

Appendix D

RF Test Data for 5.8GWIFI (Conducted Measurement)

Product Name: Aroma Diffuser

Test Model: ECOSCENT V.2 ULTRA

Environmental Conditions

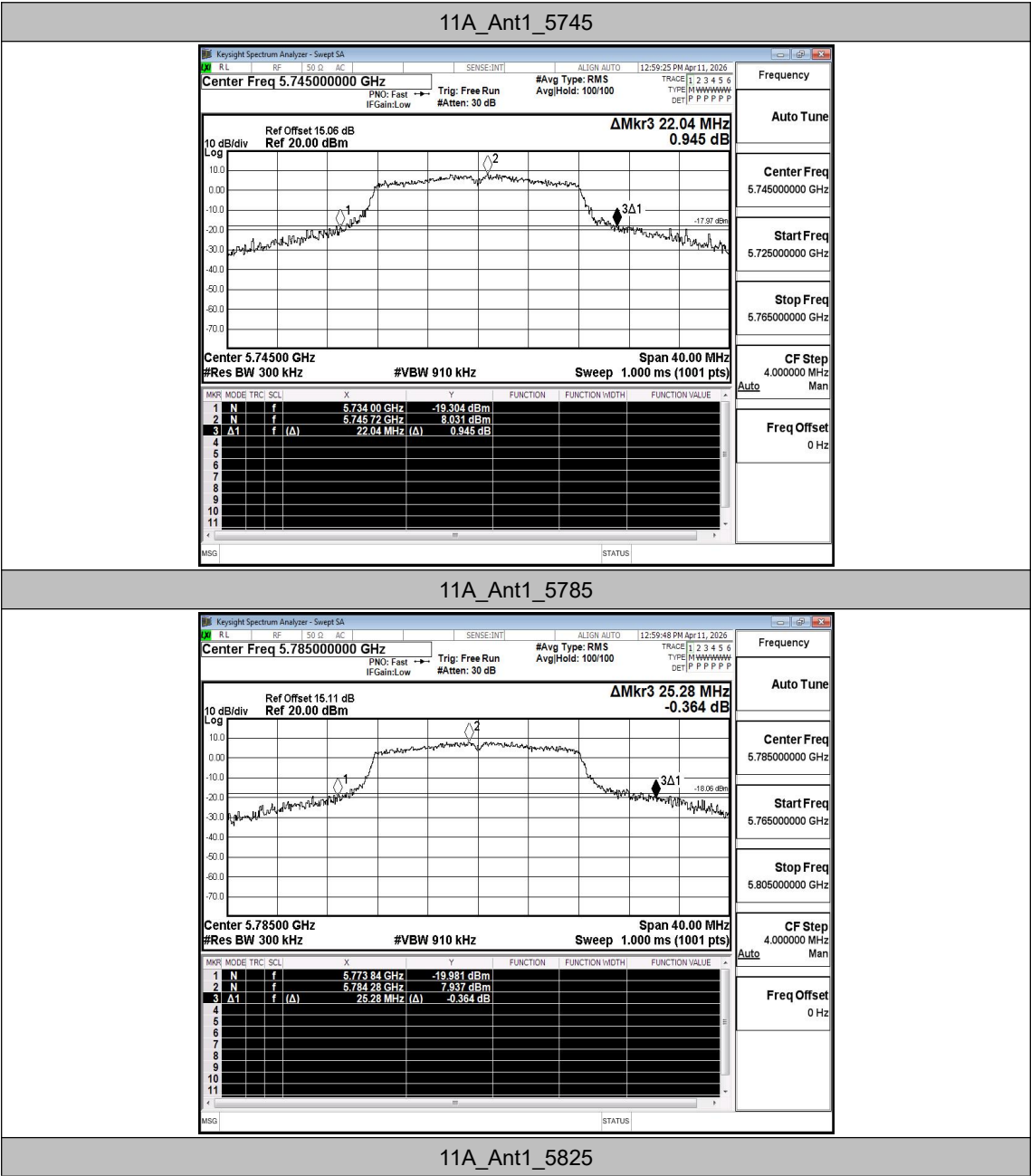
Temperature:	24.6°C
Relative Humidity:	54.5%
ATM Pressure:	100.0 kPa
Test Engineer:	zhao xing hai
Supervised by:	Fengliu Tang

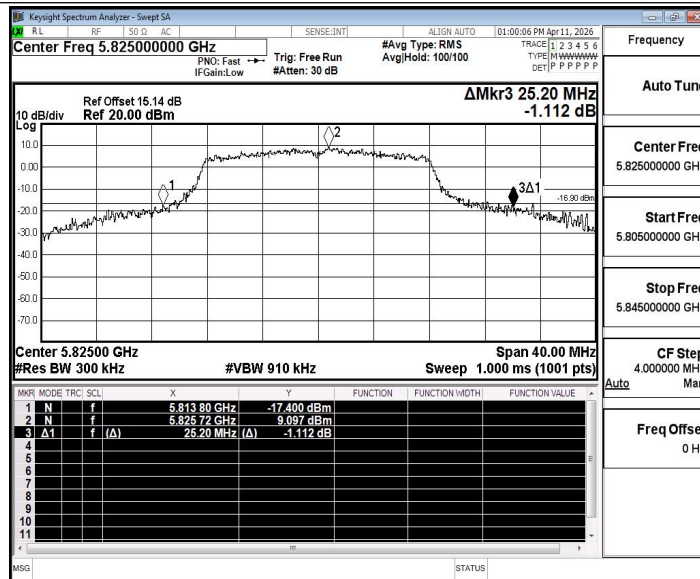
D.1 Emission Bandwidth

Test Result

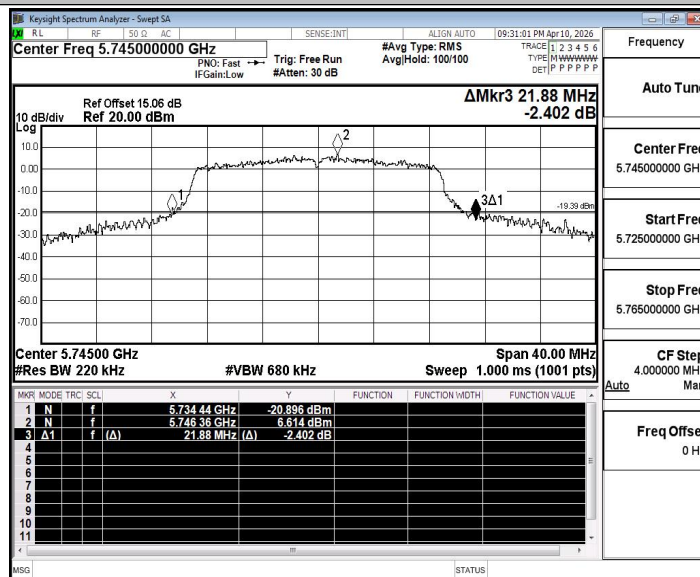
TestMode	Antenna	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	22.040	5734.000	5756.040	---	---
		5785	25.280	5773.840	5799.120	---	---
		5825	25.200	5813.800	5839.000	---	---
11N20SISO	Ant1	5745	21.880	5734.440	5756.320	---	---
		5785	26.440	5774.080	5800.520	---	---
		5825	25.320	5812.480	5837.800	---	---
11N40SISO	Ant1	5755	52.480	5731.960	5784.440	---	---
		5795	62.880	5771.400	5834.280	---	---
11AC20SISO	Ant1	5745	22.920	5734.080	5757.000	---	---
		5785	25.440	5774.280	5799.720	---	---
		5825	24.280	5814.200	5838.480	---	---
11AX20SISO	Ant1	5745	21.920	5734.640	5756.560	---	---
		5785	21.080	5774.520	5795.600	---	---
		5825	24.120	5813.920	5838.040	---	---

