

FCC Appendix RF Test Data

FCC ID : 2BPZC-HSGQ-X410DW

Company: : SHENZHEN HS FIBER COMMUNICATION
EQUIPMENT CO., LTD

EUT : XPON ONU

Model Number : HSGQ-X410DW

Report No. : CTA25052301201

Reviewed By : Eric Wang

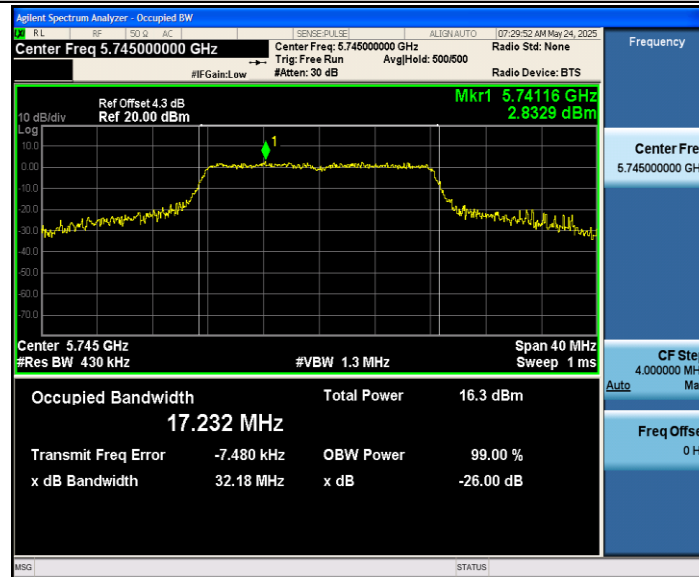
Appendix A1: Occupied channel bandwidth

Test Result

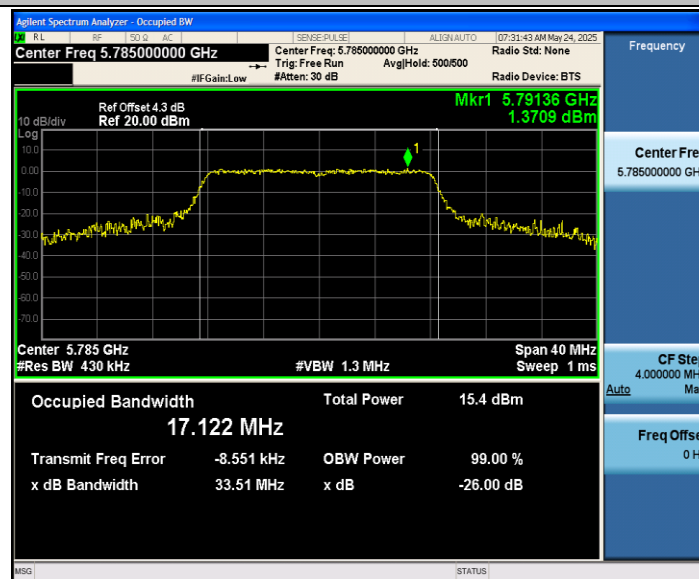
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	17.232	5736.3765	5753.6085	---	---
		5785	17.122	5776.4305	5793.5525	---	---
		5825	17.160	5816.4688	5833.6288	---	---
11N20SISO	Ant1	5745	18.167	5735.8992	5754.0662	---	---
		5785	18.087	5775.9844	5794.0714	---	---
		5825	18.074	5816.0541	5834.1281	---	---
11N40SISO	Ant1	5755	36.633	5736.6603	5773.2933	---	---
		5795	36.521	5776.8118	5813.3328	---	---
11AC20SISO	Ant1	5745	17.975	5736.0113	5753.9863	---	---
		5785	17.958	5776.0200	5793.9780	---	---
		5825	17.899	5816.0892	5833.9882	---	---
11AC40SISO	Ant1	5755	36.523	5736.7557	5773.2787	---	---
		5795	36.407	5776.8766	5813.2836	---	---
11AC80SISO	Ant1	5775	76.096	5736.9843	5813.0803	---	---

