



13. Appendix

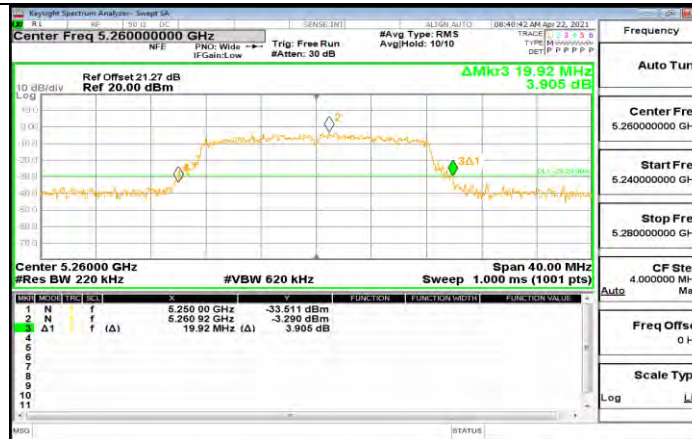
13.1. Appendix A1: Emission Bandwidth

13.1.1. Test Result

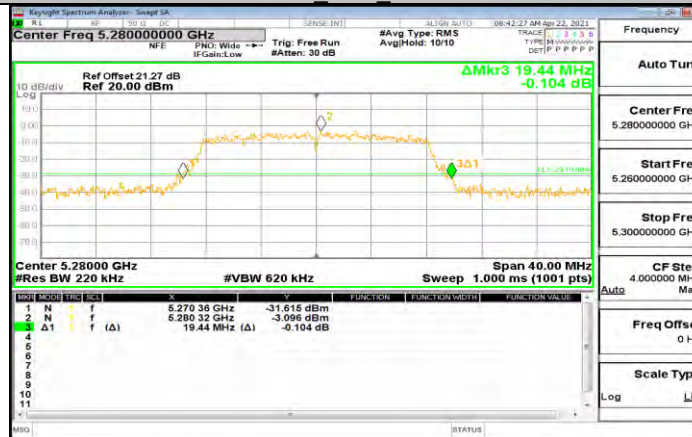
Test Mode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Verdict
11A	Ant1	5180	19.080	5170.320	5189.400	PASS
		5200	19.640	5190.280	5209.920	PASS
		5240	19.400	5230.240	5249.640	PASS
		5260	19.920	5250.000	5269.920	PASS
		5280	19.440	5270.360	5289.800	PASS
		5320	19.480	5310.200	5329.680	PASS
		5500	19.840	5490.120	5509.960	PASS
		5580	20.120	5569.800	5589.920	PASS
		5700	19.600	5690.040	5709.640	PASS
		5720	19.240	5710.120	5729.360	PASS
		5720 UNII-2C	14.88	5710.120	5725	PASS
		5720 UNII-3	4.36	5725	5729.360	PASS
		5745	19.400	5735.440	5754.840	PASS
		5785	19.560	5775.480	5795.040	PASS
11AC20SISO	Ant1	5825	19.520	5815.120	5834.640	PASS
		5180	20.040	5169.960	5190.000	PASS
		5200	20.080	5189.800	5209.880	PASS
		5240	20.120	5229.840	5249.960	PASS
		5260	20.000	5250.120	5270.120	PASS
		5280	20.040	5269.640	5289.680	PASS
		5320	19.960	5310.120	5330.080	PASS
		5500	20.000	5489.880	5509.880	PASS
		5580	19.800	5570.080	5589.880	PASS
		5700	20.040	5689.800	5709.840	PASS
		5720	19.840	5710.080	5729.920	PASS
		5720 UNII-2C	14.92	5710.080	5725	PASS
		5720 UNII-3	4.92	5725	5729.920	PASS
		5745	19.360	5735.200	5754.560	PASS
11AC40SISO	Ant1	5785	19.960	5774.920	5794.880	PASS
		5825	20.360	5814.600	5834.960	PASS
		5190	40.320	5169.760	5210.080	PASS
		5230	40.240	5209.840	5250.080	PASS
		5270	39.680	5250.080	5289.760	PASS
		5310	39.920	5290.080	5330.000	PASS
		5510	40.000	5489.920	5529.920	PASS
		5550	40.000	5530.080	5570.080	PASS
		5670	39.840	5650.240	5690.080	PASS
		5710	40.000	5689.840	5729.840	PASS
		5710 UNII-2C	35.16	5689.840	5725	PASS
		5710 UNII-3	4.84	5725	5729.840	PASS
		5755	39.920	5734.760	5774.680	PASS
		5795	39.280	5775.400	5814.680	PASS
11AC80SISO	Ant1	5210	79.200	5170.320	5249.520	PASS
		5290	79.200	5250.480	5329.680	PASS
		5530	79.680	5490.160	5569.840	PASS
		5610	80.320	5569.840	5650.160	PASS
		5690	80.160	5649.680	5729.840	PASS
		5690 UNII-2C	75.32	5649.680	5725	PASS
		5690 UNII-3	4.84	5725	5729.840	PASS
		5775	80.640	5734.680	5815.320	PASS

13.1.2. Test Graphs





11A_Ant1_5260



11A_Ant1_5280



11A_Ant1_5320

























**13.2. Appendix A2: Occupied channel bandwidth****13.2.1. Test Result**

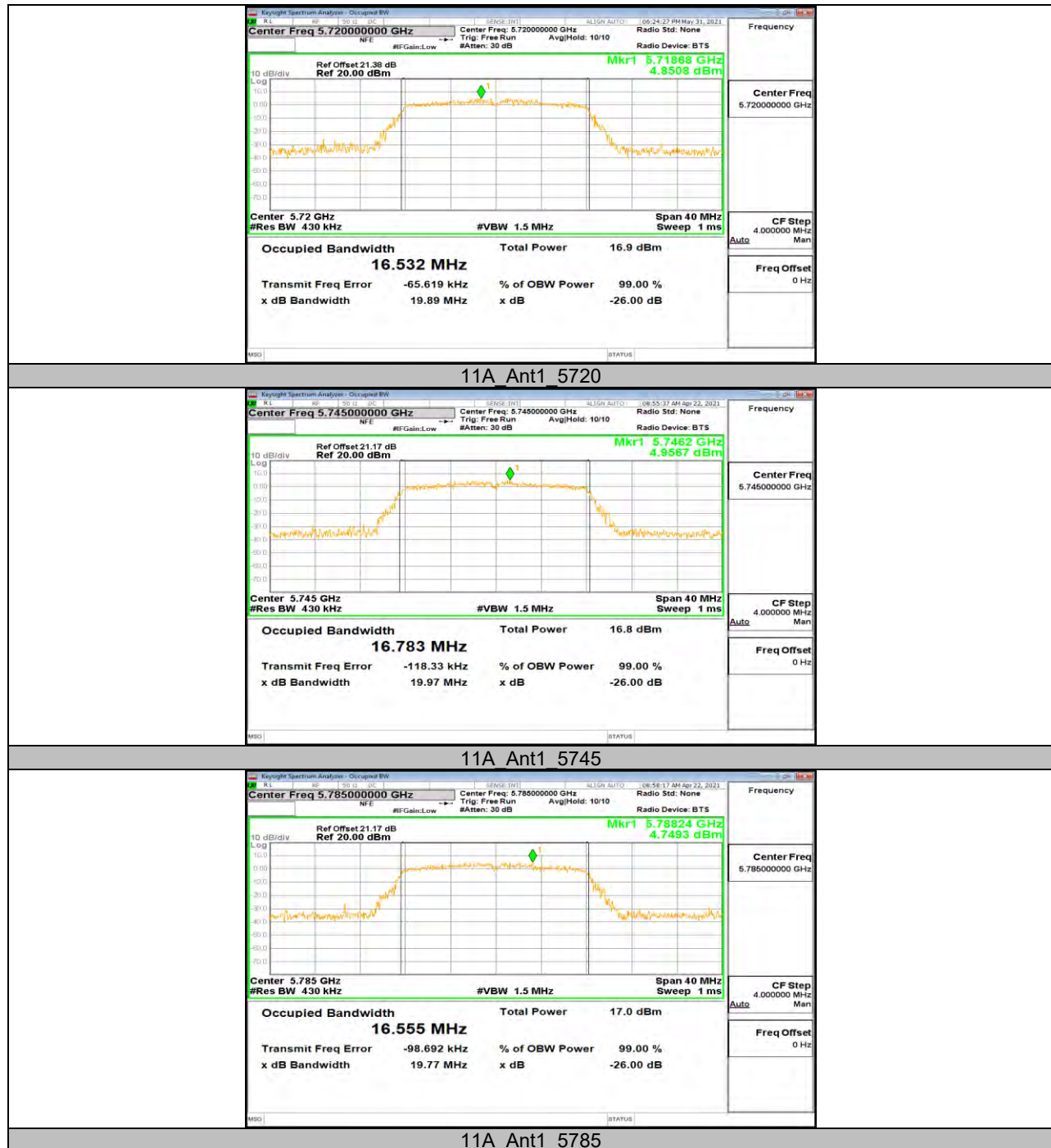
Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Verdict
11A	Ant1	5180	16.637	5171.676	5188.313	PASS
		5200	16.624	5191.611	5208.235	PASS
		5240	16.536	5231.697	5248.233	PASS
		5260	16.550	5251.744	5268.294	PASS
		5280	16.783	5271.543	5288.326	PASS
		5320	16.608	5311.639	5328.247	PASS
		5500	16.458	5491.720	5508.178	PASS
		5580	16.495	5571.636	5588.131	PASS
		5700	16.549	5691.653	5708.202	PASS
		5720	16.532	5711.668	5728.200	PASS
		5720 UNII-2C	13.332	5711.668	5725	PASS
		5720 UNII-3	3.2	5725	5728.200	PASS
		5745	16.783	5736.490	5753.273	PASS
		5785	16.555	5776.624	5793.179	PASS
		5825	16.543	5816.621	5833.164	PASS
11AC20SISO	Ant1	5180	17.674	5171.084	5188.758	PASS
		5200	17.749	5191.068	5208.817	PASS
		5240	17.690	5231.030	5248.720	PASS
		5260	17.659	5251.148	5268.807	PASS
		5280	17.686	5271.067	5288.753	PASS
		5320	17.680	5311.079	5328.759	PASS
		5500	17.609	5491.138	5508.747	PASS
		5580	17.738	5571.091	5588.829	PASS
		5700	17.680	5691.064	5708.744	PASS
		5720	17.658	5711.146	5728.804	PASS
		5720 UNII-2C	13.854	5711.146	5725	PASS
		5720 UNII-3	3.804	5725	5728.804	PASS
		5745	17.660	5736.097	5753.757	PASS
		5785	17.733	5776.061	5793.794	PASS
		5825	17.633	5816.091	5833.724	PASS
11AC40SISO	Ant1	5190	36.188	5171.889	5208.077	PASS
		5230	35.966	5211.996	5247.962	PASS
		5270	36.052	5251.937	5287.989	PASS
		5310	35.988	5291.993	5327.981	PASS
		5510	36.089	5491.980	5528.069	PASS
		5550	36.178	5531.931	5568.109	PASS
		5670	36.075	5651.987	5688.062	PASS
		5710	35.983	5691.967	5727.950	PASS
		5710 UNII-2C	33.033	5691.967	5725	PASS
		5710 UNII-3	2.95	5725	5727.950	PASS
		5755	36.210	5736.823	5773.033	PASS
		5795	36.052	5776.880	5812.932	PASS
11AC80SISO	Ant1	5210	75.840	5172.133	5247.973	PASS
		5290	75.663	5252.270	5327.933	PASS
		5530	75.757	5492.261	5568.018	PASS
		5610	75.570	5572.443	5648.013	PASS
		5690	75.284	5652.512	5727.796	PASS
		5690 UNII-2C	72.488	5652.512	5725	PASS
		5690 UNII-3	2.796	5725	5727.796	PASS
		5775	75.543	5737.330	5812.873	PASS

