

RF Test Data for RLAN(5.2G) (Conducted Measurement)

Product Name: Wanbo Projector

Trade Mark: Wanbo

Test Model: WPA34

FCC ID: 2A7PIX5PRO

Environmental Conditions

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

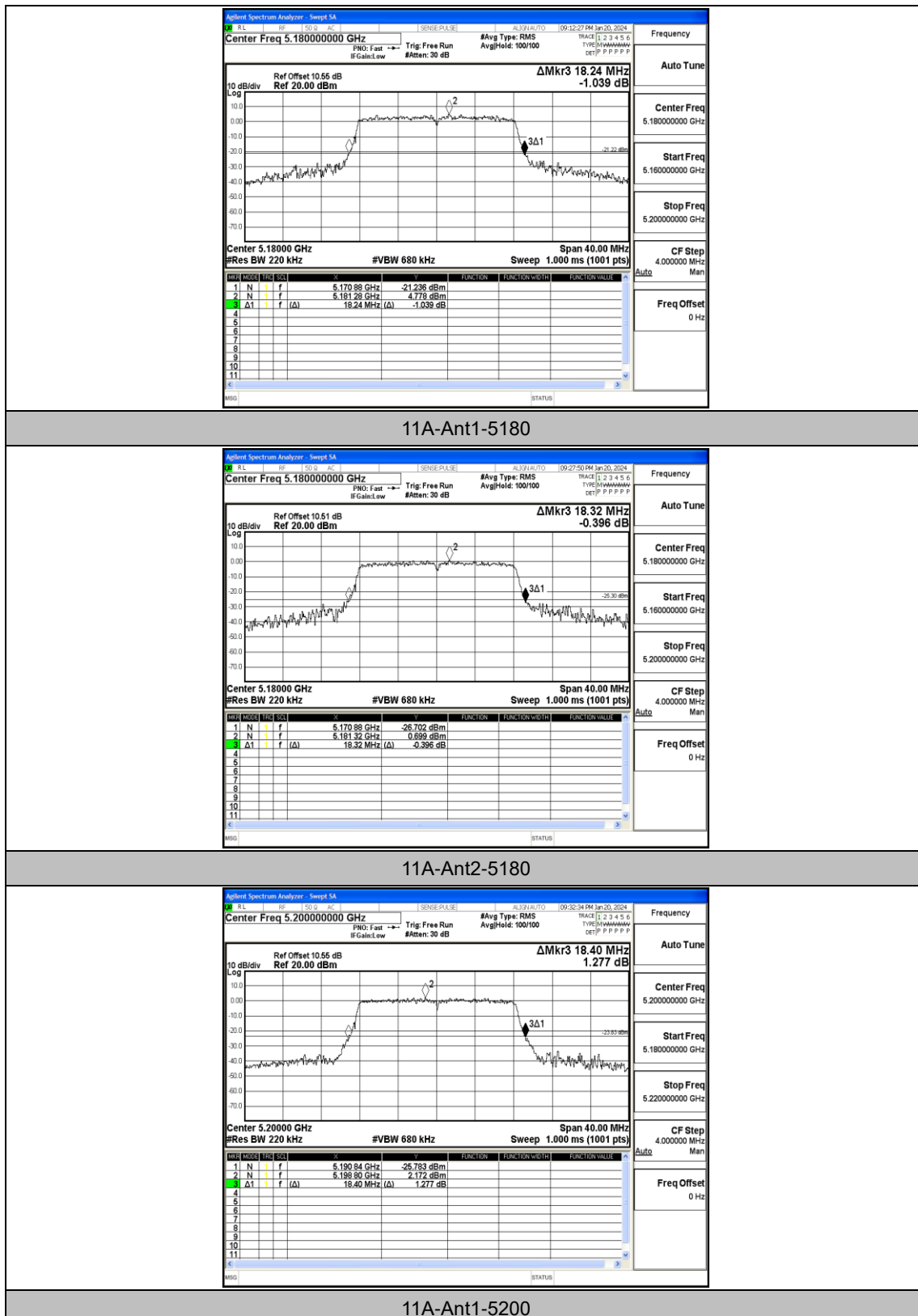
Appendix A1: Emission Bandwidth

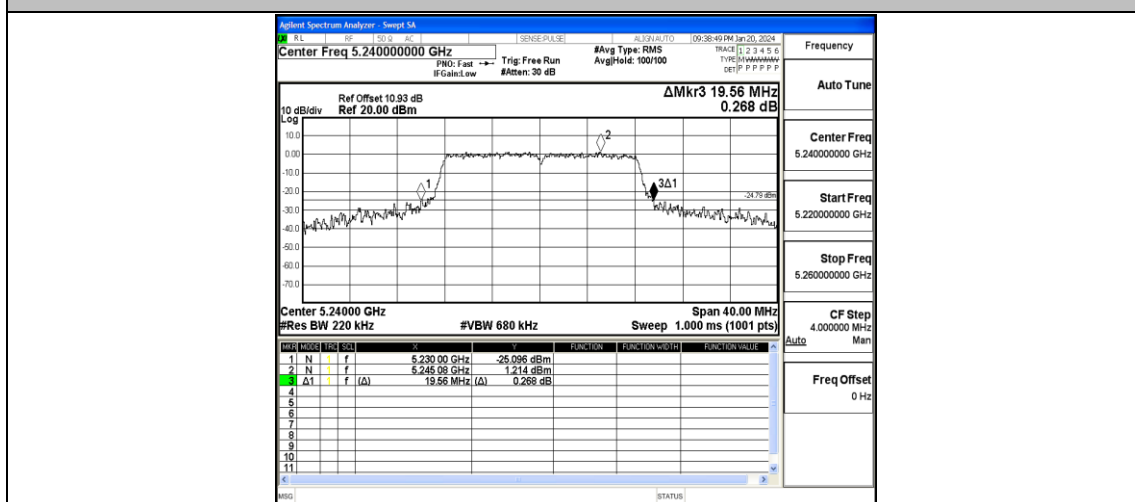
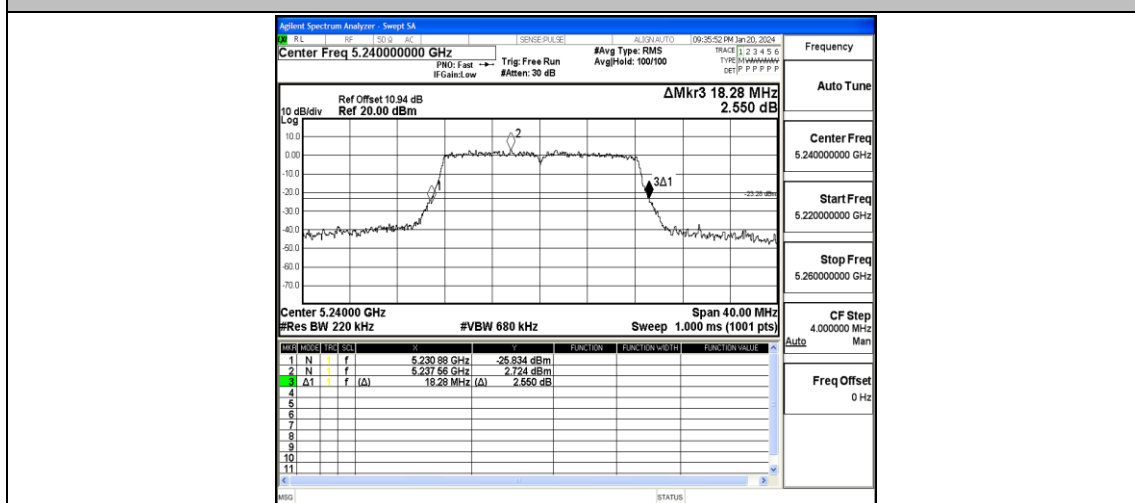
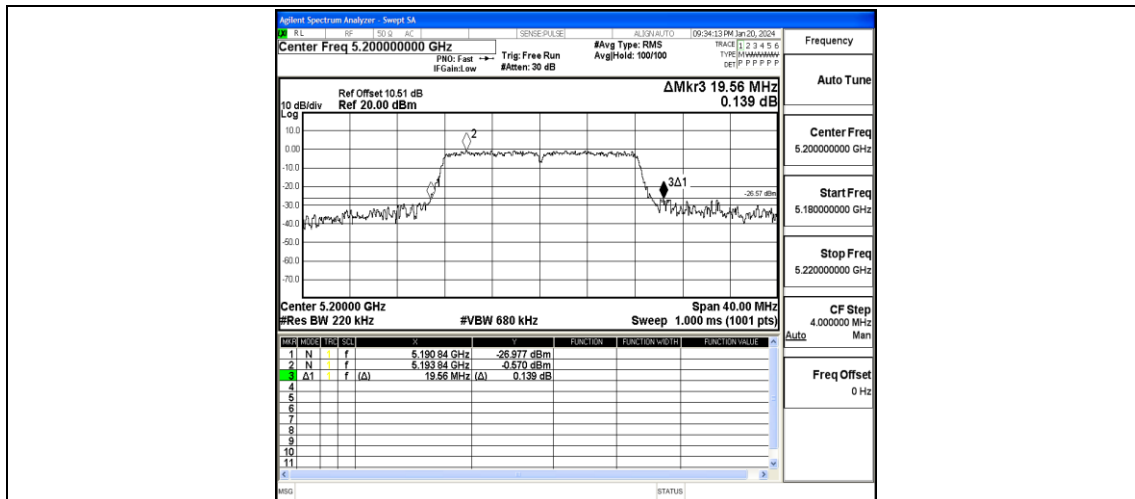
Test Result

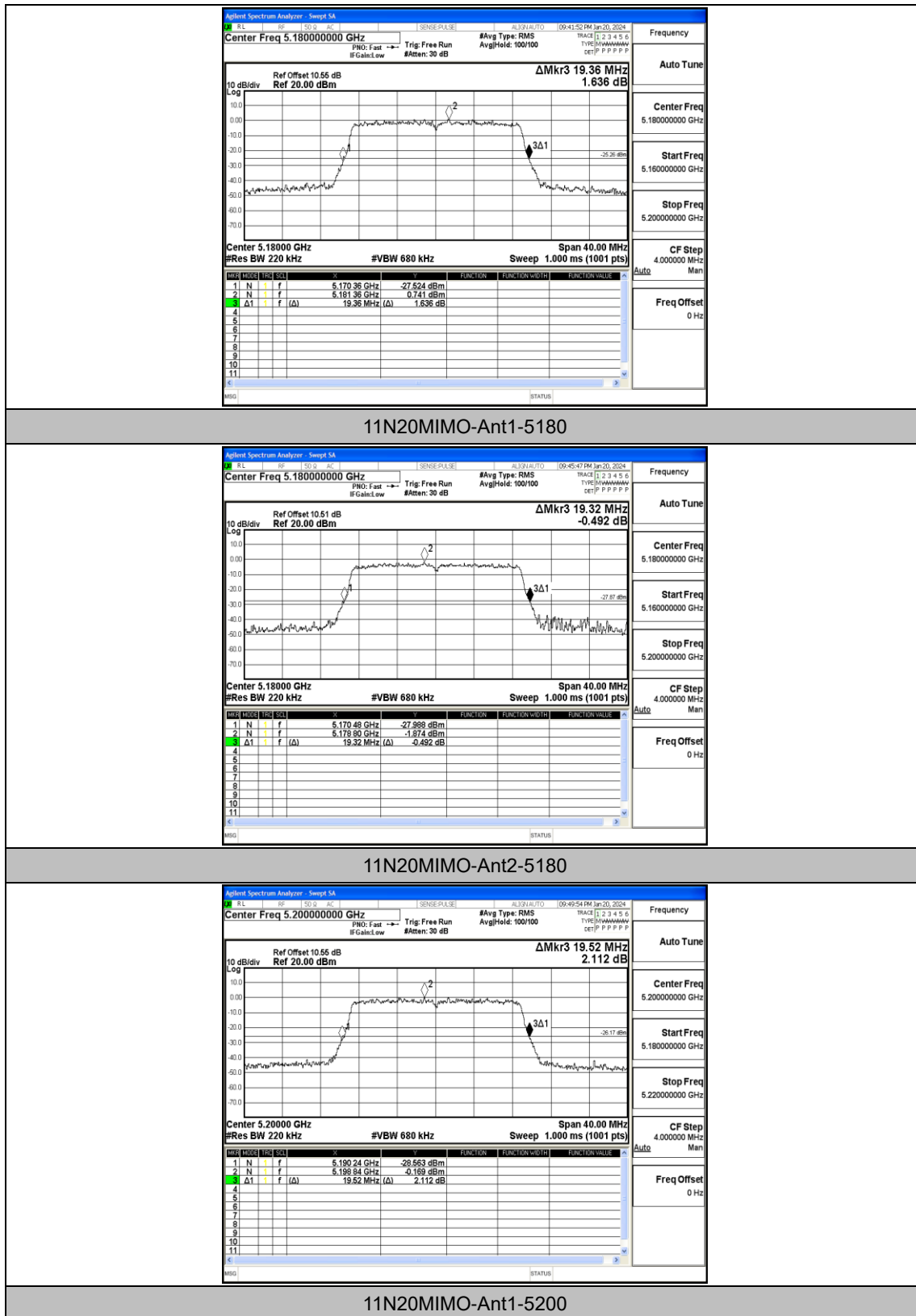
TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	18.240	5170.880	5189.120	---	---
11A	Ant2	5180	18.320	5170.880	5189.200	---	---
11A	Ant1	5200	18.400	5190.840	5209.240	---	---
11A	Ant2	5200	19.560	5190.840	5210.400	---	---
11A	Ant1	5240	18.280	5230.880	5249.160	---	---
11A	Ant2	5240	19.560	5230.000	5249.560	---	---
11N20MIMO	Ant1	5180	19.360	5170.360	5189.720	---	---
11N20MIMO	Ant2	5180	19.320	5170.480	5189.800	---	---
11N20MIMO	Ant1	5200	19.520	5190.240	5209.760	---	---
11N20MIMO	Ant2	5200	19.560	5190.280	5209.840	---	---
11N20MIMO	Ant1	5240	19.200	5230.480	5249.680	---	---
11N20MIMO	Ant2	5240	19.440	5230.360	5249.800	---	---
11N40MIMO	Ant1	5190	40.960	5169.840	5210.800	---	---
11N40MIMO	Ant2	5190	41.200	5169.920	5211.120	---	---
11N40MIMO	Ant1	5230	40.960	5209.760	5250.720	---	---
11N40MIMO	Ant2	5230	40.160	5210.240	5250.400	---	---
11AC20MIMO	Ant1	5180	19.440	5170.400	5189.840	---	---
11AC20MIMO	Ant2	5180	19.400	5170.400	5189.800	---	---
11AC20MIMO	Ant1	5200	19.320	5190.360	5209.680	---	---
11AC20MIMO	Ant2	5200	19.400	5190.360	5209.760	---	---
11AC20MIMO	Ant1	5240	19.400	5230.400	5249.800	---	---
11AC20MIMO	Ant2	5240	19.440	5230.360	5249.800	---	---
11AC40MIMO	Ant1	5190	40.560	5170.080	5210.640	---	---
11AC40MIMO	Ant2	5190	40.960	5169.840	5210.800	---	---