Test Graphs

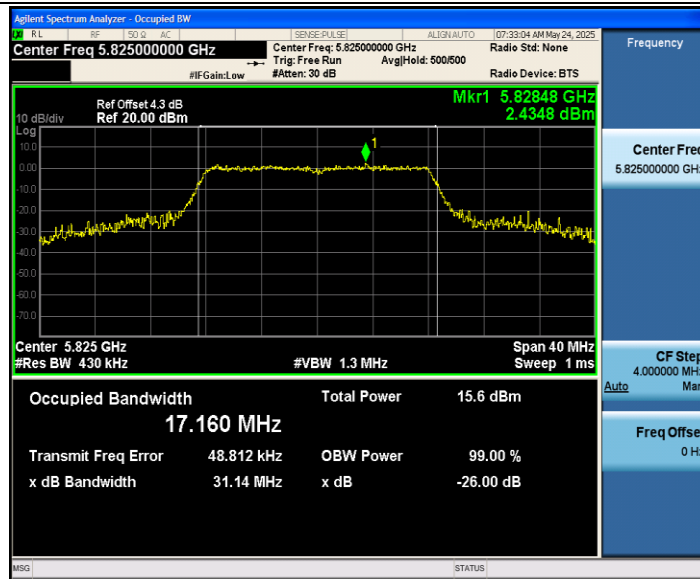
11A_Ant1_5745



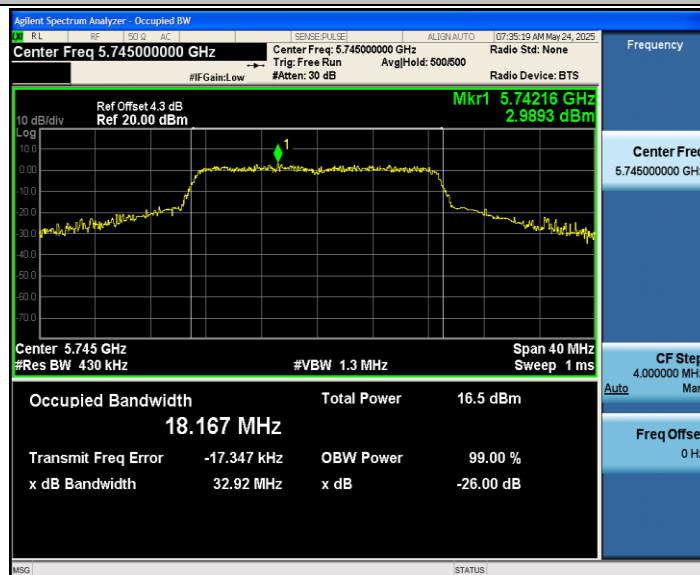
11A_Ant1_5785



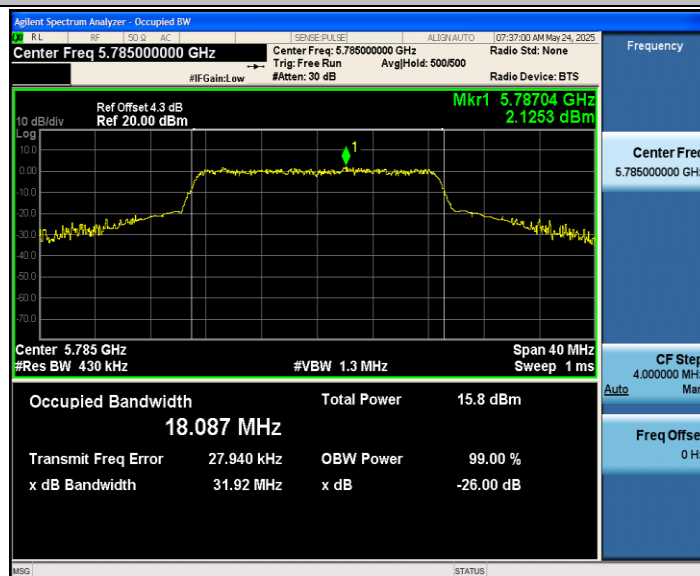
11A_Ant1_5825



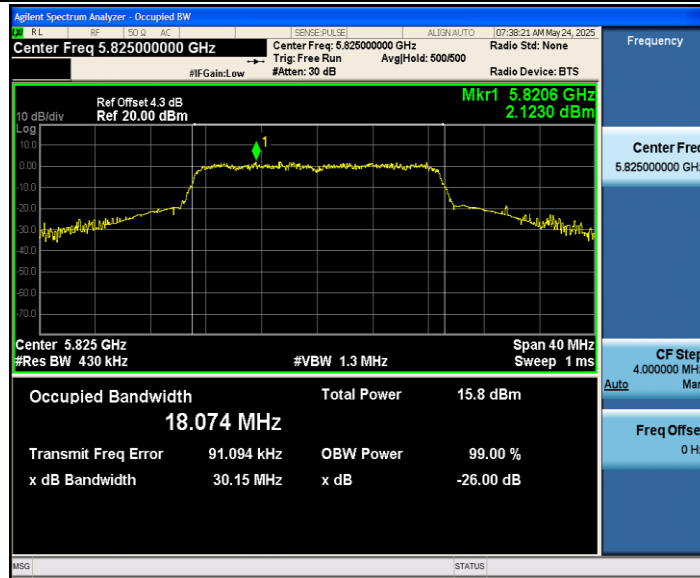
11N20SISO_Ant1_5745



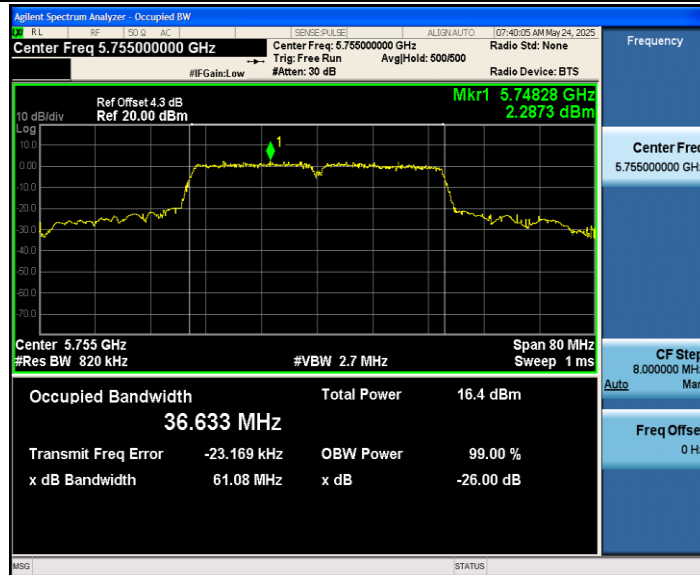
11N20SISO_Ant1_5785



11N20SISO_Ant1_5825



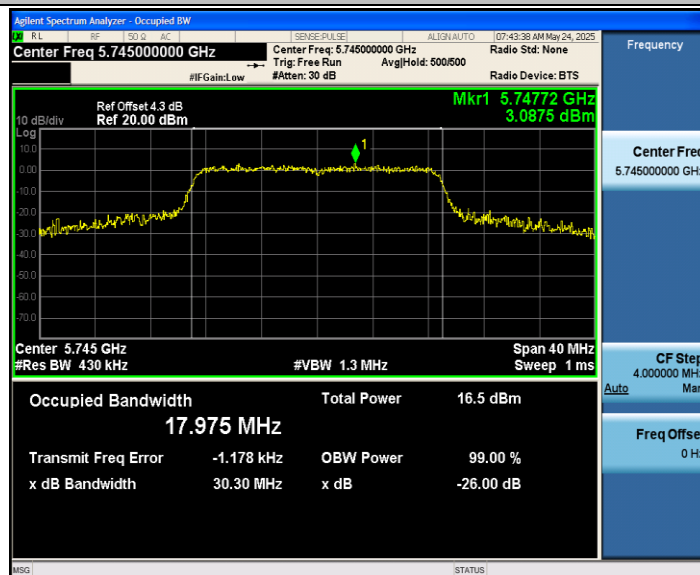
11N40SISO_Ant1_5755



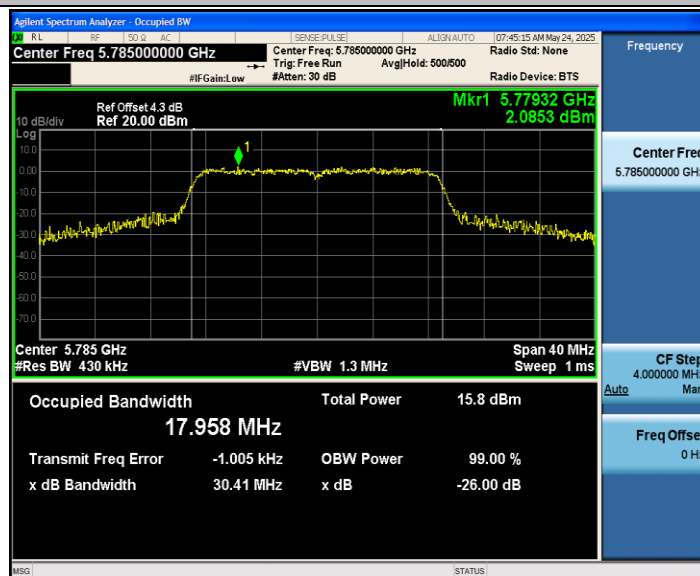
11N40SISO_Ant1_5795



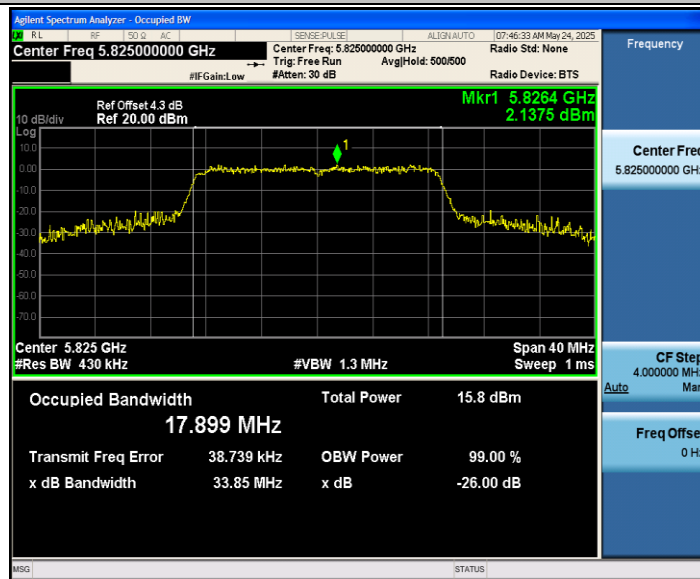
11AC20SISO_Ant1_5745



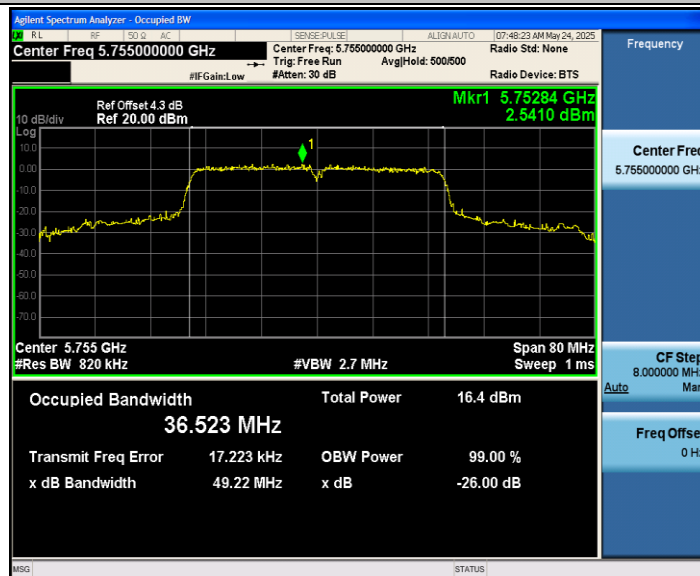
11AC20SISO_Ant1_5785



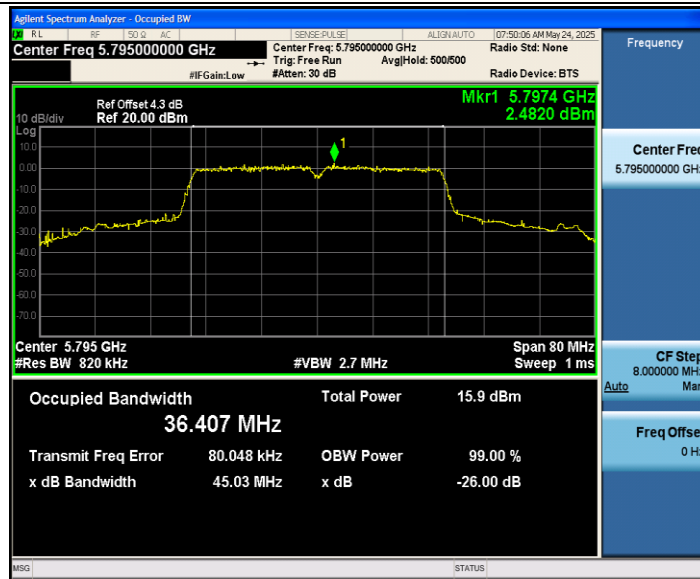
11AC20SISO_Ant1_5825



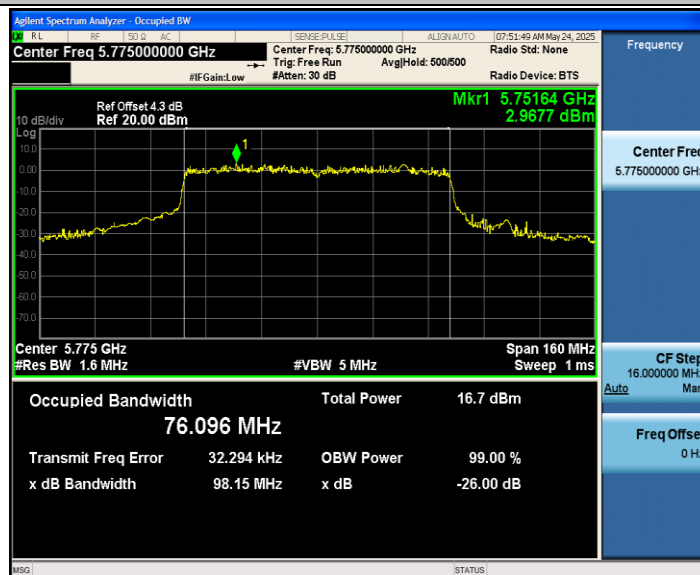
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5775

