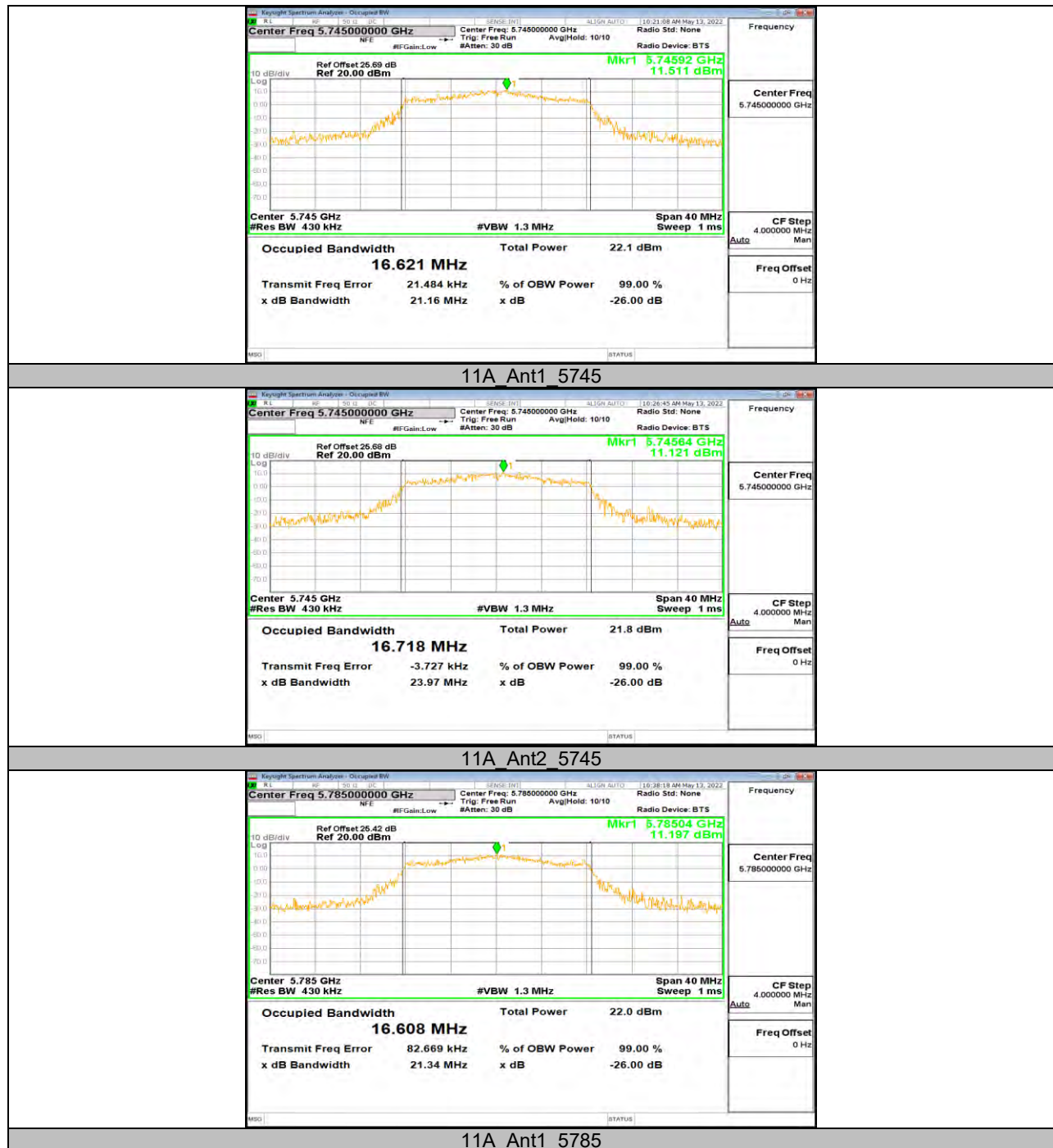










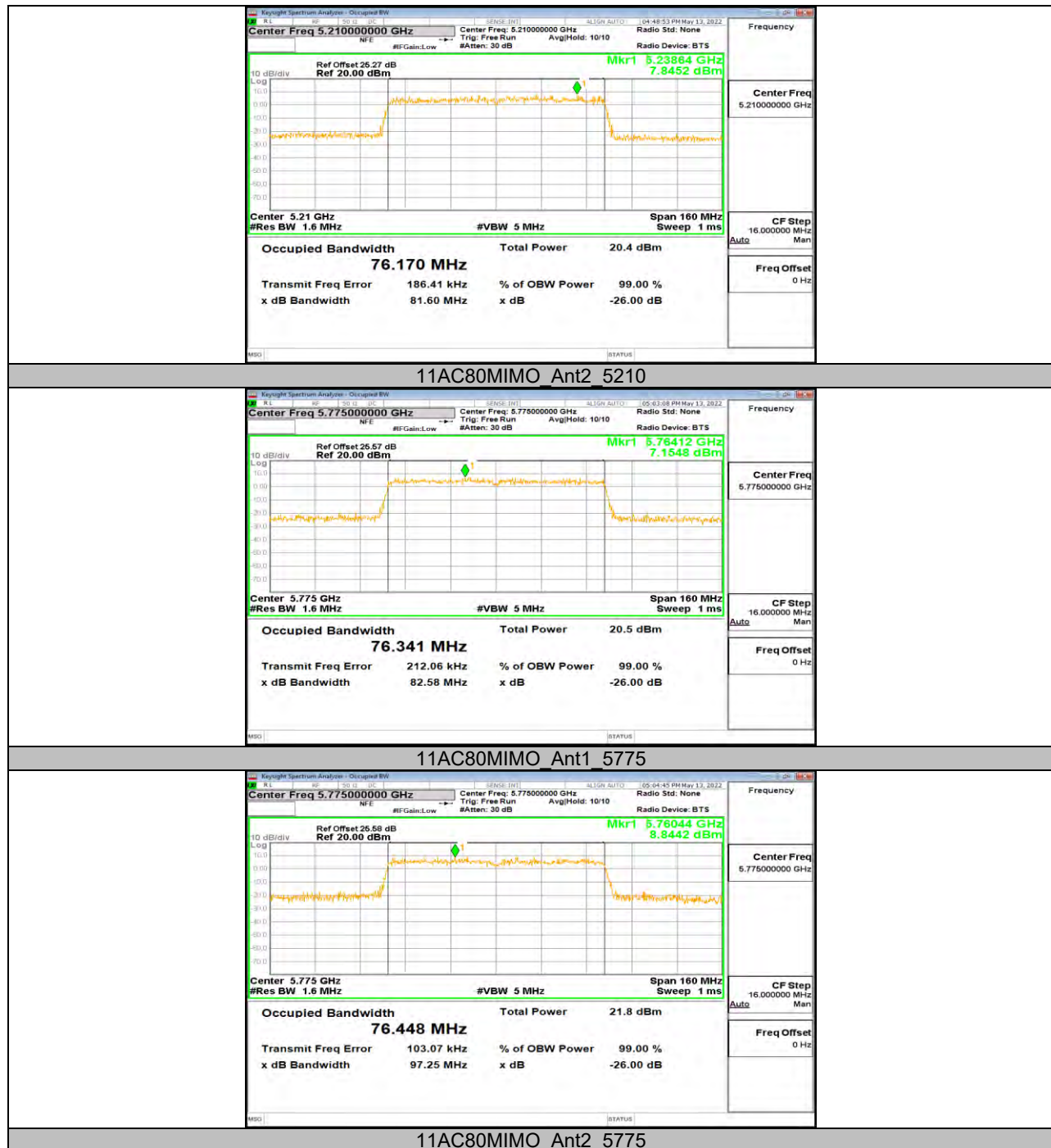




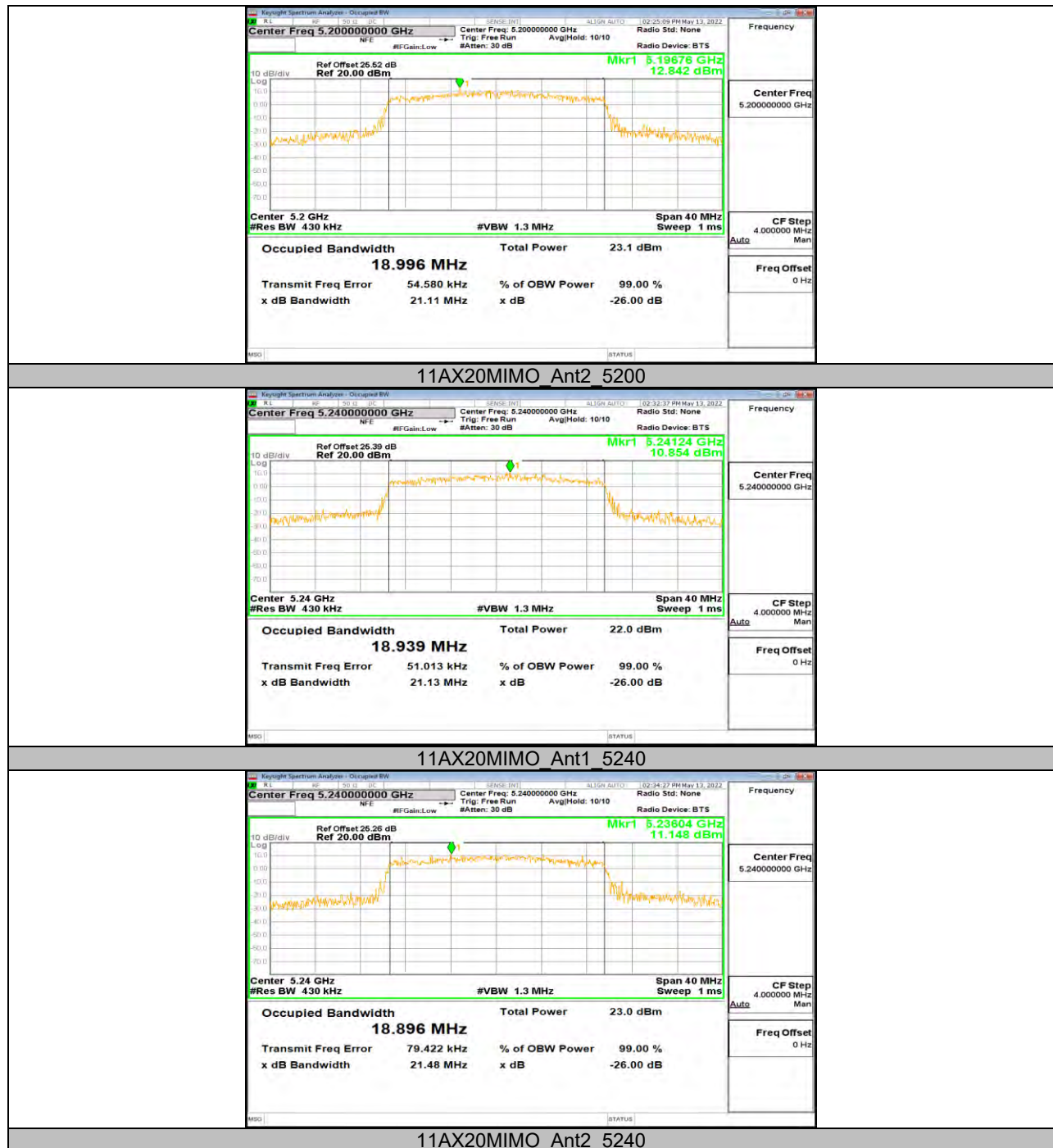
























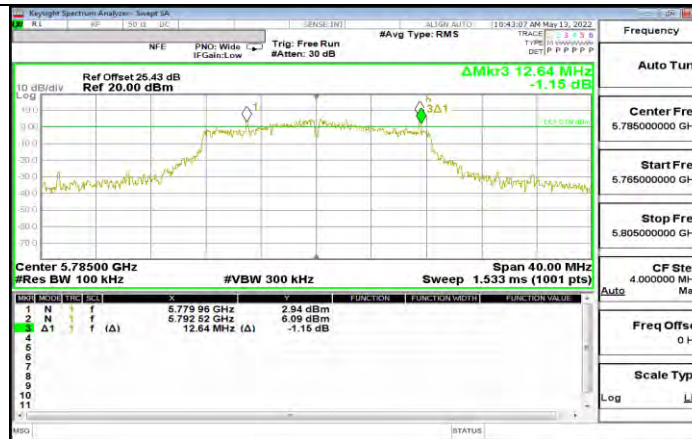
12.3. Appendix A3: Min Emission Bandwidth

