

Appendix E

RF Test Data for 5.8GWIFI(Conducted Measurement)

Product Name: Cash register

Test Model: WLL-A100

Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	53.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang Hai
Supervised by:	Fengliu Tang

C.1 Min emission bandwidth

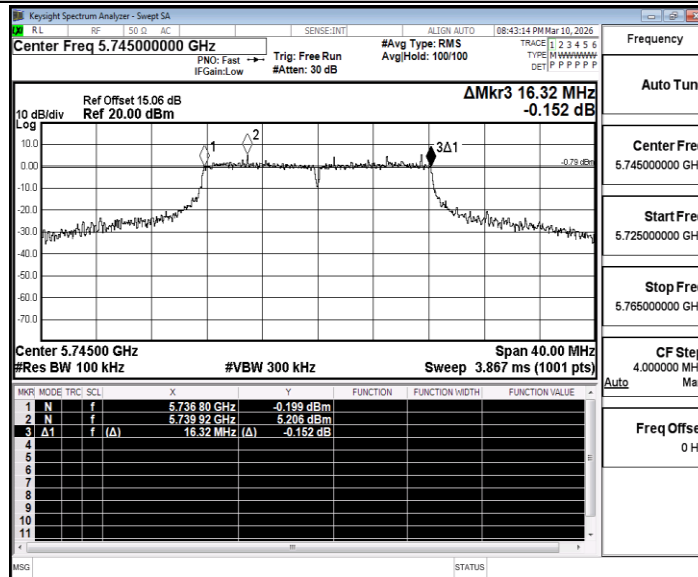
Test Result B4

TestMode	Antenna	Freq(MHz)	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.800	5753.120	0.5	PASS
		5785	16.280	5776.800	5793.080	0.5	PASS
		5825	16.480	5816.720	5833.200	0.5	PASS
11N20SISO	Ant1	5745	17.640	5736.160	5753.800	0.5	PASS
		5785	17.640	5776.120	5793.760	0.5	PASS
		5825	17.640	5816.120	5833.760	0.5	PASS
11N40SISO	Ant1	5755	36.400	5736.760	5773.160	0.5	PASS
		5795	36.400	5776.760	5813.160	0.5	PASS
11AC20SISO	Ant1	5745	17.680	5736.080	5753.760	0.5	PASS
		5785	17.640	5776.120	5793.760	0.5	PASS
		5825	17.680	5816.120	5833.800	0.5	PASS
11AC40SISO	Ant1	5755	36.400	5736.760	5773.160	0.5	PASS
		5795	36.400	5776.760	5813.160	0.5	PASS
11AC80SISO	Ant1	5775	76.160	5736.760	5812.920	0.5	PASS

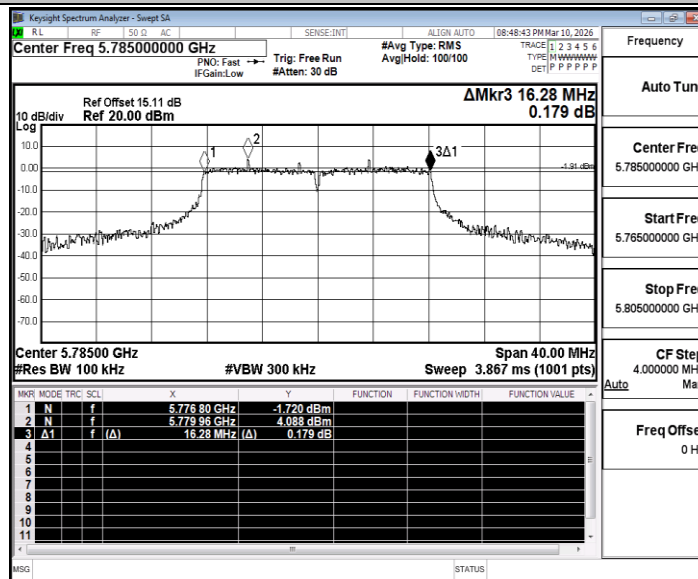
Note: offset=System attenuation +cabal loss

Test Graphs B4

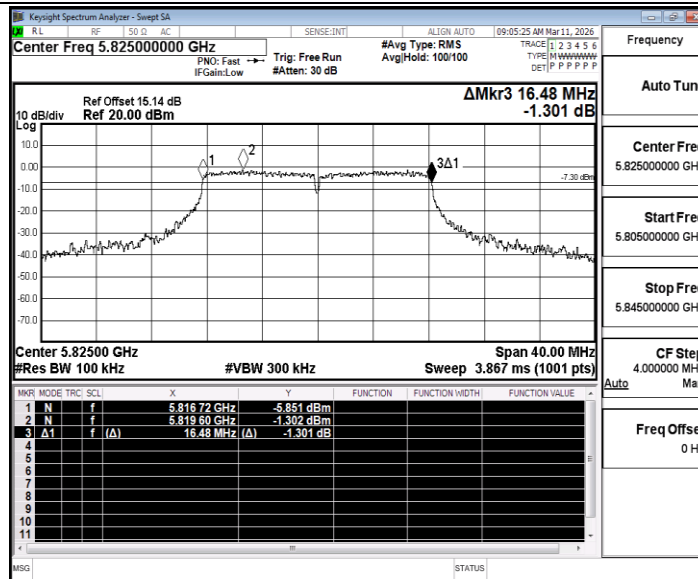
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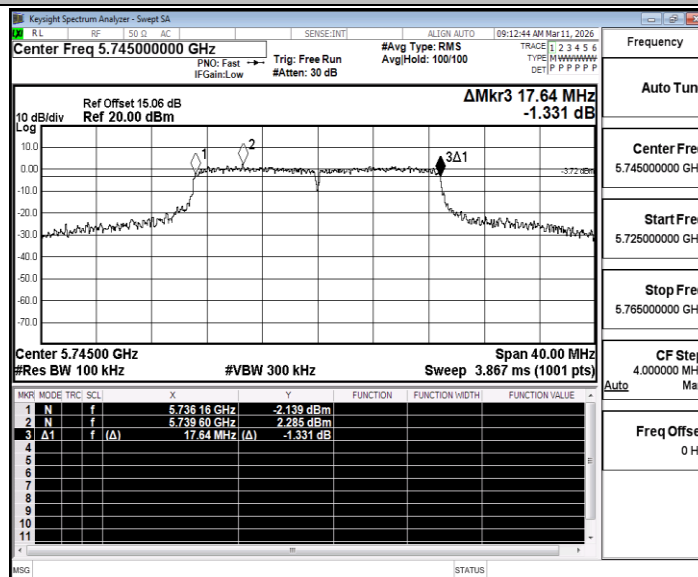
11A_Ant1_5785



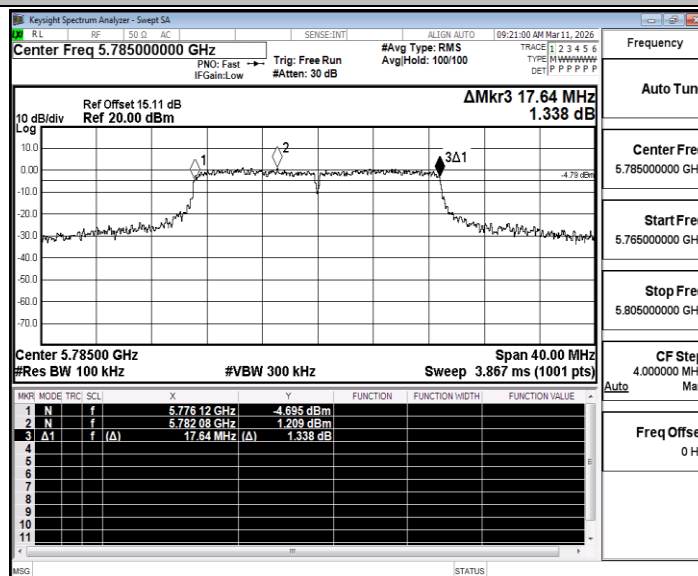
11A_Ant1_5825



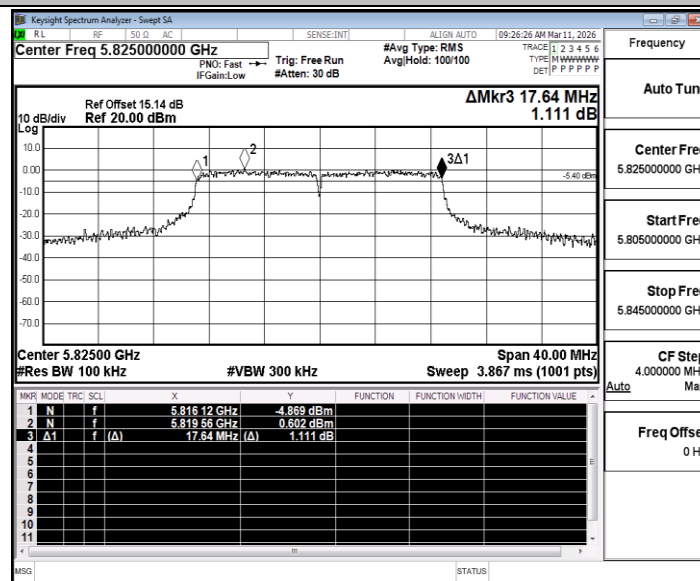
11N20SISO_Ant1_5745



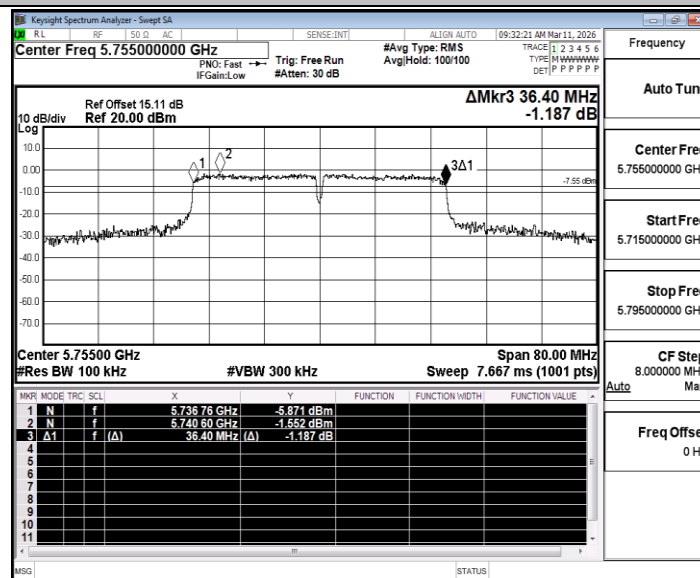
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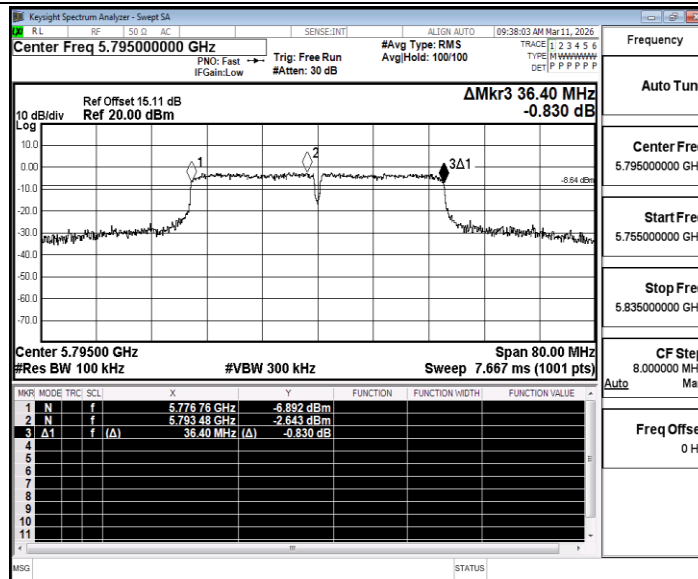
11N20SISO_Ant1_5825



