

FCC Appendix RF Test Data

FCC ID : 2AAMS-X15-S

Company: : SHENZHEN NST INDUSTRY AND TRADE CO.,LTD

EUT : laptop

Model Number : X15-S

Report No. : CTA25041000804

Reviewed By : Eric Wang

Appendix A1: Emission Bandwidth

Test Result

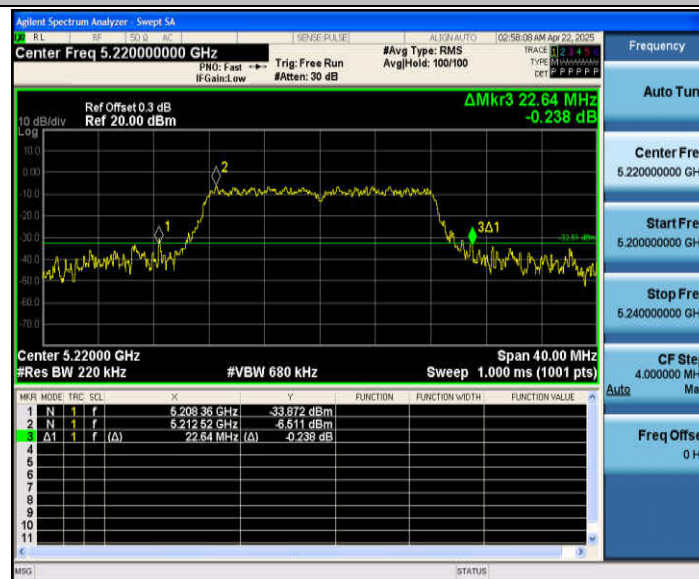
TestMode	Antenna	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	21.200	5170.200	5191.400	---	---
		5220	22.640	5208.360	5231.000	---	---
		5240	21.040	5230.160	5251.200	---	---
		5745	19.720	5735.160	5754.880	---	---
		5785	21.600	5774.160	5795.760	---	---
		5825	22.200	5813.000	5835.200	---	---
11N20SISO	Ant1	5180	28.160	5168.440	5196.600	---	---
		5220	25.560	5207.440	5233.000	---	---
		5240	25.800	5227.040	5252.840	---	---
		5745	24.560	5732.960	5757.520	---	---
		5785	24.840	5772.800	5797.640	---	---
		5825	24.880	5812.880	5837.760	---	---
11N40SISO	Ant1	5190	43.760	5168.640	5212.400	---	---
		5230	43.200	5208.720	5251.920	---	---
		5755	48.080	5733.640	5781.720	---	---
		5795	50.400	5773.240	5823.640	---	---
11AC20SISO	Ant1	5180	22.560	5167.320	5189.880	---	---
		5220	23.240	5206.800	5230.040	---	---
		5240	21.240	5229.120	5250.360	---	---
		5745	21.800	5733.480	5755.280	---	---
		5785	25.640	5772.440	5798.080	---	---
		5825	21.280	5814.880	5836.160	---	---
11AC40SISO	Ant1	5190	42.400	5169.600	5212.000	---	---
		5230	41.520	5210.400	5251.920	---	---
		5755	50.240	5731.720	5781.960	---	---
		5795	52.320	5772.600	5824.920	---	---
11AC80SISO	Ant1	5210	85.760	5167.760	5253.520	---	---
		5775	85.760	5733.560	5819.320	---	---

Test Graphs

11A_Ant1_5180



11A_Ant1_5220



11A_Ant1_5240



11A_Ant1_5745



11A_Ant1_5785



11A_Ant1_5825



11N20SISO_Ant1_5180



11N20SISO_Ant1_5220



11N20SISO_Ant1_5240



11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



11N20SISO_Ant1_5825



11N40SISO_Ant1_5190



11N40SISO_Ant1_5230



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5220



11AC20SISO_Ant1_5240



11AC20SISO_Ant1_5745



11AC20SISO_Ant1_5785



11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



11AC40SISO_Ant1_5755



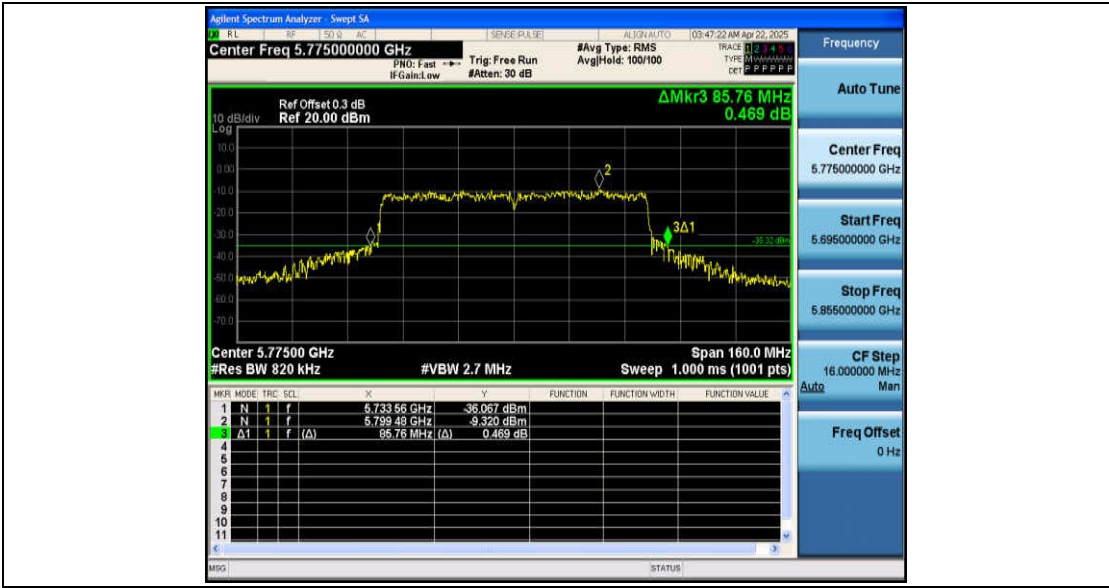
11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5210



