

FCC Appendix RF Test Data

FCC ID : 2BOTE-HWMDC001

Company: : ShenZhen Testdisplay Technology Co., Ltd

EUT : Motorcycle dash cam

Model Number : HWMDC001

Reviewed By : Eric Wang

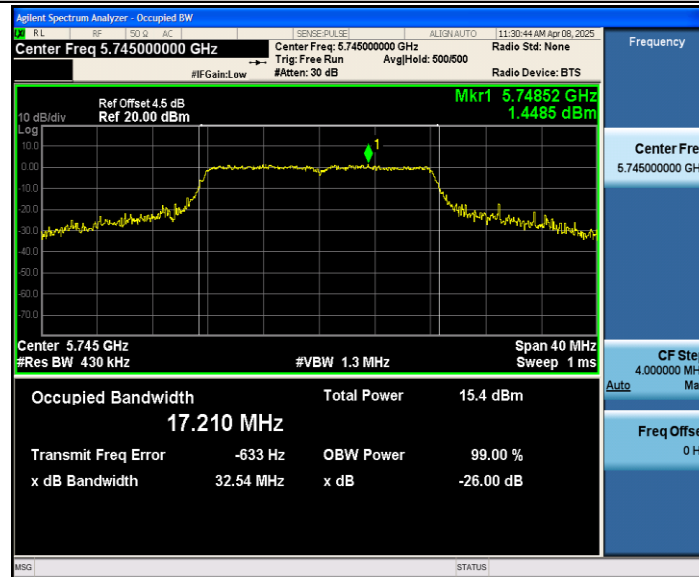
Appendix A1: Occupied channel bandwidth

Test Result

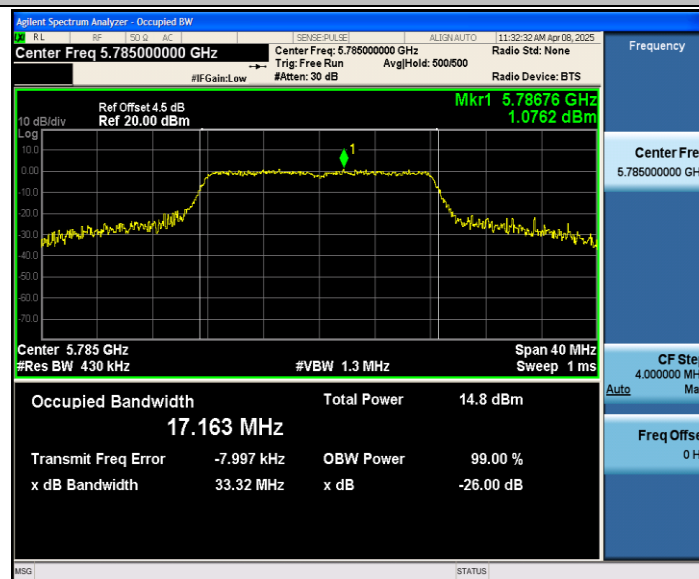
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	17.210	5736.3944	5753.6044	---	---
		5785	17.163	5776.4105	5793.5735	---	---
		5825	17.132	5816.4548	5833.5868	---	---
11N20SISO	Ant1	5745	18.118	5735.9675	5754.0855	---	---
		5785	18.128	5775.9622	5794.0902	---	---
		5825	18.133	5815.9759	5834.1089	---	---
11N40SISO	Ant1	5755	36.587	5736.7418	5773.3288	---	---
		5795	36.486	5776.8035	5813.2895	---	---

