

9. 26dB Bandwidth, 6dB Bandwidth and 99% 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
	For reporting purposes only.	---

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)	Limit (MHz)	Verdict
11A	Ant1	5180	17.323	5171.2539	5188.5769	---	---
		5200	17.314	5191.2607	5208.5747	---	---
		5240	17.371	5231.2336	5248.6046	---	---
		5260	17.229	5251.2778	5268.5068	---	---
		5280	17.339	5271.2323	5288.5713	---	---
		5320	17.317	5311.2369	5328.5539	---	---
		5500	17.517	5491.2461	5508.7631	---	---
		5580	17.382	5571.2601	5588.6421	---	---
		5700	17.701	5691.0467	5708.7477	---	---
		5720	17.774	5711.1146	5728.8886	---	---
		5720 UNII-2C	13.885	5711.1146	5725	---	---
		5720 UNII-3	3.889	5725	5728.8886	---	---
		5745	17.368	5736.1961	5753.5641	---	---
		5785	17.507	5776.1626	5793.6696	---	---
		5825	17.588	5816.0890	5833.6770	---	---
11N20SISO	Ant1	5180	18.425	5170.7867	5189.2117	---	---
		5200	18.267	5190.7887	5209.0557	---	---
		5240	18.400	5230.6986	5249.0986	---	---

		5260	18.422	5250.7171	5269.1391	---	---
		5280	18.395	5270.6969	5289.0919	---	---
		5320	18.434	5310.7032	5329.1372	---	---
		5500	18.558	5490.7905	5509.3485	---	---
		5580	18.729	5570.6529	5589.3819	---	---
		5700	18.594	5690.6420	5709.2360	---	---
		5720	18.604	5710.7294	5729.3334	---	---
		5720_UNII-2C	14.271	5710.7294	5725	---	---
		5720_UNII-3	4.333	5725	5729.3334	---	---
		5745	18.501	5735.6906	5754.1916	---	---
		5785	18.635	5775.6353	5794.2703	---	---
		5825	18.498	5815.6770	5834.1750	---	---
		5190	36.652	5171.6316	5208.2836	---	---
11N40SISO	Ant1	5230	36.657	5211.5272	5248.1842	---	---
		5270	36.591	5251.5317	5288.1227	---	---
		5310	36.811	5291.4727	5328.2837	---	---
		5510	36.931	5491.5857	5528.5167	---	---
		5550	36.811	5531.5621	5568.3731	---	---
		5670	36.816	5651.4968	5688.3128	---	---
		5710	36.976	5691.4603	5728.4363	---	---
		5710_UNII-2C	33.54	5691.4603	5725	---	---
		5710_UNII-3	3.436	5725	5728.4363	---	---
		5755	36.871	5736.3919	5773.2629	---	---
		5795	37.002	5776.4000	5813.4020	---	---
		5180	18.404	5170.7744	5189.1784	---	---
		5200	18.382	5190.7415	5209.1235	---	---
		5240	18.395	5230.7549	5249.1499	---	---
11AC20SISO	Ant1	5260	18.351	5250.7626	5269.1136	---	---
		5280	18.377	5270.6947	5289.0717	---	---
		5320	18.375	5310.7715	5329.1465	---	---
		5500	18.648	5490.6859	5509.3339	---	---
		5580	18.657	5570.6559	5589.3129	---	---
		5700	18.606	5690.6448	5709.2508	---	---
		5720	18.620	5710.7302	5729.3502	---	---
		5720_UNII-2C	14.27	5710.7302	5725	---	---
		5720_UNII-3	4.35	5725	5729.3502	---	---
		5745	18.517	5735.6280	5754.1450	---	---
		5785	18.497	5775.6572	5794.1542	---	---
		5825	18.602	5815.5807	5834.1827	---	---
		5190	36.731	5171.5689	5208.2999	---	---
		5230	36.634	5211.5190	5248.1530	---	---
11AC40SISO	Ant1	5270	36.718	5251.4659	5288.1839	---	---
		5310	36.819	5291.3560	5328.1750	---	---
		5510	36.944	5491.6033	5528.5473	---	---
		5550	36.912	5531.4811	5568.3931	---	---
		5670	37.085	5651.4416	5688.5266	---	---
		5710	36.860	5691.5166	5728.3766	---	---
		5710_UNII-2C	33.483	5691.5166	5725	---	---
		5710_UNII-3	3.377	5725	5728.3766	---	---
		5755	36.962	5736.4350	5773.3970	---	---
		5795	36.936	5776.4820	5813.4180	---	---
		5210	75.949	5171.8565	5247.8055	---	---
		5290	76.073	5251.6248	5327.6978	---	---
		5530	76.352	5492.0231	5568.3751	---	---
11AC80SISO	Ant1	5610	76.159	5571.8263	5647.9853	---	---
		5690	76.487	5651.5730	5728.0600	---	---
		5690_UNII-2C	73.427	5651.5730	5725	---	---
		5690_UNII-3	3.06	5725	5728.0600	---	---
		5775	76.402	5736.6546	5813.0566	---	---
		5180	19.228	5170.3174	5189.5454	---	---
		5180	19.228	5170.3174	5189.5454	---	---

		5200	19.204	5190.3969	5209.6009	---	---
		5240	19.179	5230.3403	5249.5193	---	---
		5260	19.174	5250.3300	5269.5040	---	---
		5280	19.268	5270.2895	5289.5575	---	---
		5320	19.221	5310.3333	5329.5543	---	---
		5500	19.389	5490.2932	5509.6822	---	---
		5580	19.342	5570.2704	5589.6124	---	---
		5700	19.307	5690.2779	5709.5849	---	---
		5720	19.304	5710.3205	5729.6245	---	---
		5720_UNII-2C	14.68	5710.3205	5725	---	---
		5720_UNII-3	4.624	5725	5729.6245	---	---
		5745	19.251	5735.3105	5754.5615	---	---
		5785	19.280	5775.3276	5794.6076	---	---
		5825	19.280	5815.3263	5834.6063	---	---
11AX40SISO	Ant1	5190	37.989	5170.9495	5208.9385	---	---
		5230	37.899	5211.0111	5248.9101	---	---
		5270	37.880	5251.0039	5288.8839	---	---
		5310	38.057	5290.8868	5328.9438	---	---
		5510	38.147	5490.9181	5529.0651	---	---
		5550	38.185	5530.8697	5569.0547	---	---
		5670	38.239	5650.8034	5689.0424	---	---
		5710	38.132	5690.8968	5729.0288	---	---
		5710_UNII-2C	34.103	5690.8968	5725	---	---
		5710_UNII-3	4.029	5725	5729.0288	---	---
		5755	38.178	5735.8576	5774.0356	---	---
		5795	38.194	5775.8842	5814.0782	---	---
11AX80SISO	Ant1	5210	77.259	5171.4708	5248.7298	---	---
		5290	77.495	5251.0781	5328.5731	---	---
		5530	77.785	5491.2314	5569.0164	---	---
		5610	77.741	5571.2730	5649.0140	---	---
		5690	77.996	5650.9789	5728.9749	---	---
		5690_UNII-2C	74.021	5650.9789	5725	---	---
		5690_UNII-3	3.975	5725	5728.9749	---	---
		5775	78.044	5735.8730	5813.9170	---	---

Test Mode	Ant.	Freq. (MHz)	26dB EBW (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11A	Ant1	5180	24.240	5167.560	5191.800	---	---
		5200	24.120	5187.200	5211.320	---	---
		5240	24.040	5227.360	5251.400	---	---
		5260	24.120	5247.720	5271.840	---	---
		5280	24.960	5267.320	5292.280	---	---
		5320	26.520	5306.440	5332.960	---	---
		5500	25.400	5486.960	5512.360	---	---
		5580	25.040	5567.520	5592.560	---	---
		5700	27.160	5686.000	5713.160	---	---
		5720	28.040	5706.520	5734.560	---	---
		5720_UNII-2C	18.48	5706.520	5725	---	---
		5720_UNII-3	9.56	5725	5734.560	---	---
		5745	23.280	5733.040	5756.320	---	---
		5785	24.880	5772.400	5797.280	---	---
		5825	24.880	5812.240	5837.120	---	---
11N20SISO	Ant1	5180	23.920	5168.240	5192.160	---	---
		5200	24.560	5187.200	5211.760	---	---
		5240	24.520	5227.880	5252.400	---	---
		5260	25.360	5246.840	5272.200	---	---
		5280	24.720	5267.680	5292.400	---	---
		5320	24.760	5307.600	5332.360	---	---
		5500	25.680	5487.440	5513.120	---	---
		5580	29.800	5564.880	5594.680	---	---

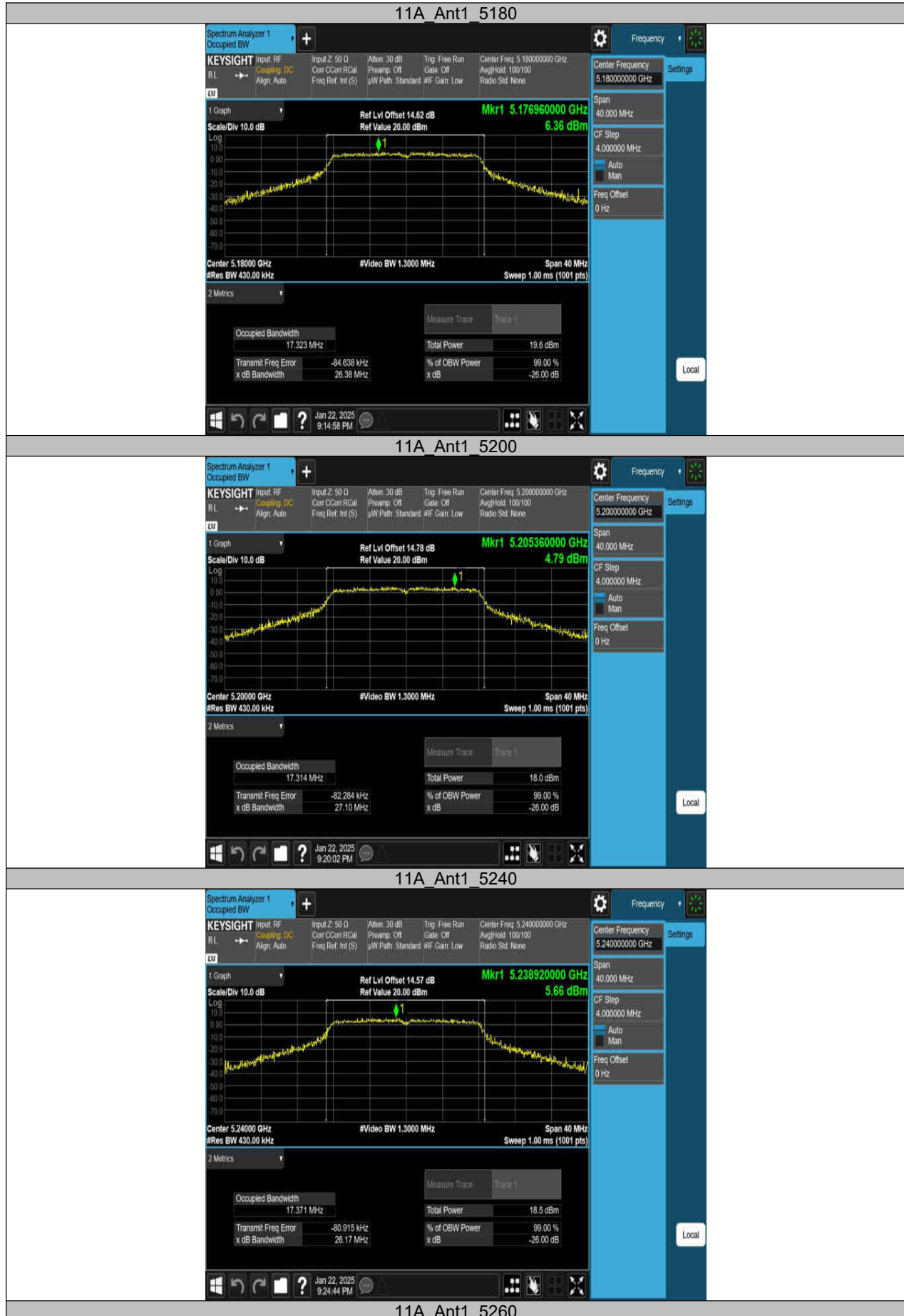
		5700	25.640	5686.360	5712.000	---	---
		5720	25.240	5707.600	5732.840	---	---
		5720 UNII-2C	17.4	5707.600	5725	---	---
		5720 UNII-3	7.84	5725	5732.840	---	---
		5745	25.240	5732.080	5757.320	---	---
		5785	25.000	5772.640	5797.640	---	---
		5825	24.880	5812.200	5837.080	---	---
11N40SISO	Ant1	5190	44.080	5168.000	5212.080	---	---
		5230	44.640	5207.280	5251.920	---	---
		5270	43.200	5248.400	5291.600	---	---
		5310	44.720	5287.440	5332.160	---	---
		5510	45.840	5487.440	5533.280	---	---
		5550	44.960	5527.600	5572.560	---	---
		5670	46.000	5646.400	5692.400	---	---
		5710	46.080	5687.520	5733.600	---	---
		5710 UNII-2C	37.48	5687.520	5725	---	---
		5710 UNII-3	8.6	5725	5733.600	---	---
		5755	45.520	5732.200	5777.720	---	---
11AC20SISO	Ant1	5795	47.440	5771.400	5818.840	---	---
		5180	24.120	5167.840	5191.960	---	---
		5200	23.920	5187.920	5211.840	---	---
		5240	24.600	5227.640	5252.240	---	---
		5260	24.720	5247.600	5272.320	---	---
		5280	24.520	5267.720	5292.240	---	---
		5320	24.640	5307.440	5332.080	---	---
		5500	25.560	5487.360	5512.920	---	---
		5580	24.480	5567.880	5592.360	---	---
		5700	24.800	5687.600	5712.400	---	---
		5720	26.200	5706.440	5732.640	---	---
		5720 UNII-2C	18.56	5706.440	5725	---	---
		5720 UNII-3	7.64	5725	5732.640	---	---
		5745	24.800	5732.160	5756.960	---	---
		5785	25.320	5772.080	5797.400	---	---
11AC40SISO	Ant1	5825	24.600	5812.400	5837.000	---	---
		5190	46.080	5167.360	5213.440	---	---
		5230	44.640	5207.440	5252.080	---	---
		5270	46.800	5245.680	5292.480	---	---
		5310	47.520	5285.200	5332.720	---	---
		5510	44.400	5488.320	5532.720	---	---
		5550	46.880	5526.800	5573.680	---	---
		5670	46.960	5646.480	5693.440	---	---
		5710	45.680	5688.000	5733.680	---	---
		5710 UNII-2C	37	5688.000	5725	---	---
		5710 UNII-3	8.68	5725	5733.680	---	---
		5755	47.200	5731.080	5778.280	---	---
		5795	44.560	5772.840	5817.400	---	---
11AC80SISO	Ant1	5210	86.080	5166.000	5252.080	---	---
		5290	86.080	5246.320	5332.400	---	---
		5530	87.680	5487.280	5574.960	---	---
		5610	88.800	5565.520	5654.320	---	---
		5690	87.200	5647.280	5734.480	---	---
		5690 UNII-2C	77.72	5647.280	5725	---	---
		5690 UNII-3	9.48	5725	5734.480	---	---
		5775	97.120	5723.800	5820.920	---	---
11AX20SISO	Ant1	5180	24.960	5167.200	5192.160	---	---
		5200	25.240	5187.240	5212.480	---	---
		5240	23.400	5227.960	5251.360	---	---
		5260	23.480	5247.920	5271.400	---	---
		5280	24.120	5267.360	5291.480	---	---
		5320	23.480	5308.120	5331.600	---	---

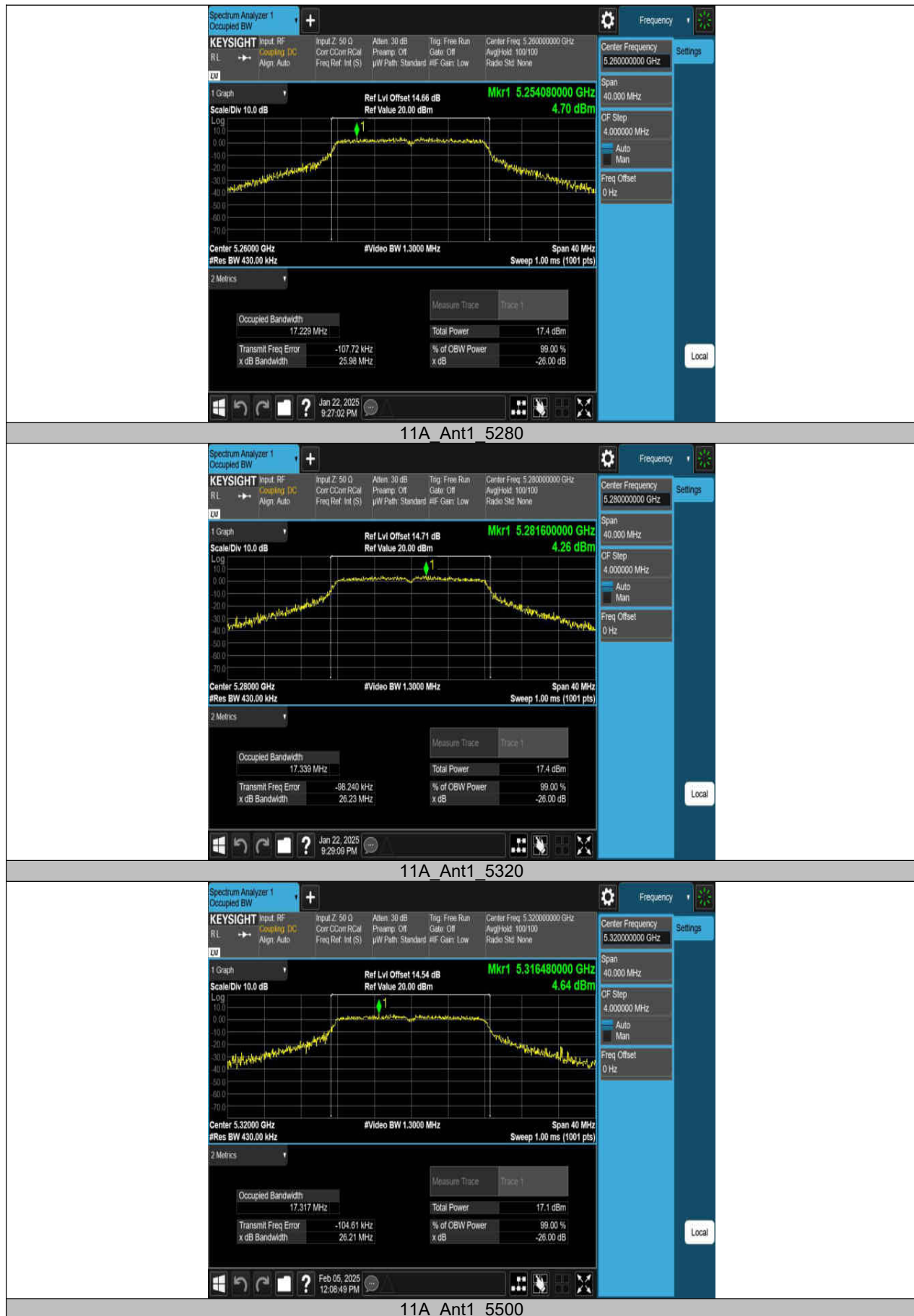
		5500	26.680	5487.080	5513.760	---	---
		5580	27.040	5567.520	5594.560	---	---
		5700	24.440	5687.400	5711.840	---	---
		5720	28.200	5706.600	5734.800	---	---
		5720 UNII-2C	18.4	5706.600	5725	---	---
		5720 UNII-3	9.8	5725	5734.800	---	---
		5745	23.880	5732.800	5756.680	---	---
		5785	25.440	5772.920	5798.360	---	---
11AX40SISO	Ant1	5825	25.680	5812.400	5838.080	---	---
		5190	45.200	5167.440	5212.640	---	---
		5230	44.880	5207.600	5252.480	---	---
		5270	45.040	5247.760	5292.800	---	---
		5310	44.400	5287.280	5331.680	---	---
		5510	44.640	5487.600	5532.240	---	---
		5550	45.280	5528.080	5573.360	---	---
		5670	43.920	5647.760	5691.680	---	---
		5710	46.000	5687.520	5733.520	---	---
		5710 UNII-2C	37.48	5687.520	5725	---	---
		5710 UNII-3	8.52	5725	5733.520	---	---
		5755	44.400	5732.600	5777.000	---	---
11AX80SISO	Ant1	5795	44.160	5773.160	5817.320	---	---
		5210	85.920	5167.280	5253.200	---	---
		5290	83.200	5247.920	5331.120	---	---
		5530	85.280	5488.080	5573.360	---	---
		5610	85.920	5567.440	5653.360	---	---
		5690	84.640	5647.760	5732.400	---	---
		5690 UNII-2C	77.24	5647.760	5725	---	---
		5690 UNII-3	7.4	5725	5732.400	---	---
		5775	85.920	5731.640	5817.560	---	---

Test Mode	Ant.	Freq. (MHz)	6dB EBW (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11A	Ant1	5745	16.360	5736.760	5753.120	0.5	PASS
		5785	16.320	5776.800	5793.120	0.5	PASS
		5825	16.320	5816.800	5833.120	0.5	PASS
11N20SISO	Ant1	5745	17.600	5736.160	5753.760	0.5	PASS
		5785	17.600	5776.160	5793.760	0.5	PASS
		5825	17.600	5816.160	5833.760	0.5	PASS
11N40SISO	Ant1	5755	36.000	5736.760	5772.760	0.5	PASS
		5795	36.240	5776.840	5813.080	0.5	PASS
11AC20SISO	Ant1	5745	17.600	5736.160	5753.760	0.5	PASS
		5785	17.600	5776.160	5793.760	0.5	PASS
		5825	17.600	5816.160	5833.760	0.5	PASS
11AC40SISO	Ant1	5755	36.320	5736.760	5773.080	0.5	PASS
		5795	36.400	5776.760	5813.160	0.5	PASS
11AC80SISO	Ant1	5775	76.320	5736.760	5813.080	0.5	PASS
11AX20SISO	Ant1	5745	19.000	5735.440	5754.440	0.5	PASS
		5785	18.920	5775.440	5794.360	0.5	PASS
		5825	18.800	5815.560	5834.360	0.5	PASS
11AX40SISO	Ant1	5755	37.840	5735.960	5773.800	0.5	PASS
		5795	38.000	5776.040	5814.040	0.5	PASS
11AX80SISO	Ant1	5775	77.760	5736.120	5813.880	0.5	PASS

9.5. Original Test Data

99% Bandwidth:







11A_Ant1_5580

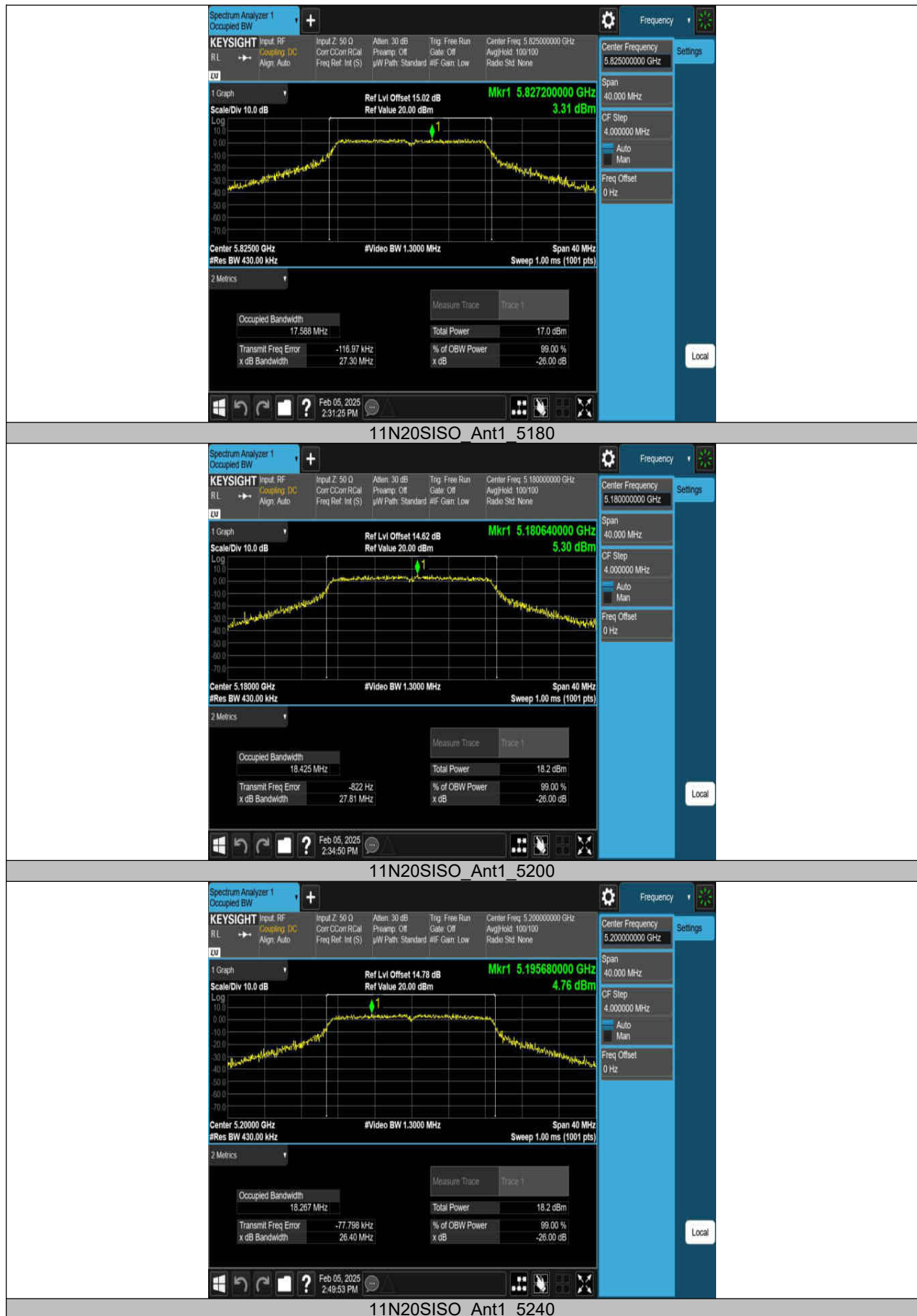


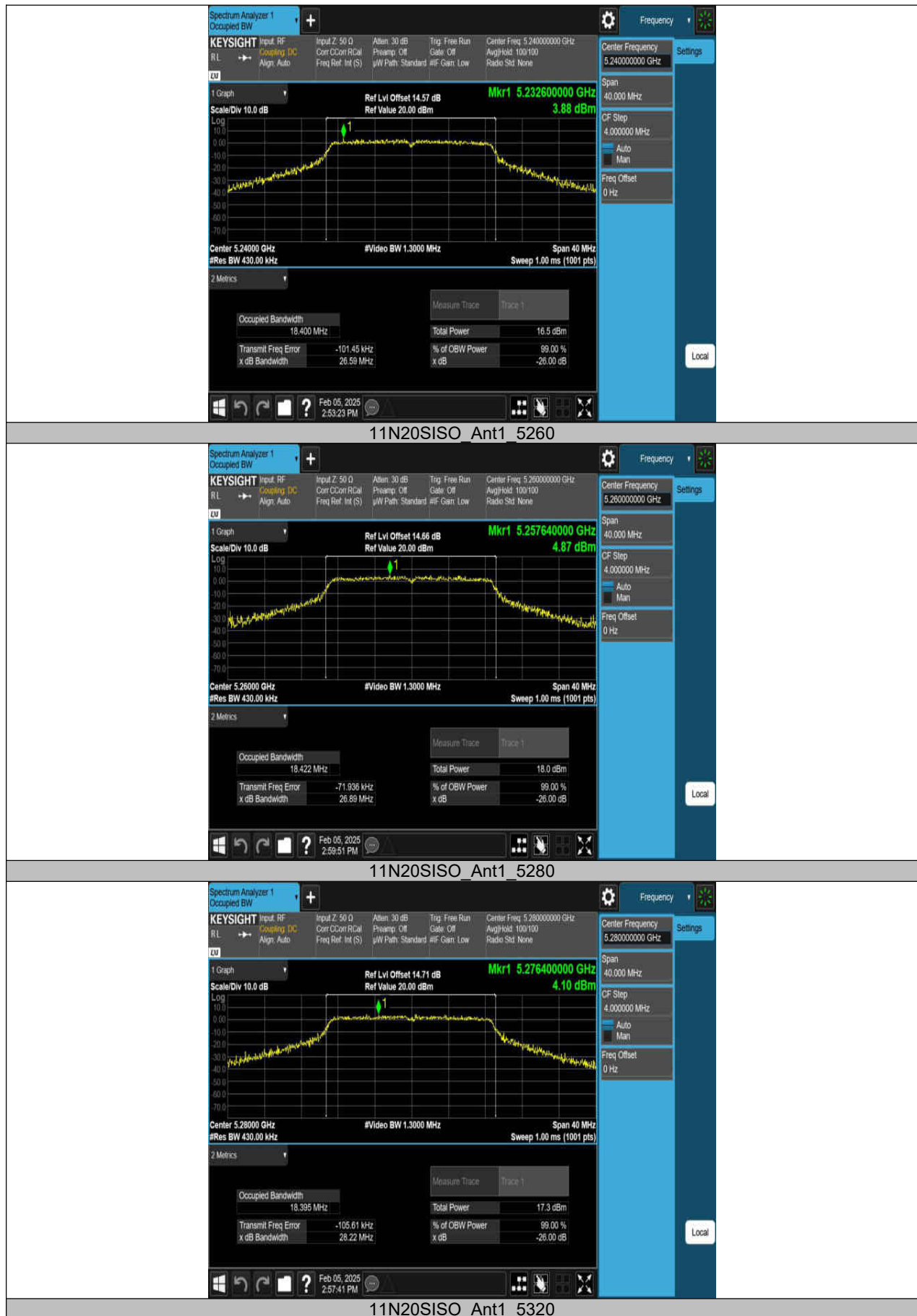
11A_Ant1_5700

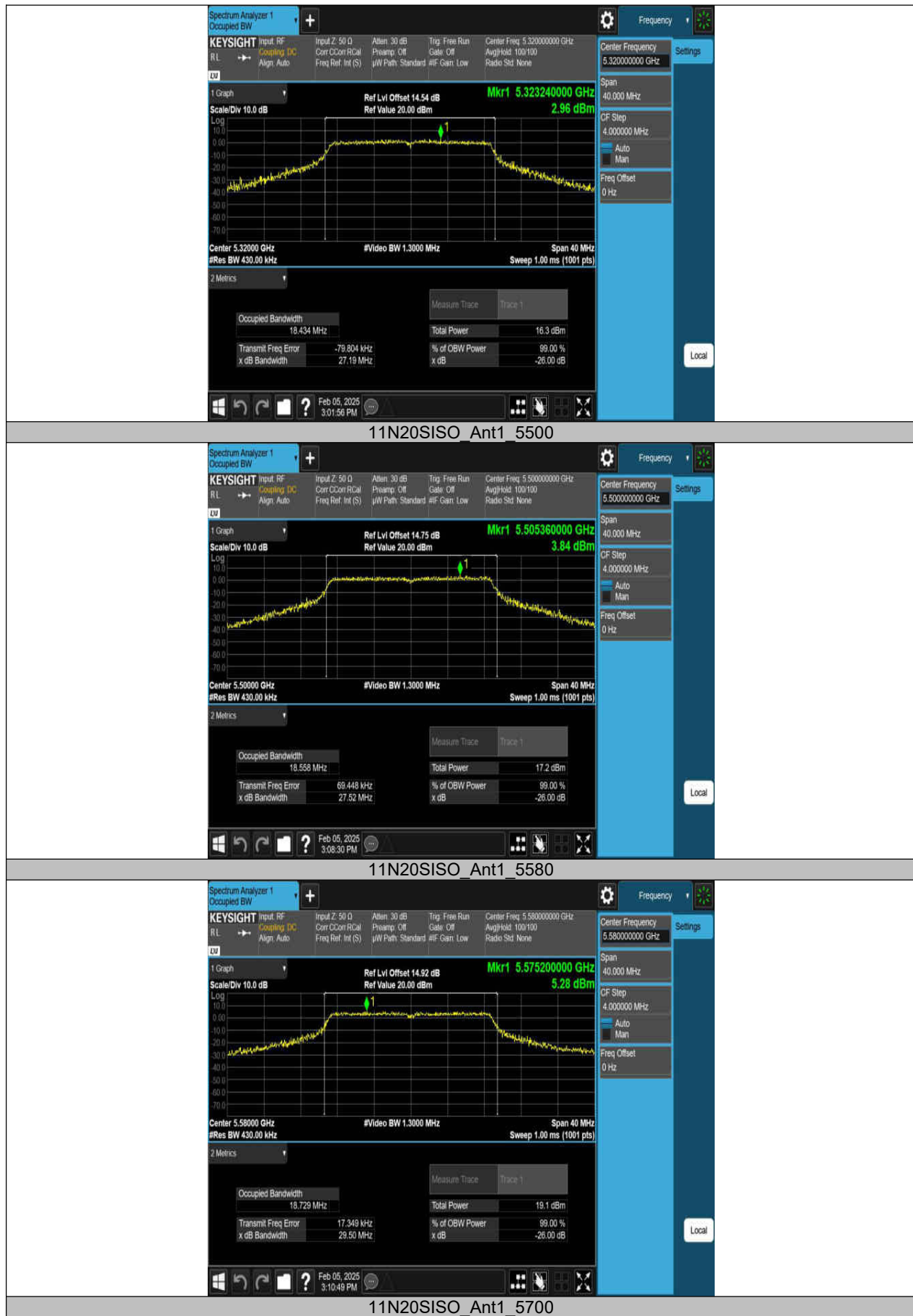


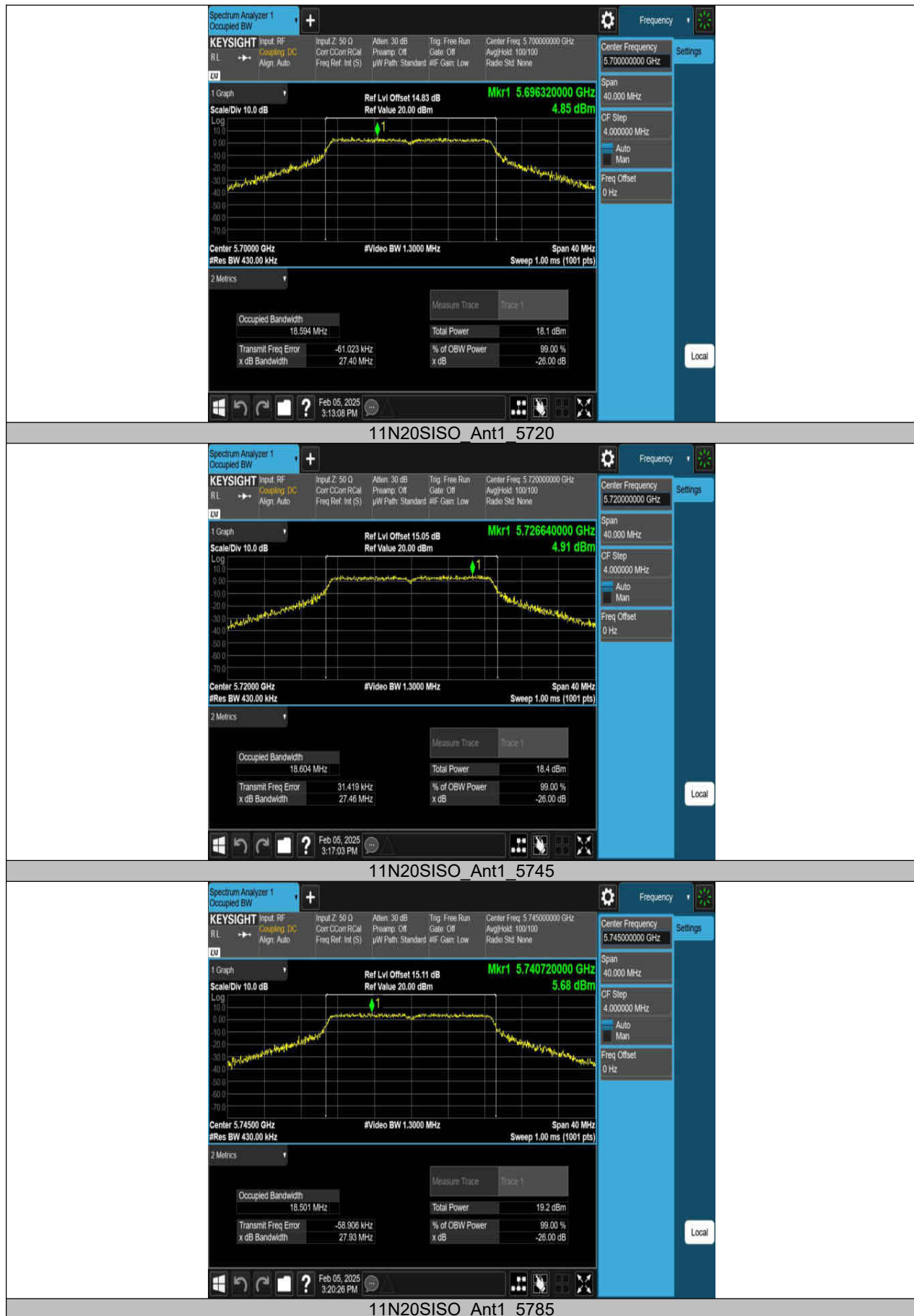
11A_Ant1_5720

