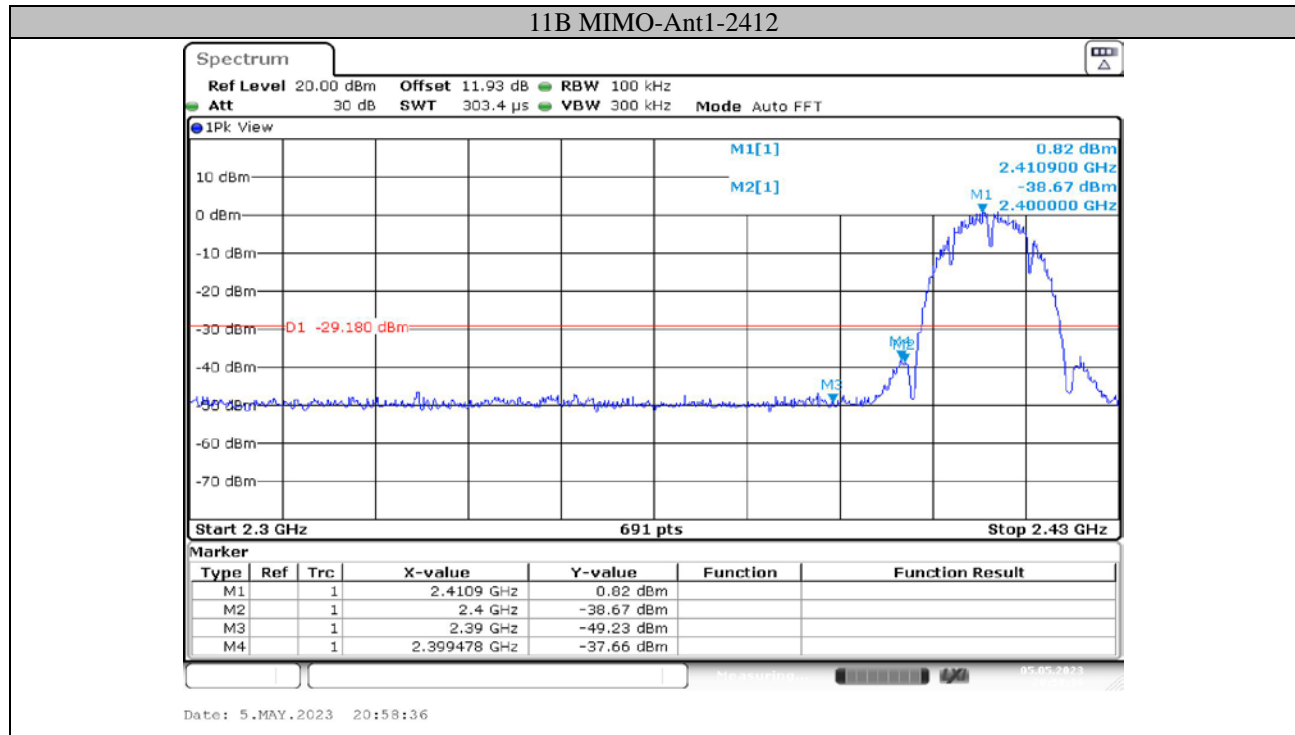
Note: The maximum antenna gain is 2.82 dBi. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

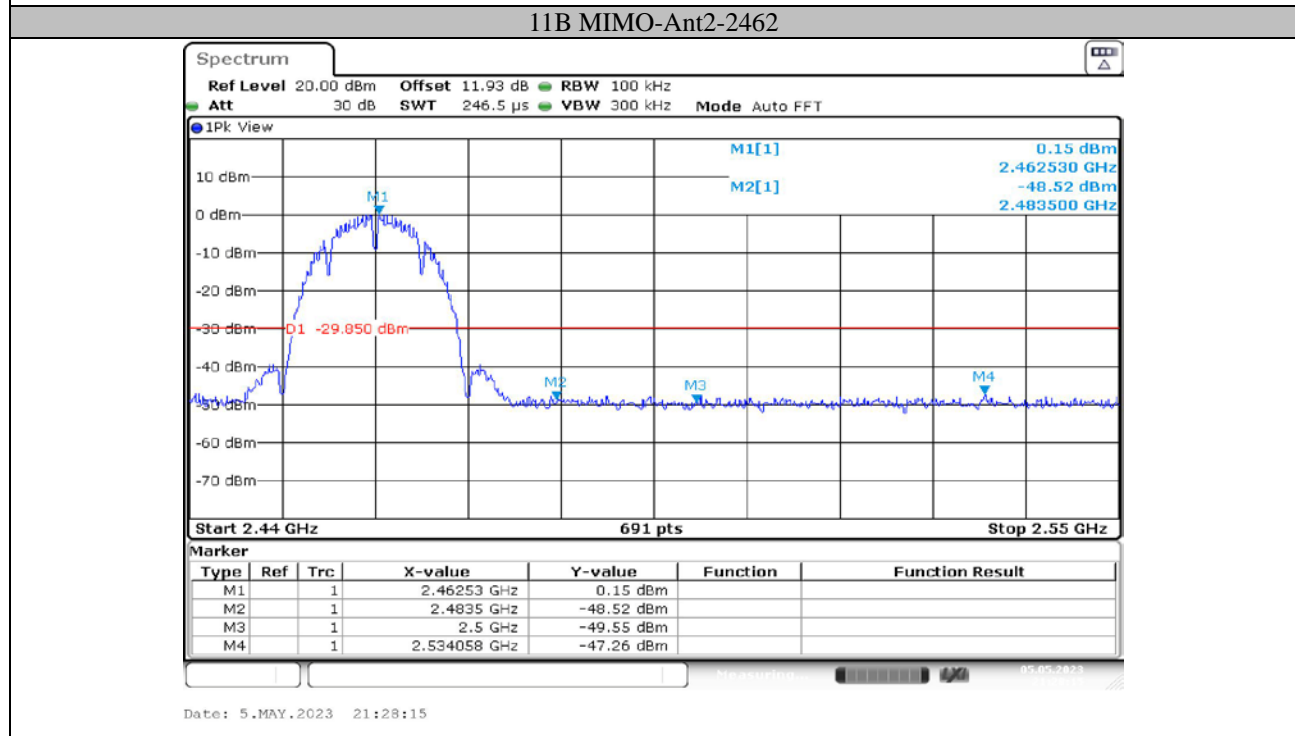
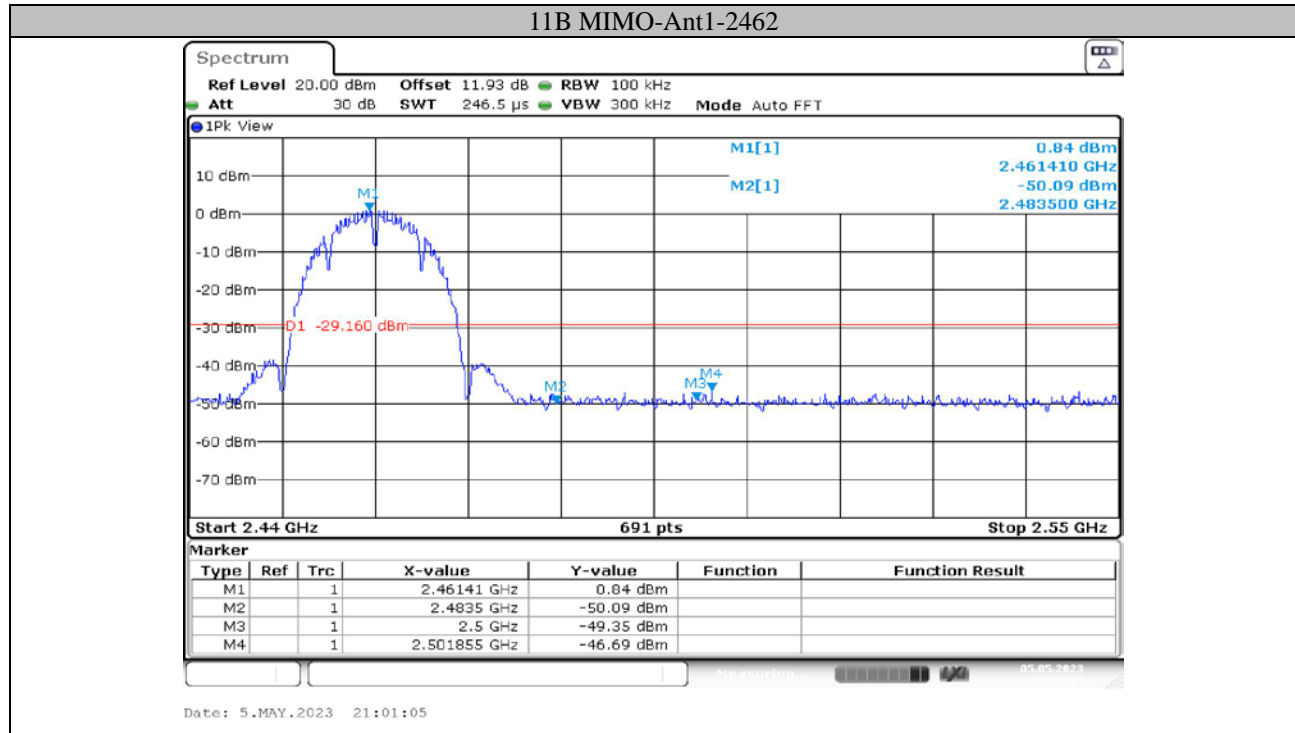
Array Gain = 0dB (i.e., no array gain) For $N_{ANT} \leq 4$;

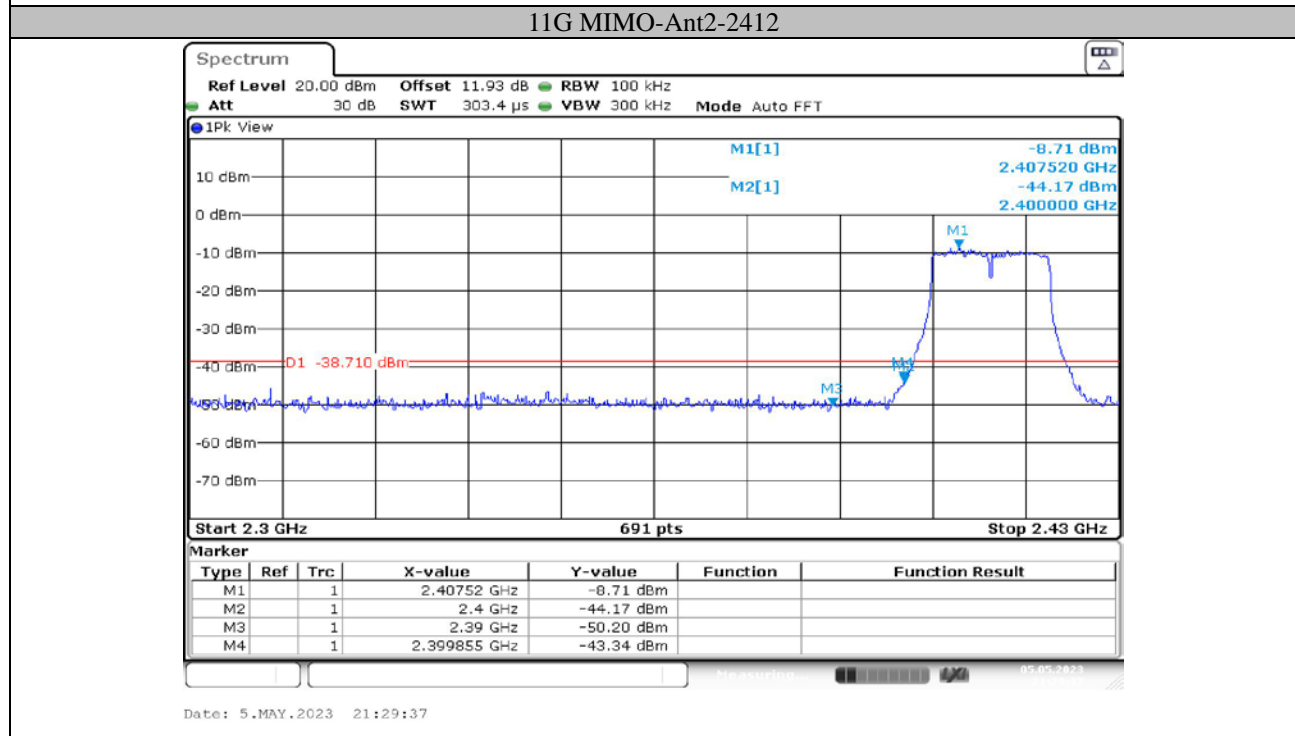
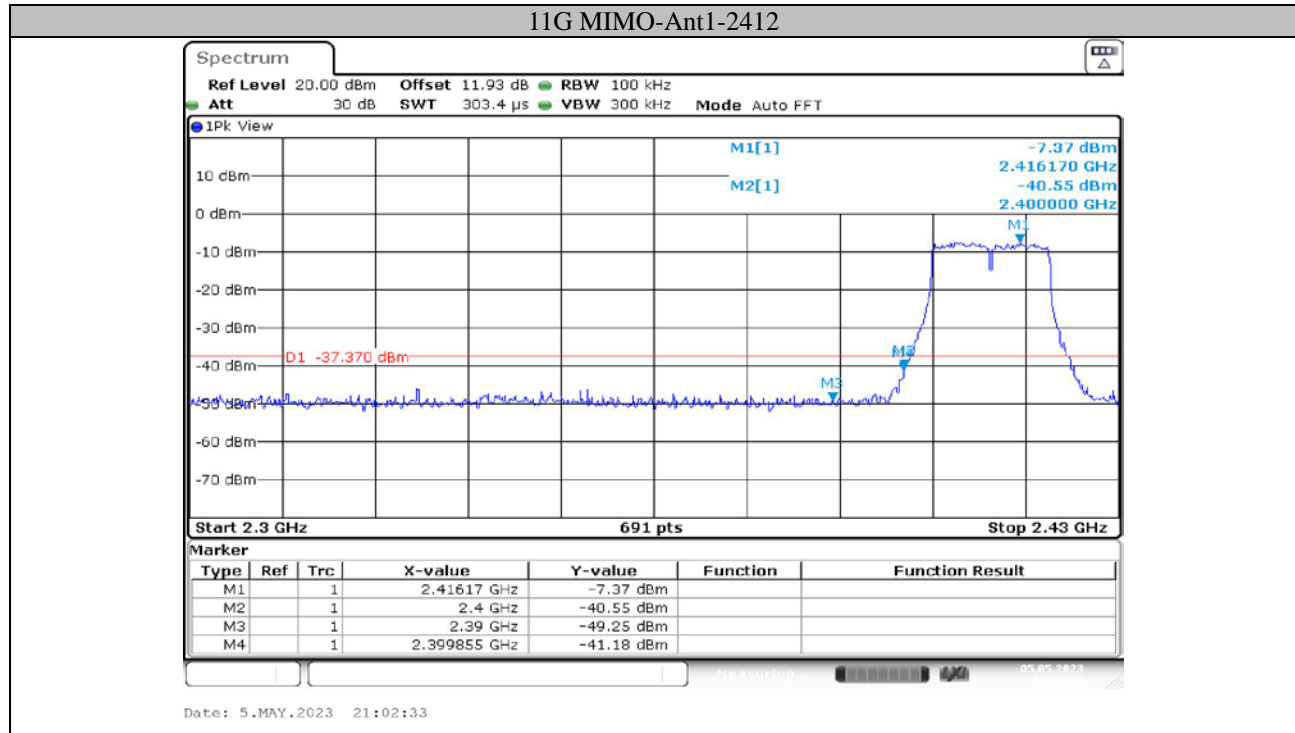
So: Directional gain < 6dBi, the limit is not reduced.

