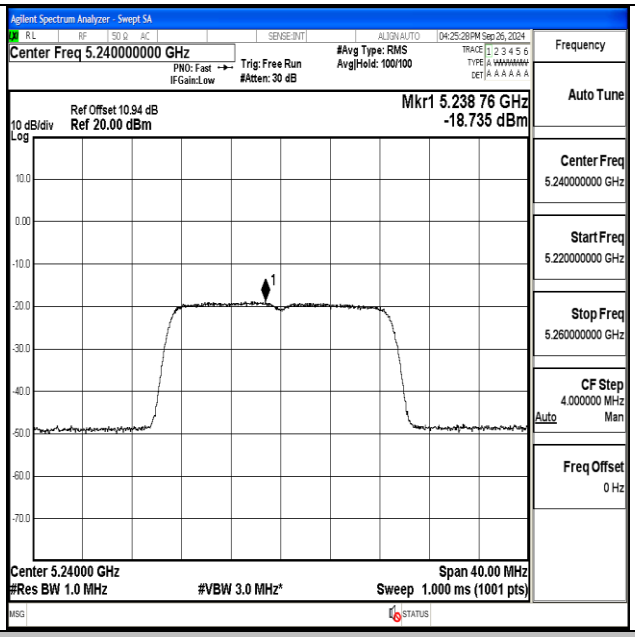
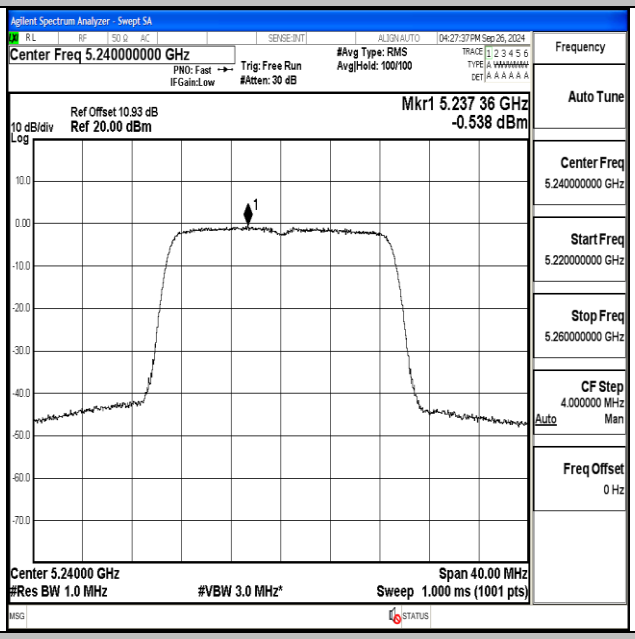
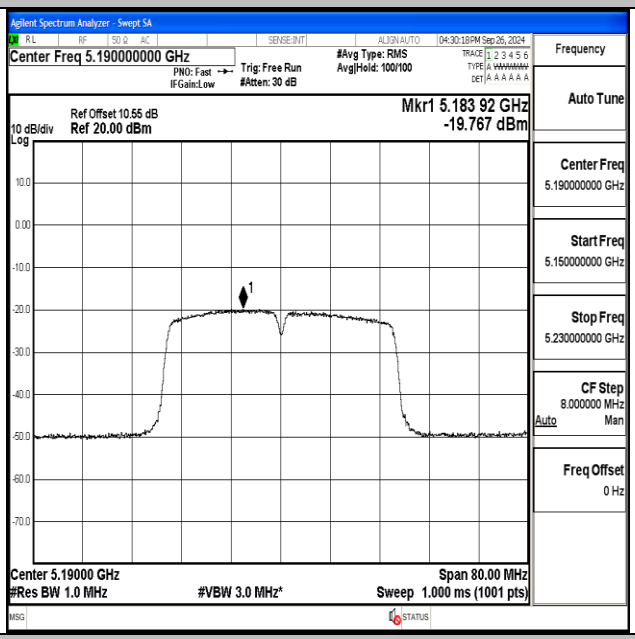


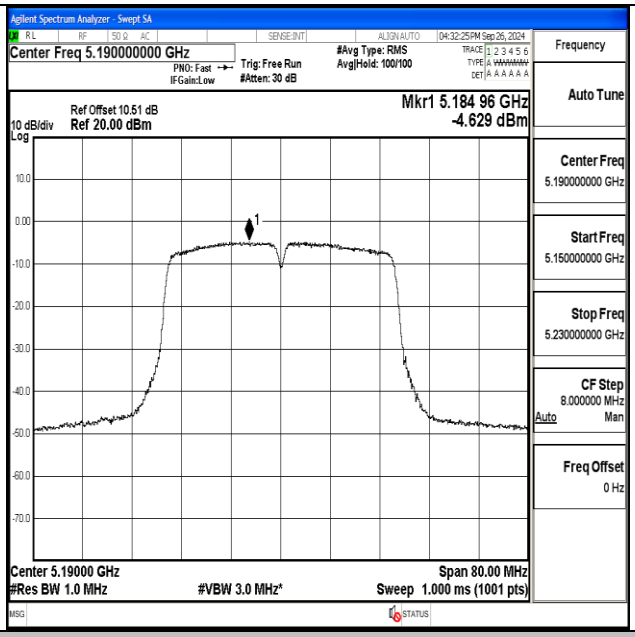
11AC20MIMO-Ant1-5240-PASS



11AC20MIMO-Ant2-5240-PASS



11AC40MIMO-Ant1-5190-PASS



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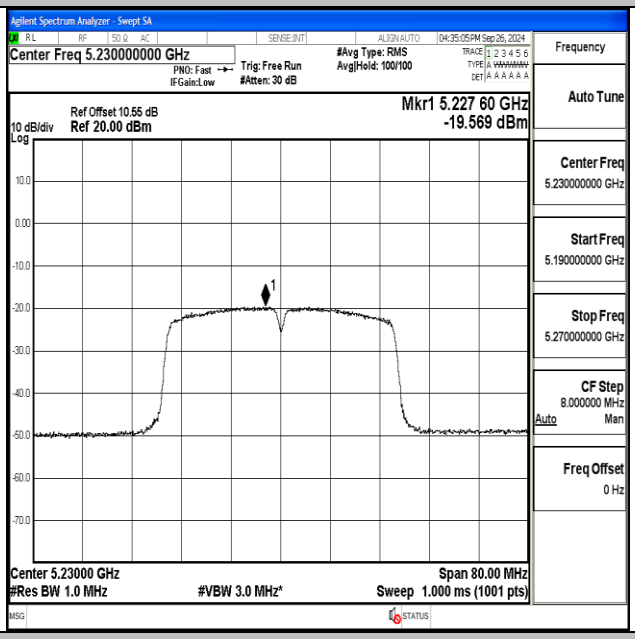
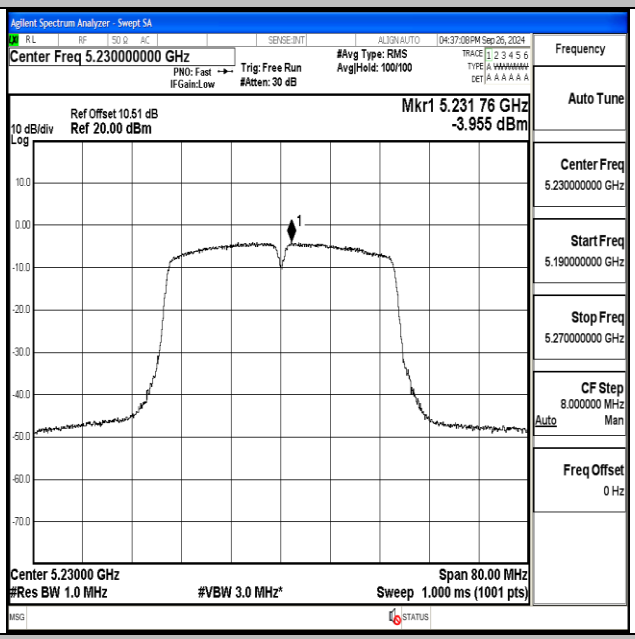


11AC40MIMO-Ant1-5230-PASS



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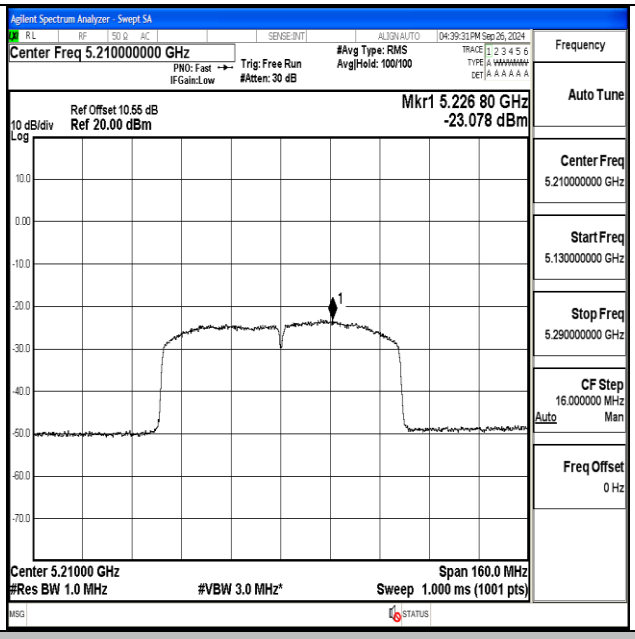
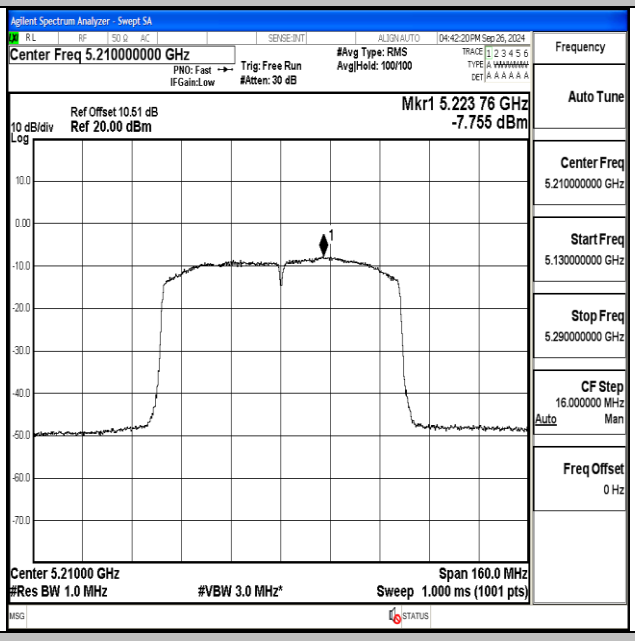


