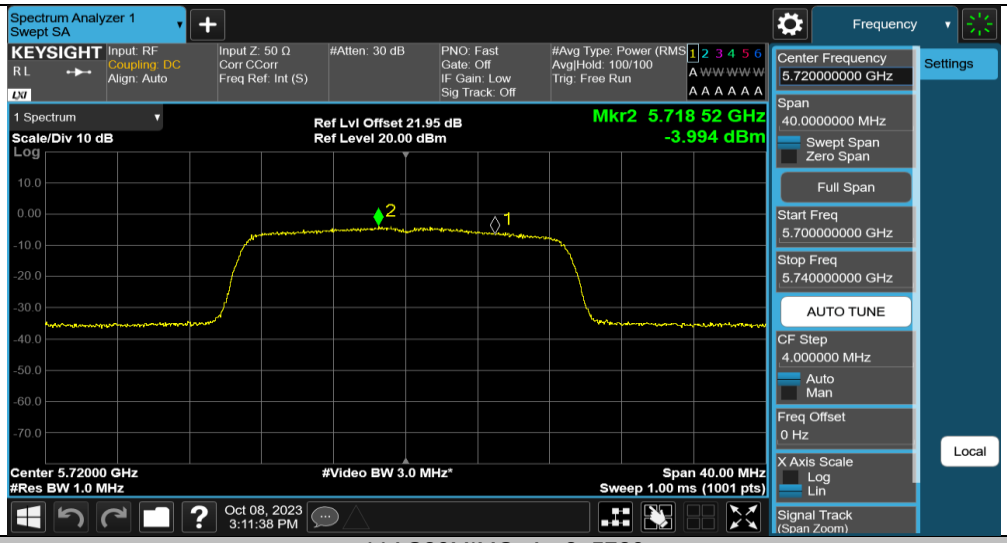
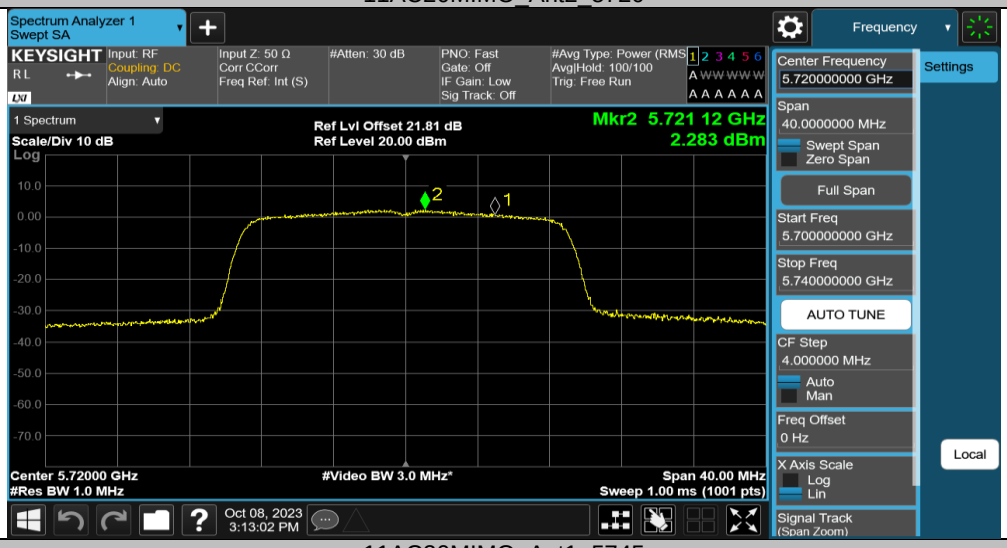
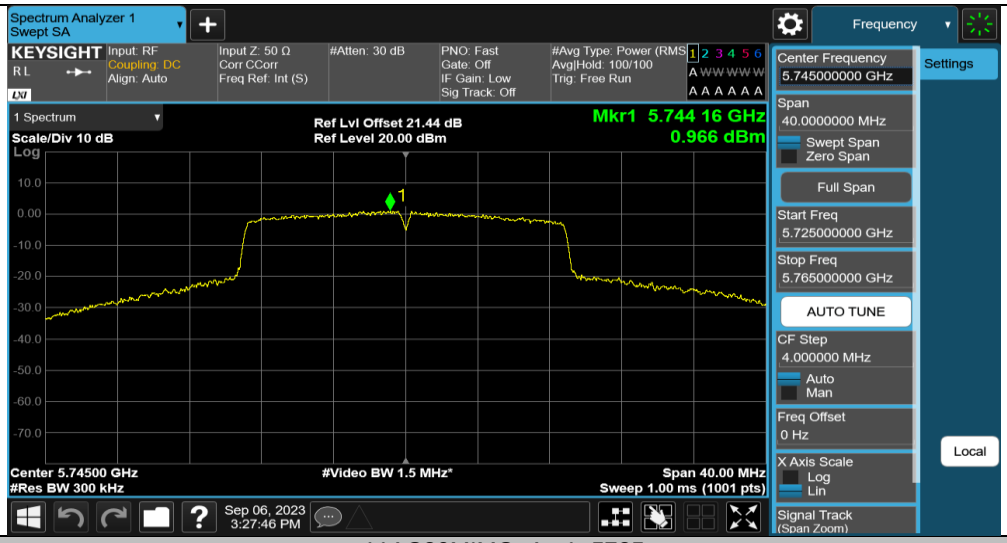