Test Graphs

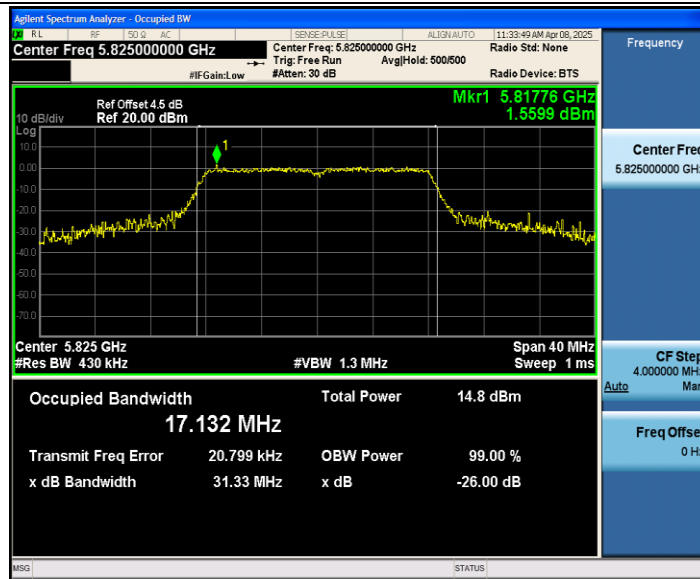
11A_Ant1_5745



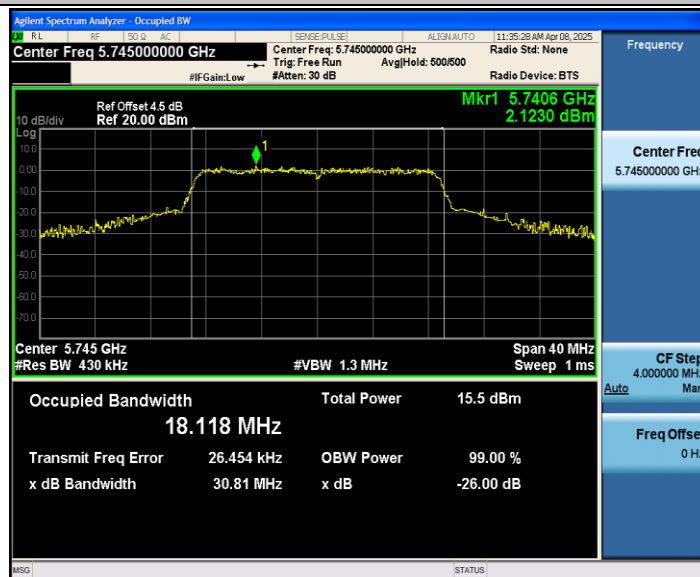
11A_Ant1_5785



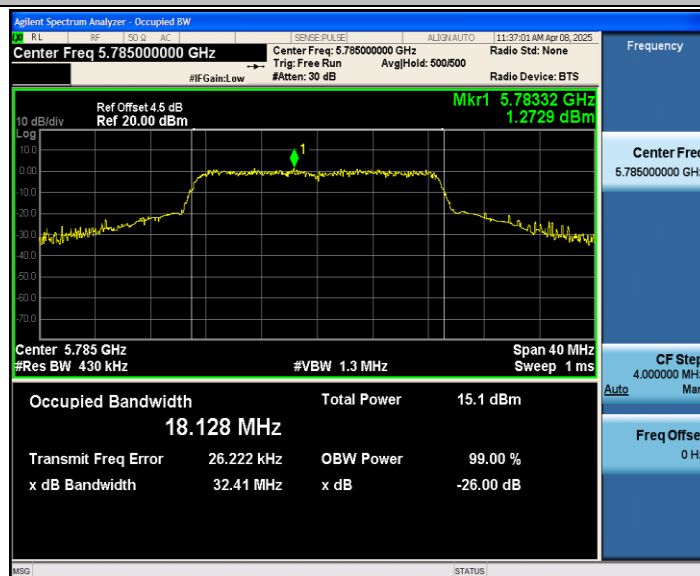
11A_Ant1_5825



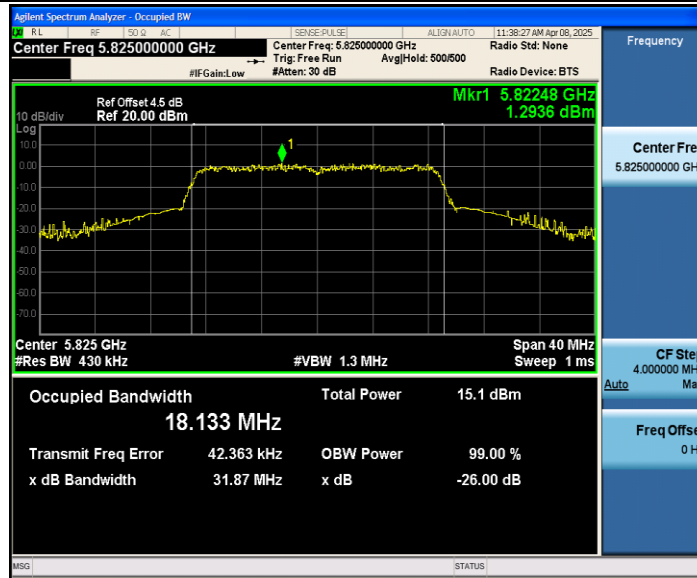
11N20SISO_Ant1_5745



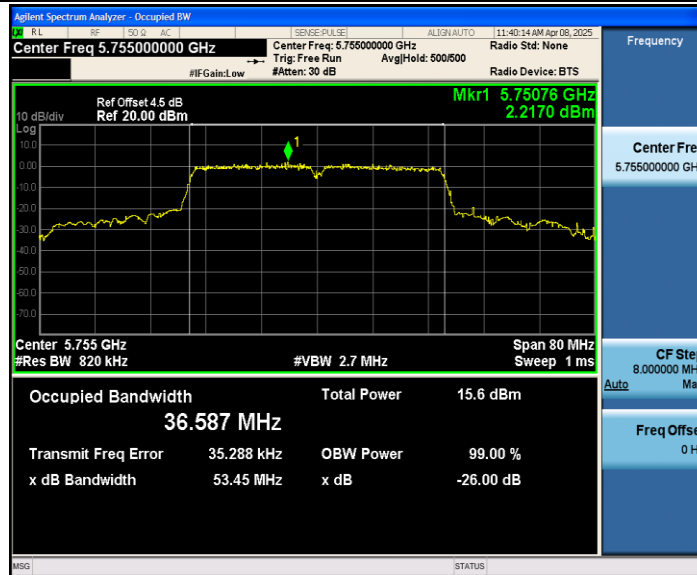
11N20SISO_Ant1_5785



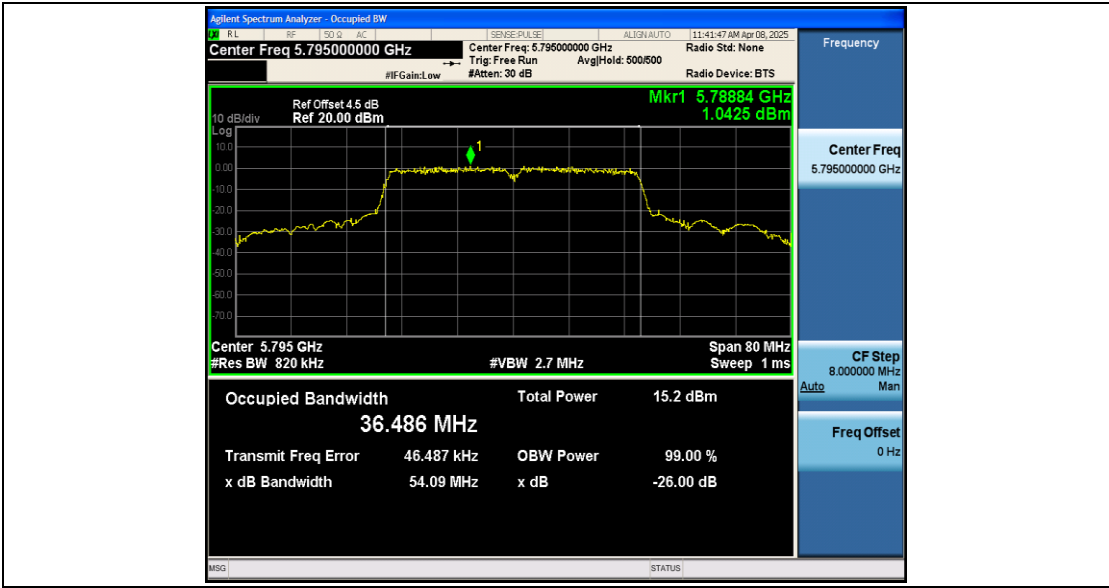
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795

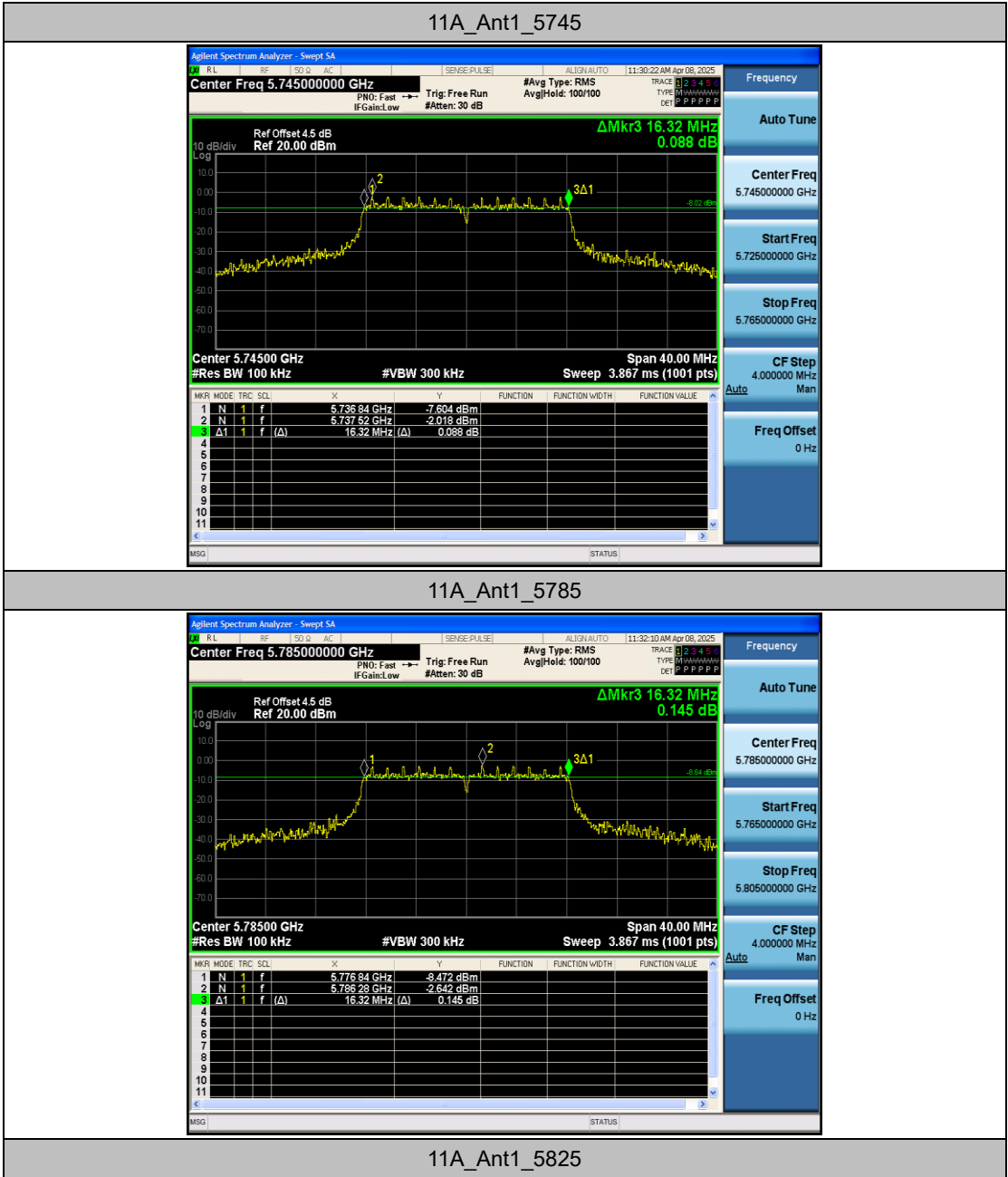


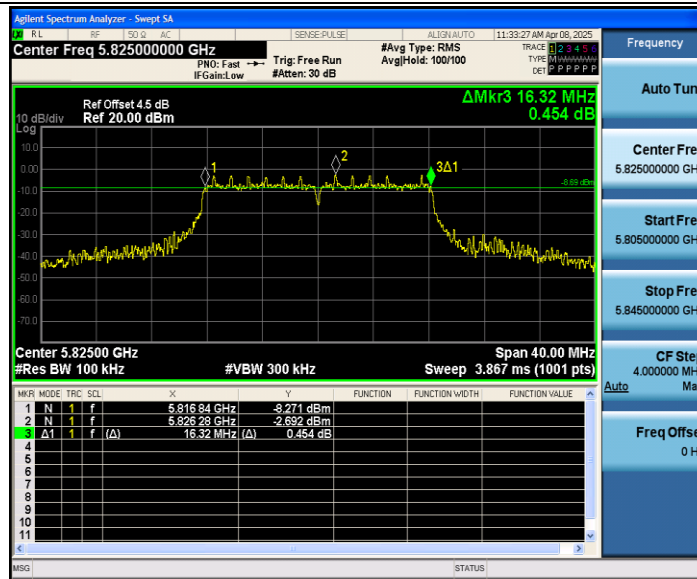
Appendix A2: Min emission bandwidth

Test Result B4

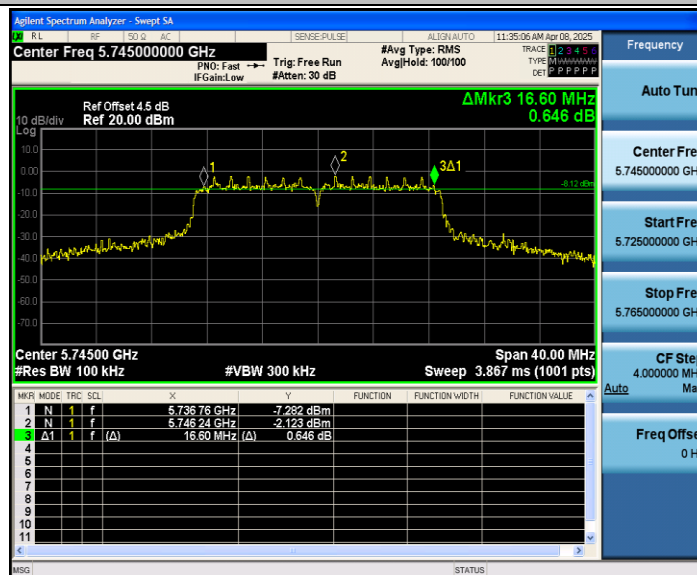
TestMode	Antenna	Freq(MHz)	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.840	5753.160	0.5	PASS
		5785	16.320	5776.840	5793.160	0.5	PASS
		5825	16.320	5816.840	5833.160	0.5	PASS
11N20SISO	Ant1	5745	16.600	5736.760	5753.360	0.5	PASS
		5785	16.600	5776.760	5793.360	0.5	PASS
		5825	16.720	5816.760	5833.480	0.5	PASS
11N40SISO	Ant1	5755	35.200	5737.400	5772.600	0.5	PASS
		5795	35.200	5777.400	5812.600	0.5	PASS

