RF Test Data for RLAN(5.2G) (Conducted Measurement)

Product Name: OE FIT dash camera

Trade Mark: Mangoal/MMgoal

Test Model: MG-014D

FCC ID: 2A8IU-MG028G

Environmental Conditions

Temperature:	23.8℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

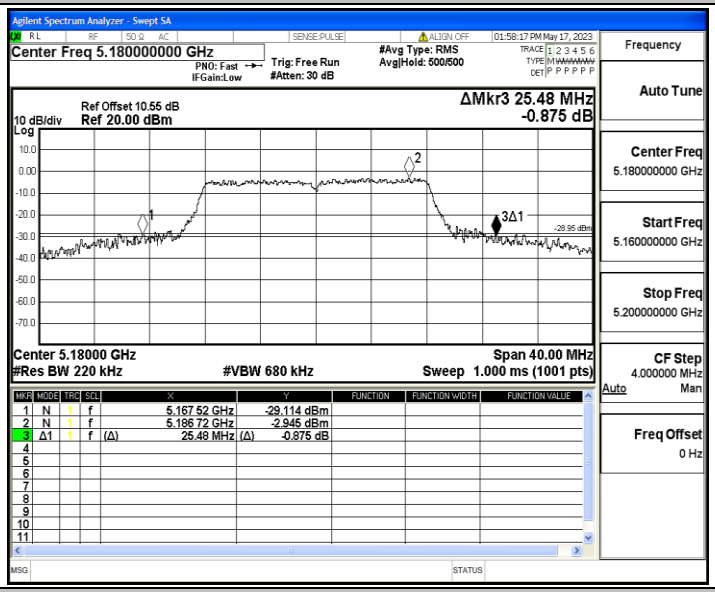
Appendix A1: Emission Bandwidth

Test Result

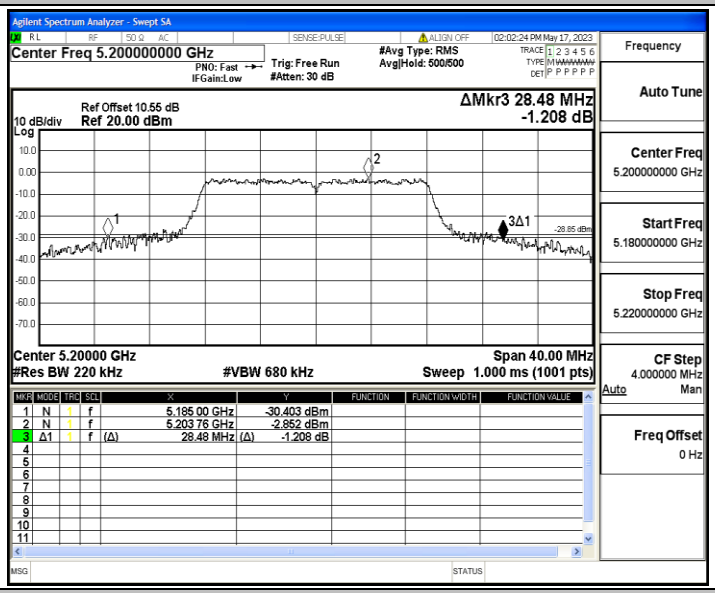
TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	25.480	5167.520	5193.000	---	---
		5200	28.480	5185.000	5213.480	---	---
		5240	23.920	5228.280	5252.200	---	---
11N20SISO	Ant1	5180	25.960	5167.840	5193.800	---	---
		5200	26.320	5186.880	5213.200	---	---
		5240	26.360	5226.920	5253.280	---	---
11N40SISO	Ant1	5190	46.560	5167.520	5214.080	---	---
		5230	45.840	5207.200	5253.040	---	---

