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

Product Name: Set Top Box

Trade Mark: ROBERTS COMMUNICATIONS NETWORK

Test Model: ROBERTS-3PATH

FCC ID: 2BK67-ROBERTS-3PATH

Environmental Conditions

Temperature:	23.8℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

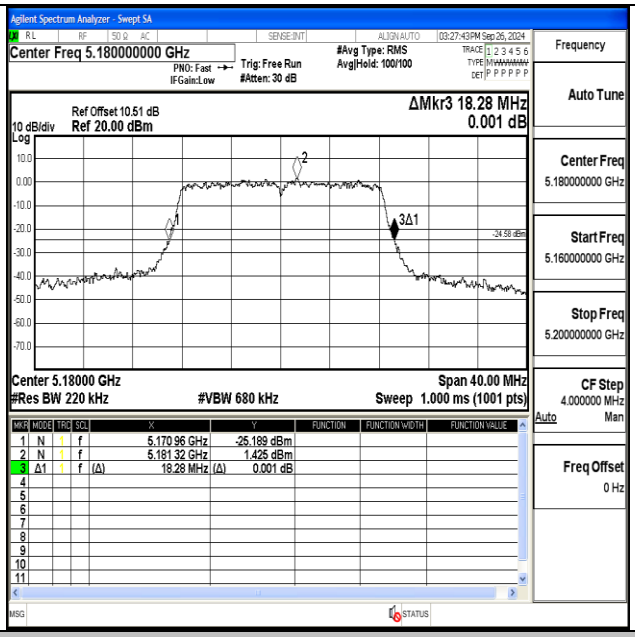
Appendix A1: Emission Bandwidth

Test Result

Test Mode	Antenna	Frequency [MHz]	26db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant2	5180	18.280	5170.960	5189.240	---	---
11A	Ant1	5180	18.720	5170.640	5189.360	---	---
11A	Ant1	5200	18.680	5190.680	5209.360	---	---
11A	Ant2	5200	18.400	5190.840	5209.240	---	---
11A	Ant1	5240	18.640	5230.800	5249.440	---	---
11A	Ant2	5240	18.320	5230.880	5249.200	---	---
11N20MIMO	Ant1	5180	19.480	5170.240	5189.720	---	---
11N20MIMO	Ant2	5180	19.360	5170.360	5189.720	---	---
11N20MIMO	Ant1	5200	19.840	5190.160	5210.000	---	---
11N20MIMO	Ant2	5200	19.400	5190.320	5209.720	---	---
11N20MIMO	Ant1	5240	19.760	5230.080	5249.840	---	---
11N20MIMO	Ant2	5240	19.240	5230.440	5249.680	---	---
11N40MIMO	Ant1	5190	64.640	5163.280	5227.920	---	---
11N40MIMO	Ant2	5190	41.120	5169.600	5210.720	---	---
11N40MIMO	Ant1	5230	46.160	5209.440	5255.600	---	---
11N40MIMO	Ant2	5230	40.400	5209.920	5250.320	---	---
11AC20MIMO	Ant1	5180	19.920	5170.160	5190.080	---	---
11AC20MIMO	Ant2	5180	19.520	5170.360	5189.880	---	---
11AC20MIMO	Ant1	5200	19.560	5190.240	5209.800	---	---
11AC20MIMO	Ant2	5200	19.440	5190.320	5209.760	---	---
11AC20MIMO	Ant1	5240	19.960	5230.160	5250.120	---	---
11AC20MIMO	Ant2	5240	19.480	5230.320	5249.800	---	---
11AC40MIMO	Ant1	5190	77.040	5151.040	5228.080	---	---
11AC40MIMO	Ant2	5190	40.960	5169.520	5210.480	---	---

11AC40MIMO	Ant1	5230	41.520	5209.200	5250.720	---	---
11AC40MIMO	Ant2	5230	40.480	5209.840	5250.320	---	---
11AC80MIMO	Ant1	5210	159.680	5130.320	5290.000	---	---
11AC80MIMO	Ant2	5210	80.640	5170.160	5250.800	---	---

Test Graphs



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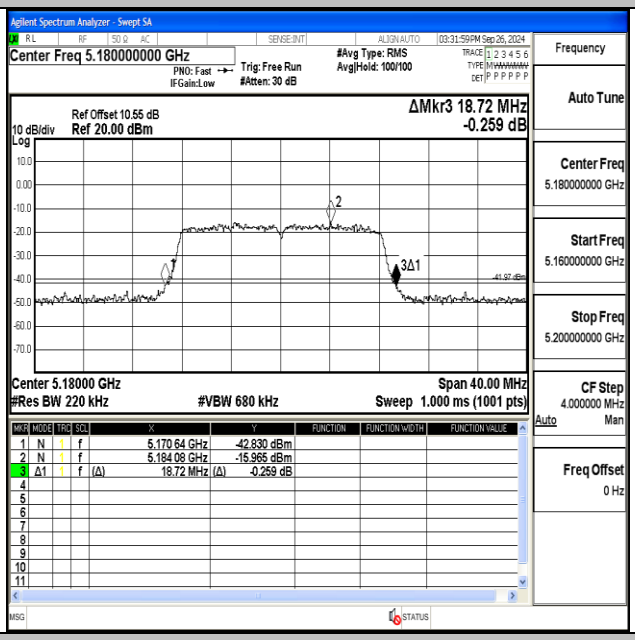

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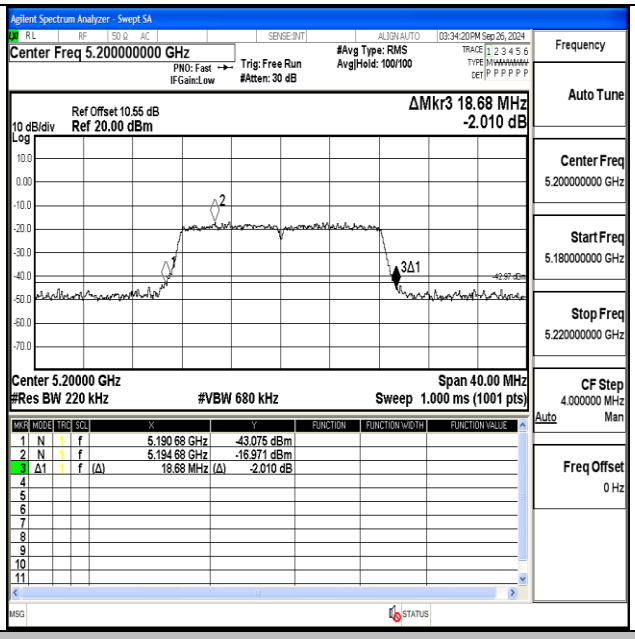

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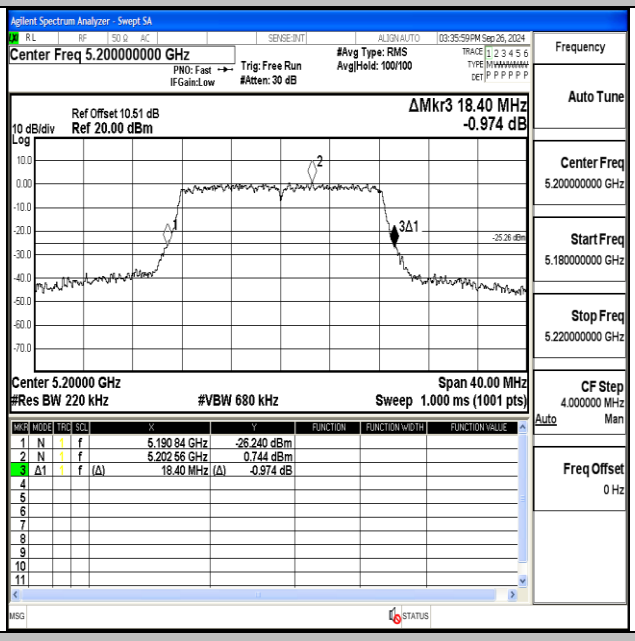

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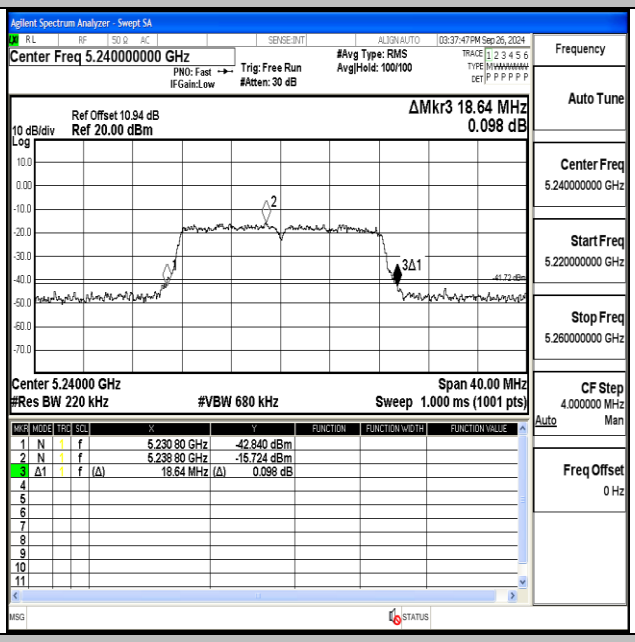

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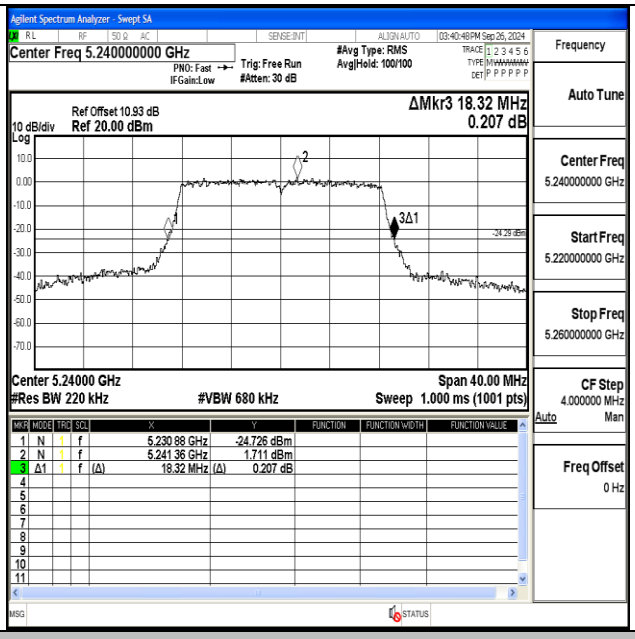

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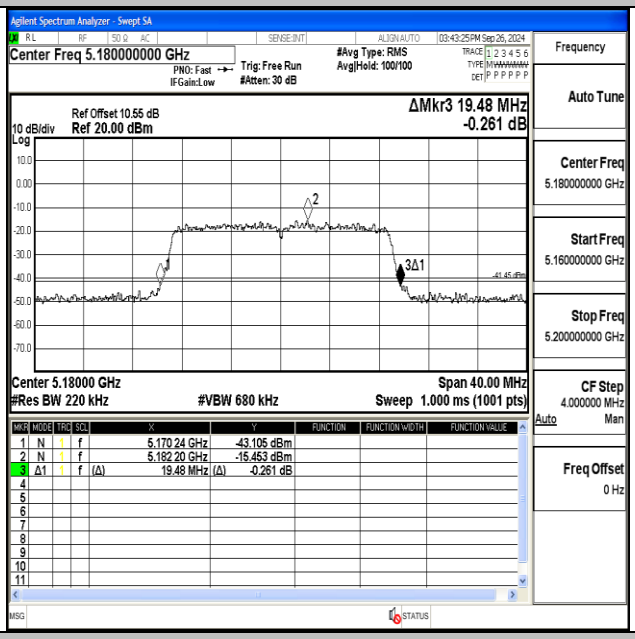

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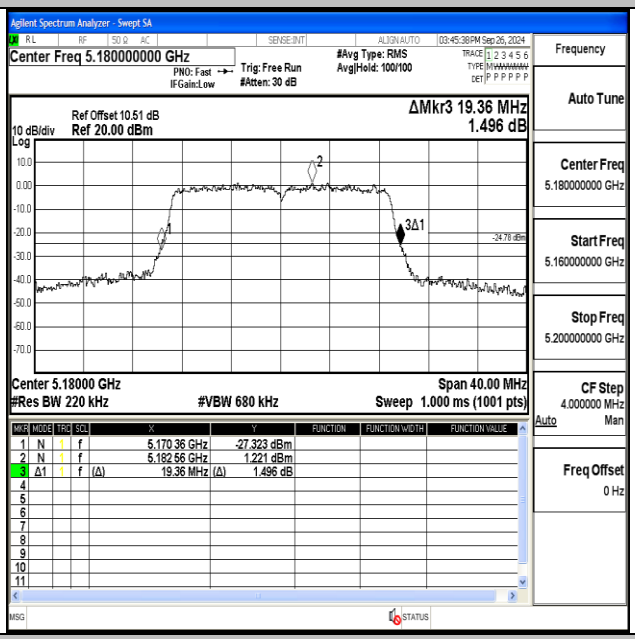

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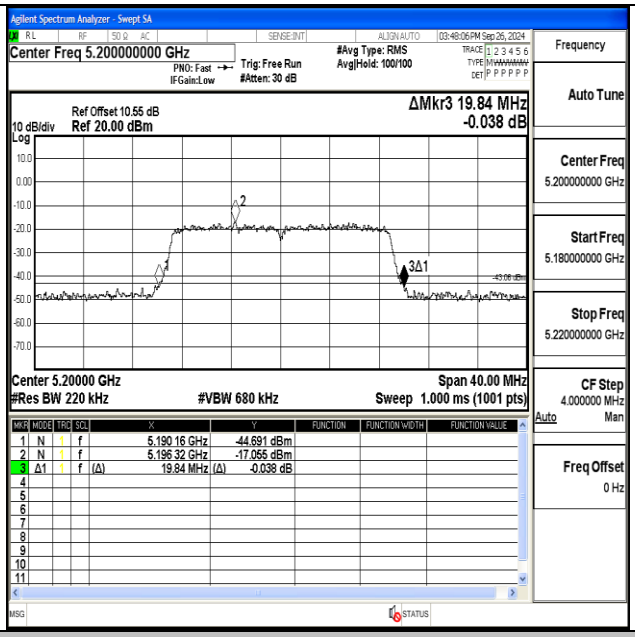

