

RF Test Data for RLAN(5. 8G) (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

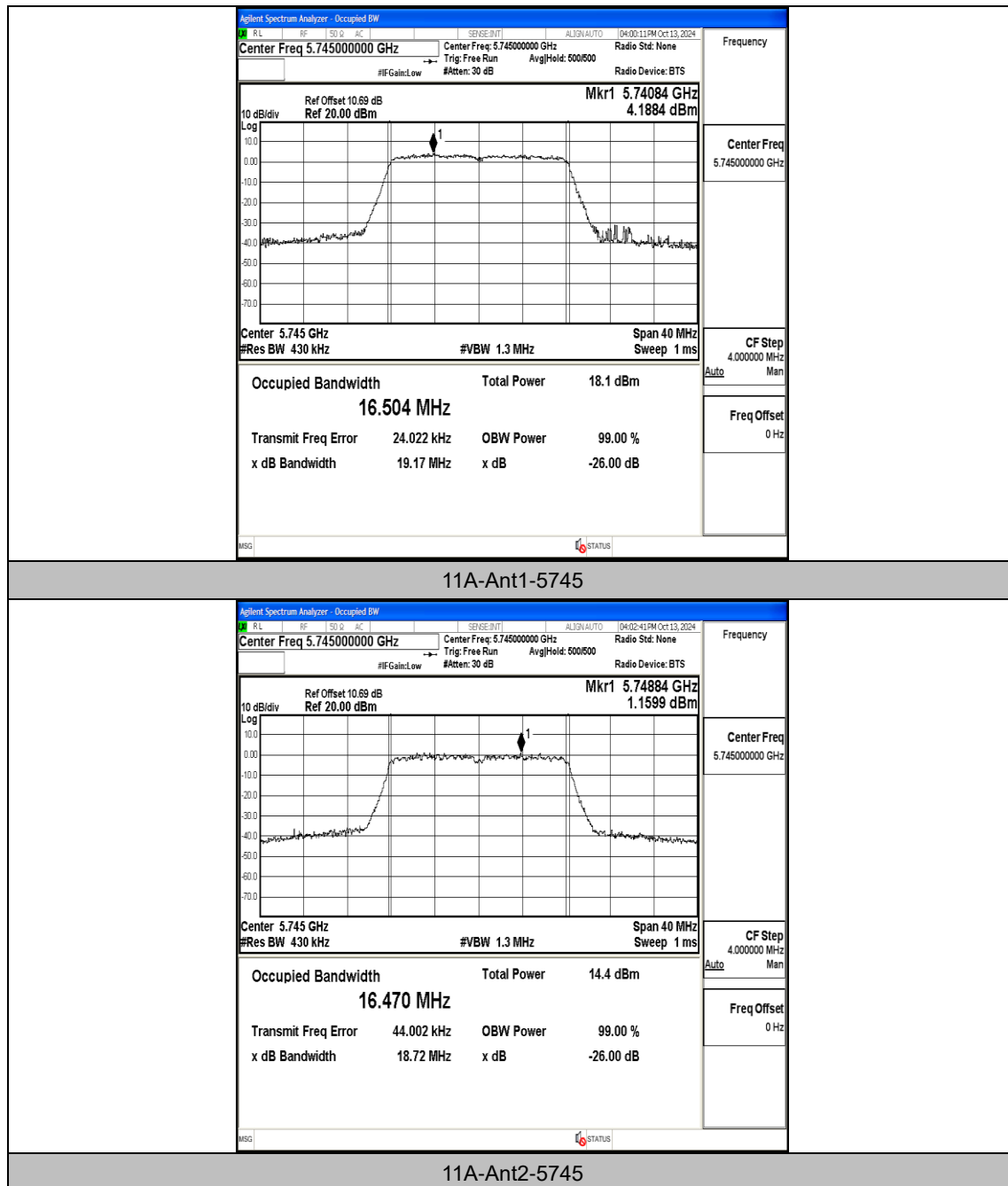
Appendix A2: Occupied channel bandwidth

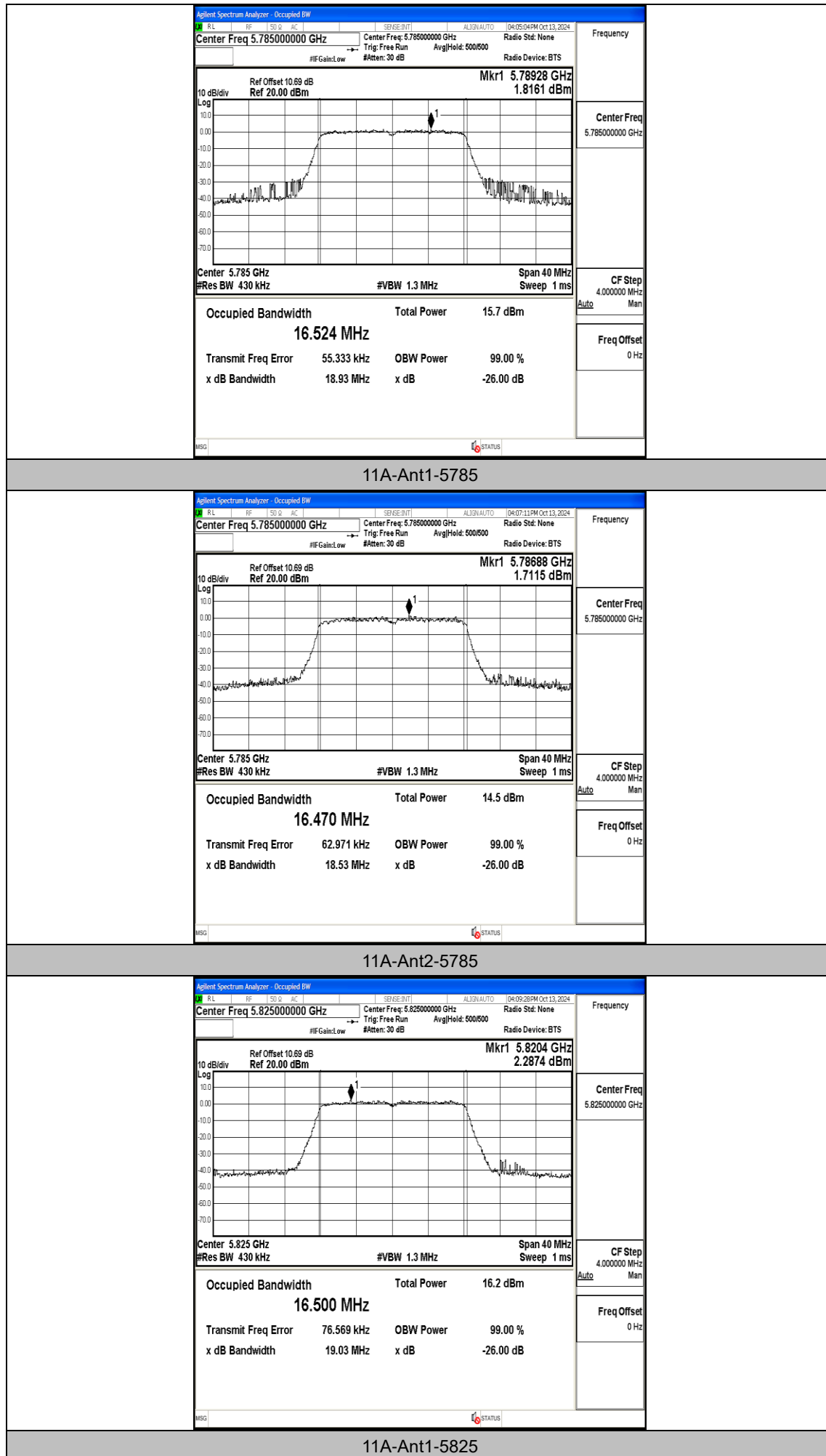
Test Result

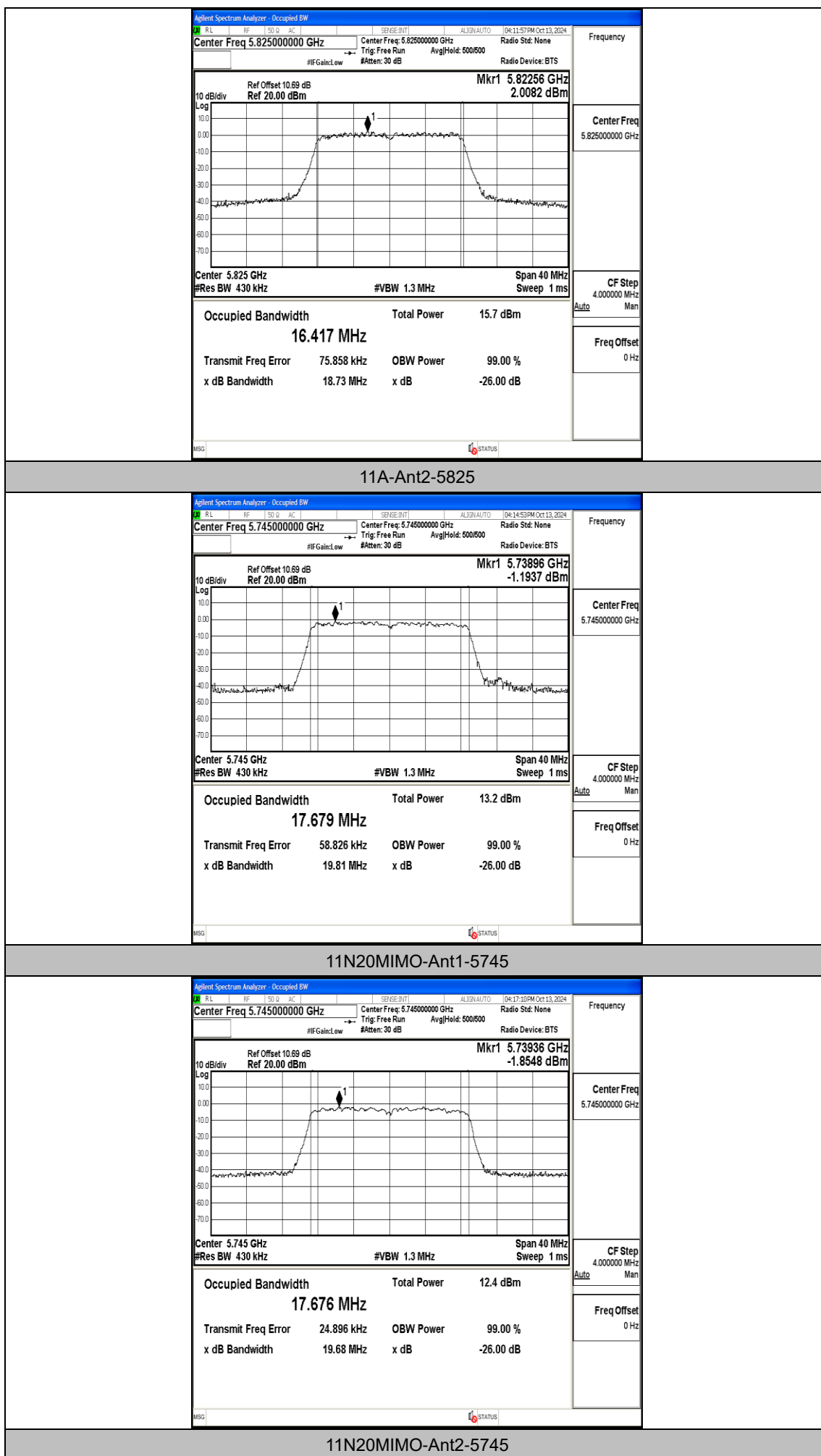
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	16.504	5736.7720	5753.2760	---	---
11A	Ant2	5745	16.470	5736.8090	5753.2790	---	---
11A	Ant1	5785	16.524	5776.7933	5793.3173	---	---
11A	Ant2	5785	16.470	5776.8280	5793.2980	---	---
11A	Ant1	5825	16.500	5816.8266	5833.3266	---	---
11A	Ant2	5825	16.417	5816.8674	5833.2844	---	---
11N20MIMO	Ant1	5745	17.679	5736.2193	5753.8983	---	---
11N20MIMO	Ant2	5745	17.676	5736.1869	5753.8629	---	---
11N20MIMO	Ant1	5785	17.720	5776.1547	5793.8747	---	---
11N20MIMO	Ant2	5785	17.735	5776.1447	5793.8797	---	---
11N20MIMO	Ant1	5825	17.758	5816.1544	5833.9124	---	---
11N20MIMO	Ant2	5825	17.795	5816.1817	5833.9767	---	---
11N40MIMO	Ant1	5755	36.163	5736.9935	5773.1565	---	---
11N40MIMO	Ant2	5755	36.372	5736.8836	5773.2556	---	---
11N40MIMO	Ant1	5795	36.284	5776.9063	5813.1903	---	---
11N40MIMO	Ant2	5795	36.307	5776.9108	5813.2178	---	---
11AC20MIMO	Ant1	5745	17.786	5736.1079	5753.8939	---	---
11AC20MIMO	Ant2	5745	17.836	5736.0866	5753.9226	---	---
11AC20MIMO	Ant1	5785	17.671	5776.1631	5793.8341	---	---
11AC20MIMO	Ant2	5785	17.700	5776.1499	5793.8499	---	---
11AC20MIMO	Ant1	5825	17.619	5816.2253	5833.8443	---	---
11AC20MIMO	Ant2	5825	17.640	5816.2172	5833.8572	---	---
11AC40MIMO	Ant1	5755	36.276	5736.9819	5773.2579	---	---
11AC40MIMO	Ant2	5755	36.384	5736.8719	5773.2559	---	---
11AC40MIMO	Ant1	5795	36.215	5776.9437	5813.1587	---	---

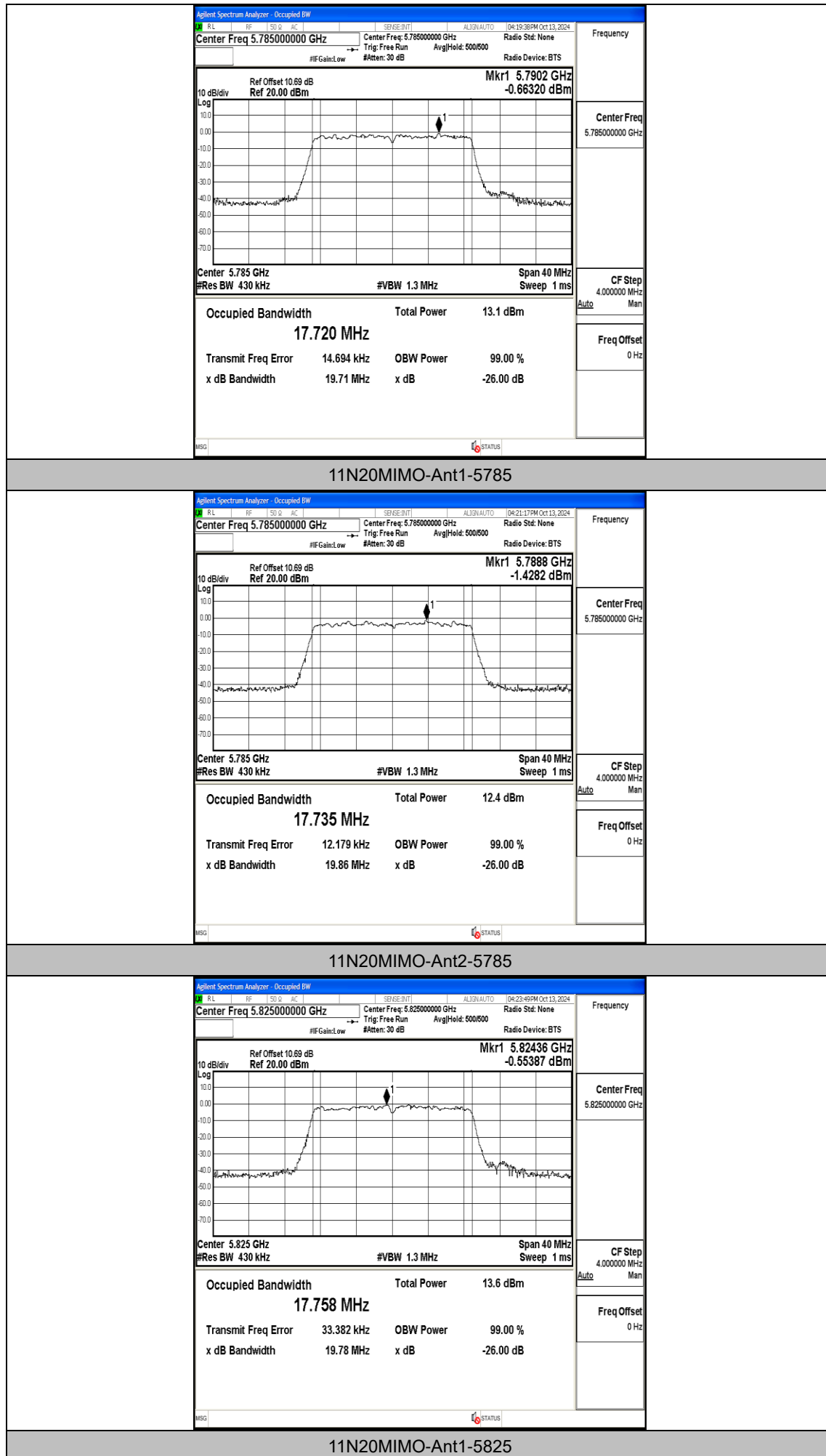
11AC40MIMO	Ant2	5795	36.291	5776.8963	5813.1873	---	---
11AC80MIMO	Ant1	5775	75.019	5737.5300	5812.5490	---	---
11AC80MIMO	Ant2	5775	75.989	5736.8849	5812.8739	---	---

