

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

Product Name: DRONE

Trade Mark: /

Test Model: F11PRO 2

FCC ID: 2AXQL-F11PRO2YK

Environmental Conditions

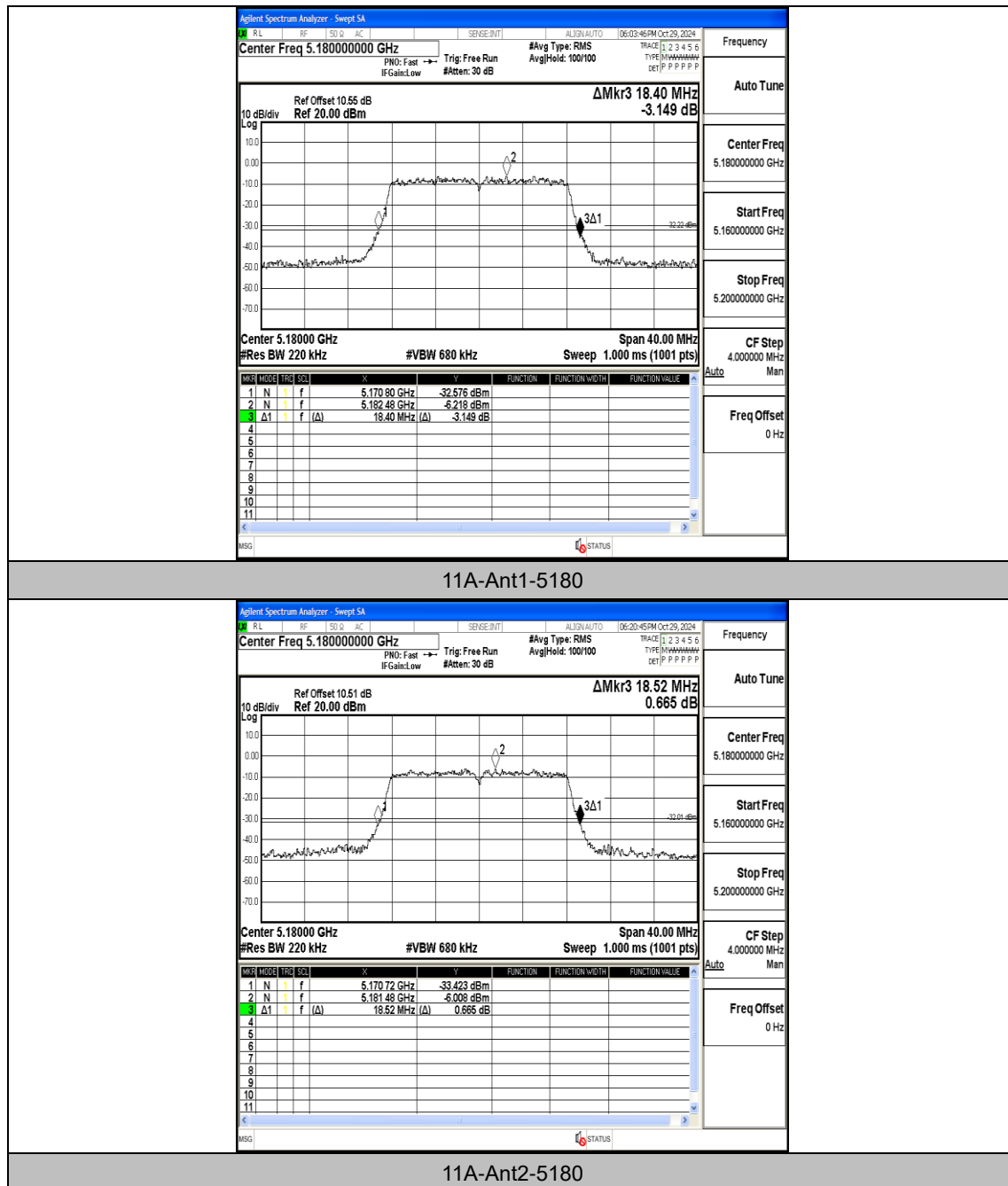
Temperature:	23.8℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

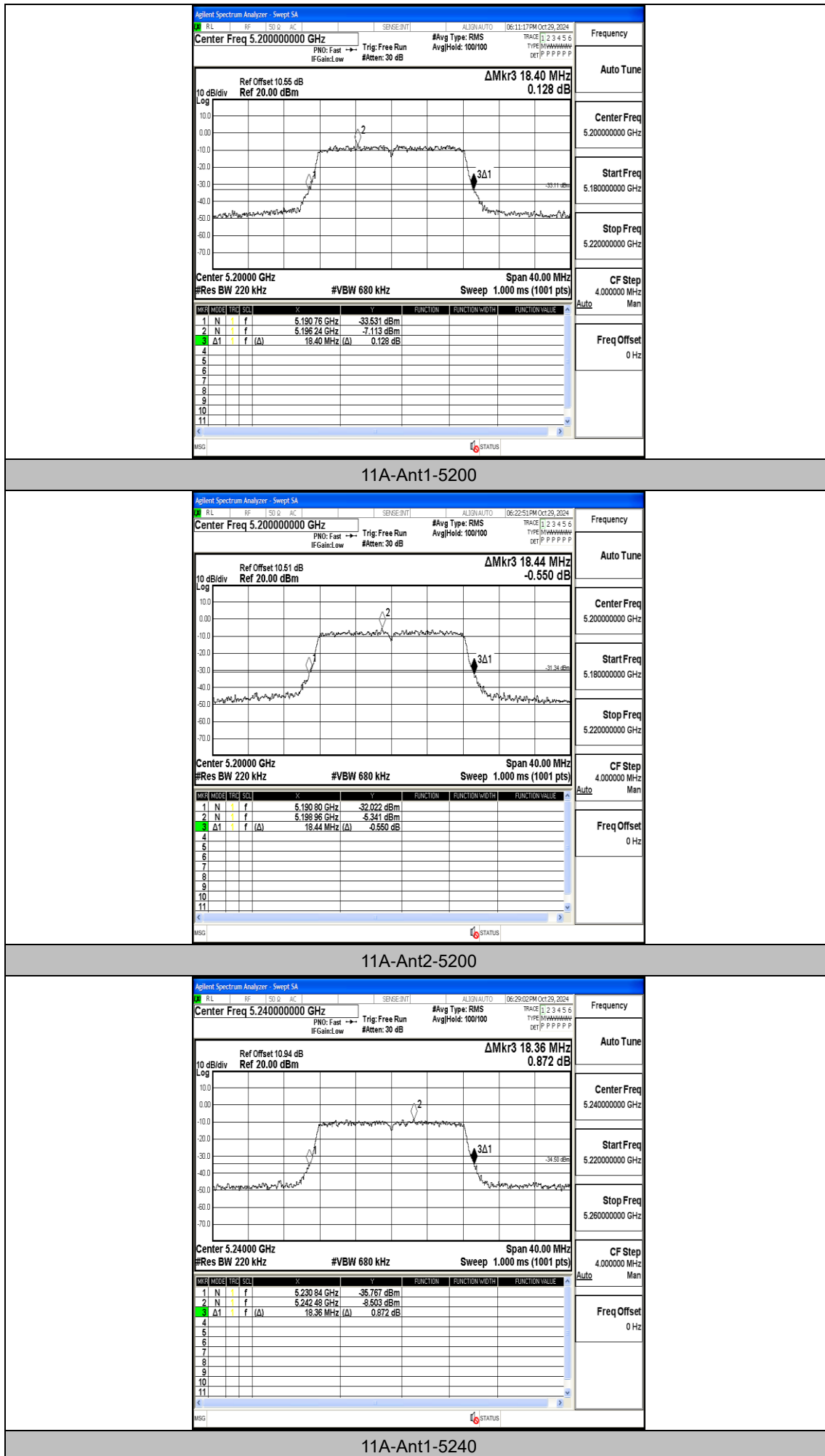
Appendix A1: Emission Bandwidth

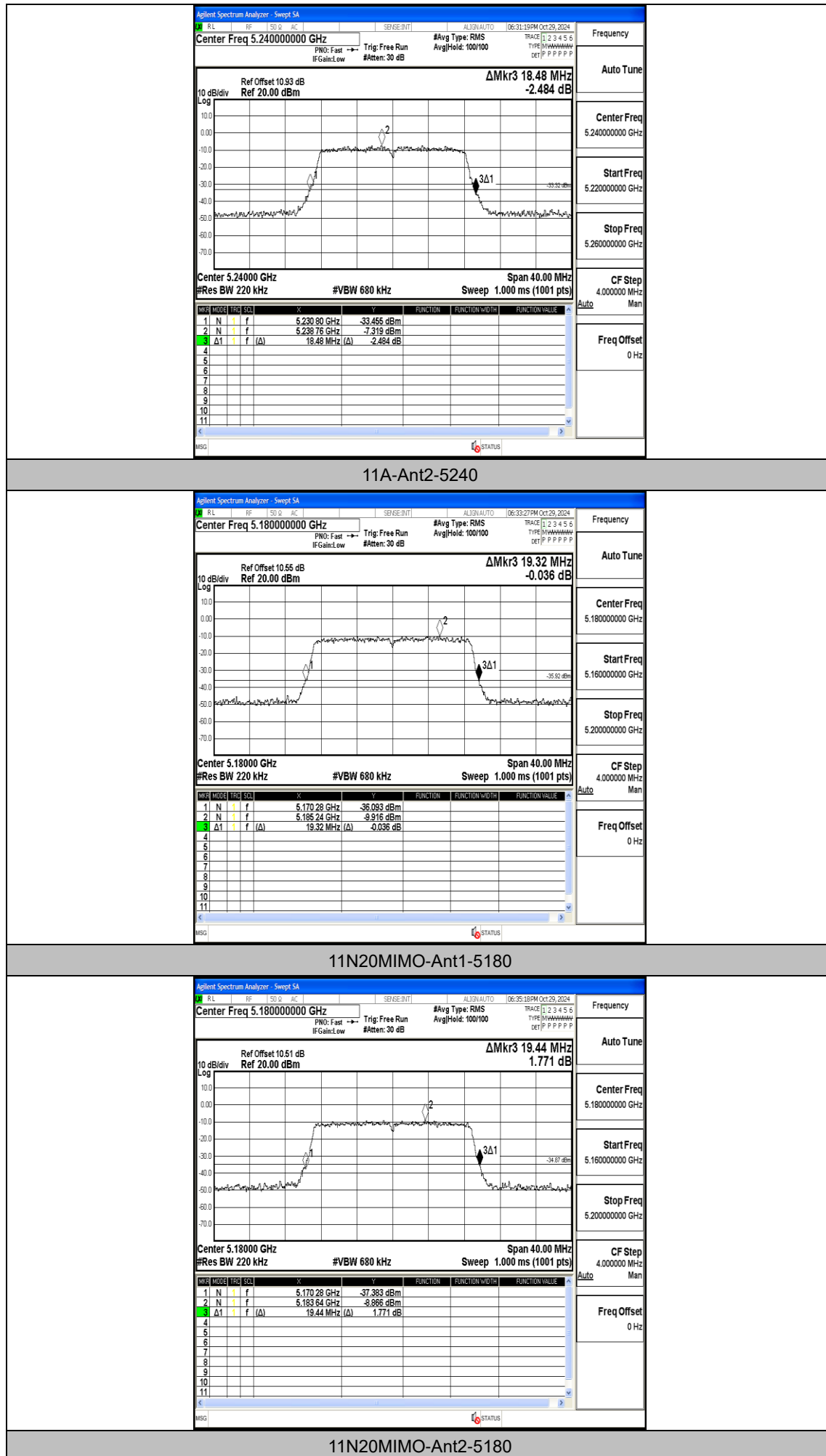
Test Result

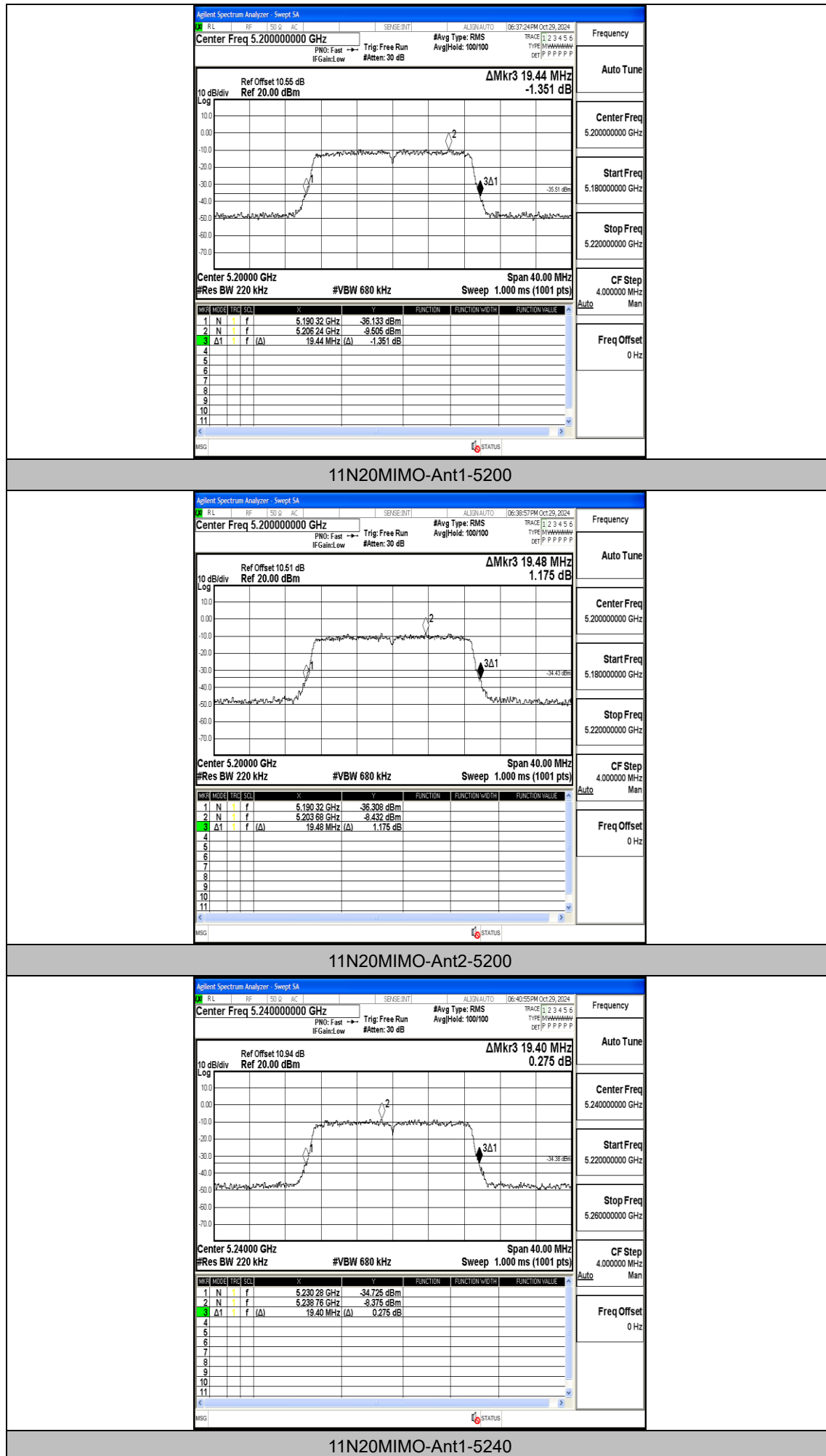
Test Mode	Antenna	Frequency [MHz]	26db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5180	18.400	5170.800	5189.200	---	---
11A	Ant2	5180	18.520	5170.720	5189.240	---	---
11A	Ant1	5200	18.400	5190.760	5209.160	---	---
11A	Ant2	5200	18.440	5190.800	5209.240	---	---
11A	Ant1	5240	18.360	5230.840	5249.200	---	---
11A	Ant2	5240	18.480	5230.800	5249.280	---	---
11N20MIMO	Ant1	5180	19.320	5170.280	5189.600	---	---
11N20MIMO	Ant2	5180	19.440	5170.280	5189.720	---	---
11N20MIMO	Ant1	5200	19.440	5190.320	5209.760	---	---
11N20MIMO	Ant2	5200	19.480	5190.320	5209.800	---	---
11N20MIMO	Ant1	5240	19.400	5230.280	5249.680	---	---
11N20MIMO	Ant2	5240	19.280	5230.360	5249.640	---	---
11AC20MIMO	Ant1	5180	19.360	5170.360	5189.720	---	---
11AC20MIMO	Ant2	5180	19.520	5170.240	5189.760	---	---
11AC20MIMO	Ant1	5200	19.480	5190.200	5209.680	---	---
11AC20MIMO	Ant2	5200	19.360	5190.320	5209.680	---	---
11AC20MIMO	Ant1	5240	19.400	5230.320	5249.720	---	---
11AC20MIMO	Ant2	5240	19.520	5230.240	5249.760	---	---