Test Graphs

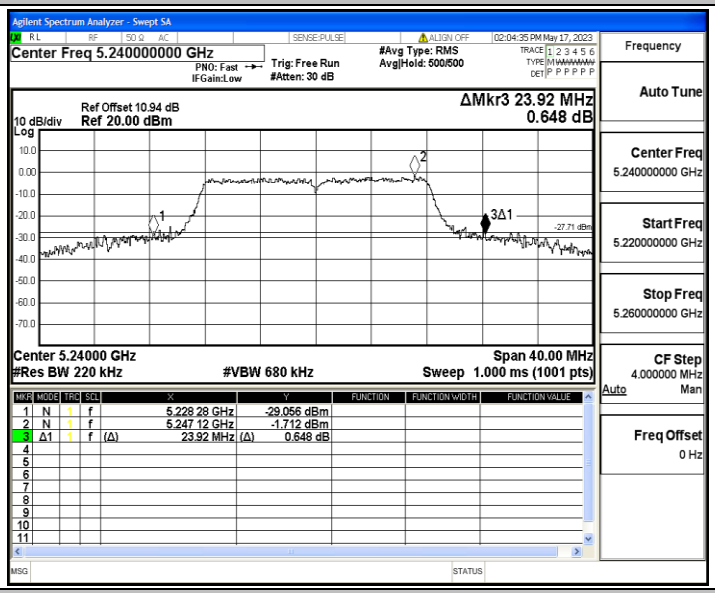
11A_Ant1_5180



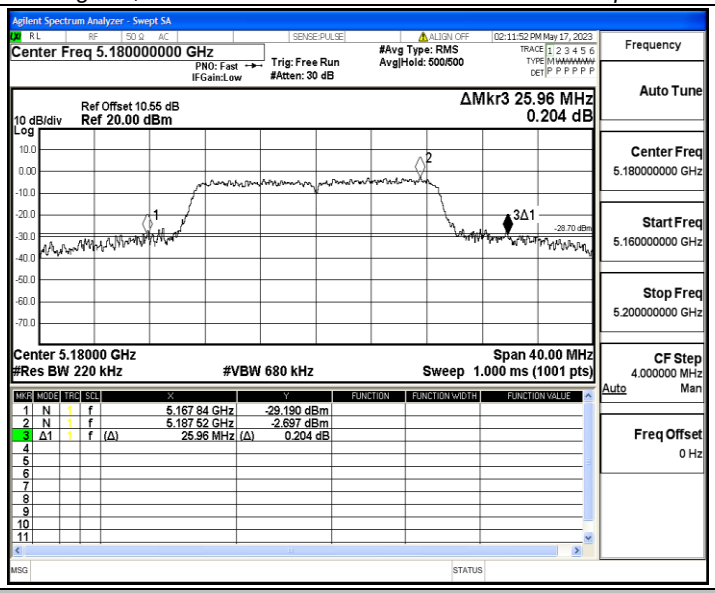
11A_Ant1_5200



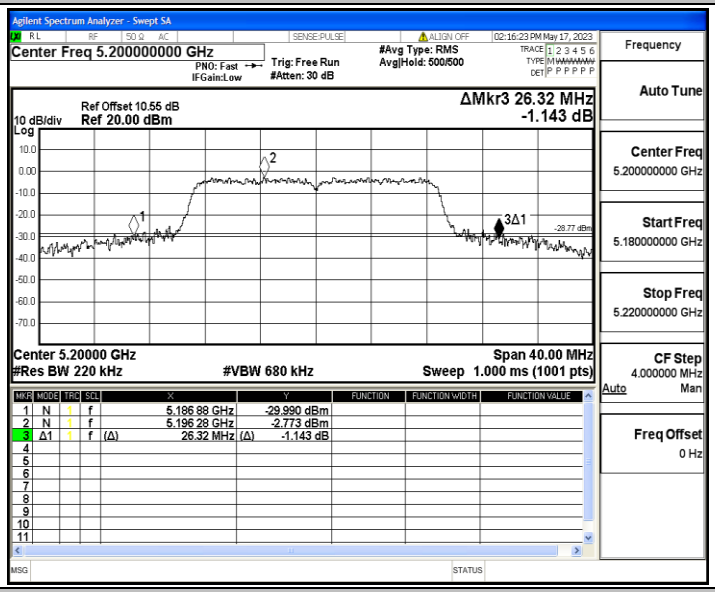
11A_Ant1_5240



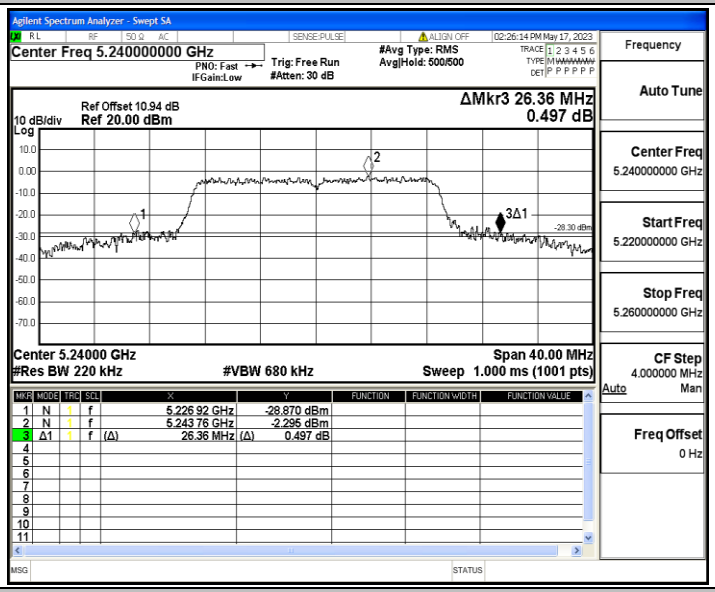
11N20SISO_Ant1_5180



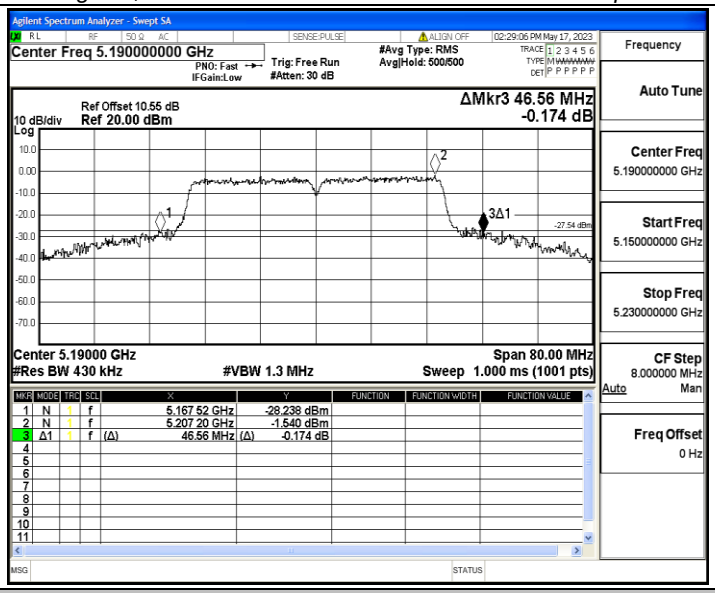
11N20SISO_Ant1_5200



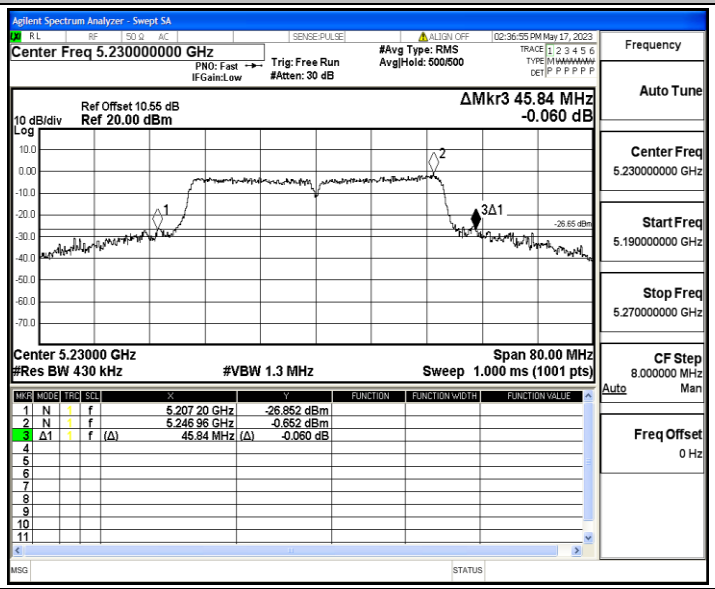
11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



11N40SISO_Ant1_5230



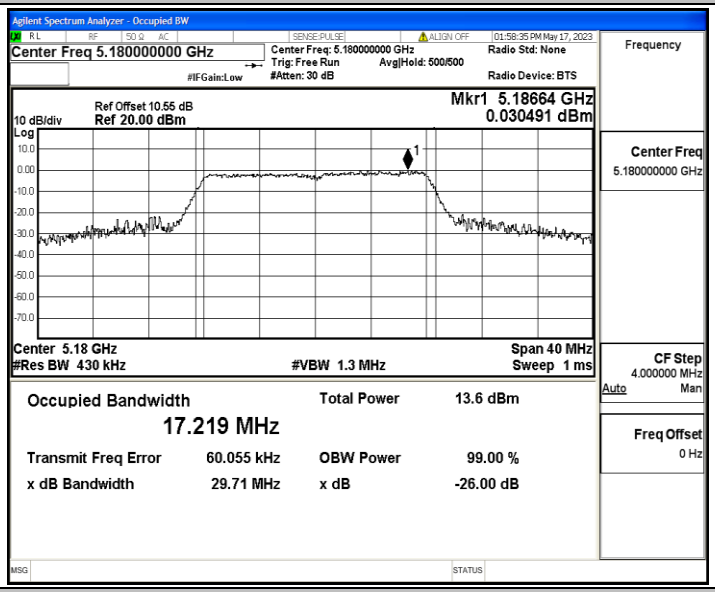
Appendix A2: Occupied channel bandwidth

Test Result

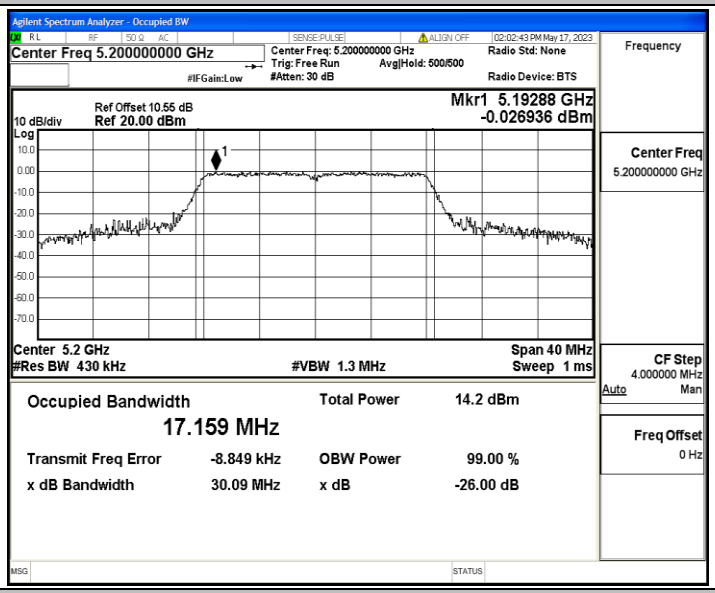
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	17.219	5171.4506	5188.6696	---	---
		5200	17.159	5191.4117	5208.5707	---	---
		5240	17.191	5231.4593	5248.6503	---	---
11N20SISO	Ant1	5180	18.012	5171.0747	5189.0867	---	---
		5200	17.938	5191.0107	5208.9487	---	---
		5240	17.896	5231.1124	5249.0084	---	---
11N40SISO	Ant1	5190	36.606	5171.8174	5208.4234	---	---
		5230	36.819	5211.7240	5248.5430	---	---