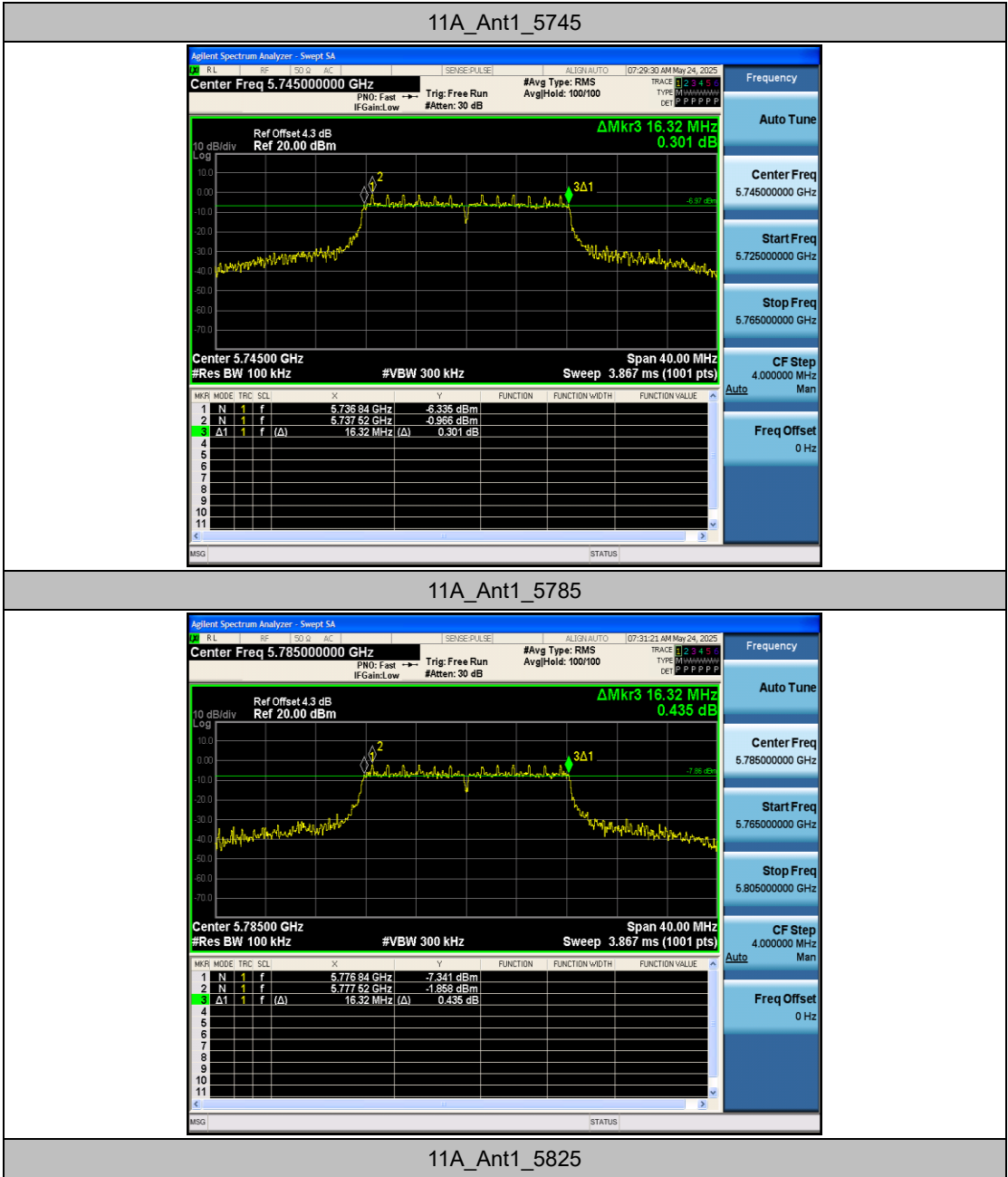


Appendix A2: Min emission bandwidth

Test Result B4

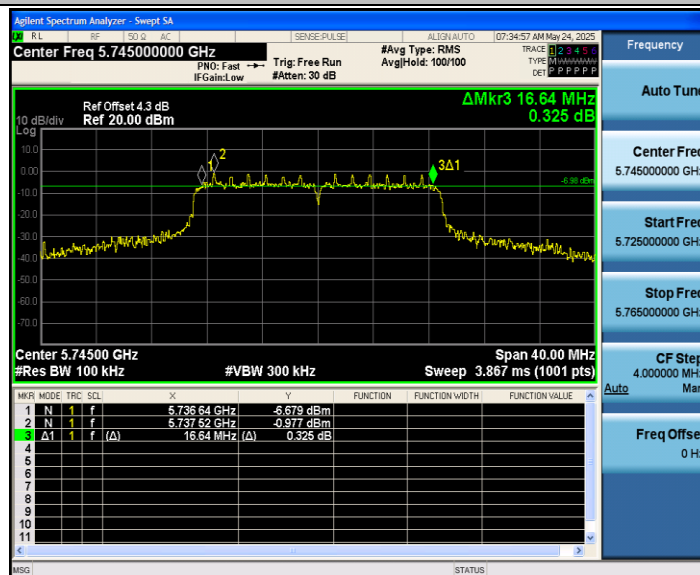
TestMode	Antenna	Freq(MHz)	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.840	5753.160	0.5	PASS
		5785	16.320	5776.840	5793.160	0.5	PASS
		5825	16.320	5816.840	5833.160	0.5	PASS
11N20SISO	Ant1	5745	16.640	5736.640	5753.280	0.5	PASS
		5785	16.840	5776.680	5793.520	0.5	PASS
		5825	17.040	5816.480	5833.520	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
11AC20SISO	Ant1	5745	16.600	5736.480	5753.080	0.5	PASS
		5785	17.160	5776.480	5793.640	0.5	PASS
		5825	17.000	5816.640	5833.640	0.5	PASS
11AC40SISO	Ant1	5755	35.440	5737.240	5772.680	0.5	PASS
		5795	35.360	5777.240	5812.600	0.5	PASS
11AC80SISO	Ant1	5775	75.200	5737.400	5812.600	0.5	PASS

