

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

Product Name: 4K Set Top Box

Trade Mark: OptiSigns

Test Model: ARD3

FCC ID: 2AOVU-ARD3

Environmental Conditions

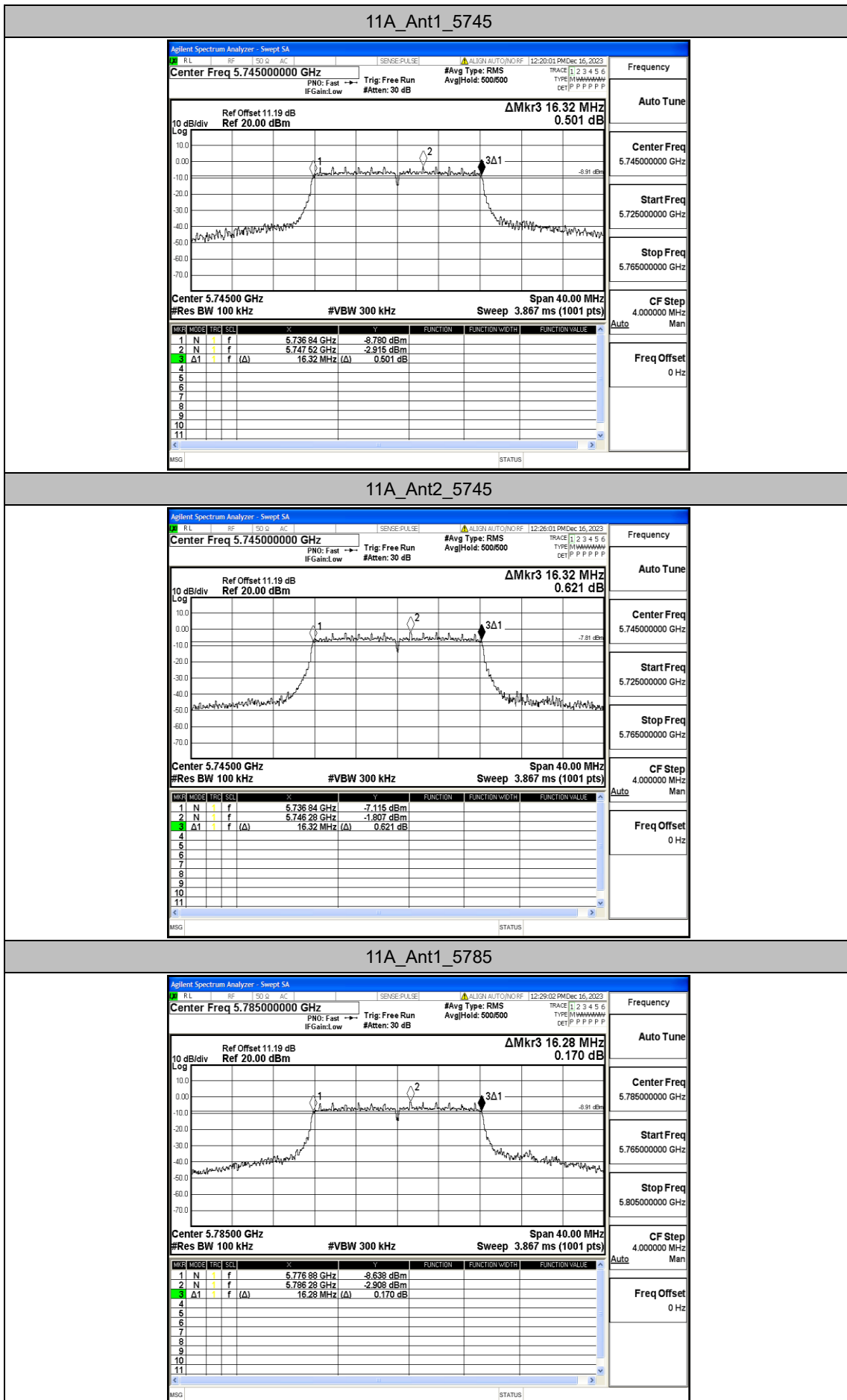
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: Min emission bandwidth

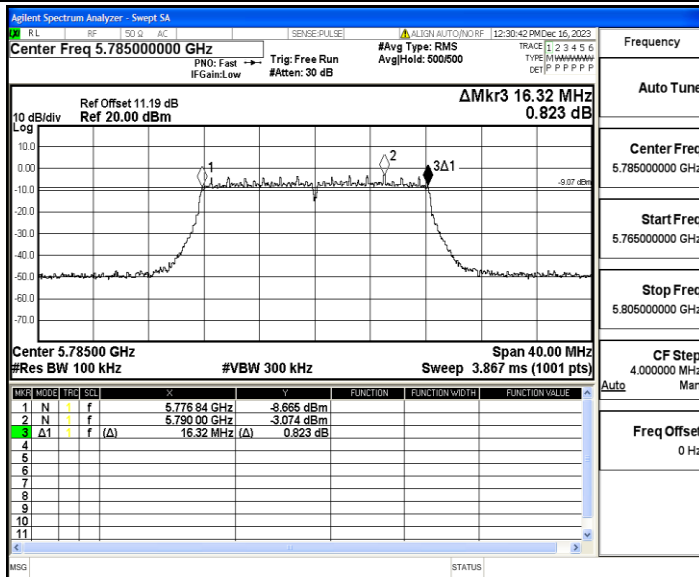
Test Result

TestMode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.840	5753.160	0.5	PASS
	Ant2	5745	16.320	5736.840	5753.160	0.5	PASS
	Ant1	5785	16.280	5776.880	5793.160	0.5	PASS
	Ant2	5785	16.320	5776.840	5793.160	0.5	PASS
	Ant1	5825	16.320	5816.840	5833.160	0.5	PASS
	Ant2	5825	16.320	5816.840	5833.160	0.5	PASS
11N20MIMO	Ant1	5745	17.520	5736.240	5753.760	0.5	PASS
	Ant2	5745	17.040	5736.480	5753.520	0.5	PASS
	Ant1	5785	17.560	5776.240	5793.800	0.5	PASS
	Ant2	5785	17.280	5776.480	5793.760	0.5	PASS
	Ant1	5825	17.280	5816.480	5833.760	0.5	PASS
	Ant2	5825	17.280	5816.480	5833.760	0.5	PASS
11N40MIMO	Ant1	5755	35.200	5737.400	5772.600	0.5	PASS
	Ant2	5755	35.040	5737.480	5772.520	0.5	PASS
	Ant1	5795	35.040	5777.480	5812.520	0.5	PASS
	Ant2	5795	35.120	5777.480	5812.600	0.5	PASS
11AC20MIMO	Ant1	5745	17.520	5736.240	5753.760	0.5	PASS
	Ant2	5745	17.520	5736.240	5753.760	0.5	PASS
	Ant1	5785	17.560	5776.240	5793.800	0.5	PASS
	Ant2	5785	17.280	5776.480	5793.760	0.5	PASS
	Ant1	5825	17.280	5816.480	5833.760	0.5	PASS
	Ant2	5825	17.280	5816.480	5833.760	0.5	PASS
11AC40MIMO	Ant1	5755	35.200	5737.400	5772.600	0.5	PASS
	Ant2	5755	35.200	5737.400	5772.600	0.5	PASS
	Ant1	5795	35.280	5777.480	5812.760	0.5	PASS
	Ant2	5795	35.120	5777.480	5812.600	0.5	PASS
11AC80MIMO	Ant1	5775	75.040	5737.560	5812.600	0.5	PASS
	Ant2	5775	73.920	5738.680	5812.600	0.5	PASS