Test Graphs

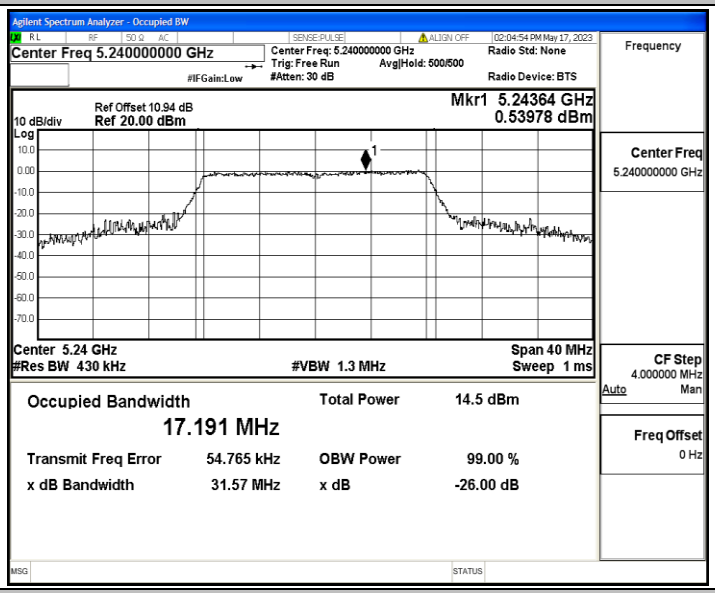
11A_Ant1_5180



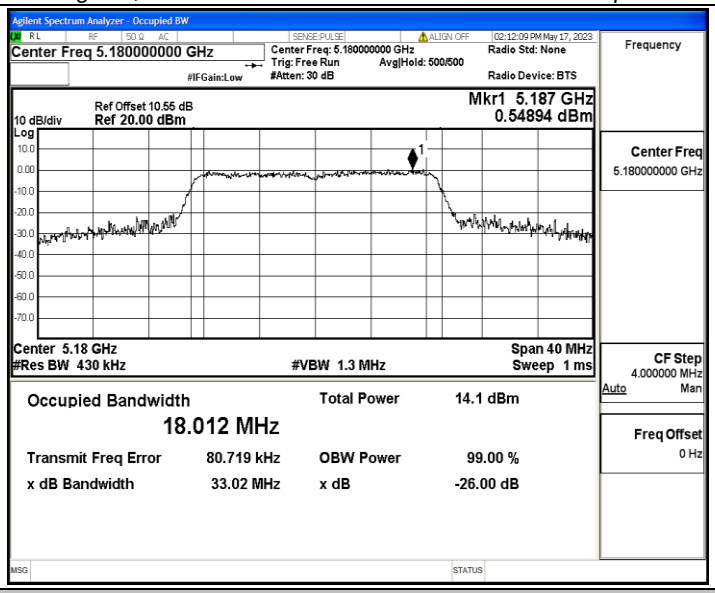
11A_Ant1_5200



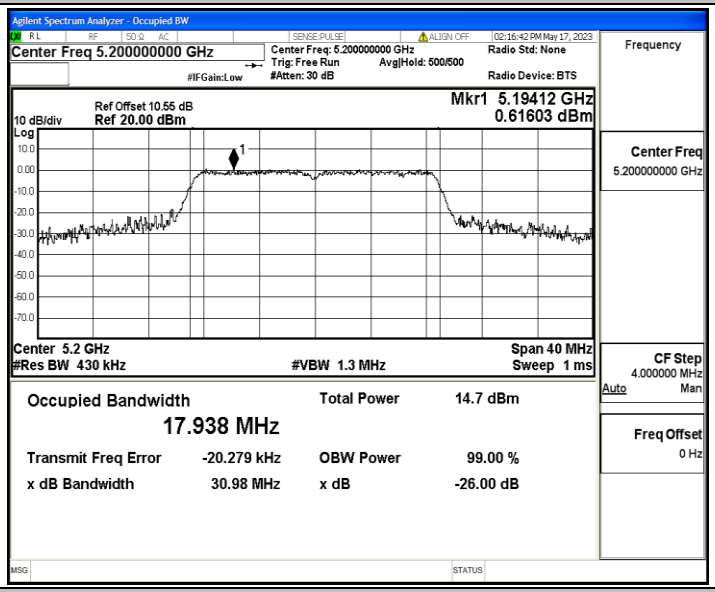
11A_Ant1_5240



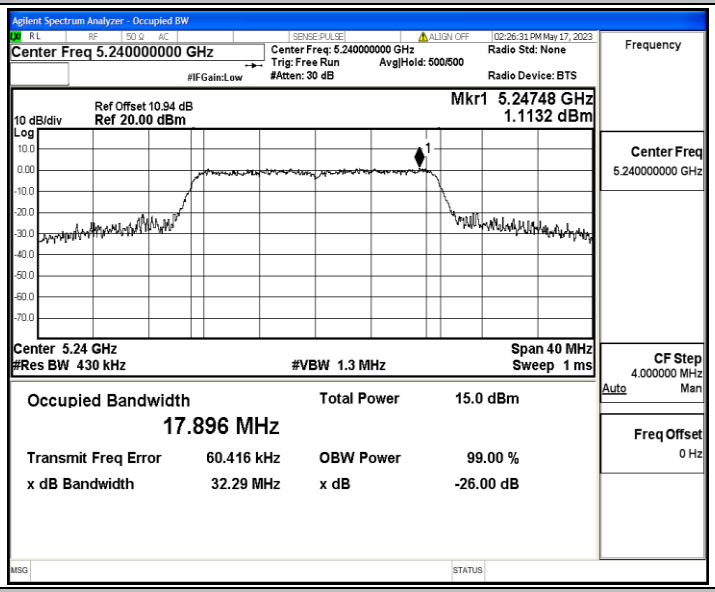
11N20SISO_Ant1_5180



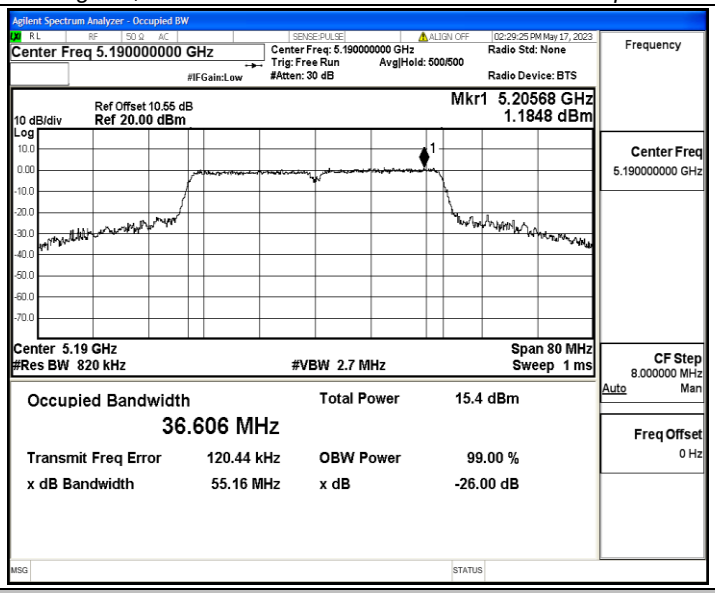
11N20SISO_Ant1_5200



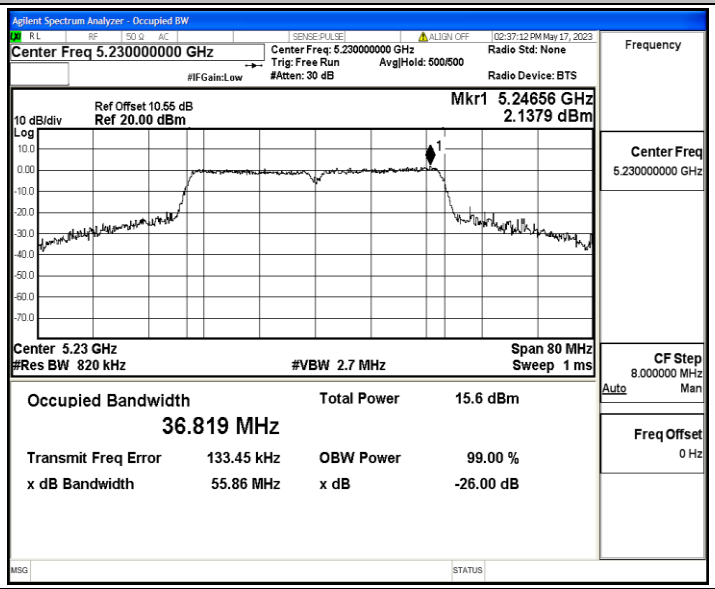
11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



11N40SISO_Ant1_5230



Appendix B: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5180	6.87	≤23.98	PASS
		5200	7.54	≤23.98	PASS
		5240	7.89	≤23.98	PASS
11N20SISO	Ant1	5180	6.94	≤23.98	PASS
		5200	7.64	≤23.98	PASS
		5240	7.79	≤23.98	PASS
11N40SISO	Ant1	5190	7.74	≤23.98	PASS
		5230	7.60	≤23.98	PASS

Note：The Duty Cycle Factor is compensated in the test result.

Appendix C: Maximum power spectral density

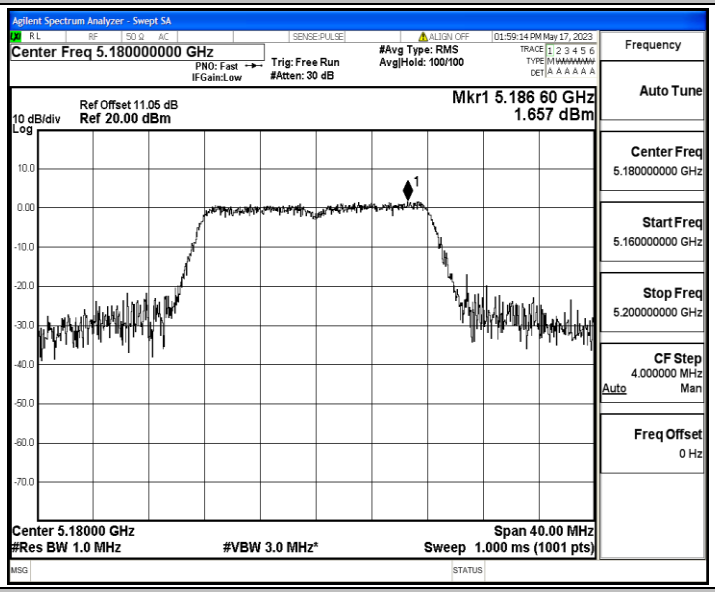
Test Result

TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	1.66	≤11.00	PASS
		5200	2.31	≤11.00	PASS
		5240	2.21	≤11.00	PASS
11N20SISO	Ant1	5180	2.52	≤11.00	PASS
		5200	3.27	≤11.00	PASS
		5240	4.15	≤11.00	PASS
11N40SISO	Ant1	5190	1.39	≤11.00	PASS
		5230	1.71	≤11.00	PASS

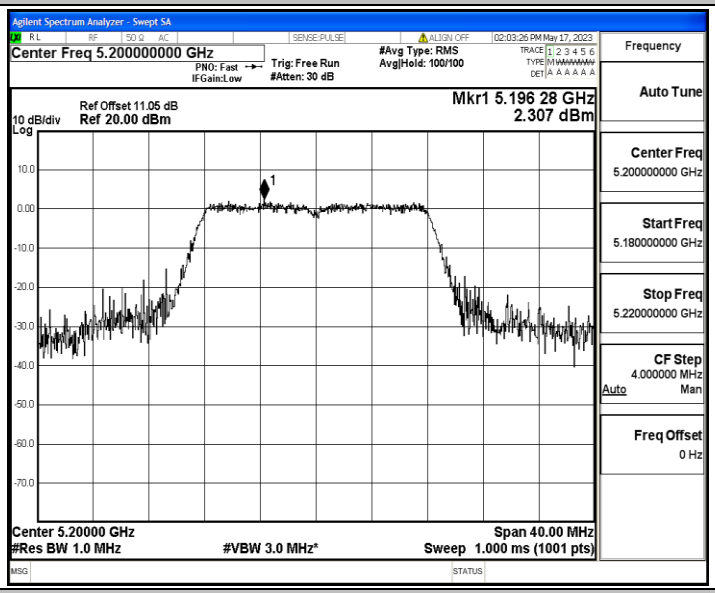
Note：1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

