

Appendix Test Data for WLAN(2. 4G) (Conducted Measurement)

Product Name: Wanbo Projector

Trade Mark: wanbo

Test Model: WPD24

FCC ID: 2A7PIWPD24

Environmental Conditions

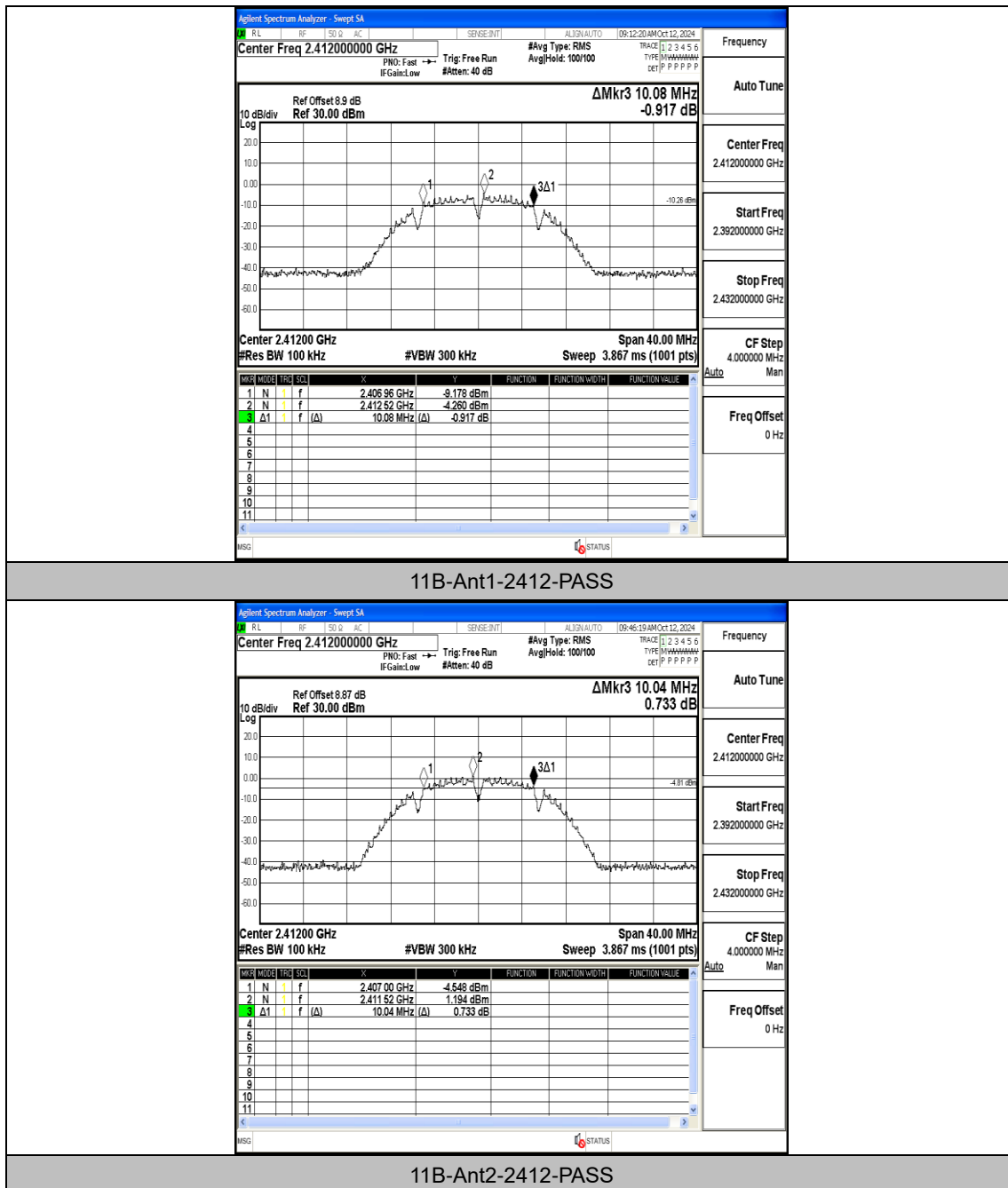
Temperature:	23.8℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