11AC80MIMO-Ant1-5210-PASS



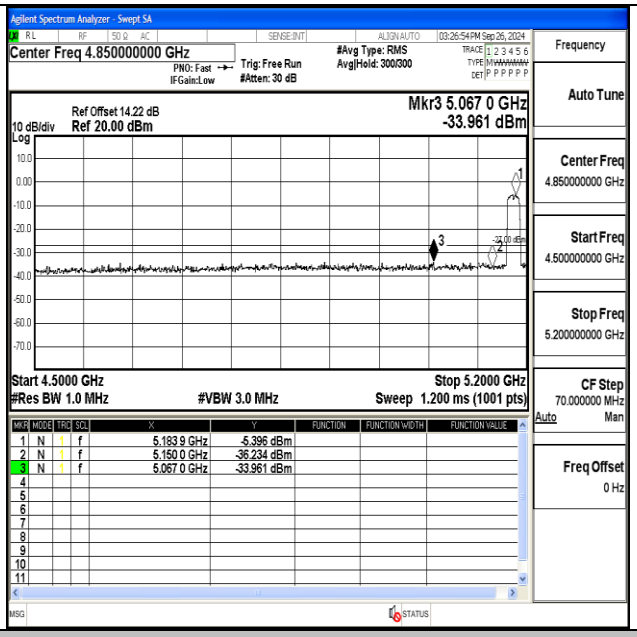
11AC80MIMO-Ant2-5210-PASS

Appendix D: Band edge measurements

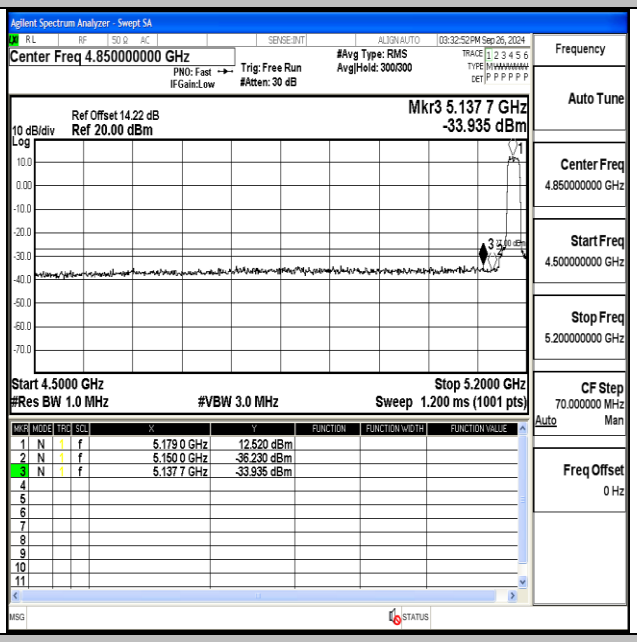
Test Result

Test Mode	Antenna	Ch. Name	Frequency [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5180	-33.96	≤-27	PASS
11A	Ant2	Low	5180	-33.94	≤-27	PASS
11A	Ant1	High	5240	-33.12	≤-27	PASS
11A	Ant2	High	5240	-33.01	≤-27	PASS
11N20MIMO	Ant1	Low	5180	-33.32	≤-27	PASS
11N20MIMO	Ant2	Low	5180	-33.17	≤-27	PASS
11N20MIMO	Ant1	High	5240	-32.95	≤-27	PASS
11N20MIMO	Ant2	High	5240	-33.07	≤-27	PASS
11N40MIMO	Ant1	Low	5190	-33.19	≤-27	PASS
11N40MIMO	Ant2	Low	5190	-33.67	≤-27	PASS
11N40MIMO	Ant1	High	5230	-33.95	≤-27	PASS
11N40MIMO	Ant2	High	5230	-33.46	≤-27	PASS
11AC20MIMO	Ant1	Low	5180	-33.66	≤-27	PASS
11AC20MIMO	Ant2	Low	5180	-33.83	≤-27	PASS
11AC20MIMO	Ant1	High	5240	-33.33	≤-27	PASS
11AC20MIMO	Ant2	High	5240	-32.84	≤-27	PASS
11AC40MIMO	Ant1	Low	5190	-33.81	≤-27	PASS
11AC40MIMO	Ant2	Low	5190	-33.92	≤-27	PASS
11AC40MIMO	Ant1	High	5230	-32.73	≤-27	PASS
11AC40MIMO	Ant2	High	5230	-33.2	≤-27	PASS
11AC80MIMO	Ant1	Low	5210	-33.31	≤-27	PASS
11AC80MIMO	Ant1	High	5210	-34.25	≤-27	PASS
11AC80MIMO	Ant2	Low	5210	-33.55	≤-27	PASS
11AC80MIMO	Ant2	High	5210	-33.1	≤-27	PASS

