

Appendix Test Data for RLAN(5.8G) (Conducted Measurement)

Product Name: Smart Gateway

Trade Mark: Dusun

Test Model: DSGW-093

FCC ID: 2AUXBDSGW-093

Environmental Conditions

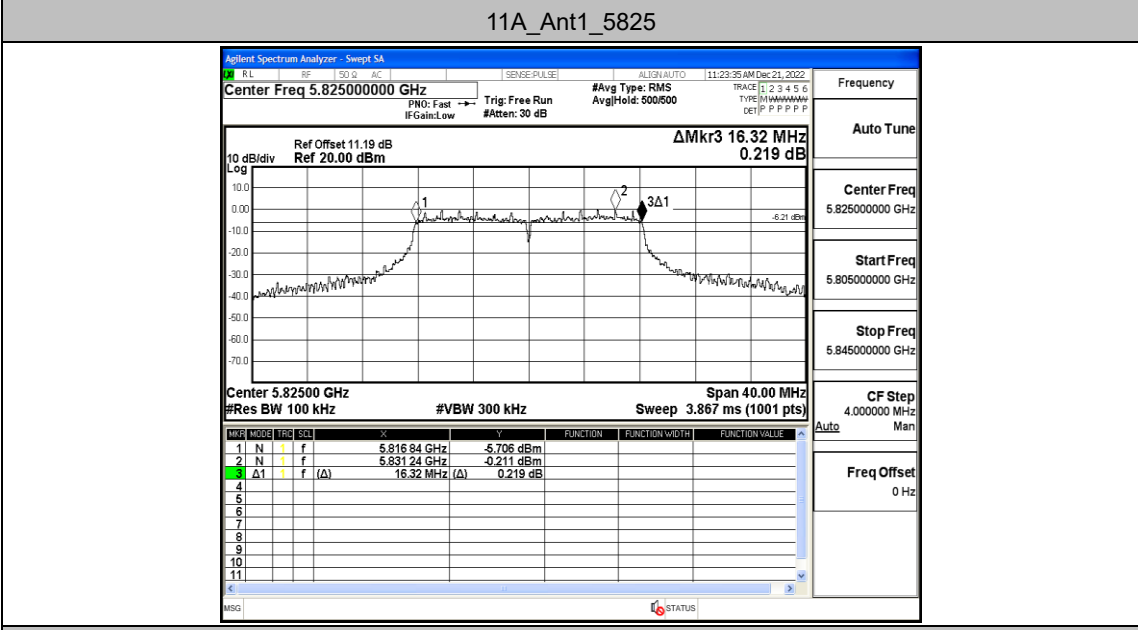
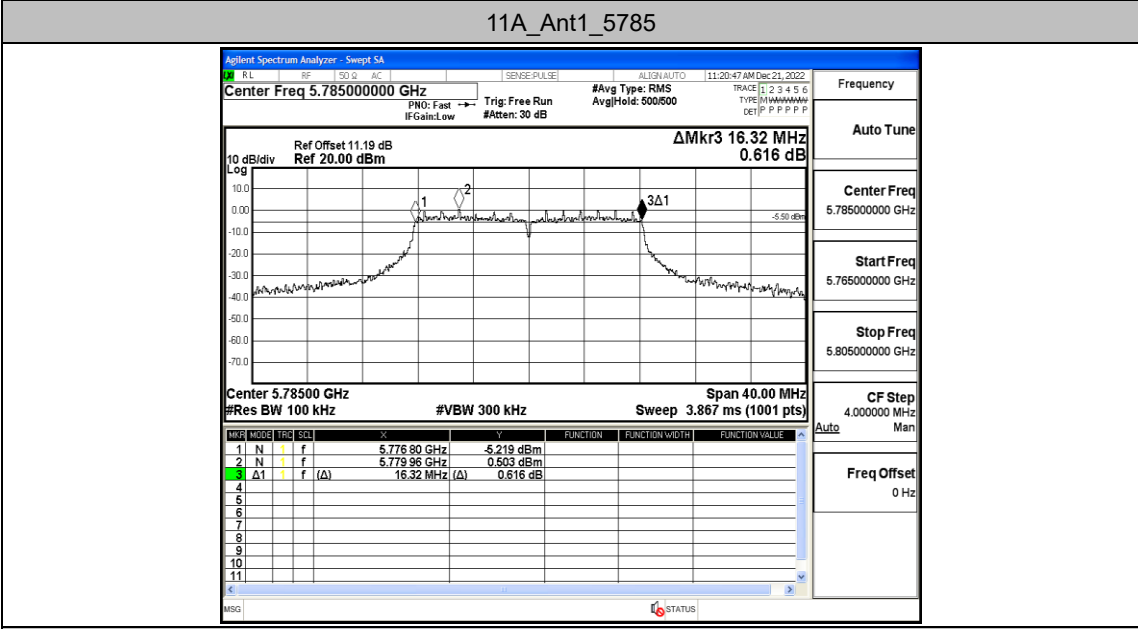
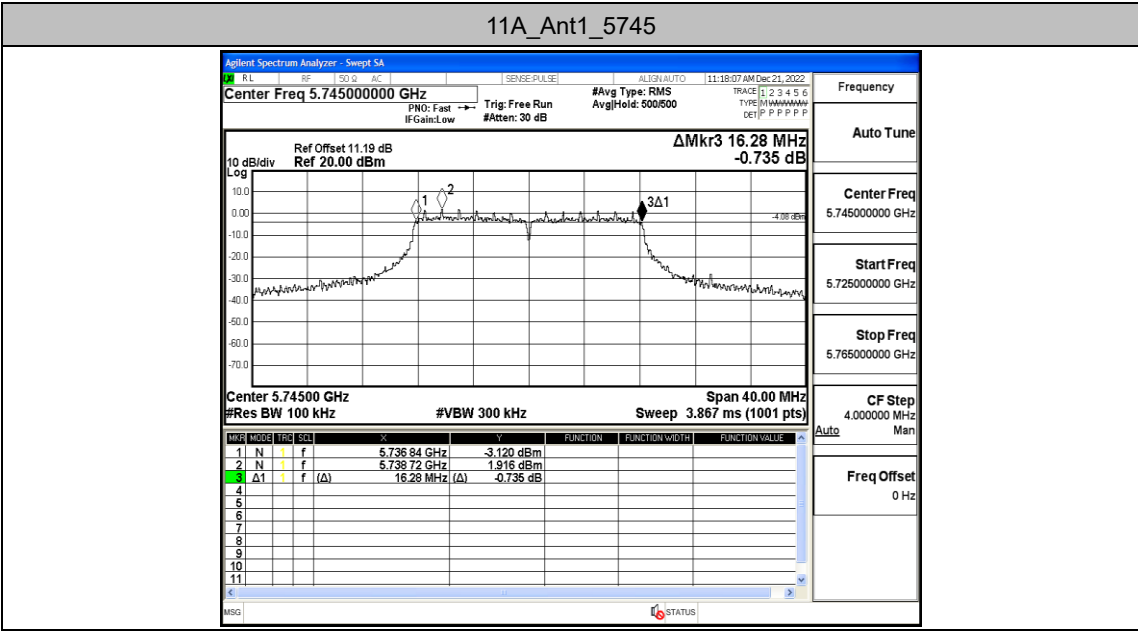
Temperature:	22.7°C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engneer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: Min emission bandwidth

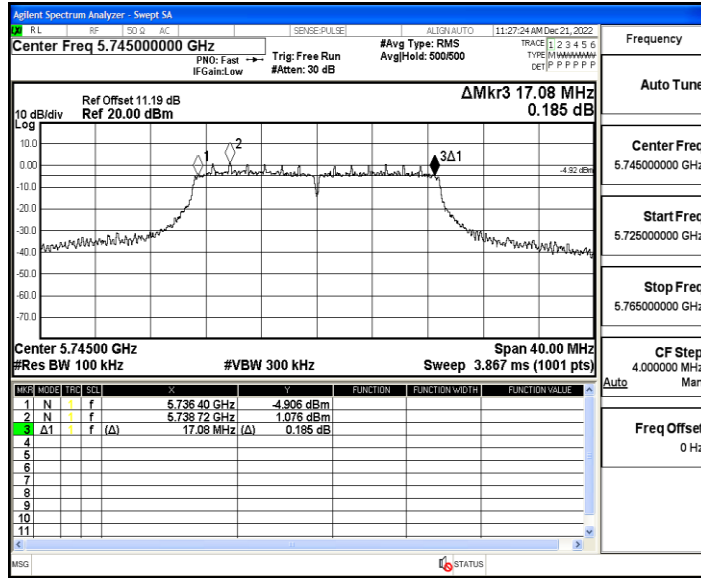
Test Result

TestMode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.280	5736.840	5753.120	0.5	PASS
		5785	16.320	5776.800	5793.120	0.5	PASS
		5825	16.320	5816.840	5833.160	0.5	PASS
11N20MIMO	Ant1	5745	17.080	5736.400	5753.480	0.5	PASS
		5785	17.000	5776.480	5793.480	0.5	PASS
		5825	17.040	5816.480	5833.520	0.5	PASS
11N40MIMO	Ant1	5755	35.440	5737.080	5772.520	0.5	PASS
		5795	35.520	5777.080	5812.600	0.5	PASS
11AC20MIMO	Ant1	5745	17.240	5736.240	5753.480	0.5	PASS
		5785	17.320	5776.240	5793.560	0.5	PASS
		5825	17.280	5816.480	5833.760	0.5	PASS
11AC40MIMO	Ant1	5755	35.520	5737.080	5772.600	0.5	PASS
		5795	35.520	5777.080	5812.600	0.5	PASS
11AC80MIMO	Ant1	5775	75.200	5737.400	5812.600	0.5	PASS

