

Appendix: 2.4G WIFI of module 2

Contents

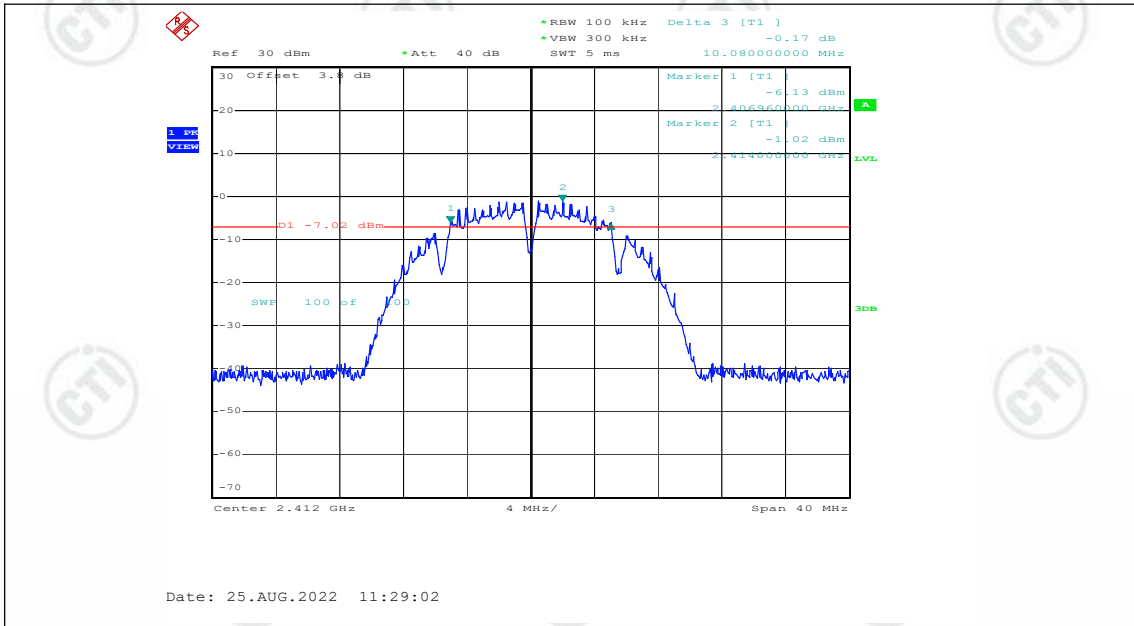
Appendix A: DTS Bandwidth.....	3
Test Result.....	3
Test Graphs.....	4
Appendix B: Occupied Channel Bandwidth.....	10
Test Result.....	10
Test Graphs.....	11
Appendix C: Maximum conducted output power.....	17
Test Result.....	17
Appendix D: Maximum power spectral density.....	18
Test Result.....	18
Test Graphs.....	19
Appendix E: Band edge measurements.....	25
Test Result.....	25
Test Graphs.....	26
Appendix F: Conducted Spurious Emission.....	30
Test Result.....	30
Test Graphs.....	32
Appendix G: Duty Cycle.....	50
Test Result.....	50
Test Graphs.....	51

Appendix A: DTS Bandwidth

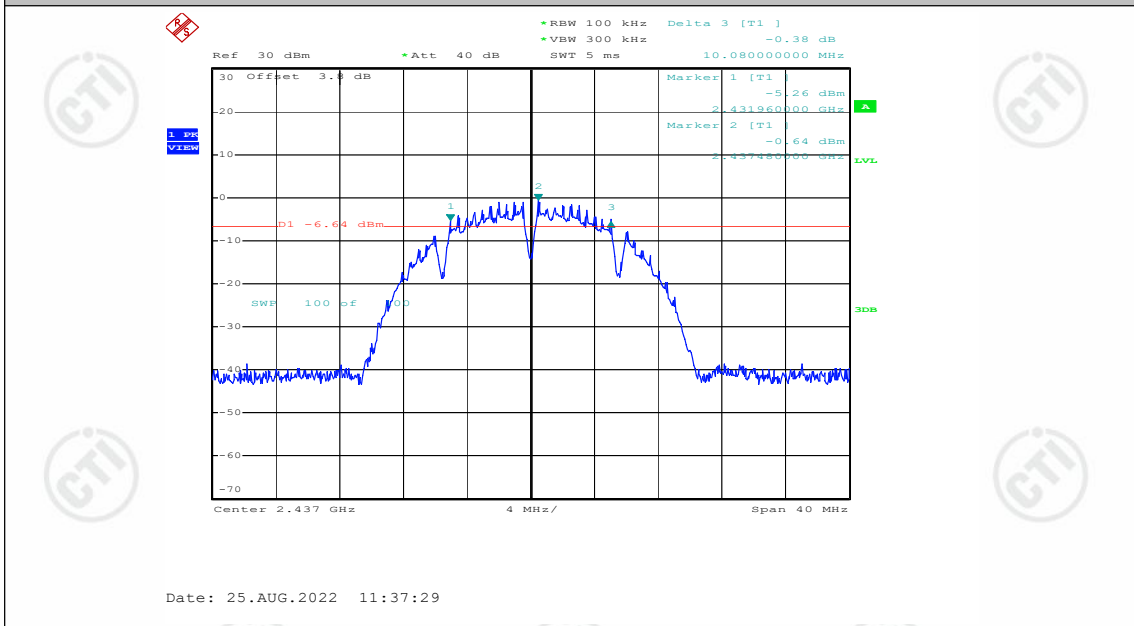
Test Result

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.08	2406.96	2417.04	0.5	PASS
		2437	10.08	2431.96	2442.04	0.5	PASS
		2462	11.04	2456.00	2467.04	0.5	PASS
11G	Ant1	2412	16.36	2403.84	2420.20	0.5	PASS
		2437	16.36	2428.84	2445.20	0.5	PASS
		2462	16.32	2453.84	2470.16	0.5	PASS
11N20SI SO	Ant1	2412	17.32	2403.20	2420.52	0.5	PASS
		2437	17.56	2428.24	2445.80	0.5	PASS
		2462	17.52	2453.24	2470.76	0.5	PASS
11N40SI SO	Ant1	2422	35.68	2403.84	2439.52	0.5	PASS
		2437	35.60	2419.24	2454.84	0.5	PASS
		2452	35.84	2444.08	2479.92	0.5	PASS

