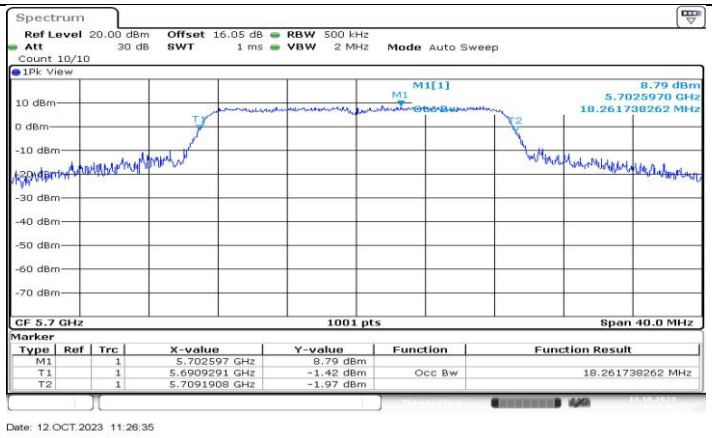
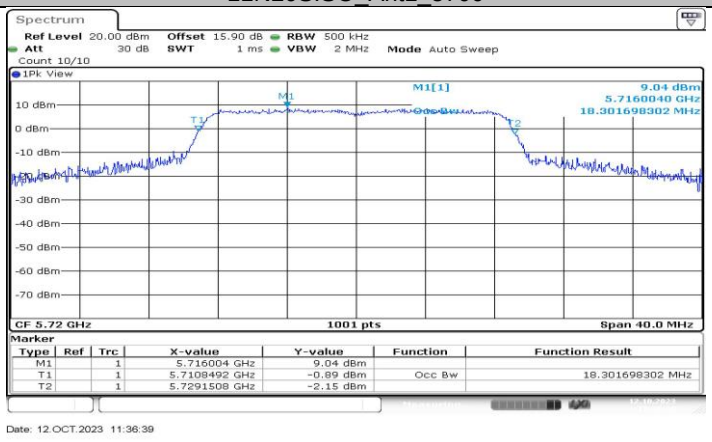
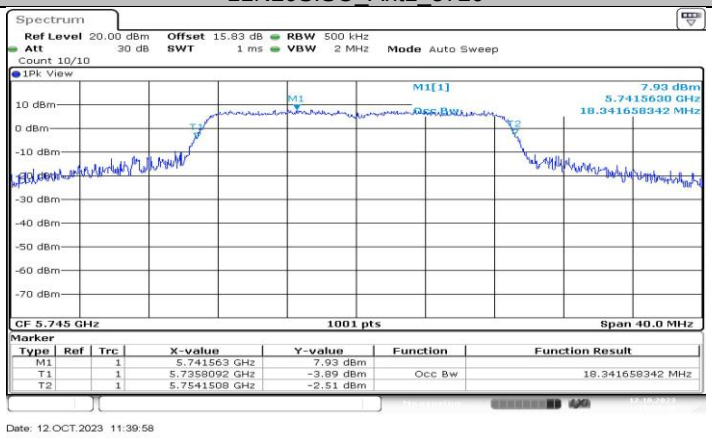