Test Graphs

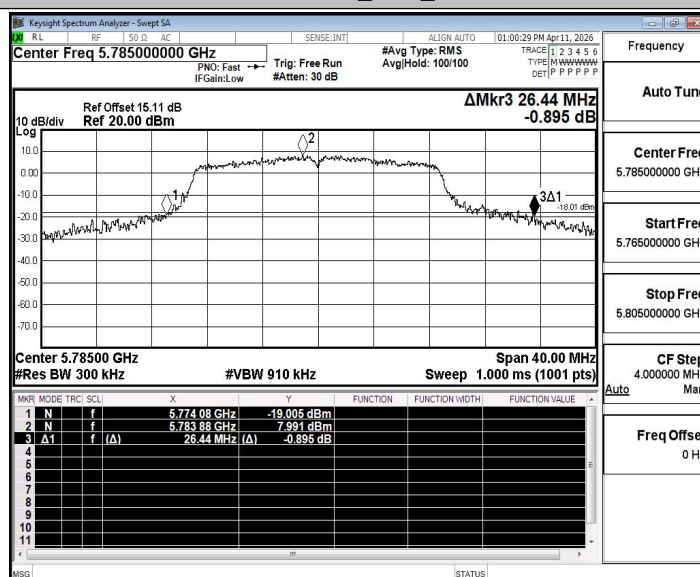




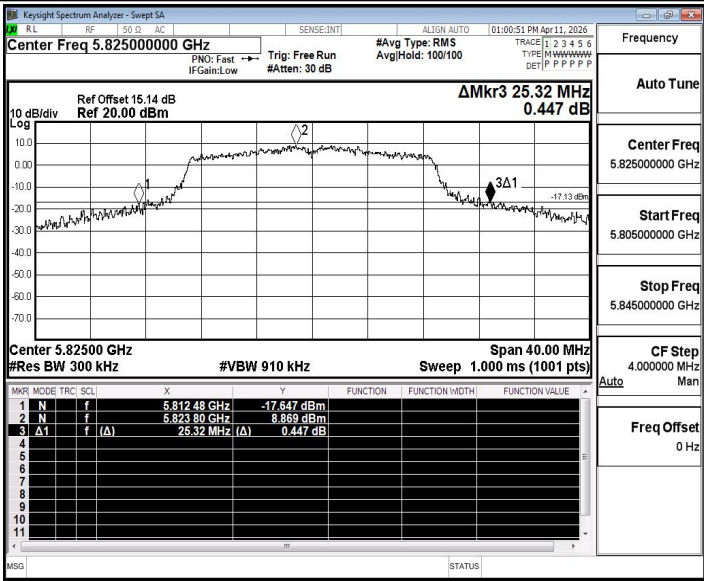
11N20SISO_Ant1_5745



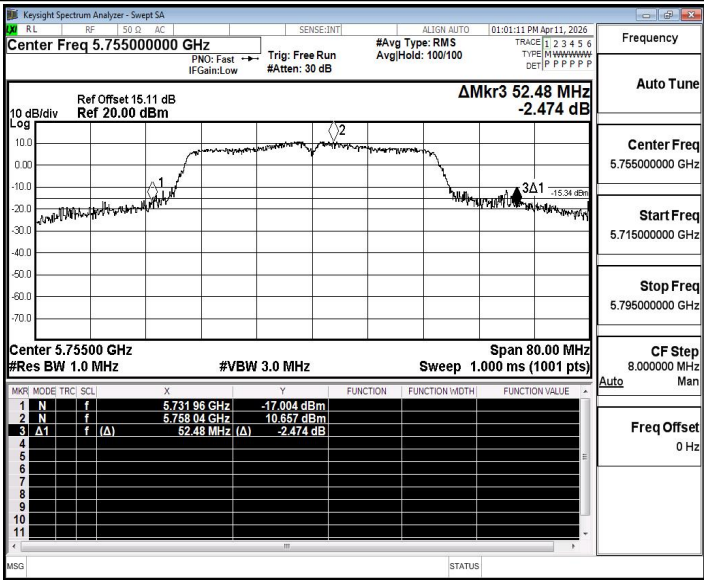
11N20SISO_Ant1_5785



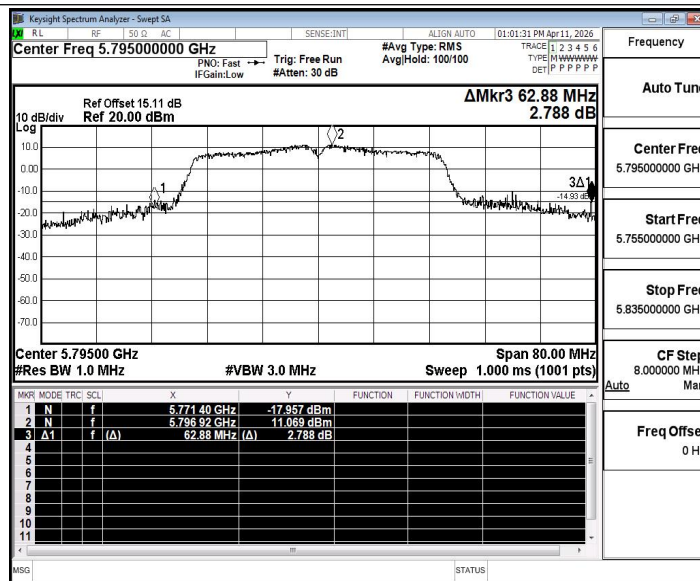
11N20SISO_Ant1_5825



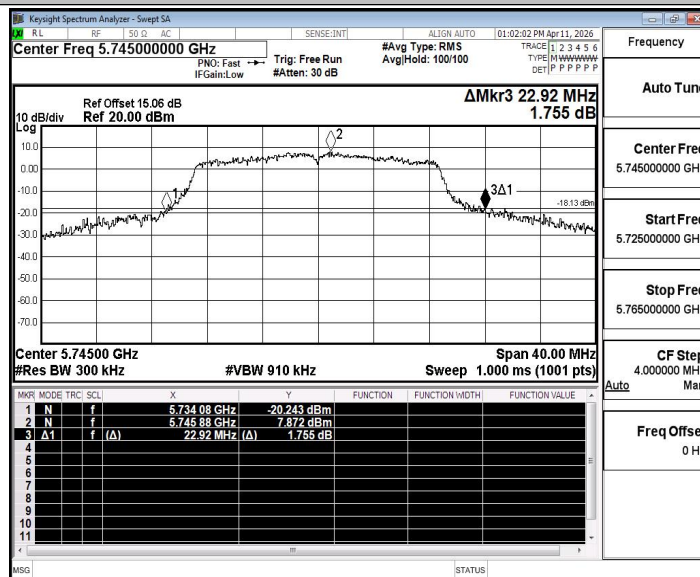
11N40SISO_Ant1_5755



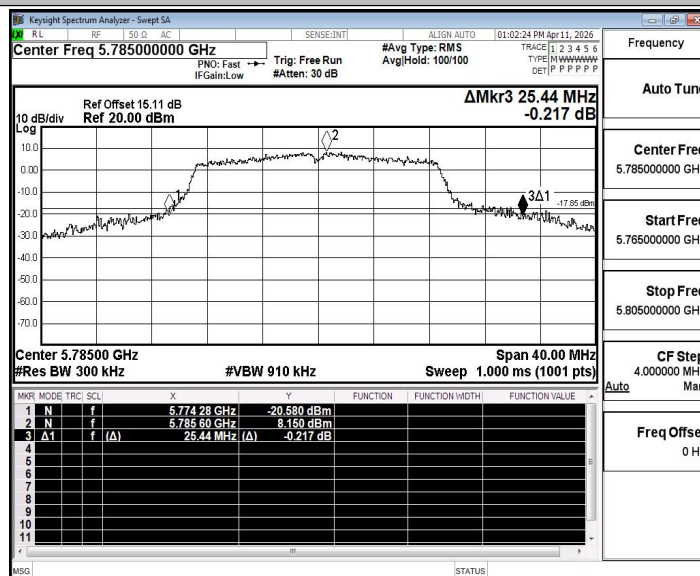
11N40SISO_Ant1_5795



11AC20SISO_Ant1_5745



11AC20SISO_Ant1_5785

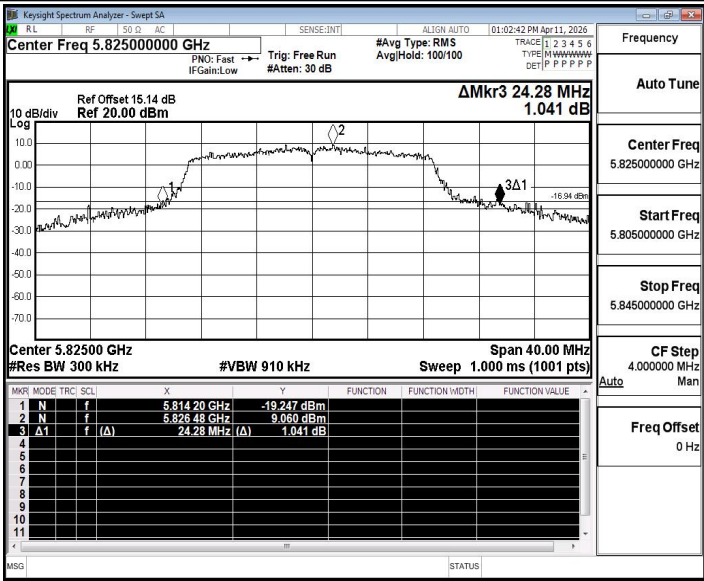


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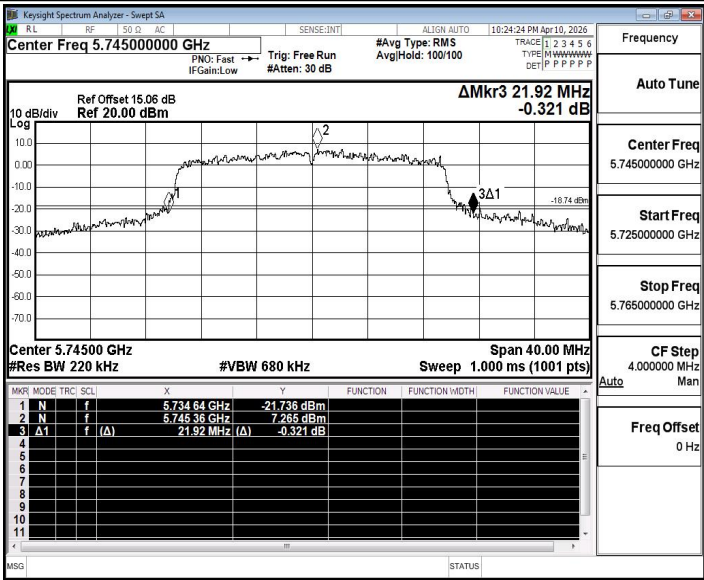
Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China