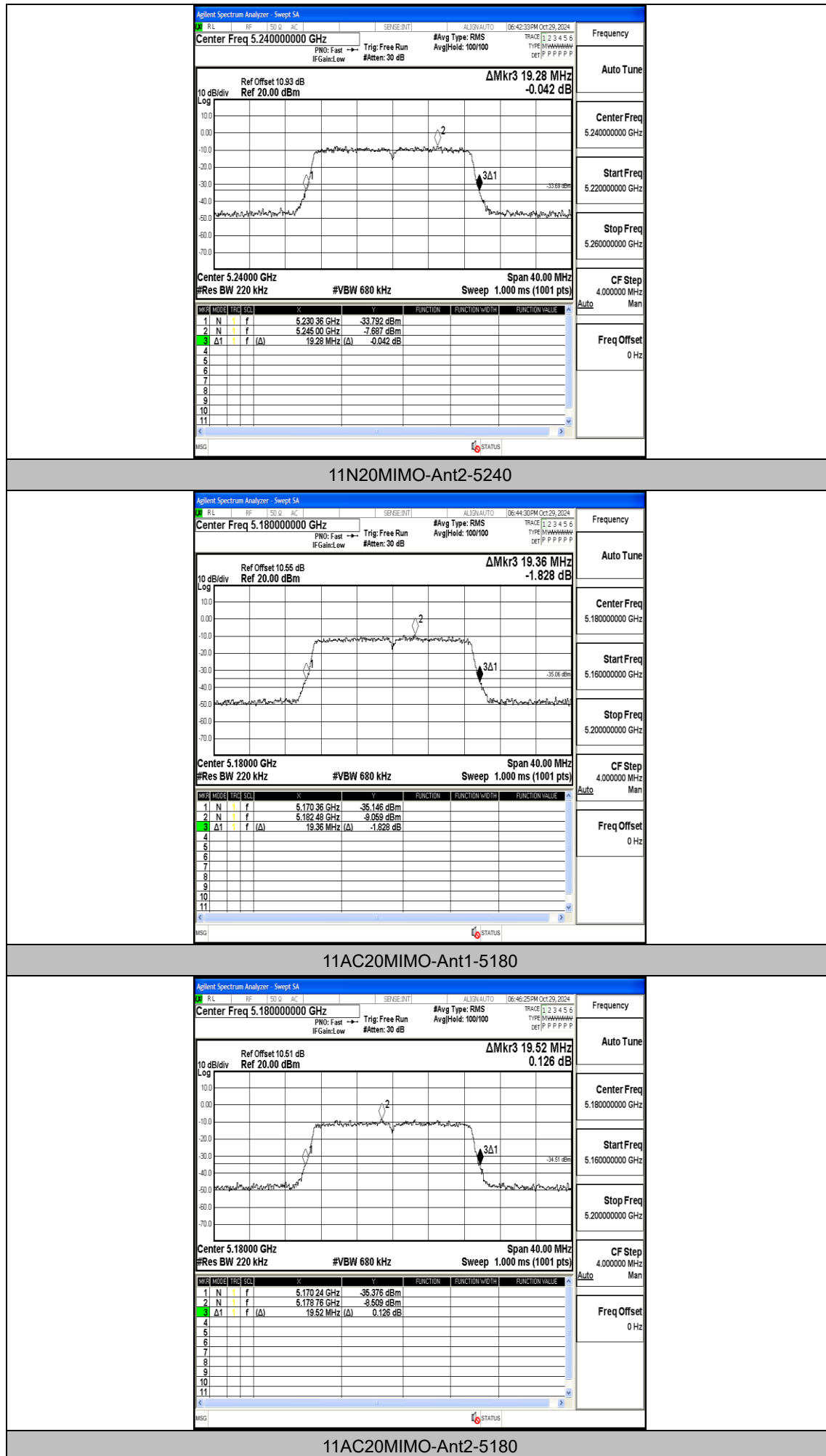
Test Graphs

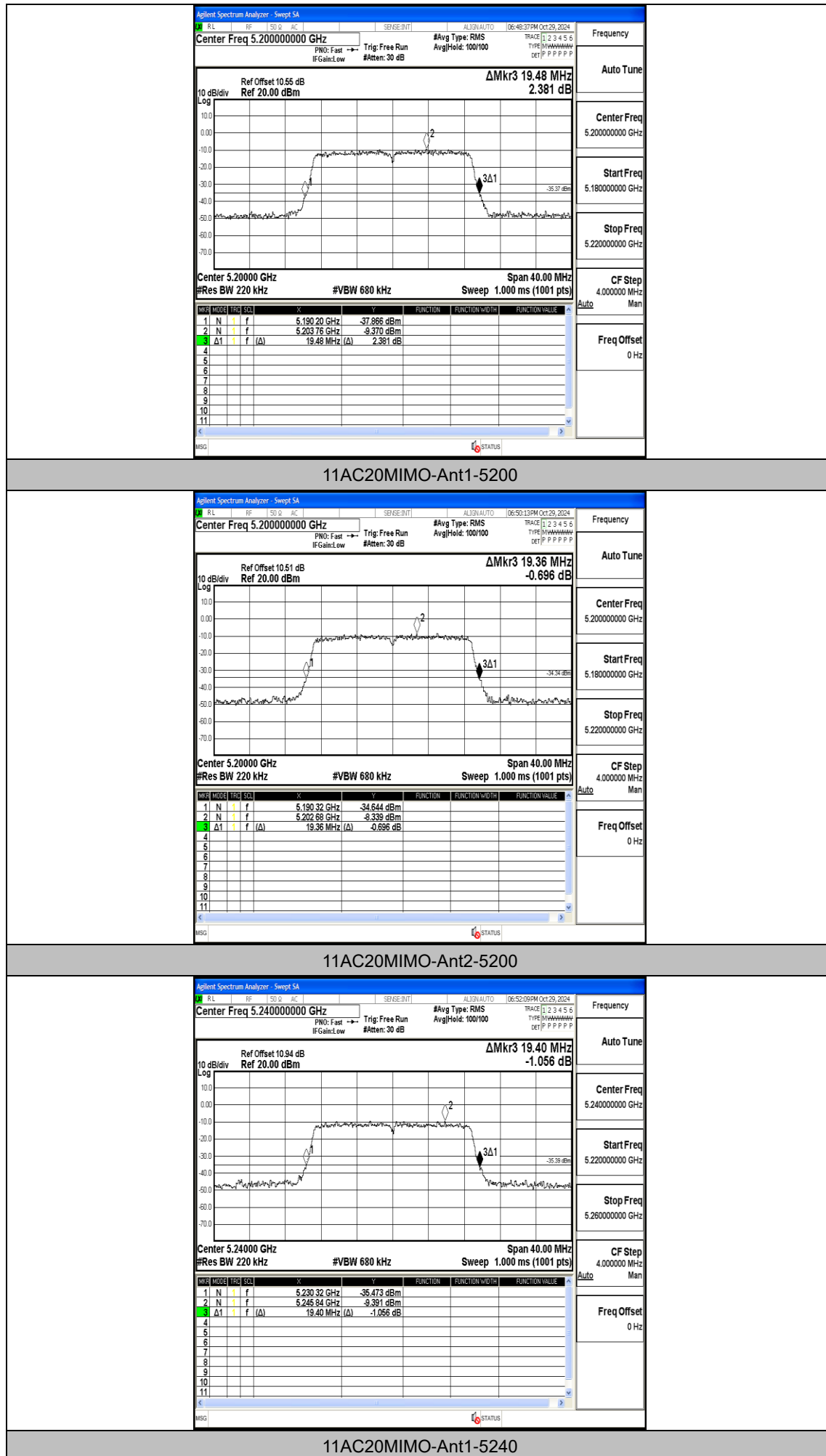


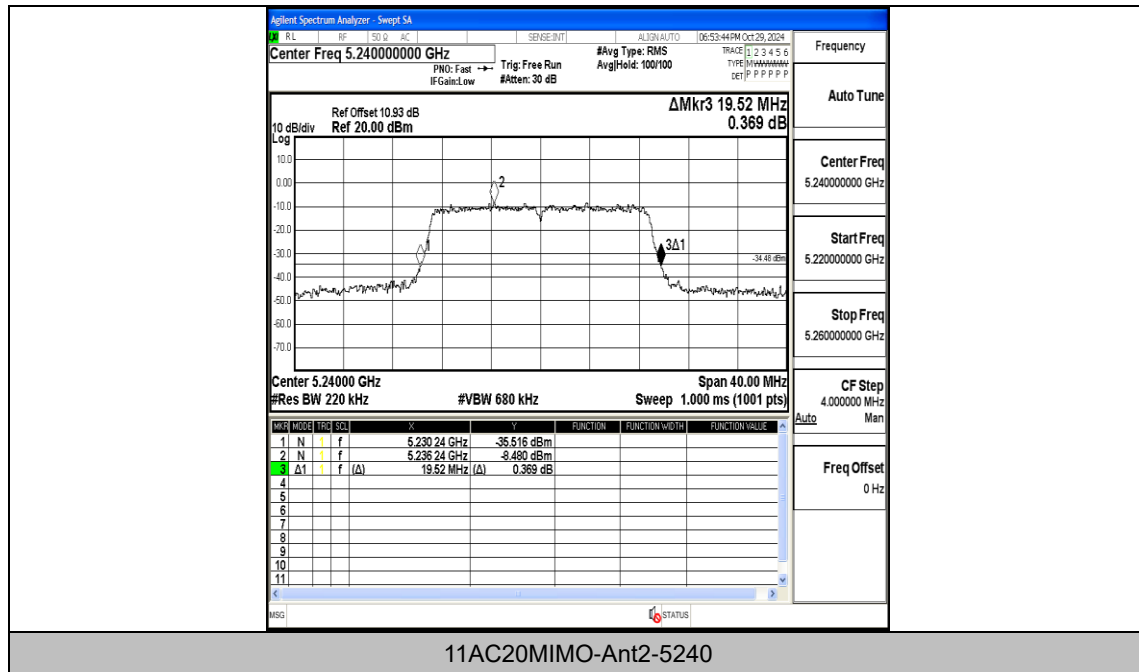










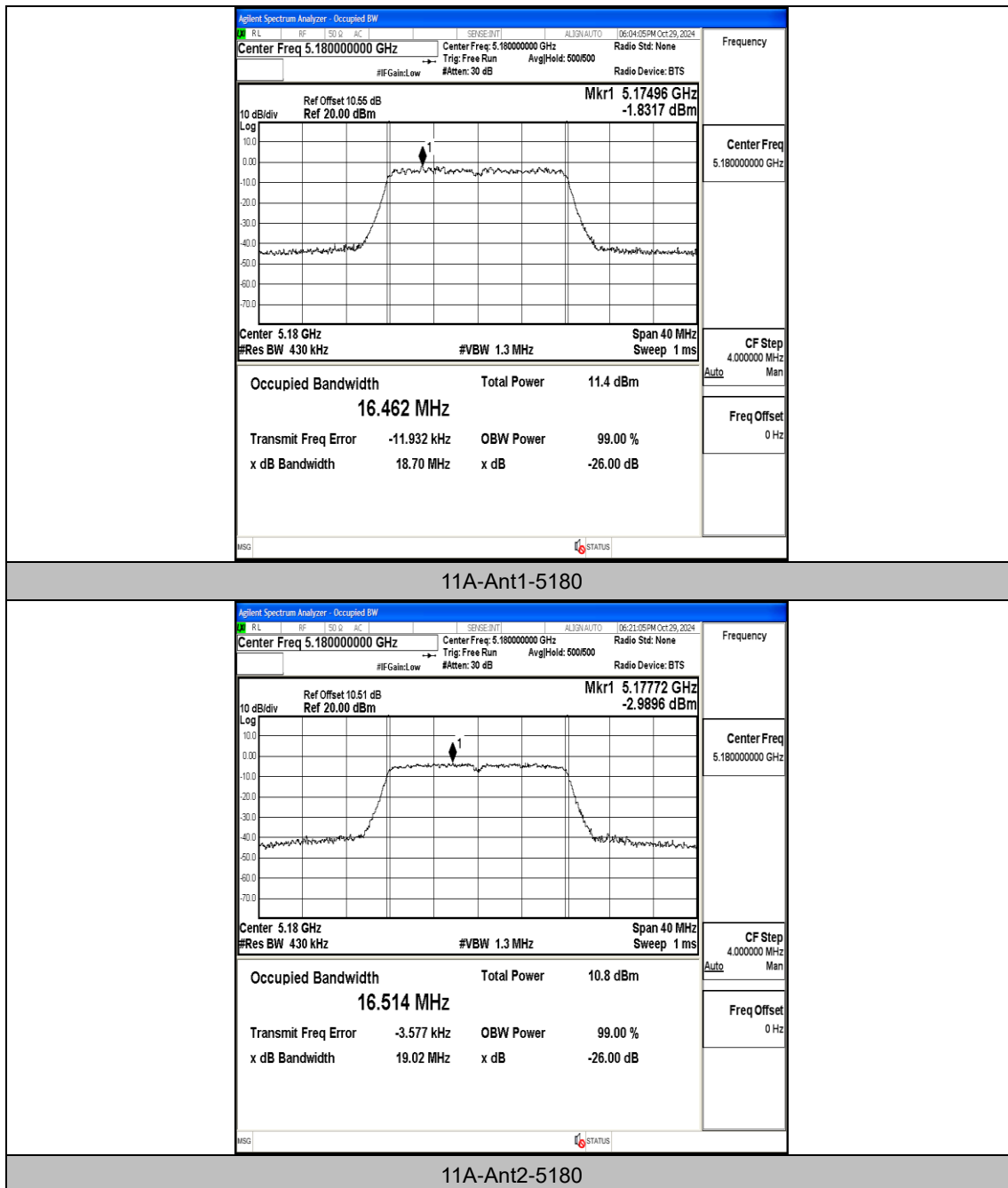


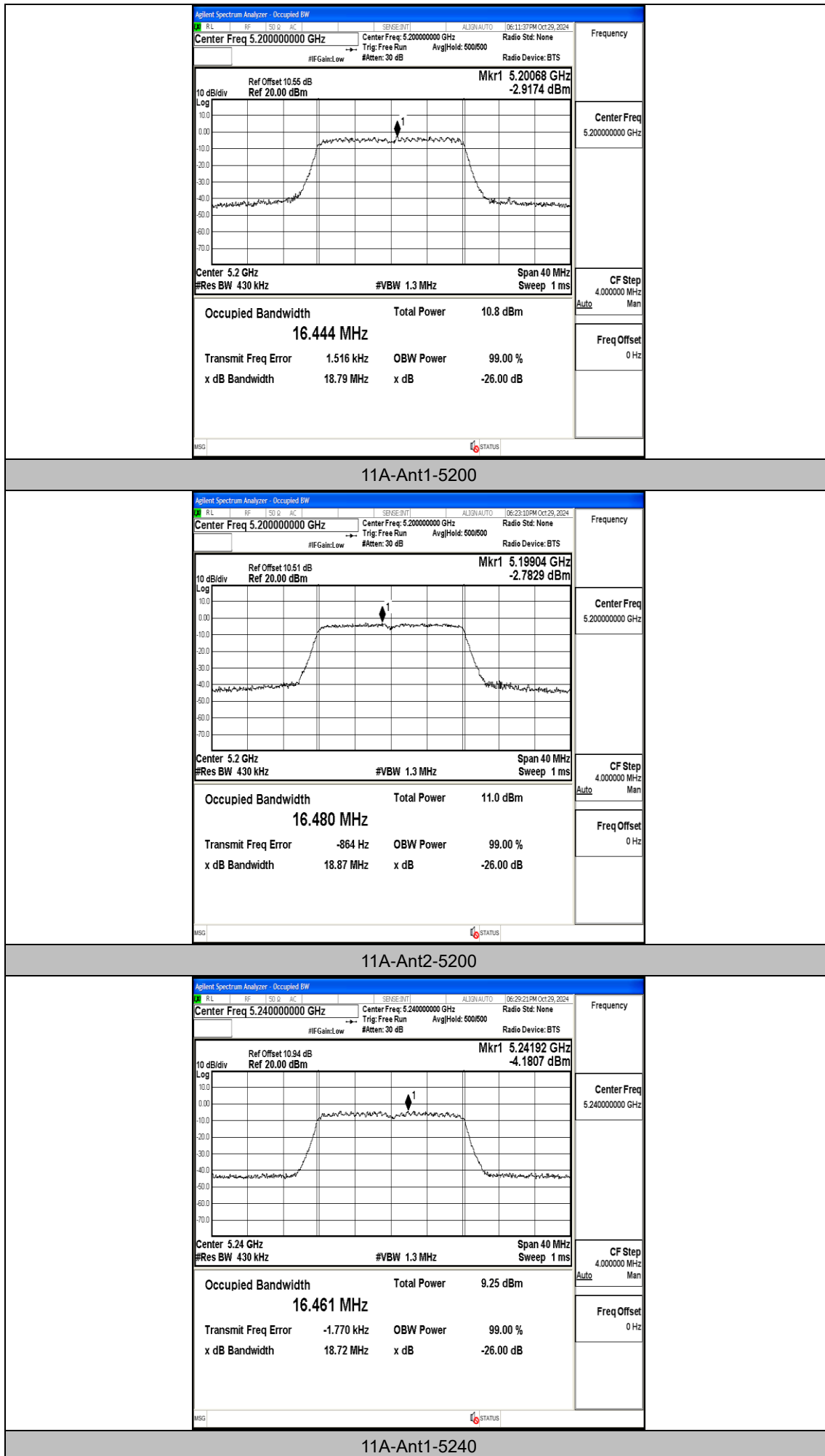
Appendix A2: Occupied channel bandwidth

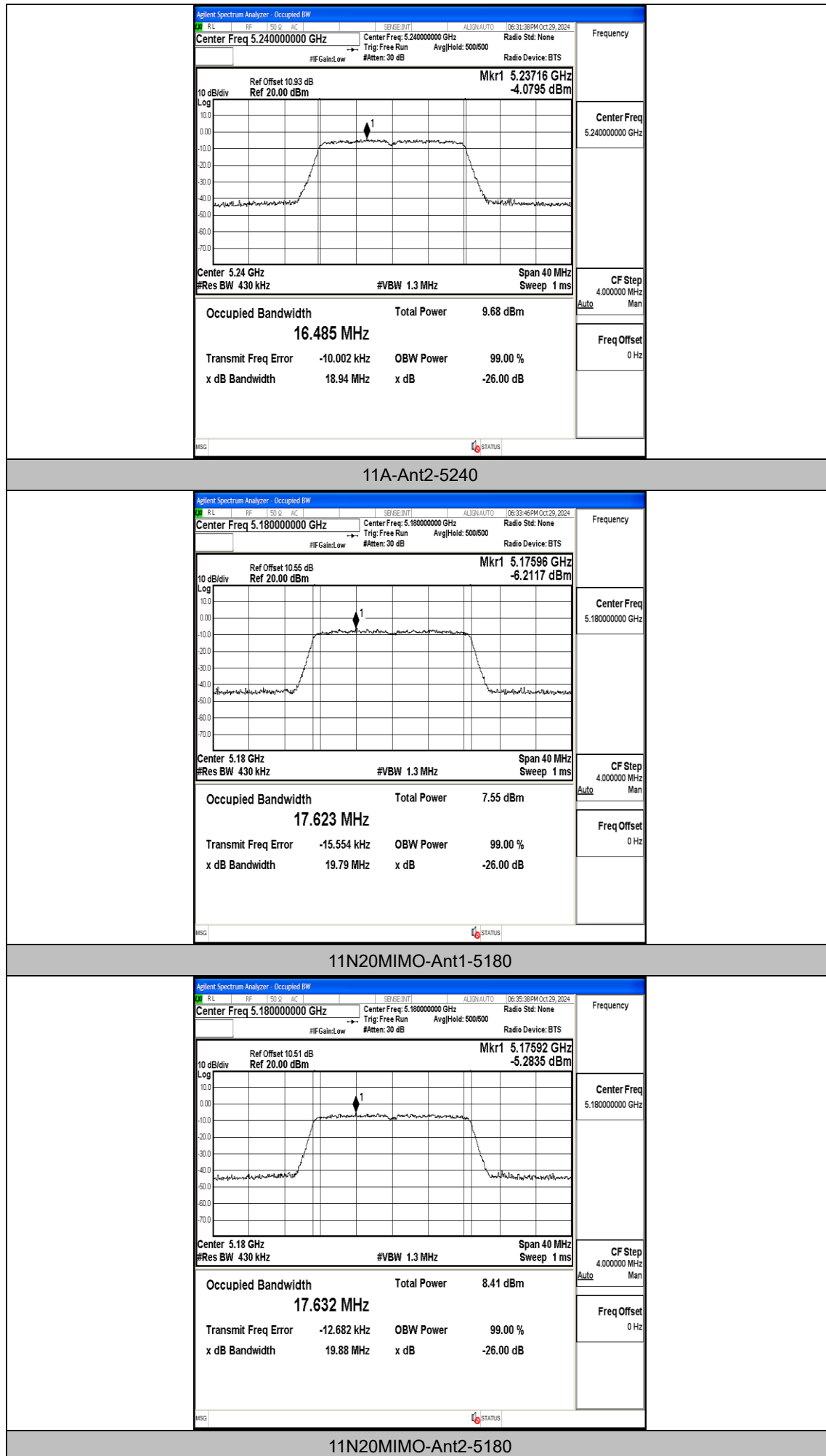
Test Result

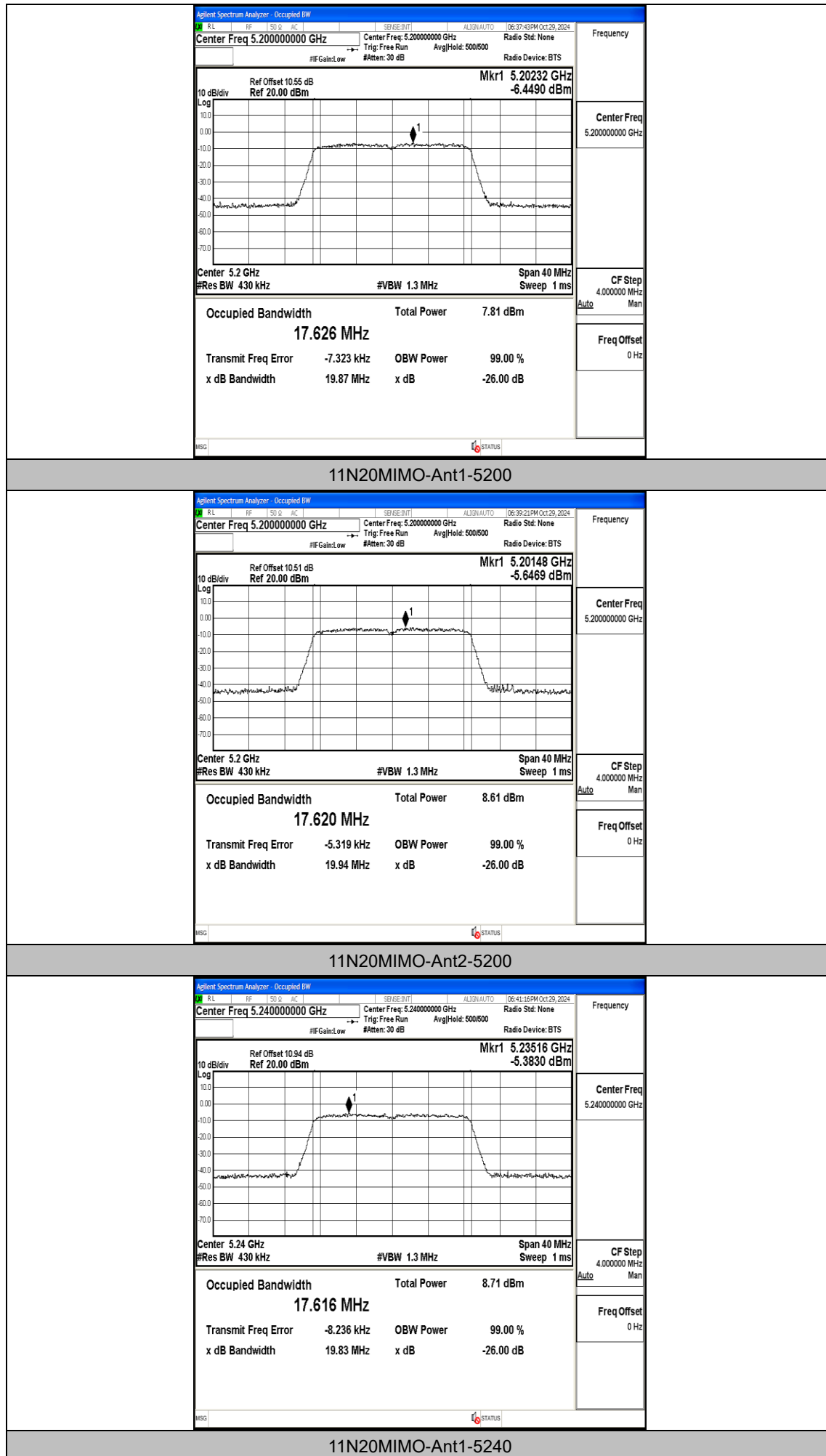
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5180	16.462	5171.7571	5188.2191	---	---
11A	Ant2	5180	16.514	5171.7394	5188.2534	---	---
11A	Ant1	5200	16.444	5191.7795	5208.2235	---	---
11A	Ant2	5200	16.480	5191.7591	5208.2391	---	---
11A	Ant1	5240	16.461	5231.7677	5248.2287	---	---
11A	Ant2	5240	16.485	5231.7475	5248.2325	---	---
11N20MIMO	Ant1	5180	17.623	5171.1730	5188.7960	---	---
11N20MIMO	Ant2	5180	17.632	5171.1713	5188.8033	---	---
11N20MIMO	Ant1	5200	17.626	5191.1797	5208.8057	---	---
11N20MIMO	Ant2	5200	17.620	5191.1847	5208.8047	---	---
11N20MIMO	Ant1	5240	17.616	5231.1838	5248.7998	---	---
11N20MIMO	Ant2	5240	17.603	5231.1909	5248.7939	---	---
11AC20MIMO	Ant1	5180	17.631	5171.1873	5188.8183	---	---
11AC20MIMO	Ant2	5180	17.638	5171.1818	5188.8198	---	---
11AC20MIMO	Ant1	5200	17.636	5191.1819	5208.8179	---	---
11AC20MIMO	Ant2	5200	17.645	5191.1771	5208.8221	---	---
11AC20MIMO	Ant1	5240	17.646	5231.1749	5248.8209	---	---
11AC20MIMO	Ant2	5240	17.645	5231.1695	5248.8145	---	---

