

Appendix G

RF Test Data for 5.8GWIFI (Conducted Measurement)

Product Name: Smart Phone

Test Model: ULTRA S26

Environmental Conditions

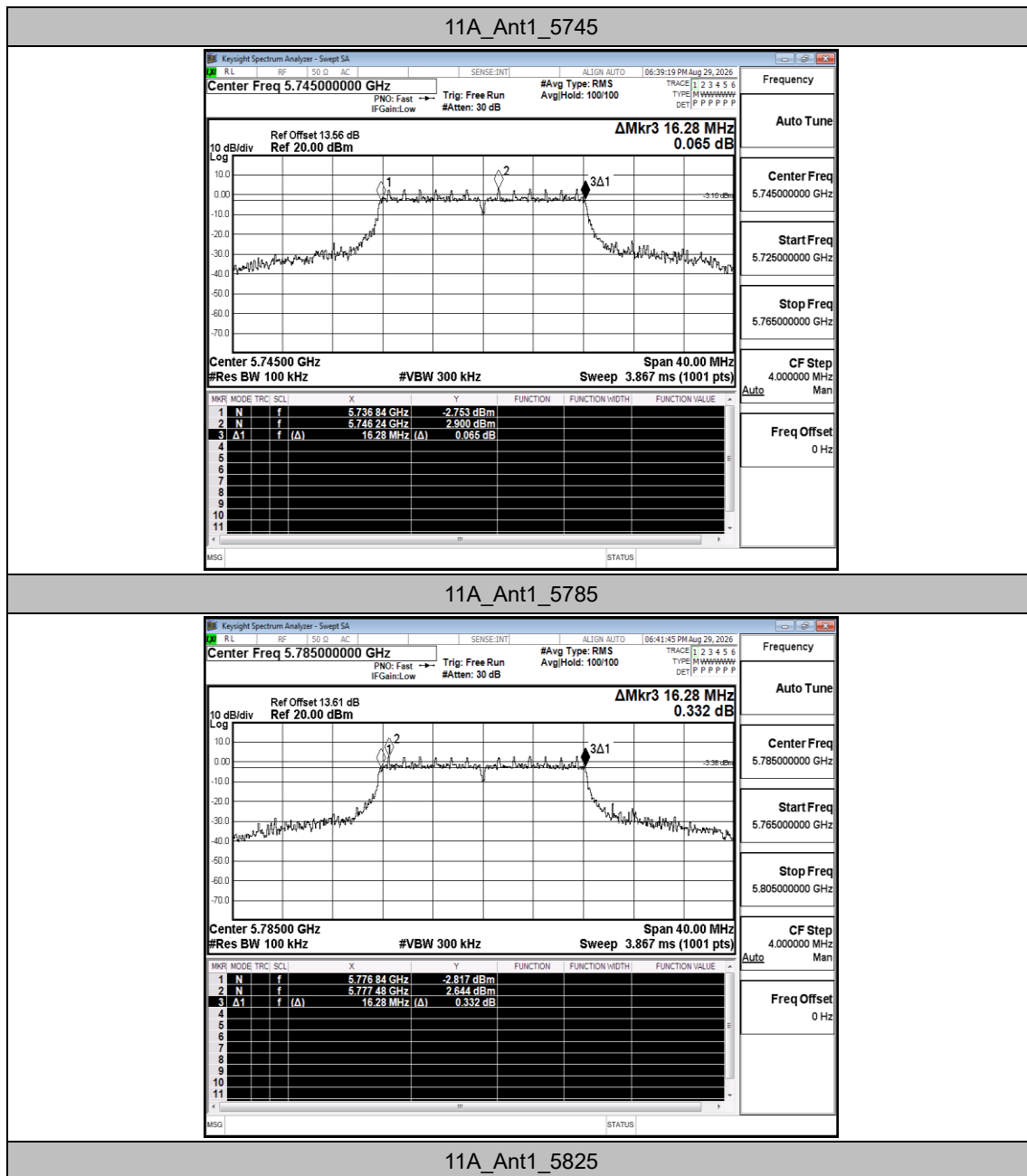
Temperature:	24.3°C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