11AC20MIMO_Ant2_5720



11AC20MIMO_Ant1_5745

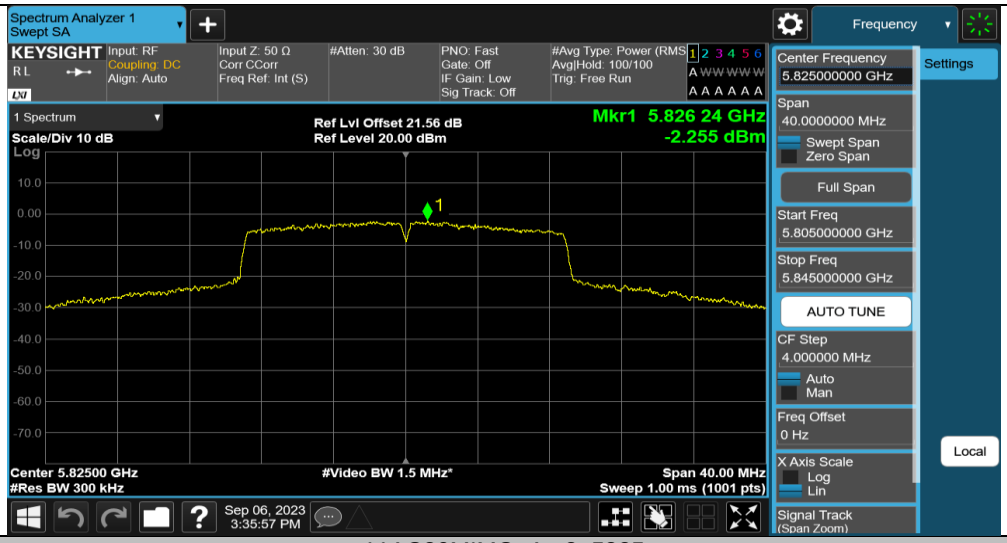
11AC20MIMO_Ant2_5745



11AC20MIMO_Ant1_5785

11AC20MIMO_Ant2_5785

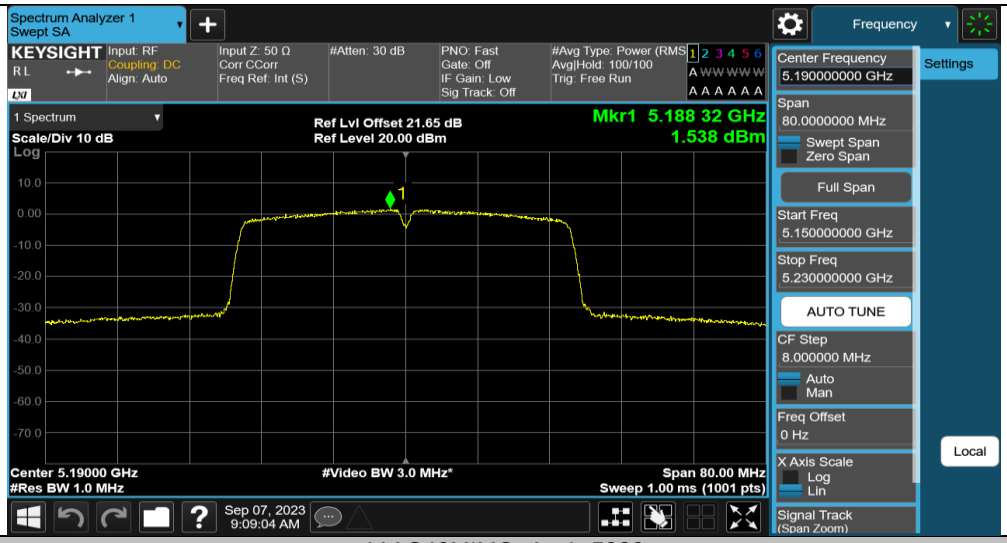
11AC20MIMO_Ant1_5825



11AC20MIMO_Ant2_5825

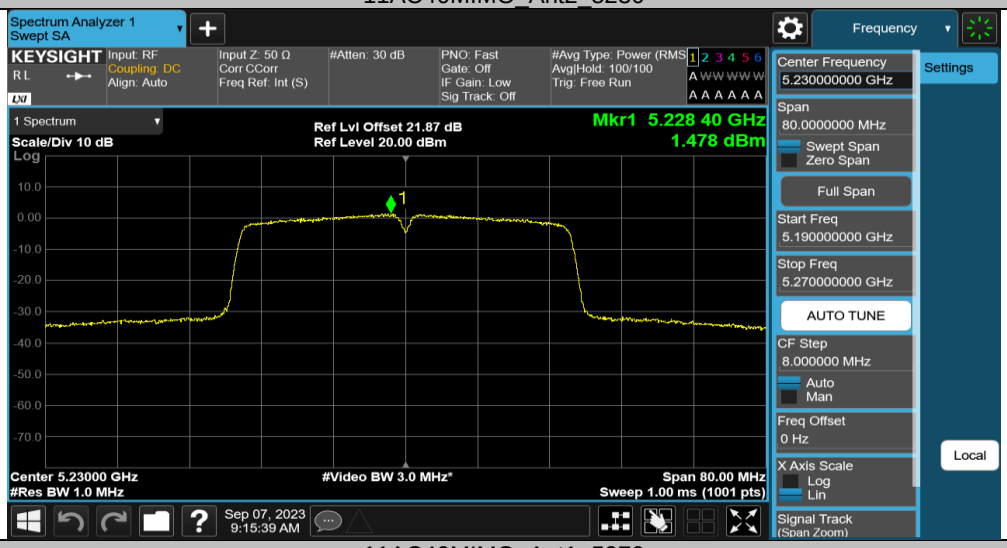
11AC40MIMO_Ant1_5190

11AC40MIMO_Ant2_5190

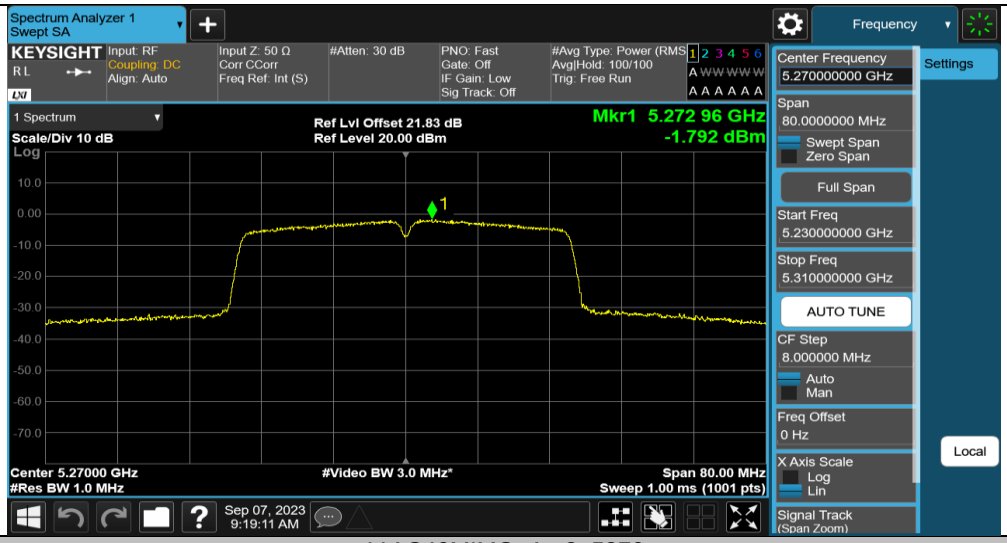


11AC40MIMO_Ant1_5230

11AC40MIMO_Ant2_5230



11AC40MIMO_Ant1_5270



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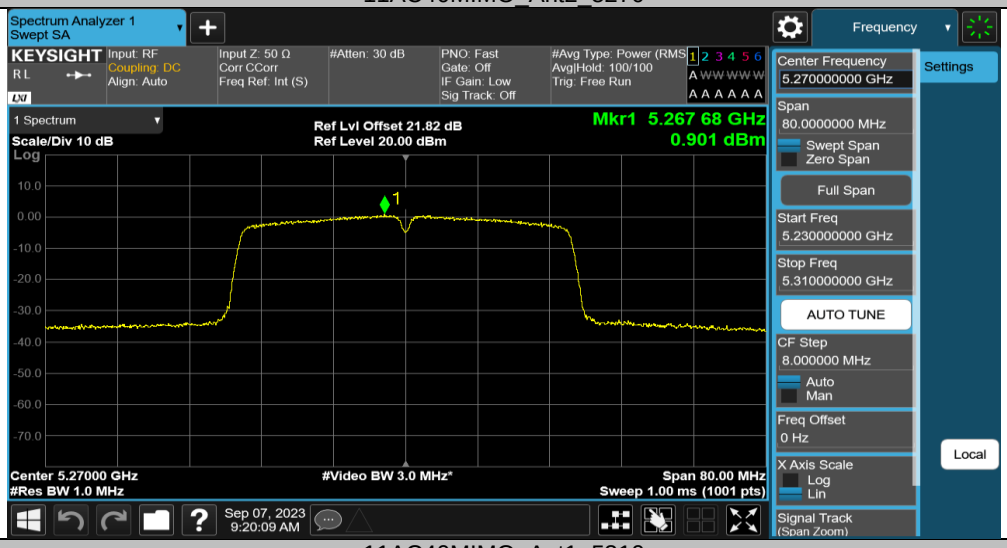
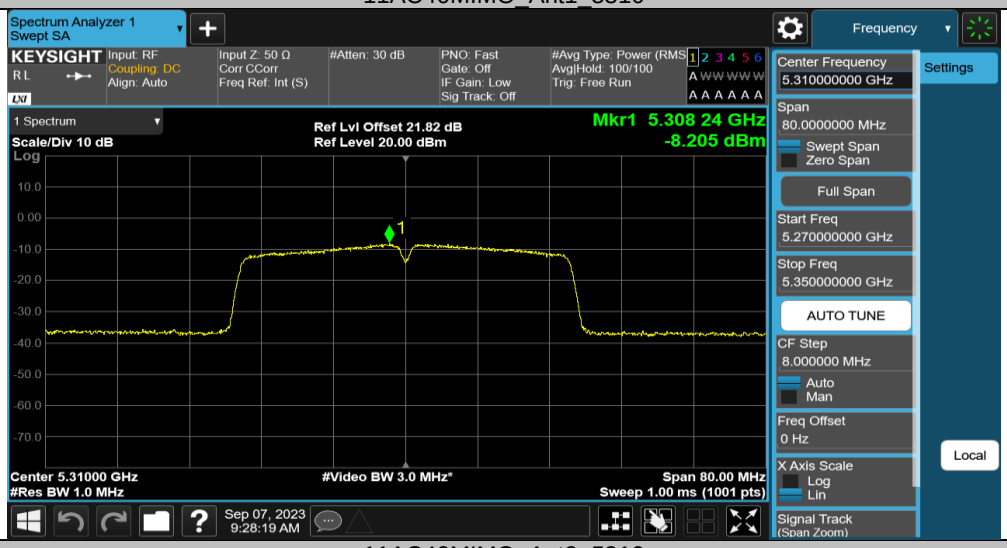
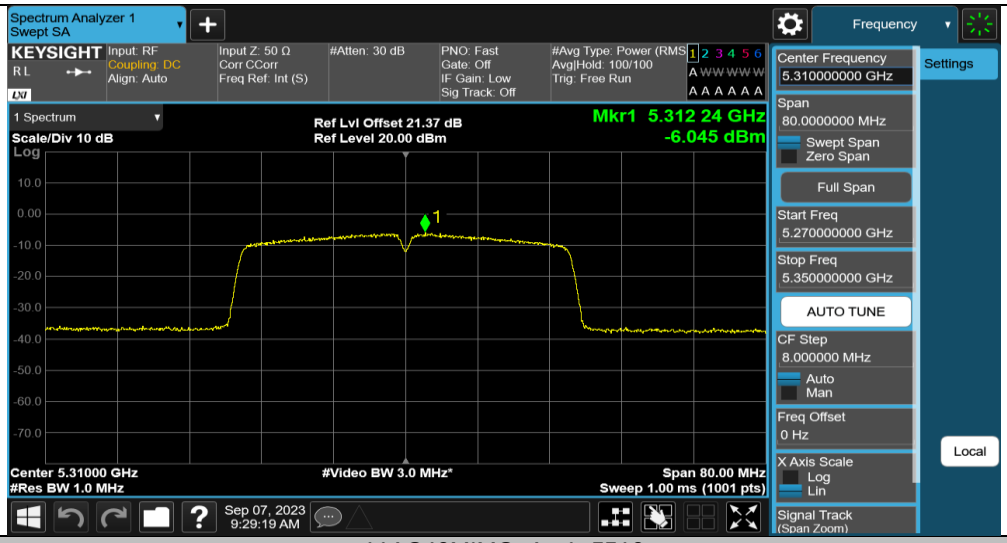