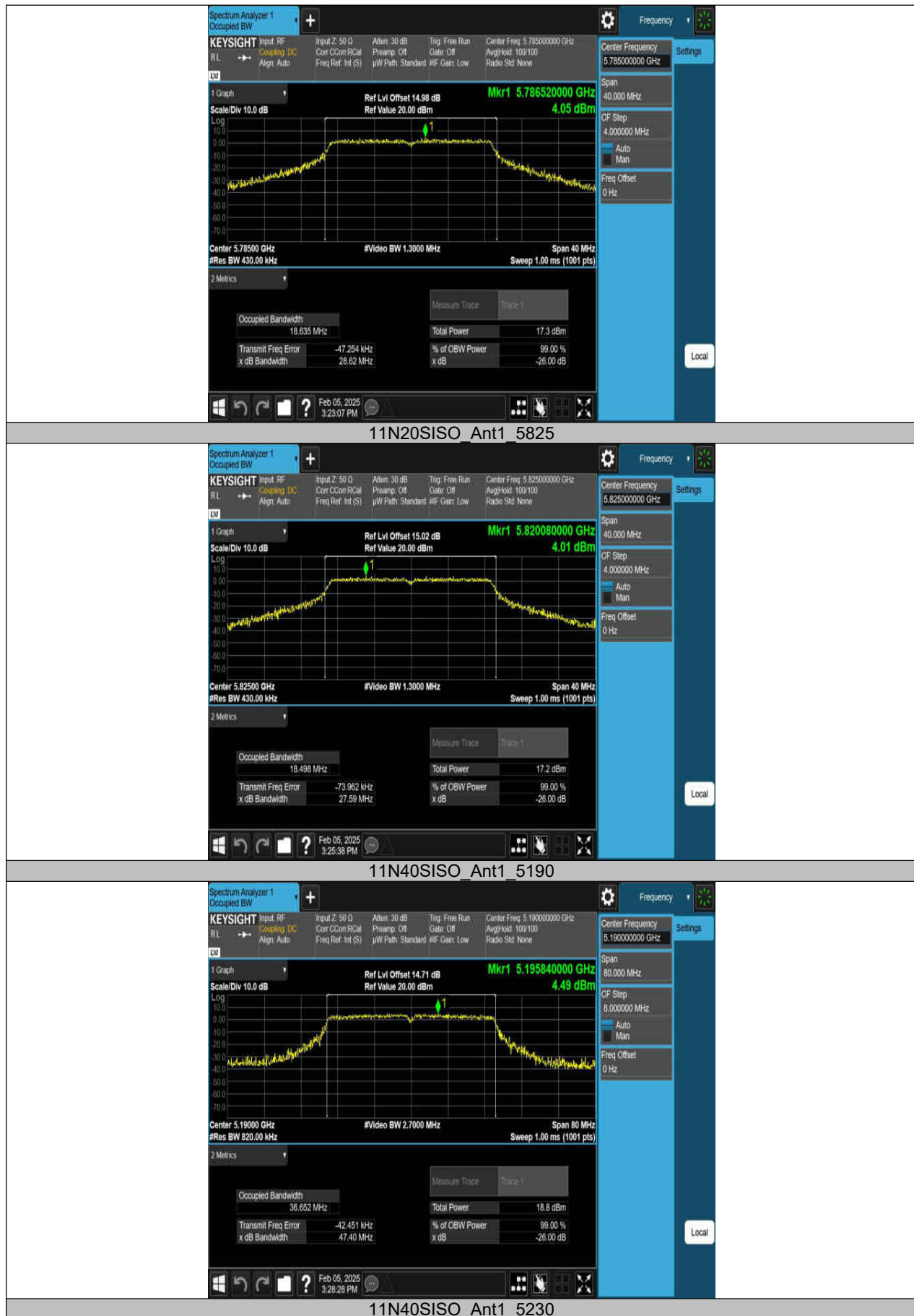


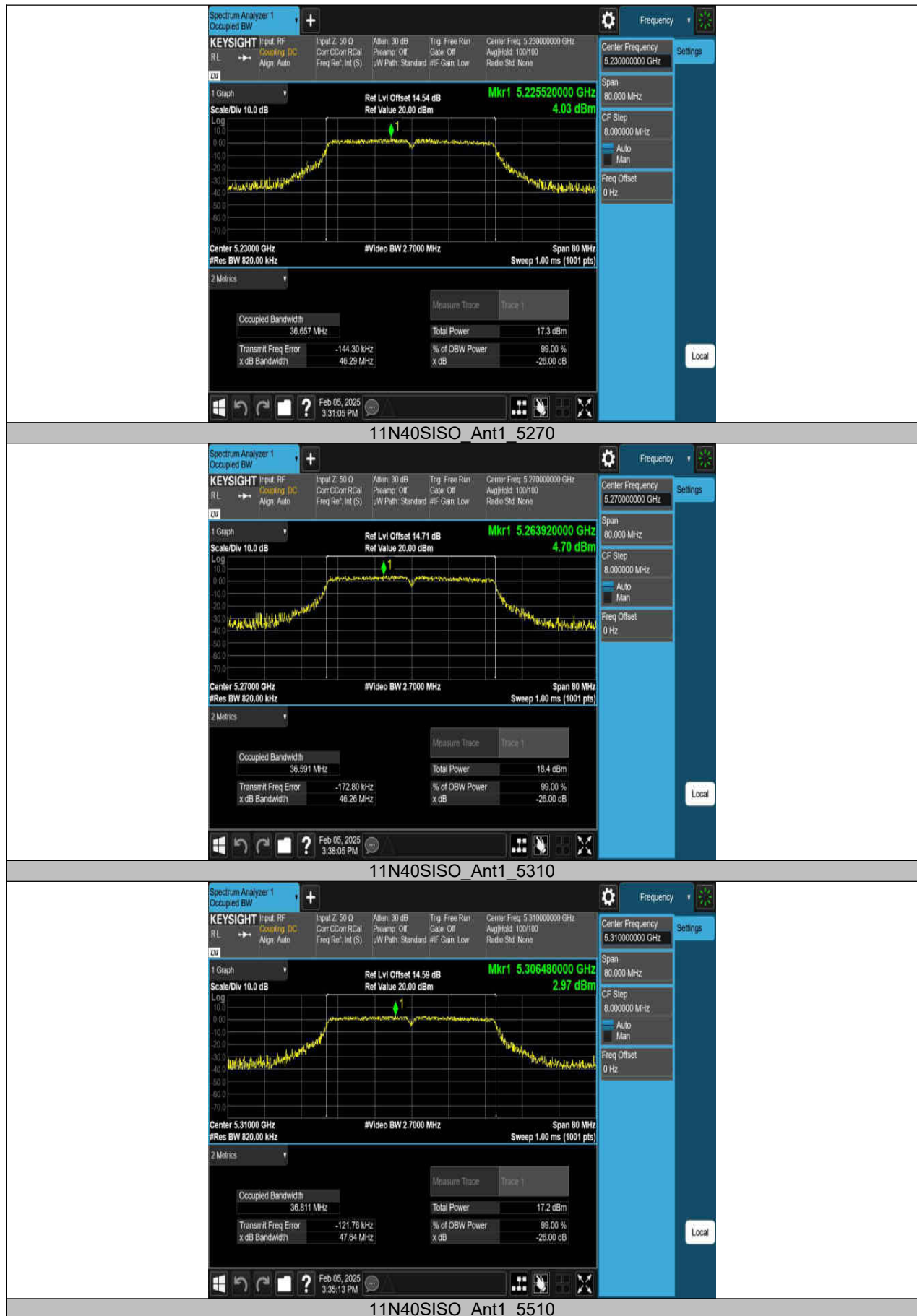


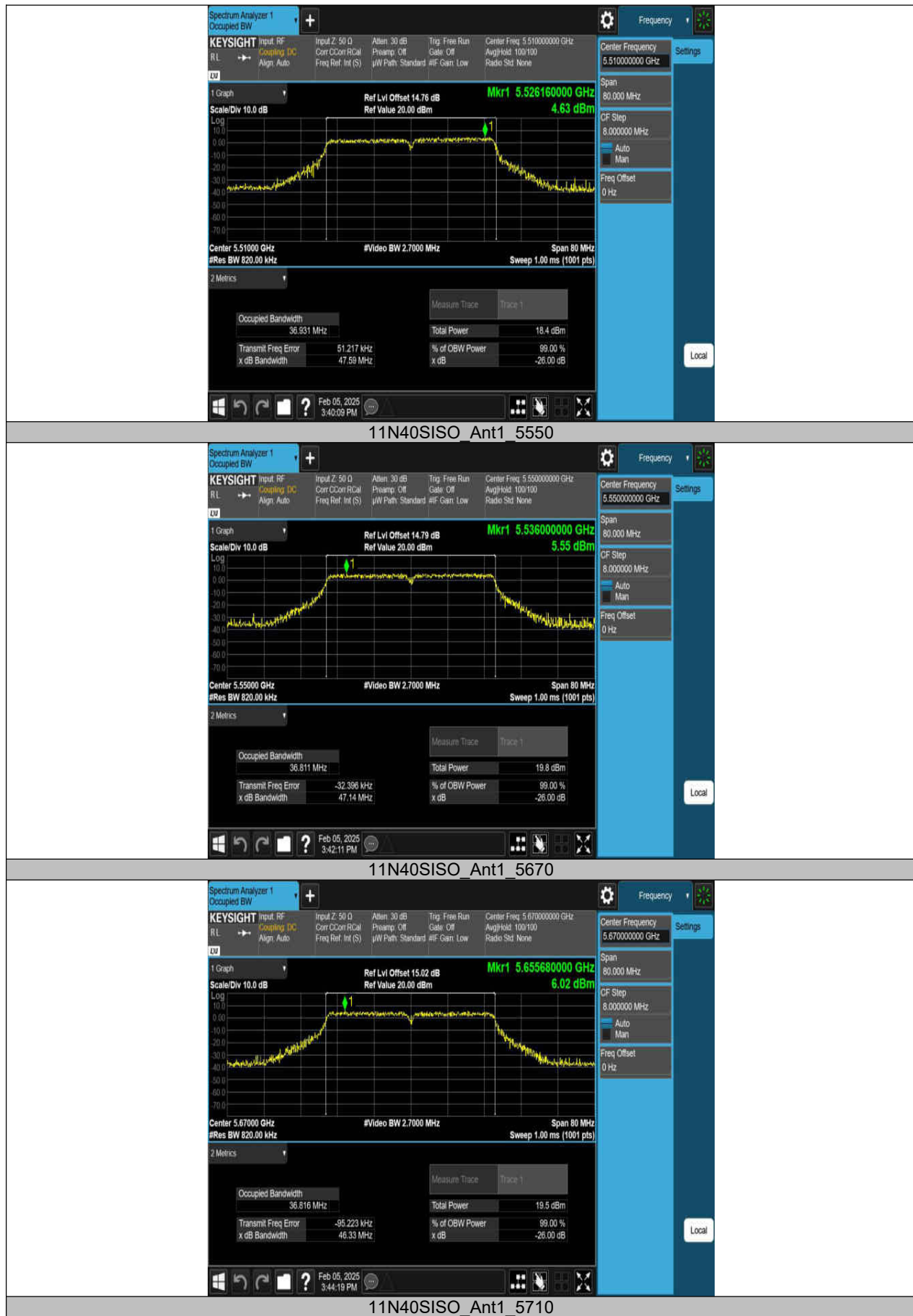


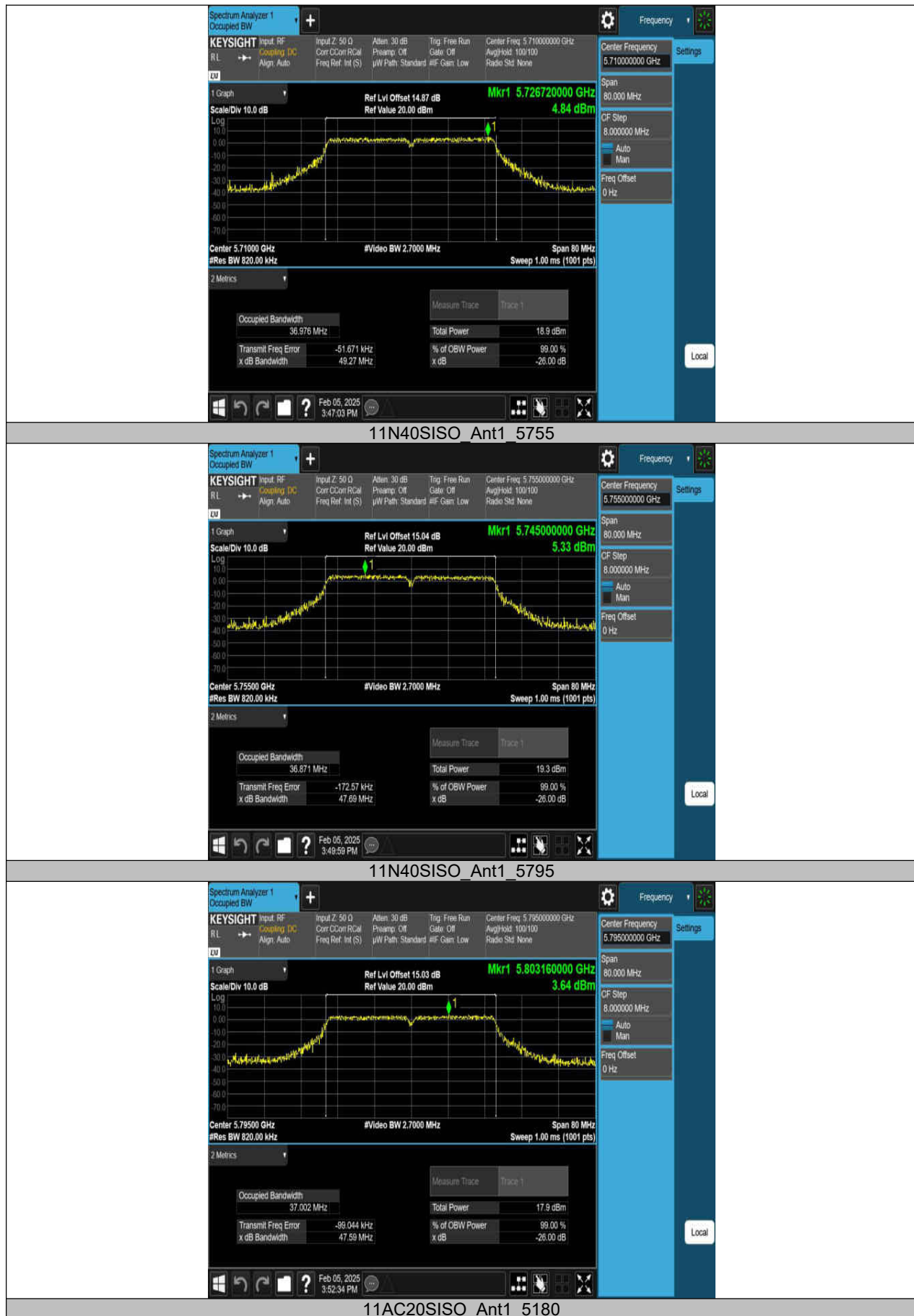


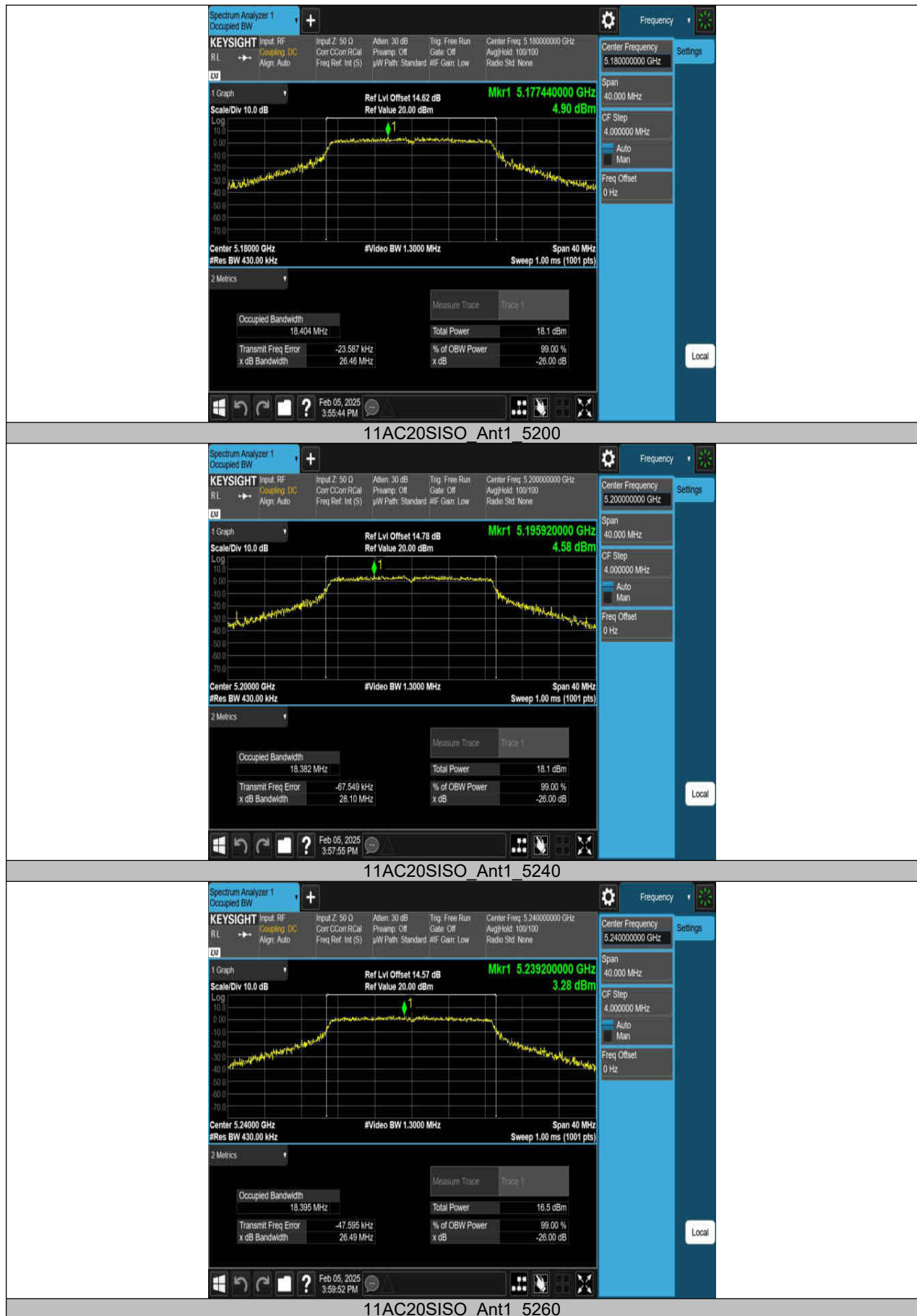