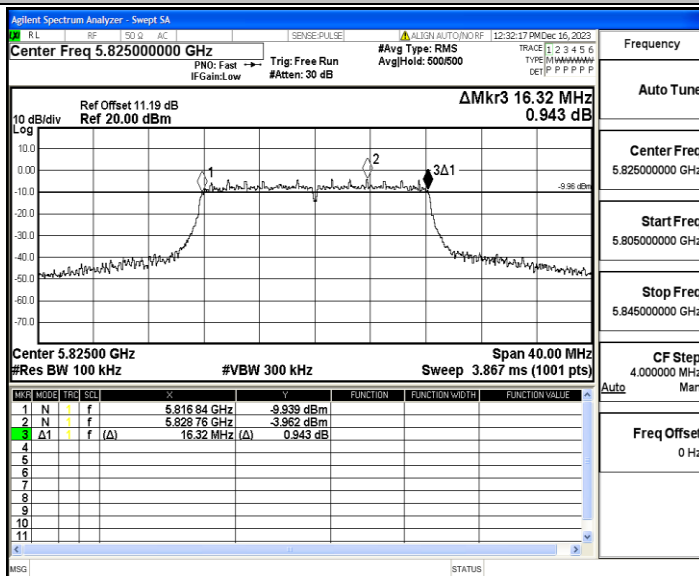
Test Graphs



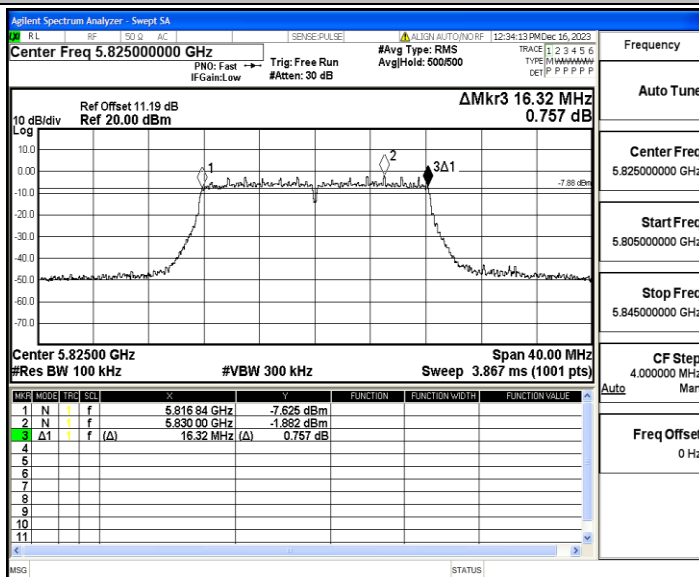
11A_Ant2_5785



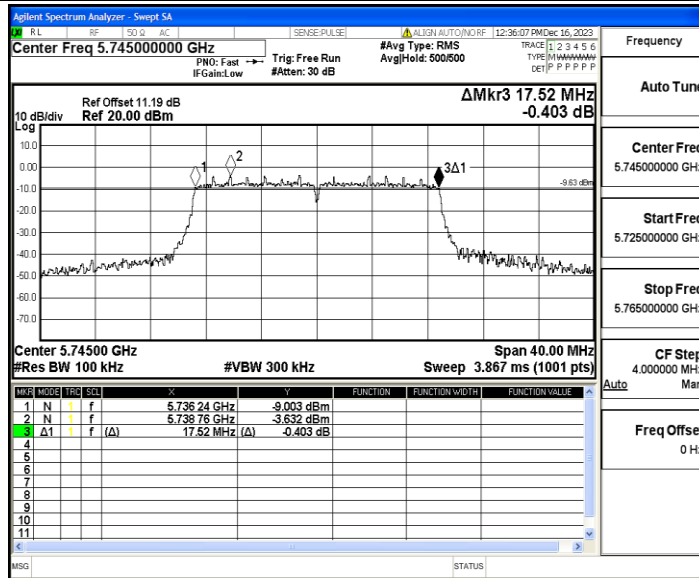
11A_Ant1_5825



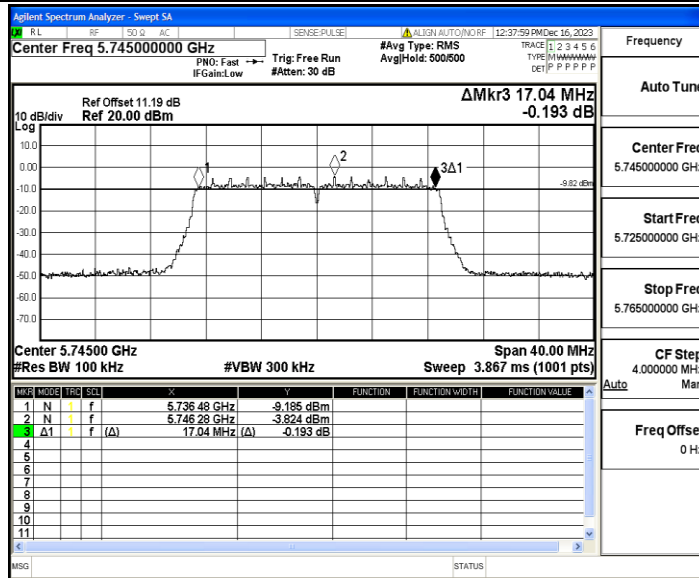
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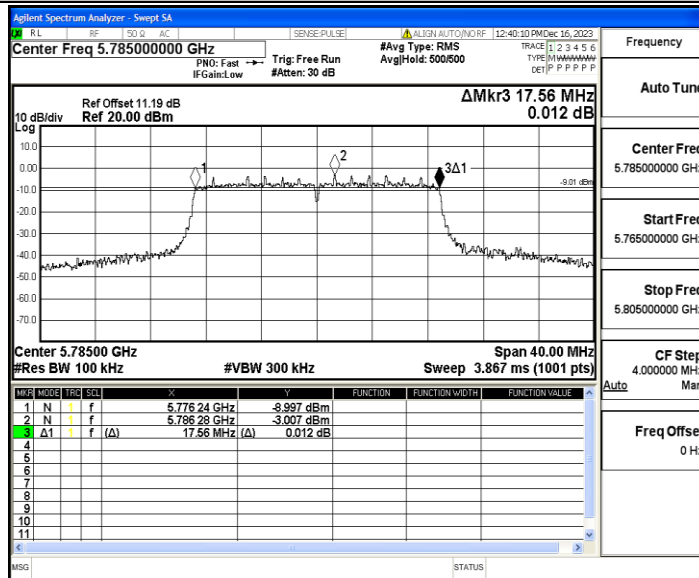
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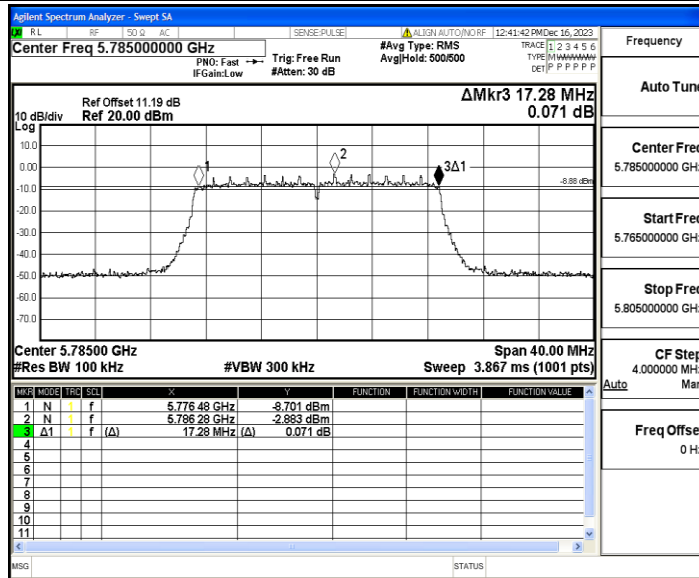
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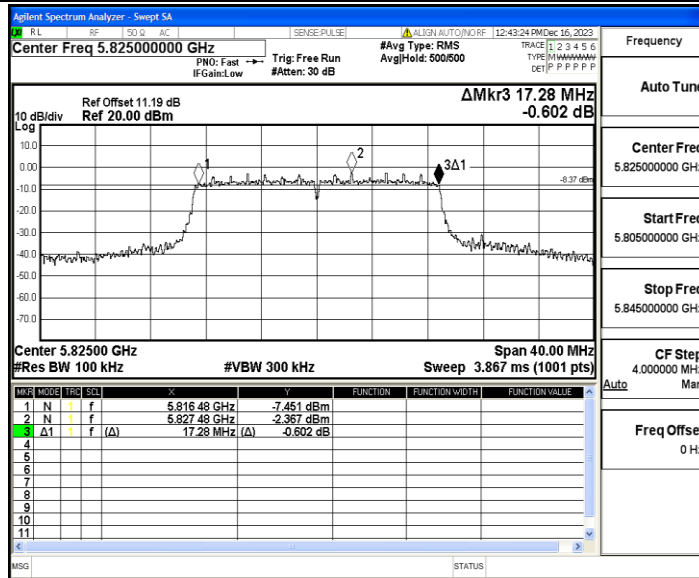
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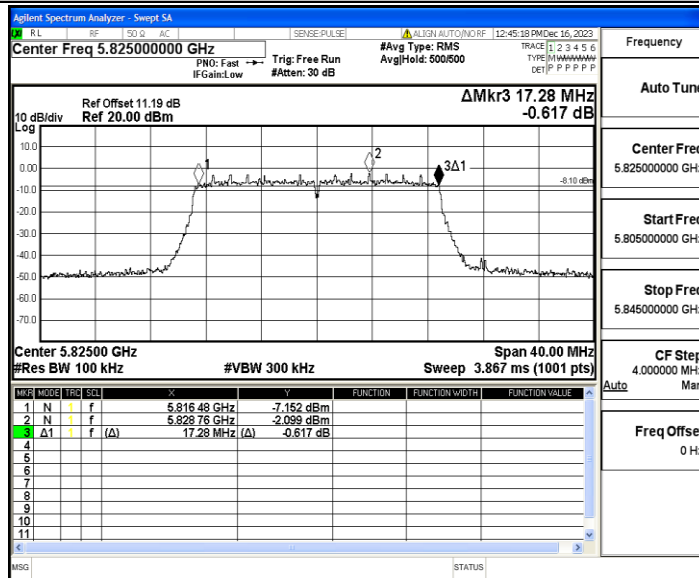
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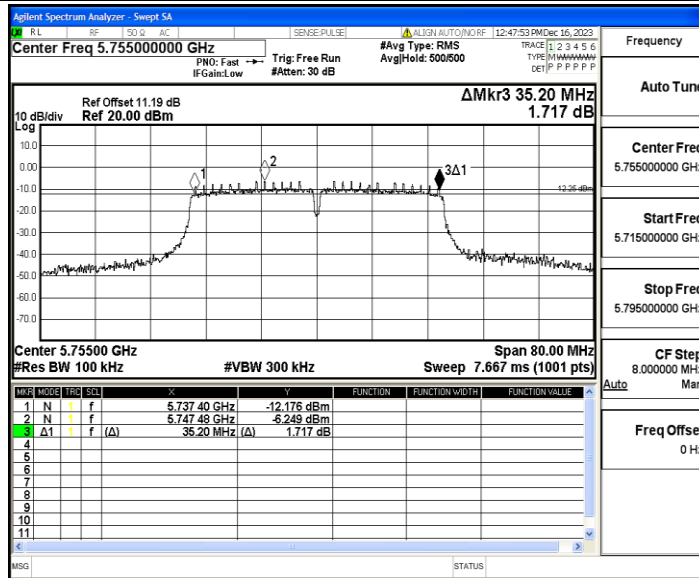
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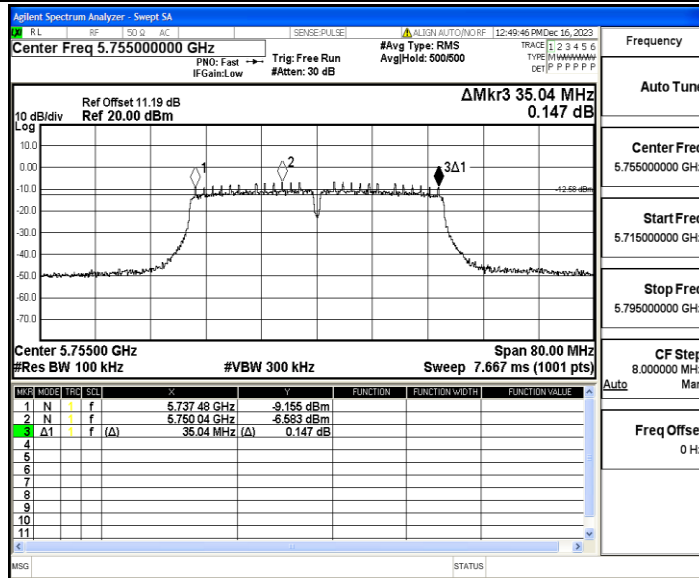
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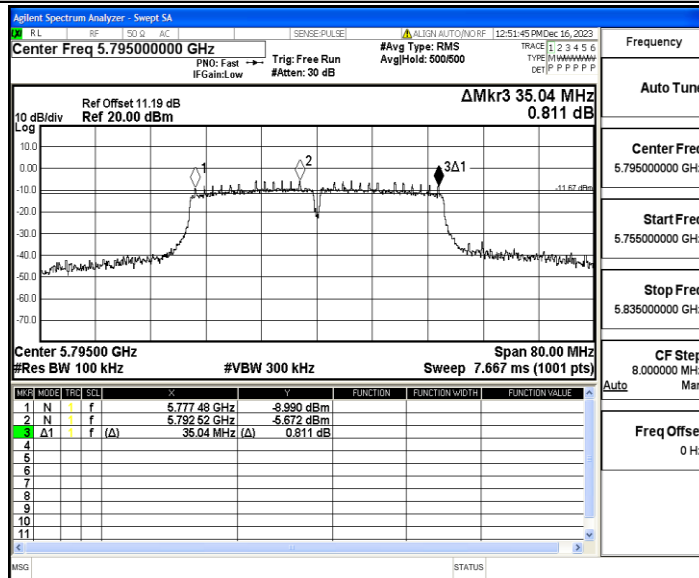
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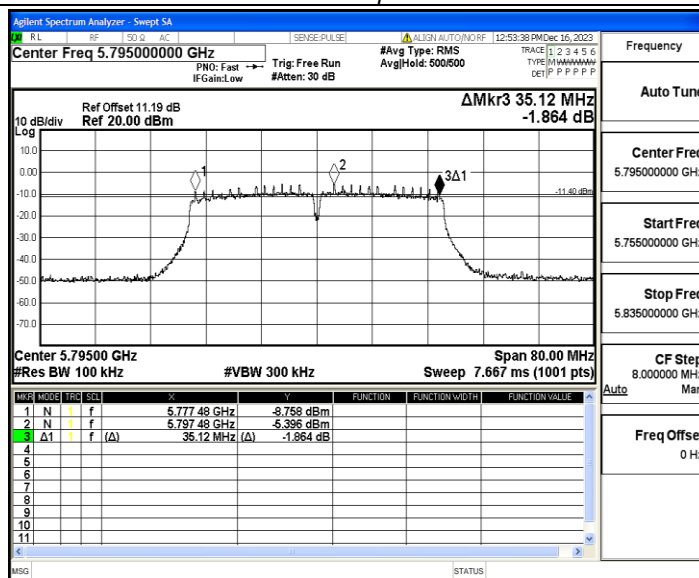
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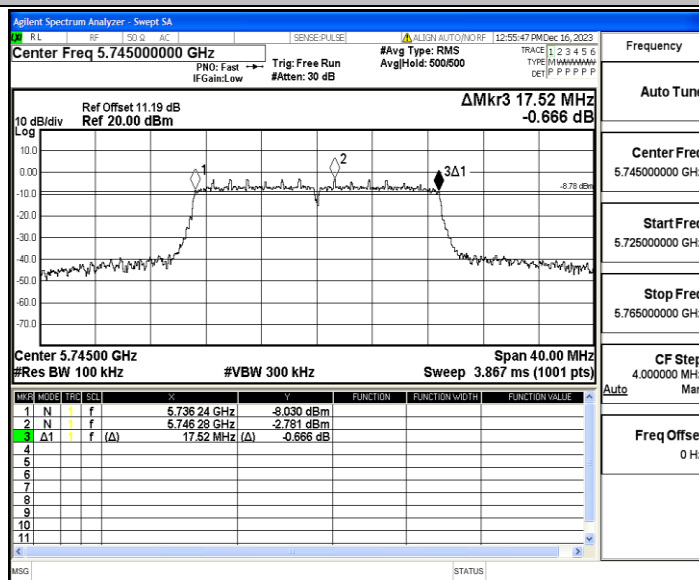
11N40MIMO_Ant1_5795