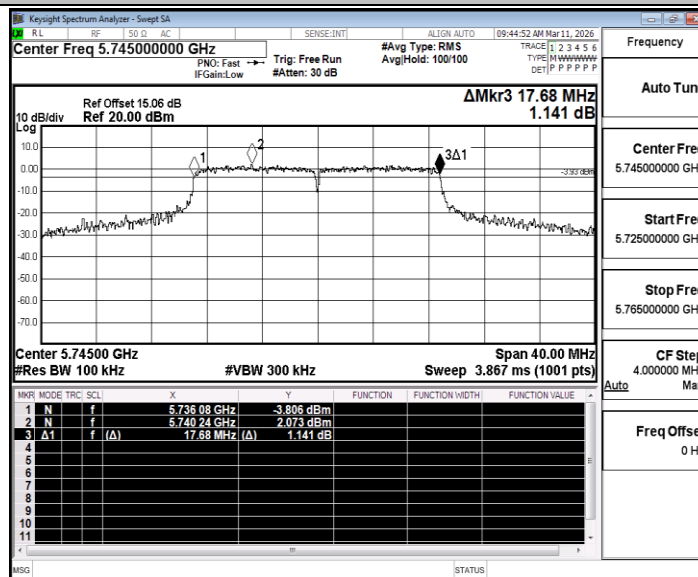
11N40SISO_Ant1_5755



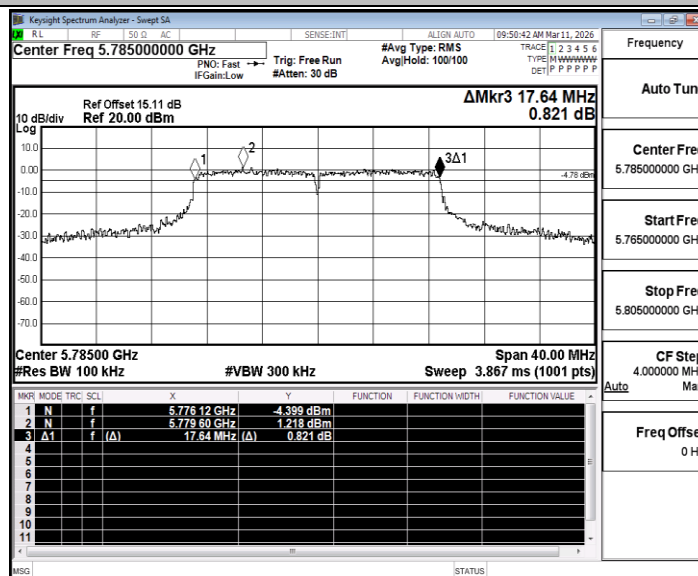
11N40SISO_Ant1_5795



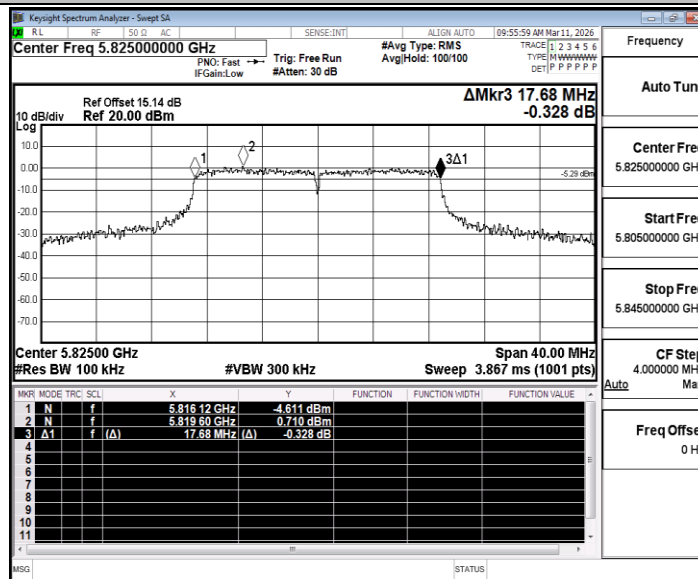
11AC20SISO_Ant1_5745



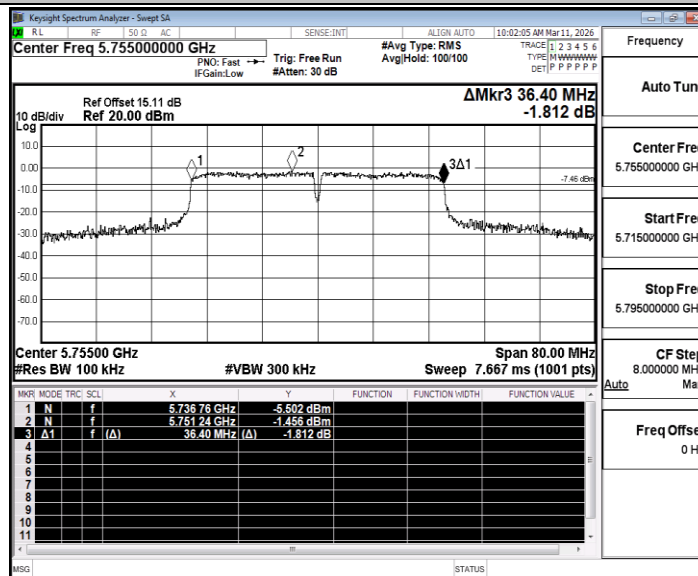
11AC20SISO_Ant1_5785



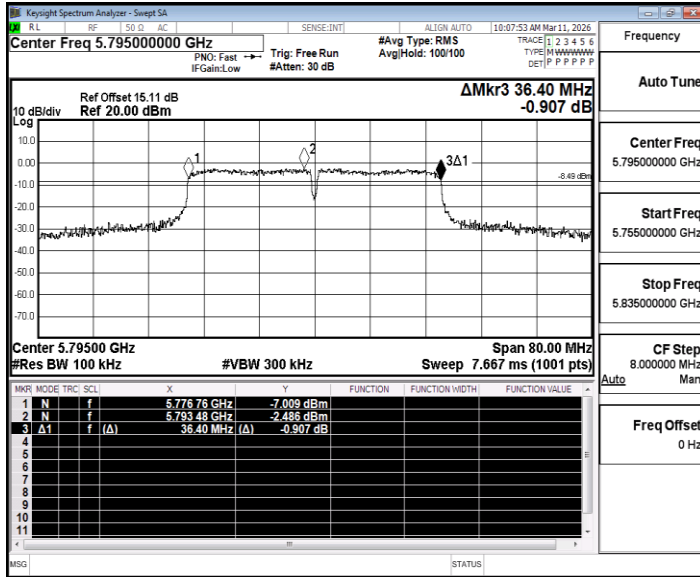
11AC20SISO_Ant1_5825



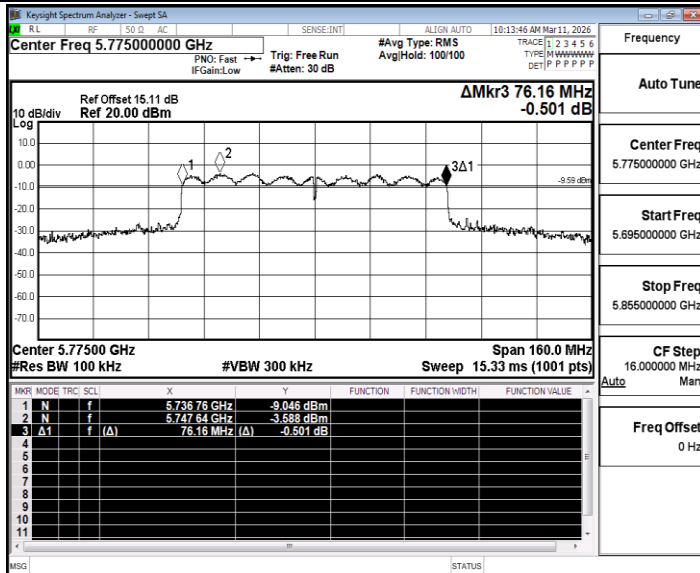
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5775



C.2 Maximum conducted output power

Test Result Channel Power

Test Mode	Antenna	Freq(MHz)	TPC Mode	Measured Power [dBm]	DC Factor [dB]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	NA	17.32	0.00	17.32	≤30.00	PASS
		5785	NA	16.00	0.00	16.00	≤30.00	PASS
		5825	NA	16.22	0.00	16.22	≤30.00	PASS
11N20SISO	Ant1	5745	NA	17.46	0.00	17.46	≤30.00	PASS
		5785	NA	16.71	0.00	16.71	≤30.00	PASS
		5825	NA	16.06	0.00	16.06	≤30.00	PASS
11N40SISO	Ant1	5755	NA	17.21	0.00	17.21	≤30.00	PASS
		5795	NA	16.50	0.00	16.50	≤30.00	PASS
11AC20SISO	Ant1	5745	NA	17.46	0.00	17.46	≤30.00	PASS
		5785	NA	16.66	0.00	16.66	≤30.00	PASS
		5825	NA	15.98	0.00	15.98	≤30.00	PASS
11AC40SISO	Ant1	5755	NA	17.26	0.00	17.26	≤30.00	PASS
		5795	NA	16.53	0.00	16.53	≤30.00	PASS
11AC80SISO	Ant1	5775	NA	16.75	0.00	16.75	≤30.00	PASS

