

FCC Appendix RF Test Data for 5GWIFI

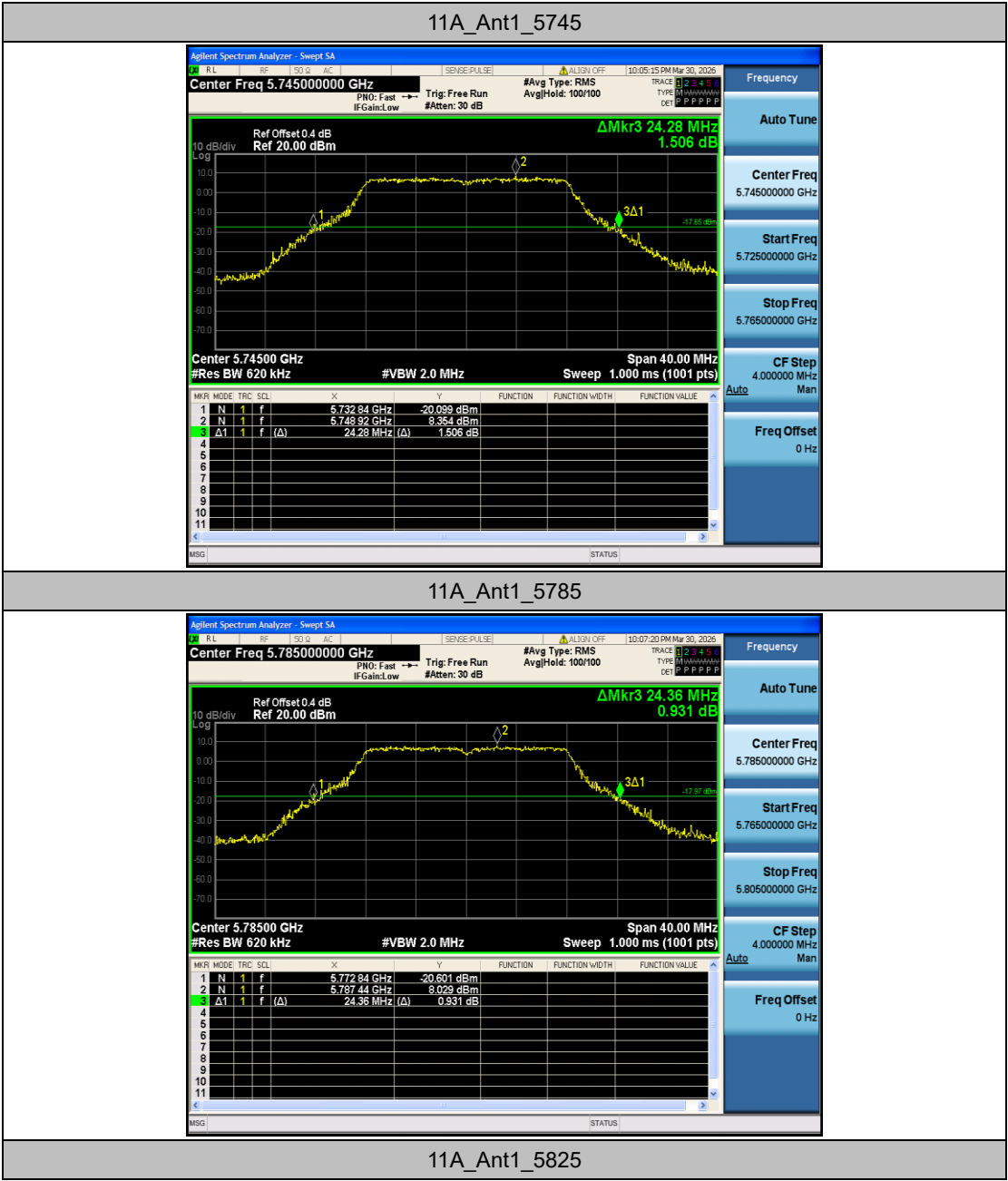
FCC ID : 2AW5W-AIBOX
Company : REXING INC.
EUT : CARPLAY
Model Number : AI BOX
Report No. : CTA26032400101
Reviewed By : Eric Wang

Appendix A1: Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	24.280	5732.840	5757.120	---	---
		5785	24.360	5772.840	5797.200	---	---
		5825	24.080	5812.880	5836.960	---	---
11N20SISO	Ant1	5745	24.960	5732.680	5757.640	---	---
		5785	24.560	5773.120	5797.680	---	---
		5825	25.000	5812.400	5837.400	---	---
11N40SISO	Ant1	5755	44.720	5733.240	5777.960	---	---
		5795	45.120	5772.920	5818.040	---	---

Test Graphs





11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



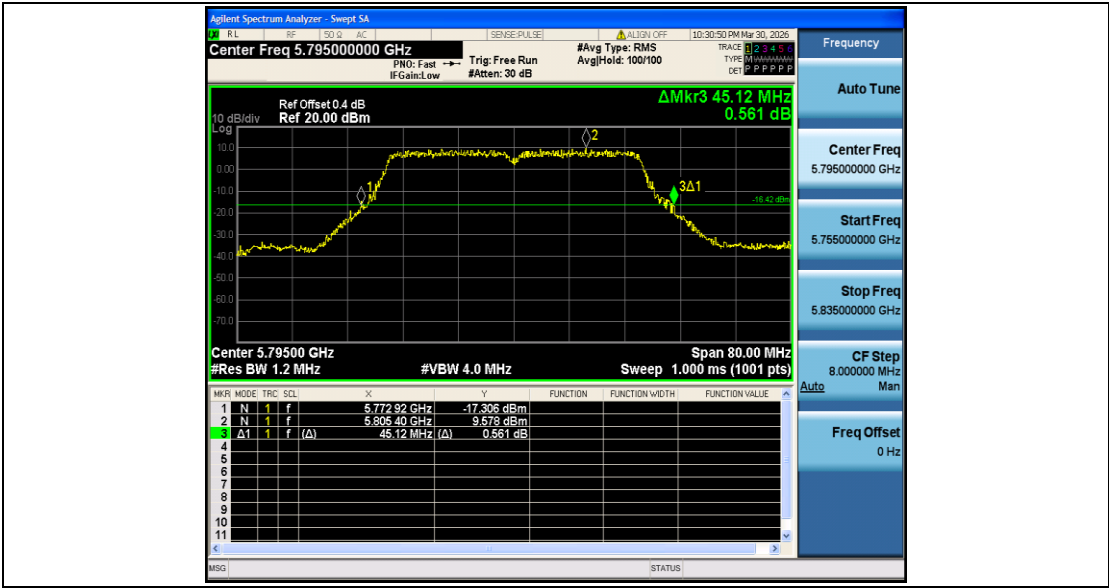
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795

