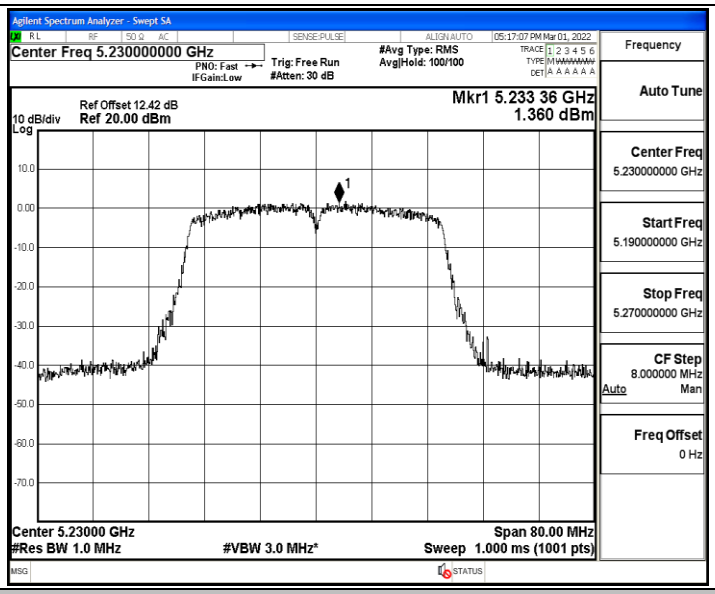
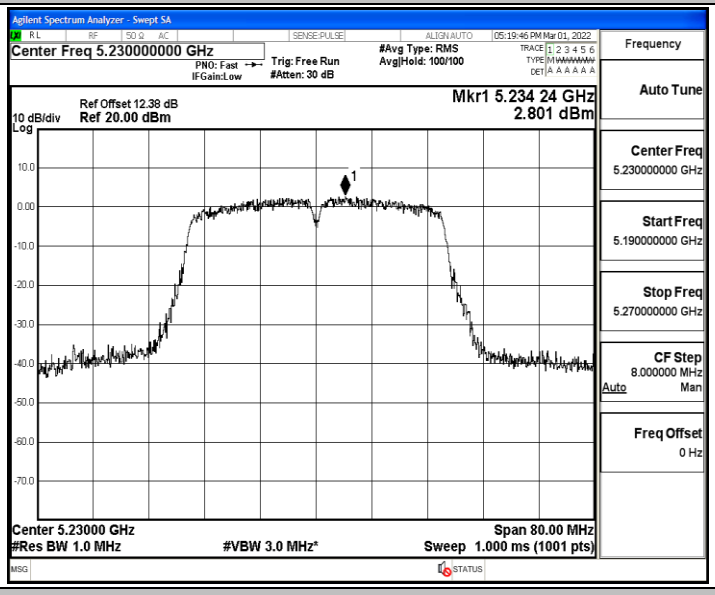
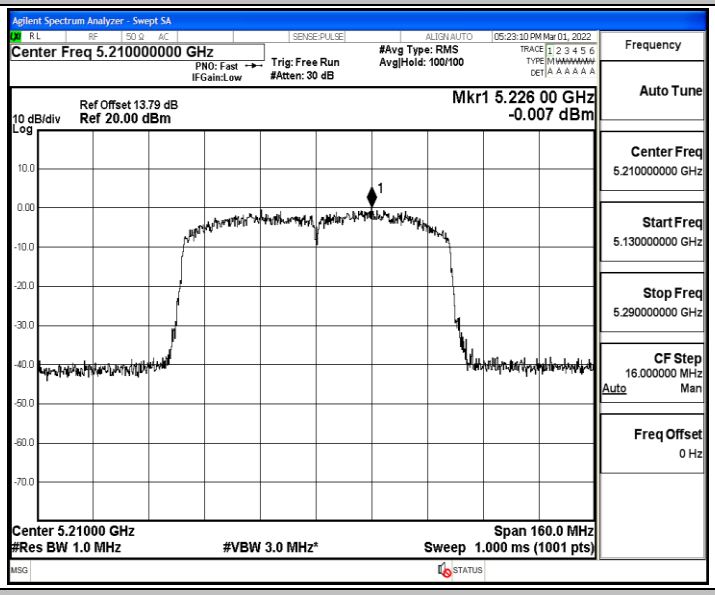


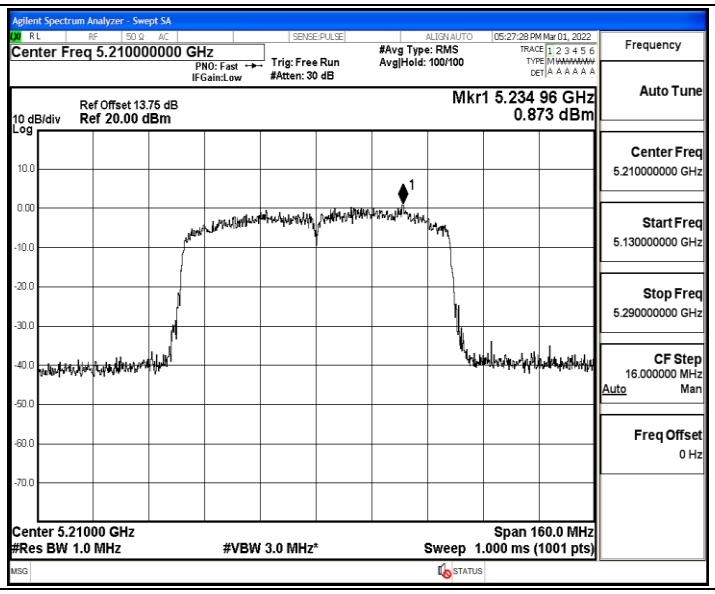
11AC40MIMO_Ant2_5230



11AC80MIMO_Ant1_5210



11AC80MIMO_Ant2_5210


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.210000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
05:27:28 PM Mar 01, 2022
Ref Offset 13.75 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 5.234 96 GHz
0.873 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.21000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 160.0 MHz
Sweep 1.000 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.210000000 GHz
Start Freq
5.130000000 GHz
Stop Freq
5.290000000 GHz
CF Step
16.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

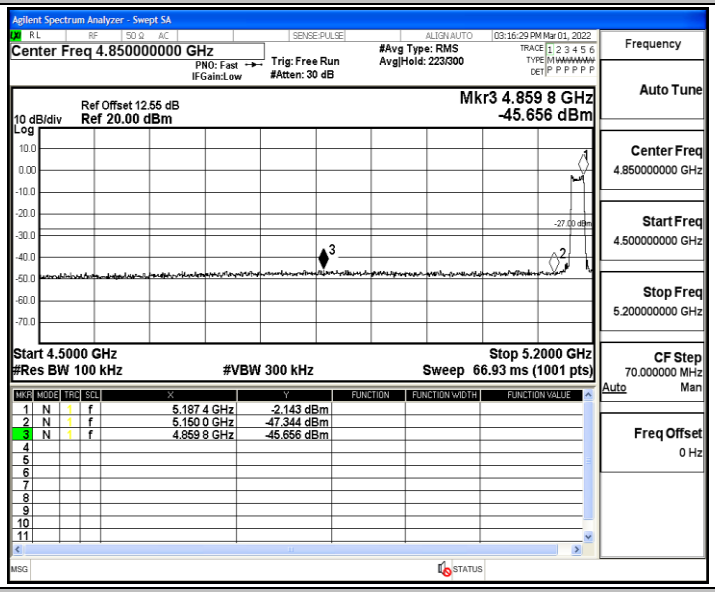
Appendix D: Band edge measurements

Test Result

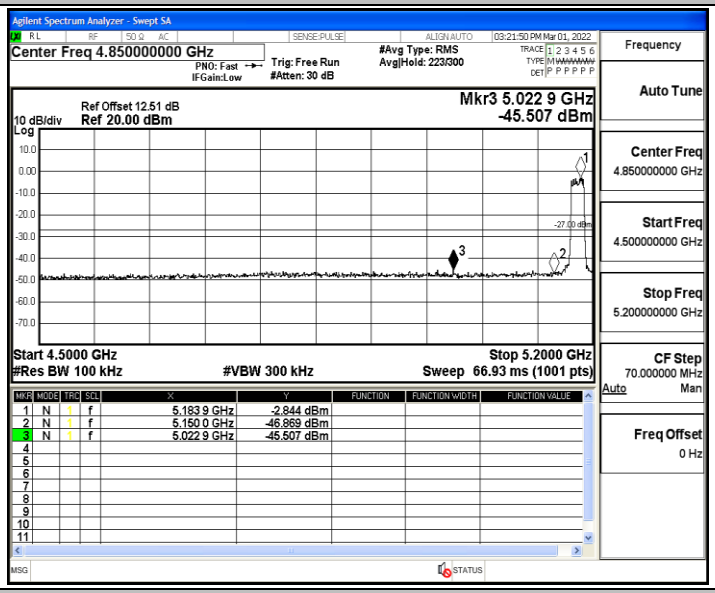
TestMode	Antenna	ChName	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-45.66	≤-27	PASS
	Ant2	Low	5180	-45.51	≤-27	PASS
	Ant1	High	5240	-45.93	≤-27	PASS
	Ant2	High	5240	-44.48	≤-27	PASS
11N20MIMO	Ant1	Low	5180	-45.77	≤-27	PASS
	Ant2	Low	5180	-45.38	≤-27	PASS
	Ant1	High	5240	-45.68	≤-27	PASS
	Ant2	High	5240	-44.28	≤-27	PASS
11N40MIMO	Ant1	Low	5190	-44.65	≤-27	PASS
	Ant2	Low	5190	-44.19	≤-27	PASS
	Ant1	High	5230	-45.97	≤-27	PASS
	Ant2	High	5230	-45.74	≤-27	PASS
11AC20MIMO	Ant1	Low	5180	-45.35	≤-27	PASS
	Ant2	Low	5180	-45.32	≤-27	PASS
	Ant1	High	5240	-44.6	≤-27	PASS
	Ant2	High	5240	-45.35	≤-27	PASS
11AC40MIMO	Ant1	Low	5190	-45.41	≤-27	PASS
	Ant2	Low	5190	-45.17	≤-27	PASS
	Ant1	High	5230	-46.16	≤-27	PASS
	Ant2	High	5230	-45.14	≤-27	PASS
11AC80MIMO	Ant1	Low	5210	-44.56	≤-27	PASS
	Ant2	Low	5210	-45.06	≤-27	PASS
	Ant1	High	5210	-45.94	≤-27	PASS
	Ant2	High	5210	-45.55	≤-27	PASS