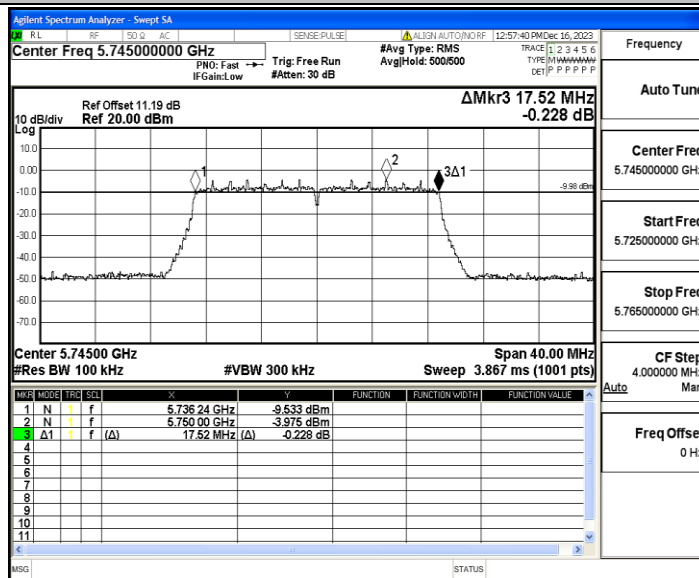
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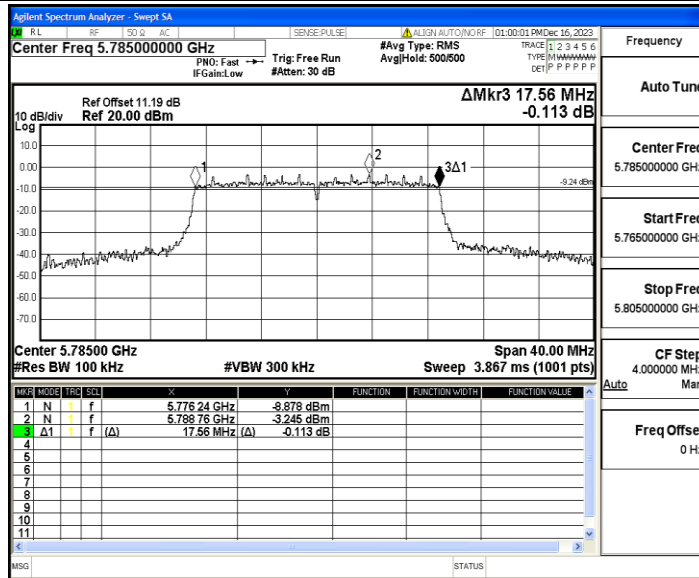
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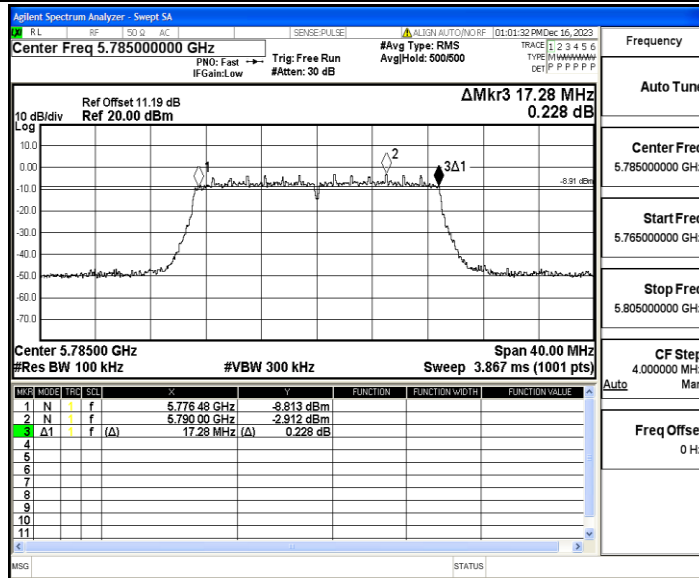
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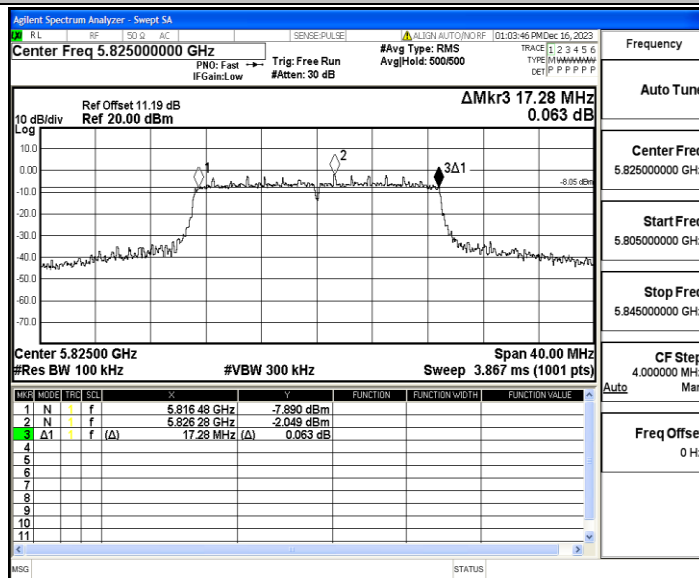
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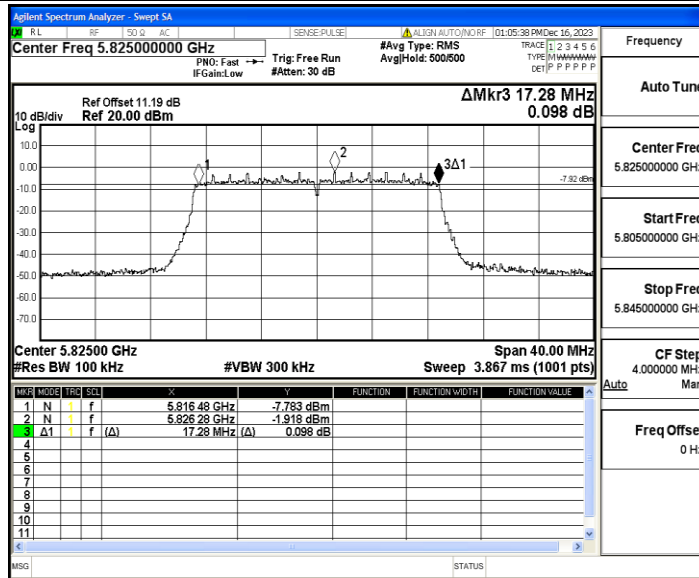
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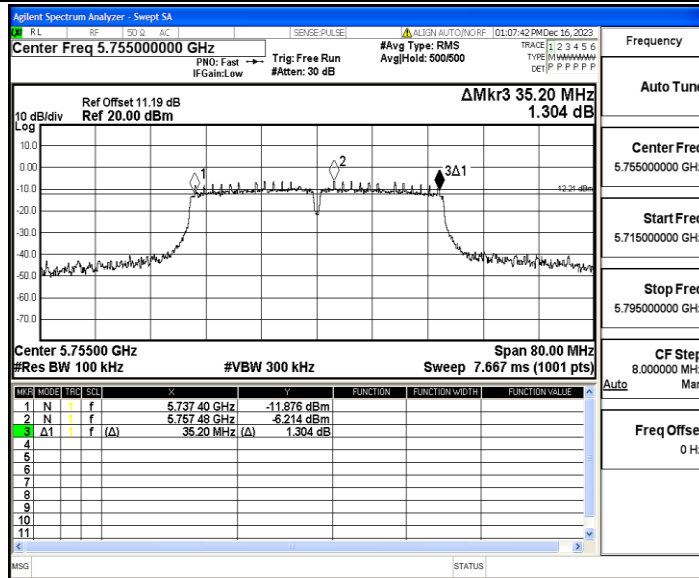
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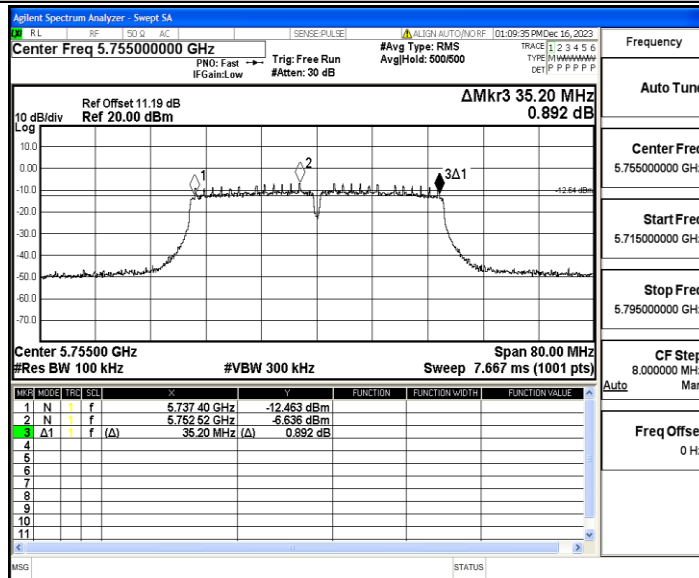
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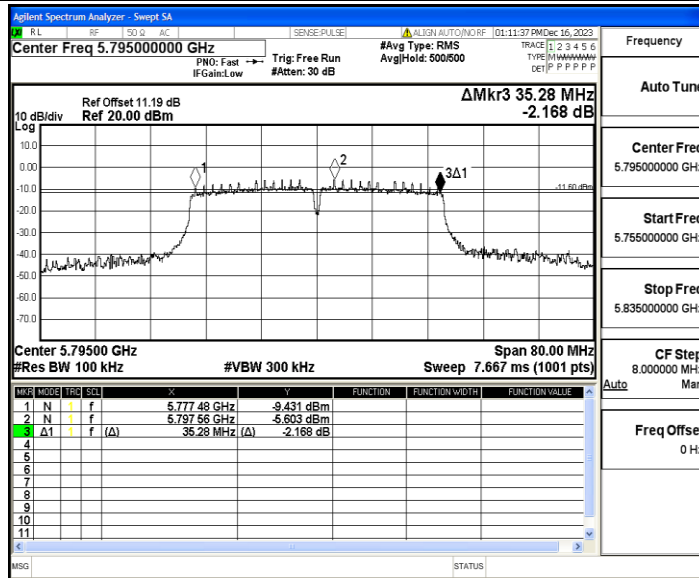
11AC40MIMO_Ant1_5755



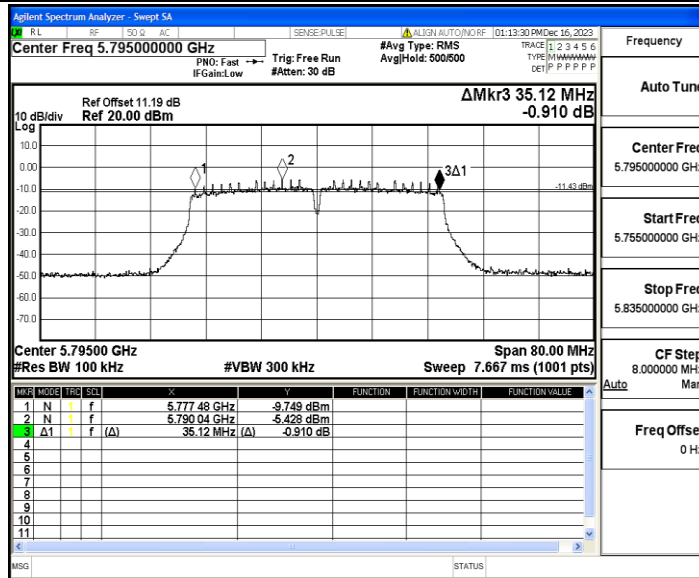
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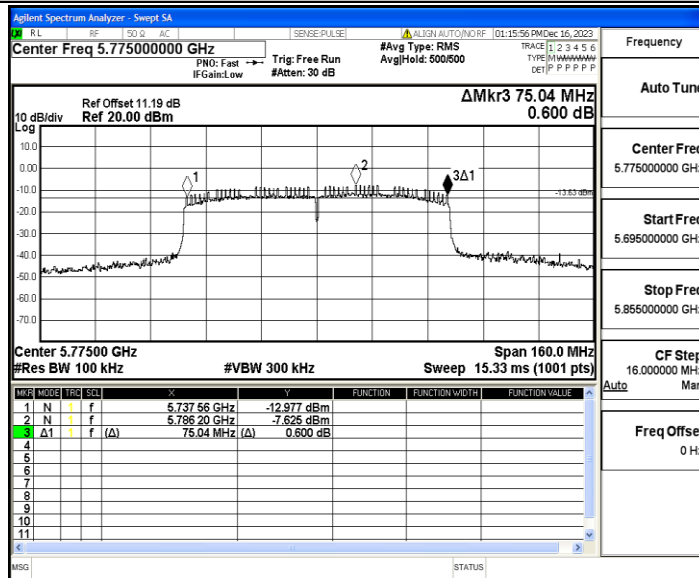
11AC40MIMO_Ant1_5795



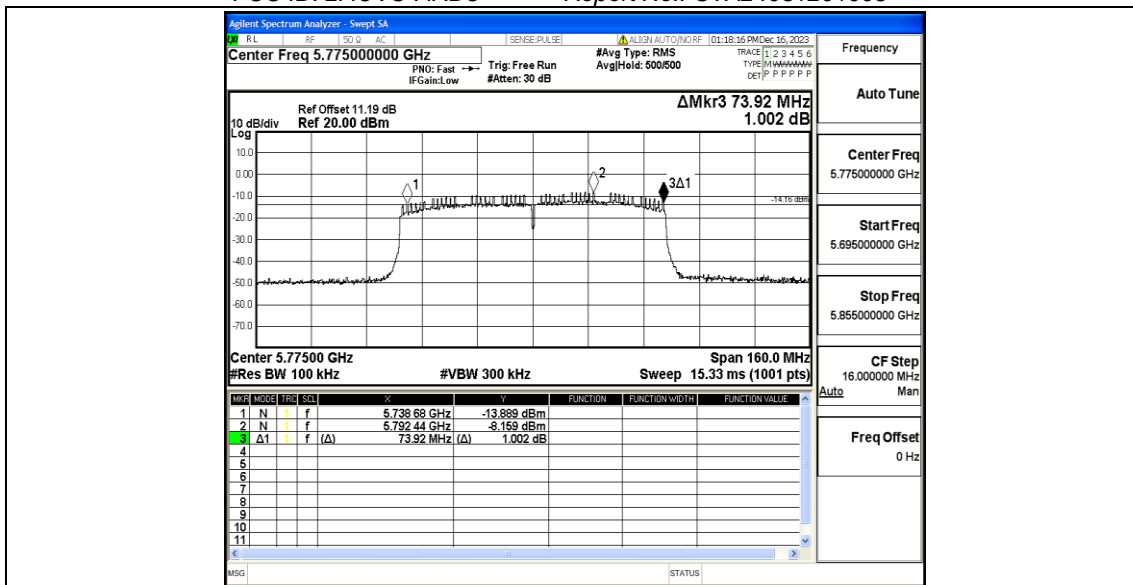
11AC40MIMO_Ant2_5795



11AC80MIMO_Ant1_5775



11AC80MIMO_Ant2_5775



Appendix B: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5745	10.29	≤30.00	PASS
	Ant2	5745	9.50	≤30.00	PASS
	Ant1	5785	8.27	≤30.00	PASS
	Ant2	5785	8.21	≤30.00	PASS
	Ant1	5825	7.52	≤30.00	PASS
	Ant2	5825	9.20	≤30.00	PASS
11N20MIMO	Ant1	5745	7.91	≤30.00	PASS
	Ant2	5745	7.06	≤30.00	PASS
	total	5745	10.52	≤30.00	PASS
	Ant1	5785	8.23	≤30.00	PASS
	Ant2	5785	8.14	≤30.00	PASS
	total	5785	11.20	≤30.00	PASS
	Ant1	5825	8.97	≤30.00	PASS
	Ant2	5825	9.21	≤30.00	PASS
	total	5825	12.10	≤30.00	PASS
11N40MIMO	Ant1	5755	9.42	≤30.00	PASS
	Ant2	5755	7.17	≤30.00	PASS
	total	5755	11.45	≤30.00	PASS
	Ant1	5795	8.28	≤30.00	PASS
	Ant2	5795	9.19	≤30.00	PASS
	total	5795	11.77	≤30.00	PASS
11AC20MIMO	Ant1	5745	8.47	≤30.00	PASS
	Ant2	5745	7.20	≤30.00	PASS
	total	5745	10.89	≤30.00	PASS
	Ant1	5785	8.30	≤30.00	PASS
	Ant2	5785	8.21	≤30.00	PASS
	total	5785	11.27	≤30.00	PASS
	Ant1	5825	8.99	≤30.00	PASS
	Ant2	5825	9.35	≤30.00	PASS
	total	5825	12.18	≤30.00	PASS
11AC40MIMO	Ant1	5755	7.86	≤30.00	PASS
	Ant2	5755	7.29	≤30.00	PASS
	total	5755	10.59	≤30.00	PASS
	Ant1	5795	8.52	≤30.00	PASS
	Ant2	5795	8.53	≤30.00	PASS
	total	5795	11.54	≤30.00	PASS
11AC80MIMO	Ant1	5775	9.14	≤30.00	PASS
	Ant2	5775	8.35	≤30.00	PASS
	total	5775	11.77	≤30.00	PASS