13.2.2. Test Graphs































13.3. Appendix A3: Min emission bandwidth

13.3.1. Test Result

Test Mode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5720 UNII-3	3.12	5725	5728.120	0.5	PASS
		5745	16.040	5737.080	5753.120	0.5	PASS
		5785	16.400	5776.720	5793.120	0.5	PASS
		5825	16.400	5816.720	5833.120	0.5	PASS
11AC20SISO	Ant1	5720 UNII-3	3.32	5725	5728.320	0.5	PASS
		5745	17.240	5736.480	5753.720	0.5	PASS
		5785	16.360	5776.720	5793.080	0.5	PASS
		5825	17.640	5816.080	5833.720	0.5	PASS
11AC40SISO	Ant1	5710 UNII-3	2.52	5725	5727.520	0.5	PASS
		5755	35.440	5737.080	5772.520	0.5	PASS
		5795	36.000	5776.920	5812.920	0.5	PASS
11AC80SISO	Ant1	5690 UNII-3	1.32	5725	5726.320	0.5	PASS
		5775	74.080	5738.520	5812.600	0.5	PASS



13.3.2. Test Graphs











**13.4. Appendix B: Maximum conducted output power****13.4.1. Test Result**

Test Mode	Antenna	Channel	Power [dBm]	FCC Limit [dBm]	ISED Limit [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	7.62	<=23.98	---	9.62	<=22.21	PASS
		5200	7.30	<=23.98	---	9.3	<=22.21	PASS
		5240	7.17	<=23.98	---	9.17	<=22.18	PASS
		5260	7.71	<=23.98	<=23.19	9.71	<=29.19	PASS
		5280	7.72	<=23.89	<=23.25	9.72	<=29.25	PASS
		5320	7.75	<=23.90	<=23.20	9.75	<=29.20	PASS
		5500	10.17	<=23.98	<=23.16	12.17	<=29.16	PASS
		5580	11.66	<=23.98	<=23.17	13.66	<=29.17	PASS
		5700	12.14	<=23.92	<=23.19	14.14	<=29.19	PASS
		5720_UNII-2C	11.26	<=22.73	<=22.25	13.26	<=28.25	PASS
		5720_UNII-3	2.98	<=30	<=30	---	---	PASS
		5745	12.18	<=30	<=30	---	---	PASS
		5785	12.31	<=30	<=30	---	---	PASS
		5825	11.70	<=30	<=30	---	---	PASS
11AC20SISO	Ant1	5180	7.52	<=23.98	---	9.52	<=22.47	PASS
		5200	7.70	<=23.98	---	9.7	<=22.49	PASS
		5240	7.39	<=23.98	---	9.39	<=22.48	PASS
		5260	8.00	<=23.98	<=23.47	10	<=29.47	PASS
		5280	7.58	<=23.98	<=23.48	9.58	<=29.48	PASS
		5320	7.63	<=23.98	<=23.47	9.63	<=29.47	PASS
		5500	10.18	<=23.98	<=23.46	12.18	<=29.46	PASS
		5580	11.51	<=23.97	<=23.49	13.51	<=29.49	PASS
		5700	12.15	<=23.98	<=23.47	14.15	<=29.47	PASS
		5720_UNII-2C	11.29	<=22.74	<=22.42	13.29	<=28.42	PASS
		5720_UNII-3	3.93	<=30	<=30	---	---	PASS
		5745	12.18	<=30	<=30	---	---	PASS
		5785	12.20	<=30	<=30	---	---	PASS
		5825	11.65	<=30	<=30	---	---	PASS
11AC40SISO	Ant1	5190	7.47	<=23.98	---	9.47	<=23	PASS
		5230	7.98	<=23.98	---	9.98	<=23	PASS
		5270	8.09	<=23.98	<=23.98	10.09	<=30	PASS
		5310	7.84	<=23.98	<=23.98	9.84	<=30	PASS
		5510	9.87	<=23.98	<=23.98	11.87	<=30	PASS
		5550	10.80	<=23.98	<=23.98	12.8	<=30	PASS
		5670	11.81	<=23.98	<=23.98	13.81	<=30	PASS
		5710_UNII-2C	11.83	<=23.98	<=23.98	13.83	<=30	PASS
		5710_UNII-3	-1.32	<=30	<=30	---	---	PASS
		5755	12.46	<=30	<=30	---	---	PASS
		5795	12.40	<=30	<=30	---	---	PASS
11AC80SISO	Ant1	5210	7.25	<=23.98	---	9.25	<=23	PASS
		5290	7.88	<=23.98	<=23.98	9.88	<=30	PASS
		5530	10.43	<=23.98	<=23.98	12.43	<=30	PASS
		5610	11.72	<=23.98	<=23.98	13.72	<=30	PASS
		5690_UNII-2C	11.79	<=23.98	<=23.98	13.79	<=30	PASS
		5690_UNII-3	-4.35	<=30	<=30	---	---	PASS
		5775	12.57	<=30	<=30	---	---	PASS

Note : The Duty Cycle Factor is compensated in the results.

13.5. Appendix C: Maximum power spectral density

13.5.1. Test Result

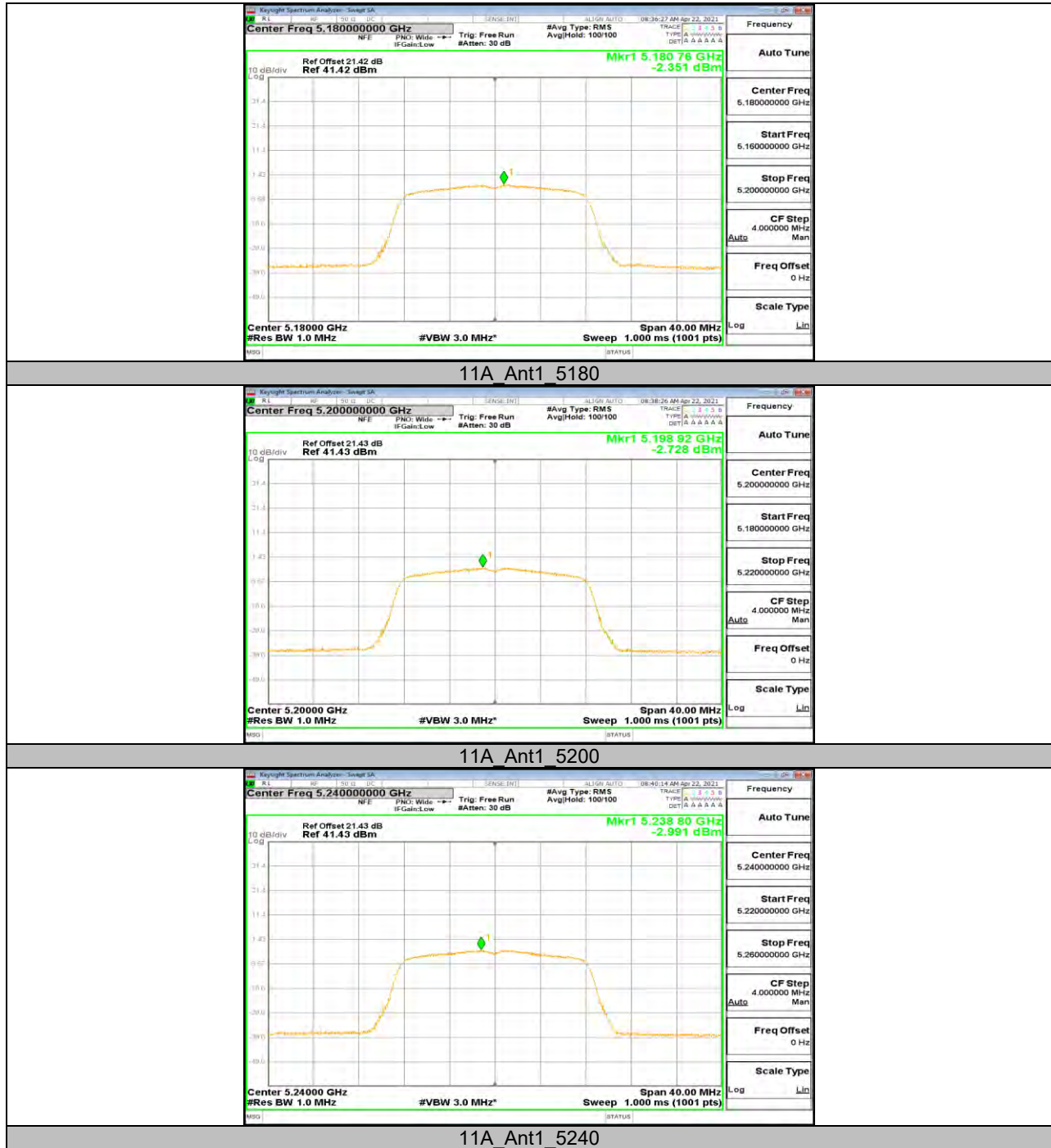
Test Mode	Antenna	Channel	Power [dBm/MHz]	Limit [dBm/MHz]	EIRP [dBm/MHz]	ISED Limit [dBm/MHz]	Verdict
11A	Ant1	5180	-2.35	<=11	0.65	<=10	PASS
		5200	-2.73	<=11	0.27	<=10	PASS
		5240	-2.99	<=11	0.01	<=10	PASS
		5260	-2.54	<=11	---	---	PASS
		5280	-2.24	<=11	---	---	PASS
		5320	-2.47	<=11	---	---	PASS
		5500	0.21	<=11	---	---	PASS
		5580	1.67	<=11	---	---	PASS
		5700	2.06	<=11	---	---	PASS
		5720_UNII-2C	1.99	<=11	---	---	PASS
		5720_UNII-3	-2.52	<=11	---	---	PASS
		5745	-0.85	<=30	---	---	PASS
		5785	-0.55	<=30	---	---	PASS
		5825	-1.12	<=30	---	---	PASS
11AC20SISO	Ant1	5180	-2.7	<=11	0.30	<=10	PASS
		5200	-2.51	<=11	0.49	<=10	PASS
		5240	-2.66	<=11	0.34	<=10	PASS
		5260	-2.33	<=11	---	---	PASS
		5280	-2.52	<=11	---	---	PASS
		5320	-2.64	<=11	---	---	PASS
		5500	-0.08	<=11	---	---	PASS
		5580	1.38	<=11	---	---	PASS
		5700	1.97	<=11	---	---	PASS
		5720_UNII-2C	2.1	<=11	---	---	PASS
		5720_UNII-3	-3.54	<=11	---	---	PASS
		5745	-0.94	<=30	---	---	PASS
		5785	-0.91	<=30	---	---	PASS
		5825	-1.42	<=30	---	---	PASS
11AC40SISO	Ant1	5190	-5.14	<=11	-2.14	<=10	PASS
		5230	-5.21	<=11	-2.21	<=10	PASS
		5270	-5.05	<=11	---	---	PASS
		5310	-5.3	<=11	---	---	PASS
		5510	-3.11	<=11	---	---	PASS
		5550	-2.23	<=11	---	---	PASS
		5670	-1.43	<=11	---	---	PASS
		5710_UNII-2C	-1.26	<=11	---	---	PASS
		5710_UNII-3	-7.72	<=11	---	---	PASS
		5755	-3.67	<=30	---	---	PASS
		5795	-3.63	<=30	---	---	PASS
		5835	-3.63	<=30	---	---	PASS
11AC80SISO	Ant1	5210	-9.38	<=11	-6.38	<=10	PASS
		5290	-8.54	<=11	---	---	PASS
		5530	-6.07	<=11	---	---	PASS
		5610	-4.57	<=11	---	---	PASS
		5690_UNII-2C	-4.61	<=11	---	---	PASS
		5690_UNII-3	-11.35	<=11	---	---	PASS
		5775	-6.23	<=30	---	---	PASS