Test Graphs

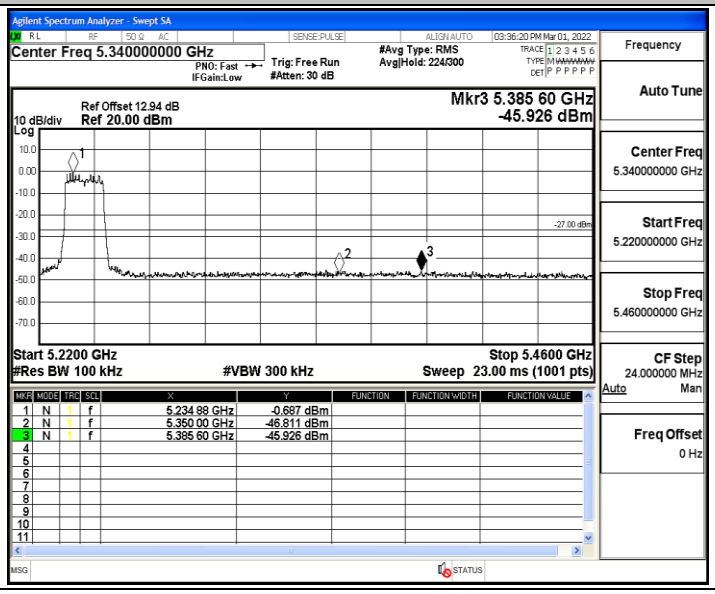
11A_Ant1_Low_5180



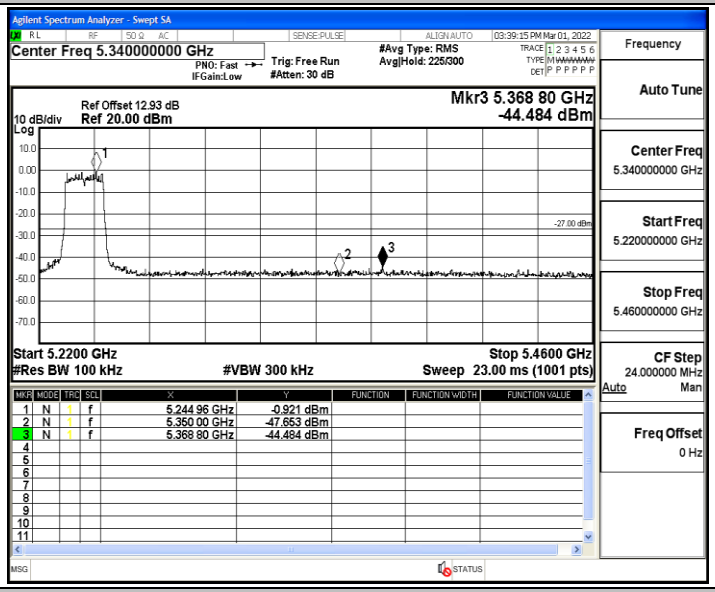
11A_Ant2_Low_5180



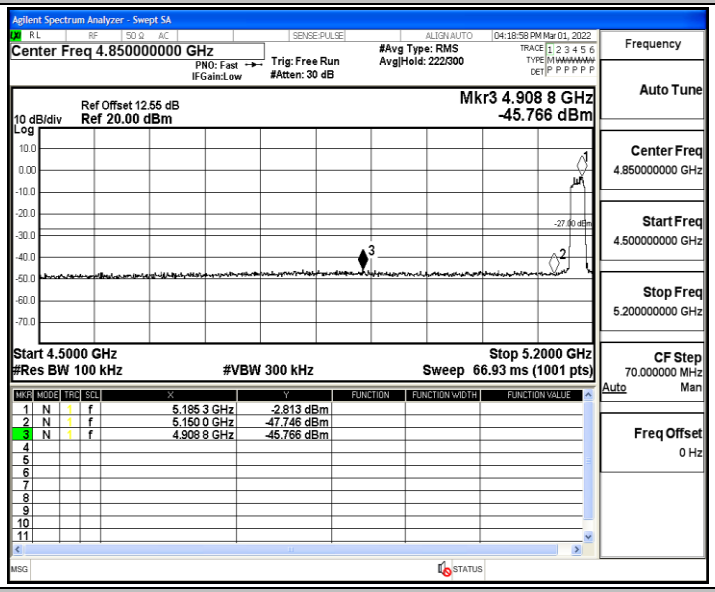
11A_Ant1_High_5240



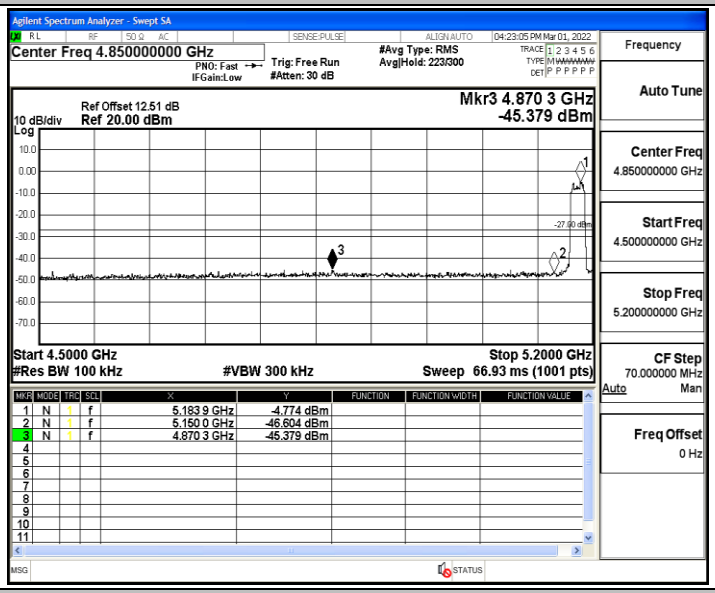
11A_Ant2_High_5240



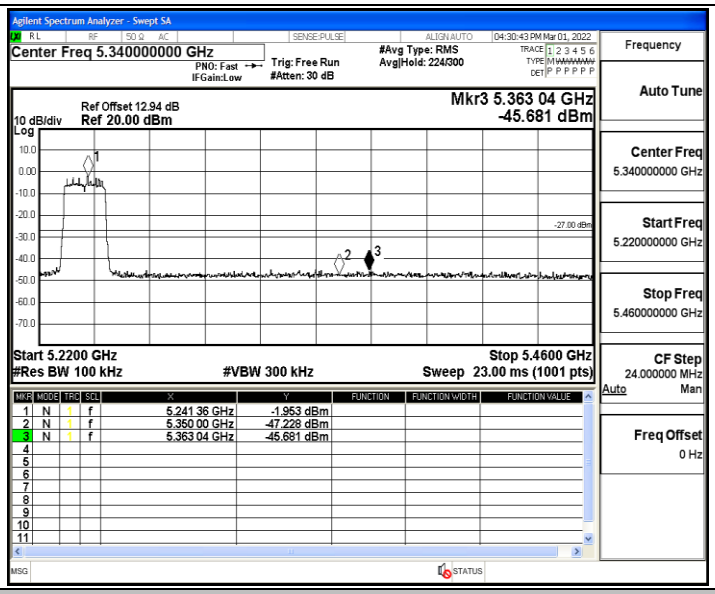
11N20MIMO_Ant1_Low_5180



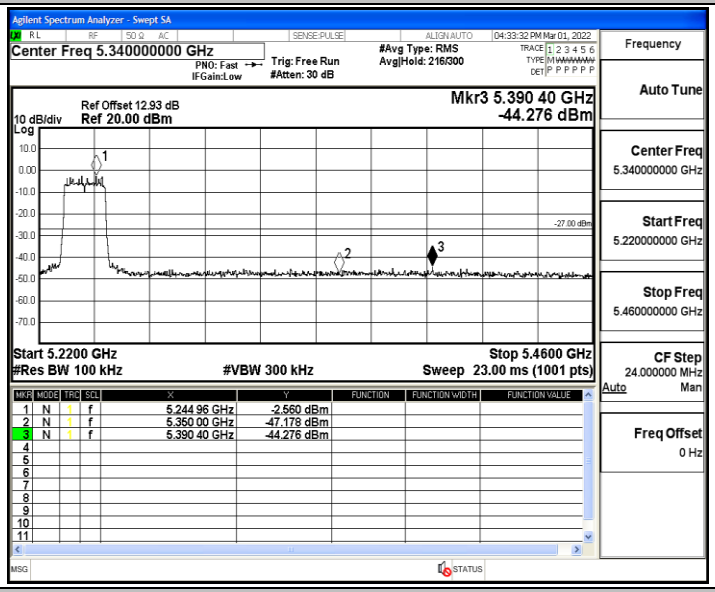
11N20MIMO_Ant2_Low_5180



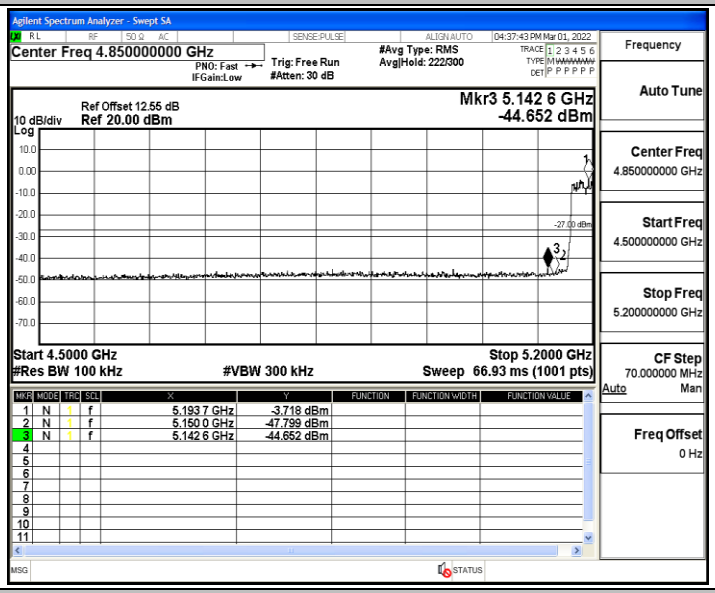
11N20MIMO_Ant1_High_5240



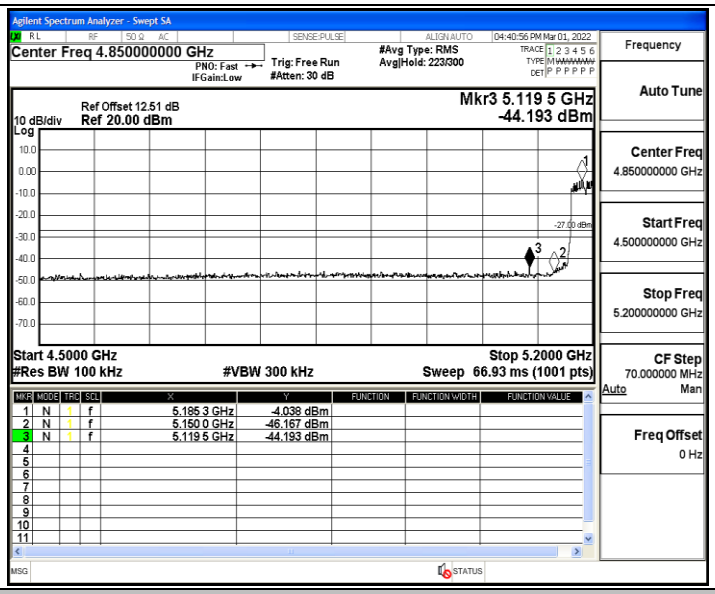
11N20MIMO_Ant2_High_5240



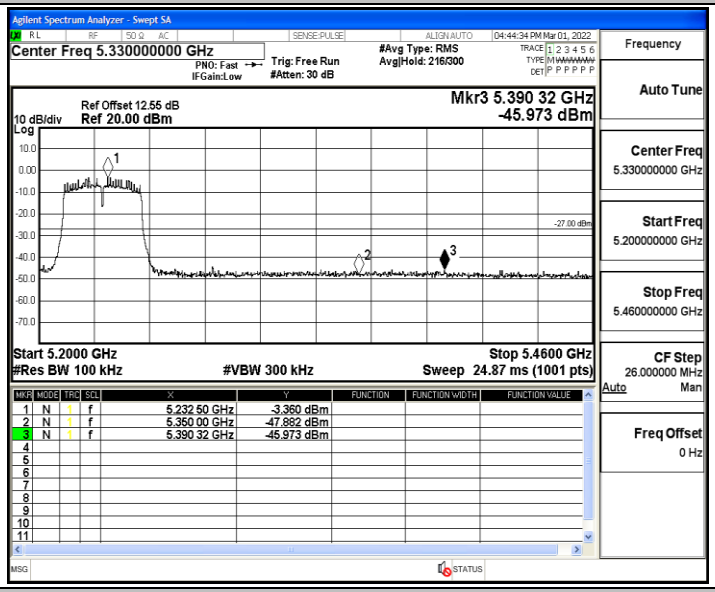
11N40MIMO_Ant1_Low_5190



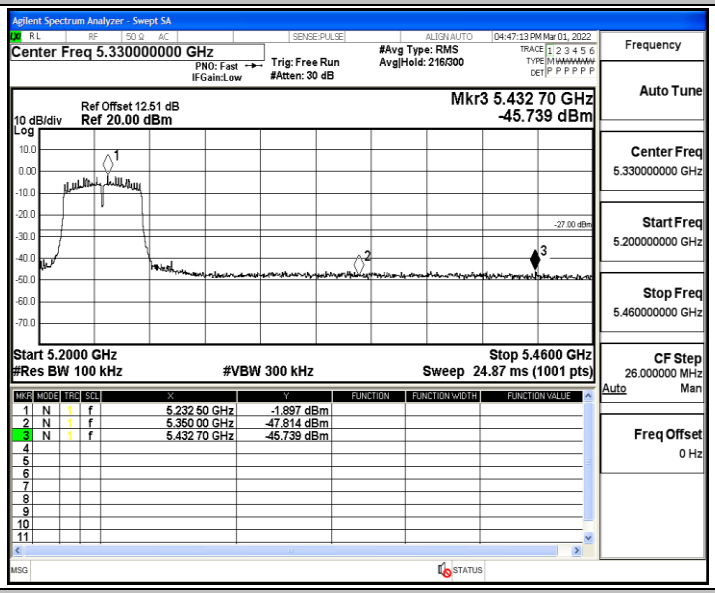
11N40MIMO_Ant2_Low_5190



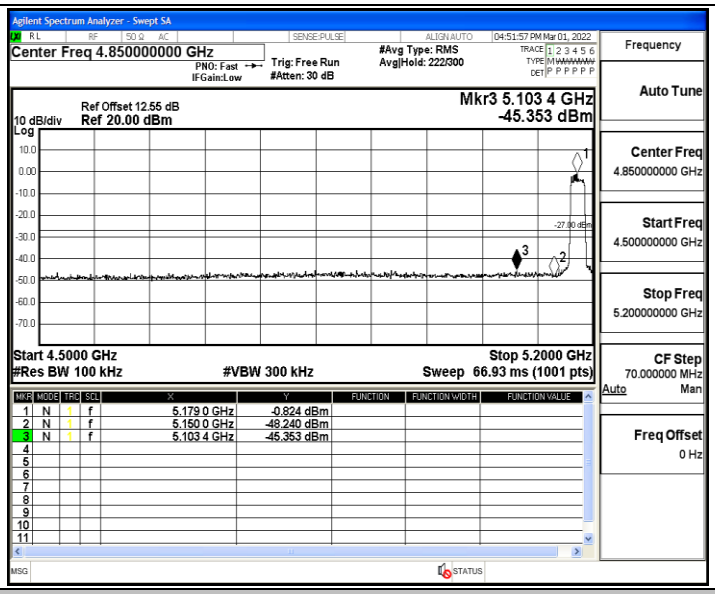
11N40MIMO_Ant1_High_5230



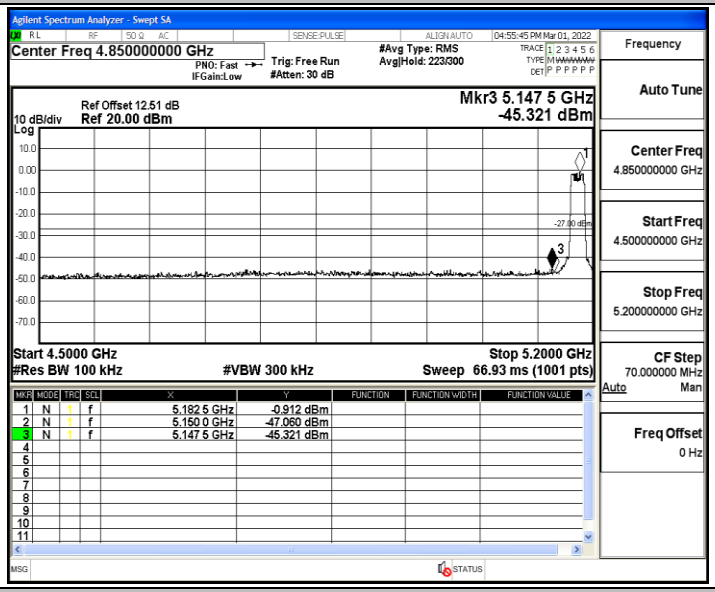
11N40MIMO_Ant2_High_5230



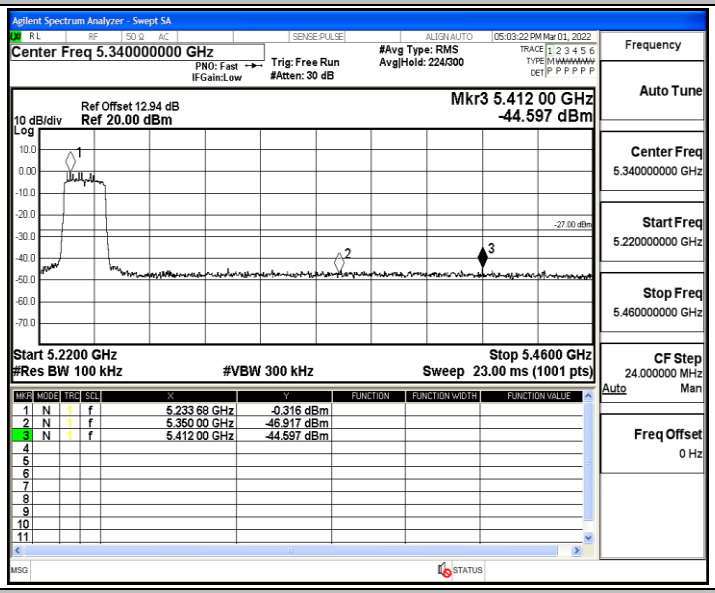
11AC20MIMO_Ant1_Low_5180



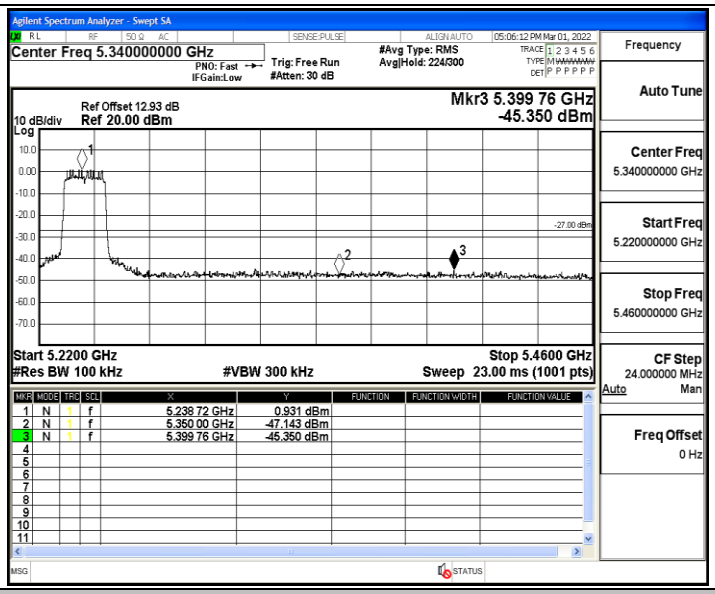
11AC20MIMO_Ant2_Low_5180



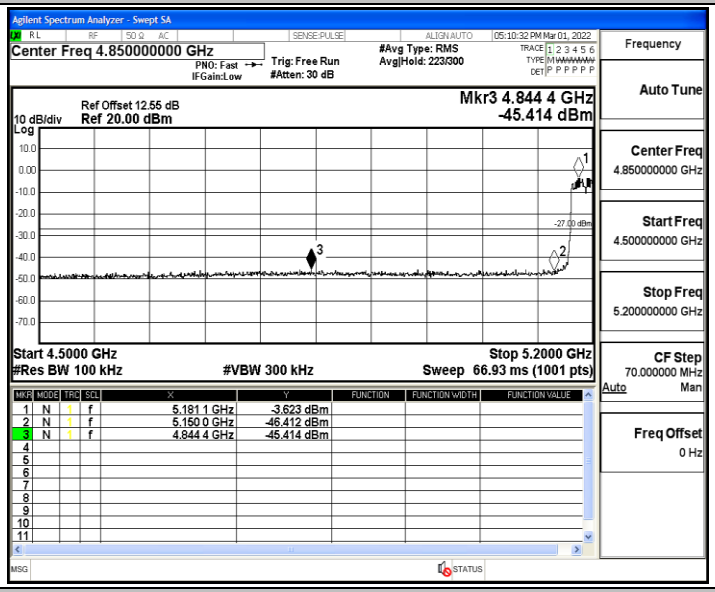
11AC20MIMO_Ant1_High_5240



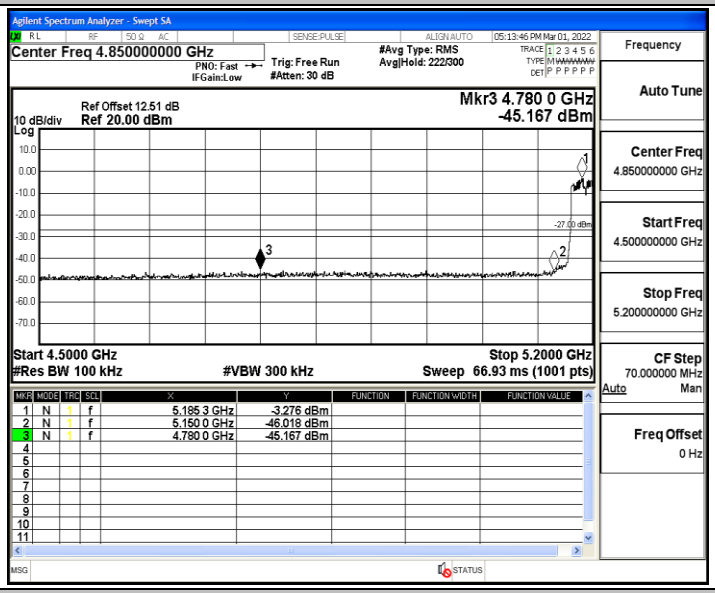
11AC20MIMO_Ant2_High_5240



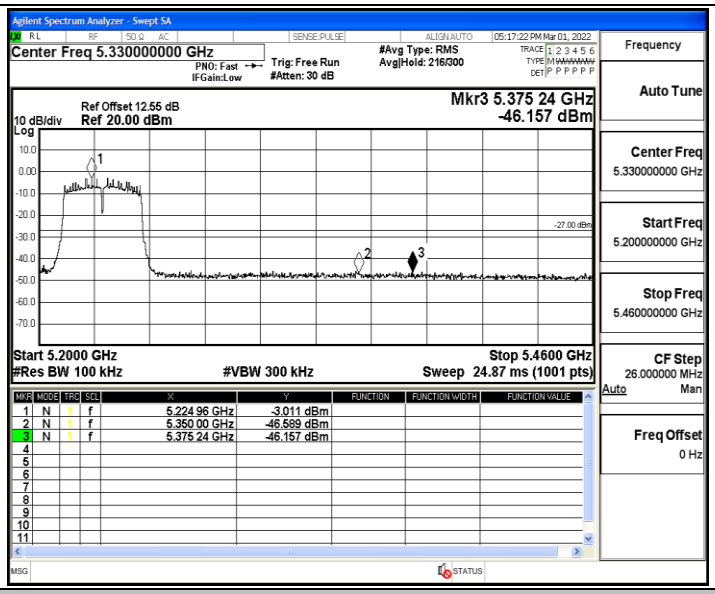
11AC40MIMO_Ant1_Low_5190



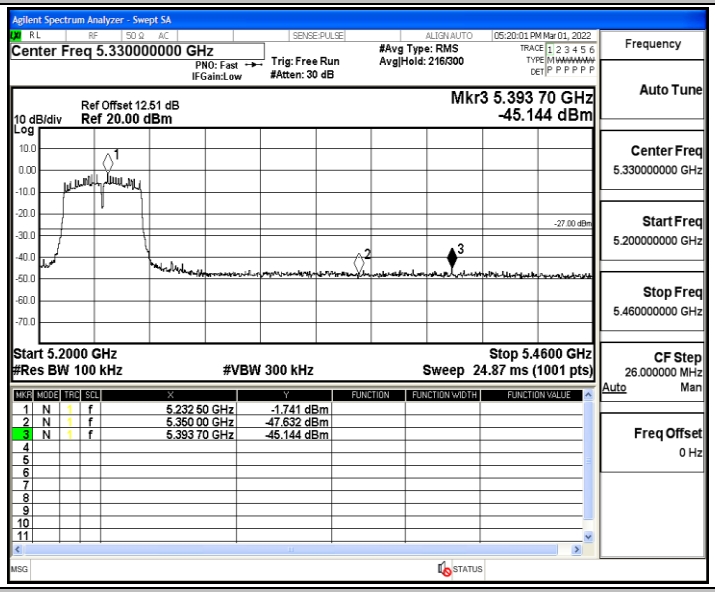
11AC40MIMO_Ant2_Low_5190



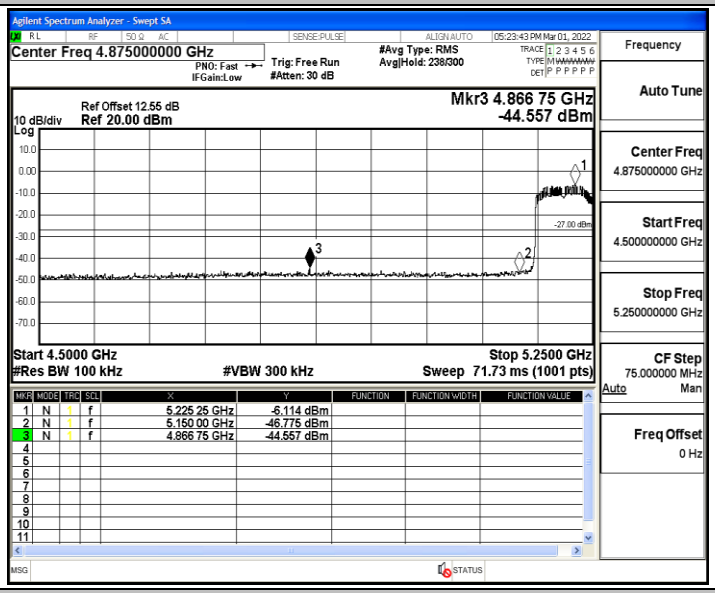
11AC40MIMO_Ant1_High_5230



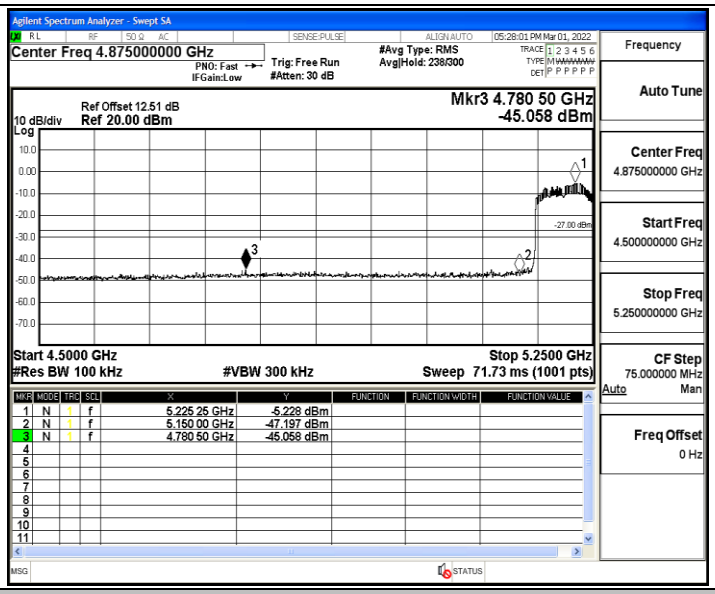
11AC40MIMO_Ant2_High_5230



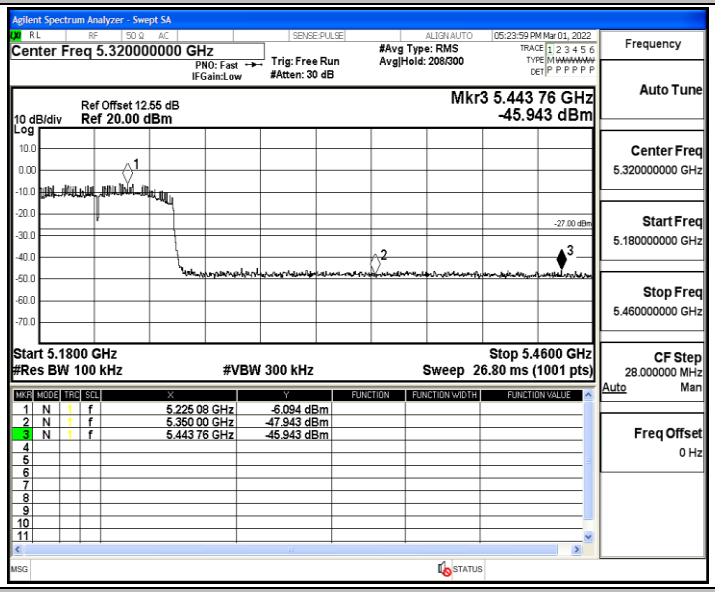
11AC80MIMO_Ant1_Low_5210



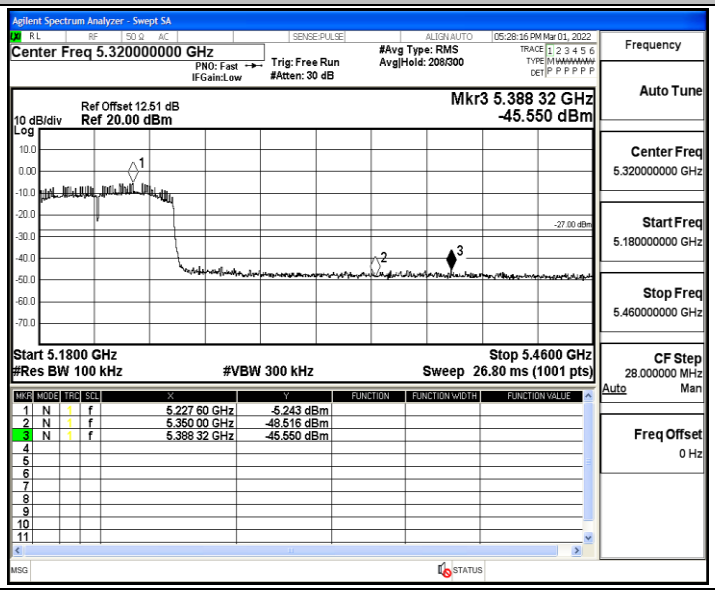
11AC80MIMO_Ant2_Low_5210



11AC80MIMO_Ant1_High_5210



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	5180.091411	5150 – 5250	PASS
5180	20	108	5180.082227	5150 – 5250	PASS
5180	50	120	5180.091380	5150 – 5250	PASS
5180	40	120	5179.926557	5150 – 5250	PASS
5180	30	120	5180.038841	5150 – 5250	PASS
5180	20	120	5179.998894	5150 – 5250	PASS
5180	10	120	5180.044931	5150 – 5250	PASS
5180	0	120	5179.909283	5150 – 5250	PASS
5180	-10	120	5180.040820	5150 – 5250	PASS
5180	-20	120	5180.060889	5150 – 5250	PASS
