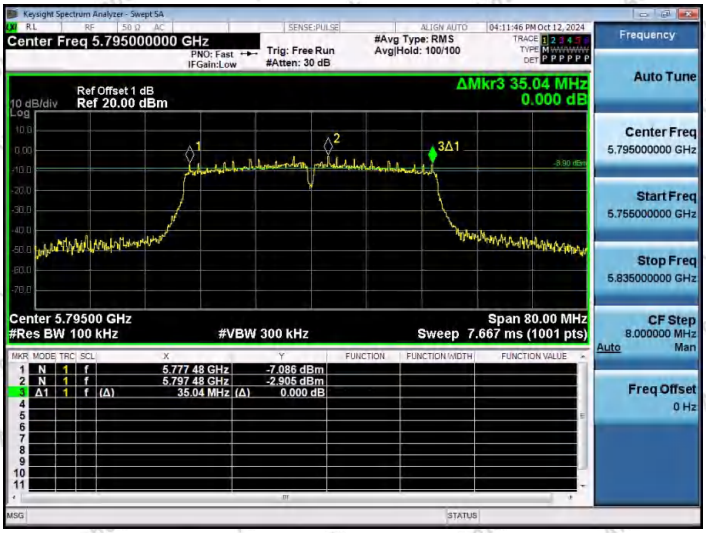

11N40MIMO-Ant2-5795-PASS

11AC20MIMO-Ant1-5745-PASS

11AC20MIMO-Ant2-5745-PASS

11AC20MIMO-Ant1-5785-PASS

11AC20MIMO-Ant2-5785-PASS

11AC20MIMO-Ant1-5825-PASS

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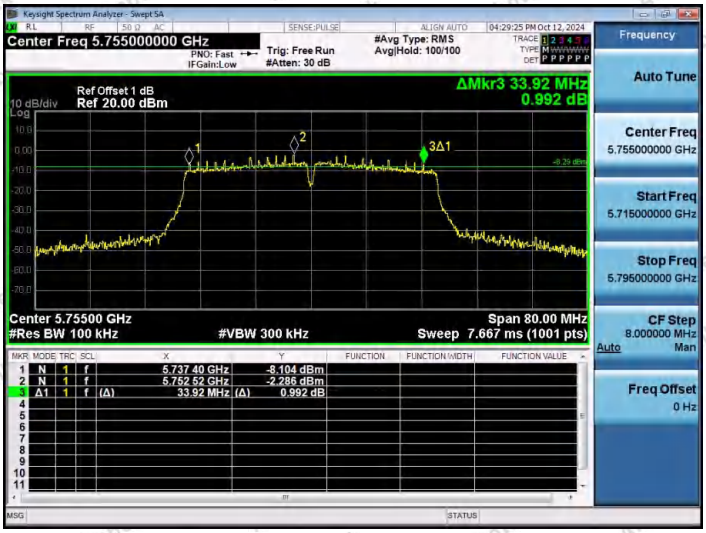
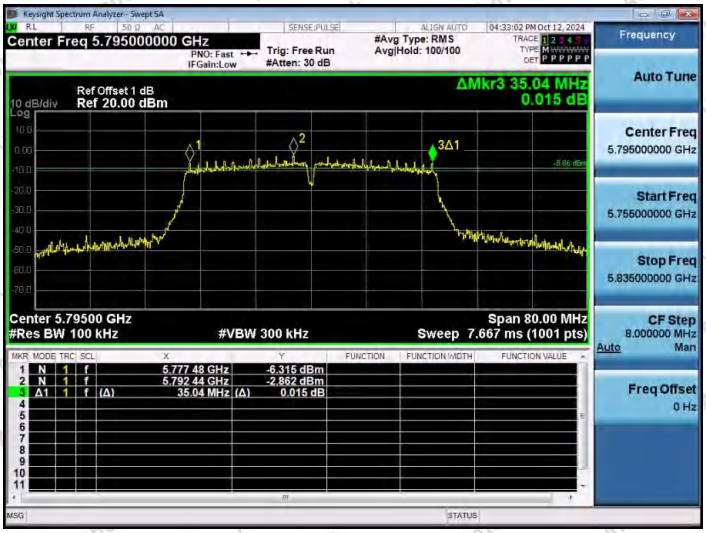


11AC40MIMO-Ant1-5755-PASS

11AC40MIMO-Ant2-5755-PASS



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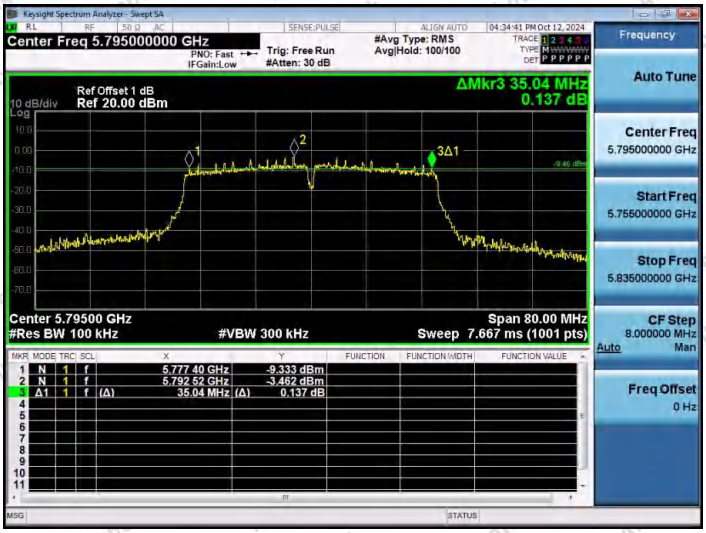

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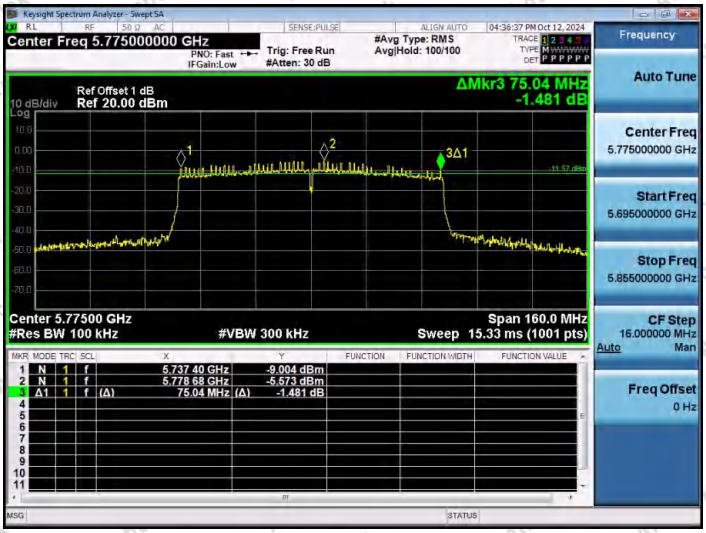


11AC80MIMO-Ant1-5775-PASS

11AC80MIMO-Ant2-5775-PASS

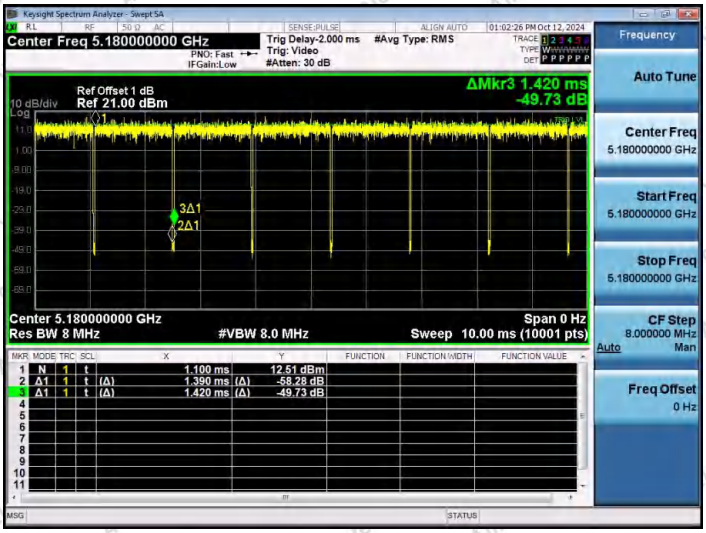
Appendix B: Duty Cycle

Test Result

TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Dc Factor [%]	1/T
11A	Ant1	5180	1.39	1.42	97.89	0.09	0.72
11A	Ant2	5180	1.39	1.43	97.20	0.12	0.72
11A	Ant1	5200	1.39	1.43	97.20	0.12	0.72
11A	Ant2	5200	1.39	1.42	97.89	0.09	0.72
11A	Ant1	5240	1.39	1.43	97.20	0.12	0.72
11A	Ant2	5240	1.39	1.43	97.20	0.12	0.72
11A	Ant1	5745	1.39	1.43	97.20	0.12	0.72
11A	Ant2	5745	1.39	1.43	97.20	0.12	0.72
11A	Ant1	5785	1.40	1.43	97.90	0.09	0.71
11A	Ant2	5785	1.40	1.43	97.90	0.09	0.71
11A	Ant1	5825	1.40	1.43	97.90	0.09	0.71
11A	Ant2	5825	1.39	1.43	97.20	0.12	0.72
11N20MIMO	Ant1	5180	1.30	1.34	97.01	0.13	0.77
11N20MIMO	Ant2	5180	1.30	1.33	97.74	0.10	0.77
11N20MIMO	Ant1	5200	1.30	1.33	97.74	0.10	0.77
11N20MIMO	Ant2	5200	1.30	1.34	97.01	0.13	0.77
11N20MIMO	Ant1	5240	1.30	1.33	97.74	0.10	0.77
11N20MIMO	Ant2	5240	1.30	1.34	97.01	0.13	0.77
11N20MIMO	Ant1	5745	1.30	1.34	97.01	0.13	0.77
11N20MIMO	Ant2	5745	1.30	1.34	97.01	0.13	0.77
11N20MIMO	Ant1	5785	1.30	1.34	97.01	0.13	0.77
11N20MIMO	Ant2	5785	1.30	1.33	97.74	0.10	0.77
11N20MIMO	Ant1	5825	1.30	1.34	97.01	0.13	0.77
11N20MIMO	Ant2	5825	1.30	1.33	97.74	0.10	0.77
11N40MIMO	Ant1	5190	0.65	0.68	95.59	0.20	1.54
11N40MIMO	Ant2	5190	0.65	0.68	95.59	0.20	1.54
11N40MIMO	Ant1	5230	0.65	0.68	95.59	0.20	1.54
11N40MIMO	Ant2	5230	0.65	0.69	94.20	0.26	1.54
11N40MIMO	Ant1	5755	0.65	0.69	94.20	0.26	1.54
11N40MIMO	Ant2	5755	0.64	0.68	94.12	0.26	1.56
11N40MIMO	Ant1	5795	0.65	0.69	94.20	0.26	1.54
11N40MIMO	Ant2	5795	0.65	0.68	95.59	0.20	1.54
11AC20MIMO	Ant1	5180	1.31	1.35	97.04	0.13	0.76
11AC20MIMO	Ant2	5180	1.31	1.34	97.76	0.10	0.76
11AC20MIMO	Ant1	5200	1.31	1.34	97.76	0.10	0.76
11AC20MIMO	Ant2	5200	1.31	1.35	97.04	0.13	0.76

11AC20MIMO	Ant1	5240	1.31	1.35	97.04	0.13	0.76
11AC20MIMO	Ant2	5240	1.31	1.35	97.04	0.13	0.76
11AC20MIMO	Ant1	5745	1.31	1.35	97.04	0.13	0.76
11AC20MIMO	Ant2	5745	1.31	1.35	97.04	0.13	0.76
11AC20MIMO	Ant1	5785	1.31	1.34	97.76	0.10	0.76
11AC20MIMO	Ant2	5785	1.31	1.34	97.76	0.10	0.76
11AC20MIMO	Ant1	5825	1.31	1.34	97.76	0.10	0.76
11AC20MIMO	Ant2	5825	1.31	1.35	97.04	0.13	0.76
11AC40MIMO	Ant1	5190	0.65	0.69	94.20	0.26	1.54
11AC40MIMO	Ant2	5190	0.65	0.68	95.59	0.20	1.54
11AC40MIMO	Ant1	5230	0.65	0.69	94.20	0.26	1.54
11AC40MIMO	Ant2	5230	0.66	0.69	95.65	0.19	1.52
11AC40MIMO	Ant1	5755	0.65	0.69	94.20	0.26	1.54
11AC40MIMO	Ant2	5755	0.65	0.69	94.20	0.26	1.54
11AC40MIMO	Ant1	5795	0.65	0.68	95.59	0.20	1.54
11AC40MIMO	Ant2	5795	0.65	0.69	94.20	0.26	1.54
11AC80MIMO	Ant1	5210	0.32	0.36	88.89	0.51	3.13
11AC80MIMO	Ant2	5210	0.32	0.36	88.89	0.51	3.13
11AC80MIMO	Ant1	5775	0.33	0.36	91.67	0.38	3.03
11AC80MIMO	Ant2	5775	0.32	0.36	88.89	0.51	3.13

Test Graphs



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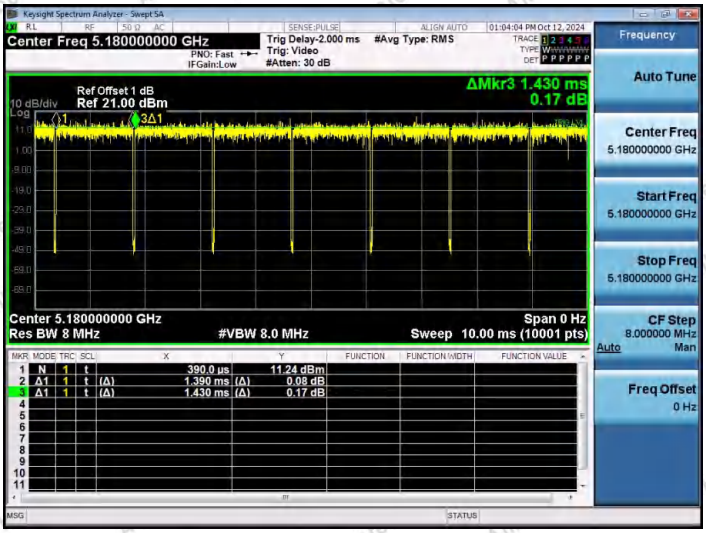

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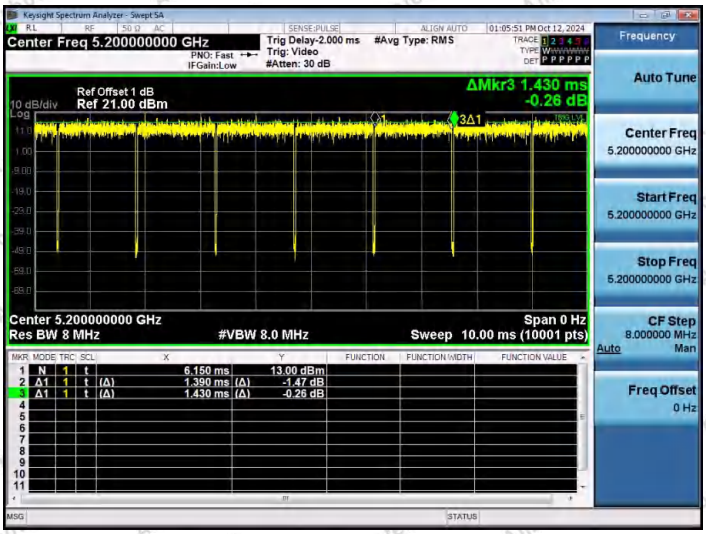

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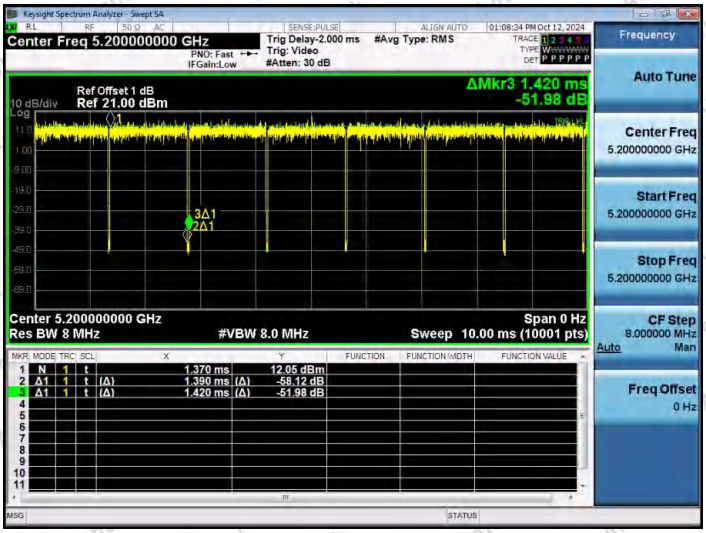

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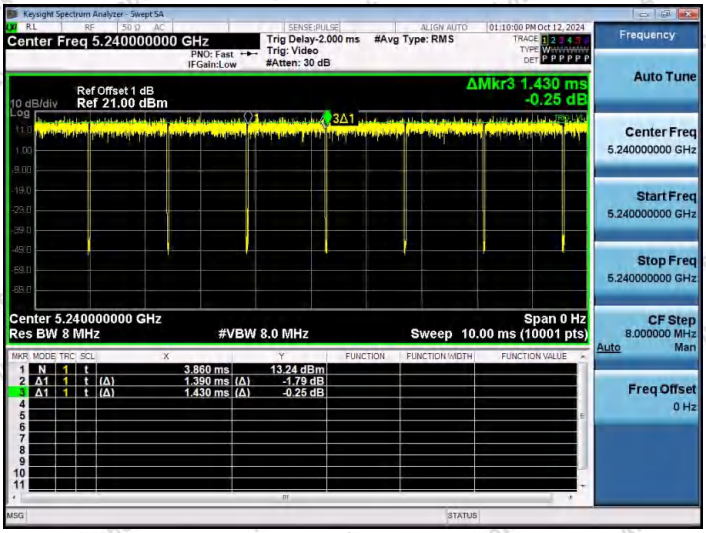

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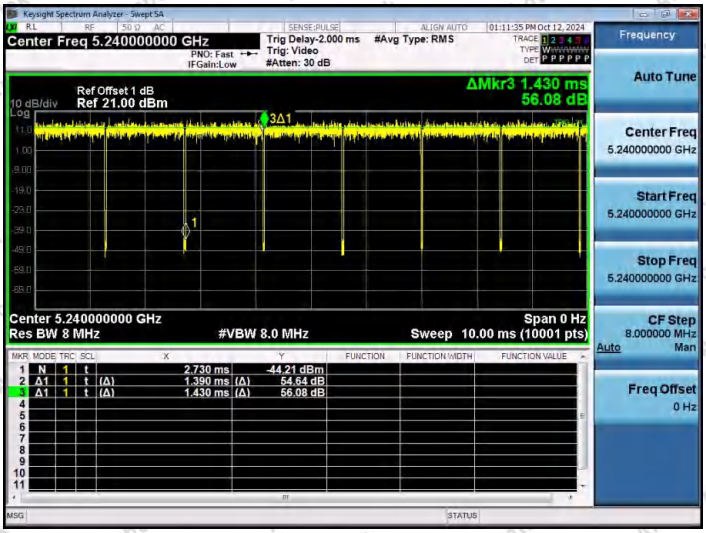

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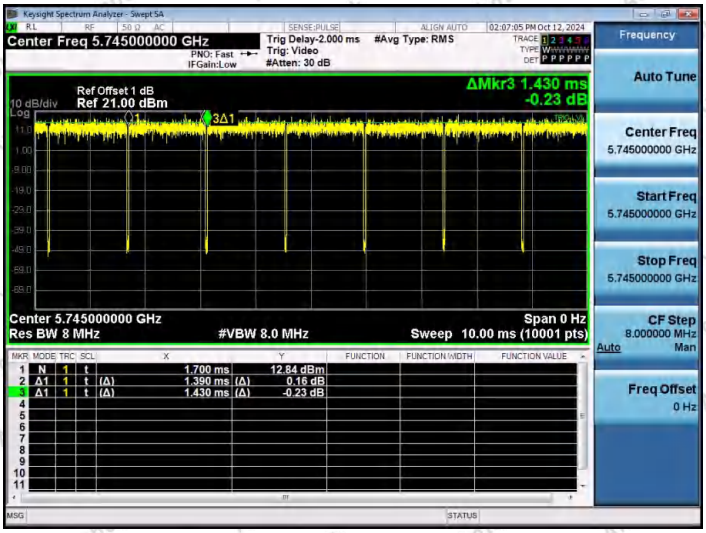

