

Appendix G

RF Test Data for 5.8GWIFI (Conducted Measurement)

Product Name: Smart Phone

Test Model: ULTRA S25

Environmental Conditions

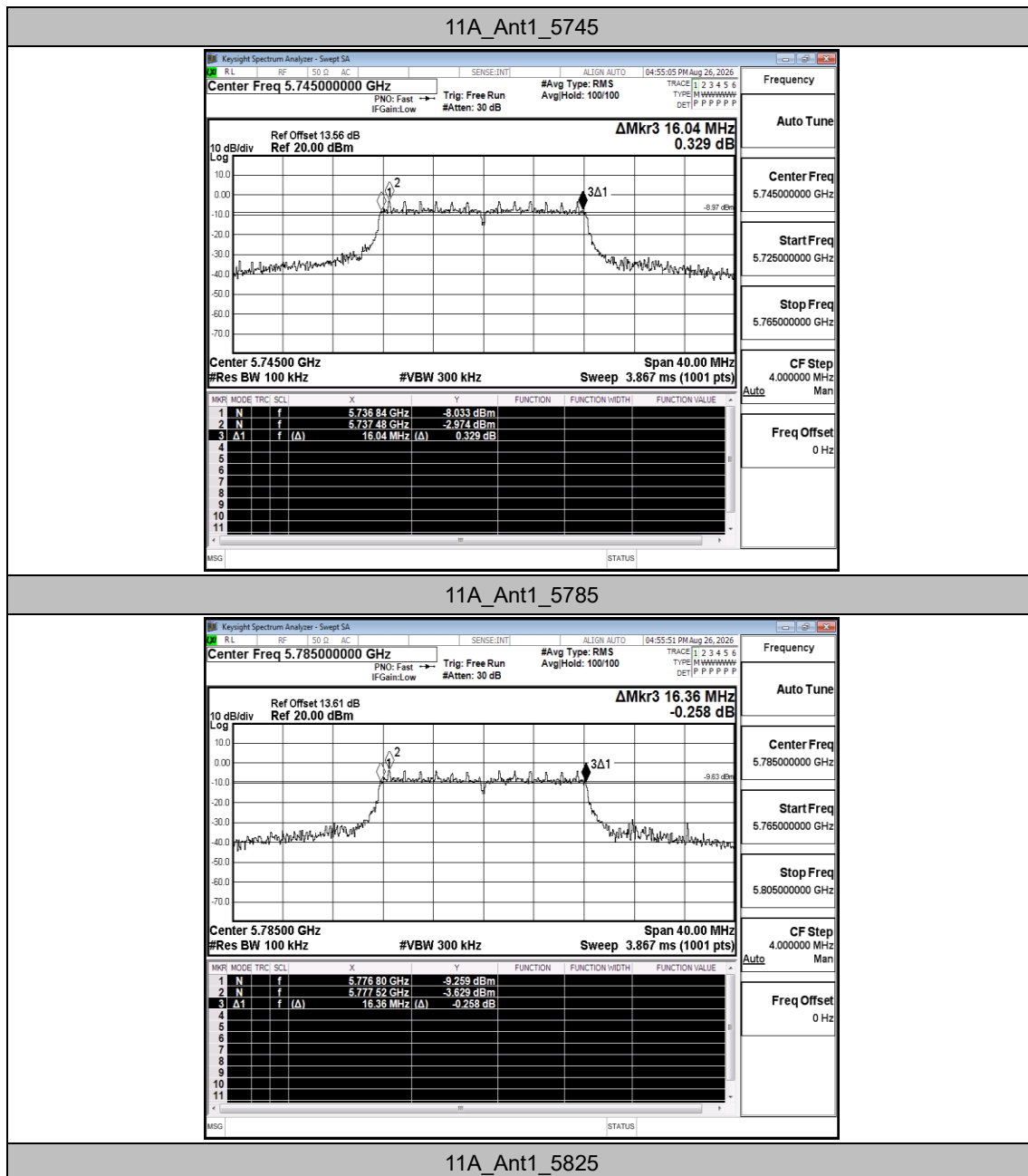
Temperature:	24.3°C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