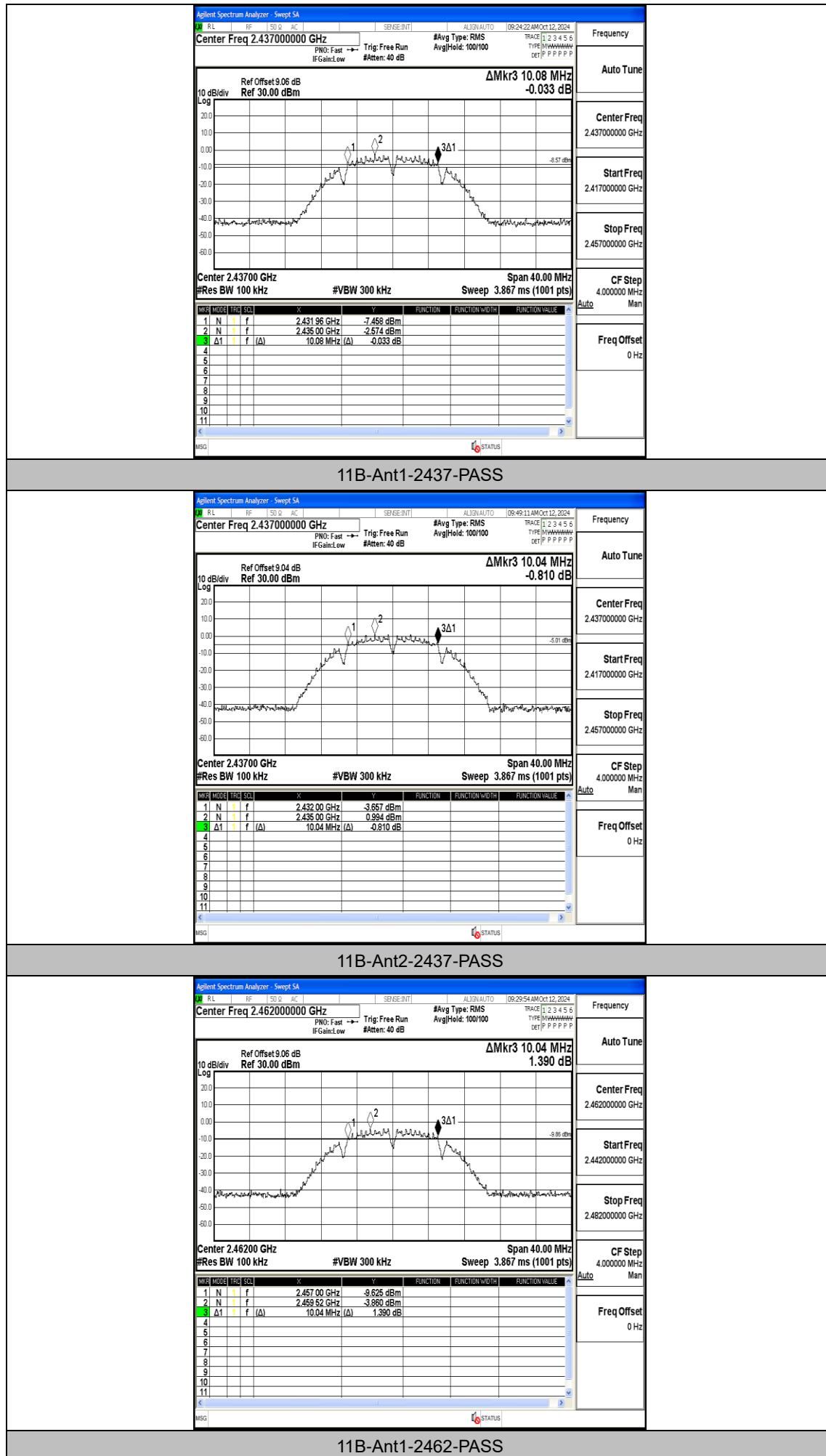
Appendix A: DTS Bandwidth

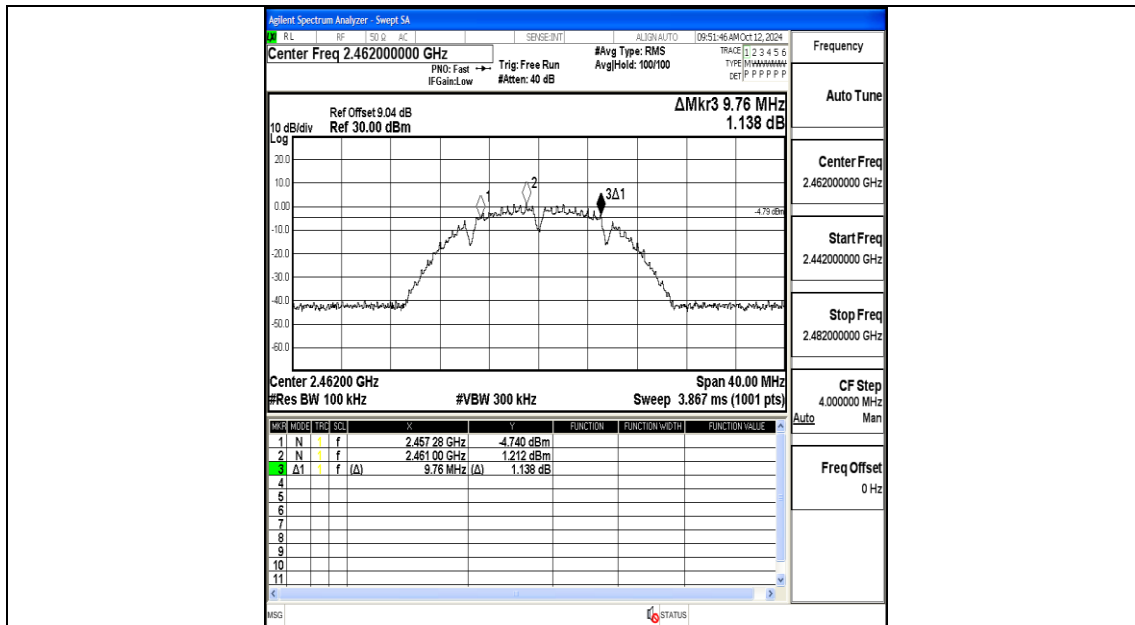
Test Result

Test Mode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	10.080	2406.960	2417.040	0.5	PASS
11B	Ant2	2412	10.040	2407.000	2417.040	0.5	PASS
11B	Ant1	2437	10.080	2431.960	2442.040	0.5	PASS
11B	Ant2	2437	10.040	2432.000	2442.040	0.5	PASS
11B	Ant1	2462	10.040	2457.000	2467.040	0.5	PASS
11B	Ant2	2462	9.760	2457.280	2467.040	0.5	PASS
11G	Ant1	2412	15.640	2403.880	2419.520	0.5	PASS
11G	Ant2	2412	15.840	2404.120	2419.960	0.5	PASS
11G	Ant1	2437	16.280	2428.880	2445.160	0.5	PASS
11G	Ant2	2437	14.240	2429.640	2443.880	0.5	PASS
11G	Ant1	2462	16.280	2453.880	2470.160	0.5	PASS
11G	Ant2	2462	15.640	2454.120	2469.760	0.5	PASS
11N20MIMO	Ant1	2412	16.520	2403.560	2420.080	0.5	PASS
11N20MIMO	Ant2	2412	16.160	2403.920	2420.080	0.5	PASS
11N20MIMO	Ant1	2437	15.720	2428.840	2444.560	0.5	PASS
11N20MIMO	Ant2	2437	16.600	2428.840	2445.440	0.5	PASS
11N20MIMO	Ant1	2462	16.920	2453.240	2470.160	0.5	PASS
11N20MIMO	Ant2	2462	16.960	2453.240	2470.200	0.5	PASS
11N40MIMO	Ant1	2422	35.680	2403.920	2439.600	0.5	PASS
11N40MIMO	Ant2	2422	35.040	2404.480	2439.520	0.5	PASS
11N40MIMO	Ant1	2437	35.120	2419.400	2454.520	0.5	PASS
11N40MIMO	Ant2	2437	35.120	2419.480	2454.600	0.5	PASS
11N40MIMO	Ant1	2452	35.040	2434.480	2469.520	0.5	PASS
11N40MIMO	Ant2	2452	35.120	2434.480	2469.600	0.5	PASS