5180	-30	120	5179.950100	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5180	20	132	5180.046417	5150 – 5250	PASS
5180	20	108	5179.951780	5150 – 5250	PASS
5180	50	120	5180.018584	5150 – 5250	PASS
5180	40	120	5180.077235	5150 – 5250	PASS
5180	30	120	5179.920483	5150 – 5250	PASS
5180	20	120	5179.949226	5150 – 5250	PASS
5180	10	120	5180.042306	5150 – 5250	PASS
5180	0	120	5180.033291	5150 – 5250	PASS
5180	-10	120	5179.909788	5150 – 5250	PASS
5180	-20	120	5180.013993	5150 – 5250	PASS
5180	-30	120	5180.015428	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	132	5200.036033	5150 – 5250	PASS
5200	20	108	5200.086924	5150 – 5250	PASS
5200	50	120	5200.029034	5150 – 5250	PASS
5200	40	120	5200.088906	5150 – 5250	PASS
5200	30	120	5199.959230	5150 – 5250	PASS
5200	20	120	5199.969702	5150 – 5250	PASS
5200	10	120	5200.066598	5150 – 5250	PASS
5200	0	120	5200.076694	5150 – 5250	PASS
5200	-10	120	5200.001678	5150 – 5250	PASS
5200	-20	120	5200.042175	5150 – 5250	PASS
5200	-30	120	5200.058880	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	132	5200.067696	5150 – 5250	PASS
5200	20	108	5199.951630	5150 – 5250	PASS
5200	50	120	5200.055358	5150 – 5250	PASS
5200	40	120	5199.991063	5150 – 5250	PASS
5200	30	120	5199.985003	5150 – 5250	PASS
5200	20	120	5200.060979	5150 – 5250	PASS
5200	10	120	5199.954902	5150 – 5250	PASS
5200	0	120	5199.998170	5150 – 5250	PASS
5200	-10	120	5199.919093	5150 – 5250	PASS
5200	-20	120	5200.068770	5150 – 5250	PASS
5200	-30	120	5200.063954	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	132	5239.971455	5150 – 5250	PASS
5240	20	108	5239.965098	5150 – 5250	PASS
5240	50	120	5239.979543	5150 – 5250	PASS
5240	40	120	5240.077371	5150 – 5250	PASS
5240	30	120	5240.067147	5150 – 5250	PASS
5240	20	120	5239.958338	5150 – 5250	PASS
5240	10	120	5240.058098	5150 – 5250	PASS
5240	0	120	5239.959047	5150 – 5250	PASS
5240	-10	120	5240.009807	5150 – 5250	PASS
5240	-20	120	5240.061794	5150 – 5250	PASS