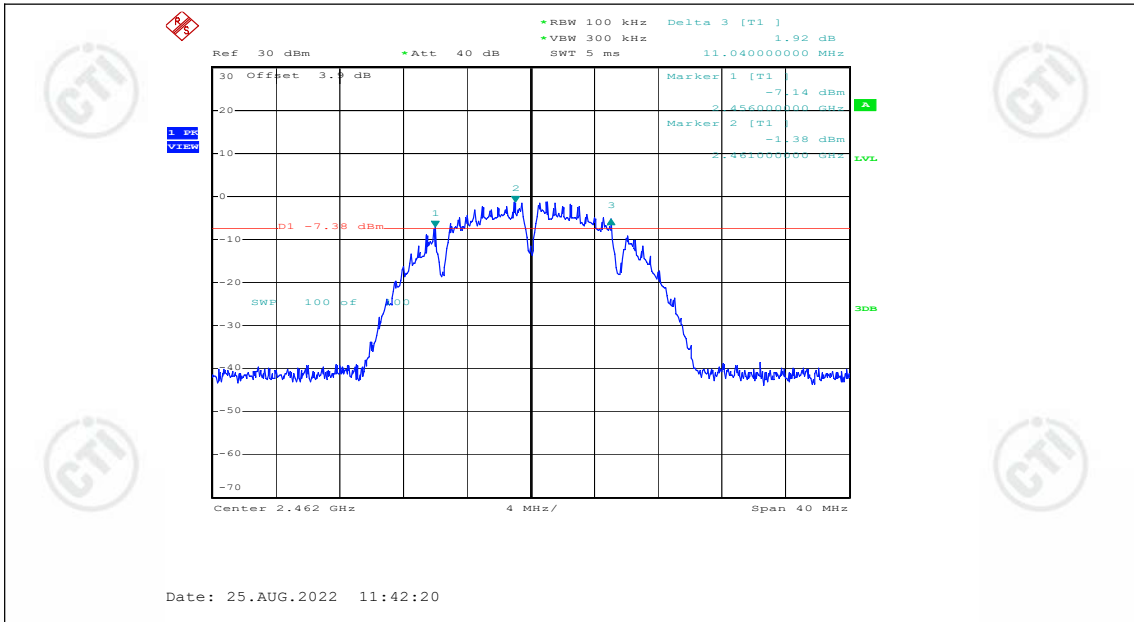
Test Graphs



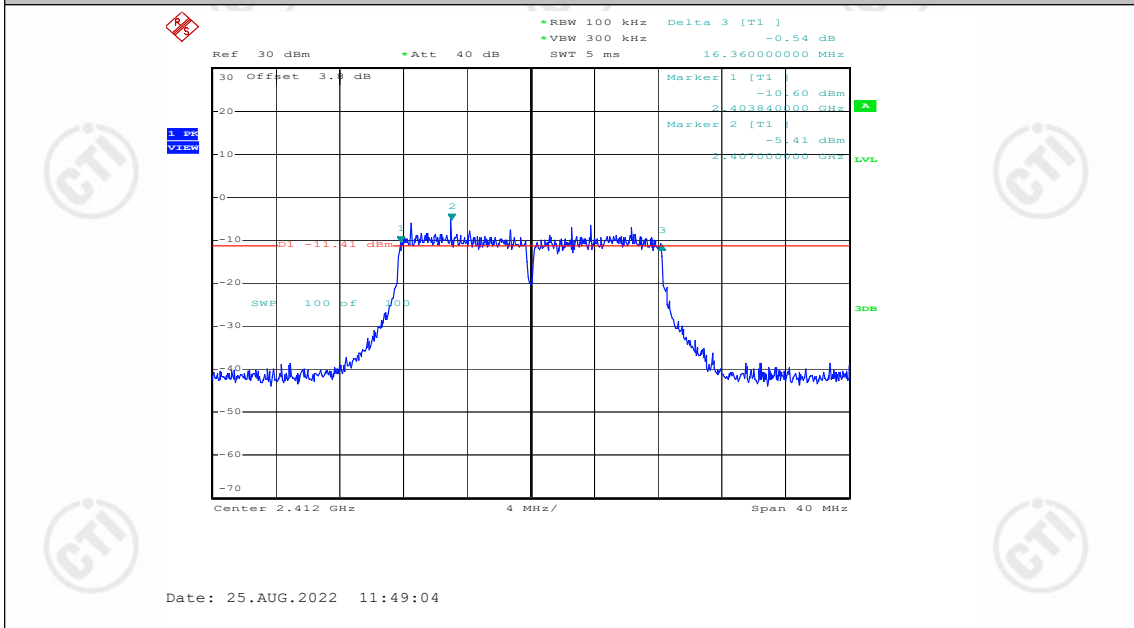
11B_Ant1_2412



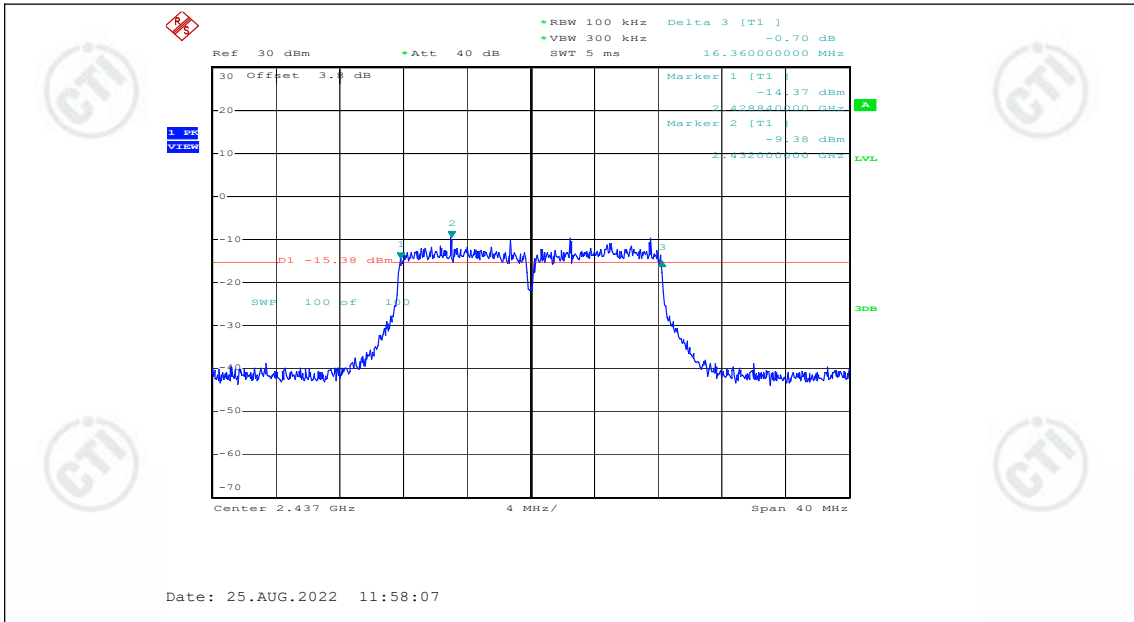
11B_Ant1_2437



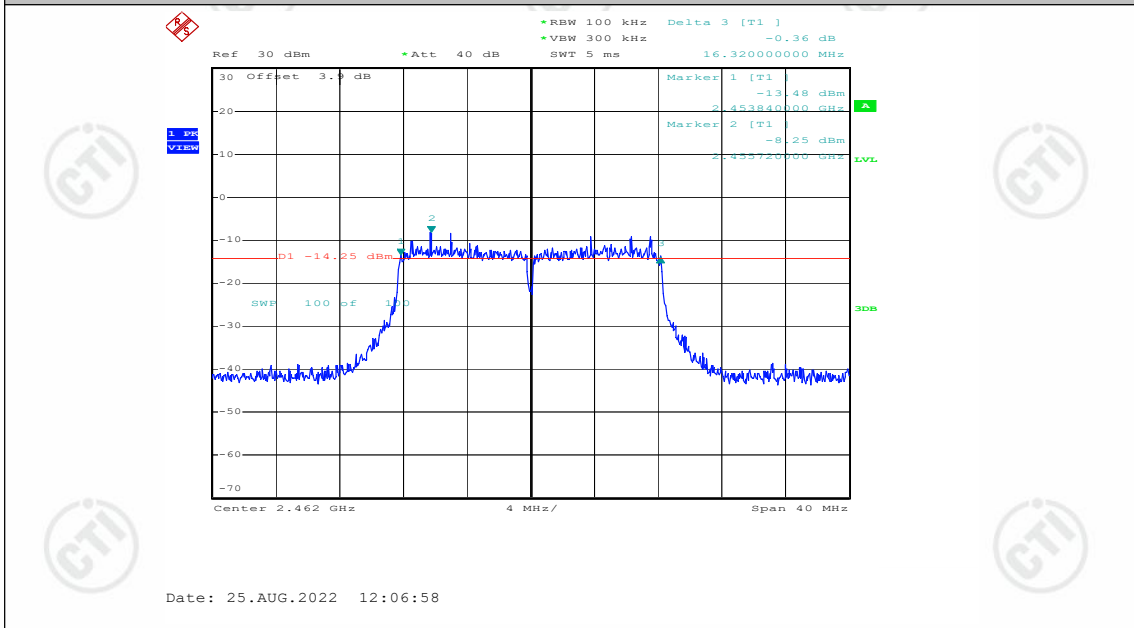
11B_Ant1_2462



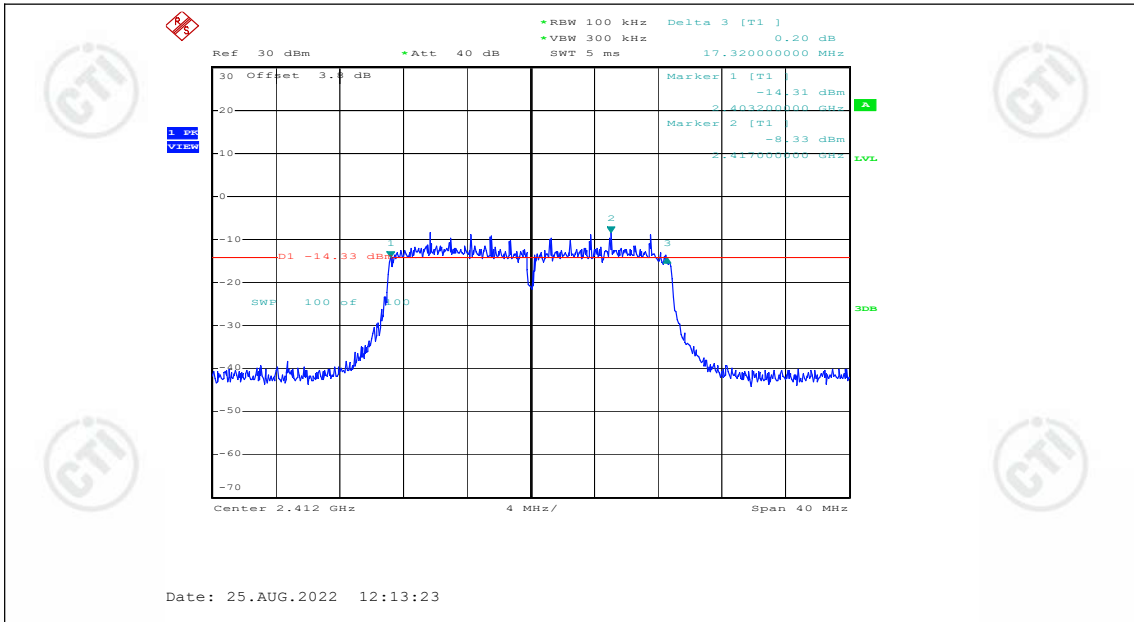
11G_Ant1_2412



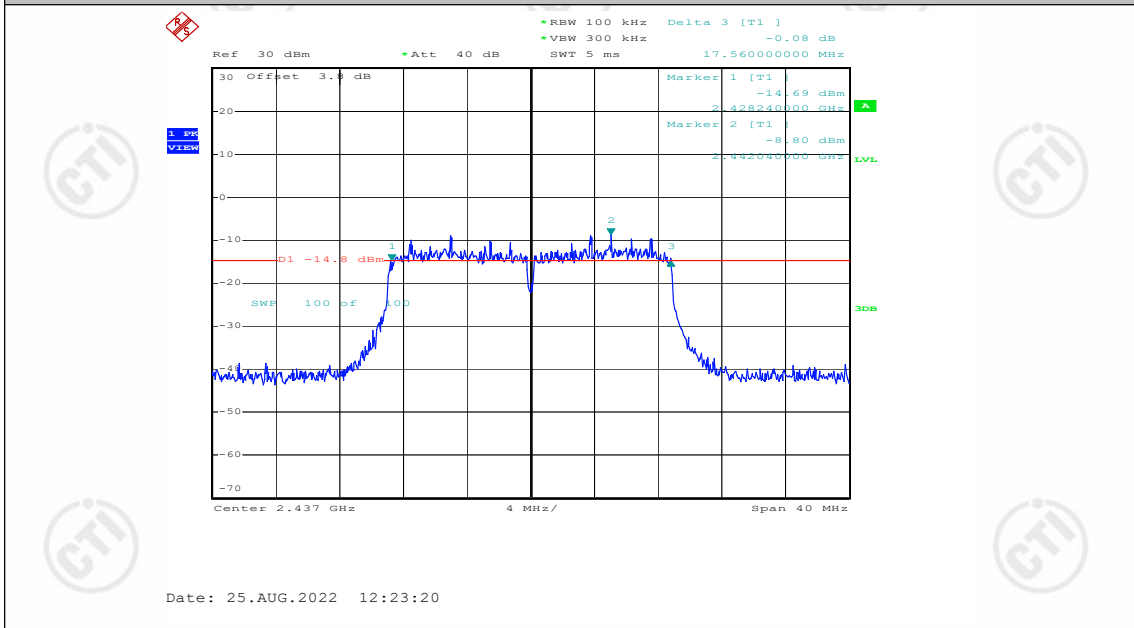
11G_Ant1_2437



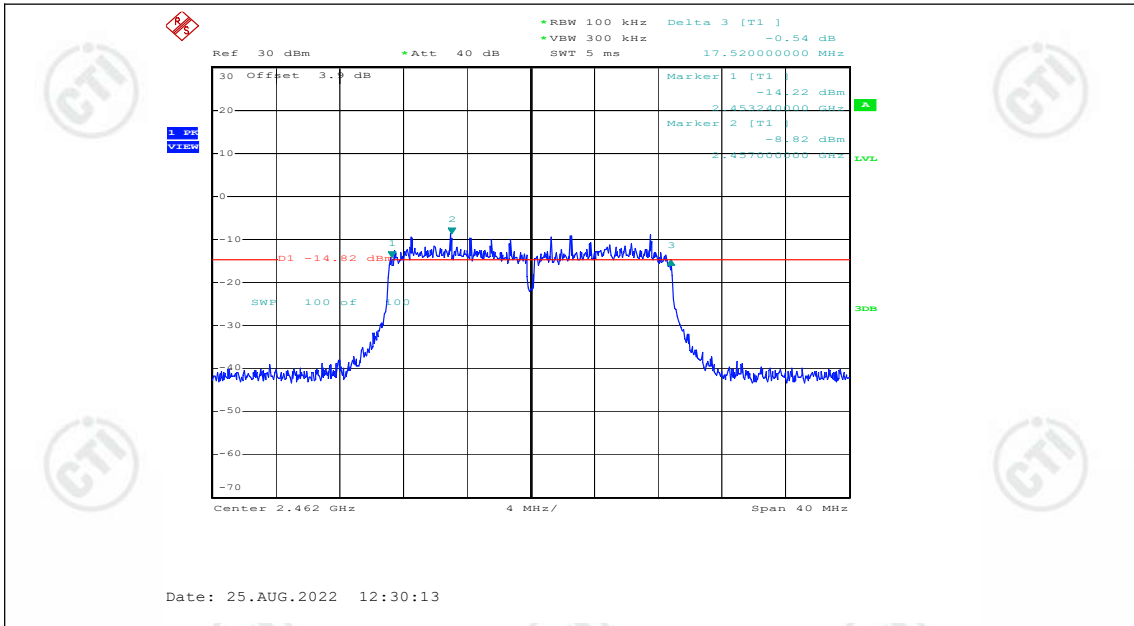
11G_Ant1_2462



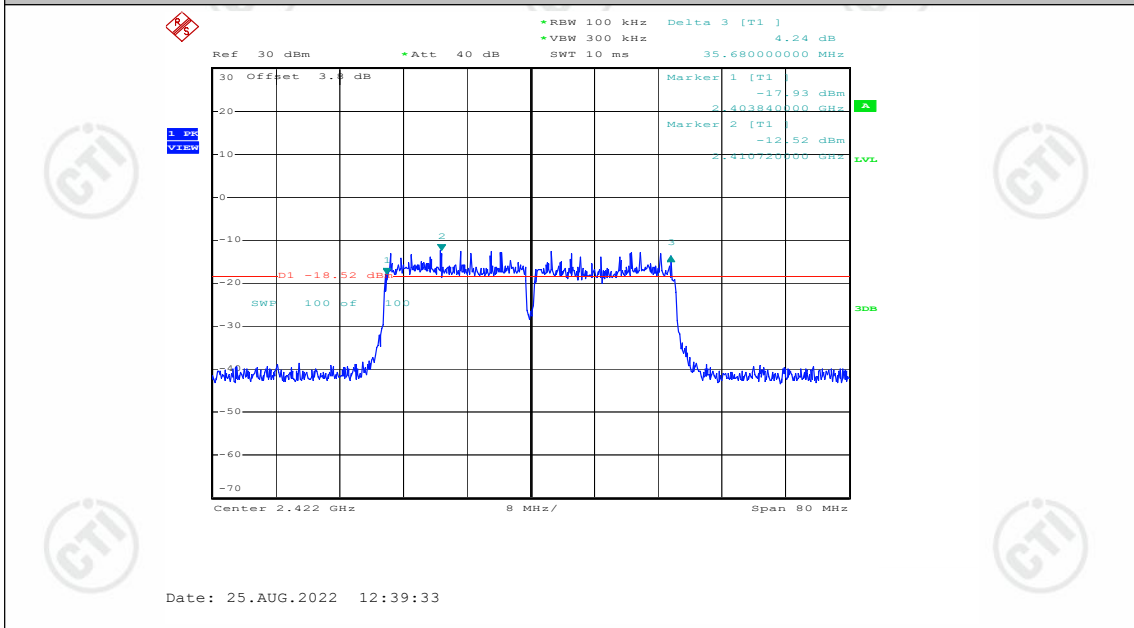
11N20SISO_Ant1_2412



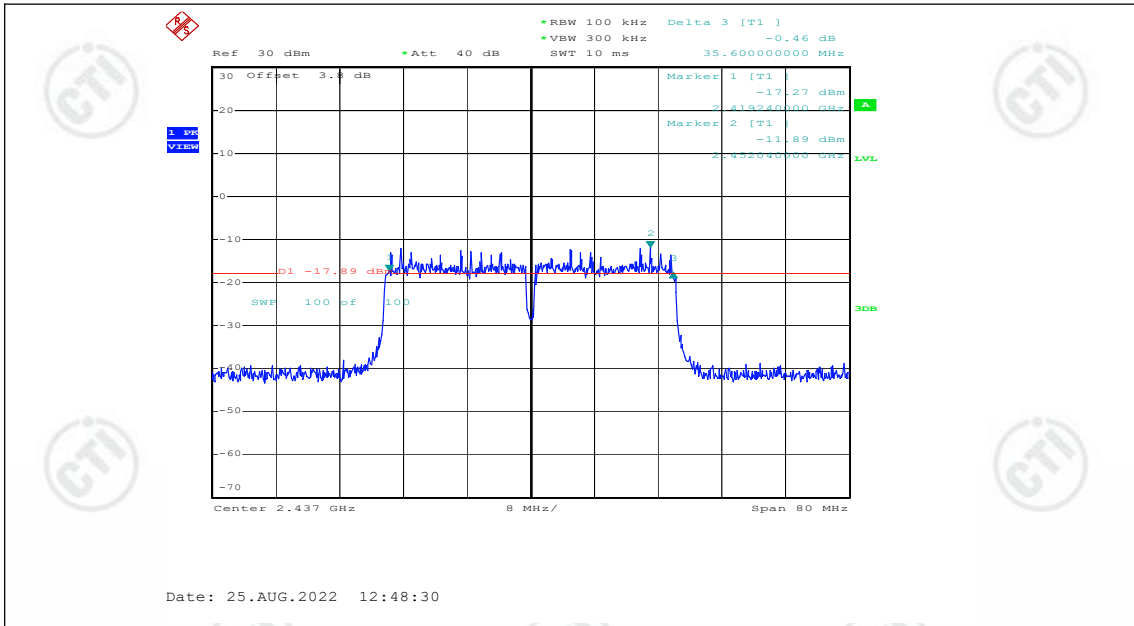
11N20SISO_Ant1_2437



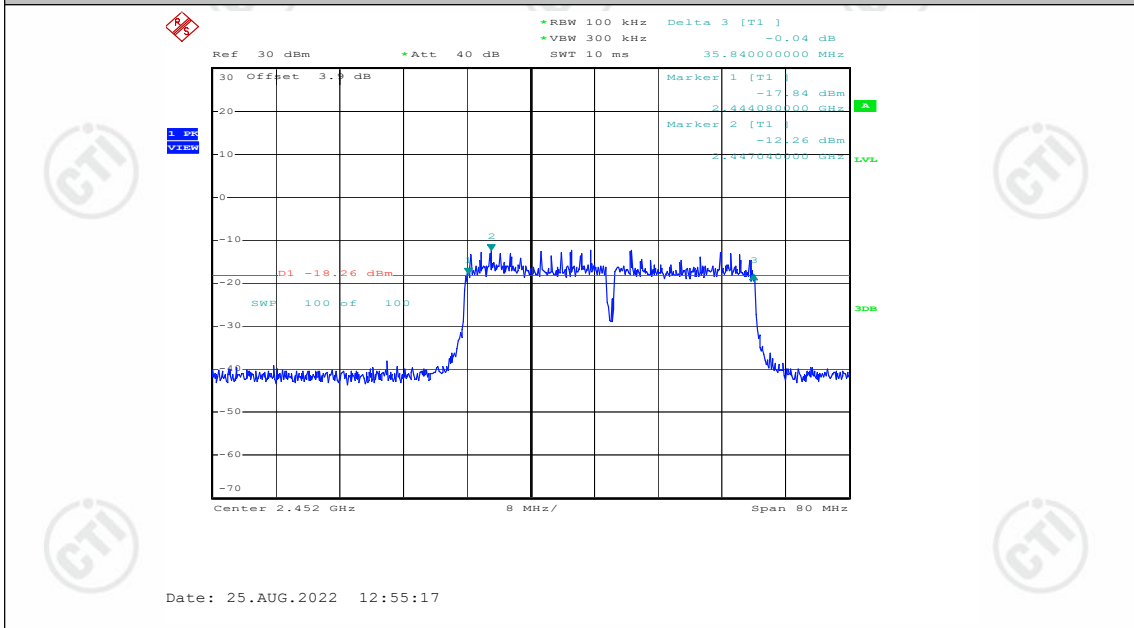
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



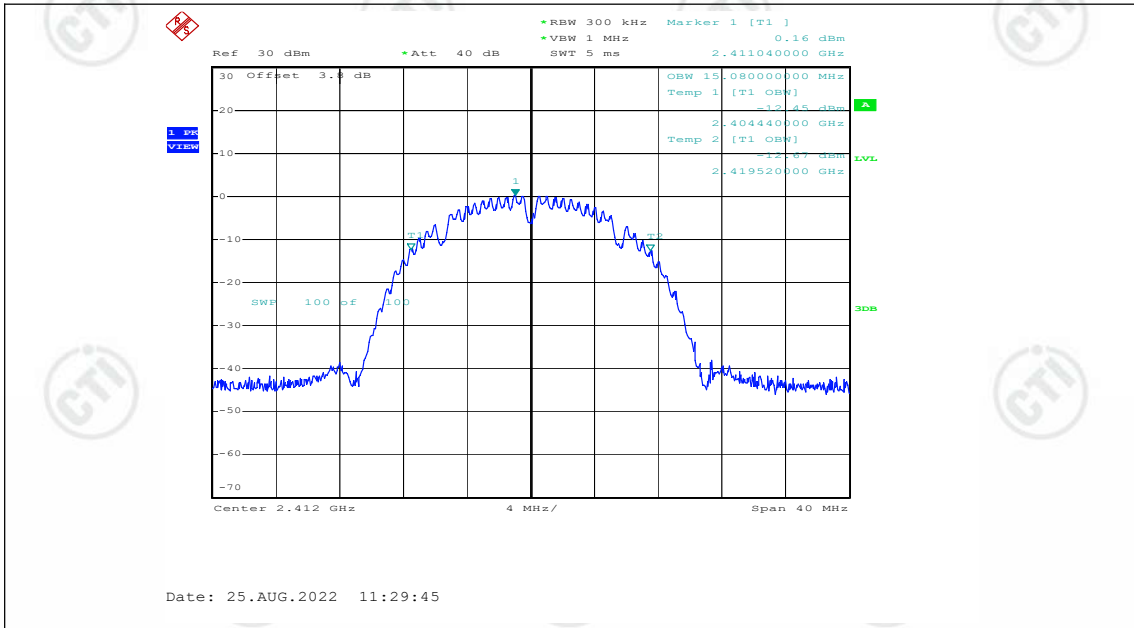
11N40SISO_Ant1_2452

Appendix B: Occupied Channel Bandwidth

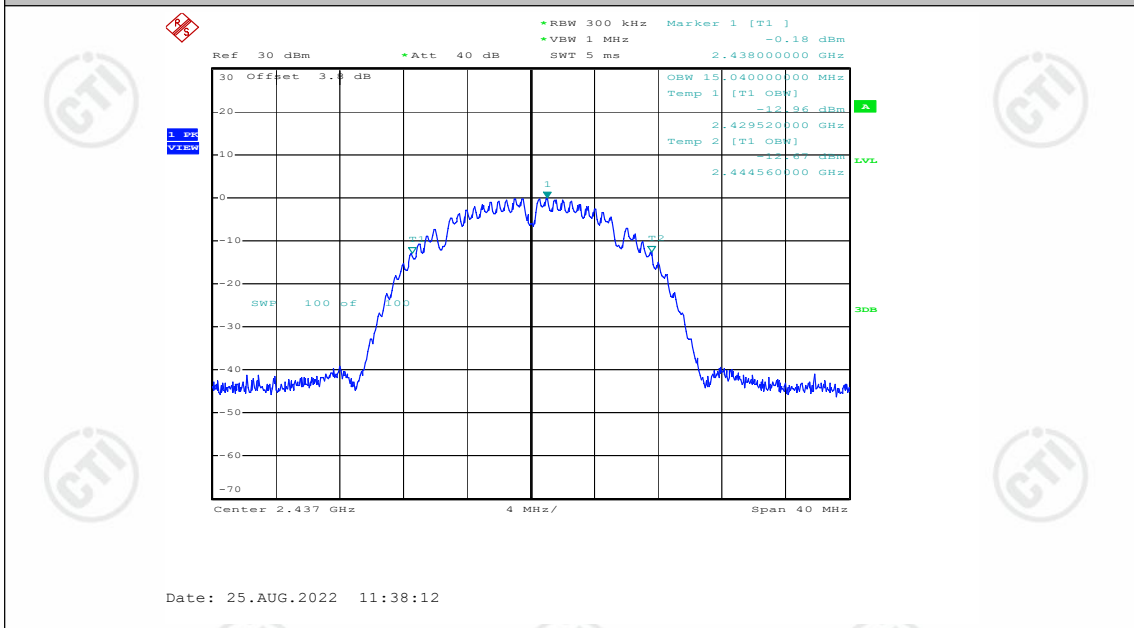
Test Result

Test Mode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	15.08	0.000	0.000	---	---
		2437	15.04	0.000	0.000	---	---
		2462	15.12	0.000	0.000	---	---
11G	Ant1	2412	16.96	0.000	0.000	---	---
		2437	16.88	0.000	0.000	---	---
		2462	17	0.000	0.000	---	---
11N20SI SO	Ant1	2412	17.88	0.000	0.000	---	---
		2437	17.92	0.000	0.000	---	---
		2462	17.84	0.000	0.000	---	---
11N40SI SO	Ant1	2422	36.88	0.000	0.000	---	---
		2437	36.8	0.000	0.000	---	---
		2452	36.88	0.000	0.000	---	---

