

RF Test Data for RLAN(5.2G) (Conducted Measurement)**Product Name: 4K Set top box****Trade Mark: eSTREAM4K****Test Model: IPA1114HDW-02****FCC ID: 2AOVU-SN6BBAXS****IC: 25669-IPA1114HDWS****Environmental Conditions**

Temperature:	24.3℃
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

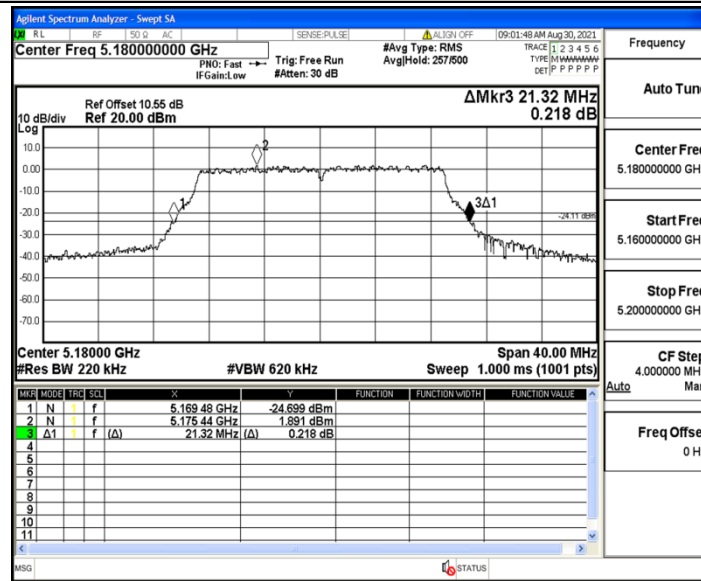
Appendix A1: Emission Bandwidth**Test Result**

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	21.320	5169.400	5190.840	---	PASS
	Ant2	5180	20.960	5169.640	5190.600	---	PASS
	Ant1	5200	21.320	5189.320	5210.640	---	PASS
	Ant2	5200	21.320	5189.400	5210.720	---	PASS
	Ant1	5240	21.040	5229.560	5250.600	---	PASS
	Ant2	5240	21.320	5229.520	5250.840	---	PASS
11N20MIMO	Ant1	5180	21.320	5169.480	5190.800	---	PASS
	Ant2	5180	21.560	5169.360	5190.920	---	PASS
	Ant1	5200	21.200	5189.560	5210.760	---	PASS
	Ant2	5200	21.480	5189.440	5210.920	---	PASS
	Ant1	5240	21.080	5229.560	5250.640	---	PASS
	Ant2	5240	21.200	5229.440	5250.640	---	PASS
11N40MIMO	Ant1	5190	39.600	5170.560	5210.160	---	PASS
	Ant2	5190	39.440	5170.480	5209.920	---	PASS
	Ant1	5230	39.440	5210.480	5249.920	---	PASS
	Ant2	5230	39.360	5210.480	5249.840	---	PASS
11AC20MIMO	Ant1	5180	21.320	5169.480	5190.800	---	PASS
	Ant2	5180	21.200	5169.480	5190.680	---	PASS
	Ant1	5200	21.400	5189.320	5210.720	---	PASS
	Ant2	5200	21.440	5189.360	5210.800	---	PASS
	Ant1	5240	21.400	5229.320	5250.720	---	PASS
	Ant2	5240	21.320	5229.400	5250.720	---	PASS
11AC40MIMO	Ant1	5190	39.600	5170.400	5210.000	---	PASS
	Ant2	5190	40.000	5170.160	5210.160	---	PASS
	Ant1	5230	40.080	5210.080	5250.160	---	PASS
	Ant2	5230	40.240	5210.080	5250.320	---	PASS
11AC80MIMO	Ant1	5210	81.280	5170.000	5251.280	---	PASS

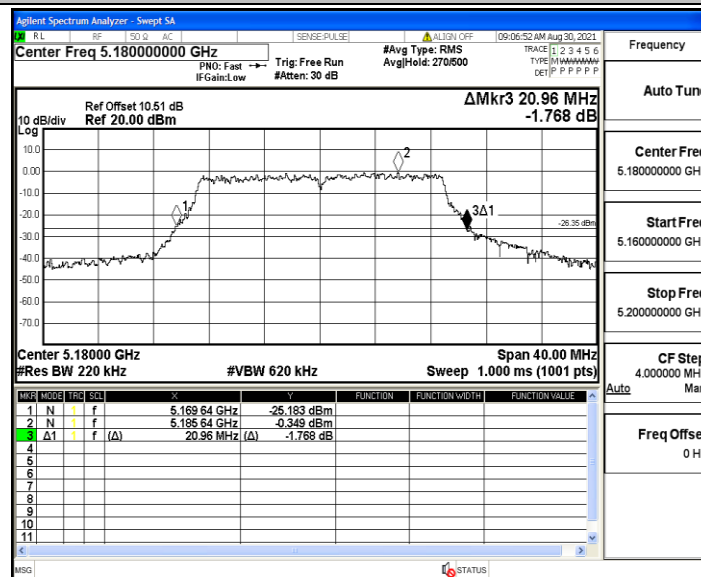
	Ant2	5210	81.120	5170.160	5251.280	---	PASS
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Test Graphs