12.3.1. Test Result

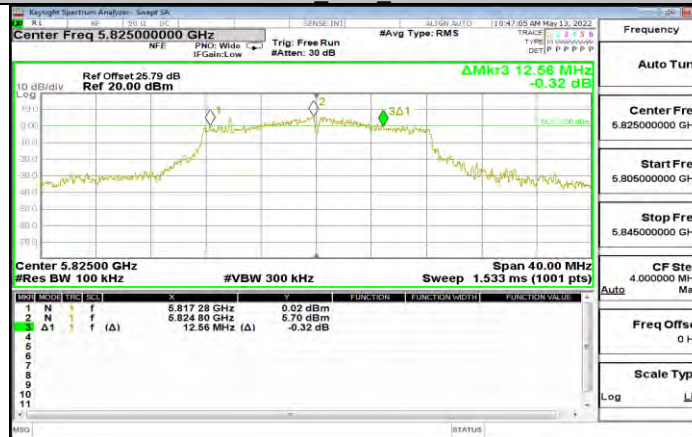
Test Mode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	11.320	5738.760	5750.080	0.5	PASS
	Ant2	5745	11.160	5740.440	5751.600	0.5	PASS
	Ant1	5785	12.240	5780.400	5792.640	0.5	PASS
	Ant2	5785	12.640	5779.960	5792.600	0.5	PASS
	Ant1	5825	12.560	5817.280	5829.840	0.5	PASS
	Ant2	5825	11.400	5818.680	5830.080	0.5	PASS
11N20MIMO	Ant1	5745	11.200	5740.000	5751.200	0.5	PASS
	Ant2	5745	11.360	5740.040	5751.400	0.5	PASS
	Ant1	5785	12.680	5779.960	5792.640	0.5	PASS
	Ant2	5785	12.640	5780.040	5792.680	0.5	PASS
	Ant1	5825	11.400	5818.720	5830.120	0.5	PASS
	Ant2	5825	11.360	5820.040	5831.400	0.5	PASS
11N40MIMO	Ant1	5755	37.360	5736.440	5773.800	0.5	PASS
	Ant2	5755	37.280	5736.280	5773.560	0.5	PASS
	Ant1	5795	35.680	5777.160	5812.840	0.5	PASS
	Ant2	5795	36.000	5777.240	5813.240	0.5	PASS
11AC80MIMO	Ant1	5775	76.000	5736.920	5812.920	0.5	PASS
	Ant2	5775	75.520	5737.240	5812.760	0.5	PASS
11AX20MIMO	Ant1	5745	17.640	5736.640	5754.280	0.5	PASS
	Ant2	5745	17.400	5736.640	5754.040	0.5	PASS
	Ant1	5785	17.800	5775.800	5793.600	0.5	PASS
	Ant2	5785	16.360	5776.280	5792.640	0.5	PASS
	Ant1	5825	17.800	5816.280	5834.080	0.5	PASS
	Ant2	5825	16.400	5816.240	5832.640	0.5	PASS
11AX40MIMO	Ant1	5755	37.280	5736.600	5773.880	0.5	PASS
	Ant2	5755	37.120	5736.280	5773.400	0.5	PASS
	Ant1	5795	34.720	5778.760	5813.480	0.5	PASS
	Ant2	5795	36.160	5777.240	5813.400	0.5	PASS
11AX80MIMO	Ant1	5775	76.960	5736.600	5813.560	0.5	PASS
	Ant2	5775	75.200	5737.560	5812.760	0.5	PASS

12.3.2. Test Graphs





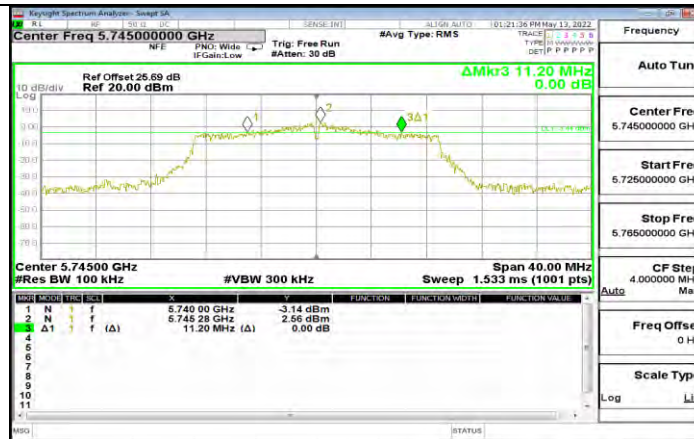
11A_Ant2_5785



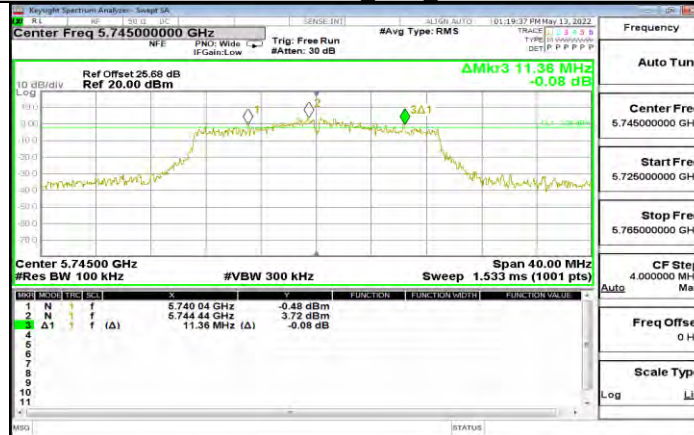
11A_Ant1_5825



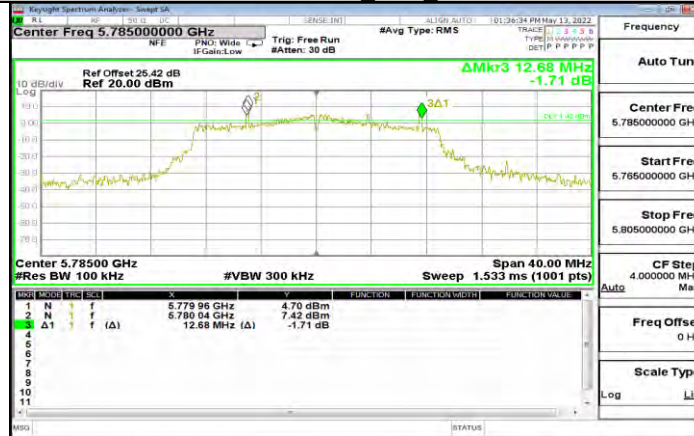
11A_Ant2_5825



11N20MIMO Ant1 5745



11N20MIMO Ant2 5745



11N20MIMO Ant1 5785

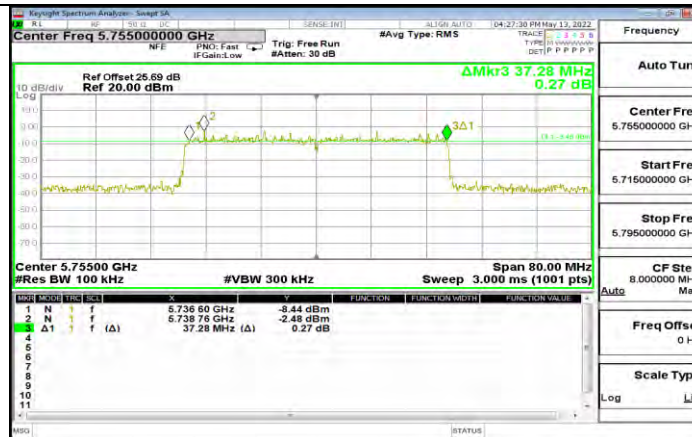








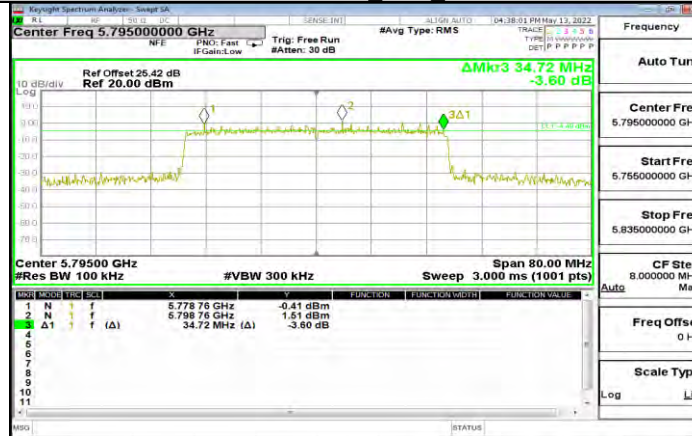




11AX40MIMO Ant1 5755



11AX40MIMO Ant2 5755



11AX40MIMO Ant1 5795



**12.4. Appendix B: Maximum Average Conducted Output Power****12.4.1. Test Result**

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5180	17.84	≤23.98	PASS
	Ant2	5180	17.63	≤23.98	PASS
	Ant1	5200	17.61	≤23.98	PASS
	Ant2	5200	17.63	≤23.98	PASS
	Ant1	5240	17.34	≤23.98	PASS
	Ant2	5240	17.65	≤23.98	PASS
	Ant1	5745	17.58	≤30.00	PASS
	Ant2	5745	17.31	≤30.00	PASS
	Ant1	5785	17.52	≤30.00	PASS
	Ant2	5785	17.23	≤30.00	PASS
	Ant1	5825	18.00	≤30.00	PASS
	Ant2	5825	17.35	≤30.00	PASS
11N20MIMO	Ant1	5180	15.94	≤23.98	PASS
	Ant2	5180	16.79	≤23.98	PASS
	total	5180	19.40	≤23.98	PASS
	Ant1	5200	16.06	≤23.98	PASS
	Ant2	5200	17.04	≤23.98	PASS
	total	5200	19.59	≤23.98	PASS
	Ant1	5240	15.64	≤23.98	PASS
	Ant2	5240	16.79	≤23.98	PASS
	total	5240	19.26	≤23.98	PASS
	Ant1	5745	17.50	≤30.00	PASS
	Ant2	5745	18.05	≤30.00	PASS
	total	5745	20.79	≤30.00	PASS
	Ant1	5785	17.63	≤30.00	PASS
	Ant2	5785	17.90	≤30.00	PASS
	total	5785	20.78	≤30.00	PASS
	Ant1	5825	17.86	≤30.00	PASS
	Ant2	5825	18.10	≤30.00	PASS
	total	5825	20.99	≤30.00	PASS
11N40MIMO	Ant1	5190	12.85	≤23.98	PASS
	Ant2	5190	13.30	≤23.98	PASS
	total	5190	16.09	≤23.98	PASS
	Ant1	5230	12.13	≤23.98	PASS
	Ant2	5230	13.09	≤23.98	PASS
	total	5230	15.65	≤23.98	PASS
	Ant1	5755	17.07	≤30.00	PASS
	Ant2	5755	18.08	≤30.00	PASS
	total	5755	20.61	≤30.00	PASS
	Ant1	5795	16.16	≤30.00	PASS
11AC80MIMO	Ant2	5795	17.77	≤30.00	PASS
	total	5795	20.05	≤30.00	PASS
	Ant1	5210	13.15	≤23.98	PASS
	Ant2	5210	13.85	≤23.98	PASS
	total	5210	16.52	≤23.98	PASS
	Ant1	5775	14.67	≤30.00	PASS
11AX20MIMO	Ant2	5775	15.94	≤30.00	PASS
	total	5775	18.36	≤30.00	PASS
	Ant1	5180	17.33	≤23.98	PASS
	Ant2	5180	18.21	≤23.98	PASS
	total	5180	20.80	≤23.98	PASS
	Ant1	5200	17.22	≤23.98	PASS
11AX20MIMO	Ant2	5200	18.03	≤23.98	PASS
	total	5200	20.65	≤23.98	PASS



