

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

Product Name: DRONE

Trade Mark: N/A

Test Model: U11PRO2

FCC ID: 2AXQL-U11PRO

Environmental Conditions

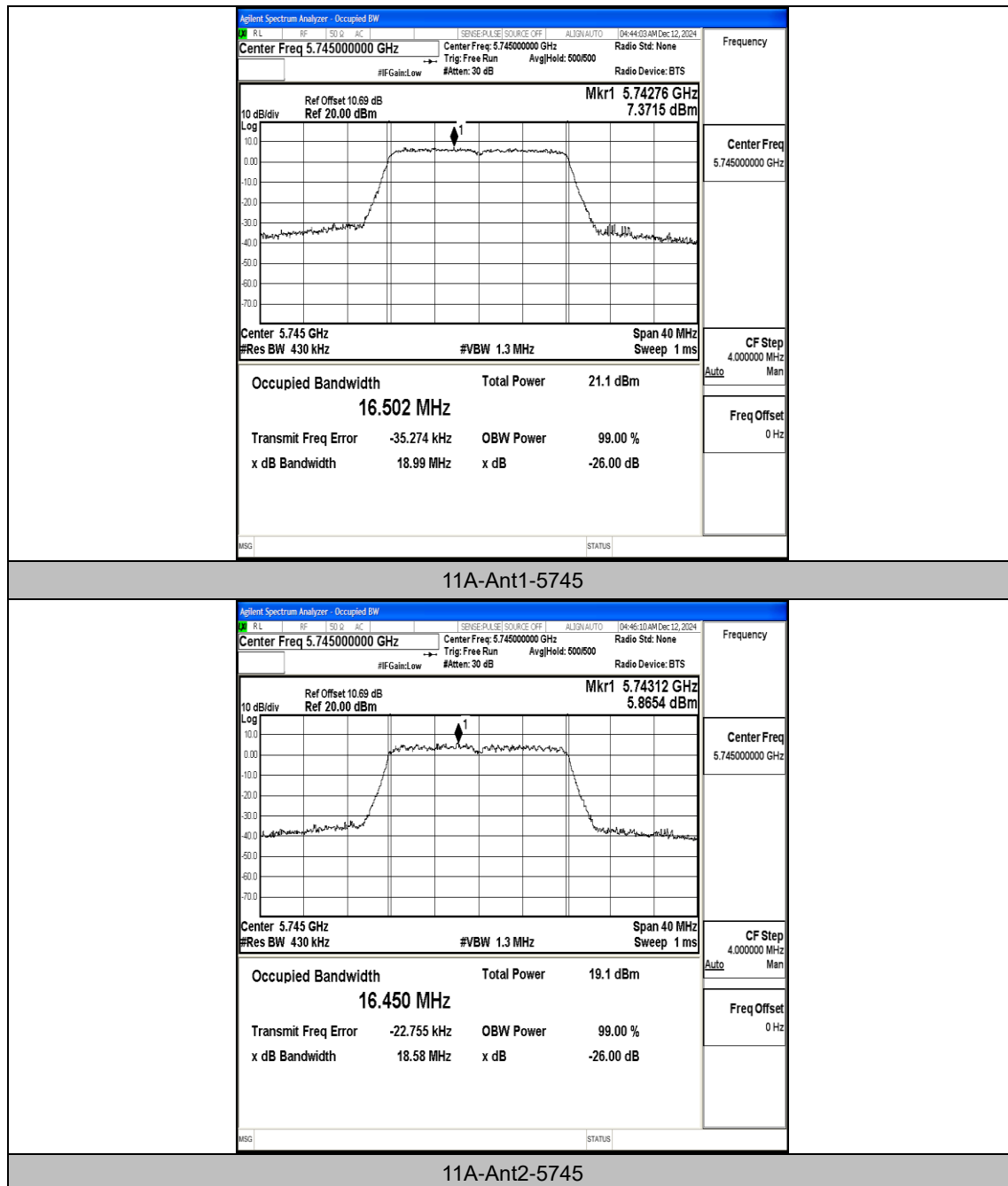
Temperature:	#Temp.
Relative Humidity:	#Humidity
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

