

Appendix E

RF Test Data for 5.8GWIFI (Conducted Measurement)

Product Name: Smart Terminal

Test Model: MX15

Environmental Conditions

Temperature:	24.8°C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

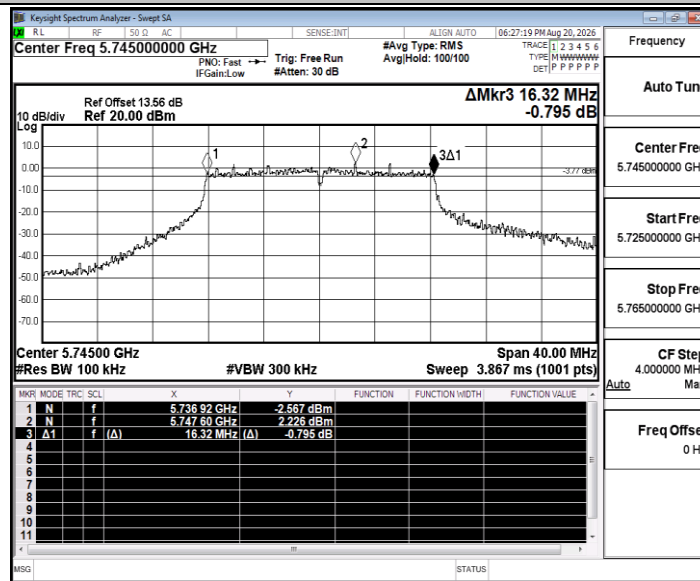
E.1 Min emission bandwidth

Test Result B4

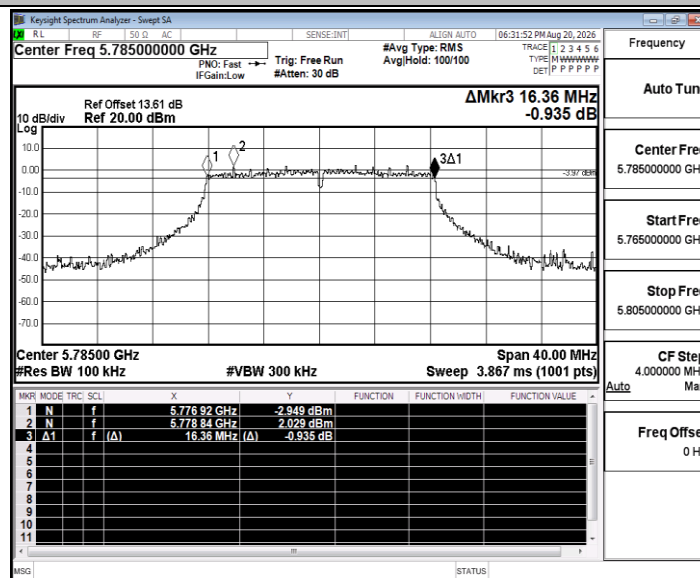
TestMode	Antenna	Freq(MHz)	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.920	5753.240	0.5	PASS
		5785	16.360	5776.920	5793.280	0.5	PASS
		5825	15.400	5817.560	5832.960	0.5	PASS
11N20SISO	Ant1	5745	17.600	5736.280	5753.880	0.5	PASS
		5785	17.560	5776.320	5793.880	0.5	PASS
		5825	17.560	5816.320	5833.880	0.5	PASS
11N40SISO	Ant1	5755	35.120	5737.480	5772.600	0.5	PASS
		5795	35.040	5777.560	5812.600	0.5	PASS
11AC20SISO	Ant1	5745	17.480	5736.320	5753.800	0.5	PASS
		5785	17.520	5776.320	5793.840	0.5	PASS
		5825	16.920	5816.560	5833.480	0.5	PASS
11AC40SISO	Ant1	5755	35.040	5737.560	5772.600	0.5	PASS
		5795	35.120	5777.560	5812.680	0.5	PASS
11AC80SISO	Ant1	5775	75.040	5737.560	5812.600	0.5	PASS