11AC80SISO_Ant1_5775



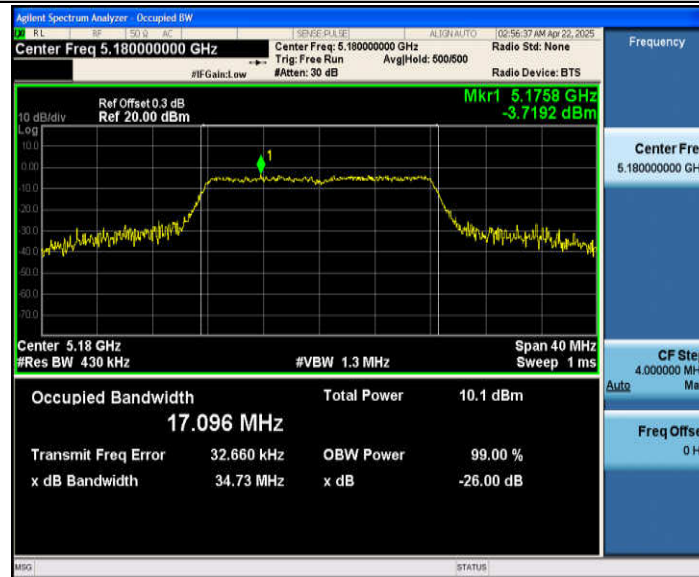
Appendix A2: Occupied channel bandwidth

Test Result

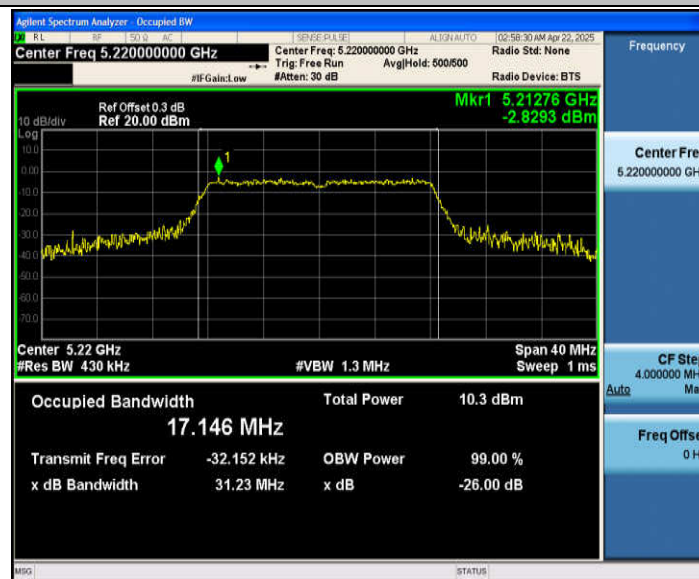
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	17.096	5171.4847	5188.5807	---	---
		5220	17.146	5211.3949	5228.5409	---	---
		5240	17.150	5231.4474	5248.5974	---	---
		5745	17.121	5736.4313	5753.5523	---	---
		5785	17.068	5776.4619	5793.5299	---	---
		5825	17.033	5816.5183	5833.5513	---	---
11N20SISO	Ant1	5180	18.191	5170.9772	5189.1682	---	---
		5220	18.205	5210.9560	5229.1610	---	---
		5240	18.216	5230.9246	5249.1406	---	---
		5745	18.095	5735.9420	5754.0370	---	---
		5785	18.112	5775.9853	5794.0973	---	---
		5825	18.074	5815.9995	5834.0735	---	---
11N40SISO	Ant1	5190	36.470	5171.7959	5208.2659	---	---
		5230	36.376	5211.8889	5248.2649	---	---
		5755	36.893	5736.6657	5773.5587	---	---
		5795	36.830	5776.7805	5813.6105	---	---
11AC20SISO	Ant1	5180	17.919	5171.1046	5189.0236	---	---
		5220	17.918	5211.0682	5228.9862	---	---
		5240	17.909	5231.0810	5248.9900	---	---
		5745	17.868	5736.0467	5753.9147	---	---
		5785	17.830	5776.1014	5793.9314	---	---
		5825	17.865	5816.1064	5833.9714	---	---
11AC40SISO	Ant1	5190	36.328	5171.8803	5208.2083	---	---
		5230	36.346	5211.9169	5248.2629	---	---
		5755	36.877	5736.6927	5773.5697	---	---
		5795	36.816	5776.8011	5813.6171	---	---
11AC80SISO	Ant1	5210	75.951	5172.2364	5248.1874	---	---
		5775	76.136	5737.1329	5813.2689	---	---