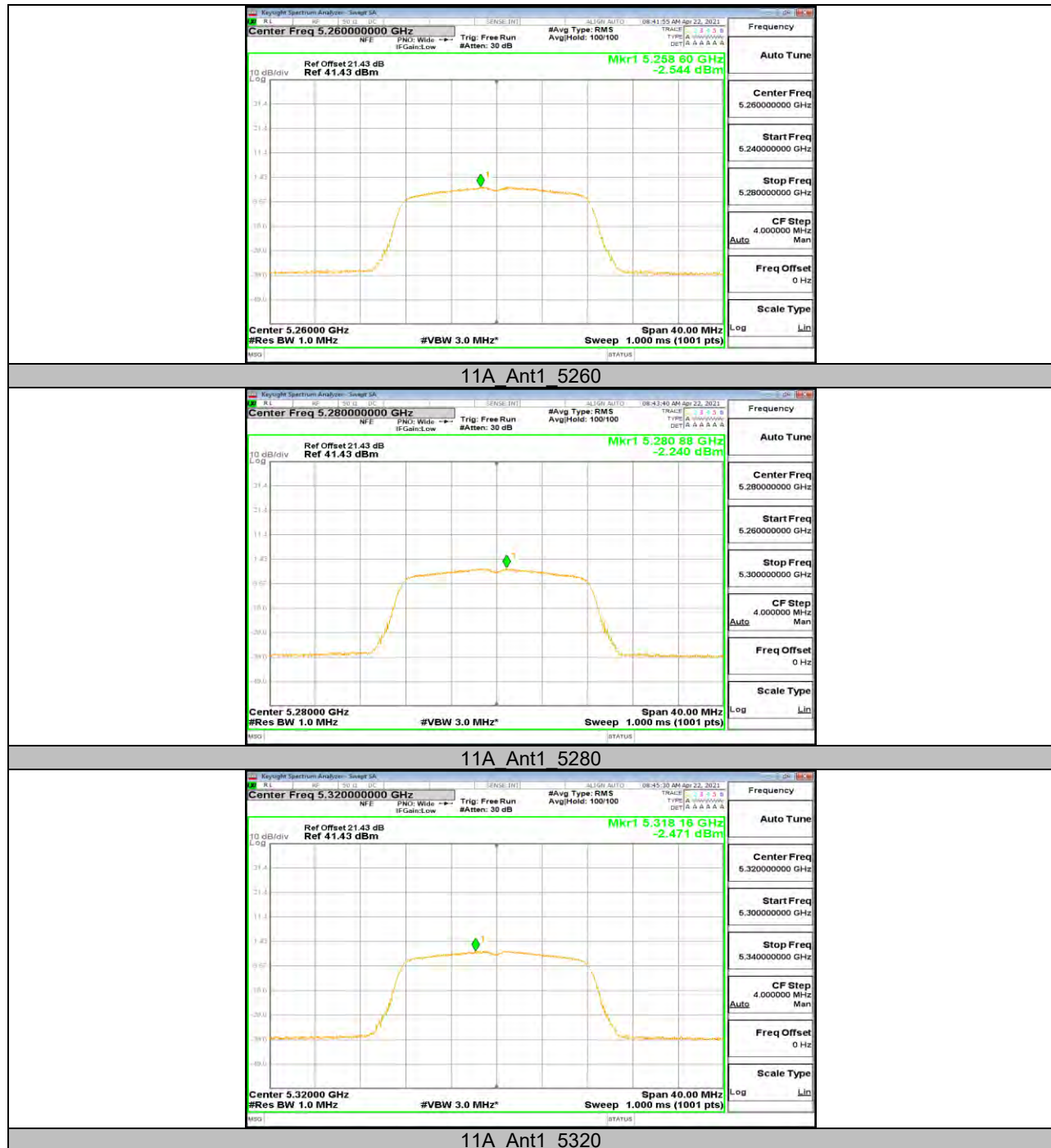
Note : 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

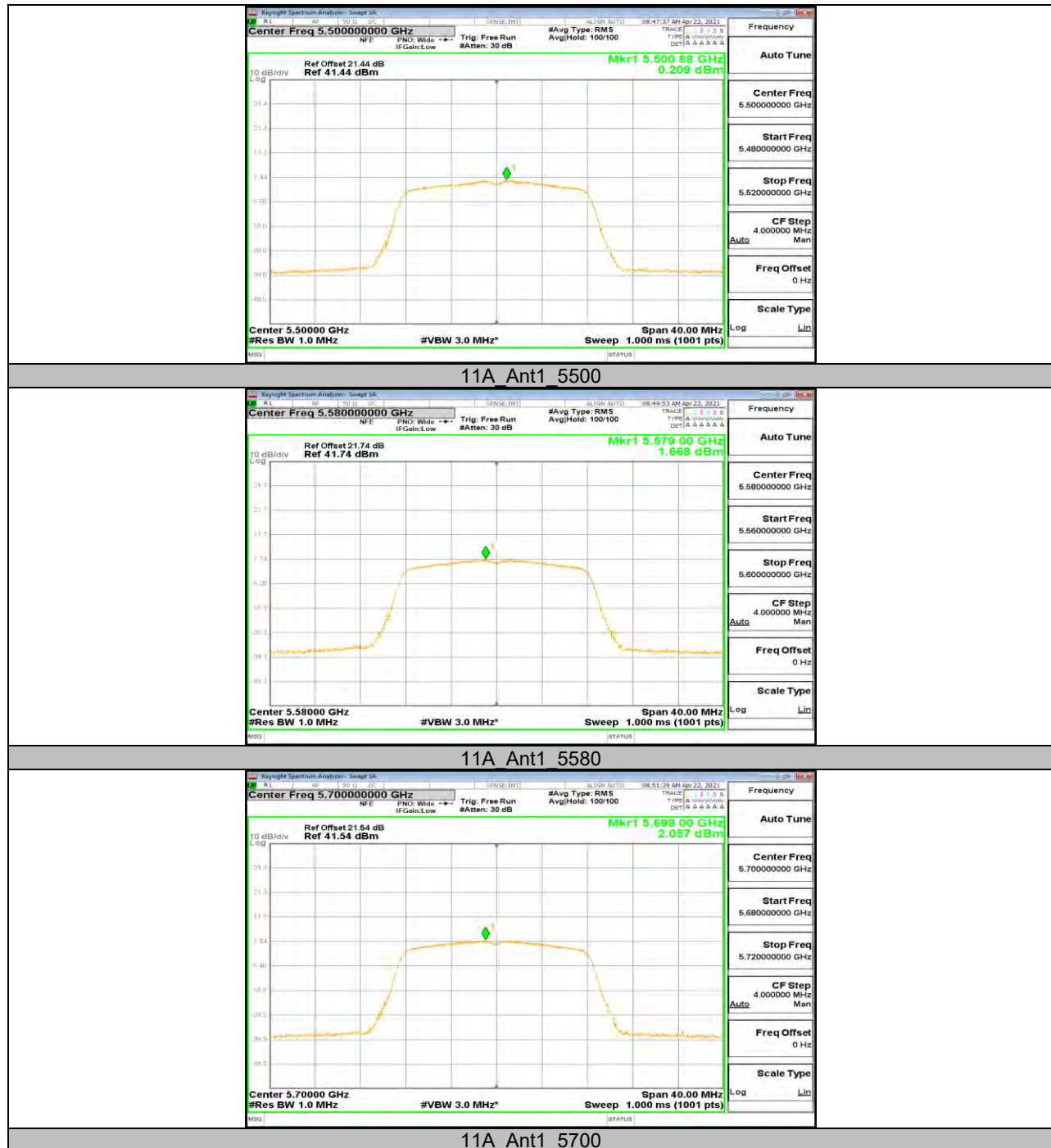
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