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

Appendix C: Maximum power spectral density

Test Result

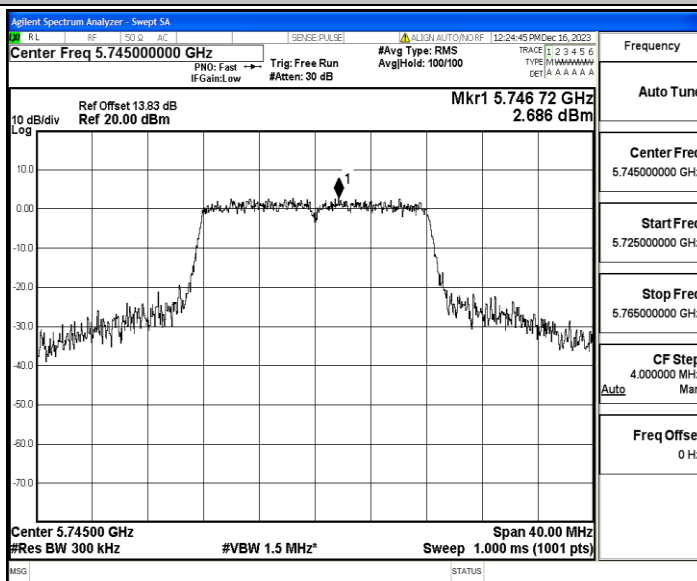
TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5745	2.69	≤30.00	PASS
	Ant2	5745	2.36	≤30.00	PASS
	Ant1	5785	0.96	≤30.00	PASS
	Ant2	5785	1.44	≤30.00	PASS
	Ant1	5825	0.47	≤30.00	PASS
	Ant2	5825	2.36	≤30.00	PASS
11N20MIMO	Ant1	5745	0.48	≤30.00	PASS
	Ant2	5745	-0.16	≤30.00	PASS
	total	5745	3.18	≤30.00	PASS
	Ant1	5785	0.79	≤30.00	PASS
	Ant2	5785	0.96	≤30.00	PASS
	total	5785	3.89	≤30.00	PASS
	Ant1	5825	2.25	≤30.00	PASS
	Ant2	5825	1.41	≤30.00	PASS
	total	5825	4.86	≤30.00	PASS
11N40MIMO	Ant1	5755	-0.71	≤30.00	PASS
	Ant2	5755	-2.59	≤30.00	PASS
	total	5755	1.46	≤30.00	PASS
	Ant1	5795	-1.65	≤30.00	PASS
	Ant2	5795	-0.94	≤30.00	PASS
	total	5795	1.73	≤30.00	PASS
11AC20MIMO	Ant1	5745	1.01	≤30.00	PASS
	Ant2	5745	-0.5	≤30.00	PASS
	total	5745	3.33	≤30.00	PASS
	Ant1	5785	0.75	≤30.00	PASS
	Ant2	5785	0.72	≤30.00	PASS
	total	5785	3.75	≤30.00	PASS
	Ant1	5825	1.18	≤30.00	PASS
	Ant2	5825	2.25	≤30.00	PASS
	total	5825	4.76	≤30.00	PASS
11AC40MIMO	Ant1	5755	-1.85	≤30.00	PASS
	Ant2	5755	-2.6	≤30.00	PASS
	total	5755	0.80	≤30.00	PASS
	Ant1	5795	-1.75	≤30.00	PASS
	Ant2	5795	-0.82	≤30.00	PASS
	total	5795	1.75	≤30.00	PASS
11AC80MIMO	Ant1	5775	-3.73	≤30.00	PASS
	Ant2	5775	-3.43	≤30.00	PASS
	total	5775	-0.57	≤30.00	PASS

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

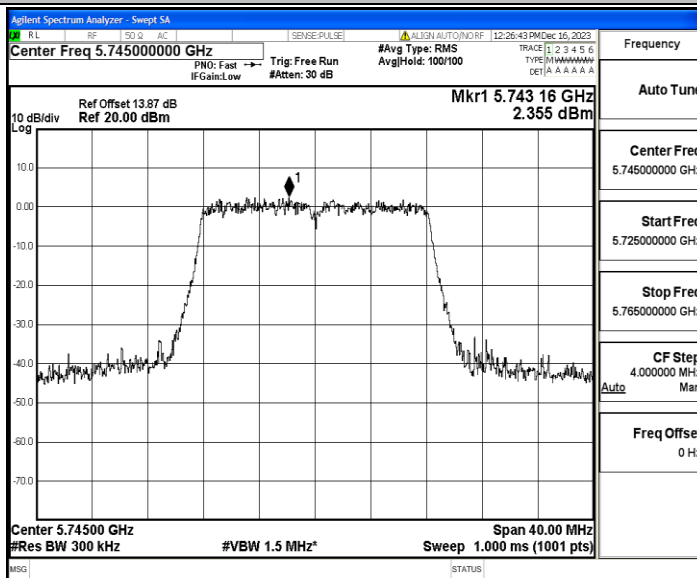
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