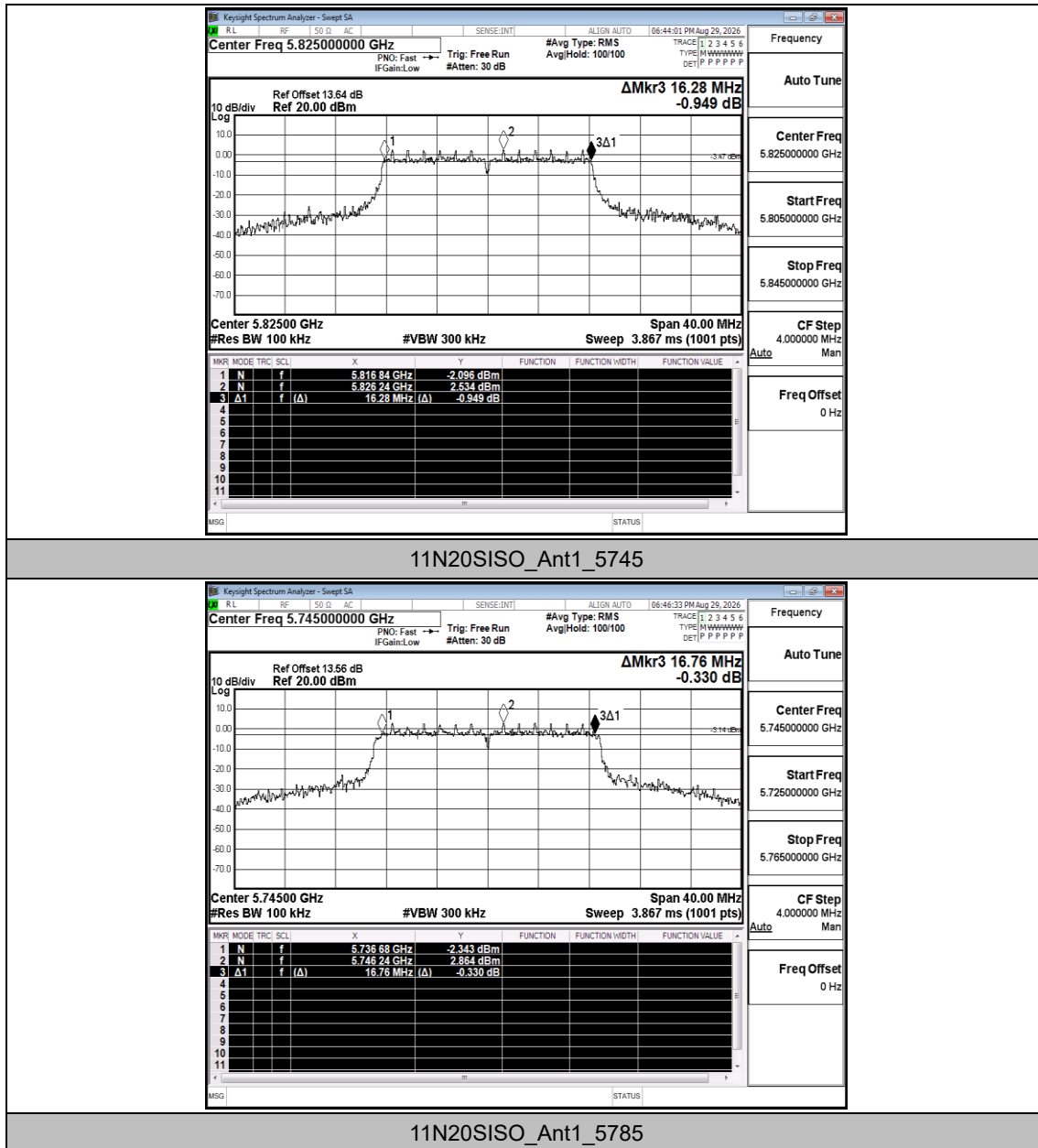
G.1 Min emission bandwidth

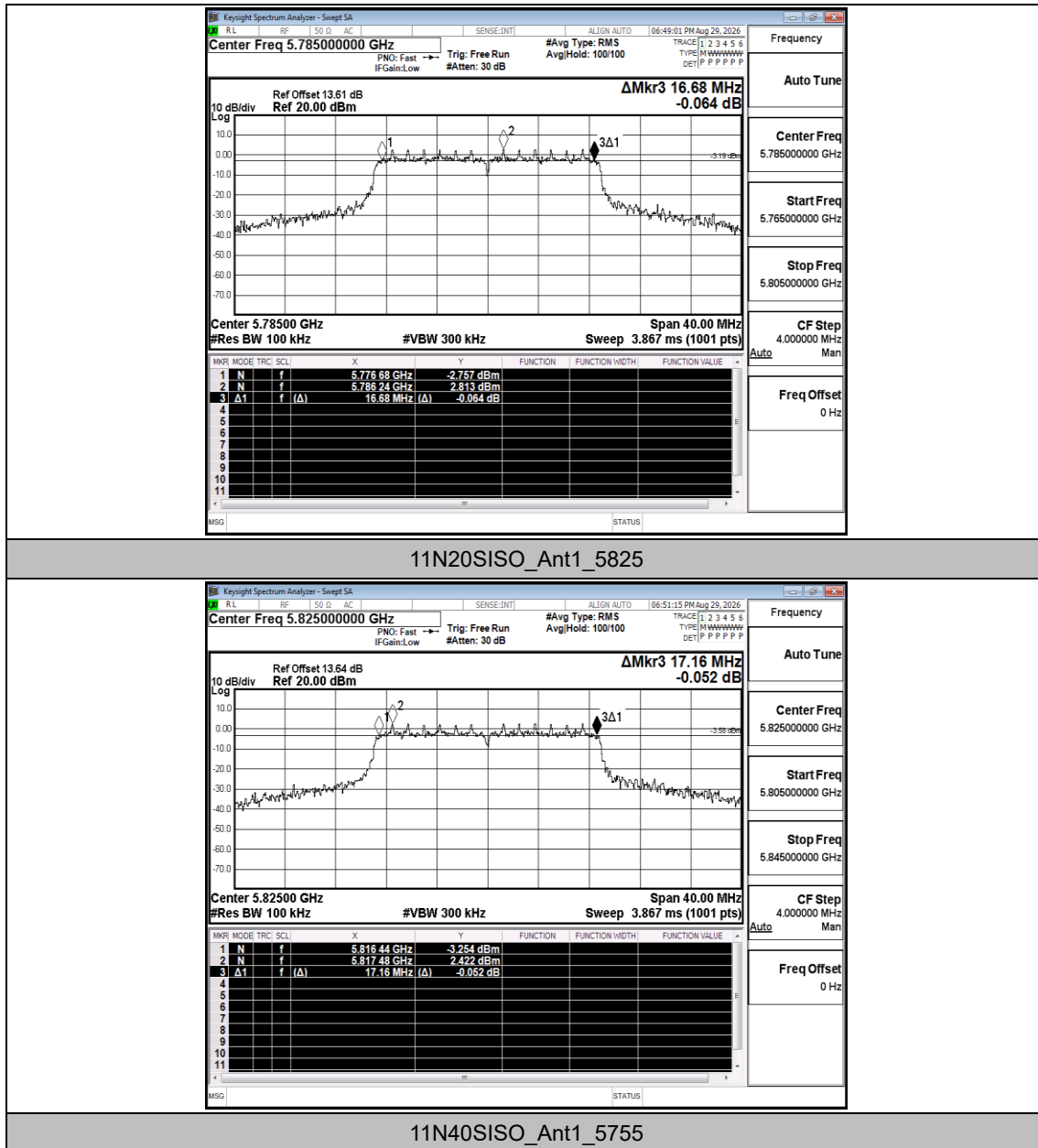
Test Result B4

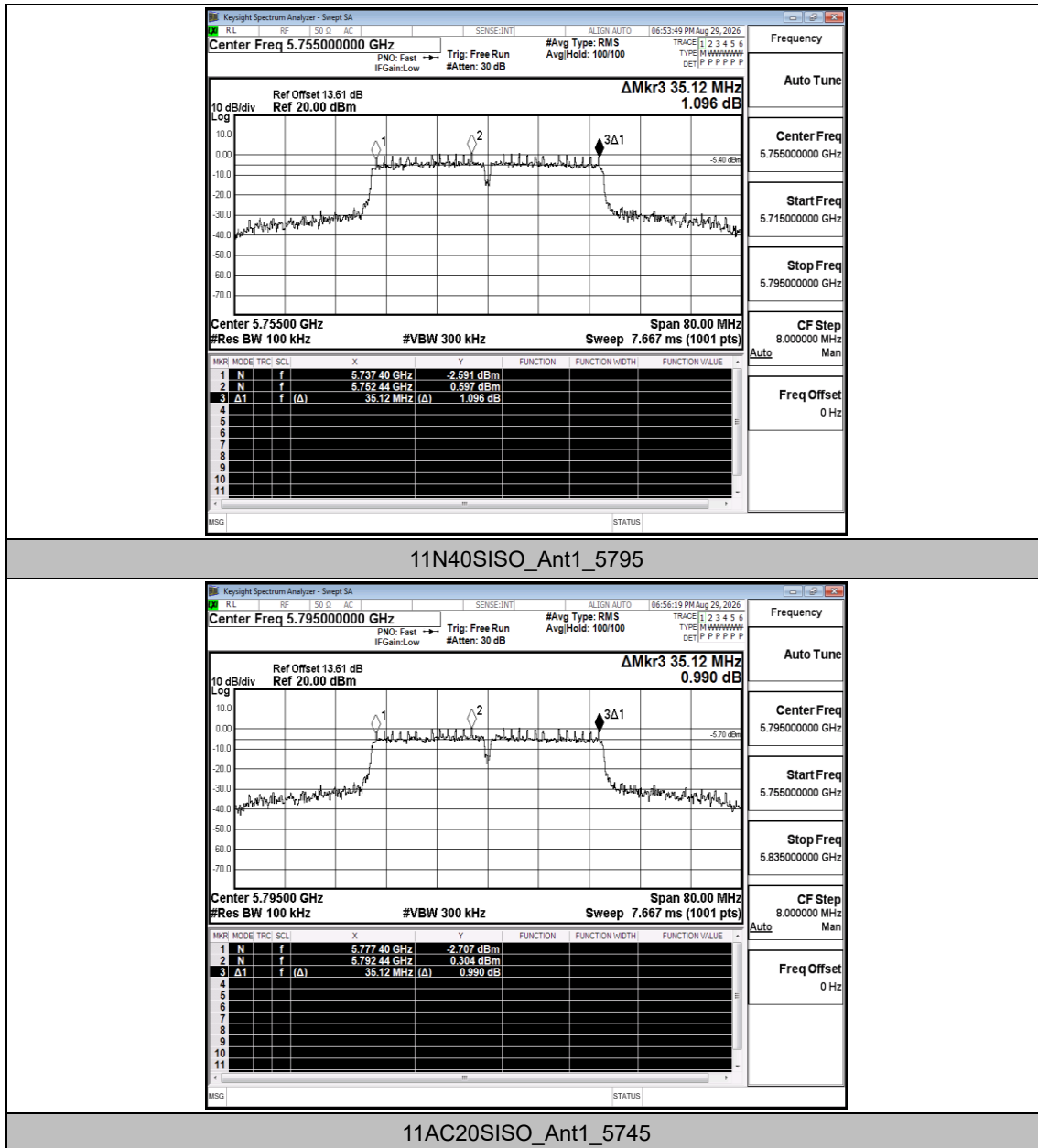
TestMode	Antenna	Freq (MHz)	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	16.280	5736.840	5753.120	0.5	PASS
		5785	16.280	5776.840	5793.120	0.5	PASS
		5825	16.280	5816.840	5833.120	0.5	PASS
11N20SISO	Ant1	5745	16.760	5736.680	5753.440	0.5	PASS
		5785	16.680	5776.680	5793.360	0.5	PASS
		5825	17.160	5816.440	5833.600	0.5	PASS
11N40SISO	Ant1	5755	35.120	5737.400	5772.520	0.5	PASS
		5795	35.120	5777.400	5812.520	0.5	PASS
11AC20SISO	Ant1	5745	16.960	5736.600	5753.560	0.5	PASS
		5785	16.800	5776.480	5793.280	0.5	PASS
		5825	17.080	5816.400	5833.480	0.5	PASS
11AC40SISO	Ant1	5755	35.120	5737.400	5772.520	0.5	PASS
		5795	35.120	5777.400	5812.520	0.5	PASS
11AC80SISO	Ant1	5775	75.200	5737.400	5812.600	0.5	PASS