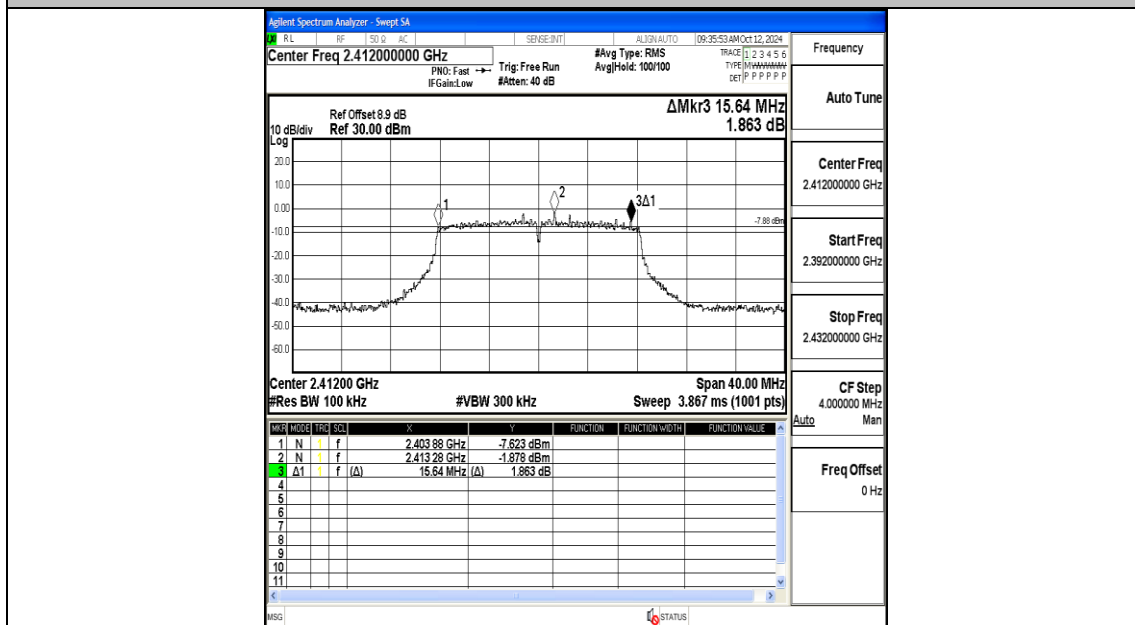
Test Graphs



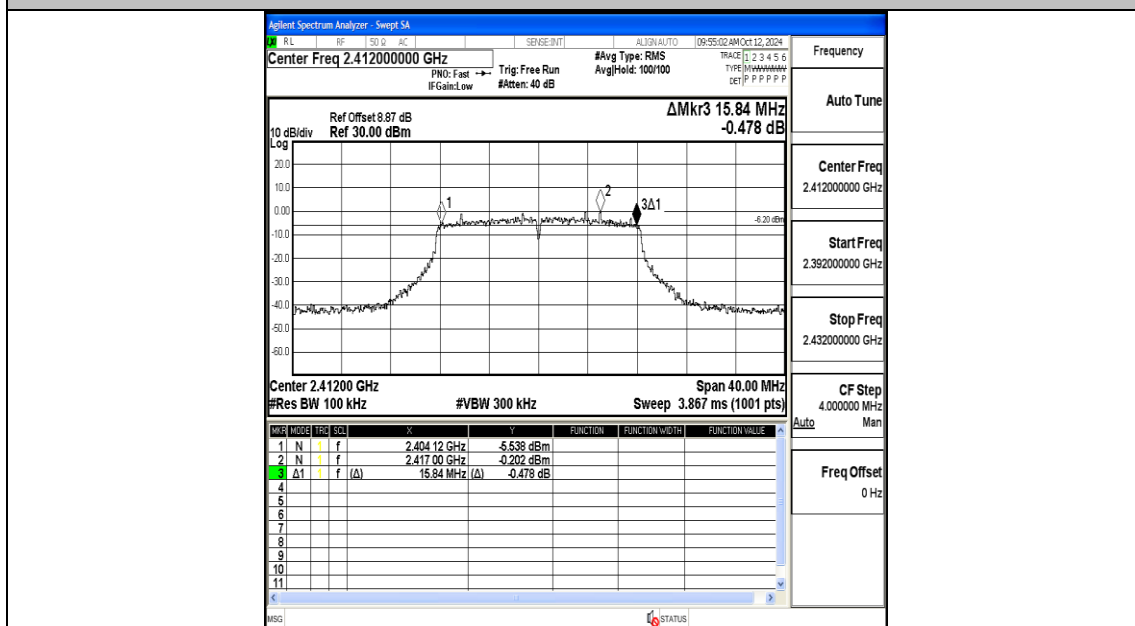




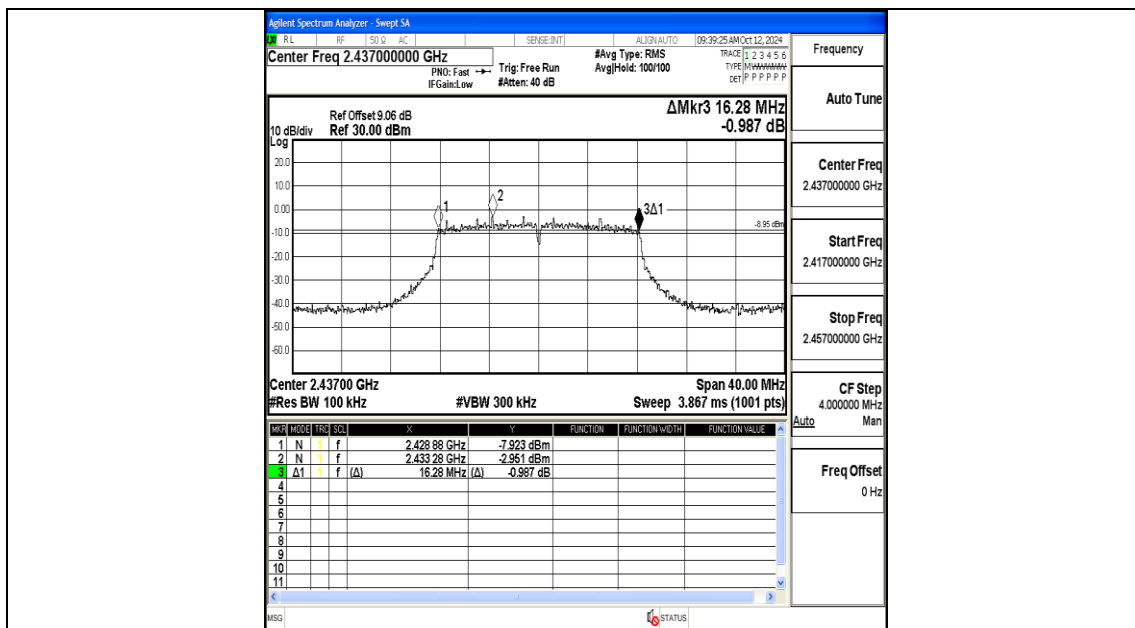
11B-Ant2-2462-PASS



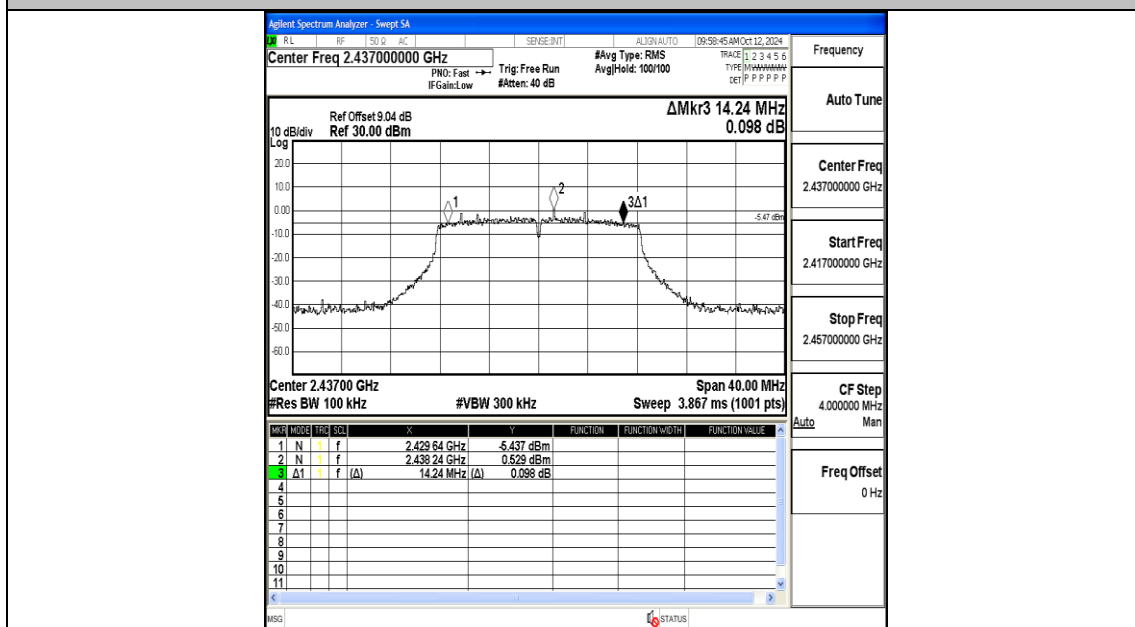
11G-Ant1-2412-PASS



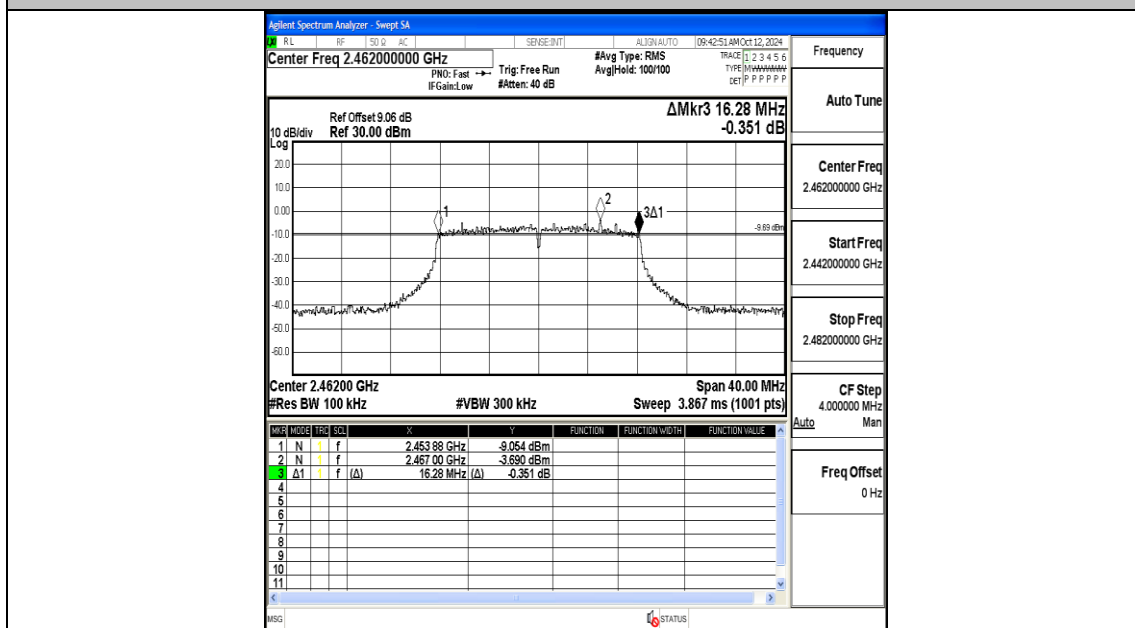
11G-Ant2-2412-PASS



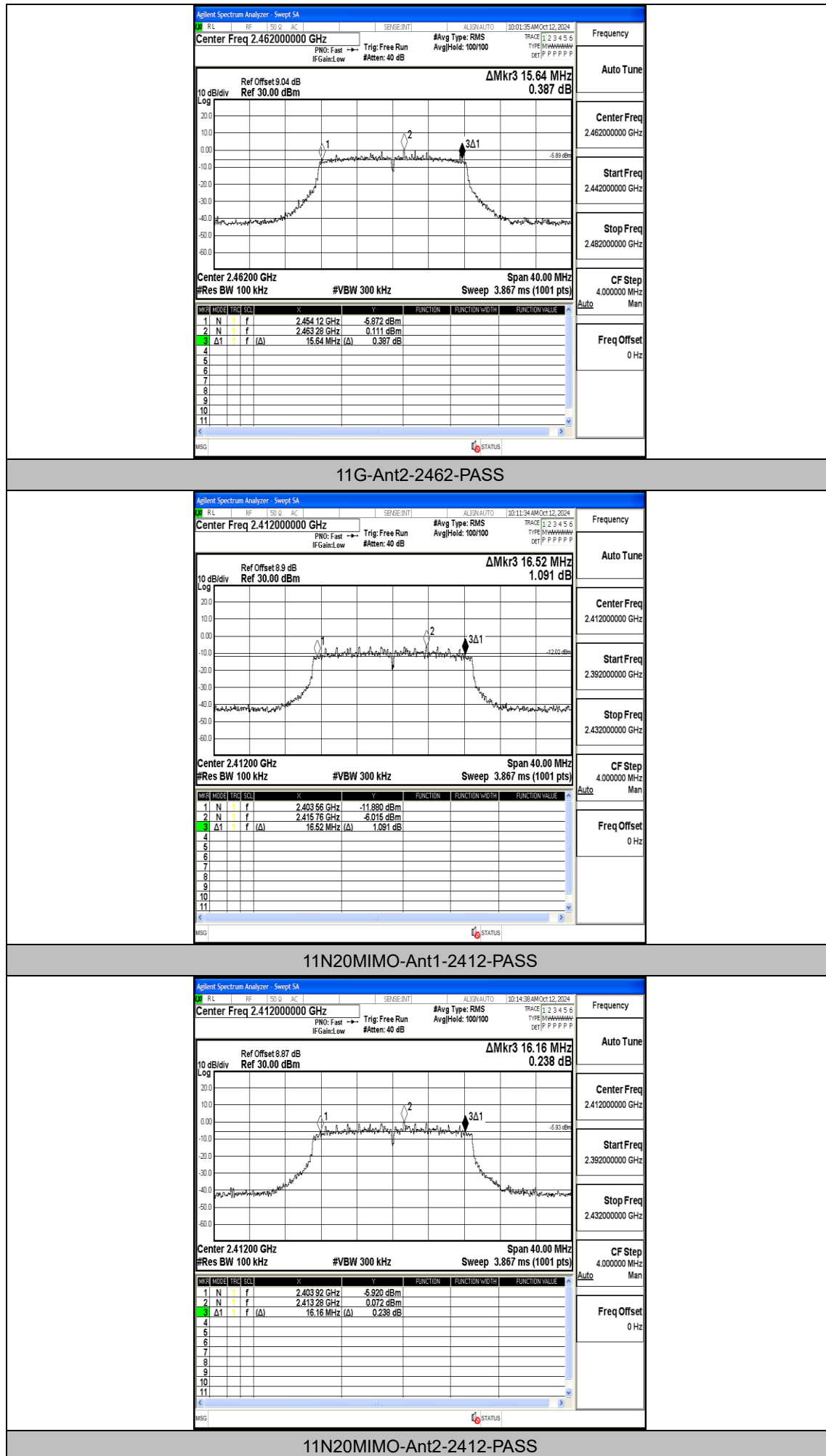
11G-Ant1-2437-PASS

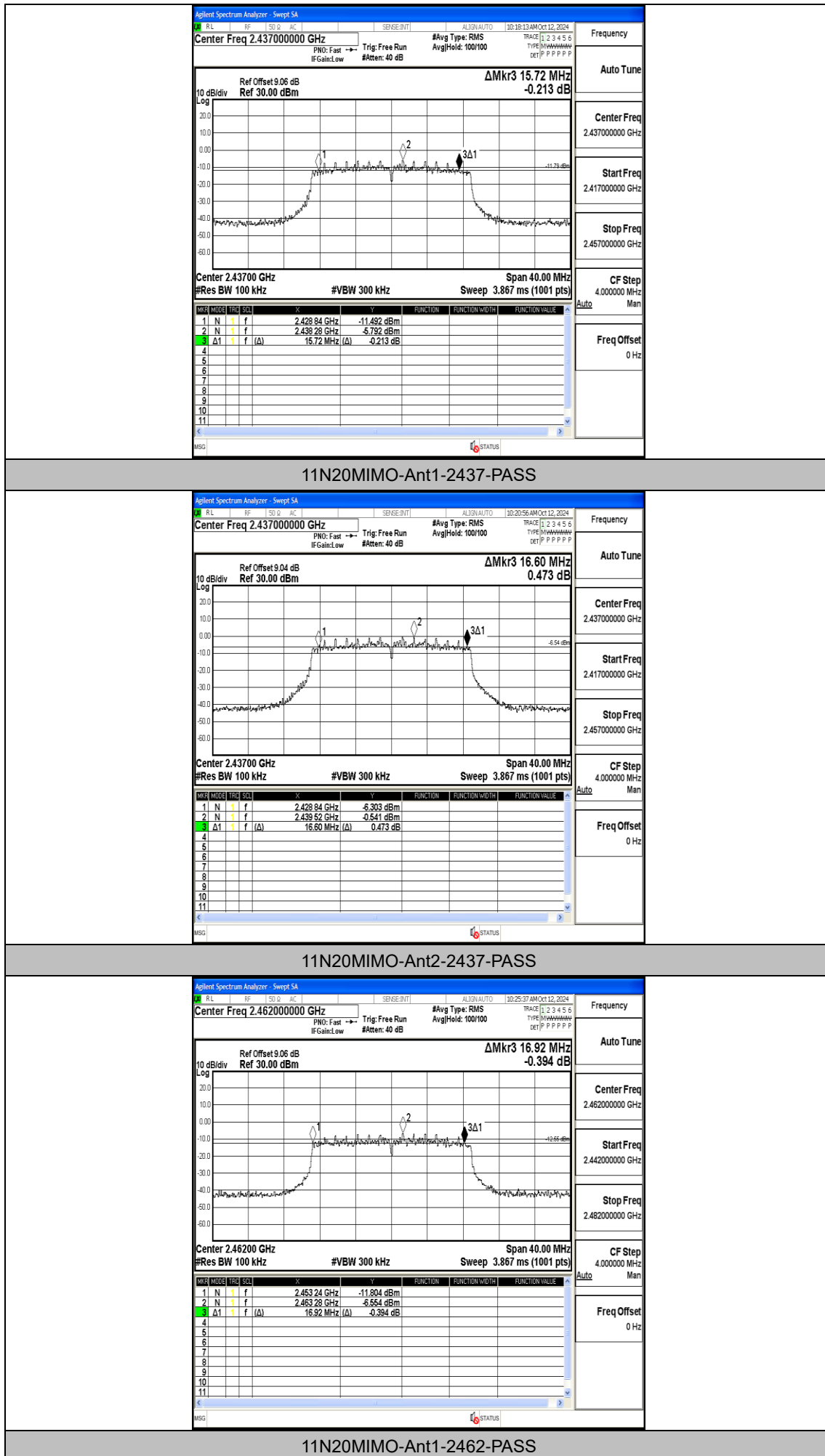


11G-Ant2-2437-PASS

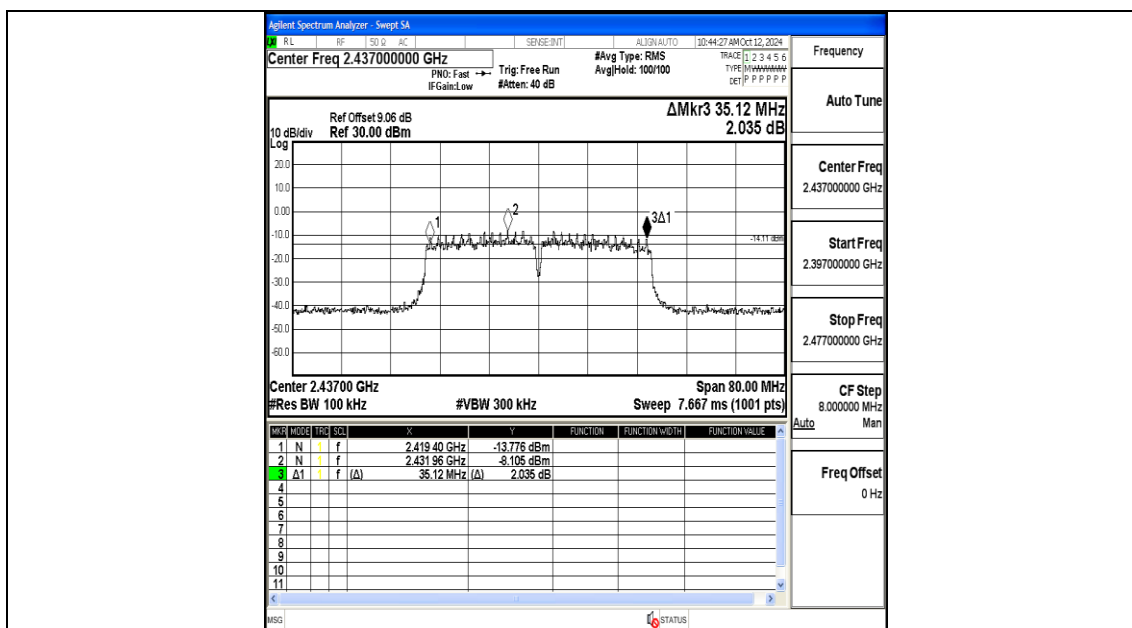


11G-Ant1-2462-PASS

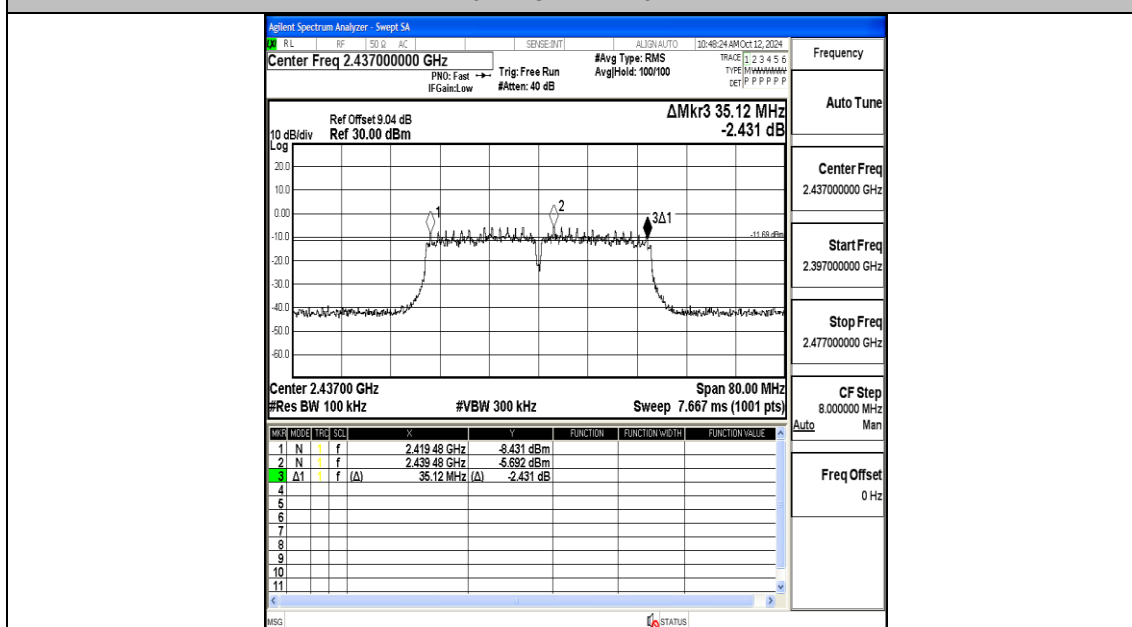




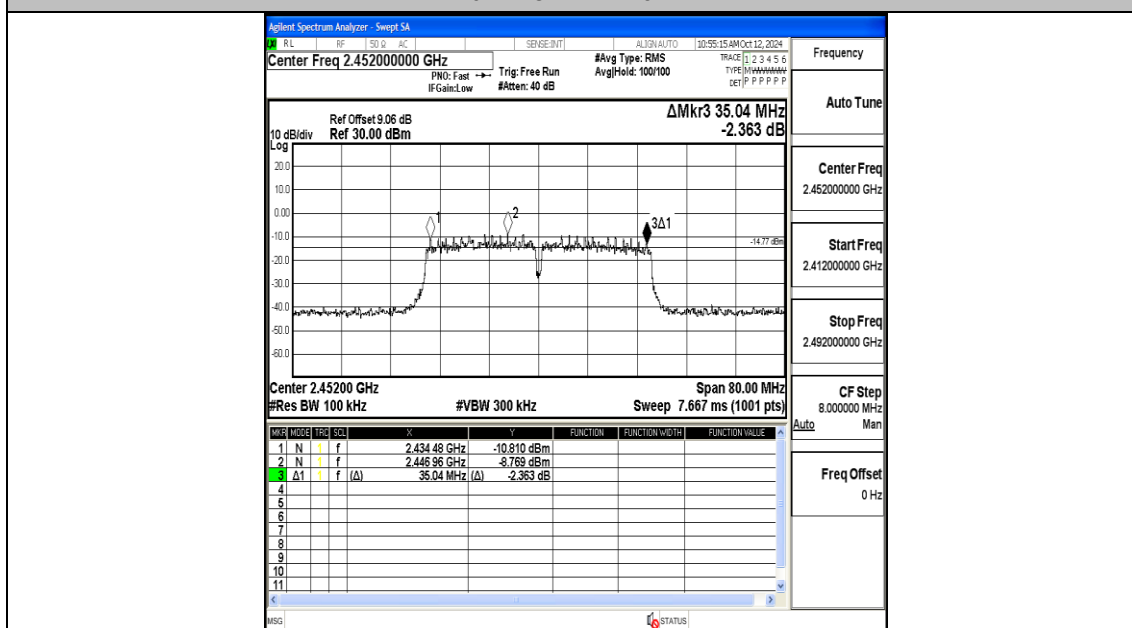