Test Graphs

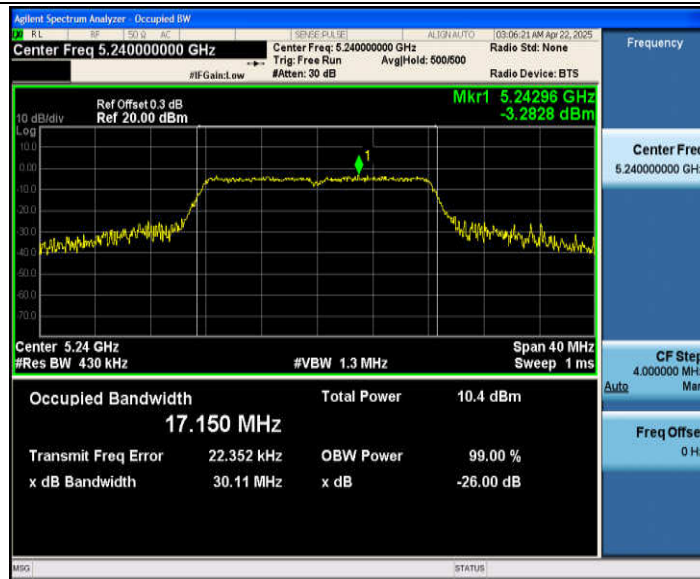
11A_Ant1_5180



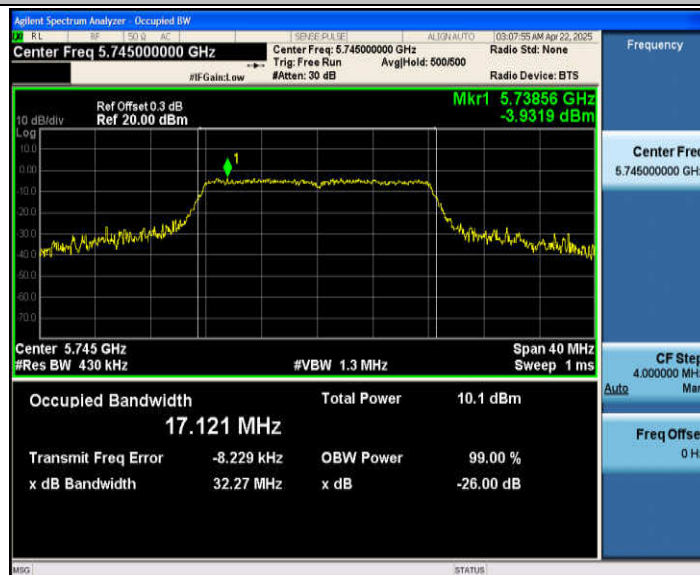
11A_Ant1_5220



11A_Ant1_5240



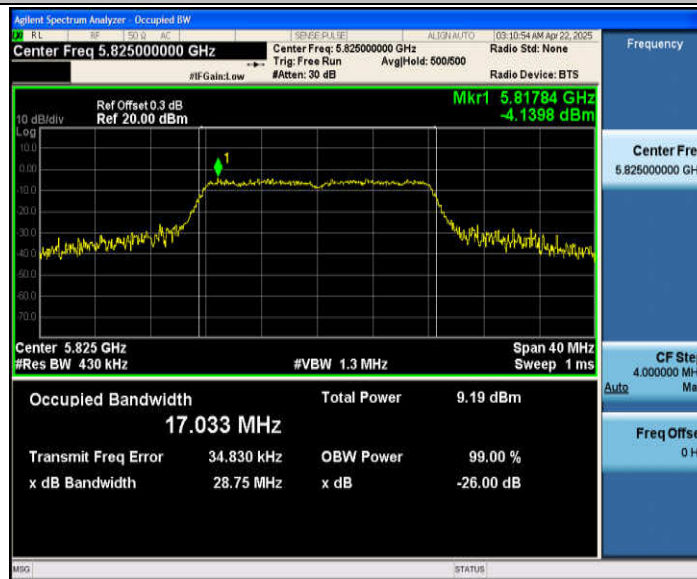
11A_Ant1_5745



11A_Ant1_5785



11A_Ant1_5825



11N20SISO_Ant1_5180



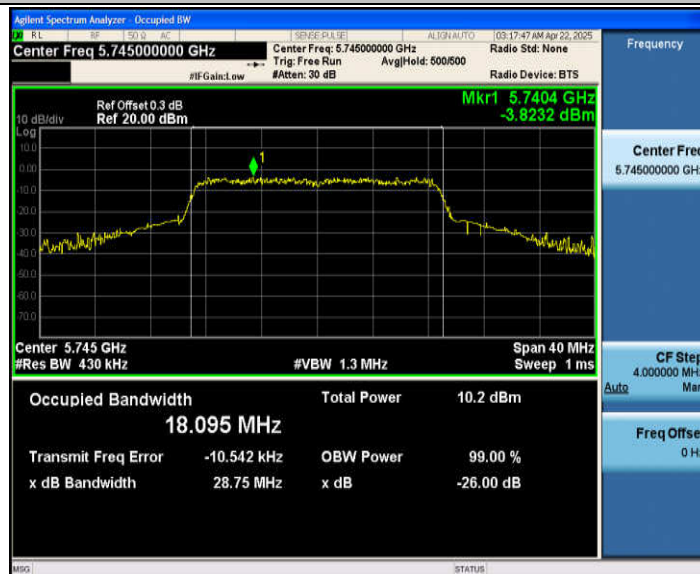
11N20SISO_Ant1_5220



11N20SISO_Ant1_5240



11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



11N20SISO_Ant1_5825



11N40SISO_Ant1_5190



11N40SISO_Ant1_5230



11N40SISO_Ant1_5755



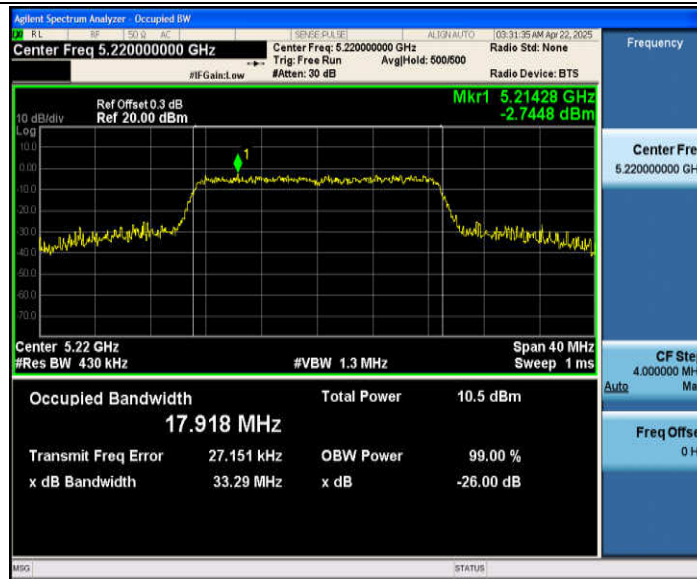
11N40SISO_Ant1_5795



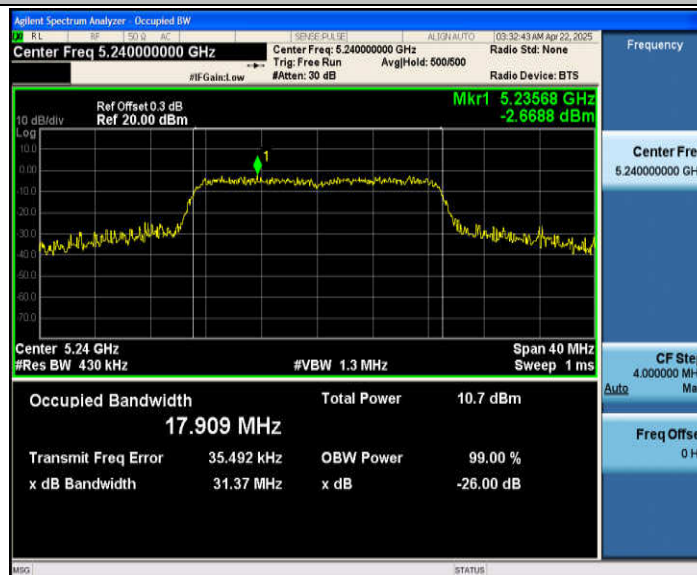
11AC20SISO_Ant1_5180



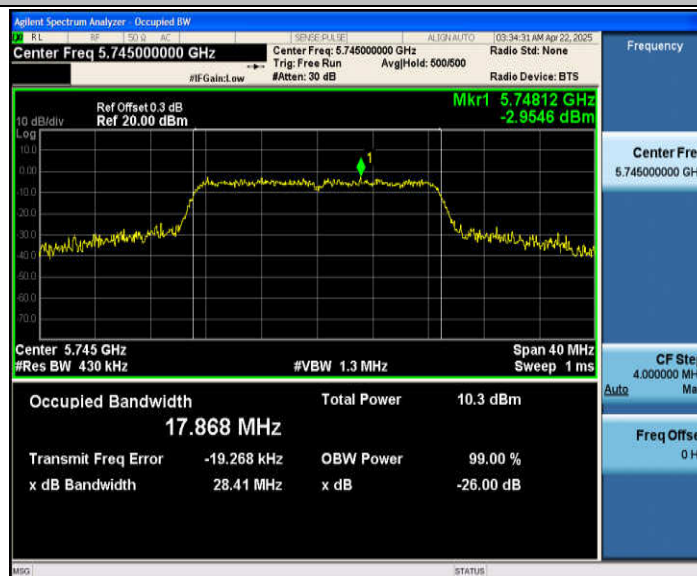
11AC20SISO_Ant1_5220



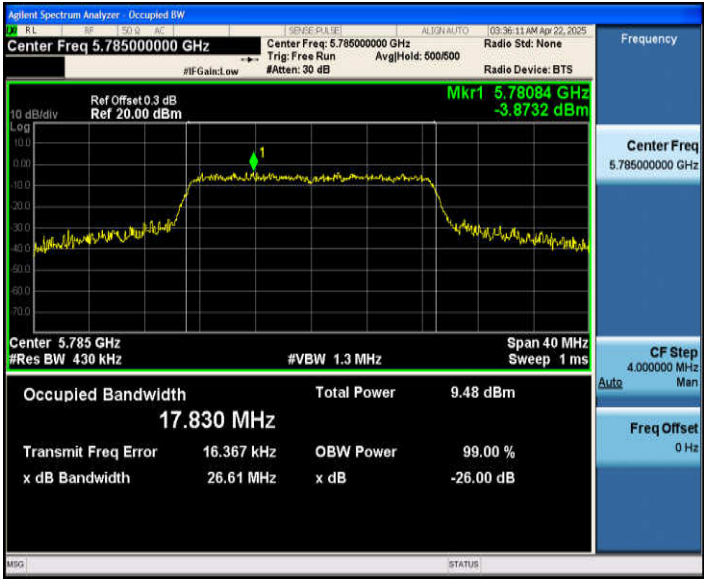
11AC20SISO_Ant1_5240



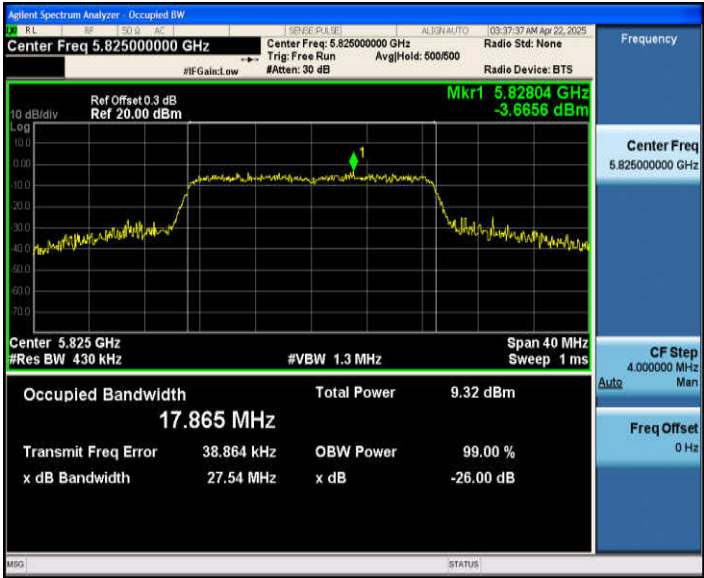