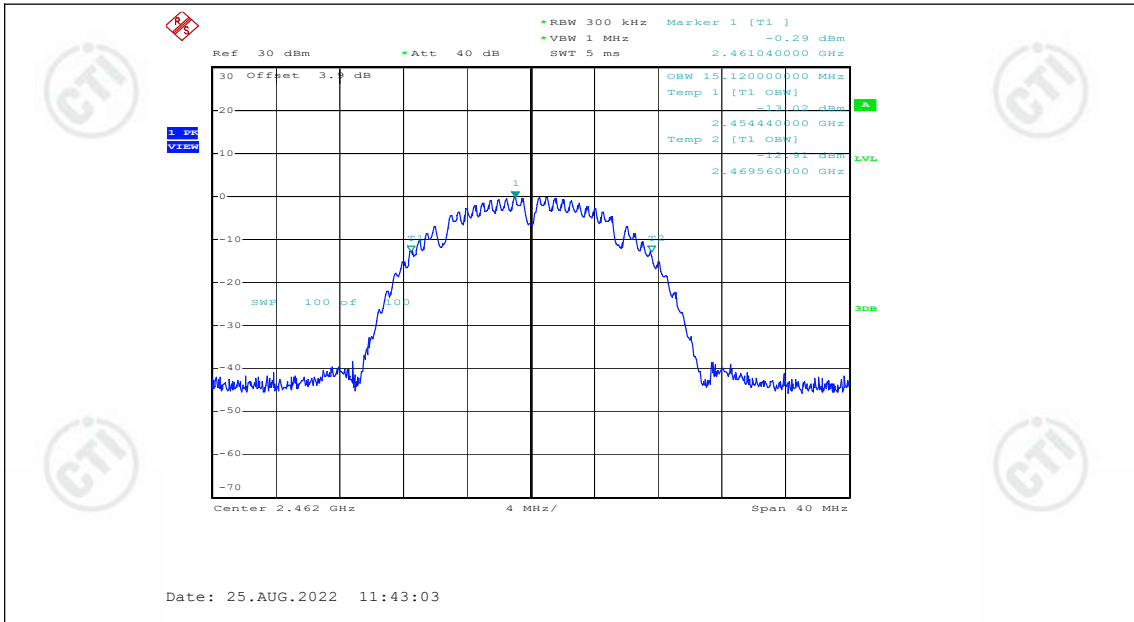
Test Graphs



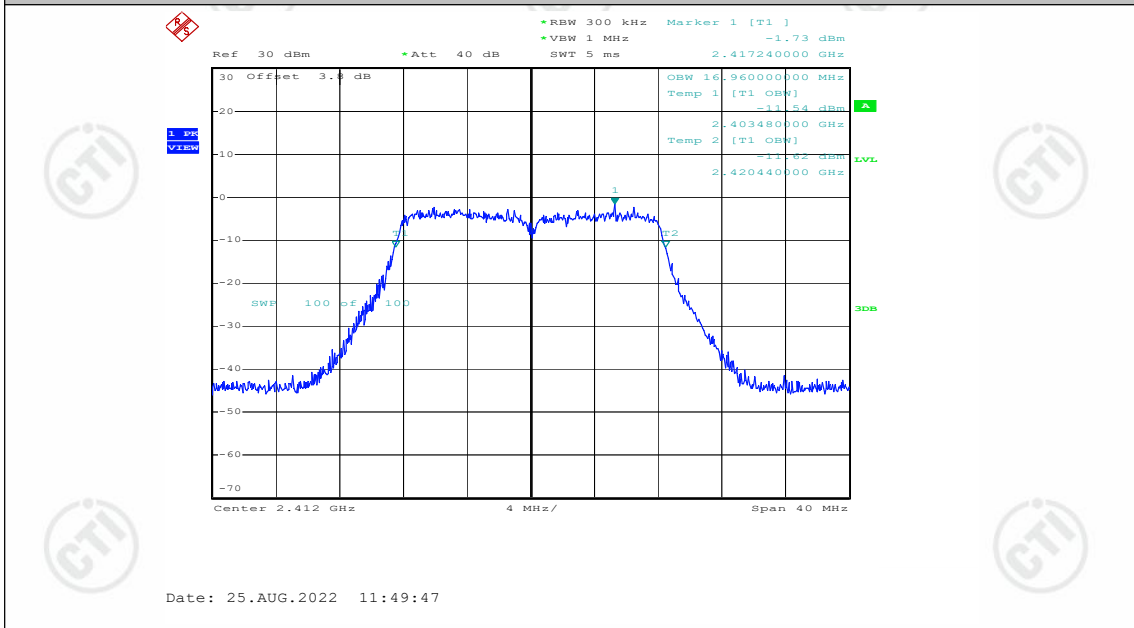
11B_Ant1_2412



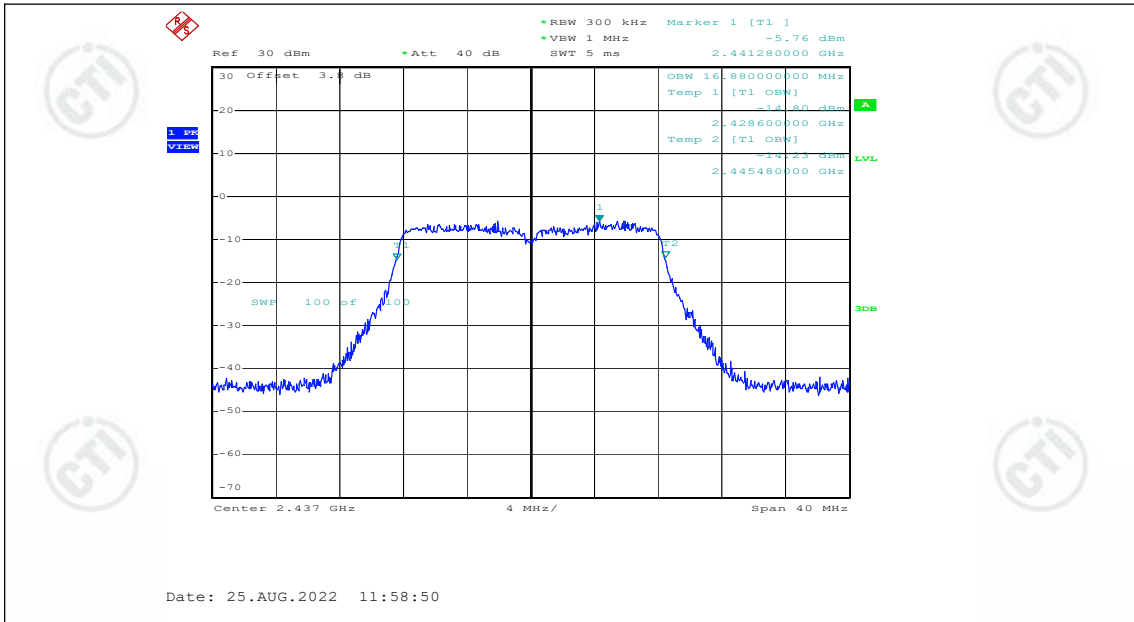
11B_Ant1_2437



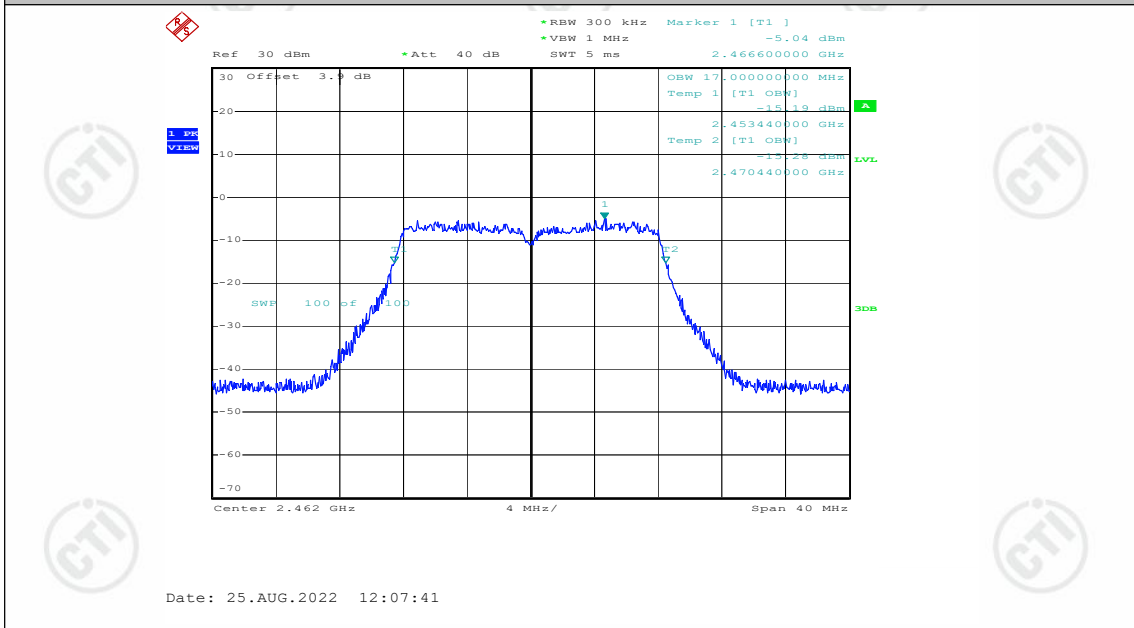
11B_Ant1_2462



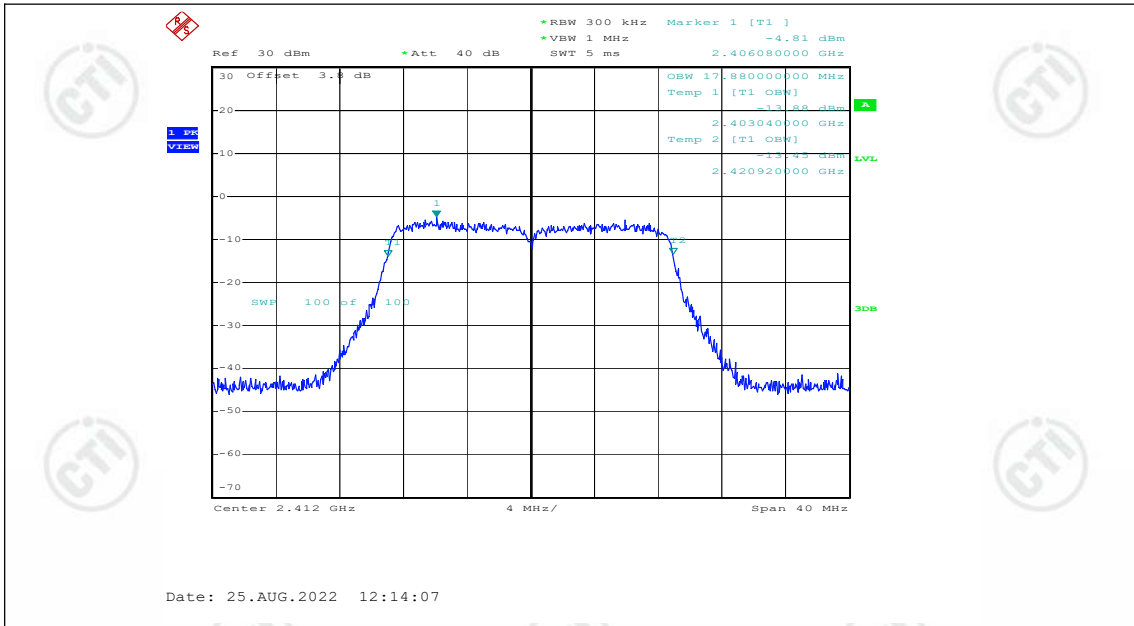
11G_Ant1_2412



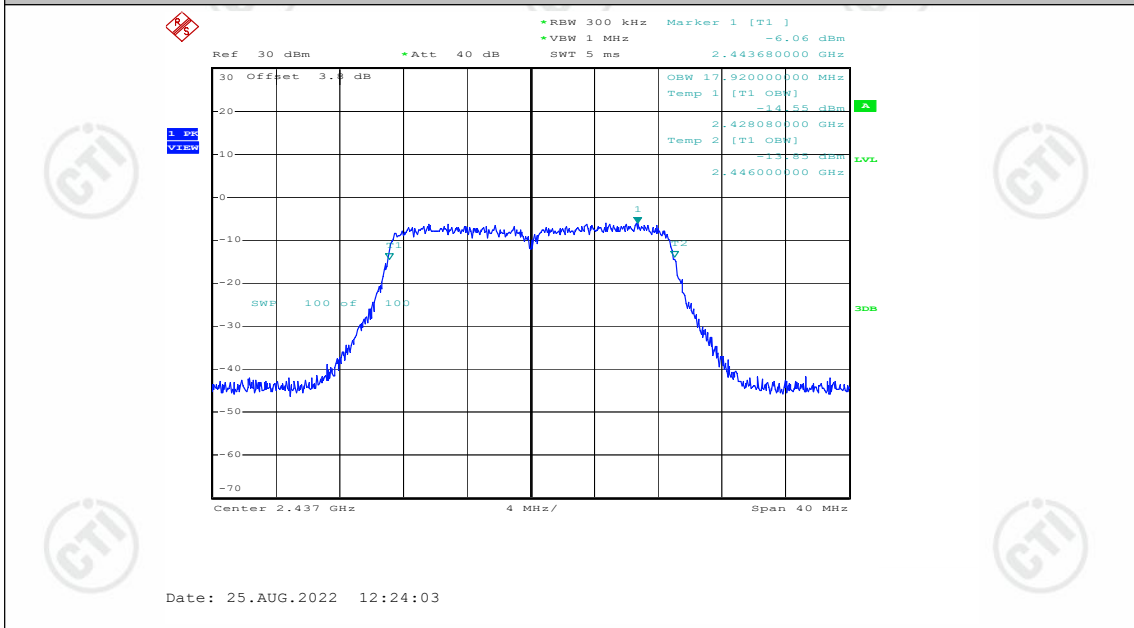
11G_Ant1_2437



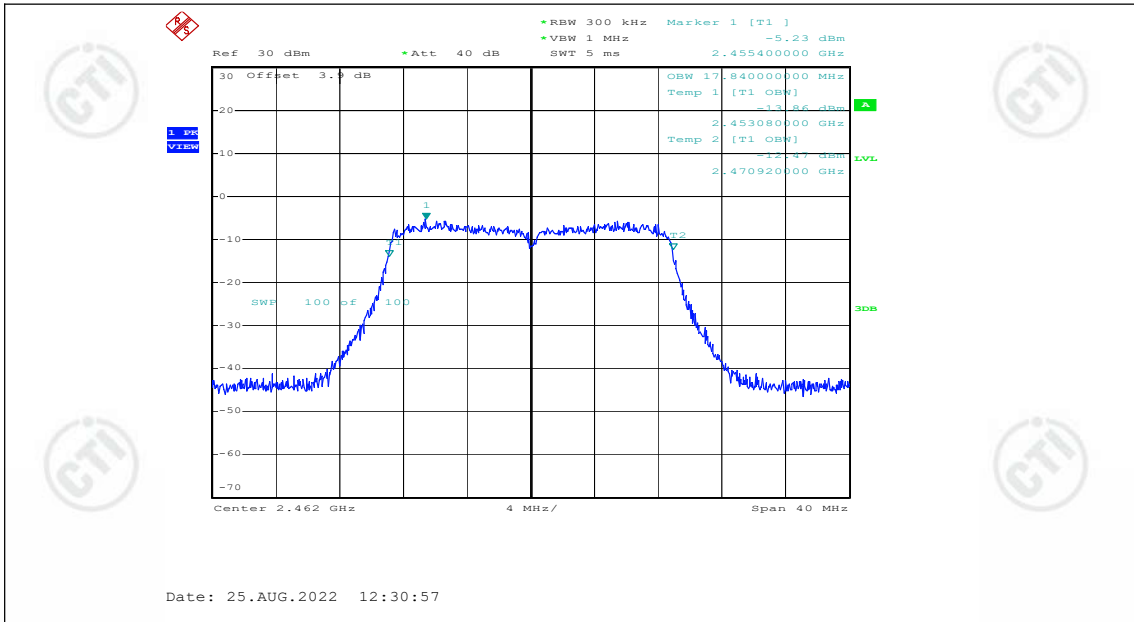
11G_Ant1_2462



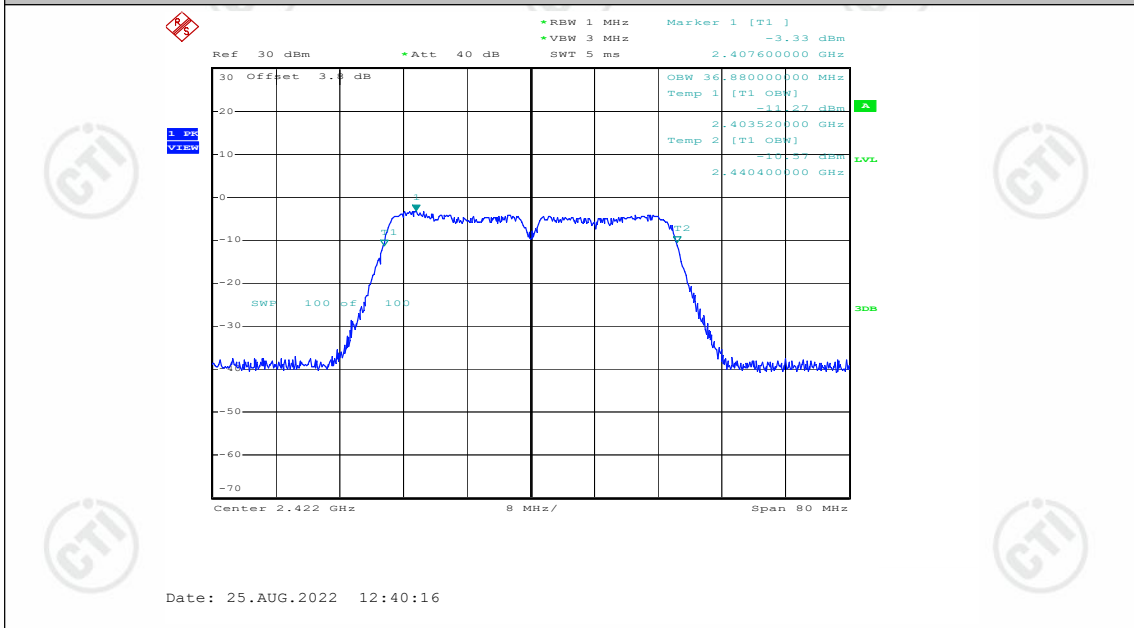
11N20SISO_Ant1_2412



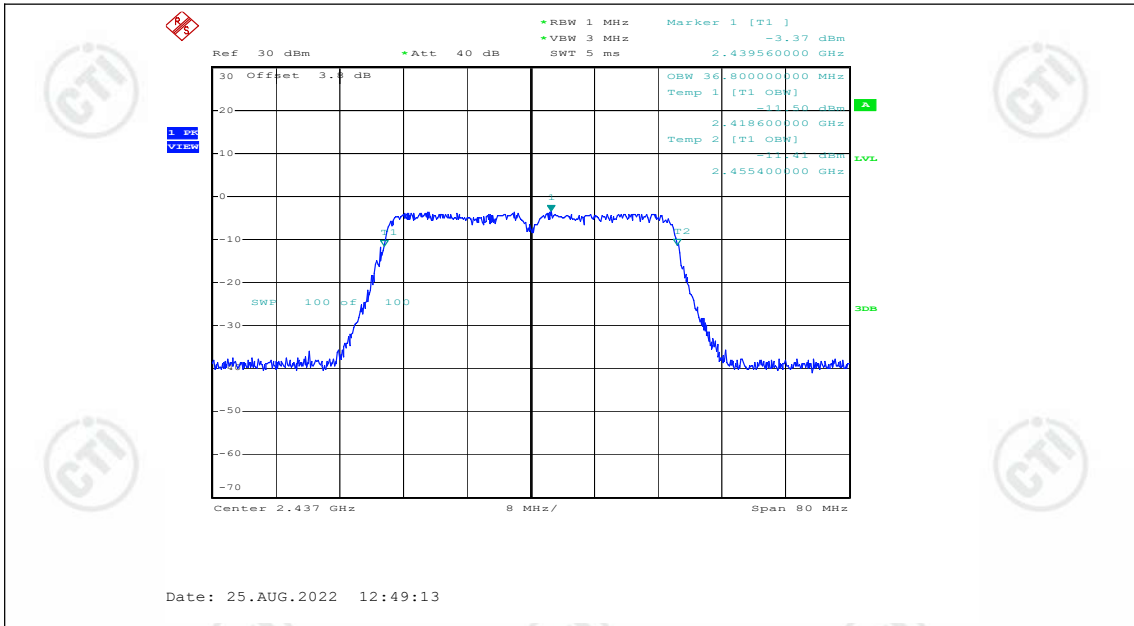
11N20SISO_Ant1_2437



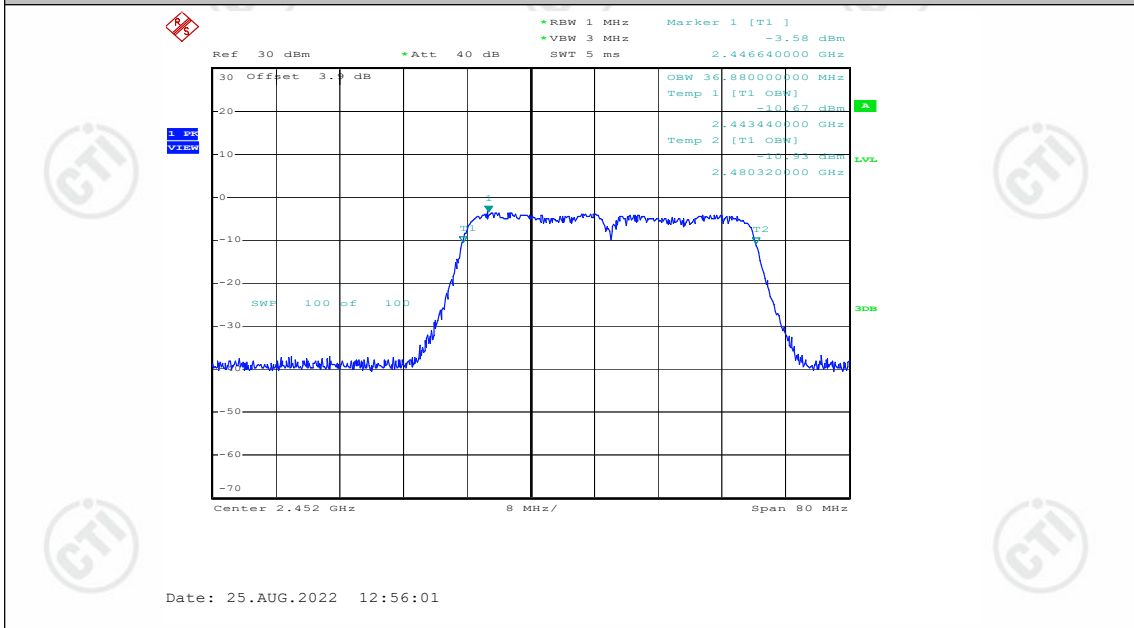
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