	Ant1	5240	16.70	≤23.98	PASS
	Ant2	5240	17.84	≤23.98	PASS
	total	5240	20.32	≤23.98	PASS
	Ant1	5745	16.86	≤30.00	PASS
	Ant2	5745	17.31	≤30.00	PASS
	total	5745	20.10	≤30.00	PASS
	Ant1	5785	16.78	≤30.00	PASS
	Ant2	5785	17.18	≤30.00	PASS
	total	5785	19.99	≤30.00	PASS
	Ant1	5825	17.05	≤30.00	PASS
	Ant2	5825	17.30	≤30.00	PASS
	total	5825	20.19	≤30.00	PASS
11AX40MIMO	Ant1	5190	12.28	≤23.98	PASS
	Ant2	5190	13.46	≤23.98	PASS
	total	5190	15.92	≤23.98	PASS
	Ant1	5230	12.55	≤23.98	PASS
	Ant2	5230	13.54	≤23.98	PASS
	total	5230	16.08	≤23.98	PASS
	Ant1	5755	16.11	≤30.00	PASS
	Ant2	5755	17.73	≤30.00	PASS
	total	5755	20.01	≤30.00	PASS
	Ant1	5795	16.45	≤30.00	PASS
	Ant2	5795	17.82	≤30.00	PASS
	total	5795	20.20	≤30.00	PASS
11AX80MIMO	Ant1	5210	12.63	≤23.98	PASS
	Ant2	5210	13.39	≤23.98	PASS
	total	5210	16.04	≤23.98	PASS
	Ant1	5775	11.98	≤30.00	PASS
	Ant2	5775	13.13	≤30.00	PASS
	total	5775	15.60	≤30.00	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.

**12.5. Appendix C: Maximum Power Spectral Density****12.5.1. Test Result**

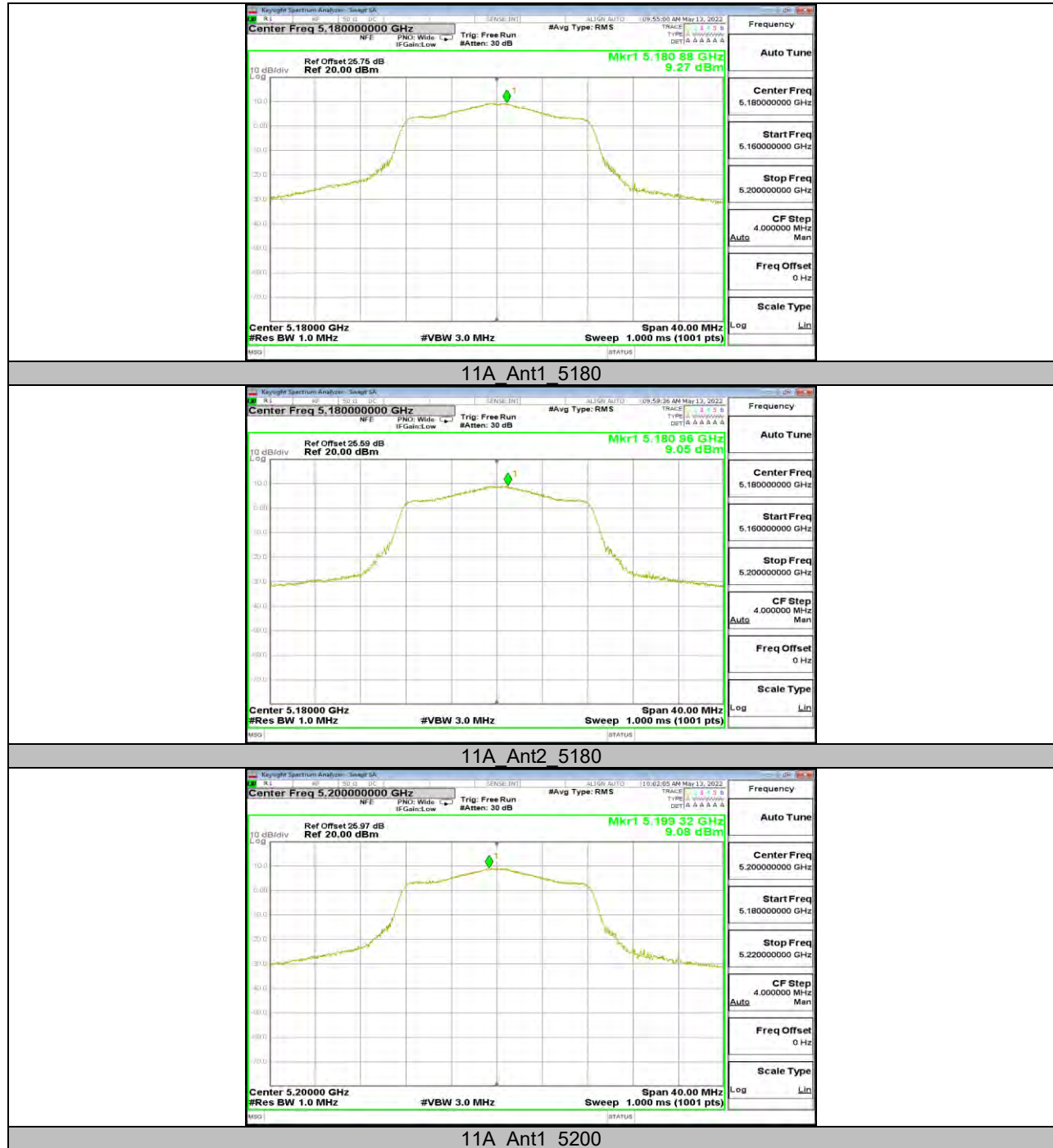
Test Mode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	9.27	≤11.00	PASS
	Ant2	5180	9.05	≤11.00	PASS
	Ant1	5200	9.08	≤11.00	PASS
	Ant2	5200	8.76	≤11.00	PASS
	Ant1	5240	8.7	≤11.00	PASS
	Ant2	5240	9.61	≤11.00	PASS
	Ant1	5745	6.45	≤30.00	PASS
	Ant2	5745	6.27	≤30.00	PASS
	Ant1	5785	6.54	≤30.00	PASS
	Ant2	5785	6.13	≤30.00	PASS
	Ant1	5825	7.15	≤30.00	PASS
	Ant2	5825	6.35	≤30.00	PASS
11N20MIMO	Ant1	5180	7.22	≤11.00	PASS
	Ant2	5180	8	≤11.00	PASS
	total	5180	10.64	≤11.00	PASS
	Ant1	5200	7.36	≤11.00	PASS
	Ant2	5200	8.24	≤11.00	PASS
	total	5200	10.83	≤11.00	PASS
	Ant1	5240	6.88	≤11.00	PASS
	Ant2	5240	7.94	≤11.00	PASS
	total	5240	10.46	≤11.00	PASS
	Ant1	5745	6.3	≤30.00	PASS
	Ant2	5745	6.83	≤30.00	PASS
	total	5745	9.58	≤30.00	PASS
	Ant1	5785	6.42	≤30.00	PASS
	Ant2	5785	6.84	≤30.00	PASS
	total	5785	9.65	≤30.00	PASS
	Ant1	5825	6.74	≤30.00	PASS
	Ant2	5825	6.81	≤30.00	PASS
	total	5825	9.79	≤30.00	PASS
11N40MIMO	Ant1	5190	-1.73	≤11.00	PASS
	Ant2	5190	-1.12	≤11.00	PASS
	total	5190	1.60	≤11.00	PASS
	Ant1	5230	-2.28	≤11.00	PASS
	Ant2	5230	-1.21	≤11.00	PASS
	total	5230	1.29	≤11.00	PASS
	Ant1	5755	-0.28	≤30.00	PASS
	Ant2	5755	0.78	≤30.00	PASS
	total	5755	3.29	≤30.00	PASS
	Ant1	5795	-1.03	≤30.00	PASS
	Ant2	5795	0.5	≤30.00	PASS
	total	5795	2.81	≤30.00	PASS
11AC80MIMO	Ant1	5210	-3.99	≤11.00	PASS
	Ant2	5210	-3.39	≤11.00	PASS
	total	5210	-0.67	≤11.00	PASS
	Ant1	5775	-5.51	≤30.00	PASS
	Ant2	5775	-4.47	≤30.00	PASS
	total	5775	-1.95	≤30.00	PASS
11AX20MIMO	Ant1	5180	6.8	≤11.00	PASS
	Ant2	5180	8.12	≤11.00	PASS
	total	5180	10.52	≤11.00	PASS
	Ant1	5200	7.13	≤11.00	PASS
	Ant2	5200	7.75	≤11.00	PASS
	total	5200	10.46	≤11.00	PASS



	Ant1	5240	6.45	≤ 11.00	PASS
	Ant2	5240	7.94	≤ 11.00	PASS
	total	5240	10.27	≤ 11.00	PASS
	Ant1	5745	3.83	≤ 30.00	PASS
	Ant2	5745	4.52	≤ 30.00	PASS
	total	5745	7.20	≤ 30.00	PASS
	Ant1	5785	3.98	≤ 30.00	PASS
	Ant2	5785	4.29	≤ 30.00	PASS
	total	5785	7.15	≤ 30.00	PASS
	Ant1	5825	4.76	≤ 30.00	PASS
	Ant2	5825	4.43	≤ 30.00	PASS
	total	5825	7.61	≤ 30.00	PASS
11AX40MIMO	Ant1	5190	-2.24	≤ 11.00	PASS
	Ant2	5190	-0.65	≤ 11.00	PASS
	total	5190	1.63	≤ 11.00	PASS
	Ant1	5230	-1.84	≤ 11.00	PASS
	Ant2	5230	-0.98	≤ 11.00	PASS
	total	5230	1.62	≤ 11.00	PASS
	Ant1	5755	-1.16	≤ 30.00	PASS
	Ant2	5755	0.41	≤ 30.00	PASS
	total	5755	2.71	≤ 30.00	PASS
	Ant1	5795	-0.73	≤ 30.00	PASS
	Ant2	5795	0.63	≤ 30.00	PASS
	total	5795	3.01	≤ 30.00	PASS
11AX80MIMO	Ant1	5210	-4.81	≤ 11.00	PASS
	Ant2	5210	-3.93	≤ 11.00	PASS
	total	5210	-1.34	≤ 11.00	PASS
	Ant1	5775	-8.21	≤ 30.00	PASS
	Ant2	5775	-7.2	≤ 30.00	PASS
	total	5775	-4.67	≤ 30.00	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.