Note: offset=System attenuation +cabel loss

C.3 Maximum power spectral density

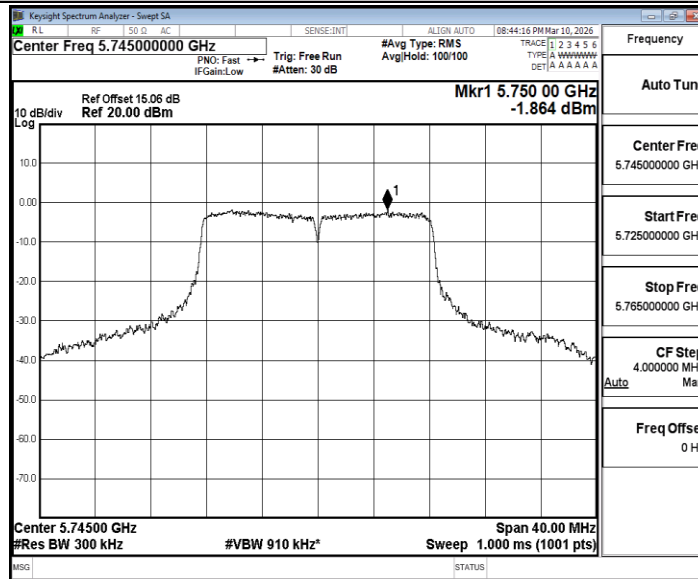
Test Result

TestMode	Antenna	Freq (MHz)	Raw Data [dBm/300kHz]	DC Factor	RBW Factor	Result [dBm/500kHz]	Limit [dBm/500kHz]	Verdict
11A	Ant1	5745	-1.86	0.00	2.22	0.36	≤30.00	PASS
		5785	-3.14	0.00	2.22	-0.92	≤30.00	PASS
		5825	-3.5	0.00	2.22	-1.28	≤30.00	PASS
11N20SISO	Ant1	5745	-0.53	0.00	2.22	1.69	≤30.00	PASS
		5785	-1.58	0.00	2.22	0.64	≤30.00	PASS
		5825	-1.91	0.00	2.22	0.31	≤30.00	PASS
11N40SISO	Ant1	5755	-3.71	0.00	2.22	-1.49	≤30.00	PASS
		5795	-4.72	0.00	2.22	-2.50	≤30.00	PASS
11AC20SISO	Ant1	5745	-0.55	0.00	2.22	1.67	≤30.00	PASS
		5785	-1.36	0.00	2.22	0.86	≤30.00	PASS
		5825	-1.94	0.00	2.22	0.28	≤30.00	PASS
11AC40SISO	Ant1	5755	-3.42	0.00	2.22	-1.20	≤30.00	PASS
		5795	-4.66	0.00	2.22	-2.44	≤30.00	PASS
11AC80SISO	Ant1	5775	-6.22	0.00	2.22	-4.00	≤30.00	PASS

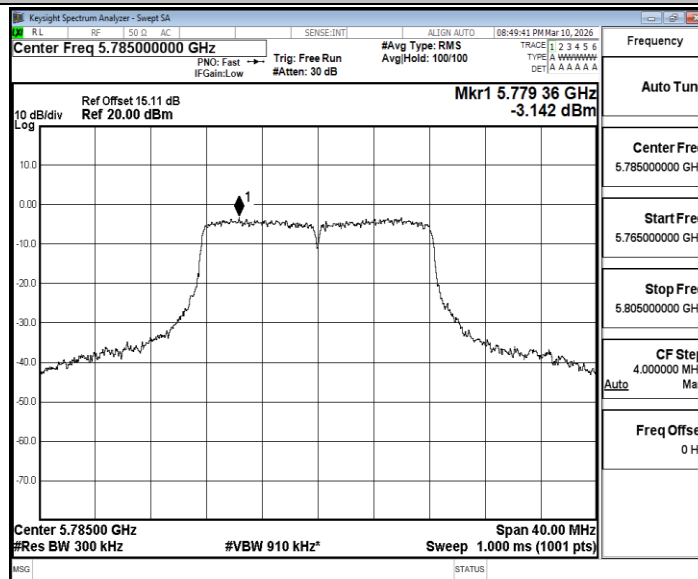
Note: offset=System attenuation +cabal loss