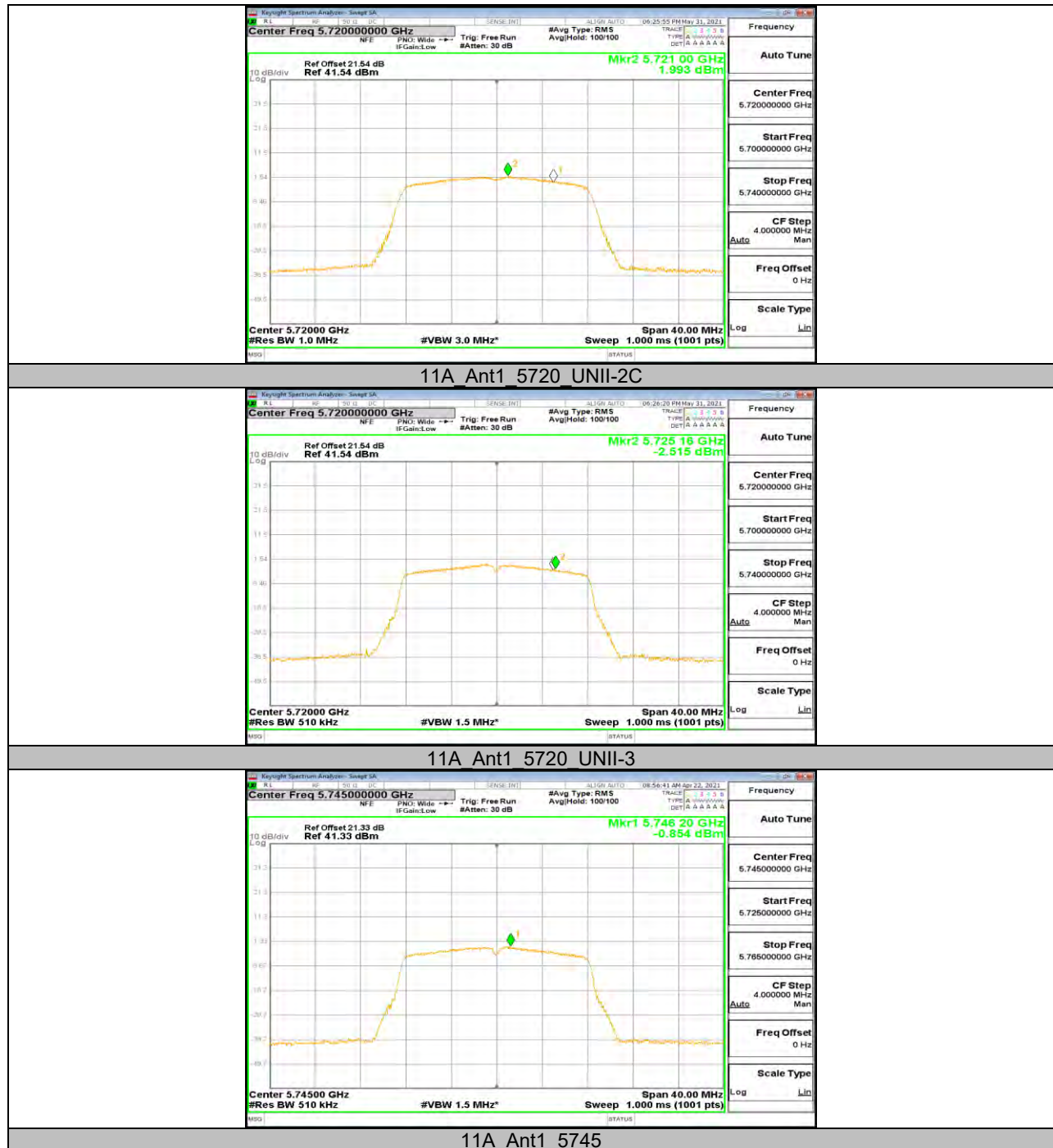


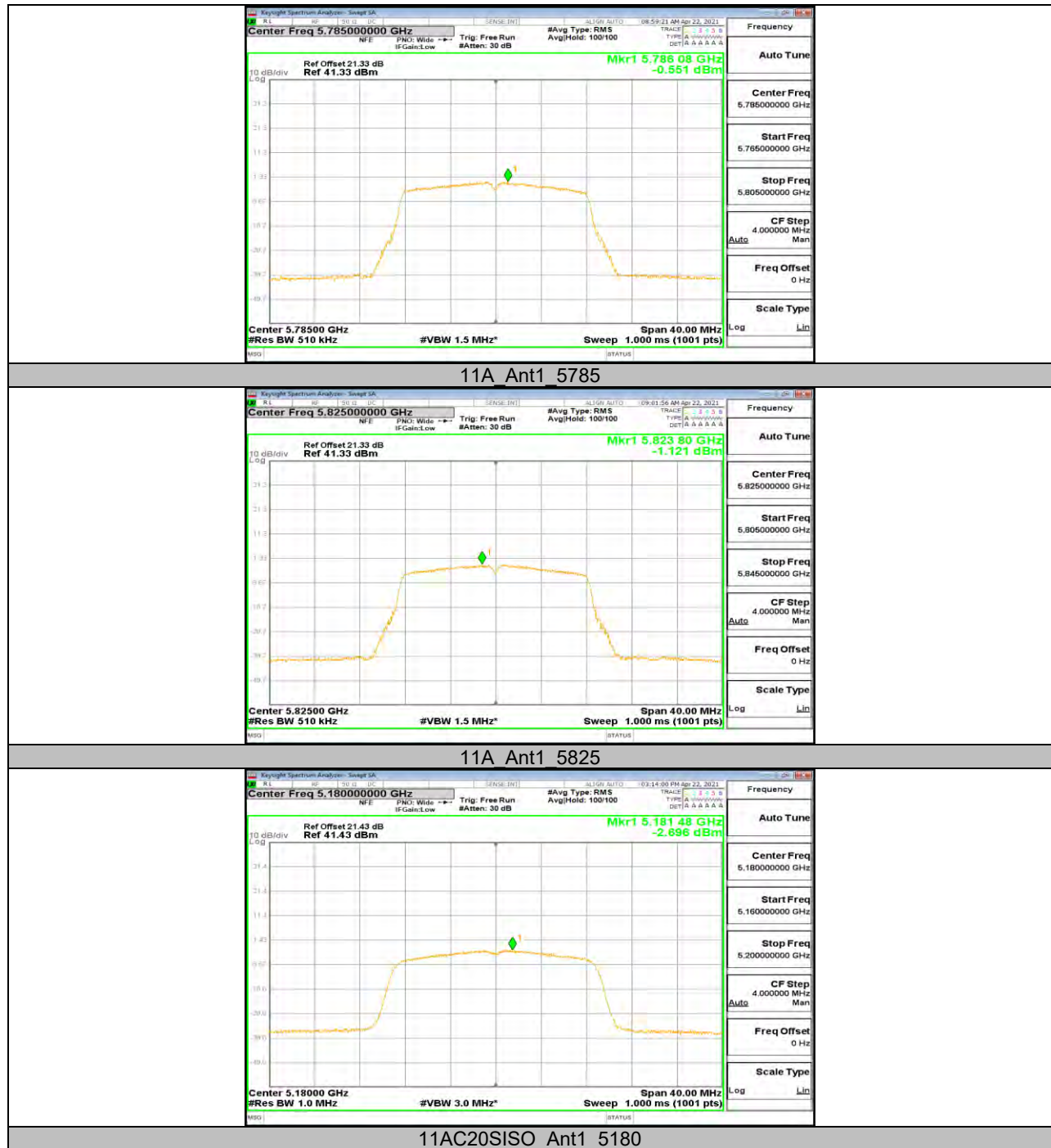
13.5.2. Test Graphs

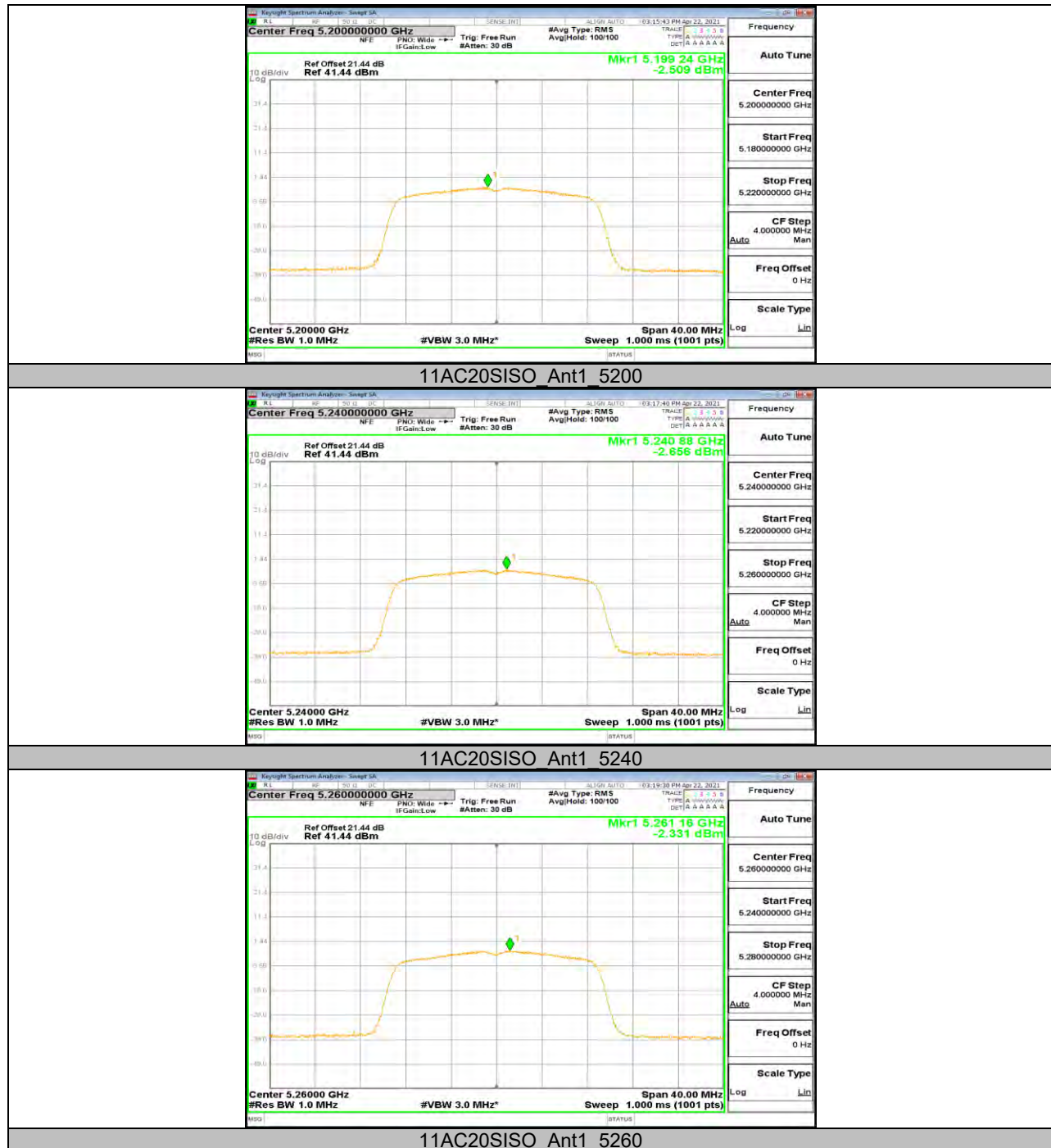


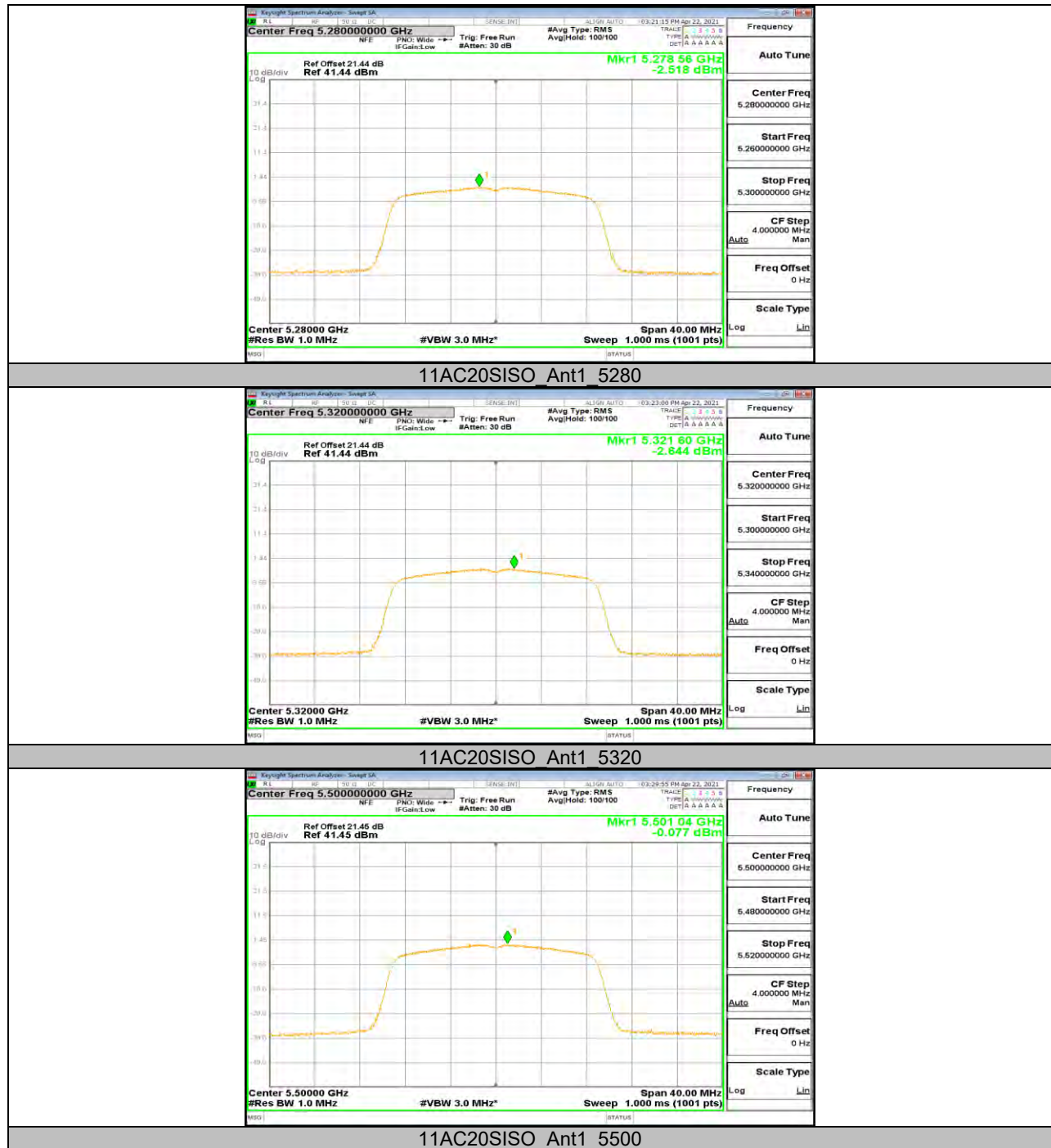


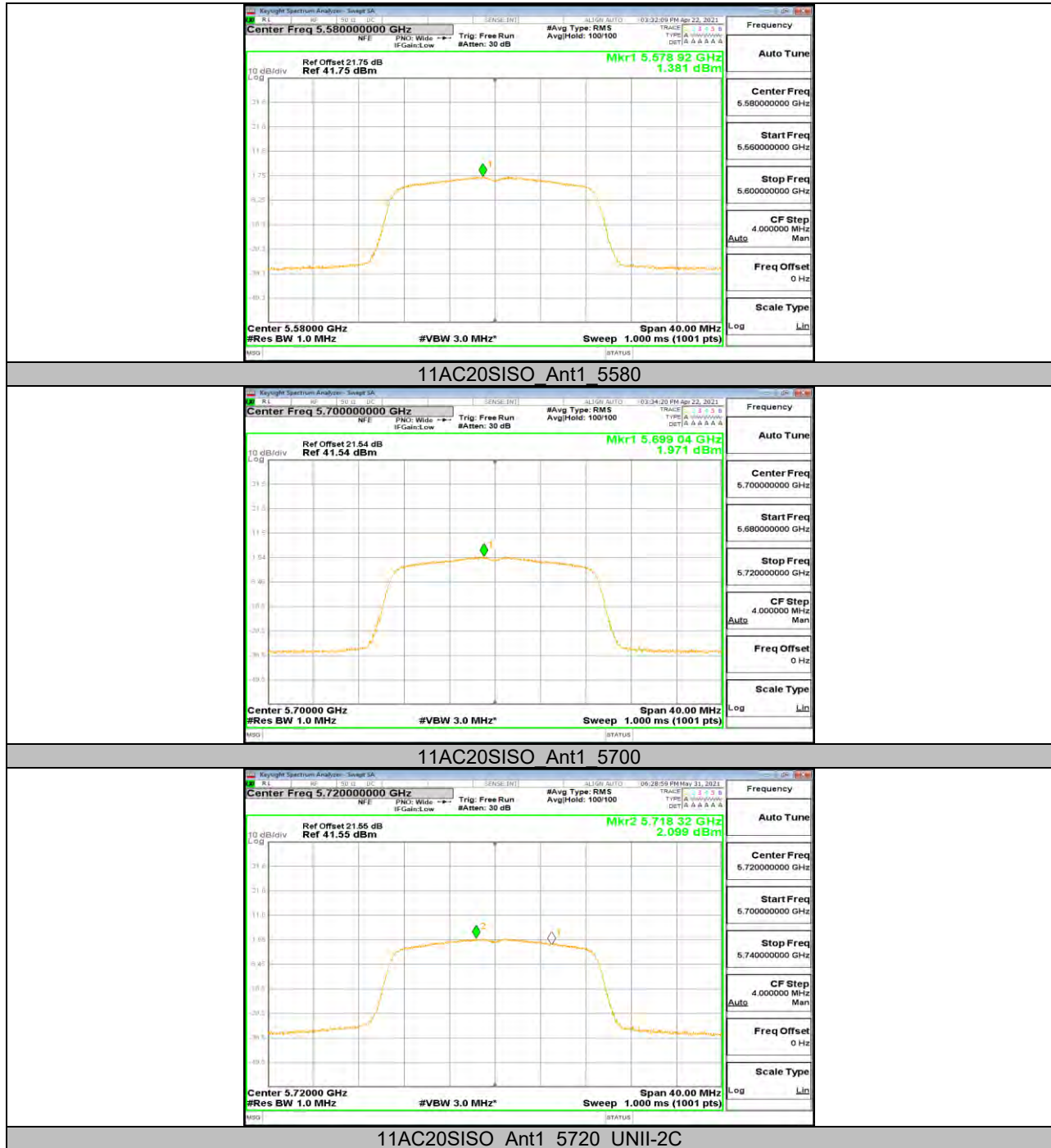


