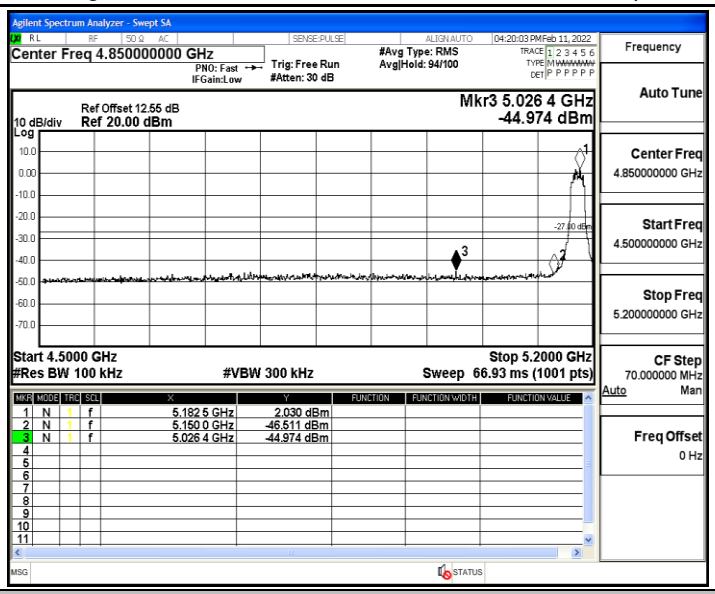
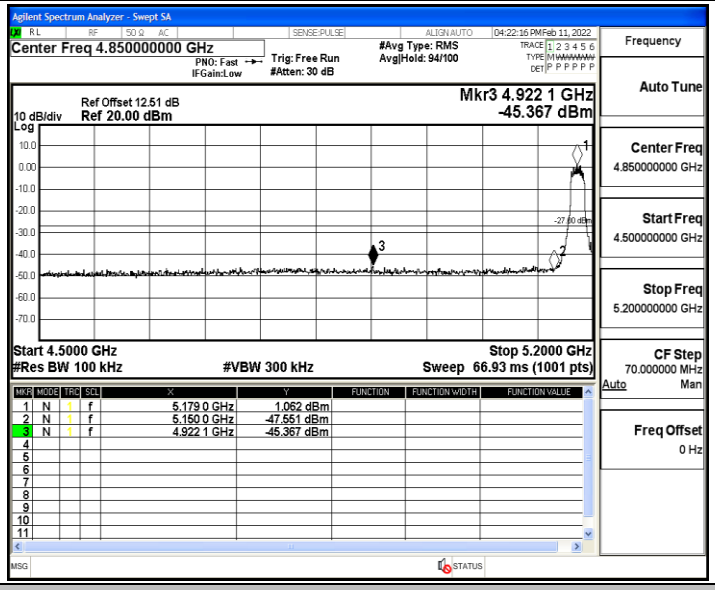
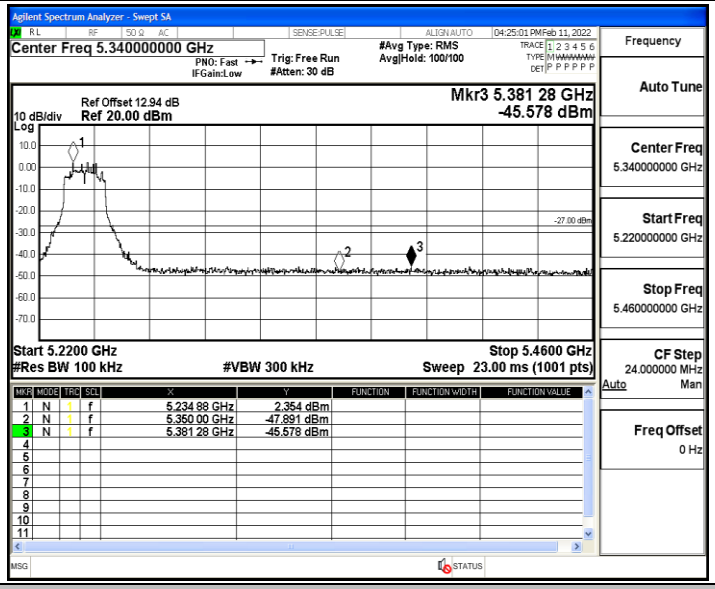