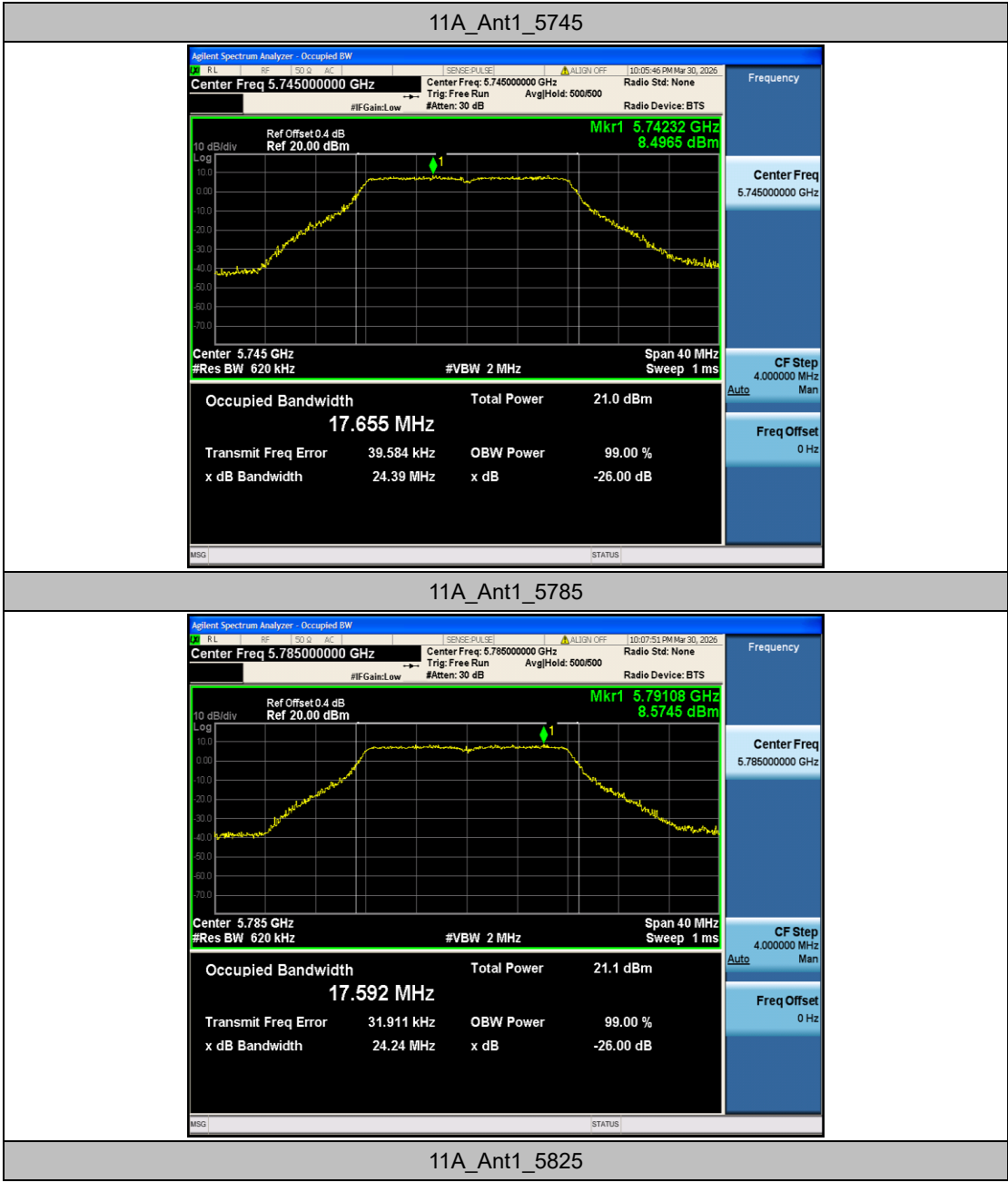


Appendix A2: Occupied channel bandwidth

Test Result

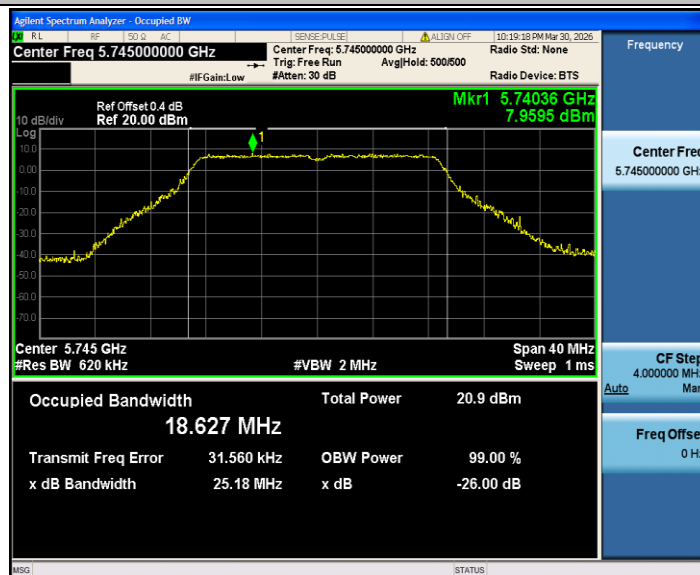
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	17.655	5736.2121	5753.8671	---	---
		5785	17.592	5776.2359	5793.8279	---	---
		5825	17.646	5816.1804	5833.8264	---	---
11N20SISO	Ant1	5745	18.627	5735.7181	5754.3451	---	---
		5785	18.664	5775.6870	5794.3510	---	---
		5825	18.625	5815.6894	5834.3144	---	---
11N40SISO	Ant1	5755	36.936	5736.6654	5773.6014	---	---
		5795	36.958	5776.6390	5813.5970	---	---

Test Graphs

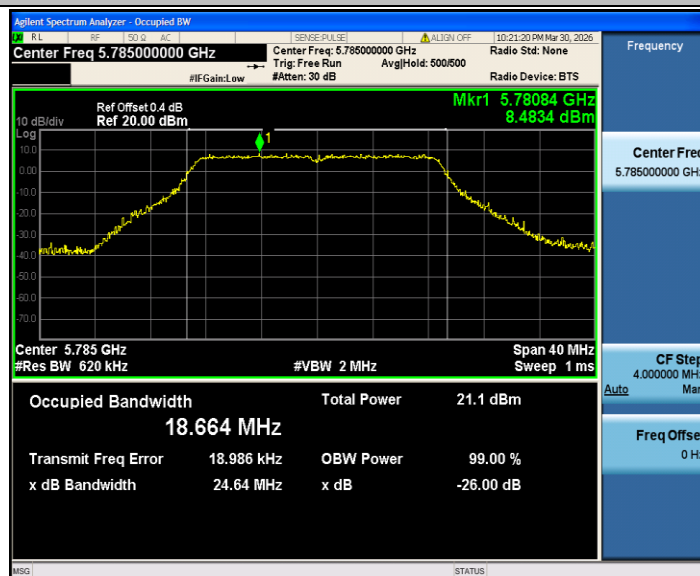




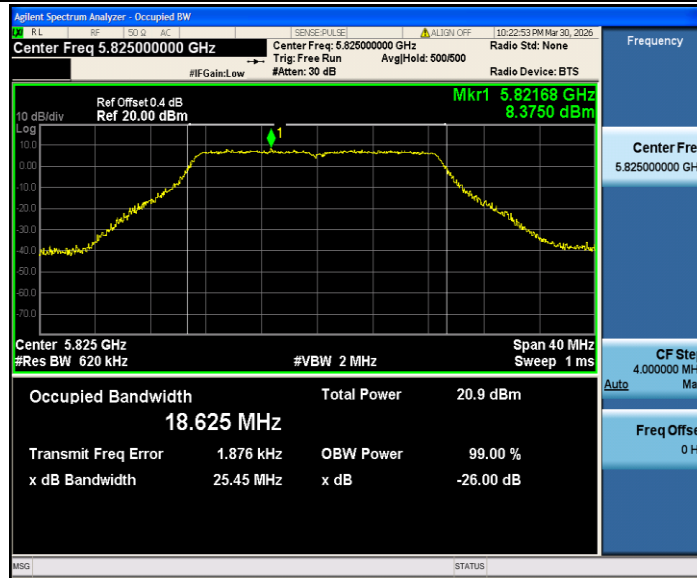
11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



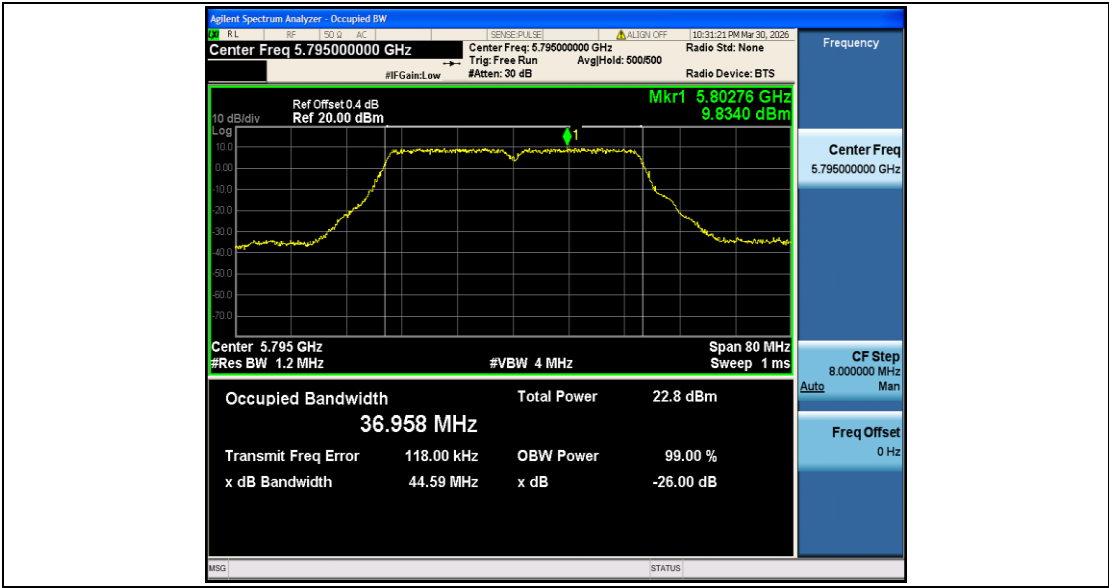
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795