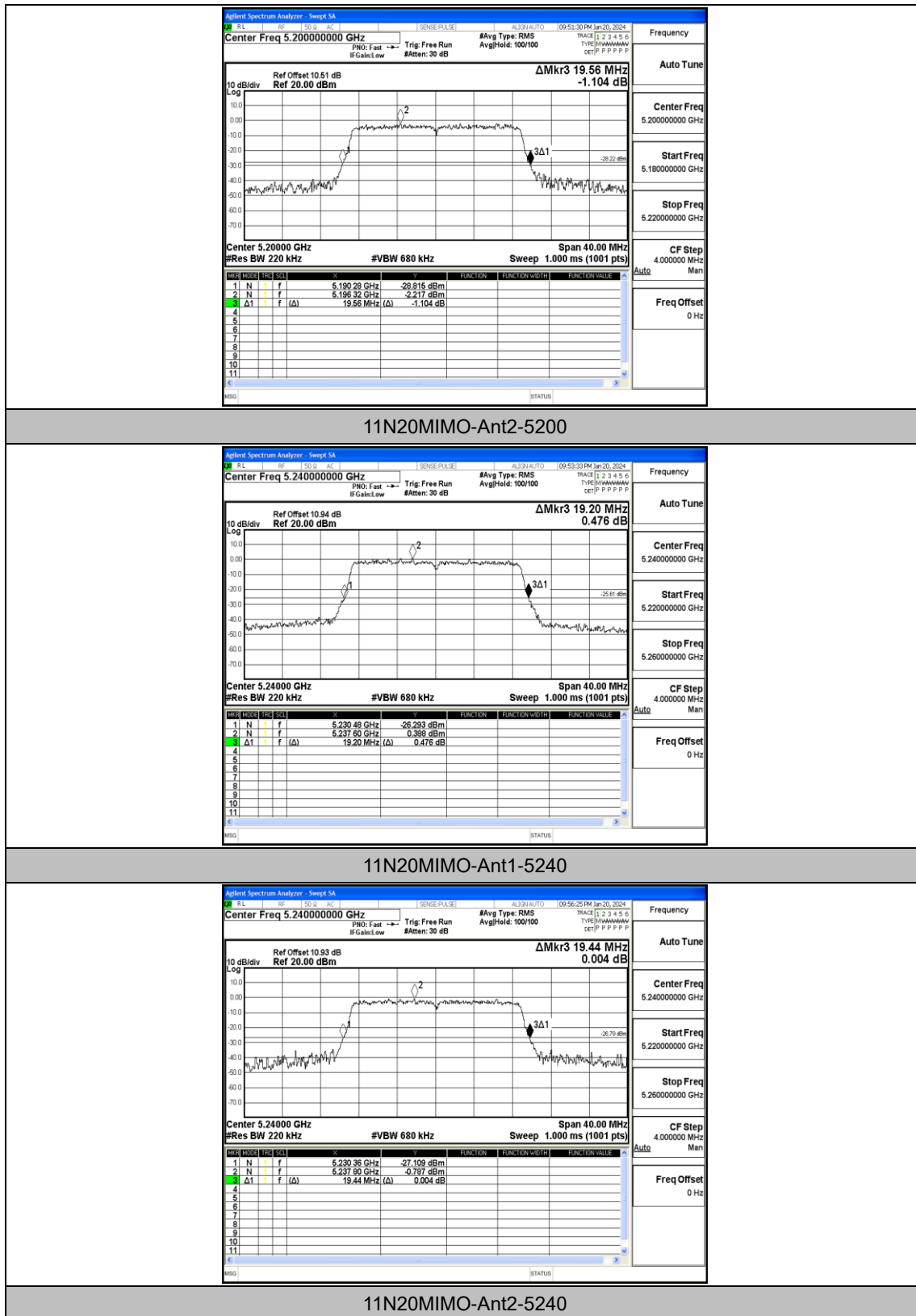
11AC40MIMO	Ant1	5230	40.160	5209.920	5250.080	---	---
11AC40MIMO	Ant2	5230	40.400	5210.000	5250.400	---	---
11AC80MIMO	Ant1	5210	80.640	5169.840	5250.480	---	---
11AC80MIMO	Ant2	5210	80.480	5170.000	5250.480	---	---

