

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	17.978	5170.960	5188.938	PASS
		5200	17.899	5191.050	5208.949	PASS
		5240	18.037	5230.969	5249.006	PASS
		5260	17.961	5251.007	5268.968	PASS
		5280	18.018	5271.000	5289.018	PASS
		5320	18.011	5310.974	5328.985	PASS
		5500	18.103	5490.931	5509.034	PASS
		5580	18.094	5570.879	5588.973	PASS
		5700	18.017	5690.829	5708.846	PASS
		5720	18.034	5710.838	5728.872	PASS
		5720 UNII-2C	14.162	5710.838	5725	PASS
		5720 UNII-3	3.872	5725	5728.872	PASS
		5745	18.028	5735.829	5753.857	PASS
		5785	17.979	5775.915	5793.894	PASS
		5825	18.014	5815.844	5833.858	PASS
11N20SISO	Ant1	5180	19.131	5170.525	5189.656	PASS
		5200	19.113	5190.557	5209.670	PASS
		5240	19.084	5230.479	5249.563	PASS
		5260	19.139	5250.479	5269.618	PASS
		5280	19.190	5270.473	5289.663	PASS
		5320	19.105	5310.453	5329.558	PASS
		5500	19.270	5490.467	5509.737	PASS
		5580	19.174	5570.408	5589.582	PASS
		5700	19.225	5690.248	5709.473	PASS
		5720	19.249	5710.288	5729.537	PASS
		5720 UNII-2C	14.712	5710.288	5725	PASS
		5720 UNII-3	4.537	5725	5729.537	PASS
		5745	19.161	5735.312	5754.473	PASS
		5785	19.245	5775.325	5794.570	PASS
		5825	19.187	5815.328	5834.515	PASS
11N40SISO	Ant1	5190	37.515	5171.313	5208.828	PASS
		5230	37.462	5211.409	5248.871	PASS
		5270	37.563	5251.277	5288.840	PASS
		5310	37.478	5291.307	5328.785	PASS
		5510	37.708	5491.195	5528.903	PASS
		5550	37.652	5531.212	5568.864	PASS
		5670	37.675	5650.978	5688.653	PASS
		5710	37.567	5691.029	5728.596	PASS
		5710 UNII-2C	33.971	5691.029	5725	PASS
		5710 UNII-3	3.596	5725	5728.596	PASS
		5755	37.639	5736.029	5773.668	PASS
		5795	37.679	5776.108	5813.787	PASS
11AX20SISO	Ant1	5180	19.695	5170.221	5189.916	PASS
		5200	19.705	5190.187	5209.892	PASS
		5240	19.601	5230.259	5249.860	PASS
		5260	19.662	5250.193	5269.855	PASS
		5280	19.659	5270.218	5289.877	PASS
		5320	19.763	5310.183	5329.946	PASS
		5500	19.785	5490.139	5509.924	PASS
		5580	19.680	5570.178	5589.858	PASS
		5700	19.643	5690.112	5709.755	PASS
		5720	19.726	5710.126	5729.852	PASS



		5720 UNII-2C	14.874	5710.126	5725	PASS
		5720 UNII-3	4.852	5725	5729.852	PASS
		5745	19.733	5735.100	5754.833	PASS
		5785	19.653	5775.158	5794.811	PASS
		5825	19.747	5815.102	5834.849	PASS
11AX40SISO	Ant1	5190	38.371	5170.877	5209.248	PASS
		5230	38.490	5210.829	5249.319	PASS
		5270	38.515	5250.785	5289.300	PASS
		5310	38.404	5290.864	5329.268	PASS
		5510	38.453	5490.843	5529.296	PASS
		5550	38.557	5530.711	5569.268	PASS
		5670	38.512	5650.619	5689.131	PASS
		5710	38.468	5690.618	5729.086	PASS
		5710 UNII-2C	34.382	5690.618	5725	PASS
		5710 UNII-3	4.086	5725	5729.086	PASS
		5755	38.551	5735.624	5774.175	PASS
		5795	38.460	5775.729	5814.189	PASS

13.2.2. Test Graphs





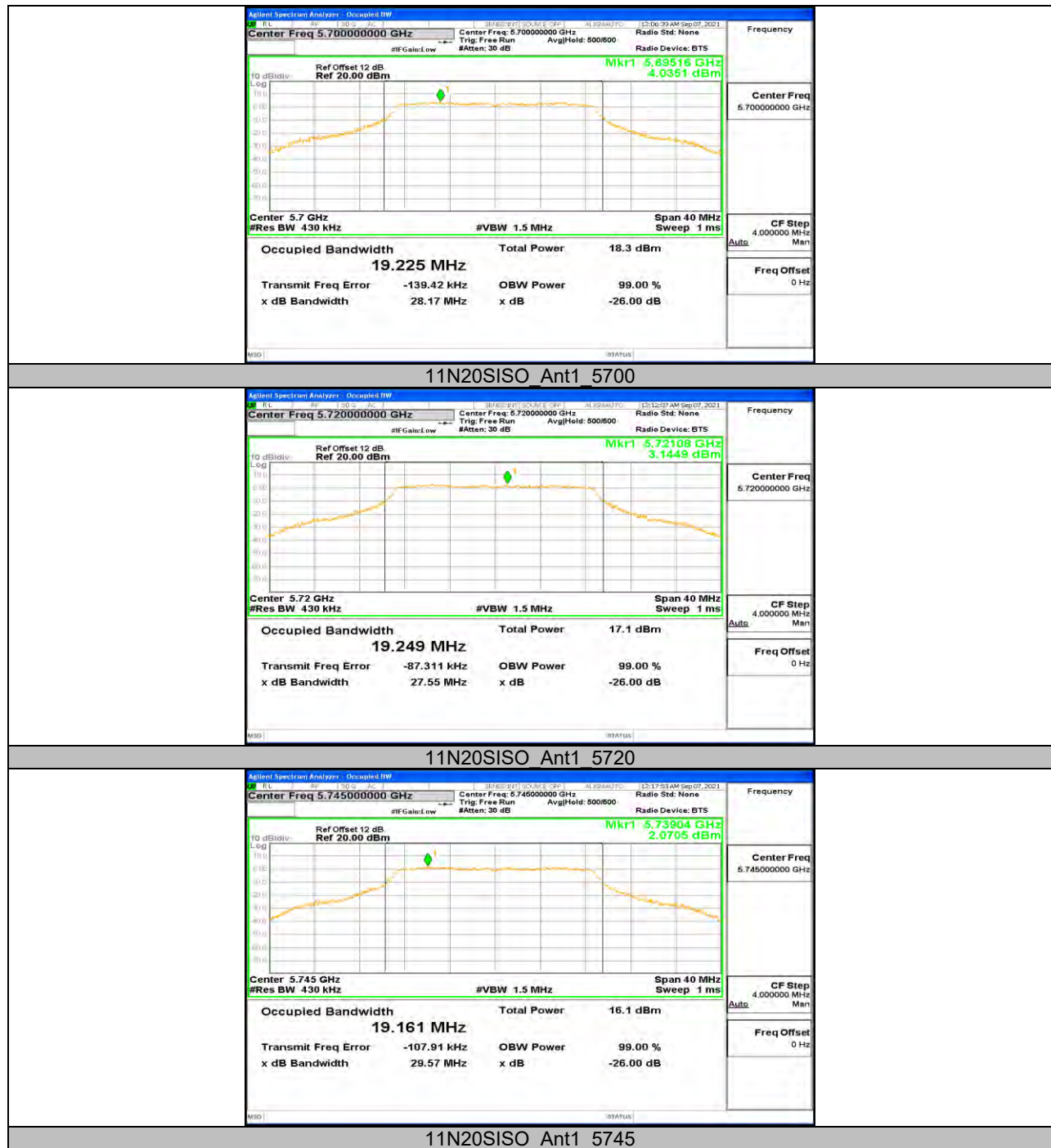














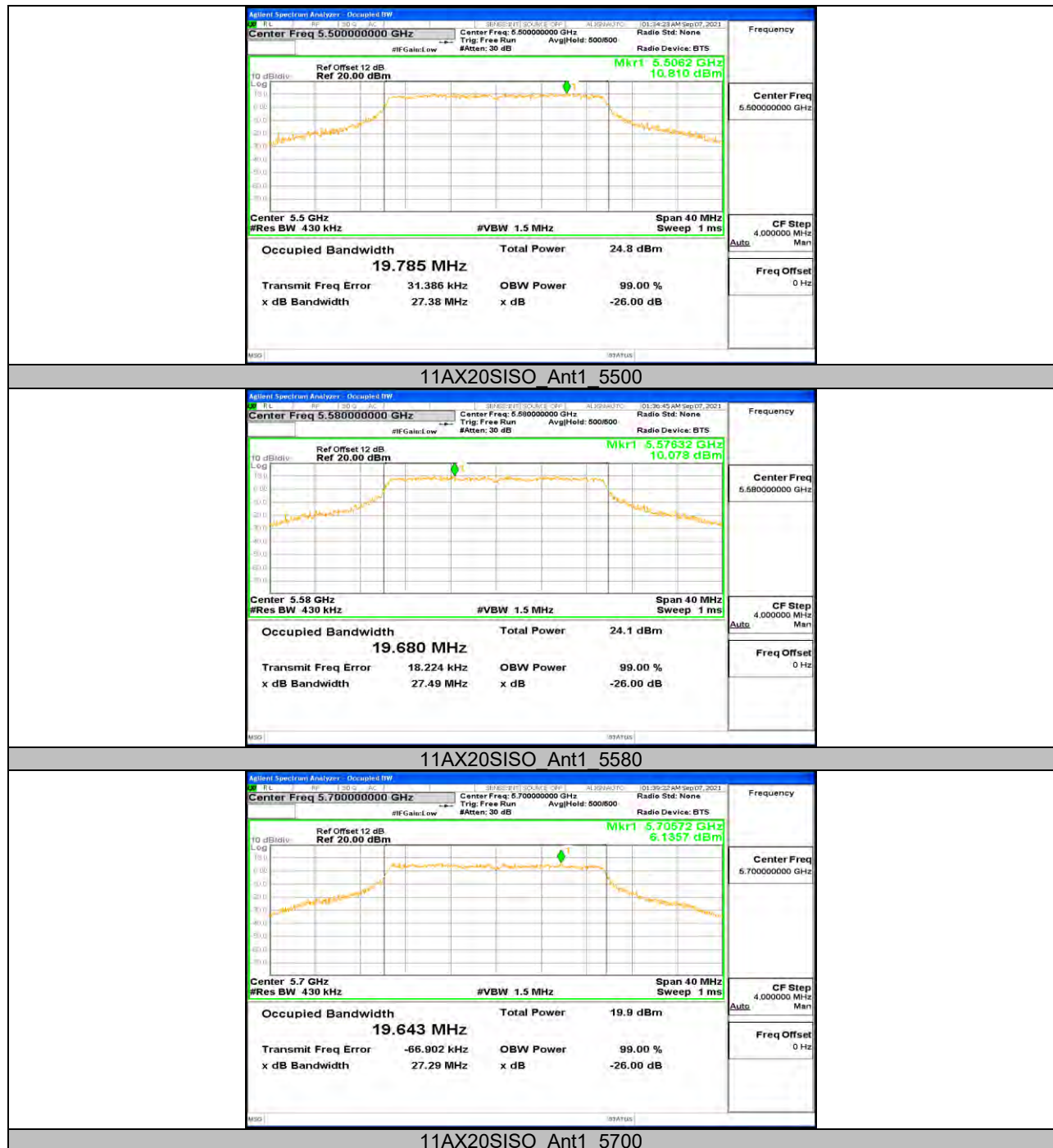




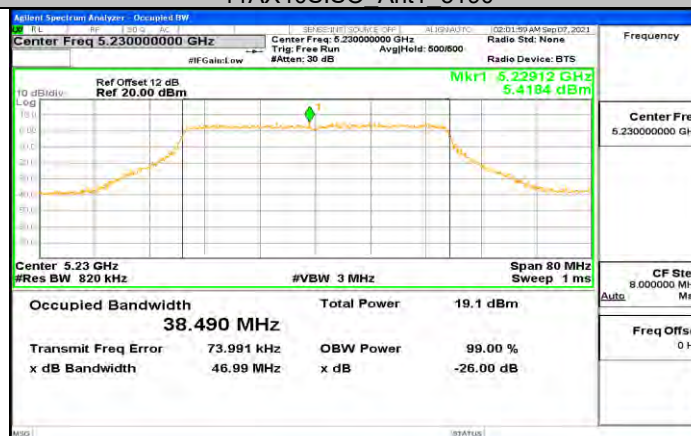
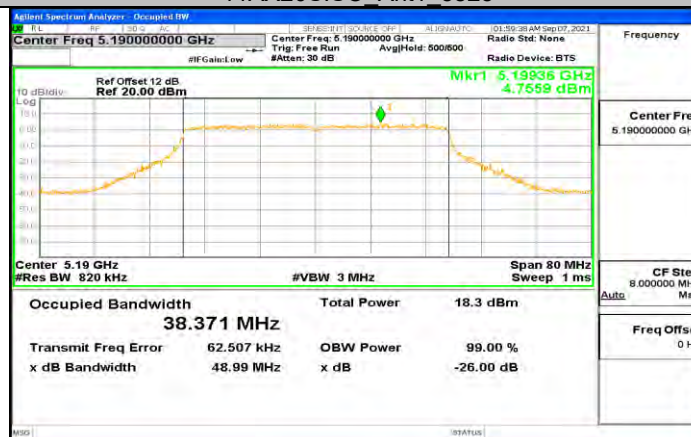
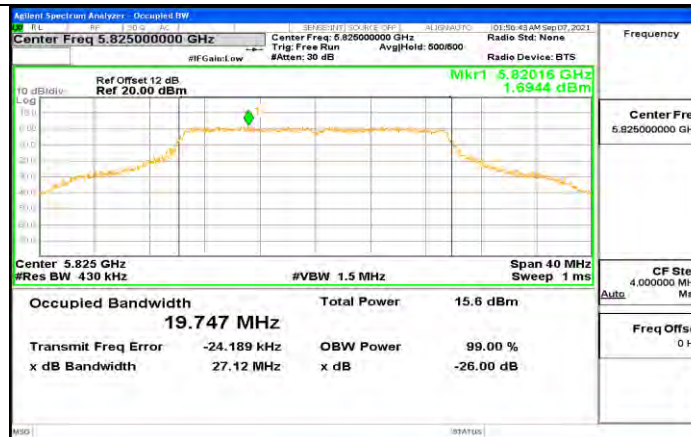
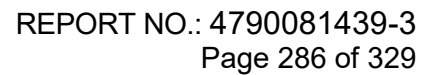


