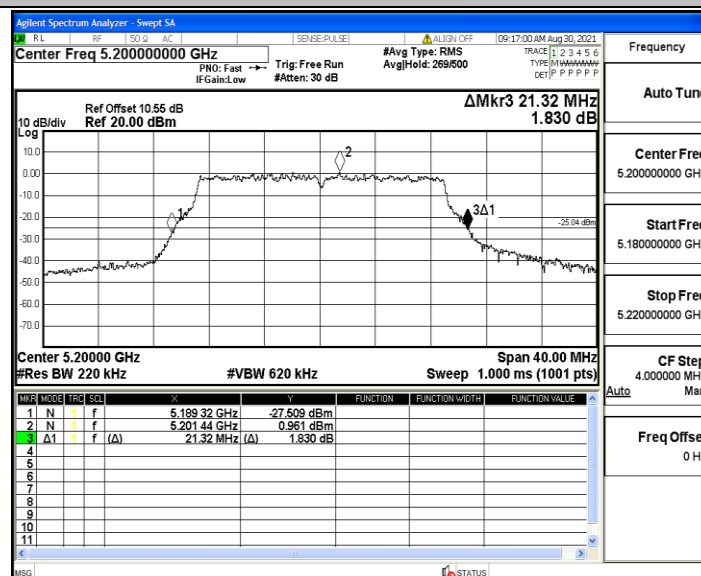
11A_Ant1_5180



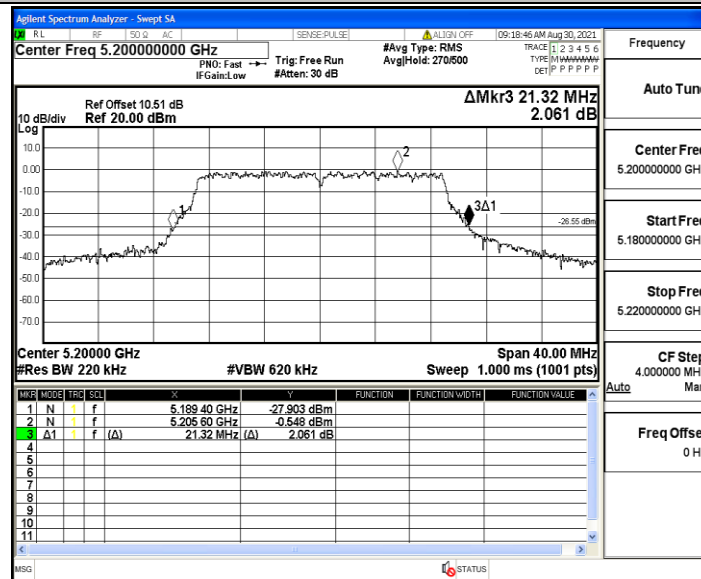
11A_Ant2_5180



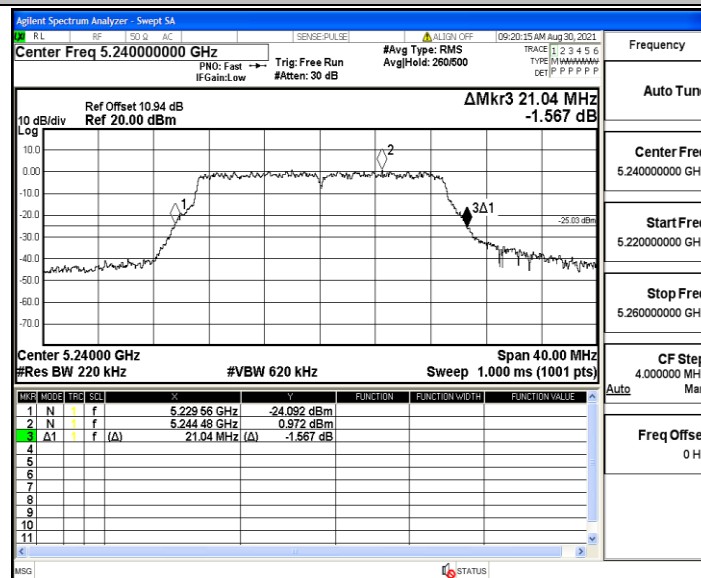
11A_Ant1_5200



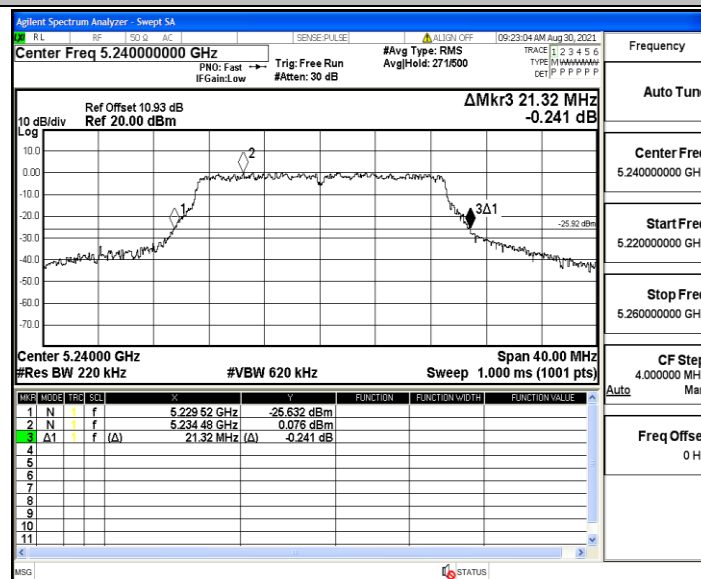
11A_Ant2_5200



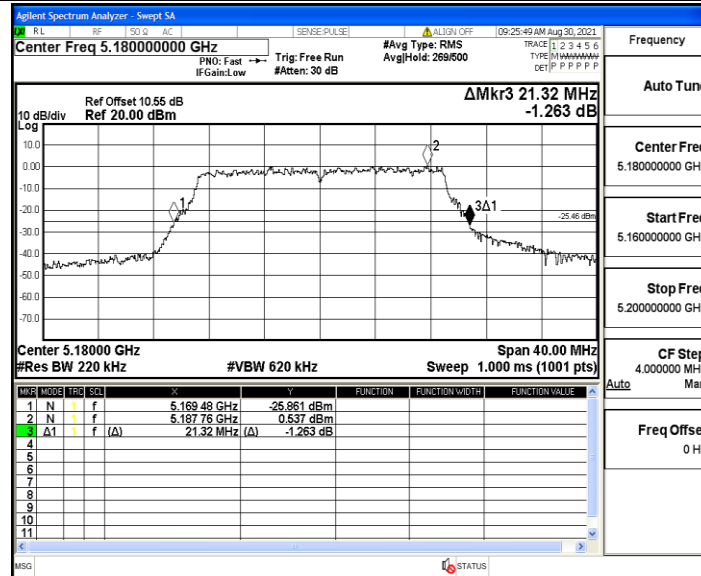
11A_Ant1_5240



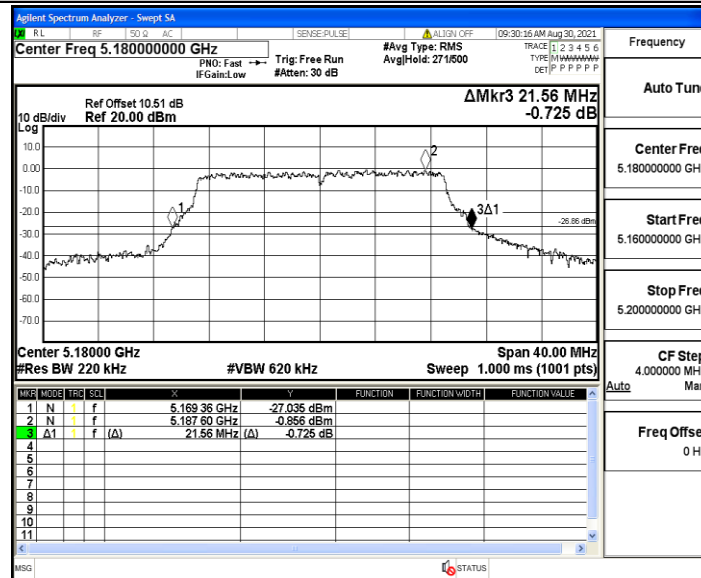
11A_Ant2_5240



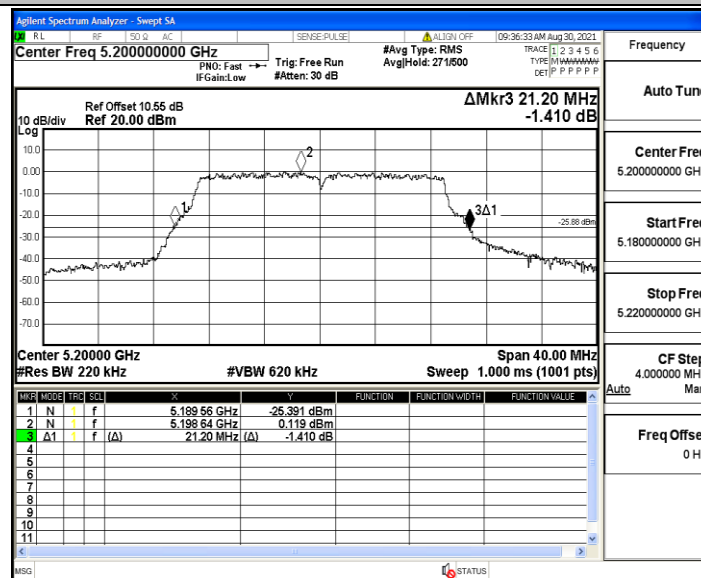
11N20MIMO_Ant1_5180



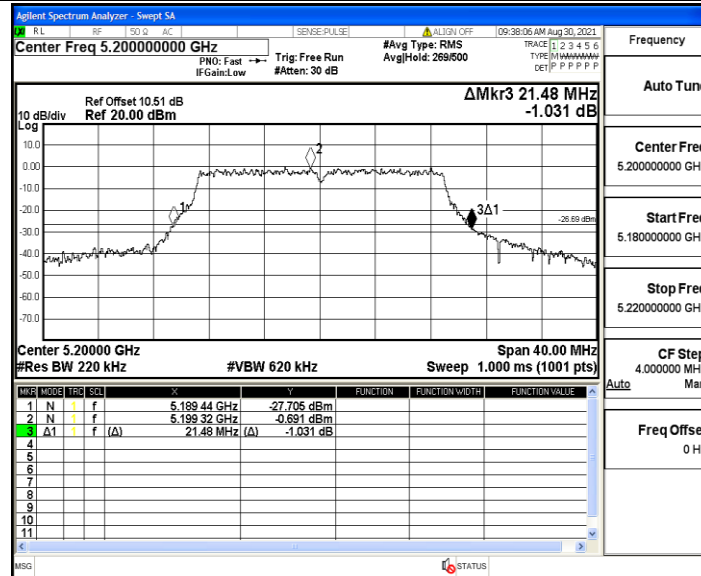
11N20MIMO_Ant2_5180



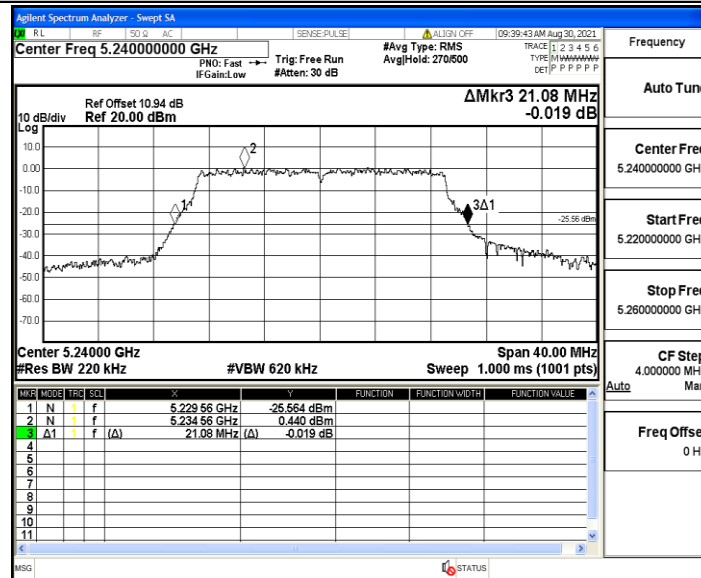
11N20MIMO_Ant1_5200



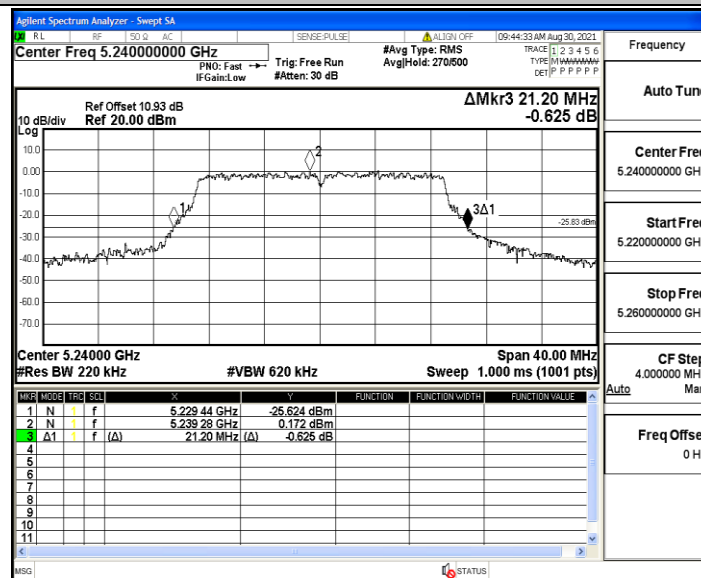
11N20MIMO_Ant2_5200



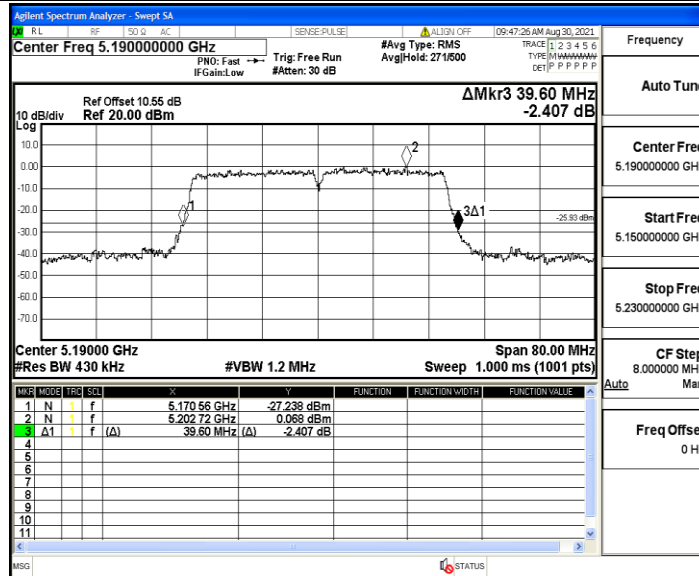
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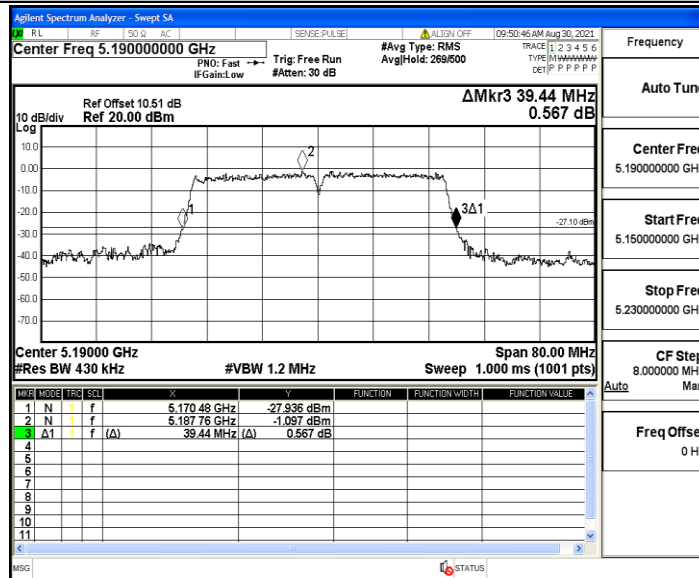
11N20MIMO_Ant2_5240