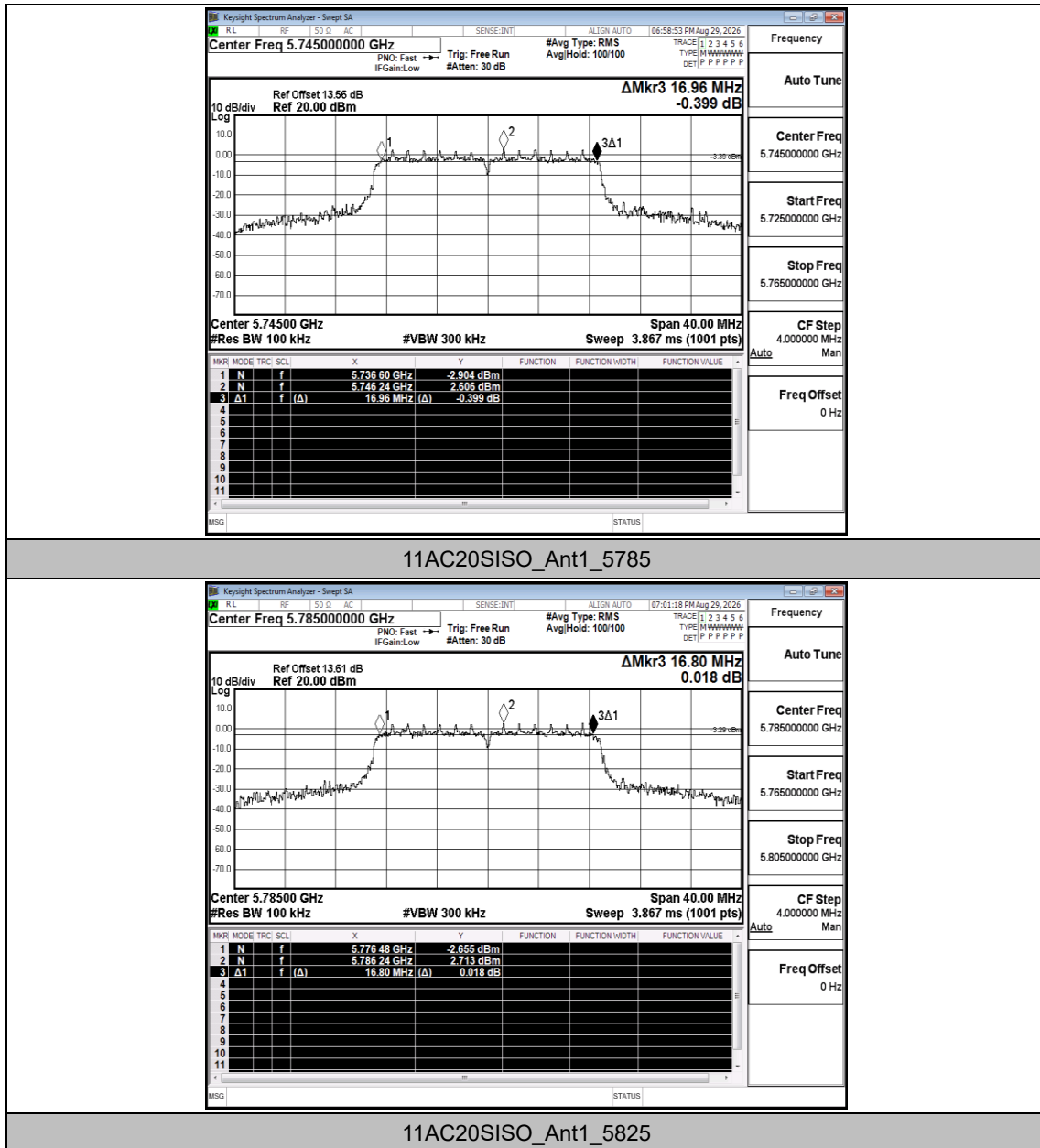
Test Graphs B4

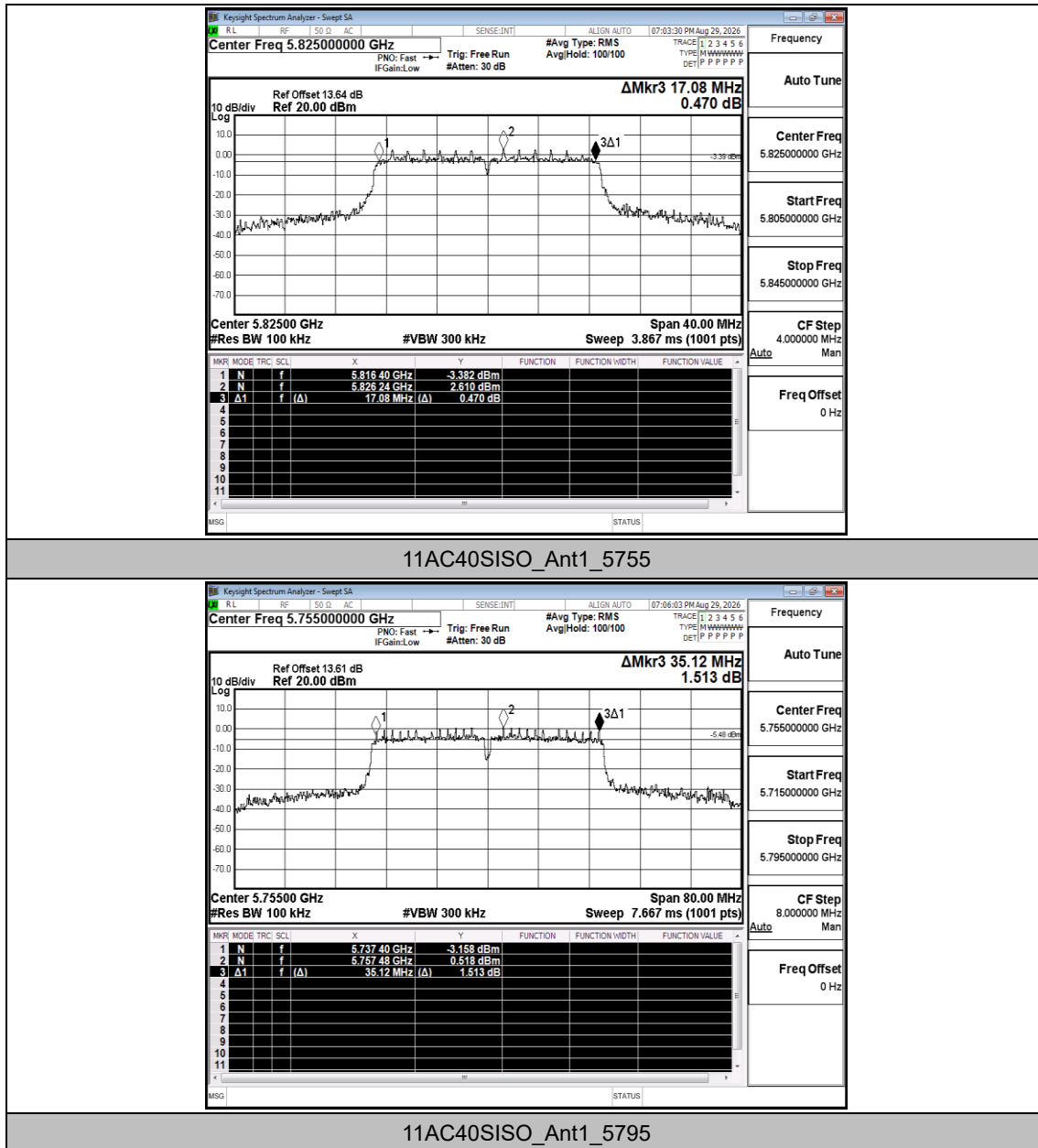


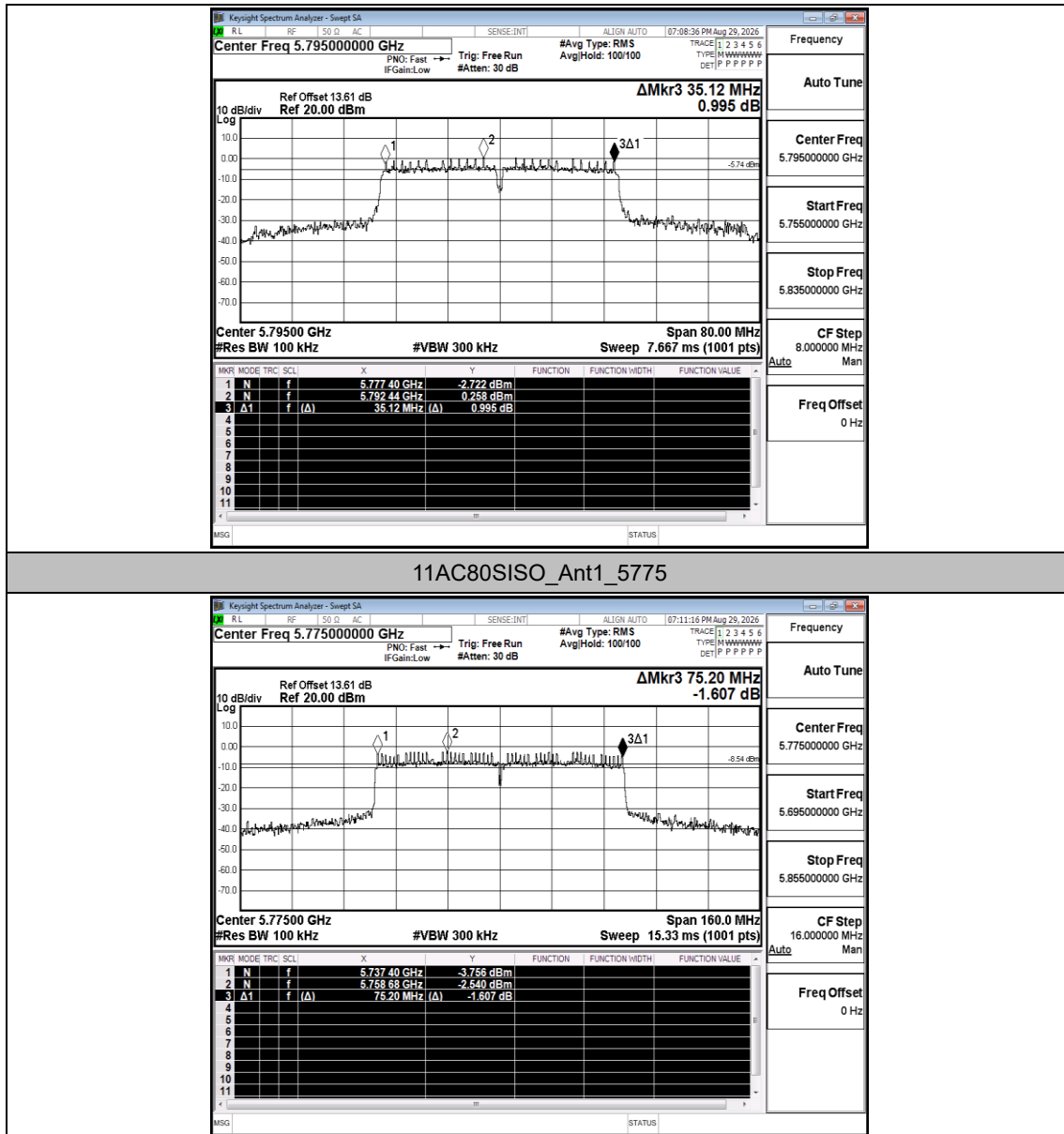












G.2 Maximum conducted output power

Test Result

Test Mode	Antenna	Freq (MHz)	TPC Mode	Measured Power [dBm]	DC Factor [dB]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	NA	14.56	0.12	14.68	≤30.00	PASS
		5785	NA	16.22	0.12	16.34	≤30.00	PASS
		5825	NA	16.11	0.15	16.26	≤30.00	PASS
11N20SISO	Ant1	5745	NA	16.09	0.13	16.22	≤30.00	PASS
		5785	NA	16.08	0.16	16.24	≤30.00	PASS
		5825	NA	15.97	0.13	16.10	≤30.00	PASS
11N40SISO	Ant1	5755	NA	16.27	0.26	16.53	≤30.00	PASS
		5795	NA	16.19	0.32	16.51	≤30.00	PASS
11AC20SISO	Ant1	5745	NA	15.98	0.16	16.14	≤30.00	PASS
		5785	NA	16.10	0.16	16.26	≤30.00	PASS
		5825	NA	15.90	0.13	16.03	≤30.00	PASS
11AC40SISO	Ant1	5755	NA	16.16	0.32	16.48	≤30.00	PASS
		5795	NA	16.10	0.26	16.36	≤30.00	PASS
11AC80SISO	Ant1	5775	NA	16.06	0.51	16.57	≤30.00	PASS