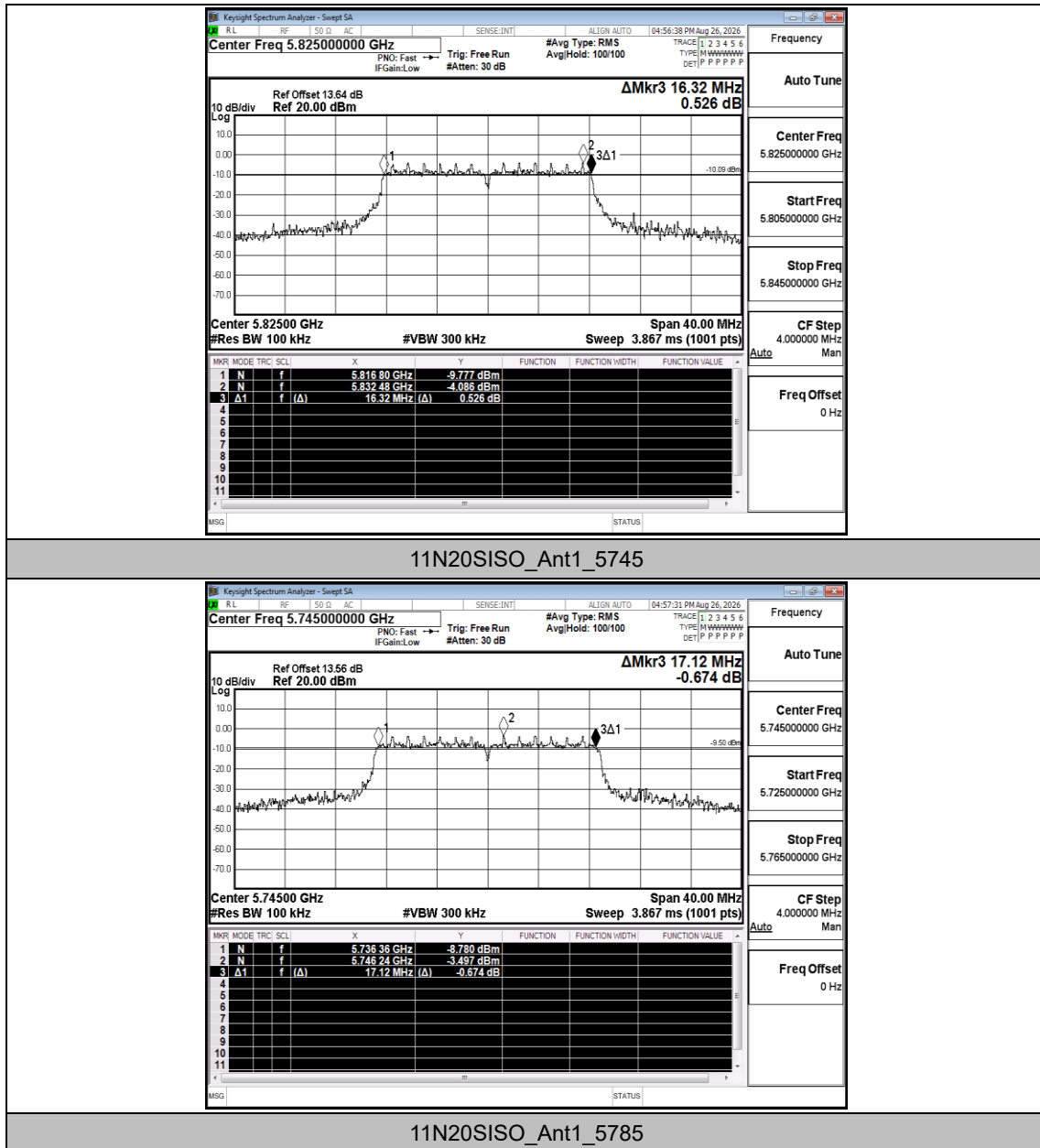
G.1 Min emission bandwidth

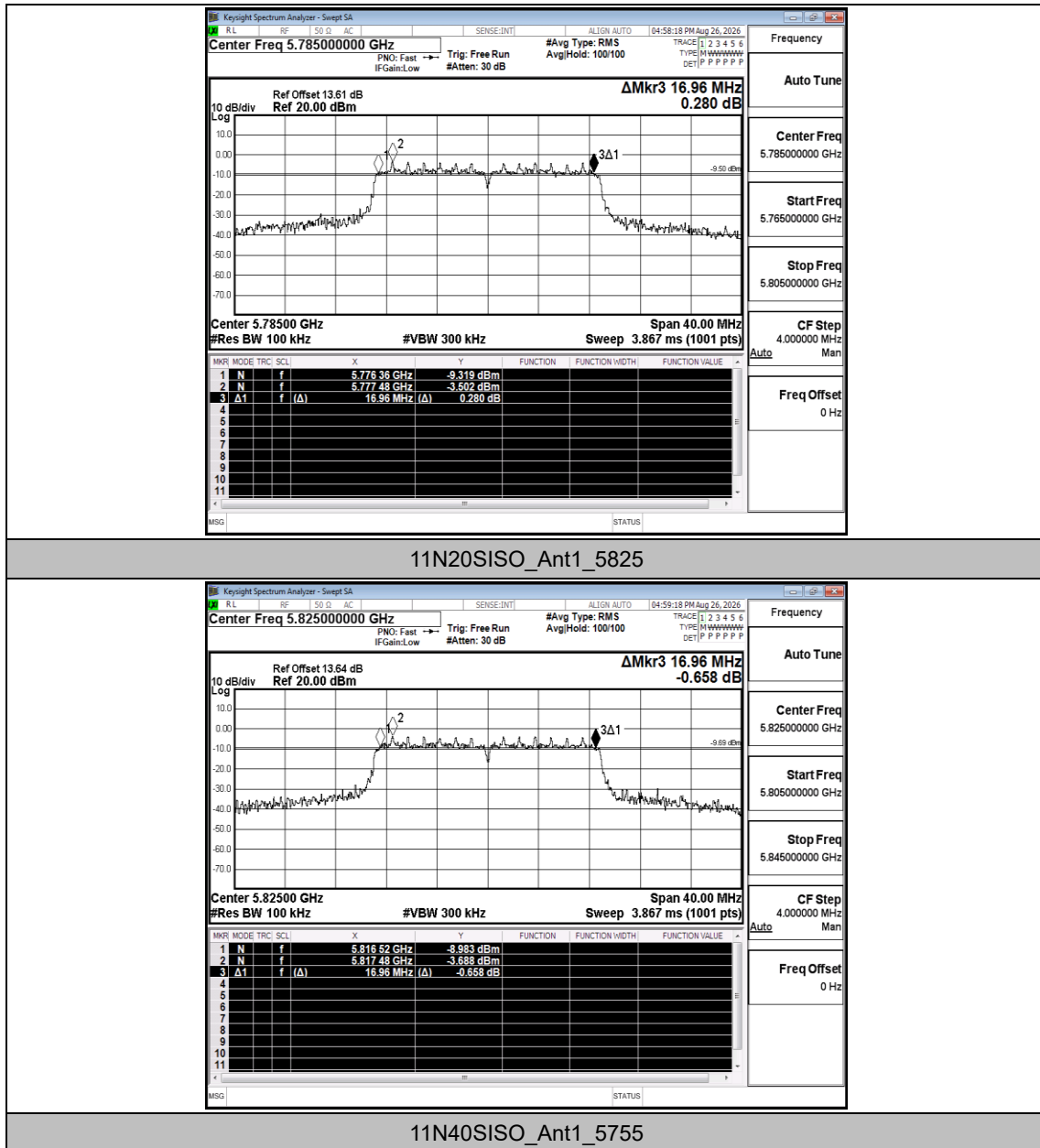
Test Result

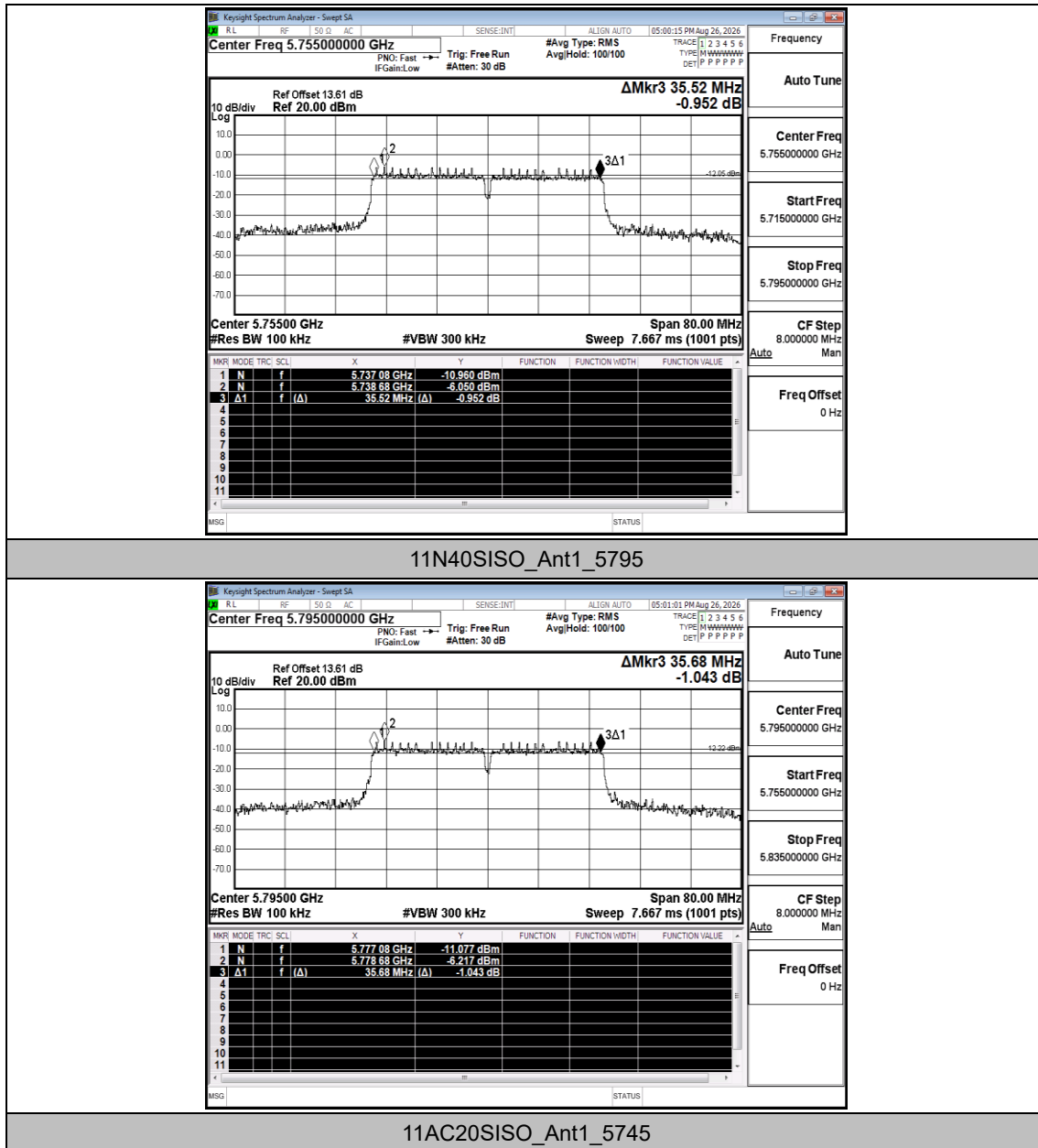
TestMode	Antenna	Freq (MHz)	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	16.040	5736.840	5752.880	0.5	PASS
		5785	16.360	5776.800	5793.160	0.5	PASS
		5825	16.320	5816.800	5833.120	0.5	PASS
11N20SISO	Ant1	5745	17.120	5736.360	5753.480	0.5	PASS
		5785	16.960	5776.360	5793.320	0.5	PASS
		5825	16.960	5816.520	5833.480	0.5	PASS
11N40SISO	Ant1	5755	35.520	5737.080	5772.600	0.5	PASS
		5795	35.680	5777.080	5812.760	0.5	PASS
11AC20SISO	Ant1	5745	17.000	5736.480	5753.480	0.5	PASS
		5785	17.000	5776.320	5793.320	0.5	PASS
		5825	17.120	5816.400	5833.520	0.5	PASS
11AC40SISO	Ant1	5755	36.000	5736.920	5772.920	0.5	PASS
		5795	36.080	5776.920	5813.000	0.5	PASS
11AC80SISO	Ant1	5775	75.200	5737.400	5812.600	0.5	PASS

