Appendix E

RF Test Data for 5.8GWIFI (Conducted Measurement)

Product Name: LCD PROJECTOR

Test Model: L011

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
	Nick Peng
Supervised by:	Ling Zhu
	Ling.zhu

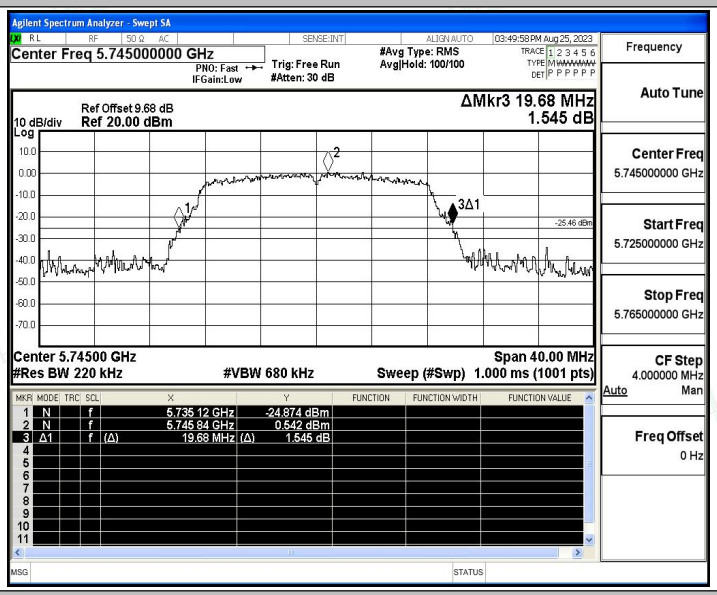
E.1 Emission Bandwidth

Test Result

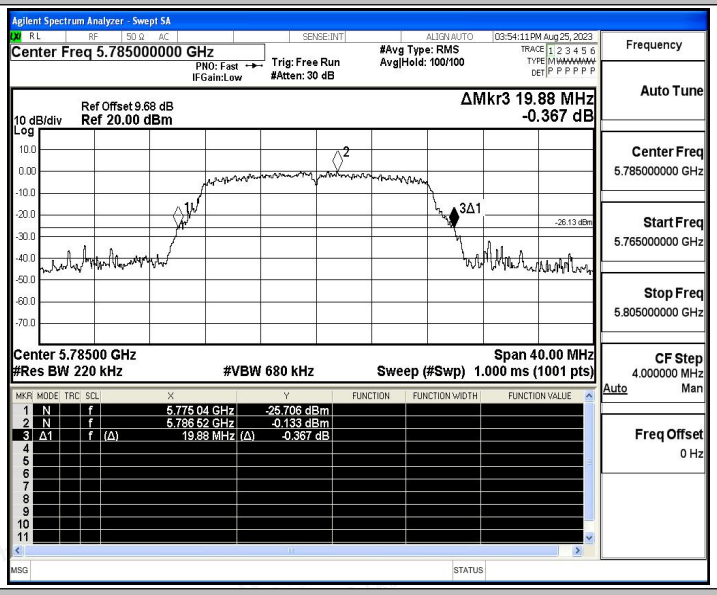
TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	19.680	5735.120	5754.800	---	---
		5785	19.880	5775.040	5794.920	---	---
		5825	19.320	5815.320	5834.640	---	---
11N20SISO	Ant1	5745	19.920	5735.040	5754.960	---	---
		5785	20.200	5774.920	5795.120	---	---
		5825	19.920	5815.040	5834.960	---	---
11N40SISO	Ant1	5755	40.240	5734.760	5775.000	---	---
		5795	39.840	5775.000	5814.840	---	---