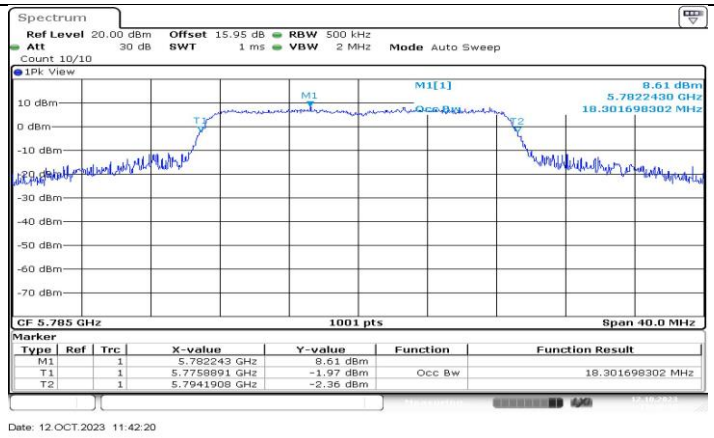
11N20SISO_Ant1_5700



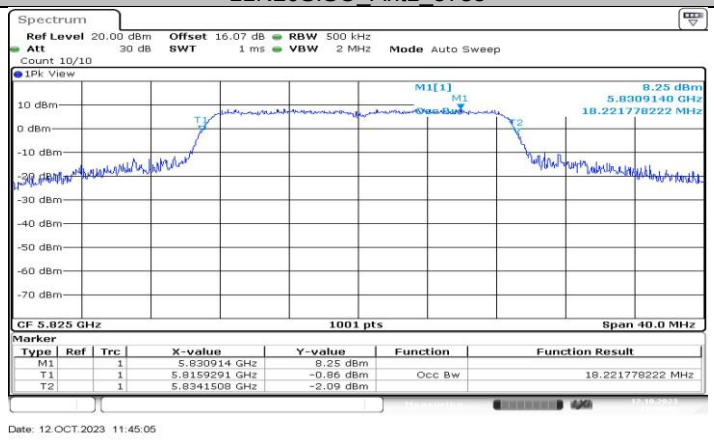
11N20SISO_Ant1_5720



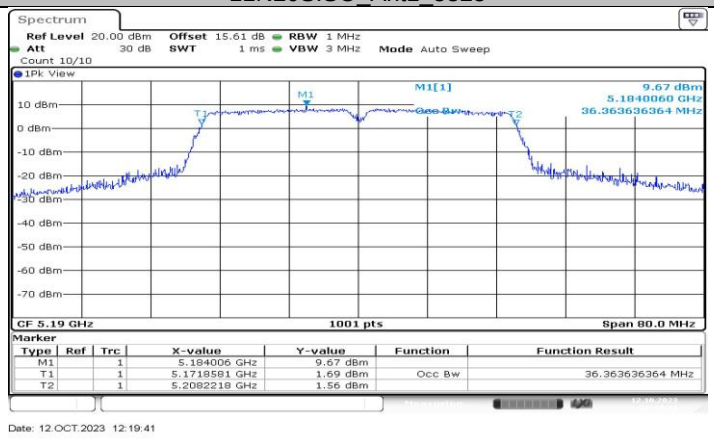
11N20SISO_Ant1_5745



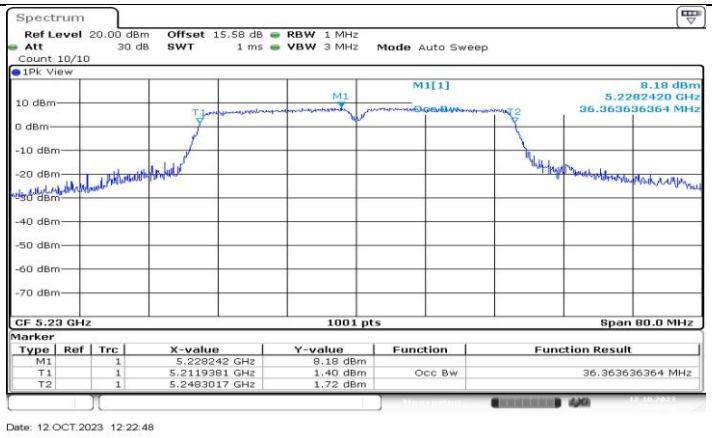
11N20SISO_Ant1_5785



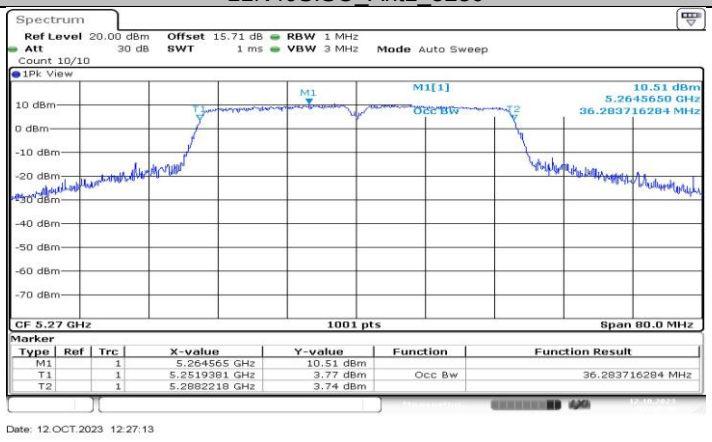
11N20SISO_Ant1_5825



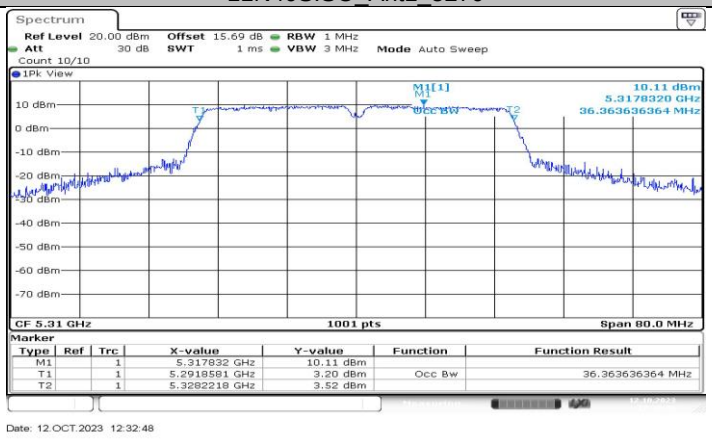
11N40SISO_Ant1_5190



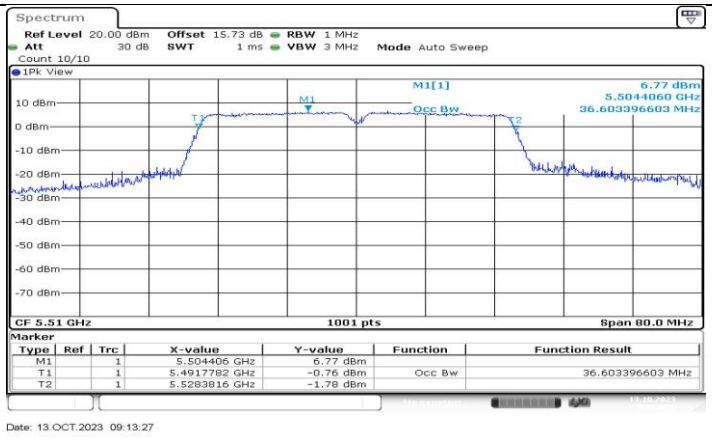
11N40SISO_Ant1_5230



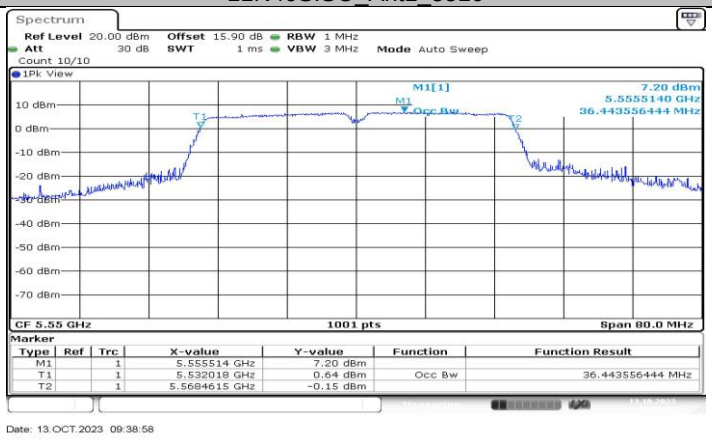
11N40SISO_Ant1_5270



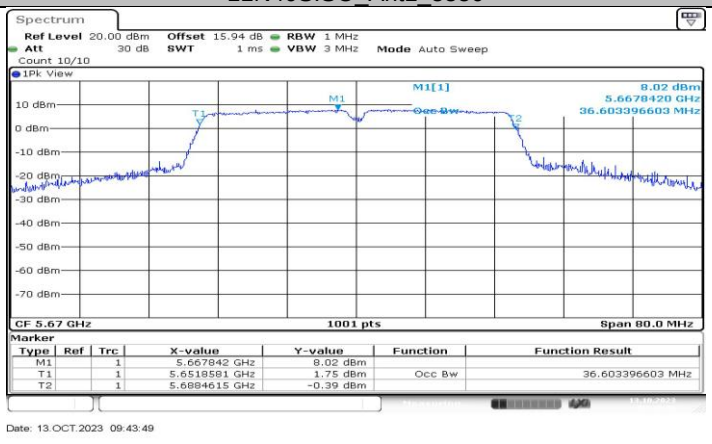
11N40SISO_Ant1_5310



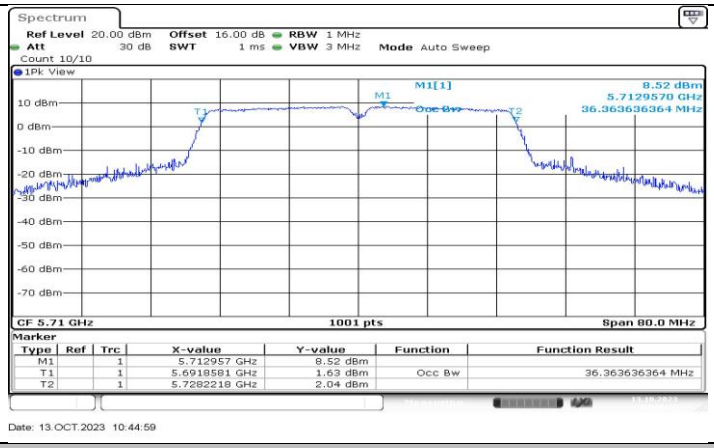
11N40SISO_Ant1_5510



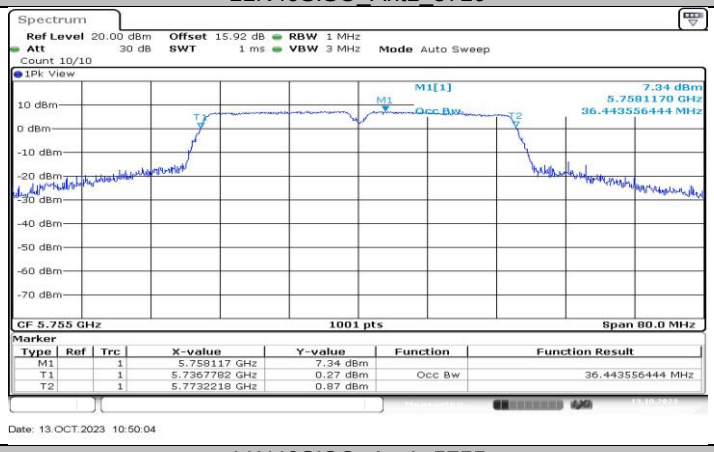
11N40SISO_Ant1_5550



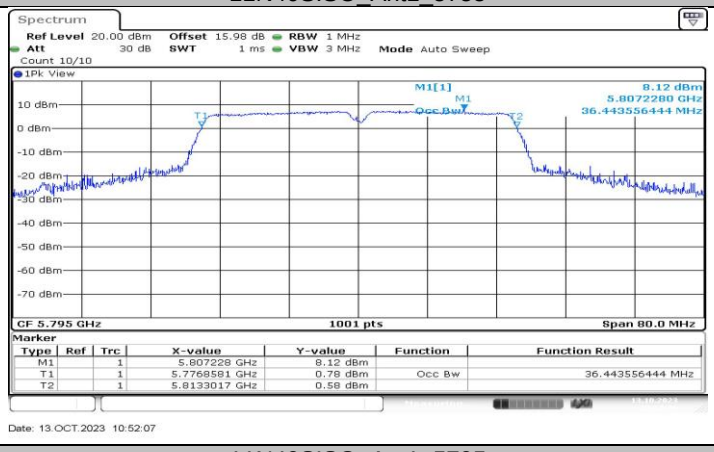
11N40SISO_Ant1_5670



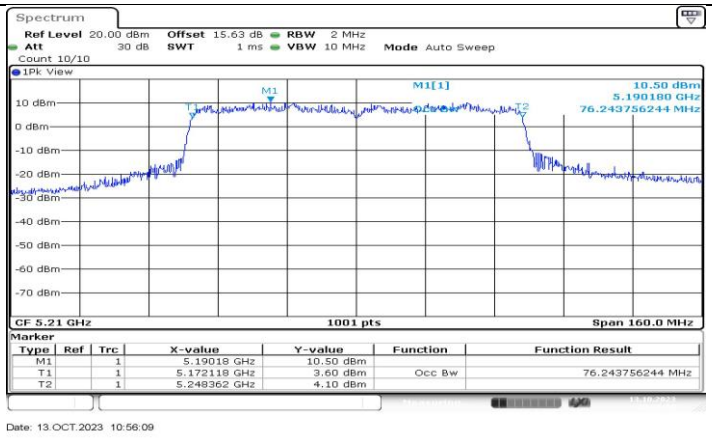
11N40SISO_Ant1_5710



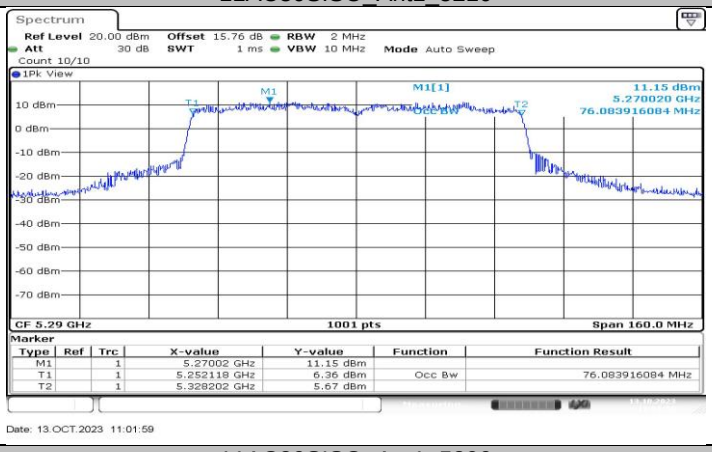
11N40SISO_Ant1_5755



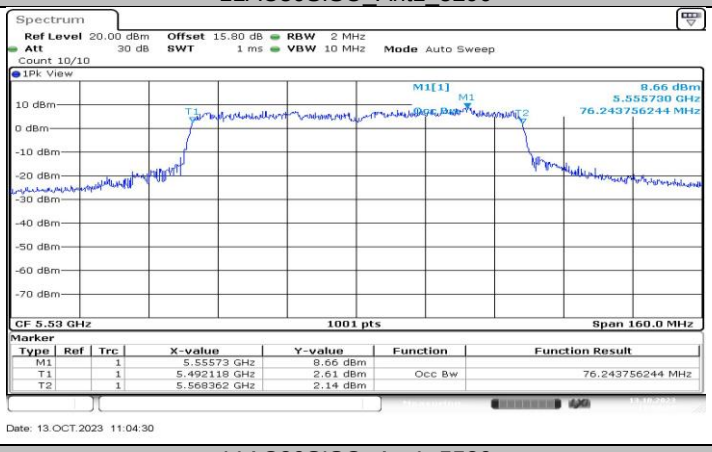
11N40SISO_Ant1_5795



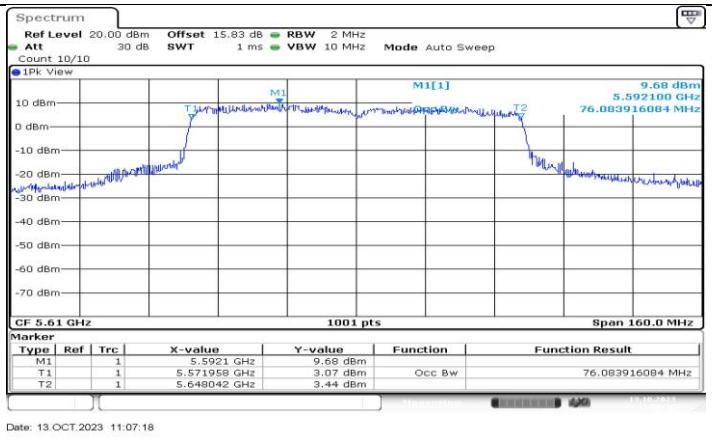
11AC80SISO_Ant1_5210



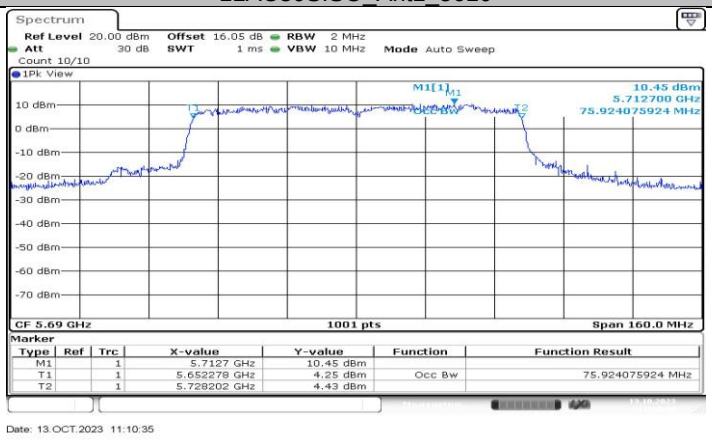