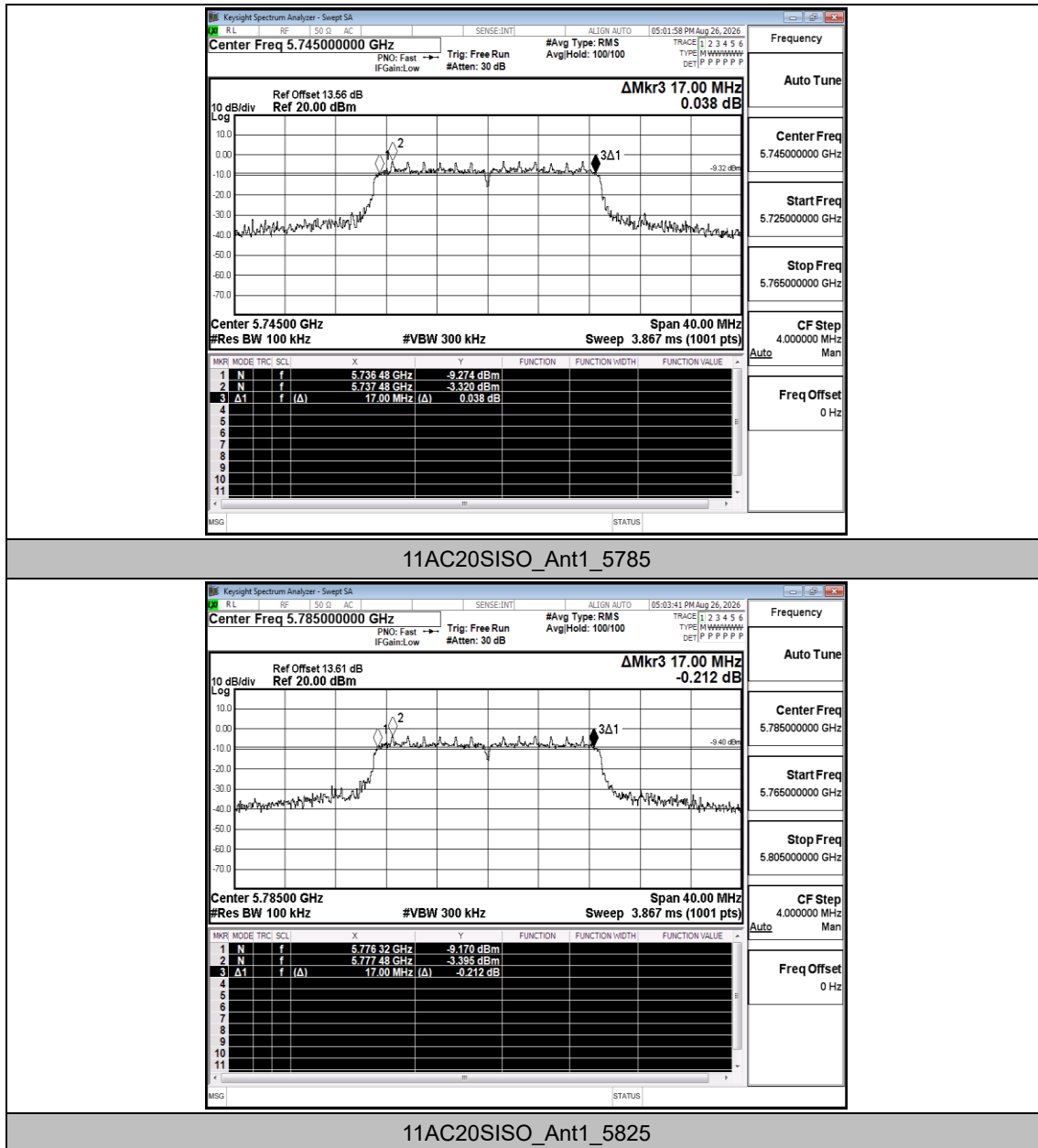
Test Graphs B4

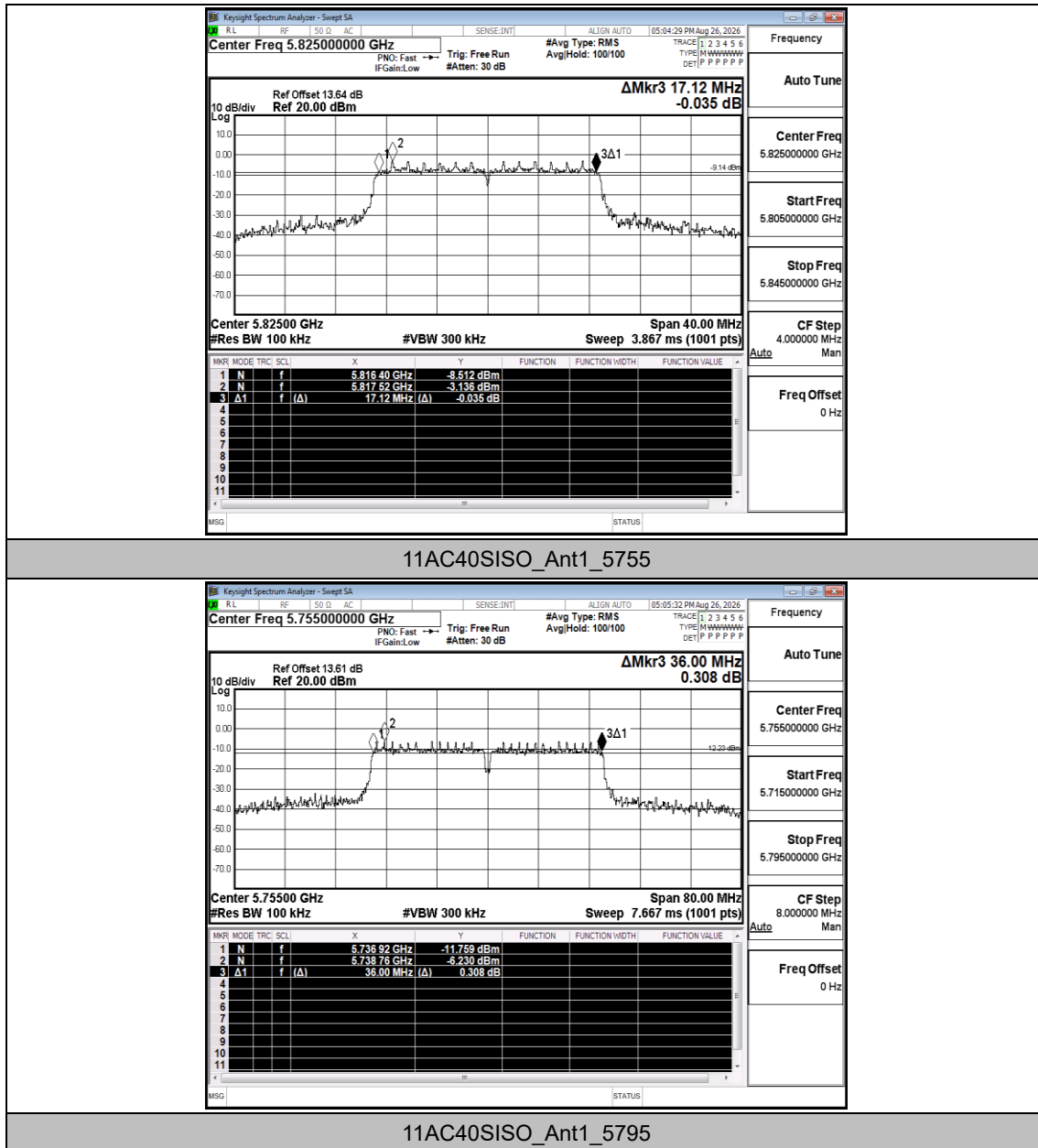


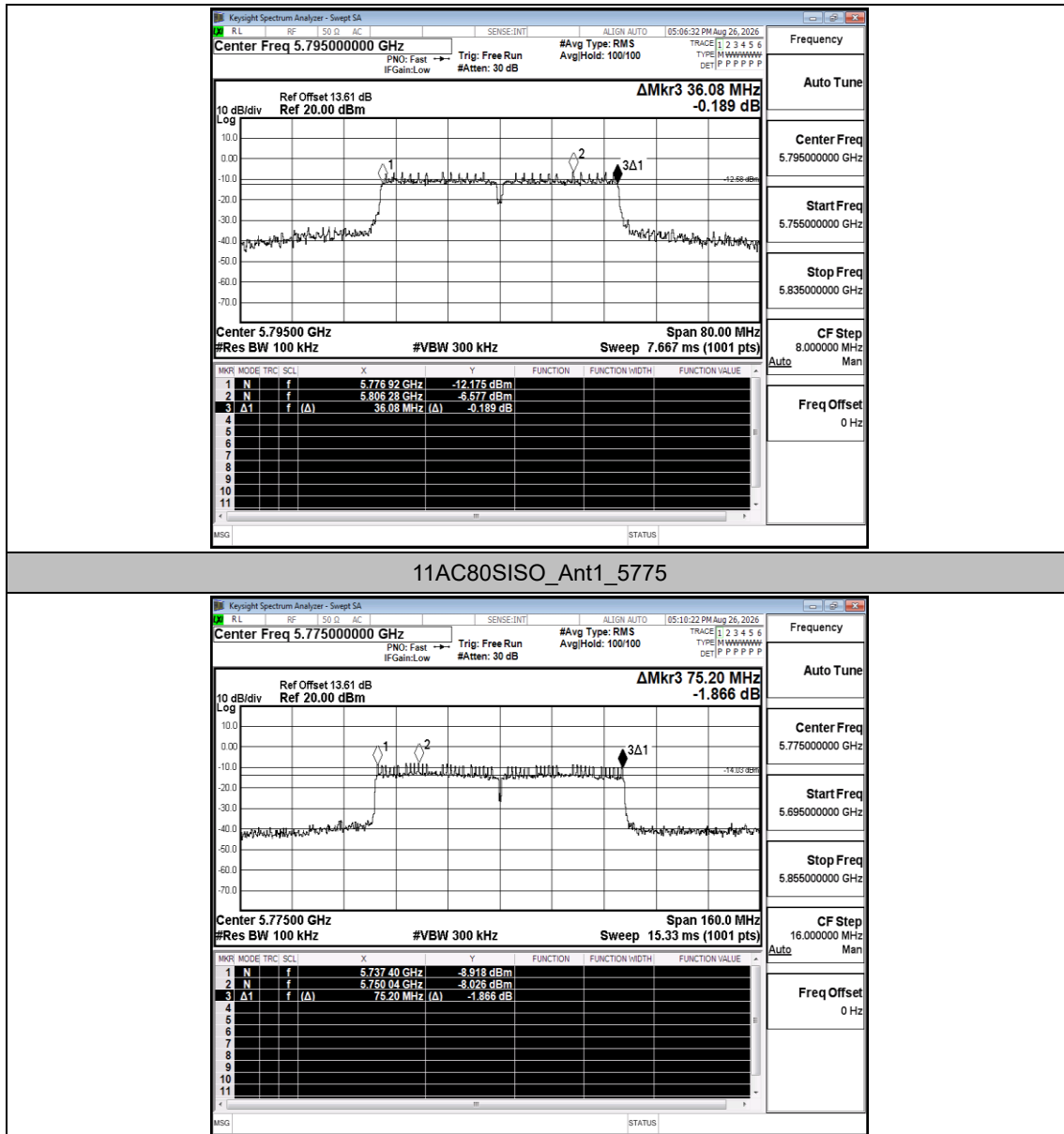












G.2 Maximum conducted output power

Test Result

Test Mode	Antenna	Freq (MHz)	TPC Mode	Measured Power [dBm]	DC Factor [dB]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	NA	12.59	1.76	14.35	≤30.00	PASS
		5785	NA	12.47	2.14	14.61	≤30.00	PASS
		5825	NA	12.75	2.14	14.89	≤30.00	PASS
11N20SISO	Ant1	5745	NA	12.62	1.89	14.51	≤30.00	PASS
		5785	NA	12.53	2.14	14.67	≤30.00	PASS
		5825	NA	12.82	1.76	14.58	≤30.00	PASS
11N40SISO	Ant1	5755	NA	11.48	3.01	14.49	≤30.00	PASS
		5795	NA	11.53	3.01	14.54	≤30.00	PASS
11AC20SISO	Ant1	5745	NA	12.67	1.65	14.32	≤30.00	PASS
		5785	NA	12.60	1.65	14.25	≤30.00	PASS
		5825	NA	12.88	2.00	14.88	≤30.00	PASS
11AC40SISO	Ant1	5755	NA	11.62	2.43	14.05	≤30.00	PASS
		5795	NA	11.65	3.27	14.92	≤30.00	PASS
11AC80SISO	Ant1	5775	NA	11.35	3.36	14.71	≤30.00	PASS