Tel: +(86) 020-39166689 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

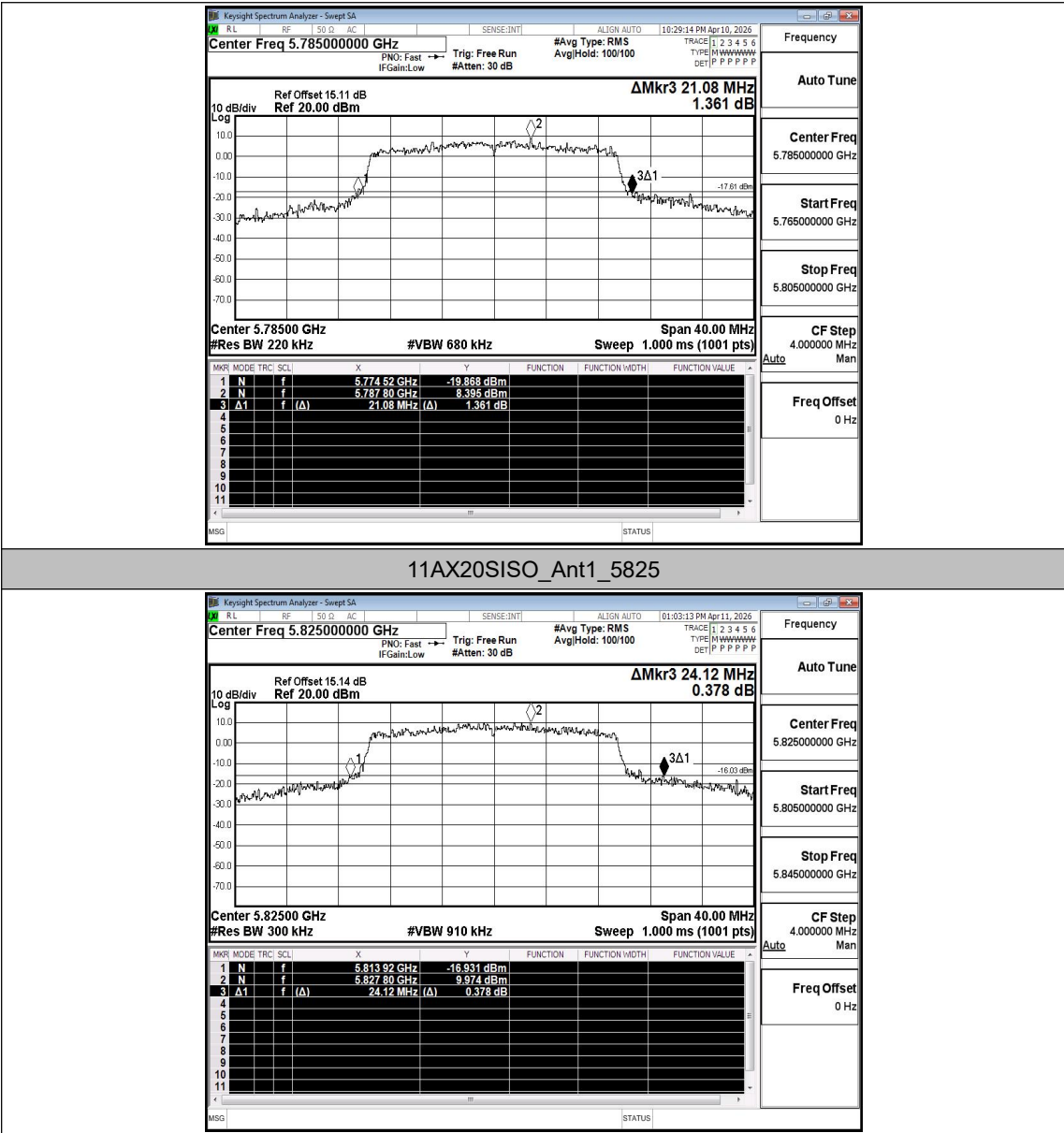
11AC20SISO_Ant1_5825



11AX20SISO_Ant1_5745



11AX20SISO_Ant1_5785



D.2 Maximum conducted output power

Test Result

Test Mode	Antenna	Freq(MHz)	Measured Power [dBm]	DC Factor [dB]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	16.75	0.02	16.77	≤30.00	PASS
		5785	17.78	0.02	17.80	≤30.00	PASS
		5825	18.08	0.02	18.10	≤30.00	PASS
11N20SISO	Ant1	5745	17.02	0.03	17.05	≤30.00	PASS
		5785	17.40	0.02	17.42	≤30.00	PASS
		5825	18.16	0.03	18.19	≤30.00	PASS
11N40SISO	Ant1	5755	16.71	0.05	16.76	≤30.00	PASS
		5795	17.26	0.05	17.31	≤30.00	PASS
11AC20SISO	Ant1	5745	16.97	0.03	17.00	≤30.00	PASS
		5785	17.41	0.02	17.43	≤30.00	PASS
		5825	18.18	0.02	18.20	≤30.00	PASS
11AX20SISO	Ant1	5745	16.92	0.03	16.95	≤30.00	PASS
		5785	17.38	0.03	17.41	≤30.00	PASS
		5825	18.11	0.03	18.14	≤30.00	PASS