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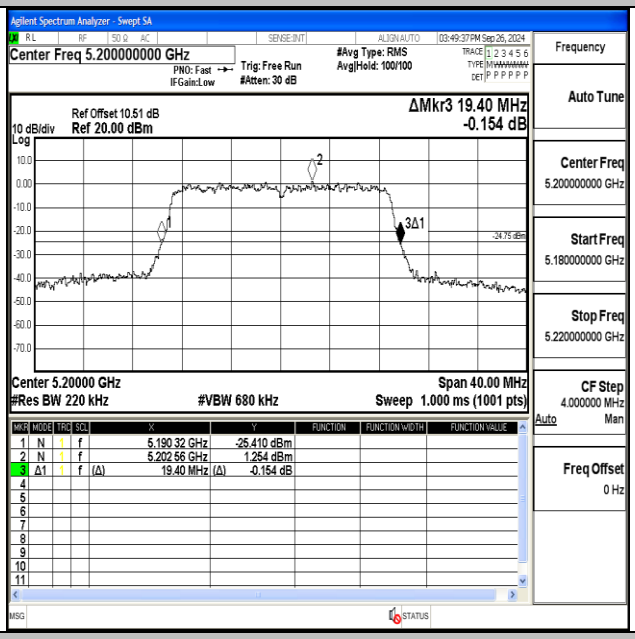

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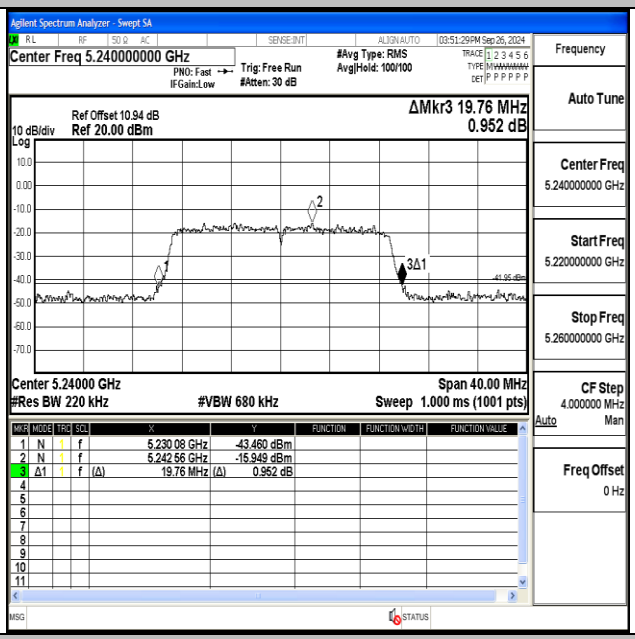

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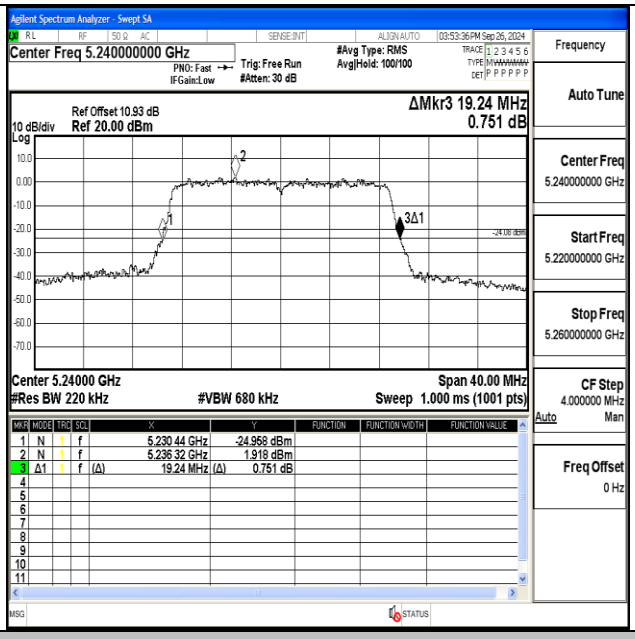

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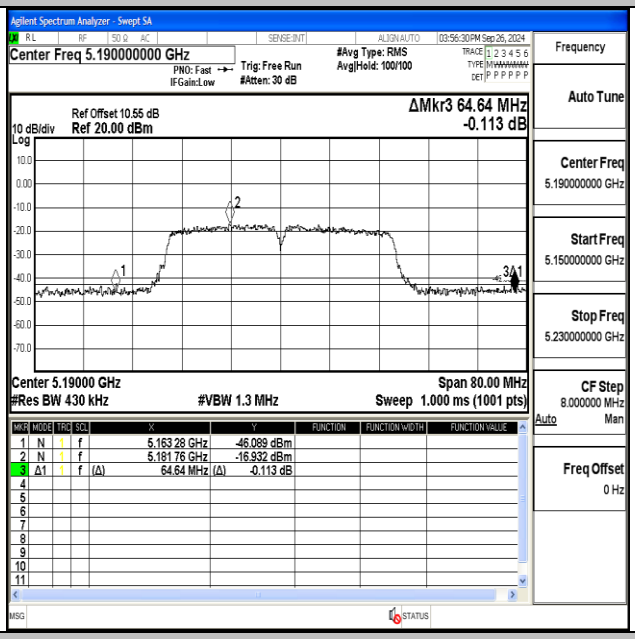

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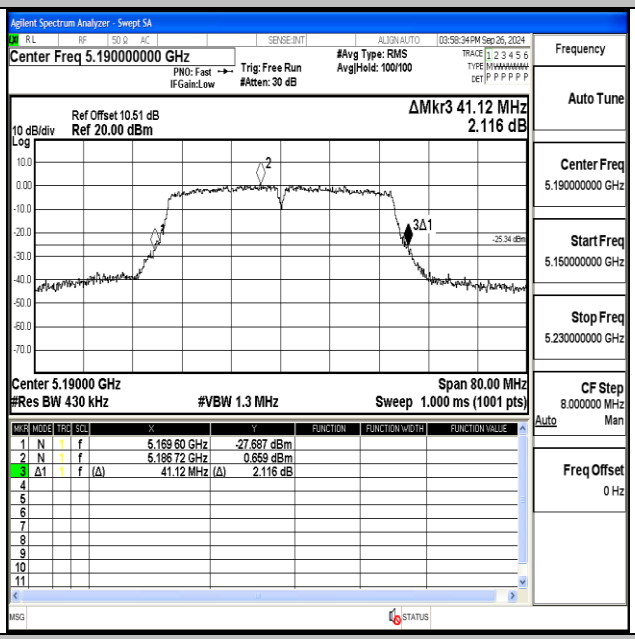

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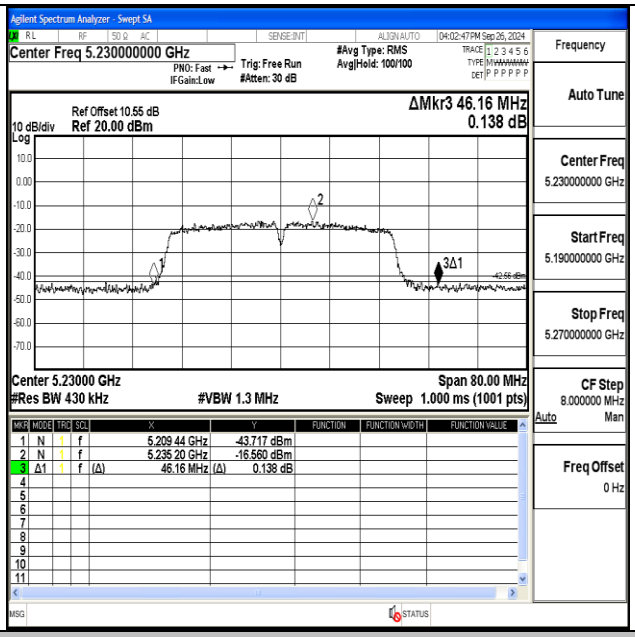

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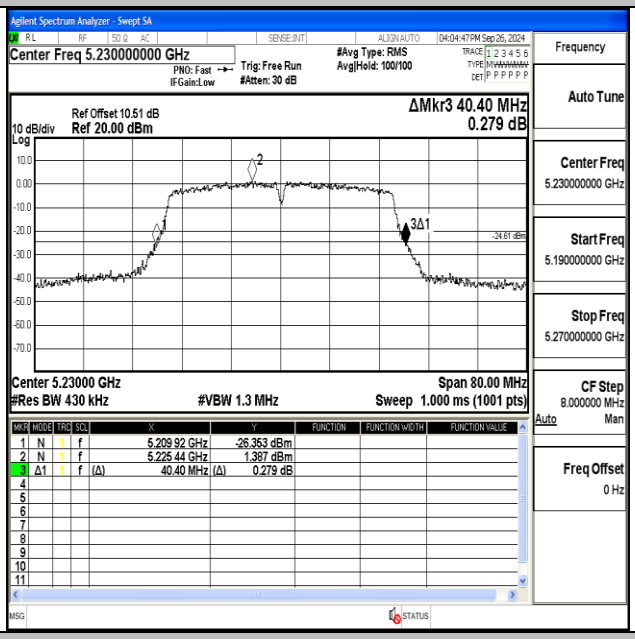

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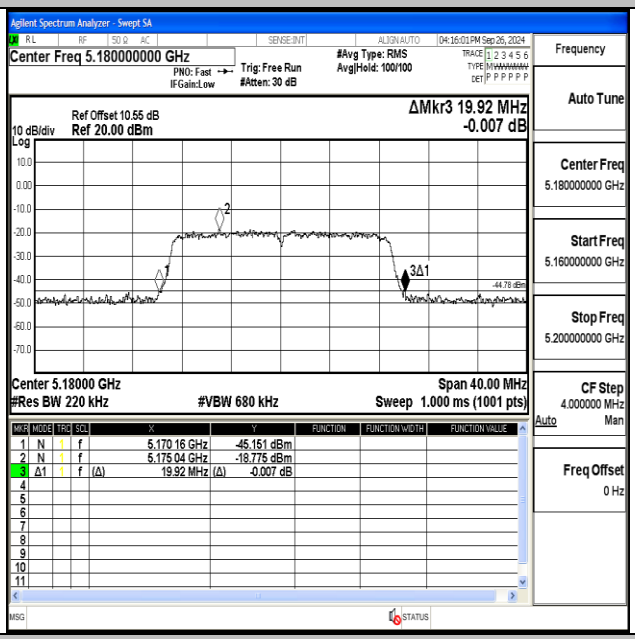

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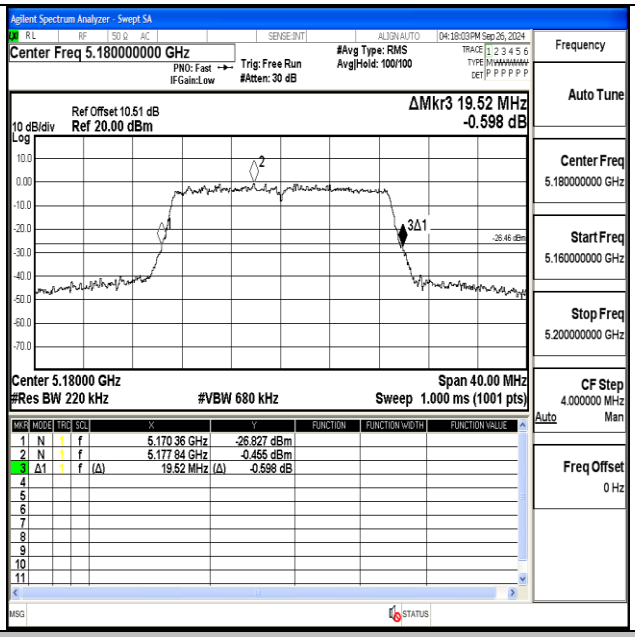

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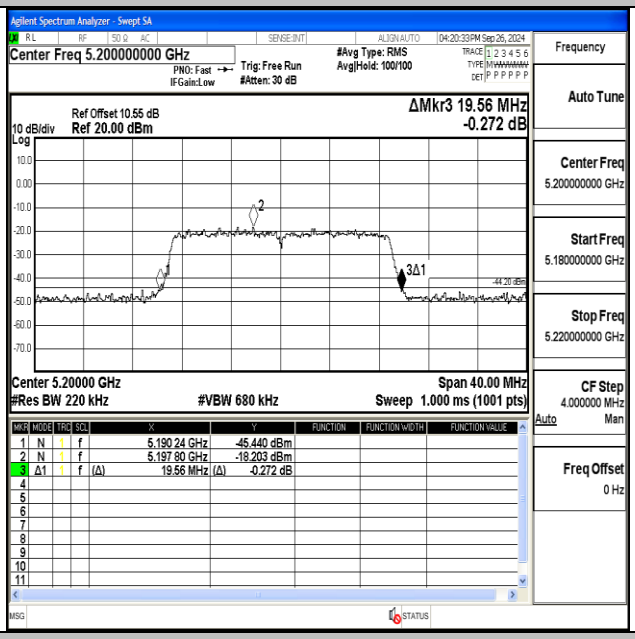