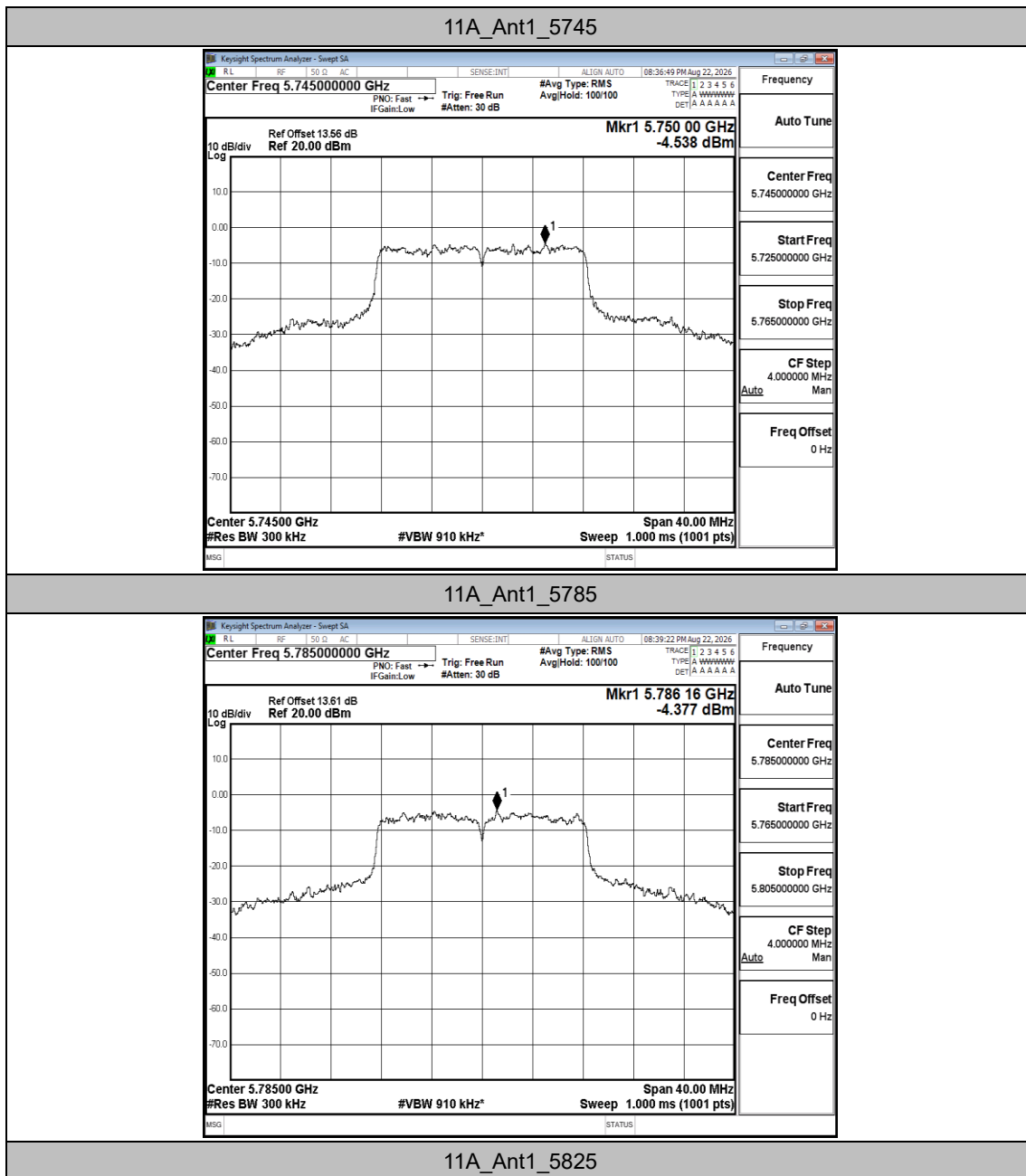
G.3 Maximum power spectral density

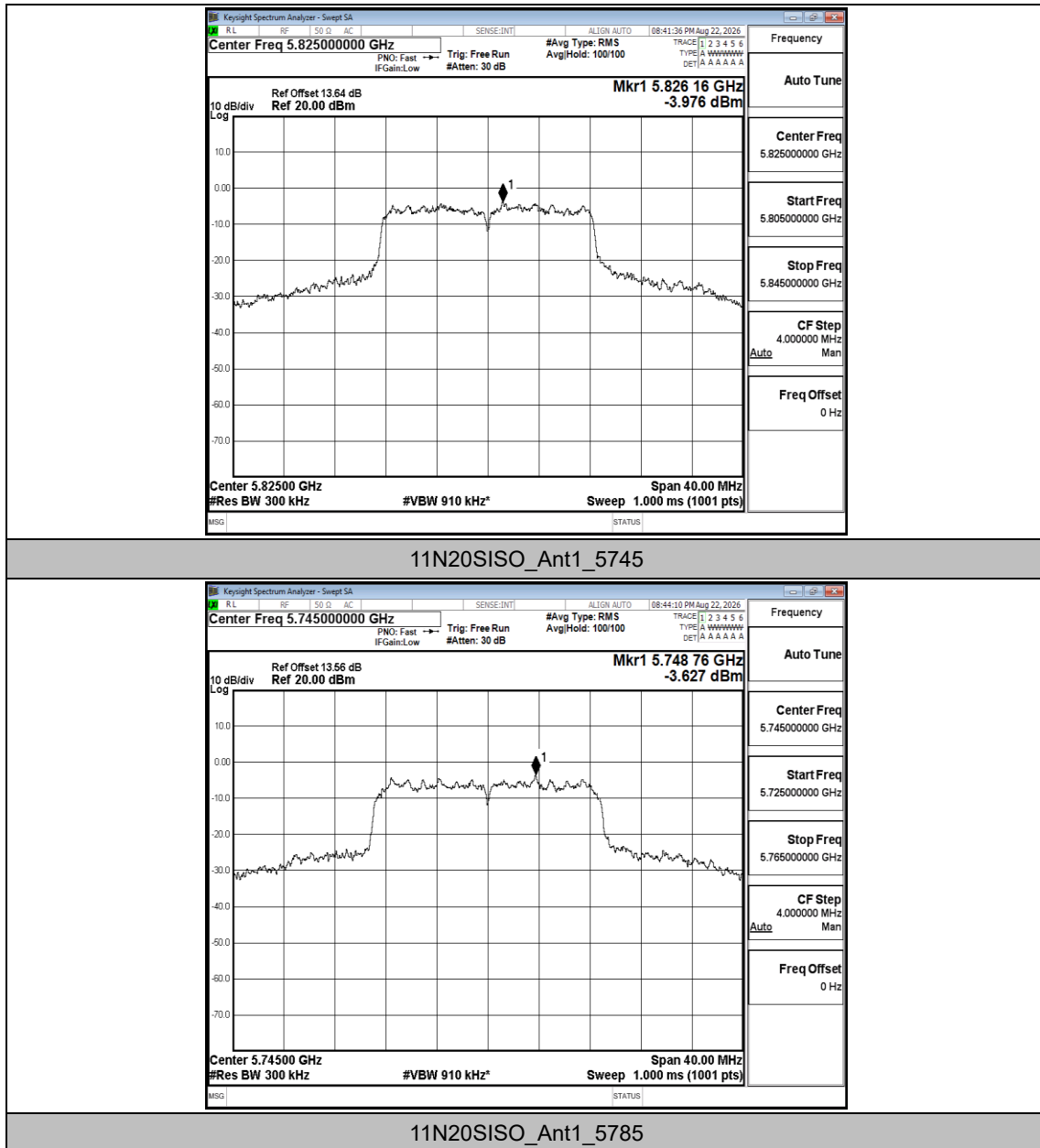
Test Result

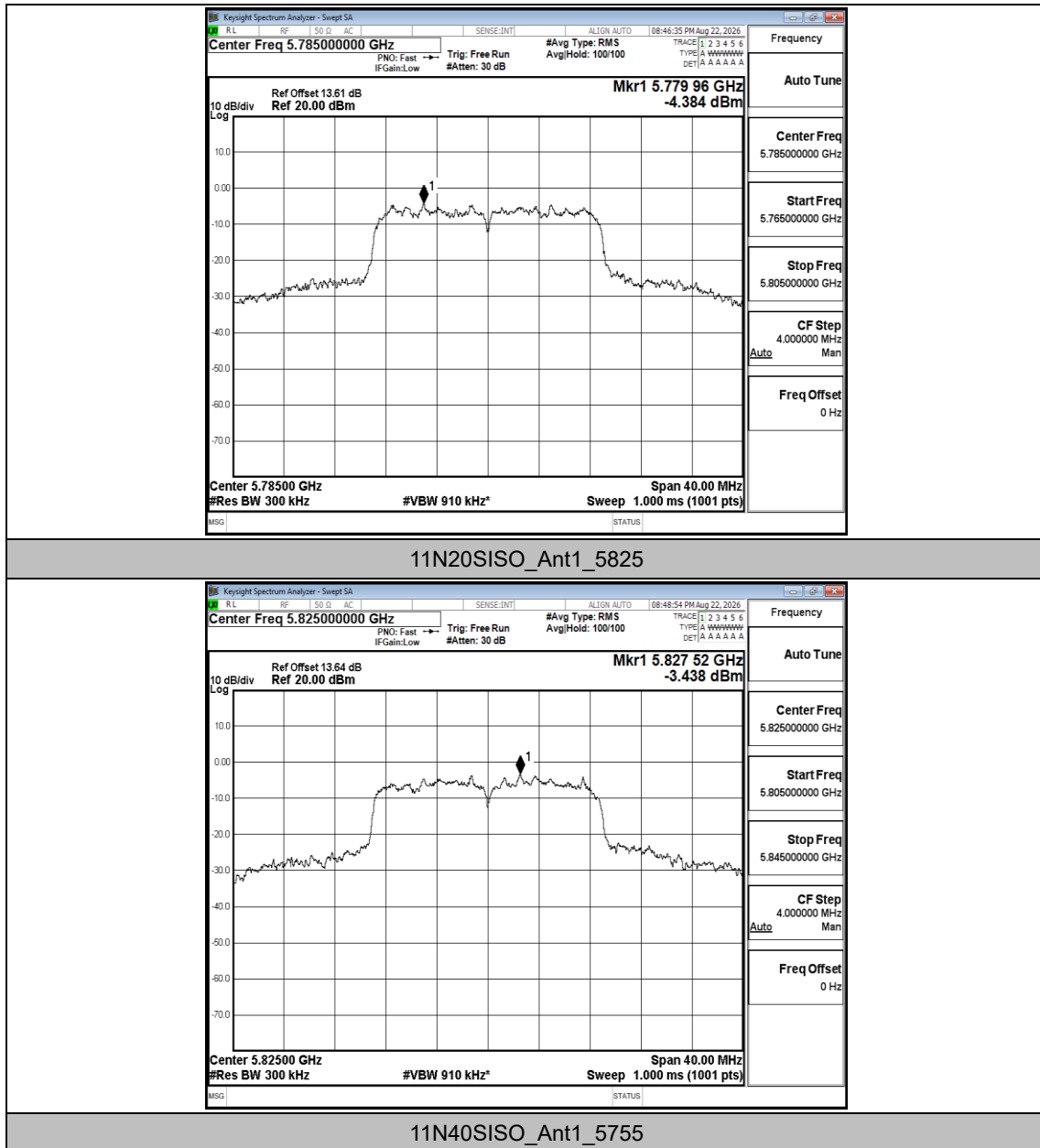
TestMode	Antenna	Freq (MHz)	Raw Data [dBm/MHz]	DC Factor	RBW Factor	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5745	-4.54	1.76	2.22	-0.56	≤30.00	PASS
		5785	-4.38	2.14	2.22	-0.02	≤30.00	PASS
		5825	-3.98	2.14	2.22	0.38	≤30.00	PASS
11N20SISO	Ant1	5745	-3.63	1.89	2.22	0.48	≤30.00	PASS
		5785	-4.38	2.14	2.22	-0.02	≤30.00	PASS
		5825	-3.44	1.76	2.22	0.54	≤30.00	PASS
11N40SISO	Ant1	5755	-6.62	3.01	2.22	-1.39	≤30.00	PASS
		5795	-8.03	3.01	2.22	-2.80	≤30.00	PASS
11AC20SISO	Ant1	5745	-3.92	1.65	2.22	-0.05	≤30.00	PASS
		5785	-4.06	1.65	2.22	-0.19	≤30.00	PASS
		5825	-4.11	2.00	2.22	0.11	≤30.00	PASS
11AC40SISO	Ant1	5755	-7.67	2.43	2.22	-3.02	≤30.00	PASS
		5795	-7.53	3.27	2.22	-2.04	≤30.00	PASS
11AC80SISO	Ant1	5775	-9.04	3.36	2.22	-3.46	≤30.00	PASS

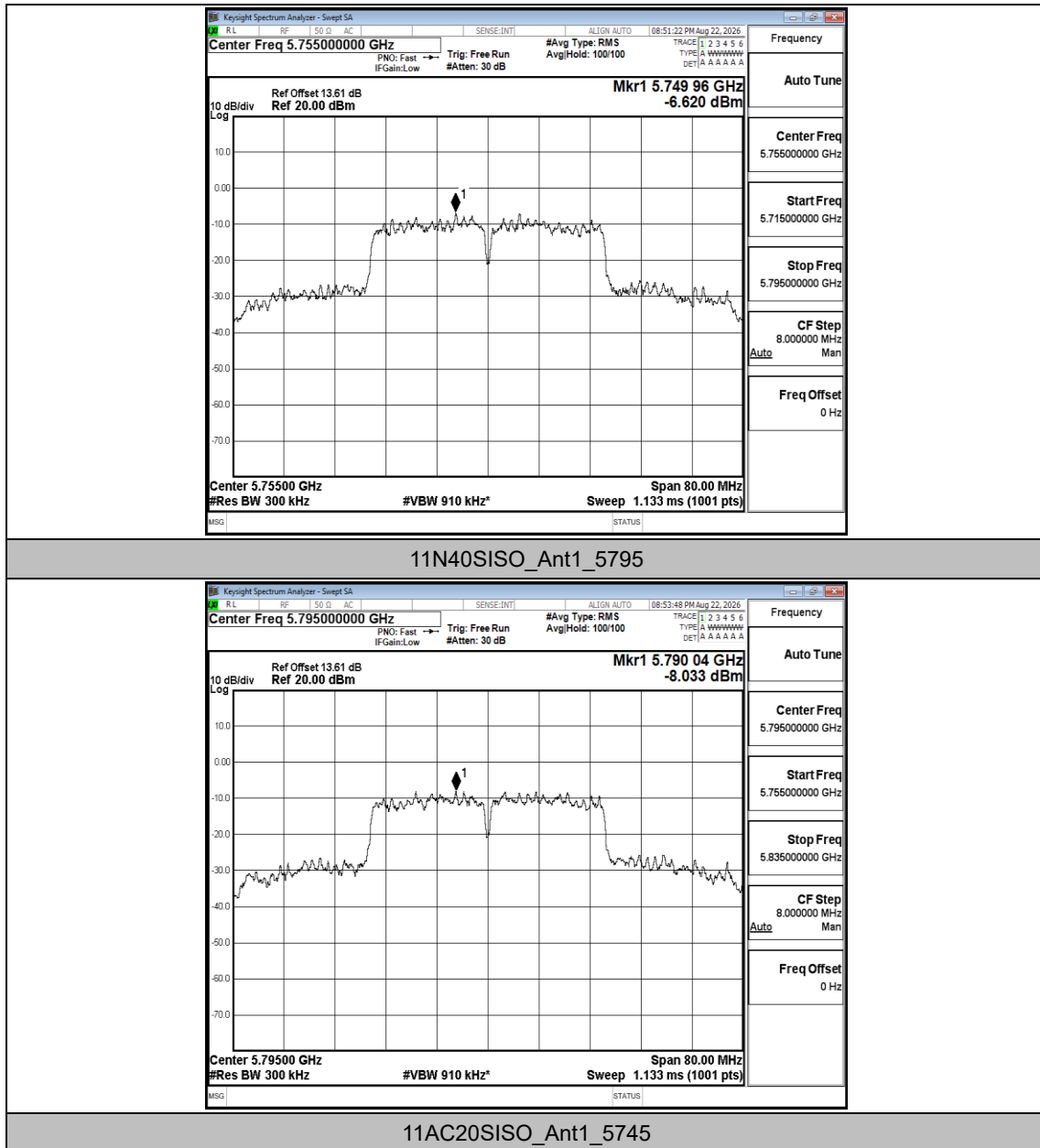
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