12.5.2. Test Graphs





11A_Ant2_5200



11A_Ant1_5240



11A_Ant2_5240



11A Ant1 5745



11A Ant2 5745



11A Ant1 5785



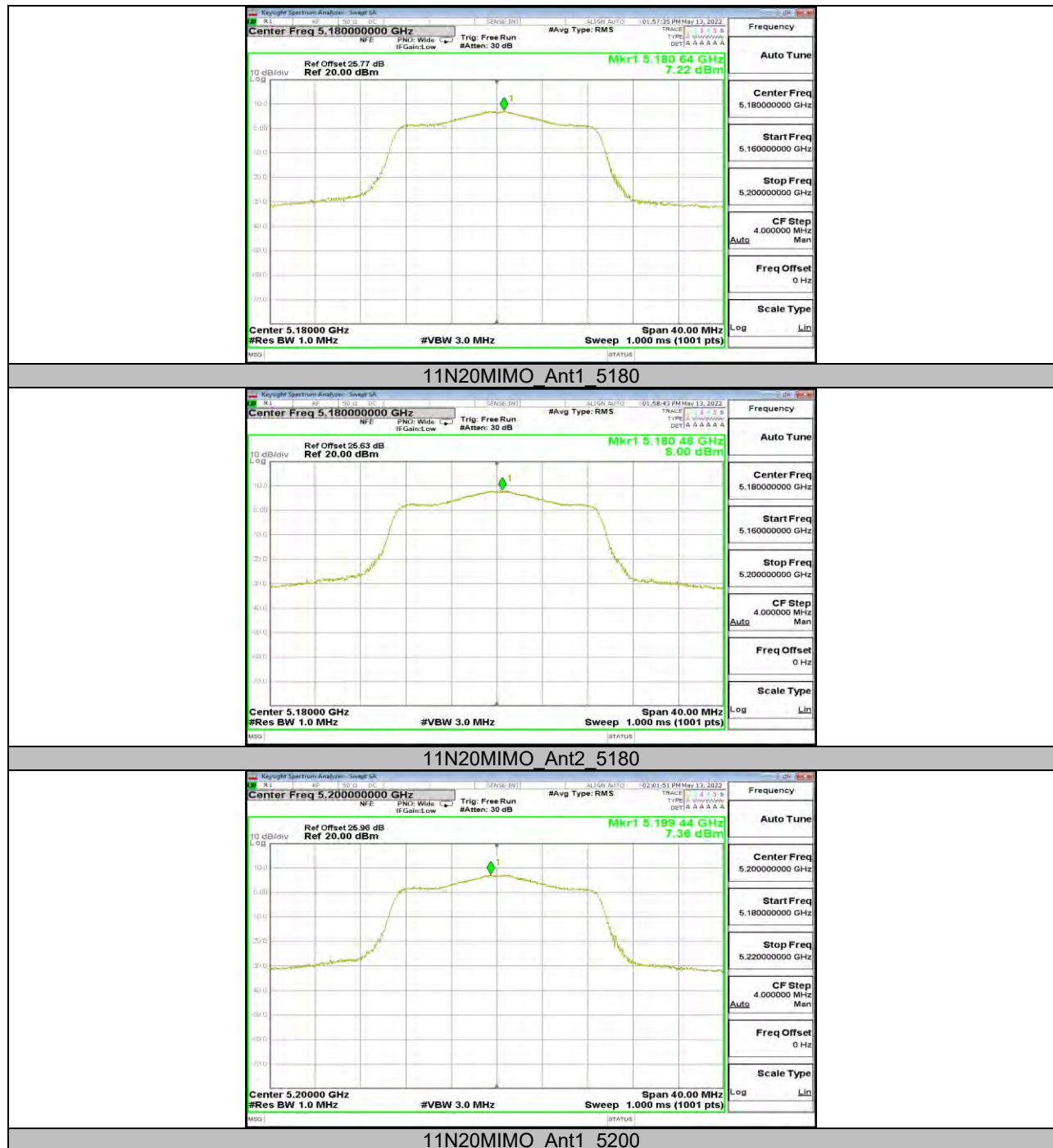
11A_Ant2_5785



11A_Ant1_5825



11A_Ant2_5825





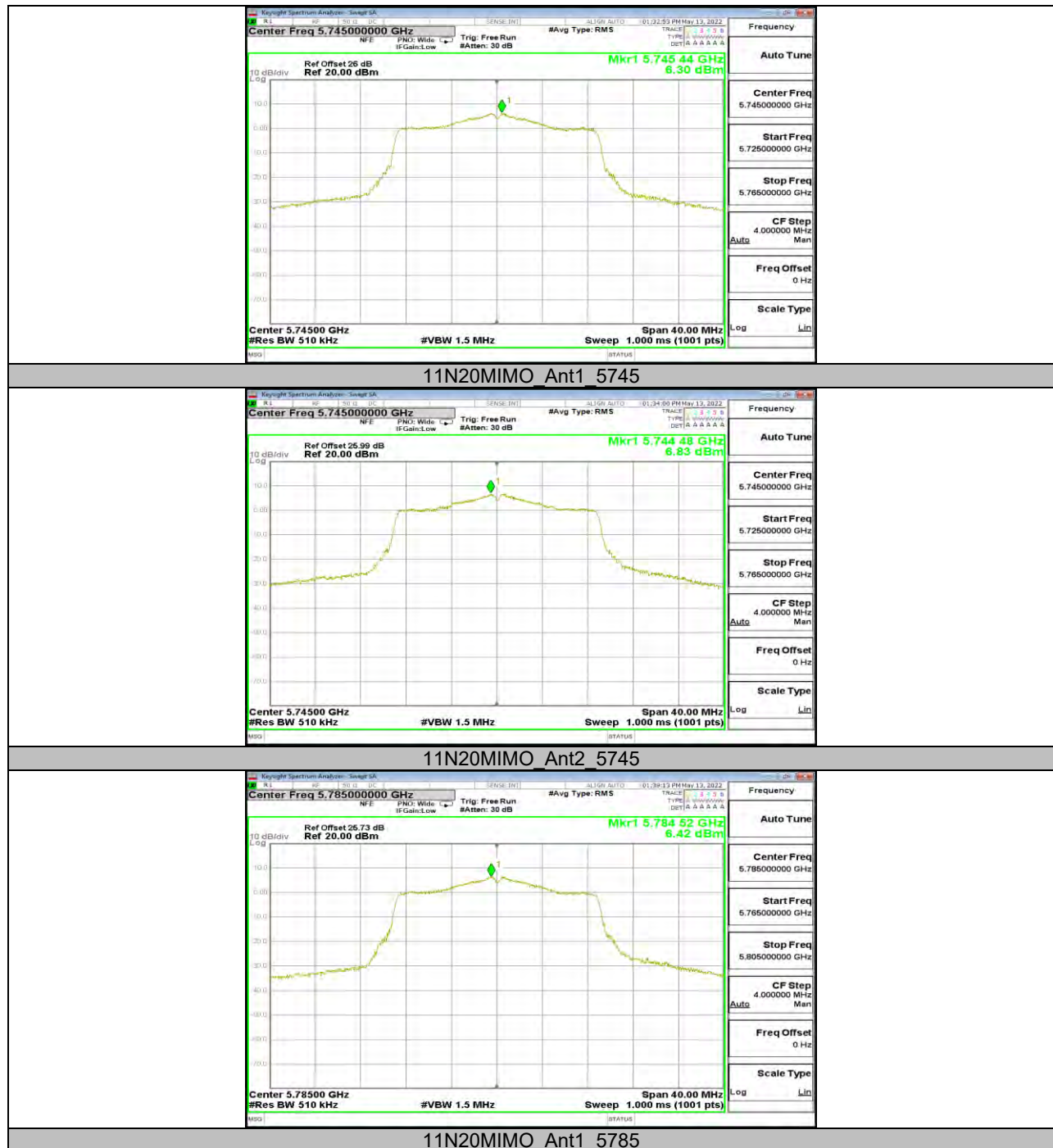
11N20MIMO Ant2 5200

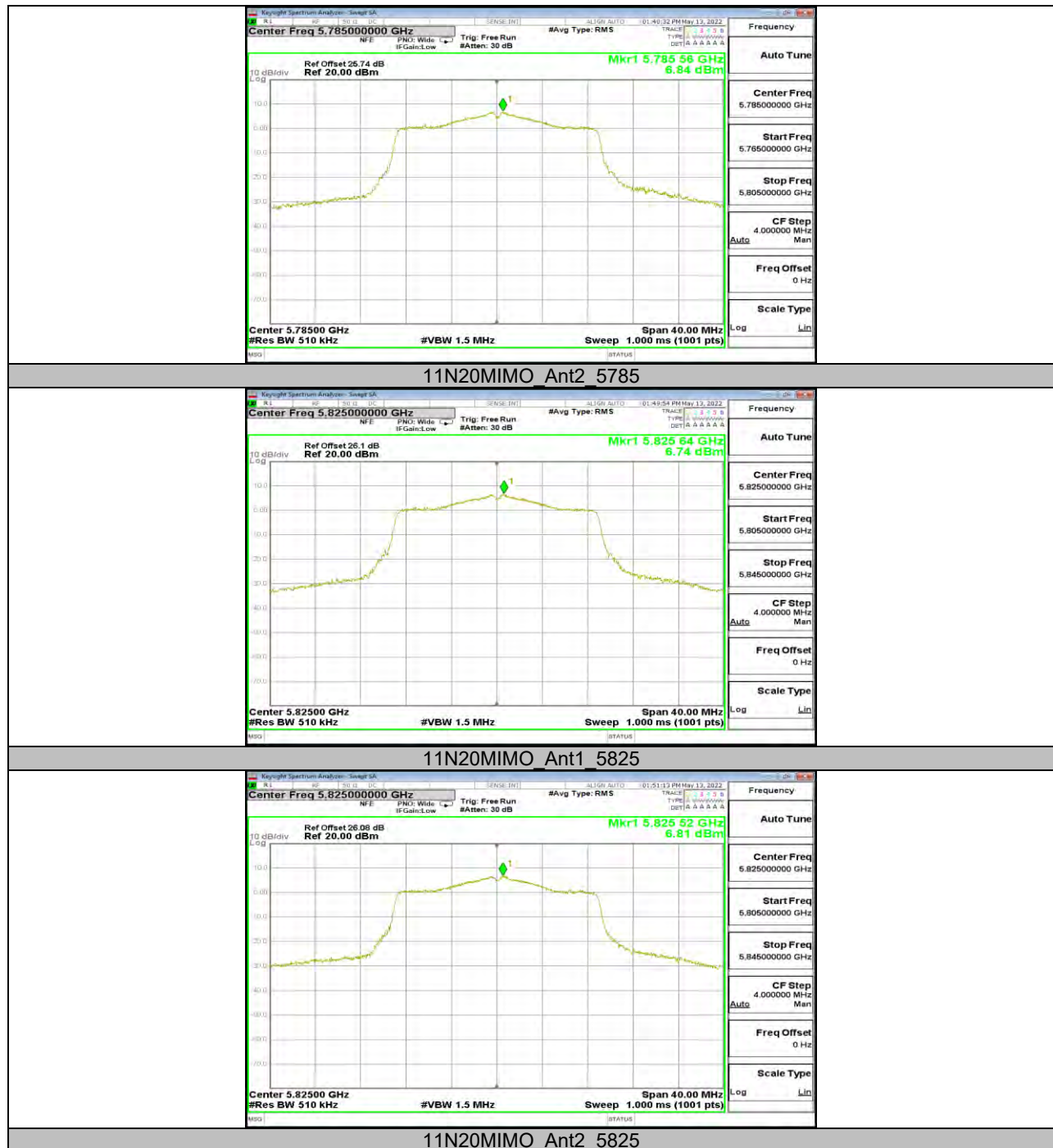


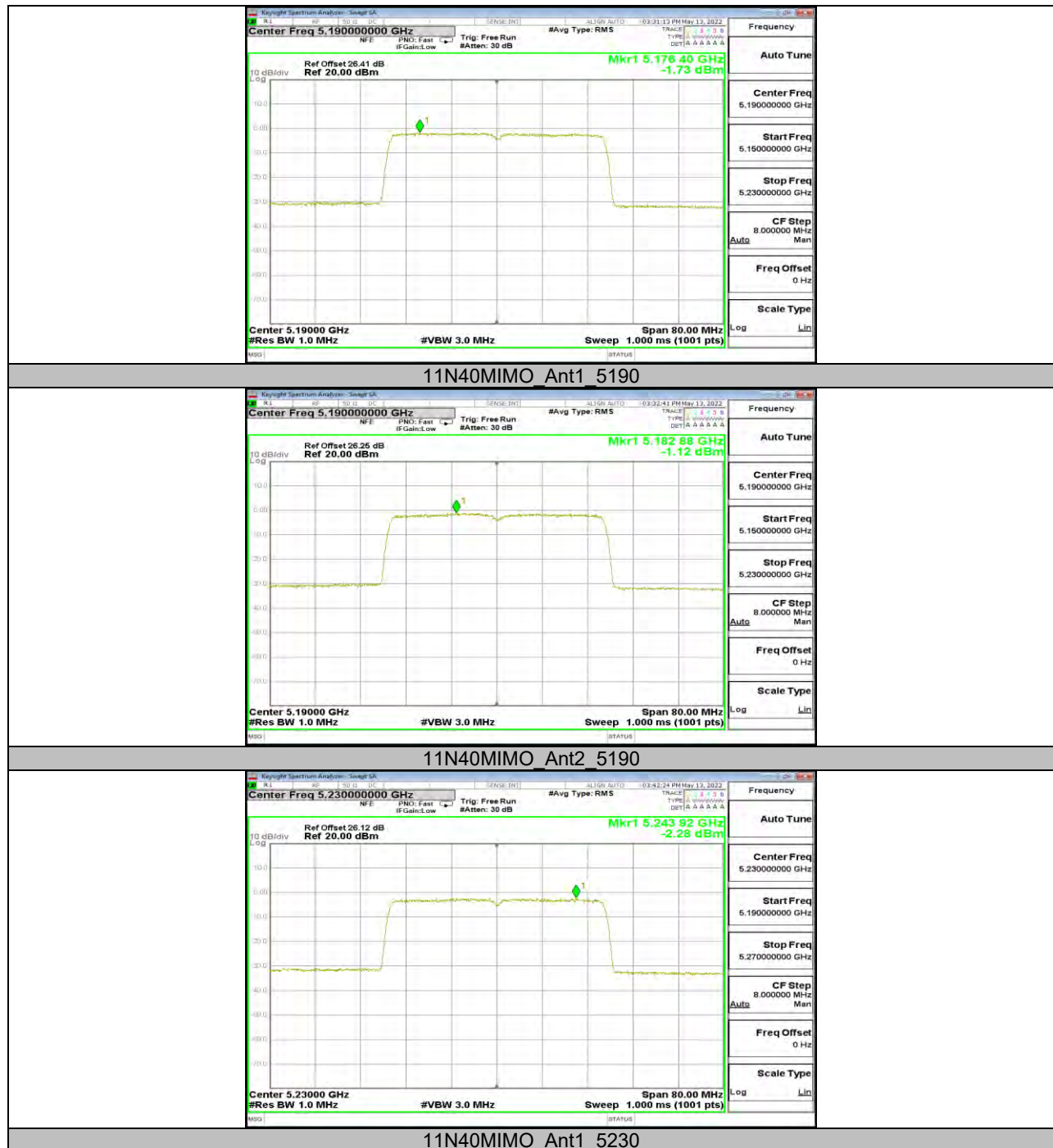
11N20MIMO Ant1 5240

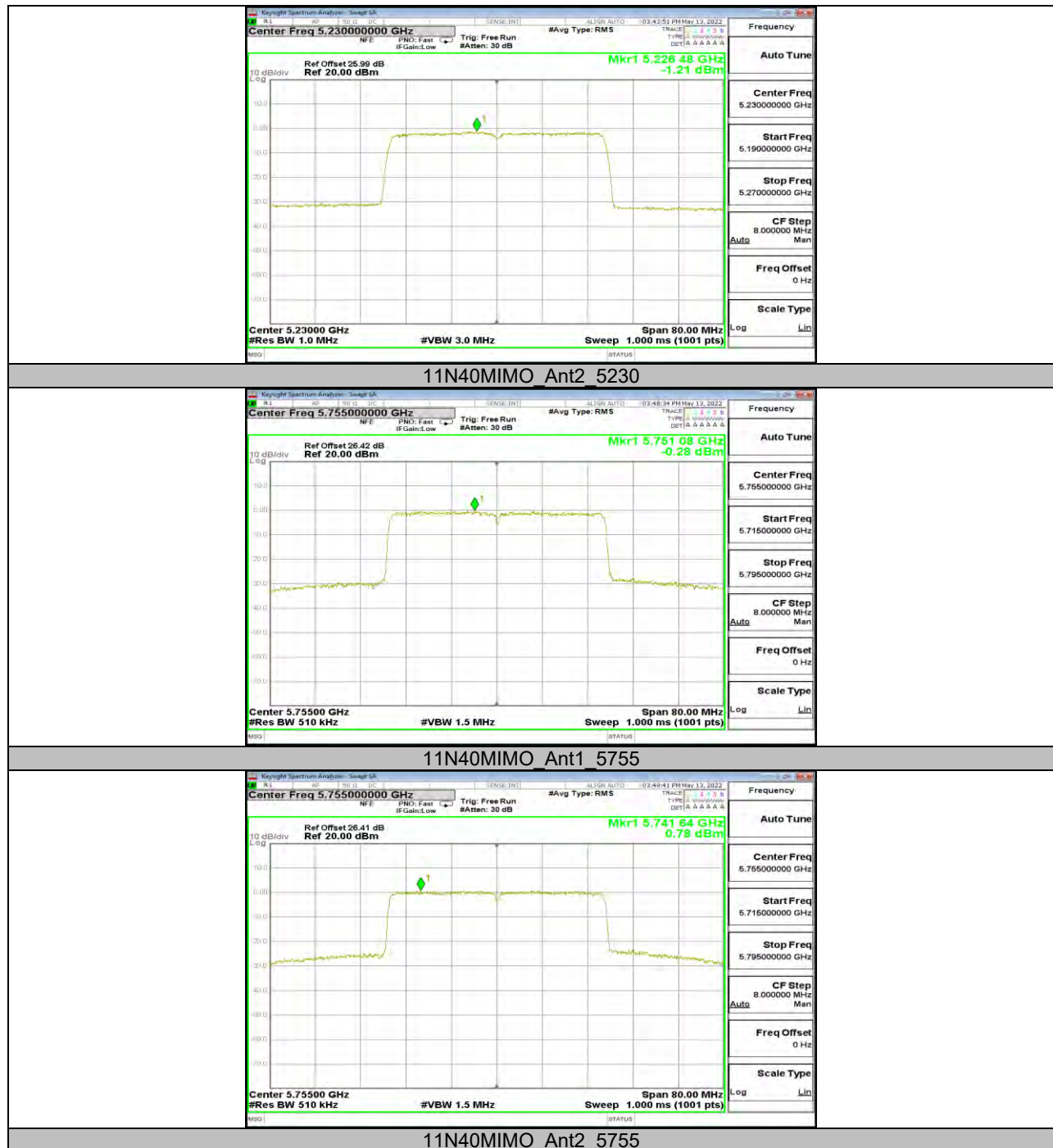


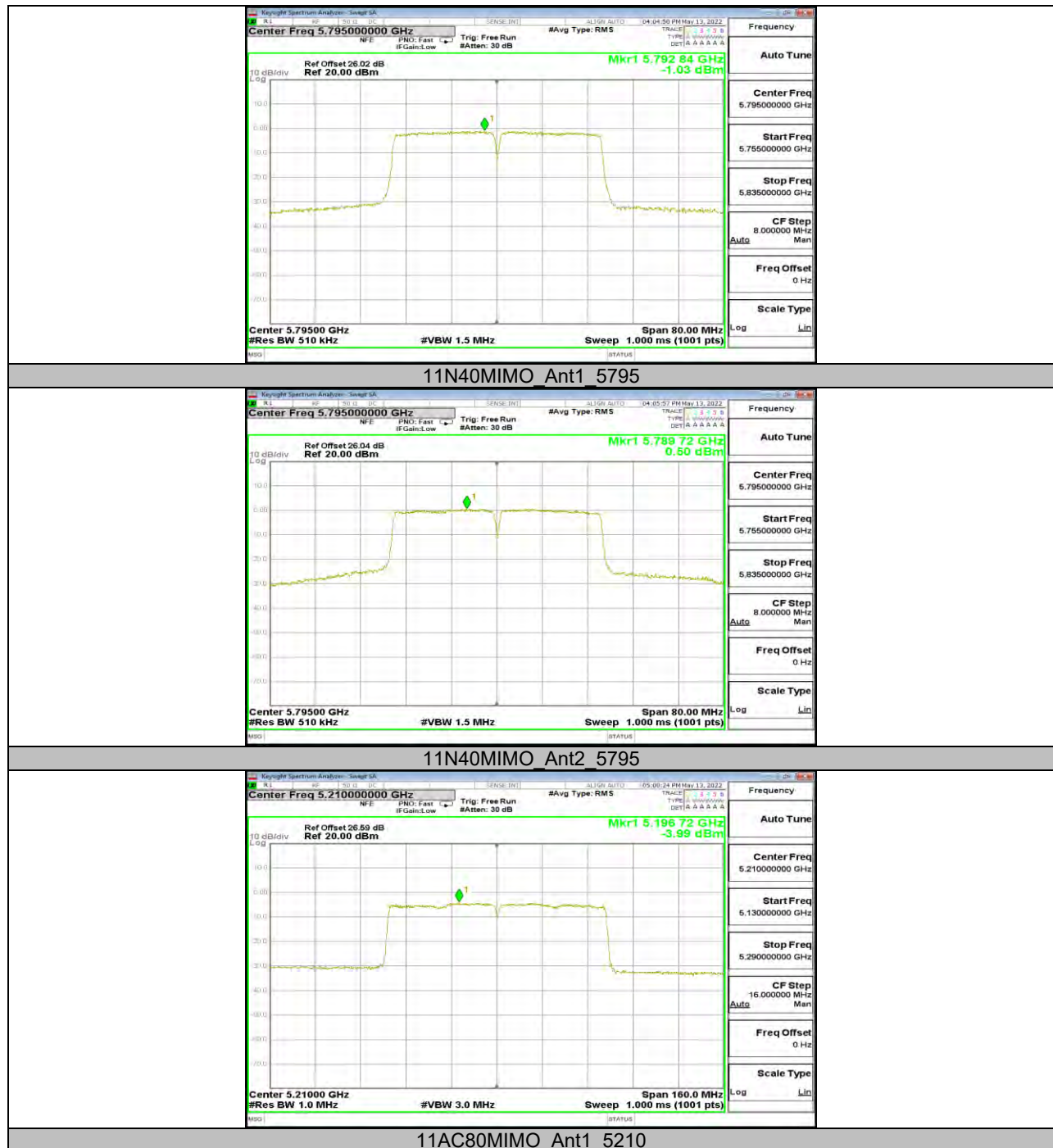
11N20MIMO Ant2 5240

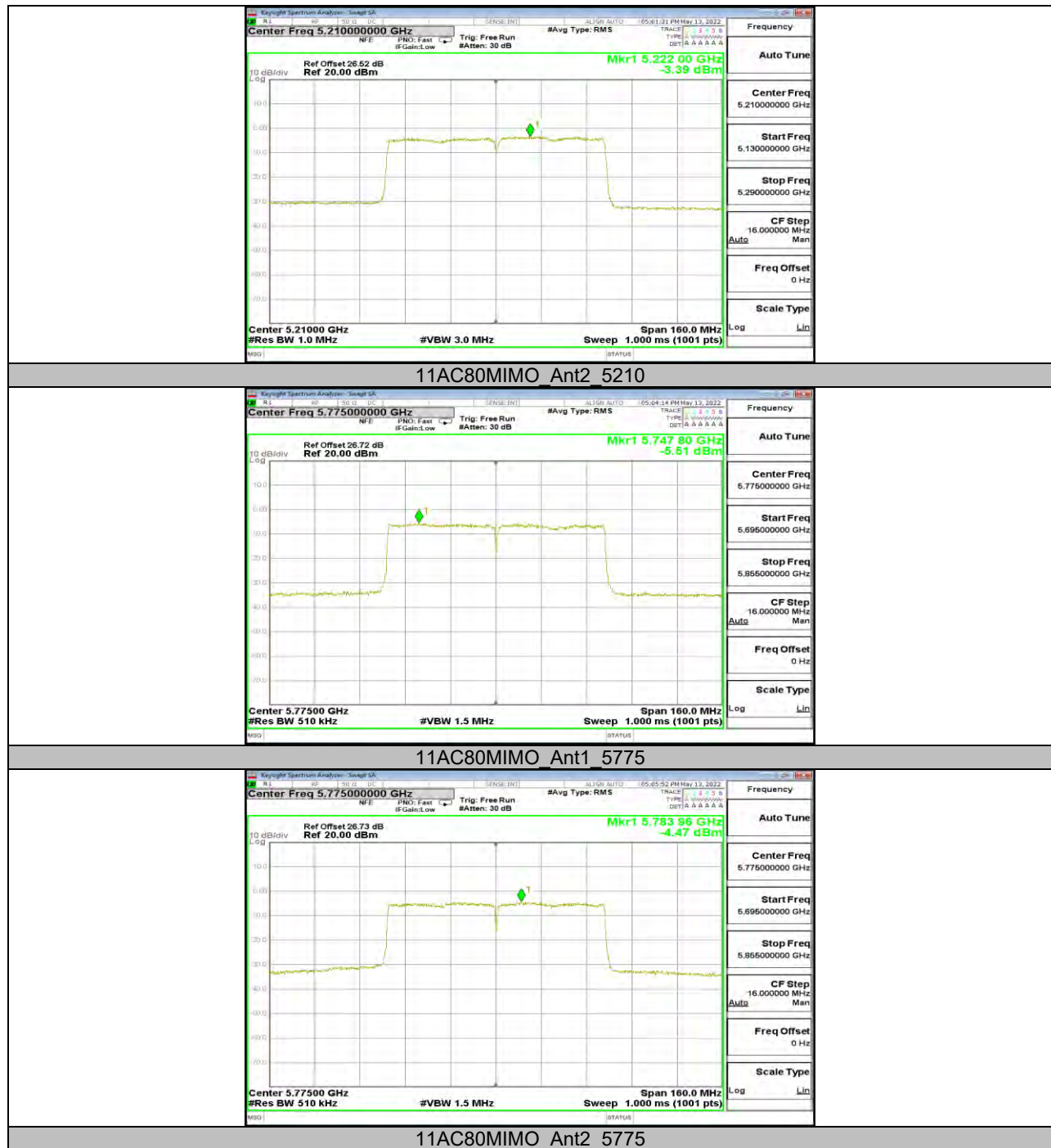


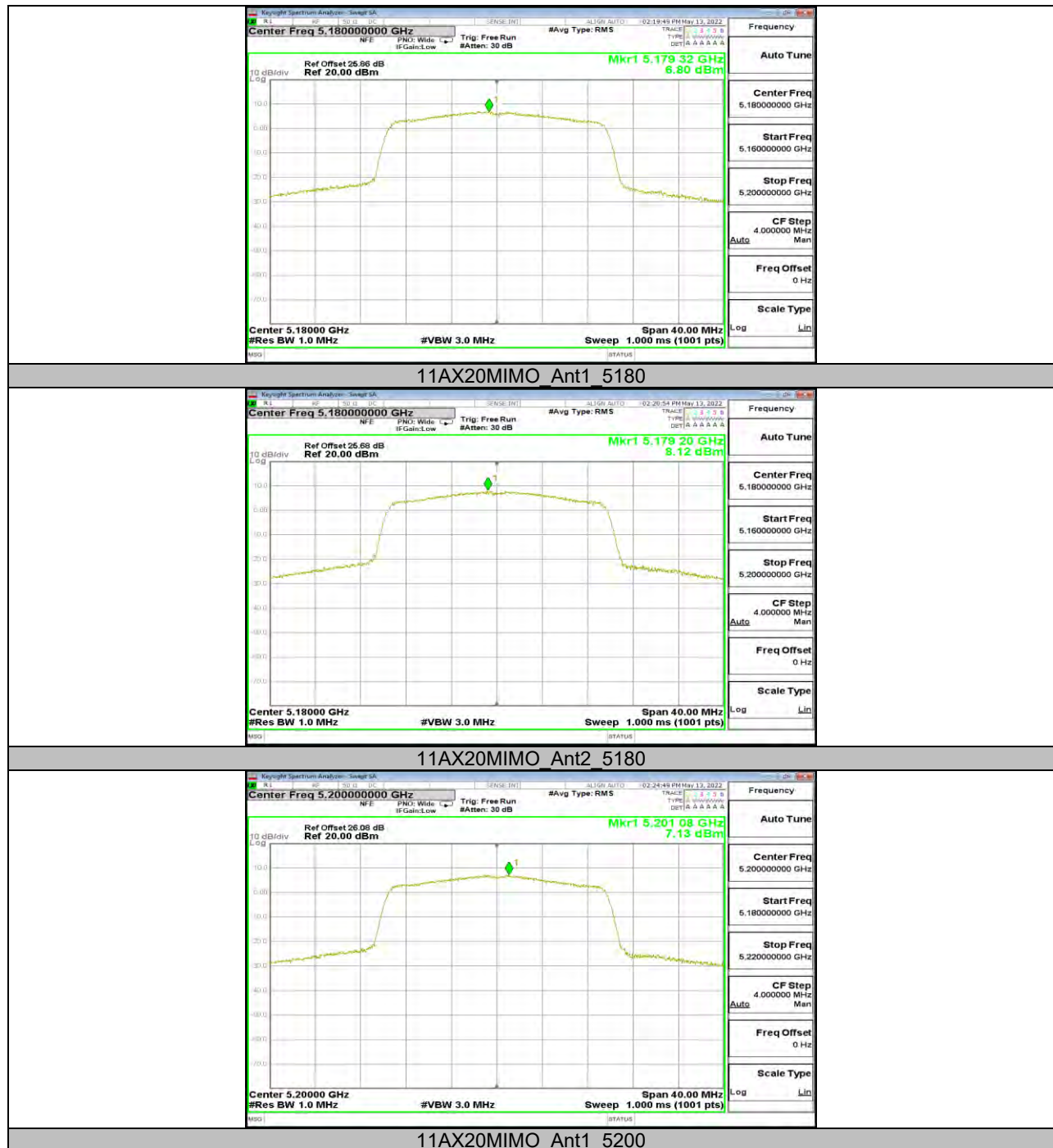


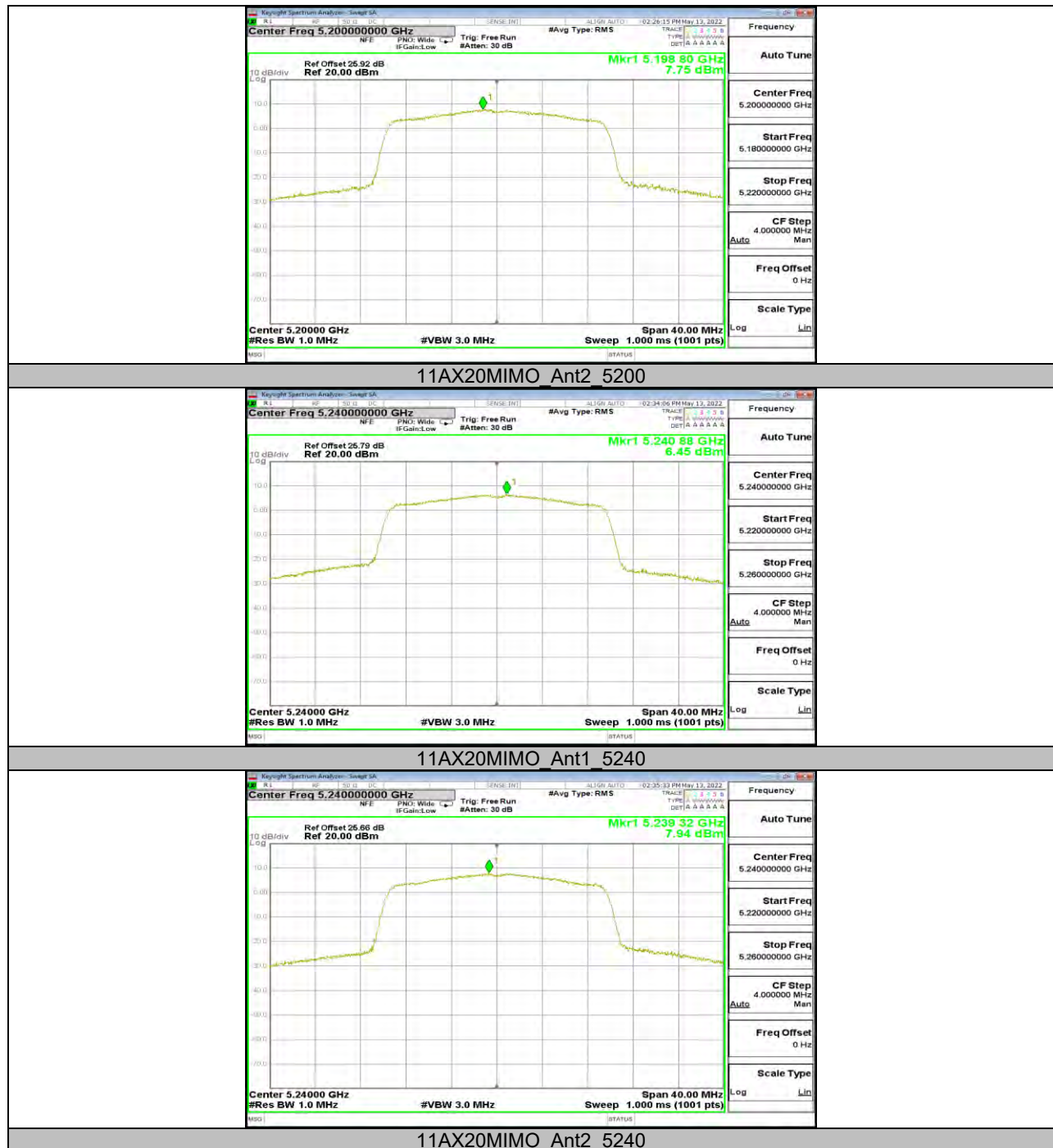


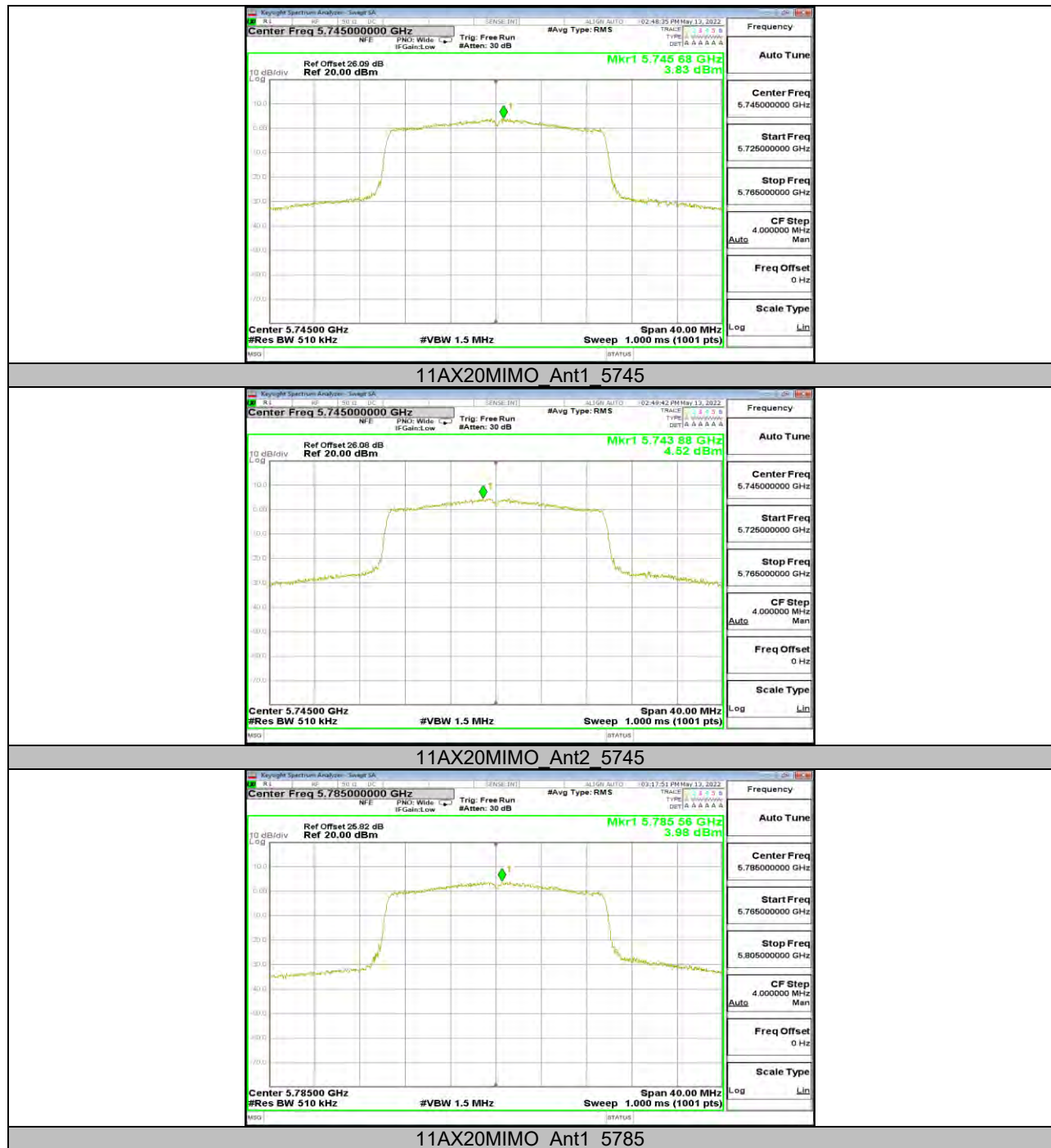














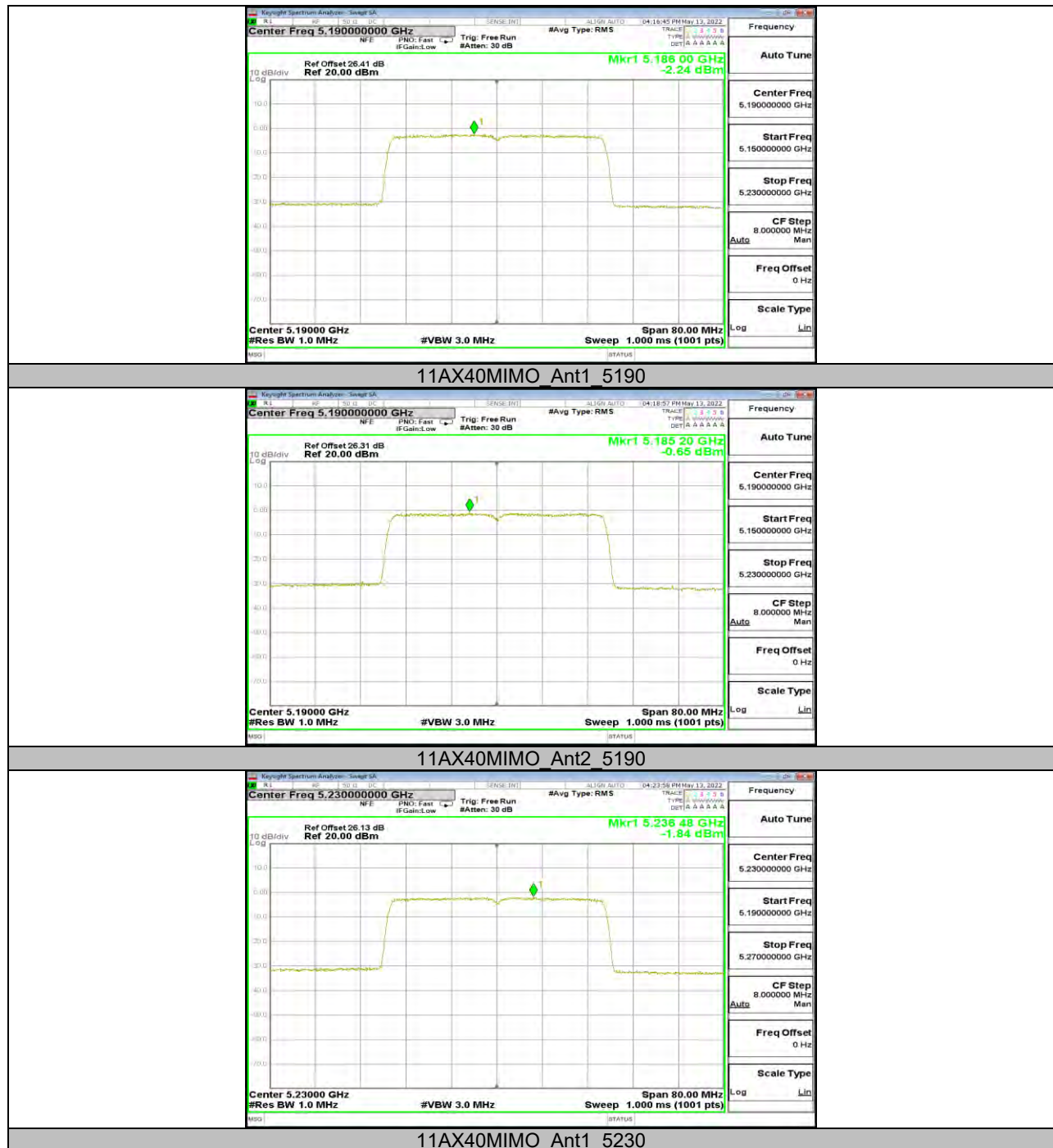
11AX20MIMO_Ant2_5785

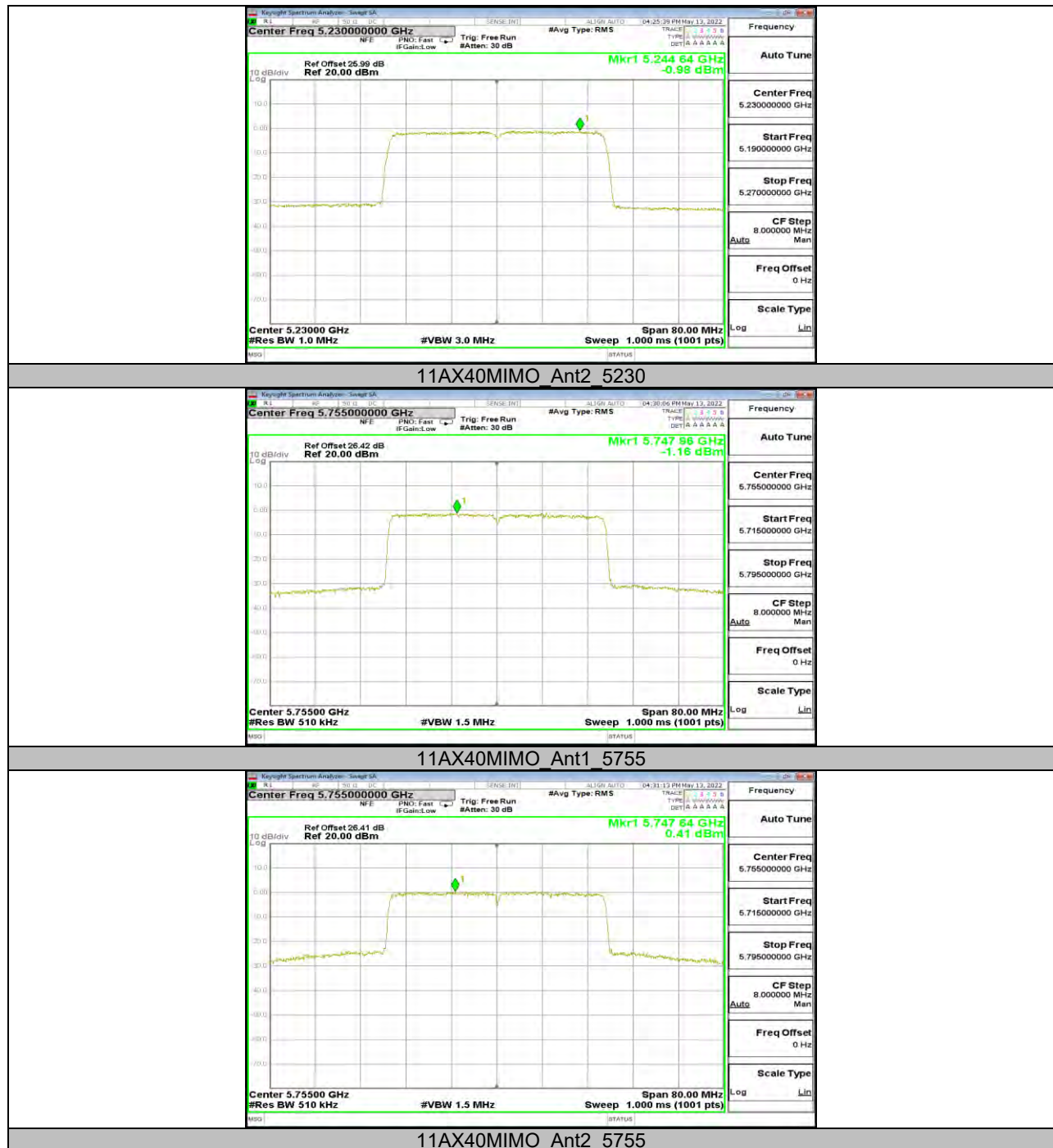


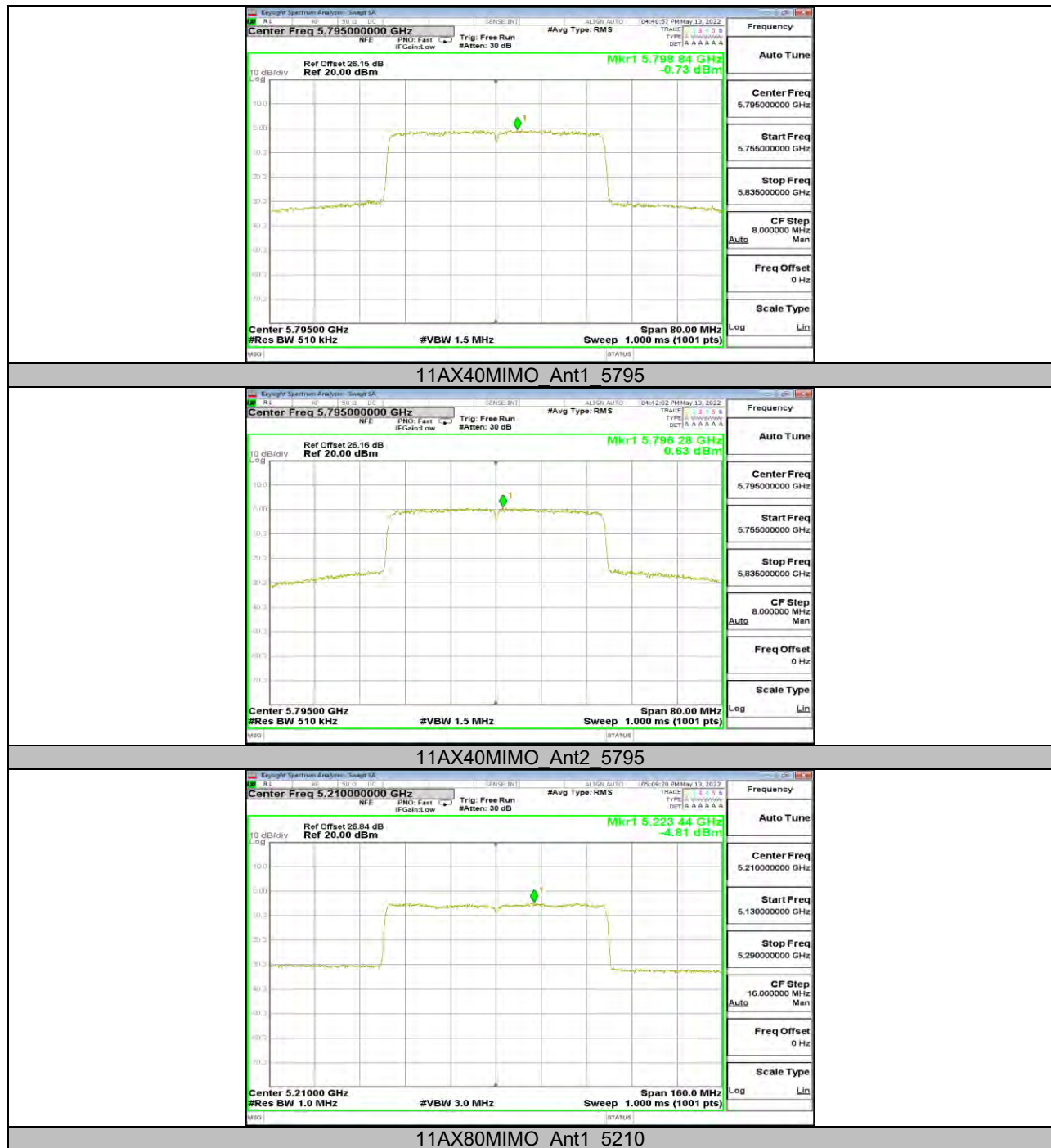
11AX20MIMO_Ant1_5825

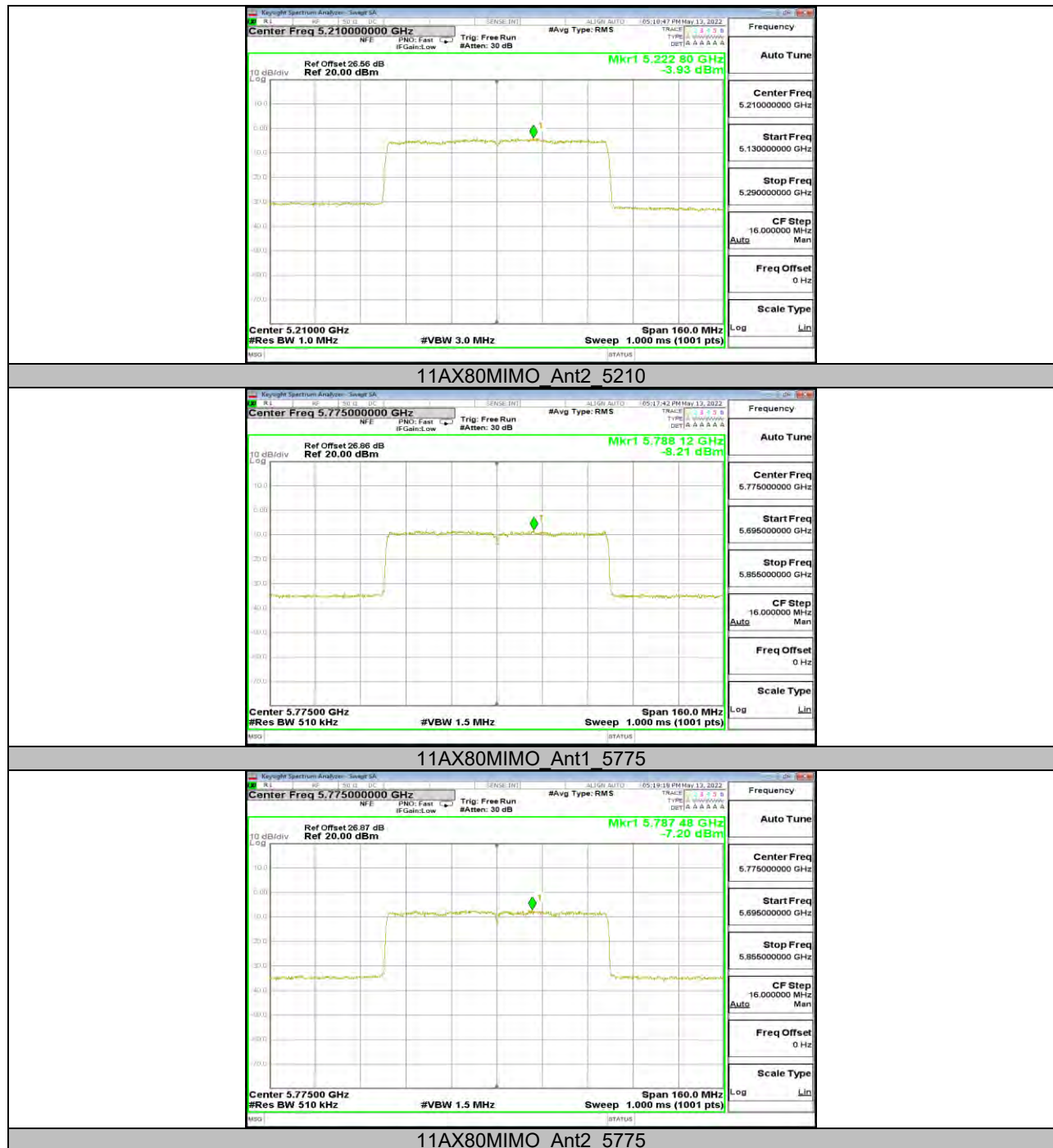


11AX20MIMO_Ant2_5825











12.6. Appendix D: Duty Cycle

12.6.1. 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	1.43	1.53	0.9346	93.46	0.29	0.70	1
11N20MIMO	1.34	1.44	0.9306	93.06	0.31	0.75	1
11N40MIMO	1.27	1.37	0.9270	92.70	0.33	0.79	1
11AC80MIMO	0.33	0.43	0.7674	76.74	1.15	3.03	4
11AX20MIMO	1.05	1.15	0.9130	91.30	0.40	0.95	1
11AX40MIMO	0.55	0.65	0.8462	84.62	0.73	1.82	2
11AX80MIMO	0.29	0.40	0.7250	72.50	1.40	3.45	4

Note:

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

Where: x is Duty Cycle (Linear)

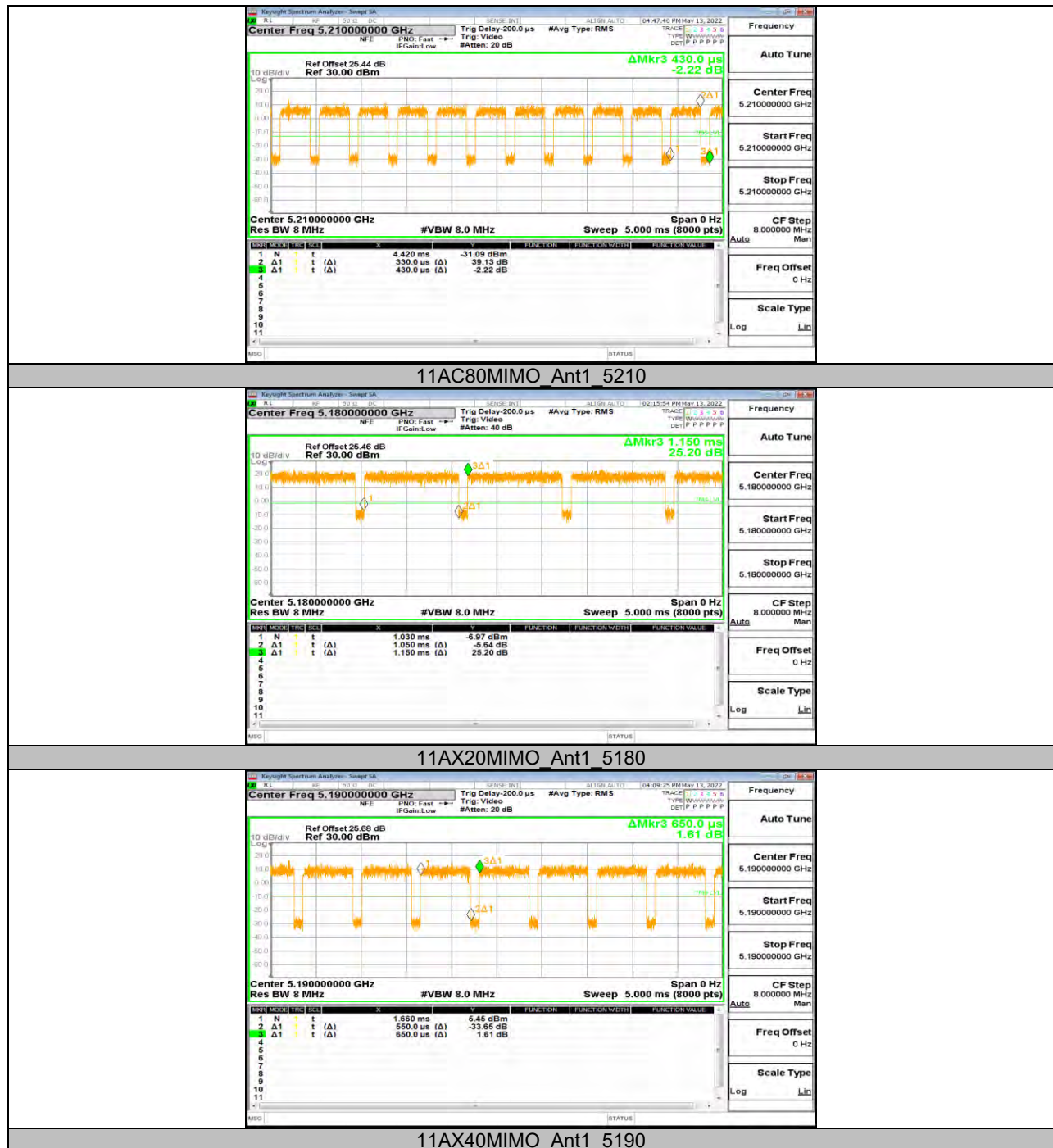
Where: T is On Time

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



12.6.2. Test Graphs









12.7. Appendix E: Frequency Stability 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	5199.9891	-2.10	5200.0060	1.15	5199.9964	-0.70	5199.9802	-3.82
TN	VN	5200.0021	0.40	5200.0119	2.29	5200.0249	4.78	5200.0119	2.29
TN	VH	5199.9757	-4.68	5200.0079	1.52	5199.9755	-4.72	5199.9856	-2.77
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)
45	VN	5200.0149	2.86	5199.9759	-4.63	5200.0223	4.29	5199.9816	-3.54