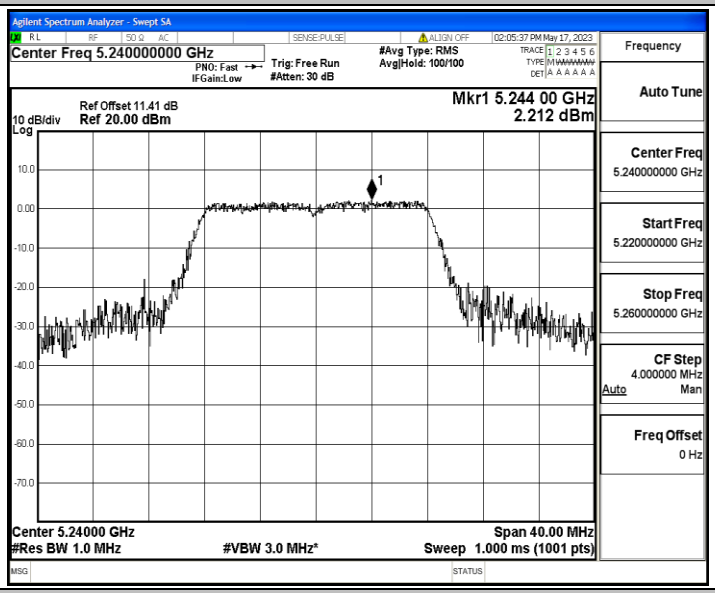
11A_Ant1_5180



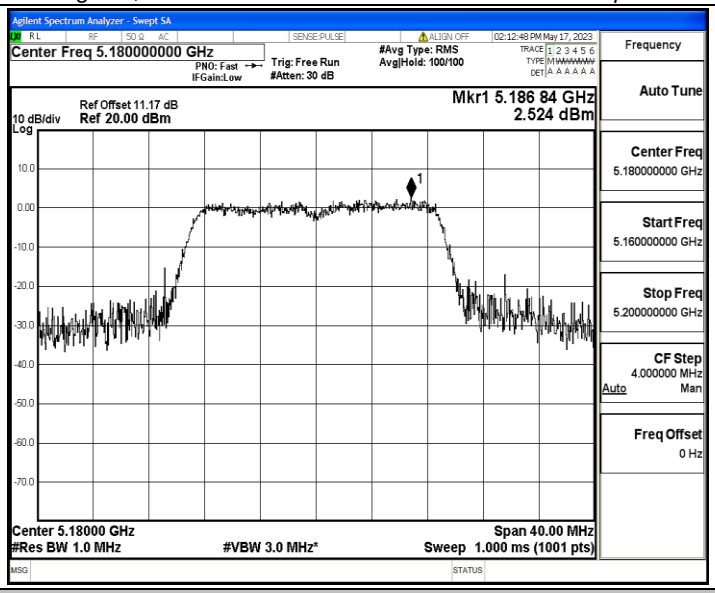
11A_Ant1_5200



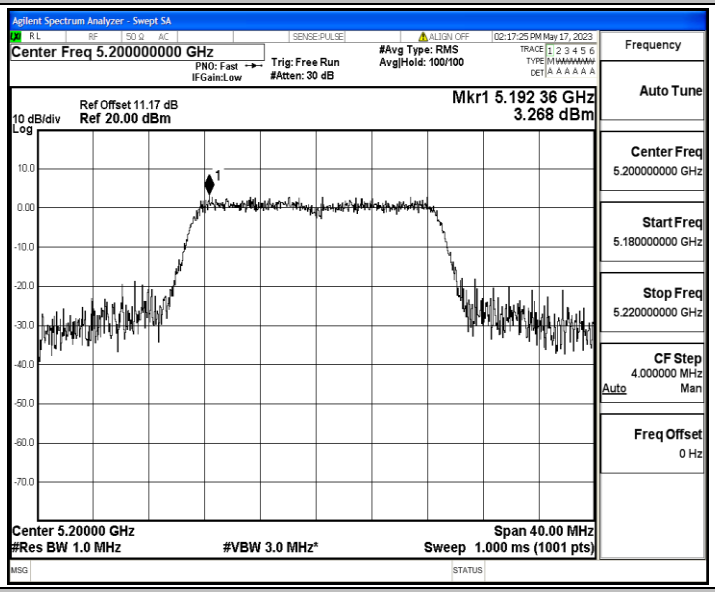
11A_Ant1_5240



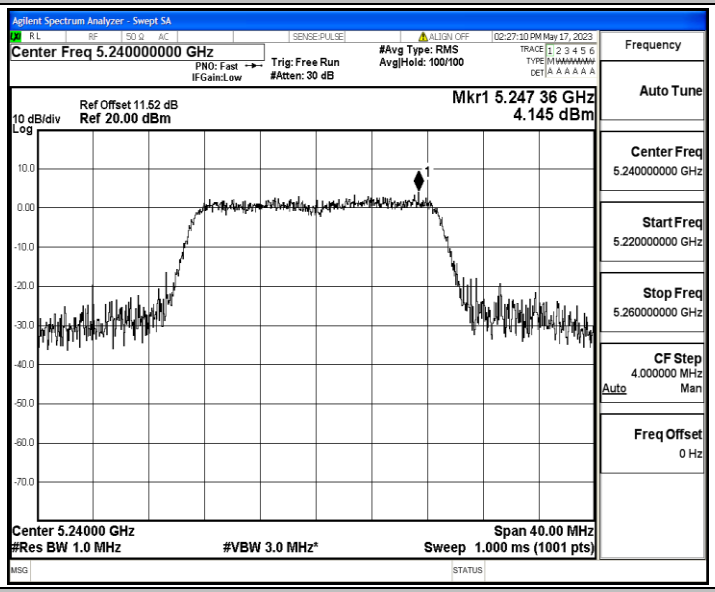
11N20SISO_Ant1_5180



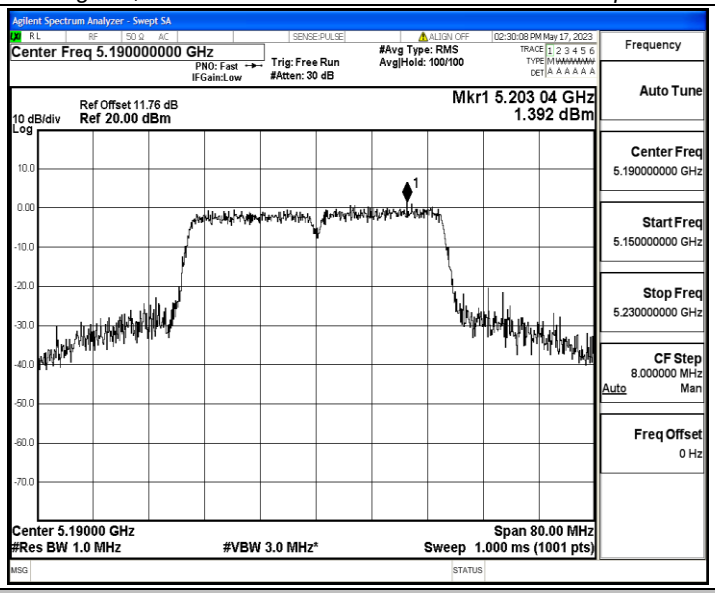
11N20SISO_Ant1_5200



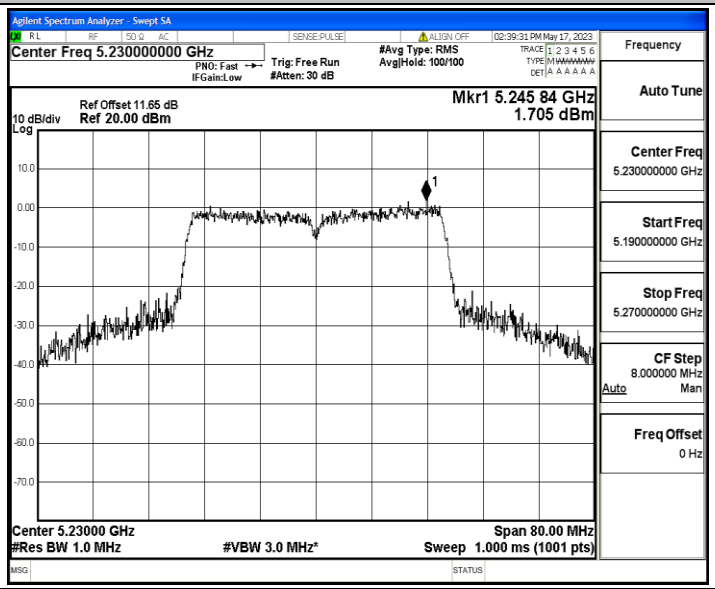
11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