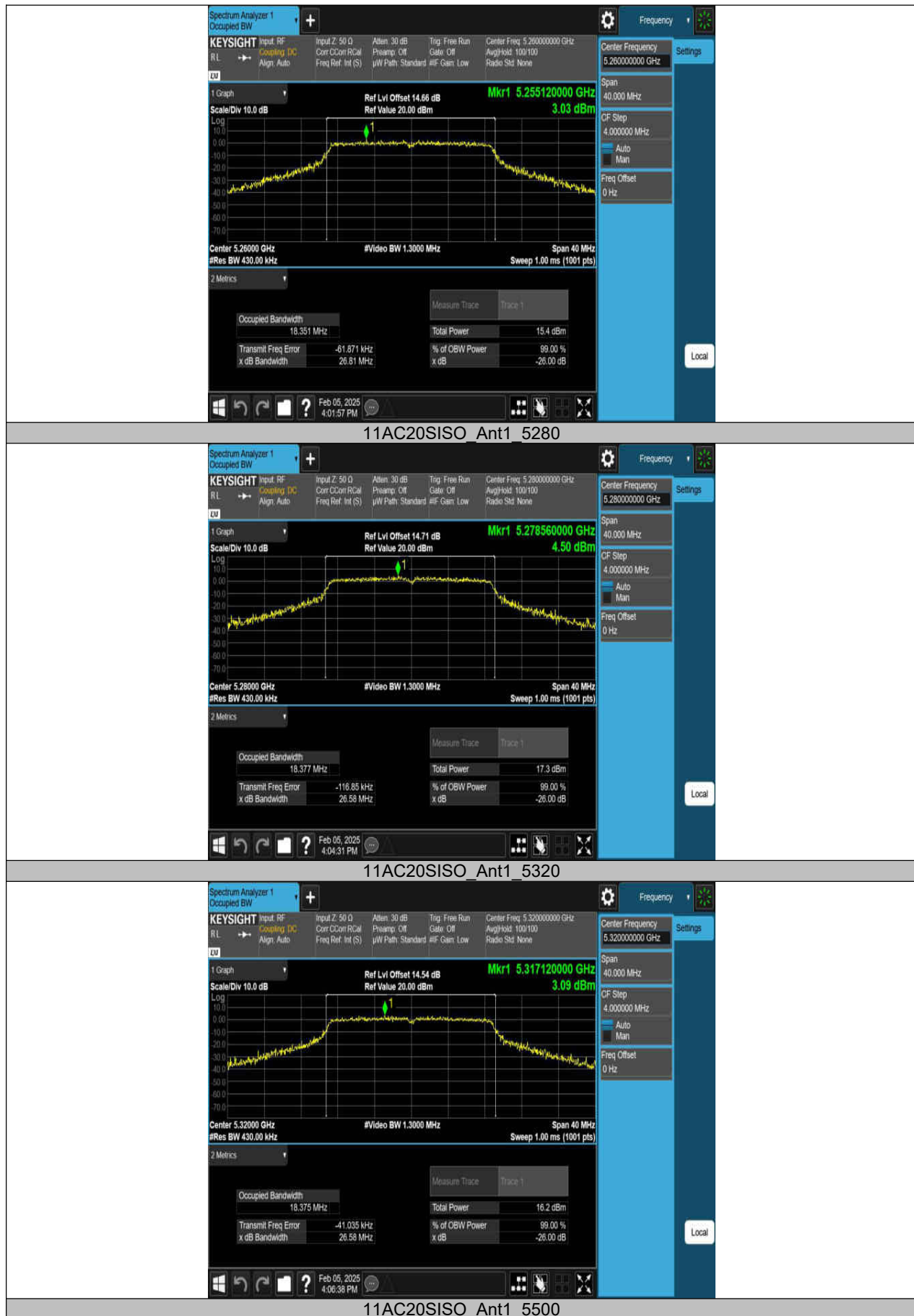


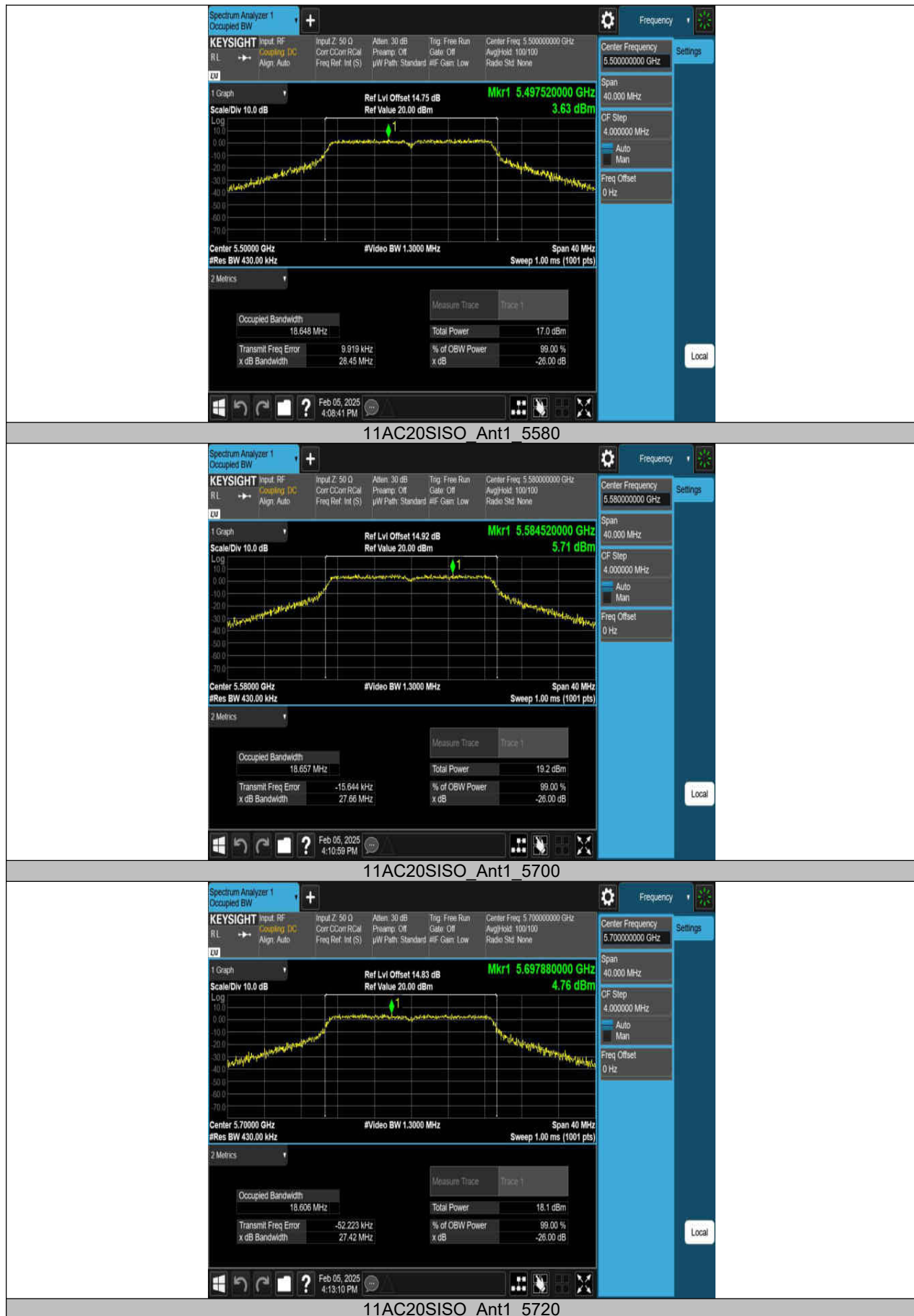


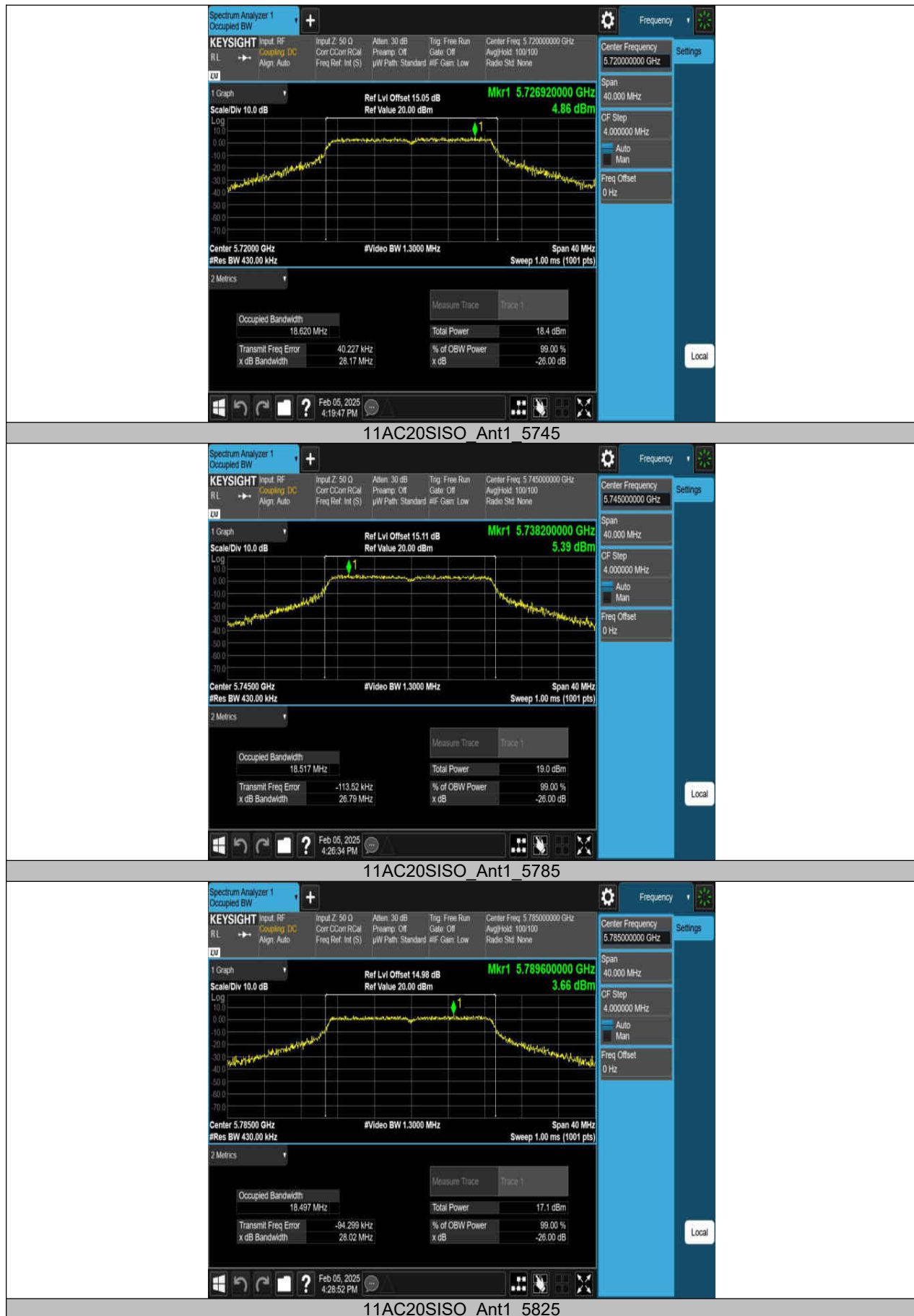


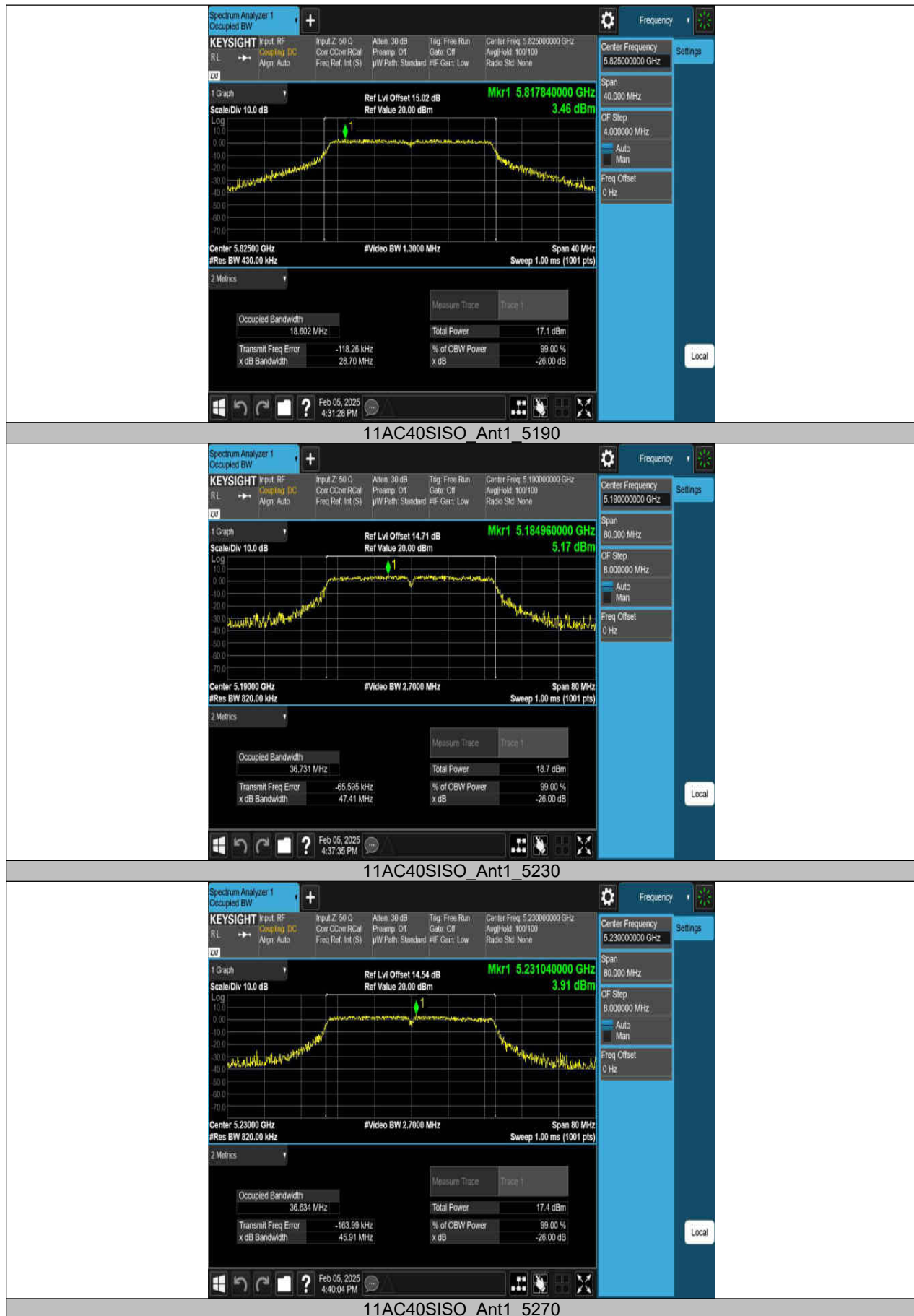


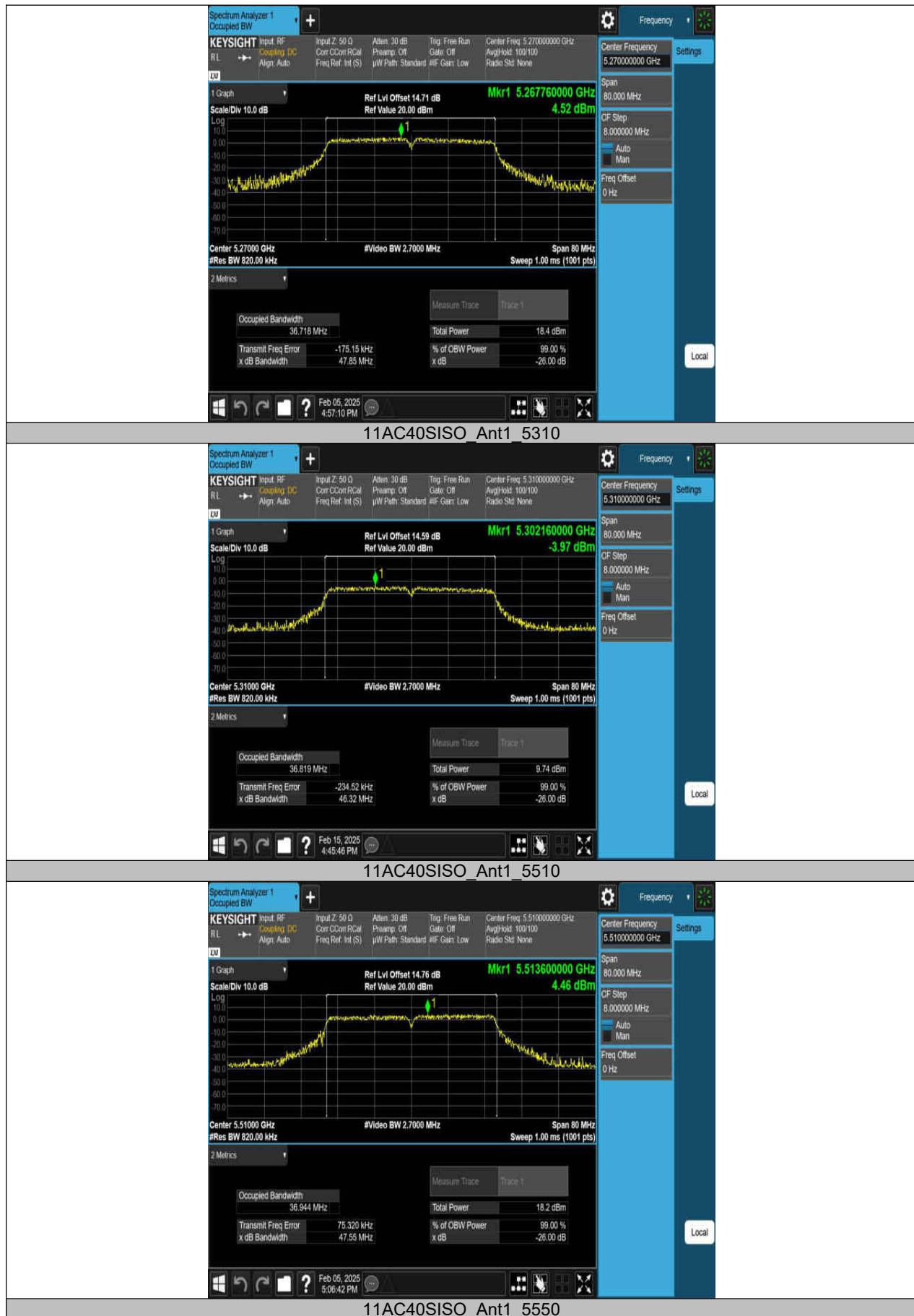