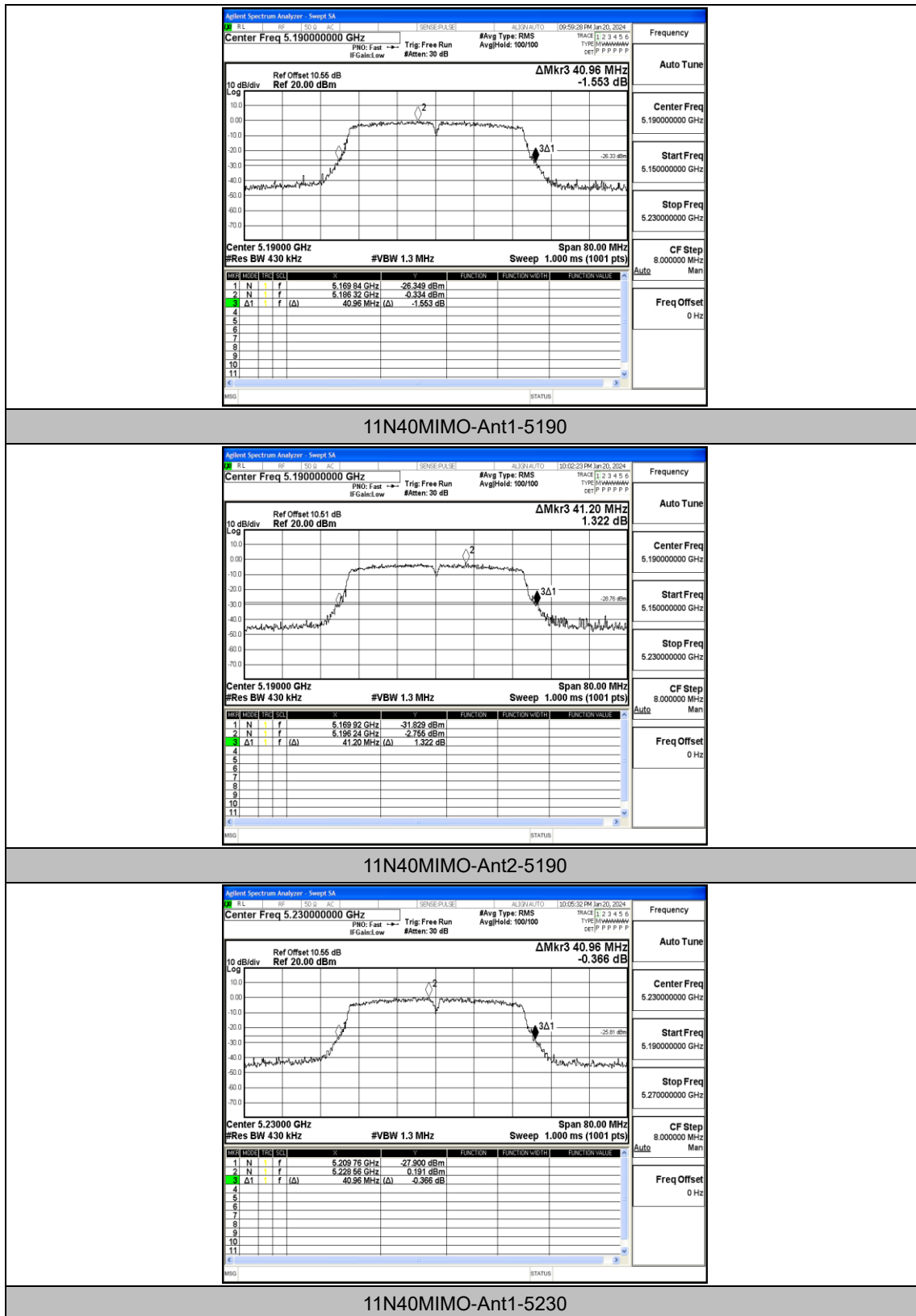
Test Graphs

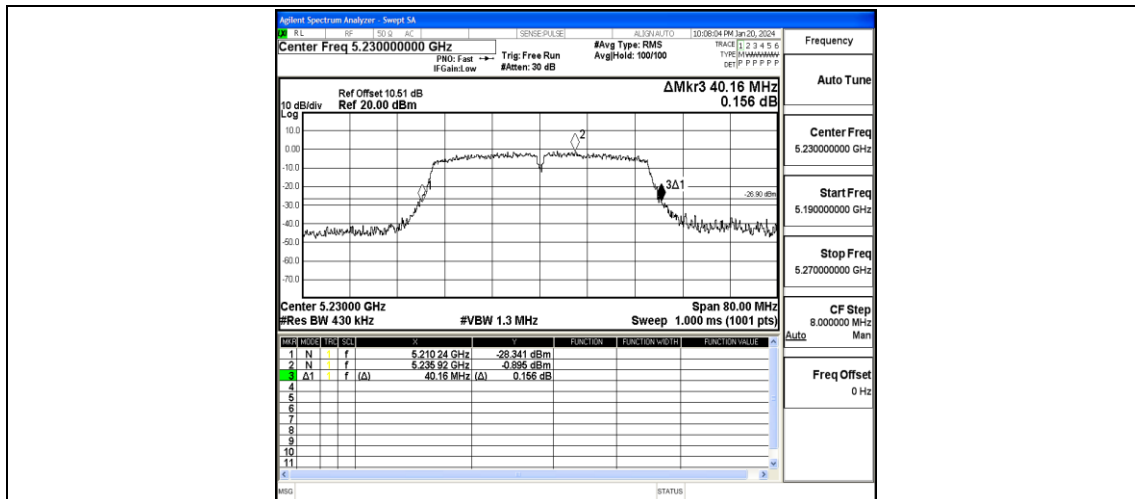




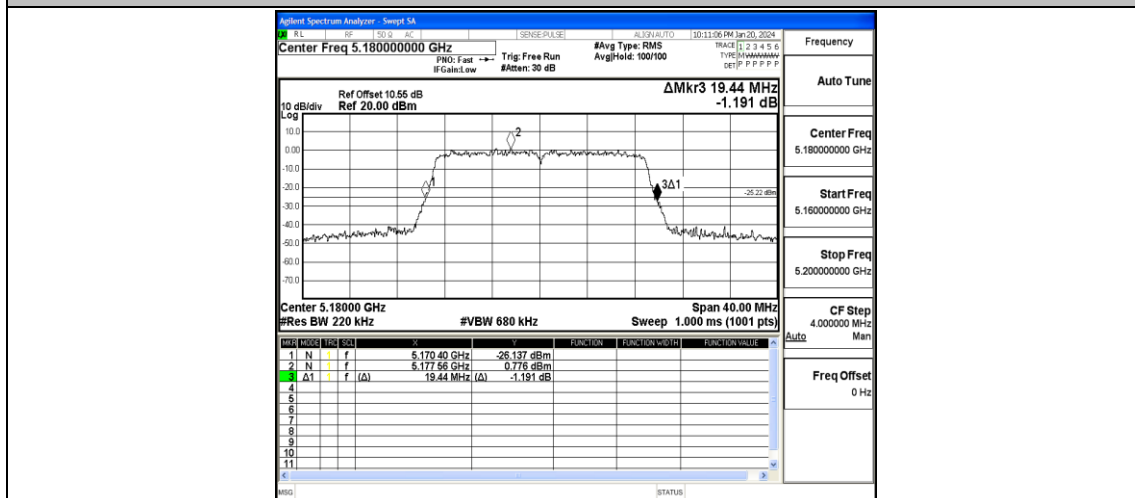




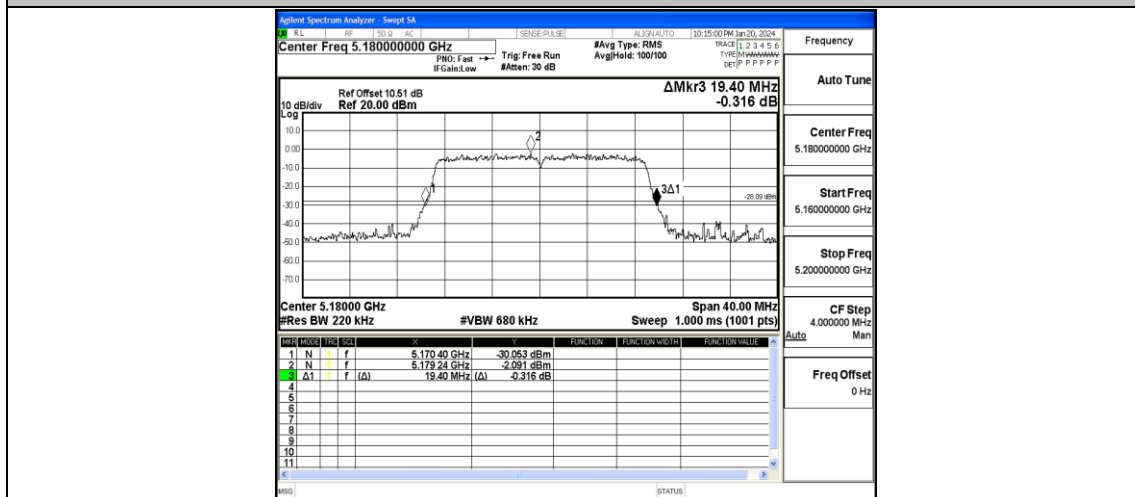




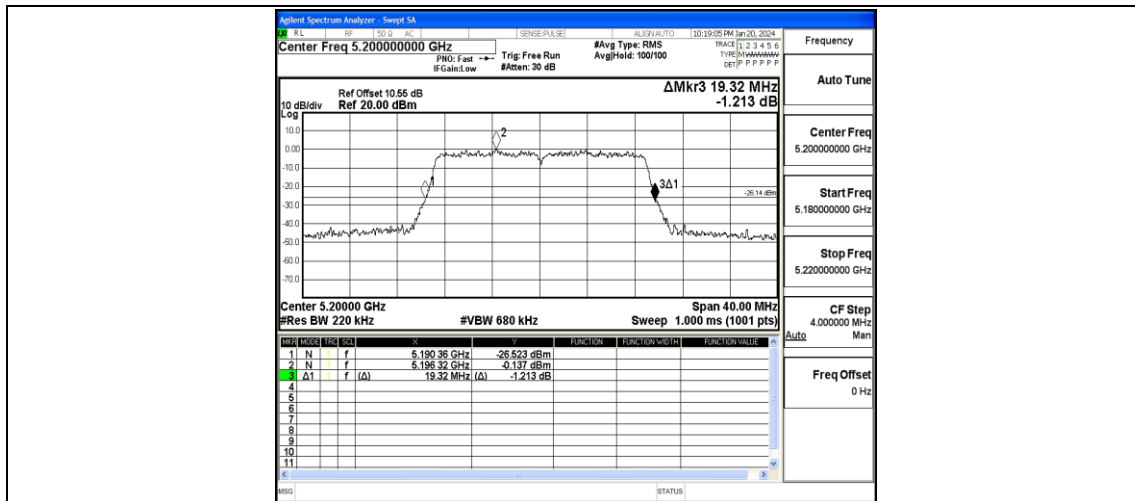
11N40MIMO-Ant2-5230



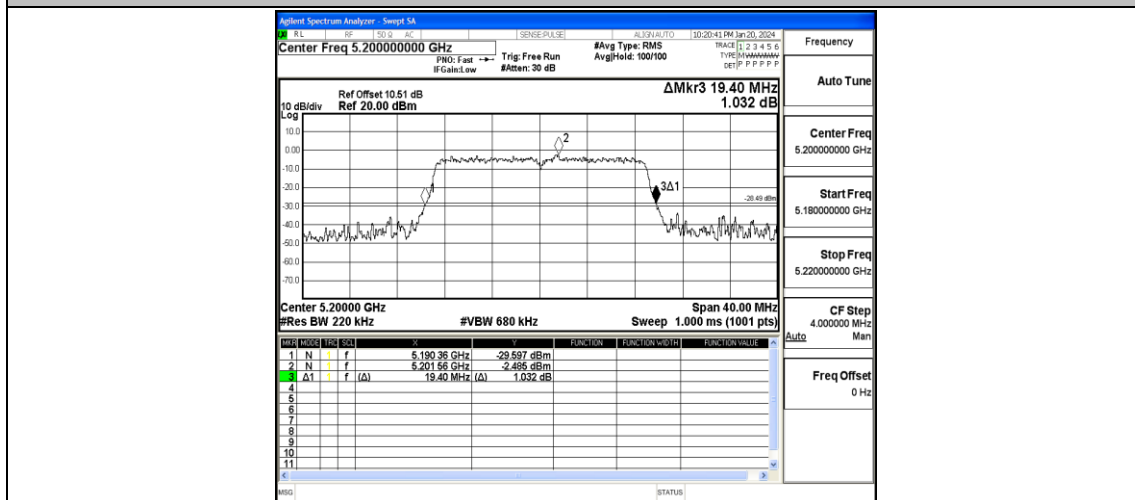
11AC20MIMO-Ant1-5180



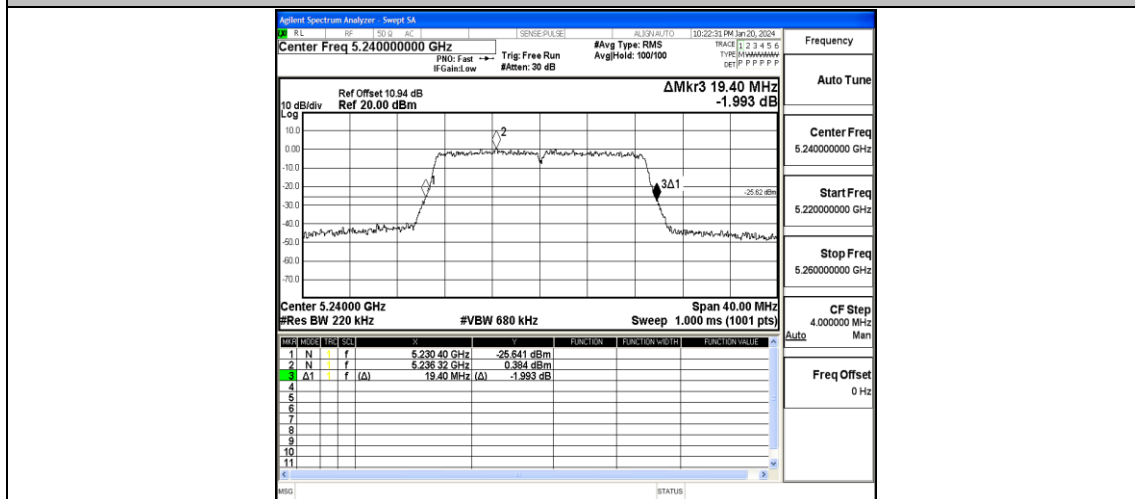
11AC20MIMO-Ant2-5180



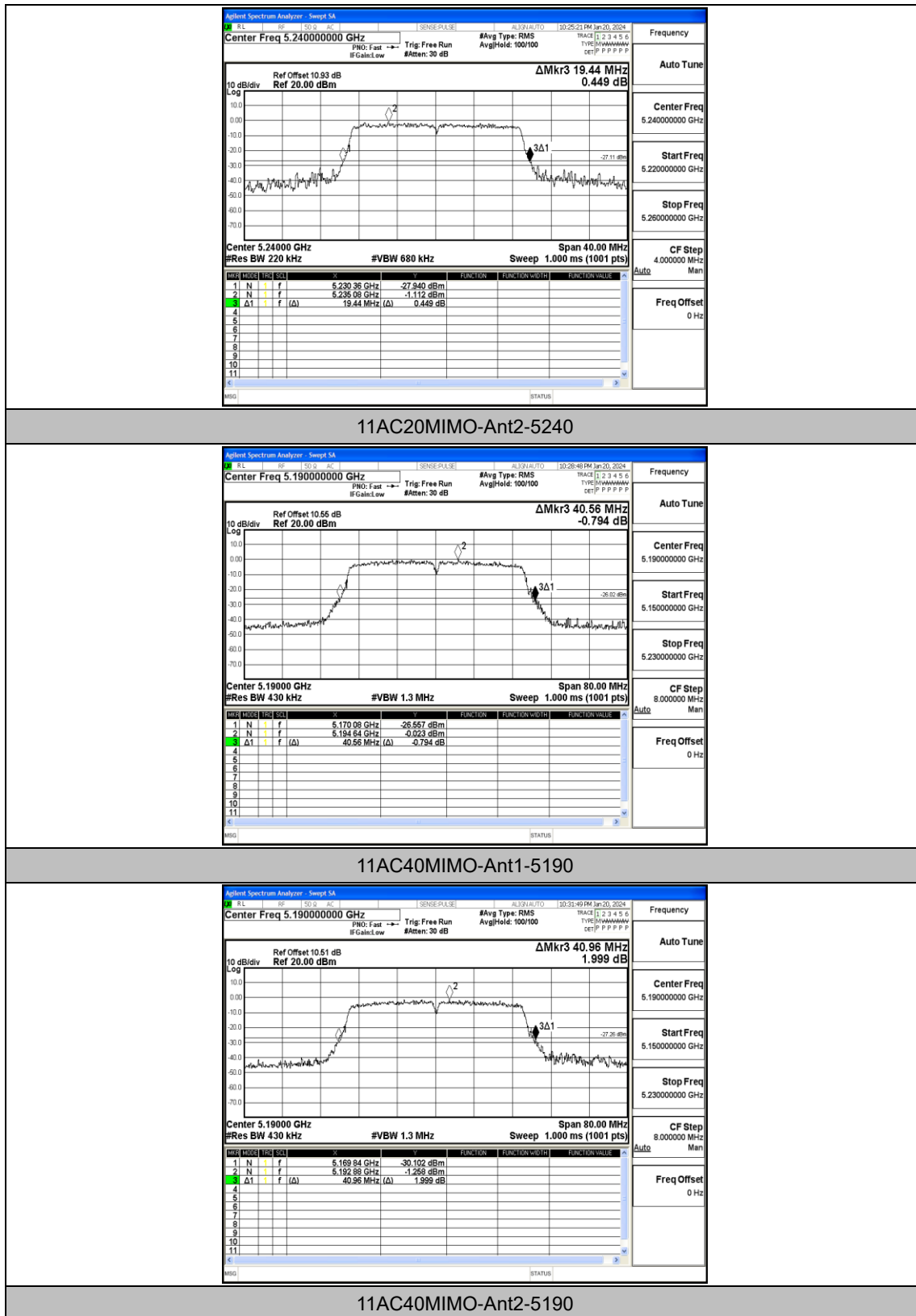
11AC20MIMO-Ant1-5200

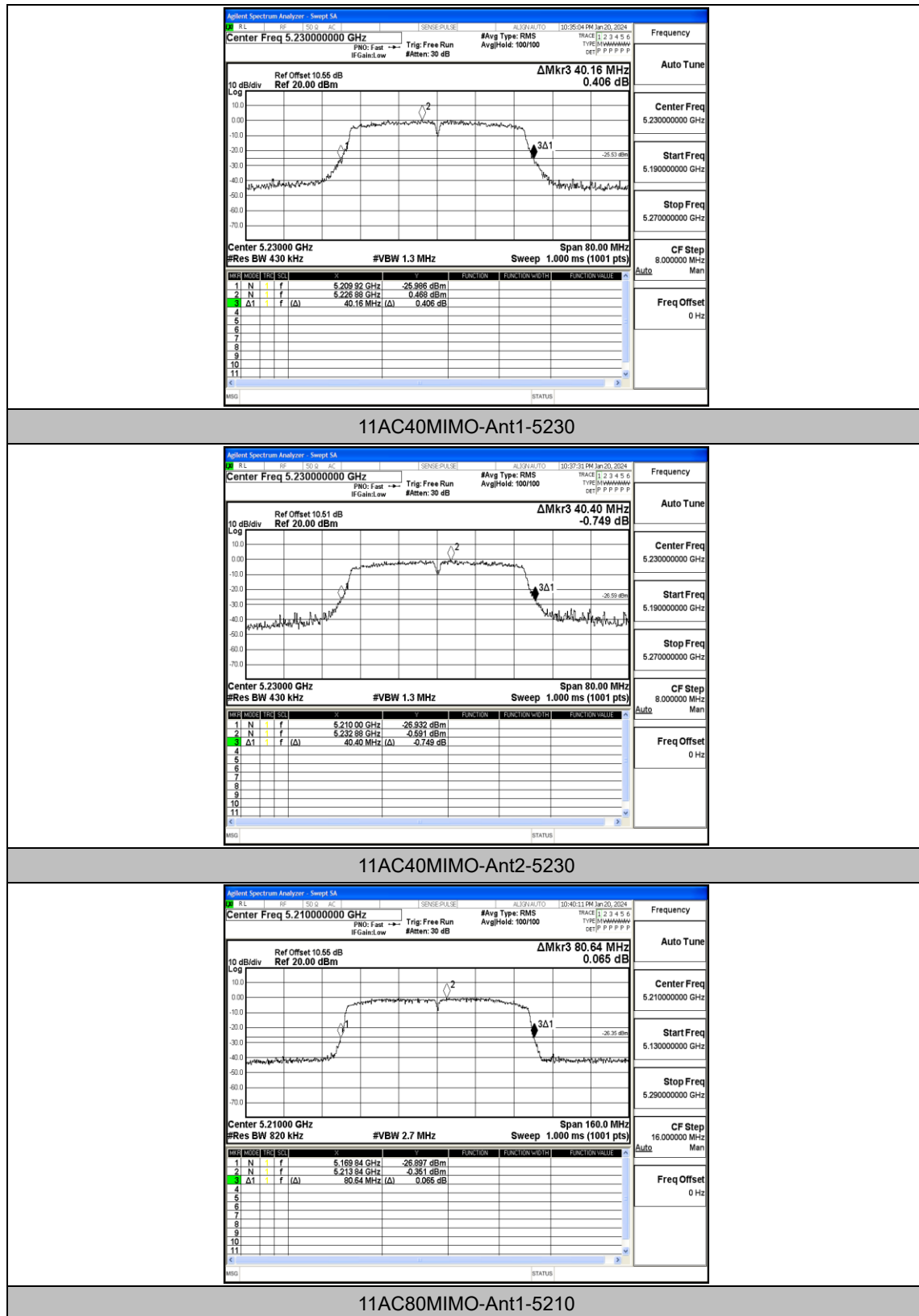


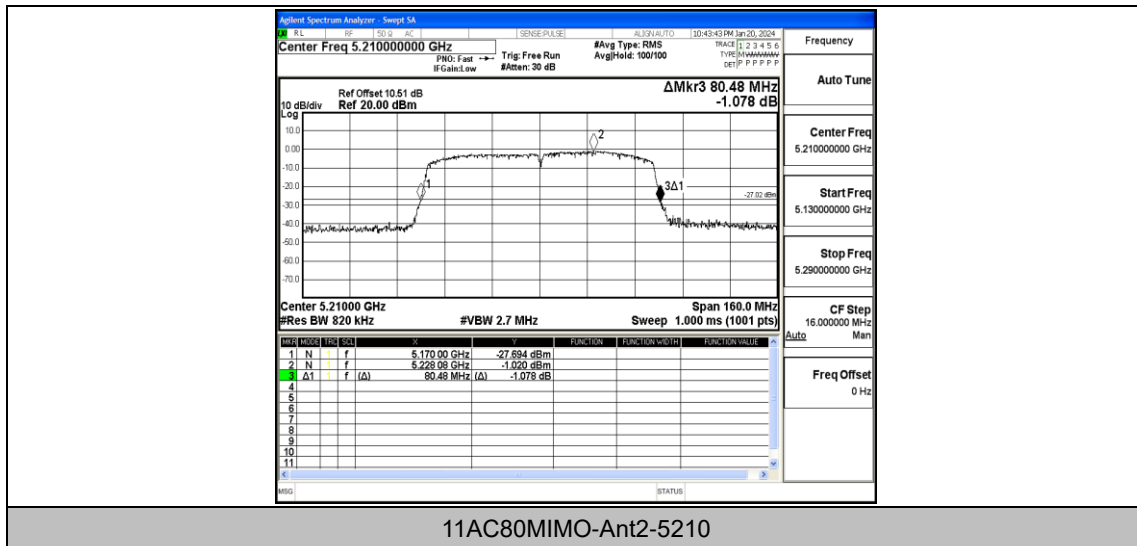
11AC20MIMO-Ant2-5200



11AC20MIMO-Ant1-5240





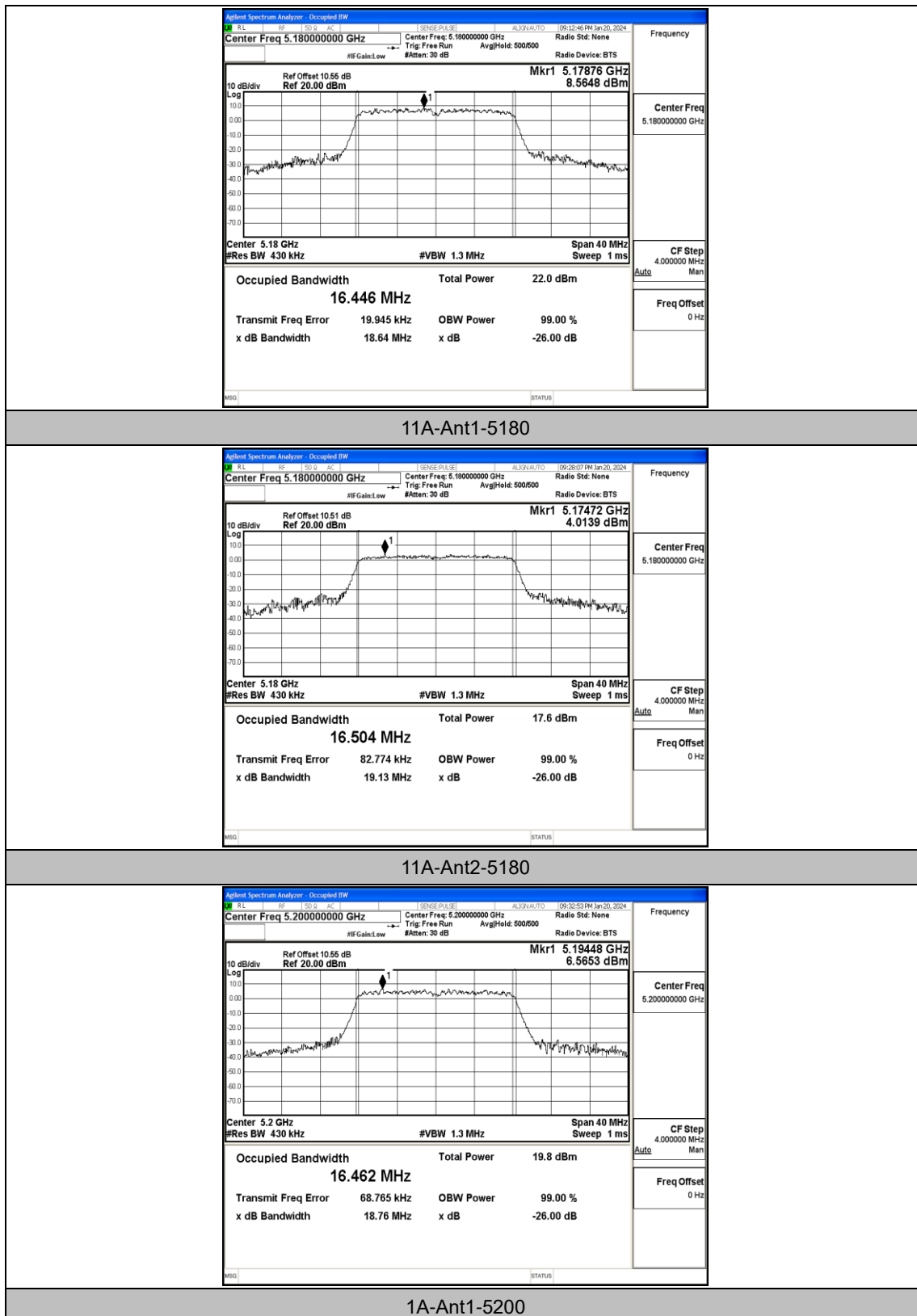


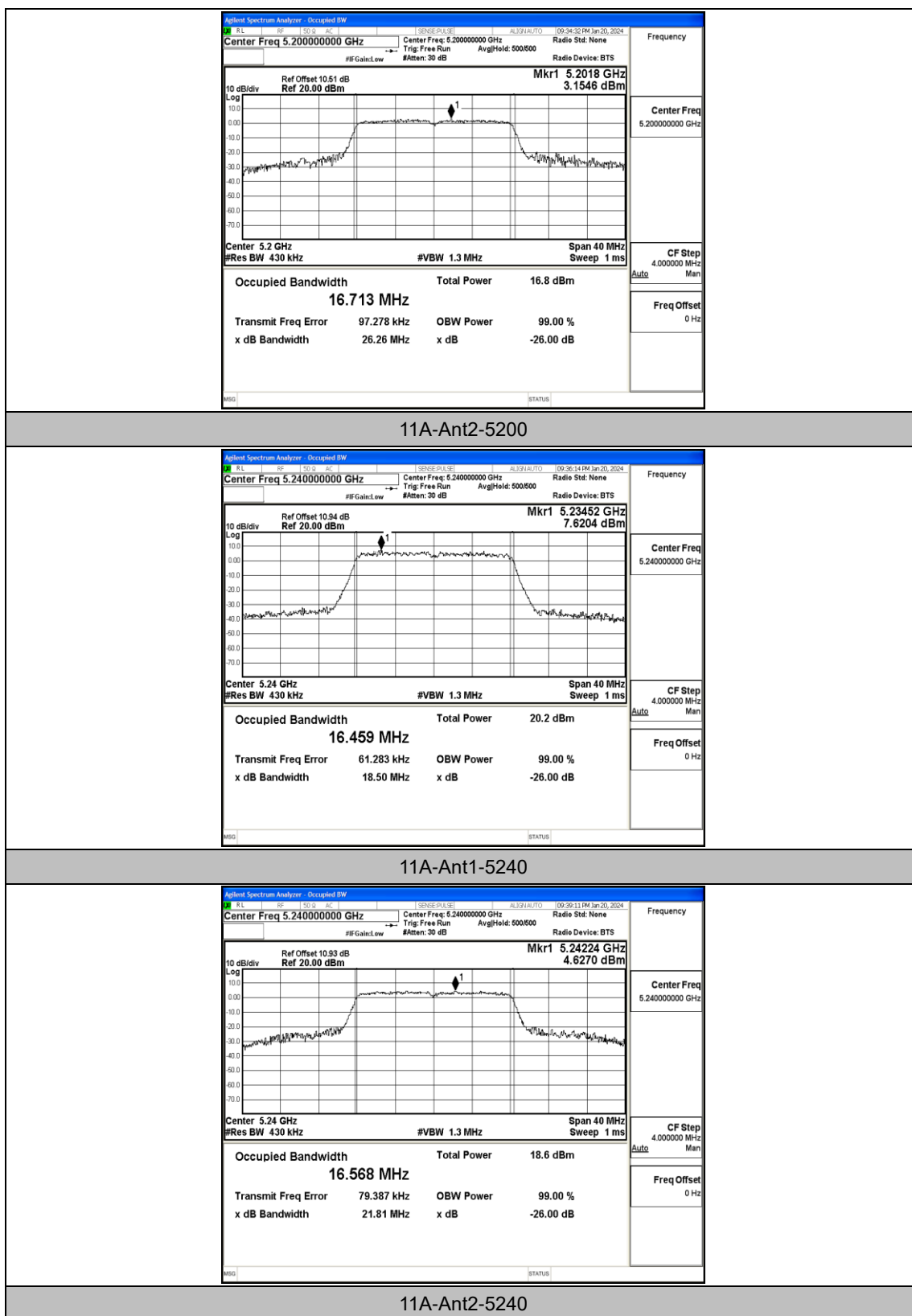
Appendix A2: Occupied channel bandwidth

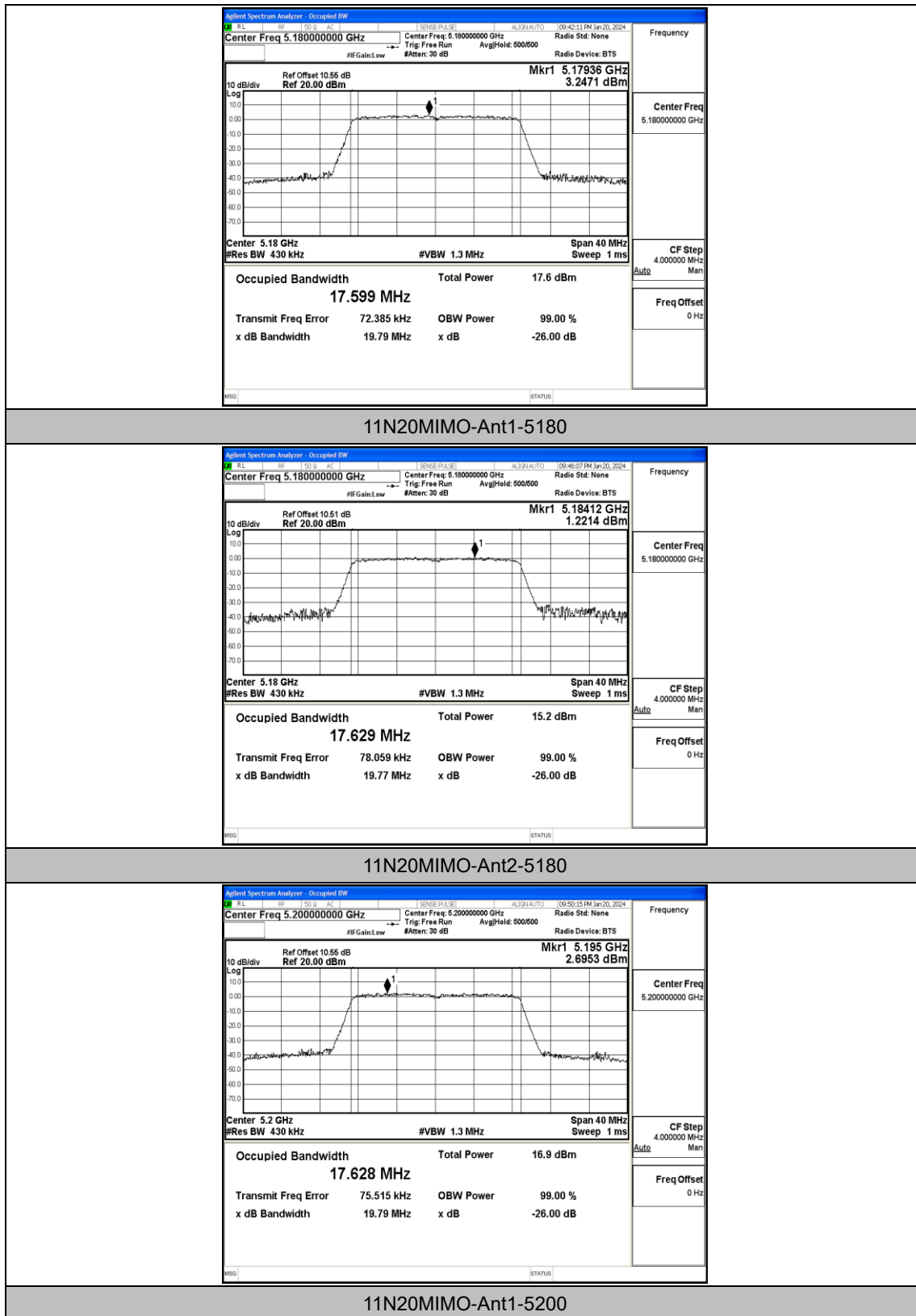
Test Result

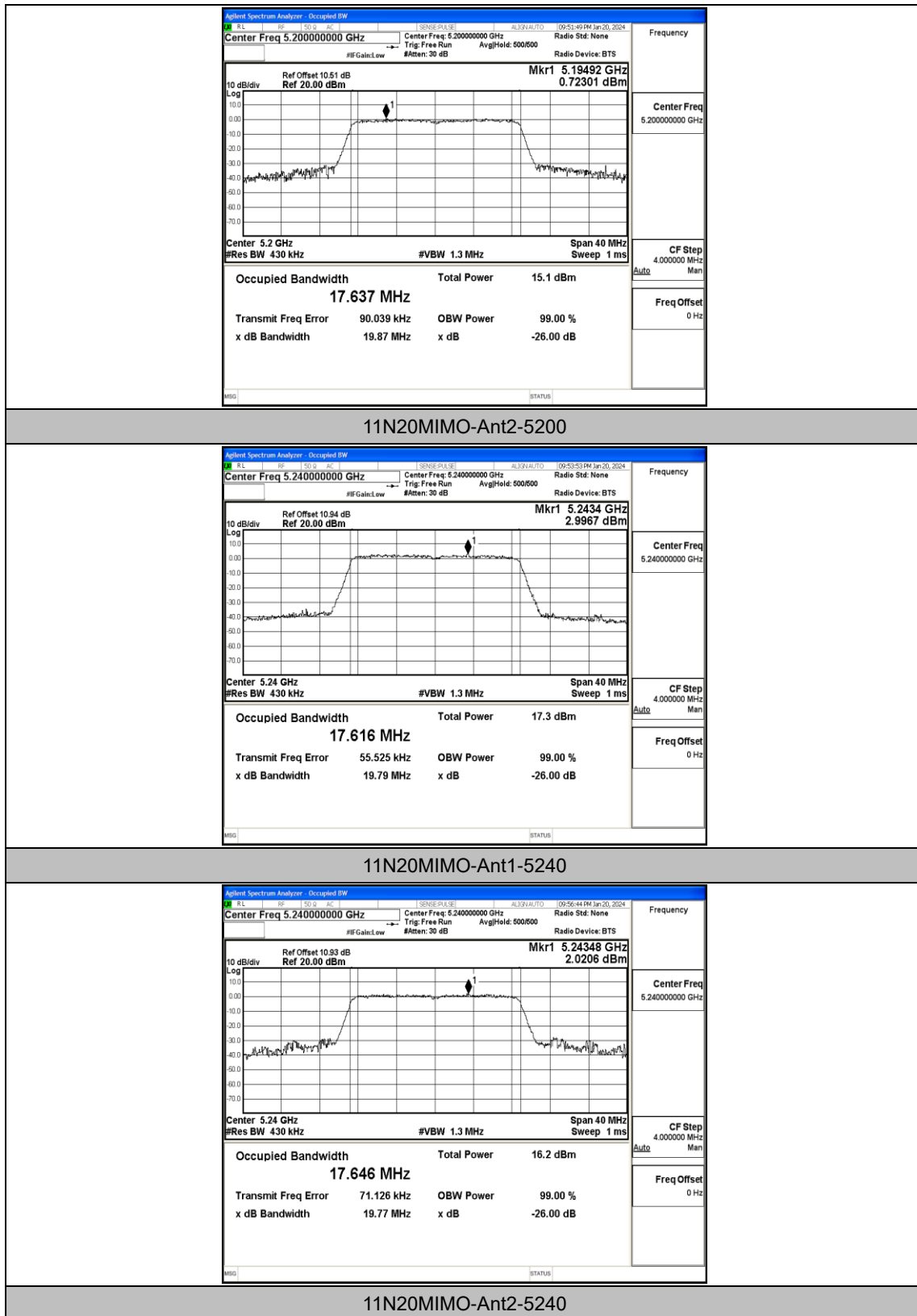
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	16.446	5171.7970	5188.2430	---	---
11A	Ant2	5180	16.504	5171.8308	5188.3348	---	---
11A	Ant1	5200	16.462	5191.8378	5208.2998	---	---
11A	Ant2	5200	16.713	5191.7408	5208.4538	---	---
11A	Ant1	5240	16.459	5231.8318	5248.2908	---	---
11A	Ant2	5240	16.568	5231.7954	5248.3634	---	---
11N20MIMO	Ant1	5180	17.599	5171.2729	5188.8719	---	---