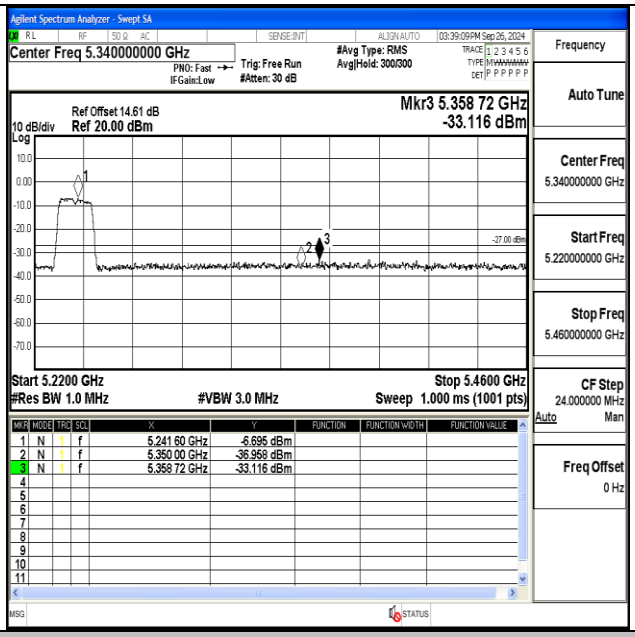
Test Graphs



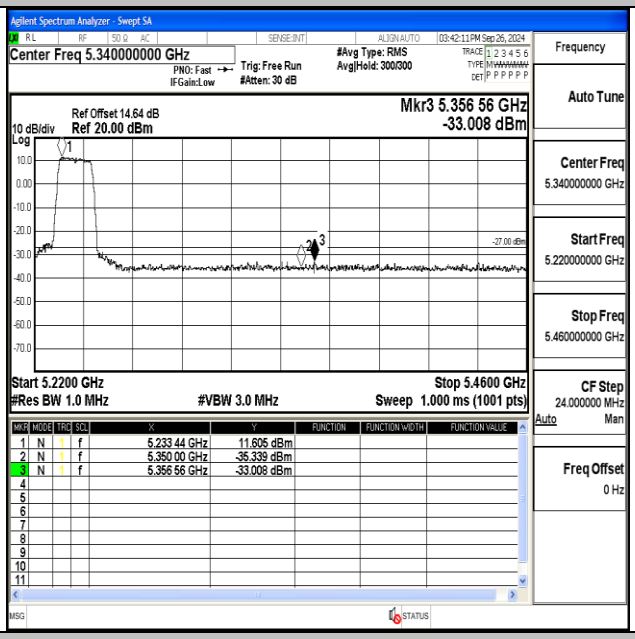
11A-Ant1-5180-PASS



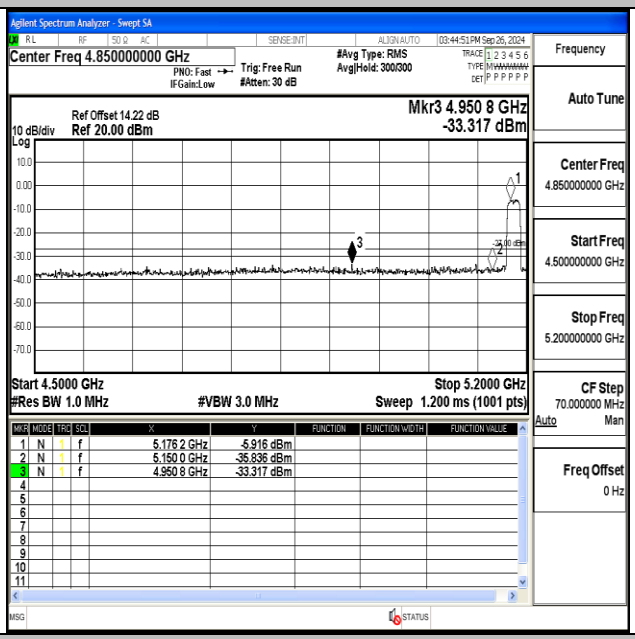
11A-Ant2-5180-PASS



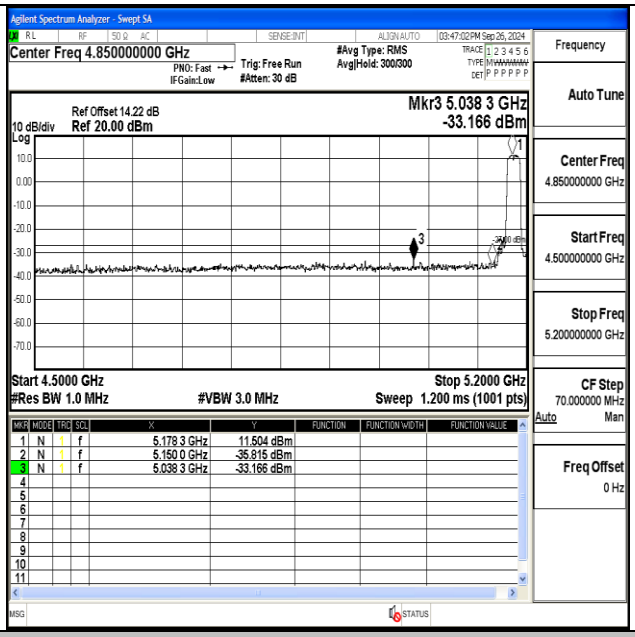
11A-Ant1-5240-PASS



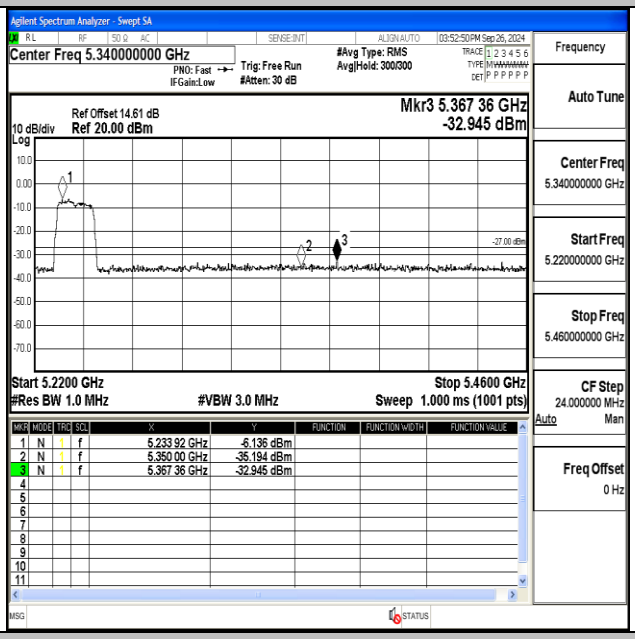
11A-Ant2-5240-PASS



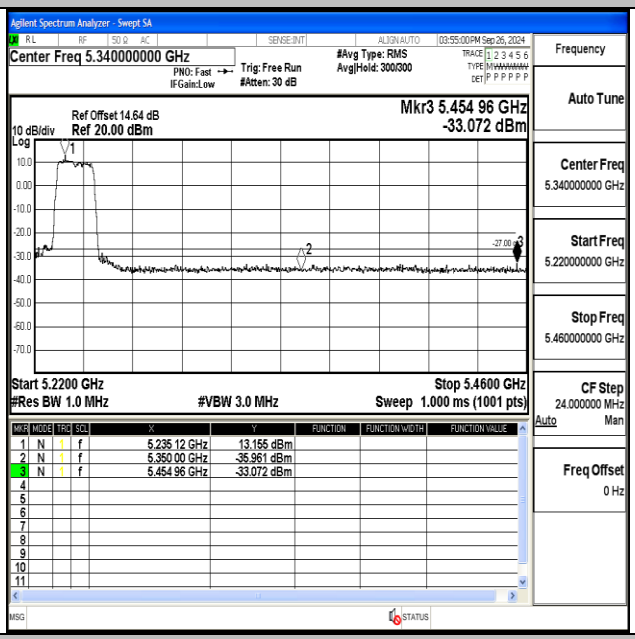
11N20MIMO-Ant1-5180-PASS



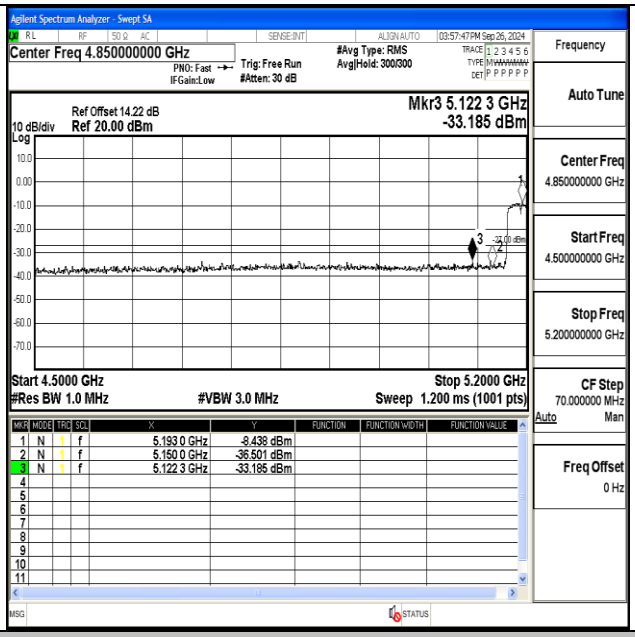
11N20MIMO-Ant2-5180-PASS



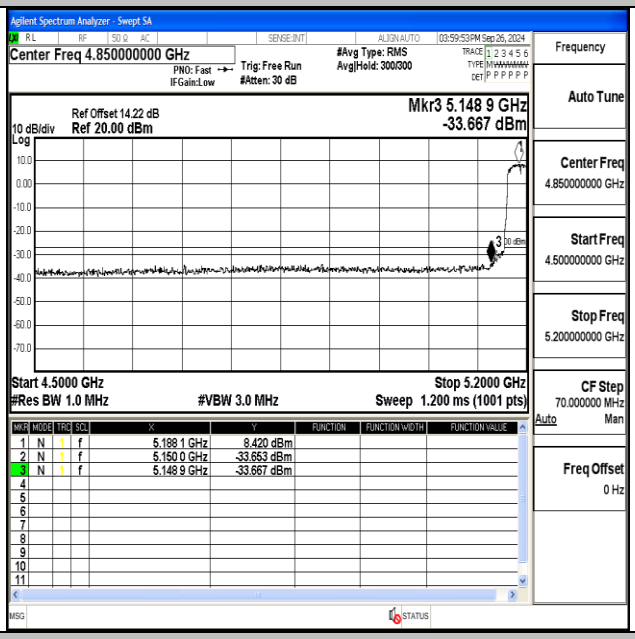
11N20MIMO-Ant1-5240-PASS



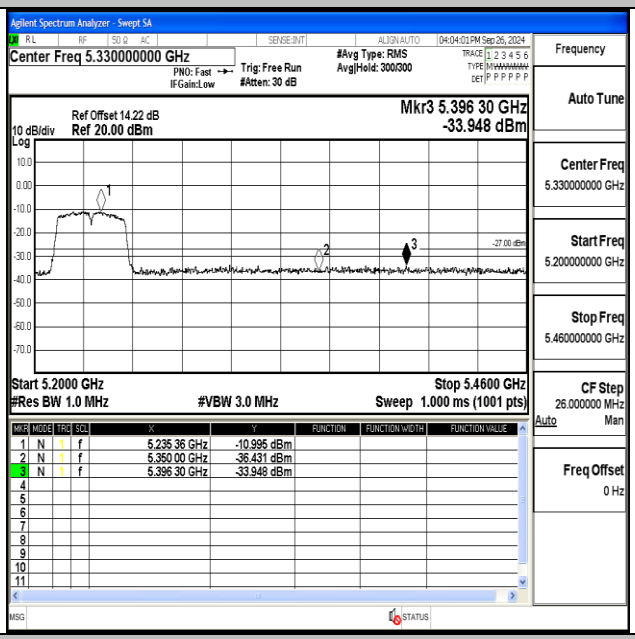
11N20MIMO-Ant2-5240-PASS



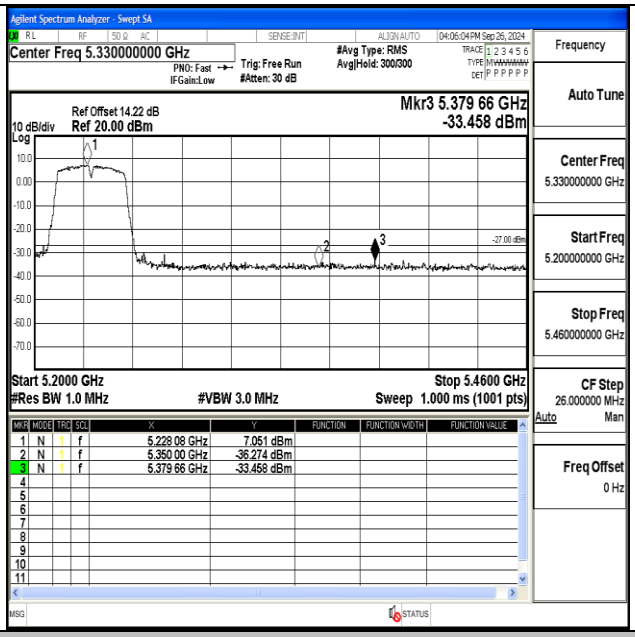
11N40MIMO-Ant1-5190-PASS



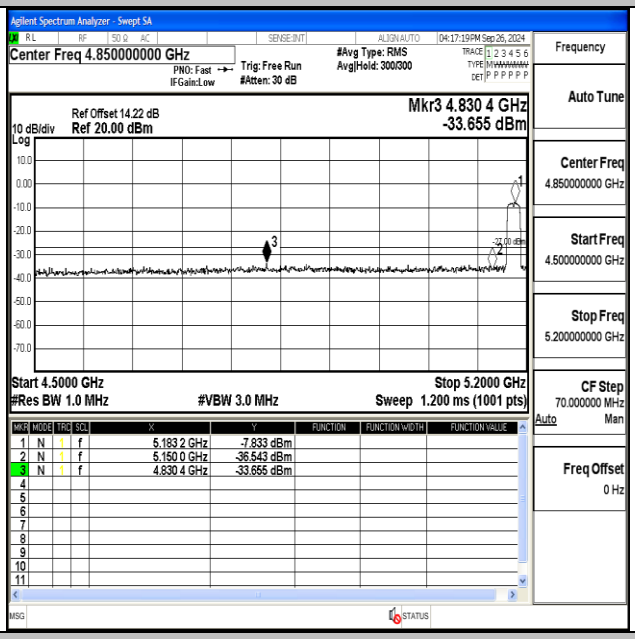
11N40MIMO-Ant2-5190-PASS



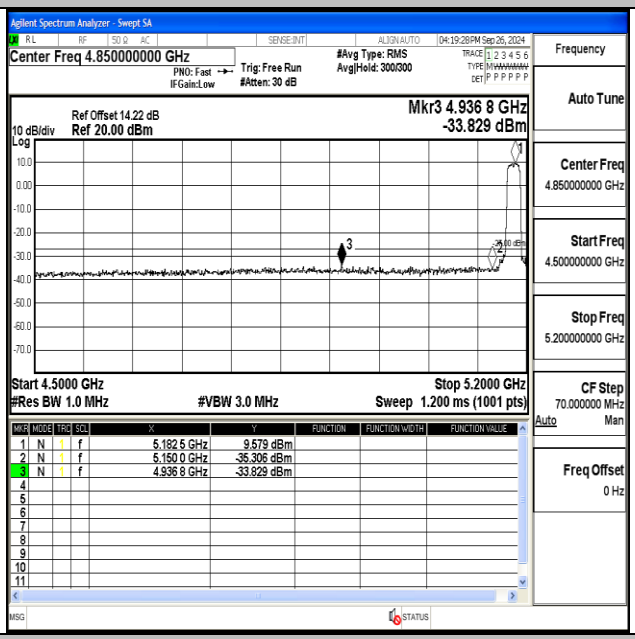
11N40MIMO-Ant1-5230-PASS



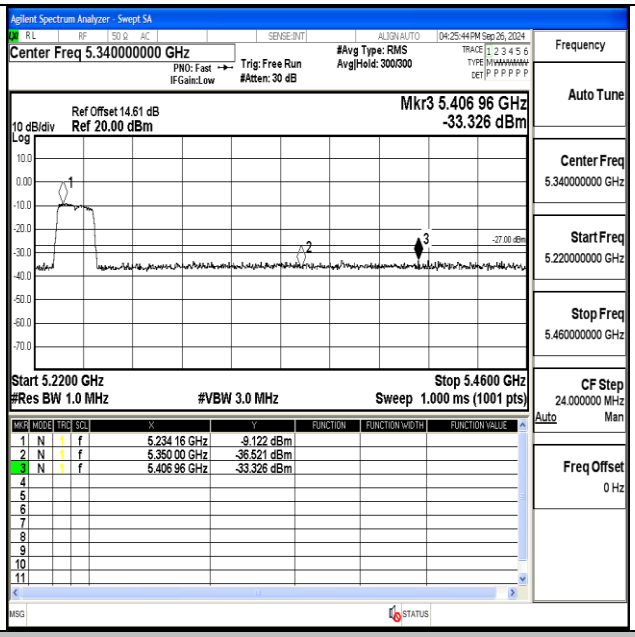
11N40MIMO-Ant2-5230-PASS



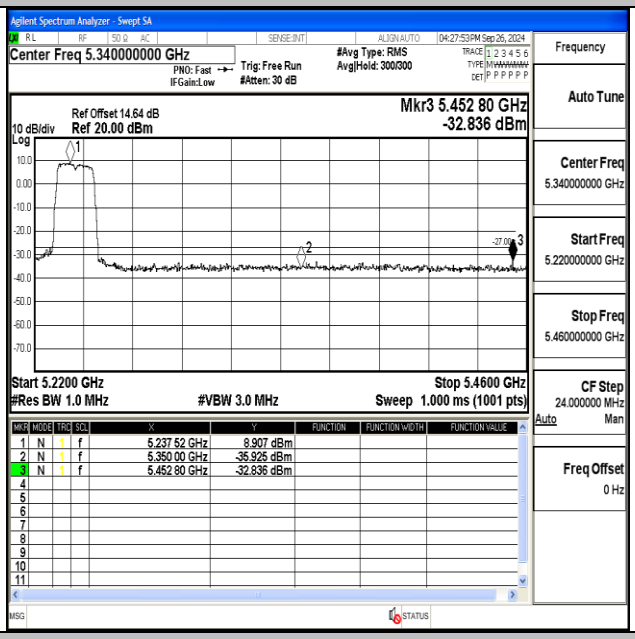
11AC20MIMO-Ant1-5180-PASS



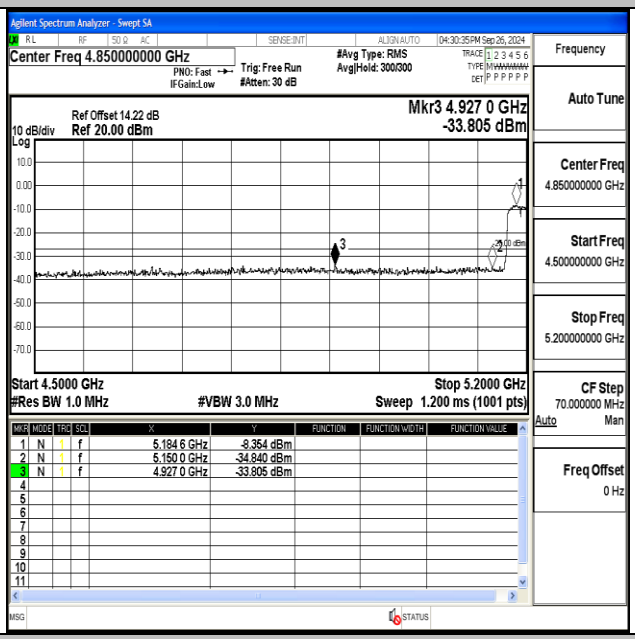
11AC20MIMO-Ant2-5180-PASS



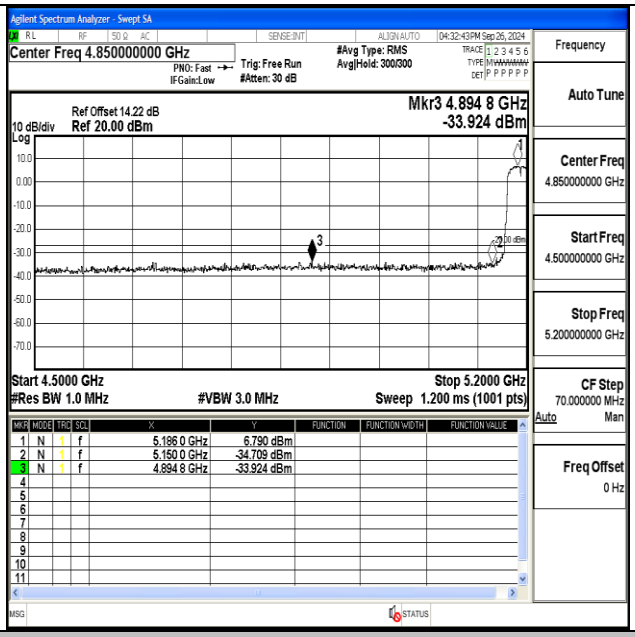
11AC20MIMO-Ant1-5240-PASS



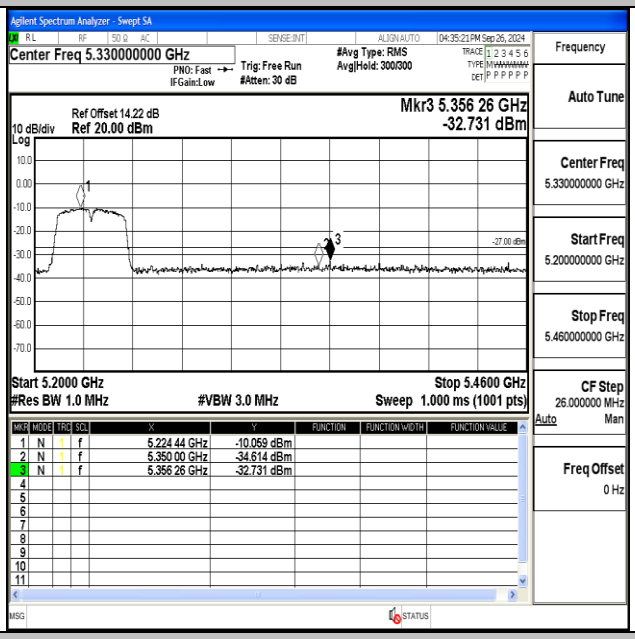
11AC20MIMO-Ant2-5240-PASS



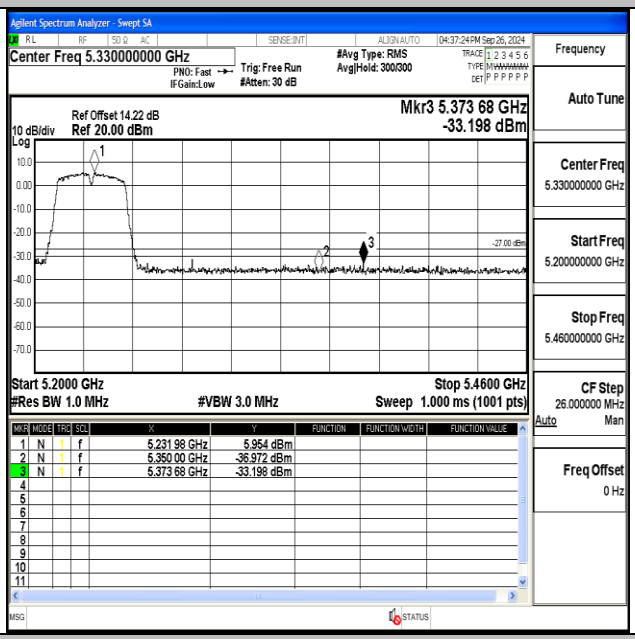
11AC40MIMO-Ant1-5190-PASS



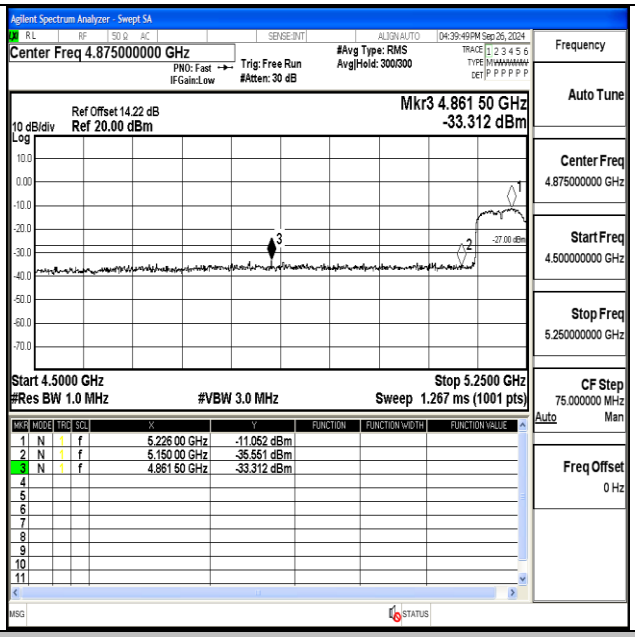
11AC40MIMO-Ant2-5190-PASS



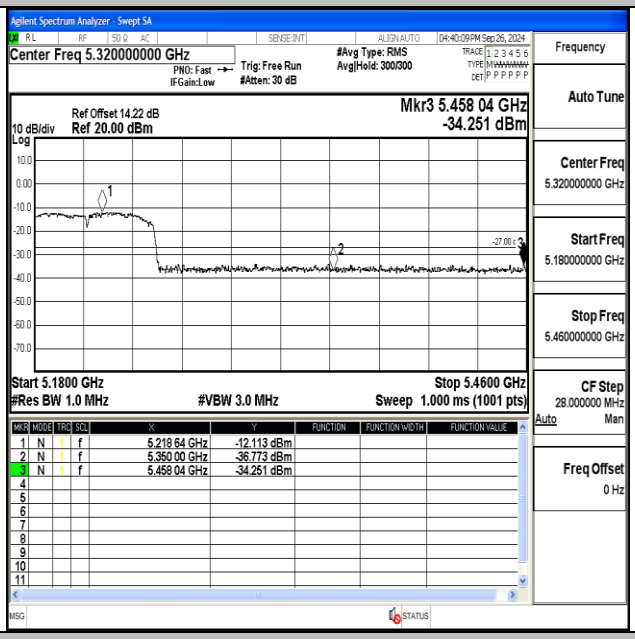
11AC40MIMO-Ant1-5230-PASS



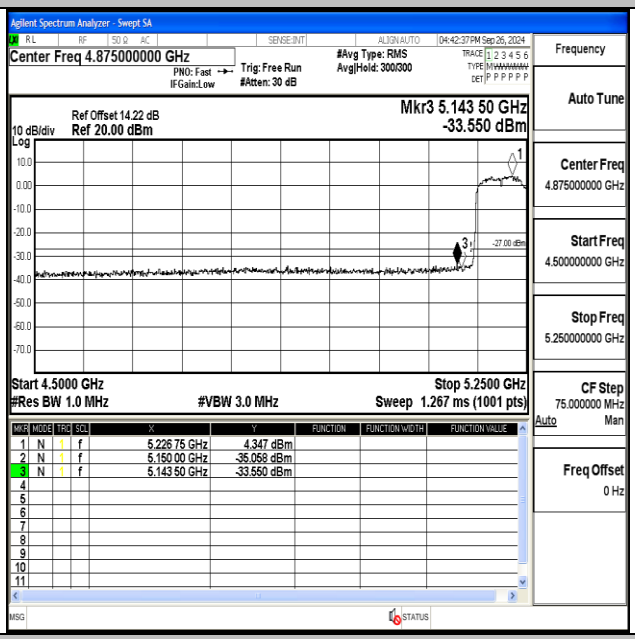
11AC40MIMO-Ant2-5230-PASS



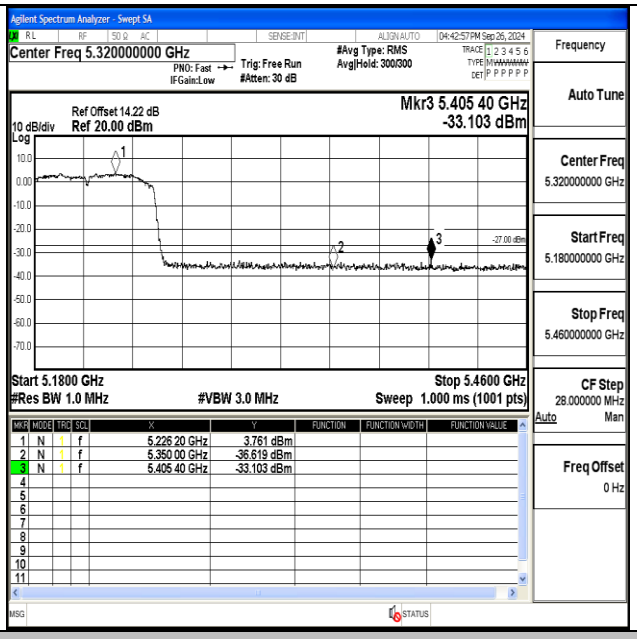
11AC80MIMO-Ant1-5210-PASS



11AC80MIMO-Ant1-5210-PASS



11AC80MIMO-Ant2-5210-PASS



11AC80MIMO-Ant2-5210-PASS

Appendix E: Frequency Stability

Test Result

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5180	20	132	5180.005129	5150 – 5250	PASS
5180	20	108	5179.969335	5150 – 5250	PASS
5180	50	120	5180.034933	5150 – 5250	PASS
5180	40	120	5179.961207	5150 – 5250	PASS
5180	30	120	5179.944016	5150 – 5250	PASS
5180	20	120	5179.953366	5150 – 5250	PASS
5180	10	120	5179.926704	5150 – 5250	PASS
5180	0	120	5179.968161	5150 – 5250	PASS
5180	-10	120	5180.093015	5150 – 5250	PASS
5180	-20	120	5179.977630	5150 – 5250	PASS
5180	-30	120	5179.939434	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5180	20	132	5179.943117	5150 – 5250	PASS
5180	20	108	5180.089708	5150 – 5250	PASS
5180	50	120	5179.927032	5150 – 5250	PASS
5180	40	120	5180.079981	5150 – 5250	PASS
5180	30	120	5179.955466	5150 – 5250	PASS
5180	20	120	5180.093140	5150 – 5250	PASS
5180	10	120	5180.076612	5150 – 5250	PASS
5180	0	120	5179.939233	5150 – 5250	PASS
5180	-10	120	5180.015180	5150 – 5250	PASS
5180	-20	120	5179.904034	5150 – 5250	PASS
5180	-30	120	5179.974530	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	132	5199.946412	5150 – 5250	PASS
5200	20	108	5200.094176	5150 – 5250	PASS
5200	50	120	5200.039637	5150 – 5250	PASS
5200	40	120	5199.934464	5150 – 5250	PASS
5200	30	120	5200.037124	5150 – 5250	PASS
5200	20	120	5200.046432	5150 – 5250	PASS
5200	10	120	5199.944760	5150 – 5250	PASS
5200	0	120	5199.947695	5150 – 5250	PASS
5200	-10	120	5199.921535	5150 – 5250	PASS