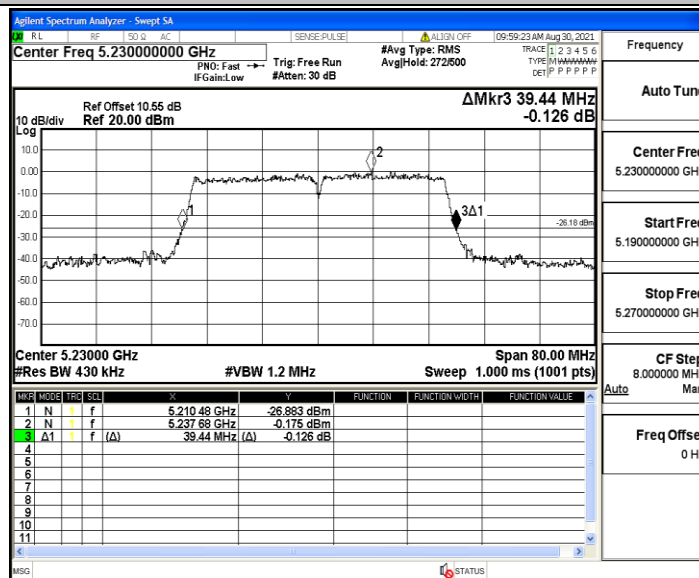
11N40MIMO_Ant1_5190



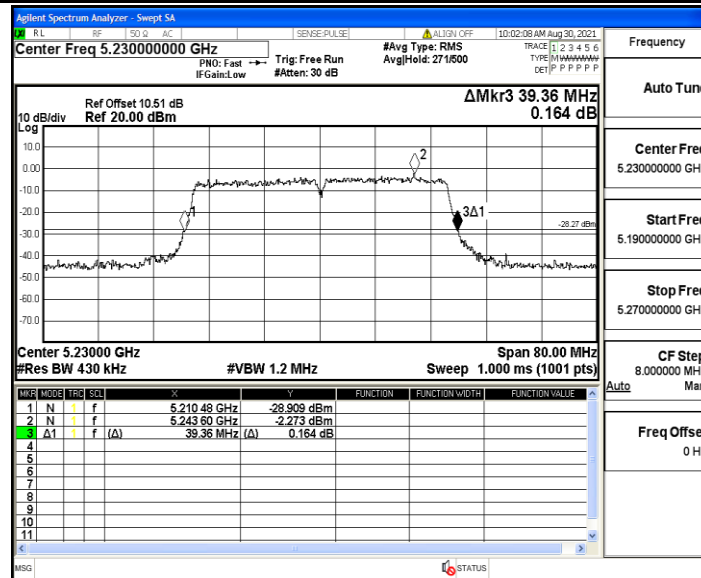
11N40MIMO_Ant2_5190



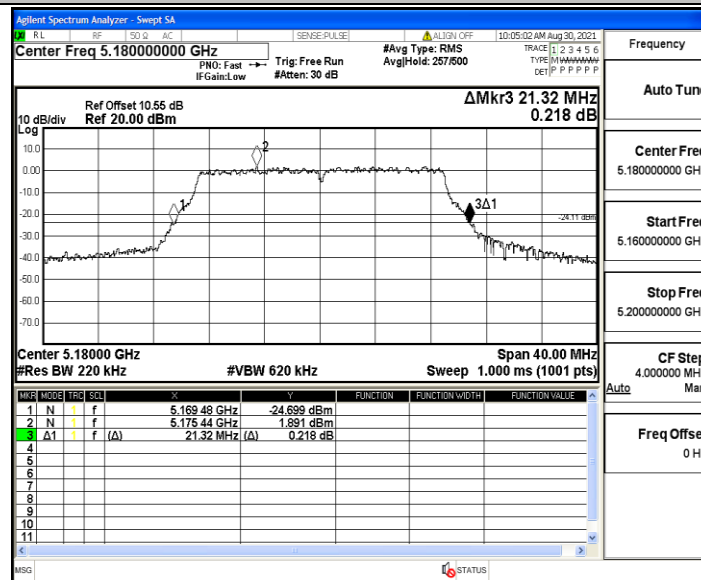
11N40MIMO_Ant1_5230



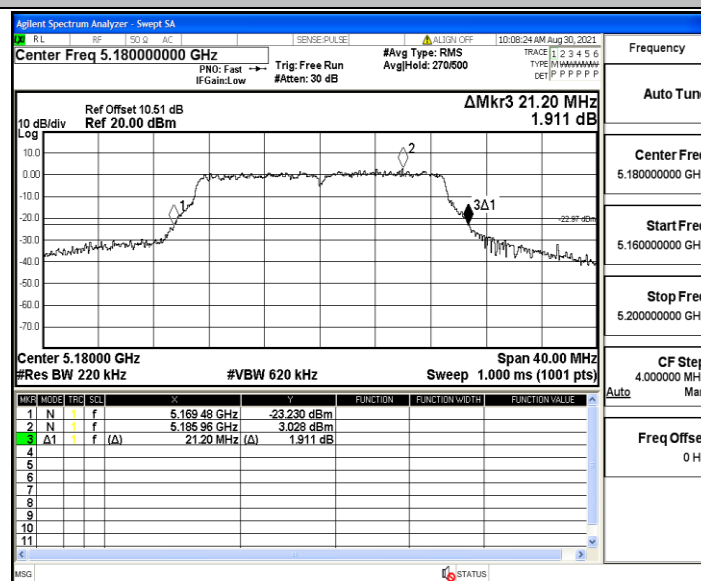
11N40MIMO_Ant2_5230



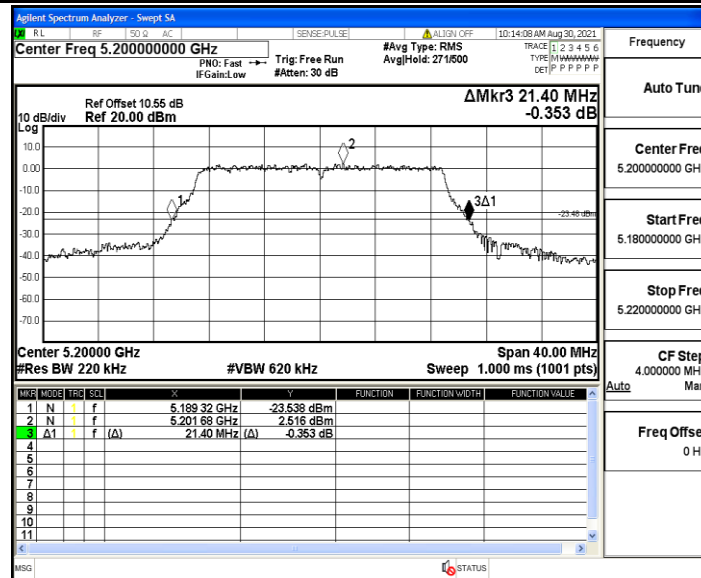
11AC20MIMO_Ant1_5180



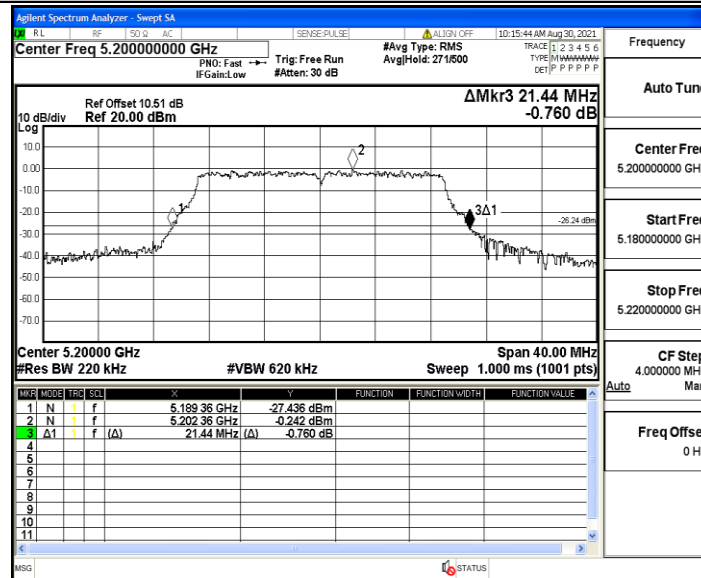
11AC20MIMO_Ant2_5180



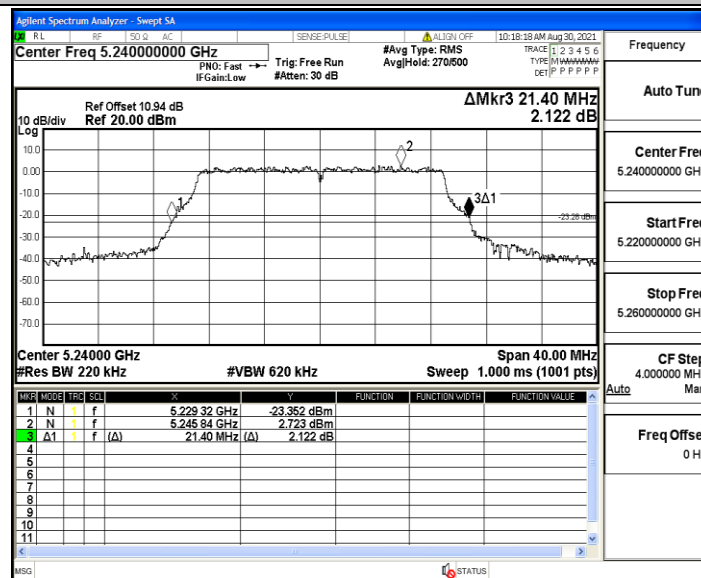
11AC20MIMO_Ant1_5200



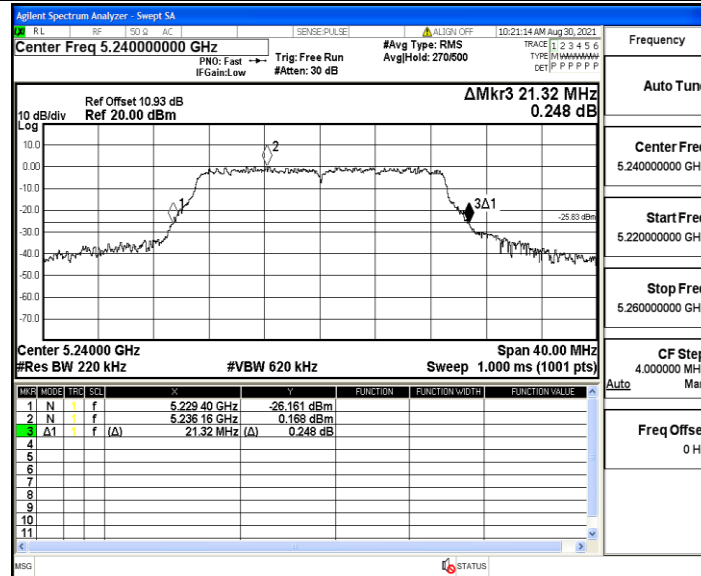
11AC20MIMO_Ant2_5200



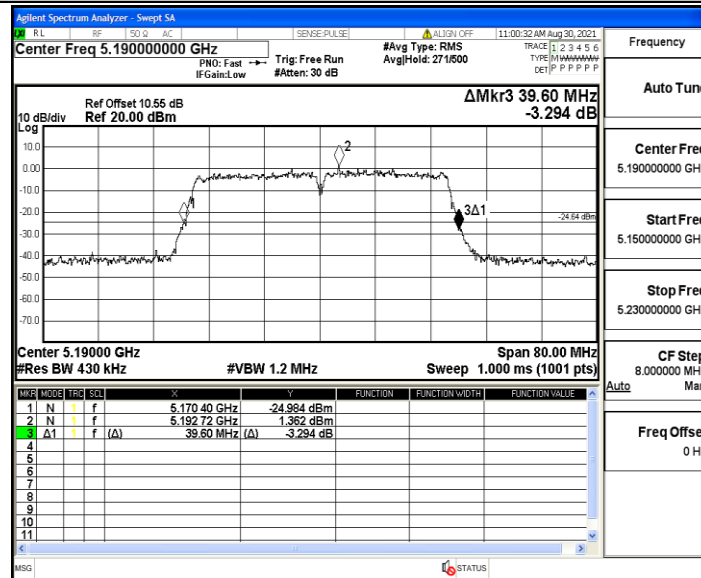
11AC20MIMO_Ant1_5240



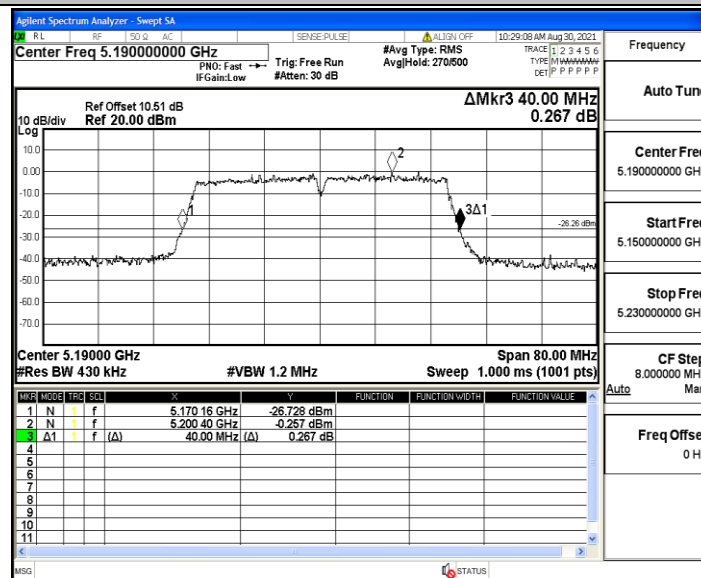
11AC20MIMO_Ant2_5240



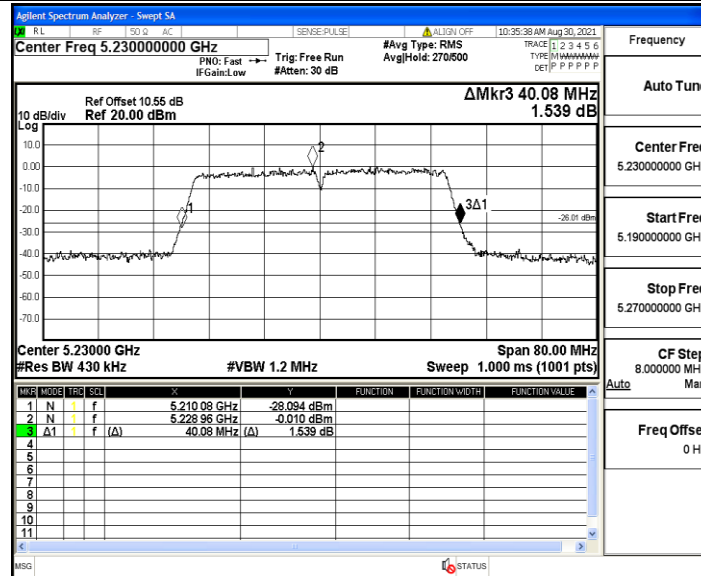
11AC40MIMO_Ant1_5190



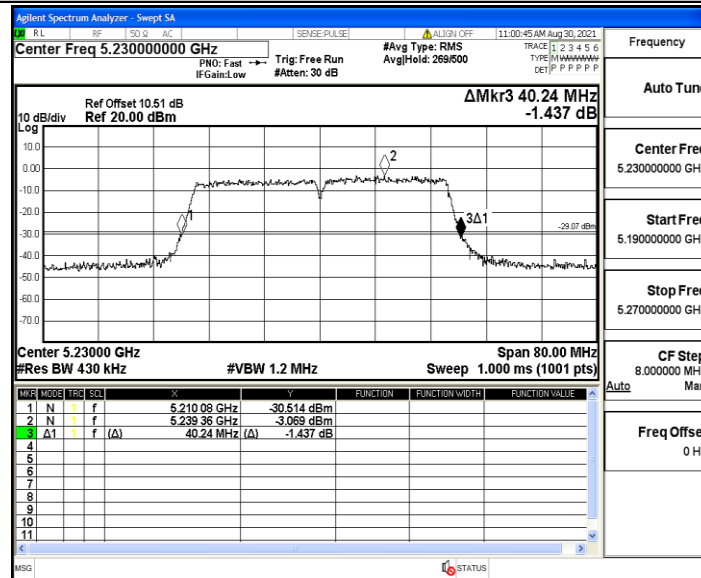
11AC40MIMO_Ant2_5190



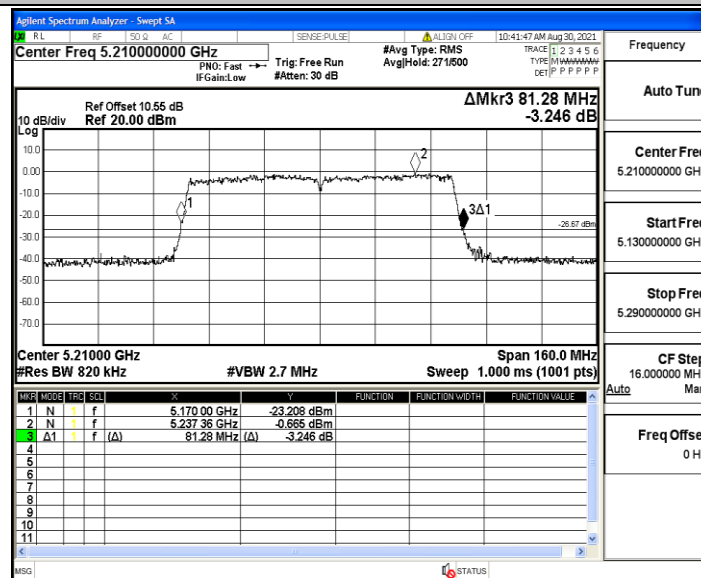
11AC40MIMO_Ant1_5230



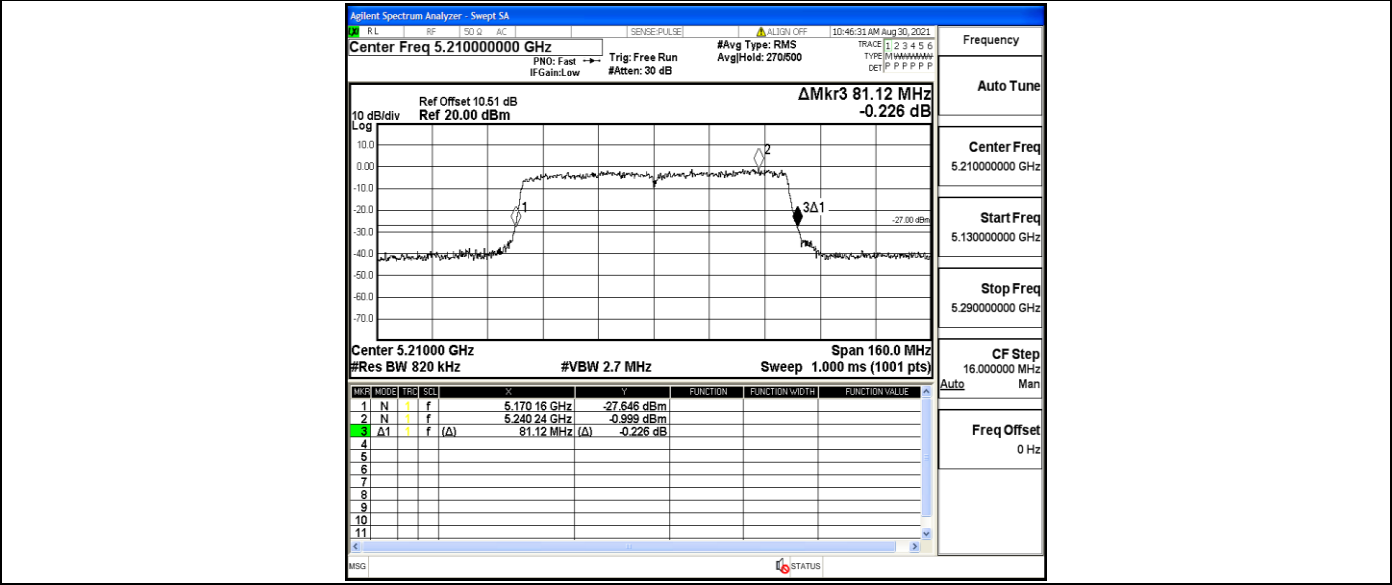
11AC40MIMO_Ant2_5230



11AC80MIMO_Ant1_5210



11AC80MIMO_Ant2_5210



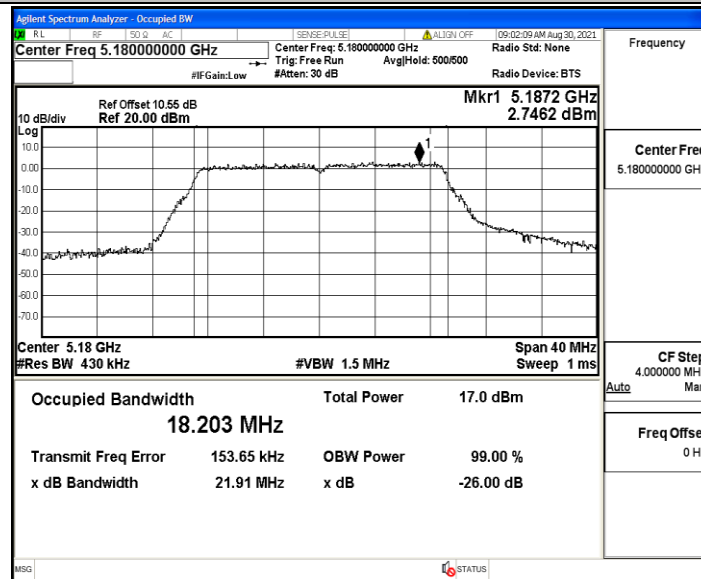
Appendix A2: Occupied channel bandwidth

Test Result

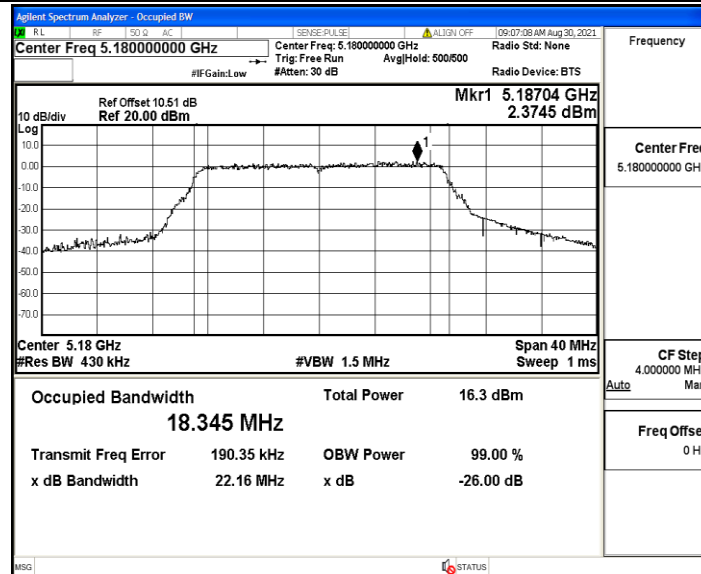
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	18.203	5171.052	5189.255	---	PASS
	Ant2	5180	18.345	5171.018	5189.363	---	PASS