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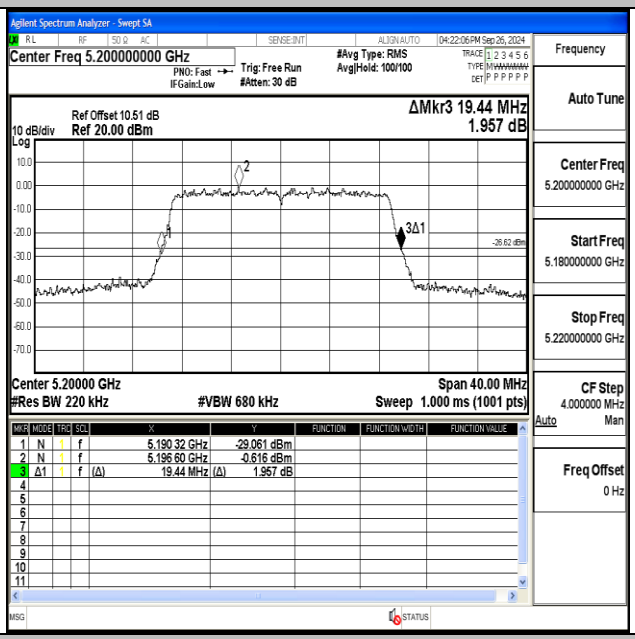

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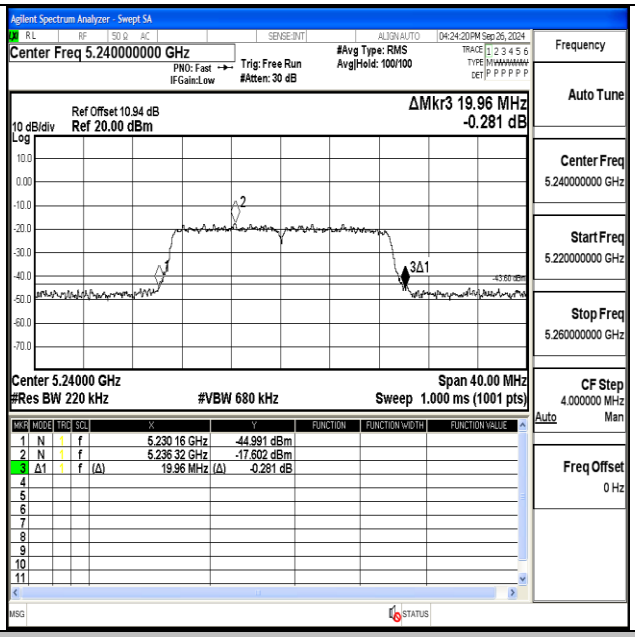

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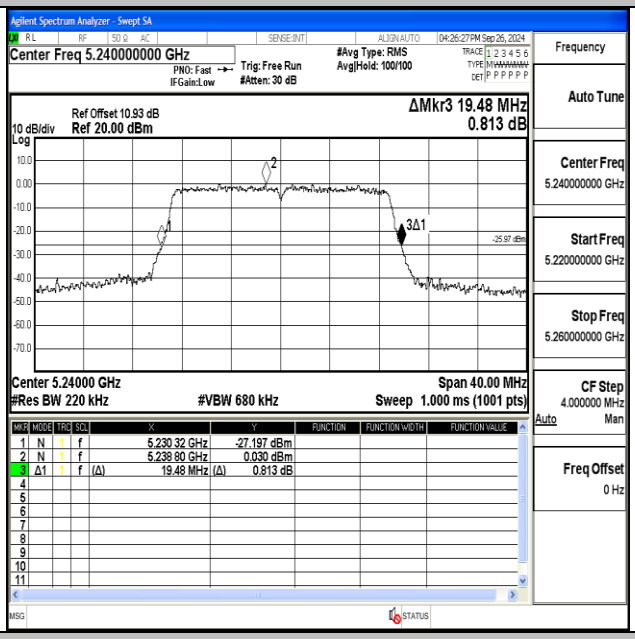

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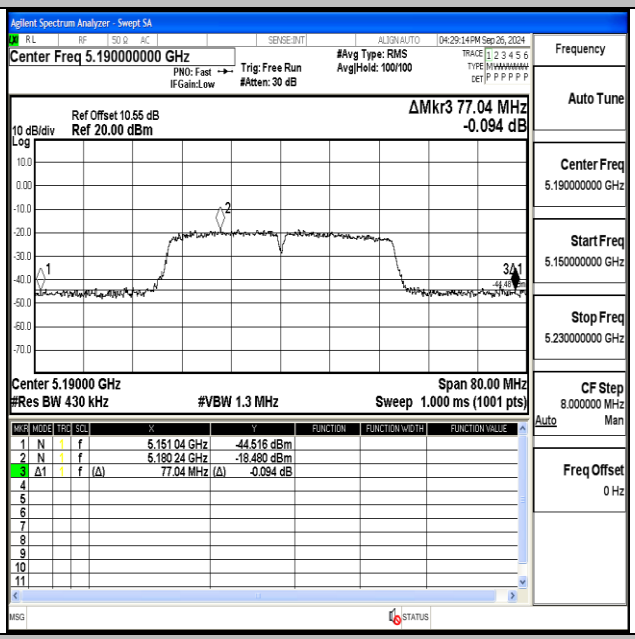

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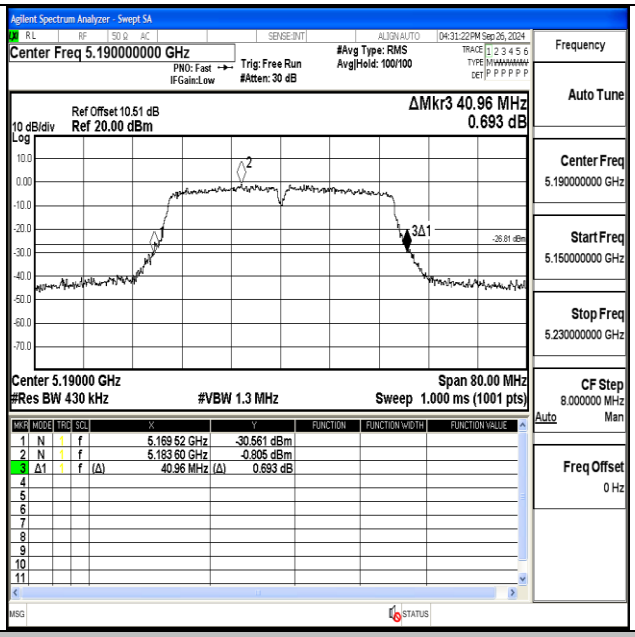

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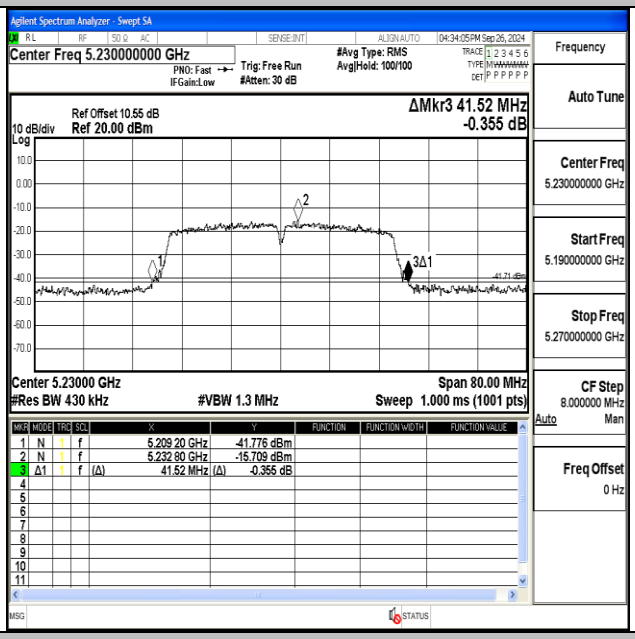

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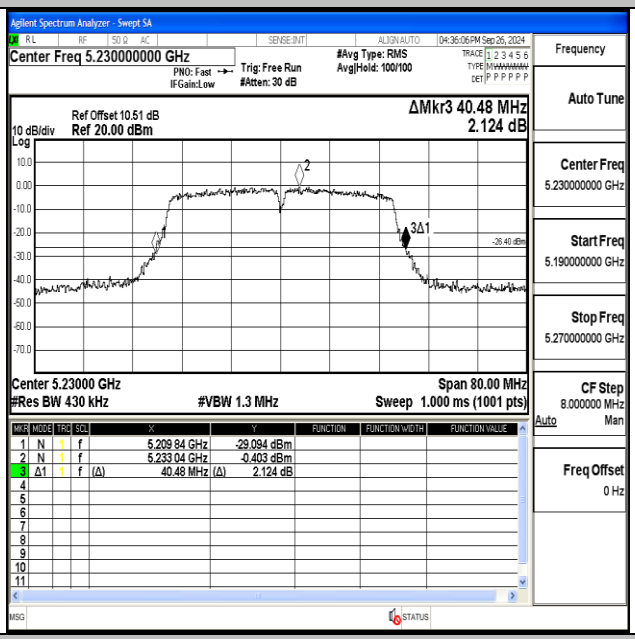

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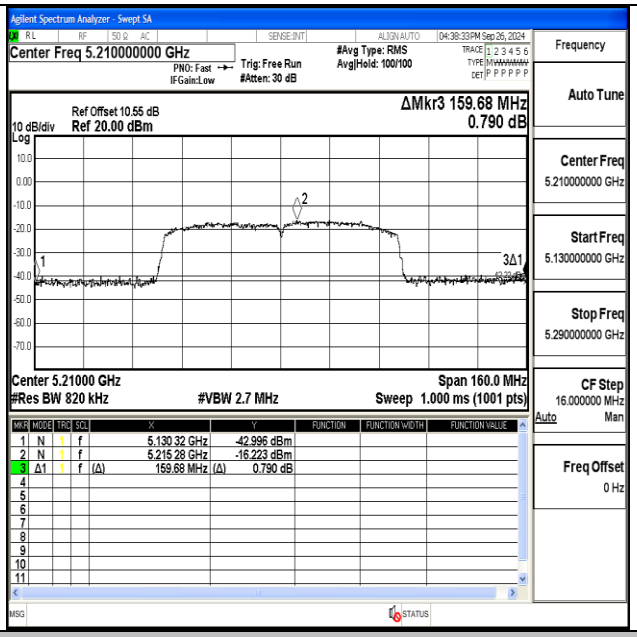

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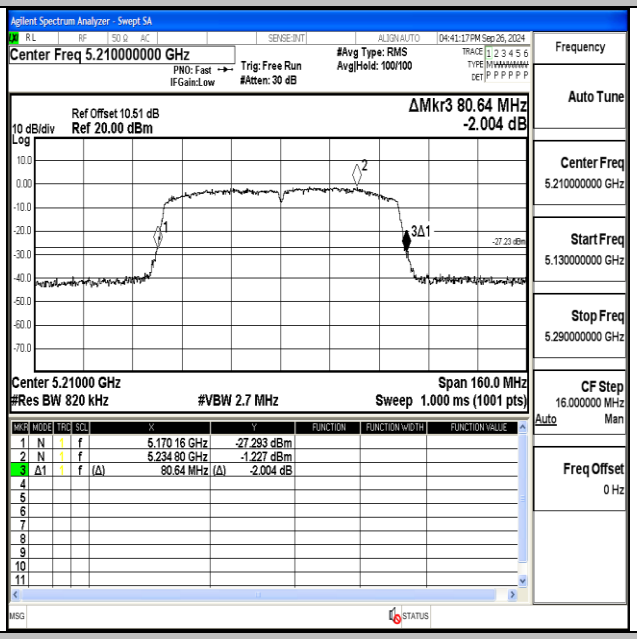

11AC80MIMO-Ant2-5210

Appendix A2: Occupied channel bandwidth

Test Result

Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5180	16.570	5171.7611	5188.3311	---	---
11A	Ant2	5180	16.432	5171.8442	5188.2762	---	---
11A	Ant1	5200	16.580	5191.7487	5208.3287	---	---
11A	Ant2	5200	16.471	5191.8172	5208.2882	---	---
11A	Ant1	5240	16.584	5231.7503	5248.3343	---	---
11A	Ant2	5240	16.471	5231.7964	5248.2674	---	---
11N20MIMO	Ant1	5180	17.658	5171.2151	5188.8731	---	---
11N20MIMO	Ant2	5180	17.602	5171.2643	5188.8663	---	---
11N20MIMO	Ant1	5200	17.760	5191.1693	5208.9293	---	---
11N20MIMO	Ant2	5200	17.651	5191.2334	5208.8844	---	---
11N20MIMO	Ant1	5240	17.718	5231.1653	5248.8833	---	---
11N20MIMO	Ant2	5240	17.631	5231.2170	5248.8480	---	---
11N40MIMO	Ant1	5190	36.700	5171.6948	5208.3948	---	---
11N40MIMO	Ant2	5190	36.336	5171.9774	5208.3134	---	---
11N40MIMO	Ant1	5230	36.489	5211.8545	5248.3435	---	---
11N40MIMO	Ant2	5230	36.254	5212.0063	5248.2603	---	---
11AC20MIMO	Ant1	5180	17.718	5171.1970	5188.9150	---	---
11AC20MIMO	Ant2	5180	17.590	5171.2661	5188.8561	---	---
11AC20MIMO	Ant1	5200	17.783	5191.1697	5208.9527	---	---
11AC20MIMO	Ant2	5200	17.617	5191.2491	5208.8661	---	---
11AC20MIMO	Ant1	5240	17.756	5231.1642	5248.9202	---	---
11AC20MIMO	Ant2	5240	17.621	5231.2265	5248.8475	---	---
11AC40MIMO	Ant1	5190	36.727	5171.6929	5208.4199	---	---
11AC40MIMO	Ant2	5190	36.313	5171.9558	5208.2688	---	---
11AC40MIMO	Ant1	5230	36.545	5211.8181	5248.3631	---	---
11AC40MIMO	Ant2	5230	36.228	5211.9586	5248.1866	---	---
11AC80MIMO	Ant1	5210	75.554	5172.4559	5248.0099	---	---
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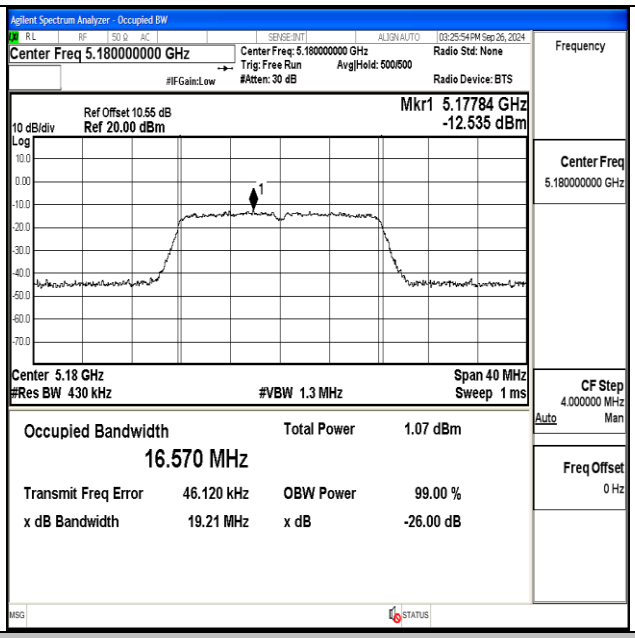
Test Graphs