5240	-30	120	5240.010023	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	132	5239.916624	5150 – 5250	PASS
5240	20	108	5240.076369	5150 – 5250	PASS
5240	50	120	5240.055786	5150 – 5250	PASS
5240	40	120	5239.945434	5150 – 5250	PASS
5240	30	120	5240.027645	5150 – 5250	PASS
5240	20	120	5240.048393	5150 – 5250	PASS
5240	10	120	5240.023015	5150 – 5250	PASS
5240	0	120	5240.085352	5150 – 5250	PASS
5240	-10	120	5239.987805	5150 – 5250	PASS
5240	-20	120	5239.945070	5150 – 5250	PASS
5240	-30	120	5240.082877	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5190	20	132	5189.958173	5150 – 5250	PASS
5190	20	108	5190.091387	5150 – 5250	PASS
5190	50	120	5189.984614	5150 – 5250	PASS
5190	40	120	5190.063296	5150 – 5250	PASS
5190	30	120	5190.053020	5150 – 5250	PASS
5190	20	120	5190.085168	5150 – 5250	PASS
5190	10	120	5190.020751	5150 – 5250	PASS
5190	0	120	5190.070297	5150 – 5250	PASS
5190	-10	120	5190.099927	5150 – 5250	PASS
5190	-20	120	5189.960362	5150 – 5250	PASS
5190	-30	120	5190.058569	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5190	20	132	5189.962275	5150 – 5250	PASS
5190	20	108	5190.053393	5150 – 5250	PASS
5190	50	120	5189.960948	5150 – 5250	PASS
5190	40	120	5189.951399	5150 – 5250	PASS
5190	30	120	5189.907989	5150 – 5250	PASS
5190	20	120	5190.019411	5150 – 5250	PASS
5190	10	120	5189.933832	5150 – 5250	PASS
5190	0	120	5189.956783	5150 – 5250	PASS
5190	-10	120	5189.940830	5150 – 5250	PASS
5190	-20	120	5190.083654	5150 – 5250	PASS
5190	-30	120	5189.959024	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5230	20	132	5230.064227	5150 – 5250	PASS
5230	20	108	5230.084071	5150 – 5250	PASS
5230	50	120	5230.062752	5150 – 5250	PASS
5230	40	120	5229.928858	5150 – 5250	PASS
5230	30	120	5229.959408	5150 – 5250	PASS
5230	20	120	5230.035241	5150 – 5250	PASS
5230	10	120	5230.072943	5150 – 5250	PASS
5230	0	120	5230.047821	5150 – 5250	PASS
5230	-10	120	5229.954550	5150 – 5250	PASS
5230	-20	120	5230.053727	5150 – 5250	PASS
5230	-30	120	5230.038629	5150 – 5250	PASS