Test Graphs

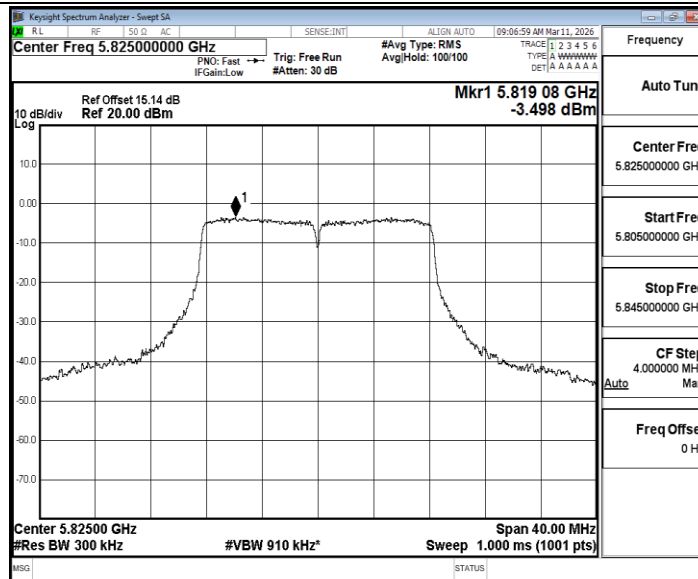
11A_Ant1_5745



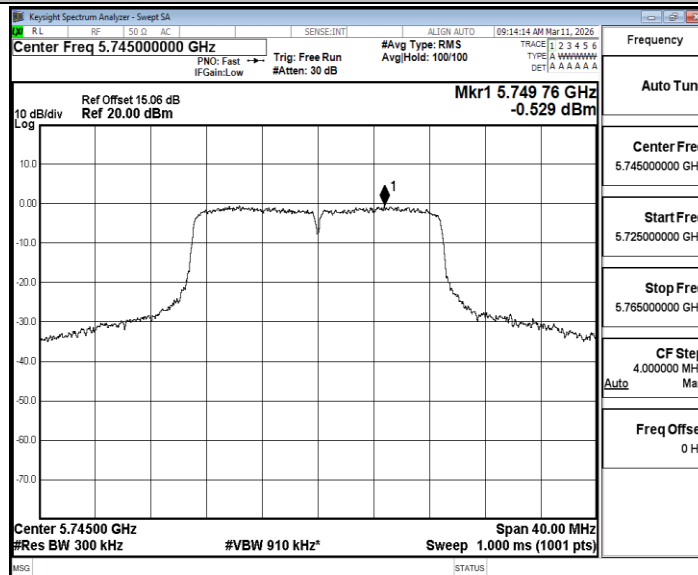
11A_Ant1_5785



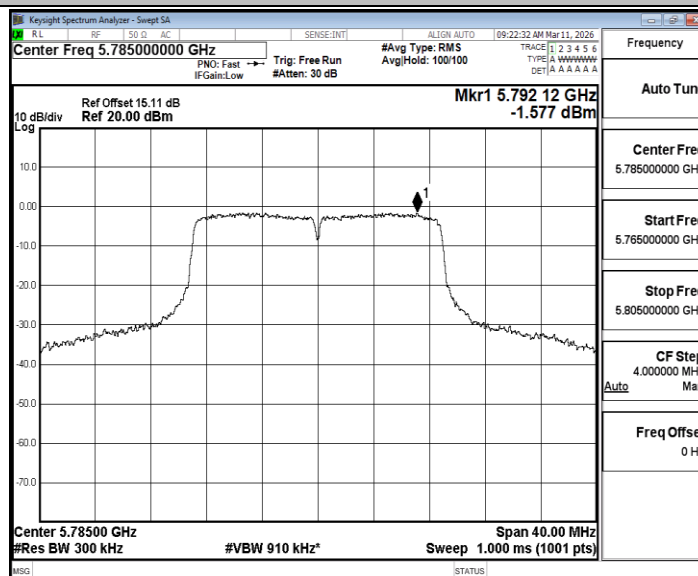
11A_Ant1_5825



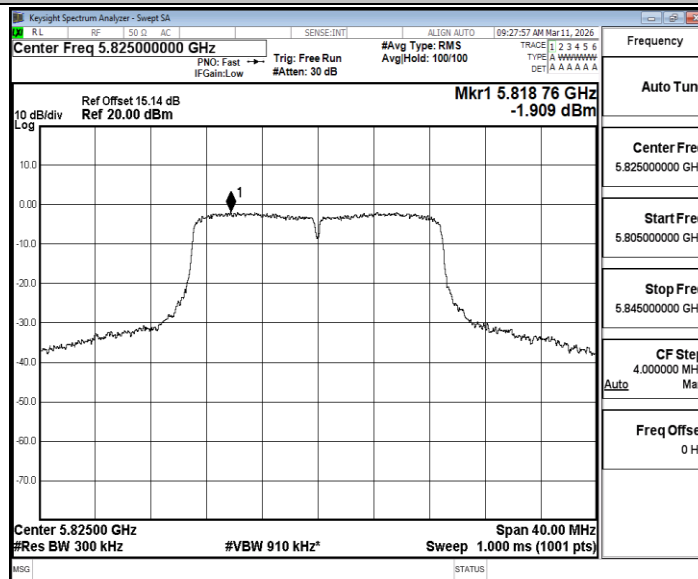
11N20SISO_Ant1_5745



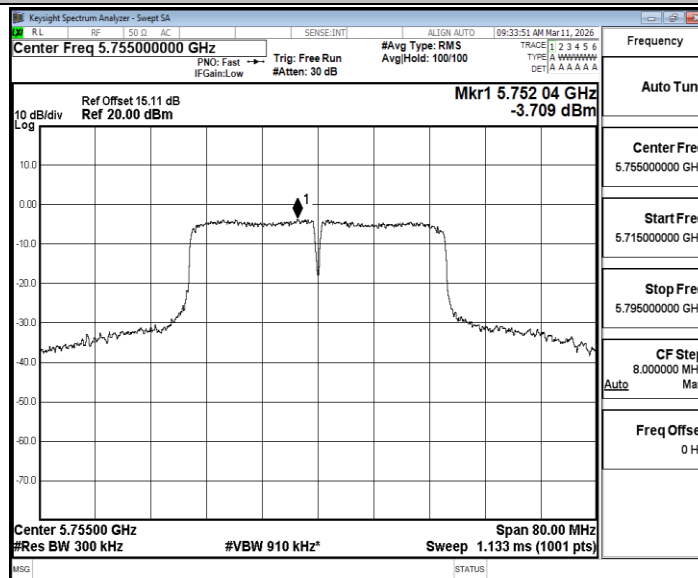
11N20SISO_Ant1_5785



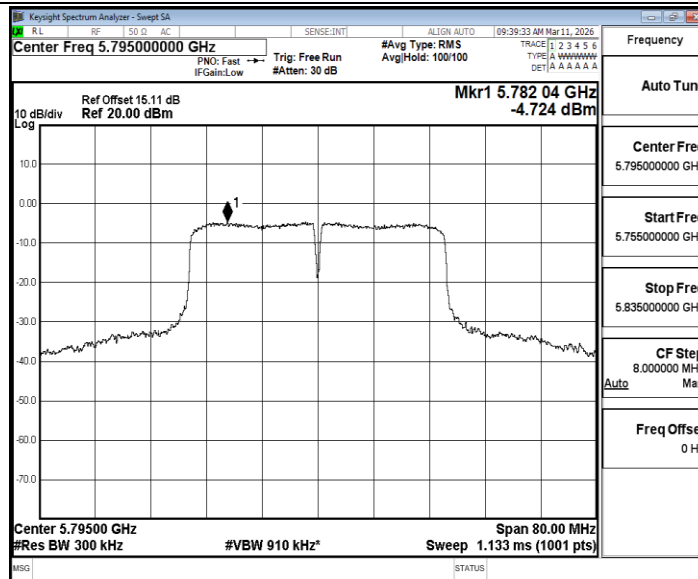
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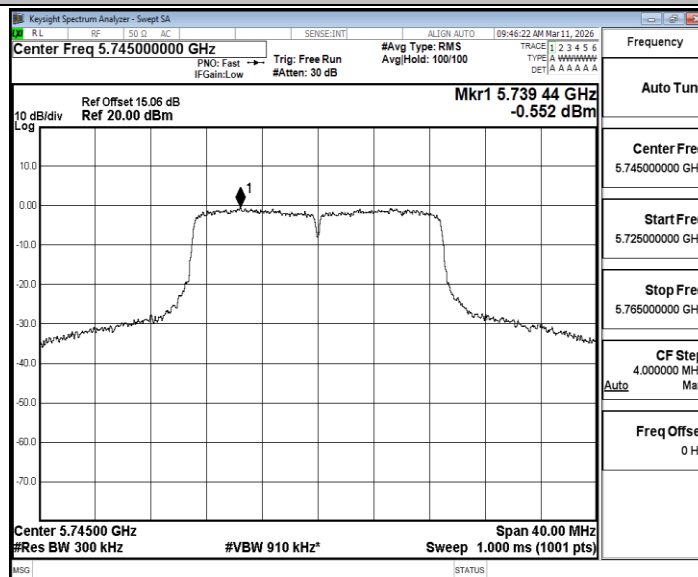
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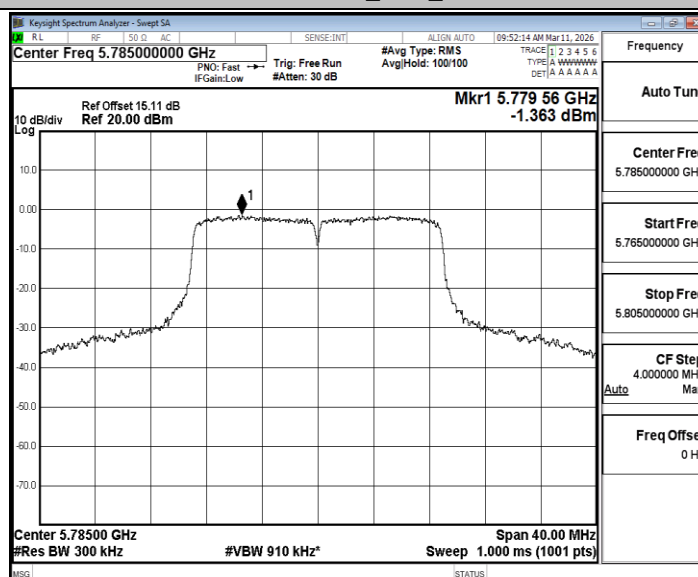
11N40SISO_Ant1_5795



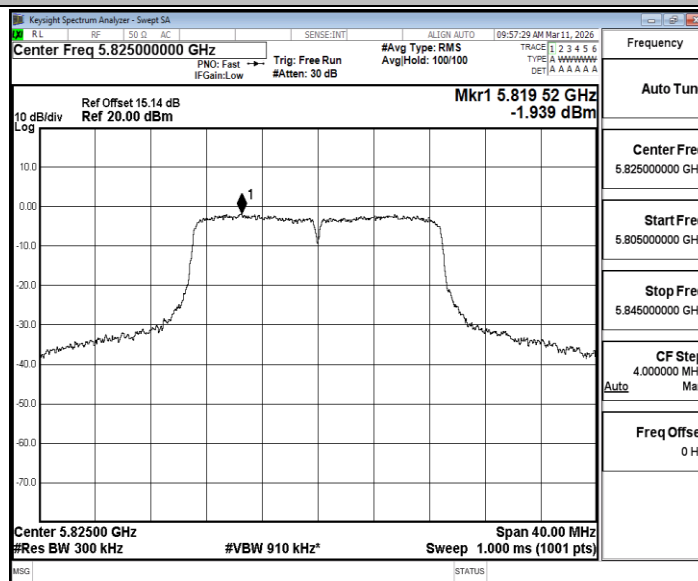
11AC20ISO_Ant1_5745



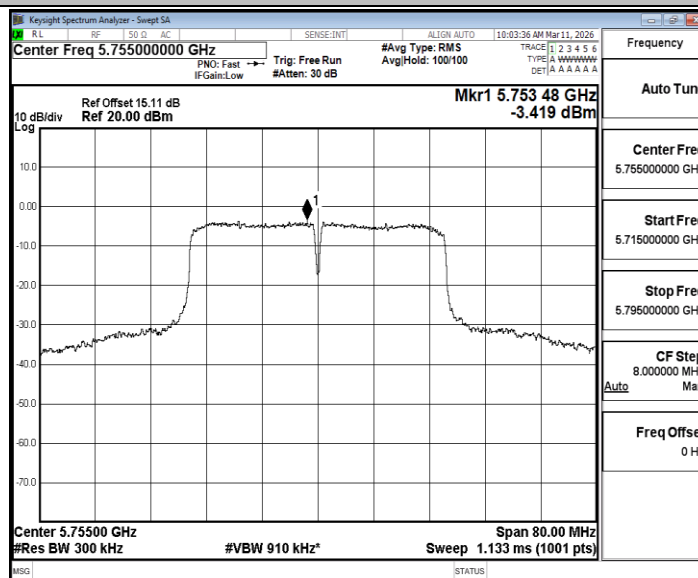
11AC20ISO_Ant1_5785



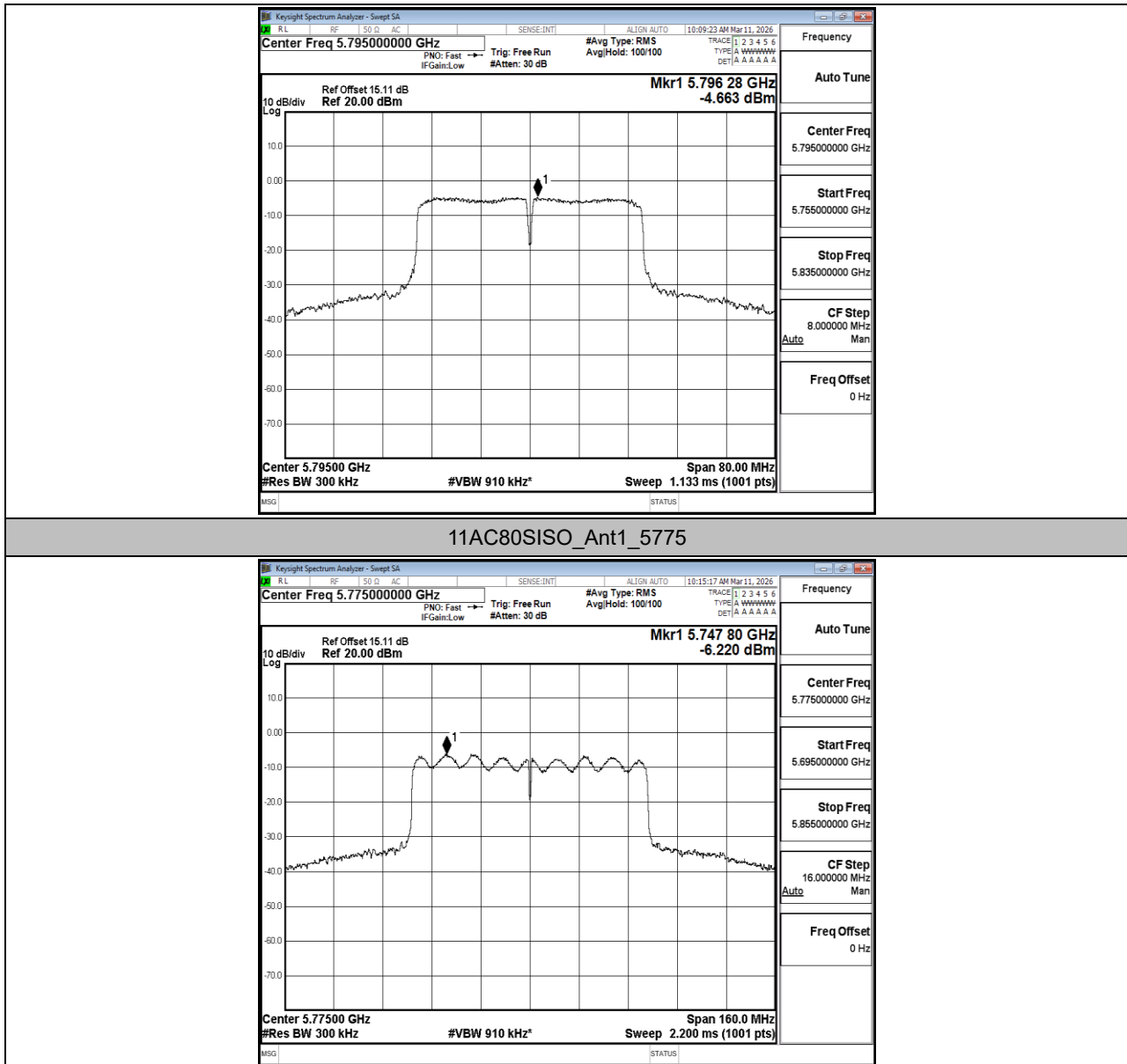
11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