Test Graphs B4

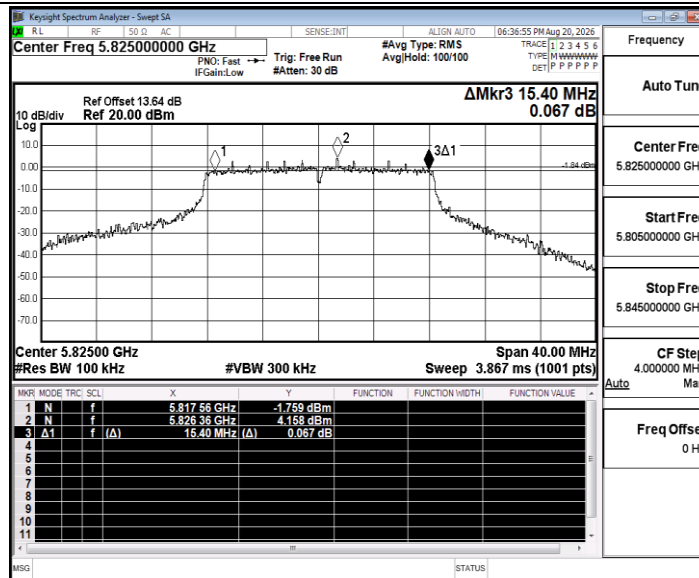
11A_Ant1_5745



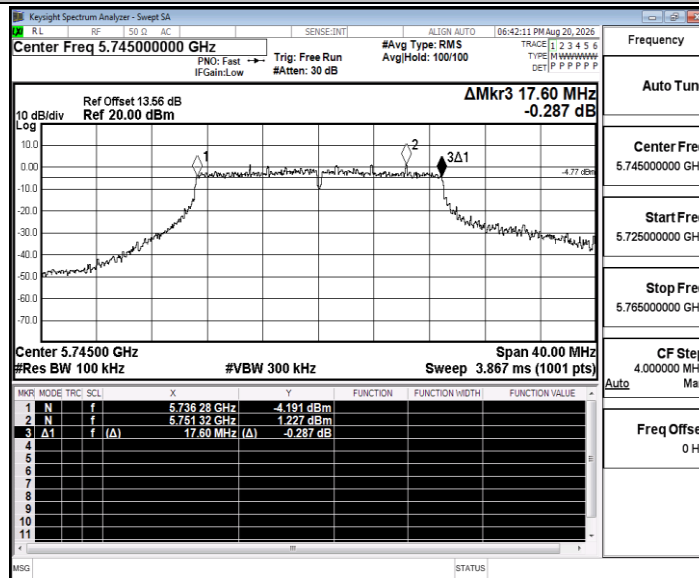
11A_Ant1_5785



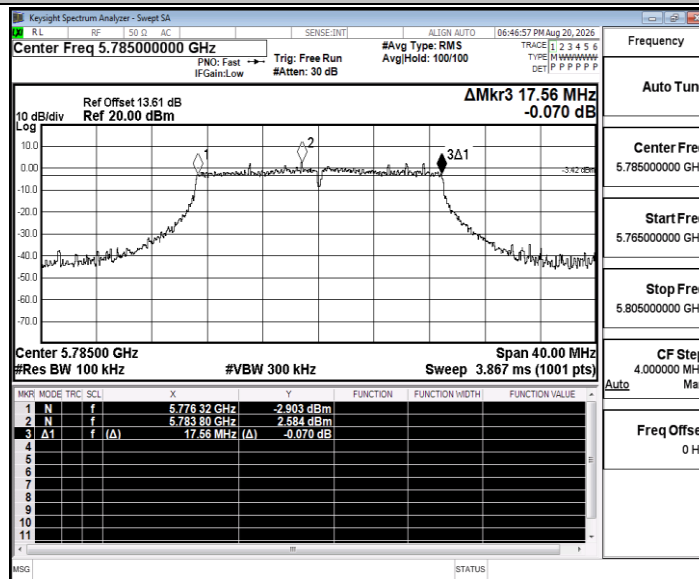
11A_Ant1_5825



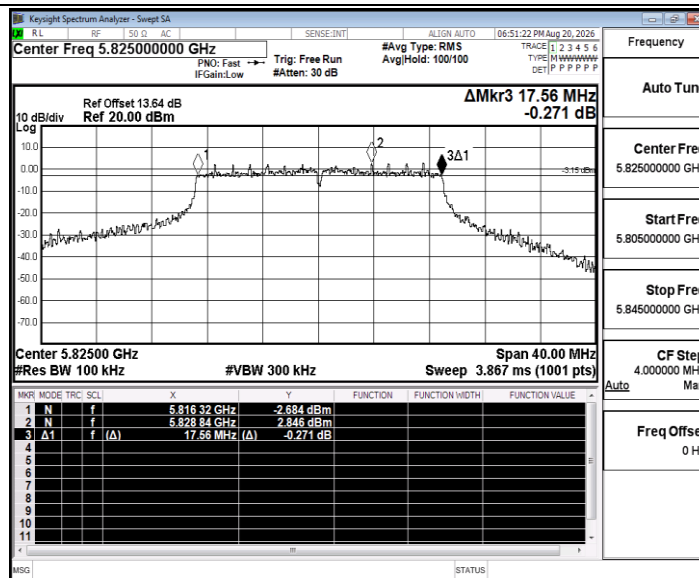
11N20SISO_Ant1_5745



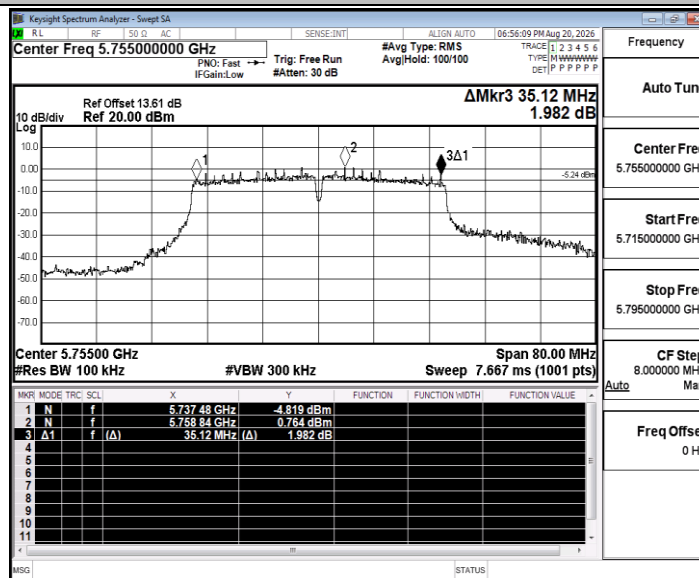
11N20SISO_Ant1_5785



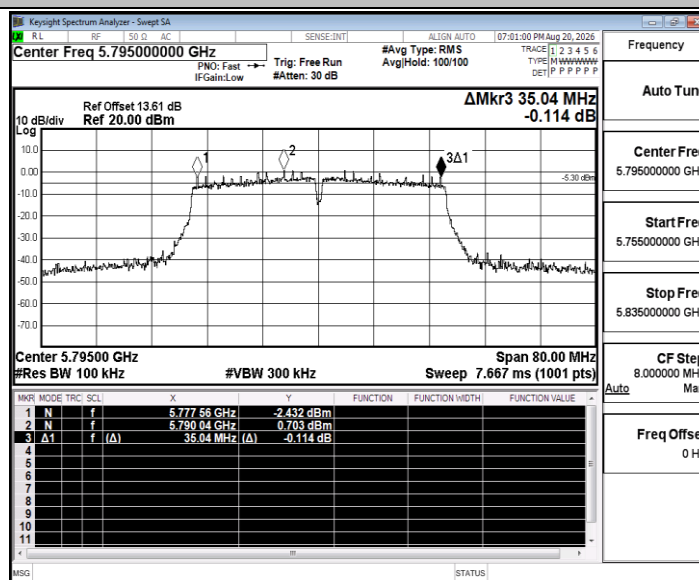
11N20SISO_Ant1_5825



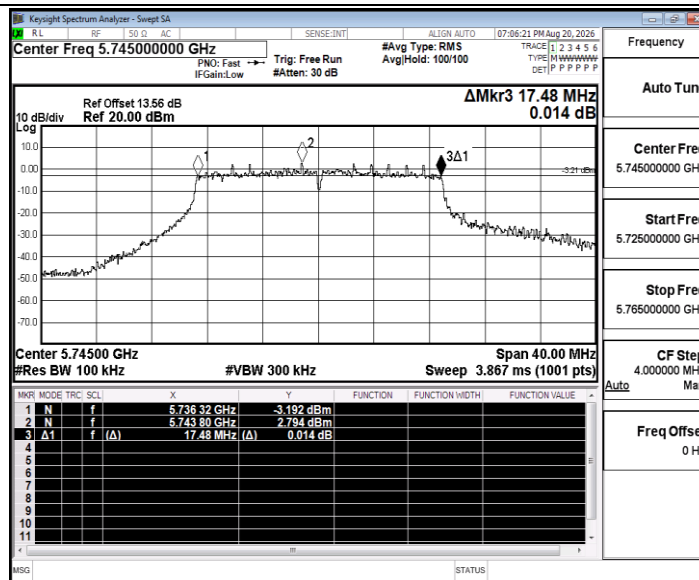
11N40SISO_Ant1_5755



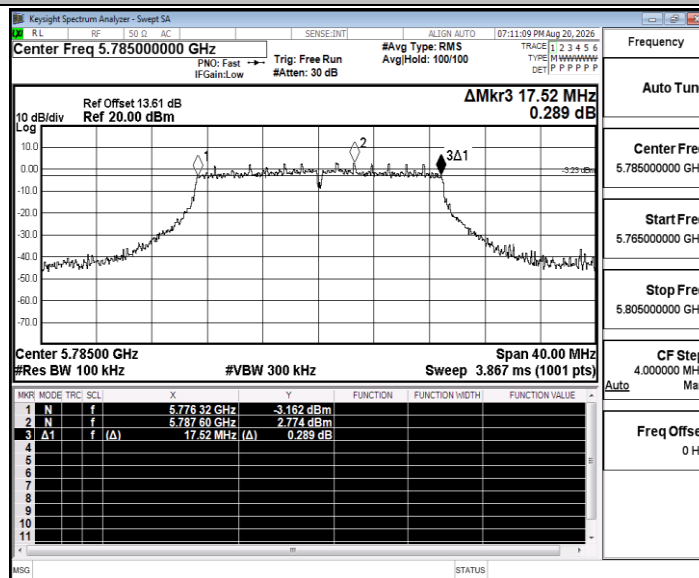
11N40SISO_Ant1_5795



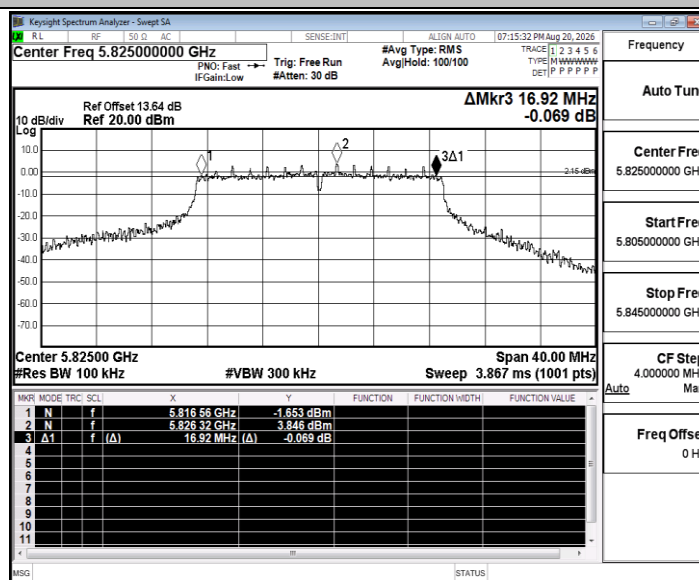
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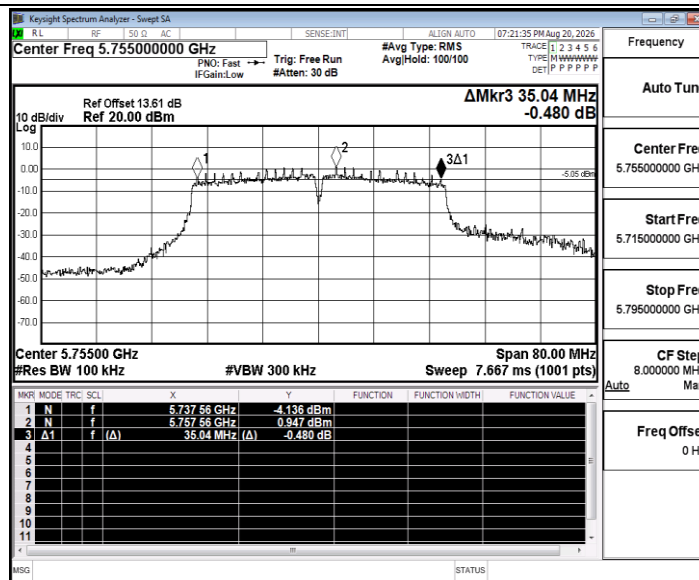
11AC20SISO_Ant1_5785



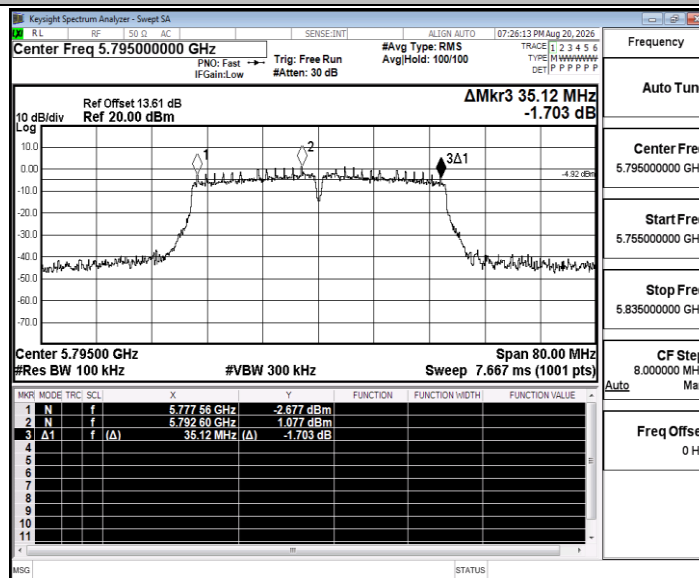
11AC20SISO_Ant1_5825



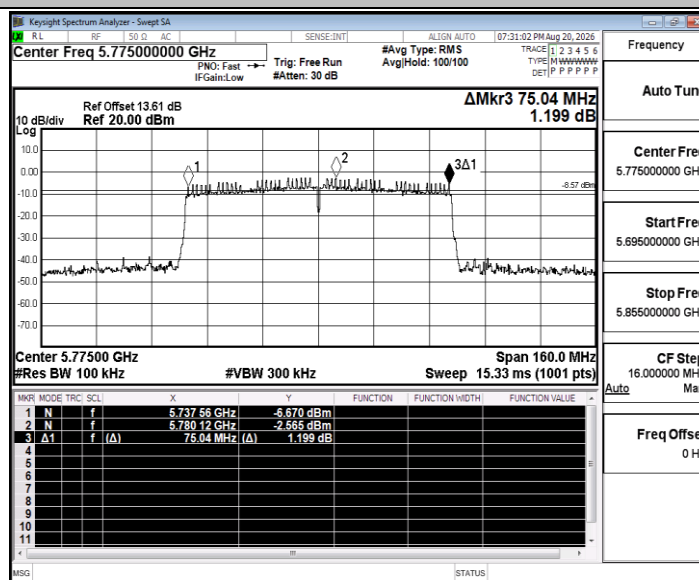
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5775



E.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	15.2	0.15	15.35	≤30.00	PASS
		5785	NA	15.59	0.18	15.77	≤30.00	PASS
		5825	NA	15.71	0.15	15.86	≤30.00	PASS
11N20SISO	Ant1	5745	NA	14.56	0.19	14.75	≤30.00	PASS
		5785	NA	15.69	0.16	15.85	≤30.00	PASS
		5825	NA	15.67	0.19	15.86	≤30.00	PASS
11N40SISO	Ant1	5755	NA	15.15	0.38	15.53	≤30.00	PASS
		5795	NA	15.46	0.38	15.84	≤30.00	PASS
11AC20SISO	Ant1	5745	NA	14.87	0.51	15.38	≤30.00	PASS
		5785	NA	15.33	0.51	15.84	≤30.00	PASS
		5825	NA	15.39	0.51	15.9	≤30.00	PASS
11AC40SISO	Ant1	5755	NA	14.66	0.9	15.56	≤30.00	PASS
		5795	NA	14.88	0.9	15.78	≤30.00	PASS
11AC80SISO	Ant1	5775	NA	13.79	1.25	15.04	≤30.00	PASS