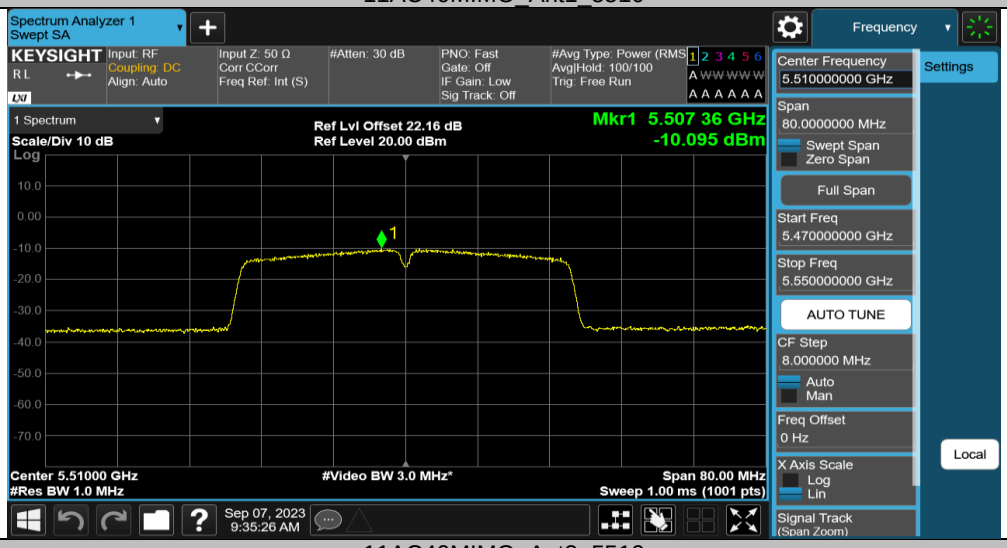
11AC40MIMO_Ant1_5310



11AC40MIMO_Ant2_5310



11AC40MIMO_Ant1_5510



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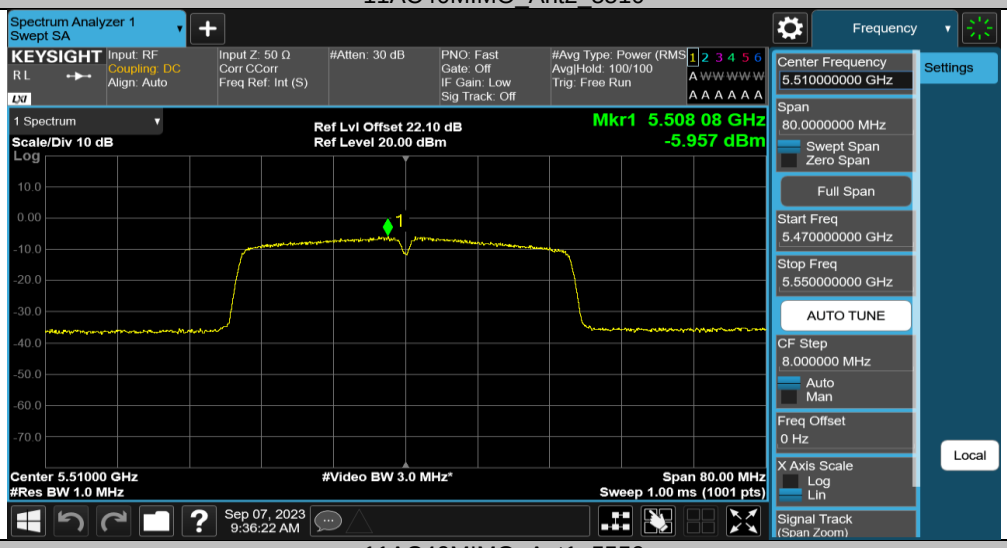
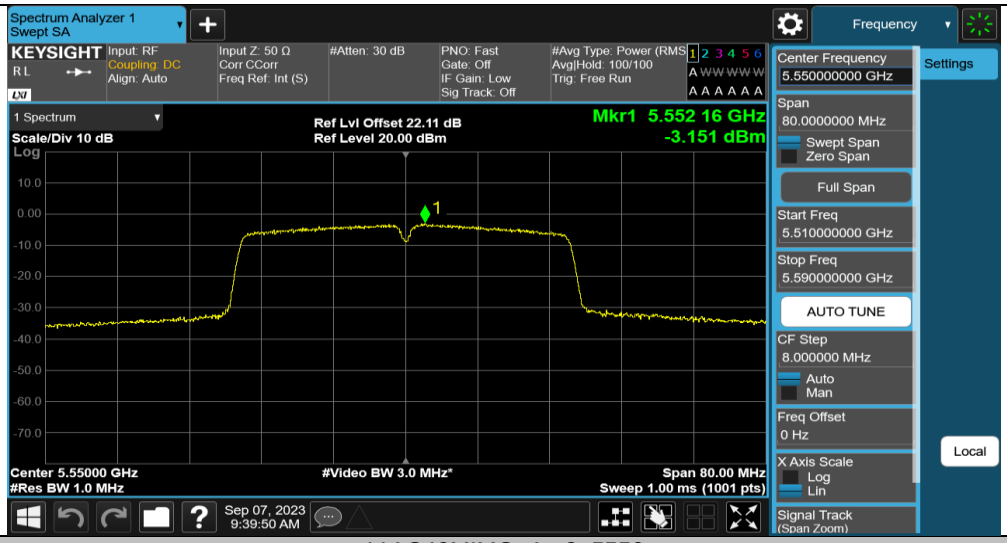
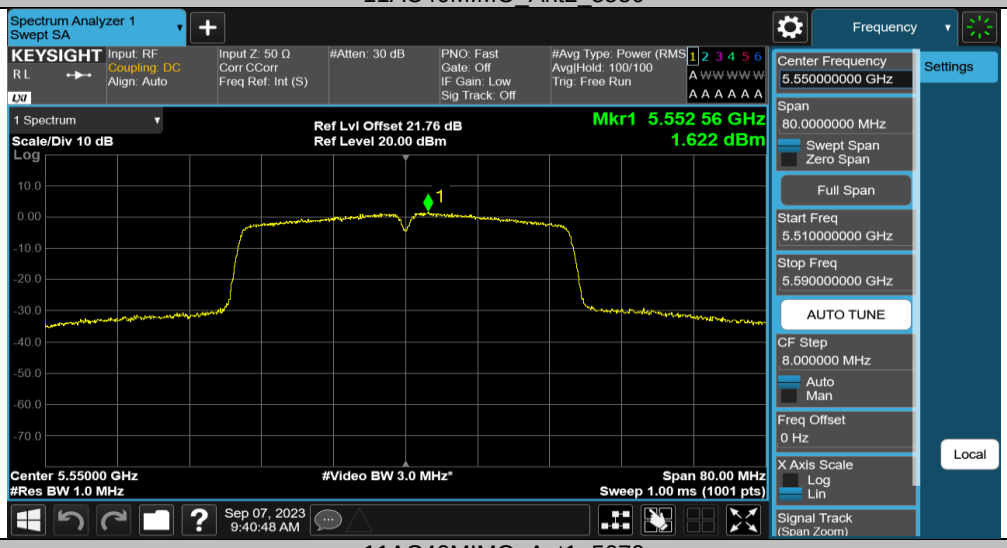