Test Graphs B4

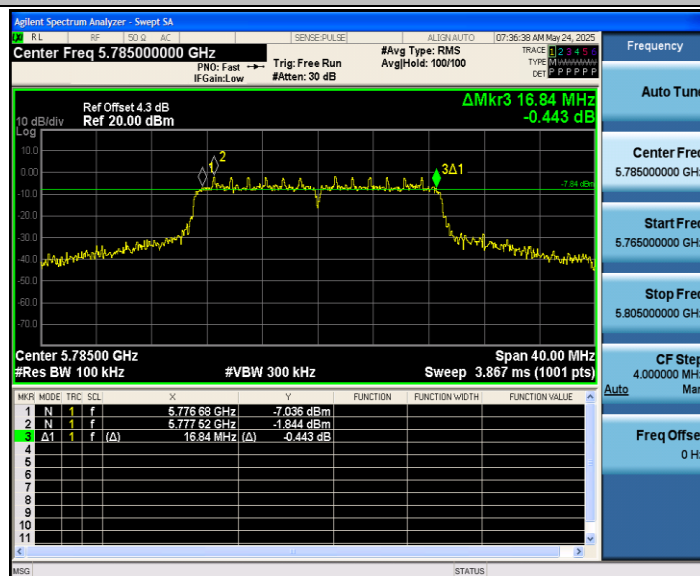




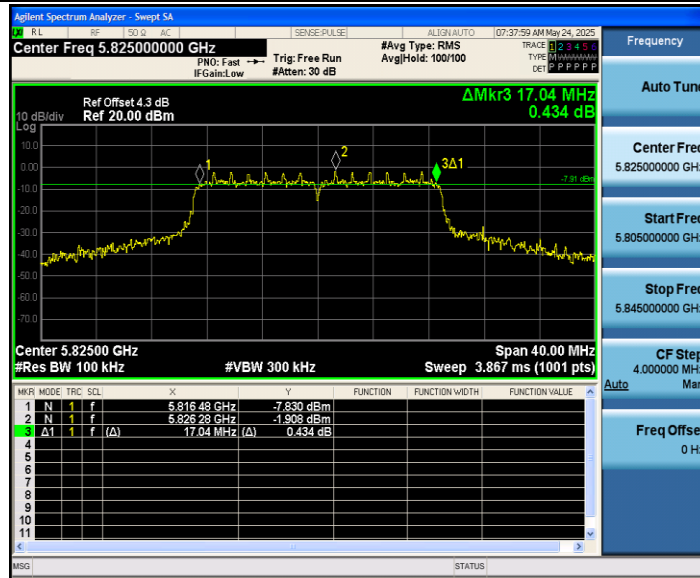
11N20SISO_Ant1_5745



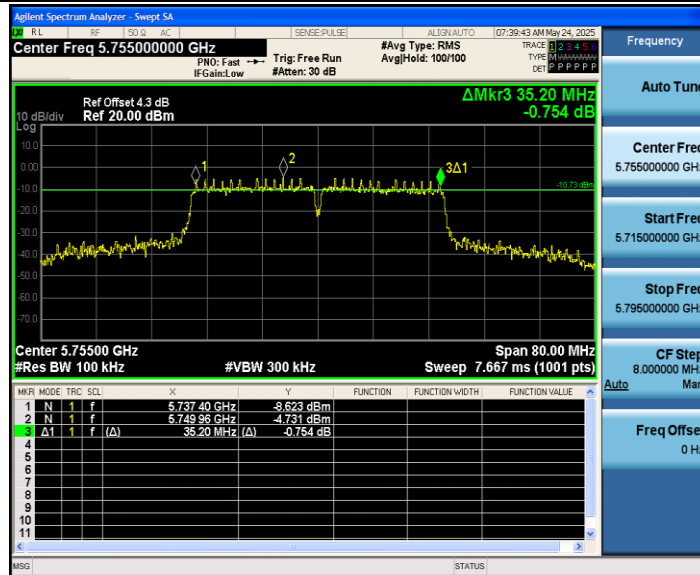
11N20SISO_Ant1_5785



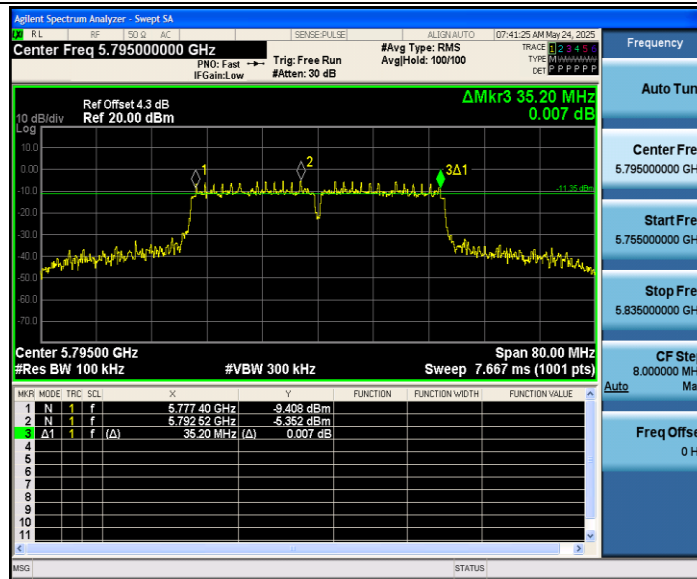
11N20SISO_Ant1_5825



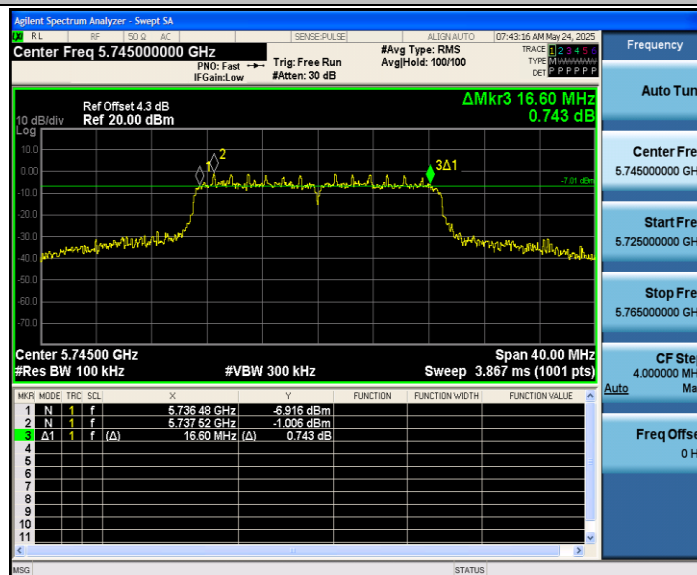
11N40SISO_Ant1_5755



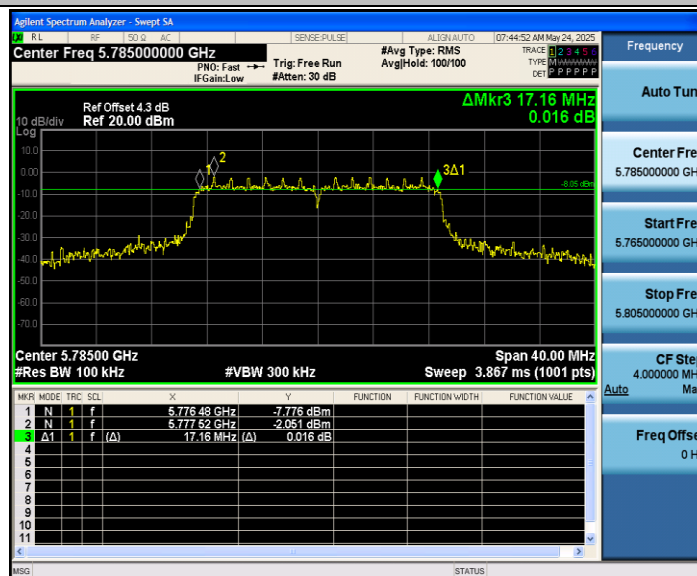
11N40SISO_Ant1_5795



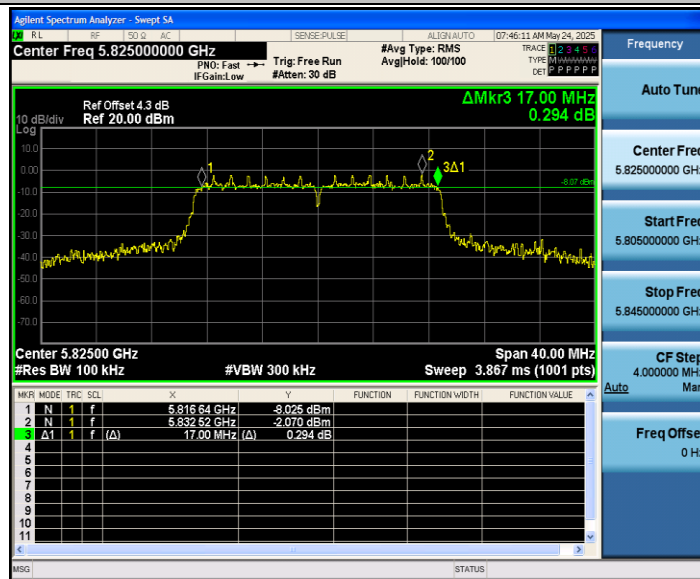
11AC20SISO_Ant1_5745



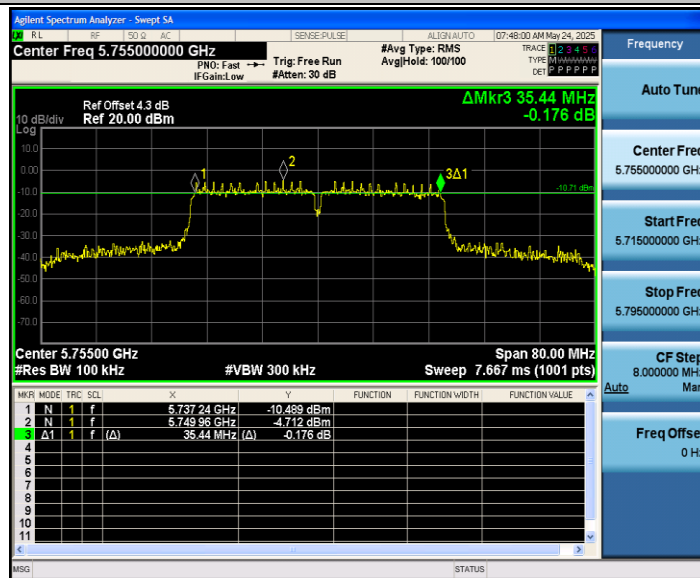
11AC20SISO_Ant1_5785



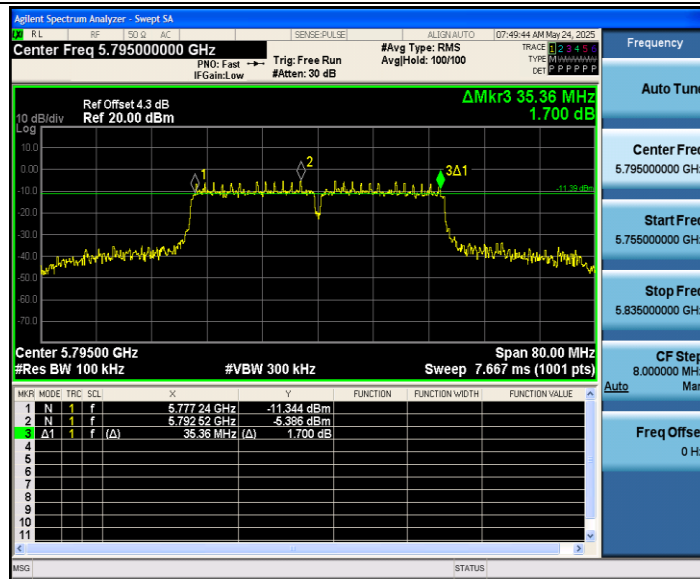
11AC20SISO_Ant1_5825



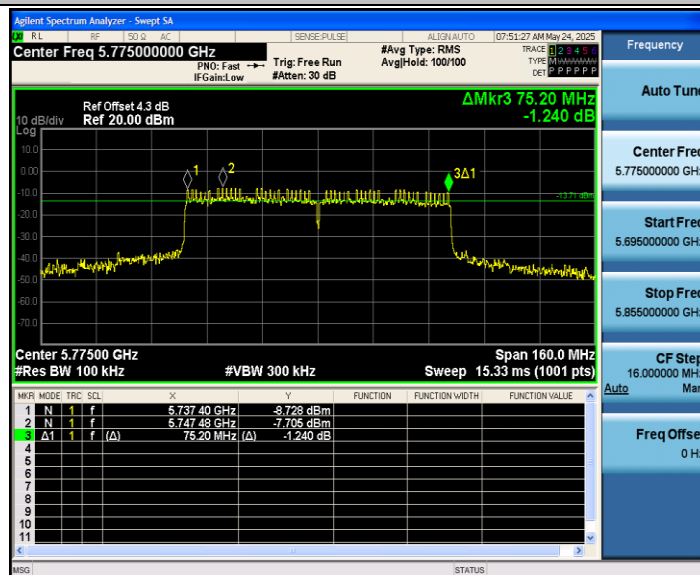
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80ISO_Ant1_5775

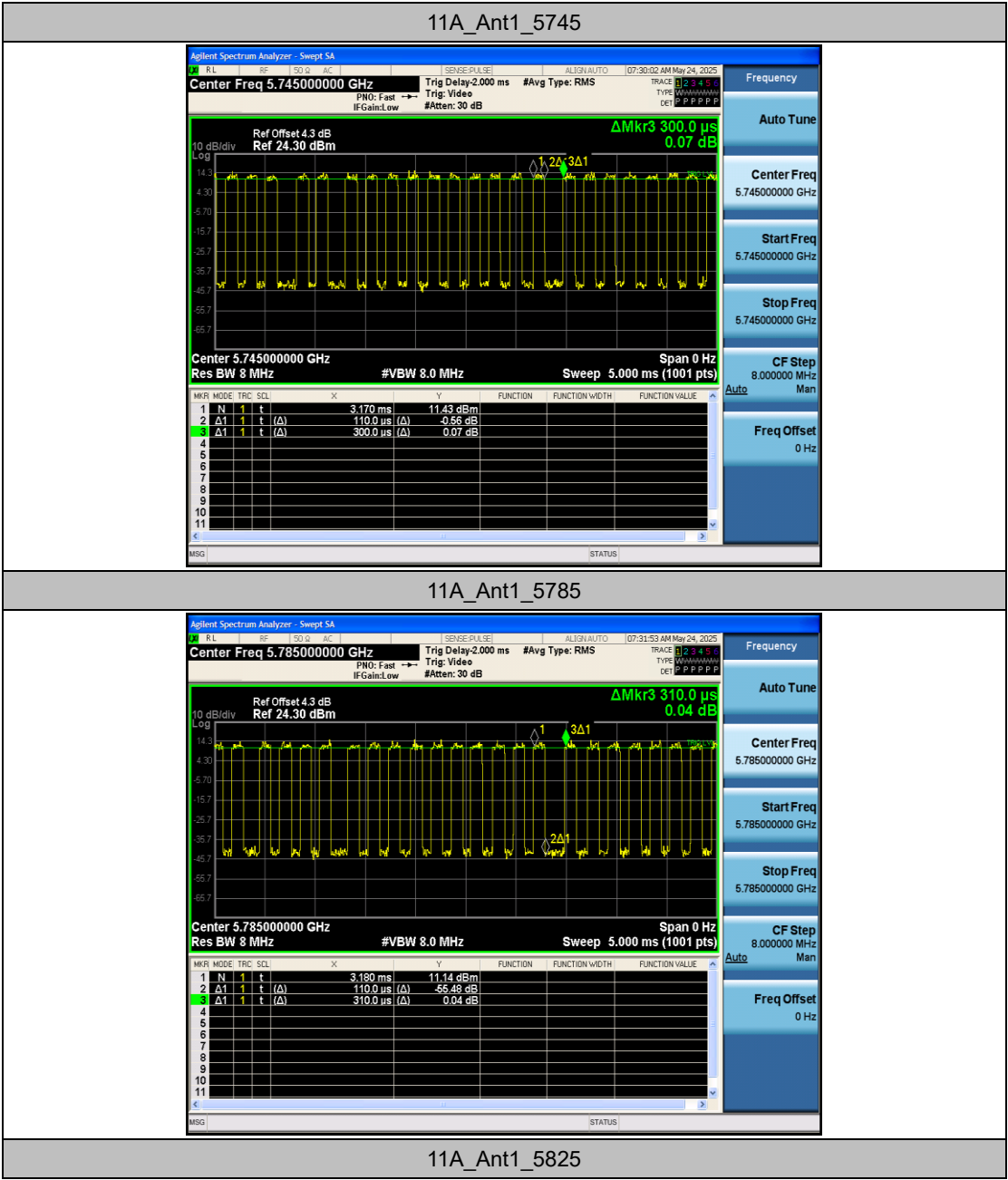


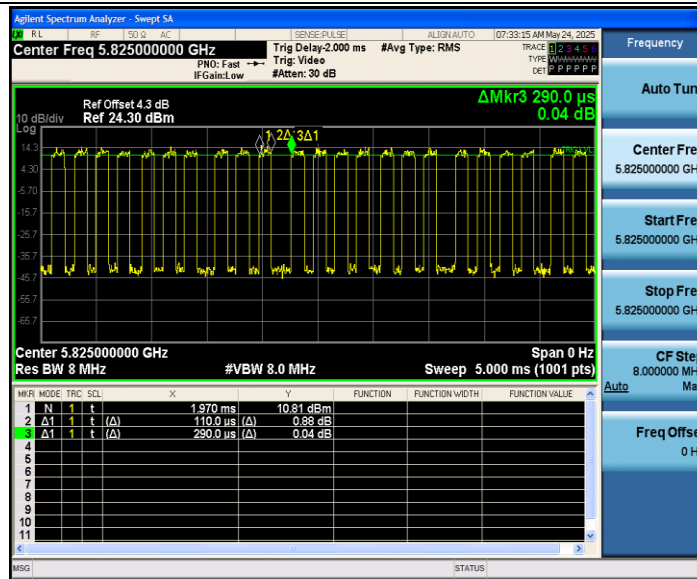