11AC20SISO_Ant1_5745



11AC20SISO_Ant1_5785



11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5210



11AC80SISO_Ant1_5775



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	16.360	5736.800	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	16.880	5736.480	5753.360	0.5	PASS
		5785	16.560	5776.640	5793.200	0.5	PASS
		5825	16.960	5816.400	5833.360	0.5	PASS
11N40SISO	Ant1	5755	35.840	5737.080	5772.920	0.5	PASS
		5795	35.600	5777.320	5812.920	0.5	PASS
11AC20SISO	Ant1	5745	16.800	5736.520	5753.320	0.5	PASS
		5785	16.960	5776.400	5793.360	0.5	PASS
		5825	16.720	5816.640	5833.360	0.5	PASS
11AC40SISO	Ant1	5755	35.840	5737.240	5773.080	0.5	PASS
		5795	35.760	5777.160	5812.920	0.5	PASS
11AC80SISO	Ant1	5775	75.200	5737.400	5812.600	0.5	PASS

11A_Ant1_5745

Agilent Spectrum Analyzer - Swept SA

Center Freq 5.745000000 GHz

Ref Offset 0.3 dB
Ref 20.00 dBm

Trig: Free Run
#Atten: 30 dB

#Avg Type: RMS
AvgHld: 100/100

Span 40.00 MHz
Sweep 3.867 ms (1001 pts)

ΔMkr3 16.36 MHz
0.317 dB

MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	5.736 80 GHz	-13.462 dBm			
2	N	1	f	5.745 28 GHz	-7.492 dBm			
3	Δ1	1	f (Δ)	16.36 MHz (Δ)	0.317 dB			

11A_Ant1_5785

Agilent Spectrum Analyzer - Swept SA

Center Freq 5.785000000 GHz

Ref Offset 0.3 dB
Ref 20.00 dBm

Trig: Free Run
#Atten: 30 dB

#Avg Type: RMS
AvgHld: 100/100

Span 40.00 MHz
Sweep 3.867 ms (1001 pts)

ΔMkr3 16.32 MHz
-0.680 dB

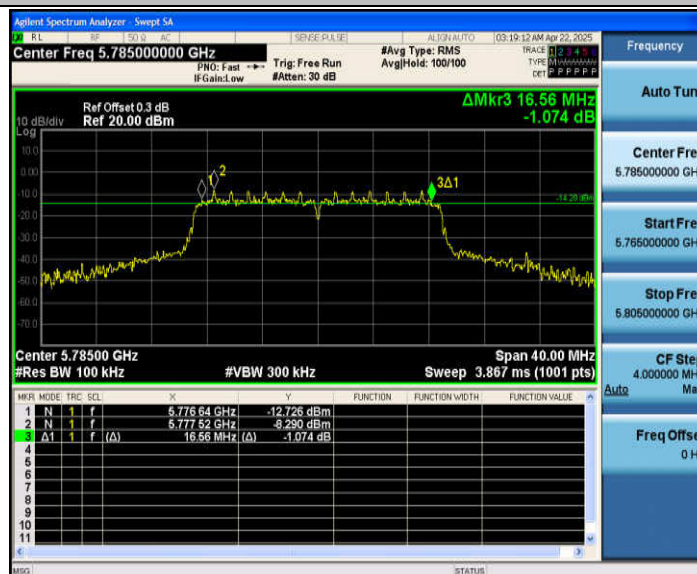
MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	5.776 84 GHz	-13.022 dBm			
2	N	1	f	5.786 28 GHz	-8.607 dBm			
3	Δ1	1	f (Δ)	16.32 MHz (Δ)	-0.680 dB			