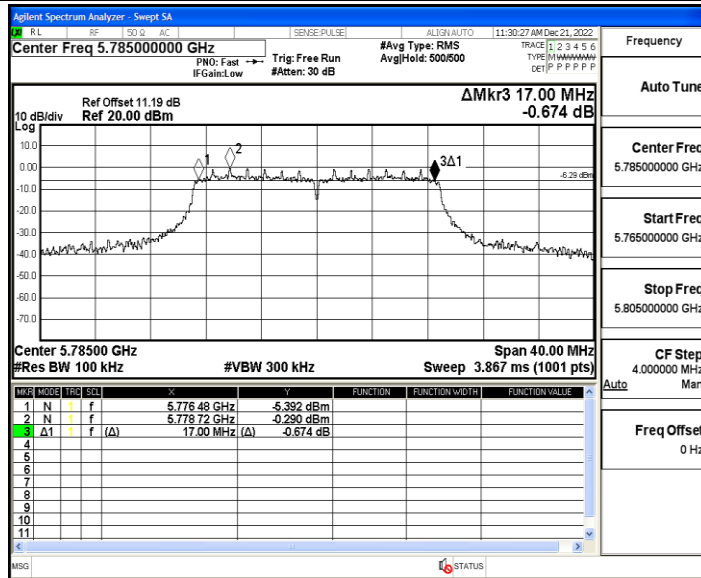
Test Graphs



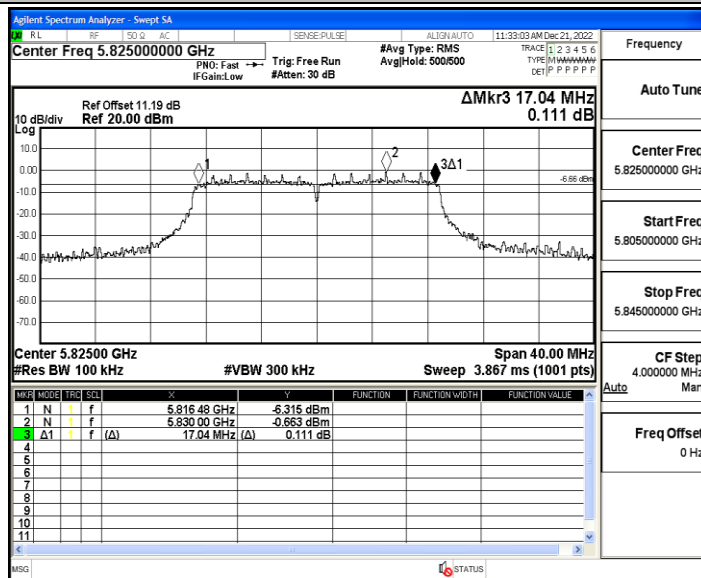
11N20MIMO_Ant1_5745



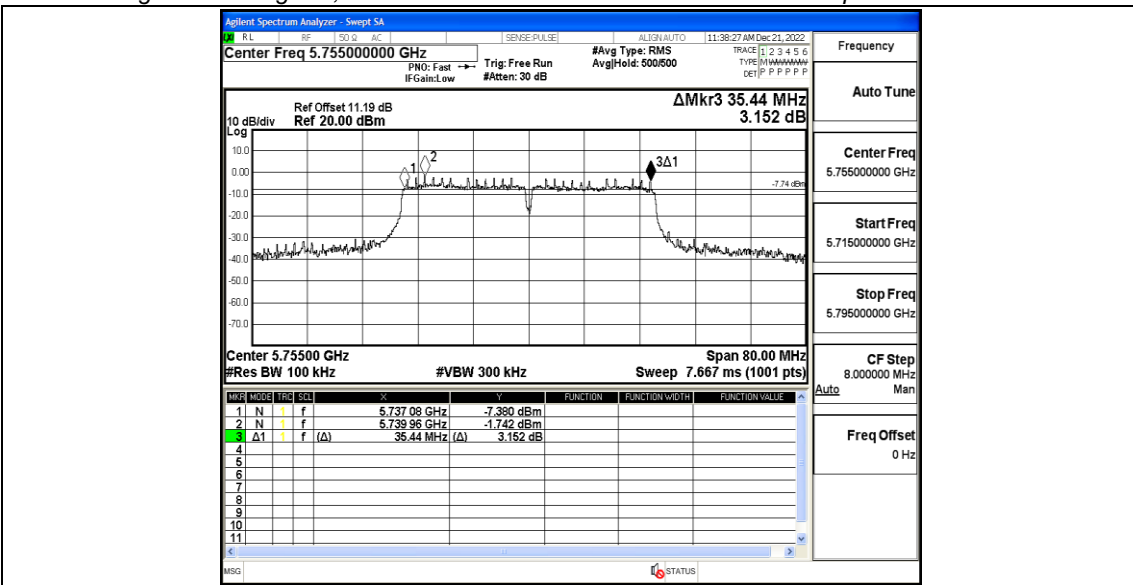
11N20MIMO_Ant1_5785



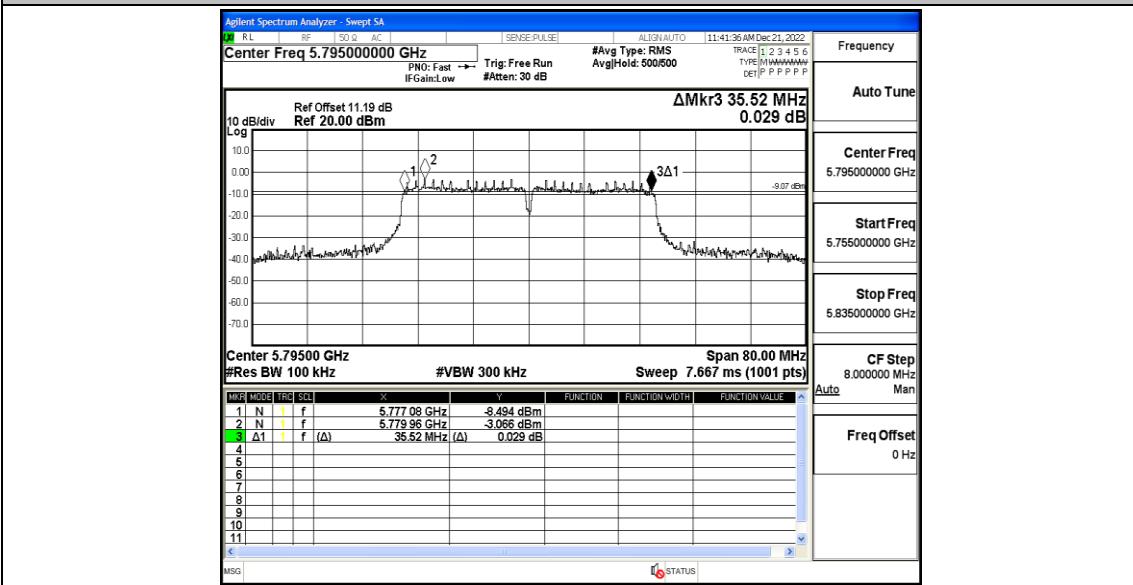
11N20MIMO_Ant1_5825



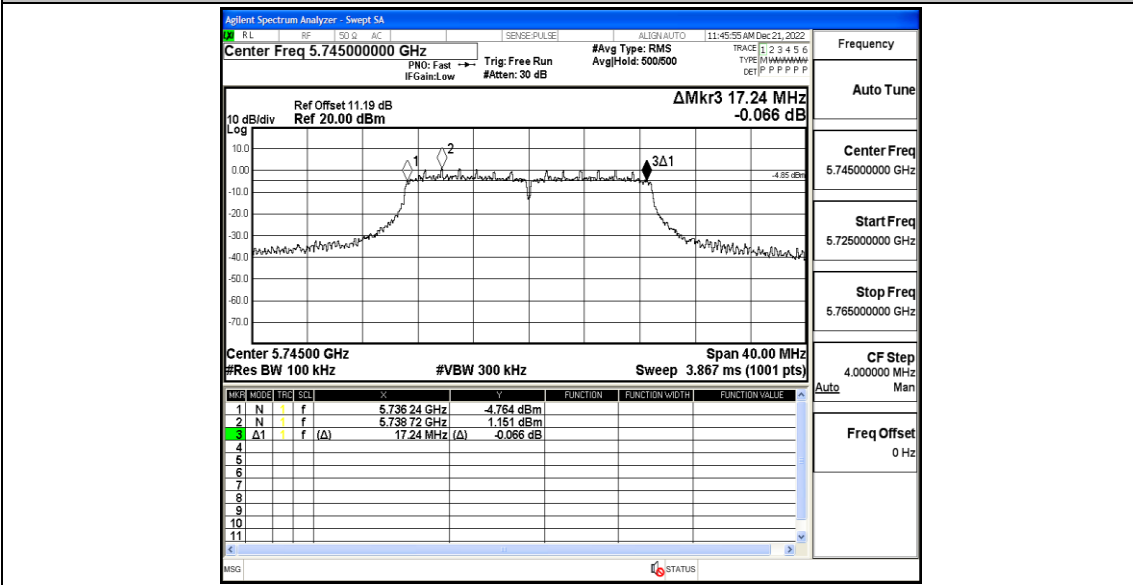
11N40MIMO_Ant1_5755



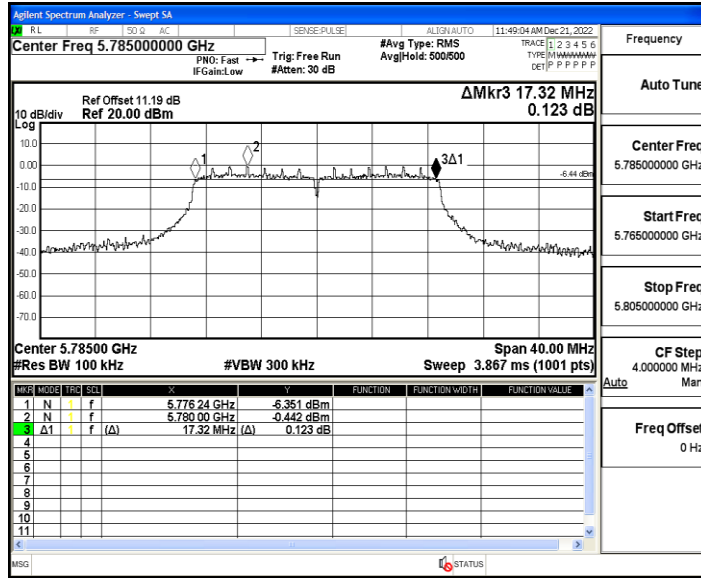
11N40MIMO_Ant1_5795



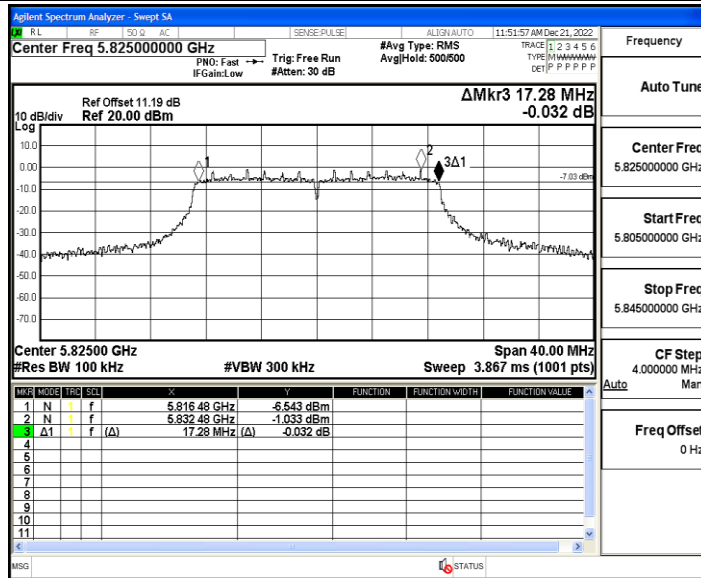
11AC20MIMO_Ant1_5745



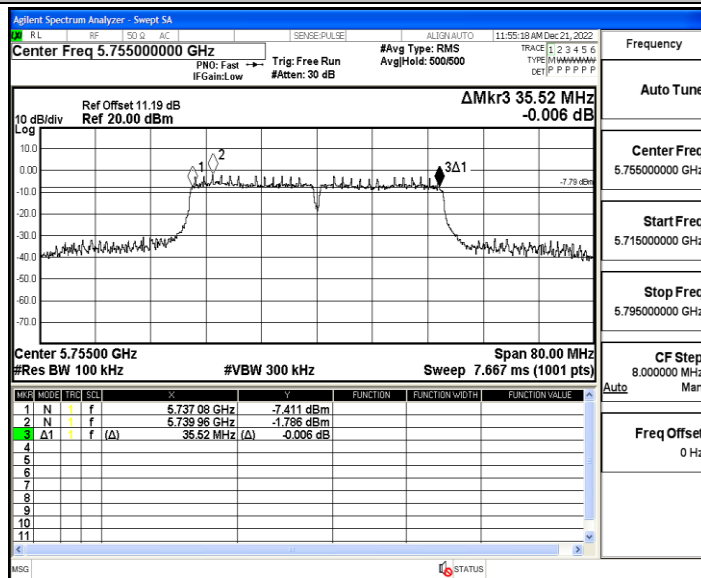
11AC20MIMO_Ant1_5785



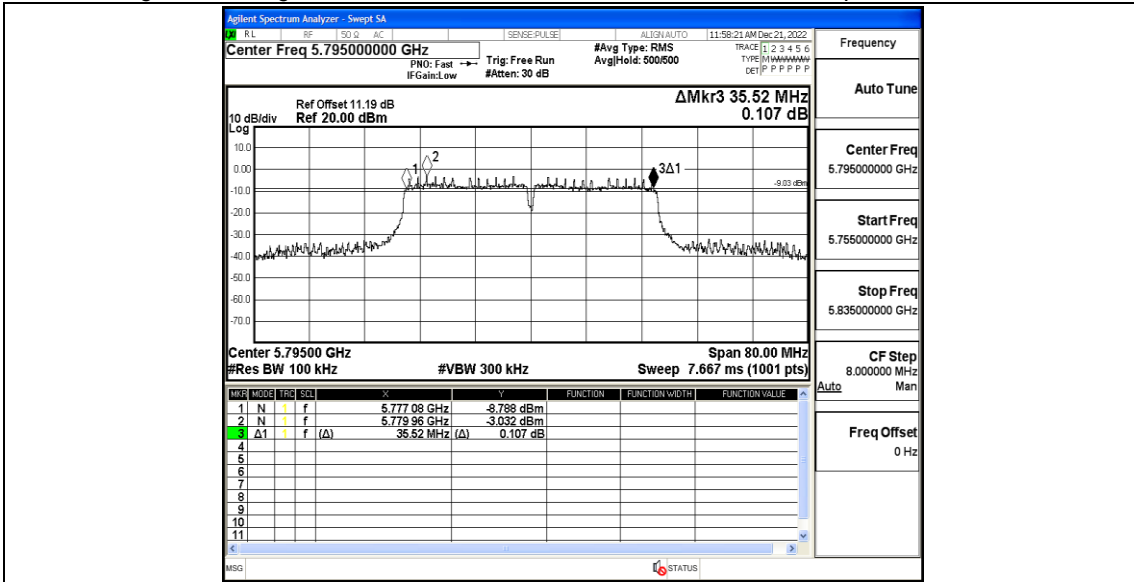
11AC20MIMO_Ant1_5825



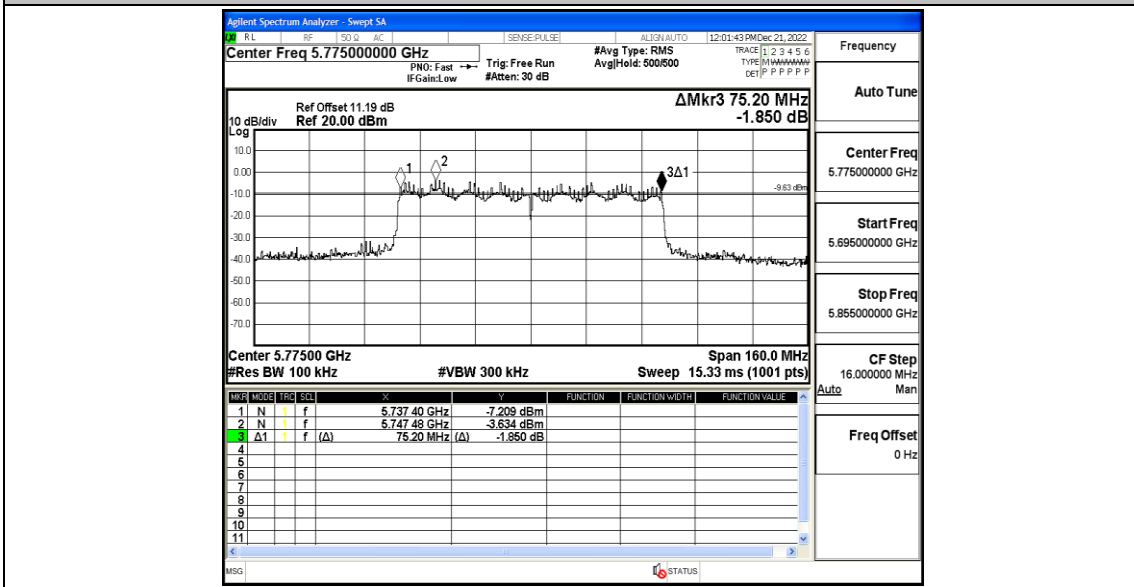
11AC40MIMO_Ant1_5755



11AC40MIMO_Ant1_5795



11AC80MIMO_Ant1_5775



Appendix B: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5745	12.58	≤30.00	PASS
		5785	11.46	≤30.00	PASS
		5825	10.84	≤30.00	PASS
11N20MIMO	Ant1	5745	11.83	≤30.00	PASS
		5785	10.56	≤30.00	PASS
		5825	10.24	≤30.00	PASS
11N40MIMO	Ant1	5755	11.94	≤30.00	PASS
		5795	10.98	≤30.00	PASS