Appendix B: Duty Cycle

Test Result

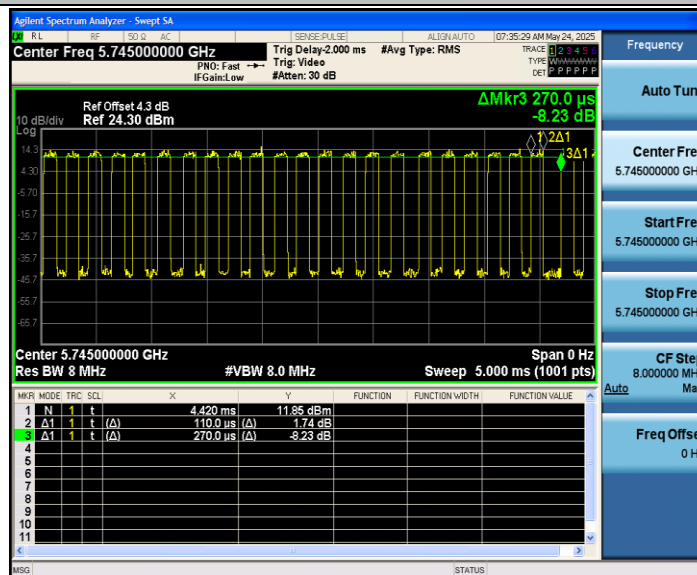
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Duty factor(dB)	Limit	Verdict
11A	Ant1	5745	0.11	0.30	36.67	4.36	---	---
		5785	0.11	0.31	35.48	4.50	---	---
		5825	0.11	0.29	37.93	4.21	---	---
11N20SISO	Ant1	5745	0.11	0.27	40.74	3.90	---	---
		5785	0.11	0.30	36.67	4.36	---	---
		5825	0.11	0.26	42.31	3.74	---	---
11N40SISO	Ant1	5755	0.07	0.24	29.17	5.35	---	---
		5795	0.07	0.24	29.17	5.35	---	---
11AC20SISO	Ant1	5745	0.12	0.31	38.71	4.12	---	---
		5785	0.12	0.25	48.00	3.19	---	---
		5825	0.12	0.28	42.86	3.68	---	---
11AC40SISO	Ant1	5755	0.08	0.28	28.57	5.44	---	---
		5795	0.08	0.24	33.33	4.77	---	---
11AC80SISO	Ant1	5775	0.05	0.25	20.00	6.99		