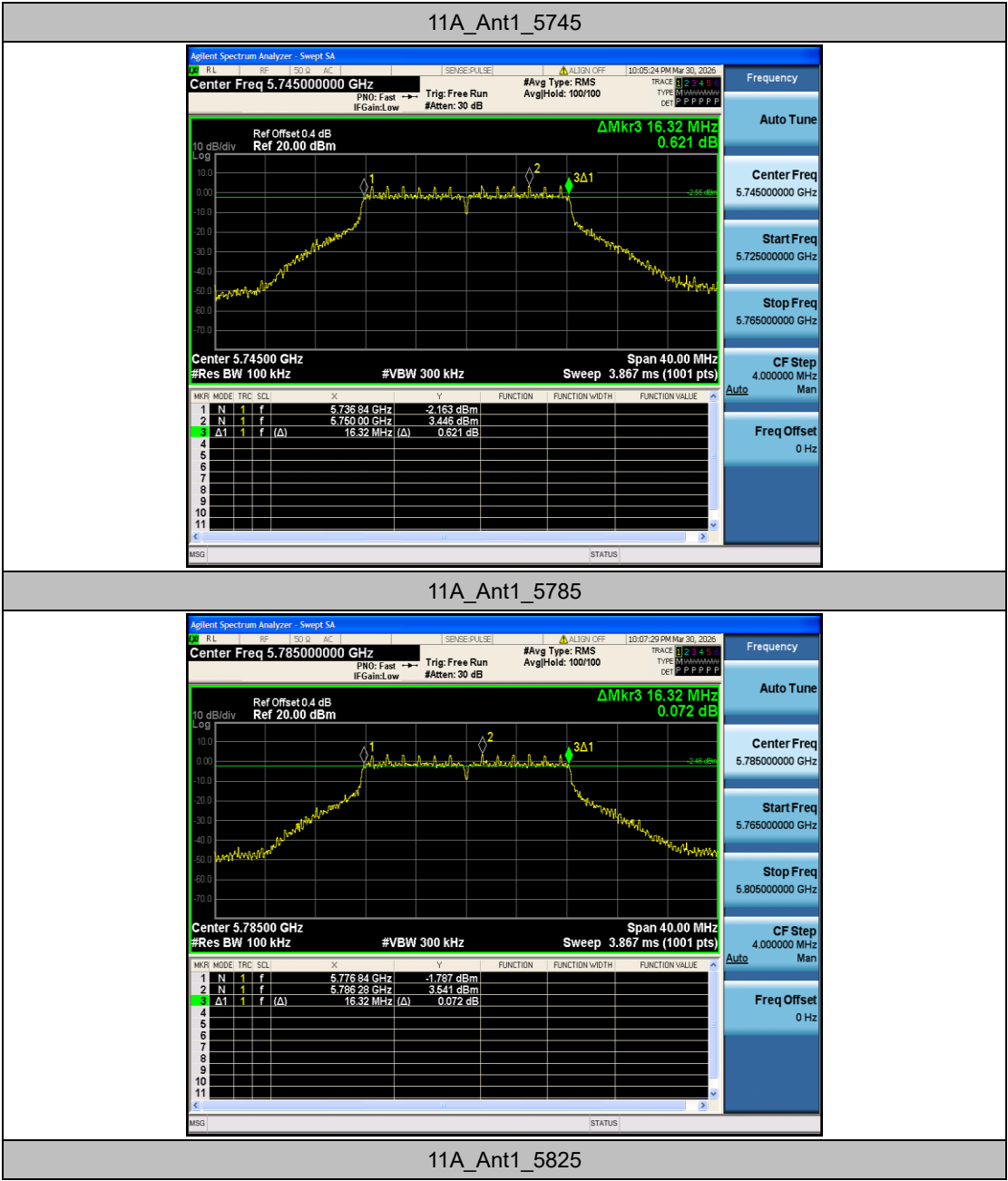


Appendix A3: Min emission bandwidth

Test Result B4

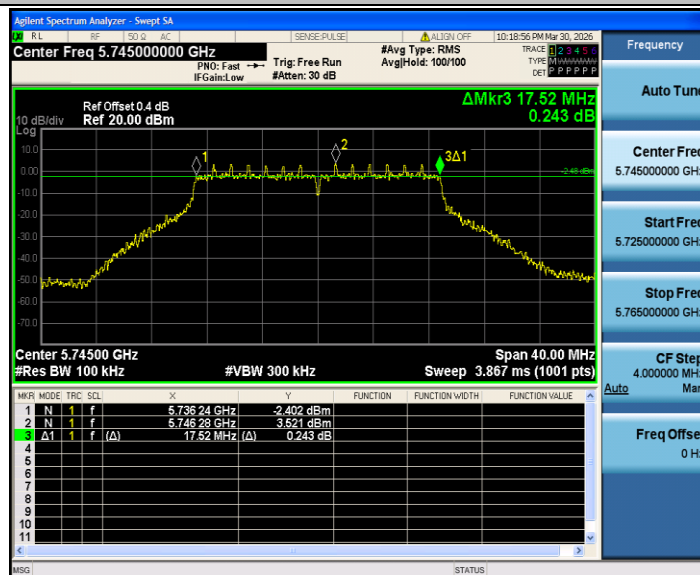
TestMode	Antenna	Freq(MHz)	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.840	5753.160	0.5	PASS
		5785	16.320	5776.840	5793.160	0.5	PASS
		5825	16.320	5816.840	5833.160	0.5	PASS
11N20SISO	Ant1	5745	17.520	5736.240	5753.760	0.5	PASS
		5785	17.520	5776.240	5793.760	0.5	PASS
		5825	17.520	5816.240	5833.760	0.5	PASS
11N40SISO	Ant1	5755	36.320	5736.840	5773.160	0.5	PASS
		5795	36.320	5776.840	5813.160	0.5	PASS