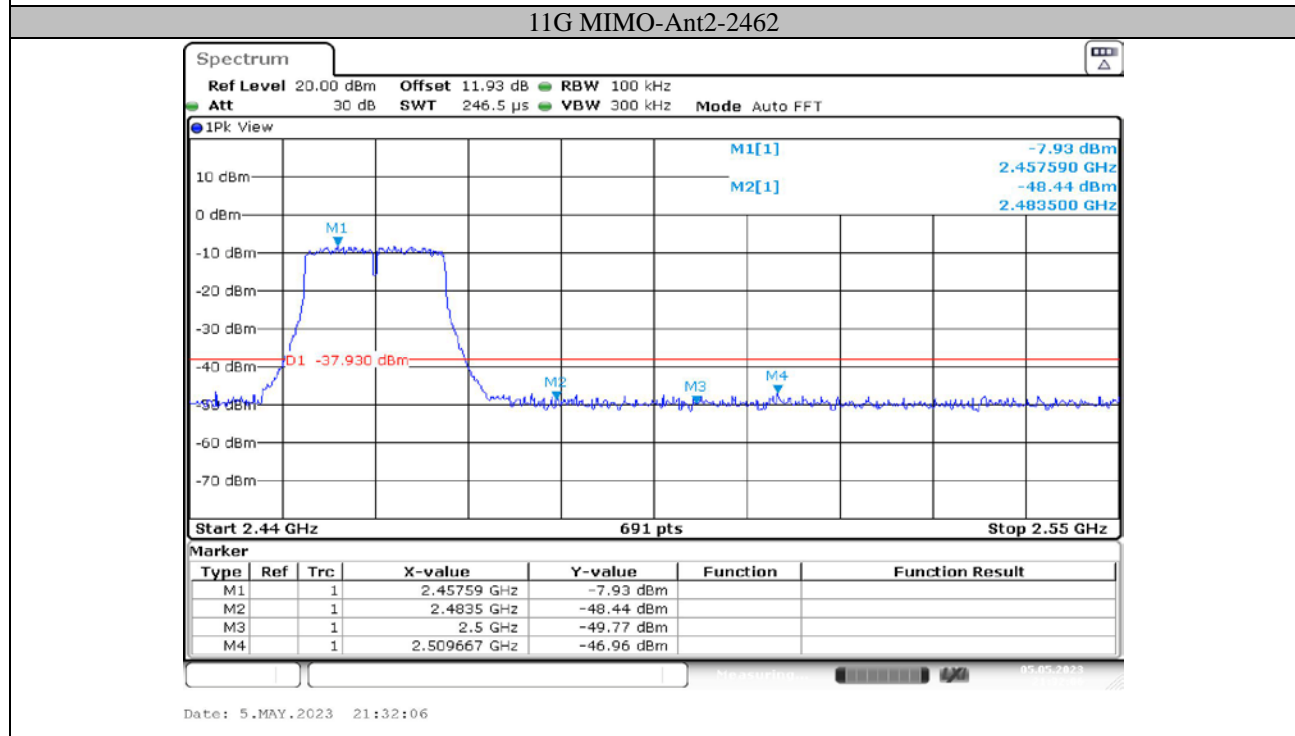
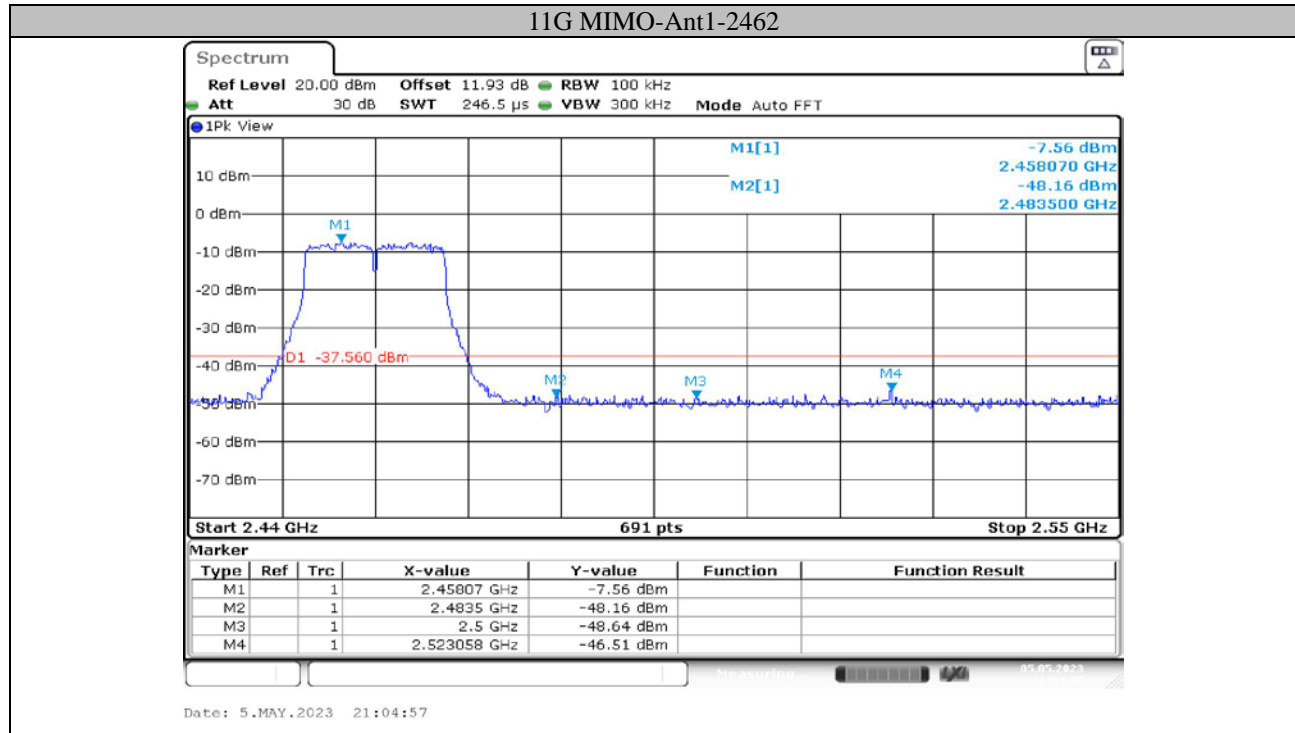
APPENDIX D: Band Edge Measurements

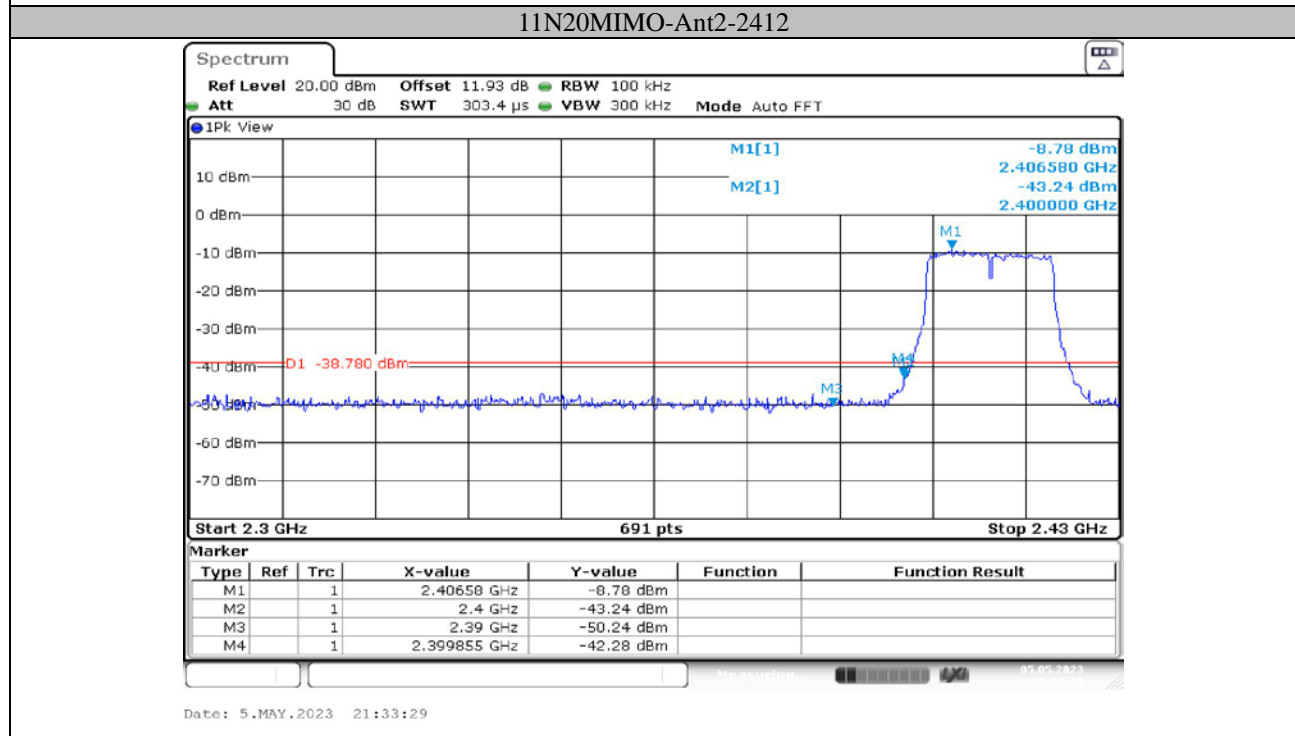
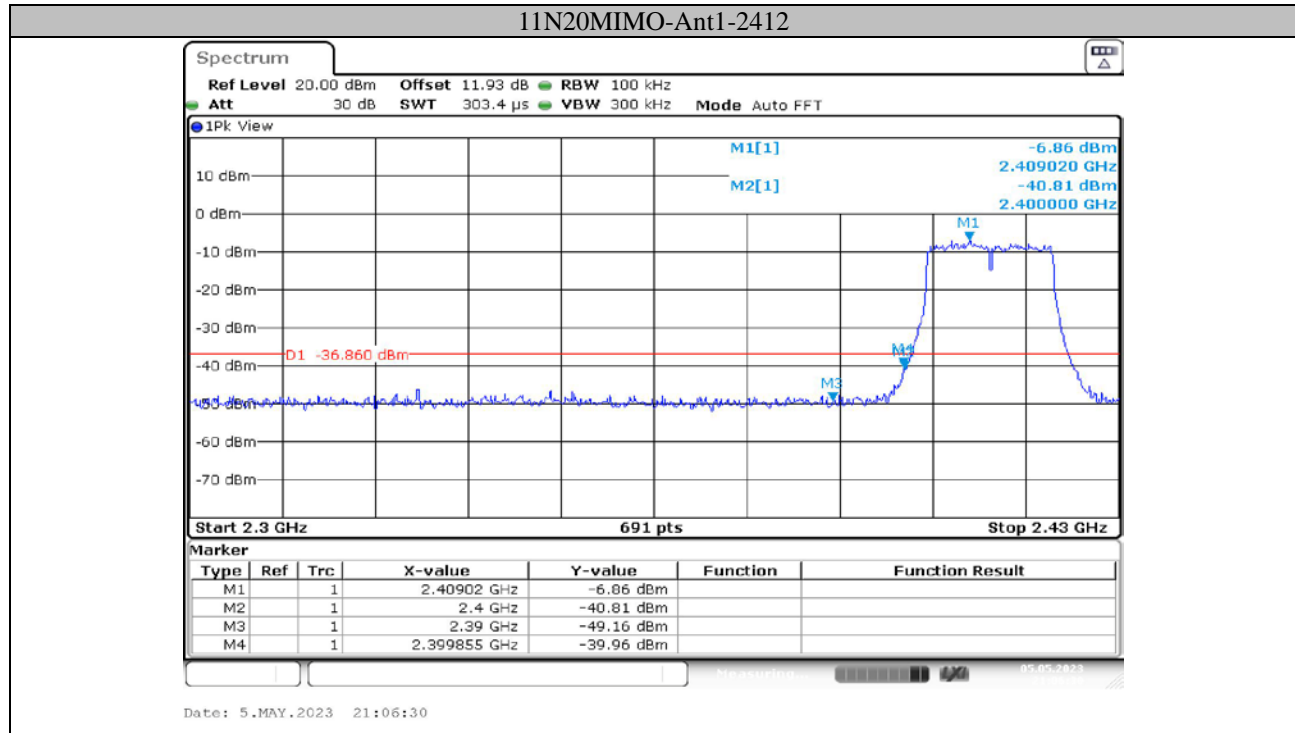
Test Graphs

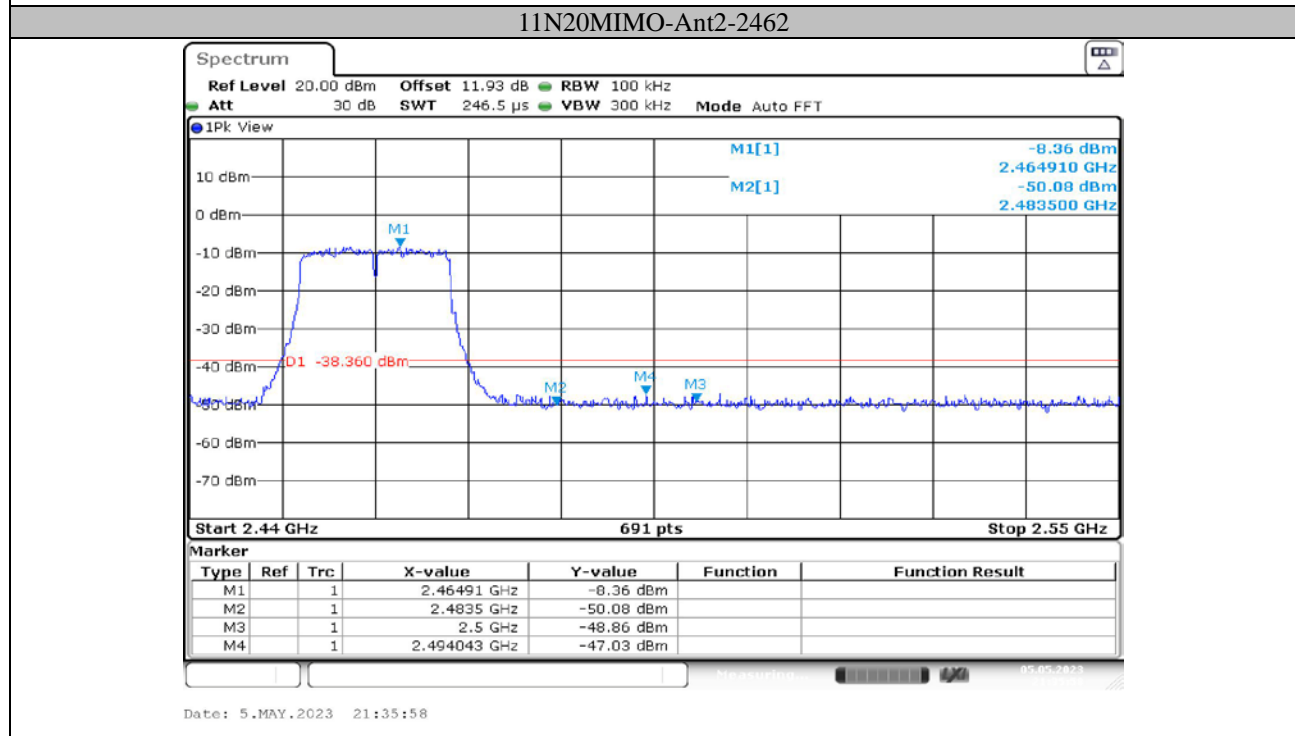
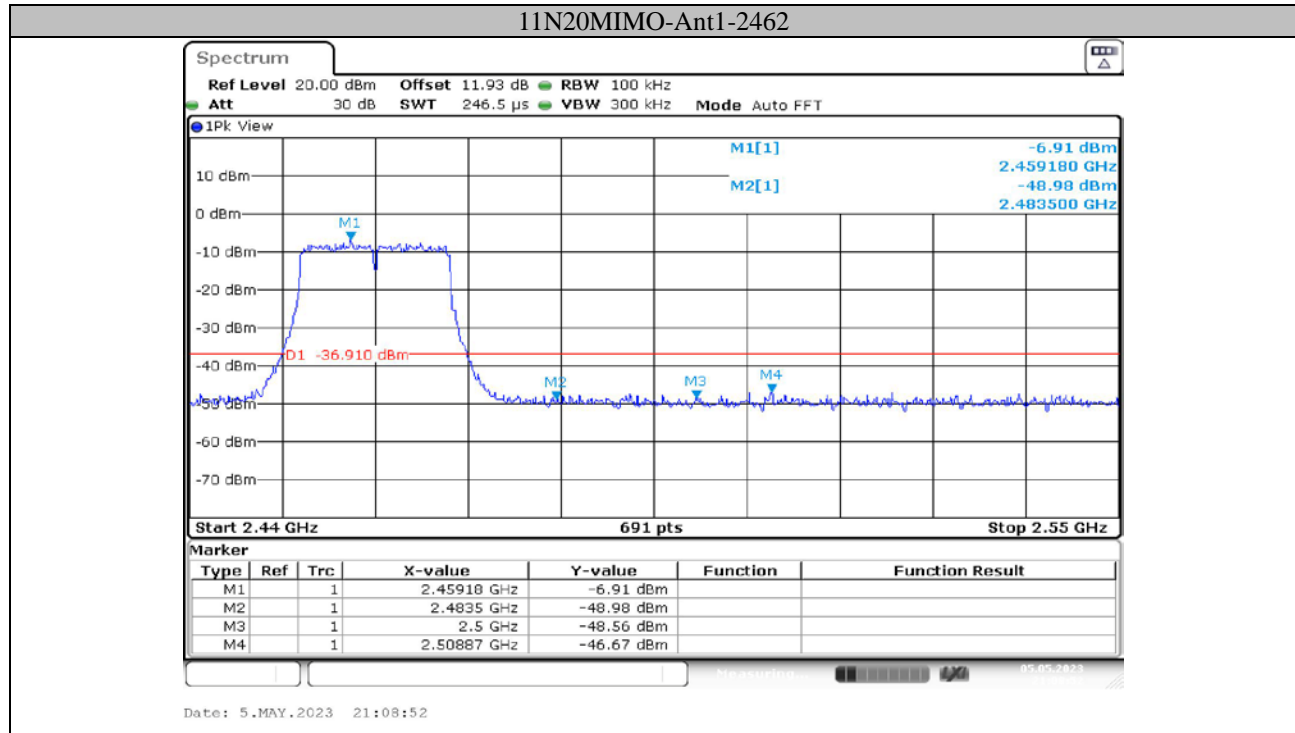


