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

Product Name: projector

Trade Mark: umiio

Test Model: A007

FCC ID: 2BAHIA007

Environmental Conditions

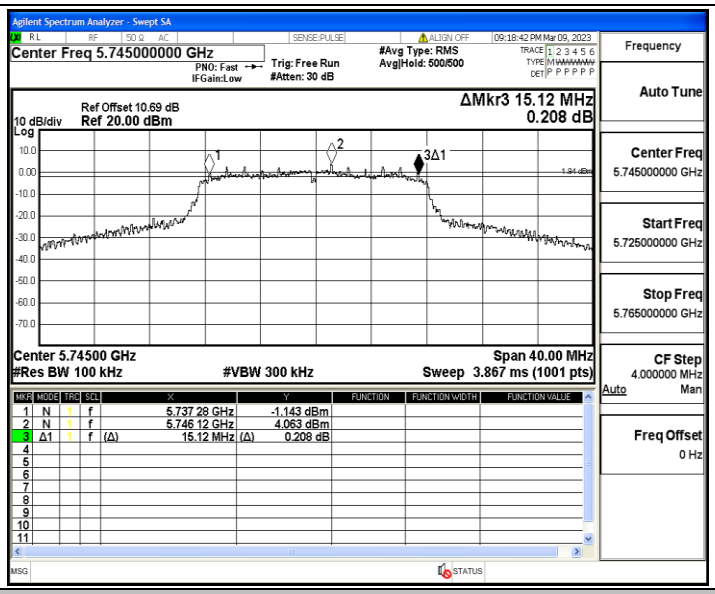
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engneer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: Min emission bandwidth

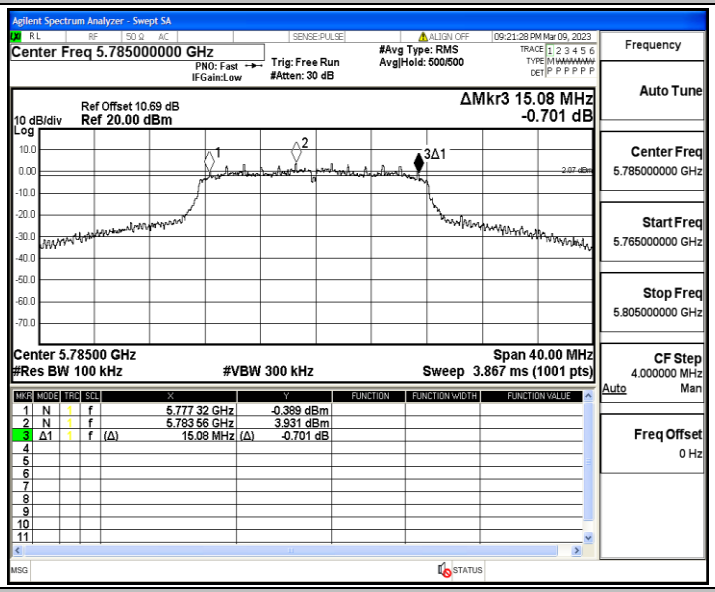
Test Result

TestMode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	15.120	5737.280	5752.400	0.5	PASS
		5785	15.080	5777.320	5792.400	0.5	PASS
		5825	15.120	5817.280	5832.400	0.5	PASS
11N20MIMO	Ant1	5745	15.120	5737.280	5752.400	0.5	PASS
		5785	15.120	5777.280	5792.400	0.5	PASS
		5825	15.080	5817.280	5832.360	0.5	PASS
11N40MIMO	Ant1	5755	35.040	5737.320	5772.360	0.5	PASS
		5795	35.120	5777.240	5812.360	0.5	PASS