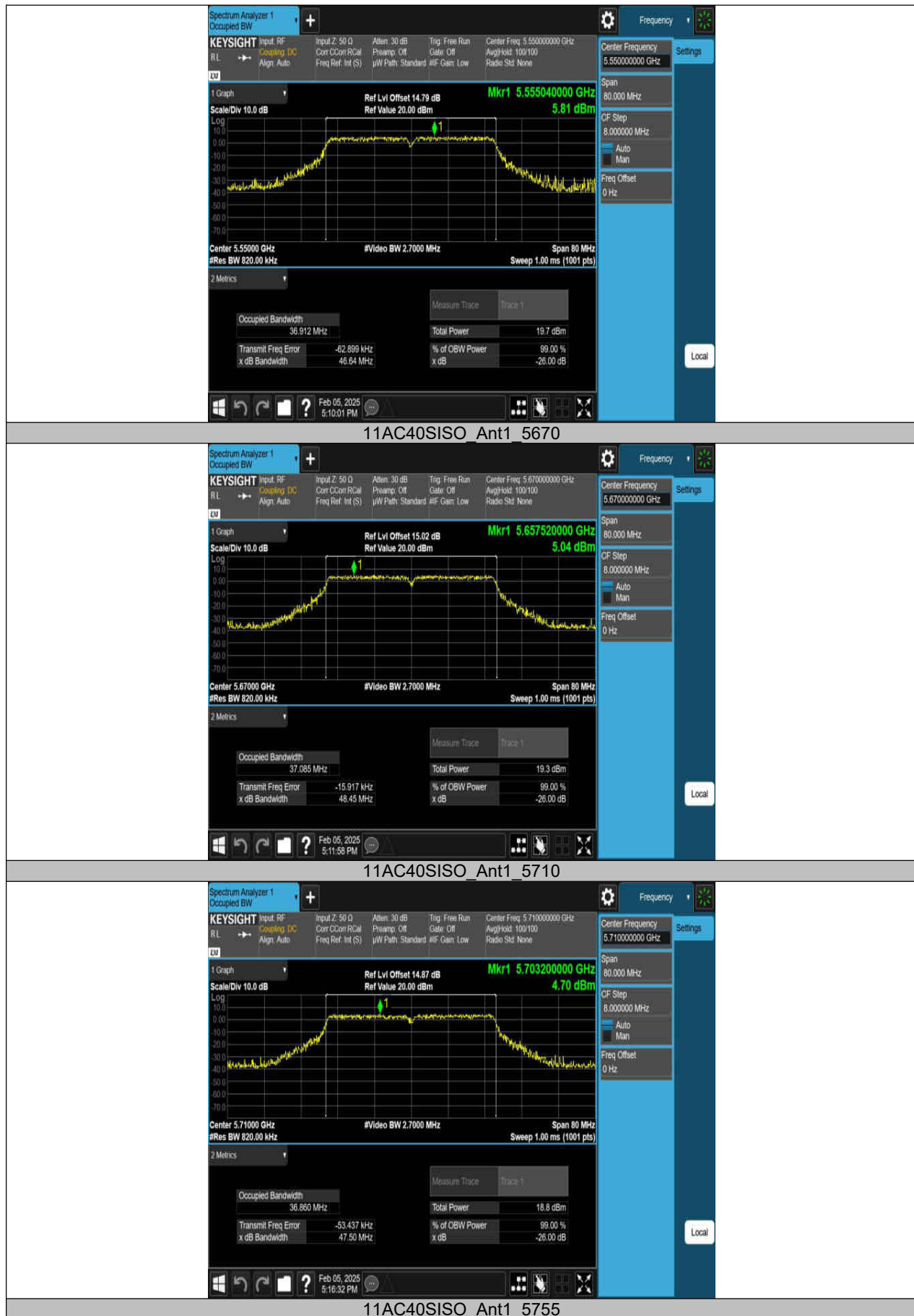


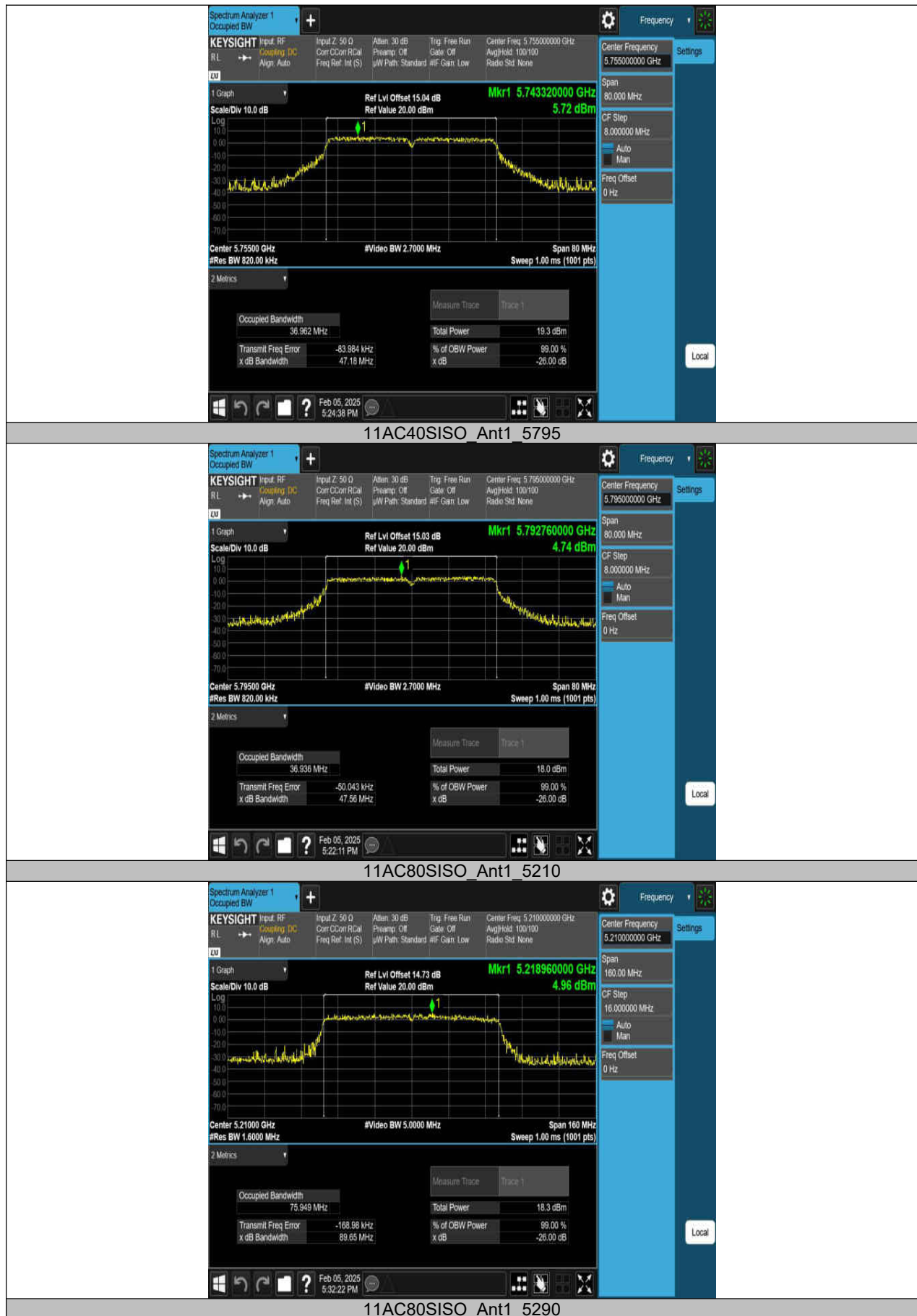


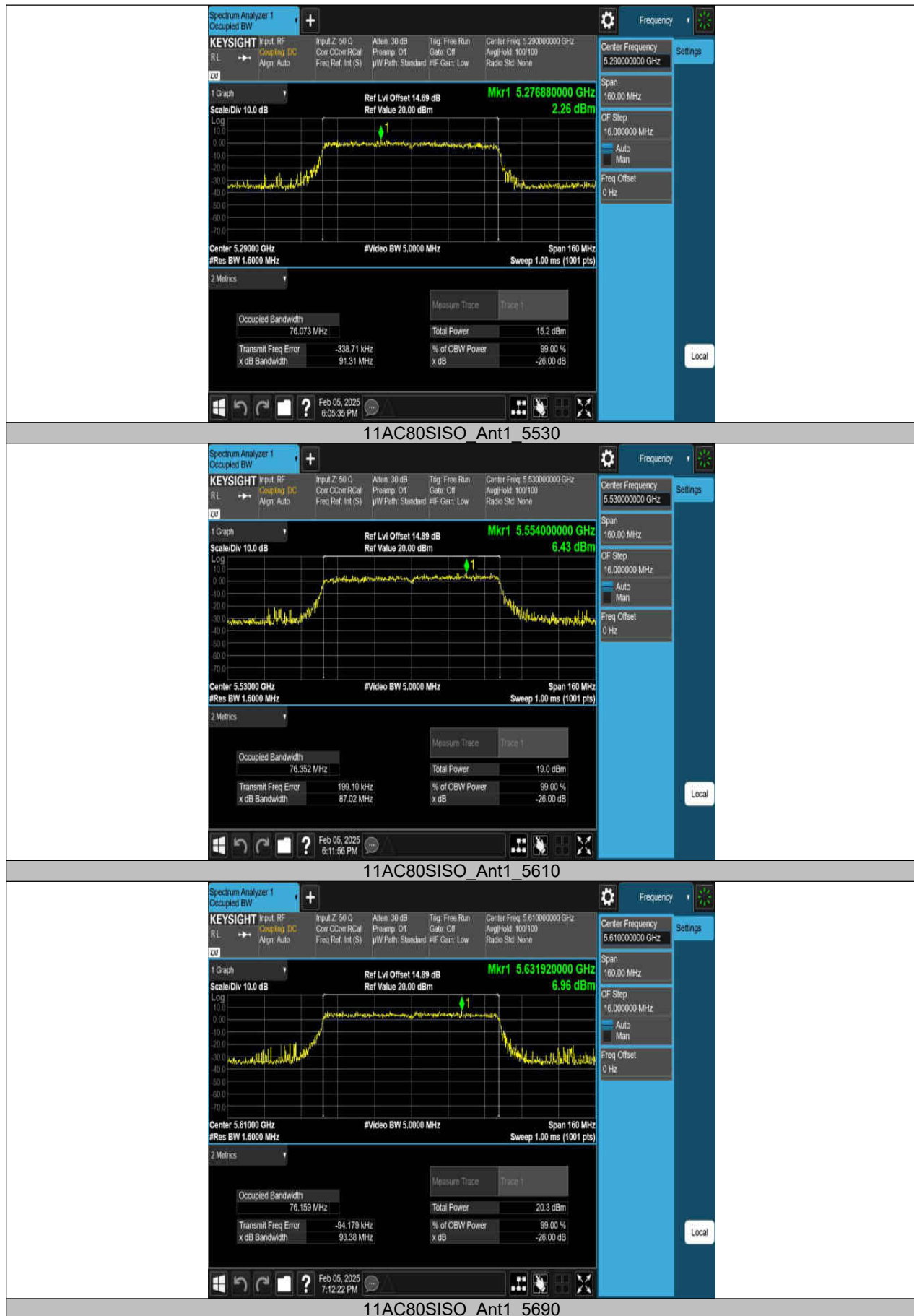


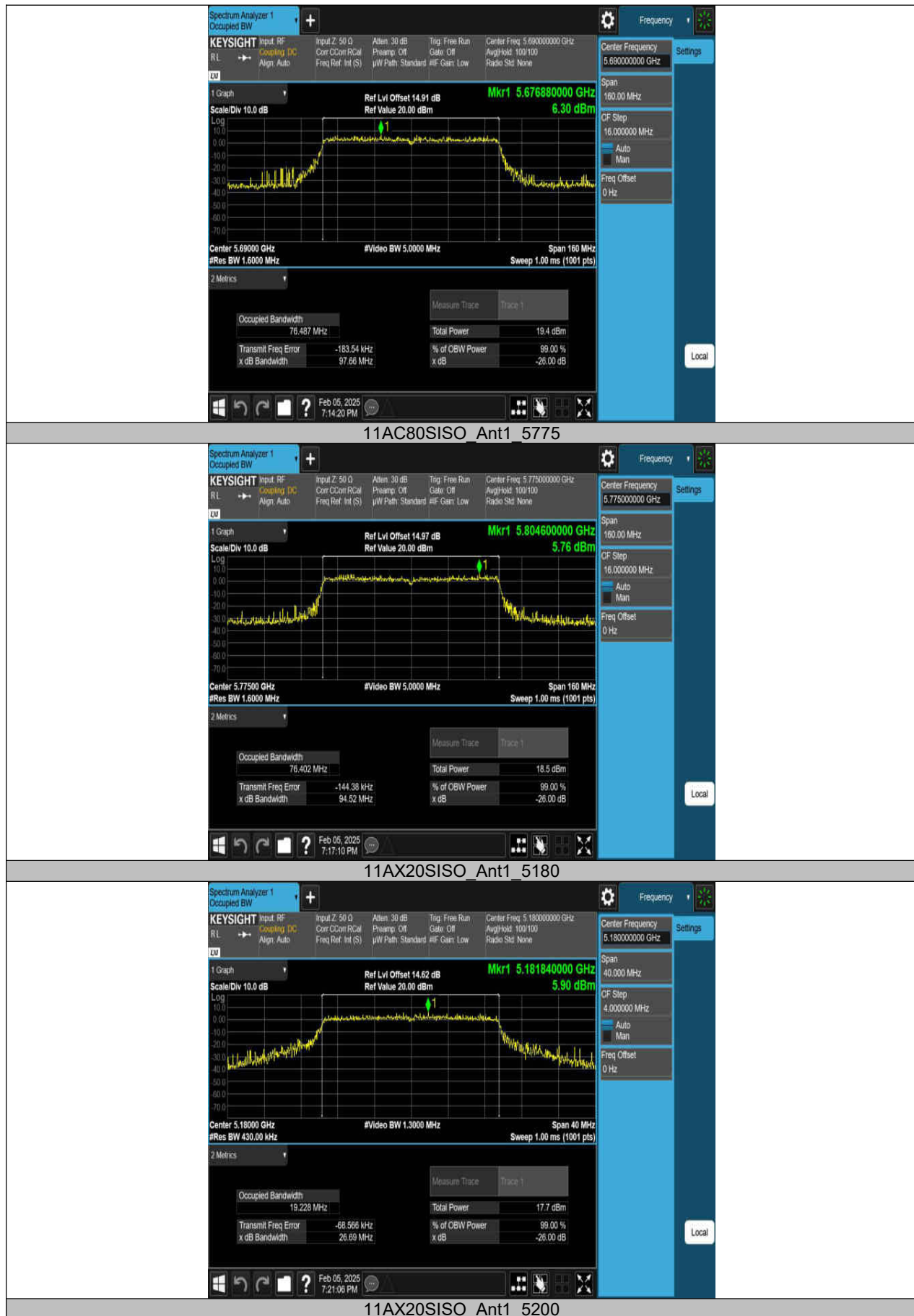


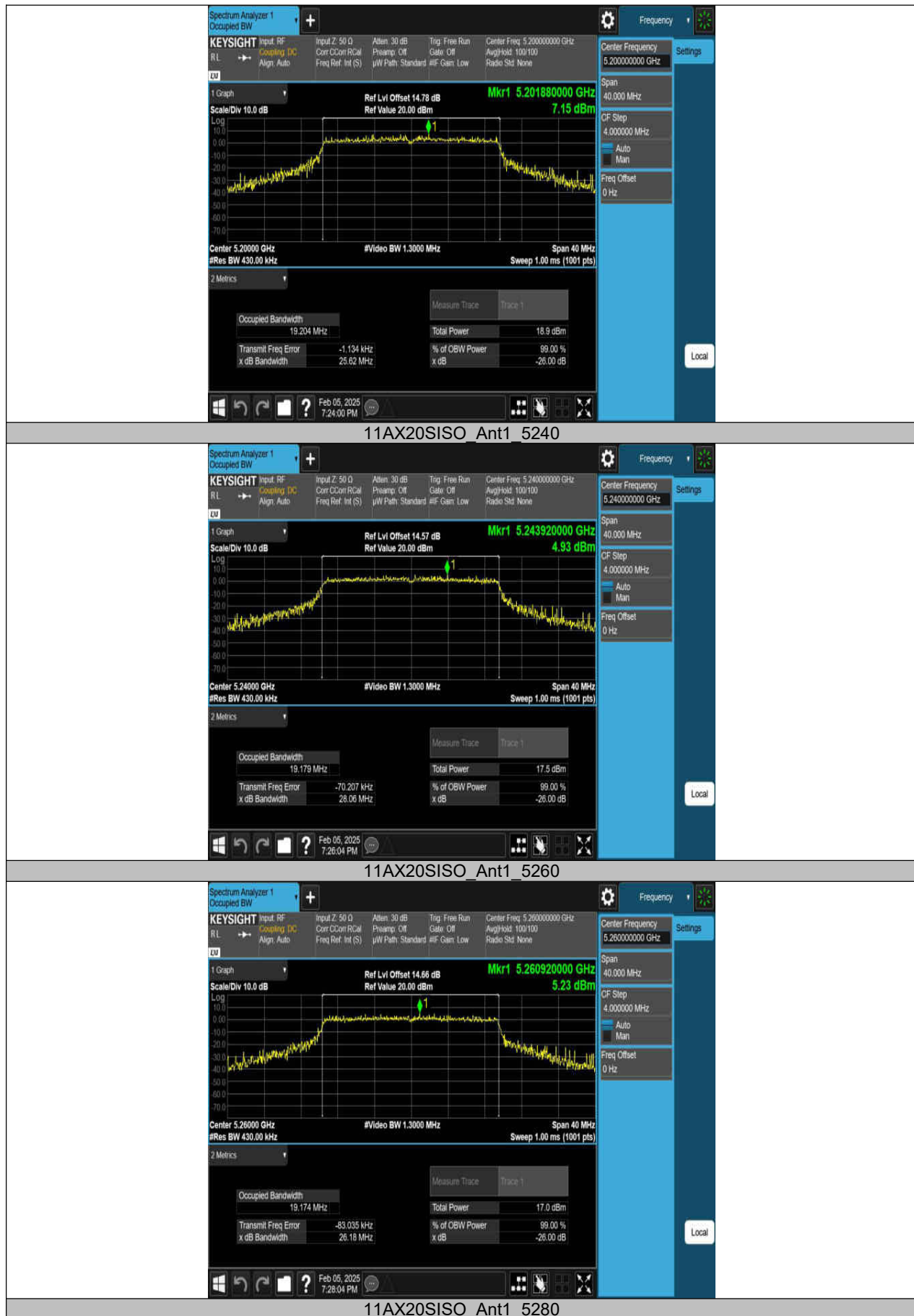