Test Graphs B4

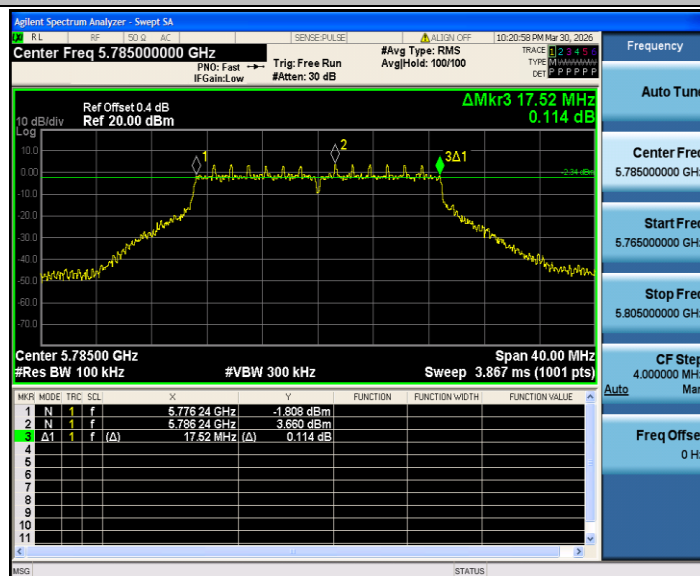




11N20SISO_Ant1_5745



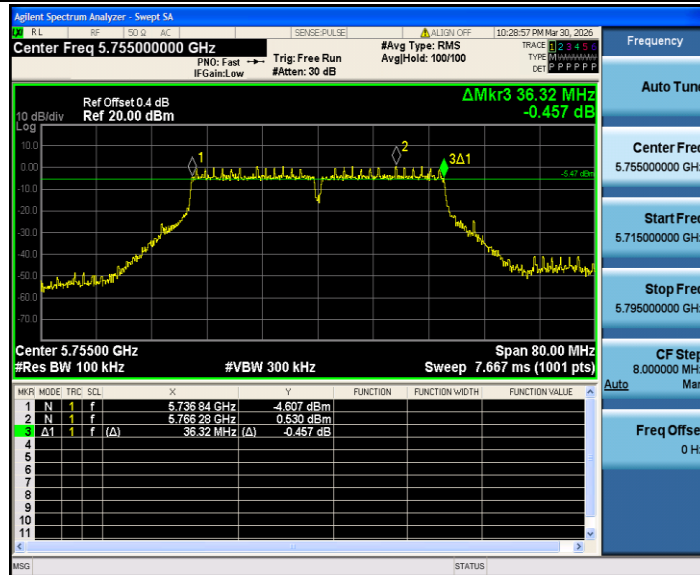
11N20SISO_Ant1_5785



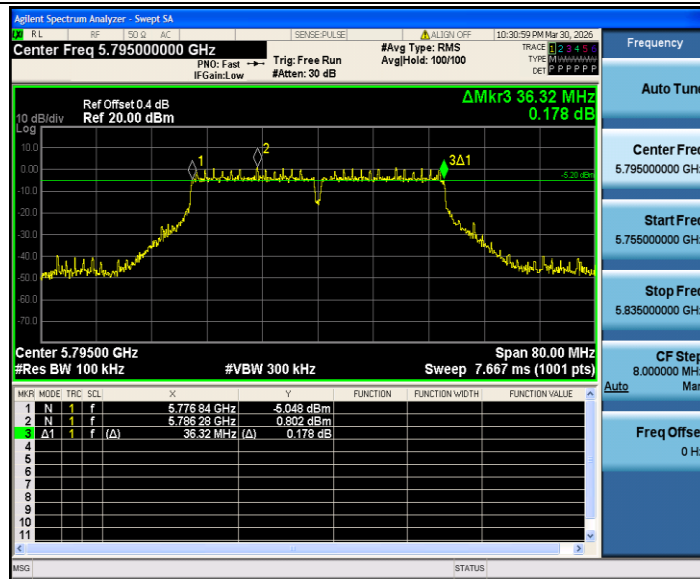
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795

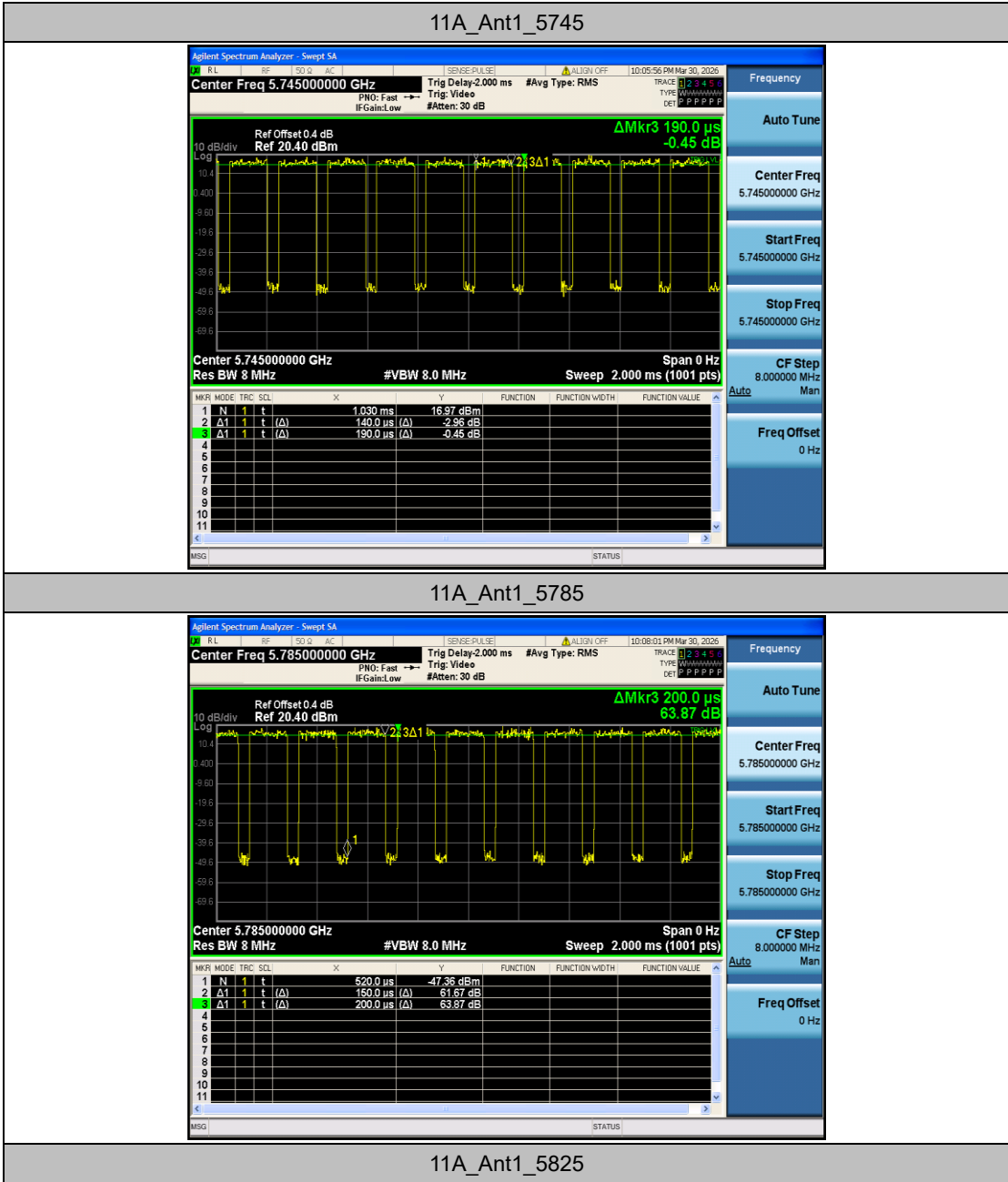


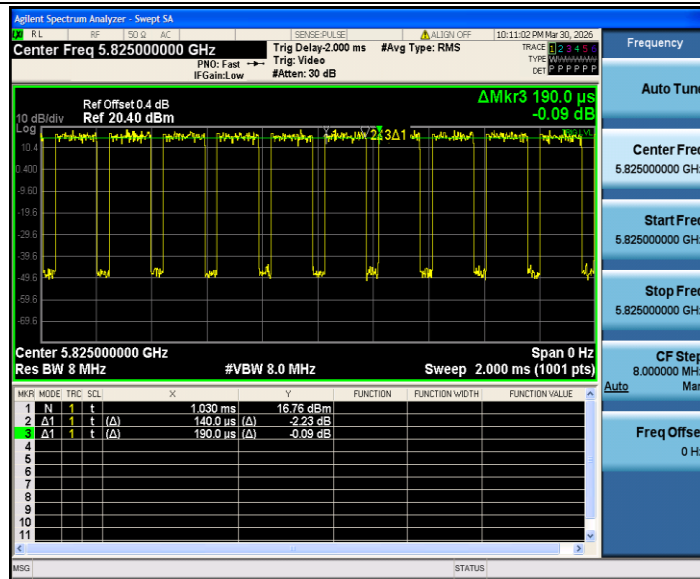
Appendix B: Duty Cycle

Test Result

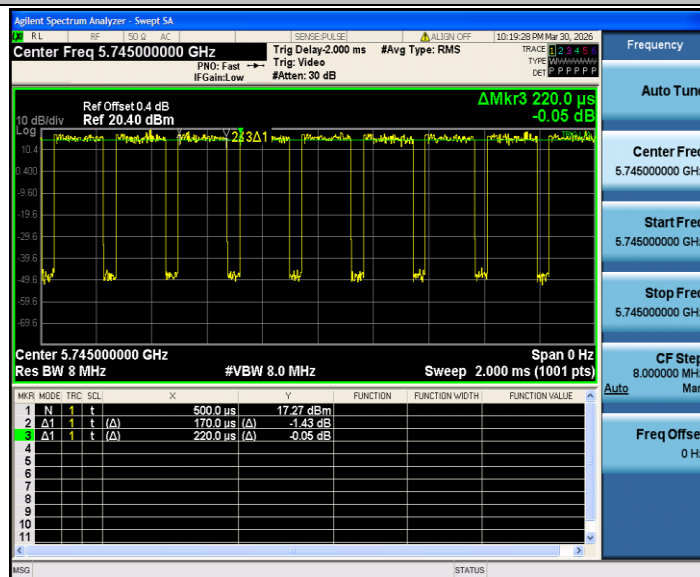
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factor [dB]	Limit	Verdict
11A	Ant1	5745	0.14	0.19	73.68	1.33	---	---
		5785	0.15	0.20	75.00	1.25	---	---
		5825	0.14	0.19	73.68	1.33	---	---
11N20SISO	Ant1	5745	0.17	0.22	77.27	1.12	---	---
		5785	0.18	0.23	78.26	1.06	---	---
		5825	0.17	0.22	77.27	1.12	---	---
11N40SISO	Ant1	5755	0.18	0.23	78.26	1.06	---	---
		5795	0.18	0.22	81.82	0.87	---	---

