

RF Test Data for RLAN(5.2G) (Conducted Measurement)

Product Name: NucBox4

Trade Mark: GMKtec,GMKTEC

Test Model: KB4

FCC ID: 2AXUD-KB4

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

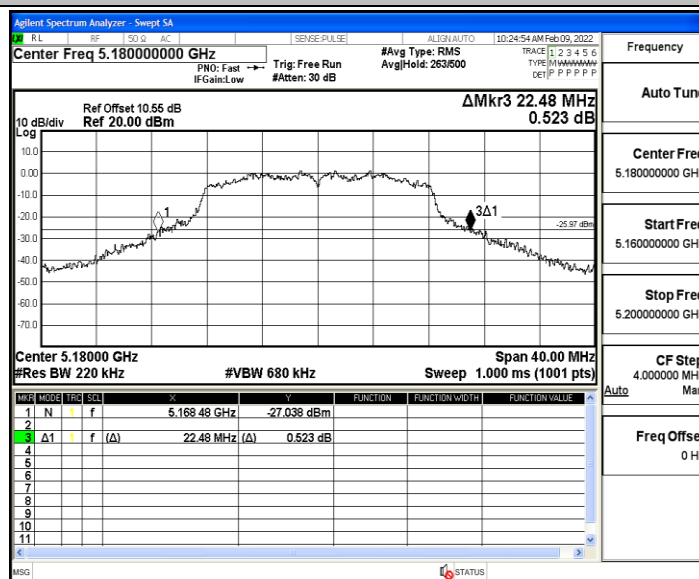
Appendix A1: Emission Bandwidth

Test Result

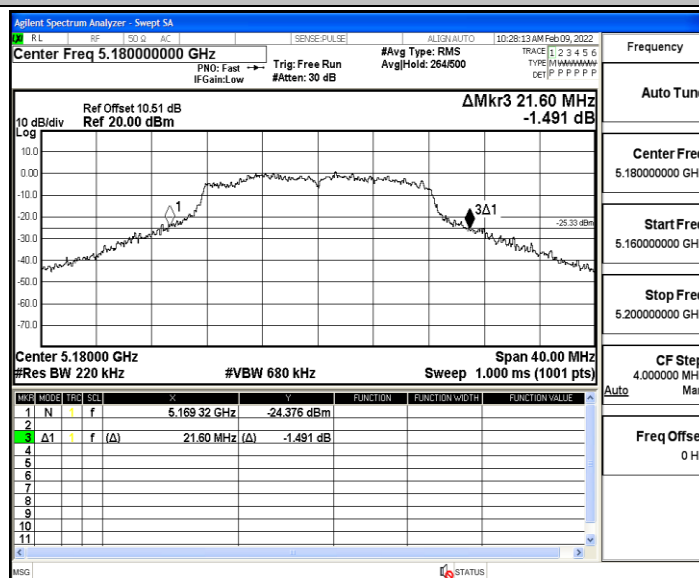
TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	22.480	5168.480	5190.960	---	PASS
	Ant2	5180	21.600	5169.320	5190.920	---	PASS
	Ant1	5200	23.760	5187.920	5211.680	---	PASS
	Ant2	5200	24.040	5187.880	5211.920	---	PASS
	Ant1	5240	22.520	5228.800	5251.320	---	PASS
	Ant2	5240	22.280	5228.800	5251.080	---	PASS
11N20MIMO	Ant1	5180	21.120	5169.760	5190.880	---	PASS
	Ant2	5180	23.160	5168.000	5191.160	---	PASS
	Ant1	5200	23.600	5188.680	5212.280	---	PASS
	Ant2	5200	24.640	5187.040	5211.680	---	PASS
	Ant1	5240	23.800	5227.880	5251.680	---	PASS
	Ant2	5240	24.120	5228.200	5252.320	---	PASS
11N40MIMO	Ant1	5190	41.600	5169.520	5211.120	---	PASS
	Ant2	5190	44.240	5167.600	5211.840	---	PASS
	Ant1	5230	41.840	5209.360	5251.200	---	PASS
	Ant2	5230	43.680	5207.600	5251.280	---	PASS
11AC20MIMO	Ant1	5180	22.760	5168.480	5191.240	---	PASS
	Ant2	5180	23.560	5168.120	5191.680	---	PASS
	Ant1	5200	22.960	5188.760	5211.720	---	PASS
	Ant2	5200	23.880	5188.000	5211.880	---	PASS
	Ant1	5240	23.280	5228.520	5251.800	---	PASS
	Ant2	5240	23.440	5228.120	5251.560	---	PASS
11AC40MIMO	Ant1	5190	42.320	5169.120	5211.440	---	PASS
	Ant2	5190	41.200	5169.120	5210.320	---	PASS
	Ant1	5230	43.920	5207.520	5251.440	---	PASS
	Ant2	5230	42.560	5208.640	5251.200	---	PASS
11AC80MIMO	Ant1	5210	81.280	5169.520	5250.800	---	PASS
	Ant2	5210	80.160	5169.840	5250.000	---	PASS