11N40SISO_Ant1_5230



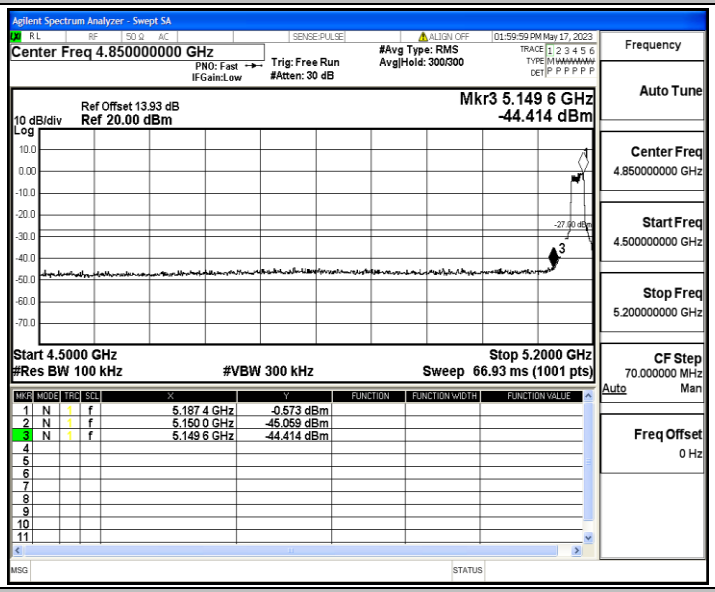
Appendix D: Band edge measurements

Test Result

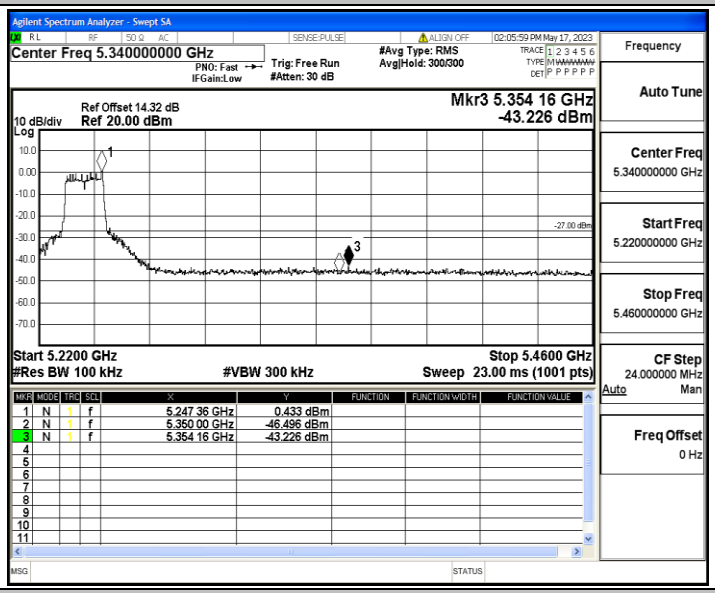
TestMode	Antenna	ChName	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-44.41	≤-27	PASS
		High	5240	-43.23	≤-27	PASS
11N20SISO	Ant1	Low	5180	-43.32	≤-27	PASS
		High	5240	-44.02	≤-27	PASS
11N40SISO	Ant1	Low	5190	-42.87	≤-27	PASS
		High	5230	-43.73	≤-27	PASS