11AC20MIMO	Ant1	5745	11.84	≤30.00	PASS
		5785	10.62	≤30.00	PASS
		5825	10.35	≤30.00	PASS
11AC40MIMO	Ant1	5755	11.78	≤30.00	PASS
		5795	10.85	≤30.00	PASS
11AC80MIMO	Ant1	5775	11.91	≤30.00	PASS

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

Appendix C: Maximum power spectral density

Test Result

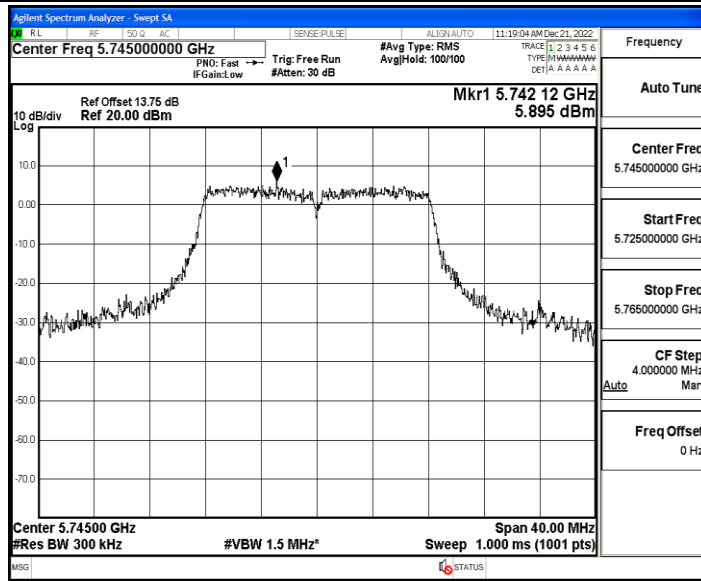
TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5745	5.9	≤30.00	PASS
		5785	4.24	≤30.00	PASS
		5825	3.67	≤30.00	PASS
11N20MIMO	Ant1	5745	5.39	≤30.00	PASS
		5785	2.97	≤30.00	PASS
		5825	3.16	≤30.00	PASS
11N40MIMO	Ant1	5755	1.78	≤30.00	PASS
		5795	0.92	≤30.00	PASS
11AC20MIMO	Ant1	5745	4.25	≤30.00	PASS
		5785	3.26	≤30.00	PASS
		5825	3.04	≤30.00	PASS
11AC40MIMO	Ant1	5755	2.37	≤30.00	PASS
		5795	0.49	≤30.00	PASS
11AC80MIMO	Ant1	5775	0.63	≤30.00	PASS

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

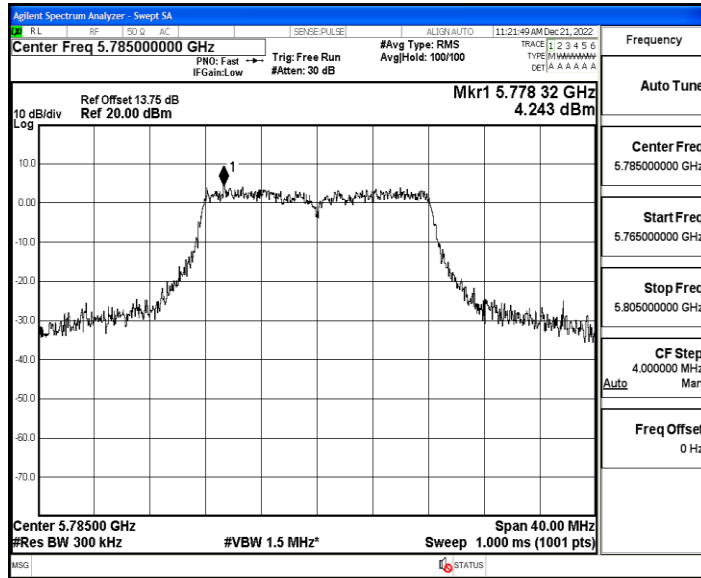
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