Test Graphs

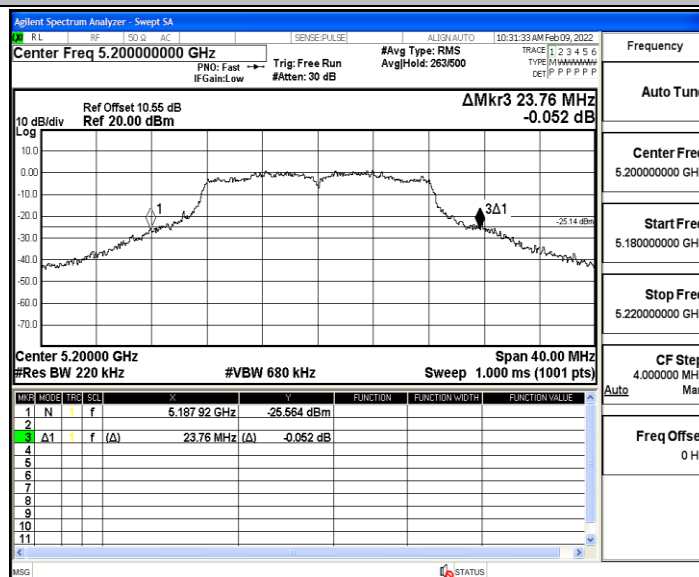
11A_Ant1_5180



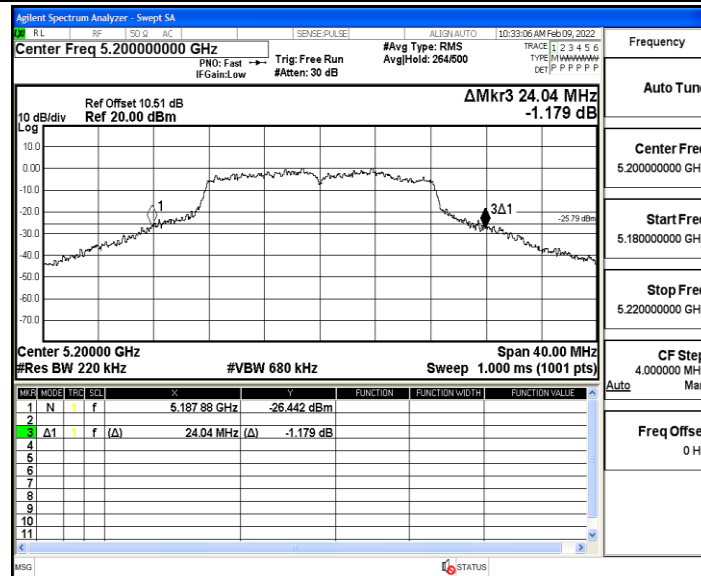
11A_Ant2_5180



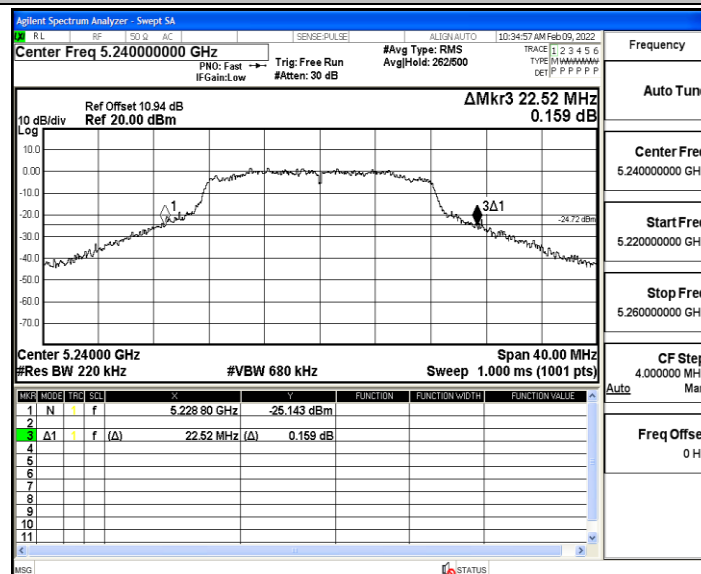
11A_Ant1_5200



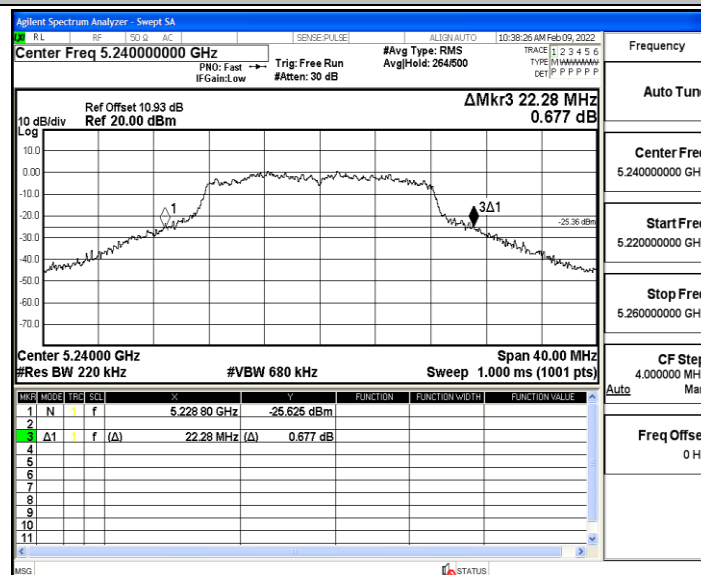
11A_Ant2_5200



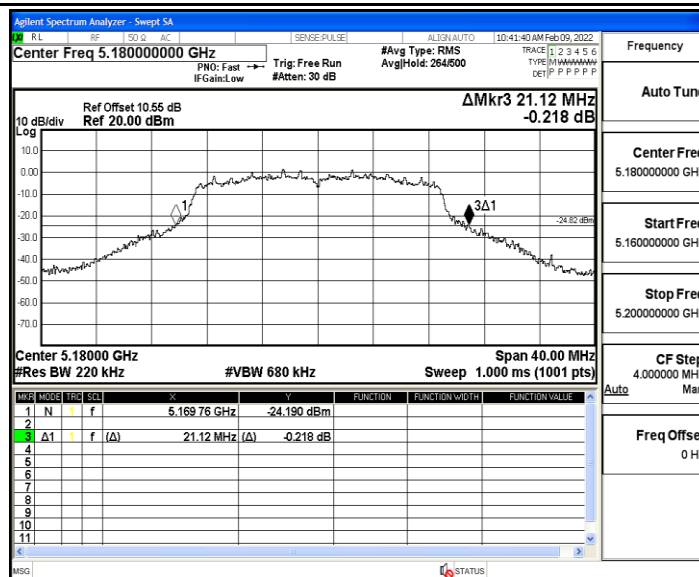
11A_Ant1_5240



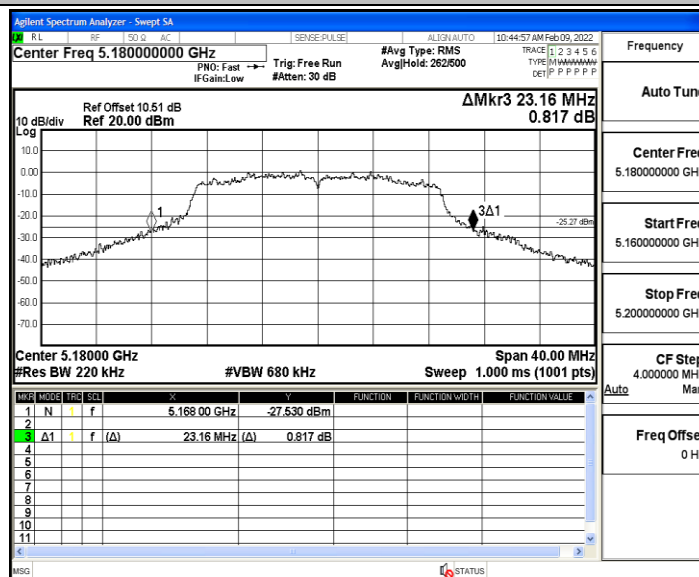
11A_Ant2_5240



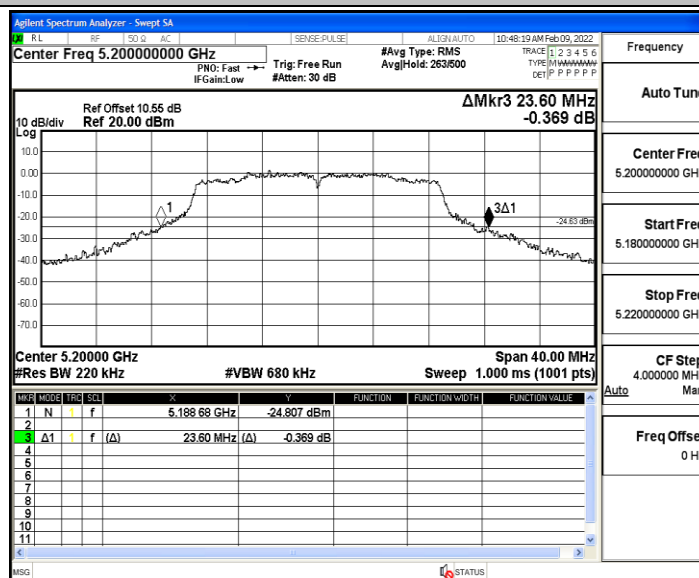
11N20MIMO_Ant1_5180



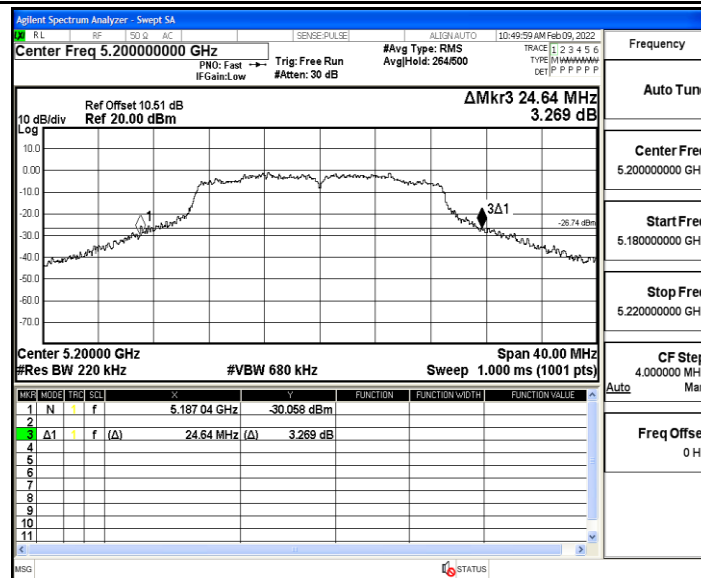
11N20MIMO_Ant2_5180



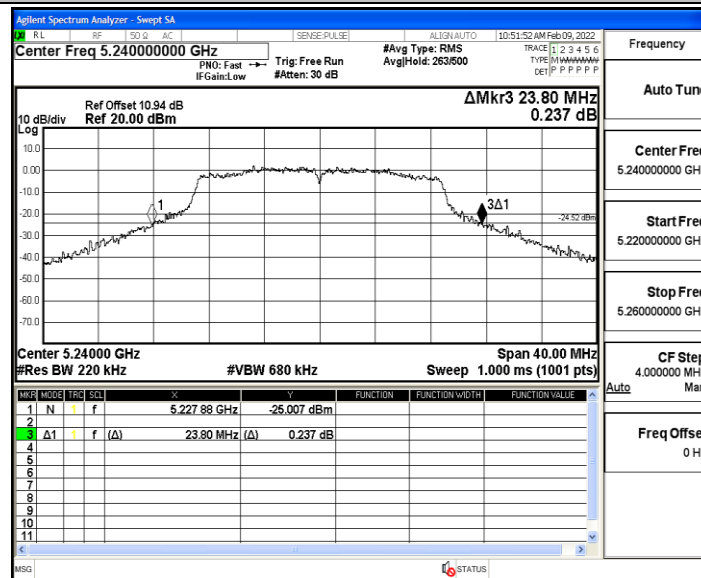
11N20MIMO_Ant1_5200



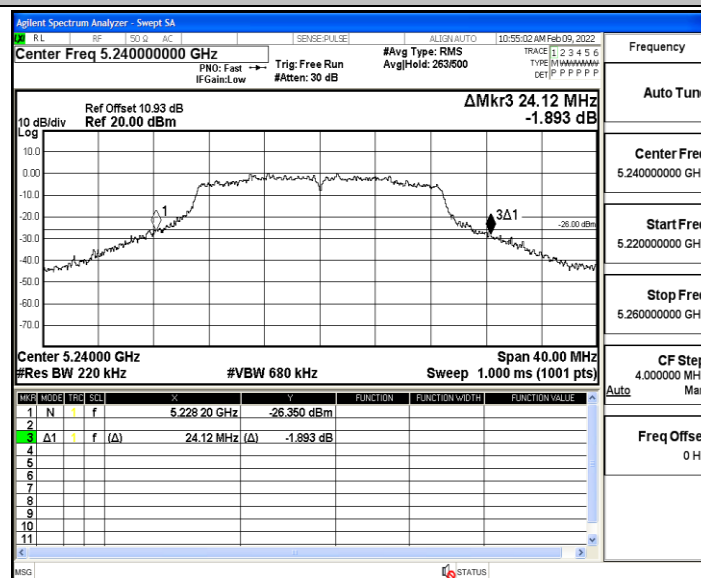
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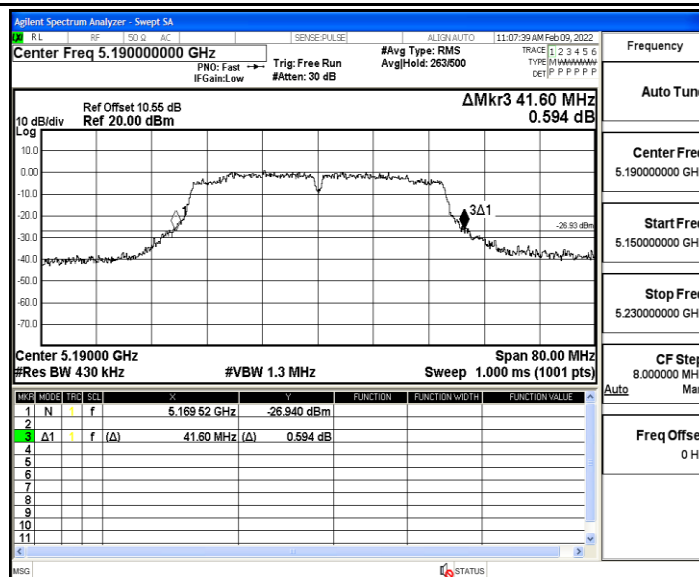
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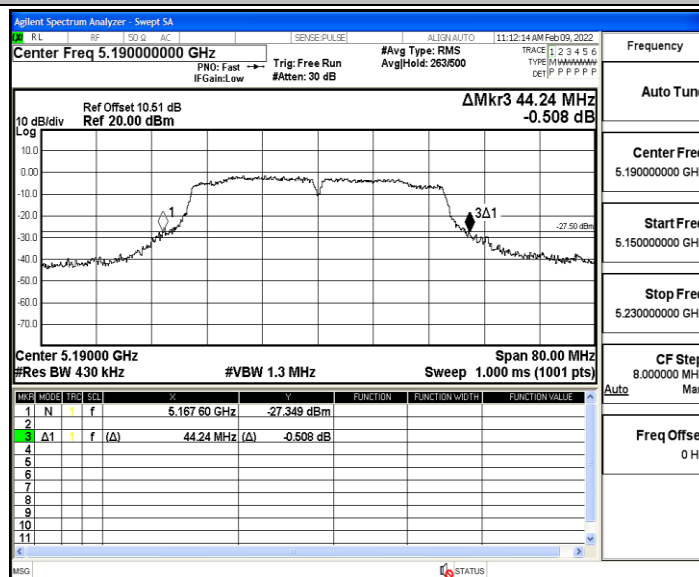
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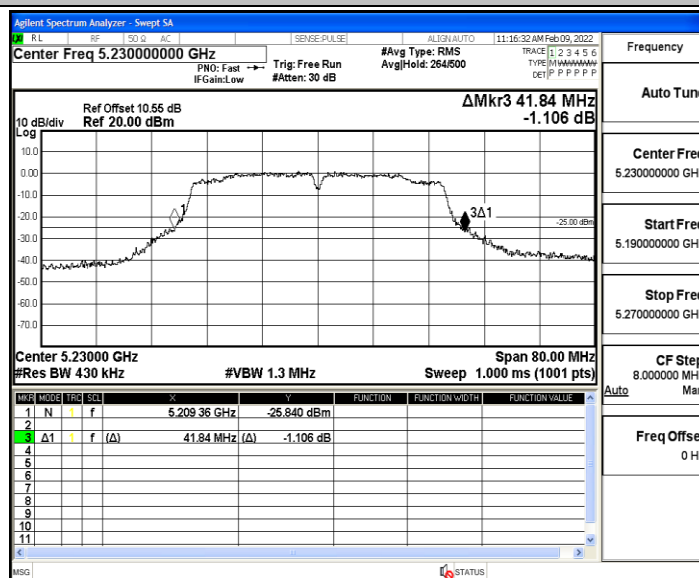
11N40MIMO_Ant1_5190