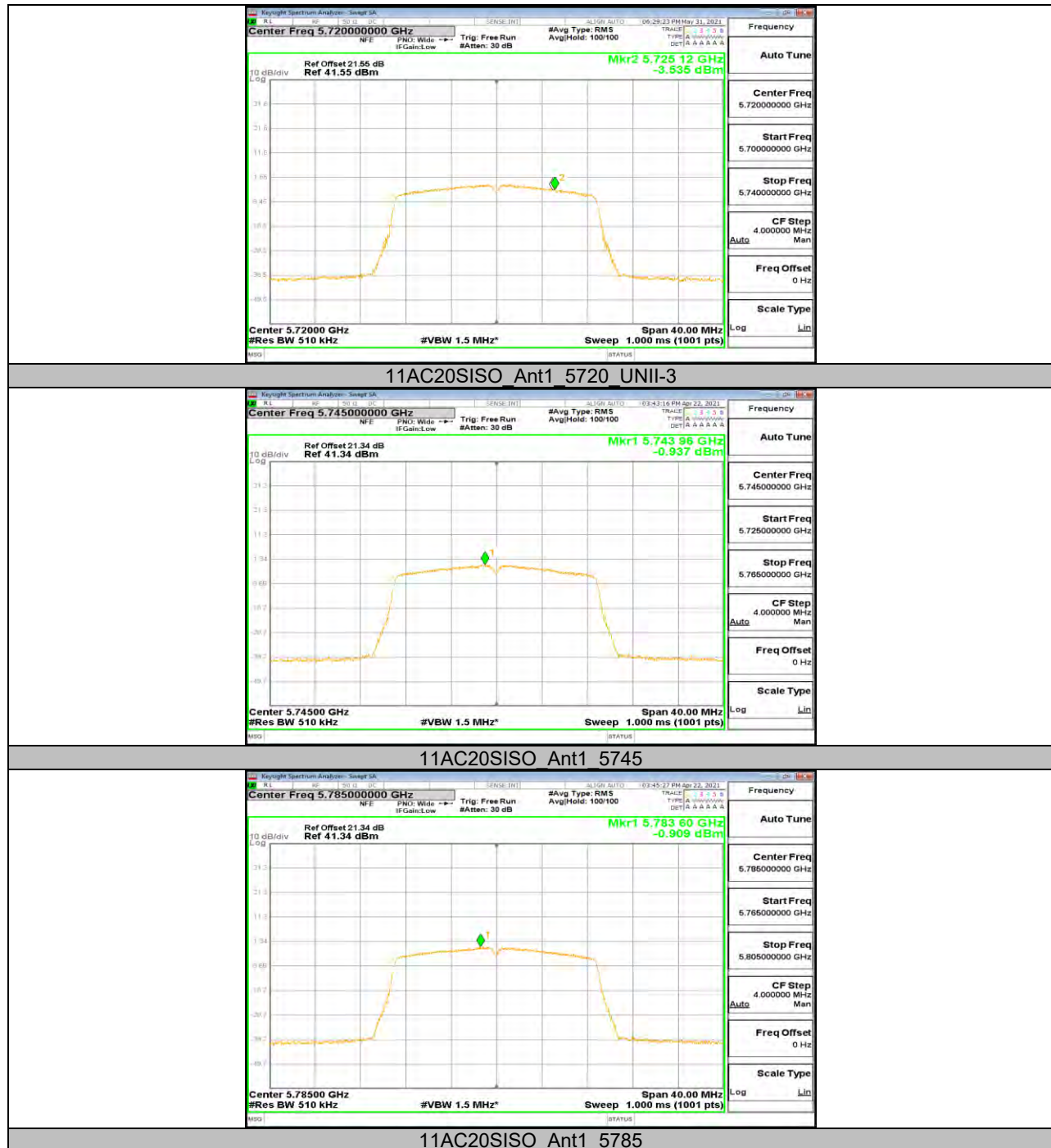


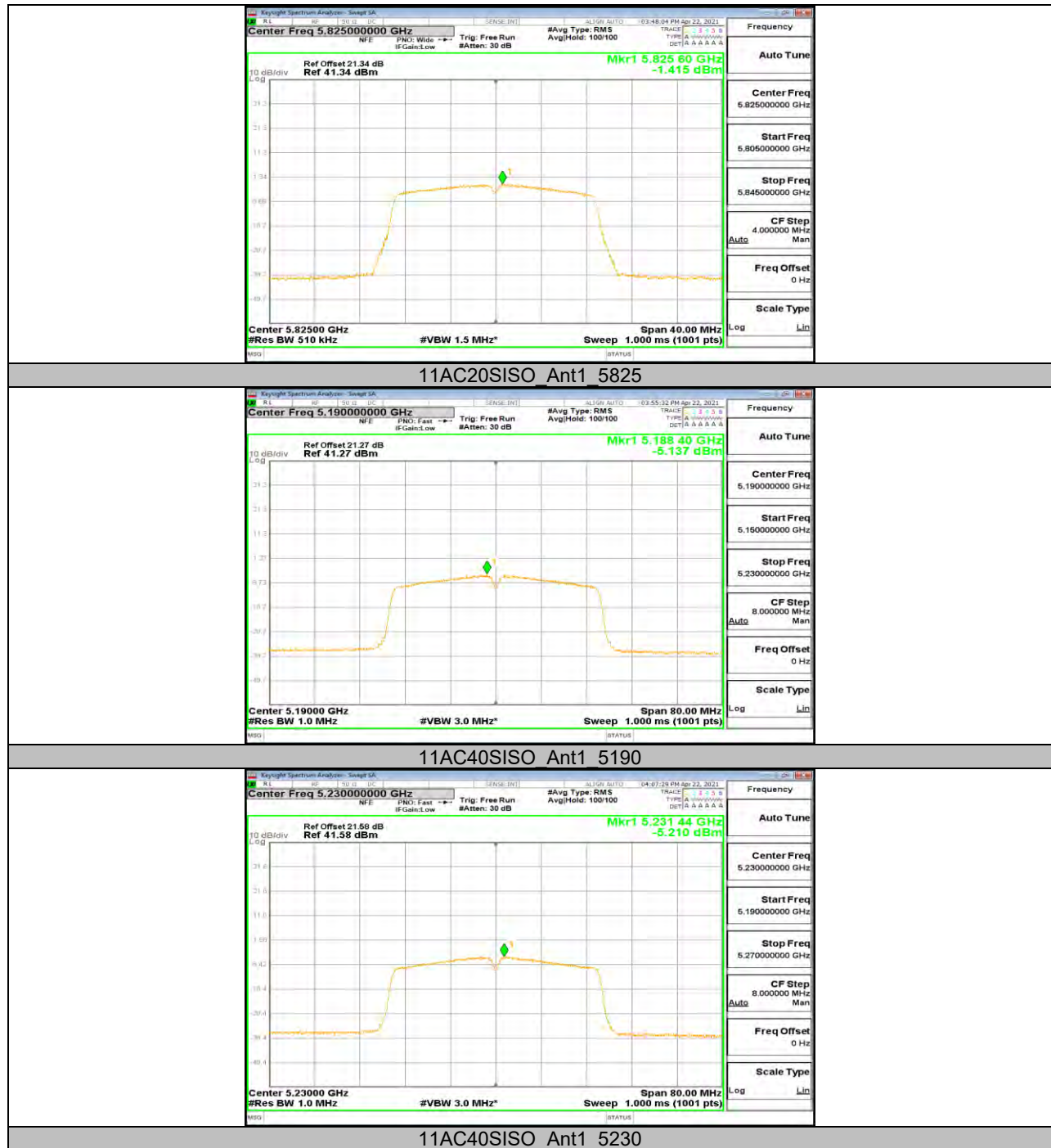




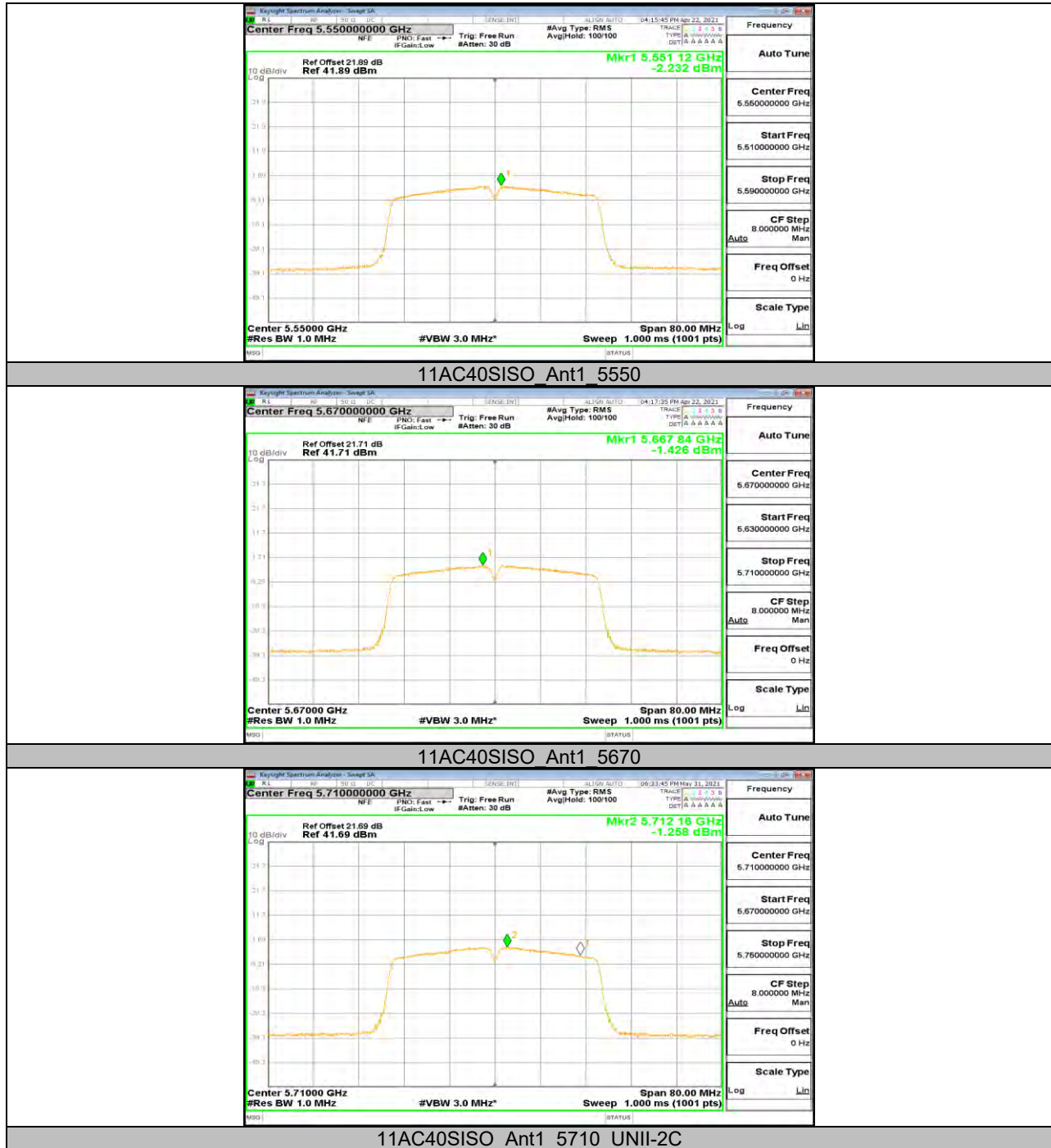


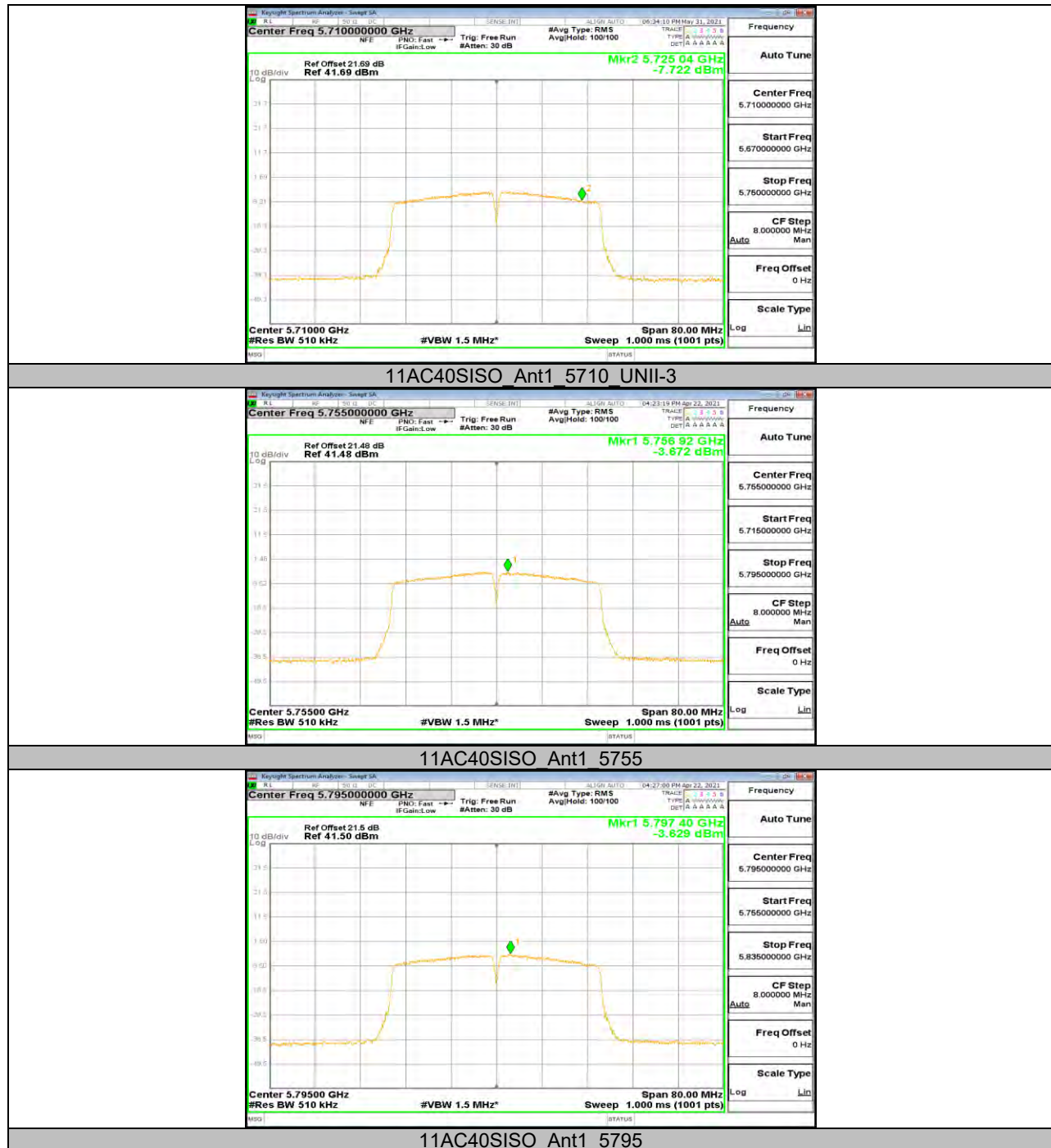




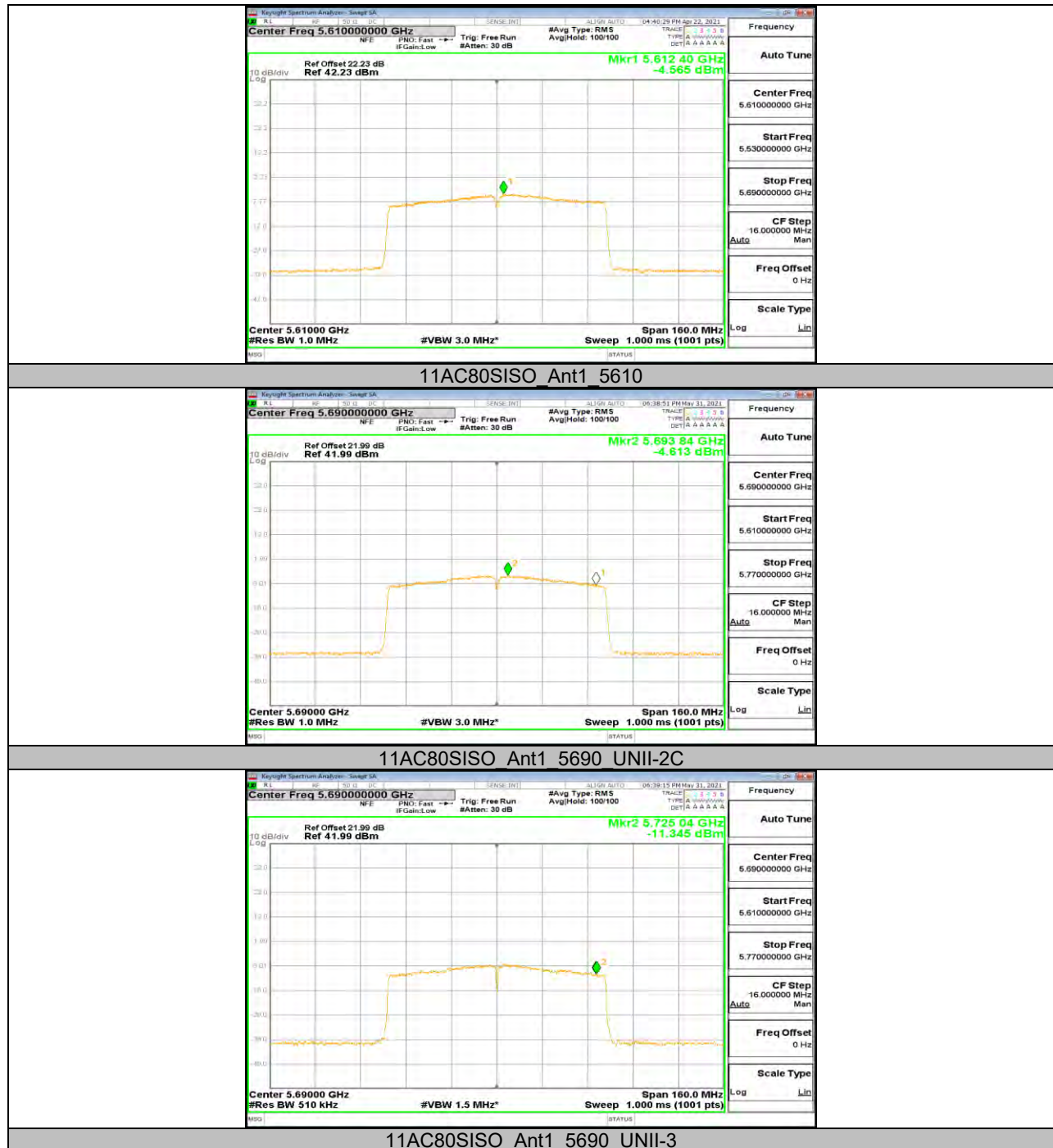
















