

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

Product Name: Wanbo Projector

Trade Mark: wanbo

Test Model: WPD24

FCC ID: 2A7PIWPD24

Environmental Conditions

Temperature:	23.5℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

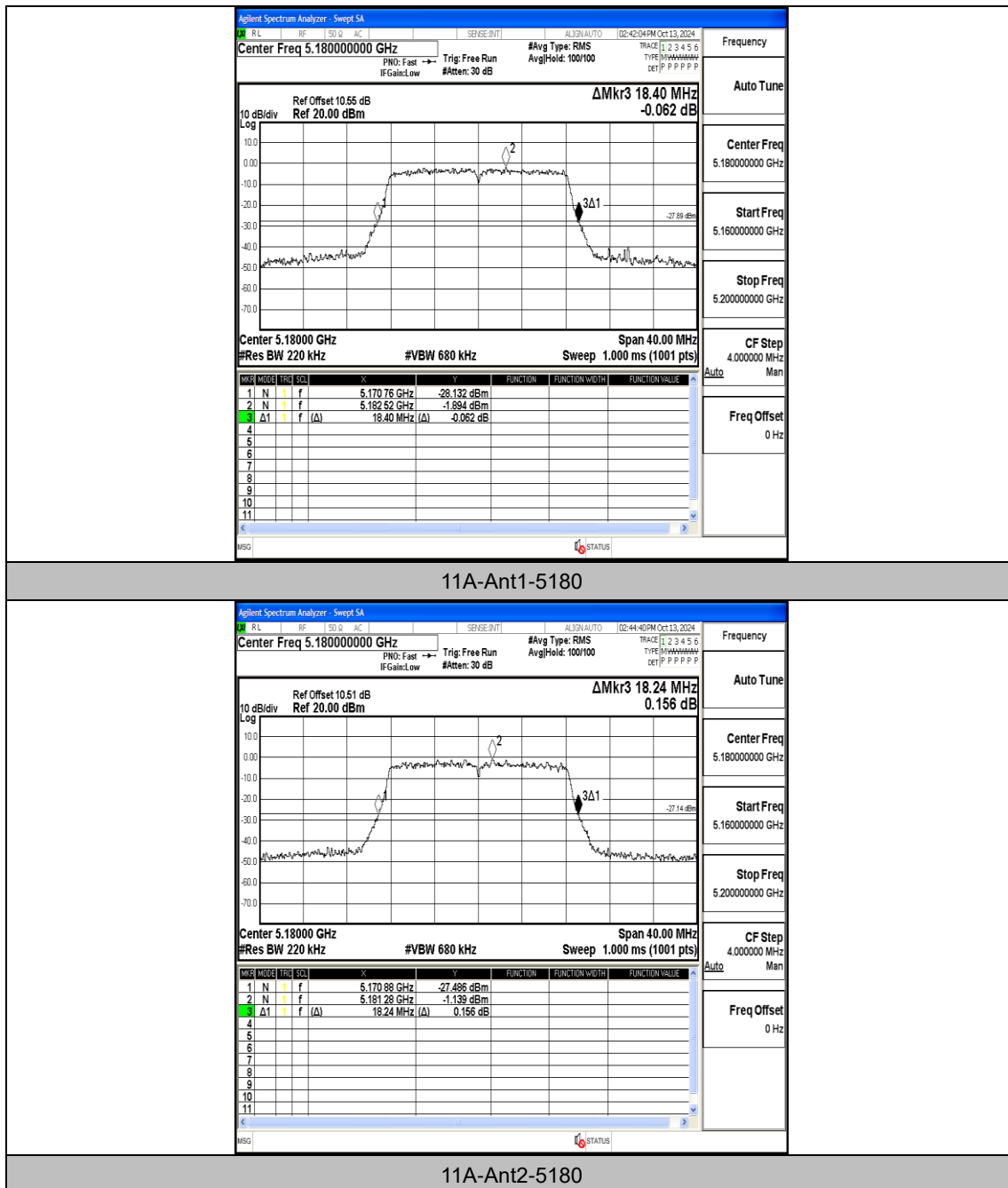
Appendix A1: Emission Bandwidth

Test Result

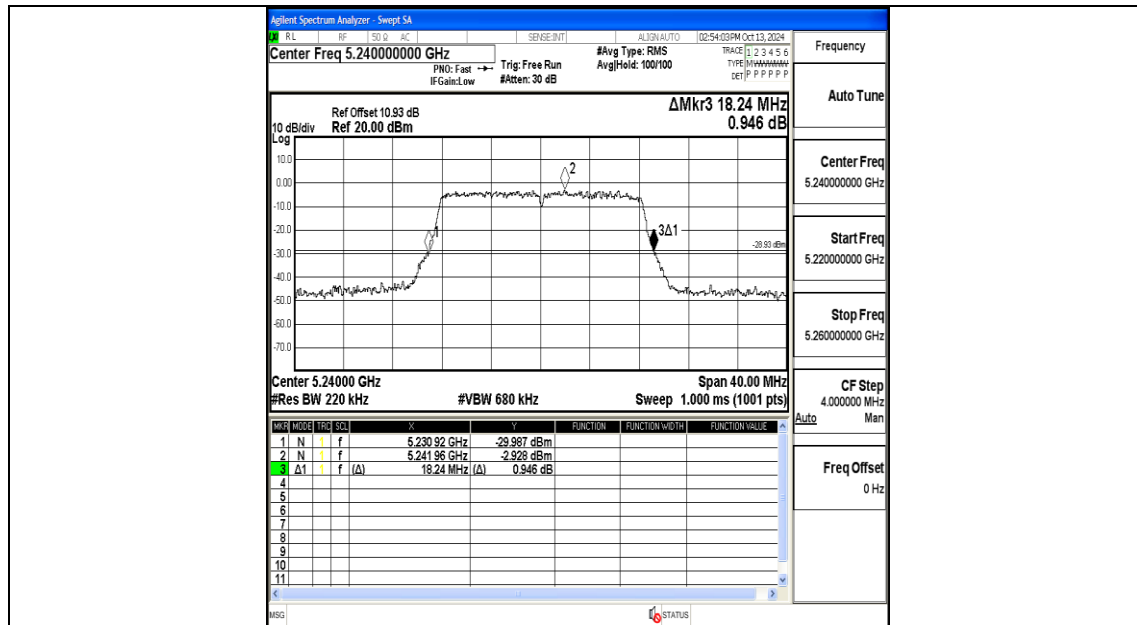
Test Mode	Antenna	Frequency [MHz]	26db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5180	18.400	5170.760	5189.160	---	---
11A	Ant2	5180	18.240	5170.880	5189.120	---	---
11A	Ant1	5200	18.560	5190.720	5209.280	---	---
11A	Ant2	5200	18.520	5190.760	5209.280	---	---
11A	Ant1	5240	18.560	5230.760	5249.320	---	---
11A	Ant2	5240	18.240	5230.920	5249.160	---	---
11N20MIMO	Ant1	5180	19.360	5170.240	5189.600	---	---
11N20MIMO	Ant2	5180	19.280	5170.440	5189.720	---	---
11N20MIMO	Ant1	5200	19.440	5190.240	5209.680	---	---
11N20MIMO	Ant2	5200	19.160	5190.520	5209.680	---	---
11N20MIMO	Ant1	5240	19.240	5230.360	5249.600	---	---
11N20MIMO	Ant2	5240	19.400	5230.400	5249.800	---	---
11N40MIMO	Ant1	5190	39.600	5170.480	5210.080	---	---
11N40MIMO	Ant2	5190	40.320	5169.840	5210.160	---	---
11N40MIMO	Ant1	5230	40.160	5209.920	5250.080	---	---
11N40MIMO	Ant2	5230	40.160	5209.920	5250.080	---	---
11AC20MIMO	Ant1	5180	19.280	5170.360	5189.640	---	---
11AC20MIMO	Ant2	5180	19.240	5170.400	5189.640	---	---
11AC20MIMO	Ant1	5200	19.400	5190.280	5209.680	---	---
11AC20MIMO	Ant2	5200	19.240	5190.400	5209.640	---	---
11AC20MIMO	Ant1	5240	19.200	5230.440	5249.640	---	---
11AC20MIMO	Ant2	5240	19.280	5230.320	5249.600	---	---
11AC40MIMO	Ant1	5190	40.320	5169.840	5210.160	---	---
11AC40MIMO	Ant2	5190	40.400	5170.000	5210.400	---	---
11AC40MIMO	Ant1	5230	40.480	5210.080	5250.560	---	---

11AC40MIMO	Ant2	5230	40.000	5210.240	5250.240	---	---
11AC80MIMO	Ant1	5210	81.280	5169.680	5250.960	---	---
11AC80MIMO	Ant2	5210	81.120	5169.520	5250.640	---	---