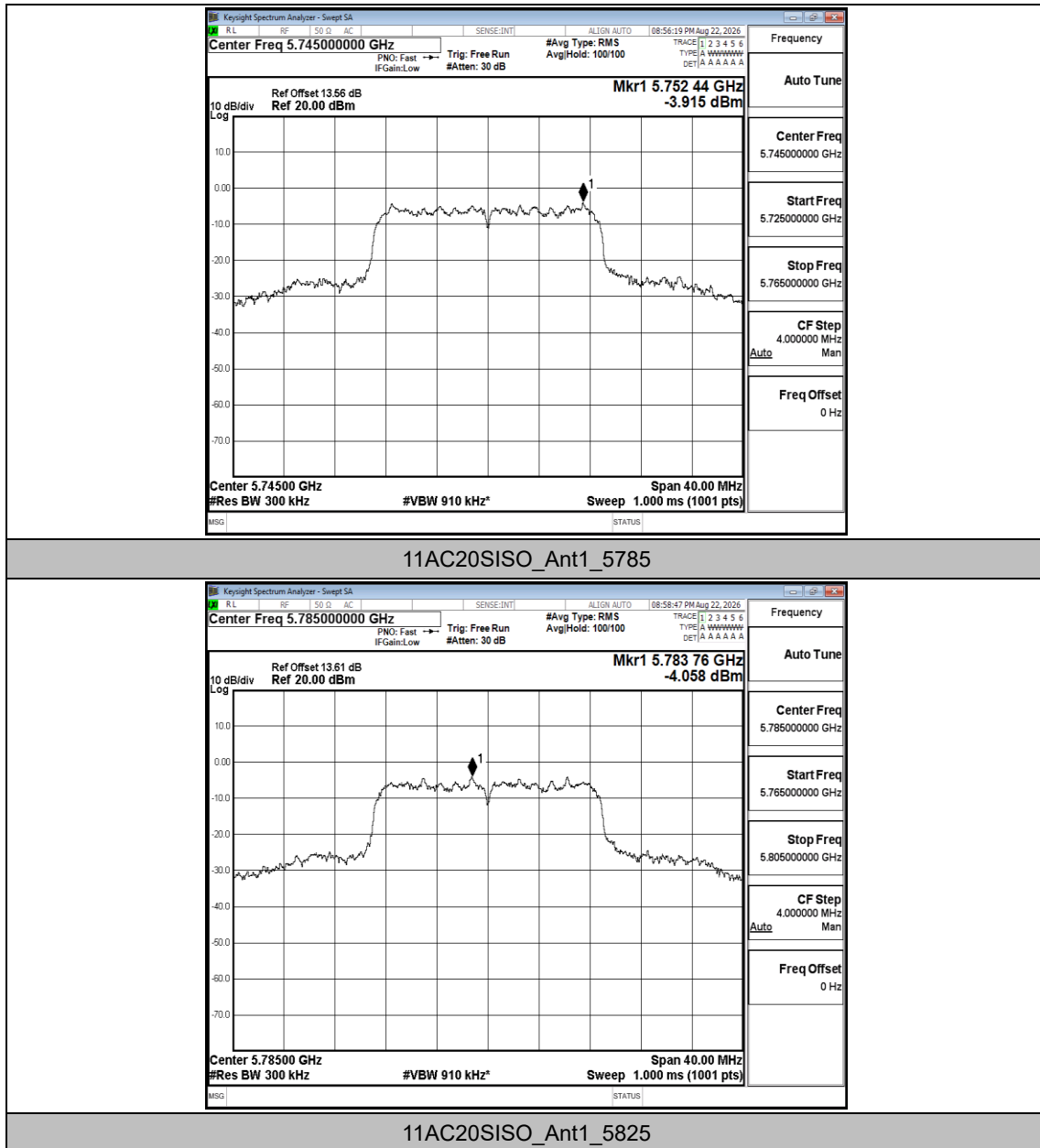
Test Graphs

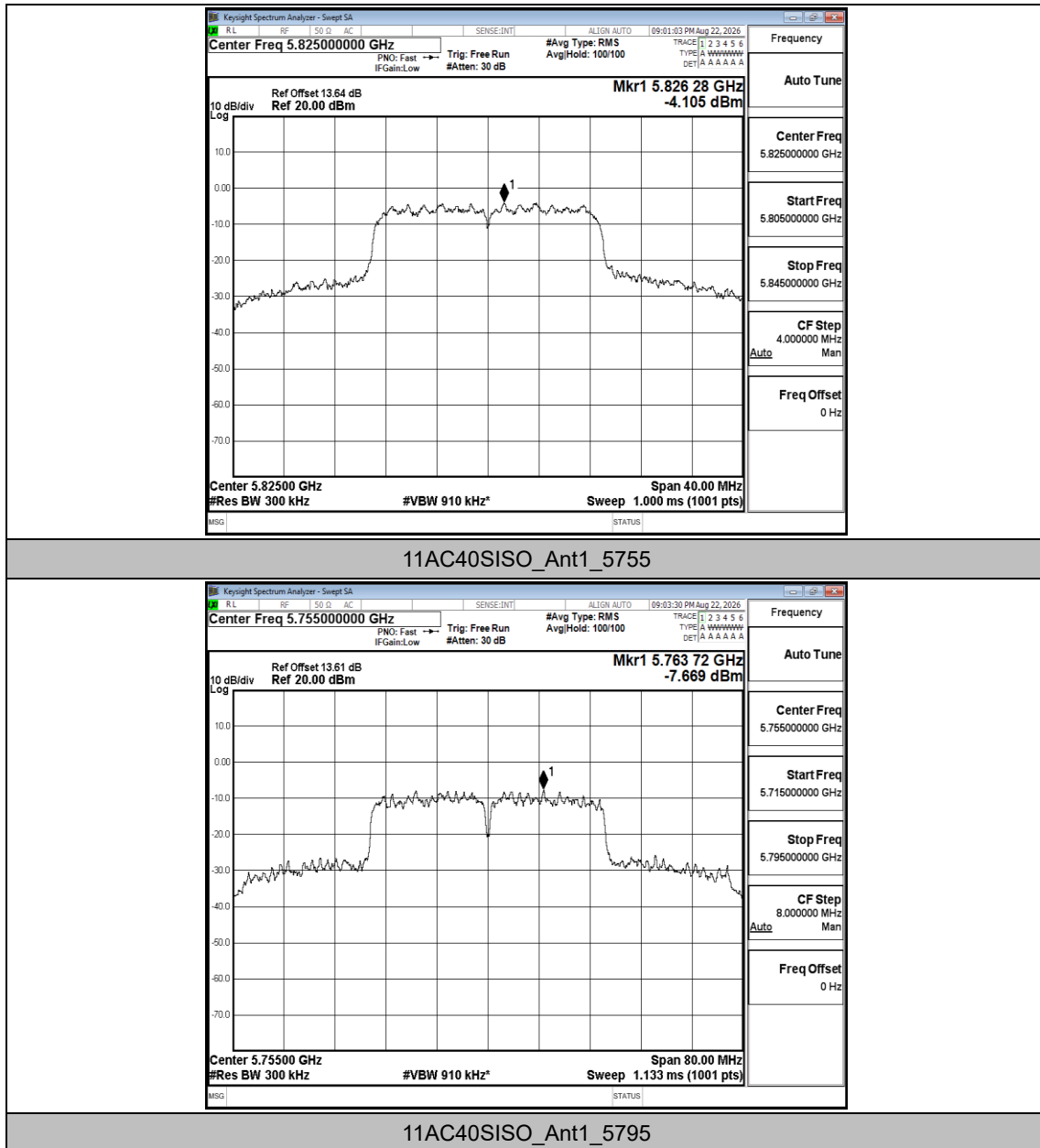


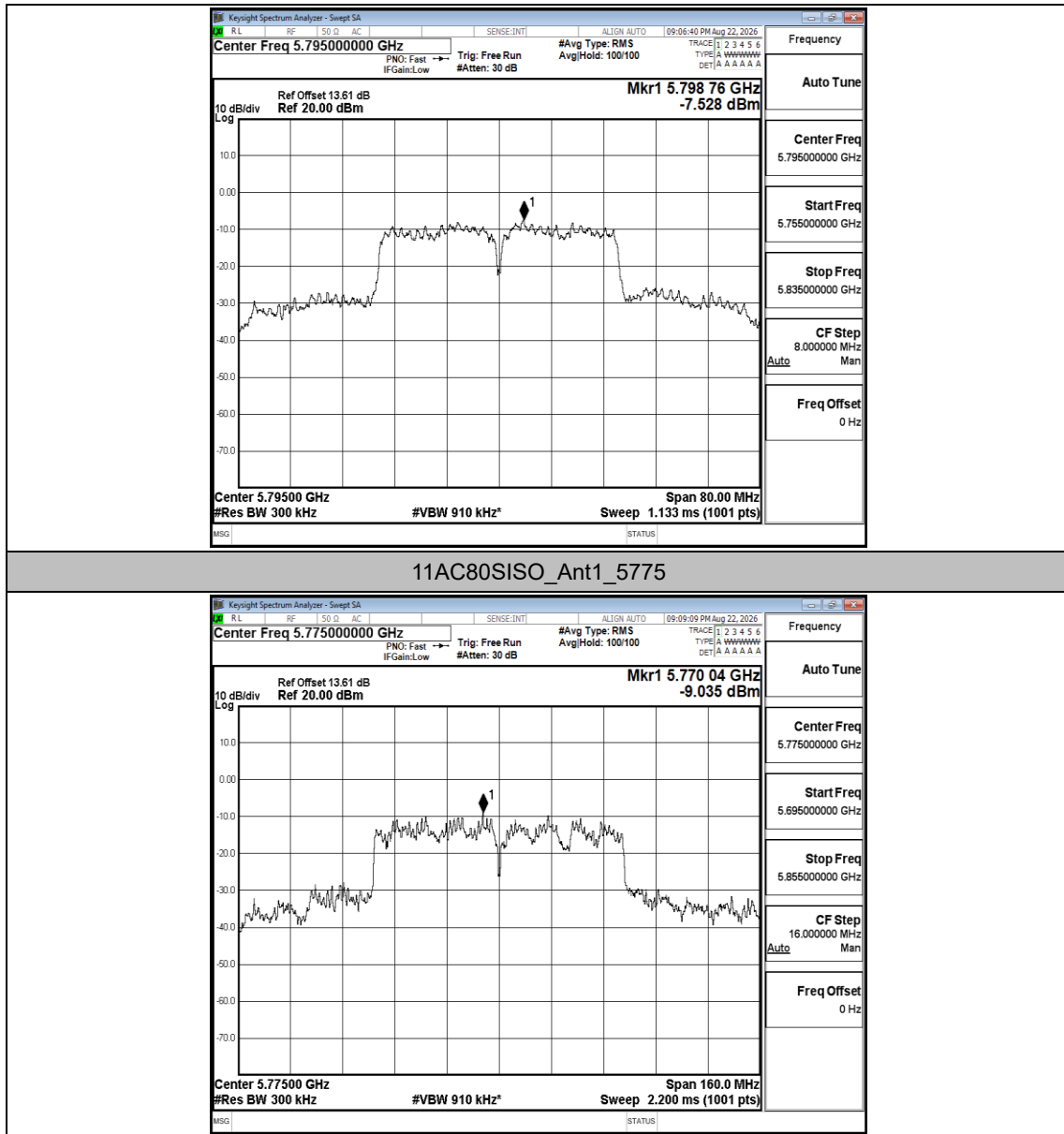












G.4 Emissions in Restricted Bands

Test Result

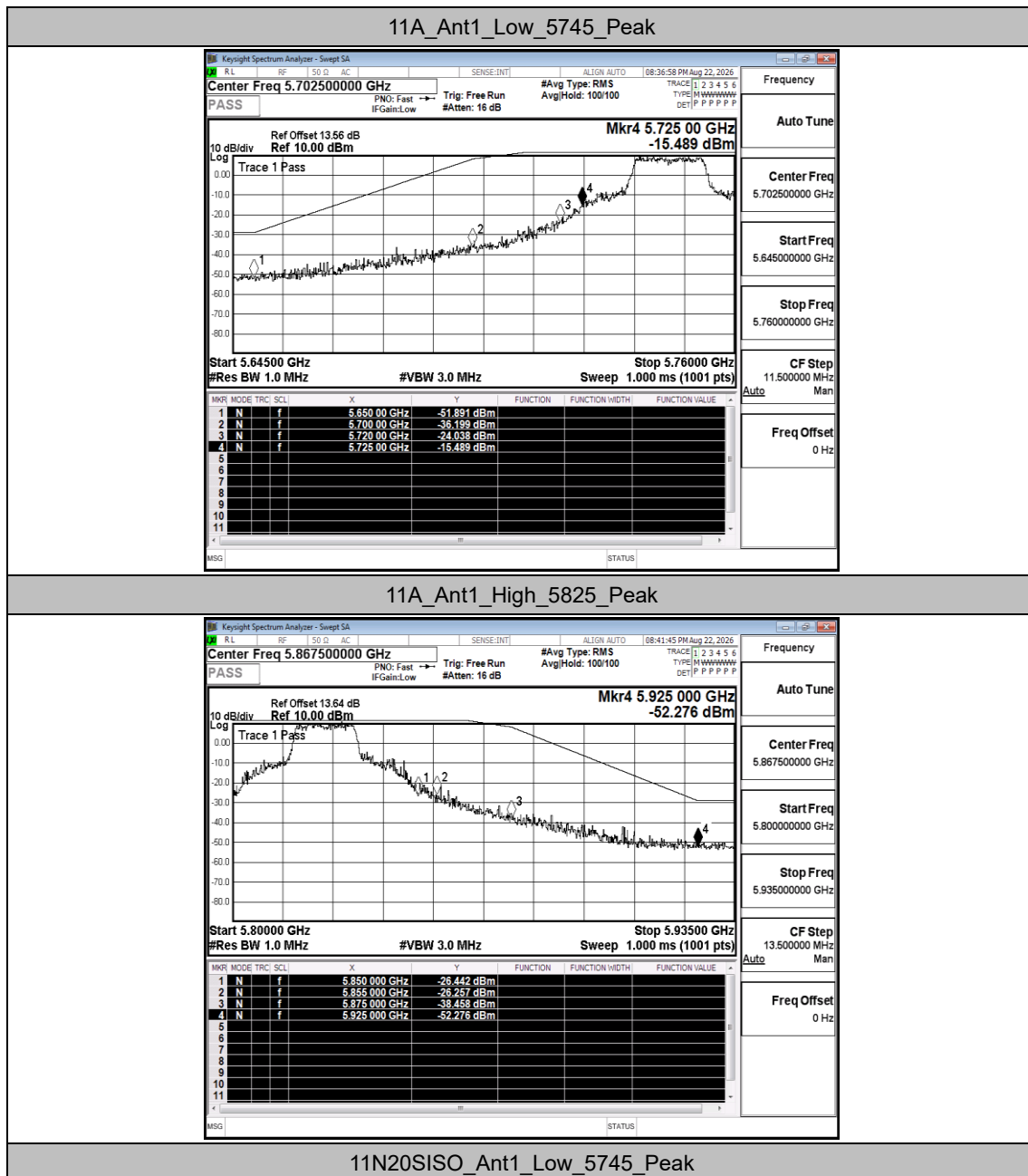
TestMode	Antenna	ChName	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm/MHz]	Gain [dBi]	Verdict
11A	Ant1	Low	5745	Peak	5650.000	-51.891	-29	2.00	PASS
				Peak	5700.000	-36.2	8	2.00	PASS
				Peak	5720.000	-24.04	13.6	2.00	PASS
				Peak	5725.000	-15.49	25	2.00	PASS
		High	5825	Peak	5850.000	-26.442	25	2.00	PASS
				Peak	5855.000	-26.26	13.6	2.00	PASS
				Peak	5875.000	-38.46	8	2.00	PASS
				Peak	5925.000	-52.28	-29	2.00	PASS
11N20SISO	Ant1	Low	5745	Peak	5650.000	-51.758	-29	2.00	PASS
				Peak	5700.000	-37.07	8	2.00	PASS
				Peak	5720.000	-23.87	13.6	2.00	PASS
				Peak	5725.000	-14.45	25	2.00	PASS
		High	5825	Peak	5850.000	-22.511	25	2.00	PASS
				Peak	5855.000	-27.47	13.6	2.00	PASS
				Peak	5875.000	-36.44	8	2.00	PASS
				Peak	5925.000	-51.3	-29	2.00	PASS
11N40SISO	Ant1	Low	5755	Peak	5650.000	-42.865	-29	2.00	PASS
				Peak	5700.000	-28.42	8	2.00	PASS
				Peak	5720.000	-16.63	13.6	2.00	PASS
				Peak	5725.000	-13.65	25	2.00	PASS