C.4 Emissions in Restricted Bands

Test Result

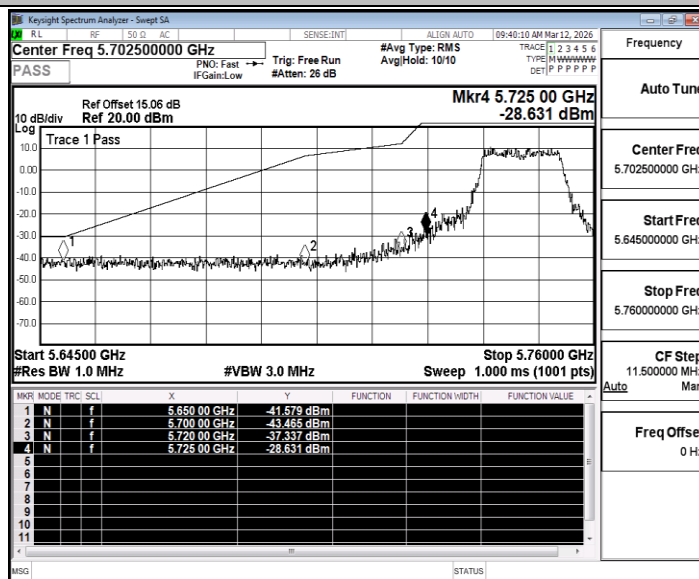
TestMode	Antenna	ChName	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	Verdict
11A	Ant1	Low	5745	Peak	5650.000	-41.579	≤-30.59	3.59	PASS
				Peak	5700.000	-43.47	≤6.41	3.59	PASS
				Peak	5720.000	-37.34	≤12.01	3.59	PASS
				Peak	5725.000	-28.63	≤23.41	3.59	PASS
		High	5825	Peak	5850.000	-42.59	≤23.41	3.59	PASS
				Peak	5855.000	-40.98	≤12.01	3.59	PASS
				Peak	5875.000	-43.23	≤6.41	3.59	PASS
				Peak	5925.000	-44.34	≤-30.59	3.59	PASS
11N20SISO	Ant1	Low	5745	Peak	5650.000	-44.227	≤-30.59	3.59	PASS
				Peak	5700.000	-43.97	≤6.41	3.59	PASS
				Peak	5720.000	-33.67	≤12.01	3.59	PASS
				Peak	5725.000	-29.02	≤23.41	3.59	PASS
		High	5825	Peak	5850.000	-37.505	≤23.41	3.59	PASS
				Peak	5855.000	-44.43	≤12.01	3.59	PASS
				Peak	5875.000	-49.03	≤6.41	3.59	PASS
				Peak	5925.000	-49.13	≤-30.59	3.59	PASS
11N40SISO	Ant1	Low	5755	Peak	5650.000	-47.769	≤-30.59	3.59	PASS
				Peak	5700.000	-35.89	≤6.41	3.59	PASS
				Peak	5720.000	-23.36	≤12.01	3.59	PASS
				Peak	5725.000	-20.86	≤23.41	3.59	PASS
		High	5795	Peak	5850.000	-44.11	≤23.41	3.59	PASS
				Peak	5855.000	-44.32	≤12.01	3.59	PASS
				Peak	5875.000	-46.57	≤6.41	3.59	PASS
				Peak	5925.000	-50.3	≤-30.59	3.59	PASS
11AC20SISO	Ant1	Low	5745	Peak	5650.000	-50.016	≤-30.59	3.59	PASS
				Peak	5700.000	-44.2	≤6.41	3.59	PASS
				Peak	5720.000	-31.08	≤12.01	3.59	PASS
				Peak	5725.000	-22.31	≤23.41	3.59	PASS
		High	5825	Peak	5850.000	-36.549	≤23.41	3.59	PASS
				Peak	5855.000	-43.67	≤12.01	3.59	PASS
				Peak	5875.000	-51.03	≤6.41	3.59	PASS
				Peak	5925.000	-48.32	≤-30.59	3.59	PASS
11AC40SISO	Ant1	Low	5755	Peak	5650.000	-48.131	≤-30.59	3.59	PASS
				Peak	5700.000	-36.41	≤6.41	3.59	PASS
				Peak	5720.000	-25.21	≤12.01	3.59	PASS
				Peak	5725.000	-21.1	≤23.41	3.59	PASS
		High	5795	Peak	5850.000	-42.039	≤23.41	3.59	PASS

11AC80SISO	Ant1			Peak	5855.000	-45.78	≤12.01	3.59	PASS
				Peak	5875.000	-47.77	≤6.41	3.59	PASS
				Peak	5925.000	-48.31	≤-30.59	3.59	PASS
		Low	5775	Peak	5650.000	-39.523	≤-30.59	3.59	PASS
				Peak	5700.000	-25.63	≤6.41	3.59	PASS
				Peak	5720.000	-22	≤12.01	3.59	PASS
				Peak	5725.000	-20.44	≤23.41	3.59	PASS
		High	5775	Peak	5850.000	-24.863	≤23.41	3.59	PASS
				Peak	5855.000	-27.58	≤12.01	3.59	PASS
				Peak	5875.000	-38.04	≤6.41	3.59	PASS
				Peak	5925.000	-45.55	≤-30.59	3.59	PASS

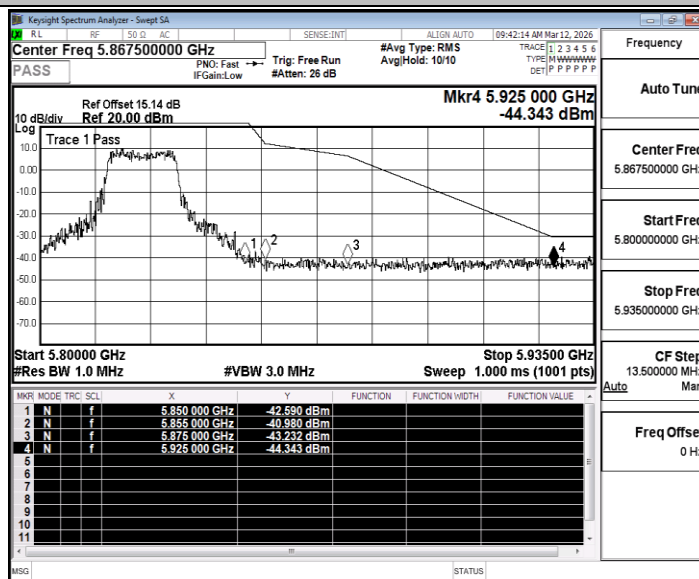
Note: offset=System attenuation +cabal loss