Test Graphs

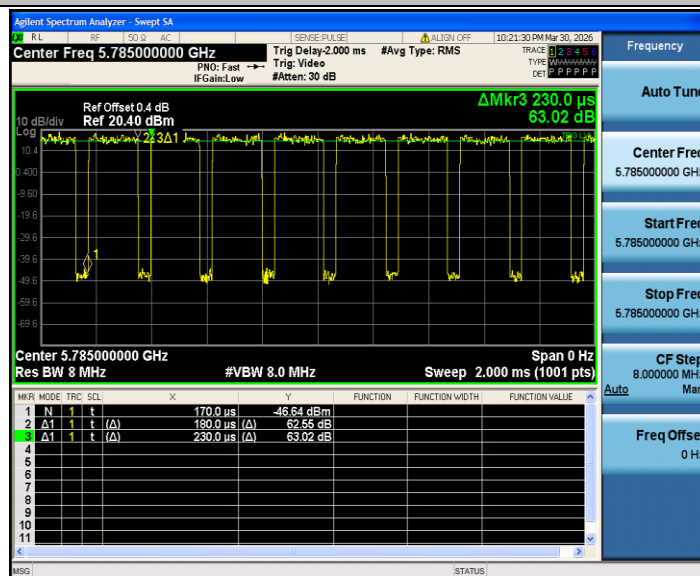




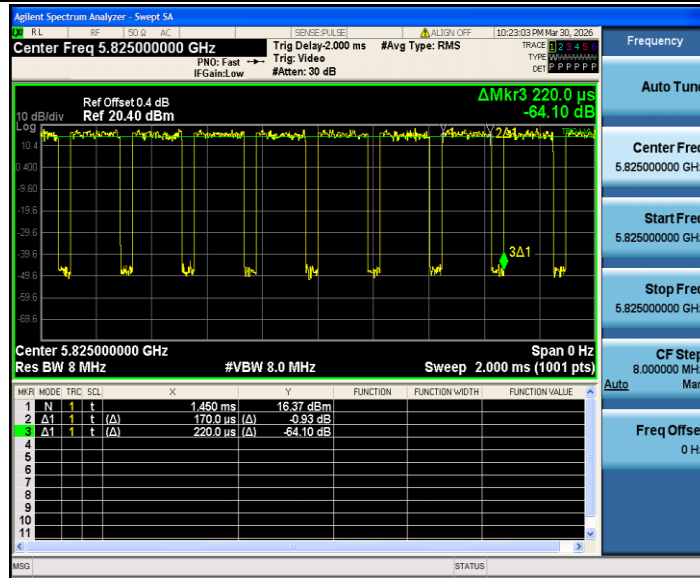
11N20SISO_Ant1_5745



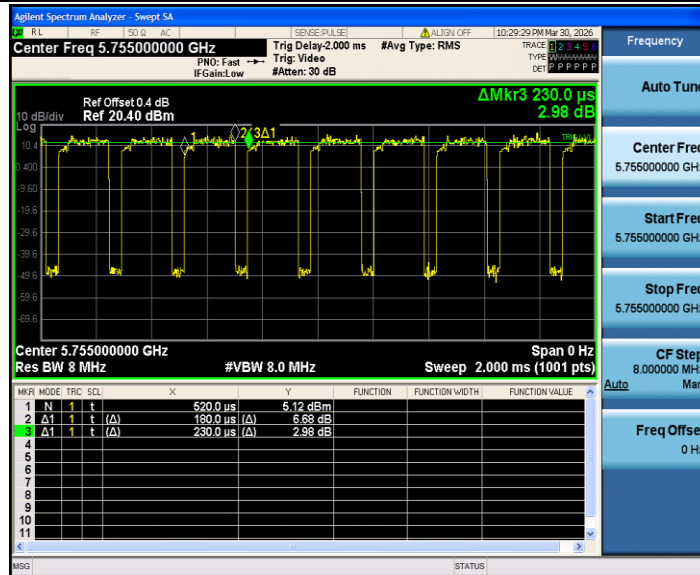
11N20SISO_Ant1_5785



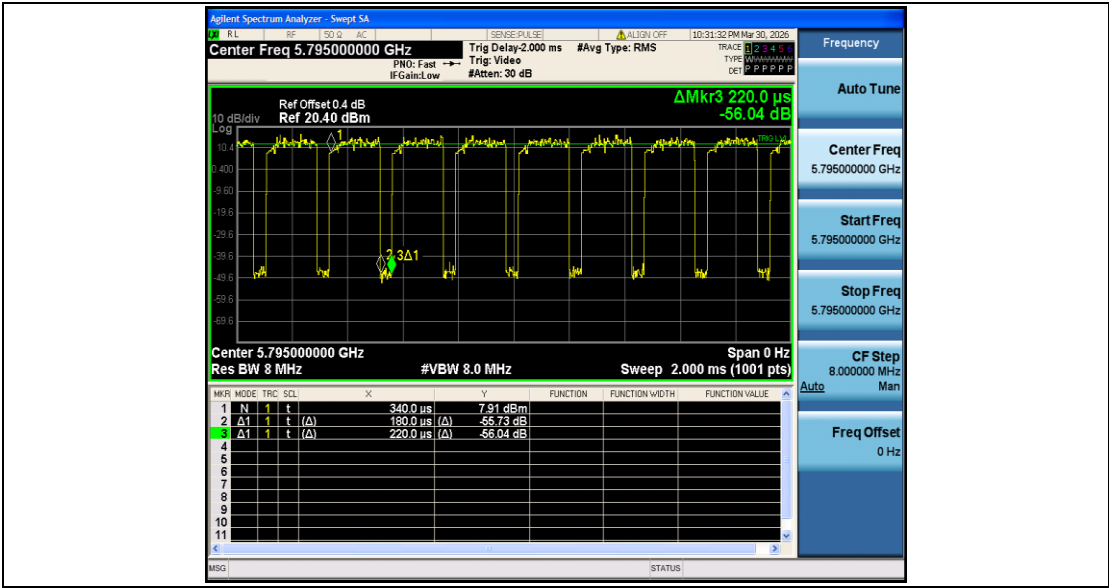
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



Appendix C: Maximum conducted output power

Test Result Channel Power

Test Mode	Antenna	Freq(MHz)	Channel Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	12.95	73.68	1.33	14.28	≤30.00	PASS
		5785	13.06	75.00	1.25	14.31	≤30.00	PASS
		5825	13.02	73.68	1.33	14.35	≤30.00	PASS
11N20SI SO	Ant1	5745	13.04	77.27	1.12	14.16	≤30.00	PASS
		5785	13.20	78.26	1.06	14.26	≤30.00	PASS
		5825	13.13	77.27	1.12	14.25	≤30.00	PASS
11N40SI SO	Ant1	5755	13.31	78.26	1.06	14.37	≤30.00	PASS
		5795	13.47	81.82	0.87	14.34	≤30.00	PASS

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

Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result [dBm/300KHz]	Duty factor (dB)	RBW Factor (dB)	Result [dBm/500KHz]	Limit [dBm/500KHz]	Verdict
11A	Ant1	5745	-2.26	1.12	2.22	1.08	≤30.00	PASS
		5785	-2.23	1.06	2.22	1.05	≤30.00	PASS
		5825	-1.69	1.12	2.22	1.65	≤30.00	PASS
11N20SISO	Ant1	5745	-2.49	1.12	2.22	0.85	≤30.00	PASS
		5785	-2.45	1.06	2.22	0.83	≤30.00	PASS
		5825	-2.21	1.12	2.22	1.13	≤30.00	PASS
11N40SISO	Ant1	5755	-5.2	1.06	2.22	-1.92	≤30.00	PASS
		5795	-5.21	0.87	2.22	-2.12	≤30.00	PASS

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

$P.S.D(dBm/500KHz) = P.S.D(dBm/300KHz) + 10 \log (500 \text{ kHz}/300KHz)$.