	Ant1	5200	18.231	5190.985	5209.216	---	PASS
	Ant2	5200	18.196	5191.002	5209.198	---	PASS
	Ant1	5240	18.210	5231.024	5249.234	---	PASS
	Ant2	5240	18.224	5231.009	5249.233	---	PASS
11N20MIMO	Ant1	5180	18.261	5171.031	5189.292	---	PASS
	Ant2	5180	18.299	5171.021	5189.320	---	PASS
	Ant1	5200	18.245	5190.983	5209.228	---	PASS
	Ant2	5200	18.224	5190.971	5209.195	---	PASS
	Ant1	5240	18.224	5230.992	5249.216	---	PASS
	Ant2	5240	18.185	5231.032	5249.217	---	PASS
11N40MIMO	Ant1	5190	36.509	5171.980	5208.489	---	PASS
	Ant2	5190	36.480	5172.004	5208.484	---	PASS
	Ant1	5230	36.421	5211.967	5248.388	---	PASS
	Ant2	5230	36.541	5211.938	5248.479	---	PASS
11AC20MIMO	Ant1	5180	18.307	5170.964	5189.271	---	PASS
	Ant2	5180	18.363	5170.922	5189.285	---	PASS
	Ant1	5200	18.324	5190.890	5209.214	---	PASS
	Ant2	5200	18.289	5190.890	5209.179	---	PASS
	Ant1	5240	18.245	5230.929	5249.174	---	PASS
	Ant2	5240	18.352	5230.902	5249.254	---	PASS
11AC40MIMO	Ant1	5190	36.671	5171.794	5208.465	---	PASS
	Ant2	5190	36.695	5171.824	5208.519	---	PASS
	Ant1	5230	36.815	5211.751	5248.566	---	PASS
	Ant2	5230	36.754	5211.780	5248.534	---	PASS
11AC80MIMO	Ant1	5210	76.087	5172.418	5248.505	---	PASS
	Ant2	5210	76.105	5172.373	5248.478	---	PASS