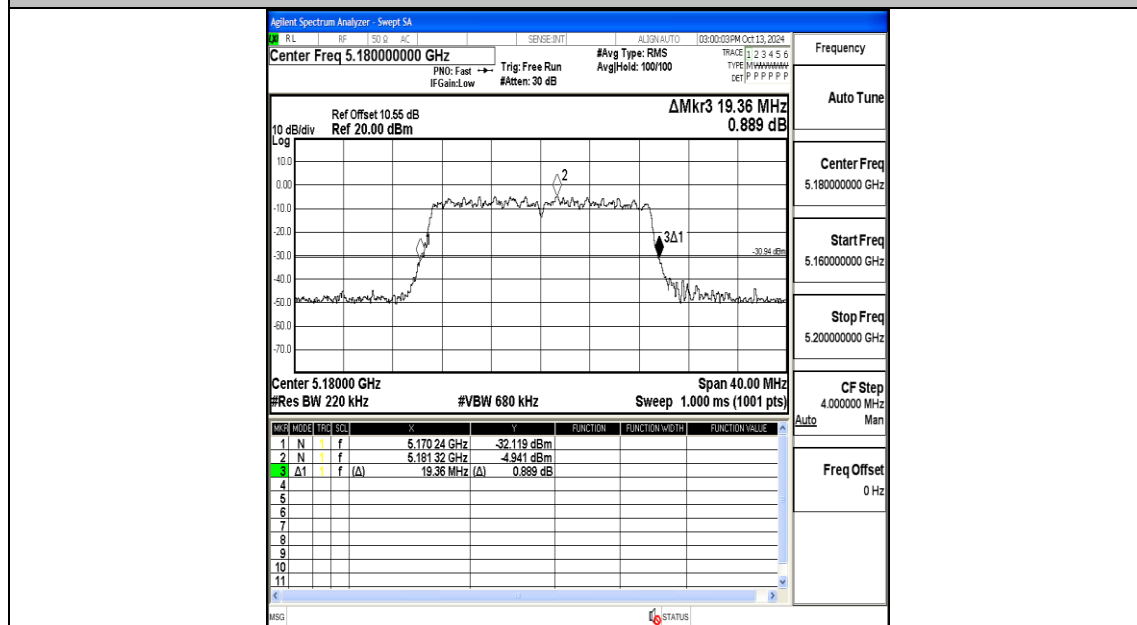
Test Graphs



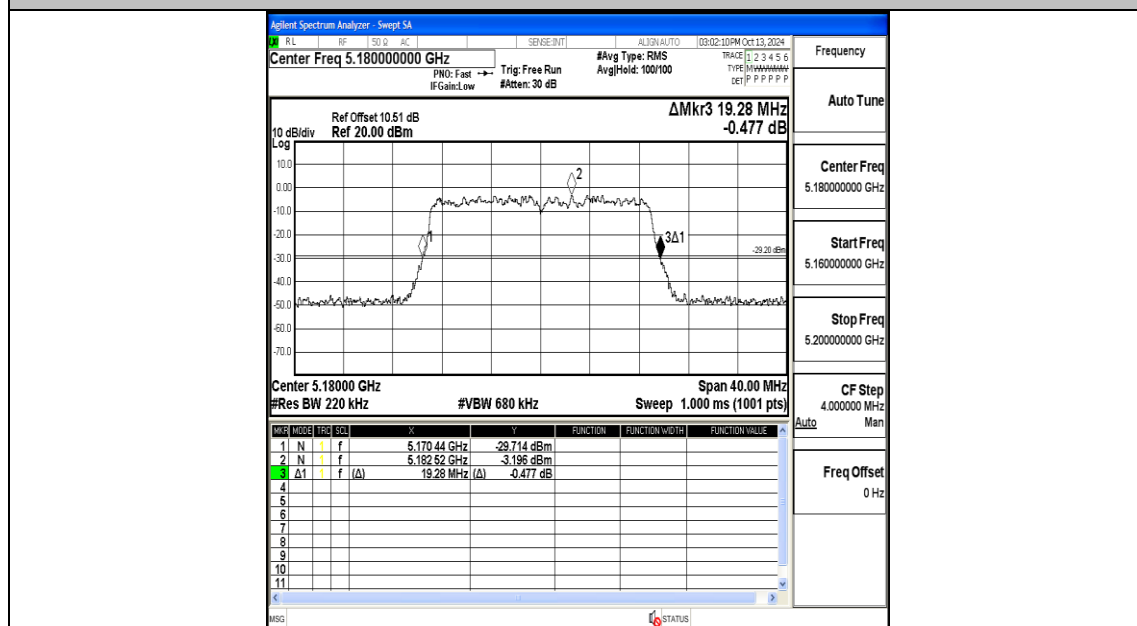




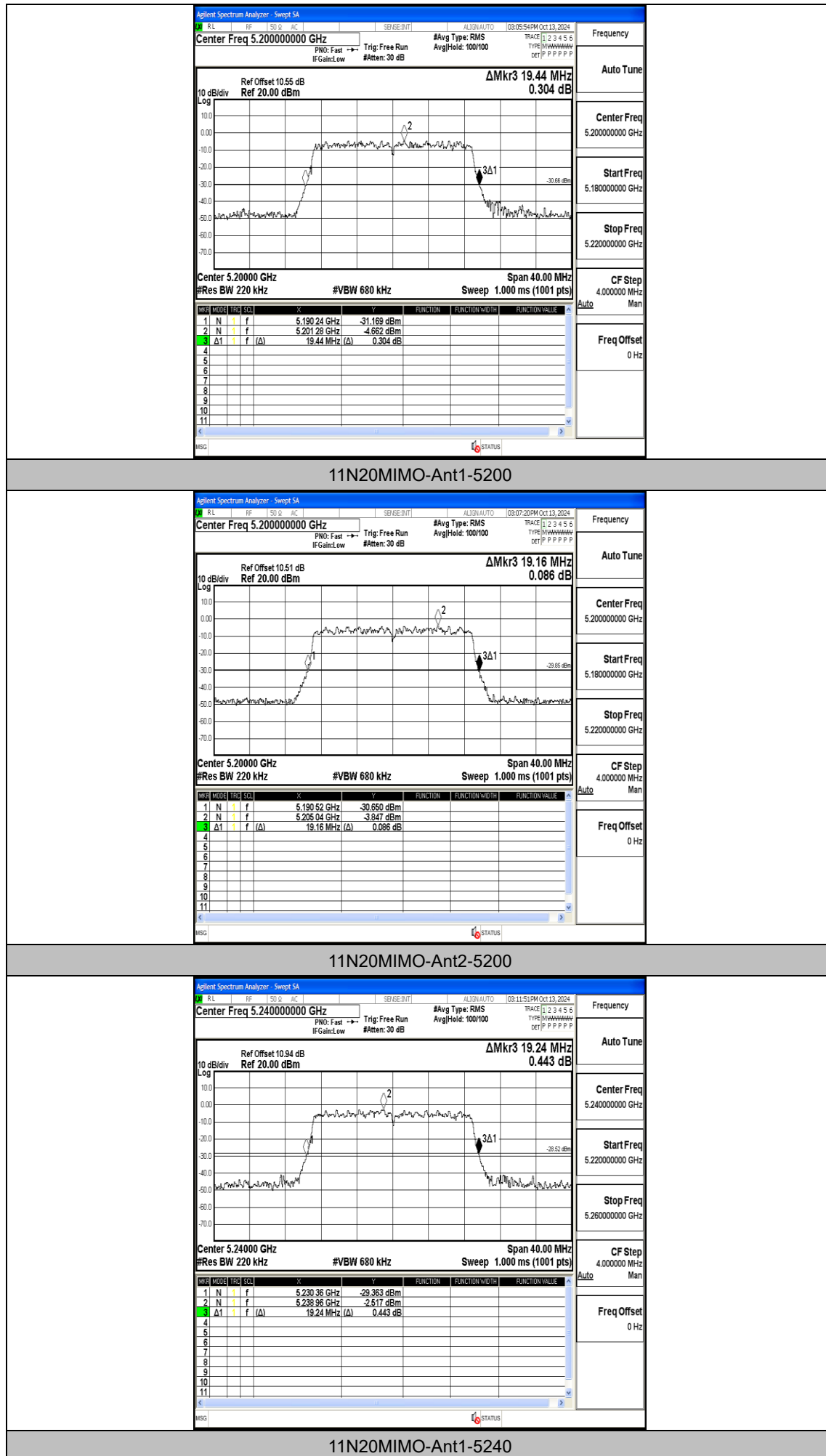
11A-Ant2-5240

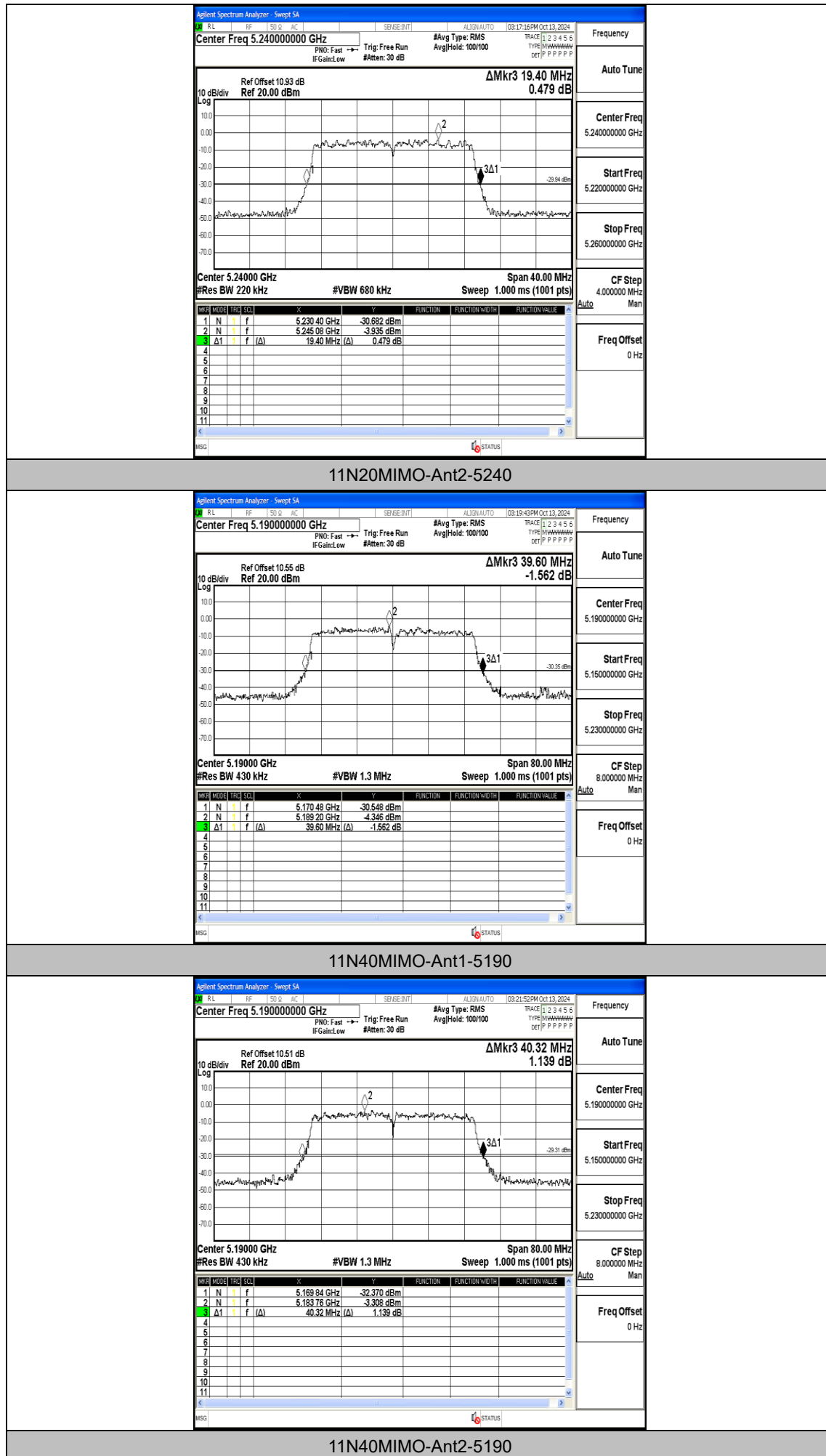


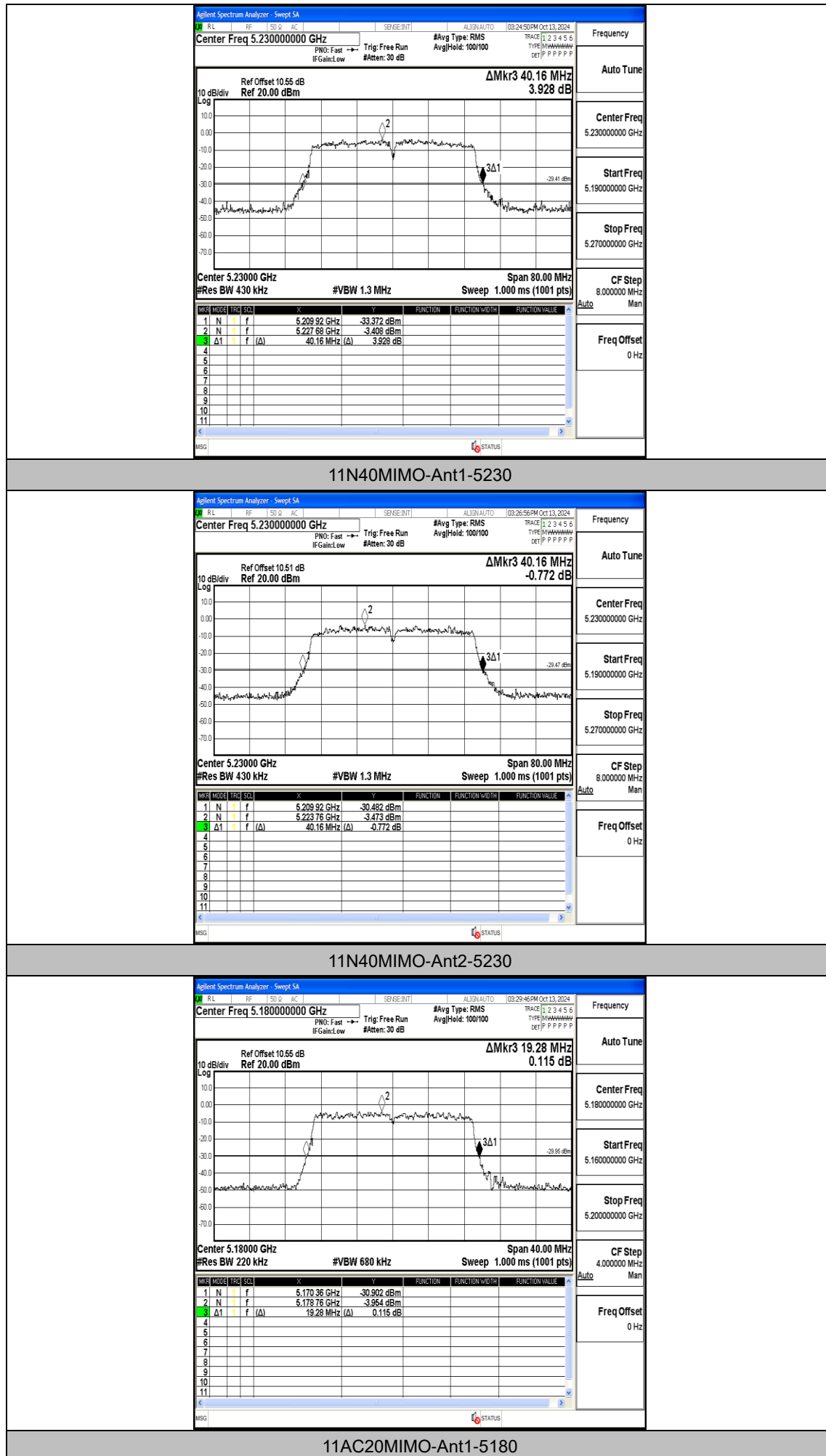
11N20MIMO-Ant1-5180

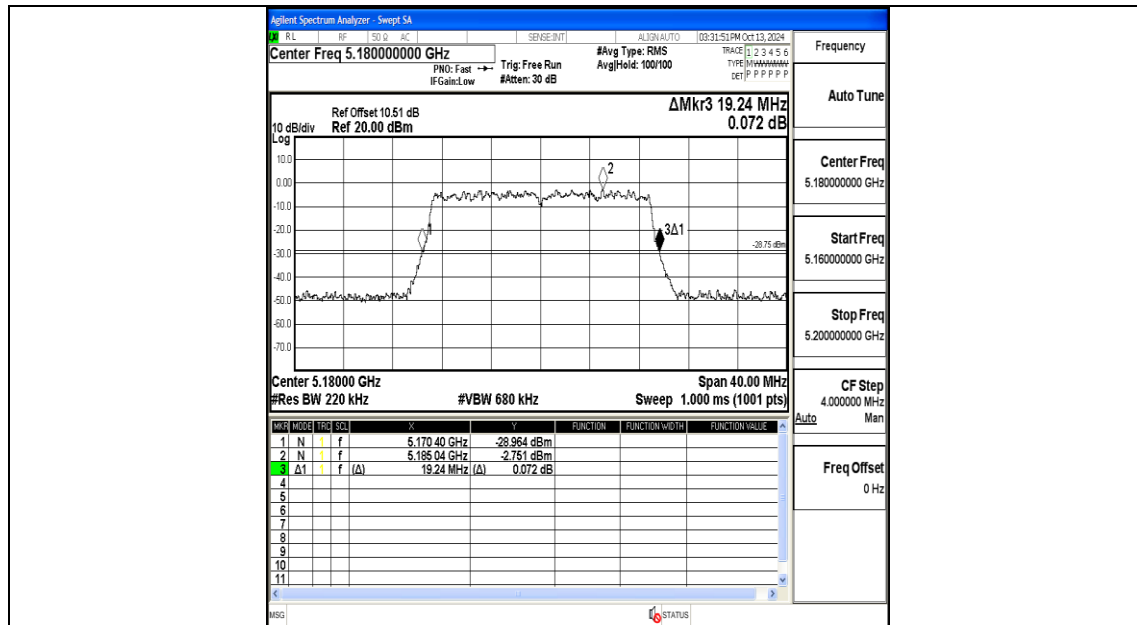


11N20MIMO-Ant2-5180

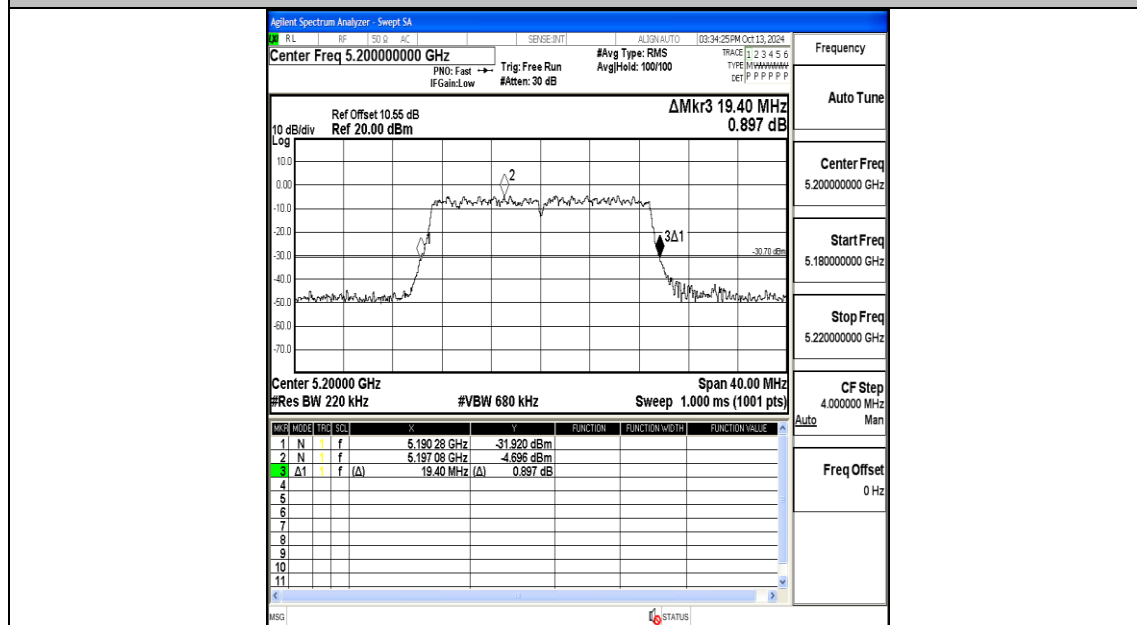




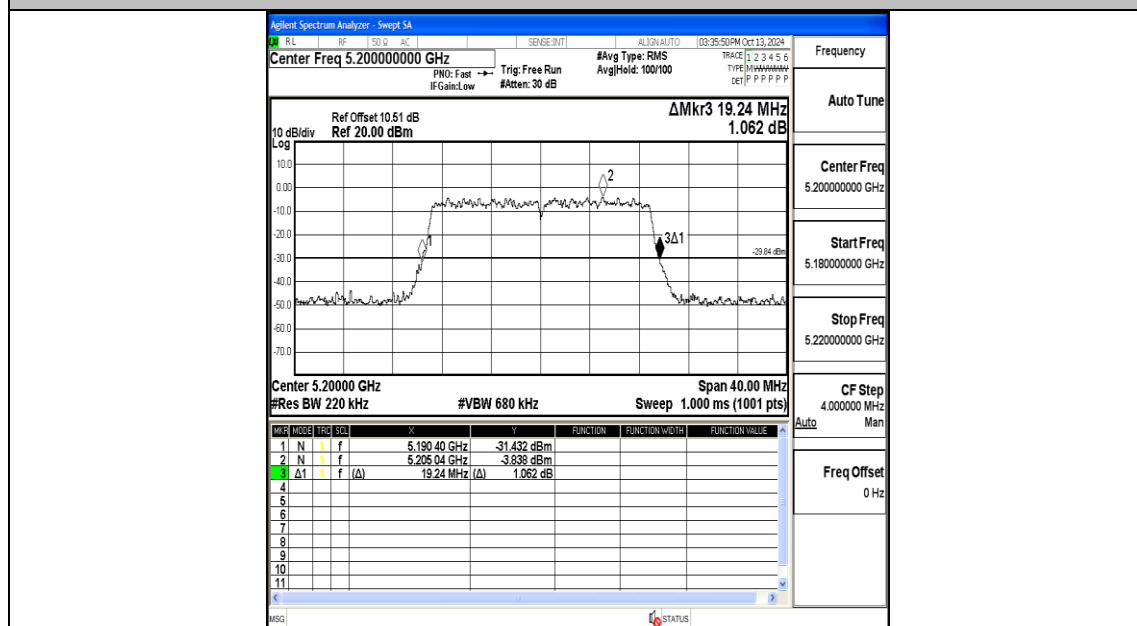




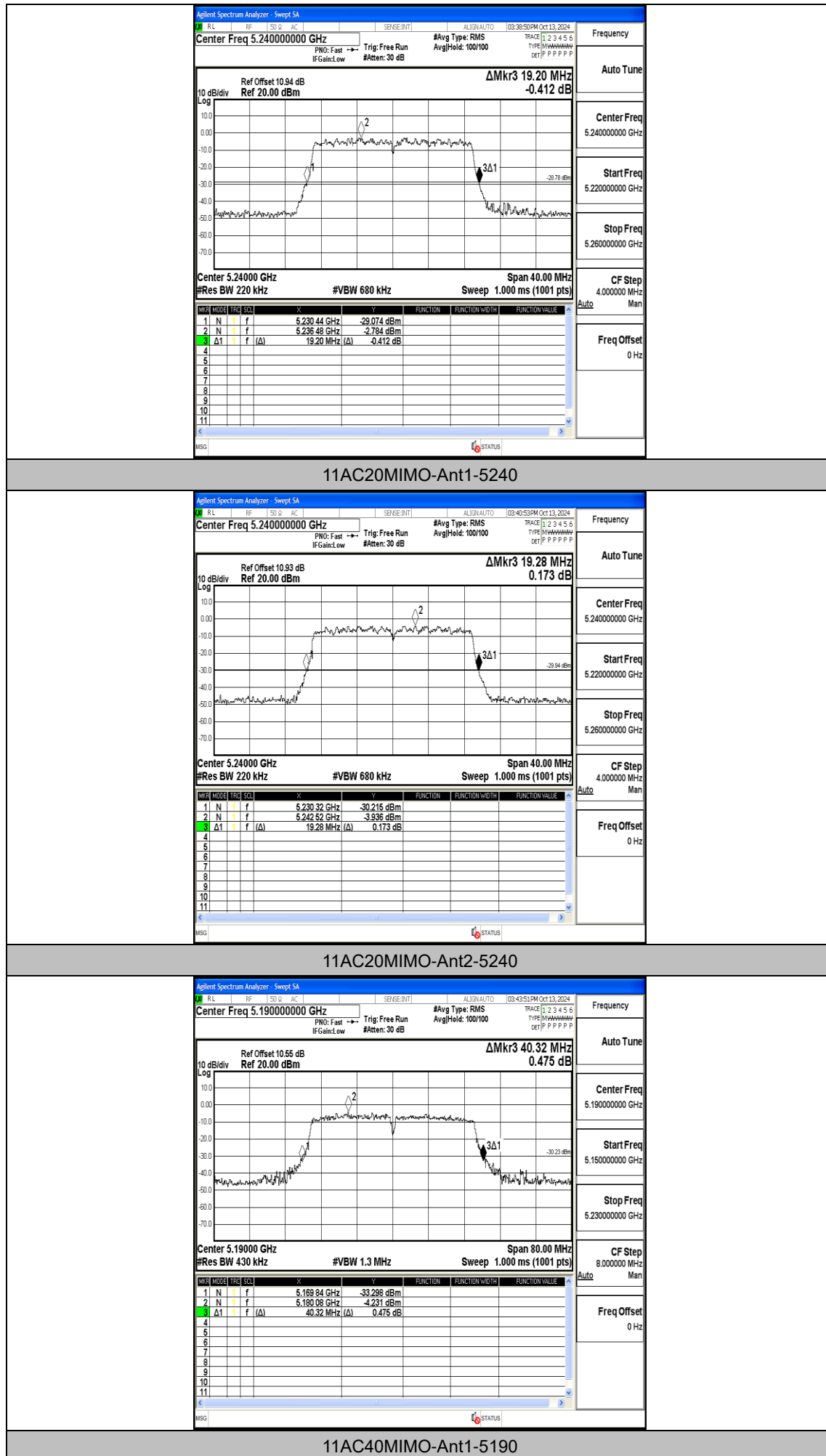
11AC20MIMO-Ant2-5180

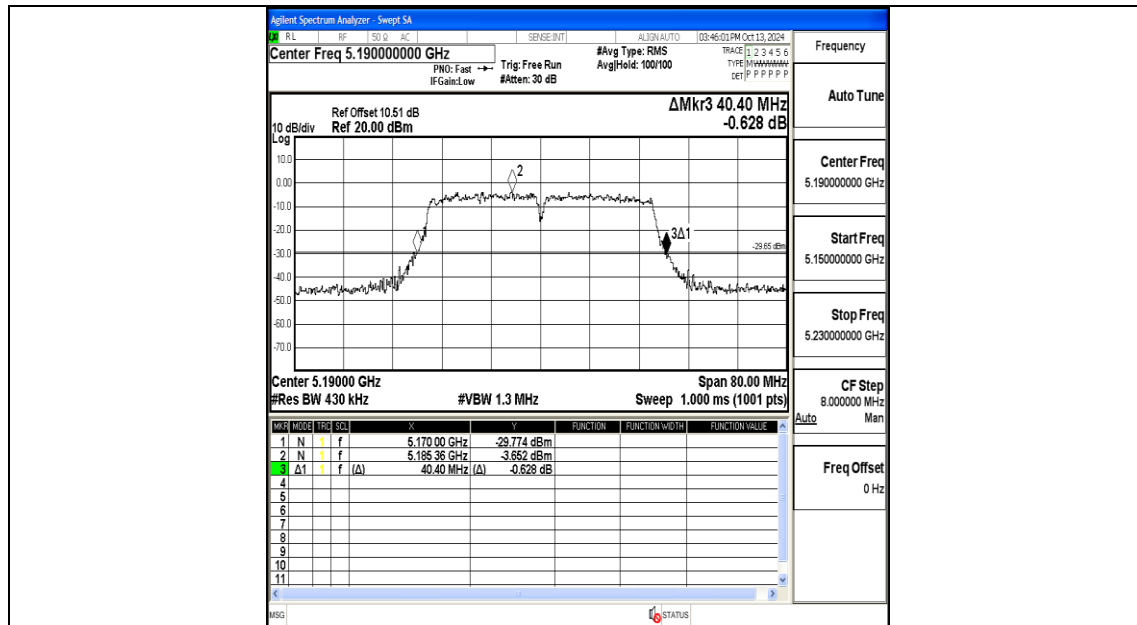


11AC20MIMO-Ant1-5200

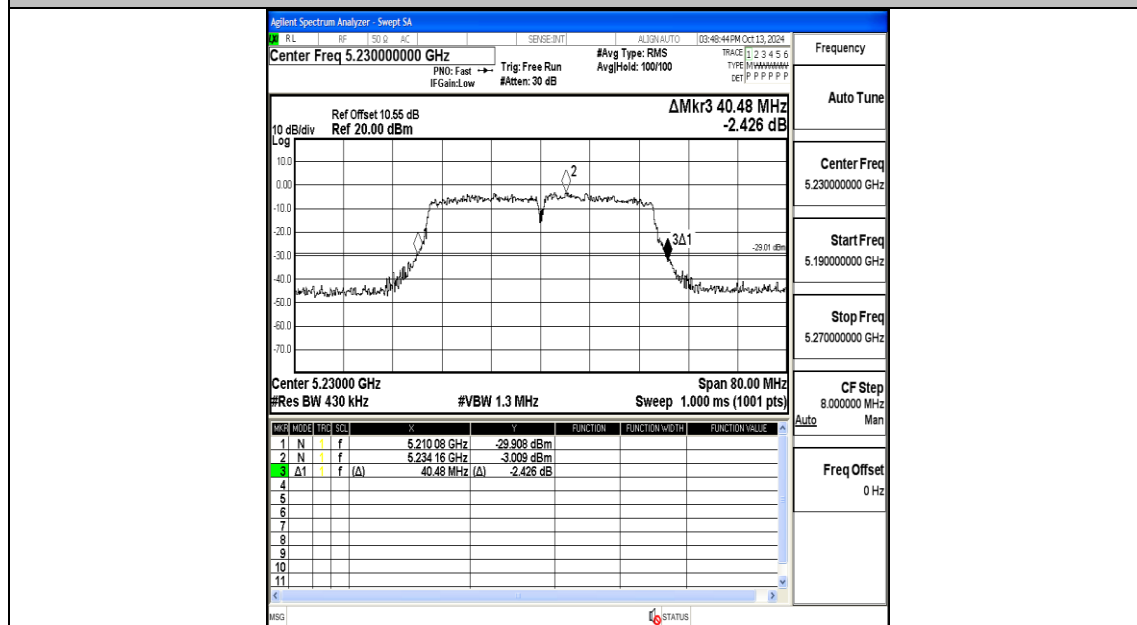


11AC20MIMO-Ant2-5200

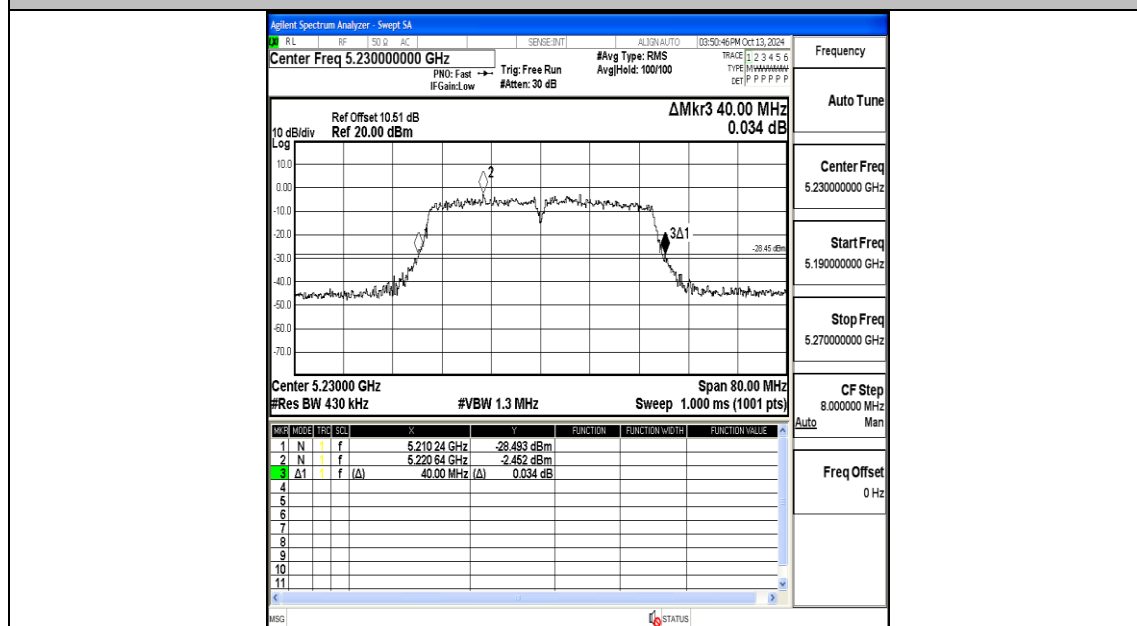




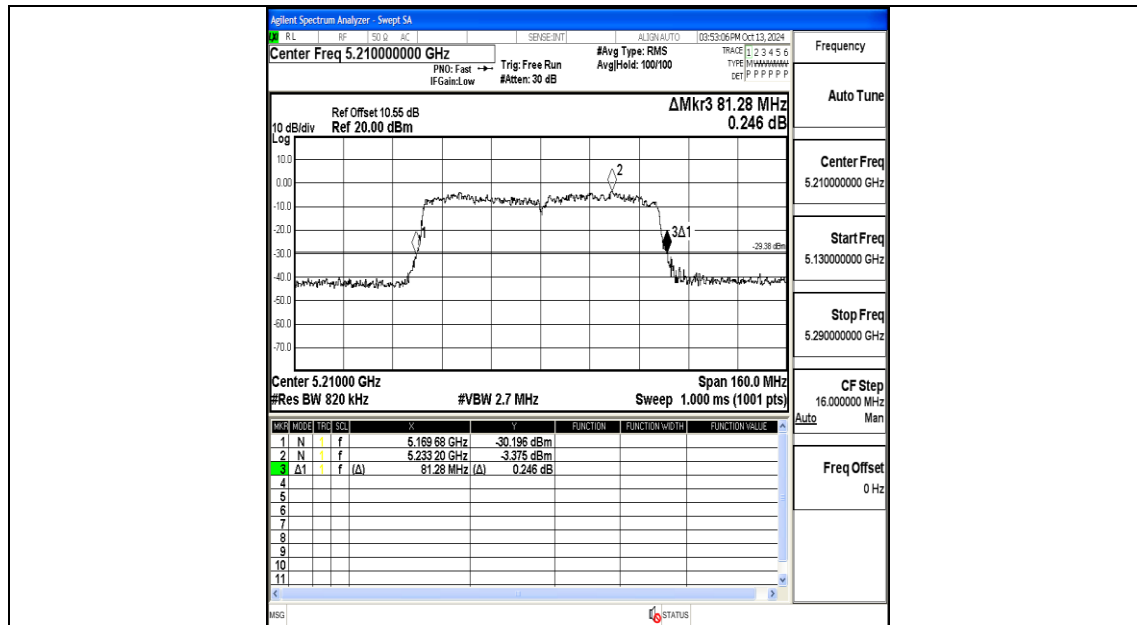
11AC40MIMO-Ant2-5190



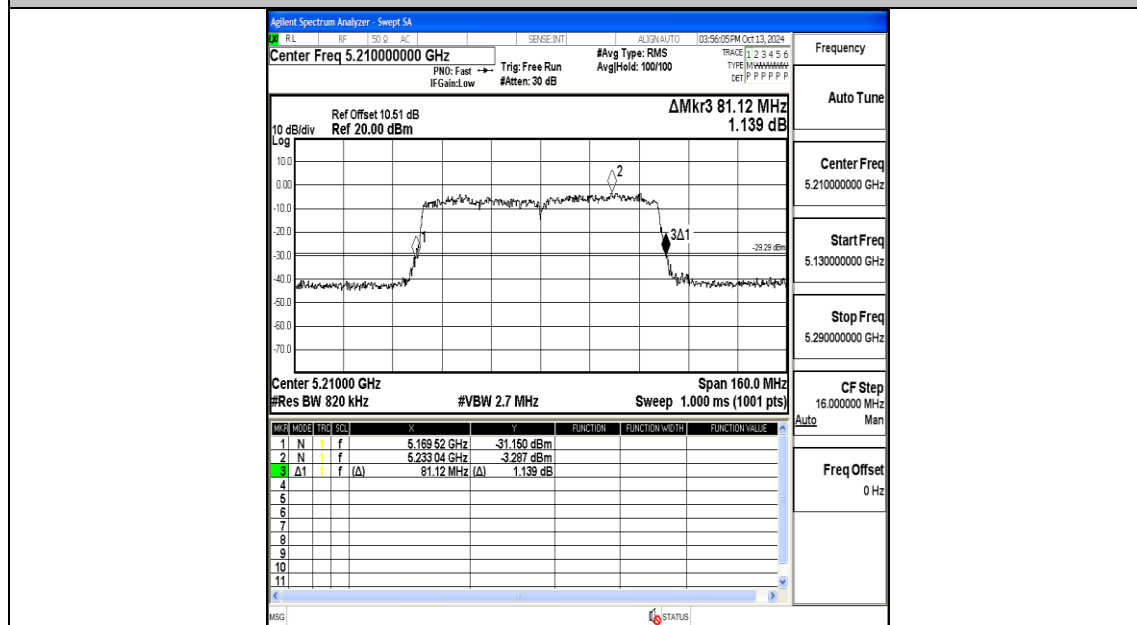
11AC40MIMO-Ant1-5230



11AC40MIMO-Ant2-5230



11AC80MIMO-Ant1-5210



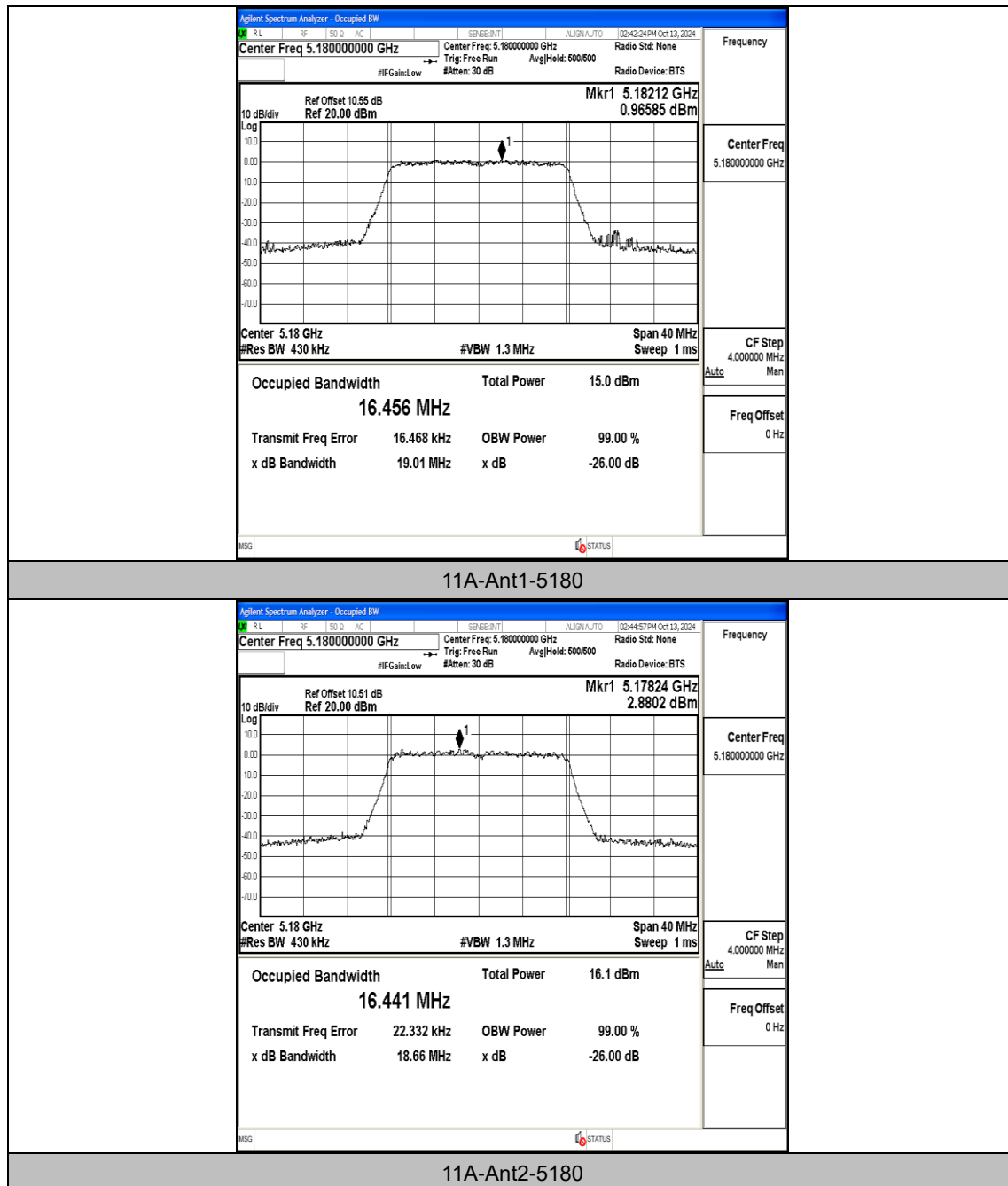