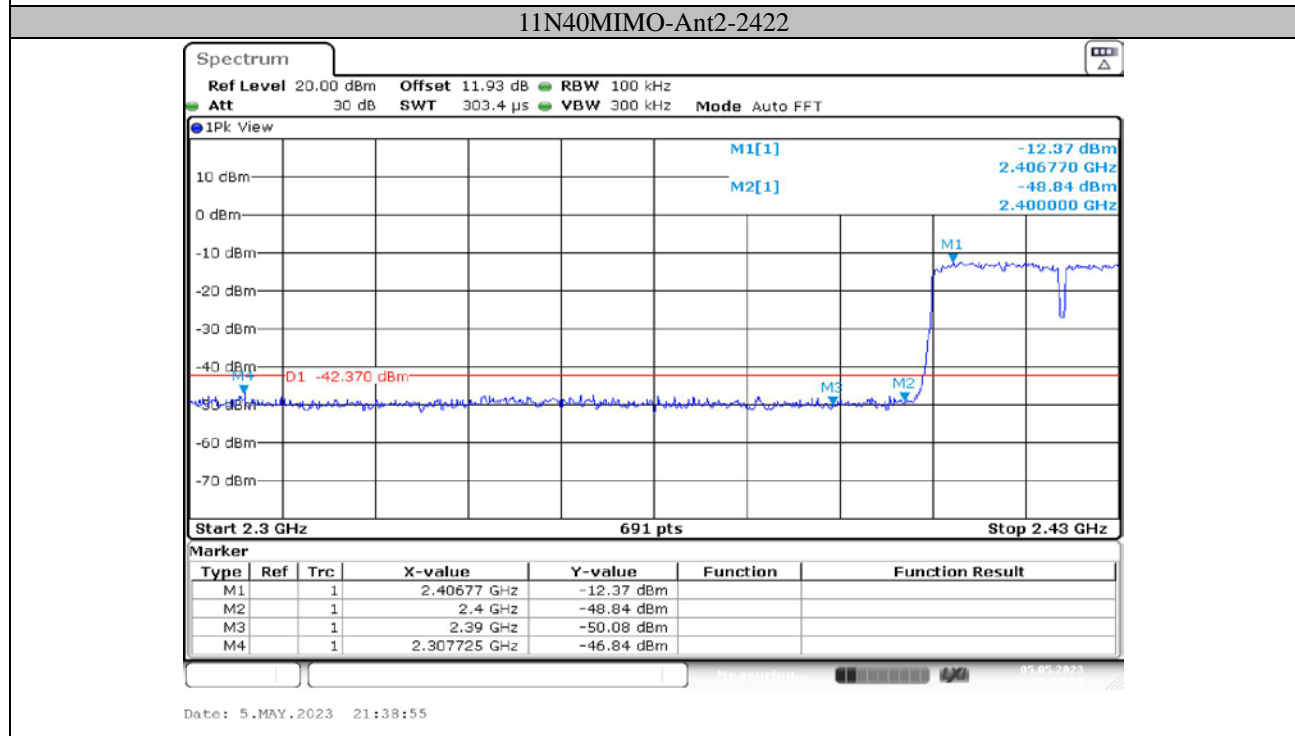
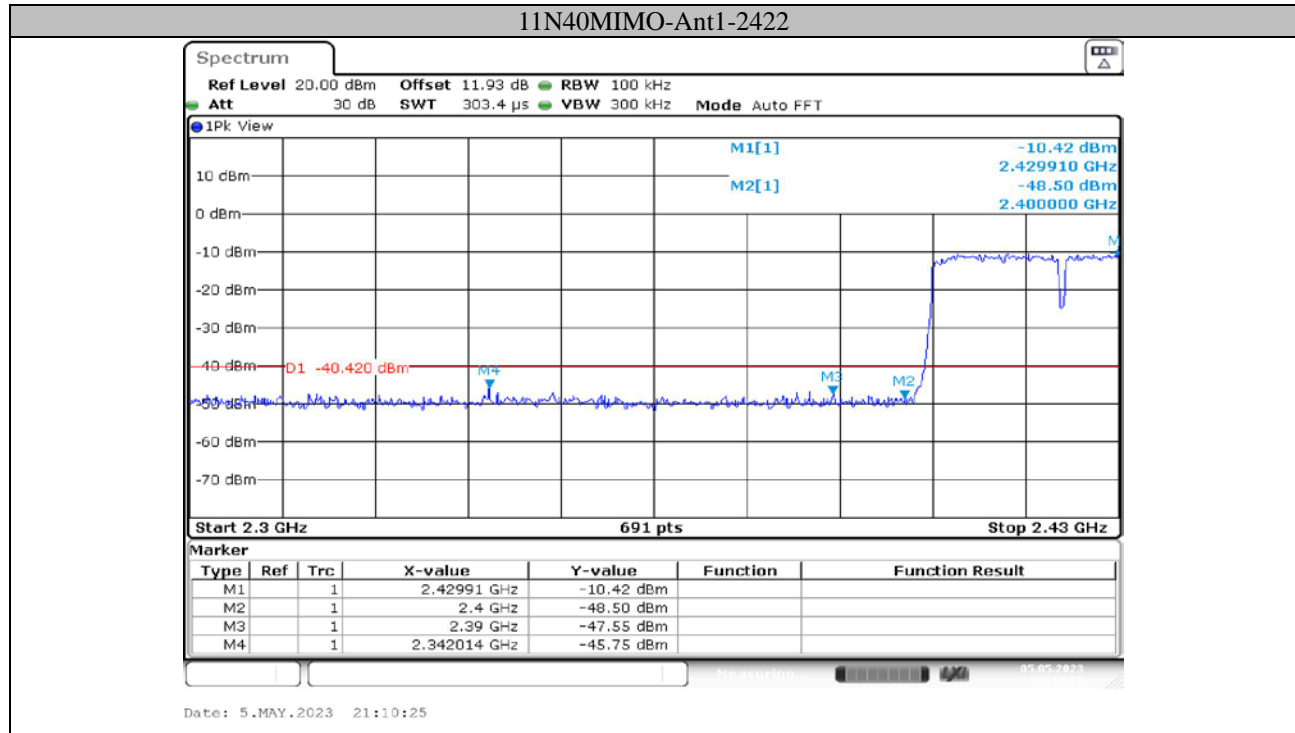


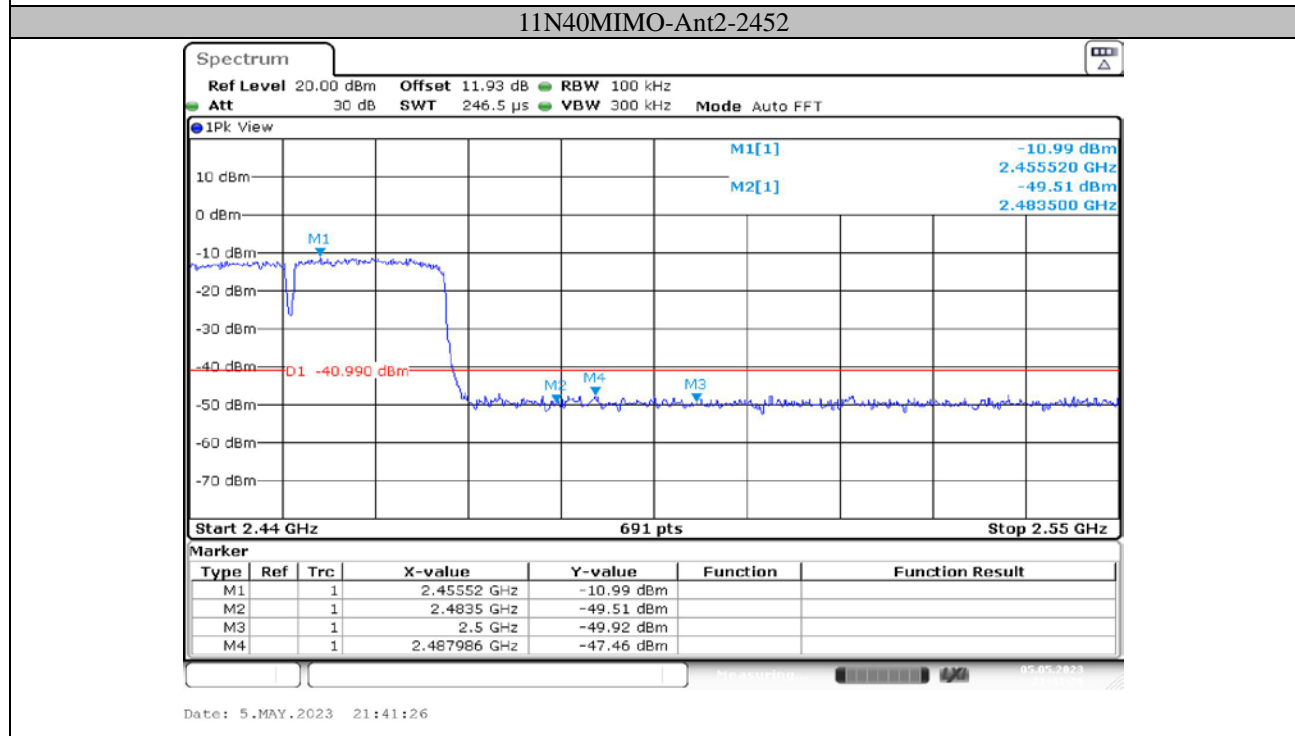
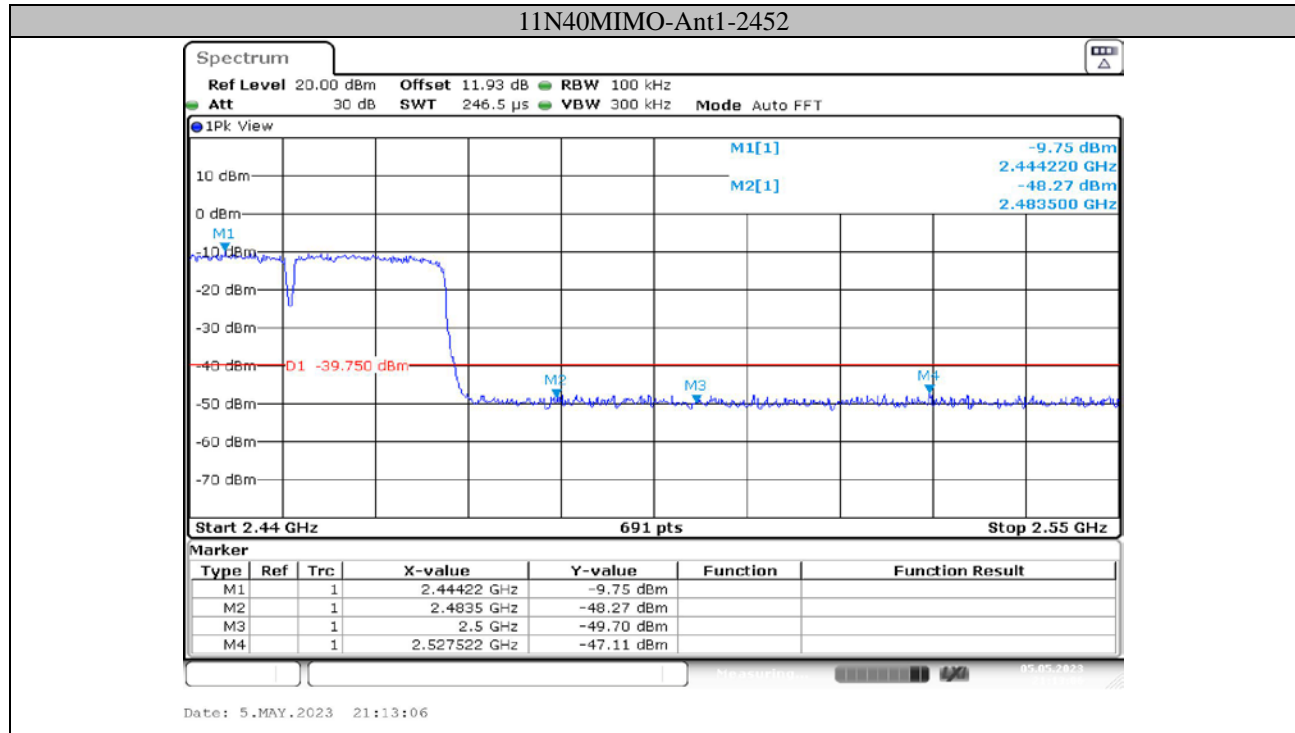












APPENDIX E: Maximum Power Spectral Density**Test Result**

Test Mode	Channel	Antenna	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11BMIMO	2412	Ant1	-20.85	<=8	PASS
		Ant2	-22.51	<=8	PASS
		total	-18.59	<=8	PASS
	2437	Ant1	-20.74	<=8	PASS
		Ant2	-22.98	<=8	PASS
		total	-18.71	<=8	PASS
	2462	Ant1	-20.92	<=8	PASS
		Ant2	-21.55	<=8	PASS
		total	-18.21	<=8	PASS
11GMIMO	2412	Ant1	-25.31	<=8	PASS
		Ant2	-26.26	<=8	PASS
		total	-22.75	<=8	PASS
	2437	Ant1	-25.22	<=8	PASS
		Ant2	-27.20	<=8	PASS
		total	-23.09	<=8	PASS
	2462	Ant1	-25.39	<=8	PASS
		Ant2	-26.17	<=8	PASS
		total	-22.75	<=8	PASS
11N20MIMO	2412	Ant1	-25.93	<=8	PASS
		Ant2	-27.62	<=8	PASS
		total	-23.68	<=8	PASS
	2437	Ant1	-25.81	<=8	PASS
		Ant2	-28.11	<=8	PASS
		total	-23.80	<=8	PASS
	2462	Ant1	-26.01	<=8	PASS
		Ant2	-27.05	<=8	PASS
		total	-23.49	<=8	PASS

Test Mode	Channel	Antenna	Result[dBm/10kHz]	Limit[dBm/3kHz]	Verdict
11N40MIMO	2422	Ant1	-24.13	<=8	PASS
		Ant2	-26.05	<=8	PASS
		total	-21.99	<=8	PASS
	2437	Ant1	-24.24	<=8	PASS
		Ant2	-26.23	<=8	PASS
		total	-22.11	<=8	PASS
	2452	Ant1	-24.12	<=8	PASS
		Ant2	-25.36	<=8	PASS
		total	-21.69	<=8	PASS

Note:

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:

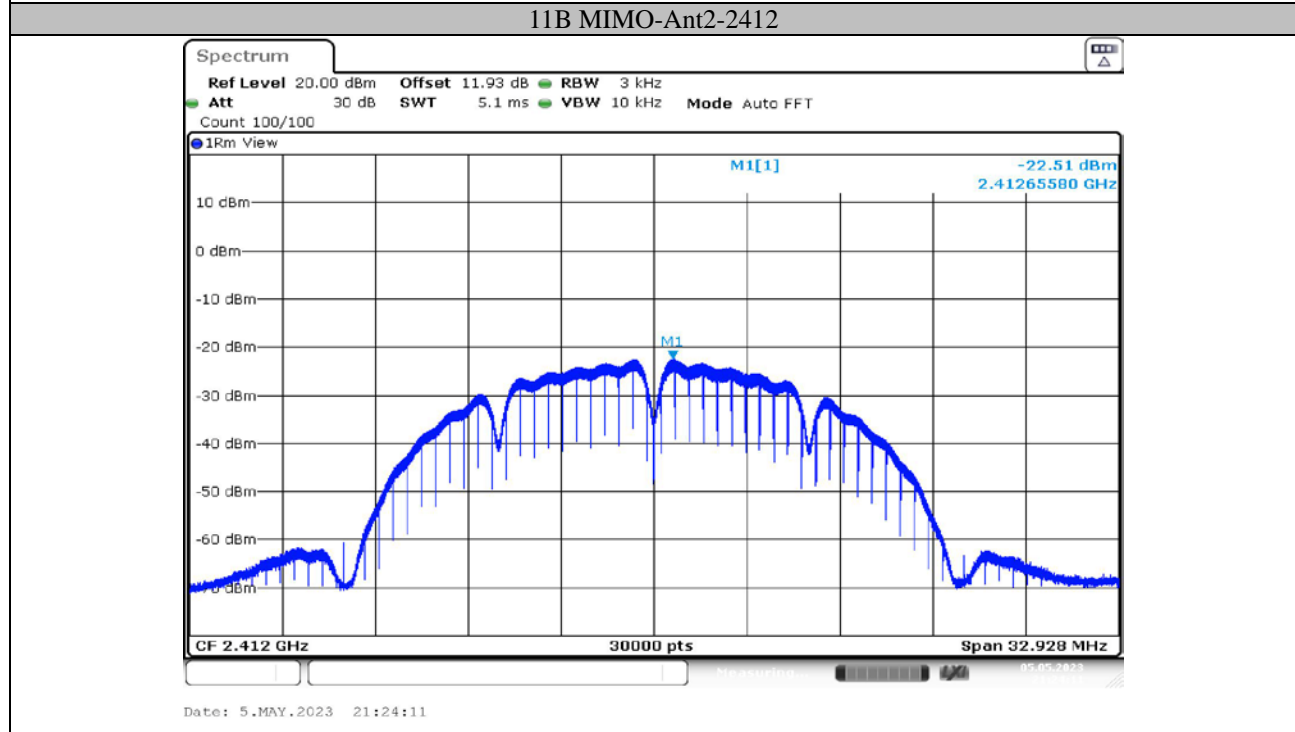
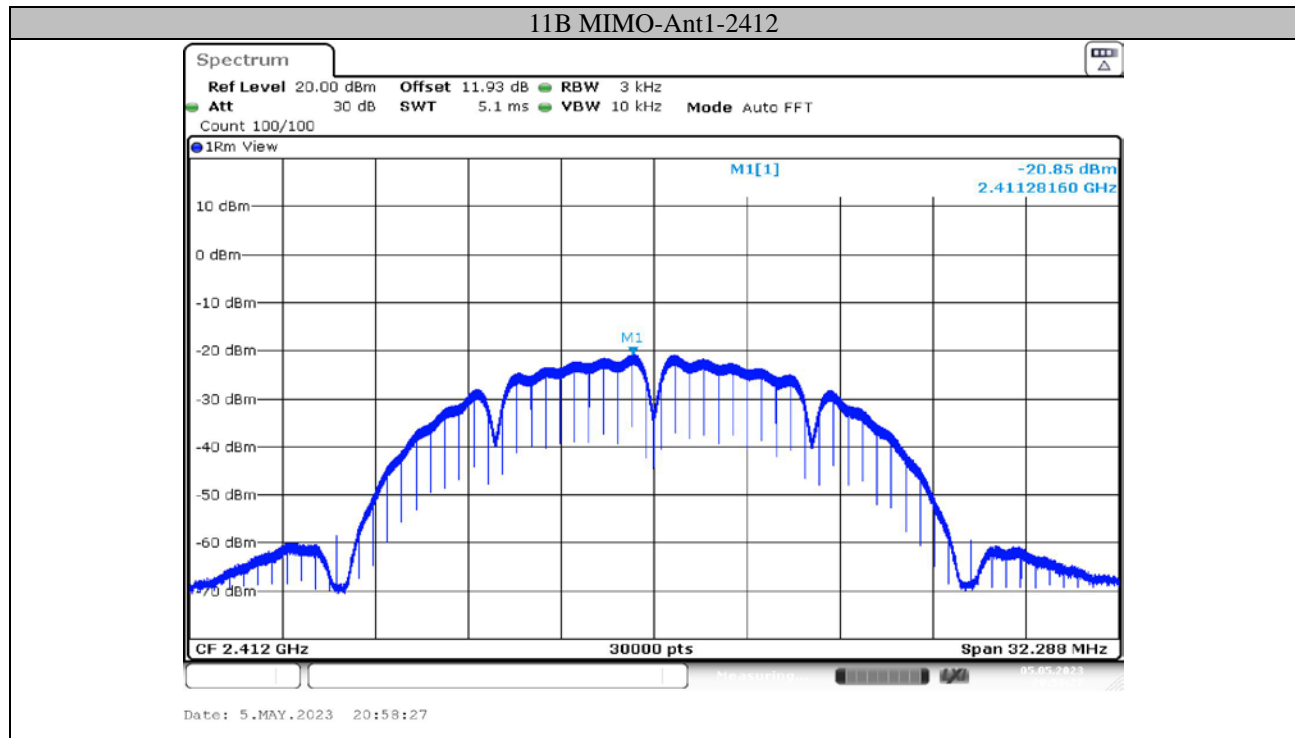
Array Gain = $10 \log(N_{\text{ANT}}/N_{\text{SS}})$ dB

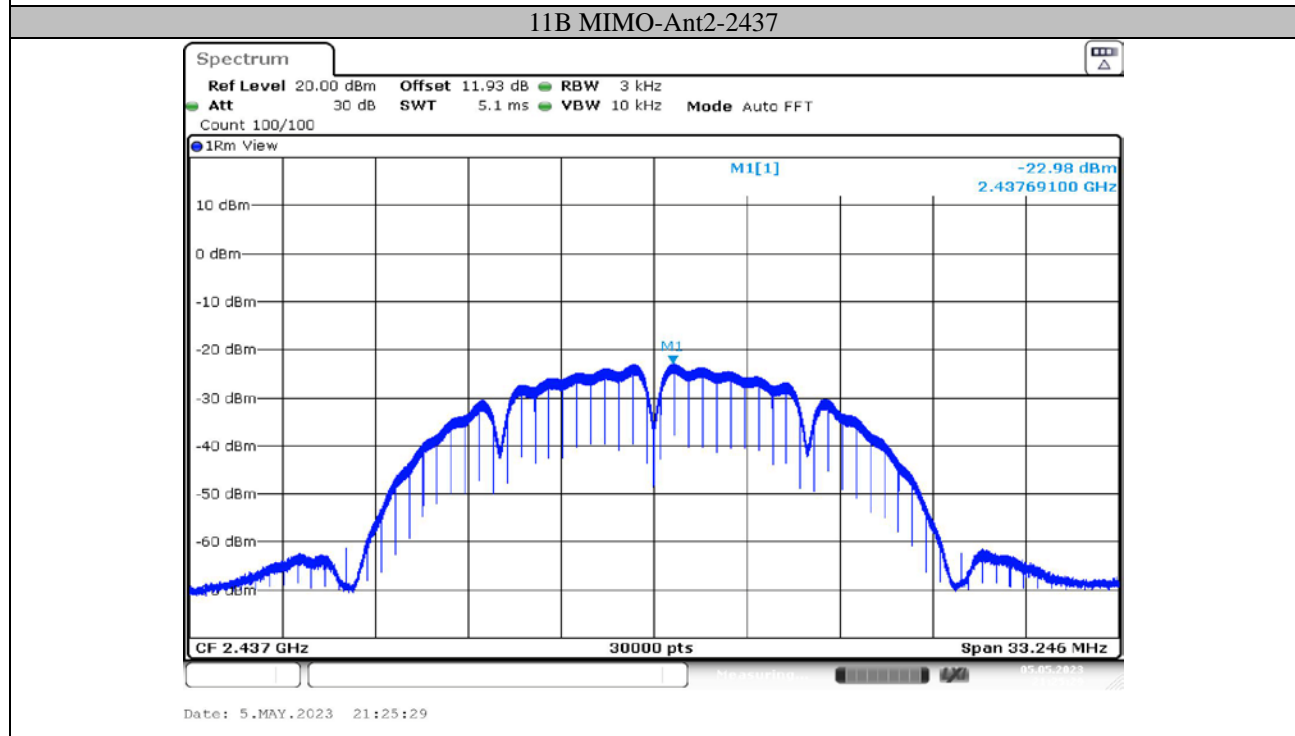
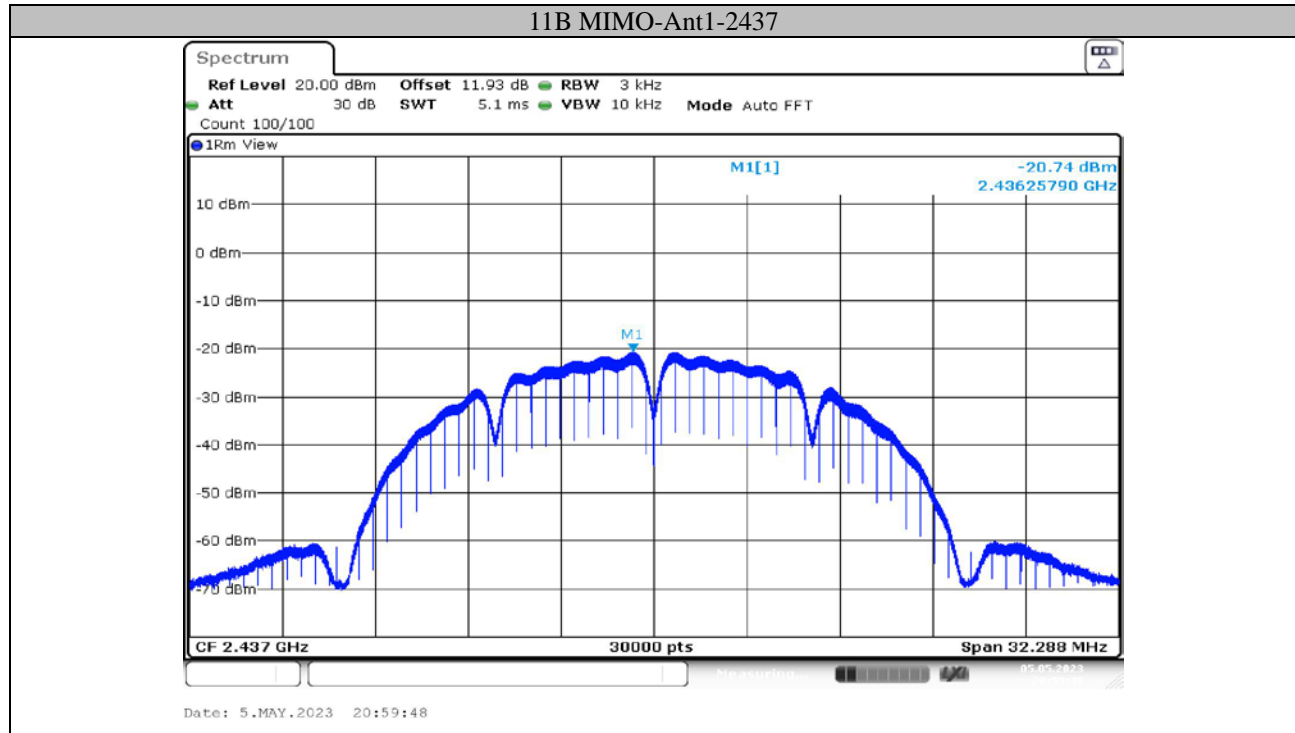
Directional gain= G_{ANT} + Array Gain

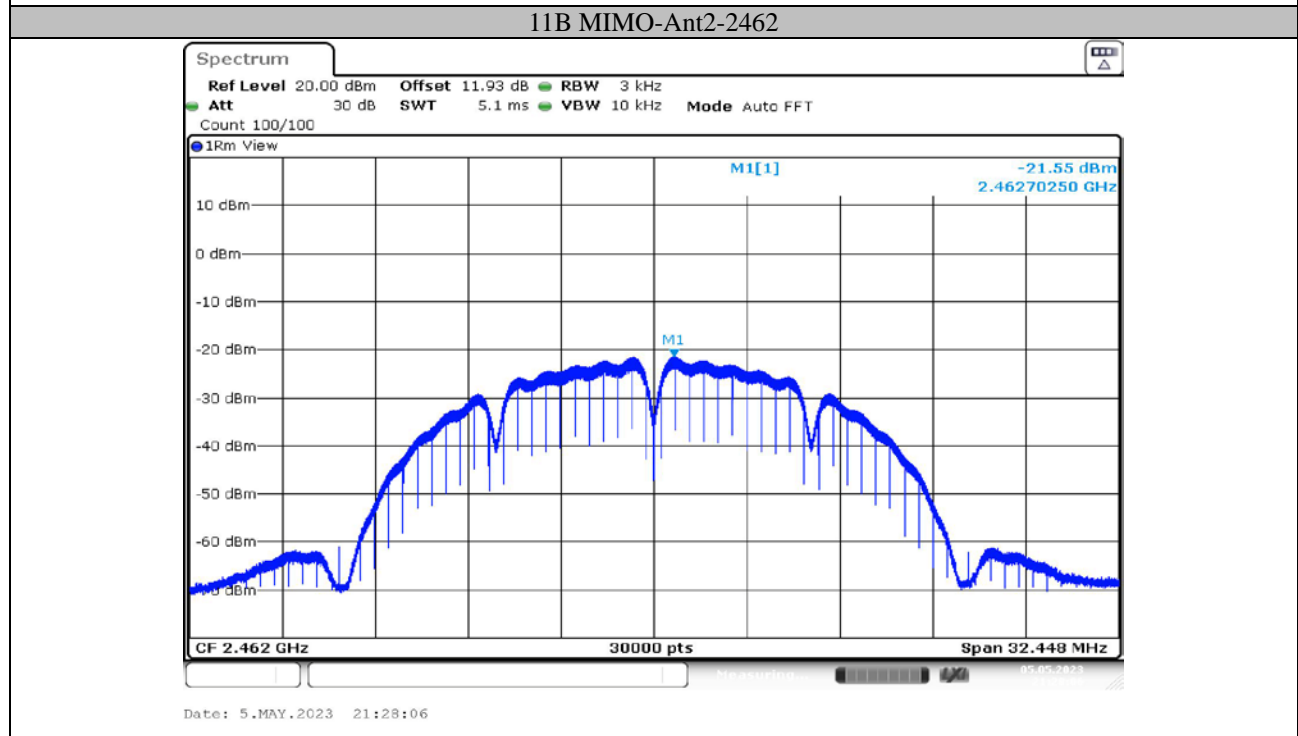
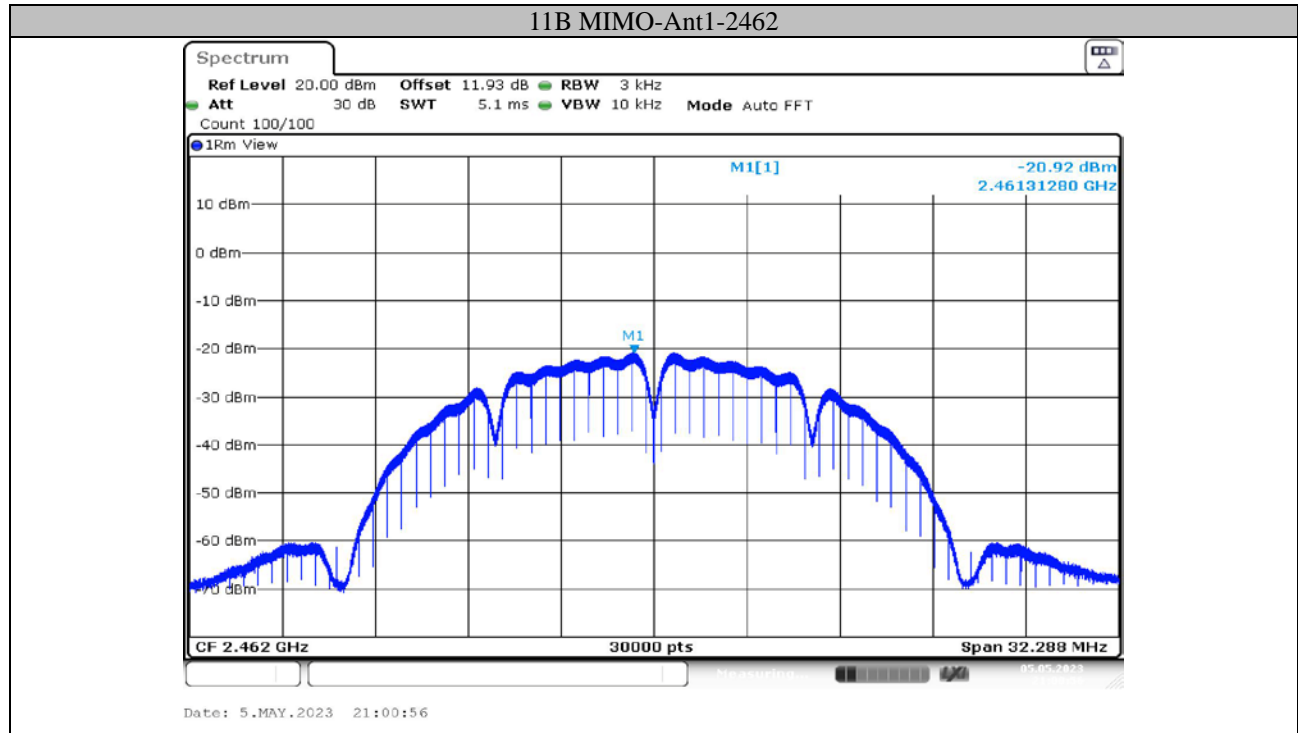
The $G_{\text{ANT} 1/2}$ =2.82dBi