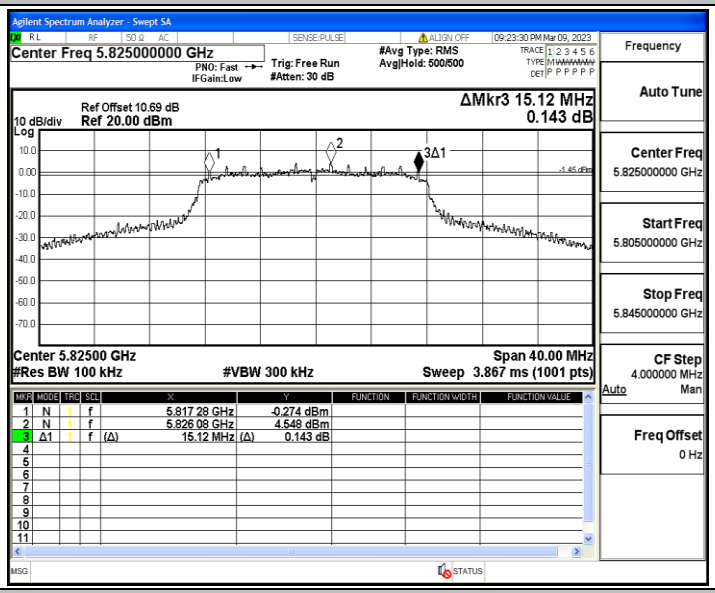
Test Graphs



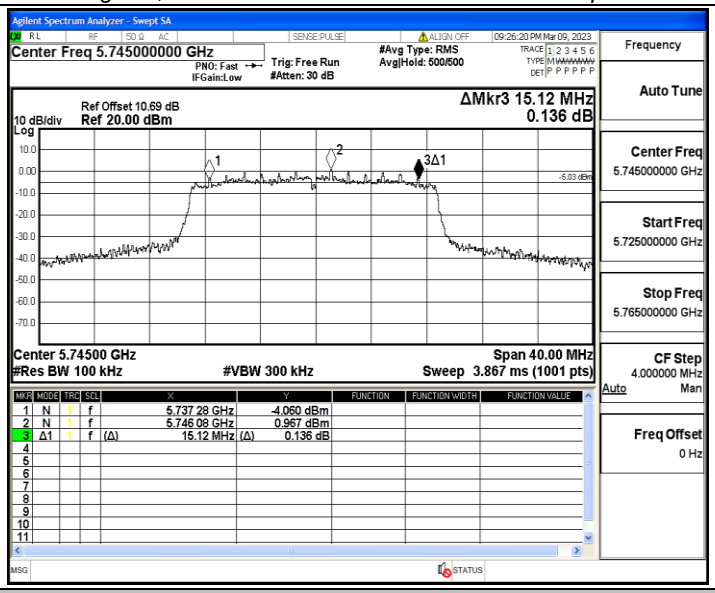
11A_Ant1_5745



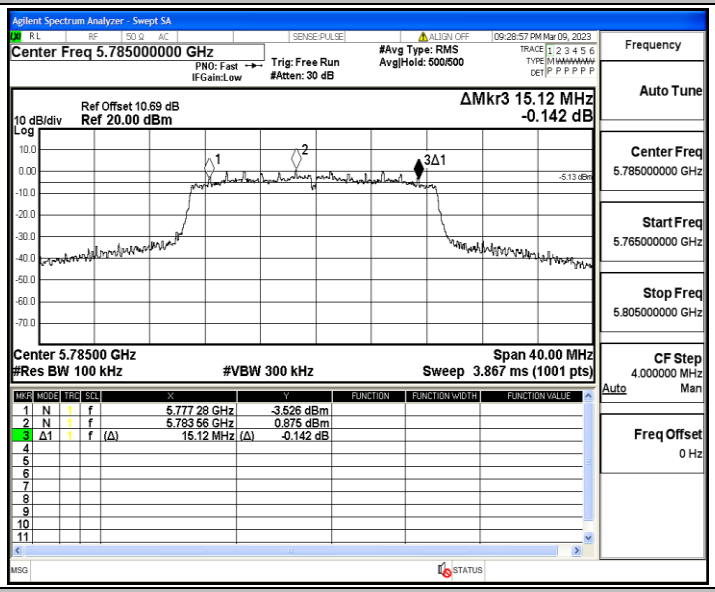
11A_Ant1_5785



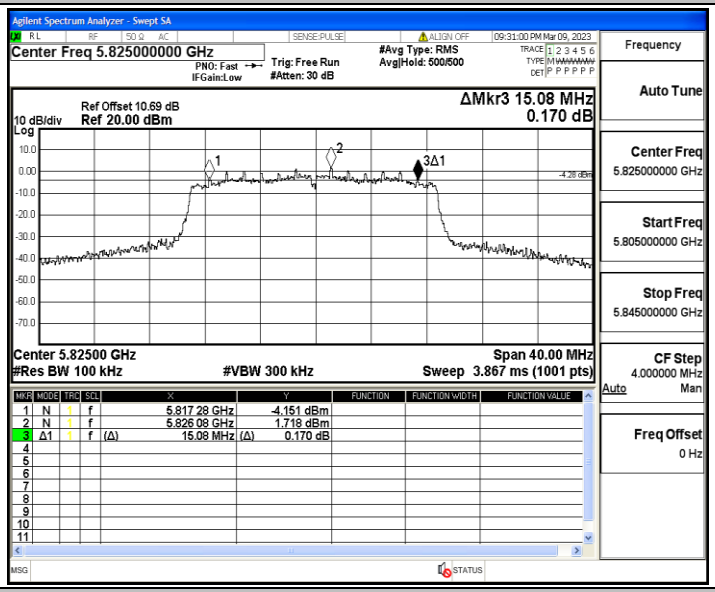
11A_Ant1_5825



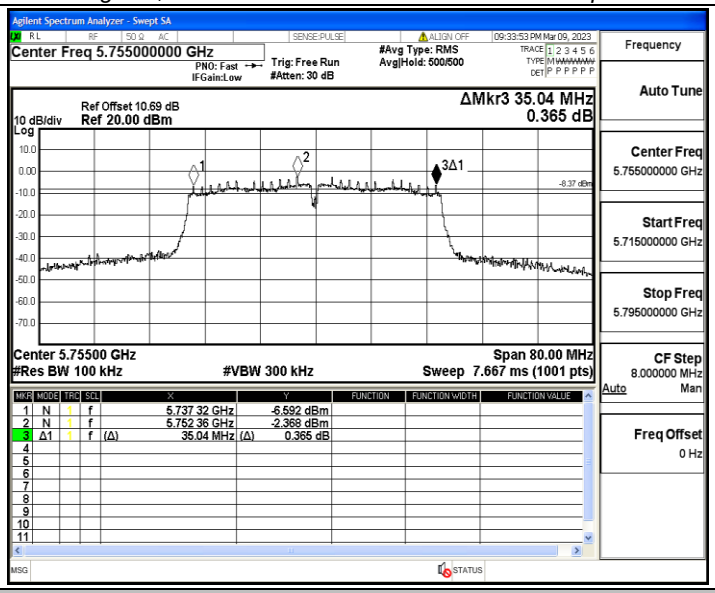
11N20MIMO_Ant1_5745



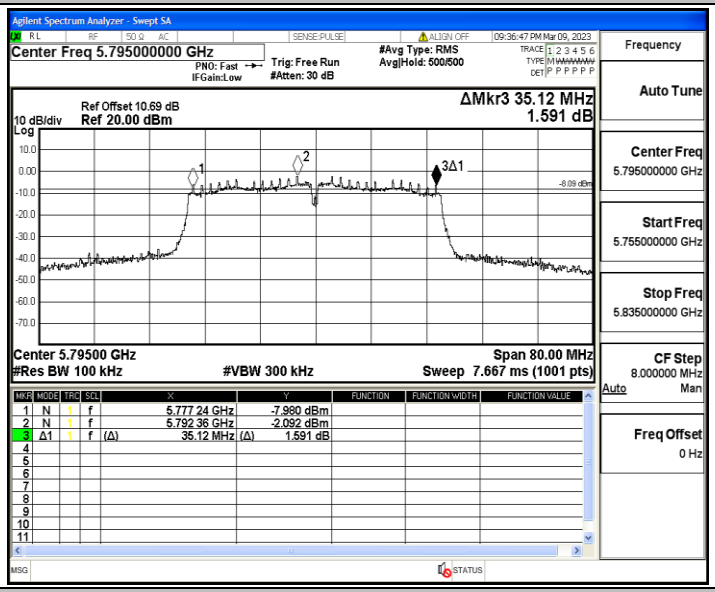
11N20MIMO_Ant1_5785



11N20MIMO_Ant1_5825



11N40MIMO_Ant1_5755



11N40MIMO_Ant1_5795

Appendix B: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5745	13.79	≤30.00	PASS
		5785	14.17	≤30.00	PASS
		5825	14.49	≤30.00	PASS
11N20MIMO	Ant1	5745	10.92	≤30.00	PASS
		5785	11.25	≤30.00	PASS
		5825	11.55	≤30.00	PASS
11N40MIMO	Ant1	5755	10.40	≤30.00	PASS
		5795	10.61	≤30.00	PASS