13.6. Appendix D: Duty Cycle

13.6.1. Test Result

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)	Final setting For VBW (kHz)
11A	1.39	1.44	0.9653	96.53	0.15	0.72	1
11AC20SISO	1.31	1.36	0.9632	96.32	0.16	0.76	1
11AC40SISO	0.65	0.70	0.9286	92.86	0.32	1.54	2
11AC80SISO	0.32	0.37	0.8649	86.49	0.63	3.13	4

Note:

Duty Cycle Correction Factor=10log (1/x).

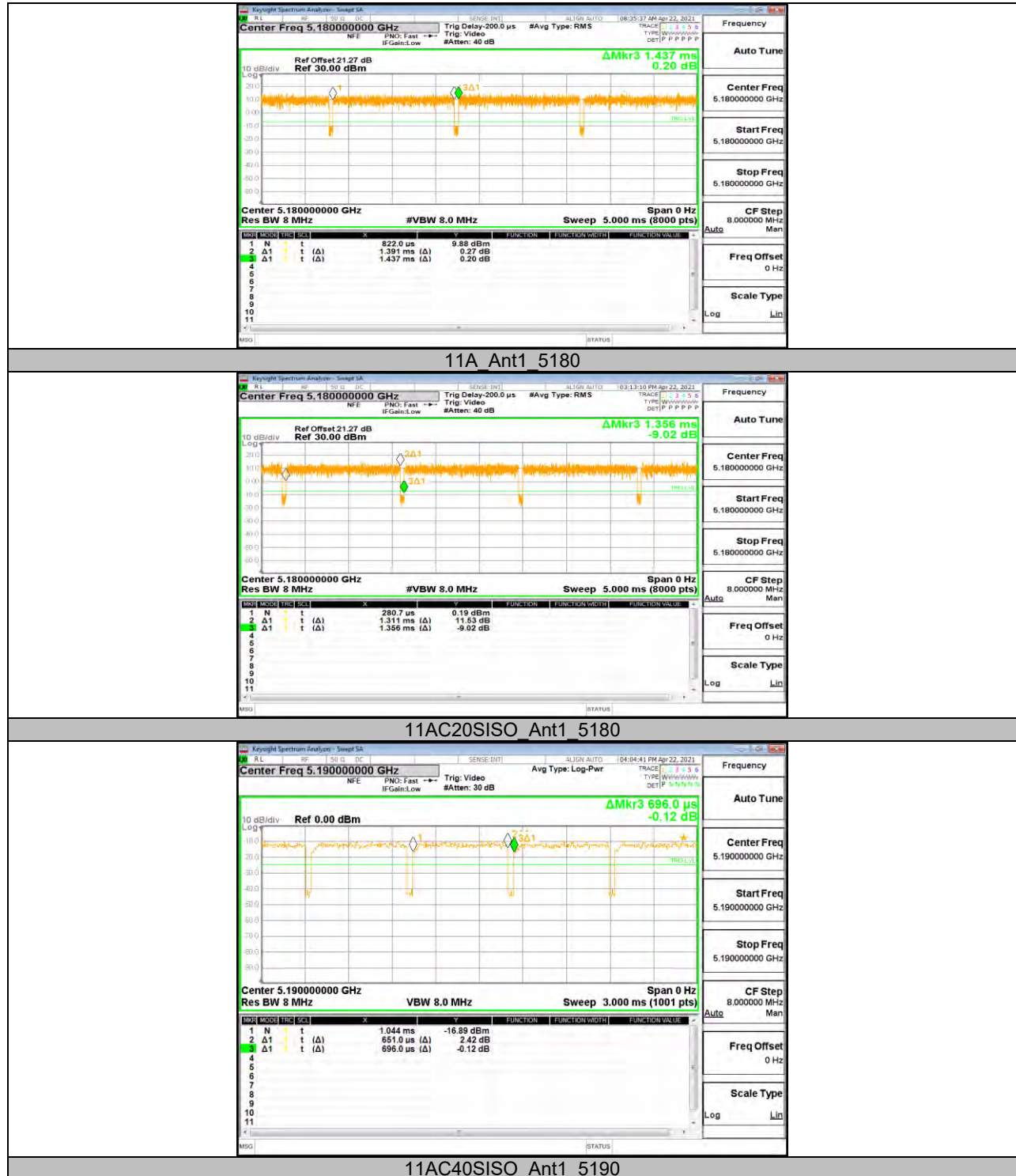
Where: x is Duty Cycle (Linear)