2. RBW factor= $10 \log (500 \text{ KHz} / 300 \text{ KHz}) = 2.22 \text{ dB}$ and The RBW Factor is compensated in the data graph.

3. The Duty Cycle Factor is compensated in the graph.

Test Graphs

11A_Ant1_5745



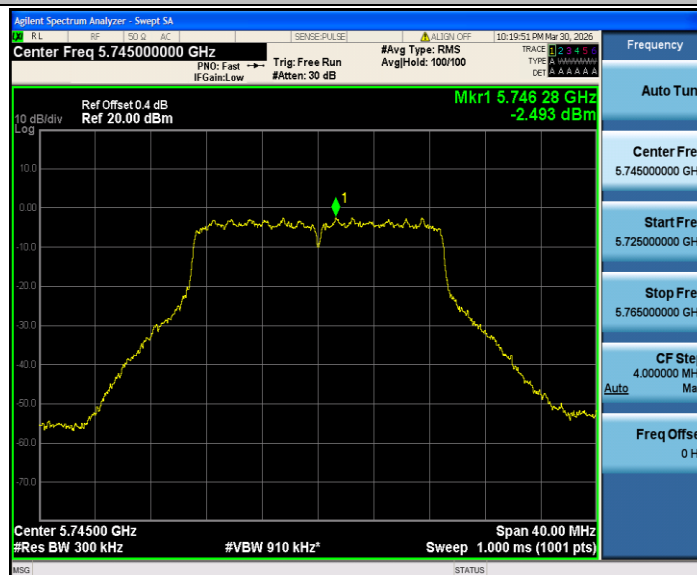
11A_Ant1_5785



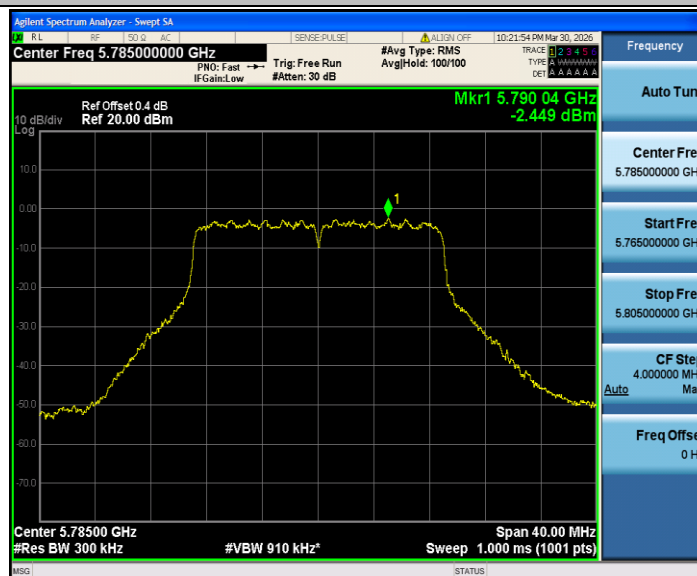
11A_Ant1_5825



11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



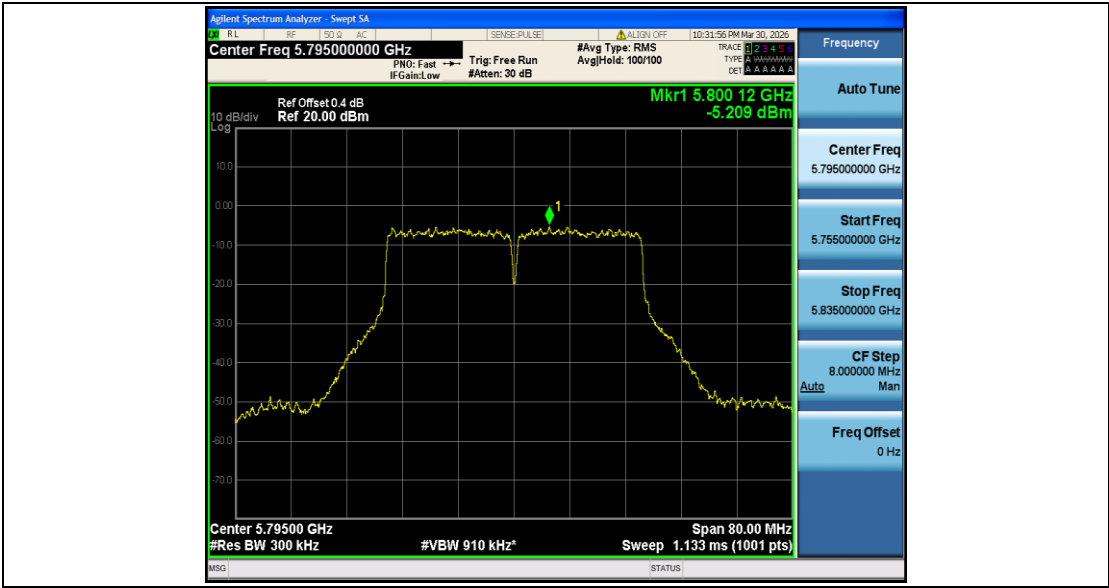
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795