Test Graphs B4

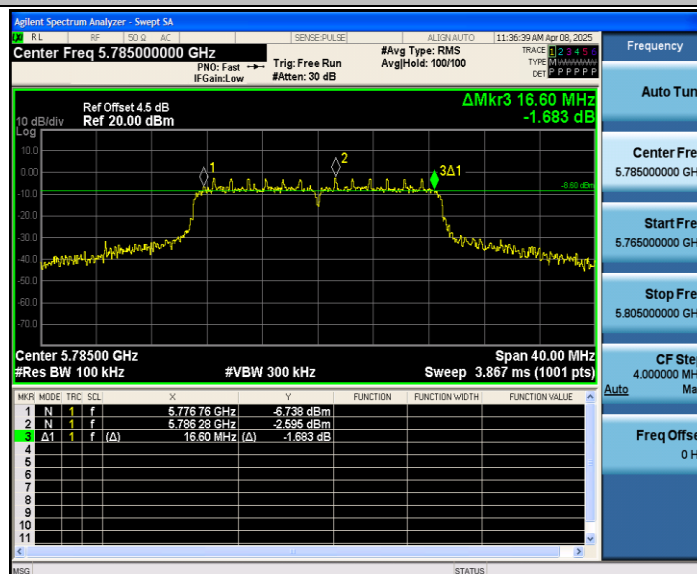




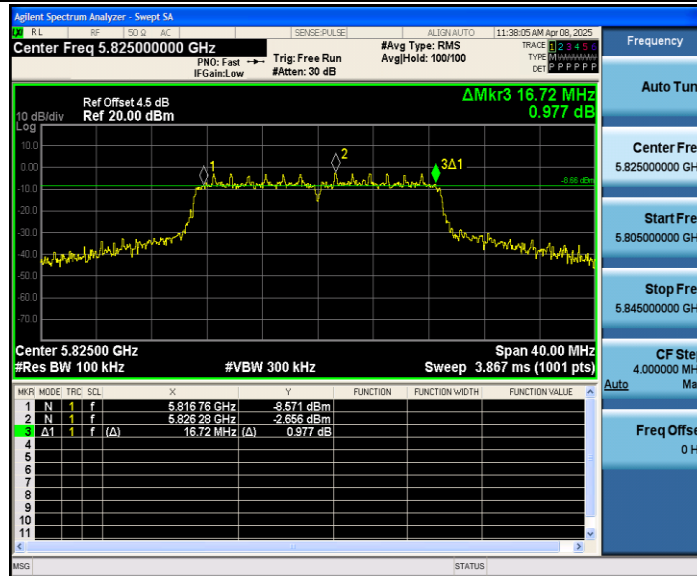
11N20SISO_Ant1_5745



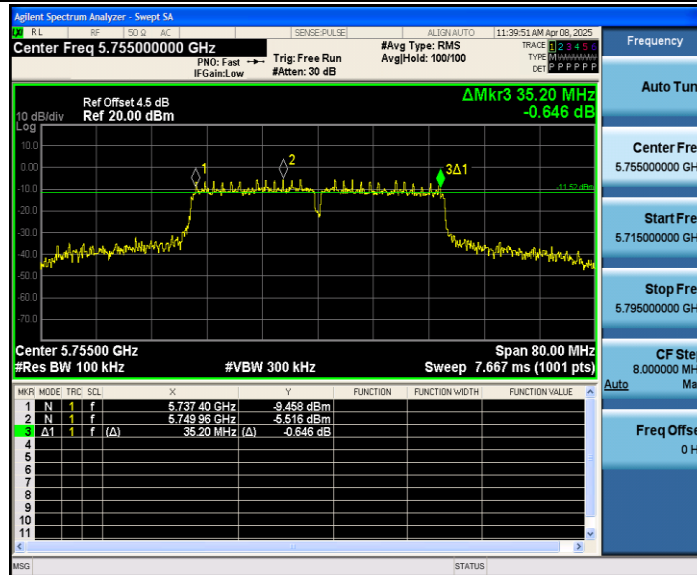
11N20SISO_Ant1_5785



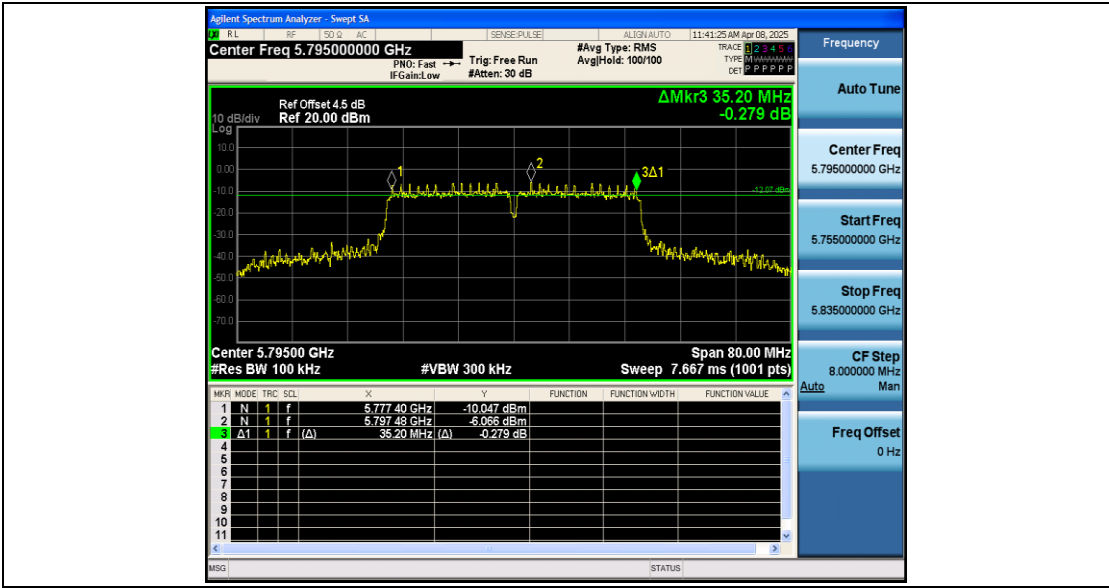
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795