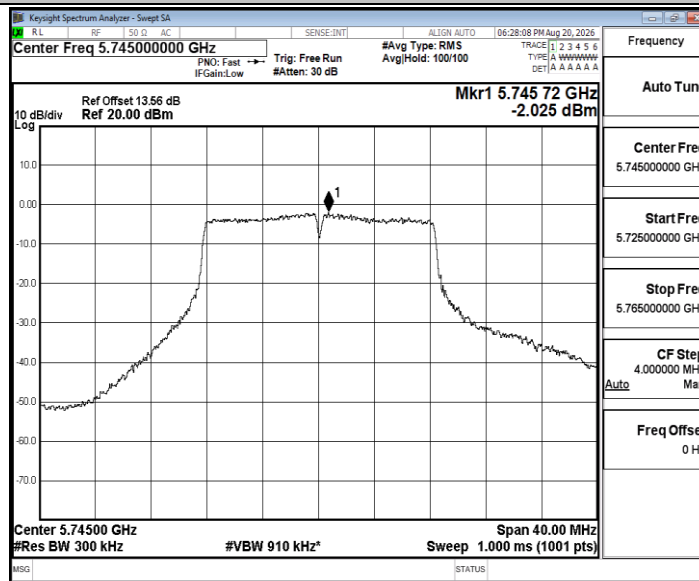
E.3 Maximum power spectral density

Test Result

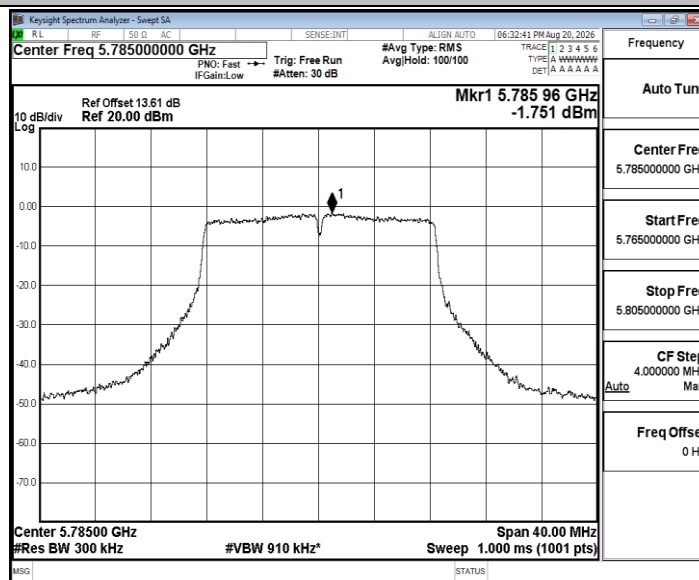
TestMode	Antenna	Freq (MHz)	Raw Data [dBm/MHz]	DC Factor	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5745	-2.03	0.15	-1.88	≤30.00	PASS
		5785	-1.75	0.18	-1.57	≤30.00	PASS
		5825	-1.61	0.15	-1.46	≤30.00	PASS
11N20SISO	Ant1	5745	-2.9	0.19	-2.71	≤30.00	PASS
		5785	-1.75	0.16	-1.59	≤30.00	PASS
		5825	-2.03	0.19	-1.84	≤30.00	PASS
11N40SISO	Ant1	5755	-4.77	0.38	-4.39	≤30.00	PASS
		5795	-4.3	0.38	-3.92	≤30.00	PASS
11AC20SISO	Ant1	5745	-2.44	0.51	-1.93	≤30.00	PASS
		5785	-2.14	0.51	-1.63	≤30.00	PASS
		5825	-1.42	0.51	-0.91	≤30.00	PASS
11AC40SISO	Ant1	5755	-4.96	0.9	-4.06	≤30.00	PASS
		5795	-4.65	0.9	-3.75	≤30.00	PASS
11AC80SISO	Ant1	5775	-8.75	1.25	-7.5	≤30.00	PASS