Appendix C: Maximum conducted output power

Test Result

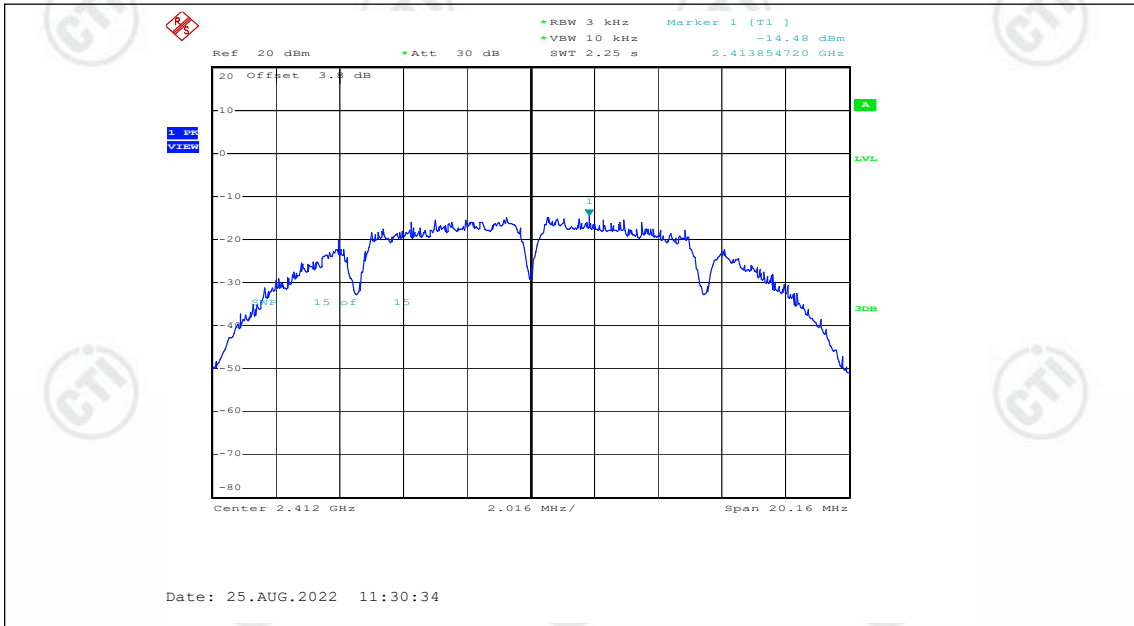
Test Mode	Antenna	Frequen cy[MHz]	Set Power	Peak Power[dBm]	Conducted Limit[dBm]	EIRP [dBm]	EIRP Limit[dBm]	Verdict
11B	Ant1	2412	---	11.65	≤30.00	16.05	≤36.00	PASS
		2437	---	11.27	≤30.00	15.67	≤36.00	PASS
		2462	---	11.80	≤30.00	16.20	≤36.00	PASS
11G	Ant1	2412	---	10.30	≤30.00	14.70	≤36.00	PASS
		2437	---	10.20	≤30.00	14.60	≤36.00	PASS
		2462	---	10.15	≤30.00	14.55	≤36.00	PASS
11N20SISO	Ant1	2412	---	10.49	≤30.00	14.89	≤36.00	PASS
		2437	---	10.19	≤30.00	14.59	≤36.00	PASS
		2462	---	10.04	≤30.00	14.44	≤36.00	PASS
11N40SISO	Ant1	2422	---	9.98	≤30.00	14.38	≤36.00	PASS
		2437	---	9.64	≤30.00	14.04	≤36.00	PASS
		2452	---	9.60	≤30.00	14.00	≤36.00	PASS

Appendix D: Maximum power spectral density

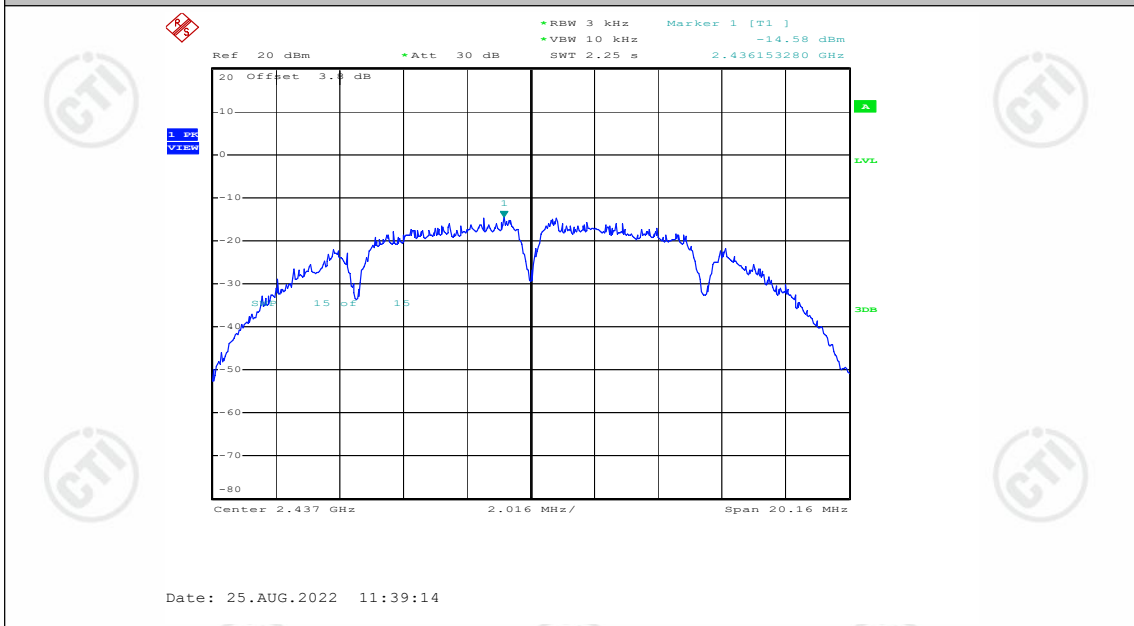
Test Result

Test Mode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-14.48	≤8.00	PASS
		2437	-14.58	≤8.00	PASS
		2462	-14.42	≤8.00	PASS
11G	Ant1	2412	-22.49	≤8.00	PASS
		2437	-22.79	≤8.00	PASS
		2462	-22.65	≤8.00	PASS
11N20SISO	Ant1	2412	-22.43	≤8.00	PASS
		2437	-22.7	≤8.00	PASS
		2462	-22.21	≤8.00	PASS
11N40SISO	Ant1	2422	-25.48	≤8.00	PASS
		2437	-25.35	≤8.00	PASS
		2452	-24.96	≤8.00	PASS