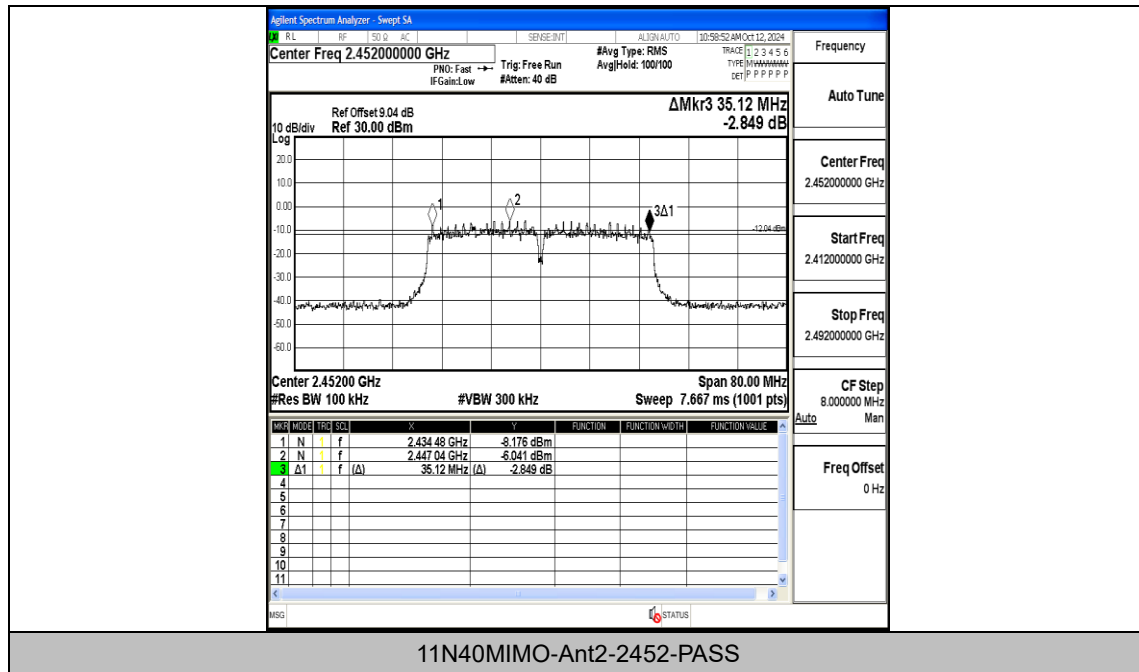
11N40MIMO-Ant1-2437-PASS



11N40MIMO-Ant2-2437-PASS



11N40MIMO-Ant1-2452-PASS

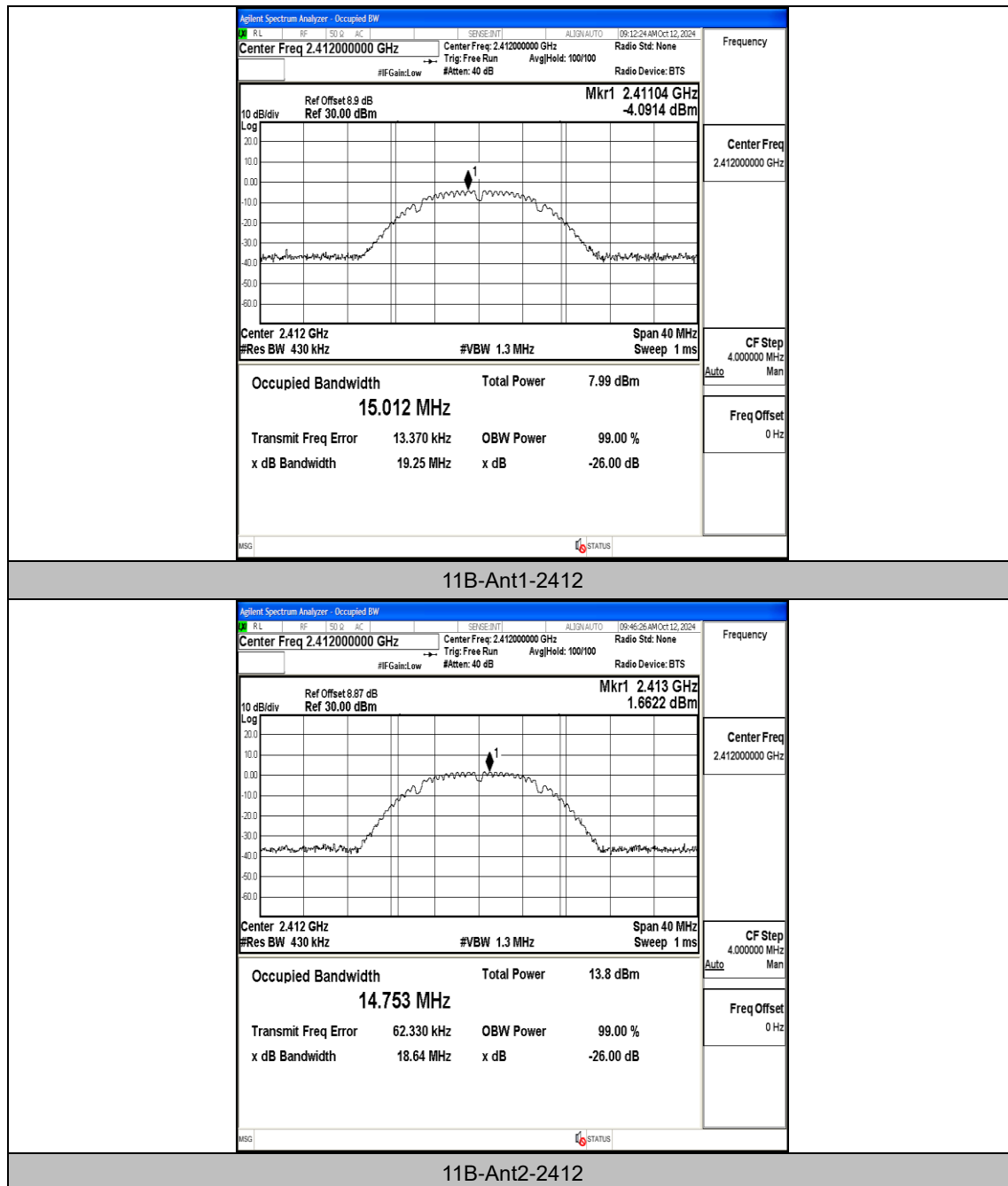


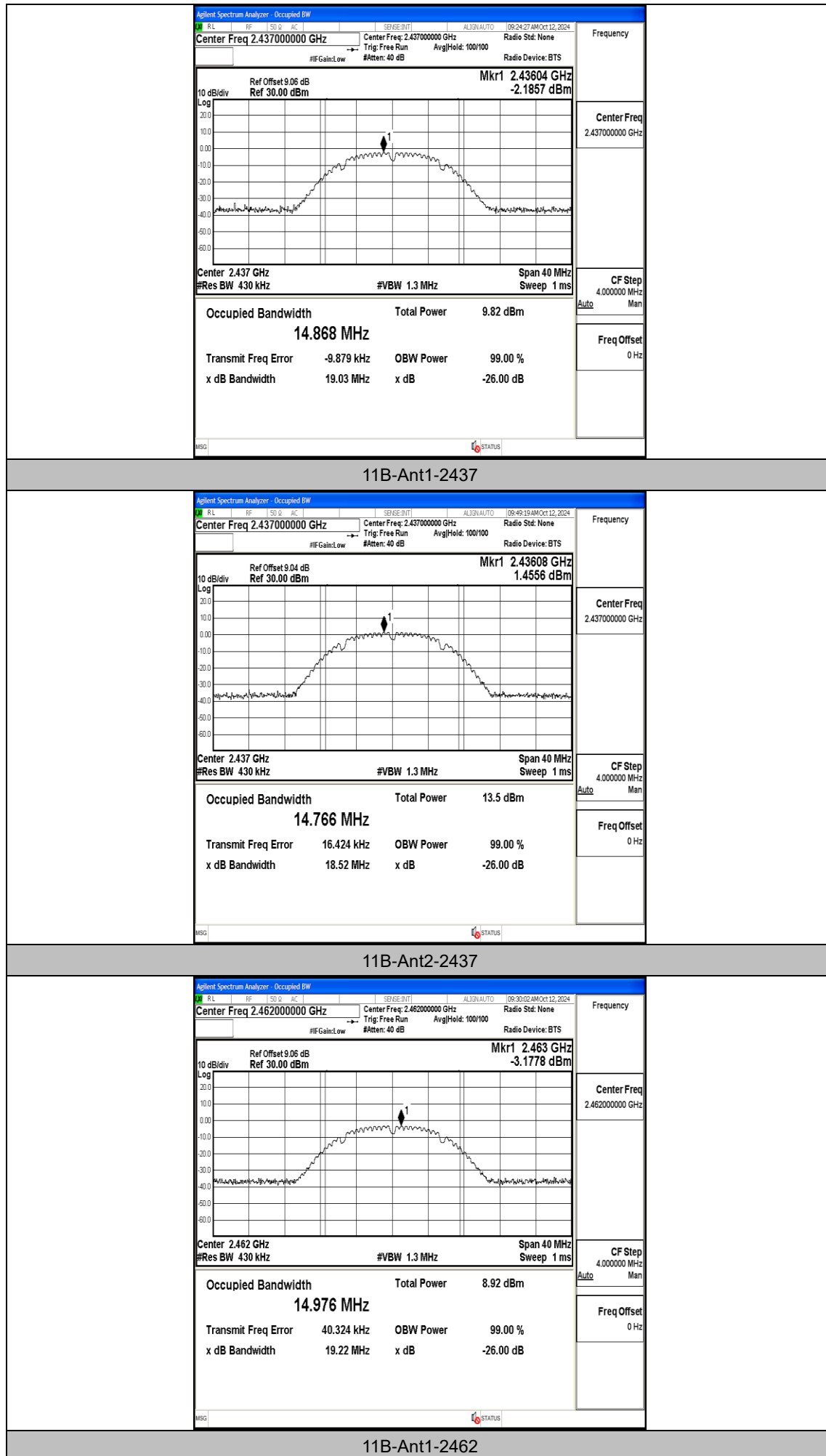
Appendix B: Occupied Channel Bandwidth

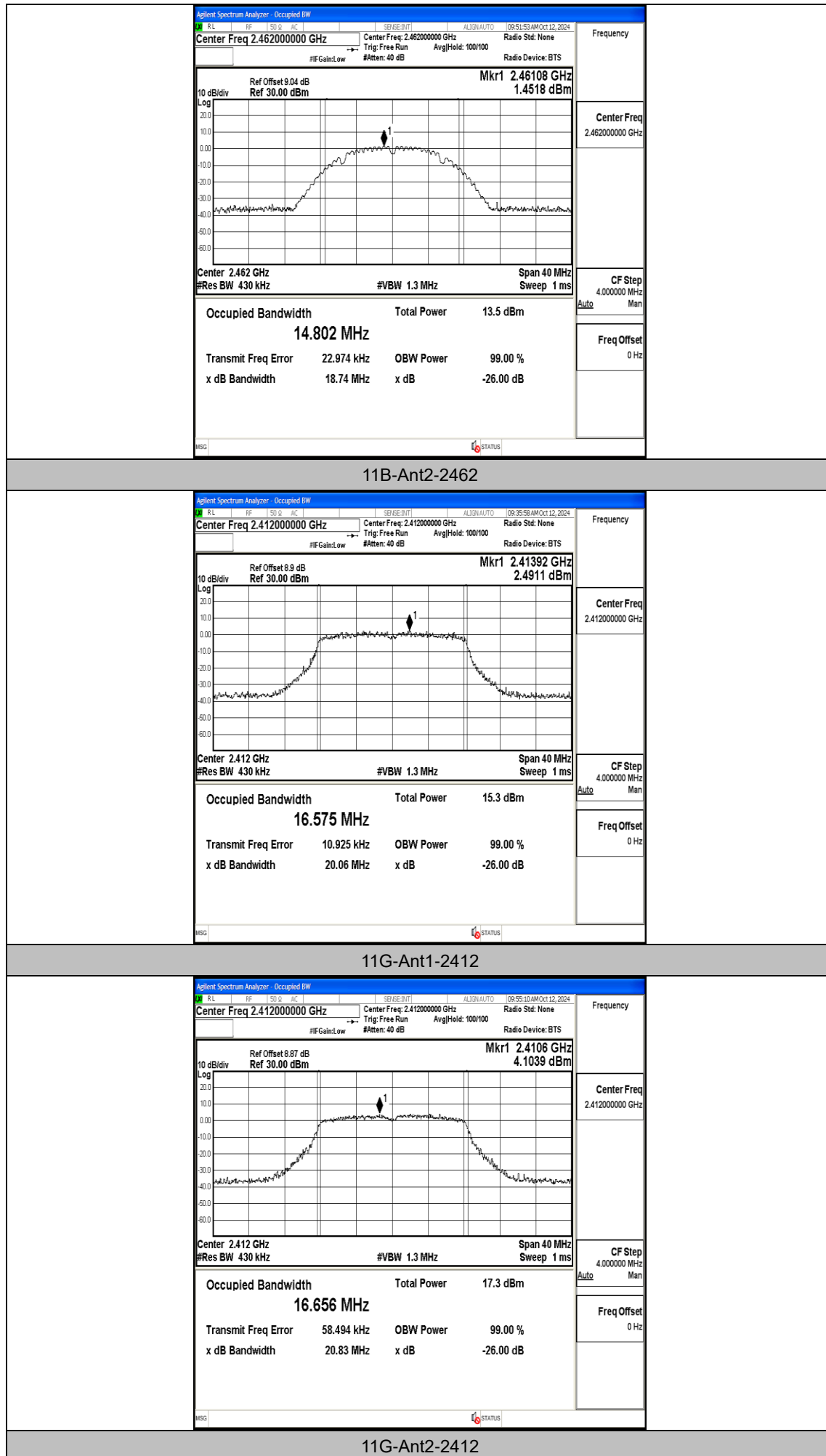
Test Result

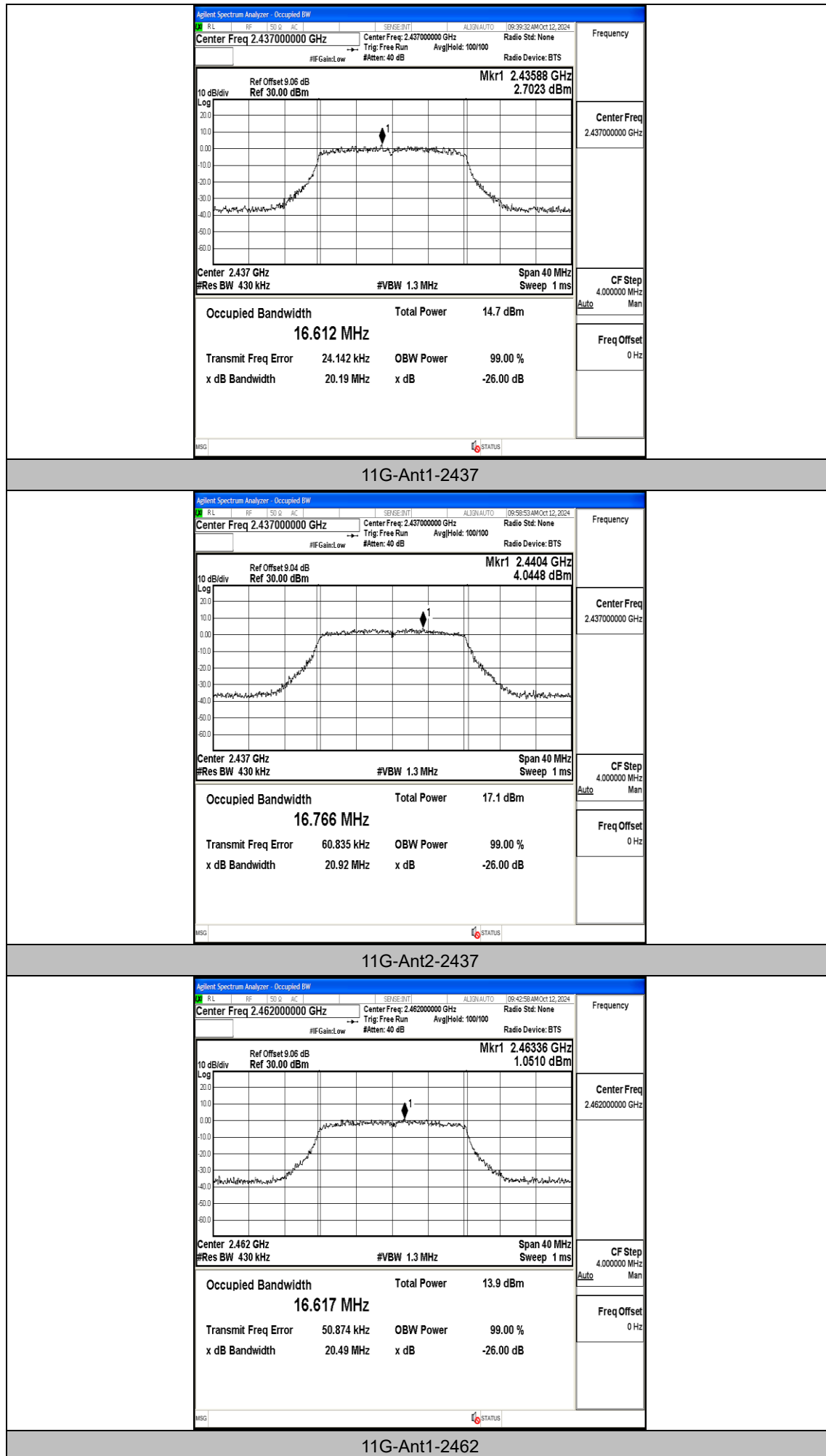
Test Mode	Antenna	Channel Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	15.012	2404.5074	2419.5194	---	---
11B	Ant2	2412	14.753	2404.6858	2419.4388	---	---
11B	Ant1	2437	14.868	2429.5561	2444.4241	---	---