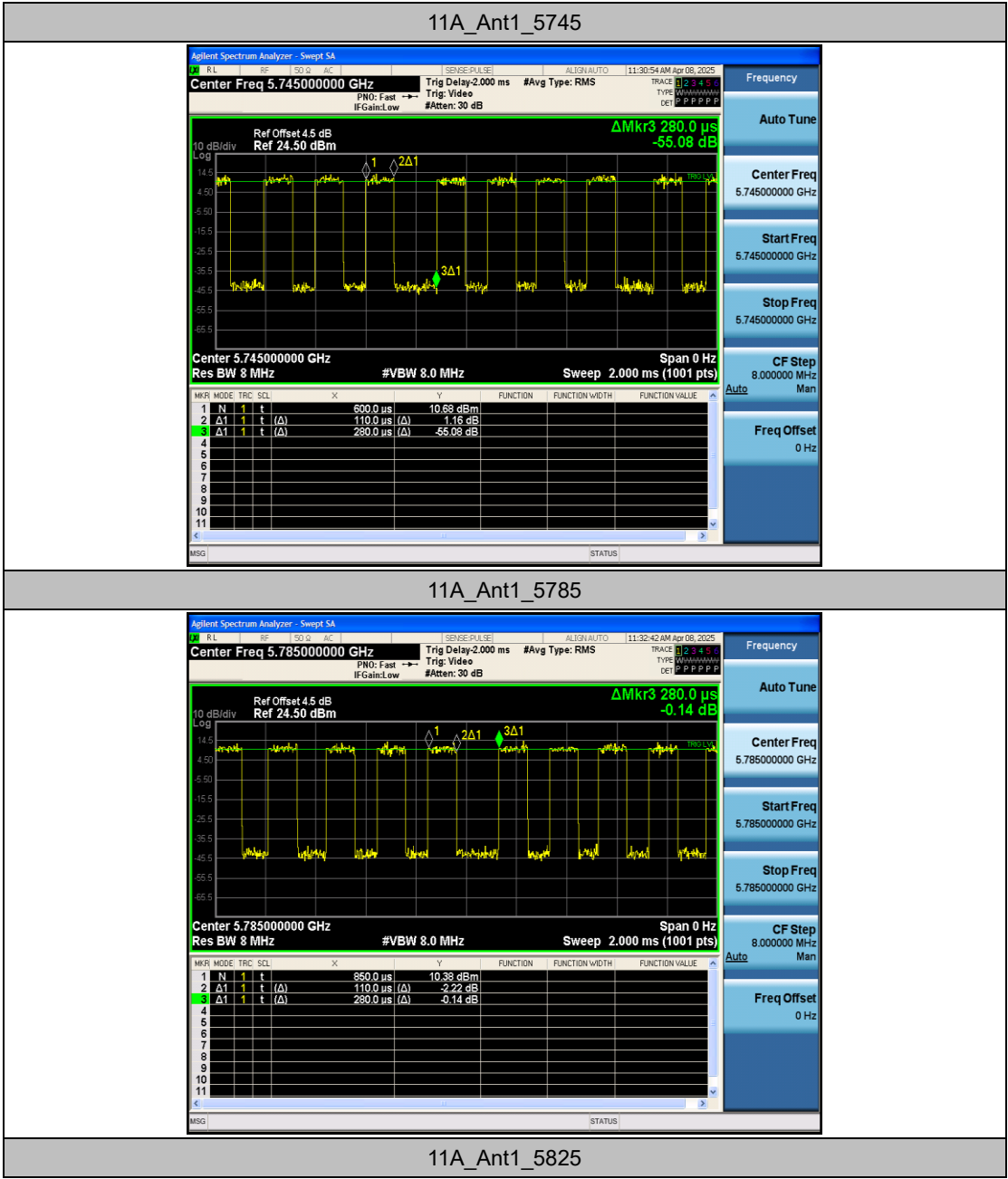


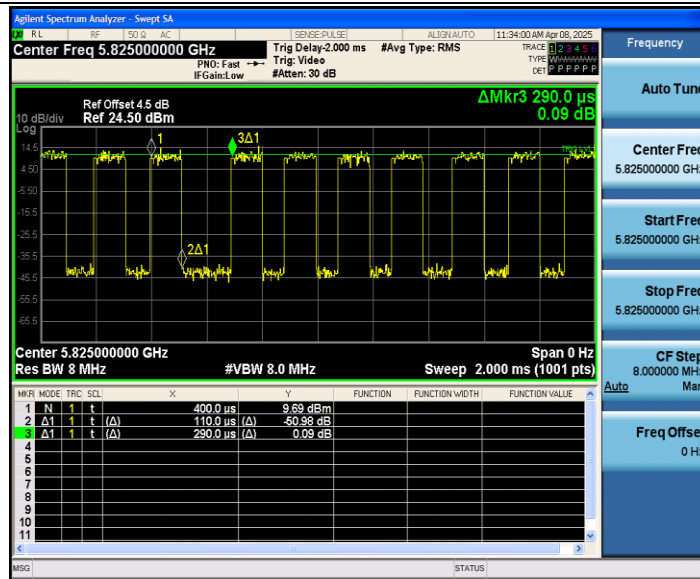
Appendix B: Duty Cycle

Test Result

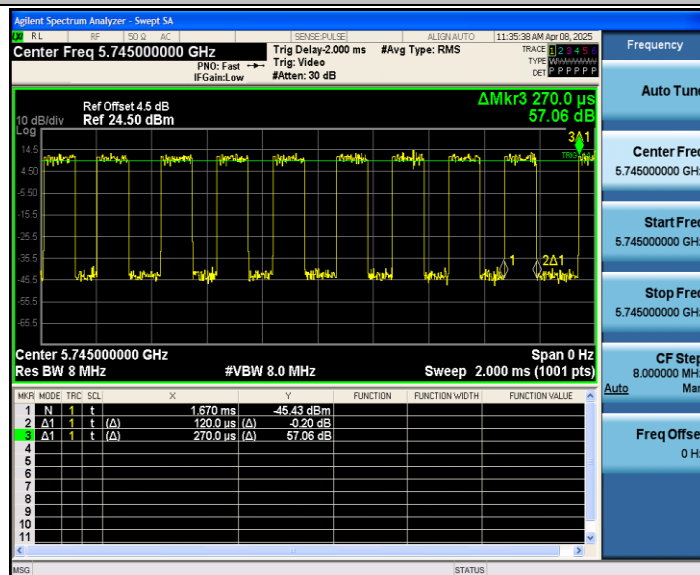
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Duty factor(dB)	Limit	Verdict
11A	Ant1	5745	0.11	0.28	39.29	4.06	---	---
		5785	0.11	0.28	39.29	4.06	---	---
		5825	0.11	0.29	37.93	4.21	---	---
11N20SISO	Ant1	5745	0.12	0.27	44.44	3.52	---	---
		5785	0.11	0.30	36.67	4.36	---	---
		5825	0.11	0.30	36.67	4.36	---	---
11N40SISO	Ant1	5755	0.07	0.23	30.43	5.17	---	---
		5795	0.07	0.25	28.00	5.53	---	---

Test Graphs

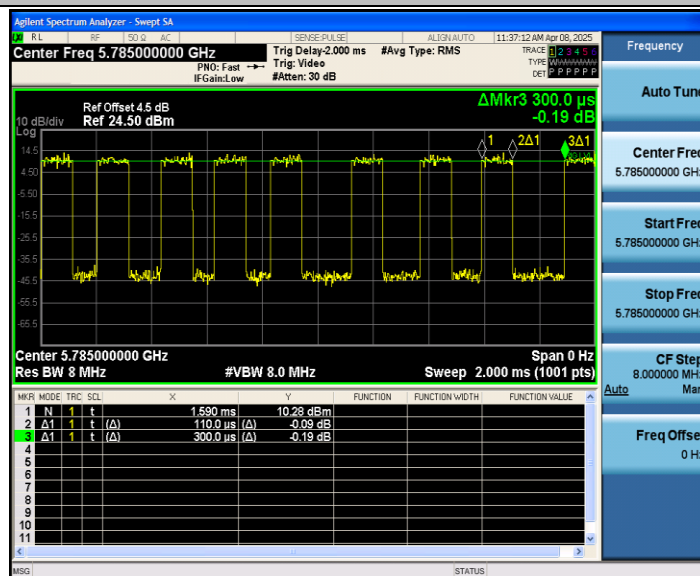




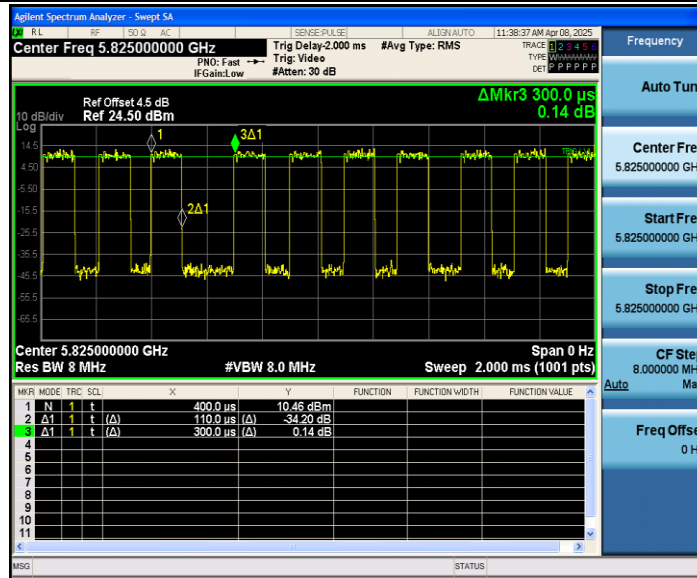
11N20SISO_Ant1_5745



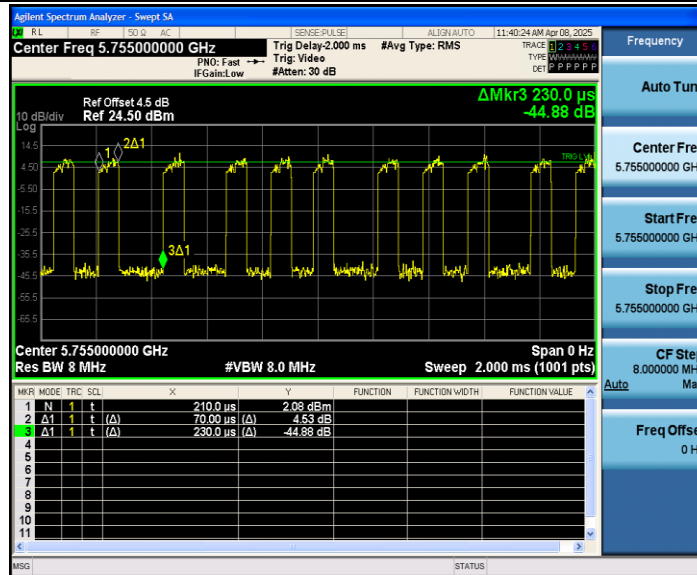
11N20SISO_Ant1_5785



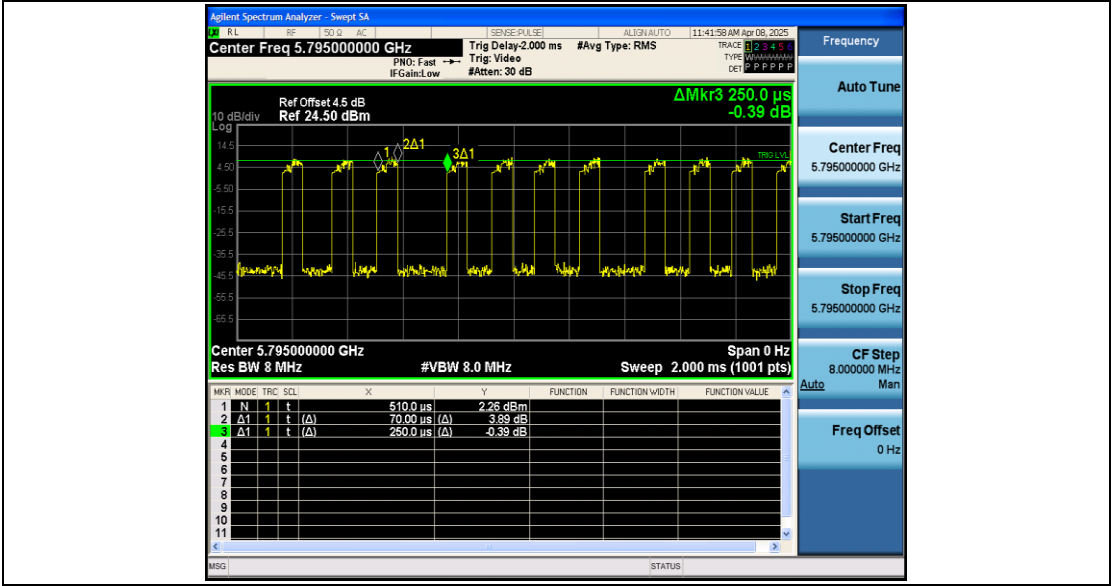
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