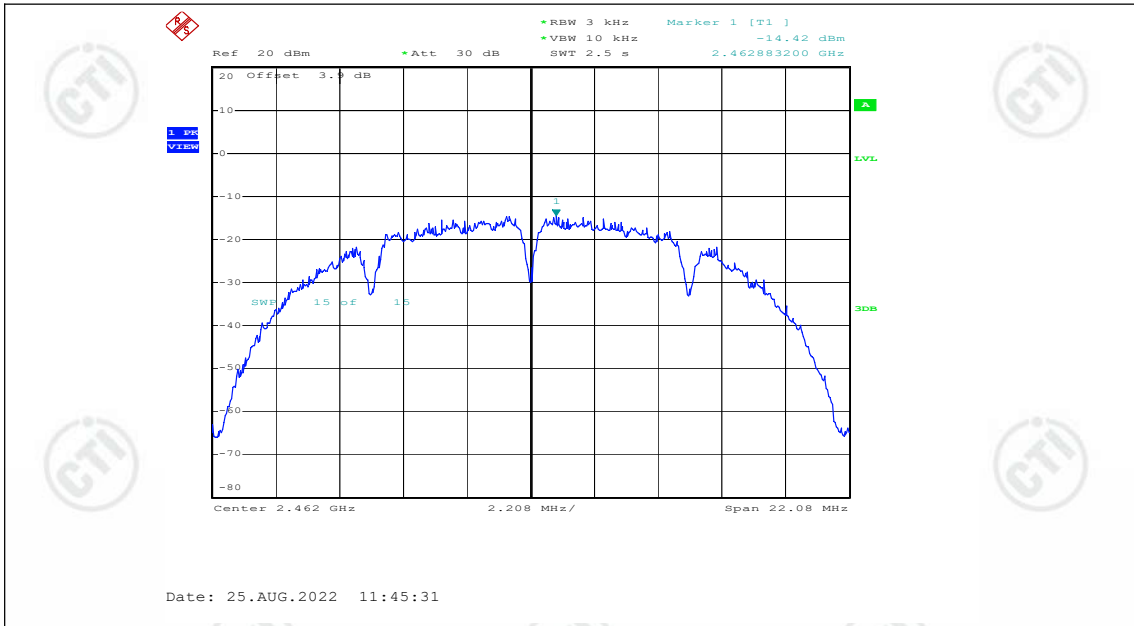
Test Graphs



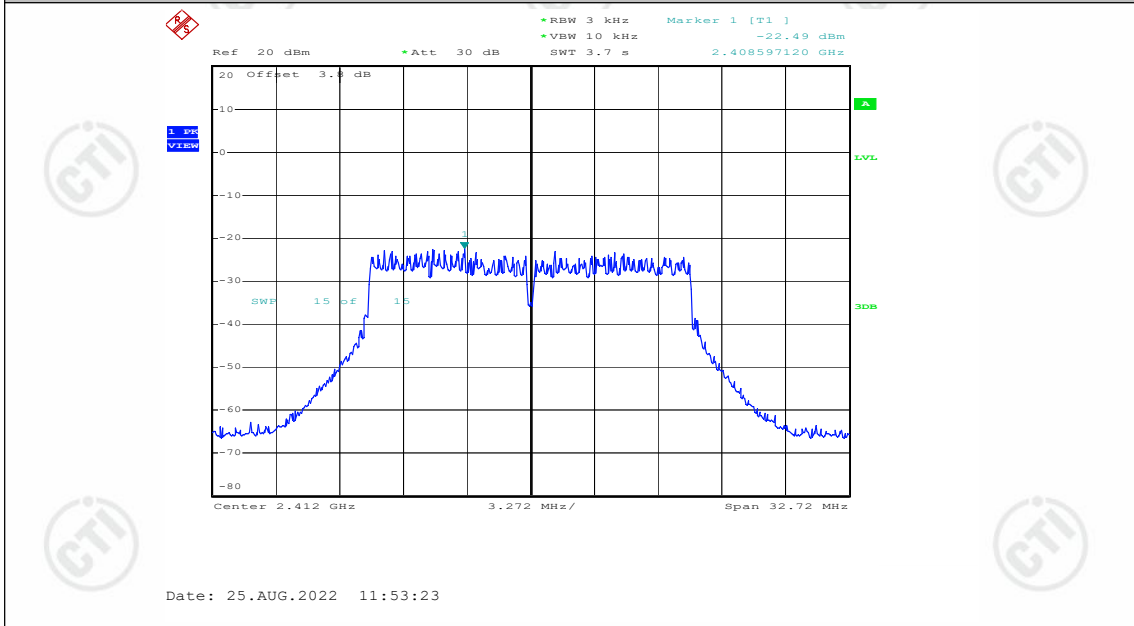
11B_Ant1_2412



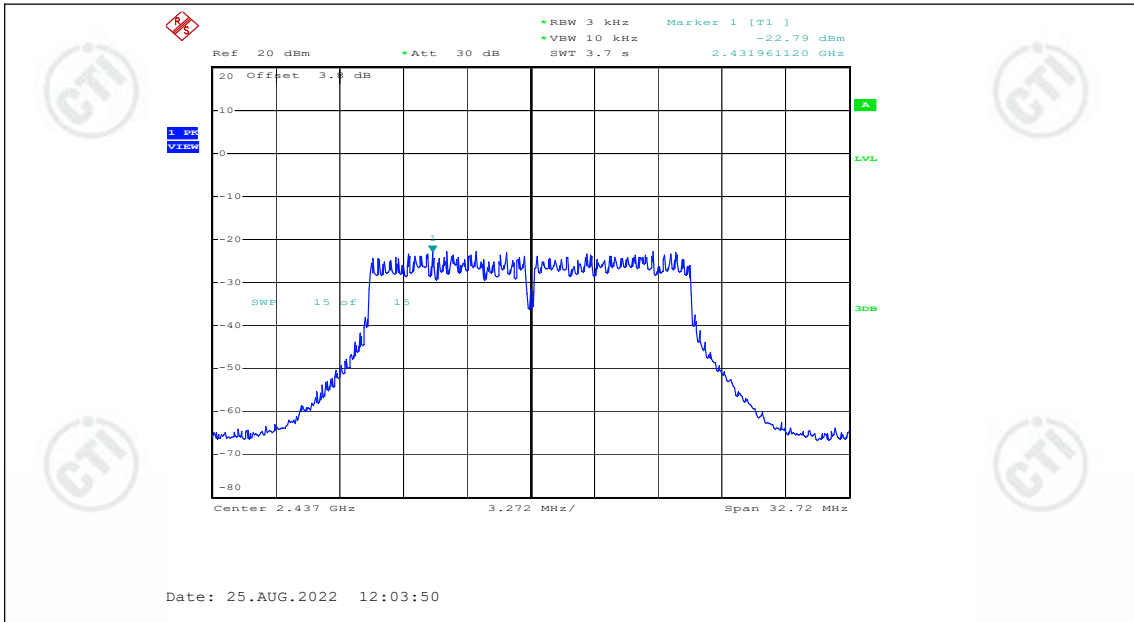
11B_Ant1_2437



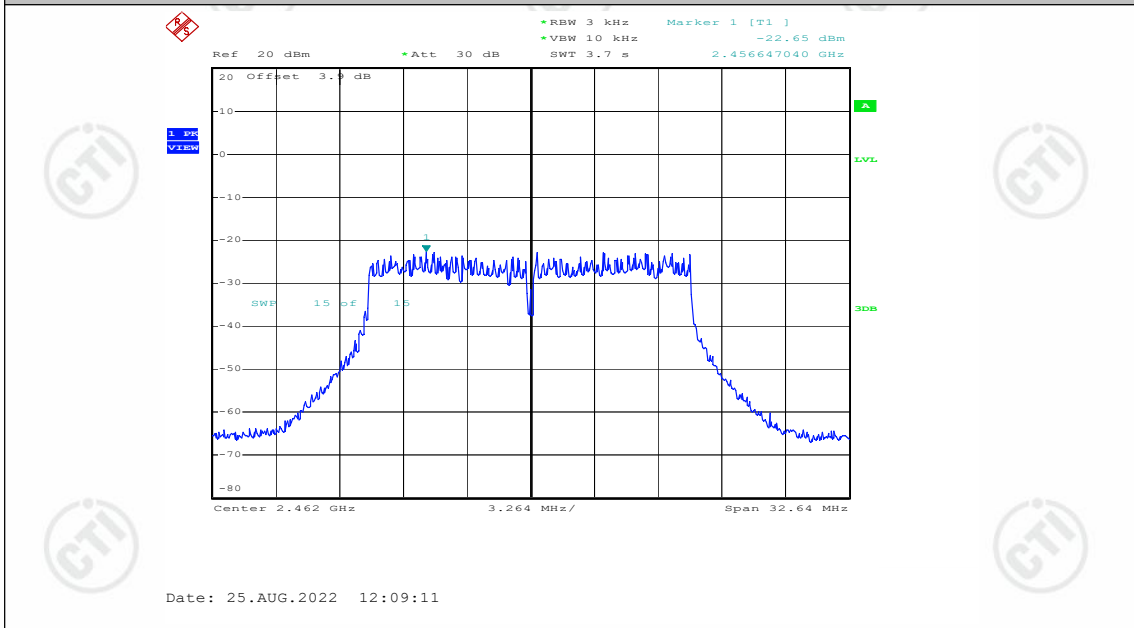
11B_Ant1_2462



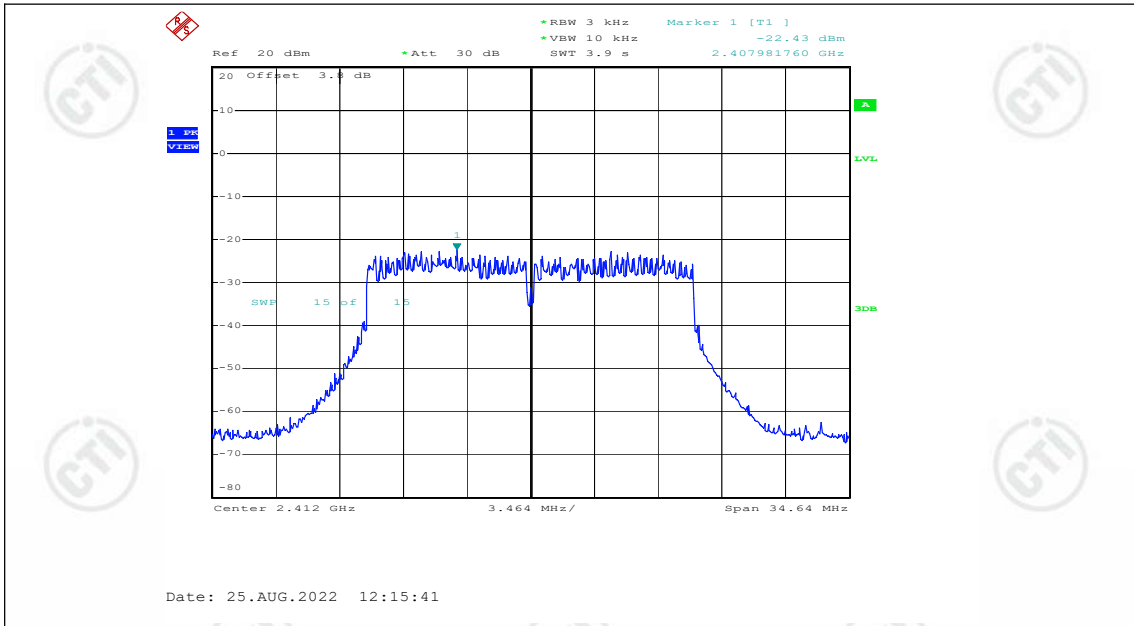
11G_Ant1_2412



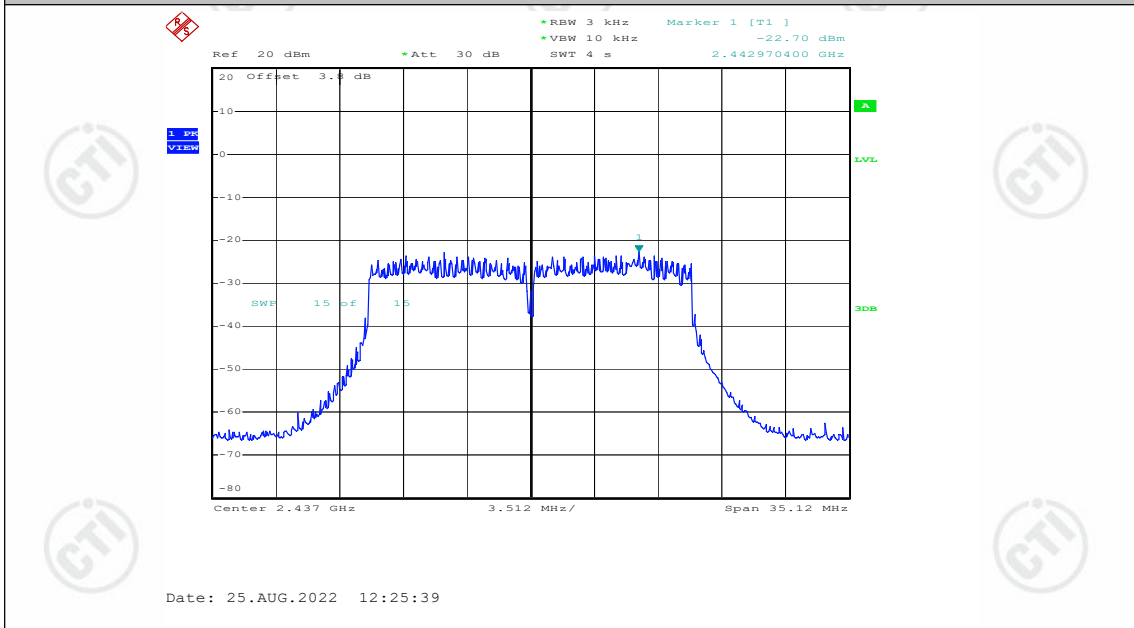
11G_Ant1_2437



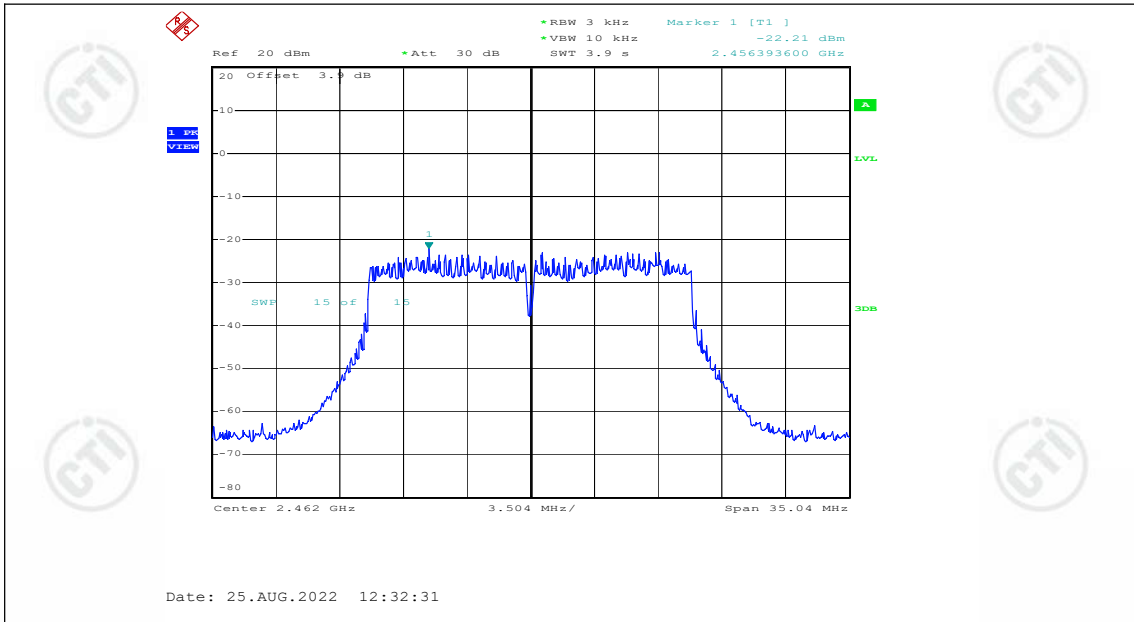
11G_Ant1_2462



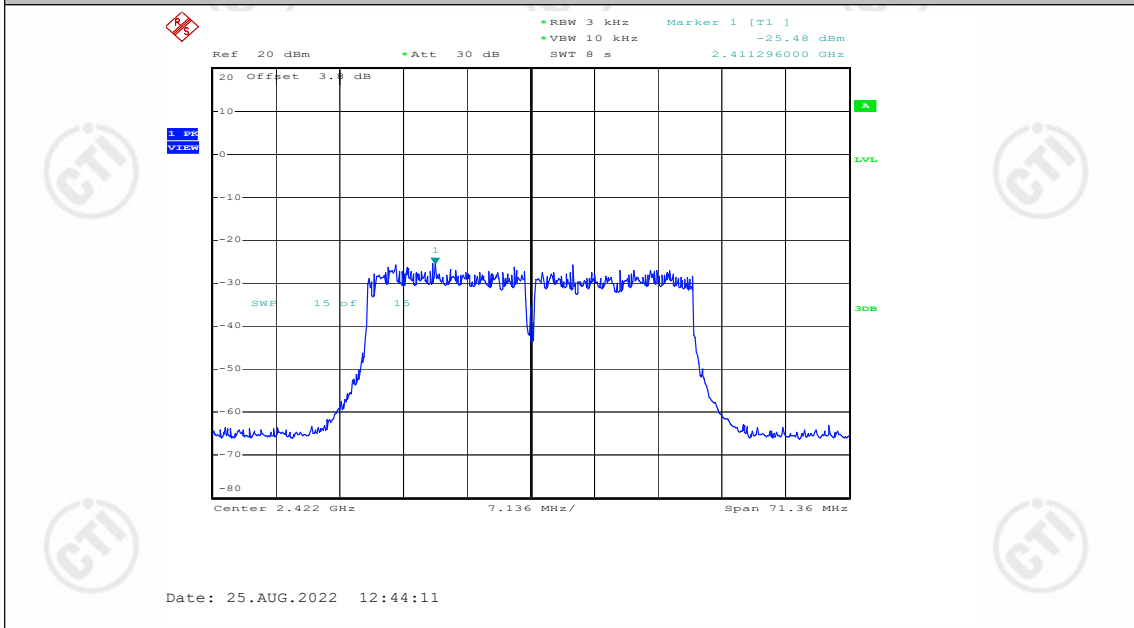
11N20SISO_Ant1_2412



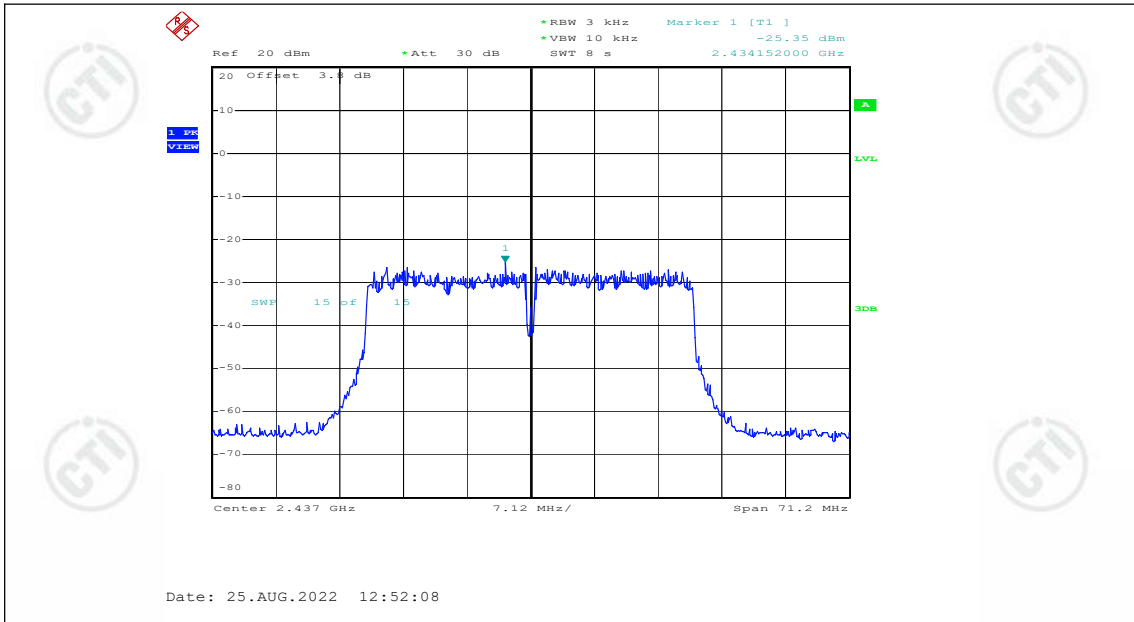
11N20SISO_Ant1_2437



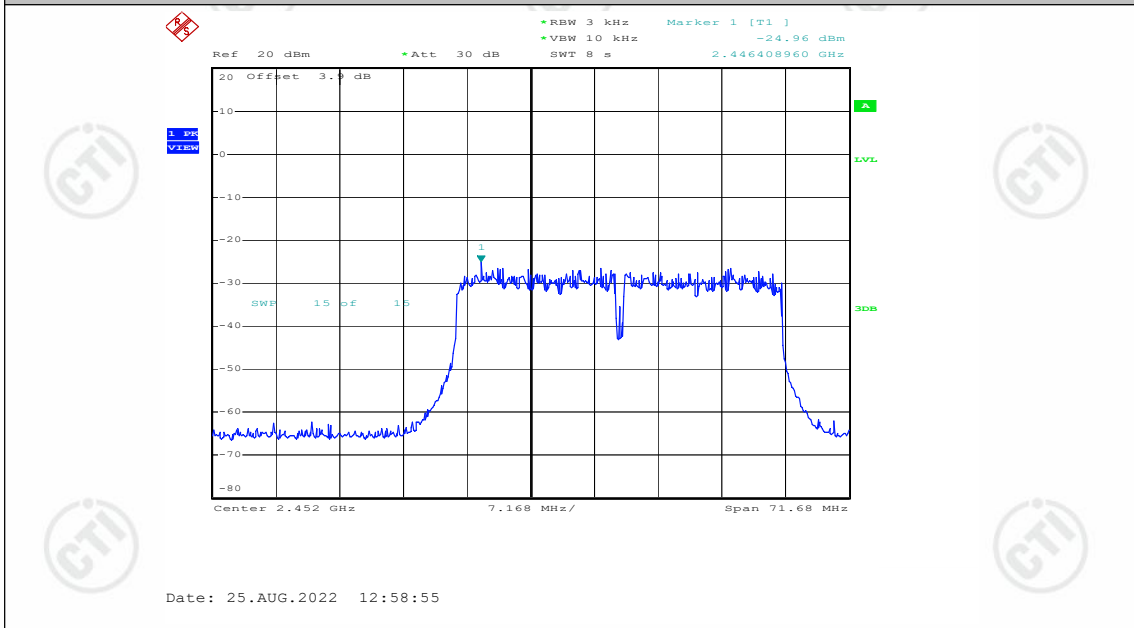
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

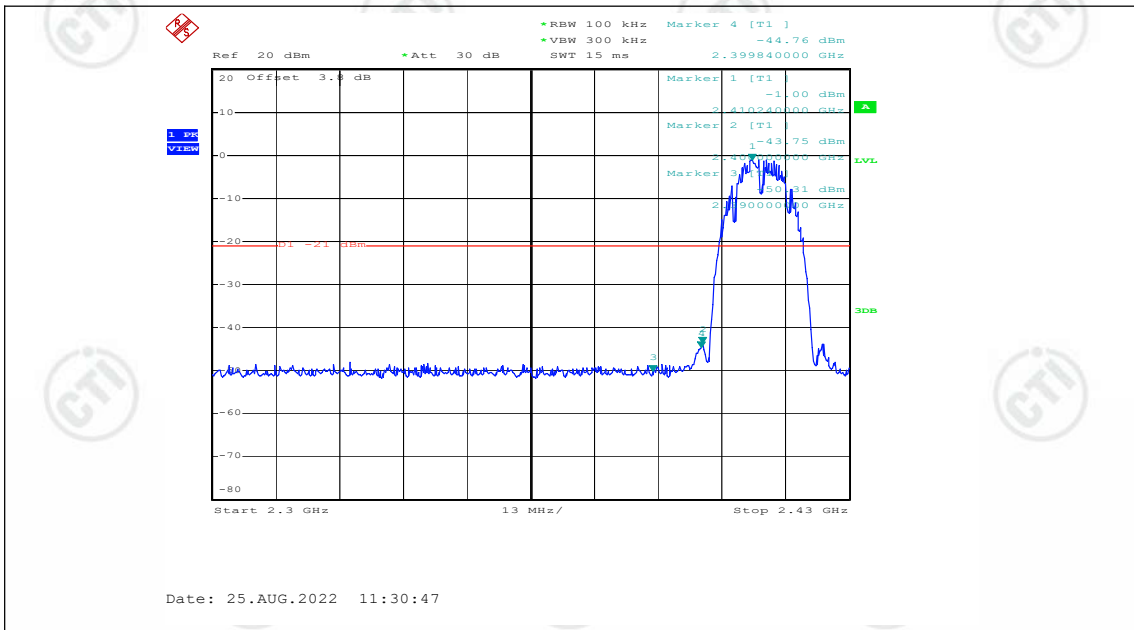


11N40SISO_Ant1_2452

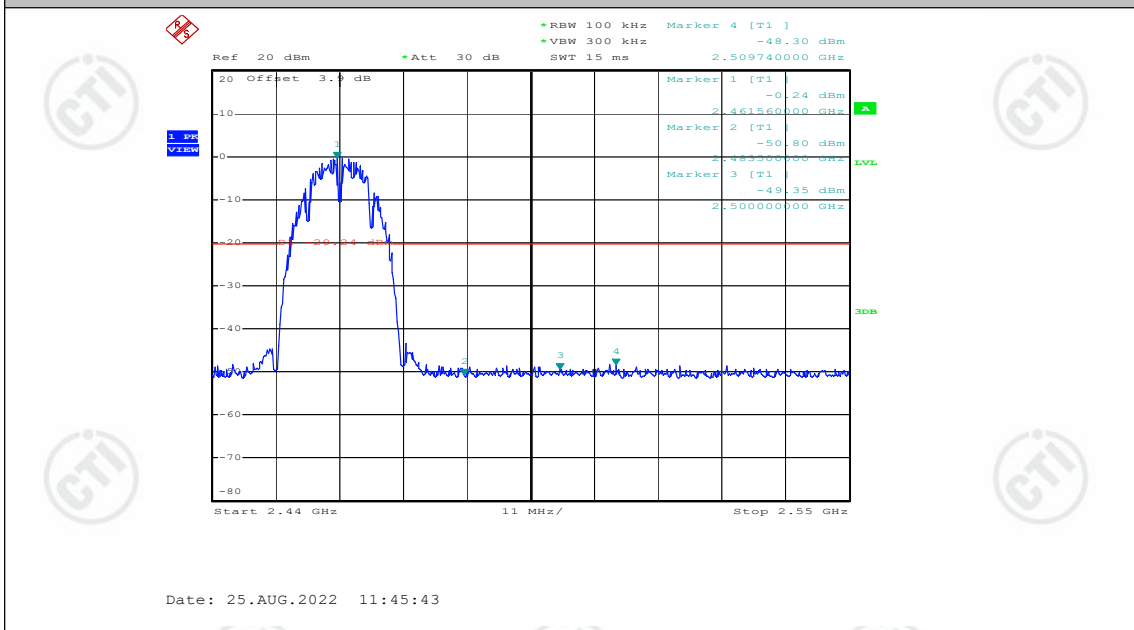
Appendix E: Band edge measurements**Test Result**

Test Mode	Antenna	ChName	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	-1.00	-44.76	≤-21	PASS
		High	2462	-0.24	-48.3	≤-20.24	PASS
11G	Ant1	Low	2412	-8.21	-45.76	≤-28.21	PASS
		High	2462	-9.10	-47.6	≤-29.1	PASS
11N20SIS O	Ant1	Low	2412	-8.26	-45.82	≤-28.26	PASS
		High	2462	-8.69	-47.73	≤-28.69	PASS
11N40SIS O	Ant1	Low	2422	-11.29	-44.56	≤-31.29	PASS
		High	2452	-12.29	-45.46	≤-32.29	PASS