5200	-20	120	5200.068697	5150 – 5250	PASS
5200	-30	120	5200.019136	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	132	5200.015771	5150 – 5250	PASS
5200	20	108	5200.084972	5150 – 5250	PASS
5200	50	120	5199.970996	5150 – 5250	PASS
5200	40	120	5200.057669	5150 – 5250	PASS
5200	30	120	5199.983715	5150 – 5250	PASS
5200	20	120	5200.020240	5150 – 5250	PASS
5200	10	120	5200.055100	5150 – 5250	PASS
5200	0	120	5199.999311	5150 – 5250	PASS
5200	-10	120	5199.942525	5150 – 5250	PASS
5200	-20	120	5200.051667	5150 – 5250	PASS
5200	-30	120	5199.901170	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	132	5240.022422	5150 – 5250	PASS
5240	20	108	5239.979973	5150 – 5250	PASS
5240	50	120	5239.911140	5150 – 5250	PASS
5240	40	120	5240.011221	5150 – 5250	PASS
5240	30	120	5240.076001	5150 – 5250	PASS
5240	20	120	5240.097196	5150 – 5250	PASS
5240	10	120	5239.964981	5150 – 5250	PASS
5240	0	120	5239.934266	5150 – 5250	PASS
5240	-10	120	5239.964559	5150 – 5250	PASS
5240	-20	120	5240.005501	5150 – 5250	PASS
5240	-30	120	5239.949387	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	132	5240.092594	5150 – 5250	PASS
5240	20	108	5240.034917	5150 – 5250	PASS
5240	50	120	5239.995319	5150 – 5250	PASS
5240	40	120	5239.907488	5150 – 5250	PASS
5240	30	120	5240.094972	5150 – 5250	PASS
5240	20	120	5239.992698	5150 – 5250	PASS
5240	10	120	5240.010046	5150 – 5250	PASS
5240	0	120	5239.900120	5150 – 5250	PASS
5240	-10	120	5239.941660	5150 – 5250	PASS
5240	-20	120	5239.973675	5150 – 5250	PASS
5240	-30	120	5240.081840	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5190	20	132	5190.087750	5150 – 5250	PASS
5190	20	108	5189.930950	5150 – 5250	PASS
5190	50	120	5189.928768	5150 – 5250	PASS
5190	40	120	5189.971984	5150 – 5250	PASS
5190	30	120	5189.981768	5150 – 5250	PASS
5190	20	120	5190.087799	5150 – 5250	PASS
5190	10	120	5190.093155	5150 – 5250	PASS
5190	0	120	5190.012565	5150 – 5250	PASS
5190	-10	120	5190.021701	5150 – 5250	PASS
5190	-20	120	5189.987662	5150 – 5250	PASS
5190	-30	120	5190.027504	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5190	20	132	5190.030027	5150 – 5250	PASS
5190	20	108	5190.061777	5150 – 5250	PASS
5190	50	120	5190.024711	5150 – 5250	PASS
5190	40	120	5190.032731	5150 – 5250	PASS
5190	30	120	5190.095051	5150 – 5250	PASS
5190	20	120	5189.994575	5150 – 5250	PASS
5190	10	120	5190.030037	5150 – 5250	PASS
5190	0	120	5189.953970	5150 – 5250	PASS
5190	-10	120	5190.046604	5150 – 5250	PASS
5190	-20	120	5189.936429	5150 – 5250	PASS
5190	-30	120	5189.912859	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5230	20	132	5229.942115	5150 – 5250	PASS
5230	20	108	5229.909968	5150 – 5250	PASS
5230	50	120	5230.079754	5150 – 5250	PASS
5230	40	120	5230.049069	5150 – 5250	PASS
5230	30	120	5230.053682	5150 – 5250	PASS
5230	20	120	5229.996703	5150 – 5250	PASS
5230	10	120	5230.037926	5150 – 5250	PASS
5230	0	120	5230.058278	5150 – 5250	PASS
5230	-10	120	5230.070241	5150 – 5250	PASS
5230	-20	120	5229.960882	5150 – 5250	PASS