Test Graphs

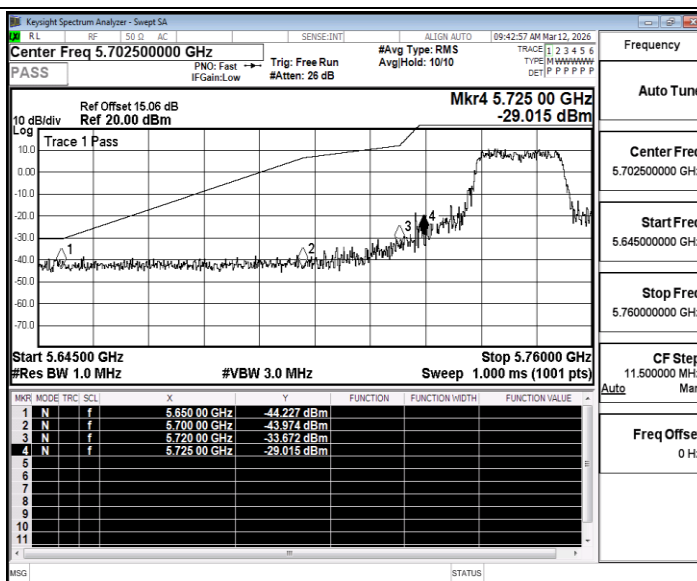
11A_Ant1_Low_5745_Peak



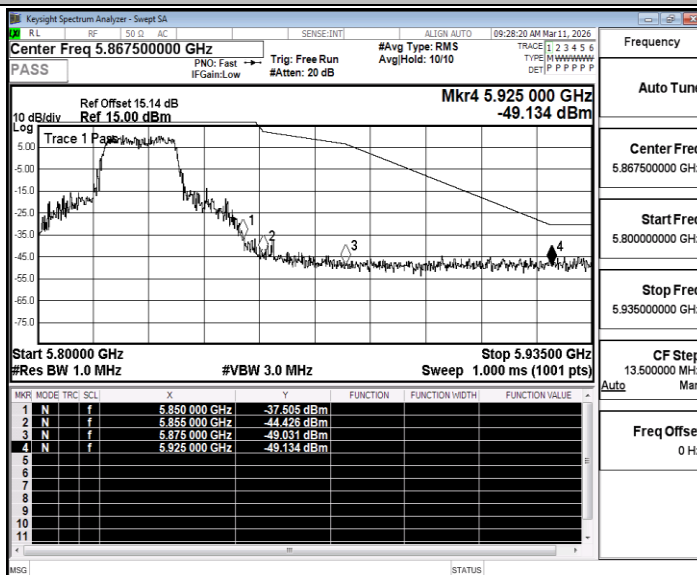
11A_Ant1_High_5825_Peak



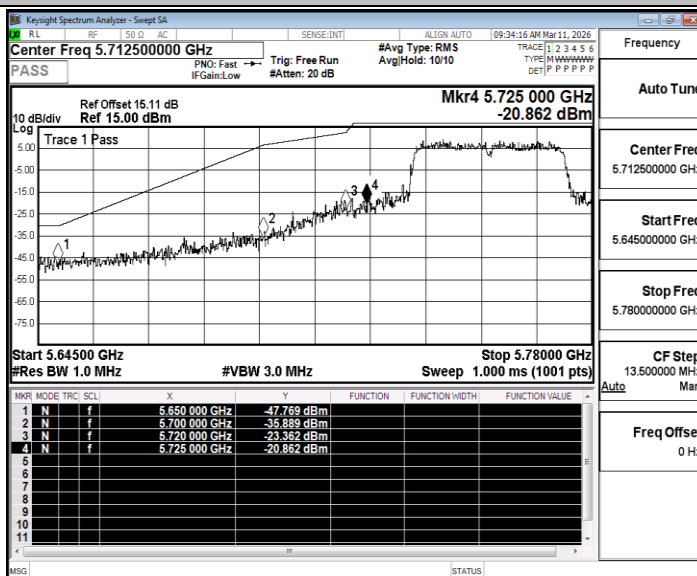
11N20SISO_Ant1_Low_5745_Peak



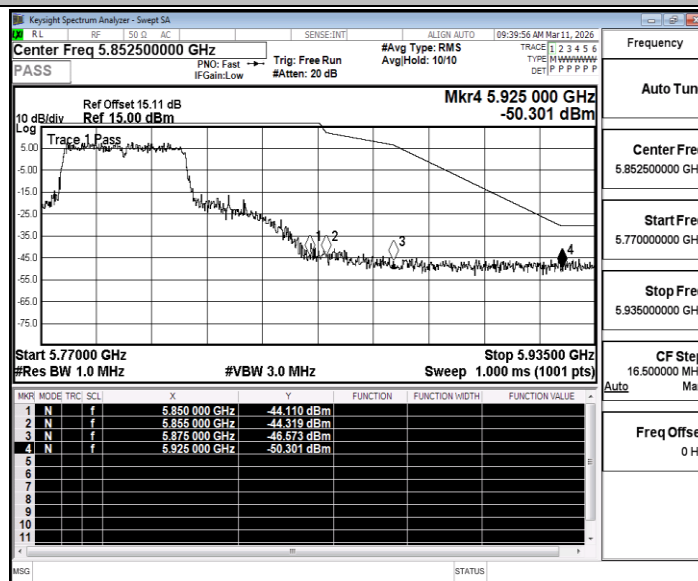
11N20SISO_Ant1_High_5825_Peak



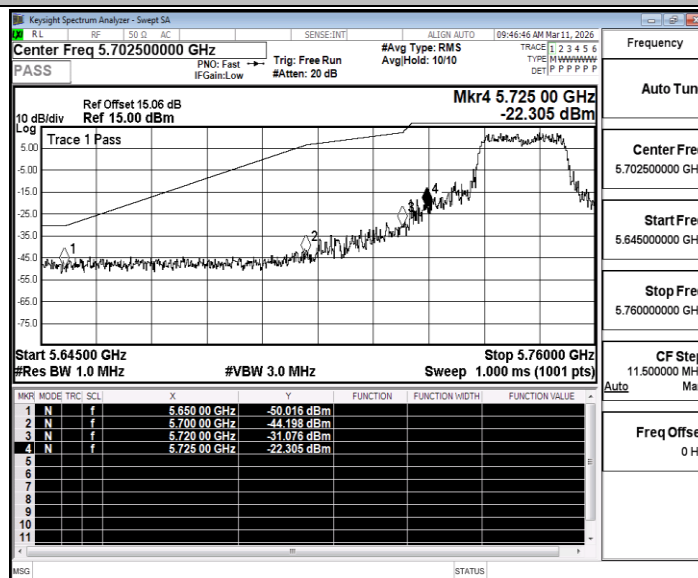
11N40SISO_Ant1_Low_5755_Peak



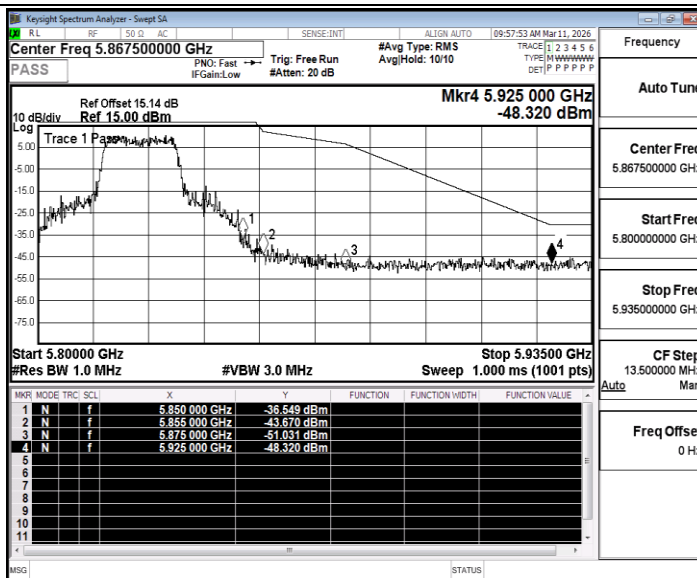
11N40SISO_Ant1_High_5795_Peak



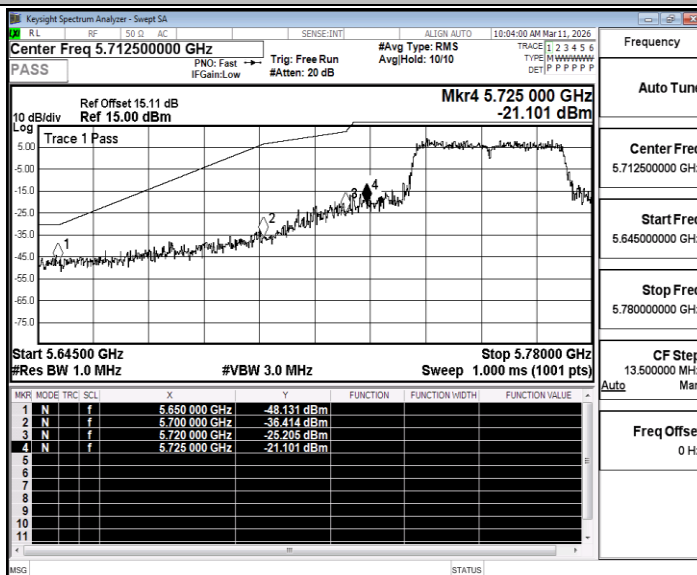
11AC20SISO_Ant1_Low_5745_Peak



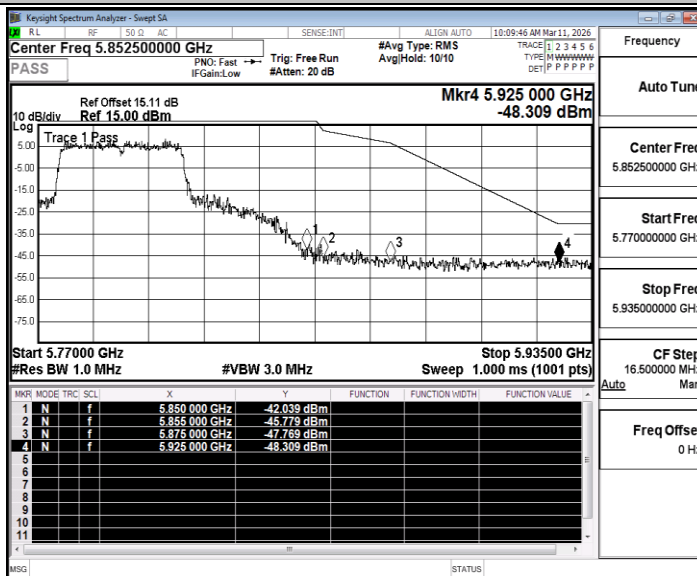
11AC20SISO_Ant1_High_5825_Peak



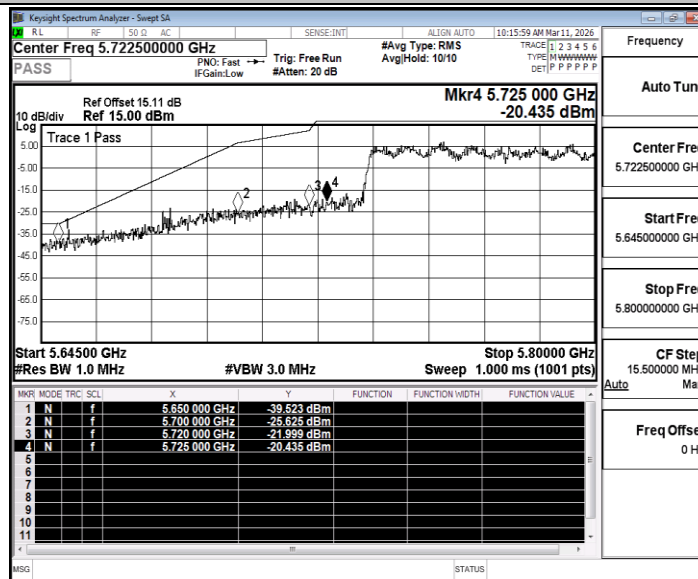
11AC40SISO_Ant1_Low_5755_Peak



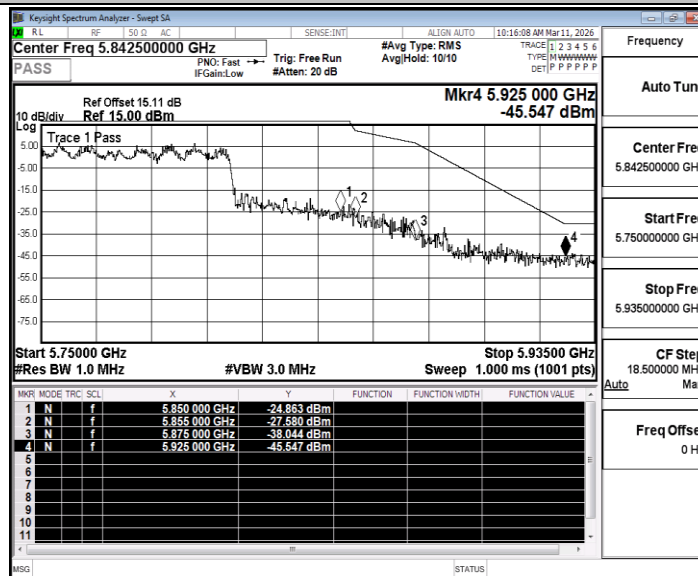
11AC40SISO_Ant1_High_5795_Peak



11AC80SISO_Ant1_Low_5775_Peak



11AC80SISO_Ant1_High_5775_Peak



C.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	-60000.00	-10.443864	20	PASS
			HV	NT	-60000.00	-10.443864	20	PASS
		5785	NV	NT	-60000.00	-10.371651	20	PASS
			LV	NT	-60000.00	-10.371651	20	PASS
			HV	NT	-60000.00	-10.371651	20	PASS
		5825	NV	NT	-60000.00	-10.300429	20	PASS
			LV	NT	-60000.00	-10.300429	20	PASS
			HV	NT	-60000.00	-10.300429	20	PASS
11N20SIS O	Ant1	5745	NV	NT	-60000.00	-10.443864	20	PASS
			LV	NT	-60000.00	-10.443864	20	PASS
			HV	NT	-60000.00	-10.443864	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	-6.866953	20	PASS
			LV	NT	-40000.00	-6.866953	20	PASS
			HV	NT	-60000.00	-10.300429	20	PASS
11N40SIS O	Ant1	5755	NV	NT	-40000.00	-6.950478	20	PASS
			LV	NT	-80000.00	-13.900956	20	PASS
			HV	NT	-40000.00	-6.950478	20	PASS
		5795	NV	NT	-80000.00	-13.805004	20	PASS
			LV	NT	-40000.00	-6.902502	20	PASS
			HV	NT	-40000.00	-6.902502	20	PASS
11AC20SIS O	Ant1	5745	NV	NT	-20000.00	-3.481288	20	PASS
			LV	NT	-20000.00	-3.481288	20	PASS
			HV	NT	-40000.00	-6.962576	20	PASS
		5785	NV	NT	-60000.00	-10.371651	20	PASS
			LV	NT	-60000.00	-10.371651	20	PASS
			HV	NT	-40000.00	-6.914434	20	PASS
		5825	NV	NT	-20000.00	-3.433476	20	PASS
			LV	NT	-20000.00	-3.433476	20	PASS
			HV	NT	-60000.00	-10.300429	20	PASS
11AC40SIS O	Ant1	5755	NV	NT	-40000.00	-6.950478	20	PASS
			LV	NT	-40000.00	-6.950478	20	PASS
			HV	NT	-80000.00	-13.900956	20	PASS