11AC80SISO_Ant1_5290



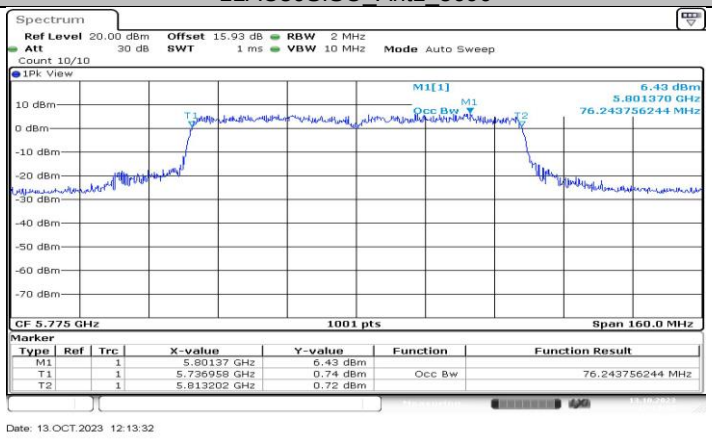
11AC80SISO_Ant1_5530



11AC80SISO_Ant1_5610



11AC80SISO_Ant1_5690



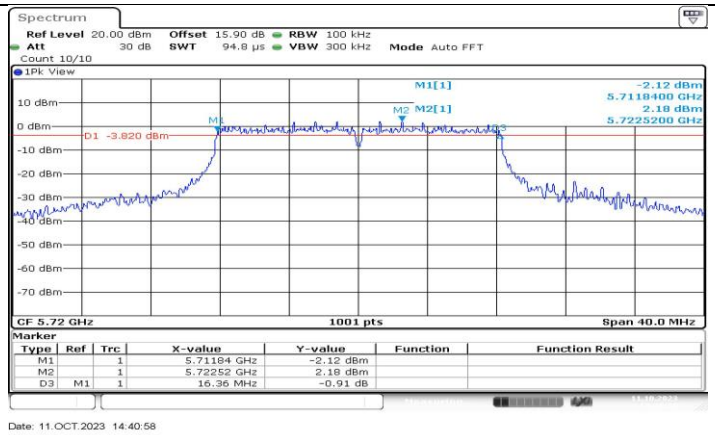
11AC80SISO_Ant1_5775

11.3. APPENDIX A3: MIN EMISSION BANDWIDTH

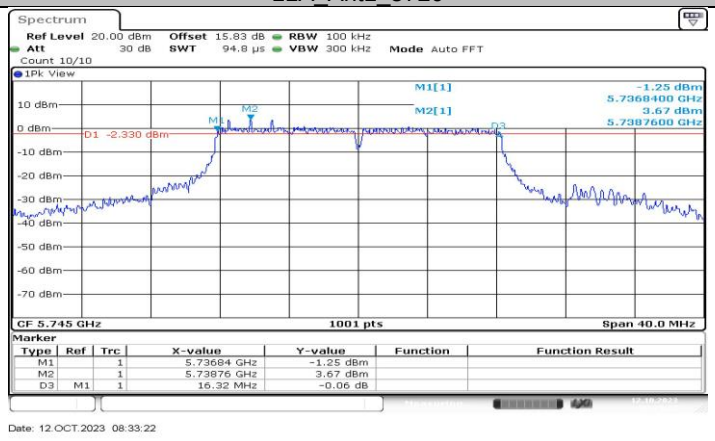
11.3.1. Test Result

Test Mode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5720	16.36	5711.84	5728.20	≤0.5	PASS
		5720_UNII-3	3.2	5725	5728.20	≤0.5	PASS
		5745	16.32	5736.84	5753.16	≤0.5	PASS
		5785	16.32	5776.84	5793.16	≤0.5	PASS
		5825	16.36	5816.84	5833.20	≤0.5	PASS
11N20SISO	Ant1	5720	17.32	5711.24	5728.56	≤0.5	PASS
		5720_UNII-3	3.56	5725	5728.56	≤0.5	PASS
		5745	17.32	5736.24	5753.56	≤0.5	PASS
		5785	17.56	5776.24	5793.80	≤0.5	PASS
		5825	17.56	5816.24	5833.80	≤0.5	PASS
11N40SISO	Ant1	5710	35.60	5692.24	5727.84	≤0.5	PASS
		5710_UNII-3	2.84	5725	5727.84	≤0.5	PASS
		5755	35.68	5737.16	5772.84	≤0.5	PASS
		5795	35.68	5777.24	5812.92	≤0.5	PASS
11AC80SISO	Ant1	5690	75.20	5652.40	5727.60	≤0.5	PASS
		5690_UNII-3	2.6	5725	5727.60	≤0.5	PASS
		5775	75.20	5737.40	5812.60	≤0.5	PASS