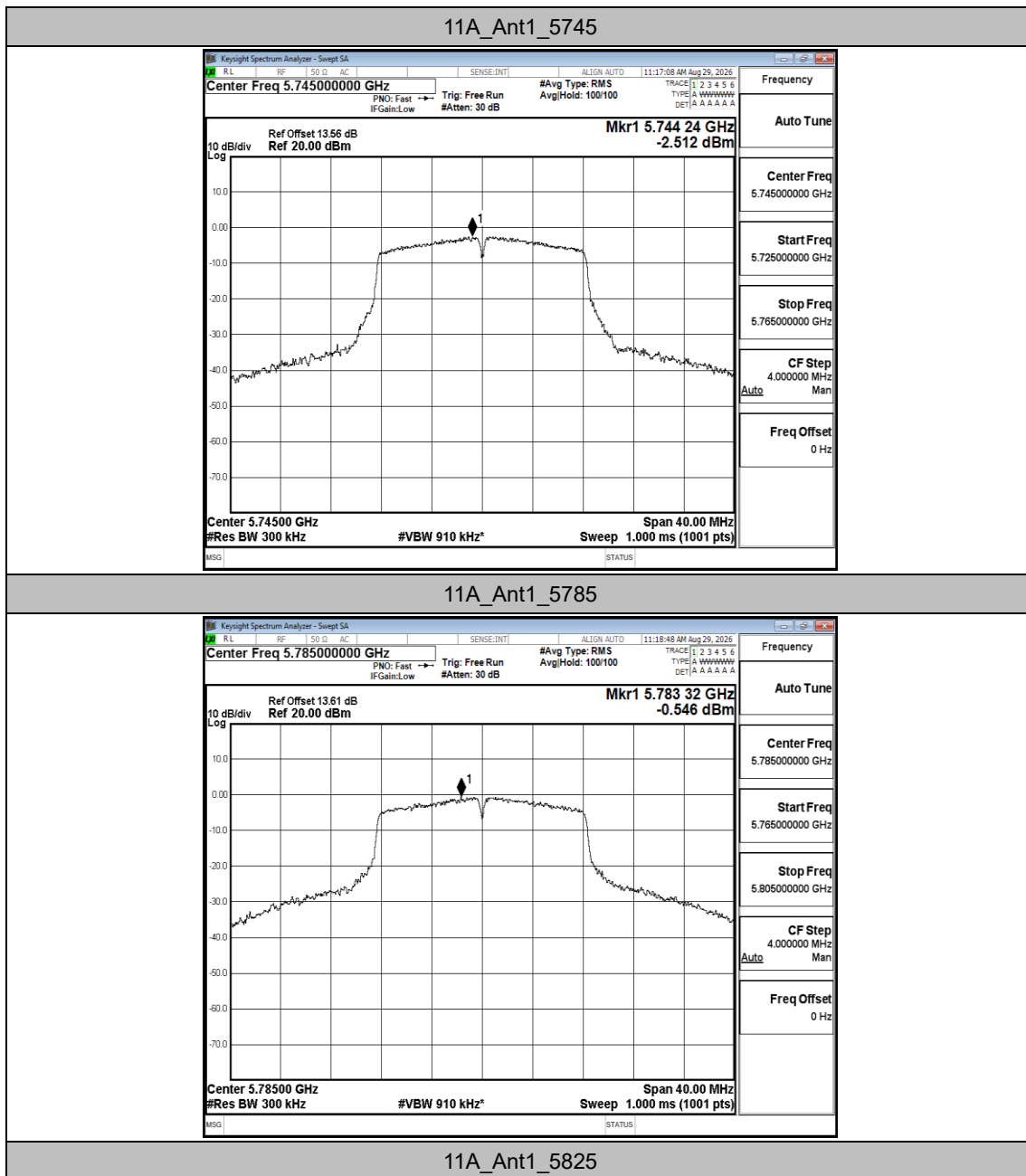
G.3 Maximum power spectral density

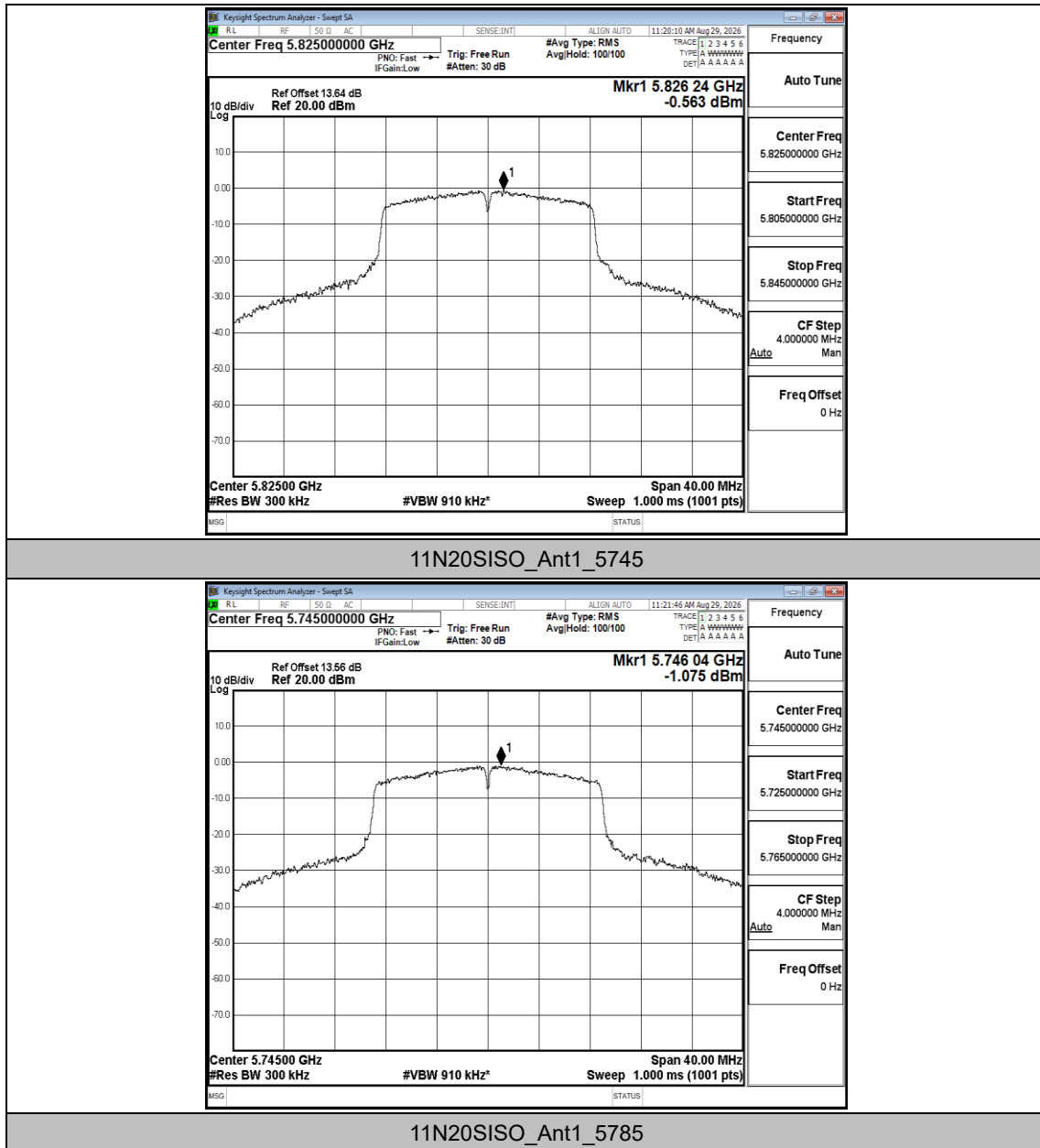
Test Result

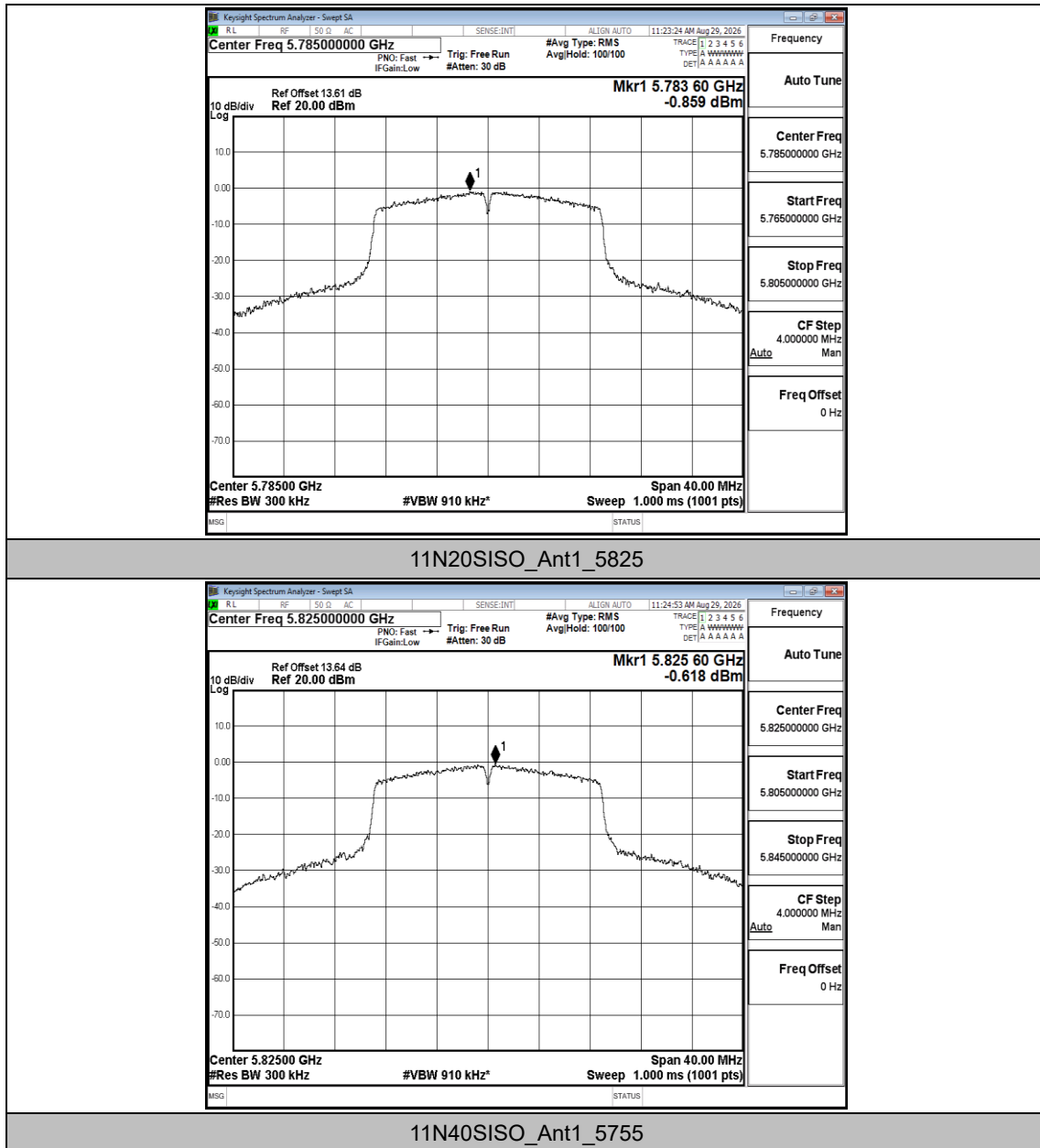
TestMode	Antenna	Freq (MHz)	Raw Data [dBm/MHz]	DC Factor	RBW Factor	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5745	-2.51	0.12	2.22	-0.17	≤30.00	PASS
		5785	-0.55	0.12	2.22	1.79	≤30.00	PASS
		5825	-0.56	0.15	2.22	1.81	≤30.00	PASS
11N20SISO	Ant1	5745	-1.08	0.13	2.22	1.27	≤30.00	PASS
		5785	-0.86	0.16	2.22	1.52	≤30.00	PASS
		5825	-0.62	0.13	2.22	1.73	≤30.00	PASS
11N40SISO	Ant1	5755	-3.46	0.26	2.22	-0.98	≤30.00	PASS
		5795	-3.61	0.32	2.22	-1.07	≤30.00	PASS
11AC20SISO	Ant1	5745	-1.12	0.16	2.22	1.26	≤30.00	PASS
		5785	-1.05	0.16	2.22	1.33	≤30.00	PASS
		5825	-0.99	0.13	2.22	1.36	≤30.00	PASS
11AC40SISO	Ant1	5755	-3.74	0.32	2.22	-1.20	≤30.00	PASS
		5795	-3.68	0.26	2.22	-1.20	≤30.00	PASS
11AC80SISO	Ant1	5775	-6.98	0.51	2.22	-4.25	≤30.00	PASS

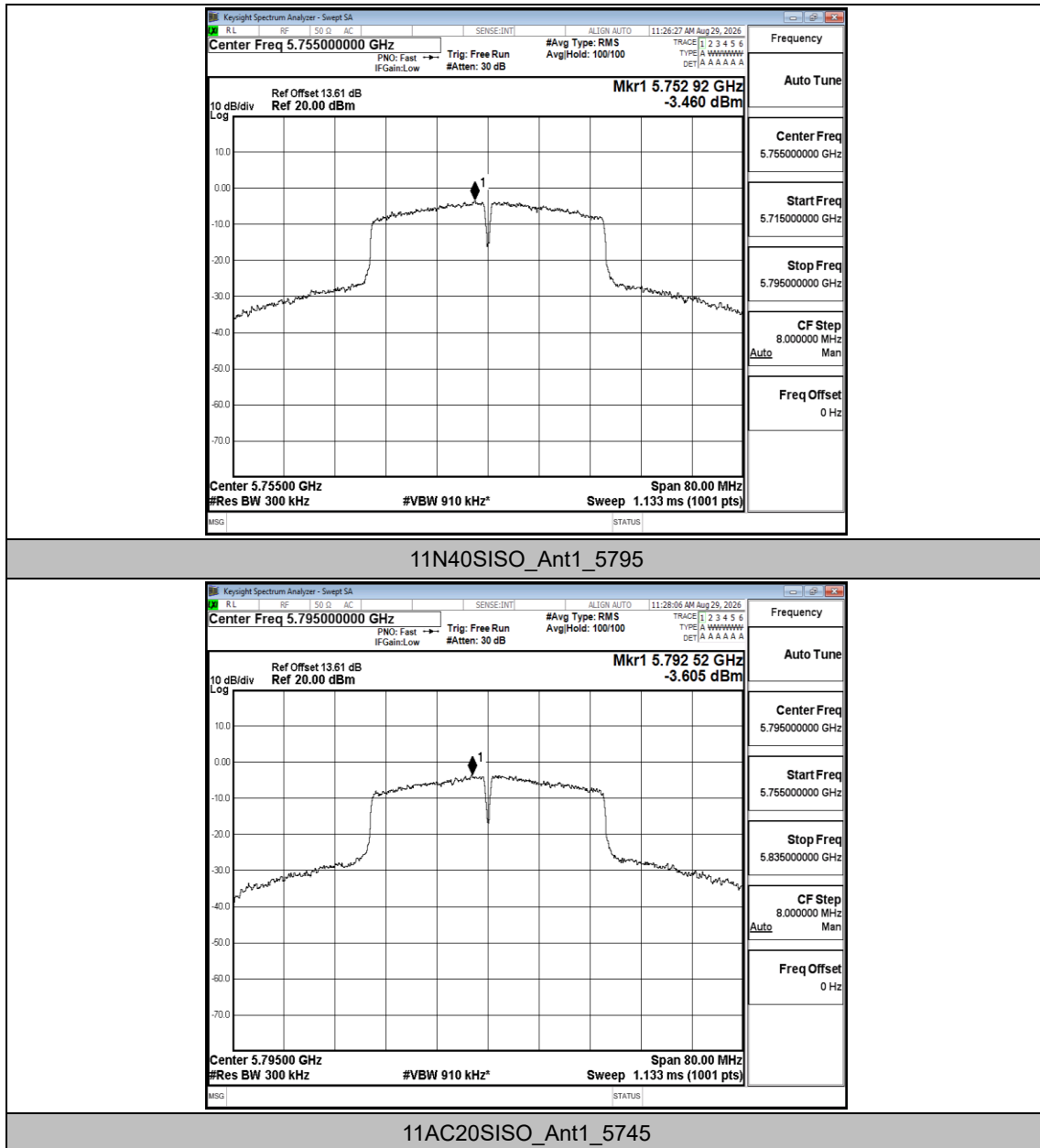
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