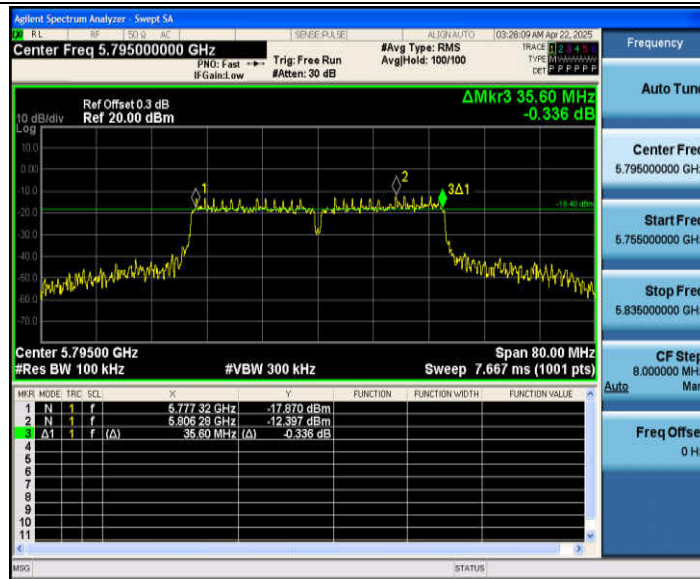


11N20SISO_Ant1_5745

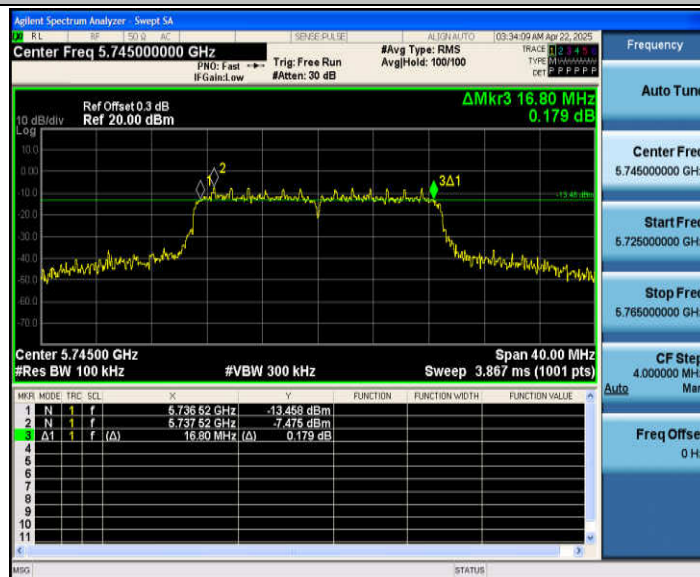


11N20SISO_Ant1_5785

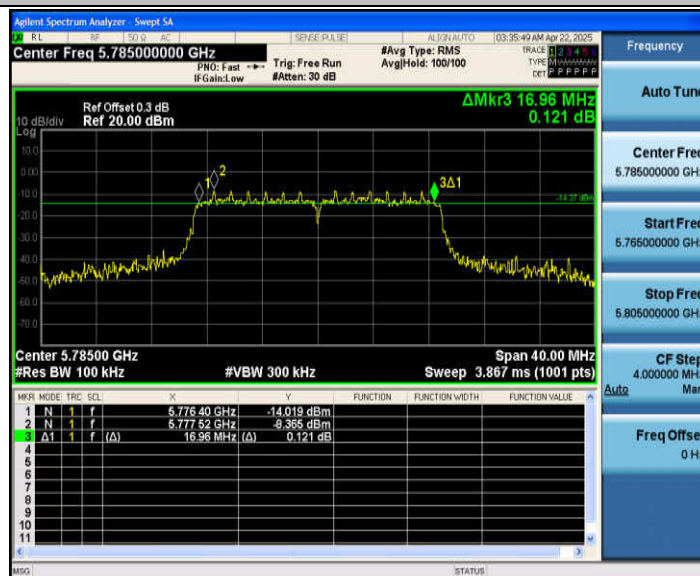




11AC20SISO_Ant1_5745



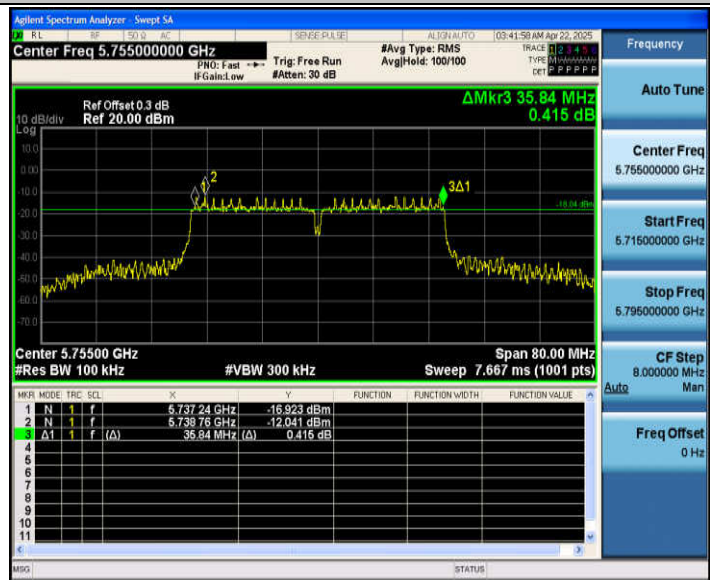
11AC20SISO_Ant1_5785



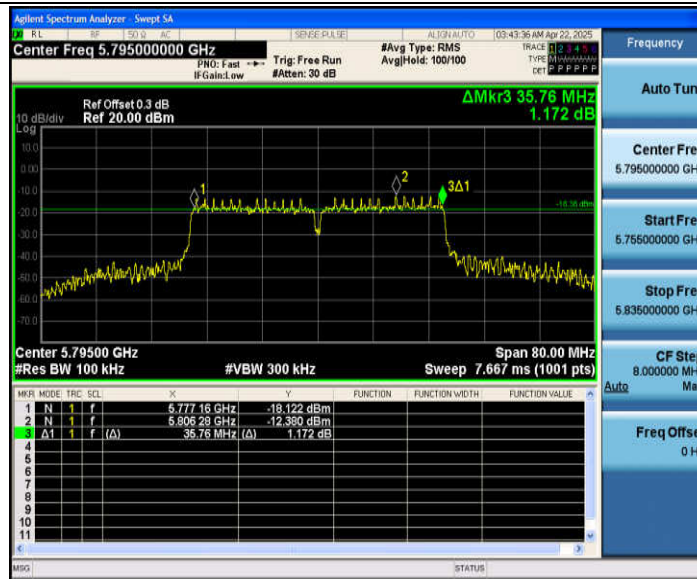
11AC20SISO_Ant1_5825



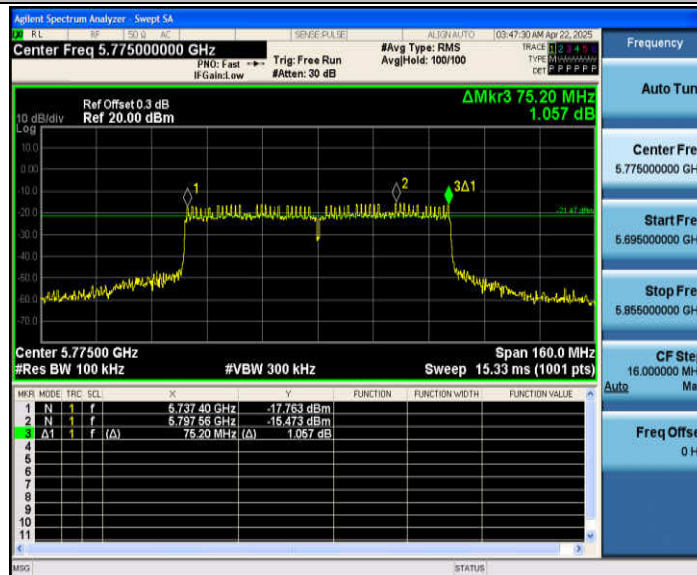
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80ISO_Ant1_5775



