

Appendix A: Test result for 5GHz&5.8GHz Wi-Fi

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1.1 Appendix A1: Emission Bandwidth

1.1.1 Test Result

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	18.920	5170.280	5189.200	---	---
		5200	23.000	5188.400	5211.400	---	---
		5240	24.320	5229.560	5253.880	---	---
		5745	18.360	5735.800	5754.160	---	---
		5785	18.480	5775.760	5794.240	---	---
		5825	19.280	5815.520	5834.800	---	---
11N20MIMO	Ant1	5180	19.440	5170.280	5189.720	---	---
		5200	19.440	5190.320	5209.760	---	---
		5240	19.400	5230.360	5249.760	---	---
		5745	19.320	5735.360	5754.680	---	---
		5785	19.320	5775.400	5794.720	---	---
		5825	19.440	5815.320	5834.760	---	---
11N40MIMO	Ant1	5190	41.920	5168.960	5210.880	---	---
		5230	41.680	5209.200	5250.880	---	---
		5755	50.720	5731.560	5782.280	---	---
		5795	42.880	5773.880	5816.760	---	---
11AC20MIMO	Ant1	5180	19.520	5170.280	5189.800	---	---
		5200	19.480	5190.320	5209.800	---	---
		5240	19.400	5230.320	5249.720	---	---
		5745	19.680	5735.200	5754.880	---	---
		5785	19.640	5775.200	5794.840	---	---
		5825	19.960	5815.360	5835.320	---	---
11AC40MIMO	Ant1	5190	41.120	5169.200	5210.320	---	---
		5230	40.240	5210.000	5250.240	---	---
		5755	41.280	5734.360	5775.640	---	---
		5795	41.520	5774.200	5815.720	---	---
11AC80MIMO	Ant1	5210	81.440	5169.200	5250.640	---	---
		5775	82.720	5733.720	5816.440	---	---

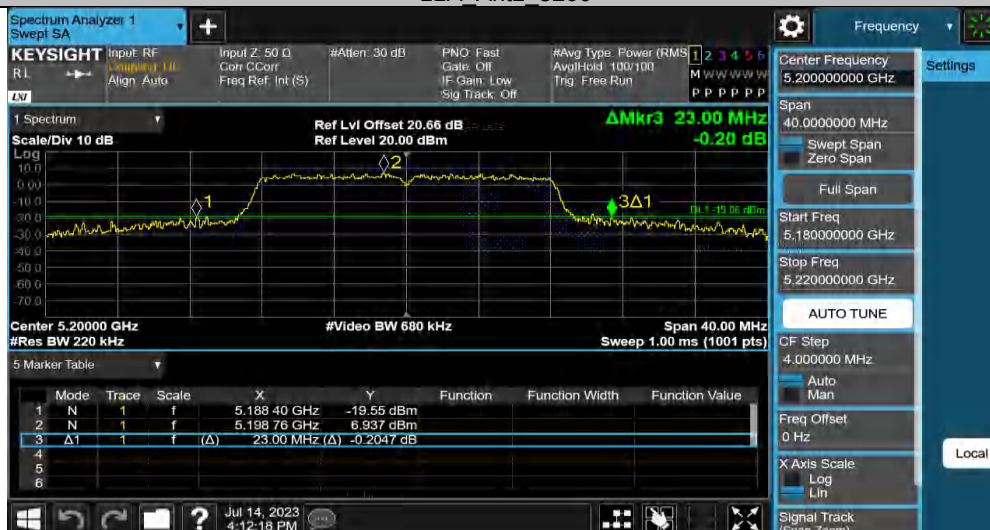
Note: Test were performed on ANT1 and ANT2 Ports, the worst case was recorded.