Appendix C: Maximum conducted output power

Test Mode	Antenna	Freq(MHz)	Maximum conducted Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Total power Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	6.01	39.29	4.06	10.07	≤30.00	PASS
		5785	5.45	39.29	4.06	9.51	≤30.00	PASS
		5825	5.49	37.93	4.21	9.70	≤30.00	PASS
11N20SISO	Ant1	5745	5.97	44.44	3.52	9.49	≤30.00	PASS
		5785	5.42	36.67	4.36	9.78	≤30.00	PASS
		5825	5.49	36.67	4.36	9.85	≤30.00	PASS
11N40SISO	Ant1	5755	4.19	30.43	5.17	9.36	≤30.00	PASS
		5795	3.85	28.00	5.53	9.38	≤30.00	PASS

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

Total power= Maximum conducted Power+Duty factor

Appendix D: Maximum power spectral density

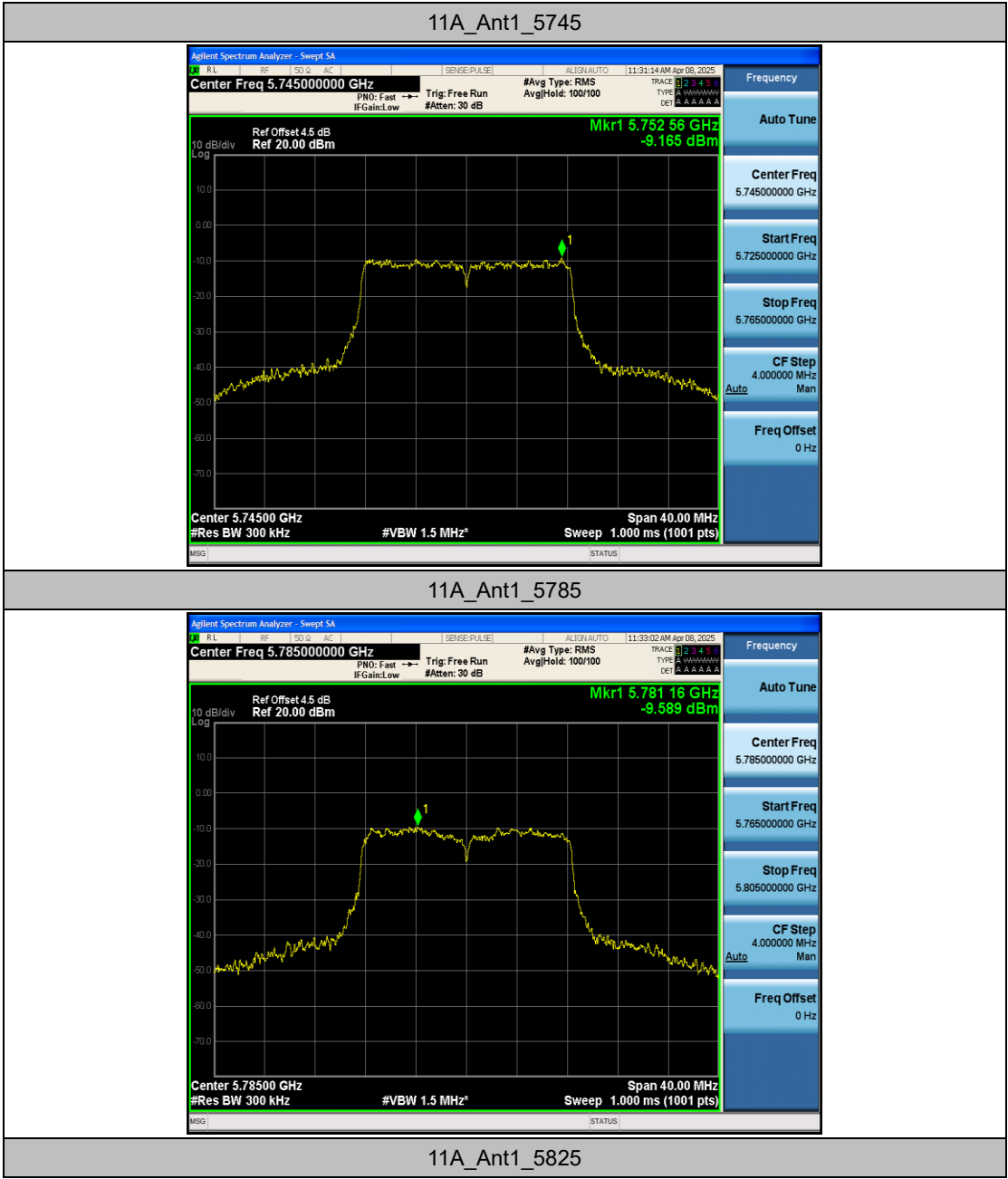
Test Result

TestMode	Antenna	Freq(MHz)	Result [dBm/300KHz]	RBW Factor (dB)	Duty factor(dB)	Result [dBm/500KHz]	Limit [dBm/500KHz]	Verdict
11A	Ant1	5745	-9.165	2.22	4.06	-2.89	≤30.00	PASS
		5785	-9.589	2.22	4.06	-3.31	≤30.00	PASS
		5825	-9.137	2.22	4.21	-2.71	≤30.00	PASS
11N20SISO	Ant1	5745	-9.41	2.22	3.52	-3.67	≤30.00	PASS
		5785	-10.008	2.22	4.36	-3.43	≤30.00	PASS
		5825	-9.515	2.22	4.36	-2.94	≤30.00	PASS
11N40SISO	Ant1	5755	-12.158	2.22	5.17	-4.77	≤30.00	PASS
		5795	-13.09	2.22	5.53	-5.34	≤30.00	PASS

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

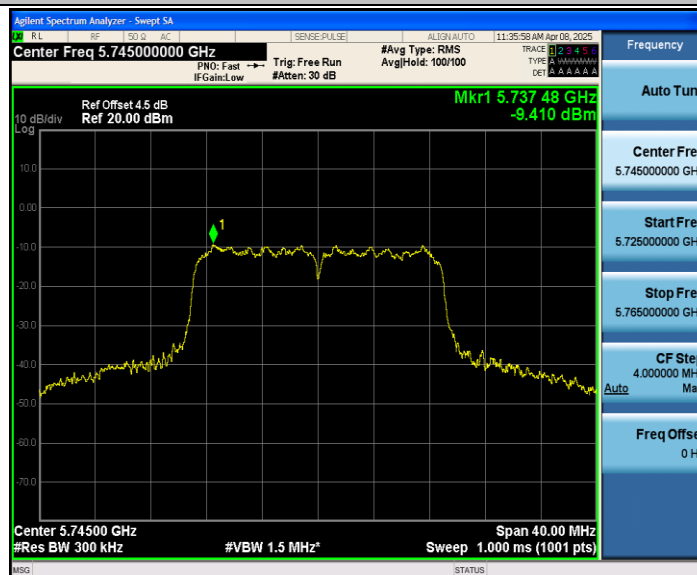
P.S.D(dBm/500KHz)= P.S.D(dBm/300KHz)+10 log (500 kHz/300KHz)=2.22 dB.