Test Graphs

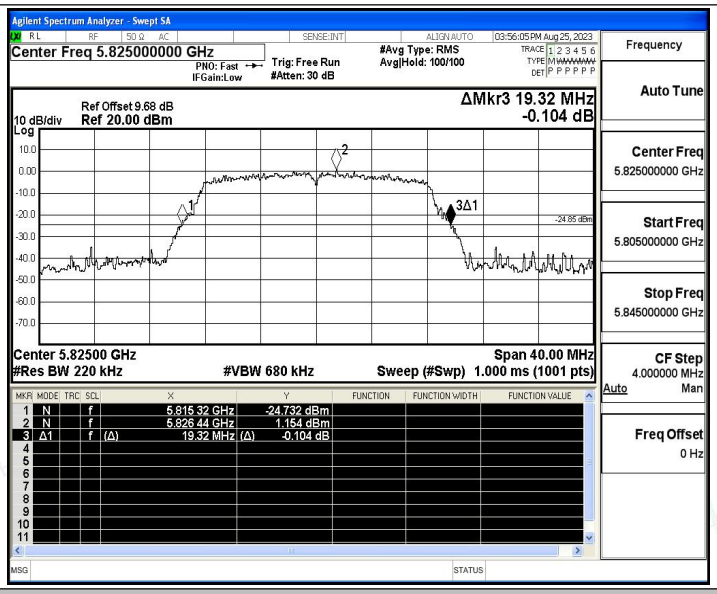
11A_Ant1_5745



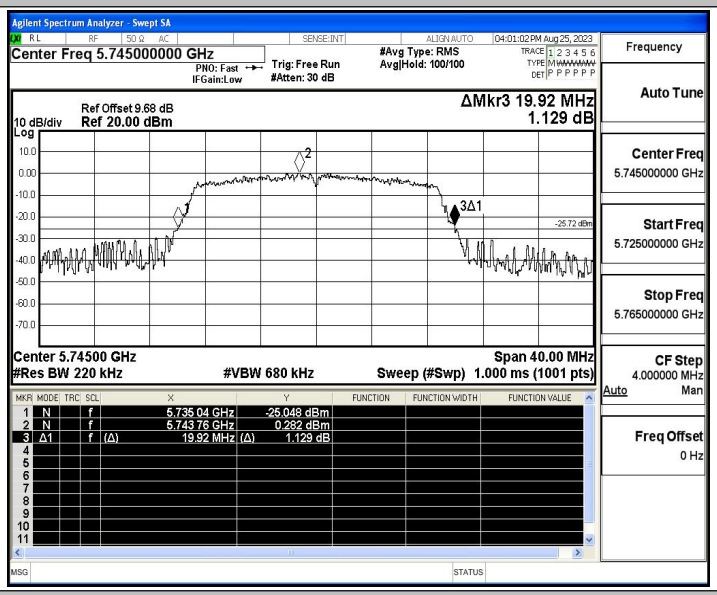
11A_Ant1_5785



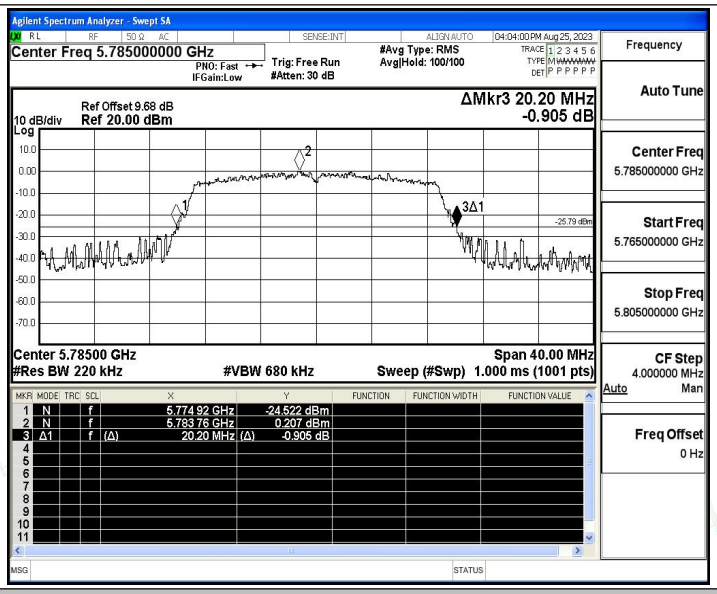
11A_Ant1_5825



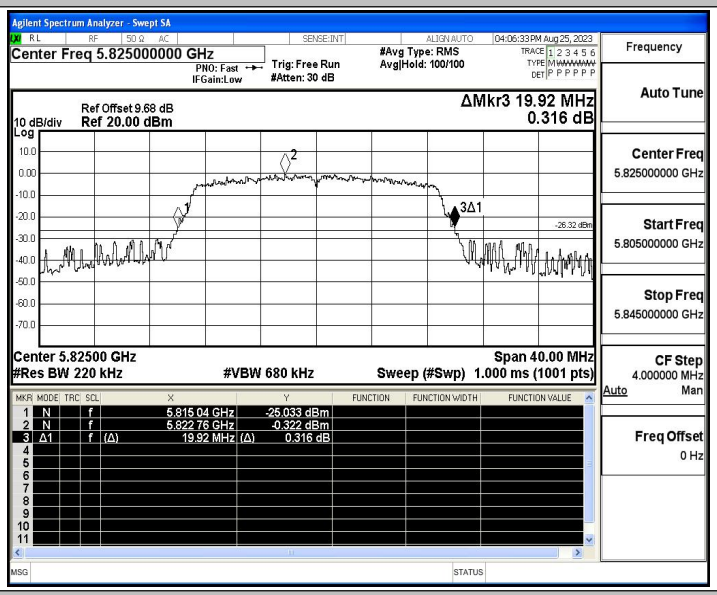
11N20SISO_Ant1_5745



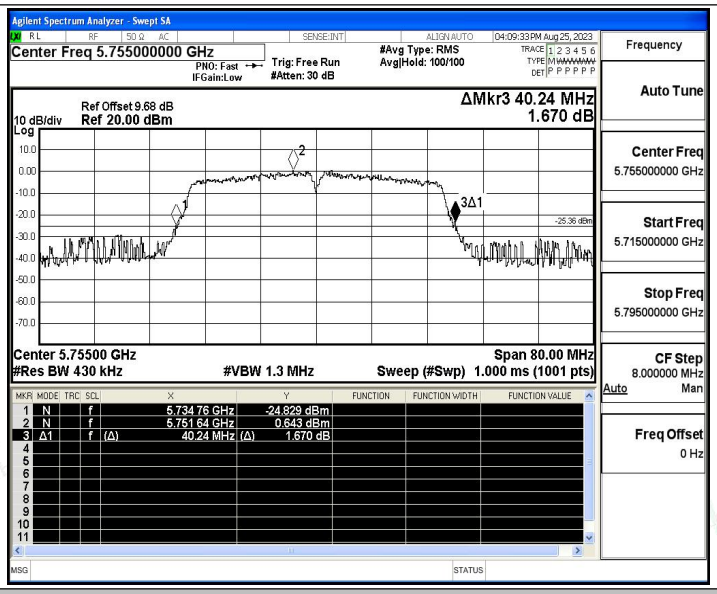
11N20SISO_Ant1_5785



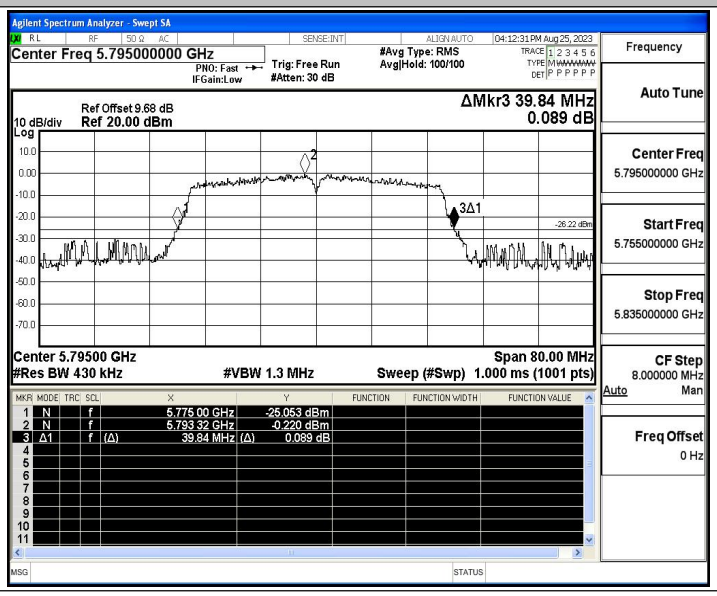
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



E.2 Maximum conducted output power

Test Result Channel Power

Test Mode	Antenna	Frequency[MHz]	Channel Powert [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	10.19	97.20	0.12	10.31	≤30.00	PASS
		5785	10.02	96.53	0.15	10.17	≤30.00	PASS
		5825	9.72	97.20	0.12	9.84	≤30.00	PASS
11N20SISO	Ant1	5745	9.78	96.99	0.13	9.91	≤30.00	PASS
		5785	9.82	96.99	0.13	9.95	≤30.00	PASS
		5825	9.40	96.24	0.17	9.57	≤30.00	PASS
11N40SISO	Ant1	5755	9.56	94.12	0.26	9.82	≤30.00	PASS
		5795	9.12	94.12	0.26	9.38	≤30.00	PASS

Note：The Duty Cycle Factor is compensated in the graph.