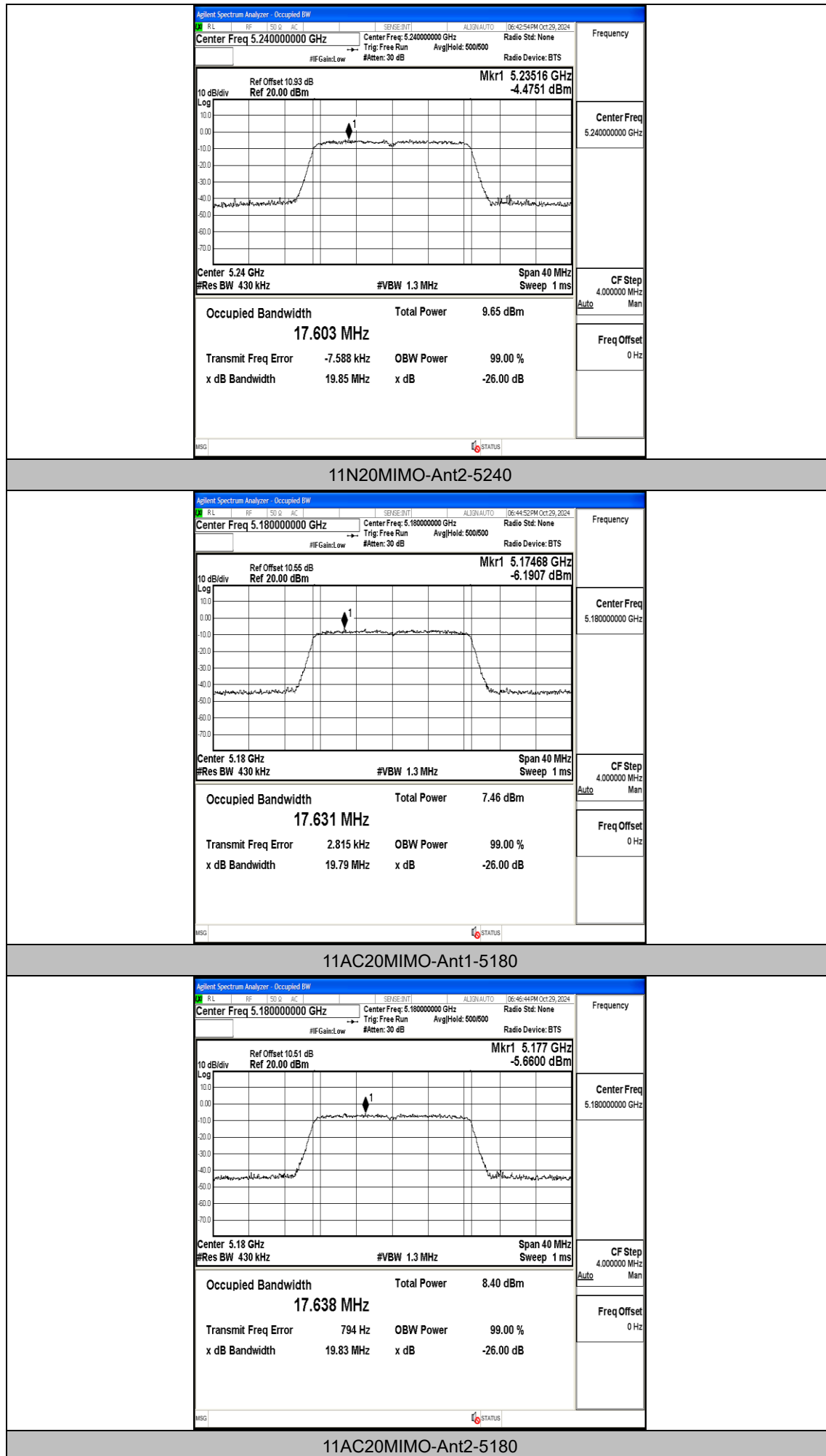
Test Graphs

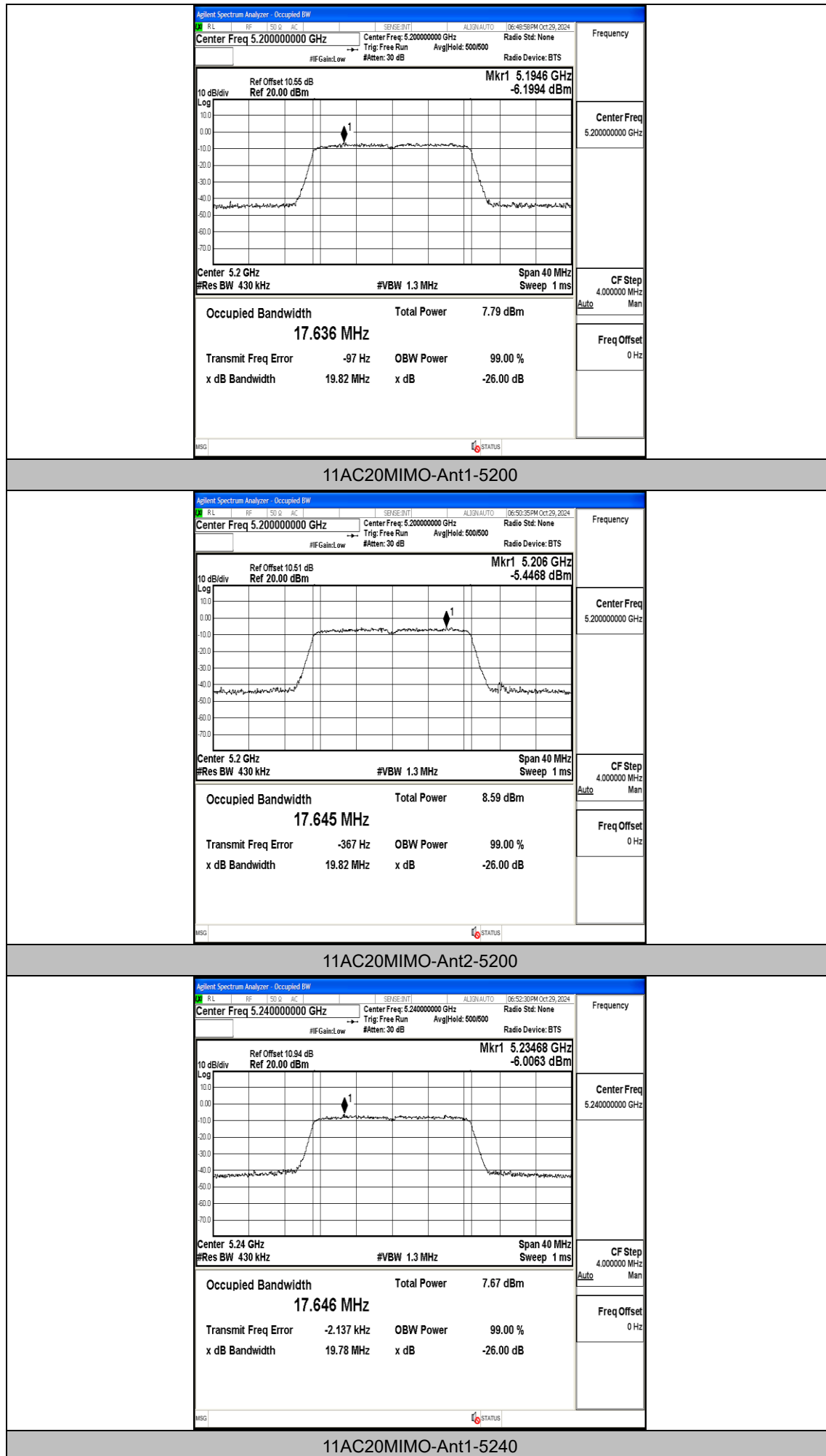


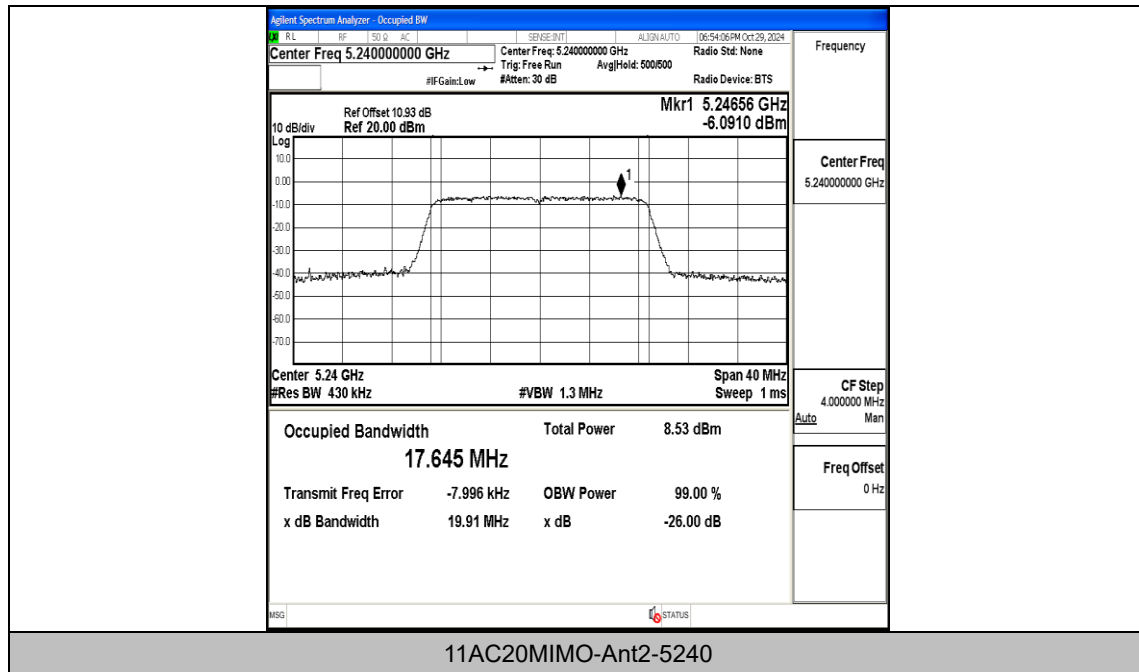












Appendix B: Maximum conducted output power

Test Result

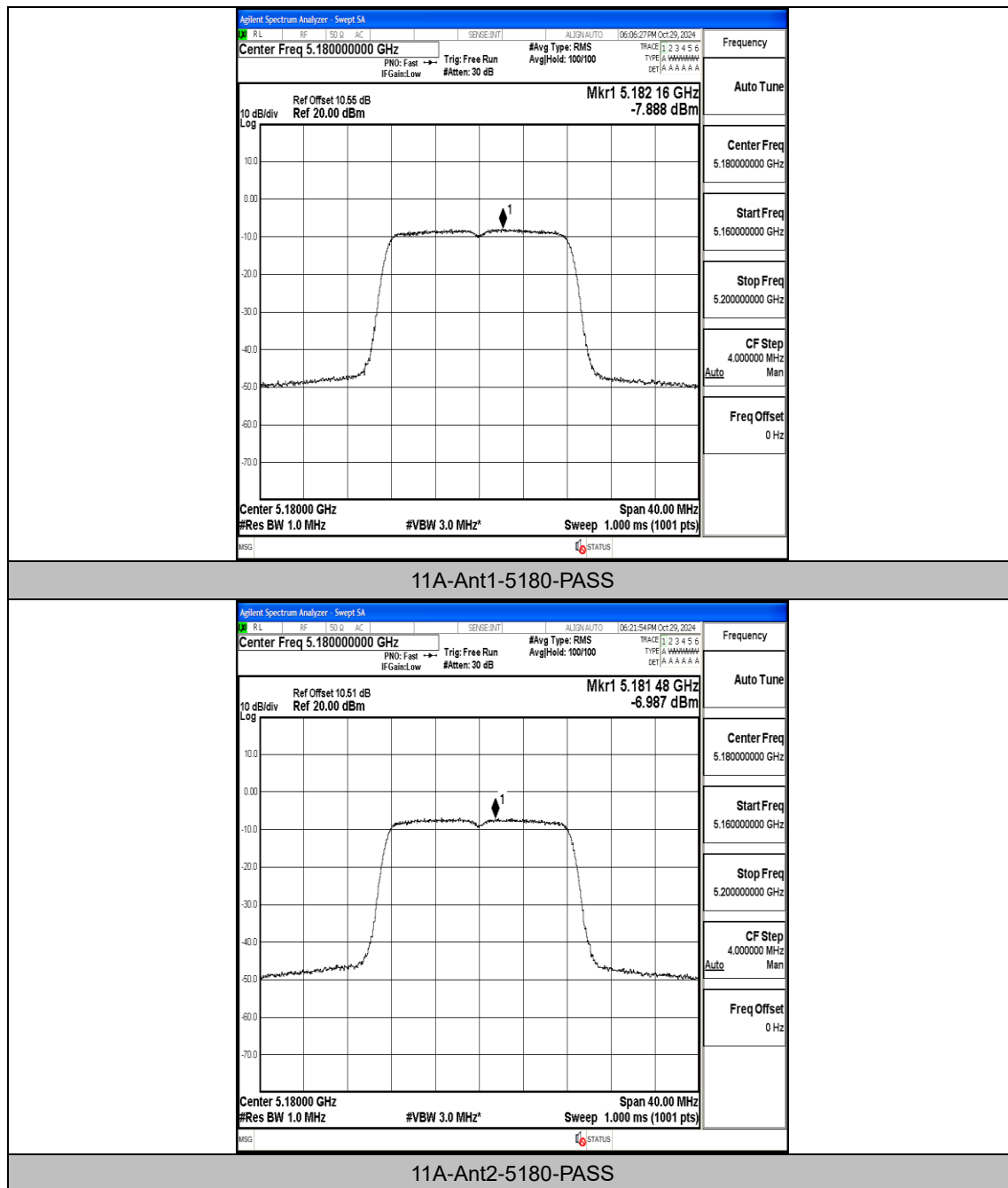
Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11A	Ant1	5180	3.26	≤23.98	PASS
11A	Ant2	5180	4.21	≤23.98	PASS
11A	Ant1	5200	3.64	≤23.98	PASS
11A	Ant2	5200	4.32	≤23.98	PASS
11A	Ant1	5240	2.02	≤23.98	PASS
11A	Ant2	5240	3.09	≤23.98	PASS
11N20MIMO	Ant1	5180	0.77	≤23.98	PASS
11N20MIMO	Ant2	5180	1.82	≤23.98	PASS
11N20MIMO	total	5180	4.34	≤23.98	PASS
11N20MIMO	Ant1	5200	1.20	≤23.98	PASS
11N20MIMO	Ant2	5200	2.05	≤23.98	PASS
11N20MIMO	total	5200	4.66	≤23.98	PASS
11N20MIMO	Ant1	5240	-0.05	≤23.98	PASS
11N20MIMO	Ant2	5240	0.85	≤23.98	PASS
11N20MIMO	total	5240	3.43	≤23.98	PASS
11AC20MIMO	Ant1	5180	1.01	≤23.98	PASS
11AC20MIMO	Ant2	5180	1.68	≤23.98	PASS
11AC20MIMO	total	5180	4.37	≤23.98	PASS
11AC20MIMO	Ant1	5200	1.06	≤23.98	PASS
11AC20MIMO	Ant2	5200	2.06	≤23.98	PASS
11AC20MIMO	total	5200	4.60	≤23.98	PASS
11AC20MIMO	Ant1	5240	1.04	≤23.98	PASS
11AC20MIMO	Ant2	5240	2.06	≤23.98	PASS
11AC20MIMO	total	5240	4.59	≤23.98	PASS

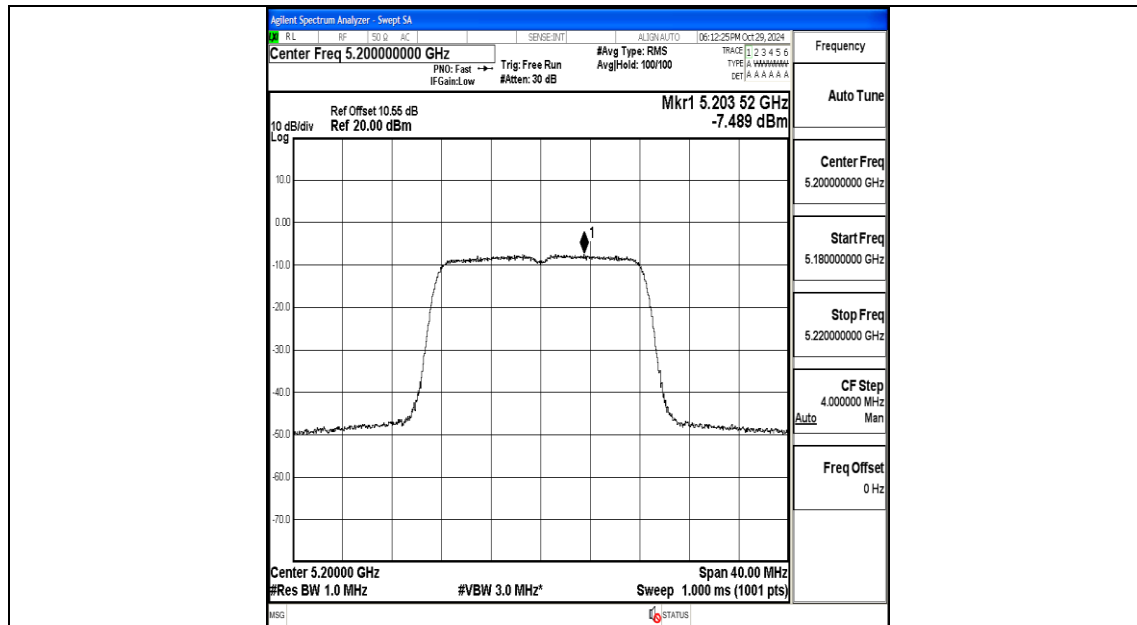
Appendix C: Maximum power spectral density

Test Result

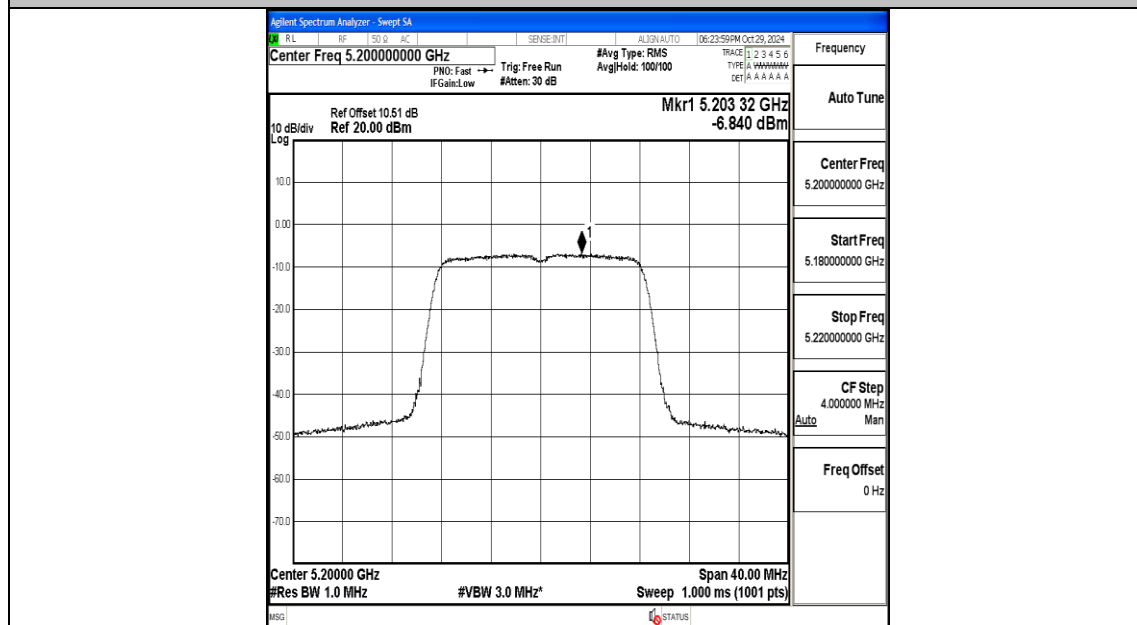
Test Mode	Antenna	Frequency [MHz]	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5180	-7.55	≤11.00	PASS
11A	Ant2	5180	-6.59	≤11.00	PASS
11A	Ant1	5200	-7.13	≤11.00	PASS
11A	Ant2	5200	-6.48	≤11.00	PASS
11A	Ant1	5240	-8.85	≤11.00	PASS
11A	Ant2	5240	-8.06	≤11.00	PASS
11N20MIMO	Ant1	5180	-10.45	≤11.00	PASS
11N20MIMO	Ant2	5180	-9.26	≤11.00	PASS
11N20MIMO	total	5180	-6.80	≤11.00	PASS
11N20MIMO	Ant1	5200	-10.22	≤11.00	PASS
11N20MIMO	Ant2	5200	-9.15	≤11.00	PASS
11N20MIMO	total	5200	-6.64	≤11.00	PASS
11N20MIMO	Ant1	5240	-9.46	≤11.00	PASS
11N20MIMO	Ant2	5240	-8.36	≤11.00	PASS
11N20MIMO	total	5240	-5.86	≤11.00	PASS
11AC20MIMO	Ant1	5180	-10.31	≤11.00	PASS
11AC20MIMO	Ant2	5180	-9.62	≤11.00	PASS
11AC20MIMO	total	5180	-6.94	≤11.00	PASS
11AC20MIMO	Ant1	5200	-10.13	≤11.00	PASS
11AC20MIMO	Ant2	5200	-9.17	≤11.00	PASS
11AC20MIMO	total	5200	-6.61	≤11.00	PASS
11AC20MIMO	Ant1	5240	-10.19	≤11.00	PASS
11AC20MIMO	Ant2	5240	-9.20	≤11.00	PASS
11AC20MIMO	total	5240	-6.66	≤11.00	PASS