Ant2

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5230	20	132	5229.971979	5150 – 5250	PASS
5230	20	108	5230.050455	5150 – 5250	PASS
5230	50	120	5230.073145	5150 – 5250	PASS
5230	40	120	5229.922936	5150 – 5250	PASS
5230	30	120	5229.975111	5150 – 5250	PASS
5230	20	120	5229.906531	5150 – 5250	PASS
5230	10	120	5229.907777	5150 – 5250	PASS
5230	0	120	5230.047412	5150 – 5250	PASS
5230	-10	120	5230.064883	5150 – 5250	PASS
5230	-20	120	5230.055414	5150 – 5250	PASS
5230	-30	120	5230.066714	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5210	20	132	5209.980561	5150 – 5250	PASS
5210	20	108	5210.033736	5150 – 5250	PASS
5210	50	120	5210.078384	5150 – 5250	PASS
5210	40	120	5209.939812	5150 – 5250	PASS
5210	30	120	5210.075933	5150 – 5250	PASS
5210	20	120	5210.013270	5150 – 5250	PASS
5210	10	120	5210.090455	5150 – 5250	PASS
5210	0	120	5210.024026	5150 – 5250	PASS
5210	-10	120	5209.912794	5150 – 5250	PASS
5210	-20	120	5210.024999	5150 – 5250	PASS
5210	-30	120	5209.907322	5150 – 5250	PASS

Ant2

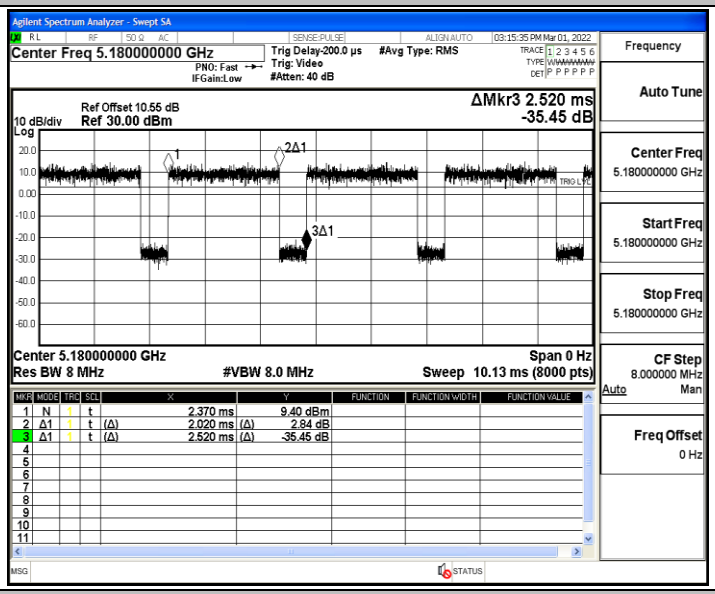
Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5210	20	132	5210.028255	5150 – 5250	PASS
5210	20	108	5210.053199	5150 – 5250	PASS
5210	50	120	5209.936273	5150 – 5250	PASS
5210	40	120	5210.008194	5150 – 5250	PASS
5210	30	120	5210.086963	5150 – 5250	PASS
5210	20	120	5210.008754	5150 – 5250	PASS
5210	10	120	5209.957682	5150 – 5250	PASS
5210	0	120	5210.059935	5150 – 5250	PASS
5210	-10	120	5209.900437	5150 – 5250	PASS
5210	-20	120	5210.098977	5150 – 5250	PASS
5210	-30	120	5209.988350	5150 – 5250	PASS

Appendix F: Duty Cycle

Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/B[KHz]
11A	Ant1	5180	2.02	2.52	80.16	0.4
	Ant2	5180	2.02	2.52	80.16	0.4
	Ant1	5200	2.03	2.53	80.24	0.4
	Ant2	5200	2.02	2.52	80.16	0.4
	Ant1	5240	2.02	2.52	80.16	0.4
	Ant2	5240	2.02	2.52	80.16	0.4
11N20MIMO	Ant1	5180	1.89	2.39	79.08	0.42
	Ant2	5180	1.89	2.39	79.08	0.42
	Ant1	5200	1.89	2.40	78.75	0.42
	Ant2	5200	1.89	2.39	79.08	0.42
	Ant1	5240	1.89	2.39	79.08	0.42
	Ant2	5240	1.88	2.39	78.66	0.42
11N40MIMO	Ant1	5190	0.93	1.43	65.03	0.7
	Ant2	5190	0.92	1.43	64.34	0.7
	Ant1	5230	0.92	1.43	64.34	0.7
	Ant2	5230	0.92	1.43	64.34	0.7
11AC20MIMO	Ant1	5180	1.89	2.39	79.08	0.42
	Ant2	5180	1.89	2.39	79.08	0.42
	Ant1	5200	1.89	2.39	79.08	0.42
	Ant2	5200	1.90	2.40	79.17	0.42
	Ant1	5240	1.90	2.40	79.17	0.42
	Ant2	5240	1.89	2.39	79.08	0.42
11AC40MIMO	Ant1	5190	0.93	1.43	65.03	0.7
	Ant2	5190	0.93	1.43	65.03	0.7
	Ant1	5230	0.93	1.43	65.03	0.7
	Ant2	5230	0.93	1.43	65.03	0.7
11AC80MIMO	Ant1	5210	0.45	0.95	47.37	1.05
	Ant2	5210	0.45	0.95	47.37	1.05

Test Graphs

11A_Ant1_5180


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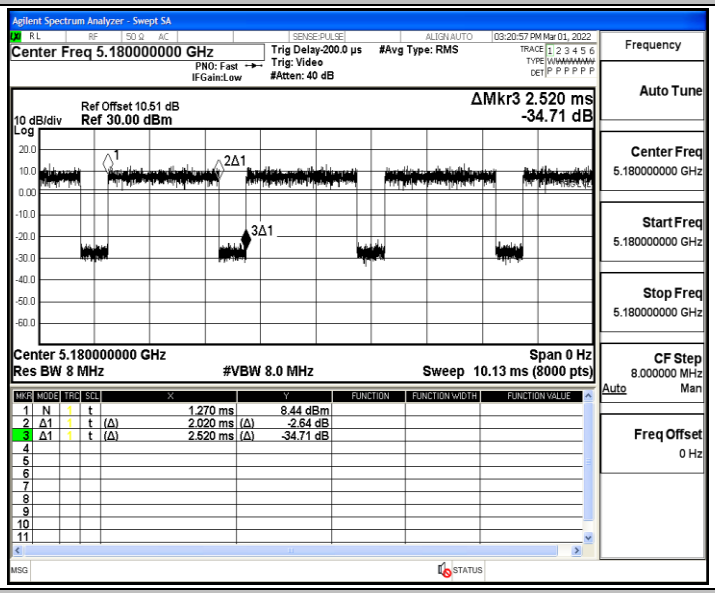

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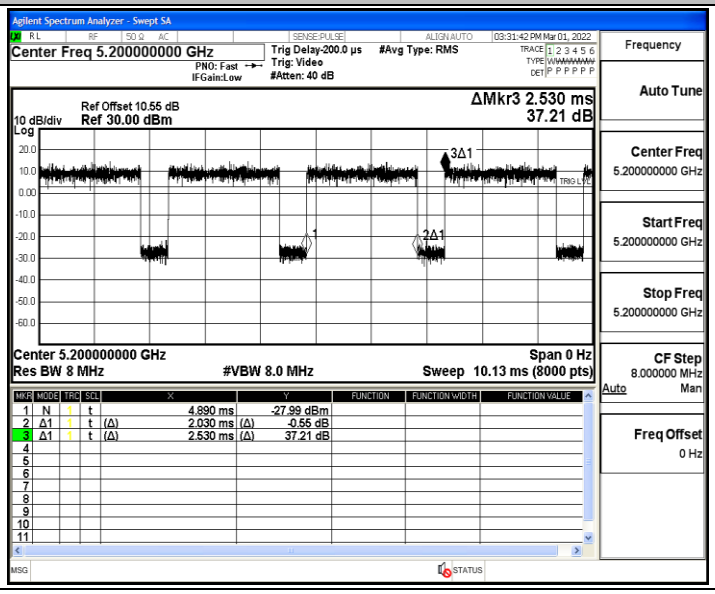

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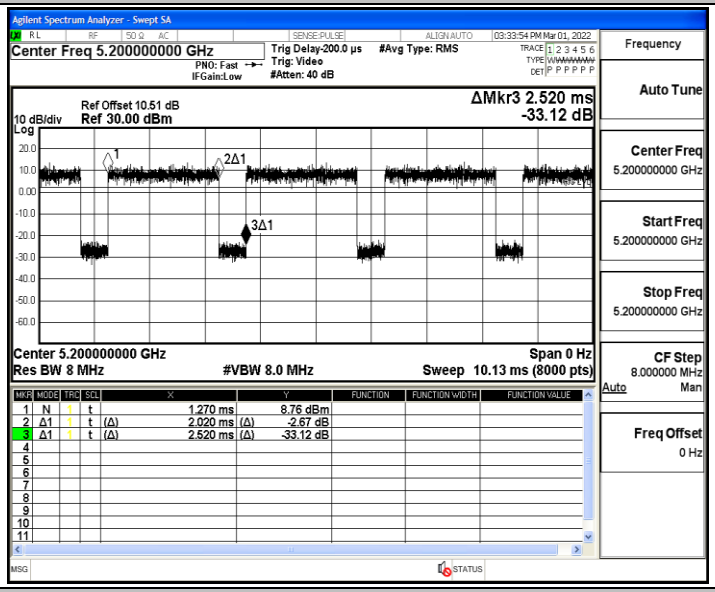