Test Graphs

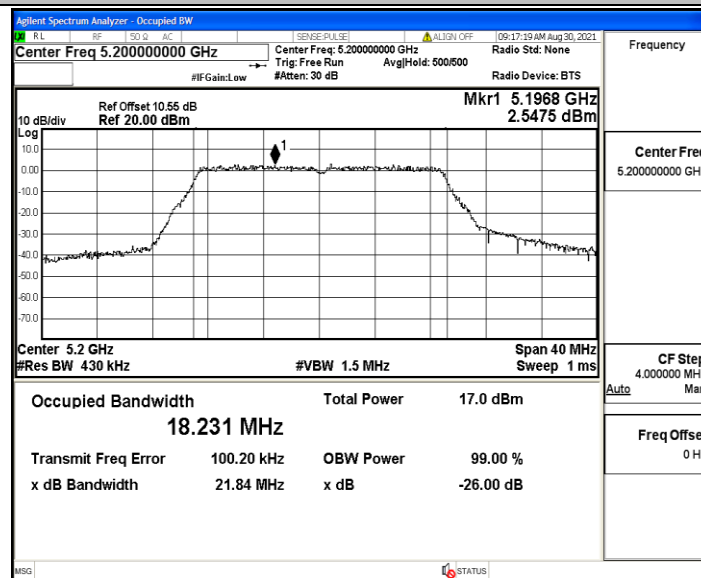
11A_Ant1_5180



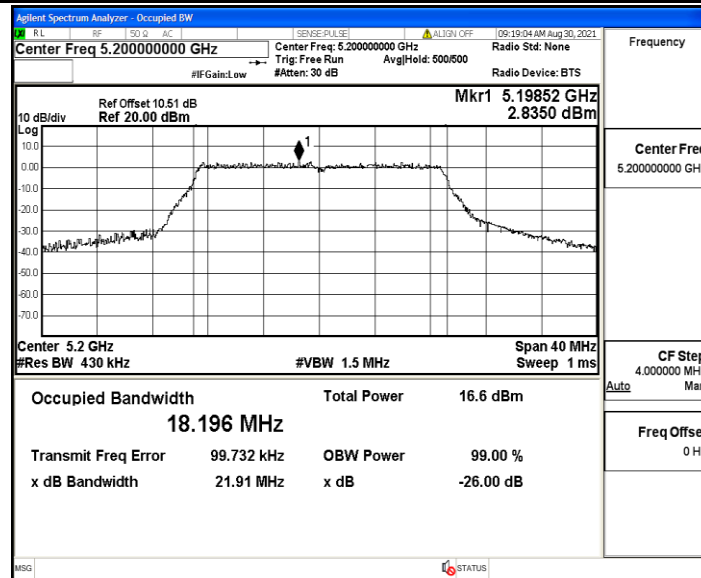
11A_Ant2_5180



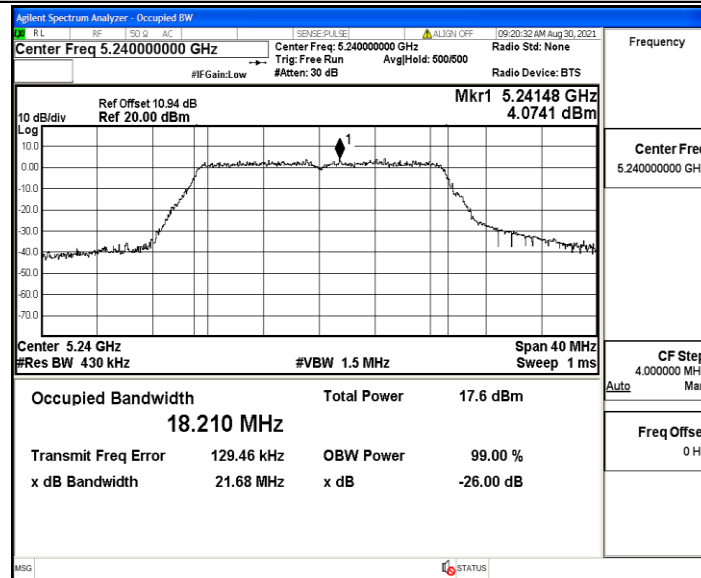
11A_Ant1_5200



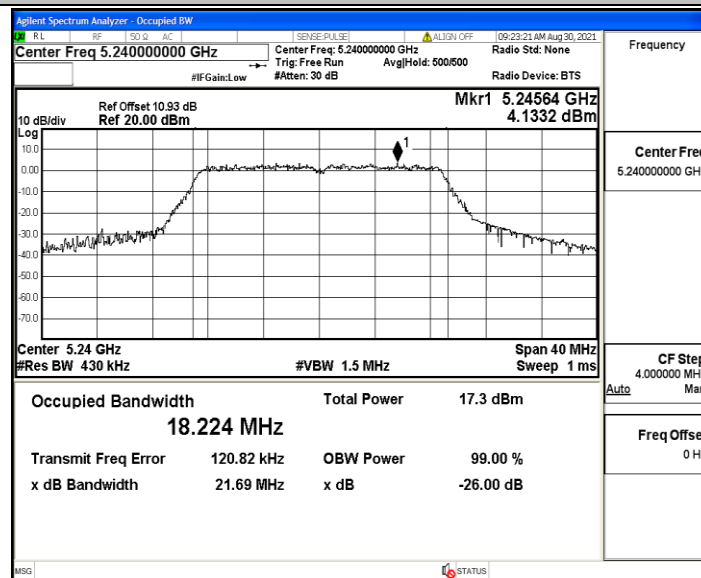
11A_Ant2_5200



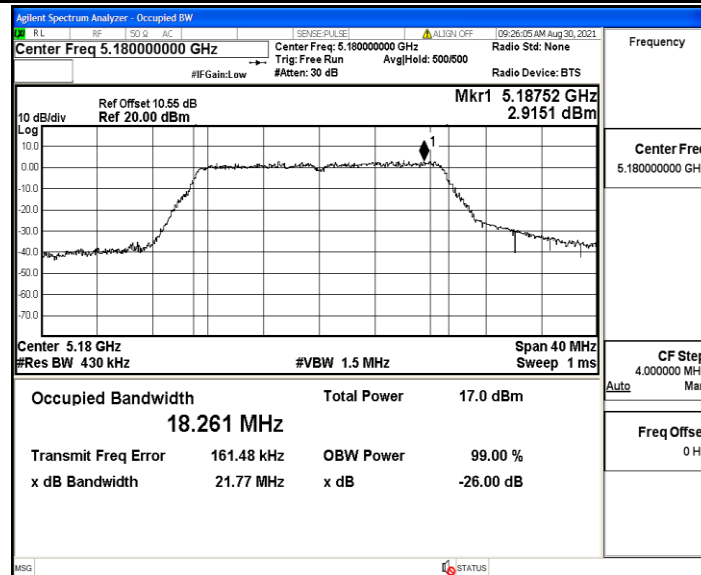
11A_Ant1_5240



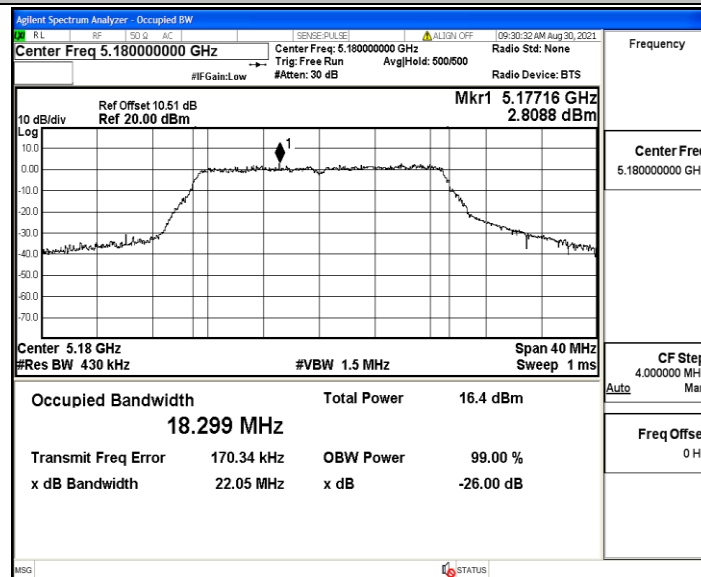
11A_Ant2_5240



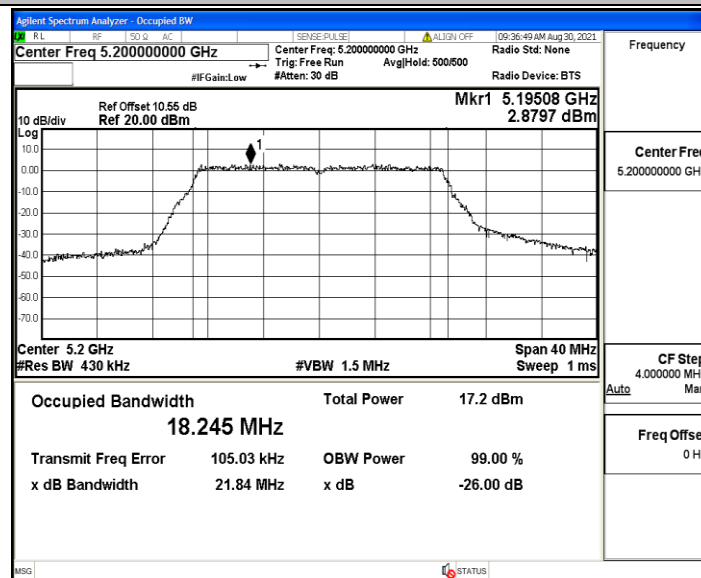
11N20MIMO_Ant1_5180



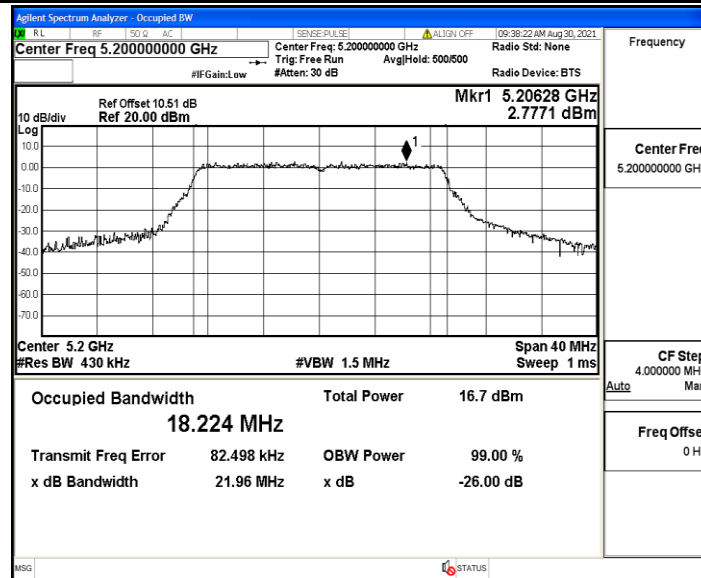
11N20MIMO_Ant2_5180



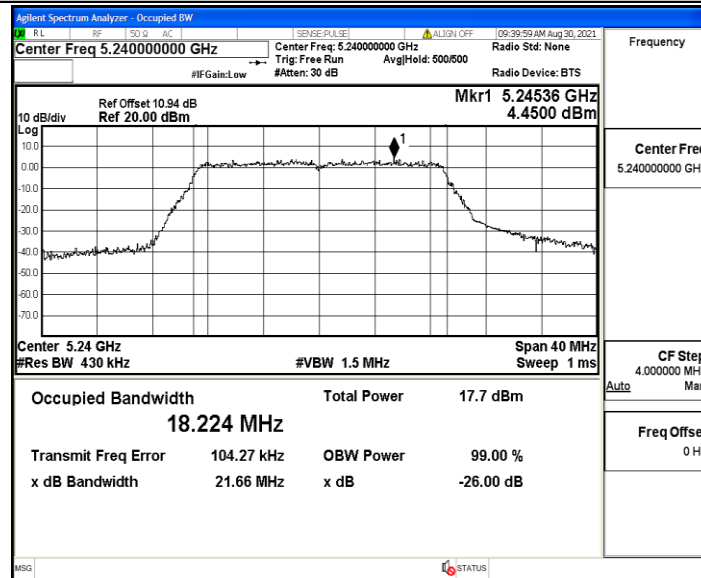
11N20MIMO_Ant1_5200



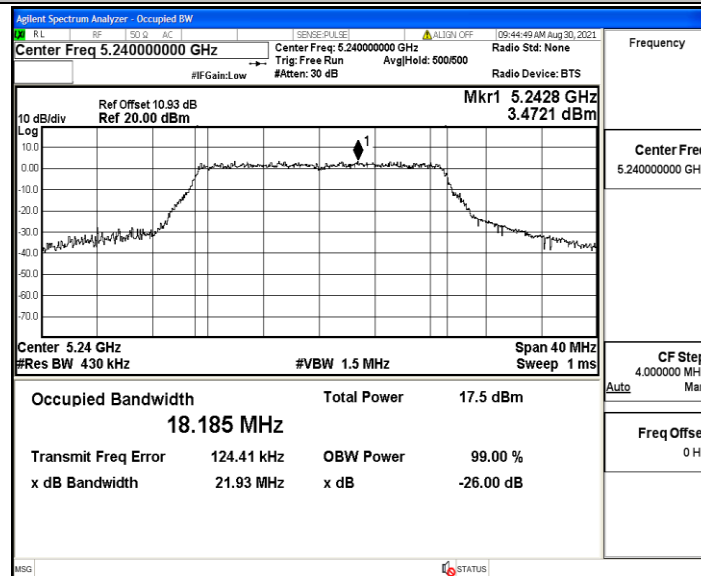
11N20MIMO_Ant2_5200



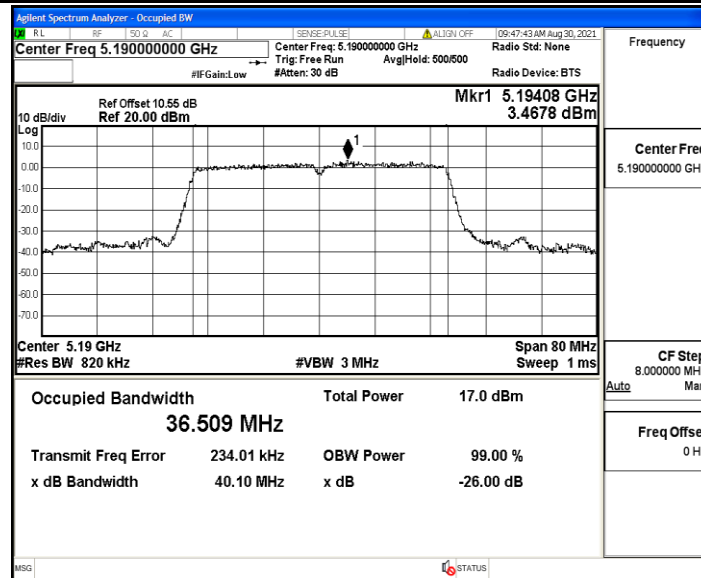
11N20MIMO_Ant1_5240



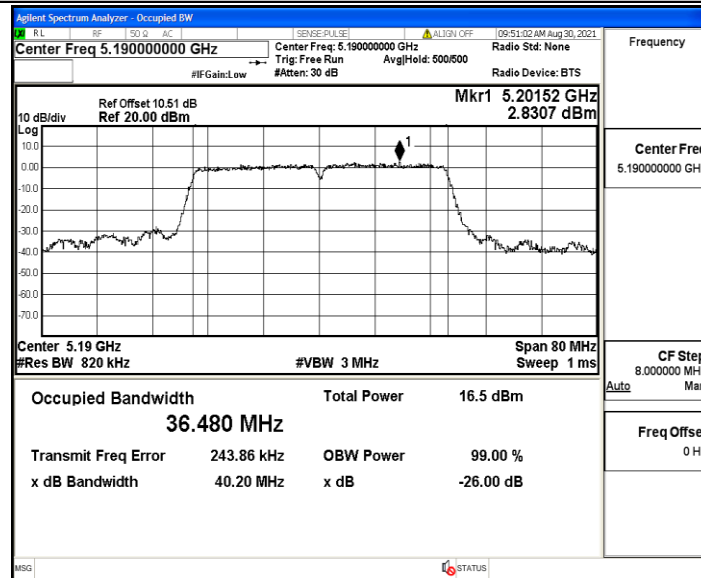
11N20MIMO_Ant2_5240



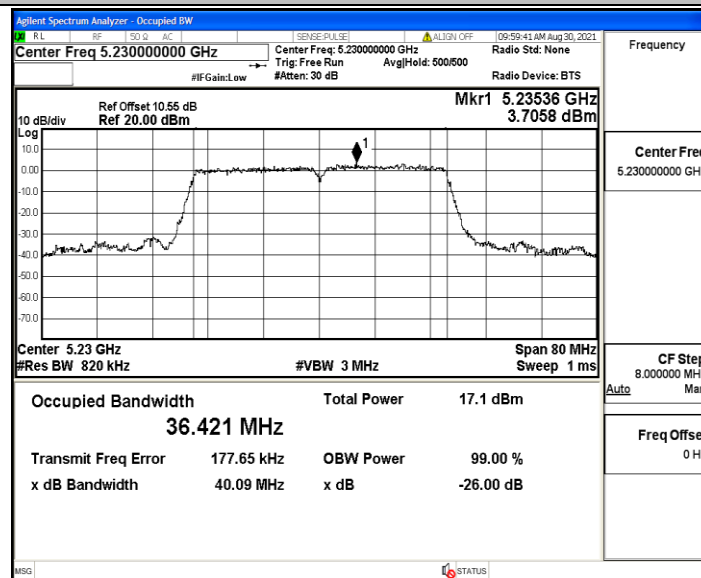
11N40MIMO_Ant1_5190



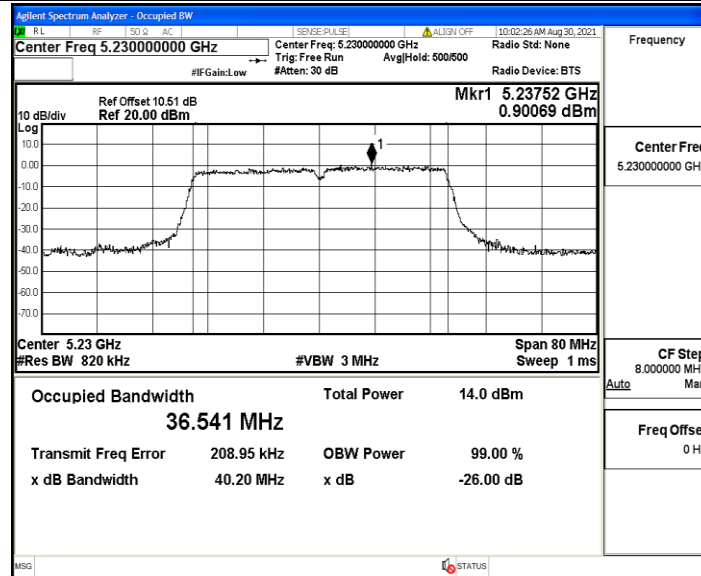
11N40MIMO_Ant2_5190



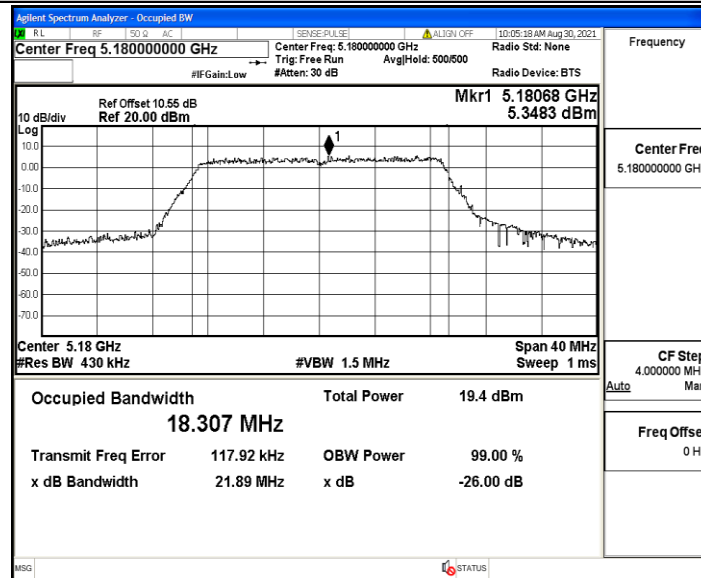
11N40MIMO_Ant1_5230



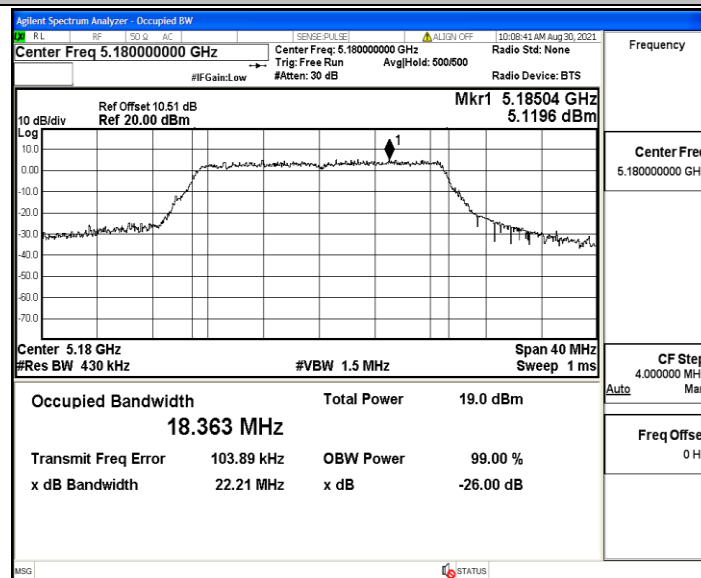
11N40MIMO_Ant2_5230



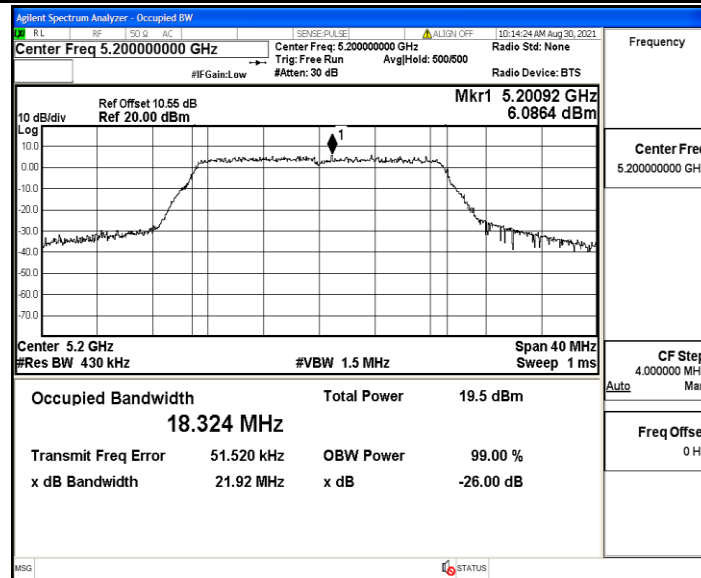
11AC20MIMO_Ant1_5180



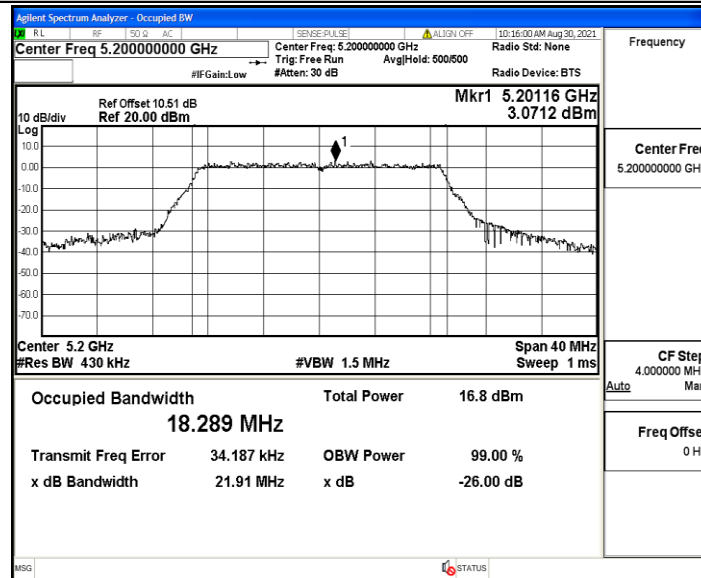
11AC20MIMO_Ant2_5180



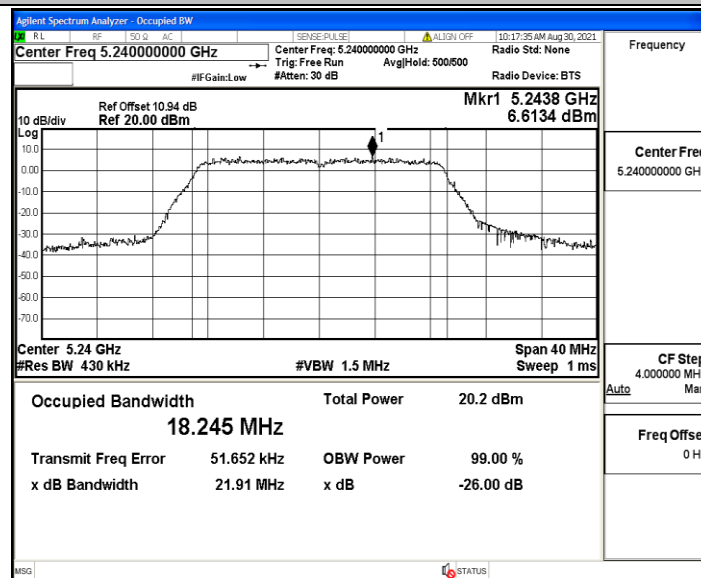
11AC20MIMO_Ant1_5200



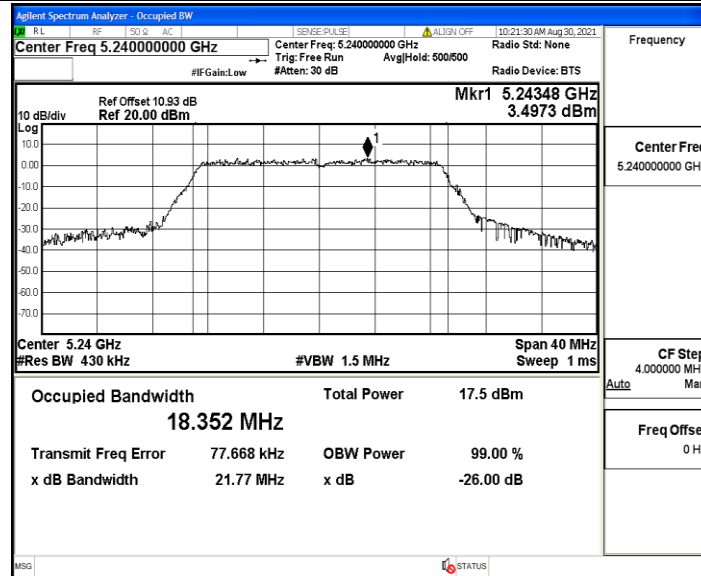
11AC20MIMO_Ant2_5200



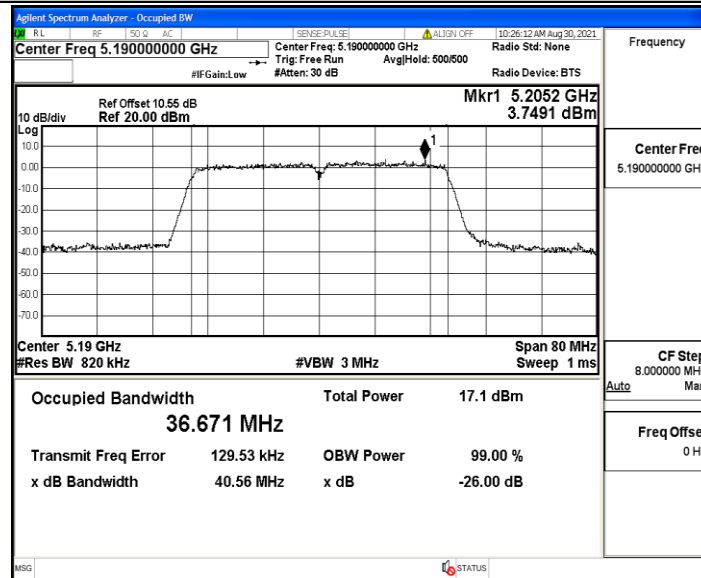
11AC20MIMO_Ant1_5240



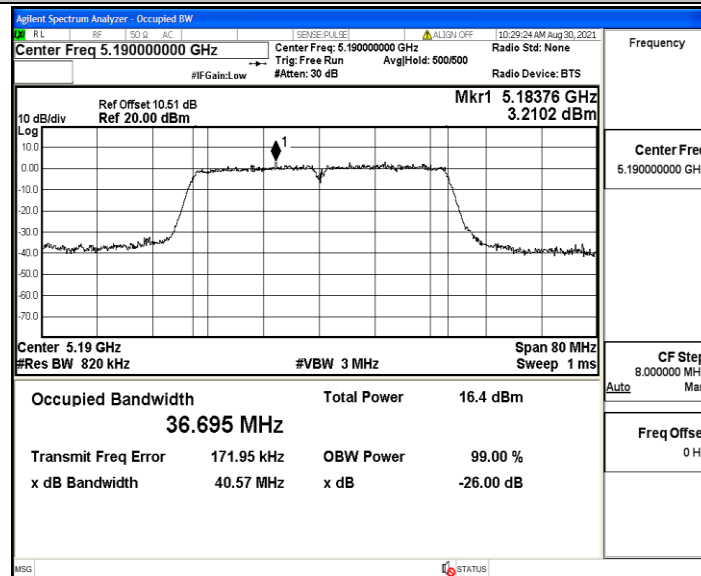
11AC20MIMO_Ant2_5240



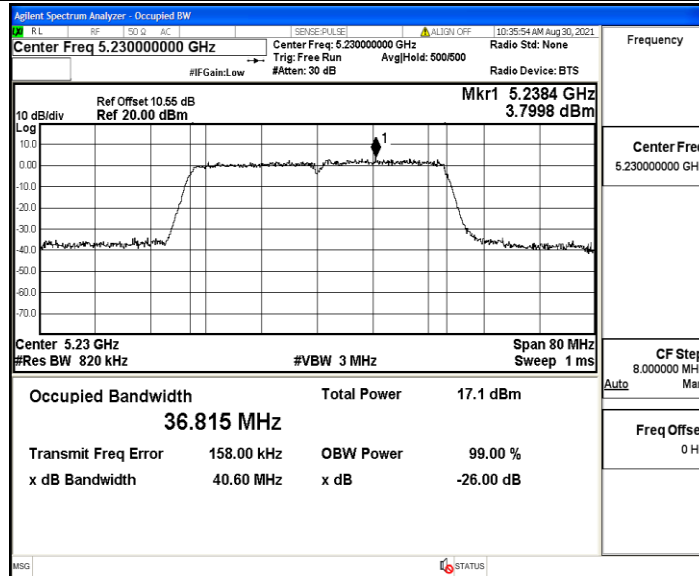
11AC40MIMO_Ant1_5190



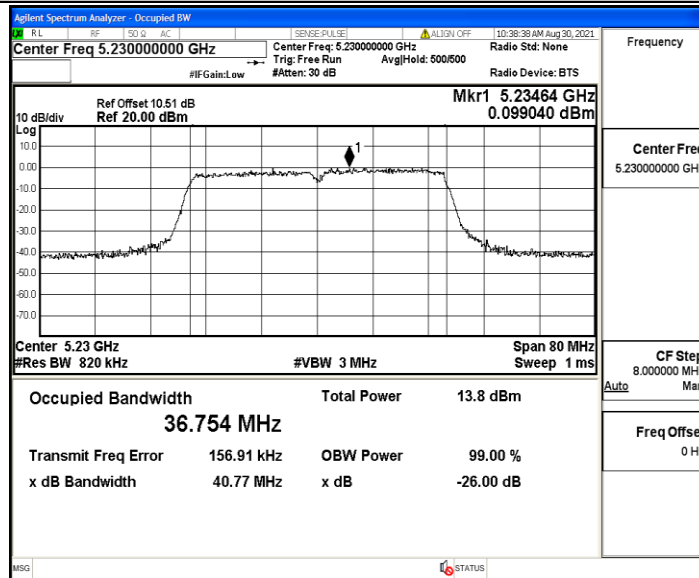
11AC40MIMO_Ant2_5190



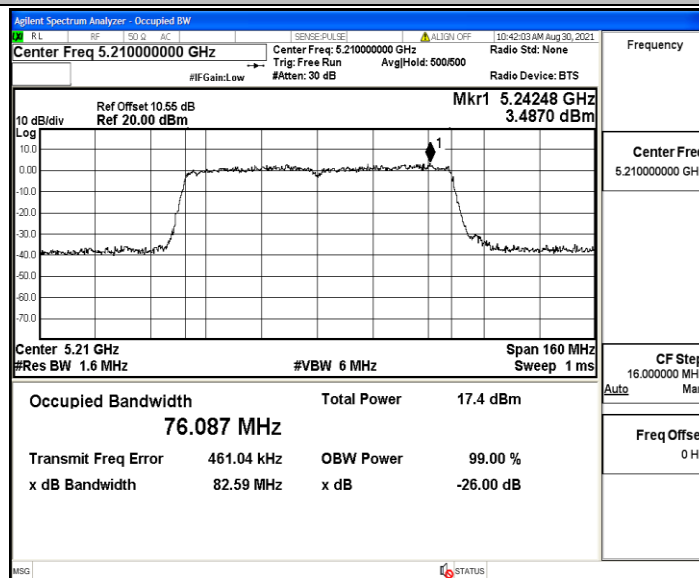
11AC40MIMO_Ant1_5230



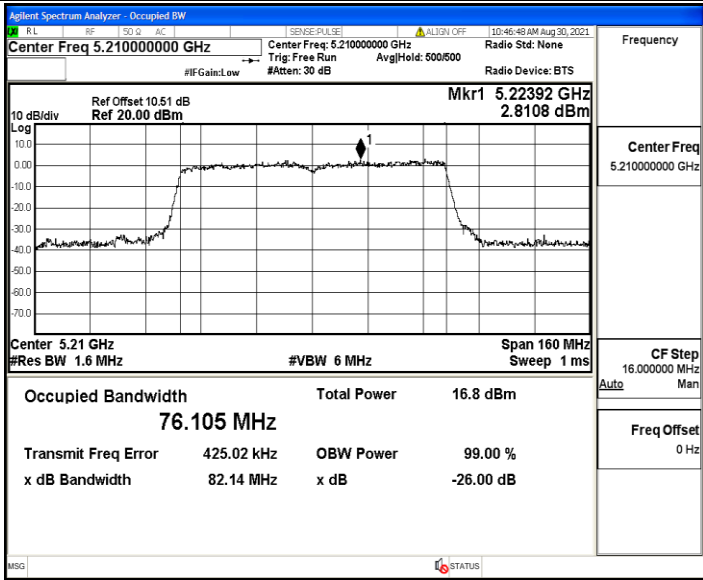
11AC40MIMO_Ant2_5230



11AC80MIMO_Ant1_5210



11AC80MIMO_Ant2_5210



