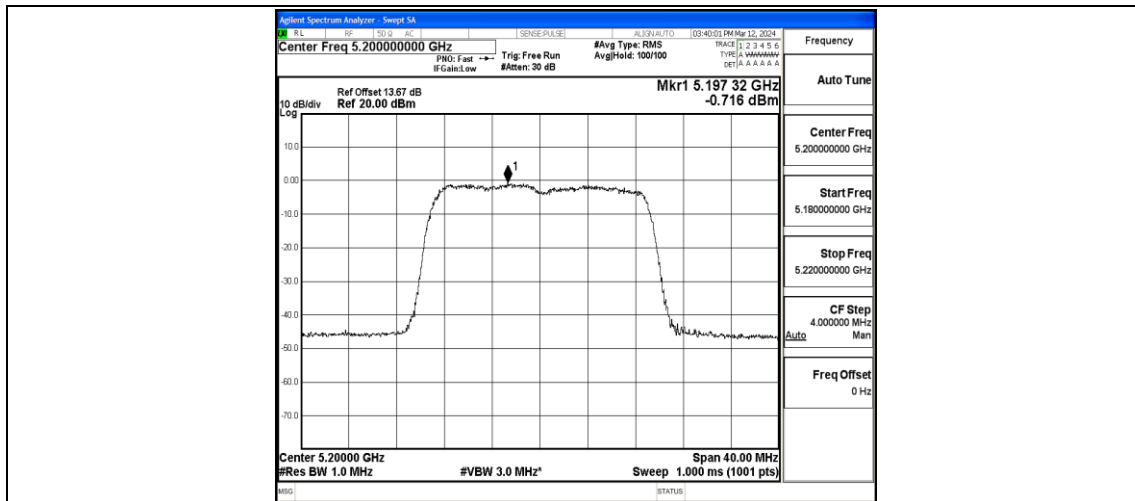
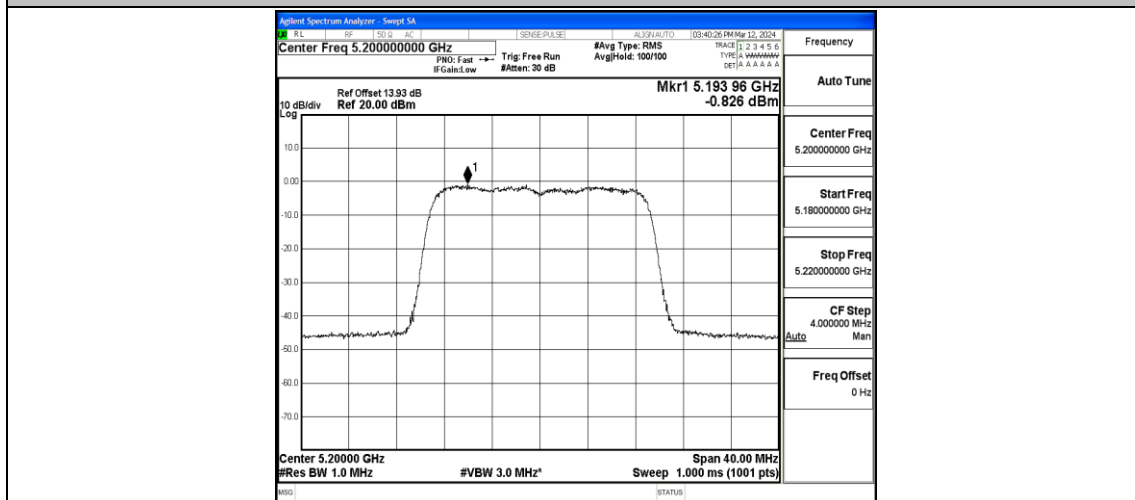
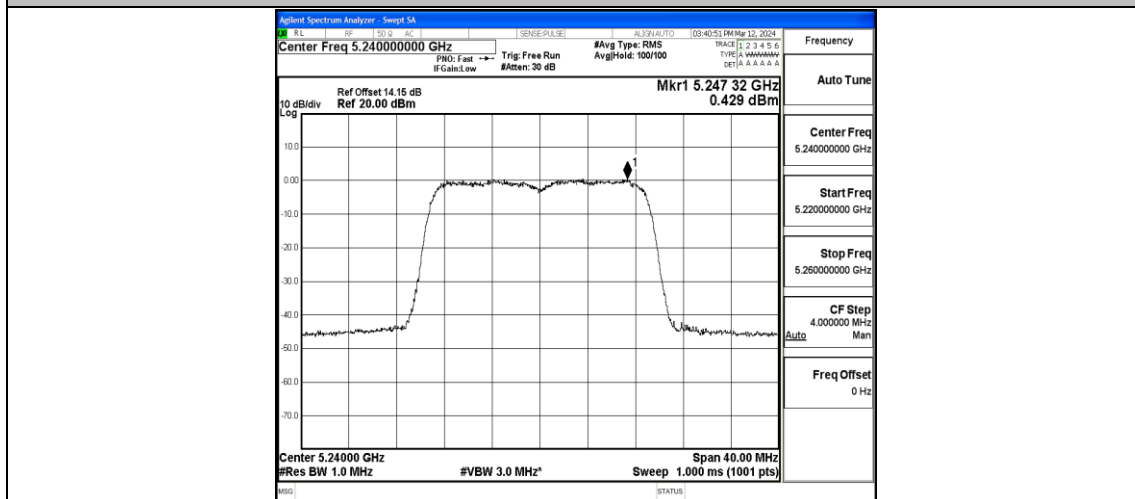




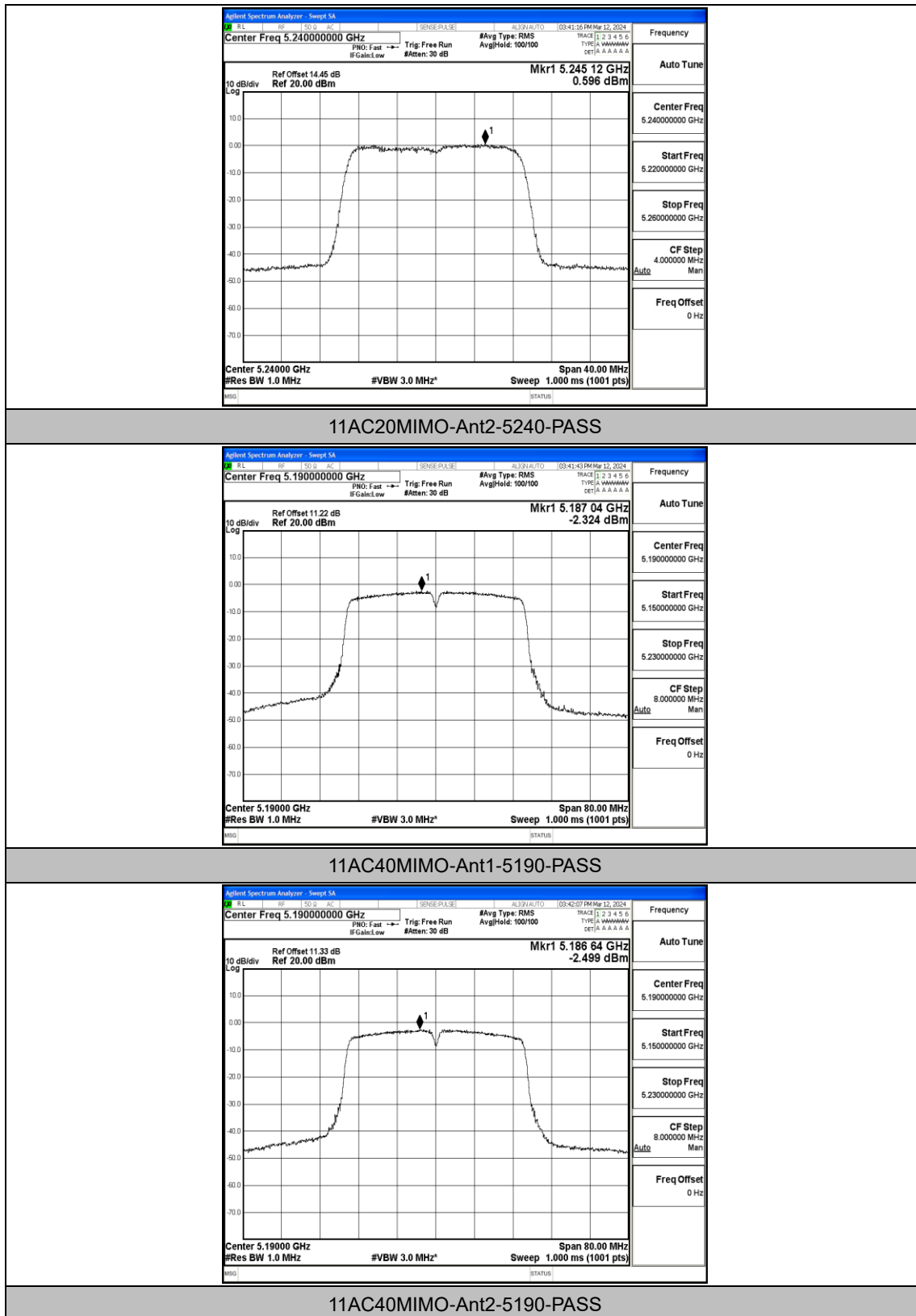
11AC20MIMO-Ant1-5200-PASS

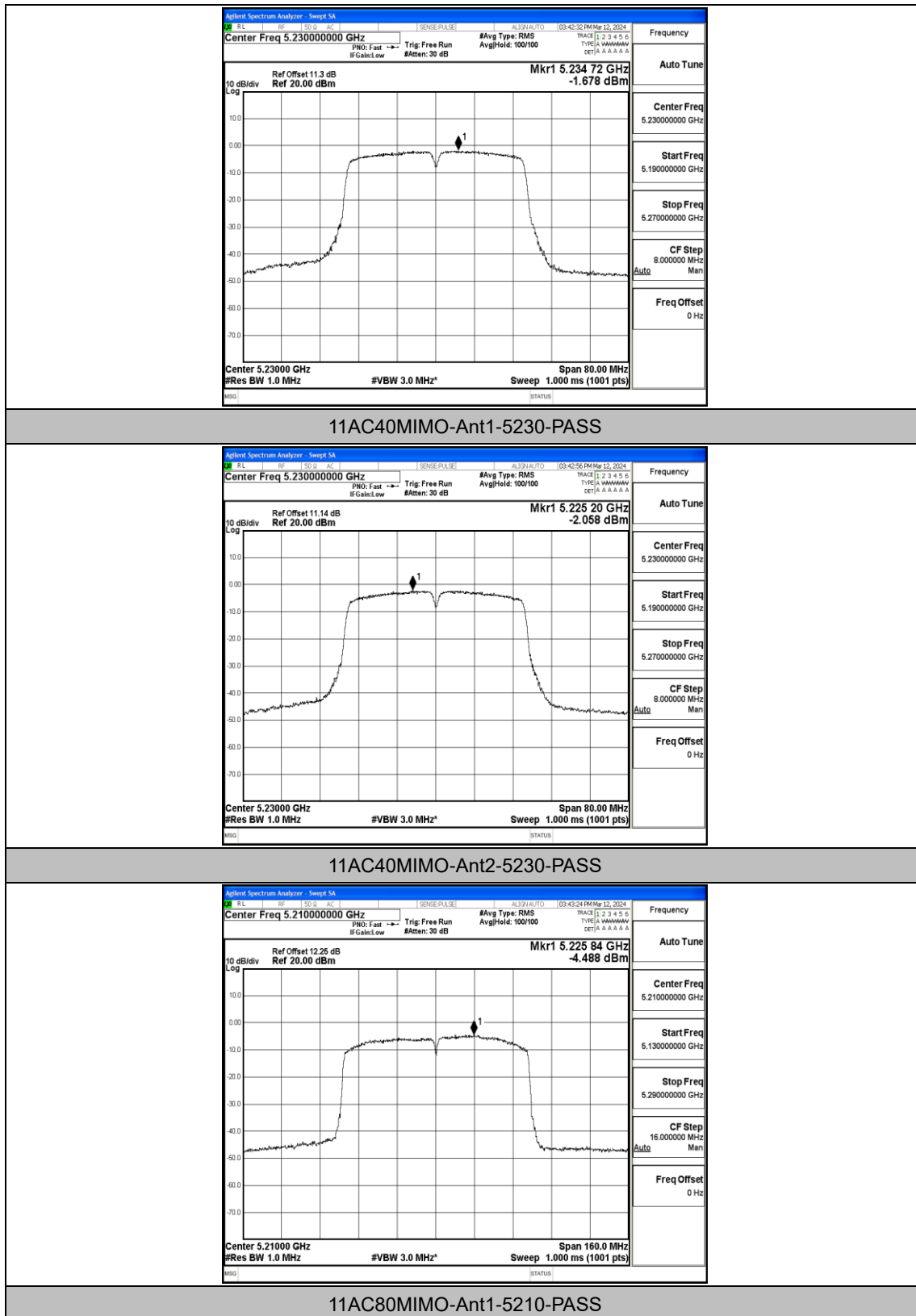


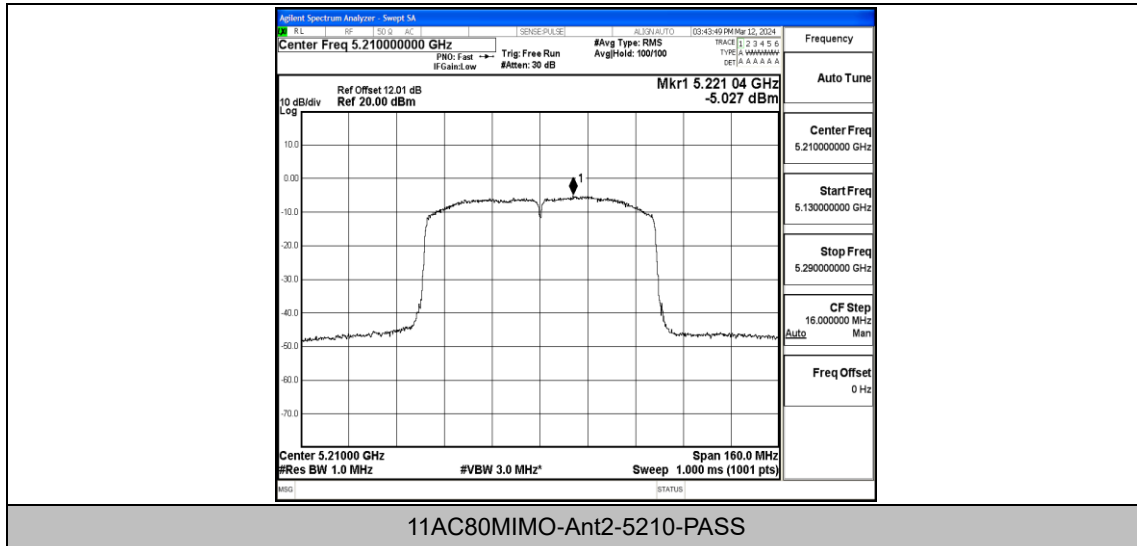
11AC20MIMO-Ant2-5200-PASS



11AC20MIMO-Ant1-5240-PASS





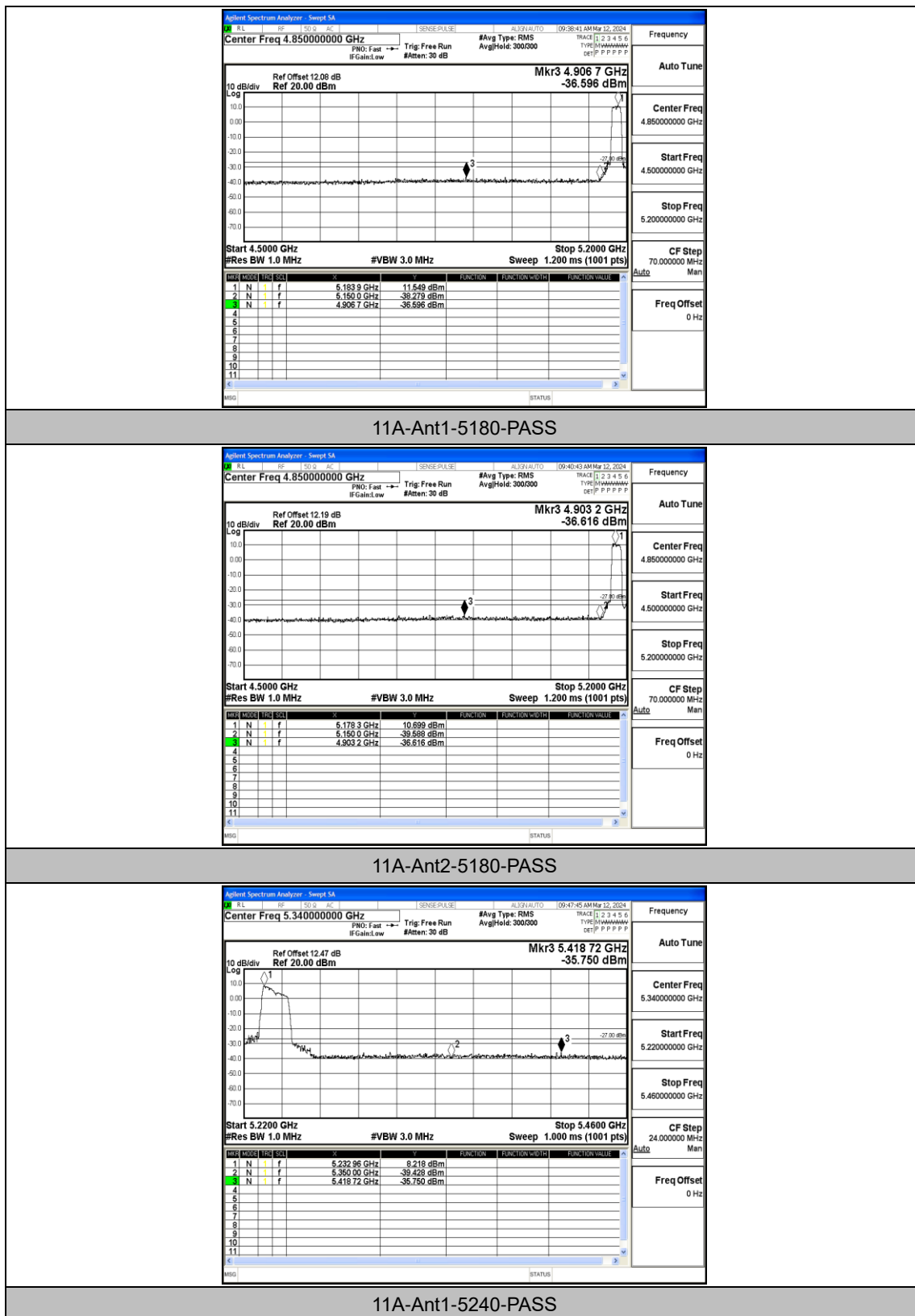


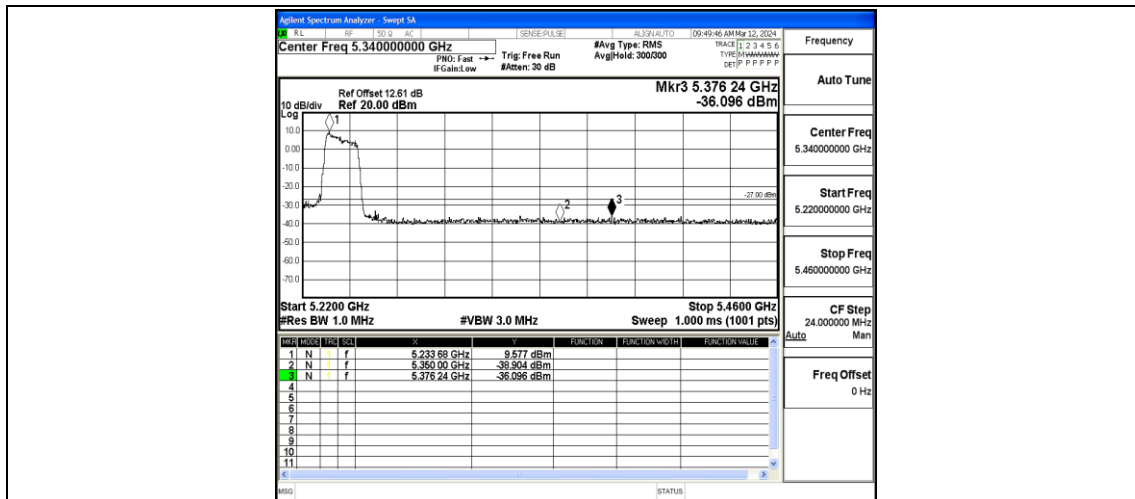
Appendix D: Band edge measurements

Test Result

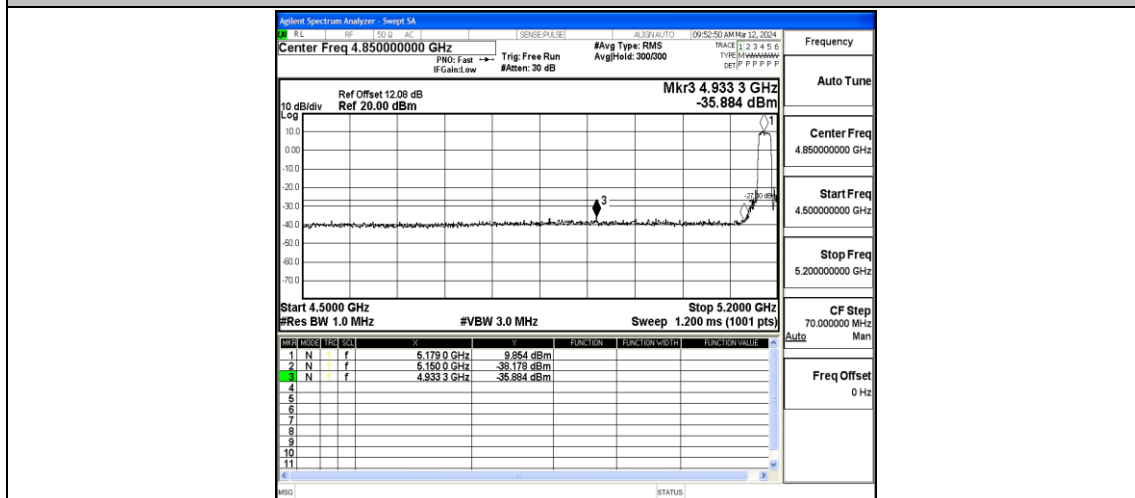
TestMode	Antenna	ChName	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-36.6	≤-27	PASS
11A	Ant2	Low	5180	-36.62	≤-27	PASS
11A	Ant1	High	5240	-35.75	≤-27	PASS
11A	Ant2	High	5240	-36.1	≤-27	PASS
11N20MIMO	Ant1	Low	5180	-35.88	≤-27	PASS
11N20MIMO	Ant2	Low	5180	-36.6	≤-27	PASS
11N20MIMO	Ant1	High	5240	-35.72	≤-27	PASS
11N20MIMO	Ant2	High	5240	-36.52	≤-27	PASS
11N40MIMO	Ant1	Low	5190	-33.29	≤-27	PASS
11N40MIMO	Ant2	Low	5190	-33.99	≤-27	PASS
11N40MIMO	Ant1	High	5230	-35.6	≤-27	PASS
11N40MIMO	Ant2	High	5230	-35.81	≤-27	PASS
11AC20MIMO	Ant1	Low	5180	-37.04	≤-27	PASS
11AC20MIMO	Ant2	Low	5180	-36.45	≤-27	PASS
11AC20MIMO	Ant1	High	5240	-36.09	≤-27	PASS
11AC20MIMO	Ant2	High	5240	-35.64	≤-27	PASS
11AC40MIMO	Ant1	Low	5190	-33.72	≤-27	PASS
11AC40MIMO	Ant2	Low	5190	-34.5	≤-27	PASS
11AC40MIMO	Ant1	High	5230	-36.47	≤-27	PASS
11AC40MIMO	Ant2	High	5230	-35.81	≤-27	PASS
11AC80MIMO	Ant1	Low	5210	-32.74	≤-27	PASS
11AC80MIMO	Ant1	High	5210	-36.24	≤-27	PASS
11AC80MIMO	Ant2	Low	5210	-33.65	≤-27	PASS
11AC80MIMO	Ant2	High	5210	-36.33	≤-27	PASS

Test Graphs

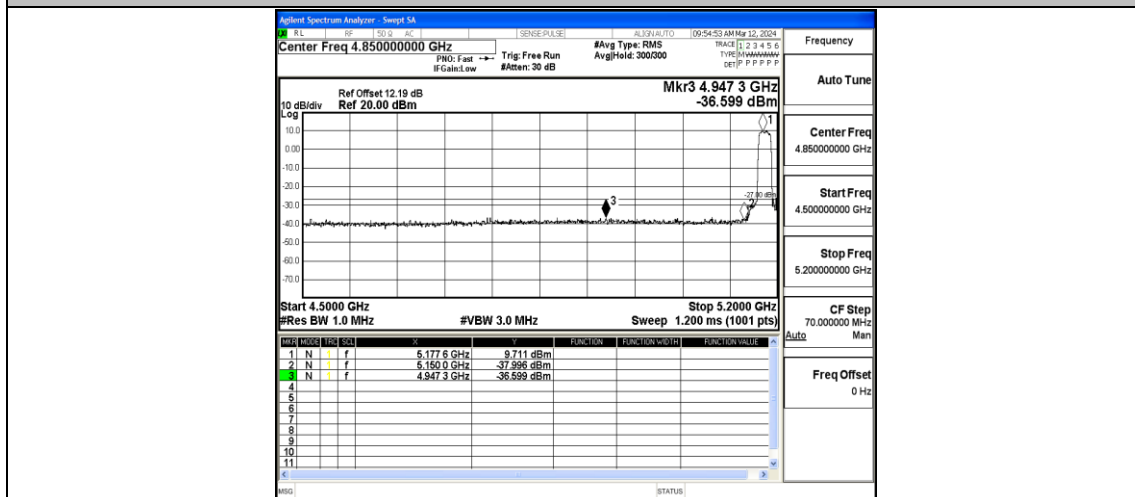




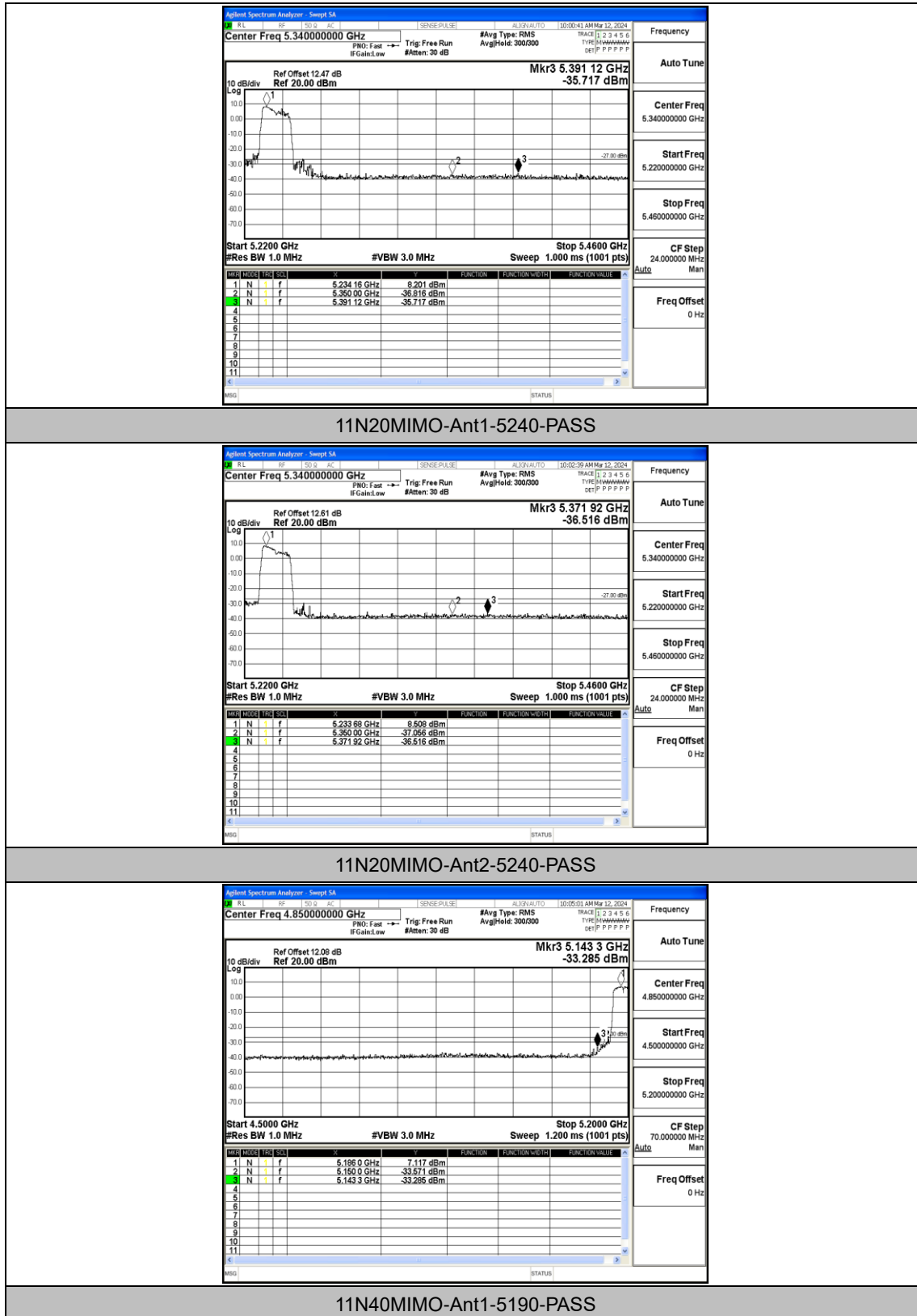
11A-Ant2-5240-PASS

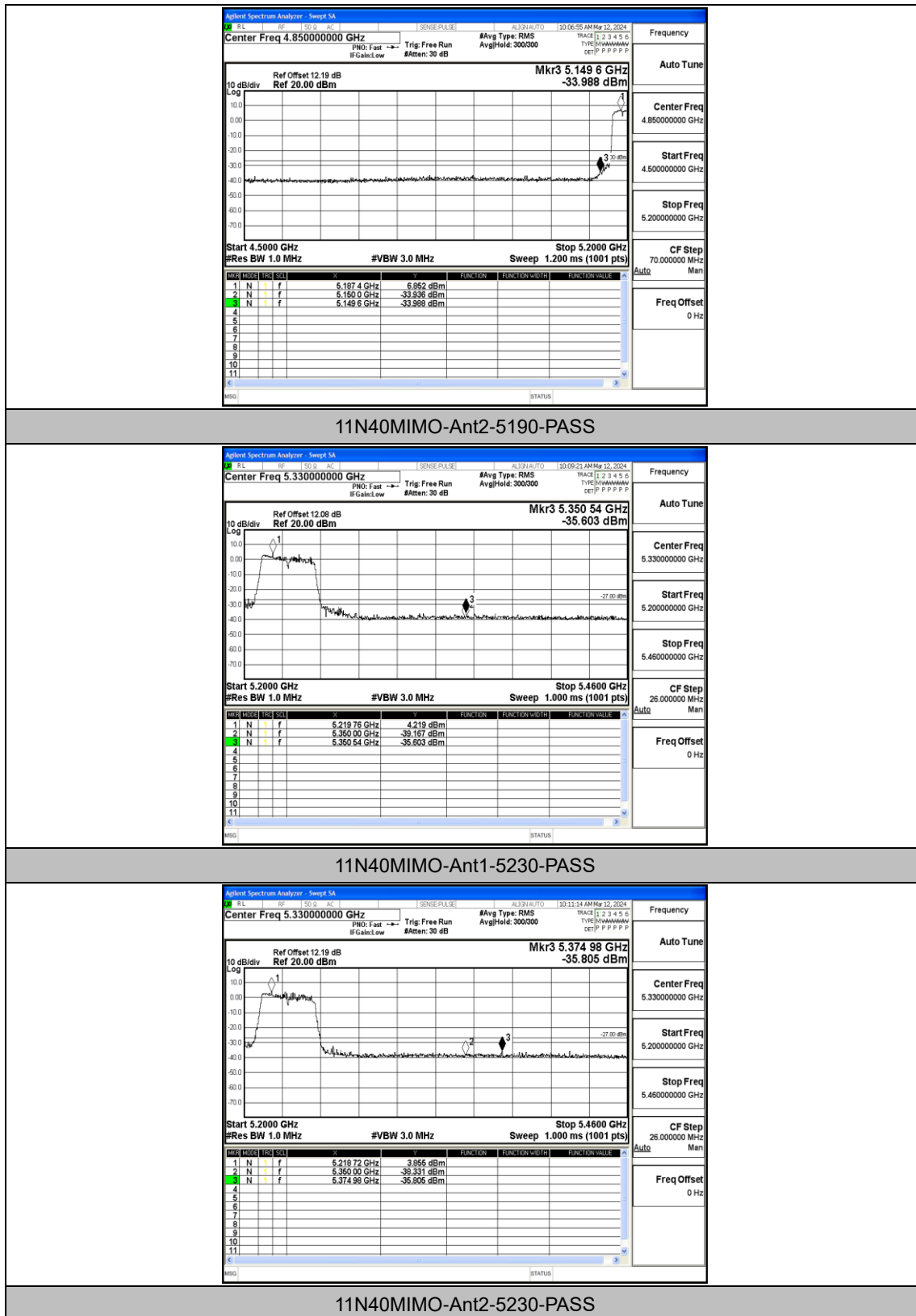


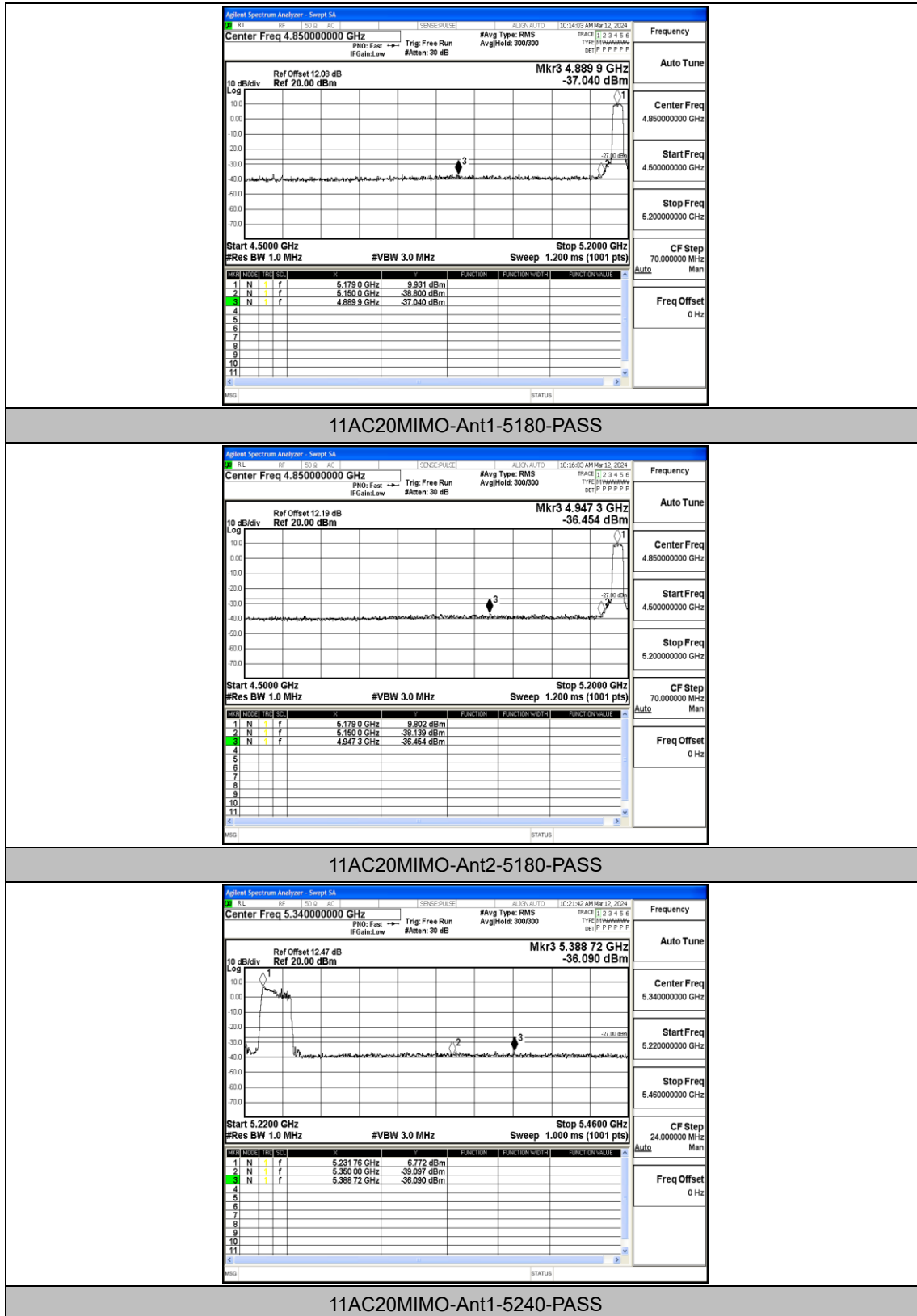
11N20MIMO-Ant1-5180-PASS

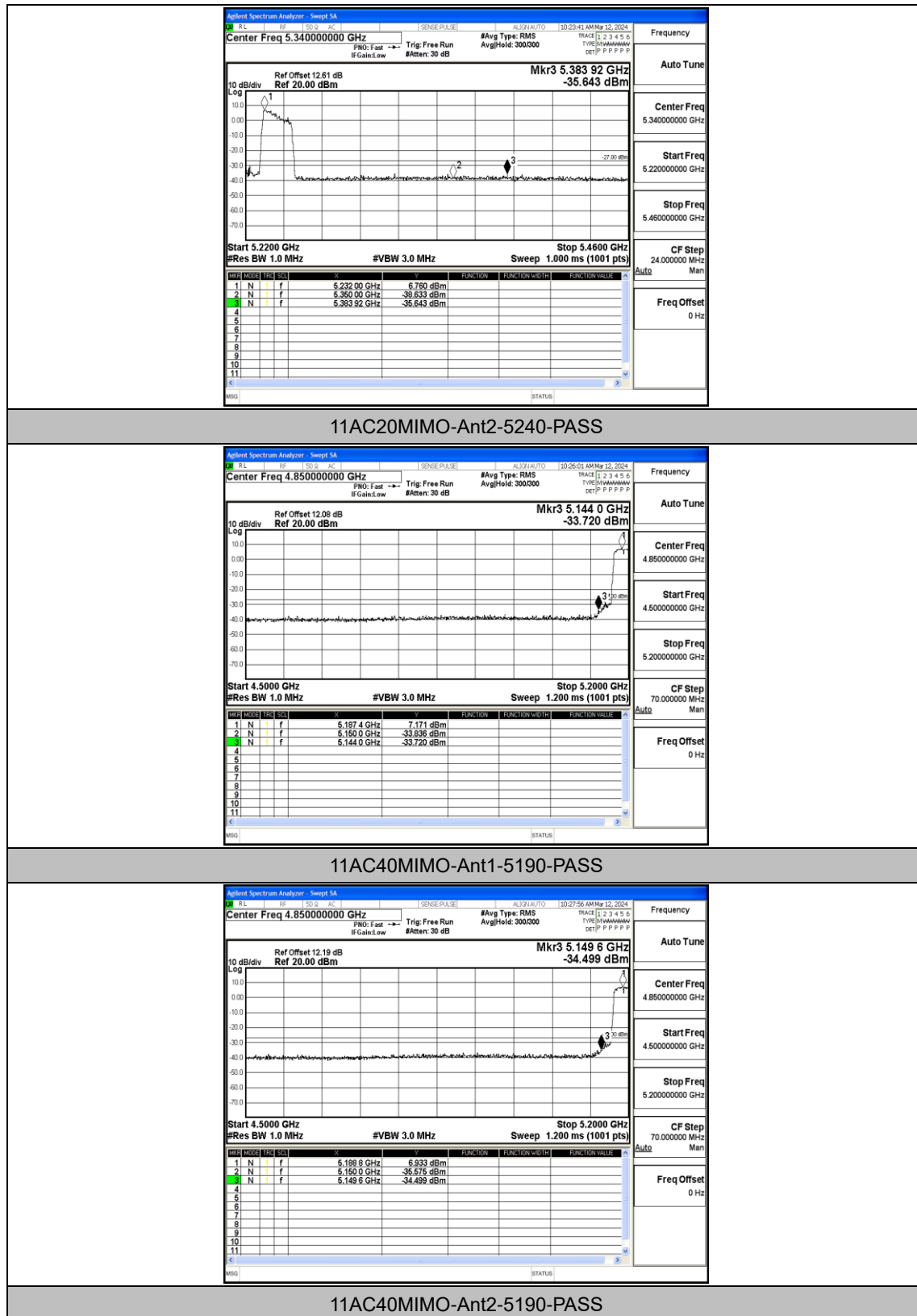


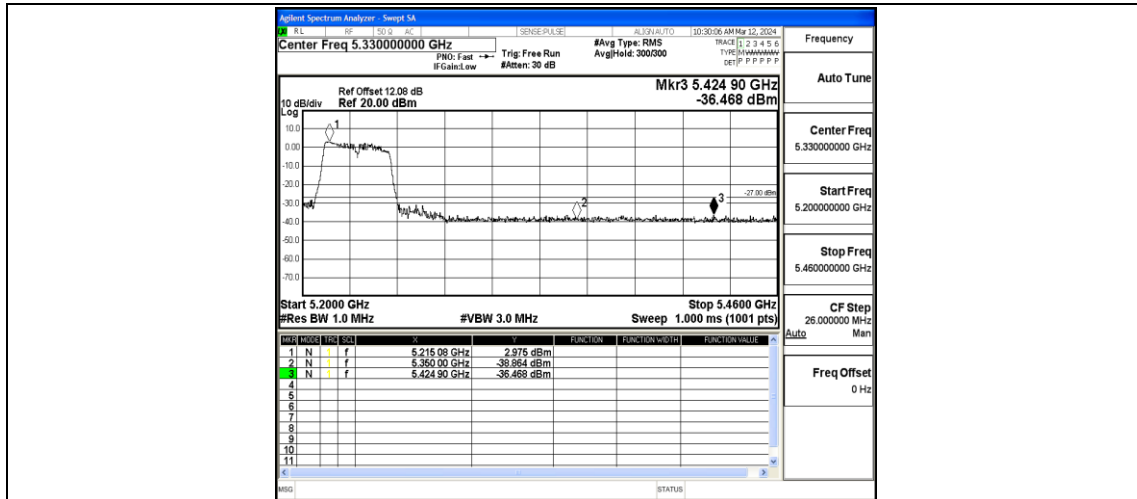
11N20MIMO-Ant2-5180-PASS



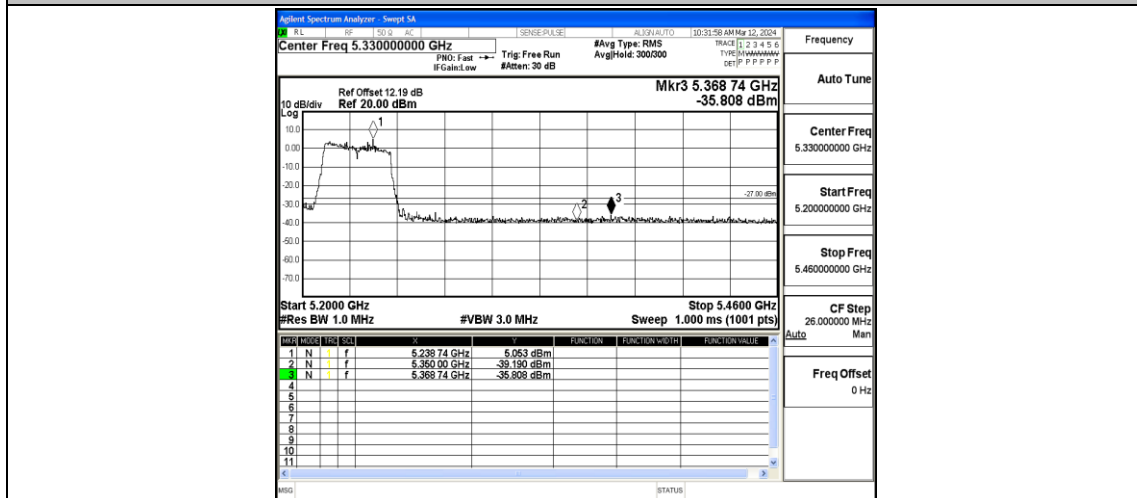




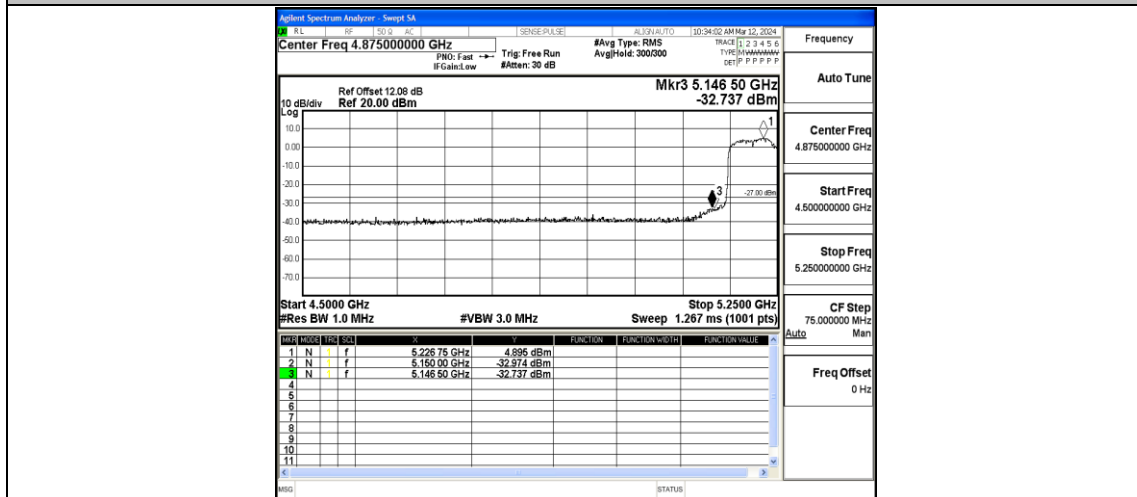




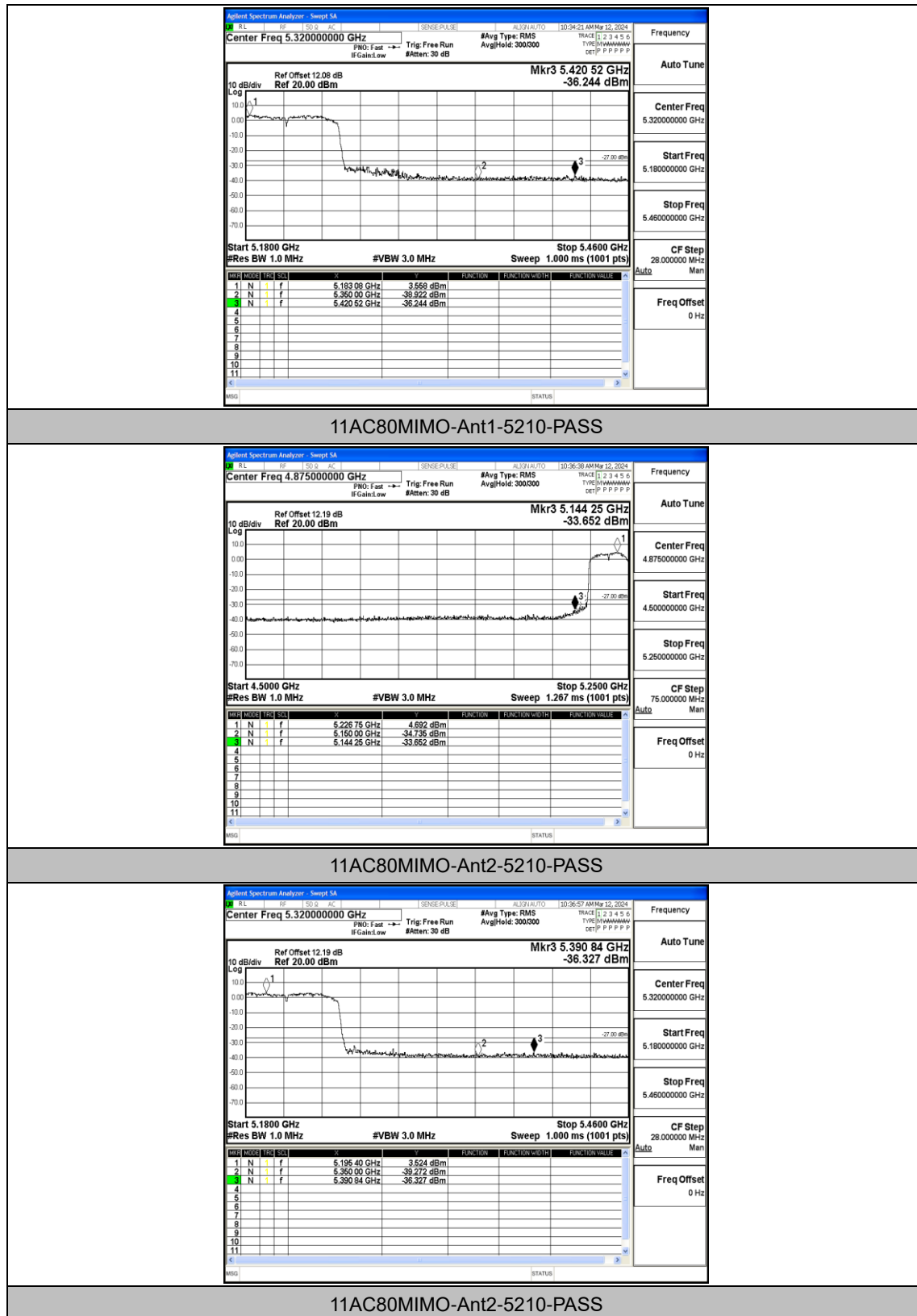
11AC40MIMO-Ant1-5230-PASS



11AC40MIMO-Ant2-5230-PASS



11AC80MIMO-Ant1-5210-PASS



Appendix E: Frequency Stability

Test Result

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5180	20	132	5180.064500	5150 – 5250	PASS
5180	20	108	5179.969640	5150 – 5250	PASS
5180	50	120	5180.005812	5150 – 5250	PASS
5180	40	120	5180.077625	5150 – 5250	PASS
5180	30	120	5180.007980	5150 – 5250	PASS
5180	20	120	5179.958182	5150 – 5250	PASS
5180	10	120	5180.058016	5150 – 5250	PASS
5180	0	120	5180.049758	5150 – 5250	PASS
5180	-10	120	5179.924614	5150 – 5250	PASS
5180	-20	120	5180.091406	5150 – 5250	PASS
5180	-30	120	5180.024770	5150 – 5250	PASS

Ant2

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5180	20	132	5179.997988	5150 – 5250	PASS
5180	20	108	5179.932544	5150 – 5250	PASS
5180	50	120	5179.905487	5150 – 5250	PASS
5180	40	120	5180.003629	5150 – 5250	PASS
5180	30	120	5180.013202	5150 – 5250	PASS
5180	20	120	5179.937870	5150 – 5250	PASS
5180	10	120	5180.096628	5150 – 5250	PASS
5180	0	120	5180.066176	5150 – 5250	PASS
5180	-10	120	5180.020539	5150 – 5250	PASS
5180	-20	120	5180.019629	5150 – 5250	PASS
5180	-30	120	5180.071383	5150 – 5250	PASS

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	132	5200.091567	5150 – 5250	PASS
5200	20	108	5200.051353	5150 – 5250	PASS
5200	50	120	5199.921545	5150 – 5250	PASS
5200	40	120	5199.937630	5150 – 5250	PASS
5200	30	120	5200.057118	5150 – 5250	PASS
5200	20	120	5200.006618	5150 – 5250	PASS
5200	10	120	5199.965597	5150 – 5250	PASS
5200	0	120	5200.052878	5150 – 5250	PASS
5200	-10	120	5200.058700	5150 – 5250	PASS
5200	-20	120	5199.923941	5150 – 5250	PASS
5200	-30	120	5199.950984	5150 – 5250	PASS

Ant2

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	132	5199.900283	5150 – 5250	PASS
5200	20	108	5199.901639	5150 – 5250	PASS
5200	50	120	5200.092369	5150 – 5250	PASS
5200	40	120	5200.012079	5150 – 5250	PASS
5200	30	120	5200.096466	5150 – 5250	PASS
5200	20	120	5199.926123	5150 – 5250	PASS
5200	10	120	5200.072590	5150 – 5250	PASS
5200	0	120	5200.008658	5150 – 5250	PASS
5200	-10	120	5199.937418	5150 – 5250	PASS
5200	-20	120	5199.952918	5150 – 5250	PASS
5200	-30	120	5200.005499	5150 – 5250	PASS

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	132	5240.096442	5150 – 5250	PASS
5240	20	108	5239.941495	5150 – 5250	PASS
5240	50	120	5239.936022	5150 – 5250	PASS
5240	40	120	5239.943190	5150 – 5250	PASS
5240	30	120	5239.986906	5150 – 5250	PASS
5240	20	120	5240.063538	5150 – 5250	PASS
5240	10	120	5240.005104	5150 – 5250	PASS
5240	0	120	5239.940011	5150 – 5250	PASS
5240	-10	120	5240.071927	5150 – 5250	PASS
5240	-20	120	5239.959493	5150 – 5250	PASS
5240	-30	120	5240.094274	5150 – 5250	PASS

Ant2

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	132	5239.963722	5150 – 5250	PASS
5240	20	108	5239.906812	5150 – 5250	PASS
5240	50	120	5239.966677	5150 – 5250	PASS
5240	40	120	5240.037530	5150 – 5250	PASS
5240	30	120	5239.964163	5150 – 5250	PASS
5240	20	120	5239.948810	5150 – 5250	PASS
5240	10	120	5239.911055	5150 – 5250	PASS
5240	0	120	5239.978562	5150 – 5250	PASS
5240	-10	120	5239.967860	5150 – 5250	PASS
5240	-20	120	5239.976338	5150 – 5250	PASS
5240	-30	120	5240.095070	5150 – 5250	PASS

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5190	20	132	5190.055166	5150 – 5250	PASS
5190	20	108	5189.936265	5150 – 5250	PASS
5190	50	120	5190.063358	5150 – 5250	PASS
5190	40	120	5189.900117	5150 – 5250	PASS
5190	30	120	5189.957975	5150 – 5250	PASS
5190	20	120	5189.993444	5150 – 5250	PASS
5190	10	120	5189.940719	5150 – 5250	PASS
5190	0	120	5189.986207	5150 – 5250	PASS
5190	-10	120	5190.058068	5150 – 5250	PASS
5190	-20	120	5189.940635	5150 – 5250	PASS
5190	-30	120	5189.925280	5150 – 5250	PASS

Ant2

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5190	20	132	5190.081578	5150 – 5250	PASS
5190	20	108	5190.016192	5150 – 5250	PASS
5190	50	120	5190.075178	5150 – 5250	PASS
5190	40	120	5190.040654	5150 – 5250	PASS
5190	30	120	5189.934946	5150 – 5250	PASS
5190	20	120	5189.934384	5150 – 5250	PASS
5190	10	120	5190.069037	5150 – 5250	PASS
5190	0	120	5189.911478	5150 – 5250	PASS
5190	-10	120	5190.062355	5150 – 5250	PASS
5190	-20	120	5189.940618	5150 – 5250	PASS
5190	-30	120	5190.050996	5150 – 5250	PASS

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5230	20	132	5230.000940	5150 – 5250	PASS
5230	20	108	5229.979367	5150 – 5250	PASS
5230	50	120	5230.082003	5150 – 5250	PASS
5230	40	120	5230.036720	5150 – 5250	PASS
5230	30	120	5229.970717	5150 – 5250	PASS
5230	20	120	5229.942558	5150 – 5250	PASS
5230	10	120	5229.944796	5150 – 5250	PASS
5230	0	120	5230.040860	5150 – 5250	PASS
5230	-10	120	5230.049212	5150 – 5250	PASS
5230	-20	120	5230.023917	5150 – 5250	PASS
5230	-30	120	5230.008513	5150 – 5250	PASS

Ant2

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5230	20	132	5230.061949	5150 – 5250	PASS
5230	20	108	5230.061109	5150 – 5250	PASS
5230	50	120	5230.054513	5150 – 5250	PASS
5230	40	120	5230.087551	5150 – 5250	PASS
5230	30	120	5229.933171	5150 – 5250	PASS
5230	20	120	5230.093891	5150 – 5250	PASS
5230	10	120	5230.089636	5150 – 5250	PASS
5230	0	120	5229.929479	5150 – 5250	PASS
5230	-10	120	5229.916484	5150 – 5250	PASS
5230	-20	120	5229.989901	5150 – 5250	PASS
5230	-30	120	5230.049792	5150 – 5250	PASS

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5210	20	132	5209.930265	5150 – 5250	PASS
5210	20	108	5209.911828	5150 – 5250	PASS
5210	50	120	5210.070240	5150 – 5250	PASS
5210	40	120	5209.924200	5150 – 5250	PASS
5210	30	120	5210.041446	5150 – 5250	PASS
5210	20	120	5209.962725	5150 – 5250	PASS
5210	10	120	5210.082702	5150 – 5250	PASS
5210	0	120	5210.007862	5150 – 5250	PASS
5210	-10	120	5210.097043	5150 – 5250	PASS
5210	-20	120	5209.965670	5150 – 5250	PASS
5210	-30	120	5210.014673	5150 – 5250	PASS

Ant2

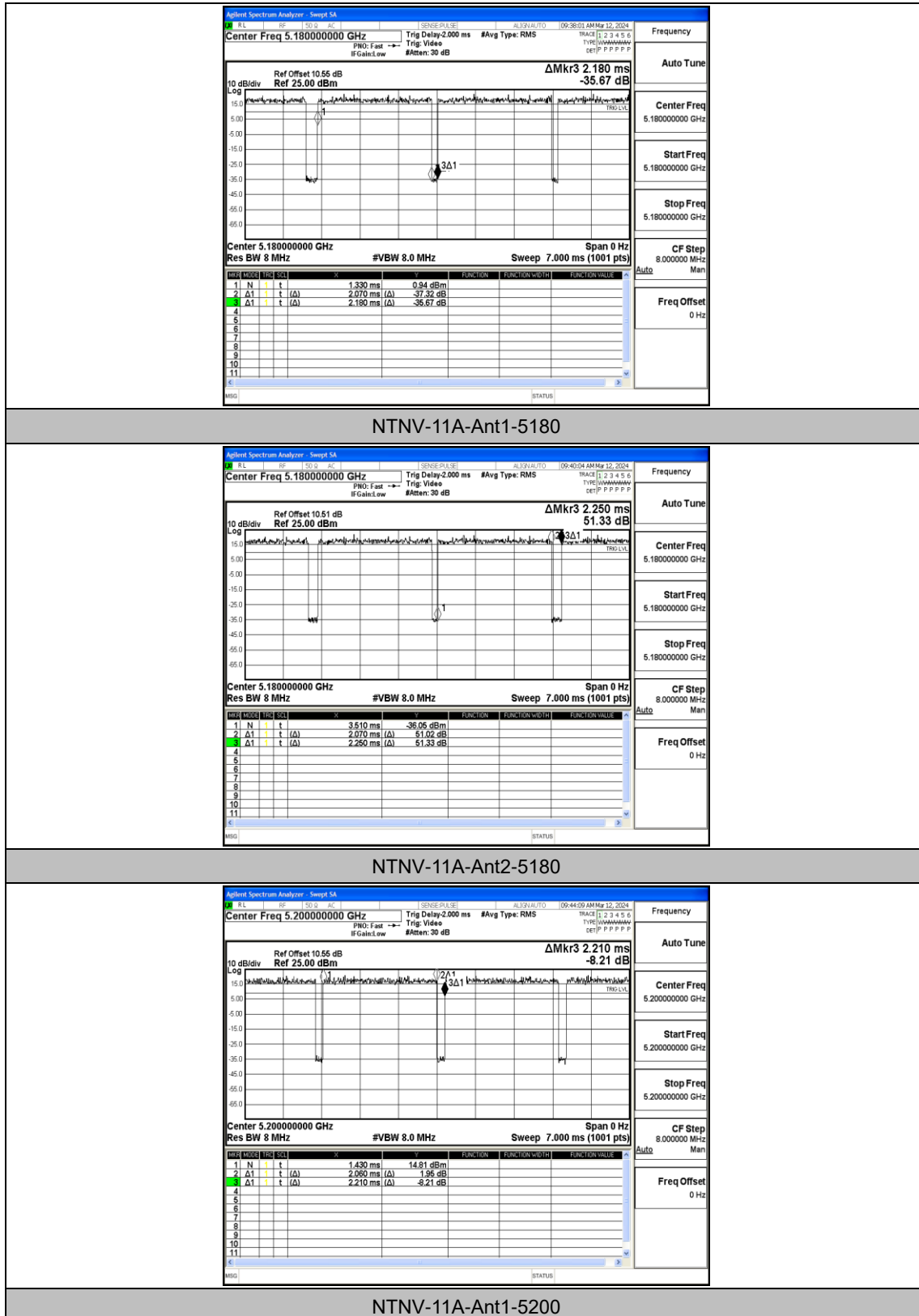
Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5210	20	132	5209.944483	5150 – 5250	PASS
5210	20	108	5209.926396	5150 – 5250	PASS
5210	50	120	5210.080102	5150 – 5250	PASS
5210	40	120	5210.088037	5150 – 5250	PASS
5210	30	120	5210.072177	5150 – 5250	PASS
5210	20	120	5210.016984	5150 – 5250	PASS
5210	10	120	5210.094032	5150 – 5250	PASS
5210	0	120	5209.977373	5150 – 5250	PASS
5210	-10	120	5210.006380	5150 – 5250	PASS
5210	-20	120	5209.929724	5150 – 5250	PASS
5210	-30	120	5210.014674	5150 – 5250	PASS

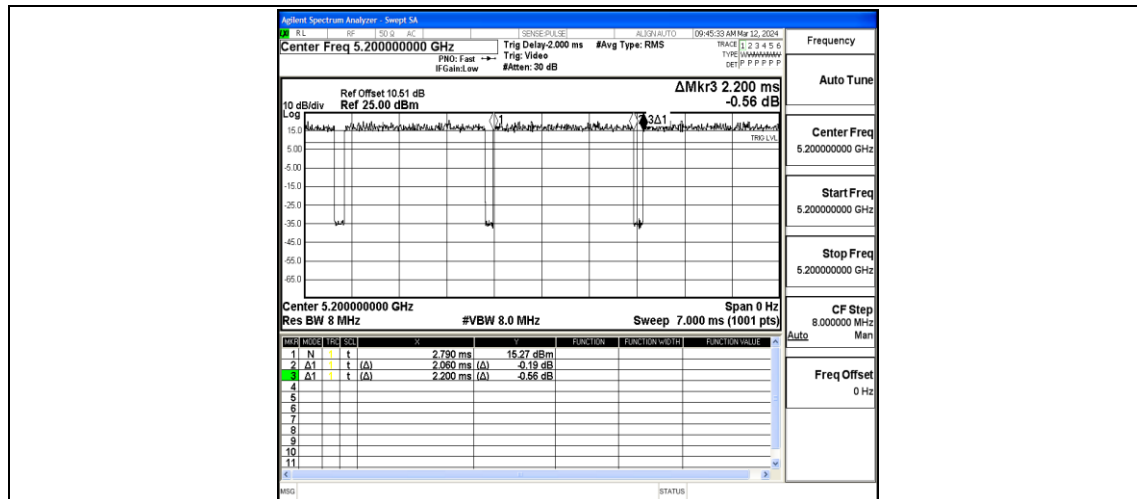
Appendix F: Duty Cycle

Test Result

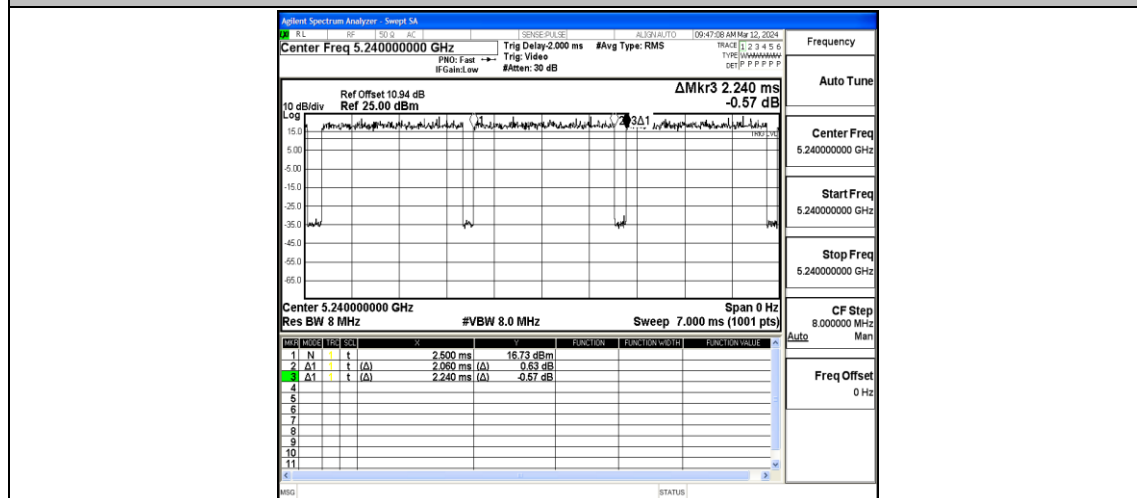
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Dc Factor [%]	1/T [kHz]
11A	Ant1	5180	2.07	2.18	94.95	0.23	0.48
11A	Ant2	5180	2.07	2.25	92.00	0.36	0.48
11A	Ant1	5200	2.06	2.21	93.21	0.31	0.49
11A	Ant2	5200	2.06	2.20	93.64	0.29	0.49
11A	Ant1	5240	2.06	2.24	91.96	0.36	0.49
11A	Ant2	5240	2.07	2.26	91.59	0.38	0.48
11N20MIMO	Ant1	5180	1.92	2.14	89.72	0.47	0.52
11N20MIMO	Ant2	5180	1.92	2.15	89.30	0.49	0.52
11N20MIMO	Ant1	5200	1.91	2.12	90.09	0.45	0.52
11N20MIMO	Ant2	5200	1.91	2.14	89.25	0.49	0.52
11N20MIMO	Ant1	5240	1.92	2.10	91.43	0.39	0.52
11N20MIMO	Ant2	5240	1.93	2.14	90.19	0.45	0.52
11N40MIMO	Ant1	5190	0.94	1.14	82.46	0.84	1.06
11N40MIMO	Ant2	5190	0.95	1.16	81.90	0.87	1.05
11N40MIMO	Ant1	5230	0.94	1.07	87.85	0.56	1.06
11N40MIMO	Ant2	5230	0.94	1.12	83.93	0.76	1.06
11AC20MIMO	Ant1	5180	1.93	2.13	90.61	0.43	0.52
11AC20MIMO	Ant2	5180	1.93	2.14	90.19	0.45	0.52
11AC20MIMO	Ant1	5200	0.20	0.41	48.78	3.12	5.00
11AC20MIMO	Ant2	5200	0.20	0.44	45.45	3.42	5.00
11AC20MIMO	Ant1	5240	0.21	0.44	47.73	3.21	4.76
11AC20MIMO	Ant2	5240	0.20	0.45	44.44	3.52	5.00
11AC40MIMO	Ant1	5190	0.96	1.12	85.71	0.67	1.04
11AC40MIMO	Ant2	5190	0.96	1.16	82.76	0.82	1.04
11AC40MIMO	Ant1	5230	0.96	1.14	84.21	0.75	1.04
11AC40MIMO	Ant2	5230	0.96	1.11	86.49	0.63	1.04
11AC80MIMO	Ant1	5210	0.46	0.68	67.65	1.70	2.17
11AC80MIMO	Ant2	5210	0.46	0.65	70.77	1.50	2.17

Test Graphs

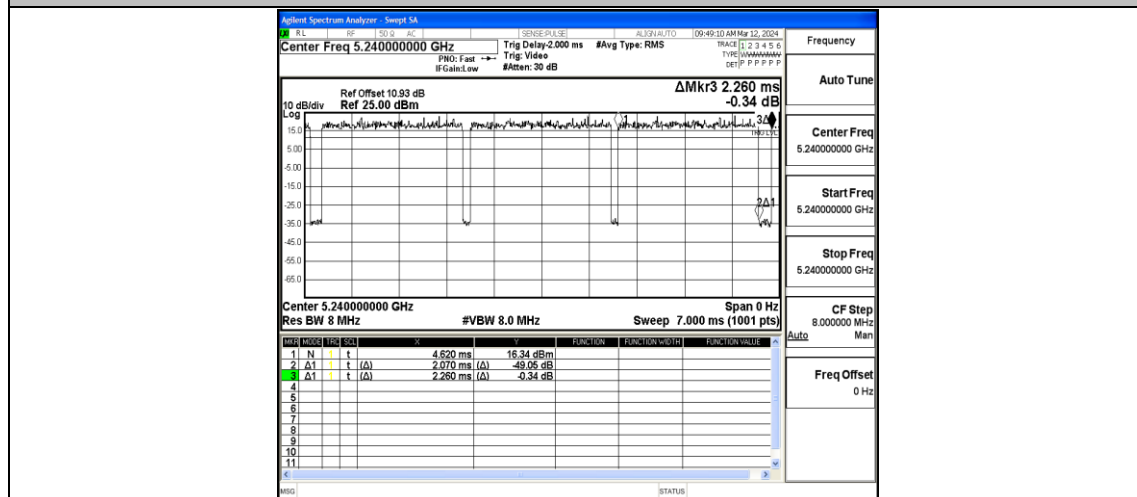




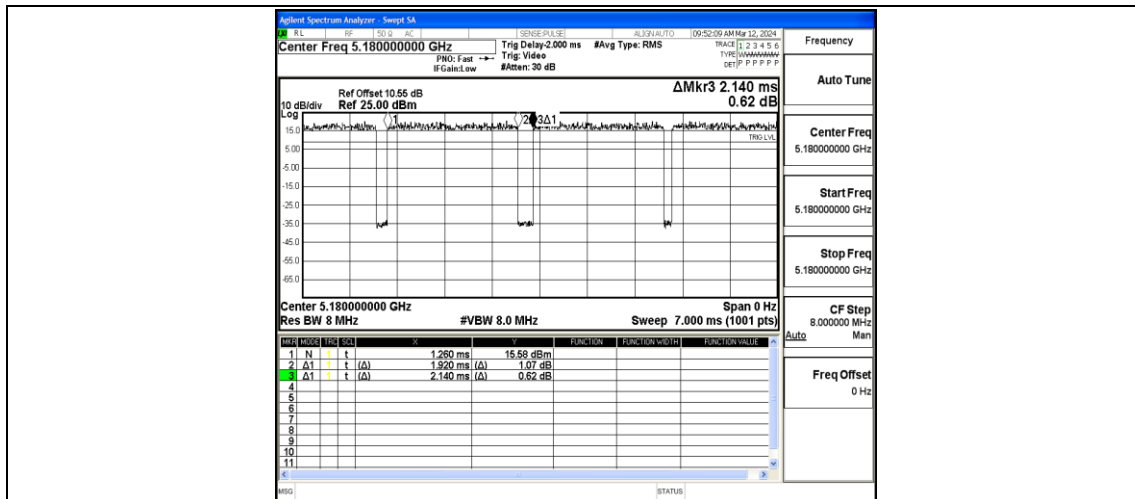
NTNV-11A-Ant2-5200



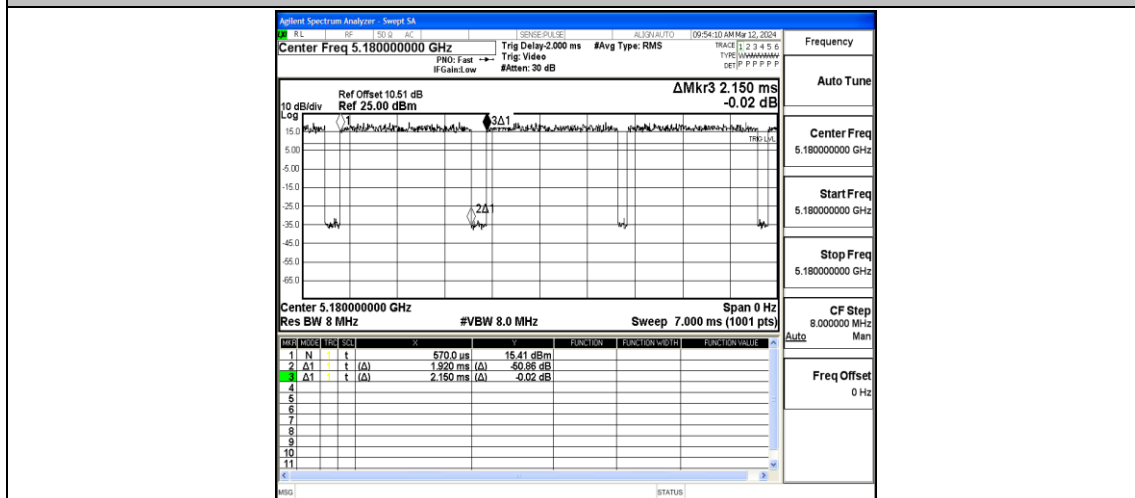
NTNV-11A-Ant1-5240



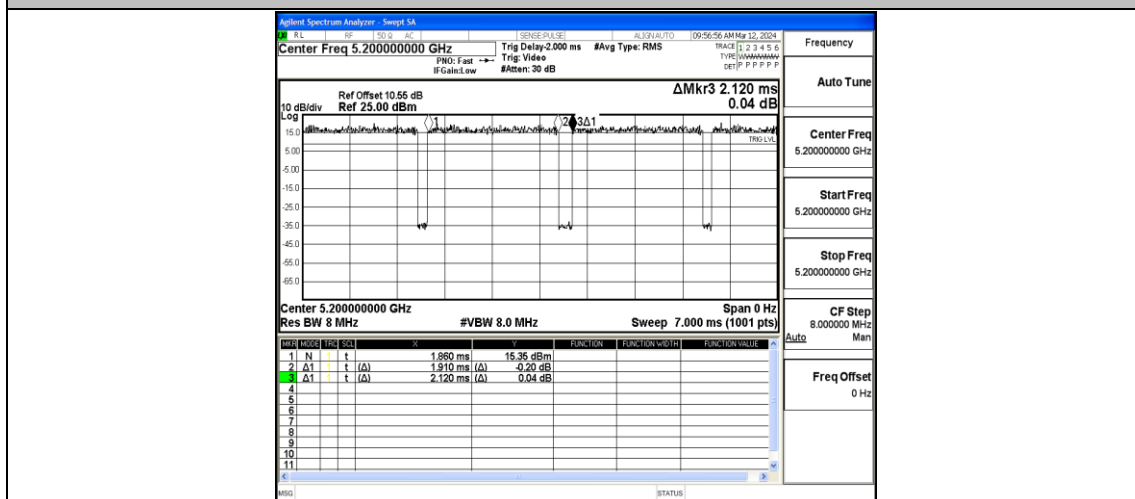
NTNV-11A-Ant2-5240



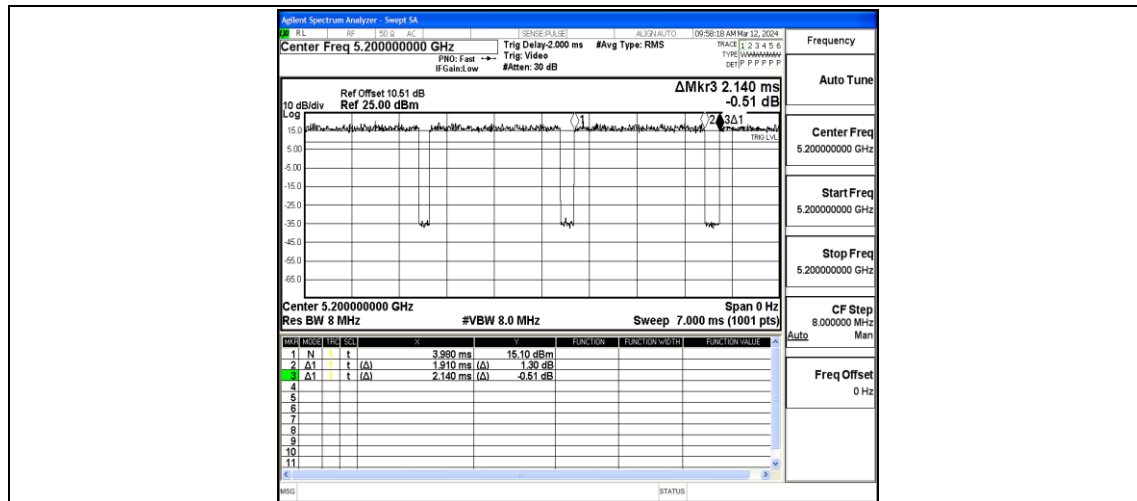
NTNV-11N20MIMO-Ant1-5180



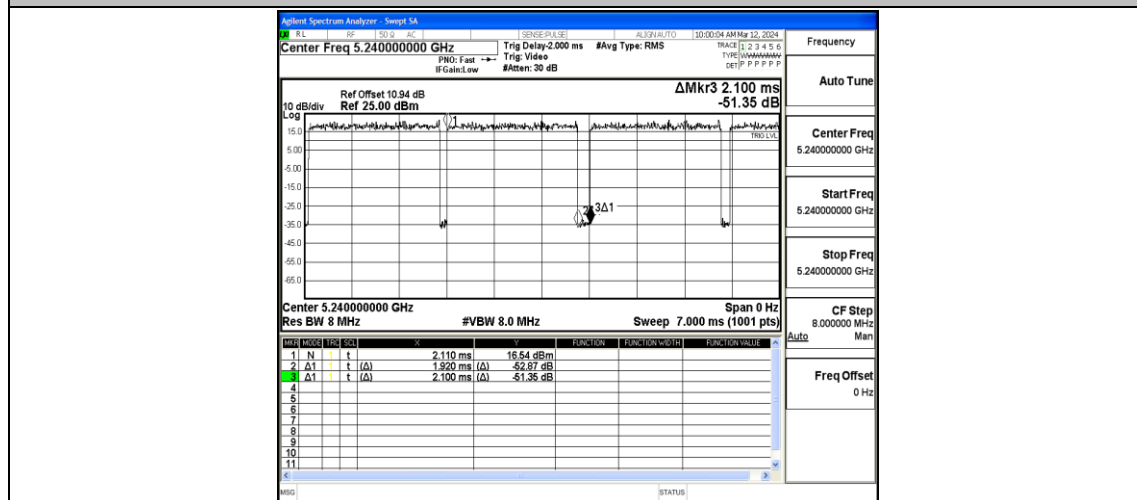
NTNV-11N20MIMO-Ant2-5180



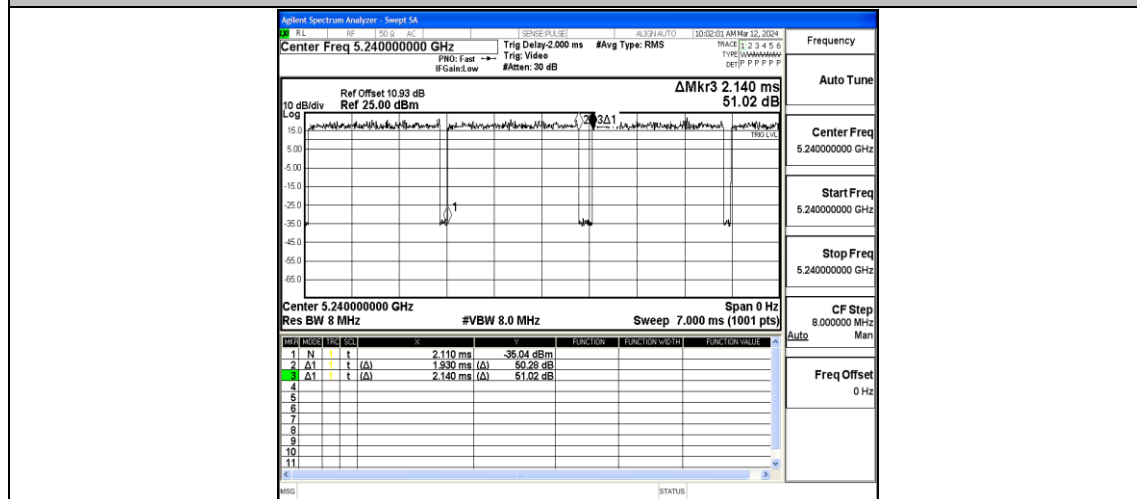
NTNV-11N20MIMO-Ant1-5200



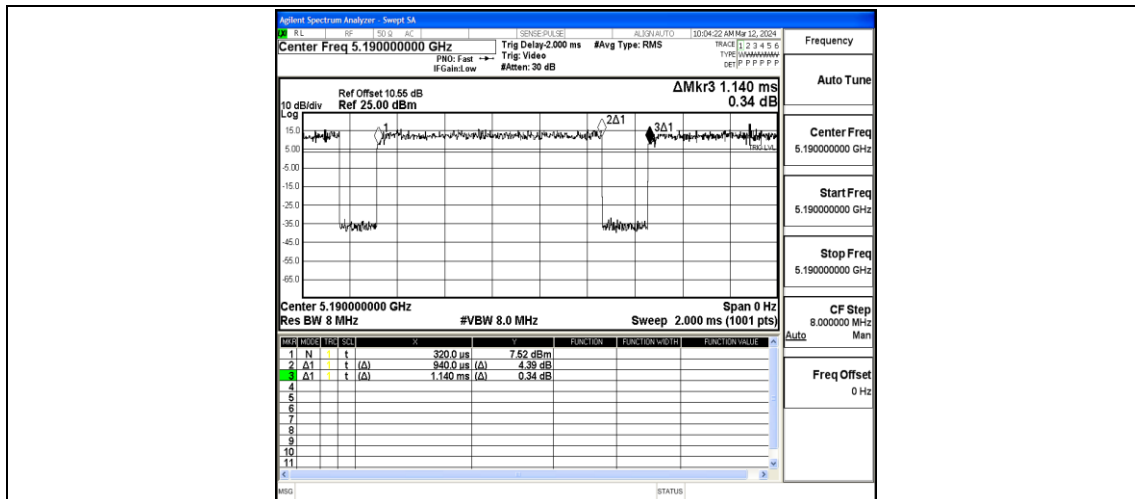
NTNV-11N20MIMO-Ant2-5200



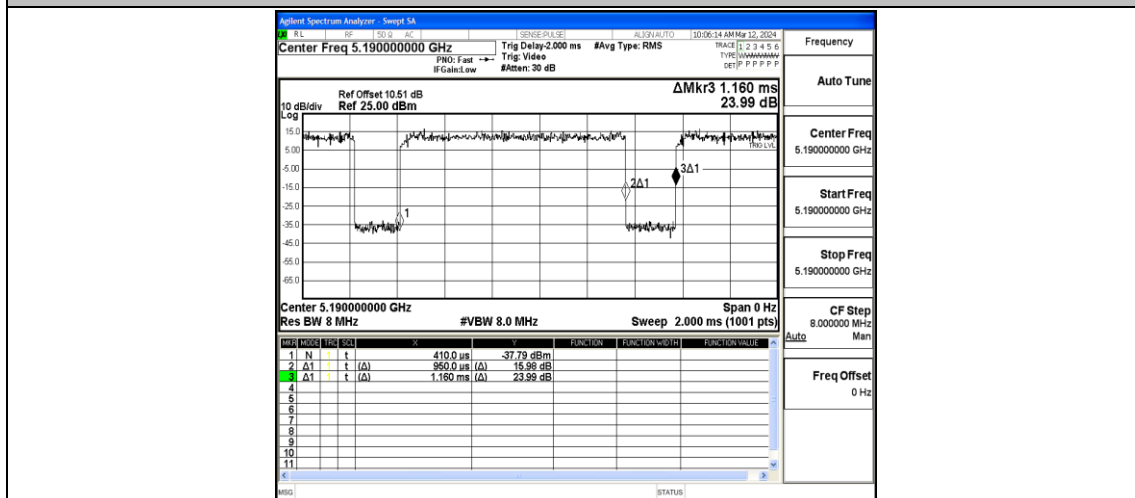