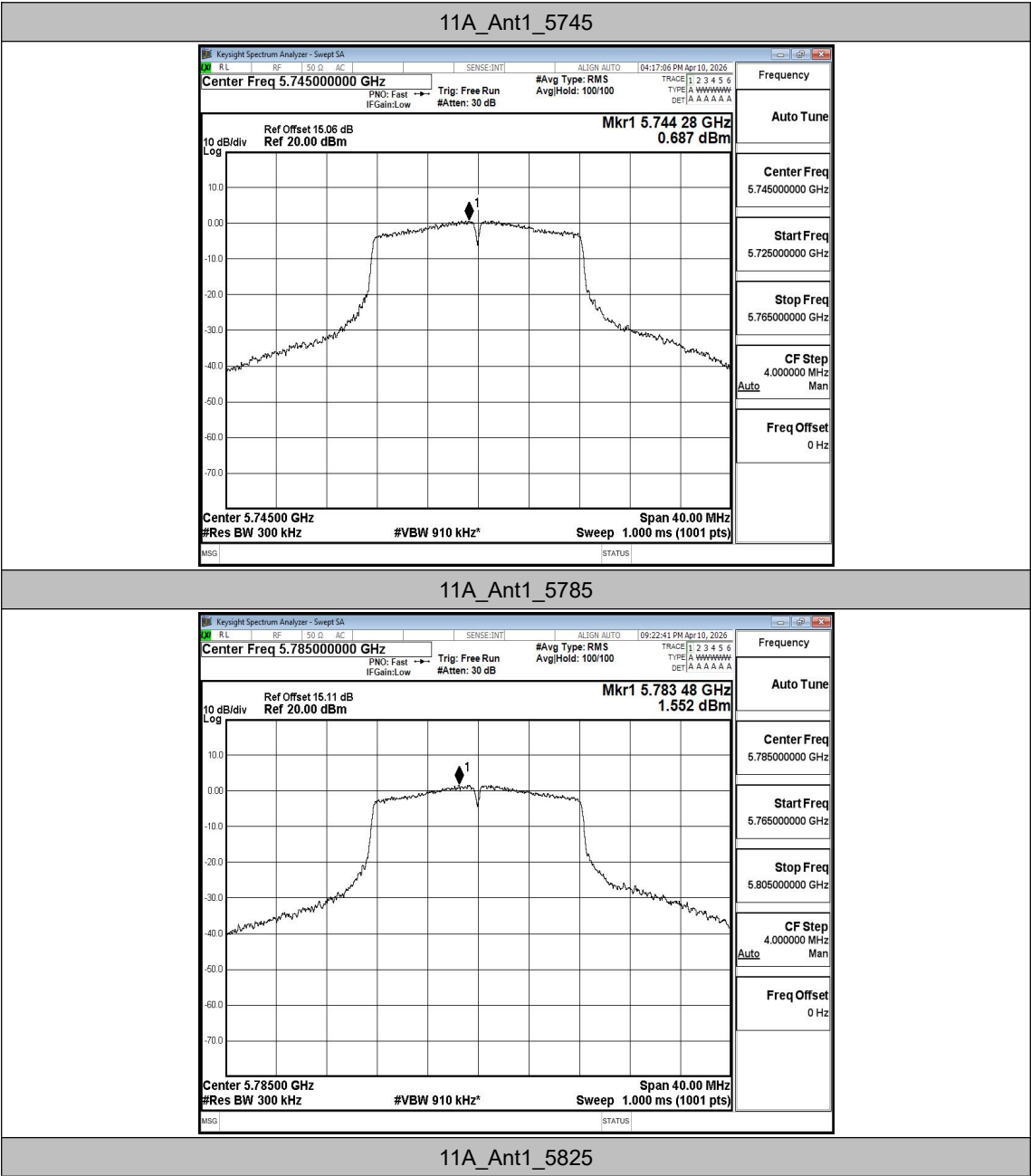
D.3 Maximum power spectral density

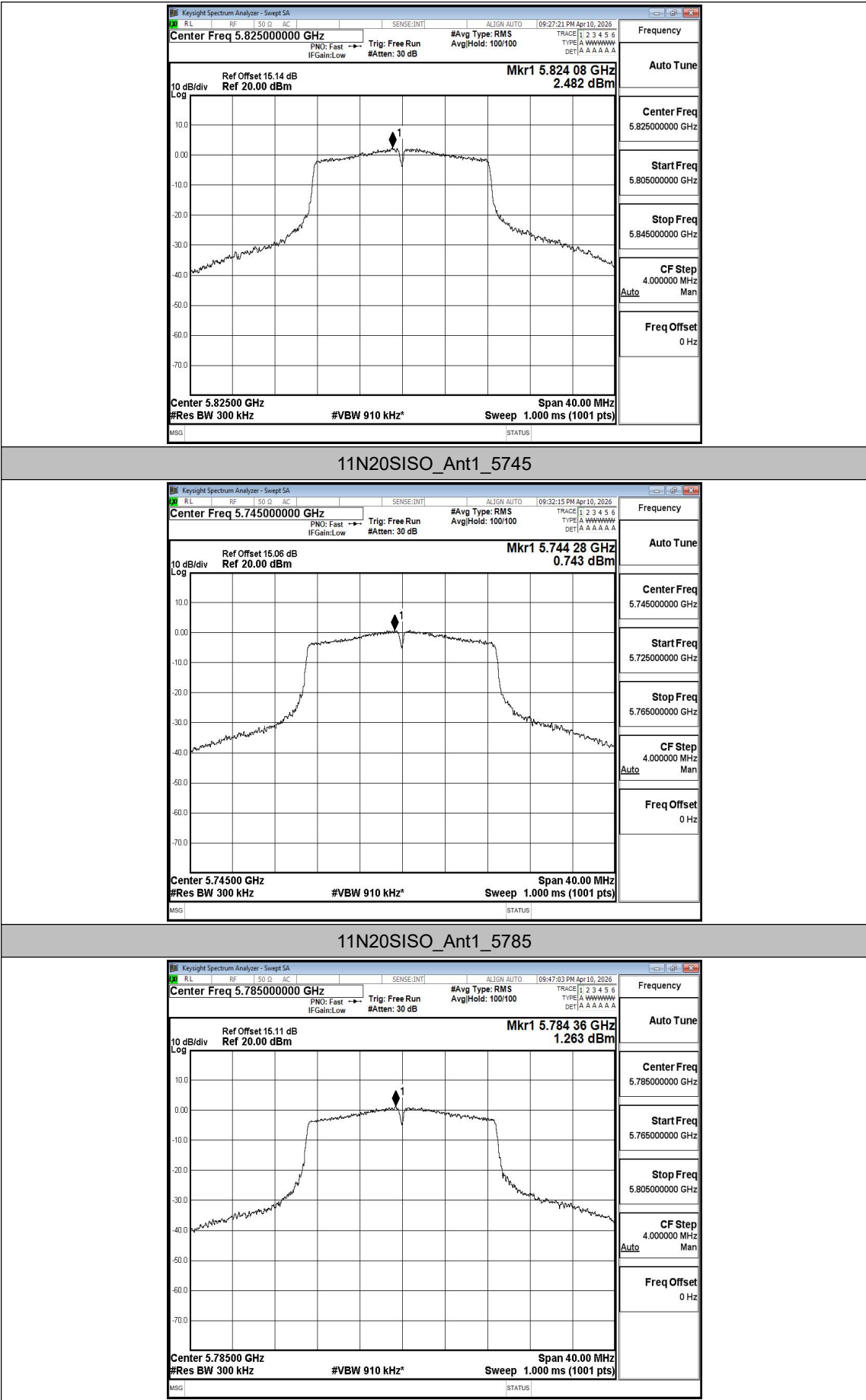
Test Result

TestMode	Antenna	Freq (MHz)	Raw Data [dBm/MHz]	DC Factor	RBW Factor	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5745	0.69	0.02	2.22	2.93	≤30.00	PASS
		5785	1.55	0.02	2.22	3.79	≤30.00	PASS
		5825	2.48	0.02	2.22	4.72	≤30.00	PASS
11N20SISO	Ant1	5745	0.74	0.03	2.22	2.99	≤30.00	PASS
		5785	1.26	0.02	2.22	3.50	≤30.00	PASS
		5825	1.95	0.03	2.22	4.20	≤30.00	PASS
11N40SISO	Ant1	5755	-2.27	0.05	2.22	0.00	≤30.00	PASS
		5795	-1.76	0.05	2.22	0.51	≤30.00	PASS
11AC20SISO	Ant1	5745	0.67	0.03	2.22	2.92	≤30.00	PASS
		5785	0.97	0.02	2.22	3.21	≤30.00	PASS
		5825	1.92	0.02	2.22	4.16	≤30.00	PASS
11AX20SISO	Ant1	5745	0.47	0.03	2.22	2.72	≤30.00	PASS
		5785	1.2	0.03	2.22	3.45	≤30.00	PASS
		5825	1.83	0.03	2.22	4.08	≤30.00	PASS

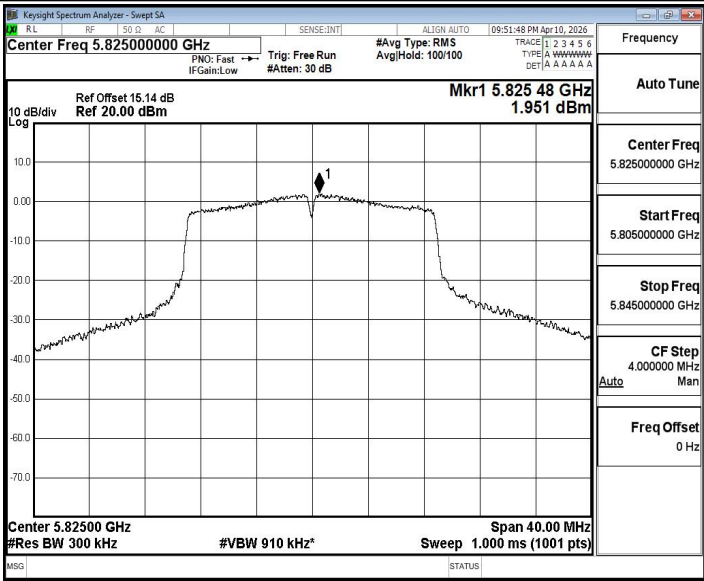
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