1.1.2 Test Graphs

11A Ant1 5180



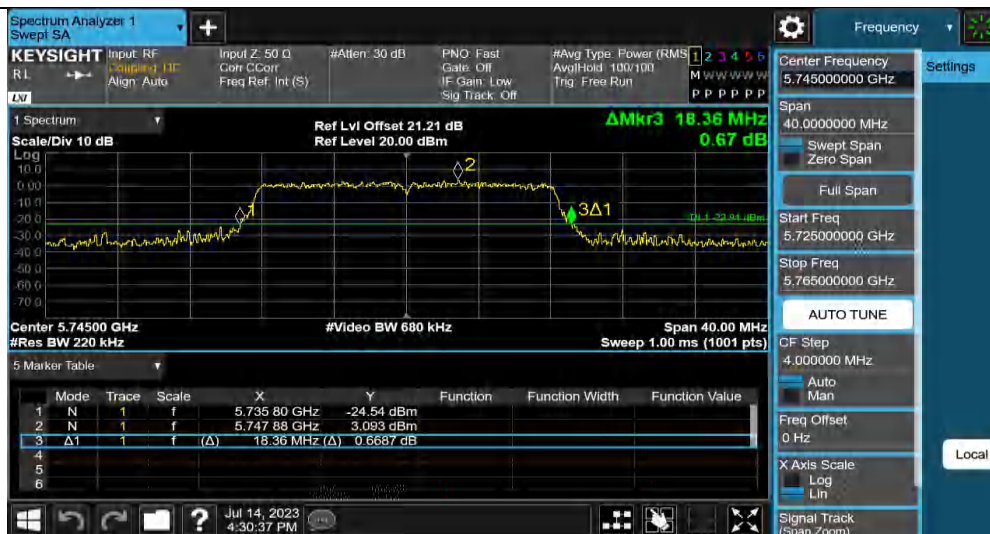
11A Ant1 5200



11A Ant1 5240



11A Ant1 5745



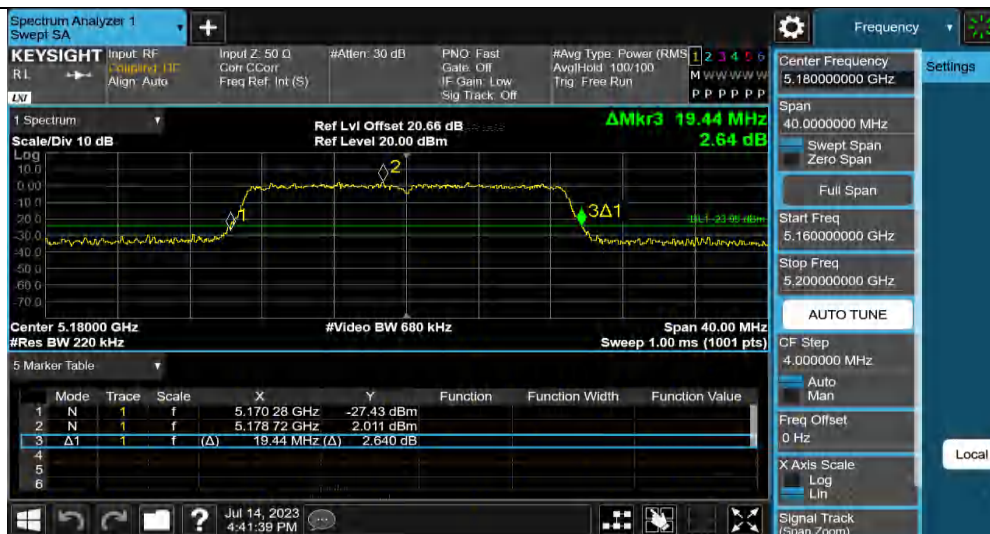
11A Ant1 5785



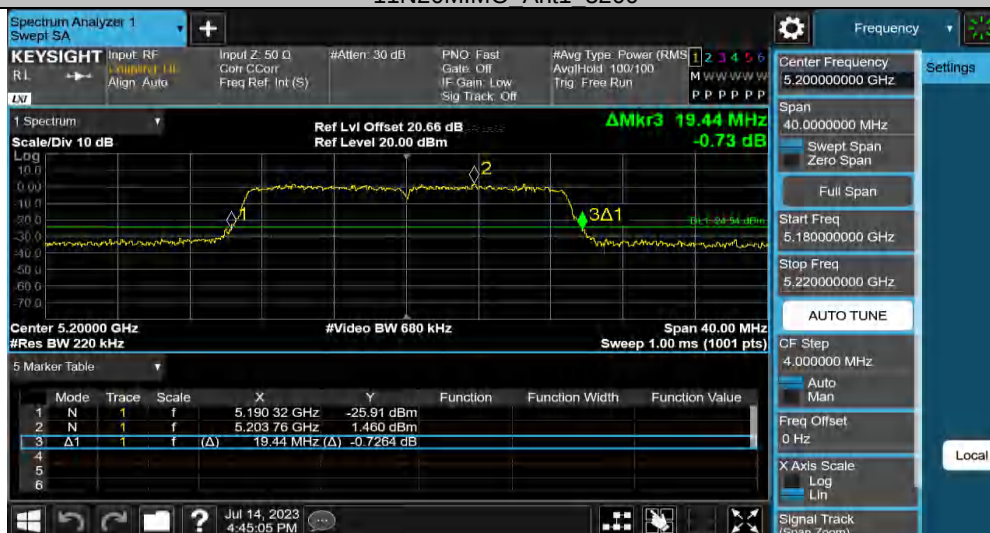
11A Ant1 5825



11N20MIMO Ant1 5180



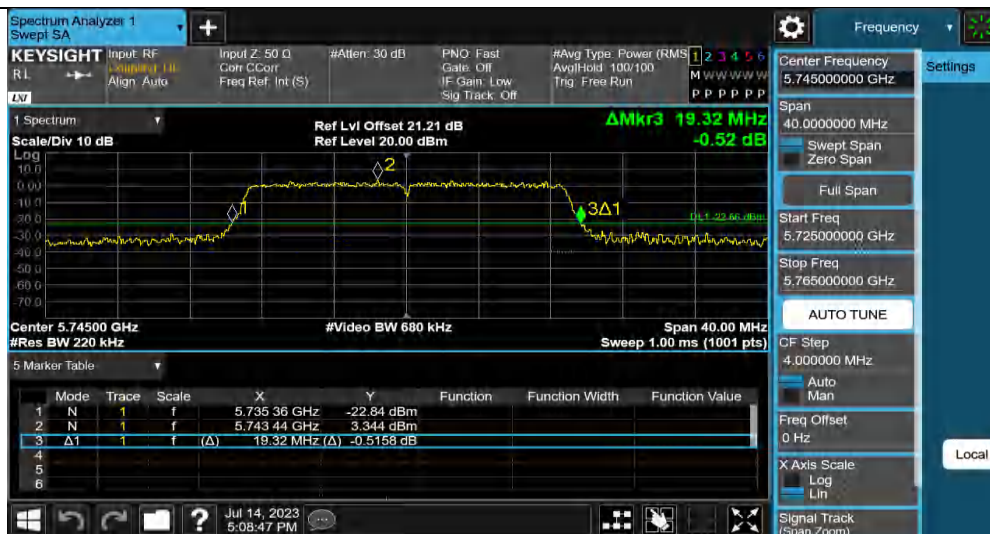
11N20MIMO Ant1 5200



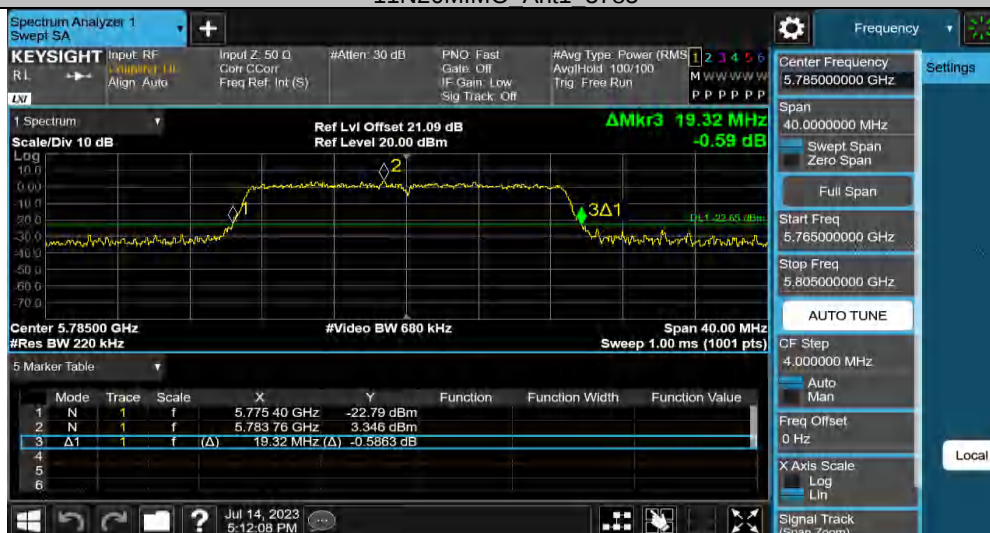
11N20MIMO Ant1 5240



11N20MIMO Ant1 5745



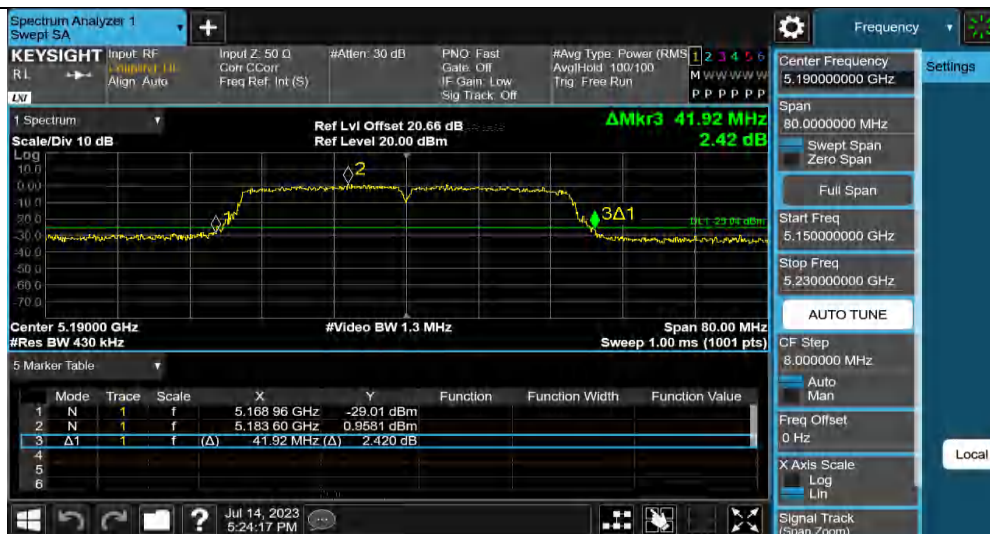
11N20MIMO Ant1 5785



11N20MIMO Ant1 5825



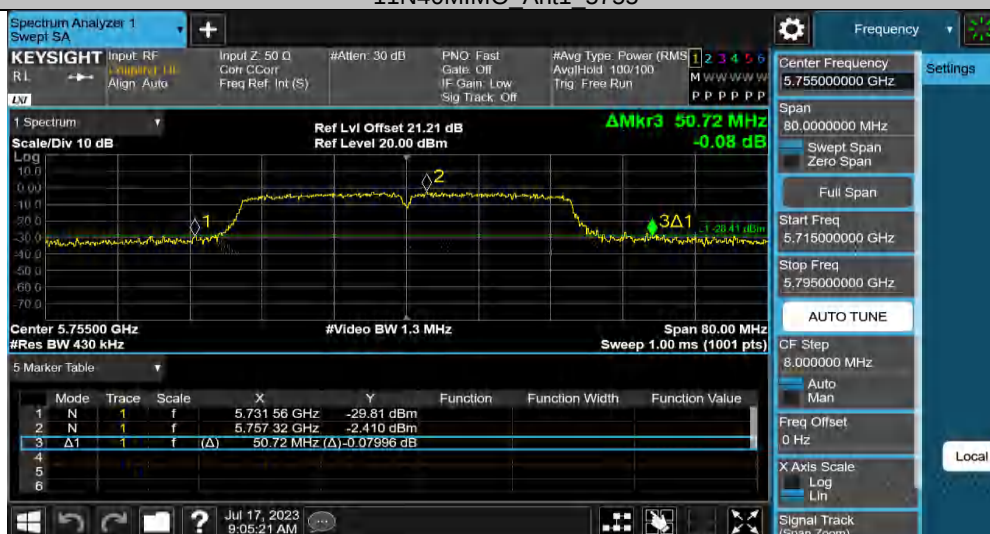
11N40MIMO Ant1 5190



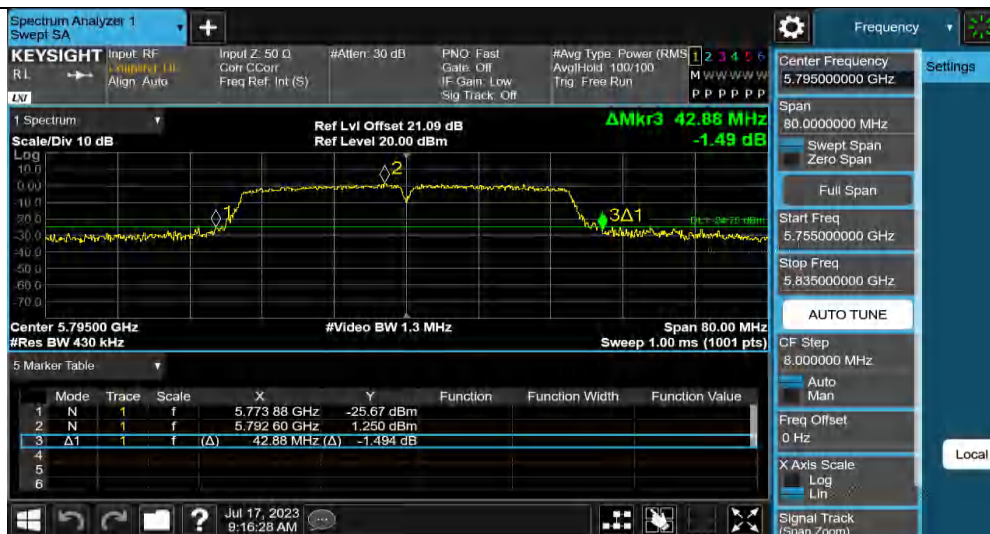
11N40MIMO Ant1 5230



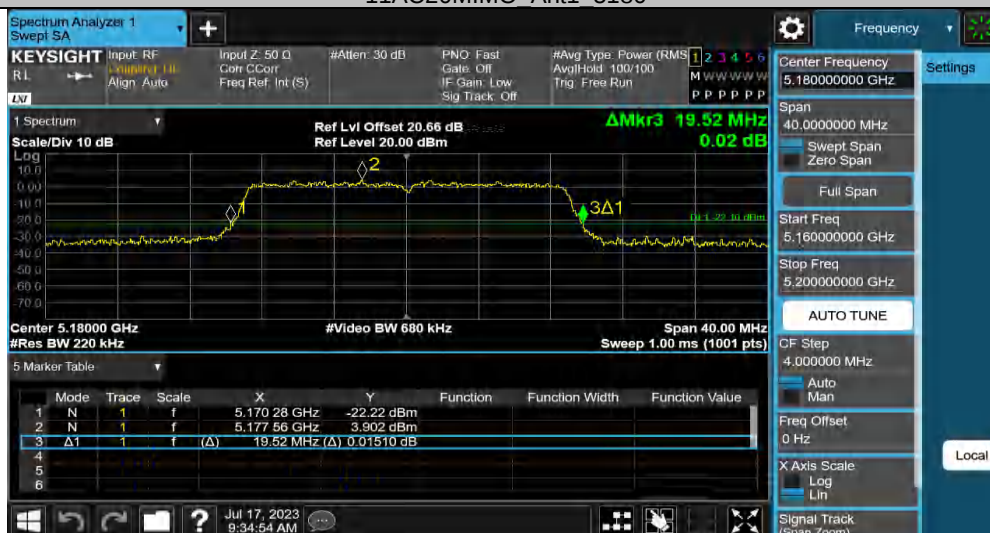
11N40MIMO Ant1 5755



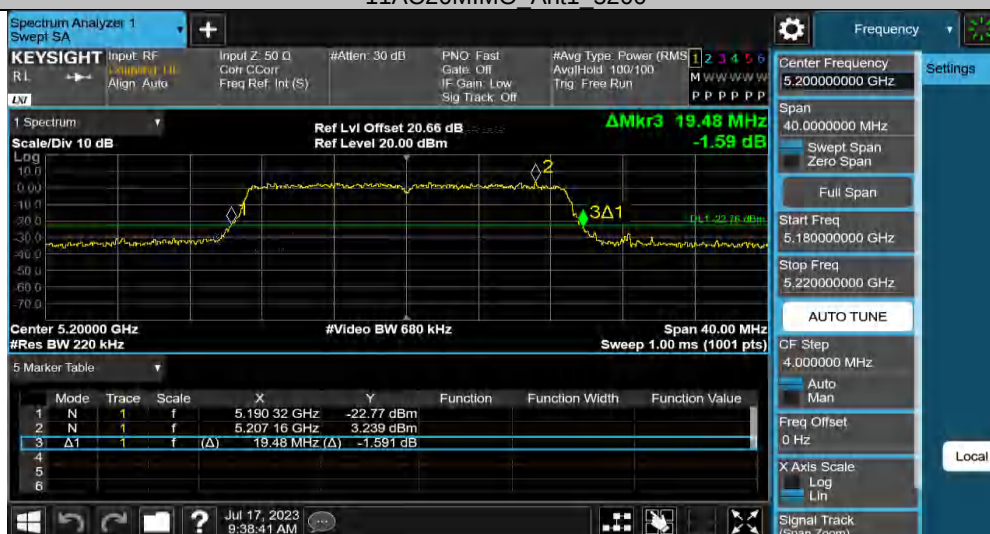
11N40MIMO Ant1 5795



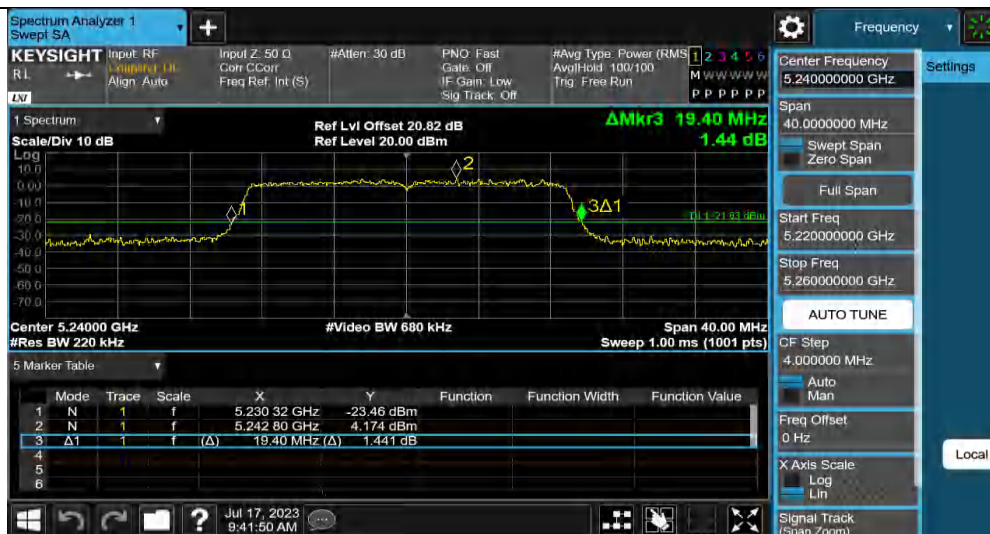
11AC20MIMO Ant1 5180



11AC20MIMO Ant1 5200



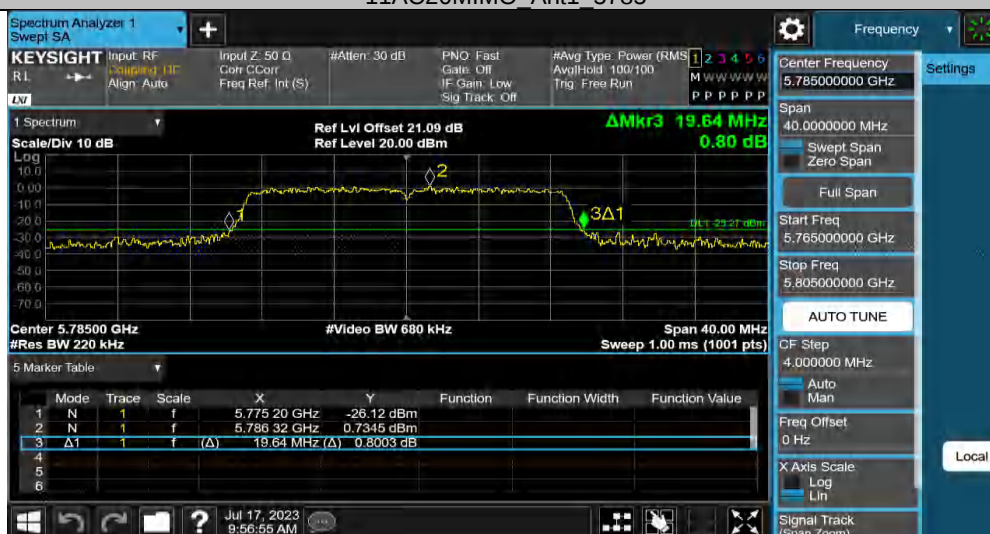
11AC20MIMO Ant1 5240



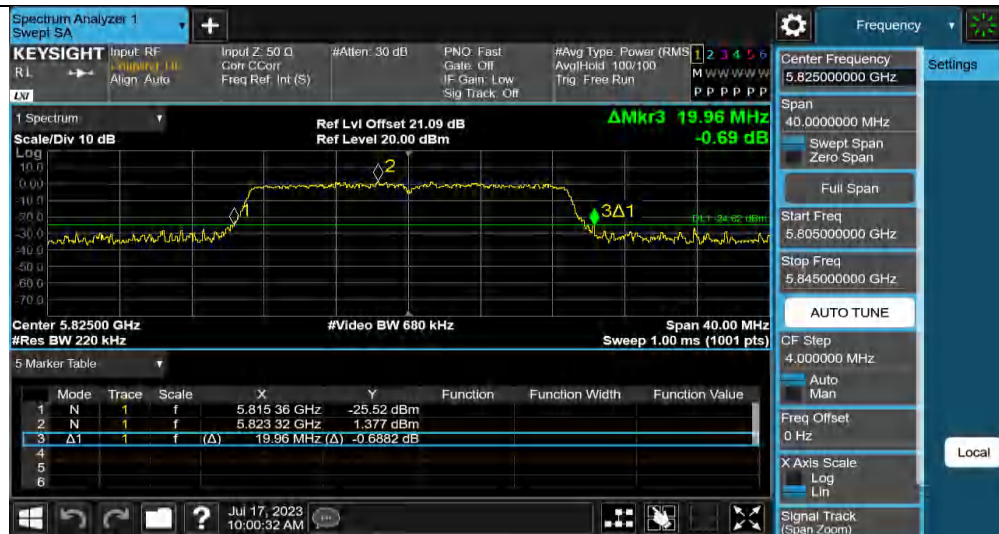
11AC20MIMO Ant1 5745



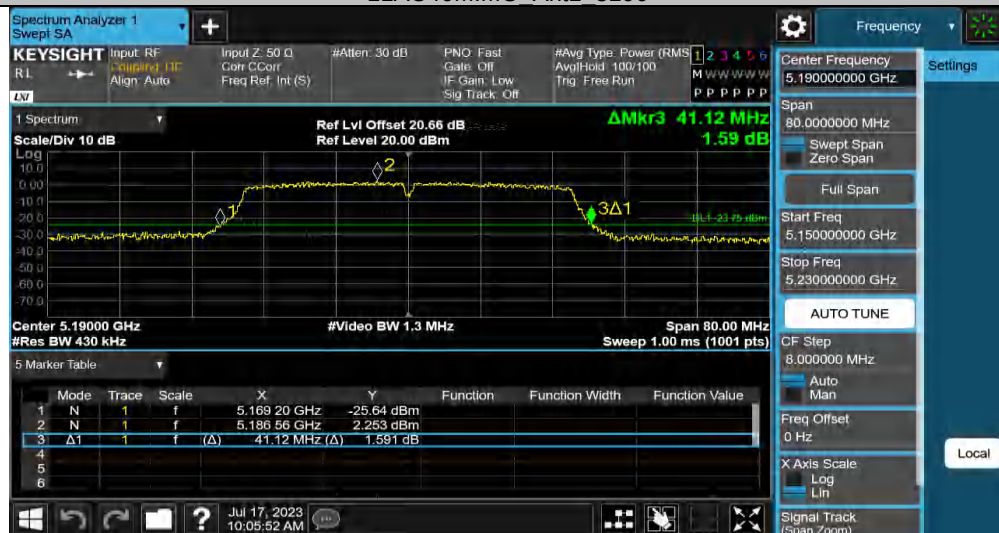
11AC20MIMO Ant1 5785



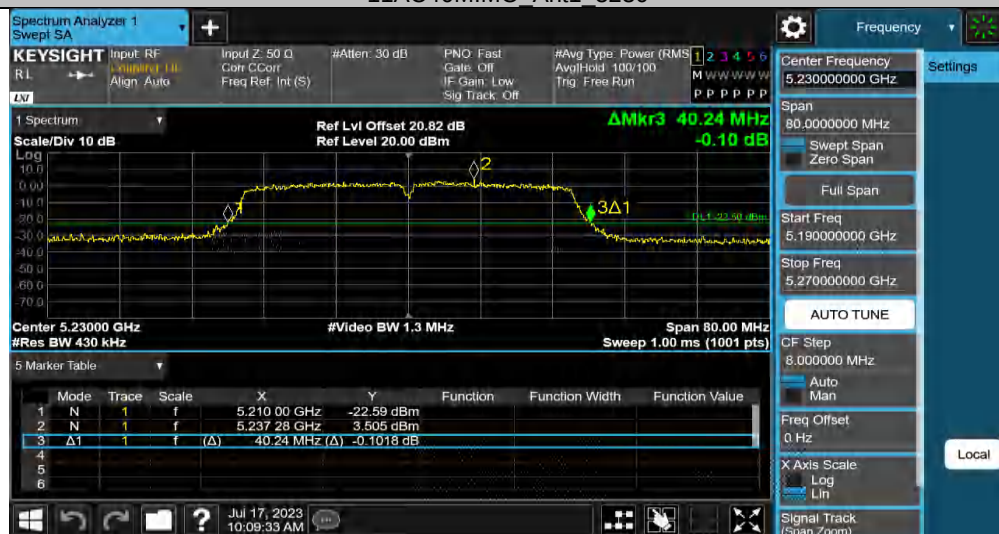
11AC20MIMO Ant1 5825



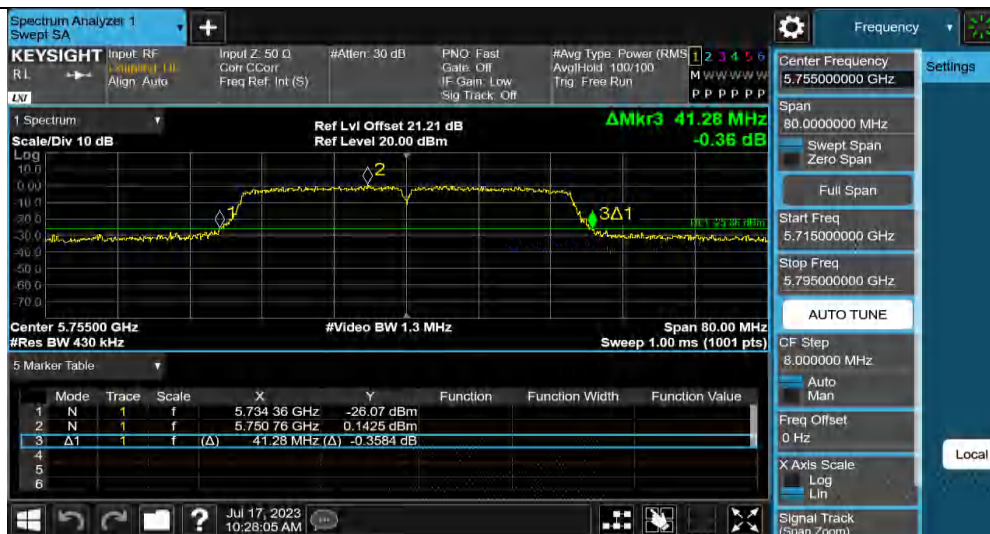
11AC40MIMO Ant1 5190



11AC40MIMO Ant1 5230



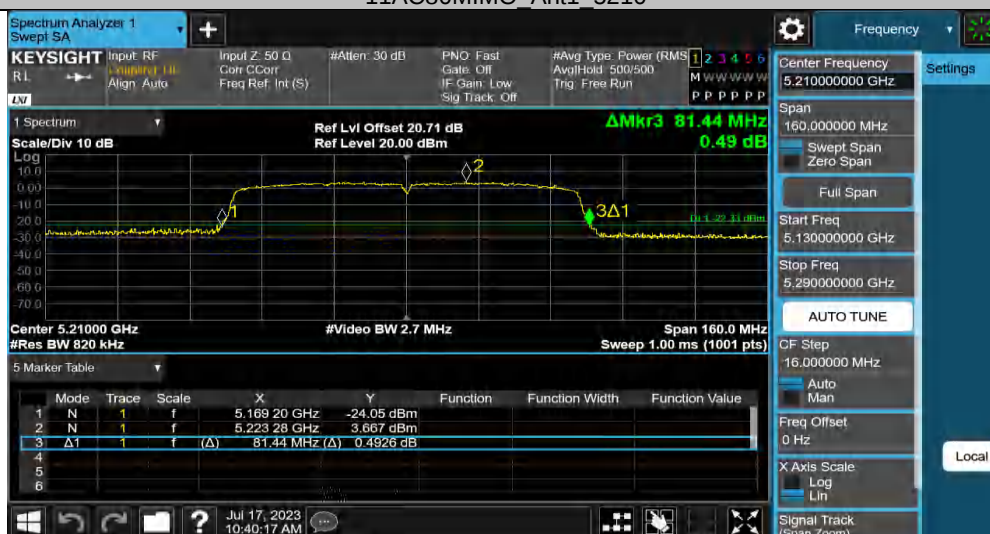
11AC40MIMO Ant1 5755



11AC40MIMO Ant1 5795



11AC80MIMO Ant1 5210



11AC80MIMO Ant1 5775



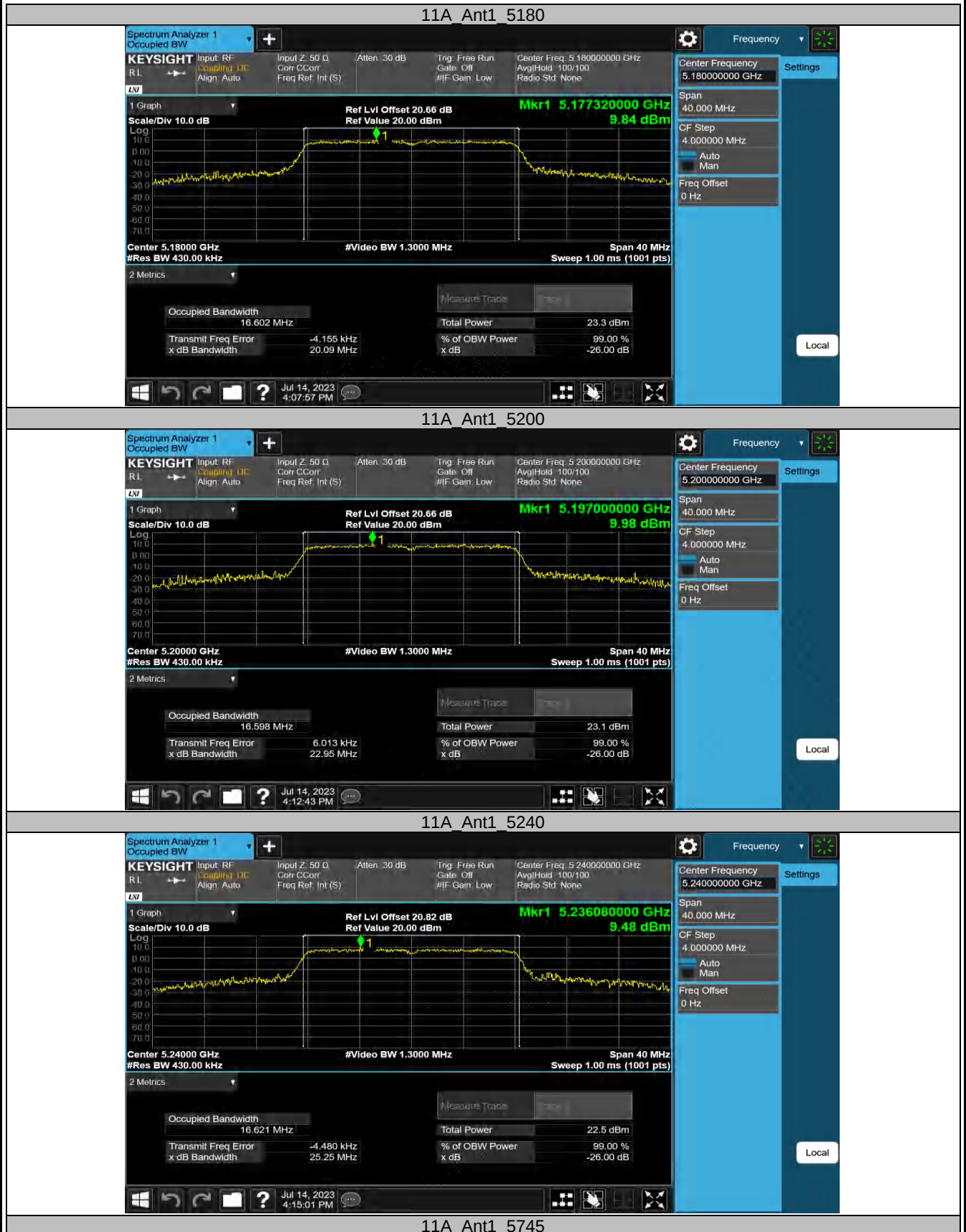
1.2 Appendix A2: Occupied channel bandwidth

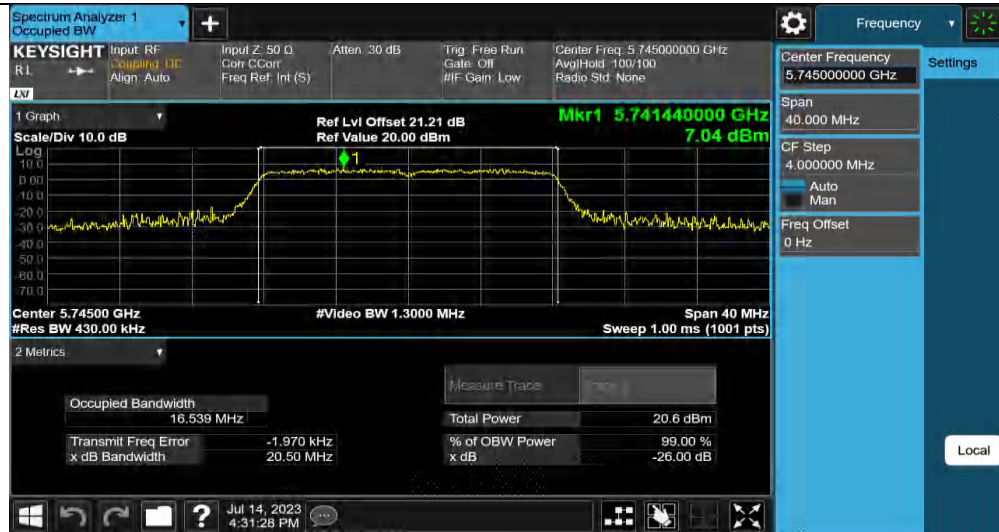
1.2.1 Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	16.602	5171.6949	5188.2969	---	---