E.3 Maximum power spectral density

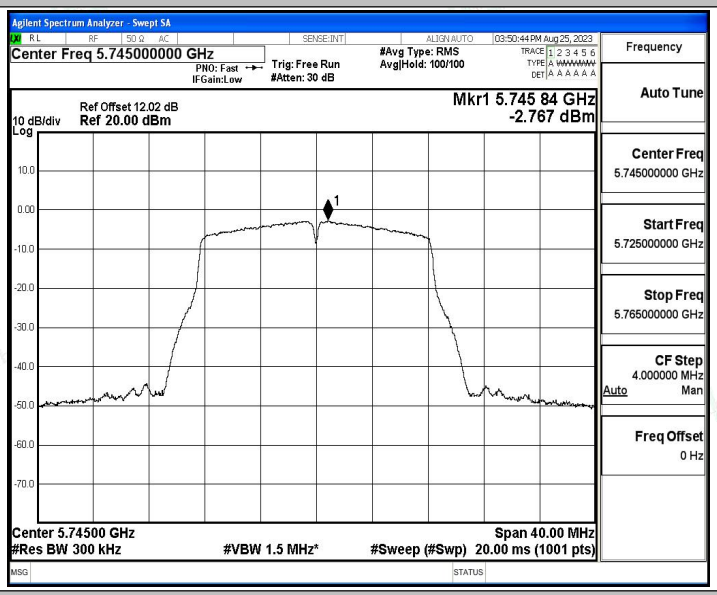
Test Result

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5745	-2.77	≤30.00	PASS
		5785	-3	≤30.00	PASS
		5825	-3.31	≤30.00	PASS
11N20SISO	Ant1	5745	-3.43	≤30.00	PASS
		5785	-3.48	≤30.00	PASS
		5825	-3.55	≤30.00	PASS
11N40SISO	Ant1	5755	-6.62	≤30.00	PASS
		5795	-6.78	≤30.00	PASS

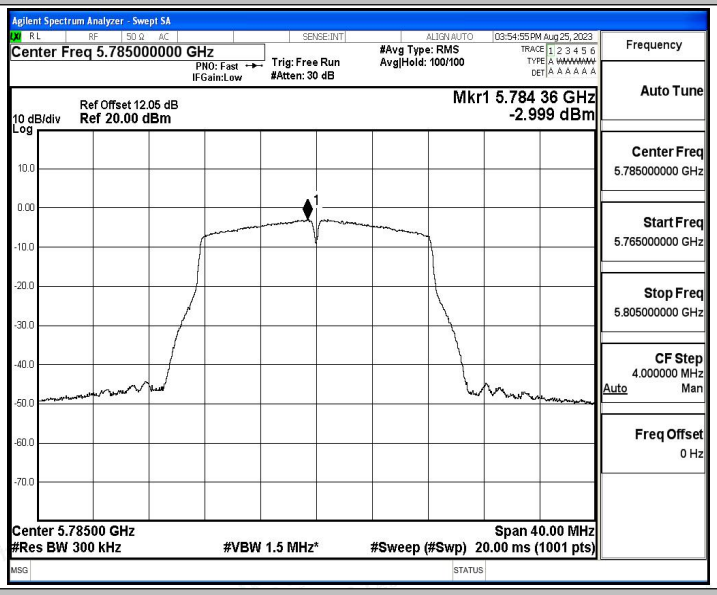
Note：1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