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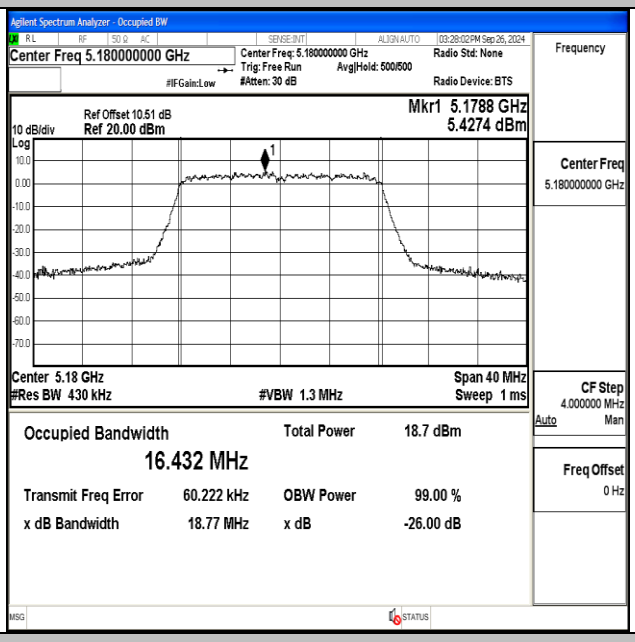

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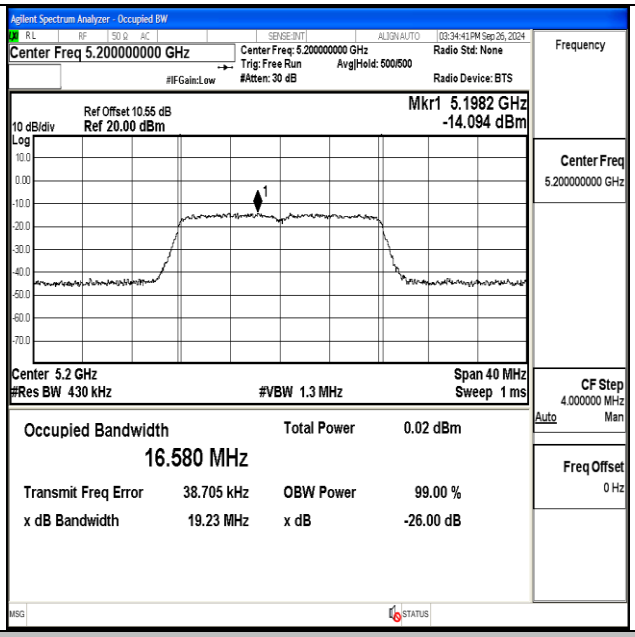

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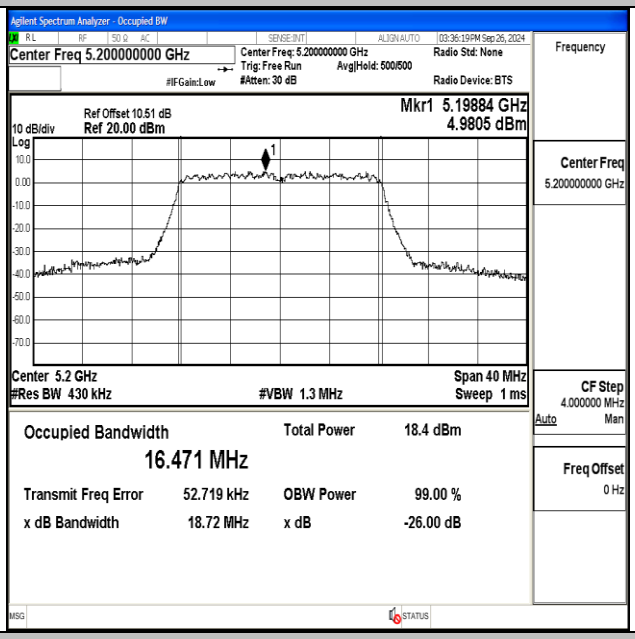

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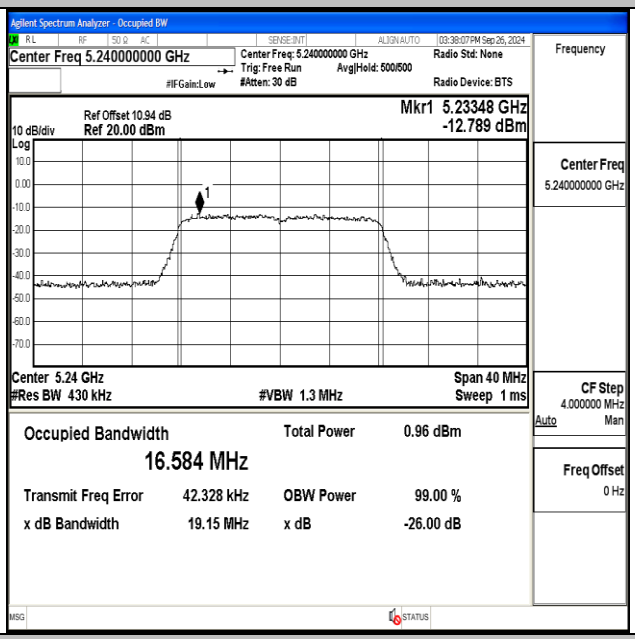

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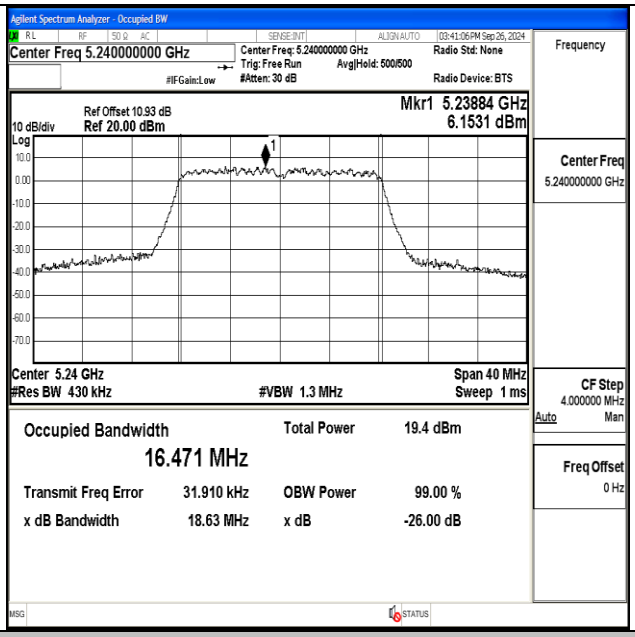

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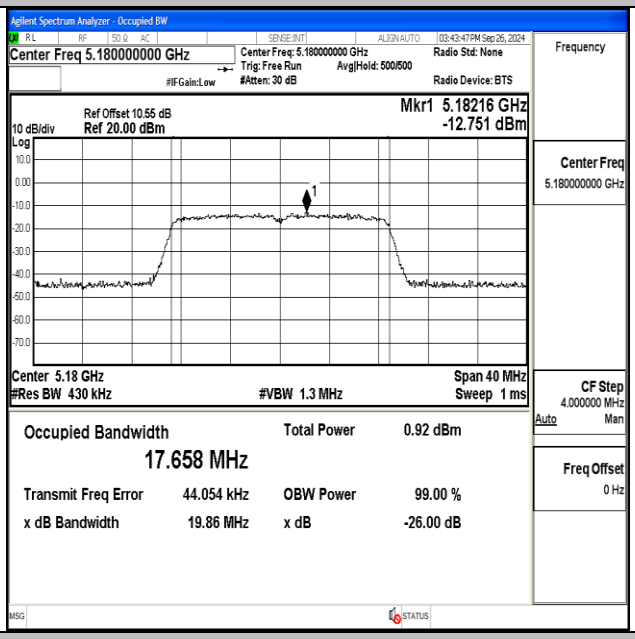

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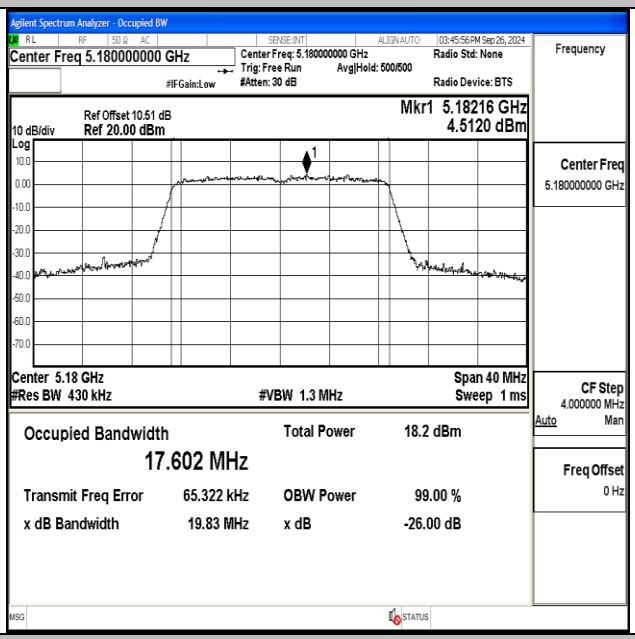

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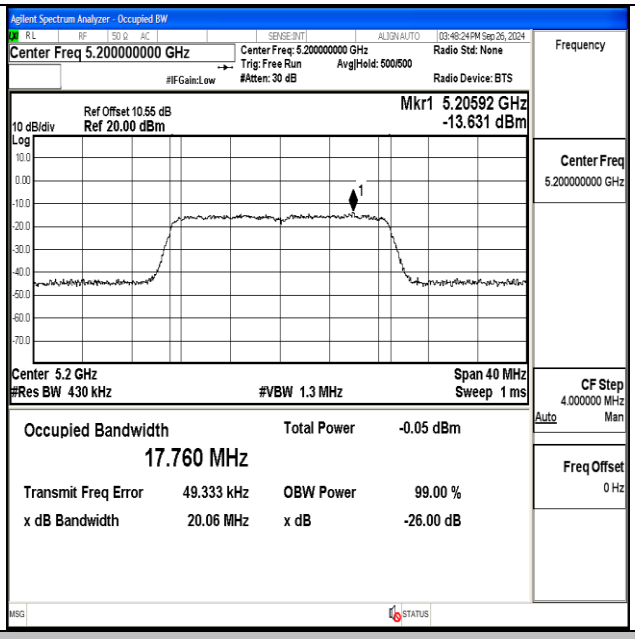

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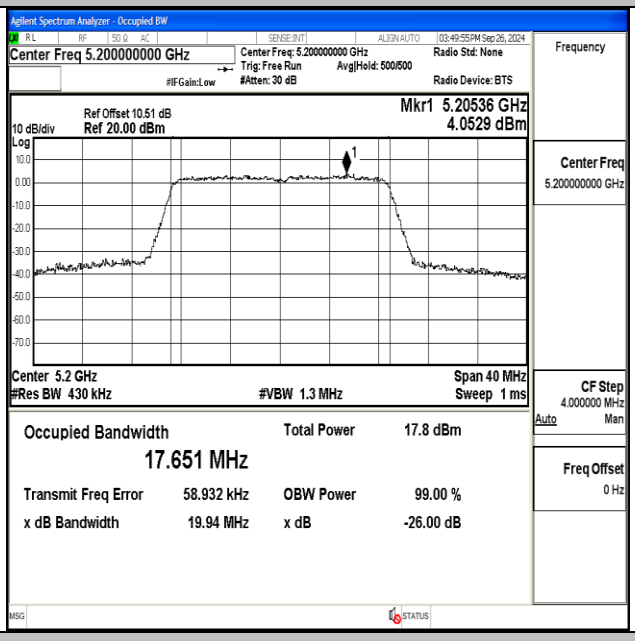