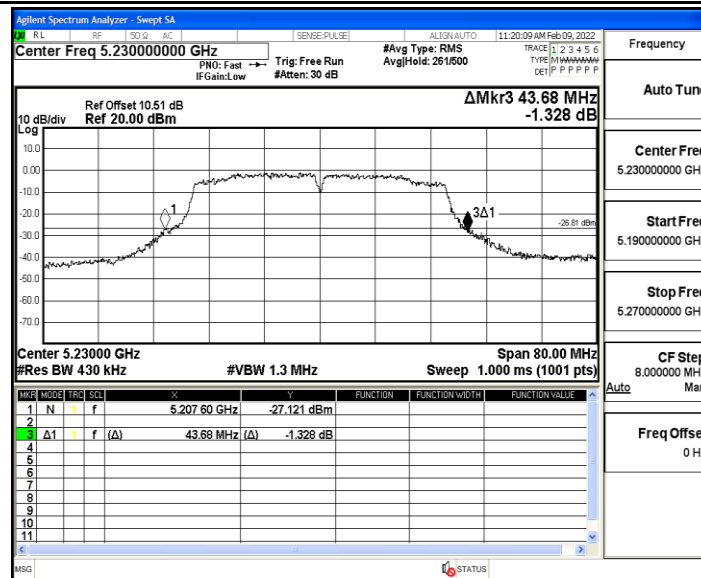
11N40MIMO_Ant2_5190



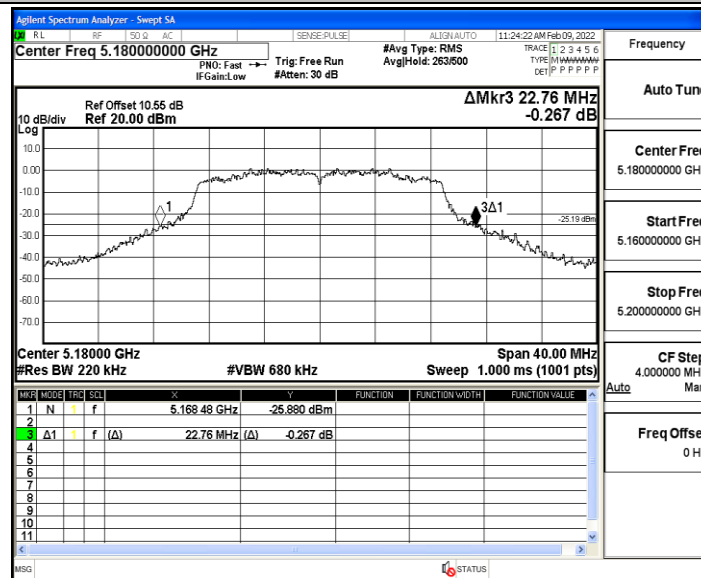
11N40MIMO_Ant1_5230



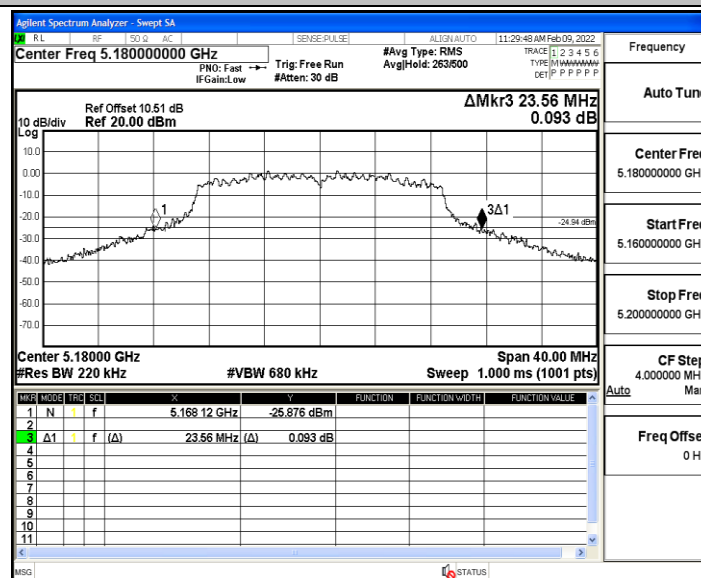
11N40MIMO_Ant2_5230



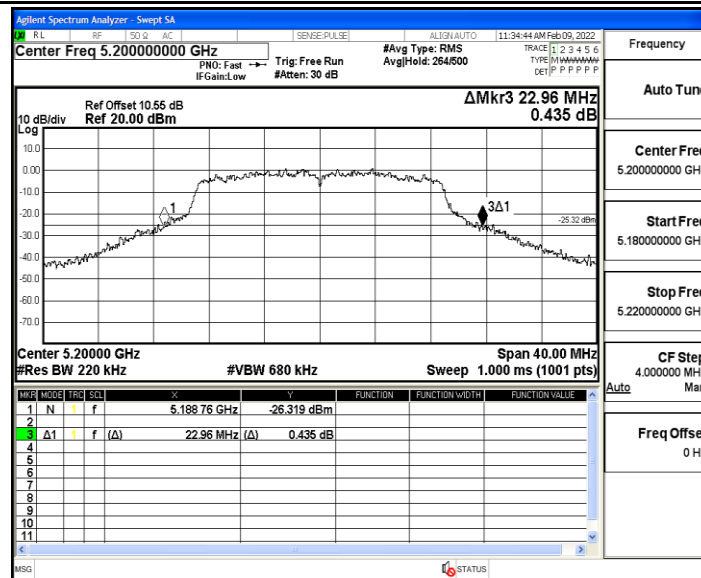
11AC20MIMO_Ant1_5180



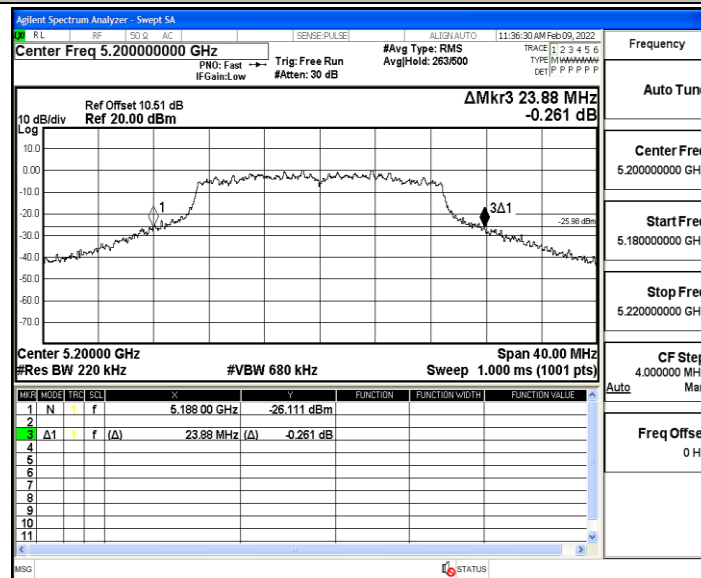
11AC20MIMO_Ant2_5180



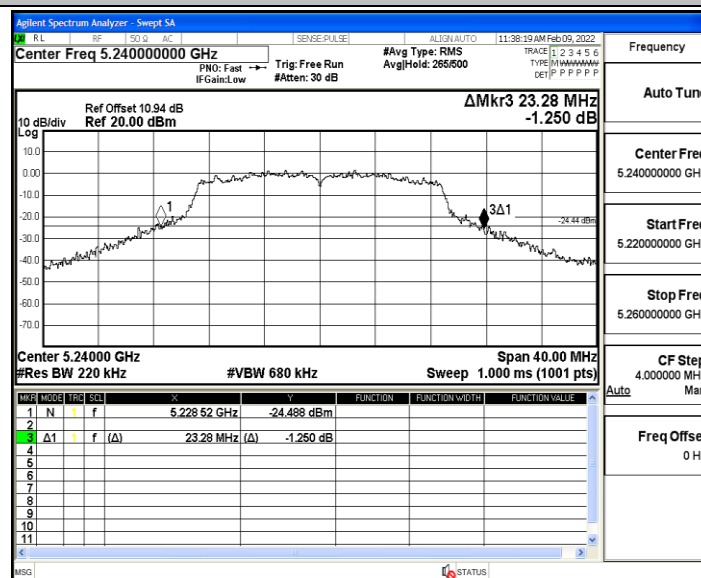
11AC20MIMO_Ant1_5200



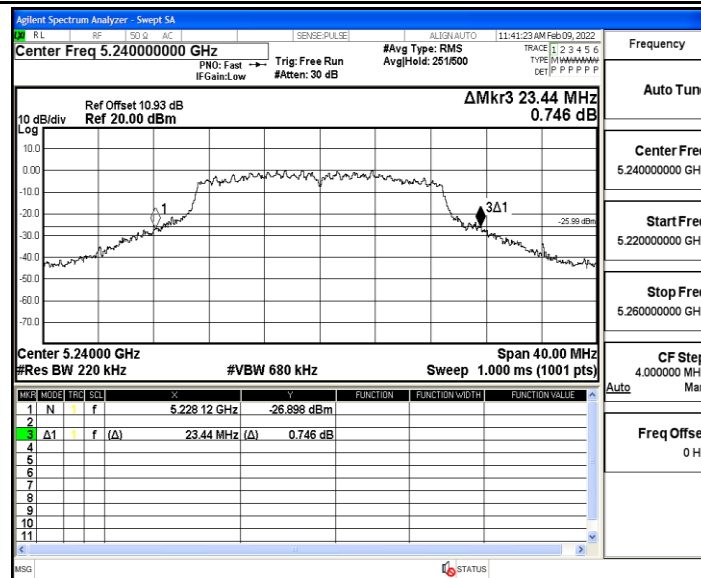
11AC20MIMO_Ant2_5200



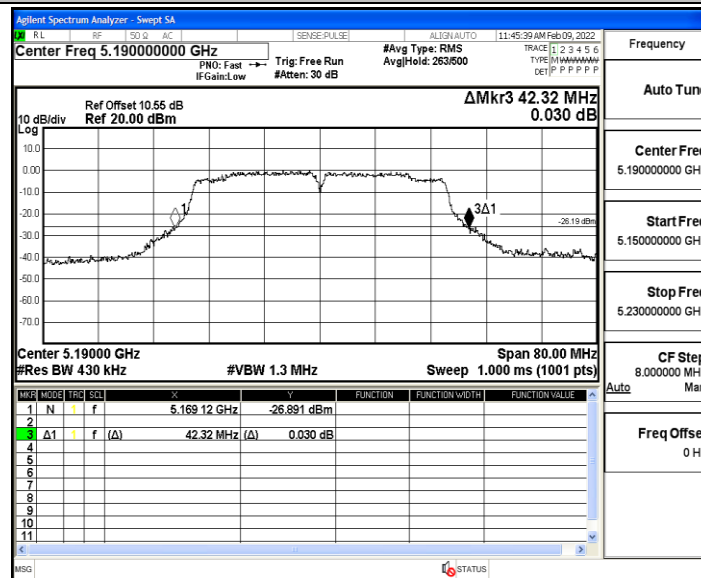
11AC20MIMO_Ant1_5240



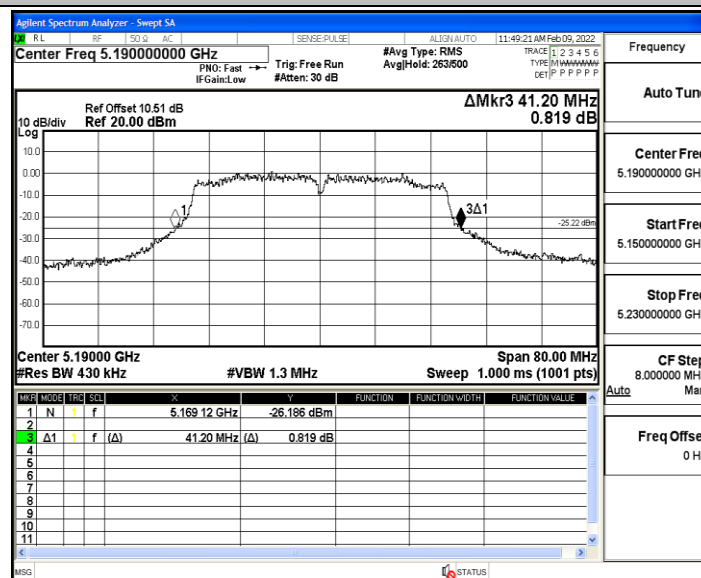
11AC20MIMO_Ant2_5240



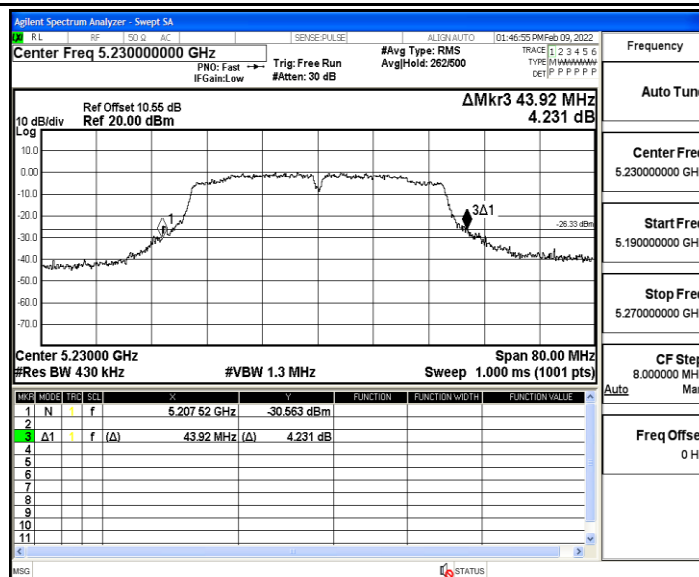
11AC40MIMO_Ant1_5190



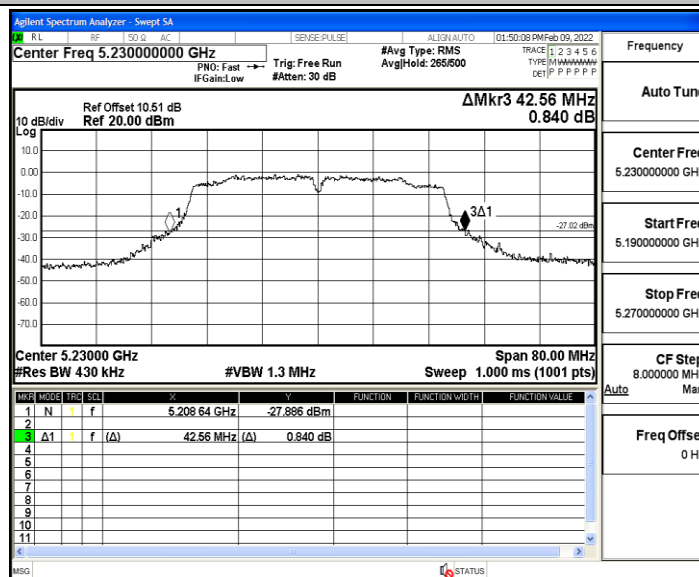
11AC40MIMO_Ant2_5190



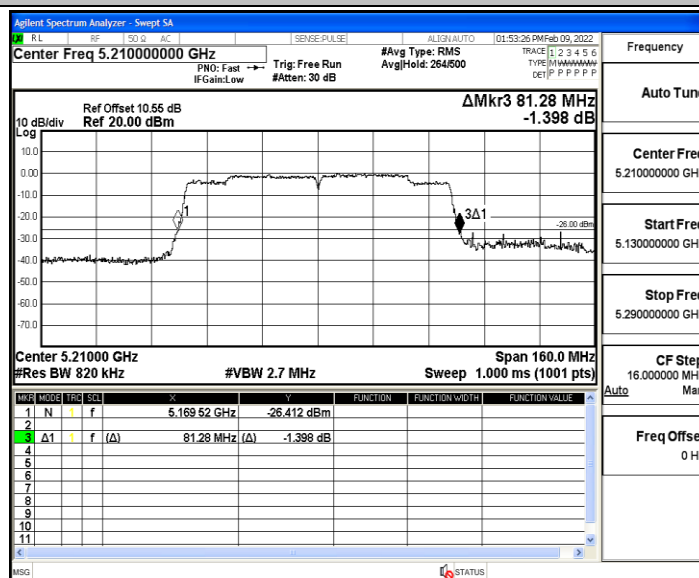
11AC40MIMO_Ant1_5230



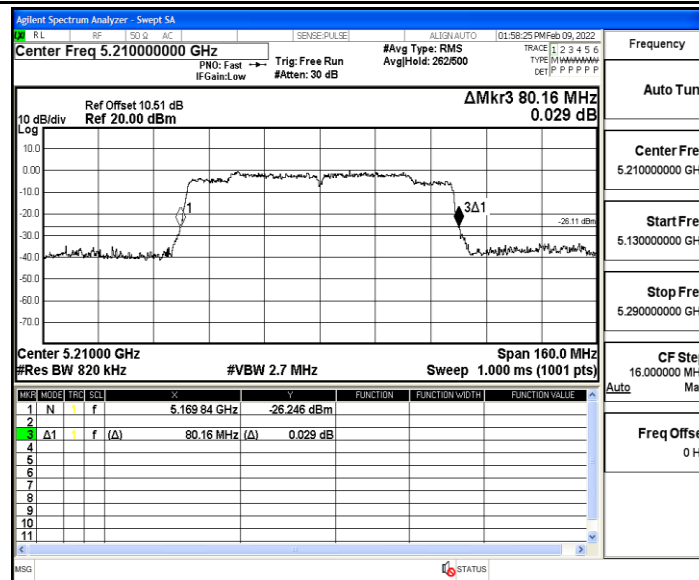
11AC40MIMO_Ant2_5230



11AC80MIMO_Ant1_5210



11AC80MIMO_Ant2_5210



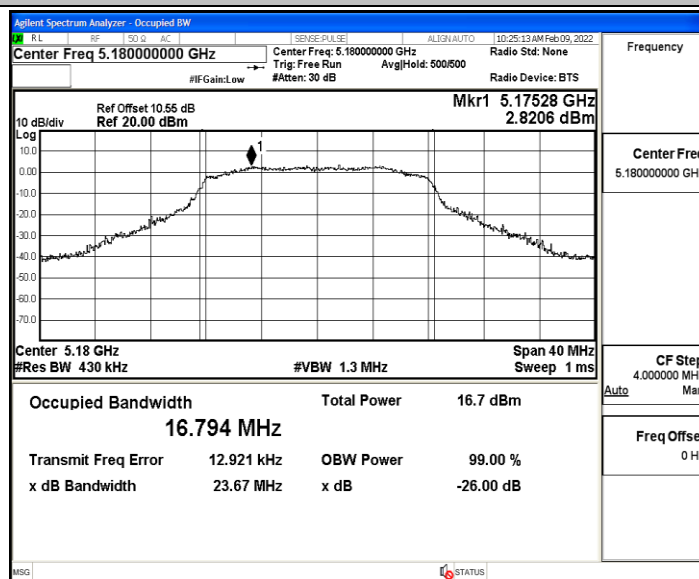
Appendix A2: Occupied channel bandwidth

Test Result

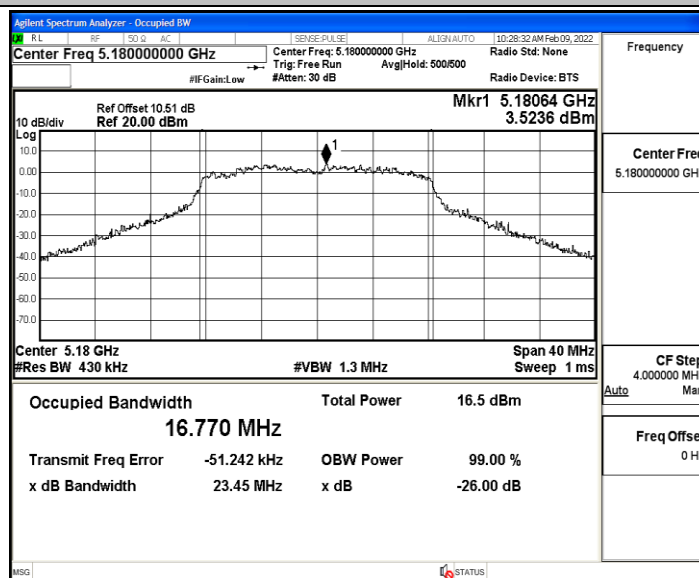
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	16.794	5171.616	5188.410	---	PASS
	Ant2	5180	16.770	5171.564	5188.334	---	PASS
	Ant1	5200	17.066	5191.467	5208.533	---	PASS
	Ant2	5200	16.933	5191.544	5208.477	---	PASS
	Ant1	5240	16.934	5231.473	5248.407	---	PASS
	Ant2	5240	16.768	5231.531	5248.299	---	PASS
11N20MIMO	Ant1	5180	18.022	5171.009	5189.031	---	PASS
	Ant2	5180	18.054	5170.920	5188.974	---	PASS
	Ant1	5200	18.152	5190.947	5209.099	---	PASS
	Ant2	5200	18.222	5190.917	5209.139	---	PASS
	Ant1	5240	18.109	5230.910	5249.019	---	PASS
	Ant2	5240	18.149	5230.868	5249.017	---	PASS
11N40MIMO	Ant1	5190	36.264	5171.964	5208.228	---	PASS
	Ant2	5190	36.338	5171.821	5208.159	---	PASS
	Ant1	5230	36.175	5211.965	5248.140	---	PASS
	Ant2	5230	36.205	5211.937	5248.142	---	PASS
11AC20MIMO	Ant1	5180	17.996	5171.037	5189.033	---	PASS
	Ant2	5180	17.892	5171.039	5188.931	---	PASS
	Ant1	5200	18.163	5190.947	5209.110	---	PASS
	Ant2	5200	17.892	5191.046	5208.938	---	PASS
	Ant1	5240	18.144	5230.889	5249.033	---	PASS
	Ant2	5240	17.862	5231.022	5248.884	---	PASS
11AC40MIMO	Ant1	5190	36.244	5171.965	5208.209	---	PASS
	Ant2	5190	36.218	5171.866	5208.084	---	PASS
	Ant1	5230	36.178	5212.030	5248.208	---	PASS
	Ant2	5230	36.227	5211.923	5248.150	---	PASS
11AC80MIMO	Ant1	5210	75.232	5172.465	5247.697	---	PASS
	Ant2	5210	75.296	5172.299	5247.595	---	PASS