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

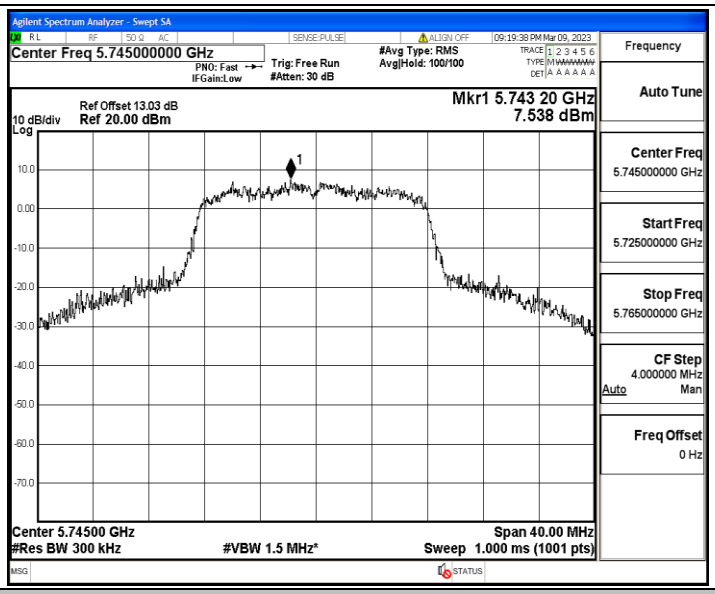
Appendix C: Maximum power spectral density

Test Result

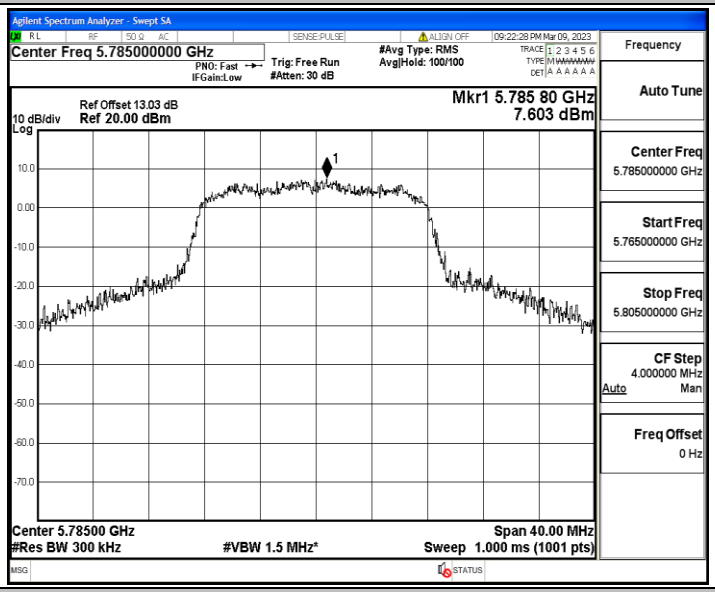
TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5745	7.54	≤30.00	PASS
		5785	7.6	≤30.00	PASS
		5825	8.63	≤30.00	PASS
11N20MIMO	Ant1	5745	4.23	≤30.00	PASS
		5785	5.27	≤30.00	PASS
		5825	5.46	≤30.00	PASS
11N40MIMO	Ant1	5755	0.48	≤30.00	PASS
		5795	1.07	≤30.00	PASS

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.