NTNV-11N20MIMO-Ant1-5240



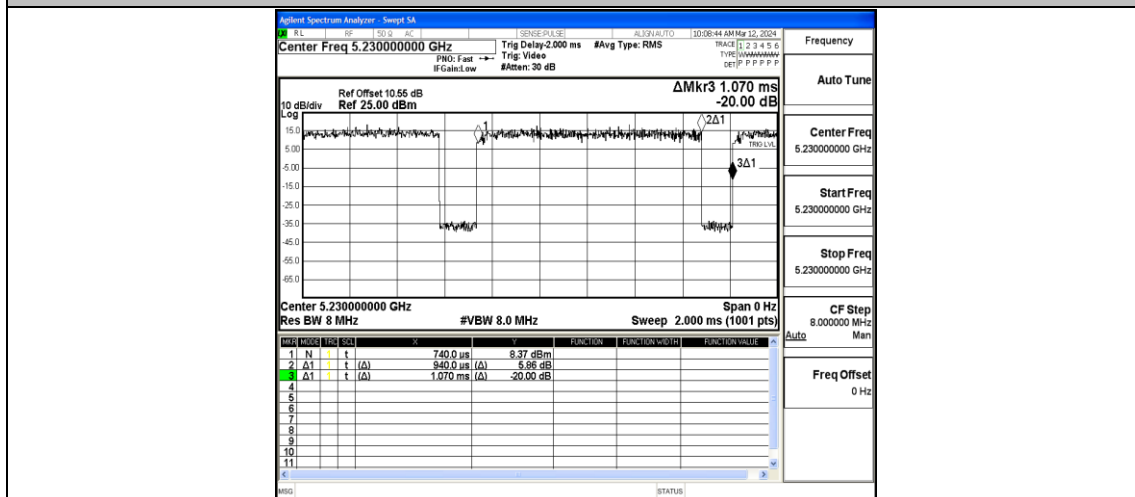
NTNV-11N20MIMO-Ant2-5240



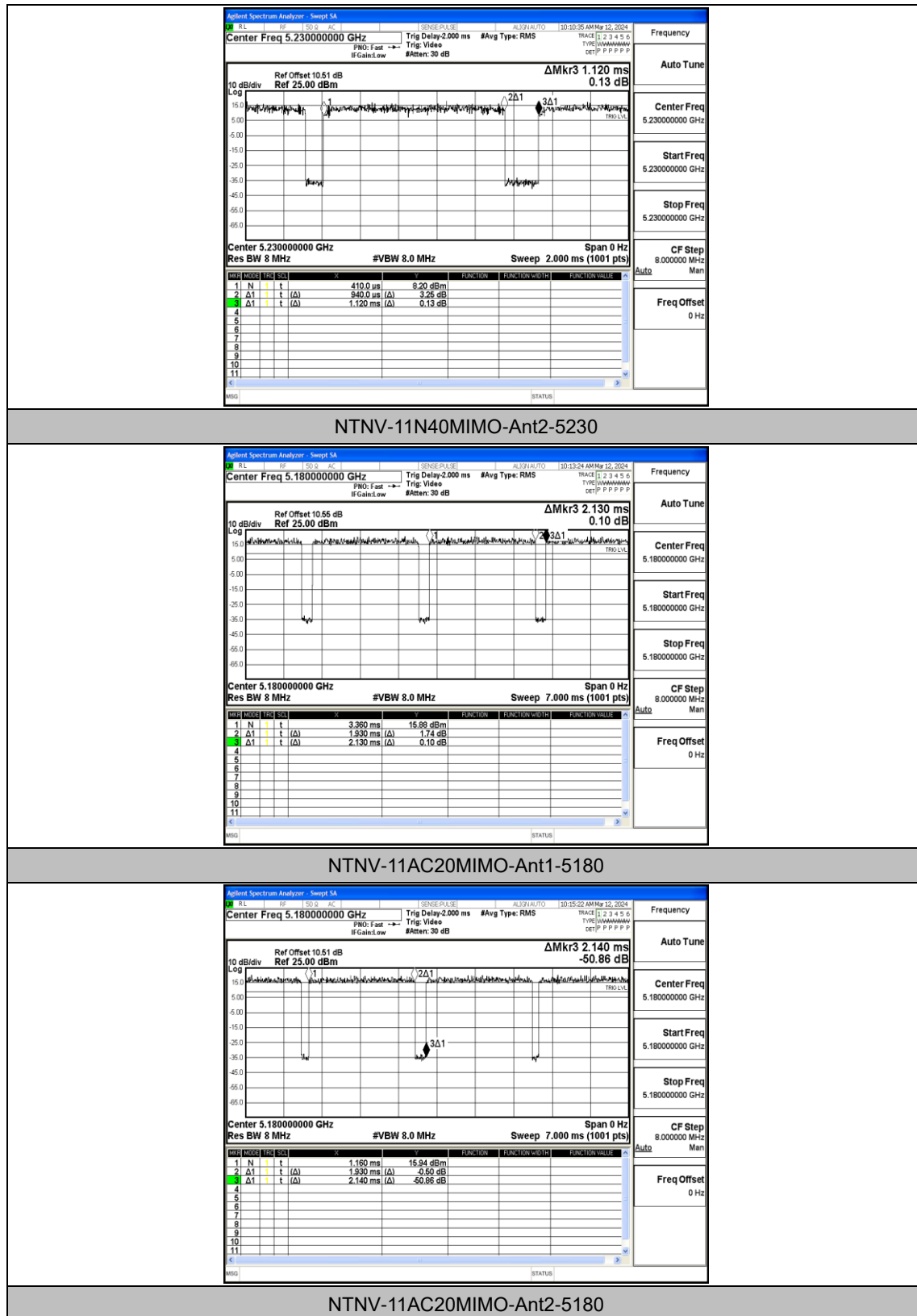
NTNV-11N40MIMO-Ant1-5190

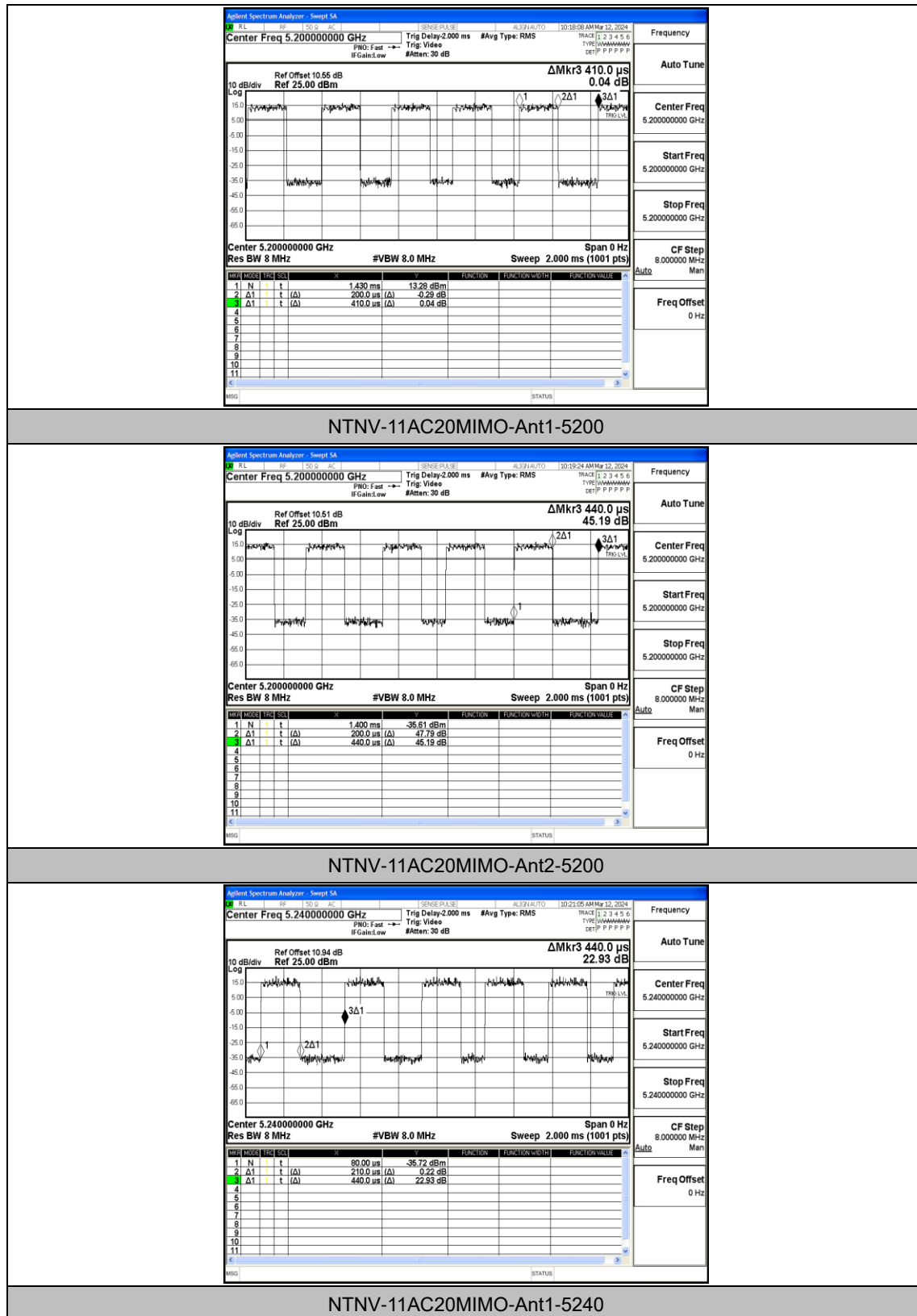


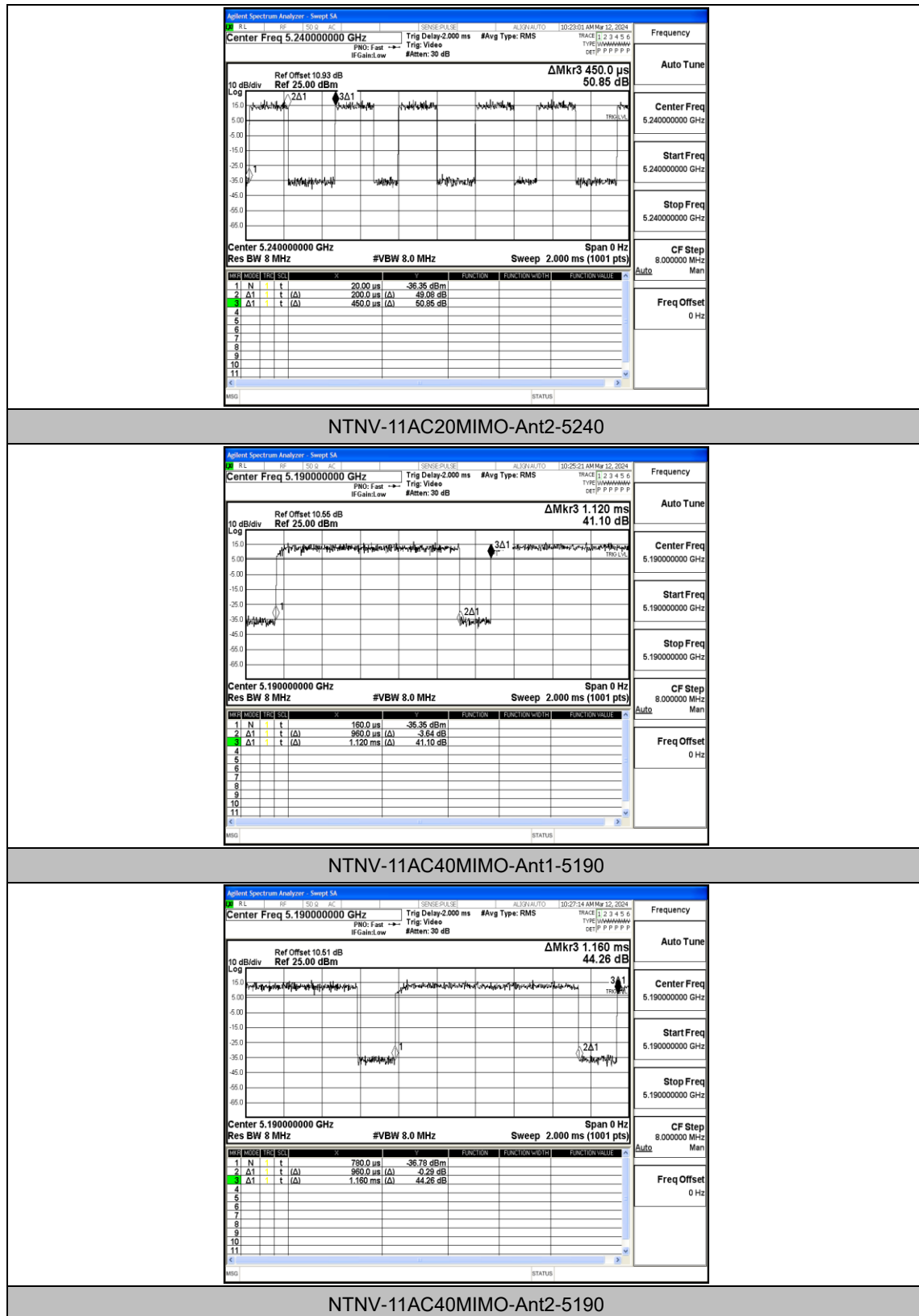
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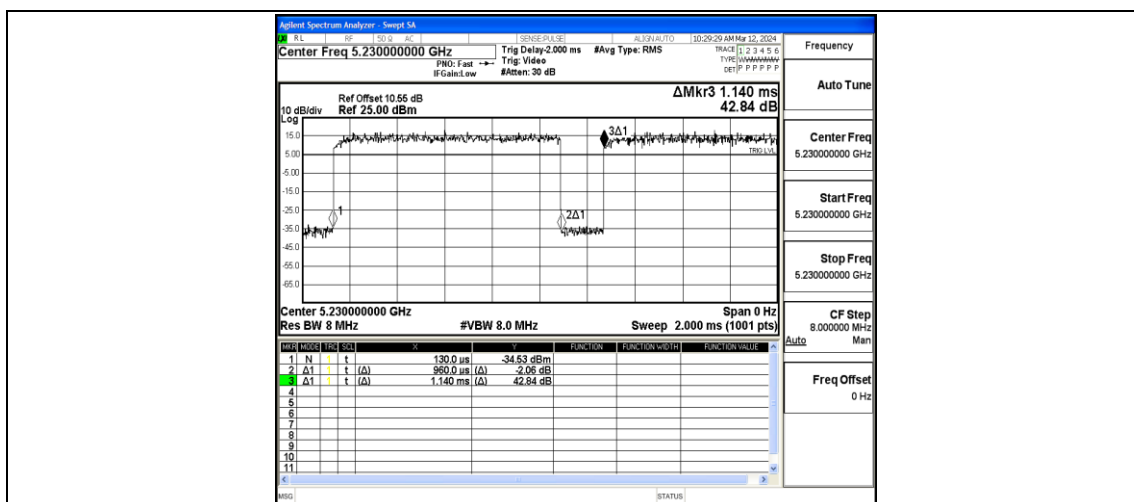


NTNV-11N40MIMO-Ant1-5230

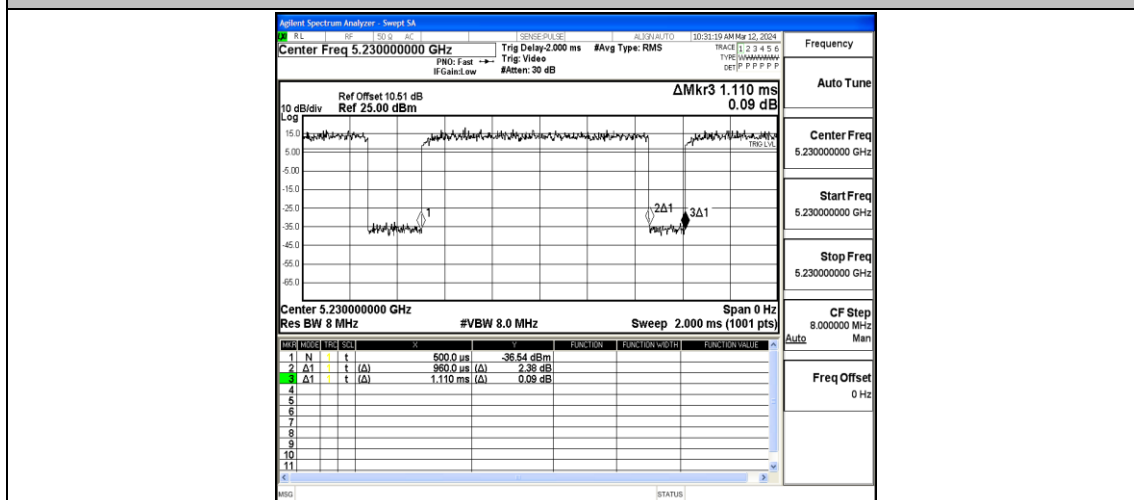




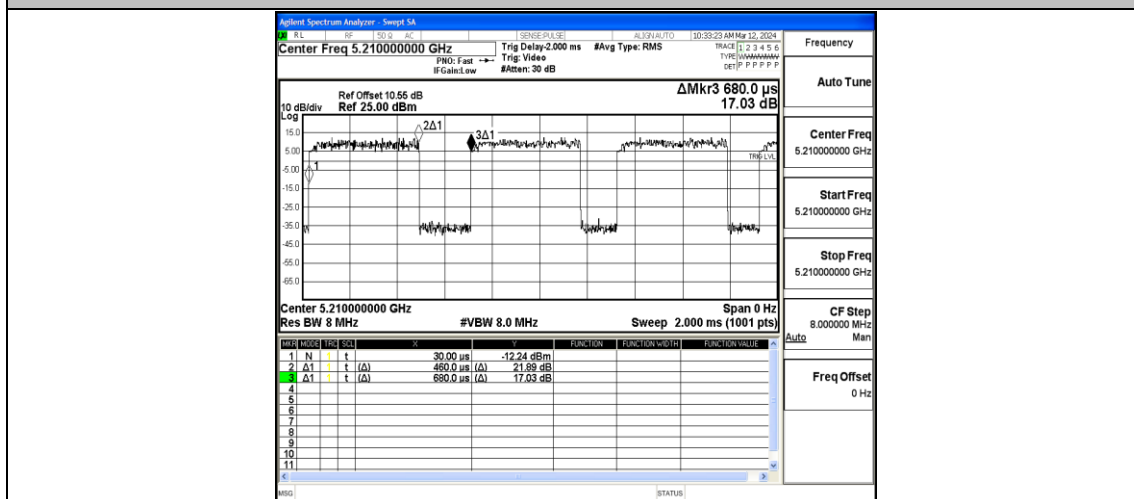




NTNV-11AC40MIMO-Ant1-5230



NTNV-11AC40MIMO-Ant2-5230



NTNV-11AC80MIMO-Ant1-5210