Test Graphs

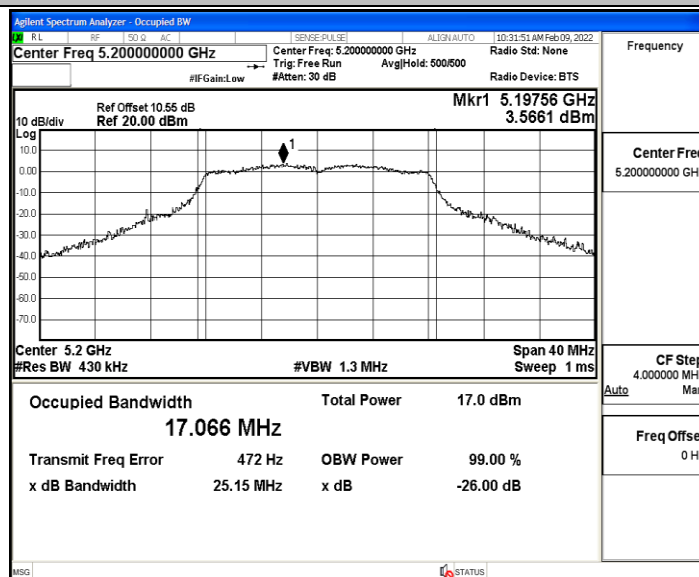
11A_Ant1_5180



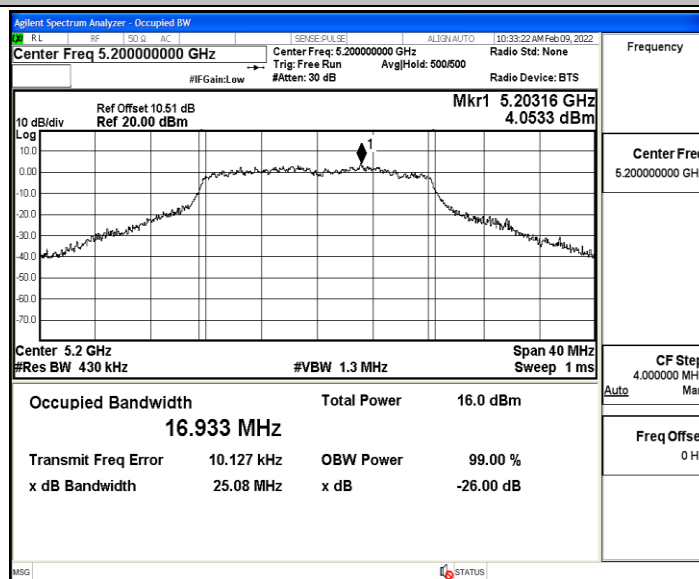
11A_Ant2_5180



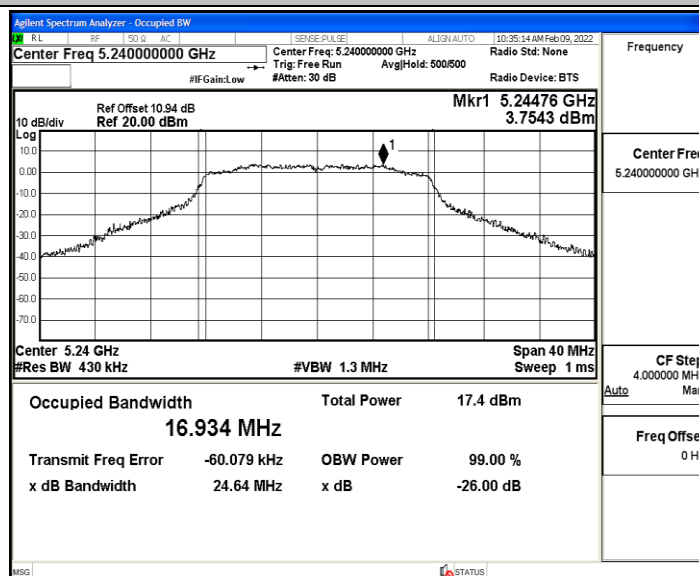
11A_Ant1_5200



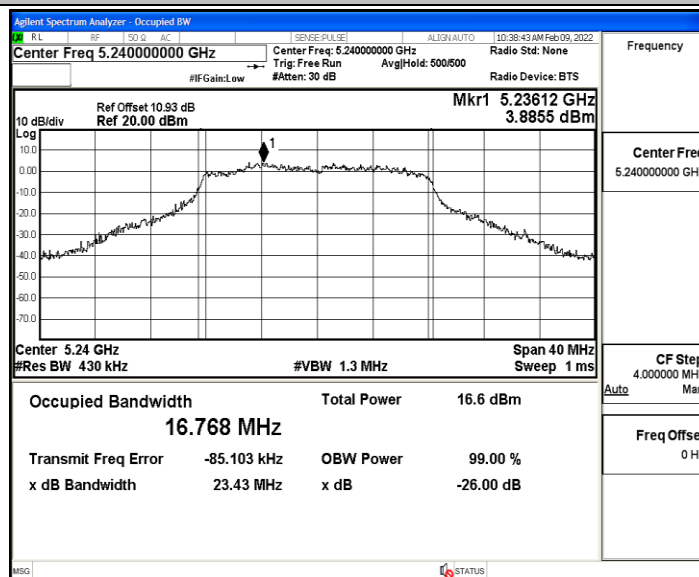
11A_Ant2_5200



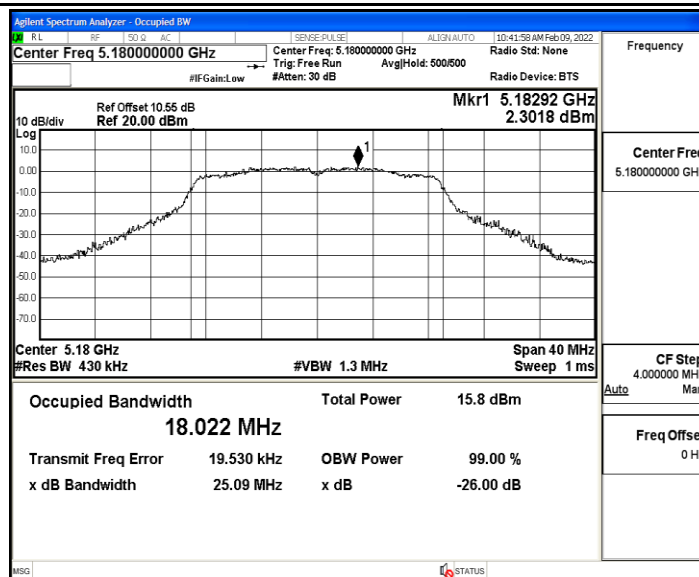
11A_Ant1_5240



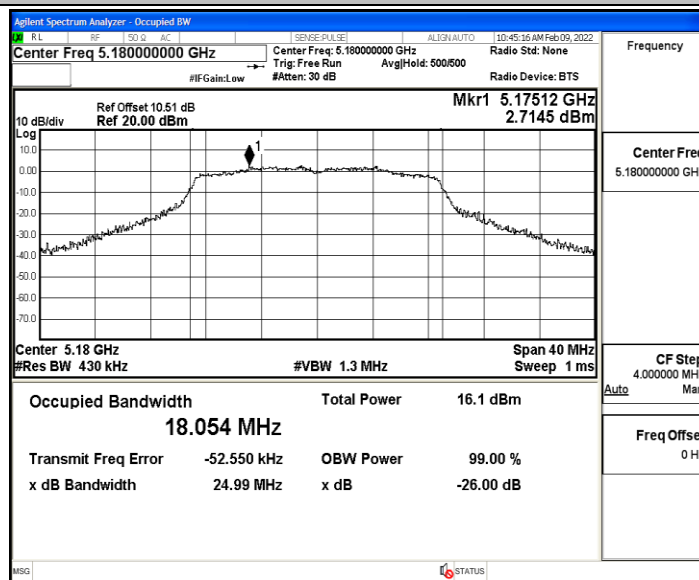
11A_Ant2_5240



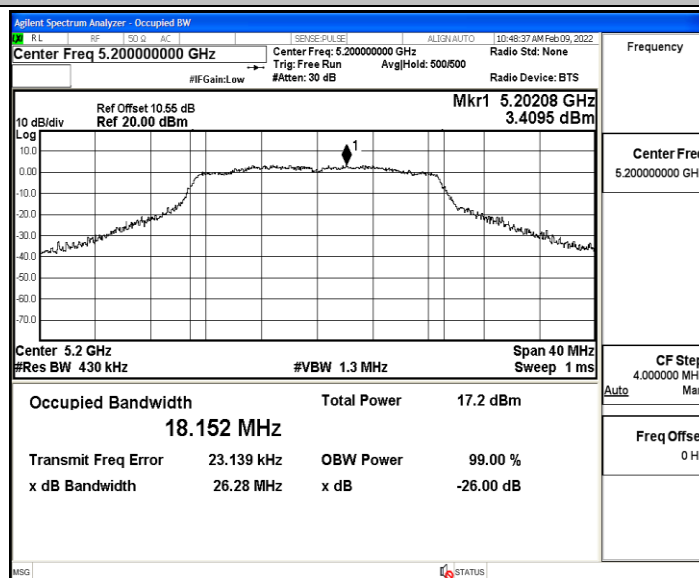
11N20MIMO_Ant1_5180



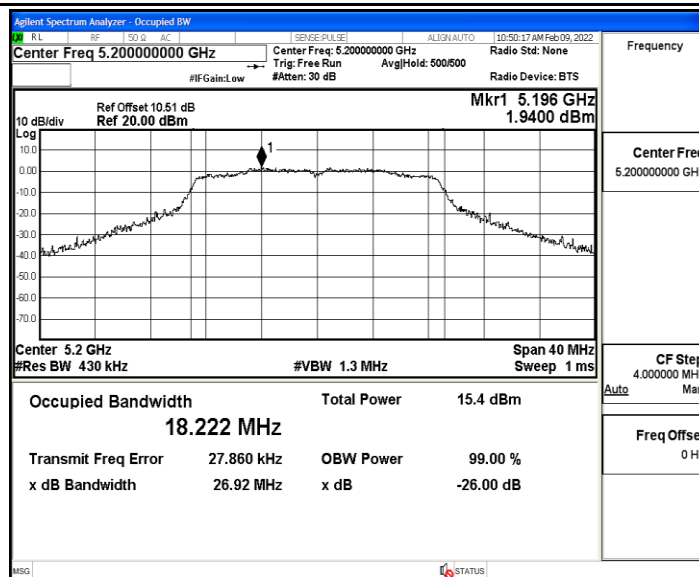
11N20MIMO_Ant2_5180



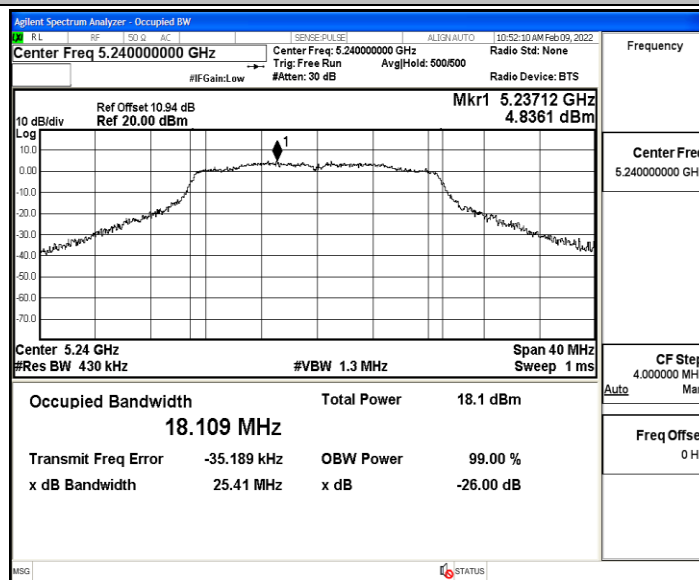
11N20MIMO_Ant1_5200



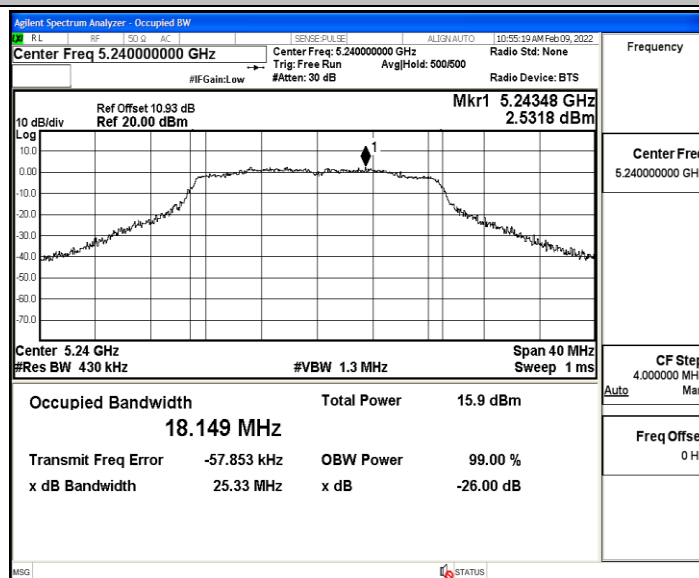
11N20MIMO_Ant2_5200



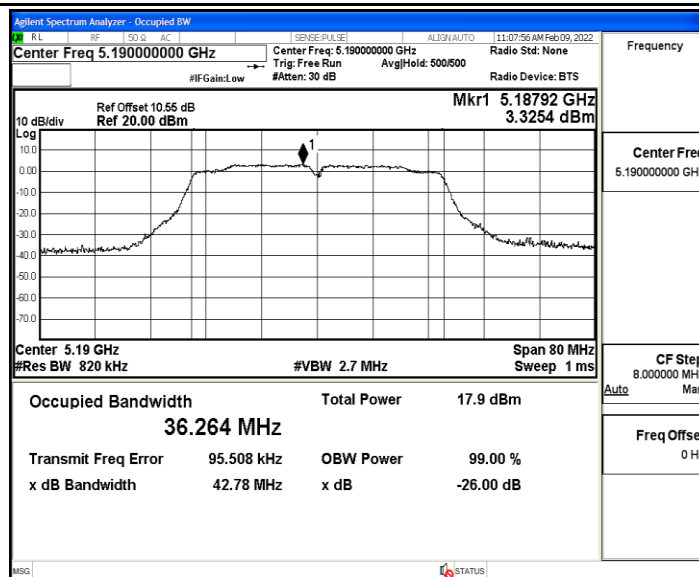
11N20MIMO_Ant1_5240



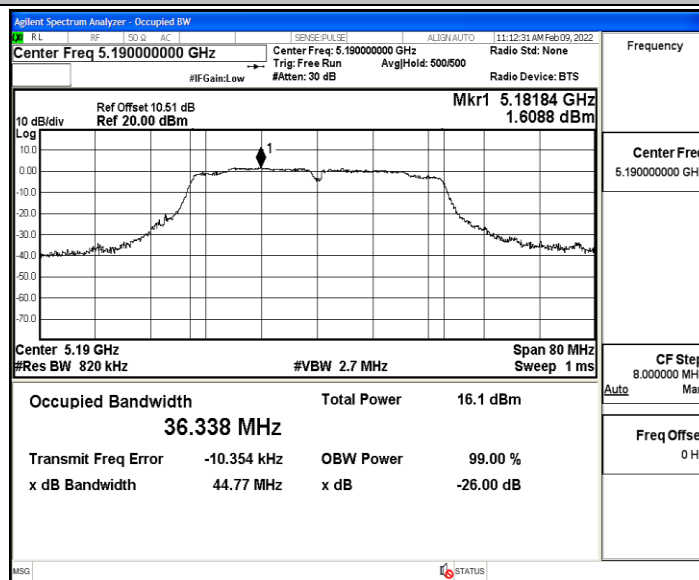
11N20MIMO_Ant2_5240



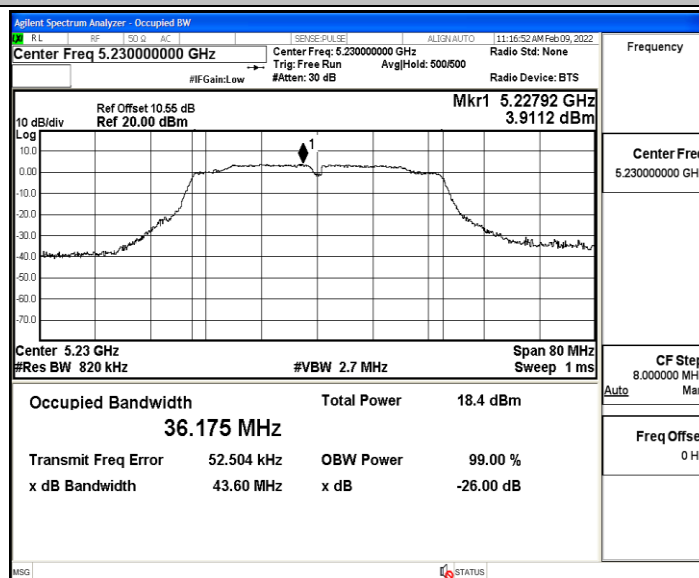
11N40MIMO_Ant1_5190



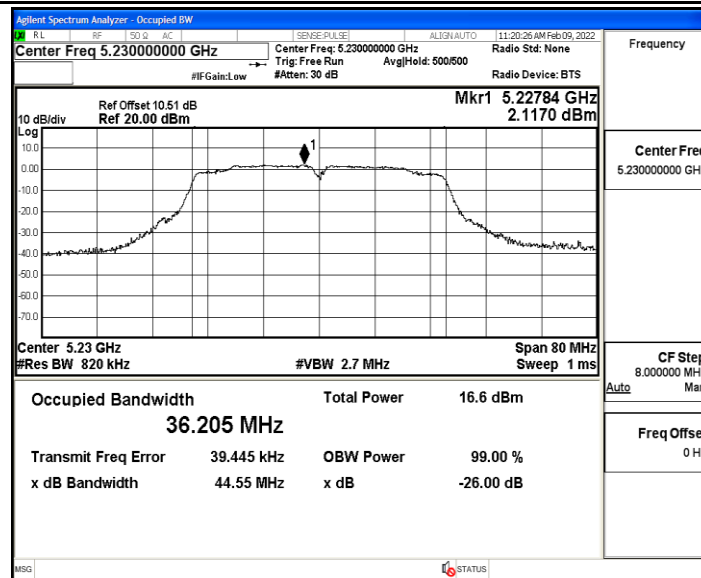
11N40MIMO_Ant2_5190



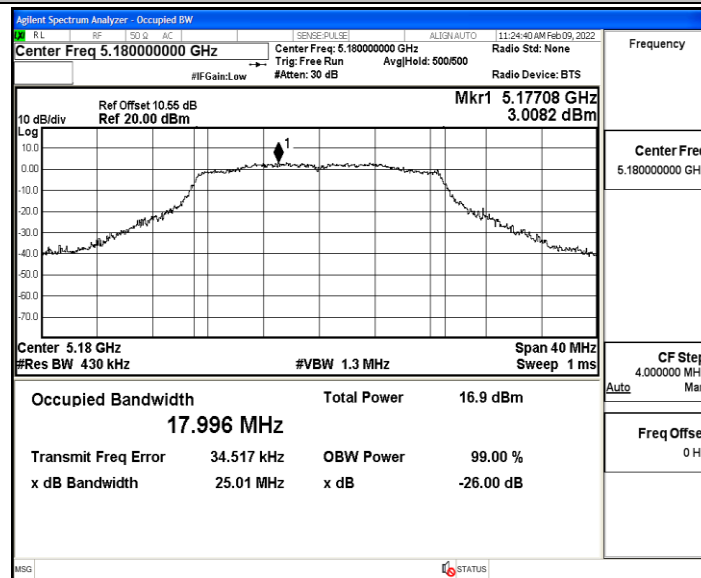
11N40MIMO_Ant1_5230



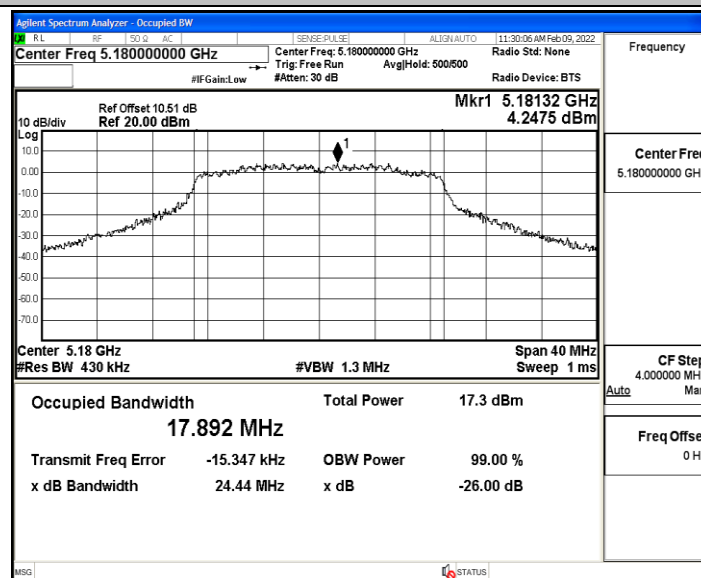
11N40MIMO_Ant2_5230



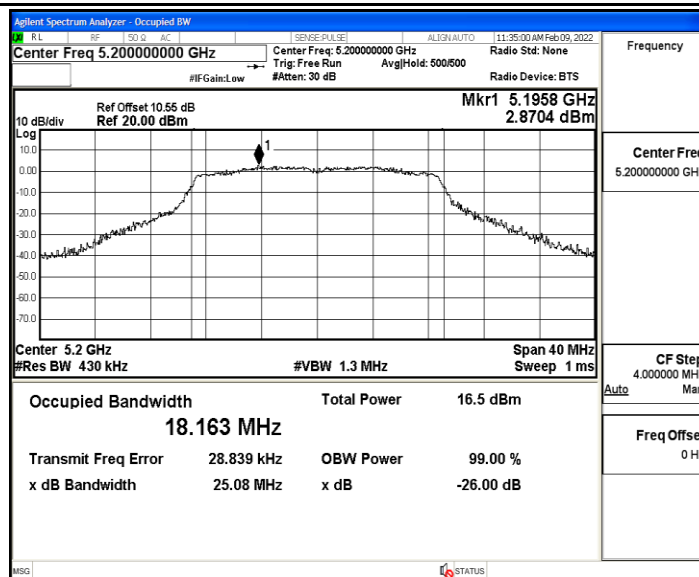
11AC20MIMO_Ant1_5180



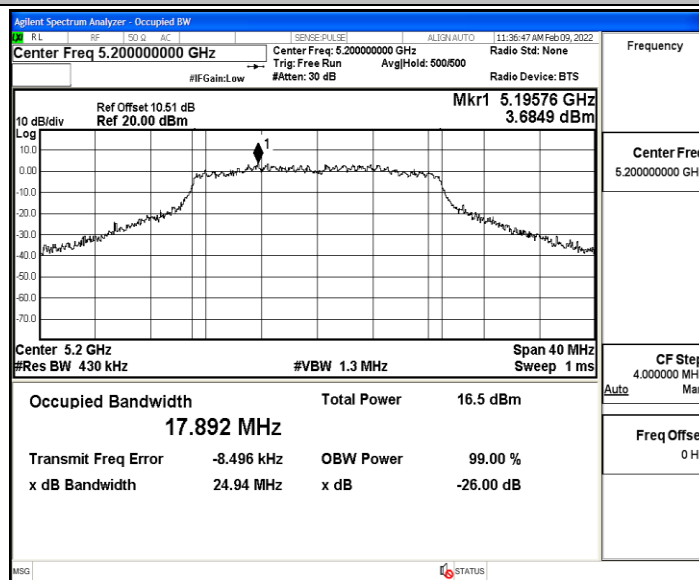
11AC20MIMO_Ant2_5180



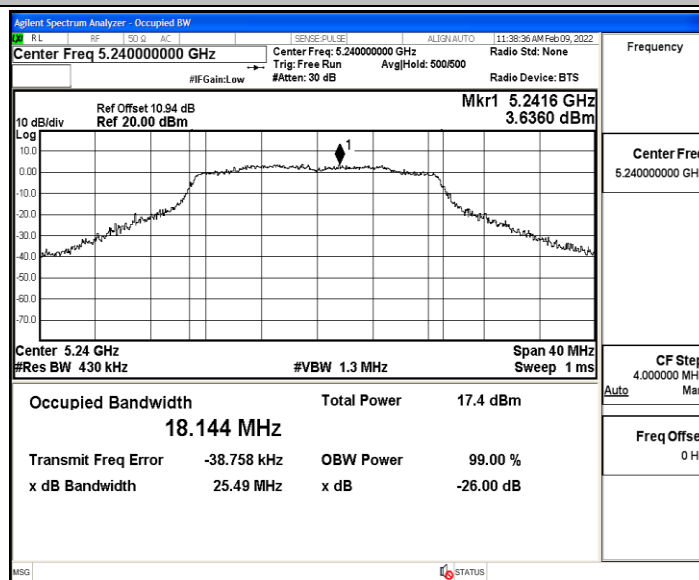
11AC20MIMO_Ant1_5200



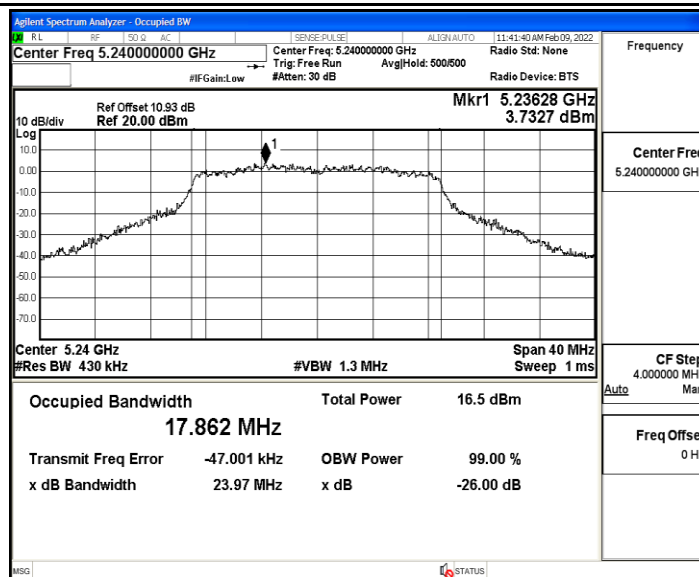
11AC20MIMO_Ant2_5200



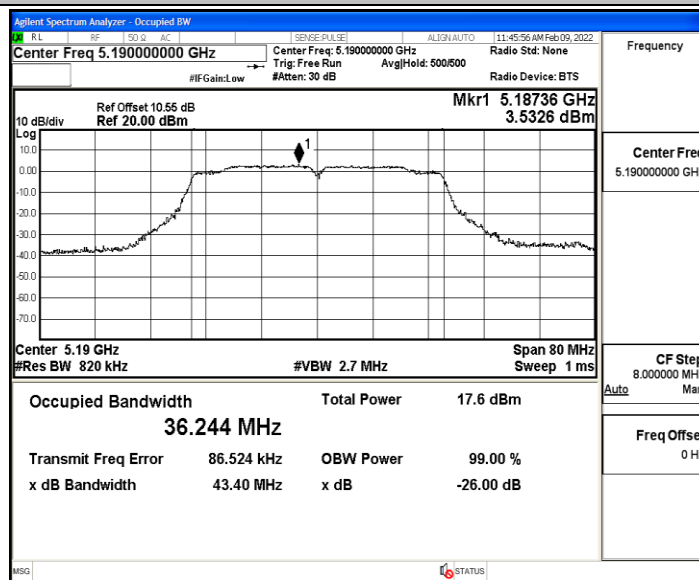
11AC20MIMO_Ant1_5240



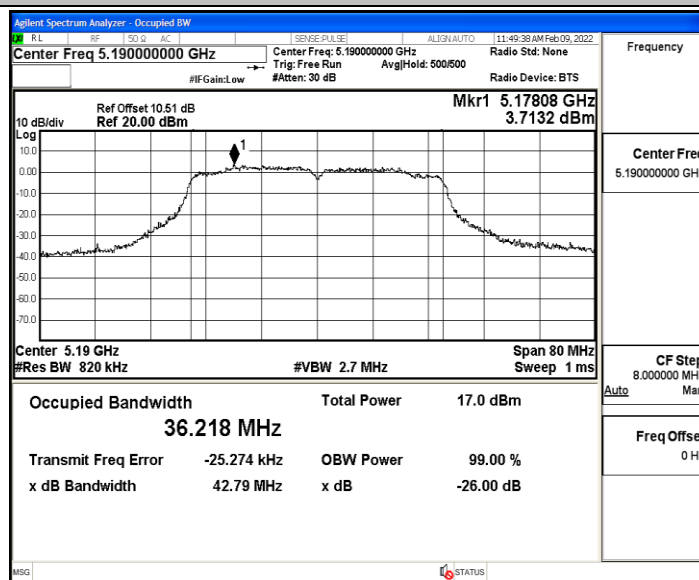
11AC20MIMO_Ant2_5240



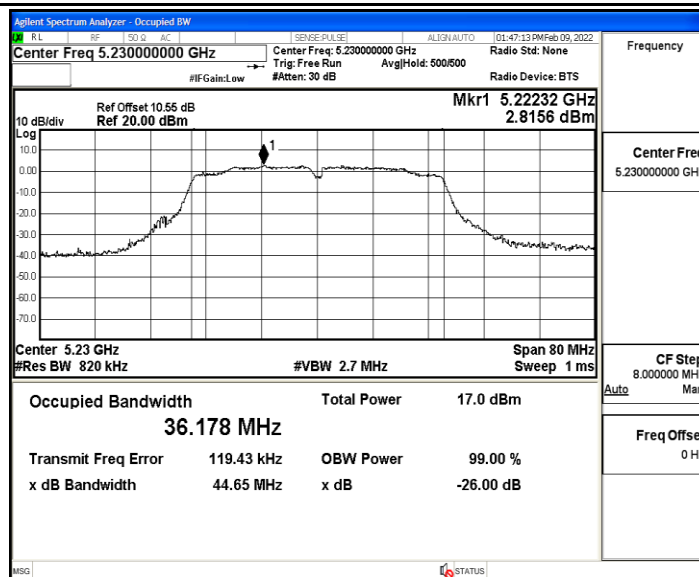
11AC40MIMO_Ant1_5190



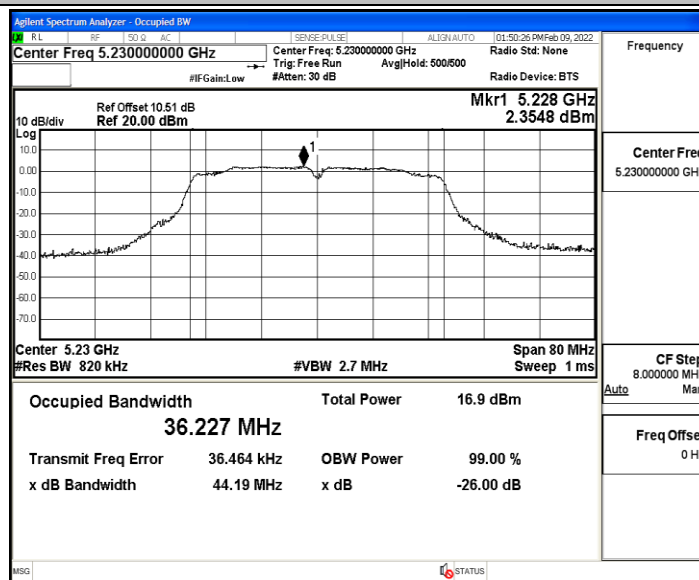
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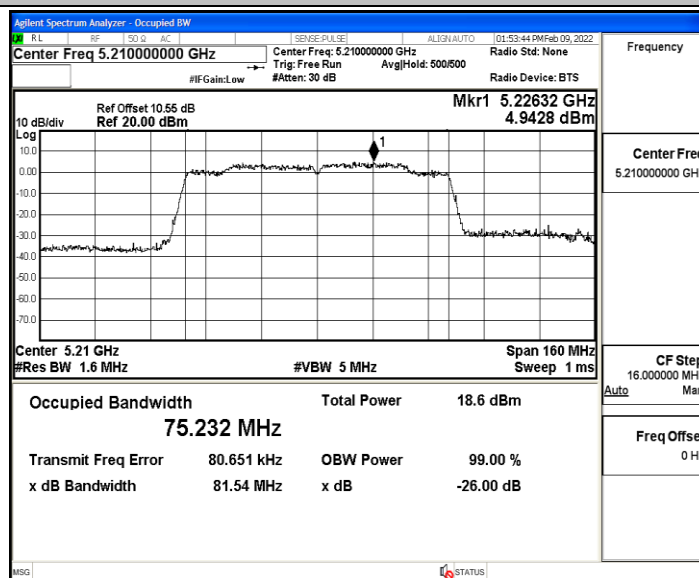
11AC40MIMO_Ant1_5230



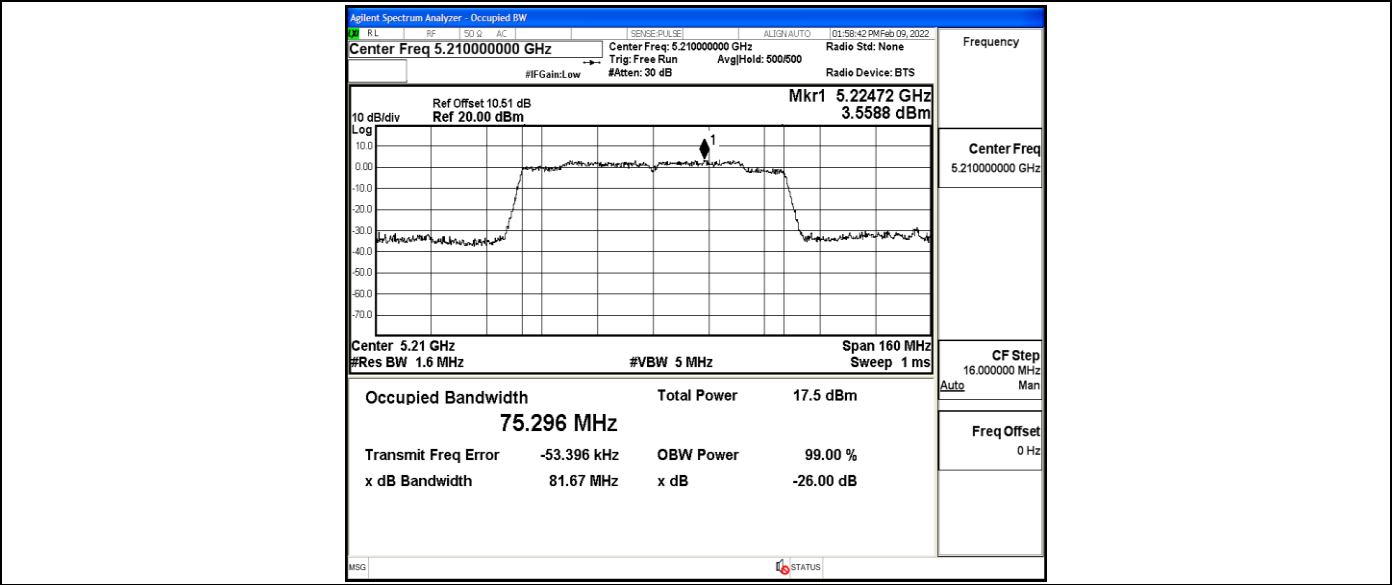
11AC40MIMO_Ant2_5230



11AC80MIMO_Ant1_5210



11AC80MIMO_Ant2_5210



Appendix B: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5180	9.09	≤23.98	PASS
	Ant2	5180	8.20	≤23.98	PASS
	Ant1	5200	9.24	≤23.98	PASS
	Ant2	5200	7.71	≤23.98	PASS
	Ant1	5240	9.73	≤23.98	PASS
	Ant2	5240	8.20	≤23.98	PASS
11N20MIMO	Ant1	5180	7.83	≤23.98	PASS
	Ant2	5180	8.20	≤23.98	PASS
	total	5180	11.0	≤23.98	PASS
	Ant1	5200	9.39	≤23.98	PASS
	Ant2	5200	7.61	≤23.98	PASS
	total	5200	11.6	≤23.98	PASS