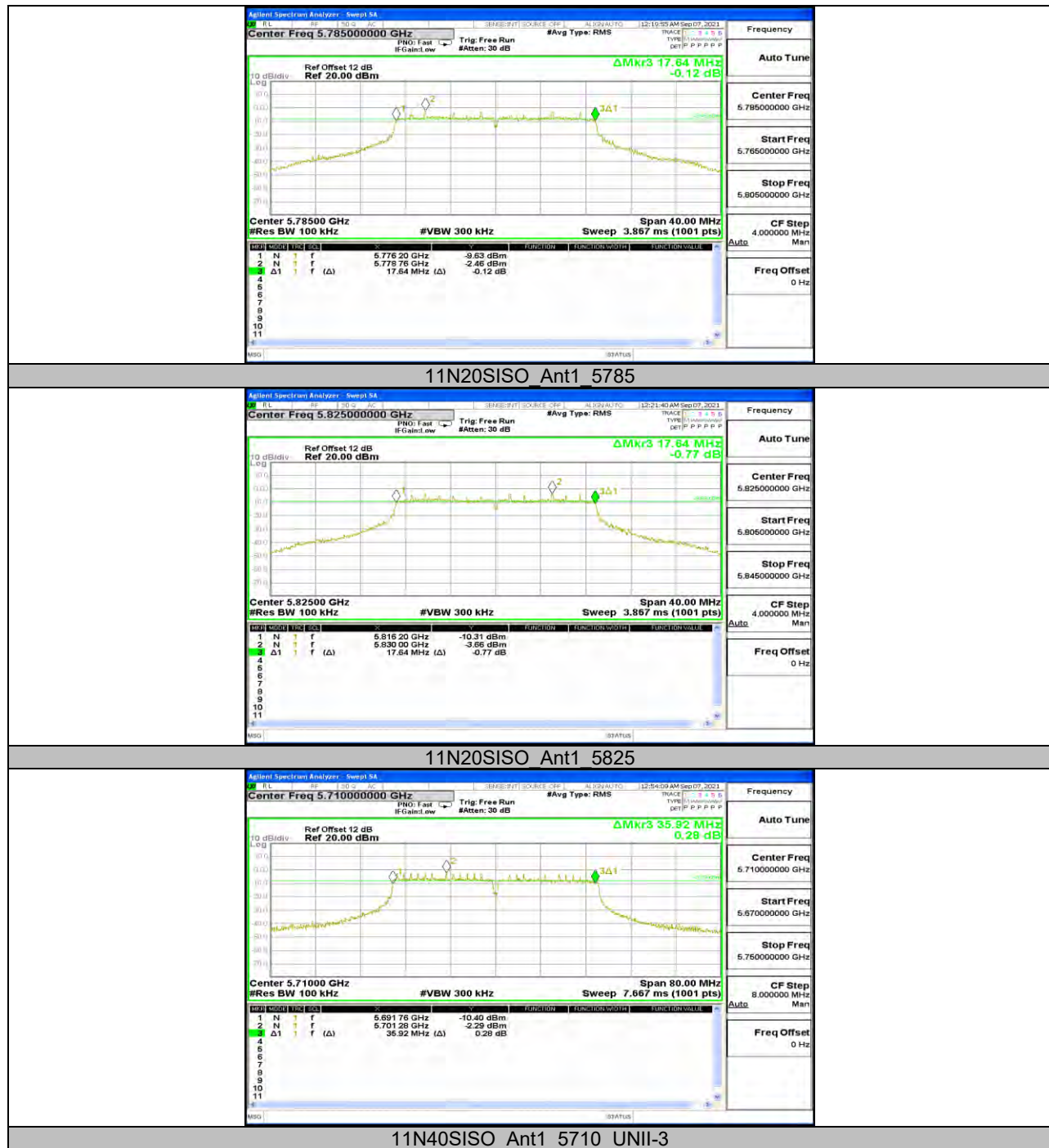
**13.3. Appendix A3: Min Emission Bandwidth****13.3.1. Test Result**

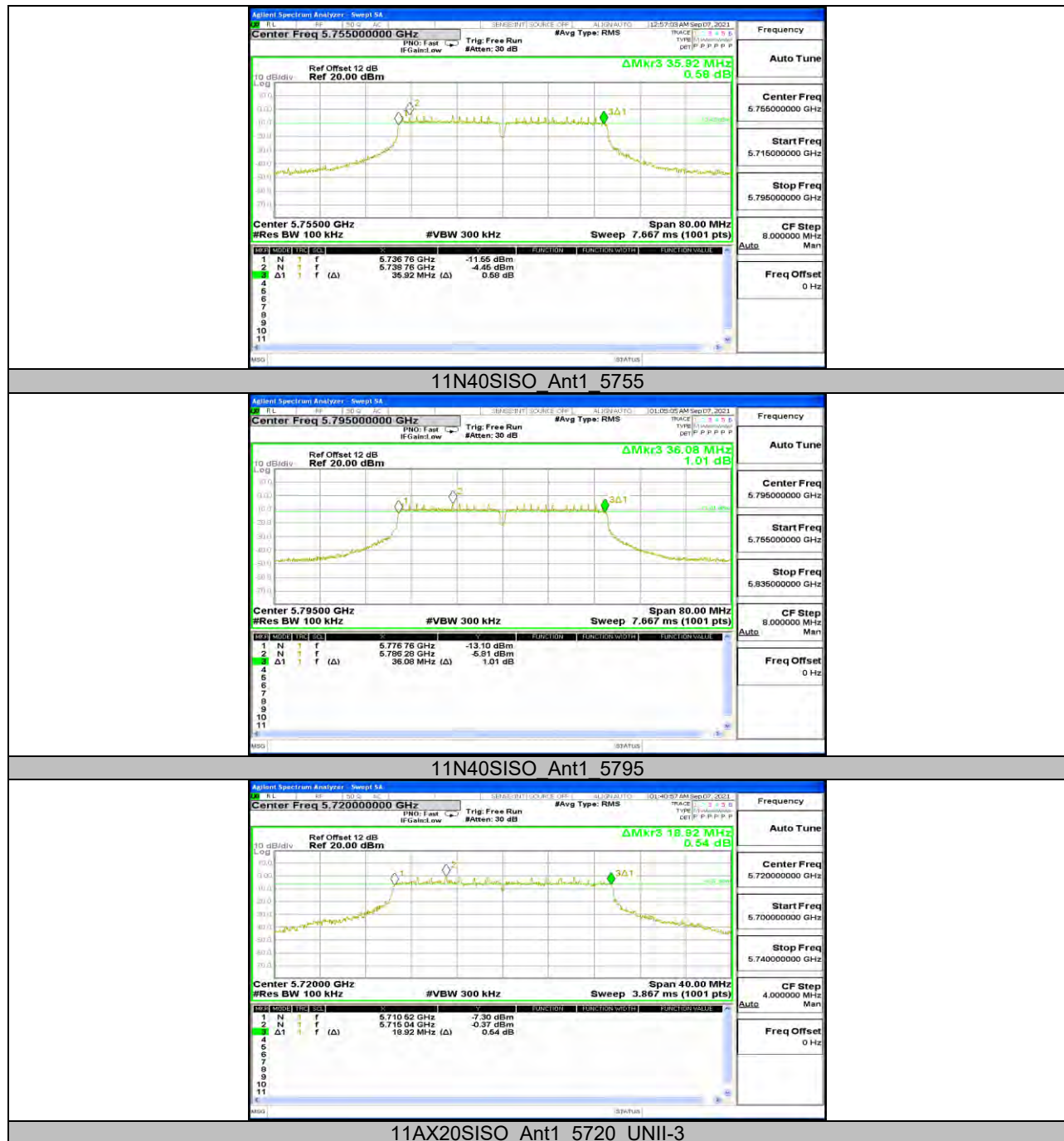
Test Mode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5720 UNII-3	2.96	5725	5727.960	0.5	PASS
		5745	16.080	5736.840	5752.920	0.5	PASS
		5785	16.120	5776.840	5792.960	0.5	PASS
		5825	16.400	5816.800	5833.200	0.5	PASS
11N20SISO	Ant1	5720 UNII-3	3.84	5725	5728.840	0.5	PASS
		5745	17.360	5736.200	5753.560	0.5	PASS
		5785	17.640	5776.200	5793.840	0.5	PASS
		5825	17.640	5816.200	5833.840	0.5	PASS
11N40SISO	Ant1	5710 UNII-3	2.68	5725	5727.680	0.5	PASS
		5755	35.920	5736.760	5772.680	0.5	PASS
		5795	36.080	5776.760	5812.840	0.5	PASS
11AX20SISO	Ant1	5720 UNII-3	4.44	5725	5729.44	0.5	PASS
		5745	18.720	5735.600	5754.320	0.5	PASS
		5785	18.920	5775.520	5794.440	0.5	PASS
		5825	18.800	5815.520	5834.320	0.5	PASS
11AX40SISO	Ant1	5710 UNII-3	3.96	5725	5728.96	0.5	PASS
		5755	38.080	5735.960	5774.040	0.5	PASS
		5795	38.000	5775.960	5813.960	0.5	PASS

13.3.2. Test Graphs













**13.4. Appendix B: Maximum Average 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	11.63	≤23.98	---	15.99	≤22.55	PASS
		5200	10.43	≤23.98	---	14.79	≤22.56	PASS
		5240	10.17	≤23.98	---	14.53	≤22.55	PASS
		5260	10.28	≤23.98	≤23.55	14.64	≤29.55	PASS
		5280	10.06	≤23.98	≤23.56	14.42	≤29.56	PASS
		5320	10.35	≤23.98	≤23.56	14.71	≤29.55	PASS
		5500	14.37	≤23.98	≤23.57	18.73	≤29.57	PASS
		5580	14.45	≤23.98	≤23.55	18.81	≤29.55	PASS
		5700	13.67	≤23.98	≤23.54	18.03	≤29.54	PASS
		5720 UNII-2C	12.03	≤23.37	≤22.49	16.39	≤28.49	PASS
		5720 UNII-3	5.99	≤30	≤30	10.35	---	PASS
		5745	12.39	≤30	≤30	16.75	---	PASS
		5785	11.72	≤30	≤30	16.08	---	PASS
		5825	10.64	≤30	≤30	15.00	---	PASS
11N20SISO	Ant1	5180	10.45	≤23.98	---	14.81	≤22.80	PASS
		5200	10.23	≤23.98	---	14.59	≤22.81	PASS
		5240	10.20	≤23.98	---	14.56	≤22.81	PASS
		5260	10.07	≤23.98	≤23.81	14.43	≤29.81	PASS
		5280	9.83	≤23.98	≤23.82	14.19	≤29.82	PASS
		5320	10.36	≤23.98	≤23.81	14.72	≤29.81	PASS
		5500	12.60	≤23.98	≤23.84	16.96	≤29.84	PASS
		5580	12.25	≤23.98	≤23.83	16.61	≤29.83	PASS
		5700	11.18	≤23.98	≤23.82	15.54	≤29.82	PASS
		5720 UNII-2C	12.13	≤23.44	≤22.651	16.49	≤28.65	PASS
		5720 UNII-3	6.30	≤30	≤30	10.66	---	PASS
		5745	12.69	≤30	≤30	17.05	---	PASS
		5785	11.79	≤30	≤30	16.15	---	PASS
		5825	10.76	≤30	≤30	15.12	---	PASS
11N40SISO	Ant1	5190	10.60	≤23.98	---	14.96	≤23	PASS
		5230	10.32	≤23.98	---	14.68	≤23	PASS
		5270	10.20	≤23.98	≤23.98	14.56	≤30	PASS
		5310	10.50	≤23.98	≤23.98	14.86	≤30	PASS
		5510	14.24	≤23.98	≤23.98	18.60	≤30	PASS
		5550	14.63	≤23.98	≤23.98	18.99	≤30	PASS
		5670	14.28	≤23.98	≤23.98	18.64	≤30	PASS
		5710 UNII-2C	12.94	≤23.98	≤23.98	17.30	≤30	PASS
		5710 UNII-3	2.47	≤30	≤30	6.83	---	PASS
		5755	12.80	≤30	≤30	17.16	---	PASS
		5795	11.44	≤30	≤30	15.80	---	PASS
11AX20SISO	Ant1	5180	10.41	≤23.98	---	14.77	≤22.97	PASS
		5200	10.47	≤23.98	---	14.83	≤22.95	PASS
		5240	10.56	≤23.98	---	14.92	≤22.93	PASS
		5260	10.11	≤23.98	≤23.93	14.47	≤29.93	PASS
		5280	10.40	≤23.98	≤23.95	14.76	≤29.95	PASS
		5320	10.65	≤23.98	≤23.94	15.01	≤29.94	PASS
		5500	14.88	≤23.98	≤23.95	19.24	≤29.95	PASS
		5580	14.67	≤23.98	≤23.93	19.03	≤29.93	PASS
		5700	13.95	≤23.98	≤23.94	18.31	≤29.95	PASS
		5720 UNII-2C	12.21	≤23.98	≤22.71	16.57	≤28.71	PASS
		5720 UNII-3	7.07	≤30	≤30	11.43	---	PASS
		5745	12.82	≤30	≤30	17.18	---	PASS
		5785	11.94	≤30	≤30	16.30	---	PASS



		5825	11.23	≤30	≤30	15.59	---	PASS
11AX40SISO	Ant1	5190	10.60	≤23.98	---	14.96	≤23	PASS
		5230	10.77	≤23.98	---	15.13	≤23	PASS
		5270	10.12	≤23.98	≤23.98	14.48	≤30	PASS
		5310	10.62	≤23.98	≤23.98	14.98	≤30	PASS
		5510	14.39	≤23.98	≤23.98	18.75	≤30	PASS
		5550	14.93	≤23.98	≤23.98	19.29	≤30	PASS
		5670	14.63	≤23.98	≤23.98	18.99	≤30	PASS
		5710 UNII-2C	13.29	≤23.98	≤23.98	17.65	≤30	PASS
		5710 UNII-3	3.48	≤30	≤30	7.84	---	PASS
		5755	12.81	≤30	≤30	17.17	---	PASS
		5795	11.84	≤30	≤30	16.20	---	PASS

Note: 1. Conducted Power=Meas. Level+ Correction Factor

2. The Duty Cycle Factor (refer to section 7.1) had already compensated to the test data.

**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]	Limit [dBm/MHz]	Verdict
11A	Ant1	5180	0.39	≤11	4.75	≤10	PASS
		5200	-0.43	≤11	3.93	≤10	PASS
		5240	1.67	≤11	6.03	≤10	PASS
		5260	-0.48	≤11	---	---	PASS
		5280	-0.94	≤11	---	---	PASS
		5320	-0.71	≤11	---	---	PASS
		5500	-10.43	≤11	---	---	PASS
		5580	-10.59	≤11	---	---	PASS
		5700	-11.24	≤11	---	---	PASS
		5720_UNII-2C	-8.38	≤11	---	---	PASS
		5720_UNII-3	-11.73	≤11	---	---	PASS
		5745	-1.14	≤30	---	---	PASS
		5785	-1.63	≤30	---	---	PASS
		5825	-2.96	≤30	---	---	PASS
11N20SISO	Ant1	5180	-0.81	≤11	3.55	≤10	PASS
		5200	-0.45	≤11	3.91	≤10	PASS
		5240	-1.24	≤11	3.12	≤10	PASS
		5260	-1.13	≤11	---	---	PASS
		5280	-1.25	≤11	---	---	PASS
		5320	-0.62	≤11	---	---	PASS
		5500	1.13	≤11	---	---	PASS
		5580	0.83	≤11	---	---	PASS
		5700	-0.12	≤11	---	---	PASS
		5720_UNII-2C	2.13	≤11	---	---	PASS
		5720_UNII-3	-0.66	≤11	---	---	PASS
		5745	-1.09	≤30	---	---	PASS
		5785	-2.06	≤30	---	---	PASS
		5825	-2.88	≤30	---	---	PASS
11N40SISO	Ant1	5190	-3.63	≤11	0.73	≤10	PASS
		5230	-4	≤11	0.36	≤10	PASS
		5270	-3.98	≤11	---	---	PASS
		5310	-3.46	≤11	---	---	PASS
		5510	0.57	≤11	---	---	PASS
		5550	0.55	≤11	---	---	PASS
		5670	0.18	≤11	---	---	PASS
		5710_UNII-2C	0.43	≤11	---	---	PASS
		5710_UNII-3	-3.65	≤11	---	---	PASS
		5755	-4.35	≤30	---	---	PASS
11AX20SISO	Ant1	5795	-5.47	≤30	---	---	PASS
		5180	-0.96	≤11	3.40	≤10	PASS
		5200	-0.79	≤11	3.57	≤10	PASS
		5240	-0.72	≤11	3.64	≤10	PASS
		5260	-0.49	≤11	---	---	PASS
		5280	-0.64	≤11	---	---	PASS
		5320	-0.84	≤11	---	---	PASS
		5500	3.38	≤11	---	---	PASS
		5580	3.31	≤11	---	---	PASS
		5700	2.3	≤11	---	---	PASS
		5720_UNII-2C	2.1	≤11	---	---	PASS