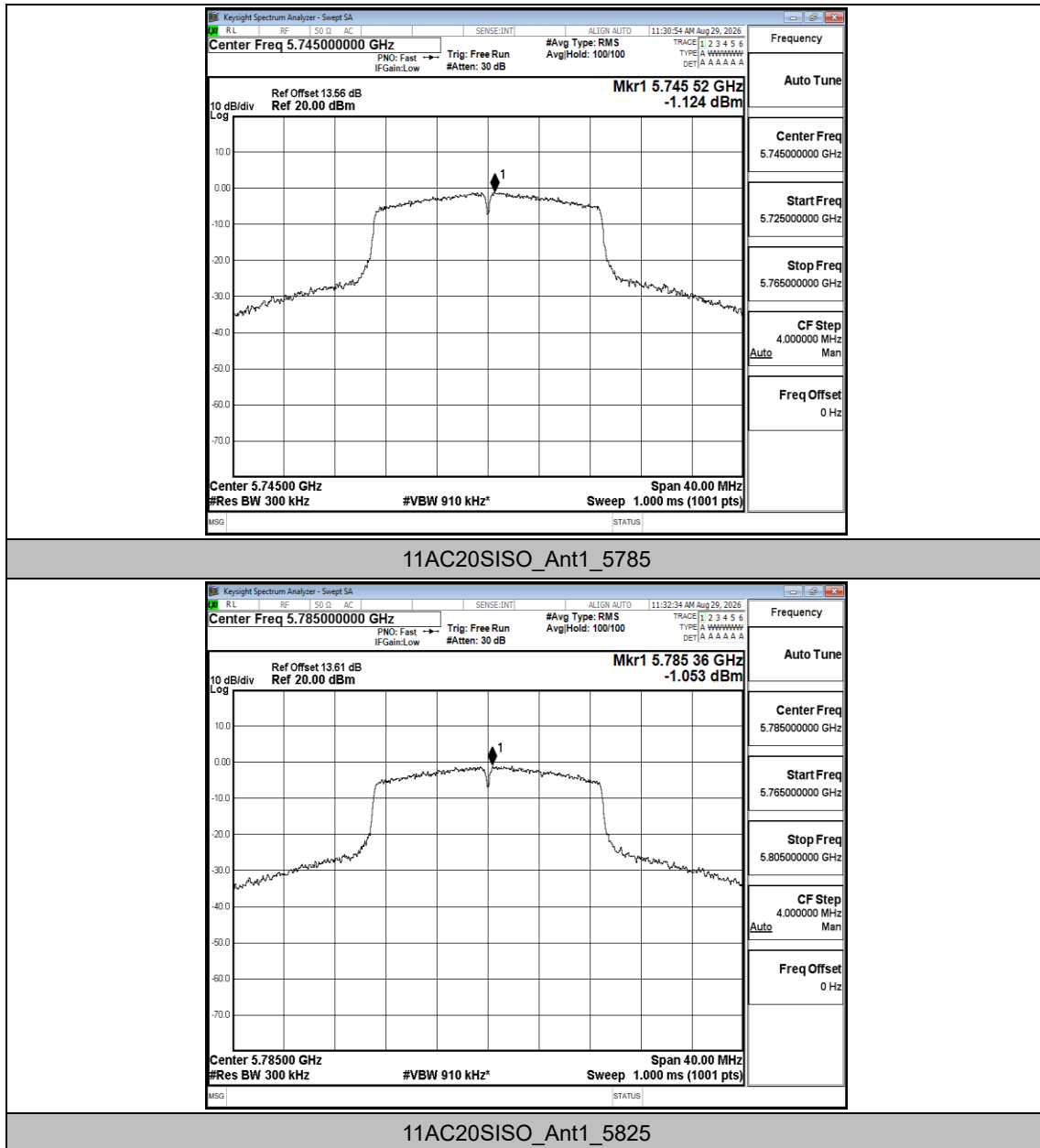
Test Graphs

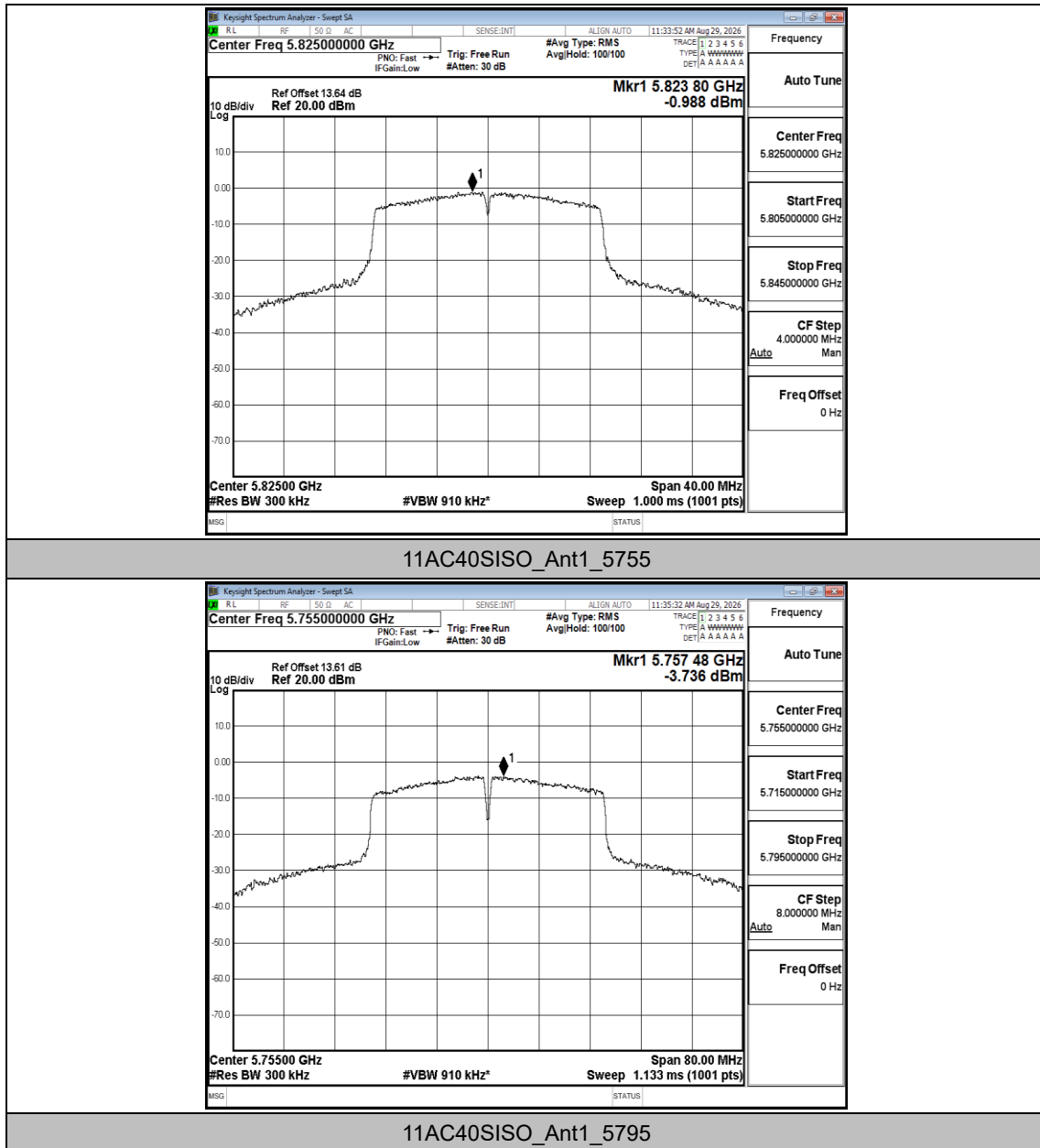


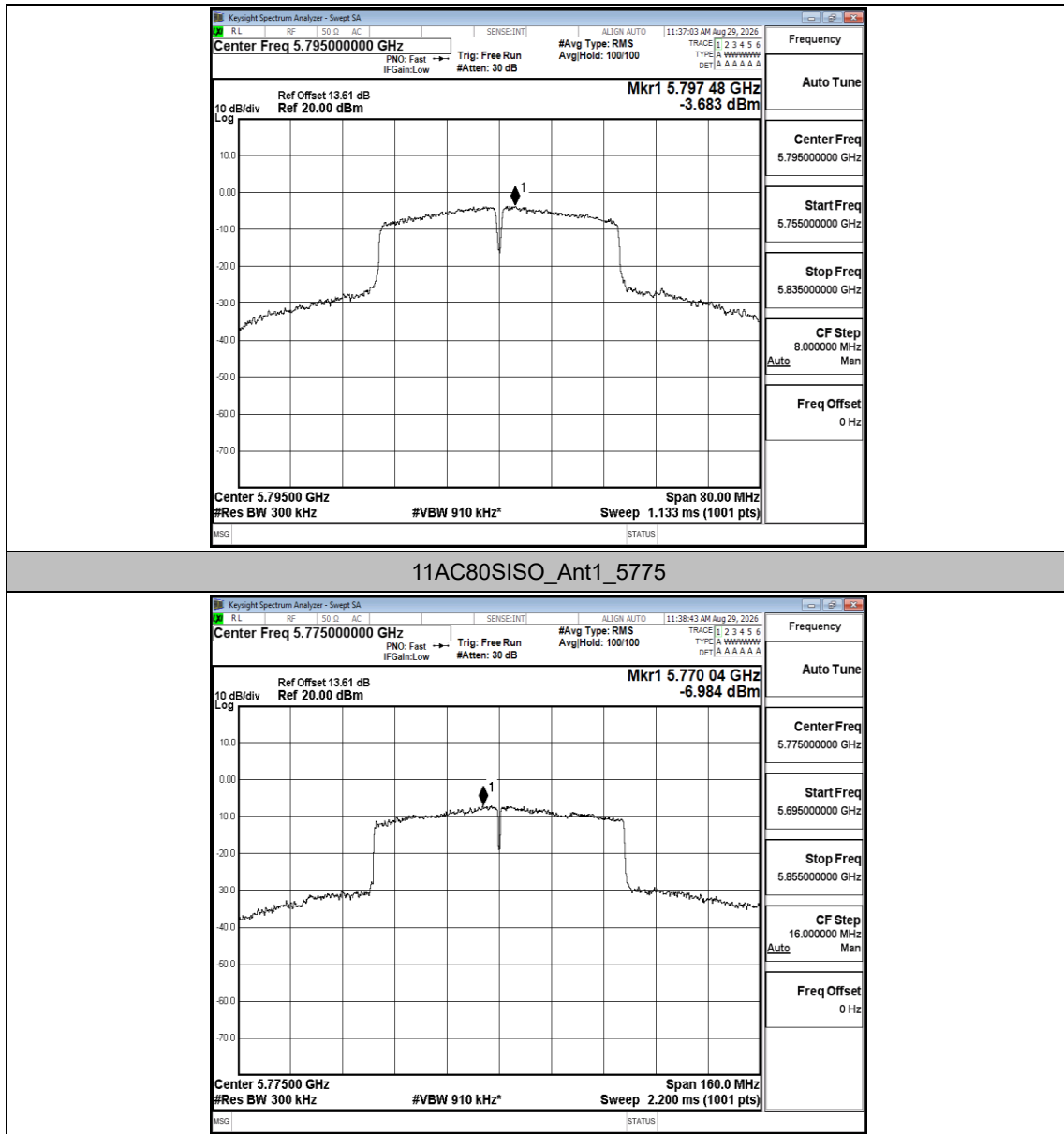












G.4 Emissions in Restricted Bands

Test Result

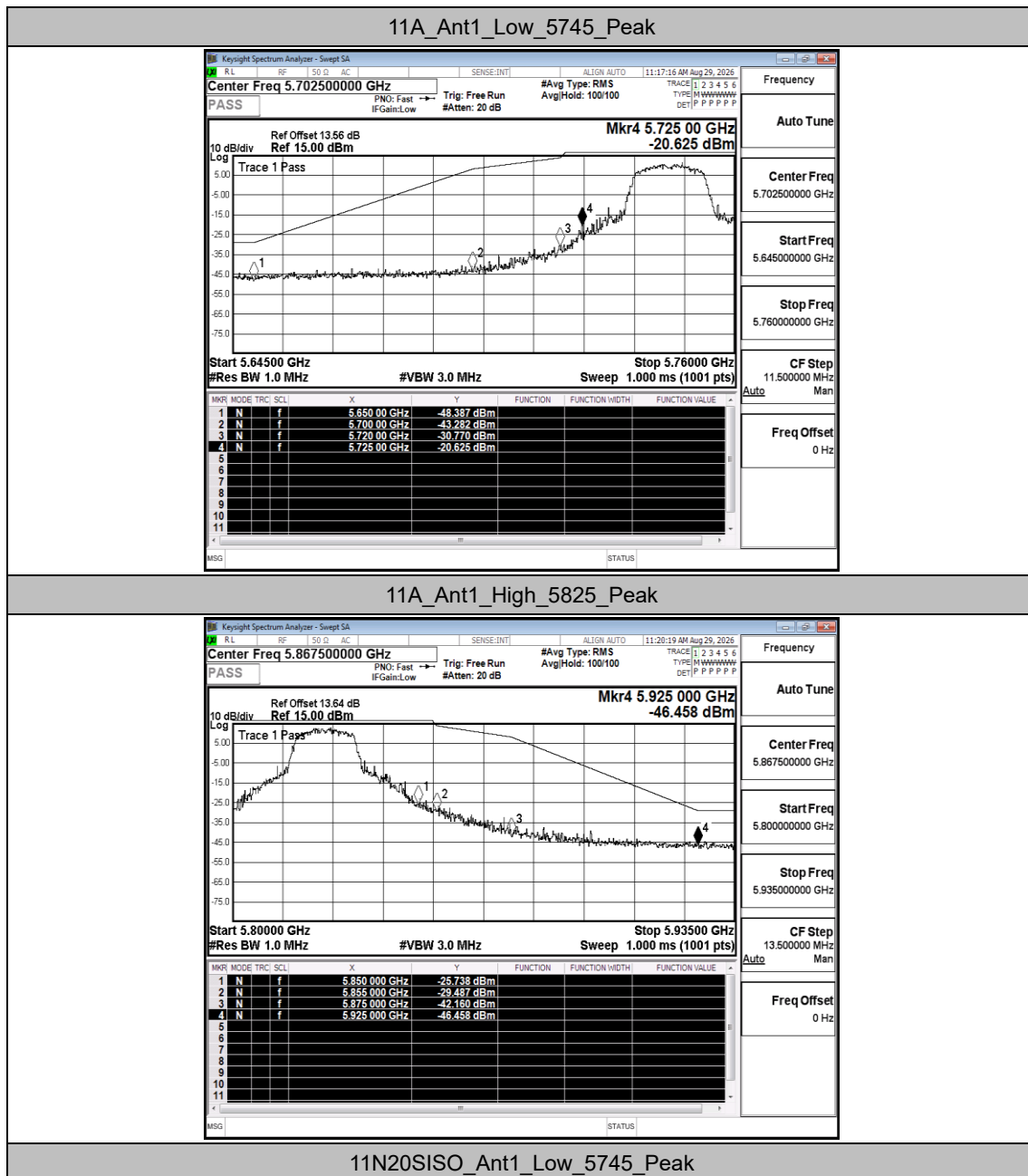
TestMode	Antenna	ChName	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	Verdict
11A	Ant1	Low	5745	Peak	5650.000	-48.387	≤-29.00	2.00	PASS
				Peak	5700.000	-43.28	≤8.00	2.00	PASS
				Peak	5720.000	-30.77	≤13.60	2.00	PASS
				Peak	5725.000	-20.63	≤25.00	2.00	PASS
		High	5825	Peak	5850.000	-25.738	≤25.00	2.00	PASS
				Peak	5855.000	-29.49	≤13.60	2.00	PASS
				Peak	5875.000	-42.16	≤8.00	2.00	PASS
				Peak	5925.000	-46.46	≤-27.00	2.00	PASS
11N20SISO	Ant1	Low	5745	Peak	5650.000	-46.433	≤-29.00	2.00	PASS
				Peak	5700.000	-37.48	≤8.00	2.00	PASS
				Peak	5720.000	-25.07	≤13.60	2.00	PASS
				Peak	5725.000	-18.71	≤25.00	2.00	PASS
		High	5825	Peak	5850.000	-24.254	≤25.00	2.00	PASS
				Peak	5855.000	-28.15	≤13.60	2.00	PASS
				Peak	5875.000	-41.22	≤8.00	2.00	PASS
				Peak	5925.000	-46.87	≤-27.00	2.00	PASS
11N40SISO	Ant1	Low	5755	Peak	5650.000	-43.967	≤-29.00	2.00	PASS
				Peak	5700.000	-29.9	≤8.00	2.00	PASS
				Peak	5720.000	-18.09	≤13.60	2.00	PASS
				Peak	5725.000	-15.96	≤25.00	2.00	PASS
		High	5795	Peak	5850.000	-28.282	≤25.00	2.00	PASS