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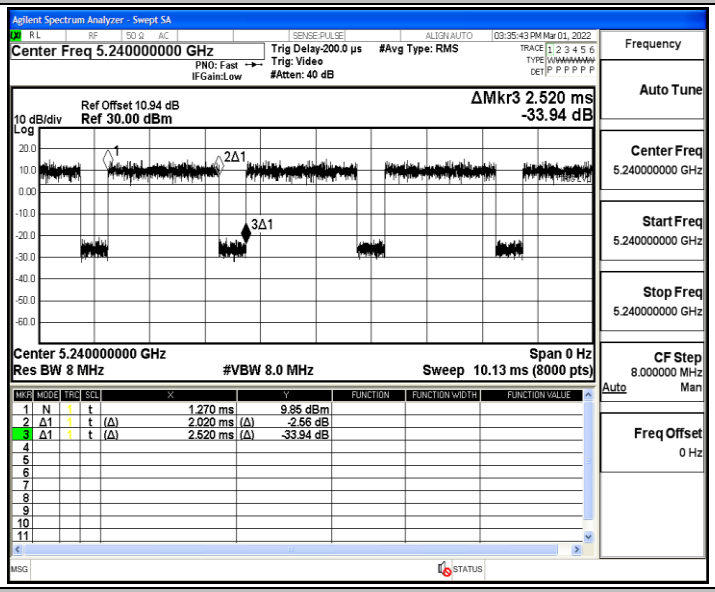

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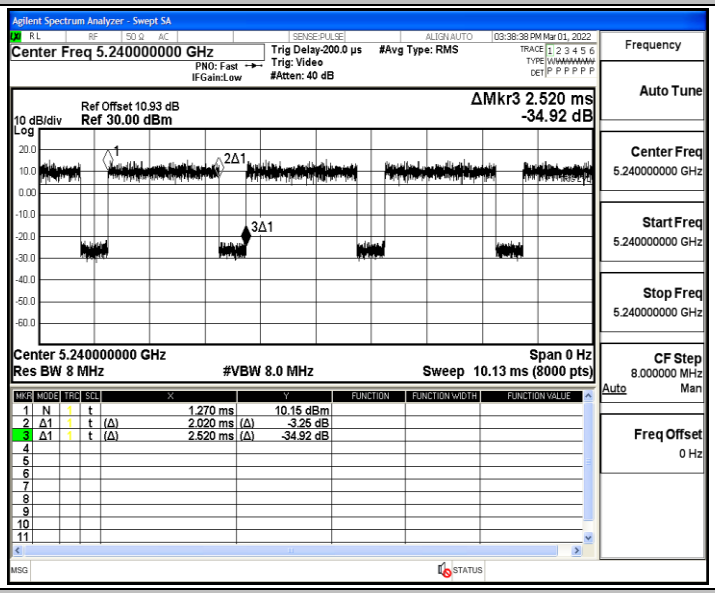

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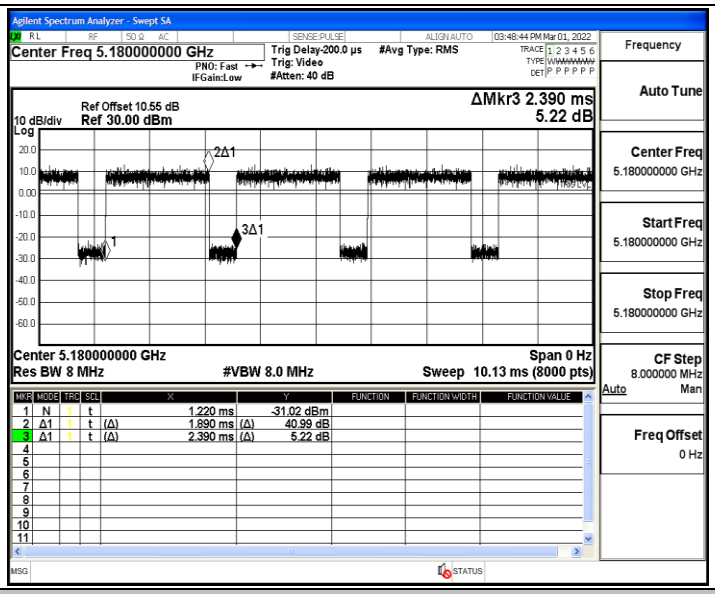

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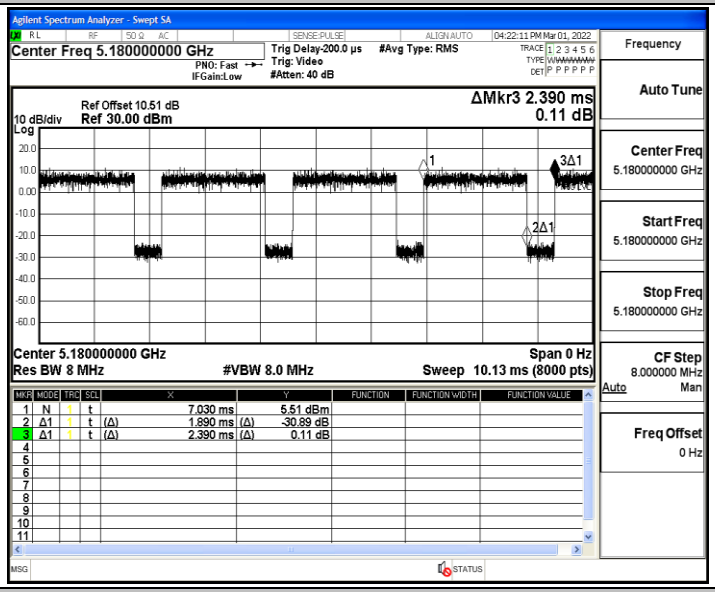

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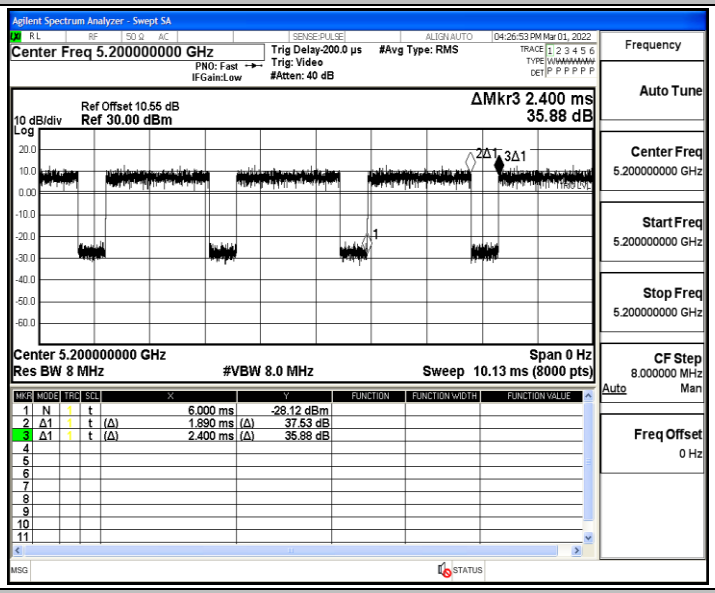

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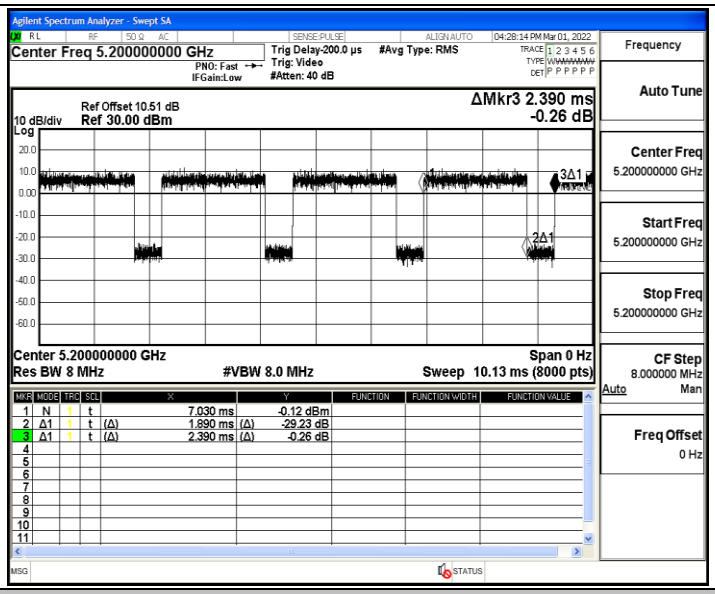

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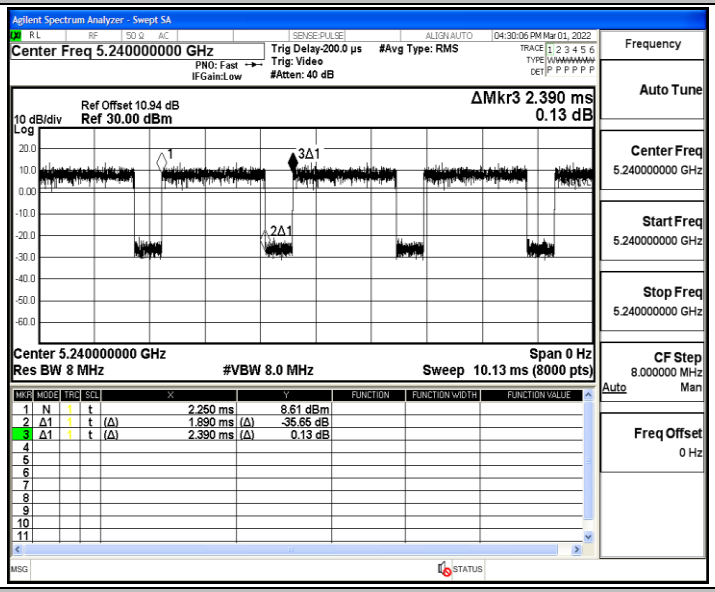

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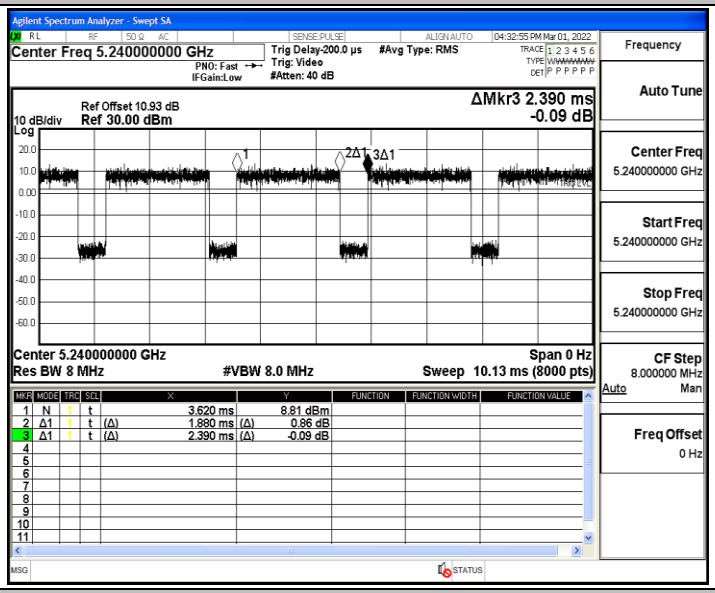