Test Graphs

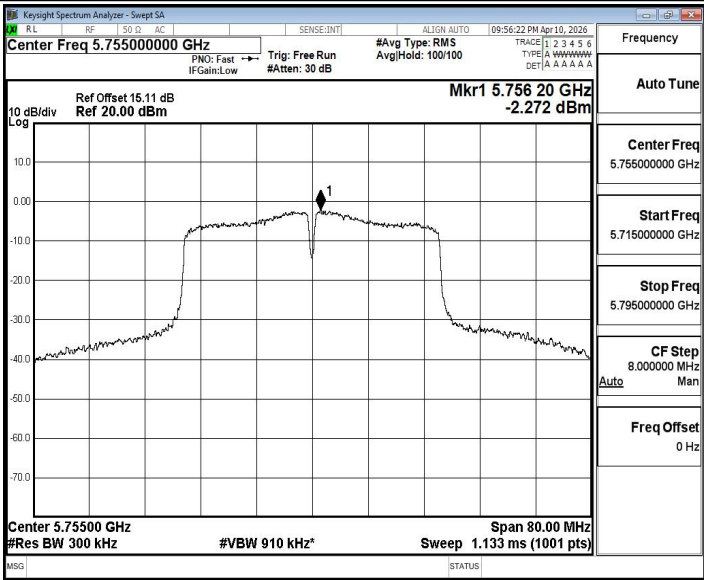




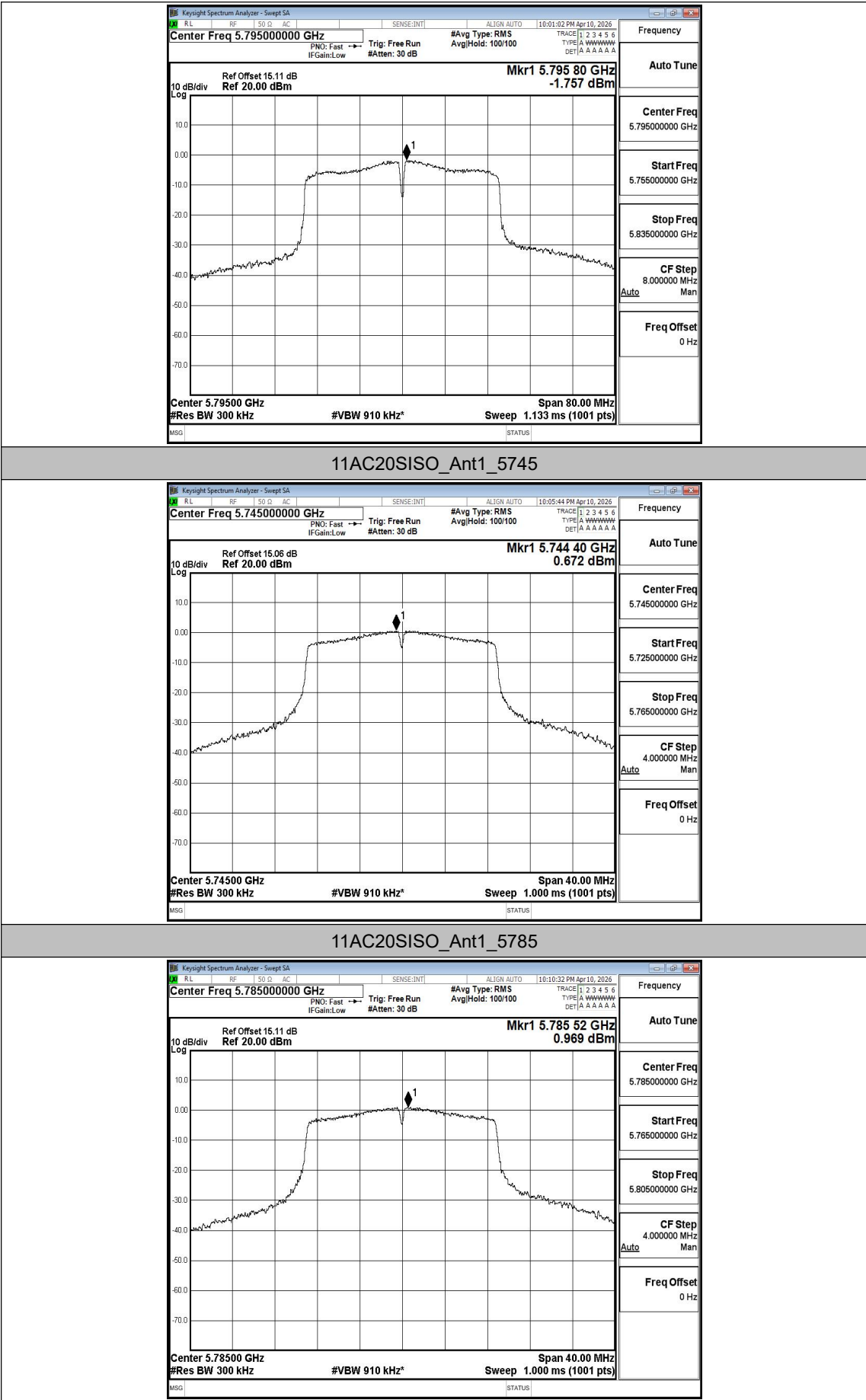
11N20SISO_Ant1_5825

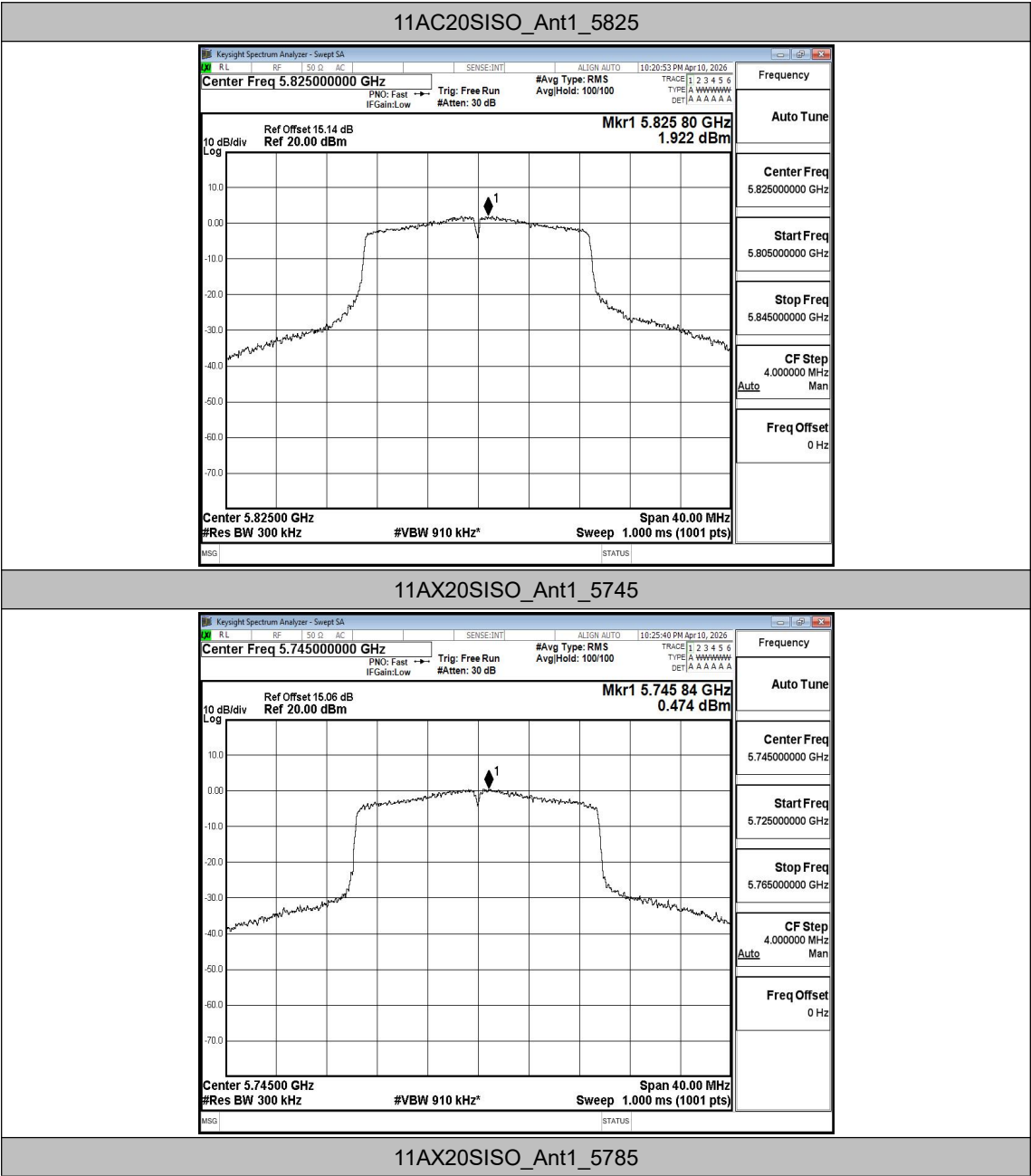


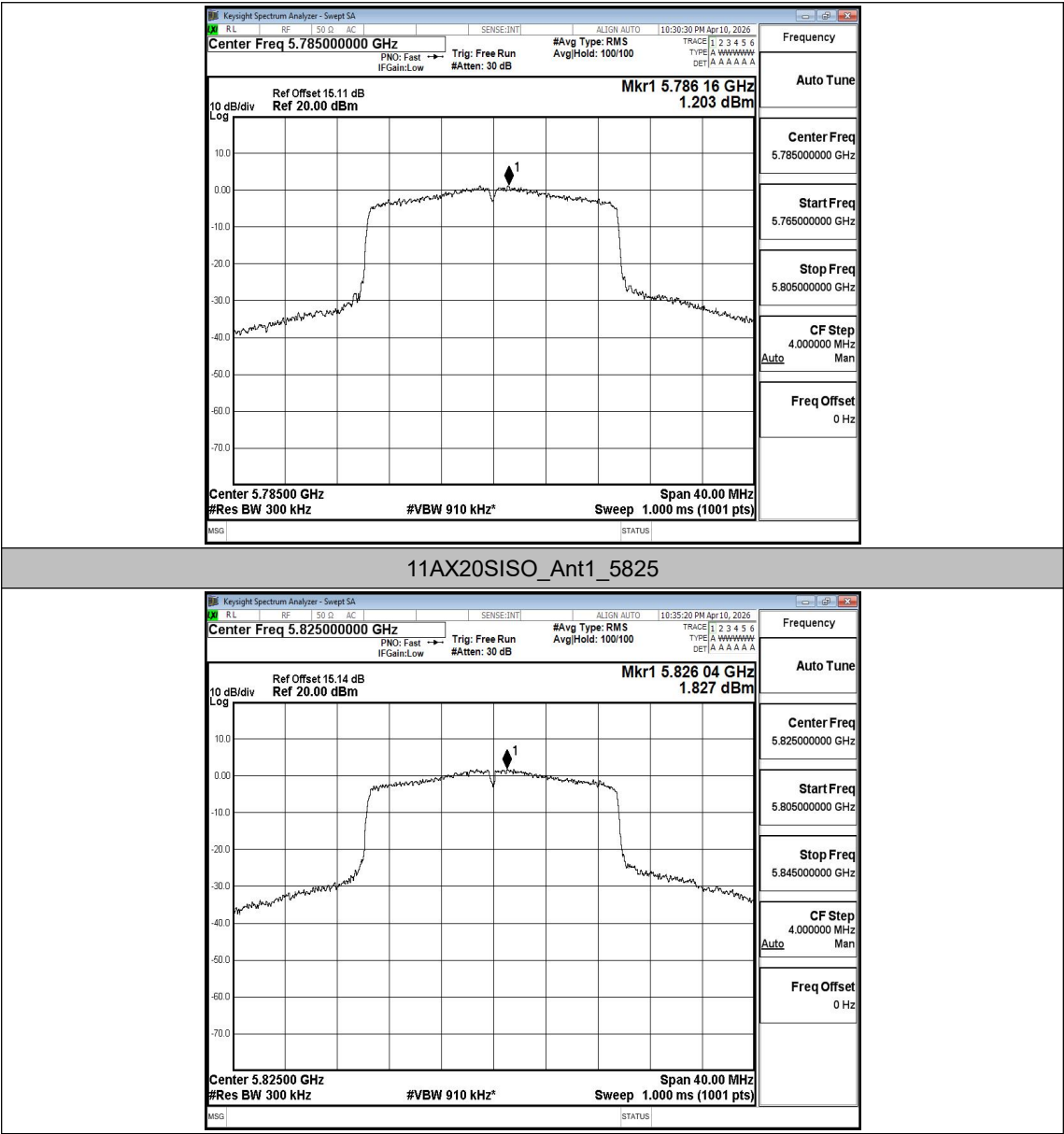
11N40SISO_Ant1_5755



11N40SISO_Ant1_5795







D.4 Emissions in Restricted Bands

Test Result

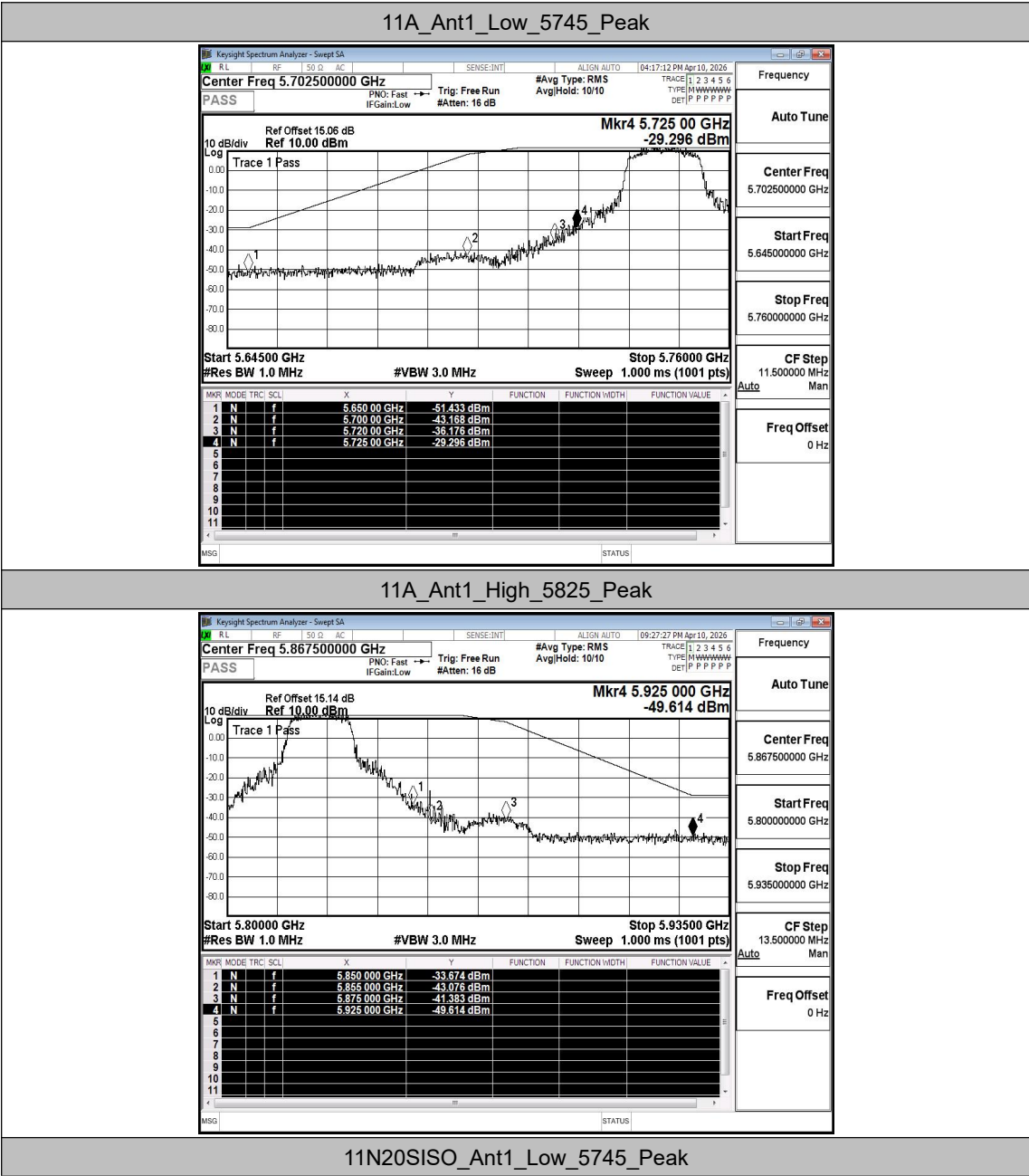
TestMode	Antenna	ChName	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	Verdict
11A	Ant1	Low	5745	Peak	5650.000	-50.10	≤-30.33	2.00	PASS
				Peak	5700.000	-41.84	≤6.67	2.00	PASS
				Peak	5720.000	-34.85	≤12.27	2.00	PASS
				Peak	5725.000	-27.97	≤23.67	2.00	PASS
		High	5825	Peak	5850.000	-32.34	≤23.67	2.00	PASS
				Peak	5855.000	-41.75	≤12.27	2.00	PASS
				Peak	5875.000	-40.05	≤6.67	2.00	PASS
				Peak	5925.000	-48.28	≤-28.33	2.00	PASS
11N20SISO	Ant1	Low	5745	Peak	5650.000	-50.63	≤-30.33	2.00	PASS
				Peak	5700.000	-43.41	≤6.67	2.00	PASS
				Peak	5720.000	-32.00	≤12.27	2.00	PASS
				Peak	5725.000	-21.00	≤23.67	2.00	PASS
		High	5825	Peak	5850.000	-29.40	≤23.67	2.00	PASS
				Peak	5855.000	-34.05	≤12.27	2.00	PASS
				Peak	5875.000	-40.12	≤6.67	2.00	PASS
				Peak	5925.000	-48.25	≤-28.33	2.00	PASS