		High	5795	Peak	5850.000	-25.935	25	2.00	PASS
				Peak	5855.000	-28.09	13.6	2.00	PASS
				Peak	5875.000	-33.96	8	2.00	PASS
				Peak	5925.000	-41.38	-29	2.00	PASS
11AC20SISO	Ant1	Low	5745	Peak	5650.000	-50.785	-29	2.00	PASS
				Peak	5700.000	-34.23	8	2.00	PASS
				Peak	5720.000	-17.24	13.6	2.00	PASS
				Peak	5725.000	-14.33	25	2.00	PASS
		High	5825	Peak	5850.000	-22.425	25	2.00	PASS
				Peak	5855.000	-25.34	13.6	2.00	PASS
				Peak	5875.000	-37.27	8	2.00	PASS
				Peak	5925.000	-50.88	-29	2.00	PASS
11AC40SISO	Ant1	Low	5755	Peak	5650.000	-40.349	-29	2.00	PASS
				Peak	5700.000	-29.41	8	2.00	PASS
				Peak	5720.000	-14.98	13.6	2.00	PASS

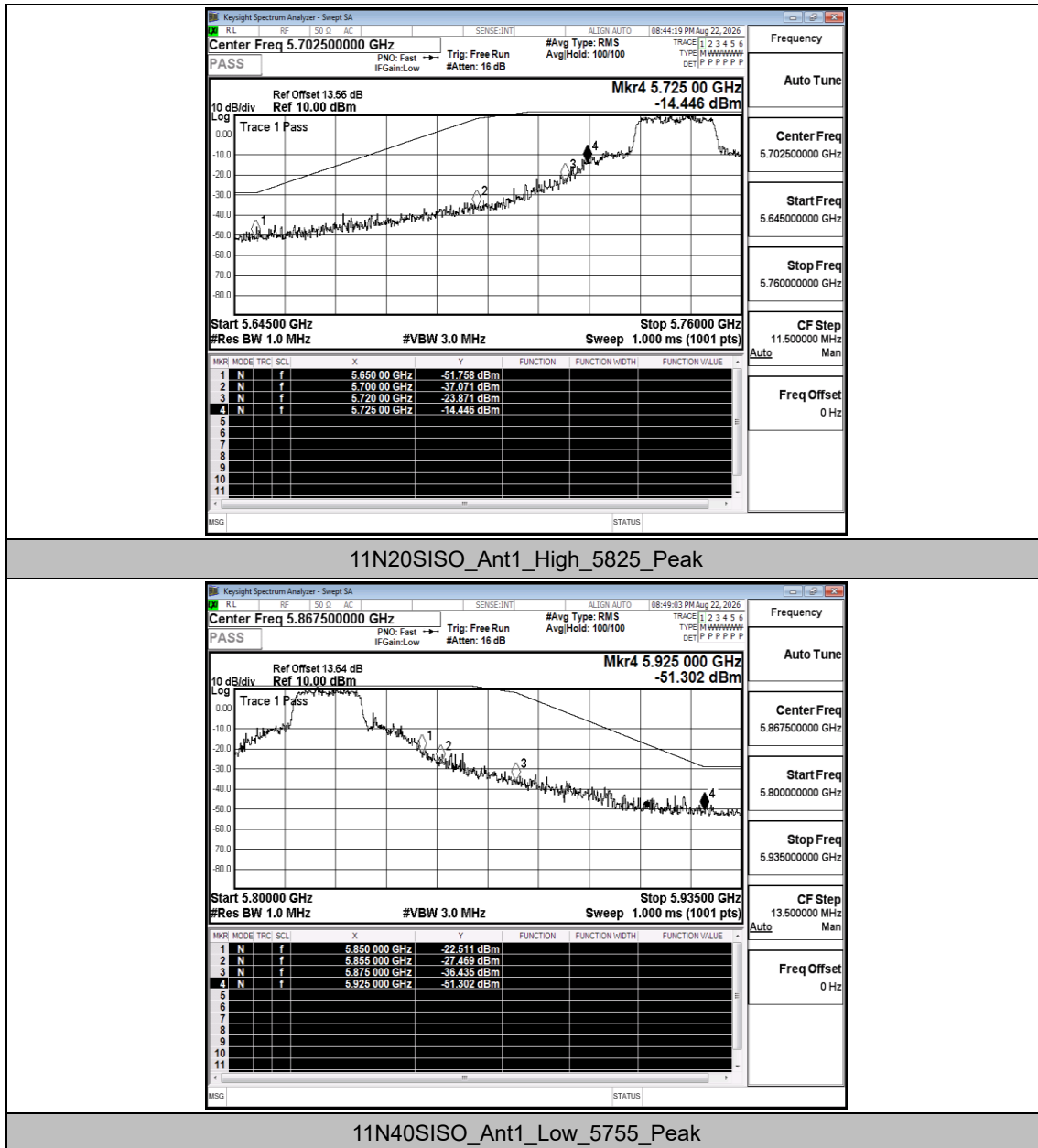
		High	5795	Peak	5725.000	-14.8	25	2.00	PASS
				Peak	5850.000	-22.571	25	2.00	PASS
				Peak	5855.000	-29.3	13.6	2.00	PASS
				Peak	5875.000	-34.91	8	2.00	PASS
				Peak	5925.000	-40.93	-29	2.00	PASS
11AC80SISO	Ant1	Low	5775	Peak	5650.000	-33.103	-29	2.00	PASS
				Peak	5700.000	-19.25	8	2.00	PASS
				Peak	5720.000	-17.12	13.6	2.00	PASS
				Peak	5725.000	-15.56	25	2.00	PASS
		High	5775	Peak	5850.000	-17.84	25	2.00	PASS
				Peak	5855.000	-19.83	13.6	2.00	PASS
				Peak	5875.000	-25.73	8	2.00	PASS
				Peak	5925.000	-34.17	-29	2.00	PASS