11B	Ant2	2437	14.766	2429.6334	2444.3994	---	---
11B	Ant1	2462	14.976	2454.5523	2469.5283	---	---
11B	Ant2	2462	14.802	2454.6220	2469.4240	---	---
11G	Ant1	2412	16.575	2403.7234	2420.2984	---	---
11G	Ant2	2412	16.656	2403.7305	2420.3865	---	---
11G	Ant1	2437	16.612	2428.7181	2445.3301	---	---
11G	Ant2	2437	16.766	2428.6778	2445.4438	---	---
11G	Ant1	2462	16.617	2453.7424	2470.3594	---	---
11G	Ant2	2462	16.713	2453.6843	2470.3973	---	---
11N20MIMO	Ant1	2412	17.758	2403.1280	2420.8860	---	---
11N20MIMO	Ant2	2412	17.730	2403.1595	2420.8895	---	---
11N20MIMO	Ant1	2437	17.765	2428.1184	2445.8834	---	---
11N20MIMO	Ant2	2437	17.757	2428.1377	2445.8947	---	---
11N20MIMO	Ant1	2462	17.680	2453.1757	2470.8557	---	---
11N20MIMO	Ant2	2462	17.640	2453.2017	2470.8417	---	---
11N40MIMO	Ant1	2422	36.304	2403.8951	2440.1991	---	---
11N40MIMO	Ant2	2422	36.164	2404.0082	2440.1722	---	---
11N40MIMO	Ant1	2437	36.409	2418.8077	2455.2167	---	---
11N40MIMO	Ant2	2437	36.378	2418.8878	2455.2658	---	---
11N40MIMO	Ant1	2452	36.317	2433.8227	2470.1397	---	---
11N40MIMO	Ant2	2452	36.248	2433.8822	2470.1302	---	---