5230	-30	120	5229.926624	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5230	20	132	5229.962000	5150 – 5250	PASS
5230	20	108	5229.904677	5150 – 5250	PASS
5230	50	120	5229.999759	5150 – 5250	PASS
5230	40	120	5230.062056	5150 – 5250	PASS
5230	30	120	5230.094389	5150 – 5250	PASS
5230	20	120	5229.943975	5150 – 5250	PASS
5230	10	120	5230.009883	5150 – 5250	PASS
5230	0	120	5230.037175	5150 – 5250	PASS
5230	-10	120	5229.925838	5150 – 5250	PASS
5230	-20	120	5230.030330	5150 – 5250	PASS
5230	-30	120	5230.000707	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5210	20	132	5210.091640	5150 – 5250	PASS
5210	20	108	5210.043473	5150 – 5250	PASS
5210	50	120	5210.032886	5150 – 5250	PASS
5210	40	120	5210.027515	5150 – 5250	PASS
5210	30	120	5210.042971	5150 – 5250	PASS
5210	20	120	5209.971419	5150 – 5250	PASS
5210	10	120	5210.047780	5150 – 5250	PASS
5210	0	120	5209.997254	5150 – 5250	PASS
5210	-10	120	5209.970826	5150 – 5250	PASS
5210	-20	120	5209.927968	5150 – 5250	PASS
5210	-30	120	5210.061009	5150 – 5250	PASS

Ant2

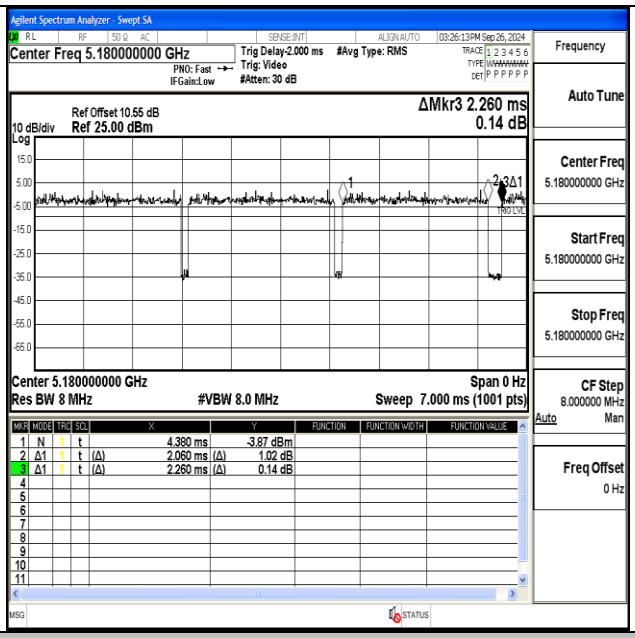
Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5210	20	132	5209.960213	5150 – 5250	PASS
5210	20	108	5210.026727	5150 – 5250	PASS
5210	50	120	5210.017396	5150 – 5250	PASS
5210	40	120	5209.944325	5150 – 5250	PASS
5210	30	120	5210.072901	5150 – 5250	PASS
5210	20	120	5210.099086	5150 – 5250	PASS
5210	10	120	5210.089456	5150 – 5250	PASS
5210	0	120	5209.973485	5150 – 5250	PASS
5210	-10	120	5209.941942	5150 – 5250	PASS
5210	-20	120	5210.041055	5150 – 5250	PASS
5210	-30	120	5210.093554	5150 – 5250	PASS

Appendix F: Duty Cycle

Test Result

Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Dc. Factor [%]	1/T [kHz]
11A	Ant1	5180	2.06	2.26	91.15	0.40	0.49
11A	Ant2	5180	2.06	2.25	91.56	0.38	0.49
11A	Ant1	5200	2.06	2.29	89.96	0.46	0.49
11A	Ant2	5200	2.07	2.20	94.09	0.26	0.48
11A	Ant1	5240	2.07	2.30	90.00	0.46	0.48
11A	Ant2	5240	2.07	2.18	94.95	0.23	0.48
11N20MIMO	Ant1	5180	1.92	2.11	91.00	0.41	0.52
11N20MIMO	Ant2	5180	1.91	2.14	89.25	0.49	0.52
11N20MIMO	Ant1	5200	1.93	2.12	91.04	0.41	0.52
11N20MIMO	Ant2	5200	1.91	2.06	92.72	0.33	0.52
11N20MIMO	Ant1	5240	1.92	2.03	94.58	0.24	0.52
11N20MIMO	Ant2	5240	1.91	2.11	90.52	0.43	0.52
11N40MIMO	Ant1	5190	0.95	1.08	87.96	0.56	1.05
11N40MIMO	Ant2	5190	0.94	1.09	86.24	0.64	1.06
11N40MIMO	Ant1	5230	0.94	1.10	85.45	0.68	1.06
11N40MIMO	Ant2	5230	0.95	1.09	87.16	0.60	1.05
11AC20MIMO	Ant1	5180	1.89	1.92	98.44	0.07	0.53
11AC20MIMO	Ant2	5180	1.89	1.92	98.44	0.07	0.53
11AC20MIMO	Ant1	5200	1.89	1.92	98.44	0.07	0.53
11AC20MIMO	Ant2	5200	1.89	1.92	98.44	0.07	0.53
11AC20MIMO	Ant1	5240	1.89	1.92	98.44	0.07	0.53
11AC20MIMO	Ant2	5240	1.89	1.92	98.44	0.07	0.53
11AC40MIMO	Ant1	5190	0.93	0.96	96.88	0.14	1.08
11AC40MIMO	Ant2	5190	0.93	0.96	96.88	0.14	1.08
11AC40MIMO	Ant1	5230	0.93	0.96	96.88	0.14	1.08
11AC40MIMO	Ant2	5230	0.93	0.96	96.88	0.14	1.08
11AC80MIMO	Ant1	5210	0.45	0.48	93.75	0.28	2.22
11AC80MIMO	Ant2	5210	0.45	0.48	93.75	0.28	2.22

Test Graphs



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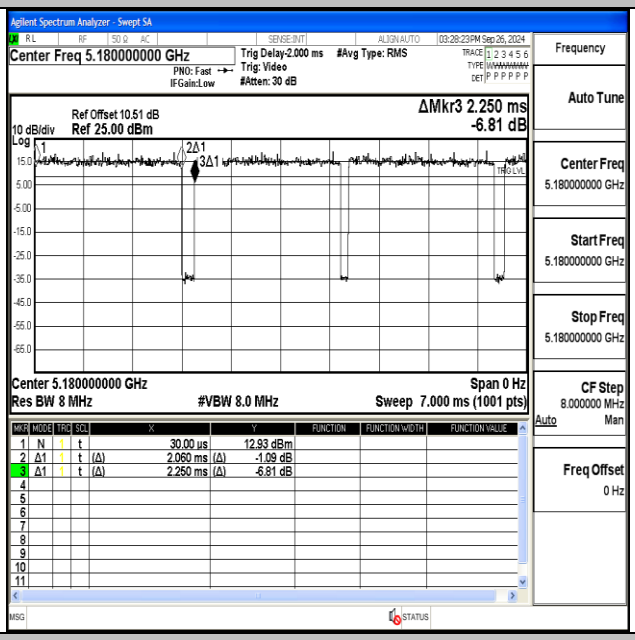