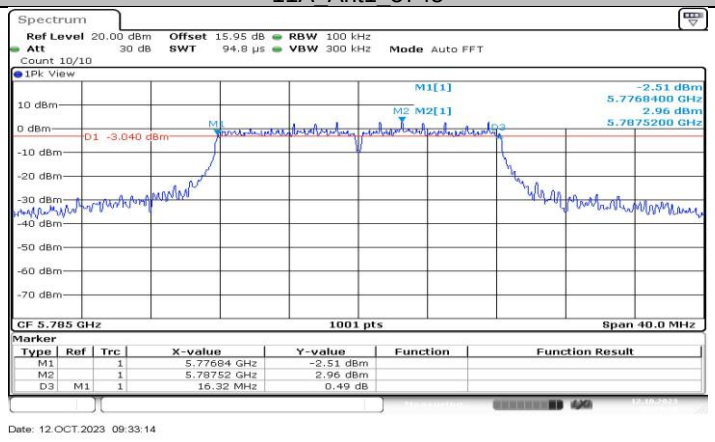
11.3.2. Test Graphs



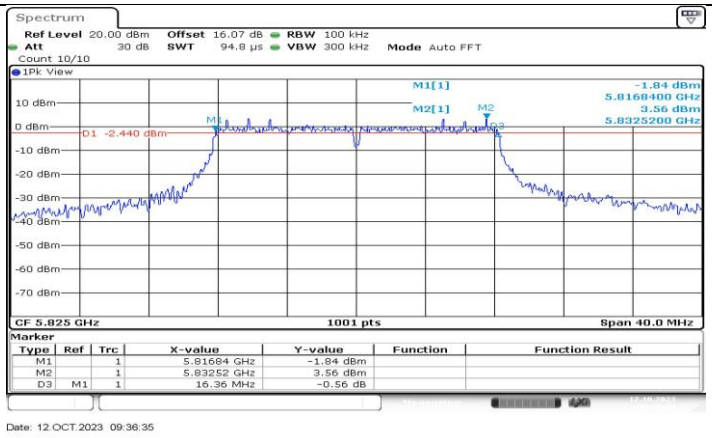
11A_Ant1_5720



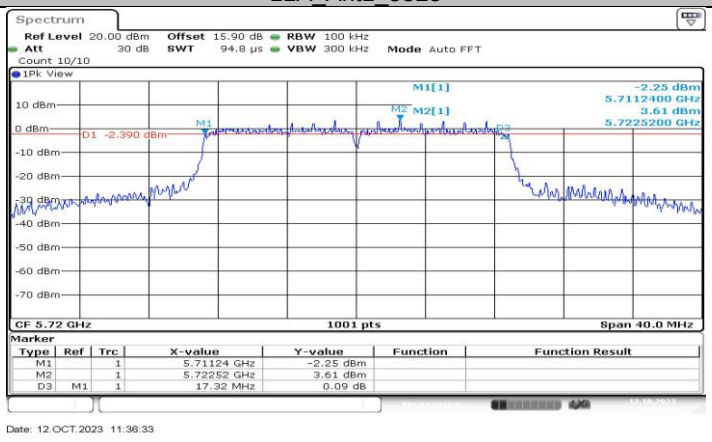
11A_Ant1_5745



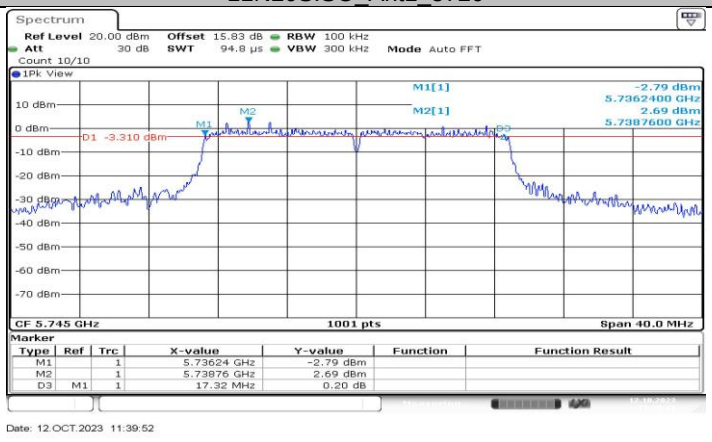
11A_Ant1_5785



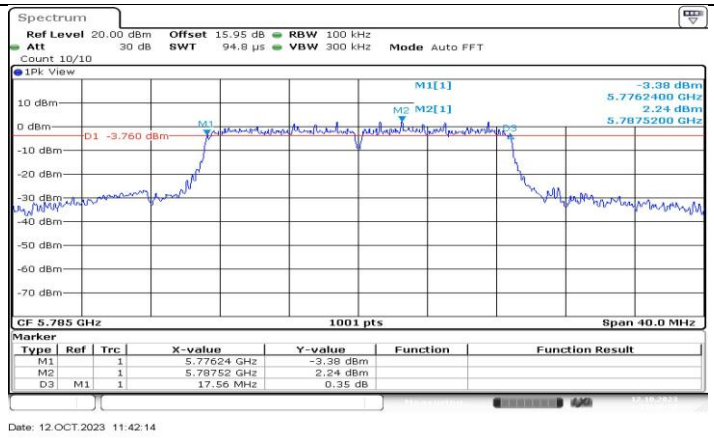
11A_Ant1_5825



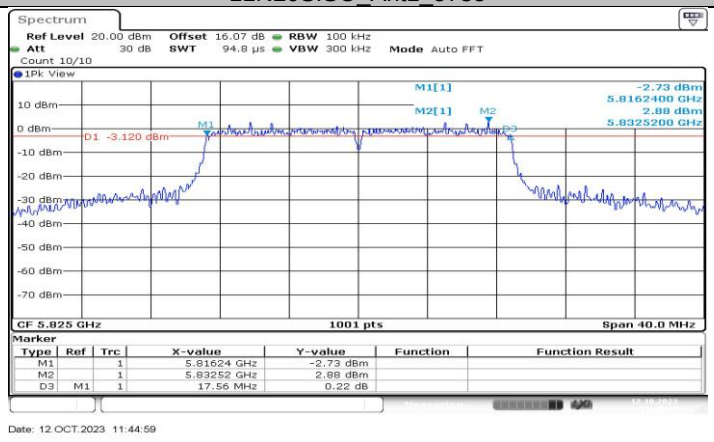
11N20SISO_Ant1_5720



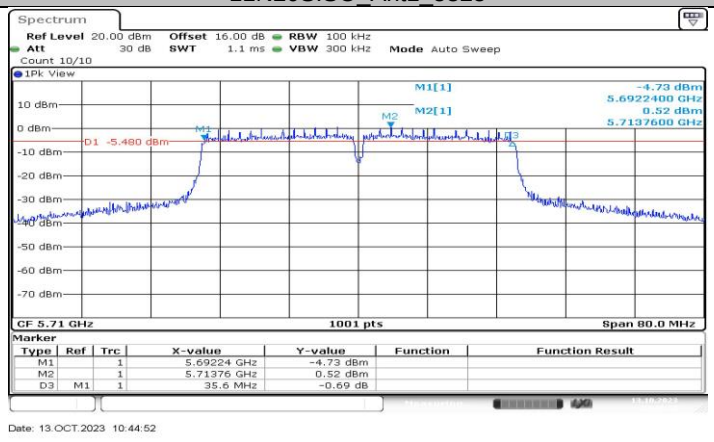
11N20SISO_Ant1_5745



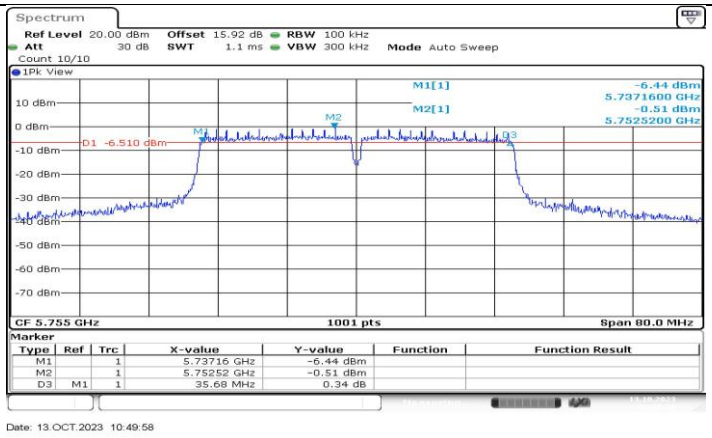
11N20SISO_Ant1_5785



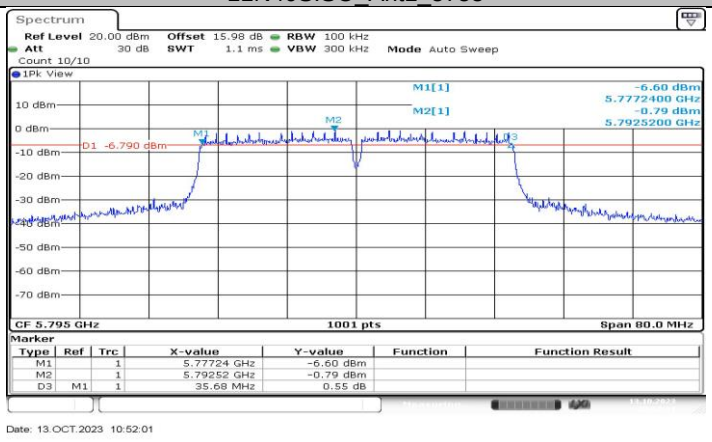
11N20SISO_Ant1_5825



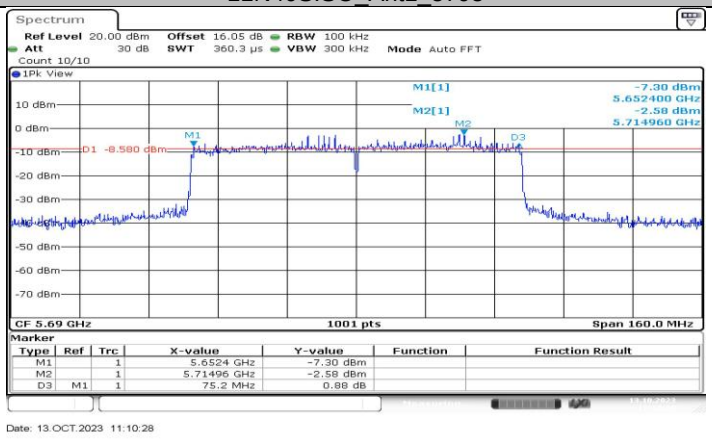
11N40SISO_Ant1_5710



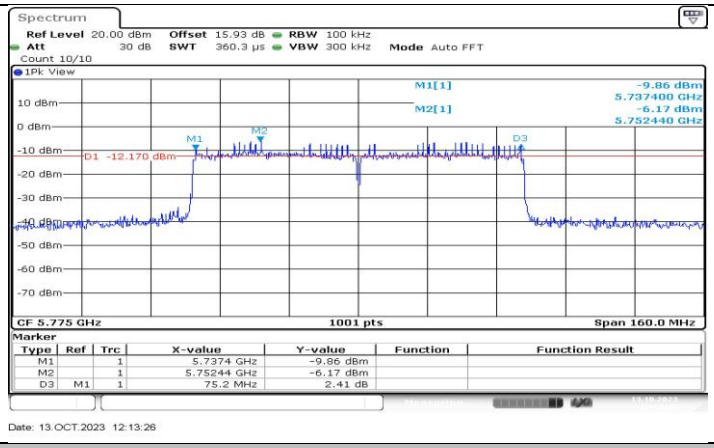
11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



11AC80SISO_Ant1_5690



11AC80SISO_Ant1_5775

11.4. APPENDIX B: MAXIMUM CONDUCTED OUTPUT POWER

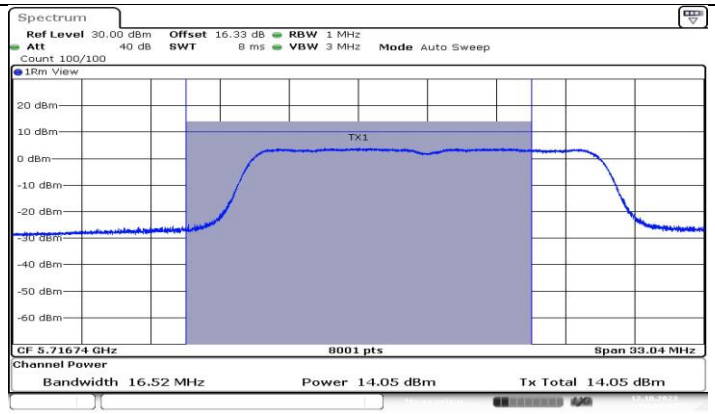
11.4.1. Test Result

Test Mode	Antenna	Frequency [MHz]	Power	FCC Limit	ISED Limit	EIRP	Limit	Verdict
			[dBm]	[dBm]	[dBm]	[dBm]	[dBm]	
11A	Ant1	5180	16.29	≤23.98	---	19.4	≤22.42	PASS
		5200	15.9	≤23.98	---	19.01	≤22.42	PASS
		5240	16.33	≤23.98	---	19.44	≤22.42	PASS
		5260	17.89	≤23.98	≤23.43	21	≤29.43	PASS
		5280	17.78	≤23.98	≤23.42	20.89	≤29.42	PASS
		5320	17.47	≤23.98	≤23.41	20.58	≤29.41	PASS
		5500	14.71	≤23.98	≤23.44	17.82	≤29.44	PASS
		5580	16.66	≤23.98	≤23.43	19.77	≤29.43	PASS
		5700	16.68	≤23.98	≤23.42	19.91	≤29.42	PASS
		5720_UNII-2C	14.05	≤23.18	≤22.37	17.16	≤28.37	PASS
		5720_UNII-3	7.37	≤30.00	≤30.00	10.48	---	PASS
		5745	16.48	≤30.00	≤30.00	19.59	---	PASS
		5785	16.28	≤30.00	≤30.00	19.39	---	PASS
		5825	16.88	≤30.00	≤30.00	19.99	---	PASS
11N20SISO	Ant1	5180	16.09	≤23.98	---	19.2	≤22.59	PASS
		5200	15.71	≤23.98	---	18.82	≤22.63	PASS
		5240	16.05	≤23.98	---	19.16	≤22.63	PASS
		5260	17.81	≤23.98	≤23.62	20.92	≤29.62	PASS
		5280	17.69	≤23.98	≤23.62	20.8	≤29.62	PASS
		5320	17.41	≤23.98	≤23.62	20.52	≤29.62	PASS
		5500	14.38	≤23.98	≤23.63	17.49	≤29.63	PASS
		5580	16.19	≤23.98	≤23.62	19.3	≤29.62	PASS
		5700	16.28	≤23.98	≤23.62	19.72	≤29.62	PASS
		5720_UNII-2C	14.26	≤22.74	≤22.51	17.37	≤28.51	PASS
		5720_UNII-3	7.89	≤30.00	≤30.00	11	---	PASS
		5745	16.34	≤30.00	≤30.00	19.45	---	PASS
		5785	16.13	≤30.00	≤30.00	19.24	---	PASS
		5825	16.57	≤30.00	≤30.00	19.68	---	PASS
11N40SISO	Ant1	5190	15.48	≤23.98	---	18.59	≤23.00	PASS
		5230	15.25	≤23.98	---	18.36	≤23.00	PASS
		5270	17.39	≤23.98	≤23.98	20.5	≤30.00	PASS
		5310	17.31	≤23.98	≤23.98	20.42	≤30.00	PASS
		5510	13.9	≤23.98	≤23.98	17.01	≤30.00	PASS
		5550	14.14	≤23.98	≤23.98	17.25	≤30.00	PASS
		5670	15.53	≤23.98	≤23.98	18.64	≤30.00	PASS

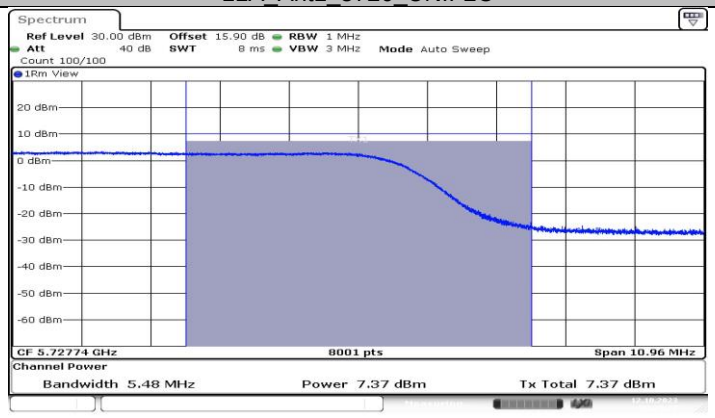
		5710_UNII-2C	14.39	≤23.98	≤23.98	17.5	≤30.00	PASS
		5710_UNII-3	2.57	≤30.00	≤30.00	5.68	---	PASS
		5755	15.37	≤30.00	≤30.00	18.48	---	PASS
		5795	15.43	≤30.00	≤30.00	18.54	---	PASS
11AC80SISO	Ant1	5210	15.69	≤23.98	---	18.8	≤23.00	PASS
		5290	17.25	≤23.98	≤23.98	20.36	≤30.00	PASS
		5530	14.12	≤23.98	≤23.98	17.23	≤30.00	PASS
		5610	15.24	≤23.98	≤23.98	18.35	≤30.00	PASS
		5690_UNII-2C	14.22	≤23.98	≤23.98	17.33	≤30.00	PASS
		5690_UNII-3	-1.22	≤30.00	≤30.00	1.89	---	PASS
		5775	12.42	≤30.00	≤30.00	15.53	---	PASS