Test Graphs

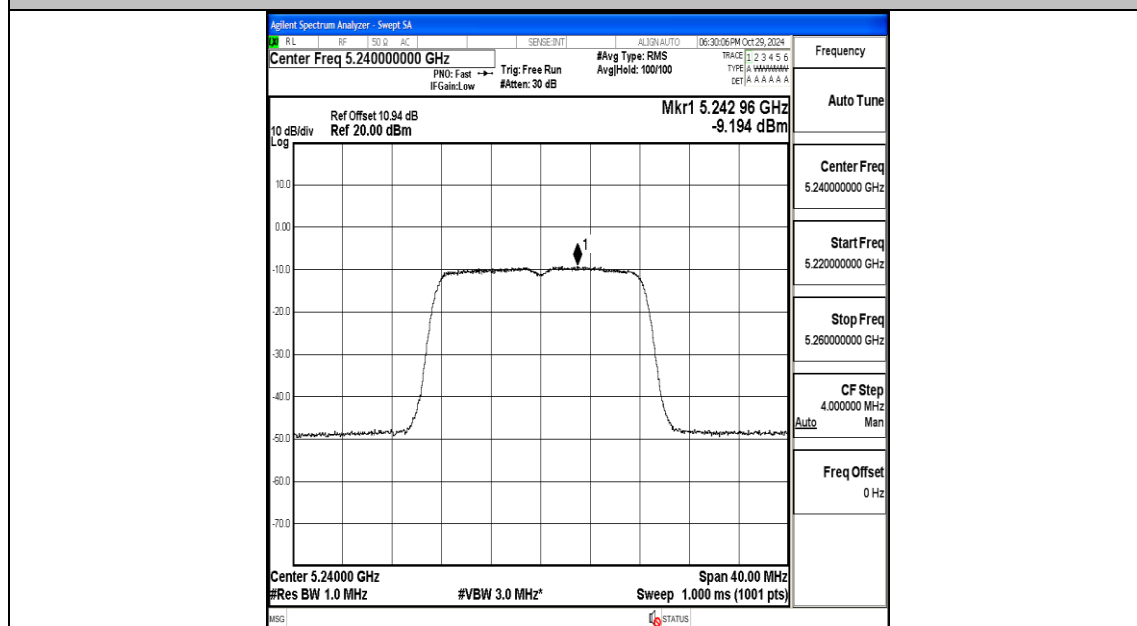




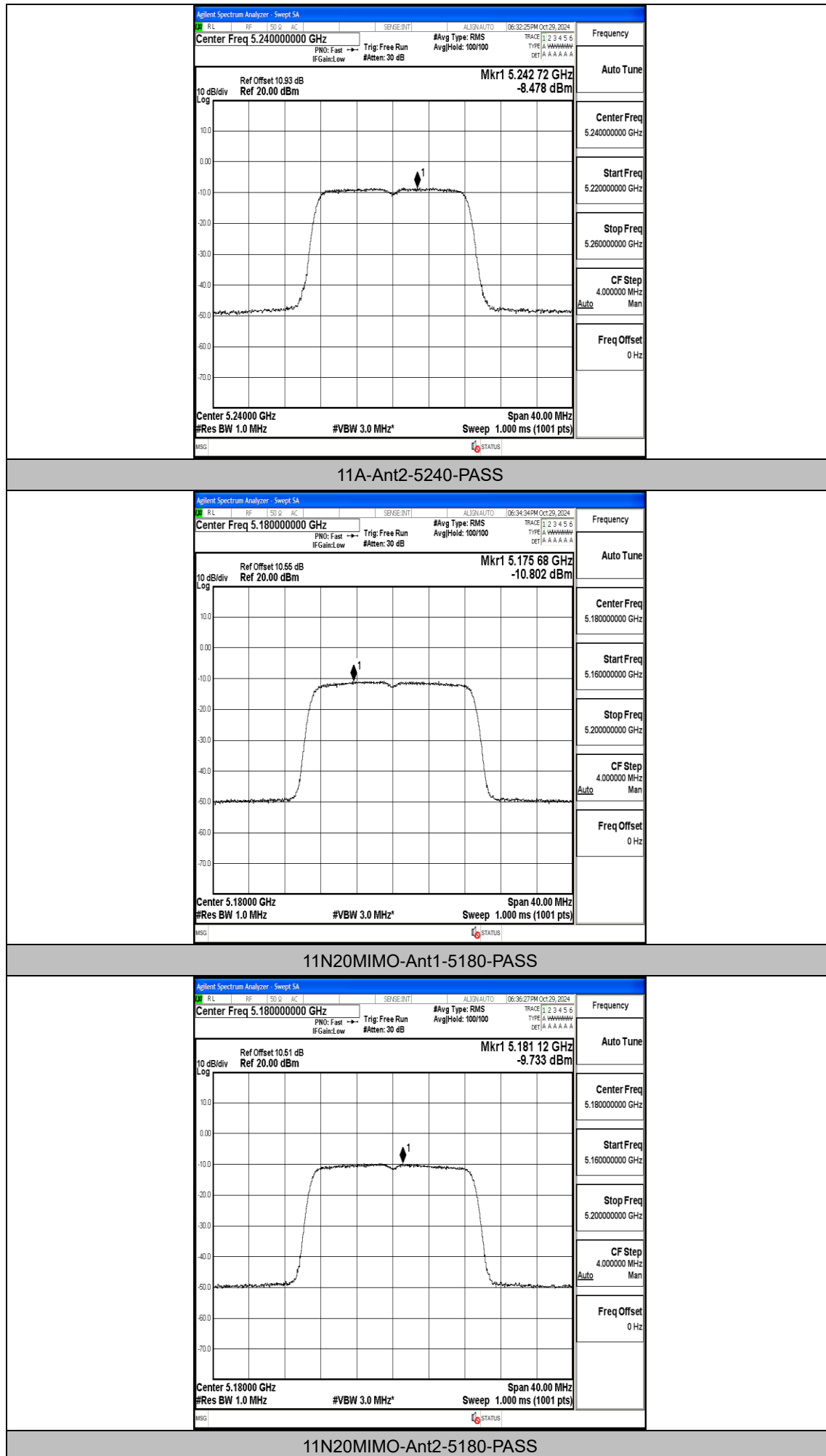
11A-Ant1-5200-PASS

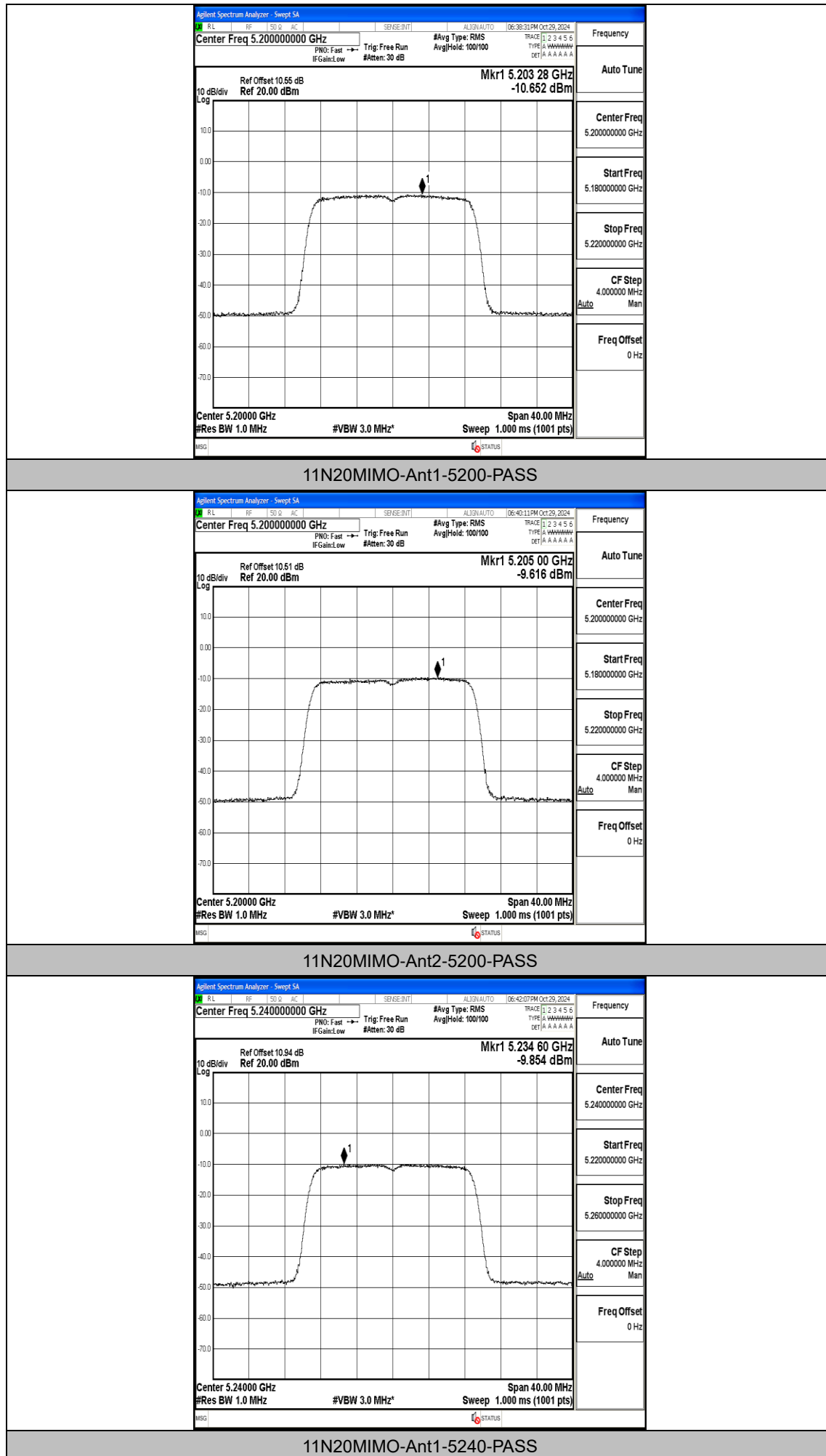


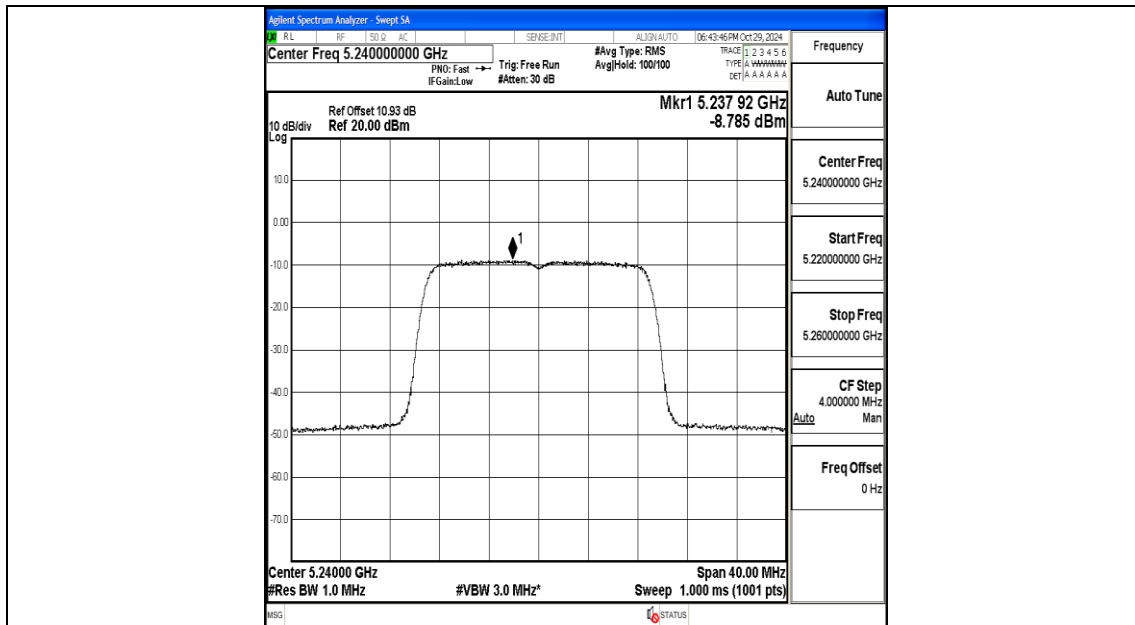
11A-Ant2-5200-PASS



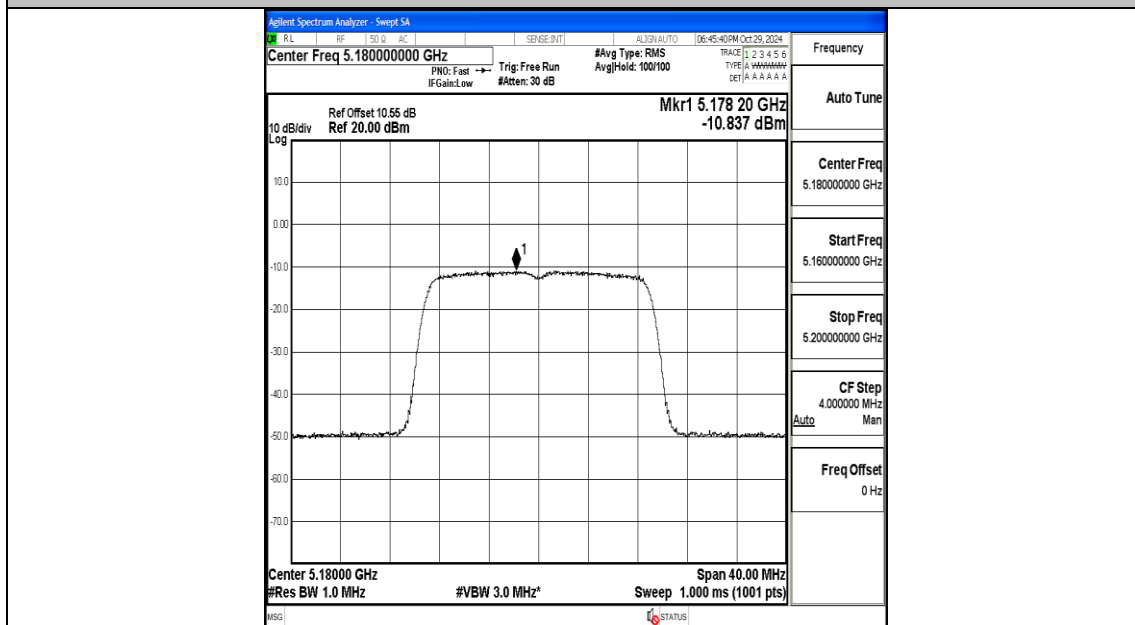
11A-Ant1-5240-PASS



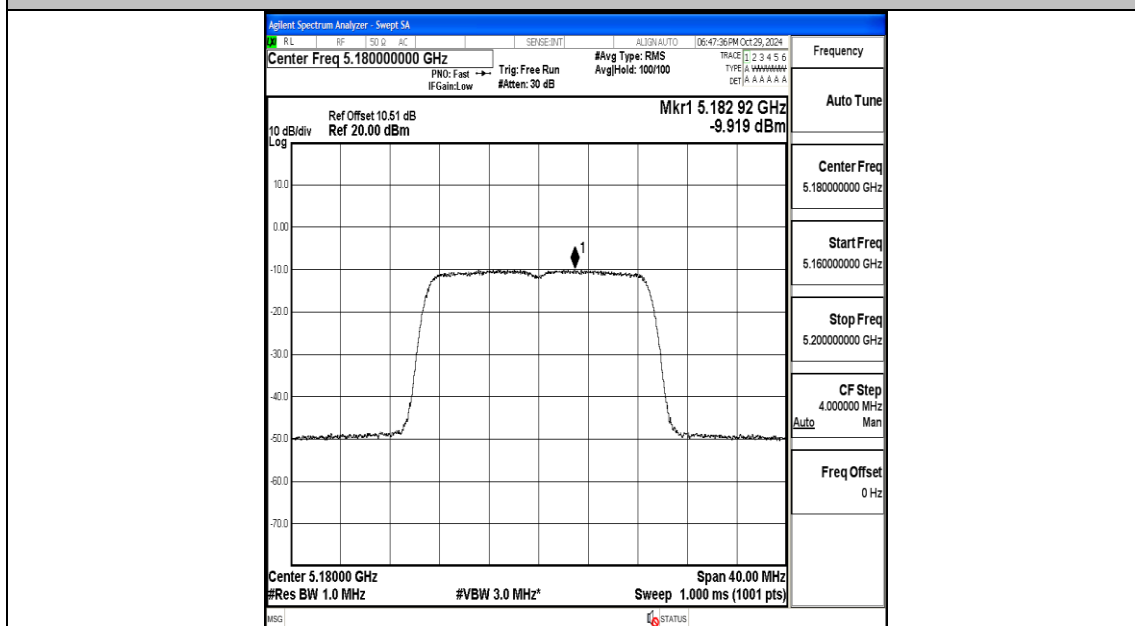




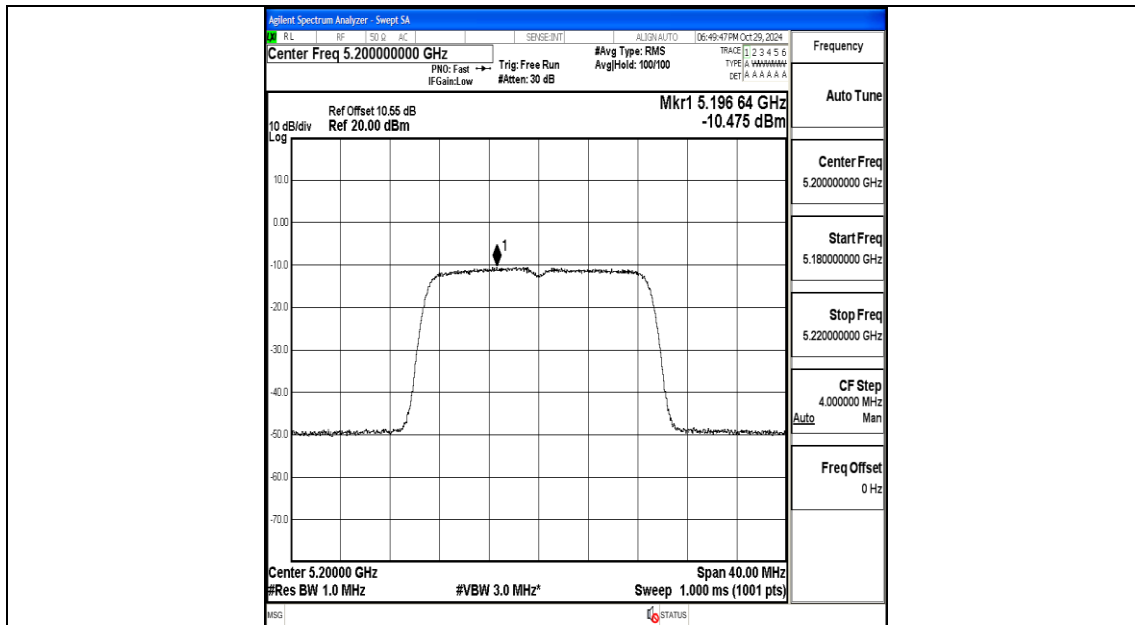
11N20MIMO-Ant2-5240-PASS



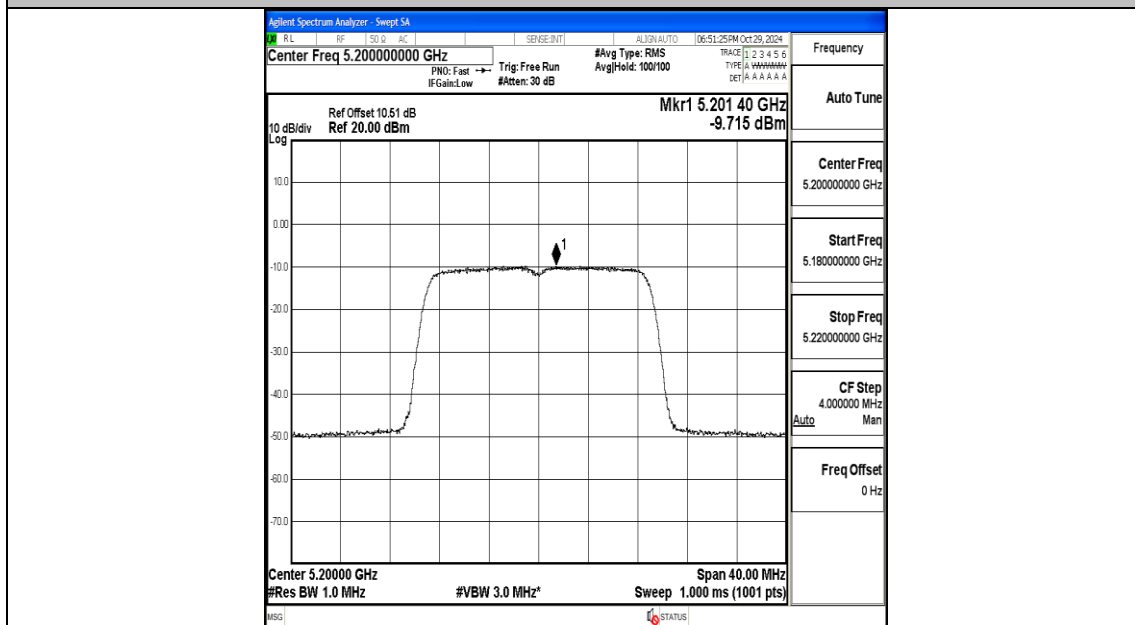
11AC20MIMO-Ant1-5180-PASS



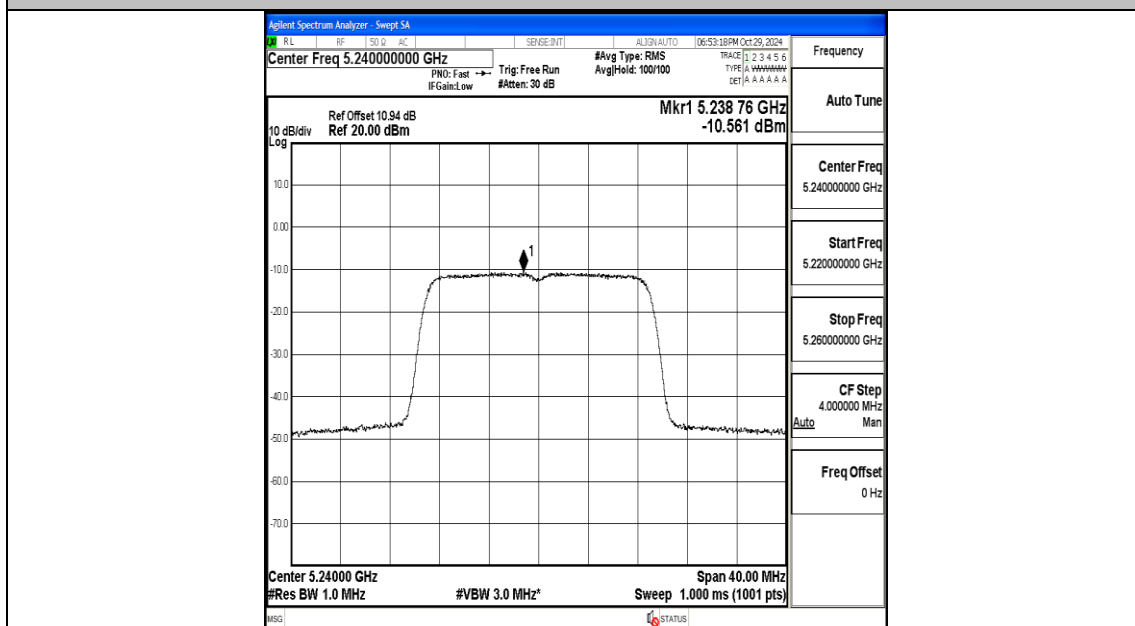
11AC20MIMO-Ant2-5180-PASS



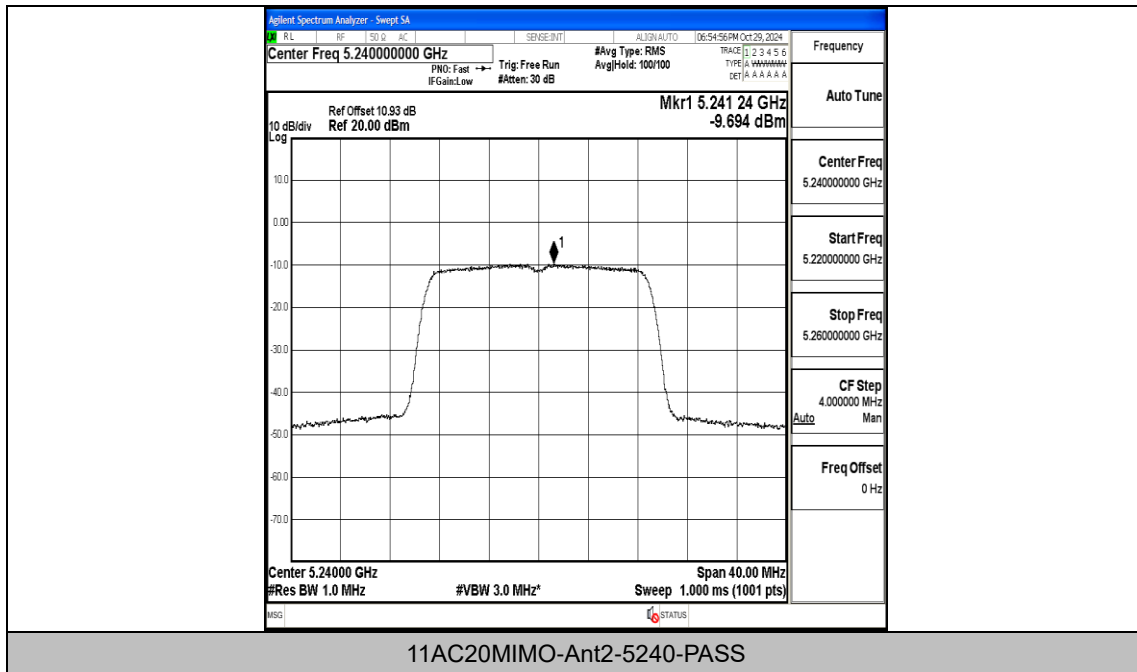
11AC20MIMO-Ant1-5200-PASS



11AC20MIMO-Ant2-5200-PASS



11AC20MIMO-Ant1-5240-PASS