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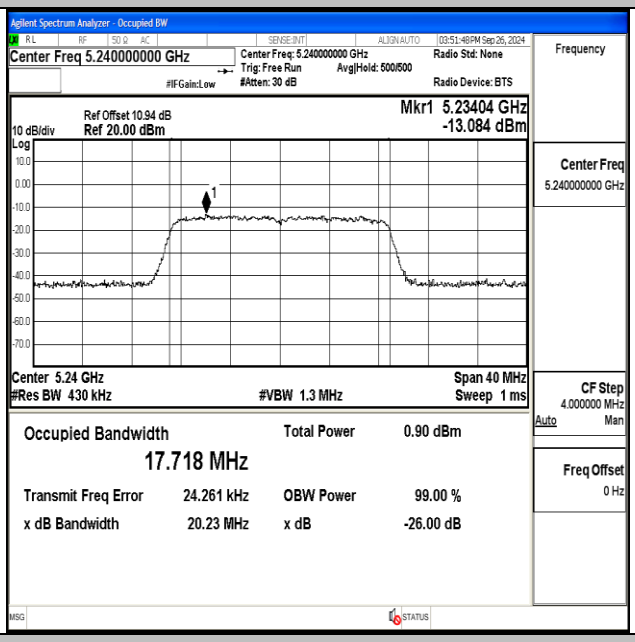

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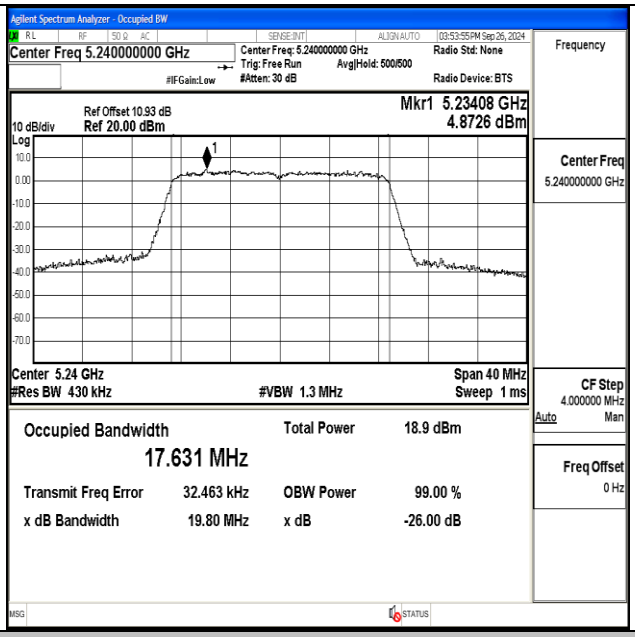
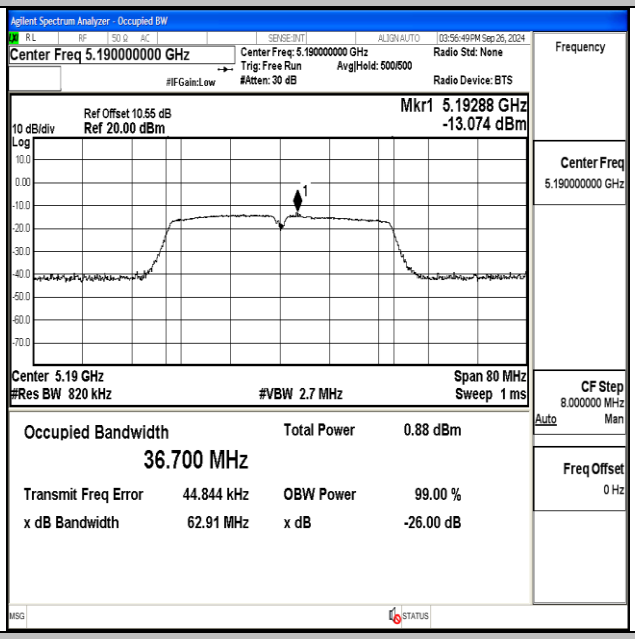


11N20MIMO-Ant2-5240



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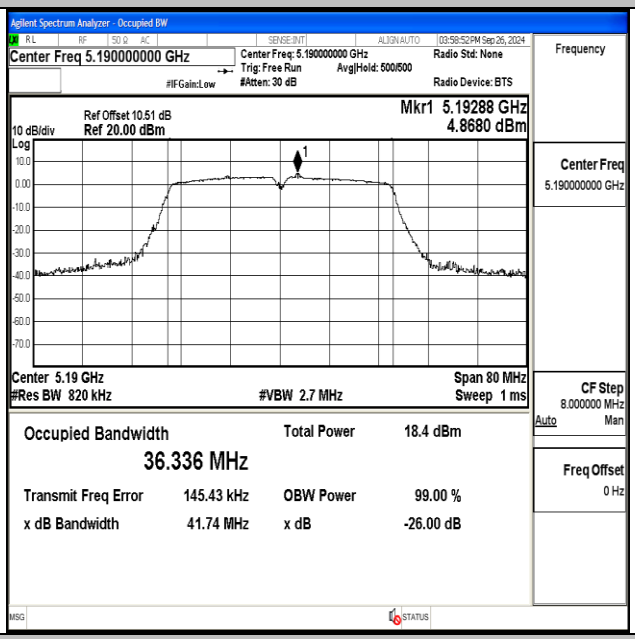

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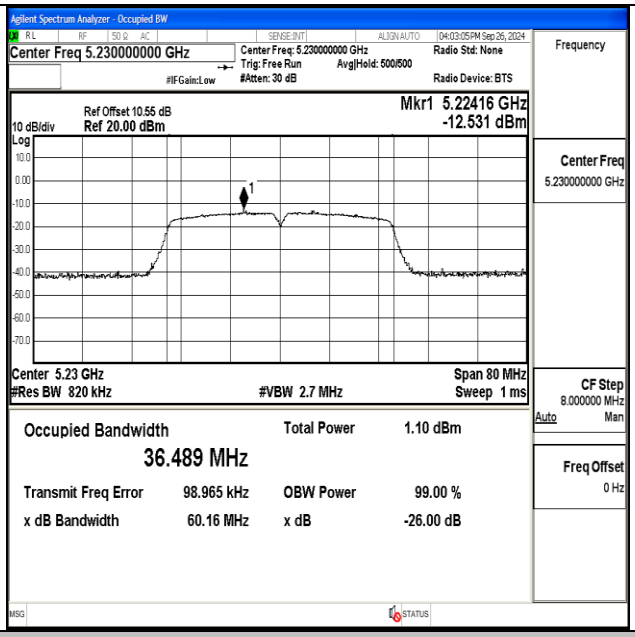

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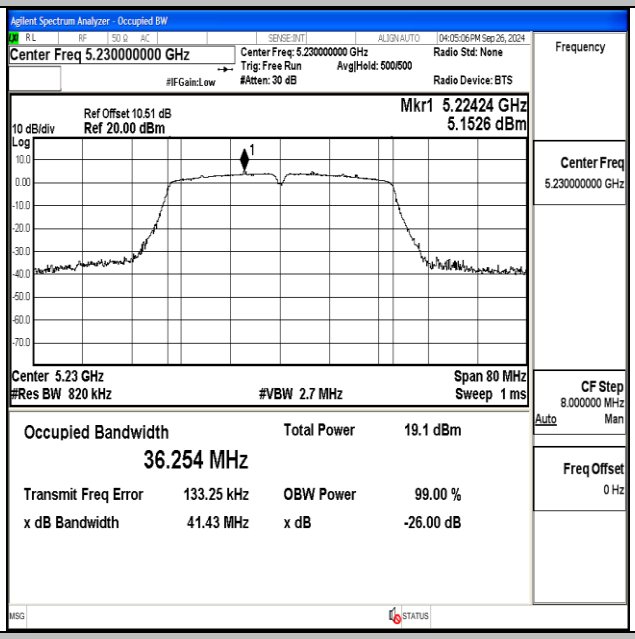

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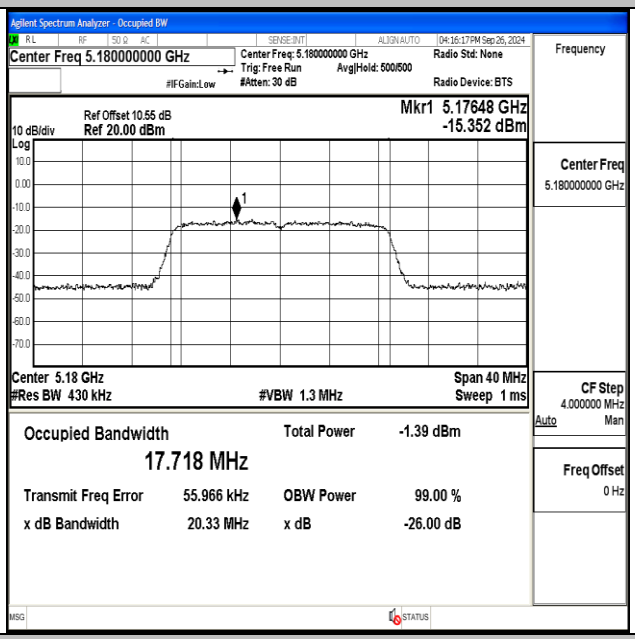

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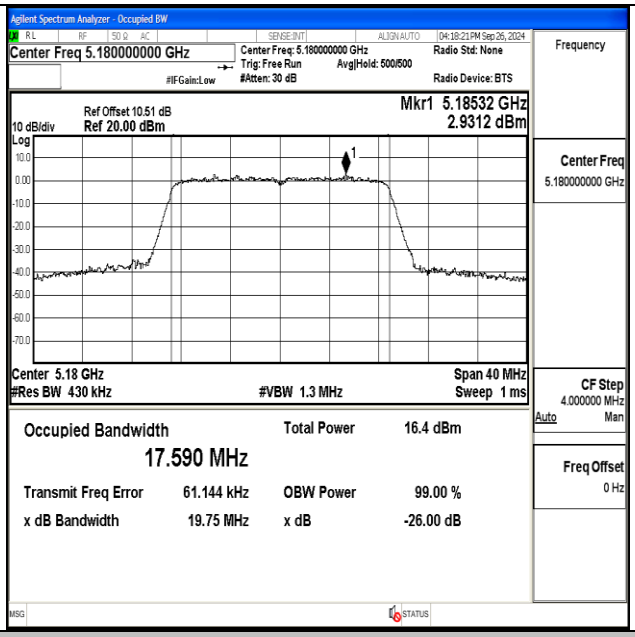

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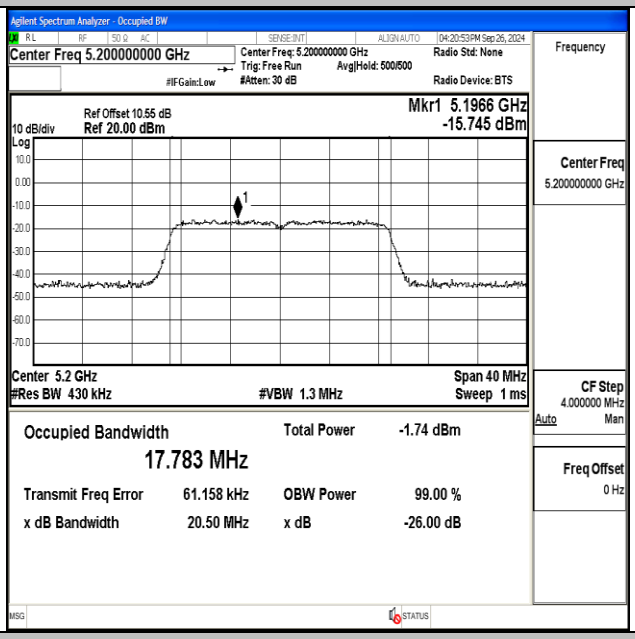

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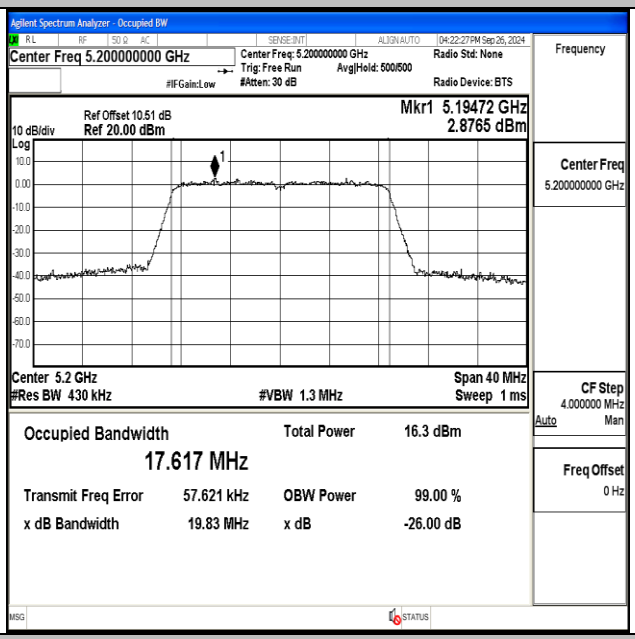

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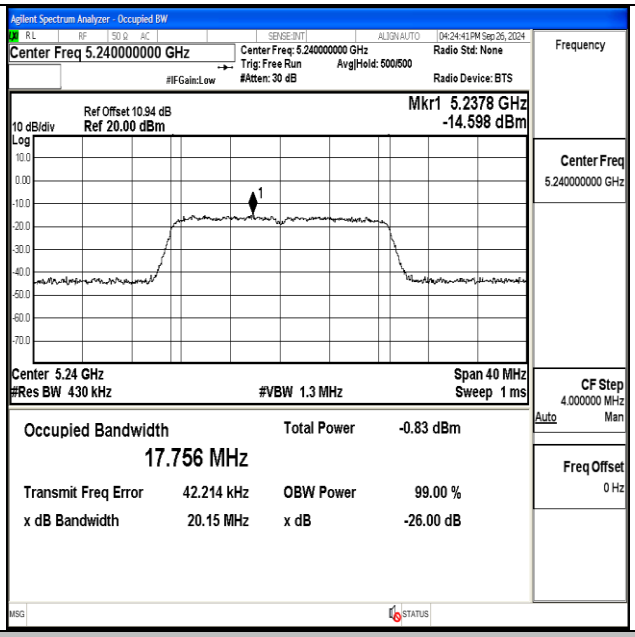