	Ant1	5240	10.24	≤23.98	PASS
	Ant2	5240	8.02	≤23.98	PASS
	total	5240	12.3	≤23.98	PASS
11N40MIMO	Ant1	5190	8.15	≤23.98	PASS
	Ant2	5190	7.66	≤23.98	PASS
	total	5190	10.9	≤23.98	PASS
	Ant1	5230	9.92	≤23.98	PASS
	Ant2	5230	8.10	≤23.98	PASS
	total	5230	12.1	≤23.98	PASS
11AC20MIMO	Ant1	5180	8.99	≤23.98	PASS
	Ant2	5180	8.66	≤23.98	PASS
	total	5180	11.8	≤23.98	PASS
	Ant1	5200	8.70	≤23.98	PASS
	Ant2	5200	7.64	≤23.98	PASS
	total	5200	11.2	≤23.98	PASS
	Ant1	5240	9.60	≤23.98	PASS
	Ant2	5240	7.81	≤23.98	PASS
	total	5240	11.8	≤23.98	PASS
11AC40MIMO	Ant1	5190	8.95	≤23.98	PASS
	Ant2	5190	7.84	≤23.98	PASS
	total	5190	11.4	≤23.98	PASS
	Ant1	5230	8.81	≤23.98	PASS
	Ant2	5230	8.38	≤23.98	PASS
	total	5230	11.6	≤23.98	PASS
11AC80MIMO	Ant1	5210	9.12	≤23.98	PASS
	Ant2	5210	7.43	≤23.98	PASS
	total	5210	11.4	≤23.98	PASS

Appendix C: Maximum power spectral density

Test Result

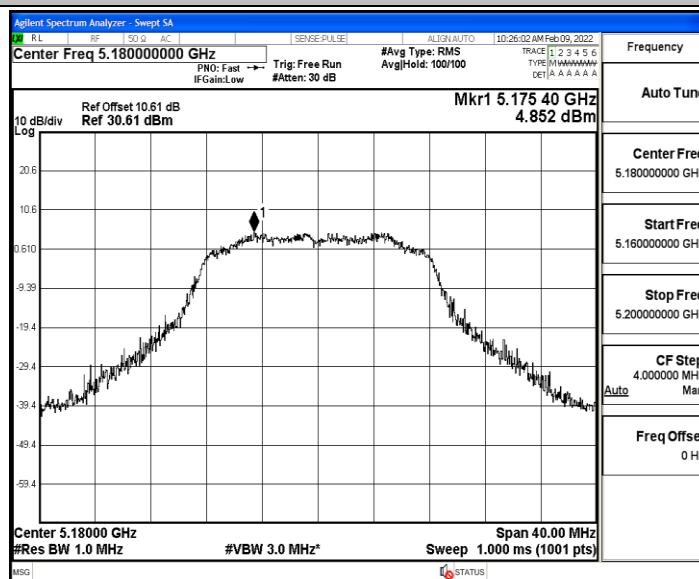
TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	4.85	≤11	PASS
	Ant2	5180	5.14	≤11	PASS
	Ant1	5200	5.22	≤11	PASS
	Ant2	5200	4.45	≤11	PASS
	Ant1	5240	5.82	≤11	PASS
	Ant2	5240	5.09	≤11	PASS
11N20MIMO	Ant1	5180	4.64	≤11	PASS
	Ant2	5180	3.86	≤11	PASS
	total	5180	7.28	≤11	PASS
	Ant1	5200	5.12	≤11	PASS
	Ant2	5200	3.25	≤11	PASS
	total	5200	7.30	≤11	PASS
	Ant1	5240	5.92	≤11	PASS
	Ant2	5240	4.57	≤11	PASS
	total	5240	8.31	≤11	PASS
11N40MIMO	Ant1	5190	0.62	≤11	PASS
	Ant2	5190	0.52	≤11	PASS
	total	5190	3.58	≤11	PASS
	Ant1	5230	2.61	≤11	PASS
	Ant2	5230	1.27	≤11	PASS
	total	5230	5.00	≤11	PASS
11AC20MIMO	Ant1	5180	5.1	≤11	PASS
	Ant2	5180	5.92	≤11	PASS
	total	5180	8.54	≤11	PASS
	Ant1	5200	4.45	≤11	PASS
	Ant2	5200	4.41	≤11	PASS
	total	5200	7.44	≤11	PASS
	Ant1	5240	5.59	≤11	PASS
	Ant2	5240	4.94	≤11	PASS
	total	5240	8.29	≤11	PASS
11AC40MIMO	Ant1	5190	1.56	≤11	PASS
	Ant2	5190	1.94	≤11	PASS
	total	5190	4.76	≤11	PASS
	Ant1	5230	1.91	≤11	PASS
	Ant2	5230	1.16	≤11	PASS
	total	5230	4.56	≤11	PASS
11AC80MIMO	Ant1	5210	-0.67	≤11	PASS
	Ant2	5210	-1.16	≤11	PASS
	total	5210	2.10	≤11	PASS

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

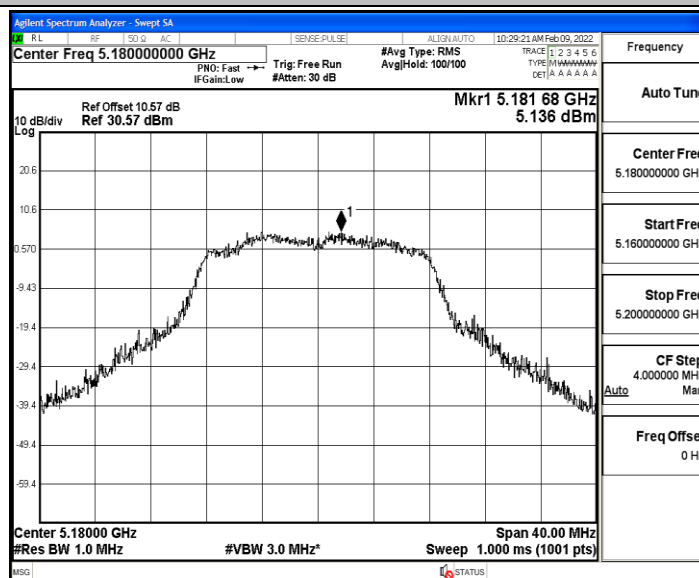
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