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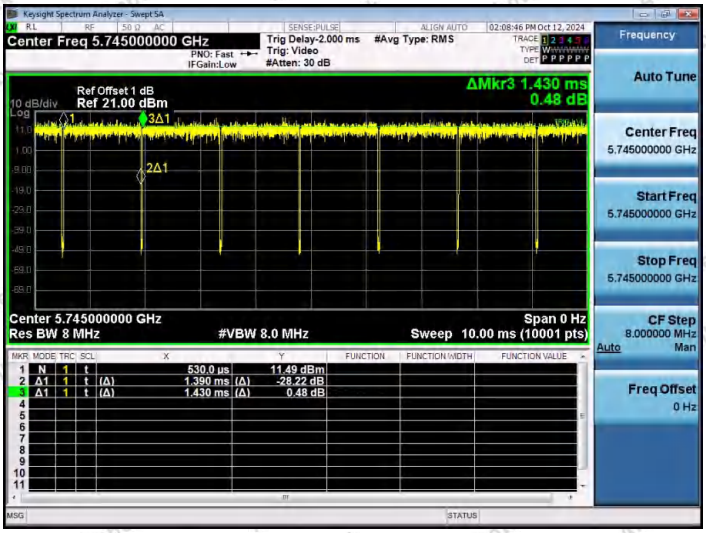

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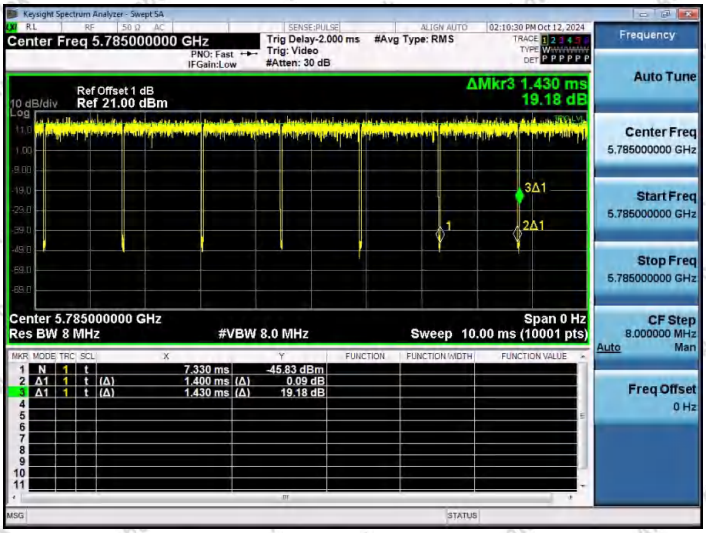

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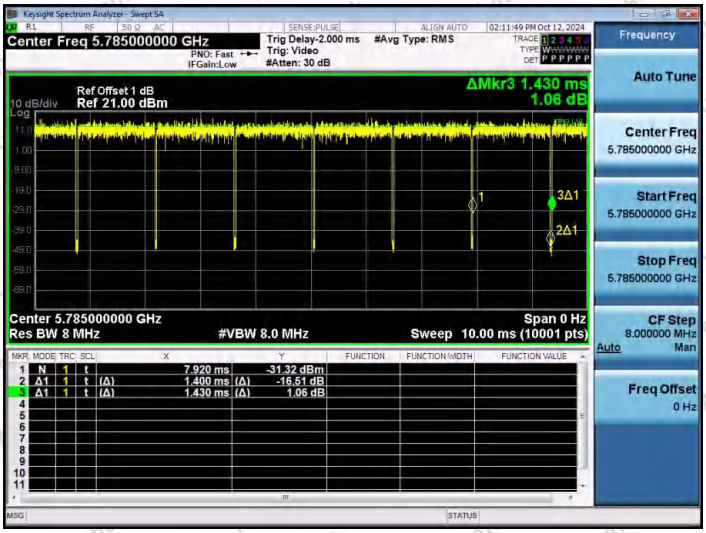

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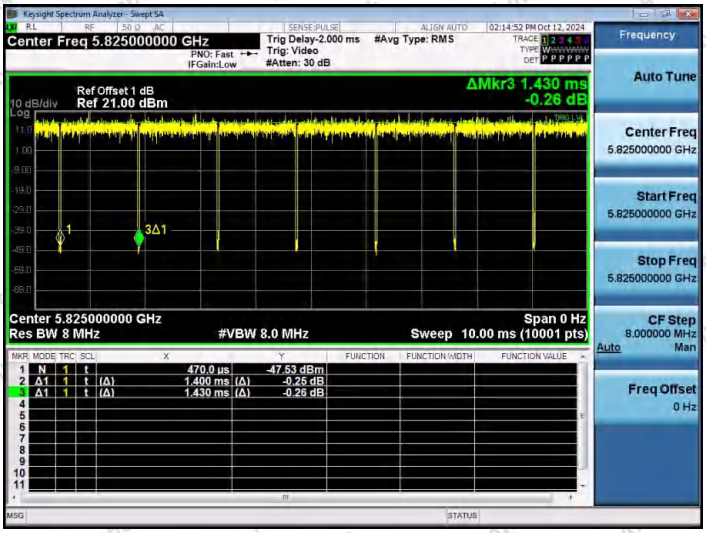

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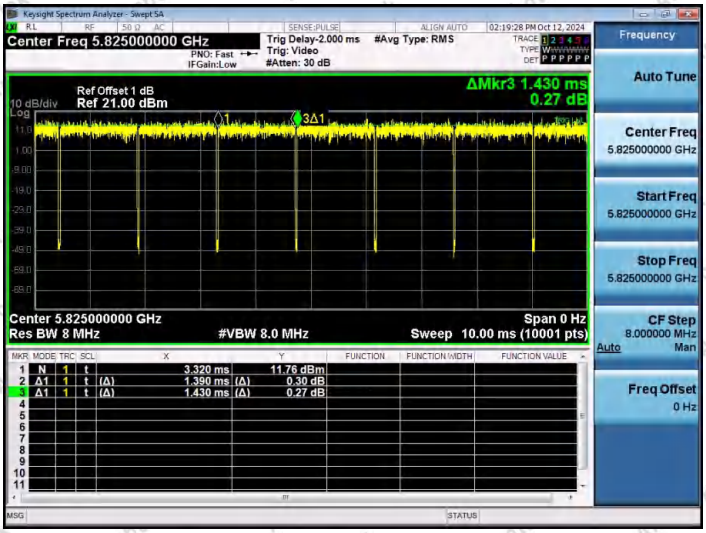

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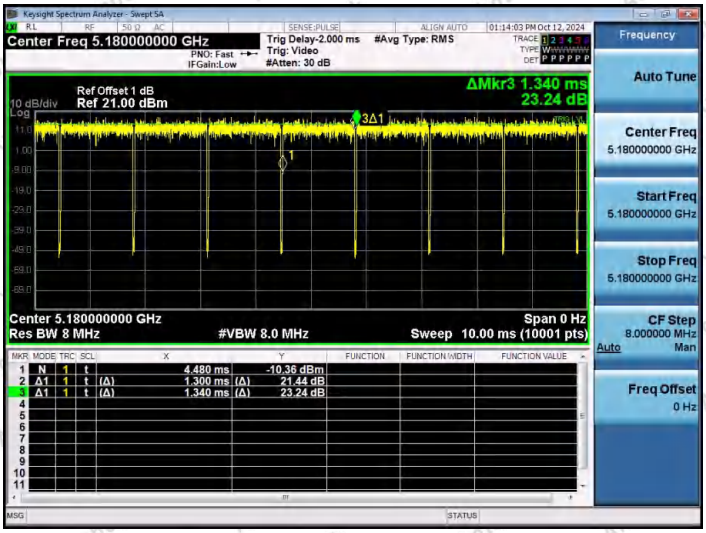

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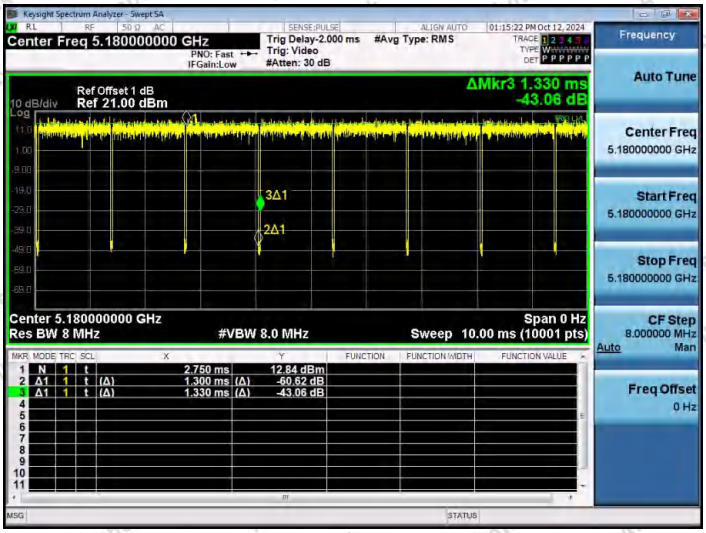

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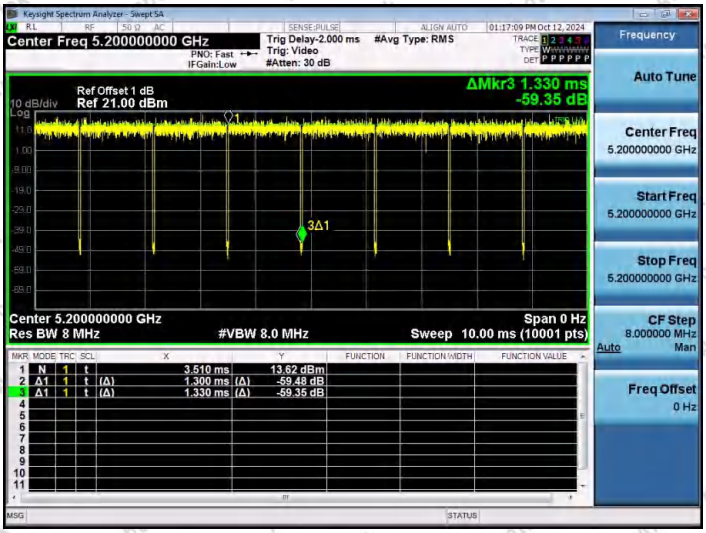

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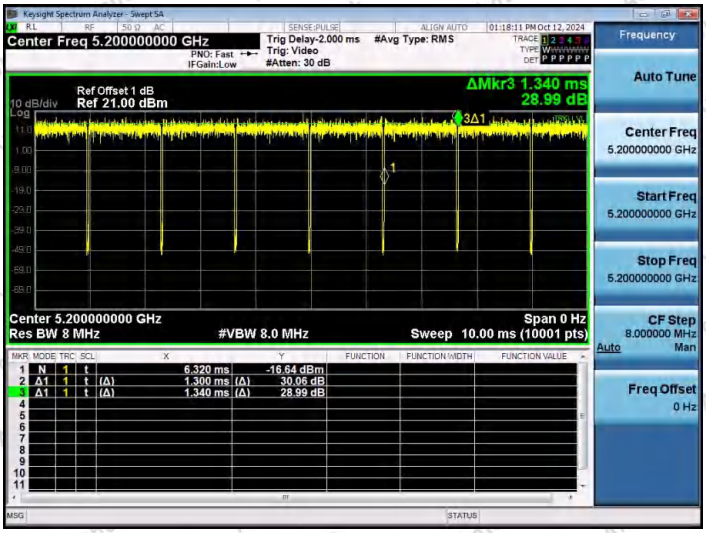

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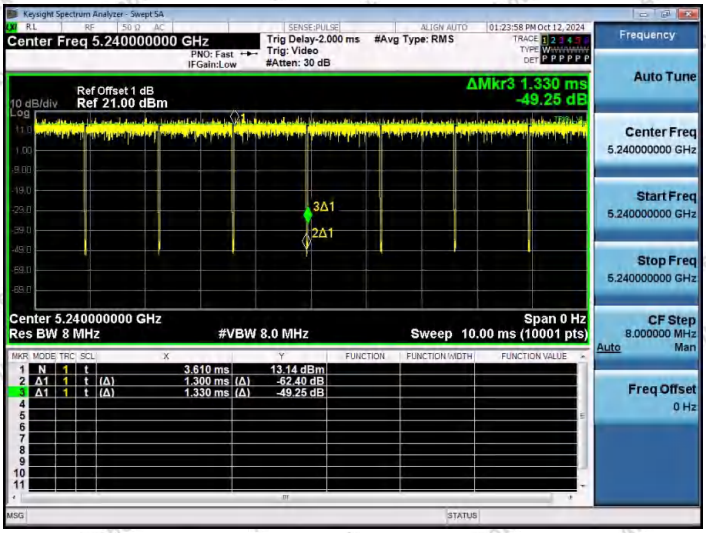

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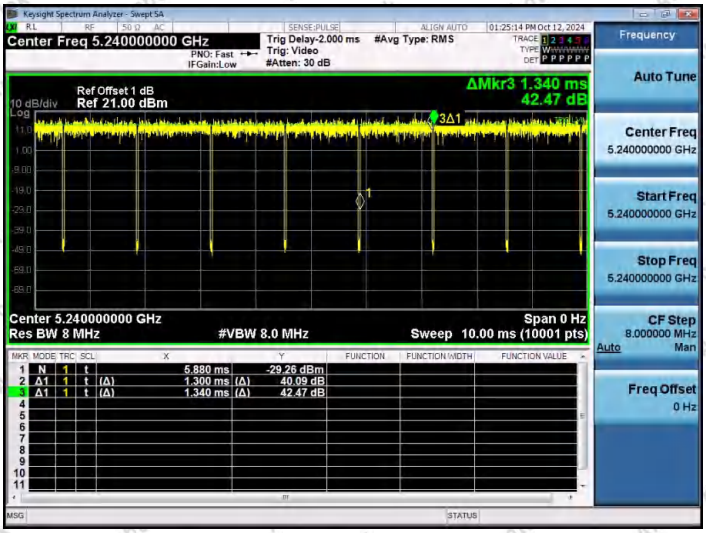

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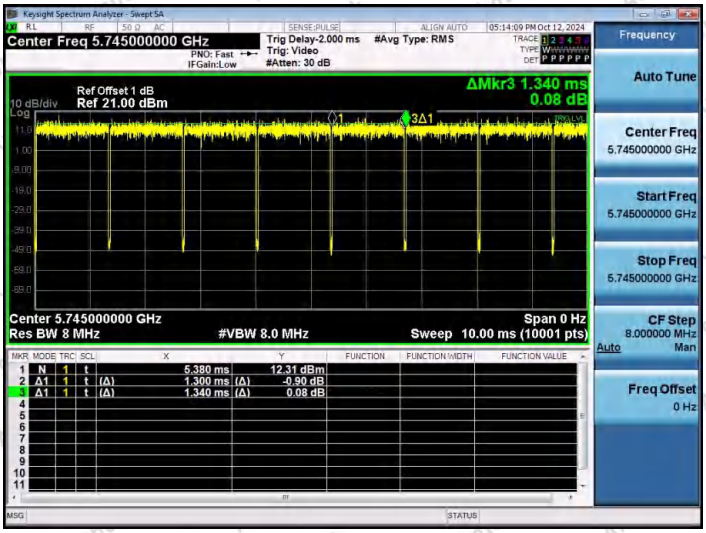

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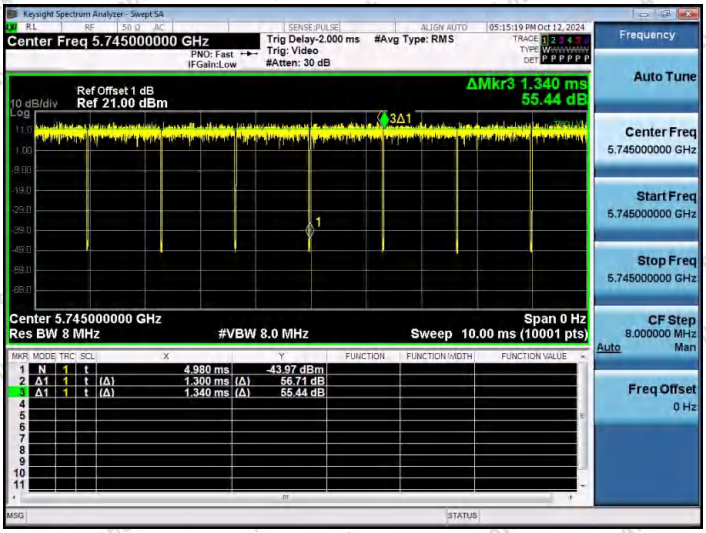

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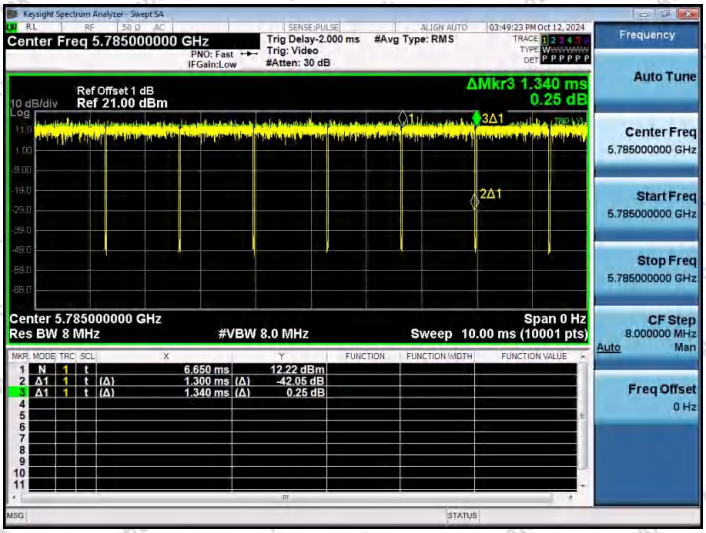

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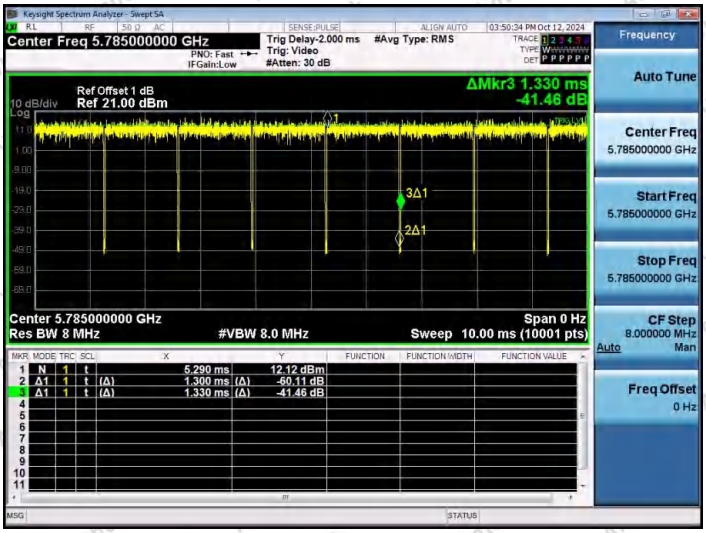

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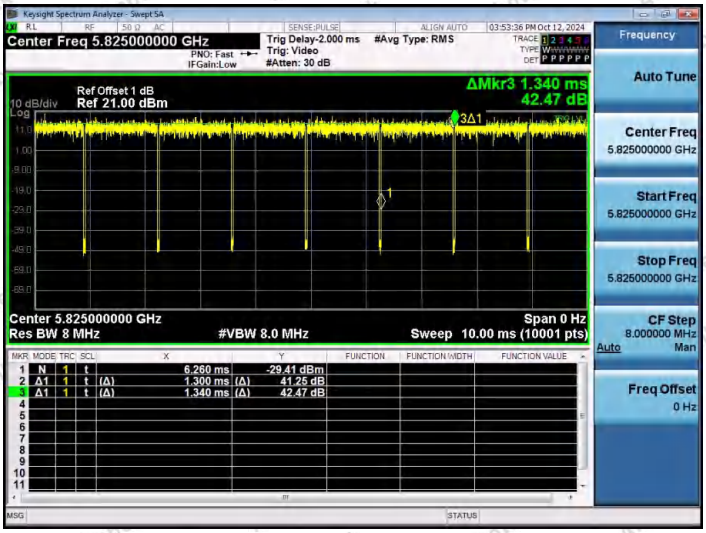