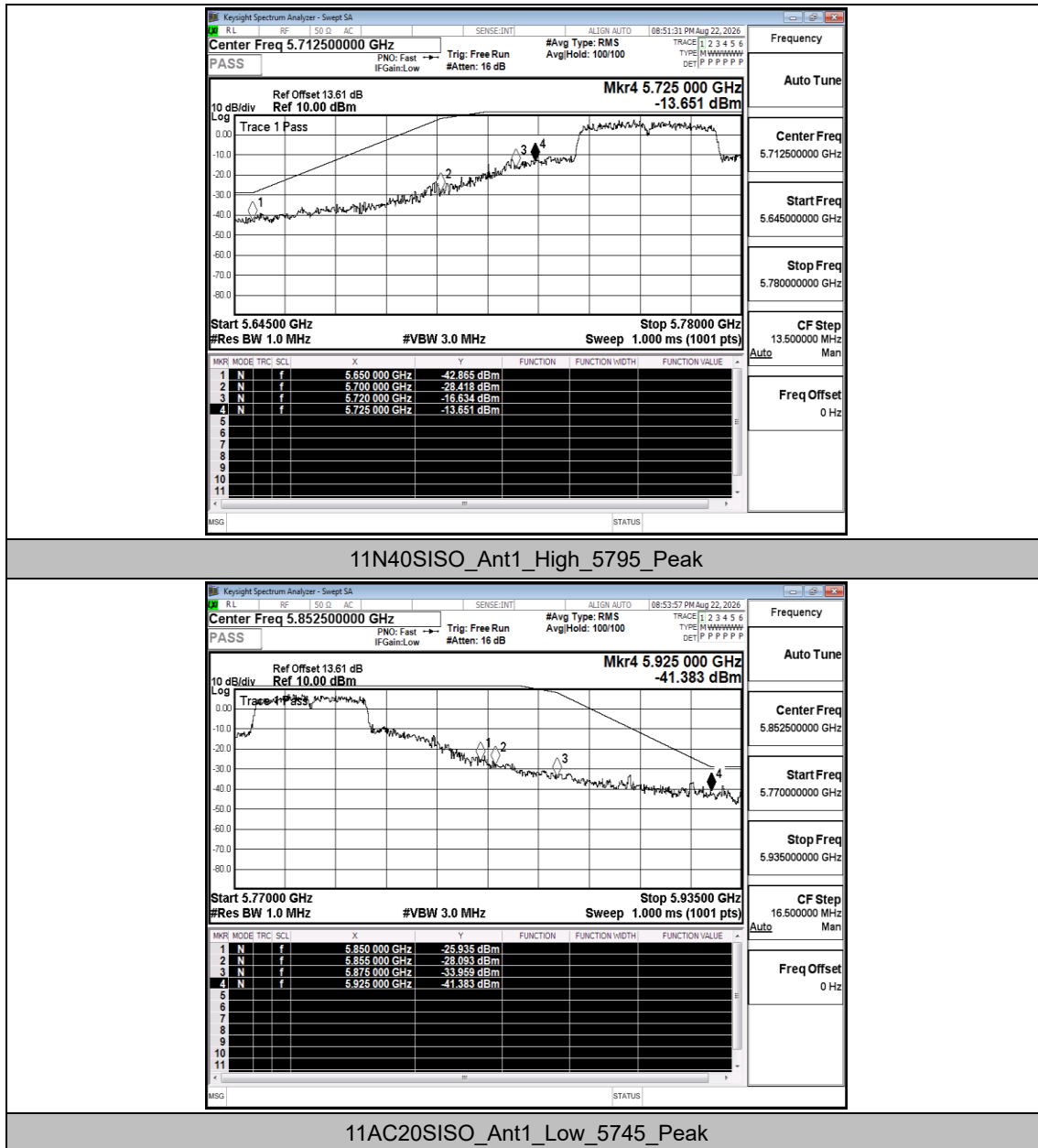
Note:

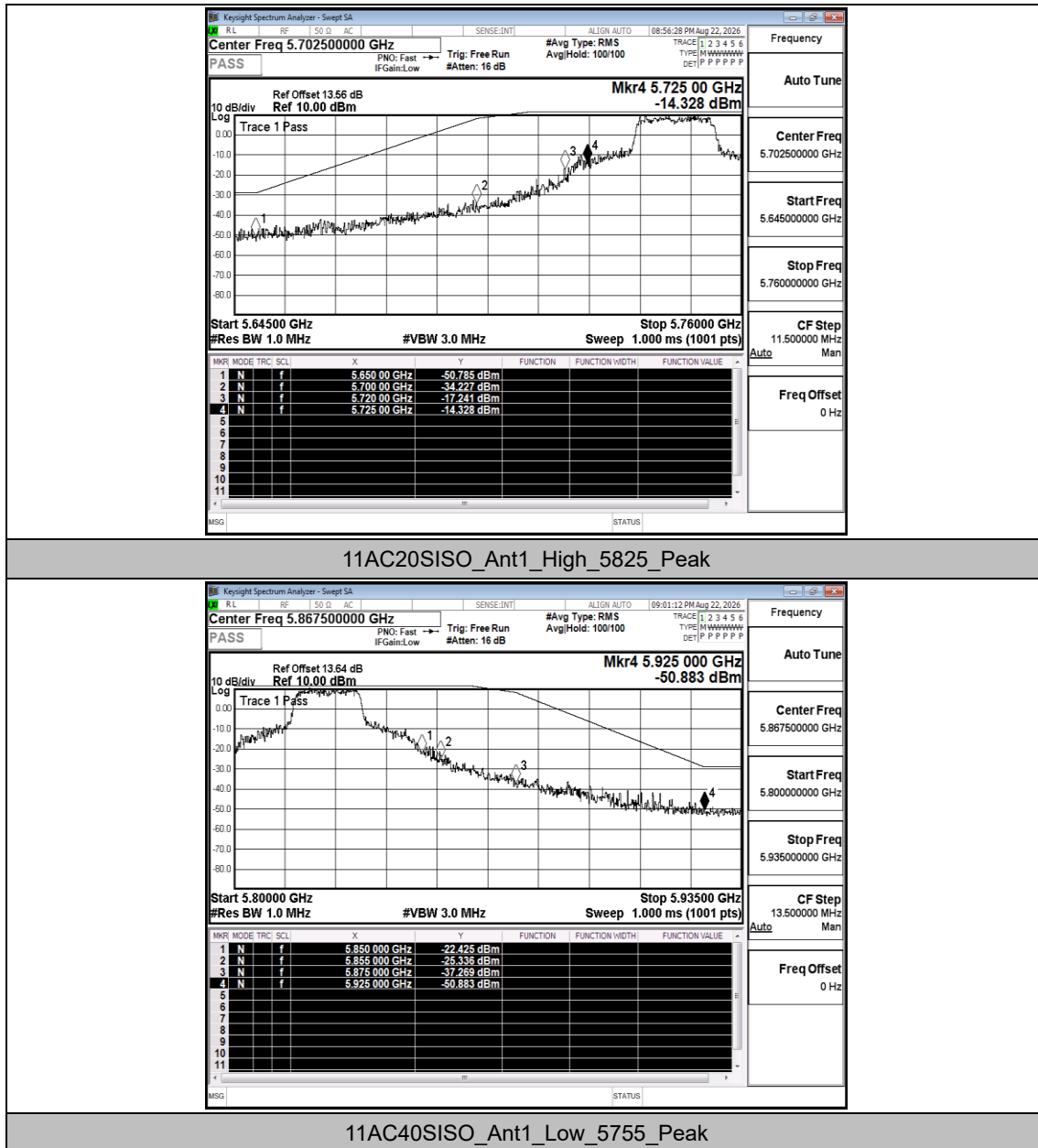
1. The Antenna Gain is compensated in the graph.