11AC40MIMO_Ant1_5550

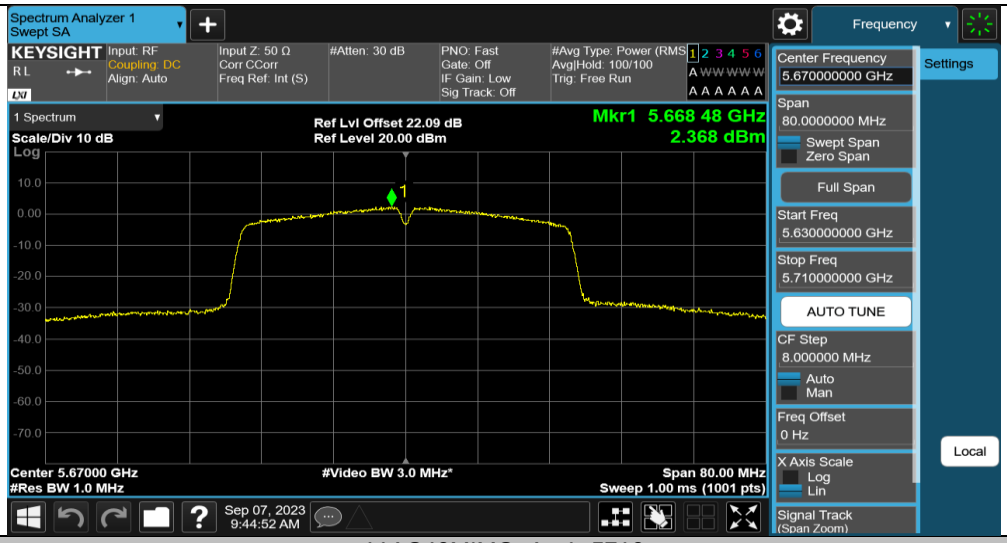


11AC40MIMO_Ant2_5550



11AC40MIMO_Ant1_5670

11AC40MIMO_Ant2_5670



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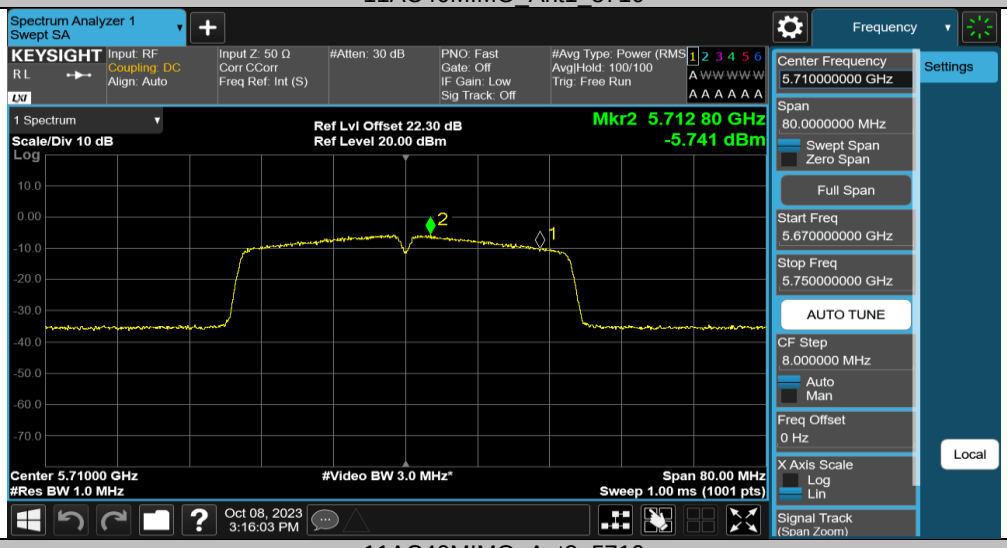

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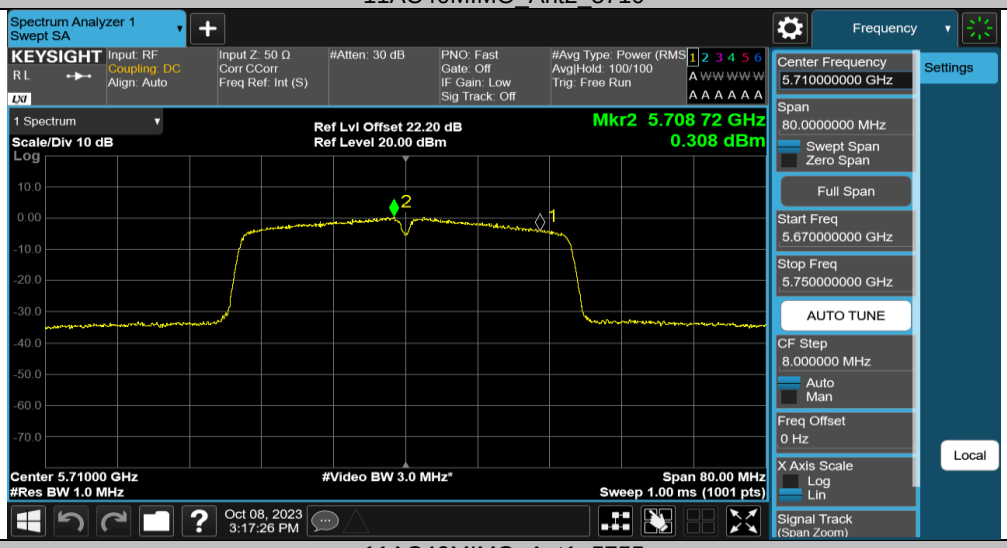
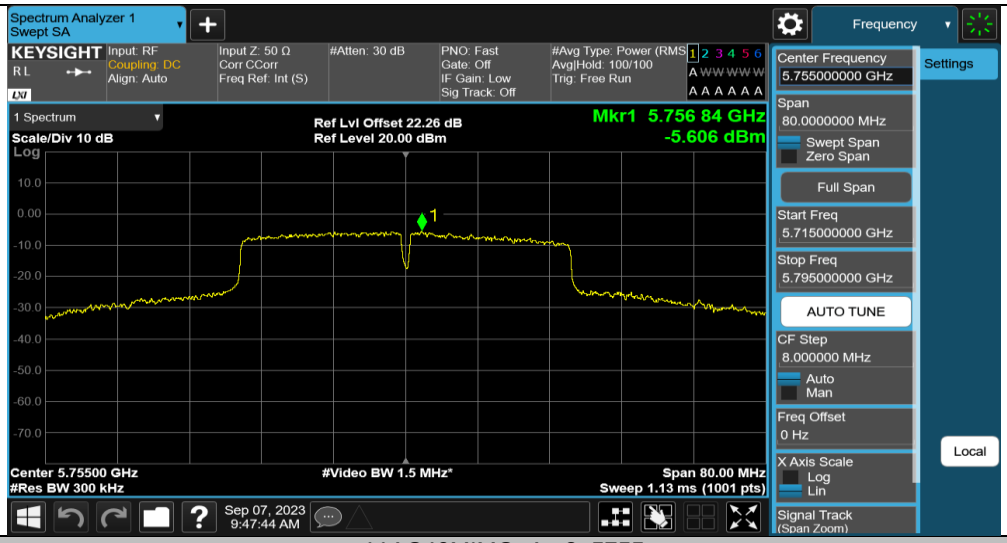
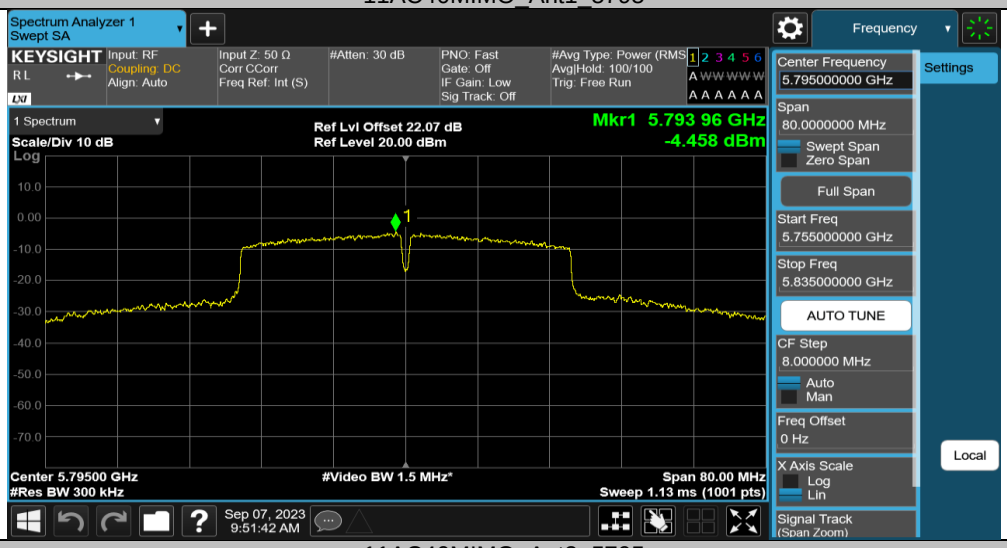


11AC40MIMO_Ant1_5755



11AC40MIMO_Ant2_5755

11AC40MIMO_Ant1_5795



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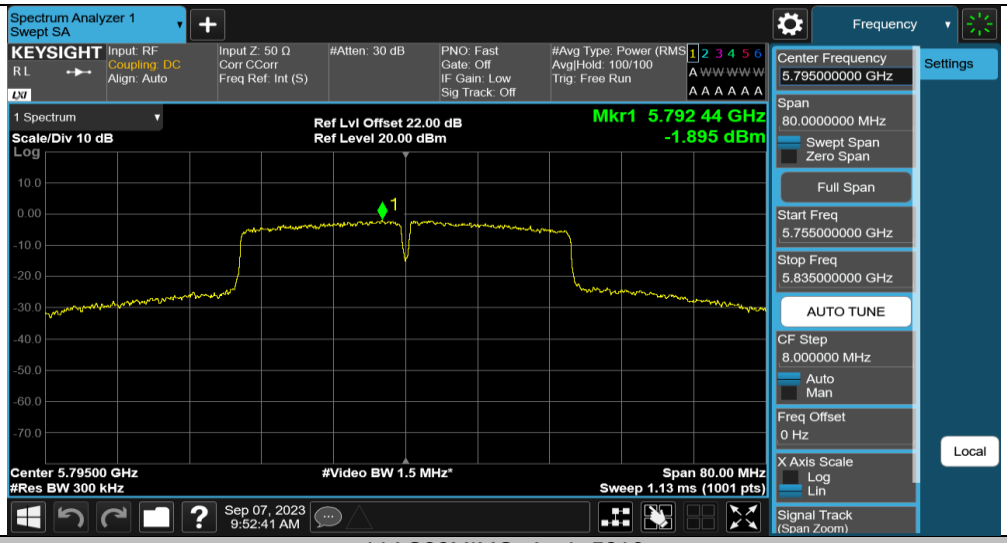
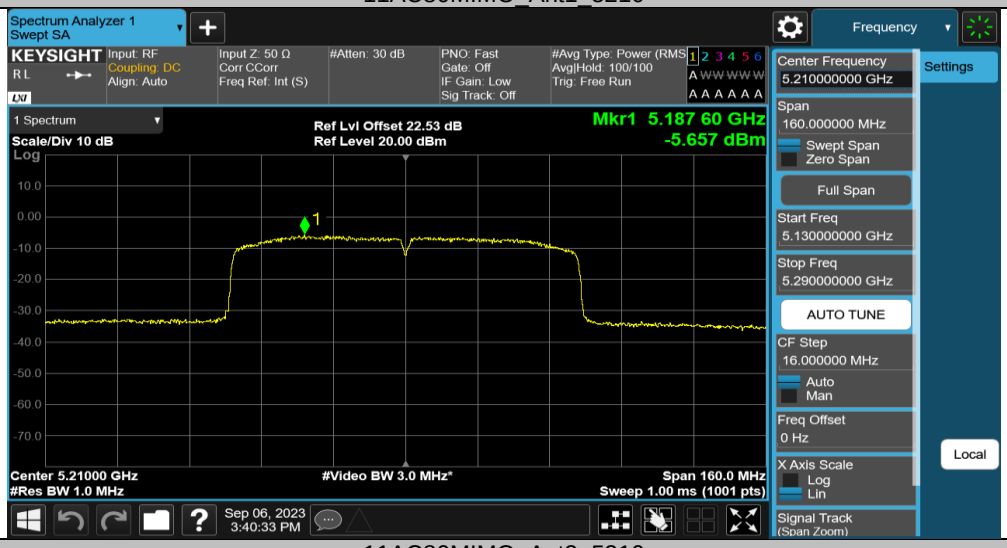
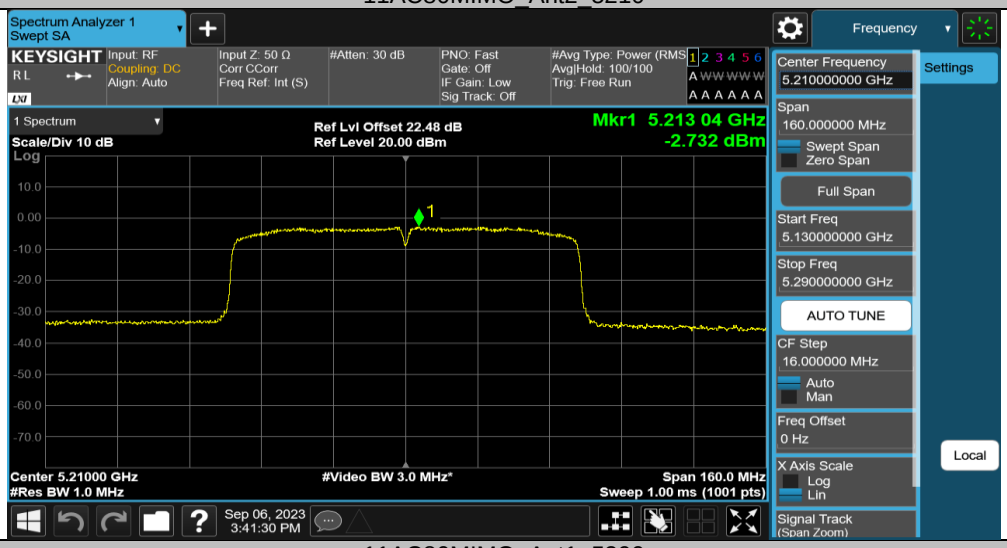


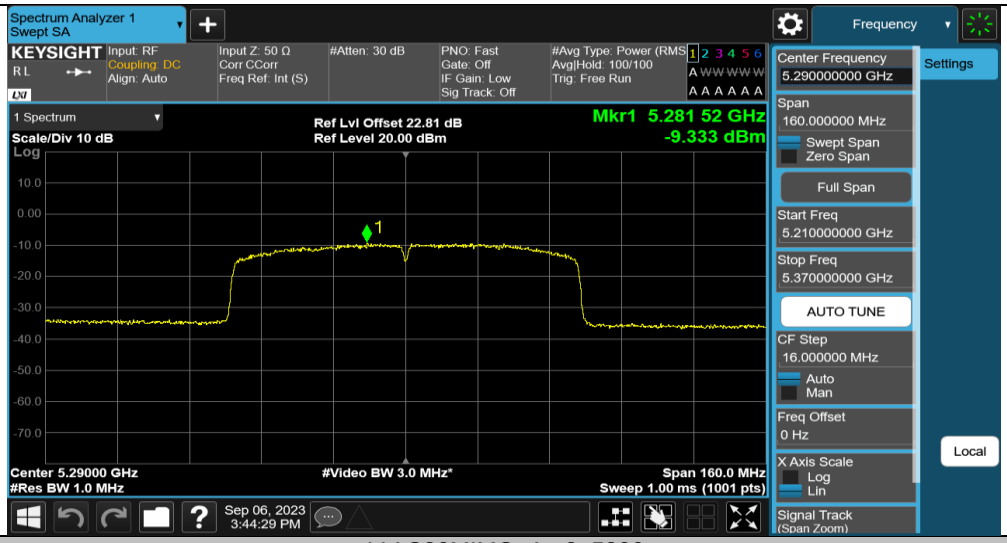
11AC80MIMO_Ant1_5210



11AC80MIMO_Ant2_5210



11AC80MIMO_Ant1_5290



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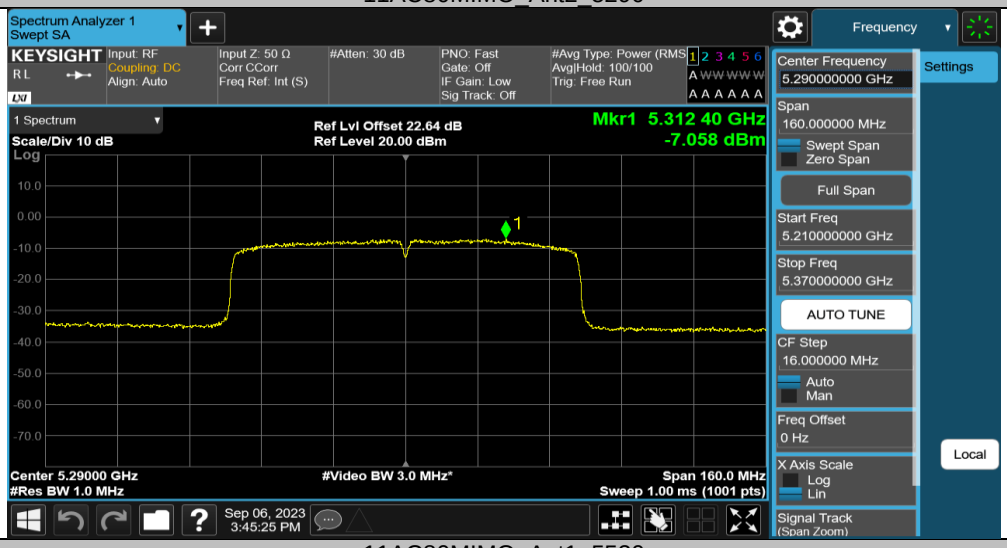
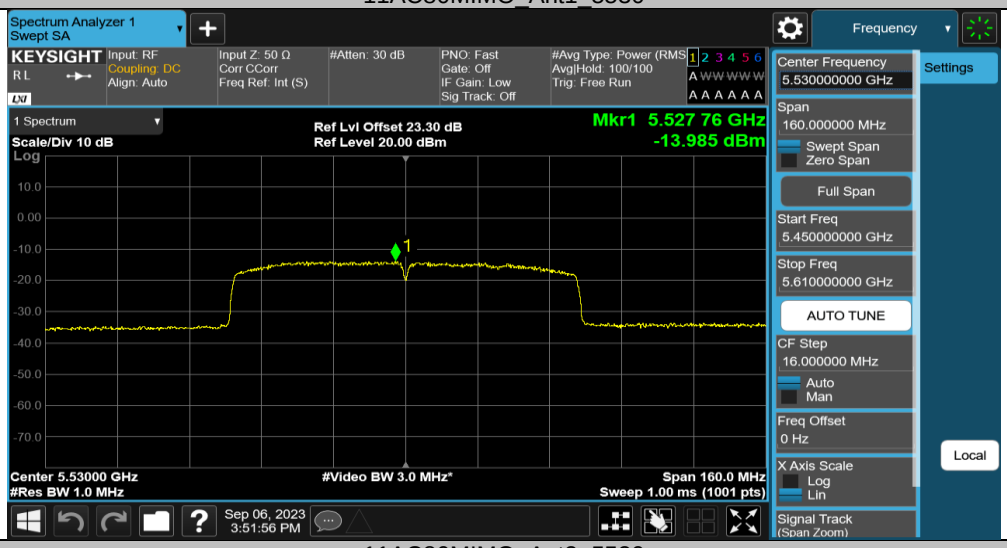
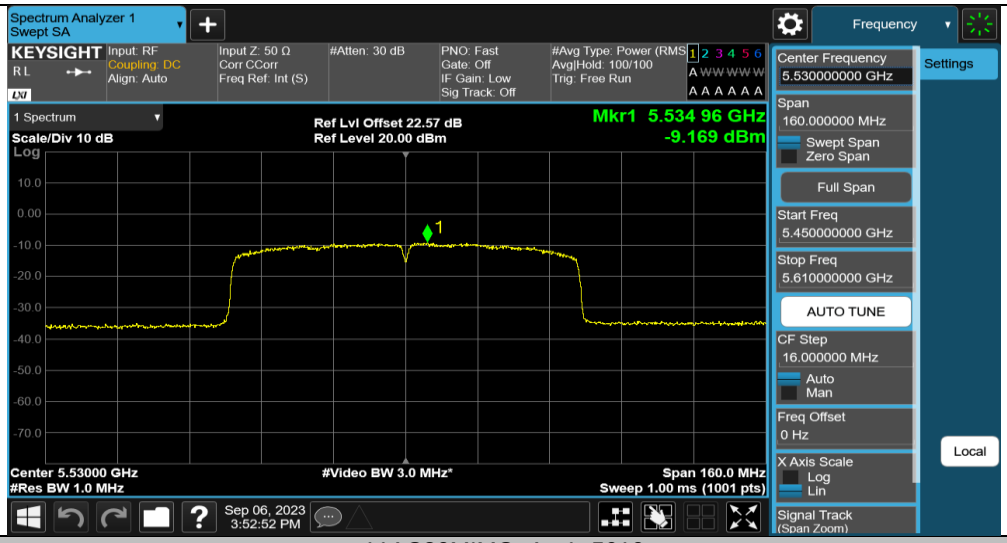


11AC80MIMO_Ant1_5530



11AC80MIMO_Ant2_5530



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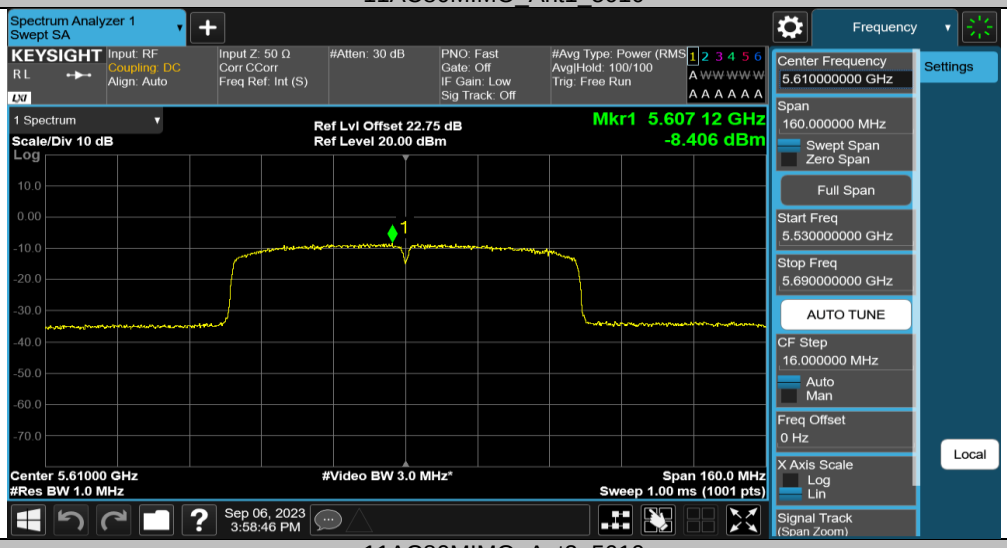
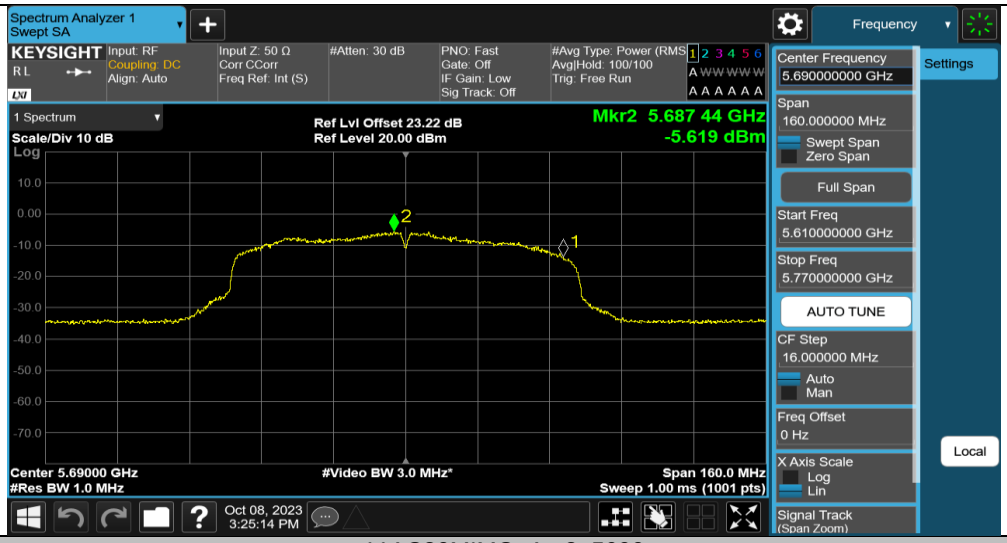


11AC80MIMO_Ant2_5610

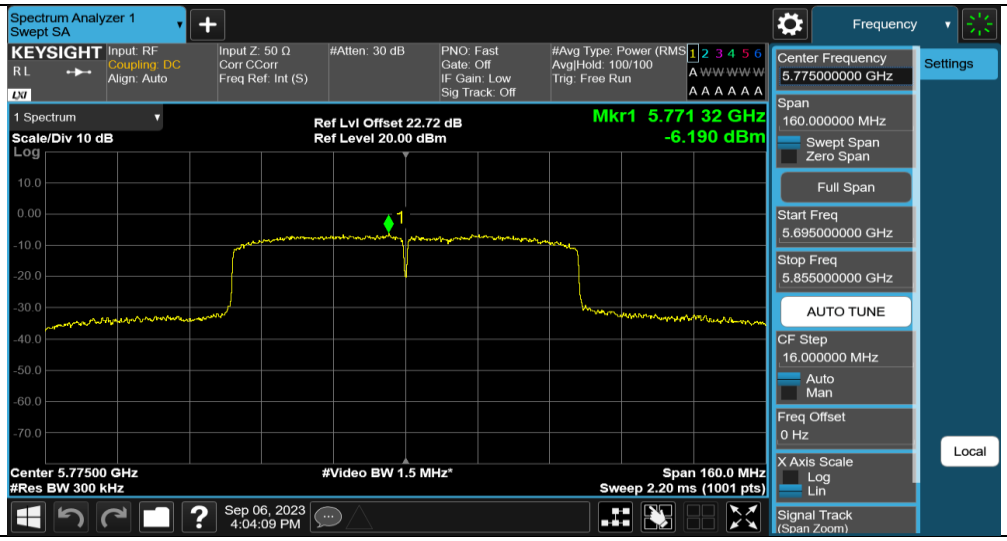
11AC80MIMO_Ant1_5690



11AC80MIMO_Ant2_5690

11AC80MIMO_Ant1_5775

11AC80MIMO_Ant2_5775


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS)
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 22.72 dB
Ref Level 20.00 dBm
Mkr1 5.771 32 GHz
-6.190 dBm
Center 5.77500 GHz
#Res BW 300 kHz
#Video BW 1.5 MHz*
Span 160.0 MHz
Sweep 2.20 ms (1001 pts)
Sep 06, 2023
4:04:09 PM
Frequency
Settings
Center Frequency
5.775000000 GHz
Span
160.000000 MHz
Swept Span
Zero Span
Full Span
Start Freq
5.695000000 GHz
Stop Freq
5.855000000 GHz
AUTO TUNE
CF Step
16.000000 MHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Signal Track
(Span Zoom)
Local

Appendix A.2: Test Results of Frequency Stability

TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11AC20 MIMO	Ant1	5180	NV	NT	-7000.00	-1.351351	20	PASS
		5200	NV	NT	-8000.00	-1.538462	20	PASS
		5240	NV	NT	-8000.00	-1.526718	20	PASS
		5260	NV	NT	-9000.00	-1.711027	20	PASS
		5280	NV	NT	-9000.00	-1.704545	20	PASS
		5320	NV	NT	-9000.00	-1.691729	20	PASS
		5500	NV	NT	-9000.00	-1.636364	20	PASS
		5580	NV	NT	-9000.00	-1.612903	20	PASS
		5700	NV	NT	-9000.00	-1.578947	20	PASS
		5745	NV	NT	-9000.00	-1.566580	20	PASS
		5785	NV	NT	-8000.00	-1.382887	20	PASS
		5825	NV	NT	-9000.00	-1.545064	20	PASS
11AC40 MIMO	Ant1	5190	NV	NT	-9000.00	-1.734104	20	PASS
		5230	NV	NT	-9000.00	-1.720841	20	PASS
		5270	NV	NT	-8000.00	-1.518027	20	PASS
		5310	NV	NT	-8000.00	-1.506591	20	PASS
		5510	NV	NT	-9000.00	-1.633394	20	PASS
		5550	NV	NT	-9000.00	-1.621622	20	PASS
		5670	NV	NT	-9000.00	-1.587302	20	PASS
		5755	NV	NT	-10000.00	-1.737619	20	PASS
		5795	NV	NT	-9000.00	-1.553063	20	PASS
11AC80 MIMO	Ant1	5210	NV	NT	-9000.00	-1.727447	20	PASS
		5290	NV	NT	-8000.00	-1.512287	20	PASS
		5530	NV	NT	-9000.00	-1.627486	20	PASS
		5610	NV	NT	-9000.00	-1.604278	20	PASS
		5775	NV	NT	-9000.00	-1.558442	20	PASS