		5200	16.598	5191.7070	5208.3050	---	---
		5240	16.621	5231.6850	5248.3060	---	---
		5745	16.539	5736.7285	5753.2675	---	---
		5785	16.568	5776.7104	5793.2784	---	---
		5825	16.652	5816.6932	5833.3452	---	---
11N20MIMO	Ant1	5180	17.641	5171.1801	5188.8211	---	---
		5200	17.658	5191.1775	5208.8355	---	---
		5240	17.641	5231.1968	5248.8378	---	---
		5745	17.650	5736.1972	5753.8472	---	---
		5785	17.667	5776.1704	5793.8374	---	---
		5825	17.703	5816.1769	5833.8799	---	---
11N40MIMO	Ant1	5190	36.375	5171.7156	5208.0906	---	---
		5230	36.272	5211.8534	5248.1254	---	---
		5755	36.450	5736.8417	5773.2917	---	---
		5795	36.400	5776.8954	5813.2954	---	---
11AC20MIMO	Ant1	5180	17.685	5171.1906	5188.8756	---	---
		5200	17.656	5191.2177	5208.8737	---	---
		5240	17.642	5231.2299	5248.8719	---	---
		5745	17.670	5736.1869	5753.8569	---	---
		5785	17.668	5776.2003	5793.8683	---	---
		5825	17.700	5816.1790	5833.8790	---	---
11AC40MIMO	Ant1	5190	36.328	5171.7902	5208.1182	---	---
		5230	36.170	5211.9795	5248.1495	---	---
		5755	36.456	5736.8352	5773.2912	---	---
		5795	36.296	5776.9207	5813.2167	---	---
11AC80MIMO	Ant1	5210	74.904	5172.4885	5247.3925	---	---
		5775	75.218	5737.5094	5812.7274	---	---

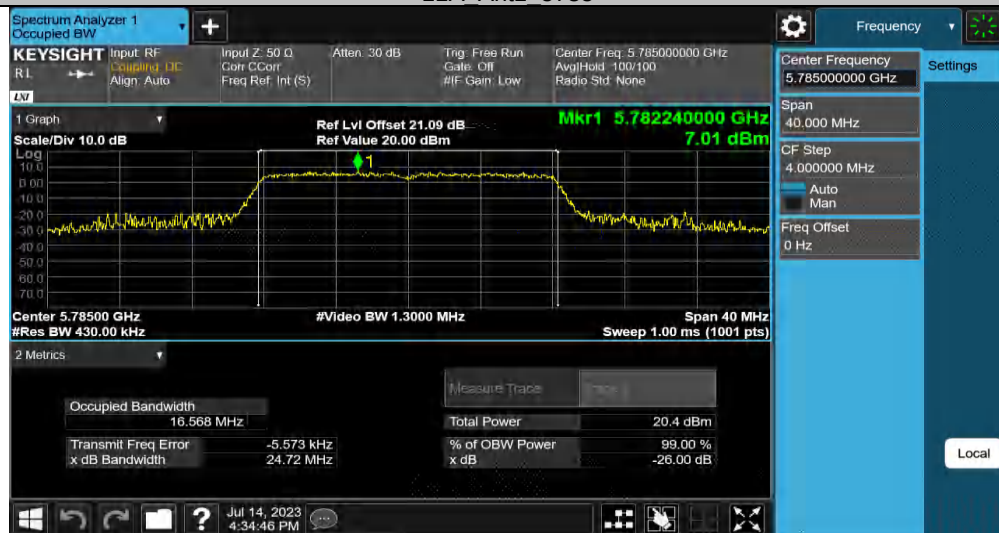
Note: Test were performed on ANT1 and ANT2 Ports, the worst case was recorded.

1.2.2 Test Graphs





11A Ant1 5785



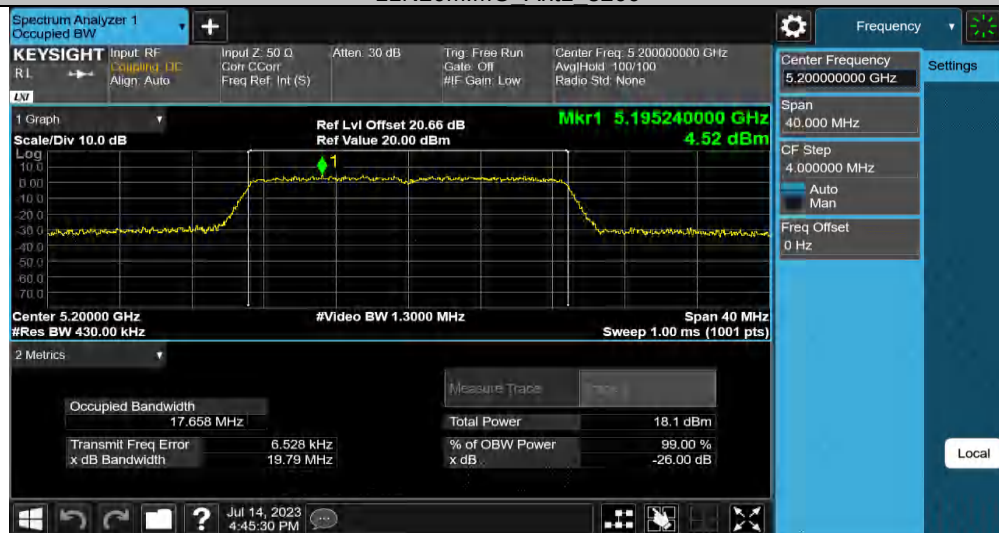
11A Ant1 5825



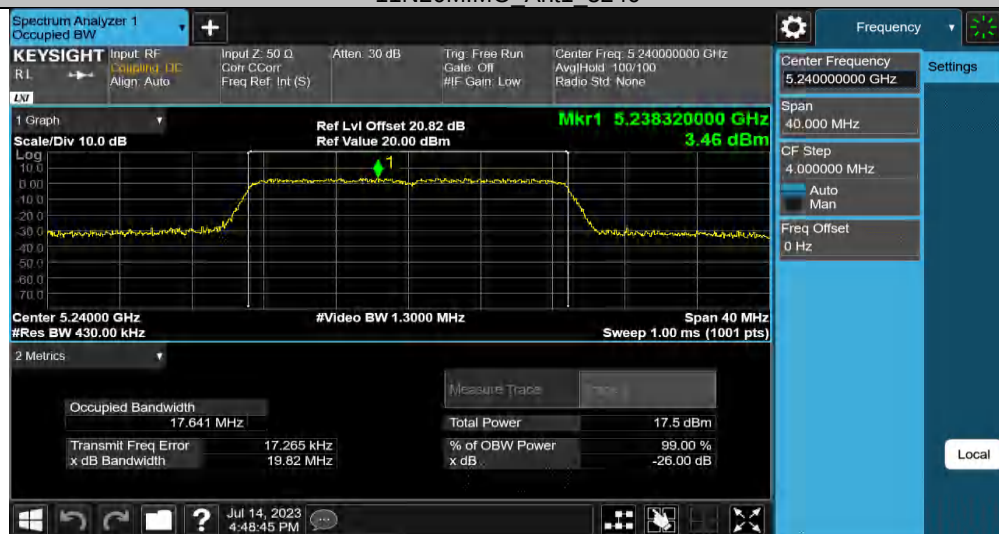
11N20MIMO Ant1 5180



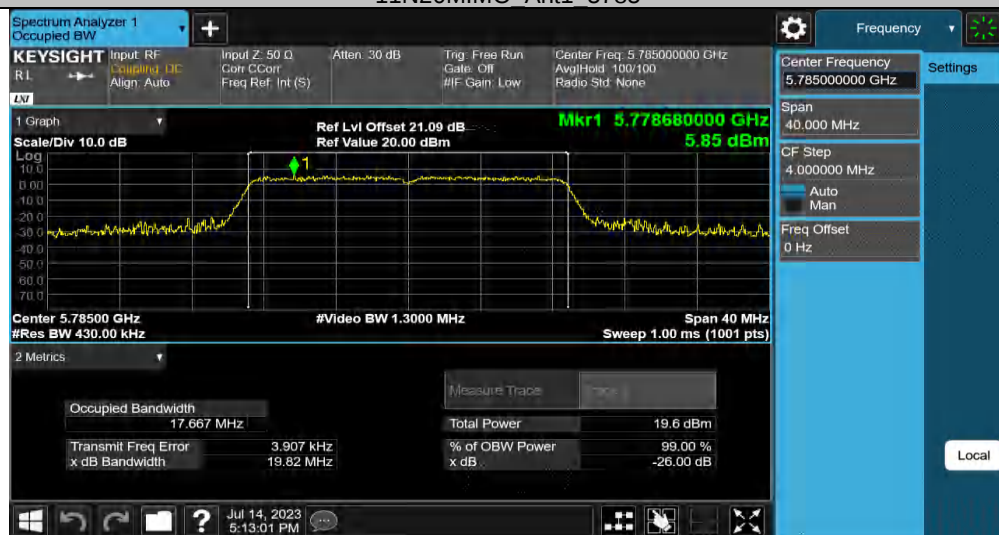
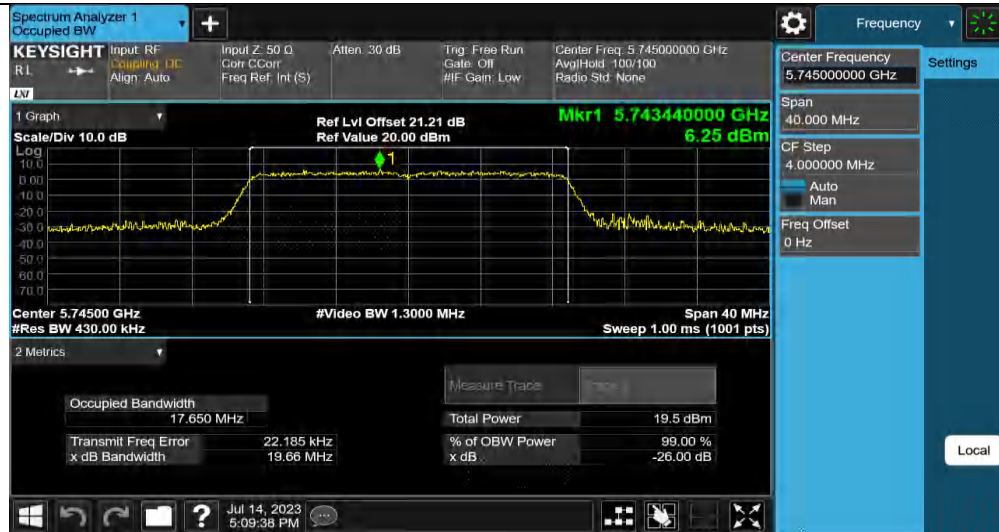
11N20MIMO Ant1 5200