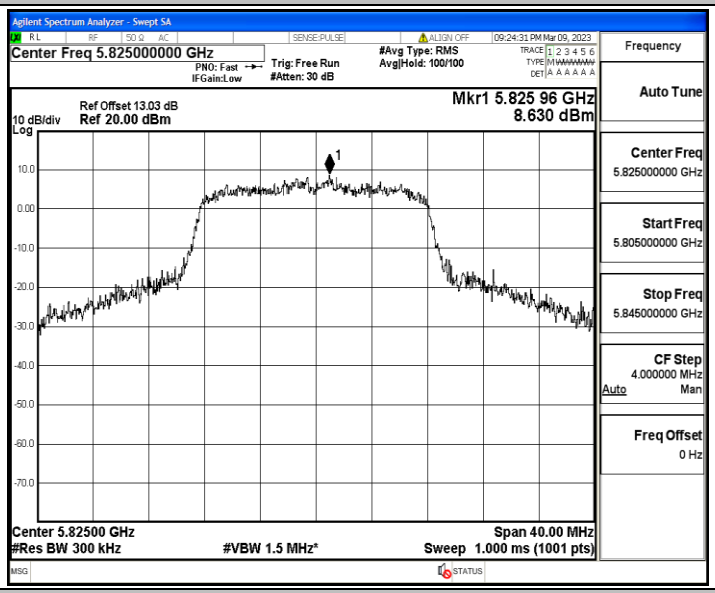
Test Graphs



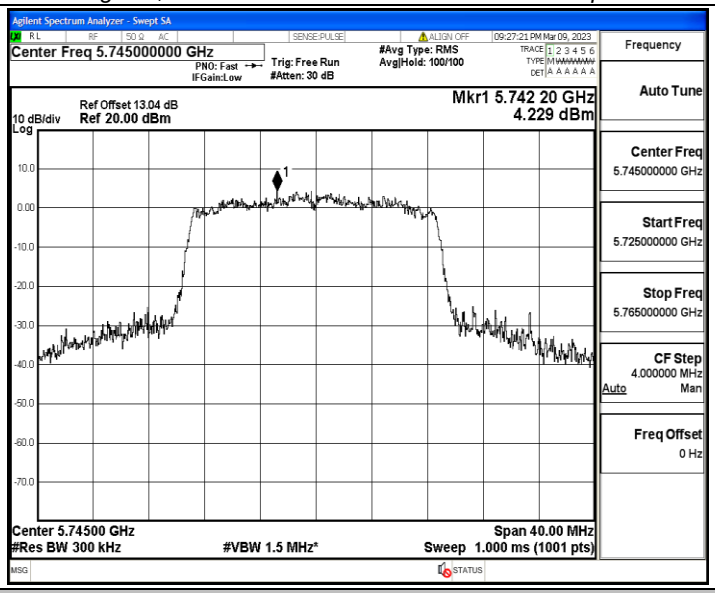
11A_Ant1_5745



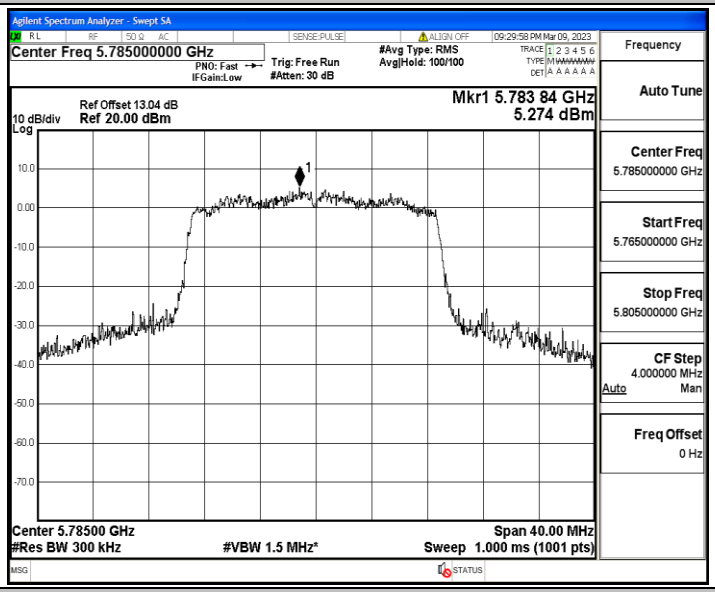
11A_Ant1_5785



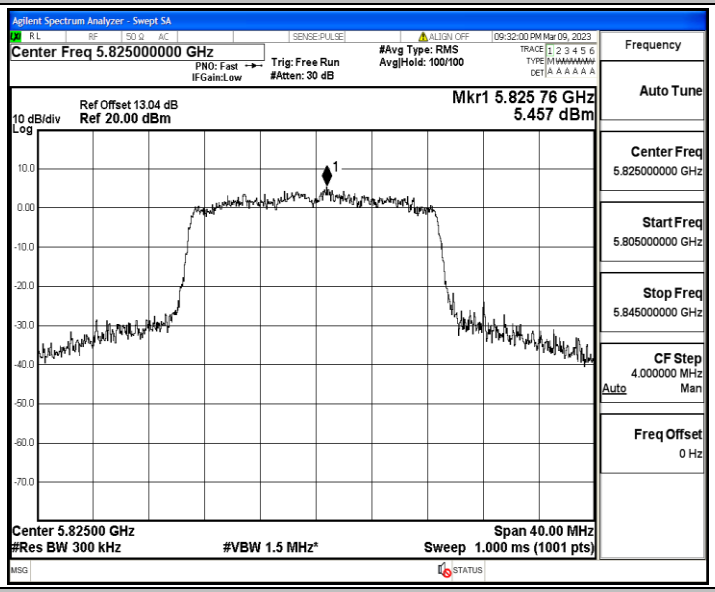
11A_Ant1_5825



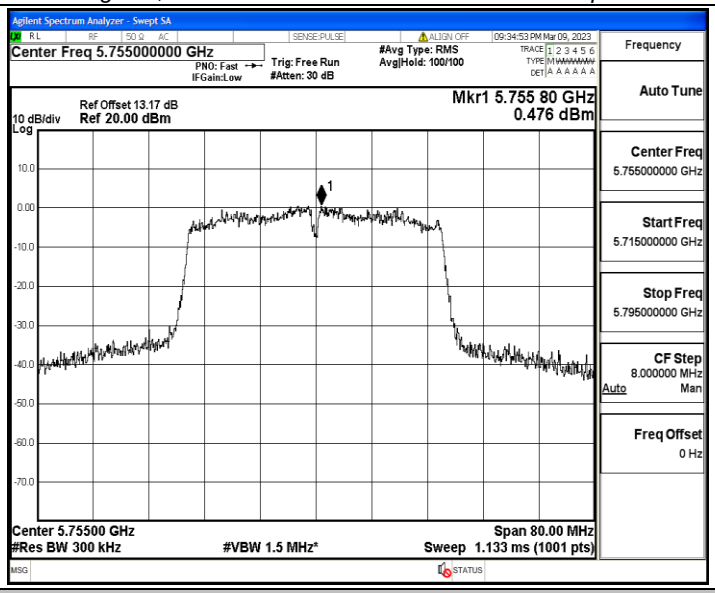
11N20MIMO_Ant1_5745



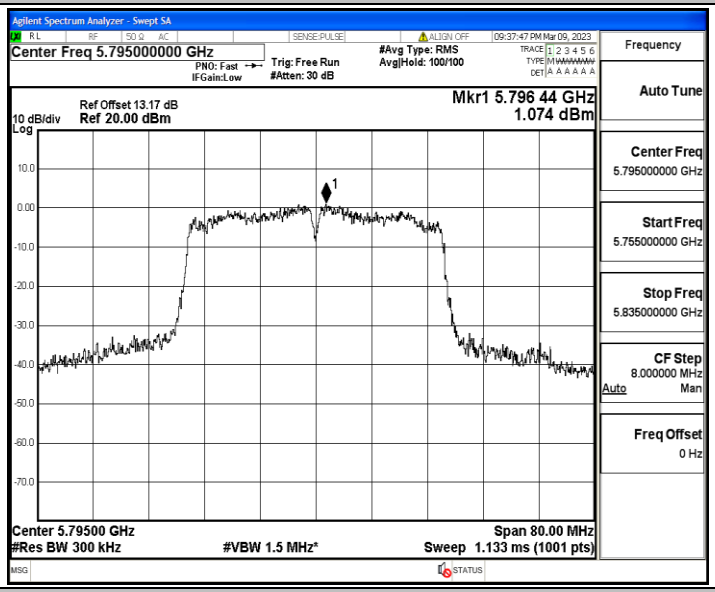
11N20MIMO_Ant1_5785



11N20MIMO_Ant1_5825



11N40MIMO_Ant1_5755



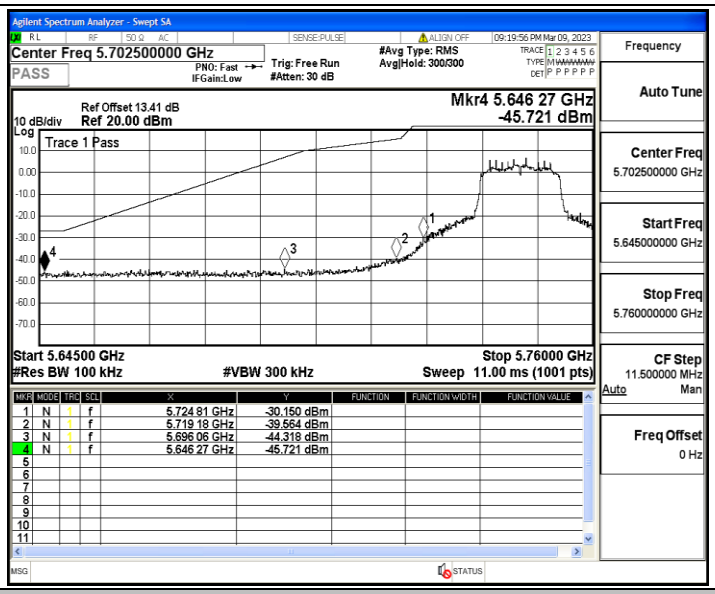
11N40MIMO_Ant1_5795

Appendix D: Band edge measurements

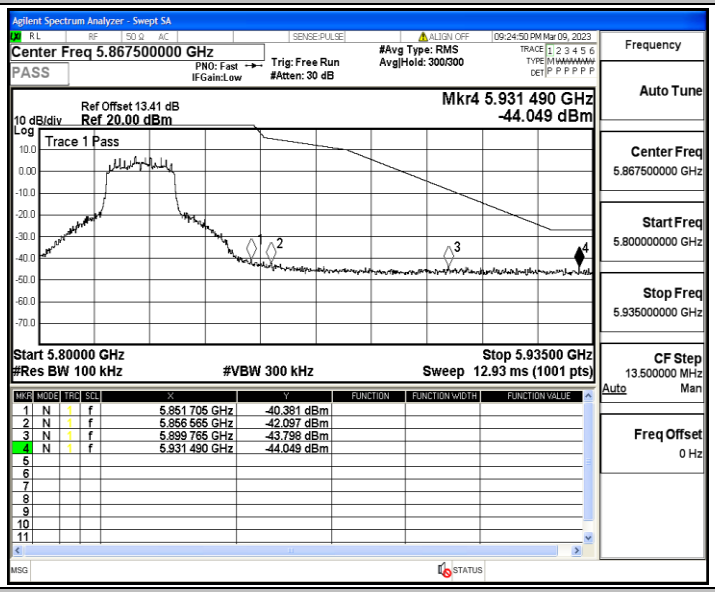
Test Result

TestMode	Antenna	ChName	Channel	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5650~5700	-44.32	≤7.08	PASS
				5700~5720	-39.56	≤15.37	PASS
				5720~5725	-30.15	≤26.57	PASS
				5760~5650	-45.72	≤-27	PASS
		High	5825	5850~5855	-40.38	≤19.49	PASS
				5855~5875	-42.1	≤10.44	PASS
				5875~5925	-43.8	≤-8.67	PASS
				5925~5935	-44.05	≤-27	PASS
11N20MIMO	Ant1	Low	5745	5650~5700	-45.03	≤5.21	PASS
				5700~5720	-43.43	≤15.18	PASS
				5720~5725	-39.35	≤23.94	PASS
				5760~5650	-46.04	≤-27	PASS
		High	5825	5850~5855	-43.58	≤17.95	PASS
				5855~5875	-43.87	≤11.84	PASS
				5875~5925	-44.65	≤-23.66	PASS
				5925~5935	-44.62	≤-27	PASS
11N40MIMO	Ant1	Low	5755	5650~5700	-44.65	≤2.17	PASS
				5700~5720	-39.5	≤15.54	PASS
				5720~5725	-35.33	≤23.74	PASS
				5780~5650	-45.18	≤-27	PASS
		High	5795	5850~5855	-44.53	≤22.80	PASS
				5855~5875	-44.74	≤12.16	PASS
				5875~5925	-45.06	≤-22.40	PASS
				5925~5935	-46.01	≤-27	PASS