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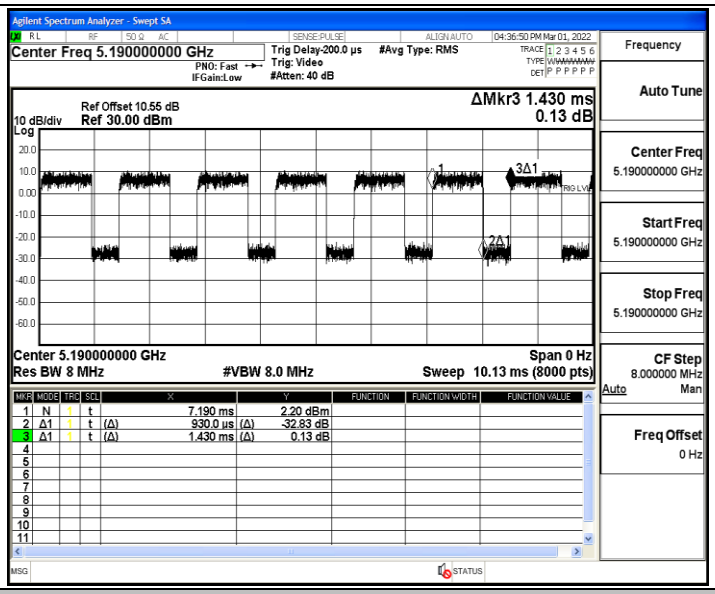

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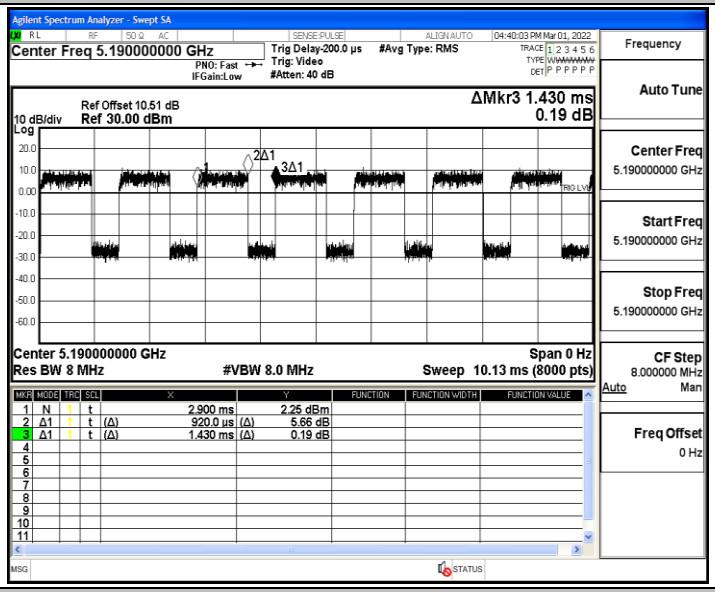

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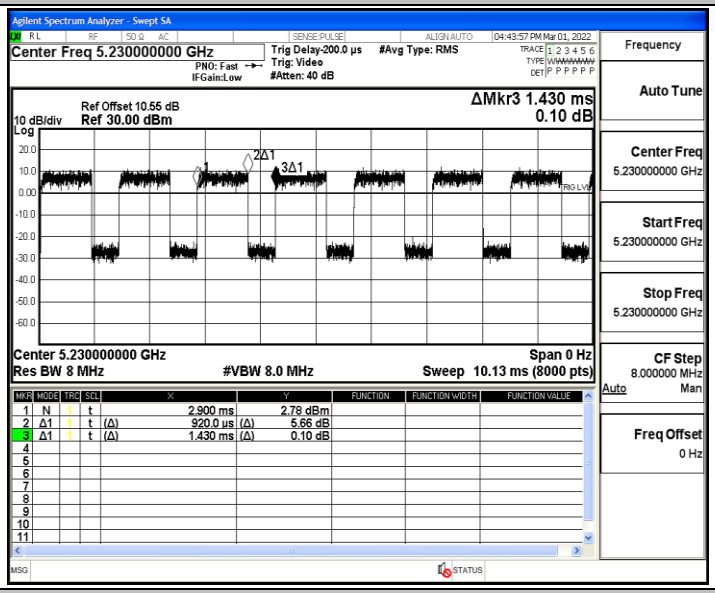

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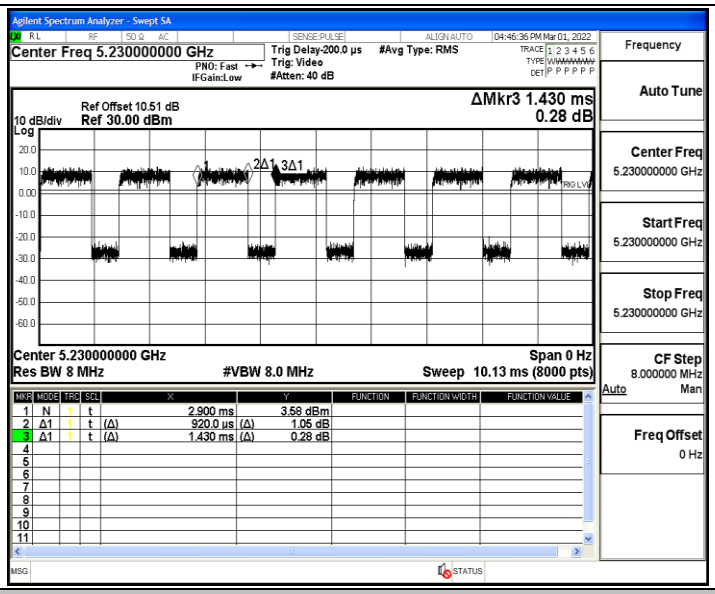

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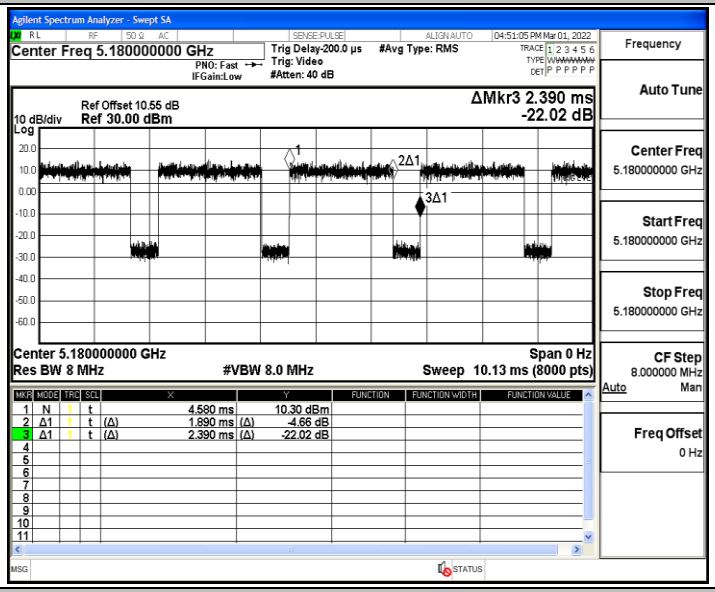

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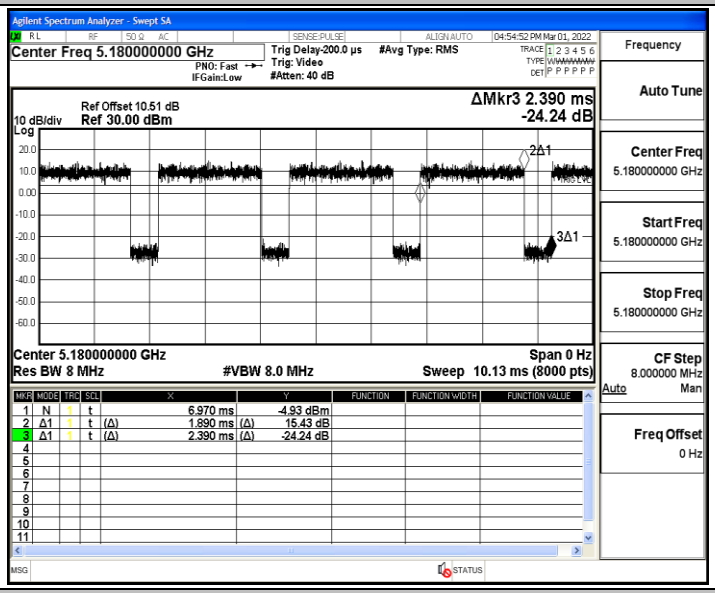

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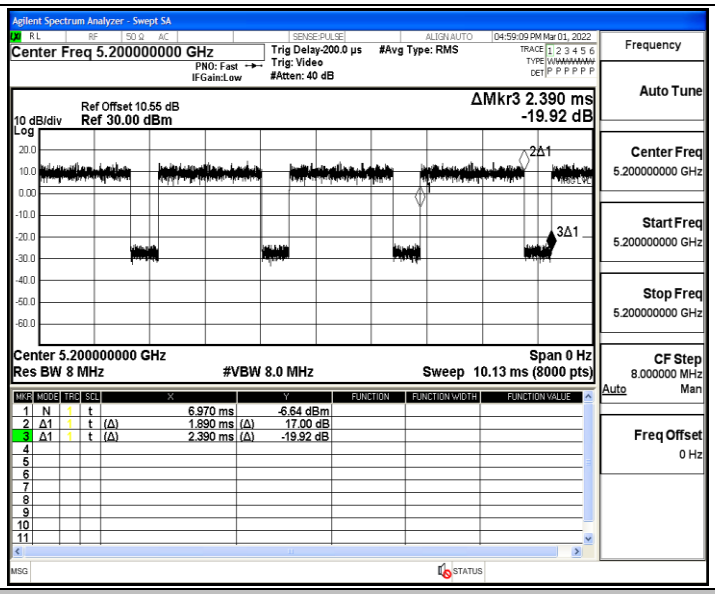

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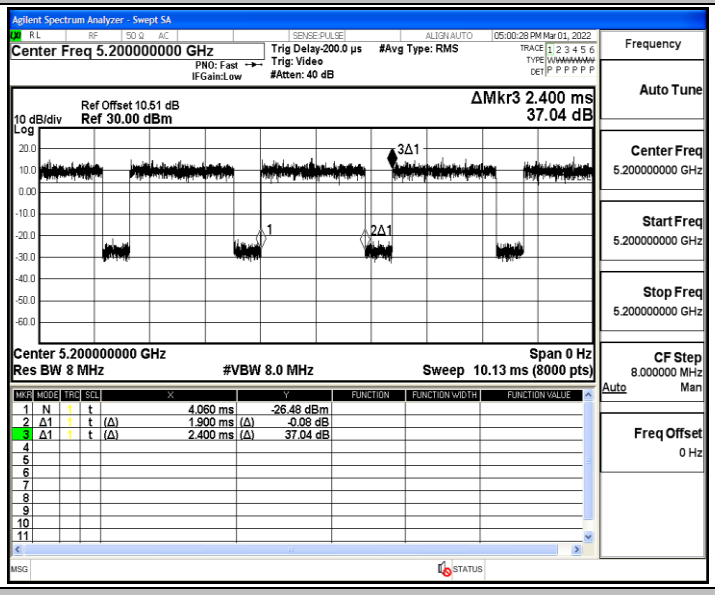