11N20MIMO Ant1 5240



11N20MIMO Ant1 5745

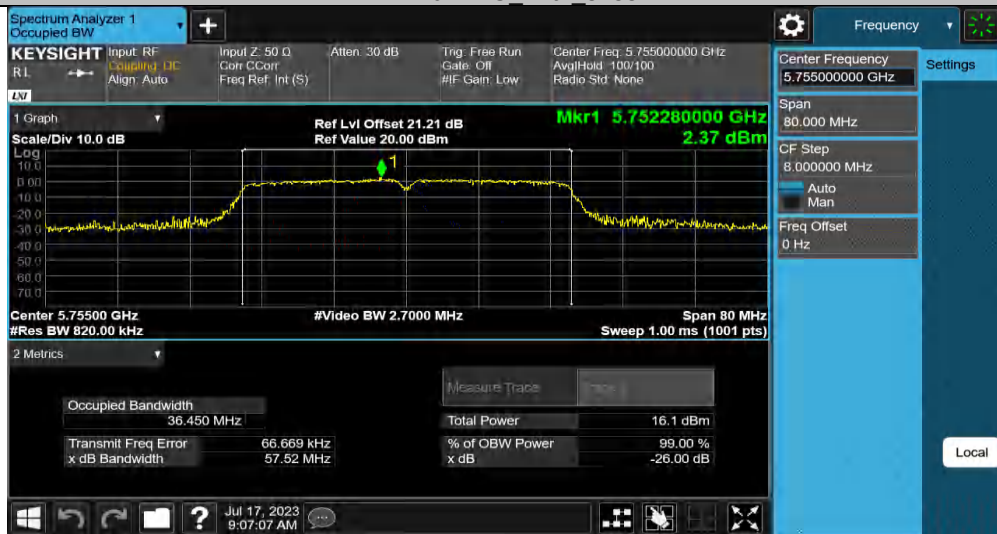




11N40MIMO Ant1 5230



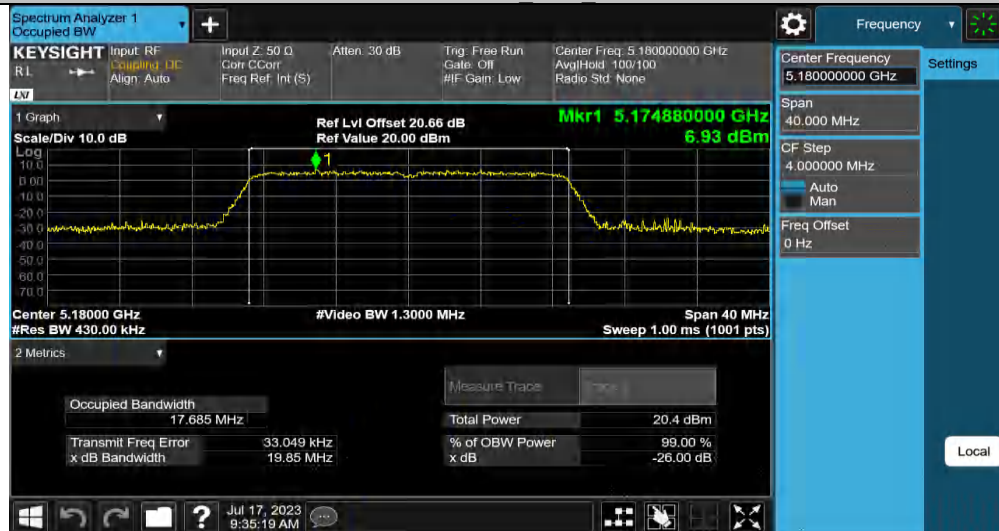
11N40MIMO Ant1 5755



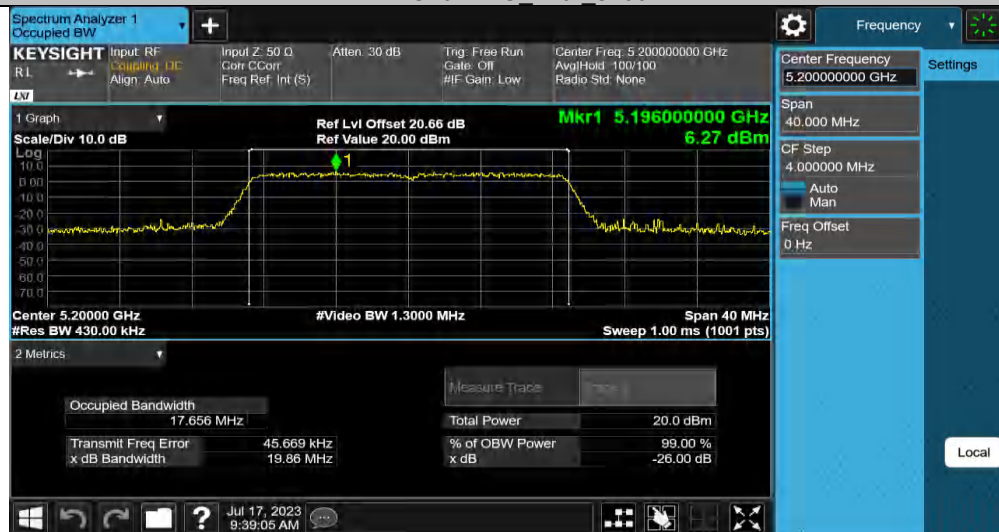
11N40MIMO Ant1 5795



11AC20MIMO Ant1 5180



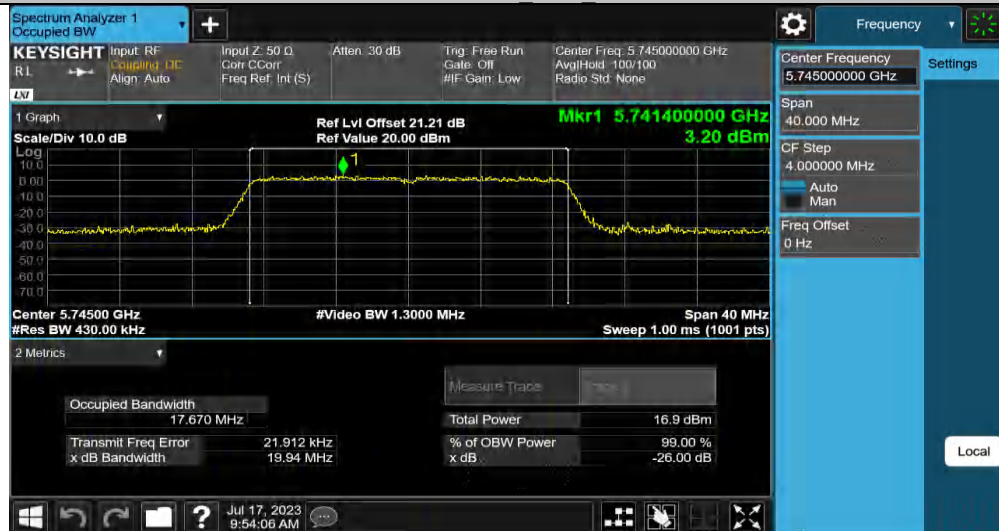
11AC20MIMO Ant1 5200



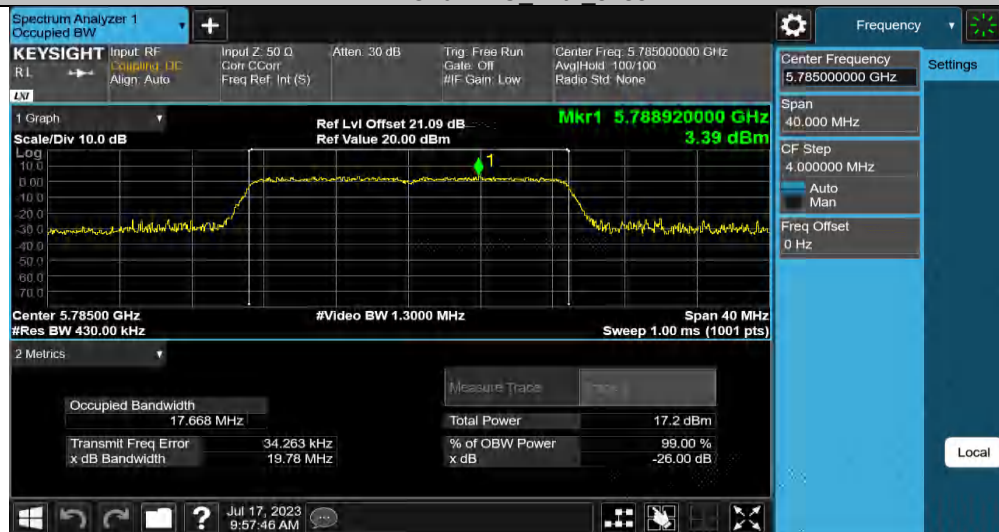
11AC20MIMO Ant1 5240



11AC20MIMO Ant1 5745



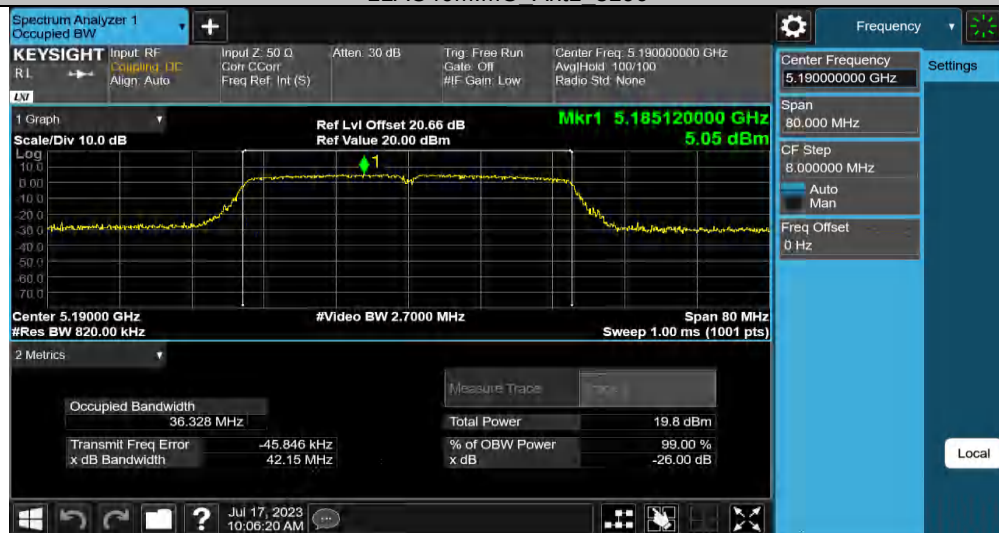
11AC20MIMO Ant1 5785



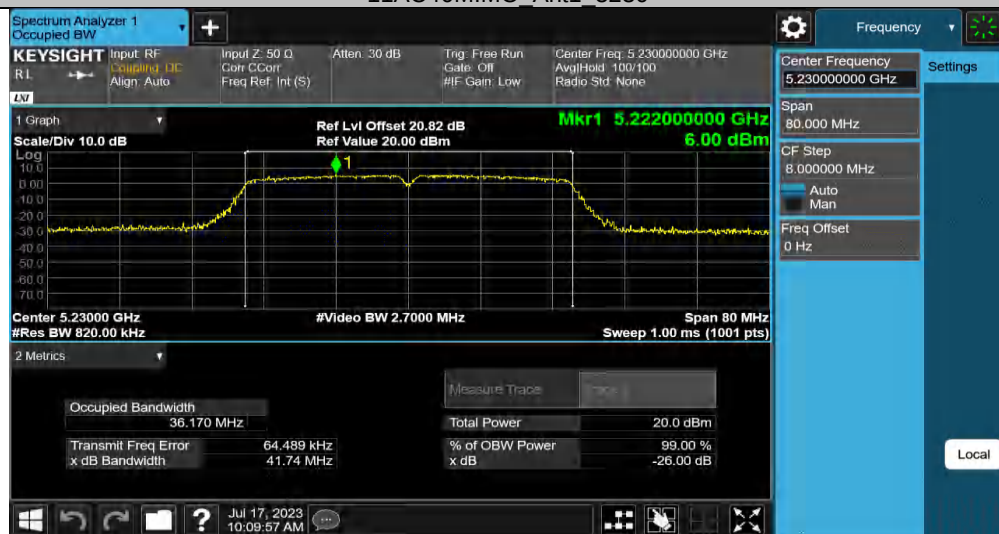
11AC20MIMO Ant1 5825



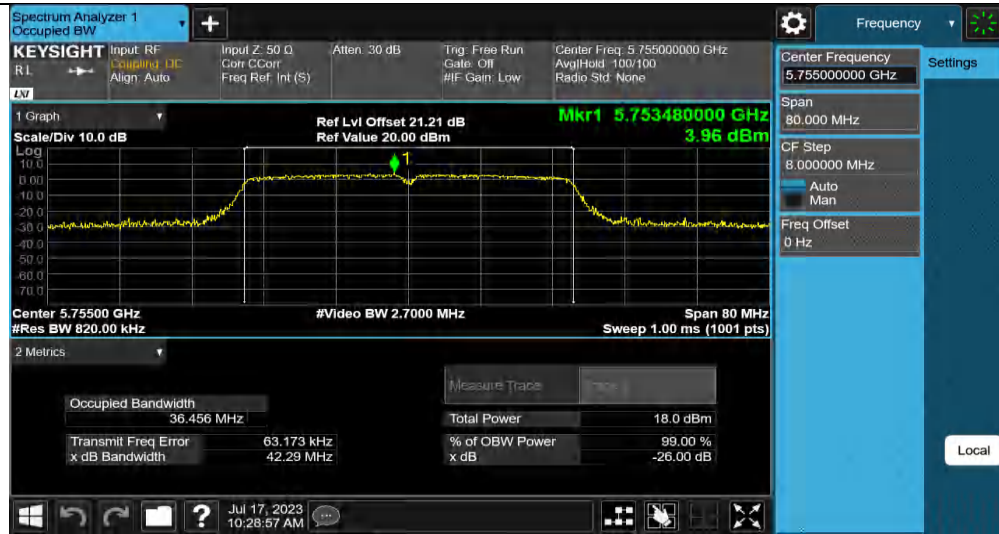
11AC40MIMO Ant1 5190



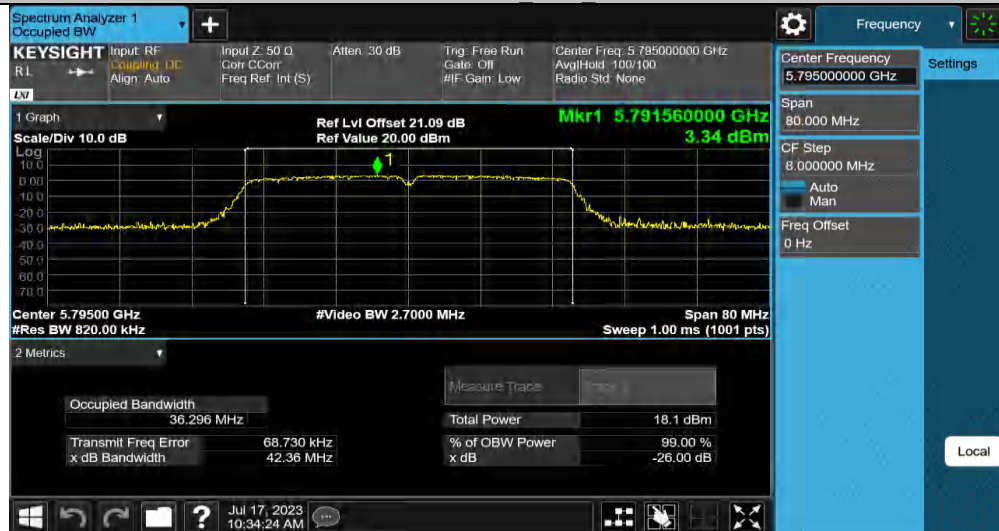
11AC40MIMO Ant1 5230



11AC40MIMO Ant1 5755



11AC40MIMO Ant1 5795



11AC80MIMO Ant1 5210



11AC80MIMO Ant1 5775



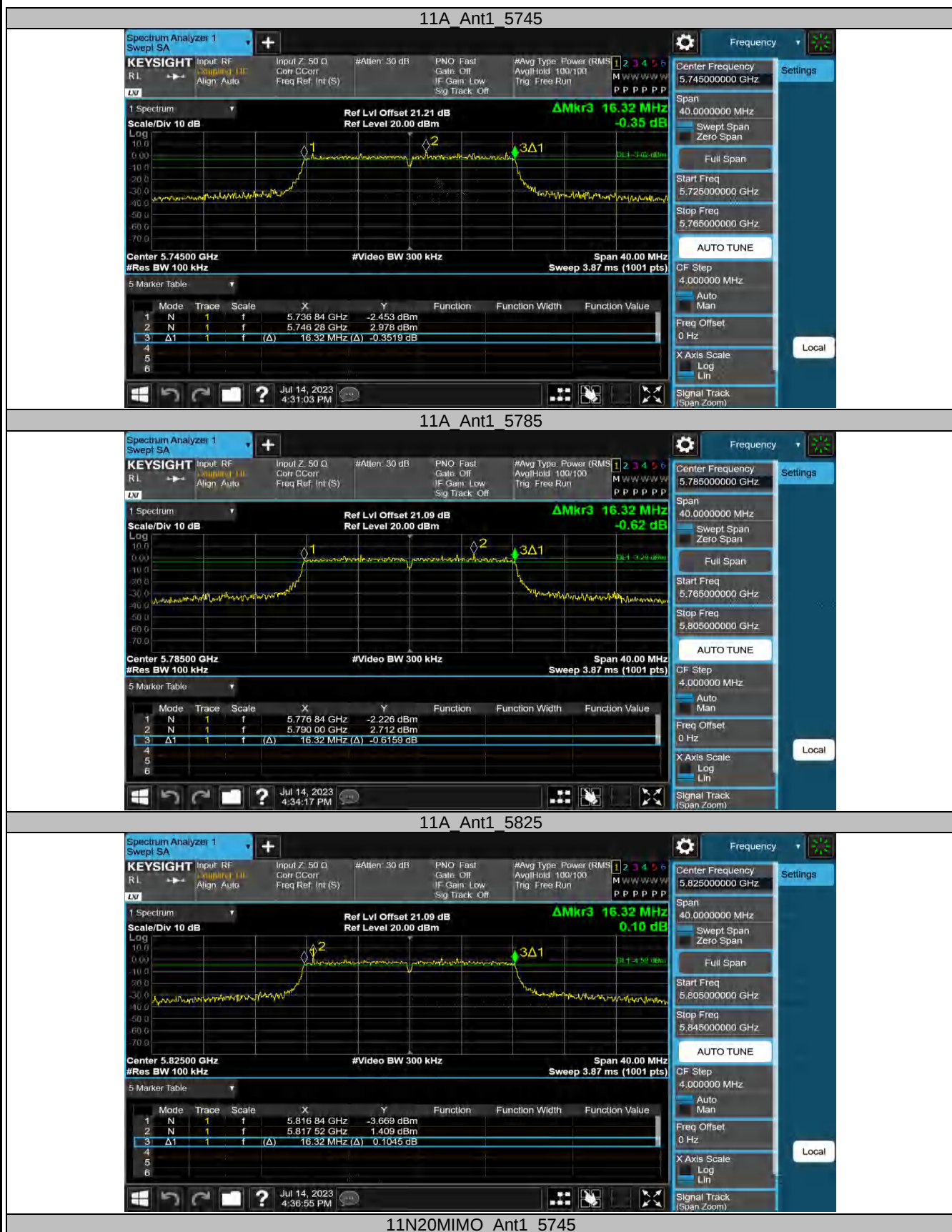
1.3 Appendix A3: Min emission bandwidth

1.3.1 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
		5785	16.320	5776.840	5793.160	0.5	PASS
		5825	16.320	5816.840	5833.160	0.5	PASS
11N20MIMO	Ant1	5745	17.560	5736.240	5753.800	0.5	PASS
		5785	17.560	5776.240	5793.800	0.5	PASS
		5825	17.560	5816.240	5833.800	0.5	PASS
11N40MIMO	Ant1	5755	35.120	5737.480	5772.600	0.5	PASS
		5795	35.040	5777.480	5812.520	0.5	PASS
11AC20MIMO	Ant1	5745	17.560	5736.240	5753.800	0.5	PASS
		5785	17.520	5776.280	5793.800	0.5	PASS
		5825	16.920	5816.480	5833.400	0.5	PASS
11AC40MIMO	Ant1	5755	35.120	5737.400	5772.520	0.5	PASS
		5795	35.120	5777.480	5812.600	0.5	PASS
11AC80MIMO	Ant1	5775	75.200	5737.400	5812.600	0.5	PASS

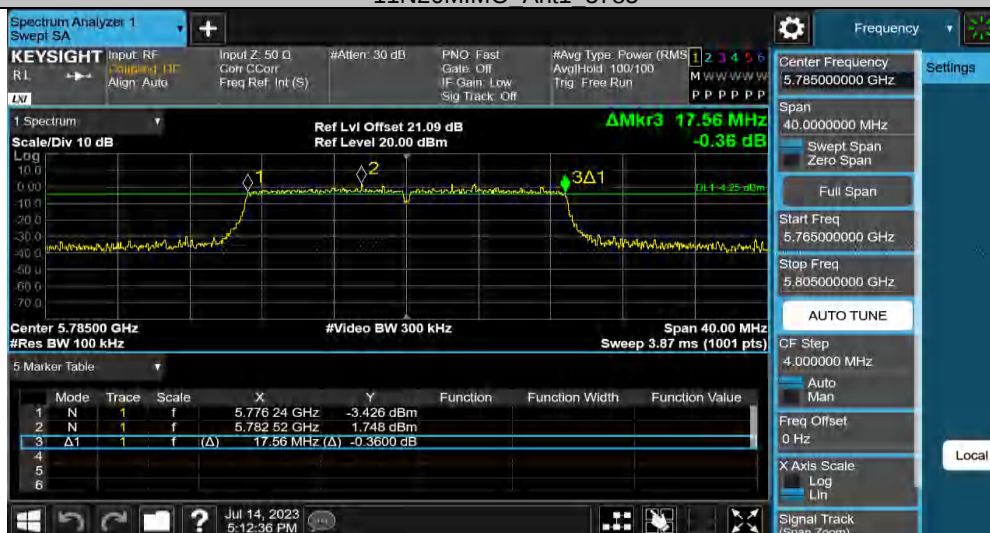
Note: Test were performed on ANT1 and ANT2 Ports, the worst case was recorded.

1.3.2 Test Graphs





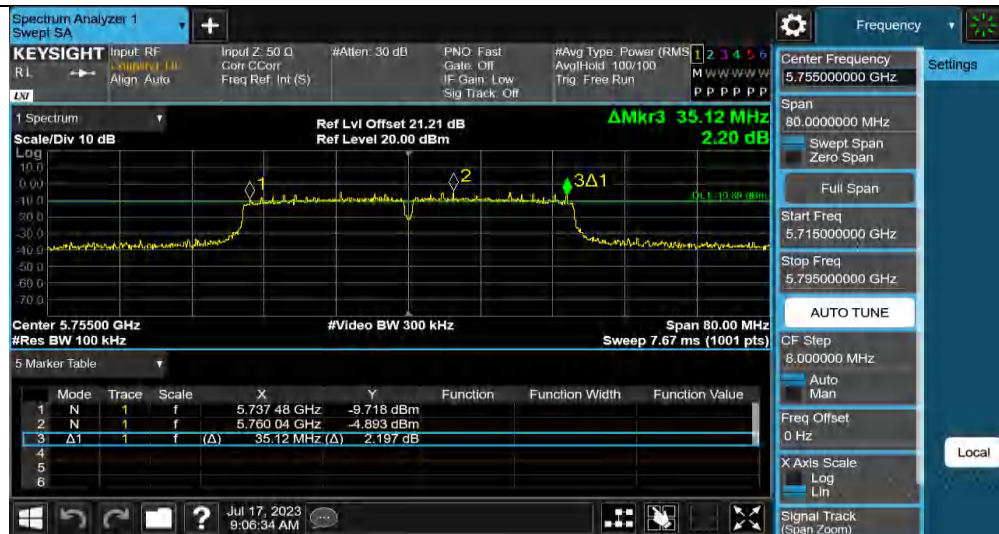
11N20MIMO Ant1 5785



11N20MIMO Ant1 5825



11N40MIMO Ant1 5755



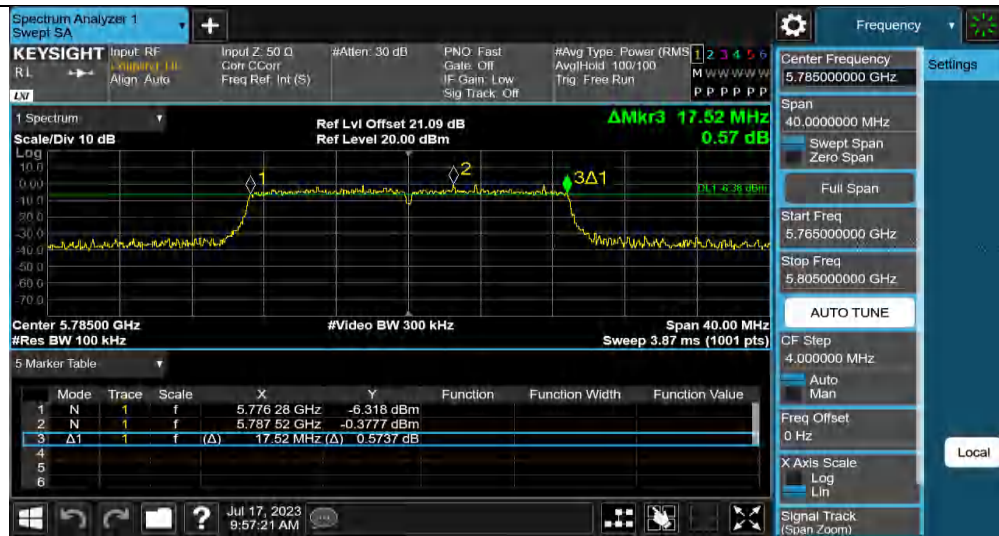
11N40MIMO Ant1 5795



11AC20MIMO Ant1 5745



11AC20MIMO Ant1 5785



11AC20MIMO Ant1 5825



11AC40MIMO Ant1 5755



11AC40MIMO Ant1 5795



11AC80MIMO Ant1 5775



1.4 Appendix B: Maximum conducted output power

1.4.1 Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5180	9.90	≤23.98	PASS
		5200	10.07	≤23.98	PASS
		5240	9.86	≤23.98	PASS
		5745	13.50	≤30.00	PASS
		5785	13.43	≤30.00	PASS
		5825	12.53	≤30.00	PASS
	Ant2	5745	12.48	≤30.00	PASS
		5785	12.31	≤30.00	PASS
		5825	11.75	≤30.00	PASS
11N20MIMO	Ant1	5180	6.30	≤23.98	PASS
	Ant2	5180	5.62	≤23.98	PASS
	total	5180	8.98	≤23.98	PASS
	Ant1	5200	6.42	≤23.98	PASS
	Ant2	5200	5.79	≤23.98	PASS
	total	5200	9.13	≤23.98	PASS
	Ant1	5240	6.24	≤23.98	PASS
	Ant2	5240	6.29	≤23.98	PASS
	total	5240	9.28	≤23.98	PASS
	Ant1	5745	12.01	≤30.00	PASS
	Ant2	5745	6.37	≤30.00	PASS
	total	5745	13.06	≤30.00	PASS
	Ant1	5785	11.96	≤30.00	PASS
	Ant2	5785	6.14	≤30.00	PASS
	total	5785	12.97	≤30.00	PASS
	Ant1	5825	11.05	≤30.00	PASS
	Ant2	5825	6.60	≤30.00	PASS
	total	5825	12.38	≤30.00	PASS
11N40MIMO	Ant1	5190	4.98	≤23.98	PASS
	Ant2	5190	3.94	≤23.98	PASS
	total	5190	7.50	≤23.98	PASS
	Ant1	5230	4.04	≤23.98	PASS
	Ant2	5230	4.45	≤23.98	PASS
	total	5230	7.26	≤23.98	PASS
	Ant1	5755	9.98	≤30.00	PASS
	Ant2	5755	9.13	≤30.00	PASS
	total	5755	12.59	≤30.00	PASS
	Ant1	5795	9.16	≤30.00	PASS
	Ant2	5795	8.89	≤30.00	PASS
	total	5795	12.04	≤30.00	PASS
11AC20MIMO	Ant1	5180	6.42	≤23.98	PASS
	Ant2	5180	5.24	≤23.98	PASS
	total	5180	8.88	≤23.98	PASS
	Ant1	5200	6.42	≤23.98	PASS
	Ant2	5200	5.65	≤23.98	PASS
	total	5200	9.06	≤23.98	PASS
	Ant1	5240	6.22	≤23.98	PASS
	Ant2	5240	6.01	≤23.98	PASS
	total	5240	9.13	≤23.98	PASS
	Ant1	5745	11.09	≤30.00	PASS
	Ant2	5745	7.22	≤30.00	PASS
	total	5745	12.58	≤30.00	PASS
	Ant1	5785	11.52	≤30.00	PASS
	Ant2	5785	6.95	≤30.00	PASS
	total	5785	12.82	≤30.00	PASS
	Ant1	5825	12.27	≤30.00	PASS
	Ant2	5825	7.33	≤30.00	PASS

	total	5825	13.48	≤30.00	PASS
11AC40MIMO	Ant1	5190	5.26	≤23.98	PASS
	Ant2	5190	4.33	≤23.98	PASS
	total	5190	7.83	≤23.98	PASS
	Ant1	5230	5.05	≤23.98	PASS
	Ant2	5230	4.27	≤23.98	PASS
	total	5230	7.69	≤23.98	PASS
	Ant1	5755	11.22	≤30.00	PASS
	Ant2	5755	6.84	≤30.00	PASS
	total	5755	12.57	≤30.00	PASS
	Ant1	5795	11.33	≤30.00	PASS
11AC80MIMO	Ant2	5795	6.78	≤30.00	PASS
	total	5795	12.64	≤30.00	PASS
	Ant1	5210	5.82	≤23.98	PASS
	Ant2	5210	5.80	≤23.98	PASS
	total	5210	8.82	≤23.98	PASS
	Ant1	5775	11.23	≤30.00	PASS
	Ant2	5775	6.52	≤30.00	PASS
	total	5775	12.49	≤30.00	PASS

Note1. Max. e.i.r.p.: $13.50\text{dBm} + 3.69\text{dBi} = 17.17\text{dBm}$, which is less than $36\text{dBm} = 4\text{W}$, Max Antenna gain: 3.69dBi, here e.i.r.p is calculated by the max antenna gain.

Note2: The Duty Cycle Factor is compensated in the tables.