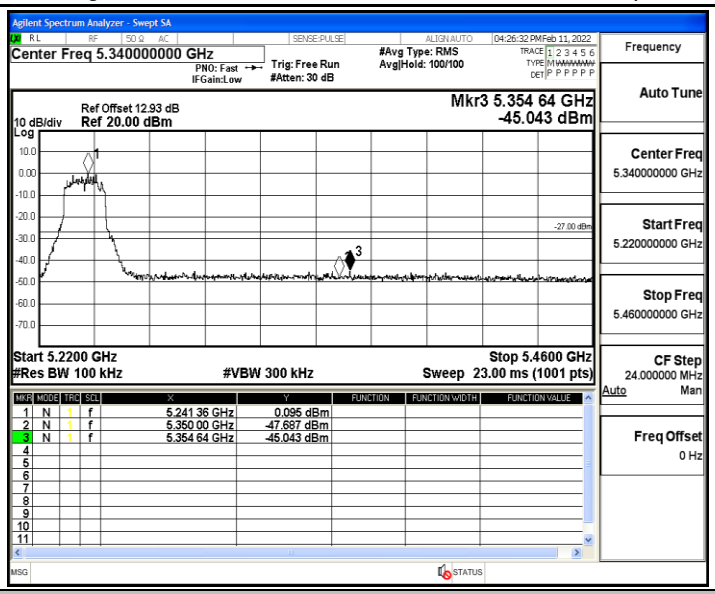
11AC20MIMO_Ant2_Low_5180



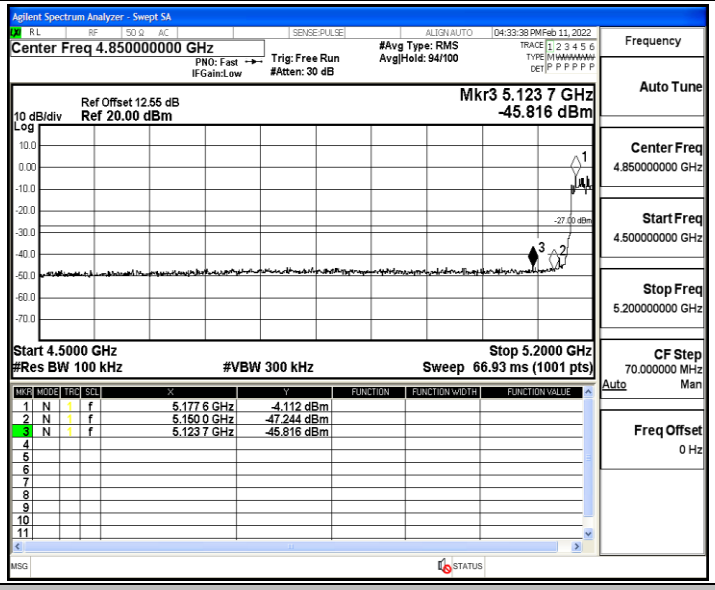
11AC20MIMO_Ant1_High_5240



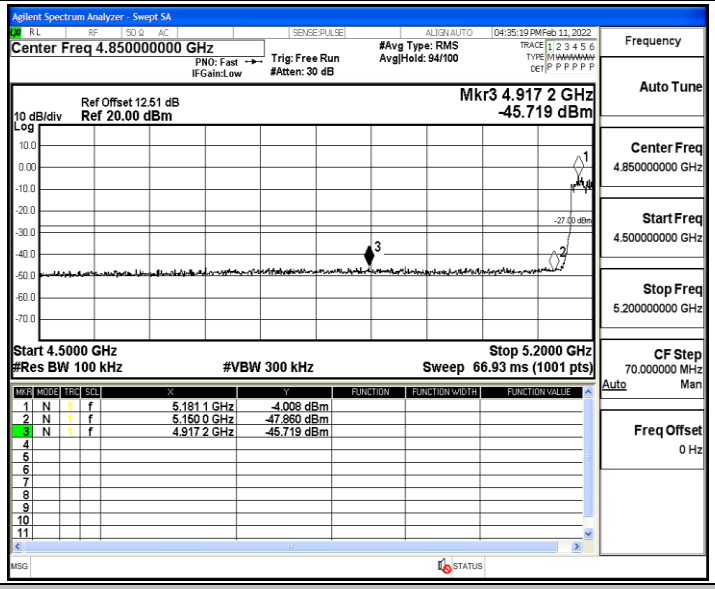
11AC20MIMO_Ant2_High_5240



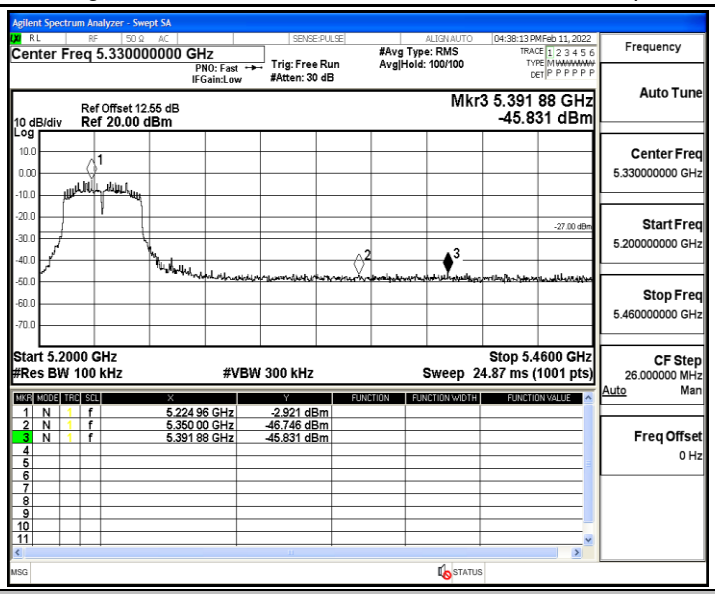
11AC40MIMO_Ant1_Low_5190



11AC40MIMO_Ant2_Low_5190



11AC40MIMO_Ant1_High_5230



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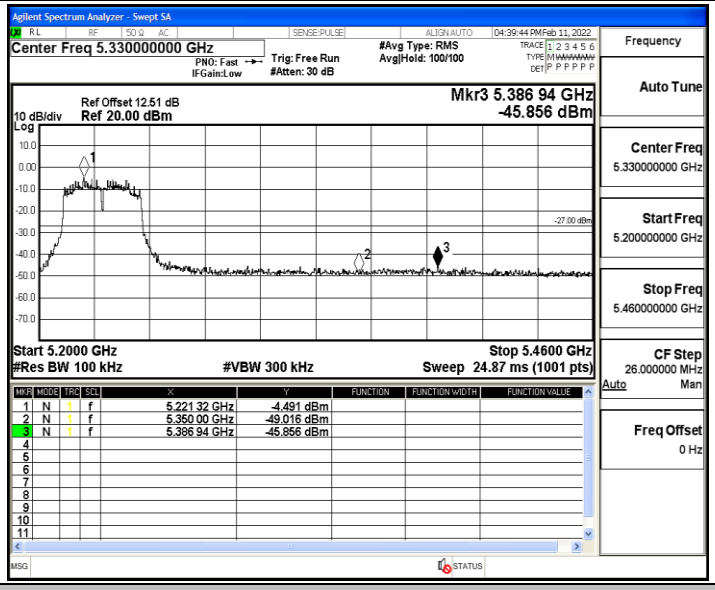
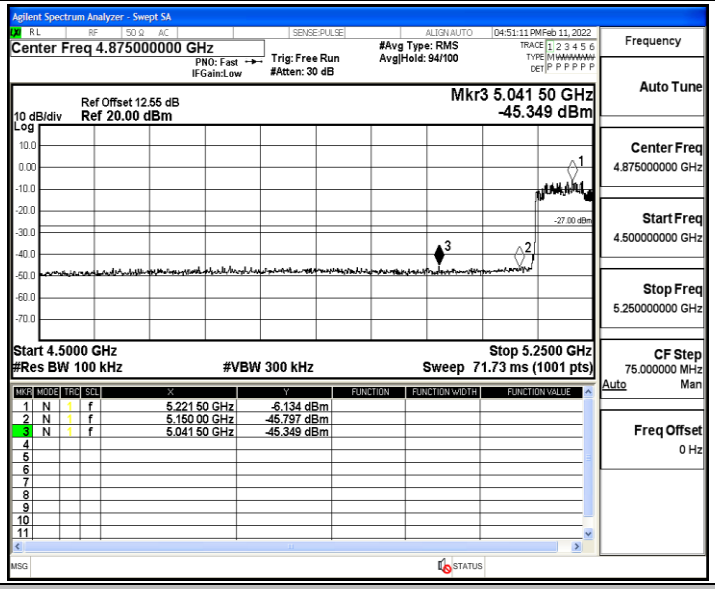
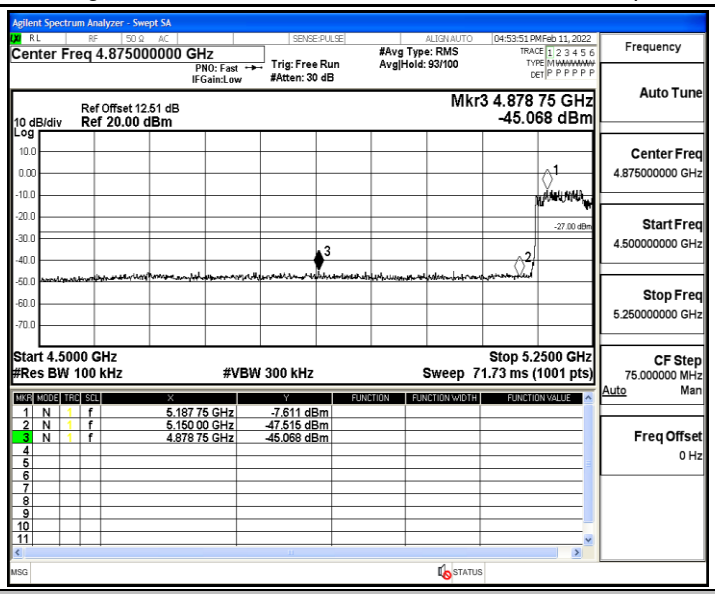


11AC80MIMO_Ant1_Low_5210



11AC80MIMO_Ant2_Low_5210



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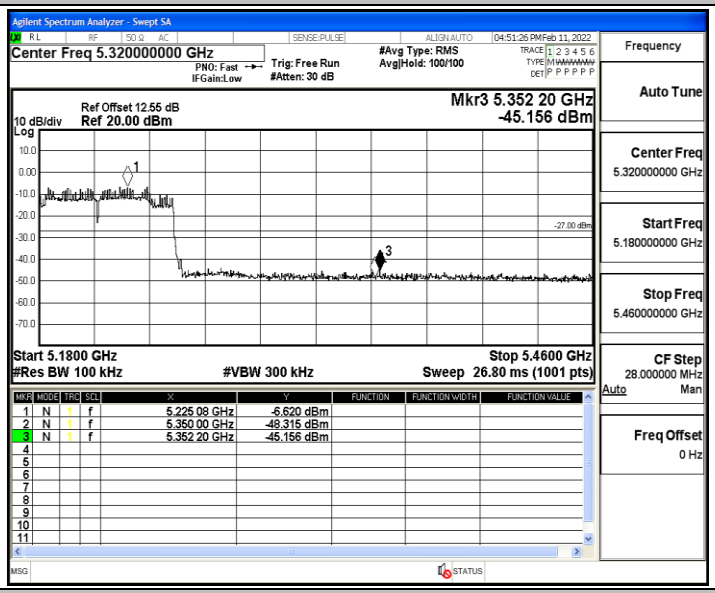
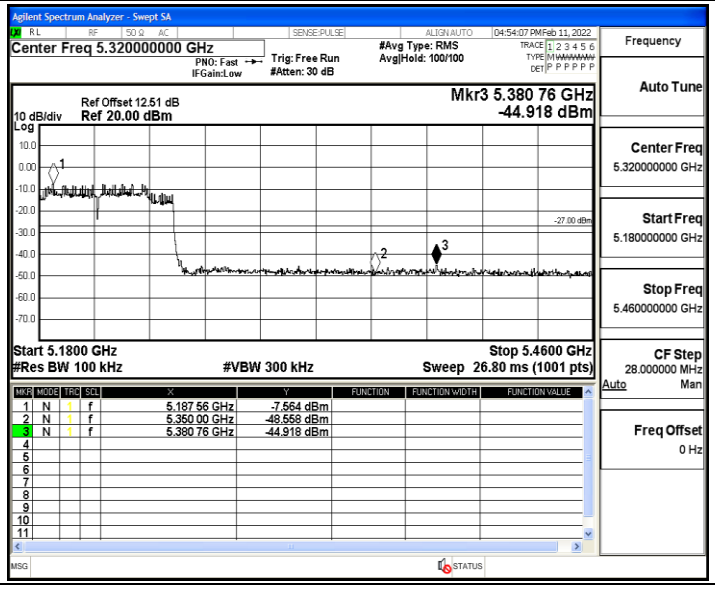