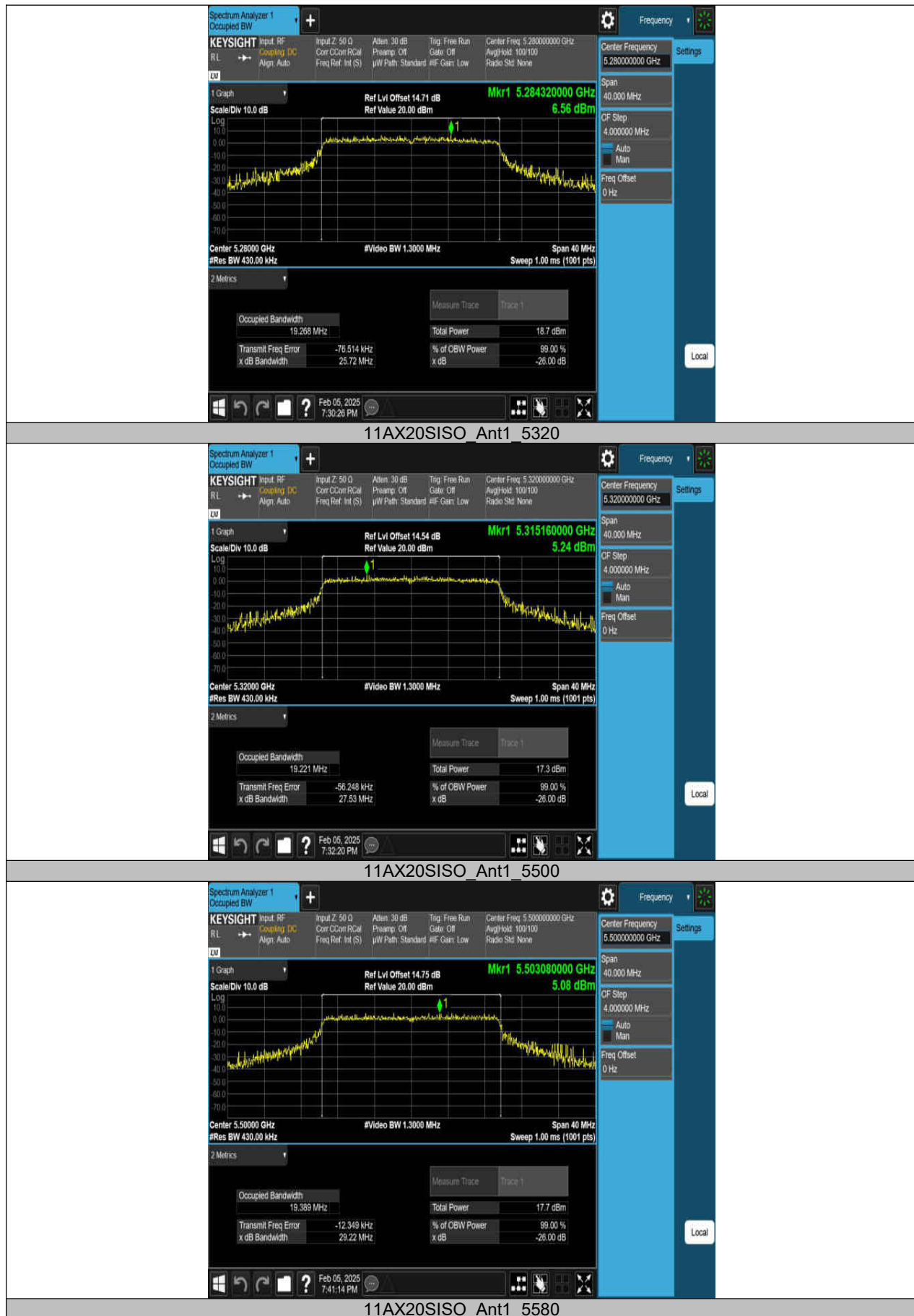


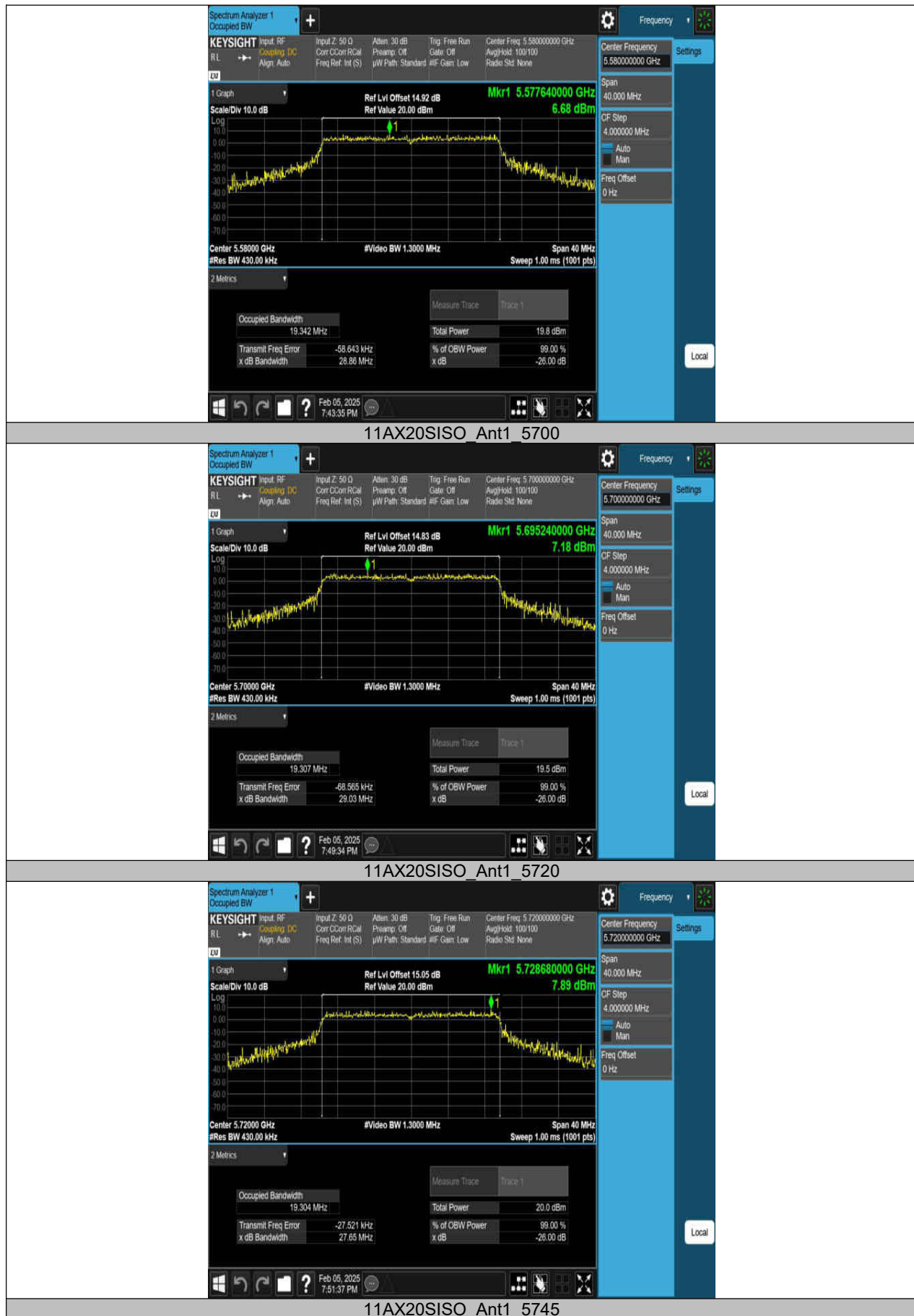


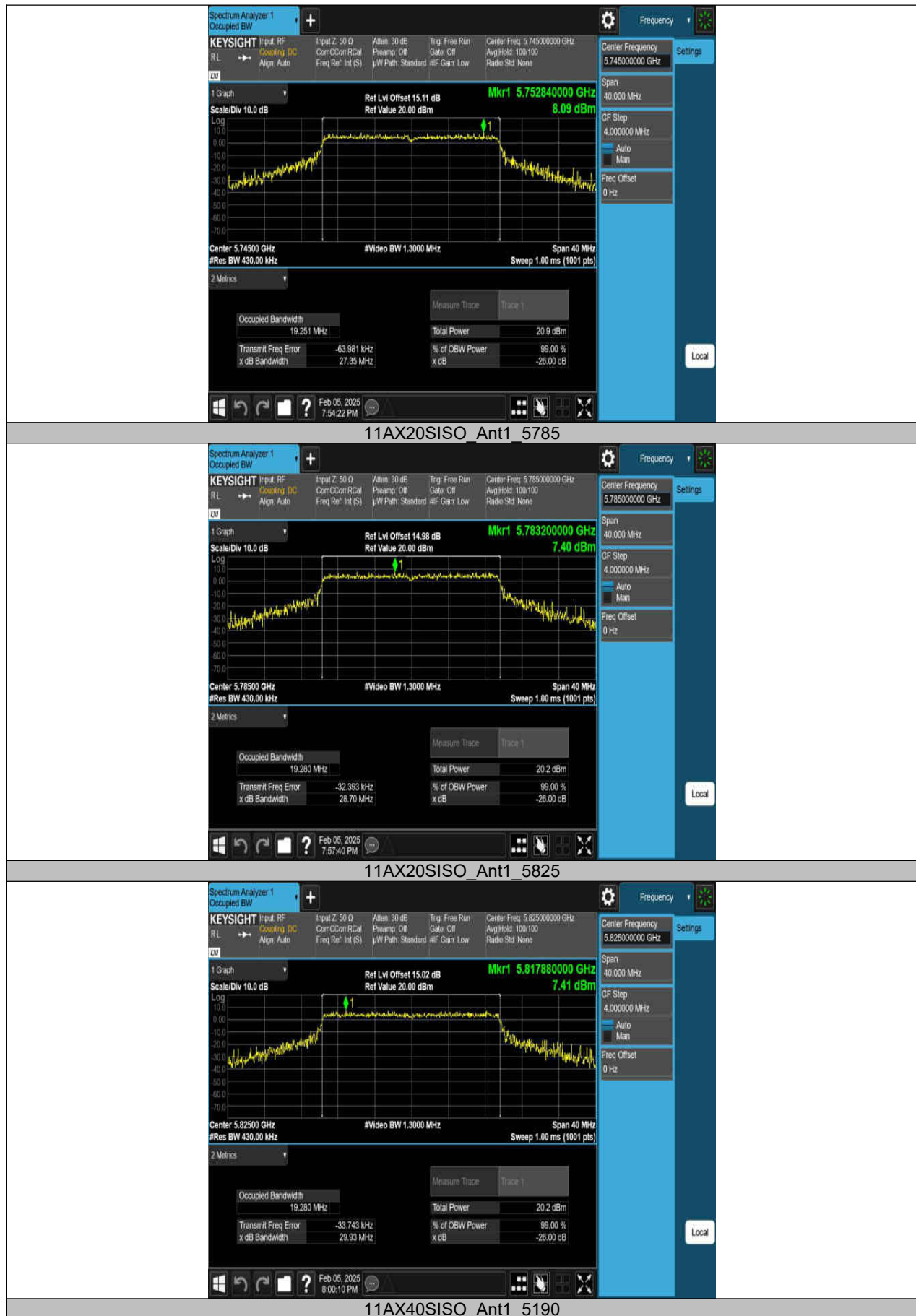


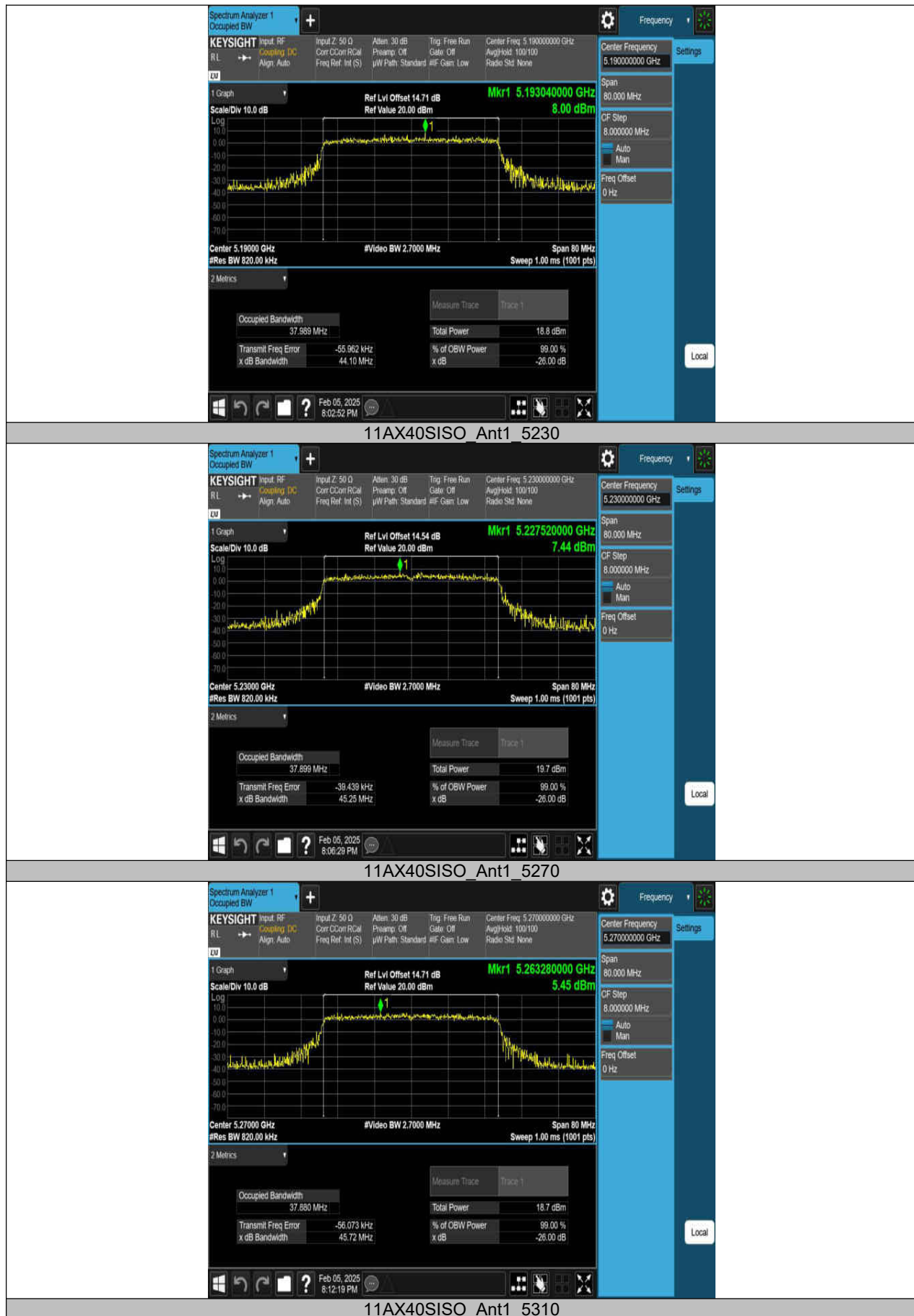


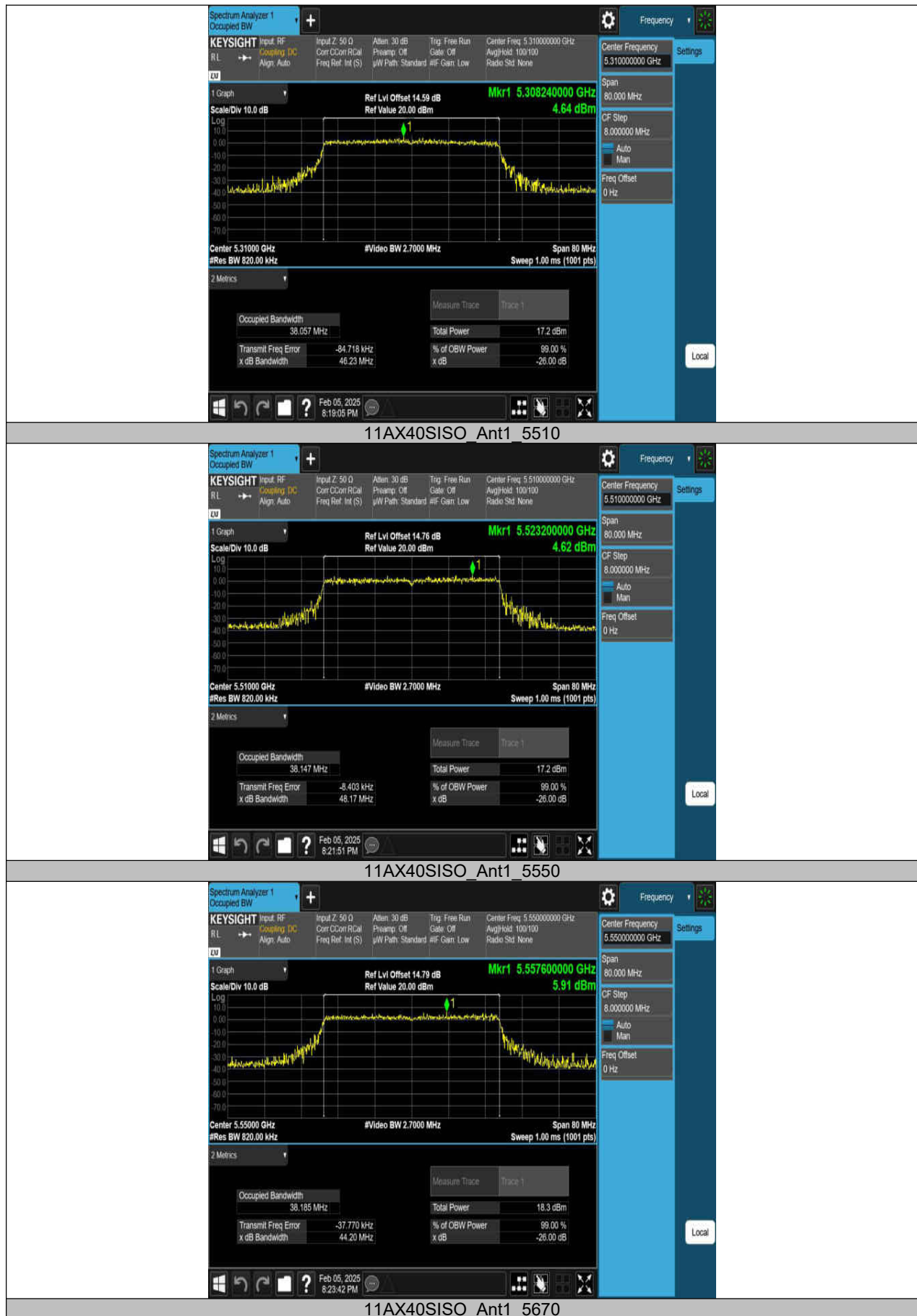