11AC80MIMO-Ant2-5210

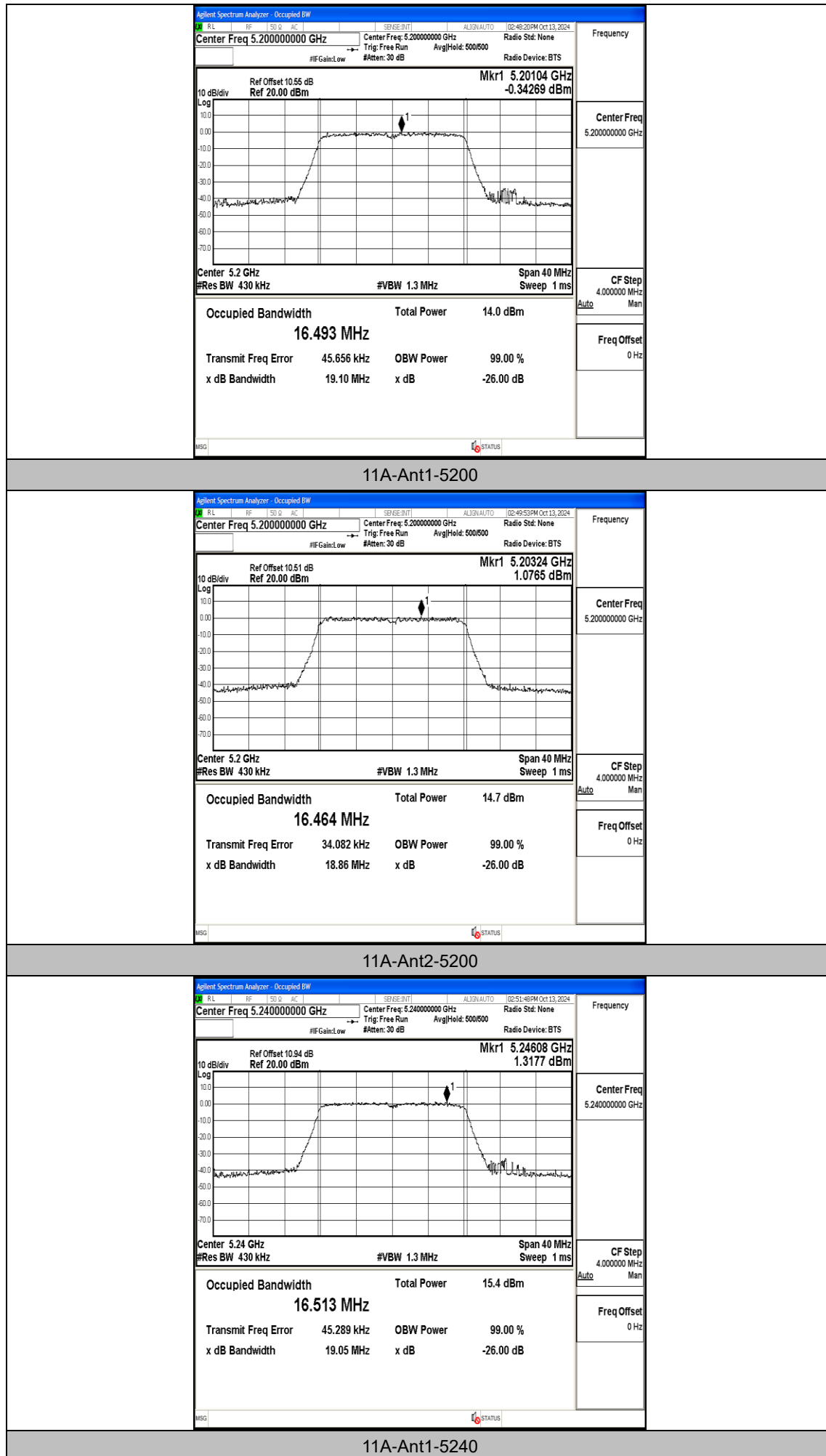
Appendix A2: Occupied channel bandwidth

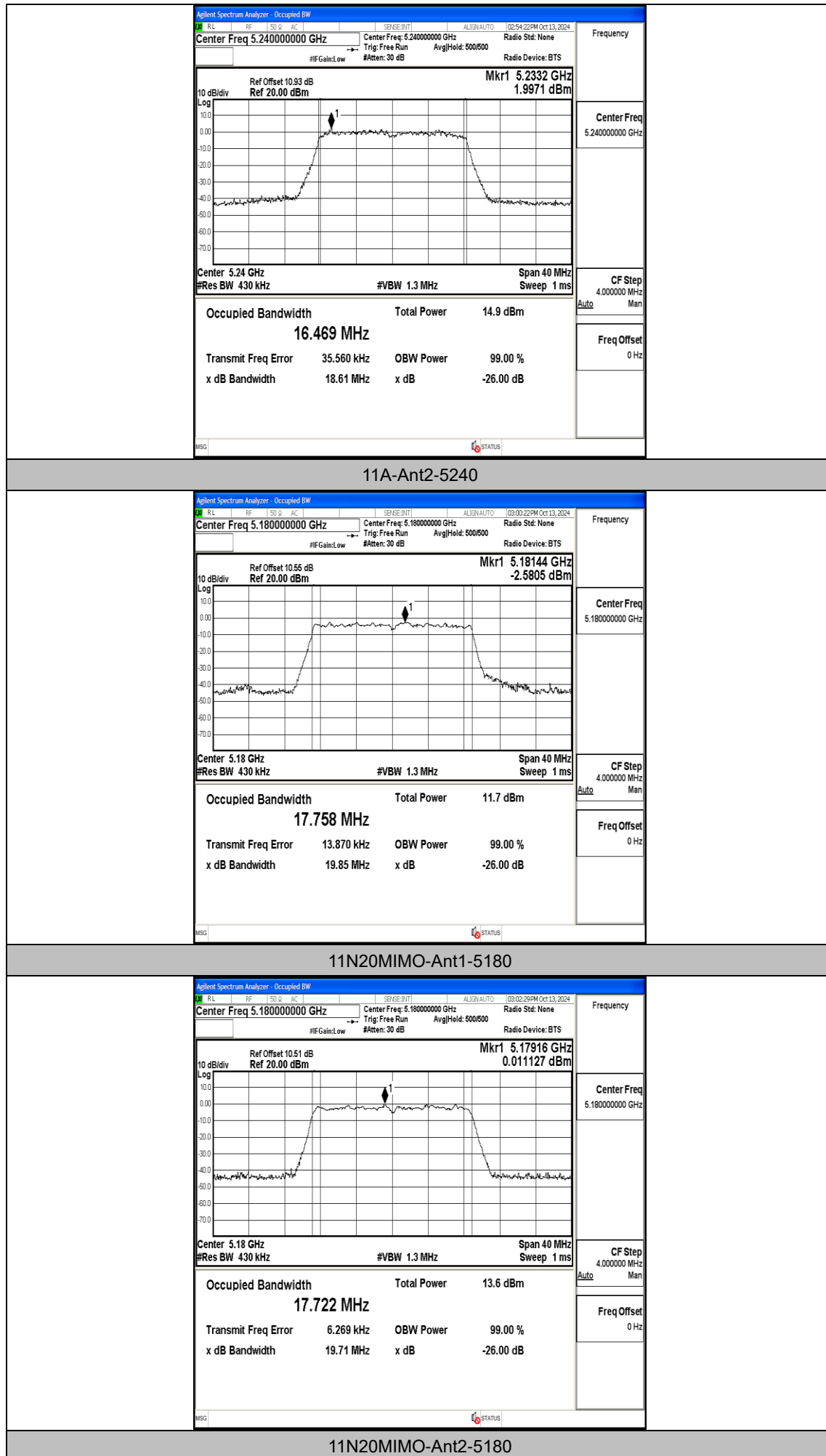
Test Result

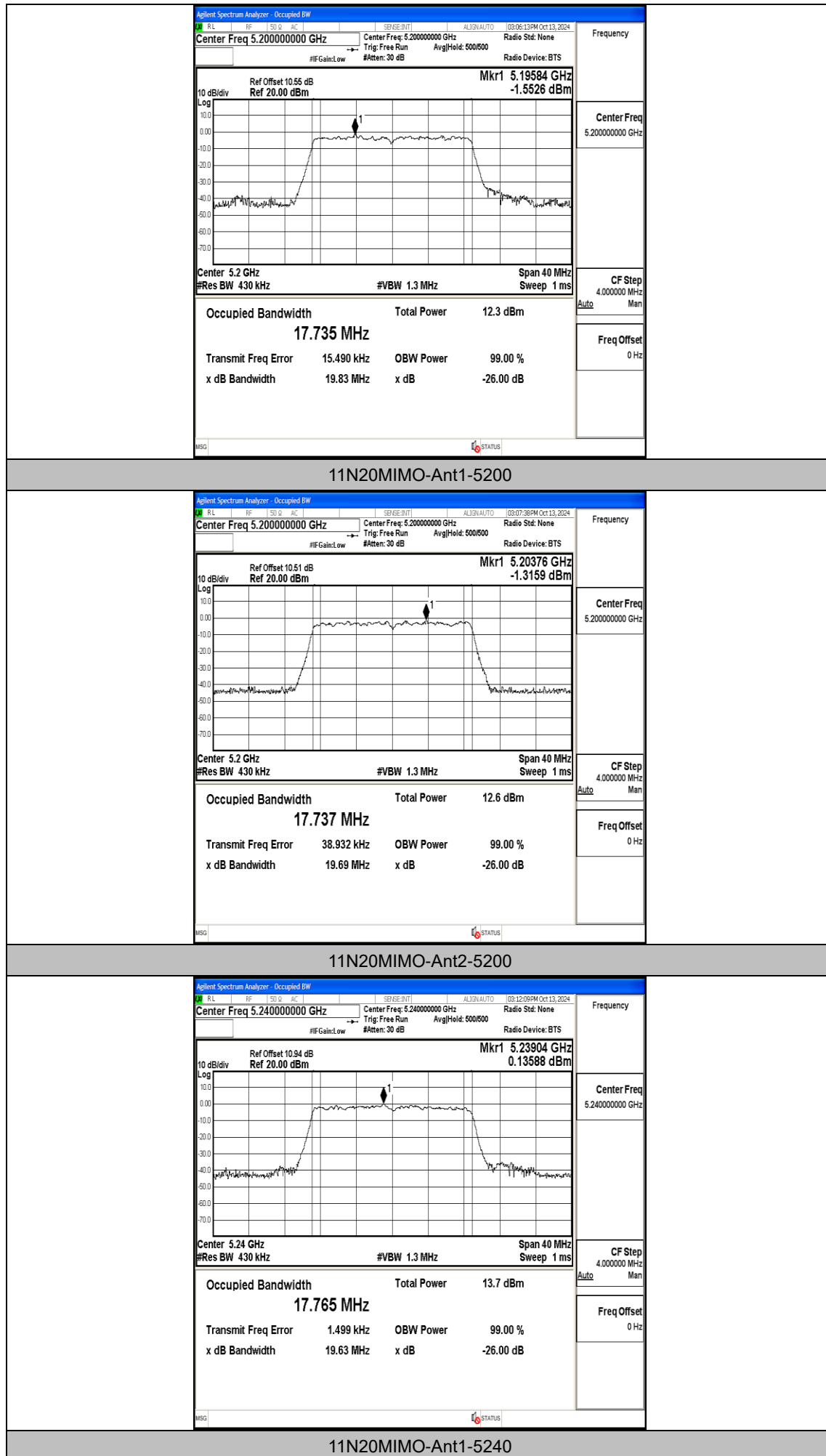
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5180	16.456	5171.7885	5188.2445	---	---
11A	Ant2	5180	16.441	5171.8018	5188.2428	---	---
11A	Ant1	5200	16.493	5191.7992	5208.2922	---	---
11A	Ant2	5200	16.464	5191.8021	5208.2661	---	---
11A	Ant1	5240	16.513	5231.7888	5248.3018	---	---
11A	Ant2	5240	16.469	5231.8011	5248.2701	---	---
11N20MIMO	Ant1	5180	17.758	5171.1349	5188.8929	---	---
11N20MIMO	Ant2	5180	17.722	5171.1453	5188.8673	---	---
11N20MIMO	Ant1	5200	17.735	5191.1480	5208.8830	---	---
11N20MIMO	Ant2	5200	17.737	5191.1704	5208.9074	---	---
11N20MIMO	Ant1	5240	17.765	5231.1190	5248.8840	---	---
11N20MIMO	Ant2	5240	17.785	5231.1498	5248.9348	---	---