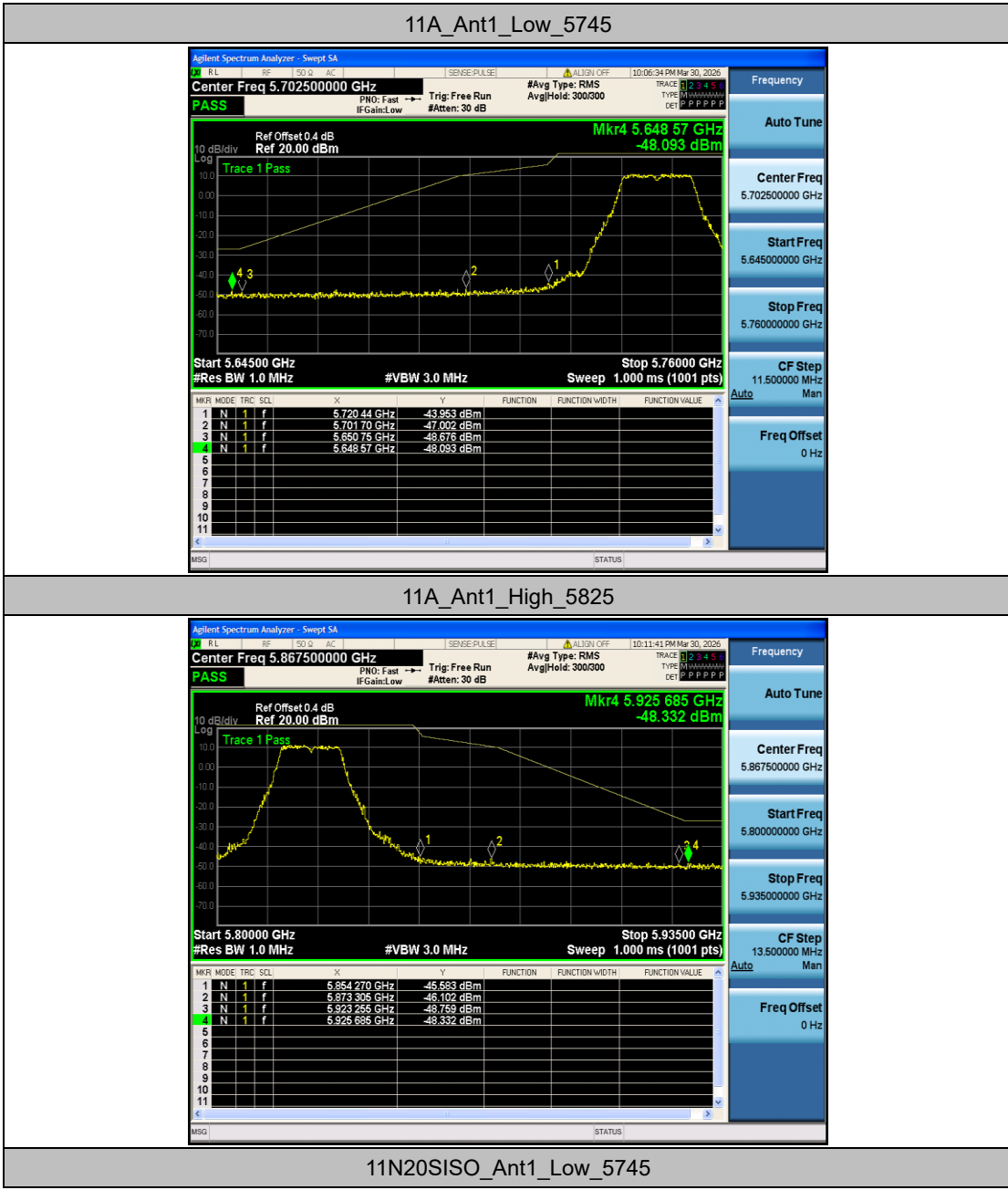


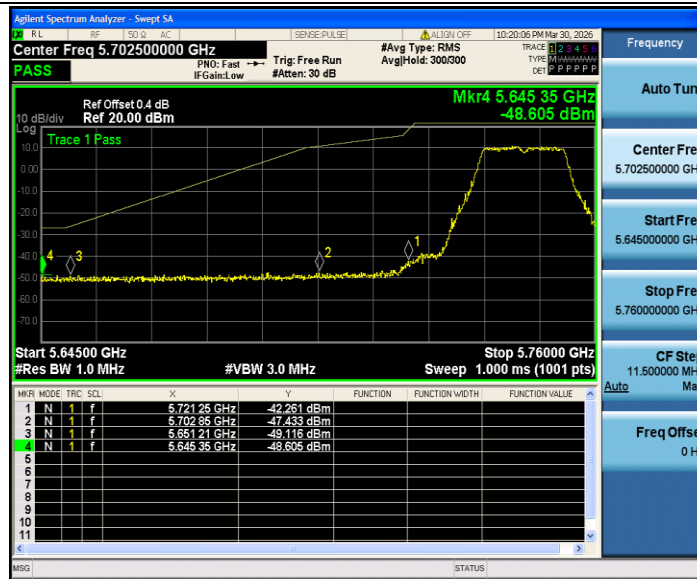
Appendix E: Band edge measurements

Test Result B4

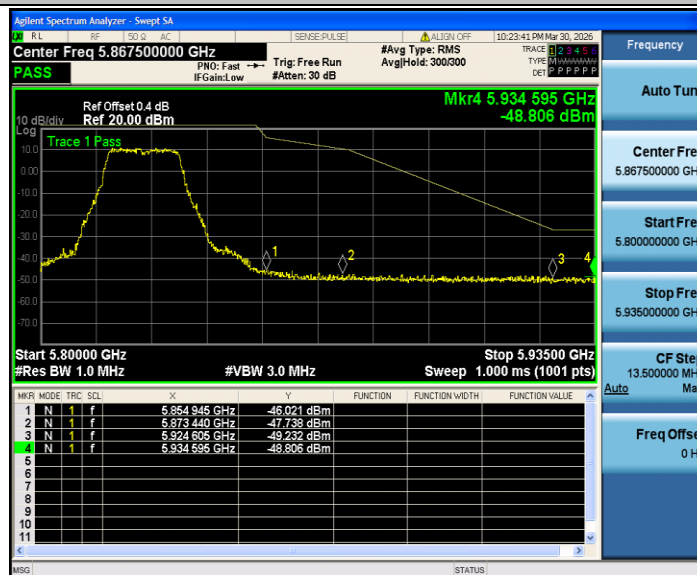
TestMode	Antenna	ChName	Freq(MHz)	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5645~5650	-48.09	≤-27	PASS
				5650~5700	-48.68	≤-26.45	PASS
				5700~5720	-47	≤10.47	PASS
				5720~5725	-43.95	≤16.60	PASS
		High	5825	5850~5855	-45.58	≤17.26	PASS
				5855~5875	-46.1	≤10.47	PASS
				5875~5925	-48.76	≤-25.71	PASS
				5925~5935	-48.33	≤-27	PASS
11N20SI SO	Ant1	Low	5745	5645~5650	-48.61	≤-27	PASS
				5650~5700	-49.12	≤-26.10	PASS
				5700~5720	-47.43	≤10.80	PASS
				5720~5725	-42.26	≤18.44	PASS
		High	5825	5850~5855	-46.02	≤15.73	PASS
				5855~5875	-47.74	≤10.44	PASS
				5875~5925	-49.23	≤-26.71	PASS
				5925~5935	-48.81	≤-27	PASS
11N40SI SO	Ant1	Low	5755	5645~5650	-48.94	≤-27	PASS
				5650~5700	-49.62	≤-26.30	PASS
				5700~5720	-39.33	≤15.58	PASS
				5720~5725	-39.05	≤15.74	PASS
		High	5795	5850~5855	-44.28	≤17.91	PASS
				5855~5875	-46.59	≤10.20	PASS
				5875~5925	-48.75	≤-25.73	PASS
				5925~5935	-48.66	≤-27	PASS