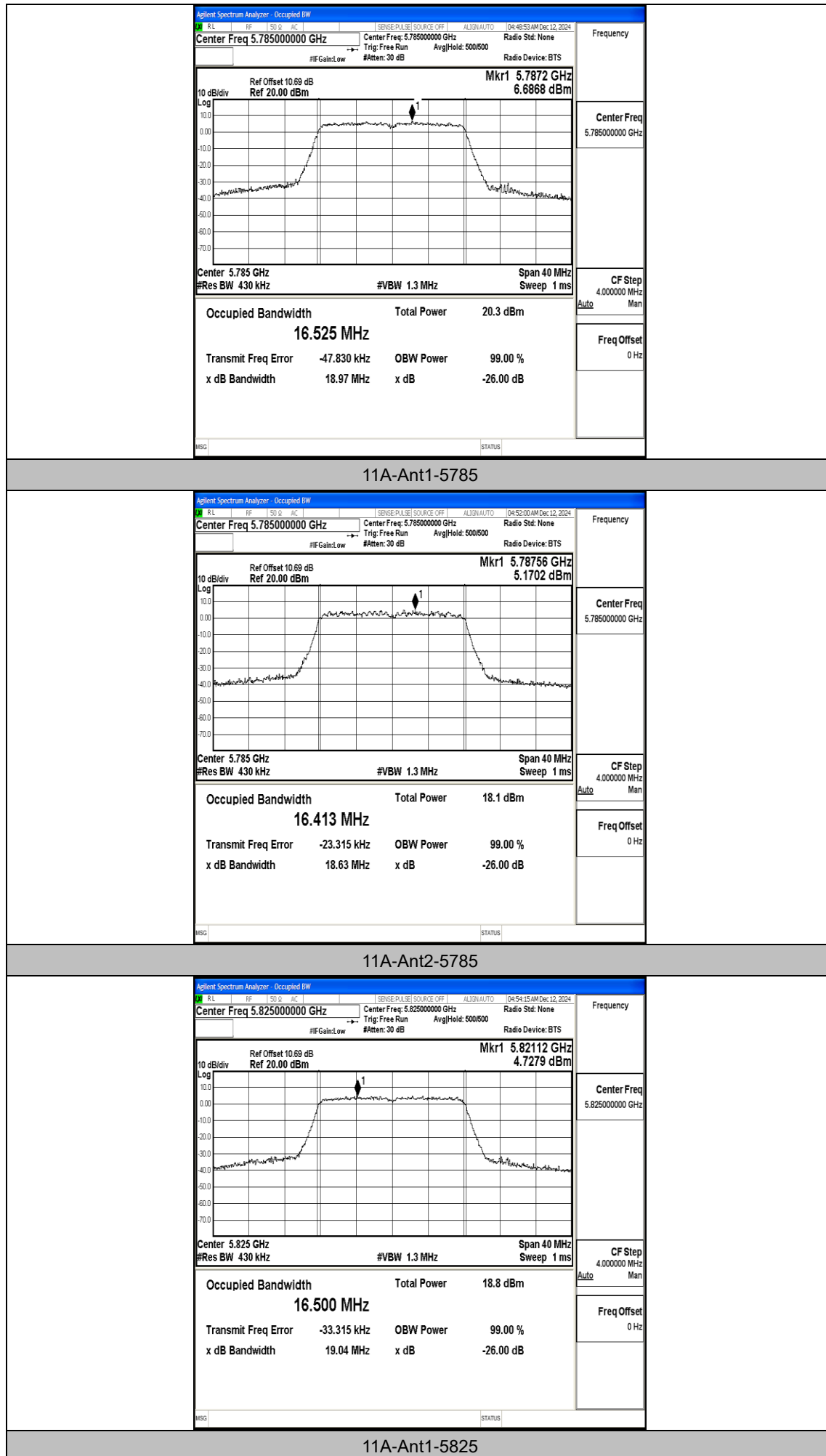
Appendix A2: Occupied channel bandwidth

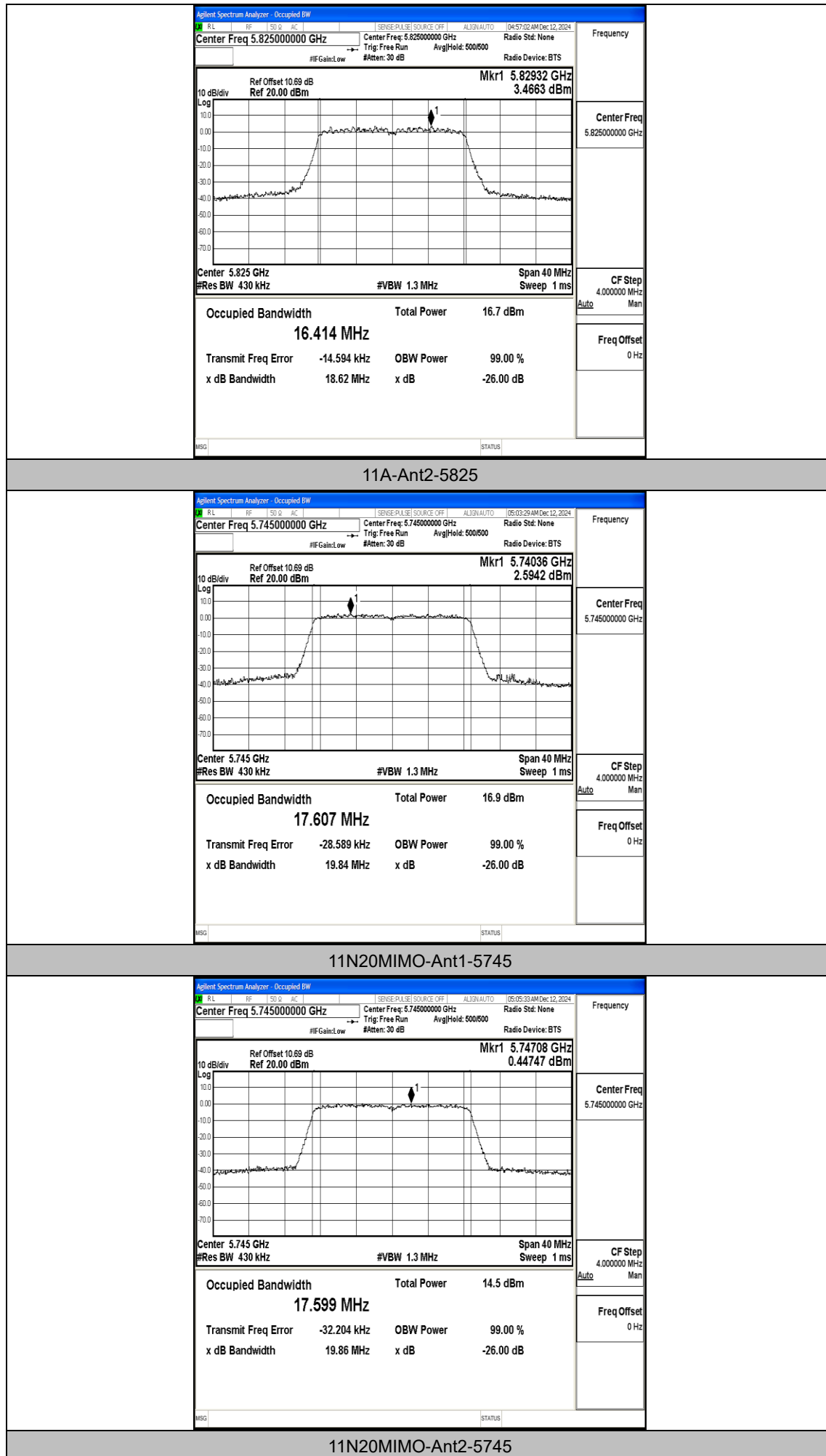
Test Result

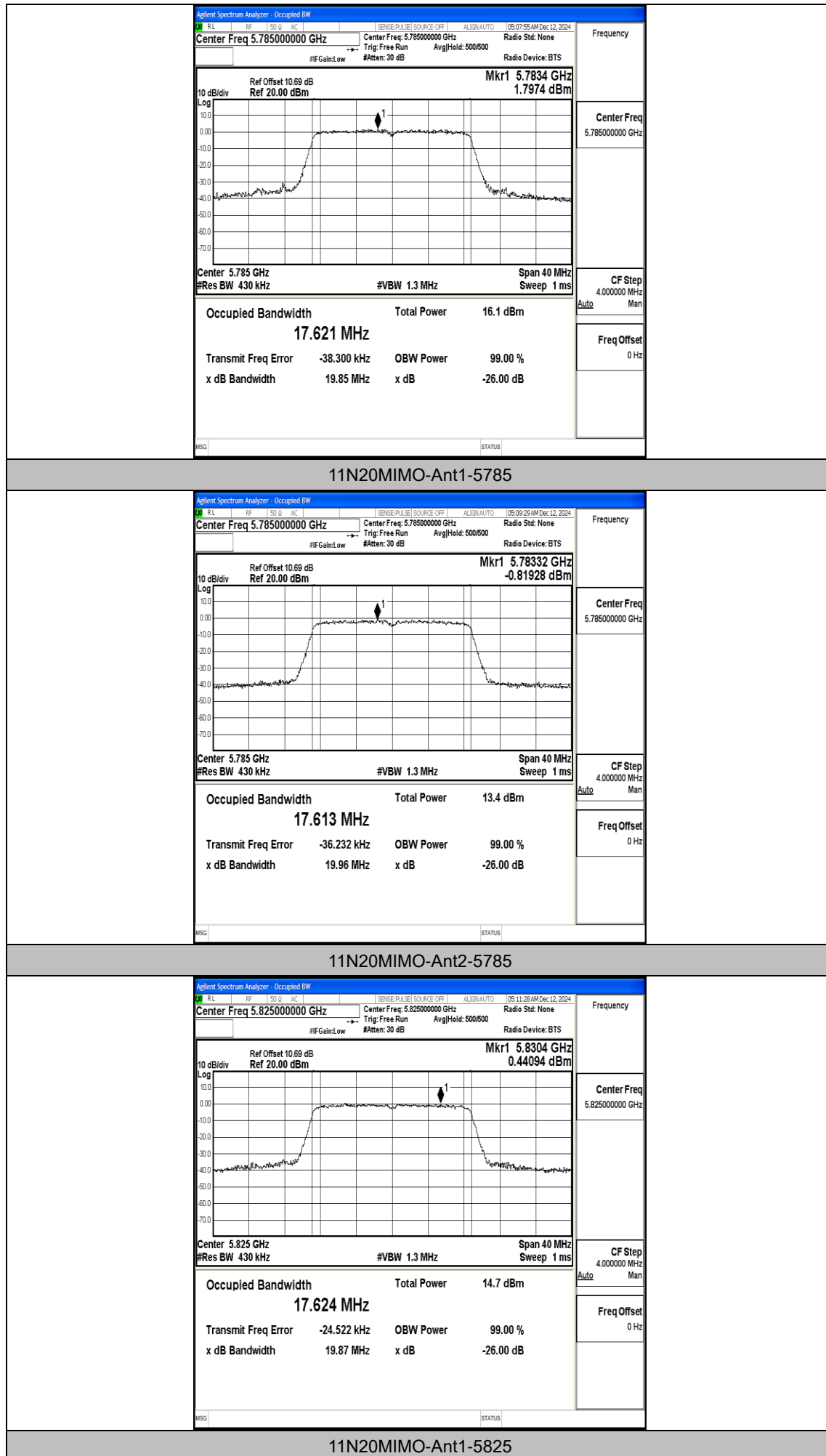
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	16.502	5736.7137	5753.2157	---	---
11A	Ant2	5745	16.450	5736.7522	5753.2022	---	---
11A	Ant1	5785	16.525	5776.6897	5793.2147	---	---
11A	Ant2	5785	16.413	5776.7702	5793.1832	---	---
11A	Ant1	5825	16.500	5816.7167	5833.2167	---	---
11A	Ant2	5825	16.414	5816.7784	5833.1924	---	---
11N20MIMO	Ant1	5745	17.607	5736.1679	5753.7749	---	---
11N20MIMO	Ant2	5745	17.599	5736.1683	5753.7673	---	---
11N20MIMO	Ant1	5785	17.621	5776.1512	5793.7722	---	---
11N20MIMO	Ant2	5785	17.613	5776.1573	5793.7703	---	---
11N20MIMO	Ant1	5825	17.624	5816.1635	5833.7875	---	---
11N20MIMO	Ant2	5825	17.622	5816.1737	5833.7957	---	---
11AC20MIMO	Ant1	5745	17.743	5736.0642	5753.8072	---	---
11AC20MIMO	Ant2	5745	17.737	5736.0746	5753.8116	---	---
11AC20MIMO	Ant1	5785	17.702	5776.1334	5793.8354	---	---
11AC20MIMO	Ant2	5785	17.692	5776.1385	5793.8305	---	---
11AC20MIMO	Ant1	5825	17.738	5816.1221	5833.8601	---	---
11AC20MIMO	Ant2	5825	17.746	5816.1219	5833.8679	---	---