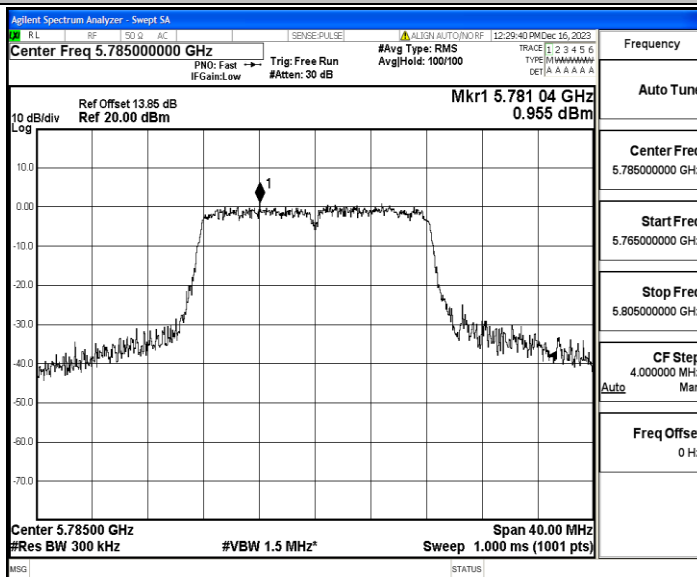
11A_Ant1_5745



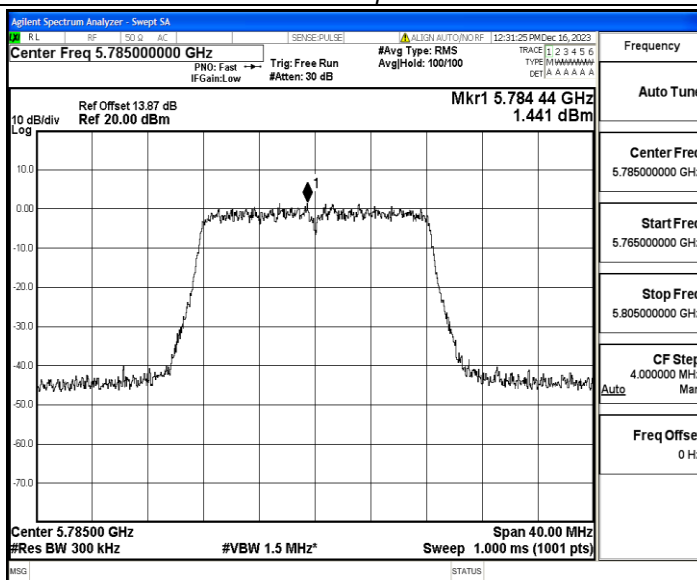
11A_Ant2_5745



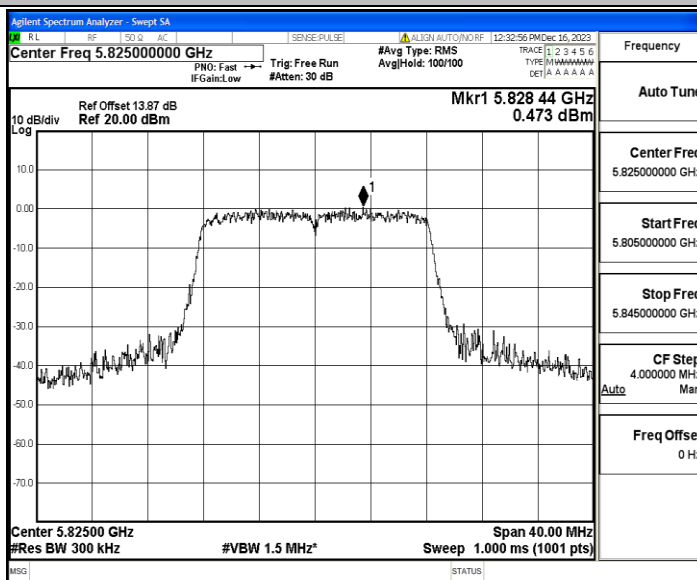
11A_Ant1_5785



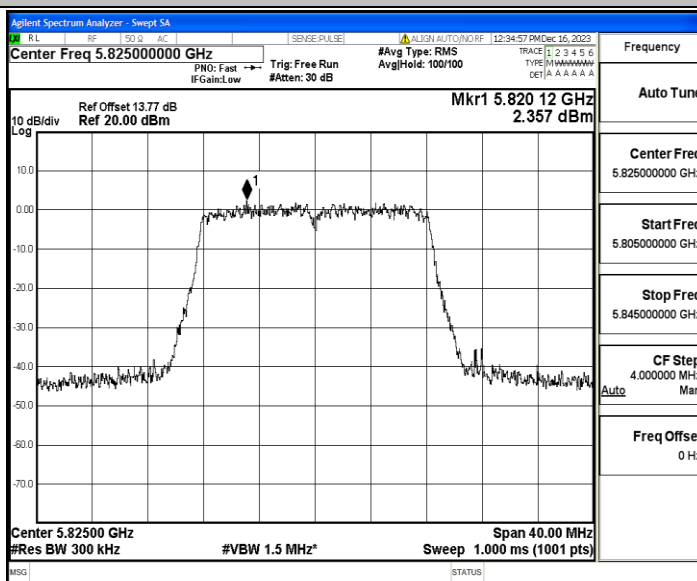
11A_Ant2_5785



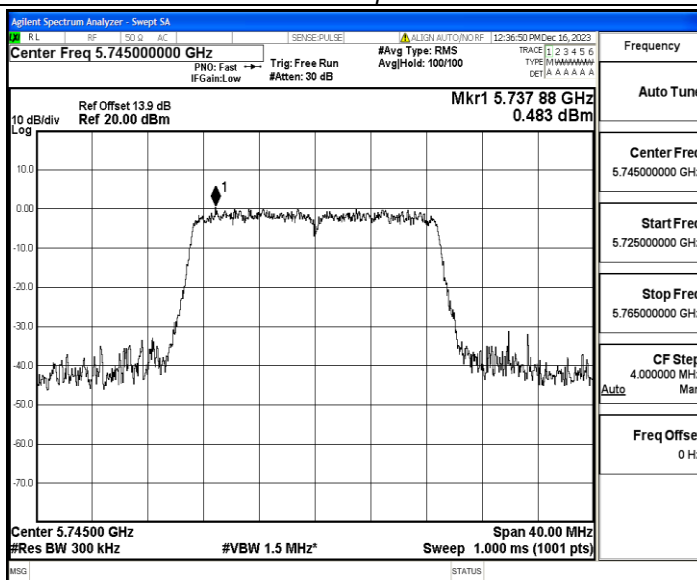
11A_Ant1_5825



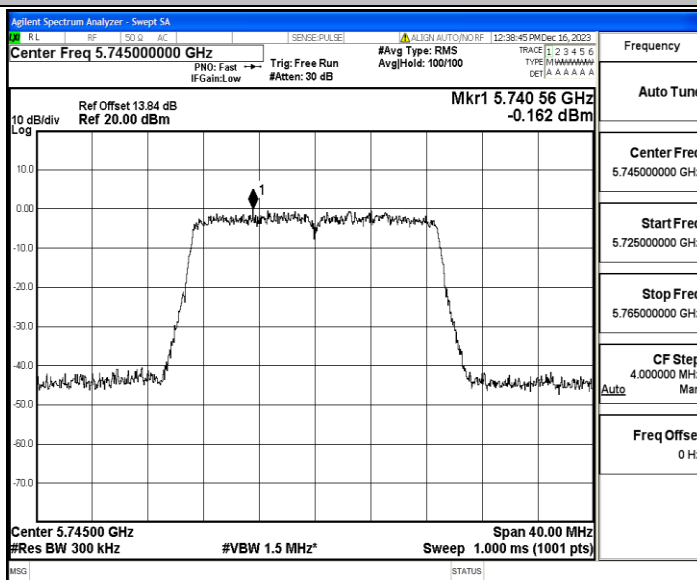
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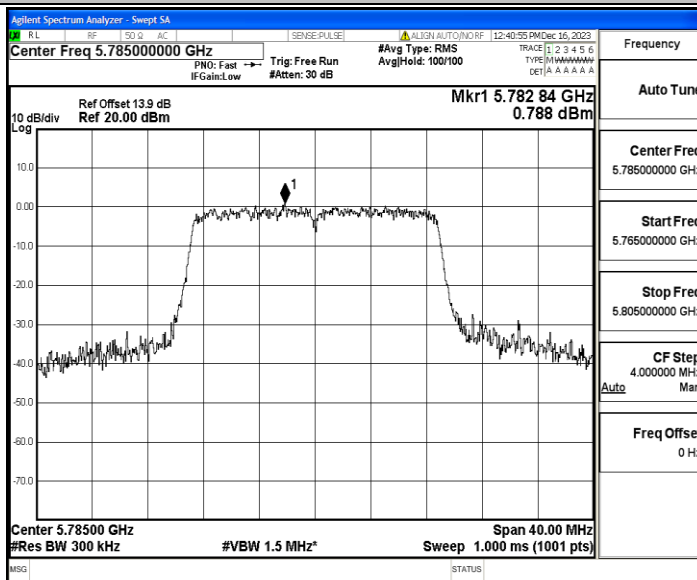
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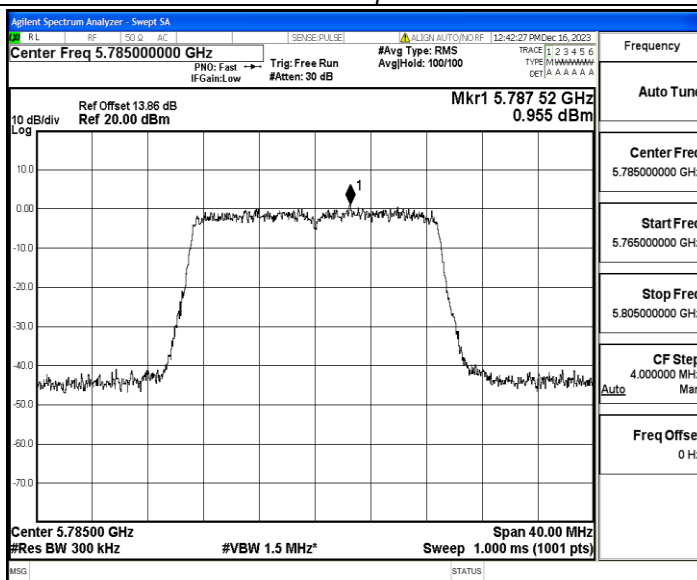
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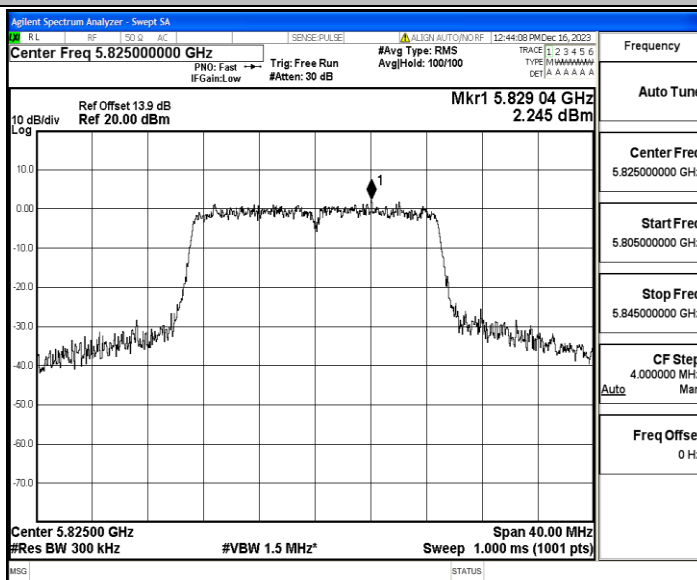
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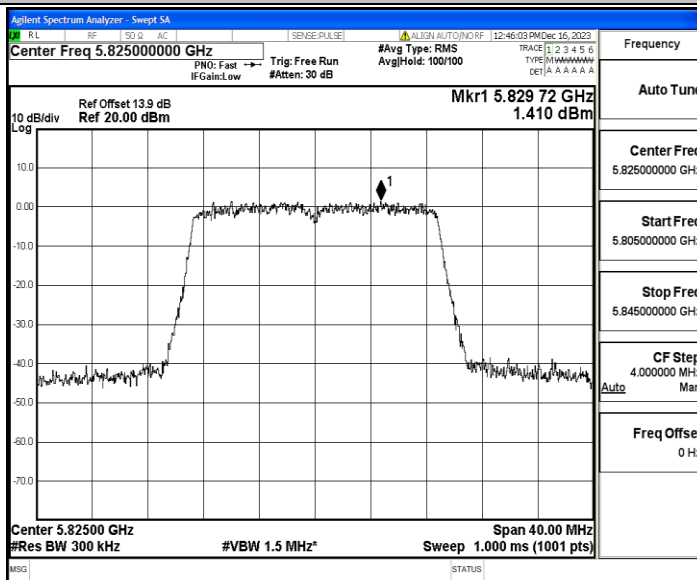
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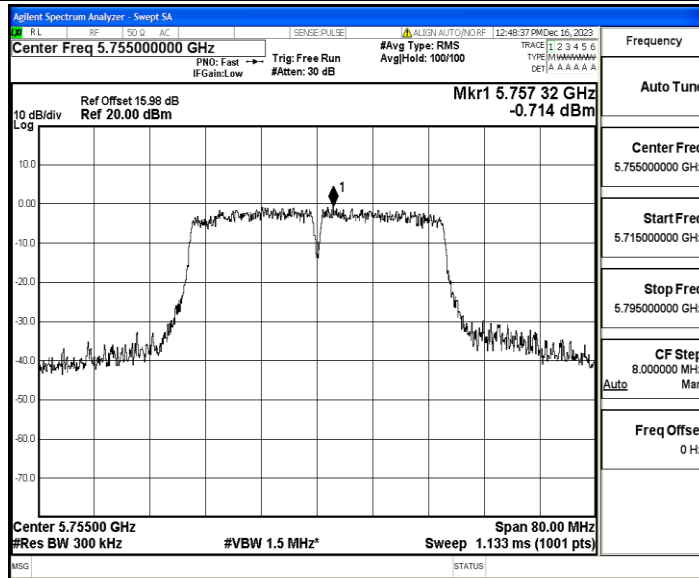
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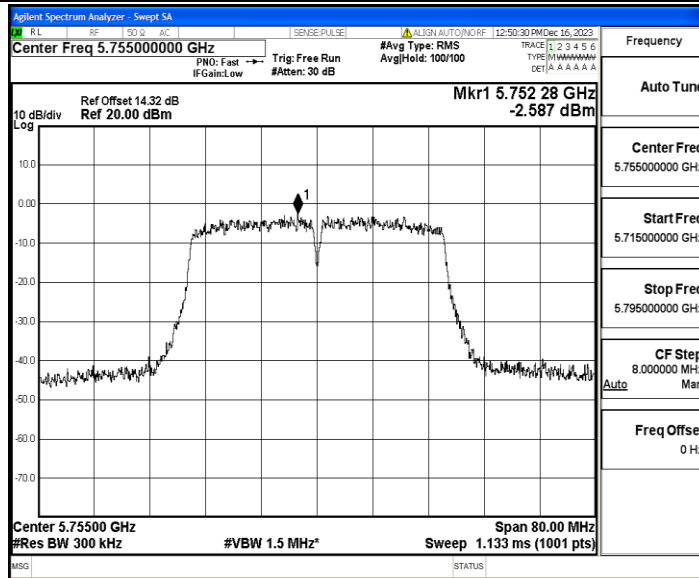
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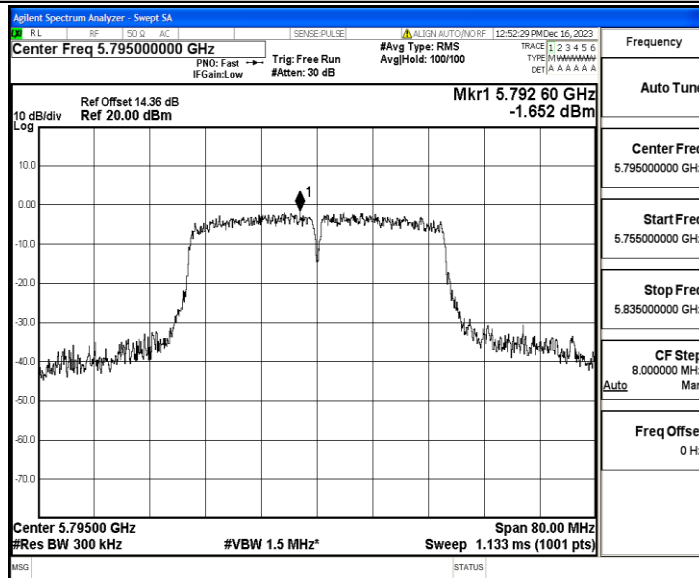
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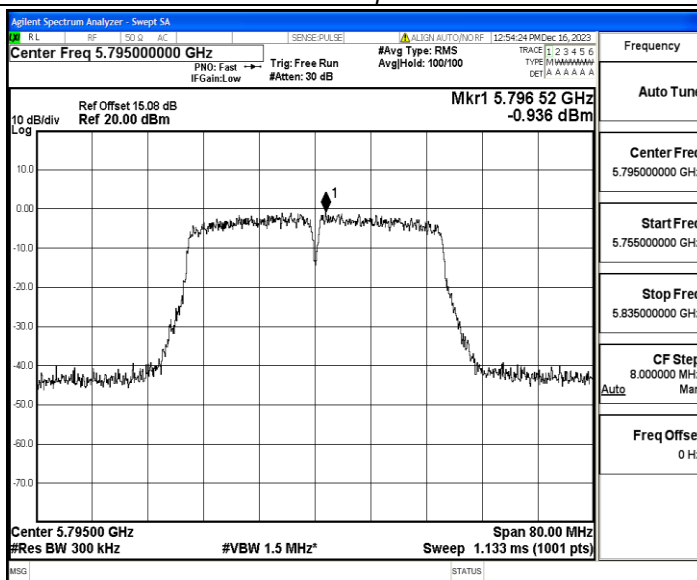
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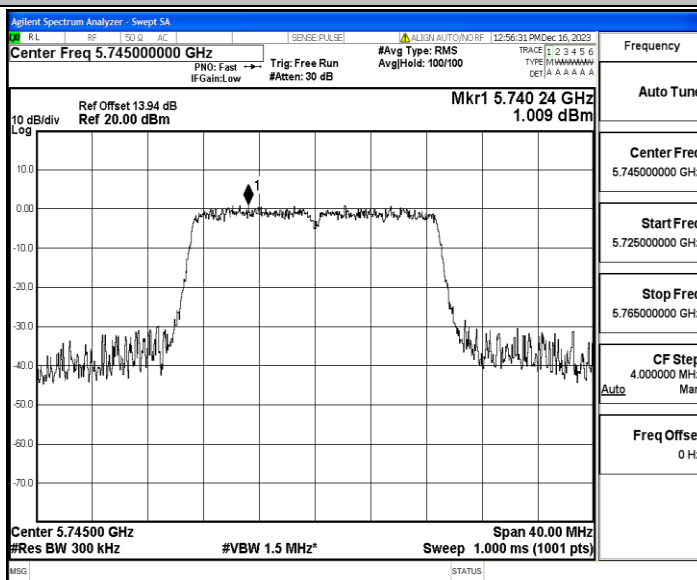
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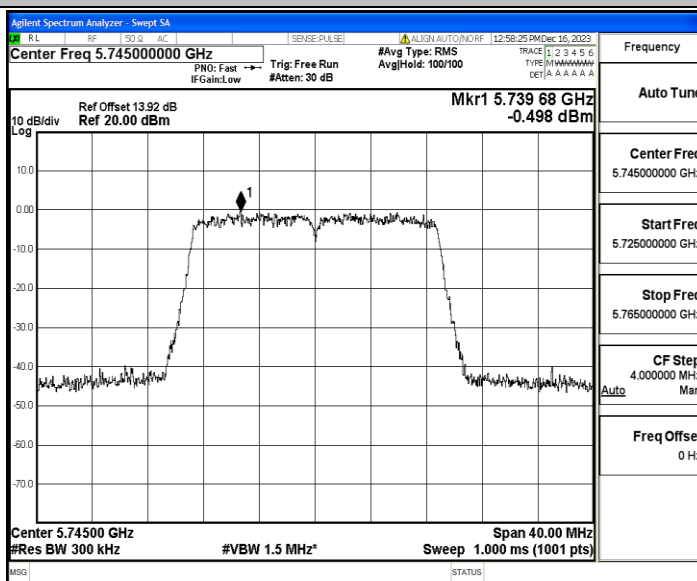
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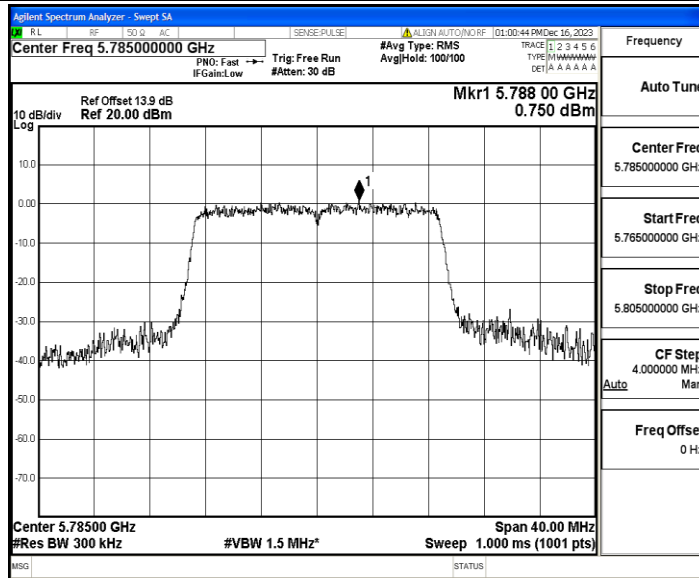
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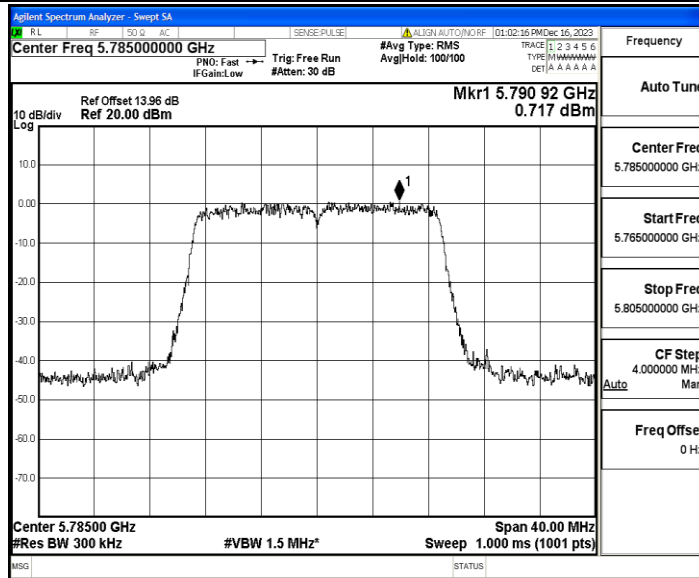
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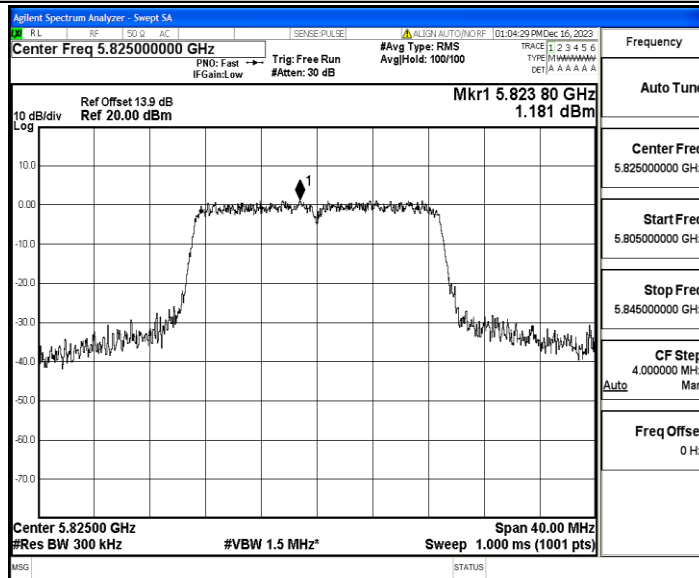
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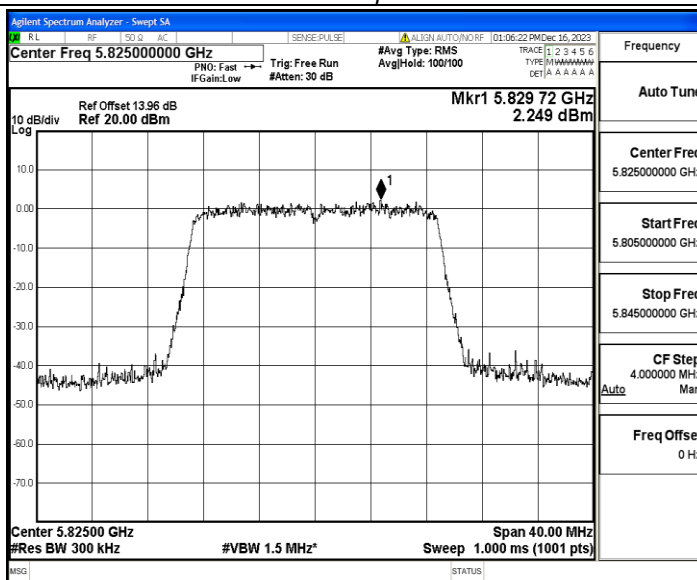
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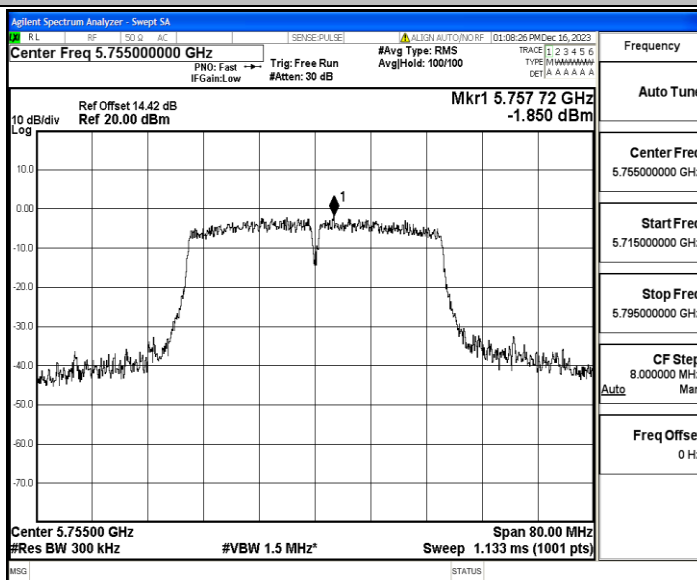
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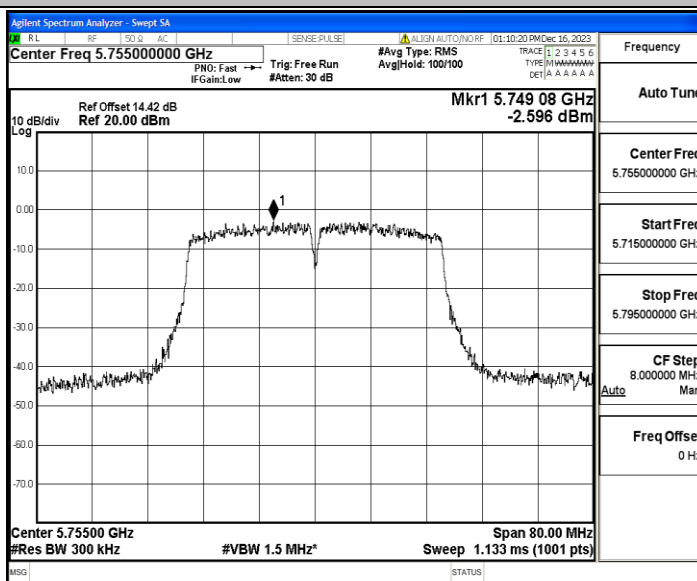
11AC20MIMO_Ant2_5825



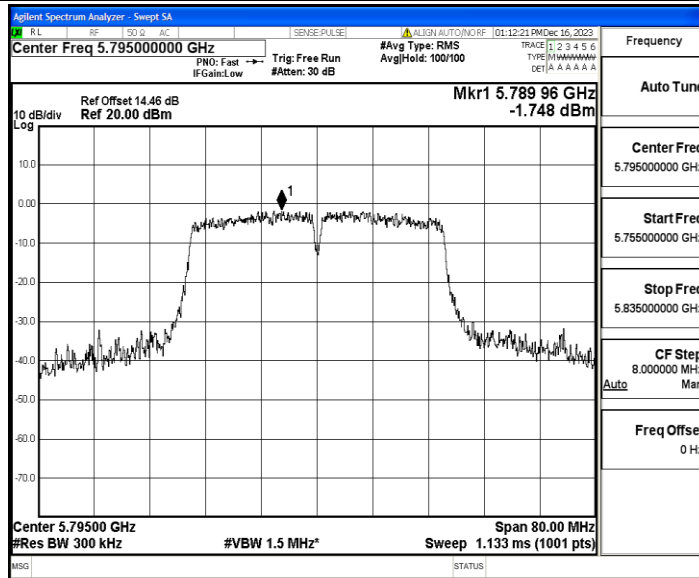
11AC40MIMO_Ant1_5755



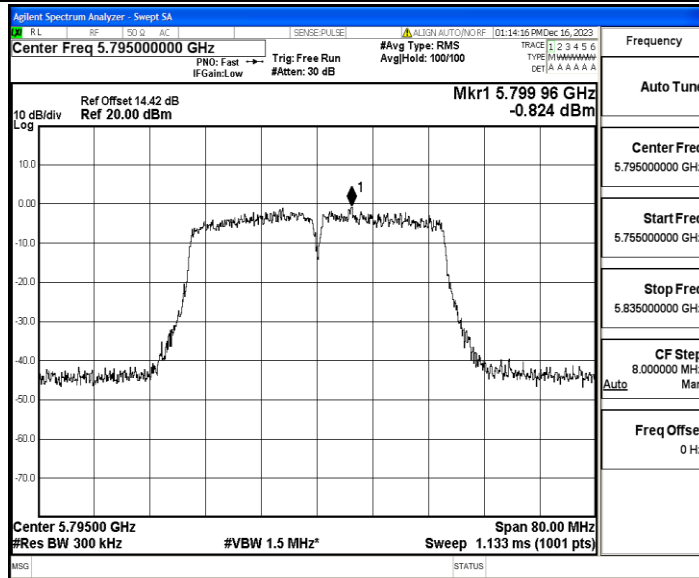
11AC40MIMO_Ant2_5755



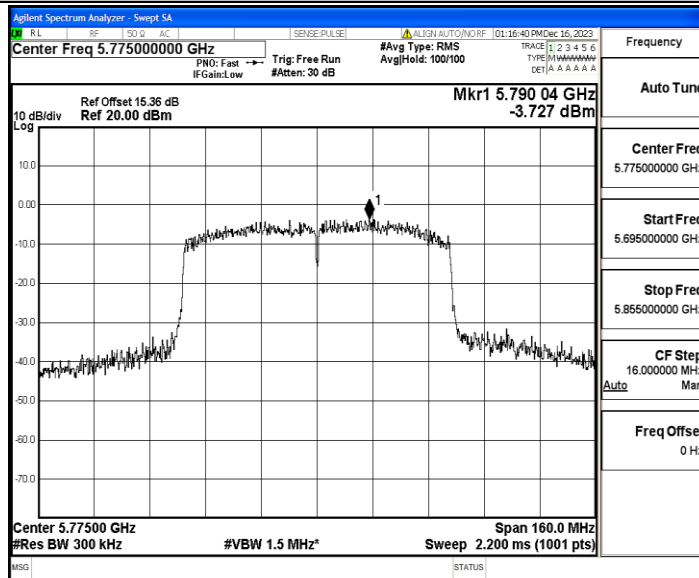
11AC40MIMO_Ant1_5795



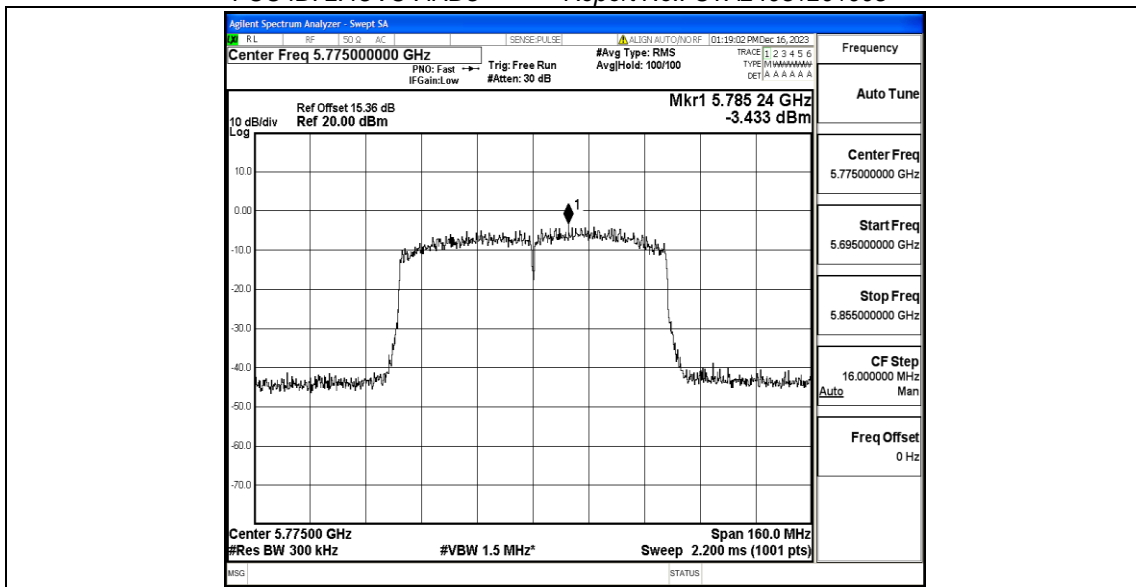
11AC40MIMO_Ant2_5795



11AC80MIMO_Ant1_5775



11AC80MIMO_Ant2_5775



Appendix D: Band edge measurements

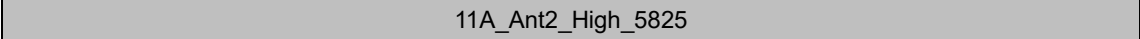
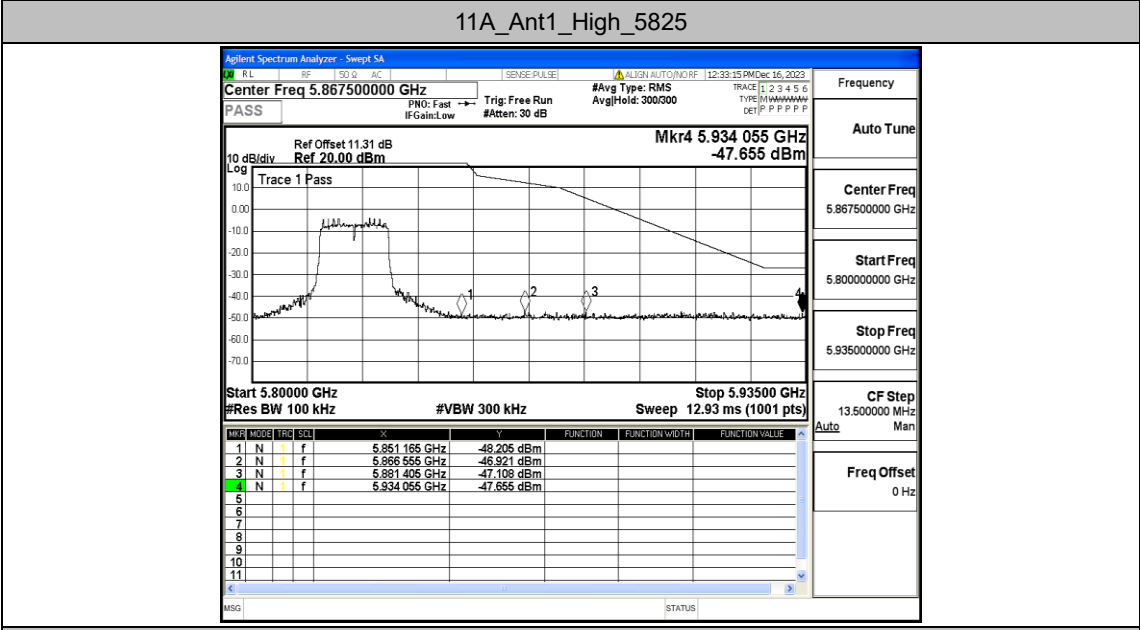
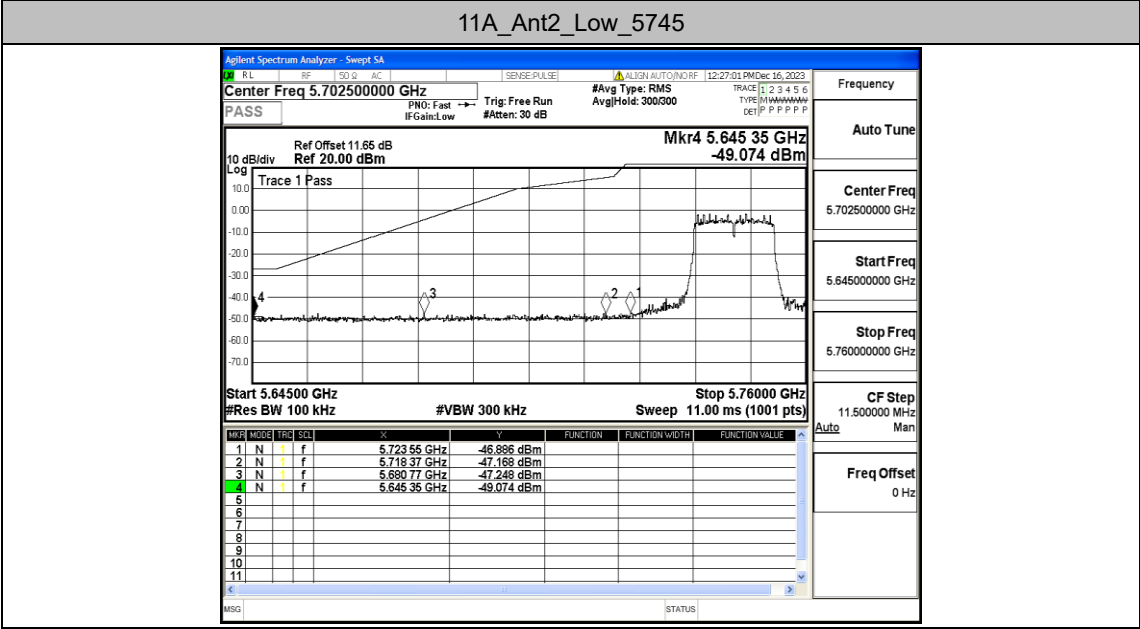
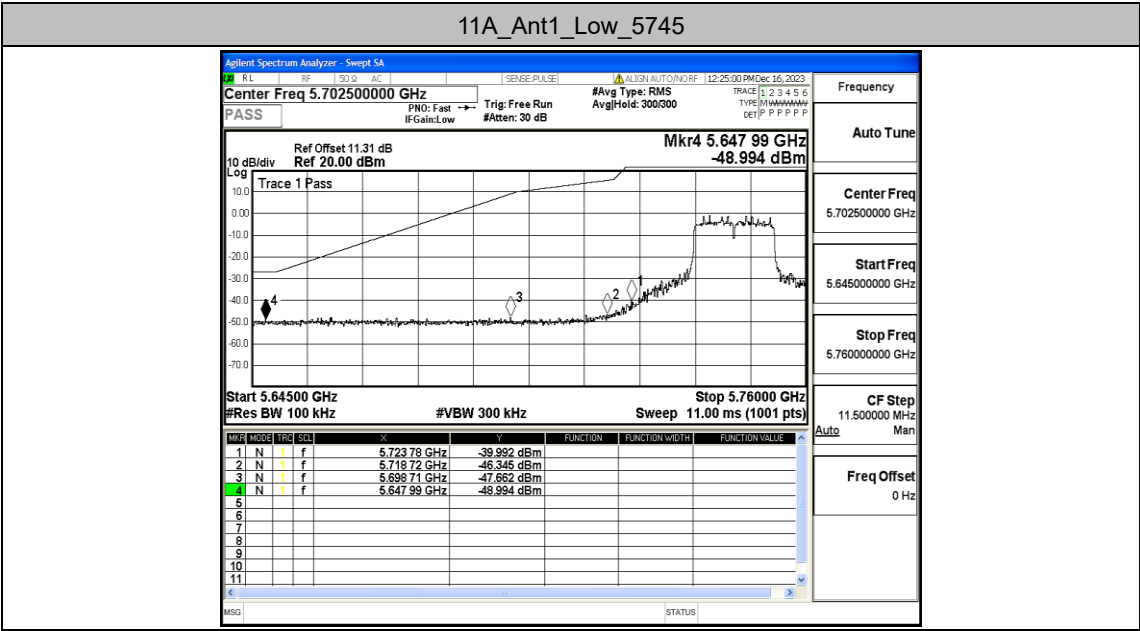
Test Result