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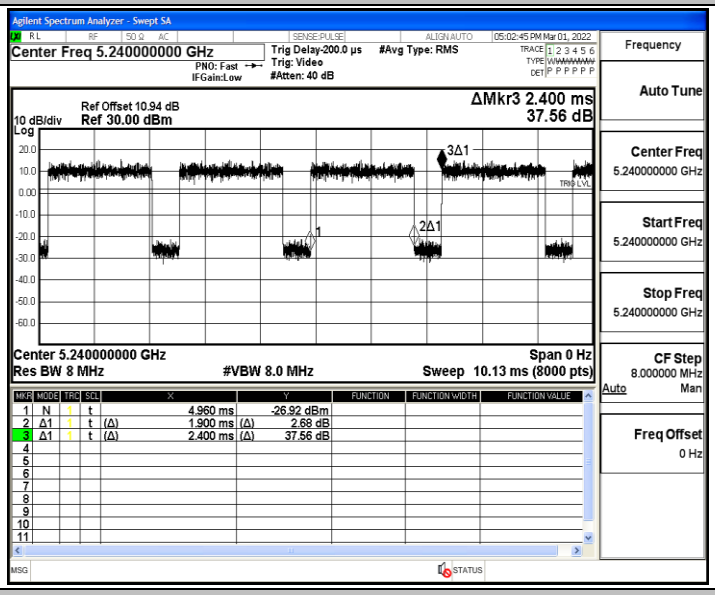

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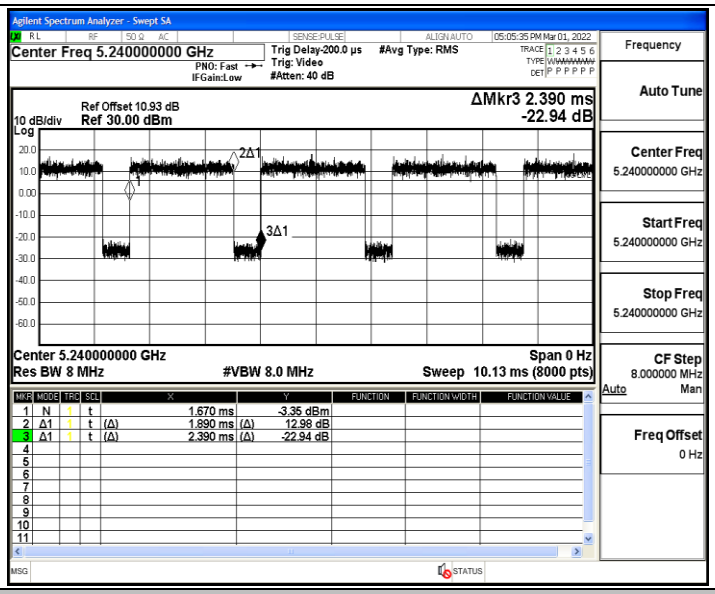

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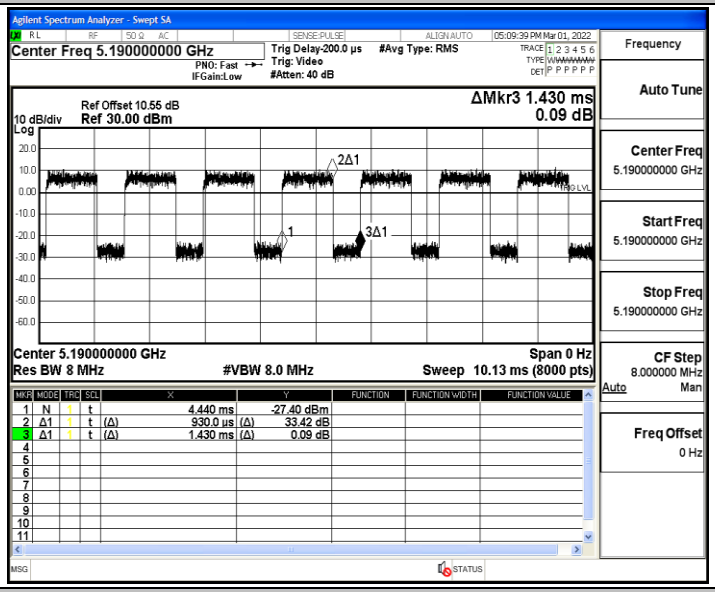

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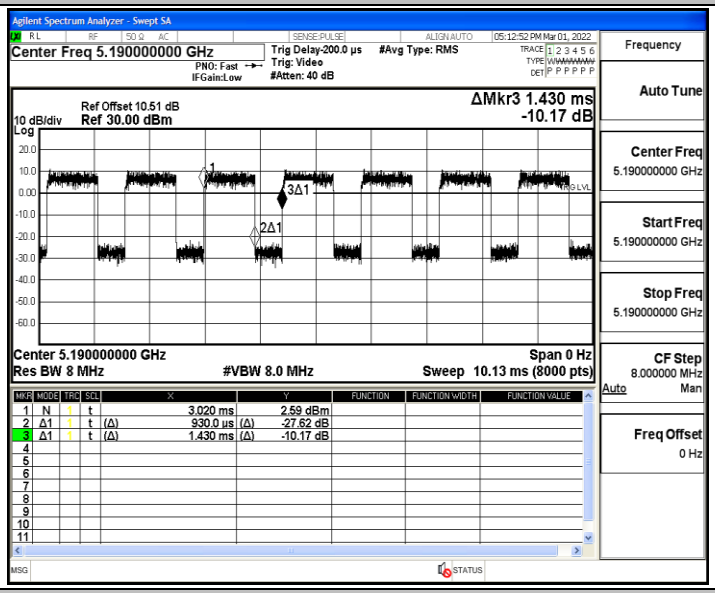

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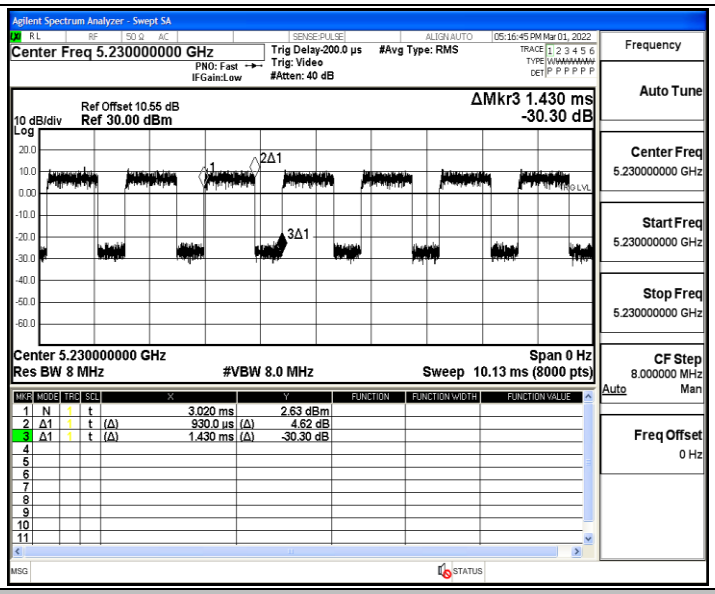

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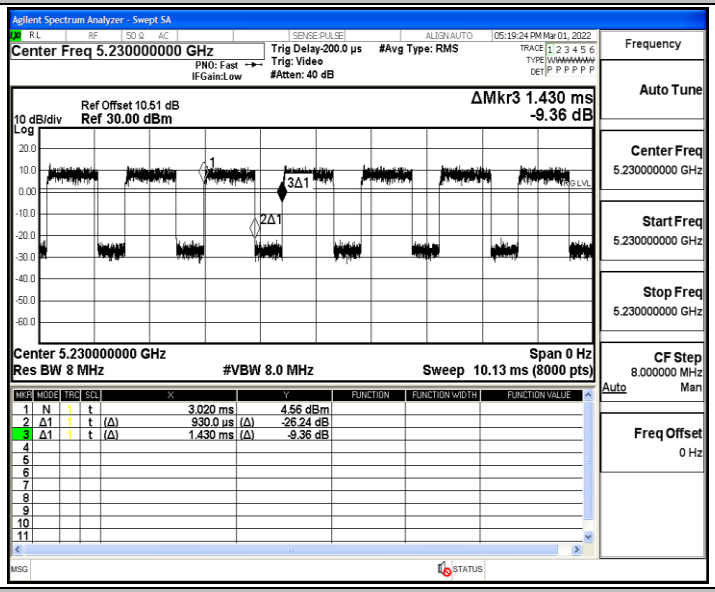

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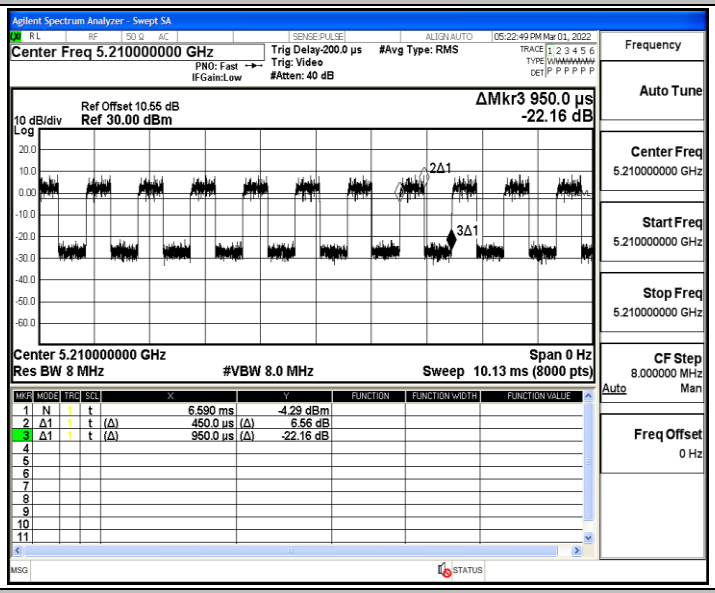

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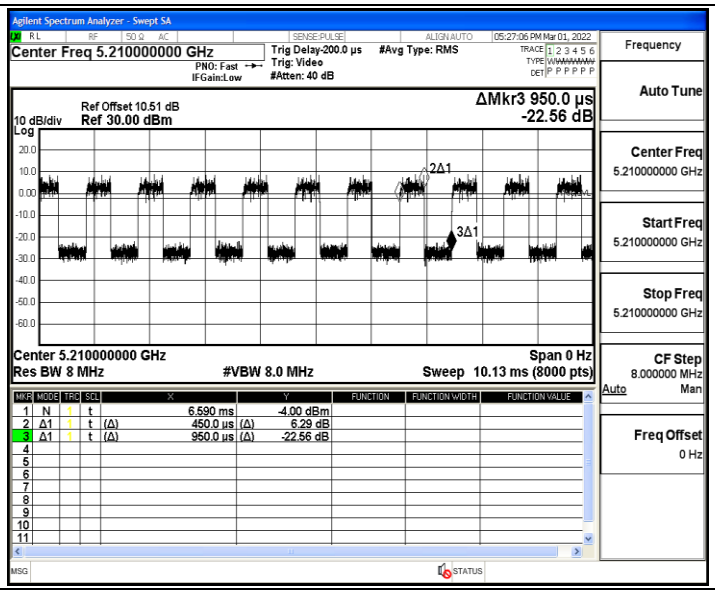
Agilent Spectrum Analyzer - Swept SA
Center Freq 5.210000000 GHz
PNO: Fast
IFGain:Low
Trig Delay-200.0 µs
Trig: Video
#Avg Type: RMS
#Atten: 40 dB
05:27:06 PM Mar 01, 2022
Ref Offset 10.51 dB
10 dB/div
Log
Ref 30.00 dBm
ΔMkr3 950.0 µs
-22.56 dB
2Δ1
3Δ1
Center 5.210000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 10.13 ms (8000 pts)
1 N 1 t 6.590 ms -4.00 dBm
2 Δ1 1 t (Δ) 450.0 µs (Δ) 6.29 dB
3 Δ1 1 t (Δ) 950.0 µs (Δ) -22.56 dB
Frequency
Auto Tune
Center Freq
5.210000000 GHz
Start Freq
5.210000000 GHz
Stop Freq
5.210000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS