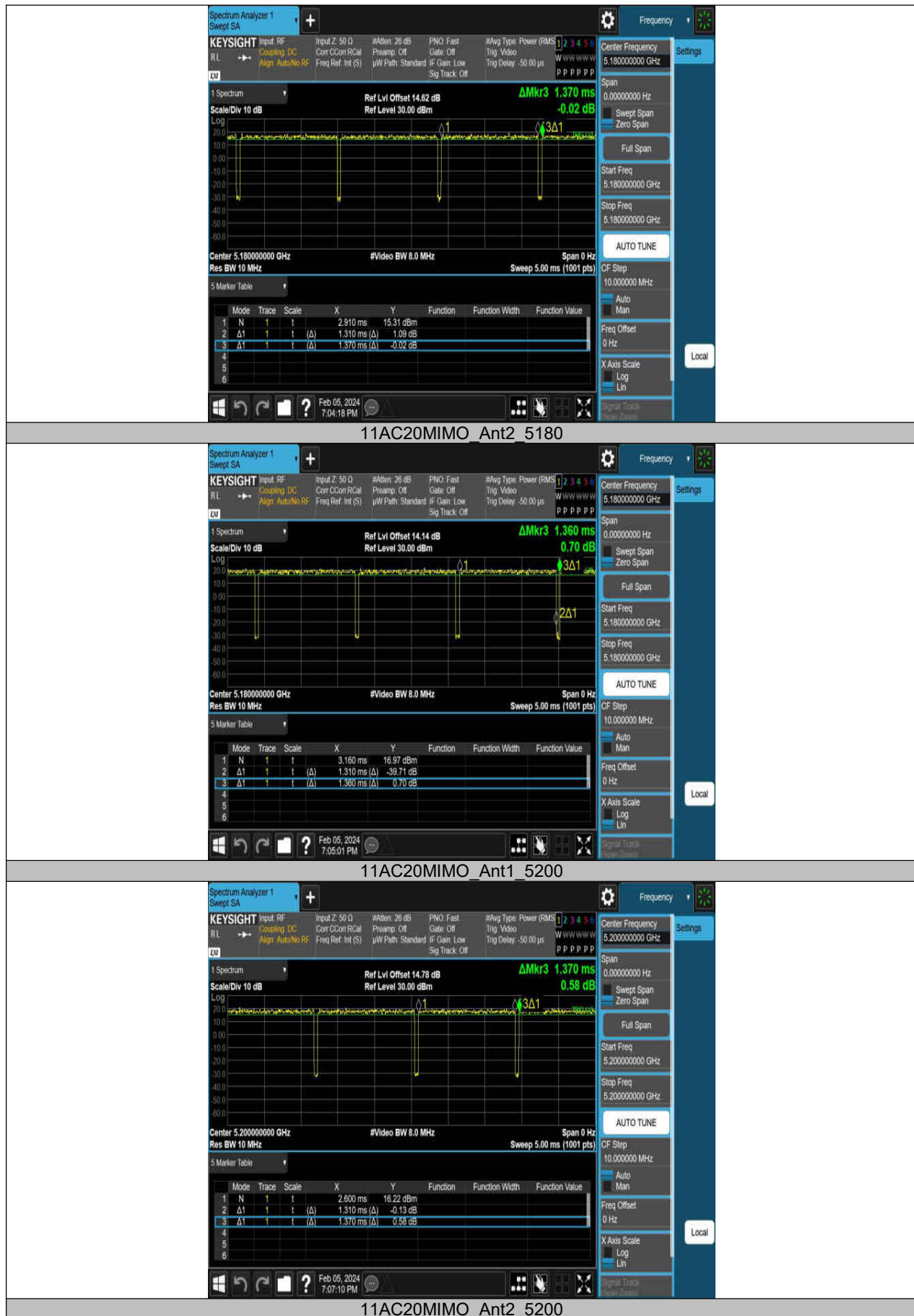




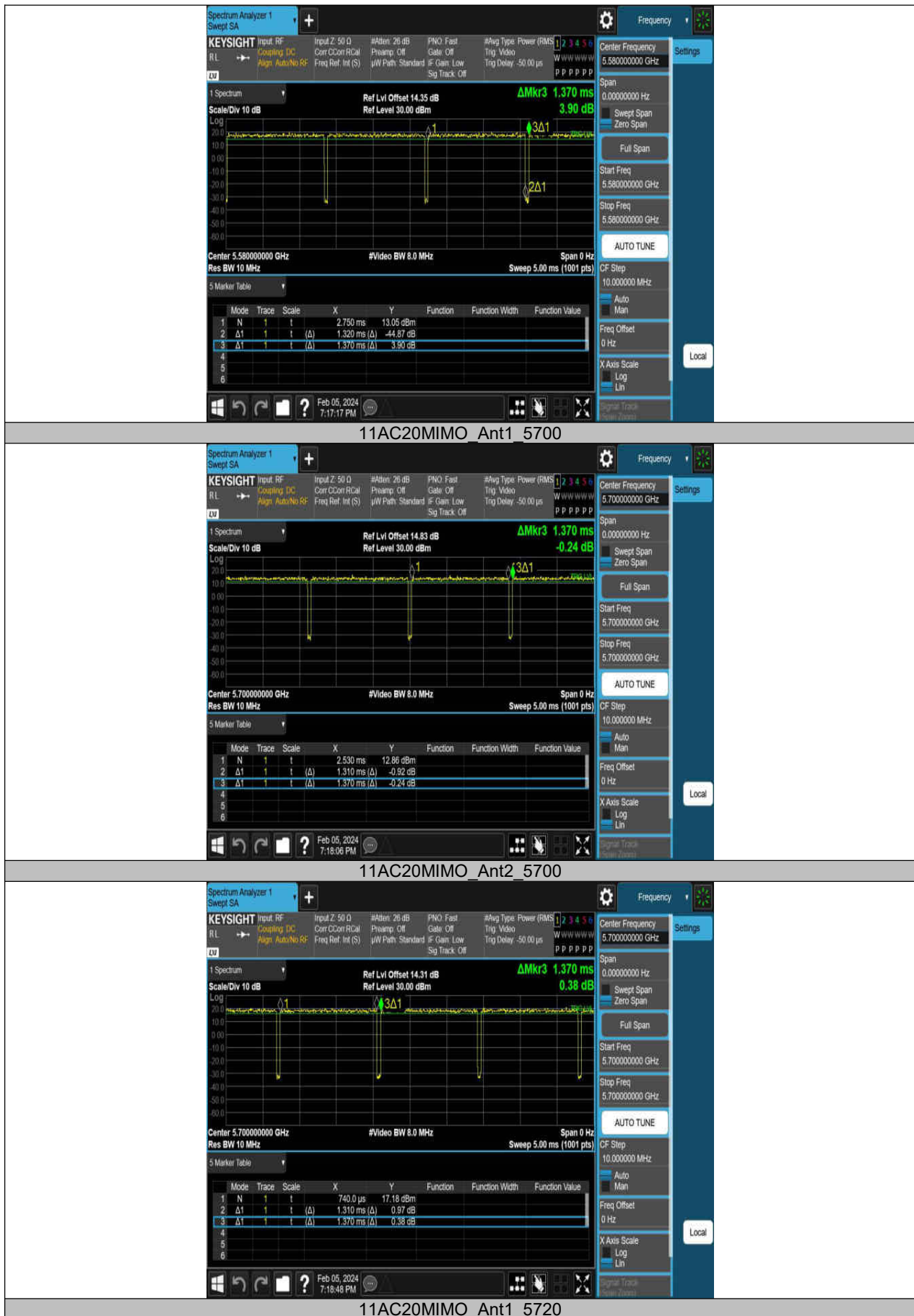














11AC20MIMO_Ant2_5720



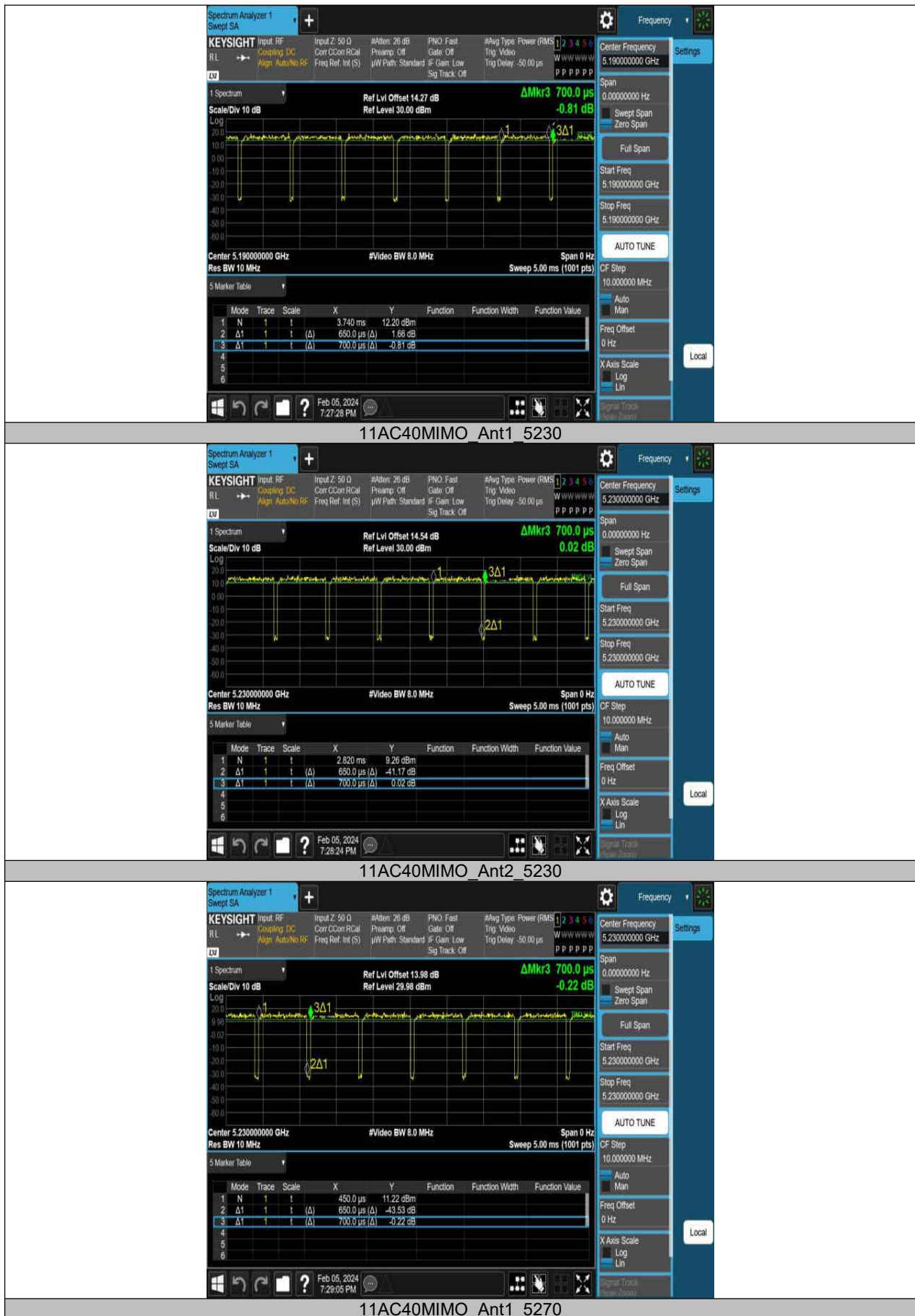
11AC20MIMO_Ant1_5745



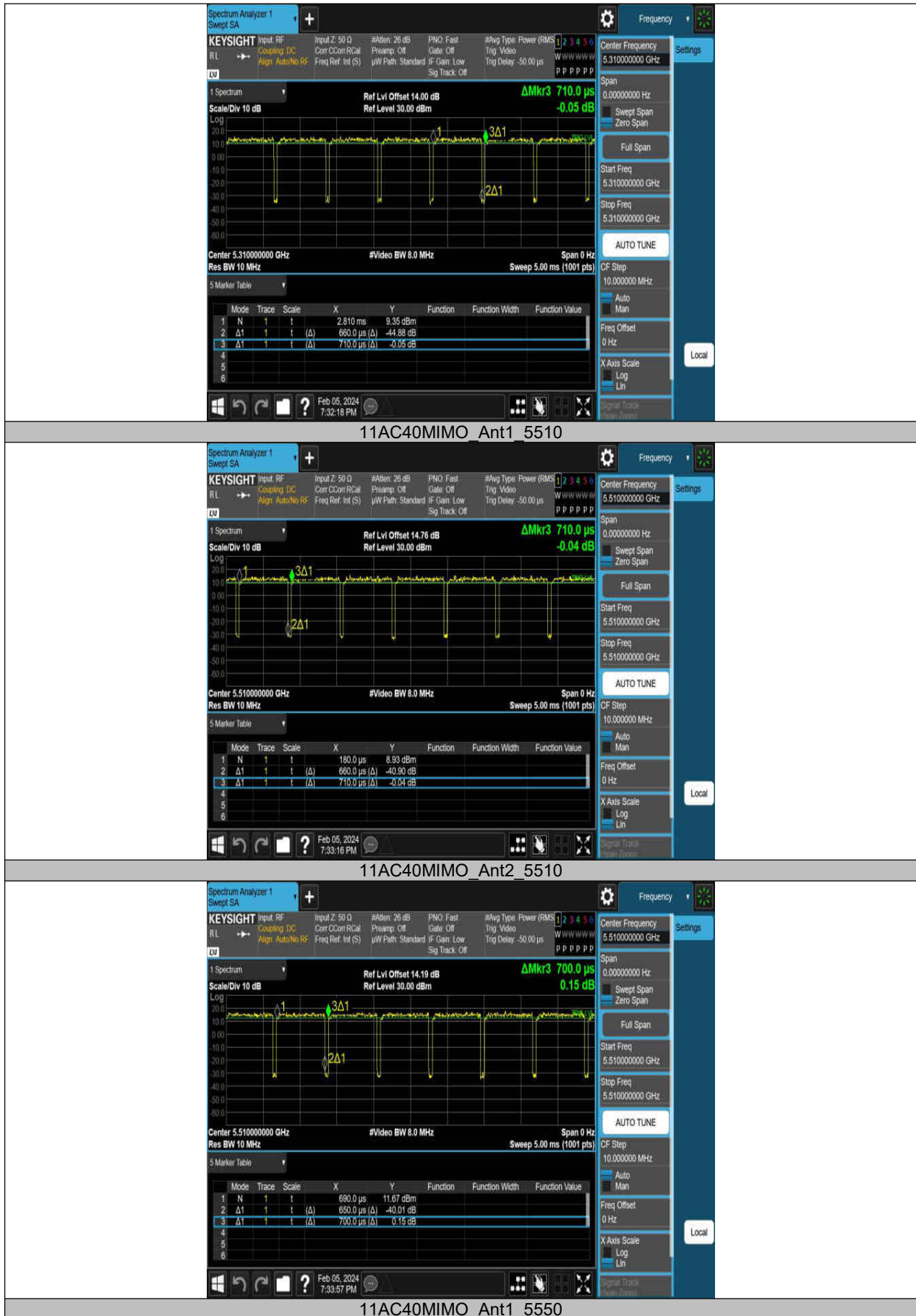
11AC20MIMO Ant2 5745







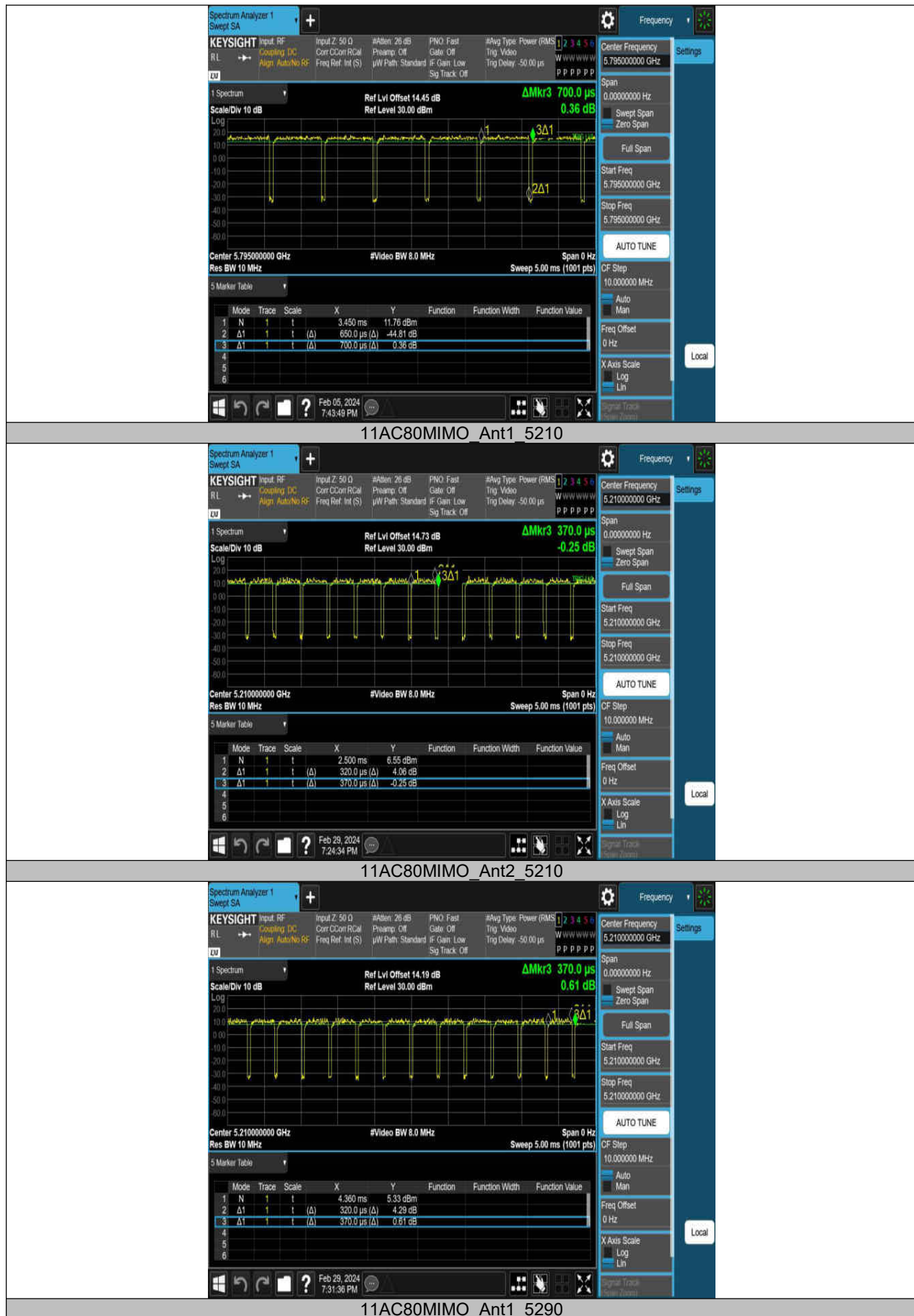


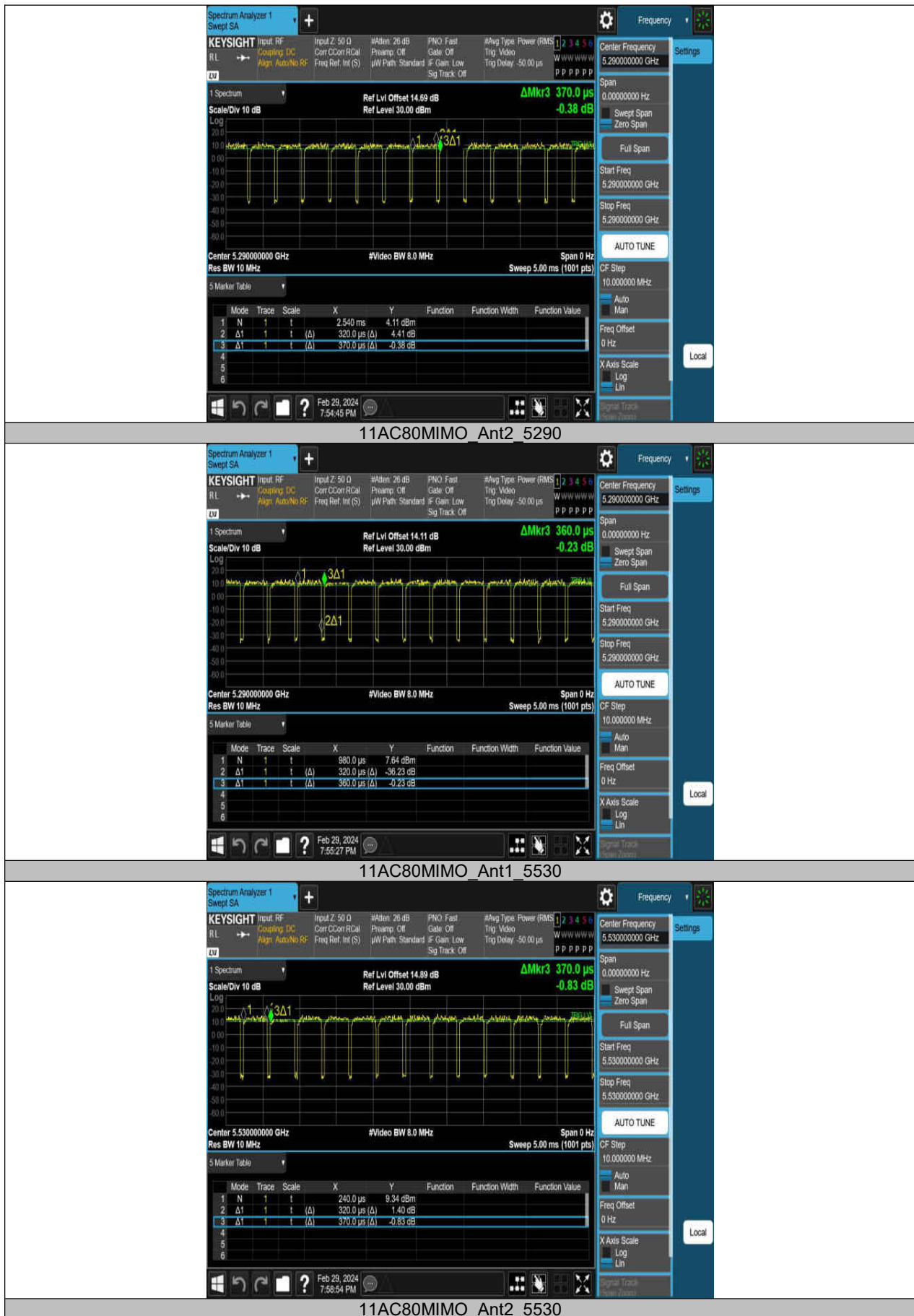


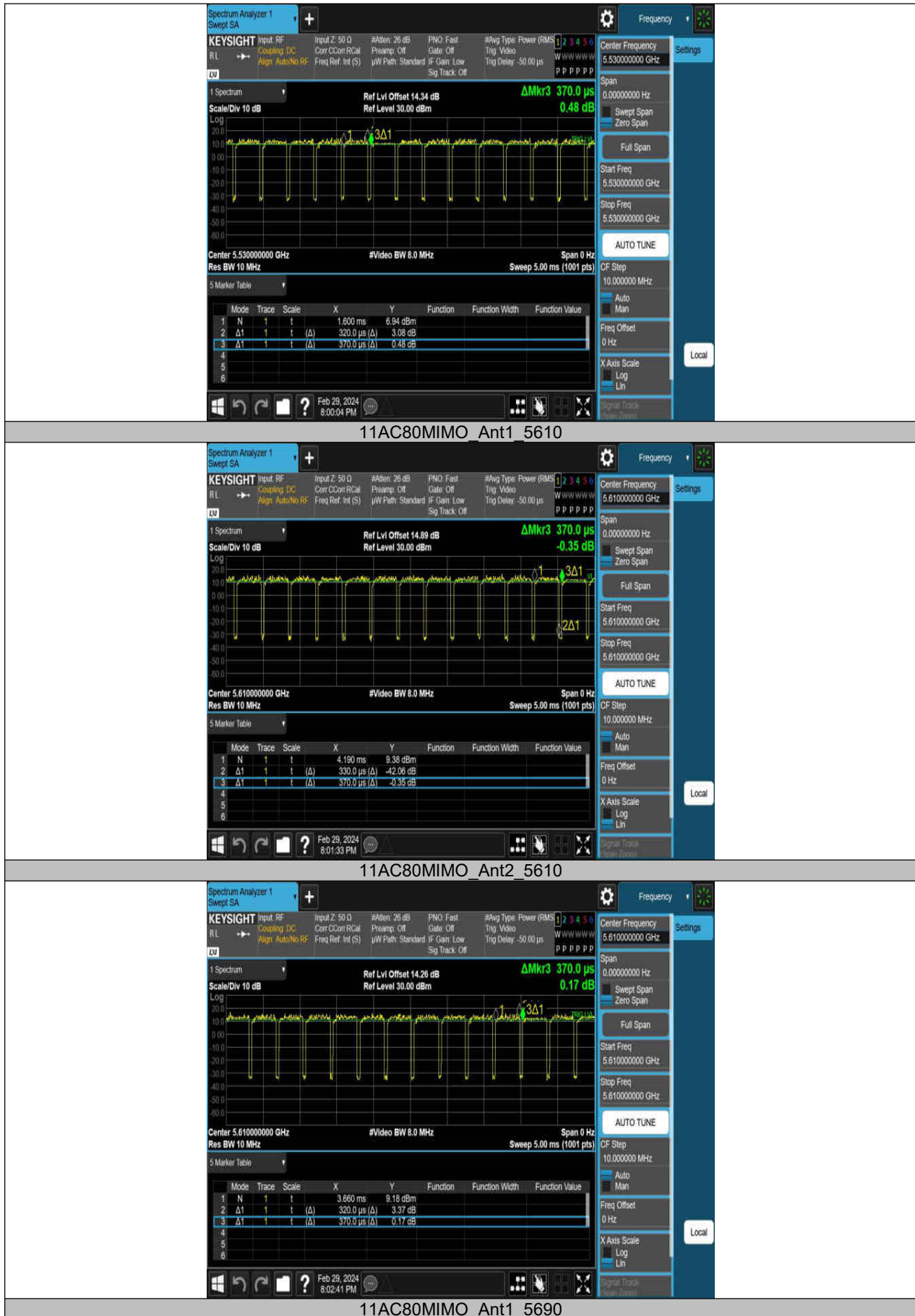


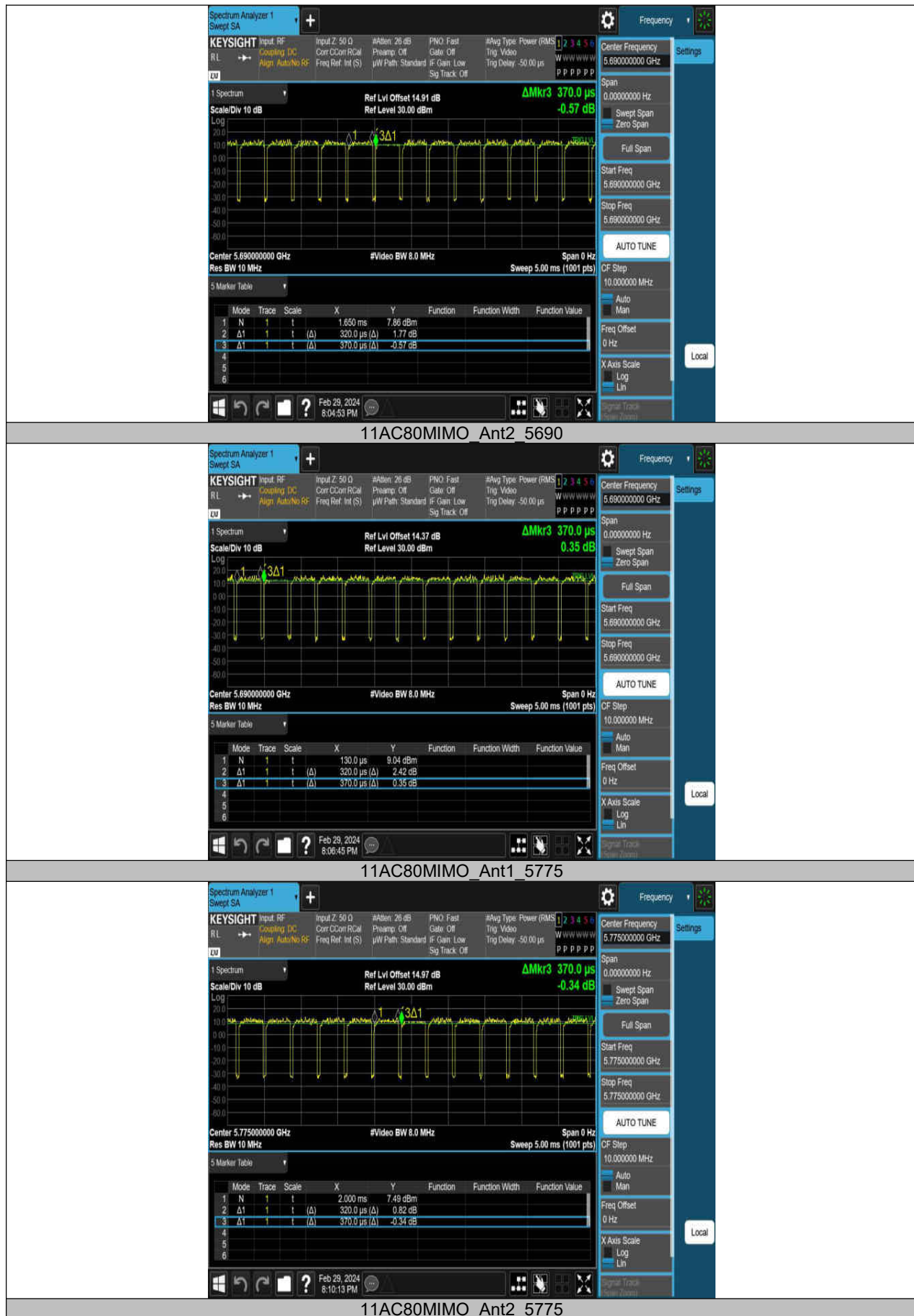


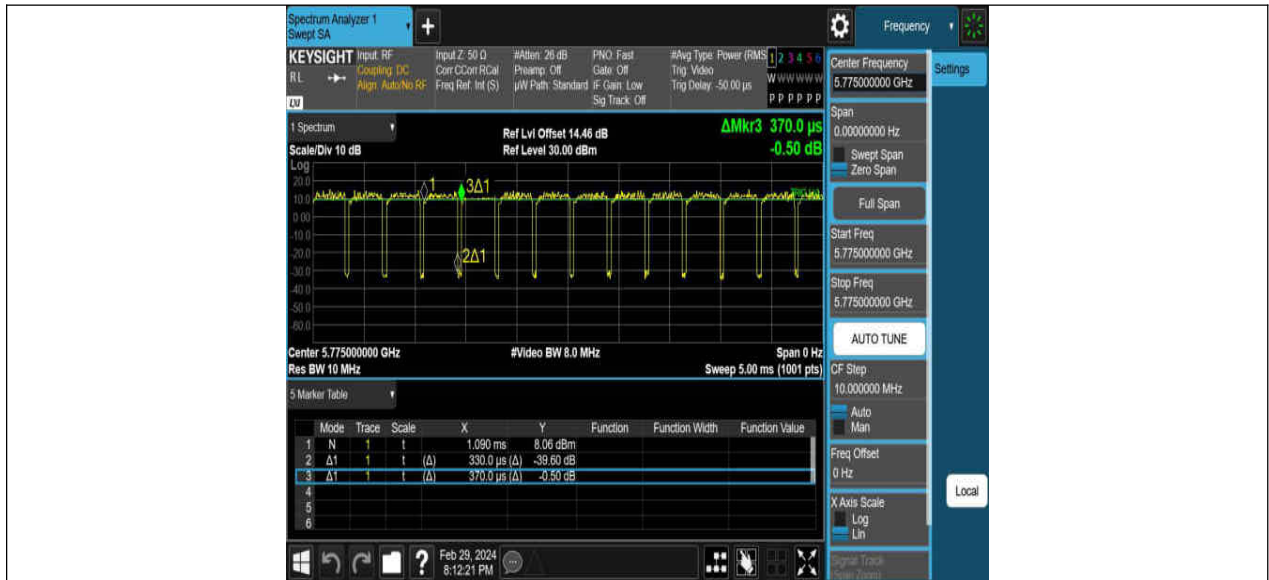












9. 26dB Bandwidth and 6dB Bandwidth

9.1. Block Diagram of Test Setup

Same as section 8.1

9.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Bandwidth	26 dB Bandwidth	5150 - 5250
	26 dB Bandwidth	5250 - 5350
	26 dB Bandwidth	5470 - 5725
	Minimum 500 kHz 6 dB Bandwidth	5725 - 5850

9.3. Test Procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	For 6 dB Bandwidth: RBW=100 kHz For 26 dB Bandwidth: approximately 1% of the emission bandwidth. For 99 % Occupied Bandwidth: approximately 1 % ~ 5 % of the OBW.
VBW	For 6 dB Bandwidth: VBW=300 kHz For 26 dB Bandwidth: >3*RBW For 99 % Bandwidth: >3*RBW
Trace	Max hold
Sweep	Auto couple

(2) Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB and 6 dB relative to the maximum level measured in the fundamental emission.

(3) Use the 99 % power bandwidth function of the instrument, allow the trace to stabilize and report the measured bandwidth.

9.4. Test Result

Test Mode	Ant.	Freq. (MHz)	OCB (MHz)	FL (MHz)	FH (MHz)
11A	Ant1	5180	16.558	5171.7081	5188.2661
	Ant2	5180	16.431	5171.7676	5188.1986
	Ant1	5200	16.839	5191.5306	5208.3696
	Ant2	5200	16.538	5191.6706	5208.2086
	Ant1	5240	17.448	5231.3022	5248.7502
	Ant2	5240	16.741	5231.6310	5248.3720
	Ant1	5260	17.668	5251.5498	5269.2178
	Ant2	5260	16.731	5251.5916	5268.3226
	Ant1	5280	16.977	5271.5176	5288.4946
	Ant2	5280	16.969	5271.4745	5288.4435
	Ant1	5320	16.426	5311.7420	5328.1680
	Ant2	5320	16.523	5311.6981	5328.2211
	Ant1	5500	16.505	5491.7770	5508.2820
	Ant2	5500	16.460	5491.7626	5508.2226
	Ant1	5580	21.534	5568.9808	5590.5148
	Ant2	5580	17.251	5571.2914	5588.5424
	Ant1	5700	17.609	5691.3261	5708.9351
	Ant2	5700	16.879	5691.5487	5708.4277
	Ant1	5720	17.120	5711.4309	5728.5509
	Ant2	5720	16.807	5711.5577	5728.3647

	Ant1	5720 UNII-2C	13.569	5711.4309	5725
	Ant2	5720 UNII-2C	13.442	5711.5577	5725
	Ant1	5720 UNII-3	3.551	5725	5728.5509
	Ant2	5720 UNII-3	3.365	5725	5728.3647
	Ant1	5745	17.310	5736.2546	5753.5646
	Ant2	5745	16.939	5736.4934	5753.4324
	Ant1	5785	16.764	5776.6856	5793.4496
	Ant2	5785	16.990	5776.5127	5793.5027
	Ant1	5825	16.745	5816.5618	5833.3068
	Ant2	5825	17.011	5816.4607	5833.4717
11N20MIMO	Ant1	5180	17.553	5171.1818	5188.7348
	Ant2	5180	17.658	5171.1702	5188.8282
	Ant1	5200	17.812	5191.0842	5208.8962
	Ant2	5200	17.612	5191.1783	5208.7903
	Ant1	5240	18.072	5231.0172	5249.0892
	Ant2	5240	17.663	5231.0968	5248.7598
	Ant1	5260	17.950	5250.9875	5268.9375
	Ant2	5260	17.781	5251.1135	5268.8945
	Ant1	5280	17.739	5271.1024	5288.8414
	Ant2	5280	17.915	5271.0403	5288.9553
	Ant1	5320	17.664	5311.1477	5328.8117
	Ant2	5320	17.688	5311.0647	5328.7527
	Ant1	5500	17.660	5491.1414	5508.8014
	Ant2	5500	17.743	5491.1229	5508.8659
	Ant1	5580	19.935	5569.9005	5589.8355
	Ant2	5580	17.991	5570.9880	5588.9790
	Ant1	5700	18.101	5690.9748	5709.0758
	Ant2	5700	17.801	5691.0385	5708.8395
	Ant1	5720	18.082	5711.0270	5729.1090
	Ant2	5720	17.808	5711.0661	5728.8741
	Ant1	5720 UNII-2C	13.973	5711.0270	5725
	Ant2	5720 UNII-2C	13.934	5711.0661	5725
	Ant1	5720 UNII-3	4.109	5725	5729.1090
	Ant2	5720 UNII-3	3.874	5725	5728.8741
	Ant1	5745	18.150	5735.9492	5754.0992
	Ant2	5745	17.800	5736.1350	5753.9350
	Ant1	5785	17.927	5776.0668	5793.9938
	Ant2	5785	17.942	5775.9716	5793.9136
	Ant1	5825	17.787	5816.1103	5833.8973
	Ant2	5825	17.769	5816.0507	5833.8197
11N40MIMO	Ant1	5190	35.968	5172.0844	5208.0524
	Ant2	5190	36.063	5172.0589	5208.1219
	Ant1	5230	36.401	5211.8738	5248.2748
	Ant2	5230	36.146	5211.7798	5247.9258
	Ant1	5270	36.483	5251.7254	5288.2084
	Ant2	5270	36.200	5251.9633	5288.1633
	Ant1	5310	36.222	5291.6907	5327.9127
	Ant2	5310	36.017	5291.8241	5327.8411
	Ant1	5510	36.179	5491.9538	5528.1328
	Ant2	5510	36.243	5491.7715	5528.0145
	Ant1	5550	42.327	5526.3911	5568.7181
	Ant2	5550	38.104	5530.8731	5568.9771
	Ant1	5670	40.662	5649.0614	5689.7234
	Ant2	5670	36.251	5651.9433	5688.1943
	Ant1	5710	36.528	5691.7356	5728.2636
	Ant2	5710	36.433	5691.7015	5728.1345
	Ant1	5710 UNII-2C	33.264	5691.7356	5725
	Ant2	5710 UNII-2C	33.298	5691.7015	5725
	Ant1	5710 UNII-3	3.264	5725	5728.2636
	Ant2	5710 UNII-3	3.135	5725	5728.1345

	Ant1	5755	37.022	5736.3686	5773.3906
	Ant2	5755	36.242	5736.8105	5773.0525
	Ant1	5795	36.235	5776.9648	5813.1998
	Ant2	5795	36.586	5776.7487	5813.3347
11AC20MIMO	Ant1	5180	17.576	5171.2015	5188.7775
	Ant2	5180	17.576	5171.2614	5188.8374
	Ant1	5200	17.800	5191.1025	5208.9025
	Ant2	5200	17.624	5191.2069	5208.8309
	Ant1	5240	18.049	5231.0154	5249.0644
	Ant2	5240	17.697	5231.0416	5248.7386
	Ant1	5260	18.018	5251.1114	5269.1294
	Ant2	5260	17.839	5251.0633	5268.9023
	Ant1	5280	17.741	5271.1133	5288.8543
	Ant2	5280	17.776	5271.1268	5288.9028
	Ant1	5320	17.614	5311.1655	5328.7795
	Ant2	5320	17.605	5311.1476	5328.7526
	Ant1	5500	17.669	5491.1712	5508.8402
	Ant2	5500	17.720	5491.0880	5508.8080
	Ant1	5580	20.124	5570.2041	5590.3281
	Ant2	5580	17.894	5571.0219	5588.9159
	Ant1	5700	18.056	5691.0140	5709.0700
	Ant2	5700	17.753	5691.0605	5708.8135
	Ant1	5720	18.035	5710.9948	5729.0298
	Ant2	5720	17.864	5711.0493	5728.9133
	Ant1	5720_UNII-2C	14.005	5710.9948	5725
	Ant2	5720_UNII-2C	13.951	5711.0493	5725
	Ant1	5720_UNII-3	4.03	5725	5729.0298
	Ant2	5720_UNII-3	3.913	5725	5728.9133
	Ant1	5745	18.058	5735.9118	5753.9698
	Ant2	5745	17.846	5736.0827	5753.9287
	Ant1	5785	17.781	5776.1018	5793.8828
	Ant2	5785	17.932	5775.9502	5793.8822
	Ant1	5825	17.778	5816.0297	5833.8077
	Ant2	5825	17.864	5816.0396	5833.9036
11AC40MIMO	Ant1	5190	35.875	5172.0655	5207.9405
	Ant2	5190	36.130	5172.0633	5208.1933
	Ant1	5230	36.514	5211.6600	5248.1740
	Ant2	5230	36.227	5211.8093	5248.0363
	Ant1	5270	36.464	5251.8669	5288.3309
	Ant2	5270	36.472	5251.7634	5288.2354
	Ant1	5310	36.127	5291.8352	5327.9622
	Ant2	5310	35.938	5291.8606	5327.7986
	Ant1	5510	36.068	5492.0657	5528.1337
	Ant2	5510	36.118	5491.9480	5528.0660
	Ant1	5550	42.668	5526.4124	5569.0804
	Ant2	5550	37.779	5531.1976	5568.9766
	Ant1	5670	41.895	5647.9444	5689.8394
	Ant2	5670	36.443	5651.7724	5688.2154
	Ant1	5710	36.487	5691.8442	5728.3312
	Ant2	5710	36.628	5691.5710	5728.1990
	Ant1	5710_UNII-2C	33.156	5691.8442	5725
	Ant2	5710_UNII-2C	33.429	5691.5710	5725
	Ant1	5710_UNII-3	3.331	5725	5728.3312
	Ant2	5710_UNII-3	3.199	5725	5728.1990
	Ant1	5755	36.962	5736.4923	5773.4543
	Ant2	5755	36.342	5736.7765	5773.1185
	Ant1	5795	36.072	5777.0469	5813.1189
	Ant2	5795	36.704	5776.6095	5813.3135
11AC80MIMO	Ant1	5210	75.984	5171.8541	5247.8381
	Ant2	5210	74.943	5172.2877	5247.2307

	Ant1	5290	76.164	5251.7007	5327.8647
	Ant2	5290	75.600	5252.1126	5327.7126
	Ant1	5530	75.419	5492.2856	5567.7046
	Ant2	5530	75.730	5492.1358	5567.8658
	Ant1	5610	75.741	5572.0752	5647.8162
	Ant2	5610	75.640	5572.0942	5647.7342
	Ant1	5690	75.932	5651.8686	5727.8006
	Ant2	5690	75.716	5652.0249	5727.7409
	Ant1	5690_UNII-2C	73.131	5651.8686	5725
	Ant2	5690_UNII-2C	72.975	5652.0249	5725
	Ant1	5690_UNII-3	2.801	5725	5727.8006
	Ant2	5690_UNII-3	2.741	5725	5727.7409
	Ant1	5775	76.116	5736.5963	5812.7123
	Ant2	5775	75.891	5736.9667	5812.8577

Test Mode	Ant.	Freq. (MHz)	26dB EBW (MHz)	FL (MHz)	FH (MHz)	Verdict
11A	Ant1	5180	19.480	5170.320	5189.800	PASS
	Ant2	5180	19.680	5170.280	5189.960	PASS
	Ant1	5200	27.560	5186.680	5214.240	PASS
	Ant2	5200	19.680	5190.240	5209.920	PASS
	Ant1	5240	35.560	5222.440	5258.000	PASS
	Ant2	5240	21.200	5229.600	5250.800	PASS
	Ant1	5260	31.280	5245.640	5276.920	PASS
	Ant2	5260	28.480	5245.960	5274.440	PASS
	Ant1	5280	31.720	5264.600	5296.320	PASS
	Ant2	5280	30.440	5266.360	5296.800	PASS
	Ant1	5320	19.520	5310.160	5329.680	PASS
	Ant2	5320	19.200	5310.440	5329.640	PASS
	Ant1	5500	20.240	5489.760	5510.000	PASS
	Ant2	5500	21.920	5490.080	5512.000	PASS
	Ant1	5580	36.400	5561.800	5598.200	PASS
	Ant2	5580	27.280	5566.200	5593.480	PASS
	Ant1	5700	33.040	5684.240	5717.280	PASS
	Ant2	5700	28.600	5684.680	5713.280	PASS
	Ant1	5720	32.120	5705.120	5737.240	PASS
	Ant2	5720	32.520	5704.600	5737.120	PASS
	Ant1	5720_UNII-2C	19.88	5705.120	5725	PASS
	Ant2	5720_UNII-2C	20.4	5704.600	5725	PASS
	Ant1	5720_UNII-3	12.24	5725	5737.240	PASS
	Ant2	5720_UNII-3	12.12	5725	5737.120	PASS
	Ant1	5745	29.600	5730.960	5760.560	PASS
	Ant2	5745	28.080	5729.960	5758.040	PASS
	Ant1	5785	28.800	5771.520	5800.320	PASS
	Ant2	5785	30.680	5769.600	5800.280	PASS
	Ant1	5825	26.560	5811.320	5837.880	PASS
	Ant2	5825	28.840	5811.240	5840.080	PASS
11N20MIMO	Ant1	5180	20.120	5170.040	5190.160	PASS
	Ant2	5180	19.960	5170.160	5190.120	PASS
	Ant1	5200	27.040	5186.320	5213.360	PASS
	Ant2	5200	19.520	5190.160	5209.680	PASS
	Ant1	5240	31.440	5223.760	5255.200	PASS
	Ant2	5240	20.760	5229.280	5250.040	PASS
	Ant1	5260	27.840	5246.600	5274.440	PASS
	Ant2	5260	25.920	5248.080	5274.000	PASS
	Ant1	5280	24.720	5268.440	5293.160	PASS
	Ant2	5280	26.160	5267.760	5293.920	PASS
	Ant1	5320	19.640	5310.200	5329.840	PASS
	Ant2	5320	19.880	5309.840	5329.720	PASS
	Ant1	5500	20.360	5489.800	5510.160	PASS

	Ant2	5500	23.960	5486.560	5510.520	PASS
	Ant1	5580	32.120	5564.120	5596.240	PASS
	Ant2	5580	27.320	5566.800	5594.120	PASS
	Ant1	5700	27.400	5686.640	5714.040	PASS
	Ant2	5700	26.120	5687.480	5713.600	PASS
	Ant1	5720	31.320	5704.640	5735.960	PASS
	Ant2	5720	29.360	5705.600	5734.960	PASS
	Ant1	5720_UNII-2C	20.36	5704.640	5725	PASS
	Ant2	5720_UNII-2C	19.4	5705.600	5725	PASS
	Ant1	5720_UNII-3	10.96	5725	5735.960	PASS
	Ant2	5720_UNII-3	9.96	5725	5734.960	PASS
	Ant1	5745	29.120	5730.400	5759.520	PASS
	Ant2	5745	31.520	5729.640	5761.160	PASS
	Ant1	5785	23.800	5773.080	5796.880	PASS
	Ant2	5785	28.440	5769.880	5798.320	PASS
	Ant1	5825	24.160	5812.400	5836.560	PASS
	Ant2	5825	29.080	5810.200	5839.280	PASS
11N40MIMO	Ant1	5190	40.160	5170.160	5210.320	PASS
	Ant2	5190	39.600	5170.400	5210.000	PASS
	Ant1	5230	66.240	5200.880	5267.120	PASS
	Ant2	5230	43.520	5206.080	5249.600	PASS
	Ant1	5270	65.280	5240.880	5306.160	PASS
	Ant2	5270	52.720	5246.320	5299.040	PASS
	Ant1	5310	39.520	5290.240	5329.760	PASS
	Ant2	5310	38.880	5290.320	5329.200	PASS
	Ant1	5510	47.360	5490.080	5537.440	PASS
	Ant2	5510	44.080	5486.160	5530.240	PASS
	Ant1	5550	79.120	5510.800	5589.920	PASS
	Ant2	5550	73.920	5516.000	5589.920	PASS
	Ant1	5670	79.280	5630.080	5709.360	PASS
	Ant2	5670	40.320	5650.000	5690.320	PASS
	Ant1	5710	60.000	5680.080	5740.080	PASS
	Ant2	5710	47.280	5683.440	5730.720	PASS
	Ant1	5710_UNII-2C	44.92	5680.080	5725	PASS
	Ant2	5710_UNII-2C	41.56	5683.440	5725	PASS
	Ant1	5710_UNII-3	15.08	5725	5740.080	PASS
	Ant2	5710_UNII-3	5.72	5725	5730.720	PASS
	Ant1	5755	63.840	5722.600	5786.440	PASS
	Ant2	5755	56.880	5727.400	5784.280	PASS
	Ant1	5795	48.080	5773.800	5821.880	PASS
	Ant2	5795	63.040	5758.600	5821.640	PASS
11AC20MIMO	Ant1	5180	20.080	5170.000	5190.080	PASS
	Ant2	5180	19.920	5170.120	5190.040	PASS
	Ant1	5200	23.000	5190.040	5213.040	PASS
	Ant2	5200	19.880	5189.920	5209.800	PASS
	Ant1	5240	34.600	5225.240	5259.840	PASS
	Ant2	5240	24.680	5229.080	5253.760	PASS
	Ant1	5260	30.960	5245.400	5276.360	PASS
	Ant2	5260	26.360	5247.080	5273.440	PASS
	Ant1	5280	25.720	5268.320	5294.040	PASS
	Ant2	5280	29.360	5266.800	5296.160	PASS
	Ant1	5320	19.960	5310.120	5330.080	PASS
	Ant2	5320	19.800	5309.880	5329.680	PASS
	Ant1	5500	20.080	5490.040	5510.120	PASS
	Ant2	5500	23.160	5489.880	5513.040	PASS
	Ant1	5580	37.280	5560.880	5598.160	PASS
	Ant2	5580	31.520	5564.920	5596.440	PASS
	Ant1	5700	28.440	5686.440	5714.880	PASS
	Ant2	5700	24.480	5687.440	5711.920	PASS
	Ant1	5720	30.240	5703.720	5733.960	PASS

	Ant2	5720	29.920	5704.440	5734.360	PASS
	Ant1	5720_UNII-2C	21.28	5703.720	5725	PASS
	Ant2	5720_UNII-2C	20.56	5704.440	5725	PASS
	Ant1	5720_UNII-3	8.96	5725	5733.960	PASS
	Ant2	5720_UNII-3	9.36	5725	5734.360	PASS
	Ant1	5745	31.200	5728.720	5759.920	PASS
	Ant2	5745	30.120	5728.960	5759.080	PASS
	Ant1	5785	26.200	5772.840	5799.040	PASS
	Ant2	5785	32.560	5768.680	5801.240	PASS
	Ant1	5825	24.800	5812.160	5836.960	PASS
11AC40MIMO	Ant2	5825	25.560	5813.200	5838.760	PASS
	Ant1	5190	39.360	5170.240	5209.600	PASS
	Ant2	5190	39.440	5170.240	5209.680	PASS
	Ant1	5230	73.840	5194.160	5268.000	PASS
	Ant2	5230	54.400	5200.800	5255.200	PASS
	Ant1	5270	66.080	5236.480	5302.560	PASS
	Ant2	5270	48.400	5247.040	5295.440	PASS
	Ant1	5310	40.080	5289.760	5329.840	PASS
	Ant2	5310	38.960	5290.480	5329.440	PASS
	Ant1	5510	40.320	5489.840	5530.160	PASS
	Ant2	5510	40.800	5489.280	5530.080	PASS
	Ant1	5550	75.440	5512.880	5588.320	PASS
	Ant2	5550	68.720	5515.200	5583.920	PASS
	Ant1	5670	78.640	5630.720	5709.360	PASS
	Ant2	5670	57.760	5645.840	5703.600	PASS
	Ant1	5710	66.320	5676.560	5742.880	PASS
	Ant2	5710	59.200	5684.560	5743.760	PASS
	Ant1	5710_UNII-2C	48.44	5676.560	5725	PASS
	Ant2	5710_UNII-2C	40.44	5684.560	5725	PASS
	Ant1	5710_UNII-3	17.88	5725	5742.880	PASS
	Ant2	5710_UNII-3	18.76	5725	5743.760	PASS
11AC80MIMO	Ant1	5755	71.680	5717.320	5789.000	PASS
	Ant2	5755	61.920	5720.760	5782.680	PASS
	Ant1	5795	54.480	5769.720	5824.200	PASS
	Ant2	5795	66.560	5762.200	5828.760	PASS
	Ant1	5210	80.960	5169.680	5250.640	PASS
	Ant2	5210	78.400	5170.640	5249.040	PASS
	Ant1	5290	80.480	5249.520	5330.000	PASS
	Ant2	5290	79.200	5250.320	5329.520	PASS
	Ant1	5530	80.000	5490.320	5570.320	PASS
	Ant2	5530	81.760	5487.600	5569.360	PASS
	Ant1	5610	95.840	5560.880	5656.720	PASS
	Ant2	5610	78.720	5570.800	5649.520	PASS
	Ant1	5690	111.840	5639.440	5751.280	PASS
	Ant2	5690	86.400	5644.080	5730.480	PASS
	Ant1	5690_UNII-2C	85.56	5639.440	5725	PASS
	Ant2	5690_UNII-2C	80.92	5644.080	5725	PASS
	Ant1	5690_UNII-3	26.28	5725	5751.280	PASS
	Ant2	5690_UNII-3	5.48	5725	5730.480	PASS
	Ant1	5775	107.360	5715.480	5822.840	PASS
	Ant2	5775	94.240	5720.600	5814.840	PASS

Test Mode	Ant.	Freq. (MHz)	6dB EBW (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11A	Ant1	5745	15.040	5737.480	5752.520	0.5	PASS
	Ant2	5745	15.080	5737.440	5752.520	0.5	PASS
	Ant1	5785	15.280	5777.240	5792.520	0.5	PASS
	Ant2	5785	15.000	5777.480	5792.480	0.5	PASS
	Ant1	5825	16.320	5816.840	5833.160	0.5	PASS
	Ant2	5825	15.120	5817.440	5832.560	0.5	PASS

11N20MIMO	Ant1	5745	16.520	5736.840	5753.360	0.5	PASS
	Ant2	5745	16.520	5736.600	5753.120	0.5	PASS
	Ant1	5785	14.040	5778.480	5792.520	0.5	PASS
	Ant2	5785	16.160	5776.600	5792.760	0.5	PASS
	Ant1	5825	15.000	5817.480	5832.480	0.5	PASS
	Ant2	5825	16.520	5816.600	5833.120	0.5	PASS
11N40MIMO	Ant1	5755	34.960	5737.480	5772.440	0.5	PASS
	Ant2	5755	32.480	5737.480	5769.960	0.5	PASS
	Ant1	5795	33.760	5778.760	5812.520	0.5	PASS
	Ant2	5795	34.400	5777.480	5811.880	0.5	PASS
11AC20MIMO	Ant1	5745	15.440	5737.120	5752.560	0.5	PASS
	Ant2	5745	15.920	5736.600	5752.520	0.5	PASS
	Ant1	5785	15.120	5777.440	5792.560	0.5	PASS
	Ant2	5785	15.960	5776.600	5792.560	0.5	PASS
	Ant1	5825	15.040	5817.480	5832.520	0.5	PASS
	Ant2	5825	16.520	5816.600	5833.120	0.5	PASS
11AC40MIMO	Ant1	5755	35.040	5737.480	5772.520	0.5	PASS
	Ant2	5755	32.800	5738.440	5771.240	0.5	PASS
	Ant1	5795	35.120	5777.400	5812.520	0.5	PASS
	Ant2	5795	35.040	5777.480	5812.520	0.5	PASS
11AC80MIMO	Ant1	5775	72.640	5737.400	5810.040	0.5	PASS
	Ant2	5775	73.760	5738.680	5812.440	0.5	PASS

9.5. Original Test Data

99% Bandwidth:



