



11N40MIMO_Ant1_5755



11N40MIMO_Ant2_5755



11N40MIMO_Ant1_5795

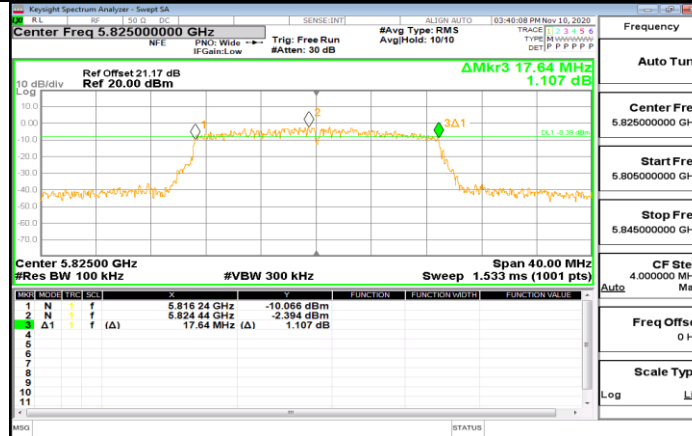




11AC20MIMO_Ant1_5785



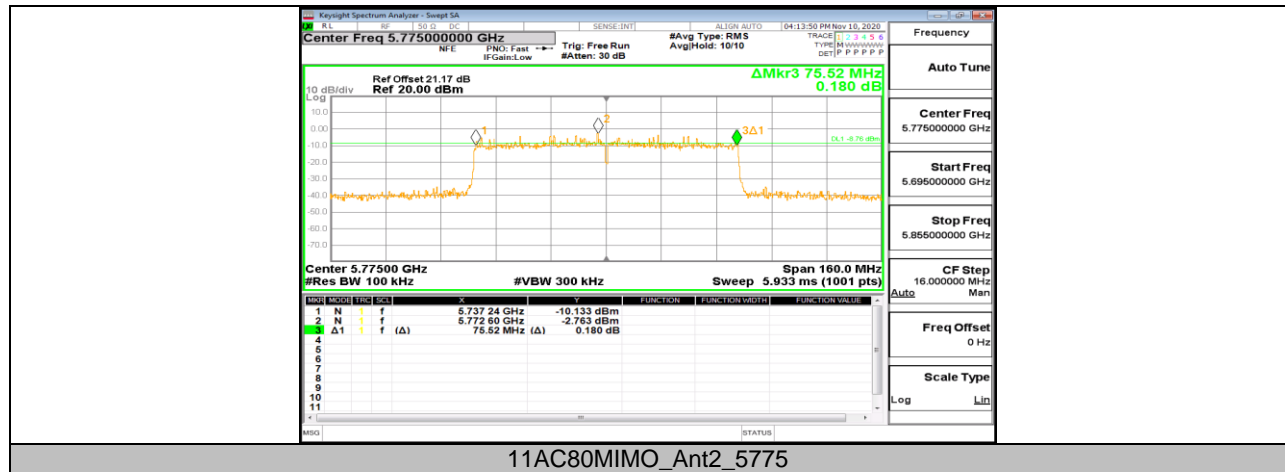
11AC20MIMO_Ant2_5785



11AC20MIMO_Ant1_5825







**Appendix B: Maximum conducted output power****Test Result**

Test Mode	Antenna	Channel	Power [dBm]	FCC Limit [dBm]	ISED Limit [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	13.44	<=30	---	17.80	<=22.19	PASS
	Ant2	5180	14.79	<=30	---	17.96	<=22.18	PASS
	Ant1	5200	13.35	<=30	---	17.71	<=22.23	PASS
	Ant2	5200	14.84	<=30	---	18.01	<=22.22	PASS
	Ant1	5240	14.03	<=30	---	18.39	<=22.17	PASS
	Ant2	5240	14.83	<=30	---	18.00	<=22.18	PASS
	Ant1	5745	13.30	<=30	<=30	---	---	PASS
	Ant2	5745	14.83	<=30	<=30	---	---	PASS
	Ant1	5785	12.95	<=30	<=30	---	---	PASS
	Ant2	5785	14.63	<=30	<=30	---	---	PASS
	Ant1	5825	12.93	<=30	<=30	---	---	PASS
	Ant2	5825	14.11	<=30	<=30	---	---	PASS
11N20MIMO	Ant1	5180	9.68	<=30	---	---	---	PASS
	Ant2	5180	10.44	<=30	---	---	---	PASS
	total	5180	13.09	<=29.2	---	19.89	<=22.45	PASS
	Ant1	5200	10.03	<=30	---	---	---	PASS
	Ant2	5200	10.42	<=30	---	---	---	PASS
	total	5200	13.24	<=29.2	---	20.04	<=22.45	PASS
	Ant1	5240	10.12	<=30	---	---	---	PASS
	Ant2	5240	9.93	<=30	---	---	---	PASS
	total	5240	13.04	<=29.2	---	19.84	<=22.45	PASS
	Ant1	5745	12.89	<=30	<=30	---	---	PASS
	Ant2	5745	14.18	<=30	<=30	---	---	PASS
	total	5745	16.59	<=29.2	<=29.2	---	---	PASS
	Ant1	5785	12.48	<=30	<=30	---	---	PASS
	Ant2	5785	14.09	<=30	<=30	---	---	PASS
	total	5785	16.37	<=29.2	<=29.2	---	---	PASS
	Ant1	5825	12.14	<=30	<=30	---	---	PASS
	Ant2	5825	13.32	<=30	<=30	---	---	PASS
	total	5825	15.78	<=29.2	<=29.2	---	---	PASS
11N40MIMO	Ant1	5190	12.31	<=30	---	---	---	PASS
	Ant2	5190	12.80	<=30	---	---	---	PASS
	total	5190	15.57	<=29.2	---	22.37	<=23	PASS
	Ant1	5230	12.45	<=30	---	---	---	PASS
	Ant2	5230	11.96	<=30	---	---	---	PASS
	total	5230	15.22	<=29.2	---	22.02	<=23	PASS
	Ant1	5755	13.48	<=30	<=30	---	---	PASS
	Ant2	5755	14.62	<=30	<=30	---	---	PASS
	total	5755	17.1	<=29.2	<=29.2	---	---	PASS
	Ant1	5795	13.12	<=30	<=30	---	---	PASS
11AC20MIMO	Ant2	5795	13.69	<=30	<=30	---	---	PASS
	total	5795	16.4	<=29.2	<=29.2	---	---	PASS
	Ant1	5180	9.65	<=30	---	---	---	PASS
	Ant2	5180	10.10	<=30	---	---	---	PASS
	total	5180	12.89	<=29.2	---	19.69	<=22.47	PASS
	Ant1	5200	9.70	<=30	---	---	---	PASS
	Ant2	5200	10.15	<=30	---	---	---	PASS
	total	5200	12.94	<=29.2	---	19.74	<=22.47	PASS
	Ant1	5240	10.02	<=30	---	---	---	PASS
	Ant2	5240	9.21	<=30	---	---	---	PASS
11AC20MIMO	total	5240	12.64	<=29.2	---	19.44	<=22.45	PASS
	Ant1	5745	13.01	<=30	<=30	---	---	PASS
	Ant2	5745	14.10	<=30	<=30	---	---	PASS



	total	5745	16.60	<=29.2	<=29.2	---	---	PASS
	Ant1	5785	12.67	<=30	<=30	---	---	PASS
	Ant2	5785	14.17	<=30	<=30	---	---	PASS
	total	5785	16.49	<=29.2	<=29.2	---	---	PASS
	Ant1	5825	12.48	<=30	<=30	---	---	PASS
	Ant2	5825	13.24	<=30	<=30	---	---	PASS
11AC40MIMO	total	5825	15.89	<=29.2	<=29.2	---	---	PASS
	Ant1	5190	12.19	<=30	---	---	---	PASS
	Ant2	5190	12.56	<=30	---	---	---	PASS
	total	5190	15.39	<=29.2	---	22.19	<=23	PASS
	Ant1	5230	12.44	<=30	---	---	---	PASS
	Ant2	5230	12.27	<=30	---	---	---	PASS
	total	5230	15.37	<=29.2	---	22.17	<=23	PASS
	Ant1	5755	13.41	<=30	<=30	---	---	PASS
	Ant2	5755	14.47	<=30	<=30	---	---	PASS
	total	5755	16.98	<=29.2	<=29.2	---	---	PASS
	Ant1	5795	13.04	<=30	<=30	---	---	PASS
	Ant2	5795	14.37	<=30	<=30	---	---	PASS
11AC80MIMO	total	5795	16.77	<=29.2	<=29.2	---	---	PASS
	Ant1	5210	12.19	<=30	---	---	---	PASS
	Ant2	5210	12.15	<=30	---	---	---	PASS
	total	5210	15.18	<=29.2	---	21.98	<=23	PASS
	Ant1	5775	11.41	<=30	<=30	---	---	PASS
	Ant2	5775	12.51	<=30	<=30	---	---	PASS
	total	5775	15.01	<=29.2	<=29.2	---	---	PASS

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

Appendix C: Maximum power spectral density Test Result

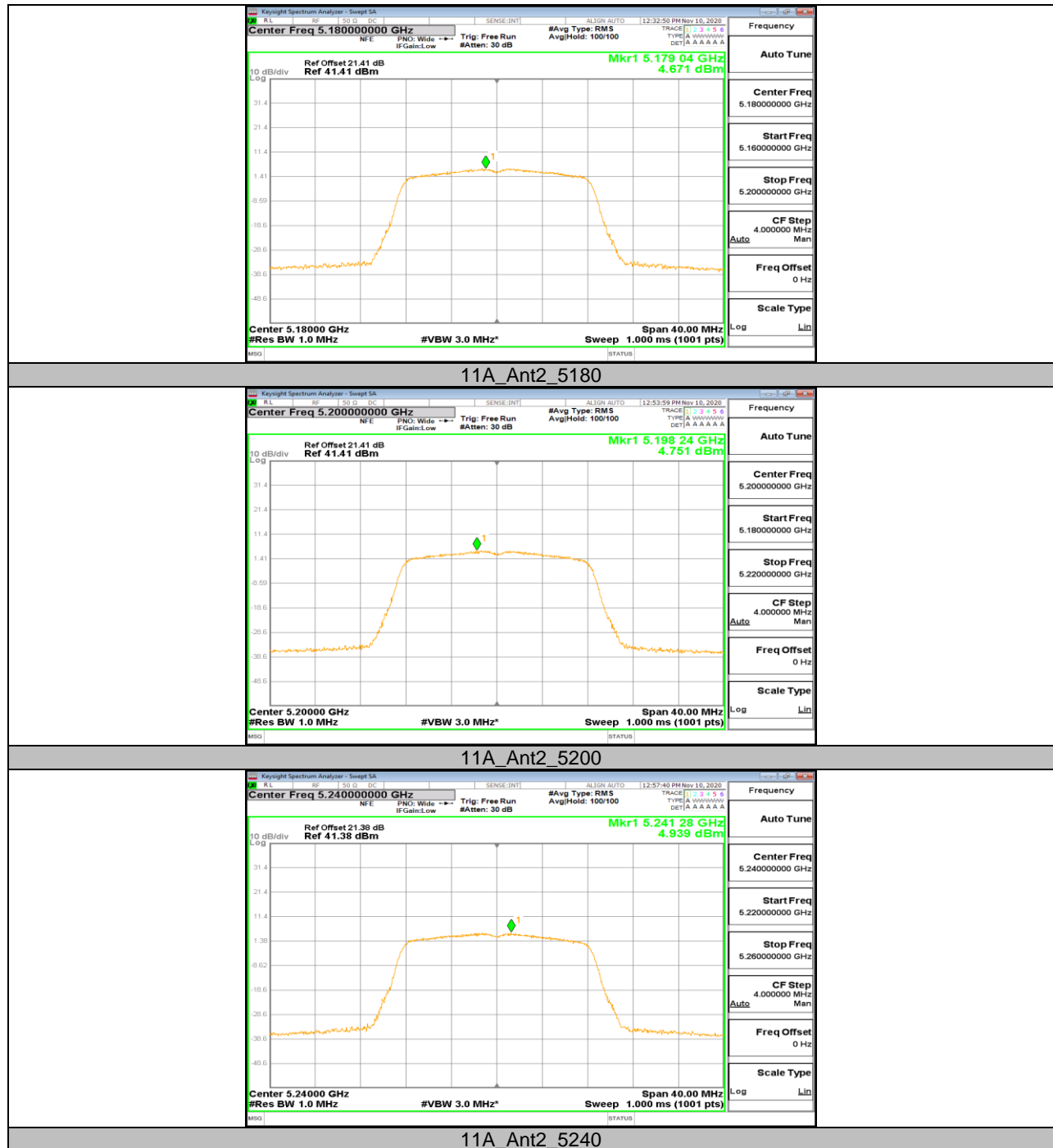
Test Mode	Antenna	Channel	Power [dBm/MHz]	Limit [dBm/MHz]	EIRP [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant2	5180	4.67	<=11	7.84	<=10	PASS
		5200	4.75	<=11	7.92	<=10	PASS
		5240	4.94	<=11	8.11	<=10	PASS
		5745	1.99	<=30	---	---	PASS
		5785	1.67	<=30	---	---	PASS
		5825	1.29	<=30	---	---	PASS
11N20MIMO	Ant1	5180	-0.64	<=11	---	---	PASS
	Ant2	5180	0.17	<=11	---	---	PASS
	total	5180	2.79	<=10.2	9.59	<=10	PASS
	Ant1	5200	-0.38	<=11	---	---	PASS
	Ant2	5200	0.1	<=11	---	---	PASS
	total	5200	2.88	<=10.2	9.68	<=10	PASS
	Ant1	5240	-0.22	<=11	---	---	PASS
	Ant2	5240	-0.32	<=11	---	---	PASS
	total	5240	2.74	<=10.2	9.52	<=10	PASS
	Ant1	5745	-0.14	<=30	---	---	PASS
	Ant2	5745	1.32	<=30	---	---	PASS
	total	5745	3.66	<=29.2	---	---	PASS
	Ant1	5785	-0.26	<=30	---	---	PASS
	Ant2	5785	1.52	<=30	---	---	PASS
	total	5785	3.73	<=29.2	---	---	PASS
	Ant1	5825	-0.19	<=30	---	---	PASS
	Ant2	5825	0.53	<=30	---	---	PASS
	total	5825	3.20	<=29.2	---	---	PASS
11N40MIMO	Ant1	5190	-1.47	<=11	---	---	PASS
	Ant2	5190	-0.81	<=11	---	---	PASS
	total	5190	1.88	<=10.2	8.68	<=10	PASS
	Ant1	5230	-1	<=11	---	---	PASS
	Ant2	5230	-1.48	<=11	---	---	PASS
	total	5230	1.78	<=10.2	8.58	<=10	PASS
	Ant1	5755	-2.72	<=30	---	---	PASS
	Ant2	5755	-1.78	<=30	---	---	PASS
	total	5755	0.79	<=29.2	---	---	PASS
	Ant1	5795	-3.45	<=30	---	---	PASS
11AC80MIMO	Ant2	5795	-1.89	<=30	---	---	PASS
	total	5795	0.41	<=29.2	---	---	PASS
	Ant1	5210	-4.44	<=11	---	---	PASS
	Ant2	5210	-5.06	<=11	---	---	PASS
	total	5210	-1.73	<=10.2	5.07	<=10	PASS
	Ant1	5775	-7.91	<=30	---	---	PASS
	Ant2	5775	-6.59	<=30	---	---	PASS
	total	5775	-4.19	<=29.2	---	---	PASS

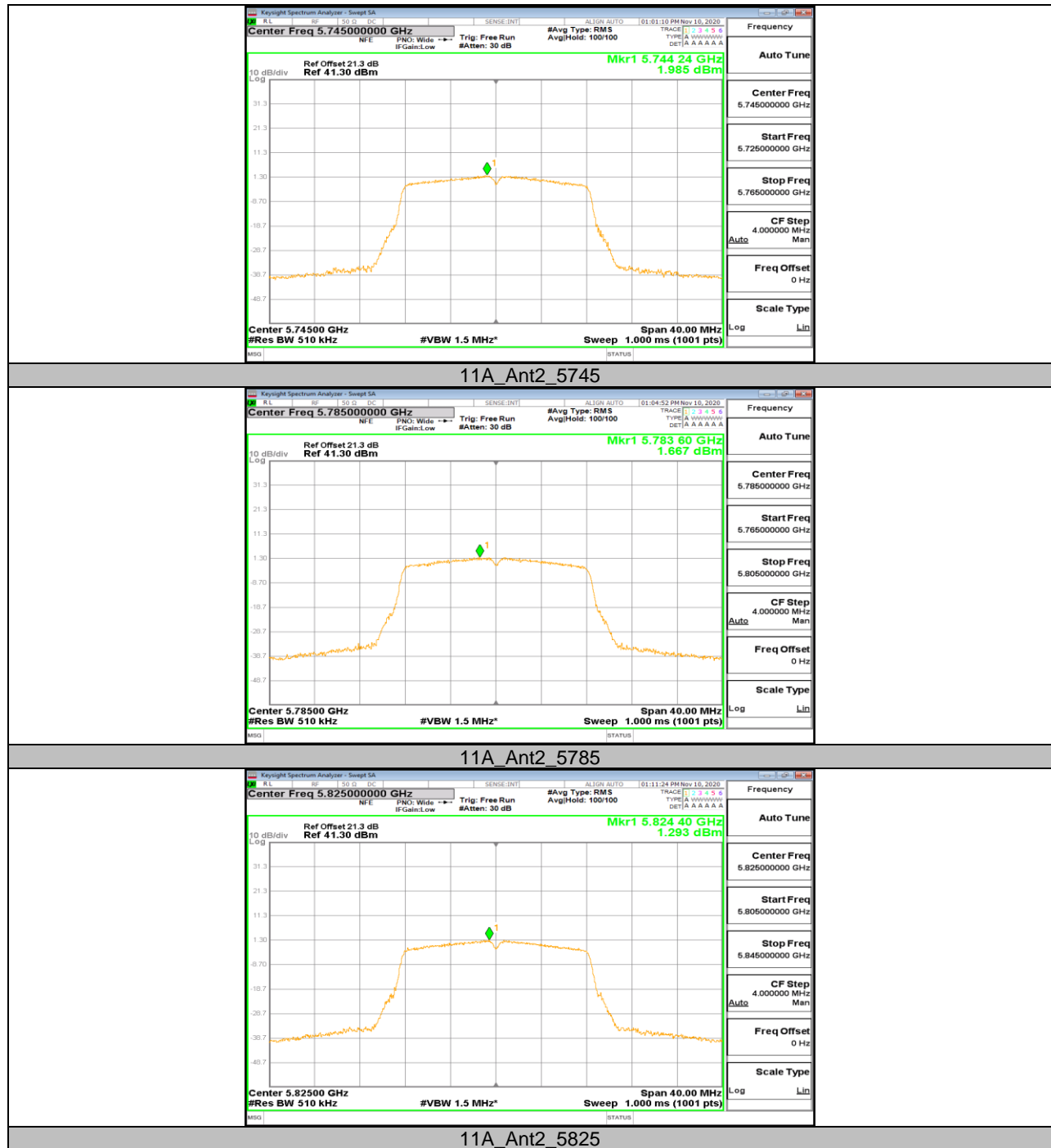
Note : 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

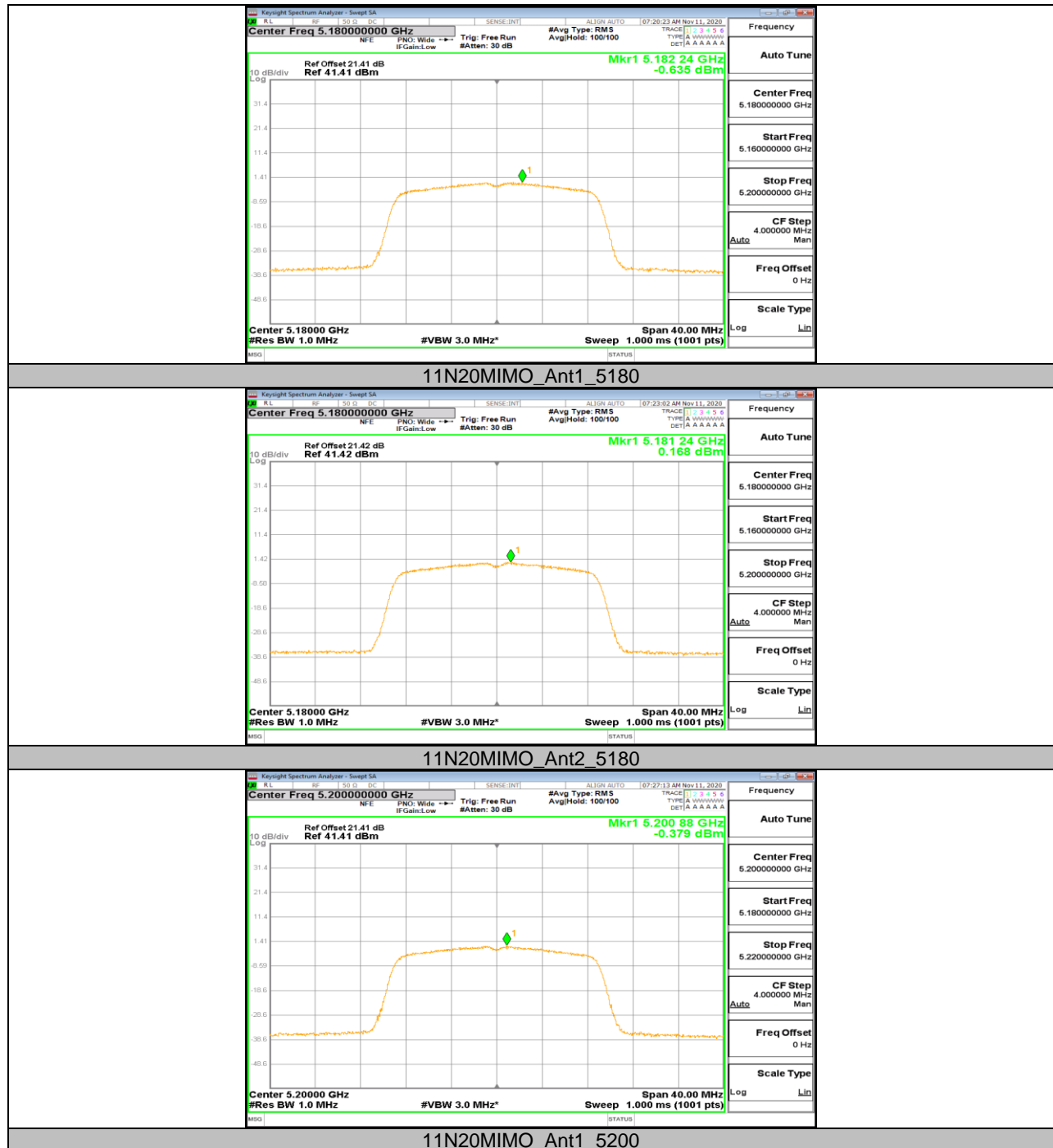
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

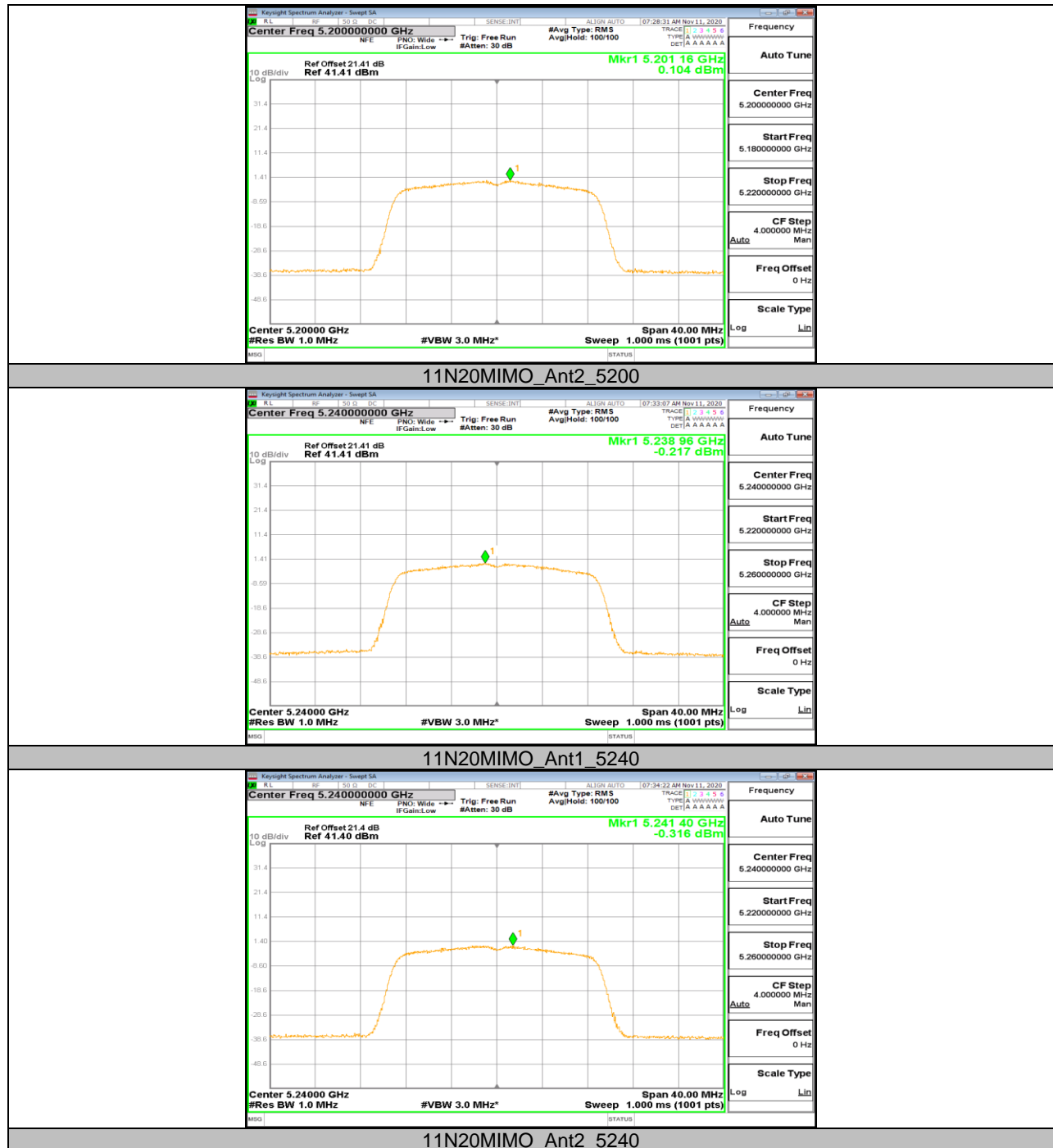


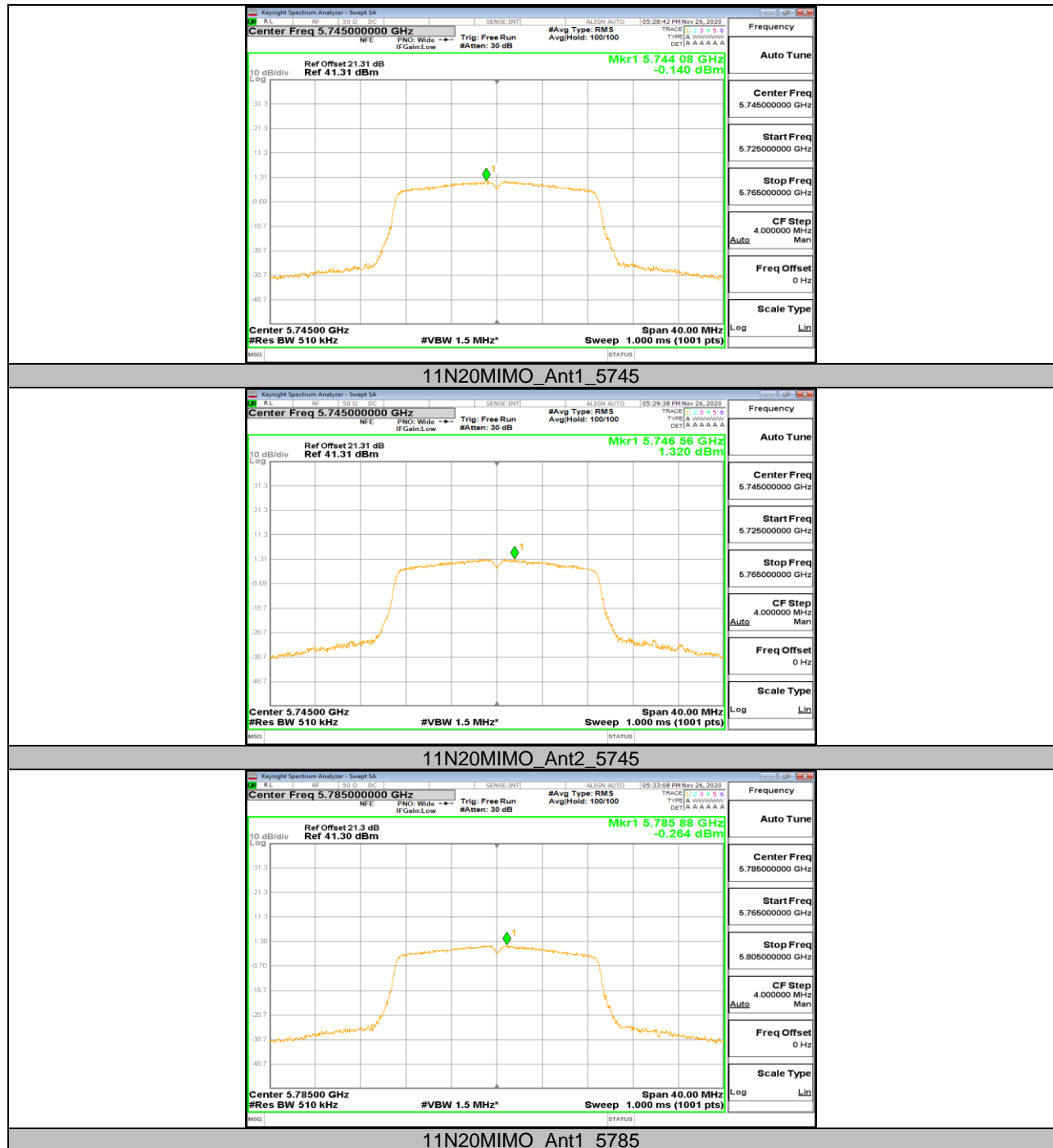
Test Graphs

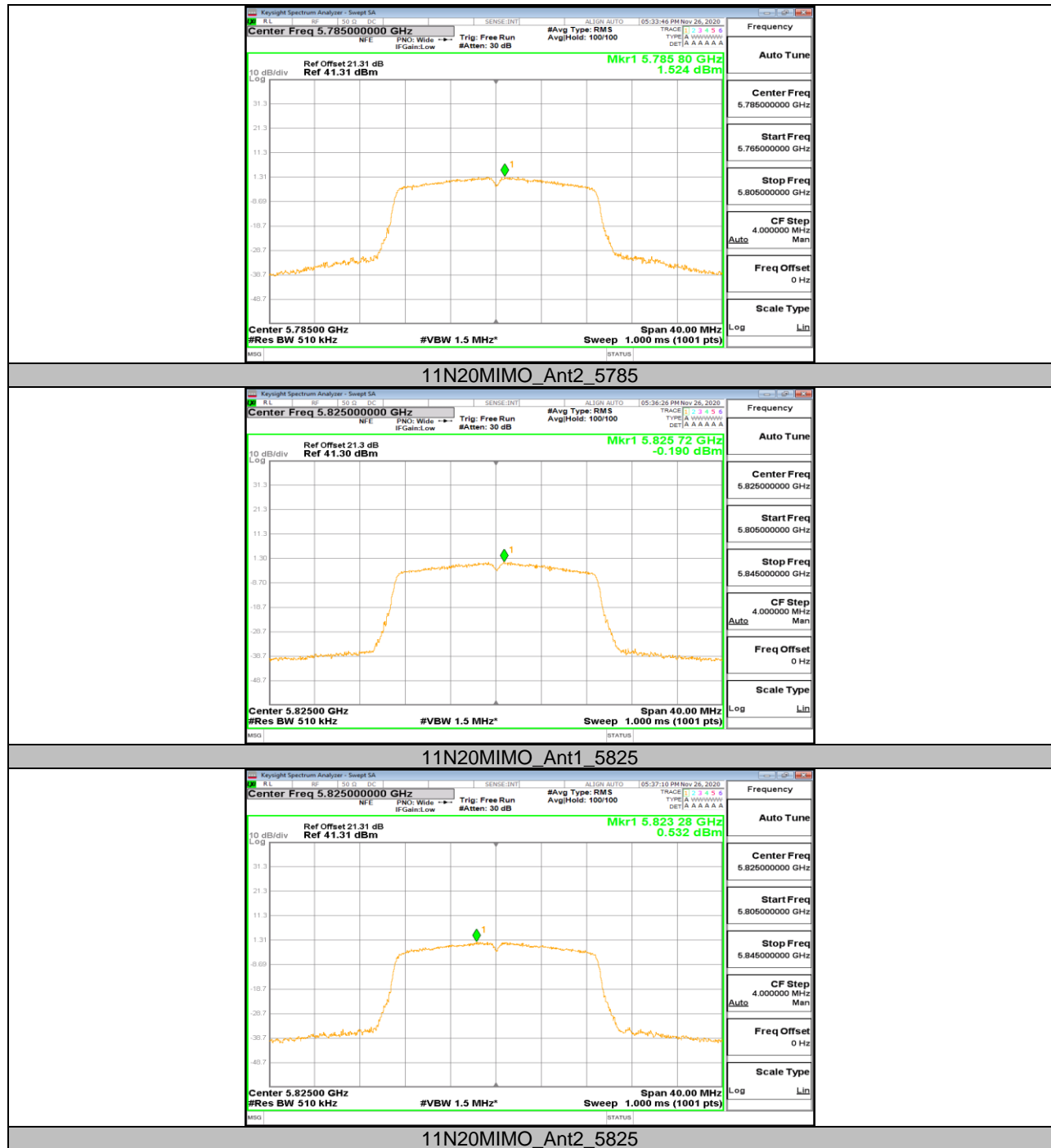




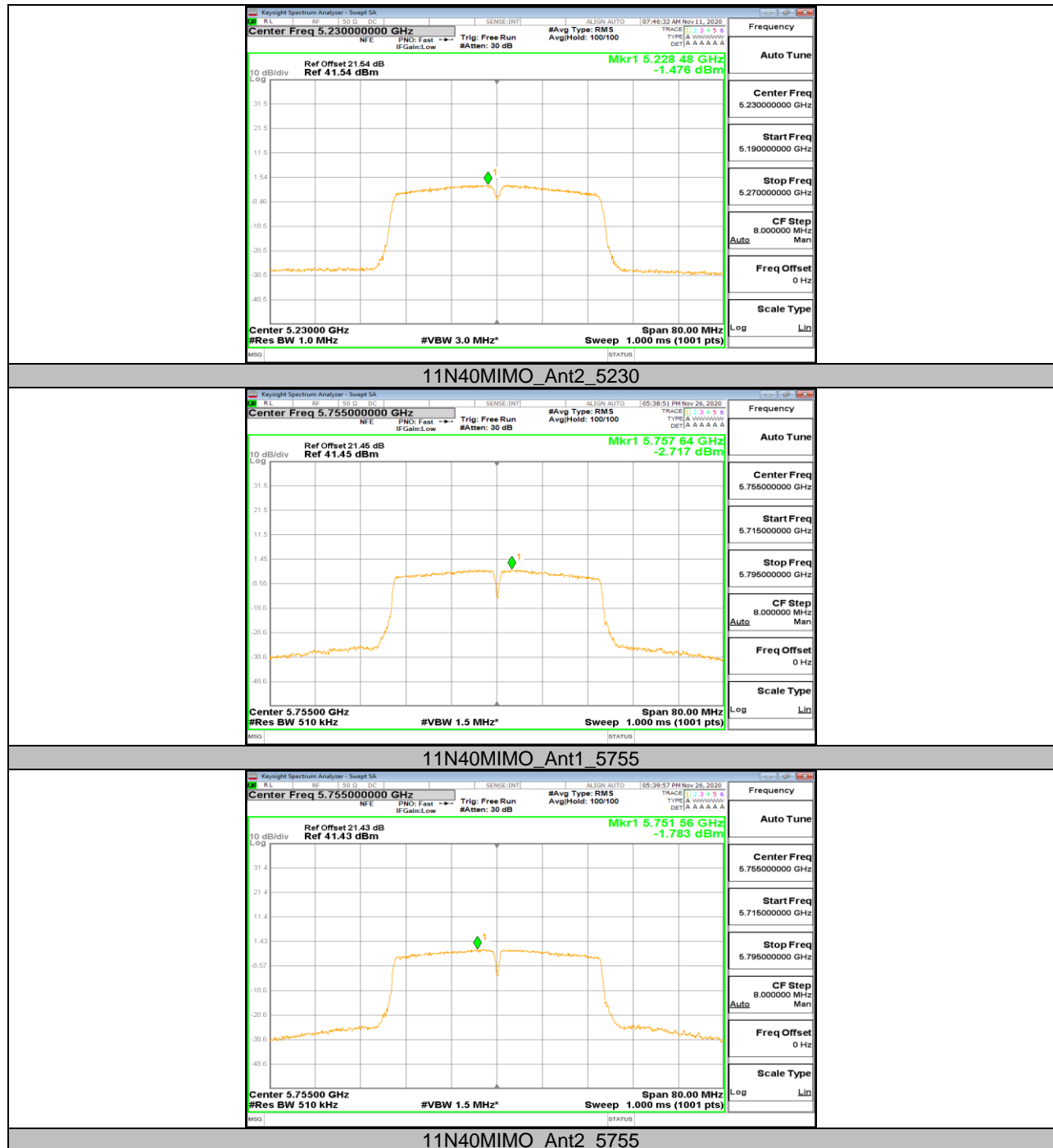


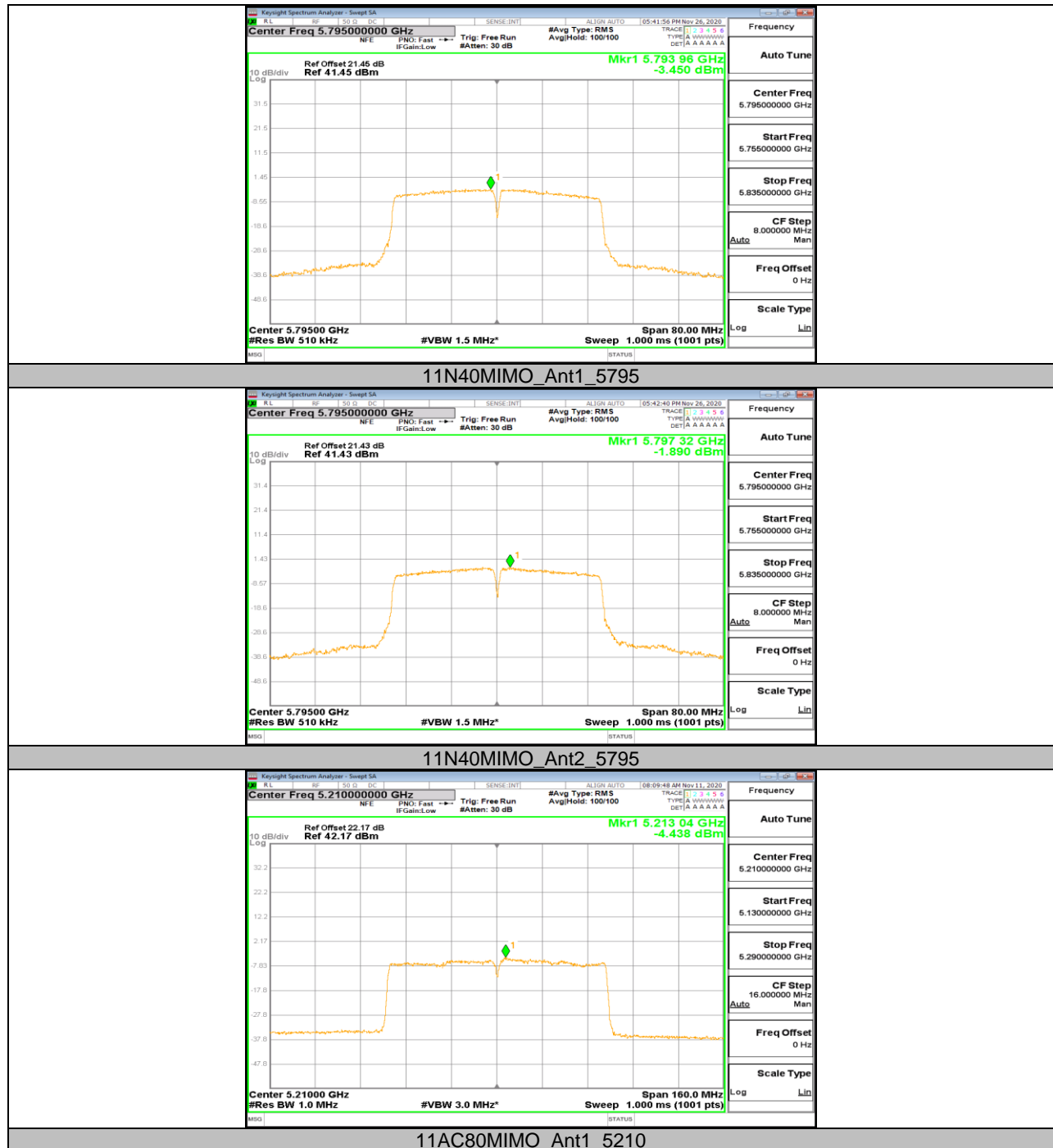
















Appendix D: Duty Cycle Test Result

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	1.43	0.9720	97.20	0.12	0.72	1
11N20MIMO	1.30	1.34	0.9701	97.01	0.13	0.77	1
11N40MIMO	0.65	0.68	0.9559	95.59	0.20	1.54	2
11AC20MIMO	0.68	0.71	0.9577	95.77	0.19	1.47	2
11AC40MIMO	0.35	0.39	0.8974	89.74	0.47	2.86	3
11AC80MIMO	0.95	1.56	0.6090	60.90	2.15	1.05	2

Note:

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

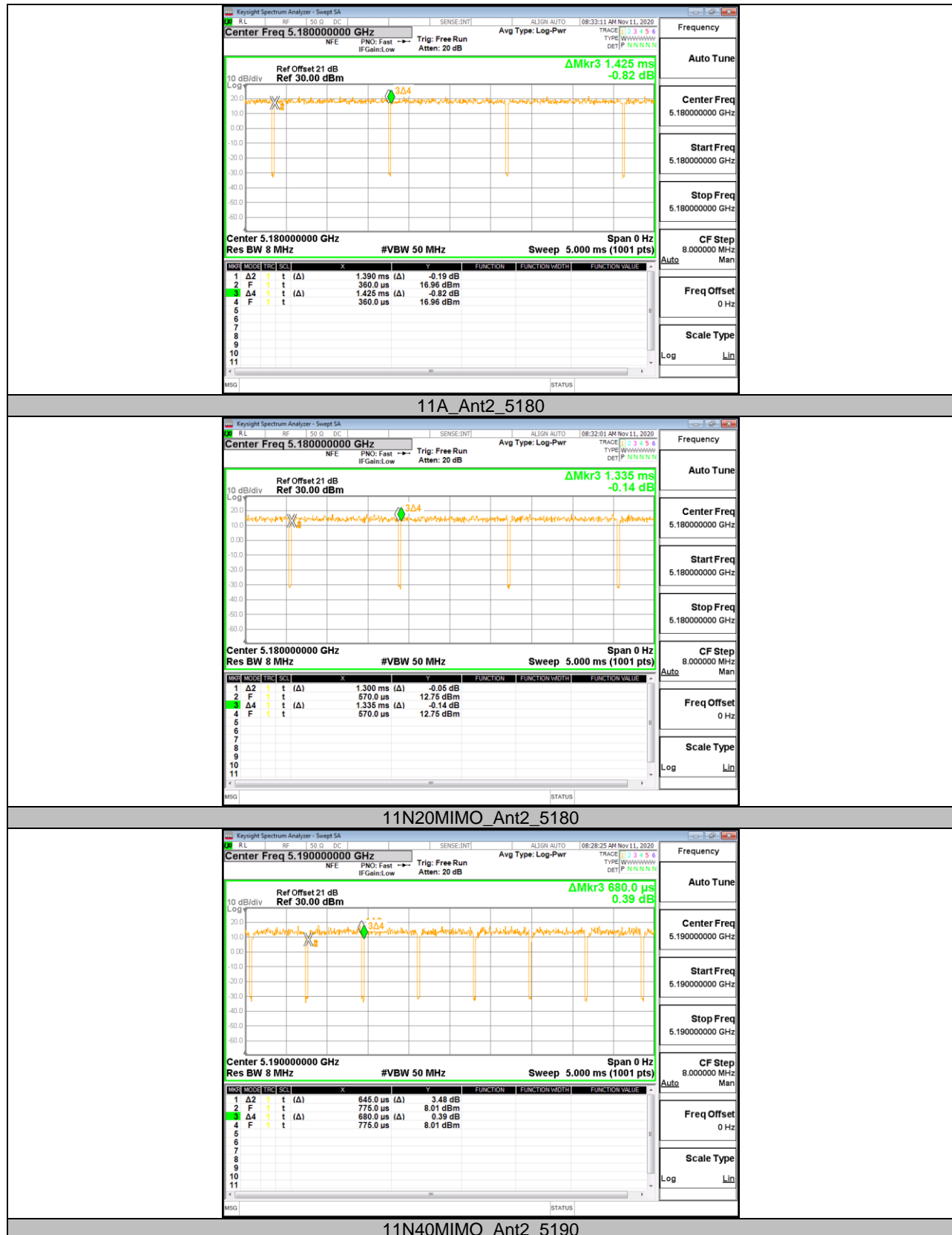
Where: x is Duty Cycle (Linear)