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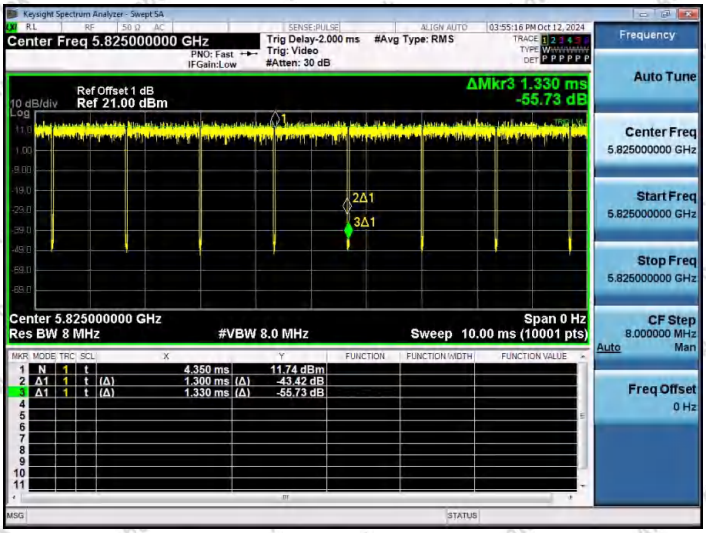

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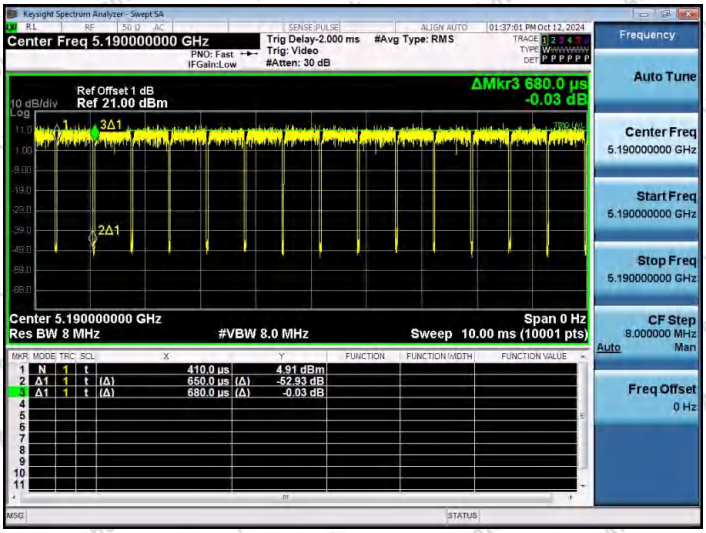

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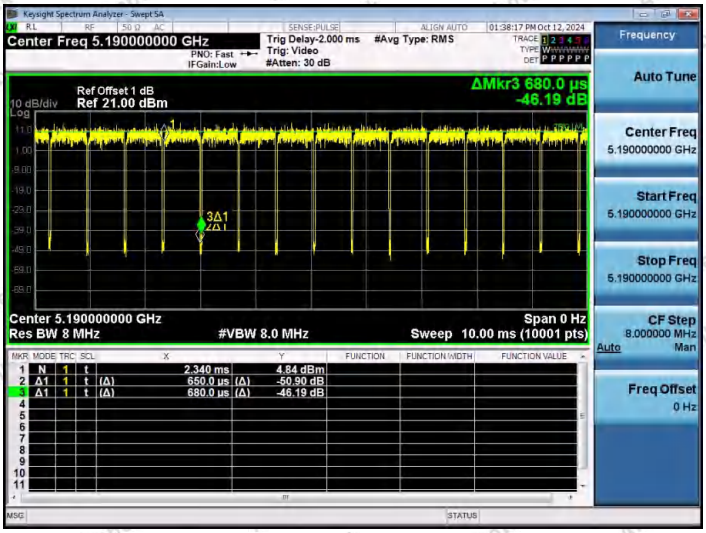

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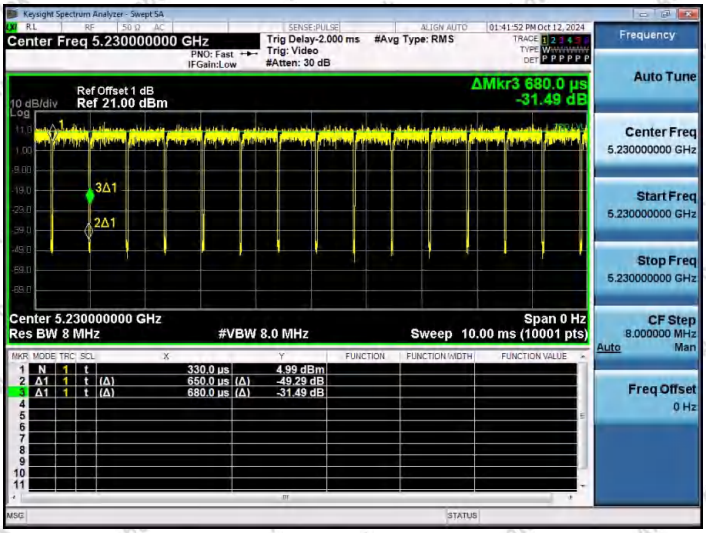

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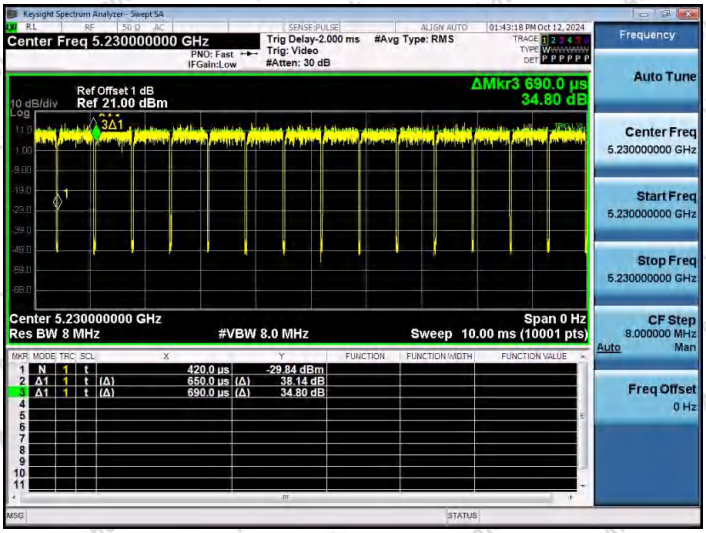

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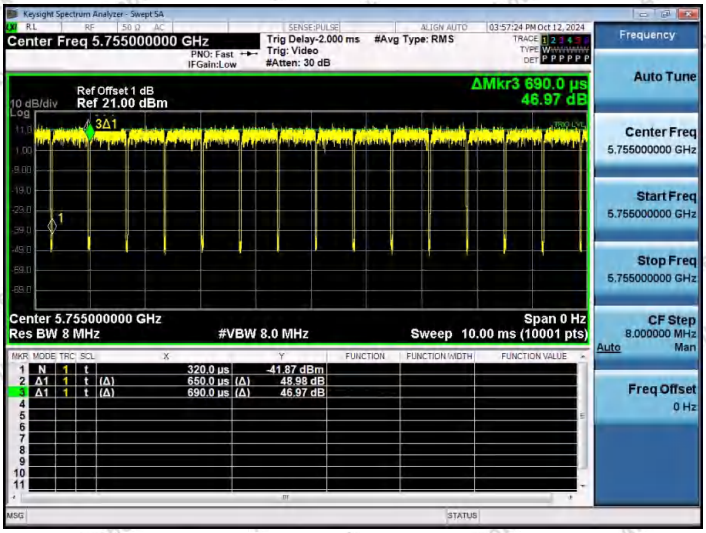

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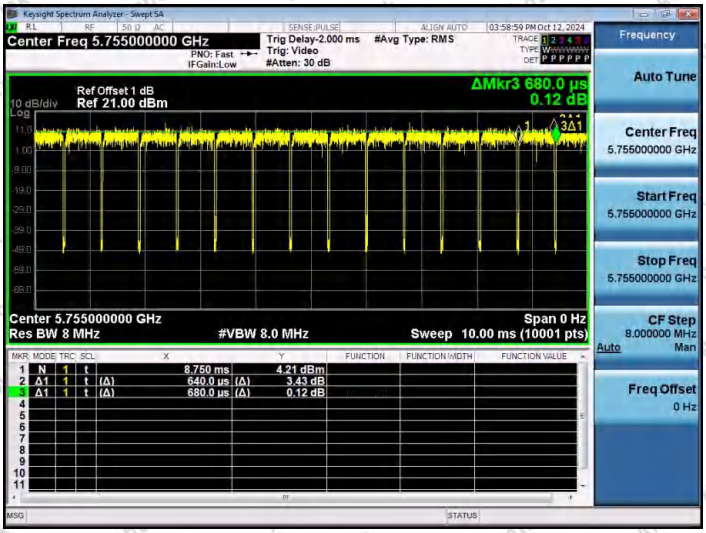

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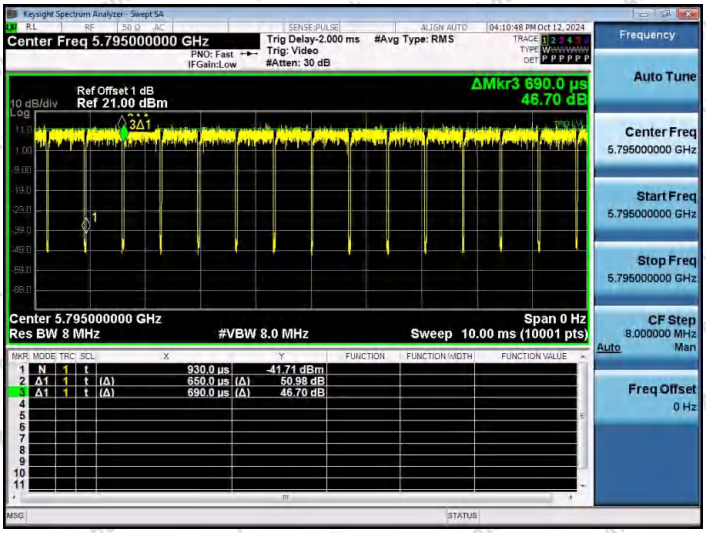

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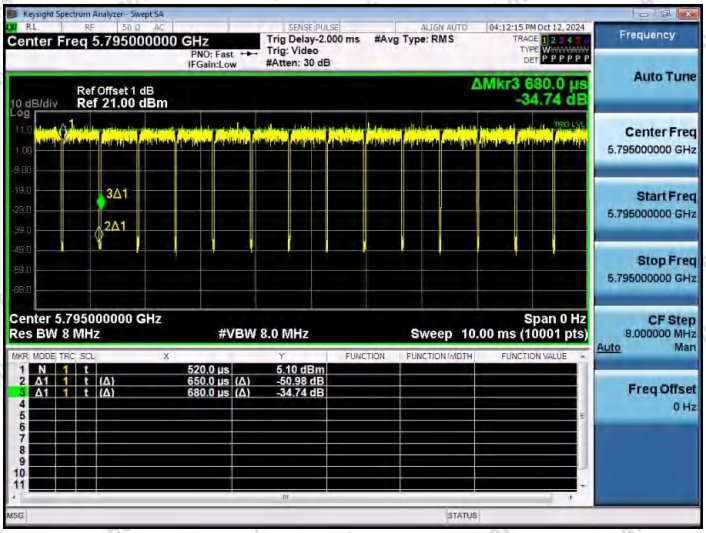

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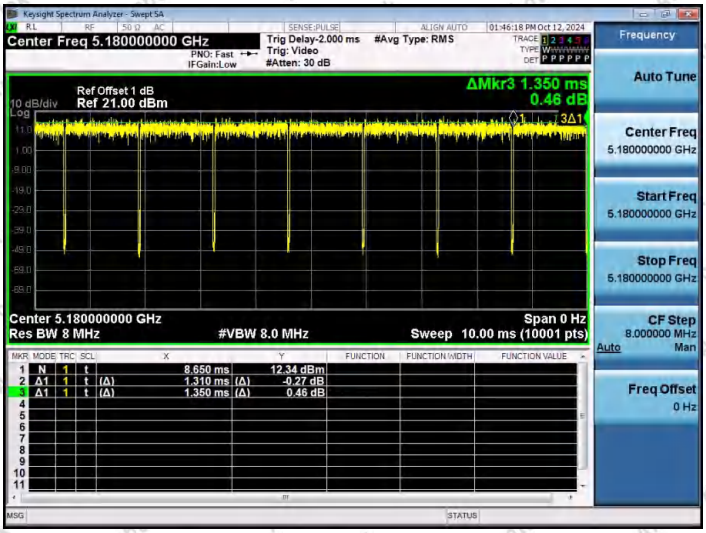

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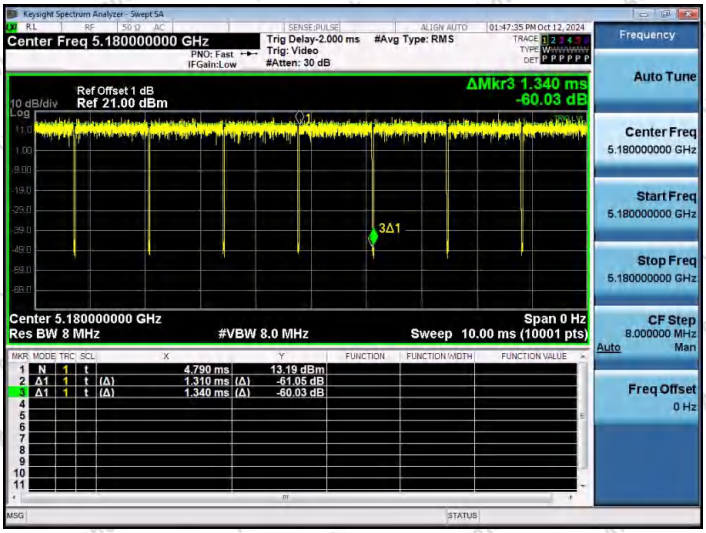
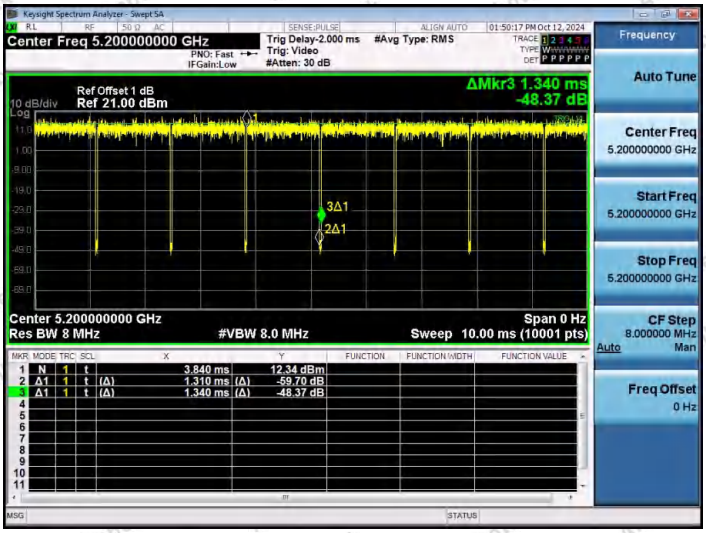


NTNV-11AC20MIMO-Ant2-5180



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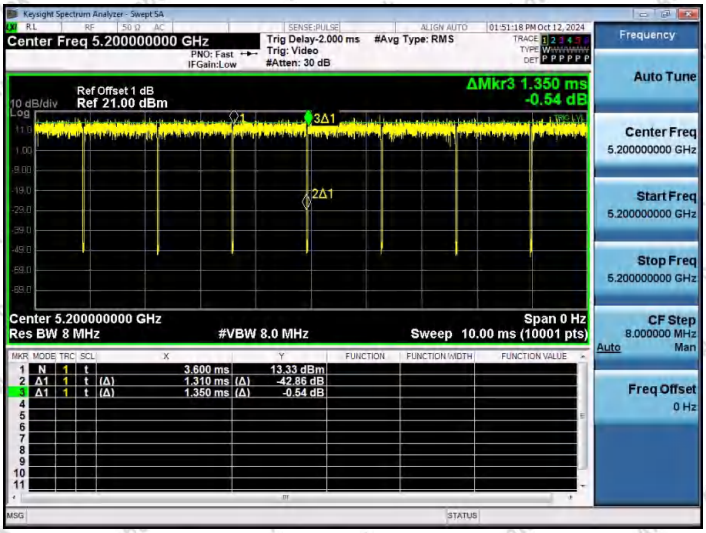

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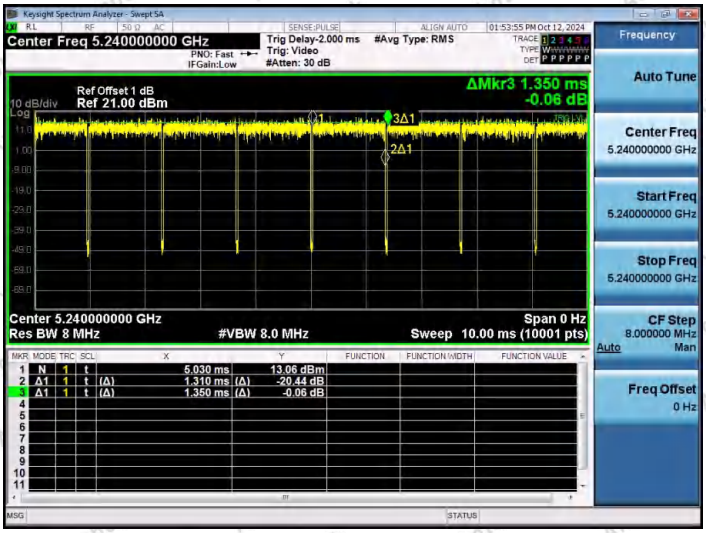

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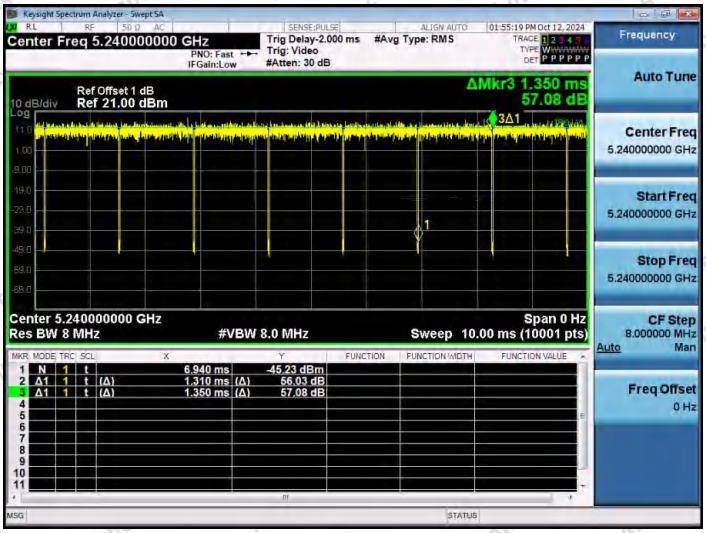

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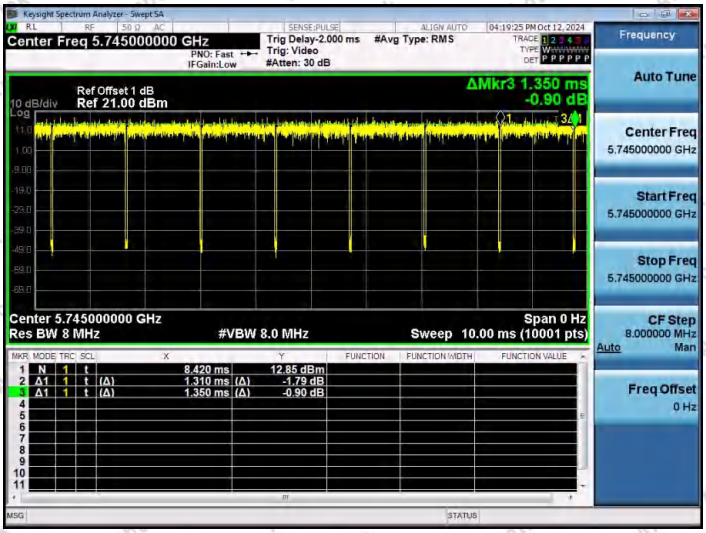