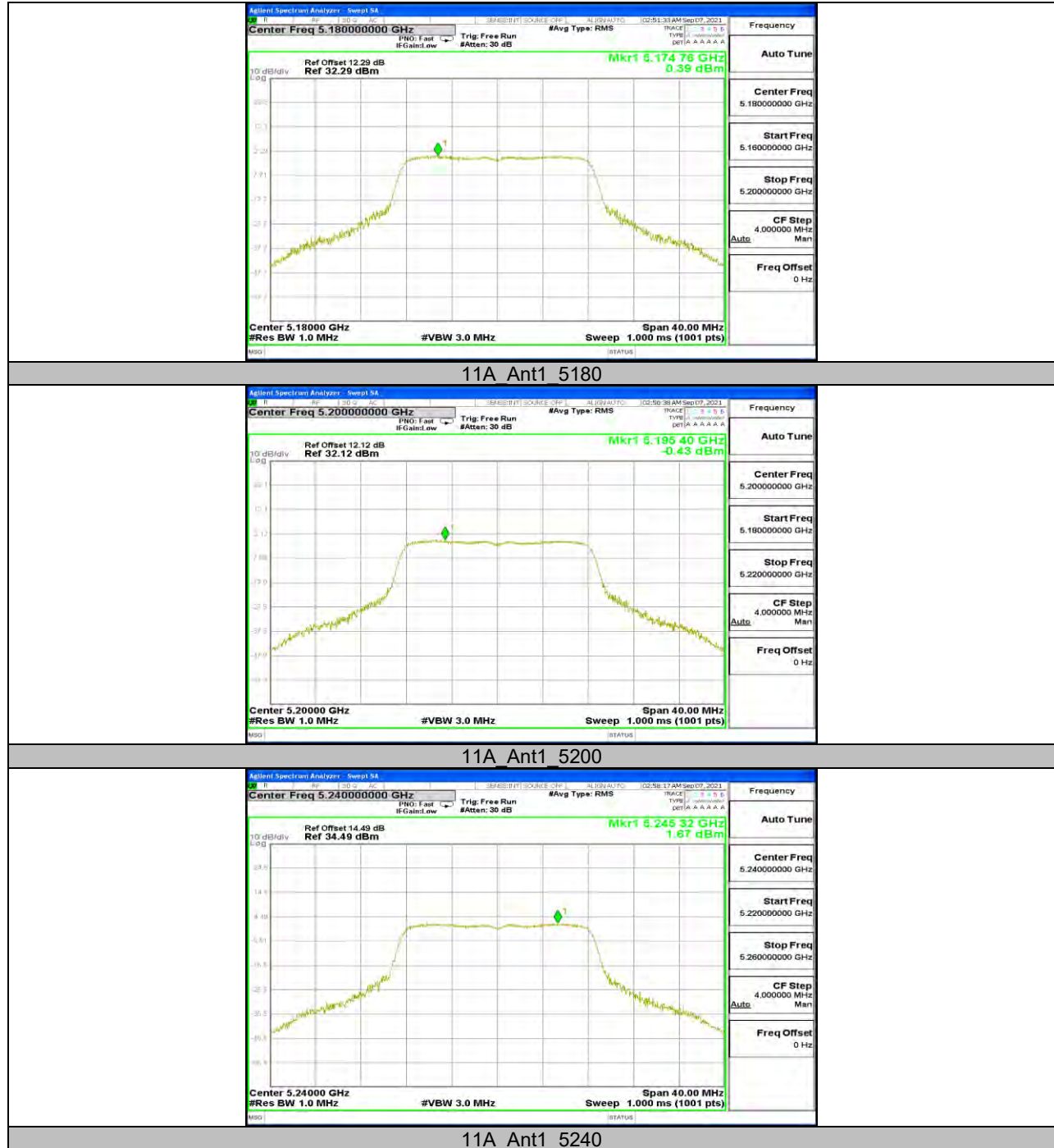


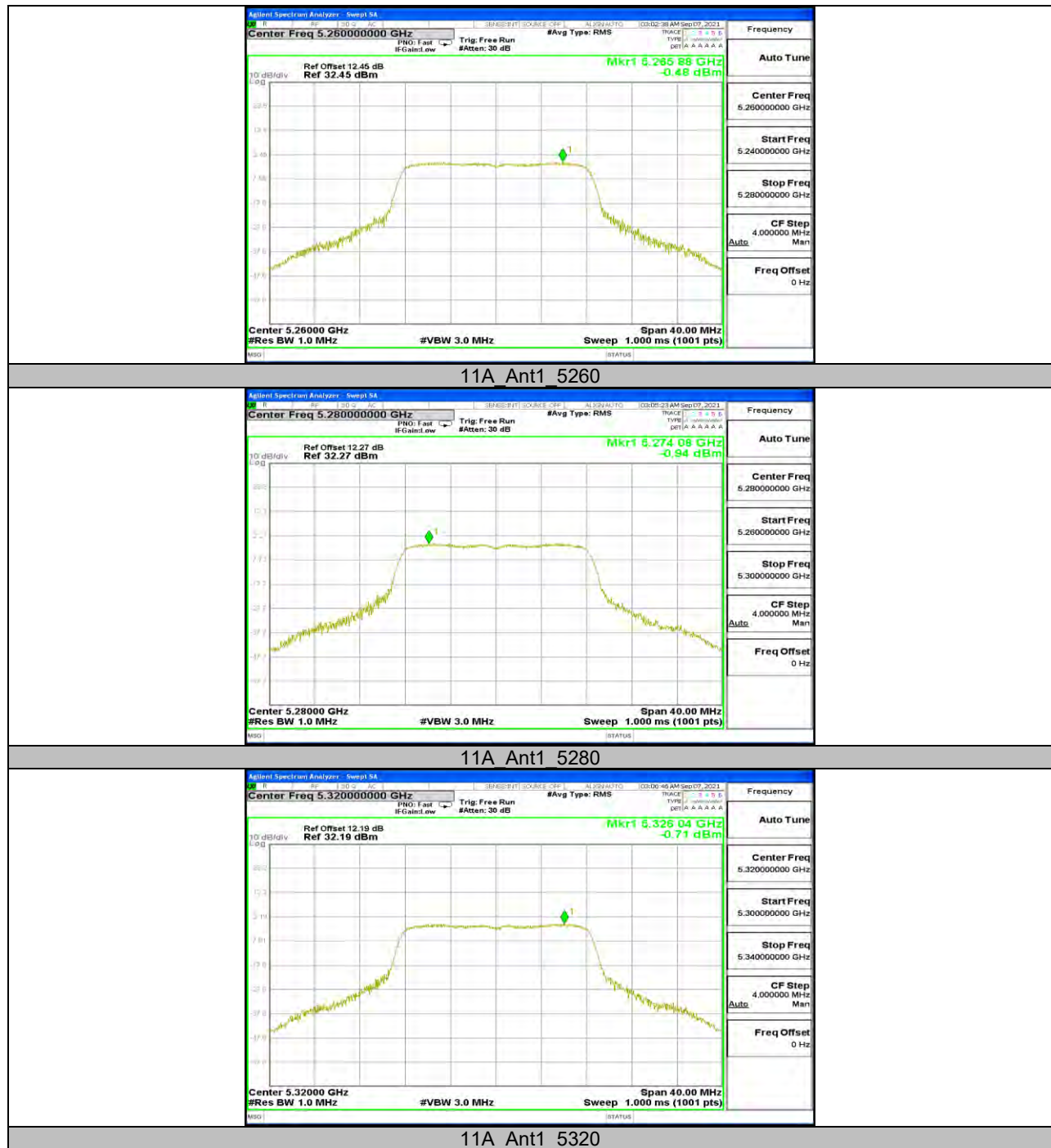
		5720 UNII-3	-1.16	≤ 11	---	---	PASS
		5745	-0.7	≤ 30	---	---	PASS
		5785	-2.17	≤ 30	---	---	PASS
		5825	-3.29	≤ 30	---	---	PASS
11AX40SISO	Ant1	5190	-3.91	≤ 11	0.45	≤ 10	PASS
		5230	-3.61	≤ 11	0.75	≤ 10	PASS
		5270	-4.09	≤ 11	---	---	PASS
		5310	-4.28	≤ 11	---	---	PASS
		5510	0.06	≤ 11	---	---	PASS
		5550	0.6	≤ 11	---	---	PASS
		5670	0.14	≤ 11	---	---	PASS
		5710 UNII-2C	-0.86	≤ 11	---	---	PASS
		5710 UNII-3	-4.07	≤ 11	---	---	PASS
		5755	-3.89	≤ 30	---	---	PASS
		5795	-4.86	≤ 30	---	---	PASS

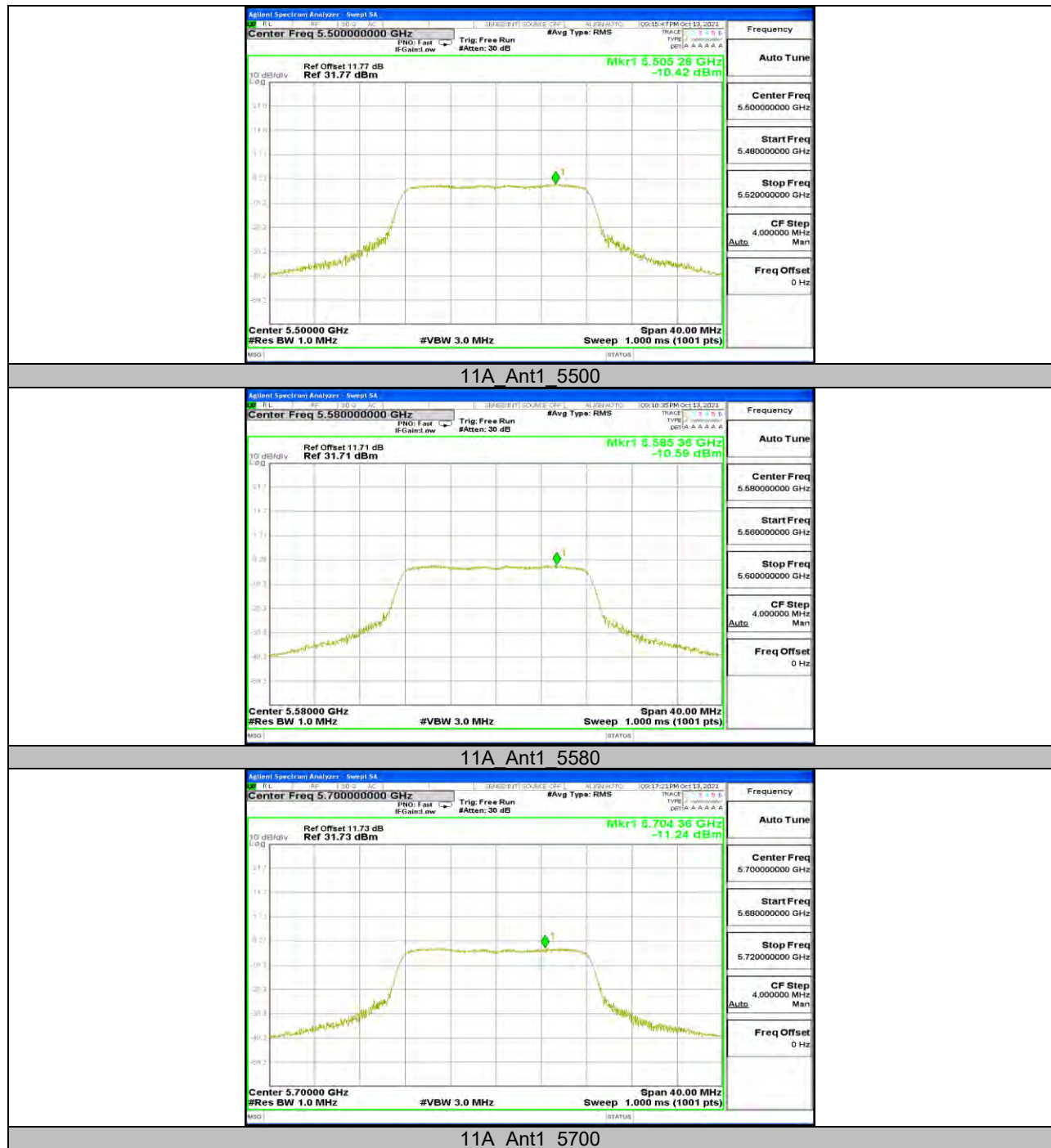
Note: 1. The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

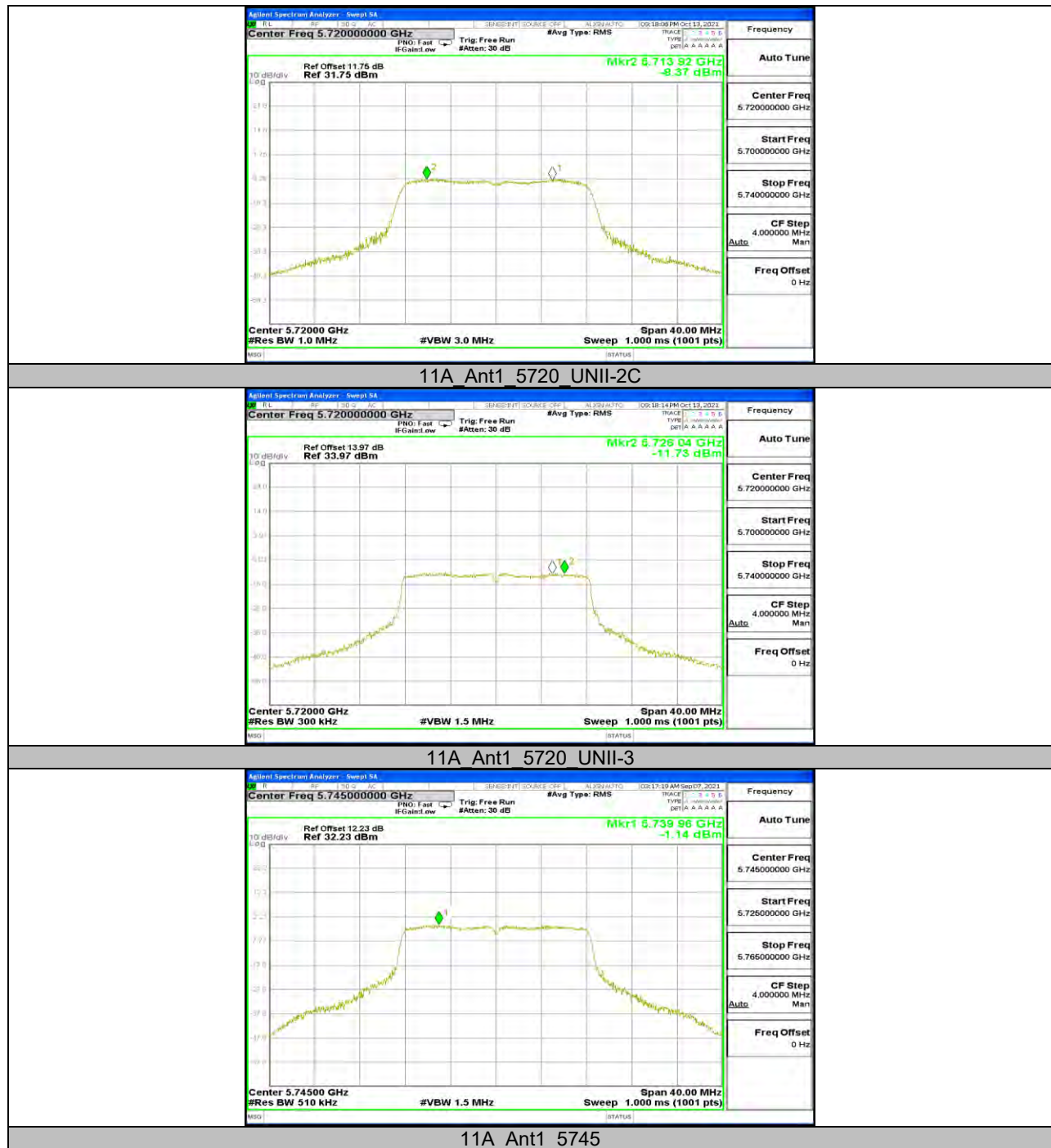
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.