Appendix B: Maximum conducted output power**Test Result**

Test Mode	Antenna	Channel	Power [dBm]	Limit [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	9.61	≤23.98	12.17	≤22.60	PASS
	Ant2	5180	5.22	≤23.59	11.61	≤22.64	PASS
	Ant1	5200	8.61	≤23.98	11.17	≤22.61	PASS
	Ant2	5200	6.34	≤23.59	12.73	≤22.60	PASS
	Ant1	5240	8.28	≤23.98	10.84	≤22.60	PASS
	Ant2	5240	6.95	≤23.59	13.34	≤22.61	PASS
11N20MIMO	Ant1	5180	6.20	≤23.98	8.76	≤22.62	PASS
	Ant2	5180	3.83	≤23.59	10.22	≤22.62	PASS
	total	5180	8.2	≤22.09	12.56	≤22.62	PASS
	Ant1	5200	7.33	≤23.98	9.89	≤22.61	PASS
	Ant2	5200	3.60	≤23.59	9.99	≤22.61	PASS
	total	5200	8.9	≤22.09	12.95	≤22.61	PASS
	Ant1	5240	5.27	≤23.98	7.83	≤22.61	PASS
	Ant2	5240	4.61	≤23.59	11.00	≤22.60	PASS
	total	5240	8.0	≤22.09	12.71	≤22.60	PASS
11N40MIMO	Ant1	5190	9.69	≤23.98	12.25	≤23	PASS
	Ant2	5190	4.40	≤23.59	10.79	≤23	PASS
	total	5190	10.8	≤22.09	14.59	≤23	PASS
	Ant1	5230	8.90	≤23.98	11.46	≤23	PASS
	Ant2	5230	5.75	≤23.59	12.14	≤23	PASS
	total	5230	10.6	≤22.09	14.82	≤23	PASS
11AC20MIMO	Ant1	5180	7.03	≤23.98	9.59	≤22.63	PASS
	Ant2	5180	2.98	≤23.59	9.37	≤22.64	PASS
	total	5180	8.5	≤22.09	12.49	≤22.64	PASS
	Ant1	5200	4.44	≤23.98	7.00	≤22.63	PASS
	Ant2	5200	3.76	≤23.59	10.15	≤22.62	PASS
	total	5200	7.1	≤22.09	11.86	≤22.62	PASS
	Ant1	5240	6.07	≤23.98	8.63	≤22.61	PASS
	Ant2	5240	3.77	≤23.59	10.16	≤22.64	PASS
	total	5240	8.1	≤22.09	12.47	≤22.64	PASS
11AC40MIMO	Ant1	5190	8.27	≤23.98	10.83	≤23	PASS
	Ant2	5190	4.72	≤23.59	11.11	≤23	PASS
	total	5190	9.9	≤22.09	13.98	≤23	PASS
	Ant1	5230	8.27	≤23.98	10.83	≤23	PASS
	Ant2	5230	5.24	≤23.59	11.63	≤23	PASS
	total	5230	10.0	≤22.09	14.26	≤23	PASS
11AC80MIMO	Ant1	5210	9.57	≤23.98	12.13	≤23	PASS
	Ant2	5210	6.03	≤23.59	12.42	≤23	PASS
	total	5210	11.2	≤22.09	15.29	≤23	PASS