		5795	NV	NT	-40000.00	-6.902502	20	PASS
			LV	NT	-40000.00	-6.902502	20	PASS
			HV	NT	-40000.00	-6.902502	20	PASS
11AC80SIS O	Ant1	5775	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	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	-40000.00	-6.962576	20	PASS
			NV	10	-60000.00	-10.443864	20	PASS
			NV	20	-60000.00	-10.443864	20	PASS
			NV	30	-60000.00	-10.443864	20	PASS
			NV	40	-40000.00	-6.962576	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	-60000.00	-10.371651	20	PASS
			NV	0	-60000.00	-10.371651	20	PASS
			NV	10	-40000.00	-6.914434	20	PASS
			NV	20	-60000.00	-10.371651	20	PASS
			NV	30	-60000.00	-10.371651	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	-60000.00	-10.300429	20	PASS
			NV	-10	-60000.00	-10.300429	20	PASS
			NV	0	-60000.00	-10.300429	20	PASS
			NV	10	-60000.00	-10.300429	20	PASS
			NV	20	-60000.00	-10.300429	20	PASS
			NV	30	-60000.00	-10.300429	20	PASS
			NV	40	-60000.00	-10.300429	20	PASS
			NV	50	-60000.00	-10.300429	20	PASS
11N20SIS O	Ant1	5745	NV	-30	-40000.00	-6.962576	20	PASS
			NV	-20	-60000.00	-10.443864	20	PASS
			NV	-10	-40000.00	-6.962576	20	PASS
			NV	0	-40000.00	-6.962576	20	PASS
			NV	10	-40000.00	-6.962576	20	PASS
			NV	20	-40000.00	-6.962576	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	-40000.00	-6.914434	20	PASS
			NV	-20	-60000.00	-10.371651	20	PASS
			NV	-10	-60000.00	-10.371651	20	PASS
			NV	0	-40000.00	-6.914434	20	PASS
			NV	10	-40000.00	-6.914434	20	PASS
			NV	20	-60000.00	-10.371651	20	PASS
			NV	30	-60000.00	-10.371651	20	PASS
			NV	40	-60000.00	-10.371651	20	PASS
			NV	50	-60000.00	-10.371651	20	PASS
			NV	-30	-40000.00	-6.866953	20	PASS
		5825	NV	-20	-40000.00	-6.866953	20	PASS
			NV	-10	-60000.00	-10.300429	20	PASS
			NV	0	-20000.00	-3.433476	20	PASS
			NV	10	-40000.00	-6.866953	20	PASS
			NV	20	-40000.00	-6.866953	20	PASS
			NV	30	-60000.00	-10.300429	20	PASS
			NV	40	-60000.00	-10.300429	20	PASS
			NV	50	-40000.00	-6.866953	20	PASS
11N40SIS O	Ant1	5755	NV	-30	-80000.00	-13.900956	20	PASS
			NV	-20	-80000.00	-13.900956	20	PASS
			NV	-10	-40000.00	-6.950478	20	PASS
			NV	0	-40000.00	-6.950478	20	PASS
			NV	10	-80000.00	-13.900956	20	PASS
			NV	20	-80000.00	-13.900956	20	PASS
			NV	30	-40000.00	-6.950478	20	PASS
			NV	40	-40000.00	-6.950478	20	PASS
			NV	50	-80000.00	-13.900956	20	PASS
		5795	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	-40000.00	-6.902502	20	PASS
			NV	10	-80000.00	-13.805004	20	PASS
			NV	20	-80000.00	-13.805004	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
11AC20SIS O	Ant1	5745	NV	-30	-40000.00	-6.962576	20	PASS
			NV	-20	-20000.00	-3.481288	20	PASS
			NV	-10	-20000.00	-3.481288	20	PASS
			NV	0	-20000.00	-3.481288	20	PASS

			NV	10	-40000.00	-6.962576	20	PASS
			NV	20	-40000.00	-6.962576	20	PASS
			NV	30	-60000.00	-10.443864	20	PASS
			NV	40	-40000.00	-6.962576	20	PASS
			NV	50	-20000.00	-3.481288	20	PASS
		5785	NV	-30	-20000.00	-3.457217	20	PASS
			NV	-20	-20000.00	-3.457217	20	PASS
			NV	-10	-20000.00	-3.457217	20	PASS
			NV	0	-20000.00	-3.457217	20	PASS
			NV	10	-60000.00	-10.371651	20	PASS
			NV	20	-60000.00	-10.371651	20	PASS
			NV	30	-60000.00	-10.371651	20	PASS
			NV	40	-40000.00	-6.914434	20	PASS
			NV	50	-20000.00	-3.457217	20	PASS
		5825	NV	-30	-60000.00	-10.300429	20	PASS
			NV	-20	-20000.00	-3.433476	20	PASS
			NV	-10	-60000.00	-10.300429	20	PASS
			NV	0	-20000.00	-3.433476	20	PASS
			NV	10	-60000.00	-10.300429	20	PASS
			NV	20	-20000.00	-3.433476	20	PASS
			NV	30	-20000.00	-3.433476	20	PASS
			NV	40	-40000.00	-6.866953	20	PASS
			NV	50	-20000.00	-3.433476	20	PASS
11AC40SIS O	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	-40000.00	-6.950478	20	PASS
		5795	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	-40000.00	-6.902502	20	PASS
			NV	10	-40000.00	-6.902502	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	-80000.00	-13.805004	20	PASS
11AC80SIS O	Ant1	5775	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	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	0.00	0.000000	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS

Note: offset=System attenuation +cabel loss

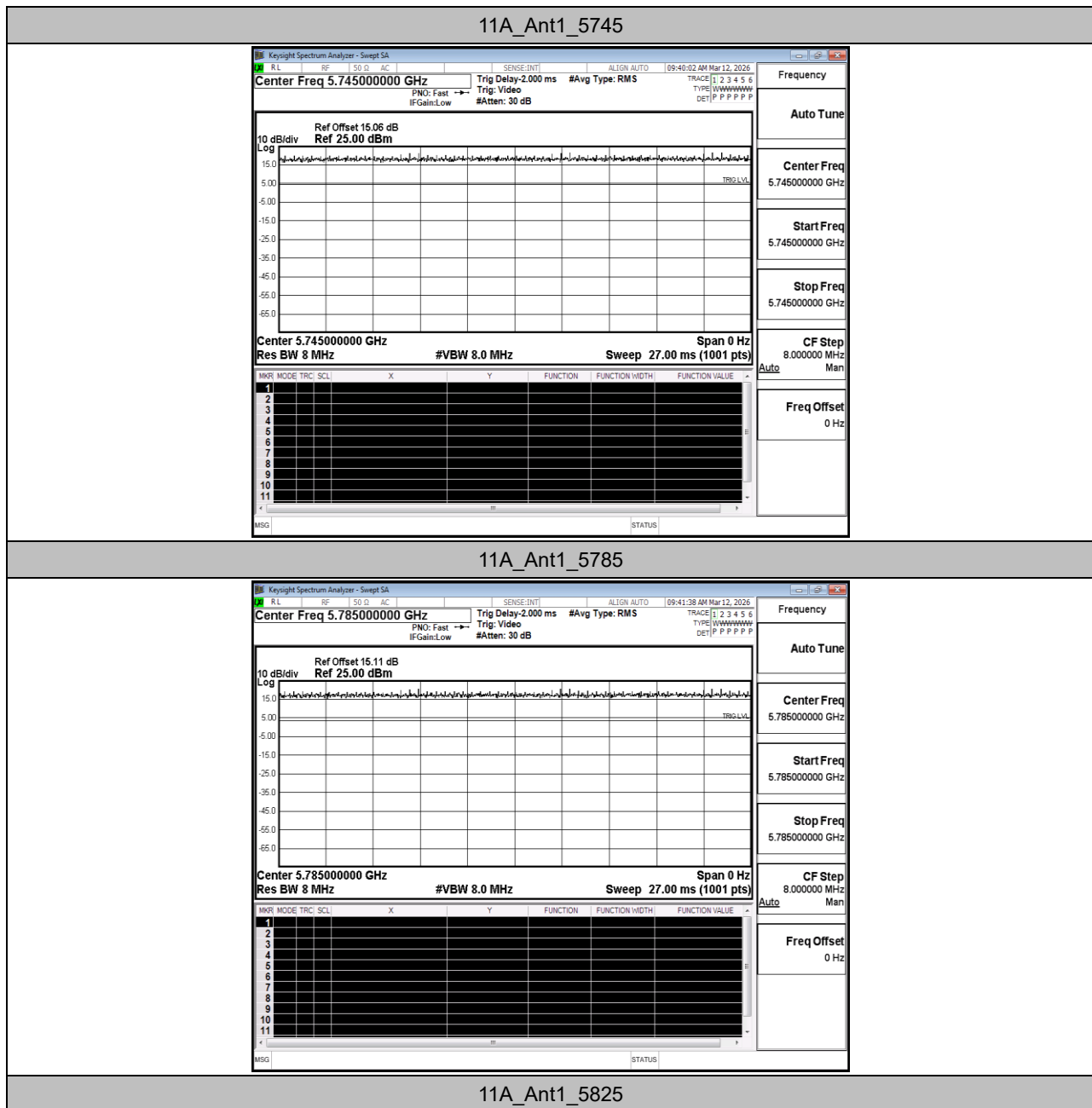
C.6 Duty Cycle

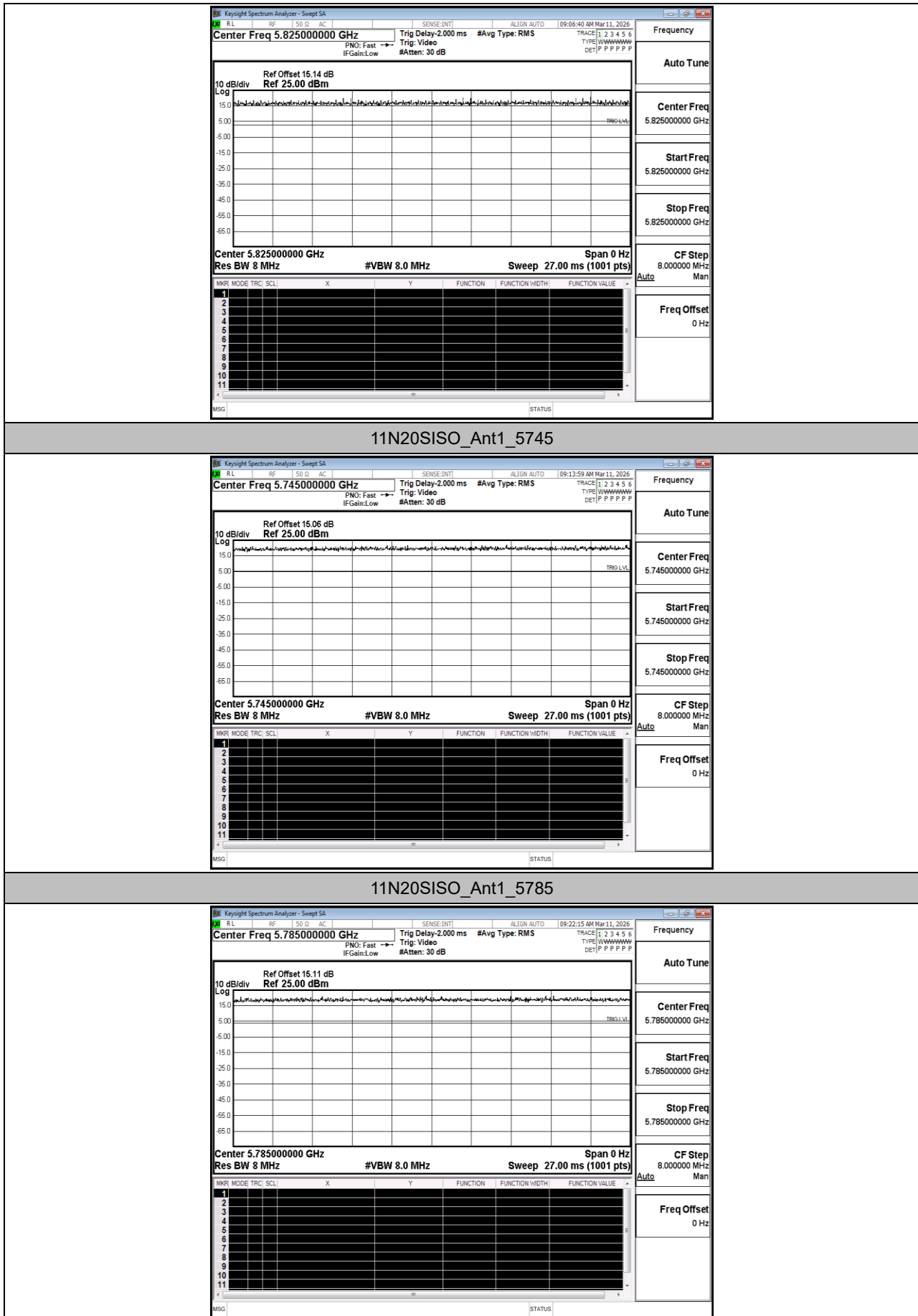
Test Result

TestMode	Antenna	Freq(MHz)	Transmissi on Duration [ms]	Transmissi on Period [ms]	Duty Cycle [%]	DC Factor	Limit	Verdict
11A	Ant1	5745	27.00	27.00	100.00	0.00	---	---
		5785	27.00	27.00	100.00	0.00	---	---
		5825	27.00	27.00	100.00	0.00	---	---
11N20SISO	Ant1	5745	27.00	27.00	100.00	0.00	---	---
		5785	27.00	27.00	100.00	0.00	---	---
		5825	27.00	27.00	100.00	0.00	---	---
11N40SISO	Ant1	5755	27.00	27.00	100.00	0.00	---	---
		5795	27.00	27.00	100.00	0.00	---	---
11AC20SISO	Ant1	5745	27.00	27.00	100.00	0.00	---	---
		5785	27.00	27.00	100.00	0.00	---	---
		5825	27.00	27.00	100.00	0.00	---	---
11AC40SISO	Ant1	5755	27.00	27.00	100.00	0.00	---	---
		5795	27.00	27.00	100.00	0.00	---	---
11AC80SISO	Ant1	5775	27.00	27.00	100.00	0.00	---	---

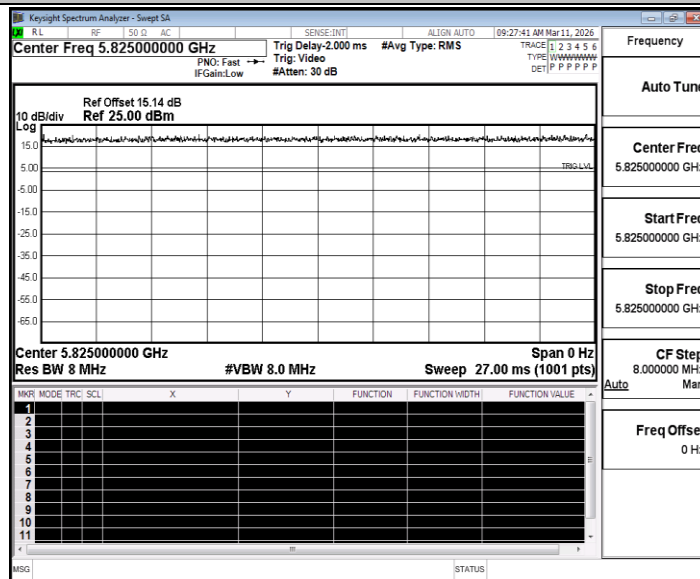
Note: offset=System attenuation +cabal loss

Test Graphs

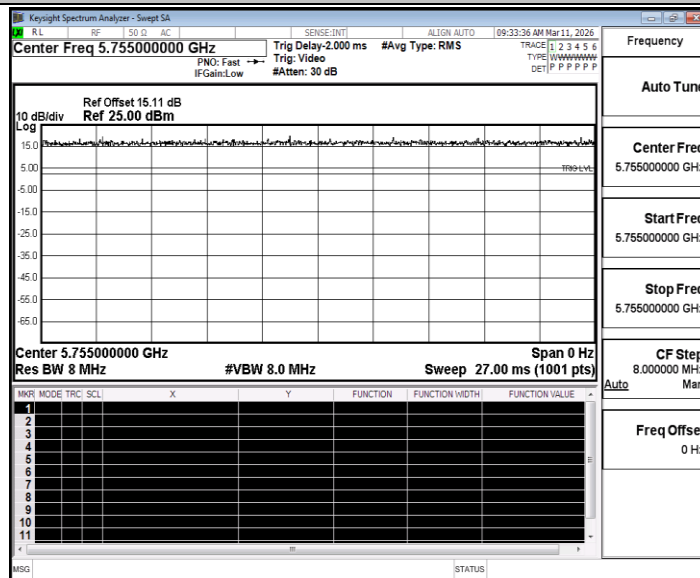




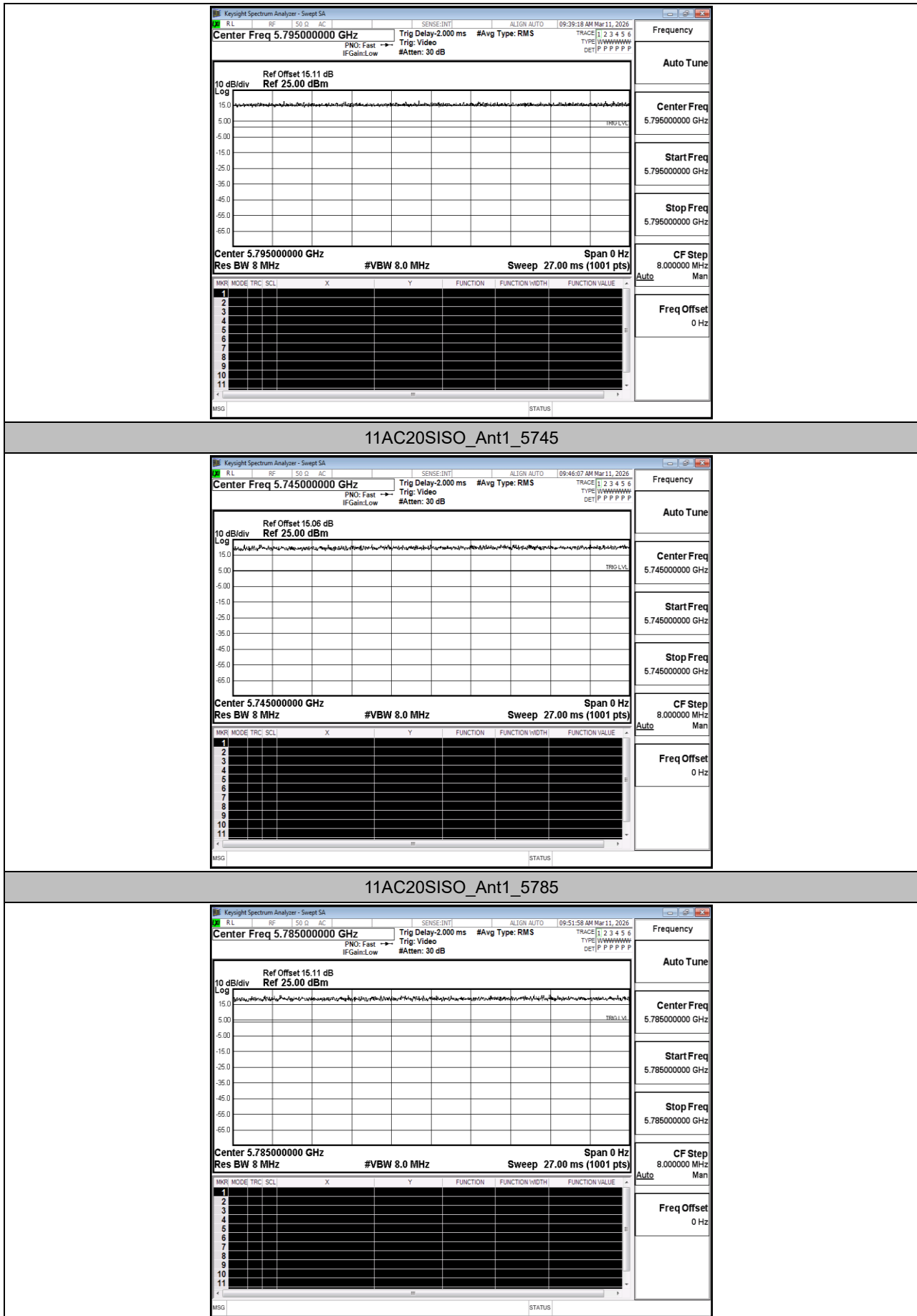
11N20SISO_Ant1_5825



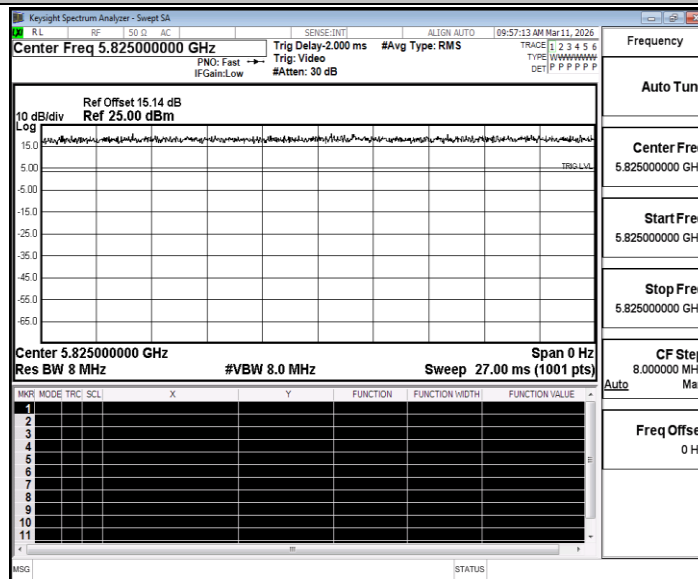
11N40SISO_Ant1_5755



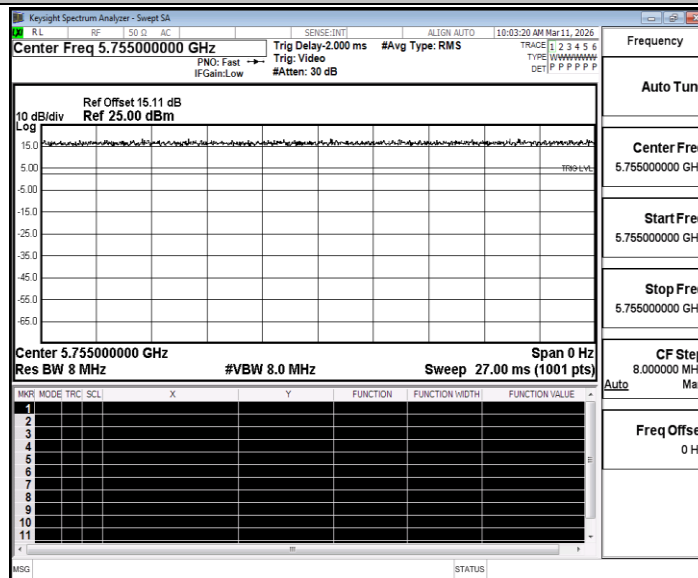
11N40SISO_Ant1_5795



11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795