Test Graphs

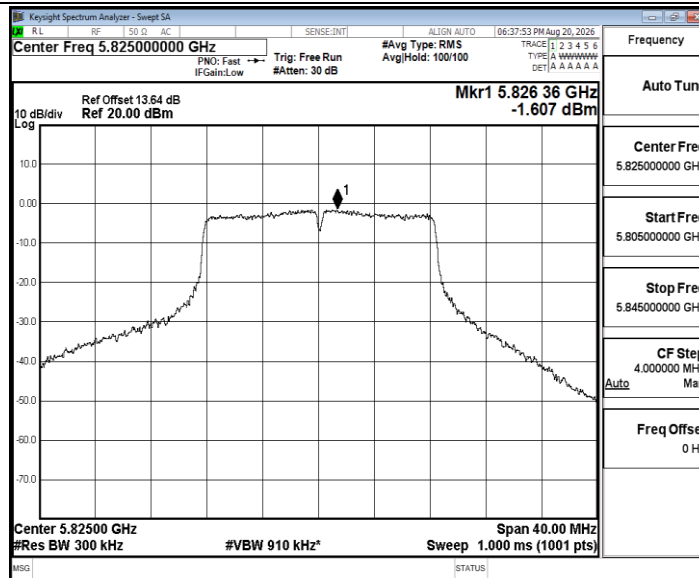
11A_Ant1_5745



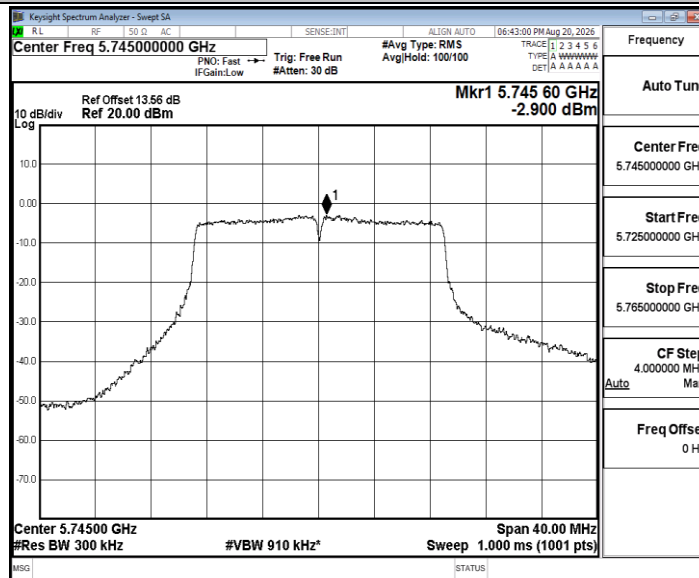
11A_Ant1_5785



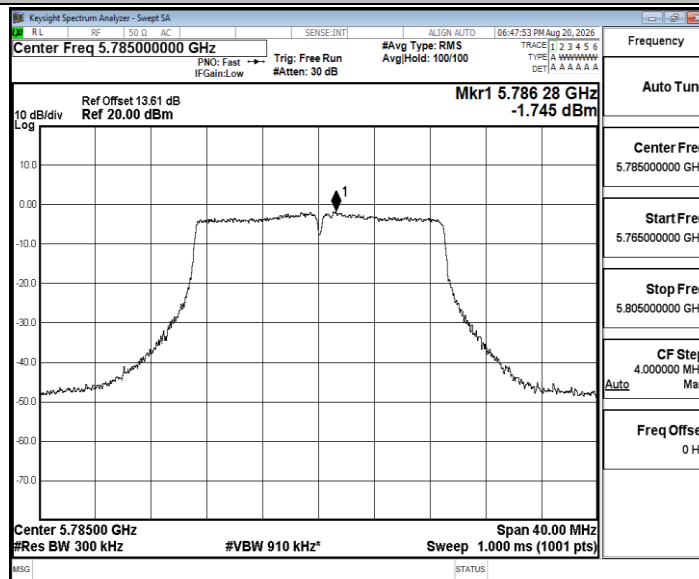
11A_Ant1_5825



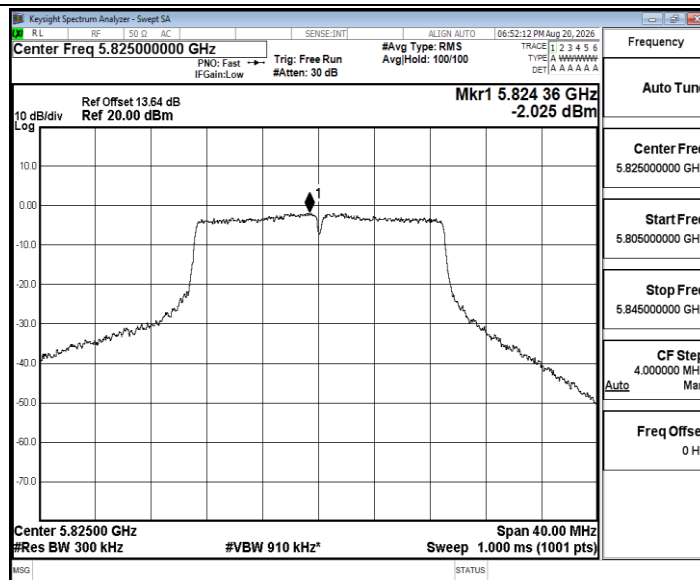
11N20SISO_Ant1_5745



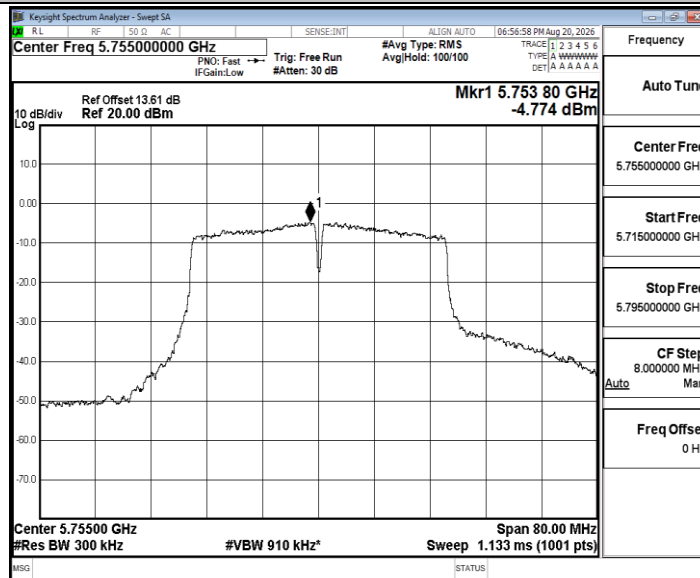
11N20SISO_Ant1_5785



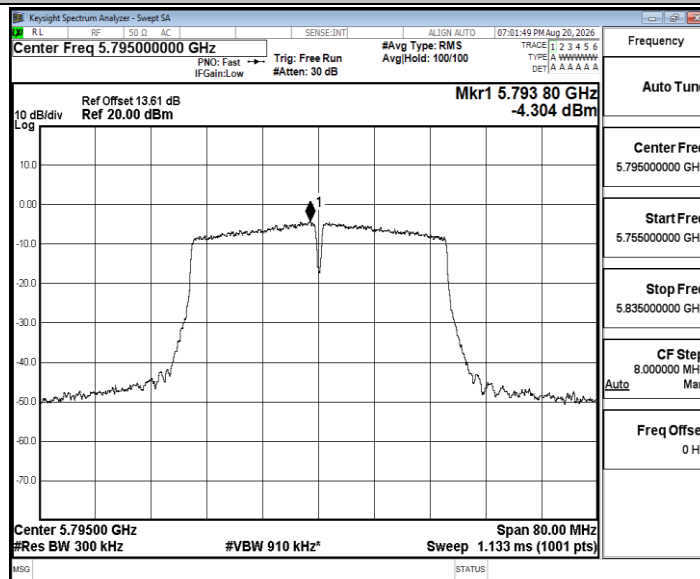
11N20SISO_Ant1_5825



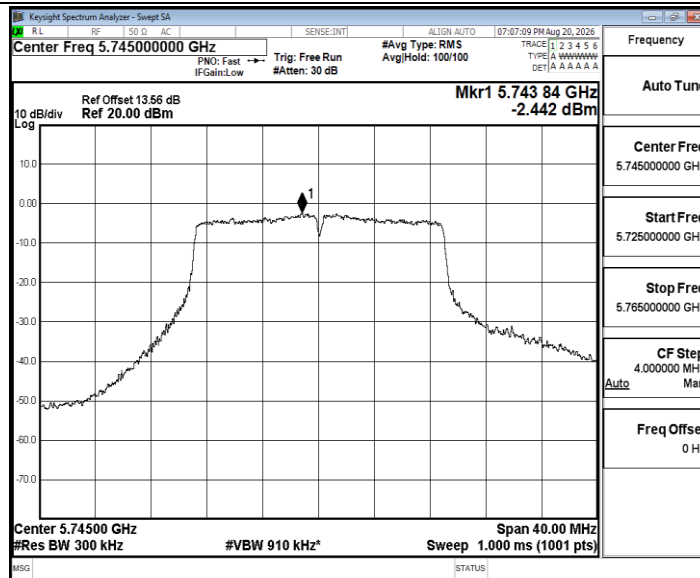
11N40SISO_Ant1_5755



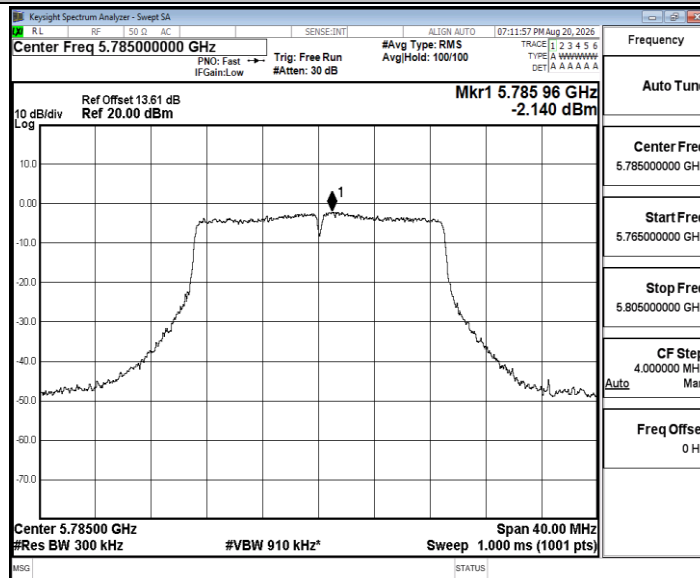
11N40SISO_Ant1_5795



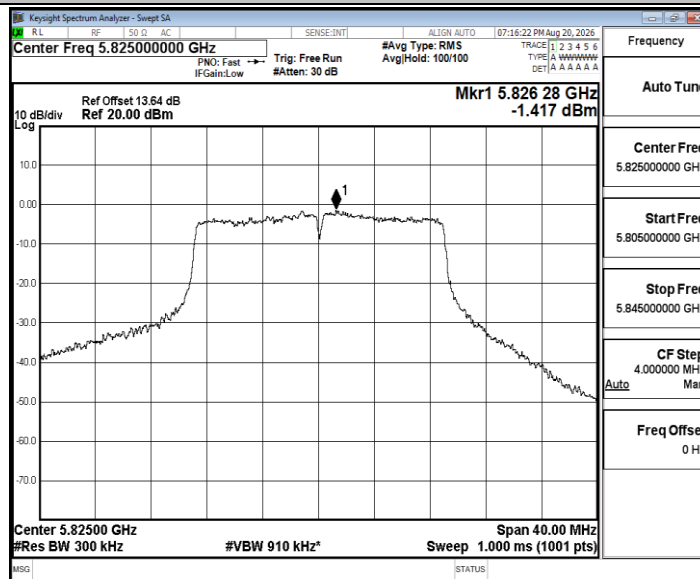
11AC20SISO_Ant1_5745



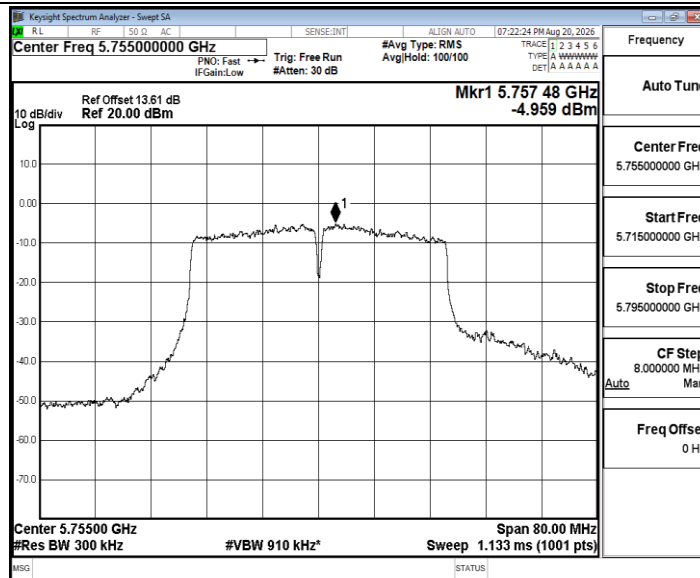
11AC20SISO_Ant1_5785



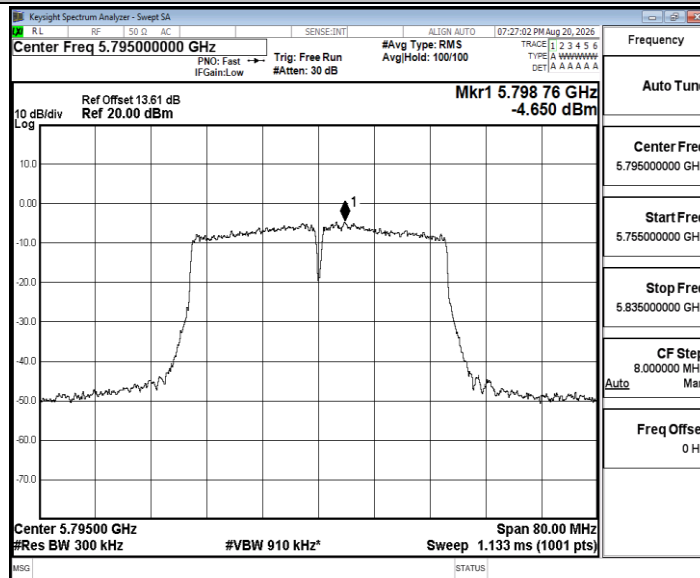
11AC20SISO_Ant1_5825



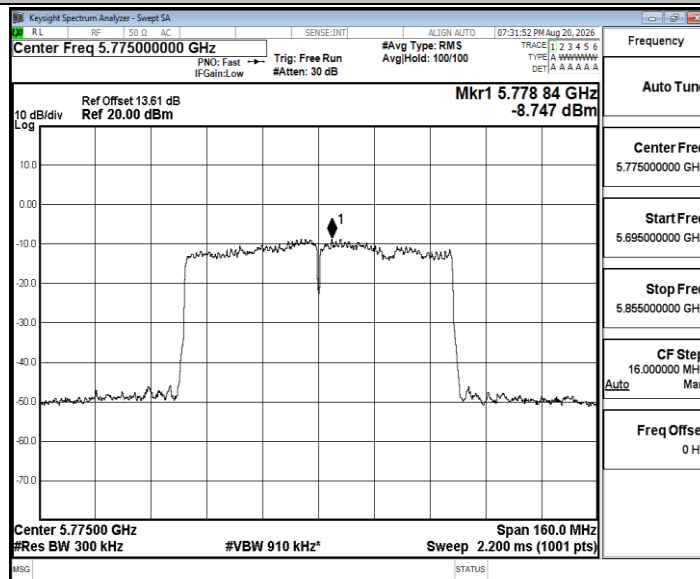
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5775