11N40MIMO	Ant1	5190	36.273	5171.9520	5208.2250	---	---
11N40MIMO	Ant2	5190	36.339	5171.9163	5208.2553	---	---
11N40MIMO	Ant1	5230	36.241	5211.9927	5248.2337	---	---
11N40MIMO	Ant2	5230	36.263	5211.9706	5248.2336	---	---
11AC20MIMO	Ant1	5180	17.697	5171.1688	5188.8658	---	---
11AC20MIMO	Ant2	5180	17.680	5171.1953	5188.8753	---	---
11AC20MIMO	Ant1	5200	17.784	5191.1127	5208.8967	---	---
11AC20MIMO	Ant2	5200	17.782	5191.1100	5208.8920	---	---
11AC20MIMO	Ant1	5240	17.710	5231.1400	5248.8500	---	---
11AC20MIMO	Ant2	5240	17.712	5231.1320	5248.8440	---	---
11AC40MIMO	Ant1	5190	36.444	5171.8566	5208.3006	---	---
11AC40MIMO	Ant2	5190	36.412	5171.8858	5208.2978	---	---
11AC40MIMO	Ant1	5230	36.150	5212.0156	5248.1656	---	---
11AC40MIMO	Ant2	5230	36.173	5211.9996	5248.1726	---	---
11AC80MIMO	Ant1	5210	75.737	5172.1883	5247.9253	---	---
11AC80MIMO	Ant2	5210	75.986	5172.0866	5248.0726	---	---