				Peak	5855.000	-30.76	≤13.60	2.00	PASS
				Peak	5875.000	-35.23	≤8.00	2.00	PASS
				Peak	5925.000	-38.28	≤-27.00	2.00	PASS
11AC20SISO	Ant1	Low	5745	Peak	5650.000	-47.786	≤-29.00	2.00	PASS
				Peak	5700.000	-38.65	≤8.00	2.00	PASS
				Peak	5720.000	-26.29	≤13.60	2.00	PASS
				Peak	5725.000	-16.56	≤25.00	2.00	PASS
		High	5825	Peak	5850.000	-26.043	≤25.00	2.00	PASS
				Peak	5855.000	-28.86	≤13.60	2.00	PASS
				Peak	5875.000	-38.9	≤8.00	2.00	PASS
				Peak	5925.000	-46.55	≤-27.00	2.00	PASS
11AC40SISO	Ant1	Low	5755	Peak	5650.000	-45.493	≤-29.00	2.00	PASS
				Peak	5700.000	-33.32	≤8.00	2.00	PASS
				Peak	5720.000	-15.27	≤13.60	2.00	PASS

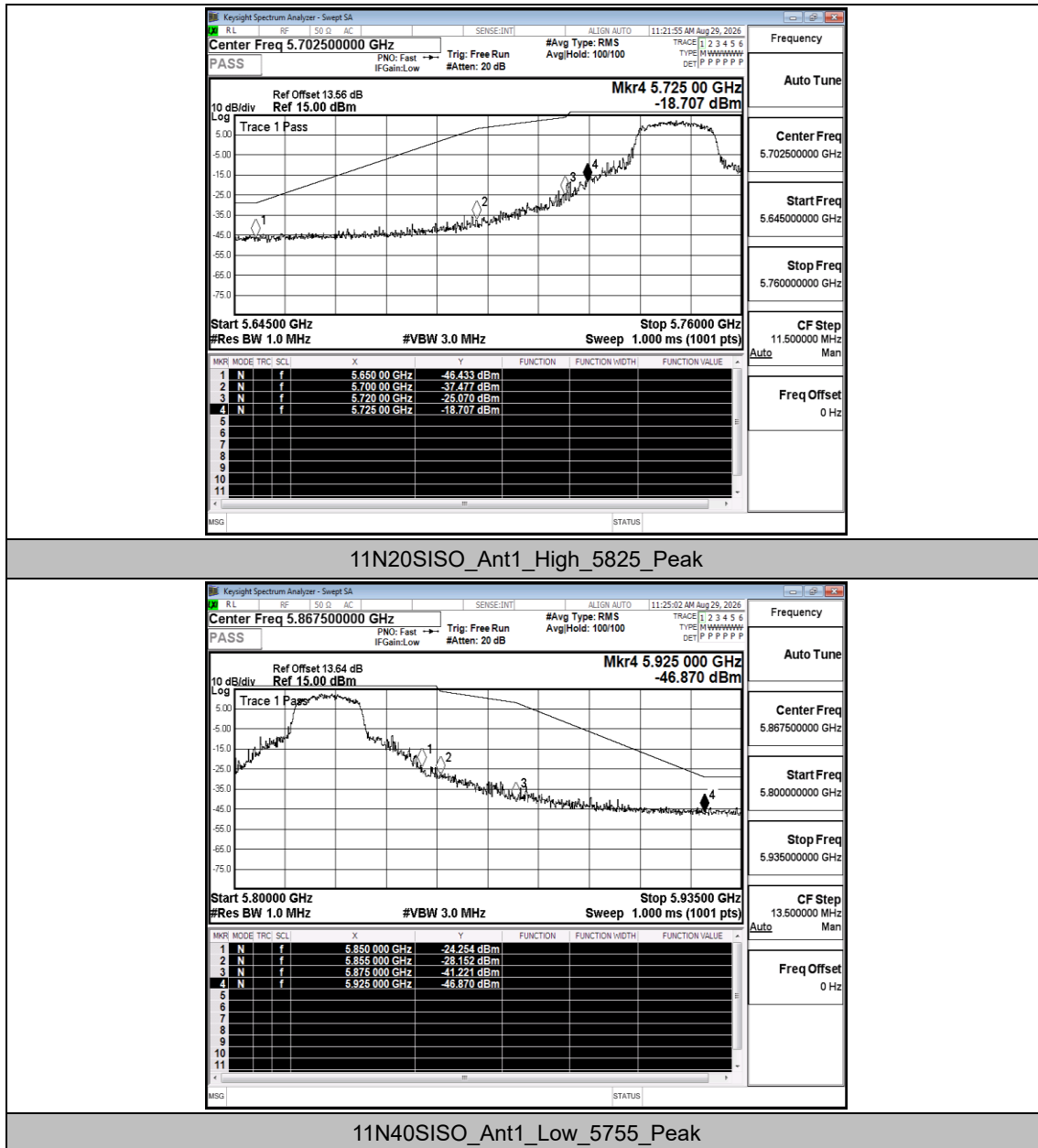
		High	5795	Peak	5725.000	-16.22	≤25.00	2.00	PASS
				Peak	5850.000	-27.513	≤25.00	2.00	PASS
				Peak	5855.000	-28.9	≤13.60	2.00	PASS
				Peak	5875.000	-34.73	≤8.00	2.00	PASS
				Peak	5925.000	-42.22	≤-27.00	2.00	PASS
11AC80SISO	Ant1	Low	5775	Peak	5650.000	-35.871	≤-29.00	2.00	PASS
				Peak	5700.000	-21.98	≤8.00	2.00	PASS
				Peak	5720.000	-15.13	≤13.60	2.00	PASS
				Peak	5725.000	-18.03	≤25.00	2.00	PASS
		High	5775	Peak	5850.000	-18.75	≤25.00	2.00	PASS
				Peak	5855.000	-22.3	≤13.60	2.00	PASS
				Peak	5875.000	-25.73	≤8.00	2.00	PASS
				Peak	5925.000	-31.35	≤-27.00	2.00	PASS