E.4 Emissions in Restricted Bands

Test Result

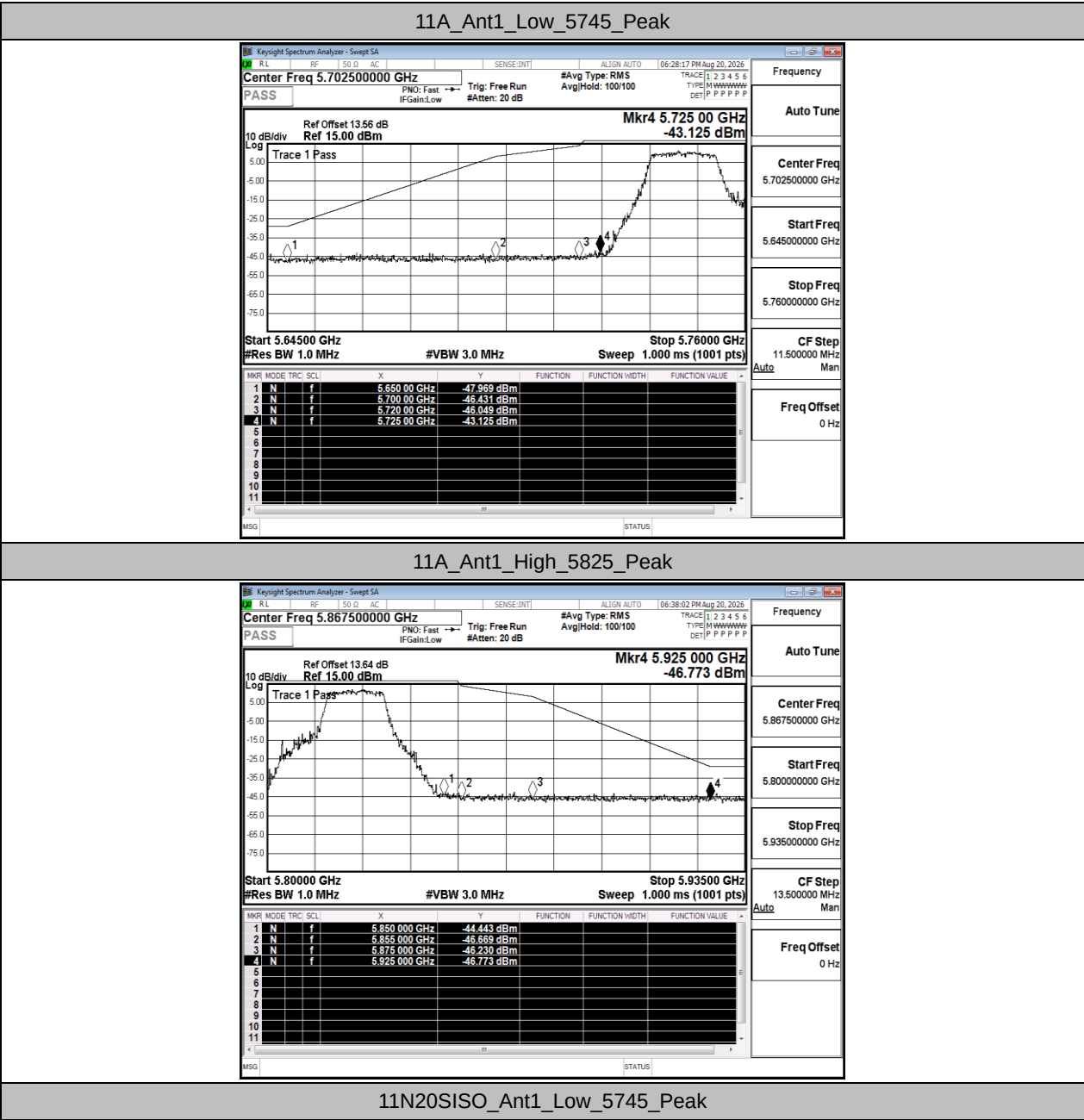
Test Mode	Antenna	Channel Name	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	Peak	5650.000	-47.969	2.69	0.15	-45.13	-29.69	PASS
				Peak	5700.000	-46.43	2.69	0.15	-43.59	7.31	PASS
				Peak	5720.000	-46.05	2.69	0.15	-43.21	12.91	PASS
				Peak	5725.000	-43.13	2.69	0.15	-40.29	24.31	PASS
		High	5825	Peak	5850.000	-44.443	2.69	0.15	-41.60	24.31	PASS
				Peak	5855.000	-46.67	2.69	0.15	-43.83	12.91	PASS
				Peak	5875.000	-46.23	2.69	0.15	-43.39	7.31	PASS
				Peak	5925.000	-46.77	2.69	0.15	-43.93	-29.69	PASS
11N2 OSIS O	Ant1	Low	5745	Peak	5650.000	-47.081	2.69	0.19	-44.20	-29.69	PASS
				Peak	5700.000	-46.06	2.69	0.19	-43.18	7.31	PASS
				Peak	5720.000	-46.19	2.69	0.19	-43.31	12.91	PASS
				Peak	5725.000	-43.39	2.69	0.19	-40.51	24.31	PASS
		High	5825	Peak	5850.000	-43.405	2.69	0.19	-40.53	24.31	PASS
				Peak	5855.000	-44.87	2.69	0.19	-41.99	12.91	PASS
				Peak	5875.000	-45.85	2.69	0.19	-42.97	7.31	PASS
				Peak	5925.000	-46.4	2.69	0.19	-43.52	-29.69	PASS
11N4 OSIS O	Ant1	Low	5755	Peak	5650.000	-47.683	2.69	0.38	-44.61	-29.69	PASS
				Peak	5700.000	-44.55	2.69	0.38	-41.48	7.31	PASS
				Peak	5720.000	-42.61	2.69	0.38	-39.54	12.91	PASS
				Peak	5725.000	-39.17	2.69	0.38	-36.10	24.31	PASS
		High	5795	Peak	5850.000	-41.305	2.69	0.38	-38.24	24.31	PASS
				Peak	5855.000	-41.3	2.69	0.38	-38.23	12.91	PASS
				Peak	5875.000	-45.16	2.69	0.38	-42.09	7.31	PASS
				Peak	5925.000	-45.57	2.69	0.38	-42.50	-29.69	PASS
11AC 20SI SO	Ant1	Low	5745	Peak	5650.000	-47.223	2.69	0.51	-44.02	-29.69	PASS
				Peak	5700.000	-47.53	2.69	0.51	-44.33	7.31	PASS
				Peak	5720.000	-43.16	2.69	0.51	-39.96	12.91	PASS
				Peak	5725.000	-43.76	2.69	0.51	-40.56	24.31	PASS
		High	5825	Peak	5850.000	-44.753	2.69	0.51	-41.55	24.31	PASS
				Peak	5855.000	-45.43	2.69	0.51	-42.23	12.91	PASS
				Peak	5875.000	-46.21	2.69	0.51	-43.01	7.31	PASS
				Peak	5925.000	-45.96	2.69	0.51	-42.76	-29.69	PASS
11AC 40SI SO	Ant1	Low	5755	Peak	5650.000	-46.738	2.69	0.9	-43.15	-29.69	PASS
				Peak	5700.000	-45.06	2.69	0.9	-41.47	7.31	PASS
				Peak	5720.000	-40.92	2.69	0.9	-37.33	12.91	PASS
				Peak	5725.000	-38.76	2.69	0.9	-35.17	24.31	PASS
		High	5795	Peak	5850.000	-38.278	2.69	0.9	-34.69	24.31	PASS

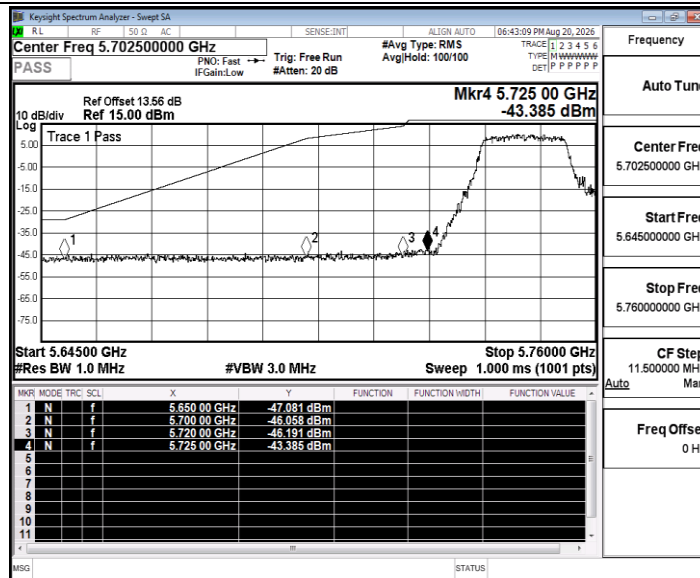
				Peak	5855.000	-40.04	2.69	0.9	-36.45	12.91	PASS
				Peak	5875.000	-44.52	2.69	0.9	-40.93	7.31	PASS
				Peak	5925.000	-45.93	2.69	0.9	-42.34	-29.69	PASS
11AC 80SI SO	Ant1	Low	5775	Peak	5650.000	-46.929	2.69	1.25	-42.99	-29.69	PASS
				Peak	5700.000	-40.13	2.69	1.25	-36.19	7.31	PASS
				Peak	5720.000	-36.63	2.69	1.25	-32.69	12.91	PASS
				Peak	5725.000	-34.35	2.69	1.25	-30.41	24.31	PASS
		High	5775	Peak	5850.000	-36.902	2.69	1.25	-32.96	24.31	PASS
				Peak	5855.000	-37.92	2.69	1.25	-33.98	12.91	PASS
				Peak	5875.000	-35.32	2.69	1.25	-31.38	7.31	PASS
				Peak	5925.000	-46.83	2.69	1.25	-42.89	-29.69	PASS

Note:

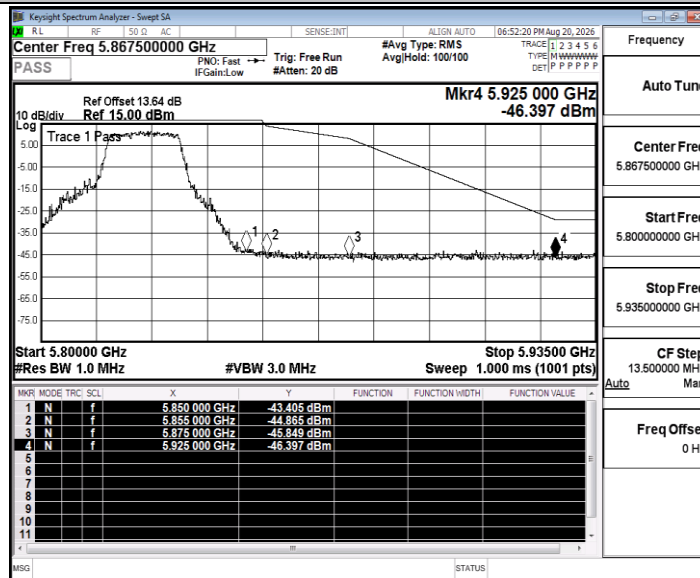
1. The Antenna Gain is compensated in the graph.