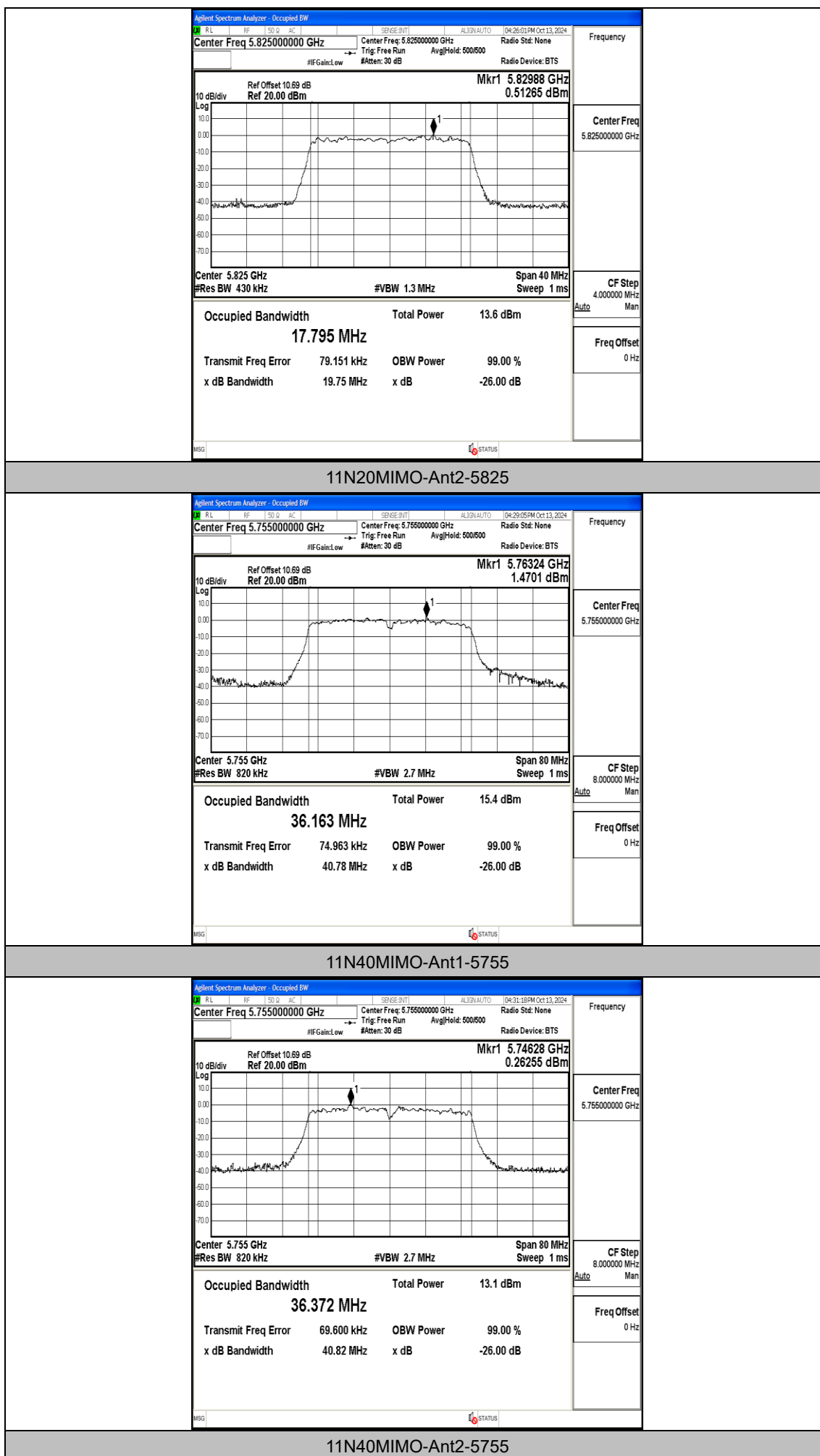
Test Graphs

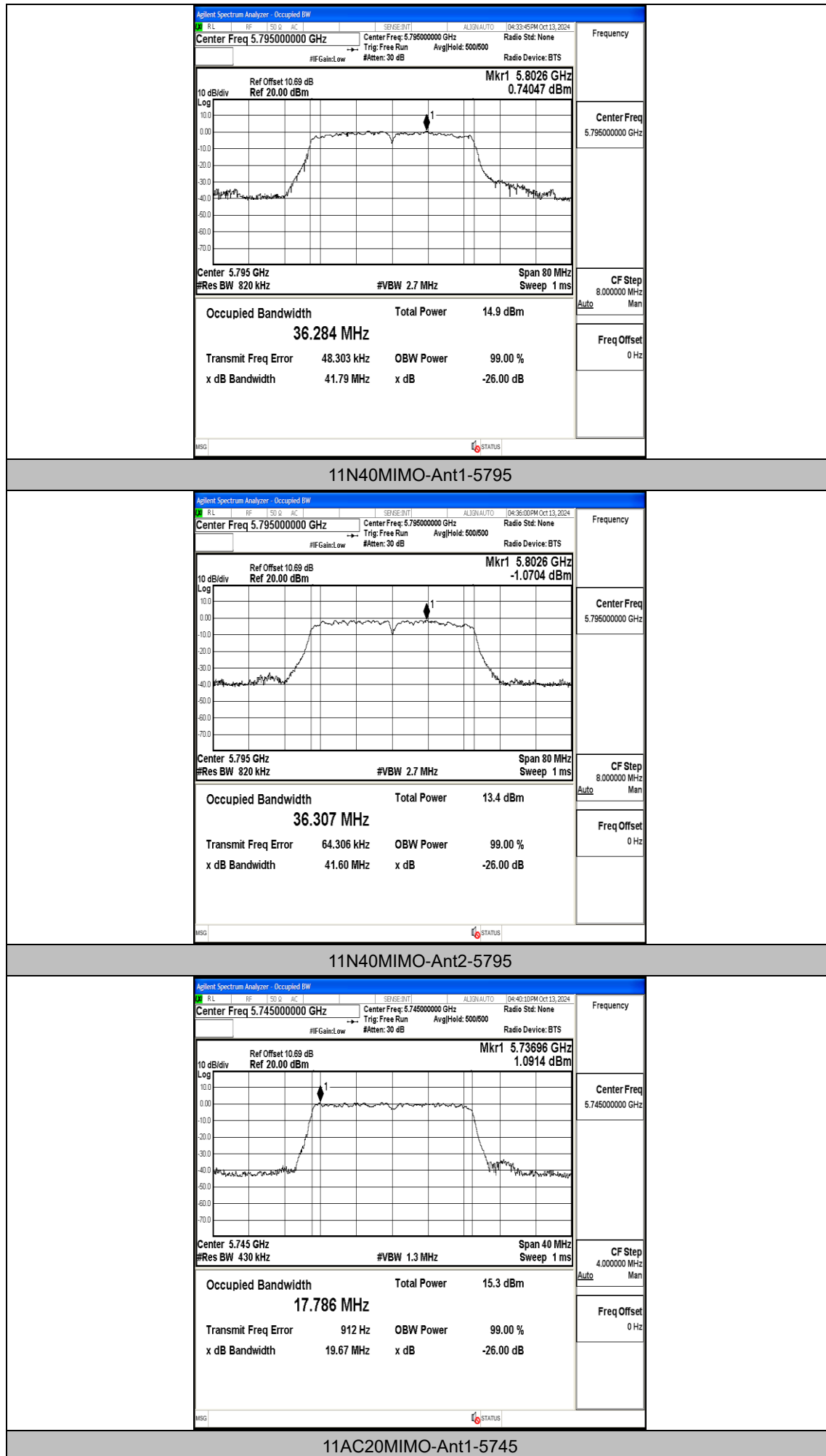


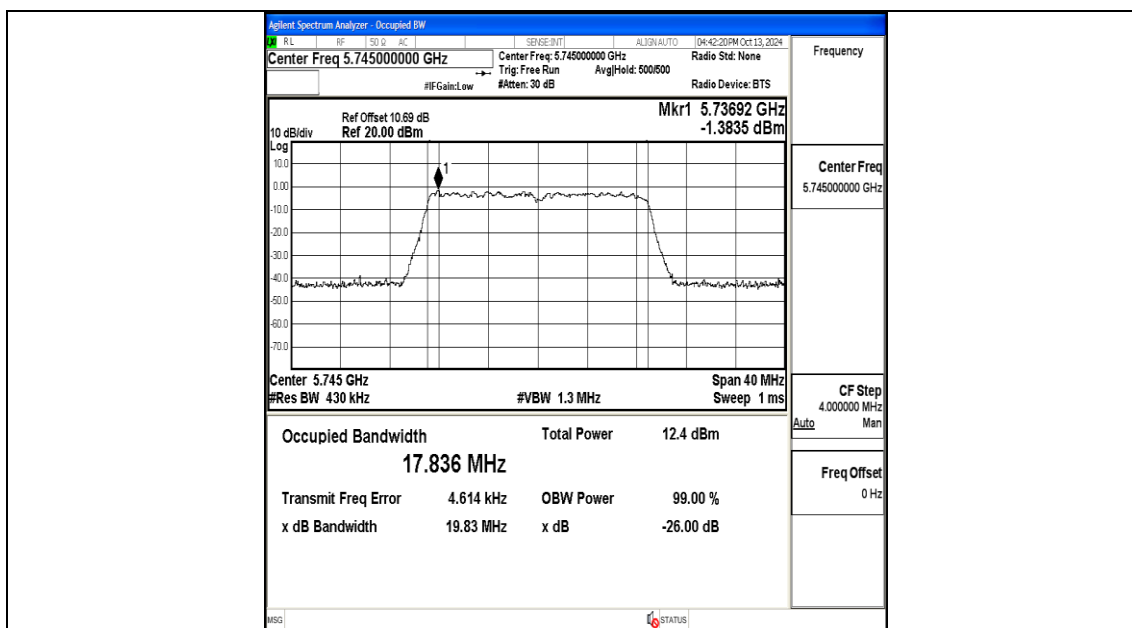




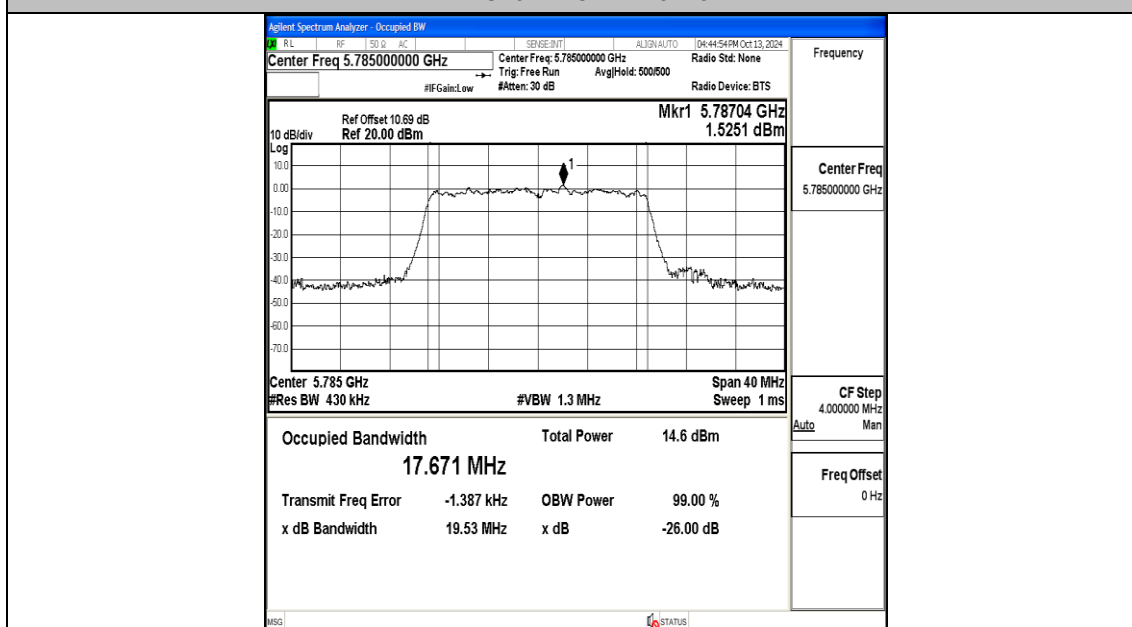




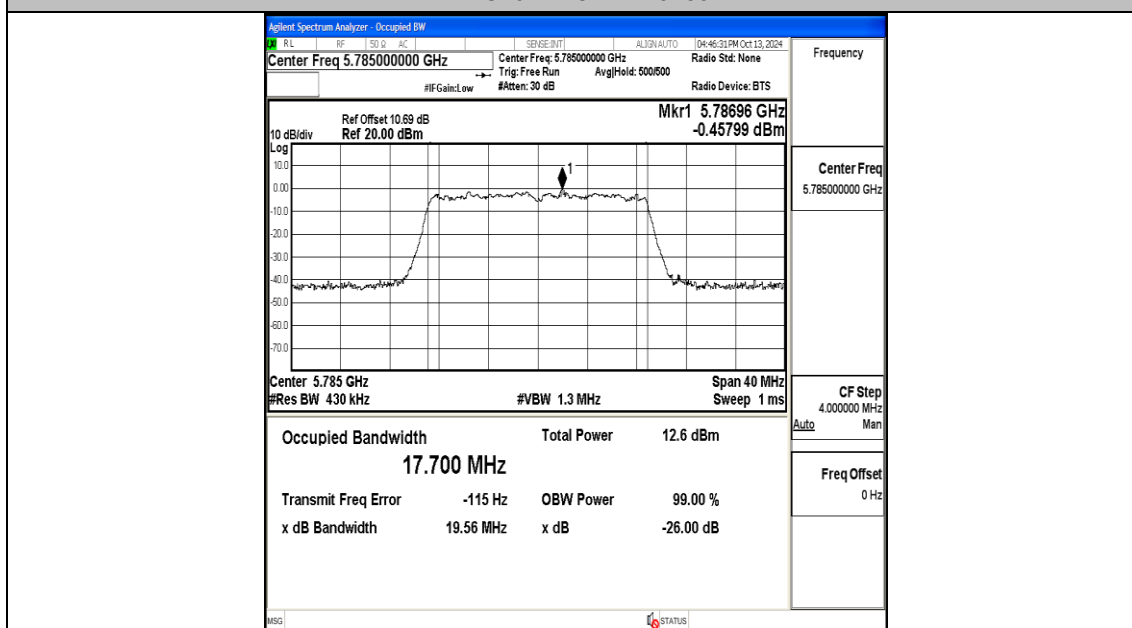




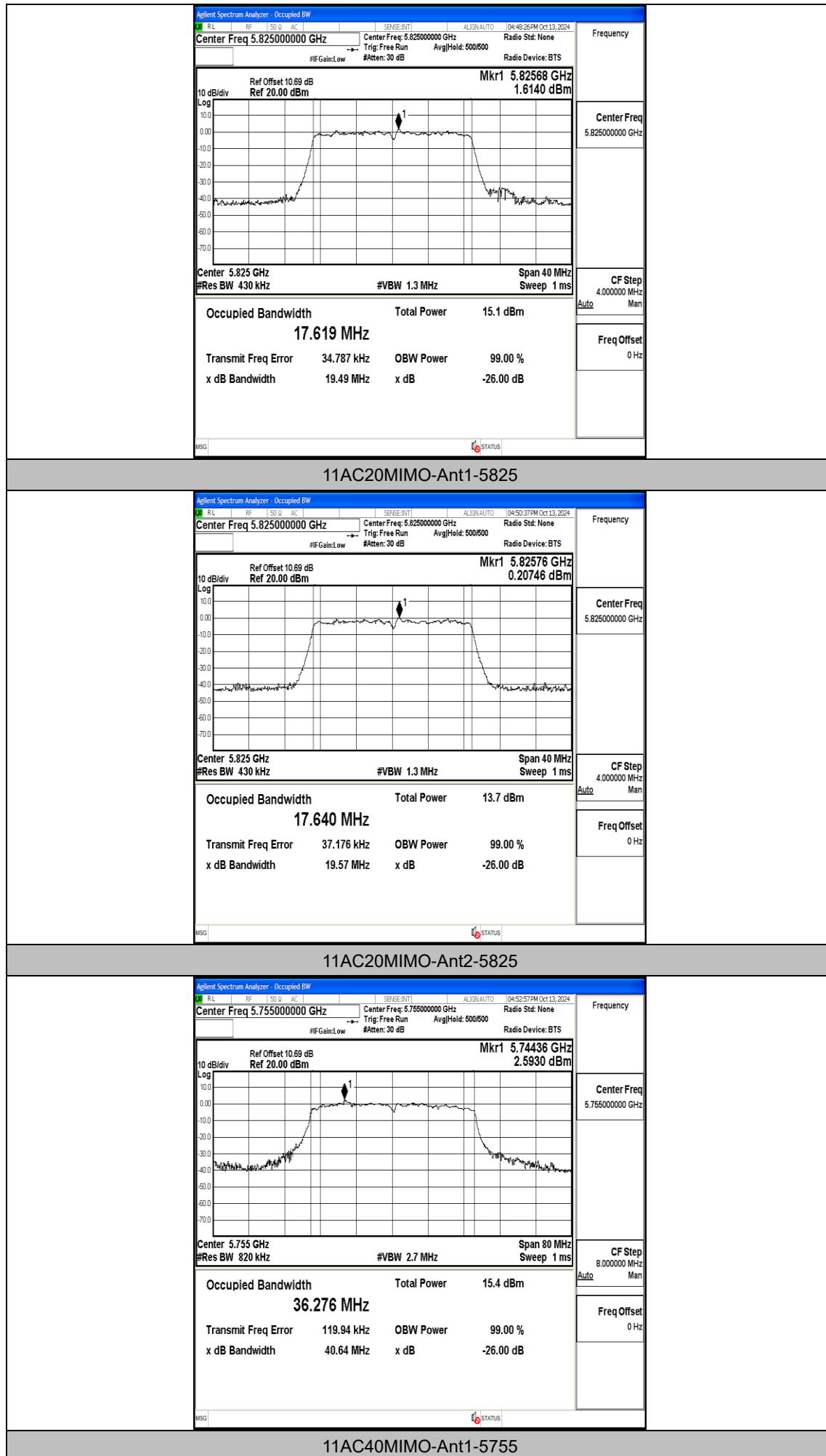
11AC20MIMO-Ant2-5745

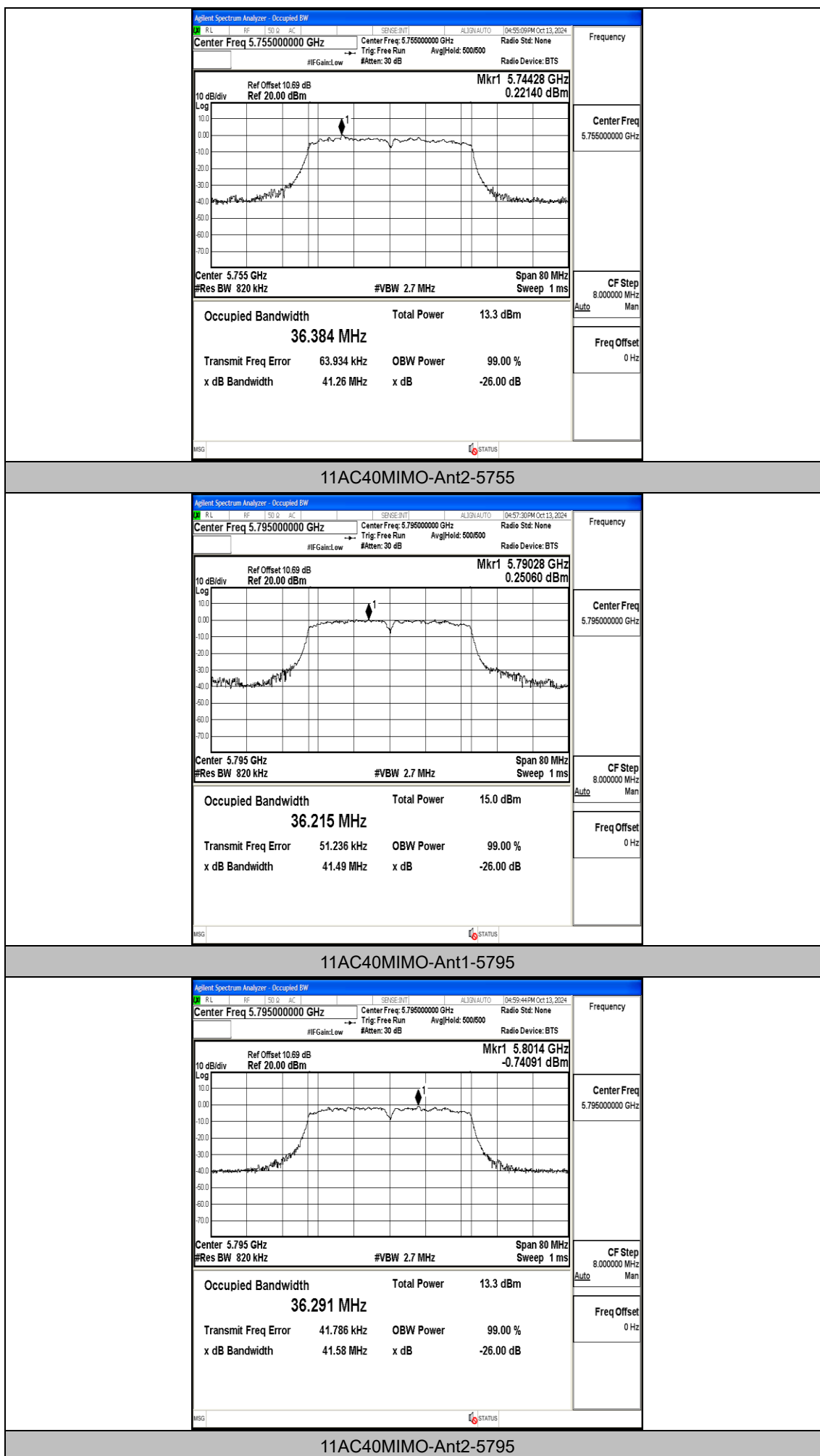


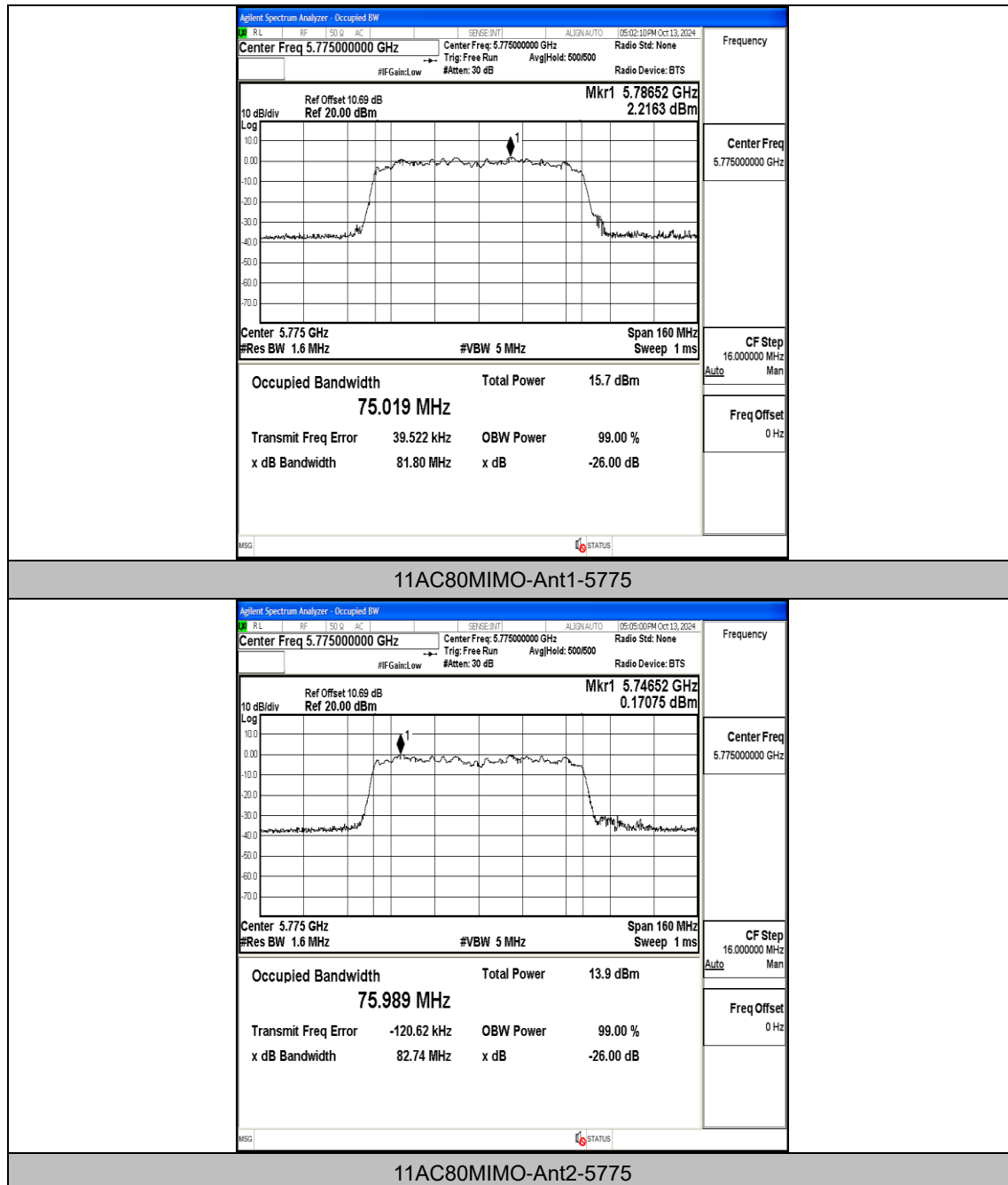
11AC20MIMO-Ant1-5785



11AC20MIMO-Ant2-5785





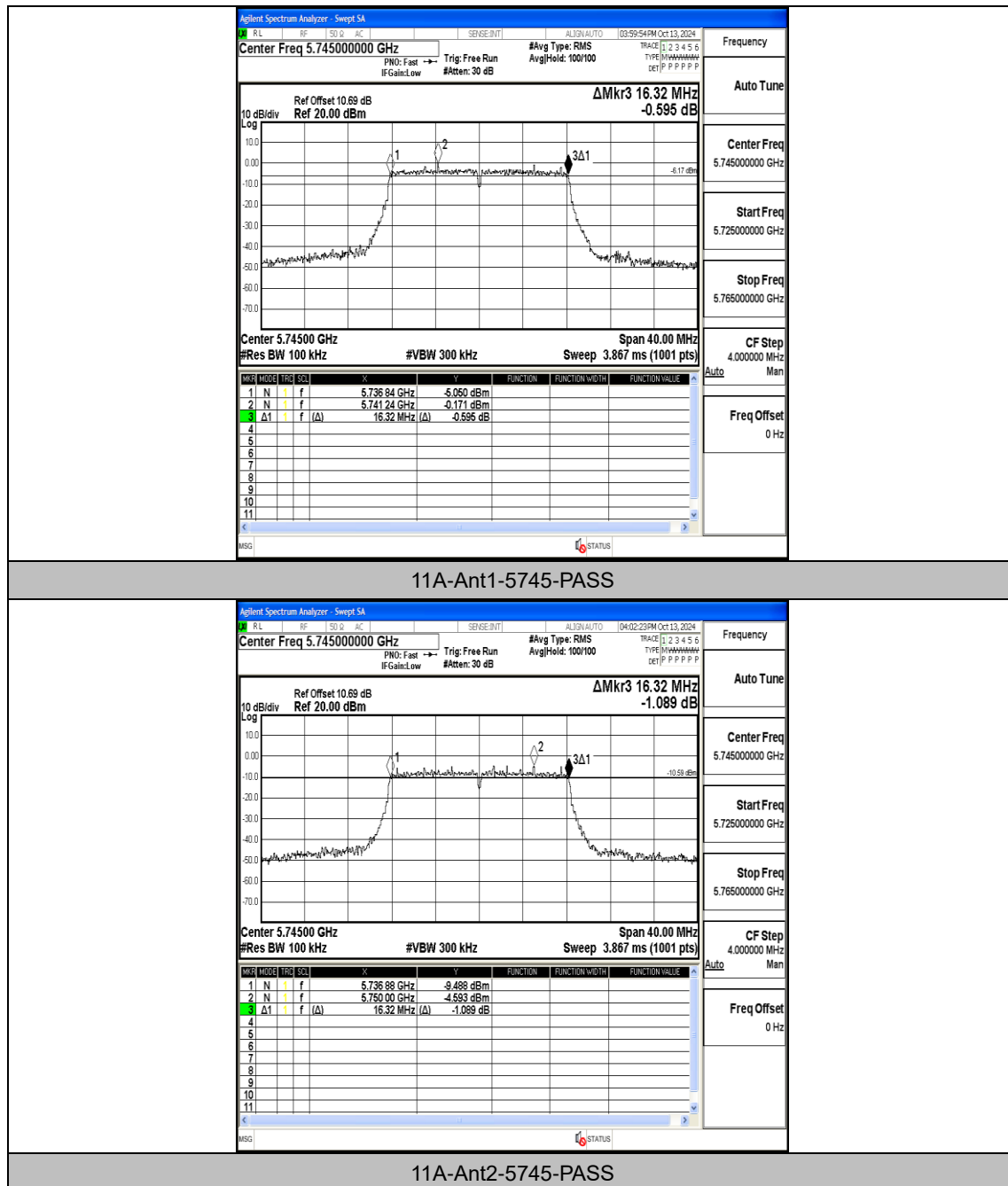


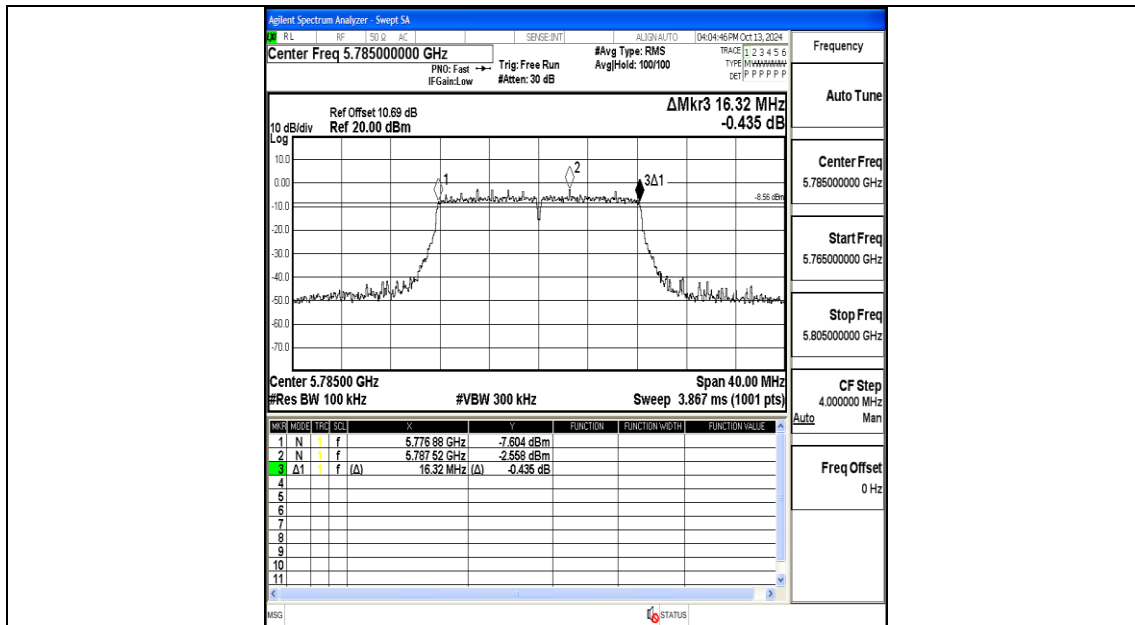
Appendix A: Min emission bandwidth

Test Result

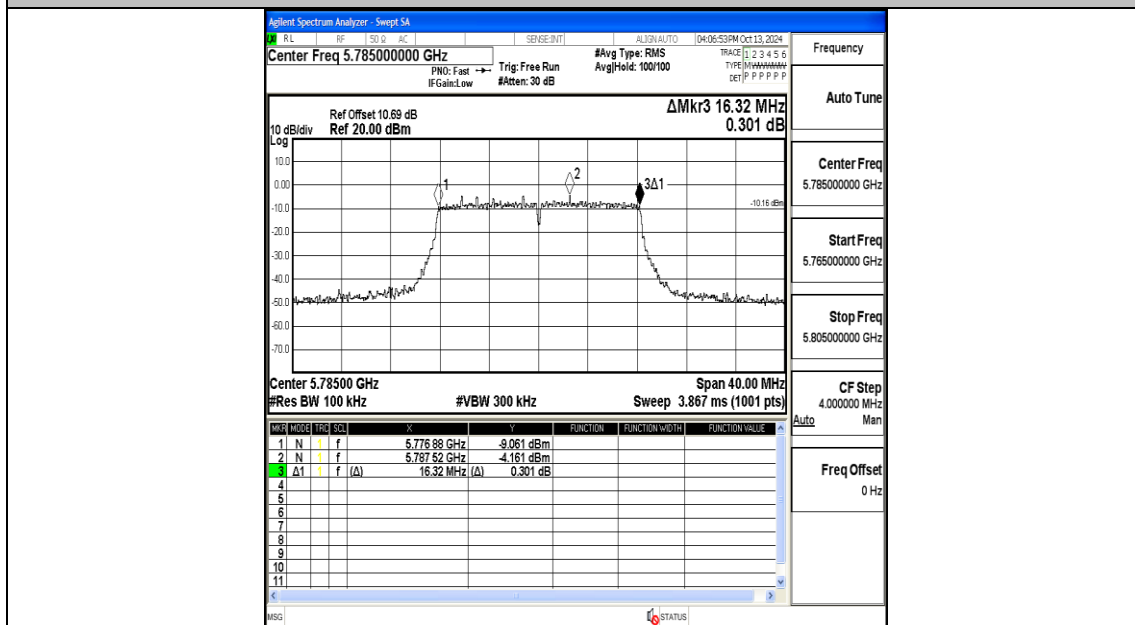
Test Mode	Antenna	Frequency [MHz]	6db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	16.320	5736.840	5753.160	0.5	PASS
11A	Ant2	5745	16.320	5736.880	5753.200	0.5	PASS
11A	Ant1	5785	16.320	5776.880	5793.200	0.5	PASS
11A	Ant2	5785	16.320	5776.880	5793.200	0.5	PASS
11A	Ant1	5825	16.120	5817.080	5833.200	0.5	PASS
11A	Ant2	5825	16.040	5817.120	5833.160	0.5	PASS
11N20MIMO	Ant1	5745	17.560	5736.280	5753.840	0.5	PASS
11N20MIMO	Ant2	5745	17.560	5736.240	5753.800	0.5	PASS