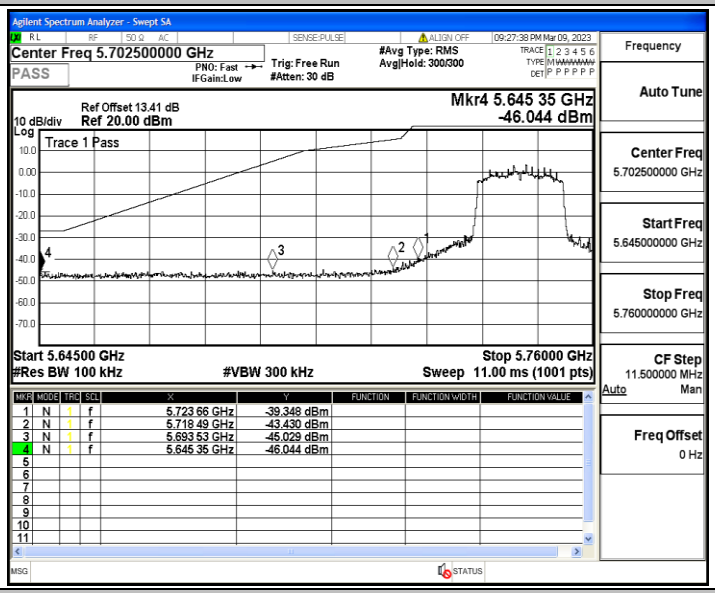
Test Graphs



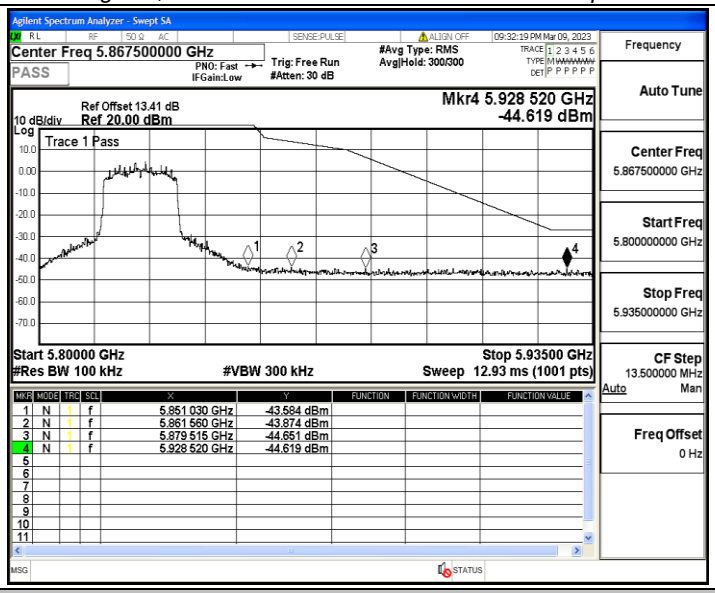
11A_Ant1_Low_5745



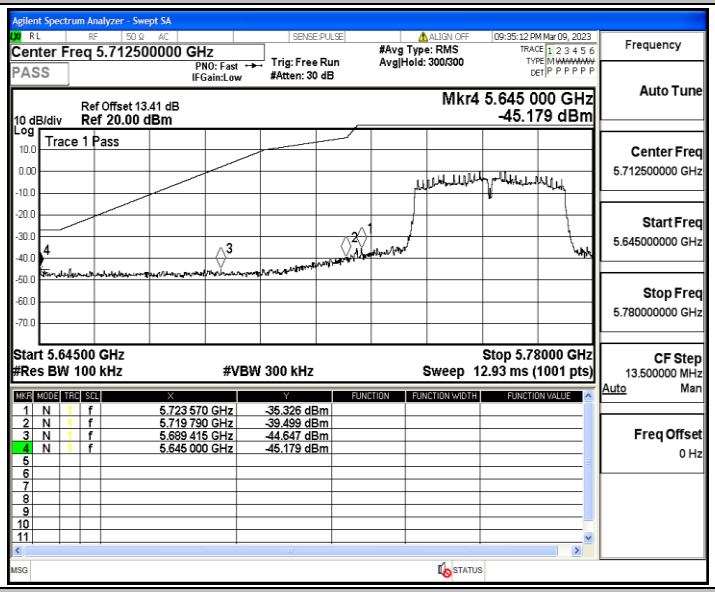
11A_Ant1_High_5825



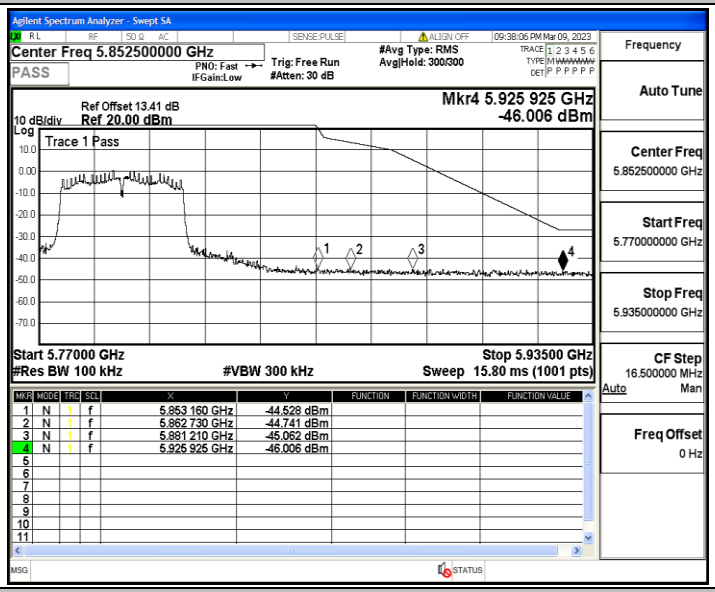
11N20MIMO_Ant1_Low_5745



11N20MIMO_Ant1_High_5825



11N40MIMO_Ant1_Low_5755



11N40MIMO_Ant1_High_5795

Appendix E: Frequency Stability

Test Result

Frequency (MHz)	Enviroment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5745	20	132	5745.066244	5745 – 5825	PASS
5745	20	108	5745.069957	5745 – 5825	PASS
5745	50	120	5745.030130	5745 – 5825	PASS
5745	40	120	5745.086208	5745 – 5825	PASS
5745	30	120	5745.002587	5745 – 5825	PASS
5745	20	120	5745.028156	5745 – 5825	PASS
5745	10	120	5744.965976	5745 – 5825	PASS
5745	0	120	5745.059272	5745 – 5825	PASS
5745	-10	120	5745.003107	5745 – 5825	PASS
5745	-20	120	5744.936014	5745 – 5825	PASS
5745	-30	120	5745.017729	5745 – 5825	PASS

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5785	20	132	5784.910495	5745 – 5825	PASS
5785	20	108	5785.019301	5745 – 5825	PASS
5785	50	120	5785.020109	5745 – 5825	PASS
5785	40	120	5785.097208	5745 – 5825	PASS
5785	30	120	5784.916201	5745 – 5825	PASS
5785	20	120	5785.068354	5745 – 5825	PASS
5785	10	120	5785.046018	5745 – 5825	PASS
5785	0	120	5784.977357	5745 – 5825	PASS
5785	-10	120	5785.075929	5745 – 5825	PASS
5785	-20	120	5784.966265	5745 – 5825	PASS
5785	-30	120	5785.044818	5745 – 5825	PASS

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5825	20	132	5824.906598	5745 – 5825	PASS
5825	20	108	5824.985295	5745 – 5825	PASS
5825	50	120	5824.970716	5745 – 5825	PASS
5825	40	120	5825.054185	5745 – 5825	PASS
5825	30	120	5824.932011	5745 – 5825	PASS
5825	20	120	5824.929550	5745 – 5825	PASS
5825	10	120	5825.072334	5745 – 5825	PASS
5825	0	120	5825.030238	5745 – 5825	PASS
5825	-10	120	5824.954066	5745 – 5825	PASS
5825	-20	120	5824.917862	5745 – 5825	PASS
5825	-30	120	5824.906992	5745 – 5825	PASS

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5755	20	132	5755.006192	5745 – 5825	PASS
5755	20	108	5754.980149	5745 – 5825	PASS
5755	50	120	5755.007903	5745 – 5825	PASS
5755	40	120	5755.073530	5745 – 5825	PASS
5755	30	120	5755.019902	5745 – 5825	PASS
5755	20	120	5754.959284	5745 – 5825	PASS
5755	10	120	5754.955618	5745 – 5825	PASS
5755	0	120	5755.086586	5745 – 5825	PASS
5755	-10	120	5755.095312	5745 – 5825	PASS
5755	-20	120	5755.062967	5745 – 5825	PASS
5755	-30	120	5755.012275	5745 – 5825	PASS