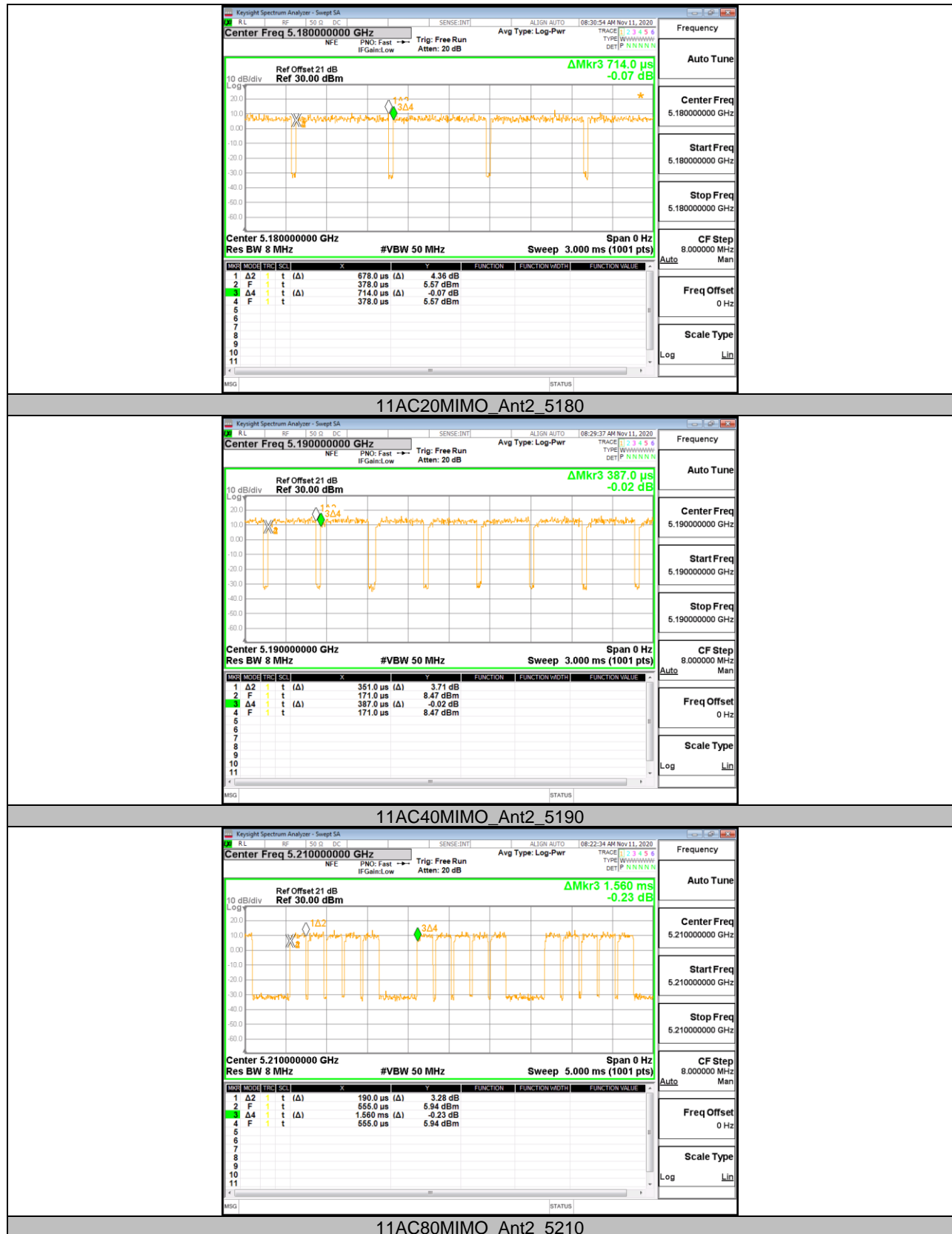
Where: T is On Time

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



Test Graphs





**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)
T _N	V _L	5200.0192	3.70	5200.0039	0.76	5199.9889	-2.13	5200.0037	0.71
T _N	V _N	5200.0002	0.05	5199.9908	-1.77	5199.9821	-3.45	5200.0023	0.43
T _N	V _H	5200.0139	2.66	5200.0035	0.67	5199.9795	-3.93	5199.9823	-3.41
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	V _N	5200.0071	1.37	5199.9978	-0.42	5200.0078	1.49	5200.0056	1.08
30	V _N	5199.9926	-1.43	5200.0108	2.07	5199.9772	-4.38	5200.0120	2.30
20	V _N	5200.0188	3.61	5200.0117	2.25	5200.0240	4.62	5199.9885	-2.21
10	V _N	5200.0155	2.98	5200.0211	4.07	5200.0180	3.45	5199.9930	-1.35
0	V _N	5200.0228	4.39	5200.0053	1.01	5199.9909	-1.75	5199.9781	-4.20

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)
T _N	V _L	5825.0157	2.70	5824.9956	-0.76	5825.0028	0.49	5825.0184	3.15
T _N	V _N	5825.0095	1.63	5824.9834	-2.86	5825.0063	1.07	5824.9897	-1.77
T _N	V _H	5824.9970	-0.51	5825.0026	0.45	5824.9973	-0.46	5825.0090	1.55
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	V _N	5825.0213	3.66	5825.0084	1.44	5824.9816	-3.16	5825.0100	1.71
30	V _N	5825.0138	2.37	5824.9918	-1.40	5825.0146	2.51	5825.0174	2.98
20	V _N	5825.0159	2.73	5824.9866	-2.30	5825.0035	0.60	5825.0114	1.96
10	V _N	5825.0052	0.90	5825.0193	3.31	5825.0226	3.87	5825.0217	3.72
0	V _N	5824.9962	-0.66	5825.0155	2.67	5825.0146	2.51	5824.9791	-3.59

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

END OF REPORT