11N20MIMO	Ant1	5785	17.600	5776.200	5793.800	0.5	PASS
11N20MIMO	Ant2	5785	17.560	5776.240	5793.800	0.5	PASS
11N20MIMO	Ant1	5825	17.640	5816.200	5833.840	0.5	PASS
11N20MIMO	Ant2	5825	17.000	5816.840	5833.840	0.5	PASS
11N40MIMO	Ant1	5755	35.120	5737.480	5772.600	0.5	PASS
11N40MIMO	Ant2	5755	35.120	5737.400	5772.520	0.5	PASS
11N40MIMO	Ant1	5795	35.120	5777.480	5812.600	0.5	PASS
11N40MIMO	Ant2	5795	35.440	5777.400	5812.840	0.5	PASS
11AC20MIMO	Ant1	5745	17.160	5736.200	5753.360	0.5	PASS
11AC20MIMO	Ant2	5745	17.280	5736.200	5753.480	0.5	PASS
11AC20MIMO	Ant1	5785	17.640	5776.160	5793.800	0.5	PASS
11AC20MIMO	Ant2	5785	17.640	5776.160	5793.800	0.5	PASS
11AC20MIMO	Ant1	5825	17.160	5816.600	5833.760	0.5	PASS
11AC20MIMO	Ant2	5825	17.120	5816.640	5833.760	0.5	PASS
11AC40MIMO	Ant1	5755	35.360	5737.240	5772.600	0.5	PASS
11AC40MIMO	Ant2	5755	35.600	5736.920	5772.520	0.5	PASS
11AC40MIMO	Ant1	5795	35.200	5777.400	5812.600	0.5	PASS
11AC40MIMO	Ant2	5795	35.120	5777.480	5812.600	0.5	PASS
11AC80MIMO	Ant1	5775	75.040	5737.560	5812.600	0.5	PASS
11AC80MIMO	Ant2	5775	75.200	5737.400	5812.600	0.5	PASS

Test Graphs

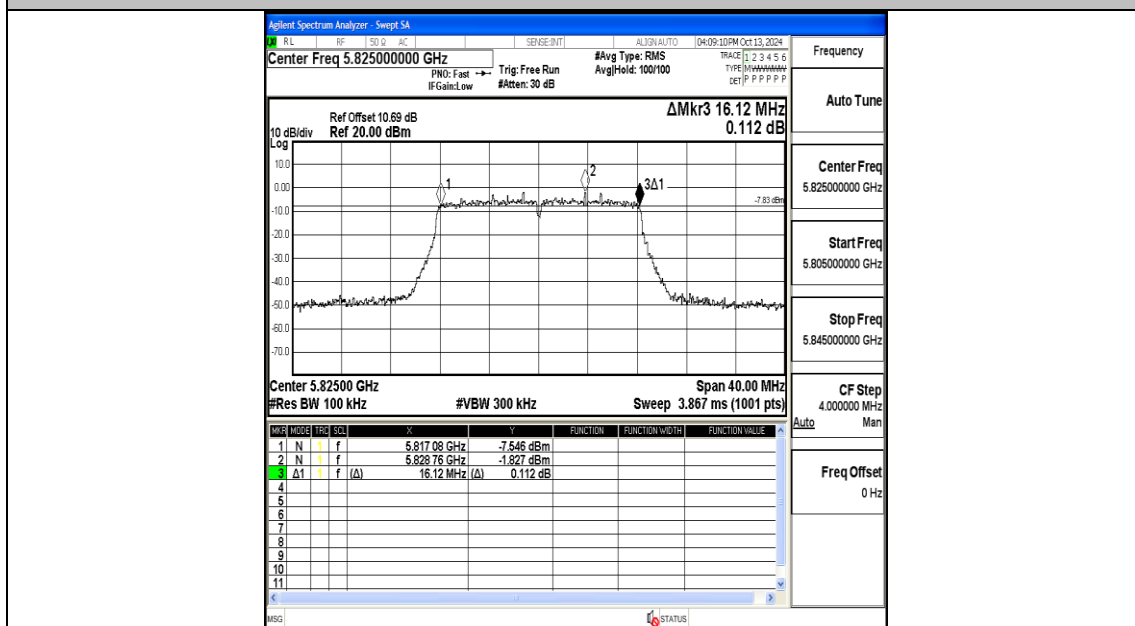




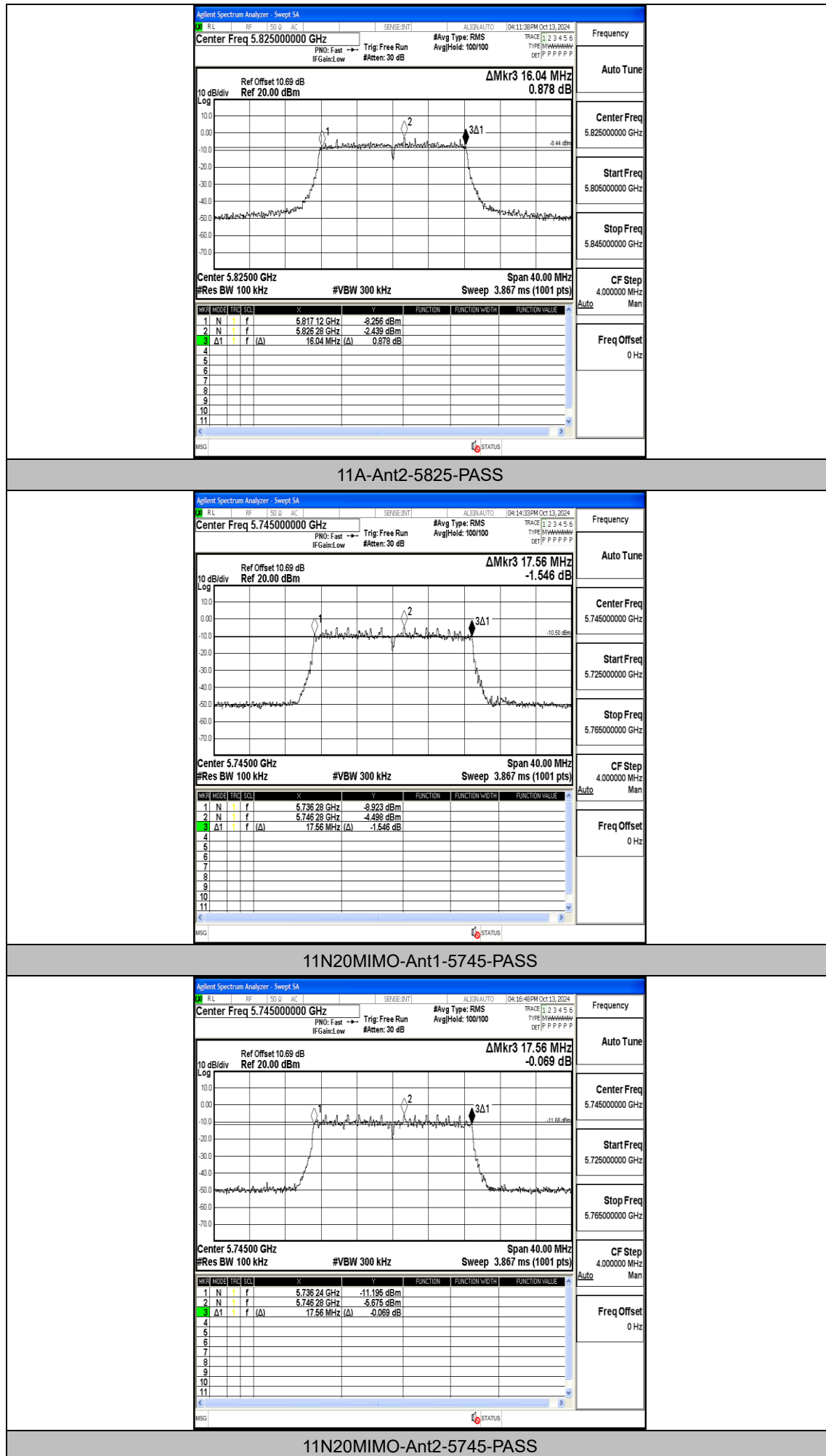
11A-Ant1-5785-PASS

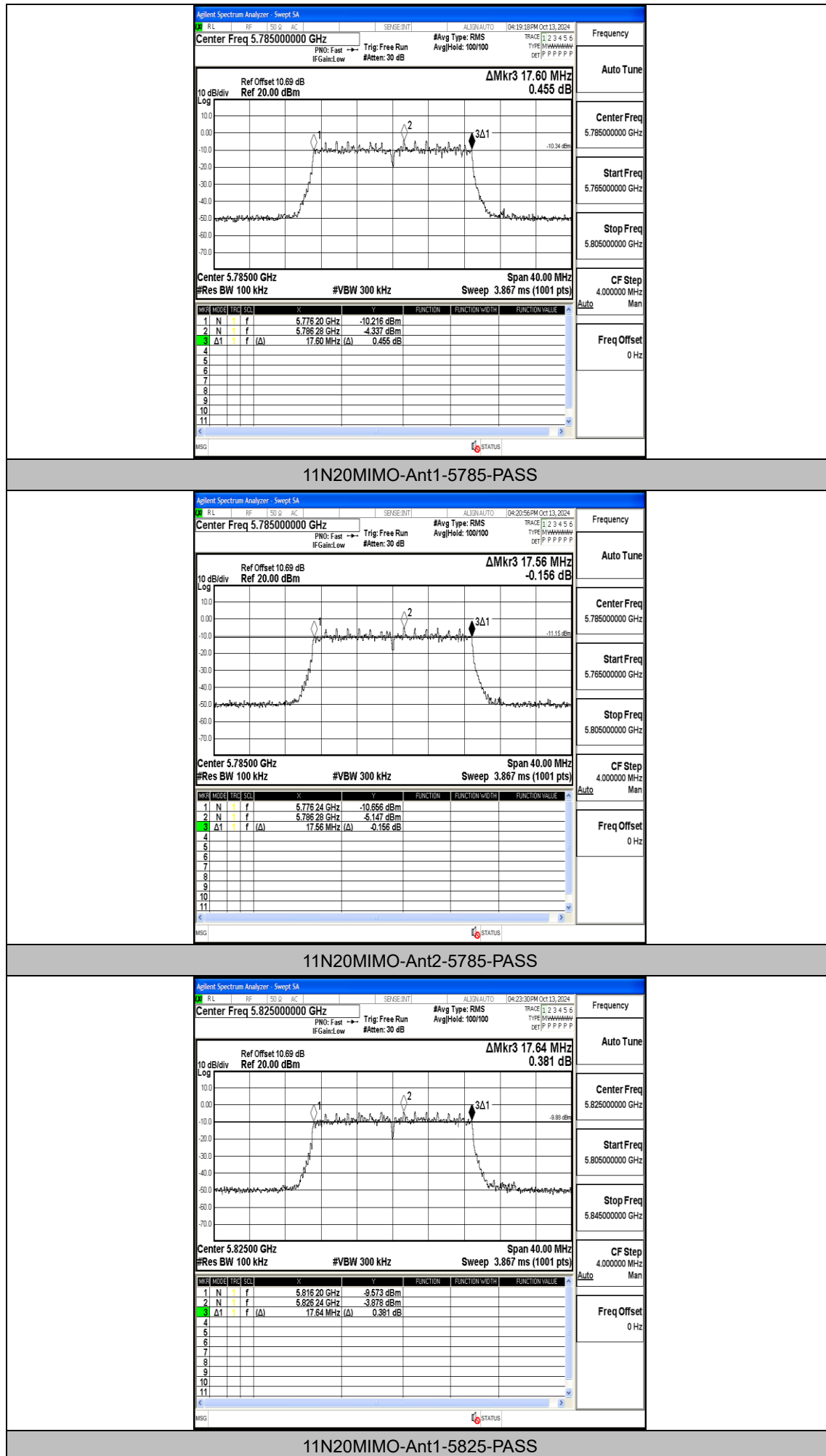


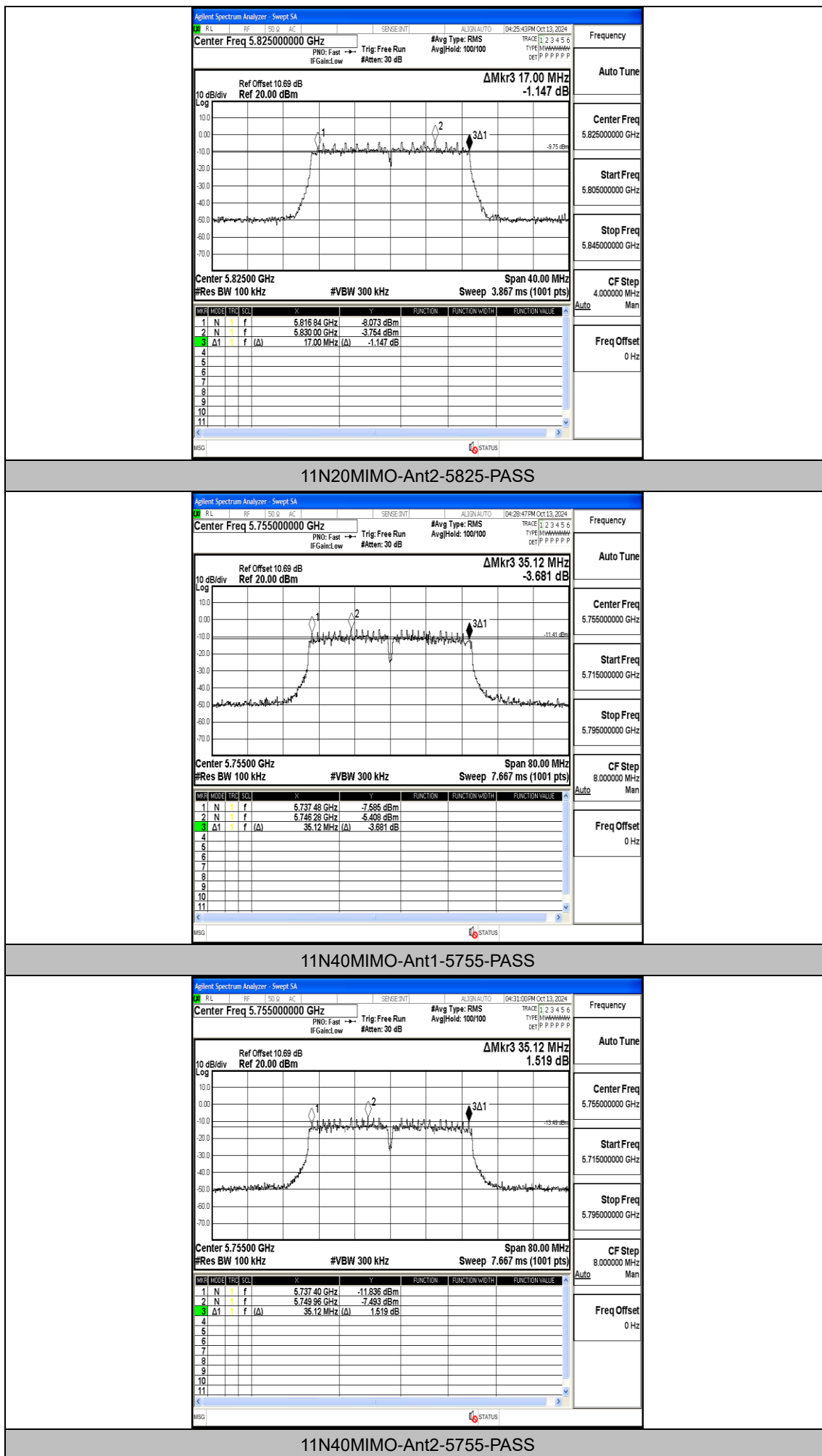
11A-Ant2-5785-PASS



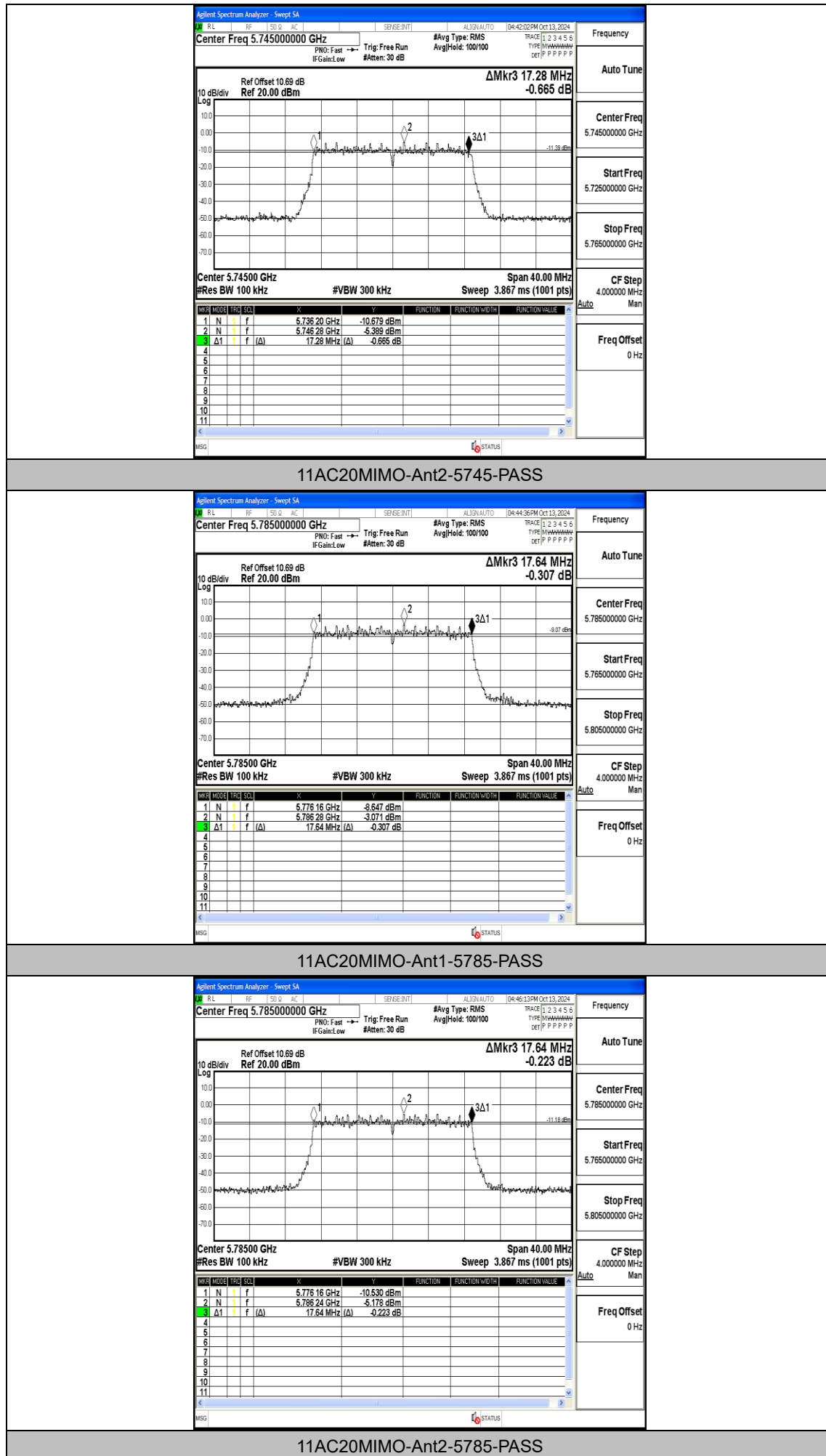
11A-Ant1-5825-PASS

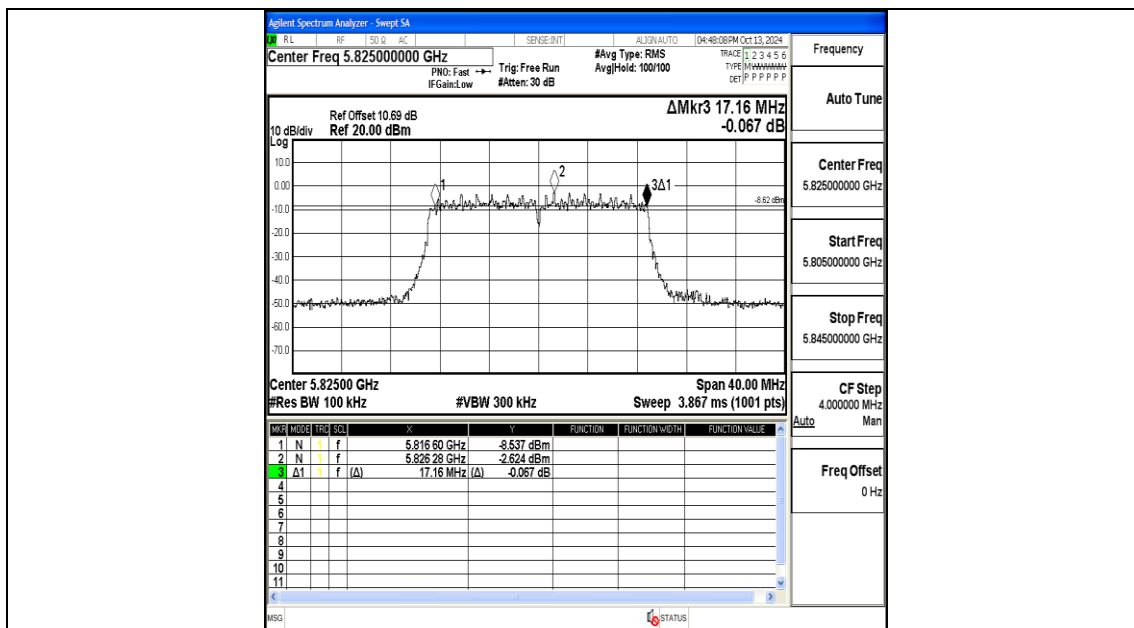




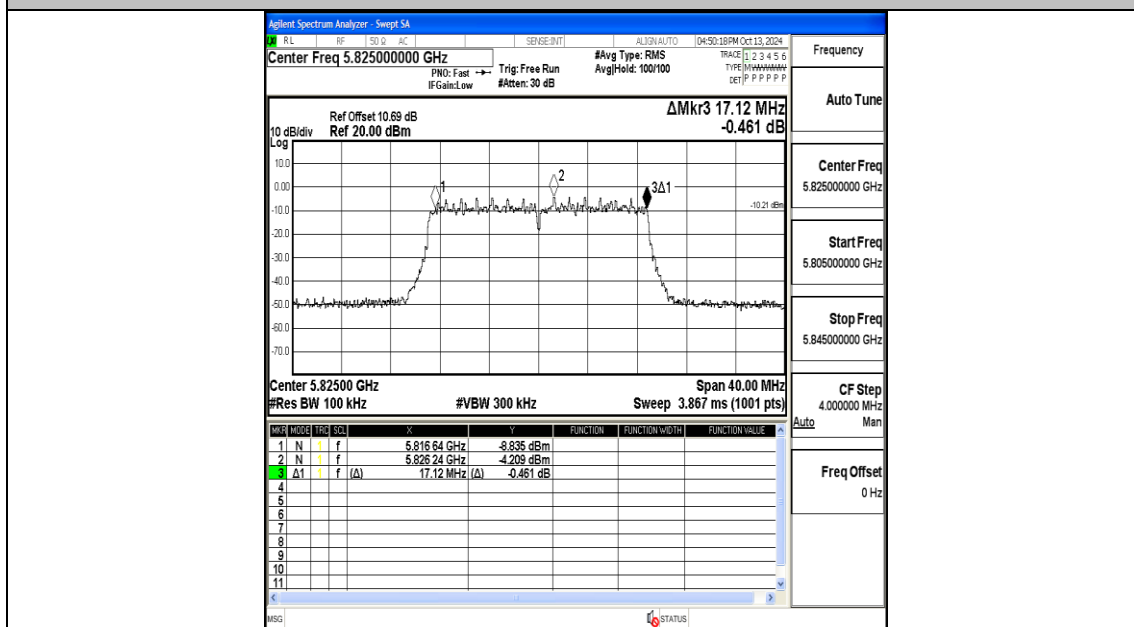




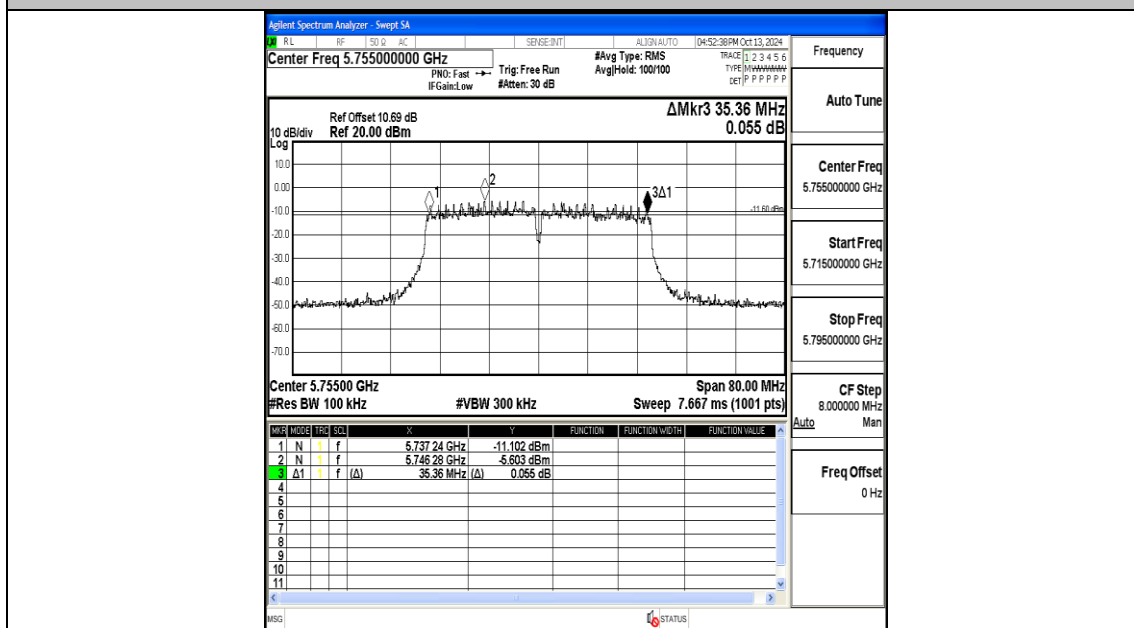




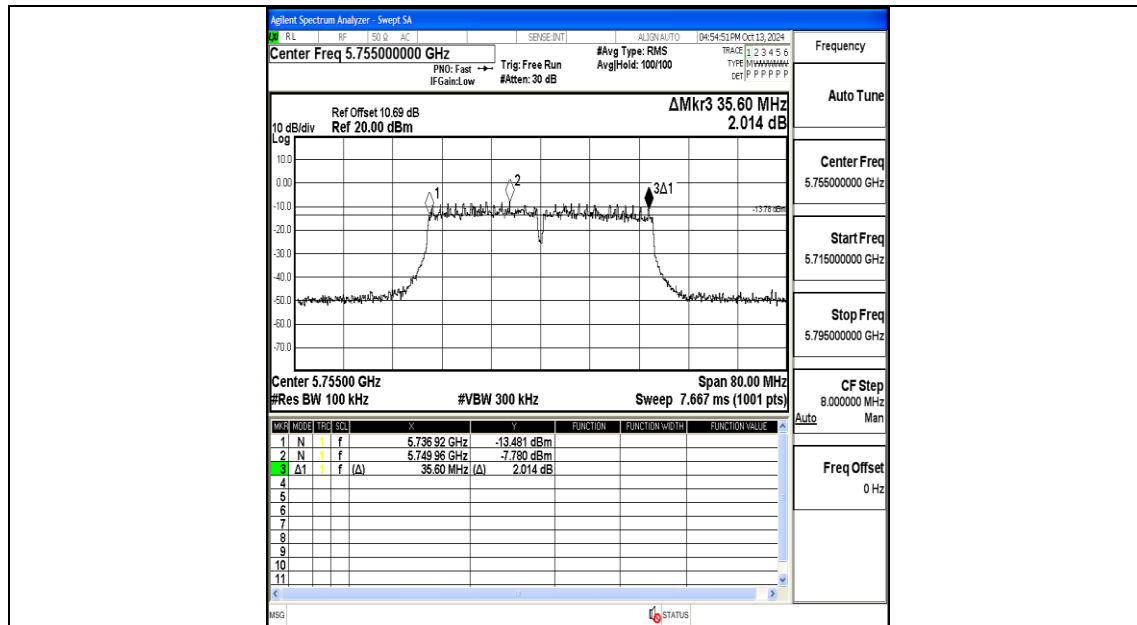
11AC20MIMO-Ant1-5825-PASS



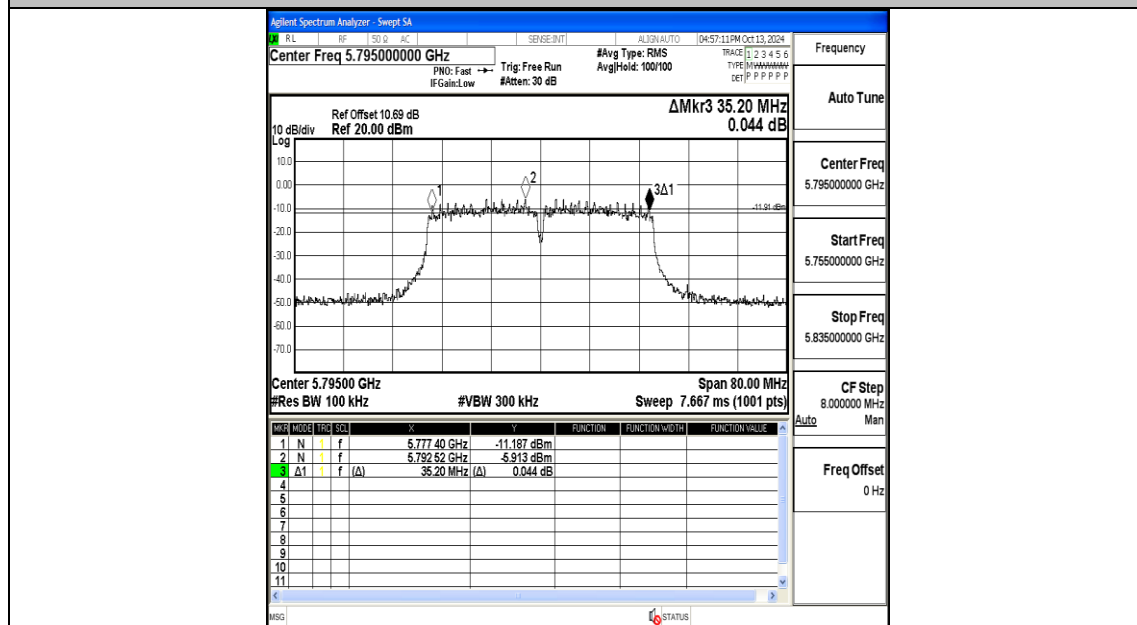
11AC20MIMO-Ant2-5825-PASS



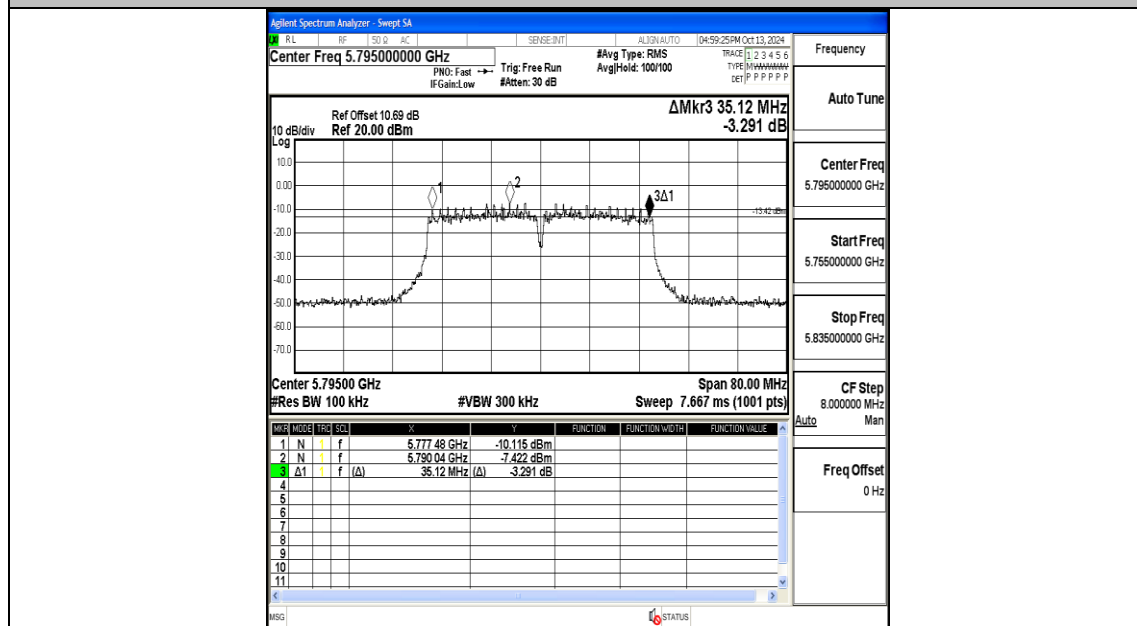
11AC40MIMO-Ant1-5755-PASS



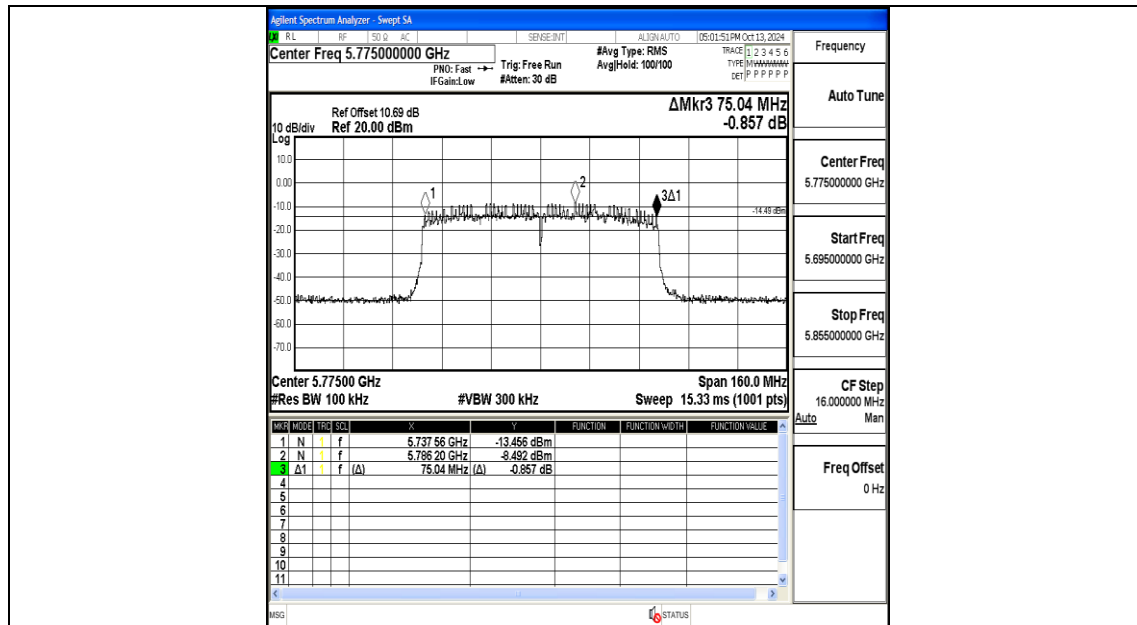
11AC40MIMO-Ant2-5755-PASS



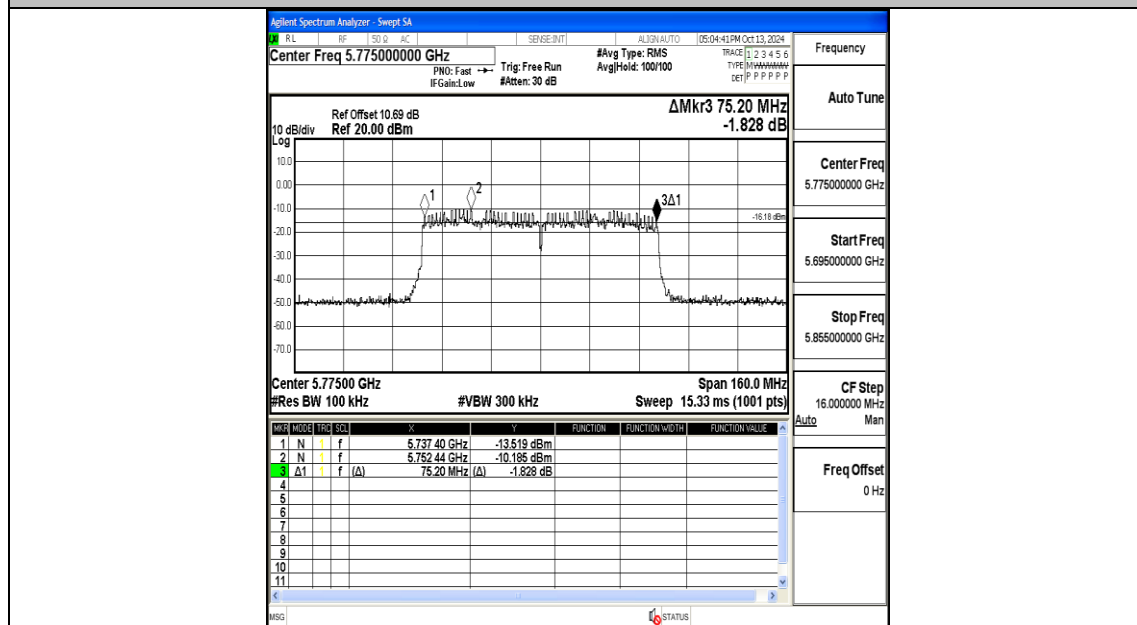
11AC40MIMO-Ant1-5795-PASS



11AC40MIMO-Ant2-5795-PASS



11AC80MIMO-Ant1-5775-PASS



11AC80MIMO-Ant2-5775-PASS

Appendix B: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11A	Ant1	5745	11.23	≤30.00	PASS
11A	Ant2	5745	7.94	≤30.00	PASS
11A	Ant1	5785	9.12	≤30.00	PASS
11A	Ant2	5785	7.28	≤30.00	PASS
11A	Ant1	5825	9.64	≤30.00	PASS
11A	Ant2	5825	8.56	≤30.00	PASS
11N20MIMO	Ant1	5745	6.98	≤30.00	PASS
11N20MIMO	Ant2	5745	6.56	≤30.00	PASS
11N20MIMO	total	5745	9.79	≤30.00	PASS
11N20MIMO	Ant1	5785	7.35	≤30.00	PASS
11N20MIMO	Ant2	5785	6.94	≤30.00	PASS
11N20MIMO	total	5785	10.16	≤30.00	PASS
11N20MIMO	Ant1	5825	8.48	≤30.00	PASS
11N20MIMO	Ant2	5825	8.09	≤30.00	PASS
11N20MIMO	total	5825	11.30	≤30.00	PASS
11N40MIMO	Ant1	5755	8.84	≤30.00	PASS
11N40MIMO	Ant2	5755	7.25	≤30.00	PASS
11N40MIMO	total	5755	11.13	≤30.00	PASS
11N40MIMO	Ant1	5795	8.99	≤30.00	PASS
11N40MIMO	Ant2	5795	6.36	≤30.00	PASS
11N40MIMO	total	5795	10.88	≤30.00	PASS
11AC20MIMO	Ant1	5745	9.19	≤30.00	PASS
11AC20MIMO	Ant2	5745	5.96	≤30.00	PASS
11AC20MIMO	total	5745	10.88	≤30.00	PASS
11AC20MIMO	Ant1	5785	8.46	≤30.00	PASS
11AC20MIMO	Ant2	5785	6.56	≤30.00	PASS
11AC20MIMO	total	5785	10.62	≤30.00	PASS
11AC20MIMO	Ant1	5825	8.62	≤30.00	PASS
11AC20MIMO	Ant2	5825	7.39	≤30.00	PASS
11AC20MIMO	total	5825	11.06	≤30.00	PASS
11AC40MIMO	Ant1	5755	9.04	≤30.00	PASS
11AC40MIMO	Ant2	5755	6.48	≤30.00	PASS
11AC40MIMO	total	5755	10.96	≤30.00	PASS
11AC40MIMO	Ant1	5795	8.74	≤30.00	PASS
11AC40MIMO	Ant2	5795	7.26	≤30.00	PASS
11AC40MIMO	total	5795	11.07	≤30.00	PASS
11AC80MIMO	Ant1	5775	8.42	≤30.00	PASS
11AC80MIMO	Ant2	5775	7.27	≤30.00	PASS
11AC80MIMO	total	5775	10.89	≤30.00	PASS

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

Appendix C: Maximum power spectral density

Test Result

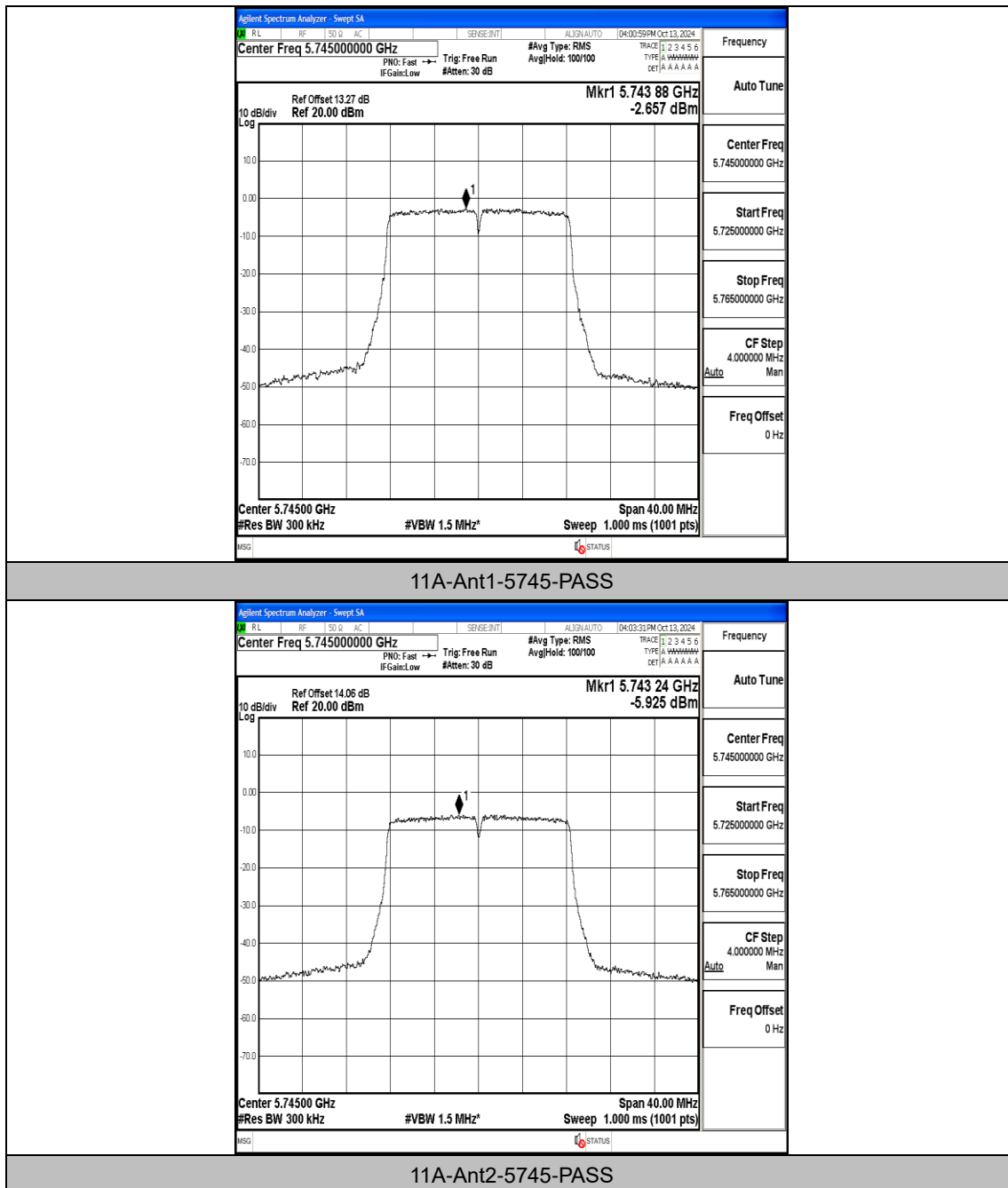
Frequency [MHz]	Test Mode	Antenna	Result [dBm/MHz]	DC Factor [dB]	RBW Factor [dB]	Limit [dBm/MHz]	Verdict
5745	11A	Ant1	-2.66	0.36	2.22	≤30.00	PASS
5745	11A	Ant2	-5.93	1.15	2.22	≤30.00	PASS
5785	11A	Ant1	-4.82	0.46	2.22	≤30.00	PASS
5785	11A	Ant2	-6.67	0.29	2.22	≤30.00	PASS
5825	11A	Ant1	-4.08	0.36	2.22	≤30.00	PASS
5825	11A	Ant2	-5.26	0.42	2.22	≤30.00	PASS
5745	11N20M IMO	Ant1	-5.54	3.45	2.22	≤30.00	PASS
5745	11N20M IMO	Ant2	-5.89	4.10	2.22	≤30.00	PASS
5745	11N20M IMO	total	-2.70	---	---	≤28.63	PASS
5785	11N20M IMO	Ant1	-5.24	4.10	2.22	≤30.00	PASS
5785	11N20M IMO	Ant2	-5.60	4.42	2.22	≤30.00	PASS
5785	11N20M IMO	total	-2.41	---	---	≤28.63	PASS
5825	11N20M IMO	Ant1	-5.04	4.54	2.22	≤30.00	PASS
5825	11N20M IMO	Ant2	-4.65	4.22	2.22	≤30.00	PASS
5825	11N20M IMO	total	-1.83	---	---	≤28.63	PASS
5755	11N40M IMO	Ant1	-5.29	4.93	2.22	≤30.00	PASS
5755	11N40M IMO	Ant2	-7.67	5.51	2.22	≤30.00	PASS
5755	11N40M IMO	total	-3.31	---	---	≤28.63	PASS
5795	11N40M IMO	Ant1	-5.24	5.51	2.22	≤30.00	PASS
5795	11N40M IMO	Ant2	-7.86	4.44	2.22	≤30.00	PASS
5795	11N40M IMO	total	-3.35	---	---	≤28.63	PASS
5745	11AC20 MIMO	Ant1	-3.88	3.52	2.22	≤30.00	PASS
5745	11AC20 MIMO	Ant2	-7.02	3.12	2.22	≤30.00	PASS
5745	11AC20	total	-2.16	---	---	≤28.63	PASS

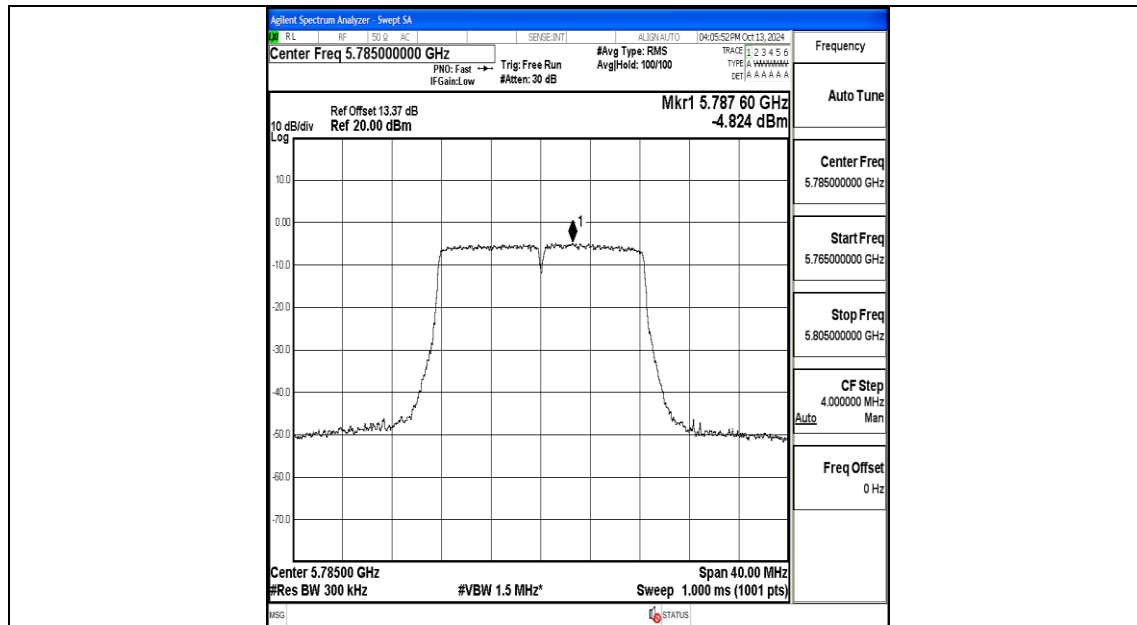
	MIMO						
5785	11AC20 MIMO	Ant1	-4.66	3.42	2.22	≤30.00	PASS
5785	11AC20 MIMO	Ant2	-6.45	3.52	2.22	≤30.00	PASS
5785	11AC20 MIMO	total	-2.45	---	---	≤28.63	PASS
5825	11AC20 MIMO	Ant1	-4.37	3.12	2.22	≤30.00	PASS
5825	11AC20 MIMO	Ant2	-5.77	3.22	2.22	≤30.00	PASS
5825	11AC20 MIMO	total	-2.00	---	---	≤28.63	PASS
5755	11AC40 MIMO	Ant1	-6.03	5.03	2.22	≤30.00	PASS
5755	11AC40 MIMO	Ant2	-8.85	4.64	2.22	≤30.00	PASS
5755	11AC40 MIMO	total	-4.20	---	---	≤28.63	PASS
5795	11AC40 MIMO	Ant1	-6.77	4.89	2.22	≤30.00	PASS
5795	11AC40 MIMO	Ant2	-7.17	5.15	2.22	≤30.00	PASS
5795	11AC40 MIMO	total	-3.96	---	---	≤28.63	PASS
5775	11AC80 MIMO	Ant1	-9.11	6.02	2.22	≤30.00	PASS
5775	11AC80 MIMO	Ant2	-10.17	6.60	2.22	≤30.00	PASS
5775	11AC80 MIMO	total	-6.60	---	---	≤28.63	PASS