Test Graphs

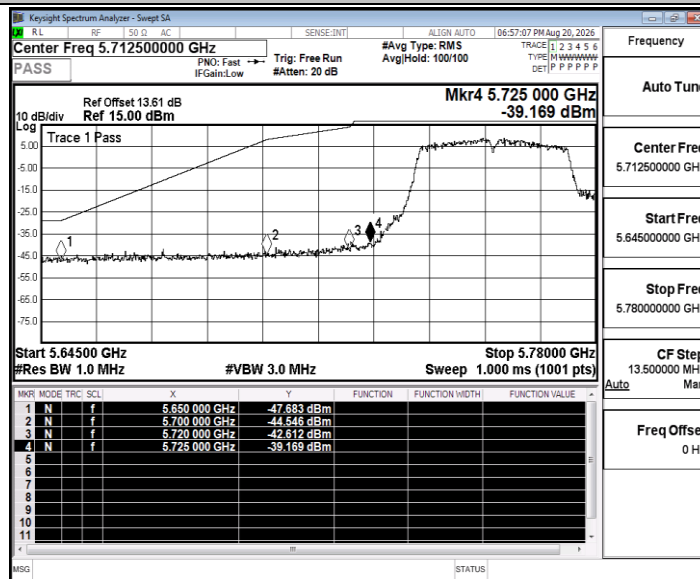




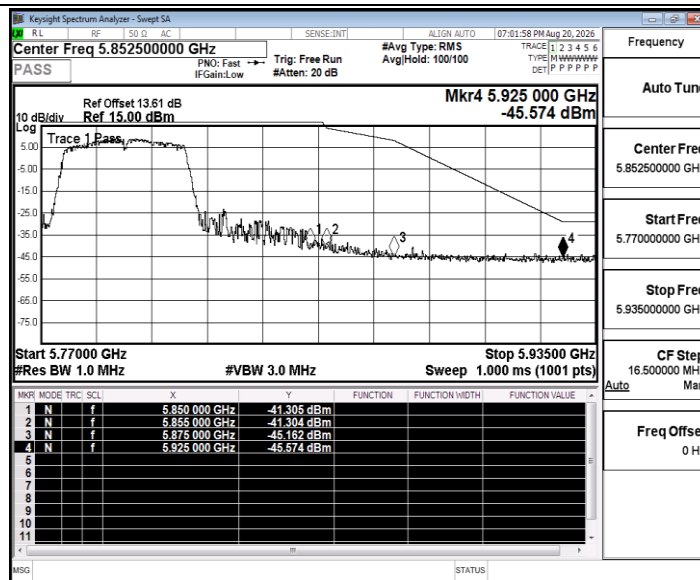
11N20SISO_Ant1_High_5825_Peak



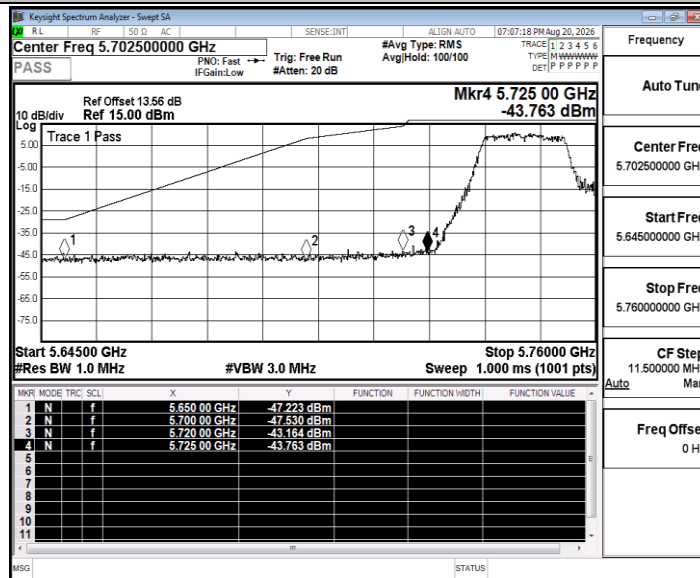
11N40SISO_Ant1_Low_5755_Peak



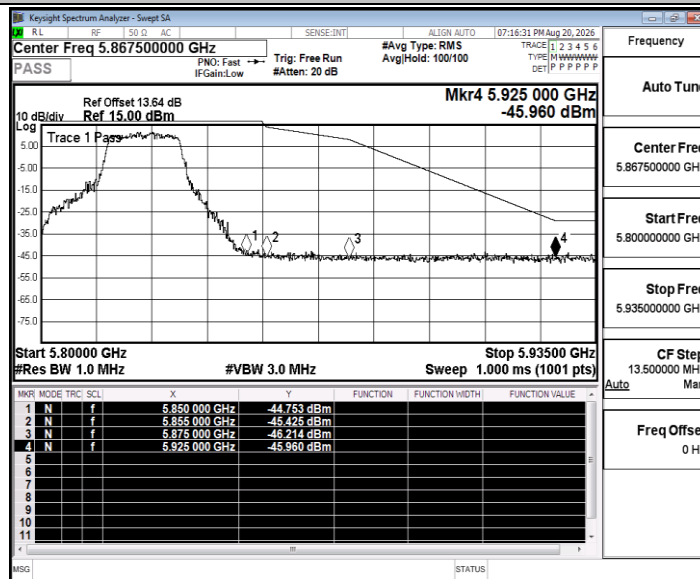
11N40SISO_Ant1_High_5795_Peak



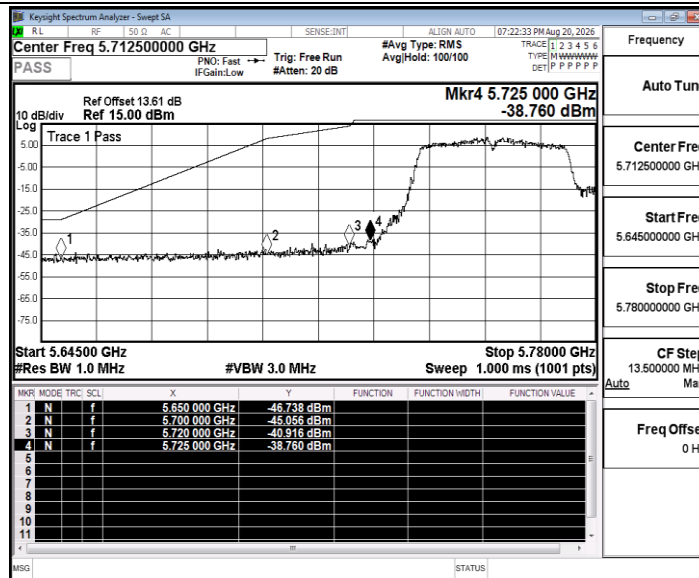
11AC20SISO_Ant1_Low_5745_Peak



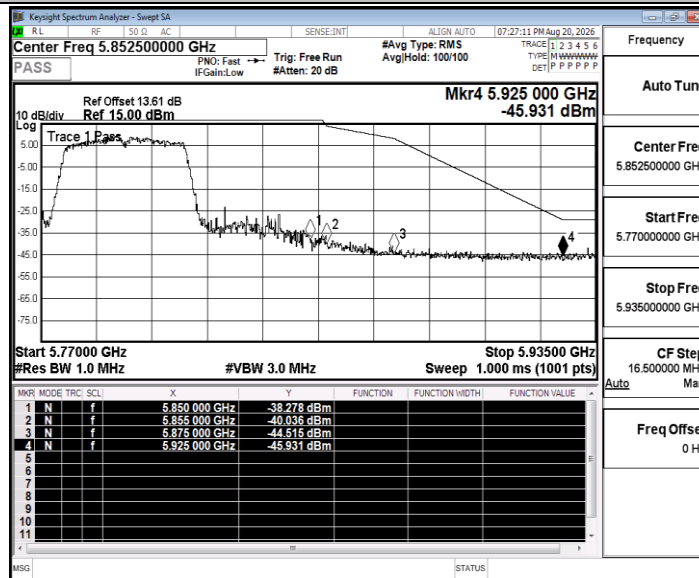
11AC20SISO_Ant1_High_5825_Peak



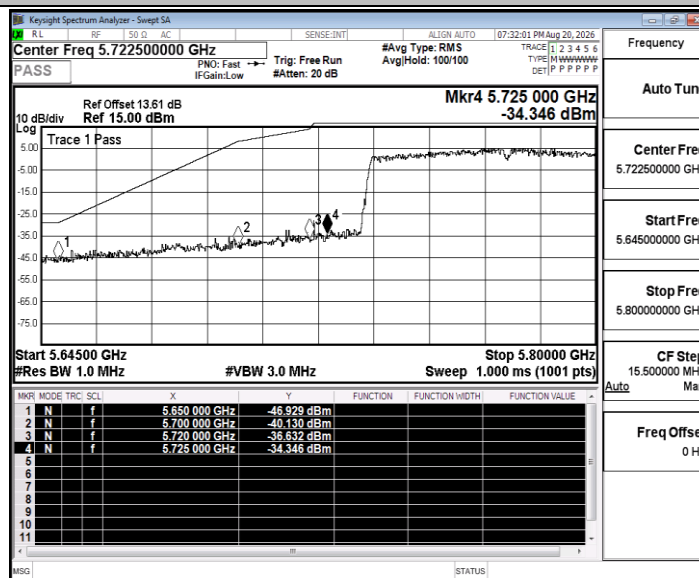
11AC40SISO_Ant1_Low_5755_Peak



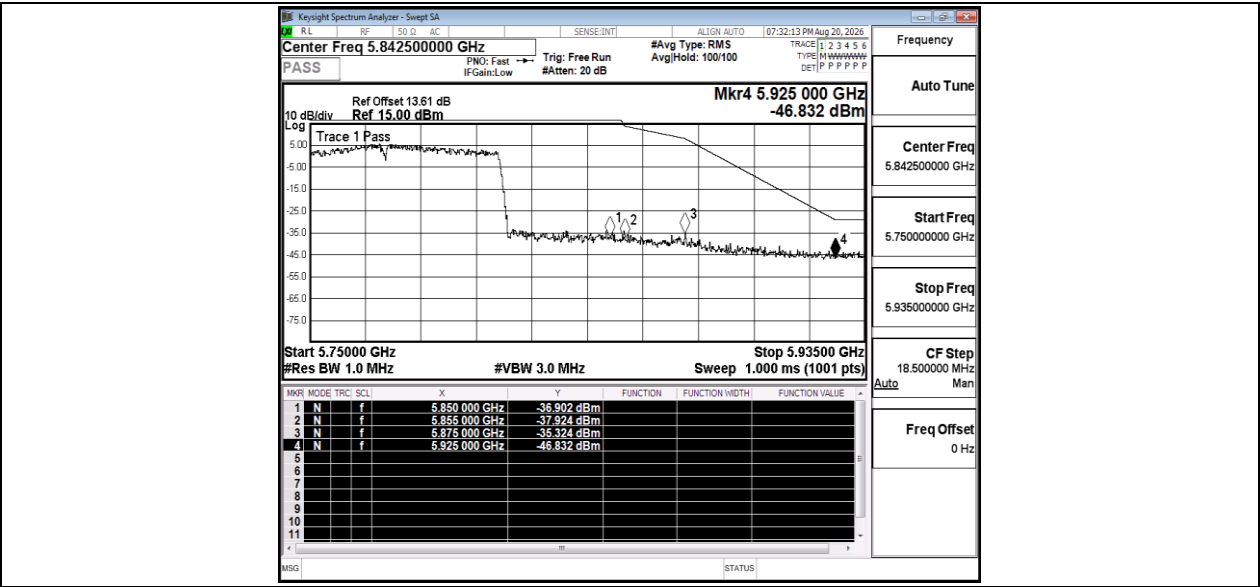
11AC40SISO_Ant1_High_5795_Peak



11AC80SISO_Ant1_Low_5775_Peak



11AC80SISO_Ant1_High_5775_Peak



E.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	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	60000.00	10.300429	20	PASS
			LV	NT	80000.00	13.733906	20	PASS
			HV	NT	80000.00	13.733906	20	PASS
11N20SISO	Ant1	5745	NV	NT	80000.00	13.925152	20	PASS
			LV	NT	100000.00	17.406440	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
11N40SISO	Ant1	5755	NV	NT	80000.00	13.900956	20	PASS
			LV	NT	40000.00	6.950478	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
11AC20SI 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
11AC40SI 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	40000.00	6.902502	20	PASS
			HV	NT	80000.00	13.805004	20	PASS
11AC80SI SO	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	80000.00	13.925152	20	PASS
			NV	-20	60000.00	10.443864	20	PASS
			NV	-10	80000.00	13.925152	20	PASS
			NV	0	60000.00	10.443864	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	60000.00	10.443864	20	PASS
		5785	NV	-30	100000.00	17.286085	20	PASS
			NV	-20	80000.00	13.828868	20	PASS
			NV	-10	100000.00	17.286085	20	PASS
			NV	0	100000.00	17.286085	20	PASS
			NV	10	80000.00	13.828868	20	PASS
			NV	20	100000.00	17.286085	20	PASS
			NV	30	80000.00	13.828868	20	PASS
			NV	40	60000.00	10.371651	20	PASS
			NV	50	80000.00	13.828868	20	PASS
		5825	NV	-30	60000.00	10.300429	20	PASS
			NV	-20	80000.00	13.733906	20	PASS
			NV	-10	100000.00	17.167382	20	PASS