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

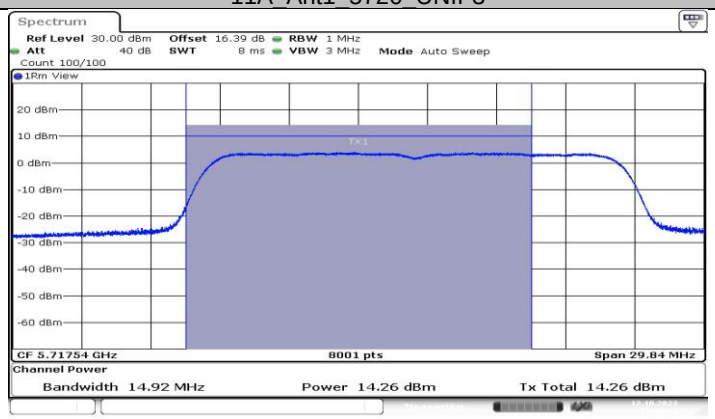
11.4.2. Test Graphs



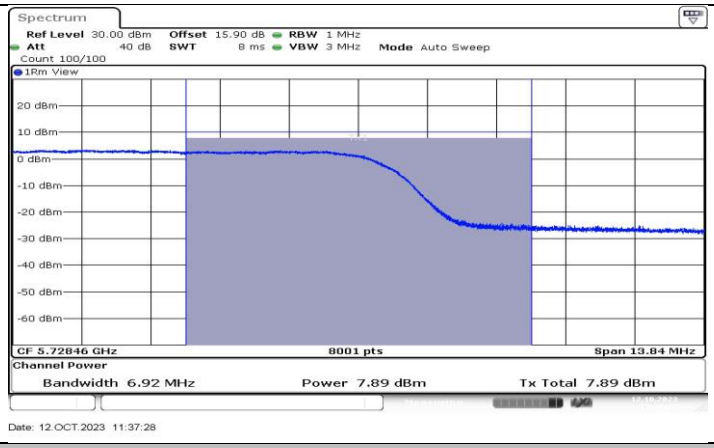
11A_Ant1_5720_UNII-2C



11A_Ant1_5720_UNII-3



11N20SISO_Ant1_5720_UNII-2C



11N20SISO_Ant1_5720_UNII-3

11N40SISO_Ant1_5710_UNII-2C

11N40SISO_Ant1_5710_UNII-3

11AC80SISO_Ant1_5690_UNII-2C

11AC80SISO_Ant1_5690_UNII-3

11.5. APPENDIX C: MAXIMUM POWER SPECTRAL DENSITY

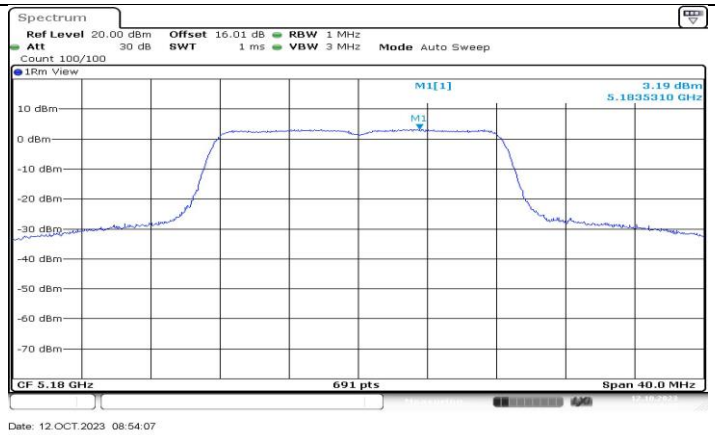
11.5.1. Test Result

Test Mode	Antenna	Frequency[MHz]	Power	Limit	EIRP	Limit	Verdict
			[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	
11A	Ant1	5180	3.19	≤11.00	6.3	≤10.00	PASS
		5200	3.17	≤11.00	6.28	≤10.00	PASS
		5240	3.35	≤11.00	6.46	≤10.00	PASS
		5260	4.82	≤11.00	7.93	---	PASS
		5280	4.76	≤11.00	7.87	---	PASS
		5320	4.27	≤11.00	7.38	---	PASS
		5500	1.56	≤11.00	4.67	---	PASS
		5580	3.48	≤11.00	6.59	---	PASS
		5700	3.85	≤11.00	6.96	---	PASS
		5720_UNII-2C	3.9	≤11.00	7.01	---	PASS
		5720_UNII-3	0.52	≤30.00	3.63	---	PASS
		5745	0.48	≤30.00	3.59	---	PASS
		5785	0.11	≤30.00	3.22	---	PASS
		5825	0.81	≤30.00	3.92	---	PASS
11N20SISO	Ant1	5180	3.29	≤11.00	6.4	≤10.00	PASS
		5200	3.03	≤11.00	6.14	≤10.00	PASS
		5240	3.19	≤11.00	6.3	≤10.00	PASS
		5260	4.76	≤11.00	7.87	---	PASS
		5280	4.99	≤11.00	8.1	---	PASS
		5320	4.28	≤11.00	7.39	---	PASS
		5500	1.26	≤11.00	4.37	---	PASS
		5580	3.61	≤11.00	6.72	---	PASS
		5700	3.82	≤11.00	6.93	---	PASS
		5720_UNII-2C	3.73	≤11.00	6.84	---	PASS
		5720_UNII-3	0.38	≤30.00	3.49	---	PASS
		5745	0.54	≤30.00	3.65	---	PASS
		5785	0.1	≤30.00	3.21	---	PASS
		5825	0.84	≤30.00	3.95	---	PASS
11N40SISO	Ant1	5190	-0.19	≤11.00	2.92	≤10.00	PASS
		5230	0.15	≤11.00	3.26	≤10.00	PASS
		5270	2.46	≤11.00	5.57	---	PASS
		5310	1.74	≤11.00	4.85	---	PASS
		5510	-2.05	≤11.00	1.06	---	PASS
		5550	-1.25	≤11.00	1.86	---	PASS
		5670	-0.25	≤11.00	2.86	---	PASS

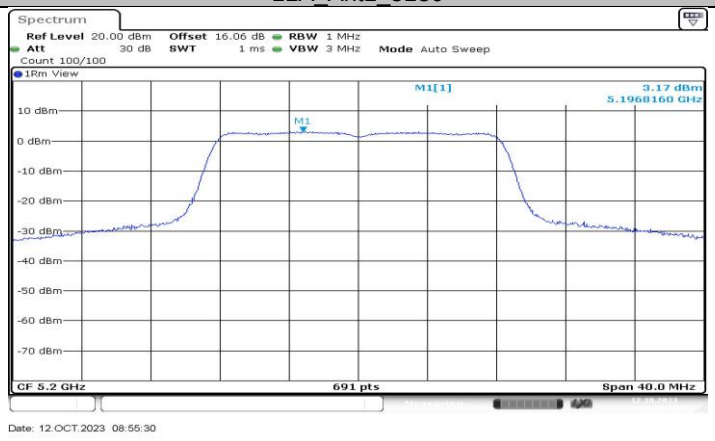
		5710_UNII-2C	0.42	≤11.00	3.53	---	PASS
		5710_UNII-3	-3.77	≤30.00	-0.66	---	PASS
		5755	-3.62	≤30.00	-0.51	---	PASS
		5795	-3.73	≤30.00	-0.62	---	PASS
11AC80SISO	Ant1	5210	-3.24	≤11.00	-0.13	≤10.00	PASS
		5290	-1.64	≤11.00	1.47	---	PASS
		5530	-4.69	≤11.00	-1.58	---	PASS
		5610	-3.57	≤11.00	-0.46	---	PASS
		5690_UNII-2C	-2.95	≤11.00	0.16	---	PASS
		5690_UNII-3	-7.13	≤30.00	-4.02	---	PASS
		5775	-11.56	≤30.00	-8.45	---	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.

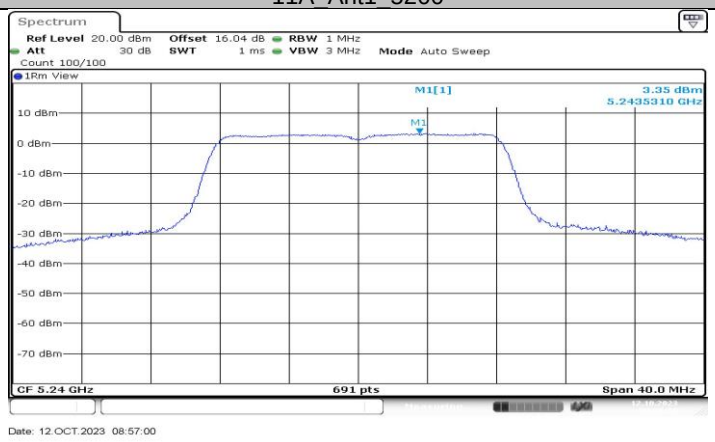
11.5.2. Test Graphs



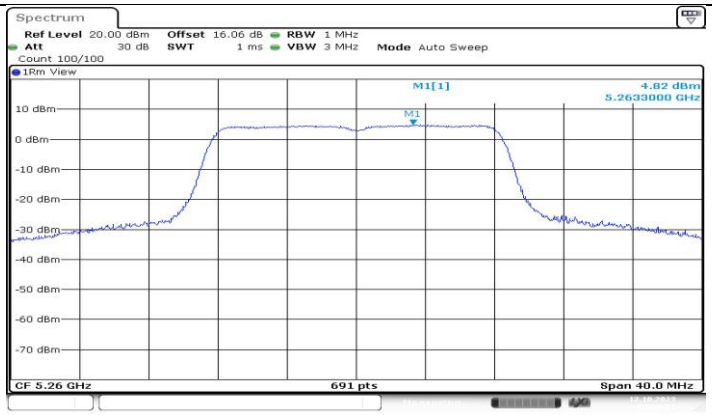
11A_Ant1_5180



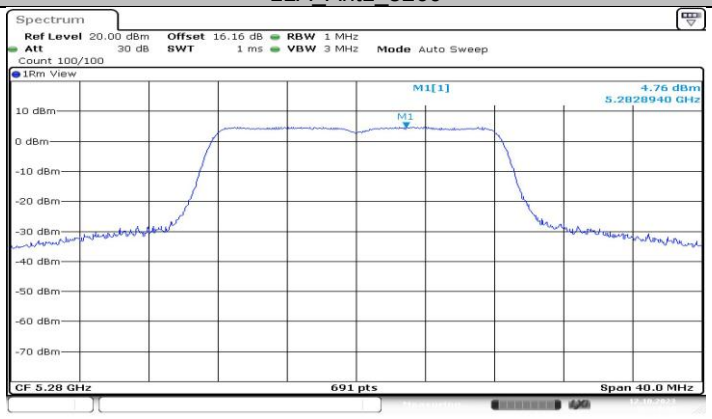
11A_Ant1_5200



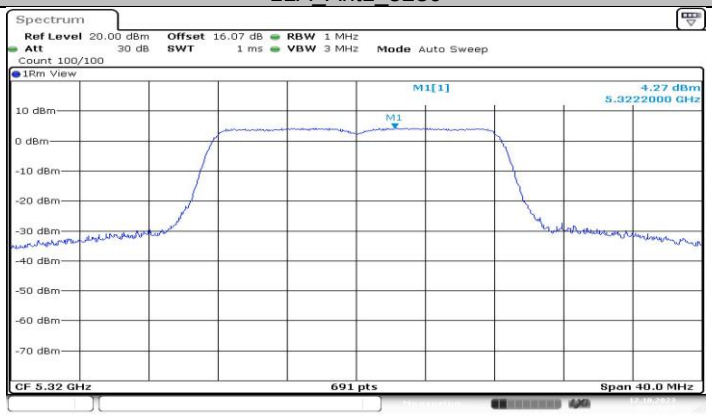
11A_Ant1_5240



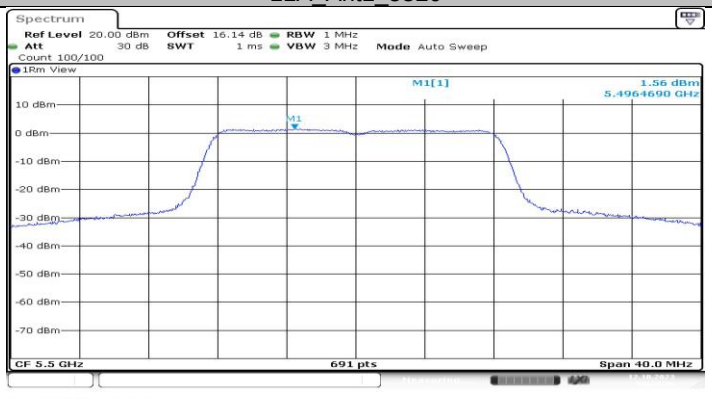
11A_Ant1_5260

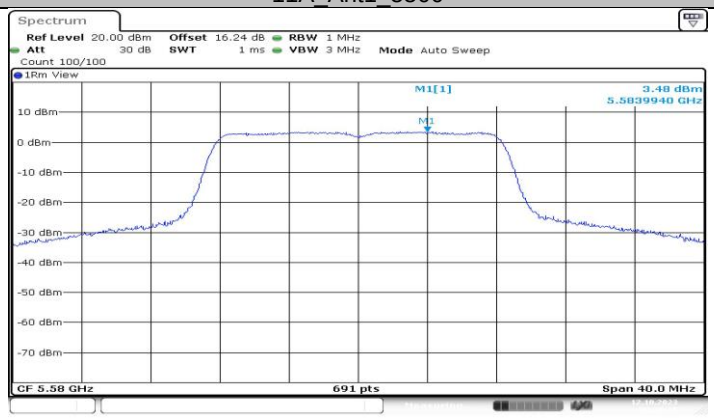
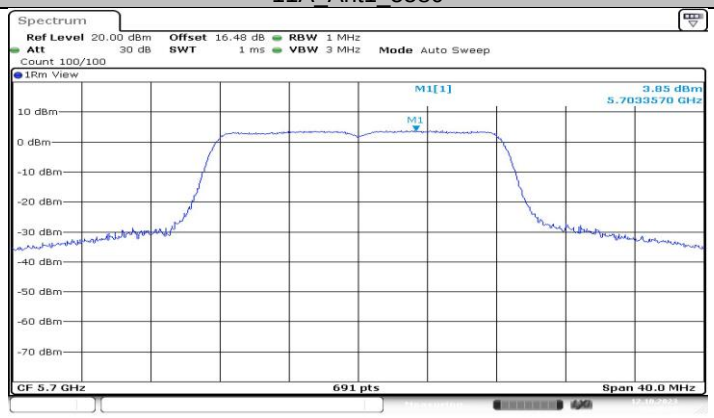
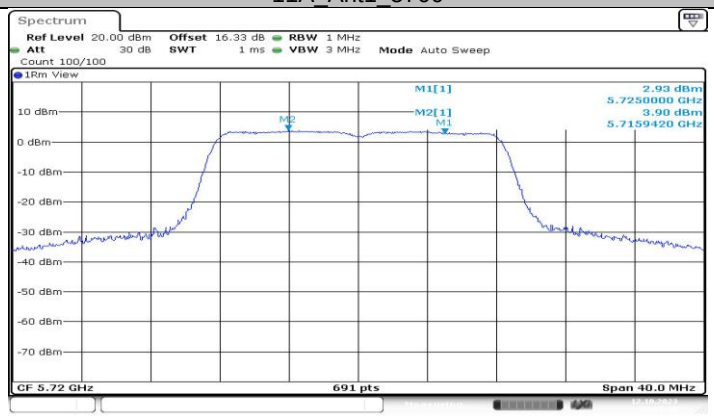