Test Graphs

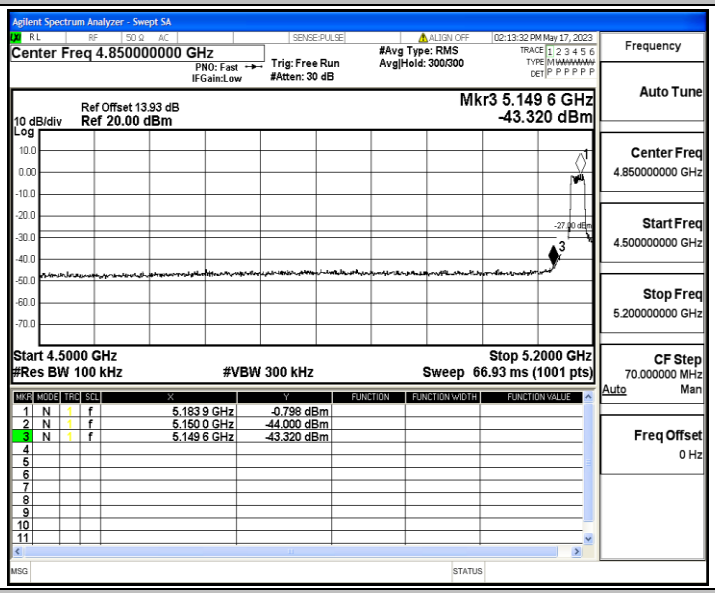
11A_Ant1_Low_5180



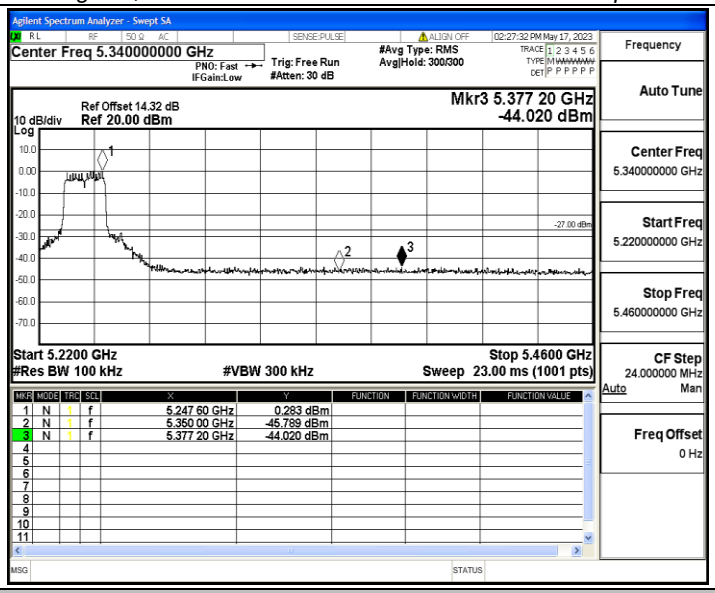
11A_Ant1_High_5240



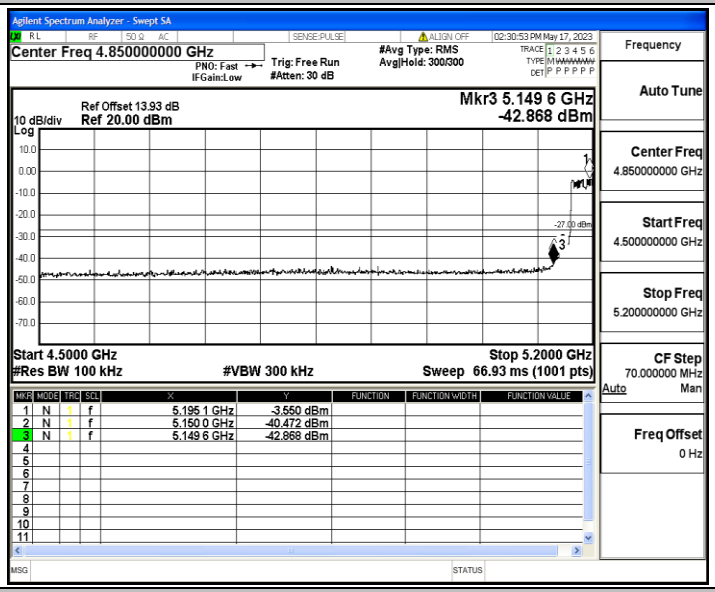
11N20SISO_Ant1_Low_5180



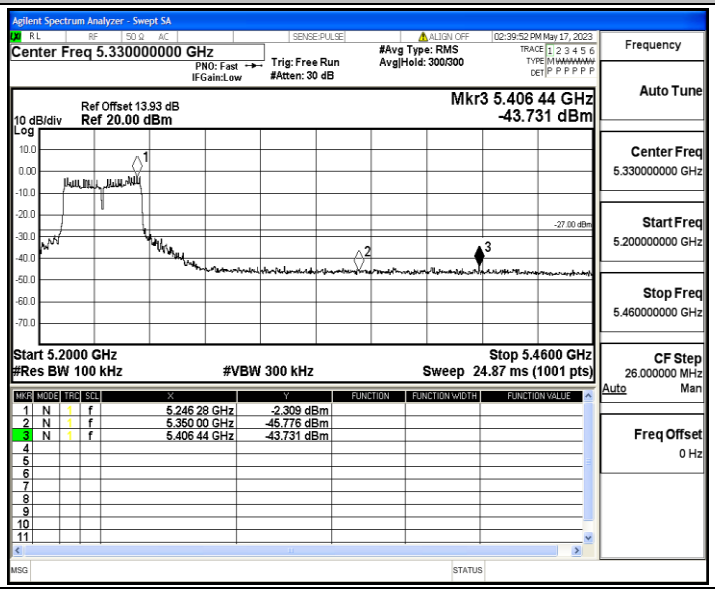
11N20SISO_Ant1_High_5240



11N40SISO_Ant1_Low_5190



11N40SISO_Ant1_High_5230



Appendix E: Frequency Stability

Test Result

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5180	20	132	5180.005071	5150 – 5250	PASS
5180	20	108	5179.904414	5150 – 5250	PASS
5180	50	120	5179.989769	5150 – 5250	PASS
5180	40	120	5179.903297	5150 – 5250	PASS
5180	30	120	5180.022402	5150 – 5250	PASS
5180	20	120	5180.012377	5150 – 5250	PASS
5180	10	120	5180.055438	5150 – 5250	PASS
5180	0	120	5179.999508	5150 – 5250	PASS
5180	-10	120	5179.921456	5150 – 5250	PASS
5180	-20	120	5180.041605	5150 – 5250	PASS
5180	-30	120	5179.964965	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	132	5199.926462	5150 – 5250	PASS
5200	20	108	5199.901302	5150 – 5250	PASS
5200	50	120	5200.036571	5150 – 5250	PASS
5200	40	120	5200.032641	5150 – 5250	PASS
5200	30	120	5199.929950	5150 – 5250	PASS
5200	20	120	5199.982976	5150 – 5250	PASS
5200	10	120	5200.017608	5150 – 5250	PASS
5200	0	120	5199.907674	5150 – 5250	PASS
5200	-10	120	5199.961484	5150 – 5250	PASS
5200	-20	120	5199.907848	5150 – 5250	PASS
5200	-30	120	5199.991136	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	132	5240.022600	5150 – 5250	PASS
5240	20	108	5239.986456	5150 – 5250	PASS
5240	50	120	5239.915500	5150 – 5250	PASS
5240	40	120	5240.027476	5150 – 5250	PASS
5240	30	120	5239.993691	5150 – 5250	PASS
5240	20	120	5239.939213	5150 – 5250	PASS