11N20MIMO	Ant2	5180	17.629	5171.2636	5188.8926	---	---
11N20MIMO	Ant1	5200	17.628	5191.2615	5208.8895	---	---
11N20MIMO	Ant2	5200	17.637	5191.2715	5208.9085	---	---
11N20MIMO	Ant1	5240	17.616	5231.2475	5248.8635	---	---
11N20MIMO	Ant2	5240	17.646	5231.2481	5248.8941	---	---
11N40MIMO	Ant1	5190	36.363	5171.9256	5208.2886	---	---
11N40MIMO	Ant2	5190	36.381	5172.0080	5208.3890	---	---
11N40MIMO	Ant1	5230	36.377	5211.9655	5248.3425	---	---
11N40MIMO	Ant2	5230	36.273	5212.1142	5248.3872	---	---
11AC20MIMO	Ant1	5180	17.608	5171.2764	5188.8844	---	---
11AC20MIMO	Ant2	5180	17.621	5171.2857	5188.9067	---	---
11AC20MIMO	Ant1	5200	17.628	5191.2557	5208.8837	---	---
11AC20MIMO	Ant2	5200	17.643	5191.2656	5208.9086	---	---
11AC20MIMO	Ant1	5240	17.632	5231.2374	5248.8694	---	---
11AC20MIMO	Ant2	5240	17.644	5231.2512	5248.8952	---	---
11AC40MIMO	Ant1	5190	36.400	5171.9843	5208.3843	---	---
11AC40MIMO	Ant2	5190	36.452	5172.0234	5208.4754	---	---
11AC40MIMO	Ant1	5230	36.090	5212.0453	5248.1353	---	---
11AC40MIMO	Ant2	5230	36.102	5212.1164	5248.2184	---	---
11AC80MIMO	Ant1	5210	74.348	5172.8070	5247.1550	---	---
11AC80MIMO	Ant2	5210	74.502	5173.0285	5247.5305	---	---