11N40SISO	Ant1	Low	5755	Peak	5650.000	-50.41	≤-30.33	2.00	PASS
				Peak	5700.000	-33.16	≤6.67	2.00	PASS
				Peak	5720.000	-25.18	≤12.27	2.00	PASS
				Peak	5725.000	-21.35	≤23.67	2.00	PASS
		High	5795	Peak	5850.000	-35.45	≤23.67	2.00	PASS
				Peak	5855.000	-34.53	≤12.27	2.00	PASS
				Peak	5875.000	-45.95	≤6.67	2.00	PASS
				Peak	5925.000	-49.79	≤-28.33	2.00	PASS
11AC20SISO	Ant1	Low	5745	Peak	5650.000	-50.87	≤-30.33	2.00	PASS
				Peak	5700.000	-40.77	≤6.67	2.00	PASS
				Peak	5720.000	-35.52	≤12.27	2.00	PASS
				Peak	5725.000	-27.17	≤23.67	2.00	PASS
		High	5825	Peak	5850.000	-30.08	≤23.67	2.00	PASS
				Peak	5855.000	-38.85	≤12.27	2.00	PASS
				Peak	5875.000	-40.53	≤6.67	2.00	PASS
				Peak	5925.000	-49.63	≤-28.33	2.00	PASS
11AX20SISO	Ant1	Low	5745	Peak	5650.000	-46.98	≤-30.33	2.00	PASS
				Peak	5700.000	-43.39	≤6.67	2.00	PASS
				Peak	5720.000	-29.03	≤12.27	2.00	PASS
				Peak	5725.000	-28.68	≤23.67	2.00	PASS
		High	5825	Peak	5850.000	-25.11	≤23.67	2.00	PASS

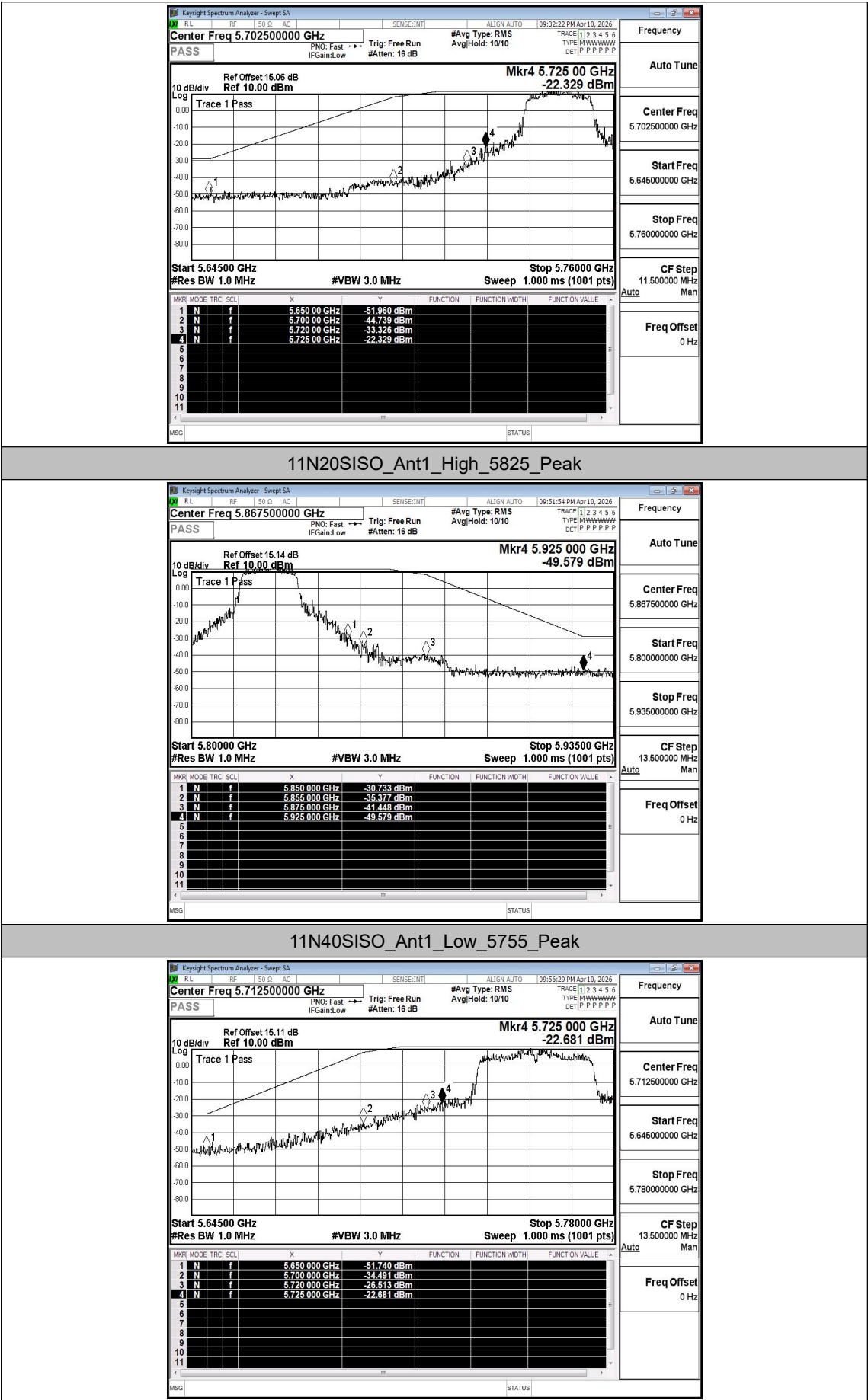
				Peak	5855.000	-36.92	≤12.27	2.00	PASS
				Peak	5875.000	-38.89	≤6.67	2.00	PASS
				Peak	5925.000	-48.46	≤-28.33	2.00	PASS