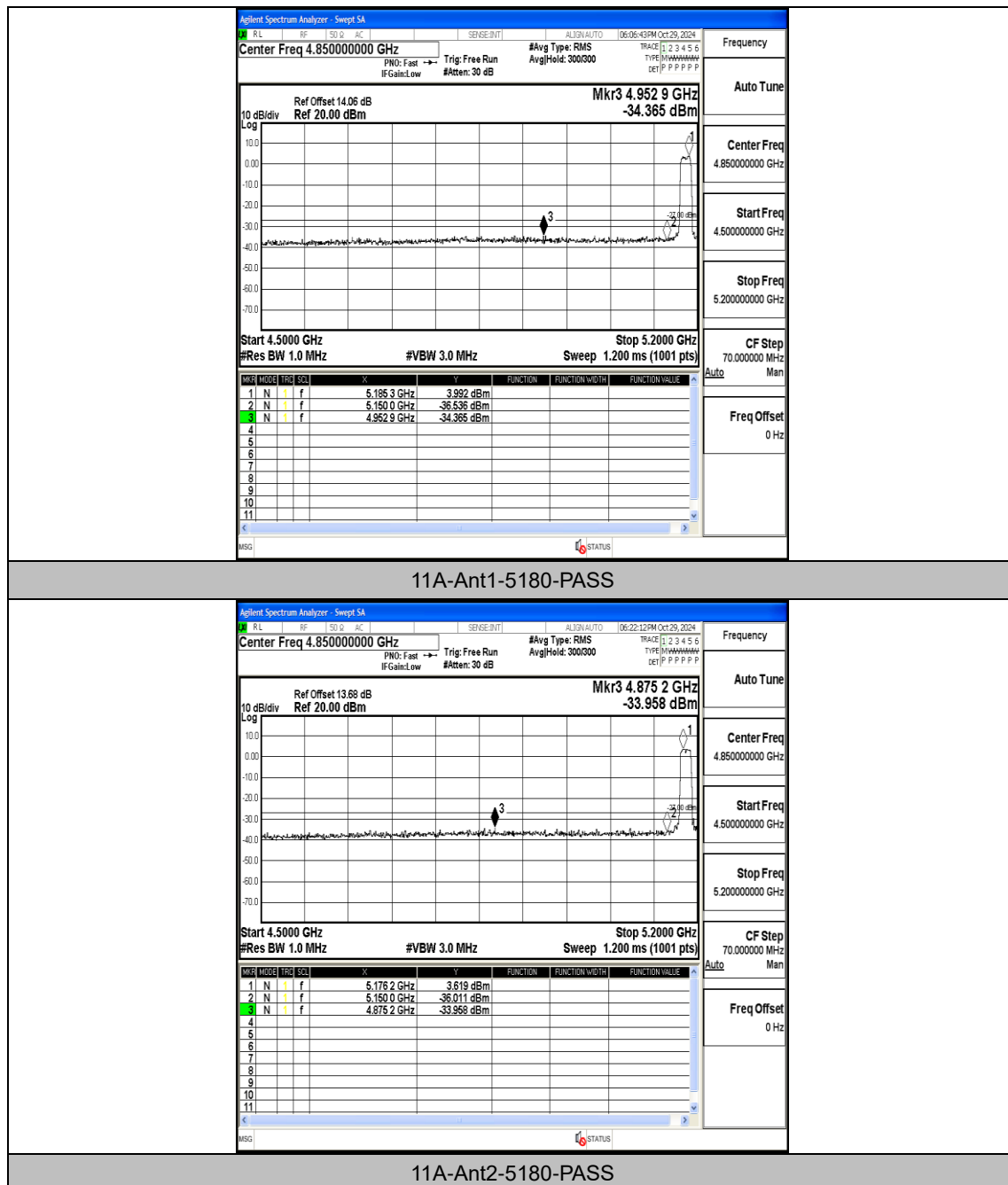


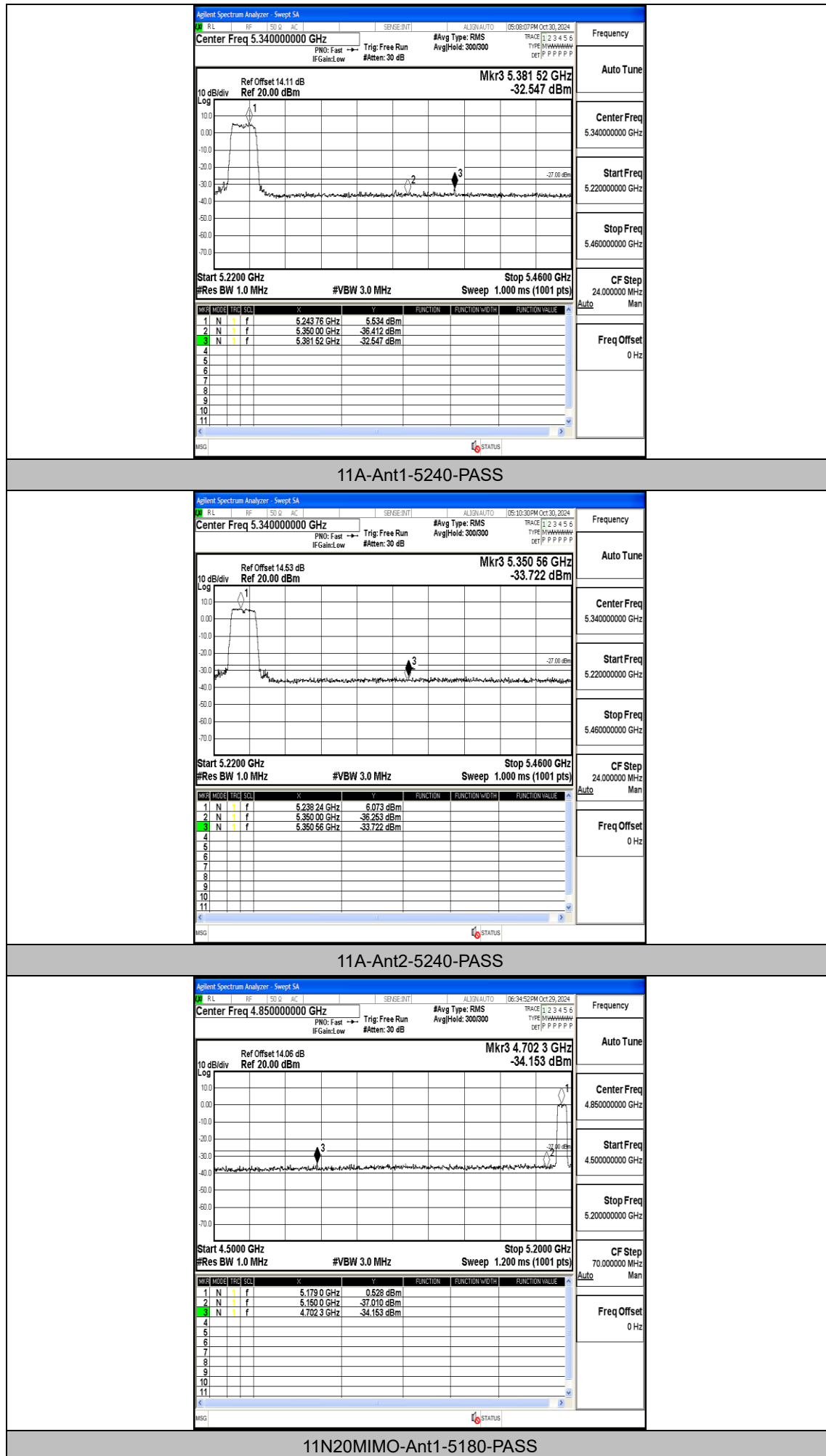
Appendix D: Band edge measurements

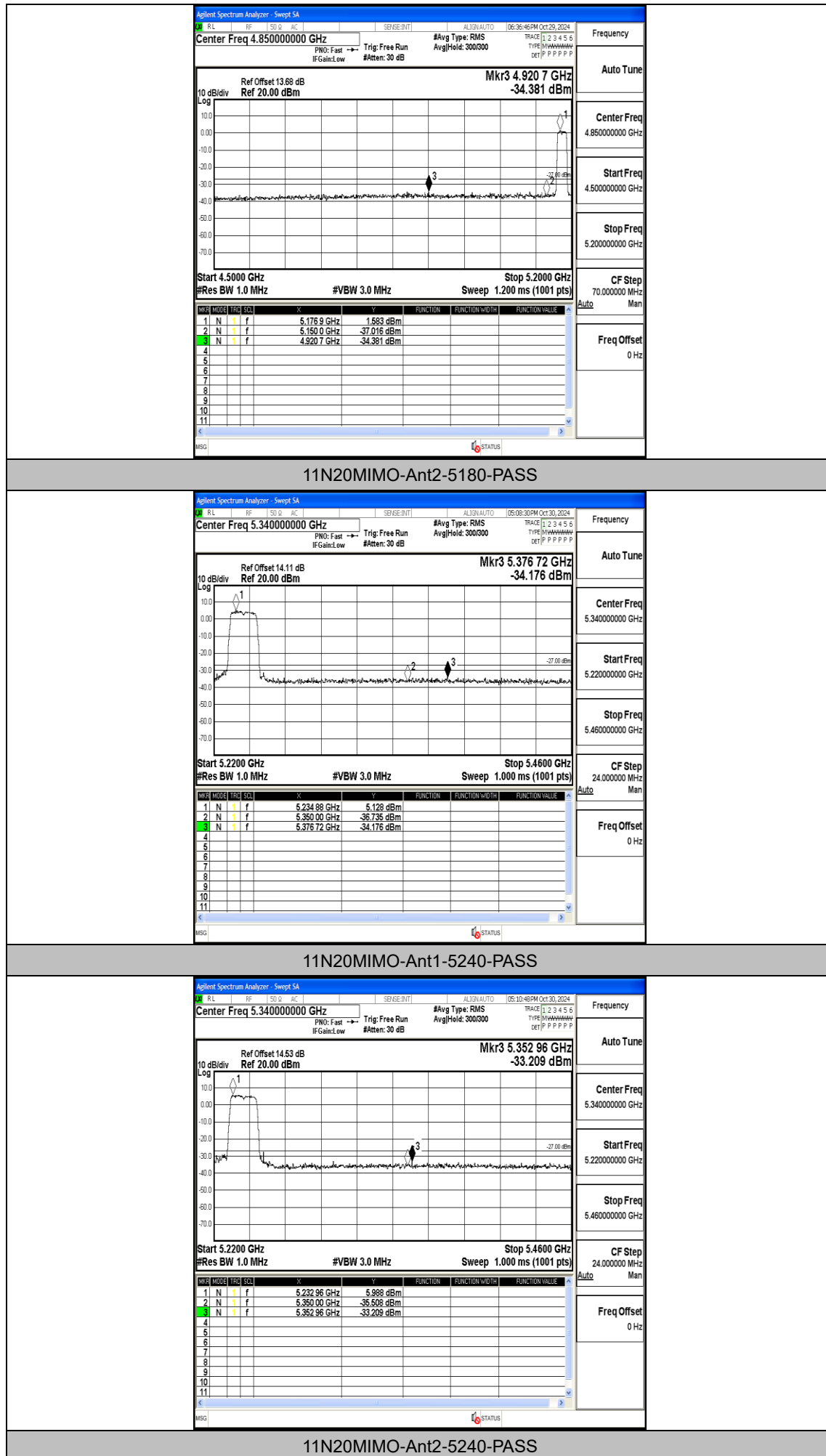
Test Result

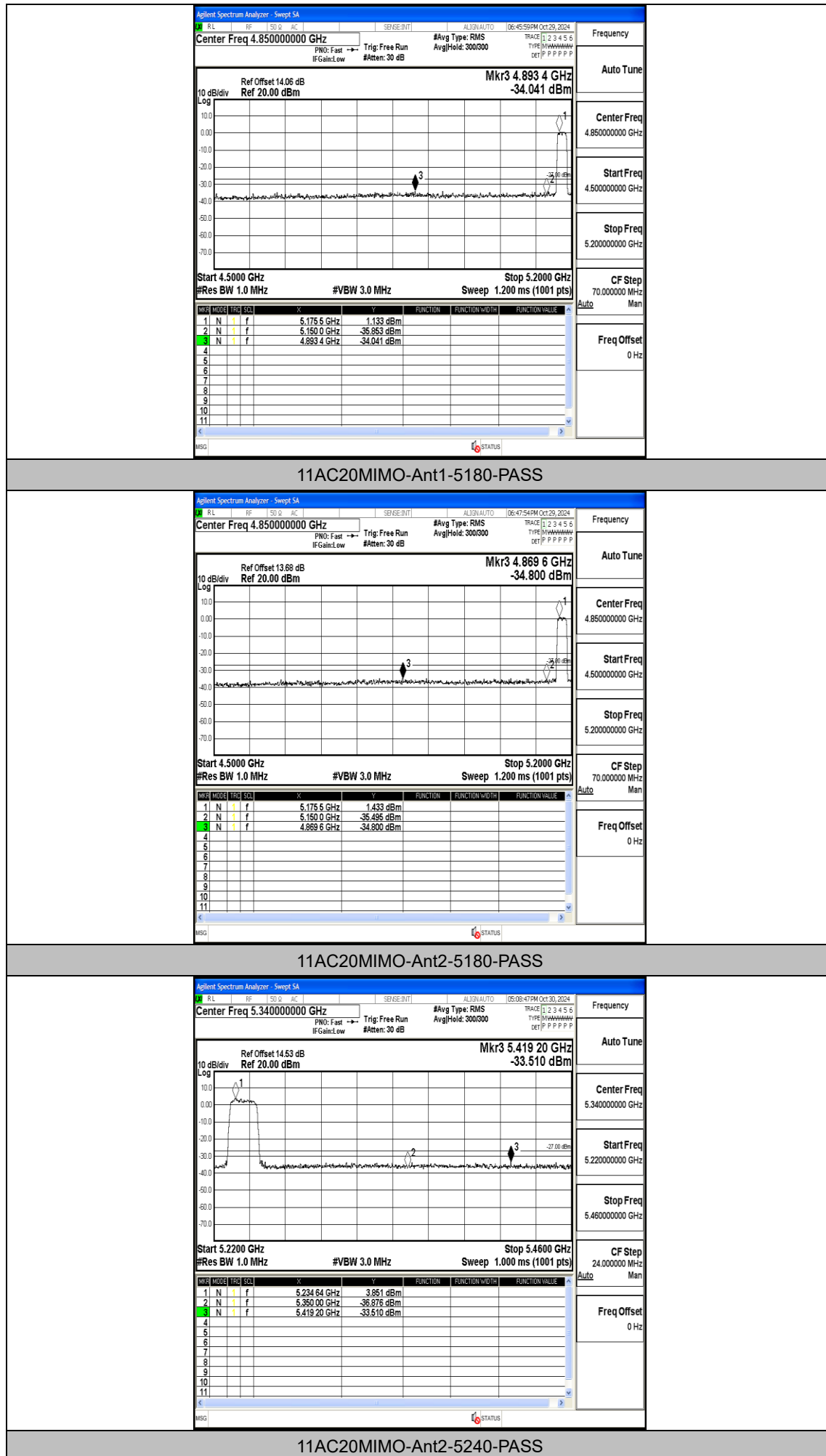
Test Mode	Antenna	Ch. Name	Frequency [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5180	-34.37	≤ -27	PASS
11A	Ant2	Low	5180	-33.96	≤ -27	PASS
11A	Ant2	High	5240	-33.72	≤ -27	PASS
11N20MIMO	Ant1	Low	5180	-34.15	≤ -27	PASS
11N20MIMO	Ant2	Low	5180	-34.38	≤ -27	PASS
11N20MIMO	Ant1	High	5240	-34.18	≤ -27	PASS
11AC20MIMO	Ant1	Low	5180	-34.04	≤ -27	PASS
11AC20MIMO	Ant2	Low	5180	-34.8	≤ -27	PASS
11AC20MIMO	Ant2	High	5240	-33.51	≤ -27	PASS
11AC20MIMO	Ant1	High	5240	-34.35	≤ -27	PASS