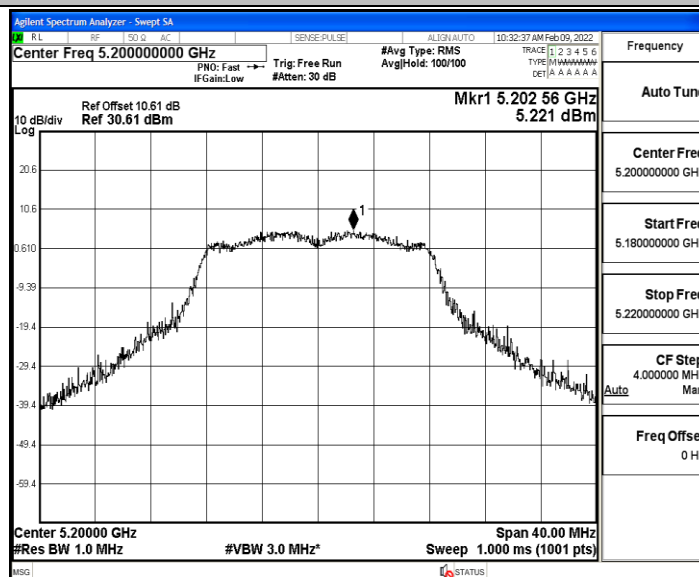
11A_Ant1_5180



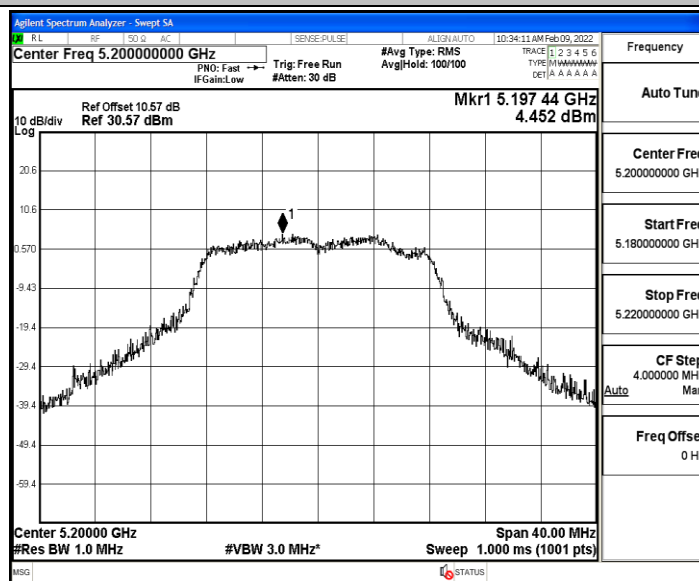
11A_Ant2_5180



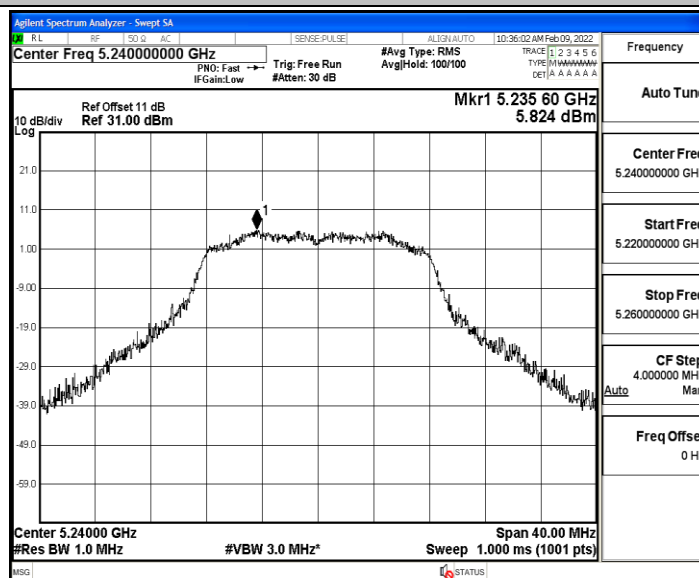
11A_Ant1_5200



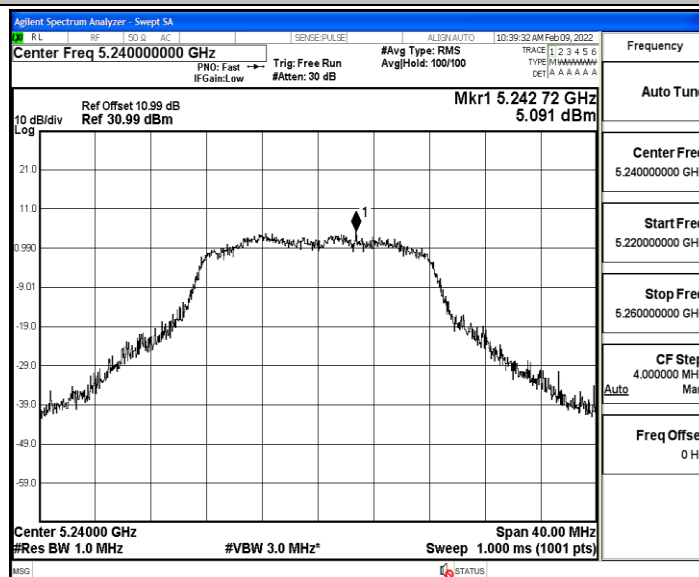
11A_Ant2_5200



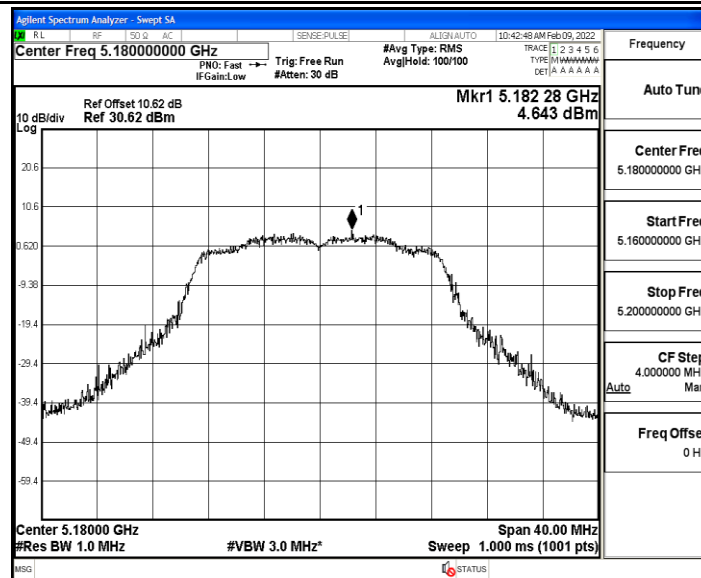
11A_Ant1_5240



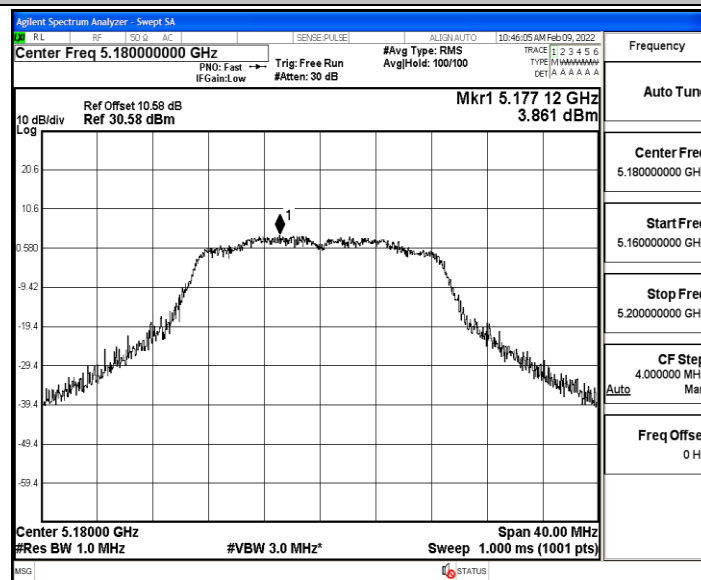
11A_Ant2_5240



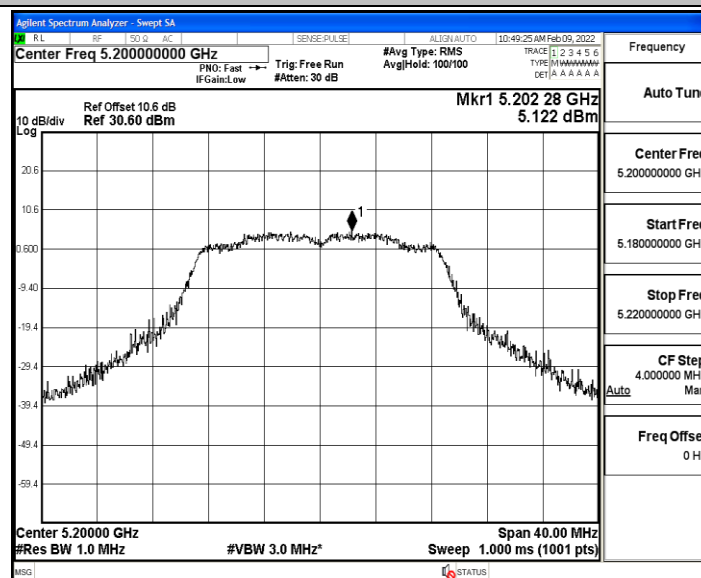
11N20MIMO_Ant1_5180



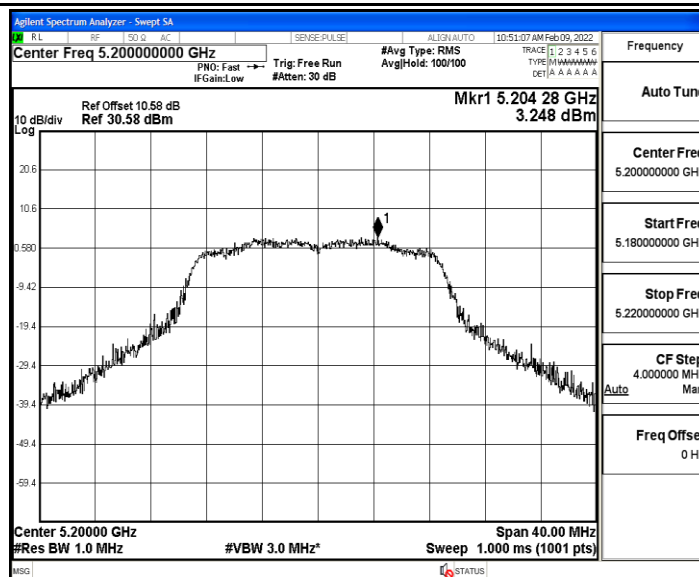
11N20MIMO_Ant2_5180



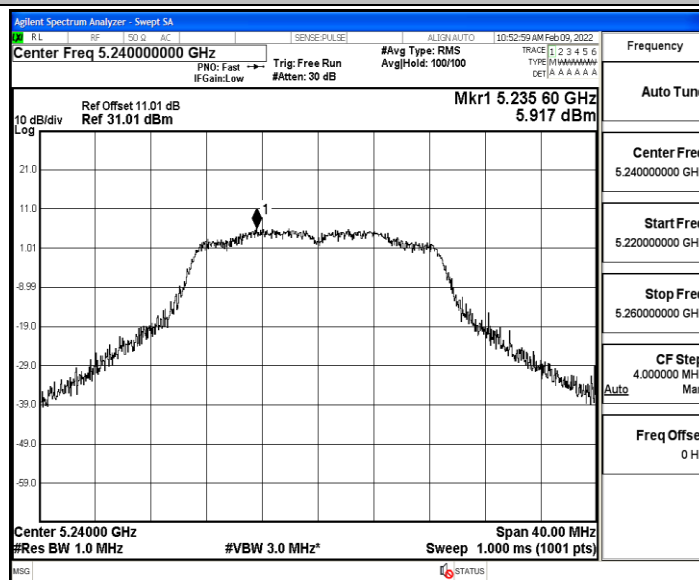
11N20MIMO_Ant1_5200



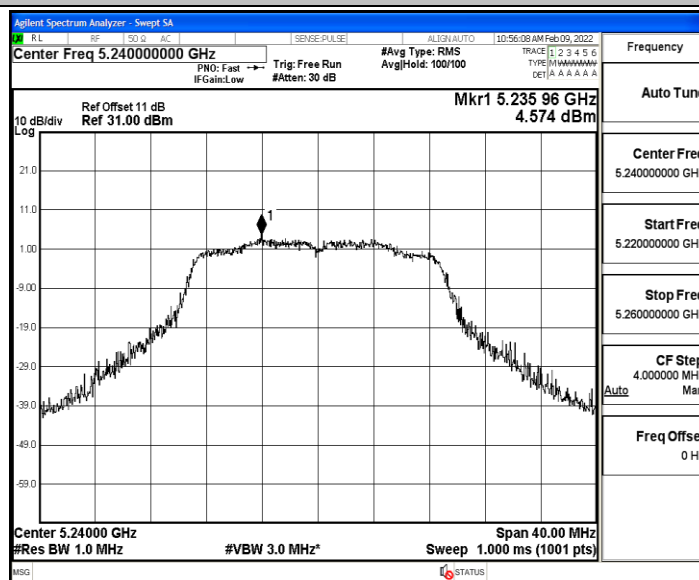
11N20MIMO_Ant2_5200



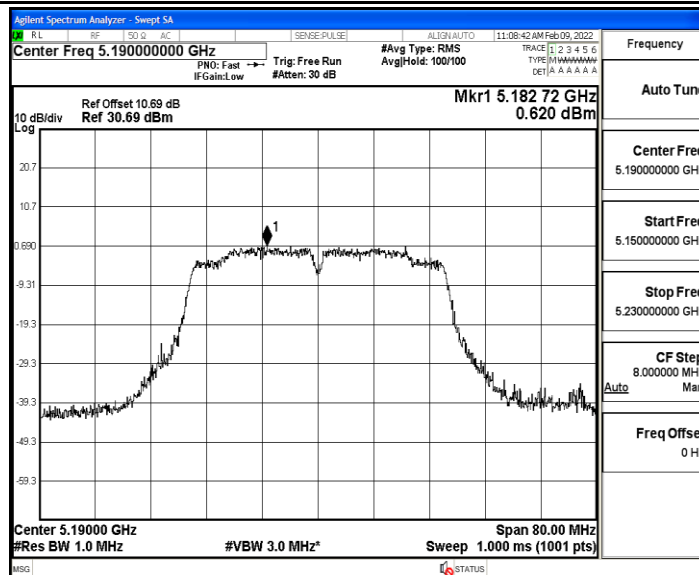
11N20MIMO_Ant1_5240



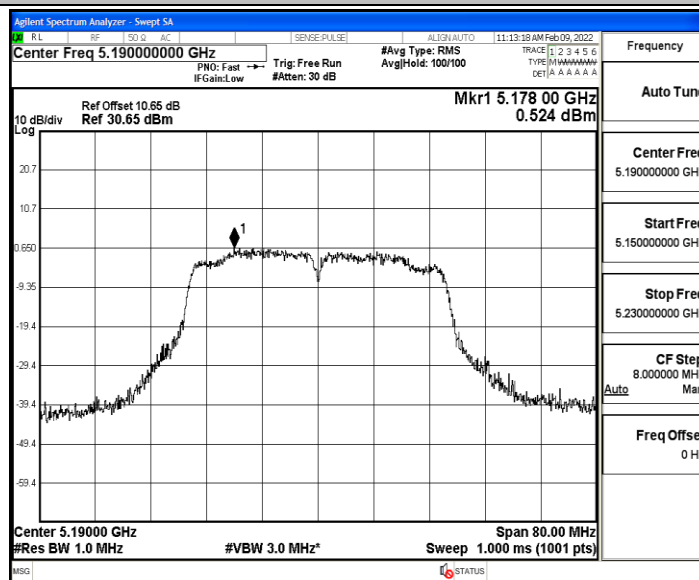
11N20MIMO_Ant2_5240



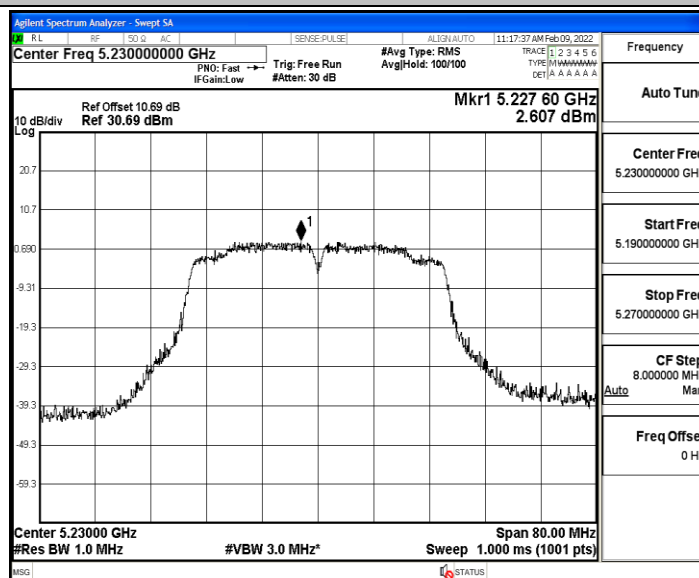
11N40MIMO_Ant1_5190



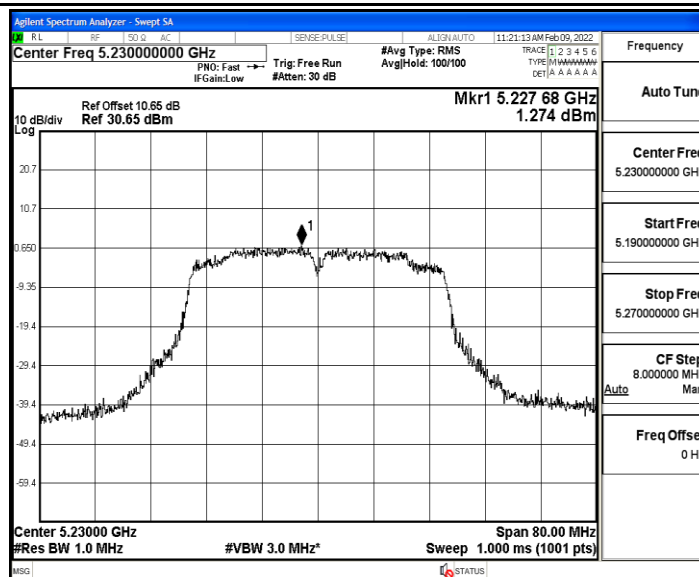
11N40MIMO_Ant2_5190



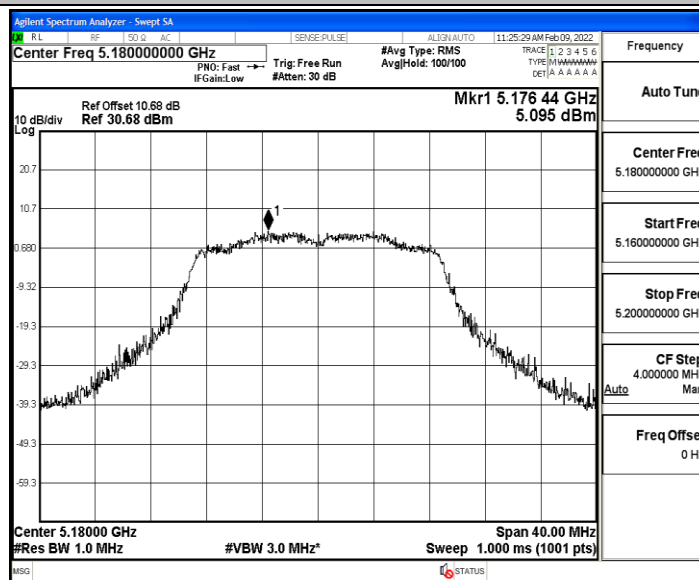
11N40MIMO_Ant1_5230



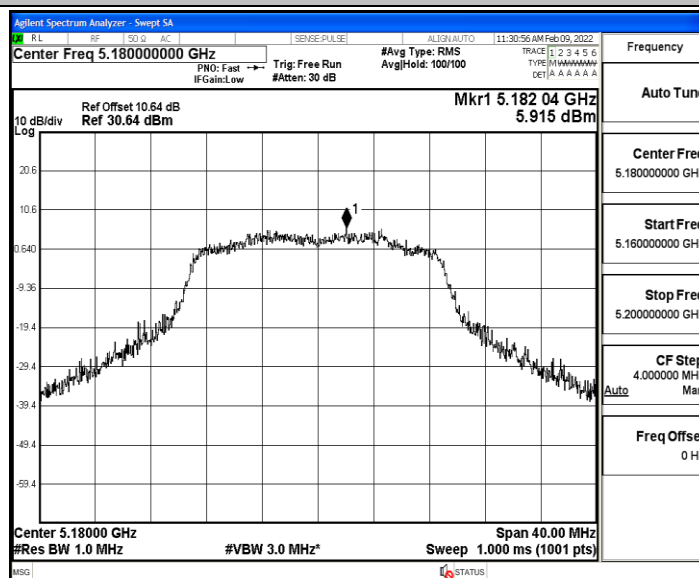
11N40MIMO_Ant2_5230



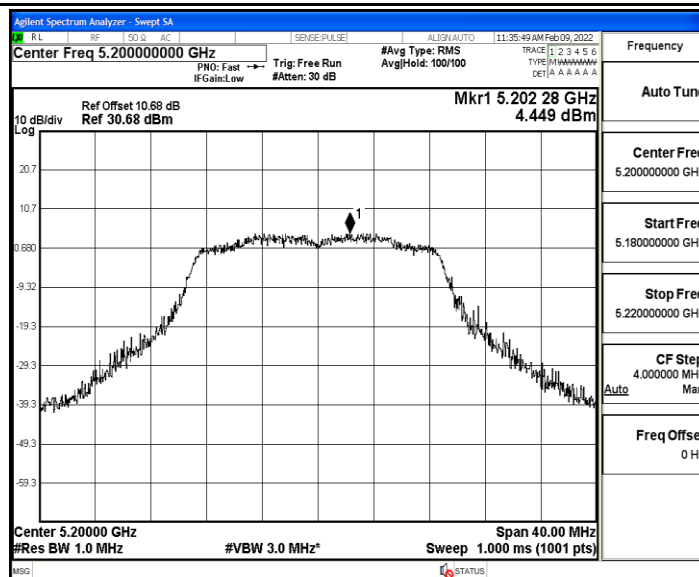
11AC20MIMO_Ant1_5180



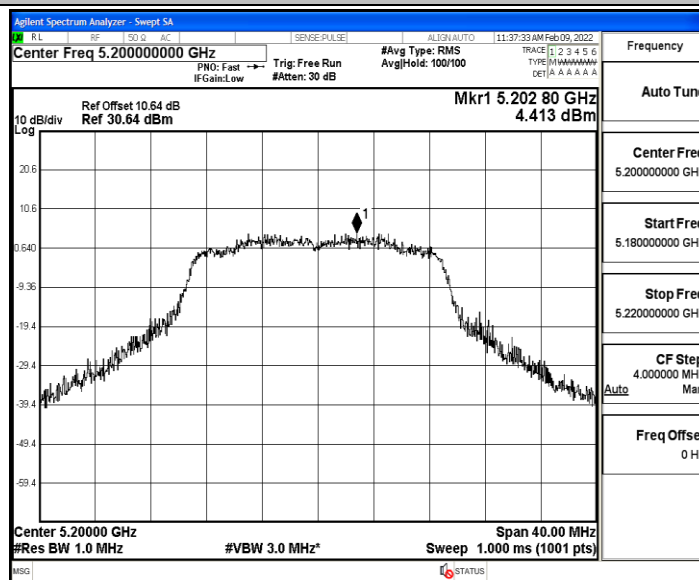
11AC20MIMO_Ant2_5180



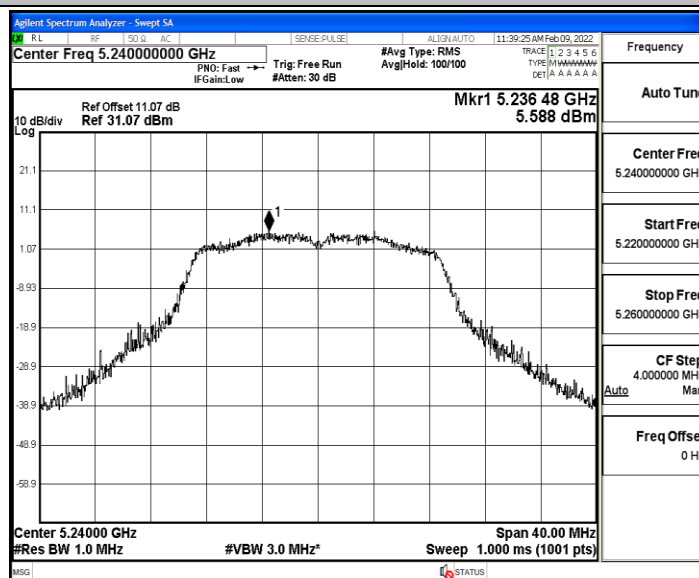