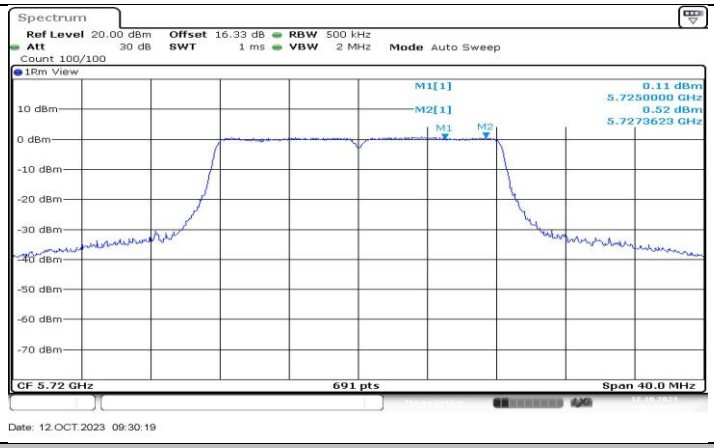
11A_Ant1_5280



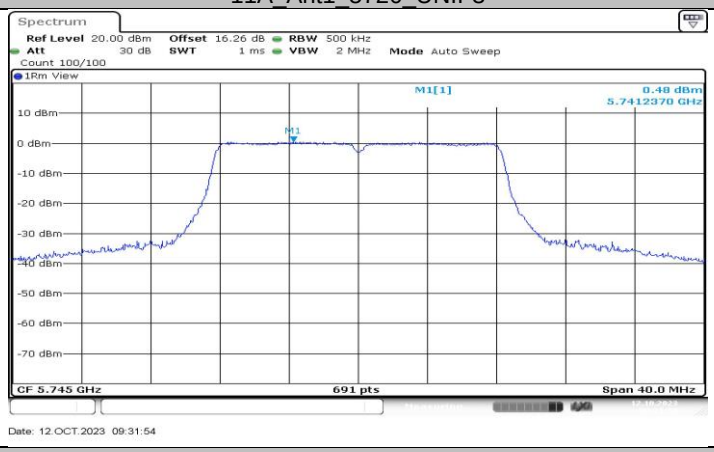
11A_Ant1_5320



11A_Ant1_5500

11A_Ant1_5580

11A_Ant1_5700

11A_Ant1_5720_UNII-2C

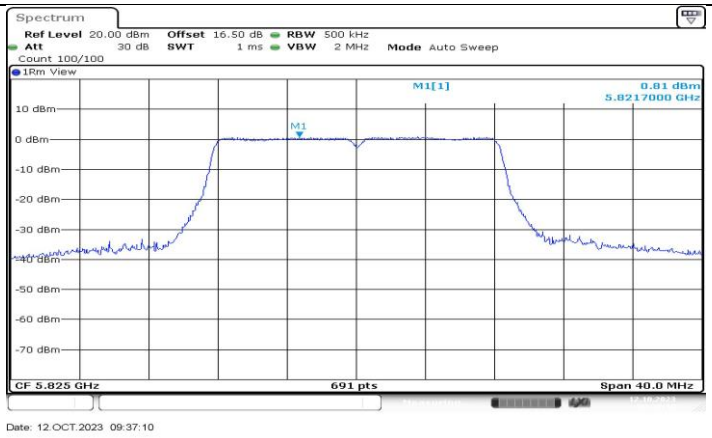


11A_Ant1_5720_UNII-3

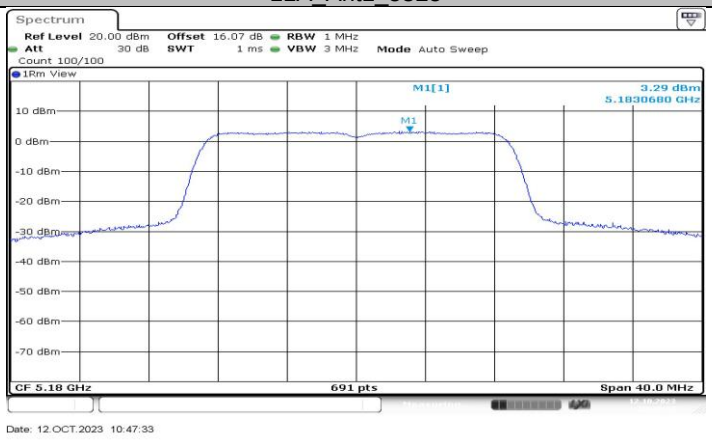


11A_Ant1_5745

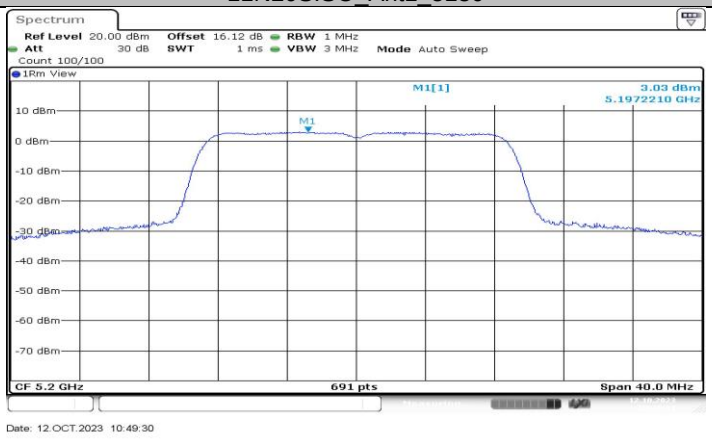
11A_Ant1_5785



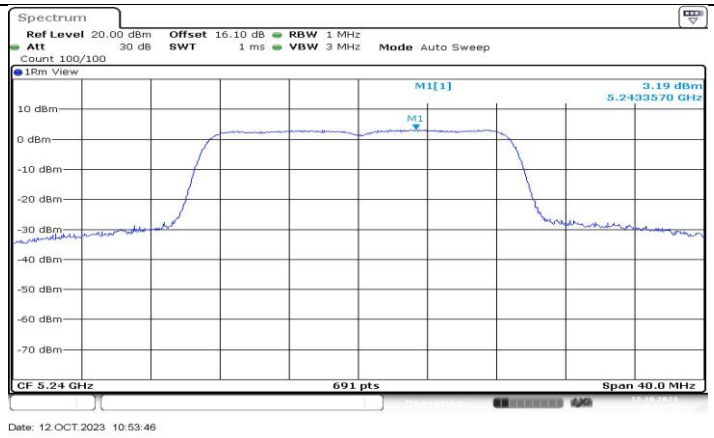
11A_Ant1_5825



11N20SISO_Ant1_5180

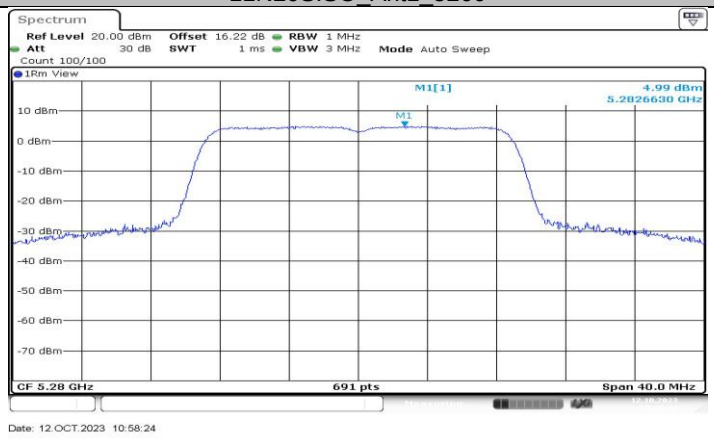


11N20SISO_Ant1_5200

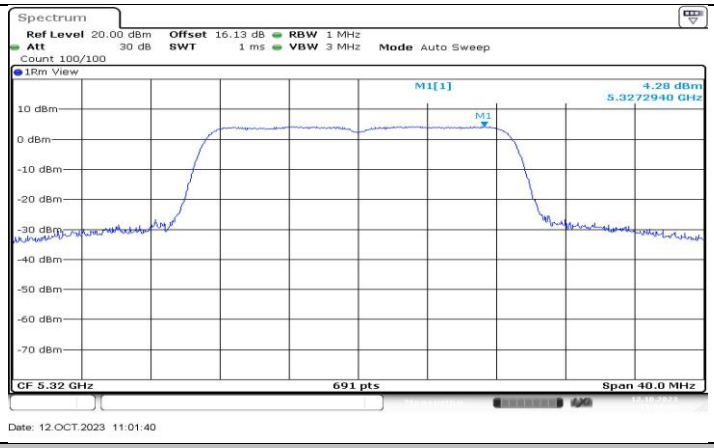


11N20SISO_Ant1_5240

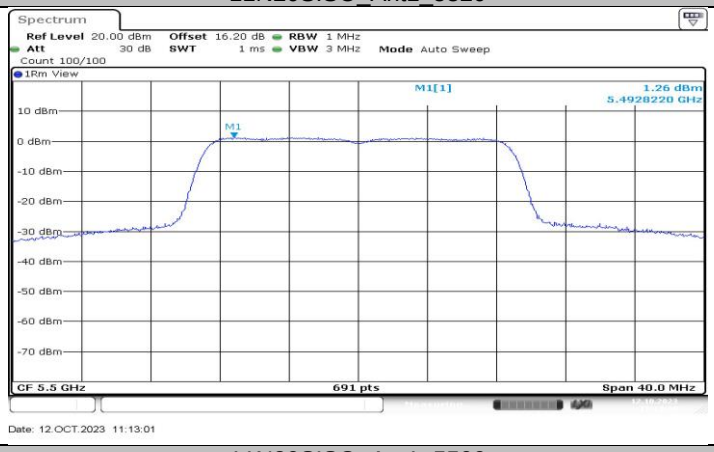
11N20SISO_Ant1_5260



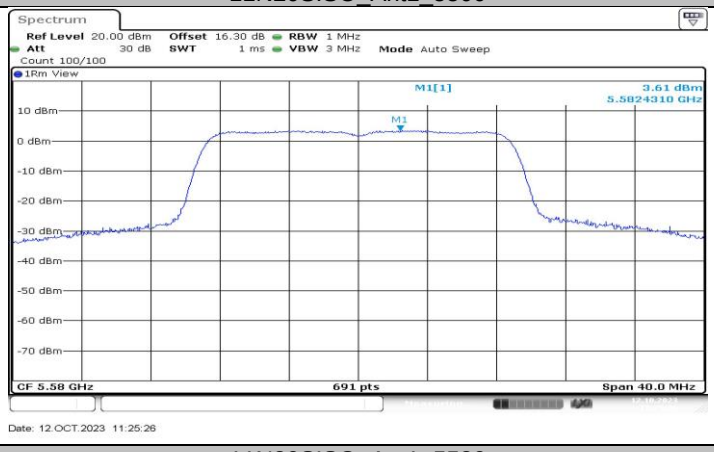
11N20SISO_Ant1_5280



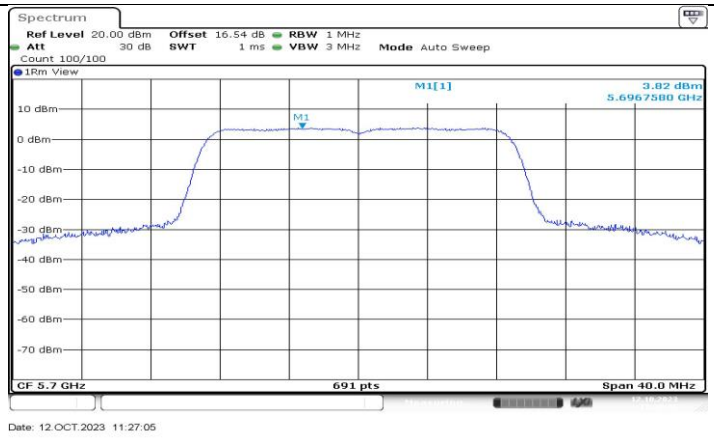
11N20SISO_Ant1_5320



11N20SISO_Ant1_5500



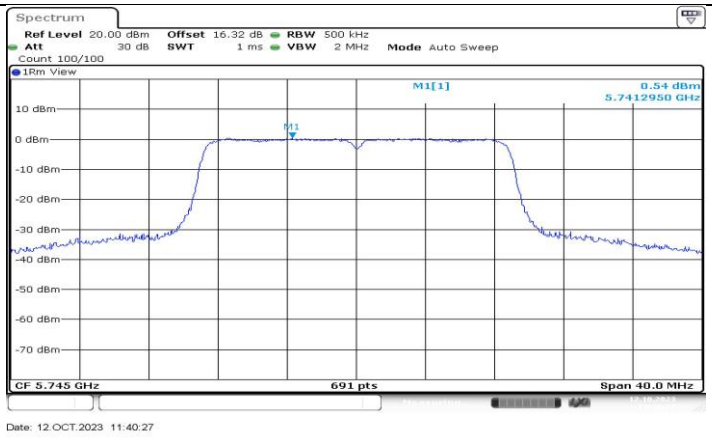
11N20SISO_Ant1_5580



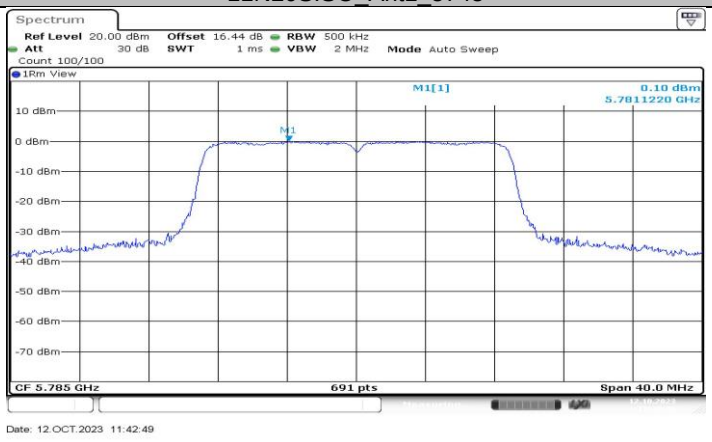
11N20SISO_Ant1_5700

11N20SISO_Ant1_5720_UNII-2C

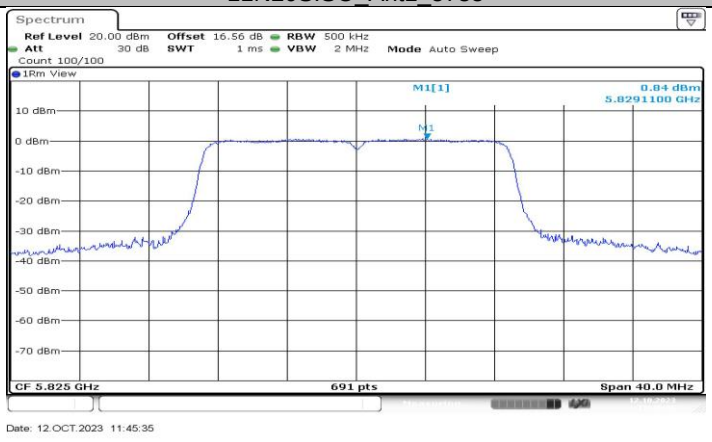
11N20SISO_Ant1_5720_UNII-3



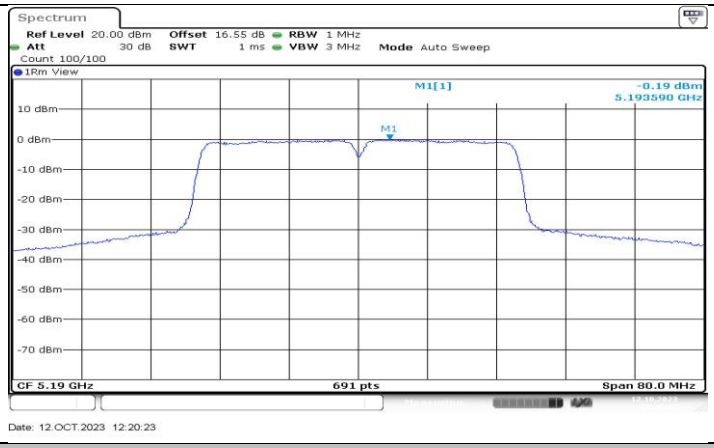
11N20SISO_Ant1_5745



11N20SISO_Ant1_5785

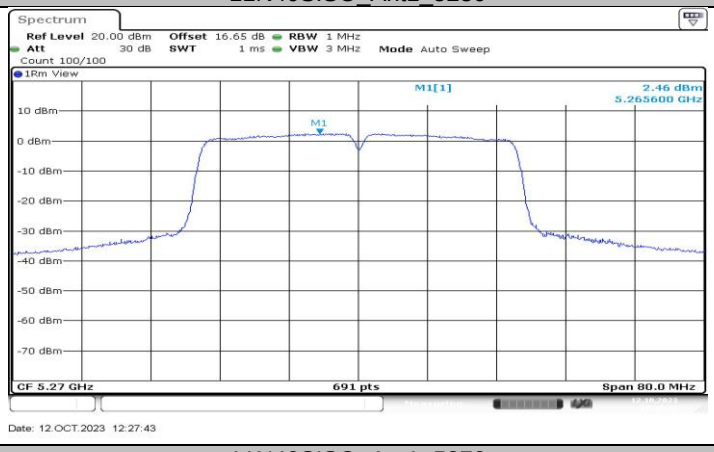


11N20SISO_Ant1_5825



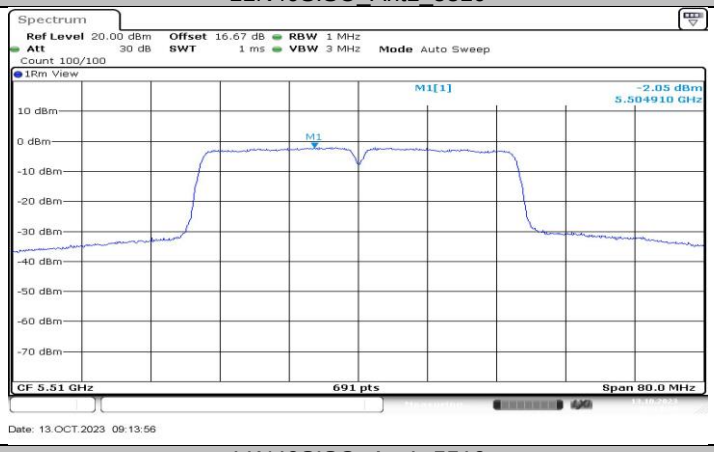
11N40SISO_Ant1_5190

11N40SISO_Ant1_5230



11N40SISO_Ant1_5270

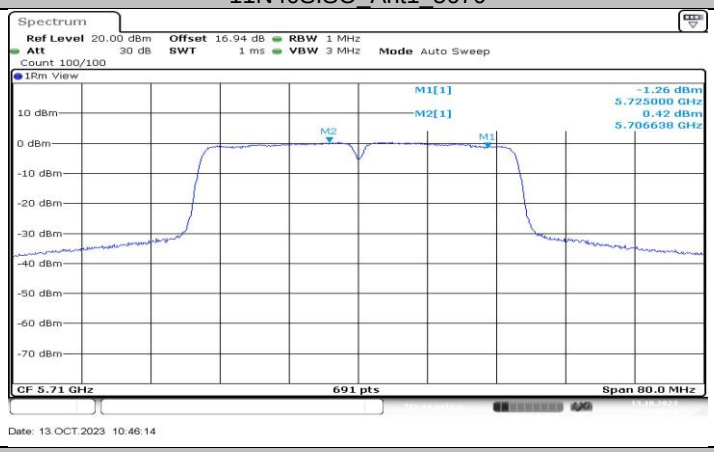
11N40SISO_Ant1_5310



11N40SISO_Ant1_5510

11N40SISO_Ant1_5550

11N40SISO_Ant1_5670



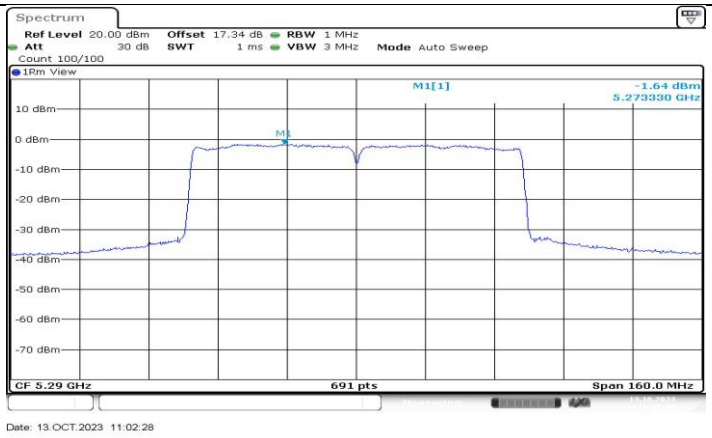