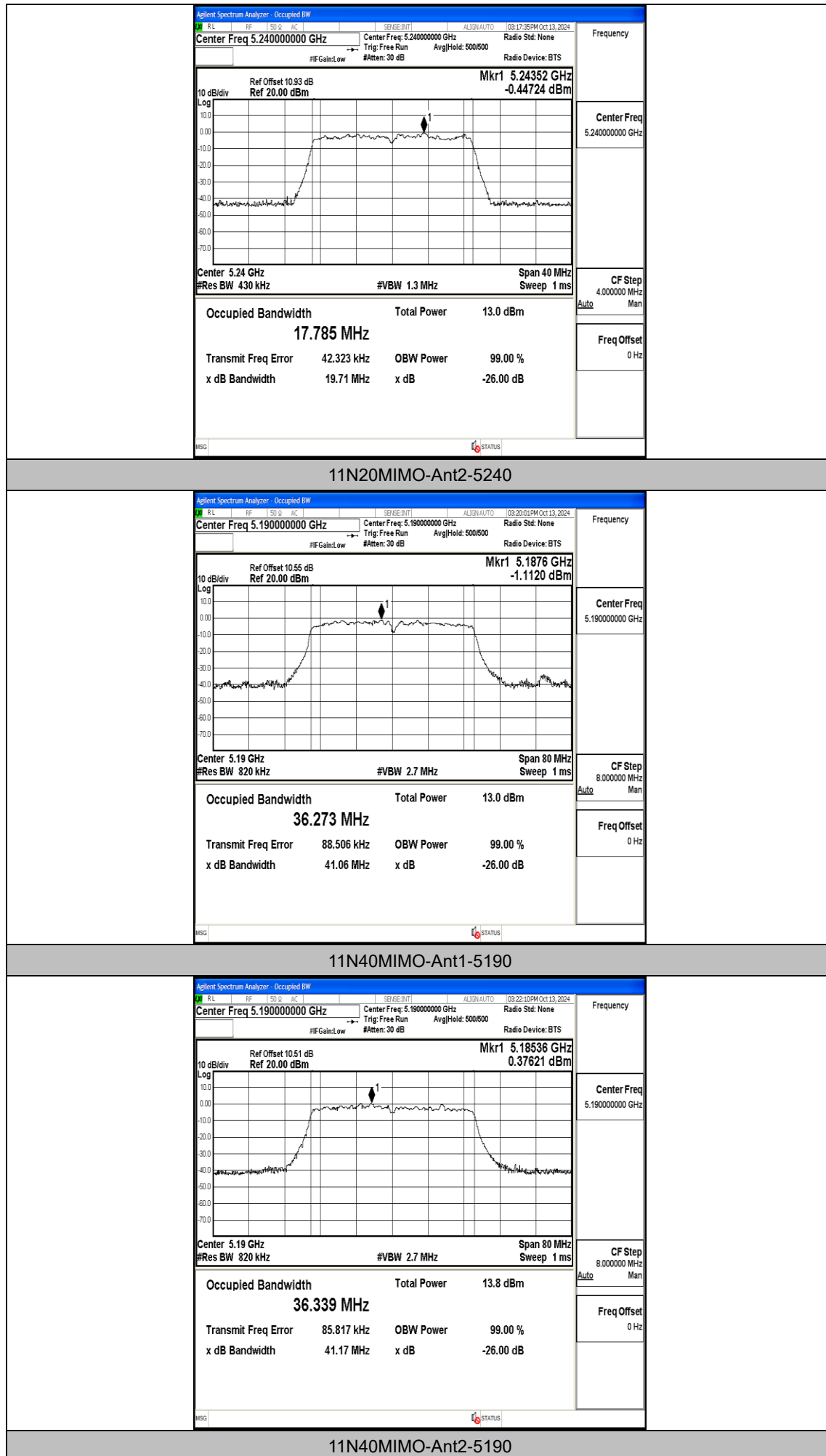
Test Graphs

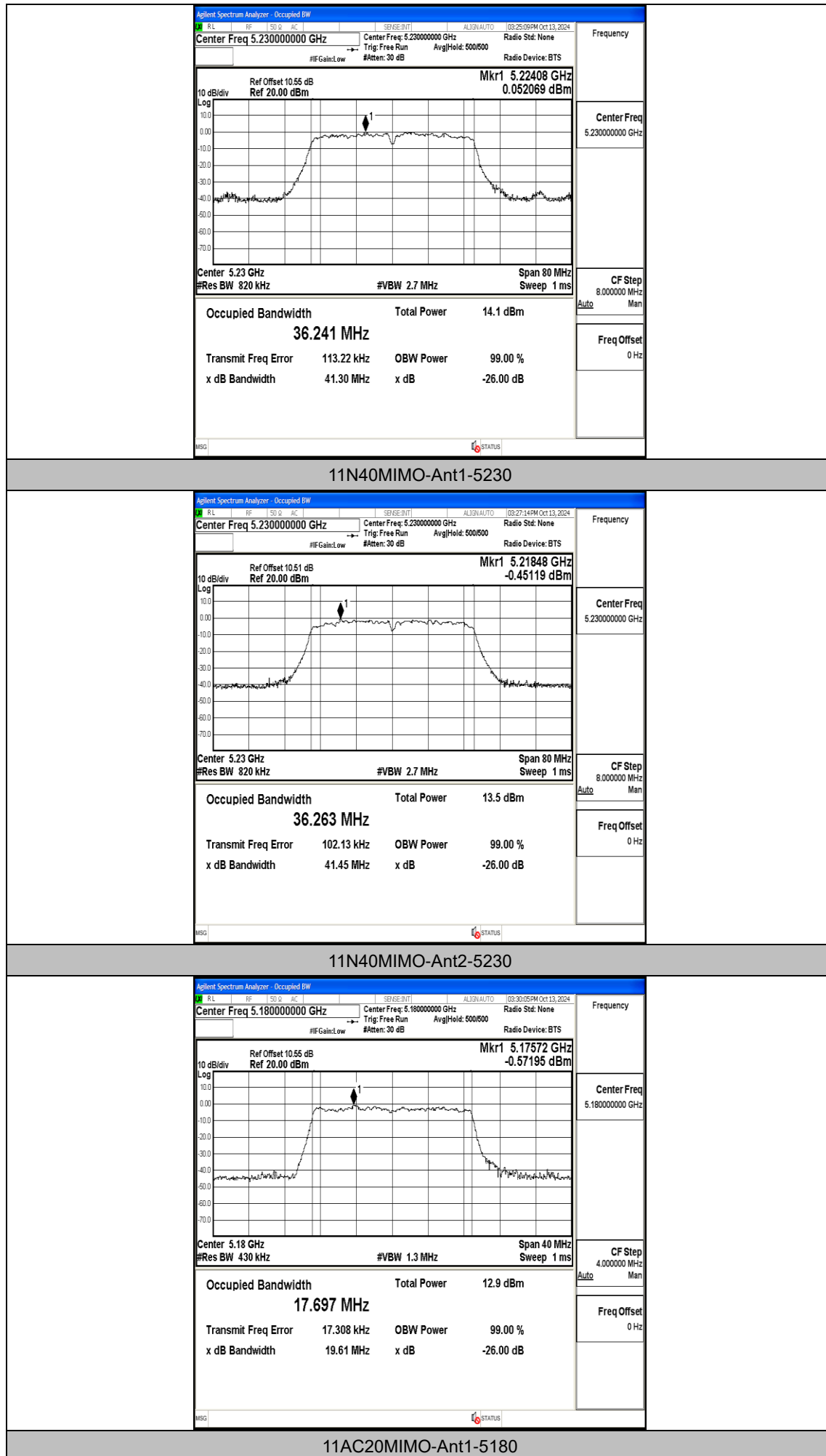


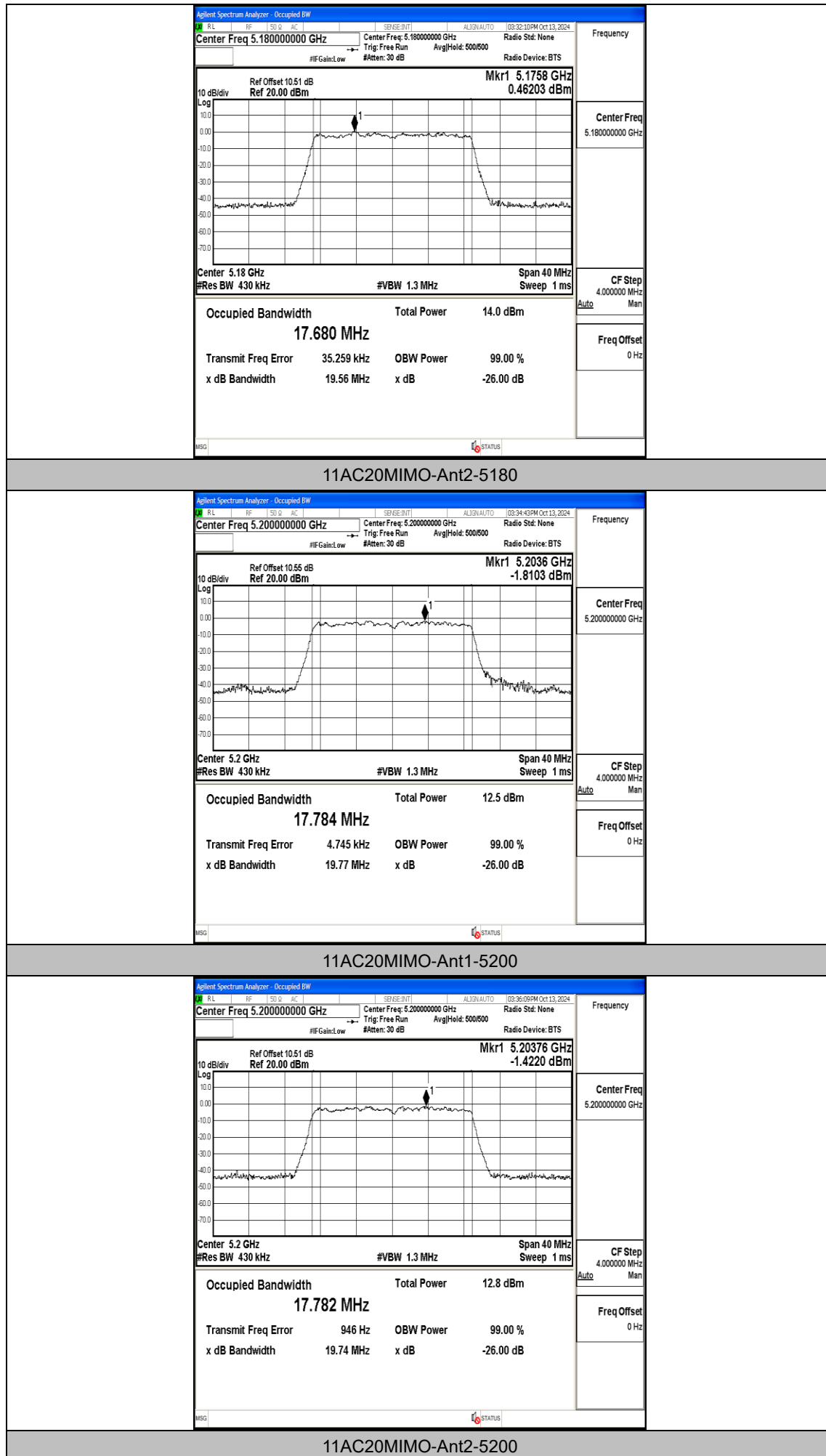


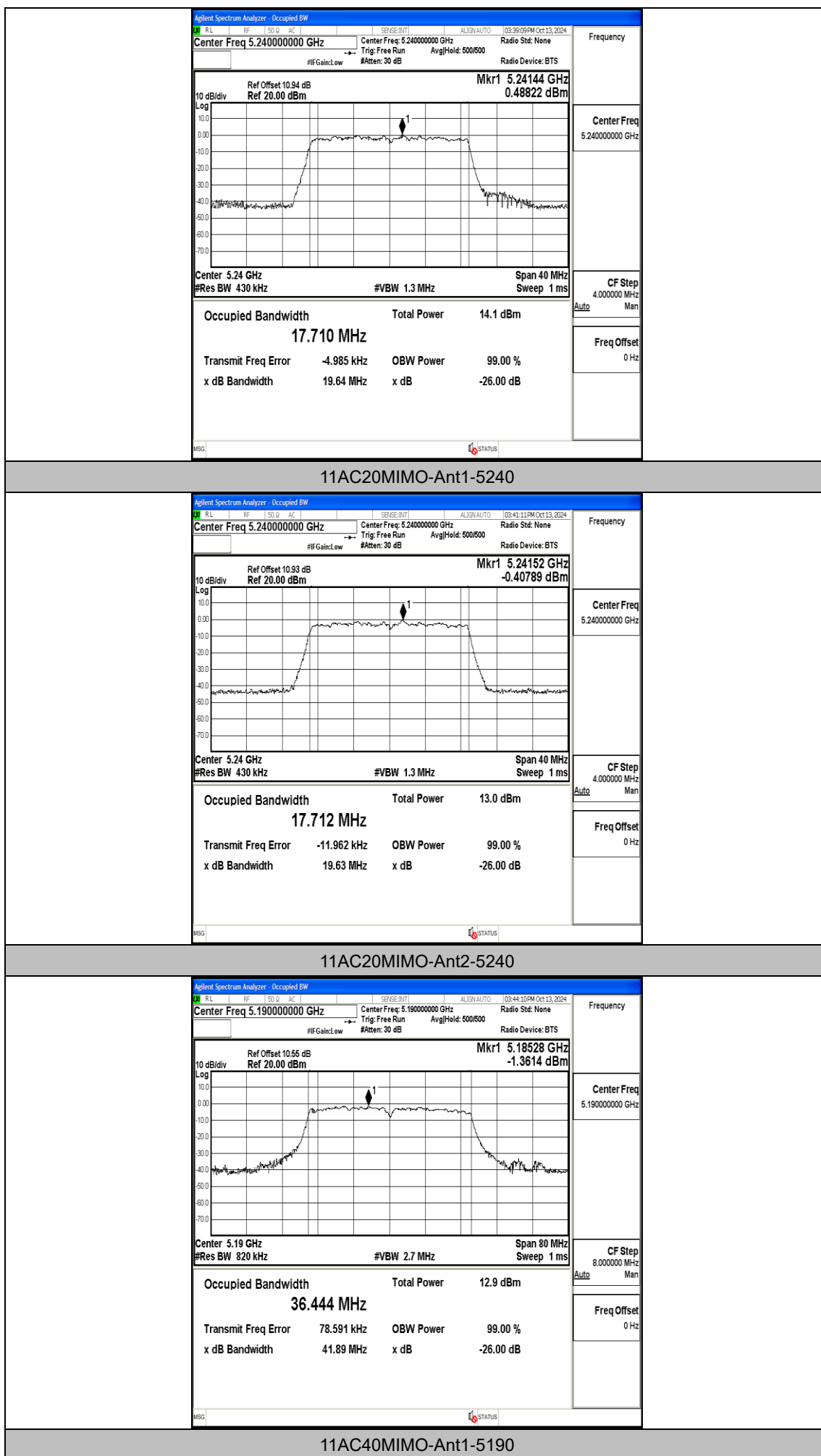


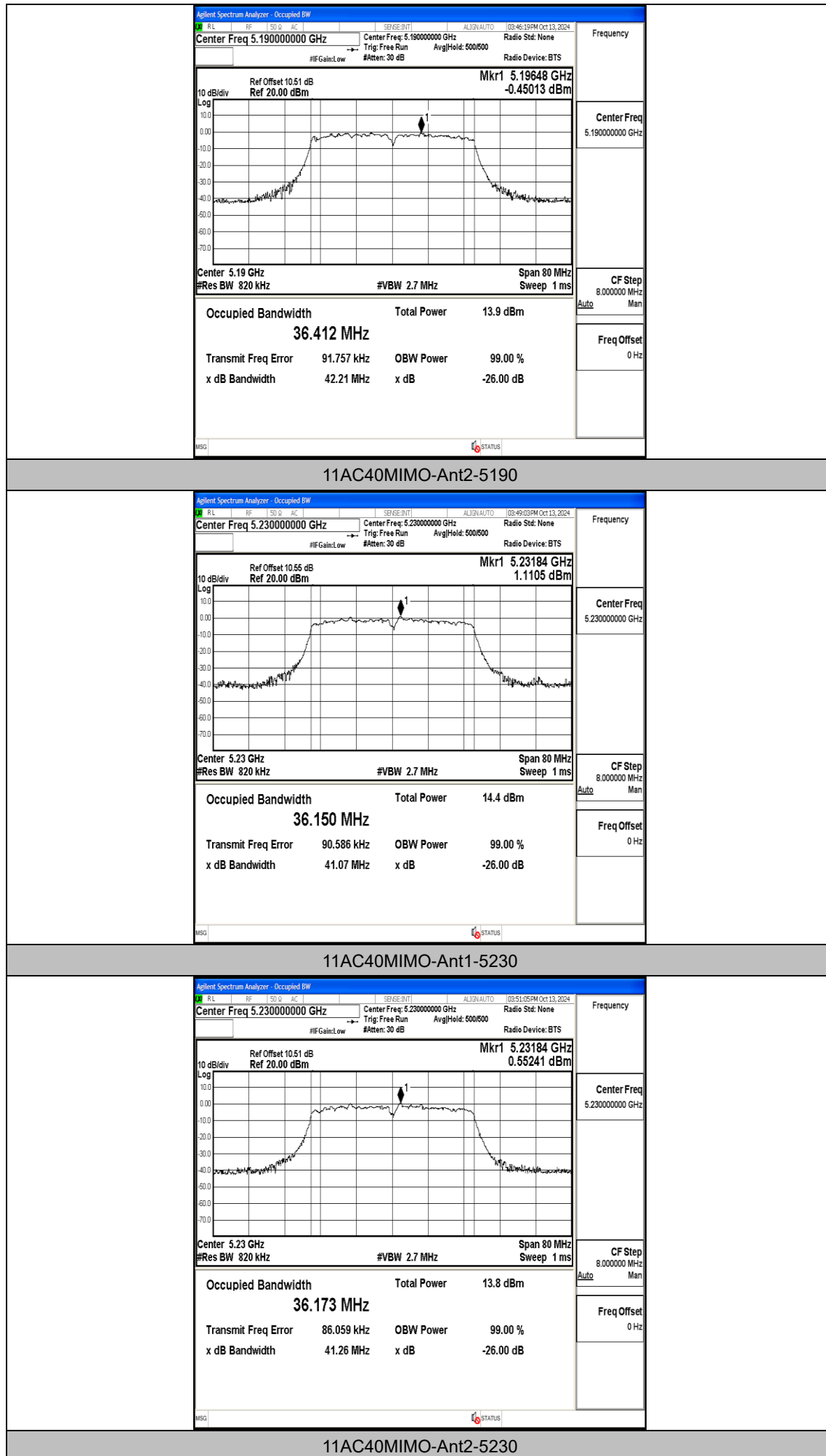


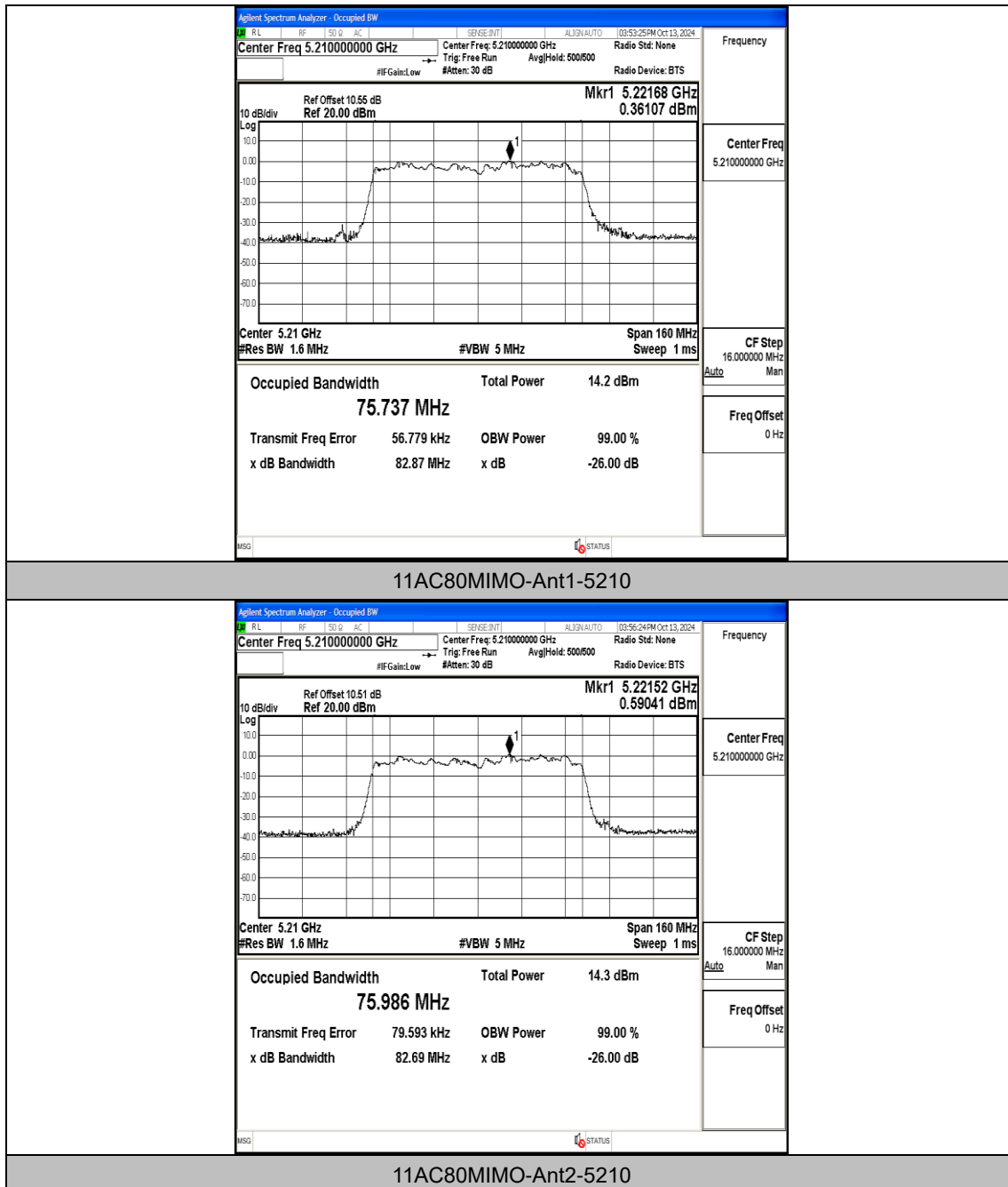












Appendix B: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11A	Ant1	5180	8.12	≤23.98	PASS
11A	Ant2	5180	8.97	≤23.98	PASS
11A	Ant1	5200	7.44	≤23.98	PASS
11A	Ant2	5200	7.39	≤23.98	PASS
11A	Ant1	5240	8.67	≤23.98	PASS
11A	Ant2	5240	7.78	≤23.98	PASS
11N20MIMO	Ant1	5180	6.38	≤23.98	PASS
11N20MIMO	Ant2	5180	7.89	≤23.98	PASS
11N20MIMO	total	5180	10.21	≤23.98	PASS
11N20MIMO	Ant1	5200	6.25	≤23.98	PASS
11N20MIMO	Ant2	5200	7.01	≤23.98	PASS
11N20MIMO	total	5200	9.66	≤23.98	PASS
11N20MIMO	Ant1	5240	8.01	≤23.98	PASS
11N20MIMO	Ant2	5240	6.85	≤23.98	PASS
11N20MIMO	total	5240	10.48	≤23.98	PASS
11N40MIMO	Ant1	5190	6.57	≤23.98	PASS
11N40MIMO	Ant2	5190	8.18	≤23.98	PASS
11N40MIMO	total	5190	10.46	≤23.98	PASS
11N40MIMO	Ant1	5230	8.55	≤23.98	PASS
11N40MIMO	Ant2	5230	7.26	≤23.98	PASS
11N40MIMO	total	5230	10.96	≤23.98	PASS
11AC20MIMO	Ant1	5180	6.03	≤23.98	PASS
11AC20MIMO	Ant2	5180	7.62	≤23.98	PASS
11AC20MIMO	total	5180	9.91	≤23.98	PASS
11AC20MIMO	Ant1	5200	6.02	≤23.98	PASS
11AC20MIMO	Ant2	5200	6.28	≤23.98	PASS
11AC20MIMO	total	5200	9.16	≤23.98	PASS
11AC20MIMO	Ant1	5240	7.57	≤23.98	PASS
11AC20MIMO	Ant2	5240	6.71	≤23.98	PASS
11AC20MIMO	total	5240	10.17	≤23.98	PASS
11AC40MIMO	Ant1	5190	6.45	≤23.98	PASS
11AC40MIMO	Ant2	5190	7.77	≤23.98	PASS
11AC40MIMO	total	5190	10.17	≤23.98	PASS
11AC40MIMO	Ant1	5230	7.55	≤23.98	PASS
11AC40MIMO	Ant2	5230	6.96	≤23.98	PASS
11AC40MIMO	total	5230	10.28	≤23.98	PASS
11AC80MIMO	Ant1	5210	7.20	≤23.98	PASS
11AC80MIMO	Ant2	5210	7.79	≤23.98	PASS