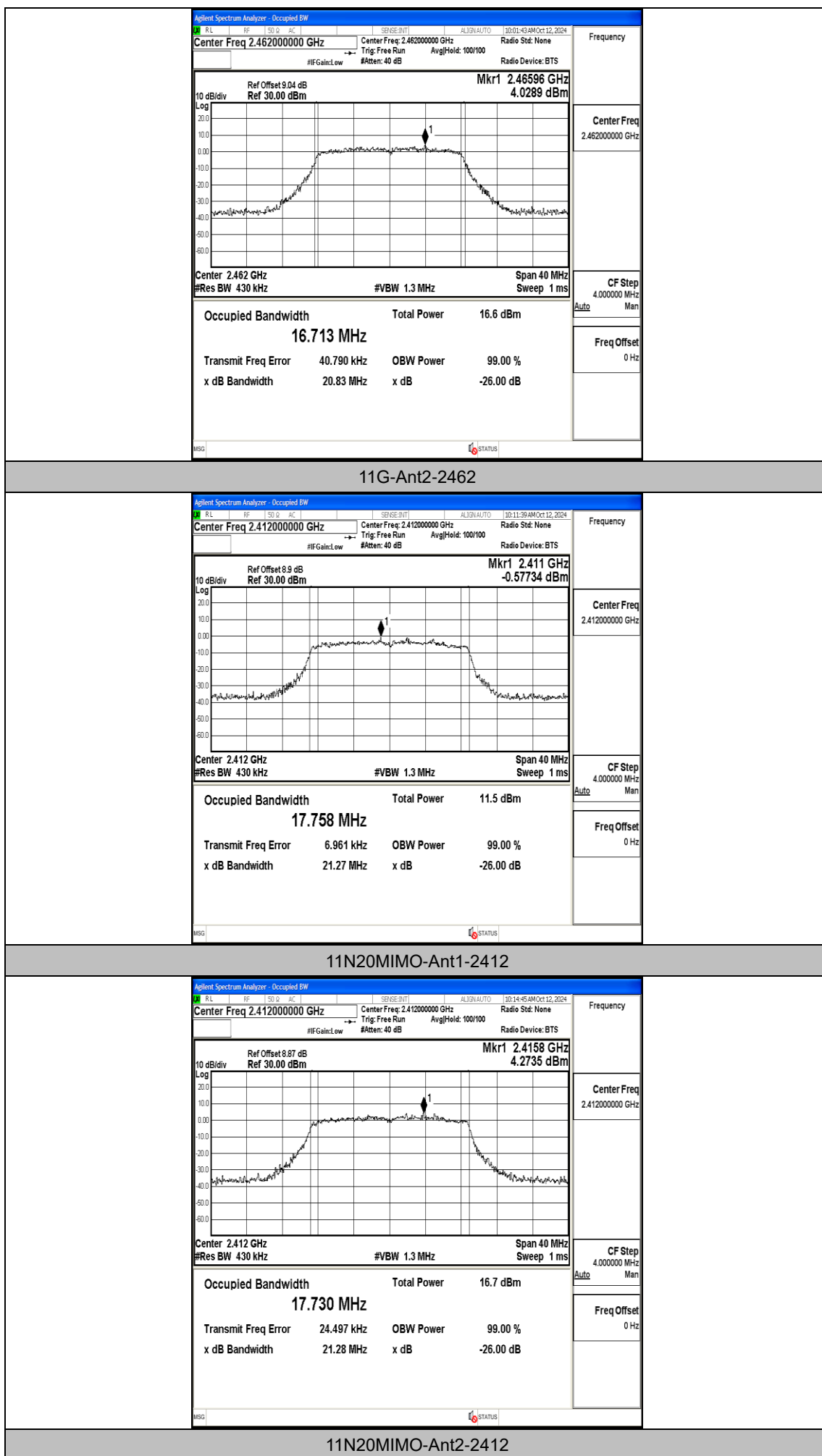
Test Graphs

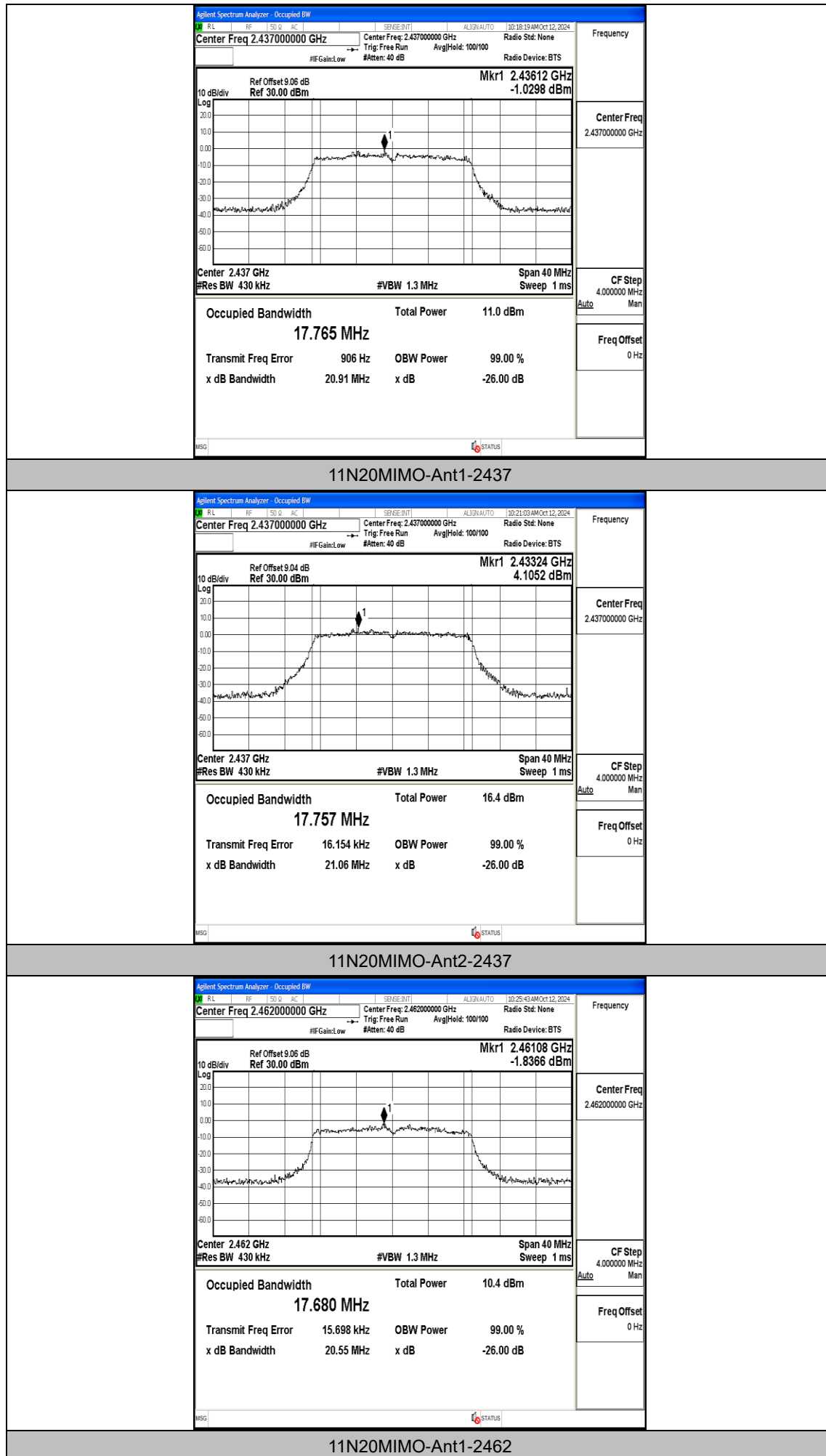


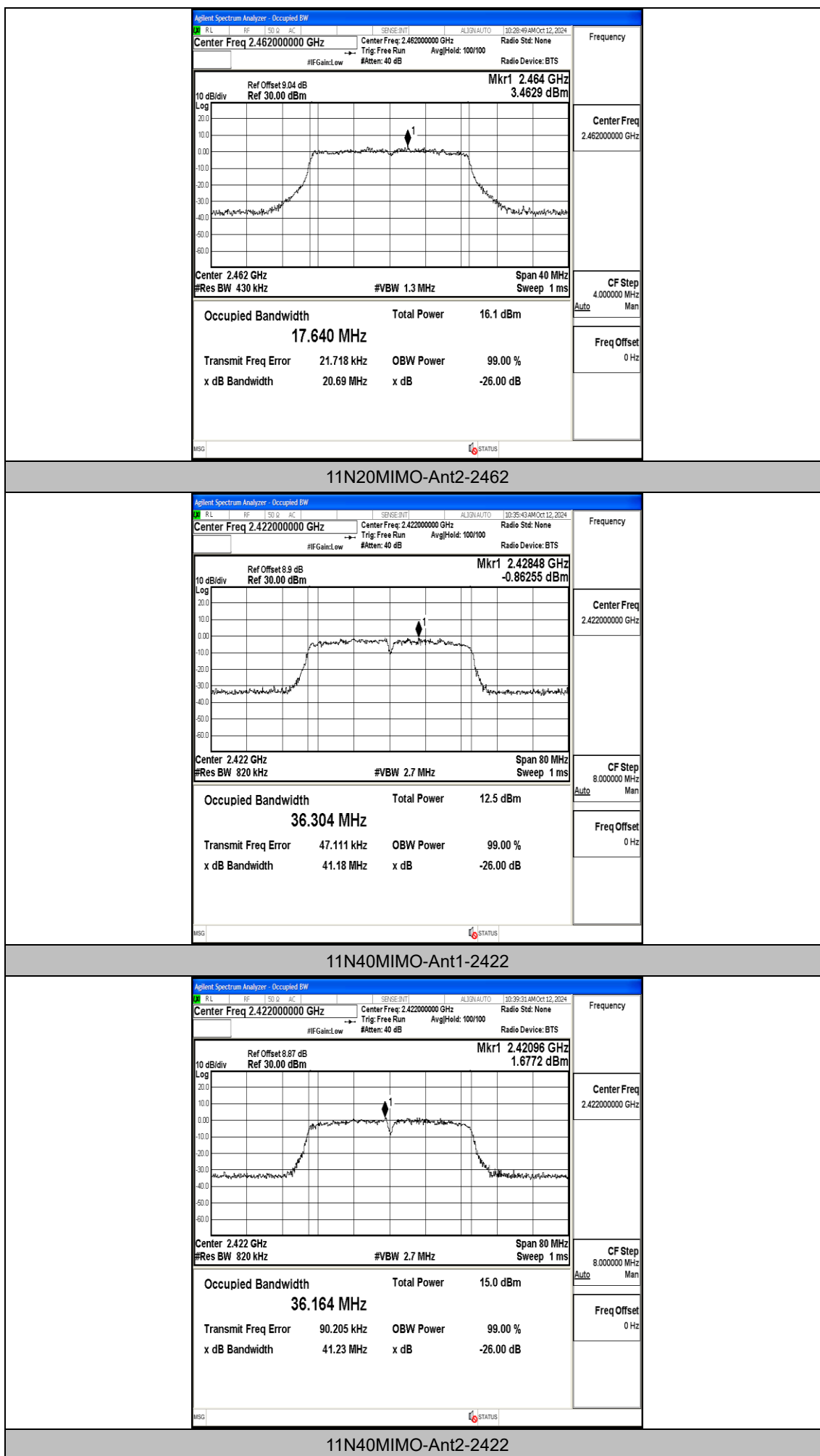


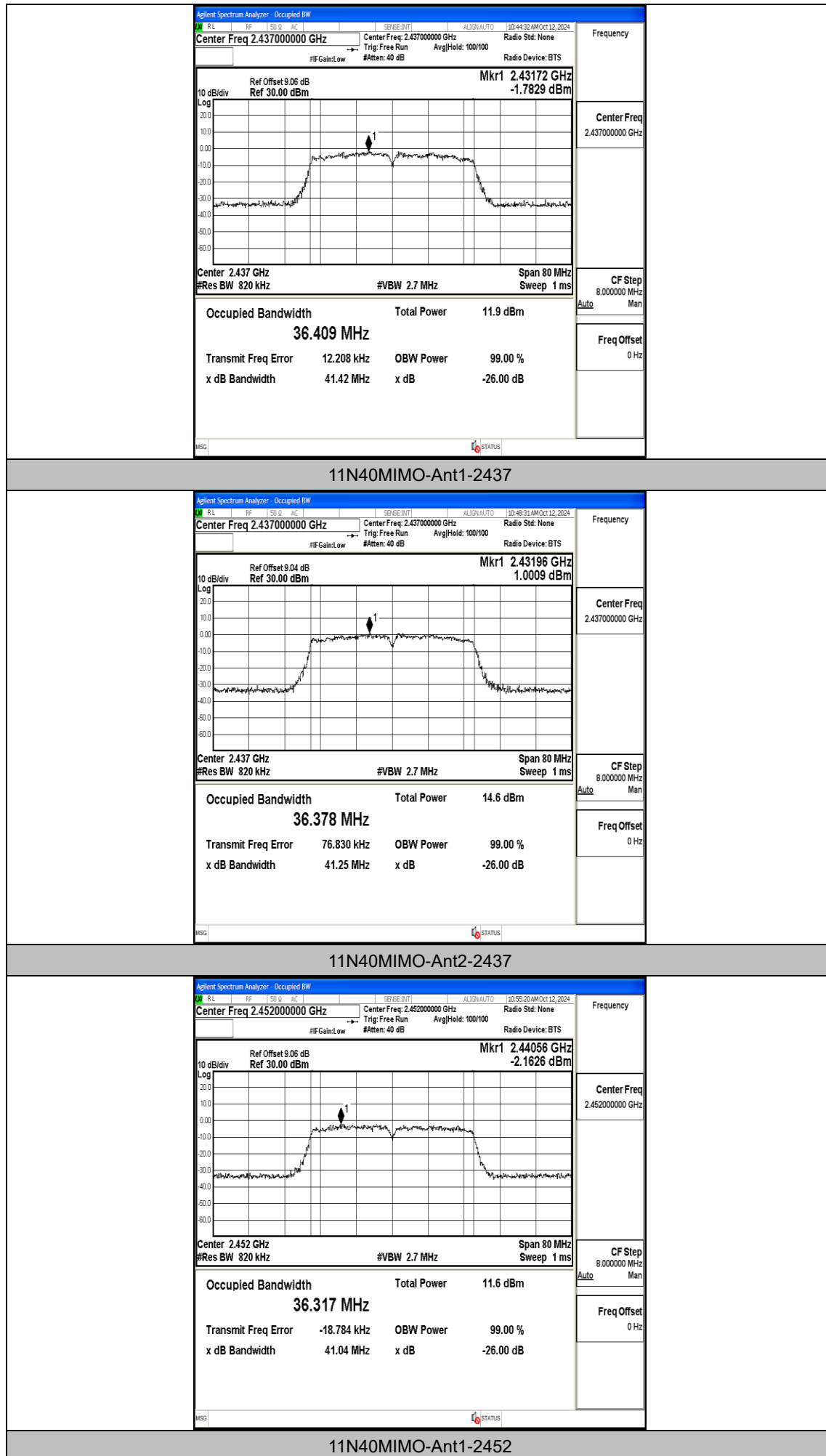


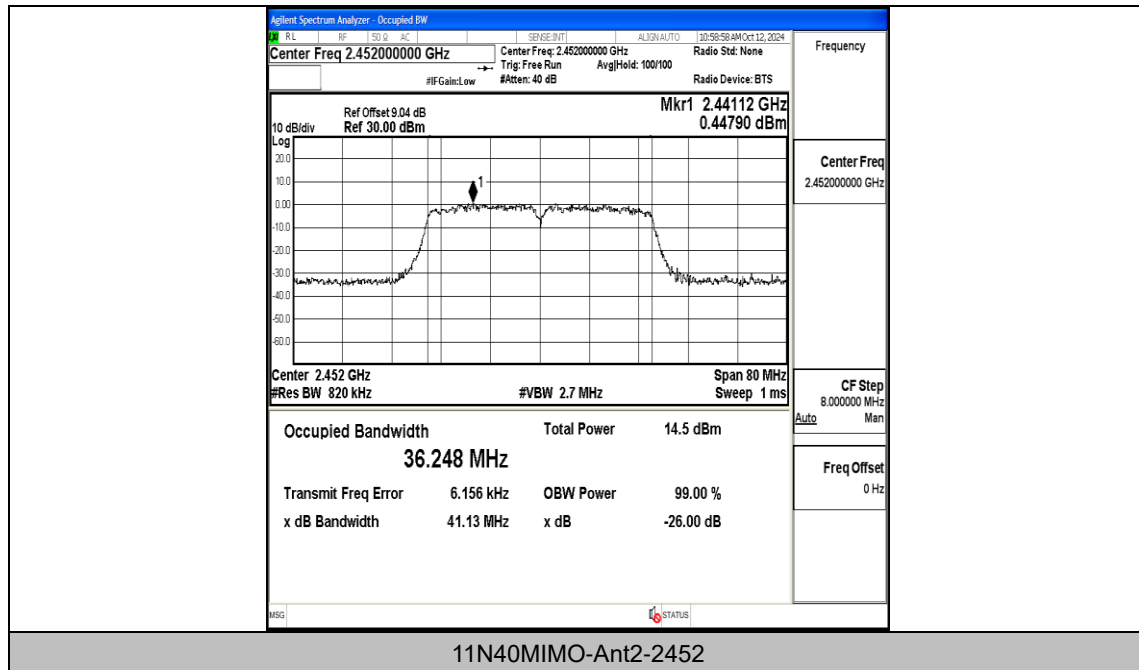












Appendix C: Maximum Average conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11B	Ant1	2412	5.71	≤30.00	PASS
11B	Ant2	2412	10.77	≤30.00	PASS
11B	Ant1	2437	6.89	≤30.00	PASS
11B	Ant2	2437	10.48	≤30.00	PASS
11B	Ant1	2462	5.87	≤30.00	PASS
11B	Ant2	2462	10.52	≤30.00	PASS
11G	Ant1	2412	9.16	≤30.00	PASS
11G	Ant2	2412	11.60	≤30.00	PASS
11G	Ant1	2437	8.42	≤30.00	PASS
11G	Ant2	2437	11.46	≤30.00	PASS
11G	Ant1	2462	7.67	≤30.00	PASS
11G	Ant2	2462	10.82	≤30.00	PASS
11N20MIMO	Ant1	2412	6.11	≤30.00	PASS
11N20MIMO	Ant2	2412	11.37	≤30.00	PASS
11N20MIMO	total	2412	12.50	≤30.00	PASS
11N20MIMO	Ant1	2437	5.51	≤30.00	PASS
11N20MIMO	Ant2	2437	11.00	≤30.00	PASS
11N20MIMO	total	2437	12.08	≤30.00	PASS
11N20MIMO	Ant1	2462	4.67	≤30.00	PASS
11N20MIMO	Ant2	2462	10.56	≤30.00	PASS
11N20MIMO	total	2462	11.56	≤30.00	PASS
11N40MIMO	Ant1	2422	6.63	≤30.00	PASS
11N40MIMO	Ant2	2422	8.98	≤30.00	PASS
11N40MIMO	total	2422	10.97	≤30.00	PASS
11N40MIMO	Ant1	2437	6.05	≤30.00	PASS
11N40MIMO	Ant2	2437	8.75	≤30.00	PASS
11N40MIMO	total	2437	10.62	≤30.00	PASS
11N40MIMO	Ant1	2452	5.76	≤30.00	PASS
11N40MIMO	Ant2	2452	8.61	≤30.00	PASS
11N40MIMO	total	2452	10.43	≤30.00	PASS

Note: The Duty Cycle Factor is compensated in the result.

Appendix D: Maximum Average power spectral density

Test Result