11N40SISO_Ant1_5710_UNII-2C

11N40SISO_Ant1_5710_UNII-3

11N40SISO_Ant1_5755

11N40SISO_Ant1_5795

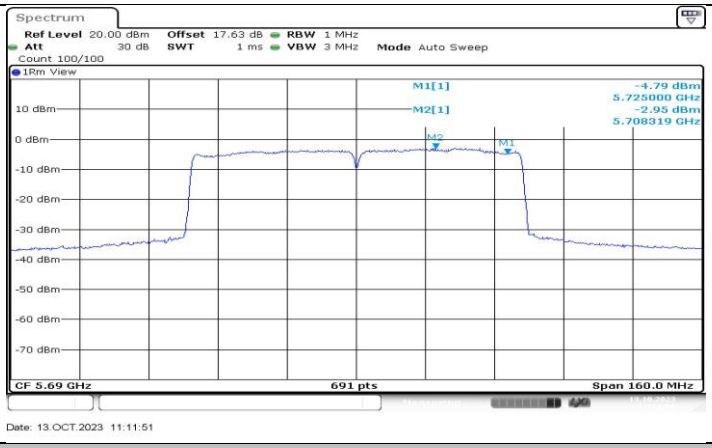
11AC80SISO_Ant1_5210



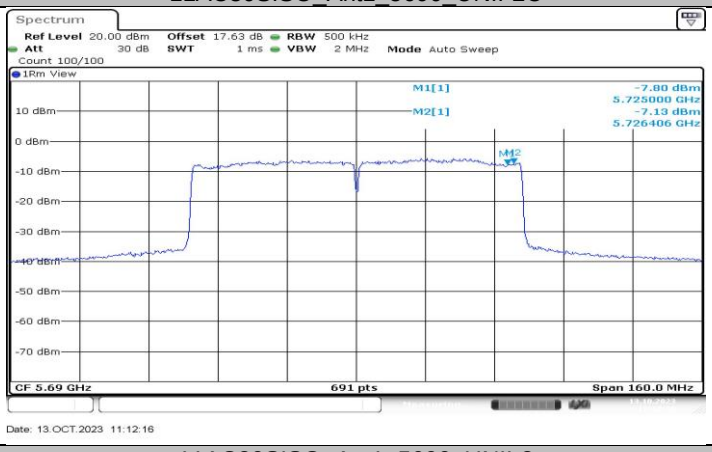
11AC80SISO_Ant1_5290

11AC80SISO_Ant1_5530

11AC80SISO_Ant1_5610



11AC80SISO_Ant1_5690_UNII-2C



11AC80SISO_Ant1_5690_UNII-3

11AC80SISO_Ant1_5775

11.6. APPENDIX H: FREQUENCY STABILITY

11.6.1. Test Result

11.6.2. Test Result

Frequency Error vs. Voltage									
802.11a:5200MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
TN	VL	5200.0032	0.61	5199.9842	-3.03	5200.0208	4.01	5199.9956	-0.85
TN	VN	5199.9840	-3.07	5199.9852	-2.85	5199.9765	-4.52	5199.9928	-1.38
TN	VH	5200.0165	3.18	5200.0080	1.53	5200.0121	2.34	5200.0134	2.57
Frequency Error vs. Temperature									
802.11a:5200MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
45	VN	5199.9937	-1.21	5200.0185	3.56	5200.0207	3.98	5200.0149	2.86
40	VN	5200.0099	1.90	5200.0033	0.64	5199.9774	-4.34	5199.9808	-3.70
30	VN	5200.0243	4.67	5200.0191	3.67	5199.9810	-3.65	5199.9861	-2.67
20	VN	5199.9907	-1.79	5199.9886	-2.20	5200.0071	1.37	5200.0073	1.41
10	VN	5200.0126	2.42	5199.9929	-1.37	5199.9972	-0.54	5199.9834	-3.19
0	VN	5199.9931	-1.32	5199.9926	-1.42	5199.9790	-4.03	5200.0153	2.95

Note:
1. All antennas, test modes and test channels have been tested, only the worst data record in the report.
2. For the detail Test Conditions, please refer to section 7.5 TEST ENVIRONMENT.