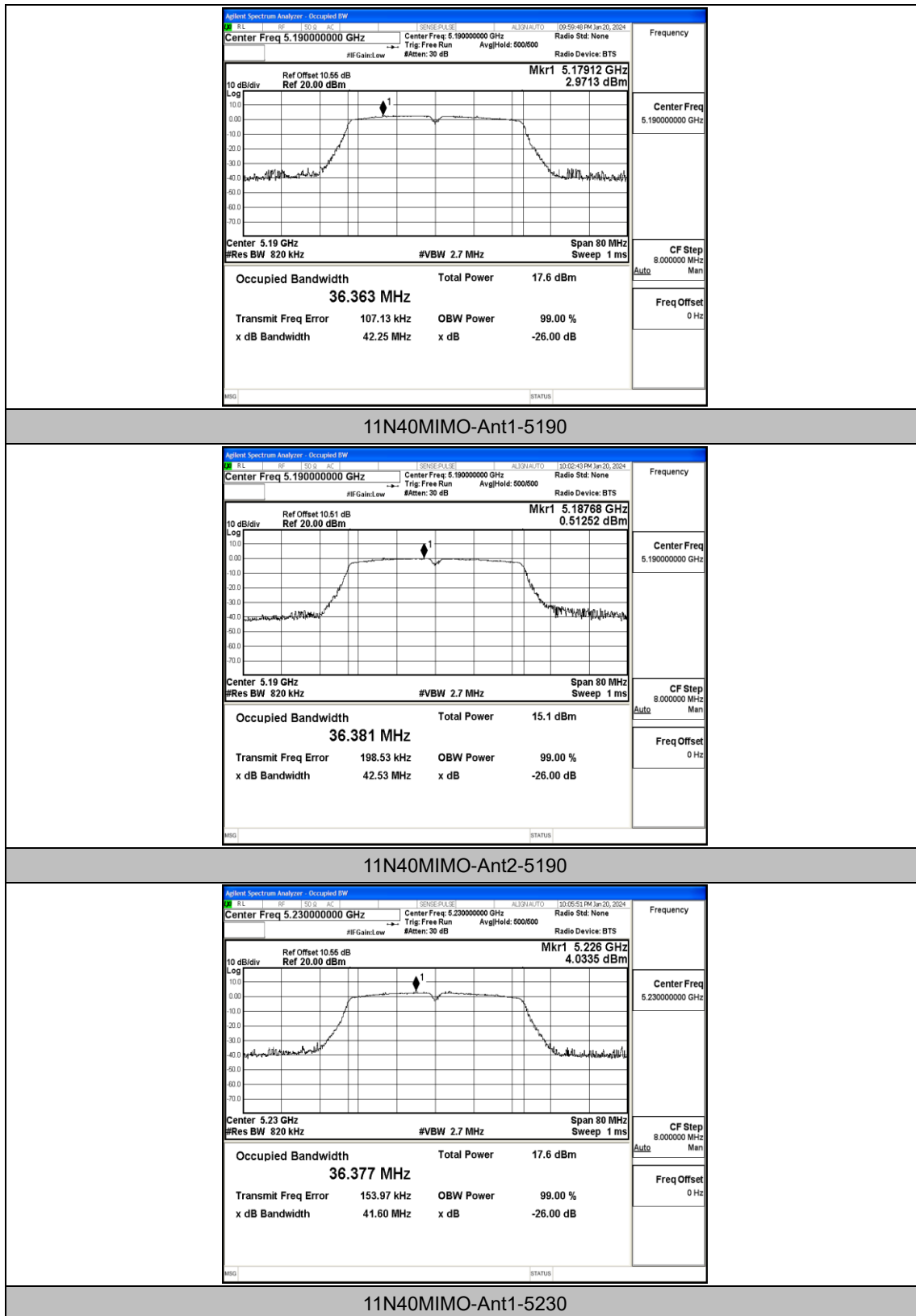
Test Graphs

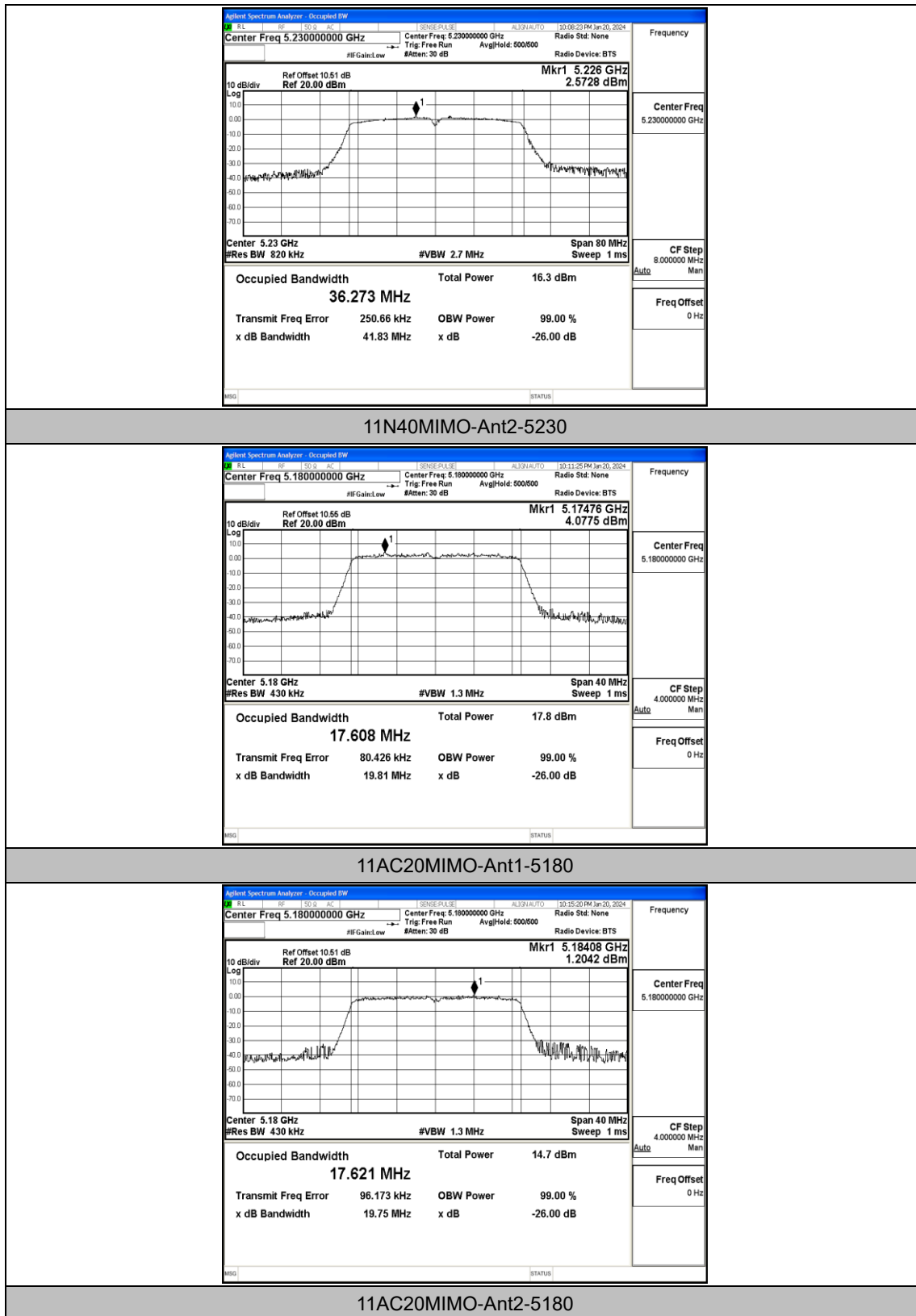


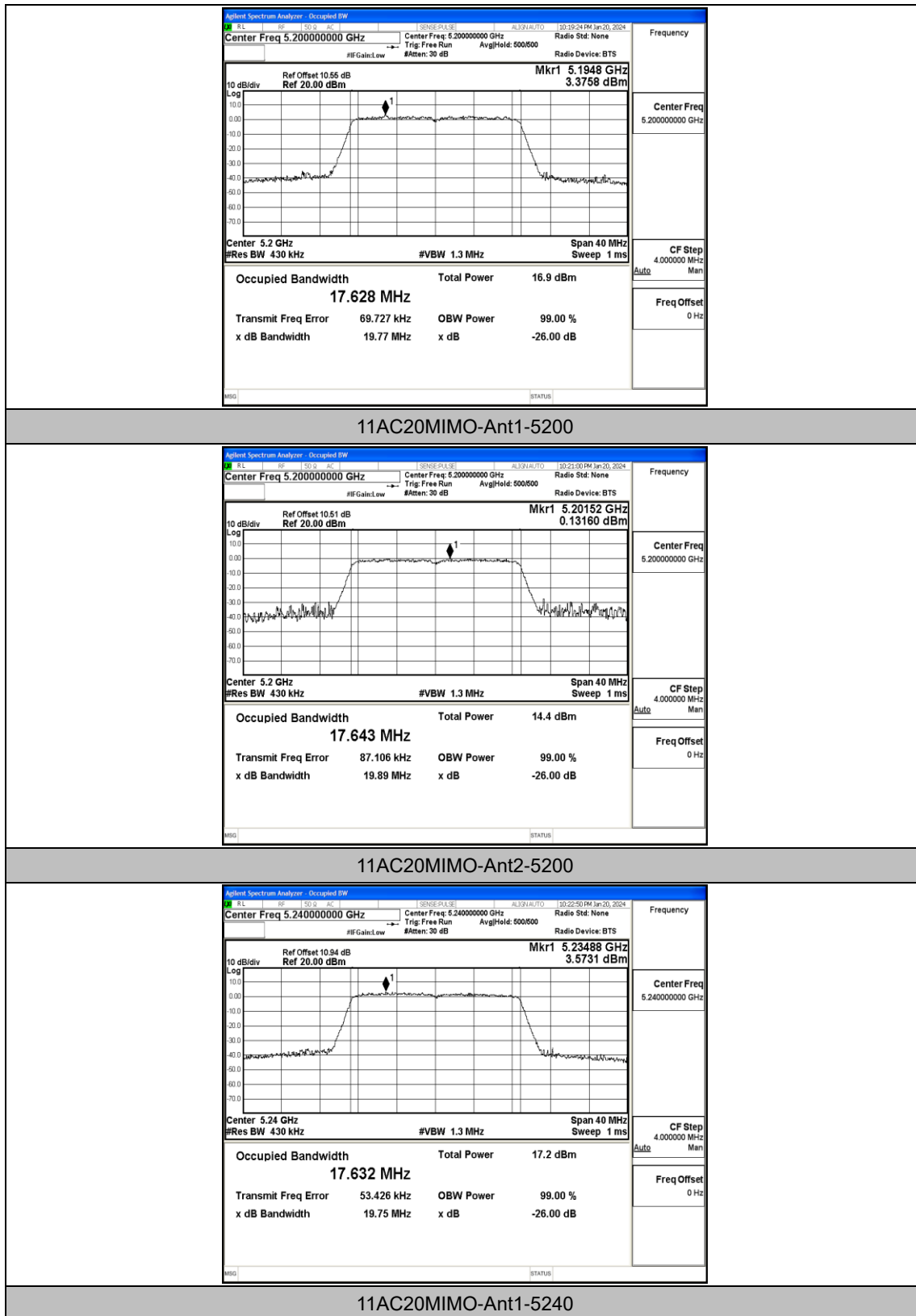


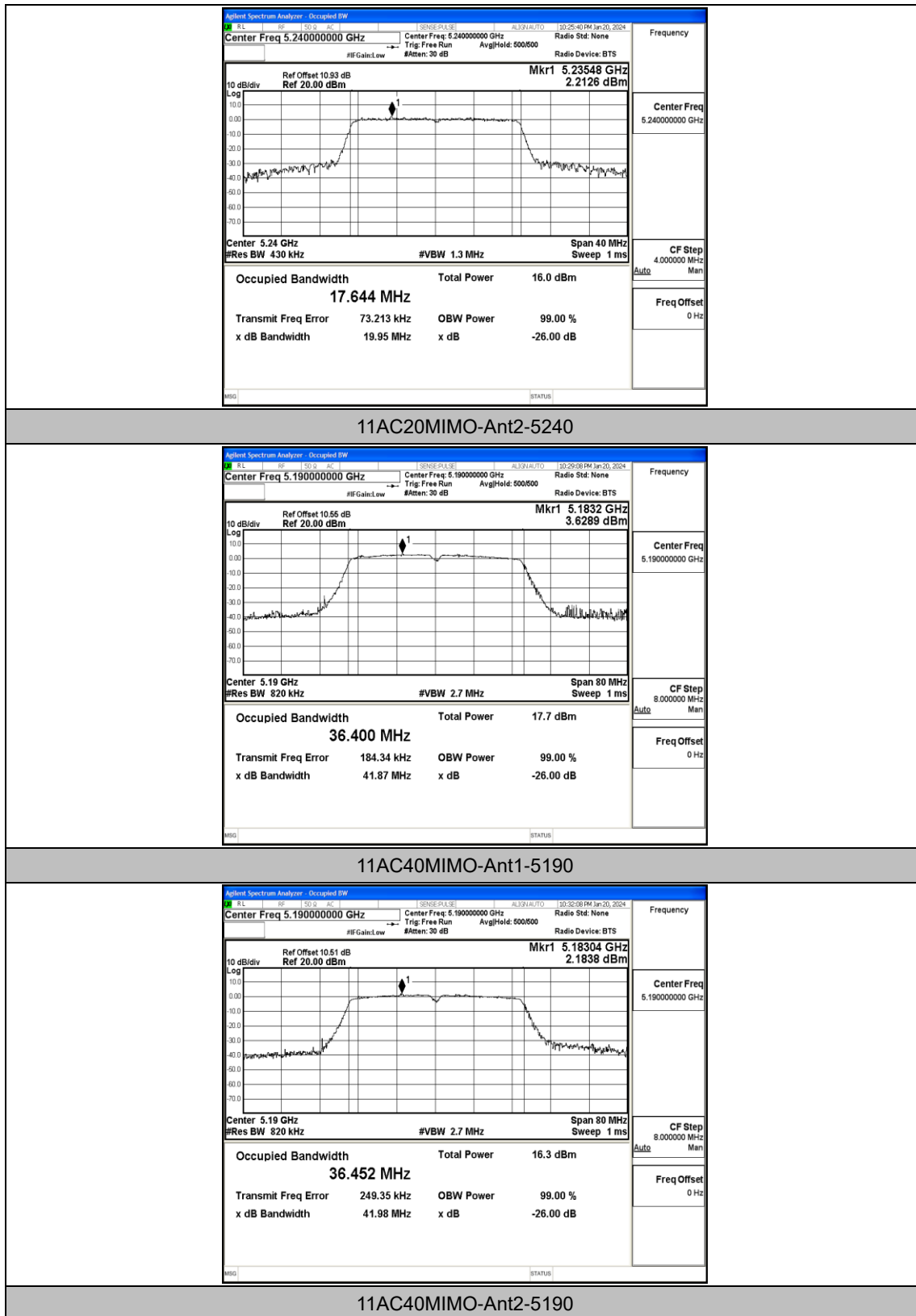


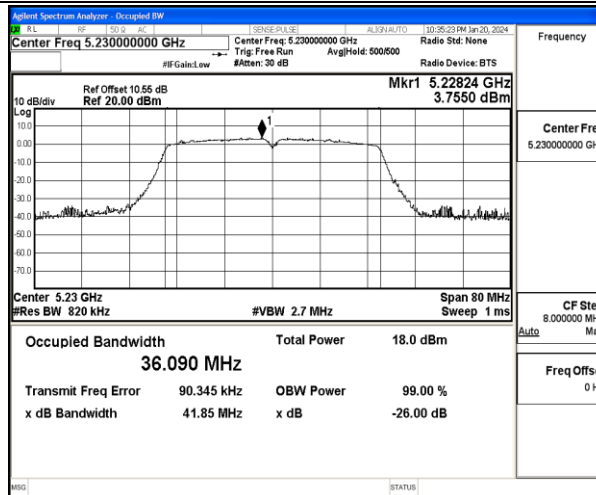




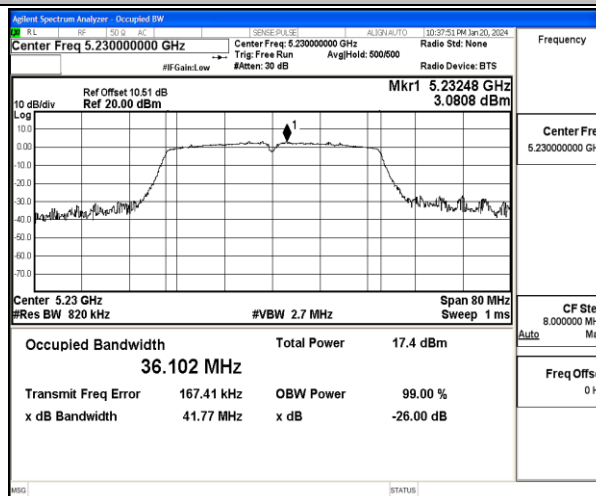




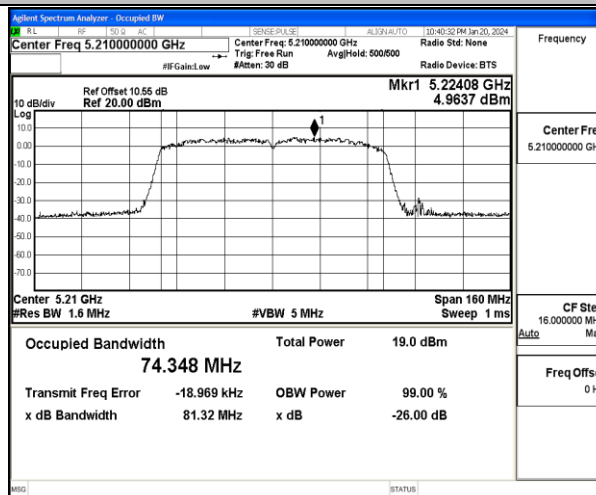




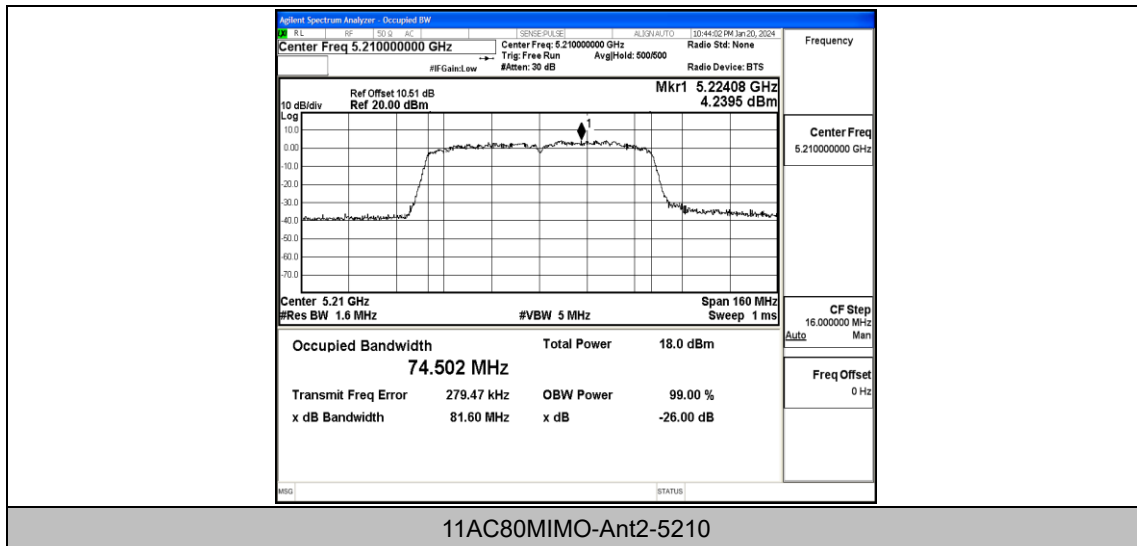
11AC40MIMO-Ant1-5230



11AC40MIMO-Ant2-5230



11AC80MIMO-Ant1-5210



Appendix B: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11A	Ant1	5180	14.70	≤23.98	4.07	18.77	---	PASS
11A	Ant2	5180	10.75	≤23.98	4.56	15.31	---	PASS
11A	Ant1	5200	12.71	≤23.98	4.07	16.78	---	PASS
11A	Ant2	5200	10.33	≤23.98	4.56	14.89	---	PASS
11A	Ant1	5240	13.00	≤23.98	4.07	17.07	---	PASS
11A	Ant2	5240	11.95	≤23.98	4.56	16.51	---	PASS
11N20MIMO	Ant1	5180	11.00	≤23.98	4.07	15.07	---	PASS
11N20MIMO	Ant2	5180	8.82	≤23.98	4.56	13.38	---	PASS
11N20MIMO	total	5180	13.06	≤23.98	4.56	17.62	---	PASS
11N20MIMO	Ant1	5200	10.25	≤23.98	4.07	14.32	---	PASS
11N20MIMO	Ant2	5200	8.33	≤23.98	4.56	12.89	---	PASS
11N20MIMO	total	5200	12.41	≤23.98	4.56	16.97	---	PASS
11N20MIMO	Ant1	5240	10.69	≤23.98	4.07	14.76	---	PASS
11N20MIMO	Ant2	5240	10.14	≤23.98	4.56	14.70	---	PASS
11N20MIMO	total	5240	13.43	≤23.98	4.56	17.99	---	PASS
11N40MIMO	Ant1	5190	10.37	≤23.98	4.07	14.44	---	PASS
11N40MIMO	Ant2	5190	7.75	≤23.98	4.56	12.31	---	PASS
11N40MIMO	total	5190	12.26	≤23.98	4.56	16.82	---	PASS
11N40MIMO	Ant1	5230	10.54	≤23.98	4.07	14.61	---	PASS
11N40MIMO	Ant2	5230	9.30	≤23.98	4.56	13.86	---	PASS
11N40MIMO	total	5230	12.97	≤23.98	4.56	17.53	---	PASS
11AC20MI MO	Ant1	5180	11.11	≤23.98	4.07	15.18	---	PASS
11AC20MI MO	Ant2	5180	8.05	≤23.98	4.56	12.61	---	PASS

11AC20MI MO	total	5180	12.85	≤ 23.98	4.56	17.41	---	PASS
11AC20MI MO	Ant1	5200	10.30	≤ 23.98	4.07	14.37	---	PASS
11AC20MI MO	Ant2	5200	7.83	≤ 23.98	4.56	12.39	---	PASS
11AC20MI MO	total	5200	12.25	≤ 23.98	4.56	16.81	---	PASS
11AC20MI MO	Ant1	5240	10.64	≤ 23.98	4.07	14.71	---	PASS
11AC20MI MO	Ant2	5240	9.47	≤ 23.98	4.56	14.03	---	PASS
11AC20MI MO	total	5240	13.10	≤ 23.98	4.56	17.66	---	PASS
11AC40MI MO	Ant1	5190	10.27	≤ 23.98	4.07	14.34	---	PASS