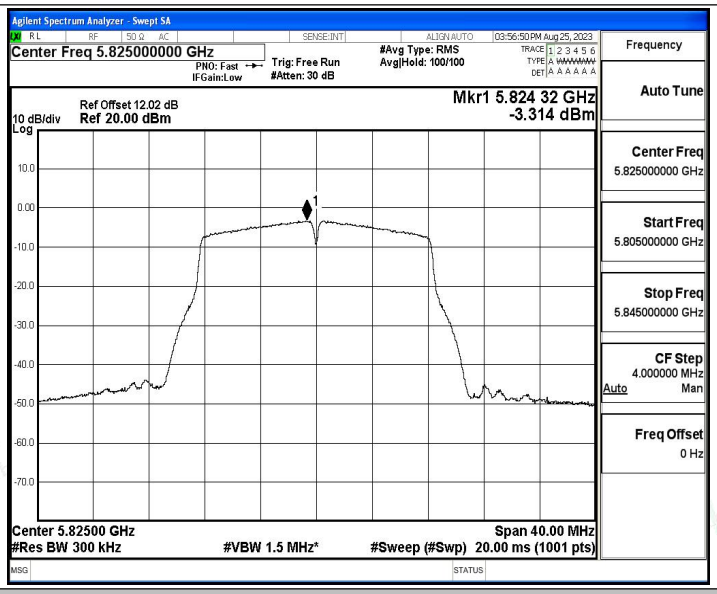
11A_Ant1_5745



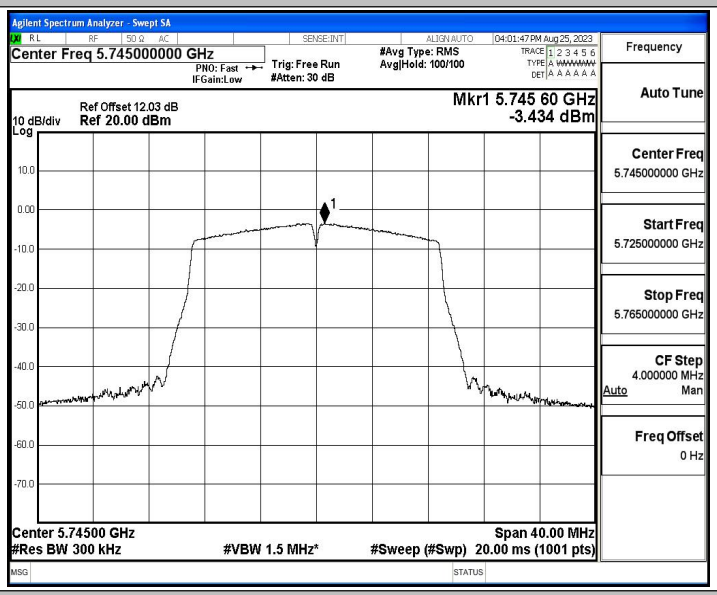
11A_Ant1_5785



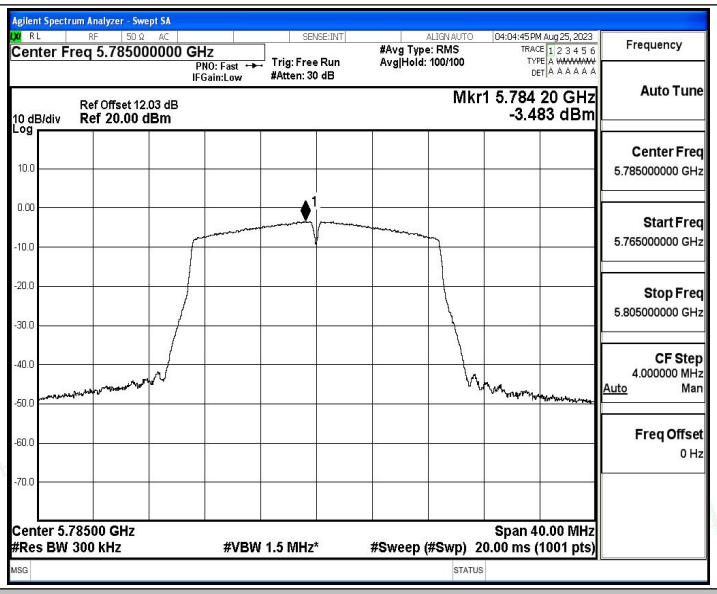
11A_Ant1_5825



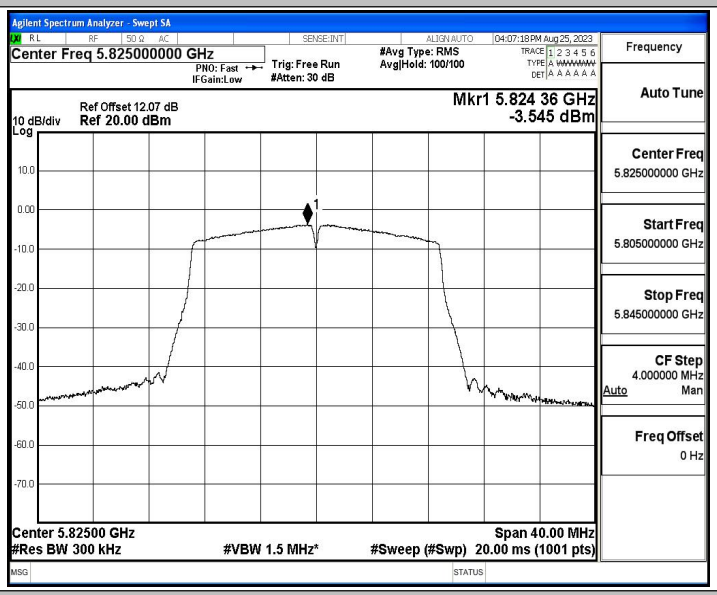
11N20SISO_Ant1_5745



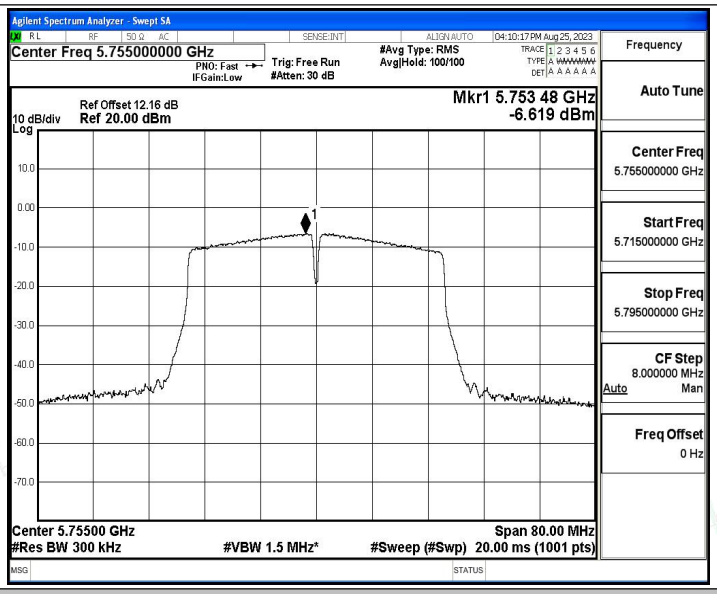
11N20SISO_Ant1_5785



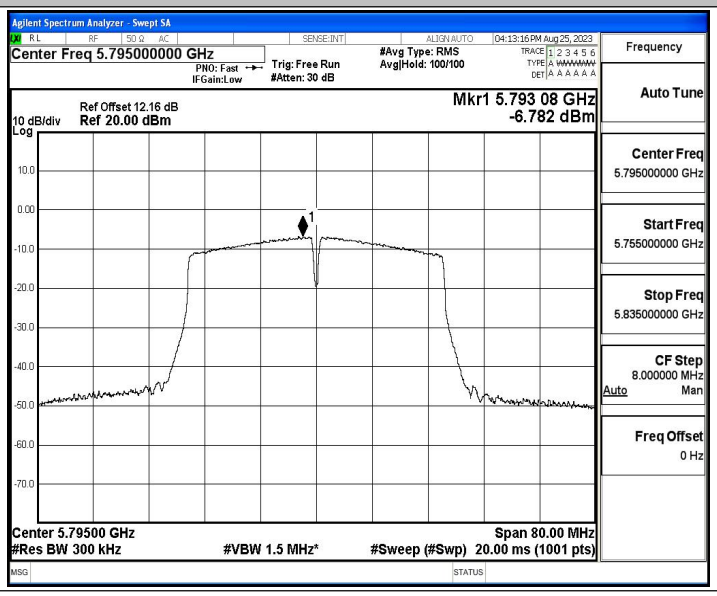
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