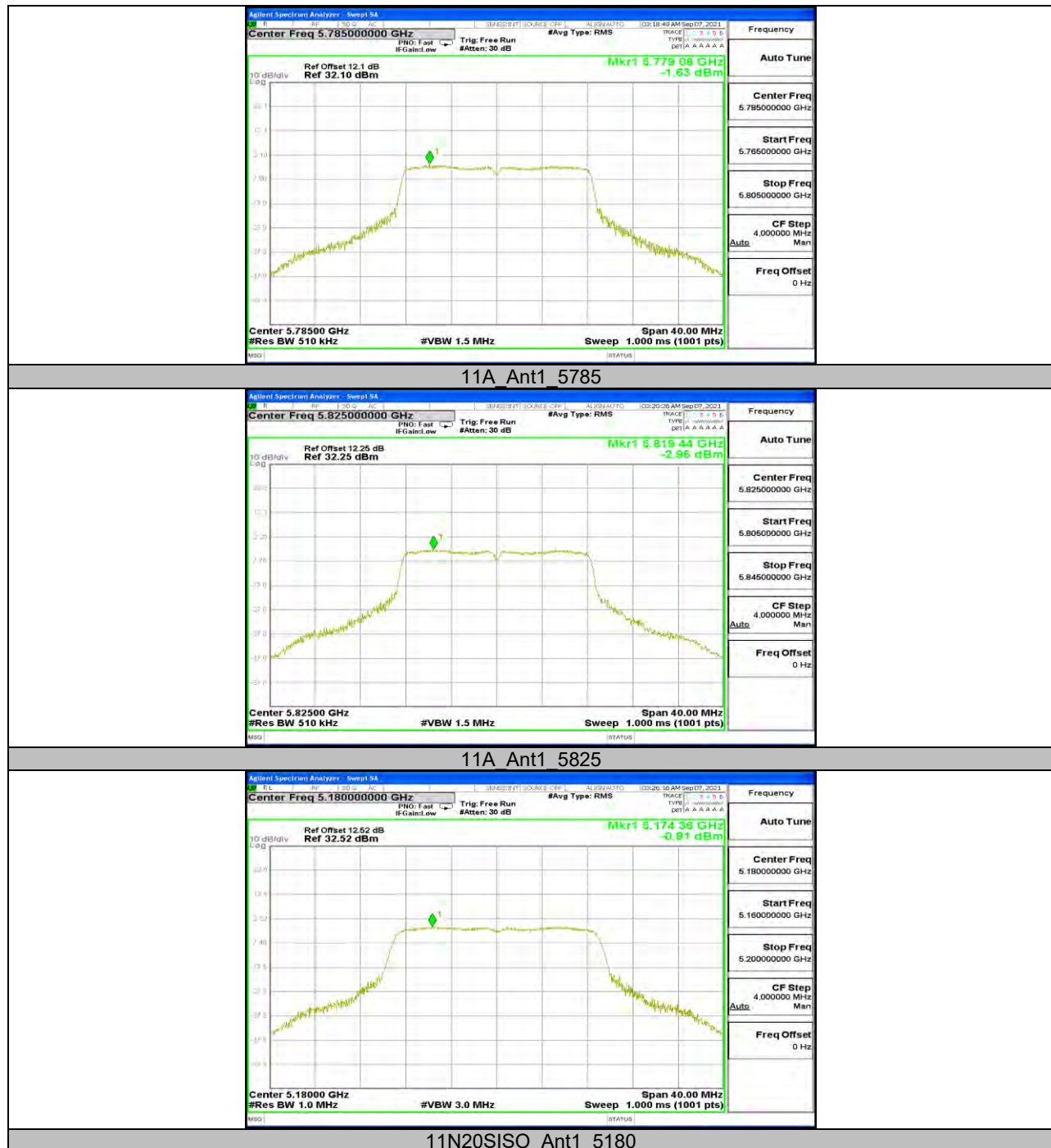
13.5.2. Test Graphs

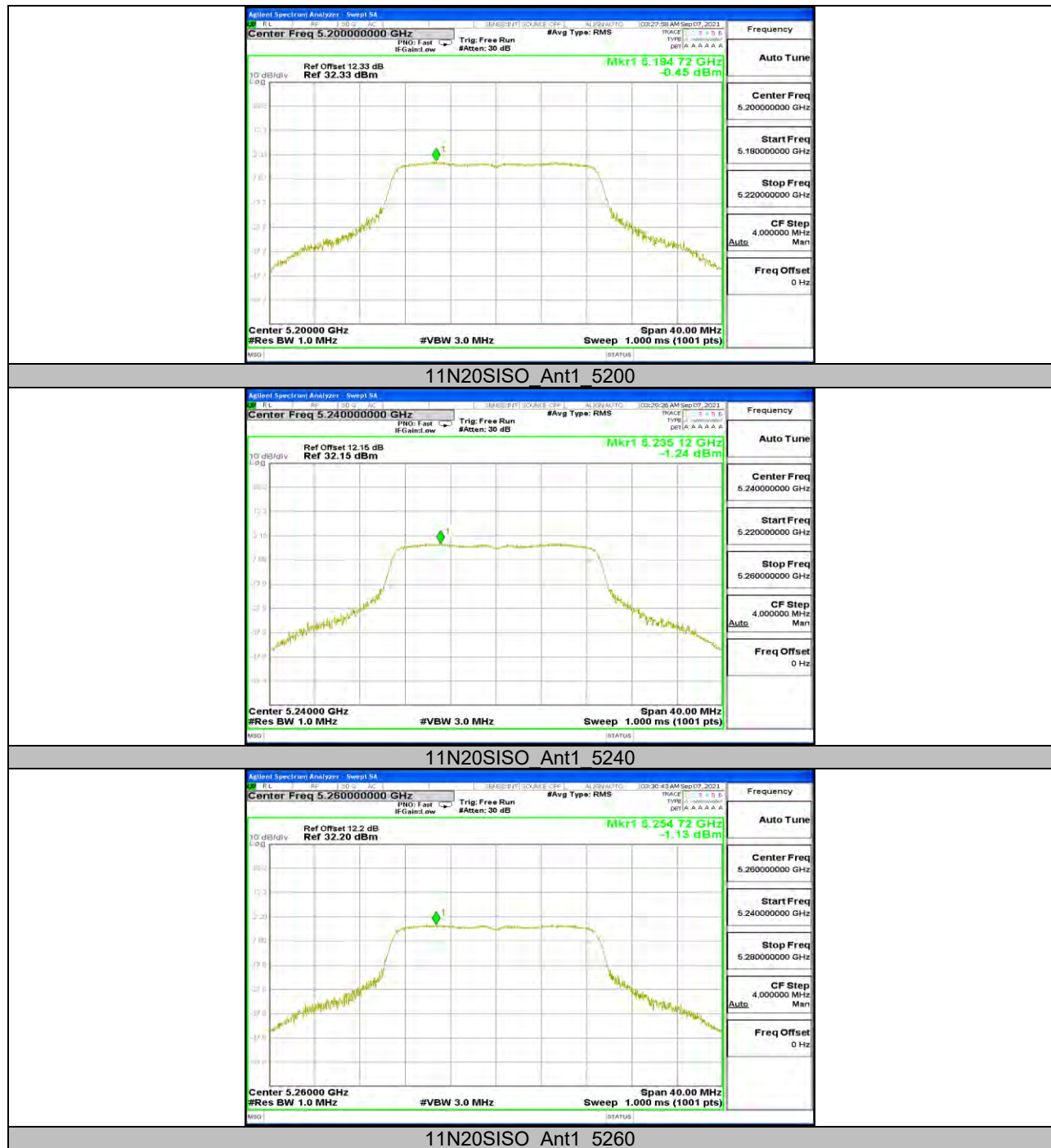


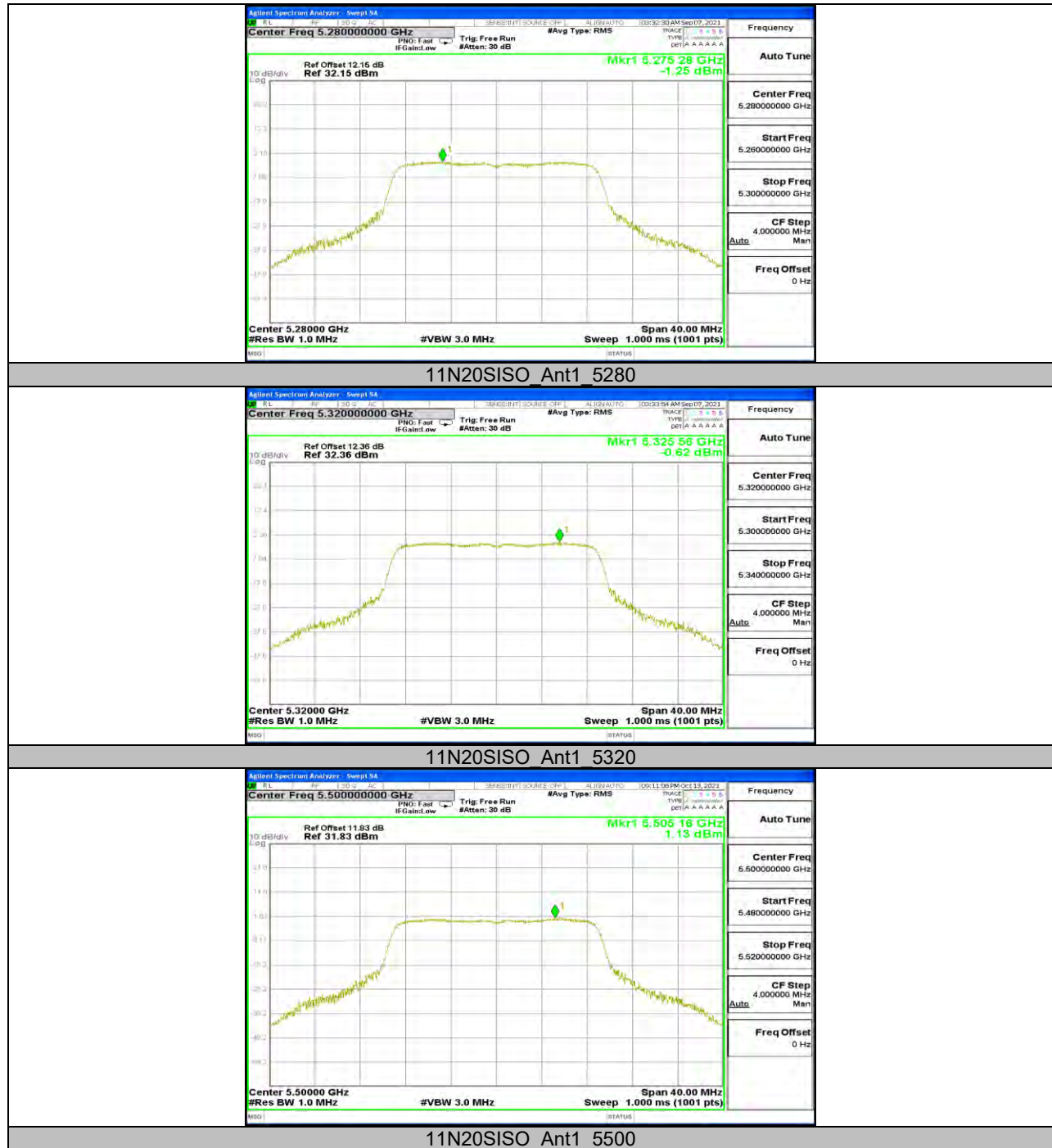


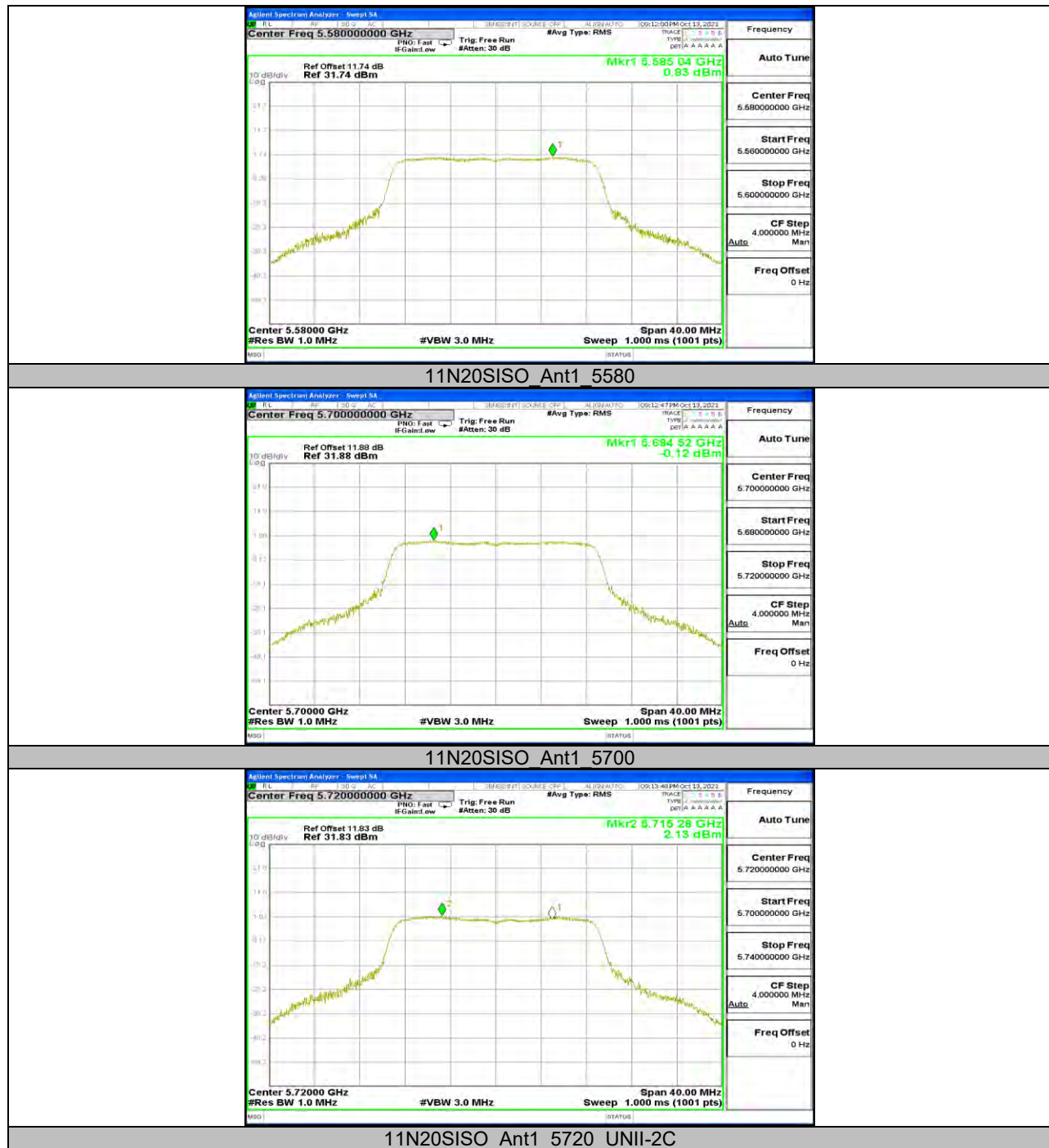


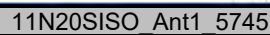
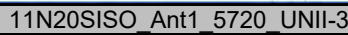
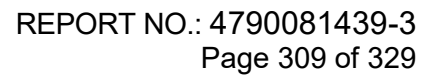