Temperature								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11AC20MIMO	Ant1	5180	NV	-10	-7000.00	-1.351351	20	PASS
			NV	40	-7000.00	-1.351351	20	PASS
		5200	NV	-10	-7000.00	-1.346154	20	PASS
			NV	40	-8000.00	-1.538462	20	PASS
		5240	NV	-10	-8000.00	-1.526718	20	PASS
			NV	40	-7000.00	-1.335878	20	PASS
		5260	NV	-10	-7000.00	-1.330798	20	PASS
			NV	40	-7000.00	-1.330798	20	PASS
		5280	NV	-10	-7000.00	-1.325758	20	PASS
			NV	40	-7000.00	-1.325758	20	PASS
		5320	NV	-10	-8000.00	-1.503759	20	PASS
			NV	40	-8000.00	-1.503759	20	PASS
		5500	NV	-10	-8000.00	-1.454545	20	PASS
			NV	40	-7000.00	-1.272727	20	PASS
		5580	NV	-10	-7000.00	-1.254480	20	PASS
			NV	40	-7000.00	-1.254480	20	PASS
		5700	NV	-10	-8000.00	-1.403509	20	PASS
			NV	40	-7000.00	-1.228070	20	PASS
		5745	NV	-10	-8000.00	-1.392515	20	PASS
			NV	40	-8000.00	-1.392515	20	PASS
		5785	NV	-10	-8000.00	-1.382887	20	PASS
			NV	40	-8000.00	-1.382887	20	PASS
		5825	NV	-10	-8000.00	-1.373391	20	PASS
			NV	40	-8000.00	-1.373391	20	PASS
11AC40MIMO	Ant1	5190	NV	-10	-7000.00	-1.348748	20	PASS
			NV	40	-7000.00	-1.348748	20	PASS

		5230	NV	-10	-7000.00	-1.338432	20	PASS
			NV	40	-7000.00	-1.338432	20	PASS
		5270	NV	-10	-7000.00	-1.328273	20	PASS
			NV	40	-8000.00	-1.518027	20	PASS
		5310	NV	-10	-8000.00	-1.506591	20	PASS
			NV	40	-8000.00	-1.506591	20	PASS
		5510	NV	-10	-8000.00	-1.451906	20	PASS
			NV	40	-8000.00	-1.451906	20	PASS
		5550	NV	-10	-8000.00	-1.441441	20	PASS
			NV	40	-7000.00	-1.261261	20	PASS
		5670	NV	-10	-8000.00	-1.410935	20	PASS
			NV	40	-7000.00	-1.234568	20	PASS
		5755	NV	-10	-8000.00	-1.390096	20	PASS
			NV	40	-8000.00	-1.390096	20	PASS
		5795	NV	-10	-8000.00	-1.380500	20	PASS
			NV	40	-8000.00	-1.380500	20	PASS
11AC80MIMO	Ant1	5210	NV	-10	-7000.00	-1.343570	20	PASS
			NV	40	-7000.00	-1.343570	20	PASS
		5290	NV	-10	-8000.00	-1.512287	20	PASS
			NV	40	-7000.00	-1.323251	20	PASS
		5530	NV	-10	-8000.00	-1.446655	20	PASS
			NV	40	-7000.00	-1.265823	20	PASS
		5610	NV	-10	-7000.00	-1.247772	20	PASS
			NV	40	-7000.00	-1.247772	20	PASS
		5775	NV	-10	-8000.00	-1.385281	20	PASS
			NV	40	-8000.00	-1.385281	20	PASS

Appendix A.3: Test Results of 26dB Bandwidth

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	18.440	5170.800	5189.240	---	---
		5200	18.560	5190.640	5209.200	---	---
		5240	19.040	5230.200	5249.240	---	---
		5260	18.560	5250.680	5269.240	---	---
		5280	18.440	5270.760	5289.200	---	---
		5320	18.360	5310.960	5329.320	---	---
		5500	18.280	5490.880	5509.160	---	---
		5580	19.120	5570.120	5589.240	---	---
		5700	18.320	5690.920	5709.240	---	---
		5720	19.360	5710.200	5729.560	---	---
		5720_UNII-2C	14.8	5710.200	5725	---	---
		5720_UNII-3	4.56	5725	5729.560	---	---
11N20MIMO	Ant1	5180	19.400	5170.280	5189.680	---	---
		5200	19.440	5190.280	5209.720	---	---
		5240	19.360	5230.360	5249.720	---	---
		5260	19.200	5250.400	5269.600	---	---
		5280	19.200	5270.360	5289.560	---	---
		5320	19.320	5310.400	5329.720	---	---
		5500	19.520	5490.200	5509.720	---	---
		5580	19.840	5570.000	5589.840	---	---
		5700	19.600	5690.360	5709.960	---	---
		5720	19.320	5710.360	5729.680	---	---
		5720_UNII-2C	14.64	5710.360	5725	---	---
		5720_UNII-3	4.68	5725	5729.680	---	---
11N40MIMO	Ant1	5190	38.800	5170.800	5209.600	---	---
		5230	39.040	5210.640	5249.680	---	---
		5270	39.120	5250.560	5289.680	---	---
		5310	39.120	5290.400	5329.520	---	---
		5510	39.200	5490.320	5529.520	---	---
		5550	39.120	5530.560	5569.680	---	---
		5670	38.880	5650.560	5689.440	---	---
		5710	38.800	5690.640	5729.440	---	---
		5710_UNII-2C	34.36	5690.640	5725	---	---
		5710_UNII-3	4.44	5725	5729.440	---	---
11AC20MIMO	Ant1	5180	19.320	5170.280	5189.600	---	---
		5200	19.440	5190.360	5209.800	---	---
		5240	19.200	5230.400	5249.600	---	---
		5260	19.280	5250.400	5269.680	---	---
		5280	19.360	5270.360	5289.720	---	---
		5320	19.200	5310.320	5329.520	---	---
		5500	19.360	5490.280	5509.640	---	---
		5580	20.800	5570.320	5591.120	---	---
		5700	19.120	5690.480	5709.600	---	---
		5720	19.240	5710.360	5729.600	---	---
		5720_UNII-2C	14.64	5710.360	5725	---	---
		5720_UNII-3	4.6	5725	5729.600	---	---
11AC40MIMO	Ant1	5190	39.200	5170.480	5209.680	---	---
		5230	38.960	5210.560	5249.520	---	---
		5270	39.040	5250.560	5289.600	---	---
		5310	39.120	5290.400	5329.520	---	---
		5510	39.440	5490.240	5529.680	---	---
		5550	39.040	5530.480	5569.520	---	---
		5670	39.040	5650.560	5689.600	---	---
		5710	38.560	5690.720	5729.280	---	---
		5710_UNII-2C	34.28	5690.720	5725	---	---
		5710_UNII-3	4.28	5725	5729.280	---	---
11AC80MIMO	Ant1	5210	81.440	5169.520	5250.960	---	---
		5290	81.120	5249.200	5330.320	---	---
		5530	80.800	5489.680	5570.480	---	---

		5610	85.280	5566.160	5651.440	---	---
		5690	90.400	5645.200	5735.600	---	---
		5690_UNII-2C	79.8	5645.200	5725	---	---
		5690_UNII-3	10.6	5725	5735.600	---	---

11A_Ant1_5180

11A_Ant1_5200

11A_Ant1_5240

11A_Ant1_5260

11A_Ant1_5280

11A_Ant1_5320

11A_Ant1_5500