E.4 Emissions in Restricted Bands

Test Result

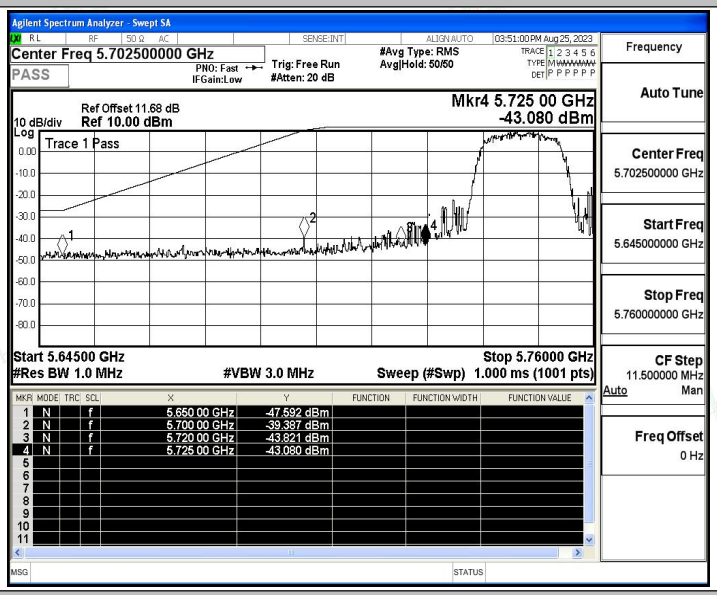
TestMode	Antenna	ChName	Frequency[MHz]	Detector	Freq [MHz]	Result [dBm]	Gain (dBi)	EIRP Power (dBm)	Limit [dBuV/m]	Verdict
11A	Ant1	Low	5745	Peak	5650.000	-47.592	5.36	-42.23	-27	PASS
				Peak	5700.000	-39.39	5.36	-34.03	10	PASS
				Peak	5720.000	-43.82	5.36	-38.46	15.6	PASS
				Peak	5725.000	-43.08	5.36	-37.72	27	PASS
		High	5825	Peak	5850.000	-40.354	5.36	-34.99	27	PASS
				Peak	5855.000	-45.21	5.36	-39.85	15.6	PASS
				Peak	5875.000	-45.81	5.36	-40.45	10	PASS
				Peak	5925.000	-48.41	5.36	-43.05	-27	PASS
11N20SISO	Ant1	Low	5745	Peak	5650.000	-49.662	5.36	-44.30	-27	PASS
				Peak	5700.000	-46.5	5.36	-41.14	10	PASS
				Peak	5720.000	-41.44	5.36	-36.08	15.6	PASS
				Peak	5725.000	-39.94	5.36	-34.58	27	PASS
		High	5825	Peak	5850.000	-32.814	5.36	-27.45	27	PASS
				Peak	5855.000	-41.97	5.36	-36.61	15.6	PASS
				Peak	5875.000	-45.33	5.36	-39.97	10	PASS
				Peak	5925.000	-49.33	5.36	-43.97	-27	PASS
11N40SISO	Ant1	Low	5755	Peak	5650.000	-47.978	5.36	-42.62	-27	PASS
				Peak	5700.000	-43.1	5.36	-37.74	10	PASS
				Peak	5720.000	-36.87	5.36	-31.51	15.6	PASS
				Peak	5725.000	-24.22	5.36	-18.86	27	PASS
		High	5795	Peak	5850.000	-45.651	5.36	-40.29	27	PASS
				Peak	5855.000	-46.01	5.36	-40.65	15.6	PASS
				Peak	5875.000	-42.06	5.36	-36.70	10	PASS
				Peak	5925.000	-47.91	5.36	-42.55	-27	PASS

Note：

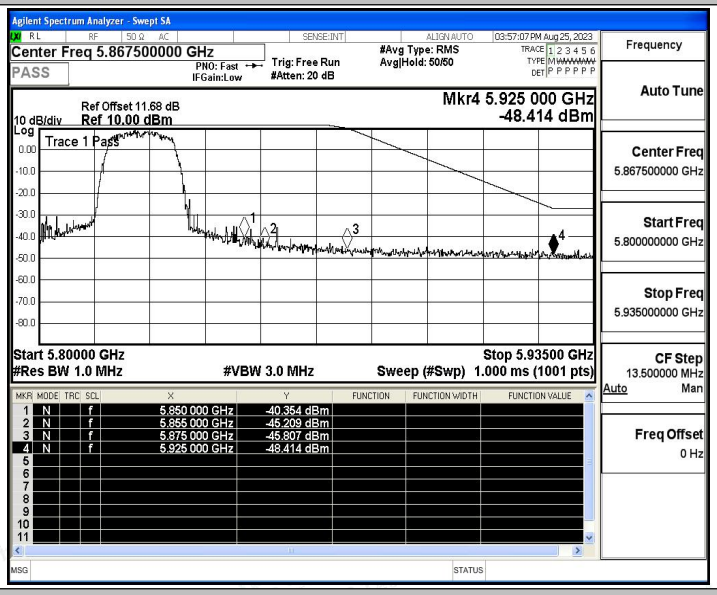
1. The Antenna Gain is compensated in the graph.
2. For transmitters operating in 5150-5350 GHz band and 5470-5725 GHz band: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