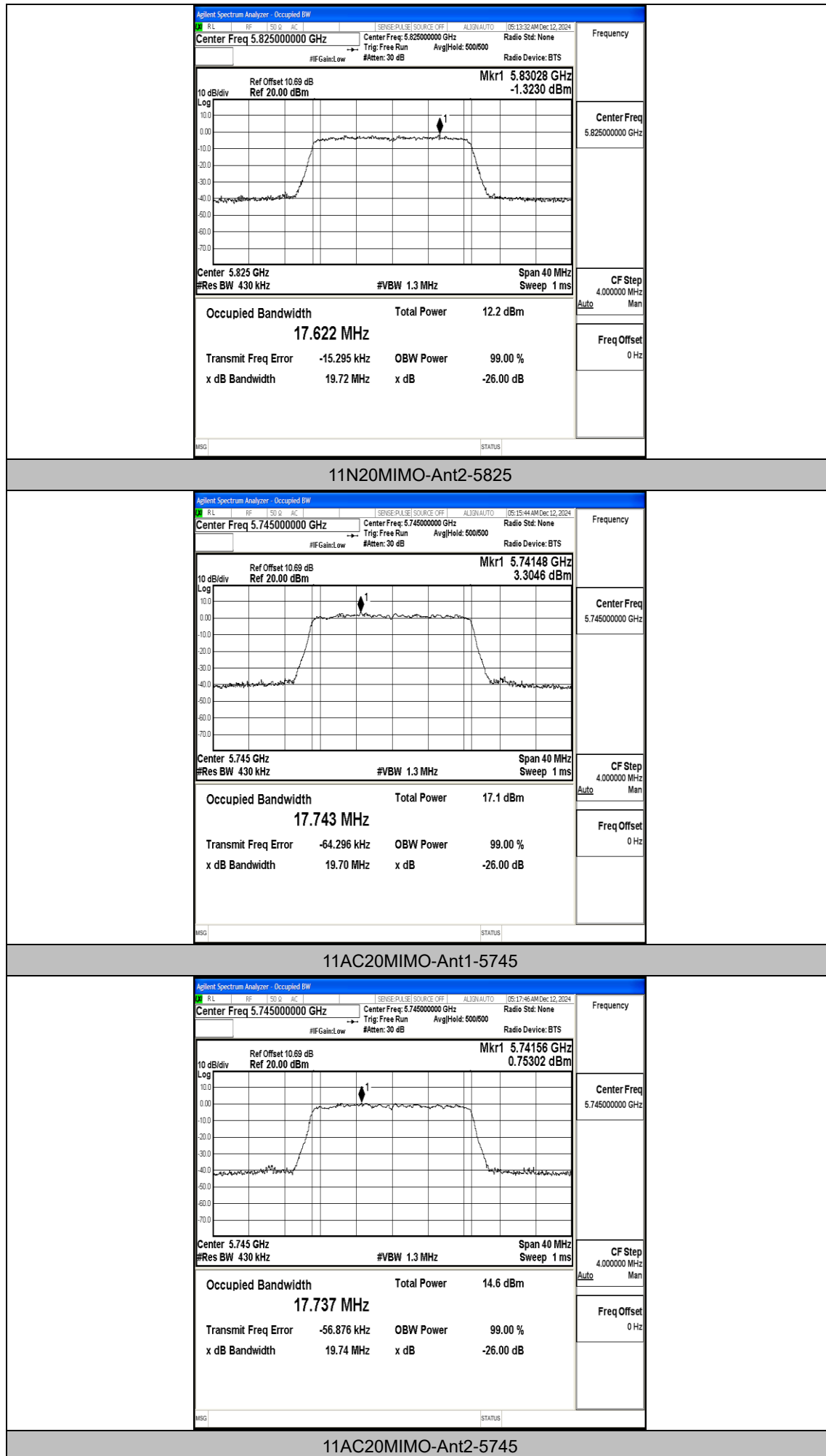
Test Graphs

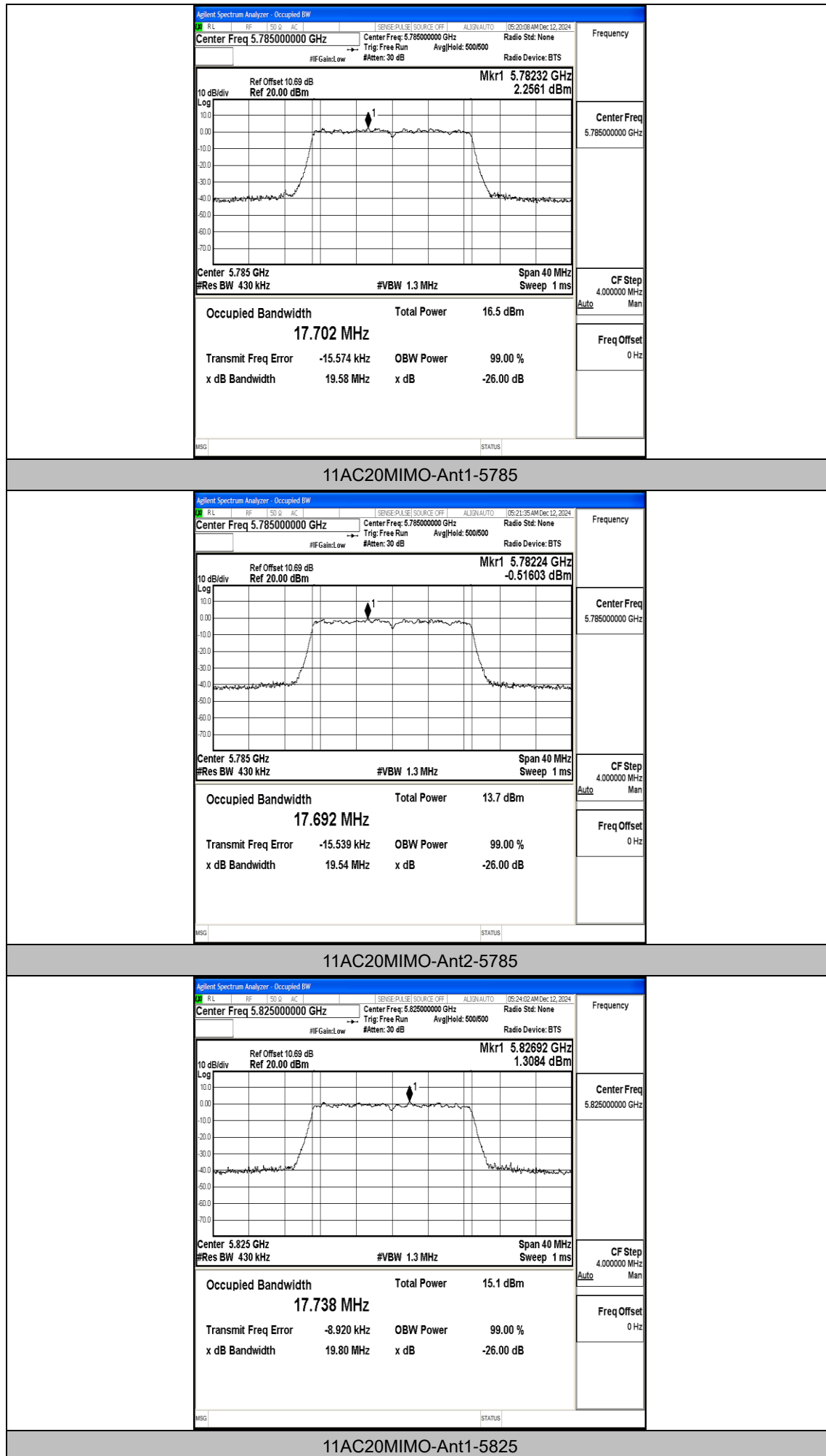


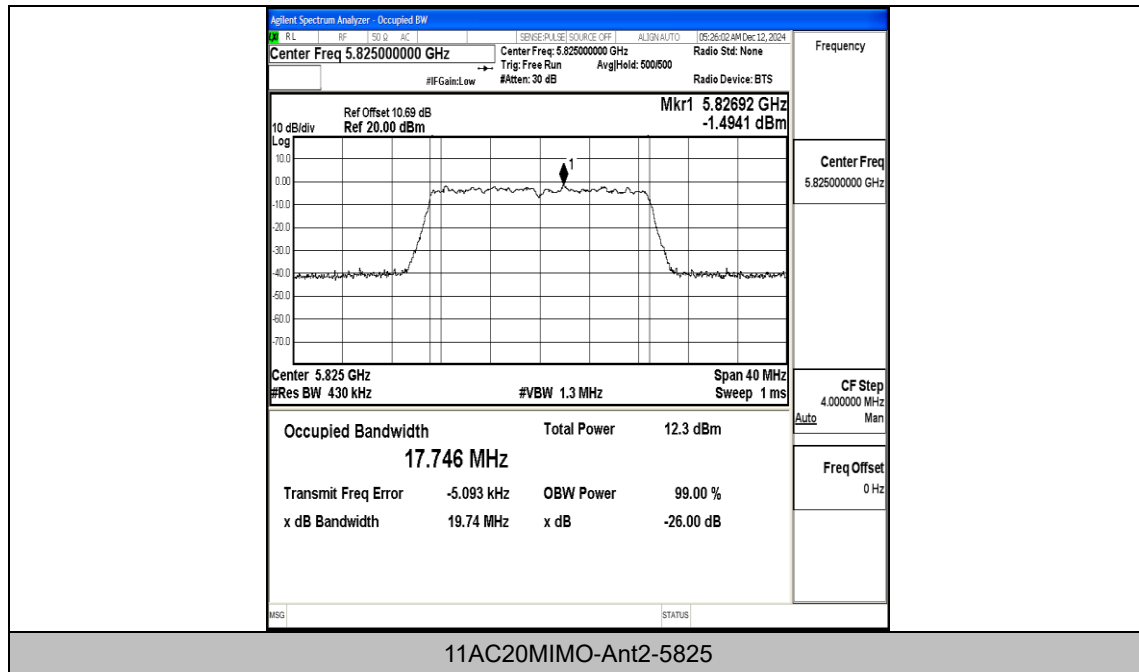










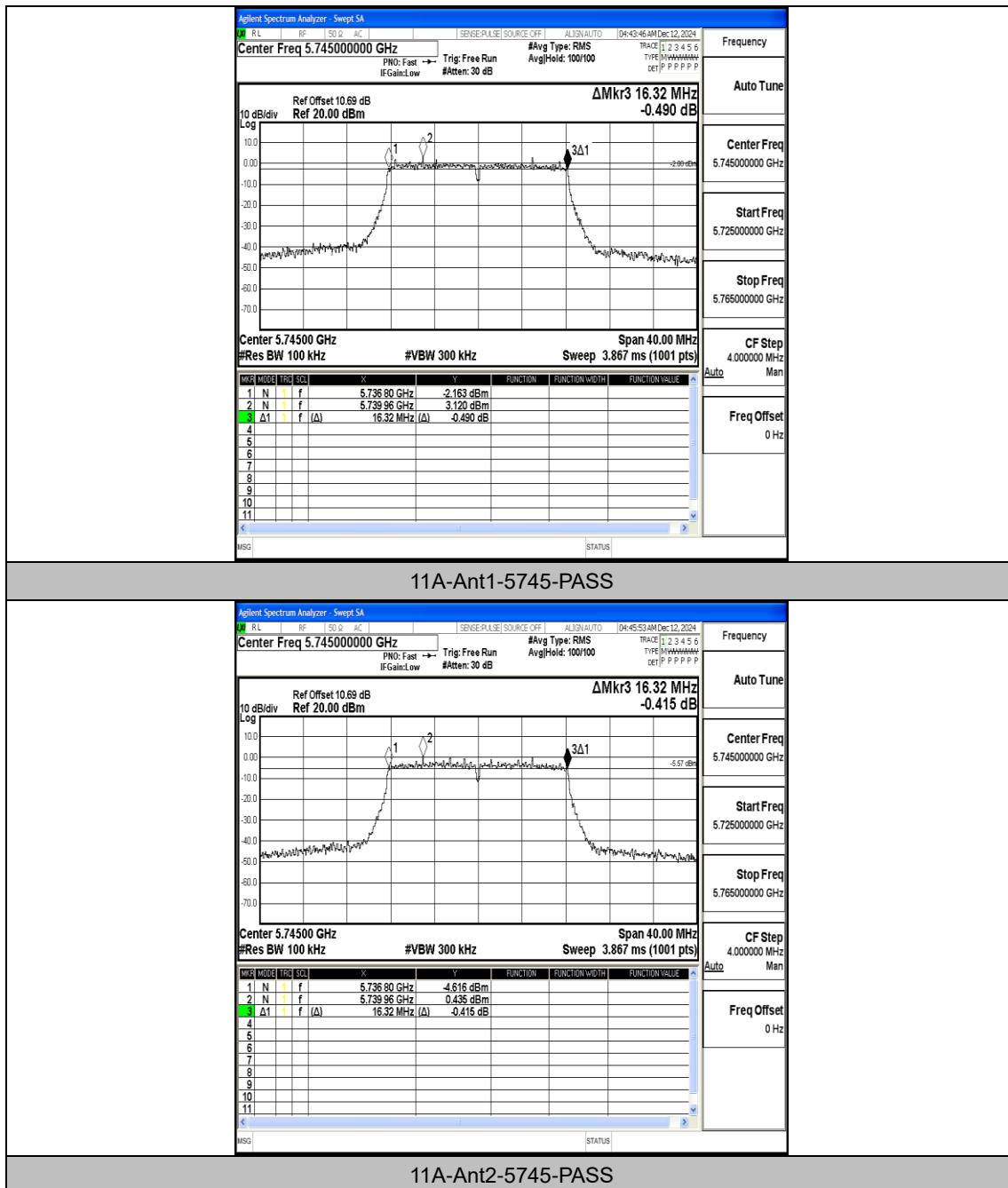


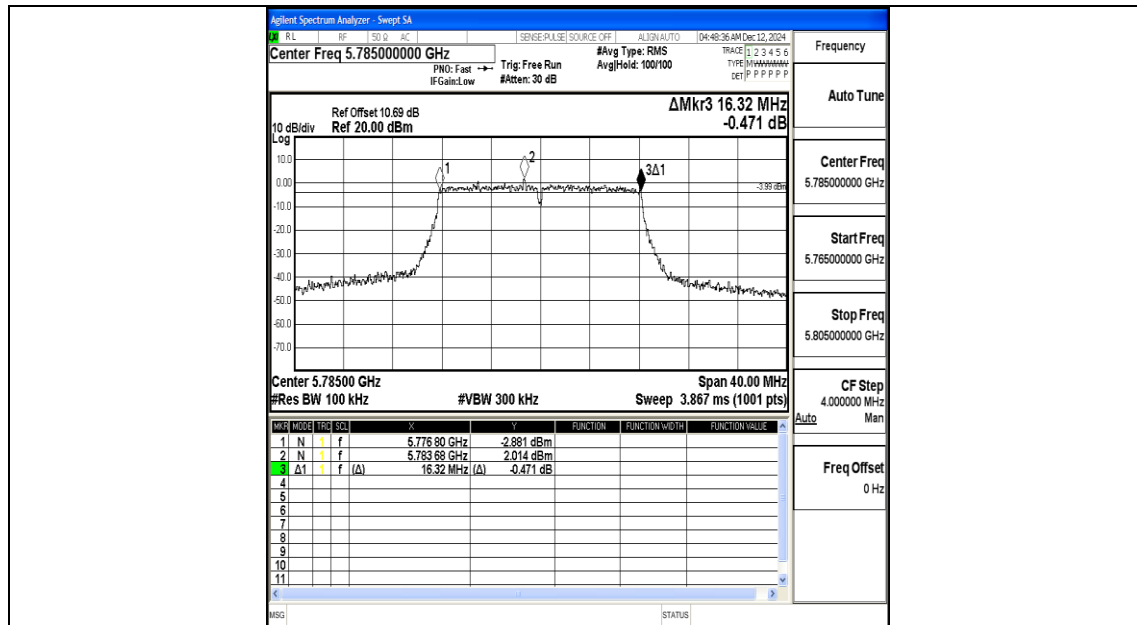
Appendix A: Min emission bandwidth

Test Result

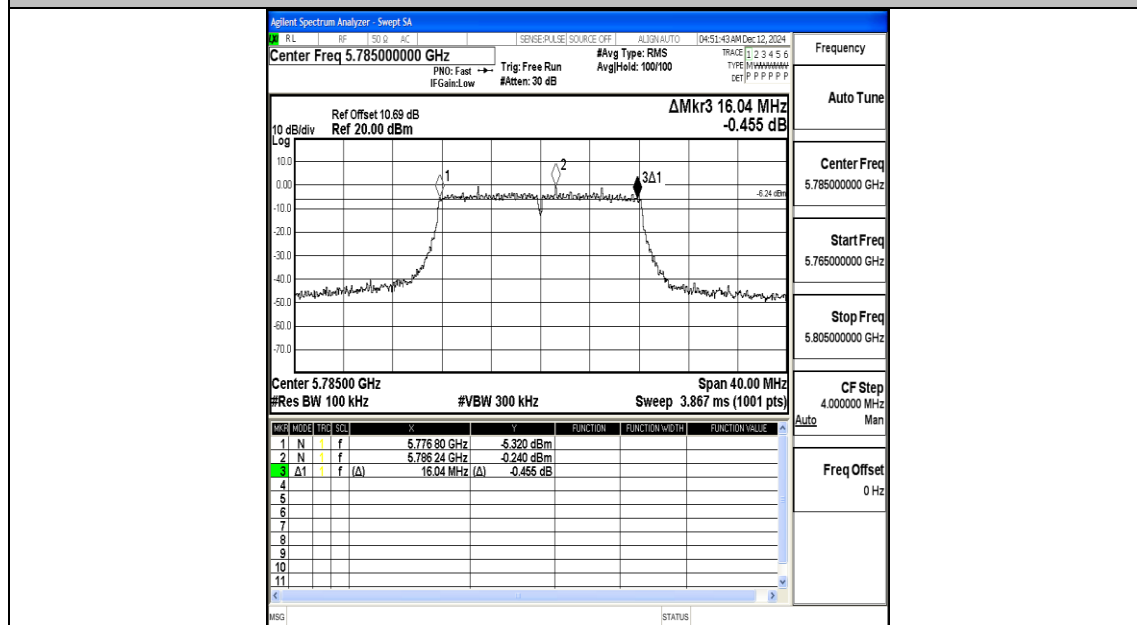
Test Mode	Antenna	Frequency [MHz]	6db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	16.320	5736.800	5753.120	0.5	PASS
11A	Ant2	5745	16.320	5736.800	5753.120	0.5	PASS
11A	Ant1	5785	16.320	5776.800	5793.120	0.5	PASS
11A	Ant2	5785	16.040	5776.800	5792.840	0.5	PASS
11A	Ant1	5825	16.400	5816.760	5833.160	0.5	PASS
11A	Ant2	5825	16.320	5816.800	5833.120	0.5	PASS
11N20MIMO	Ant1	5745	17.280	5736.200	5753.480	0.5	PASS
11N20MIMO	Ant2	5745	17.320	5736.160	5753.480	0.5	PASS
11N20MIMO	Ant1	5785	17.600	5776.160	5793.760	0.5	PASS
11N20MIMO	Ant2	5785	17.560	5776.160	5793.720	0.5	PASS
11N20MIMO	Ant1	5825	17.560	5816.160	5833.720	0.5	PASS
11N20MIMO	Ant2	5825	17.280	5816.440	5833.720	0.5	PASS
11AC20MIMO	Ant1	5745	17.680	5736.120	5753.800	0.5	PASS
11AC20MIMO	Ant2	5745	17.280	5736.120	5753.400	0.5	PASS
11AC20MIMO	Ant1	5785	17.560	5776.200	5793.760	0.5	PASS
11AC20MIMO	Ant2	5785	17.560	5776.200	5793.760	0.5	PASS
11AC20MIMO	Ant1	5825	17.600	5816.160	5833.760	0.5	PASS
11AC20MIMO	Ant2	5825	17.240	5816.200	5833.440	0.5	PASS