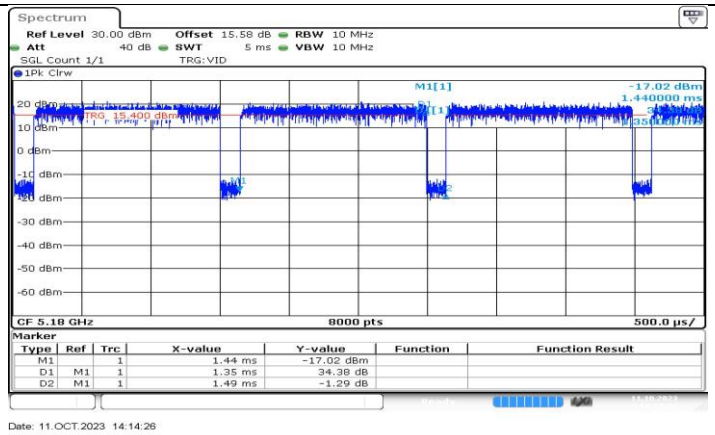
11.7. APPENDIX D: DUTY CYCLE

11.7.1. Test Result

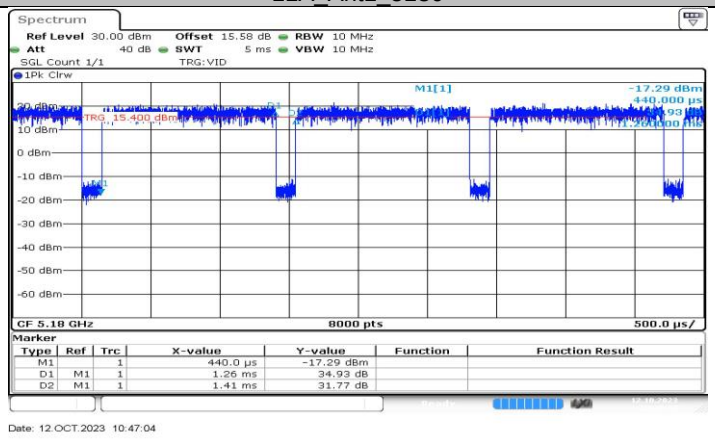
Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)	Final setting For VBW (kHz)
11A	1.35	1.49	0.9060	90.60	0.43	0.74	1
11N20SISO	1.26	1.41	0.8936	89.36	0.49	0.79	1
11N40SISO	0.62	0.77	0.8052	80.52	0.94	1.61	2
11AC80SISO	0.32	0.46	0.6957	69.57	1.58	3.13	5

Note:
Duty Cycle Correction Factor=10log (1/x).
Where: x is Duty Cycle (Linear)
Where: T is On Time
If that calculated VBW is not available on the analyzer then the next higher value should be used.

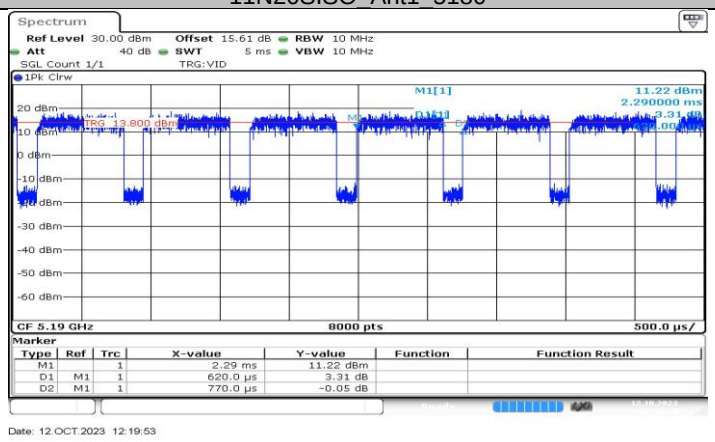
11.7.2. Test Graphs



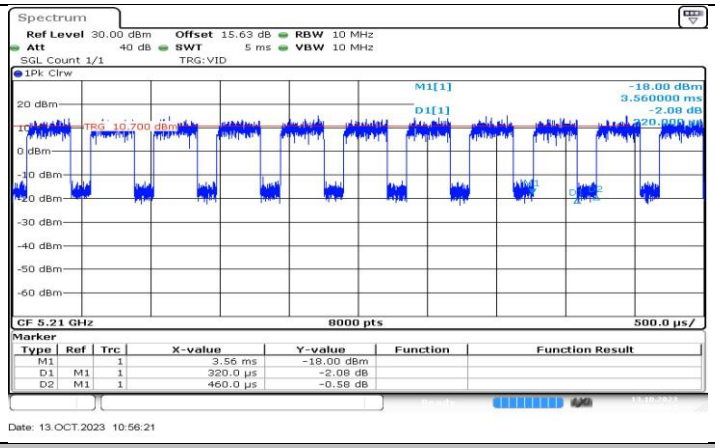
11A_Ant1_5180



11N20SISO_Ant1_5180



11N40SISO_Ant1_5190

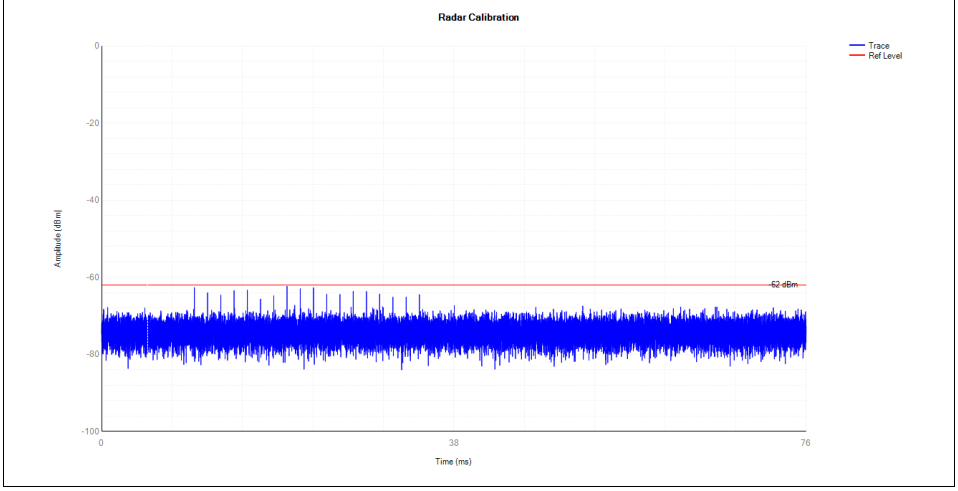


11AC80SISO_Ant1_5210

11.8. APPENDIX E: CALIBRATION

Mode	Frequency (MHz)	Type	Result	Verdict
ac80	5530	DFS_FCC_T0	See test Graph	Pass

Test Graphs
5530MHz DFS_FCC_T0

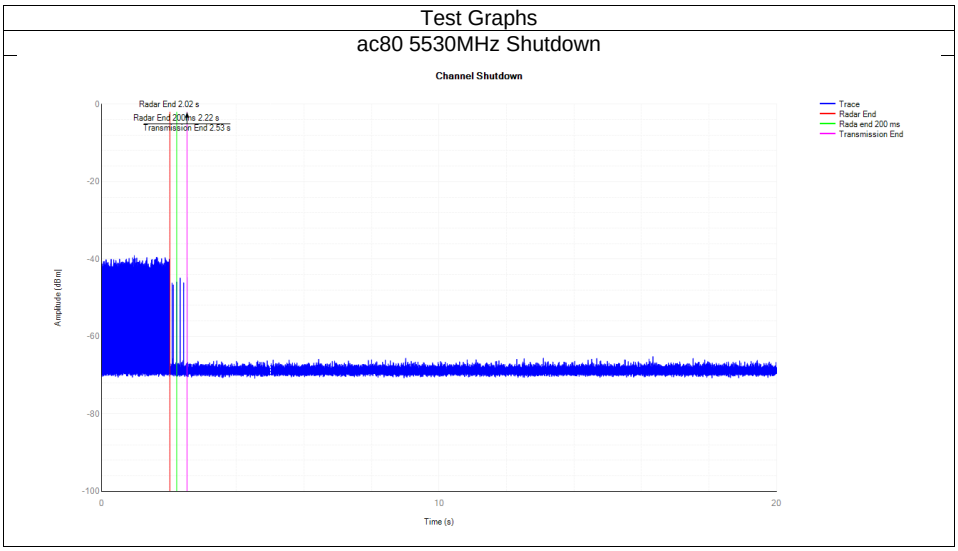


11.9. APPENDIX F: SHUTDOWN TIME

Mode	Frequency (MHz)	Channel Move Time (s)	Limit Channel Move Time (s)	Close Transmission Time (s)	Limit Close Transmission Time (s)	Close Transmission Time after 200ms(s)	Limit Close Transmission Time after 200ms (s)	Verdict
ac80	5530	0.508	10	0.005	0.26	0.003	0.06	Pass

Test Graphs

ac80 5530MHz Shutdown



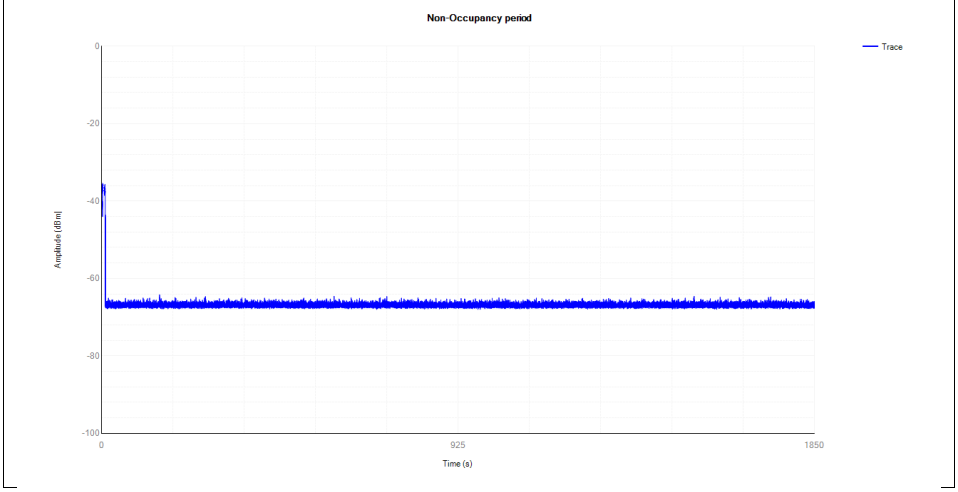
Note: All modes have been tested, only the worst data recorded in the report.

11.10. APPENDIX G: NON-OCCUPANCY

Mode	Frequency (MHz)	Result	Verdict
ac80	5530	See test Graph	Pass

Test Graphs

ac80 5530MHz Non-Occupancy



Note: All modes have been tested, only the worst data recorded in the report.

END OF REPORT