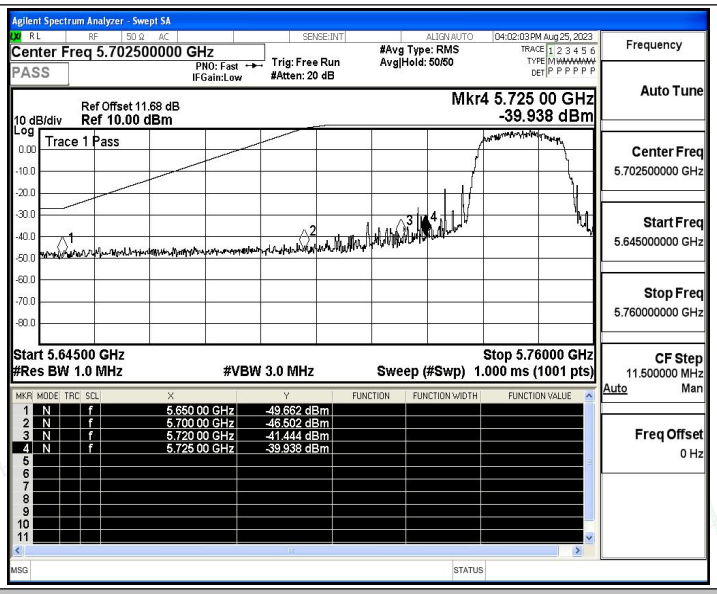
11A_Ant1_Low_5745_Peak



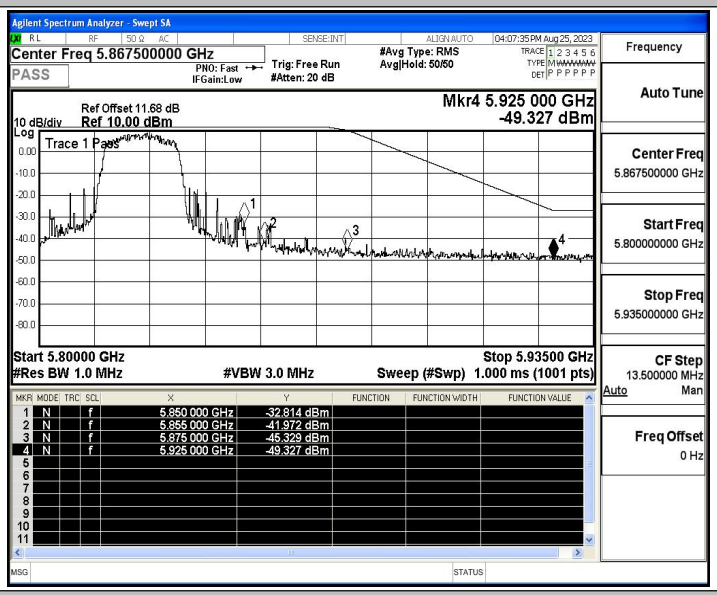
11A_Ant1_High_5825_Peak



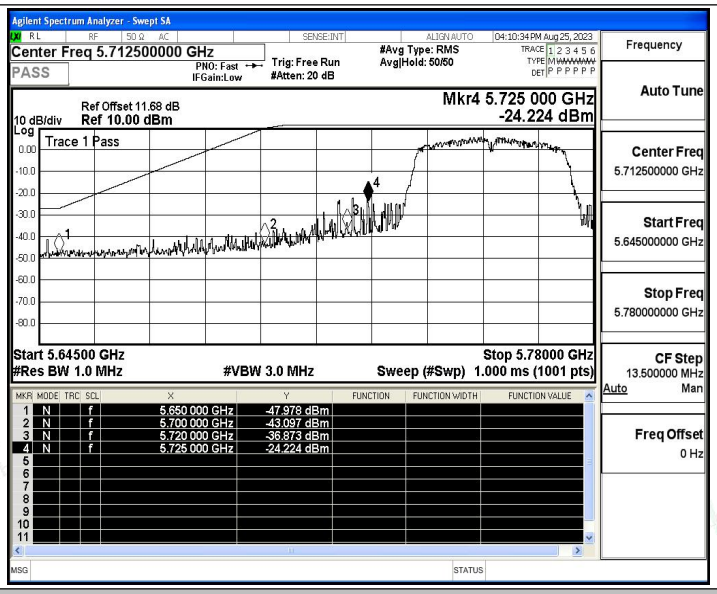
11N20SISO_Ant1_Low_5745_Peak



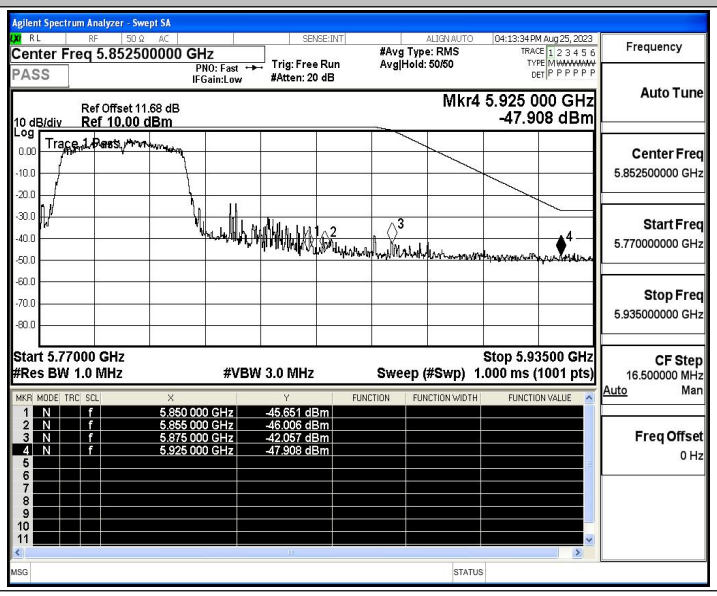
11N20SISO_Ant1_High_5825_Peak



11N40SISO_Ant1_Low_5755_Peak



11N40SISO_Ant1_High_5795_Peak



E.5 Frequency Stability

Test Result

Voltage								
TestMode	Antenna	Frequency[MHz]	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11N20SISO	Ant1	5745	NV	NT	-40000.00	-6.962576	20	PASS
			LV	NT	-20000.00	-3.481288	20	PASS
			HV	NT	-20000.00	-3.481288	20	PASS
		5785	NV	NT	-20000.00	-3.457217	20	PASS
			LV	NT	-20000.00	-3.457217	20	PASS
			HV	NT	-40000.00	-6.914434	20	PASS
		5825	NV	NT	0.00	0.000000	20	PASS
			LV	NT	-20000.00	-3.433476	20	PASS
			HV	NT	0.00	0.000000	20	PASS
11N40SISO	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	0.00	0.000000	20	PASS
			LV	NT	-40000.00	-6.902502	20	PASS
			HV	NT	80000.00	13.805004	20	PASS

Temperature								
TestMode	Antenna	Frequency[MHz]	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11N20SISO	Ant1	5745	NV	-30	0.00	0.000000	20	PASS
			NV	-20	-40000.00	-6.962576	20	PASS
			NV	-10	-20000.00	-3.481288	20	PASS
			NV	0	-40000.00	-6.962576	20	PASS
			NV	10	-40000.00	-6.962576	20	PASS
			NV	20	-20000.00	-3.481288	20	PASS
			NV	30	-40000.00	-6.962576	20	PASS
			NV	40	20000.00	3.481288	20	PASS
			NV	50	-60000.00	-10.443864	20	PASS
		5785	NV	-30	20000.00	3.457217	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	-20000.00	-3.457217	20	PASS
			NV	0	0.00	0.000000	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	0.00	0.000000	20	PASS
			NV	50	-20000.00	-3.457217	20	PASS
		5825	NV	-30	-40000.00	-6.866953	20	PASS
			NV	-20	-60000.00	-10.300429	20	PASS
			NV	-10	-20000.00	-3.433476	20	PASS
			NV	0	-20000.00	-3.433476	20	PASS
			NV	10	-40000.00	-6.866953	20	PASS
			NV	20	-20000.00	-3.433476	20	PASS
			NV	30	-20000.00	-3.433476	20	PASS
			NV	40	-20000.00	-3.433476	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	0.00	0.000000	20	PASS
			NV	20	-40000.00	-6.950478	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-40000.00	-6.950478	20	PASS
			NV	50	0.00	0.000000	20	PASS
		5795	NV	-30	-40000.00	-6.902502	20	PASS
			NV	-20	-40000.00	-6.902502	20	PASS
			NV	-10	-40000.00	-6.902502	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	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS

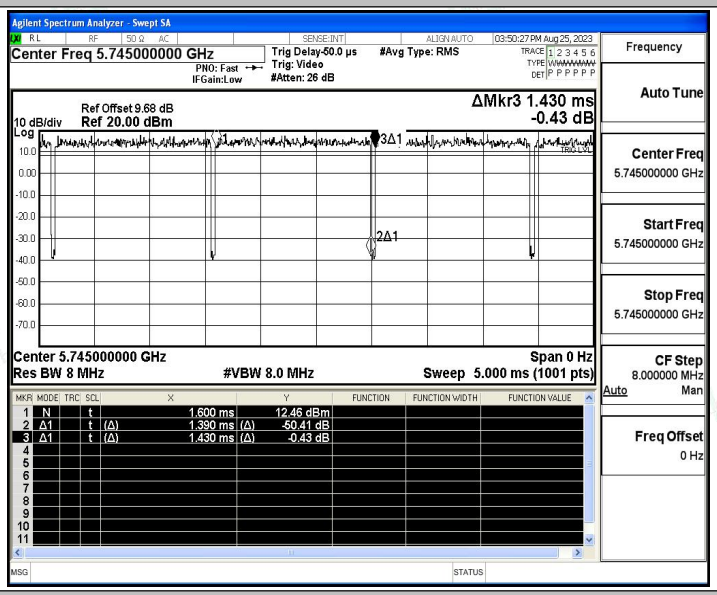
E.6 Duty Cycle

Test Result

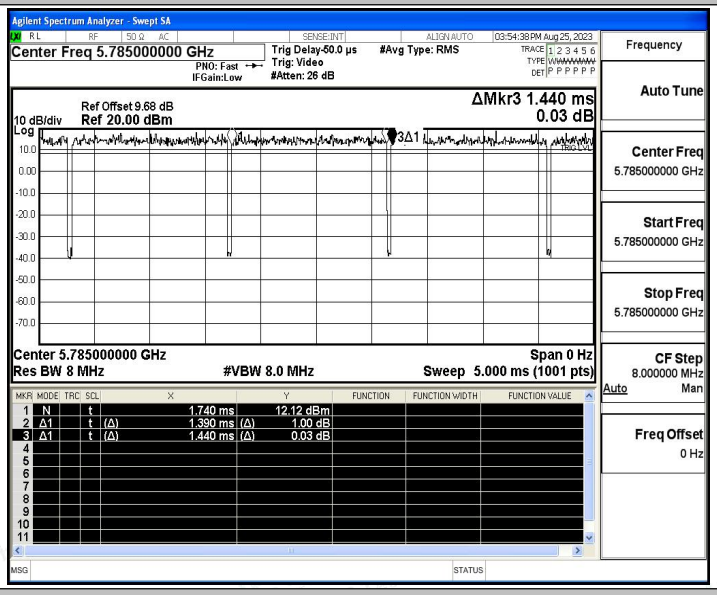
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5745	1.39	1.43	97.20
		5785	1.39	1.44	96.53
		5825	1.39	1.43	97.20
11N20SISO	Ant1	5745	1.29	1.33	96.99
		5785	1.29	1.33	96.99
		5825	1.28	1.33	96.24
11N40SISO	Ant1	5755	0.64	0.68	94.12
		5795	0.64	0.68	94.12