Test Graphs

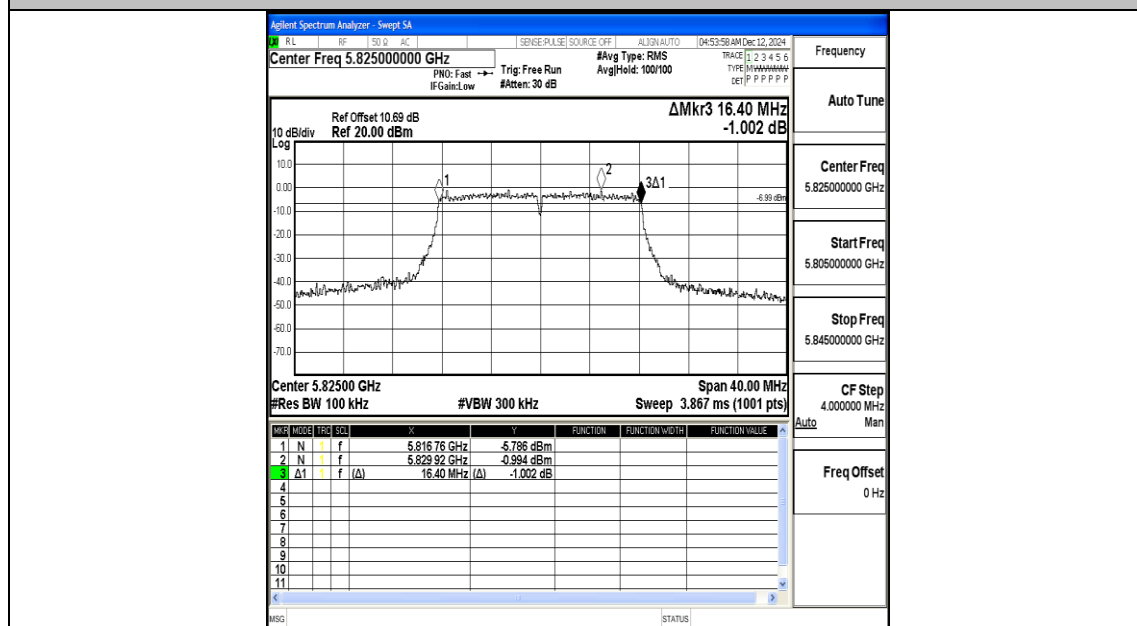




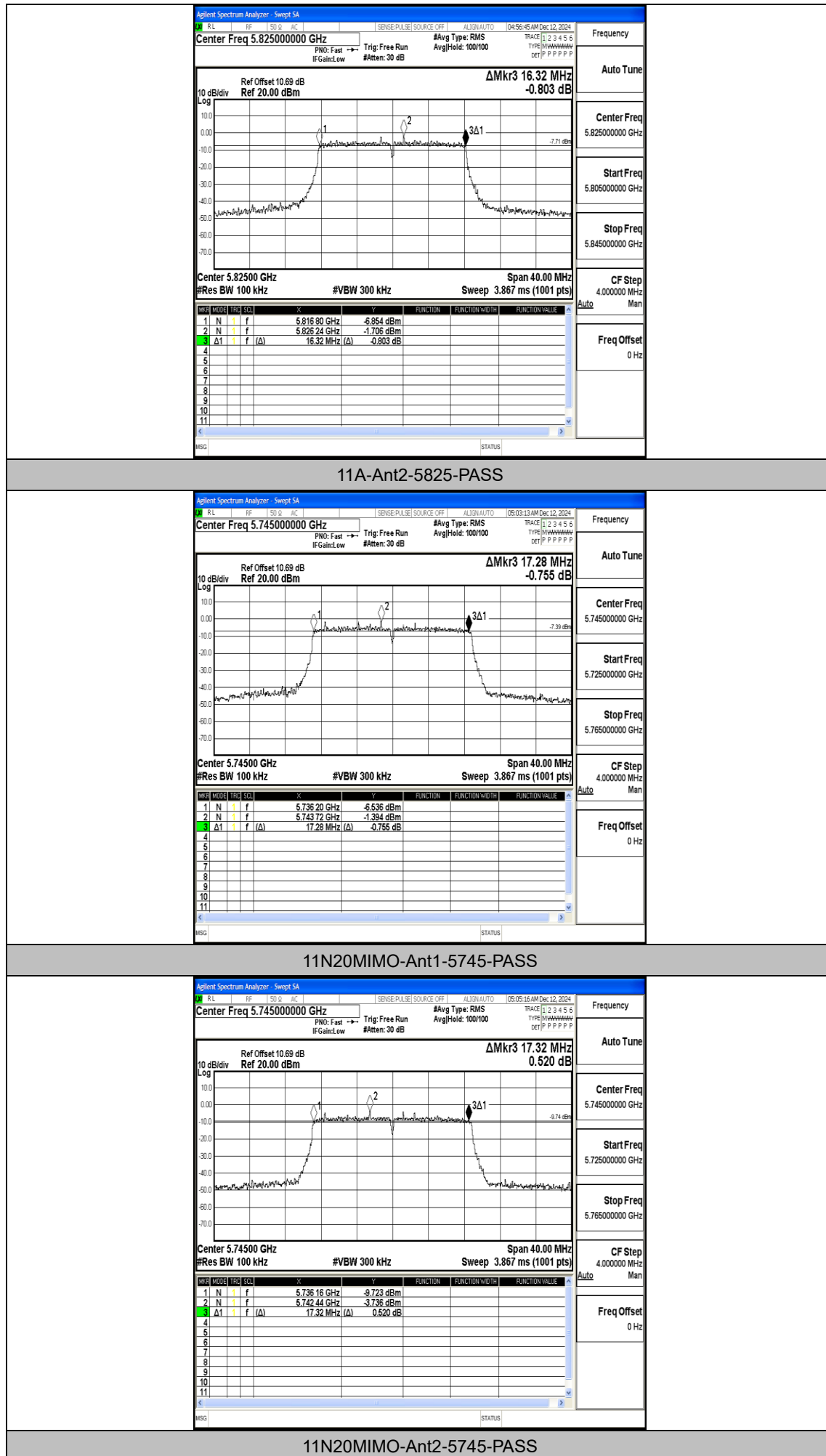
11A-Ant1-5785-PASS



11A-Ant2-5785-PASS



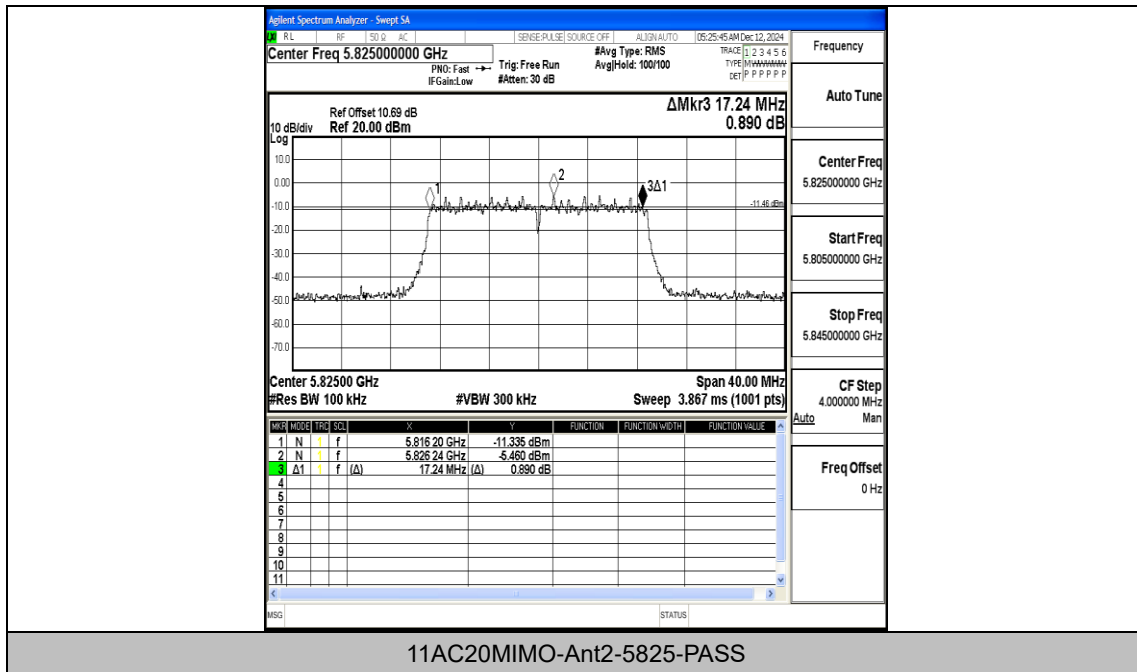
11A-Ant1-5825-PASS











Appendix B: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11A	Ant1	5745	14.58	≤30.00	PASS
11A	Ant2	5745	11.93	≤30.00	PASS
11A	Ant1	5785	13.57	≤30.00	PASS
11A	Ant2	5785	10.85	≤30.00	PASS
11A	Ant1	5825	12.29	≤30.00	PASS
11A	Ant2	5825	9.43	≤30.00	PASS
11N20MIMO	Ant1	5745	10.12	≤30.00	PASS
11N20MIMO	Ant2	5745	7.76	≤30.00	PASS
11N20MIMO	total	5745	12.11	≤30.00	PASS
11N20MIMO	Ant1	5785	9.43	≤30.00	PASS
11N20MIMO	Ant2	5785	6.78	≤30.00	PASS
11N20MIMO	total	5785	11.31	≤30.00	PASS
11N20MIMO	Ant1	5825	8.22	≤30.00	PASS
11N20MIMO	Ant2	5825	5.53	≤30.00	PASS
11N20MIMO	total	5825	10.09	≤30.00	PASS
11AC20MIMO	Ant1	5745	11.13	≤30.00	PASS
11AC20MIMO	Ant2	5745	8.52	≤30.00	PASS
11AC20MIMO	total	5745	13.03	≤30.00	PASS
11AC20MIMO	Ant1	5785	10.36	≤30.00	PASS
11AC20MIMO	Ant2	5785	7.39	≤30.00	PASS
11AC20MIMO	total	5785	12.13	≤30.00	PASS
11AC20MIMO	Ant1	5825	9.10	≤30.00	PASS
11AC20MIMO	Ant2	5825	5.91	≤30.00	PASS
11AC20MIMO	total	5825	10.80	≤30.00	PASS

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

Appendix C: Maximum power spectral density

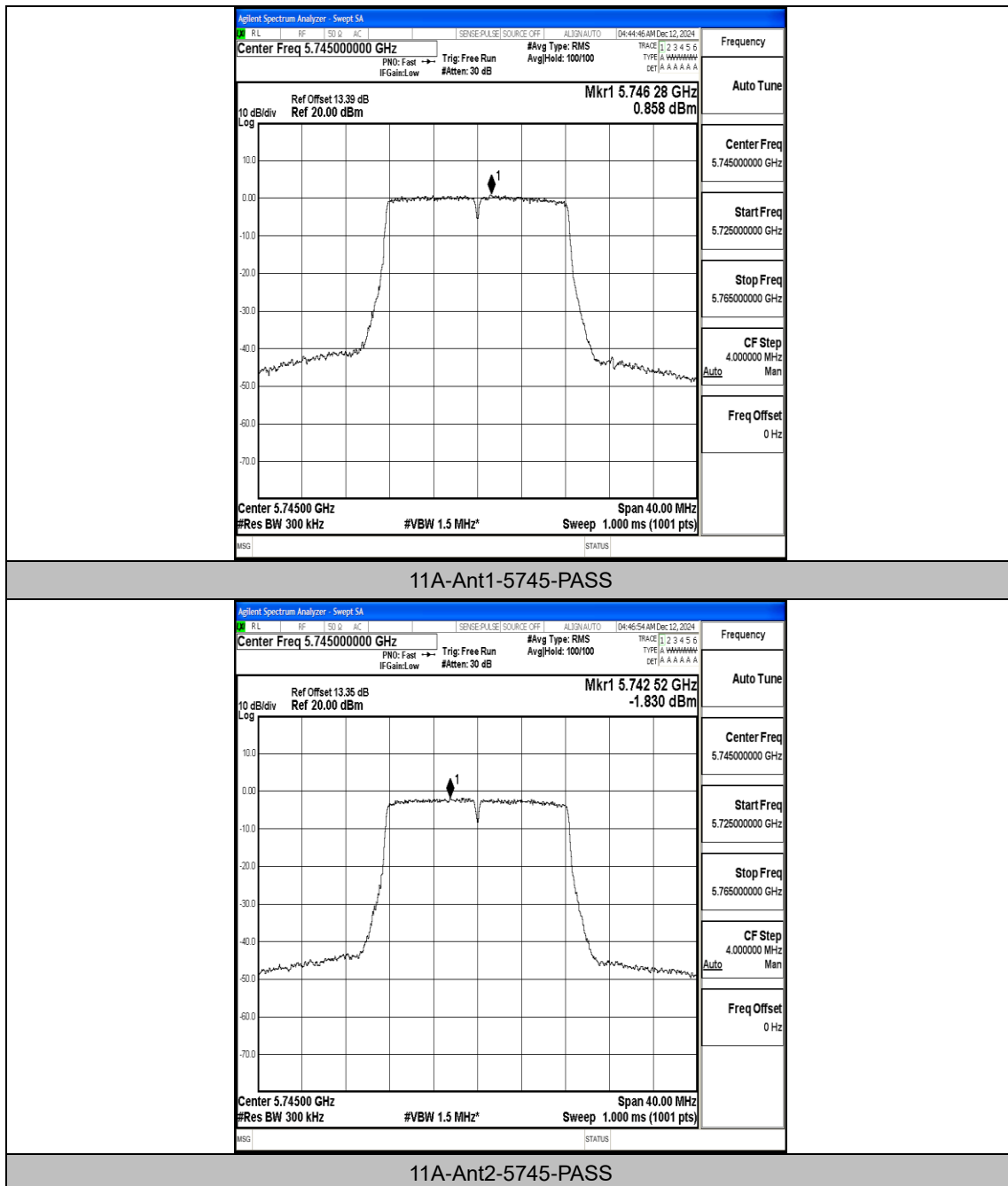
Test Result

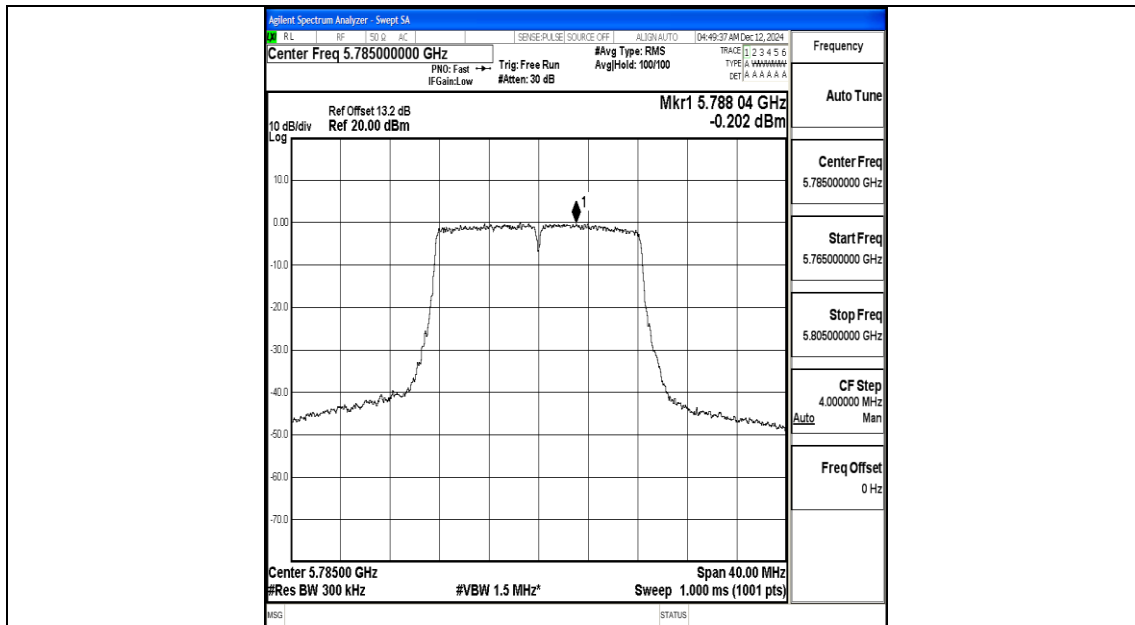
Frequency [MHz]	Test Mode	Antenna	Result [dBm/MHz]	DC Factor [dB]	RBW Factor [dB]	Limit [dBm/MHz]	Verdict
5745	11A	Ant1	0.86	0.48	2.22	≤30.00	PASS
5745	11A	Ant2	-1.83	0.42	2.22	≤30.00	PASS
5785	11A	Ant1	-0.20	0.29	2.22	≤30.00	PASS
5785	11A	Ant2	-2.79	0.42	2.22	≤30.00	PASS
5825	11A	Ant1	-1.81	0.40	2.22	≤30.00	PASS
5825	11A	Ant2	-4.64	0.34	2.22	≤30.00	PASS
5745	11N20M IMO	Ant1	-3.64	0.41	2.22	≤30.00	PASS
5745	11N20M IMO	Ant2	-6.29	0.45	2.22	≤30.00	PASS
5745	11N20M IMO	total	-1.76	---	---	≤30.00	PASS
5785	11N20M IMO	Ant1	-4.77	0.35	2.22	≤30.00	PASS
5785	11N20M IMO	Ant2	-7.27	0.35	2.22	≤30.00	PASS
5785	11N20M IMO	total	-2.83	---	---	≤30.00	PASS
5825	11N20M IMO	Ant1	-6.16	0.47	2.22	≤30.00	PASS
5825	11N20M IMO	Ant2	-8.89	0.39	2.22	≤30.00	PASS
5825	11N20M IMO	total	-4.30	---	---	≤30.00	PASS
5745	11AC20 MIMO	Ant1	-1.37	0.26	2.22	≤30.00	PASS
5745	11AC20 MIMO	Ant2	-4.68	0.45	2.22	≤30.00	PASS
5745	11AC20 MIMO	total	0.29	---	---	≤30.00	PASS
5785	11AC20 MIMO	Ant1	-2.73	0.37	2.22	≤30.00	PASS
5785	11AC20 MIMO	Ant2	-5.47	0.47	2.22	≤30.00	PASS
5785	11AC20 MIMO	total	-0.88	---	---	≤30.00	PASS
5825	11AC20 MIMO	Ant1	-4.27	0.26	2.22	≤30.00	PASS
5825	11AC20 MIMO	Ant2	-6.91	0.41	2.22	≤30.00	PASS
5825	11AC20	total	-2.38	---	---	≤30.00	PASS

	MIMO						
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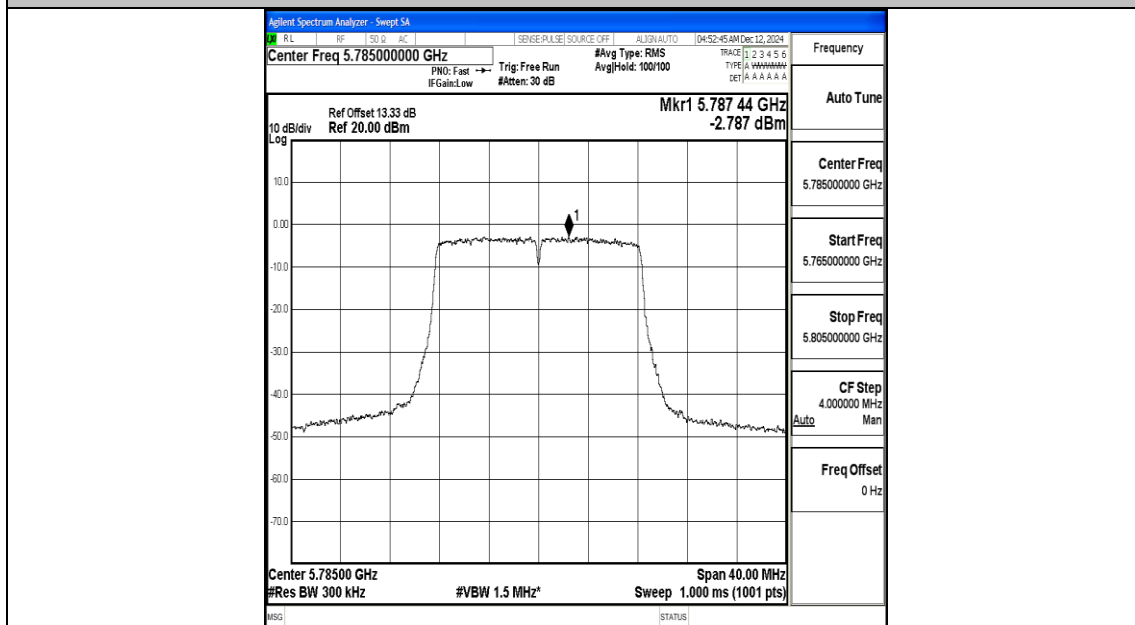
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