5240	10	120	5240.039511	5150 – 5250	PASS
5240	0	120	5239.943010	5150 – 5250	PASS
5240	-10	120	5240.010749	5150 – 5250	PASS
5240	-20	120	5240.087199	5150 – 5250	PASS
5240	-30	120	5240.093278	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5190	20	132	5190.068441	5150 – 5250	PASS
5190	20	108	5190.000433	5150 – 5250	PASS
5190	50	120	5189.933285	5150 – 5250	PASS
5190	40	120	5189.977020	5150 – 5250	PASS
5190	30	120	5189.986026	5150 – 5250	PASS
5190	20	120	5190.091800	5150 – 5250	PASS
5190	10	120	5189.922895	5150 – 5250	PASS
5190	0	120	5189.928069	5150 – 5250	PASS
5190	-10	120	5190.081759	5150 – 5250	PASS
5190	-20	120	5189.946190	5150 – 5250	PASS
5190	-30	120	5189.987506	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VAC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5230	20	132	5229.989963	5150 – 5250	PASS
5230	20	108	5229.938557	5150 – 5250	PASS
5230	50	120	5229.995911	5150 – 5250	PASS
5230	40	120	5230.059816	5150 – 5250	PASS
5230	30	120	5229.925005	5150 – 5250	PASS
5230	20	120	5229.913705	5150 – 5250	PASS
5230	10	120	5230.088605	5150 – 5250	PASS
5230	0	120	5230.008012	5150 – 5250	PASS
5230	-10	120	5230.026202	5150 – 5250	PASS
5230	-20	120	5230.012191	5150 – 5250	PASS
5230	-30	120	5230.058704	5150 – 5250	PASS

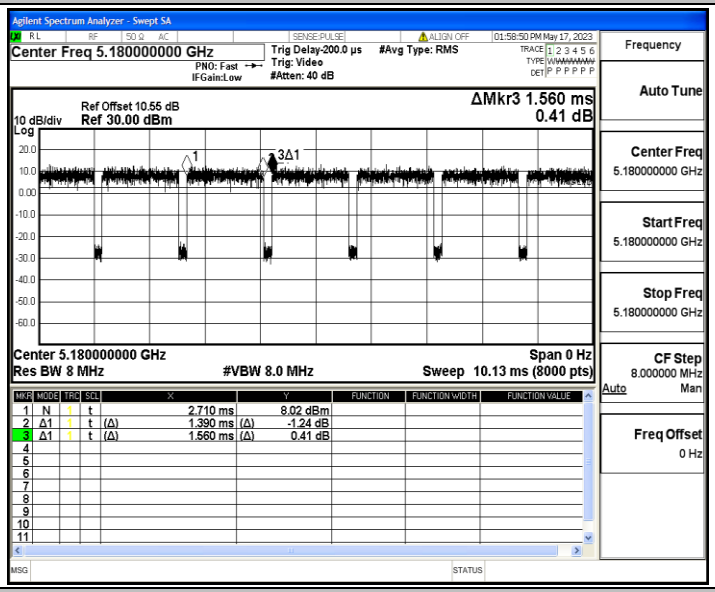
Appendix F: Duty Cycle

Test Result

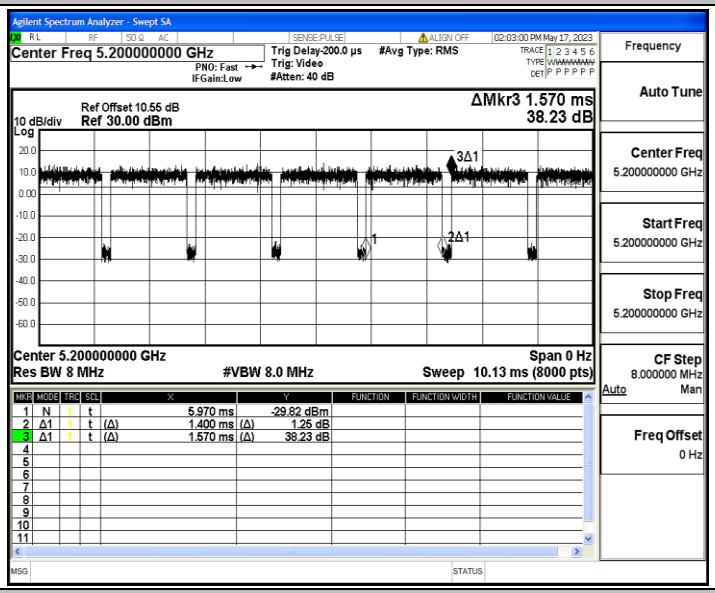
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T [kHz]
11A	Ant1	5180	1.39	1.56	89.10	0.72
		5200	1.40	1.57	89.17	0.71
		5240	1.40	1.56	89.74	0.71
11N20SISO	Ant1	5180	1.18	1.36	86.76	0.85
		5200	1.18	1.36	86.76	0.85
		5240	1.18	1.35	87.41	0.85
11N40SISO	Ant1	5190	0.59	0.78	75.64	1.69
		5230	0.59	0.76	77.63	1.69