Test Graphs

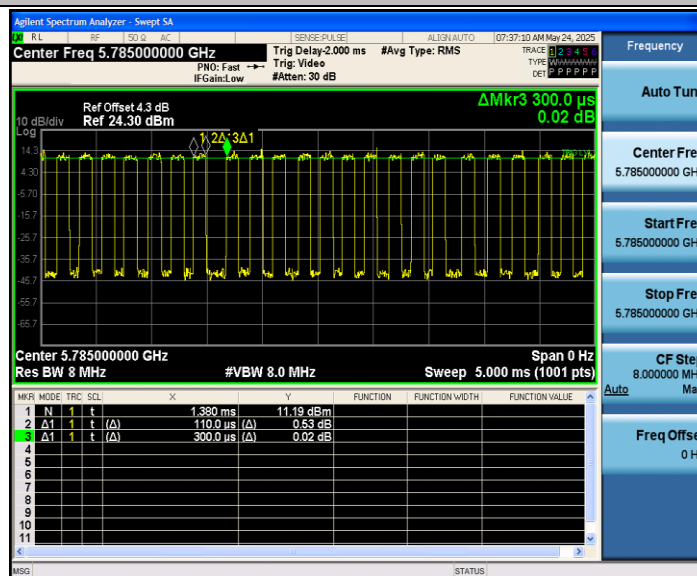




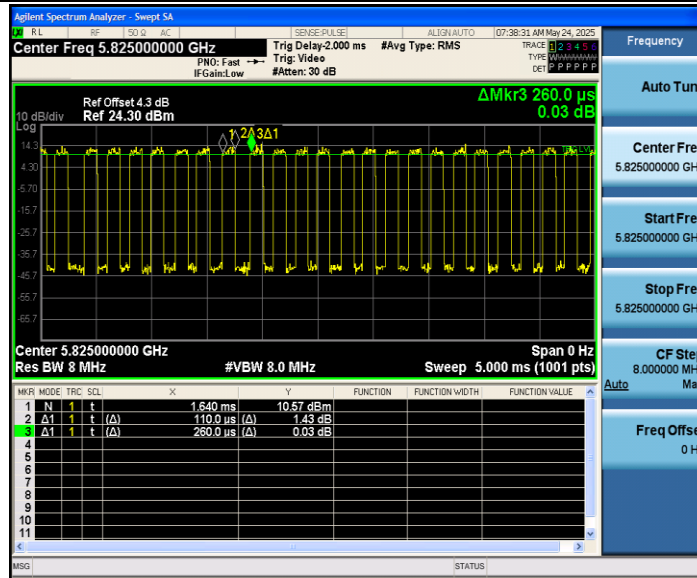
11N20SISO_Ant1_5745



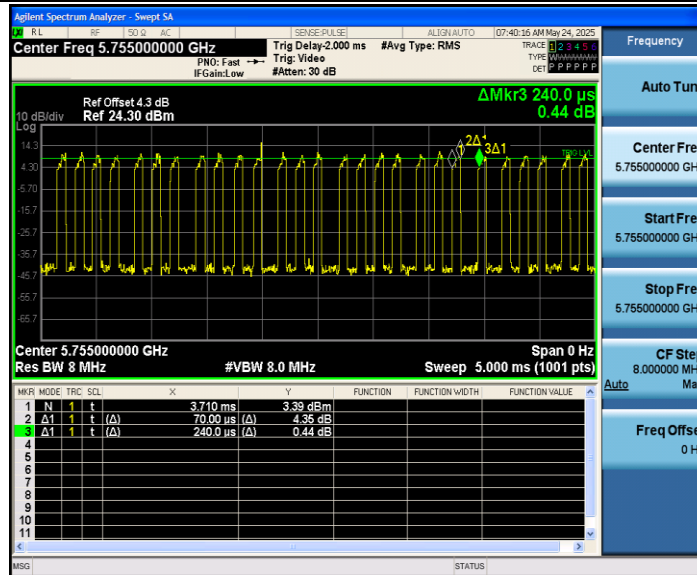
11N20SISO_Ant1_5785



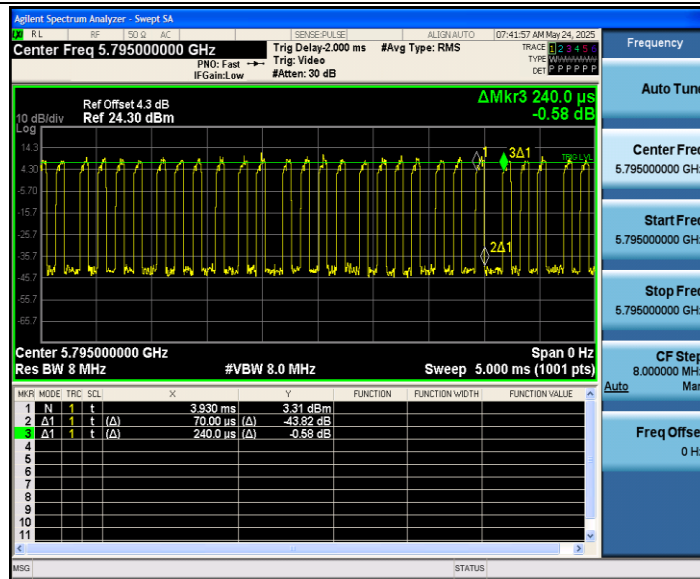
11N20SISO_Ant1_5825



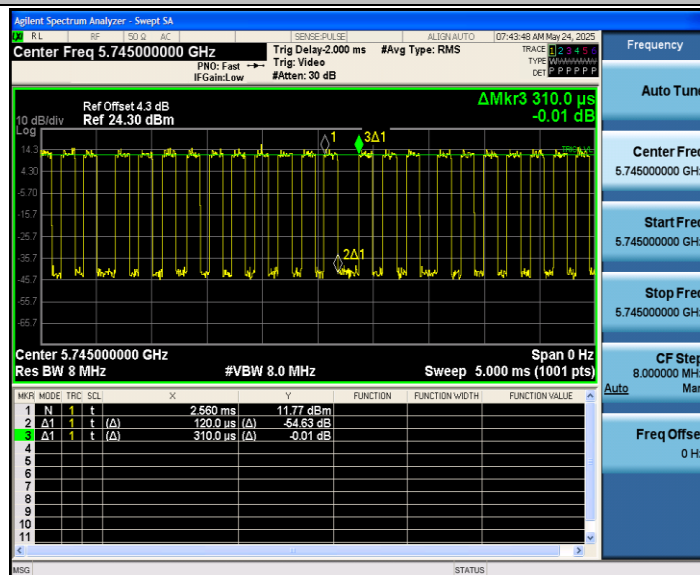
11N40SISO_Ant1_5755



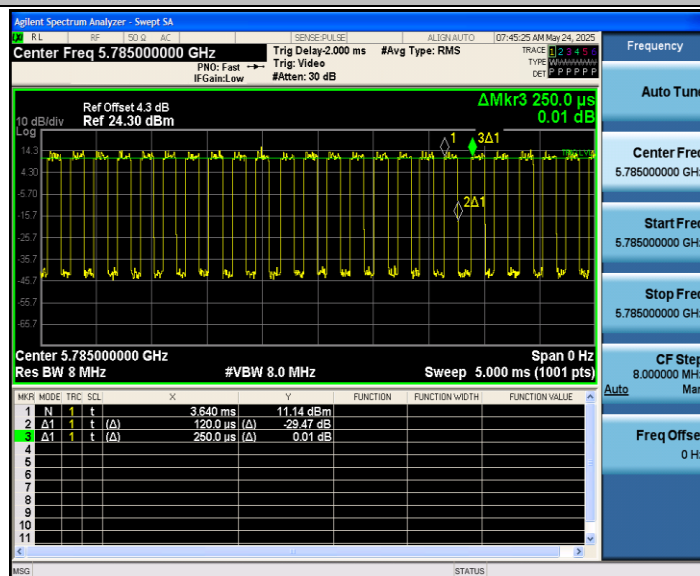
11N40SISO_Ant1_5795



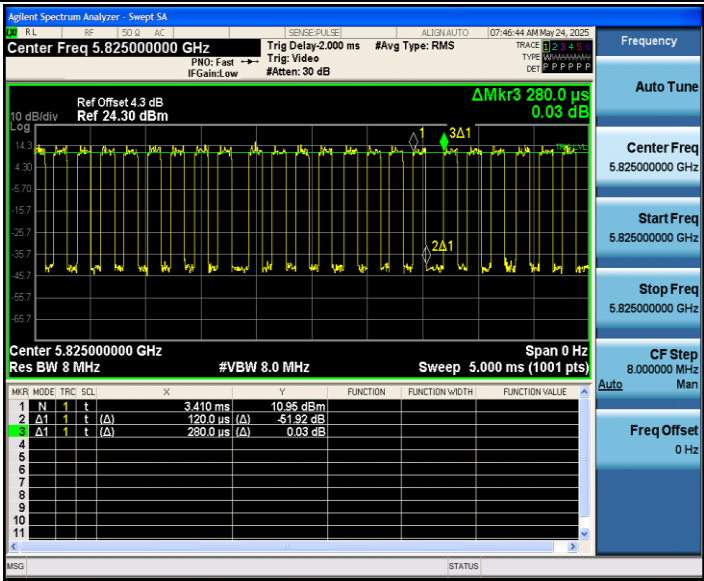
11AC20SISO_Ant1_5745



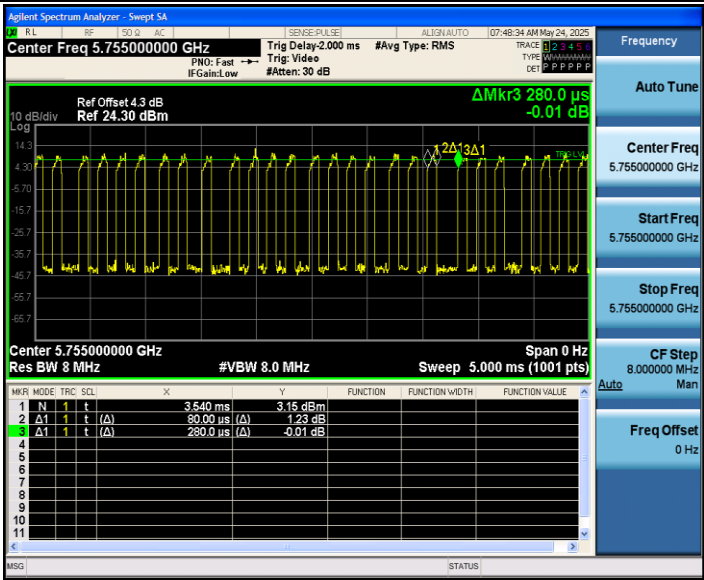
11AC20SISO_Ant1_5785



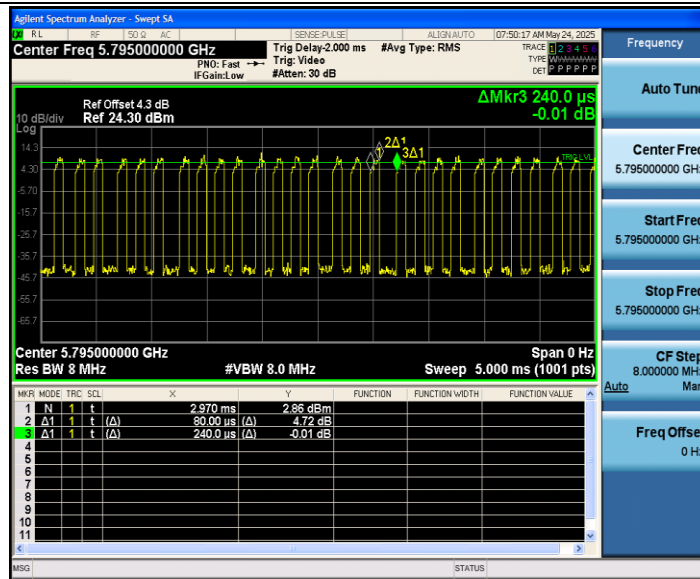
11AC20SISO_Ant1_5825



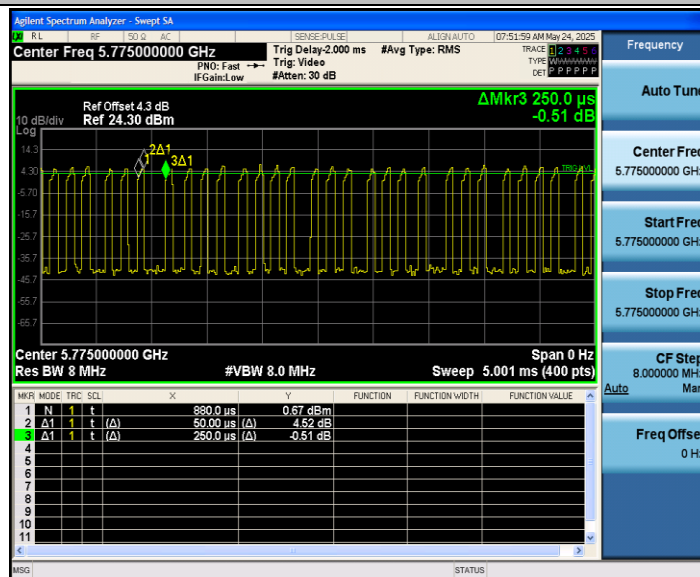
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80ISO_Ant1_5775



Appendix C: Maximum conducted output power

Test Mode	Antenna	Freq(MHz)	Channel Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	7.04	36.67	4.36	11.40	≤30.00	PASS
		5785	6.33	35.48	4.50	10.83	≤30.00	PASS
		5825	6.35	37.93	4.21	10.56	≤30.00	PASS
11N20SI SO	Ant1	5745	6.98	40.74	3.90	10.88	≤30.00	PASS
		5785	6.27	36.67	4.36	10.63	≤30.00	PASS
		5825	6.35	42.31	3.74	10.09	≤30.00	PASS
11N40SI SO	Ant1	5755	5.11	29.17	5.35	10.46	≤30.00	PASS