Test Graphs

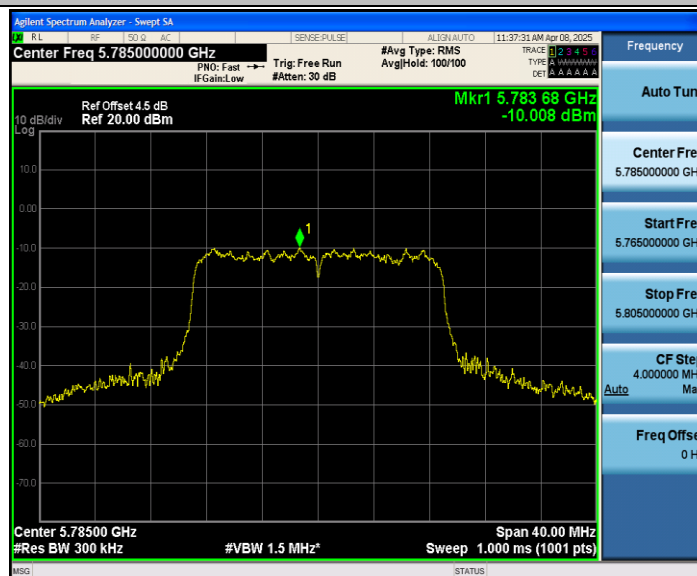




11N20SISO_Ant1_5745



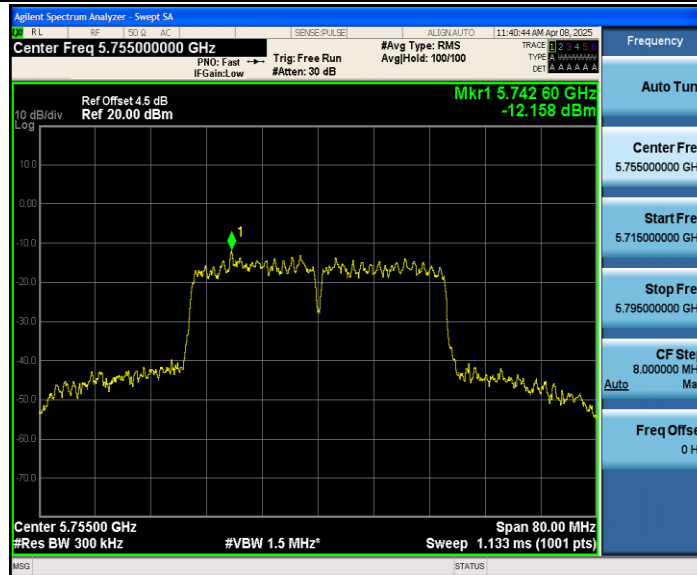
11N20SISO_Ant1_5785



11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



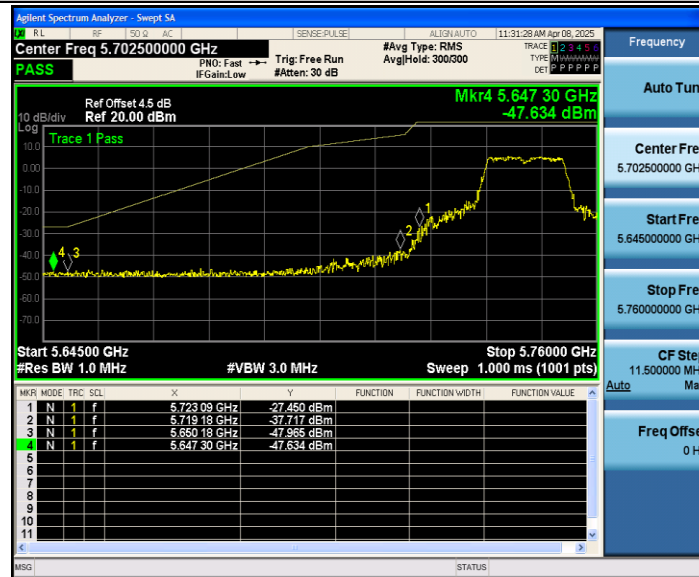
Appendix E: Band edge measurements

Test Result B4

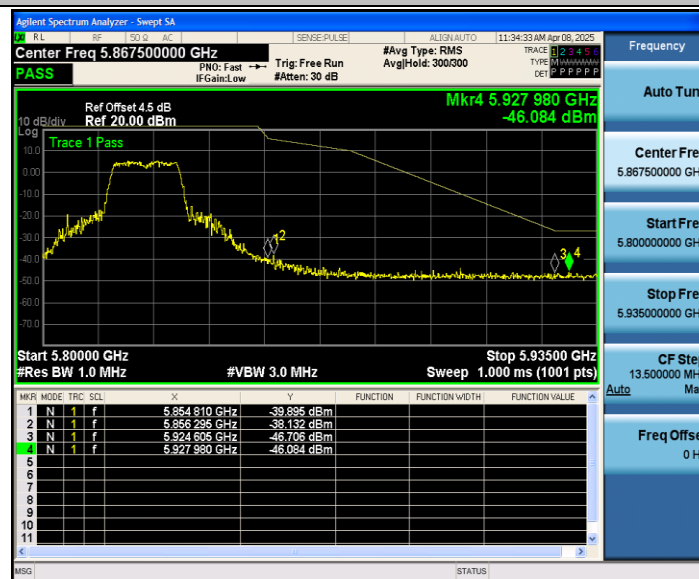
TestMode	Antenna	ChName	Freq(MHz)	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5650~5700	-47.97	≤-26.87	PASS
				5700~5720	-37.72	≤15.37	PASS
				5720~5725	-27.45	≤22.63	PASS
				5760~5650	-47.63	≤-27	PASS
		High	5825	5850~5855	-39.9	≤16.03	PASS
				5855~5875	-38.13	≤15.24	PASS
				5875~5925	-46.71	≤-26.71	PASS
				5925~5935	-46.08	≤-27	PASS
11N20SIS O	Ant1	Low	5745	5650~5700	-47.03	≤-26.70	PASS
				5700~5720	-35.73	≤15.53	PASS
				5720~5725	-25.79	≤19.49	PASS
				5760~5650	-47.35	≤-27	PASS
		High	5825	5850~5855	-36.59	≤19.42	PASS
				5855~5875	-38.53	≤15.35	PASS
				5875~5925	-46.84	≤-26.31	PASS
				5925~5935	-46.41	≤-27	PASS
11N40SIS O	Ant1	Low	5755	5650~5700	-47.53	≤-26.80	PASS
				5700~5720	-24.55	≤15.58	PASS
				5720~5725	-25.52	≤15.74	PASS
				5780~5650	-46.99	≤-27	PASS
		High	5795	5850~5855	-43.47	≤16.41	PASS
				5855~5875	-45.87	≤11.03	PASS
				5875~5925	-47.61	≤-26.83	PASS
				5925~5935	-45.81	≤-27	PASS