11AC40MI MO	Ant2	5190	9.24	≤ 23.98	4.56	13.80	---	PASS
11AC40MI MO	total	5190	12.80	≤ 23.98	4.56	17.36	---	PASS
11AC40MI MO	Ant1	5230	10.51	≤ 23.98	4.07	14.58	---	PASS
11AC40MI MO	Ant2	5230	10.23	≤ 23.98	4.56	14.79	---	PASS
11AC40MI MO	total	5230	13.38	≤ 23.98	4.56	17.94	---	PASS
11AC80MI MO	Ant1	5210	10.91	≤ 23.98	4.07	14.98	---	PASS
11AC80MI MO	Ant2	5210	9.83	≤ 23.98	4.56	14.39	---	PASS
11AC80MI MO	total	5210	13.41	≤ 23.98	4.56	17.97	---	PASS

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

Appendix C: Maximum power spectral density

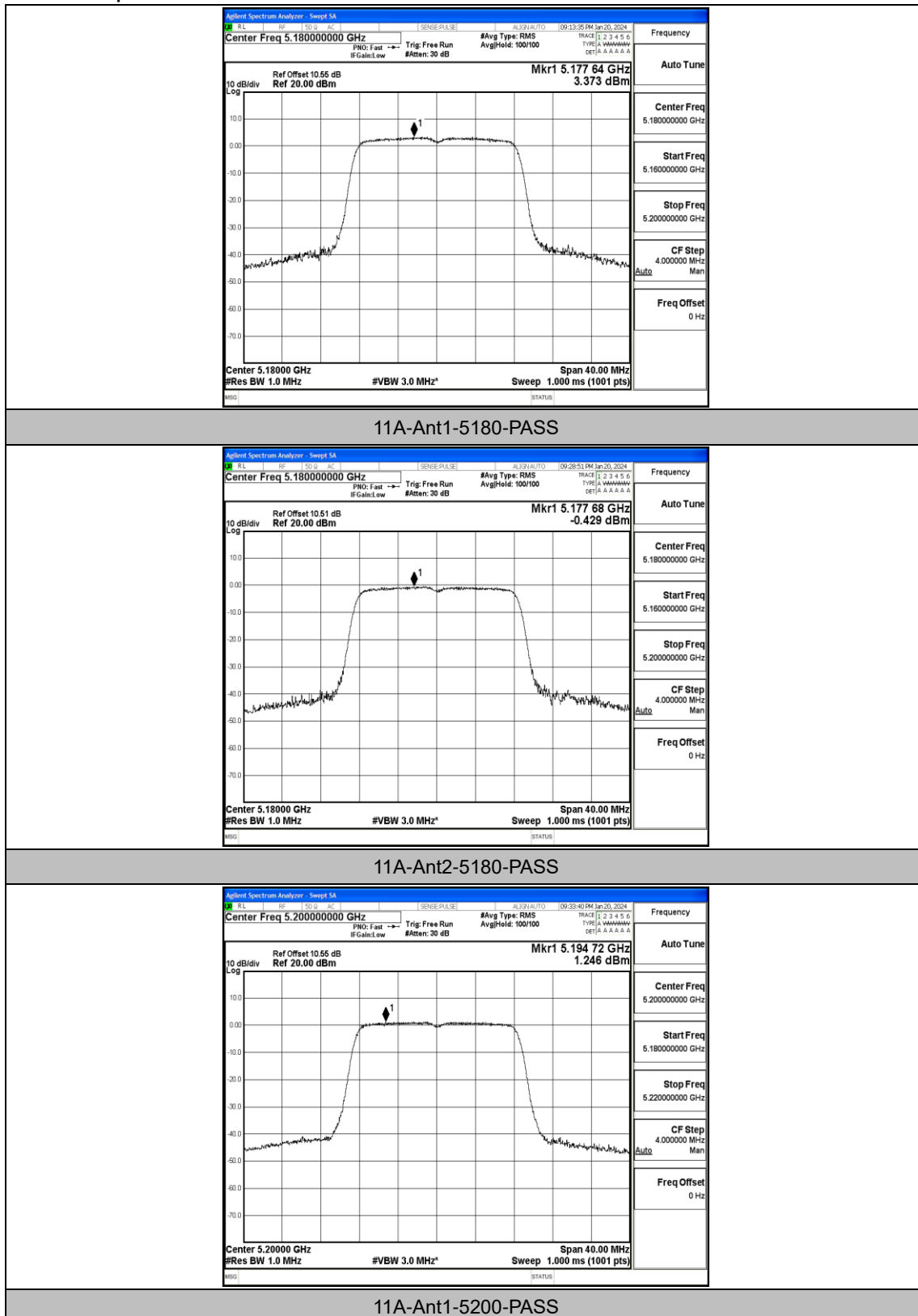
Test Result

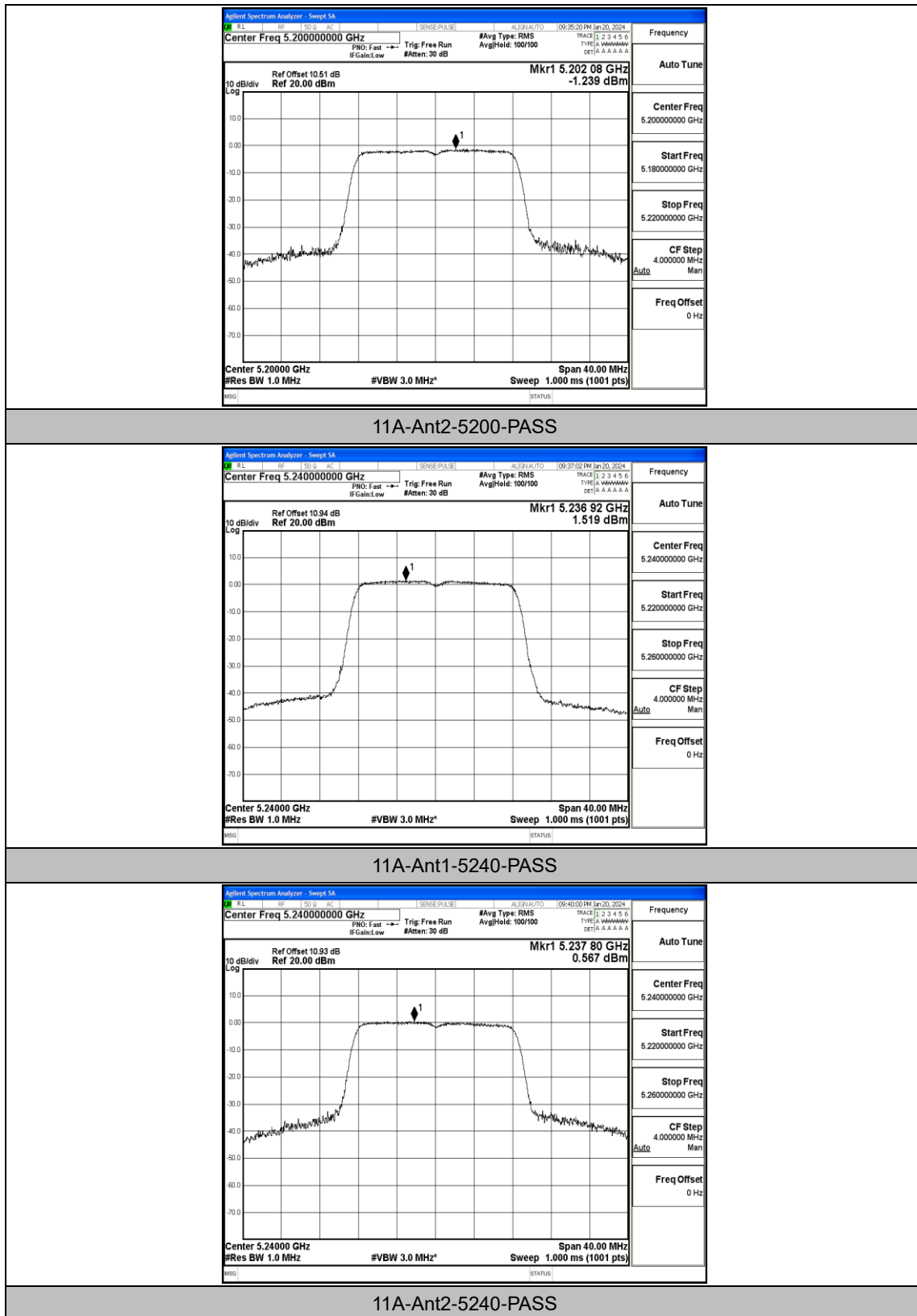
TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	3.77	≤11.00	PASS
11A	Ant2	5180	-0.15	≤11.00	PASS
11A	Ant1	5200	1.65	≤11.00	PASS
11A	Ant2	5200	-0.78	≤11.00	PASS
11A	Ant1	5240	1.90	≤11.00	PASS
11A	Ant2	5240	0.95	≤11.00	PASS
11N20MIMO	Ant1	5180	-0.36	≤11.00	PASS
11N20MIMO	Ant2	5180	-2.29	≤11.00	PASS
11N20MIMO	total	5180	1.79	≤11.00	PASS
11N20MIMO	Ant1	5200	-0.91	≤11.00	PASS
11N20MIMO	Ant2	5200	-2.59	≤11.00	PASS
11N20MIMO	total	5200	1.34	≤11.00	PASS
11N20MIMO	Ant1	5240	-0.40	≤11.00	PASS
11N20MIMO	Ant2	5240	-1.40	≤11.00	PASS
11N20MIMO	total	5240	2.14	≤11.00	PASS
11N40MIMO	Ant1	5190	-3.56	≤11.00	PASS
11N40MIMO	Ant2	5190	-6.20	≤11.00	PASS
11N40MIMO	total	5190	-1.67	≤11.00	PASS
11N40MIMO	Ant1	5230	-2.84	≤11.00	PASS
11N40MIMO	Ant2	5230	-4.39	≤11.00	PASS
11N40MIMO	total	5230	-0.54	≤11.00	PASS
11AC20MIMO	Ant1	5180	-0.21	≤11.00	PASS
11AC20MIMO	Ant2	5180	-3.30	≤11.00	PASS
11AC20MIMO	total	5180	1.52	≤11.00	PASS
11AC20MIMO	Ant1	5200	-0.86	≤11.00	PASS
11AC20MIMO	Ant2	5200	-3.37	≤11.00	PASS
11AC20MIMO	total	5200	1.07	≤11.00	PASS
11AC20MIMO	Ant1	5240	-0.50	≤11.00	PASS
11AC20MIMO	Ant2	5240	-1.67	≤11.00	PASS
11AC20MIMO	total	5240	1.96	≤11.00	PASS
11AC40MIMO	Ant1	5190	-3.22	≤11.00	PASS
11AC40MIMO	Ant2	5190	-4.63	≤11.00	PASS
11AC40MIMO	total	5190	-0.86	≤11.00	PASS
11AC40MIMO	Ant1	5230	-3.42	≤11.00	PASS
11AC40MIMO	Ant2	5230	-4.03	≤11.00	PASS
11AC40MIMO	total	5230	-0.70	≤11.00	PASS
11AC80MIMO	Ant1	5210	-5.82	≤11.00	PASS
11AC80MIMO	Ant2	5210	-6.17	≤11.00	PASS
11AC80MIMO	total	5210	-2.98	≤11.00	PASS

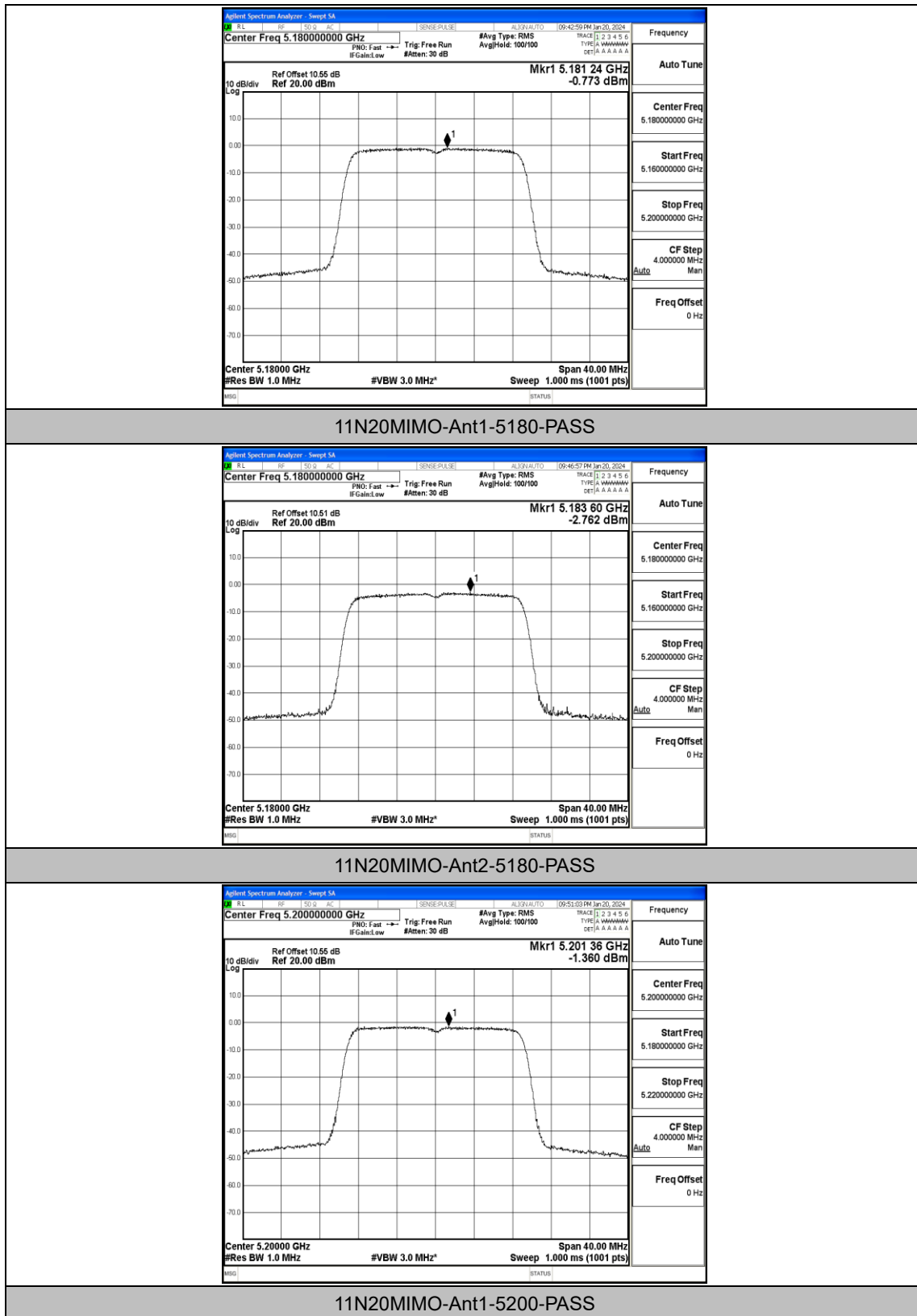
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

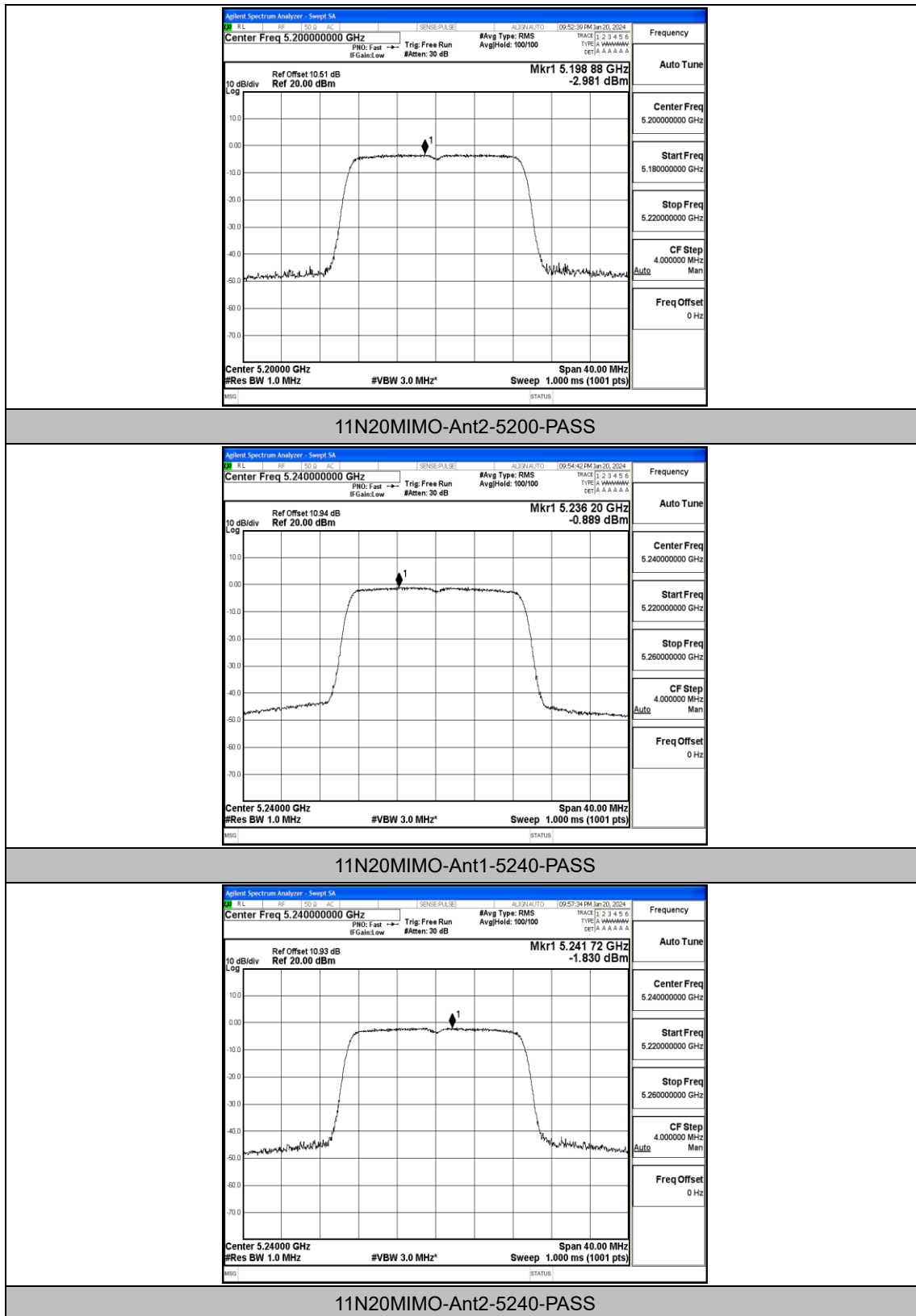
2.The Duty Cycle Factor and RBW Factor is compensated in the result.