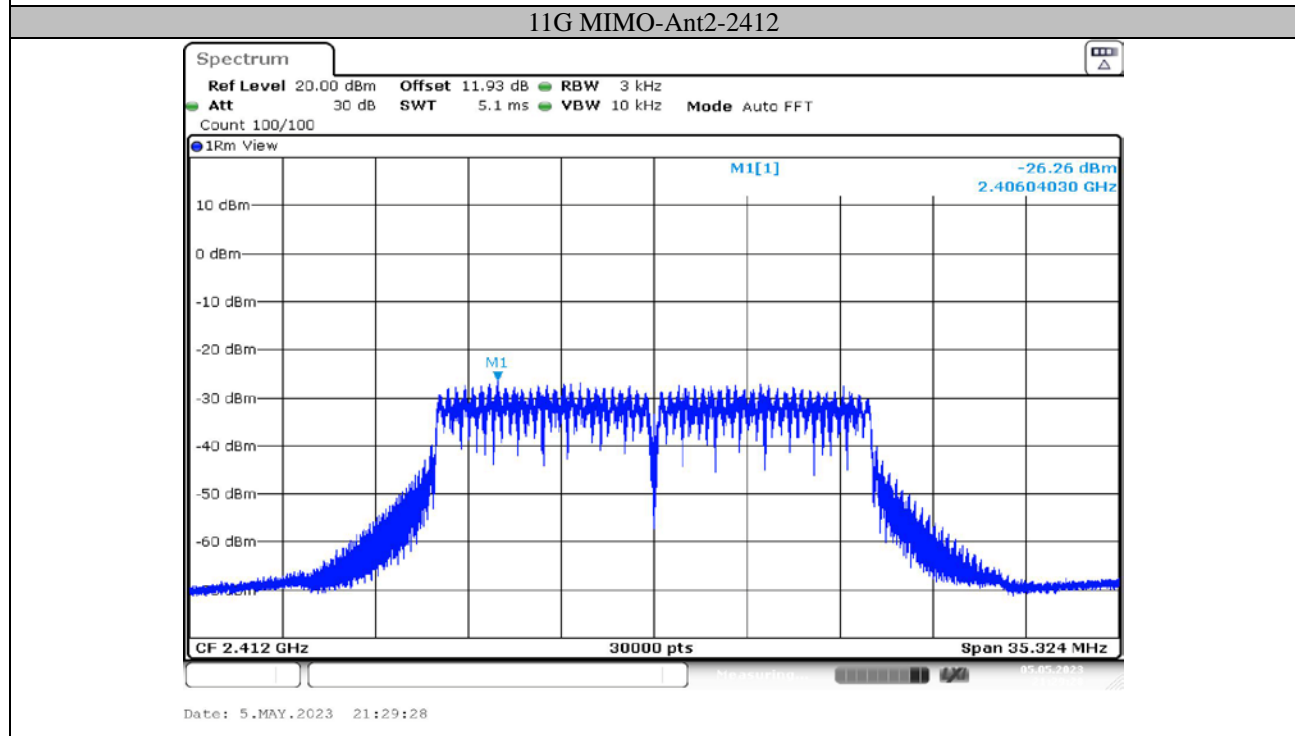
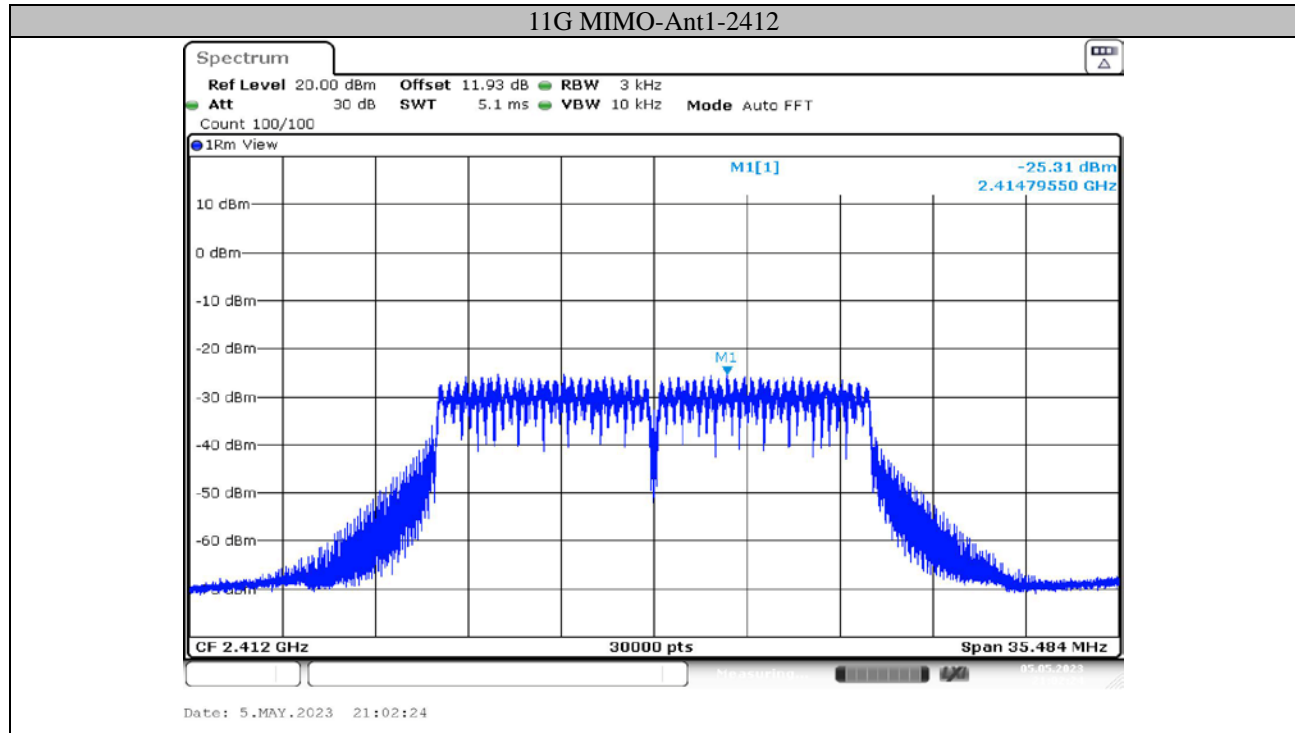
Directional gain=2.82dBi+10*log(2/1)=5.83dBi<6dBi

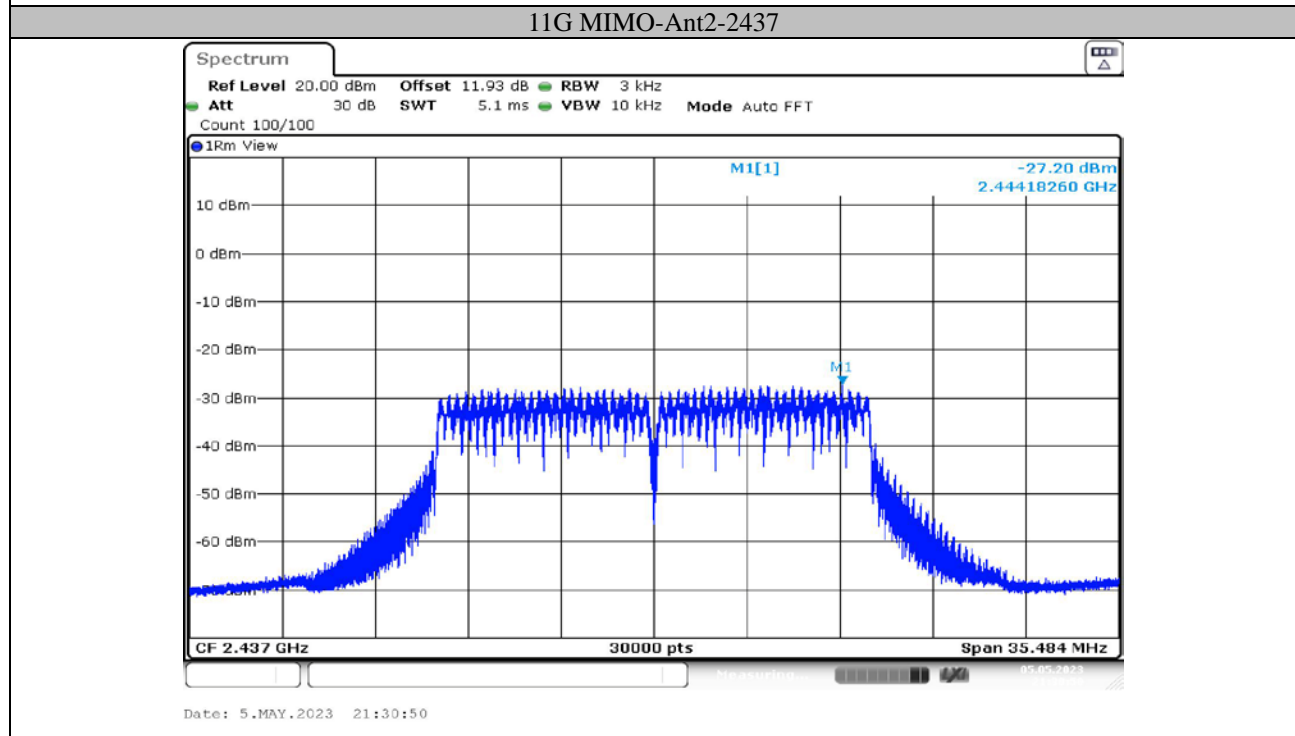
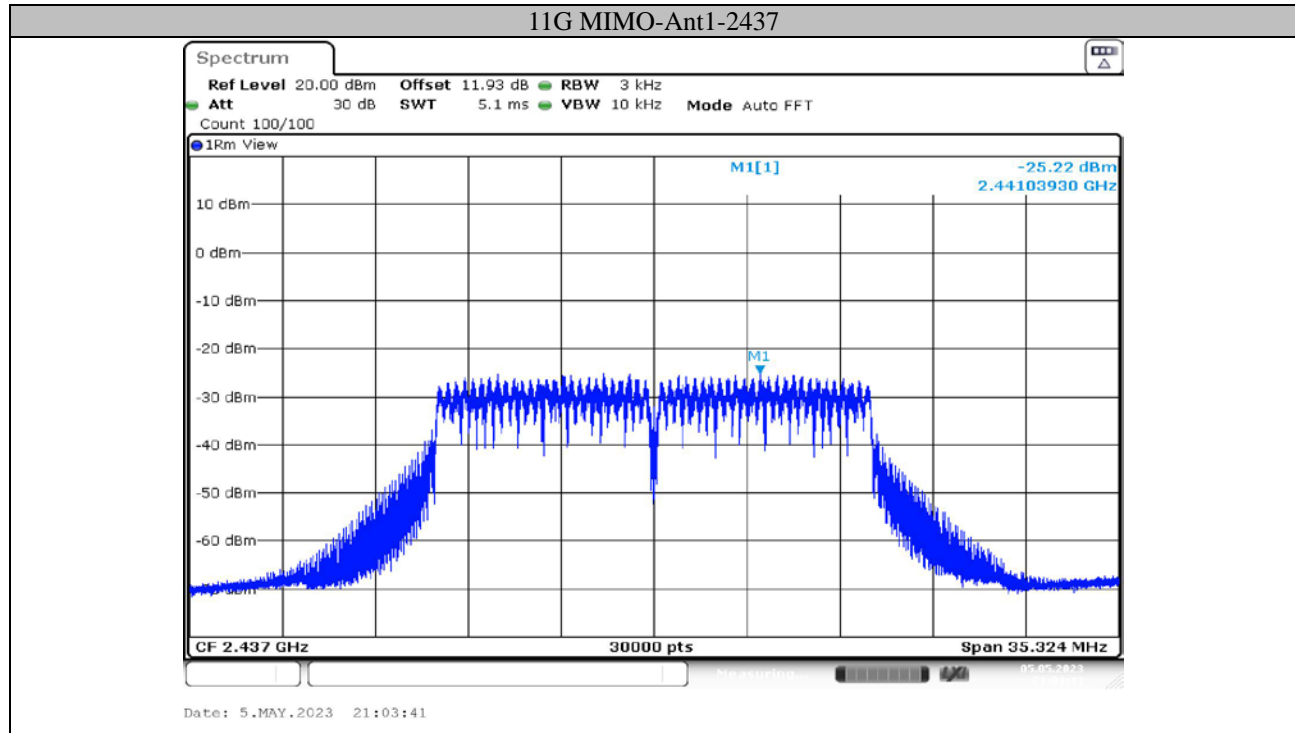
Test Graphs

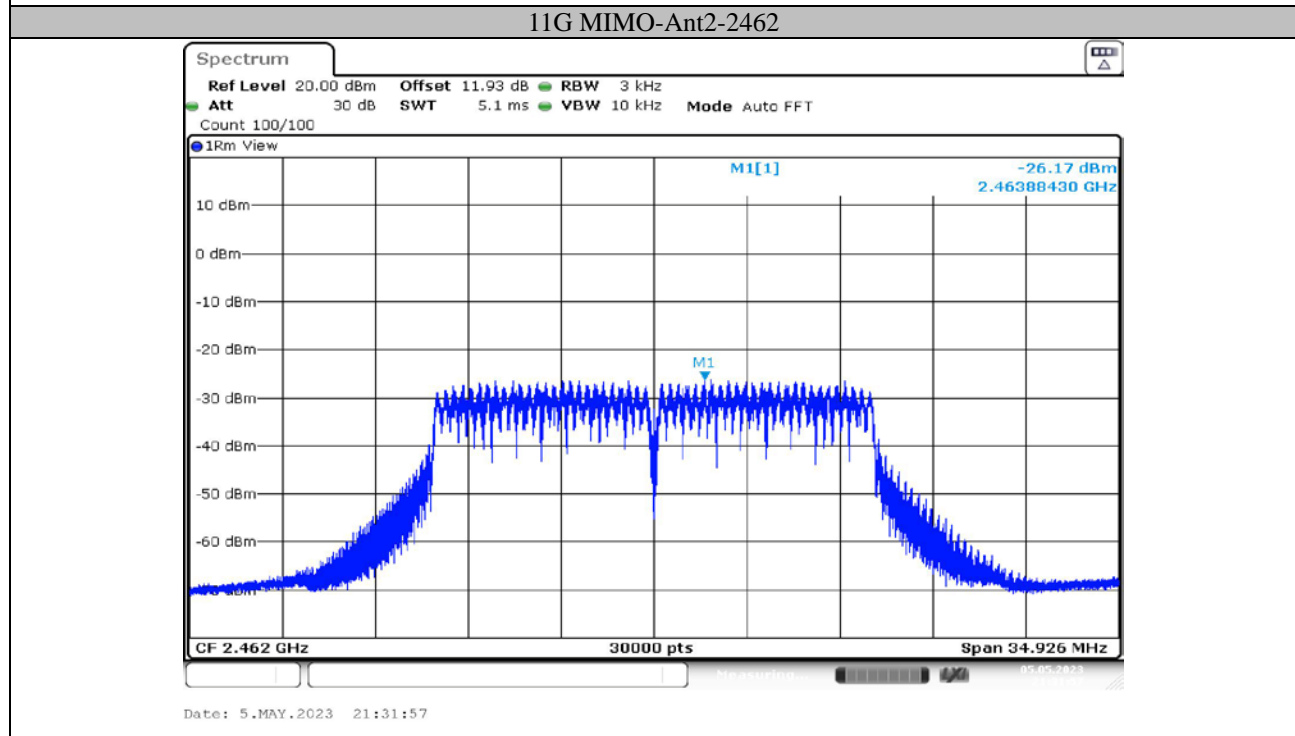
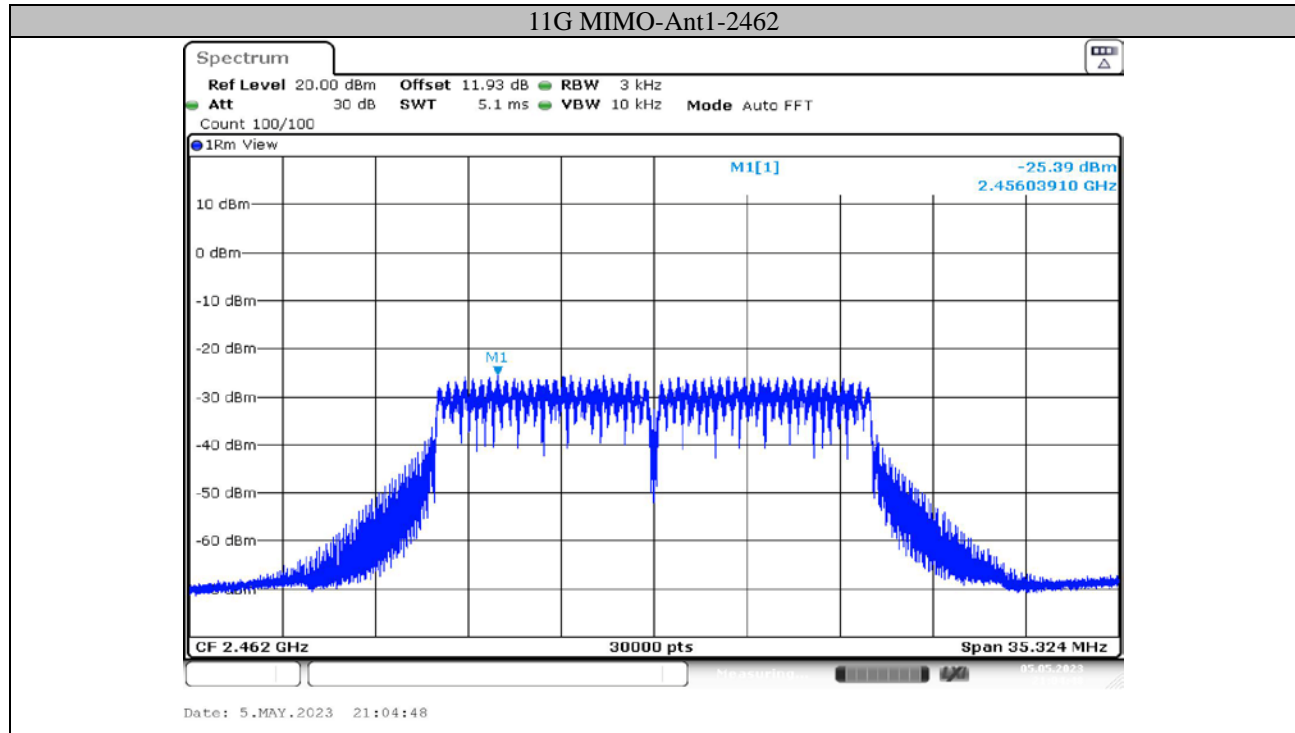