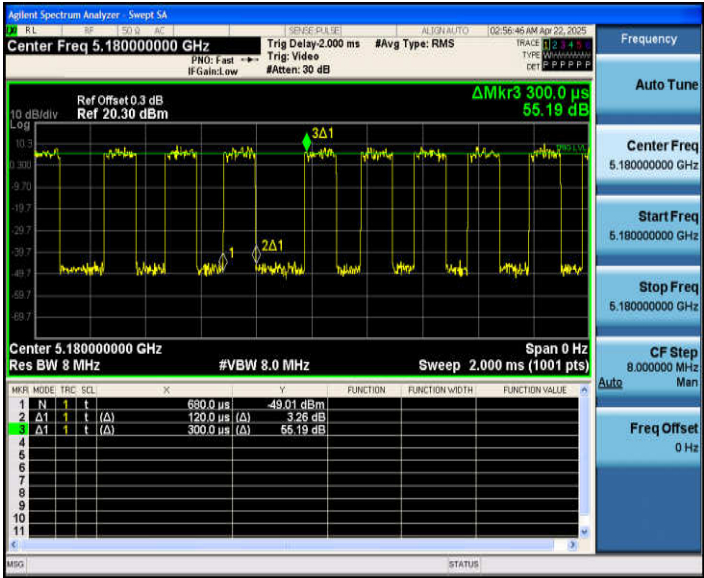
Appendix B: Duty Cycle

Test Result

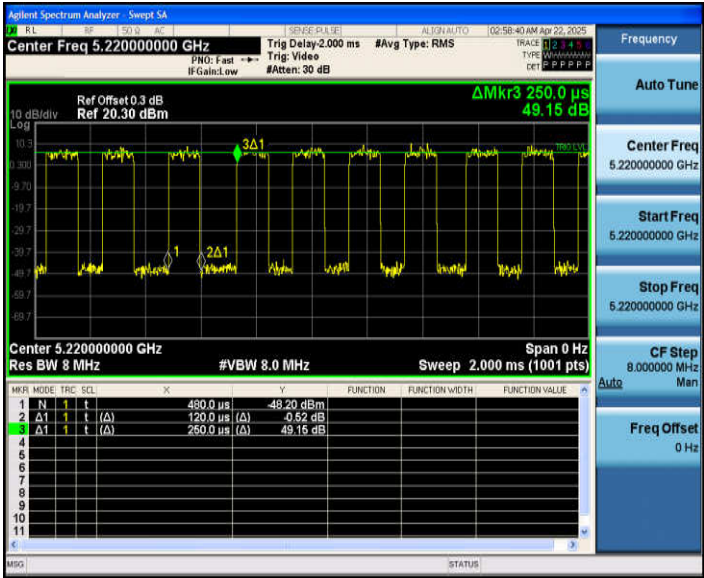
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Duty factor(dB)	Limit	Verdict
11A	Ant1	5180	0.12	0.30	40.00	3.98	---	---
		5220	0.12	0.25	48.00	3.19	---	---
		5240	0.11	0.29	37.93	4.21	---	---
		5745	0.11	0.28	39.29	4.06	---	---
		5785	0.11	0.23	47.83	3.20	---	---
		5825	0.11	0.29	37.93	4.21	---	---
11N20SISO	Ant1	5180	0.11	0.27	40.74	3.90	---	---
		5220	0.11	0.26	42.31	3.74	---	---
		5240	0.11	0.31	35.48	4.50	---	---
		5745	0.11	0.22	50.00	3.01	---	---
		5785	0.11	0.28	39.29	4.06	---	---
		5825	0.11	0.28	39.29	4.06	---	---
11N40SISO	Ant1	5190	0.07	0.23	30.43	5.17	---	---
		5230	0.08	0.25	32.00	4.95	---	---
		5755	0.07	0.24	29.17	5.35	---	---
		5795	0.07	0.26	26.92	5.70	---	---
11AC20SISO	Ant1	5180	0.12	0.29	41.38	3.83	---	---
		5220	0.11	0.29	37.93	4.21	---	---
		5240	0.12	0.34	35.29	4.52	---	---
		5745	0.12	0.29	41.38	3.83	---	---
		5785	0.12	0.29	41.38	3.83	---	---
		5825	0.12	0.29	41.38	3.83	---	---
11AC40SISO	Ant1	5190	0.08	0.31	25.81	5.88	---	---
		5230	0.08	0.28	28.57	5.44	---	---
		5755	0.08	0.22	36.36	4.39	---	---
		5795	0.08	0.30	26.67	5.74	---	---
11AC80SISO	Ant1	5210	0.06	0.25	24.00	6.20	---	---
		5775	0.06	0.26	23.08	6.37	---	---