Test Graphs B4

11A_Ant1_Low_5745



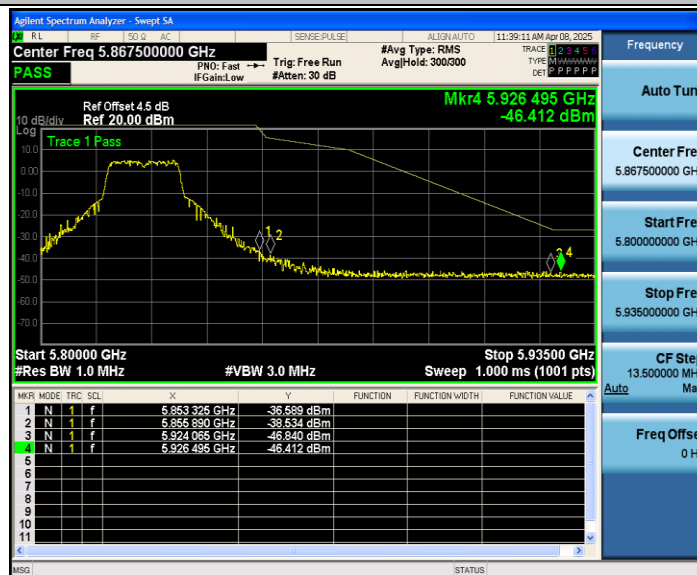
11A_Ant1_High_5825



11N20SISO_Ant1_Low_5745



11N20ISO_Ant1_High_5825



11N40ISO_Ant1_Low_5755



11N40SISO_Ant1_High_5795

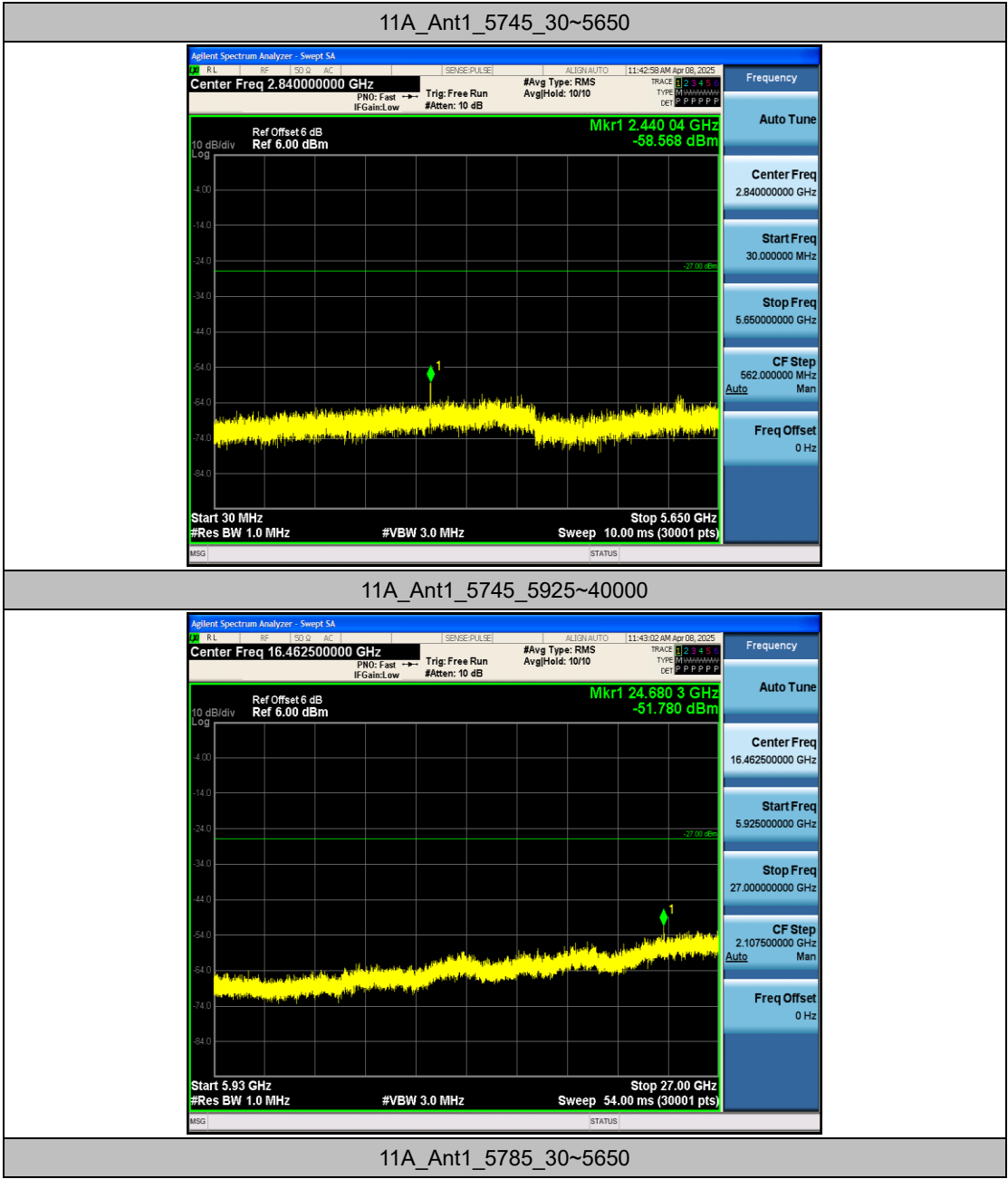


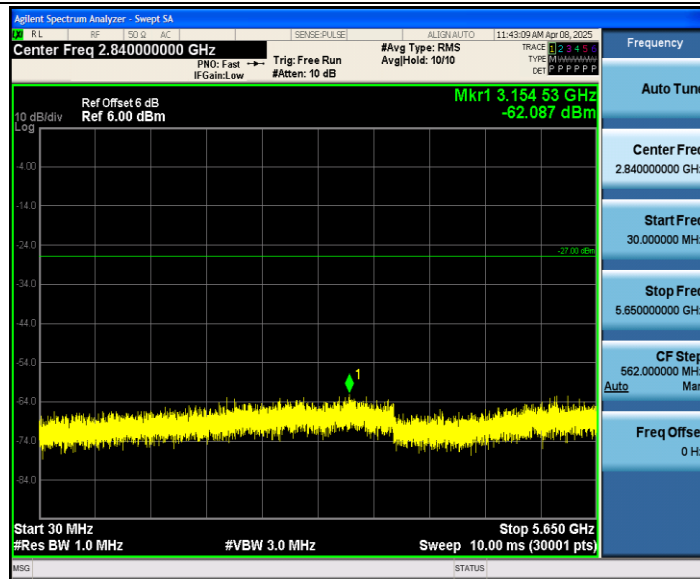
Appendix F: Conducted Spurious Emission

Test Result

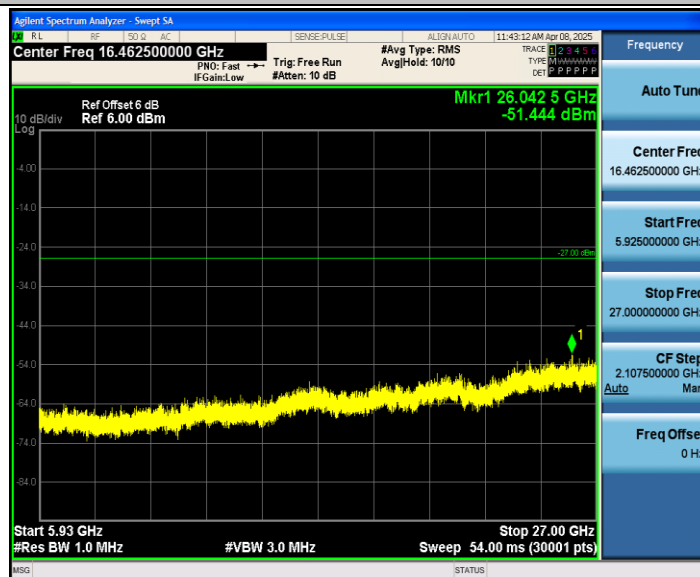
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	30~5650	2440.04	-58.57	≤-27	PASS
			5925~40000	24680.35	-51.78	≤-27	PASS
		5785	30~5650	3154.53	-62.09	≤-27	PASS
			5925~40000	26042.49	-51.44	≤-27	PASS
		5825	30~5650	5215.57	-49.21	≤-27	PASS
			5925~40000	26962.77	-51.83	≤-27	PASS
11N20SISO	Ant1	5745	30~5650	2435.55	-55.99	≤-27	PASS
			5925~40000	26164.03	-52.35	≤-27	PASS
		5785	30~5650	2436.3	-55.54	≤-27	PASS
			5925~40000	26536.35	-52.32	≤-27	PASS
		5825	30~5650	2435.92	-55.84	≤-27	PASS
			5925~40000	25618.89	-52.18	≤-27	PASS
11N40SISO	Ant1	5755	30~5650	2439.29	-55.81	≤-27	PASS
			5925~40000	26560.24	-52.34	≤-27	PASS
		5795	30~5650	5217.07	-50.1	≤-27	PASS
			5925~40000	26977.52	-52.12	≤-27	PASS