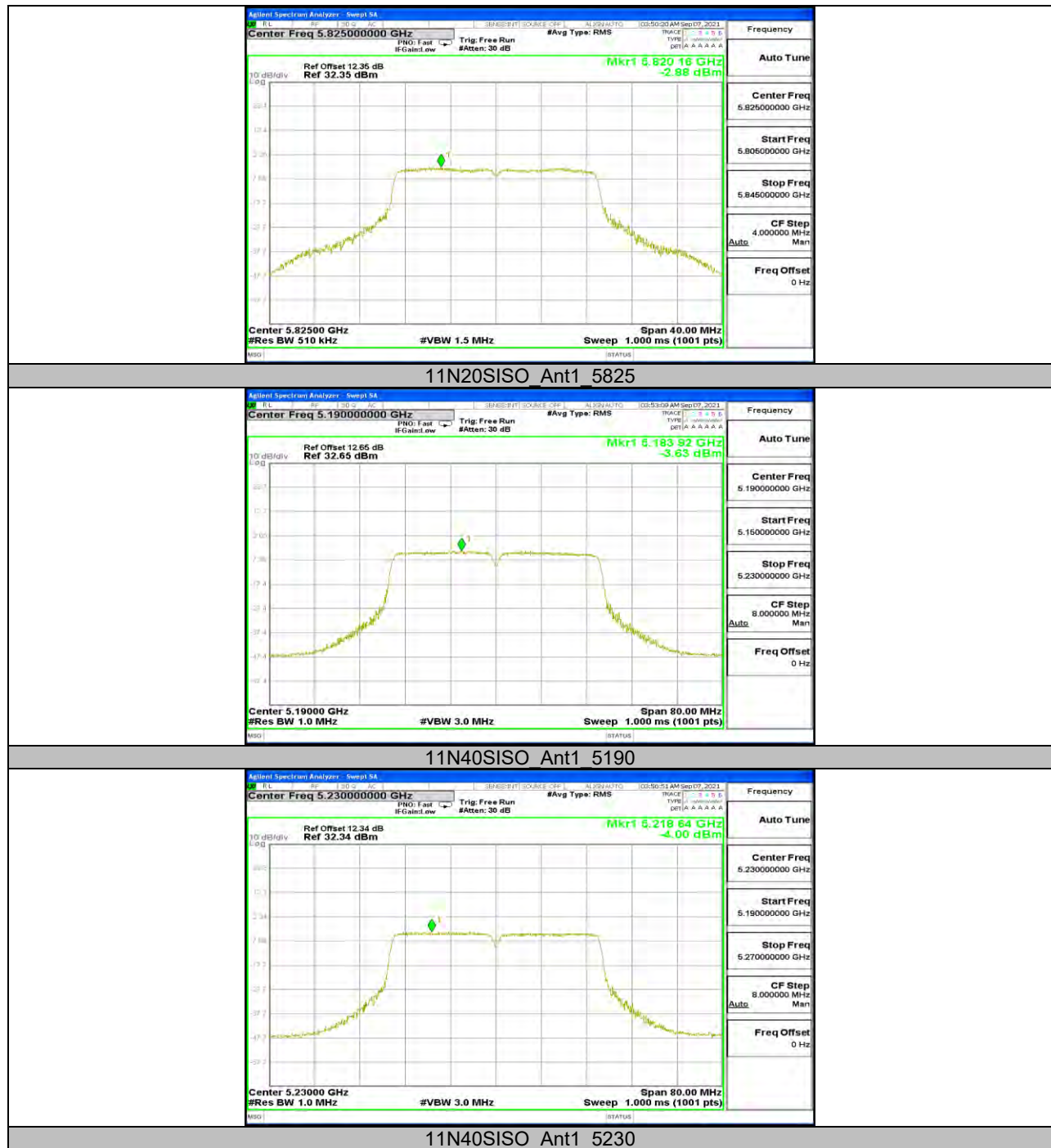


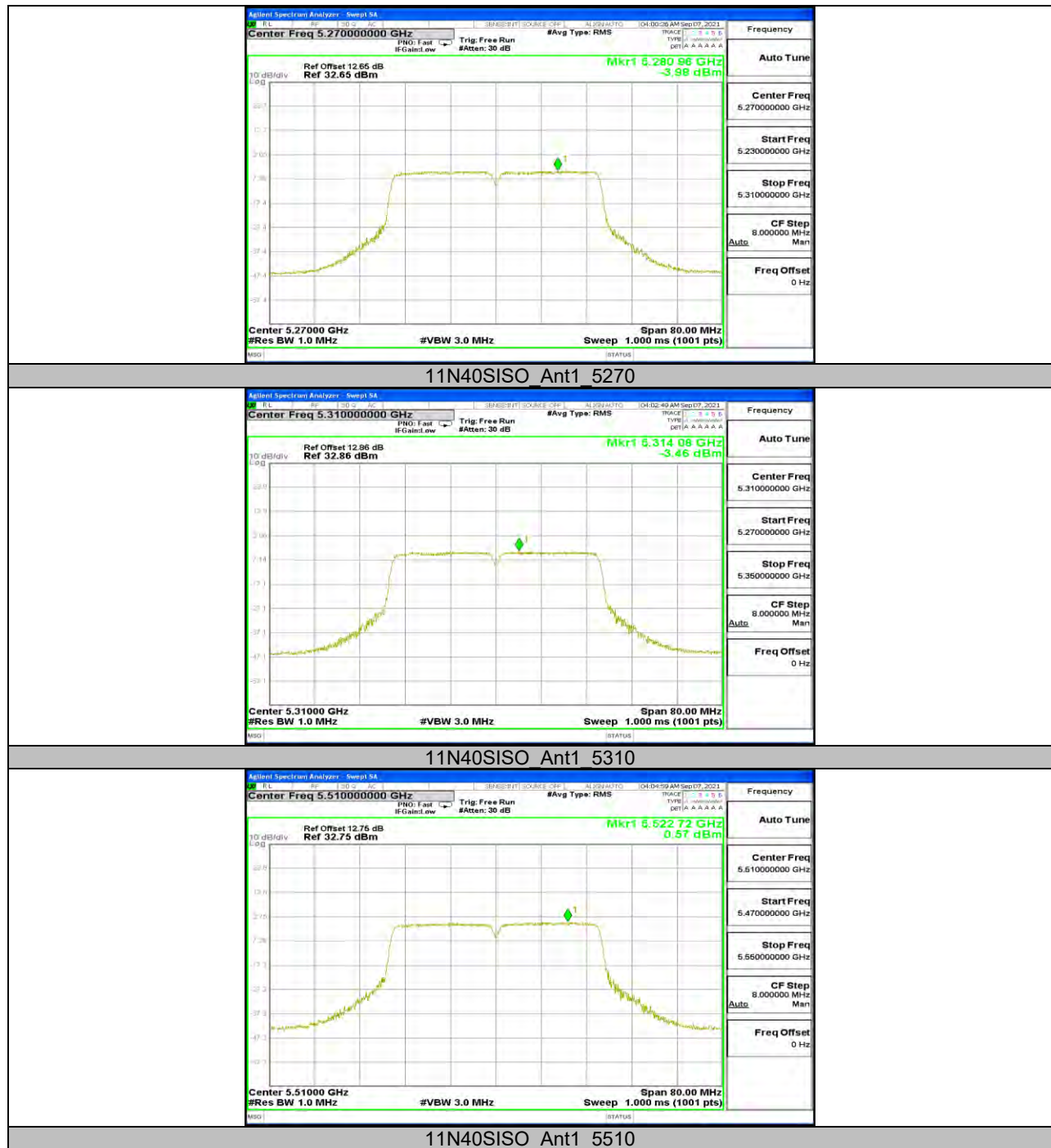


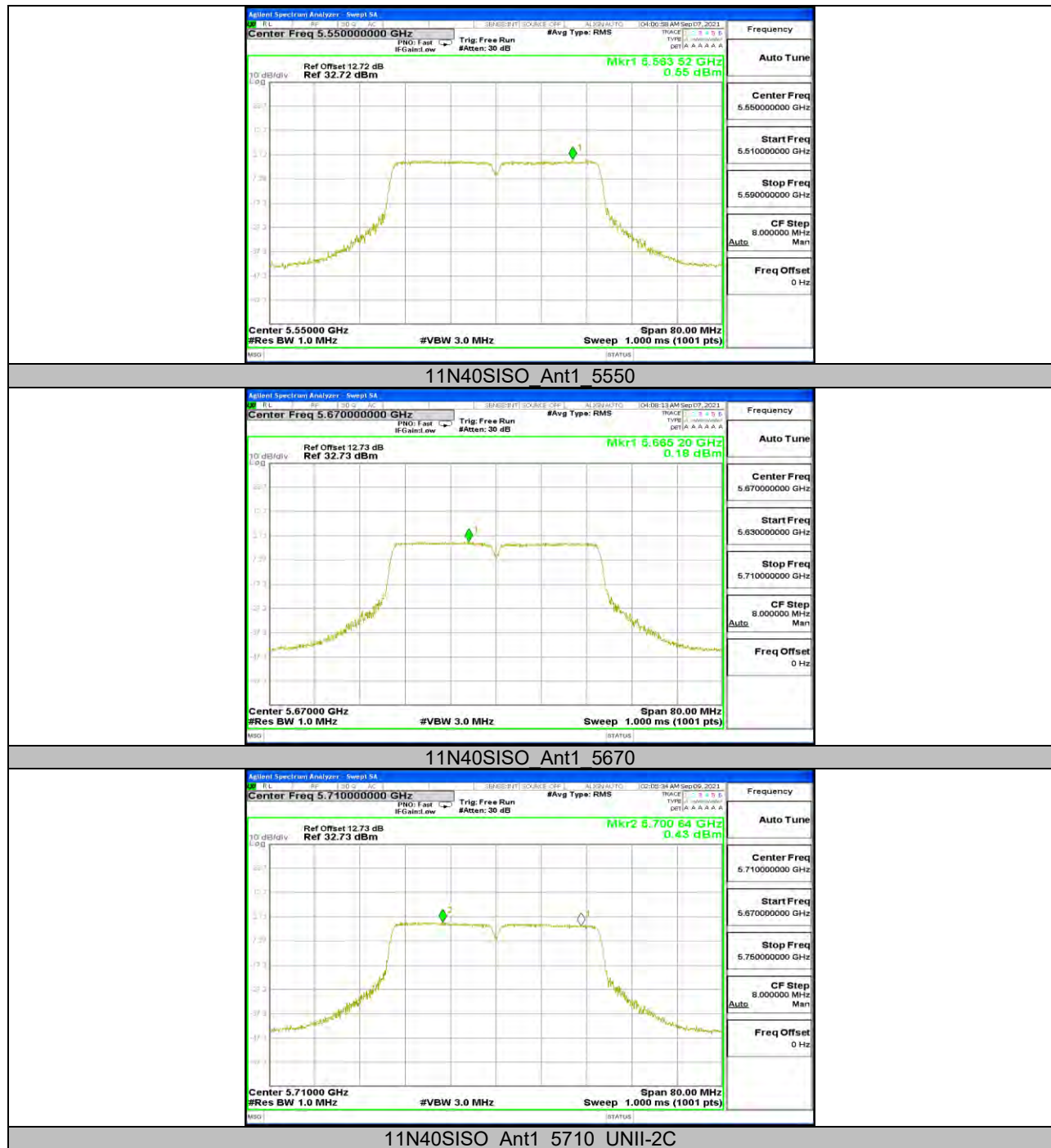


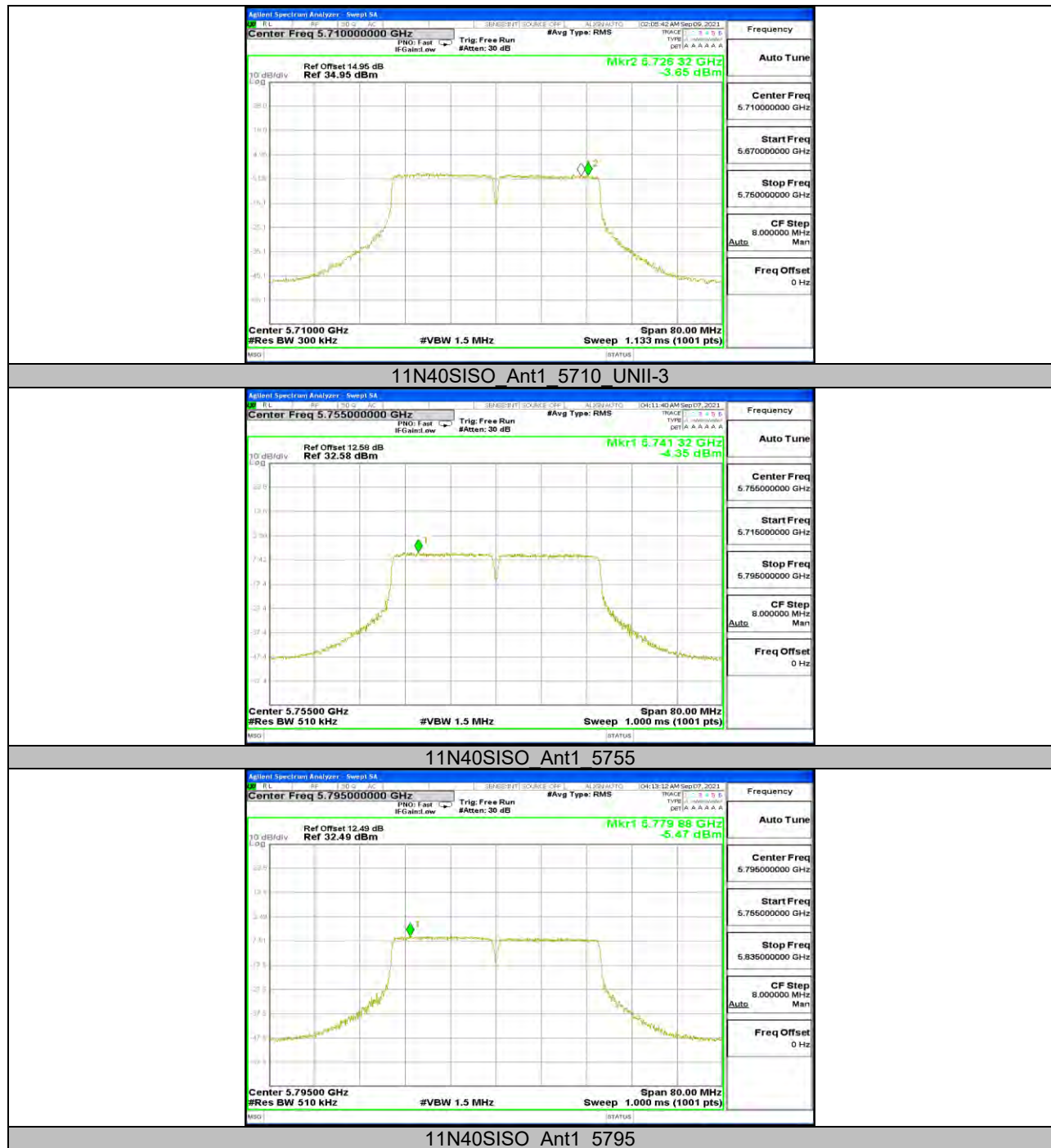


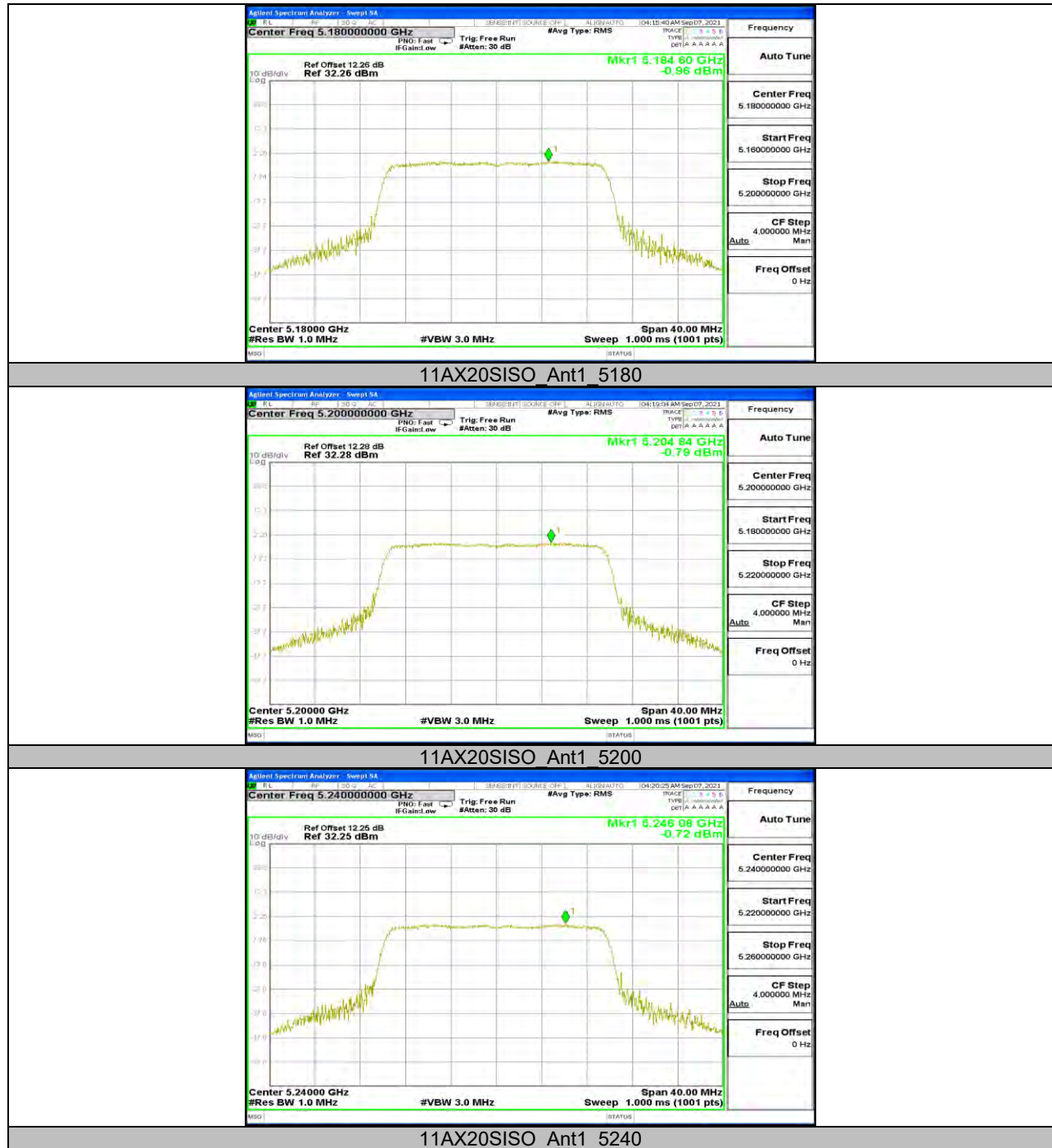


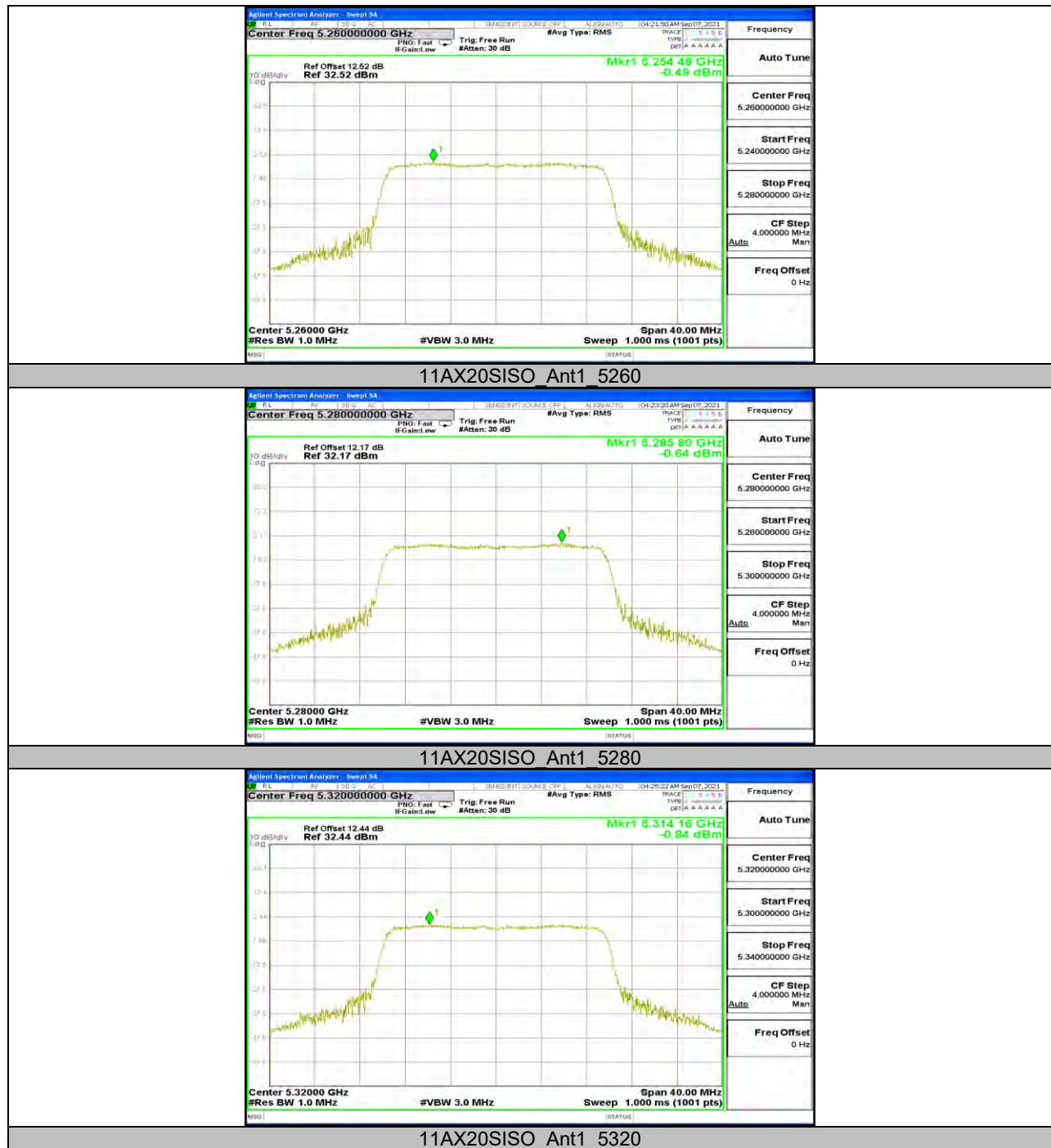


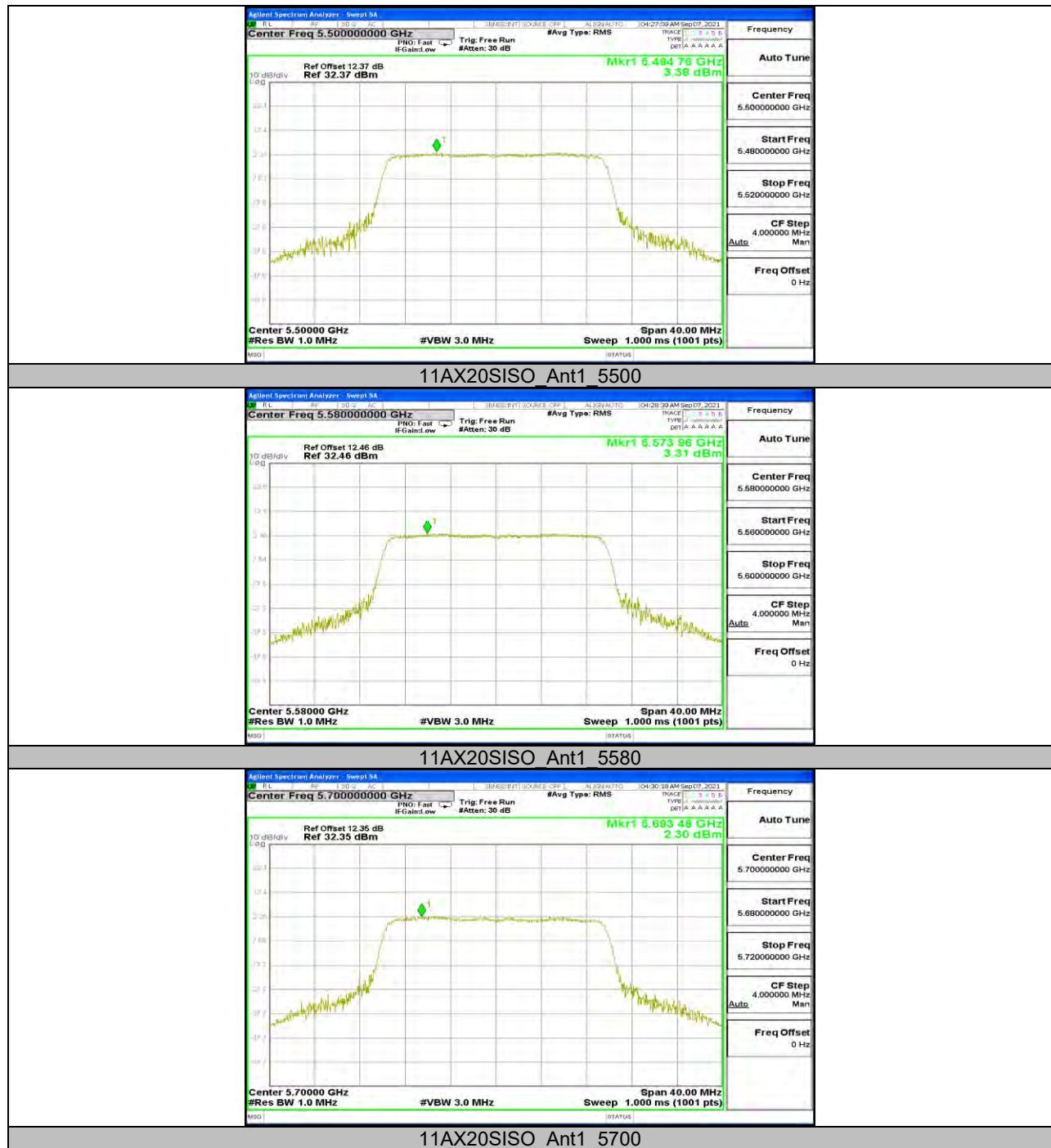