Test Graphs B4

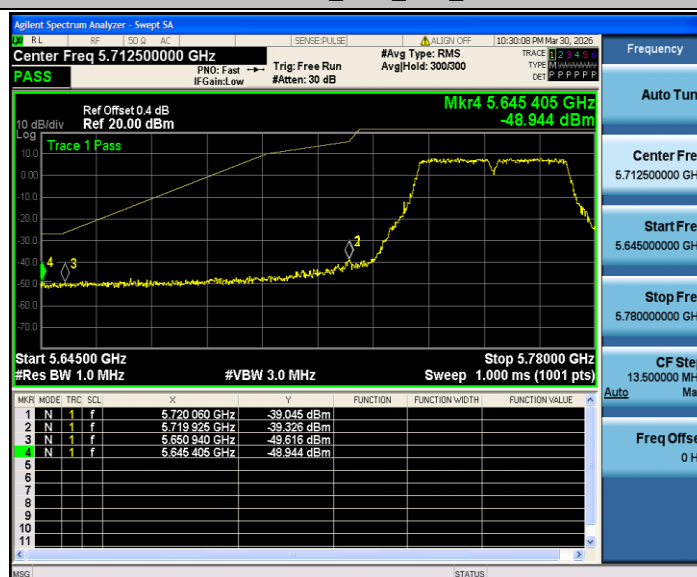




11N20ISO_Ant1_High_5825



11N40ISO_Ant1_Low_5755



11N40SISO_Ant1_High_5795

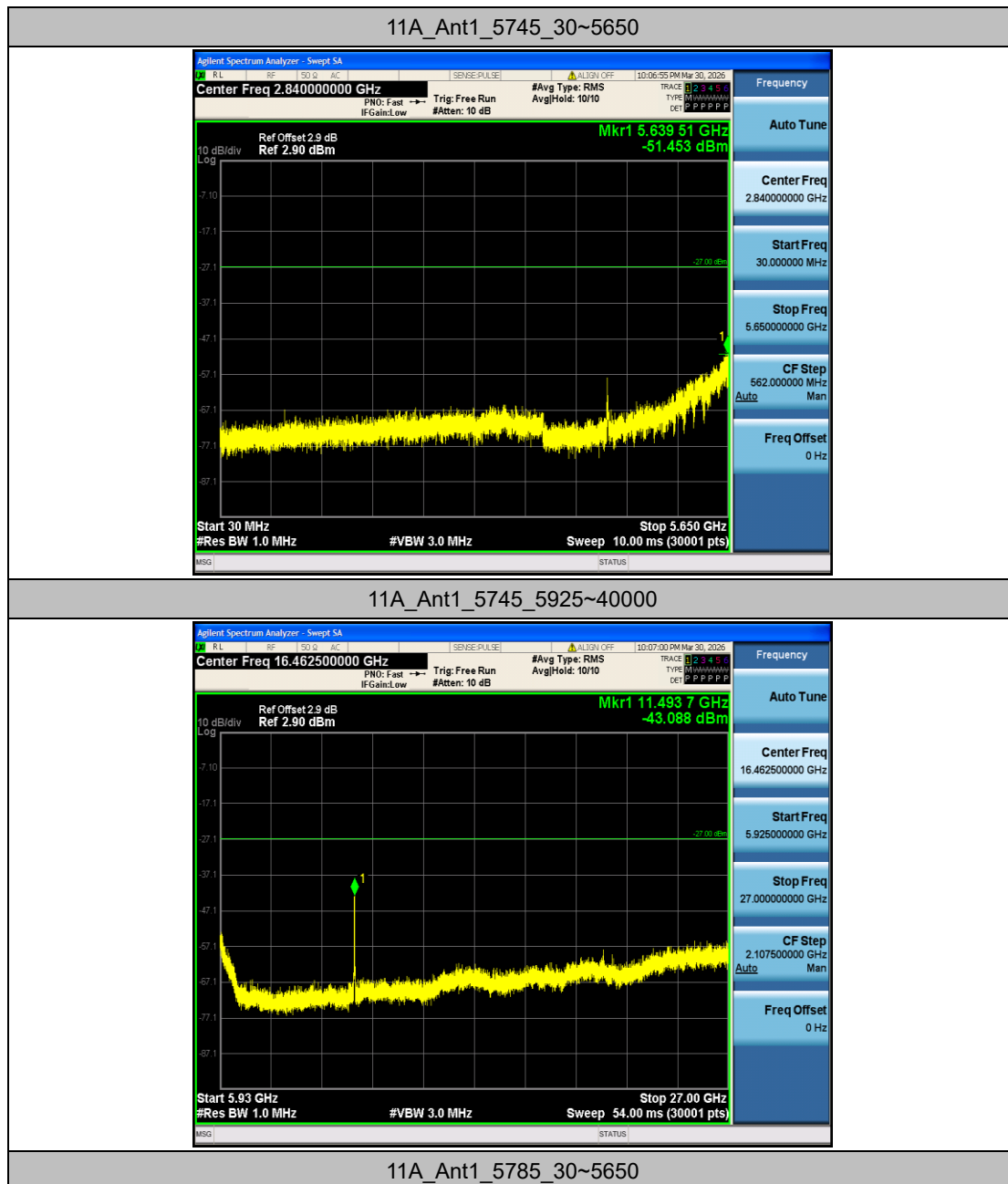


Appendix F: Conducted Spurious Emission

Test Result

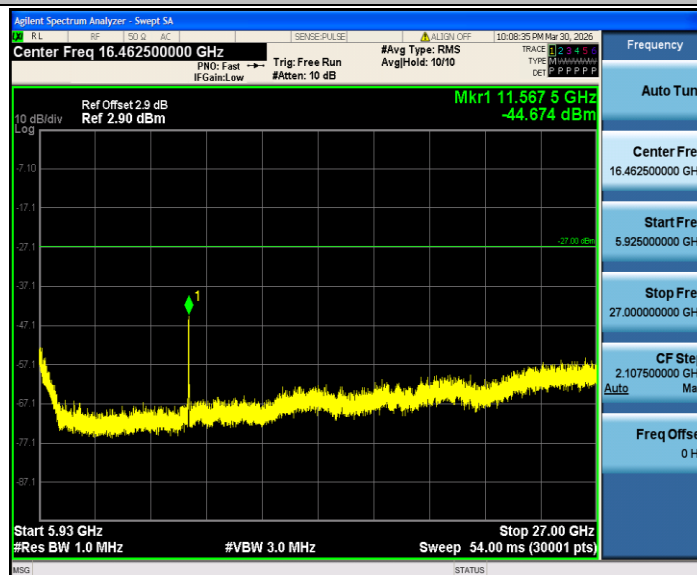
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	30~5650	5639.51	-51.45	≤-27	PASS
			5925~40000	11493.72	-43.09	≤-27	PASS
		5785	30~5650	5594.92	-51.86	≤-27	PASS
			5925~40000	11567.48	-44.67	≤-27	PASS
		5825	30~5650	5634.08	-52.36	≤-27	PASS
			5925~40000	11649.67	-48.17	≤-27	PASS
11N20SISO	Ant1	5745	30~5650	5629.02	-51.69	≤-27	PASS
			5925~40000	11486.69	-42.67	≤-27	PASS
		5785	30~5650	5617.03	-52.86	≤-27	PASS
			5925~40000	11569.59	-45.11	≤-27	PASS
		5825	30~5650	5605.79	-51.82	≤-27	PASS
			5925~40000	11648.97	-48.53	≤-27	PASS
11N40SISO	Ant1	5755	30~5650	5642.32	-51.07	≤-27	PASS
			5925~40000	11507.07	-44.5	≤-27	PASS
		5795	30~5650	5623.96	-52.27	≤-27	PASS
			5925~40000	11587.15	-46.37	≤-27	PASS

Test Graphs

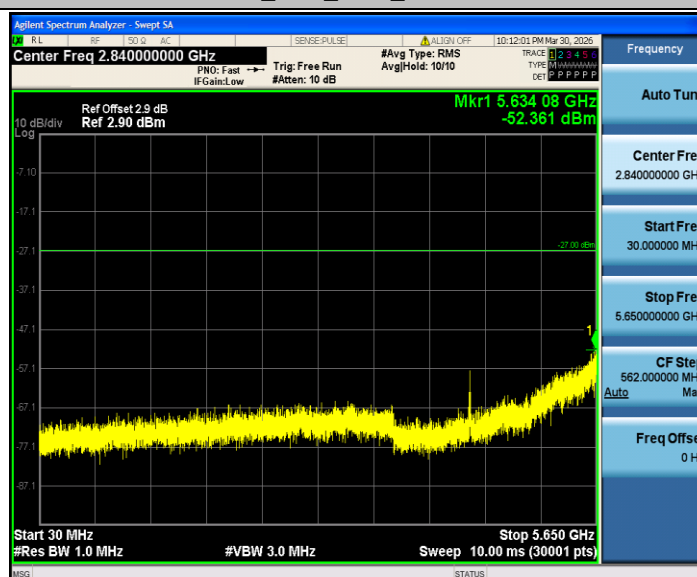




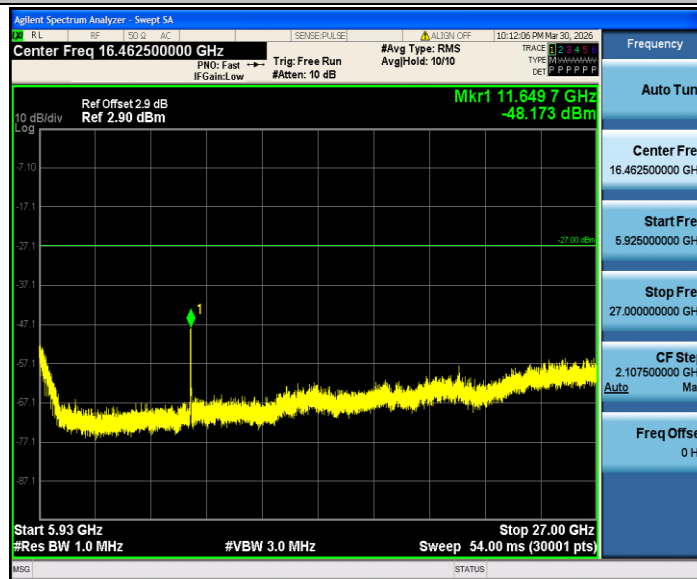
11A_Ant1_5785_5925~40000



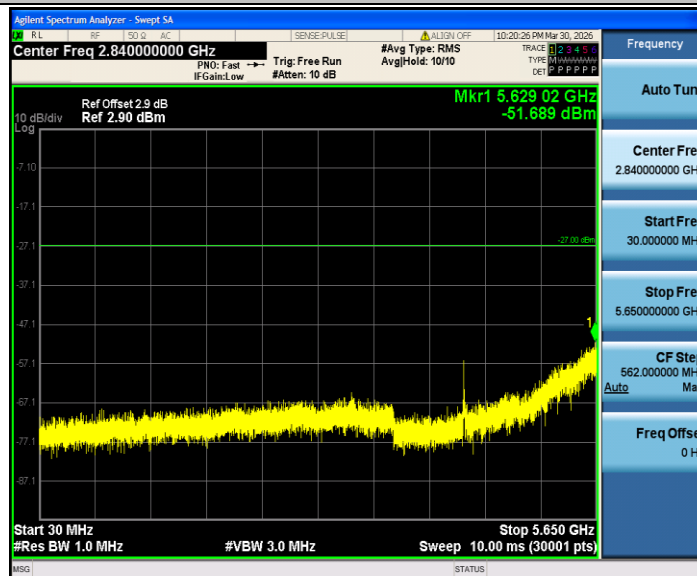
11A_Ant1_5825_30~5650



11A_Ant1_5825_5925~40000



11N20SISO_Ant1_5745_30~5650



11N20SISO_Ant1_5745_5925~40000