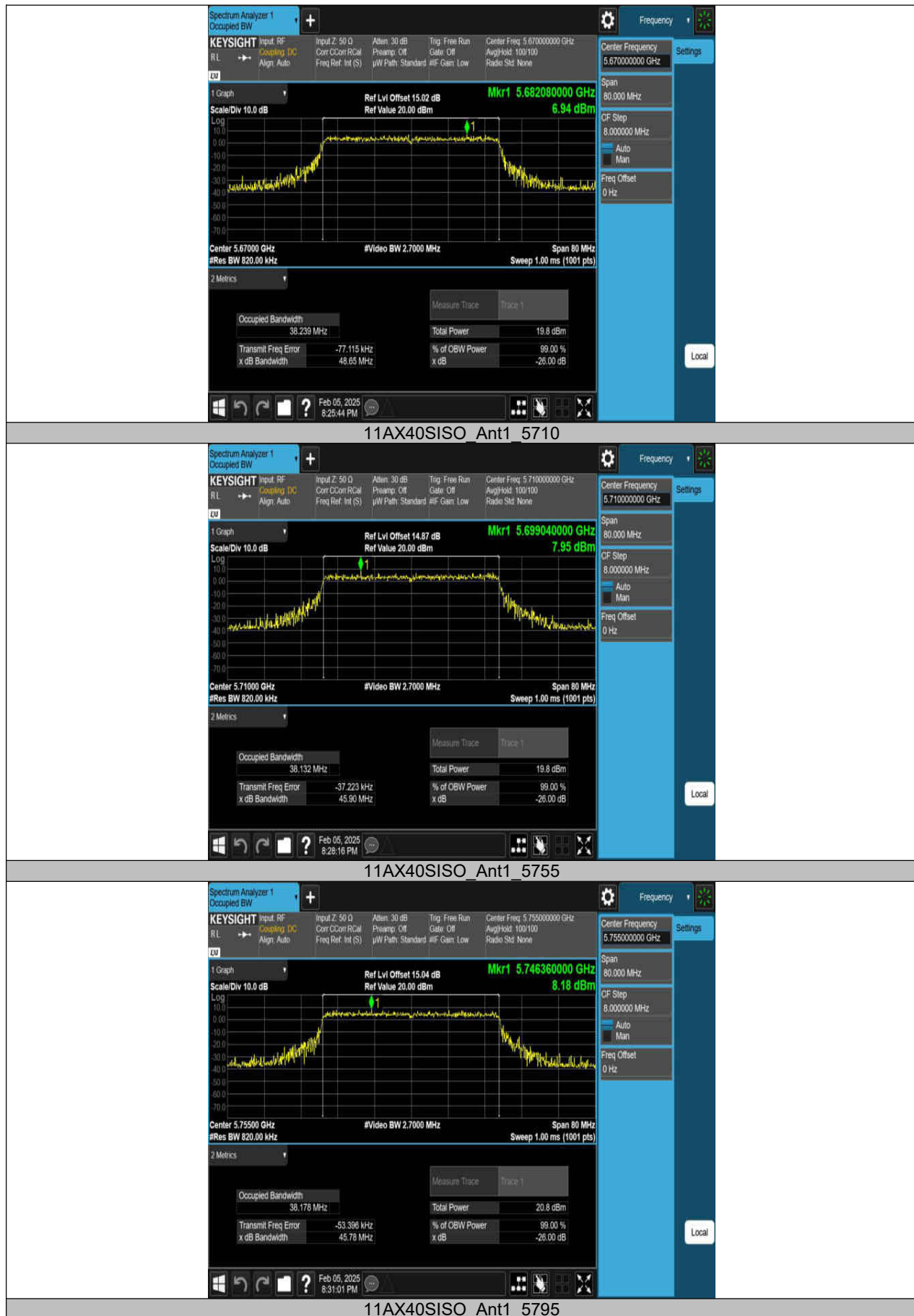


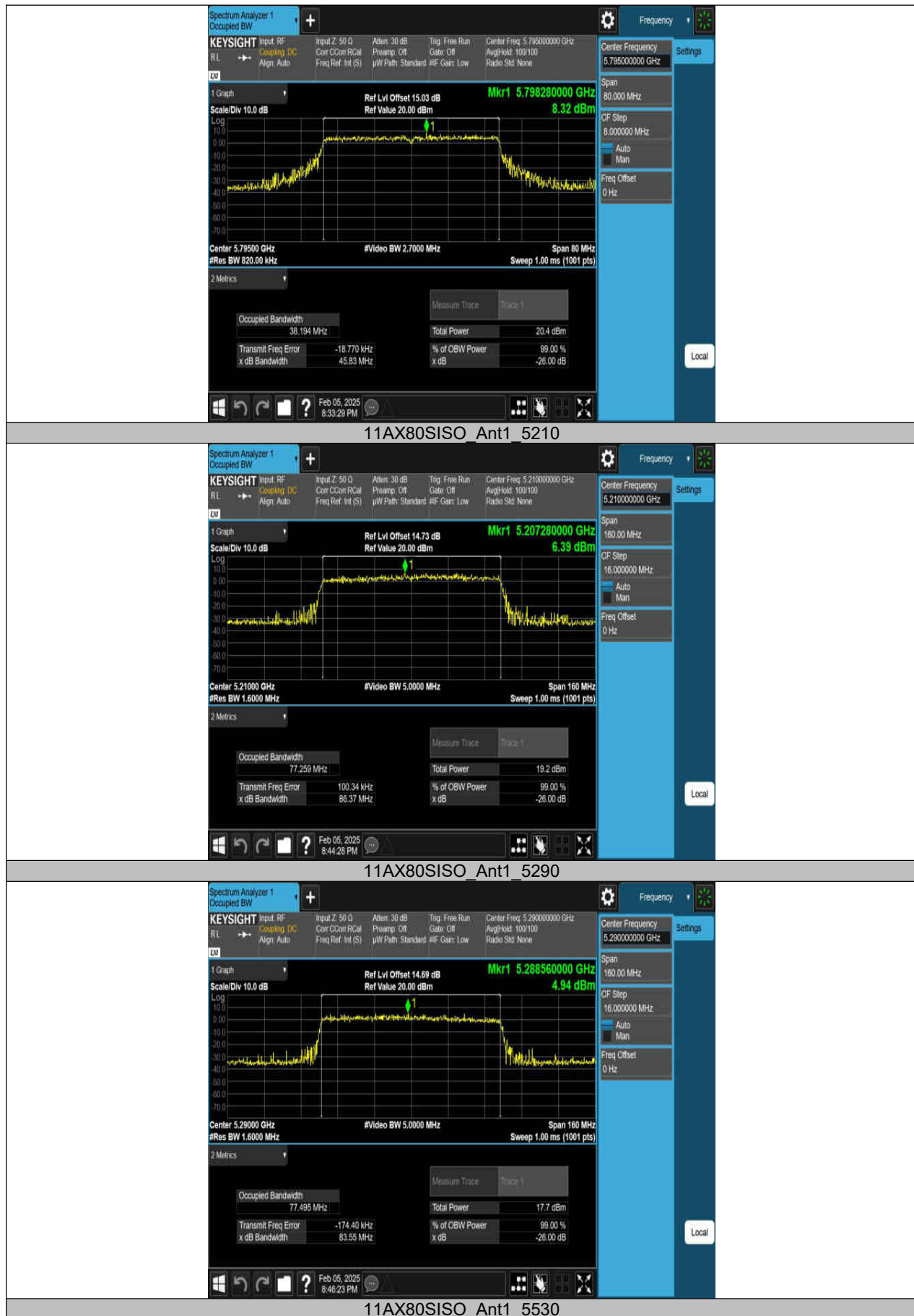


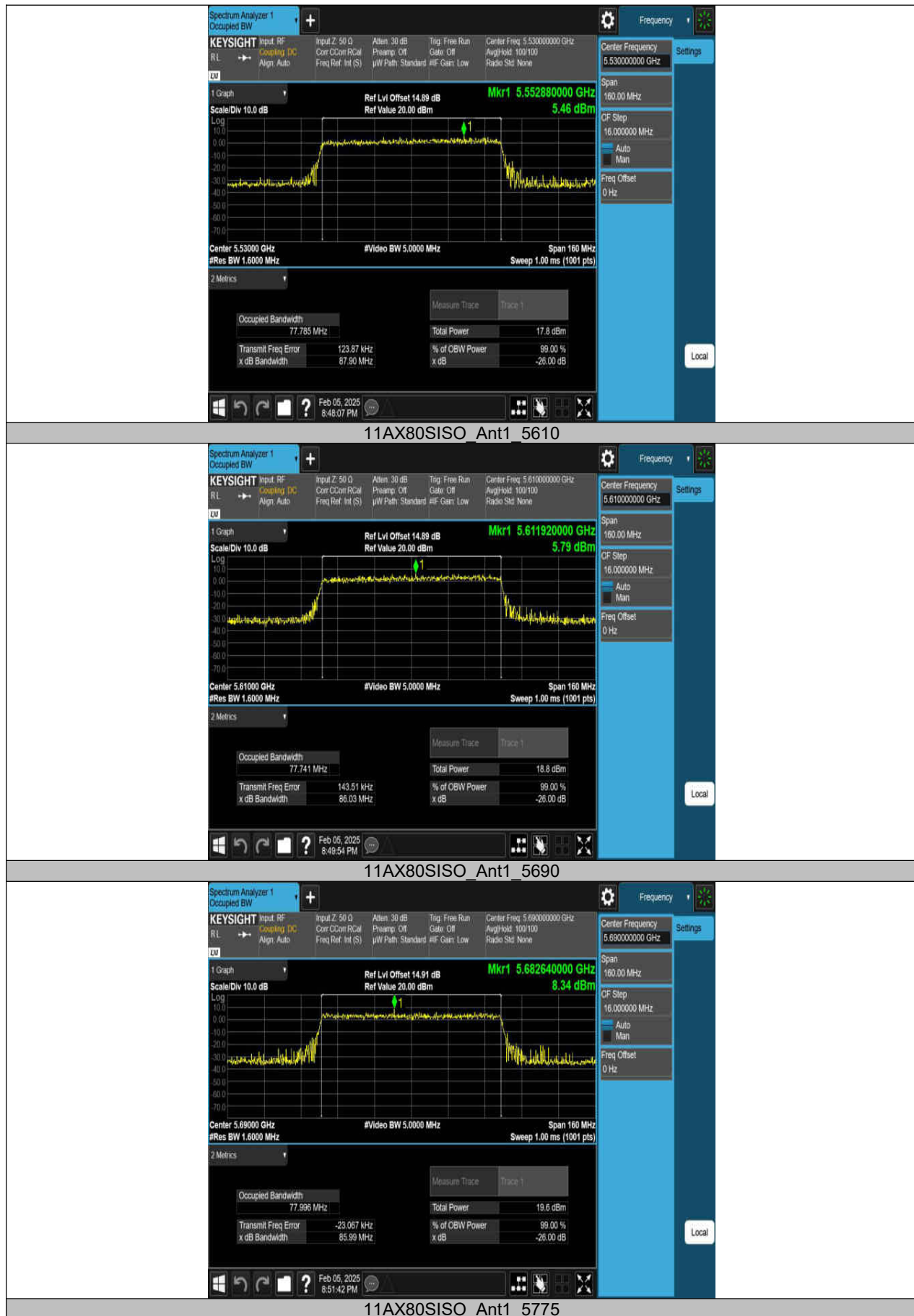


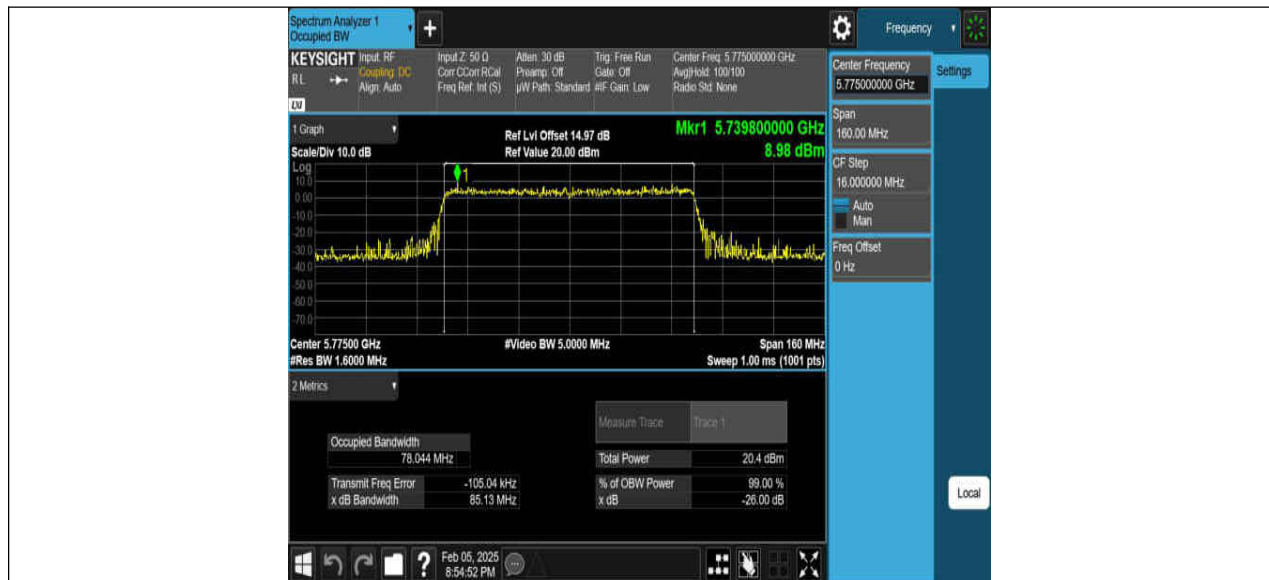












26dB Bandwidth:

