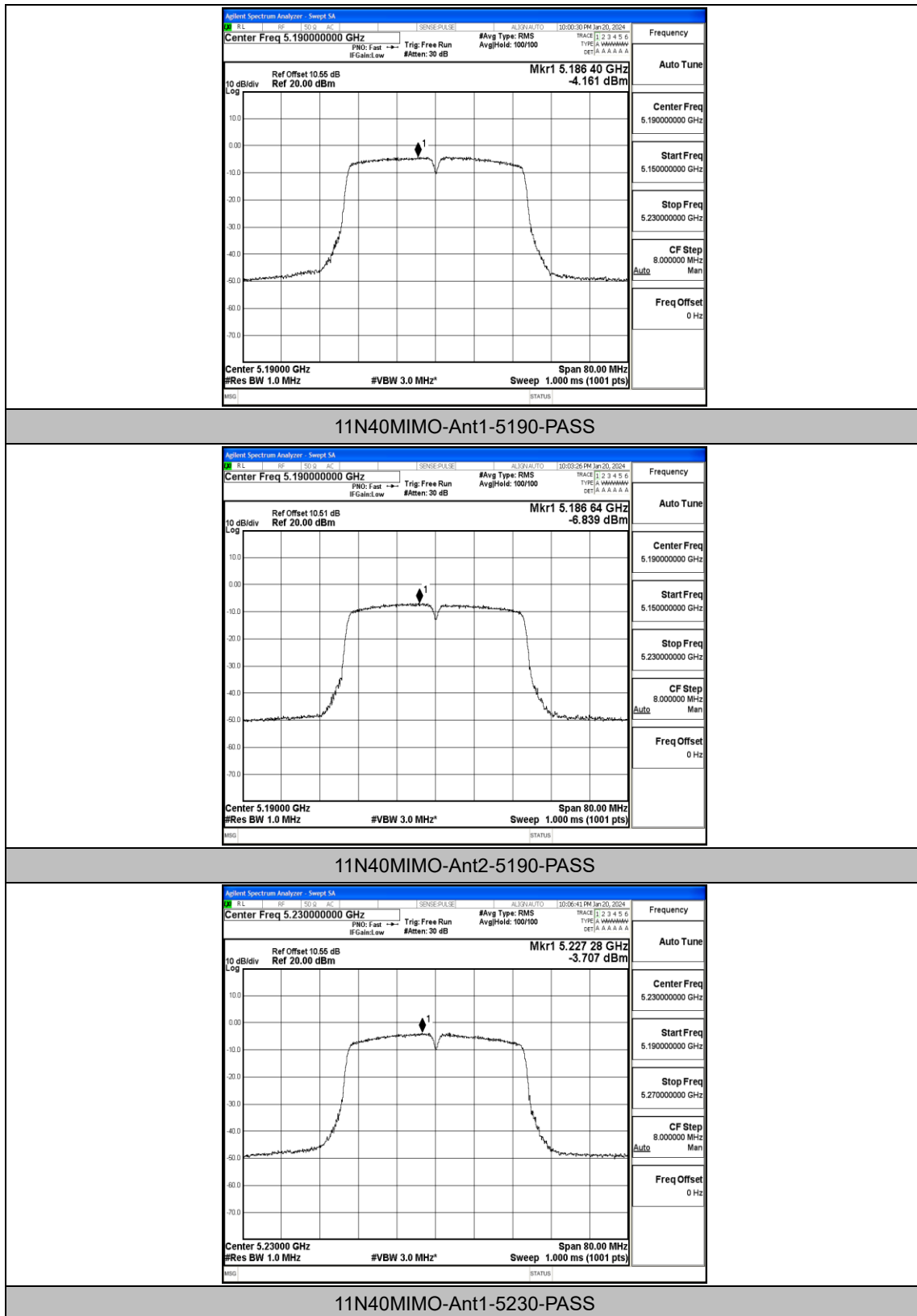
Test Graphs

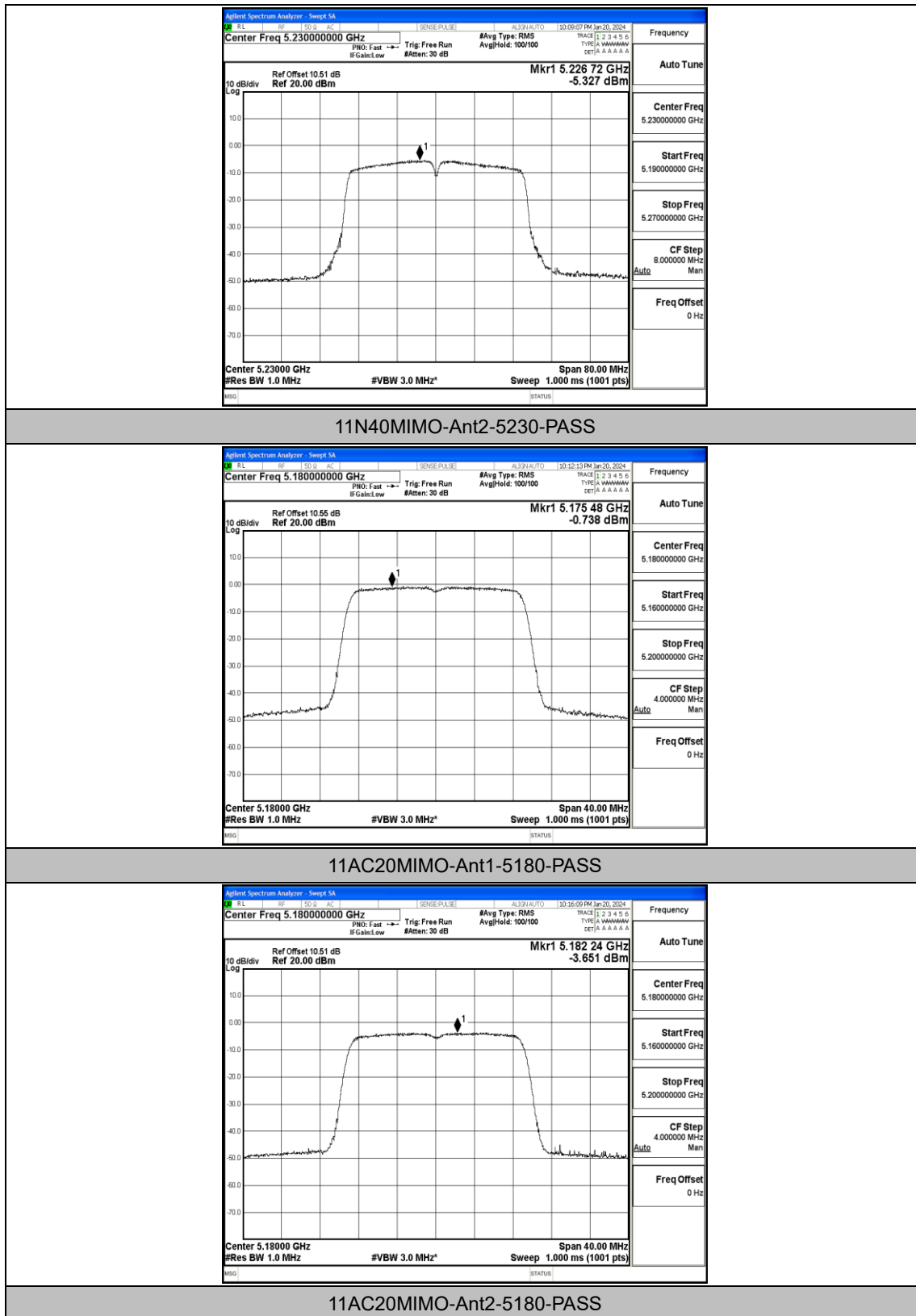


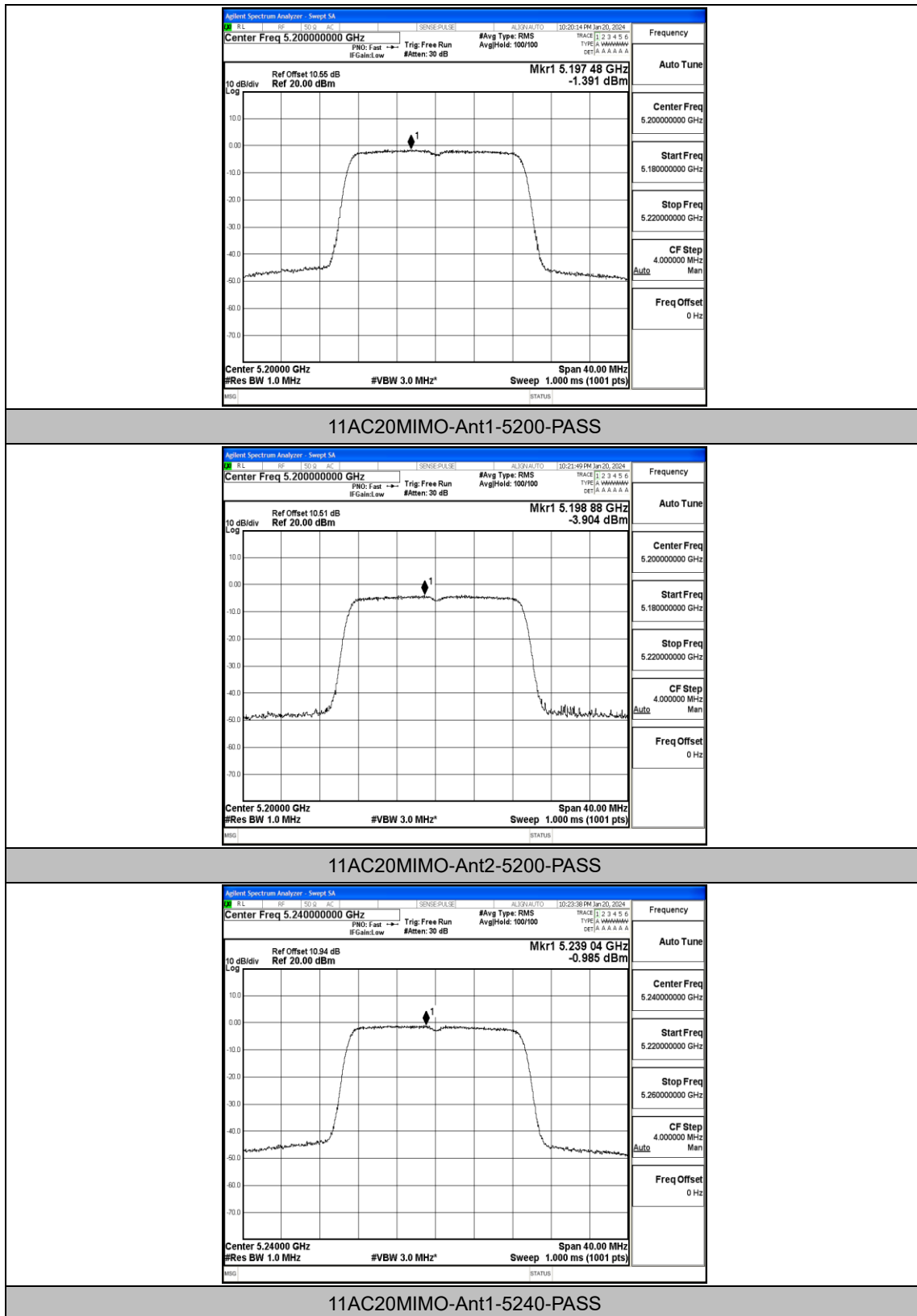


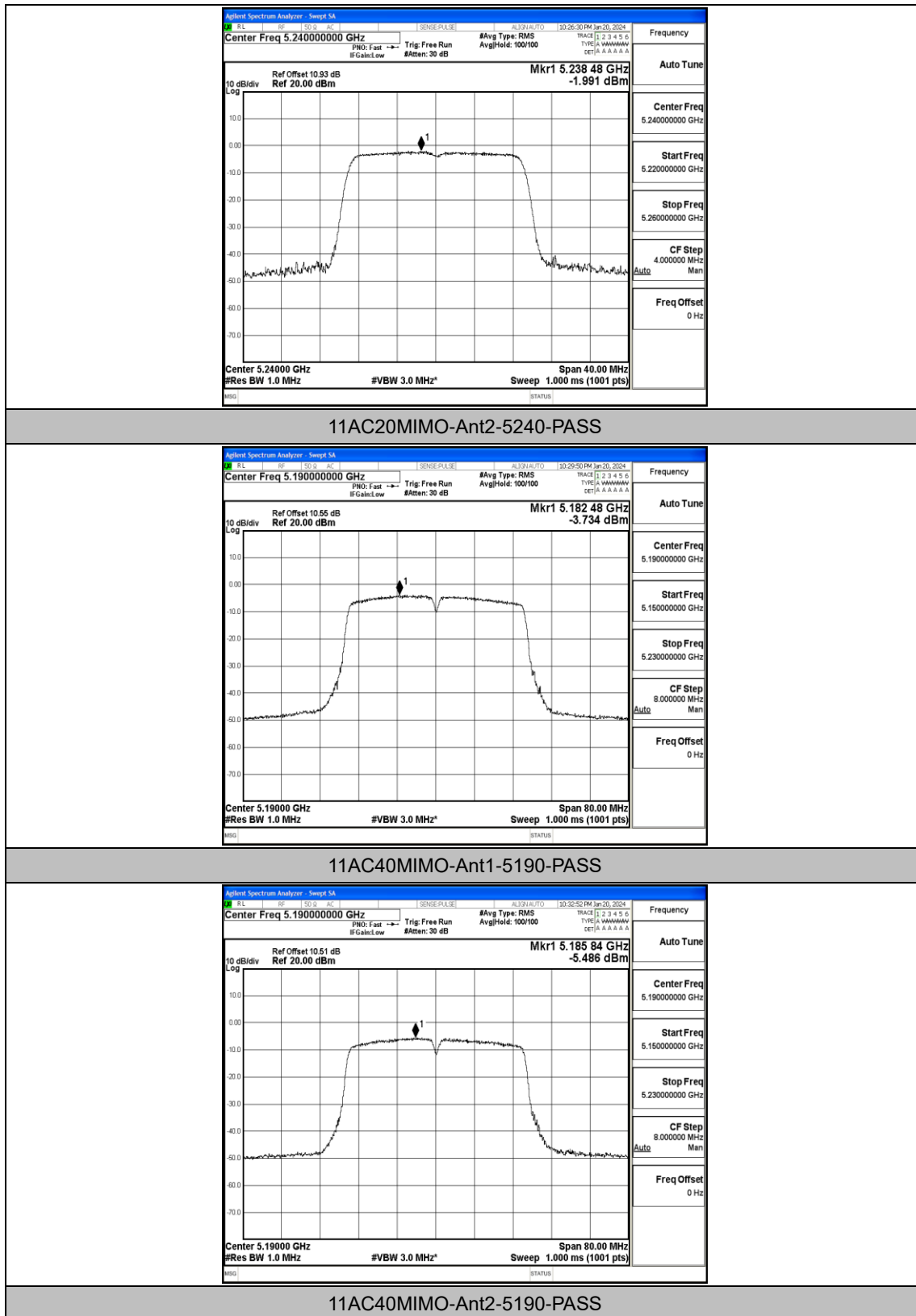


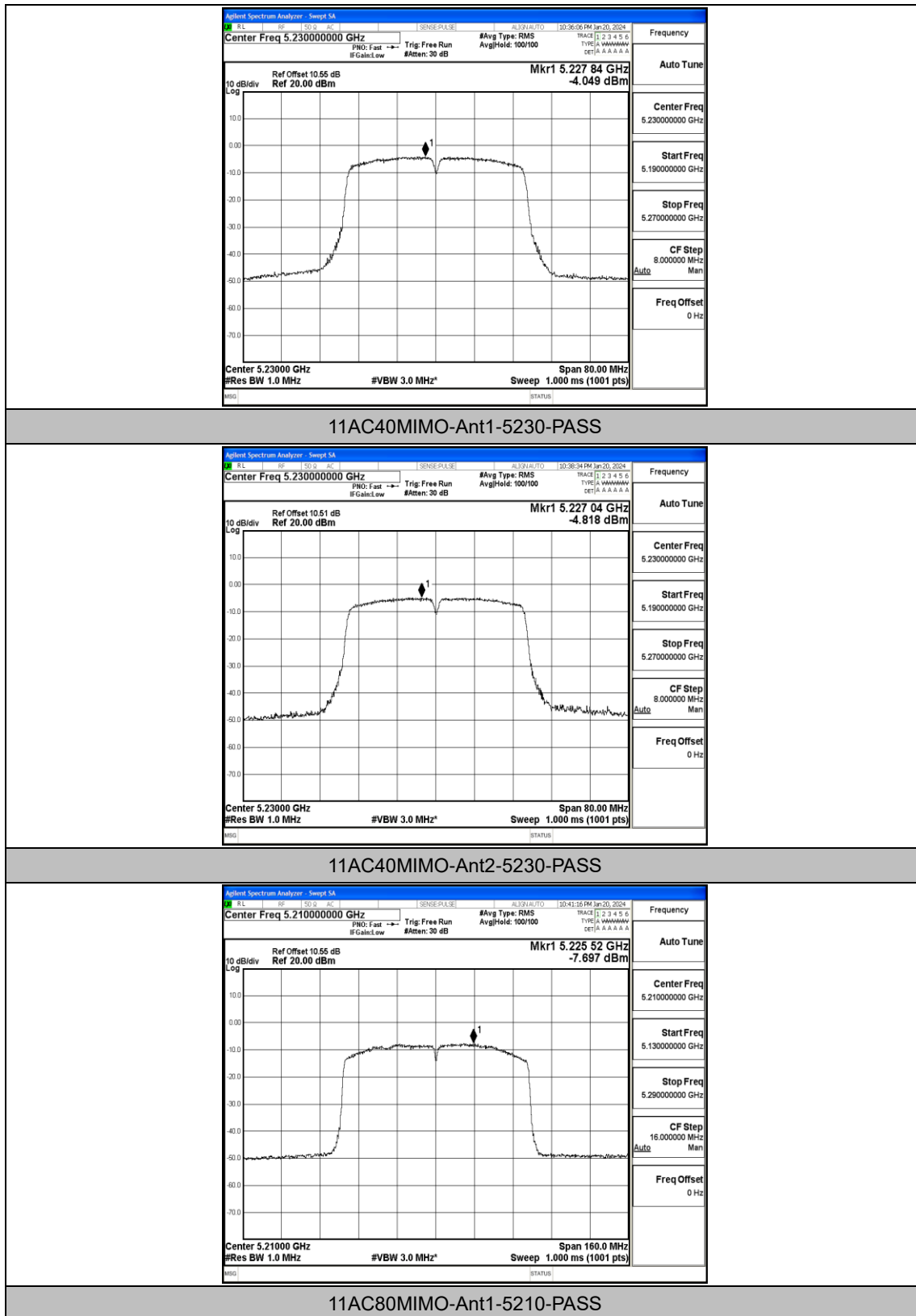


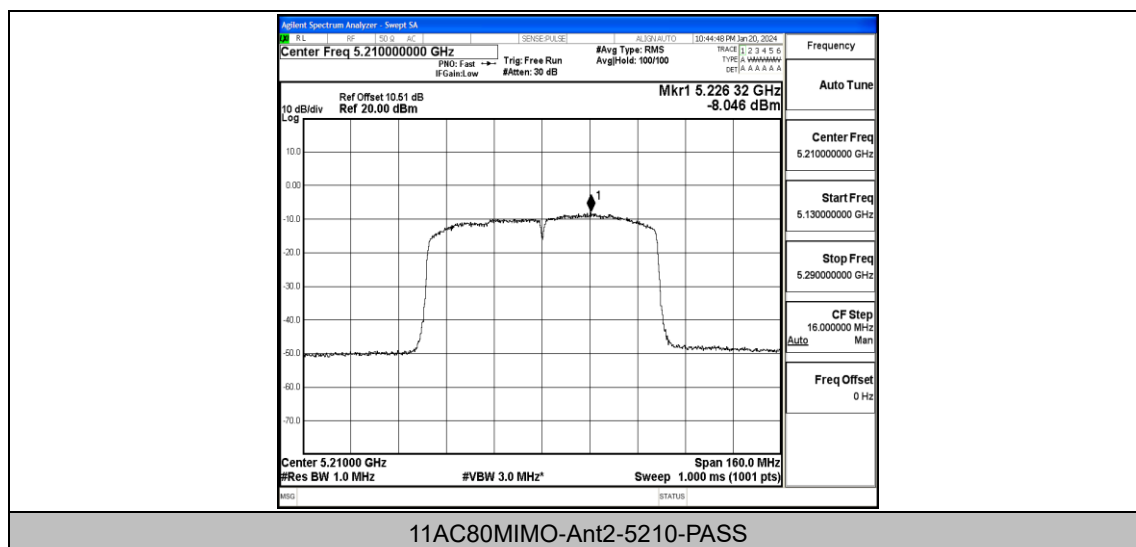












Appendix D: Band edge measurements

Test Result

TestMode	Antenna	ChName	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-33.94	≤-27	PASS
11A	Ant2	Low	5180	-33.72	≤-27	PASS
11A	Ant1	High	5240	-33.83	≤-27	PASS
11A	Ant2	High	5240	-33.49	≤-27	PASS
11N20MIMO	Ant1	Low	5180	-34.59	≤-27	PASS
11N20MIMO	Ant2	Low	5180	-33.68	≤-27	PASS
11N20MIMO	Ant1	High	5240	-33.27	≤-27	PASS
11N20MIMO	Ant2	High	5240	-32.51	≤-27	PASS
11N40MIMO	Ant1	Low	5190	-34.43	≤-27	PASS
11N40MIMO	Ant2	Low	5190	-33.55	≤-27	PASS
11N40MIMO	Ant1	High	5230	-32.97	≤-27	PASS
11N40MIMO	Ant2	High	5230	-33.6	≤-27	PASS
11AC20MIMO	Ant1	Low	5180	-34.49	≤-27	PASS
11AC20MIMO	Ant2	Low	5180	-33.96	≤-27	PASS
11AC20MIMO	Ant1	High	5240	-33.82	≤-27	PASS
11AC20MIMO	Ant2	High	5240	-33.5	≤-27	PASS
11AC40MIMO	Ant1	Low	5190	-33.52	≤-27	PASS
11AC40MIMO	Ant2	Low	5190	-33.46	≤-27	PASS
11AC40MIMO	Ant1	High	5230	-33.43	≤-27	PASS
11AC40MIMO	Ant2	High	5230	-33.64	≤-27	PASS
11AC80MIMO	Ant1	Low	5210	-32.26	≤-27	PASS
11AC80MIMO	Ant1	High	5210	-33.74	≤-27	PASS
11AC80MIMO	Ant2	Low	5210	-33.93	≤-27	PASS
11AC80MIMO	Ant2	High	5210	-32.9	≤-27	PASS

Test Graphs