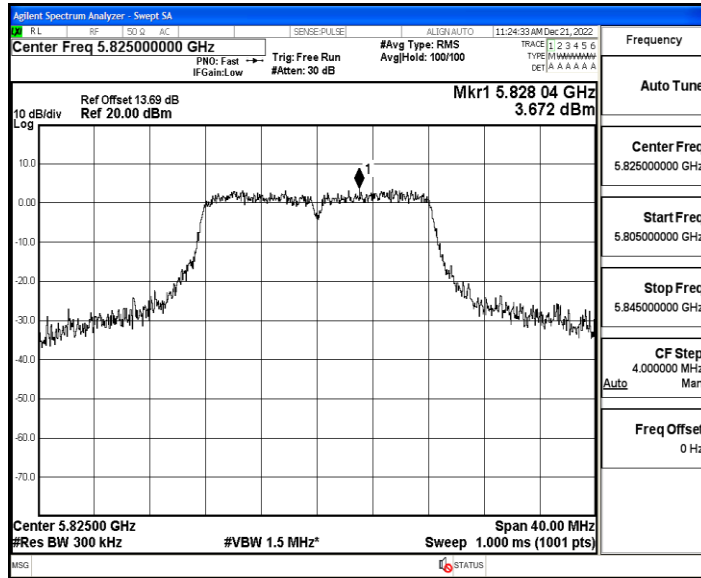
11A_Ant1_5745



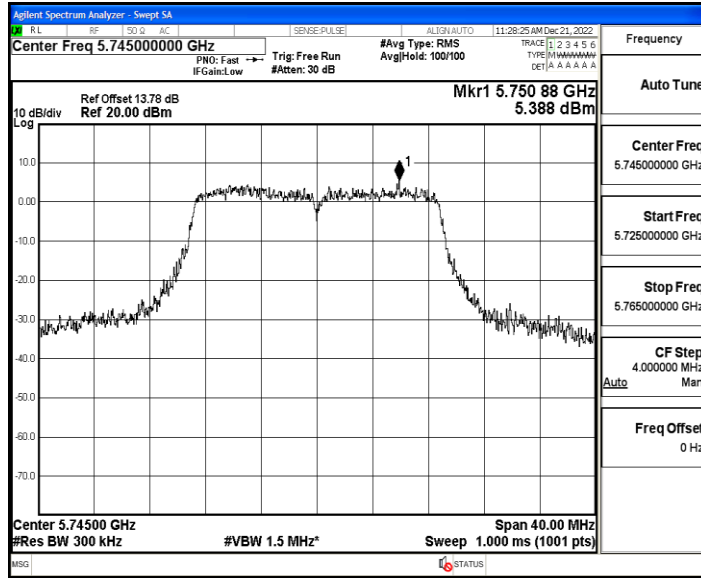
11A_Ant1_5785



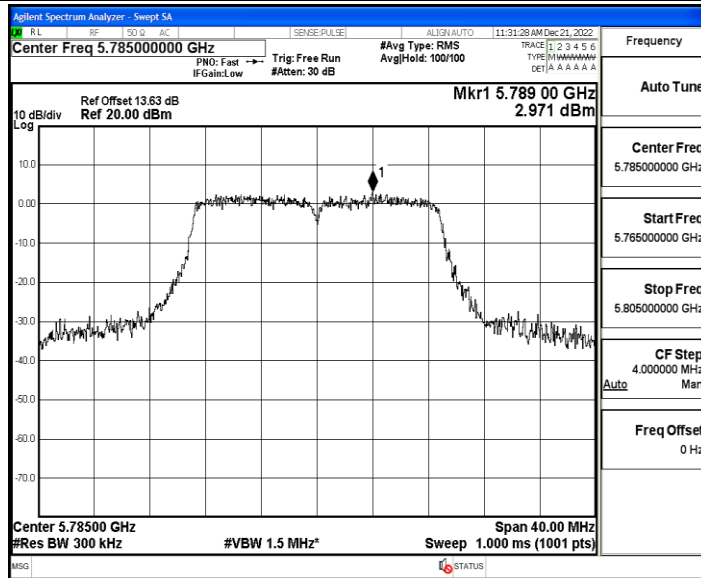
11A_Ant1_5825



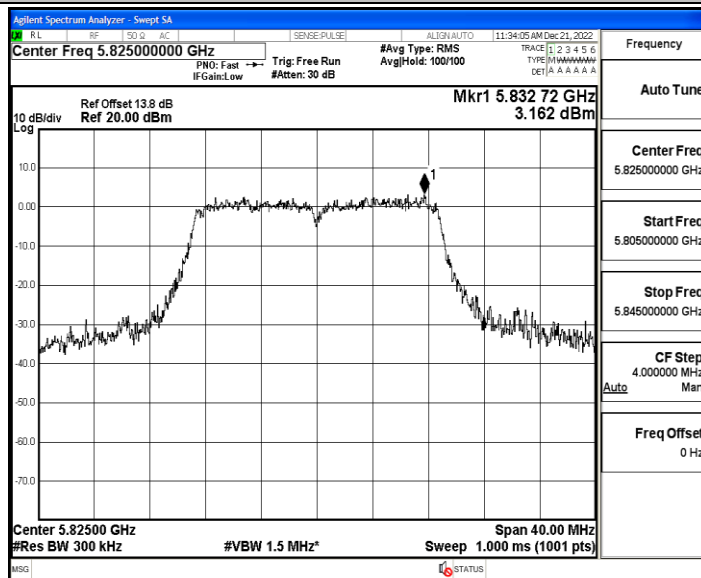
11N20MIMO_Ant1_5745



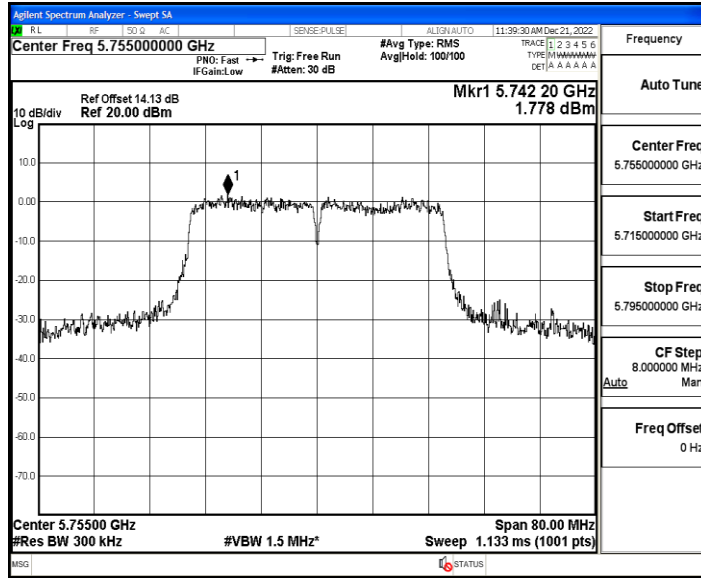
11N20MIMO_Ant1_5785



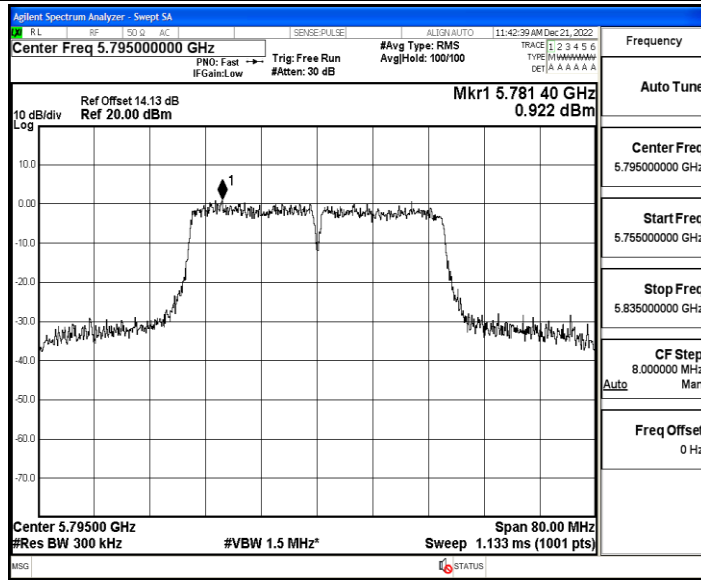
11N20MIMO_Ant1_5825



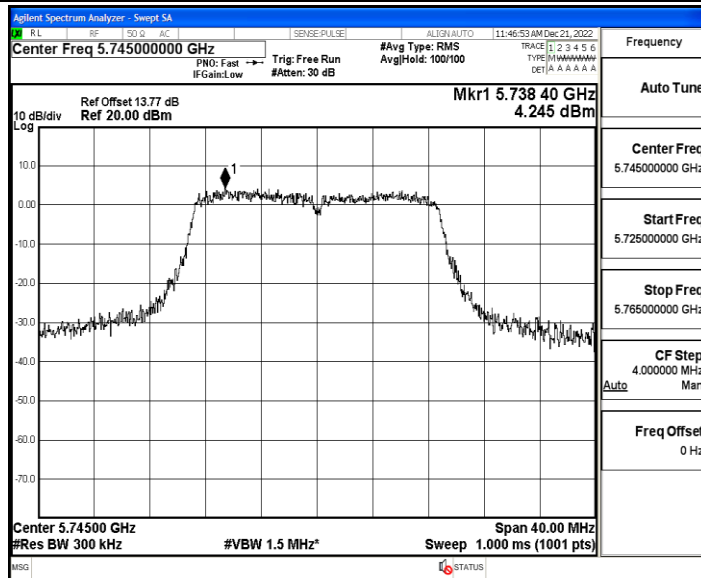
11N40MIMO_Ant1_5755



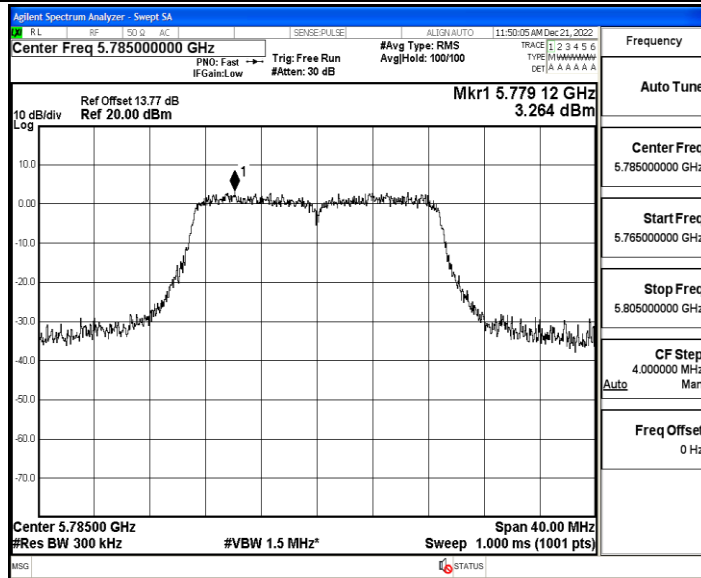
11N40MIMO_Ant1_5795



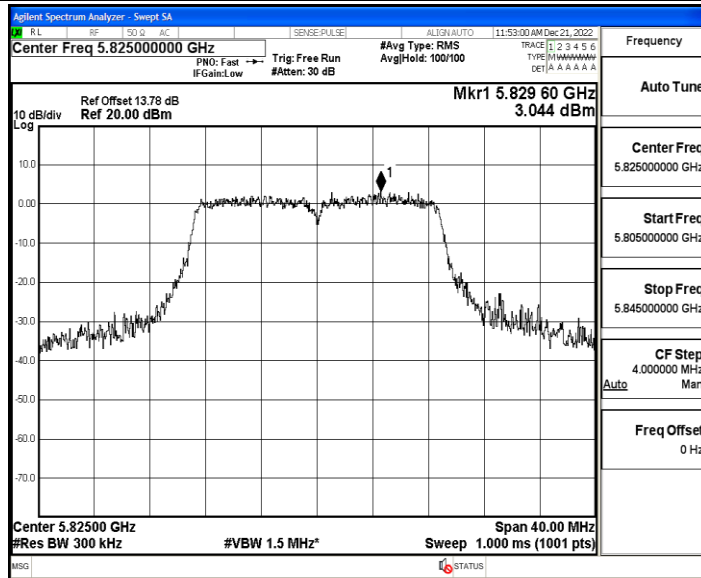
11AC20MIMO_Ant1_5745



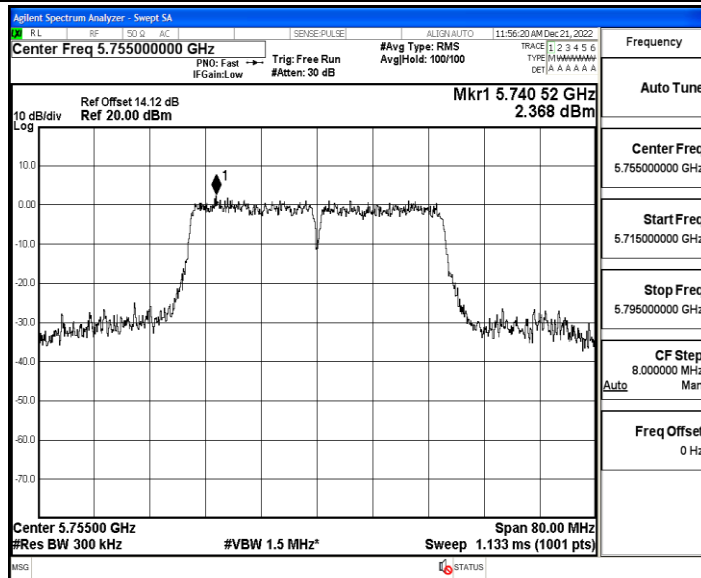
11AC20MIMO_Ant1_5785



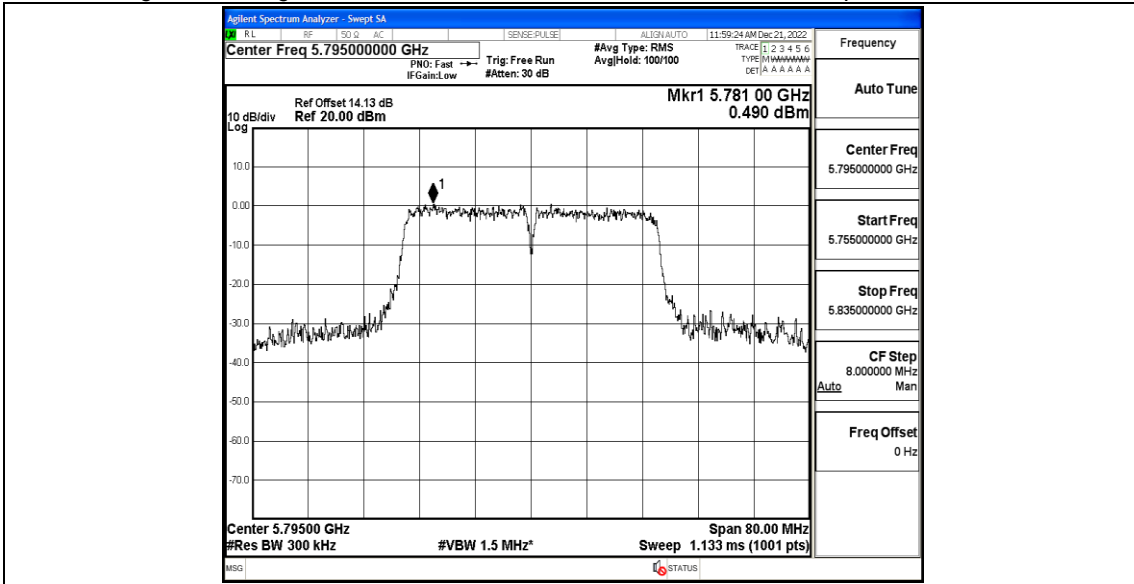
11AC20MIMO_Ant1_5825



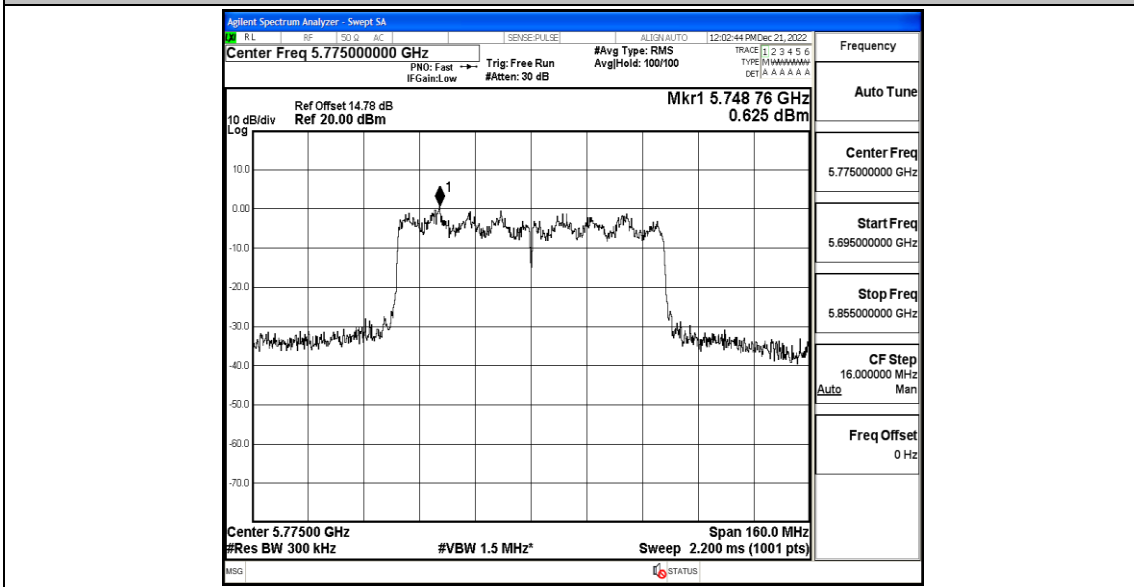
11AC40MIMO_Ant1_5755



11AC40MIMO_Ant1_5795



11AC80MIMO_Ant1_5775



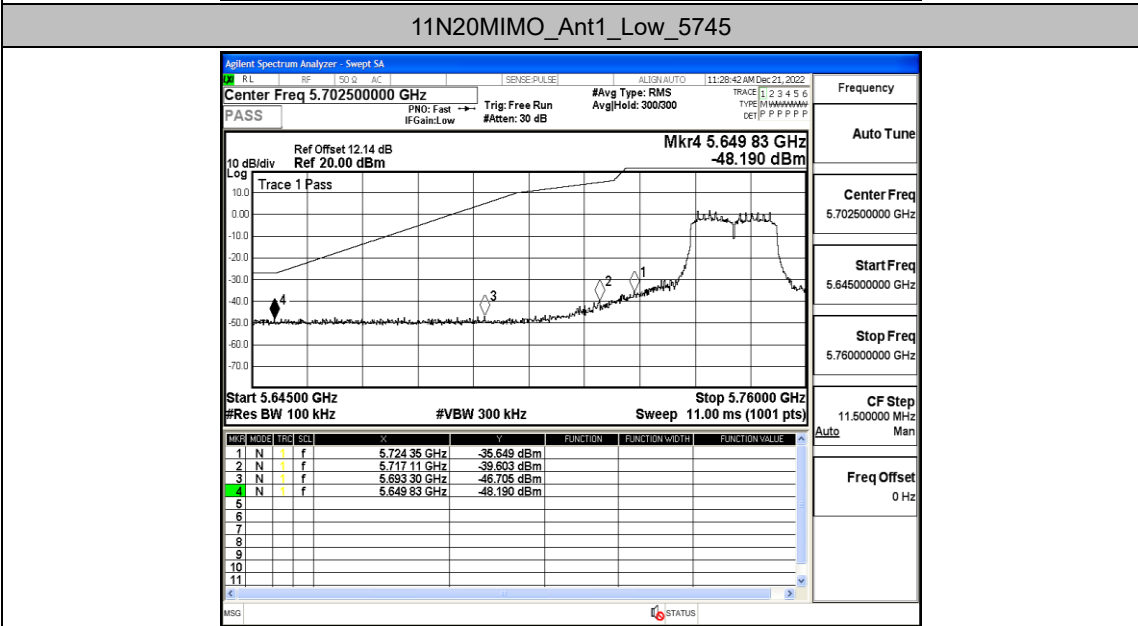
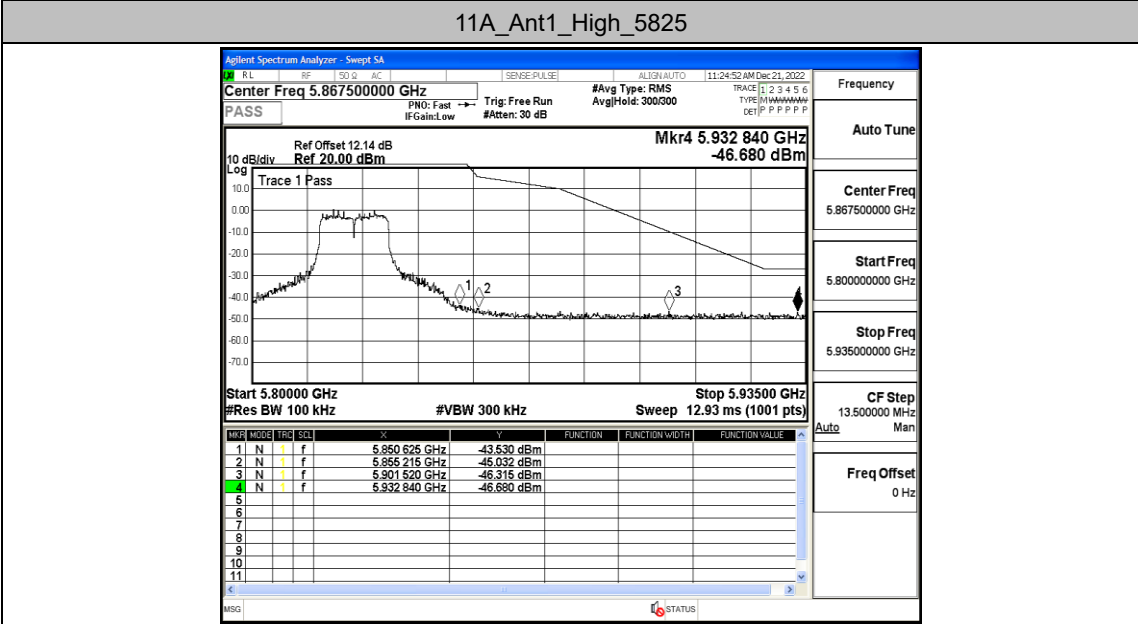
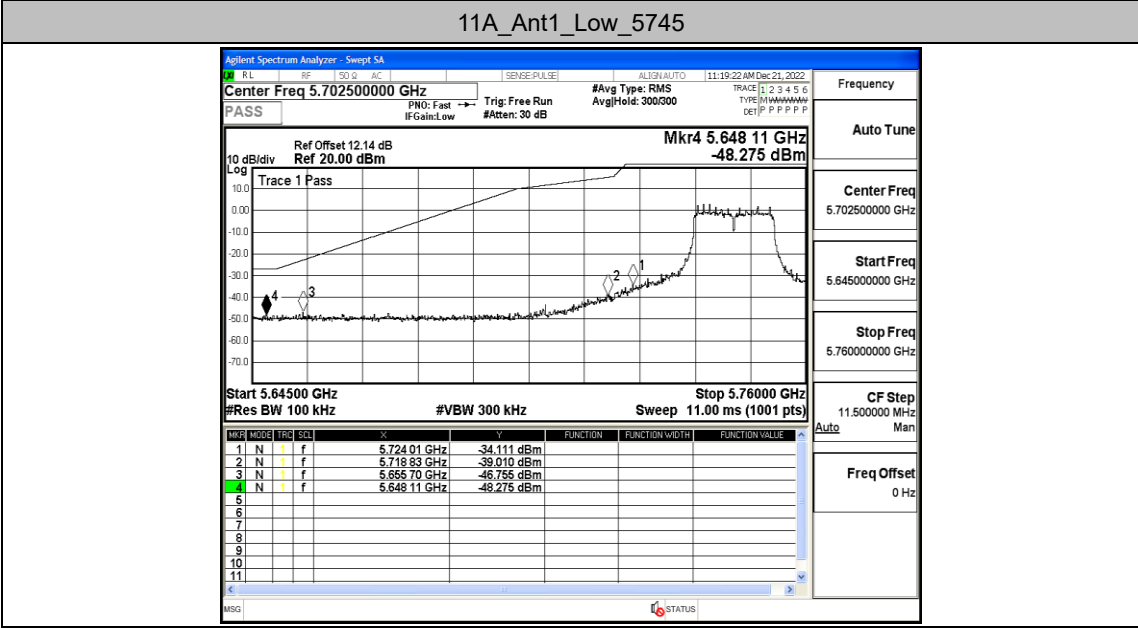
Appendix D: Band edge measurements

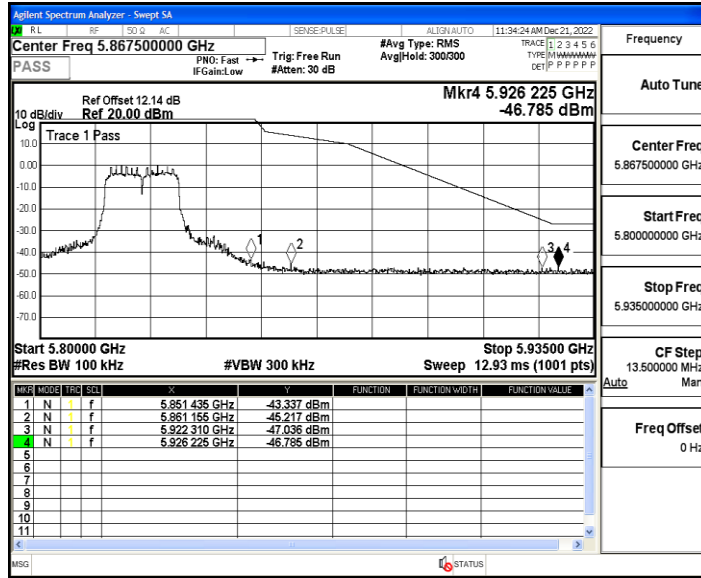
Test Result

TestMode	Antenna	ChName	Channel	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5650~5700	-46.76	≤-22.79	PASS
				5700~5720	-39.01	≤15.27	PASS
				5720~5725	-34.11	≤24.73	PASS
				5760~5650	-48.28	≤-27	PASS
		High	5825	5850~5855	-43.53	≤17.03	PASS
				5855~5875	-45.03	≤10.06	PASS
				5875~5925	-46.32	≤-7.38	PASS
11N20MI MO	Ant1	Low	5745	5650~5700	-46.71	≤5.04	PASS