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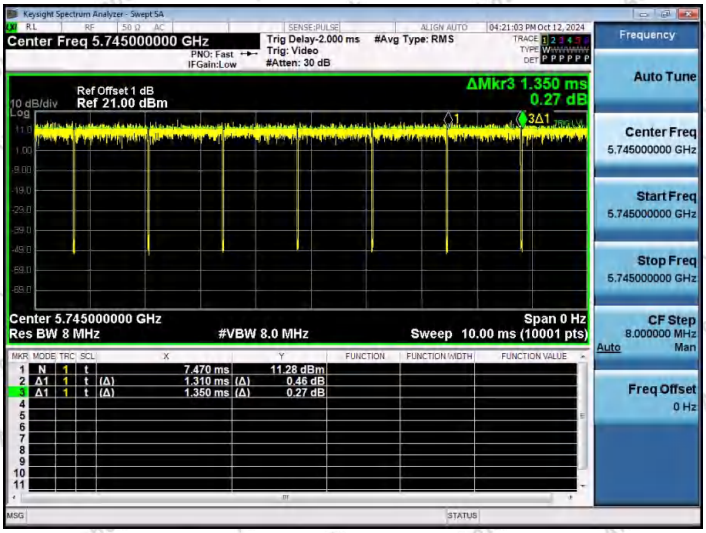

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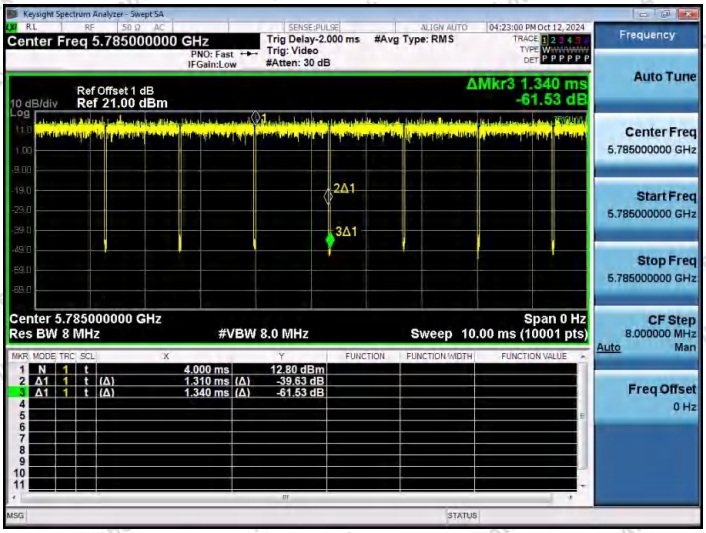

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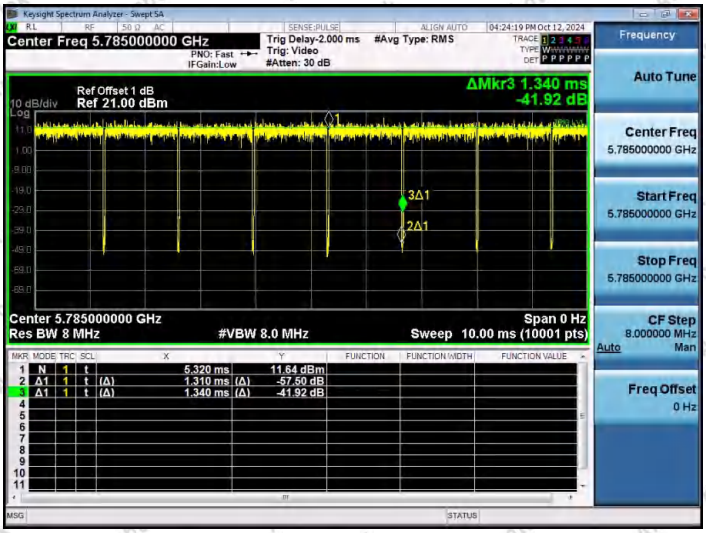

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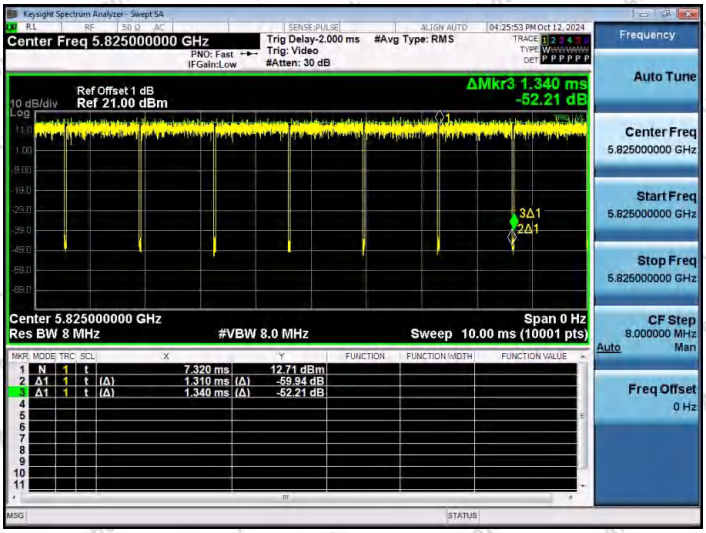

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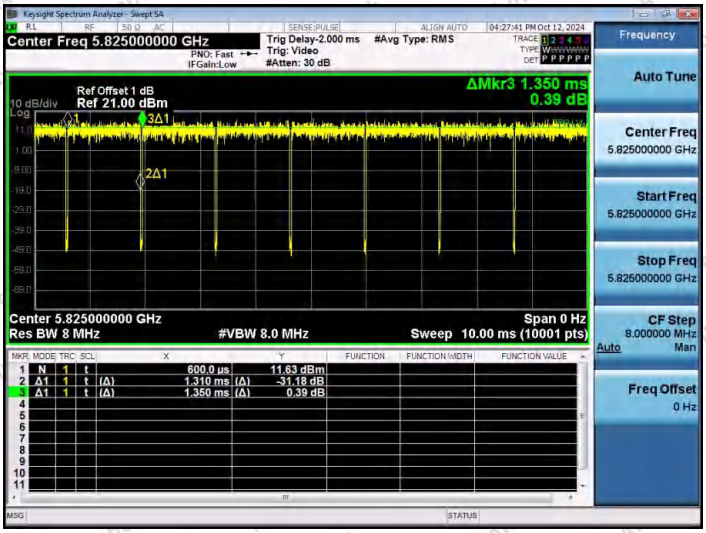

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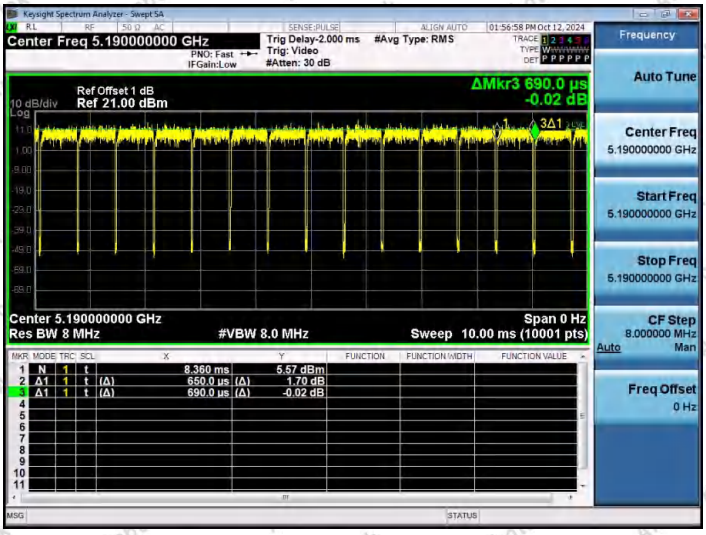

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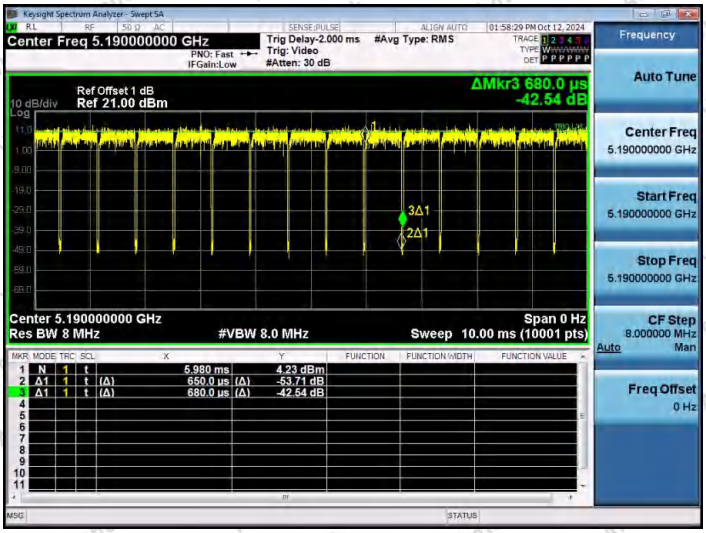

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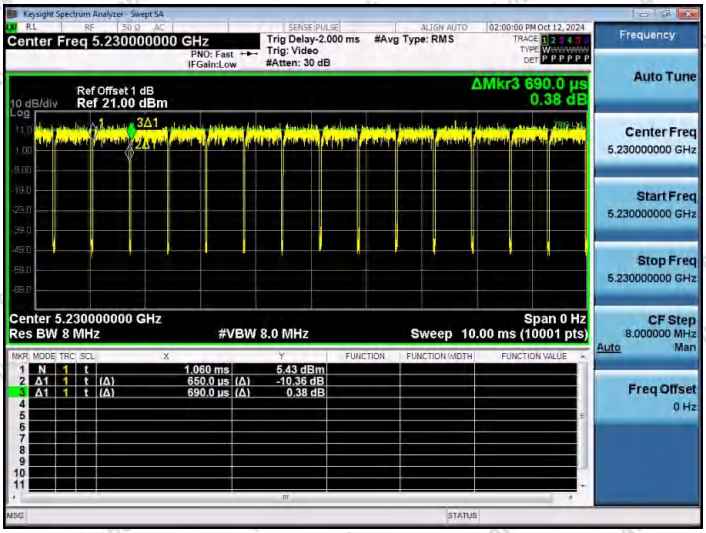

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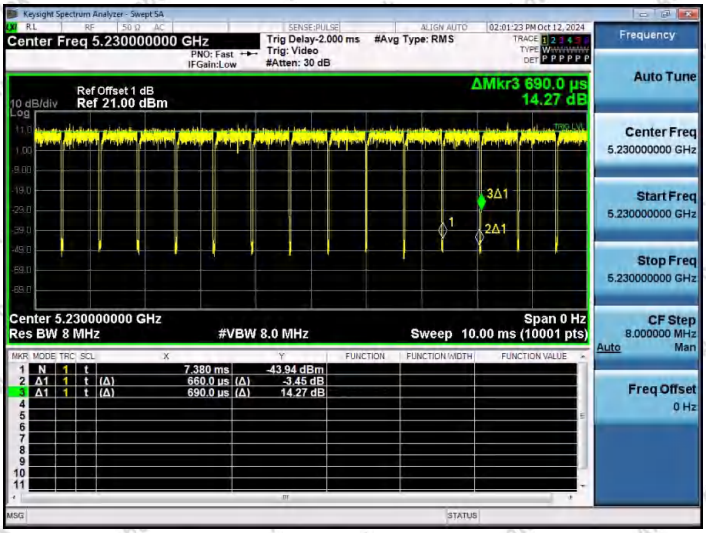

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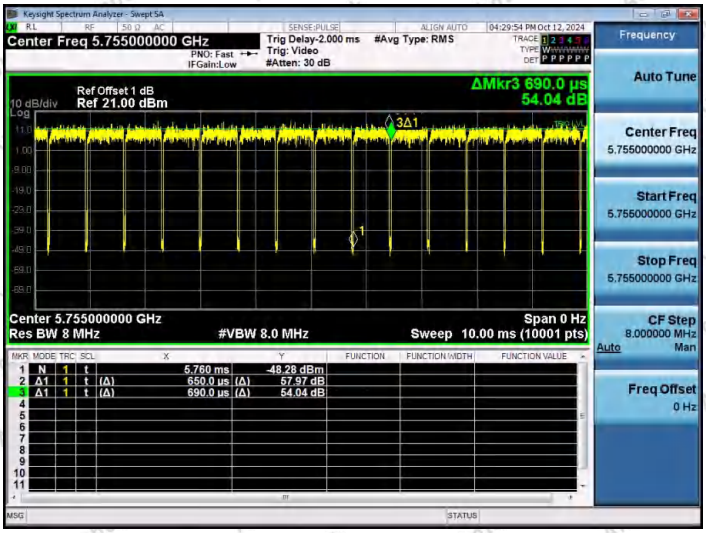

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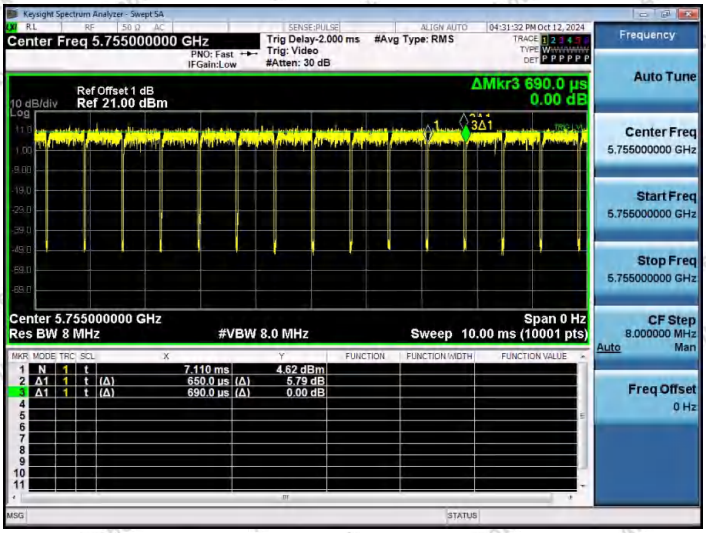

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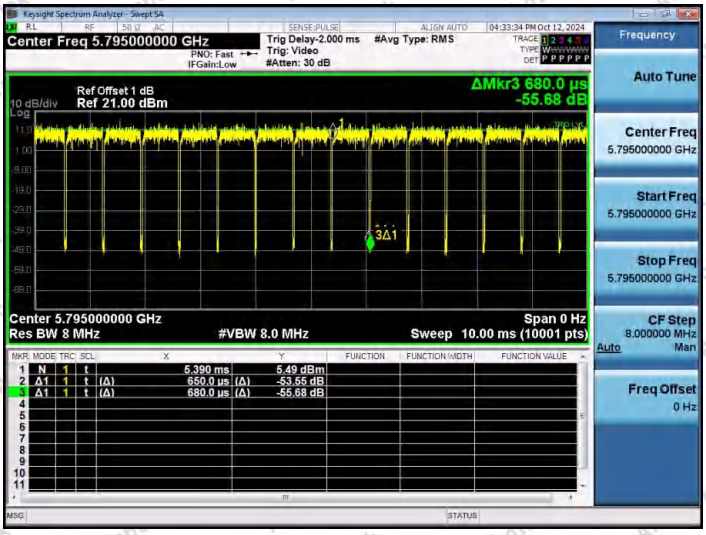

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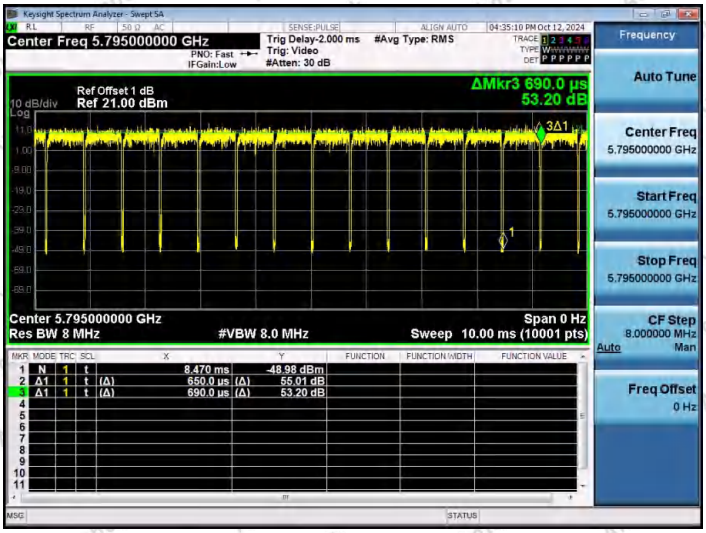

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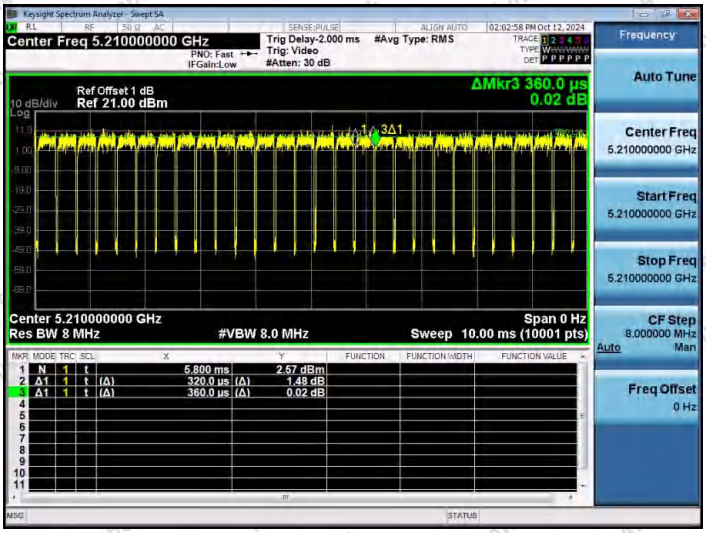
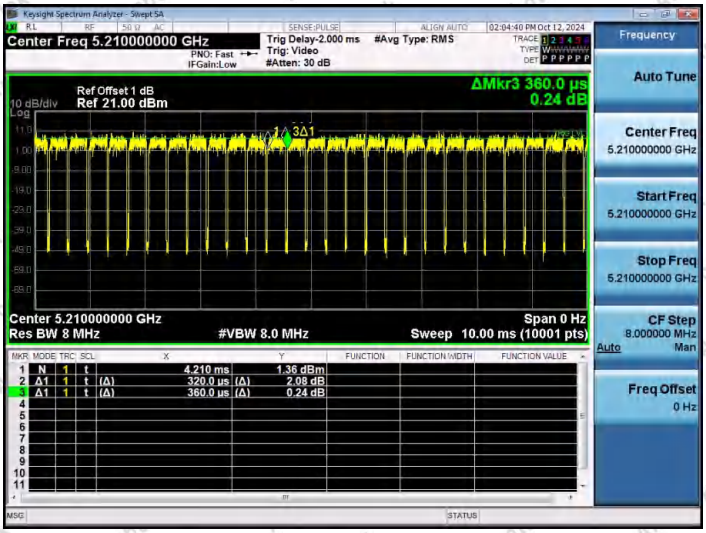