11AC80MIMO	total	5210	10.52	≤23.98	PASS

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

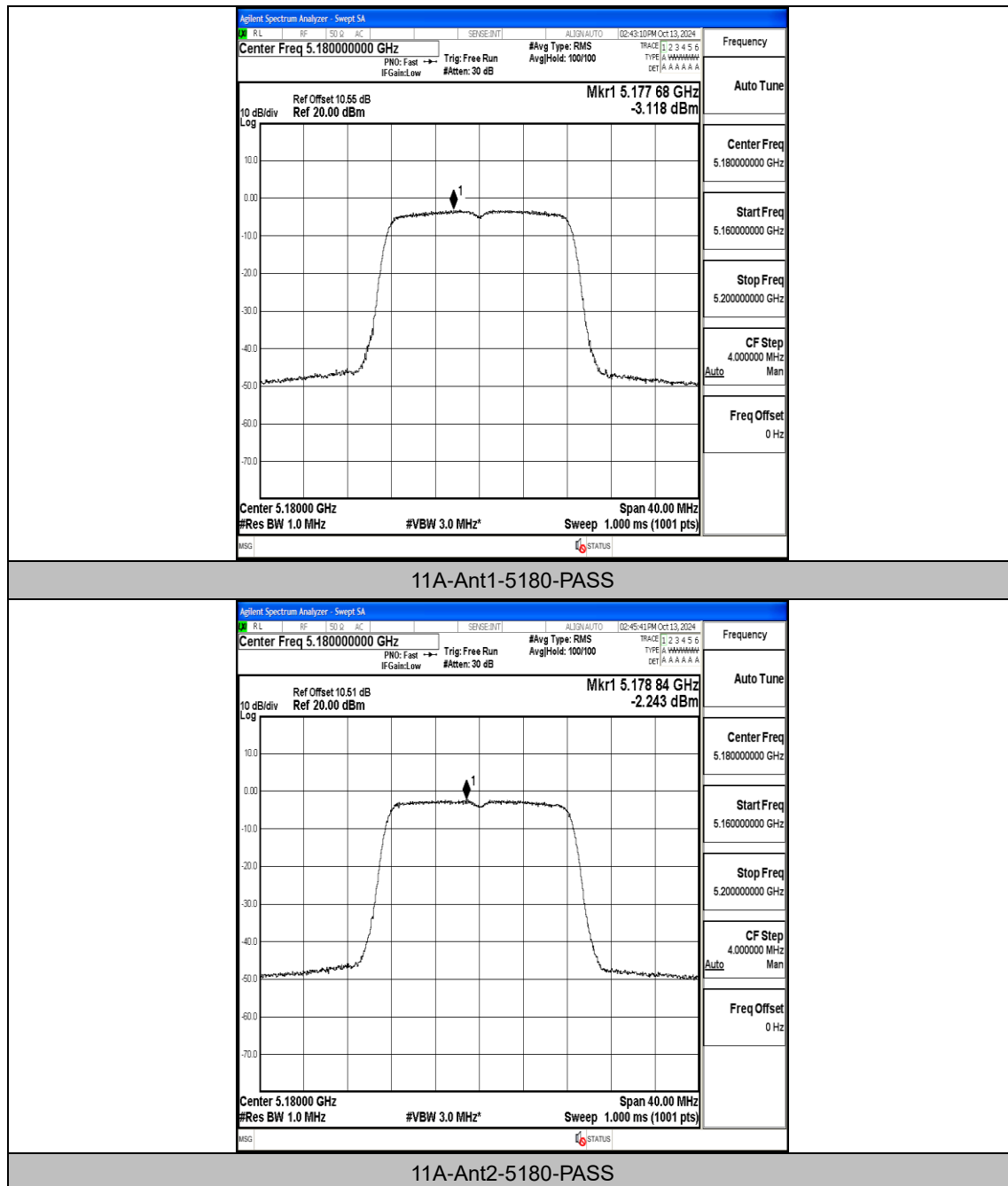
Appendix C: Maximum power spectral density

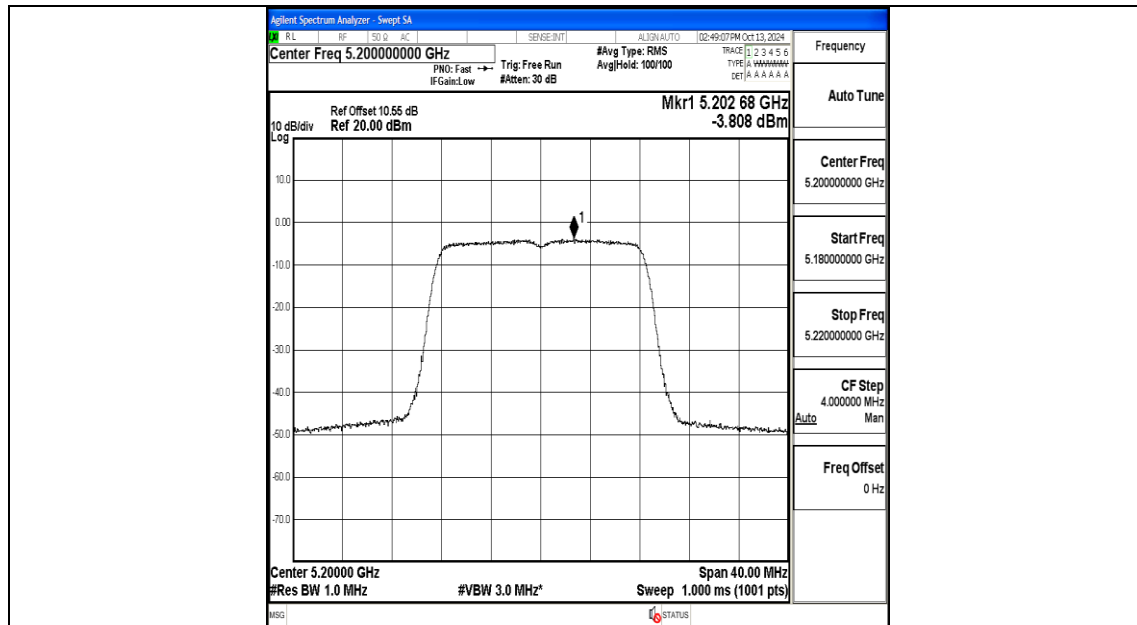
Test Result

Test Mode	Antenna	Frequency [MHz]	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5180	-3.12	≤11.00	PASS
11A	Ant2	5180	-2.24	≤11.00	PASS
11A	Ant1	5200	-3.81	≤11.00	PASS
11A	Ant2	5200	-4.04	≤11.00	PASS
11A	Ant1	5240	-2.60	≤11.00	PASS
11A	Ant2	5240	-3.74	≤11.00	PASS
11N20MIMO	Ant1	5180	-8.28	≤11.00	PASS
11N20MIMO	Ant2	5180	-6.64	≤11.00	PASS
11N20MIMO	total	5180	-4.37	≤9.32	PASS
11N20MIMO	Ant1	5200	-7.76	≤11.00	PASS
11N20MIMO	Ant2	5200	-8.19	≤11.00	PASS
11N20MIMO	total	5200	-4.96	≤9.32	PASS
11N20MIMO	Ant1	5240	-6.49	≤11.00	PASS
11N20MIMO	Ant2	5240	-7.20	≤11.00	PASS
11N20MIMO	total	5240	-3.82	≤9.32	PASS
11N40MIMO	Ant1	5190	-11.12	≤11.00	PASS
11N40MIMO	Ant2	5190	-10.98	≤11.00	PASS
11N40MIMO	total	5190	-8.04	≤9.32	PASS
11N40MIMO	Ant1	5230	-9.48	≤11.00	PASS
11N40MIMO	Ant2	5230	-11.02	≤11.00	PASS
11N40MIMO	total	5230	-7.17	≤9.32	PASS
11AC20MIMO	Ant1	5180	-7.00	≤11.00	PASS
11AC20MIMO	Ant2	5180	-6.43	≤11.00	PASS
11AC20MIMO	total	5180	-3.70	≤9.32	PASS
11AC20MIMO	Ant1	5200	-7.65	≤11.00	PASS
11AC20MIMO	Ant2	5200	-7.49	≤11.00	PASS
11AC20MIMO	total	5200	-4.56	≤9.32	PASS
11AC20MIMO	Ant1	5240	-6.13	≤11.00	PASS
11AC20MIMO	Ant2	5240	-7.28	≤11.00	PASS
11AC20MIMO	total	5240	-3.66	≤9.32	PASS
11AC40MIMO	Ant1	5190	-11.57	≤11.00	PASS
11AC40MIMO	Ant2	5190	-10.95	≤11.00	PASS
11AC40MIMO	total	5190	-8.24	≤9.32	PASS
11AC40MIMO	Ant1	5230	-11.53	≤11.00	PASS
11AC40MIMO	Ant2	5230	-10.83	≤11.00	PASS
11AC40MIMO	total	5230	-8.16	≤9.32	PASS
11AC80MIMO	Ant1	5210	-14.86	≤11.00	PASS
11AC80MIMO	Ant2	5210	-14.24	≤11.00	PASS
11AC80MIMO	total	5210	-11.53	≤9.32	PASS