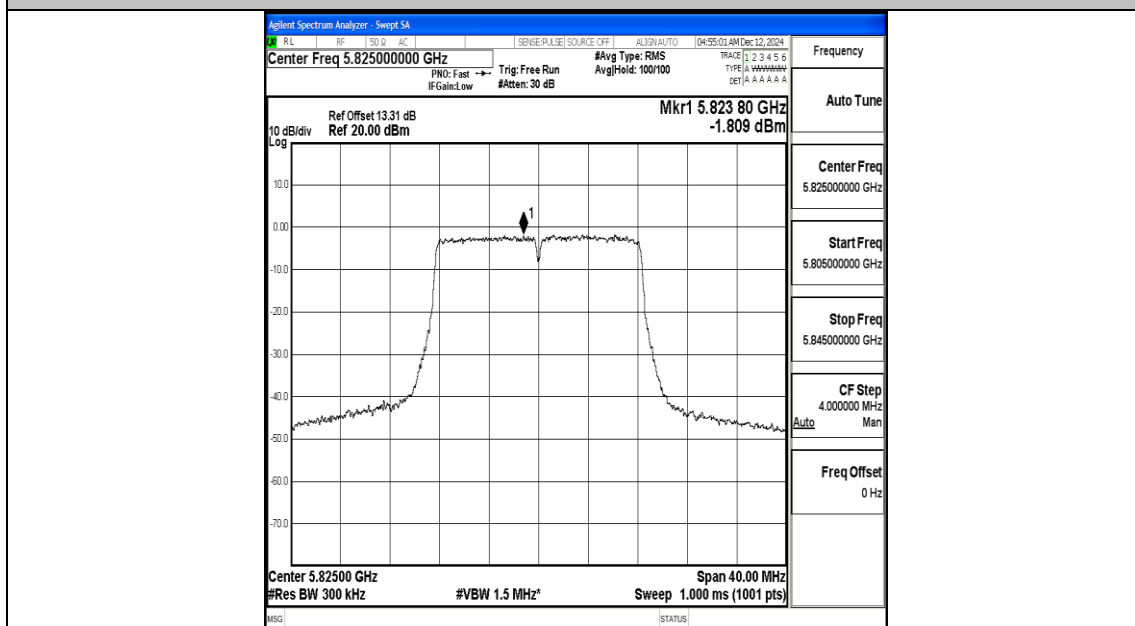




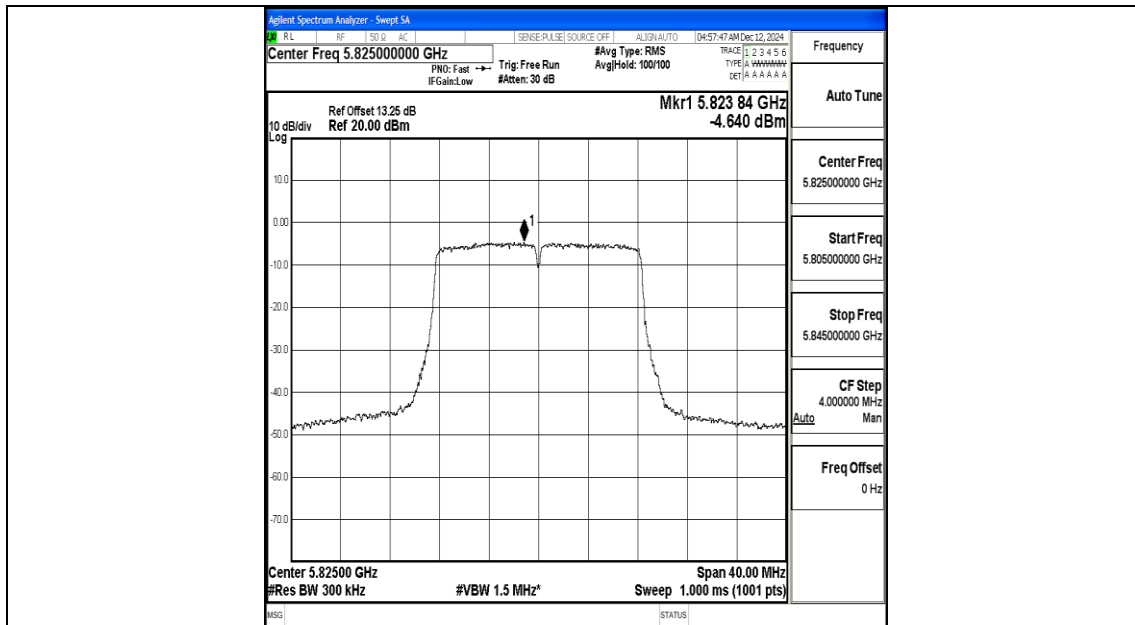
11A-Ant1-5785-PASS



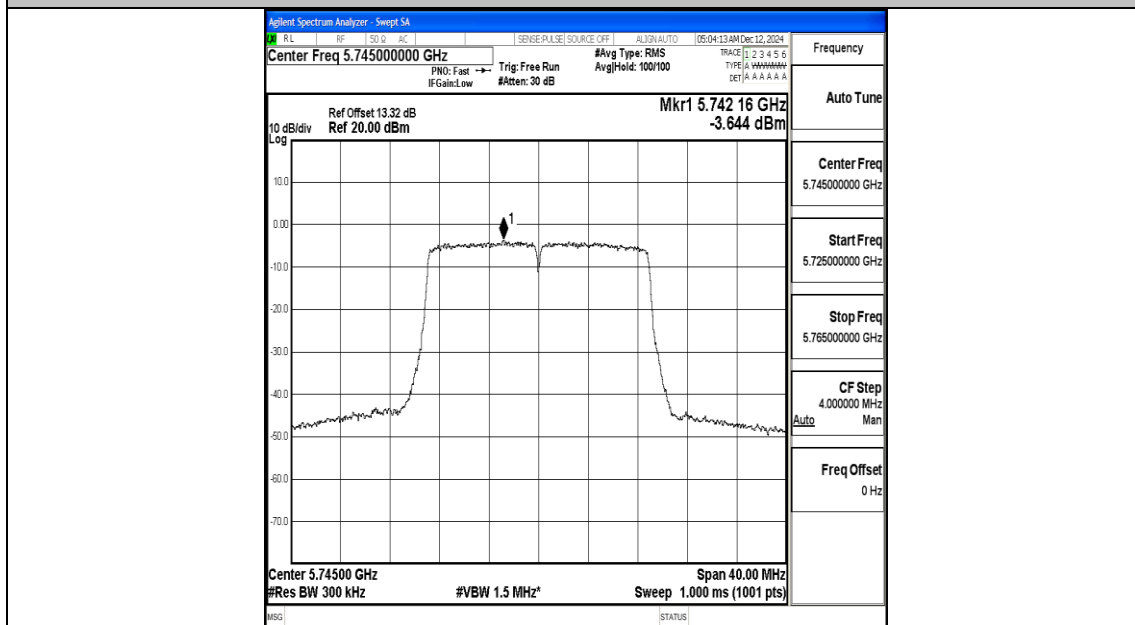
11A-Ant2-5785-PASS



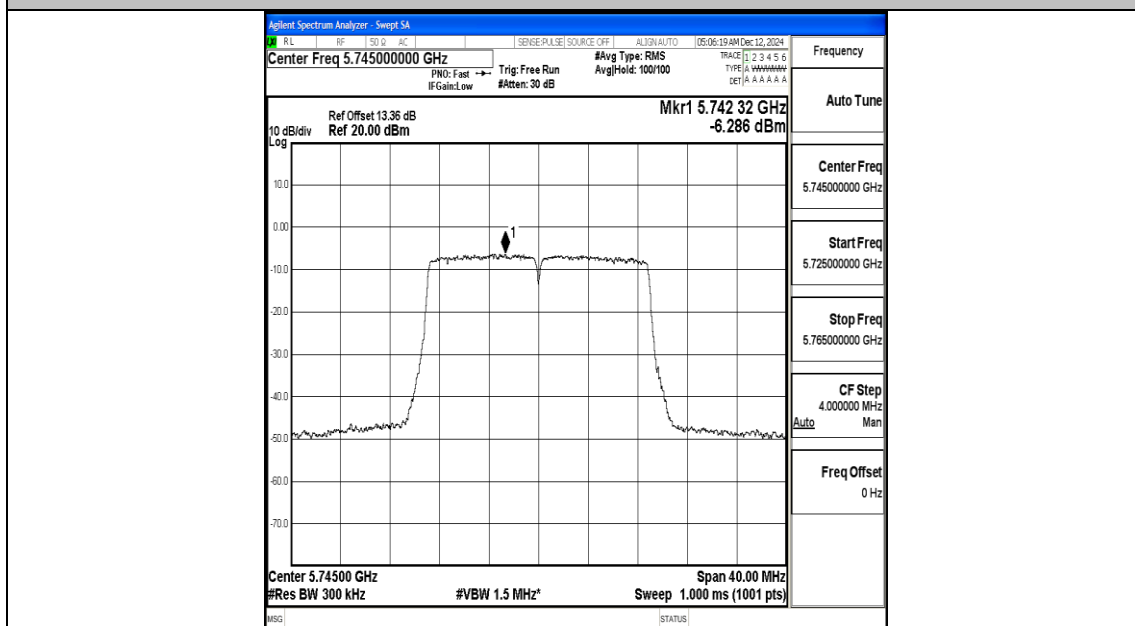
11A-Ant1-5825-PASS



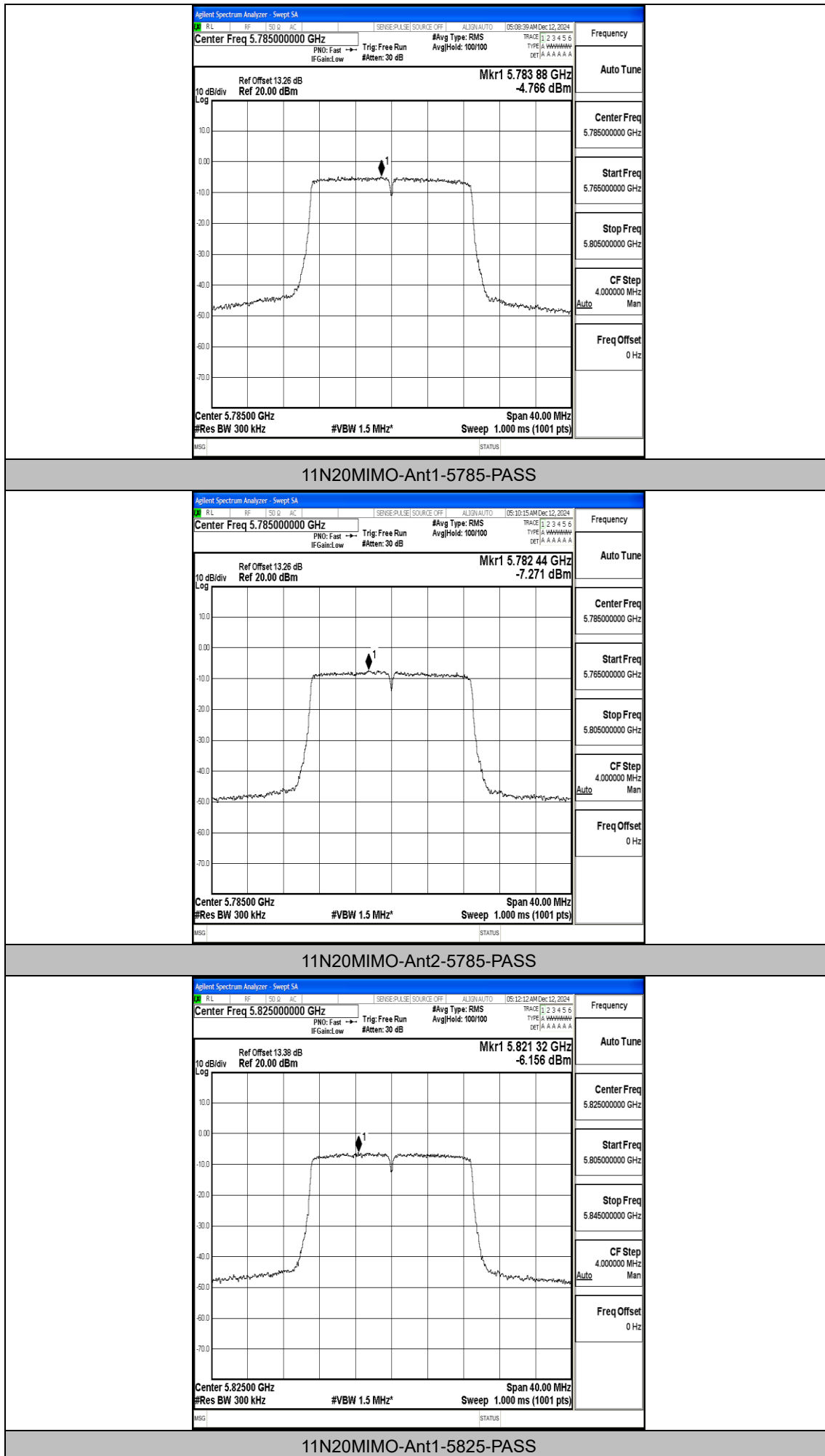
11A-Ant2-5825-PASS

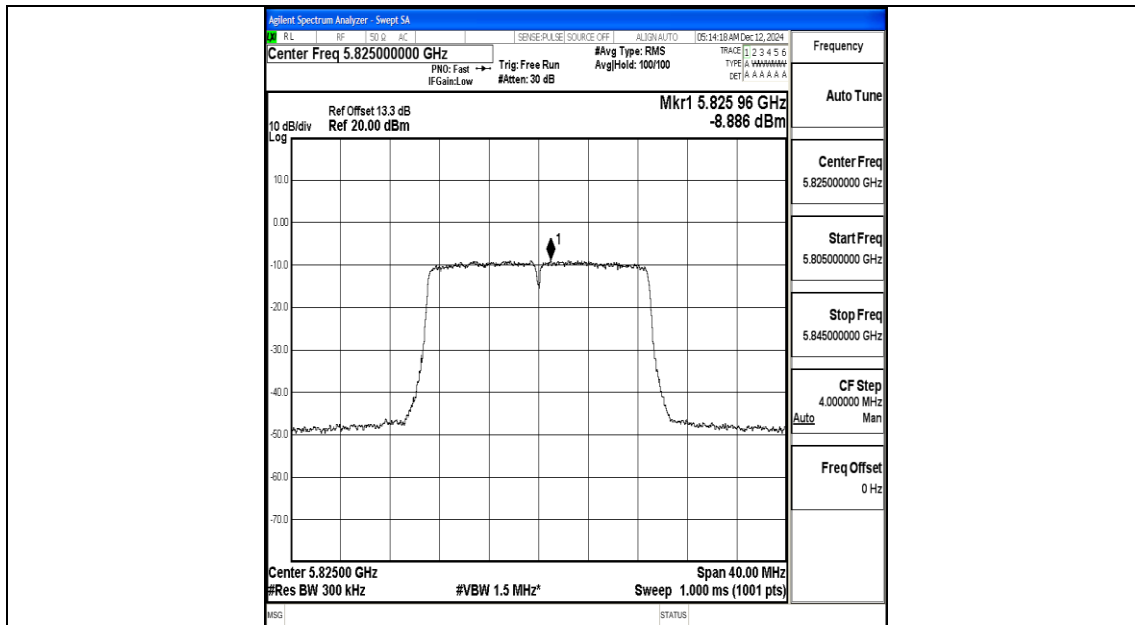


11N20MIMO-Ant1-5745-PASS

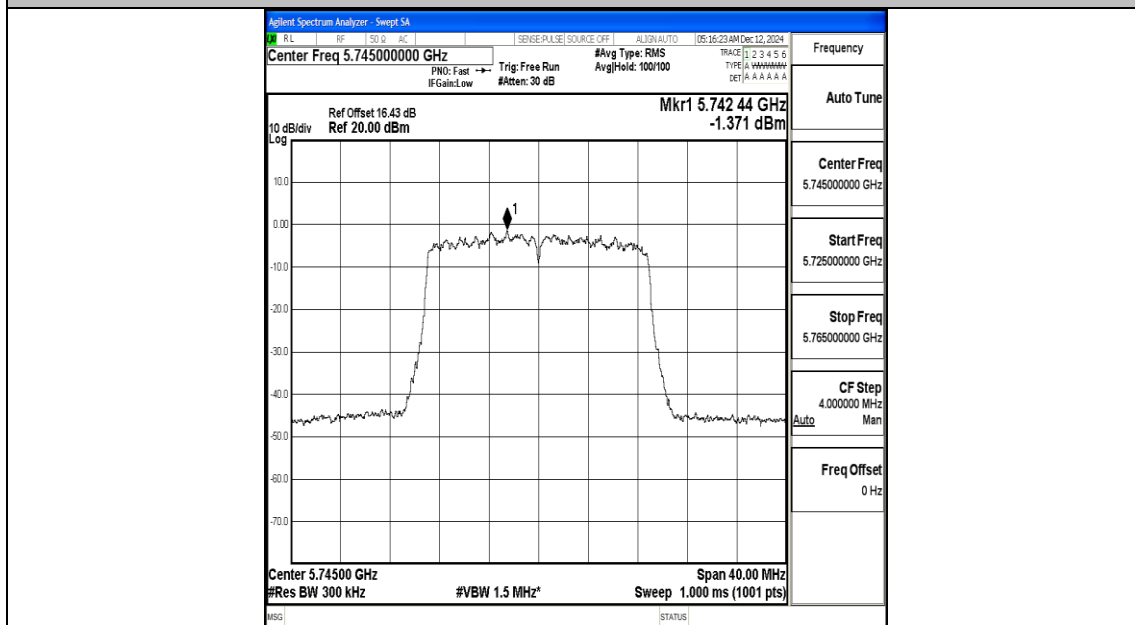


11N20MIMO-Ant2-5745-PASS

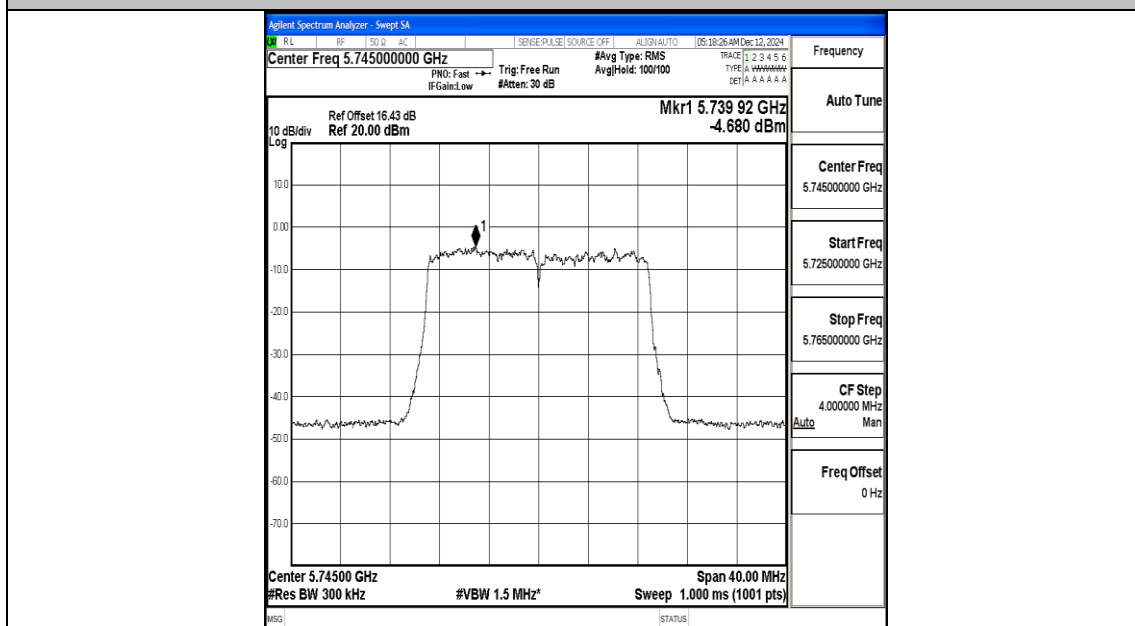




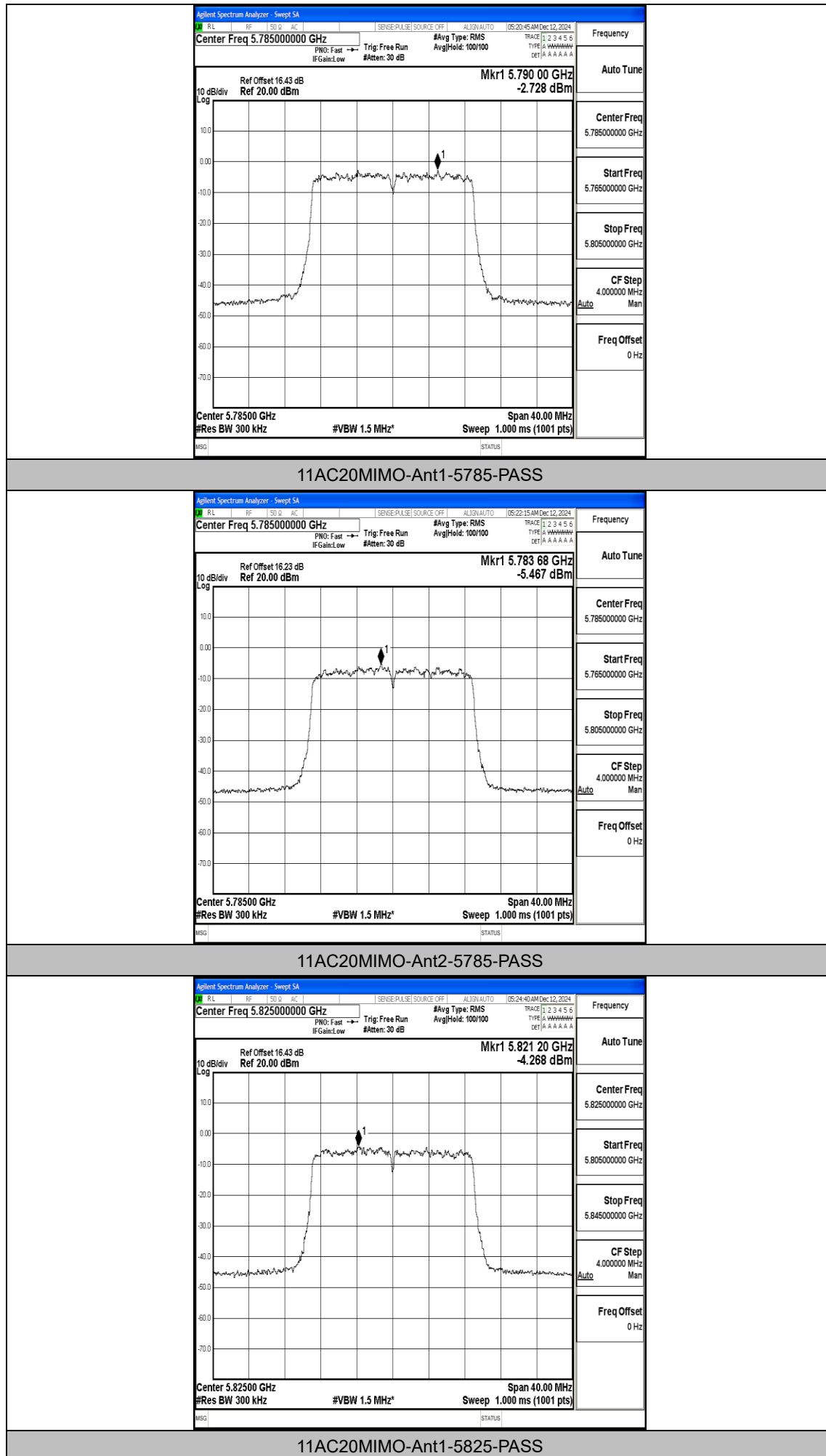
11N20MIMO-Ant2-5825-PASS

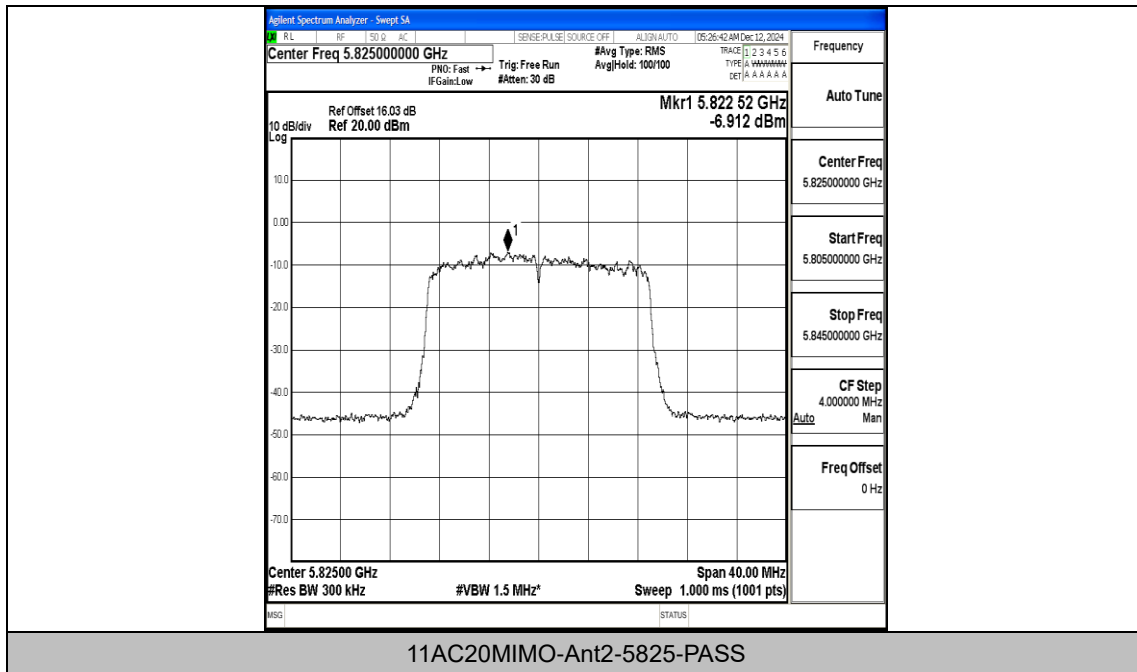


11AC20MIMO-Ant1-5745-PASS



11AC20MIMO-Ant2-5745-PASS





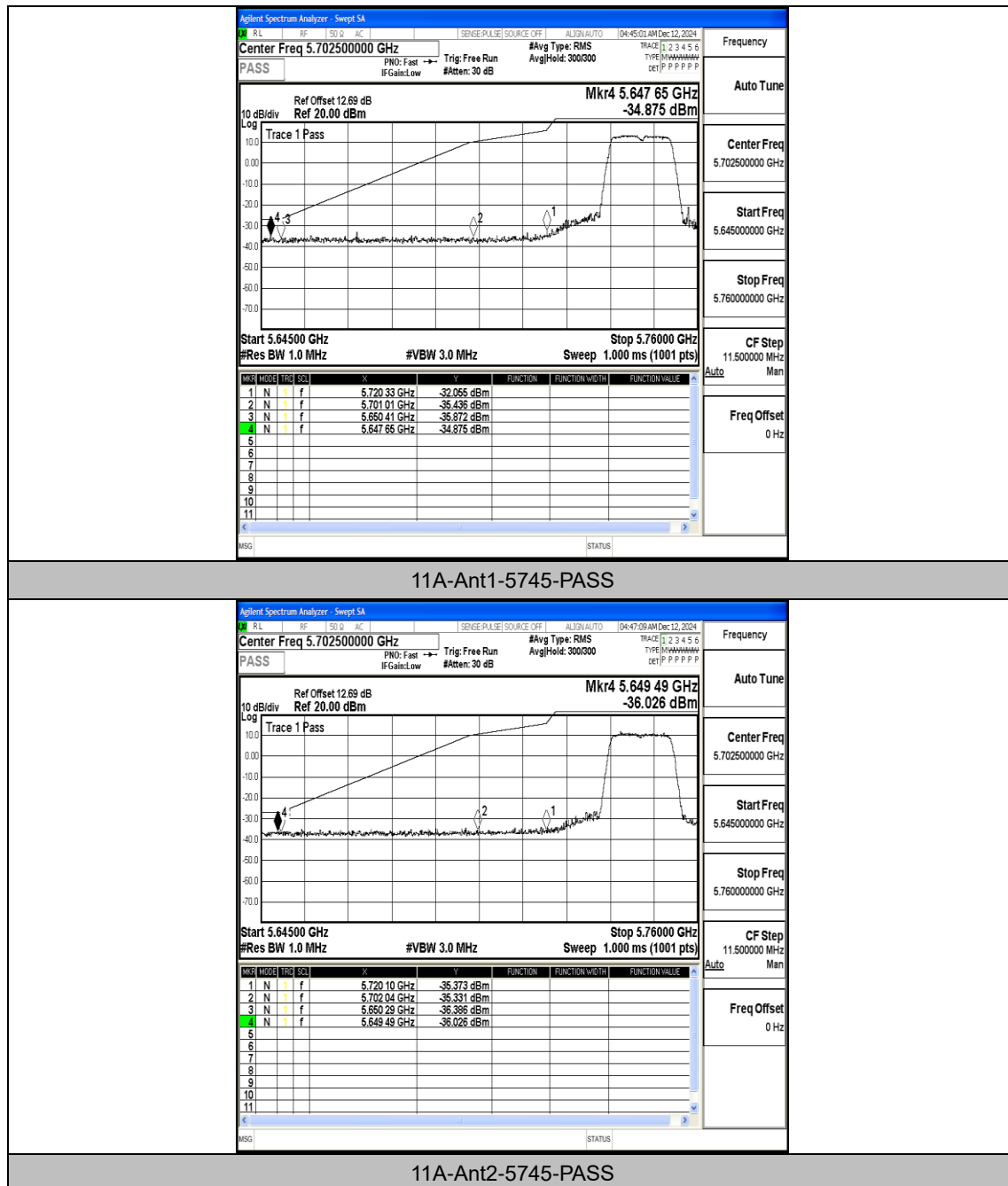
Appendix D: Band edge measurements

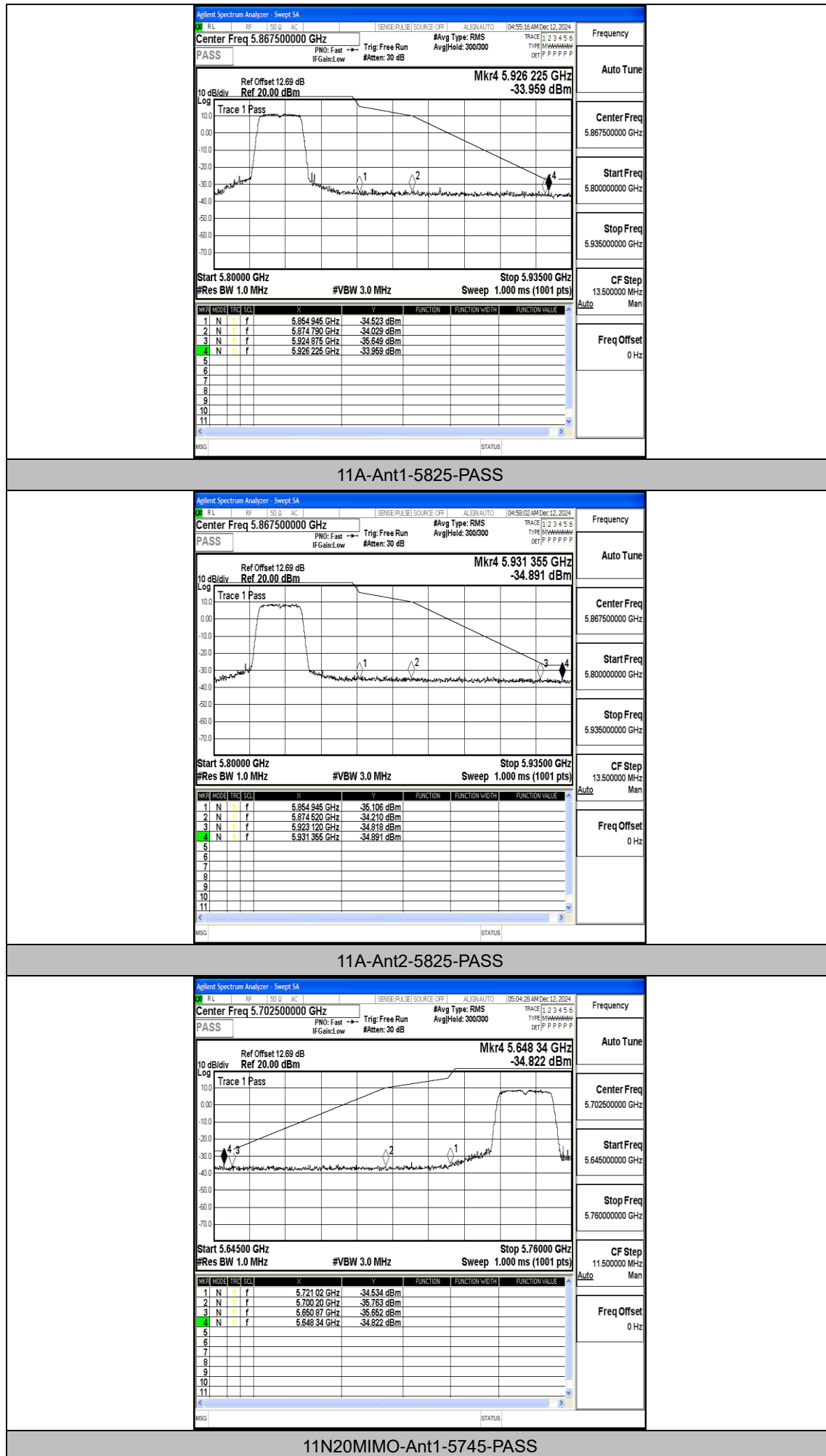
Test Result

Test Mode	Antenna	Ch. Name	Frequency [MHz]	Freq. Range [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5720~5725	-32.06	≤16.34	PASS
11A	Ant1	Low	5745	5700~5720	-35.44	≤10.28	PASS
11A	Ant1	Low	5745	5650~5700	-35.87	≤-26.70	PASS
11A	Ant1	Low	5745	5760~5650	-34.88	≤-27	PASS
11A	Ant2	Low	5745	5720~5725	-35.37	≤15.82	PASS
11A	Ant2	Low	5745	5700~5720	-35.33	≤10.57	PASS