Note:

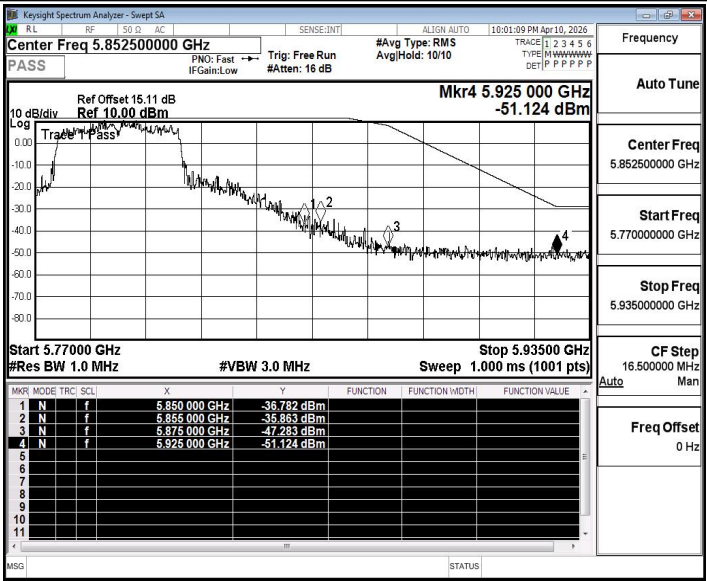
1. The Antenna Gain is compensated in the graph.

Test Graphs

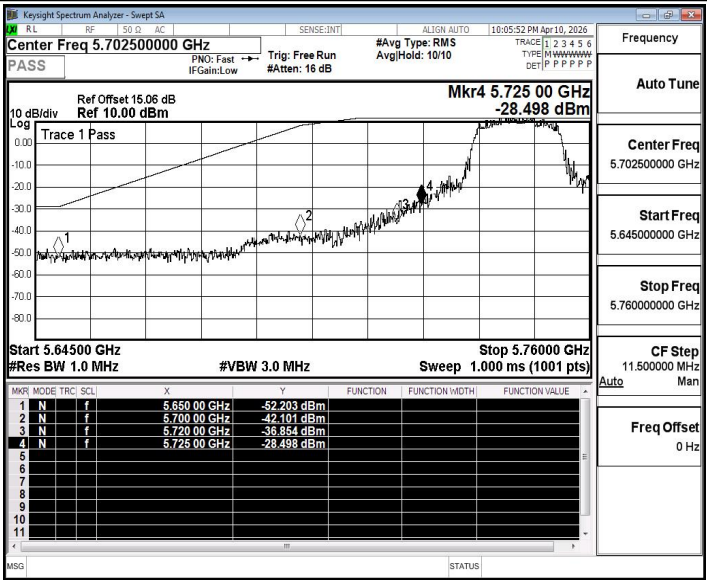




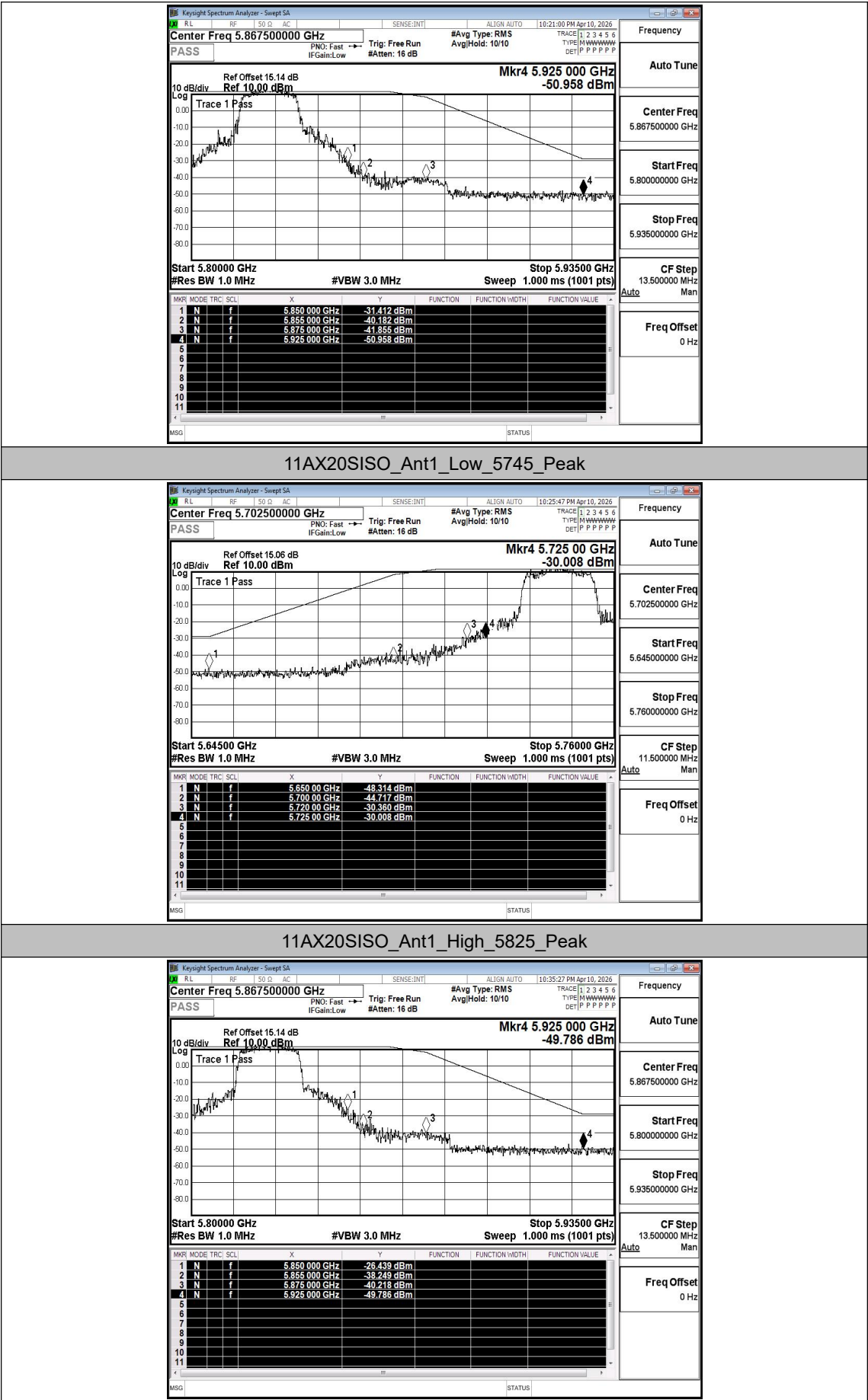
11N40SISO_Ant1_High_5795_Peak



11AC20SISO_Ant1_Low_5745_Peak



11AC20SISO_Ant1_High_5825_Peak



D.5 Frequency Stability

Test Result

Voltage								
TestMode	Antenna	Freq(M Hz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5745	NV	NT	-80000.00	-13.925152	20	PASS
			LV	NT	-80000.00	-13.925152	20	PASS
			HV	NT	-80000.00	-13.925152	20	PASS
		5785	NV	NT	-80000.00	-13.828868	20	PASS
			LV	NT	-80000.00	-13.828868	20	PASS
			HV	NT	-80000.00	-13.828868	20	PASS
		5825	NV	NT	-80000.00	-13.733906	20	PASS
			LV	NT	-80000.00	-13.733906	20	PASS
			HV	NT	-80000.00	-13.733906	20	PASS
11N20SI SO	Ant1	5745	NV	NT	-80000.00	-13.925152	20	PASS
			LV	NT	-100000.00	-17.406440	20	PASS
			HV	NT	-40000.00	-6.962576	20	PASS
		5785	NV	NT	-80000.00	-13.828868	20	PASS
			LV	NT	-80000.00	-13.828868	20	PASS
			HV	NT	-80000.00	-13.828868	20	PASS
		5825	NV	NT	-80000.00	-13.733906	20	PASS
			LV	NT	-80000.00	-13.733906	20	PASS
			HV	NT	-100000.00	-17.167382	20	PASS
11N40SI SO	Ant1	5755	NV	NT	-80000.00	-13.900956	20	PASS
			LV	NT	-80000.00	-13.900956	20	PASS
			HV	NT	-80000.00	-13.900956	20	PASS
		5795	NV	NT	80000.00	13.805004	20	PASS
			LV	NT	-80000.00	-13.805004	20	PASS
			HV	NT	-80000.00	-13.805004	20	PASS
11AC20S ISO	Ant1	5745	NV	NT	-100000.00	-17.406440	20	PASS
			LV	NT	-80000.00	-13.925152	20	PASS
			HV	NT	-100000.00	-17.406440	20	PASS
		5785	NV	NT	-100000.00	-17.286085	20	PASS
			LV	NT	-80000.00	-13.828868	20	PASS
			HV	NT	-80000.00	-13.828868	20	PASS
		5825	NV	NT	-100000.00	-17.167382	20	PASS
			LV	NT	-100000.00	-17.167382	20	PASS
			HV	NT	-80000.00	-13.733906	20	PASS
11AX20SI SO	Ant1	5745	NV	NT	-80000.00	-13.925152	20	PASS
			LV	NT	-80000.00	-13.925152	20	PASS
			HV	NT	-80000.00	-13.925152	20	PASS