Test Graphs

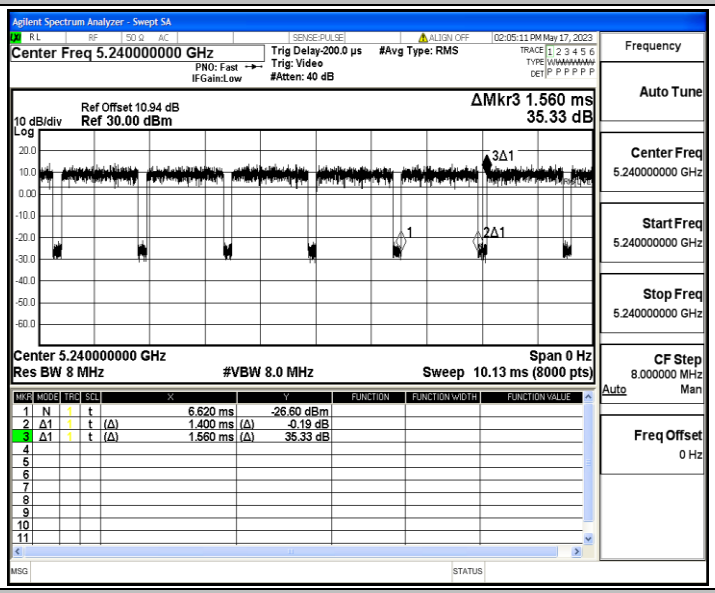
11A_Ant1_5180



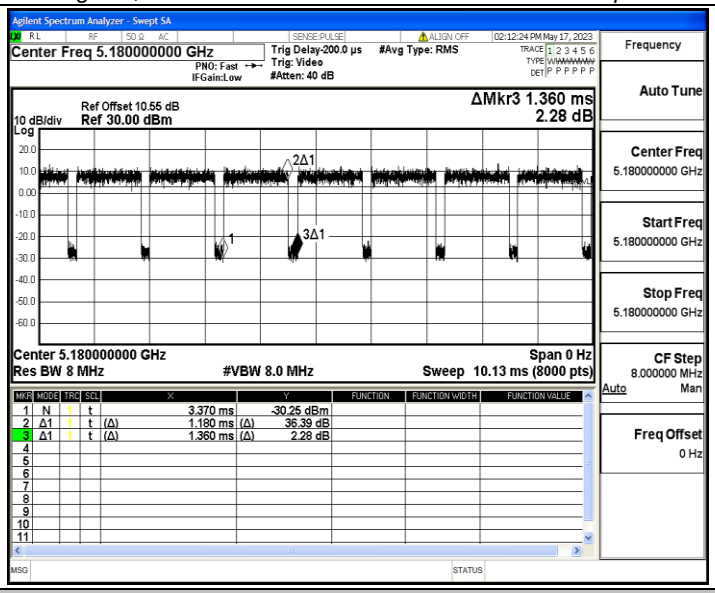
11A_Ant1_5200



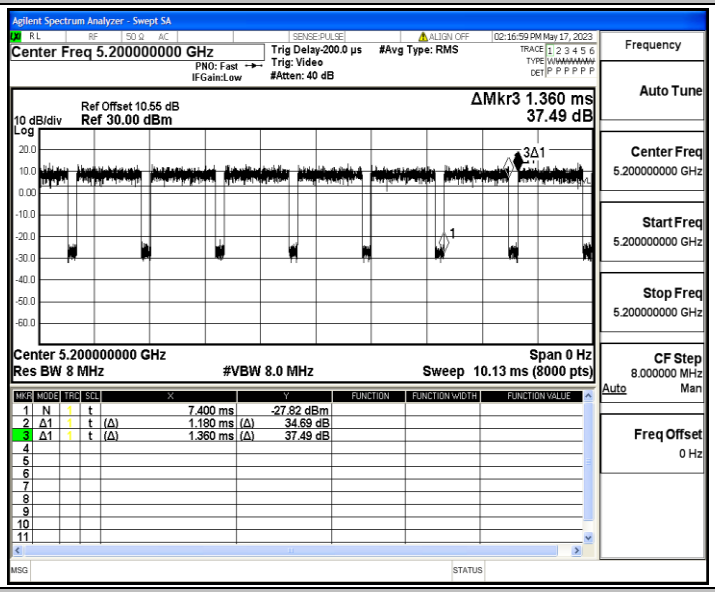
11A_Ant1_5240



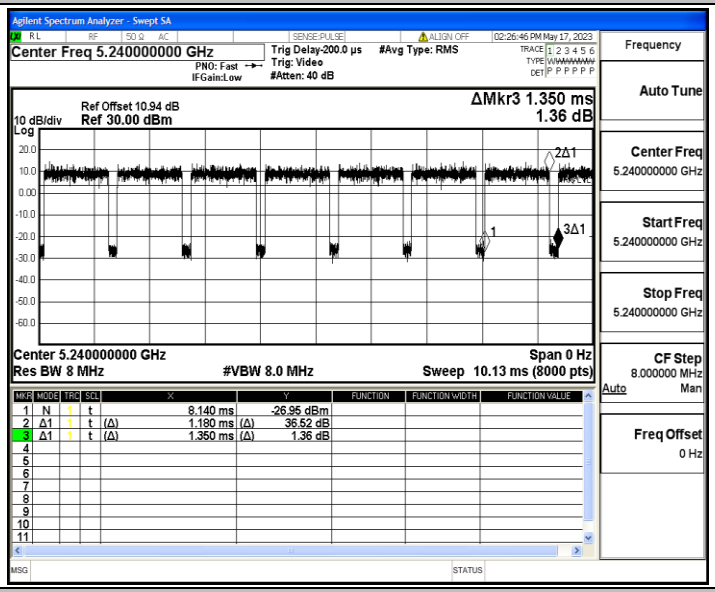
11N20SISO_Ant1_5180



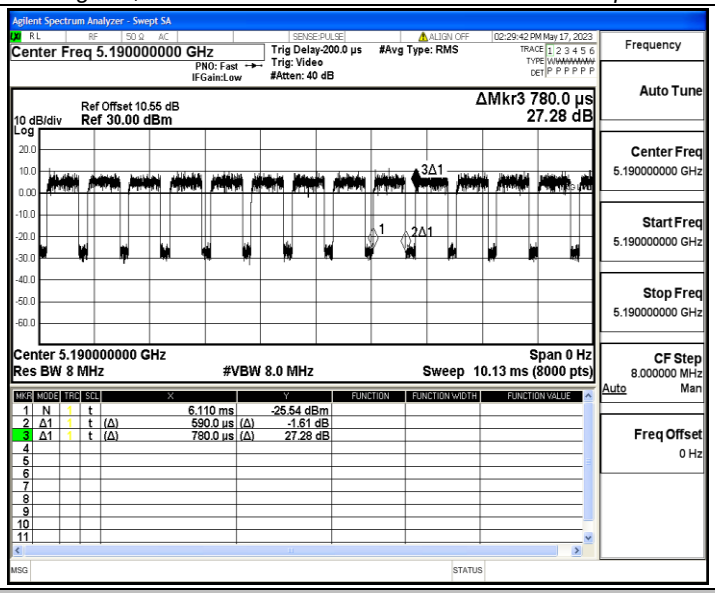
11N20SISO_Ant1_5200



11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



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