1.5 Appendix C: Maximum power spectral density

1.5.1 Test Result

TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	-1.43	≤11.00	PASS
		5200	-1.48	≤11.00	PASS
		5240	-1.32	≤11.00	PASS
		5745	-2.1	≤30.00	PASS
		5785	-2.26	≤30.00	PASS
		5825	-3.85	≤30.00	PASS
11N20MIMO	Ant1	5180	-5.24	≤11.00	PASS
	Ant2	5180	-5.85	≤11.00	PASS
	total	5180	-2.52	≤11.00	PASS
	Ant1	5200	-5.28	≤11.00	PASS
	Ant2	5200	-5.63	≤11.00	PASS
	total	5200	-2.44	≤11.00	PASS
	Ant1	5240	-5.17	≤11.00	PASS
	Ant2	5240	-5.55	≤11.00	PASS
	total	5240	-2.35	≤11.00	PASS
	Ant1	5745	-3.68	≤30.00	PASS
	Ant2	5745	-9.4	≤30.00	PASS
	total	5745	-2.65	≤30.00	PASS
	Ant1	5785	-3.84	≤30.00	PASS
	Ant2	5785	-9.57	≤30.00	PASS
	total	5785	-2.81	≤30.00	PASS
	Ant1	5825	-5.45	≤30.00	PASS
	Ant2	5825	-9.53	≤30.00	PASS
	total	5825	-4.02	≤30.00	PASS
11N40MIMO	Ant1	5190	-9.28	≤11.00	PASS
	Ant2	5190	-9.65	≤11.00	PASS
	total	5190	-6.45	≤11.00	PASS
	Ant1	5230	-9.41	≤11.00	PASS
	Ant2	5230	-9.42	≤11.00	PASS
	total	5230	-6.40	≤11.00	PASS
	Ant1	5755	-8.39	≤30.00	PASS
	Ant2	5755	-13.04	≤30.00	PASS
	total	5755	-7.11	≤30.00	PASS
	Ant1	5795	-9.59	≤30.00	PASS
	Ant2	5795	-13.33	≤30.00	PASS
	total	5795	-8.06	≤30.00	PASS
11AC20MIMO	Ant1	5180	-5.41	≤11.00	PASS
	Ant2	5180	-6.31	≤11.00	PASS
	total	5180	-2.83	≤11.00	PASS
	Ant1	5200	-5.36	≤11.00	PASS
	Ant2	5200	-5.71	≤11.00	PASS
	total	5200	-2.52	≤11.00	PASS
	Ant1	5240	-5.74	≤11.00	PASS
	Ant2	5240	-5.61	≤11.00	PASS
	total	5240	-2.66	≤11.00	PASS
	Ant1	5745	-5.38	≤30.00	PASS
	Ant2	5745	-9.17	≤30.00	PASS
	total	5745	-3.86	≤30.00	PASS
	Ant1	5785	-4.87	≤30.00	PASS
	Ant2	5785	-9.3	≤30.00	PASS
	total	5785	-3.53	≤30.00	PASS
	Ant1	5825	-4.58	≤30.00	PASS
	Ant2	5825	-9.45	≤30.00	PASS
	total	5825	-3.36	≤30.00	PASS
11AC40MIMO	Ant1	5190	-8.91	≤11.00	PASS
	Ant2	5190	-9.86	≤11.00	PASS

	total	5190	-6.35	≤11.00	PASS
	Ant1	5230	-9.24	≤11.00	PASS
	Ant2	5230	-9.64	≤11.00	PASS
	total	5230	-6.43	≤11.00	PASS
	Ant1	5755	-7.59	≤30.00	PASS
	Ant2	5755	-11.26	≤30.00	PASS
	total	5755	-6.04	≤30.00	PASS
	Ant1	5795	-7.66	≤30.00	PASS
	Ant2	5795	-12.03	≤30.00	PASS
	total	5795	-6.31	≤30.00	PASS
11AC80MIMO	Ant1	5210	-11.16	≤11.00	PASS
	Ant2	5210	-11.83	≤11.00	PASS
	total	5210	-8.47	≤11.00	PASS
	Ant1	5775	-10.73	≤30.00	PASS
	Ant2	5775	-14.83	≤30.00	PASS
	total	5775	-9.30	≤30.00	PASS

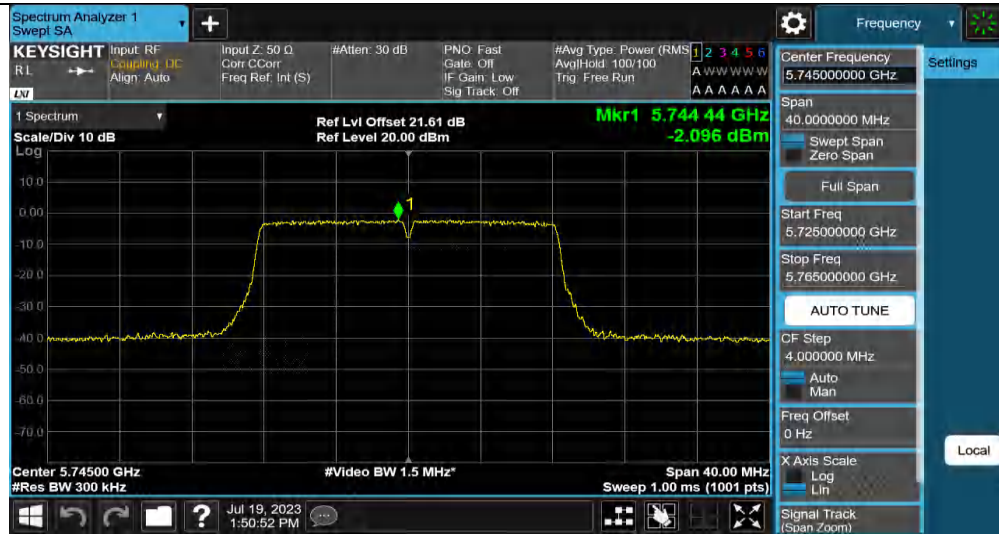
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

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

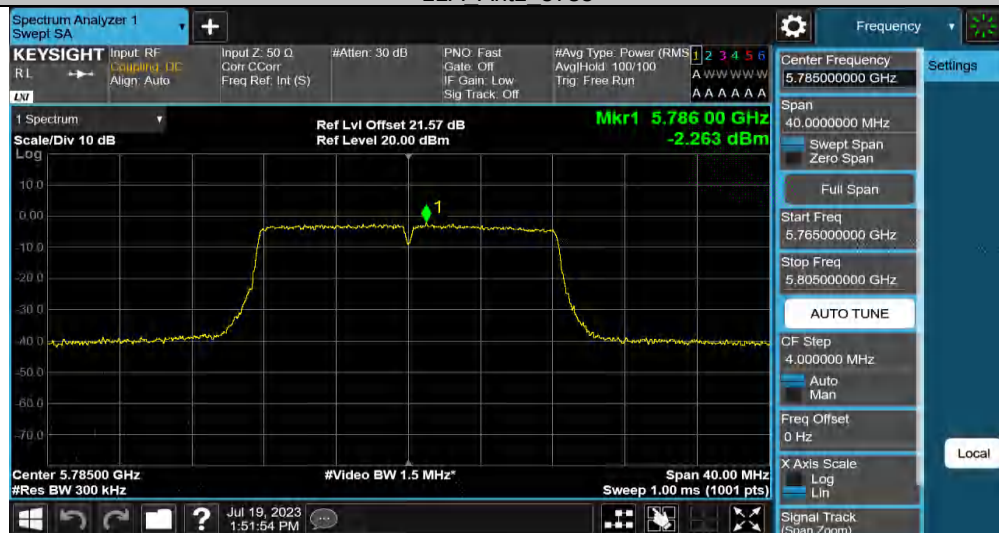
3. Max. e.i.r.p. spectral density: $-1.32\text{dBm/MHz} + 3.69\text{dBi} = 2.37\text{dBm/MHz}$, which is less than 10dBm/MHz , Max Antenna gain: 3.69dBi , here e.i.r.p is calculated by the max antenna gain.