11A	Ant2	Low	5745	5650~5700	-36.39	≤-26.79	PASS
11A	Ant2	Low	5745	5760~5650	-36.03	≤-27	PASS
11A	Ant1	High	5825	5850~5855	-34.52	≤15.73	PASS
11A	Ant1	High	5825	5855~5875	-34.03	≤10.06	PASS
11A	Ant1	High	5825	5875~5925	-35.65	≤-26.91	PASS
11A	Ant1	High	5825	5925~5935	-33.96	≤-27	PASS
11A	Ant2	High	5825	5850~5855	-35.11	≤15.73	PASS
11A	Ant2	High	5825	5855~5875	-34.21	≤10.13	PASS
11A	Ant2	High	5825	5875~5925	-34.82	≤-25.61	PASS
11A	Ant2	High	5825	5925~5935	-34.89	≤-27	PASS
11N20MI MO	Ant1	Low	5745	5720~5725	-34.53	≤17.91	PASS
11N20MI MO	Ant1	Low	5745	5700~5720	-35.76	≤10.06	PASS
11N20MI MO	Ant1	Low	5745	5650~5700	-35.65	≤-26.36	PASS
11N20MI MO	Ant1	Low	5745	5760~5650	-34.82	≤-27	PASS
11N20MI MO	Ant2	Low	5745	5720~5725	-35.57	≤16.60	PASS
11N20MI MO	Ant2	Low	5745	5700~5720	-35.87	≤10.35	PASS
11N20MI MO	Ant2	Low	5745	5650~5700	-36.13	≤-26.79	PASS
11N20MI MO	Ant2	Low	5745	5760~5650	-35.87	≤-27	PASS
11N20MI MO	Ant1	High	5825	5850~5855	-34.53	≤15.73	PASS
11N20MI MO	Ant1	High	5825	5855~5875	-34.56	≤10.44	PASS
11N20MI MO	Ant1	High	5825	5875~5925	-34.68	≤-26.61	PASS
11N20MI MO	Ant1	High	5825	5925~5935	-34.16	≤-27	PASS