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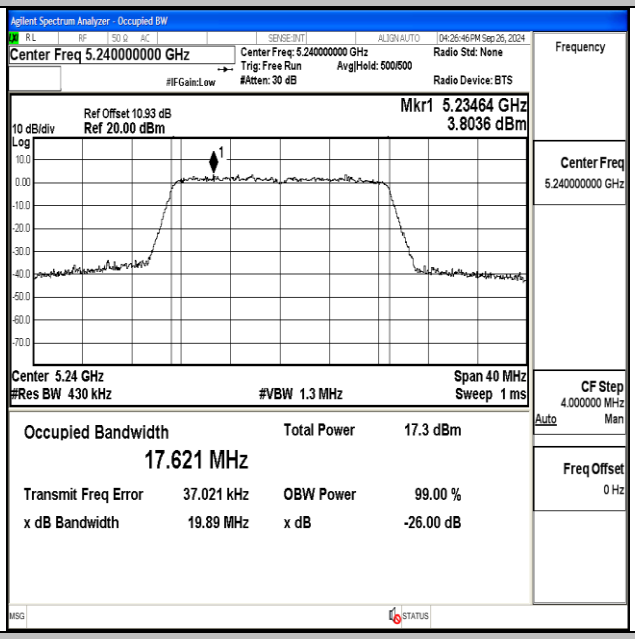

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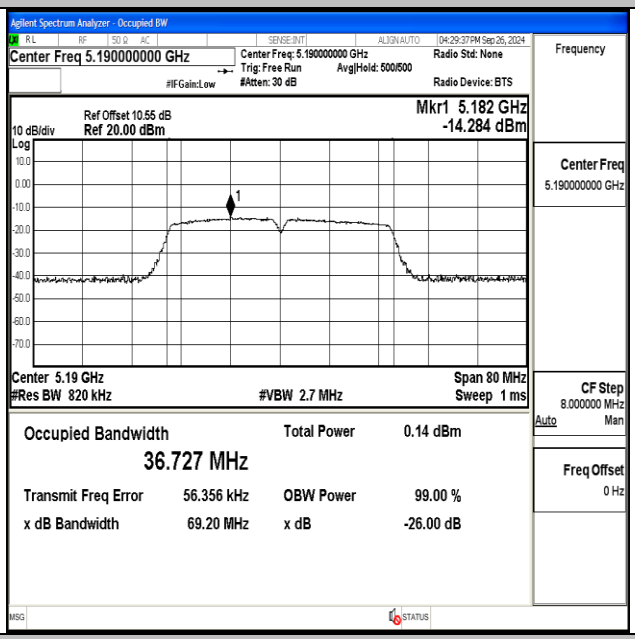

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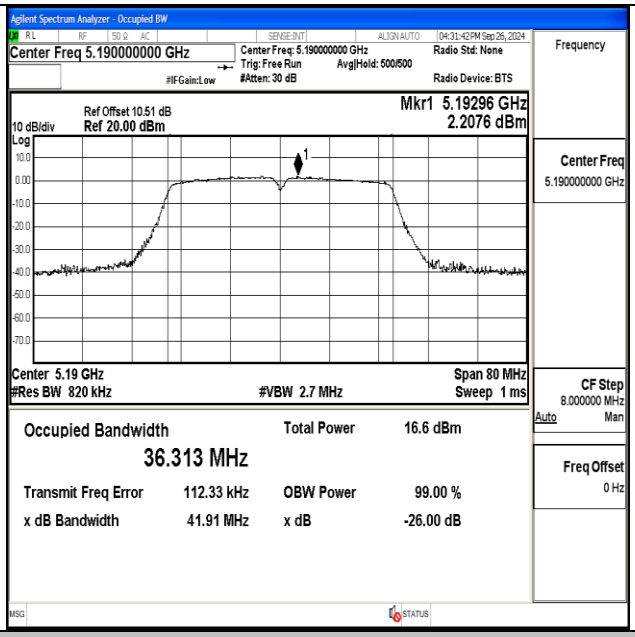

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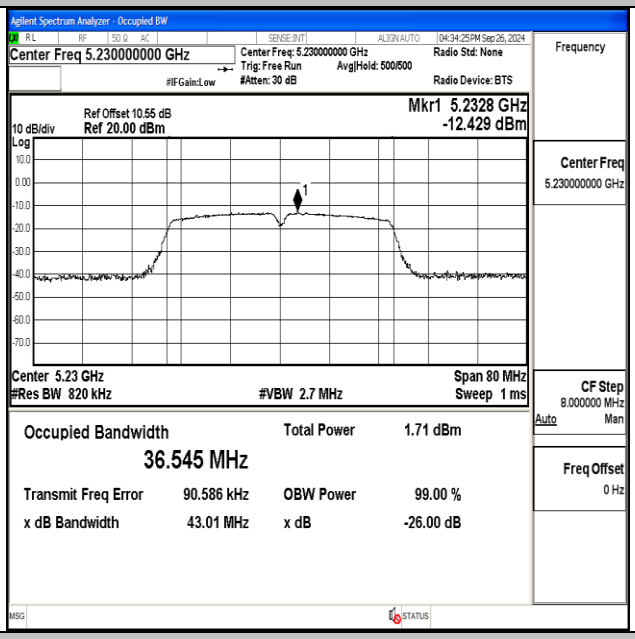

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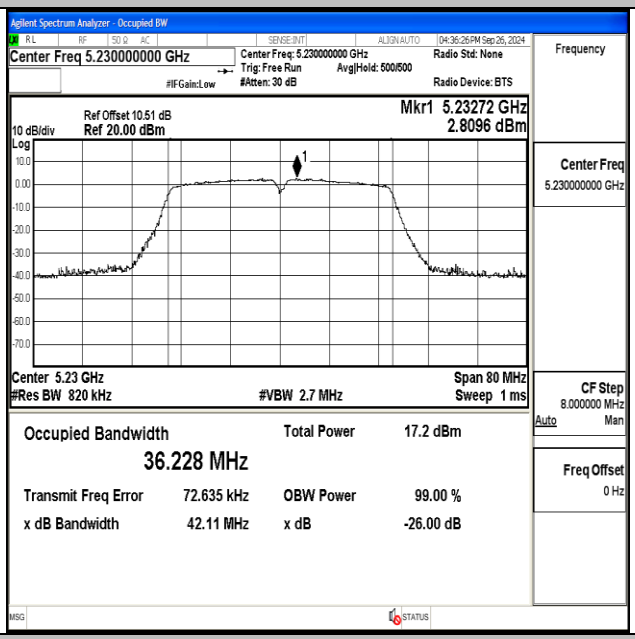

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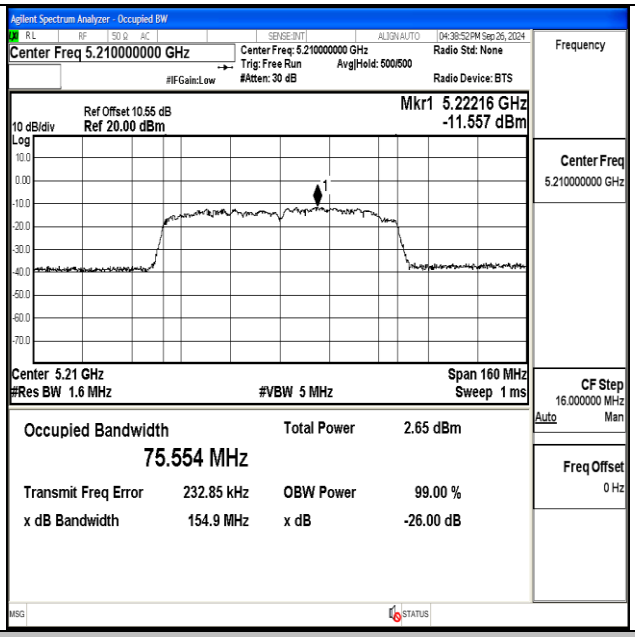
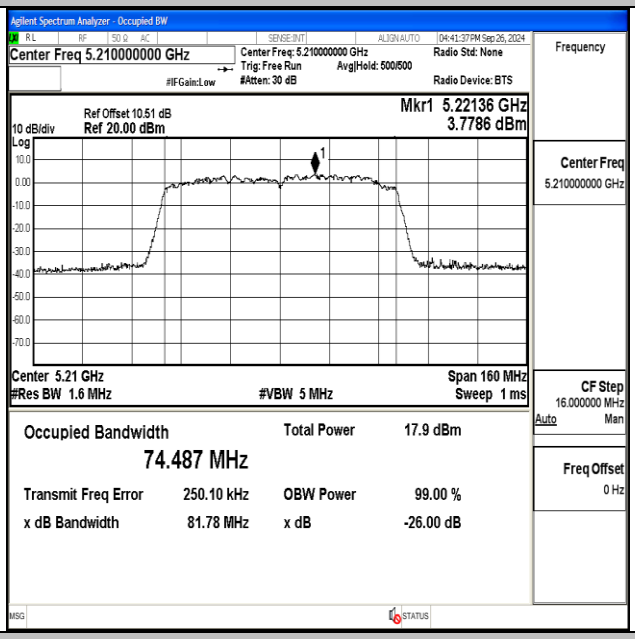


11AC80MIMO-Ant1-5210



11AC80MIMO-Ant2-5210

Appendix B: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11A	Ant1	5180	-5.78	≤23.98	PASS
11A	Ant2	5180	11.56	≤23.98	PASS
11A	Ant1	5200	-6.67	≤23.98	PASS
11A	Ant2	5200	11.10	≤23.98	PASS
11A	Ant1	5240	-5.75	≤23.98	PASS
11A	Ant2	5240	12.15	≤23.98	PASS
11N20MIMO	Ant1	5180	-5.86	≤23.98	PASS
11N20MIMO	Ant2	5180	11.64	≤23.98	PASS
11N20MIMO	total	5180	11.72	≤23.98	PASS
11N20MIMO	Ant1	5200	-6.79	≤23.98	PASS
11N20MIMO	Ant2	5200	11.05	≤23.98	PASS
11N20MIMO	total	5200	11.12	≤23.98	PASS
11N20MIMO	Ant1	5240	-5.95	≤23.98	PASS
11N20MIMO	Ant2	5240	12.29	≤23.98	PASS
11N20MIMO	total	5240	12.35	≤23.98	PASS
11N40MIMO	Ant1	5190	-6.59	≤23.98	PASS
11N40MIMO	Ant2	5190	11.11	≤23.98	PASS
11N40MIMO	total	5190	11.18	≤23.98	PASS
11N40MIMO	Ant1	5230	-6.18	≤23.98	PASS
11N40MIMO	Ant2	5230	11.64	≤23.98	PASS
11N40MIMO	total	5230	11.71	≤23.98	PASS
11AC20MIMO	Ant1	5180	-7.96	≤23.98	PASS
11AC20MIMO	Ant2	5180	9.64	≤23.98	PASS
11AC20MIMO	total	5180	9.71	≤23.98	PASS
11AC20MIMO	Ant1	5200	-8.51	≤23.98	PASS
11AC20MIMO	Ant2	5200	9.50	≤23.98	PASS
11AC20MIMO	total	5200	9.57	≤23.98	PASS
11AC20MIMO	Ant1	5240	-7.48	≤23.98	PASS
11AC20MIMO	Ant2	5240	10.55	≤23.98	PASS
11AC20MIMO	total	5240	10.62	≤23.98	PASS
11AC40MIMO	Ant1	5190	-7.06	≤23.98	PASS
11AC40MIMO	Ant2	5190	9.35	≤23.98	PASS
11AC40MIMO	total	5190	9.45	≤23.98	PASS
11AC40MIMO	Ant1	5230	-5.55	≤23.98	PASS
11AC40MIMO	Ant2	5230	9.91	≤23.98	PASS
11AC40MIMO	total	5230	10.03	≤23.98	PASS
11AC80MIMO	Ant1	5210	-6.05	≤23.98	PASS
11AC80MIMO	Ant2	5210	9.07	≤23.98	PASS
11AC80MIMO	total	5210	9.20	≤23.98	PASS