				5700~5720	-39.6	≤14.79	PASS
				5720~5725	-35.65	≤25.52	PASS
				5760~5650	-48.19	≤-27	PASS
		High	5825	5850~5855	-43.34	≤18.87	PASS
				5855~5875	-45.22	≤11.72	PASS
				5875~5925	-47.04	≤8.01	PASS
11N40MI MO	Ant1	Low	5755	5650~5700	-39.5	≤8.16	PASS
				5700~5720	-32.3	≤15.24	PASS
				5720~5725	-31.49	≤21.28	PASS
				5780~5650	-48.25	≤-27	PASS
		High	5795	5850~5855	-45.61	≤21.30	PASS
				5855~5875	-46.3	≤12.63	PASS
				5875~5925	-46.62	≤-26.07	PASS
11AC20M IMO	Ant1	Low	5745	5650~5700	-46.88	≤-11.30	PASS
				5700~5720	-39.21	≤15.43	PASS
				5720~5725	-35.83	≤26.30	PASS
				5760~5650	-48.44	≤-27	PASS
		High	5825	5850~5855	-43.45	≤15.79	PASS
				5855~5875	-45.85	≤10.25	PASS
				5875~5925	-46.09	≤-5.78	PASS
11AC40M IMO	Ant1	Low	5755	5650~5700	-39.66	≤8.16	PASS
				5700~5720	-32.03	≤15.24	PASS
				5720~5725	-31.26	≤21.28	PASS
				5780~5650	-47.64	≤-27	PASS
		High	5795	5850~5855	-46	≤26.57	PASS
				5855~5875	-46.17	≤10.22	PASS
				5875~5925	-46.7	≤-23.63	PASS
				5925~5935	-47.44	≤-27	PASS

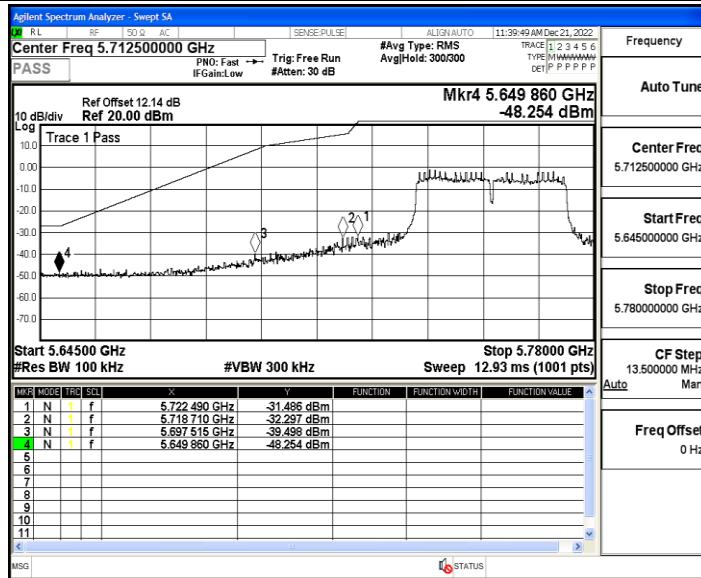
11AC80M IMO	Ant1	Low	5775	5650~5700	-31.37	≤ 0.73	PASS
				5700~5720	-33.58	≤ 15.26	PASS
				5720~5725	-35.98	≤ 19.18	PASS
				5800~5650	-43.96	≤ -27	PASS
	High	5775	5850~5855	-37.72	≤ 25.50	PASS	
			5855~5875	-37.21	≤ 14.22	PASS	
			5875~5925	-41.14	≤ -26.41	PASS	
			5925~5935	-46.58	≤ -27	PASS	