			NV	0	80000.00	13.733906	20	PASS
			NV	10	80000.00	13.733906	20	PASS
			NV	20	100000.00	17.167382	20	PASS
			NV	30	100000.00	17.167382	20	PASS
			NV	40	80000.00	13.733906	20	PASS
			NV	50	80000.00	13.733906	20	PASS
11N20SIS O	Ant1	5745	NV	-30	60000.00	10.443864	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	60000.00	10.443864	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	80000.00	13.828868	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	60000.00	10.300429	20	PASS
			NV	30	100000.00	17.167382	20	PASS
			NV	40	80000.00	13.733906	20	PASS
			NV	50	80000.00	13.733906	20	PASS
11N40SIS O	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	80000.00	13.900956	20	PASS
			NV	40	80000.00	13.900956	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	80000.00	13.805004	20	PASS
			NV	40	80000.00	13.805004	20	PASS
			NV	50	80000.00	13.805004	20	PASS
11AC20SI SO	Ant1	5745	NV	-30	60000.00	10.443864	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	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	100000.00	17.286085	20	PASS
			NV	30	80000.00	13.828868	20	PASS
			NV	40	80000.00	13.828868	20	PASS
			NV	50	100000.00	17.286085	20	PASS
		5825	NV	-30	80000.00	13.733906	20	PASS
			NV	-20	60000.00	10.300429	20	PASS
			NV	-10	80000.00	13.733906	20	PASS
			NV	0	100000.00	17.167382	20	PASS
			NV	10	60000.00	10.300429	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
11AC40SI SO	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	80000.00	13.900956	20	PASS
			NV	30	80000.00	13.900956	20	PASS
			NV	40	80000.00	13.900956	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	40000.00	6.902502	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	80000.00	13.805004	20	PASS
			NV	50	80000.00	13.805004	20	PASS
11AC80SI SO	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

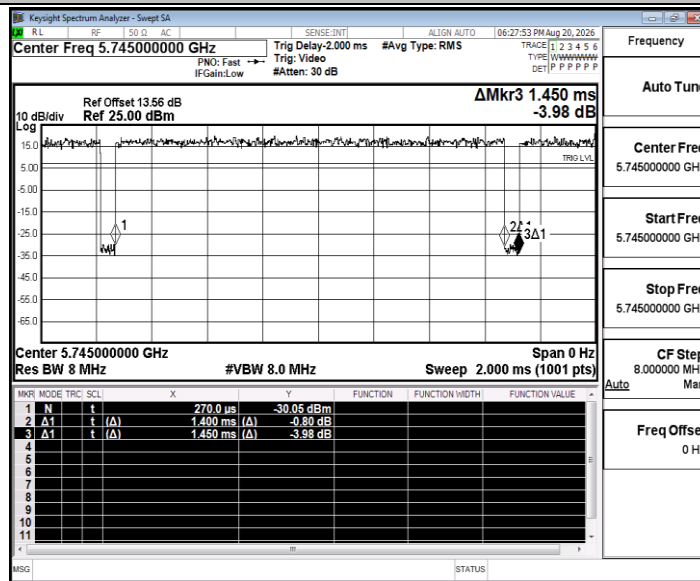
E.6 Duty Cycle

Test Result

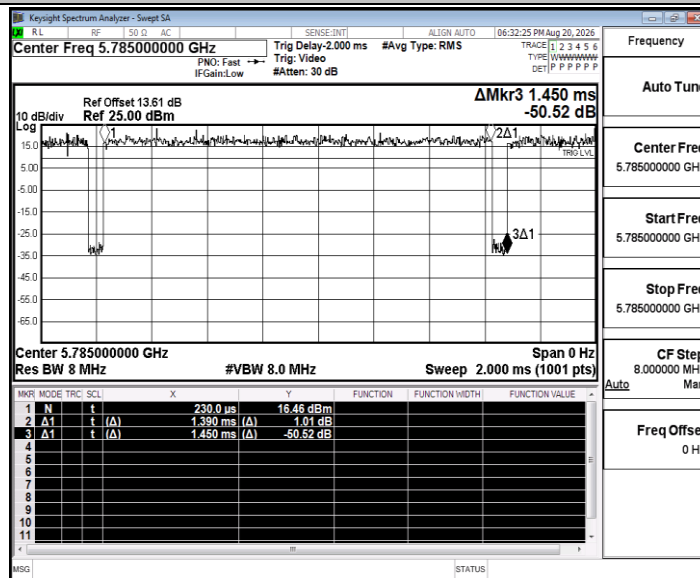
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factor	Limit	Verdict
11A	Ant1	5745	1.40	1.45	96.55	0.15	---	---
		5785	1.39	1.45	95.86	0.18	---	---
		5825	1.39	1.44	96.53	0.15	---	---
11N20SISO	Ant1	5745	1.31	1.37	95.62	0.19	---	---
		5785	1.31	1.36	96.32	0.16	---	---
		5825	1.31	1.37	95.62	0.19	---	---
11N40SISO	Ant1	5755	0.65	0.71	91.55	0.38	---	---
		5795	0.65	0.71	91.55	0.38	---	---
11AC20SISO	Ant1	5745	0.48	0.54	88.89	0.51	---	---
		5785	0.48	0.54	88.89	0.51	---	---
		5825	0.48	0.54	88.89	0.51	---	---
11AC40SISO	Ant1	5755	0.26	0.32	81.25	0.90	---	---
		5795	0.26	0.32	81.25	0.90	---	---
11AC80SISO	Ant1	5775	0.15	0.20	75.00	1.25	---	---