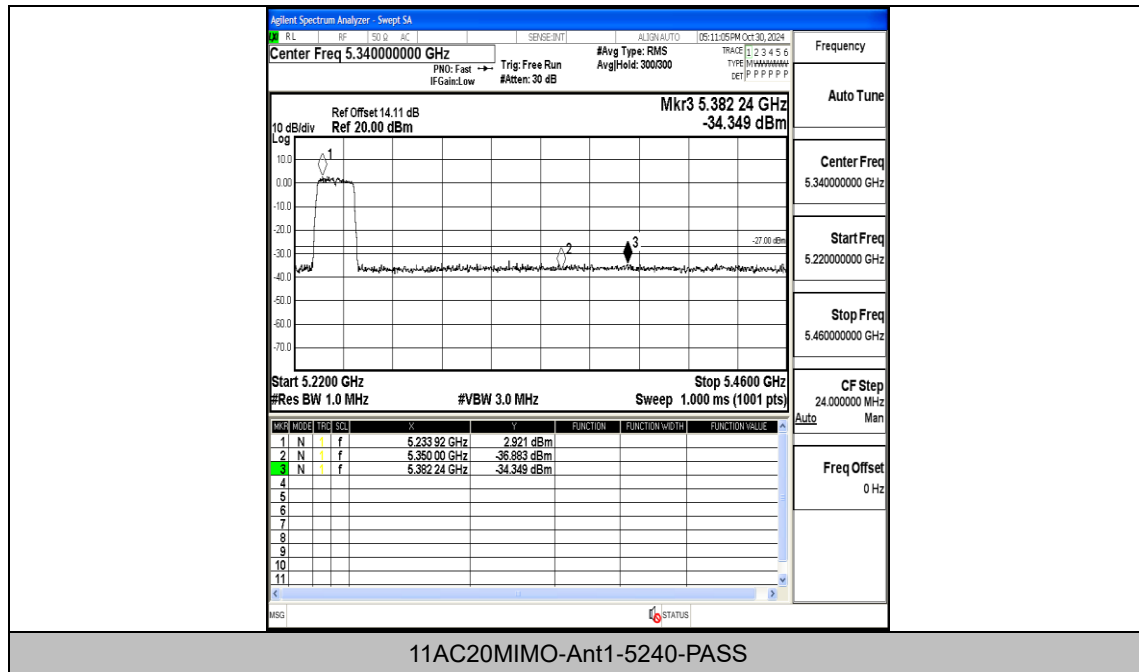
Test Graphs











Appendix E: Frequency Stability

Test Result

Ant1

Frequency (MHz)	Enviroment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5180	20	108	5179.969335	5150 – 5250	PASS
5180	50	120	5180.034933	5150 – 5250	PASS
5180	40	120	5179.961207	5150 – 5250	PASS
5180	30	120	5179.944016	5150 – 5250	PASS
5180	20	120	5179.953366	5150 – 5250	PASS
5180	10	120	5179.926704	5150 – 5250	PASS
5180	0	120	5179.968161	5150 – 5250	PASS
5180	-10	120	5180.093015	5150 – 5250	PASS
5180	-20	120	5179.977630	5150 – 5250	PASS
5180	-30	120	5179.939434	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5180	20	108	5180.089708	5150 – 5250	PASS
5180	50	120	5179.927032	5150 – 5250	PASS
5180	40	120	5180.079981	5150 – 5250	PASS
5180	30	120	5179.955466	5150 – 5250	PASS
5180	20	120	5180.093140	5150 – 5250	PASS
5180	10	120	5180.076612	5150 – 5250	PASS
5180	0	120	5179.939233	5150 – 5250	PASS
5180	-10	120	5180.015180	5150 – 5250	PASS
5180	-20	120	5179.904034	5150 – 5250	PASS
5180	-30	120	5179.974530	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	108	5200.094176	5150 – 5250	PASS
5200	50	120	5200.039637	5150 – 5250	PASS
5200	40	120	5199.934464	5150 – 5250	PASS
5200	30	120	5200.037124	5150 – 5250	PASS
5200	20	120	5200.046432	5150 – 5250	PASS
5200	10	120	5199.944760	5150 – 5250	PASS
5200	0	120	5199.947695	5150 – 5250	PASS
5200	-10	120	5199.921535	5150 – 5250	PASS
5200	-20	120	5200.068697	5150 – 5250	PASS
5200	-30	120	5200.019136	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	108	5200.084972	5150 – 5250	PASS
5200	50	120	5199.970996	5150 – 5250	PASS
5200	40	120	5200.057669	5150 – 5250	PASS
5200	30	120	5199.983715	5150 – 5250	PASS
5200	20	120	5200.020240	5150 – 5250	PASS
5200	10	120	5200.055100	5150 – 5250	PASS
5200	0	120	5199.999311	5150 – 5250	PASS
5200	-10	120	5199.942525	5150 – 5250	PASS
5200	-20	120	5200.051667	5150 – 5250	PASS
5200	-30	120	5199.901170	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	108	5239.979973	5150 – 5250	PASS
5240	50	120	5239.911140	5150 – 5250	PASS
5240	40	120	5240.011221	5150 – 5250	PASS
5240	30	120	5240.076001	5150 – 5250	PASS
5240	20	120	5240.097196	5150 – 5250	PASS
5240	10	120	5239.964981	5150 – 5250	PASS
5240	0	120	5239.934266	5150 – 5250	PASS
5240	-10	120	5239.964559	5150 – 5250	PASS
5240	-20	120	5240.005501	5150 – 5250	PASS
5240	-30	120	5239.949387	5150 – 5250	PASS

Ant2

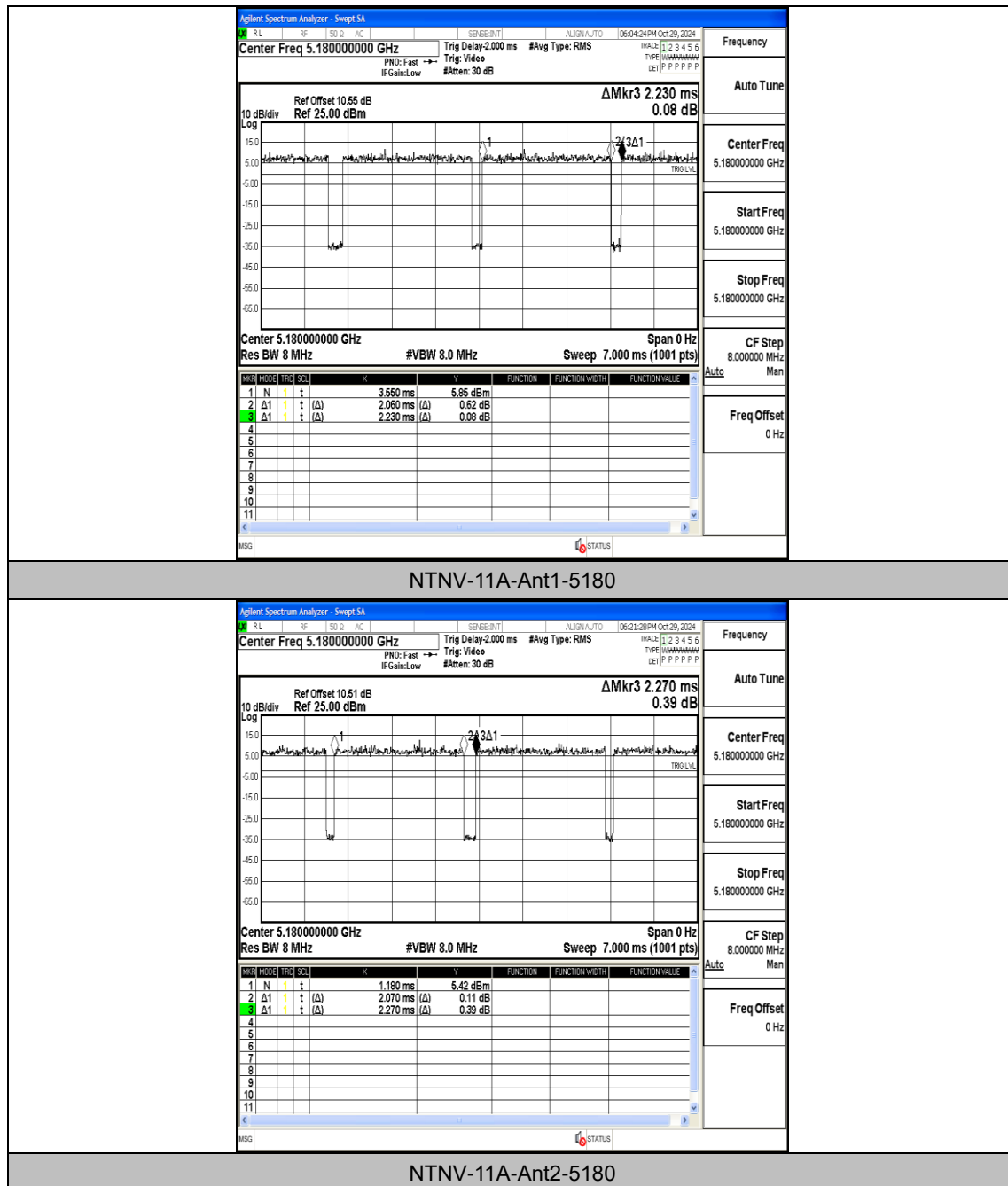
Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	108	5240.034917	5150 – 5250	PASS
5240	50	120	5239.995319	5150 – 5250	PASS
5240	40	120	5239.907488	5150 – 5250	PASS
5240	30	120	5240.094972	5150 – 5250	PASS
5240	20	120	5239.992698	5150 – 5250	PASS
5240	10	120	5240.010046	5150 – 5250	PASS
5240	0	120	5239.900120	5150 – 5250	PASS
5240	-10	120	5239.941660	5150 – 5250	PASS
5240	-20	120	5239.973675	5150 – 5250	PASS
5240	-30	120	5240.081840	5150 – 5250	PASS

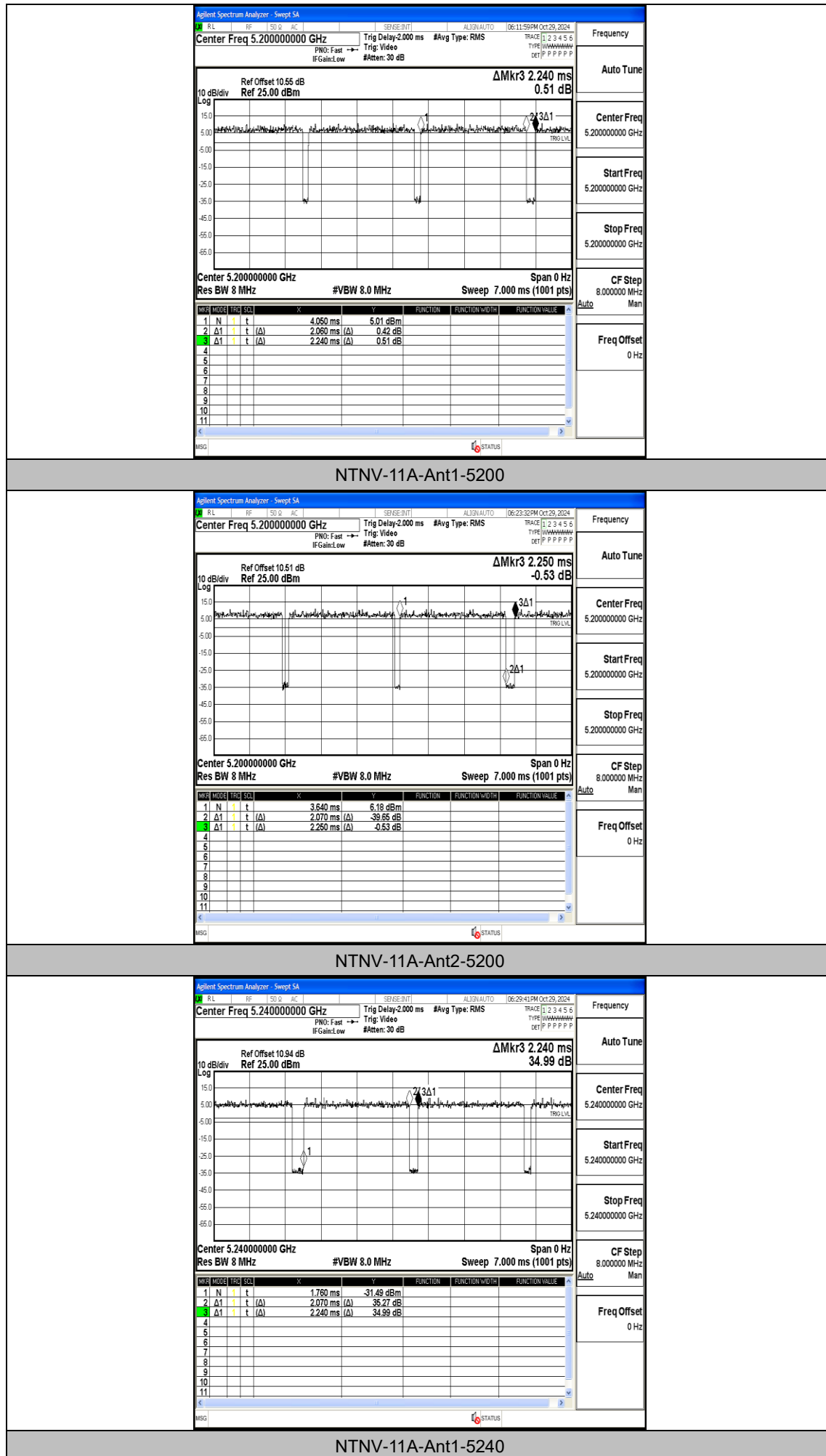
Appendix F: Duty Cycle

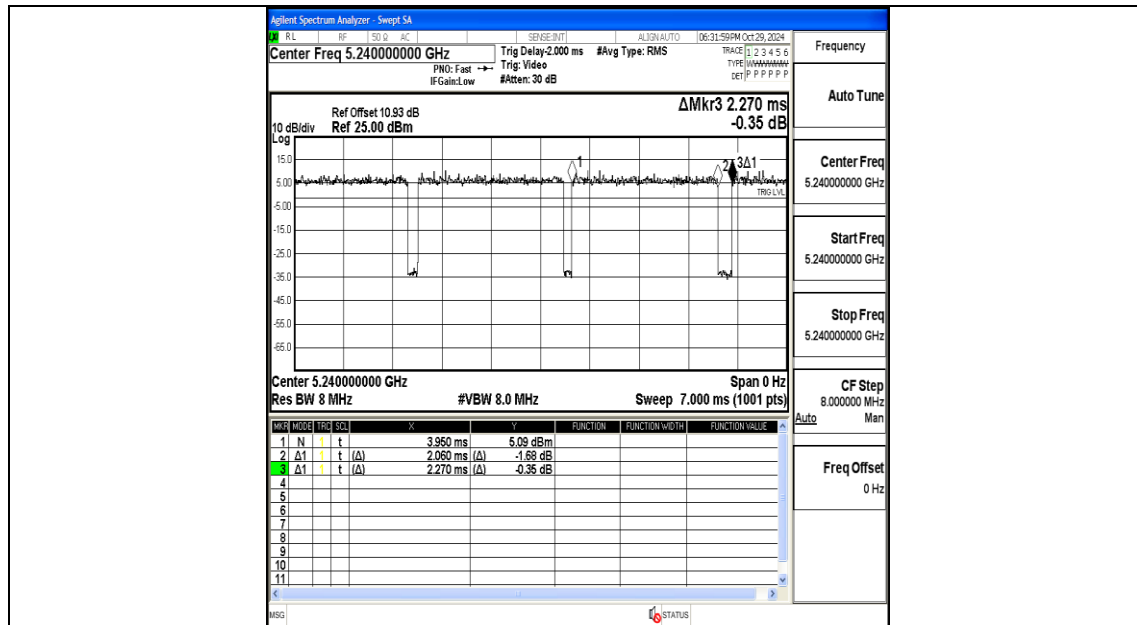
Test Result

Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Dc. Factor [%]	1/T [kHz]
11A	Ant1	5180	2.06	2.23	92.38	0.34	0.49
11A	Ant2	5180	2.07	2.27	91.19	0.40	0.48
11A	Ant1	5200	2.06	2.24	91.96	0.36	0.49
11A	Ant2	5200	2.07	2.25	92.00	0.36	0.48
11A	Ant1	5240	2.07	2.24	92.41	0.34	0.48
11A	Ant2	5240	2.06	2.27	90.75	0.42	0.49
11N20MIMO	Ant1	5180	1.92	2.08	92.31	0.35	0.52
11N20MIMO	Ant2	5180	1.92	2.14	89.72	0.47	0.52
11N20MIMO	Ant1	5200	1.92	2.12	90.57	0.43	0.52
11N20MIMO	Ant2	5200	1.92	2.14	89.72	0.47	0.52
11N20MIMO	Ant1	5240	1.91	2.09	91.39	0.39	0.52
11N20MIMO	Ant2	5240	1.92	2.12	90.57	0.43	0.52
11AC20MIMO	Ant1	5180	1.94	2.19	88.58	0.53	0.52
11AC20MIMO	Ant2	5180	1.94	2.08	93.27	0.30	0.52
11AC20MIMO	Ant1	5200	1.93	2.09	92.34	0.35	0.52
11AC20MIMO	Ant2	5200	1.93	2.19	88.13	0.55	0.52
11AC20MIMO	Ant1	5240	1.93	2.10	91.90	0.37	0.52
11AC20MIMO	Ant2	5240	1.94	2.17	89.40	0.49	0.52