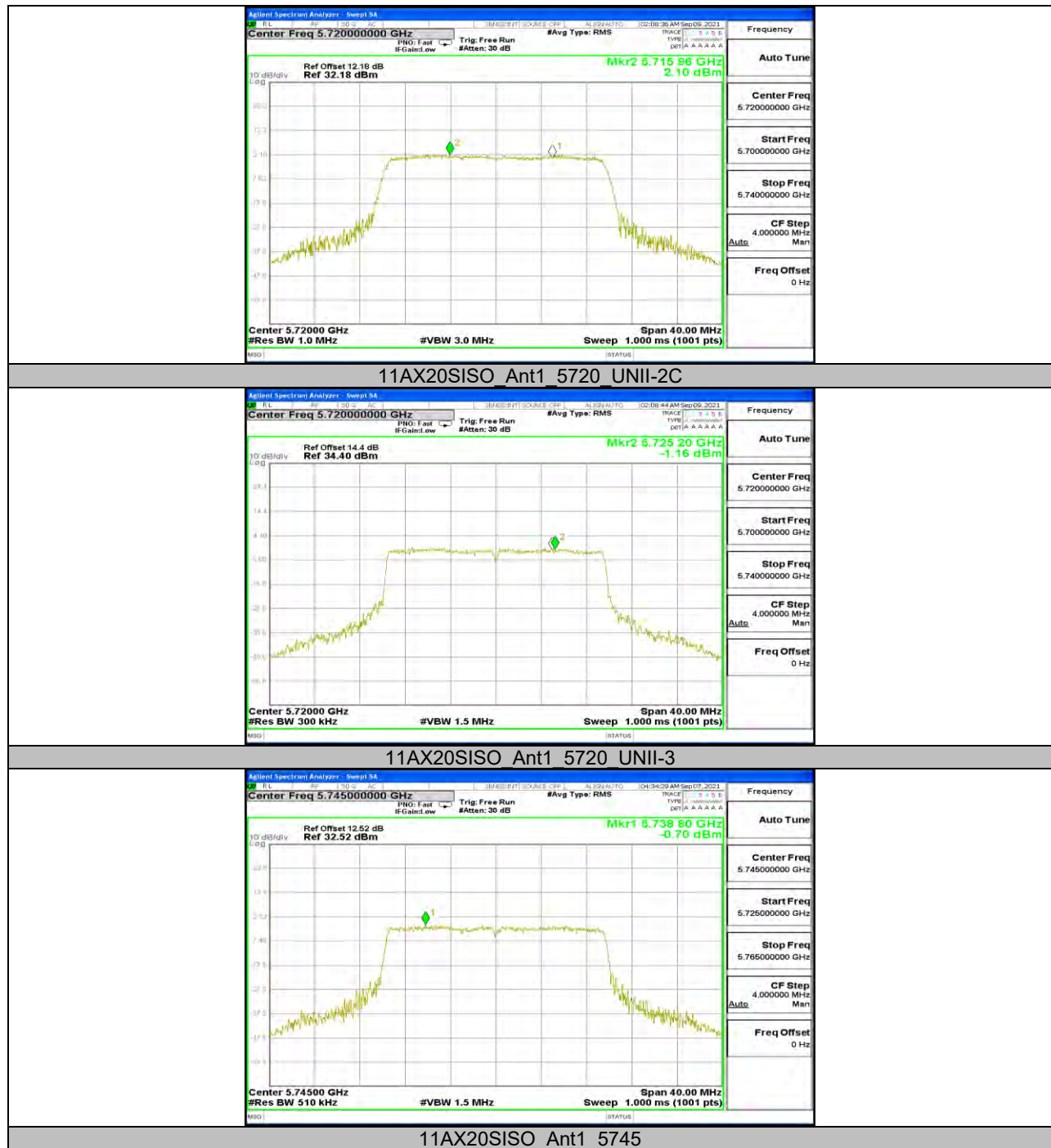


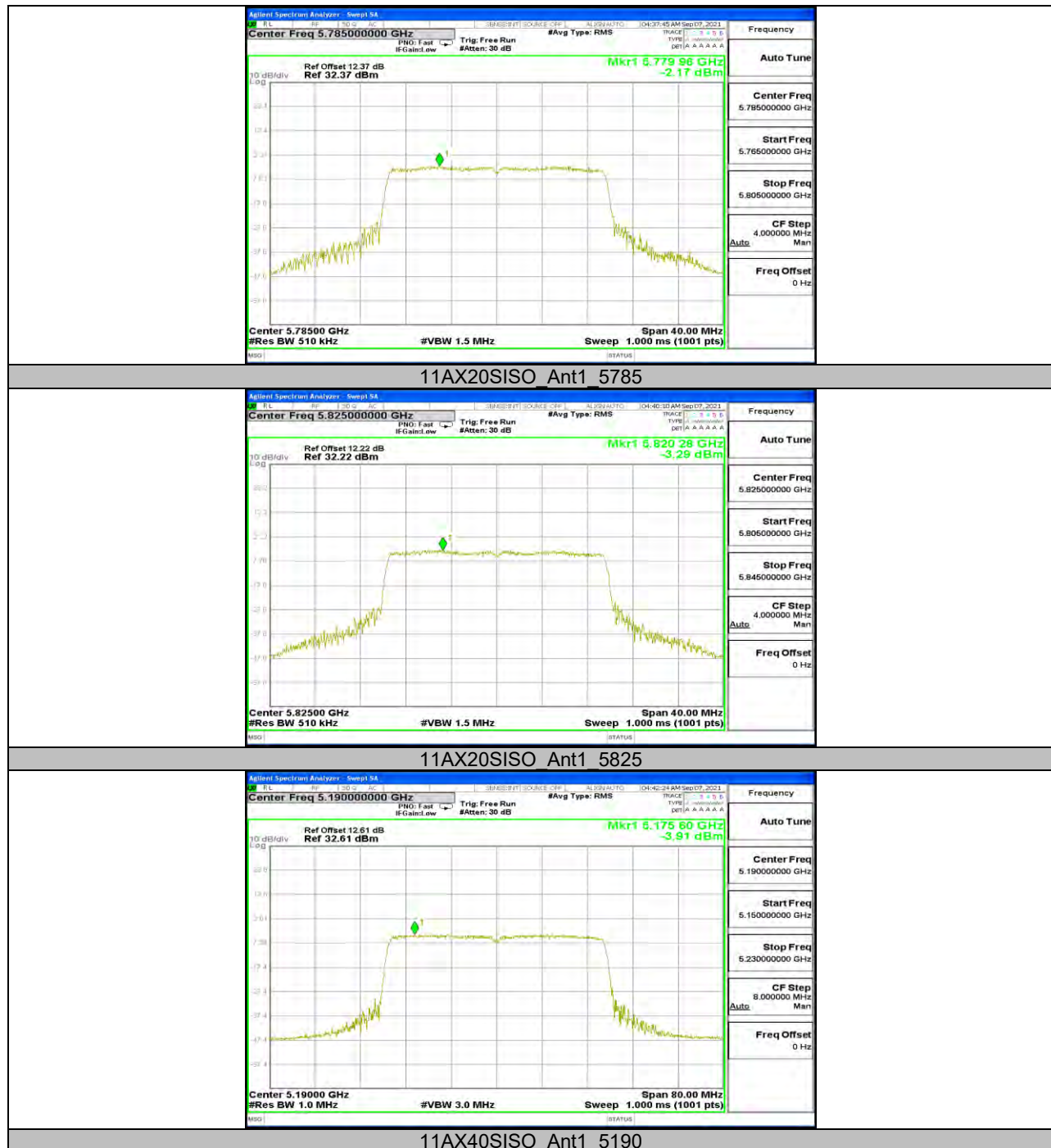


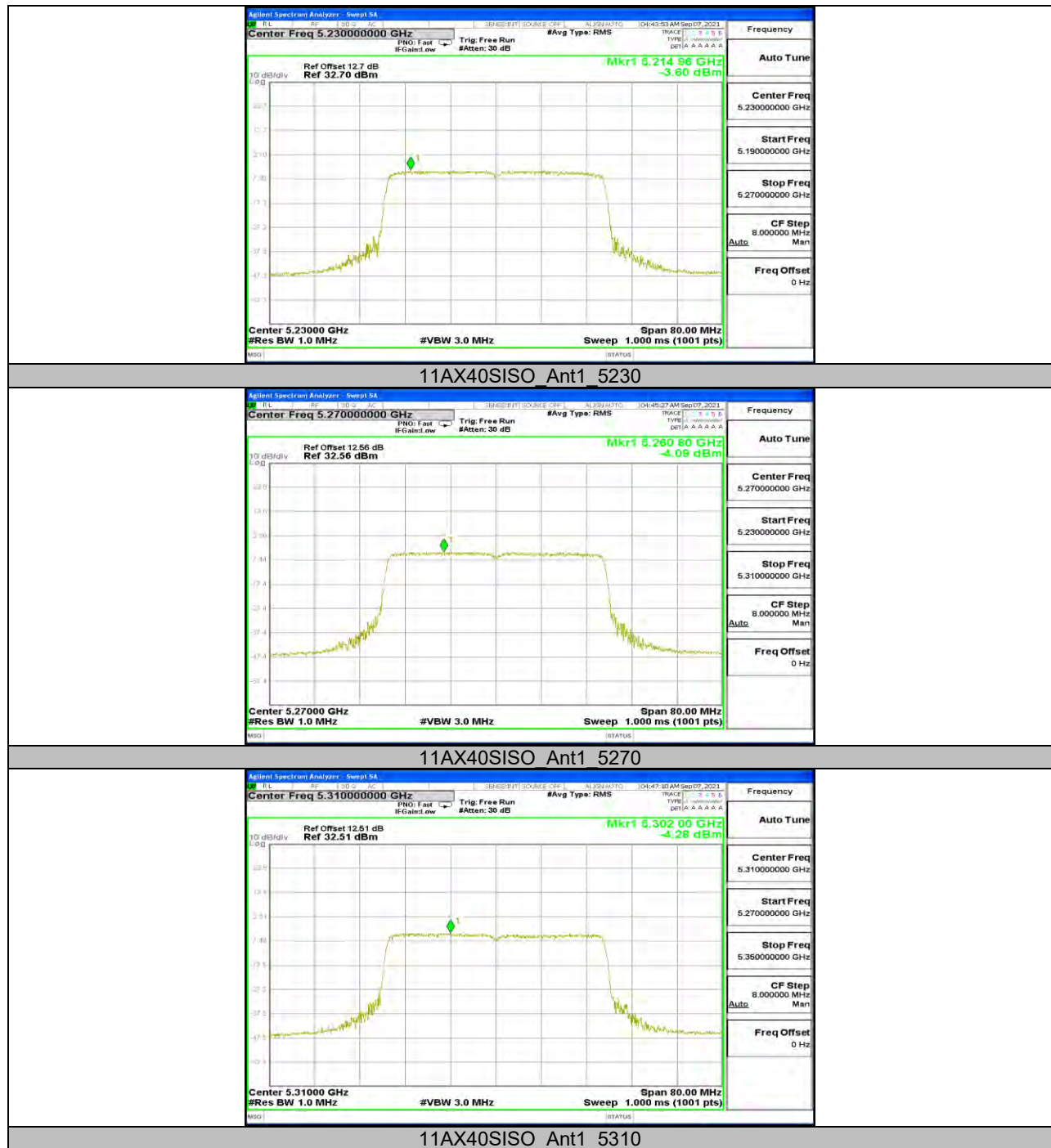


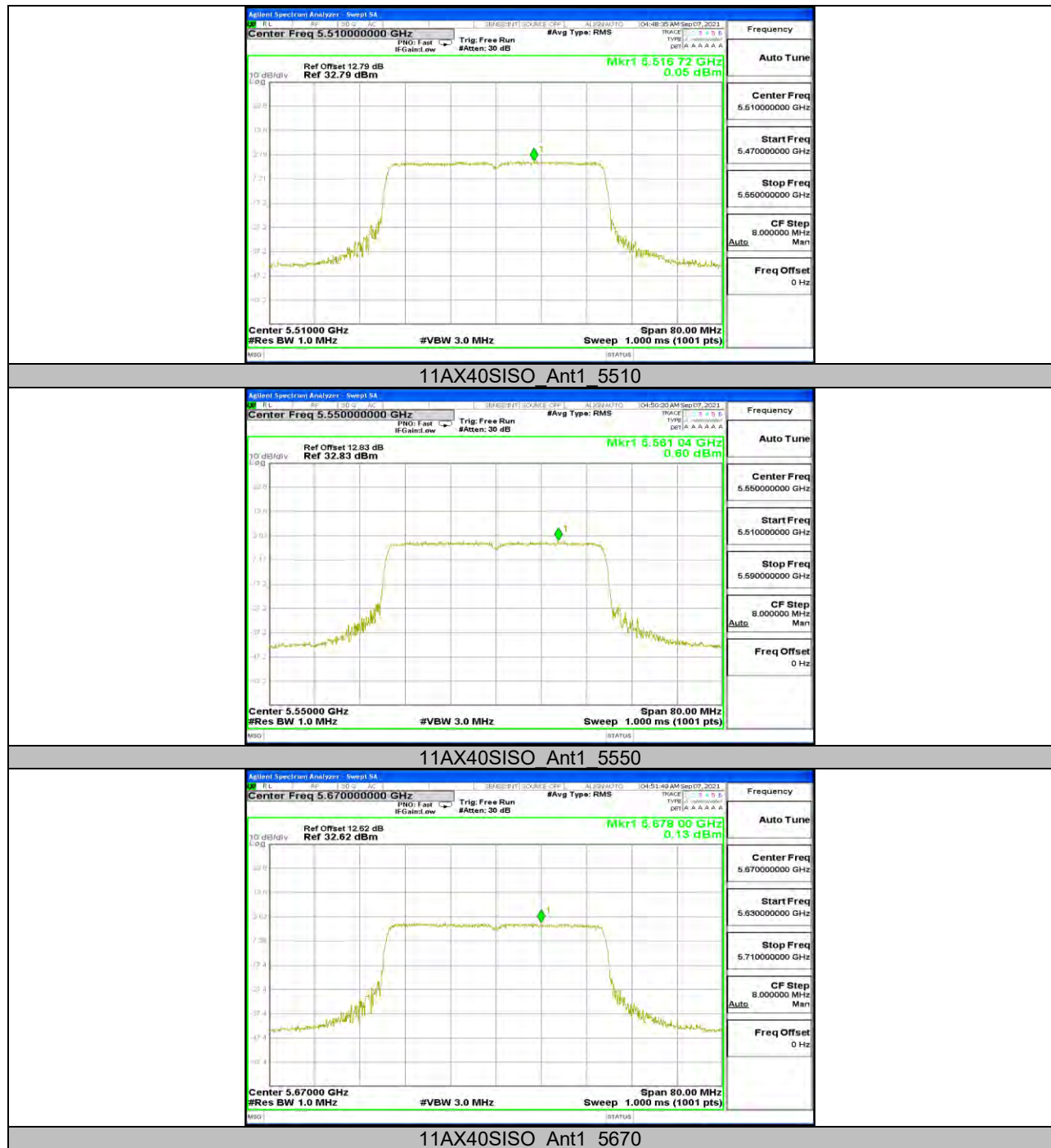


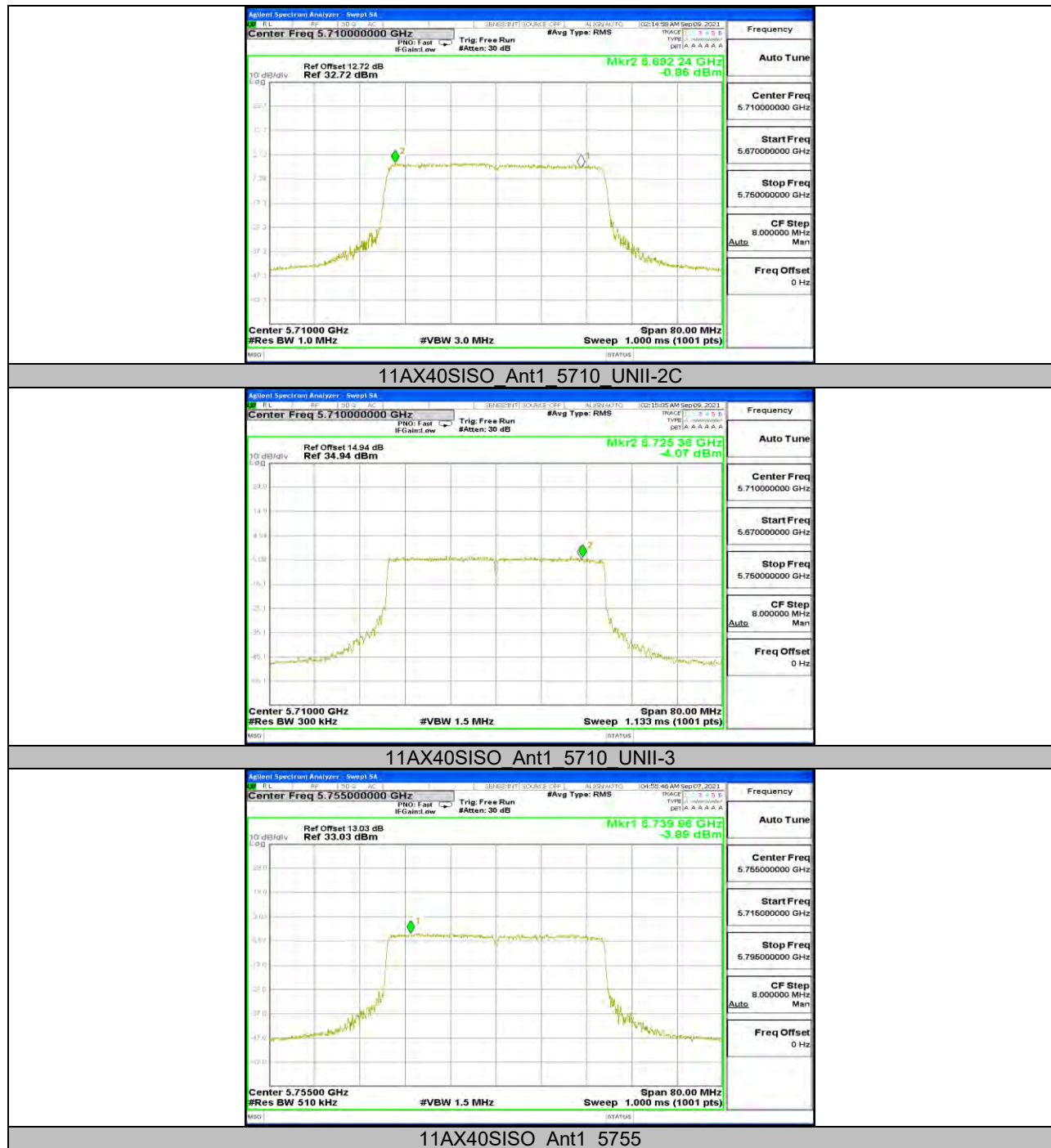
















13.6. Appendix D: Duty Cycle

13.6.1. Test Result

Test 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	2.03	2.17	0.9355	93.55	0.29	0.49	0.5
11N20SISO	1.89	2.13	0.8873	88.73	0.52	0.53	1
11N40SISO	0.93	1.08	0.8611	86.11	0.65	1.08	2
11AX20SISO	1.45	1.54	0.9416	94.16	0.26	0.69	1
11AX40SISO	0.74	0.86	0.8605	86.05	0.65	1.35	2