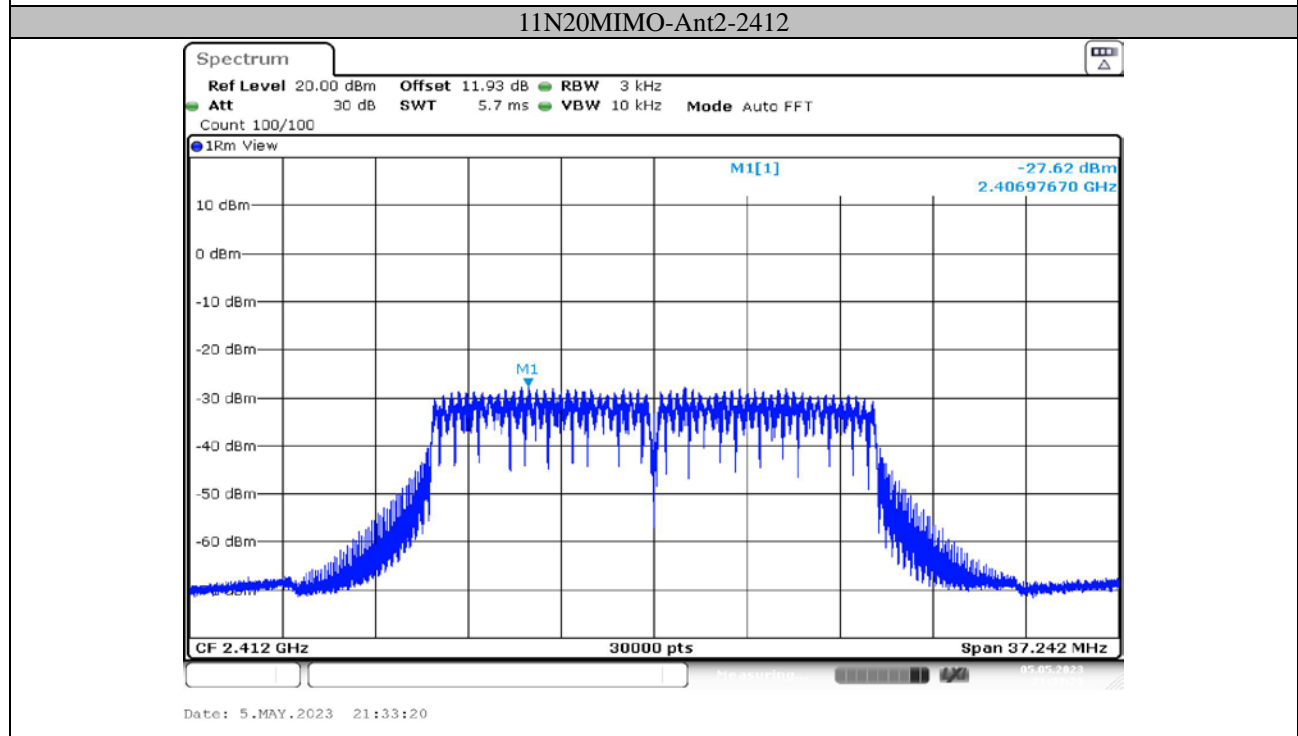
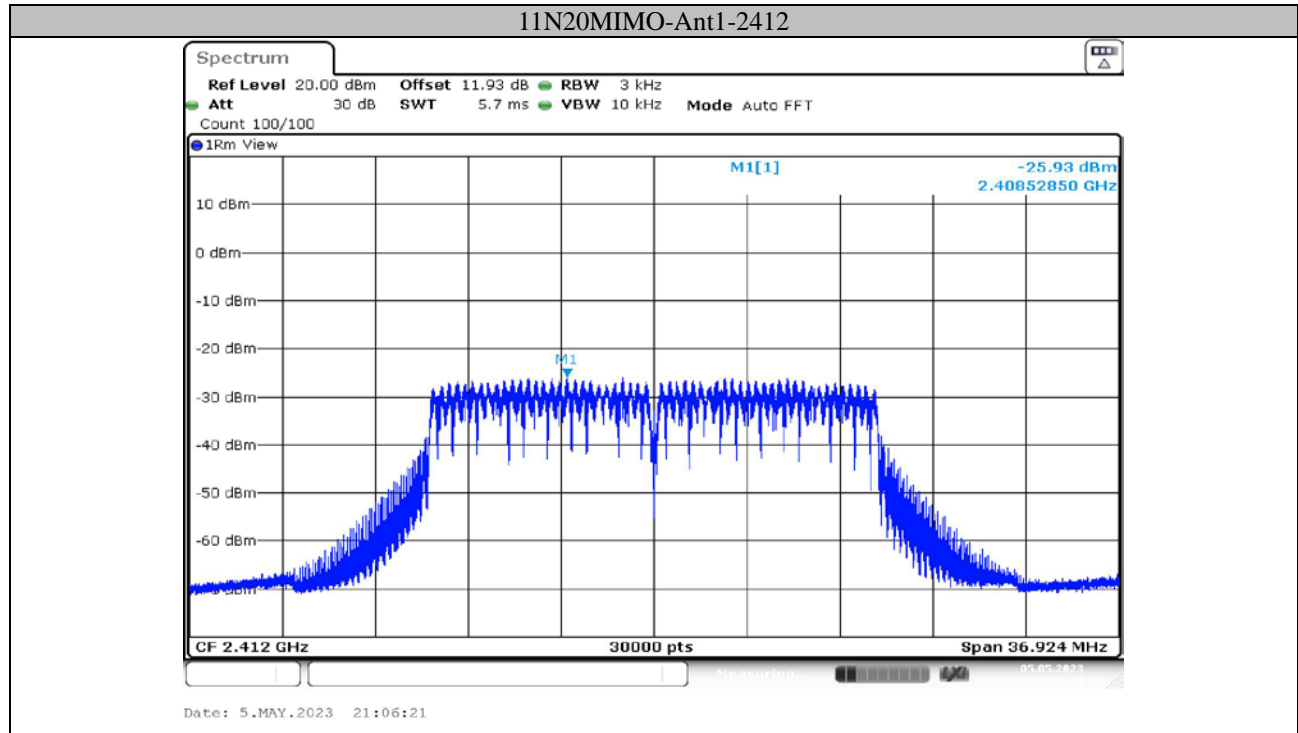


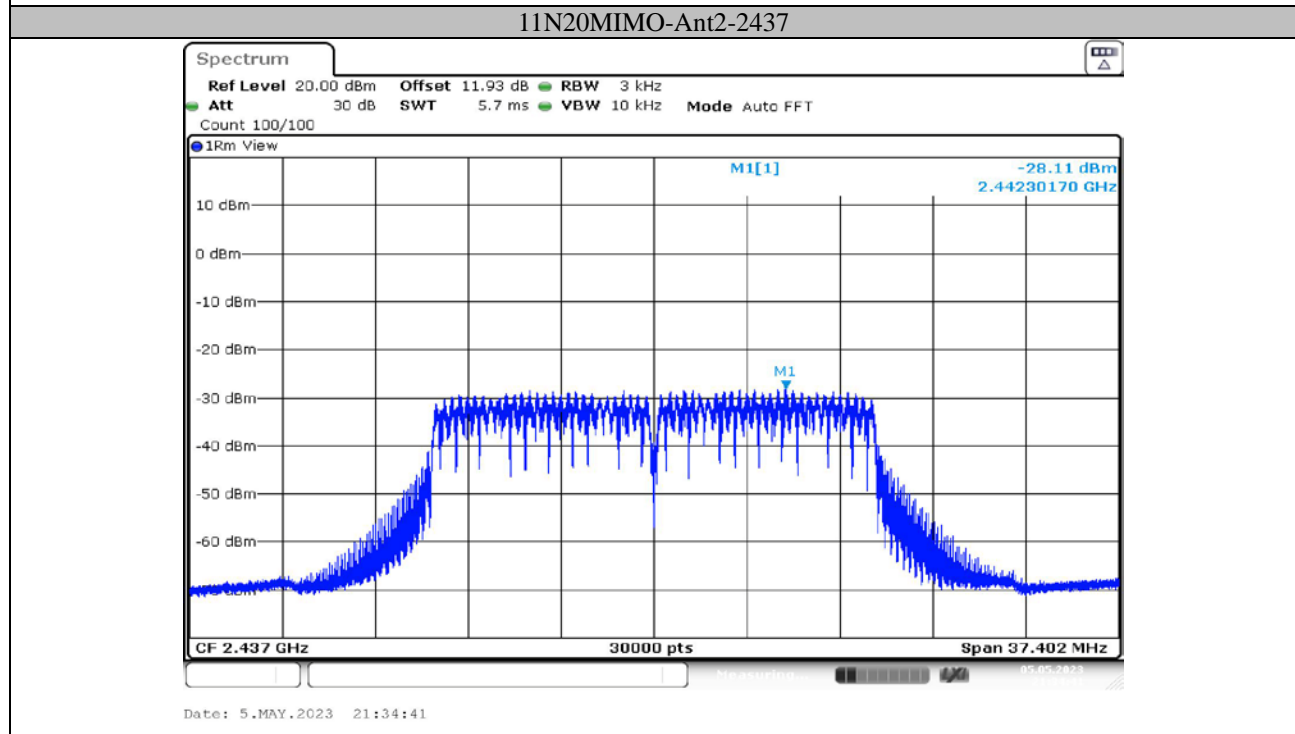
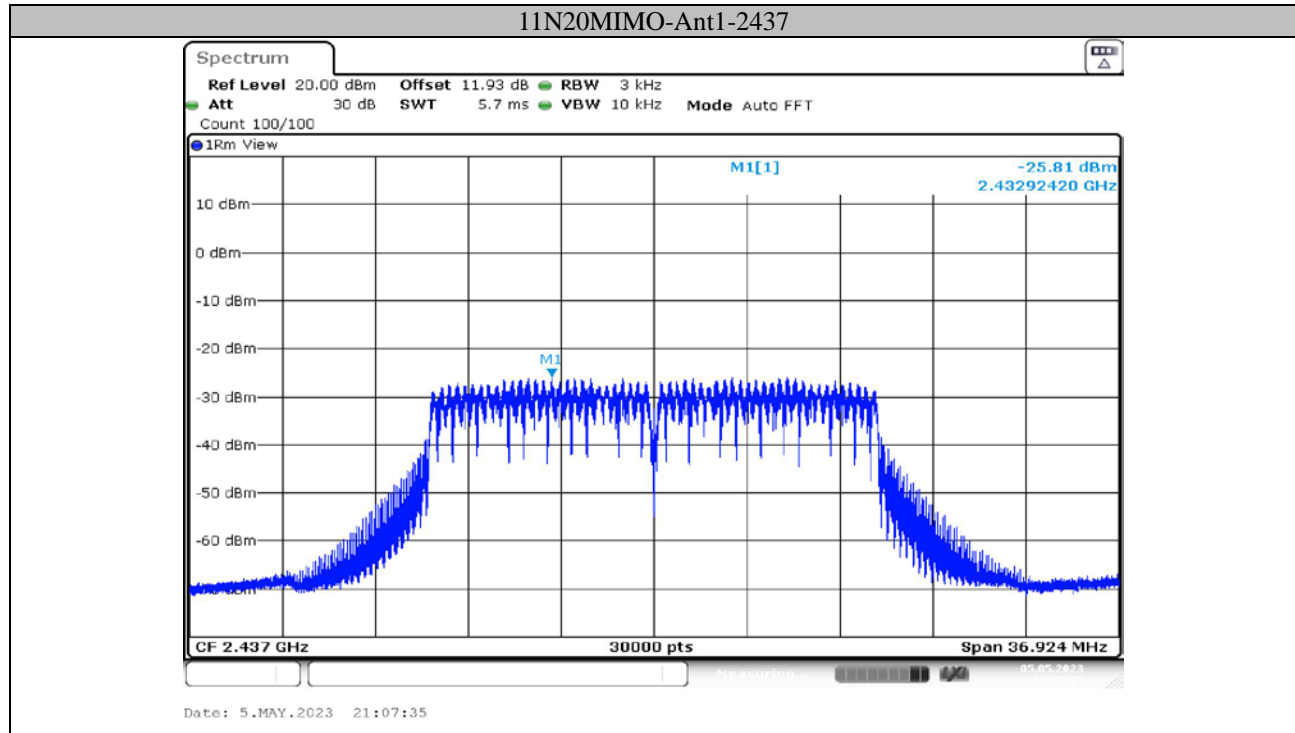


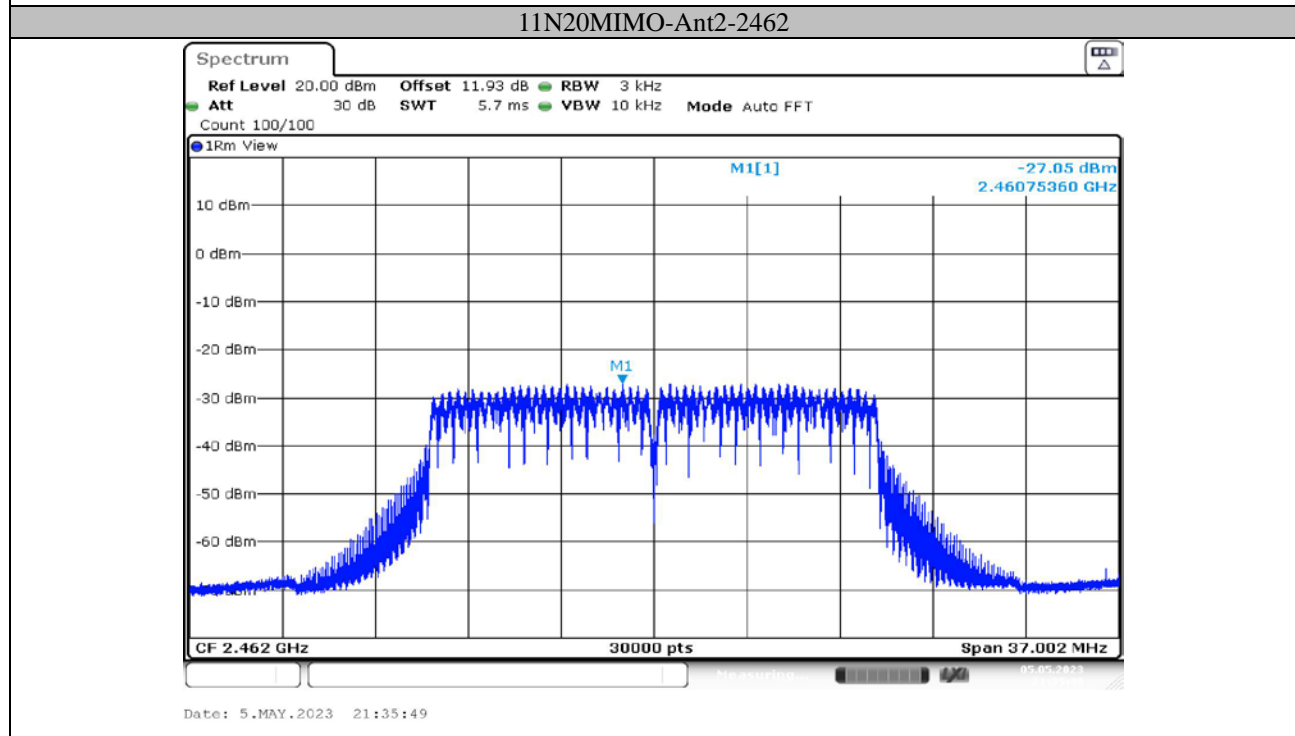
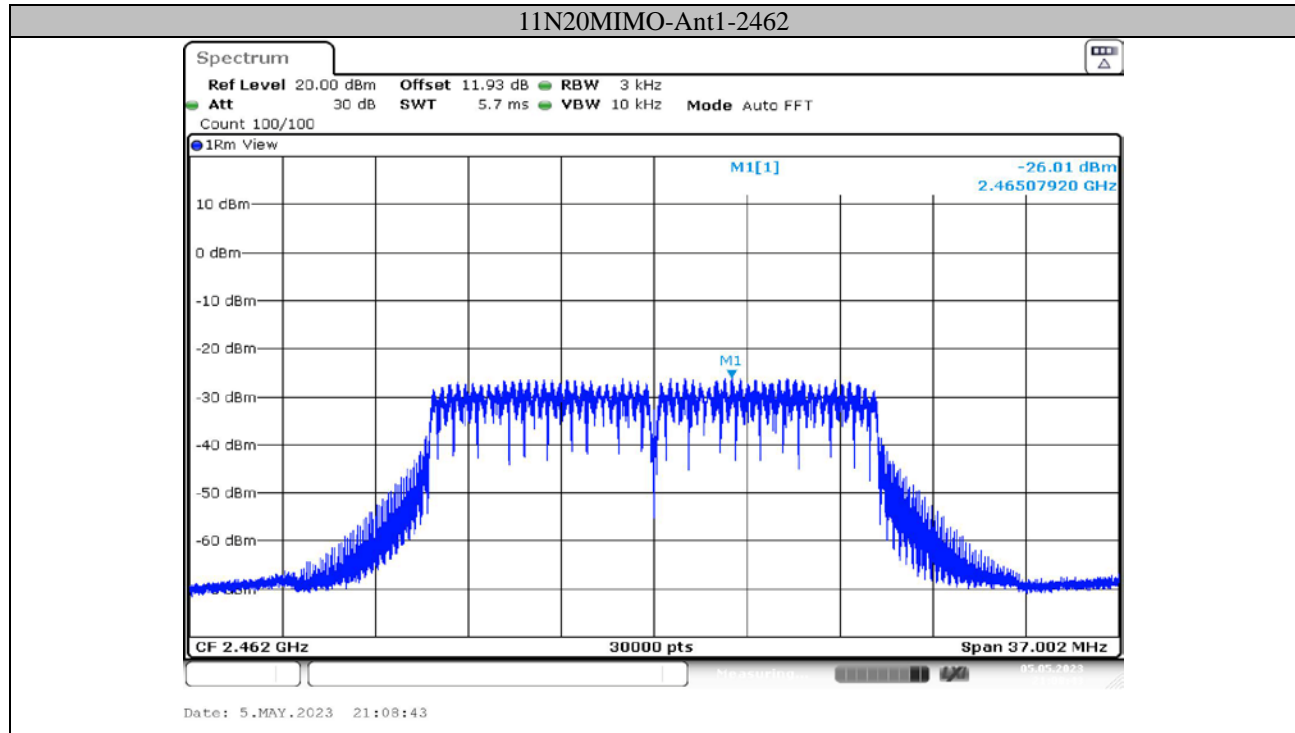