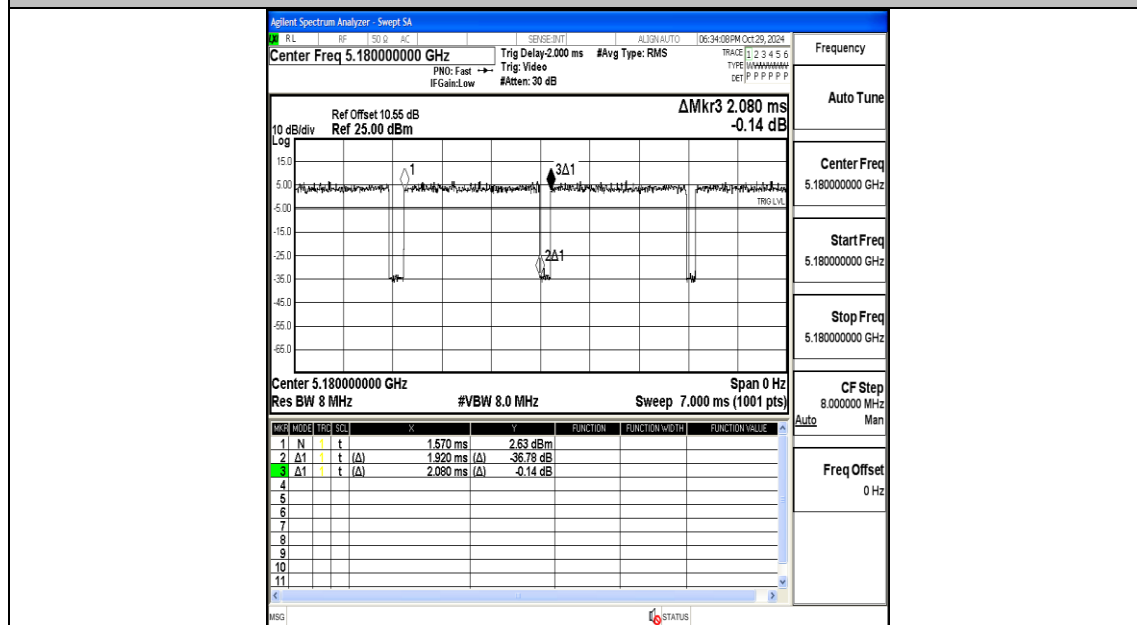
Test Graphs



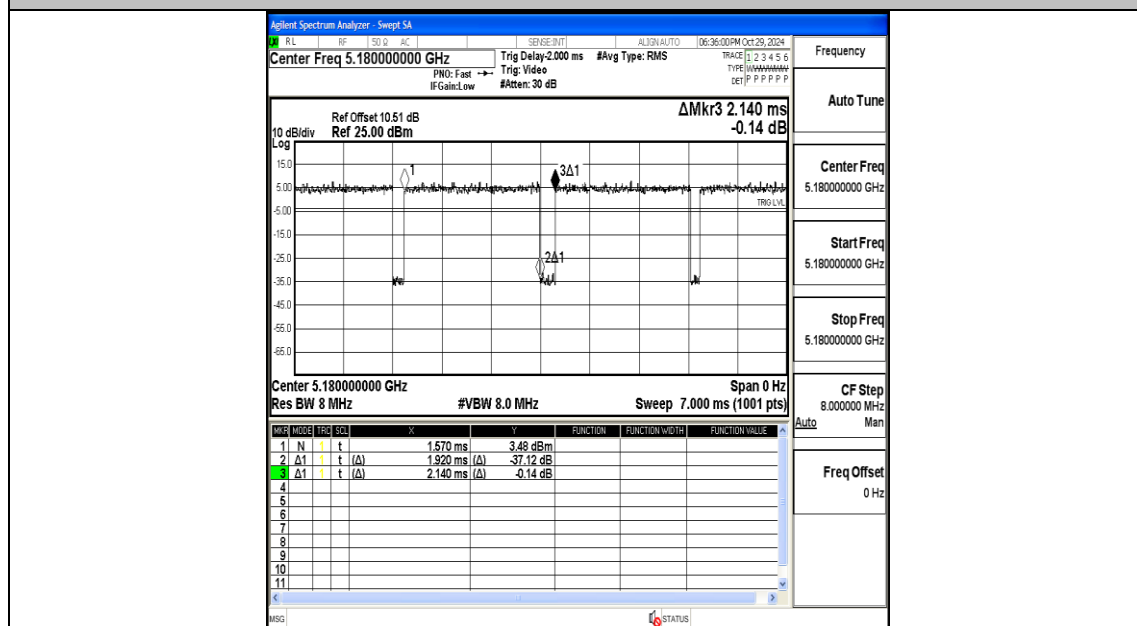




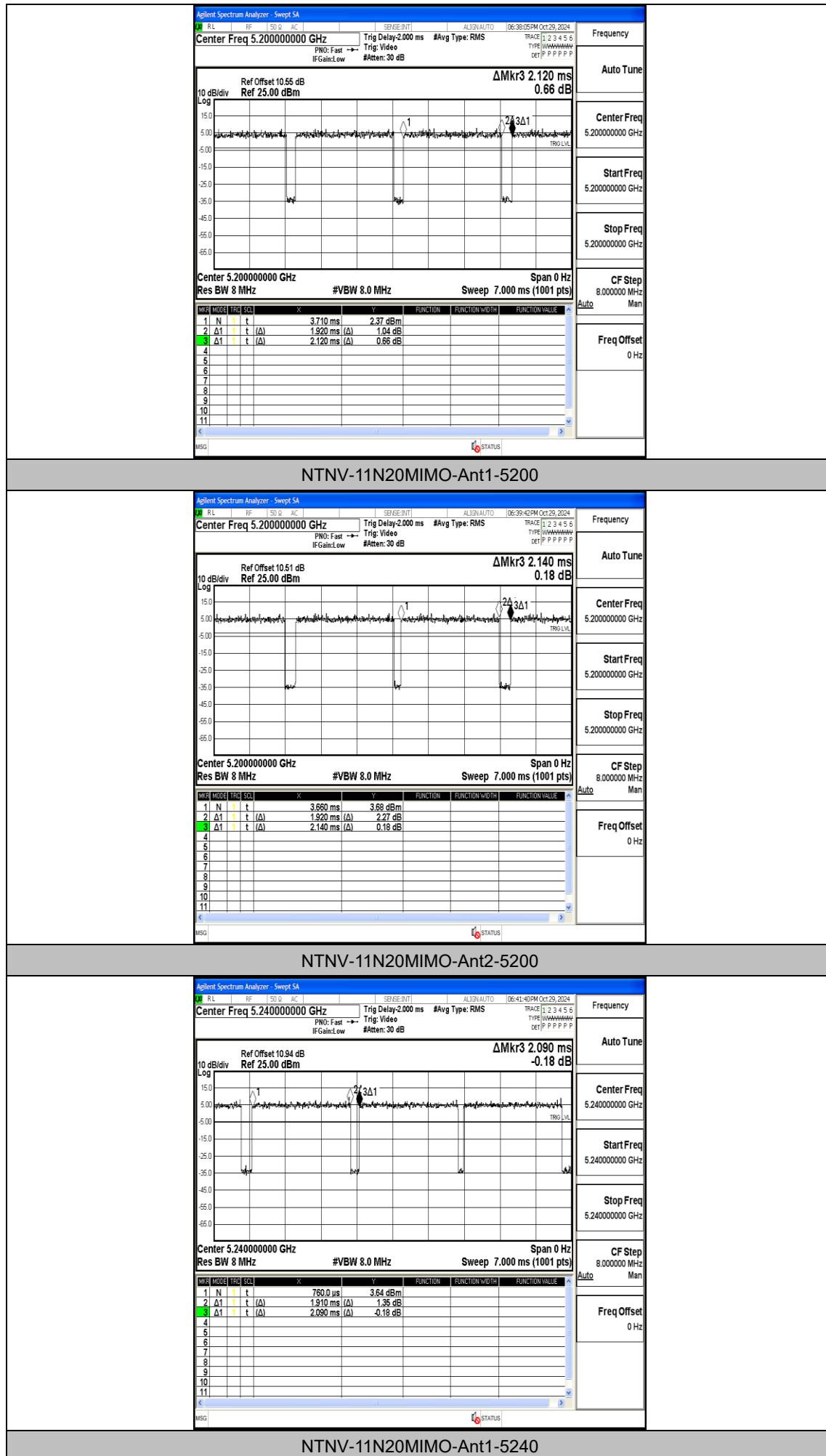
NTNV-11A-Ant2-5240

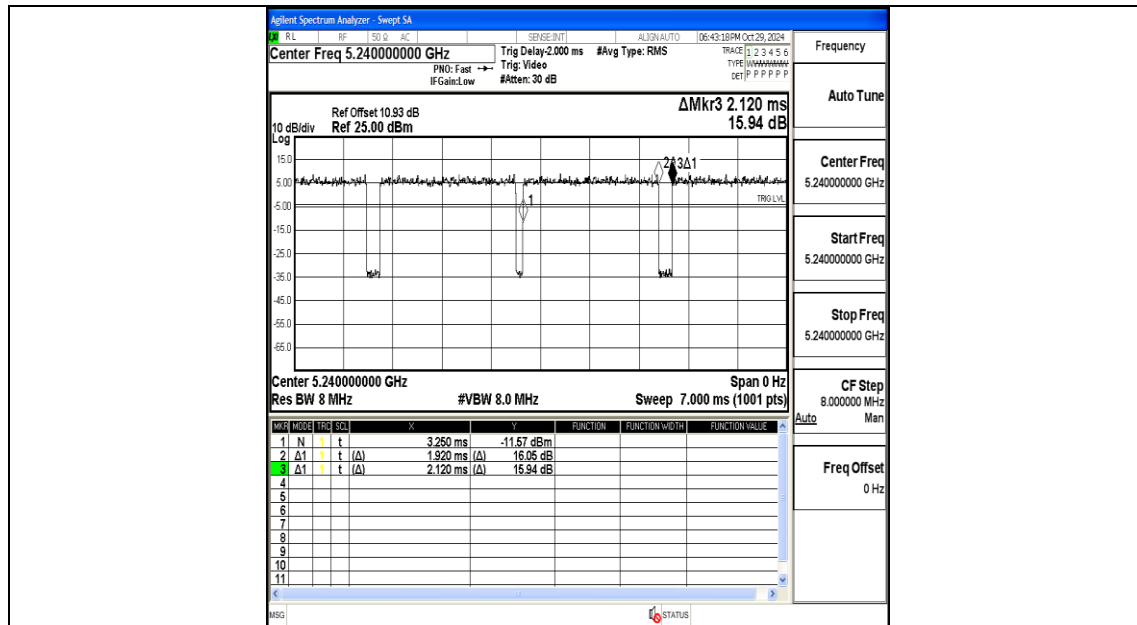


NTNV-11N20MIMO-Ant1-5180

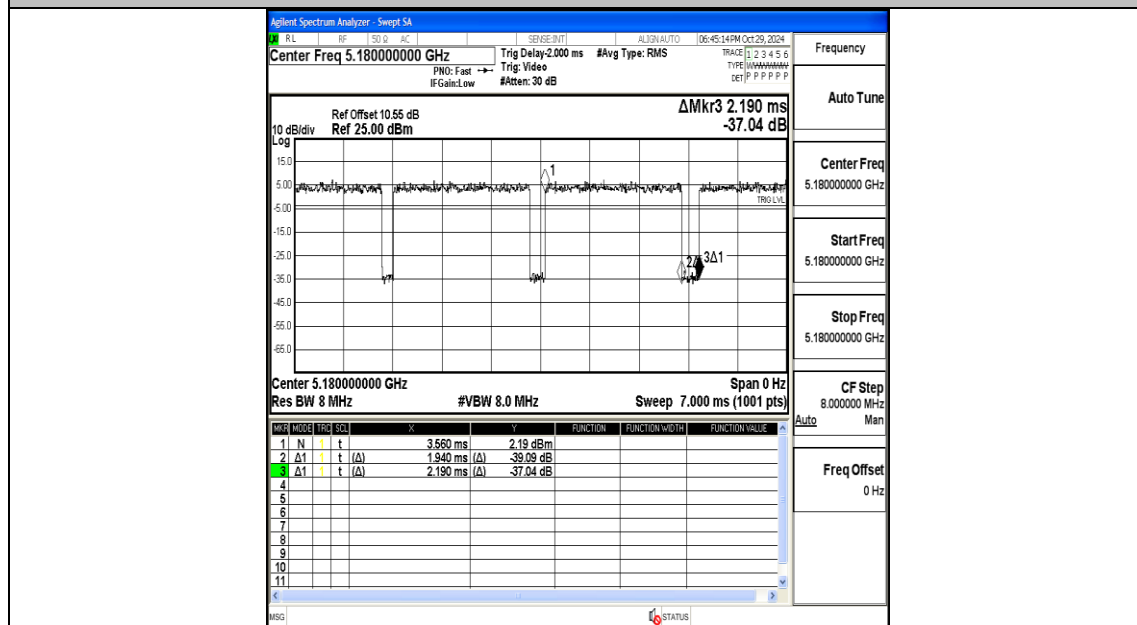


NTNV-11N20MIMO-Ant2-5180

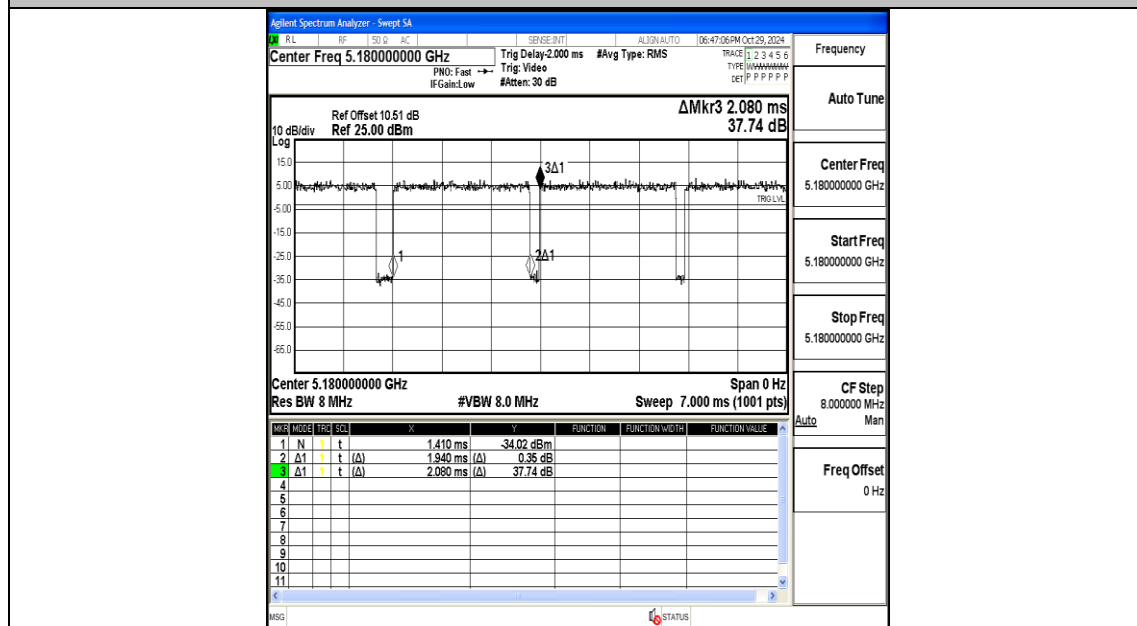




NTNV-11N20MIMO-Ant2-5240



NTNV-11AC20MIMO-Ant1-5180



NTNV-11AC20MIMO-Ant2-5180