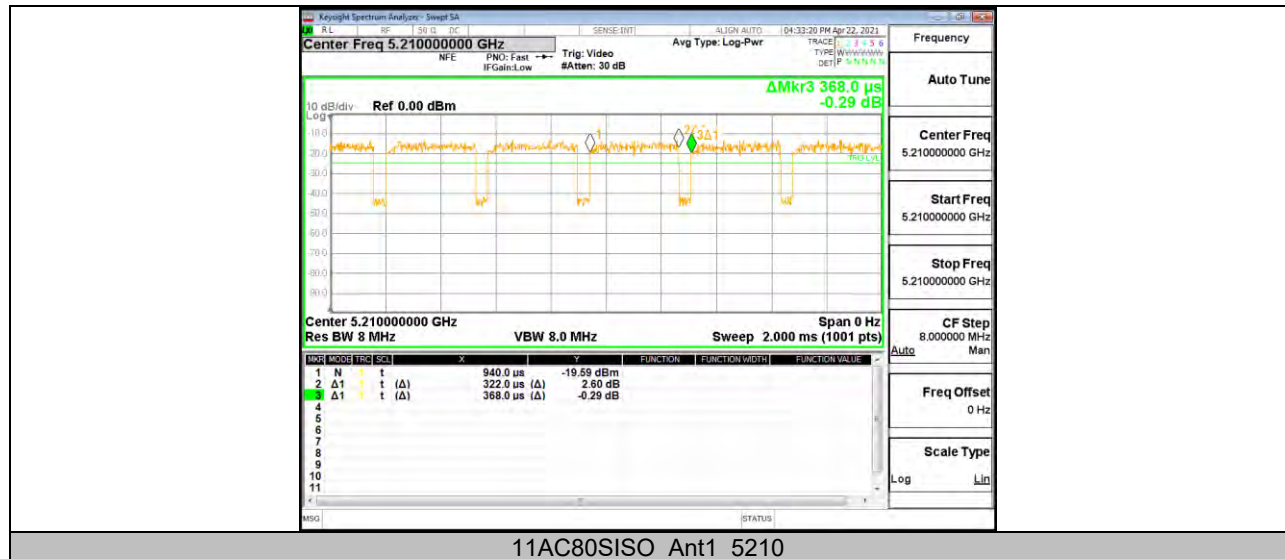
Where: T is On Time

If that calculated VBW is not available on the analyzer then the next higher value should be used.



13.6.2. Test Graphs







13.7. Appendix E: Frequency Stability Test Result

Frequency Error vs. Voltage									
802.11a:5200MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
TN	VL	5200.0037	0.71	5199.9976	-0.46	5200.0231	4.45	5199.9766	-4.49
TN	VN	5200.0124	2.38	5200.0110	2.12	5200.0209	4.02	5199.9972	-0.54
TN	VH	5199.9908	-1.78	5200.0126	2.42	5199.9770	-4.42	5199.9892	-2.08
Frequency Error vs. Temperature									
802.11a: 5200 MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
40	VN	5199.9839	-3.10	5199.9868	-2.54	5200.0211	4.05	5200.0026	0.49
30	VN	5200.0094	1.82	5199.9828	-3.30	5200.0163	3.13	5199.9833	-3.20
20	VN	5200.0055	1.06	5199.9966	-0.65	5200.0028	0.55	5200.0153	2.95
10	VN	5199.9956	-0.84	5199.9767	-4.48	5200.0059	1.13	5200.0055	1.06
0	VN	5199.9917	-1.60	5199.9888	-2.15	5200.0119	2.28	5199.9960	-0.76

Frequency Error vs. Voltage									
802.11a: 5825 MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
TN	VL	5824.9857	-2.45	5825.0032	0.54	5824.9909	-1.56	5824.9803	-3.38
TN	VN	5825.0143	2.46	5825.0194	3.33	5825.0028	0.48	5825.0187	3.21
TN	VH	5824.9982	-0.31	5824.9811	-3.24	5825.0146	2.51	5825.0224	3.85
Frequency Error vs. Temperature									
802.11a:5825MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
40	VN	5825.0151	2.58	5825.0023	0.40	5825.0218	3.75	5825.0085	1.46
30	VN	5825.0157	2.70	5824.9802	-3.40	5825.0002	0.04	5825.0169	2.90
20	VN	5825.0043	0.74	5825.0061	1.05	5824.9883	-2.00	5824.9910	-1.55
10	VN	5824.9903	-1.66	5824.9827	-2.97	5825.0248	4.26	5825.0031	0.53
0	VN	5825.0229	3.93	5824.9785	-3.69	5825.0040	0.68	5825.0026	0.44

Note: All the modes have been tested, only the worst data was recorded in the report.



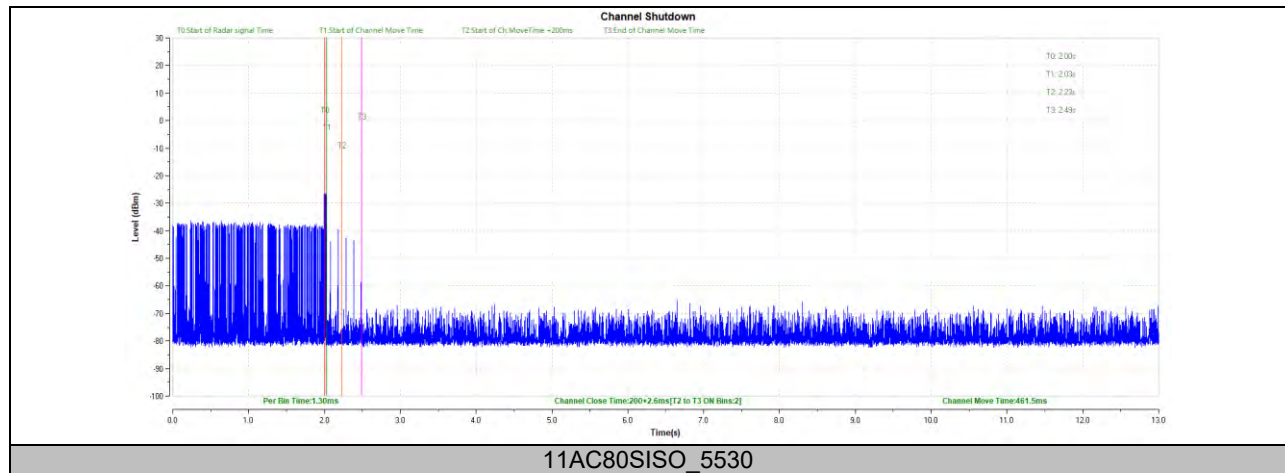
13.8. Appendix G: Channel Move Time and Channel Closing Transmission Time

13.8.1. Test Result

Test Mode	Channel	CCT[ms]	Limit[ms]	CMT[ms]	Limit[ms]	Verdict
11AC80SISO	5530	200+2.6	200+60	461.5	10000	PASS

Note: Refer to KDB 905462 D02 Table 2, only the widest BW mode test in this report.

13.8.2. Test Graphs





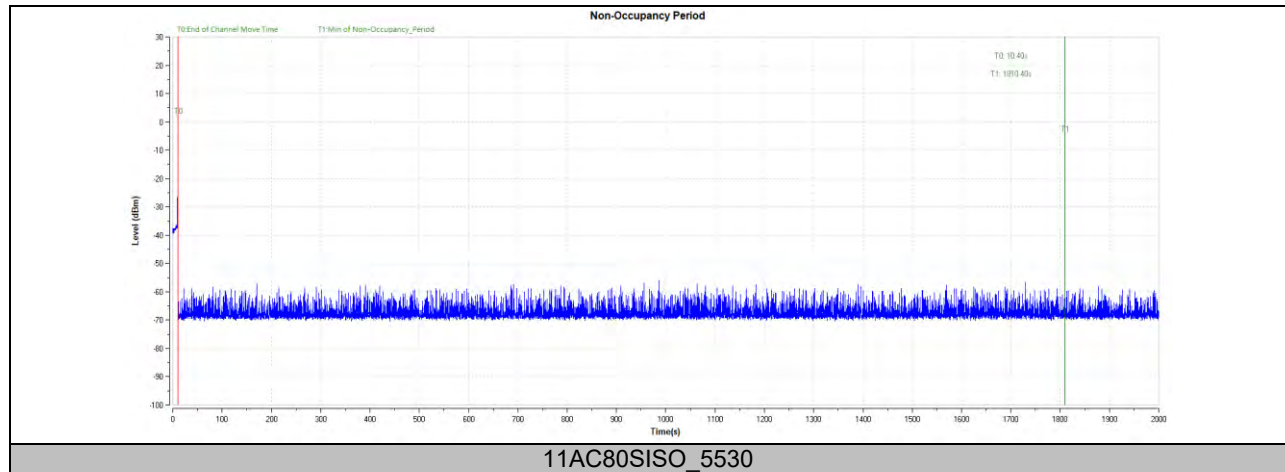
13.9. Appendix H: Non-Occupancy Period

Test Result

Test Mode	Channel	Result	Limit[s]	Verdict
11AC80SISO	5530	see test graph	≥ 1800	PASS

Note: Refer to KDB 905462 D02 Table 2, only the widest BW mode test in this report.

13.9.1. Test Graphs



END OF REPORT