11AC80MIMO_Ant2_High_5210



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	5179.928343	5150 – 5250	PASS
5180	20	108	5180.012057	5150 – 5250	PASS
5180	50	120	5180.029560	5150 – 5250	PASS
5180	40	120	5180.077392	5150 – 5250	PASS
5180	30	120	5180.066967	5150 – 5250	PASS
5180	20	120	5179.983738	5150 – 5250	PASS
5180	10	120	5179.928068	5150 – 5250	PASS
5180	0	120	5180.020957	5150 – 5250	PASS
5180	-10	120	5180.096492	5150 – 5250	PASS
5180	-20	120	5179.918840	5150 – 5250	PASS
5180	-30	120	5180.003656	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5180	20	132	5179.903204	5150 – 5250	PASS
5180	20	108	5180.049533	5150 – 5250	PASS
5180	50	120	5179.996052	5150 – 5250	PASS
5180	40	120	5180.033309	5150 – 5250	PASS
5180	30	120	5179.900807	5150 – 5250	PASS
5180	20	120	5179.989216	5150 – 5250	PASS
5180	10	120	5179.945025	5150 – 5250	PASS
5180	0	120	5179.967836	5150 – 5250	PASS
5180	-10	120	5179.951478	5150 – 5250	PASS
5180	-20	120	5180.001131	5150 – 5250	PASS
5180	-30	120	5179.939437	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	132	5200.093886	5150 – 5250	PASS
5200	20	108	5200.068337	5150 – 5250	PASS
5200	50	120	5199.939506	5150 – 5250	PASS
5200	40	120	5200.010421	5150 – 5250	PASS
5200	30	120	5199.940411	5150 – 5250	PASS
5200	20	120	5200.061794	5150 – 5250	PASS
5200	10	120	5200.086724	5150 – 5250	PASS
5200	0	120	5199.968549	5150 – 5250	PASS
5200	-10	120	5199.960020	5150 – 5250	PASS
5200	-20	120	5199.964427	5150 – 5250	PASS
5200	-30	120	5199.961072	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	132	5199.909898	5150 – 5250	PASS
5200	20	108	5200.079868	5150 – 5250	PASS
5200	50	120	5199.970520	5150 – 5250	PASS
5200	40	120	5199.924517	5150 – 5250	PASS
5200	30	120	5200.092058	5150 – 5250	PASS
5200	20	120	5200.079326	5150 – 5250	PASS
5200	10	120	5199.944441	5150 – 5250	PASS
5200	0	120	5200.055723	5150 – 5250	PASS
5200	-10	120	5200.046840	5150 – 5250	PASS
5200	-20	120	5199.983519	5150 – 5250	PASS
5200	-30	120	5200.027522	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	132	5240.057424	5150 – 5250	PASS
5240	20	108	5240.097421	5150 – 5250	PASS
5240	50	120	5240.009407	5150 – 5250	PASS
5240	40	120	5239.928226	5150 – 5250	PASS
5240	30	120	5239.907013	5150 – 5250	PASS
5240	20	120	5240.097749	5150 – 5250	PASS
5240	10	120	5240.073504	5150 – 5250	PASS
5240	0	120	5239.911534	5150 – 5250	PASS
5240	-10	120	5239.965178	5150 – 5250	PASS
5240	-20	120	5240.047842	5150 – 5250	PASS
5240	-30	120	5240.008259	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	132	5240.003611	5150 – 5250	PASS
5240	20	108	5239.989578	5150 – 5250	PASS
5240	50	120	5239.996439	5150 – 5250	PASS
5240	40	120	5239.981767	5150 – 5250	PASS
5240	30	120	5239.960316	5150 – 5250	PASS
5240	20	120	5239.907654	5150 – 5250	PASS
5240	10	120	5239.943364	5150 – 5250	PASS
5240	0	120	5239.950591	5150 – 5250	PASS
5240	-10	120	5239.970481	5150 – 5250	PASS
5240	-20	120	5239.942072	5150 – 5250	PASS
5240	-30	120	5239.935992	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5190	20	132	5189.960439	5150 – 5250	PASS
5190	20	108	5189.913297	5150 – 5250	PASS
5190	50	120	5189.986314	5150 – 5250	PASS
5190	40	120	5190.042872	5150 – 5250	PASS
5190	30	120	5189.920166	5150 – 5250	PASS
5190	20	120	5190.083985	5150 – 5250	PASS
5190	10	120	5190.028542	5150 – 5250	PASS
5190	0	120	5189.933138	5150 – 5250	PASS
5190	-10	120	5189.954151	5150 – 5250	PASS
5190	-20	120	5189.989266	5150 – 5250	PASS
5190	-30	120	5190.082067	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5190	20	132	5189.934278	5150 – 5250	PASS
5190	20	108	5190.070281	5150 – 5250	PASS
5190	50	120	5190.074833	5150 – 5250	PASS
5190	40	120	5190.095830	5150 – 5250	PASS
5190	30	120	5189.943190	5150 – 5250	PASS
5190	20	120	5190.026830	5150 – 5250	PASS
5190	10	120	5189.923812	5150 – 5250	PASS
5190	0	120	5190.007954	5150 – 5250	PASS
5190	-10	120	5189.987098	5150 – 5250	PASS
5190	-20	120	5189.978954	5150 – 5250	PASS
5190	-30	120	5190.004726	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5230	20	132	5230.067759	5150 – 5250	PASS
5230	20	108	5230.060473	5150 – 5250	PASS
5230	50	120	5229.986918	5150 – 5250	PASS
5230	40	120	5229.941613	5150 – 5250	PASS
5230	30	120	5229.920029	5150 – 5250	PASS
5230	20	120	5230.090629	5150 – 5250	PASS
5230	10	120	5230.001061	5150 – 5250	PASS
5230	0	120	5230.008698	5150 – 5250	PASS
5230	-10	120	5230.093173	5150 – 5250	PASS
5230	-20	120	5230.001458	5150 – 5250	PASS
5230	-30	120	5229.917152	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5230	20	132	5229.956859	5150 – 5250	PASS
5230	20	108	5229.901442	5150 – 5250	PASS
5230	50	120	5229.936817	5150 – 5250	PASS
5230	40	120	5230.081891	5150 – 5250	PASS
5230	30	120	5230.038462	5150 – 5250	PASS
5230	20	120	5230.073775	5150 – 5250	PASS
5230	10	120	5229.940352	5150 – 5250	PASS
5230	0	120	5230.015004	5150 – 5250	PASS
5230	-10	120	5229.972908	5150 – 5250	PASS
5230	-20	120	5229.970351	5150 – 5250	PASS
5230	-30	120	5229.987833	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5210	20	132	5210.082606	5150 – 5250	PASS
5210	20	108	5210.001789	5150 – 5250	PASS
5210	50	120	5210.097926	5150 – 5250	PASS
5210	40	120	5209.987860	5150 – 5250	PASS
5210	30	120	5210.024613	5150 – 5250	PASS
5210	20	120	5209.935115	5150 – 5250	PASS
5210	10	120	5209.978420	5150 – 5250	PASS
5210	0	120	5210.030807	5150 – 5250	PASS
5210	-10	120	5209.918524	5150 – 5250	PASS
5210	-20	120	5210.010406	5150 – 5250	PASS
5210	-30	120	5210.019180	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5210	20	132	5210.067840	5150 – 5250	PASS
5210	20	108	5209.996260	5150 – 5250	PASS
5210	50	120	5209.961150	5150 – 5250	PASS
5210	40	120	5210.075642	5150 – 5250	PASS
5210	30	120	5210.047003	5150 – 5250	PASS
5210	20	120	5209.960577	5150 – 5250	PASS
5210	10	120	5210.069423	5150 – 5250	PASS
5210	0	120	5209.942099	5150 – 5250	PASS
5210	-10	120	5210.000958	5150 – 5250	PASS
5210	-20	120	5209.923869	5150 – 5250	PASS
5210	-30	120	5209.903848	5150 – 5250	PASS