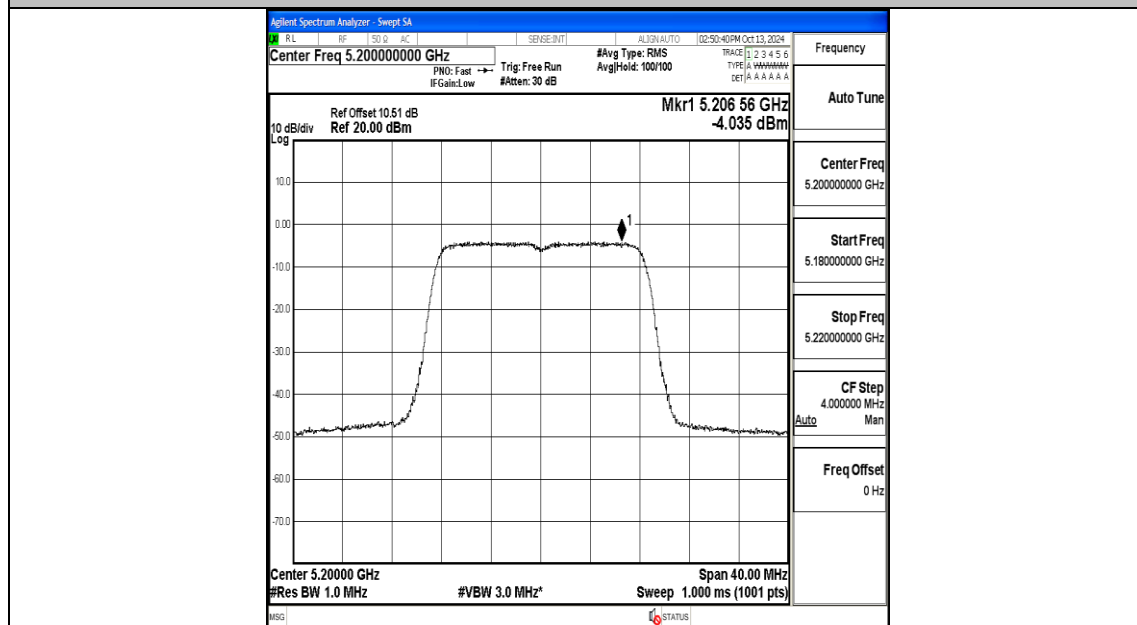
Note: The Duty Cycle Factor and RBW Factor is compensated in the result.