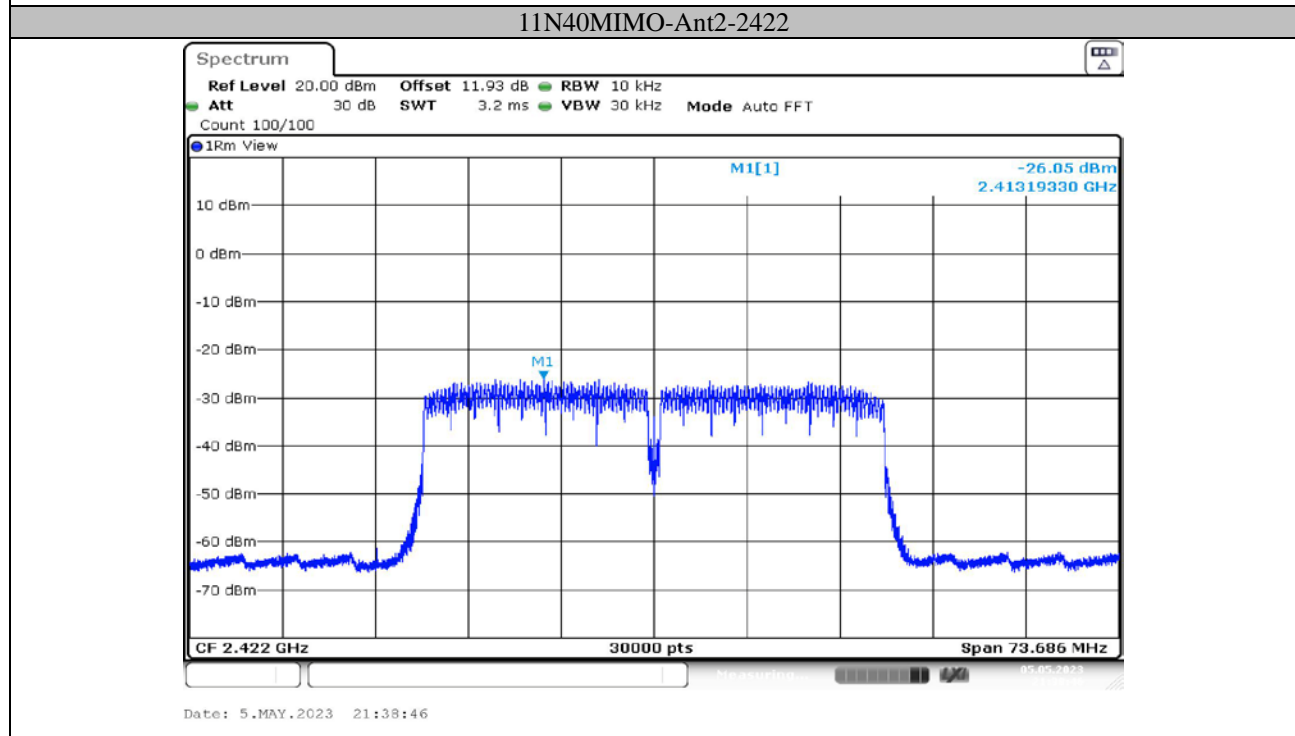
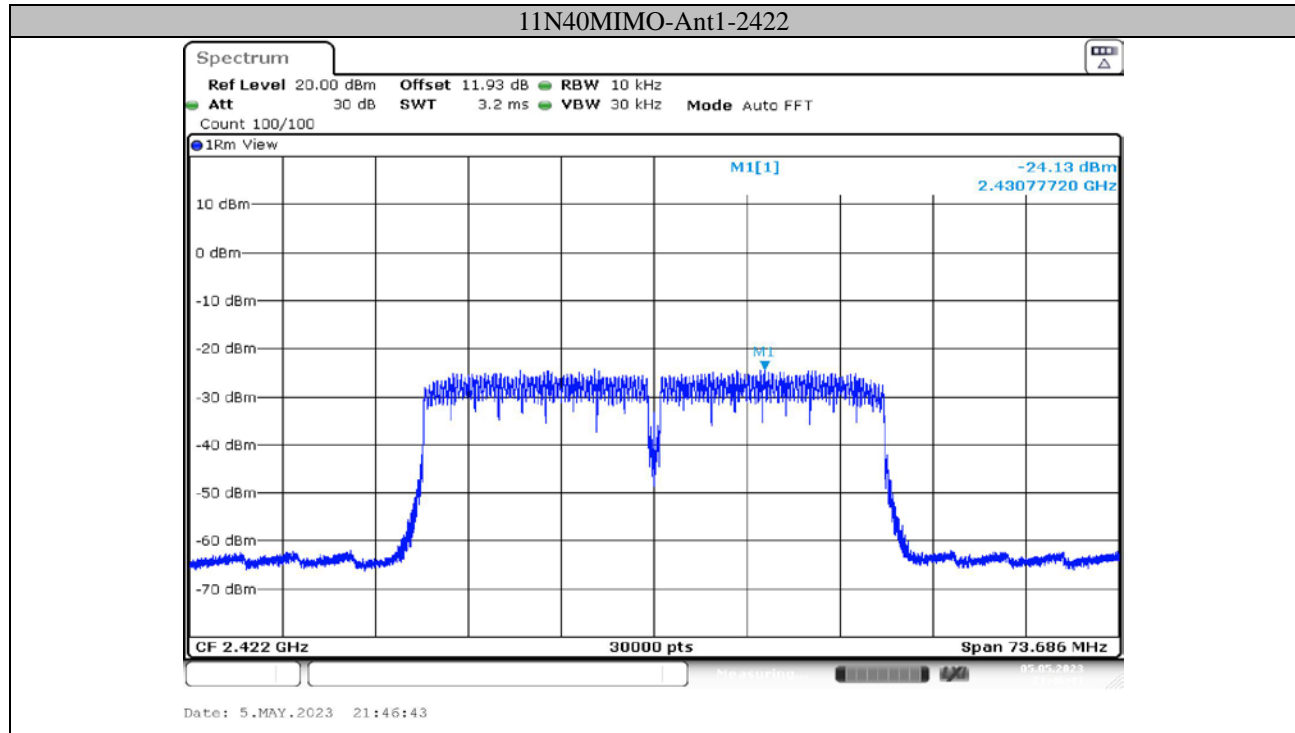


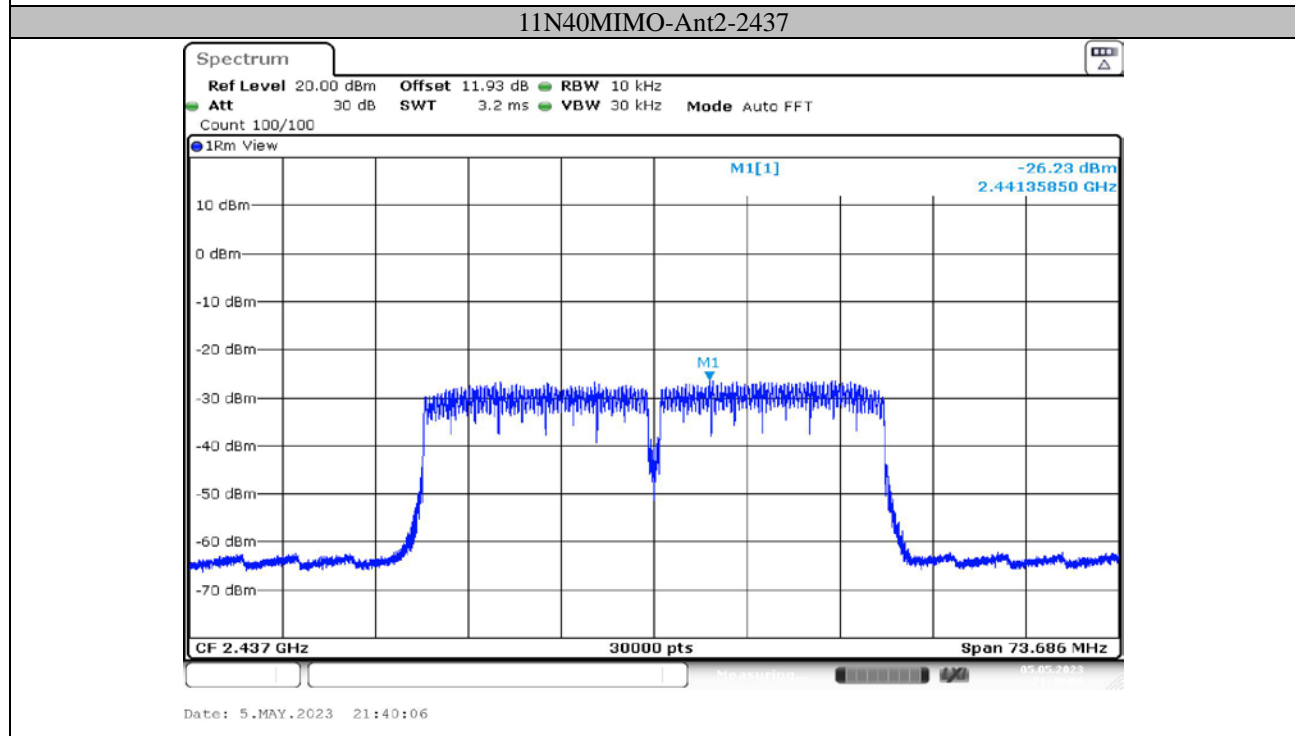
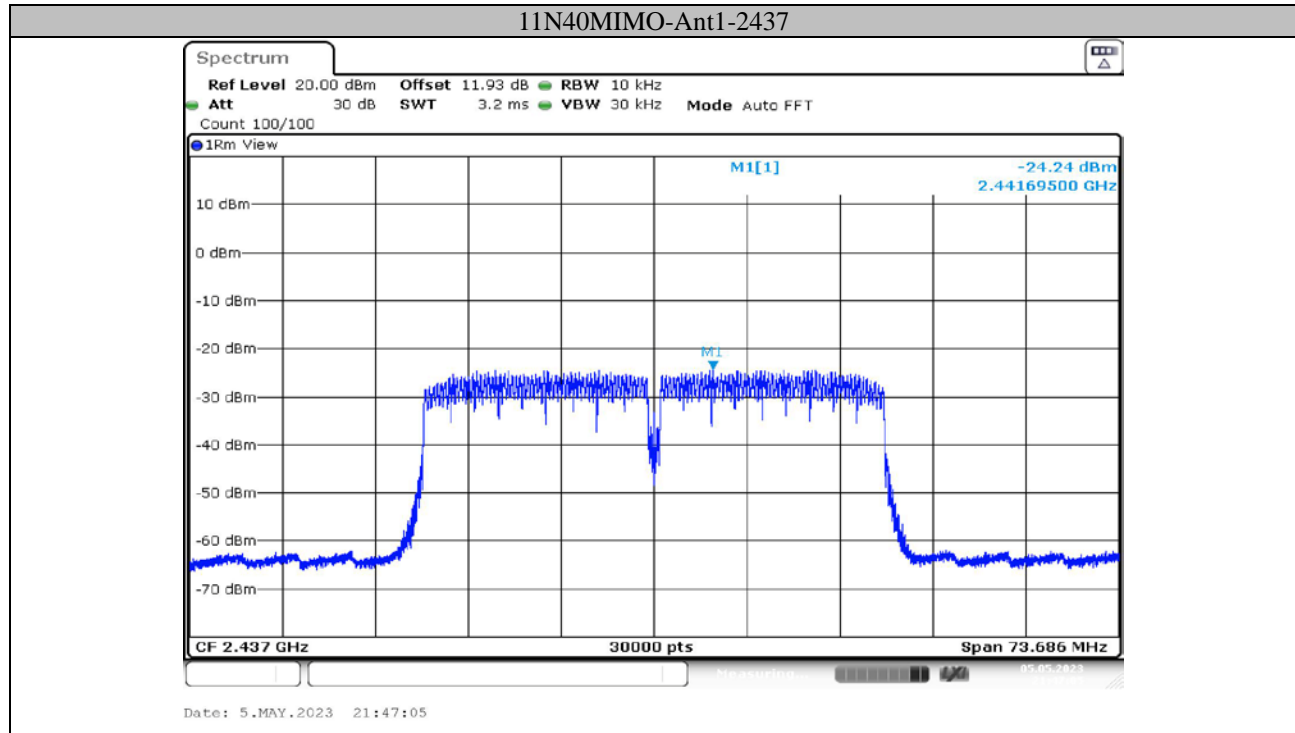