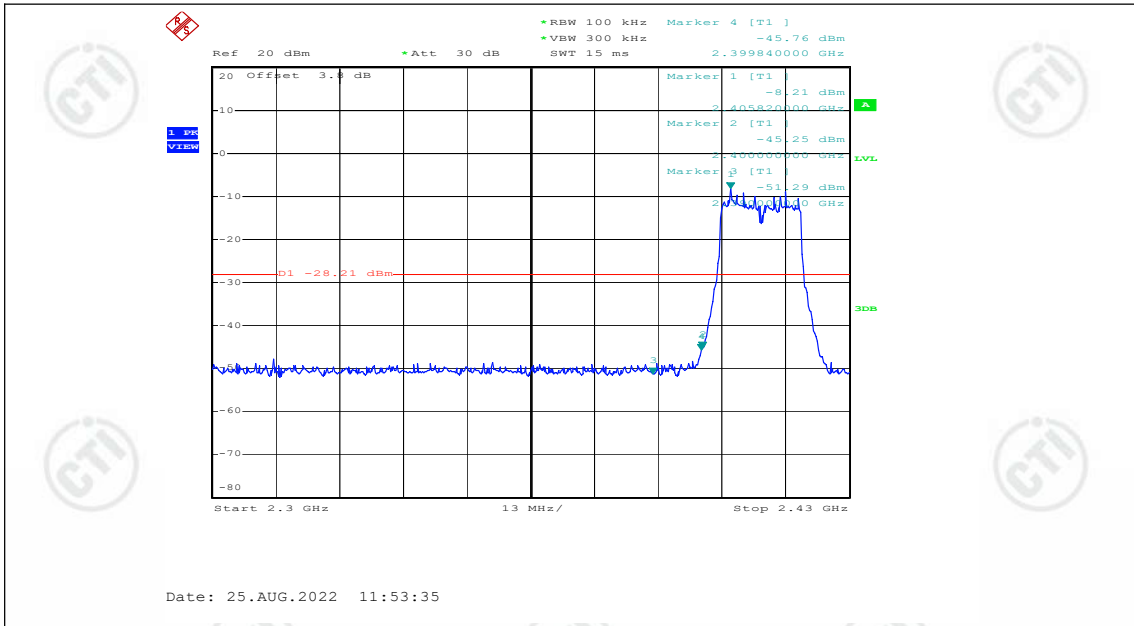
Test Graphs



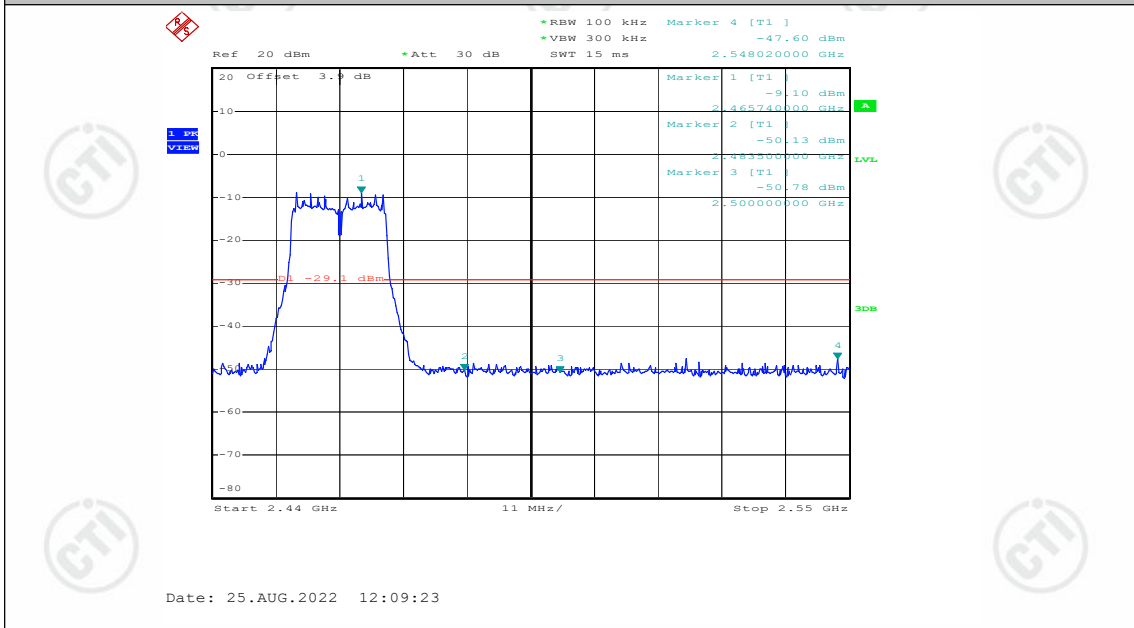
11B_Ant1_Low_2412



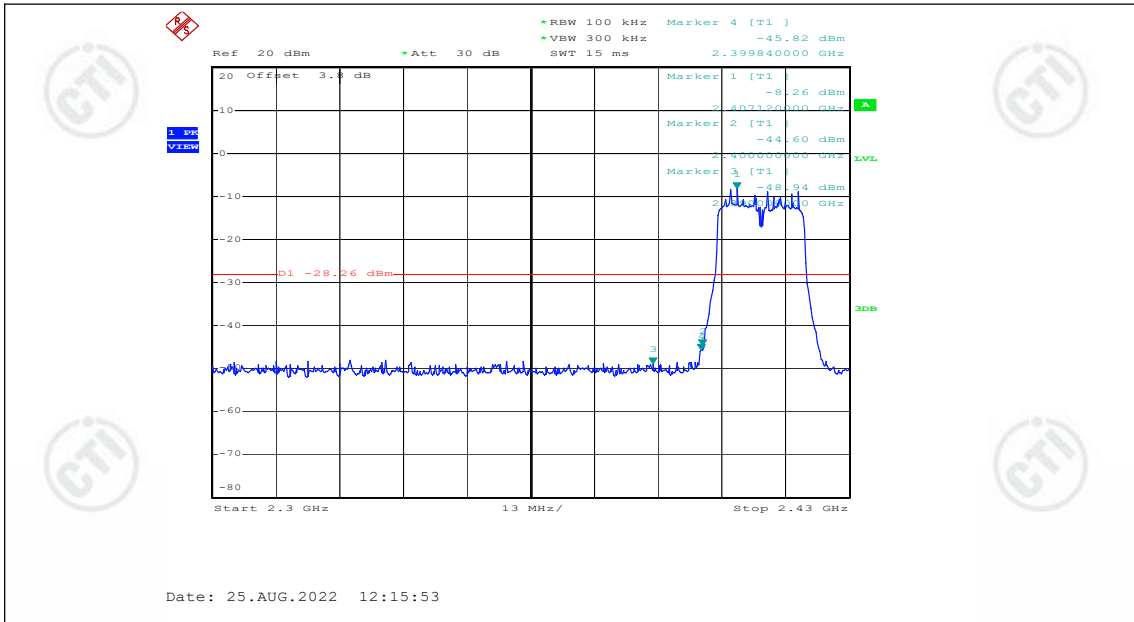
11B_Ant1_High_2462



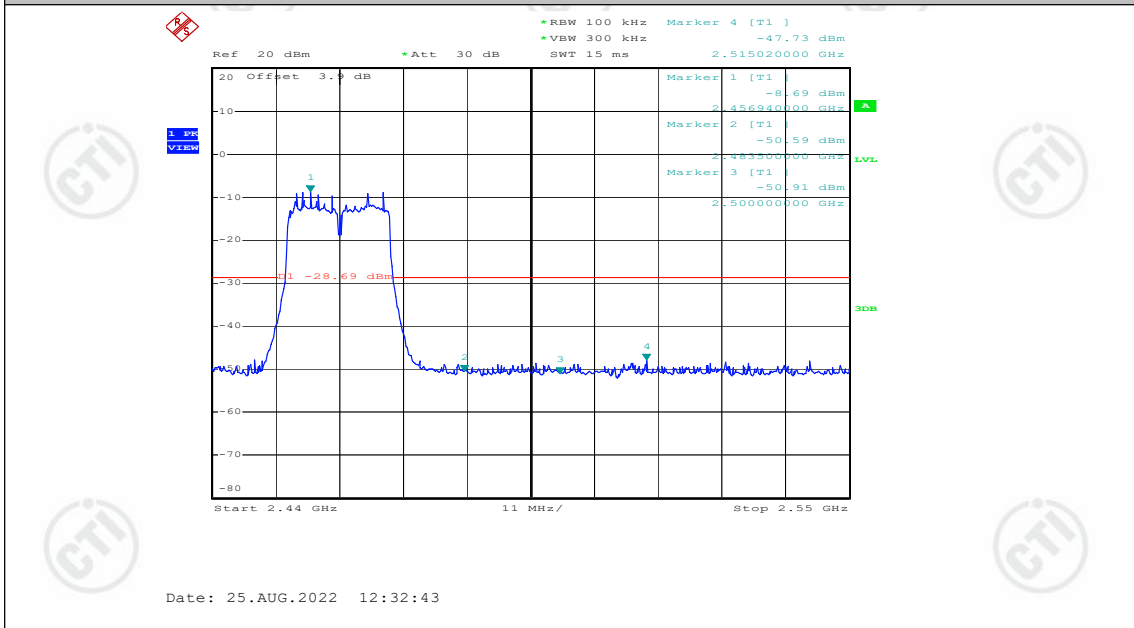
11G_Ant1_Low_2412



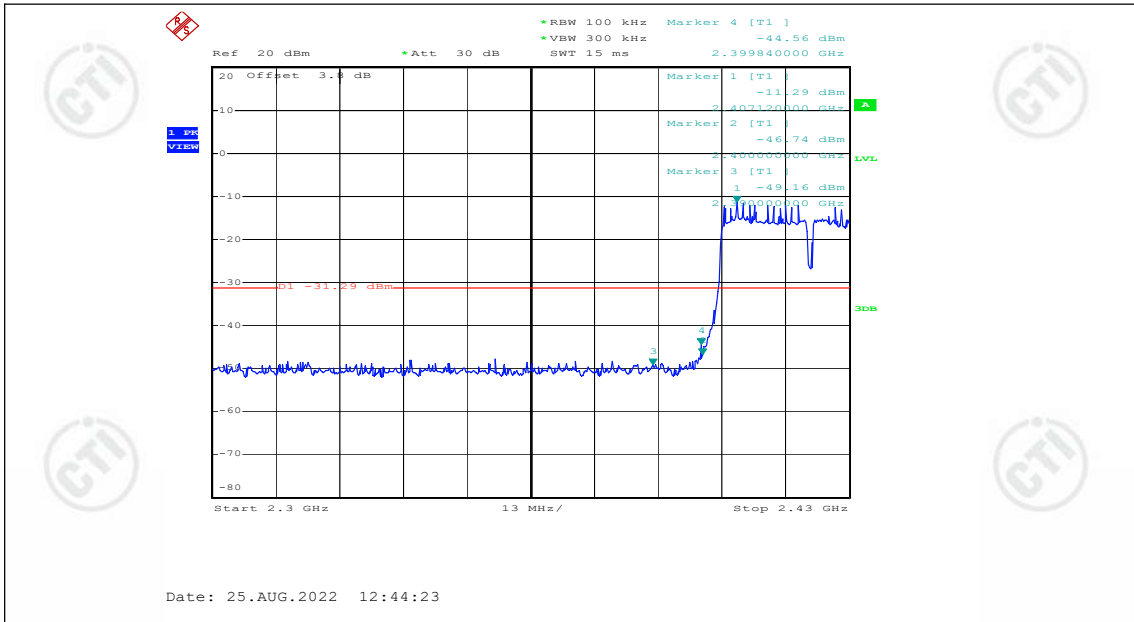
11G_Ant1_High_2462



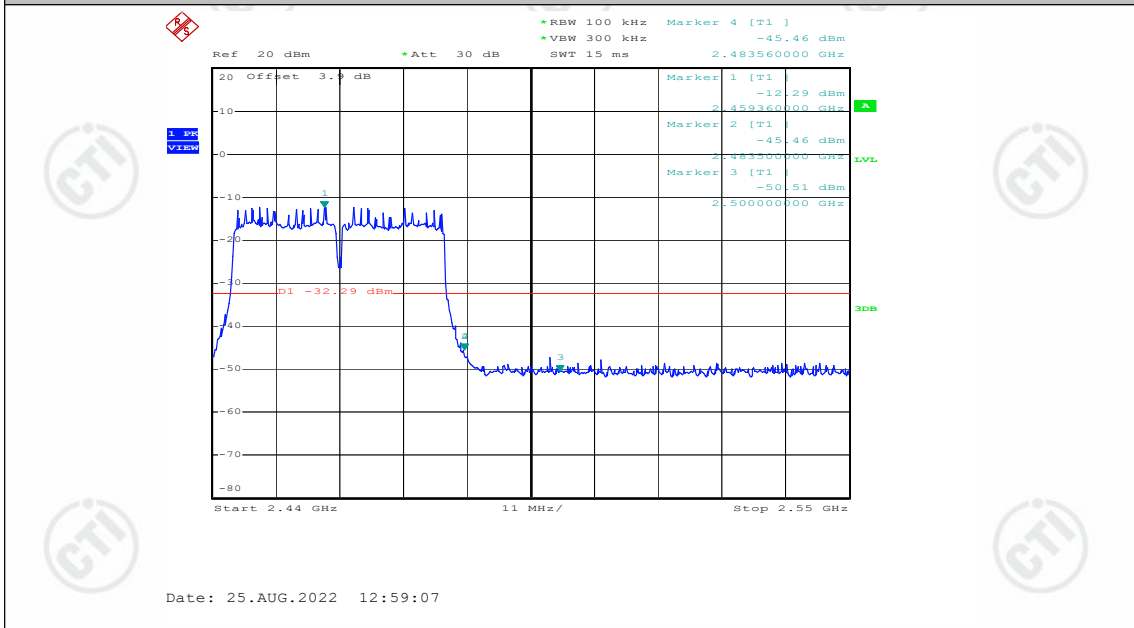
11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

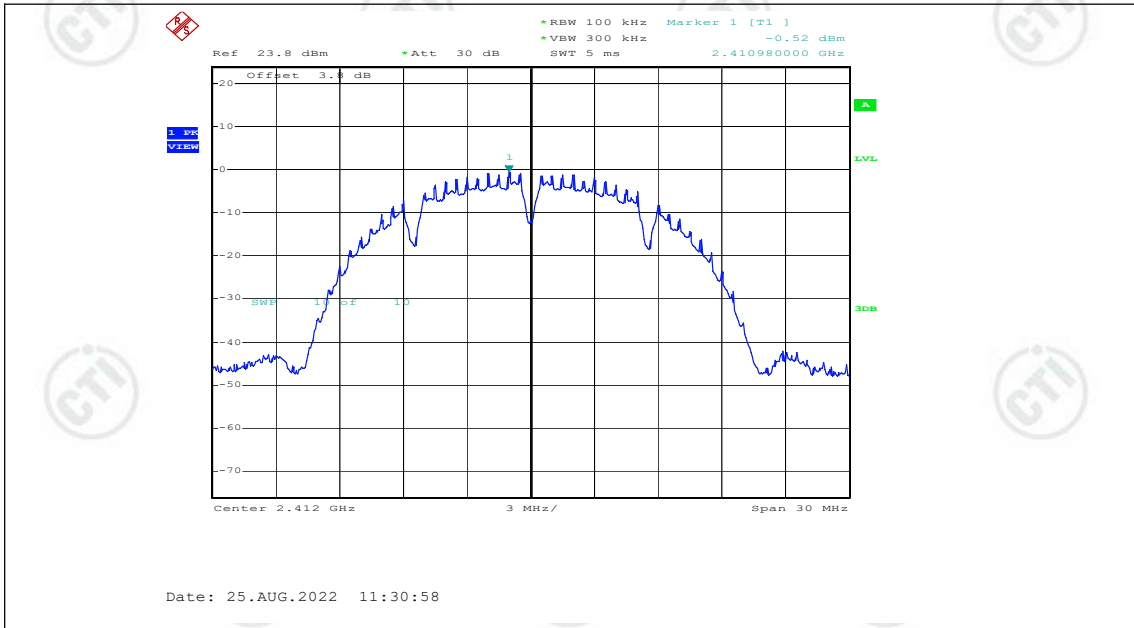
Appendix F: Conducted Spurious Emission

Test Result

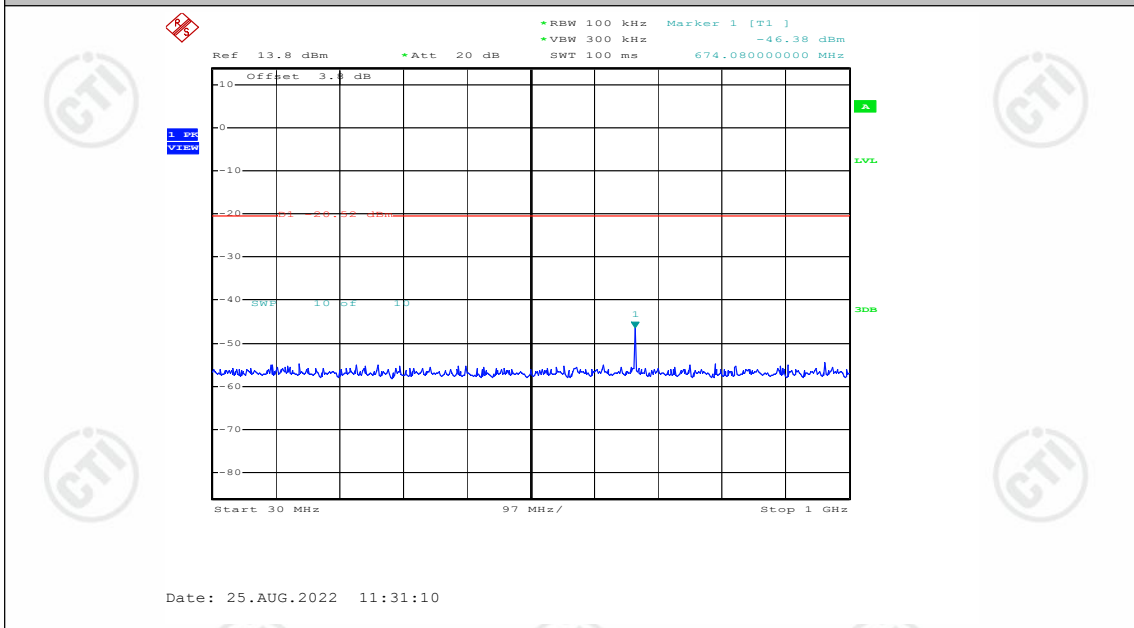
Test Mode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	-0.52	-0.52	---	PASS
			30~1000	-0.52	-46.38	≤-20.52	PASS
			1000~26500	-0.52	-47.12	≤-20.52	PASS
		2437	Reference	-0.81	-0.81	---	PASS
			30~1000	-0.81	-46.93	≤-20.81	PASS
			1000~26500	-0.81	-46.25	≤-20.81	PASS
		2462	Reference	-0.62	-0.62	---	PASS
			30~1000	-0.62	-46.03	≤-20.62	PASS
			1000~26500	-0.62	-46.93	≤-20.62	PASS
11G	Ant1	2412	Reference	-8.26	-8.26	---	PASS
			30~1000	-8.26	-54.27	≤-28.26	PASS
			1000~26500	-8.26	-46.54	≤-28.26	PASS
		2437	Reference	-8.42	-8.42	---	PASS
			30~1000	-8.42	-54.06	≤-28.42	PASS
			1000~26500	-8.42	-46.48	≤-28.42	PASS
		2462	Reference	-8.39	-8.39	---	PASS
			30~1000	-8.39	-54.48	≤-28.39	PASS
			1000~26500	-8.39	-45.99	≤-28.39	PASS
11N20SI SO	Ant1	2412	Reference	-7.88	-7.88	---	PASS
			30~1000	-7.88	-53.94	≤-27.88	PASS
			1000~26500	-7.88	-46.79	≤-27.88	PASS
		2437	Reference	-8.48	-8.48	---	PASS
			30~1000	-8.48	-54.35	≤-28.48	PASS
			1000~26500	-8.48	-46.97	≤-28.48	PASS
		2462	Reference	-8.41	-8.41	---	PASS
			30~1000	-8.41	-54.43	≤-28.41	PASS
			1000~26500	-8.41	-46.18	≤-28.41	PASS
11N40SI SO	Ant1	2422	Reference	-11.34	-11.34	---	PASS
			30~1000	-11.34	-54.52	≤-31.34	PASS
			1000~26500	-11.34	-46.76	≤-31.34	PASS
		2437	Reference	-11.94	-11.94	---	PASS
			30~1000	-11.94	-54.41	≤-31.94	PASS
			1000~26500	-11.94	-46.64	≤-31.94	PASS
		2452	Reference	-11.96	-11.96	---	PASS
			30~1000	-11.96	-54.36	≤-31.96	PASS