Test Graphs

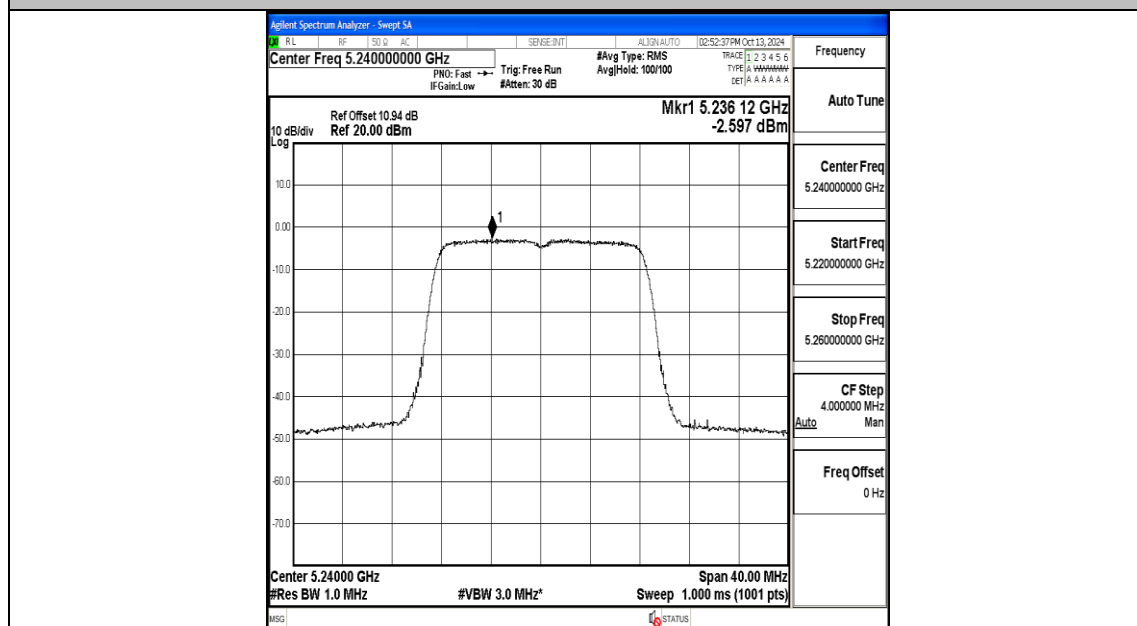




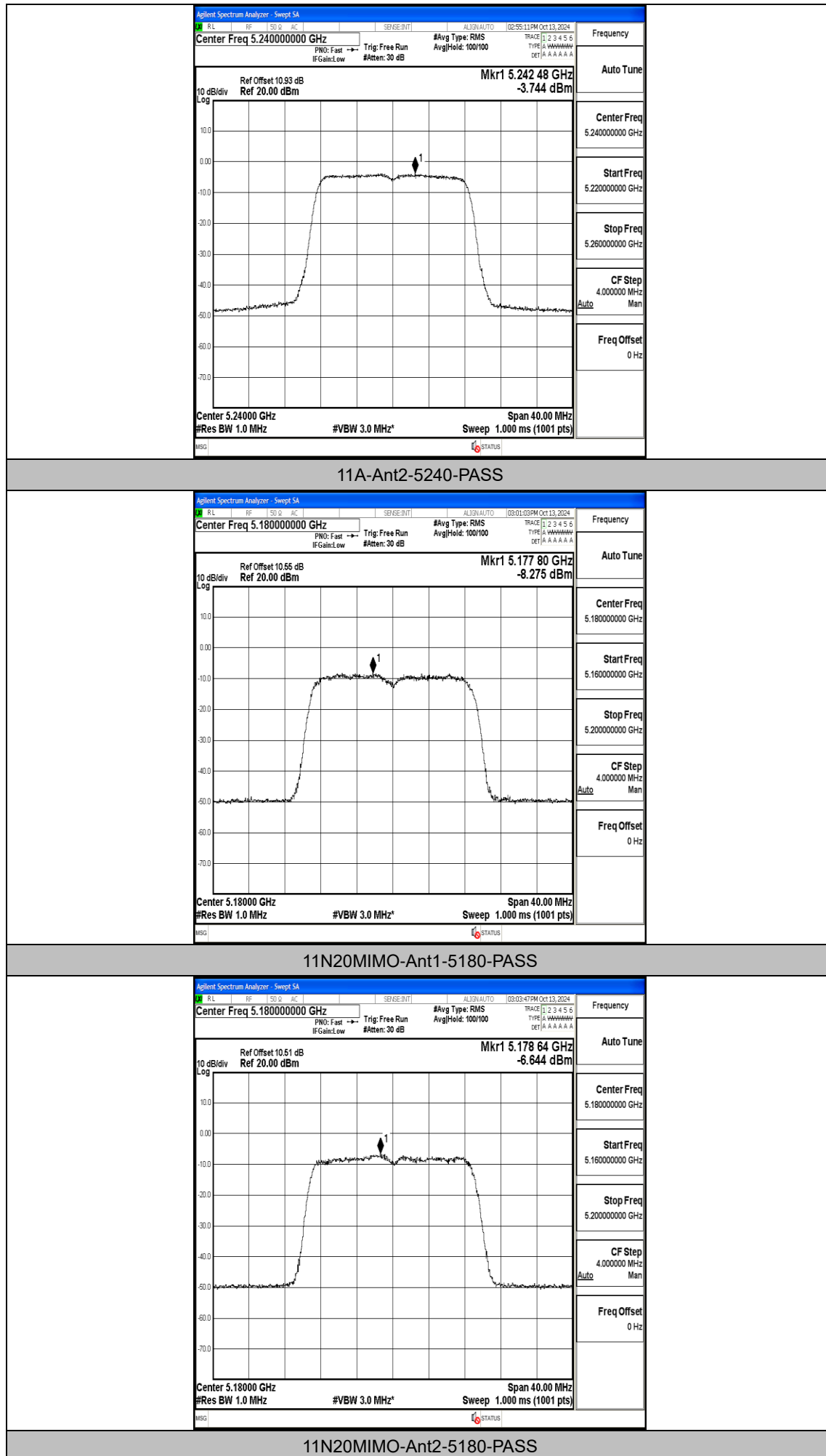
11A-Ant1-5200-PASS

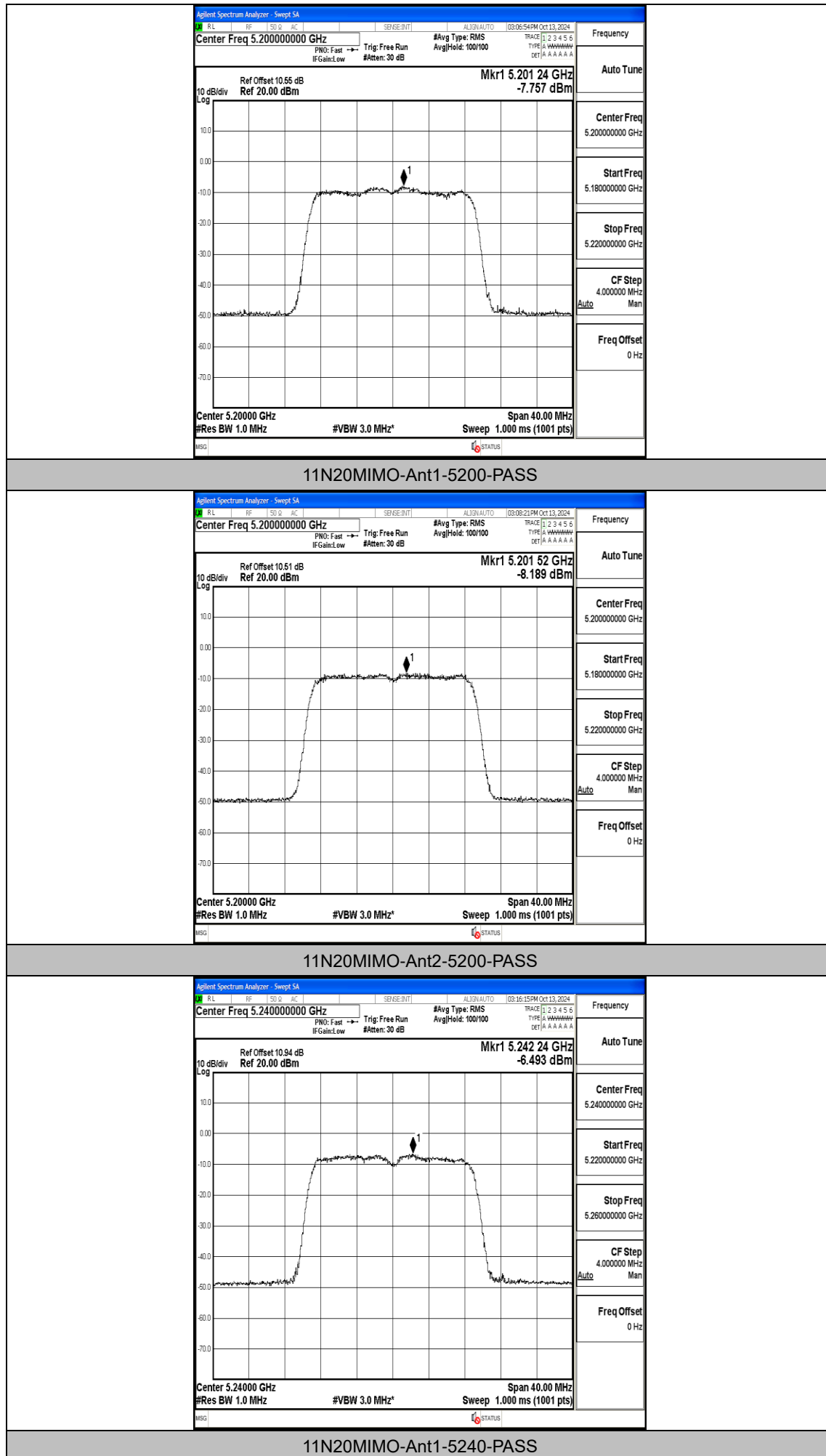


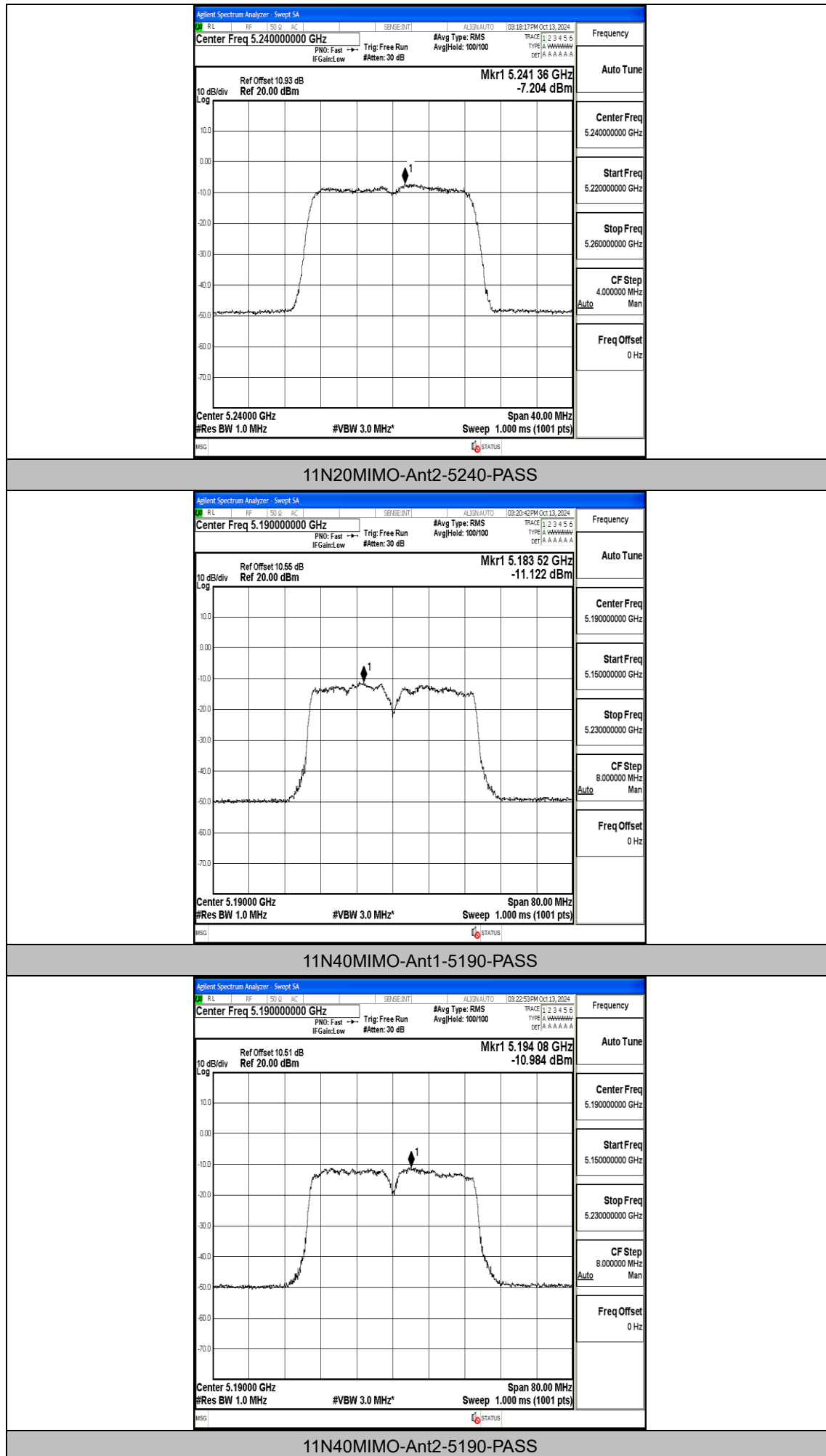
11A-Ant2-5200-PASS

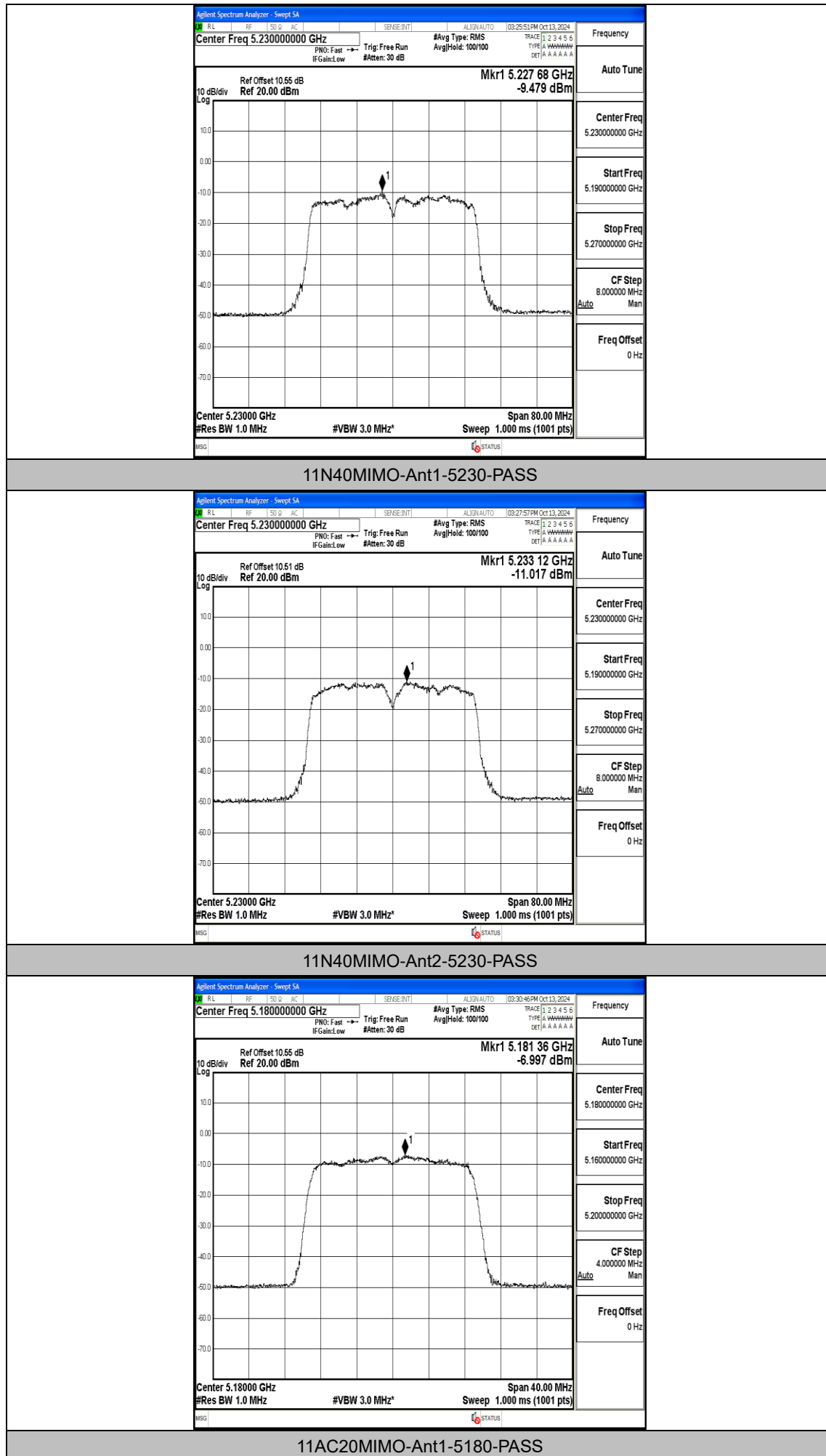


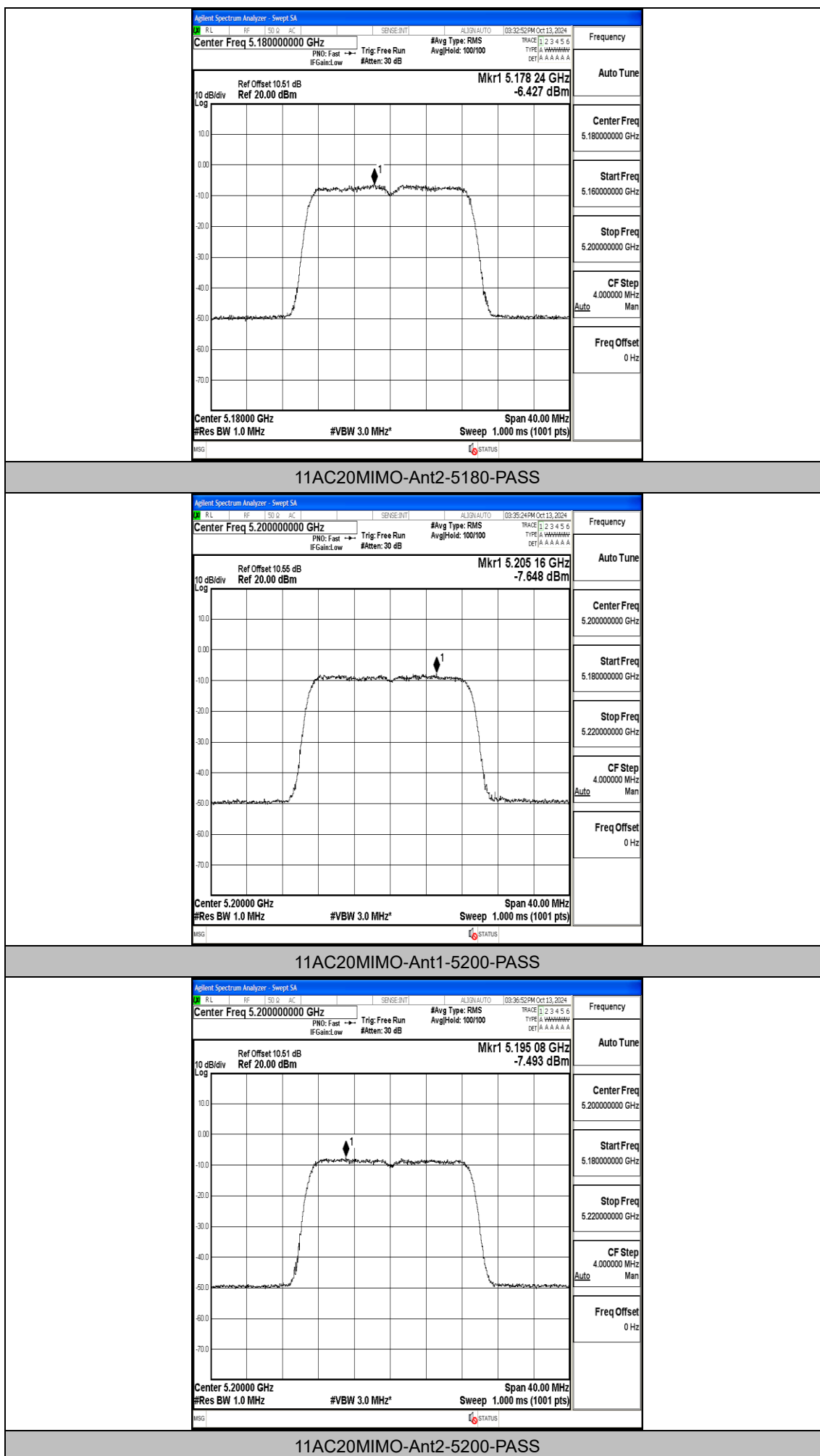
11A-Ant1-5240-PASS

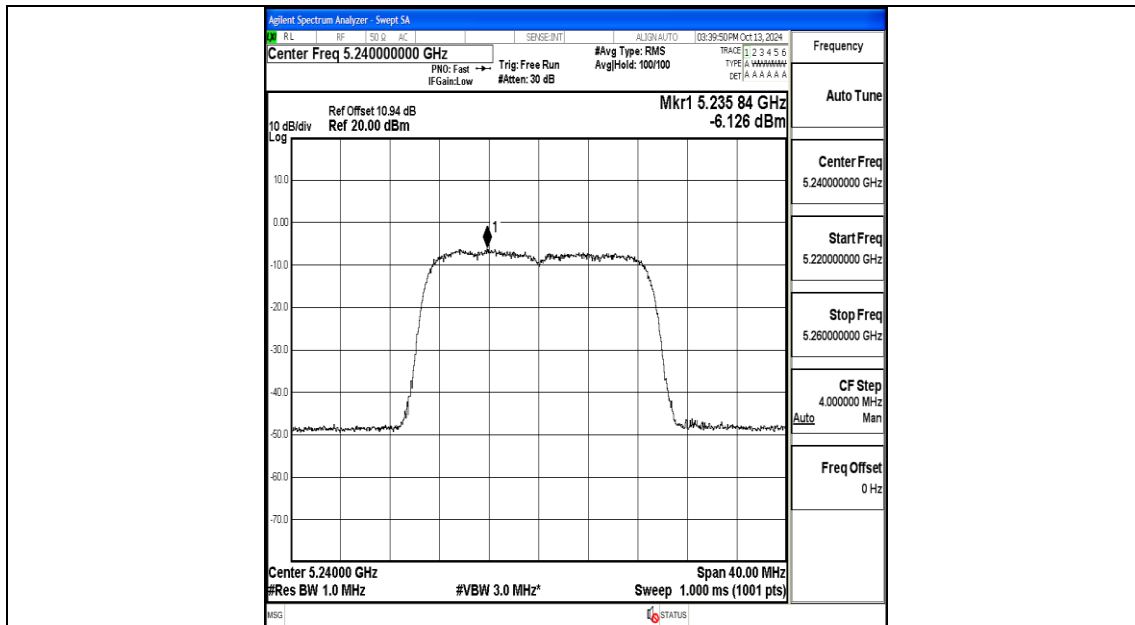




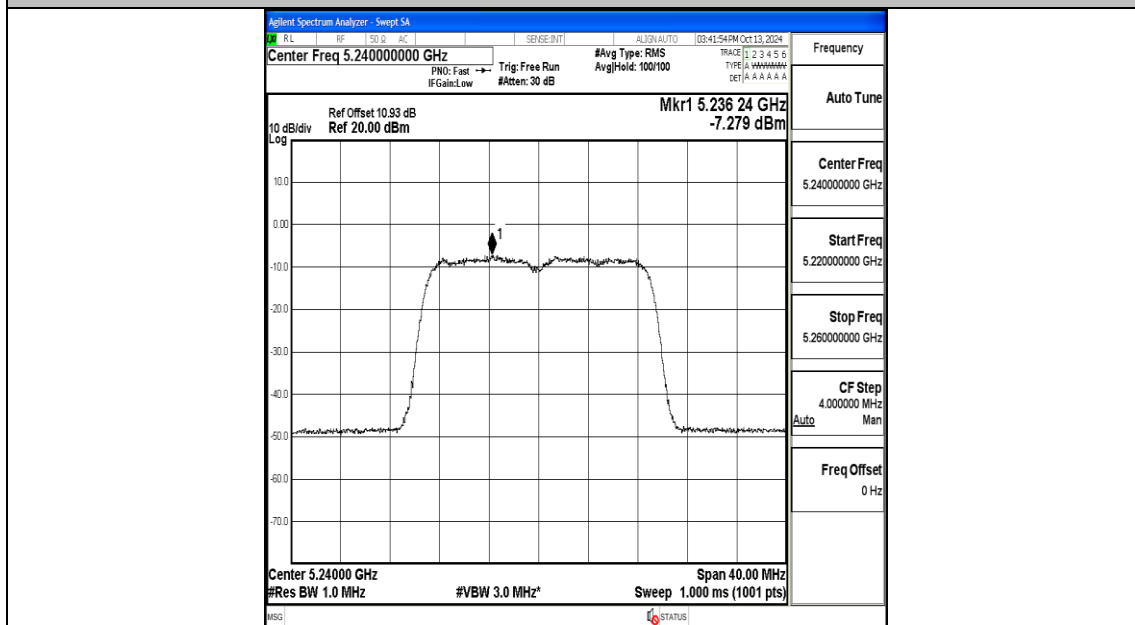




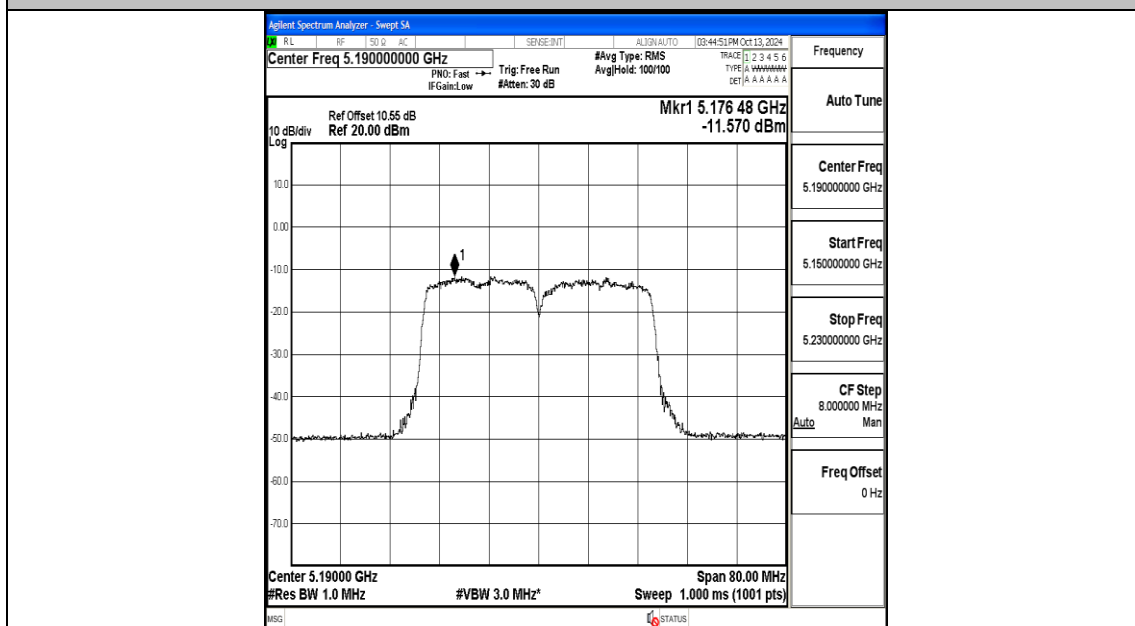




11AC20MIMO-Ant1-5240-PASS



11AC20MIMO-Ant2-5240-PASS



11AC40MIMO-Ant1-5190-PASS