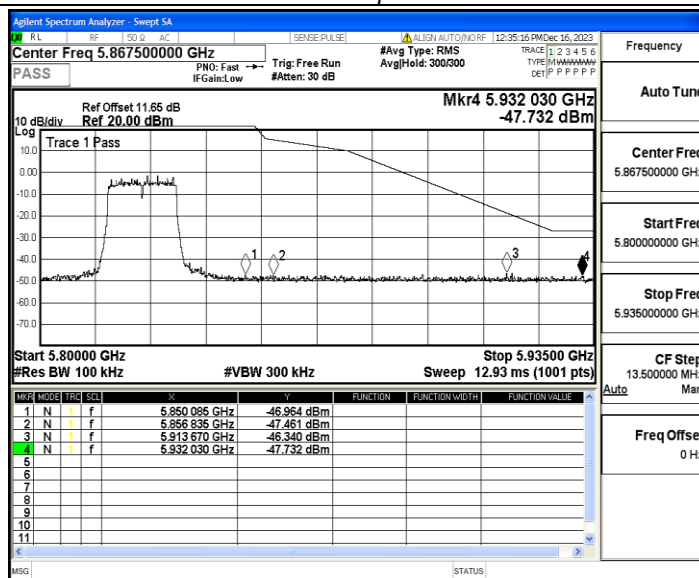
TestMode	Antenna	ChName	Channel	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5650~5700	-47.66	≤9.04	PASS
				5700~5720	-46.35	≤15.24	PASS
				5720~5725	-39.99	≤24.21	PASS
				5760~5650	-48.99	≤-27	PASS
	Ant2	Low	5745	5650~5700	-47.25	≤-4.23	PASS
				5700~5720	-47.17	≤15.14	PASS
				5720~5725	-46.89	≤23.68	PASS
				5760~5650	-49.07	≤-27	PASS
	Ant1	High	5825	5850~5855	-48.21	≤18.26	PASS
				5855~5875	-46.92	≤13.24	PASS
				5875~5925	-47.11	≤-22.26	PASS
				5925~5935	-47.66	≤-27	PASS
	Ant2	High	5825	5850~5855	-46.96	≤15.79	PASS
				5855~5875	-47.46	≤10.51	PASS
				5875~5925	-46.34	≤1.62	PASS
				5925~5935	-47.73	≤-27	PASS
11N20MI MO	Ant1	Low	5745	5650~5700	-48.13	≤-10.19	PASS
				5700~5720	-47.77	≤15.01	PASS
				5720~5725	-45.78	≤25.52	PASS
				5760~5650	-48.42	≤-27	PASS
	Ant2	Low	5745	5650~5700	-47.37	≤3.34	PASS
				5700~5720	-47.8	≤11.79	PASS
				5720~5725	-47.31	≤25.52	PASS
				5760~5650	-47.5	≤-27	PASS
	Ant1	High	5825	5850~5855	-46.94	≤26.57	PASS
				5855~5875	-47.44	≤12.14	PASS
				5875~5925	-47.08	≤-1.48	PASS
				5925~5935	-47.19	≤-27	PASS
	Ant2	High	5825	5850~5855	-46.67	≤21.03	PASS
				5855~5875	-46.24	≤12.06	PASS
				5875~5925	-46.8	≤-6.68	PASS
				5925~5935	-47.68	≤-27	PASS
11N40MI MO	Ant1	Low	5755	5650~5700	-47.43	≤9.16	PASS
				5700~5720	-44.28	≤15.01	PASS
				5720~5725	-43.71	≤20.66	PASS
				5780~5650	-49.08	≤-27	PASS
	Ant2	Low	5755	5650~5700	-47.68	≤6.66	PASS
				5700~5720	-47.47	≤15.09	PASS
				5720~5725	-46.68	≤25.59	PASS
				5780~5650	-48.53	≤-27	PASS

	Ant1	High	5795	5850~5855	-47.79	≤25.81	PASS
				5855~5875	-47.01	≤11.43	PASS
				5875~5925	-47.04	≤-4.94	PASS
				5925~5935	-48.11	≤-27	PASS
	Ant2	High	5795	5850~5855	-47.62	≤23.18	PASS
				5855~5875	-46.57	≤11.93	PASS
				5875~5925	-46.7	≤-6.41	PASS
				5925~5935	-47.05	≤-27	PASS
11AC20M IMO	Ant1	Low	5745	5650~5700	-48.16	≤-16.49	PASS
				5700~5720	-47.35	≤15.56	PASS
				5720~5725	-45.3	≤26.57	PASS
				5760~5650	-49.06	≤-27	PASS
	Ant2	Low	5745	5650~5700	-46.89	≤-21.59	PASS
				5700~5720	-47.84	≤13.02	PASS
				5720~5725	-46.89	≤24.21	PASS
				5760~5650	-49.06	≤-27	PASS
	Ant1	High	5825	5850~5855	-47.96	≤21.95	PASS
				5855~5875	-47.42	≤12.25	PASS
				5875~5925	-46.73	≤-3.28	PASS
				5925~5935	-47.6	≤-27	PASS
	Ant2	High	5825	5850~5855	-47.05	≤22.26	PASS
				5855~5875	-46.79	≤11.19	PASS
				5875~5925	-46.95	≤9.91	PASS
				5925~5935	-47.82	≤-27	PASS
11AC40M IMO	Ant1	Low	5755	5650~5700	-48.05	≤-10.22	PASS
				5700~5720	-45.51	≤15.35	PASS
				5720~5725	-42.03	≤24.36	PASS
				5780~5650	-49.01	≤-27	PASS
	Ant2	Low	5755	5650~5700	-47.54	≤-0.73	PASS
				5700~5720	-46.67	≤15.58	PASS
				5720~5725	-46.87	≤21.28	PASS
				5780~5650	-48.22	≤-27	PASS
	Ant1	High	5795	5850~5855	-47.81	≤19.42	PASS
				5855~5875	-45.73	≤10.27	PASS
				5875~5925	-46.63	≤-0.92	PASS
				5925~5935	-47.48	≤-27	PASS
	Ant2	High	5795	5850~5855	-48.08	≤15.66	PASS
				5855~5875	-46.78	≤10.18	PASS
				5875~5925	-46.62	≤-9.58	PASS
				5925~5935	-46.68	≤-27	PASS
11AC80M IMO	Ant1	Low	5775	5650~5700	-45.69	≤7.50	PASS
				5700~5720	-42.7	≤14.56	PASS
				5720~5725	-40.13	≤26.95	PASS
				5800~5650	-48.47	≤-27	PASS
		High	5775	5850~5855	-43.26	≤23.39	PASS
				5855~5875	-43.43	≤10.18	PASS

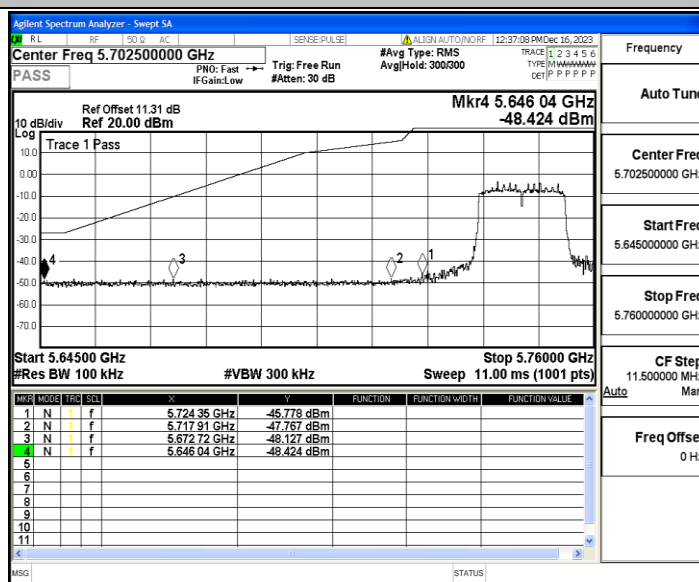
				5875~5925	-46.52	≤ -8.47	PASS		
				5925~5935	-47.51	≤ -27	PASS		
	Ant2	Low	5775	5650~5700	-47.67	≤ 2.79	PASS		
						5700~5720	-46.75	≤ 14.87	PASS
						5720~5725	-47.67	≤ 25.54	PASS
						5800~5650	-48.85	≤ -27	PASS
			High	5775	5850~5855	-46.42	≤ 21.28	PASS	
						5855~5875	-47.07	≤ 14.22	PASS
						5875~5925	-46.68	≤ 7.68	PASS
						5925~5935	-47.05	≤ -27	PASS