NTNV-11AC80MIMO-Ant1-5210



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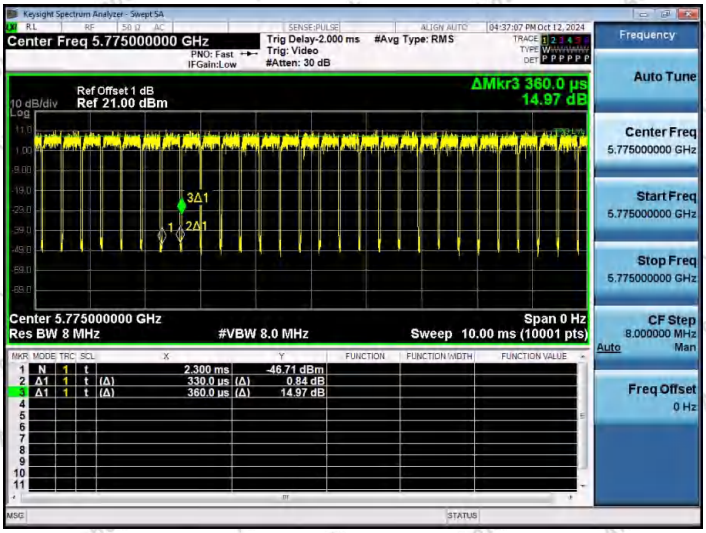
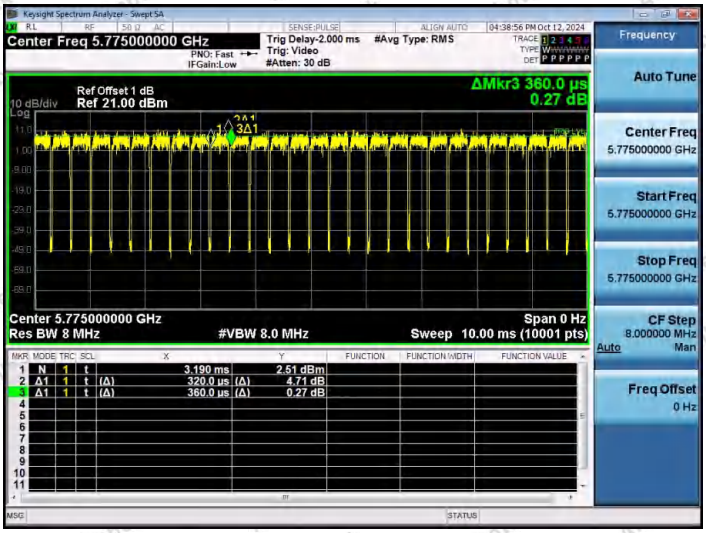


NTNV-11AC80MIMO-Ant1-5775



NTNV-11AC80MIMO-Ant2-5775

Appendix C: Maximum Conducted Output Power

Test Result Channel Power

Test Mode	Antenna	Frequency[MHz]	Set Power	Channel Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	---	15.08	97.89	0.09	15.17	≤23.98	PASS
11A	Ant2	5180	---	13.72	97.20	0.12	13.84	≤23.98	PASS
11A	Ant1	5200	---	15.38	97.20	0.12	15.50	≤23.98	PASS
11A	Ant2	5200	---	13.74	97.89	0.09	13.83	≤23.98	PASS
11A	Ant1	5240	---	15.28	97.20	0.12	15.40	≤23.98	PASS
11A	Ant2	5240	---	14.06	97.20	0.12	14.18	≤23.98	PASS
11A	Ant1	5745	---	15.54	97.20	0.12	15.66	≤30.00	PASS
11A	Ant2	5745	---	14.34	97.20	0.12	14.46	≤30.00	PASS
11A	Ant1	5785	---	15.55	97.90	0.09	15.64	≤30.00	PASS
11A	Ant2	5785	---	14.42	97.90	0.09	14.51	≤30.00	PASS
11A	Ant1	5825	---	15.82	97.90	0.09	15.91	≤30.00	PASS
11A	Ant2	5825	---	14.73	97.20	0.12	14.85	≤30.00	PASS
11N20MIMO	Ant1	5180	---	15.13	97.01	0.13	15.26	≤23.98	PASS
11N20MIMO	Ant2	5180	---	15.16	97.74	0.10	15.26	≤23.98	PASS
11N20MIMO	total	5180	---	---	---	---	18.27	≤22.57	PASS
11N20MIMO	Ant1	5200	---	15.24	97.74	0.10	15.34	≤30.00	PASS
11N20MIMO	Ant2	5200	---	14.08	97.01	0.13	14.21	≤30.00	PASS
11N20MIMO	total	5200	---	---	---	---	17.82	≤28.31	PASS
11N20MIMO	Ant1	5240	---	15.14	97.74	0.10	15.24	≤23.98	PASS
11N20MIMO	Ant2	5240	---	15.15	97.01	0.13	15.28	≤23.98	PASS
11N20MIMO	total	5240	---	---	---	---	18.27	≤22.57	PASS
11N20MIMO	Ant1	5745	---	14.88	97.01	0.13	15.01	≤30.00	PASS
11N20MIMO	Ant2	5745	---	13.78	97.01	0.13	13.91	≤30.00	PASS

11N20MIMO	total	5745	---	---	---	---	17.51	≤28.31	PASS
11N20MIMO	Ant1	5785	---	14.87	97.01	0.13	15.00	≤23.98	PASS
11N20MIMO	Ant2	5785	---	13.87	97.74	0.10	13.97	≤23.98	PASS
11N20MIMO	total	5785	---	---	---	---	17.53	≤22.57	PASS
11N20MIMO	Ant1	5825	---	15.75	97.01	0.13	15.88	≤30.00	PASS
11N20MIMO	Ant2	5825	---	14.60	97.74	0.10	14.70	≤30.00	PASS
11N20MIMO	total	5825	---	---	---	---	18.34	≤28.31	PASS
11N40MIMO	Ant1	5190	---	14.72	95.59	0.20	14.92	≤23.98	PASS
11N40MIMO	Ant2	5190	---	14.77	95.59	0.20	14.97	≤23.98	PASS
11N40MIMO	total	5190	---	---	---	---	17.96	≤22.57	PASS
11N40MIMO	Ant1	5230	---	14.66	95.59	0.20	14.86	≤30.00	PASS
11N40MIMO	Ant2	5230	---	13.69	94.20	0.26	13.95	≤30.00	PASS
11N40MIMO	total	5230	---	---	---	---	17.44	≤28.31	PASS
11N40MIMO	Ant1	5755	---	14.98	94.20	0.26	15.24	≤23.98	PASS
11N40MIMO	Ant2	5755	---	14.01	94.12	0.26	14.27	≤23.98	PASS
11N40MIMO	total	5755	---	---	---	---	17.79	≤22.57	PASS
11N40MIMO	Ant1	5795	---	14.98	94.20	0.26	15.24	≤30.00	PASS
11N40MIMO	Ant2	5795	---	13.98	95.59	0.20	14.18	≤30.00	PASS
11N40MIMO	total	5795	---	---	---	---	17.75	≤28.31	PASS
11AC20MIMO	Ant1	5180	---	15.16	97.04	0.13	15.29	≤23.98	PASS
11AC20MIMO	Ant2	5180	---	14.02	97.76	0.10	14.12	≤23.98	PASS
11AC20M	total	5180	---	---	---	---	17.75	≤22.57	PASS

IMO									
11AC20M IMO	Ant1	5200	---	15.27	97.76	0.10	15.37	≤30.00	PASS
11AC20M IMO	Ant2	5200	---	14.09	97.04	0.13	14.22	≤30.00	PASS
11AC20M IMO	total	5200	---	---	---	---	17.84	≤28.31	PASS
11AC20M IMO	Ant1	5240	---	15.10	97.04	0.13	15.23	≤23.98	PASS
11AC20M IMO	Ant2	5240	---	13.90	97.04	0.13	14.03	≤23.98	PASS
11AC20M IMO	total	5240	---	---	---	---	17.68	≤22.57	PASS
11AC20M IMO	Ant1	5745	---	14.83	97.04	0.13	14.96	≤30.00	PASS
11AC20M IMO	Ant2	5745	---	13.77	97.04	0.13	13.90	≤30.00	PASS
11AC20M IMO	total	5745	---	---	---	---	17.47	≤28.31	PASS
11AC20M IMO	Ant1	5785	---	15.39	97.76	0.10	15.49	≤23.98	PASS
11AC20M IMO	Ant2	5785	---	14.22	97.76	0.10	14.32	≤23.98	PASS
11AC20M IMO	total	5785	---	---	---	---	17.95	≤22.57	PASS
11AC20M IMO	Ant1	5825	---	15.65	97.76	0.10	15.75	≤30.00	PASS
11AC20M IMO	Ant2	5825	---	14.59	97.04	0.13	14.72	≤30.00	PASS
11AC20M IMO	total	5825	---	---	---	---	18.28	≤28.31	PASS
11AC40M IMO	Ant1	5190	---	15.36	94.20	0.26	15.62	≤23.98	PASS
11AC40M IMO	Ant2	5190	---	14.24	95.59	0.20	14.44	≤23.98	PASS
11AC40M IMO	total	5190	---	---	---	---	18.08	≤22.57	PASS
11AC40M IMO	Ant1	5230	---	15.32	94.20	0.26	15.58	≤30.00	PASS
11AC40M IMO	Ant2	5230	---	14.12	95.65	0.19	14.31	≤30.00	PASS
11AC40M IMO	total	5230	---	---	---	---	18.00	≤28.31	PASS

11AC40M IMO	Ant1	5755	---	15.52	94.20	0.26	15.78	≤23.98	PASS
11AC40M IMO	Ant2	5755	---	14.42	94.20	0.26	14.68	≤23.98	PASS
11AC40M IMO	total	5755	---	---	---	---	18.28	≤22.57	PASS
11AC40M IMO	Ant1	5795	---	15.53	95.59	0.20	15.73	≤30.00	PASS
11AC40M IMO	Ant2	5795	---	14.43	94.20	0.26	14.69	≤30.00	PASS
11AC40M IMO	total	5795	---	---	---	---	18.25	≤28.31	PASS
11AC80M IMO	Ant1	5210	---	15.55	88.89	0.51	16.06	≤23.98	PASS
11AC80M IMO	Ant2	5210	---	14.39	88.89	0.51	14.90	≤23.98	PASS
11AC80M IMO	total	5210	---	---	---	---	18.53	≤22.57	PASS
11AC80M IMO	Ant1	5775	---	15.41	91.67	0.38	15.79	≤30.00	PASS
11AC80M IMO	Ant2	5775	---	14.34	88.89	0.51	14.85	≤30.00	PASS
11AC80M IMO	total	5775	---	---	---	---	18.36	≤28.31	PASS

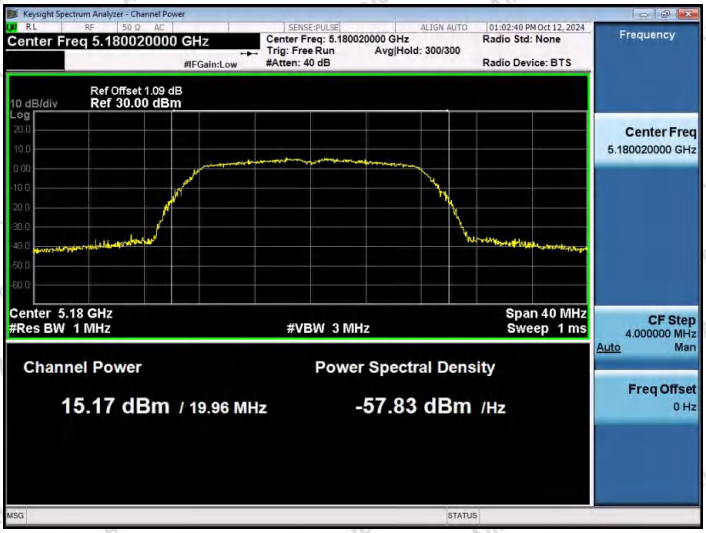
Note：1.The Duty Cycle Factor and cable loss are compensated in the graph.

2.WiFi 5.2G: As Directional gain = 10 log[(10G1/20 + 10G2/20) 2 /NANT] dBi=7.41＞6dBi, so limit=23.98-(7.41-6)dBm = 22.57dBm.

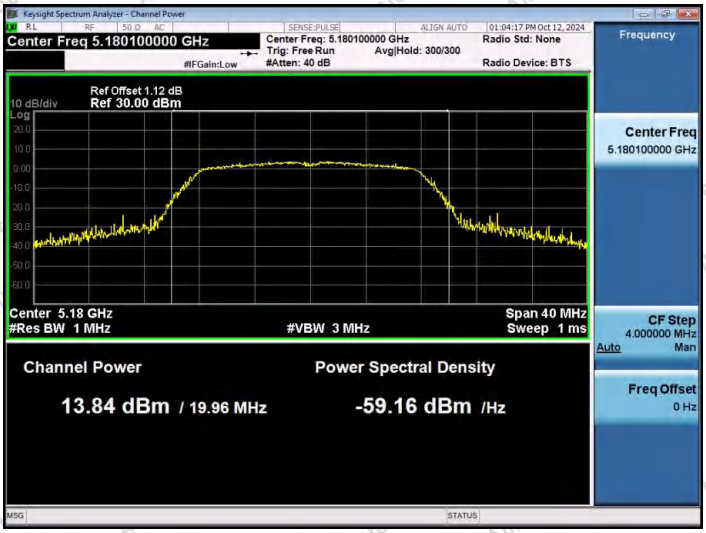
WiFi 5.8G: As Directional gain = 10 log[(10G1/20 + 10G2/20) 2 /NANT] dBi=4.36＜6dBi, so limit=30-(7.69-6)dBm = 28.31dBm.

3.NOTE: MIMO= 10*LOG((10^ANT1/10)+10^(ANT2/10))

Test Graphs Channel Power



11A-Ant1-5180-PASS



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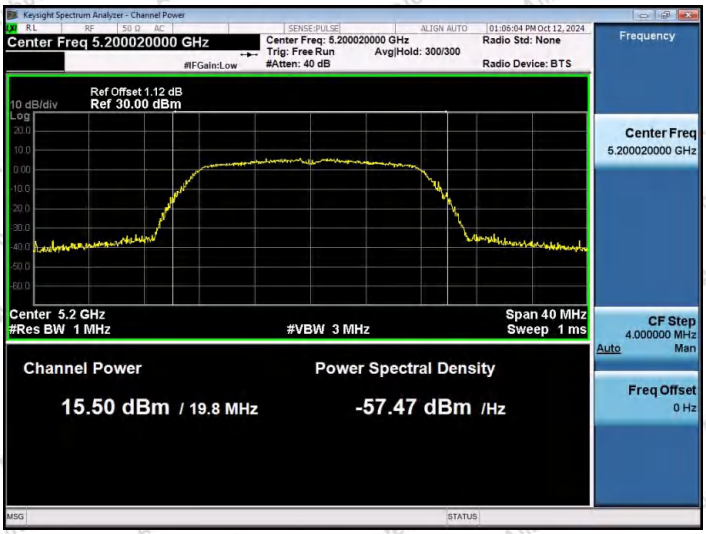

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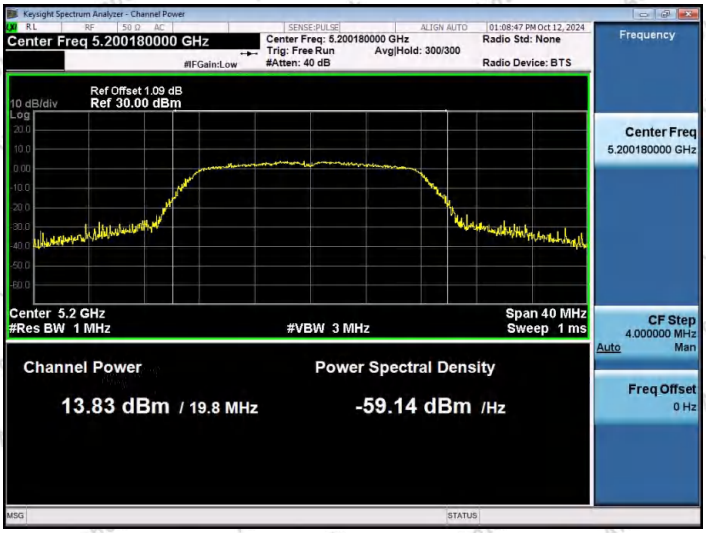

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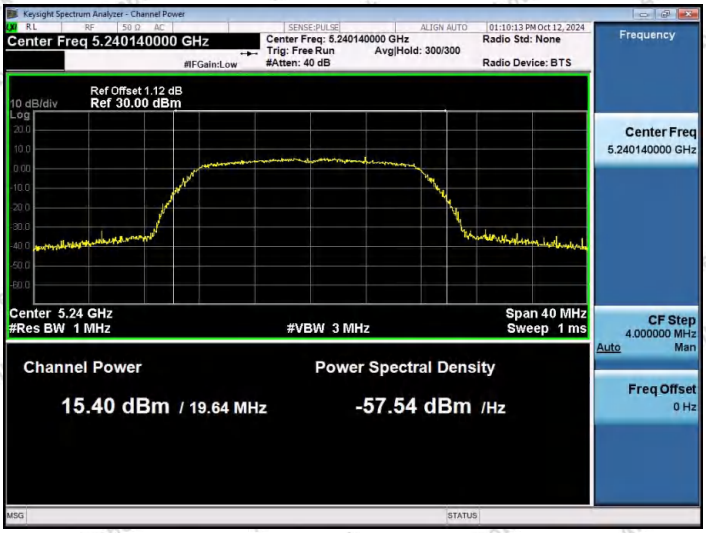

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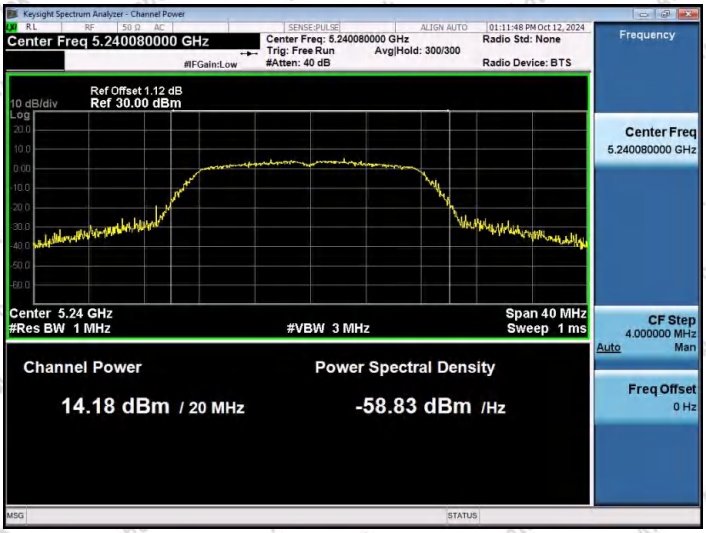

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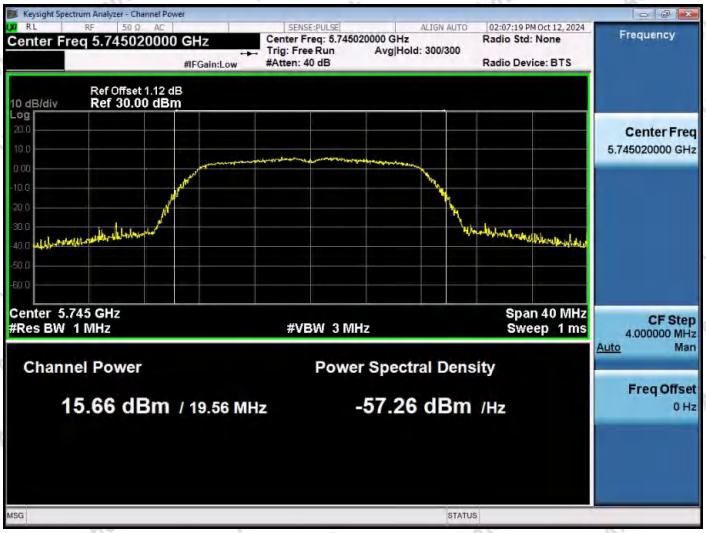

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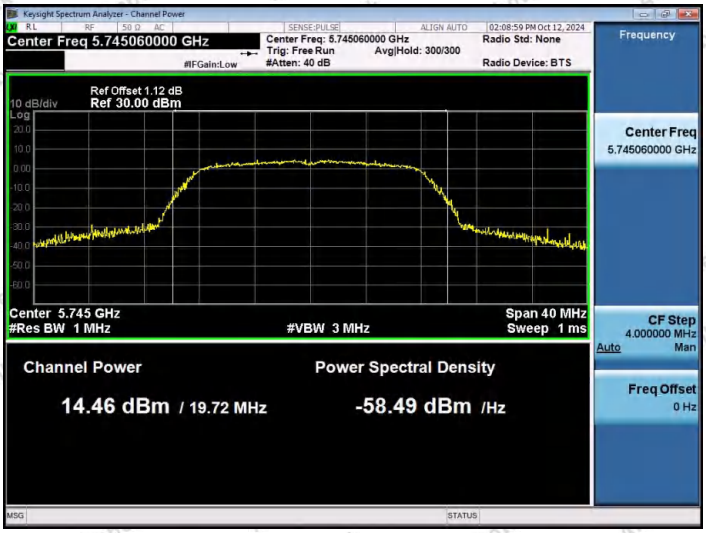