Test Graphs

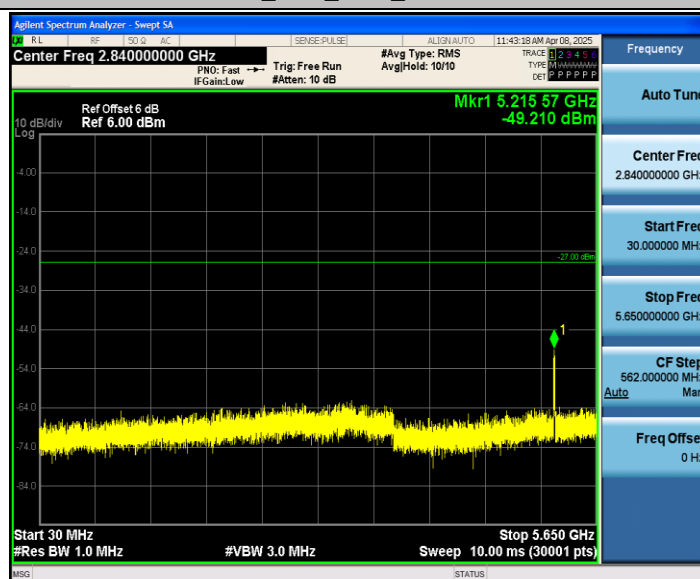




11A_Ant1_5785_5925~40000



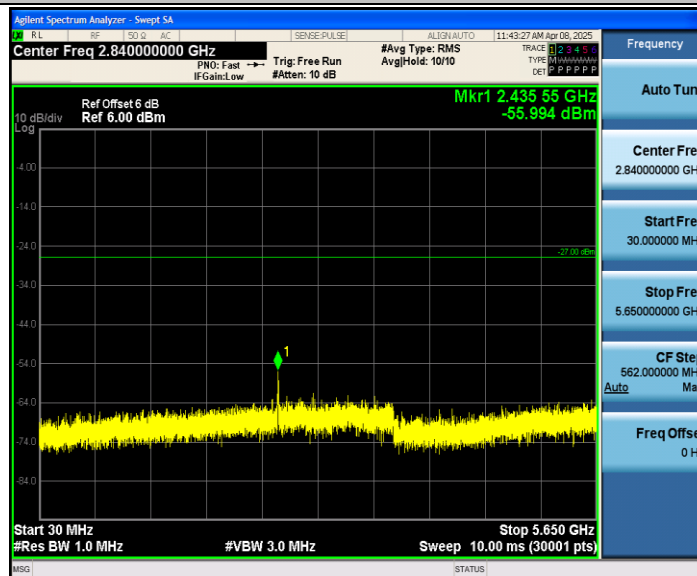
11A_Ant1_5825_30~5650



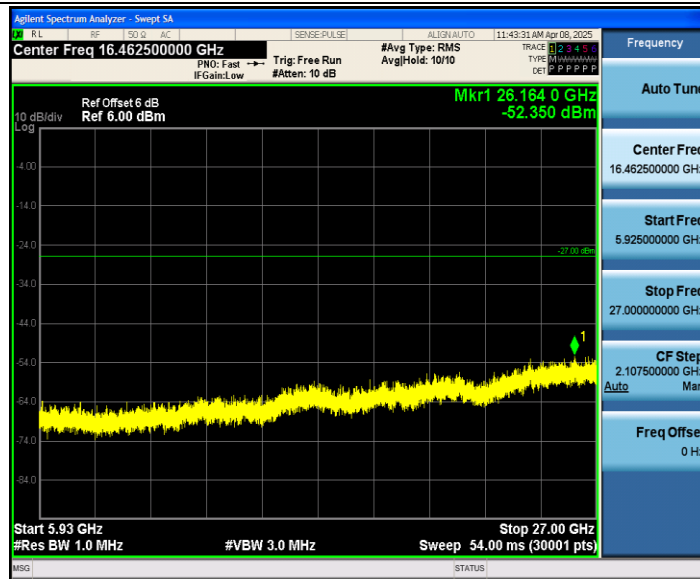
11A_Ant1_5825_5925~40000



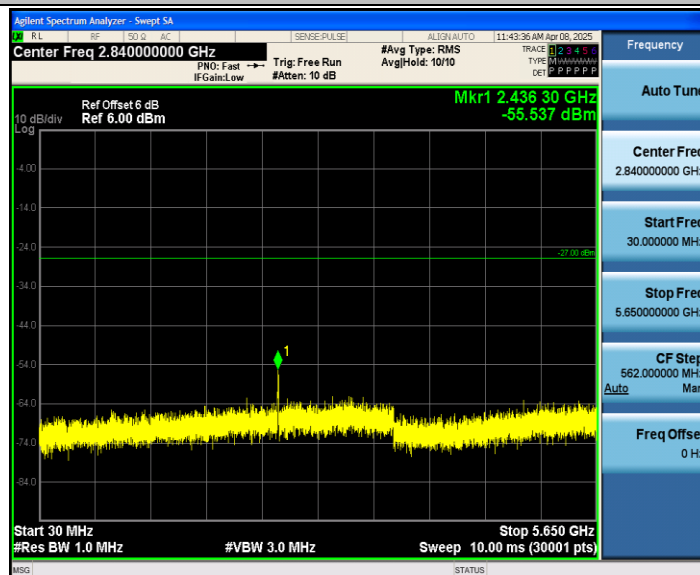
11N20SISO_Ant1_5745_30~5650



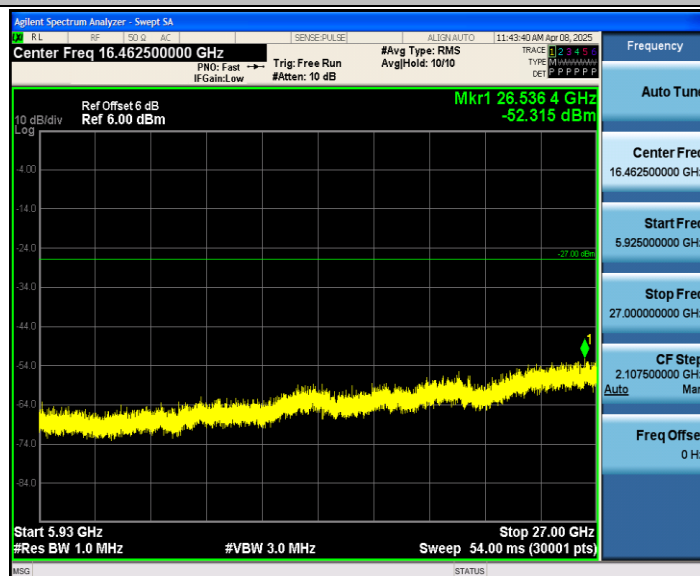
11N20SISO_Ant1_5745_5925~40000



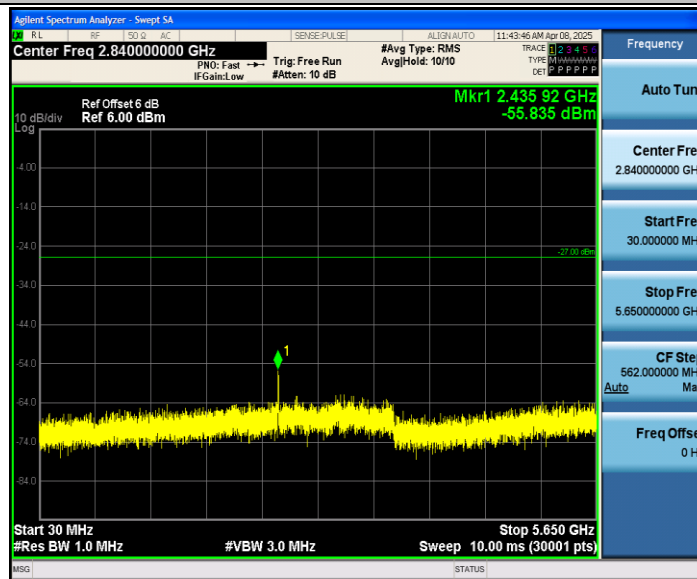
11N20SISO_Ant1_5785_30~5650



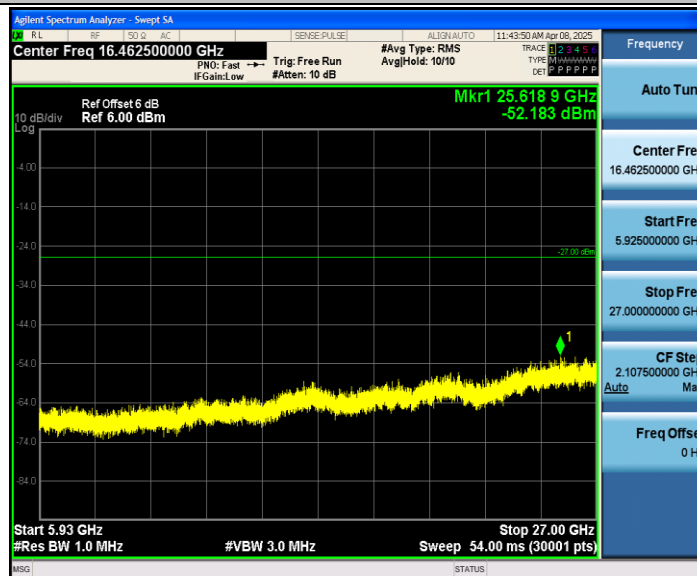
11N20SISO_Ant1_5785_5925~40000



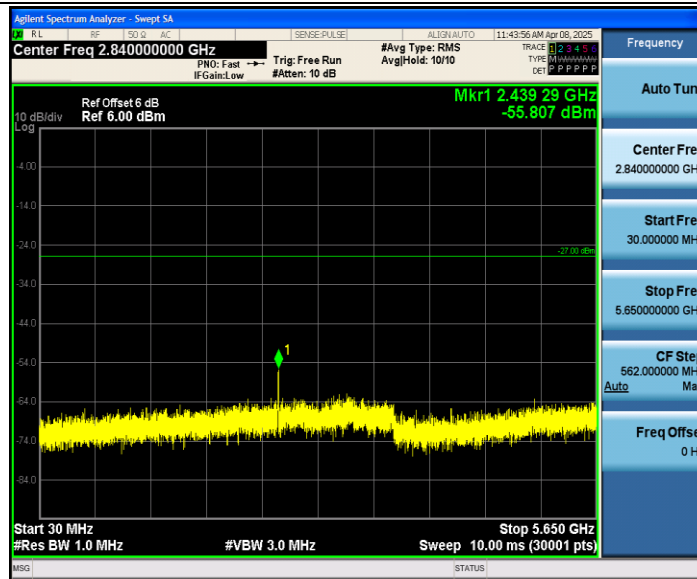
11N20SISO_Ant1_5825_30~5650



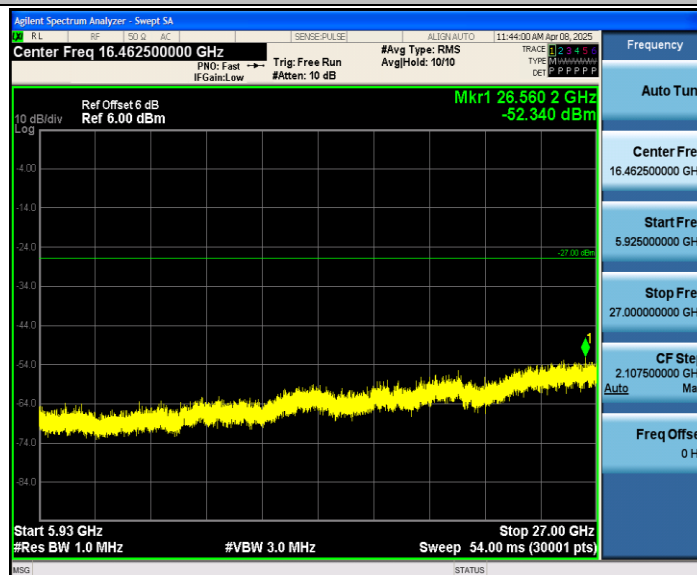
11N20SISO_Ant1_5825_5925~40000



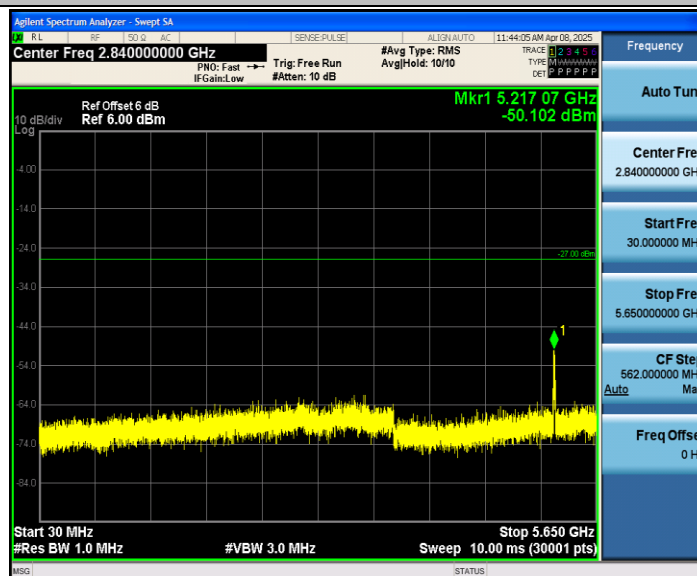
11N40SISO_Ant1_5755_30~5650



11N40SISO_Ant1_5755_5925~40000



11N40SISO_Ant1_5795_30~5650



11N40SISO_Ant1_5795_5925~40000