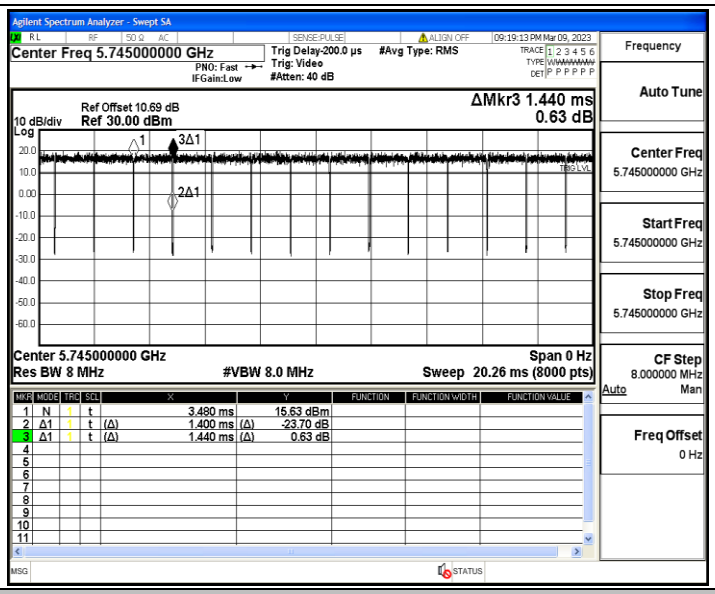
Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5795	20	132	5794.955133	5745 – 5825	PASS
5795	20	108	5795.066316	5745 – 5825	PASS
5795	50	120	5795.038257	5745 – 5825	PASS
5795	40	120	5795.094424	5745 – 5825	PASS
5795	30	120	5795.046867	5745 – 5825	PASS
5795	20	120	5795.050937	5745 – 5825	PASS
5795	10	120	5795.084912	5745 – 5825	PASS
5795	0	120	5795.018674	5745 – 5825	PASS
5795	-10	120	5795.027891	5745 – 5825	PASS
5795	-20	120	5795.081984	5745 – 5825	PASS
5795	-30	120	5794.900495	5745 – 5825	PASS

Appendix F: Duty Cycle

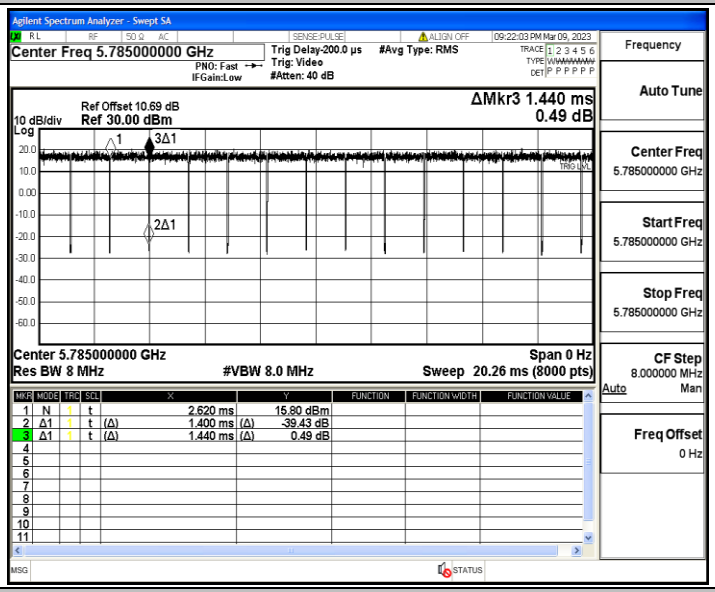
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T [kHz]
11A	Ant1	5745	1.40	1.44	97.22	0.71
		5785	1.40	1.44	97.22	0.71
		5825	1.40	1.44	97.22	0.71
11N20MIMO	Ant1	5745	1.31	1.35	97.04	0.76
		5785	1.31	1.35	97.04	0.76
		5825	1.31	1.35	97.04	0.76
11N40MIMO	Ant1	5755	0.64	0.68	94.12	1.56
		5795	0.64	0.68	94.12	1.56