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

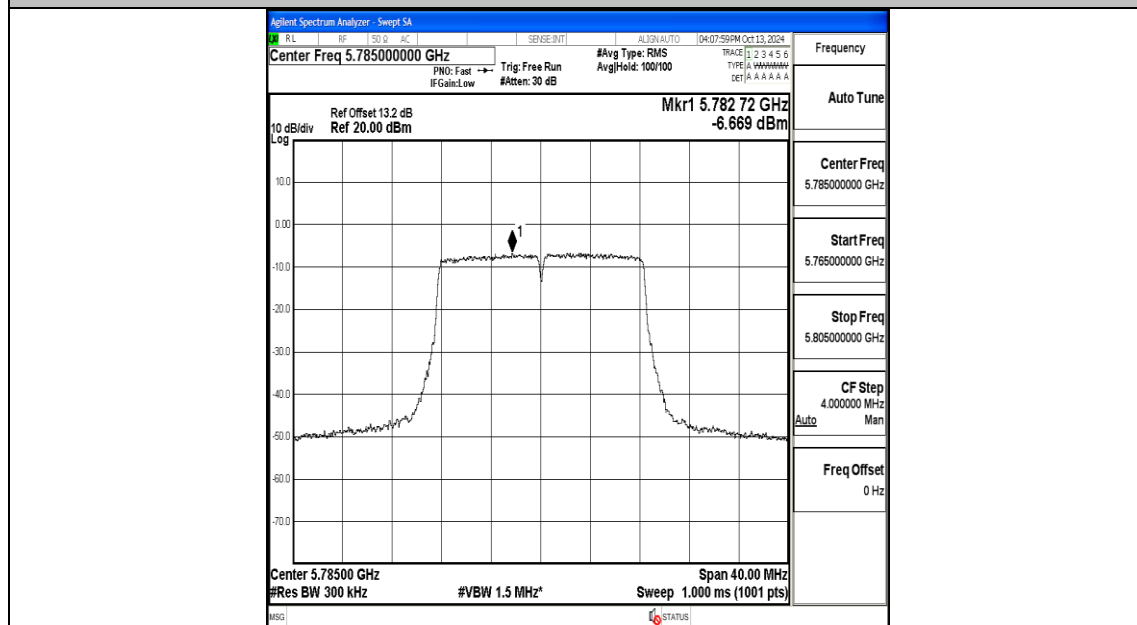
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