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

Appendix C: Maximum power spectral density

Test Result

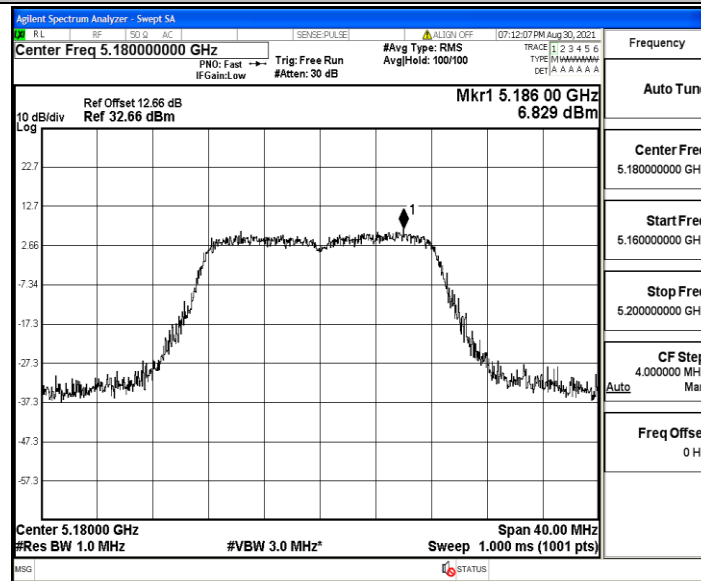
Test Mode	Antenna	Channel	Power [dBm/MHz]	Limit [dBm/MHz]	EIRP [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5180	6.83	≤11	9.39	≤10	PASS
	Ant2	5180	2.64	≤10.61	9.03	≤10	PASS
	Ant1	5200	6.86	≤11	9.42	≤10	PASS
	Ant2	5200	2.2	≤10.61	8.59	≤10	PASS
	Ant1	5240	5.79	≤11	8.35	≤10	PASS
	Ant2	5240	3.03	≤10.61	9.42	≤10	PASS
11N20MIMO	Ant1	5180	3.27	≤11	5.83	≤10	PASS
	Ant2	5180	1.36	≤10.61	7.75	≤10	PASS
	total	5180	5.43	≤9.11	9.91	≤10	PASS
	Ant1	5200	4.13	≤11	6.69	≤10	PASS
	Ant2	5200	0.68	≤10.61	7.07	≤10	PASS
	total	5200	5.75	≤9.11	9.89	≤10	PASS
	Ant1	5240	2.92	≤11	5.48	≤10	PASS
	Ant2	5240	1.1	≤10.61	7.49	≤10	PASS
	total	5240	5.11	≤9.11	9.61	≤10	PASS
11N40MIMO	Ant1	5190	3.91	≤11	6.47	≤10	PASS
	Ant2	5190	-0.97	≤10.61	5.42	≤10	PASS
	total	5190	5.13	≤9.11	8.99	≤10	PASS
	Ant1	5230	2.47	≤11	5.03	≤10	PASS
	Ant2	5230	-0.15	≤10.61	6.24	≤10	PASS
	total	5230	4.36	≤9.11	8.69	≤10	PASS
11AC20MIMO	Ant1	5180	3.63	≤11	6.19	≤10	PASS
	Ant2	5180	-0.67	≤10.61	5.72	≤10	PASS
	total	5180	5.00	≤9.11	8.97	≤10	PASS
	Ant1	5200	3.01	≤11	5.57	≤10	PASS
	Ant2	5200	-0.02	≤10.61	6.37	≤10	PASS
	total	5200	4.76	≤9.11	9.00	≤10	PASS
	Ant1	5240	3.88	≤11	6.44	≤10	PASS
	Ant2	5240	-0.04	≤10.61	6.35	≤10	PASS
	total	5240	5.36	≤9.11	9.41	≤10	PASS
11AC40MIMO	Ant1	5190	2.91	≤11	5.47	≤10	PASS
	Ant2	5190	-1.36	≤10.61	5.03	≤10	PASS
	total	5190	4.29	≤9.11	8.27	≤10	PASS
	Ant1	5230	2.18	≤11	4.74	≤10	PASS
	Ant2	5230	0.67	≤10.61	7.06	≤10	PASS
	total	5230	4.50	≤9.11	9.06	≤10	PASS
11AC80MIMO	Ant1	5210	4.22	≤11	6.78	≤10	PASS
	Ant2	5210	0.1	≤10.61	6.49	≤10	PASS
	total	5210	5.64	≤9.11	9.65	≤10	PASS

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

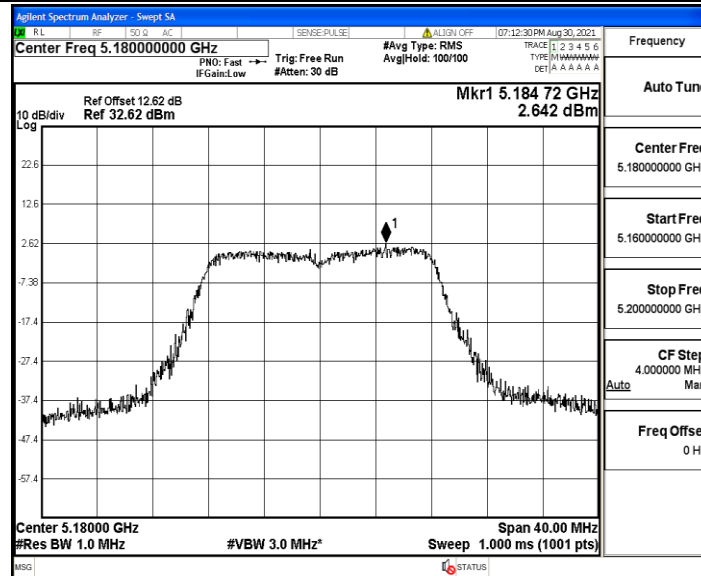
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