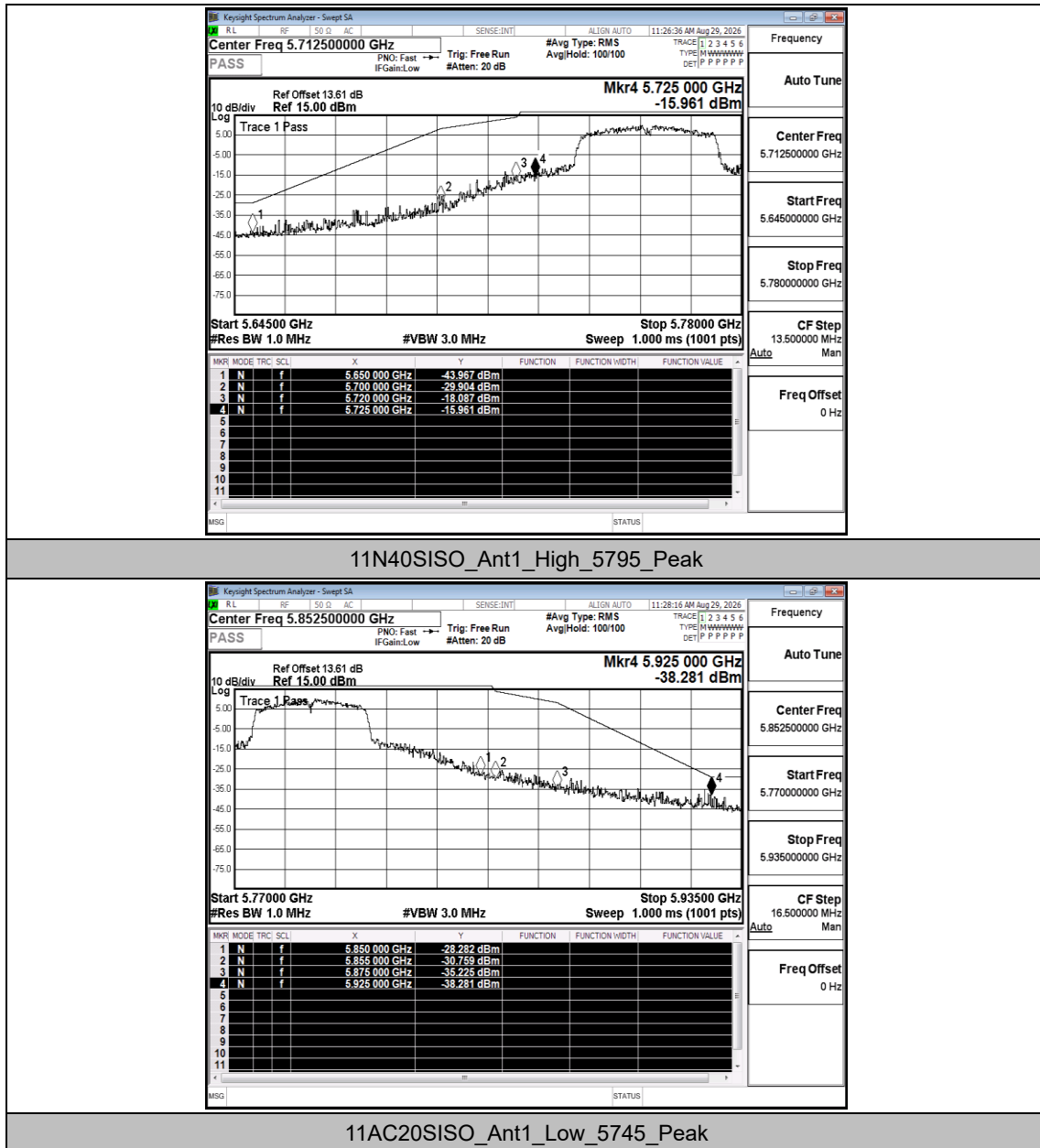
Note:

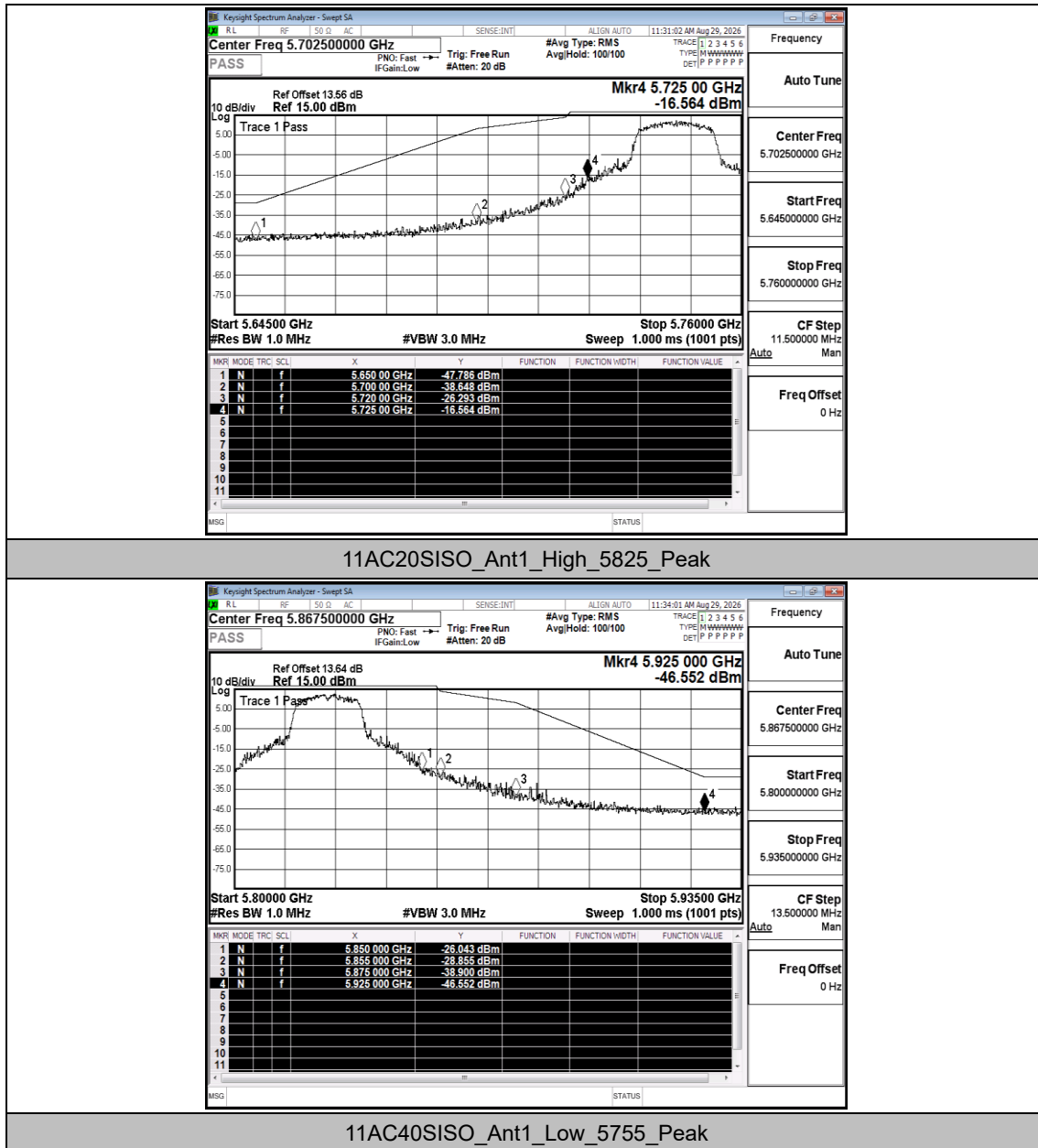
1. The Antenna Gain is compensated in the graph.