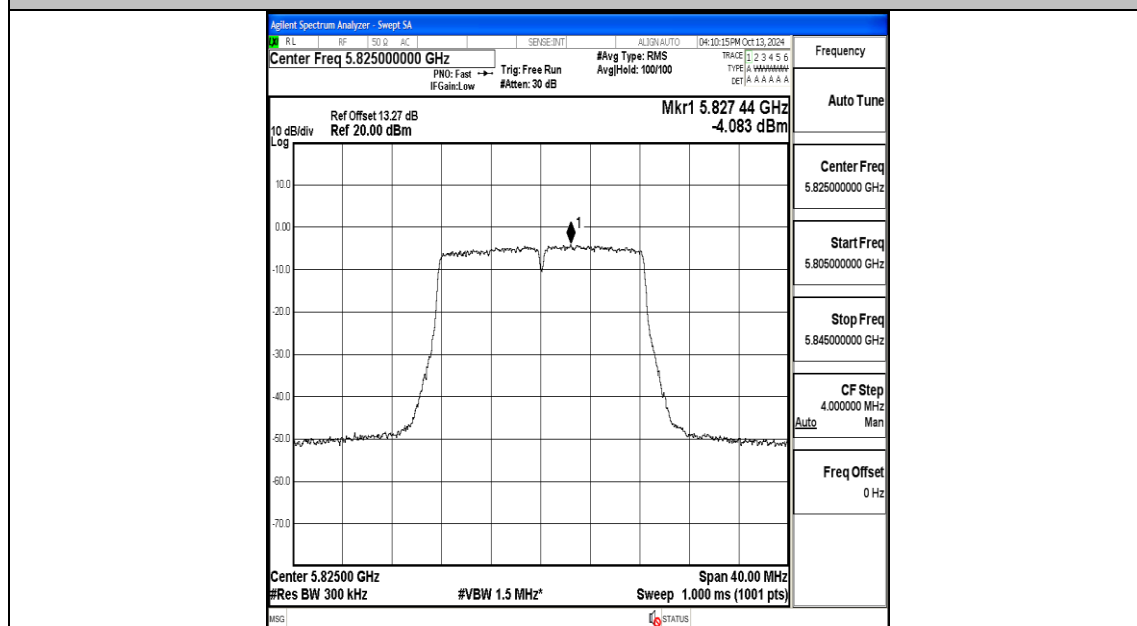




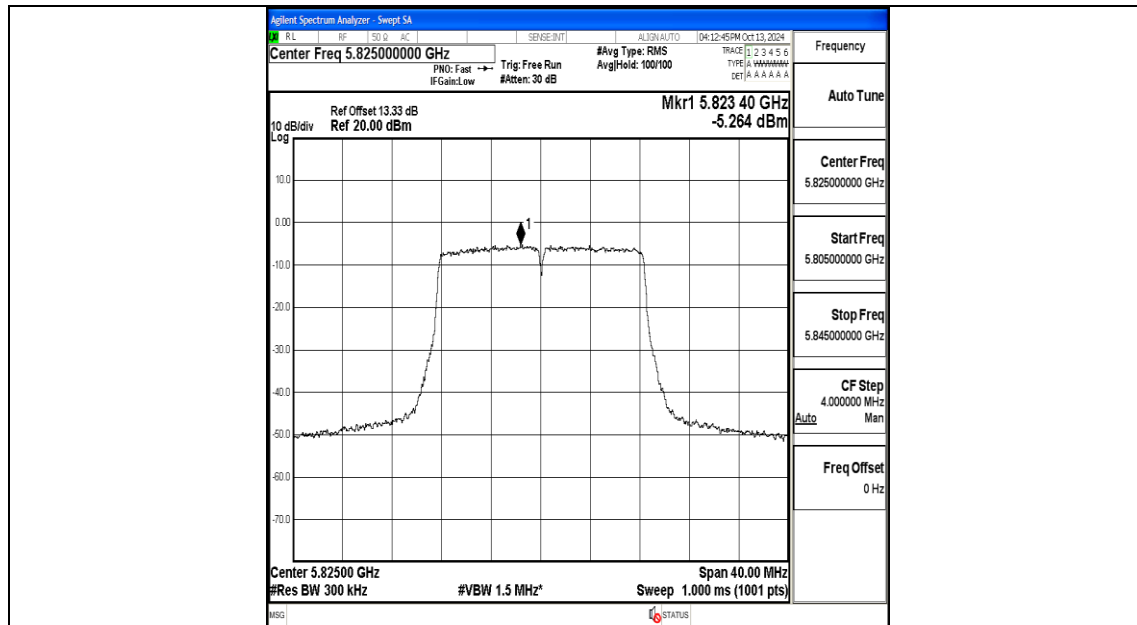
11A-Ant1-5785-PASS



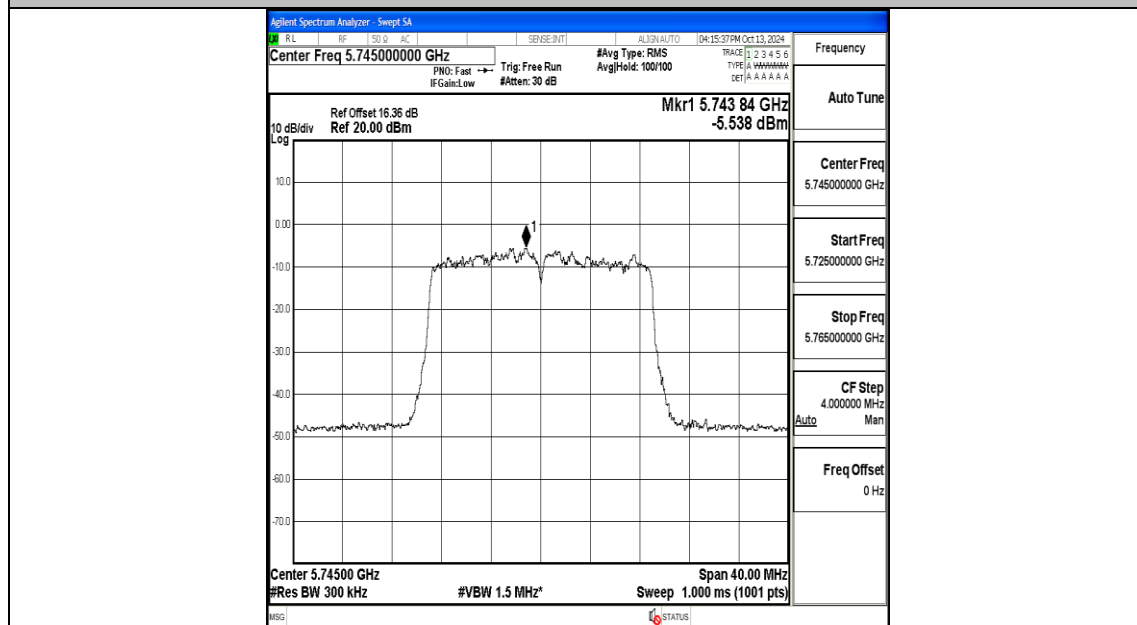
11A-Ant2-5785-PASS



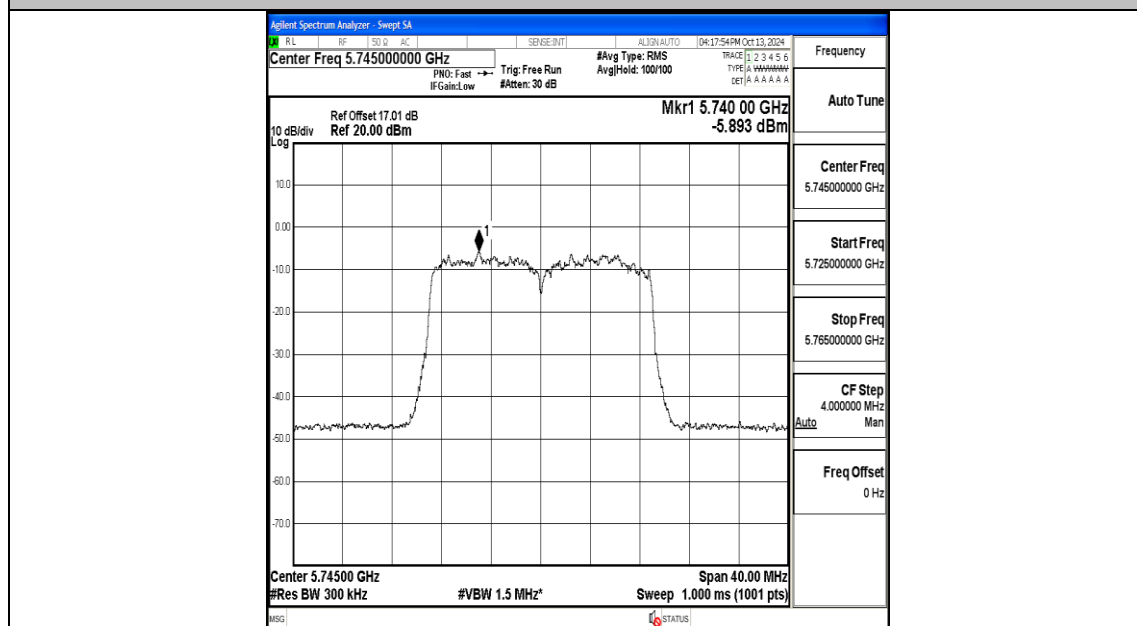
11A-Ant1-5825-PASS



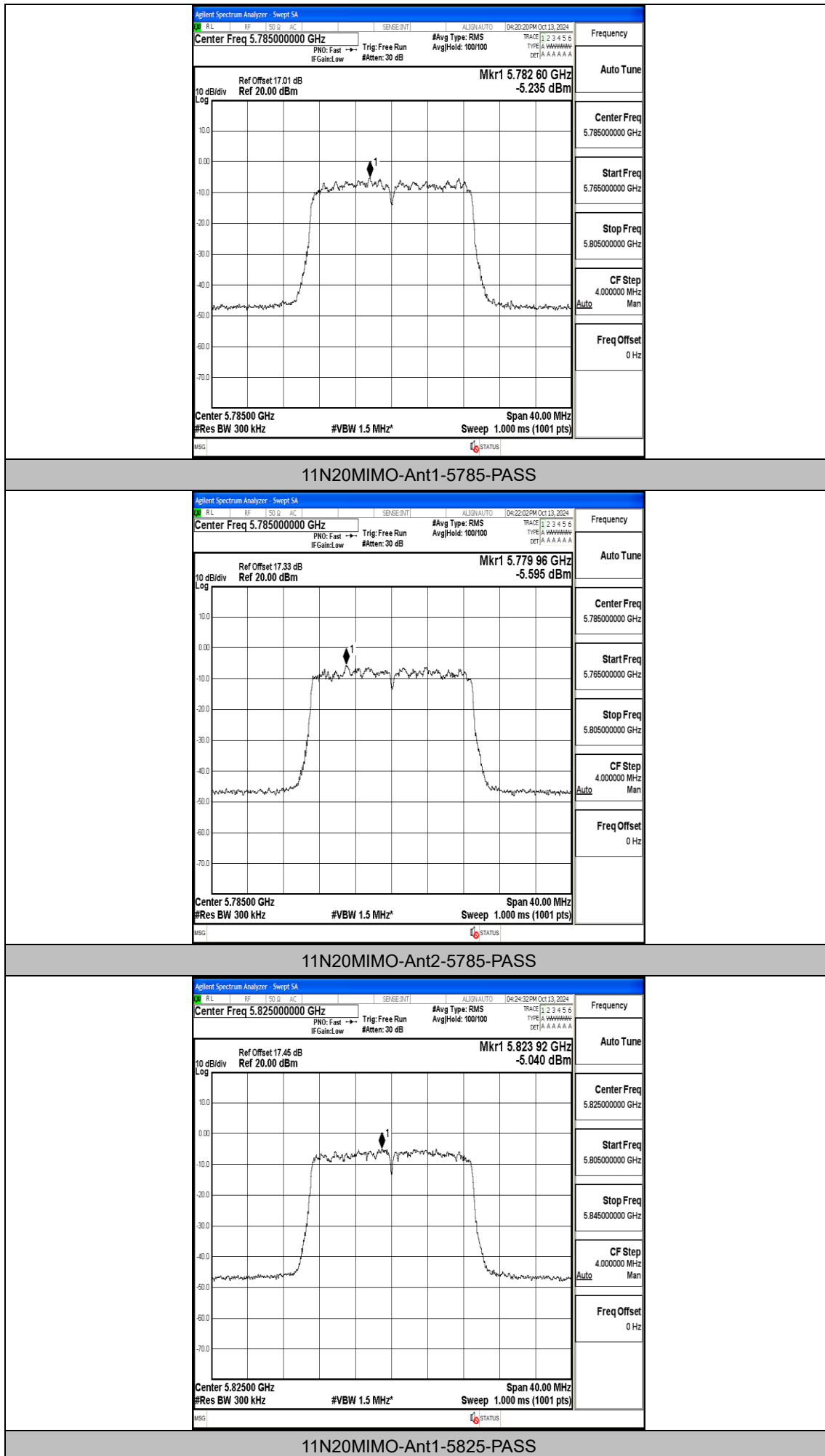
11A-Ant2-5825-PASS

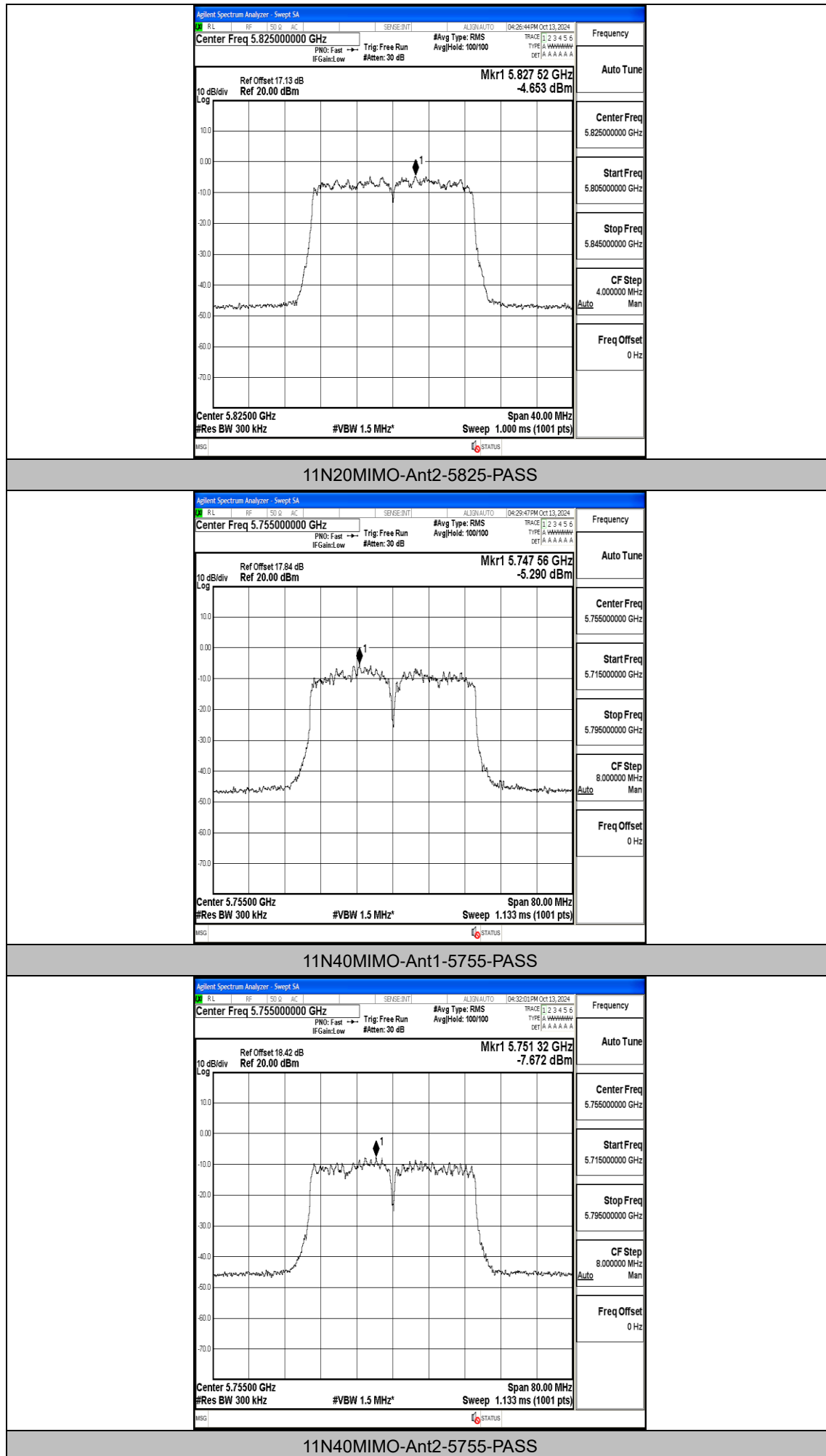


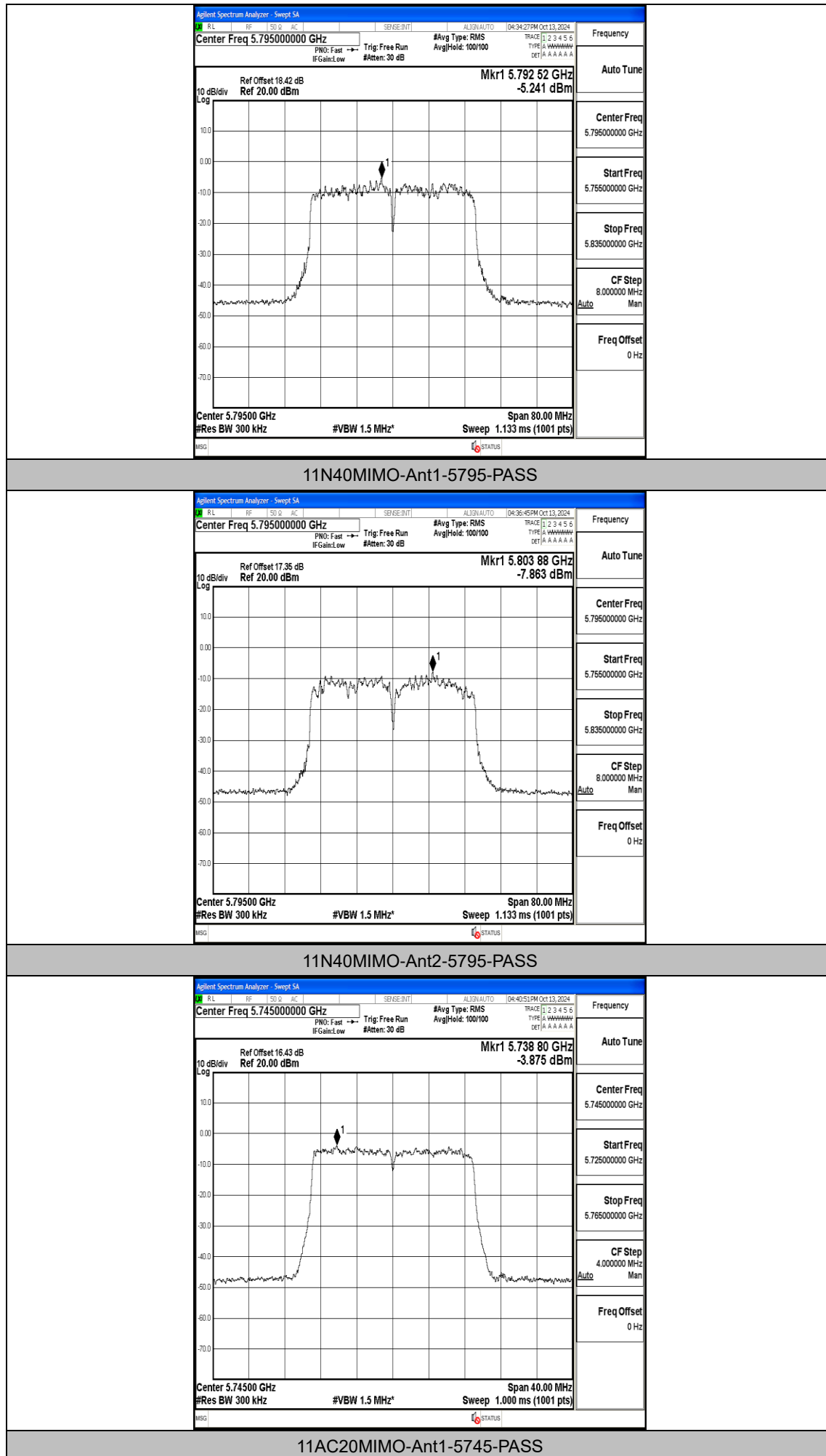
11N20MIMO-Ant1-5745-PASS

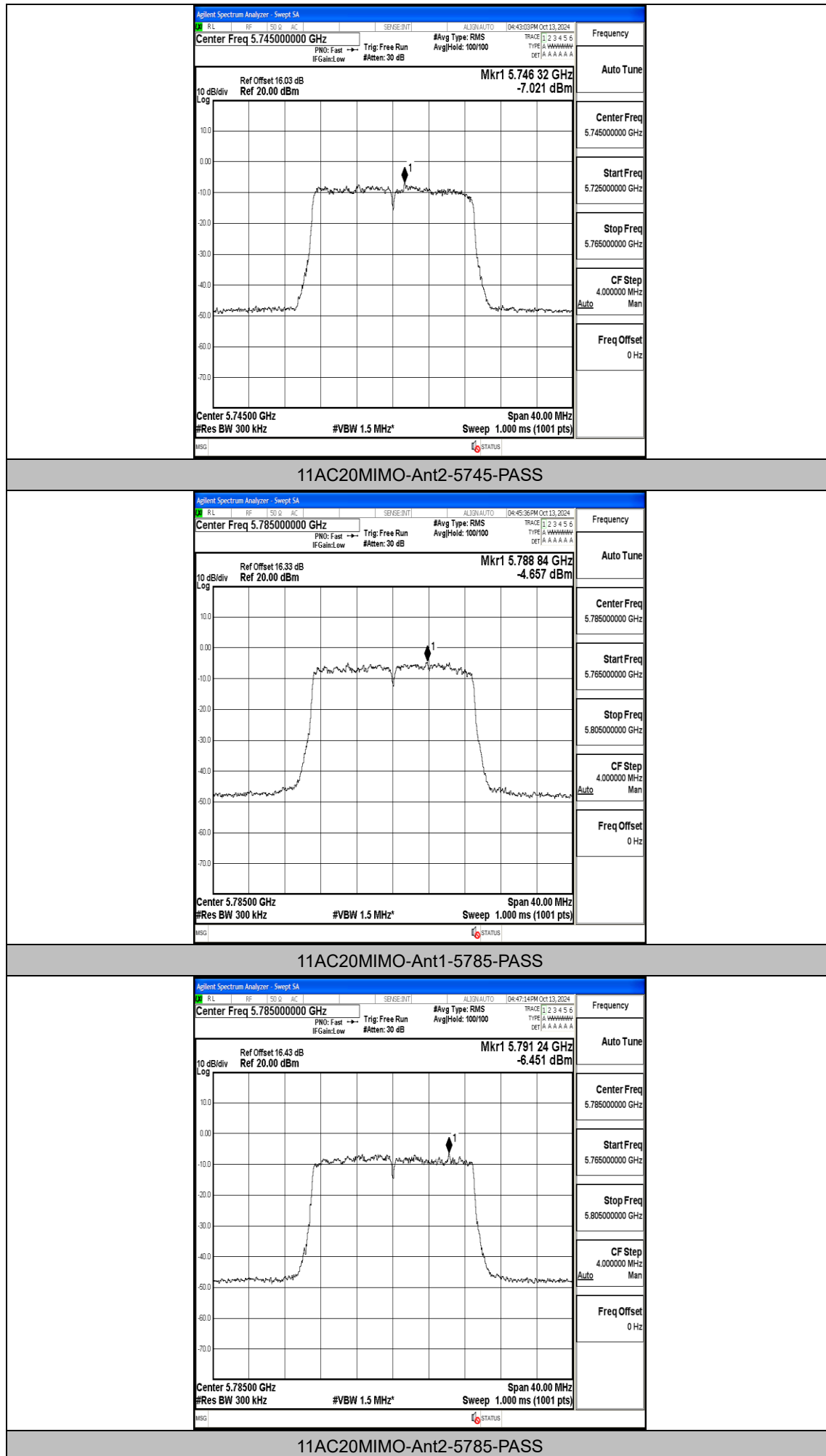


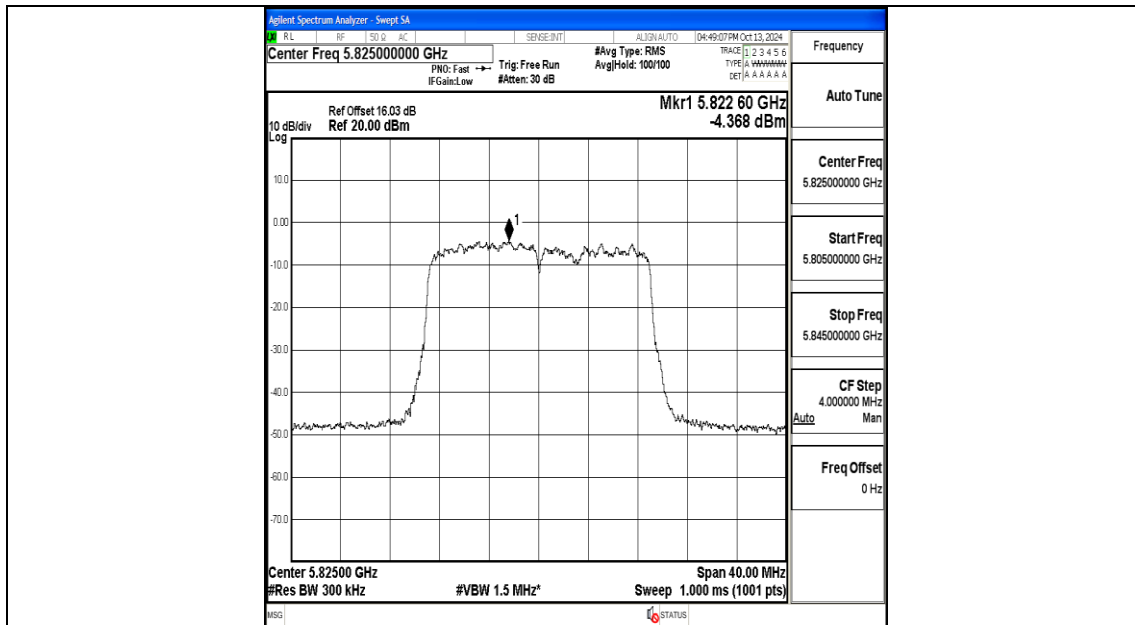
11N20MIMO-Ant2-5745-PASS



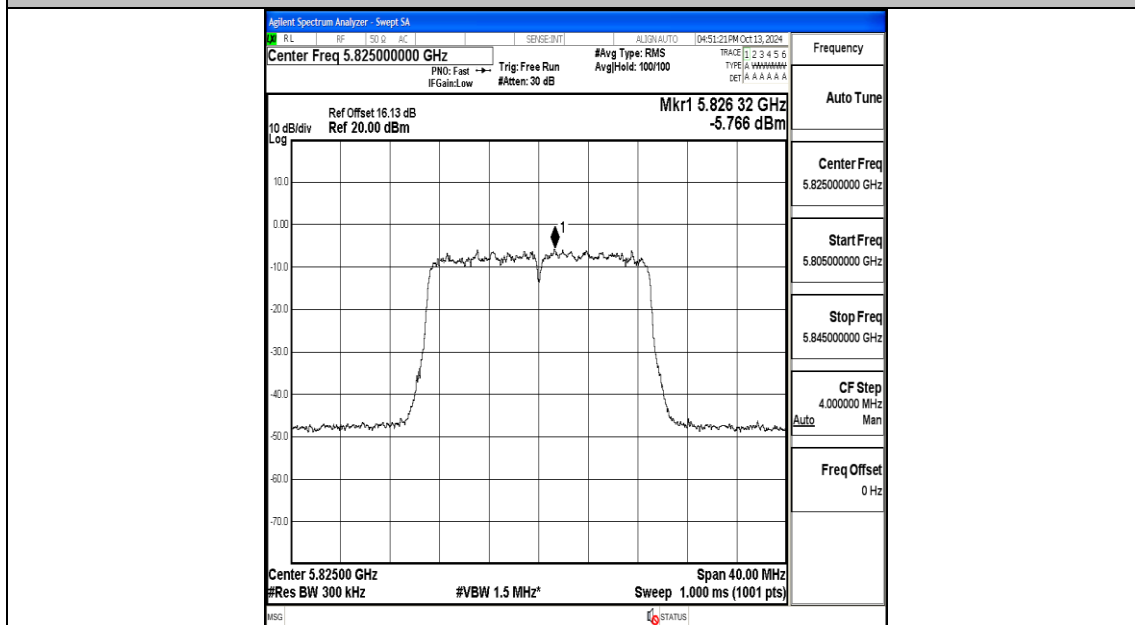




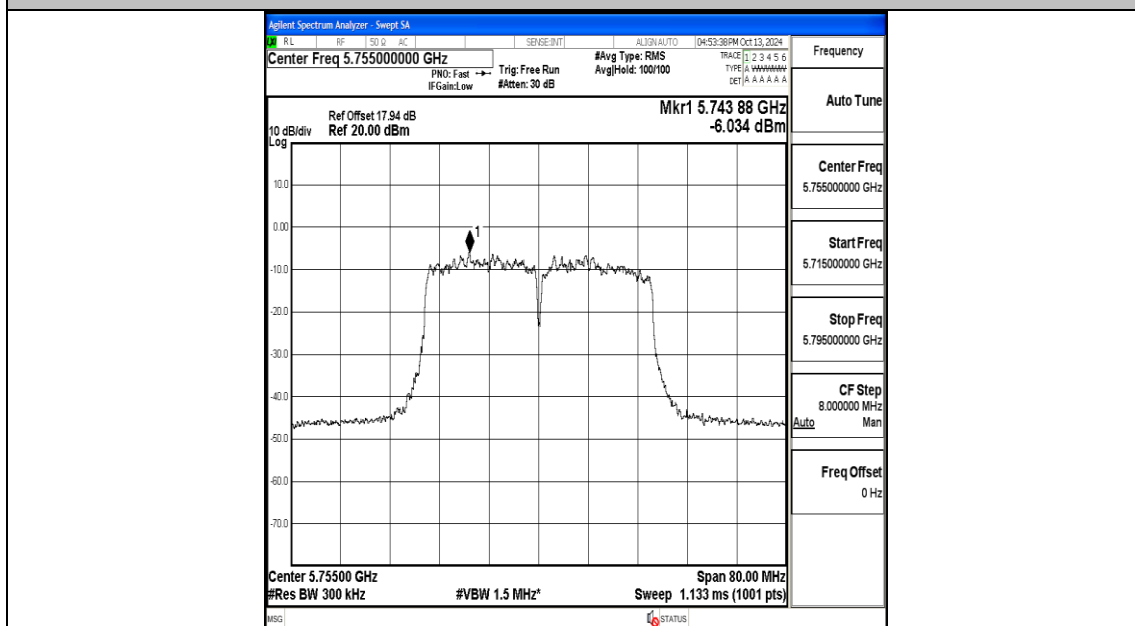




11AC20MIMO-Ant1-5825-PASS



11AC20MIMO-Ant2-5825-PASS



11AC40MIMO-Ant1-5755-PASS