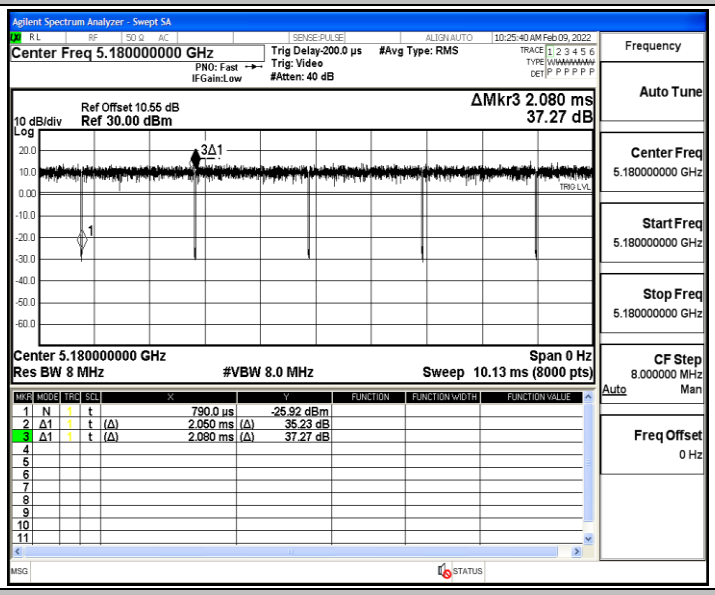
Appendix F: Duty Cycle

Test Result

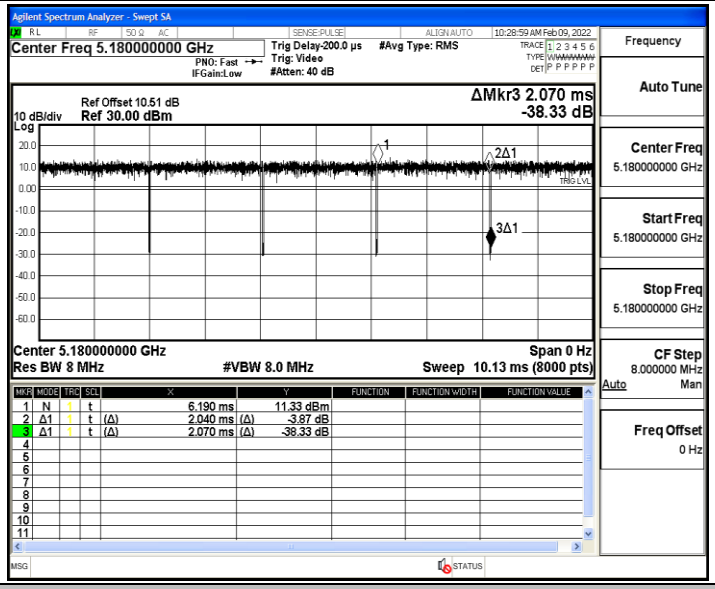
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
11A	Ant1	5180	2.05	2.08	98.56	0.49
	Ant2	5180	2.04	2.07	98.55	0.49
	Ant1	5200	2.04	2.07	98.55	0.49
	Ant2	5200	2.04	2.07	98.55	0.49
	Ant1	5240	2.05	2.08	98.56	0.49
	Ant2	5240	2.05	2.08	98.56	0.49
11N20MIMO	Ant1	5180	1.91	1.94	98.45	0.52
	Ant2	5180	1.91	1.94	98.45	0.52
	Ant1	5200	1.91	1.93	98.96	0.52
	Ant2	5200	1.91	1.94	98.45	0.52
	Ant1	5240	1.90	1.93	98.45	0.53
	Ant2	5240	1.90	1.93	98.45	0.53
11N40MIMO	Ant1	5190	0.94	0.97	96.91	1.06
	Ant2	5190	0.94	0.97	96.91	1.06
	Ant1	5230	0.94	0.97	96.91	1.06
	Ant2	5230	0.93	0.96	96.88	1.08
11AC20MIMO	Ant1	5180	0.98	1.01	97.03	1.02
	Ant2	5180	0.98	1.01	97.03	1.02
	Ant1	5200	0.98	1.01	97.03	1.02
	Ant2	5200	0.99	1.02	97.06	1.01
	Ant1	5240	0.98	1.01	97.03	1.02
	Ant2	5240	0.98	1.01	97.03	1.02
11AC40MIMO	Ant1	5190	0.50	0.52	96.15	2.00
	Ant2	5190	0.50	0.53	94.34	2.00
	Ant1	5230	0.94	0.97	96.91	1.06
	Ant2	5230	0.94	0.97	96.91	1.06
11AC80MIMO	Ant1	5210	0.25	0.28	89.29	4.00
	Ant2	5210	0.26	0.28	92.86	3.85