11AC20MIMO_Ant1_5200



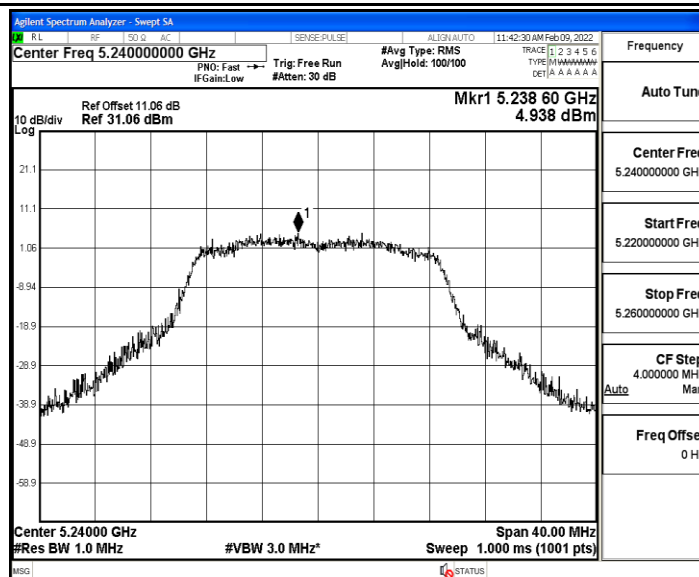
11AC20MIMO_Ant2_5200



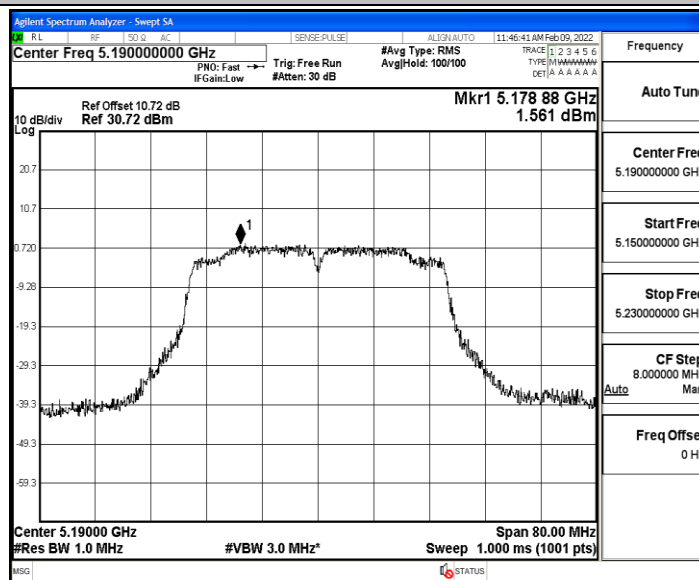
11AC20MIMO_Ant1_5240



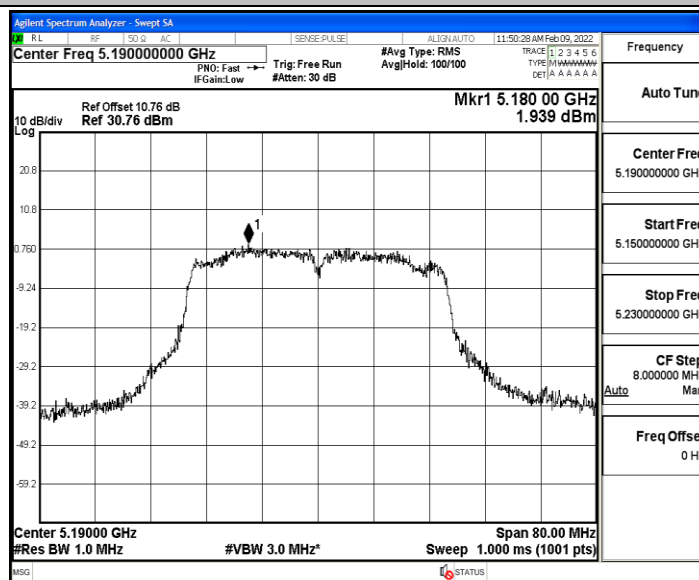
11AC20MIMO_Ant2_5240



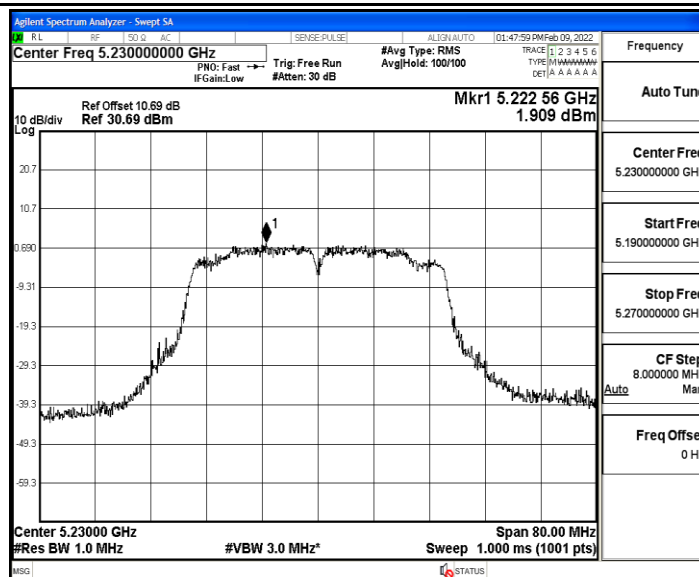
11AC40MIMO_Ant1_5190



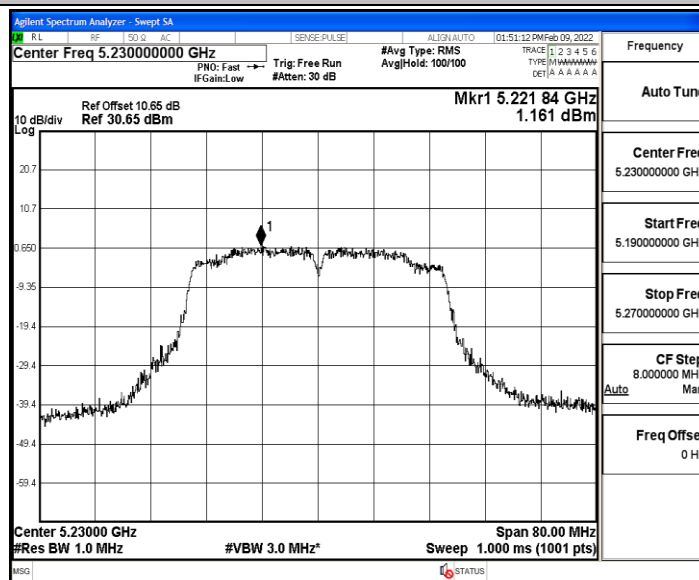
11AC40MIMO_Ant2_5190



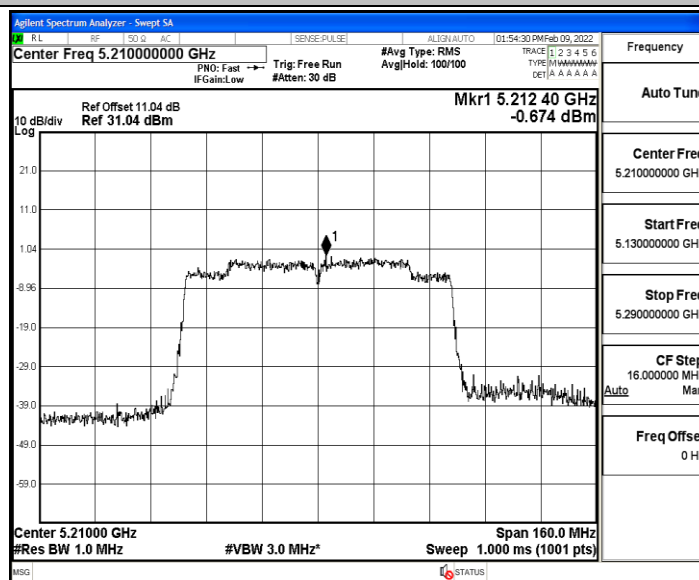
11AC40MIMO_Ant1_5230



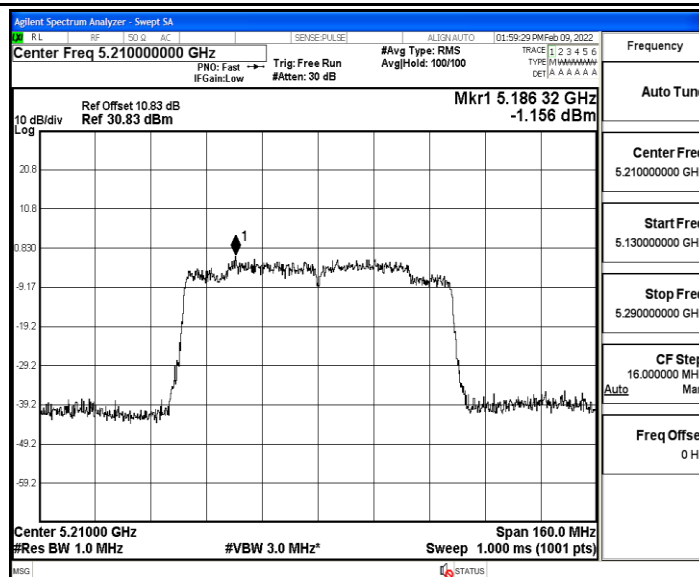
11AC40MIMO_Ant2_5230



11AC80MIMO_Ant1_5210



11AC80MIMO_Ant2_5210



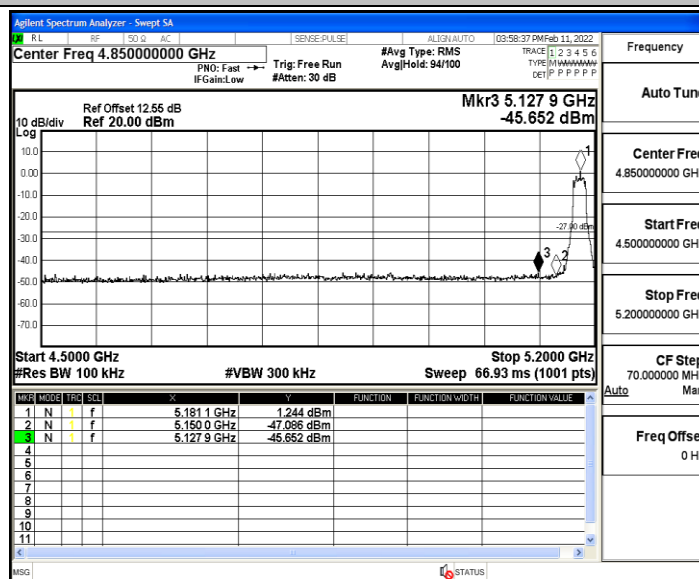
Appendix D: Band edge measurements

Test Result

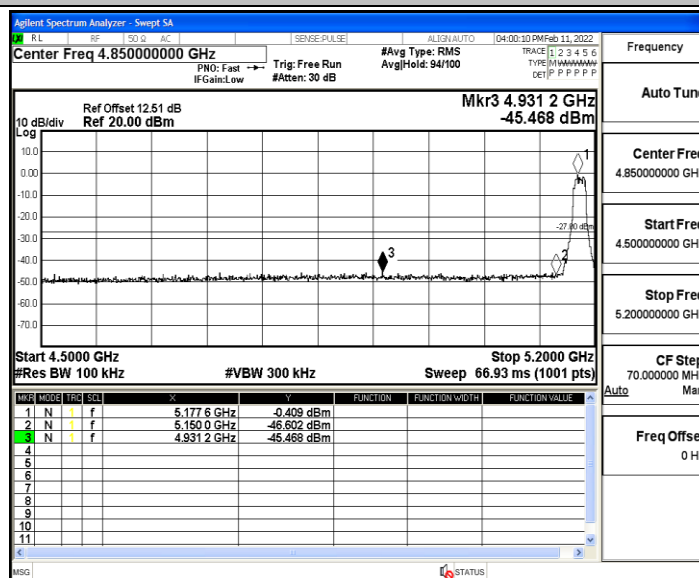
TestMode	Antenna	ChName	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-45.65	≤ -27	PASS
	Ant2	Low	5180	-45.47	≤ -27	PASS
	Ant1	High	5240	-45.06	≤ -27	PASS
	Ant2	High	5240	-45.51	≤ -27	PASS
11N20MIMO	Ant1	Low	5180	-45.04	≤ -27	PASS
	Ant2	Low	5180	-44.37	≤ -27	PASS
	Ant1	High	5240	-45.39	≤ -27	PASS
	Ant2	High	5240	-46.07	≤ -27	PASS
11N40MIMO	Ant1	Low	5190	-39	≤ -27	PASS
	Ant2	Low	5190	-39.61	≤ -27	PASS
	Ant1	High	5230	-46.28	≤ -27	PASS
	Ant2	High	5230	-44.8	≤ -27	PASS
11AC20MIMO	Ant1	Low	5180	-44.97	≤ -27	PASS