1.5.2 Test Graphs





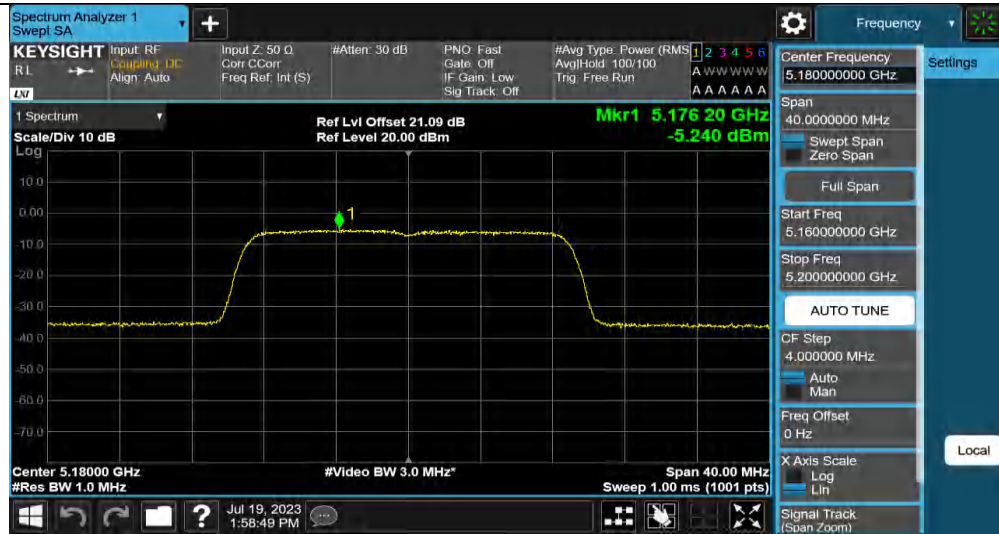
11A Ant1 5785



11A Ant1 5825



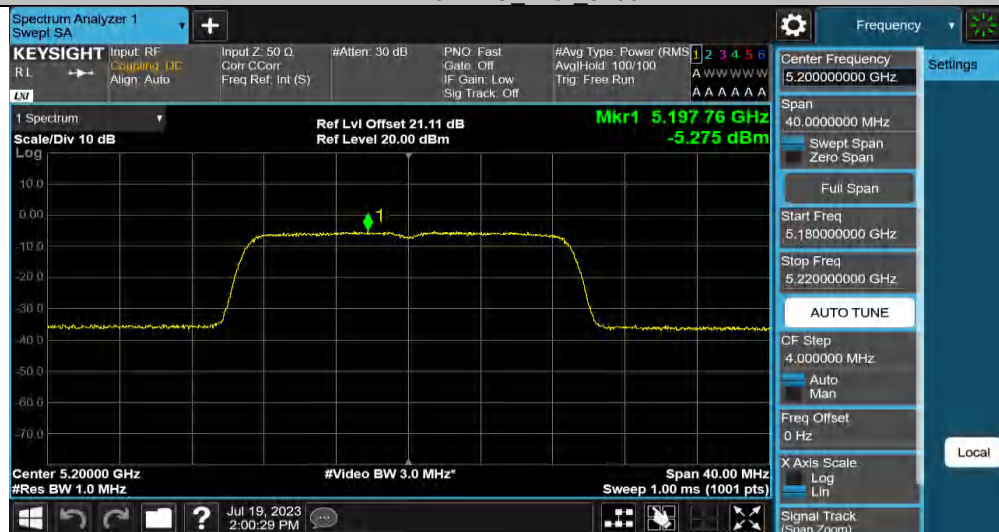
11N20MIMO Ant1 5180



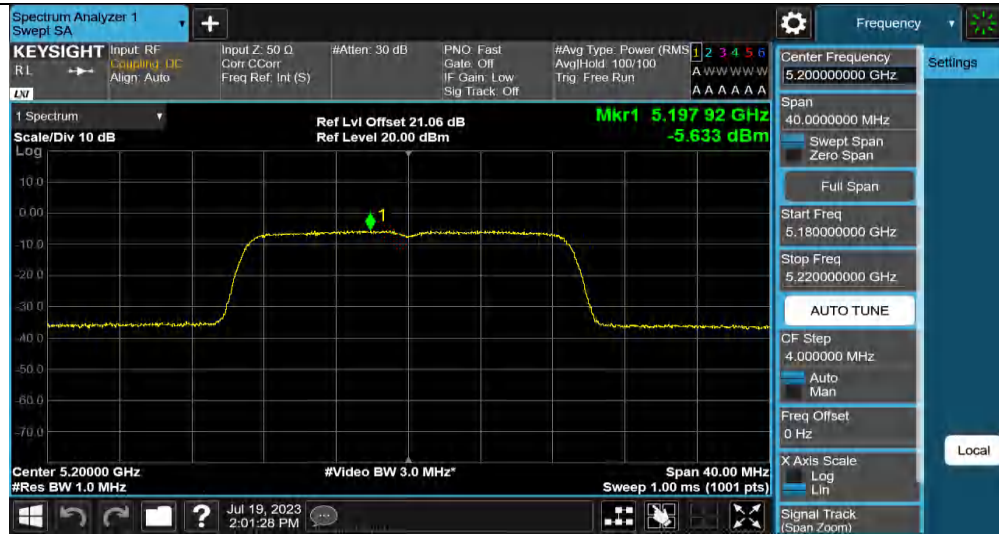
11N20MIMO Ant2 5180



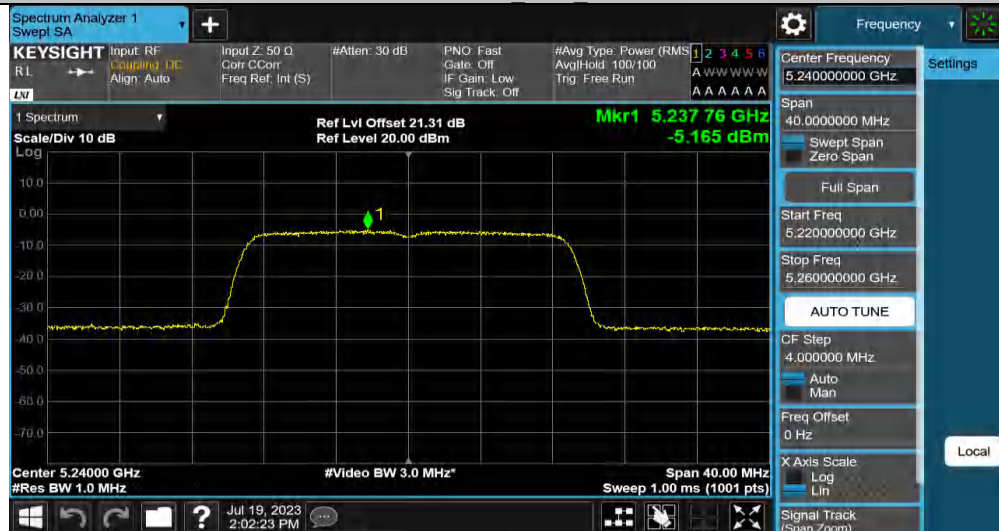
11N20MIMO Ant1 5200



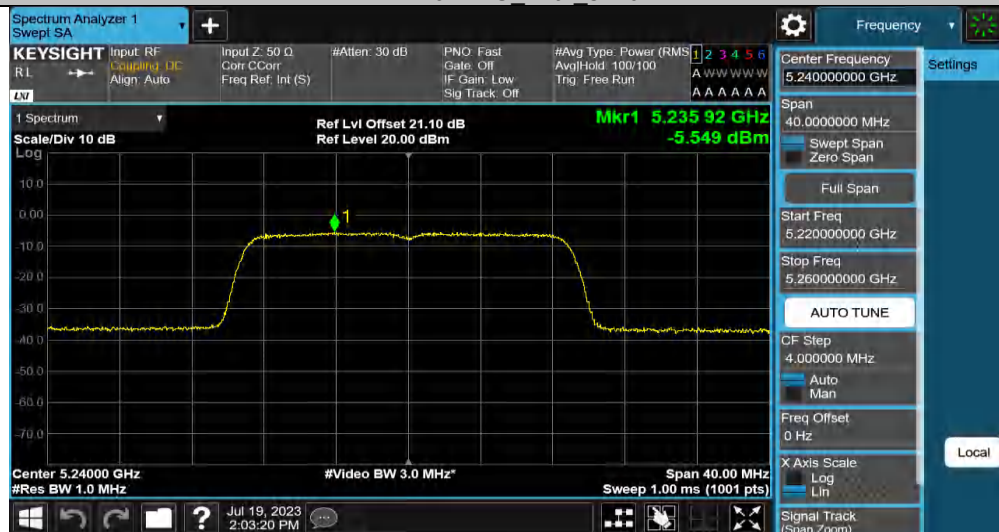
11N20MIMO Ant2 5200



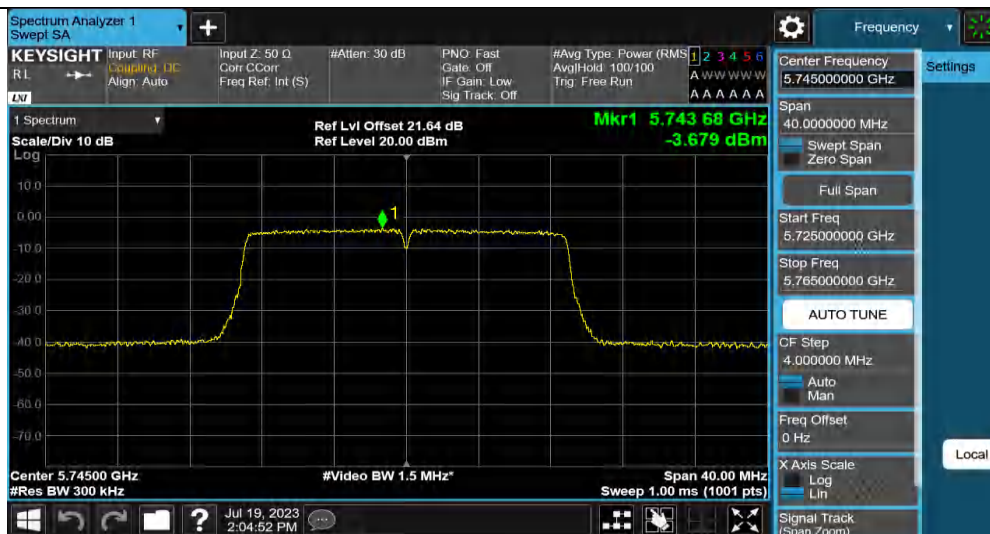
11N20MIMO Ant1 5240



11N20MIMO Ant2 5240



11N20MIMO Ant1 5745



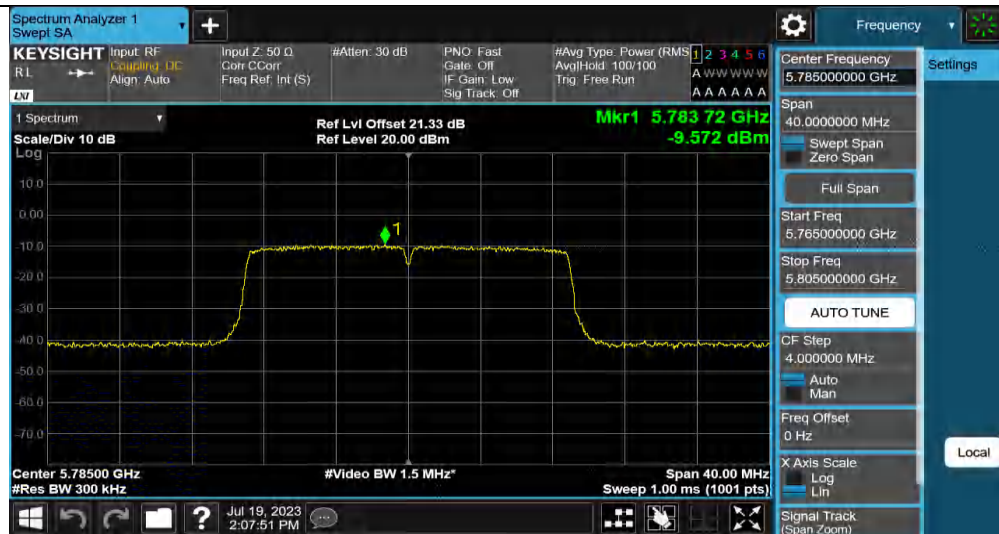
11N20MIMO Ant2 5745



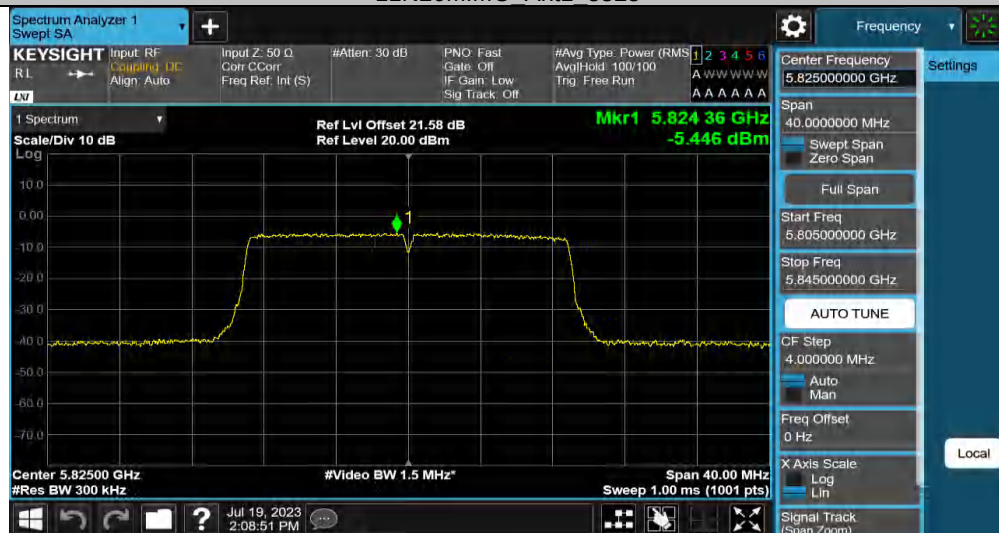
11N20MIMO Ant1 5785



11N20MIMO Ant2 5785



11N20MIMO Ant1 5825



11N20MIMO Ant2 5825



11N40MIMO Ant1 5190



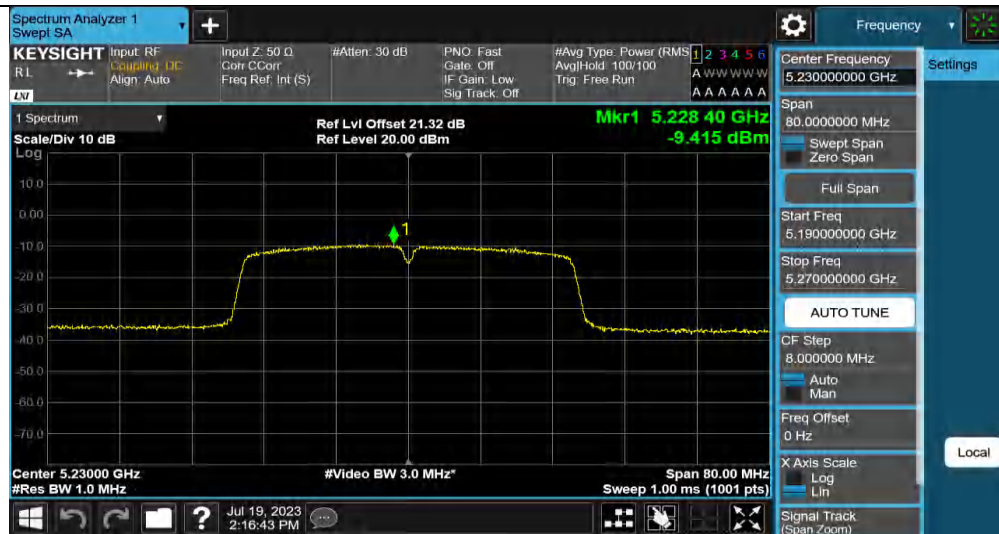
11N40MIMO Ant2 5190



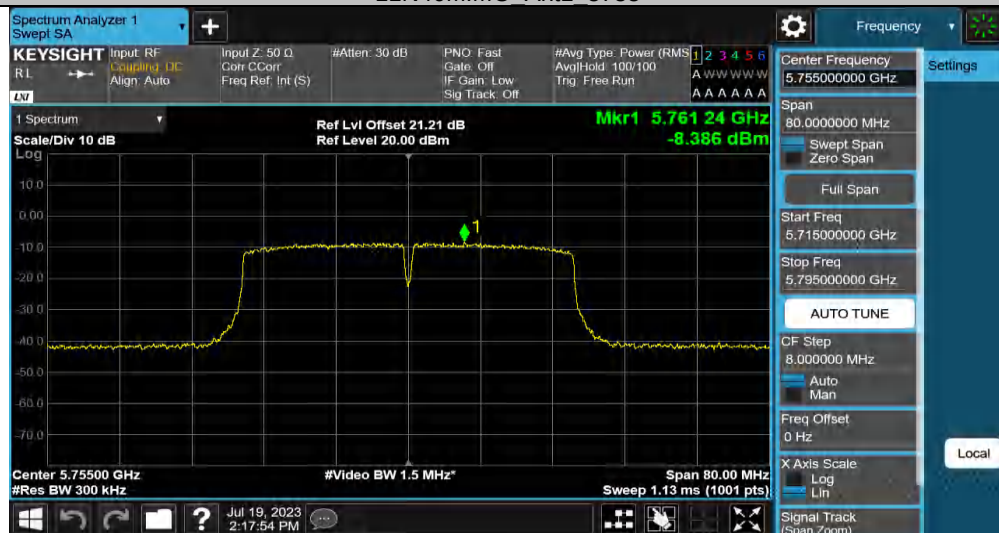
11N40MIMO Ant1 5230



11N40MIMO Ant2 5230



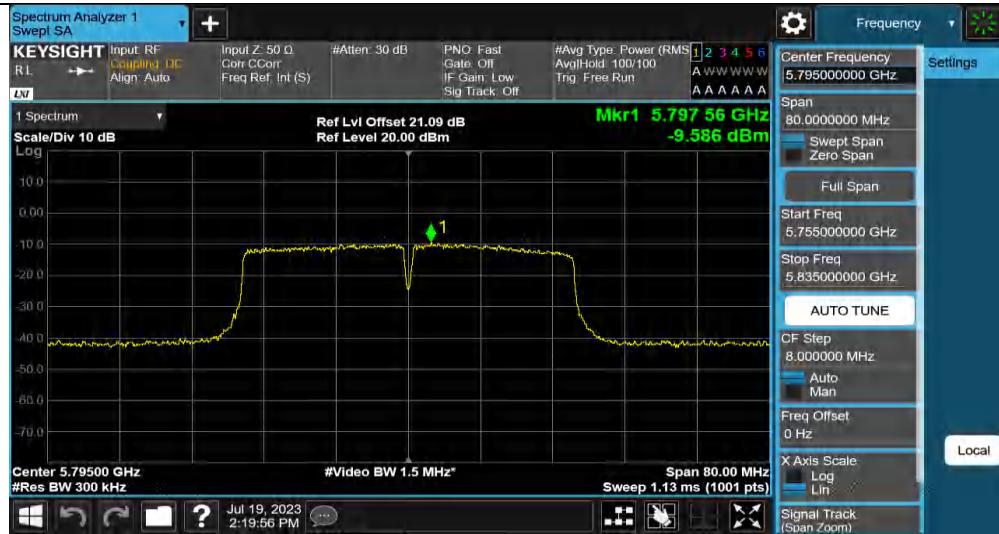
11N40MIMO Ant1 5755



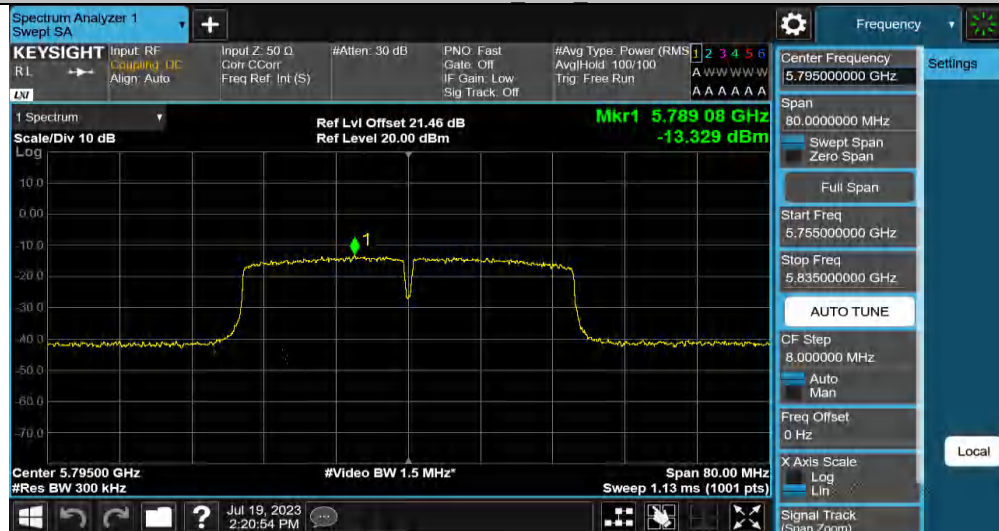
11N40MIMO Ant2 5755



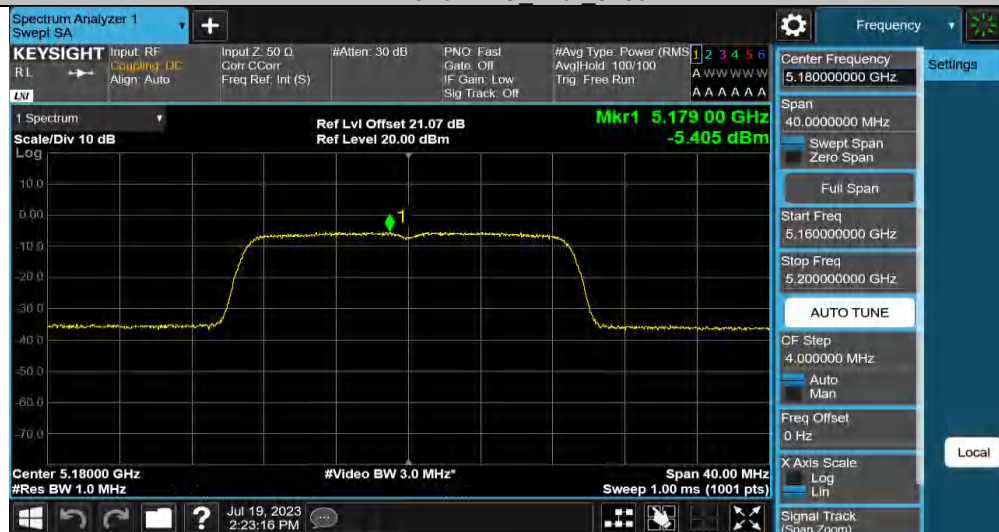