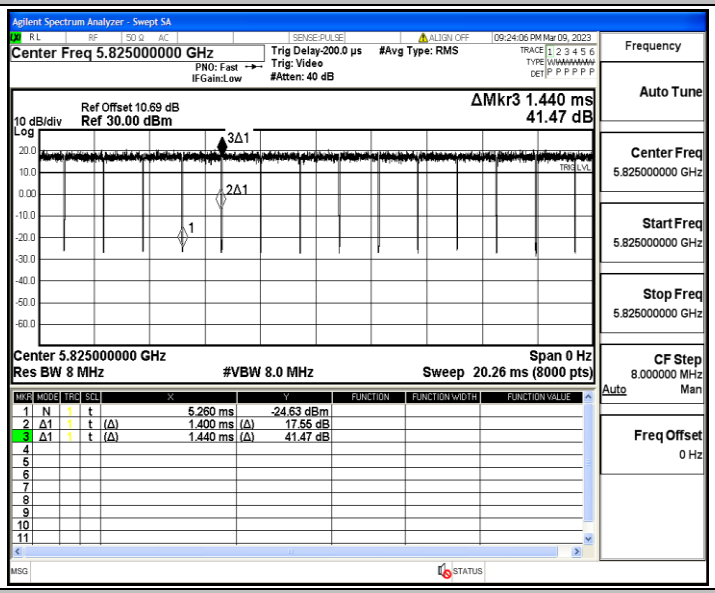
Test Graphs



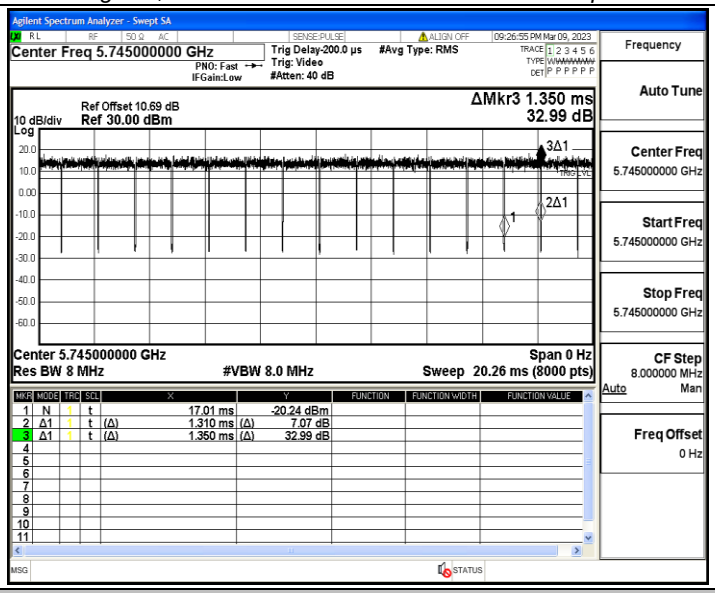
11A_Ant1_5745



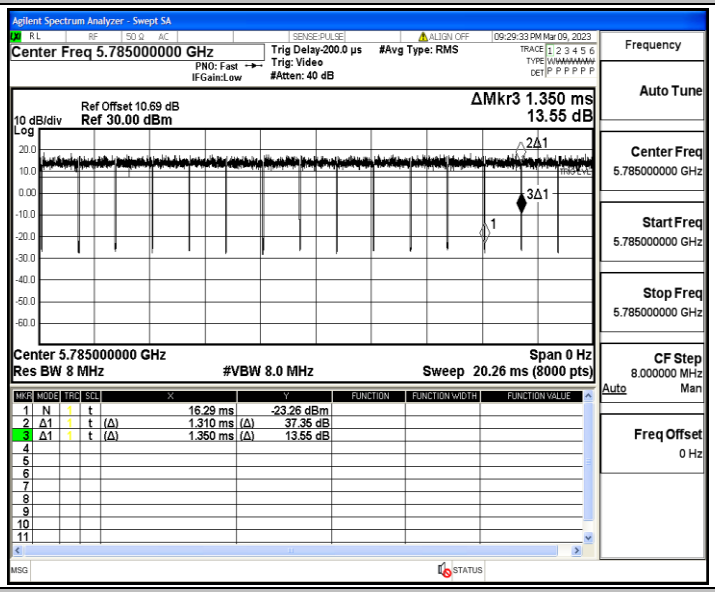
11A_Ant1_5785



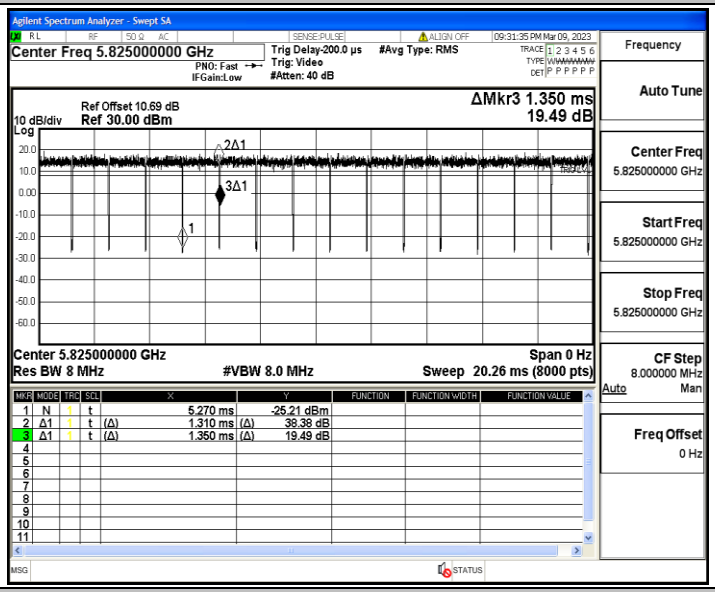
11A_Ant1_5825



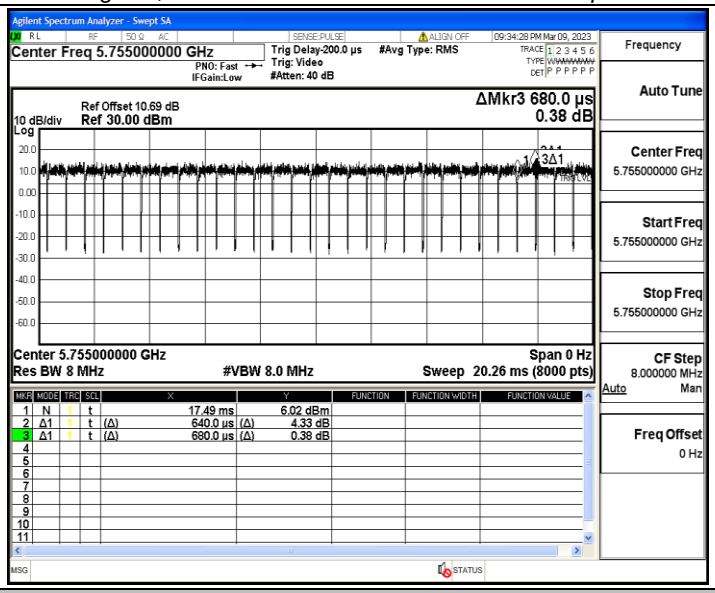
11N20MIMO_Ant1_5745



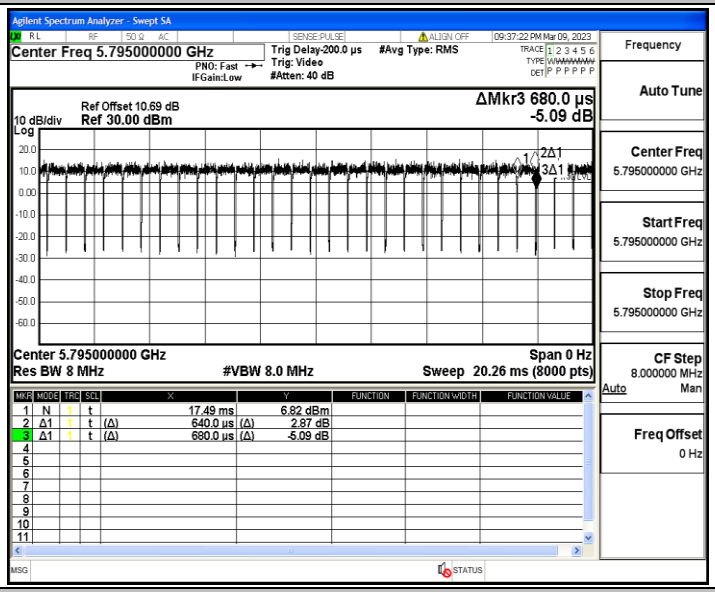
11N20MIMO_Ant1_5785



11N20MIMO_Ant1_5825



11N40MIMO_Ant1_5755



11N40MIMO_Ant1_5795