Test Graphs

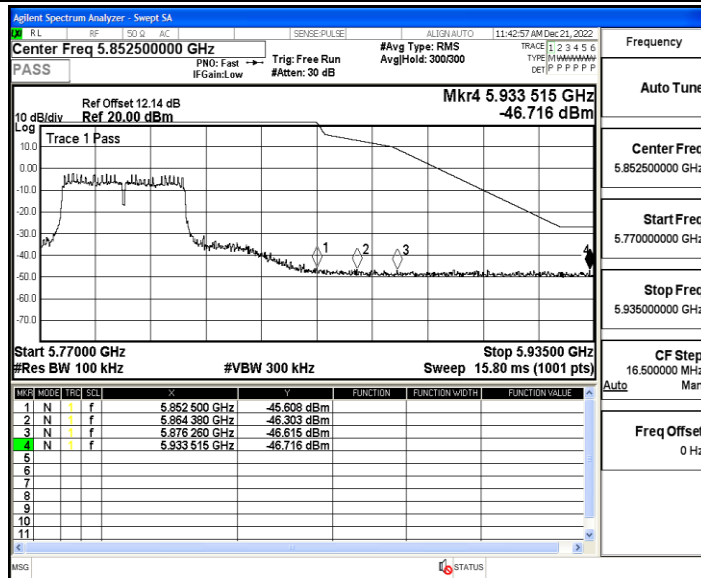




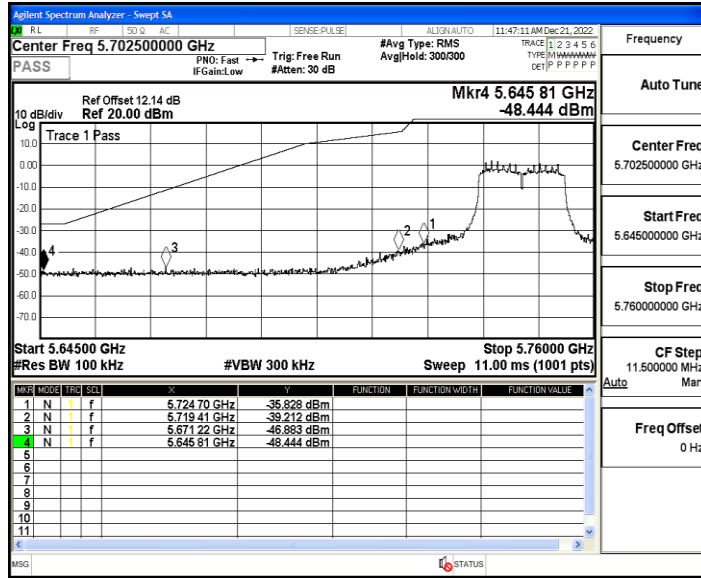
11N40MIMO_Ant1_Low_5755



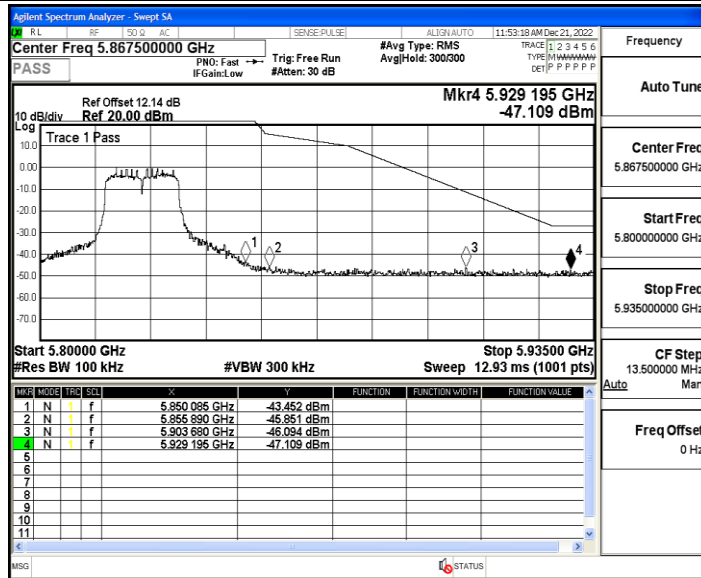
11N40MIMO_Ant1_High_5795



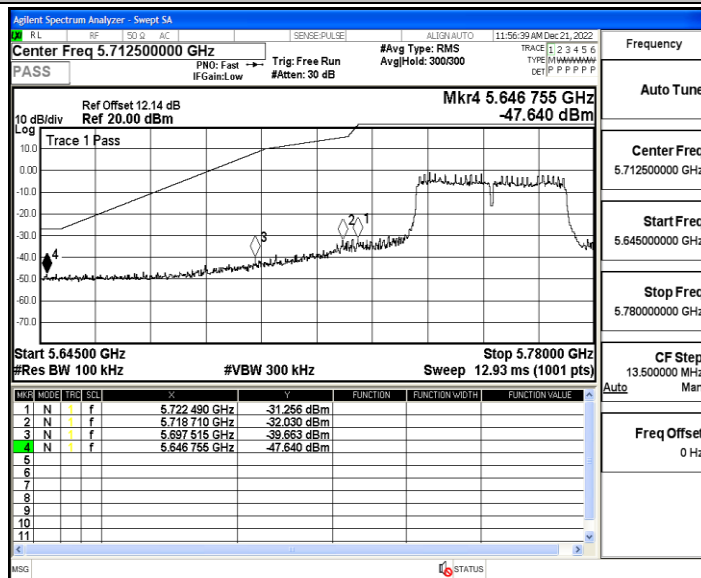
11AC20MIMO_Ant1_Low_5745



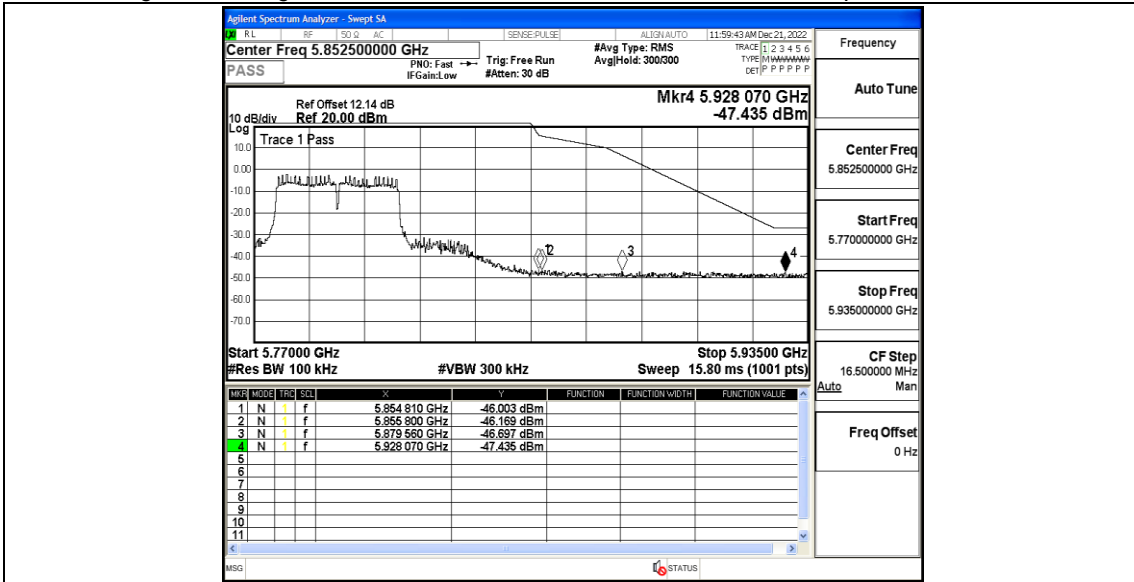
11AC20MIMO_Ant1_High_5825



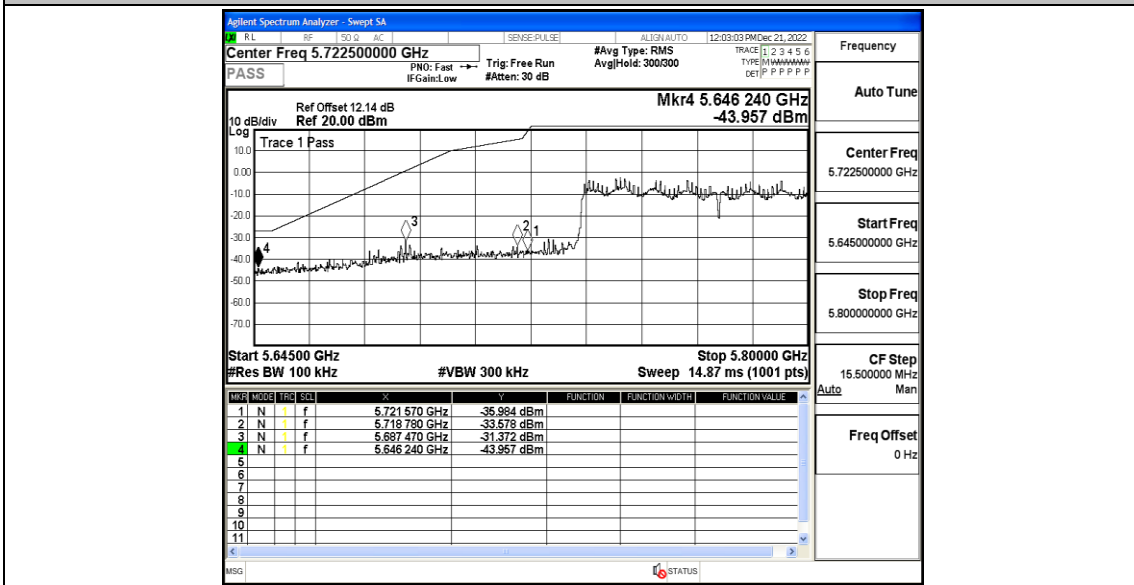
11AC40MIMO_Ant1_Low_5755



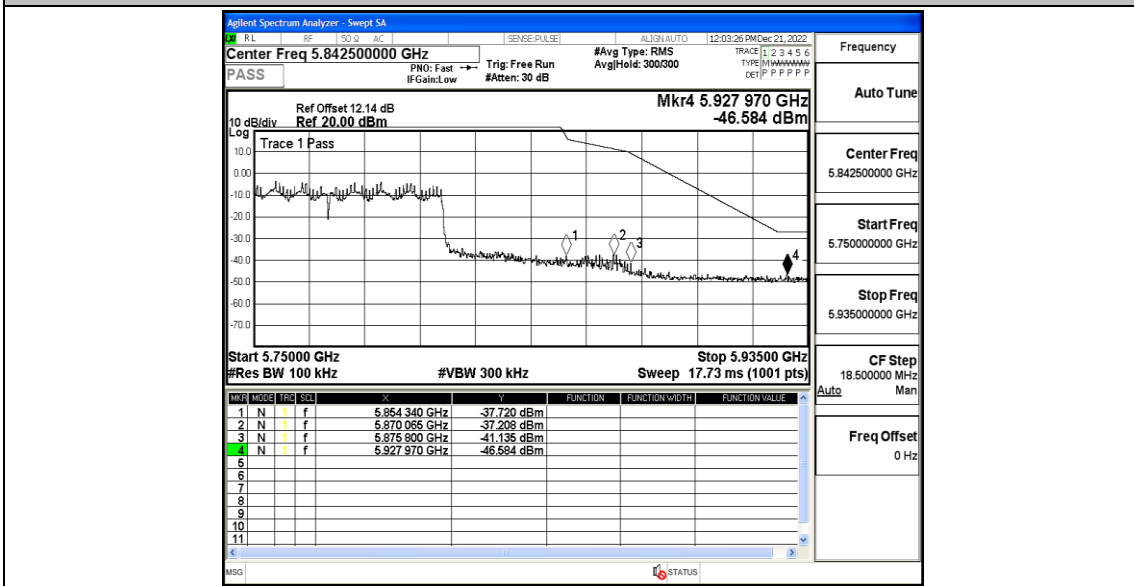
11AC40MIMO_Ant1_High_5795



11AC80MIMO_Ant1_Low_5775



11AC80MIMO_Ant1_High_5775



Appendix E: Frequency Stability

Test Result

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5745	20	5.5	5745.067768	5745 – 5825	PASS
5745	20	4.5	5745.033563	5745 – 5825	PASS
5745	50	5	5745.051036	5745 – 5825	PASS
5745	40	5	5744.928834	5745 – 5825	PASS
5745	30	5	5745.092677	5745 – 5825	PASS
5745	20	5	5745.074149	5745 – 5825	PASS
5745	10	5	5745.028404	5745 – 5825	PASS
5745	0	5	5744.901829	5745 – 5825	PASS
5745	-10	5	5744.947200	5745 – 5825	PASS
5745	-20	5	5745.073283	5745 – 5825	PASS
5745	-30	5	5744.944983	5745 – 5825	PASS

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5785	20	5.5	5784.952365	5745 – 5825	PASS
5785	20	4.5	5785.047041	5745 – 5825	PASS
5785	50	5	5785.014585	5745 – 5825	PASS
5785	40	5	5784.962418	5745 – 5825	PASS
5785	30	5	5785.071596	5745 – 5825	PASS
5785	20	5	5785.029126	5745 – 5825	PASS
5785	10	5	5784.949869	5745 – 5825	PASS
5785	0	5	5785.005946	5745 – 5825	PASS
5785	-10	5	5784.909097	5745 – 5825	PASS
5785	-20	5	5785.057420	5745 – 5825	PASS
5785	-30	5	5785.052374	5745 – 5825	PASS