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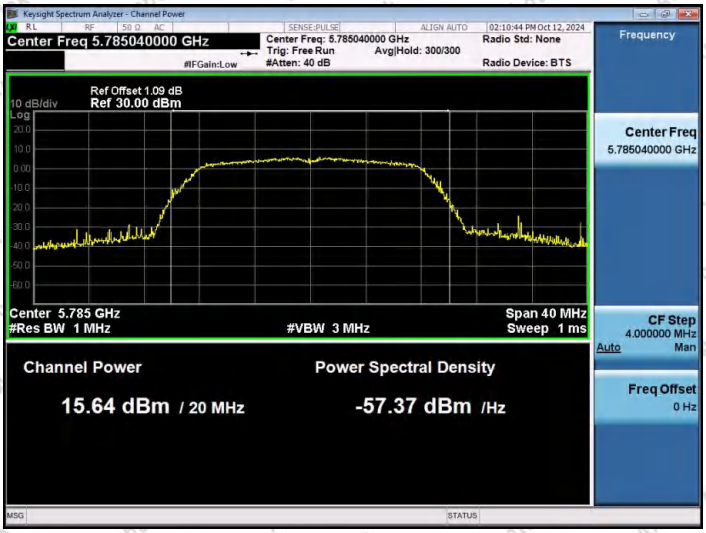
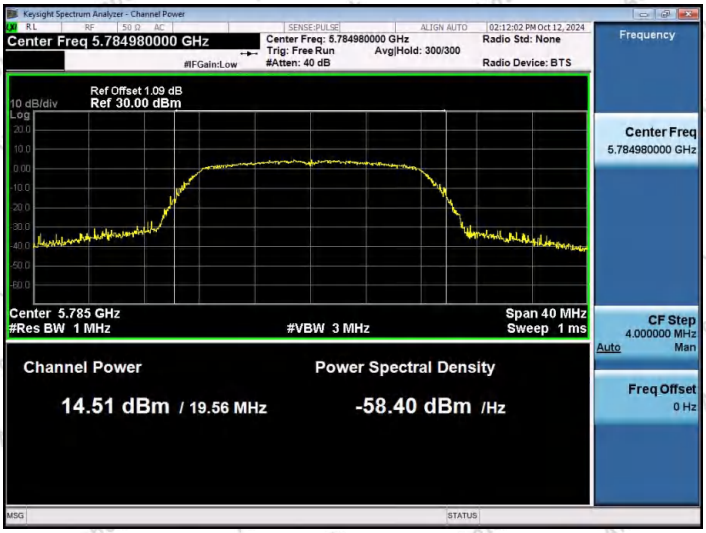
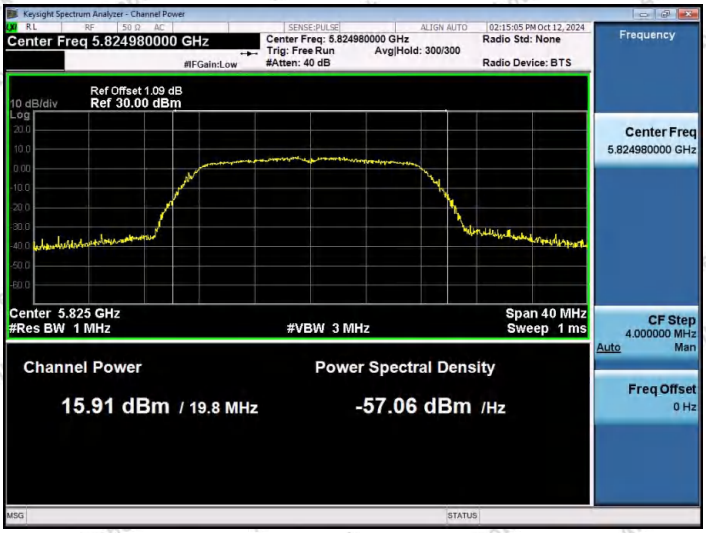