11N20MI	Ant2	High	5825	5850~5855	-33.98	≤17.57	PASS

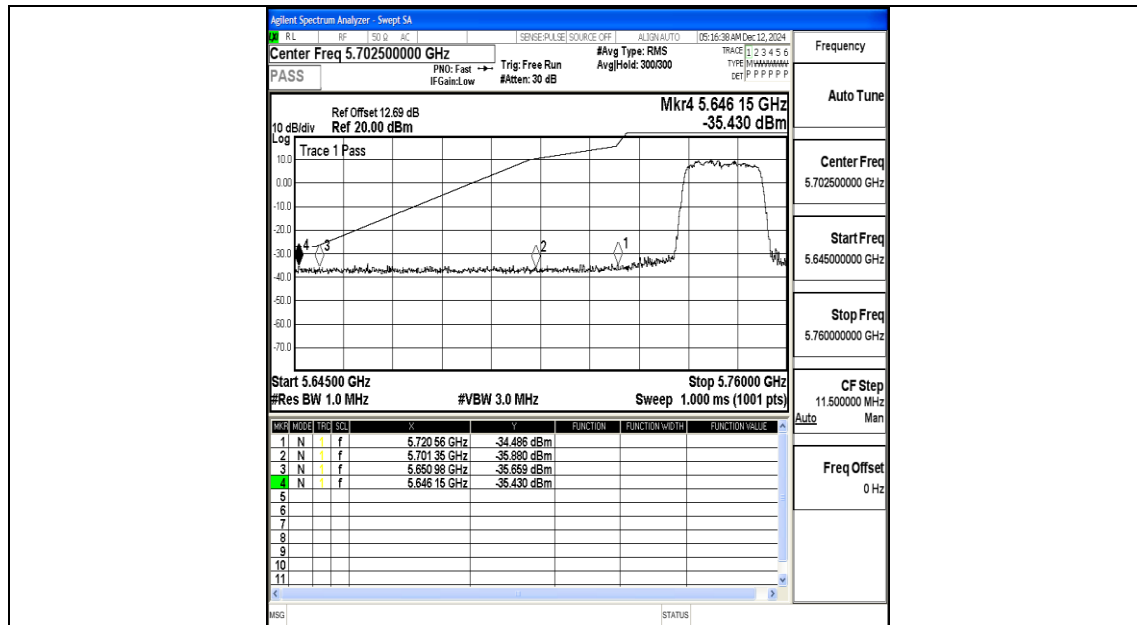
MO							
11N20MI MO	Ant2	High	5825	5855~5875	-34.78	≤10.02	PASS
11N20MI MO	Ant2	High	5825	5875~5925	-35.38	≤-26.81	PASS
11N20MI MO	Ant2	High	5825	5925~5935	-34.71	≤-27	PASS
11AC20M IMO	Ant1	Low	5745	5720~5725	-34.49	≤16.87	PASS
11AC20M IMO	Ant1	Low	5745	5700~5720	-35.88	≤10.38	PASS
11AC20M IMO	Ant1	Low	5745	5650~5700	-35.66	≤-26.27	PASS
11AC20M IMO	Ant1	Low	5745	5760~5650	-35.43	≤-27	PASS
11AC20M IMO	Ant2	Low	5745	5720~5725	-35.71	≤15.82	PASS
11AC20M IMO	Ant2	Low	5745	5700~5720	-34.93	≤11.28	PASS
11AC20M IMO	Ant2	Low	5745	5650~5700	-35.82	≤-26.96	PASS
11AC20M IMO	Ant2	Low	5745	5760~5650	-35.51	≤-27	PASS
11AC20M IMO	Ant1	High	5825	5850~5855	-35.14	≤16.03	PASS
11AC20M IMO	Ant1	High	5825	5855~5875	-34.34	≤10.06	PASS
11AC20M IMO	Ant1	High	5825	5875~5925	-34.87	≤-26.91	PASS
11AC20M IMO	Ant1	High	5825	5925~5935	-34.36	≤-27	PASS
11AC20M IMO	Ant2	High	5825	5850~5855	-34.77	≤15.73	PASS
11AC20M IMO	Ant2	High	5825	5855~5875	-34.32	≤10.63	PASS
11AC20M IMO	Ant2	High	5825	5875~5925	-35.82	≤-26.71	PASS
11AC20M IMO	Ant2	High	5825	5925~5935	-34.22	≤-27	PASS