Test Graphs

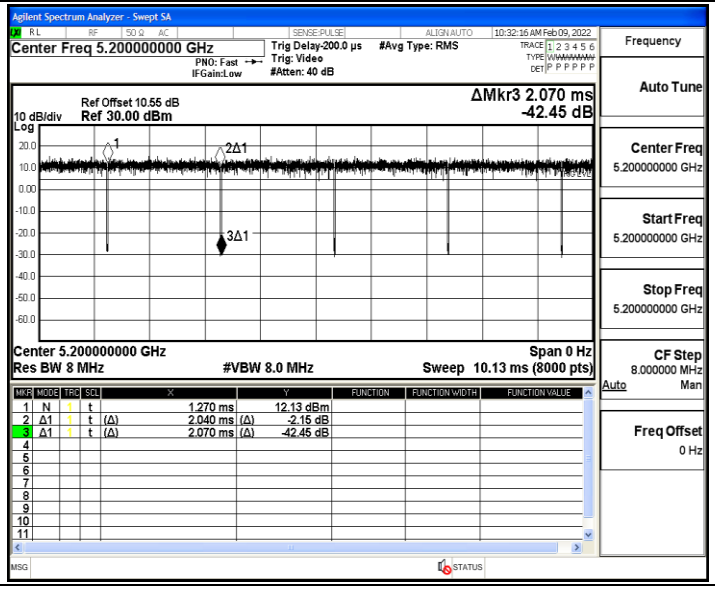
11A_Ant1_5180



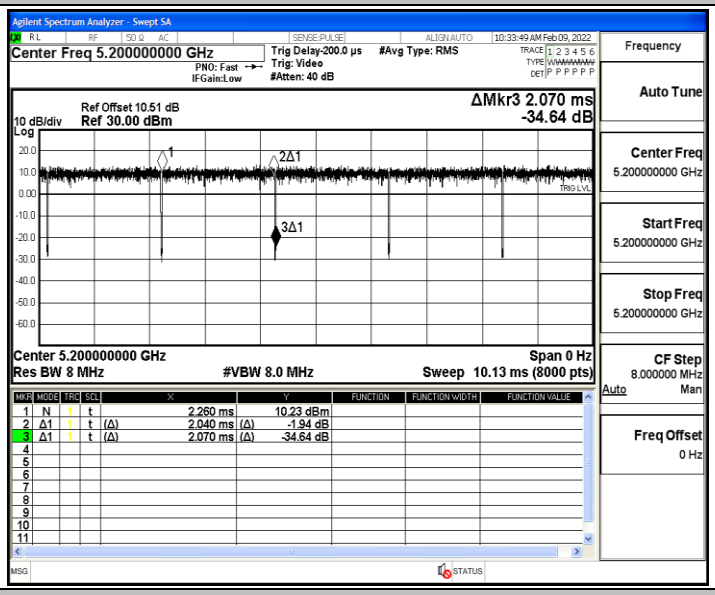
11A_Ant2_5180



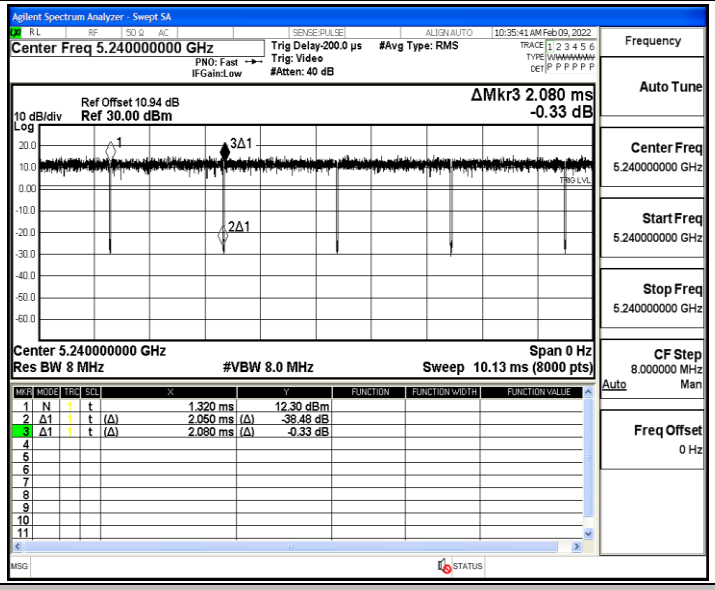
11A_Ant1_5200



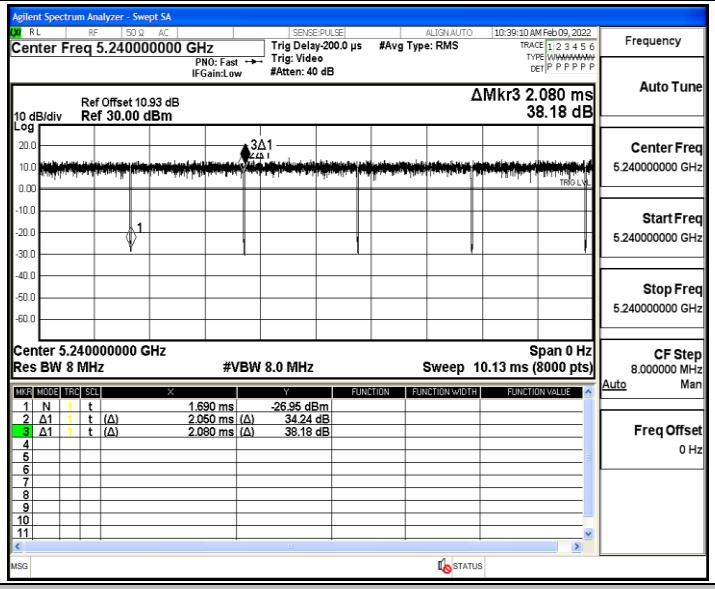
11A_Ant2_5200



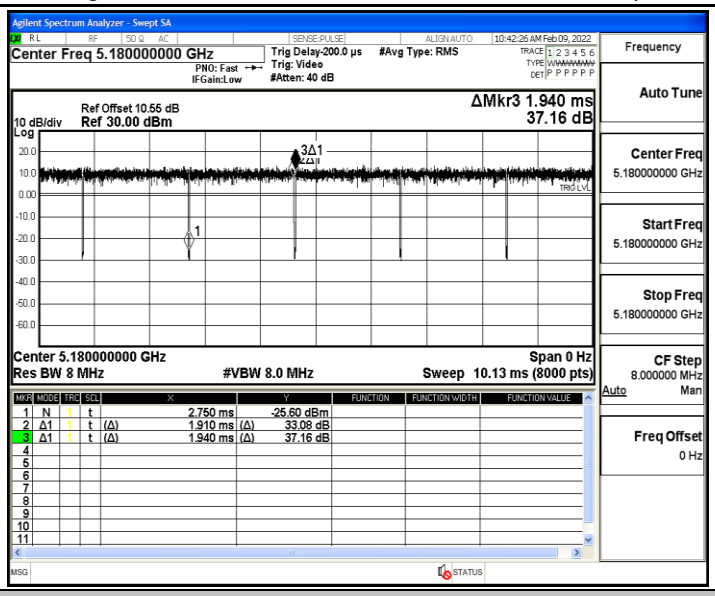
11A_Ant1_5240



11A_Ant2_5240



11N20MIMO_Ant1_5180



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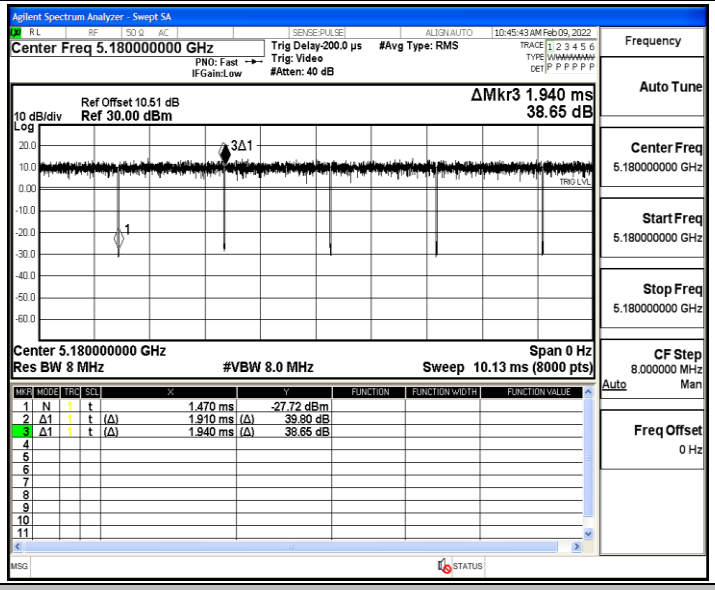
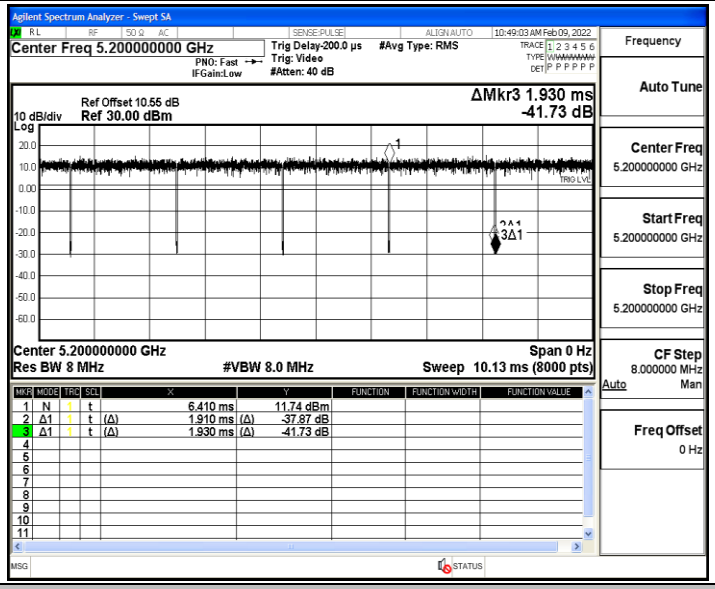
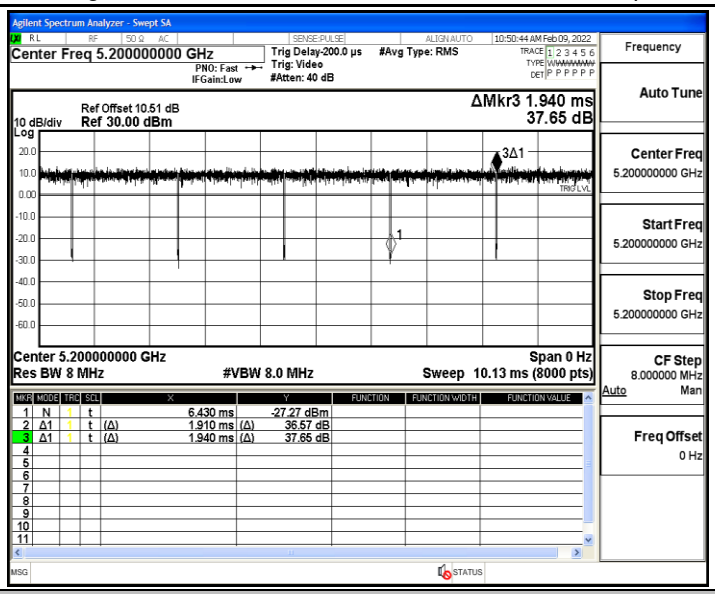