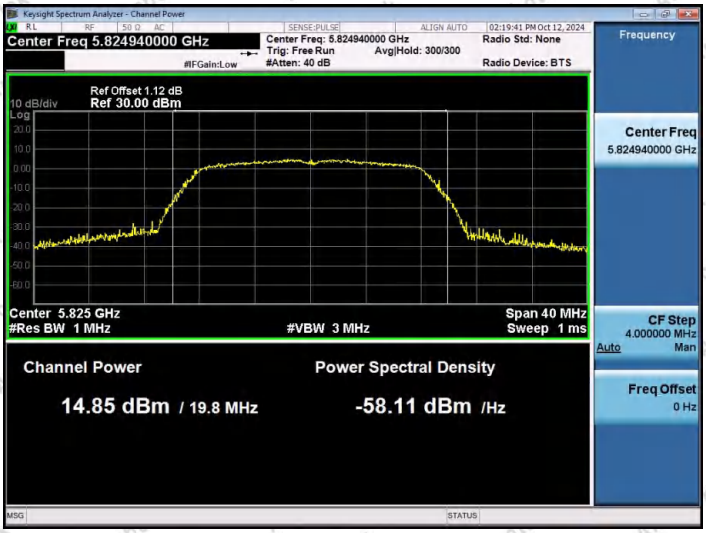
11A-Ant1-5785-PASS



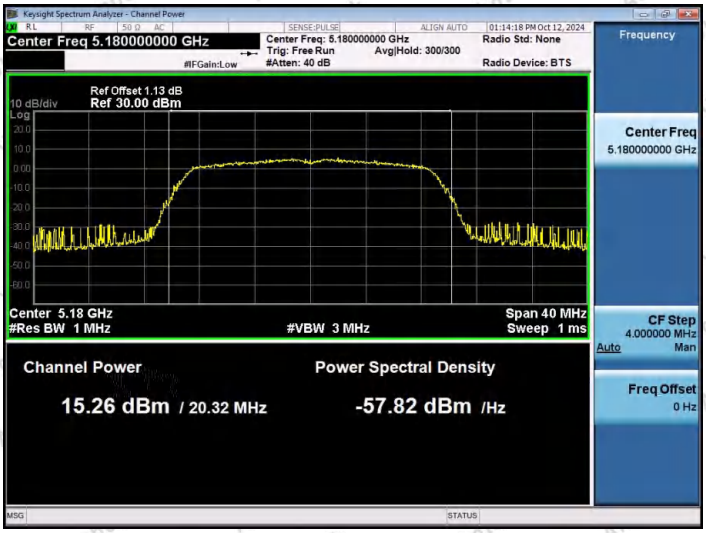
11A-Ant2-5785-PASS



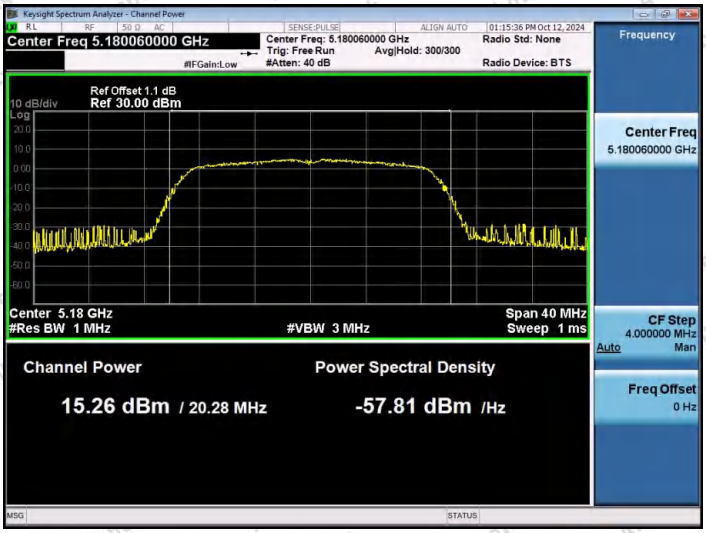
11A-Ant1-5825-PASS



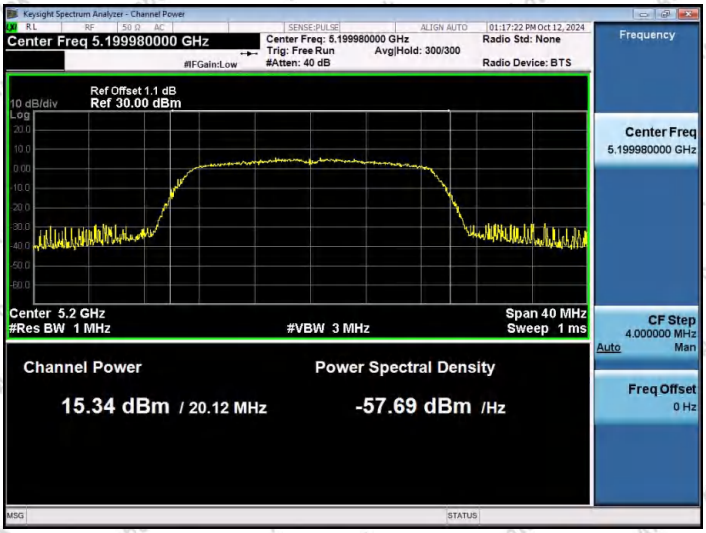
11A-Ant2-5825-PASS



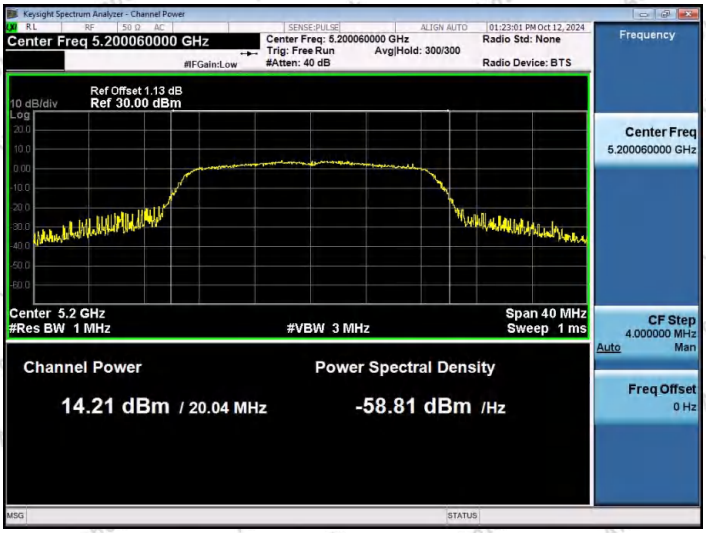
11N20MIMO-Ant1-5180-PASS



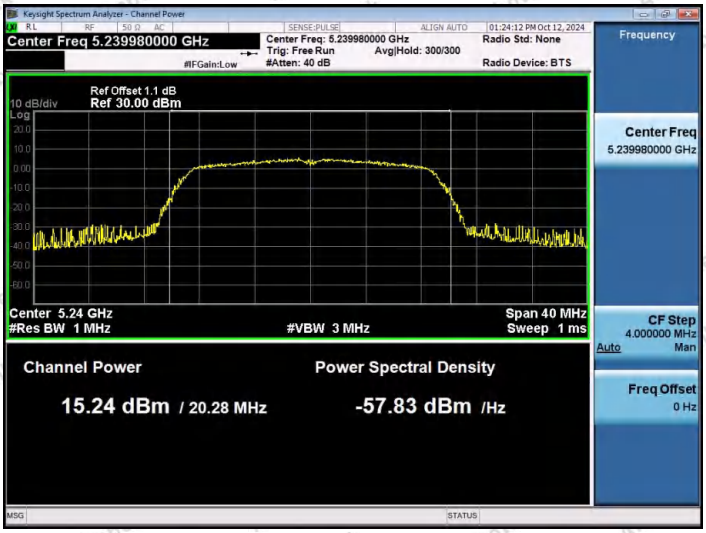
11N20MIMO-Ant2-5180-PASS



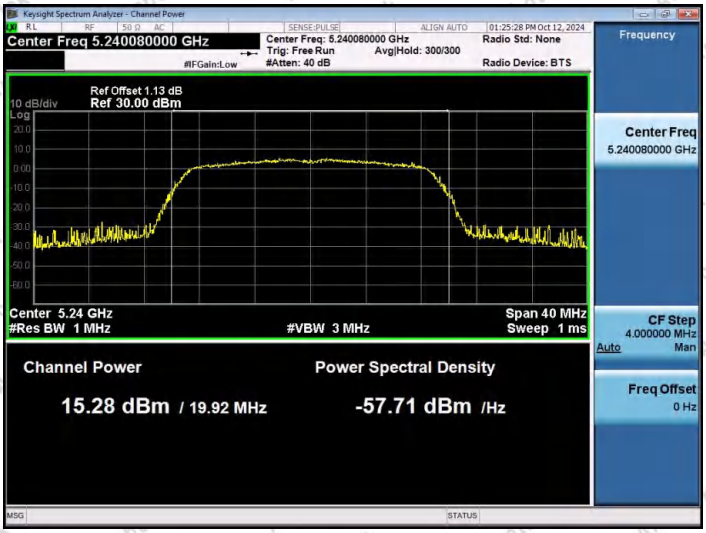
11N20MIMO-Ant1-5200-PASS



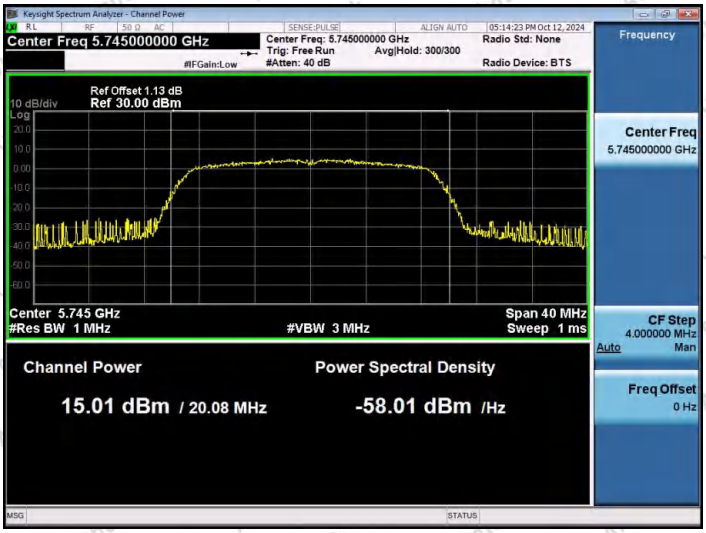
11N20MIMO-Ant2-5200-PASS



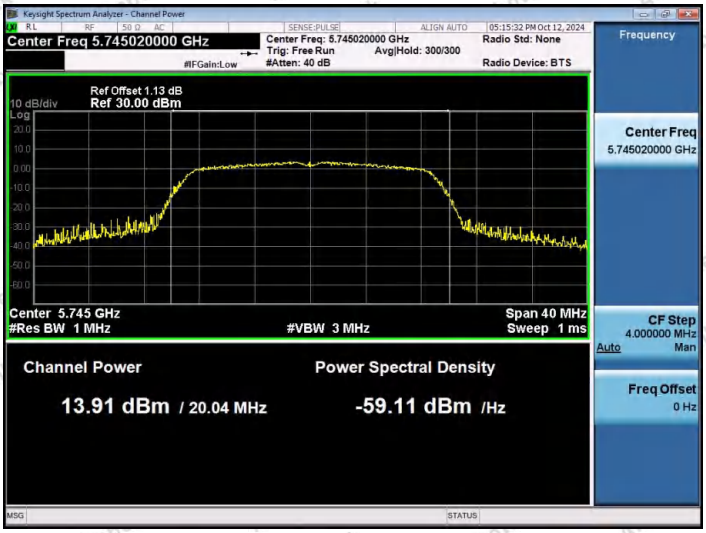
11N20MIMO-Ant1-5240-PASS



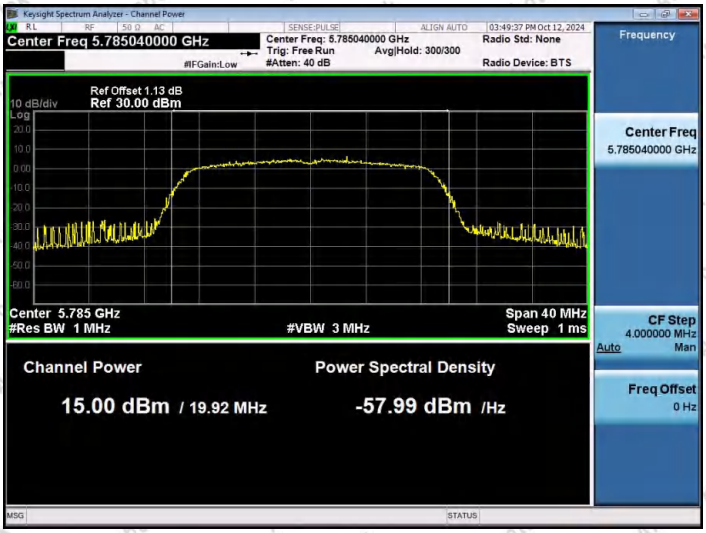
11N20MIMO-Ant2-5240-PASS



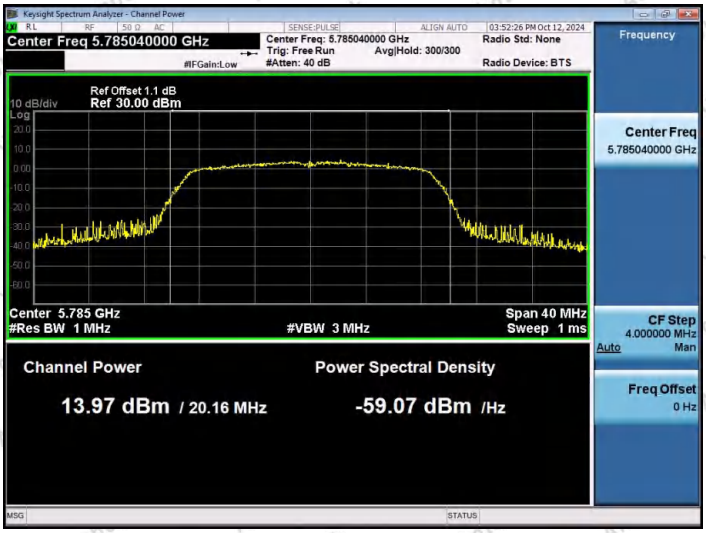
11N20MIMO-Ant1-5745-PASS



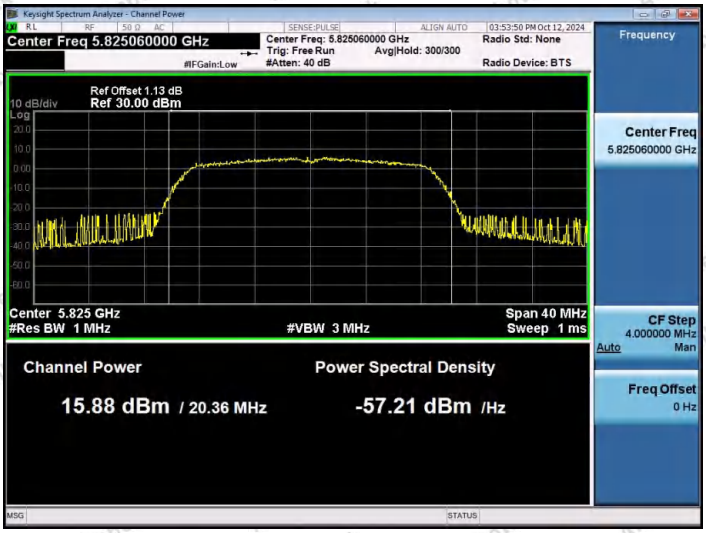
11N20MIMO-Ant2-5745-PASS



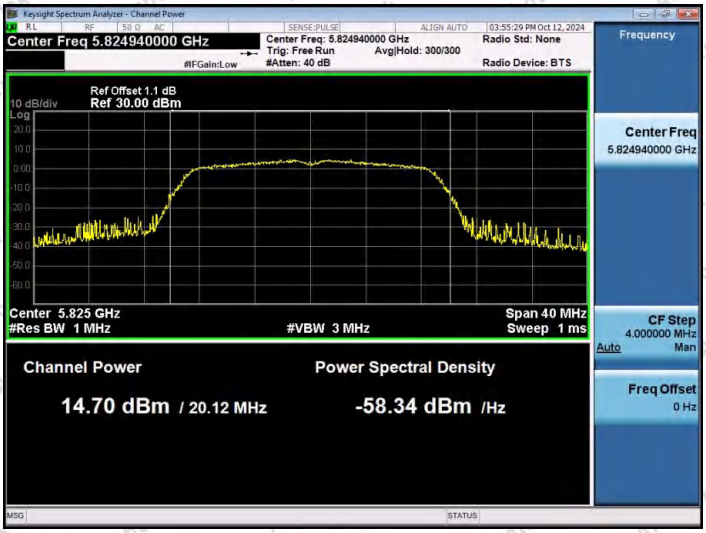
11N20MIMO-Ant1-5785-PASS



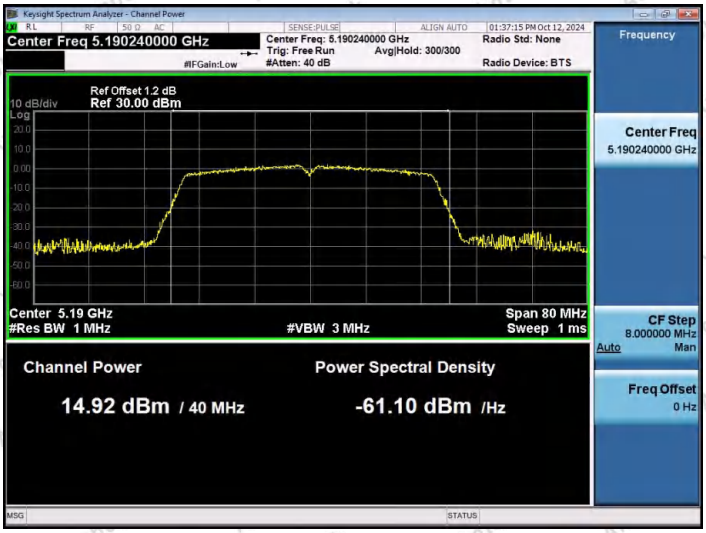
11N20MIMO-Ant2-5785-PASS



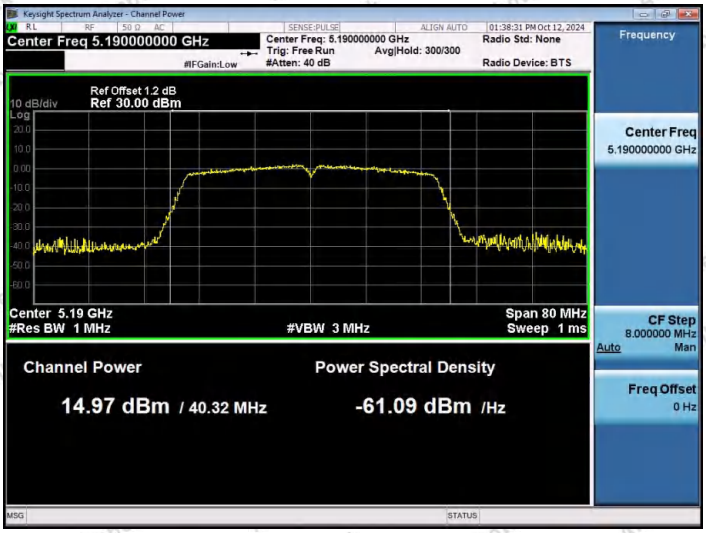
11N20MIMO-Ant1-5825-PASS



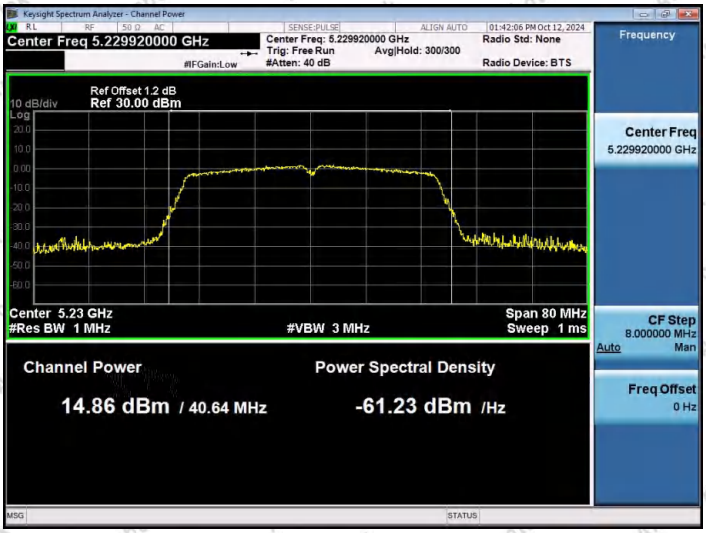
11N20MIMO-Ant2-5825-PASS



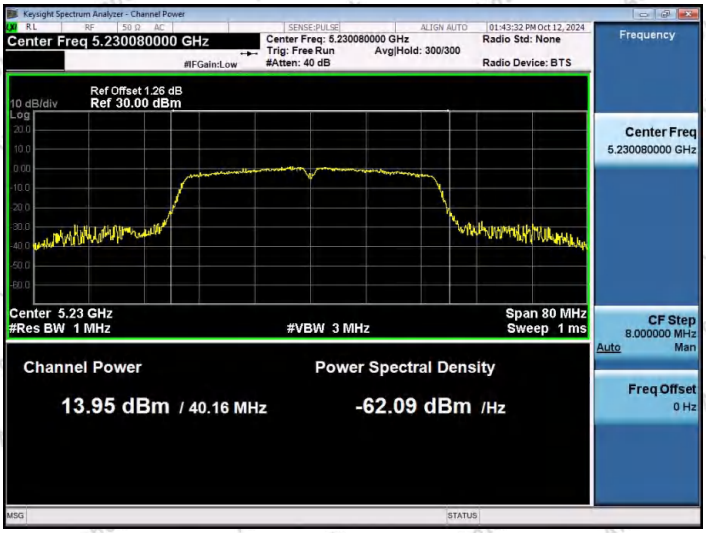
11N40MIMO-Ant1-5190-PASS



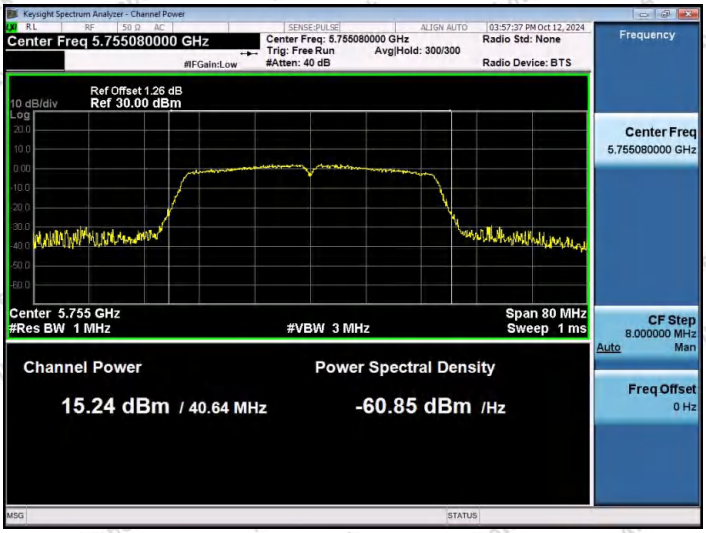
11N40MIMO-Ant2-5190-PASS



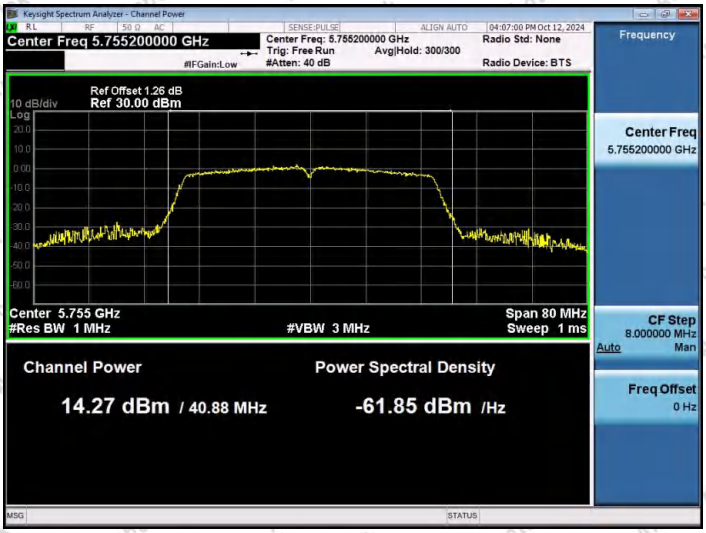
11N40MIMO-Ant1-5230-PASS



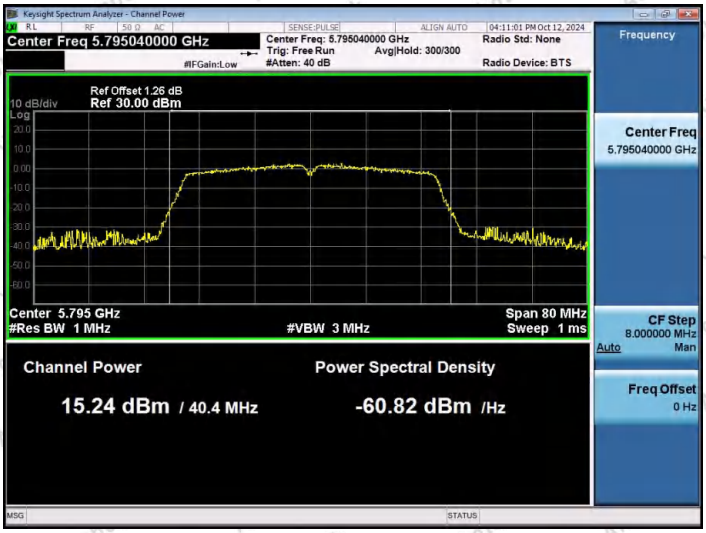
11N40MIMO-Ant2-5230-PASS



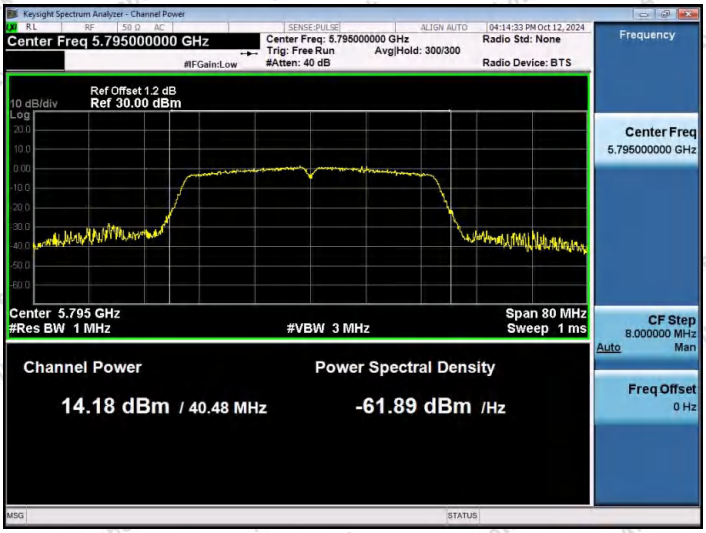
11N40MIMO-Ant1-5755-PASS



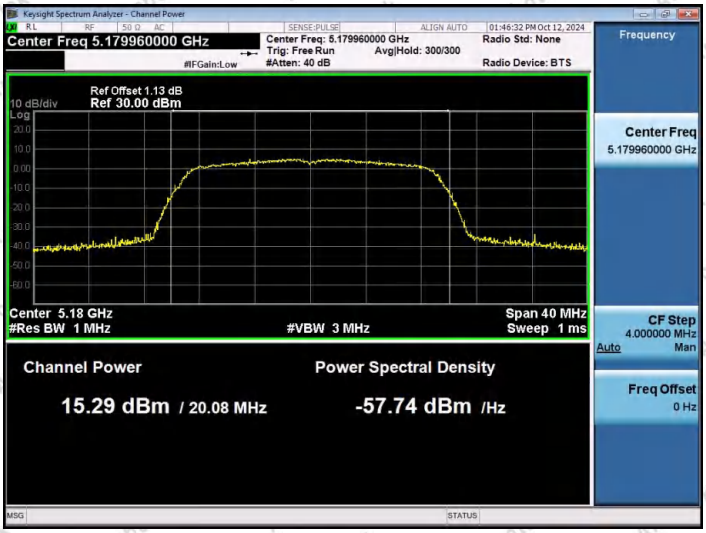
11N40MIMO-Ant2-5755-PASS



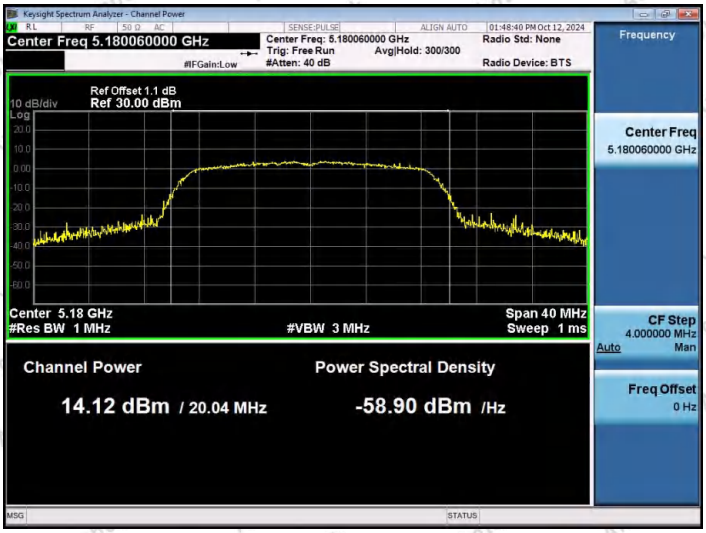
11N40MIMO-Ant1-5795-PASS