		5785	NV	NT	-80000.00	-13.828868	20	PASS
			LV	NT	-80000.00	-13.828868	20	PASS
			HV	NT	-80000.00	-13.828868	20	PASS
		5825	NV	NT	-80000.00	-13.733906	20	PASS
			LV	NT	-80000.00	-13.733906	20	PASS
			HV	NT	-60000.00	-10.300429	20	PASS

Temperature								
TestMode	Antenna	Freq(M Hz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5745	NV	-30	-80000.00	-13.925152	20	PASS
			NV	-20	-80000.00	-13.925152	20	PASS
			NV	-10	-80000.00	-13.925152	20	PASS
			NV	0	-80000.00	-13.925152	20	PASS
			NV	10	-80000.00	-13.925152	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	-80000.00	-13.925152	20	PASS
		5785	NV	-30	-80000.00	-13.828868	20	PASS
			NV	-20	-80000.00	-13.828868	20	PASS
			NV	-10	-80000.00	-13.828868	20	PASS
			NV	0	-80000.00	-13.828868	20	PASS
			NV	10	-80000.00	-13.828868	20	PASS
			NV	20	-80000.00	-13.828868	20	PASS
			NV	30	-60000.00	-10.371651	20	PASS
			NV	40	-80000.00	-13.828868	20	PASS
			NV	50	-80000.00	-13.828868	20	PASS
		5825	NV	-30	-80000.00	-13.733906	20	PASS
			NV	-20	-80000.00	-13.733906	20	PASS
			NV	-10	-80000.00	-13.733906	20	PASS
			NV	0	-80000.00	-13.733906	20	PASS
			NV	10	-80000.00	-13.733906	20	PASS
			NV	20	-80000.00	-13.733906	20	PASS
			NV	30	-80000.00	-13.733906	20	PASS
			NV	40	-80000.00	-13.733906	20	PASS
			NV	50	-80000.00	-13.733906	20	PASS
11N20SI SO	Ant1	5745	NV	-30	-80000.00	-13.925152	20	PASS
			NV	-20	-100000.00	-17.406440	20	PASS
			NV	-10	-80000.00	-13.925152	20	PASS
			NV	0	-80000.00	-13.925152	20	PASS
			NV	10	-80000.00	-13.925152	20	PASS

			NV	20	-100000.00	-17.406440	20	PASS
			NV	30	-80000.00	-13.925152	20	PASS
			NV	40	-80000.00	-13.925152	20	PASS
			NV	50	-100000.00	-17.406440	20	PASS
		5785	NV	-30	-80000.00	-13.828868	20	PASS
			NV	-20	-80000.00	-13.828868	20	PASS
			NV	-10	-60000.00	-10.371651	20	PASS
			NV	0	-60000.00	-10.371651	20	PASS
			NV	10	-60000.00	-10.371651	20	PASS
			NV	20	-80000.00	-13.828868	20	PASS
			NV	30	-80000.00	-13.828868	20	PASS
			NV	40	-80000.00	-13.828868	20	PASS
			NV	50	-60000.00	-10.371651	20	PASS
		5825	NV	-30	-100000.00	-17.167382	20	PASS
			NV	-20	-100000.00	-17.167382	20	PASS
			NV	-10	-80000.00	-13.733906	20	PASS
			NV	0	-100000.00	-17.167382	20	PASS
			NV	10	-80000.00	-13.733906	20	PASS
			NV	20	-80000.00	-13.733906	20	PASS
			NV	30	-80000.00	-13.733906	20	PASS
			NV	40	-80000.00	-13.733906	20	PASS
11N40SI SO	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	40000.00	6.950478	20	PASS
			NV	20	-40000.00	-6.950478	20	PASS
			NV	30	-80000.00	-13.900956	20	PASS
			NV	40	-80000.00	-13.900956	20	PASS
		5795	NV	50	-80000.00	-13.900956	20	PASS
			NV	-30	-40000.00	-6.902502	20	PASS
			NV	-20	-40000.00	-6.902502	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	40000.00	6.902502	20	PASS
			NV	40	-80000.00	-13.805004	20	PASS
			NV	50	-40000.00	-6.902502	20	PASS
11AC20S ISO	Ant1	5745	NV	-30	-100000.00	-17.406440	20	PASS
			NV	-20	-100000.00	-17.406440	20	PASS

			NV	-10	-80000.00	-13.925152	20	PASS
			NV	0	-100000.00	-17.406440	20	PASS
			NV	10	-100000.00	-17.406440	20	PASS
			NV	20	-100000.00	-17.406440	20	PASS
			NV	30	-80000.00	-13.925152	20	PASS
			NV	40	-80000.00	-13.925152	20	PASS
			NV	50	-100000.00	-17.406440	20	PASS
		5785	NV	-30	-100000.00	-17.286085	20	PASS
			NV	-20	-100000.00	-17.286085	20	PASS
			NV	-10	-100000.00	-17.286085	20	PASS
			NV	0	-80000.00	-13.828868	20	PASS
			NV	10	-80000.00	-13.828868	20	PASS
			NV	20	-100000.00	-17.286085	20	PASS
			NV	30	-60000.00	-10.371651	20	PASS
			NV	40	-80000.00	-13.828868	20	PASS
			NV	50	-100000.00	-17.286085	20	PASS
		5825	NV	-30	-100000.00	-17.167382	20	PASS
			NV	-20	-80000.00	-13.733906	20	PASS
			NV	-10	-80000.00	-13.733906	20	PASS
			NV	0	-100000.00	-17.167382	20	PASS
			NV	10	-80000.00	-13.733906	20	PASS
			NV	20	-80000.00	-13.733906	20	PASS
			NV	30	-80000.00	-13.733906	20	PASS
			NV	40	-100000.00	-17.167382	20	PASS
			NV	50	-60000.00	-10.300429	20	PASS
11AX20SI SO	Ant1	5745	NV	-30	-80000.00	-13.925152	20	PASS
			NV	-20	-80000.00	-13.925152	20	PASS
			NV	-10	-80000.00	-13.925152	20	PASS
			NV	0	-80000.00	-13.925152	20	PASS
			NV	10	-80000.00	-13.925152	20	PASS
			NV	20	-80000.00	-13.925152	20	PASS
			NV	30	-60000.00	-10.443864	20	PASS
			NV	40	-80000.00	-13.925152	20	PASS
			NV	50	-80000.00	-13.925152	20	PASS
		5785	NV	-30	-80000.00	-13.828868	20	PASS
			NV	-20	-60000.00	-10.371651	20	PASS
			NV	-10	-80000.00	-13.828868	20	PASS
			NV	0	-80000.00	-13.828868	20	PASS
			NV	10	-80000.00	-13.828868	20	PASS
			NV	20	-80000.00	-13.828868	20	PASS
			NV	30	-80000.00	-13.828868	20	PASS
			NV	40	-80000.00	-13.828868	20	PASS

		5825	NV	50	-60000.00	-10.371651	20	PASS
			NV	-30	-80000.00	-13.733906	20	PASS
			NV	-20	-80000.00	-13.733906	20	PASS
			NV	-10	-80000.00	-13.733906	20	PASS
			NV	0	-60000.00	-10.300429	20	PASS
			NV	10	-80000.00	-13.733906	20	PASS
			NV	20	-80000.00	-13.733906	20	PASS
			NV	30	-80000.00	-13.733906	20	PASS
			NV	40	-80000.00	-13.733906	20	PASS
			NV	50	-80000.00	-13.733906	20	PASS
			NV	50	-80000.00	-13.733906	20	PASS

D.6 Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factor	Limit	Verdict
11A	Ant1	5745	5.48	5.51	99.46	0.02	---	---
		5785	5.48	5.50	99.64	0.02	---	---
		5825	5.48	5.51	99.46	0.02	---	---
11N20SISO	Ant1	5745	5.08	5.11	99.41	0.03	---	---
		5785	5.08	5.10	99.61	0.02	---	---
		5825	5.07	5.10	99.41	0.03	---	---
11N40SISO	Ant1	5755	2.47	2.50	98.80	0.05	---	---
		5795	2.47	2.50	98.80	0.05	---	---
11AC20SISO	Ant1	5745	5.09	5.12	99.41	0.03	---	---
		5785	5.09	5.11	99.61	0.02	---	---
		5825	5.09	5.11	99.61	0.02	---	---
11AX20SISO	Ant1	5745	3.87	3.90	99.23	0.03	---	---
		5785	3.87	3.90	99.23	0.03	---	---
		5825	3.87	3.90	99.23	0.03	---	---

Test Graphs