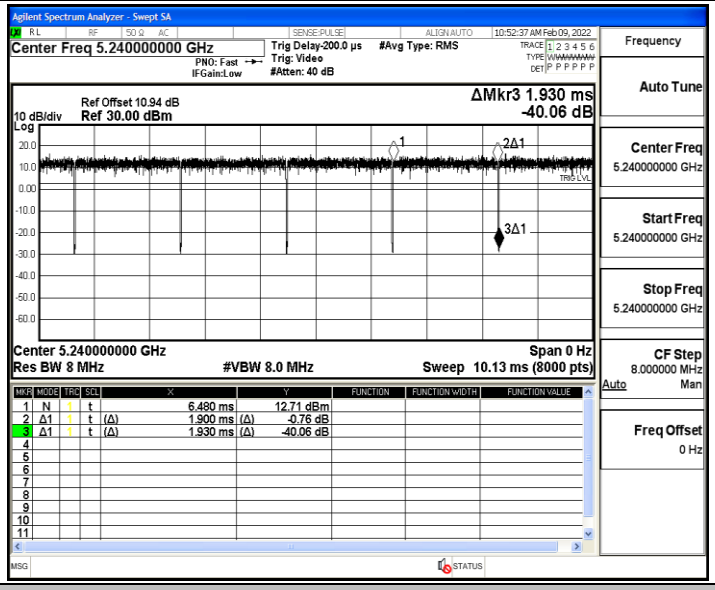
11N20MIMO_Ant1_5200



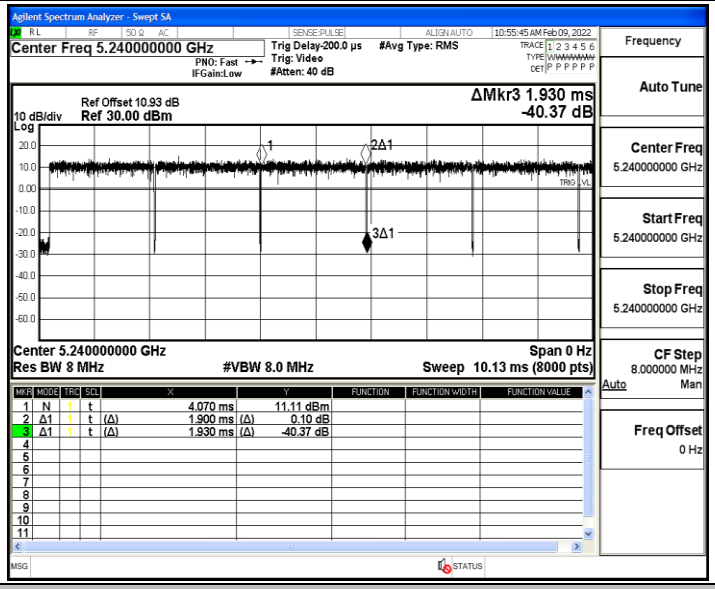
11N20MIMO_Ant2_5200



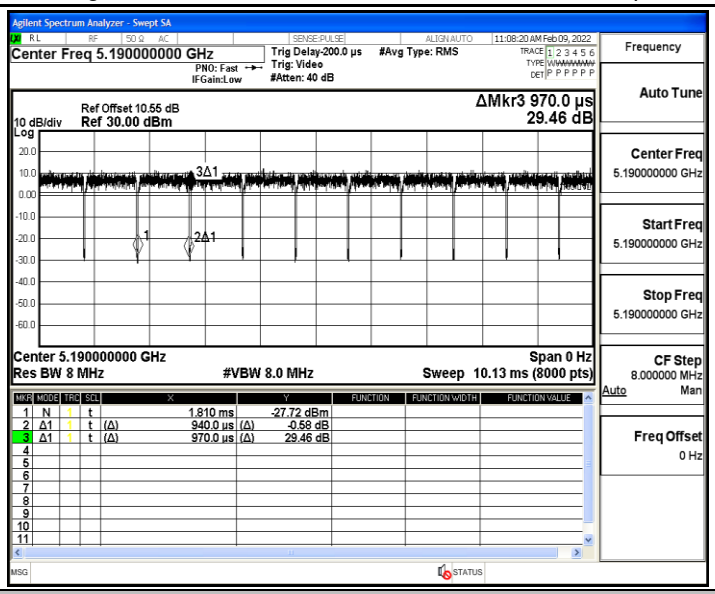
11N20MIMO_Ant1_5240



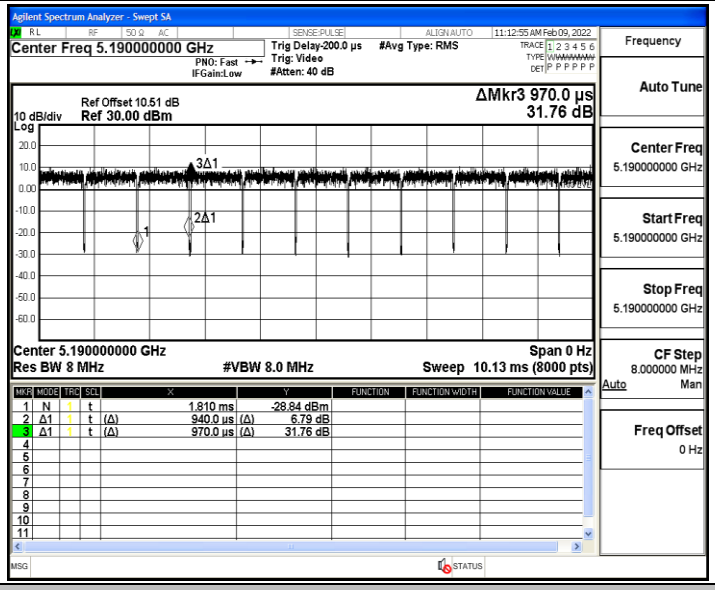
11N20MIMO_Ant2_5240



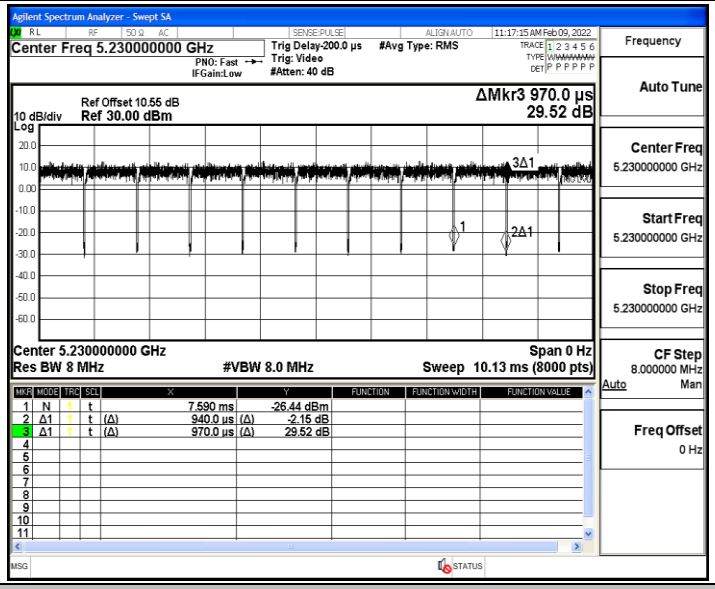
11N40MIMO_Ant1_5190



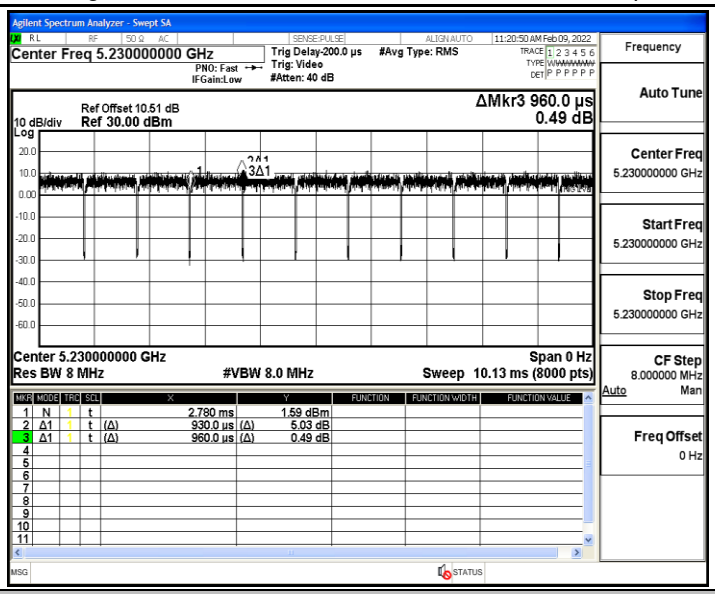
11N40MIMO_Ant2_5190



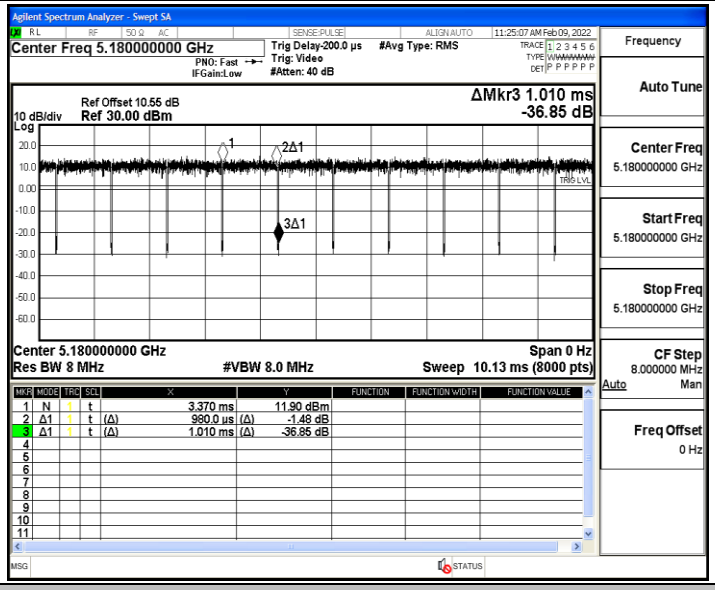
11N40MIMO_Ant1_5230



11N40MIMO_Ant2_5230



11AC20MIMO_Ant1_5180