			1000~26500	-11.96	-45.81	≤-31.96	PASS
--	--	--	------------	--------	--------	---------	------

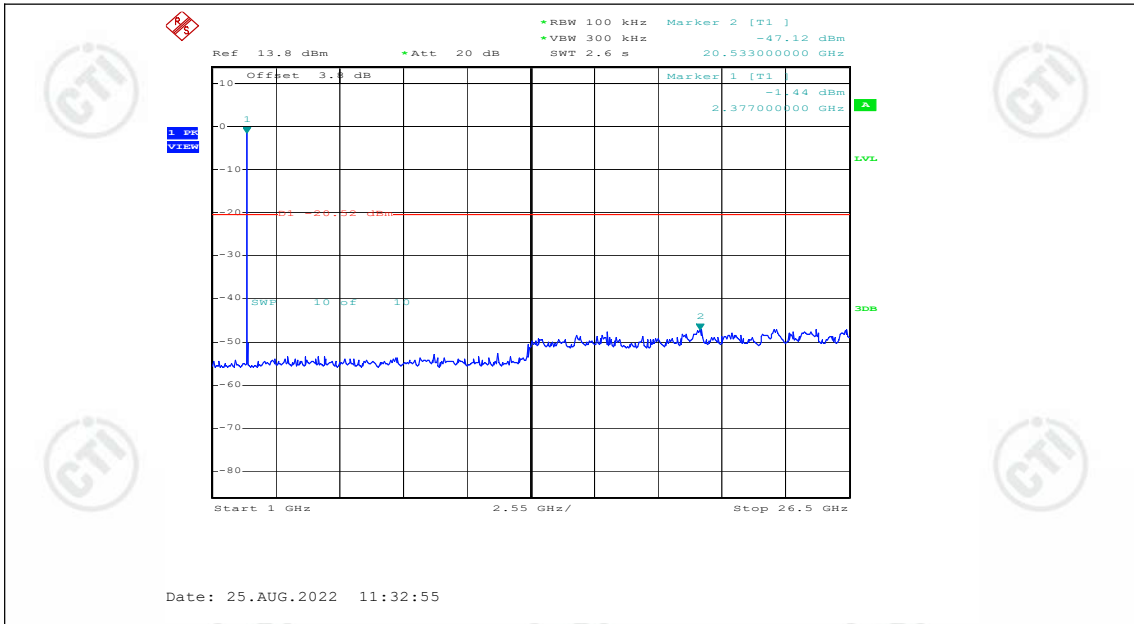
Test Graphs



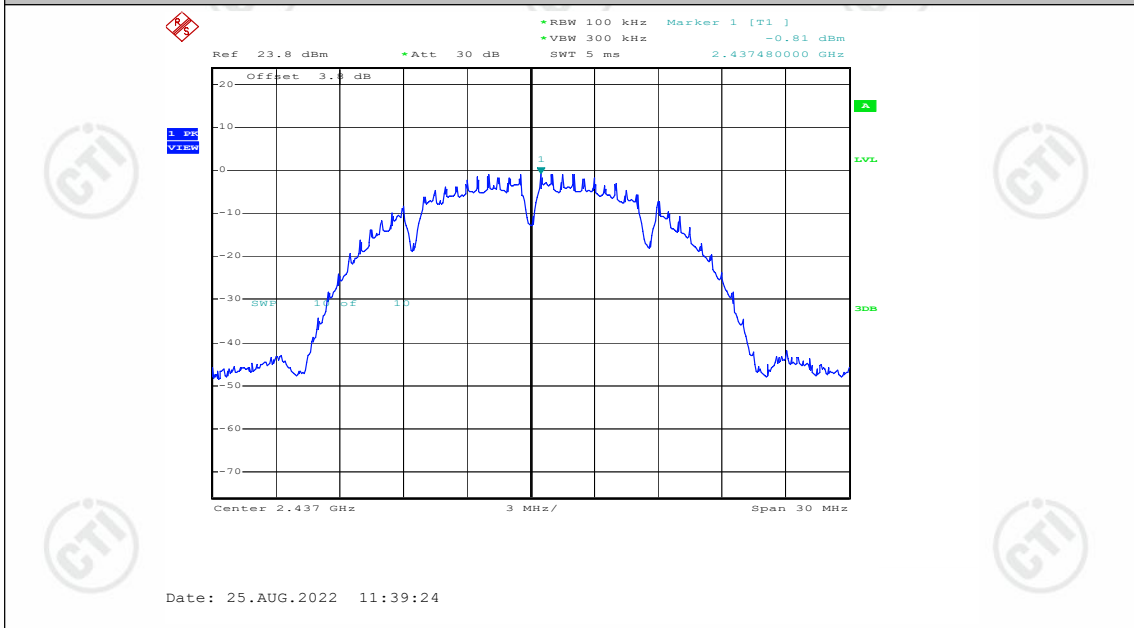
11B_Ant1_2412_0~Reference



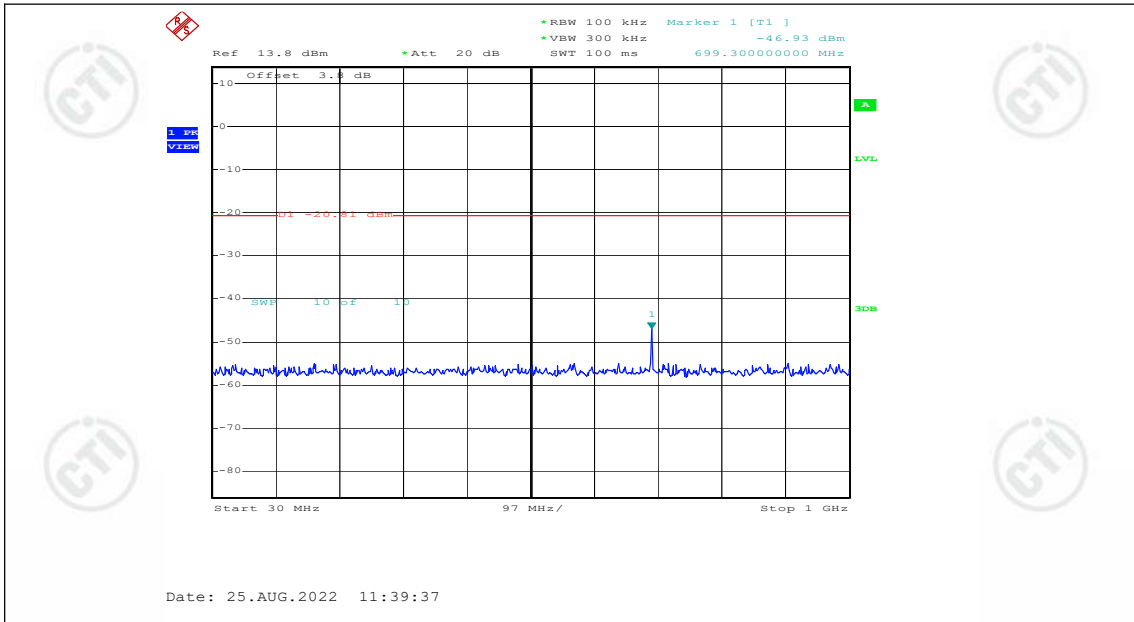
11B_Ant1_2412_30~1000



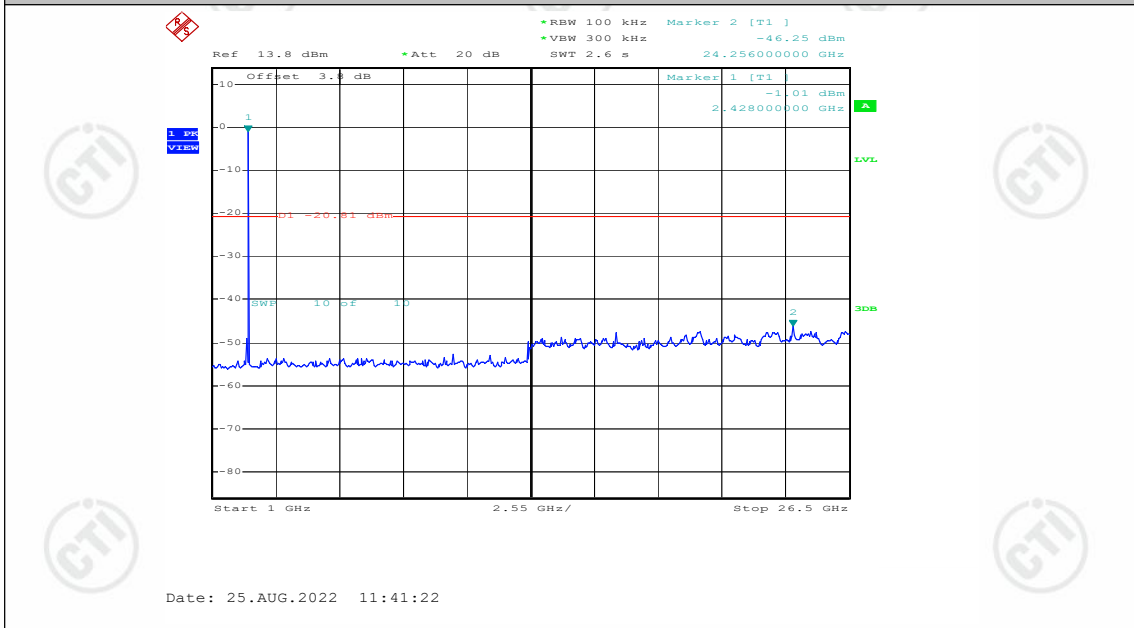
11B_Ant1_2412_1000~26500



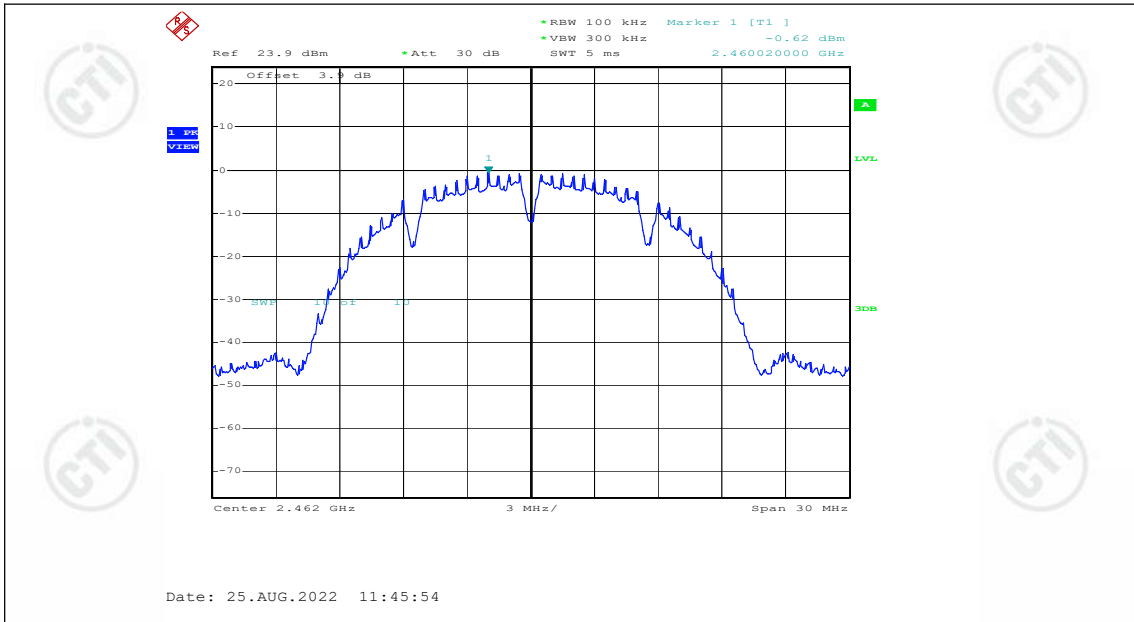
11B_Ant1_2437_0~Reference



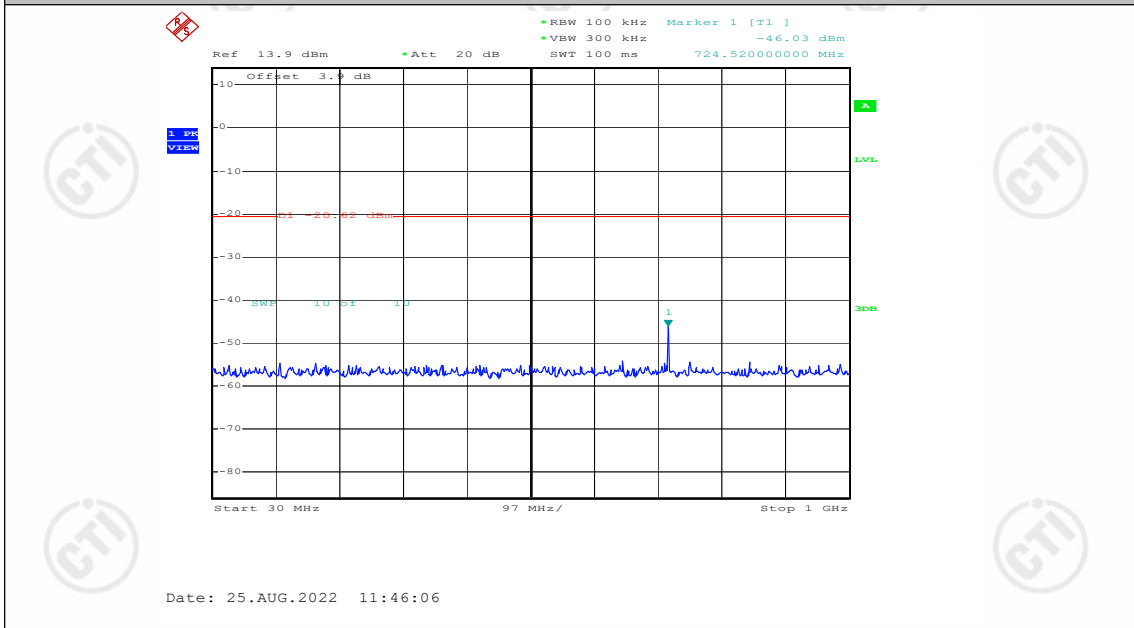
11B_Ant1_2437_30~1000



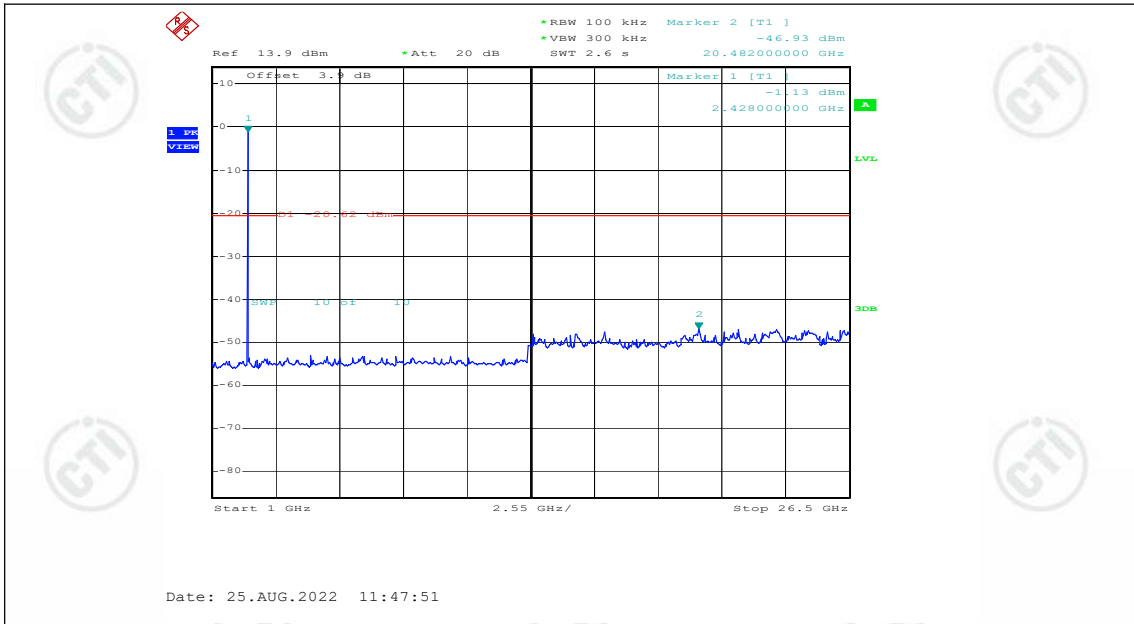
11B_Ant1_2437_1000~26500



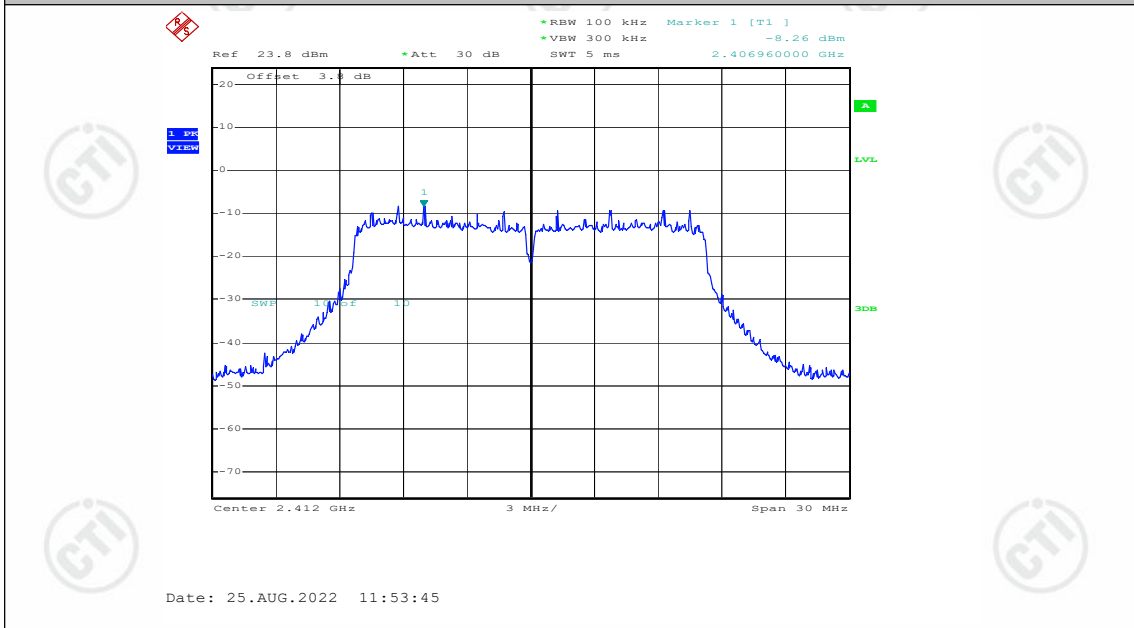
11B_Ant1_2462_0~Reference



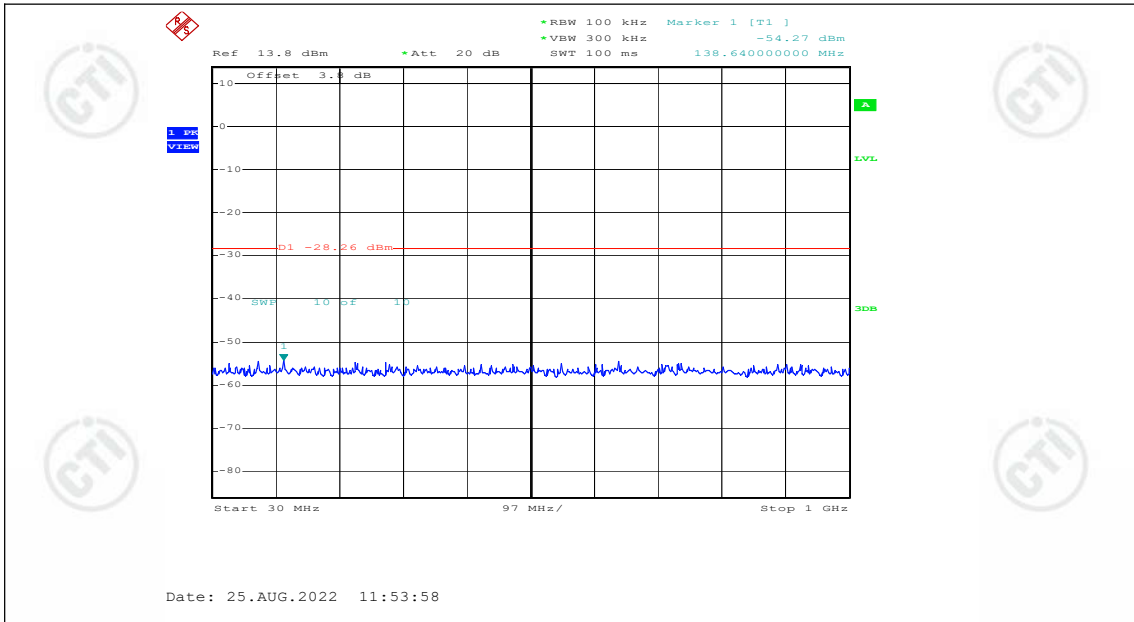
11B_Ant1_2462_30~1000