Note:

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

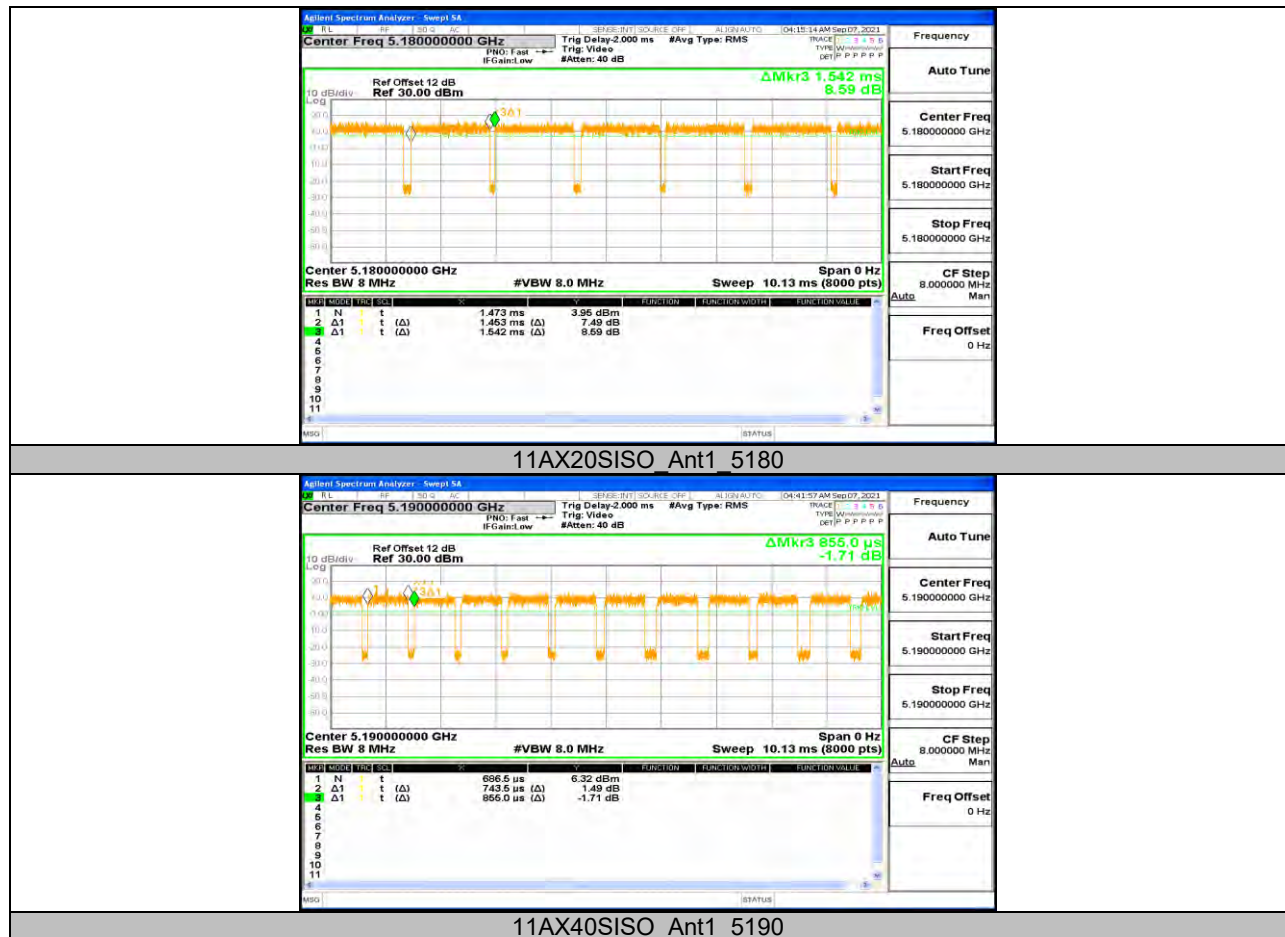
Where: x is Duty Cycle (Linear)

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****13.7.1. Test Result**

Frequency Error vs. Voltage									
802.11a 20: 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	5200.0008	0.16	5200.0187	3.60	5200.0073	1.40	5199.9836	-3.15
TN	VN	5200.0111	2.13	5199.9860	-2.69	5199.9975	-0.48	5199.9974	-0.50
TN	VH	5199.9751	-4.79	5200.0151	2.90	5200.0053	1.01	5200.0199	3.83
Frequency Error vs. Temperature									
802.11a 20: 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)
70	VN	5199.9907	-1.78	5200.0196	3.78	5200.0212	4.08	5200.0039	0.75
60	VN	5199.9891	-2.10	5199.9884	-2.24	5200.0019	0.37	5199.9793	-3.98
50	VN	5200.0004	0.07	5200.0214	4.12	5200.0086	1.65	5200.0218	4.19
40	VN	5200.0190	3.66	5199.9893	-2.05	5200.0179	3.44	5199.9818	-3.49
30	VN	5199.9936	-1.23	5199.9995	-0.11	5199.9924	-1.47	5200.0101	1.94
20	VN	5200.0032	0.62	5199.9886	-2.20	5200.0180	3.46	5199.9839	-3.10
10	VN	5199.9869	-2.52	5199.9826	-3.35	5200.0112	2.14	5199.9905	-1.82
0	VN	5200.0236	4.54	5199.9984	-0.31	5200.0009	0.18	5200.0158	3.04



Frequency Error vs. Voltage									
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)
TN	VL	5825.0015	0.25	5825.0125	2.15	5824.9805	-3.35	5824.9859	-2.42
TN	VN	5824.9924	-1.31	5825.0069	1.19	5825.0057	0.98	5825.0203	3.49
TN	VH	5825.0183	3.13	5824.9817	-3.14	5825.0197	3.38	5824.9985	-0.26
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)
70	VN	5825.0101	1.74	5824.9852	-2.55	5824.9931	-1.19	5824.9875	-2.15
60	VN	5824.9909	-1.56	5825.0183	3.14	5824.9783	-3.72	5825.0049	0.83
50	VN	5825.0068	1.17	5824.9806	-3.32	5824.9965	-0.60	5825.0070	1.20
40	VN	5825.0112	1.93	5824.9780	-3.77	5825.0176	3.02	5824.9877	-2.11
30	VN	5824.9972	-0.48	5824.9752	-4.26	5825.0002	0.04	5825.0121	2.08
20	VN	5825.0050	0.86	5824.9852	-2.55	5824.9798	-3.47	5825.0040	0.68
10	VN	5824.9905	-1.63	5824.9813	-3.21	5825.0062	1.07	5825.0211	3.63
0	VN	5824.9929	-1.21	5825.0192	3.30	5824.9776	-3.85	5824.9790	-3.61

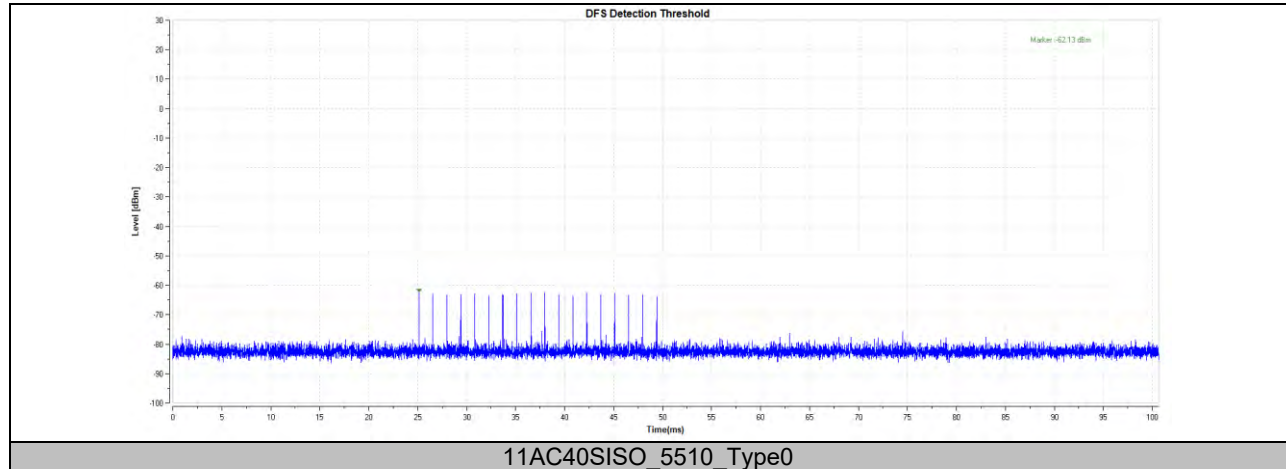
Note: All antennas and test modes have been tested, only the worst data record in the report.

13.8. Appendix F: Dynamic Frequency Selection

Radar Signal Test Result

Test Mode	Channel	Radar Type	Result	Limit[dbm]	Verdict
11AC40SISO	5510	Type0	-62.13	-57.64	PASS

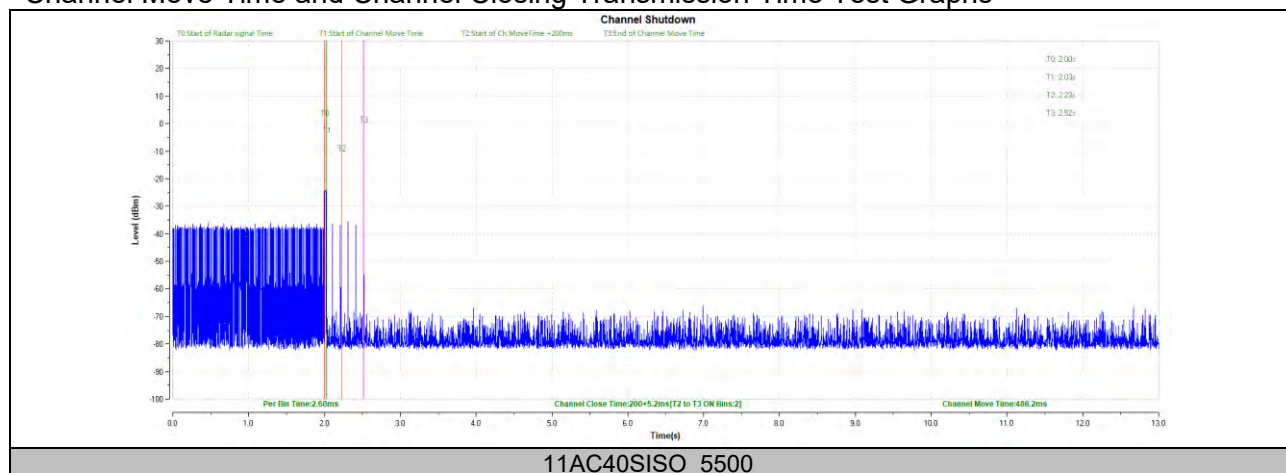
Radar Signal Test Graphs



Channel Move Time and Channel Closing Transmission Time Test Result

Test Mode	Channel	CCT[ms]	Limit[ms]	CMT[ms]	Limit[ms]	Verdict
11AC40SISO	5500	200+5.2	200+60	486.2	10000	PASS

Channel Move Time and Channel Closing Transmission Time Test Graphs

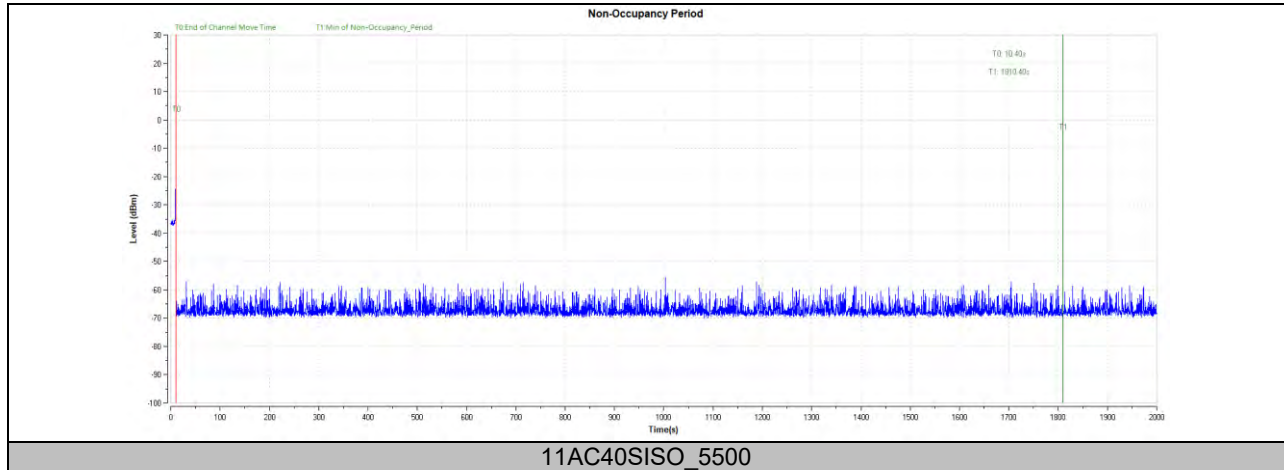




Non-Occupancy Period Test Result

Test Mode	Channel	Result	Limit[s]	Verdict
11AC40SISO	5500	see test graph	≥1800	PASS

Non-Occupancy Test Graphs



END OF REPORT