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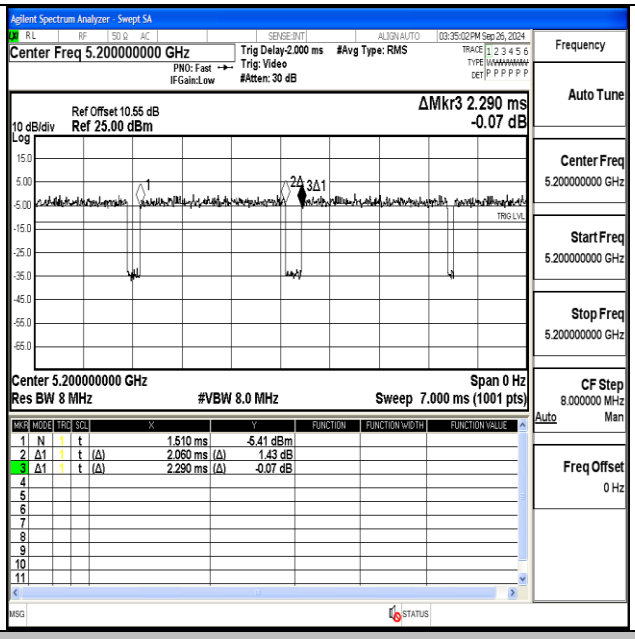

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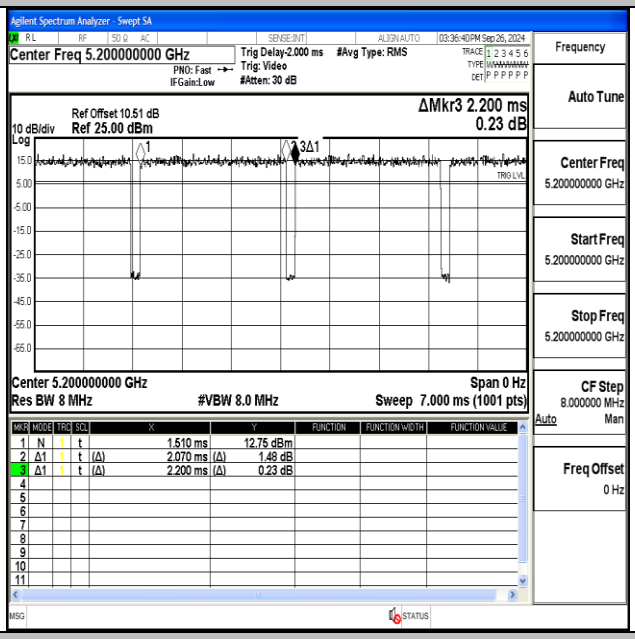

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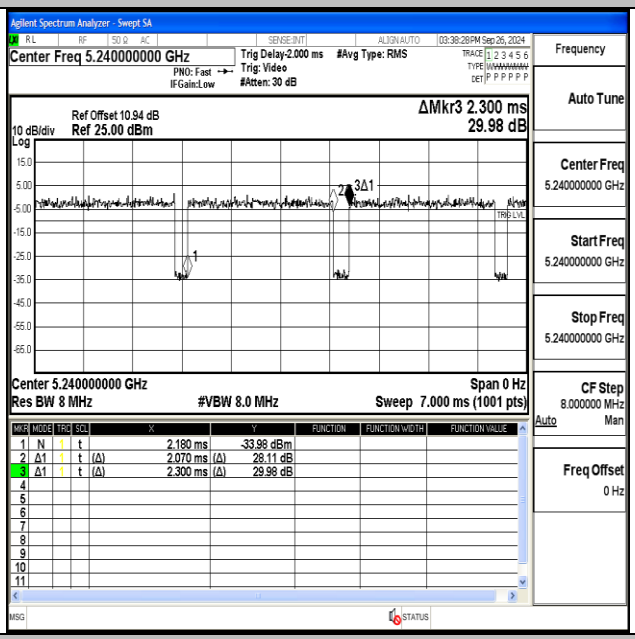

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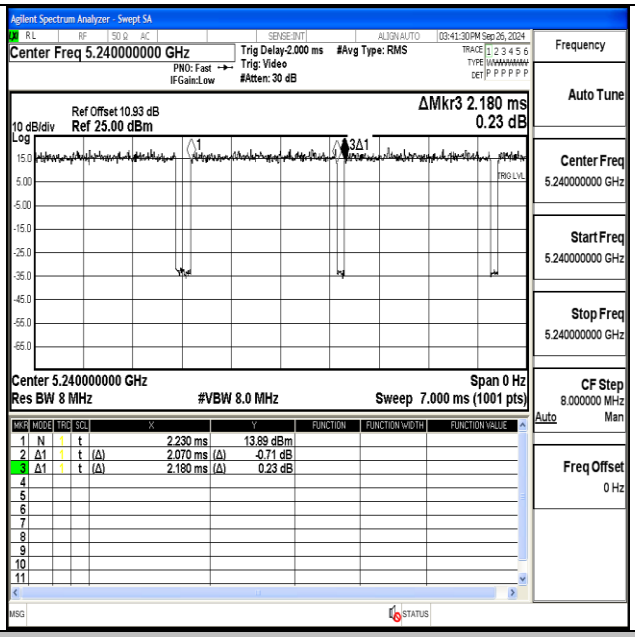

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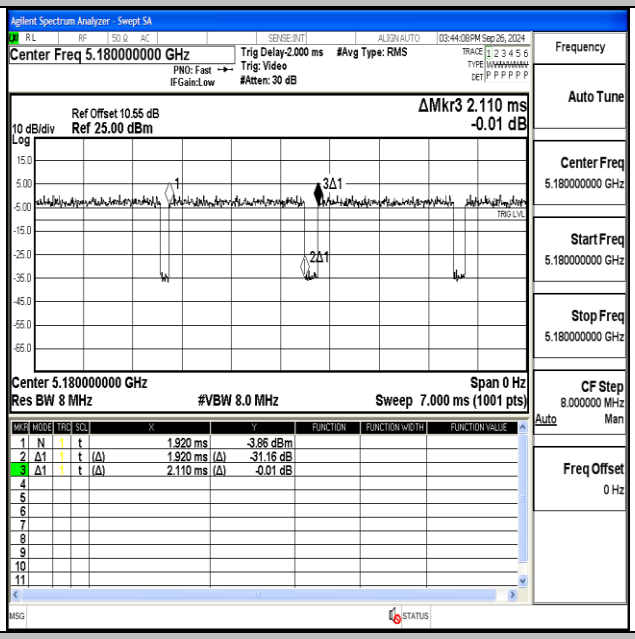

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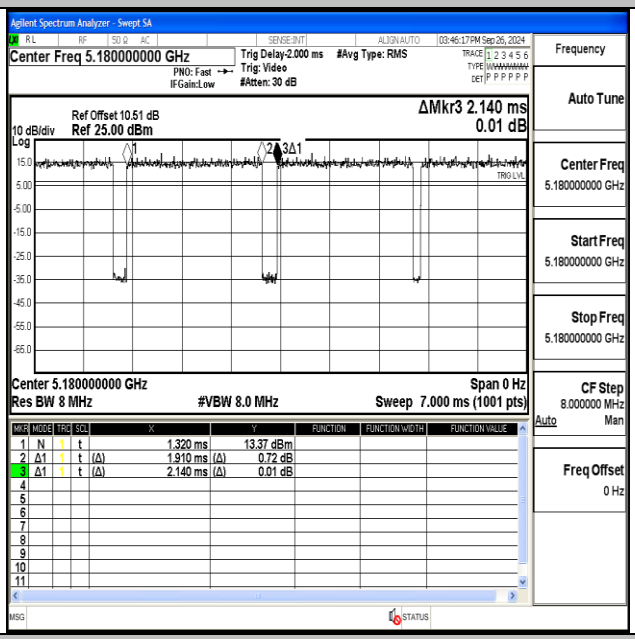

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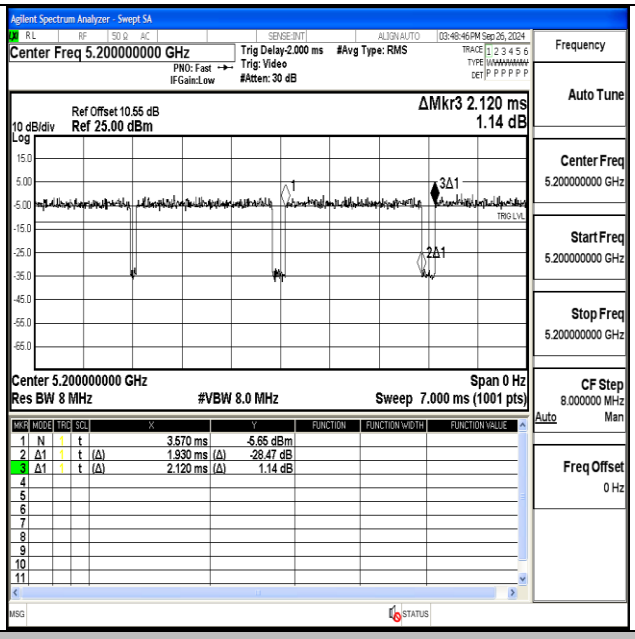

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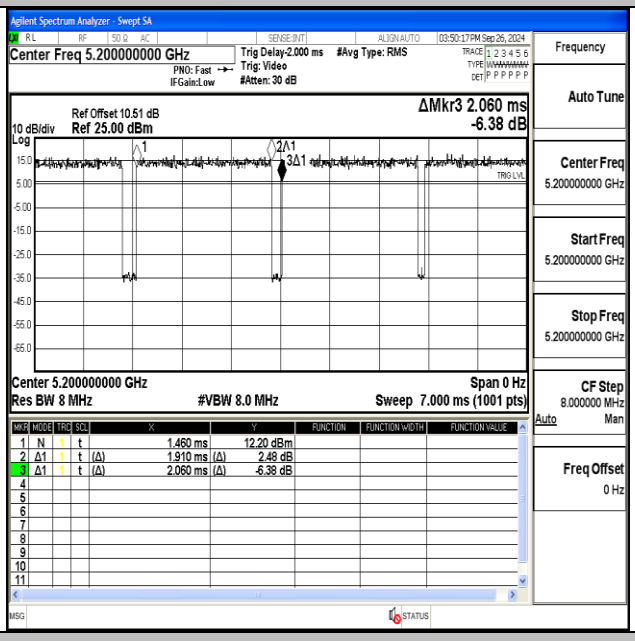