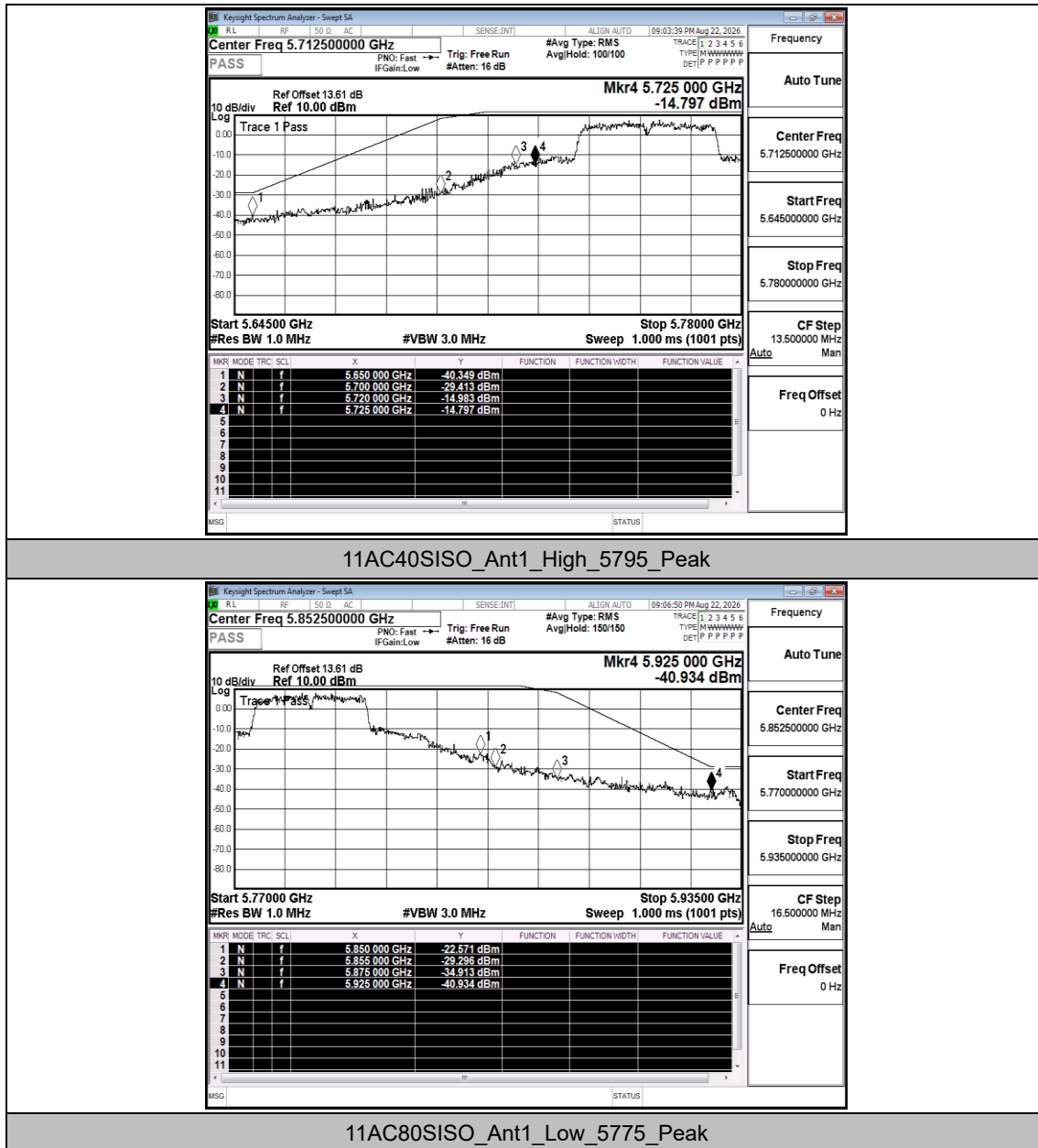
Test Graphs

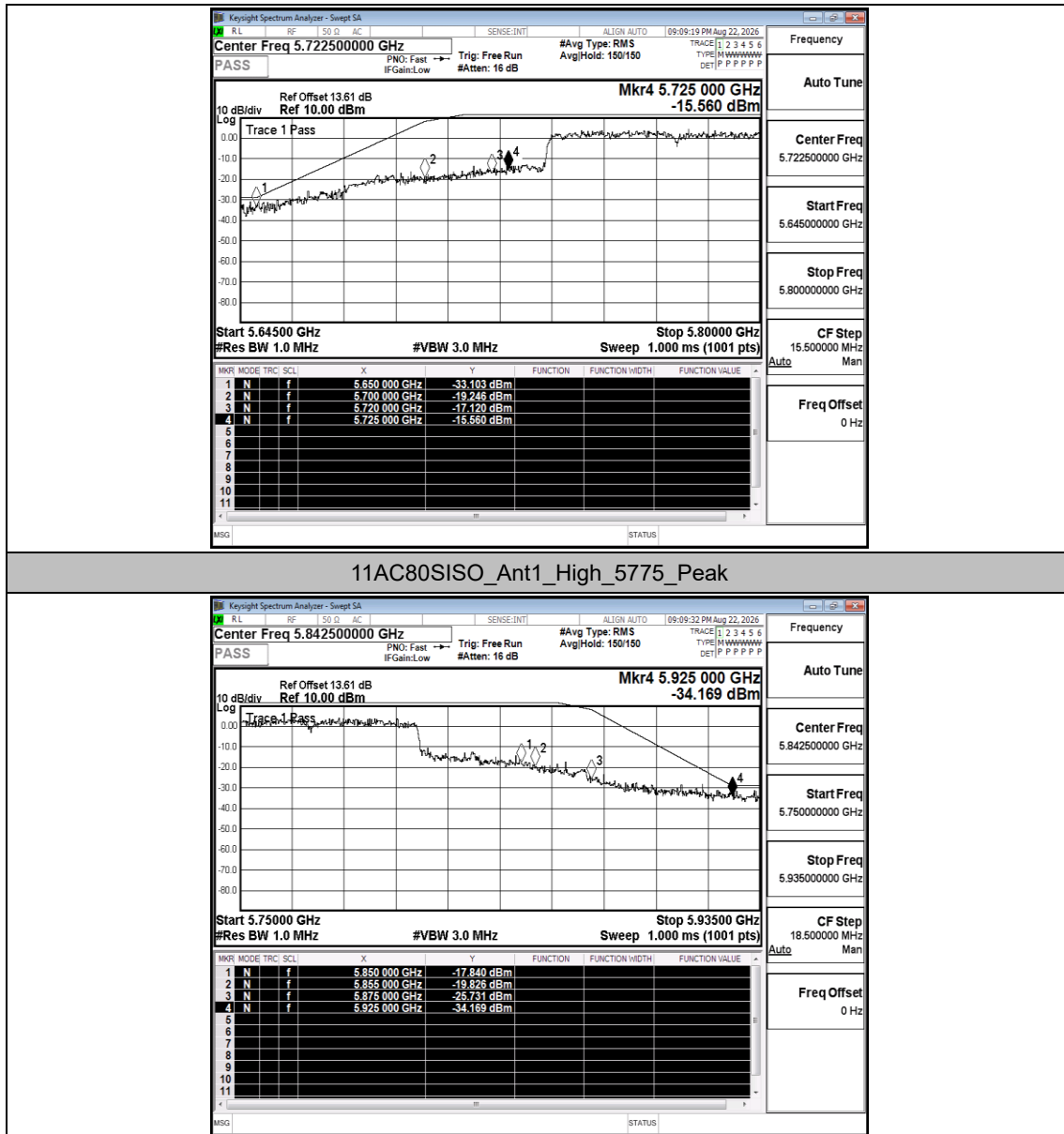












G.5 Frequency Stability

Test Result

Voltage								
TestMode	Antenna	Freq (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5745	NV	NT	-20000.00	-3.481288	20	PASS
			LV	NT	-20000.00	-3.481288	20	PASS
			HV	NT	-20000.00	-3.481288	20	PASS
		5785	NV	NT	-80000.00	-13.828868	20	PASS
			LV	NT	-40000.00	-6.914434	20	PASS
			HV	NT	-40000.00	-6.914434	20	PASS
		5825	NV	NT	-40000.00	-6.914434	20	PASS
			LV	NT	-40000.00	-6.866953	20	PASS
			HV	NT	-40000.00	-6.866953	20	PASS
11N20SISO	Ant1	5745	NV	NT	-60000.00	-10.443864	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5785	NV	NT	60000.00	10.300429	20	PASS
			LV	NT	60000.00	10.300429	20	PASS
			HV	NT	60000.00	10.300429	20	PASS
		5825	NV	NT	60000.00	10.300429	20	PASS
			LV	NT	-100000.00	-17.167382	20	PASS
			HV	NT	-20000.00	-3.433476	20	PASS
11N40SISO	Ant1	5755	NV	NT	80000.00	13.805004	20	PASS
			LV	NT	80000.00	13.805004	20	PASS
			HV	NT	80000.00	13.805004	20	PASS
		5795	NV	NT	80000.00	13.805004	20	PASS
			LV	NT	40000.00	6.902502	20	PASS
			HV	NT	0.00	0.000000	20	PASS
11AC20SISO	Ant1	5745	NV	NT	80000.00	13.925152	20	PASS
			LV	NT	-40000.00	-6.962576	20	PASS
			HV	NT	-60000.00	-10.443864	20	PASS
		5785	NV	NT	20000.00	3.457217	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5825	NV	NT	40000.00	6.866953	20	PASS
			LV	NT	-40000.00	-6.866953	20	PASS
			HV	NT	-40000.00	-6.866953	20	PASS
11AC40SISO	Ant1	5755	NV	NT	-40000.00	-6.950478	20	PASS

			LV	NT	-40000.00	-6.950478	20	PASS
			HV	NT	-40000.00	-6.950478	20	PASS
		5795	NV	NT	80000.00	13.852814	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	80000.00	13.852814	20	PASS
11AC80SISO	Ant1	5775	NV	NT	80000.00	13.852814	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	80000.00	13.852814	20	PASS

Temperature								
TestMode	Antenna	Freq (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5745	NV	-30	-100000.00	-17.406440	20	PASS
			NV	-20	-40000.00	-6.962576	20	PASS
			NV	-10	-40000.00	-6.962576	20	PASS
			NV	0	-60000.00	-10.443864	20	PASS
			NV	10	-40000.00	-6.962576	20	PASS
			NV	20	-80000.00	-13.925152	20	PASS
			NV	30	-40000.00	-6.962576	20	PASS
			NV	40	-60000.00	-10.443864	20	PASS
			NV	50	-80000.00	-13.925152	20	PASS
		5785	NV	-30	-40000.00	-6.914434	20	PASS
			NV	-20	-20000.00	-3.457217	20	PASS
			NV	-10	-40000.00	-6.914434	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	-20000.00	-3.457217	20	PASS
			NV	20	-60000.00	-10.371651	20	PASS
			NV	30	20000.00	3.457217	20	PASS
			NV	40	20000.00	3.457217	20	PASS
			NV	50	-40000.00	-6.914434	20	PASS
		5825	NV	-30	20000.00	3.433476	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	-20000.00	-3.433476	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	-40000.00	-6.866953	20	PASS
			NV	20	40000.00	6.866953	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-20000.00	-3.433476	20	PASS
			NV	50	-40000.00	-6.866953	20	PASS
11N20SISO	Ant1	5745	NV	-30	20000.00	3.481288	20	PASS
			NV	-20	20000.00	3.481288	20	PASS
			NV	-10	-60000.00	-10.443864	20	PASS
			NV	0	100000.00	17.406440	20	PASS
			NV	10	-40000.00	-6.962576	20	PASS
			NV	20	80000.00	13.925152	20	PASS
			NV	30	80000.00	13.925152	20	PASS
			NV	40	-80000.00	-13.925152	20	PASS
			NV	50	40000.00	6.962576	20	PASS
		5785	NV	-30	0.00	0.000000	20	PASS
			NV	-20	-40000.00	-6.914434	20	PASS

			NV	-10	-20000.00	-3.457217	20	PASS
			NV	0	-40000.00	-6.914434	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	-80000.00	-13.828868	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-60000.00	-10.371651	20	PASS
			NV	50	-60000.00	-10.371651	20	PASS
		5825	NV	-30	-60000.00	-10.300429	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	20000.00	3.433476	20	PASS
			NV	0	20000.00	3.433476	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	-80000.00	-13.733906	20	PASS
			NV	30	-80000.00	-13.733906	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	-100000.00	-17.167382	20	PASS
11N40SISO	Ant1	5755	NV	-30	-40000.00	-6.950478	20	PASS
			NV	-20	-40000.00	-6.950478	20	PASS
			NV	-10	80000.00	13.900956	20	PASS
			NV	0	80000.00	13.900956	20	PASS
			NV	10	80000.00	13.900956	20	PASS
			NV	20	40000.00	6.950478	20	PASS
			NV	30	80000.00	13.900956	20	PASS
			NV	40	-40000.00	-6.950478	20	PASS
			NV	50	80000.00	13.900956	20	PASS
		5795	NV	-30	80000.00	13.805004	20	PASS
			NV	-20	-80000.00	-13.805004	20	PASS
			NV	-10	-80000.00	-13.805004	20	PASS
			NV	0	-80000.00	-13.805004	20	PASS
			NV	10	-80000.00	-13.805004	20	PASS
			NV	20	-80000.00	-13.805004	20	PASS
			NV	30	-40000.00	-6.962576	20	PASS
			NV	40	40000.00	6.902502	20	PASS
			NV	50	0.00	0.000000	20	PASS
11AC20SISO	Ant1	5745	NV	-30	-40000.00	-6.962576	20	PASS
			NV	-20	-40000.00	-6.962576	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	-100000.00	-17.406440	20	PASS
			NV	10	-40000.00	-6.962576	20	PASS
			NV	20	-80000.00	-13.925152	20	PASS
			NV	30	-20000.00	-3.481288	20	PASS

			NV	40	20000.00	3.481288	20	PASS
			NV	50	0.00	0.000000	20	PASS
		5785	NV	-30	20000.00	3.457217	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	-80000.00	-13.828868	20	PASS
			NV	0	-80000.00	-13.828868	20	PASS
			NV	10	-60000.00	-10.371651	20	PASS
			NV	20	-80000.00	-13.828868	20	PASS
			NV	30	-20000.00	-3.457217	20	PASS
			NV	40	-80000.00	-13.828868	20	PASS
			NV	50	100000.00	17.286085	20	PASS
		5825	NV	-30	-20000.00	-3.433476	20	PASS
			NV	-20	-80000.00	-13.828868	20	PASS
			NV	-10	40000.00	6.866953	20	PASS
			NV	0	-40000.00	-6.866953	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	80000.00	13.900956	20	PASS
			NV	40	-40000.00	-6.866953	20	PASS
			NV	50	-60000.00	-10.300429	20	PASS
11AC40SISO	Ant1	5755	NV	-30	-40000.00	-6.950478	20	PASS
			NV	-20	80000.00	13.900956	20	PASS
			NV	-10	80000.00	13.900956	20	PASS
			NV	0	80000.00	13.900956	20	PASS
			NV	10	80000.00	13.900956	20	PASS
			NV	20	40000.00	6.950478	20	PASS
			NV	30	40000.00	6.950478	20	PASS
			NV	40	40000.00	6.950478	20	PASS
			NV	50	40000.00	6.950478	20	PASS
		5795	NV	-30	40000.00	6.950478	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	-80000.00	-13.805004	20	PASS
			NV	0	80000.00	13.805004	20	PASS
			NV	10	80000.00	13.805004	20	PASS
			NV	20	40000.00	6.902502	20	PASS
			NV	30	-80000.00	-13.805004	20	PASS
			NV	40	-40000.00	-6.902502	20	PASS
			NV	50	-40000.00	-6.902502	20	PASS
11AC80SISO	Ant1	5775	NV	-30	80000.00	13.852814	20	PASS
			NV	-20	80000.00	13.852814	20	PASS
			NV	-10	80000.00	13.852814	20	PASS

			NV	0	-80000.00	-13.852814	20	PASS
			NV	10	-80000.00	-13.852814	20	PASS
			NV	20	-80000.00	-13.852814	20	PASS
			NV	30	-80000.00	-13.852814	20	PASS
			NV	40	80000.00	13.852814	20	PASS
			NV	50	-80000.00	-13.852814	20	PASS

G.6 Duty Cycle

Test Result

TestMode	Antenna	Freq (MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factor	Limit	Verdict
11A	Ant1	5745	0.12	0.18	66.67	1.76	---	---
		5785	0.11	0.18	61.11	2.14	---	---
		5825	0.11	0.18	61.11	2.14	---	---
11N20SISO	Ant1	5745	0.11	0.17	64.71	1.89	---	---
		5785	0.11	0.18	61.11	2.14	---	---
		5825	0.12	0.18	66.67	1.76	---	---
11N40SISO	Ant1	5755	0.07	0.14	50.00	3.01	---	---
		5795	0.07	0.14	50.00	3.01	---	---
11AC20SISO	Ant1	5745	0.13	0.19	68.42	1.65	---	---
		5785	0.13	0.19	68.42	1.65	---	---
		5825	0.12	0.19	63.16	2.00	---	---
11AC40SISO	Ant1	5755	0.08	0.14	57.14	2.43	---	---
		5795	0.08	0.17	47.06	3.27	---	---
11AC80SISO	Ant1	5775	0.06	0.13	46.15	3.36	---	---

Test Graphs