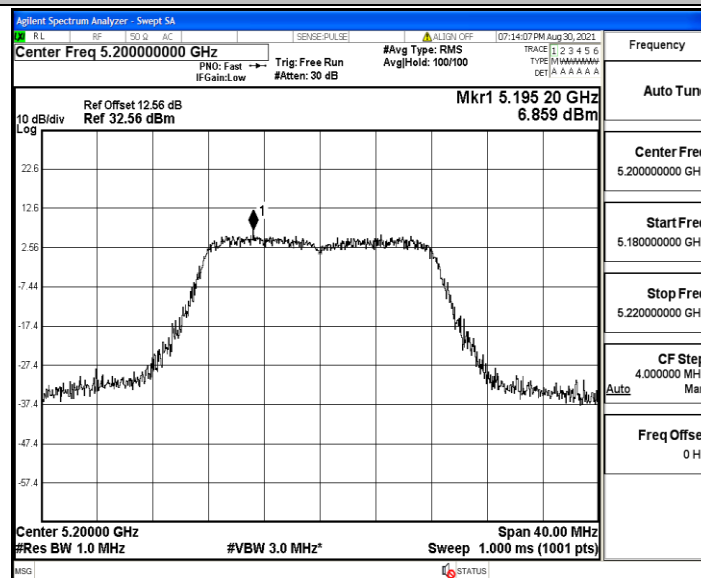
11A_Ant1_5180



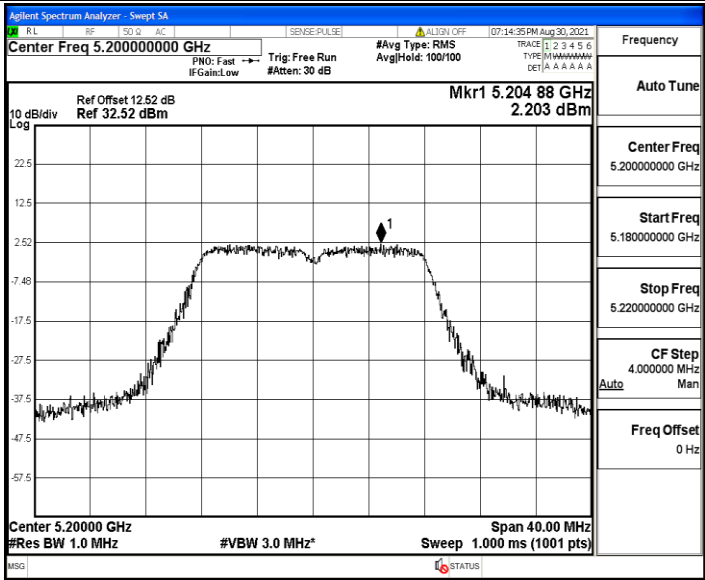
11A_Ant2_5180



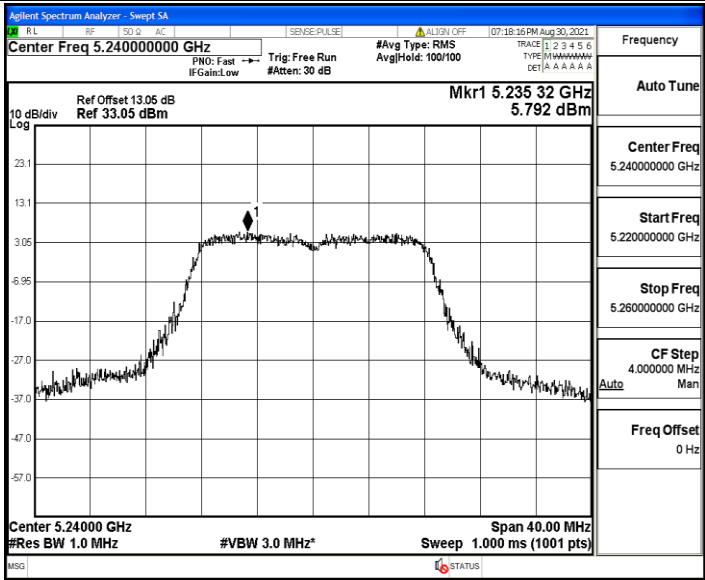
11A_Ant1_5200



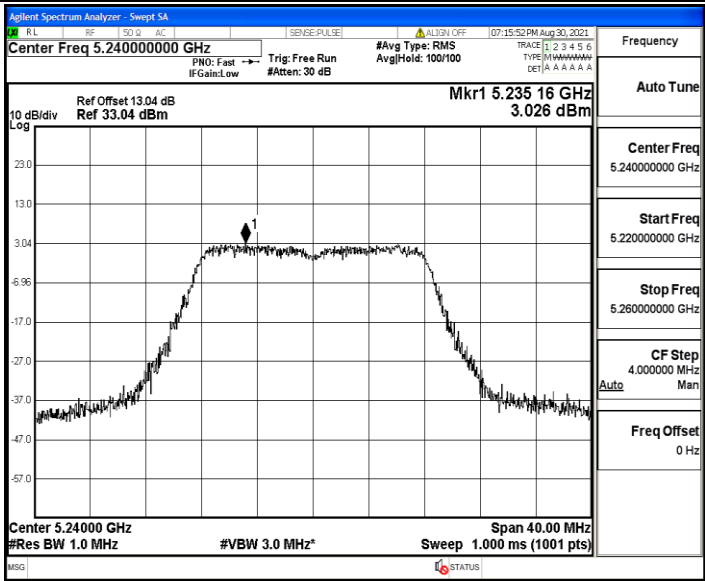
11A_Ant2_5200



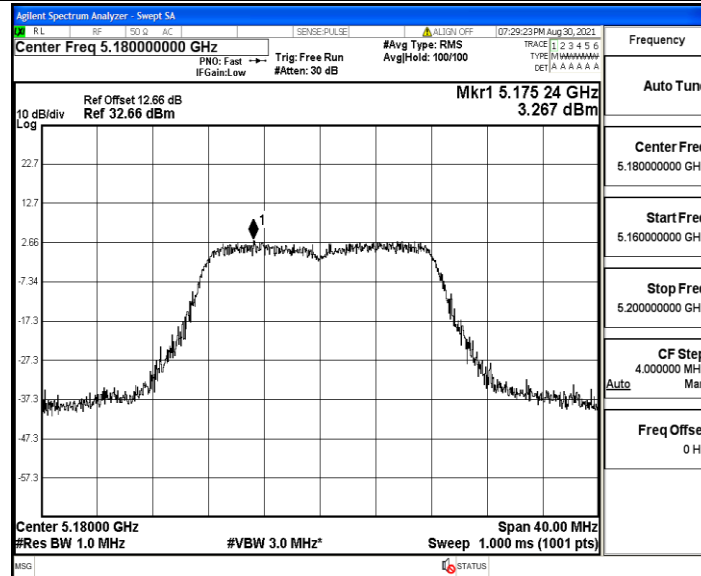
11A_Ant1_5240



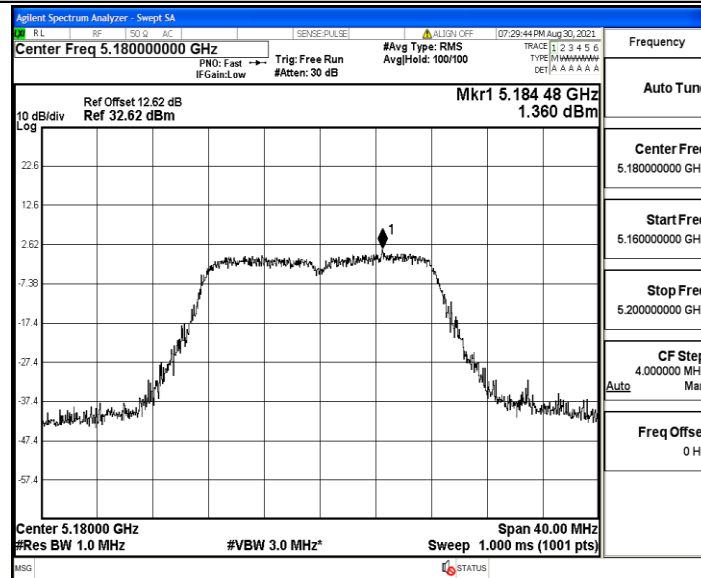
11A_Ant2_5240



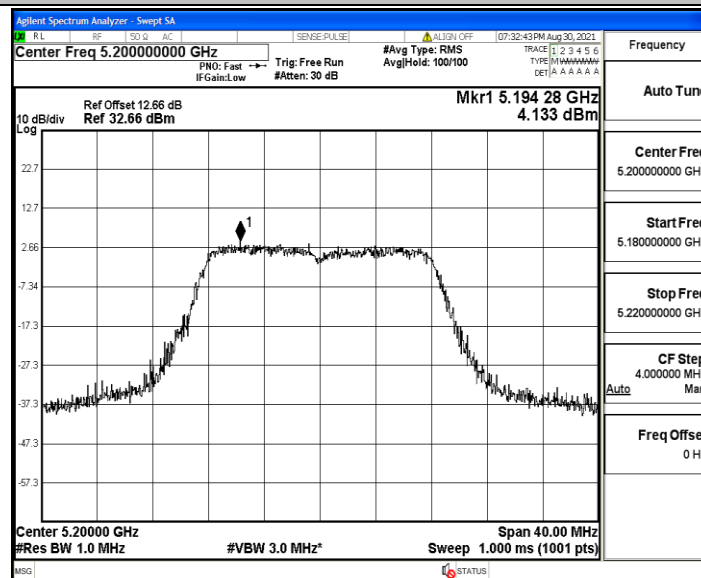
11N20MIMO_Ant1_5180



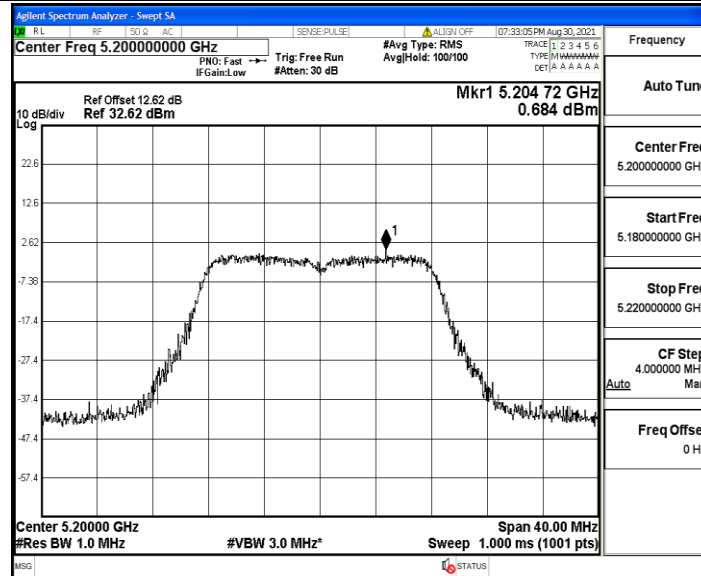
11N20MIMO_Ant2_5180



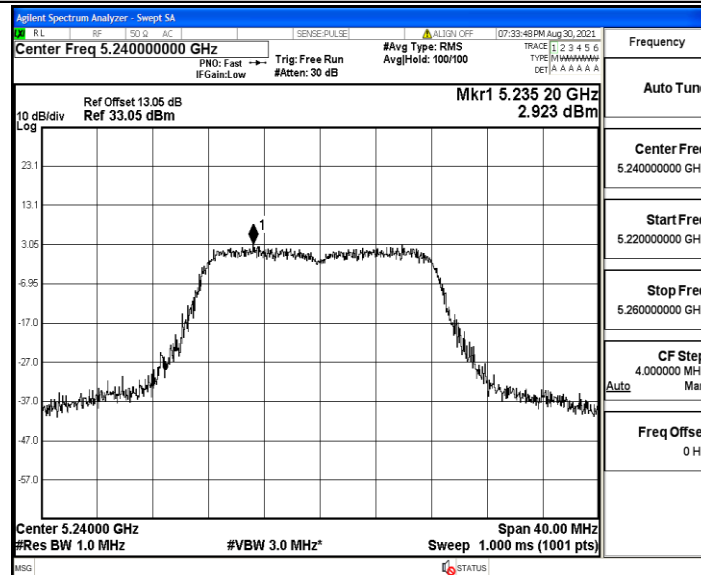
11N20MIMO_Ant1_5200



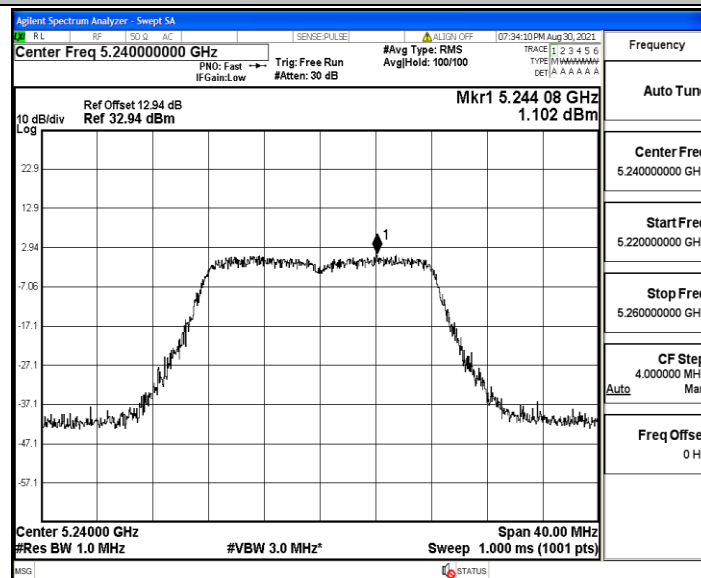
11N20MIMO_Ant2_5200



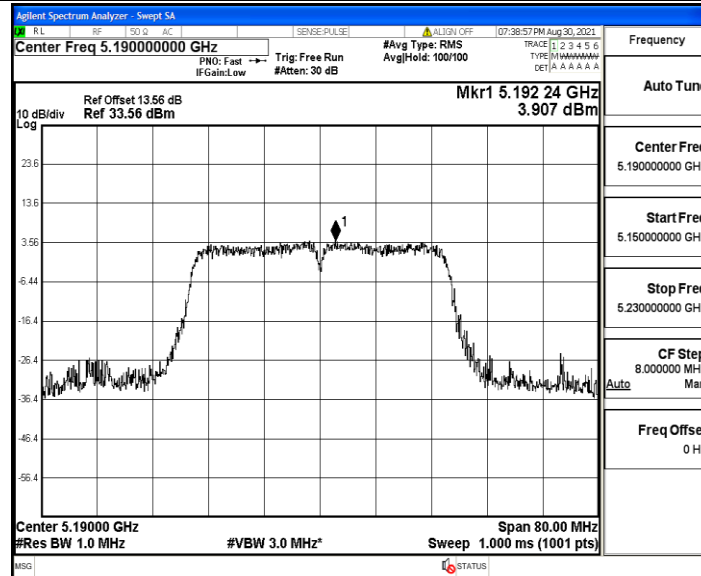
11N20MIMO_Ant1_5240



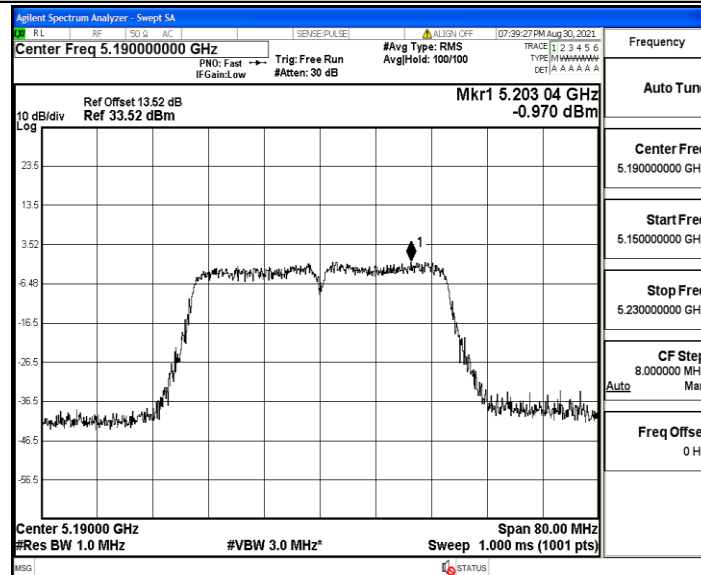
11N20MIMO_Ant2_5240



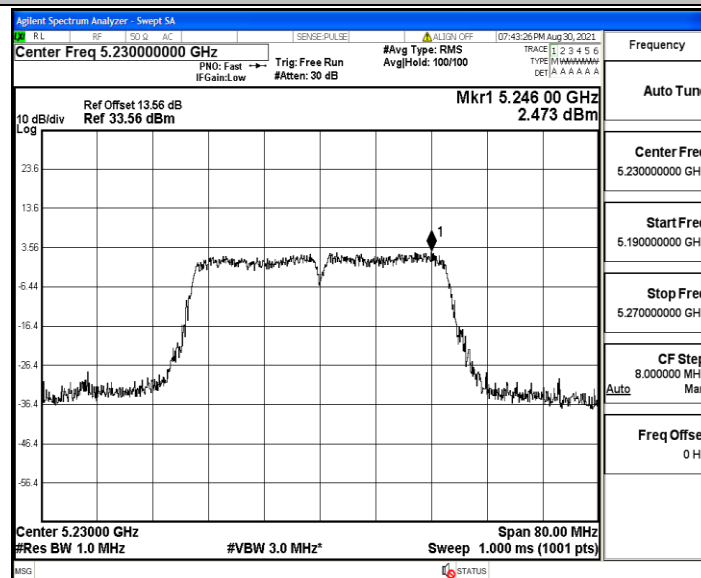
11N40MIMO_Ant1_5190



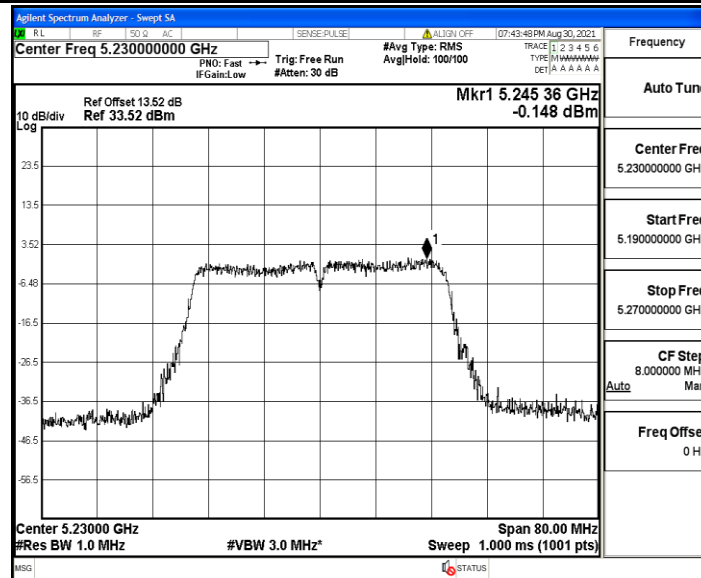
11N40MIMO_Ant2_5190



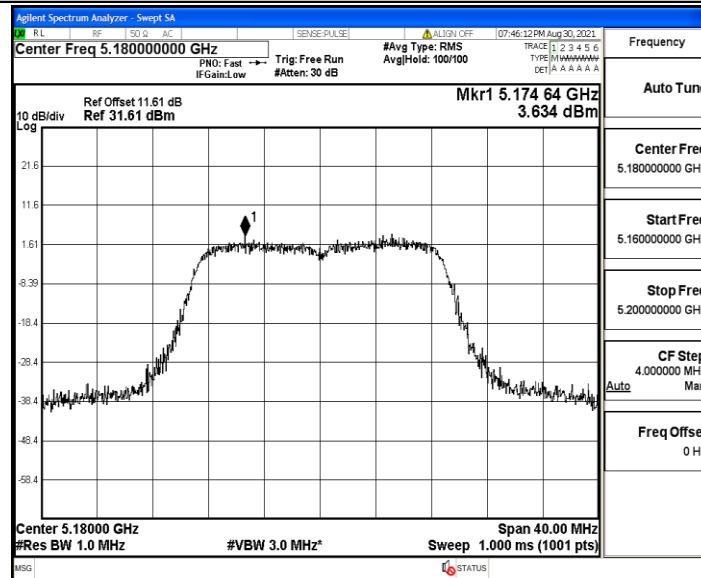
11N40MIMO_Ant1_5230



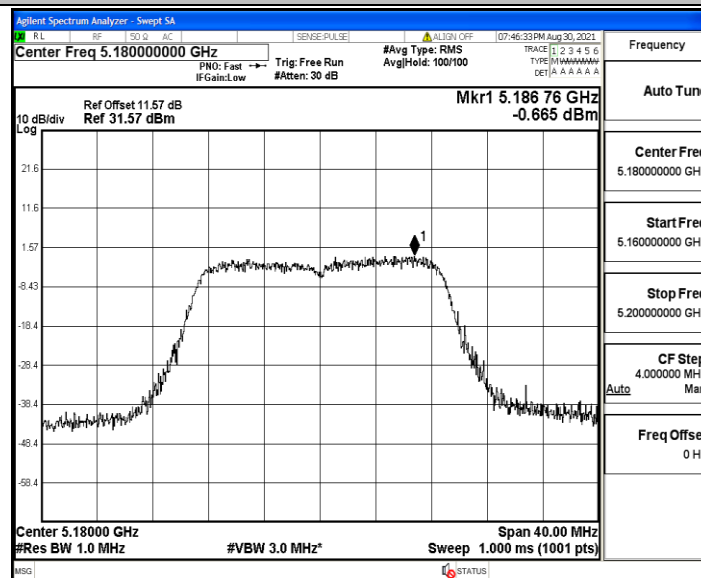
11N40MIMO_Ant2_5230



11AC20MIMO_Ant1_5180



11AC20MIMO_Ant2_5180



11AC20MIMO_Ant1_5200