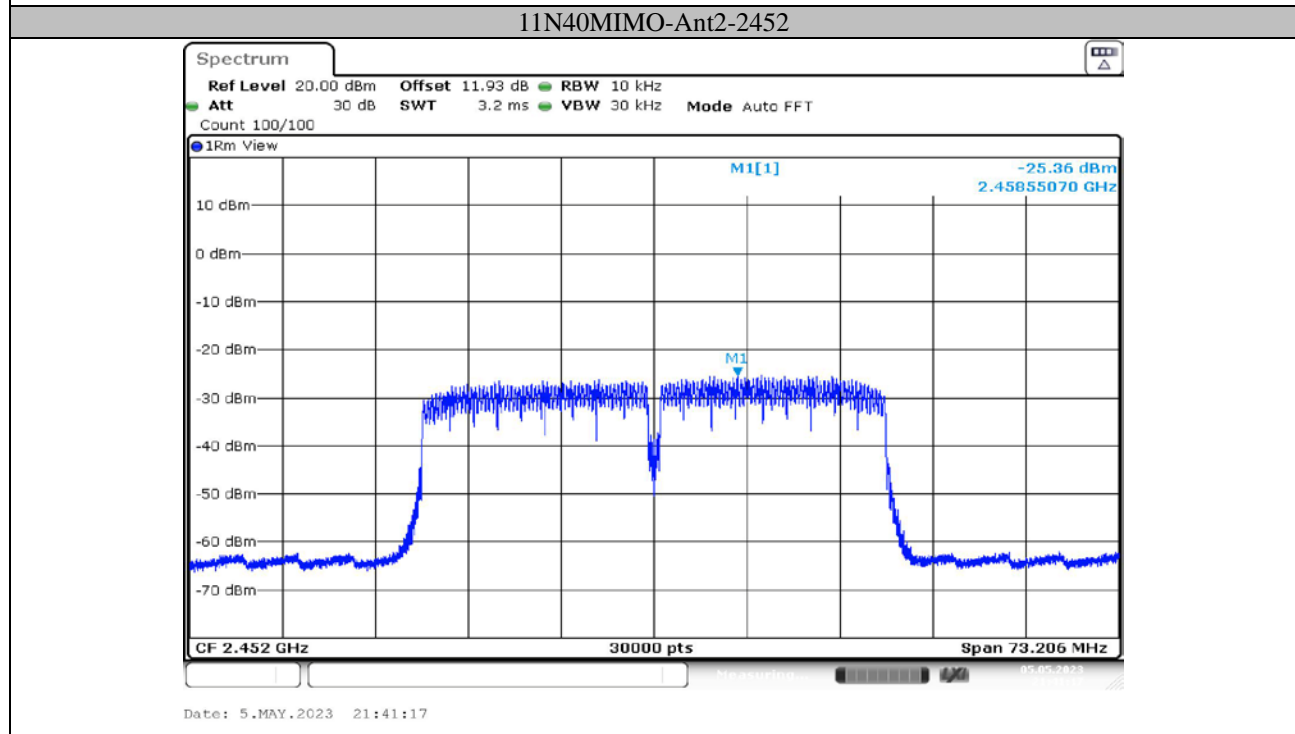
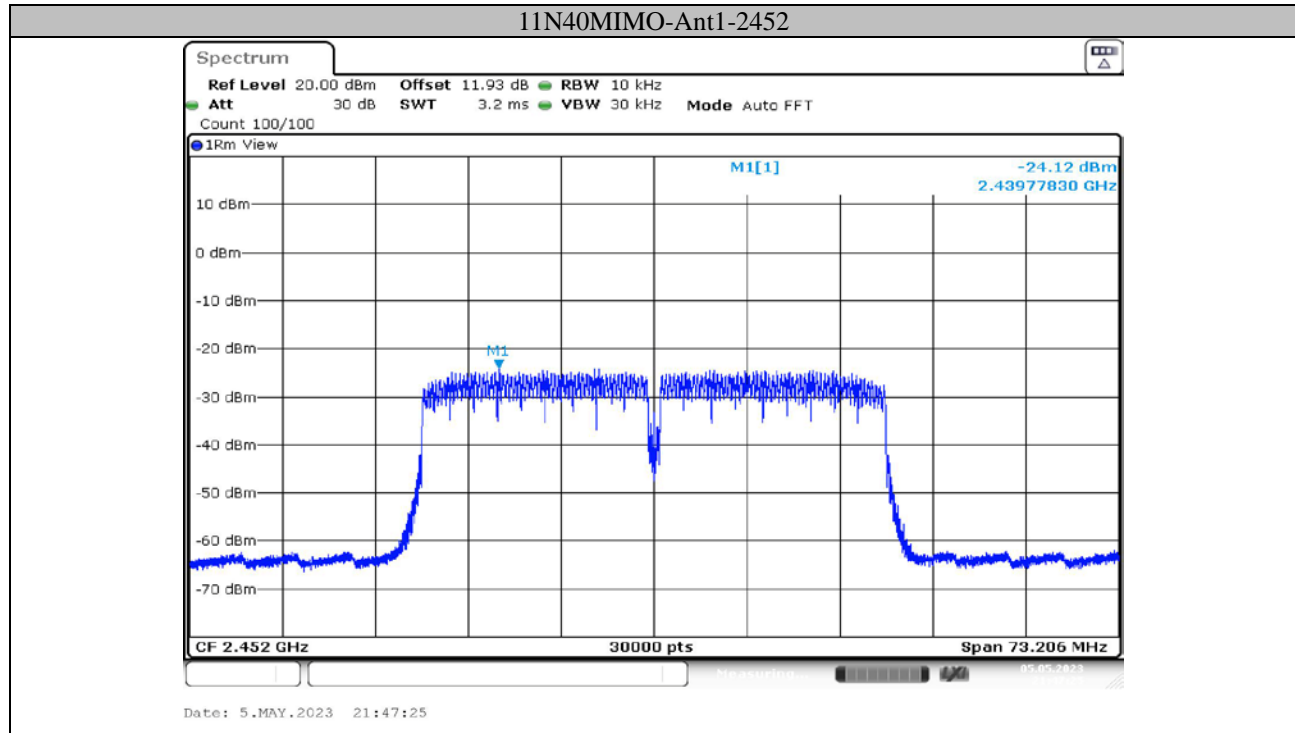








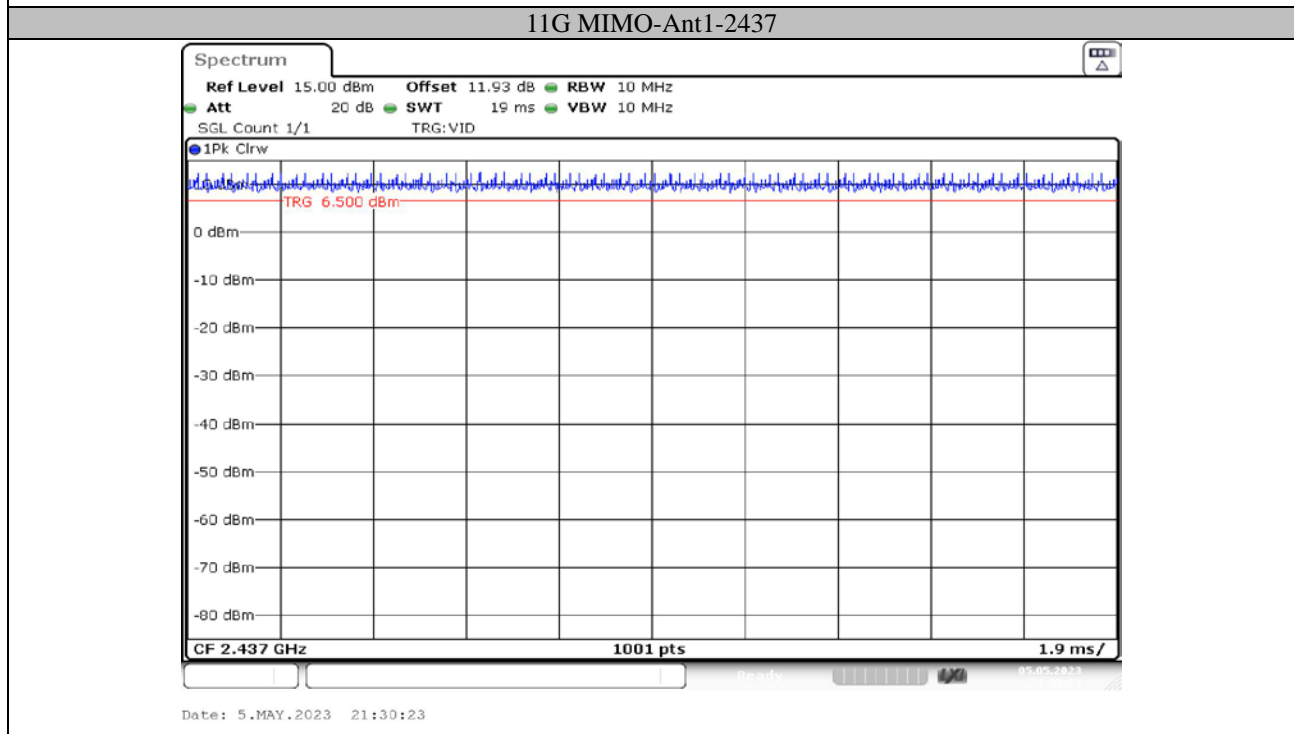
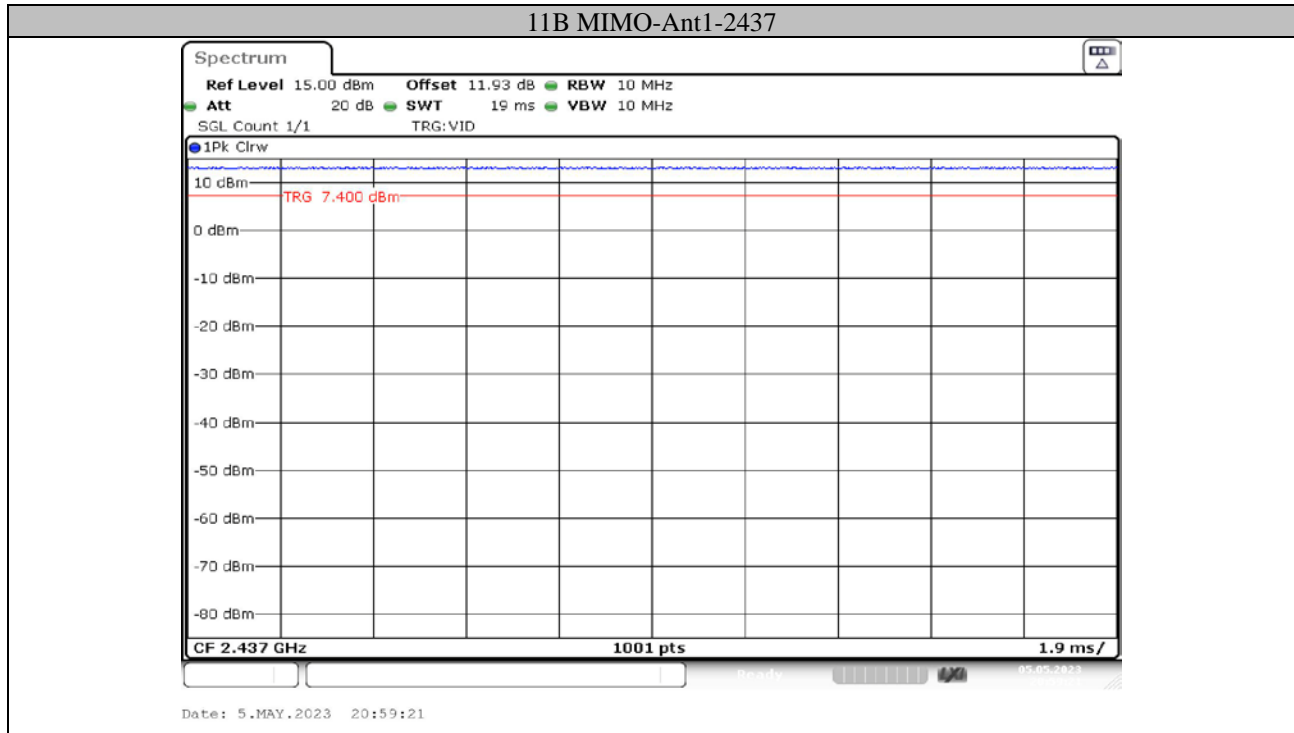


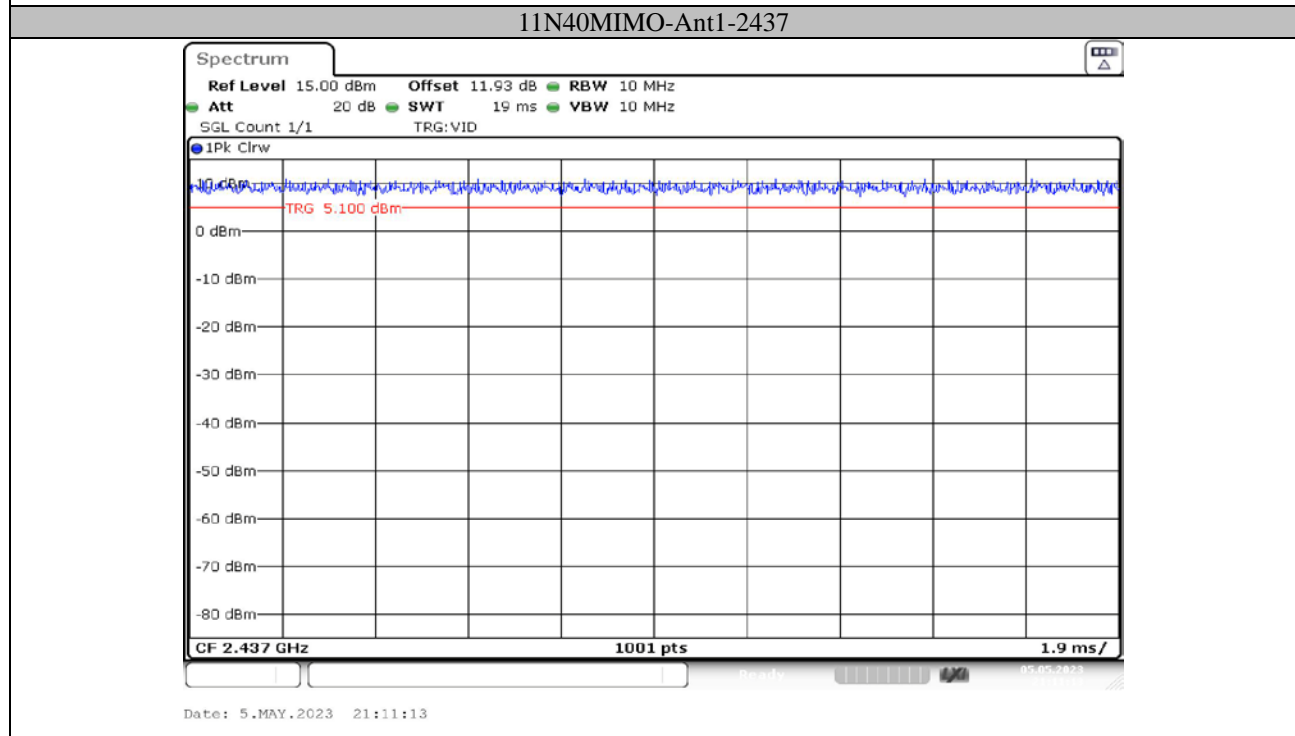
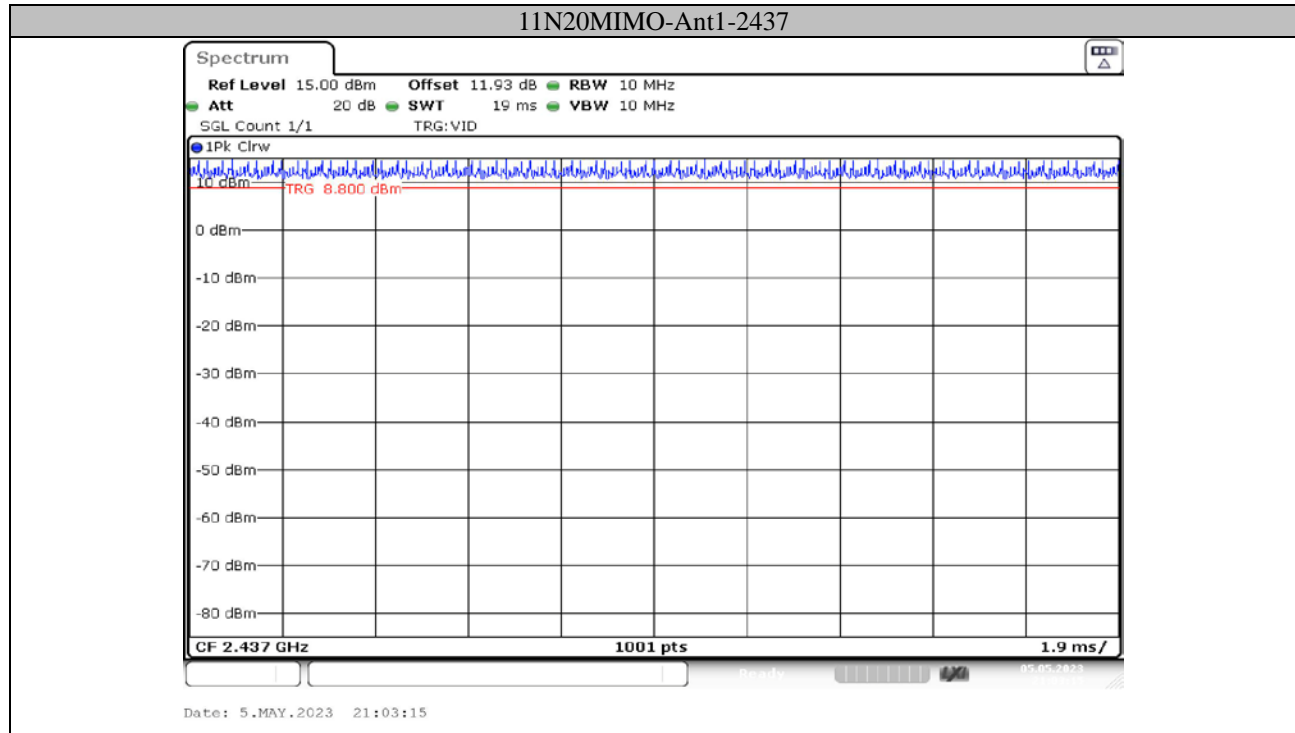


APPENDIX F: Duty Cycle**Test Result**

Test Mode	Channel	Antenna	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11BMIMO	2437	Ant1	19.00	19.00	100.00
11GMIMO	2437	Ant1	19.00	19.00	100.00
11N20MIMO	2437	Ant1	19.00	19.00	100.00
11N40MIMO	2437	Ant1	19.00	19.00	100.00

Test Graphs





******* END OF REPORT *******