		5795	4.69	29.17	5.35	10.04	≤30.00	PASS
11AC20S ISO	Ant1	5745	7.16	38.71	4.12	11.28	≤30.00	PASS
		5785	6.42	48.00	3.19	9.61	≤30.00	PASS
		5825	6.51	42.86	3.68	10.19	≤30.00	PASS
11AC40S ISO	Ant1	5755	5.39	28.57	5.44	10.83	≤30.00	PASS
		5795	4.98	33.33	4.77	9.75	≤30.00	PASS
11AC80S ISO	Ant1	5775	4.41	20.00	6.99	11.40	≤30.00	PASS

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]
11A	Ant1	5745	-8.344	2.22	4.36	-1.76	≤30.00
		5785	-8.719	2.22	4.50	-2.00	≤30.00
		5825	-8.784	2.22	4.21	-2.35	≤30.00
11N20SISO	Ant1	5745	-7.988	2.22	3.90	-1.87	≤30.00
		5785	-9.343	2.22	4.36	-2.76	≤30.00
		5825	-8.814	2.22	3.74	-2.85	≤30.00
11N40SISO	Ant1	5755	-12.274	2.22	5.35	-4.70	≤30.00
		5795	-12.781	2.22	5.35	-5.21	≤30.00
11AC20SISO	Ant1	5745	-7.936	2.22	4.12	-1.60	≤30.00
		5785	-8.543	2.22	3.19	-3.13	≤30.00
		5825	-8.496	2.22	3.68	-2.60	≤30.00
11AC40SISO	Ant1	5755	-12.443	2.22	5.44	-4.78	≤30.00
		5795	-12.612	2.22	4.77	-5.62	≤30.00
11AC80SISO	Ant1	5775	-15.658	2.22	6.99	-6.45	≤30.00

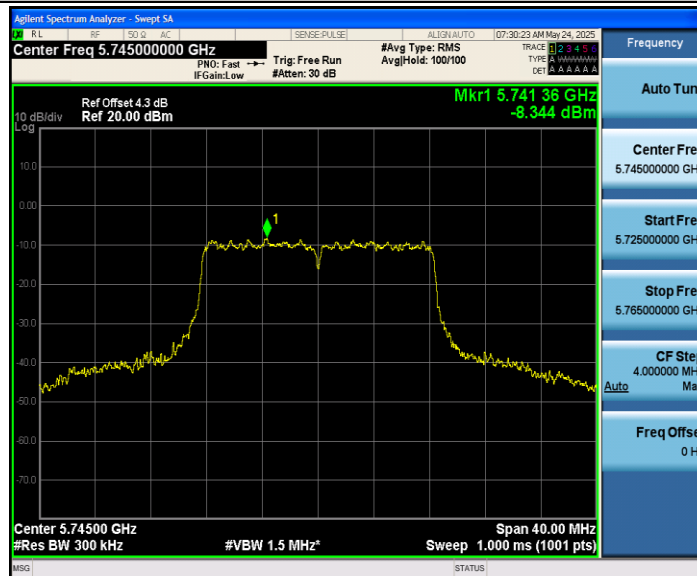
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