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

Appendix C: Maximum power spectral density

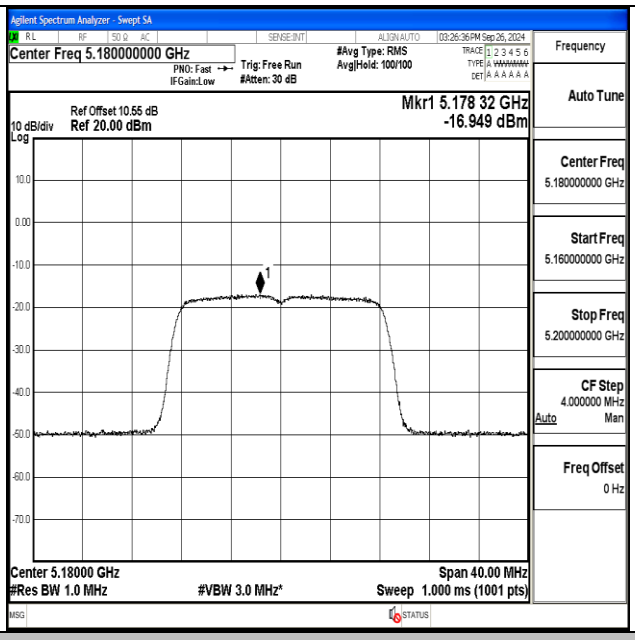
Test Result

Test Mode	Antenna	Frequency [MHz]	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5180	-16.55	≤11.00	PASS
11A	Ant2	5180	0.89	≤11.00	PASS
11A	Ant1	5200	-17.63	≤11.00	PASS
11A	Ant2	5200	0.06	≤11.00	PASS
11A	Ant1	5240	-16.56	≤11.00	PASS
11A	Ant2	5240	1.50	≤11.00	PASS
11N20MIMO	Ant1	5180	-16.96	≤11.00	PASS
11N20MIMO	Ant2	5180	0.57	≤11.00	PASS
11N20MIMO	total	5180	0.65	≤11.00	PASS
11N20MIMO	Ant1	5200	-18.09	≤11.00	PASS
11N20MIMO	Ant2	5200	-0.13	≤11.00	PASS
11N20MIMO	total	5200	-0.06	≤11.00	PASS
11N20MIMO	Ant1	5240	-16.88	≤11.00	PASS
11N20MIMO	Ant2	5240	1.02	≤11.00	PASS
11N20MIMO	total	5240	1.09	≤11.00	PASS
11N40MIMO	Ant1	5190	-20.30	≤11.00	PASS
11N40MIMO	Ant2	5190	-2.63	≤11.00	PASS
11N40MIMO	total	5190	-2.56	≤11.00	PASS
11N40MIMO	Ant1	5230	-20.02	≤11.00	PASS
11N40MIMO	Ant2	5230	-2.27	≤11.00	PASS
11N40MIMO	total	5230	-2.20	≤11.00	PASS
11AC20MIMO	Ant1	5180	-19.09	≤11.00	PASS
11AC20MIMO	Ant2	5180	-1.49	≤11.00	PASS
11AC20MIMO	total	5180	-1.42	≤11.00	PASS
11AC20MIMO	Ant1	5200	-19.93	≤11.00	PASS
11AC20MIMO	Ant2	5200	-1.92	≤11.00	PASS
11AC20MIMO	total	5200	-1.85	≤11.00	PASS
11AC20MIMO	Ant1	5240	-18.67	≤11.00	PASS
11AC20MIMO	Ant2	5240	-0.47	≤11.00	PASS
11AC20MIMO	total	5240	-0.40	≤11.00	PASS
11AC40MIMO	Ant1	5190	-19.63	≤11.00	PASS
11AC40MIMO	Ant2	5190	-4.49	≤11.00	PASS
11AC40MIMO	total	5190	-4.36	≤11.00	PASS
11AC40MIMO	Ant1	5230	-19.43	≤11.00	PASS
11AC40MIMO	Ant2	5230	-3.82	≤11.00	PASS
11AC40MIMO	total	5230	-3.70	≤11.00	PASS
11AC80MIMO	Ant1	5210	-22.80	≤11.00	PASS
11AC80MIMO	Ant2	5210	-7.48	≤11.00	PASS
11AC80MIMO	total	5210	-7.35	≤11.00	PASS

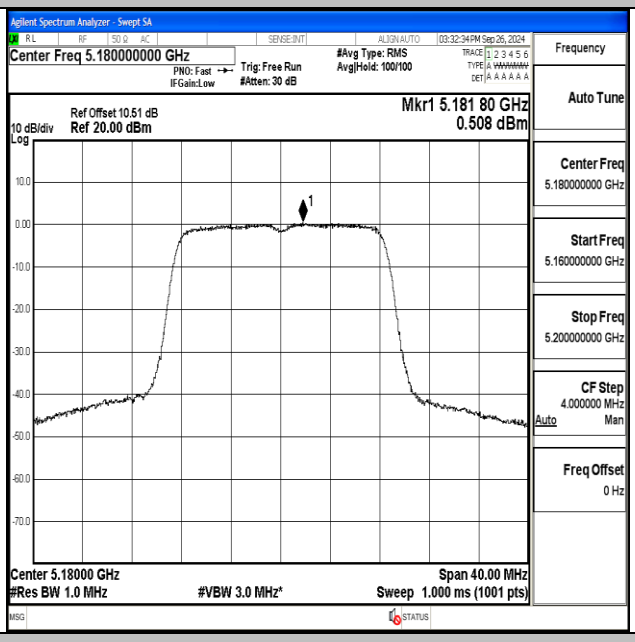
Note：1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

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

Test Graphs



11A-Ant1-5180-PASS



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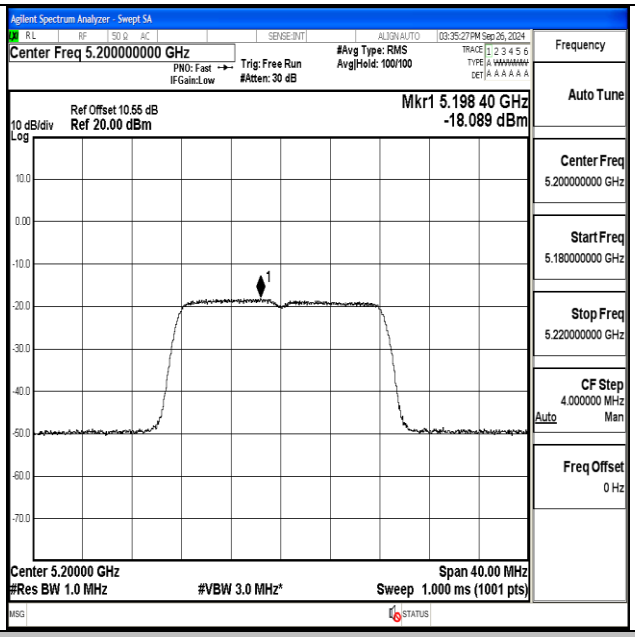

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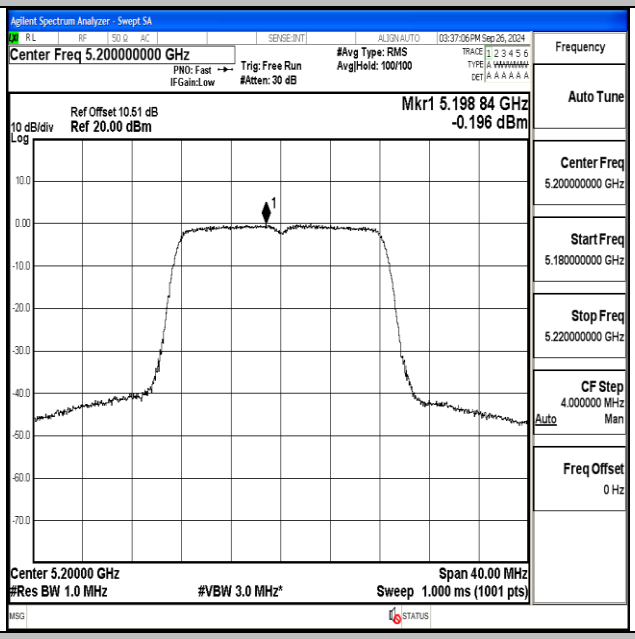

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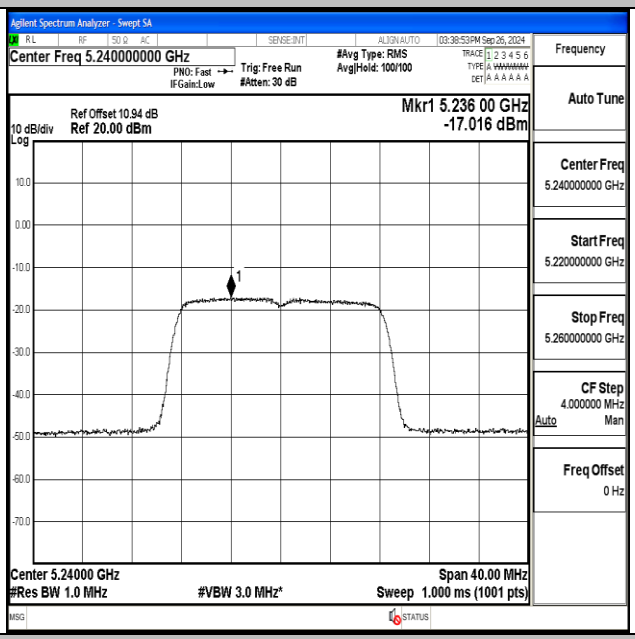

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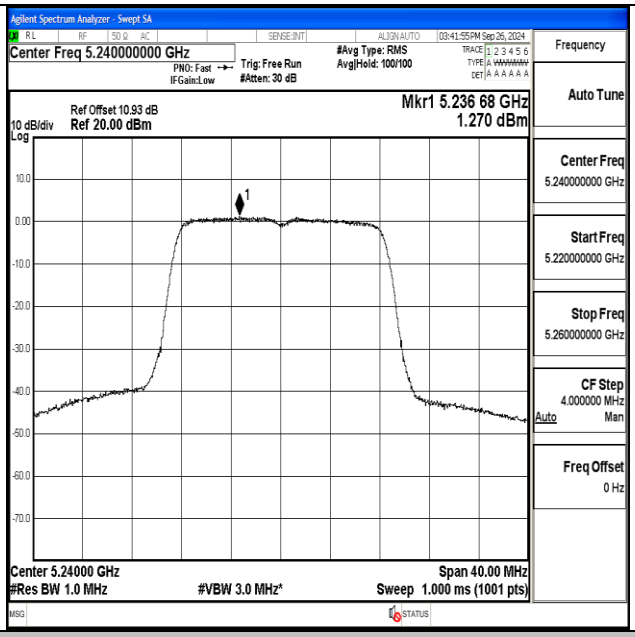

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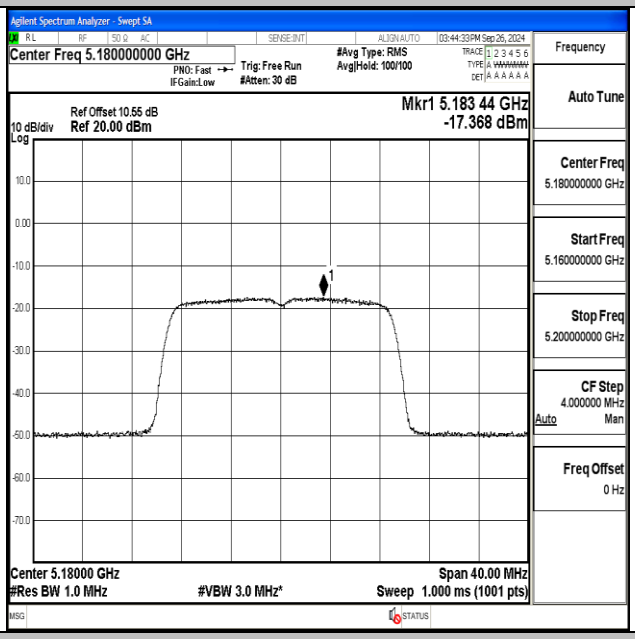

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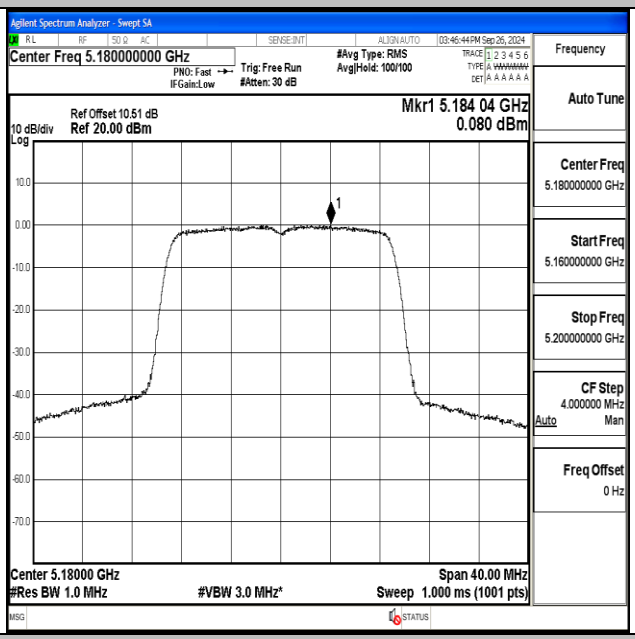

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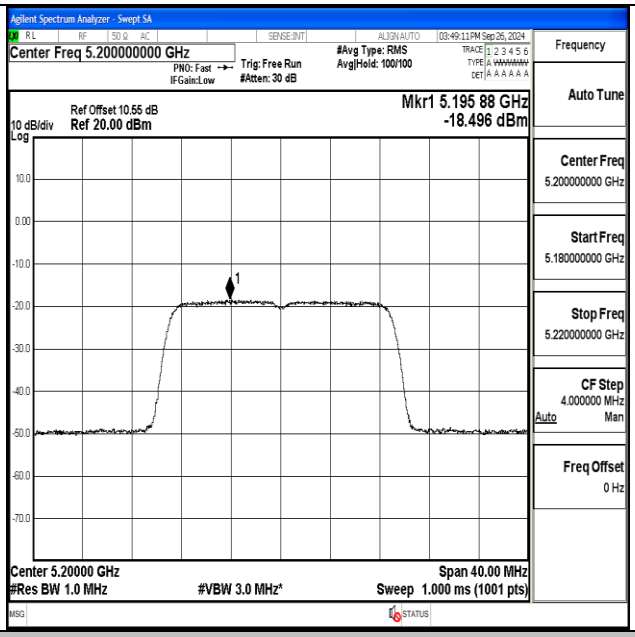