Test Graphs

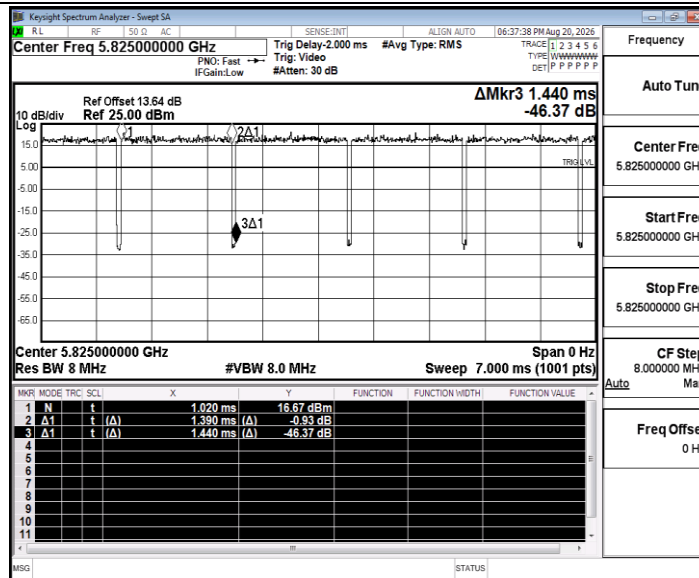
11A_Ant1_5745



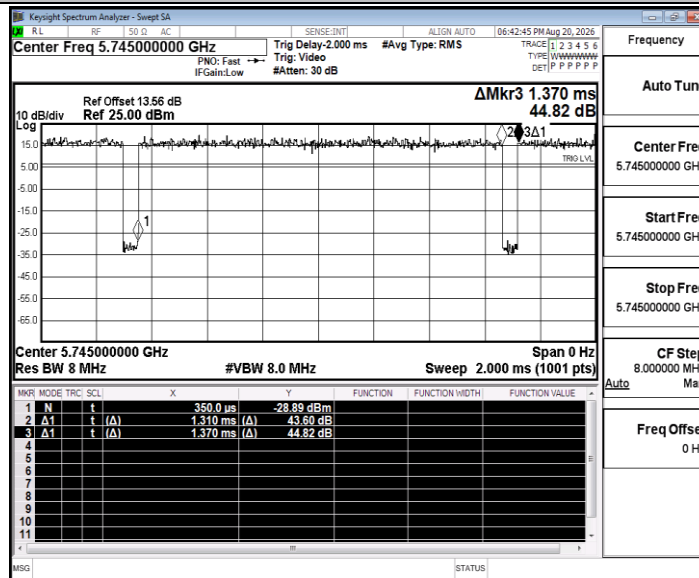
11A_Ant1_5785



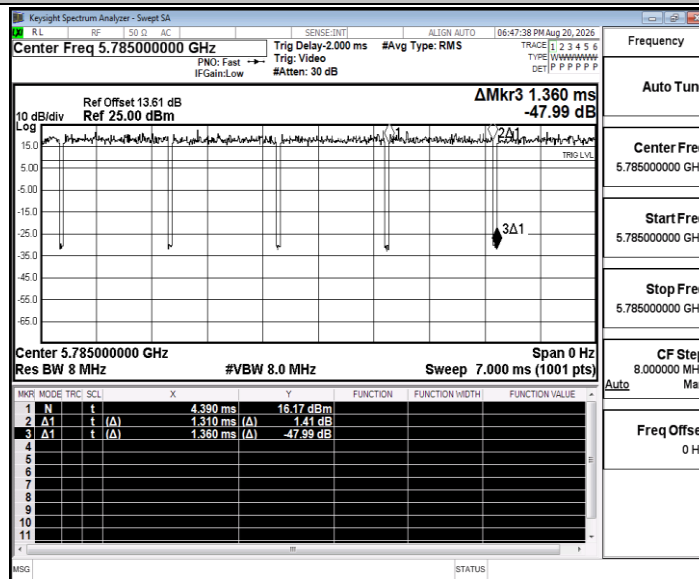
11A_Ant1_5825



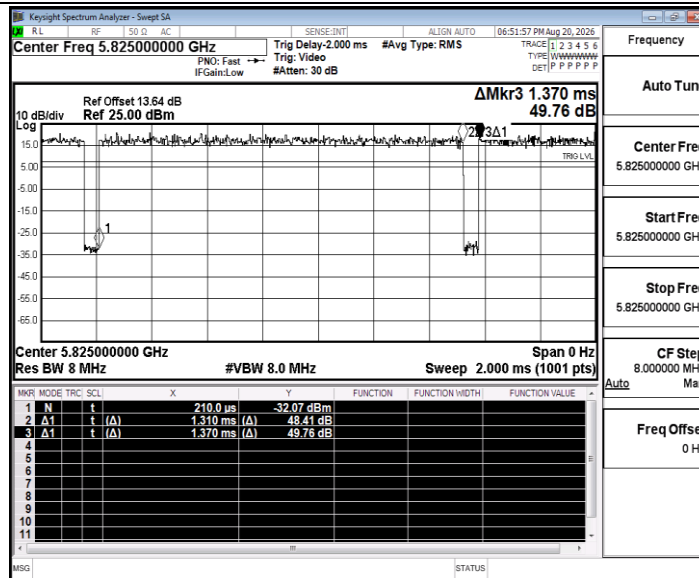
11N20SISO_Ant1_5745



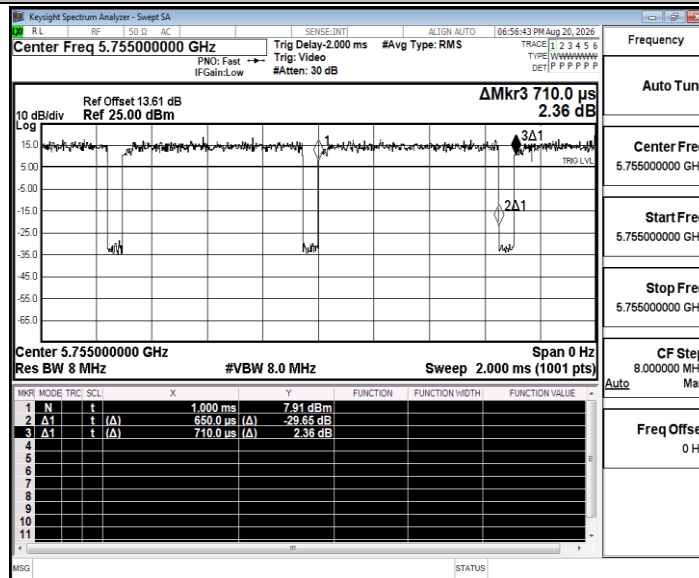
11N20SISO_Ant1_5785



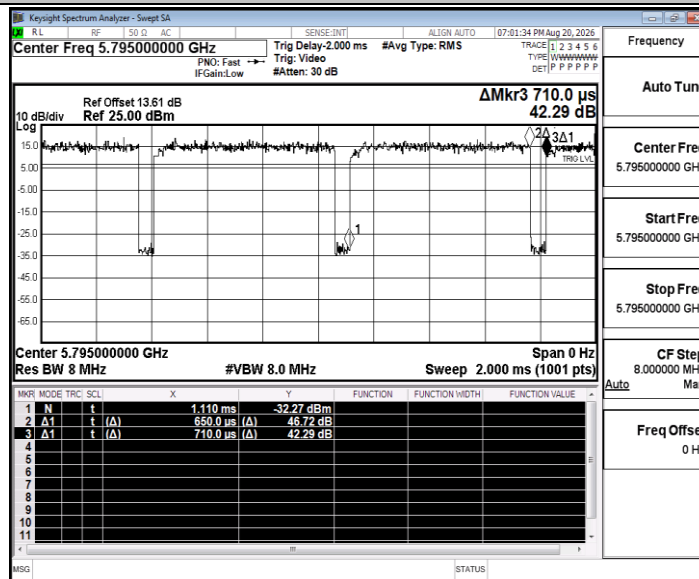
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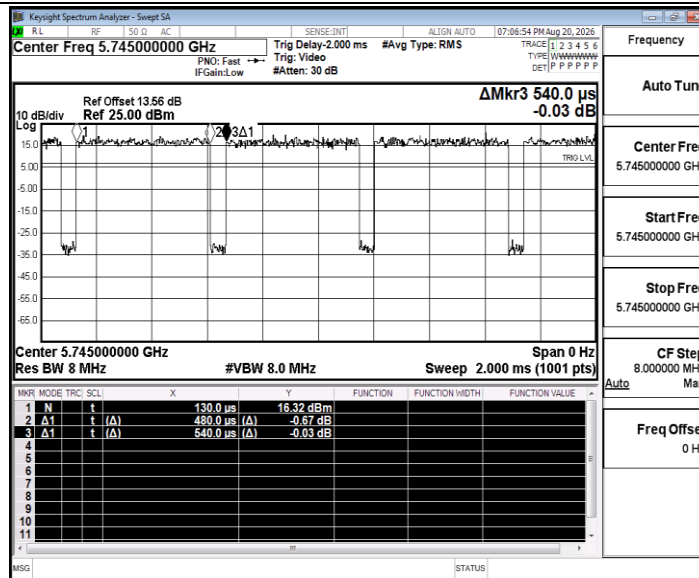
11N40SISO_Ant1_5755



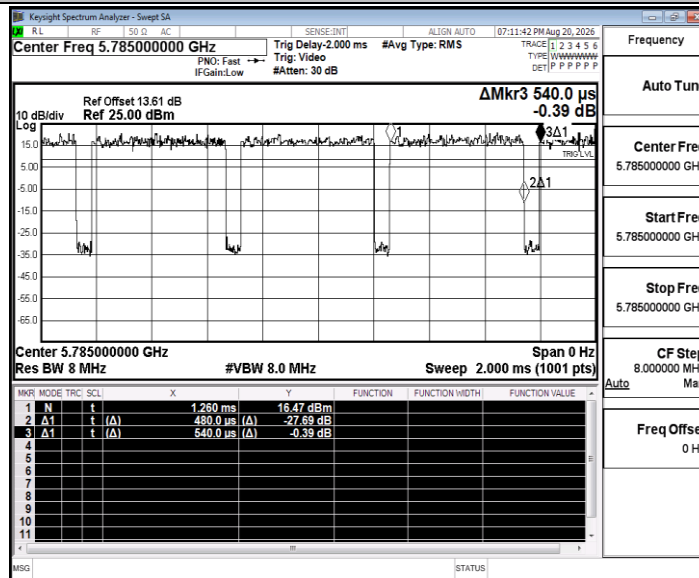
11N40SISO_Ant1_5795



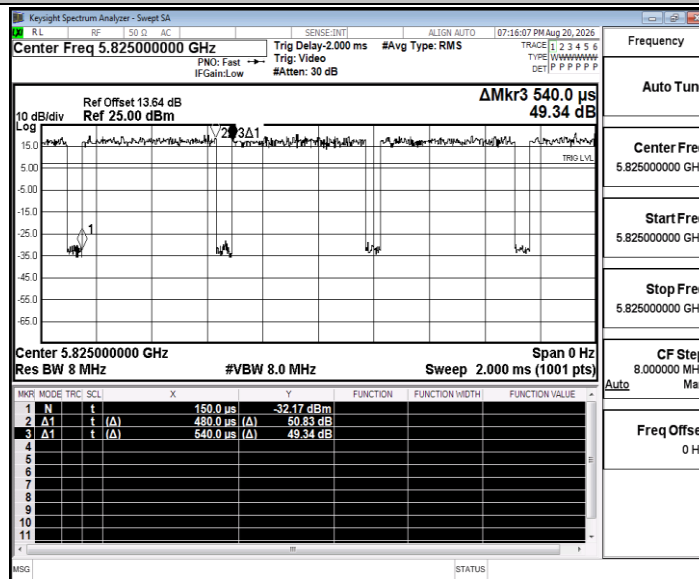
11AC20SISO_Ant1_5745



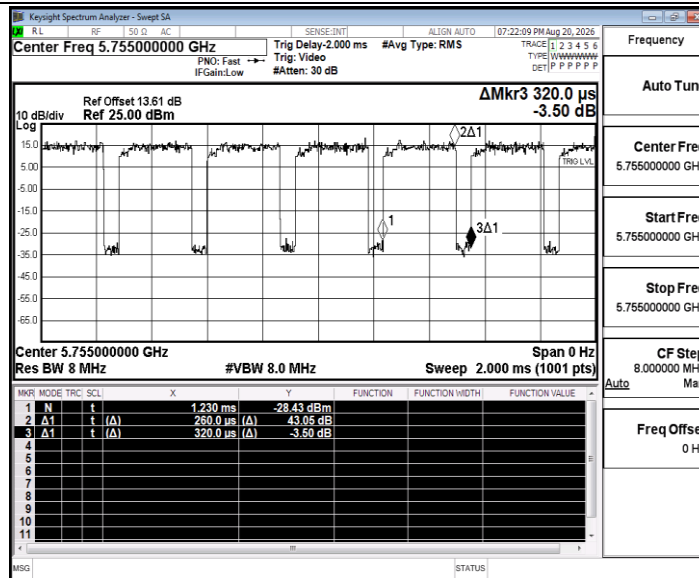
11AC20SISO_Ant1_5785



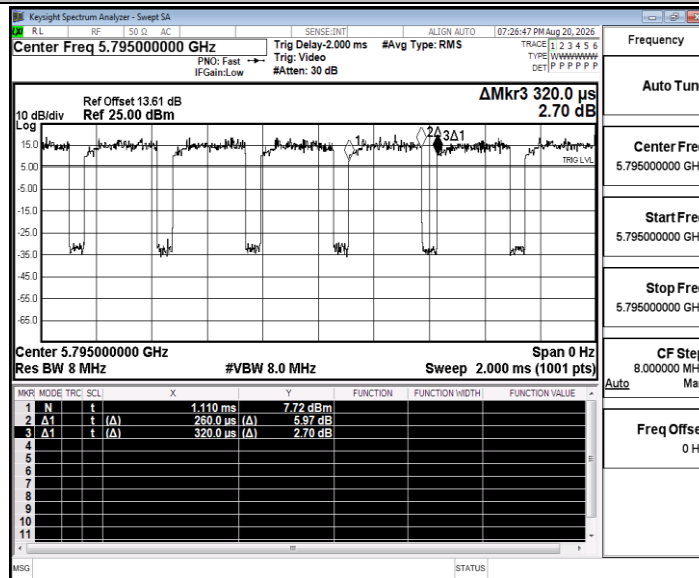
11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5775