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

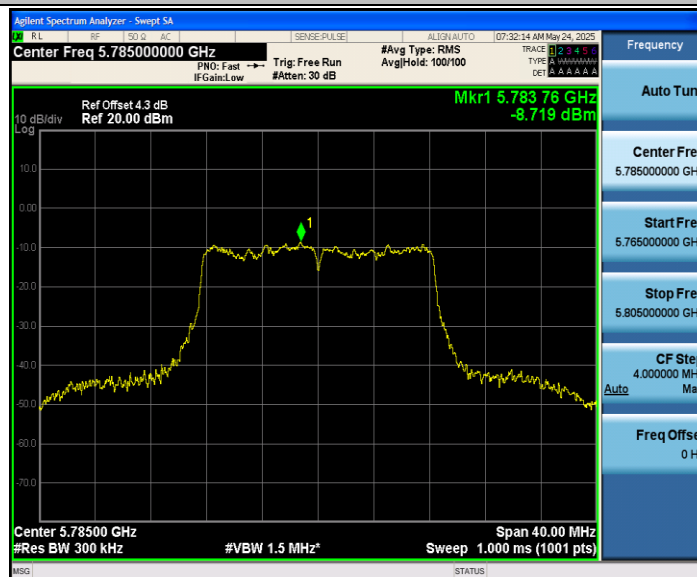
2. RBW factor= 10 log (500 KHz /300 KHz) = 2.22 dB and The RBW Factor is compensated in the data graph.

Test Graphs

11A_Ant1_5745



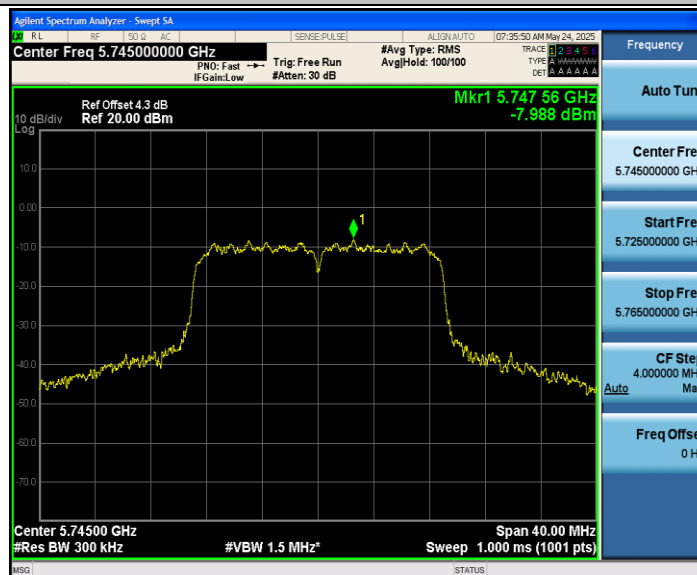
11A_Ant1_5785



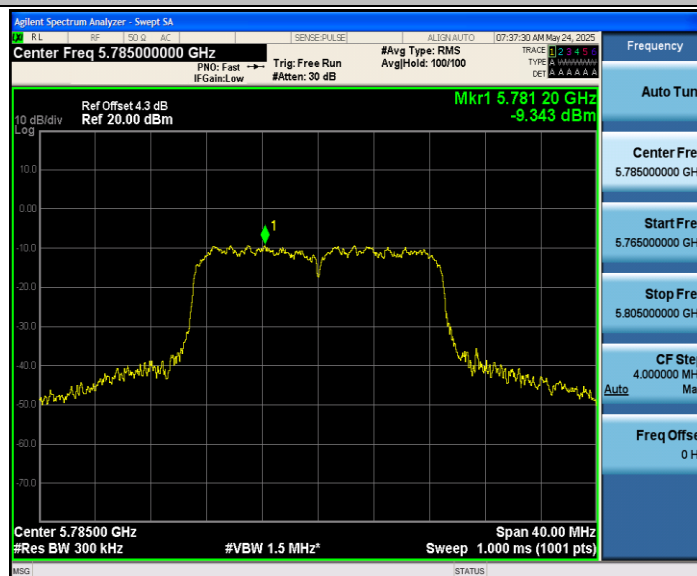
11A_Ant1_5825



11N20SISO_Ant1_5745



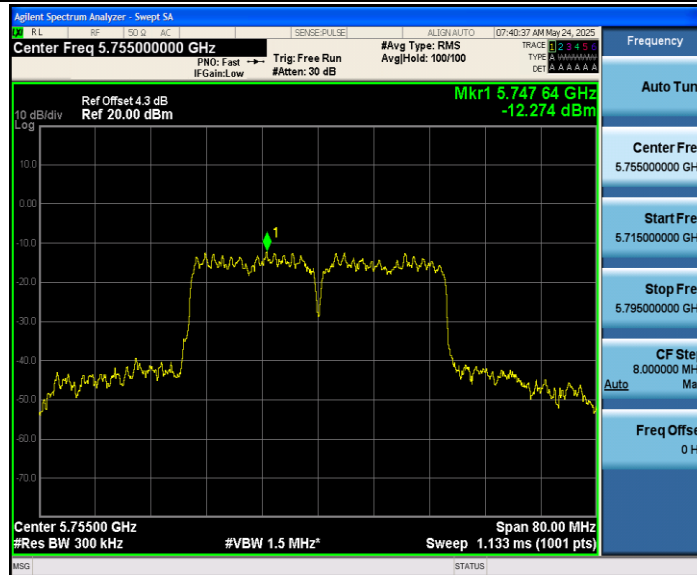
11N20SISO_Ant1_5785



11N20SISO_Ant1_5825



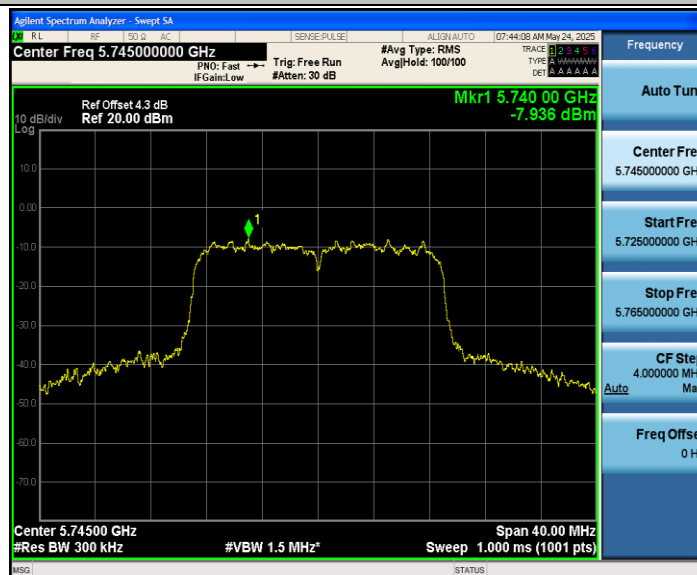
11N40SISO_Ant1_5755



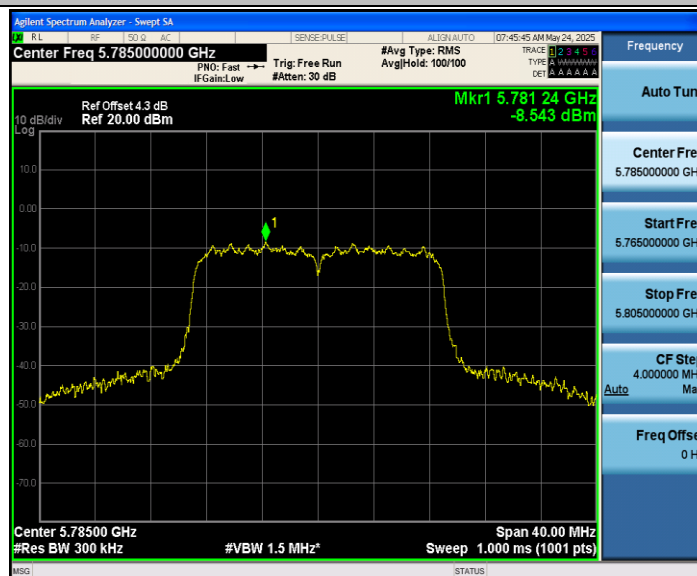
11N40SISO_Ant1_5795



11AC20SISO_Ant1_5745



11AC20SISO_Ant1_5785



11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80ISO_Ant1_5775