11N40MIMO Ant1 5795



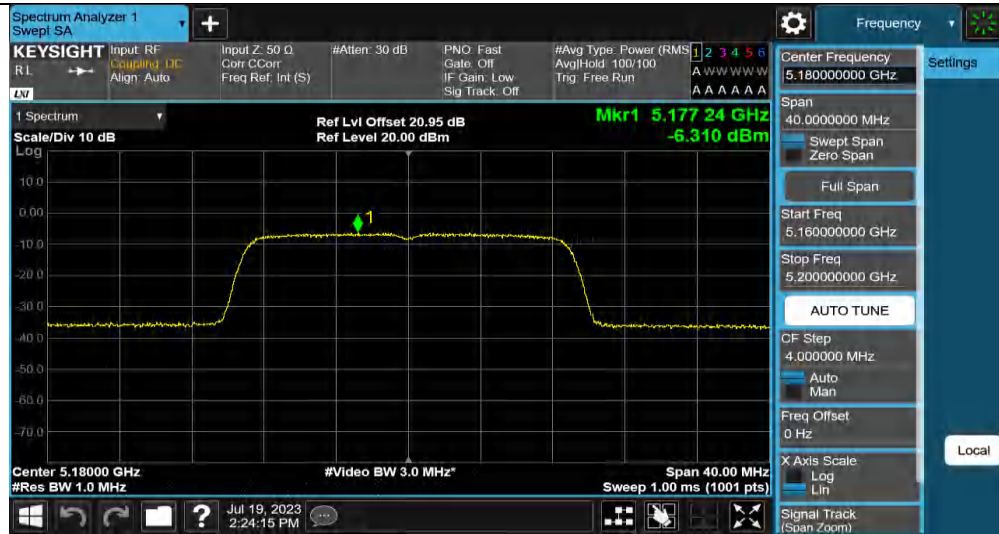
11N40MIMO Ant2 5795



11AC20MIMO Ant1 5180



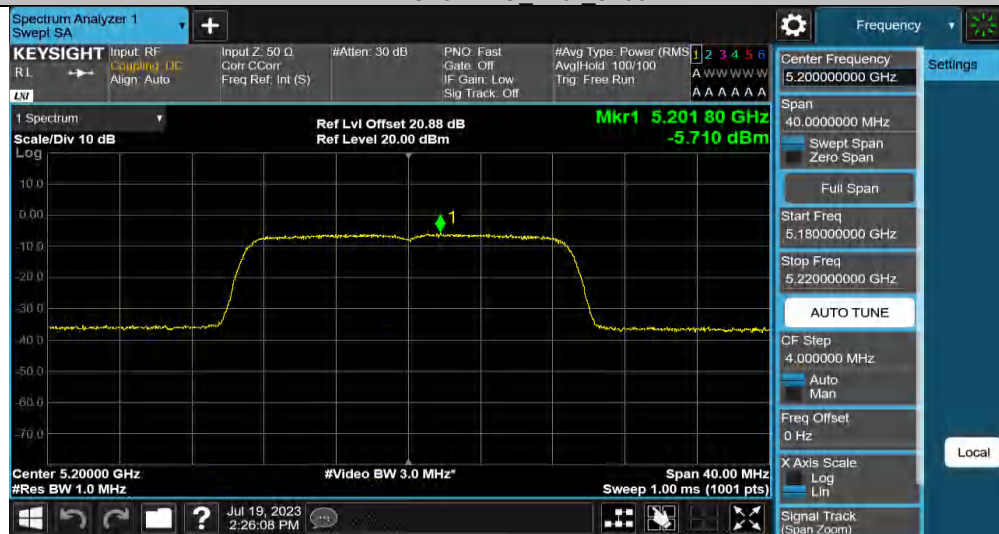
11AC20MIMO Ant2 5180



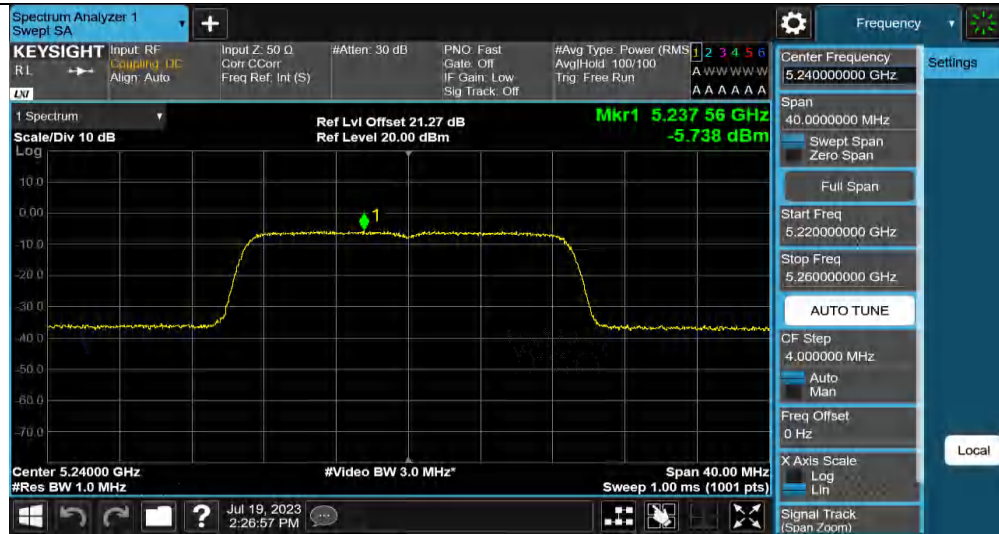
11AC20MIMO Ant1 5200



11AC20MIMO Ant2 5200



11AC20MIMO Ant1 5240



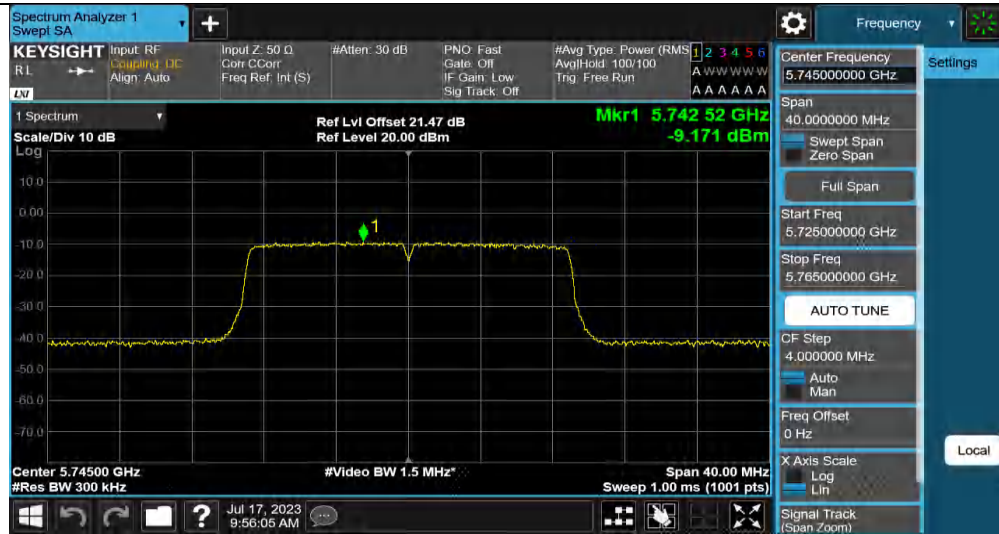
11AC20MIMO Ant2 5240



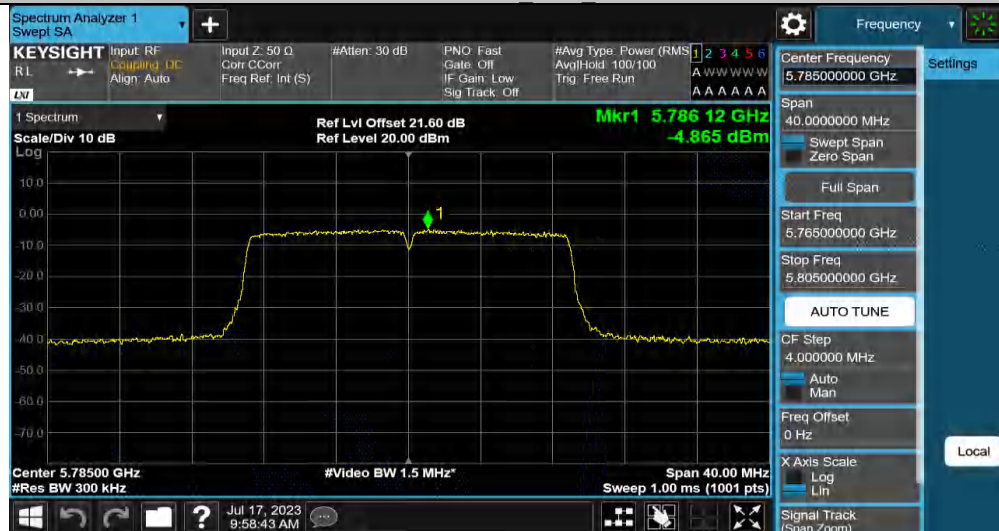
11AC20MIMO Ant1 5745



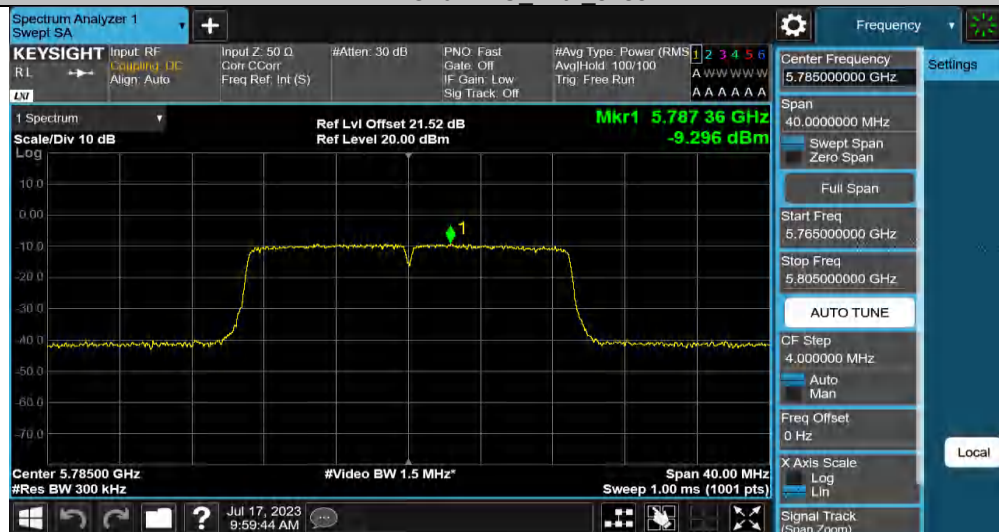
11AC20MIMO Ant2 5745



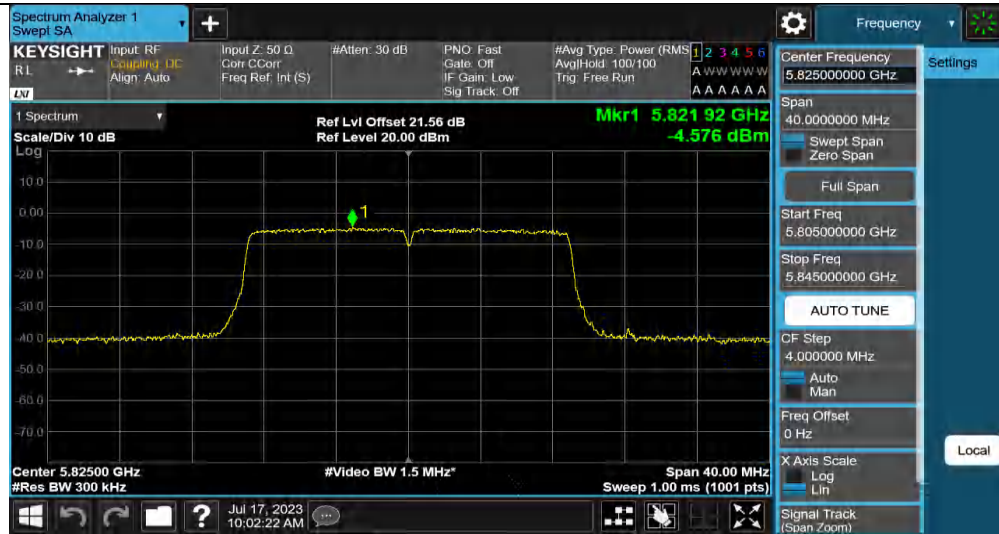
11AC20MIMO Ant1 5785



11AC20MIMO Ant2 5785



11AC20MIMO Ant1 5825



11AC20MIMO Ant2 5825



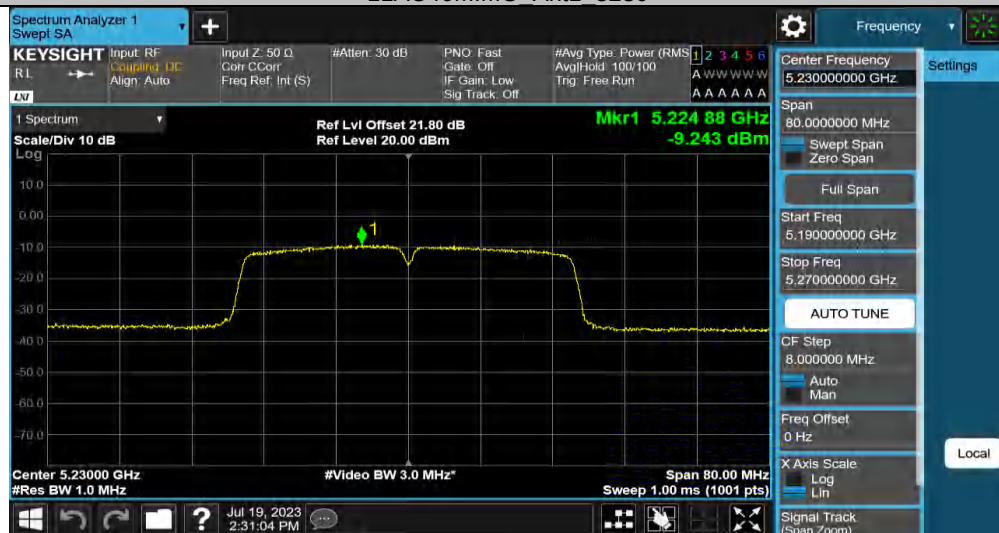
11AC40MIMO Ant1 5190



11AC40MIMO Ant2 5190



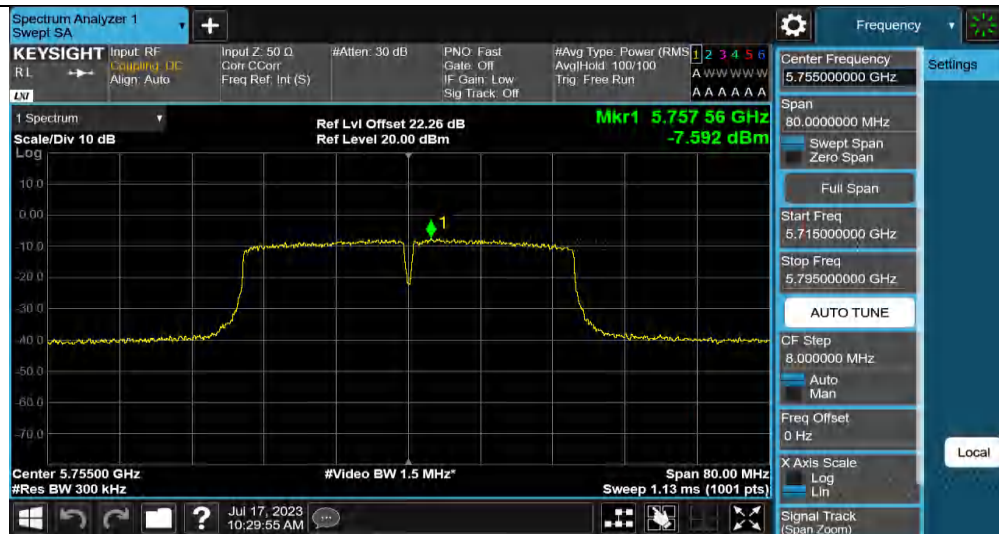
11AC40MIMO Ant1 5230



11AC40MIMO Ant2 5230



11AC40MIMO Ant1 5755



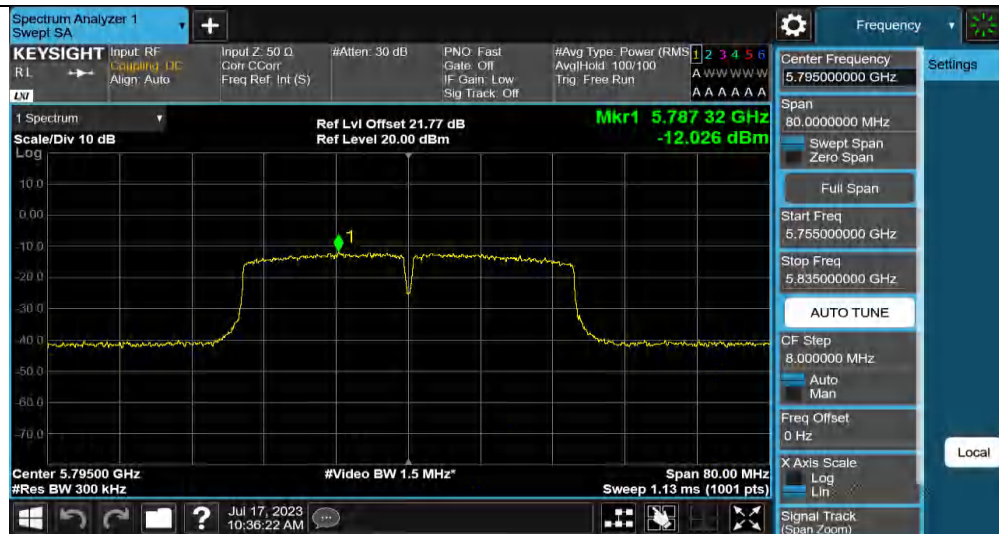
11AC40MIMO Ant2 5755



11AC40MIMO Ant1 5795



11AC40MIMO Ant2 5795



11AC80MIMO Ant1 5210



11AC80MIMO Ant2 5210



11AC80MIMO Ant1 5775