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5825	20	5.5	5824.910524	5745 – 5825	PASS
5825	20	4.5	5825.020665	5745 – 5825	PASS
5825	50	5	5824.997883	5745 – 5825	PASS
5825	40	5	5825.060376	5745 – 5825	PASS
5825	30	5	5824.948807	5745 – 5825	PASS
5825	20	5	5824.999033	5745 – 5825	PASS
5825	10	5	5824.961255	5745 – 5825	PASS
5825	0	5	5825.051919	5745 – 5825	PASS
5825	-10	5	5824.960896	5745 – 5825	PASS
5825	-20	5	5824.998903	5745 – 5825	PASS
5825	-30	5	5825.046382	5745 – 5825	PASS

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5755	20	5.5	5754.966248	5745 – 5825	PASS
5755	20	4.5	5755.050708	5745 – 5825	PASS
5755	50	5	5754.990806	5745 – 5825	PASS
5755	40	5	5754.929706	5745 – 5825	PASS
5755	30	5	5755.093640	5745 – 5825	PASS
5755	20	5	5755.060088	5745 – 5825	PASS
5755	10	5	5755.053162	5745 – 5825	PASS
5755	0	5	5755.073875	5745 – 5825	PASS
5755	-10	5	5755.094054	5745 – 5825	PASS
5755	-20	5	5754.938256	5745 – 5825	PASS
5755	-30	5	5754.932769	5745 – 5825	PASS

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5795	20	5.5	5794.911405	5745 – 5825	PASS
5795	20	4.5	5794.950189	5745 – 5825	PASS
5795	50	5	5795.029297	5745 – 5825	PASS
5795	40	5	5794.914282	5745 – 5825	PASS
5795	30	5	5795.032558	5745 – 5825	PASS
5795	20	5	5795.010102	5745 – 5825	PASS
5795	10	5	5794.929882	5745 – 5825	PASS
5795	0	5	5795.075455	5745 – 5825	PASS
5795	-10	5	5794.922322	5745 – 5825	PASS
5795	-20	5	5794.914138	5745 – 5825	PASS
5795	-30	5	5794.911386	5745 – 5825	PASS

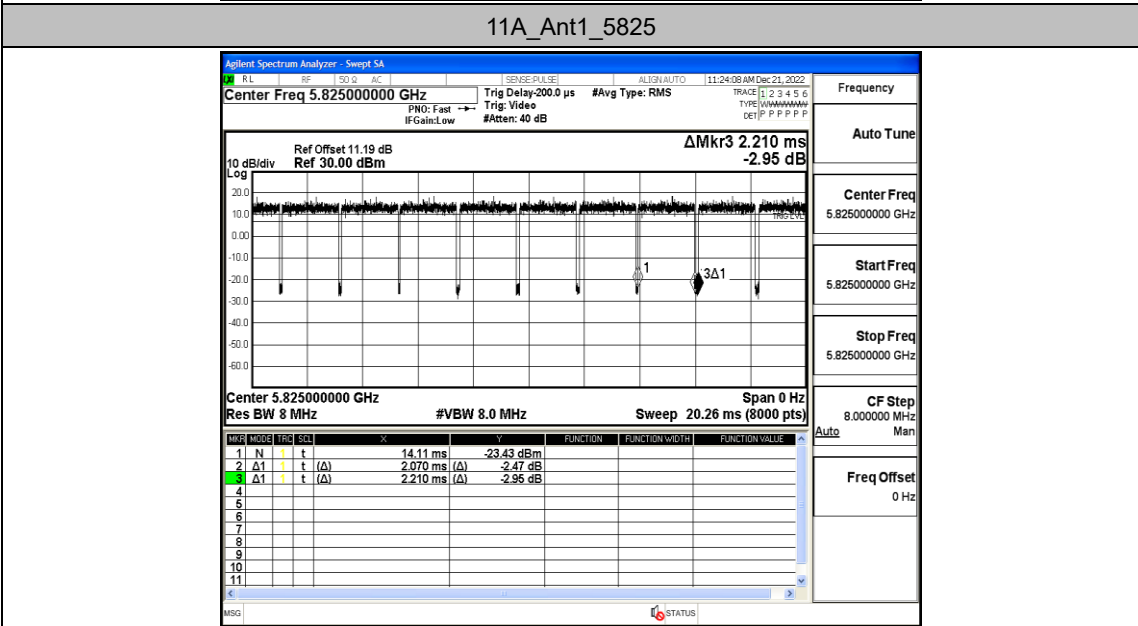
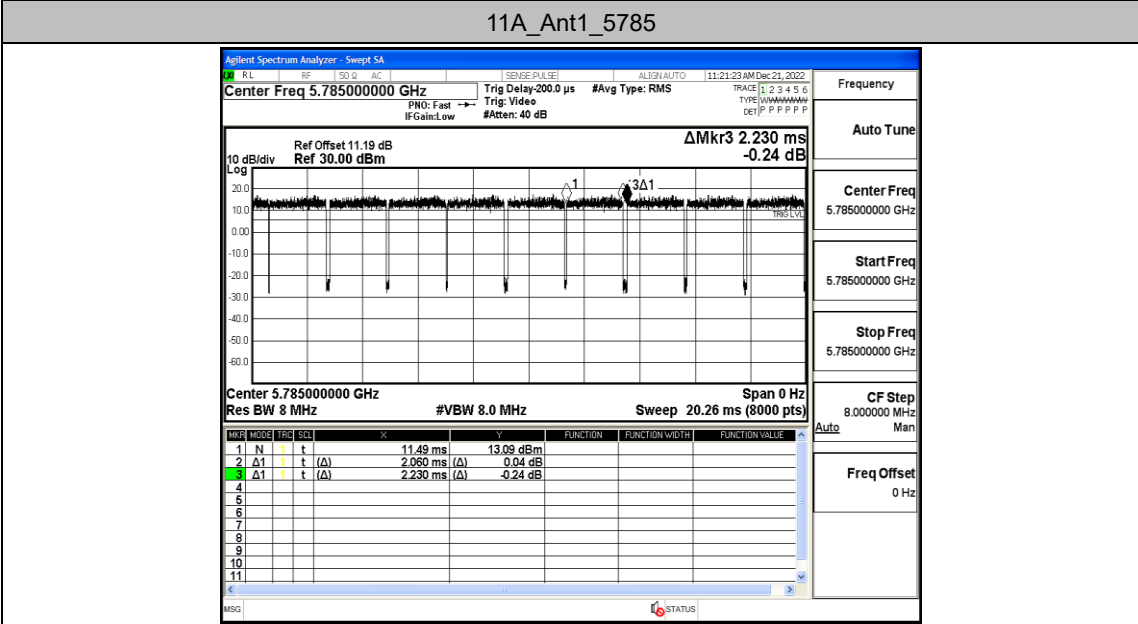
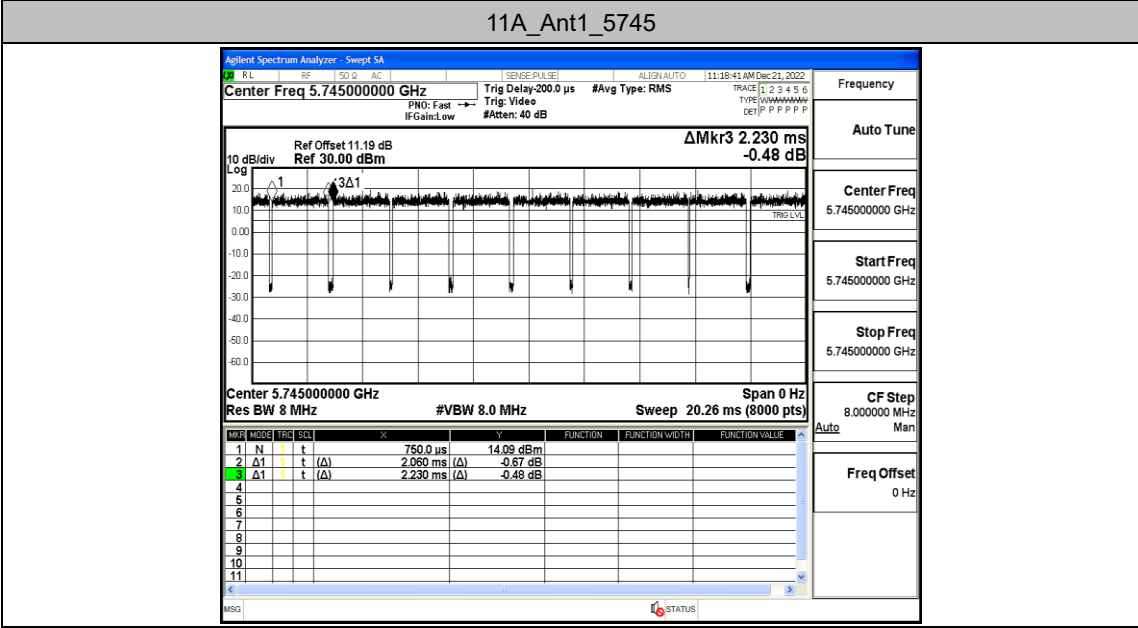
Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5775	20	5.5	5775.053553	5745 – 5825	PASS
5775	20	4.5	5775.054819	5745 – 5825	PASS
5775	50	5	5775.013192	5745 – 5825	PASS
5775	40	5	5775.053936	5745 – 5825	PASS
5775	30	5	5775.041553	5745 – 5825	PASS
5775	20	5	5774.908654	5745 – 5825	PASS
5775	10	5	5774.996524	5745 – 5825	PASS
5775	0	5	5774.923491	5745 – 5825	PASS
5775	-10	5	5775.001974	5745 – 5825	PASS
5775	-20	5	5775.051850	5745 – 5825	PASS
5775	-30	5	5774.962904	5745 – 5825	PASS

Appendix F: Duty Cycle

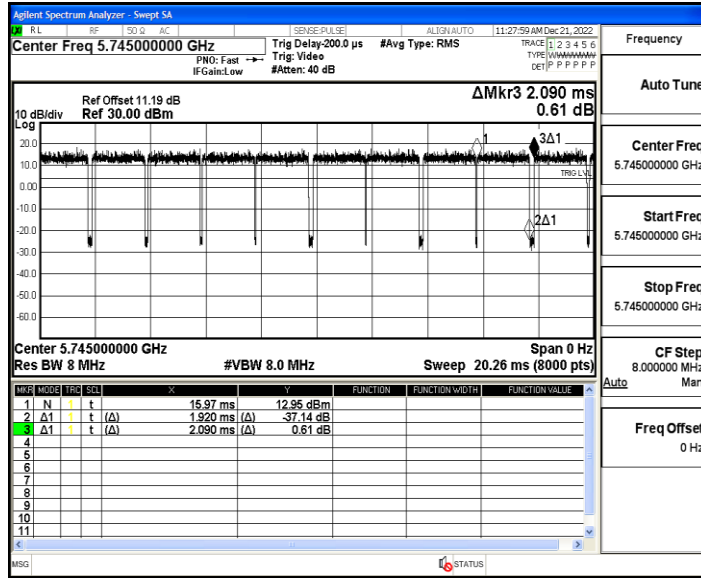
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T [kHz]
11A	Ant1	5745	2.06	2.23	92.38	0.49
		5785	2.06	2.23	92.38	0.49
		5825	2.07	2.21	93.67	0.48
11N20MIMO	Ant1	5745	1.92	2.09	91.87	0.52
		5785	1.92	2.02	95.05	0.52
		5825	1.92	2.10	91.43	0.52
11N40MIMO	Ant1	5755	0.94	1.11	84.68	1.06
		5795	0.95	1.12	84.82	1.05
11AC20MIMO	Ant1	5745	1.94	2.11	91.94	0.52
		5785	1.94	2.11	91.94	0.52
		5825	1.93	2.10	91.90	0.52
11AC40MIMO	Ant1	5755	0.96	1.13	84.96	1.04
		5795	0.95	1.12	84.82	1.05
11AC80MIMO	Ant1	5775	0.46	0.63	73.02	2.17