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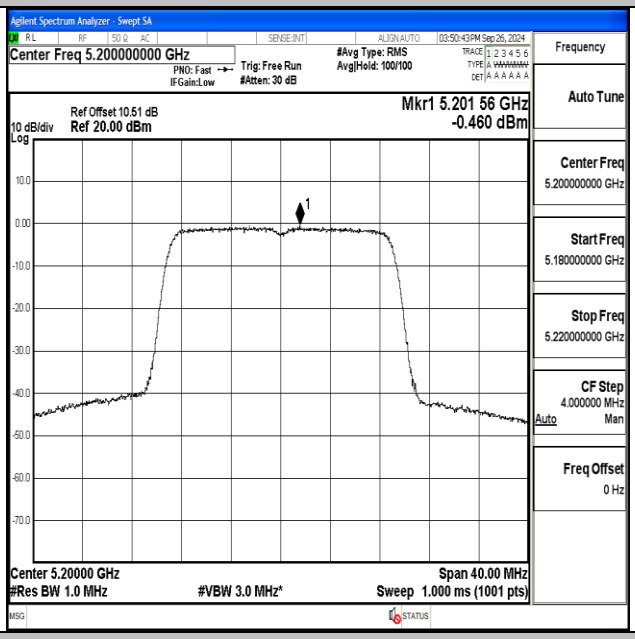

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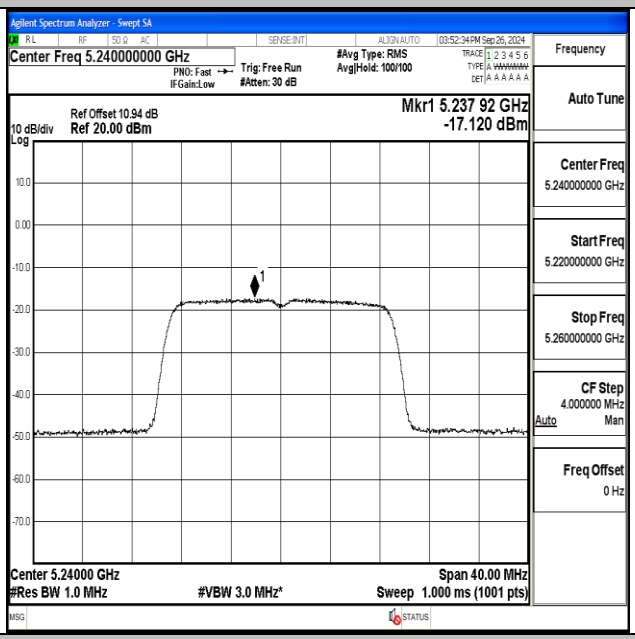

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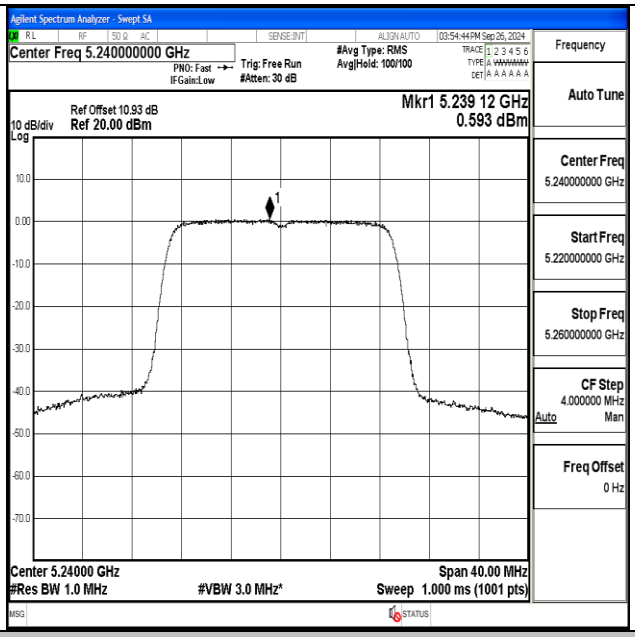

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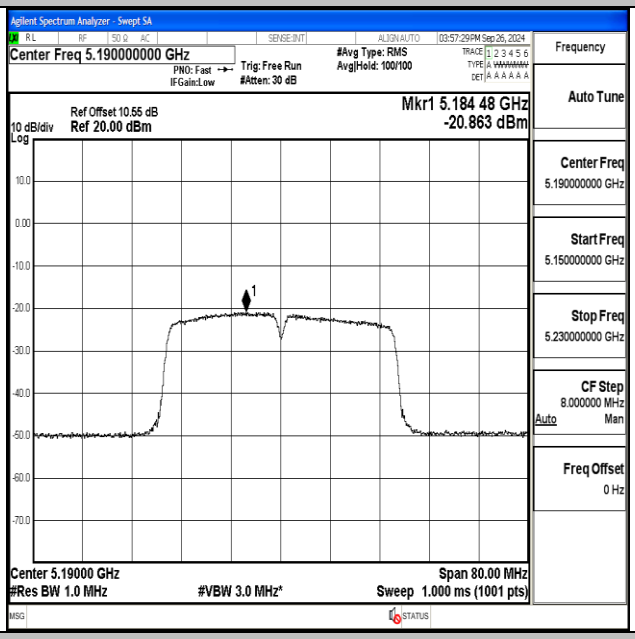

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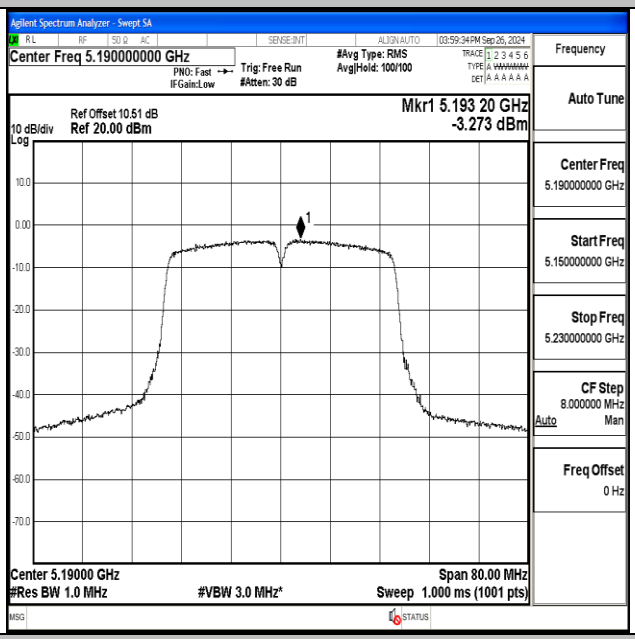

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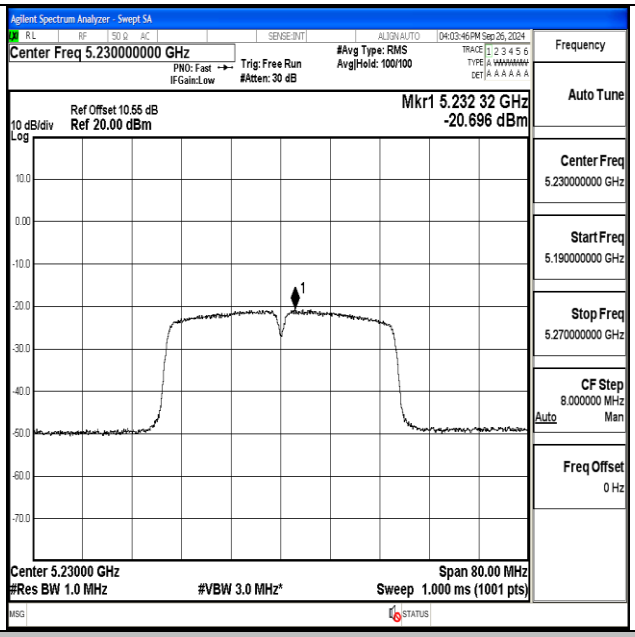

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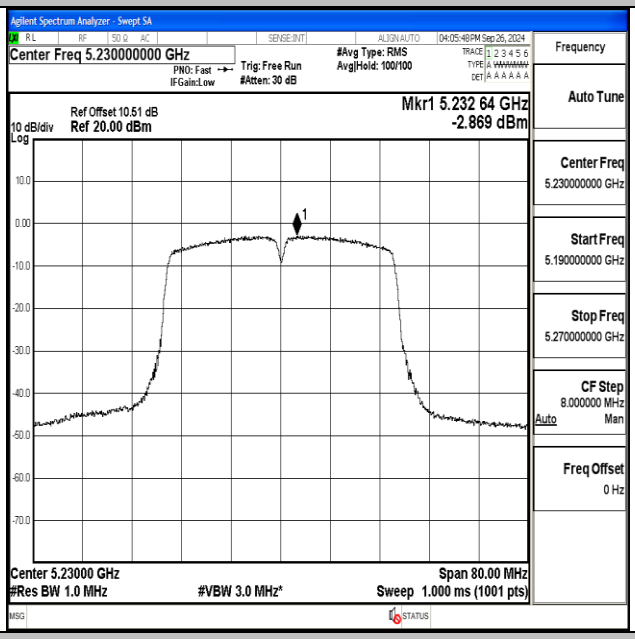

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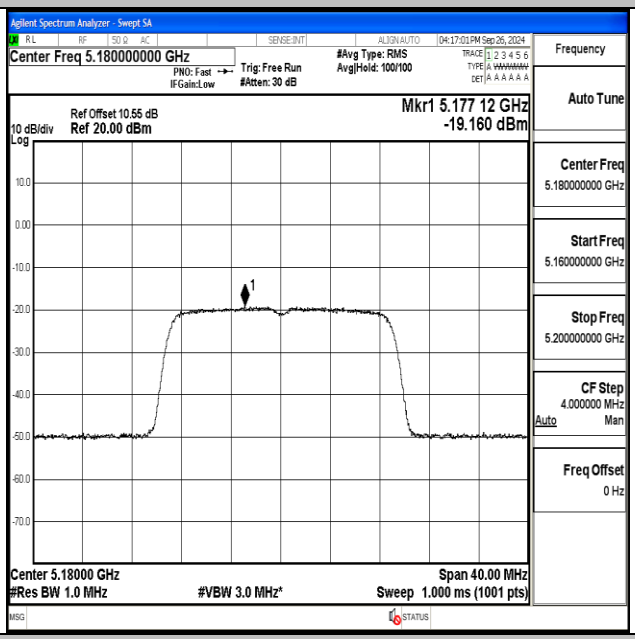

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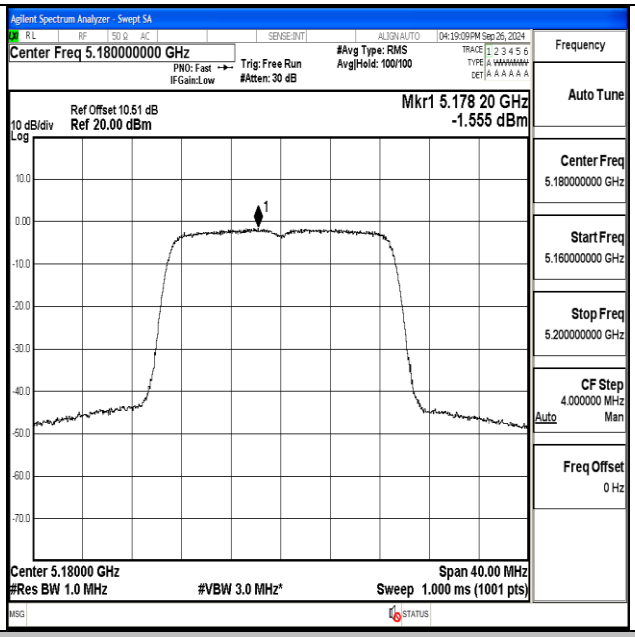

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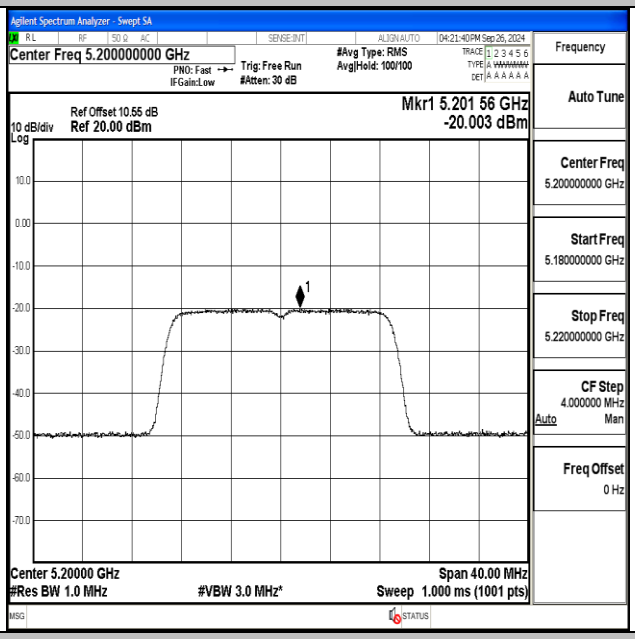

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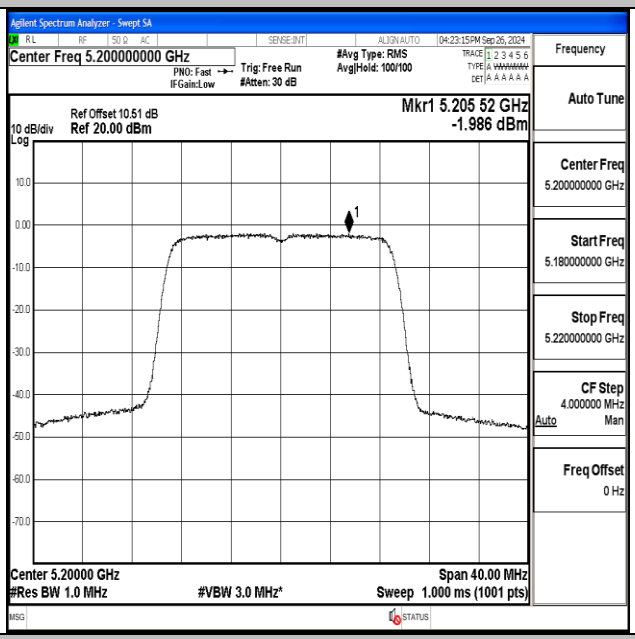

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