Test Mode	Antenna	Frequency [MHz]	Raw. Data [dBm/3-100kHz]	Dc. Factor	Result [dBm/3-100kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-23.94	0.14	-23.80	≤8	PASS
11B	Ant2	2412	-19.21	0.16	-19.05	≤8	PASS
11B	Ant1	2437	-23.75	0.16	-23.59	≤8	PASS
11B	Ant2	2437	-19.31	0.14	-19.17	≤8	PASS
11B	Ant1	2462	-24.00	0.12	-23.88	≤8	PASS
11B	Ant2	2462	-19.67	0.15	-19.52	≤8	PASS
11G	Ant1	2412	-21.51	0.44	-21.07	≤8	PASS
11G	Ant2	2412	-19.44	0.48	-18.96	≤8	PASS
11G	Ant1	2437	-21.42	0.44	-20.98	≤8	PASS
11G	Ant2	2437	-19.06	0.48	-18.58	≤8	PASS
11G	Ant1	2462	-22.38	0.44	-21.94	≤8	PASS
11G	Ant2	2462	-19.41	0.46	-18.95	≤8	PASS
11N20MI MO	Ant1	2412	-23.75	3.01	-20.74	≤8	PASS
11N20MI MO	Ant2	2412	-17.76	3.01	-14.75	≤8	PASS
11N20MI MO	total	2412	---	---	-13.77	≤7.31	PASS
11N20MI MO	Ant1	2437	-23.85	3.01	-20.84	≤8	PASS
11N20MI MO	Ant2	2437	-18.71	3.01	-15.70	≤8	PASS
11N20MI MO	total	2437	---	---	-14.54	≤7.31	PASS
11N20MI MO	Ant1	2462	-25.44	3.01	-22.43	≤8	PASS
11N20MI MO	Ant2	2462	-19.86	3.01	-16.85	≤8	PASS
11N20MI MO	total	2462	---	---	-15.79	≤7.31	PASS
11N40MI MO	Ant1	2422	-26.62	4.42	-22.20	≤8	PASS
11N40MI MO	Ant2	2422	-24.47	4.42	-20.05	≤8	PASS
11N40MI MO	total	2422	---	---	-17.98	≤7.31	PASS
11N40MI MO	Ant1	2437	-27.27	4.42	-22.85	≤8	PASS
11N40MI MO	Ant2	2437	-25.59	4.30	-21.29	≤8	PASS
11N40MI	total	2437	---	---	-18.99	≤7.31	PASS

MO							
11N40MI MO	Ant1	2452	-27.60	4.42	-23.18	≤8	PASS
11N40MI MO	Ant2	2452	-24.84	4.42	-20.42	≤8	PASS
11N40MI MO	total	2452	---	---	-18.57	≤7.31	PASS

Test Graphs