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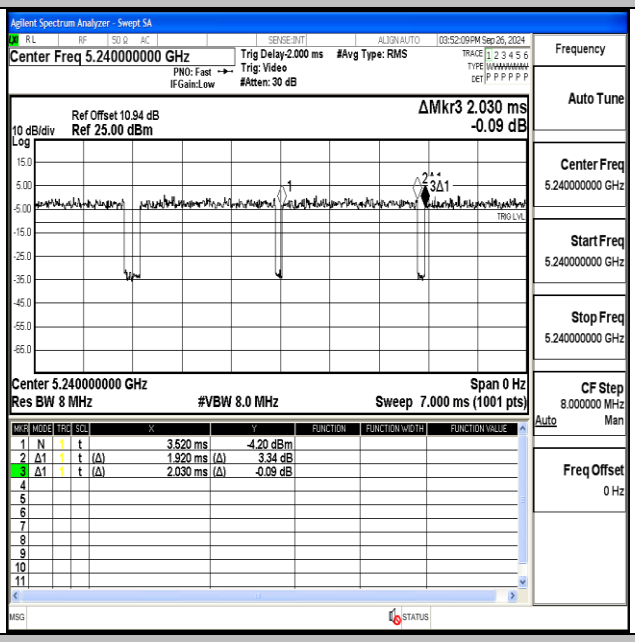

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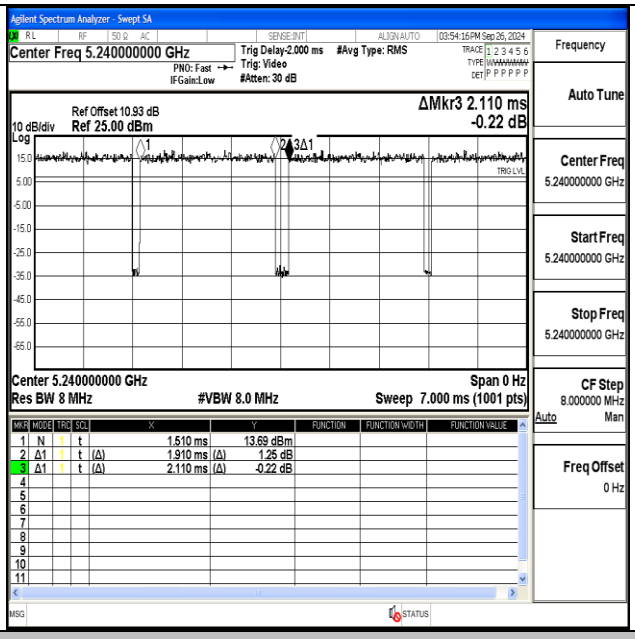

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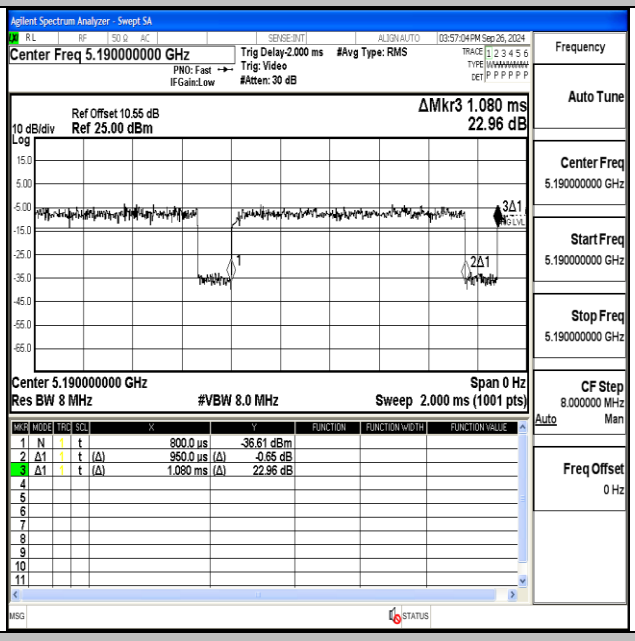

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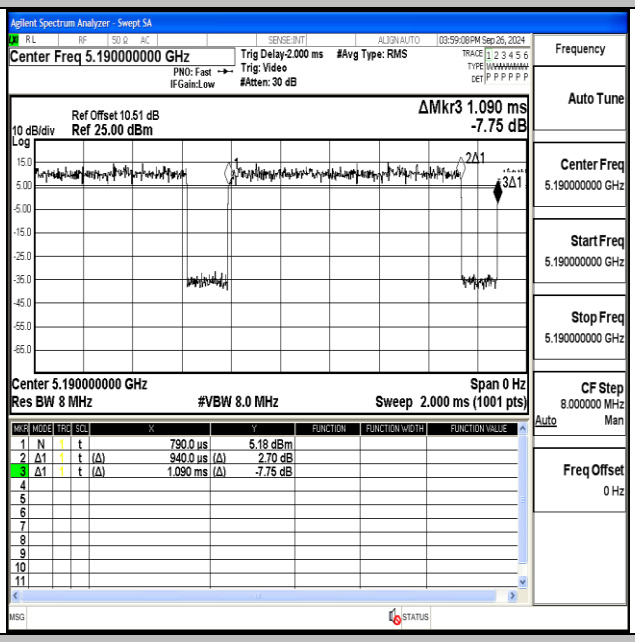

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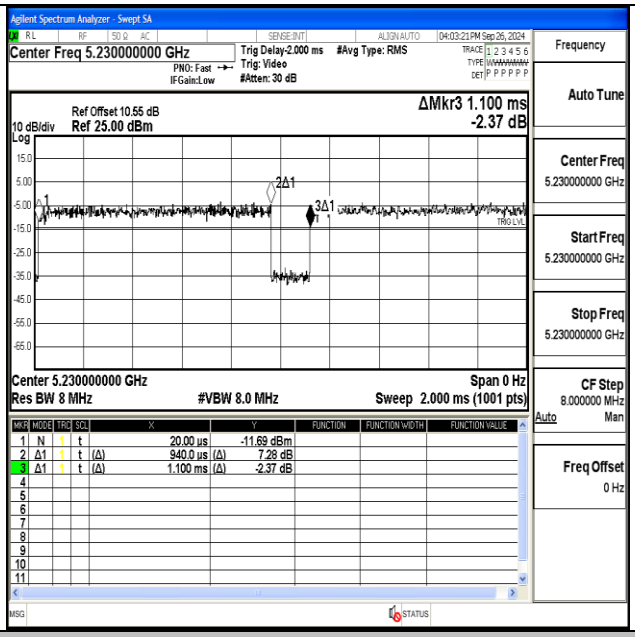

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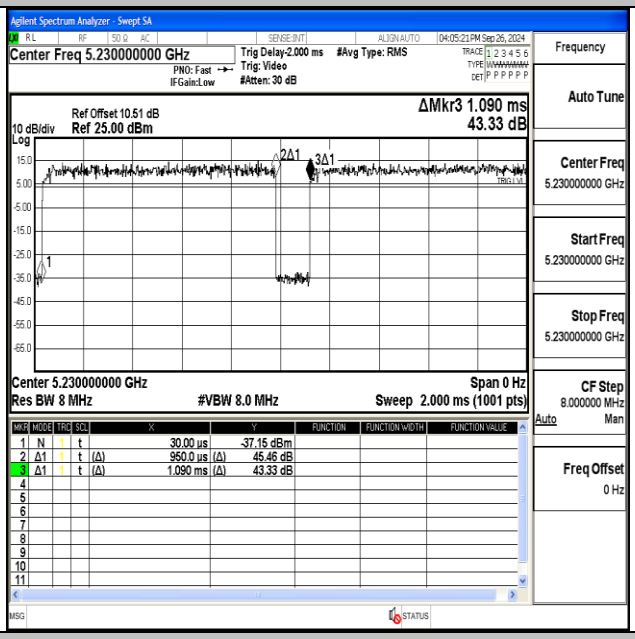

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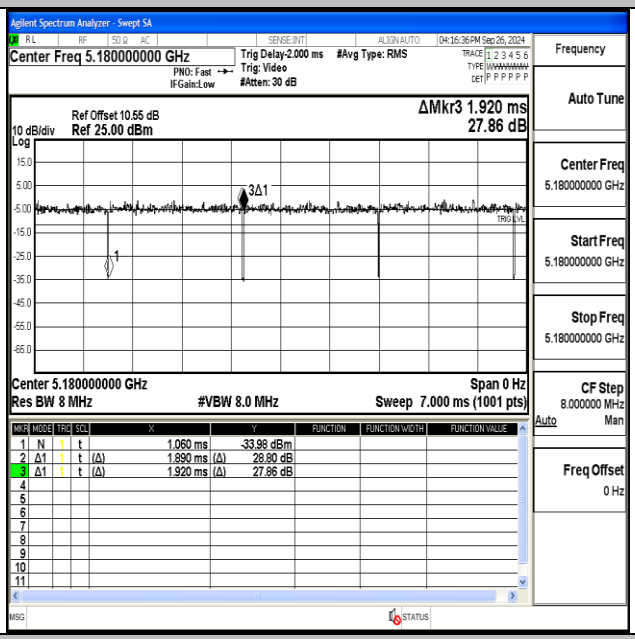

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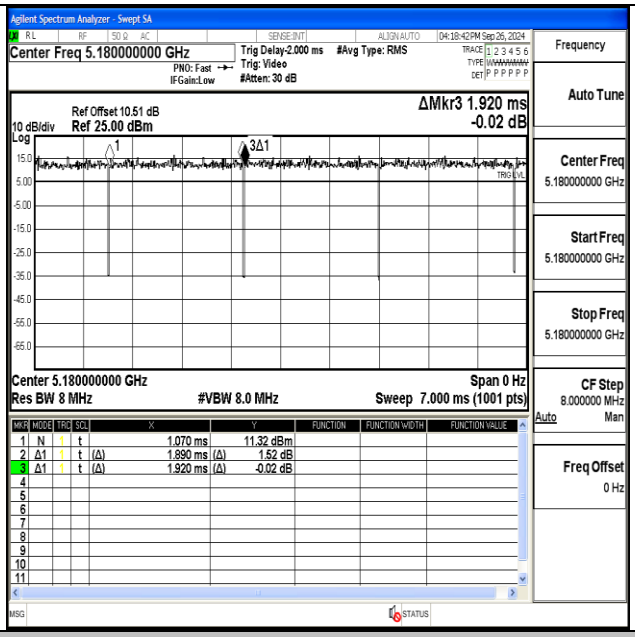

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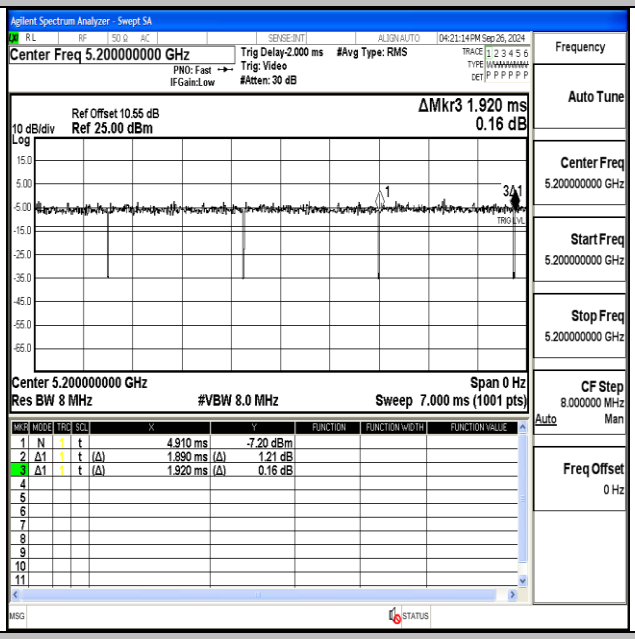

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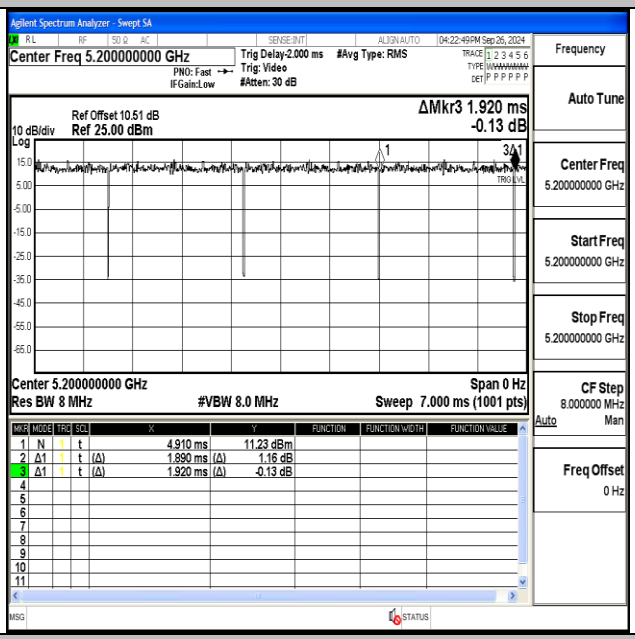

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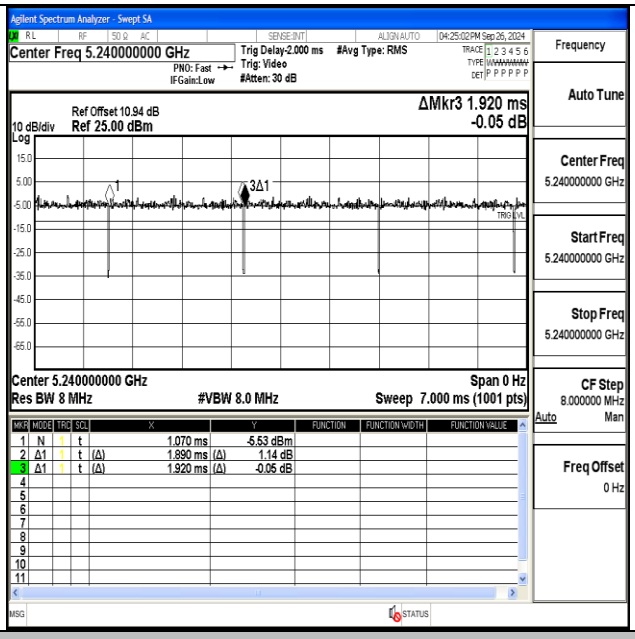

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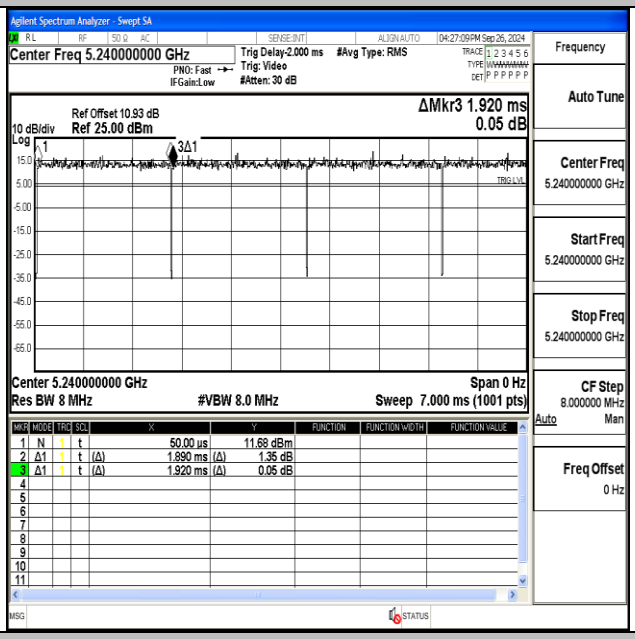

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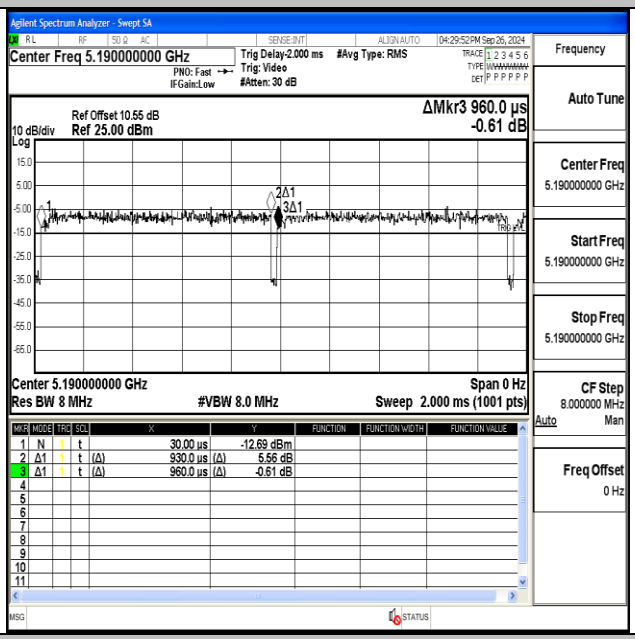

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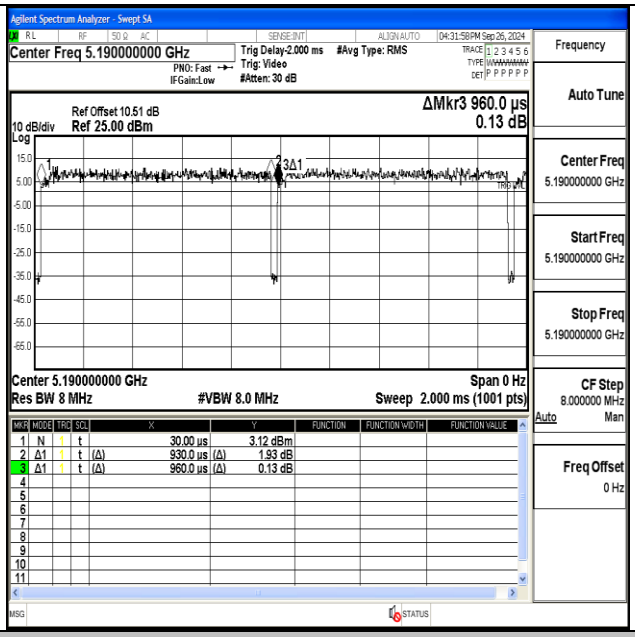

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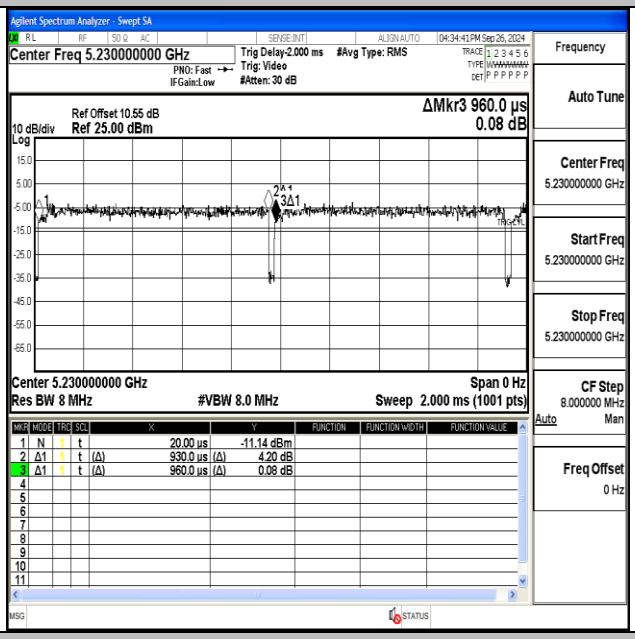

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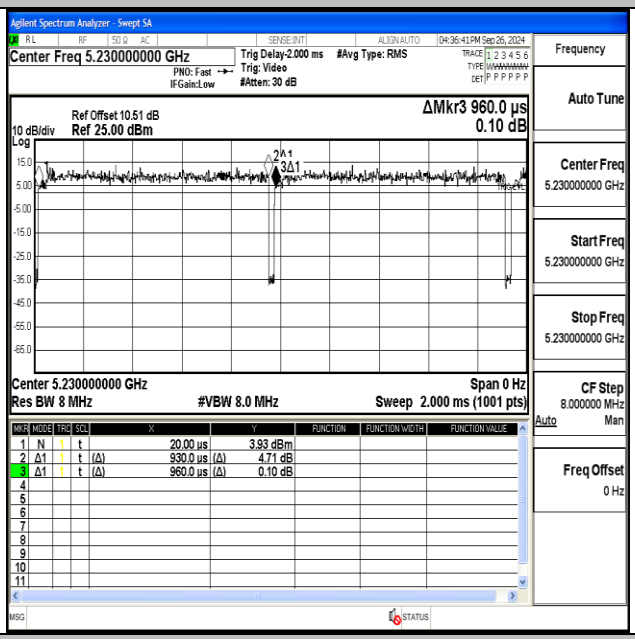

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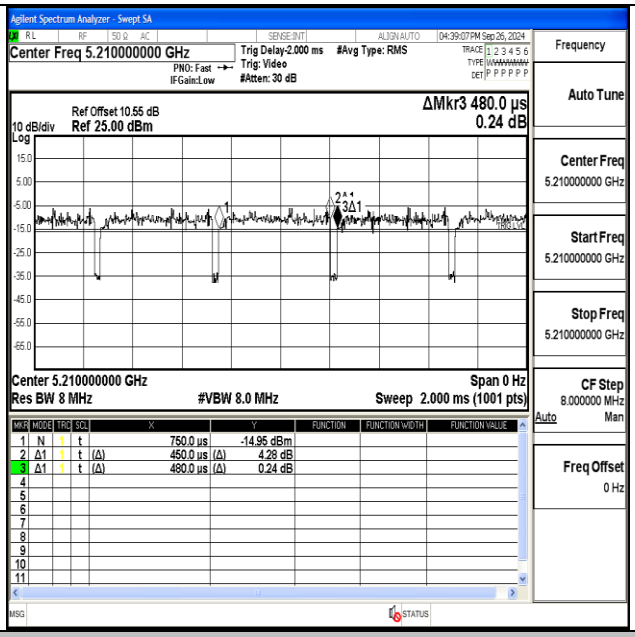

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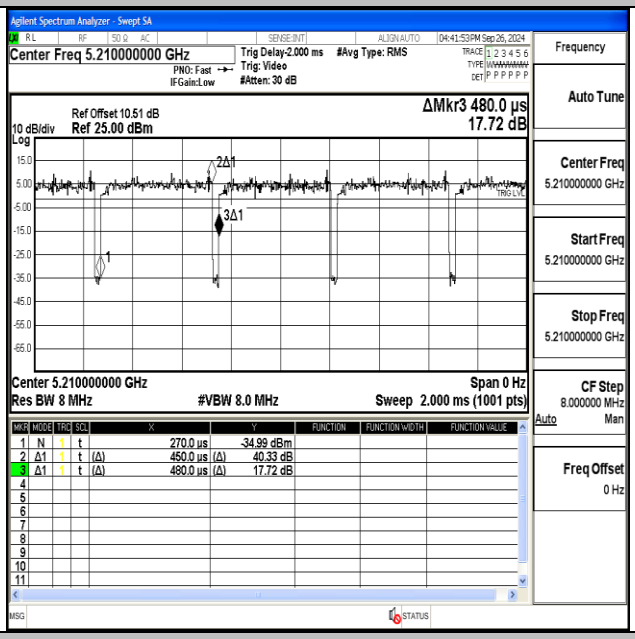

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