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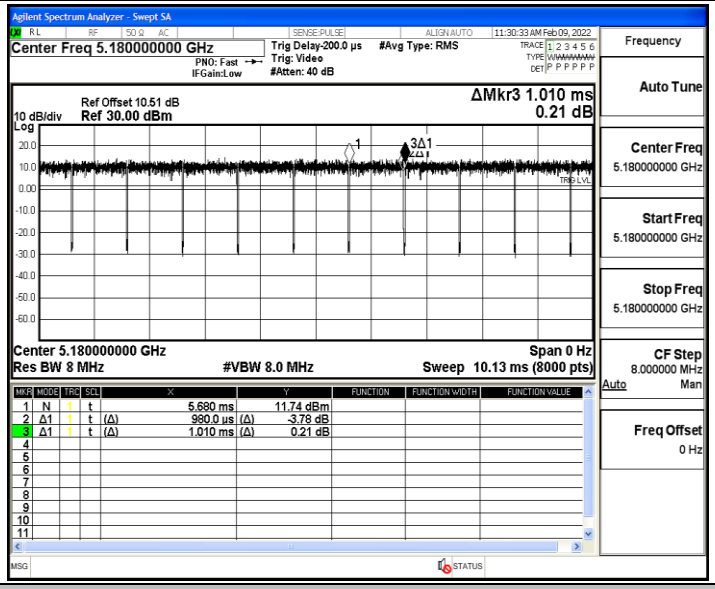

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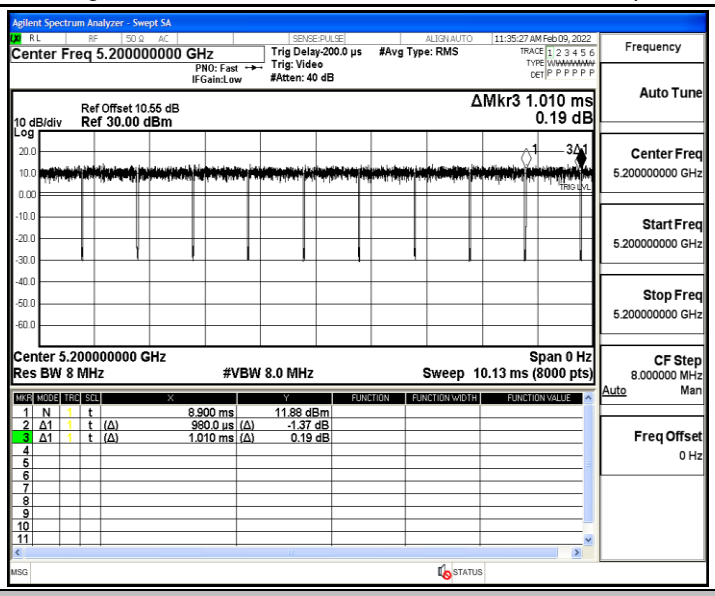

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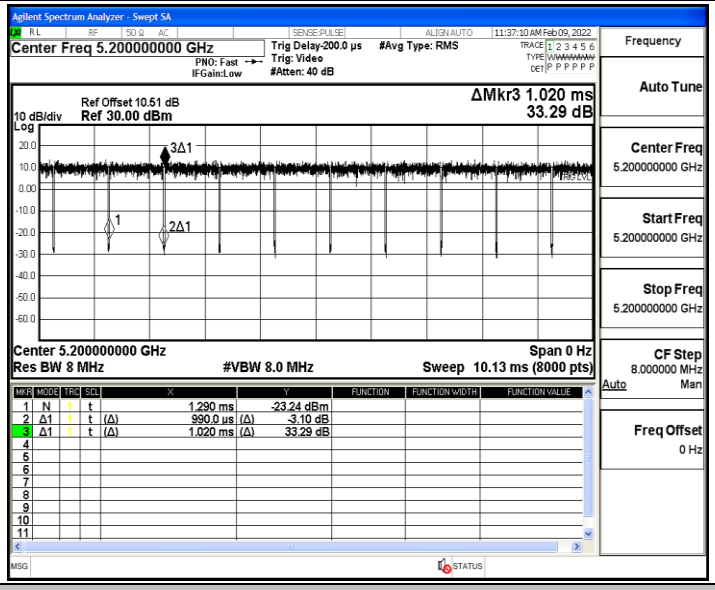

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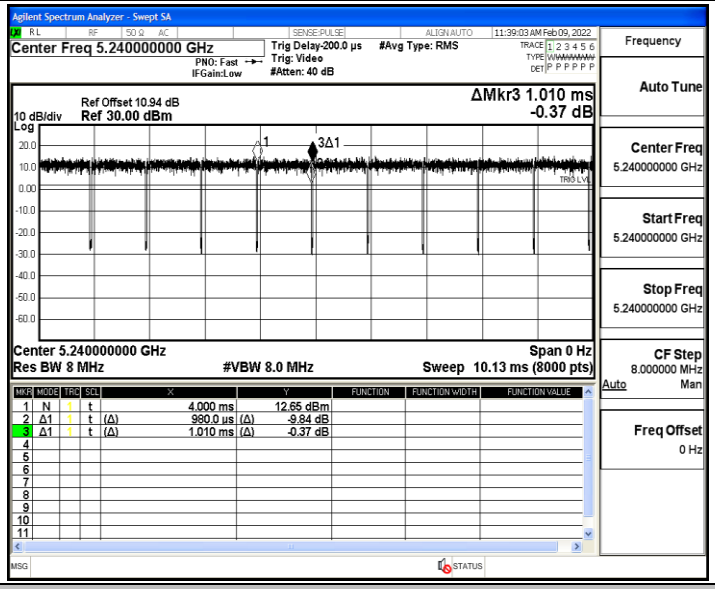

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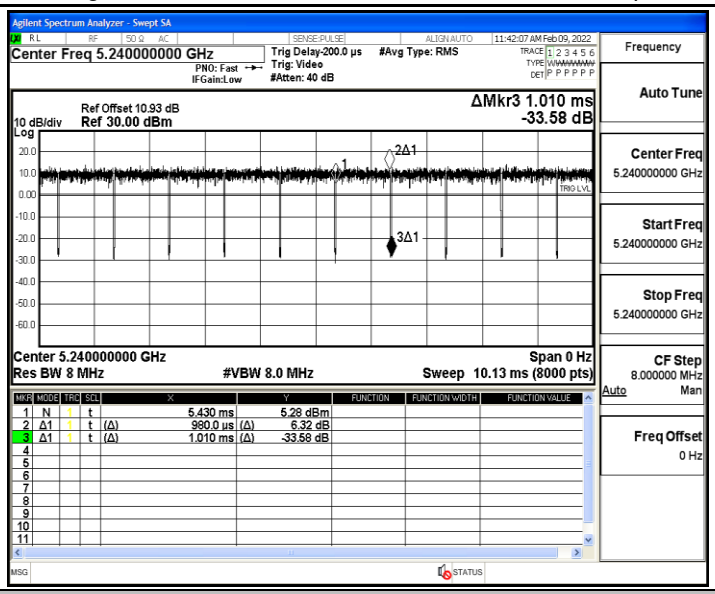

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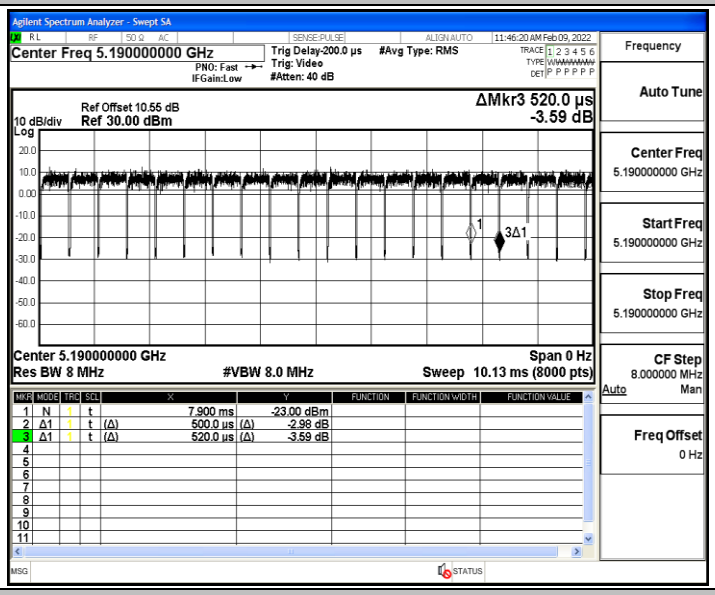

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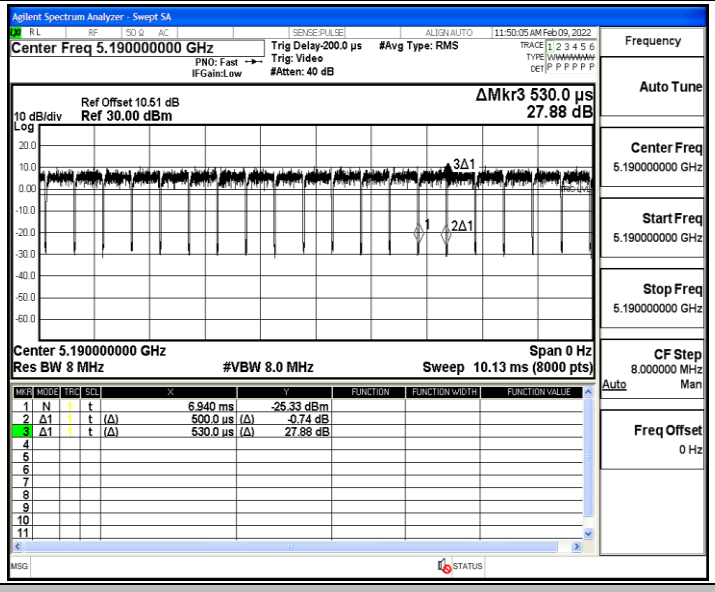

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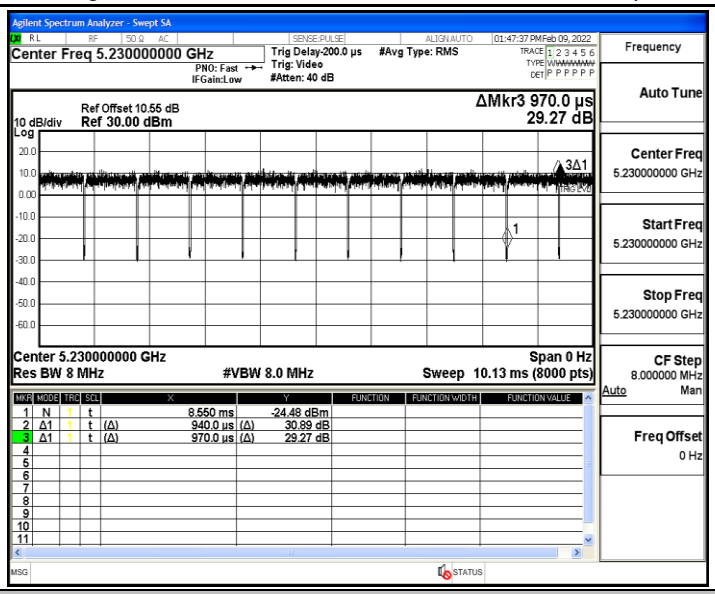

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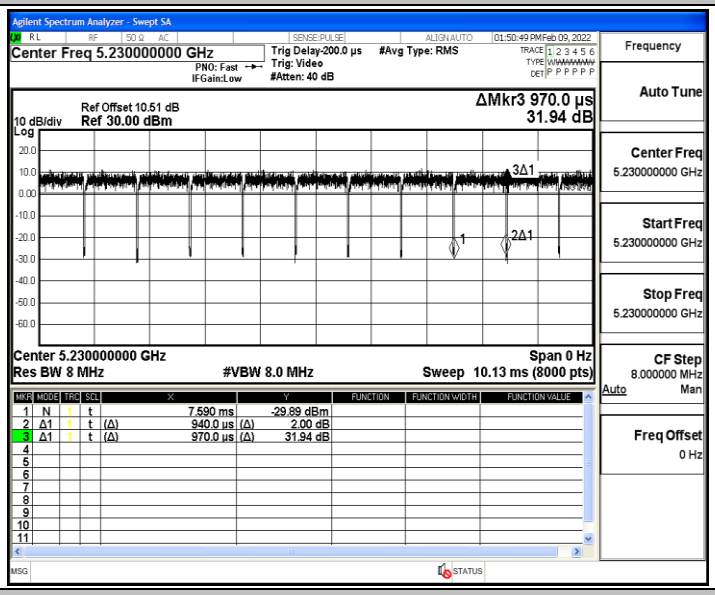

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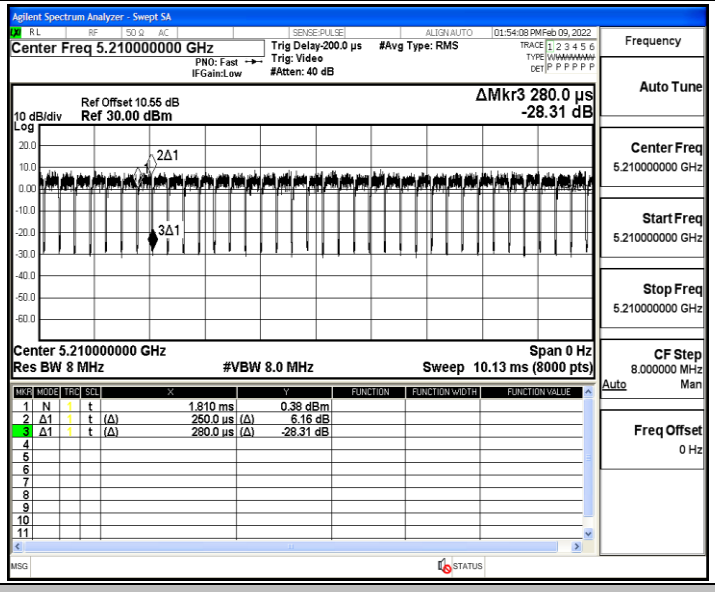

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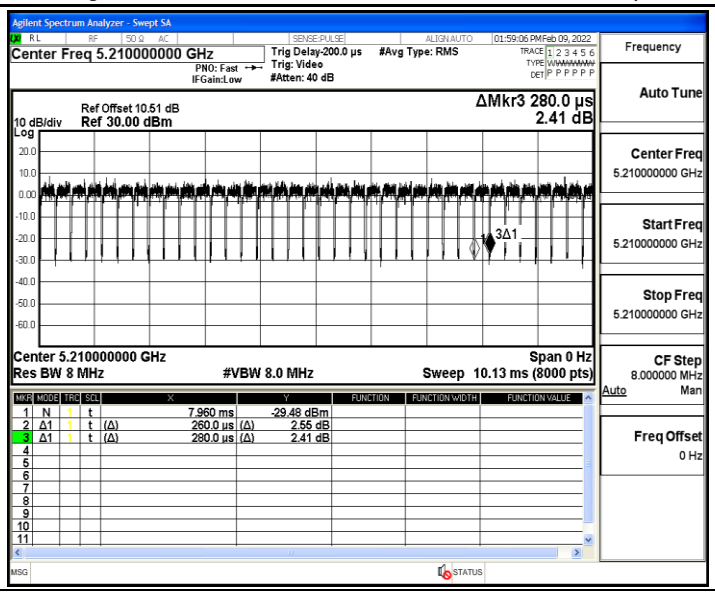
Agilent Spectrum Analyzer - Swept SA
Center Freq 5.210000000 GHz
PNO: Fast
IFGain:Low
Trig Delay-200.0 µs
Trig: Video
#Avg Type: RMS
#Atten: 40 dB
01:59:06 PM Feb 09, 2022
Frequency
Auto Tune
Ref Offset 10.51 dB
10 dB/div
Log
Ref 30.00 dBm
ΔMkr3 280.0 µs
2.41 dB
3Δ1
Center Freq
5.210000000 GHz
Start Freq
5.210000000 GHz
Stop Freq
5.210000000 GHz
Center 5.210000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 10.13 ms (8000 pts)
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
1 N 1 t 7.960 ms -29.48 dBm
2 Δ1 1 t (Δ) 260.0 µs (Δ) 2.55 dB
3 Δ1 1 t (Δ) 280.0 µs (Δ) 2.41 dB
MSG
STATUS