	Ant2	Low	5180	-45.37	≤ -27	PASS
	Ant1	High	5240	-45.58	≤ -27	PASS
	Ant2	High	5240	-45.04	≤ -27	PASS
11AC40MIMO	Ant1	Low	5190	-45.82	≤ -27	PASS
	Ant2	Low	5190	-45.72	≤ -27	PASS
	Ant1	High	5230	-45.83	≤ -27	PASS
	Ant2	High	5230	-45.86	≤ -27	PASS
11AC80MIMO	Ant1	Low	5210	-45.65	≤ -27	PASS
	Ant2	Low	5210	-45.47	≤ -27	PASS
	Ant1	High	5210	-45.06	≤ -27	PASS
	Ant2	High	5210	-45.51	≤ -27	PASS

Test Graphs

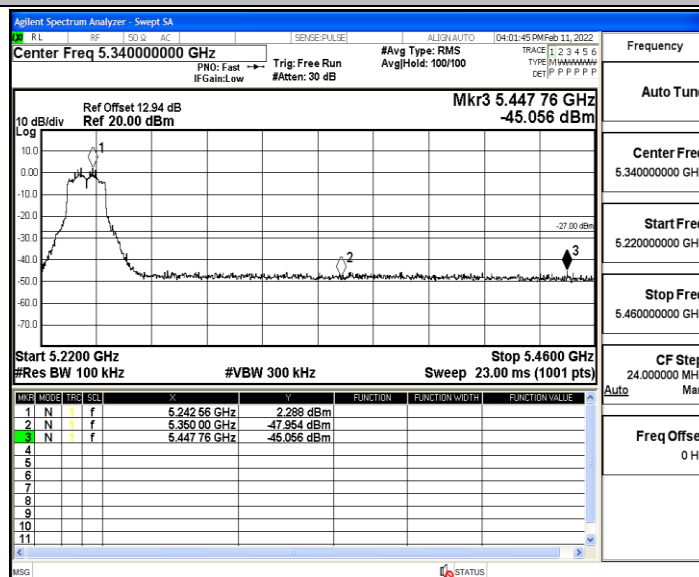
11A_Ant1_Low_5180



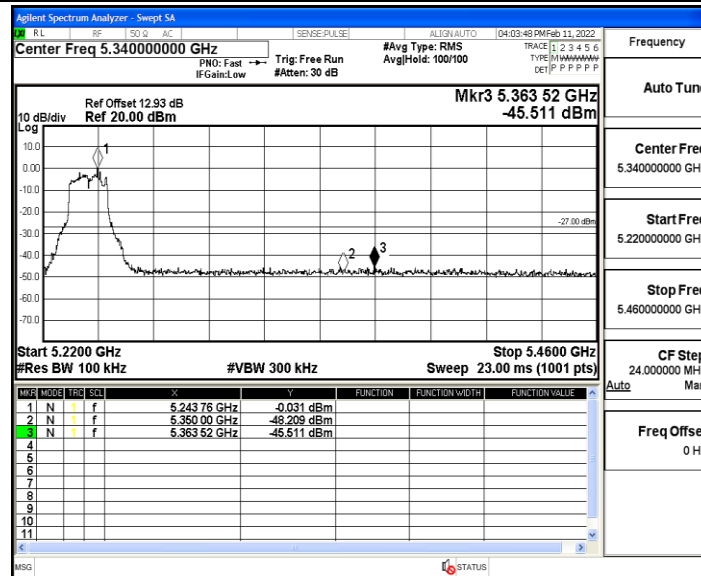
11A_Ant2_Low_5180



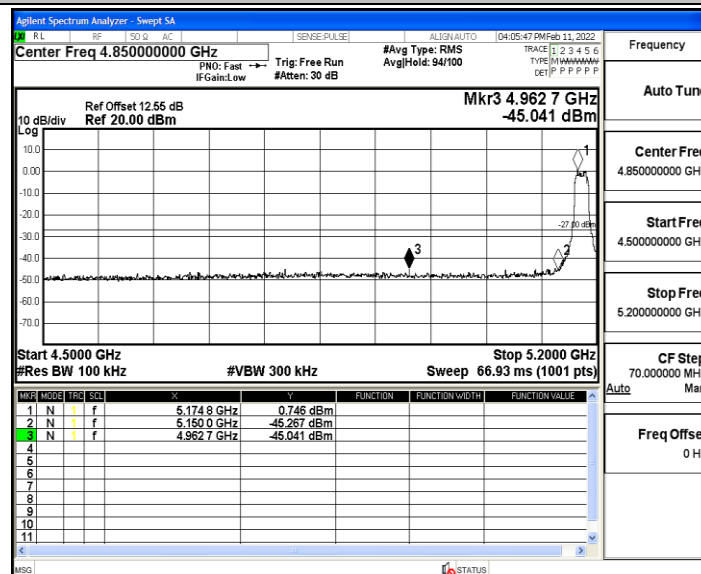
11A_Ant1_High_5240



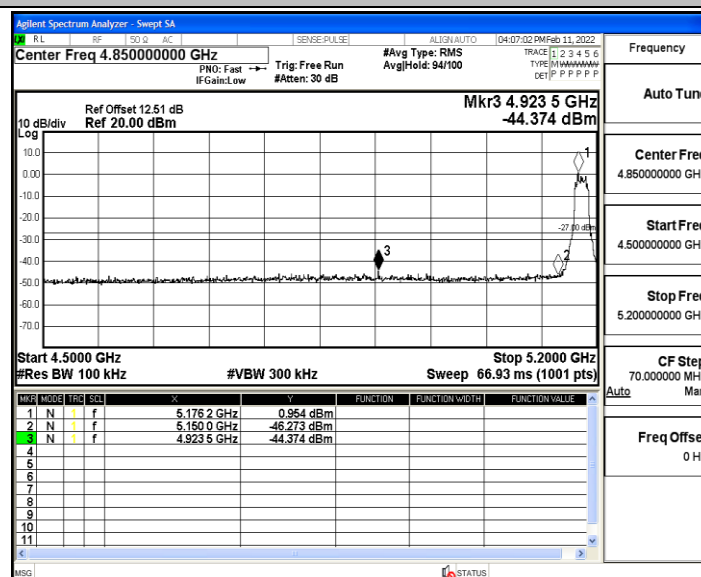
11A_Ant2_High_5240



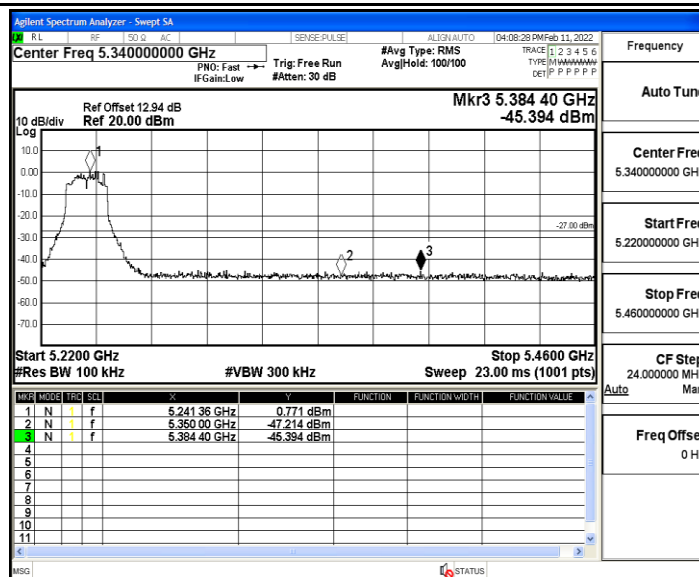
11N20MIMO_Ant1_Low_5180



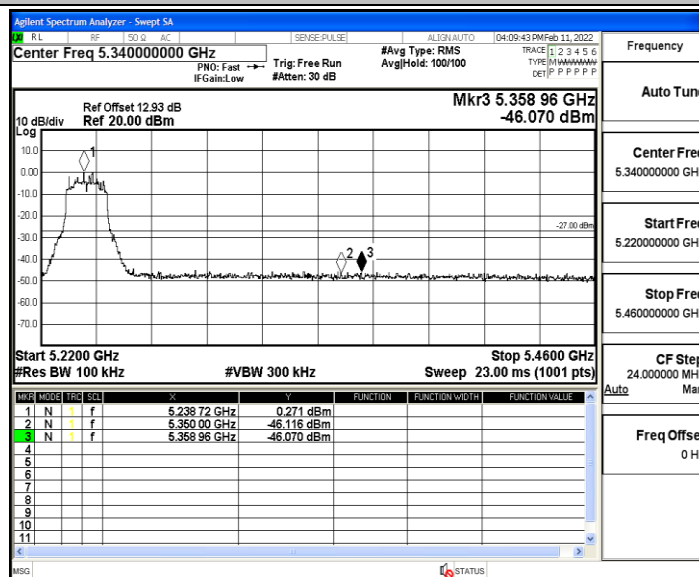
11N20MIMO_Ant2_Low_5180



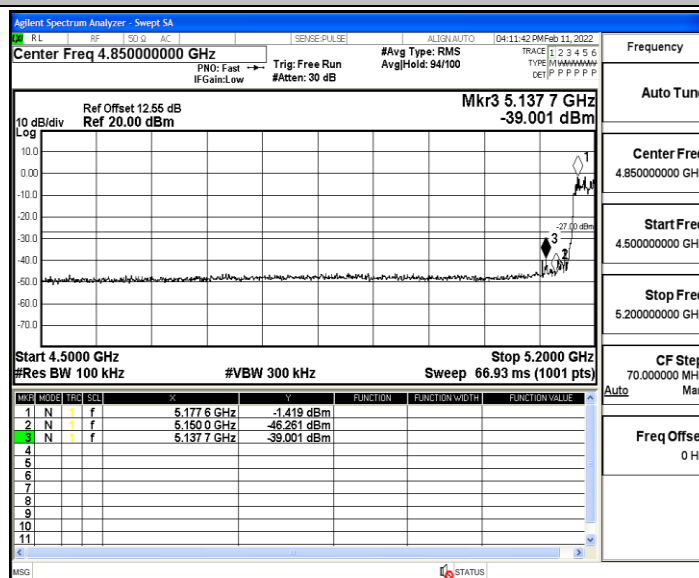
11N20MIMO_Ant1_High_5240



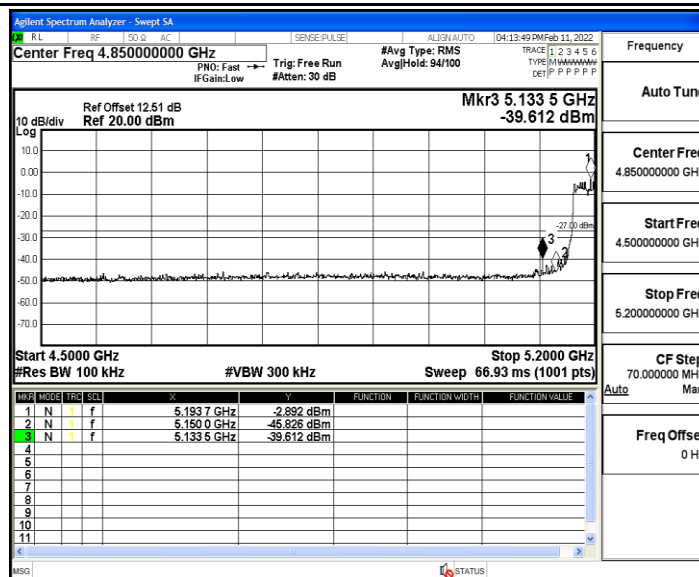
11N20MIMO_Ant2_High_5240



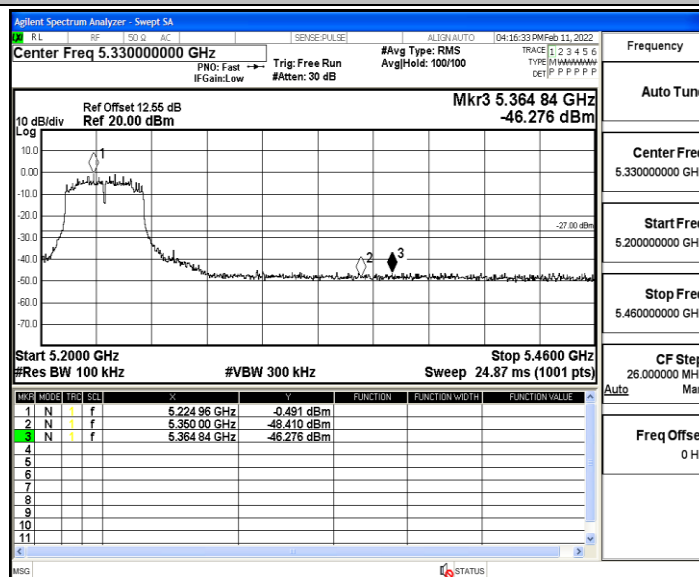
11N40MIMO_Ant1_Low_5190



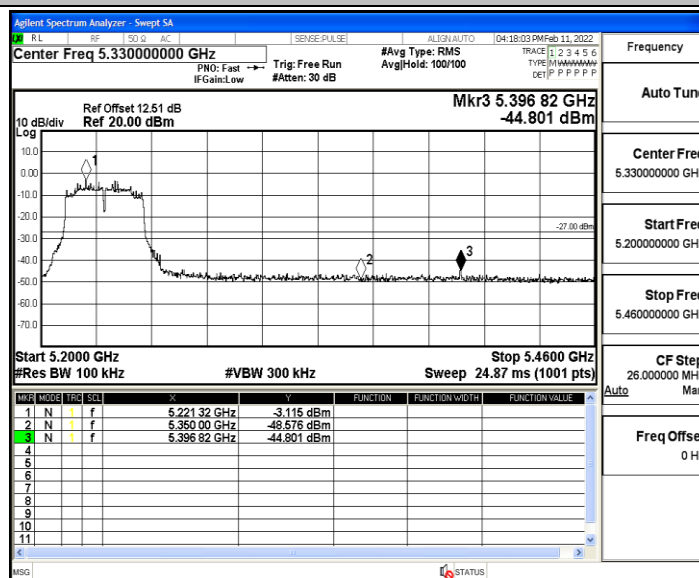
11N40MIMO_Ant2_Low_5190



11N40MIMO_Ant1_High_5230



11N40MIMO_Ant2_High_5230



11AC20MIMO_Ant1_Low_5180