Test Graphs

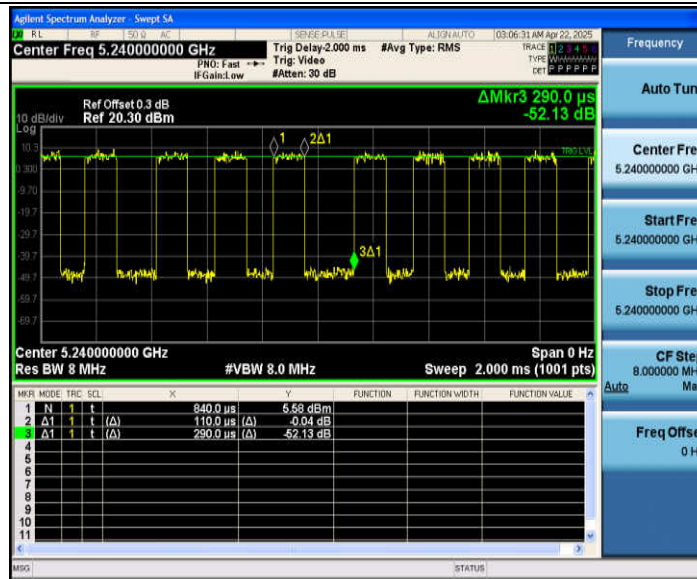
11A_Ant1_5180



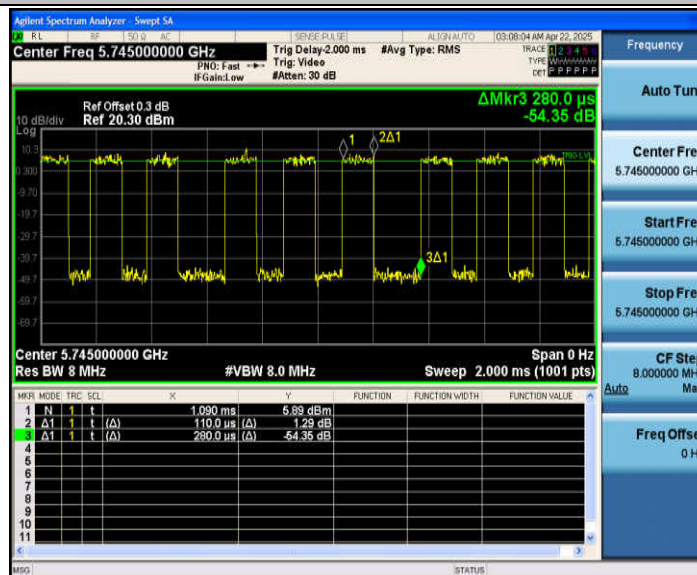
11A_Ant1_5220



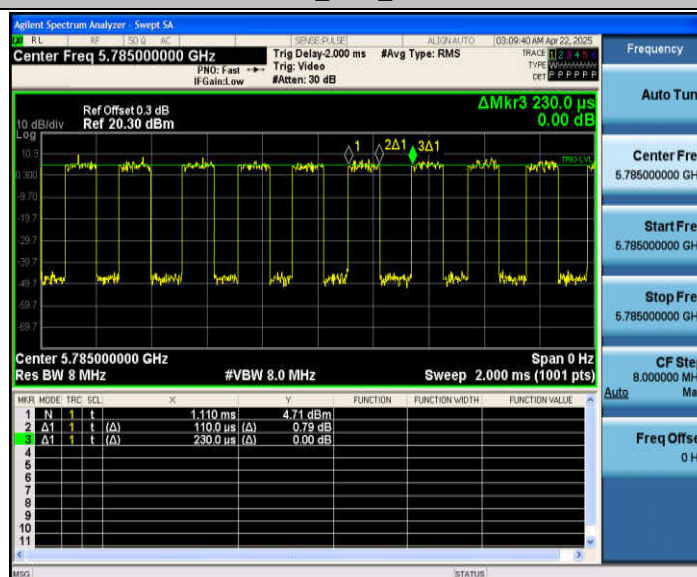
11A_Ant1_5240



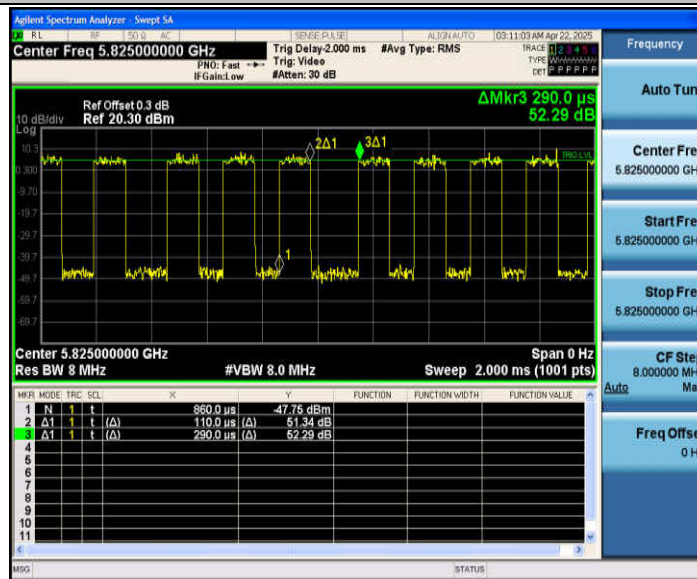
11A_Ant1_5745



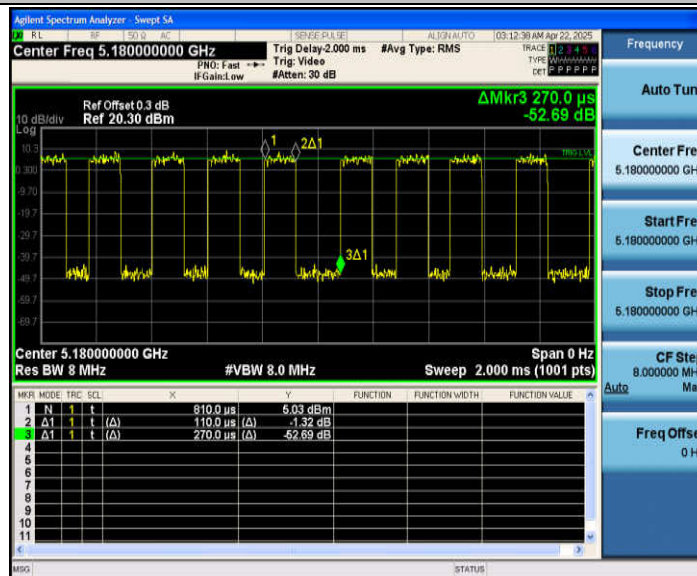
11A_Ant1_5785



11A_Ant1_5825



11N20SISO_Ant1_5180



11N20SISO_Ant1_5220