Test Graphs









Keysight Spectrum Analyzer - Sweep SA

Center Freq 5.852500000 GHz

Ref Offset 13.61 dB
Ref 15.00 dBm

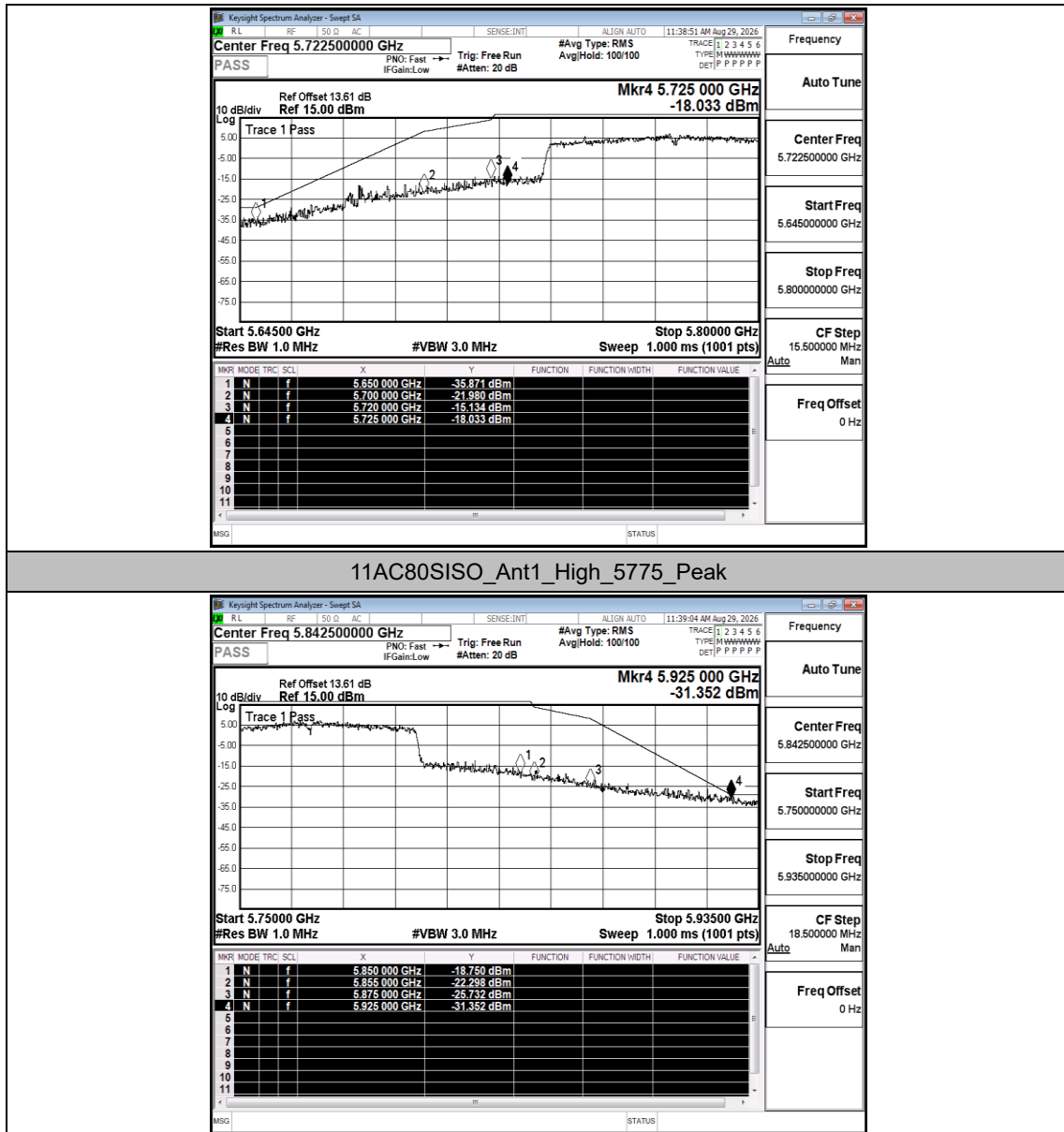
Mkr4 5.925 000 GHz
-42.219 dBm

Start 5.77000 GHz
#Res BW 1.0 MHz

Stop 5.93500 GHz
Sweep 1.000 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		5.850 000 GHz	-27.513 dBm			
2	N	f		5.855 000 GHz	-28.900 dBm			
3	N	f		5.875 000 GHz	-34.725 dBm			
4	N	f		5.925 000 GHz	-42.219 dBm			

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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	-60000.00	-10.443864	20	PASS
			LV	NT	-20000.00	-3.481288	20	PASS
			HV	NT	-40000.00	-6.962576	20	PASS
		5785	NV	NT	40000.00	6.914434	20	PASS
			LV	NT	-80000.00	-13.828868	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5825	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	60000.00	10.300429	20	PASS
11N20SISO	Ant1	5745	NV	NT	-100000.00	-17.406440	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	-20000.00	-3.481288	20	PASS
		5785	NV	NT	-40000.00	-6.914434	20	PASS
			LV	NT	-20000.00	-3.457217	20	PASS
			HV	NT	-40000.00	-6.914434	20	PASS
		5825	NV	NT	-40000.00	-6.866953	20	PASS
			LV	NT	-20000.00	-3.433476	20	PASS
			HV	NT	-20000.00	-3.433476	20	PASS
11N40SISO	Ant1	5755	NV	NT	-20000.00	-3.433476	20	PASS
			LV	NT	-20000.00	-3.433476	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5795	NV	NT	-40000.00	-6.962576	20	PASS
			LV	NT	-40000.00	-6.962576	20	PASS
			HV	NT	-40000.00	-6.962576	20	PASS
11AC20SISO	Ant1	5745	NV	NT	-40000.00	-6.962576	20	PASS
			LV	NT	40000.00	6.962576	20	PASS
			HV	NT	-40000.00	-6.914434	20	PASS
		5785	NV	NT	-40000.00	-6.914434	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	-80000.00	-13.733906	20	PASS
			HV	NT	-80000.00	-13.733906	20	PASS
11AC40SISO	Ant1	5755	NV	NT	-80000.00	-13.733906	20	PASS

			LV	NT	-80000.00	-13.733906	20	PASS
			HV	NT	-80000.00	-13.733906	20	PASS
		5795	NV	NT	-40000.00	-6.902502	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	80000.00	13.852814	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	60000.00	10.443864	20	PASS
			NV	-20	60000.00	10.443864	20	PASS
			NV	-10	60000.00	10.443864	20	PASS
			NV	0	60000.00	10.443864	20	PASS
			NV	10	-20000.00	-3.481288	20	PASS
			NV	20	-60000.00	-10.443864	20	PASS
			NV	30	-40000.00	-6.962576	20	PASS
			NV	40	20000.00	3.481288	20	PASS
			NV	50	-100000.00	-17.406440	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	-60000.00	-10.371651	20	PASS
			NV	10	-20000.00	-3.457217	20	PASS
			NV	20	-20000.00	-3.457217	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-40000.00	-6.914434	20	PASS
			NV	50	-40000.00	-6.914434	20	PASS
		5825	NV	-30	-40000.00	-6.866953	20	PASS
			NV	-20	60000.00	10.300429	20	PASS
			NV	-10	60000.00	10.300429	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	-100000.00	-17.167382	20	PASS
			NV	20	-40000.00	-6.866953	20	PASS
			NV	30	-60000.00	-10.300429	20	PASS
			NV	40	-20000.00	-3.433476	20	PASS
			NV	50	-60000.00	-10.300429	20	PASS
11N20SISO	Ant1	5745	NV	-30	-40000.00	-6.962576	20	PASS
			NV	-20	-40000.00	-6.962576	20	PASS
			NV	-10	-40000.00	-6.962576	20	PASS
			NV	0	-40000.00	-6.962576	20	PASS
			NV	10	-80000.00	-13.925152	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	0.00	0.000000	20	PASS
			NV	-20	-80000.00	-13.828868	20	PASS

			NV	-10	-80000.00	-13.828868	20	PASS
			NV	0	-20000.00	-3.457217	20	PASS
			NV	10	-20000.00	-3.457217	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	-80000.00	-13.828868	20	PASS
			NV	40	-60000.00	-10.371651	20	PASS
			NV	50	-60000.00	-10.371651	20	PASS
		5825	NV	-30	-60000.00	-10.371651	20	PASS
			NV	-20	-20000.00	-3.433476	20	PASS
			NV	-10	-80000.00	-13.733906	20	PASS
			NV	0	100000.00	17.167382	20	PASS
			NV	10	40000.00	6.866953	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	40000.00	6.866953	20	PASS
			NV	40	40000.00	6.866953	20	PASS
			NV	50	20000.00	3.433476	20	PASS
11N40SISO	Ant1	5755	NV	-30	-40000.00	-6.950478	20	PASS
			NV	-20	-40000.00	-6.950478	20	PASS
			NV	-10	-40000.00	-6.950478	20	PASS
			NV	0	-40000.00	-6.950478	20	PASS
			NV	10	-40000.00	-6.950478	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	40000.00	6.950478	20	PASS
			NV	-10	40000.00	6.950478	20	PASS
			NV	0	40000.00	6.902502	20	PASS
			NV	10	40000.00	6.902502	20	PASS
			NV	20	40000.00	6.902502	20	PASS
			NV	30	40000.00	6.902502	20	PASS
			NV	40	40000.00	6.902502	20	PASS
			NV	50	40000.00	6.902502	20	PASS
11AC20SISO	Ant1	5745	NV	-30	-100000.00	-17.406440	20	PASS
			NV	-20	-100000.00	-17.406440	20	PASS
			NV	-10	-20000.00	-3.481288	20	PASS
			NV	0	-20000.00	-3.481288	20	PASS
			NV	10	-60000.00	-10.443864	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	-60000.00	-10.443864	20	PASS

			NV	40	-60000.00	-10.443864	20	PASS
			NV	50	60000.00	10.443864	20	PASS
		5785	NV	-30	60000.00	10.371651	20	PASS
			NV	-20	-60000.00	-10.371651	20	PASS
			NV	-10	-80000.00	-13.828868	20	PASS
			NV	0	20000.00	3.457217	20	PASS
			NV	10	20000.00	3.457217	20	PASS
			NV	20	20000.00	3.457217	20	PASS
			NV	30	20000.00	3.457217	20	PASS
			NV	40	40000.00	6.914434	20	PASS
			NV	50	60000.00	10.371651	20	PASS
		5825	NV	-30	-20000.00	-3.433476	20	PASS
			NV	-20	-60000.00	-10.300429	20	PASS
			NV	-10	80000.00	13.733906	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	80000.00	13.733906	20	PASS
			NV	20	80000.00	13.733906	20	PASS
			NV	30	20000.00	3.433476	20	PASS
			NV	40	-80000.00	-13.733906	20	PASS
			NV	50	-40000.00	-6.866953	20	PASS
11AC40SISO	Ant1	5755	NV	-30	-80000.00	-13.900956	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	-80000.00	-13.900956	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	40000.00	6.950478	20	PASS
			NV	50	-40000.00	-6.902502	20	PASS
		5795	NV	-30	0.00	0.000000	20	PASS
			NV	-20	-40000.00	-6.902502	20	PASS
			NV	-10	-40000.00	-6.902502	20	PASS
			NV	0	-40000.00	-6.902502	20	PASS
			NV	10	-40000.00	-6.902502	20	PASS
			NV	20	-40000.00	-6.902502	20	PASS
			NV	30	-40000.00	-6.902502	20	PASS
			NV	40	40000.00	6.902502	20	PASS
			NV	50	-40000.00	-6.902502	20	PASS
11AC80SISO	Ant1	5775	NV	-30	-40000.00	-6.902502	20	PASS
			NV	-20	-40000.00	-6.902502	20	PASS
			NV	-10	0.00	0.000000	20	PASS

			NV	0	0.00	0.000000	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	-40000.00	-6.902502	20	PASS
			NV	30	-40000.00	-6.902502	20	PASS
			NV	40	-40000.00	-6.902502	20	PASS
			NV	50	-40000.00	-6.902502	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	1.39	1.43	97.20	0.12	---	---
		5785	1.40	1.44	97.22	0.12	---	---
		5825	1.39	1.44	96.53	0.15	---	---
11N20SISO	Ant1	5745	1.30	1.34	97.01	0.13	---	---
		5785	1.30	1.35	96.30	0.16	---	---
		5825	1.30	1.34	97.01	0.13	---	---
11N40SISO	Ant1	5755	0.65	0.69	94.20	0.26	---	---
		5795	0.65	0.70	92.86	0.32	---	---
11AC20SISO	Ant1	5745	1.31	1.36	96.32	0.16	---	---
		5785	1.31	1.36	96.32	0.16	---	---
		5825	1.31	1.35	97.04	0.13	---	---
11AC40SISO	Ant1	5755	0.65	0.70	92.86	0.32	---	---
		5795	0.65	0.69	94.20	0.26	---	---
11AC80SISO	Ant1	5775	0.32	0.36	88.89	0.51	---	---

Test Graphs