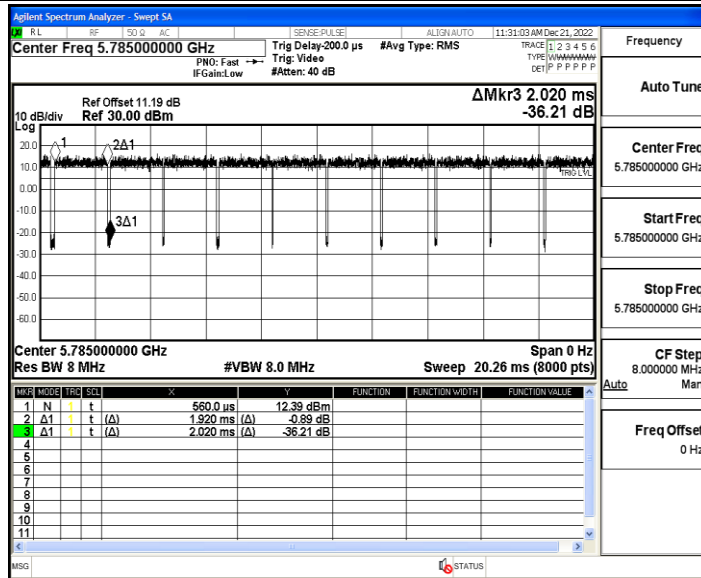
Test Graphs



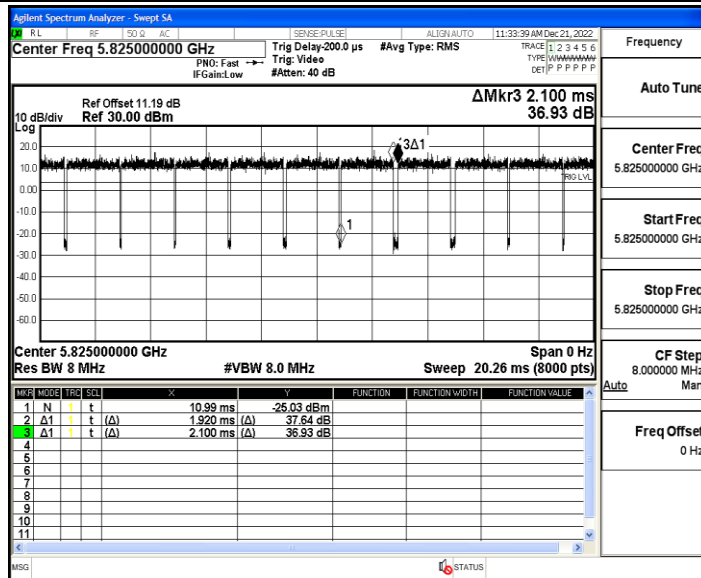
11N20MIMO_Ant1_5745



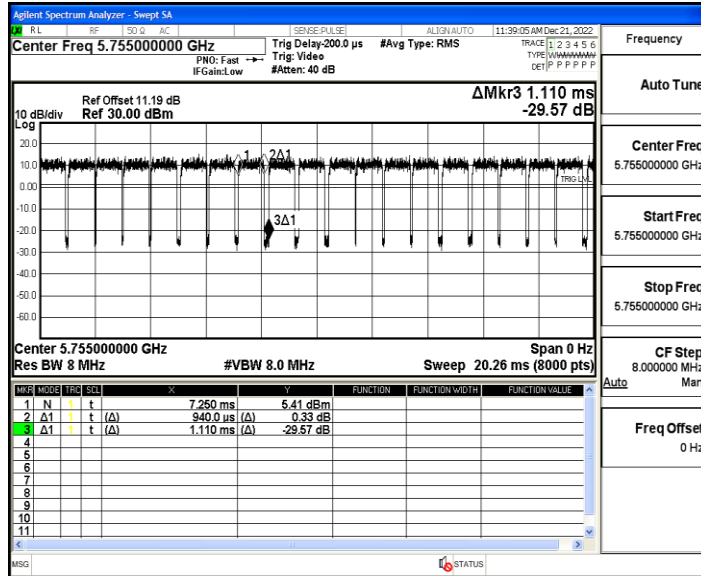
11N20MIMO_Ant1_5785



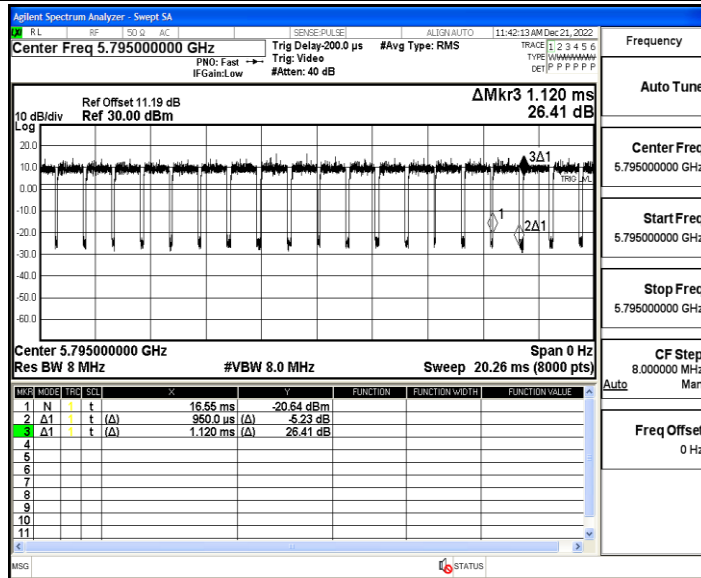
11N20MIMO_Ant1_5825



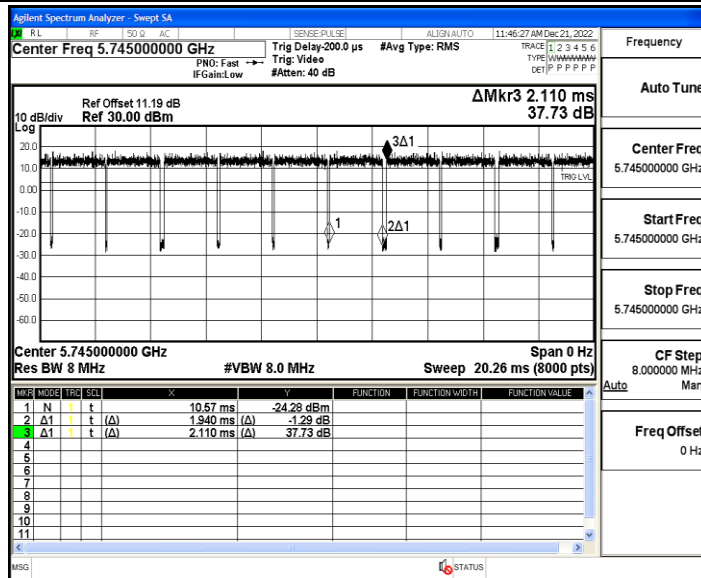
11N40MIMO_Ant1_5755



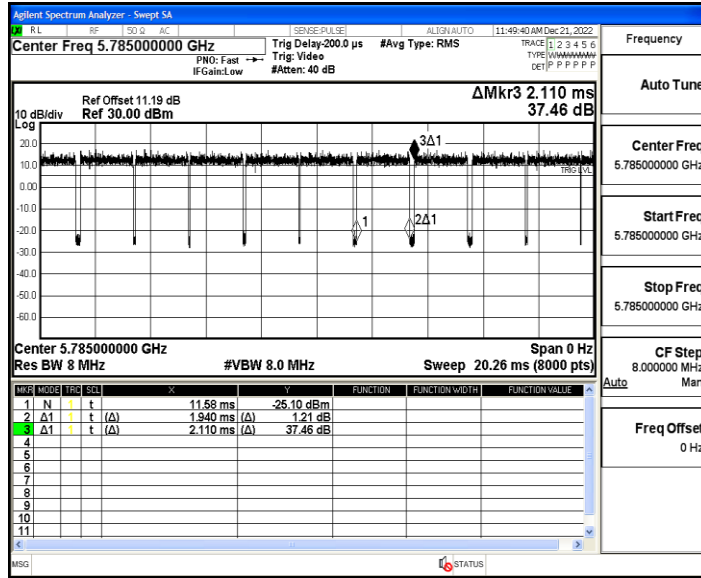
11N40MIMO_Ant1_5795



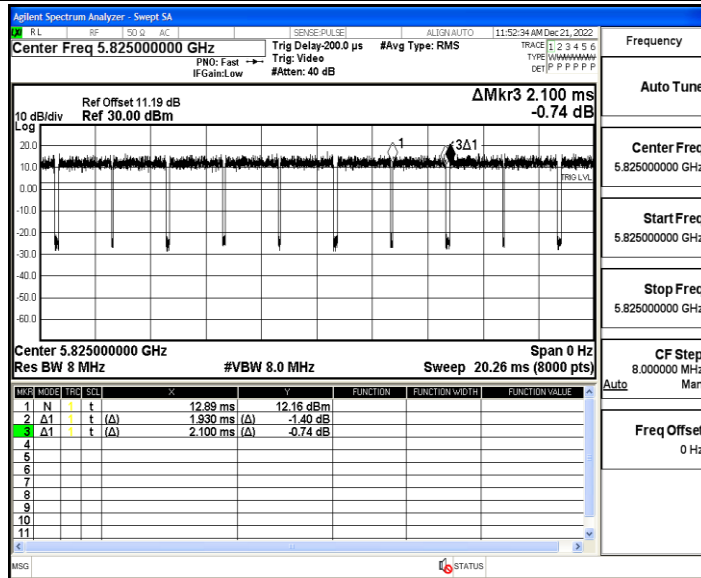
11AC20MIMO_Ant1_5745



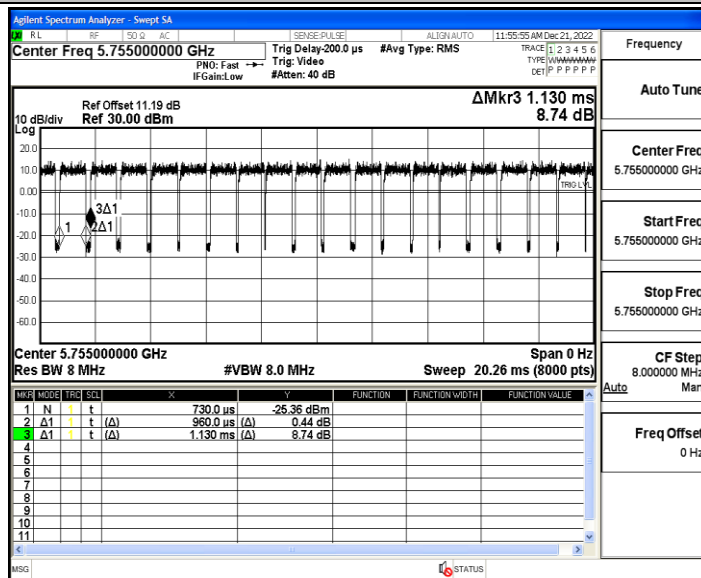
11AC20MIMO_Ant1_5785



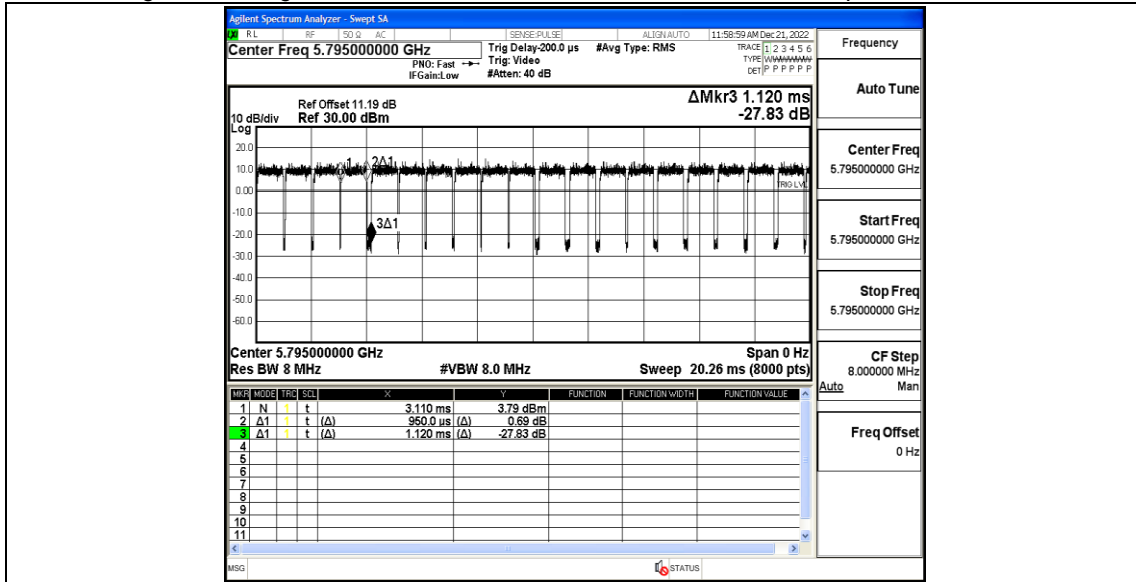
11AC20MIMO_Ant1_5825



11AC40MIMO_Ant1_5755



11AC40MIMO_Ant1_5795



11AC80MIMO_Ant_1_5775