35	VN	5200.0055	1.06	5199.9956	-0.84	5200.0155	2.99	5200.0049	0.95
25	VN	5199.9861	-2.68	5199.9849	-2.90	5199.9953	-0.91	5200.0001	0.01
15	VN	5199.9993	-0.13	5199.9982	-0.34	5199.9756	-4.69	5200.0010	0.19
5	VN	5200.0132	2.54	5200.0168	3.23	5199.9771	-4.41	5200.0192	3.69
-5	VN	5200.0015	0.29	5199.9833	-3.20	5200.0161	3.09	5199.9883	-2.26
-10	VN	5200.0249	4.79	5200.0004	0.08	5200.0019	0.37	5200.0236	4.53



Frequency Error vs. Voltage									
802.11a 20: 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	5824.9891	-1.87	5824.9975	-0.42	5824.9833	-2.87	5825.0033	0.57
TN	VN	5825.0247	4.24	5825.0137	2.35	5824.9789	-3.62	5825.0192	3.29
TN	VH	5825.0029	0.51	5825.0035	0.61	5825.0059	1.01	5824.9847	-2.62
Frequency Error vs. Temperature									
802.11a 20: 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)
45	VN	5824.9834	-2.85	5825.0204	3.49	5825.0018	0.31	5824.9778	-3.82
35	VN	5824.9908	-1.57	5824.9919	-1.38	5824.9825	-3.00	5825.0096	1.64
25	VN	5824.9846	-2.64	5824.9957	-0.73	5825.0162	2.79	5824.9809	-3.28
15	VN	5824.9997	-0.05	5825.0177	3.04	5825.0183	3.14	5825.0152	2.62
5	VN	5824.9760	-4.12	5825.0095	1.64	5824.9970	-0.52	5825.0188	3.24
-5	VN	5825.0020	0.34	5824.9769	-3.97	5824.9948	-0.89	5825.0234	4.01
-10	VN	5825.0038	0.65	5825.0065	1.11	5825.0213	3.65	5824.9863	-2.36

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

END OF REPORT