Test Graphs

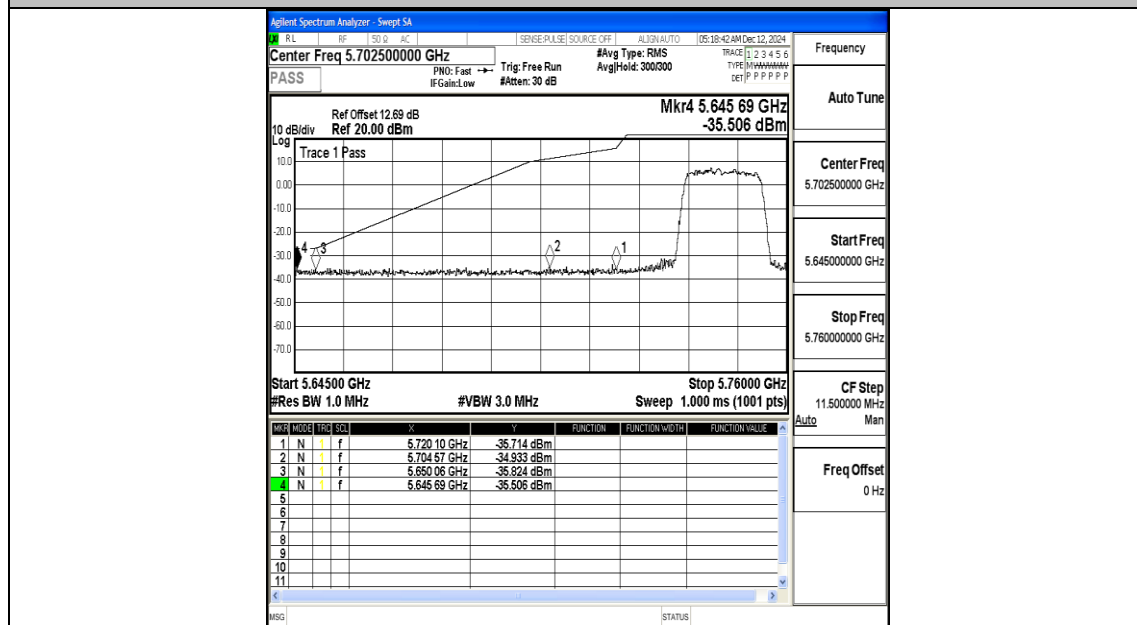




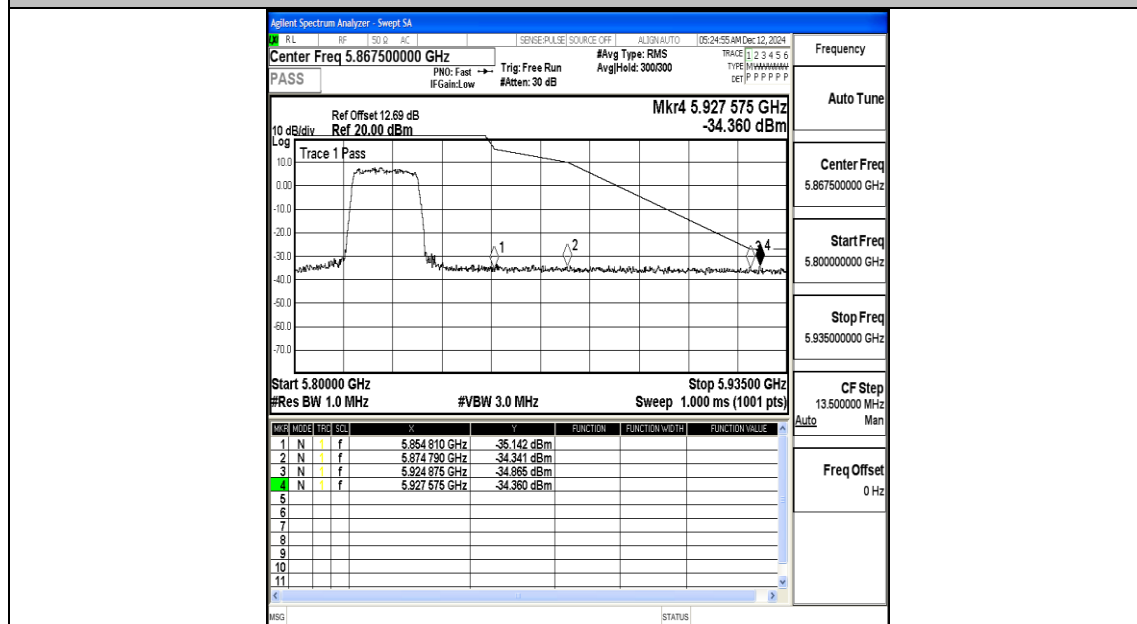




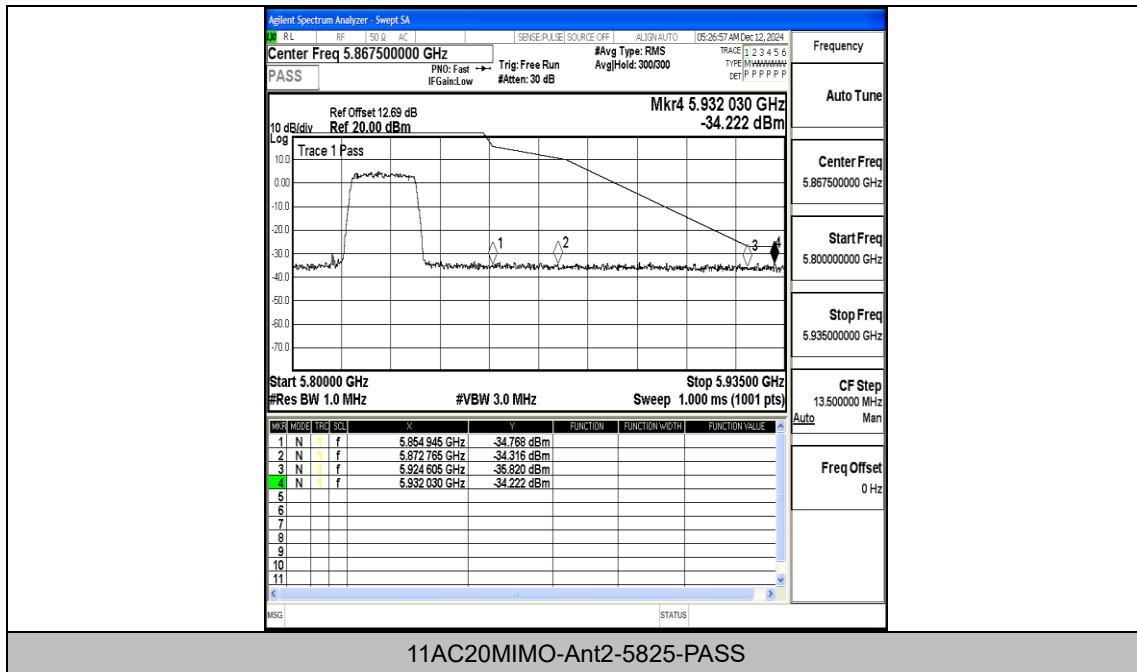
11AC20MIMO-Ant1-5745-PASS



11AC20MIMO-Ant2-5745-PASS



11AC20MIMO-Ant1-5825-PASS



Appendix E: Frequency Stability

Test Result

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5745	20	12.54	5744.900978	5725 – 5850	PASS
5745	20	10.26	5745.041039	5725 – 5850	PASS
5745	50	11.40	5744.933548	5725 – 5850	PASS
5745	40	11.40	5745.050945	5725 – 5850	PASS
5745	30	11.40	5745.009926	5725 – 5850	PASS
5745	20	11.40	5744.907202	5725 – 5850	PASS
5745	10	11.40	5745.076732	5725 – 5850	PASS
5745	0	11.40	5745.084333	5725 – 5850	PASS
5745	-10	11.40	5744.903159	5725 – 5850	PASS
5745	-20	11.40	5745.033055	5725 – 5850	PASS
5745	-30	11.40	5745.059729	5725 – 5850	PASS

Ant2

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5745	20	12.54	5744.940474	5725 – 5850	PASS
5745	20	10.26	5744.916013	5725 – 5850	PASS
5745	50	11.40	5745.005464	5725 – 5850	PASS
5745	40	11.40	5744.999666	5725 – 5850	PASS
5745	30	11.40	5744.912172	5725 – 5850	PASS
5745	20	11.40	5745.005382	5725 – 5850	PASS
5745	10	11.40	5745.021796	5725 – 5850	PASS
5745	0	11.40	5744.910254	5725 – 5850	PASS
5745	-10	11.40	5745.072852	5725 – 5850	PASS
5745	-20	11.40	5744.909069	5725 – 5850	PASS
5745	-30	11.40	5744.965065	5725 – 5850	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5785	20	12.54	5784.918658	5725 – 5850	PASS
5785	20	10.26	5784.976167	5725 – 5850	PASS
5785	50	11.40	5785.027551	5725 – 5850	PASS
5785	40	11.40	5784.962090	5725 – 5850	PASS
5785	30	11.40	5784.990629	5725 – 5850	PASS
5785	20	11.40	5784.998354	5725 – 5850	PASS
5785	10	11.40	5785.012681	5725 – 5850	PASS
5785	0	11.40	5785.059765	5725 – 5850	PASS
5785	-10	11.40	5784.912339	5725 – 5850	PASS
5785	-20	11.40	5785.074352	5725 – 5850	PASS
5785	-30	11.40	5784.912952	5725 – 5850	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5785	20	12.54	5785.055904	5725 – 5850	PASS
5785	20	10.26	5785.023417	5725 – 5850	PASS
5785	50	11.40	5784.982052	5725 – 5850	PASS
5785	40	11.40	5785.092825	5725 – 5850	PASS
5785	30	11.40	5785.091799	5725 – 5850	PASS
5785	20	11.40	5785.069784	5725 – 5850	PASS
5785	10	11.40	5784.950614	5725 – 5850	PASS
5785	0	11.40	5785.077447	5725 – 5850	PASS
5785	-10	11.40	5785.042768	5725 – 5850	PASS
5785	-20	11.40	5784.974367	5725 – 5850	PASS
5785	-30	11.40	5785.003993	5725 – 5850	PASS

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5825	20	12.54	5824.902968	5725 – 5850	PASS
5825	20	10.26	5824.910994	5725 – 5850	PASS
5825	50	11.40	5824.955446	5725 – 5850	PASS
5825	40	11.40	5824.950636	5725 – 5850	PASS
5825	30	11.40	5824.982370	5725 – 5850	PASS
5825	20	11.40	5825.085909	5725 – 5850	PASS
5825	10	11.40	5824.906989	5725 – 5850	PASS
5825	0	11.40	5825.008848	5725 – 5850	PASS
5825	-10	11.40	5824.975844	5725 – 5850	PASS
5825	-20	11.40	5824.953194	5725 – 5850	PASS
5825	-30	11.40	5825.032182	5725 – 5850	PASS

Ant2

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5825	20	12.54	5824.940325	5725 – 5850	PASS
5825	20	10.26	5825.074161	5725 – 5850	PASS
5825	50	11.40	5825.026472	5725 – 5850	PASS
5825	40	11.40	5824.983524	5725 – 5850	PASS
5825	30	11.40	5824.918209	5725 – 5850	PASS
5825	20	11.40	5825.060073	5725 – 5850	PASS
5825	10	11.40	5825.005428	5725 – 5850	PASS
5825	0	11.40	5824.983522	5725 – 5850	PASS
5825	-10	11.40	5825.083726	5725 – 5850	PASS
5825	-20	11.40	5824.988826	5725 – 5850	PASS
5825	-30	11.40	5825.095740	5725 – 5850	PASS

Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	30~5650	5501.63	-43.23	≤-27	PASS
11A	Ant2	5745	30~5650	5457.05	-42.54	≤-27	PASS
11A	Ant1	5745	5925~40000	24287.65	-28.68	≤-27	PASS
11A	Ant2	5745	5925~40000	24239.18	-28.79	≤-27	PASS
11A	Ant1	5785	30~5650	5507.06	-44.21	≤-27	PASS
11A	Ant2	5785	30~5650	5439.44	-43.89	≤-27	PASS
11A	Ant1	5785	5925~40000	24259.55	-29.03	≤-27	PASS
11A	Ant2	5785	5925~40000	24277.81	-29.17	≤-27	PASS
11A	Ant1	5825	30~5650	5508.19	-43.59	≤-27	PASS
11A	Ant2	5825	30~5650	5457.05	-44.74	≤-27	PASS
11A	Ant1	5825	5925~40000	24302.4	-29.1	≤-27	PASS
11A	Ant2	5825	5925~40000	24254.63	-28.77	≤-27	PASS
11N20MIMO	Ant1	5745	30~5650	5518.12	-44.24	≤-27	PASS
11N20MIMO	Ant2	5745	30~5650	5499.57	-44.67	≤-27	PASS
11N20MIMO	Ant1	5745	5925~40000	24263.06	-28.55	≤-27	PASS
11N20MIMO	Ant2	5745	5925~40000	24268.68	-29.06	≤-27	PASS
11N20MIMO	Ant1	5785	30~5650	5482.15	-44.25	≤-27	PASS
11N20MIMO	Ant2	5785	30~5650	5439.06	-44.41	≤-27	PASS
11N20MIMO	Ant1	5785	5925~40000	24272.19	-28.38	≤-27	PASS
11N20MIMO	Ant2	5785	5925~40000	24280.62	-29.12	≤-27	PASS
11N20MIMO	Ant1	5825	30~5650	5478.03	-44.55	≤-27	PASS
11N20MIMO	Ant2	5825	30~5650	5489.46	-44.19	≤-27	PASS
11N20MIMO	Ant1	5825	5925~40000	24237.07	-28.19	≤-27	PASS
11N20MIMO	Ant2	5825	5925~40000	24238.47	-29.13	≤-27	PASS
11AC20MIMO	Ant1	5745	30~5650	5485.15	-44.42	≤-27	PASS
11AC20MIMO	Ant2	5745	30~5650	5483.84	-43.76	≤-27	PASS
11AC20MIMO	Ant1	5745	5925~40000	24257.44	-28.44	≤-27	PASS
11AC20MIMO	Ant2	5745	5925~40000	24261.66	-29.28	≤-27	PASS
11AC20MIMO	Ant1	5785	30~5650	3402.19	-44.52	≤-27	PASS
11AC20MIMO	Ant2	5785	30~5650	5492.08	-44.63	≤-27	PASS
11AC20MIMO	Ant1	5785	5925~40000	24277.81	-28.34	≤-27	PASS
11AC20MIMO	Ant2	5785	5925~40000	24298.89	-29.31	≤-27	PASS
11AC20MIMO	Ant1	5825	30~5650	5475.97	-44.08	≤-27	PASS
11AC20MIMO	Ant2	5825	30~5650	5426.89	-44.78	≤-27	PASS
11AC20MIMO	Ant1	5825	5925~40000	24293.27	-28.28	≤-27	PASS
11AC20MIMO	Ant2	5825	5925~40000	24241.99	-28.74	≤-27	PASS

Test Graphs