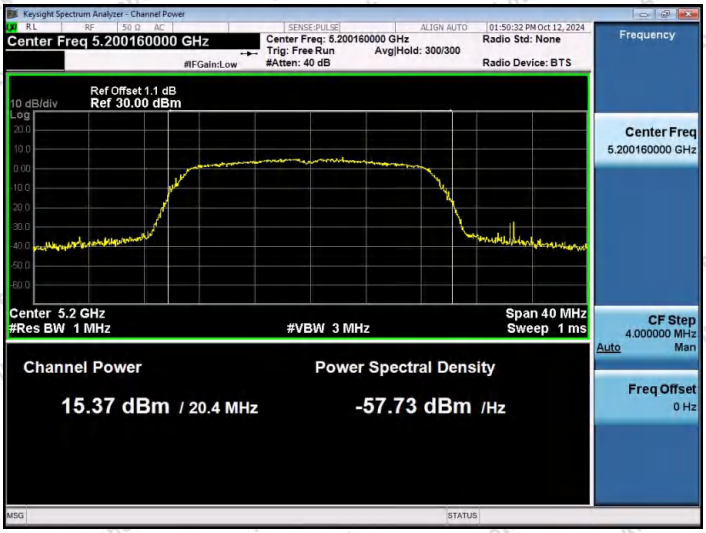
11N40MIMO-Ant2-5795-PASS



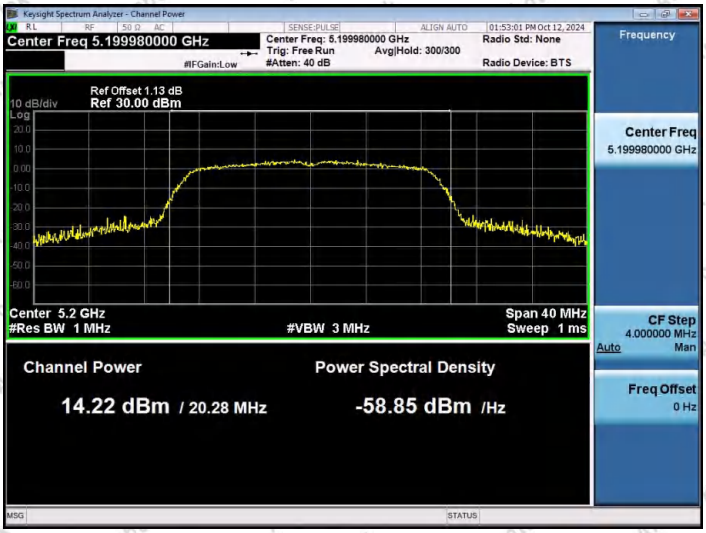
11AC20MIMO-Ant1-5180-PASS



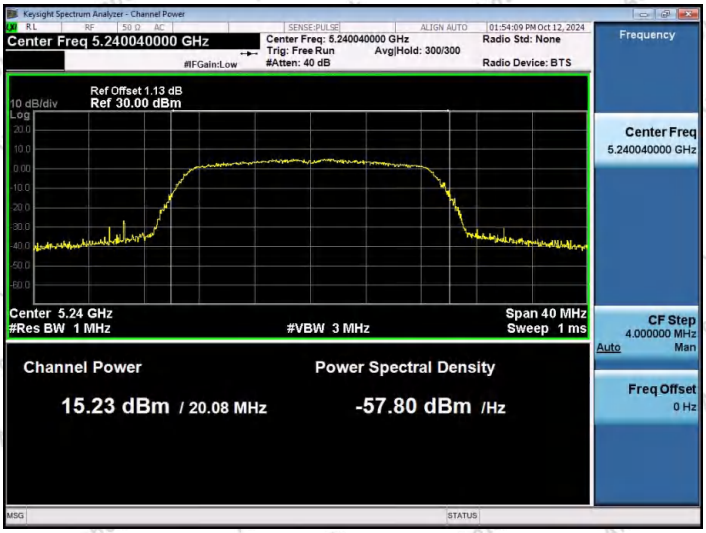
11AC20MIMO-Ant2-5180-PASS



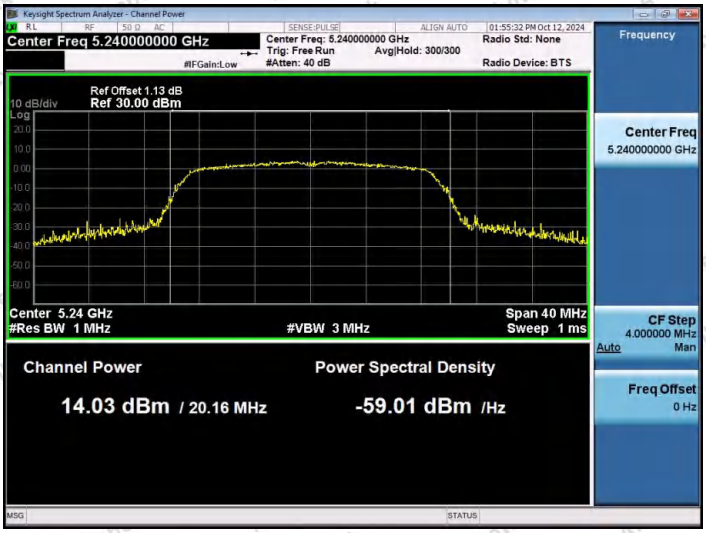
11AC20MIMO-Ant1-5200-PASS



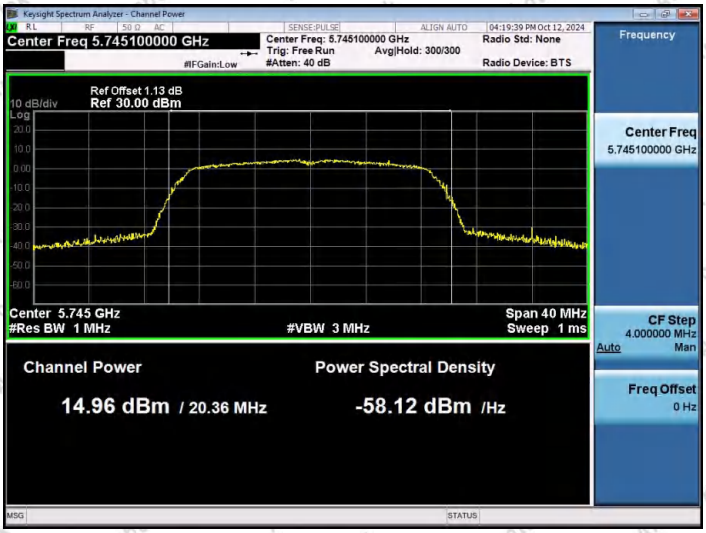
11AC20MIMO-Ant2-5200-PASS



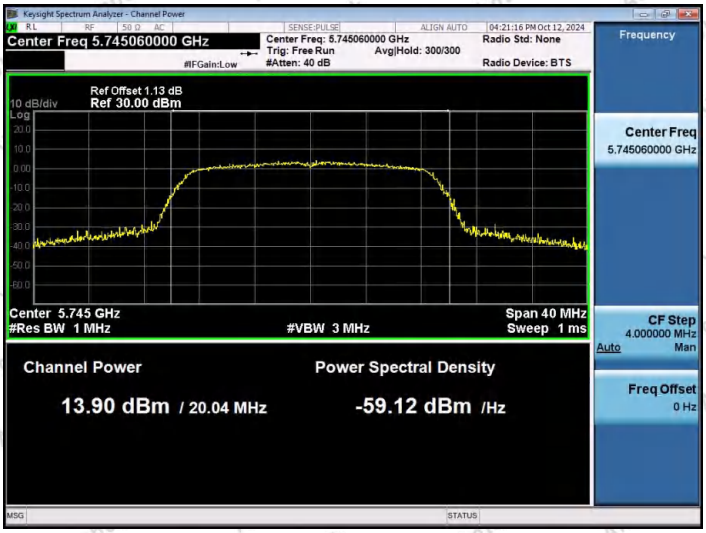
11AC20MIMO-Ant1-5240-PASS



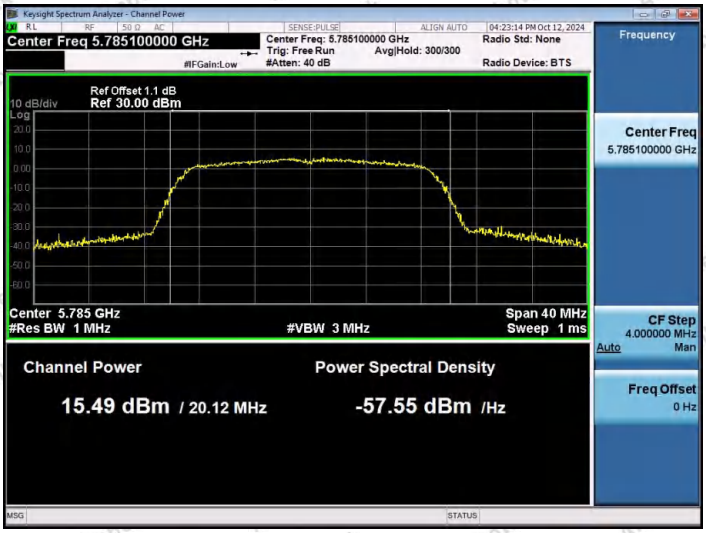
11AC20MIMO-Ant2-5240-PASS



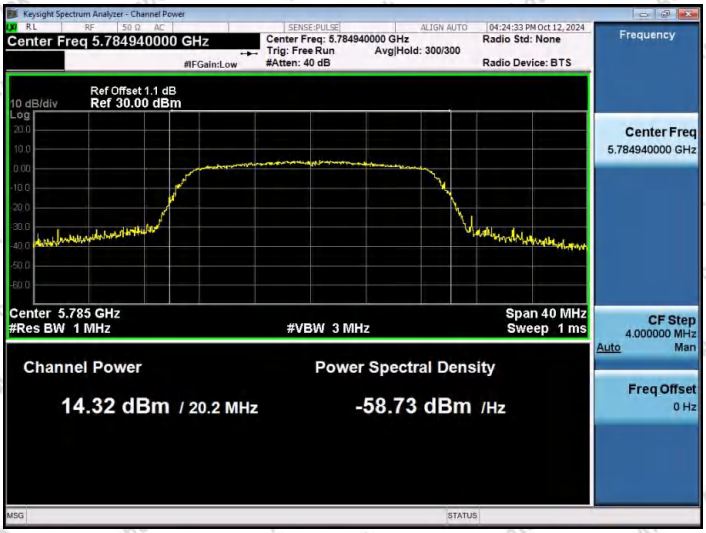
11AC20MIMO-Ant1-5745-PASS



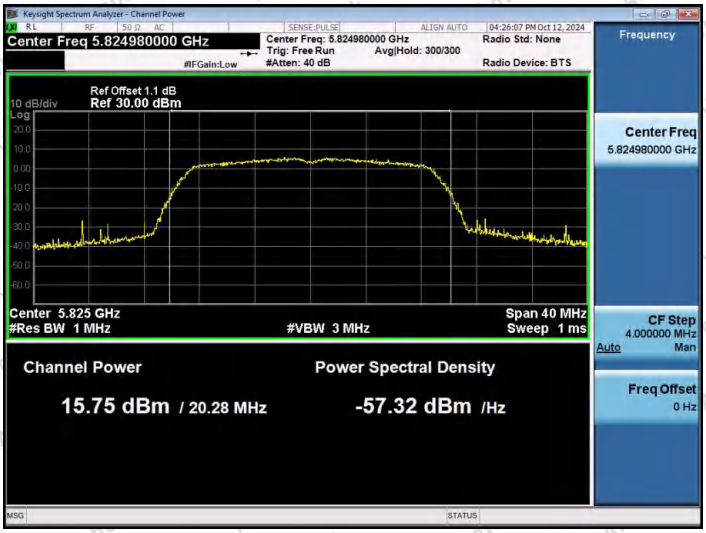
11AC20MIMO-Ant2-5745-PASS



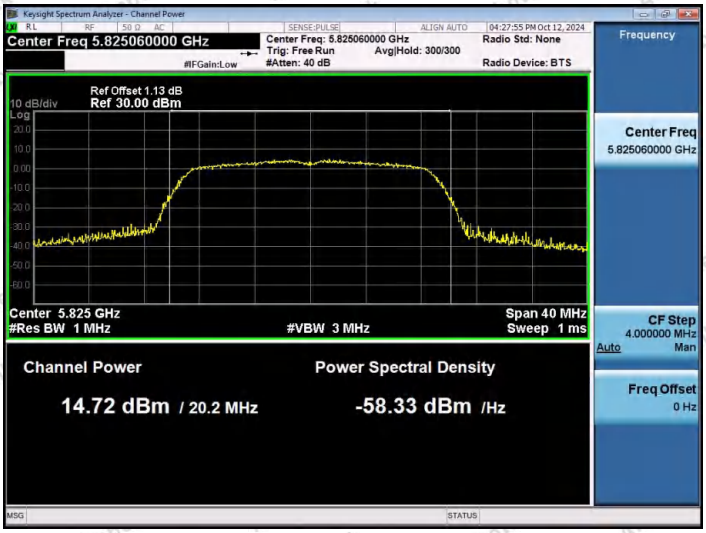
11AC20MIMO-Ant1-5785-PASS



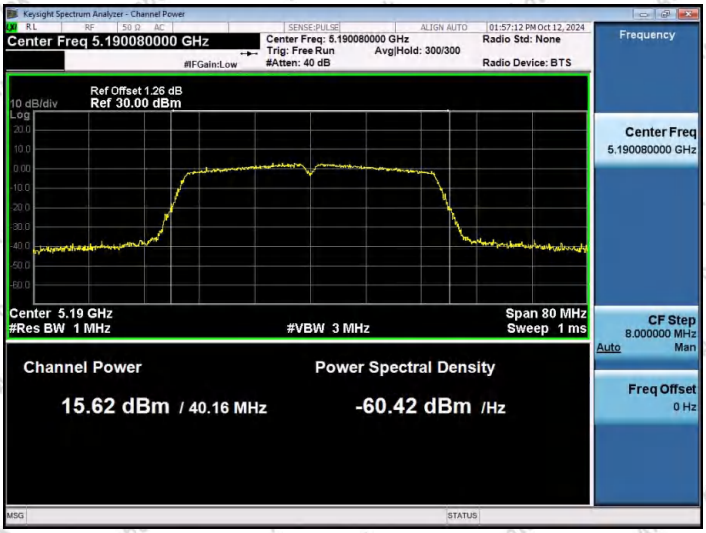
11AC20MIMO-Ant2-5785-PASS



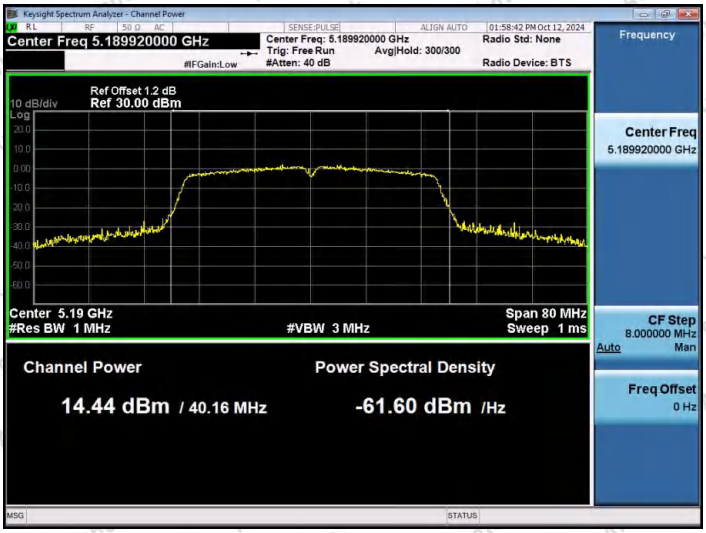
11AC20MIMO-Ant1-5825-PASS



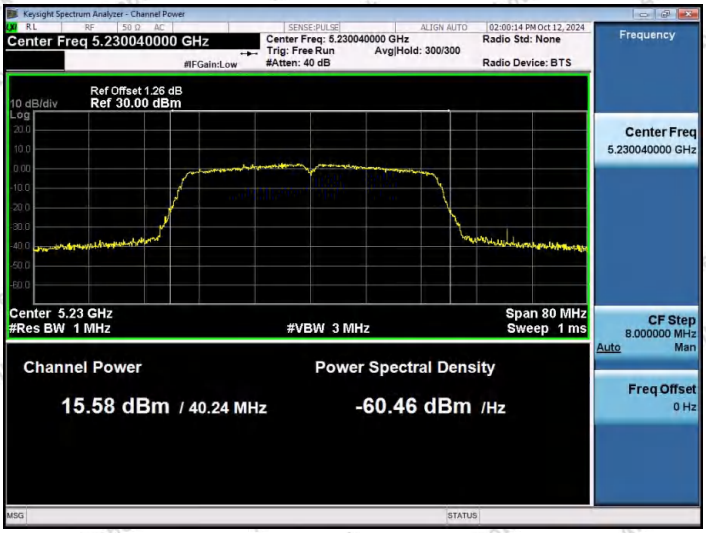
11AC20MIMO-Ant2-5825-PASS



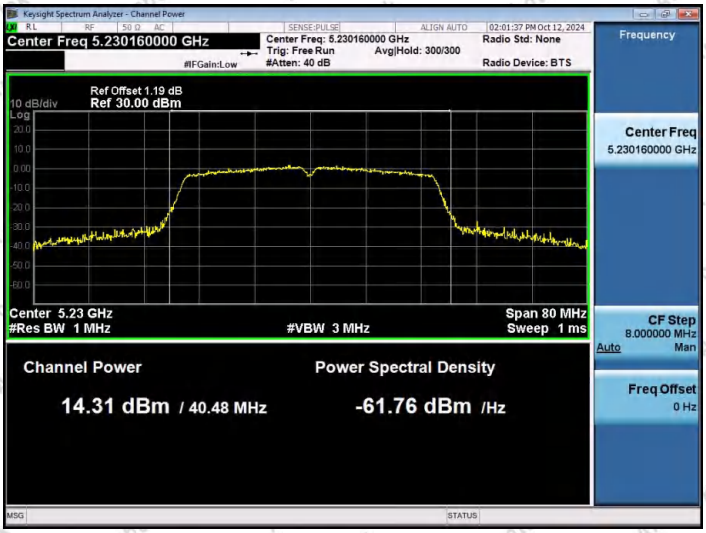
11AC40MIMO-Ant1-5190-PASS



11AC40MIMO-Ant2-5190-PASS



11AC40MIMO-Ant1-5230-PASS



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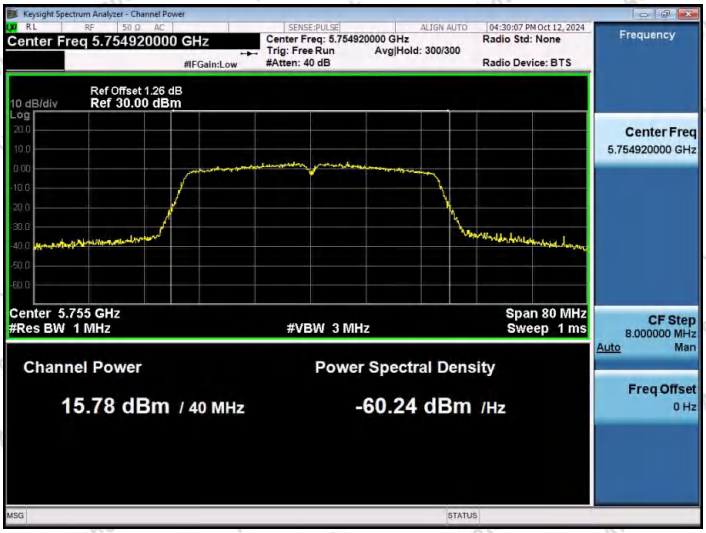
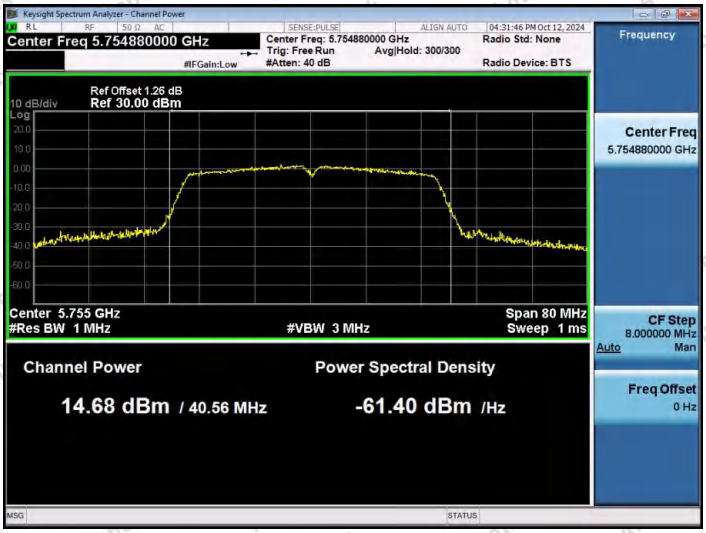


11AC40MIMO-Ant1-5755-PASS



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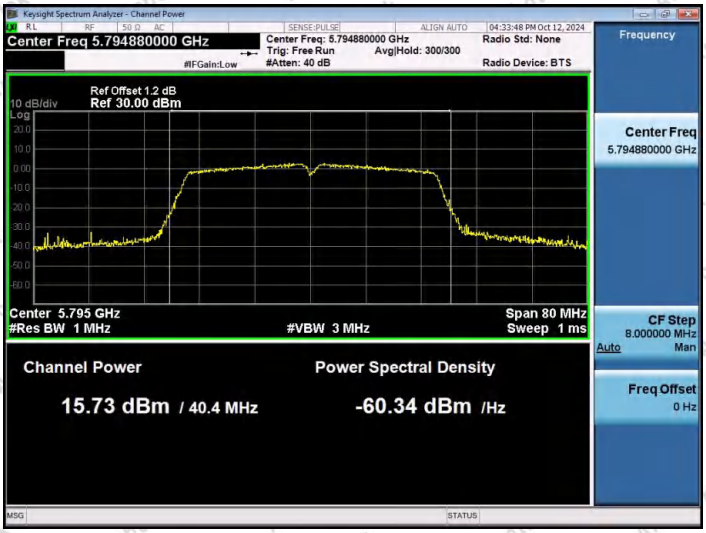
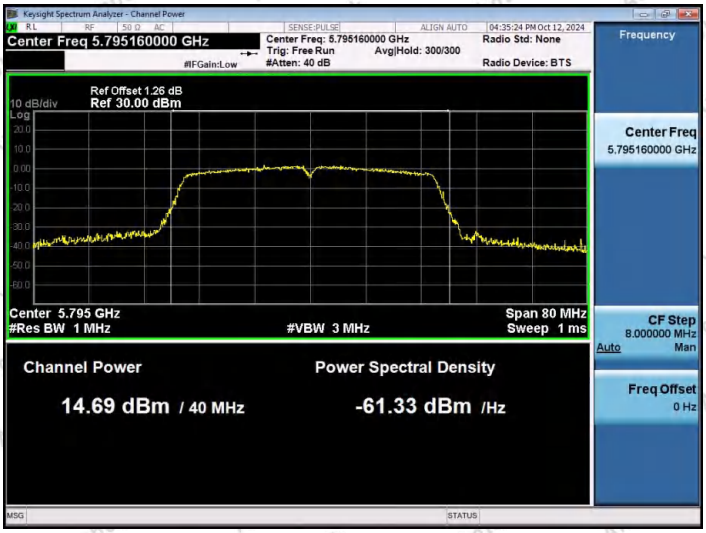


11AC40MIMO-Ant1-5795-PASS



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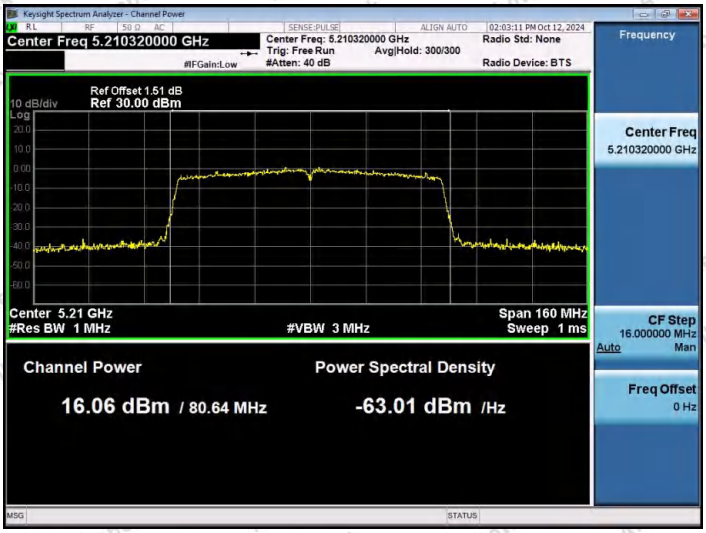
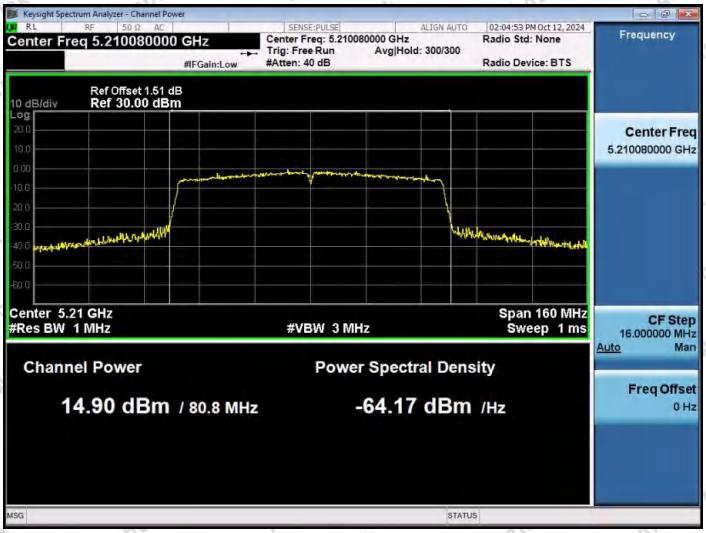


11AC80MIMO-Ant1-5210-PASS



11AC80MIMO-Ant2-5210-PASS