Test Graphs

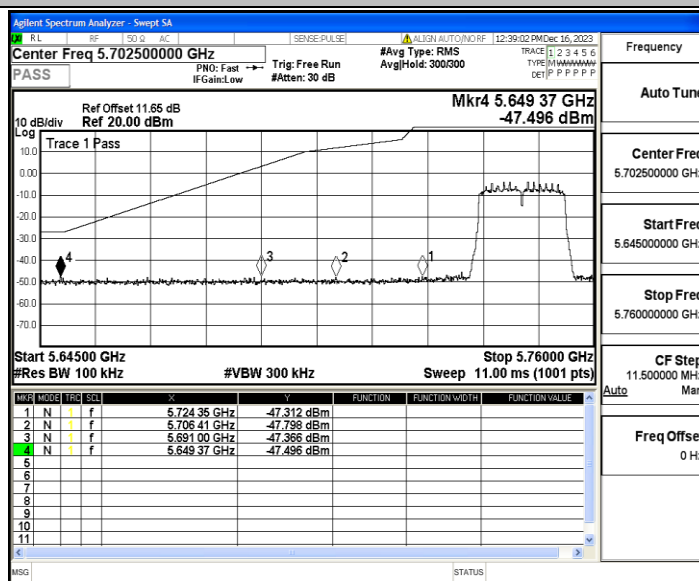




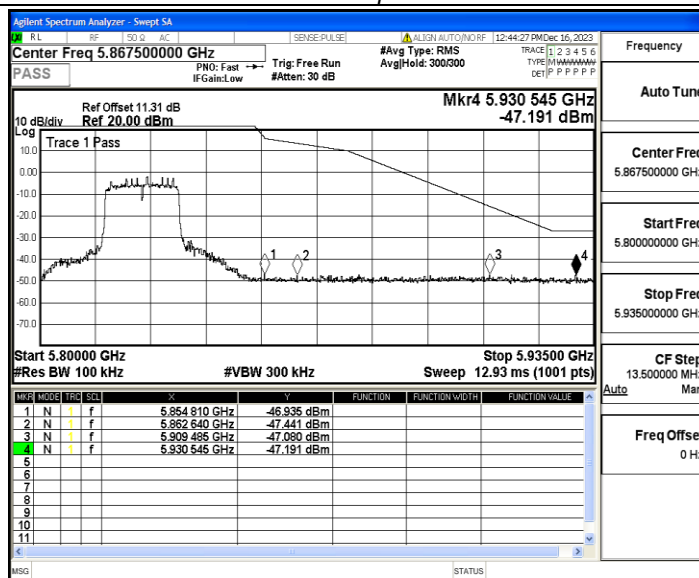
11N20MIMO_Ant1_Low_5745



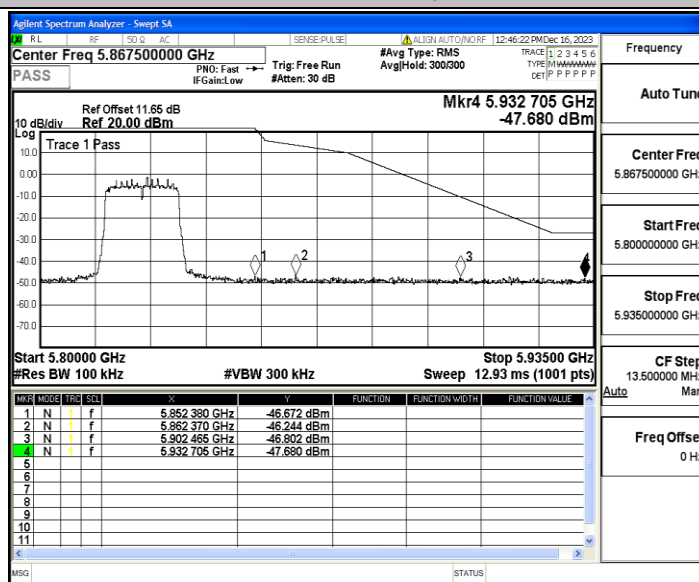
11N20MIMO_Ant2_Low_5745



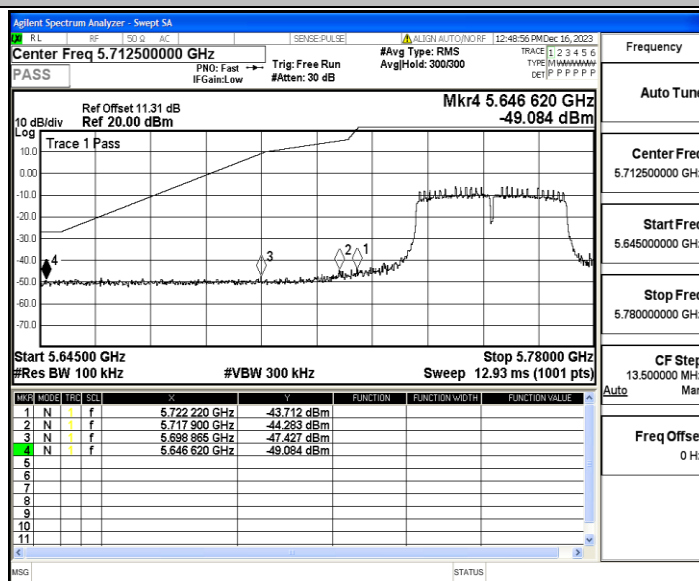
11N20MIMO_Ant1_High_5825



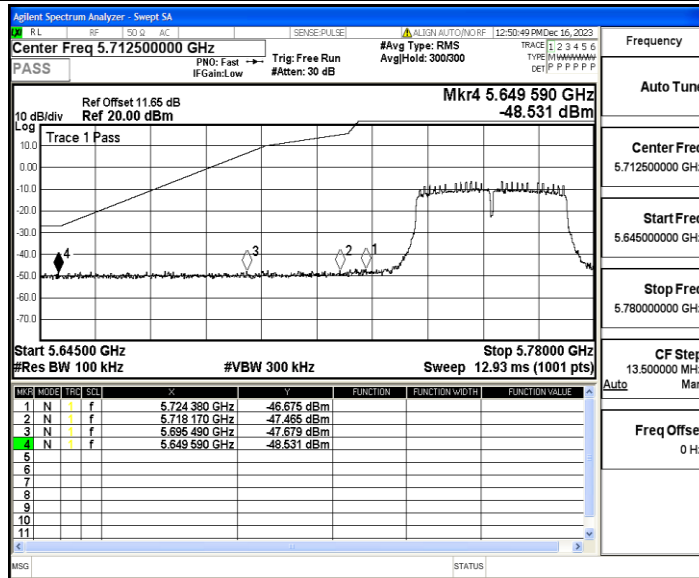
11N20MIMO_Ant2_High_5825



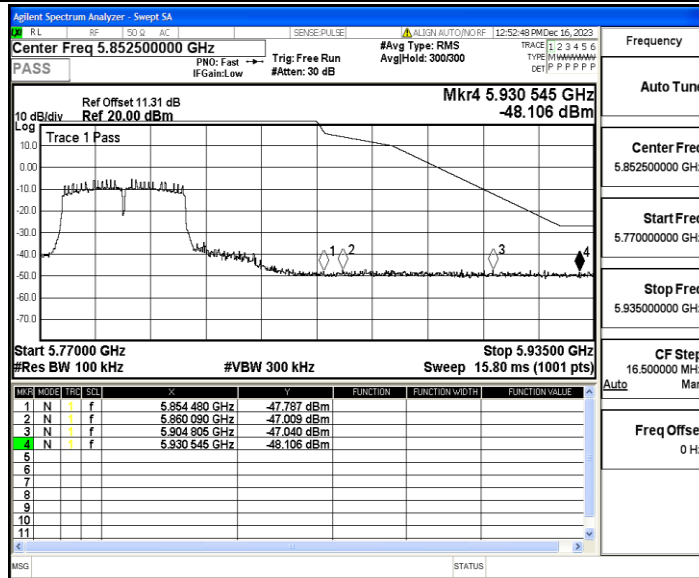
11N40MIMO_Ant1_Low_5755



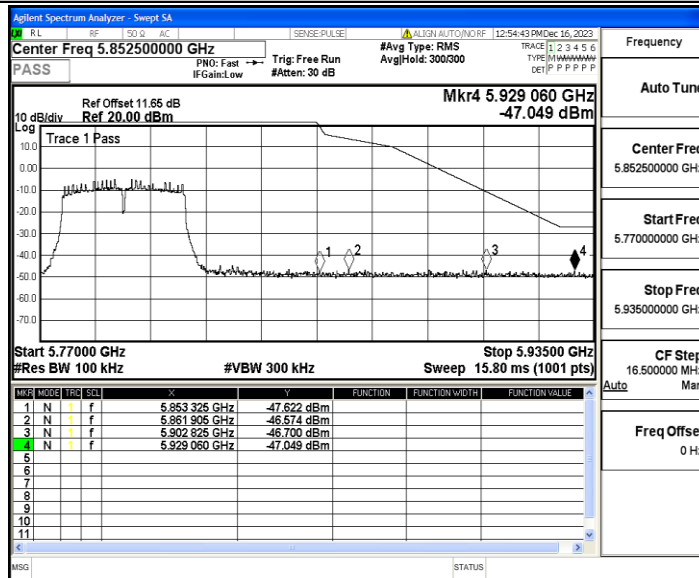
11N40MIMO_Ant2_Low_5755



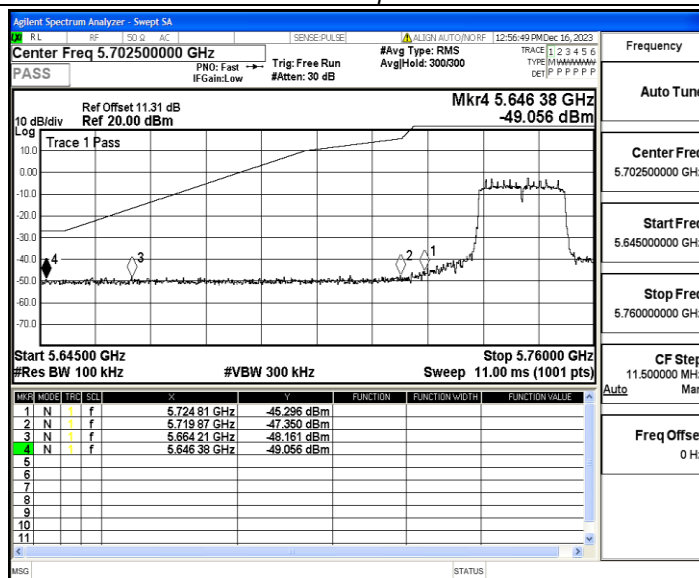
11N40MIMO_Ant1_High_5795



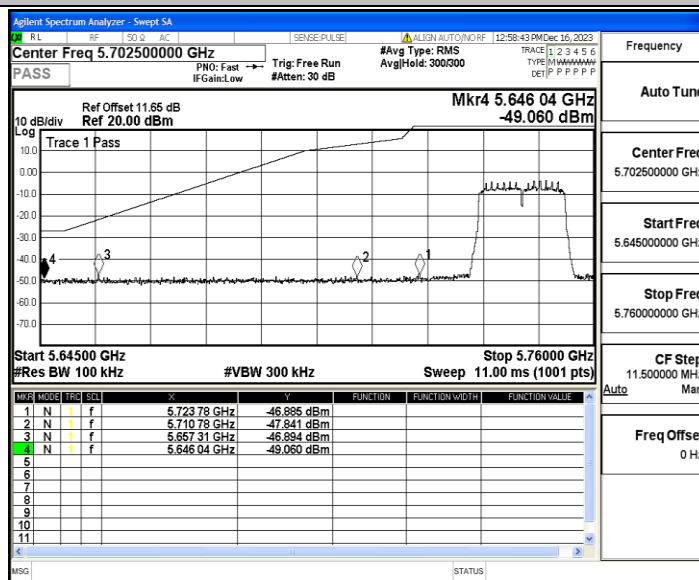
11N40MIMO_Ant2_High_5795



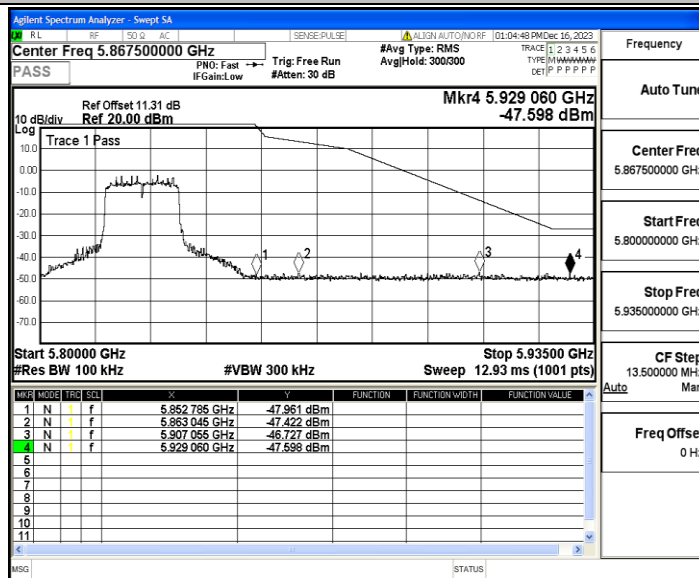
11AC20MIMO_Ant1_Low_5745



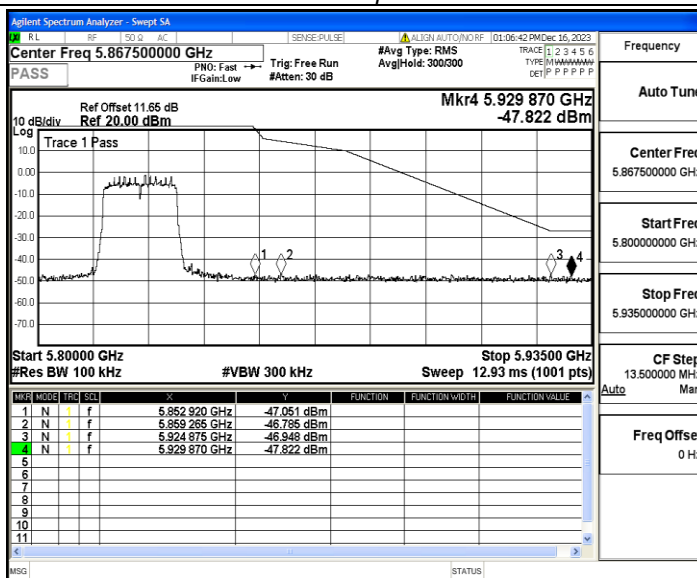
11AC20MIMO_Ant2_Low_5745



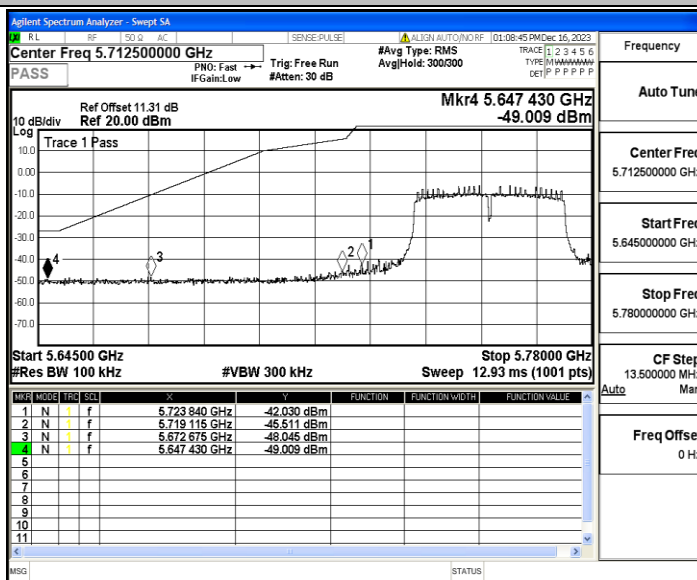
11AC20MIMO_Ant1_High_5825



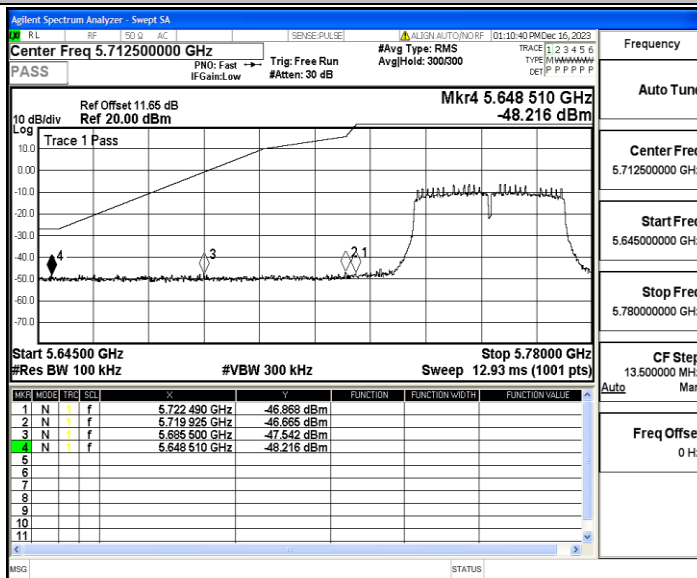
11AC20MIMO_Ant2_High_5825



11AC40MIMO_Ant1_Low_5755



11AC40MIMO_Ant2_Low_5755



11AC40MIMO_Ant1_High_5795