Test Graphs

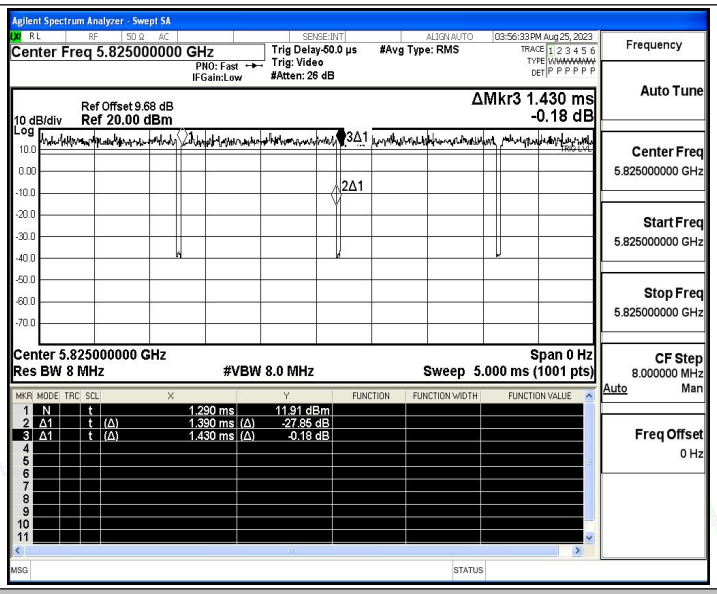
11A_Ant1_5745



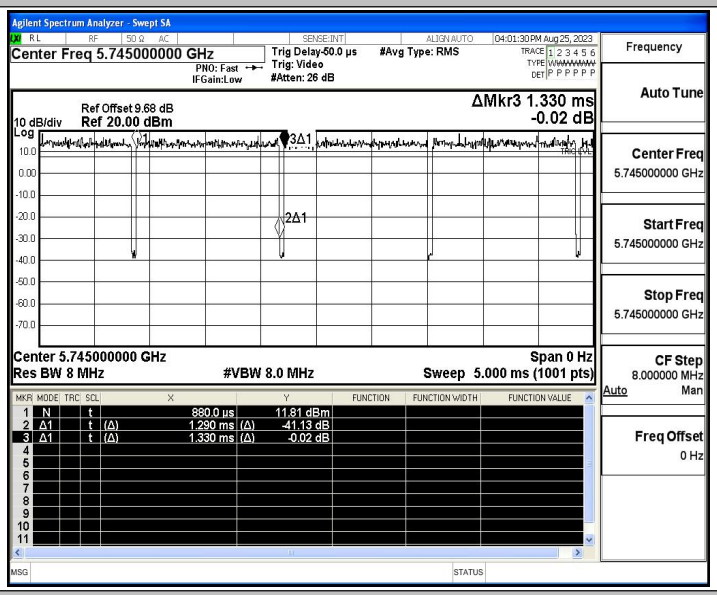
11A_Ant1_5785



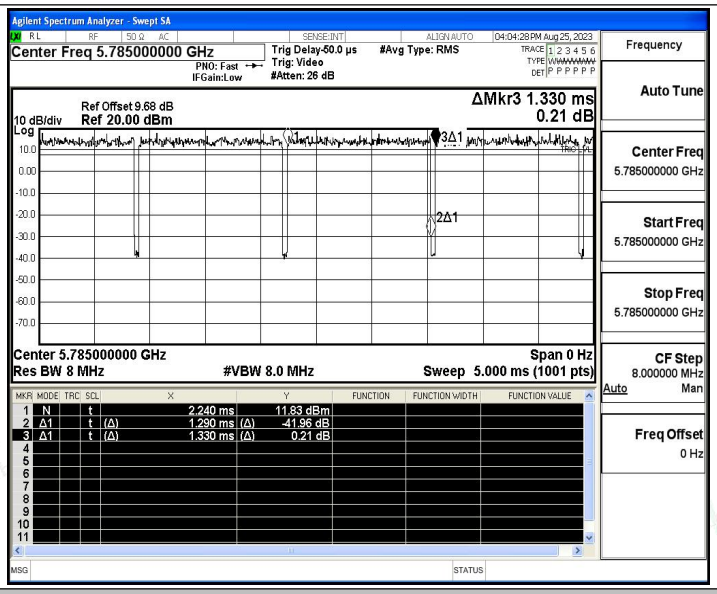
11A_Ant1_5825



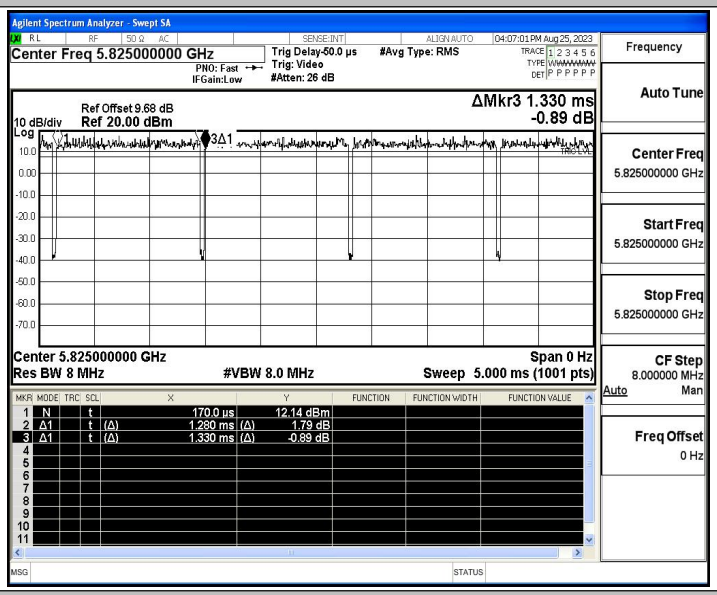
11N20SISO_Ant1_5745



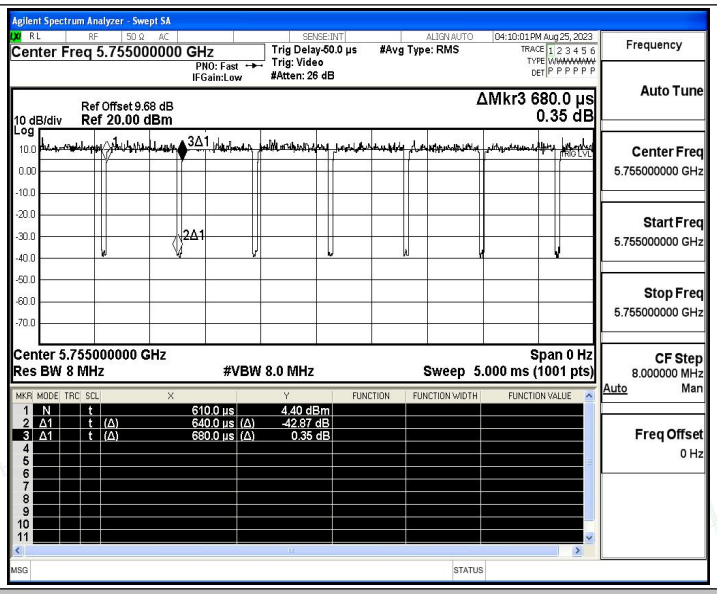
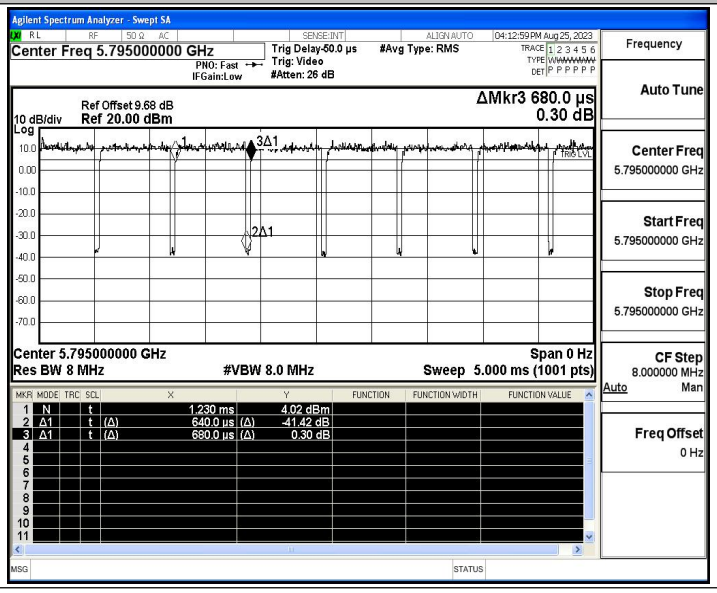
11N20SISO_Ant1_5785



11N20SISO_Ant1_5825



11N40SISO_Ant1_5755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