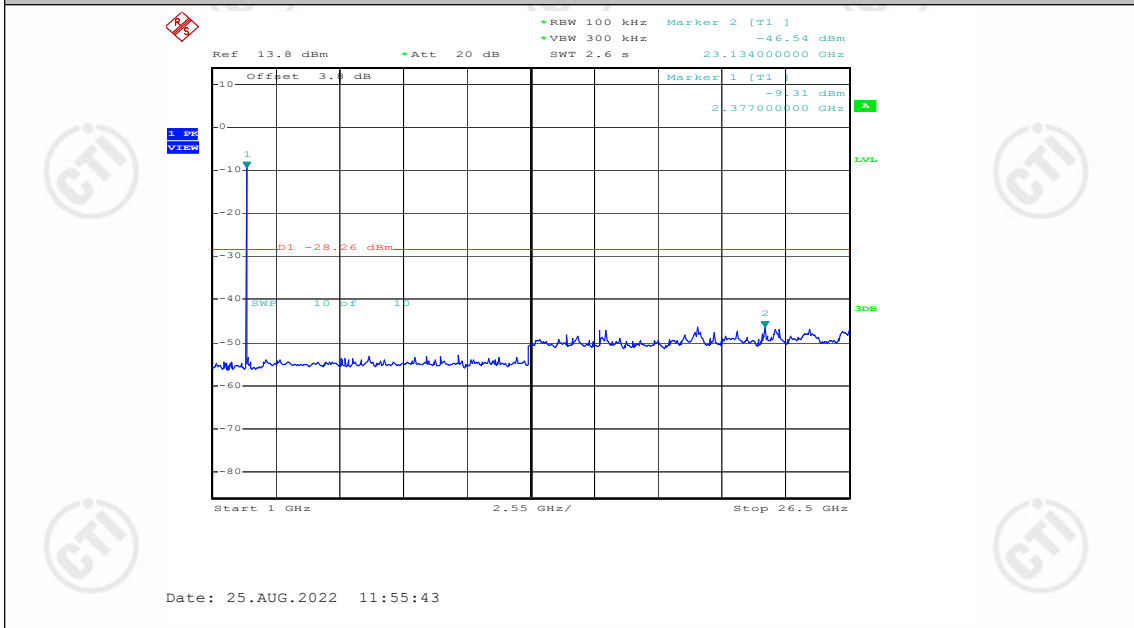
11B_Ant1_2462_1000~26500



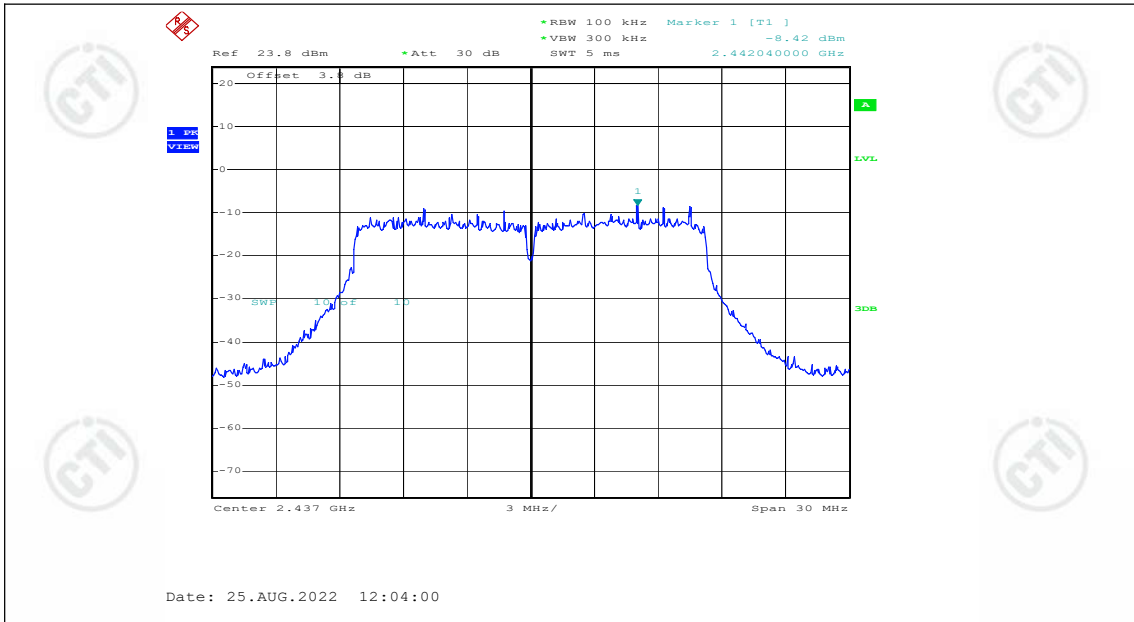
11G_Ant1_2412_0~Reference



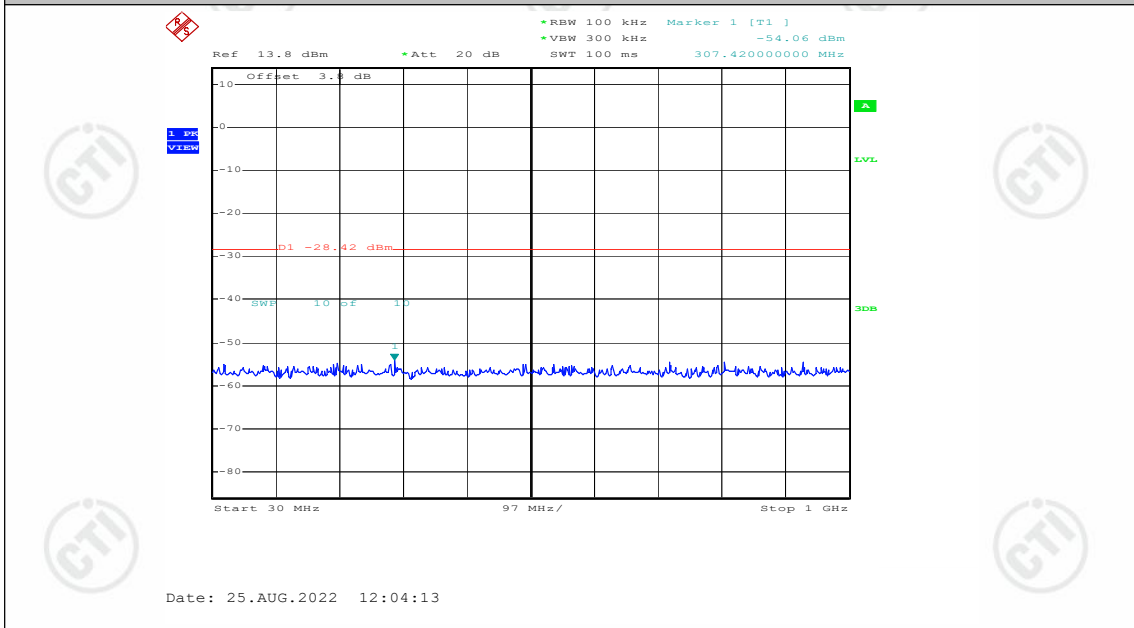
11G_Ant1_2412_30~1000



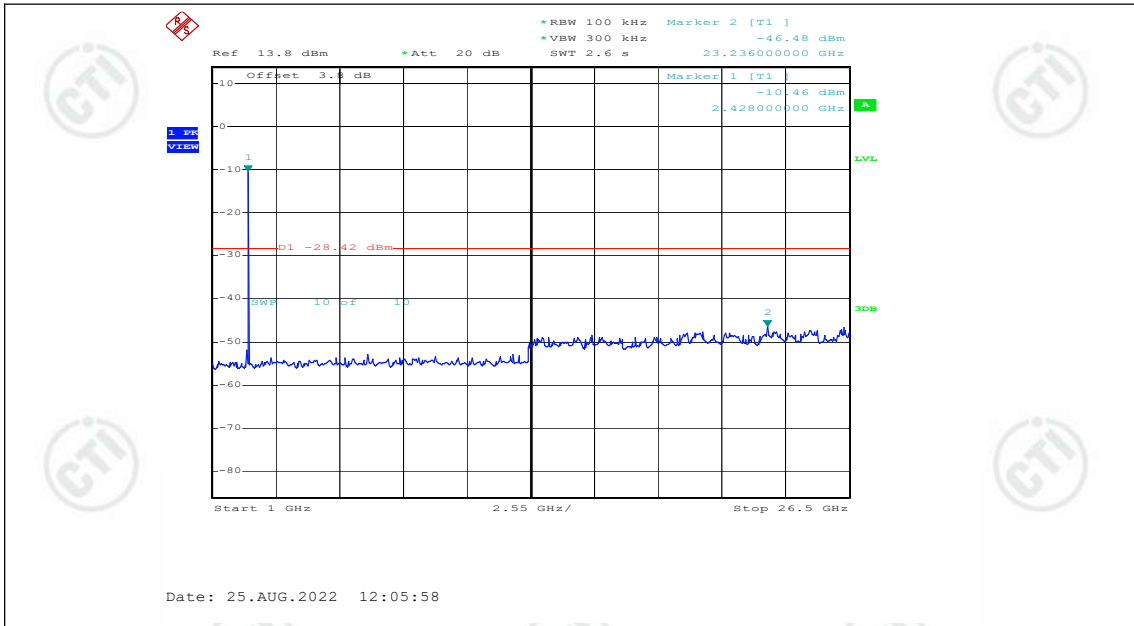
11G_Ant1_2412_1000~26500



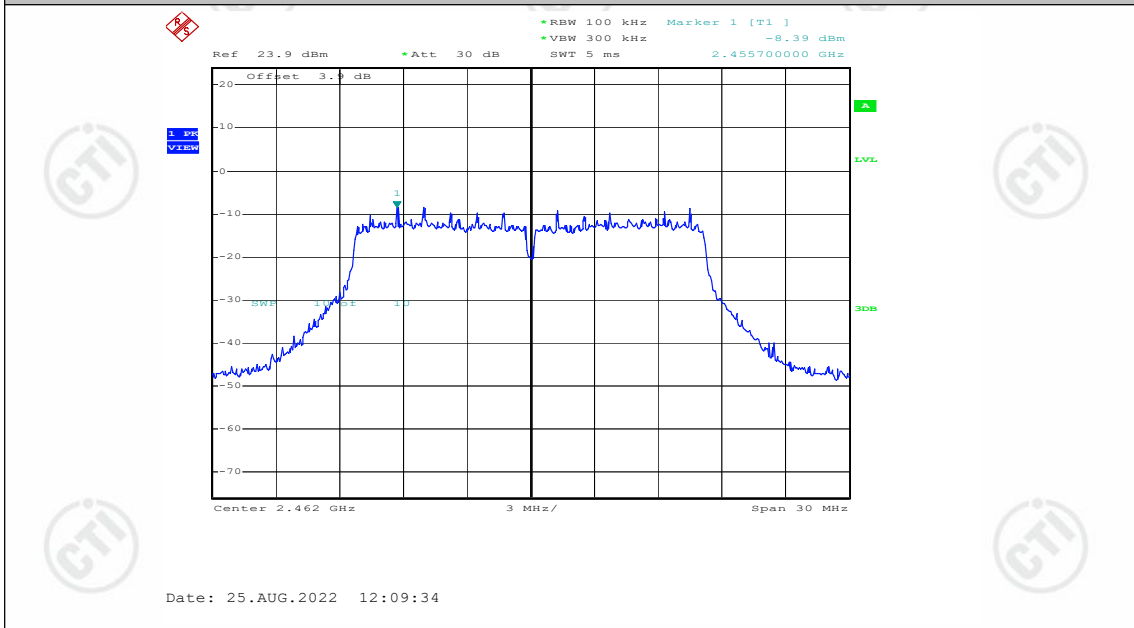
11G_Ant1_2437_0~Reference



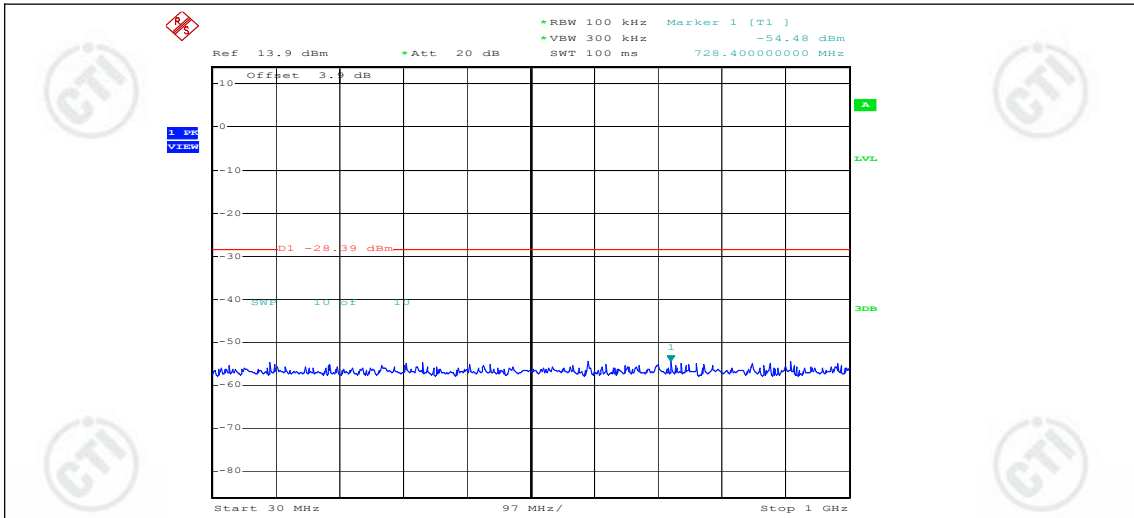
11G_Ant1_2437_30~1000



11G_Ant1_2437_1000~26500

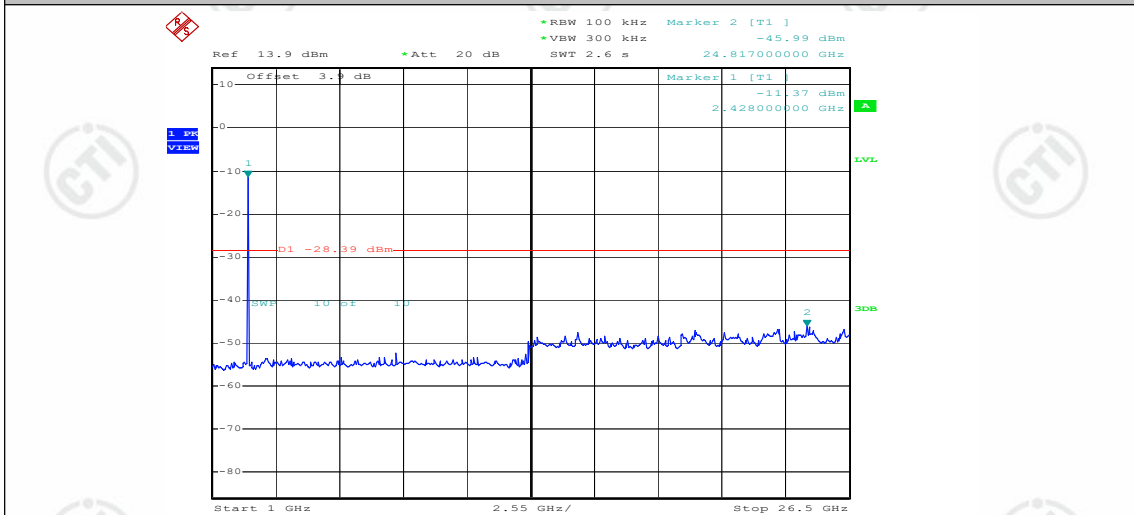


11G_Ant1_2462_0~Reference



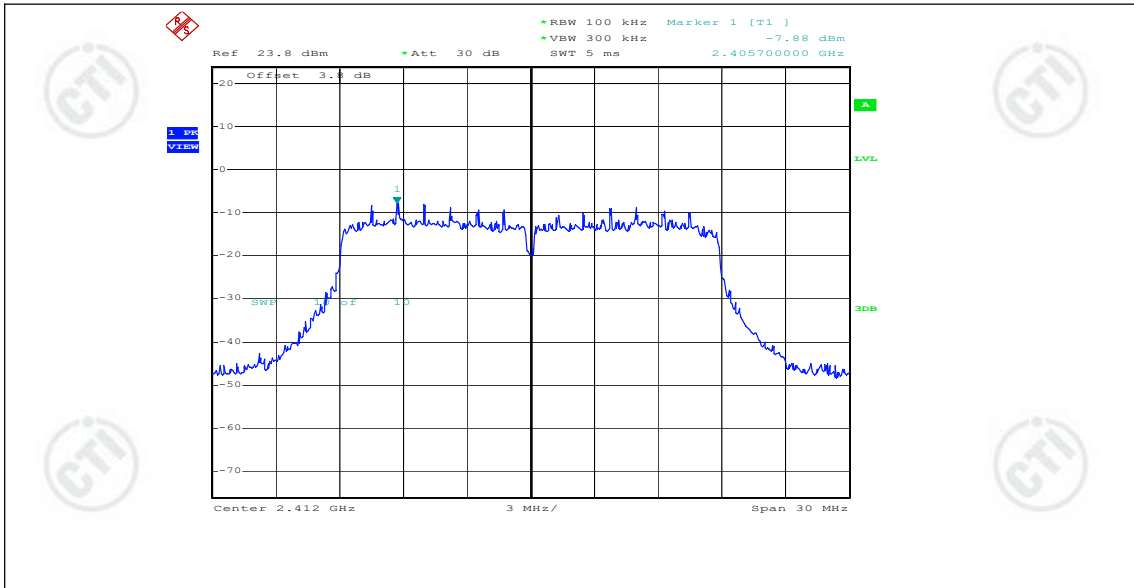
Date: 25.AUG.2022 12:09:47

11G_Ant1_2462_30~1000

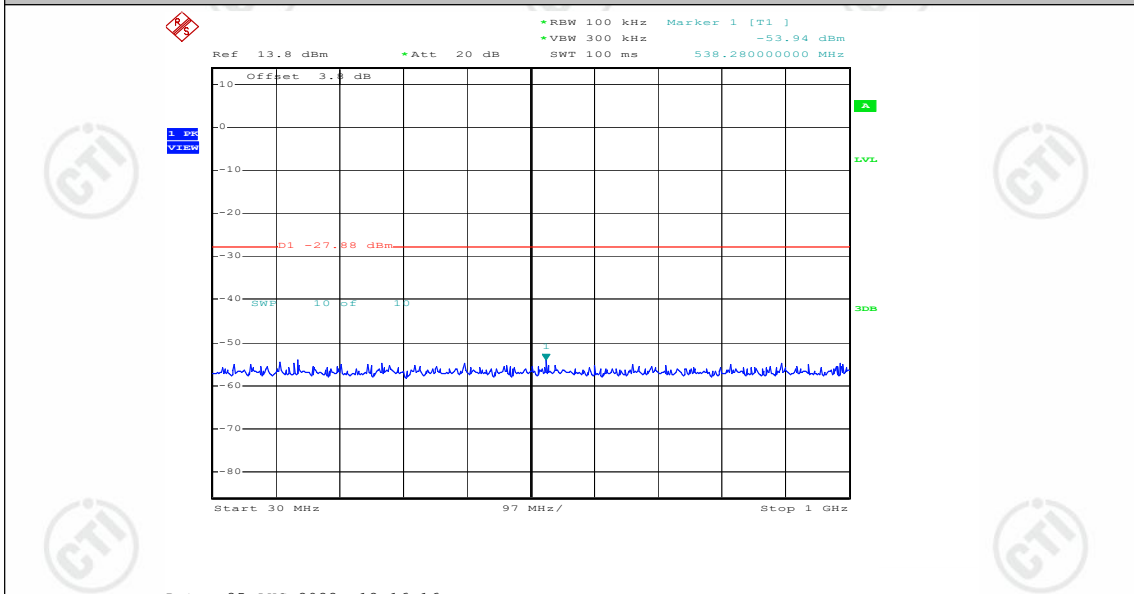


Date: 25.AUG.2022 12:11:32

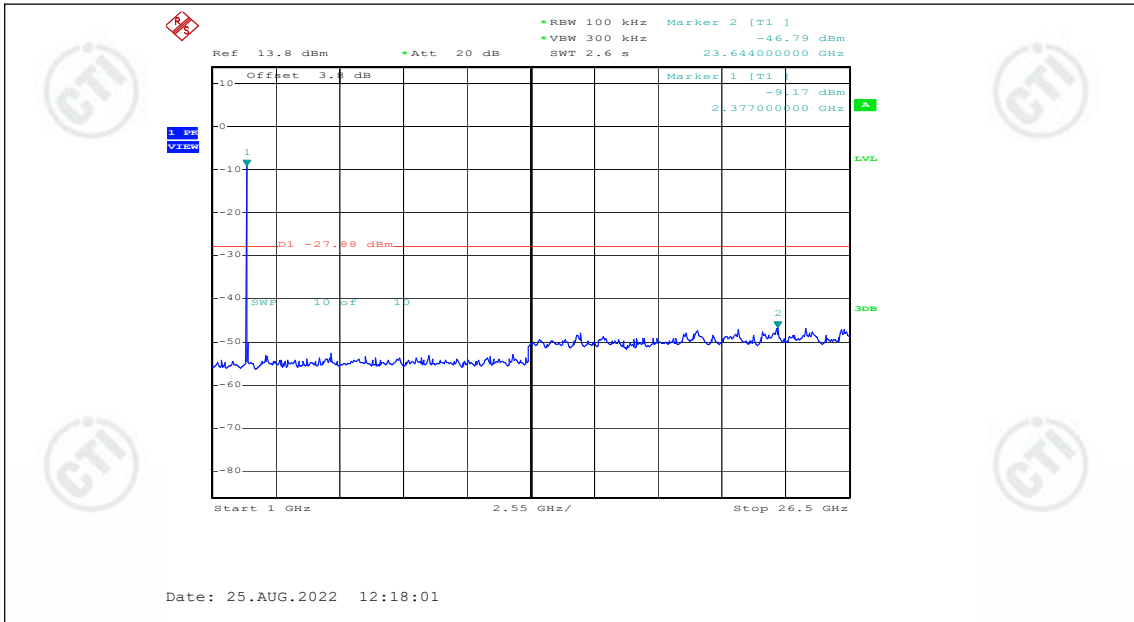
11G_Ant1_2462_1000~26500



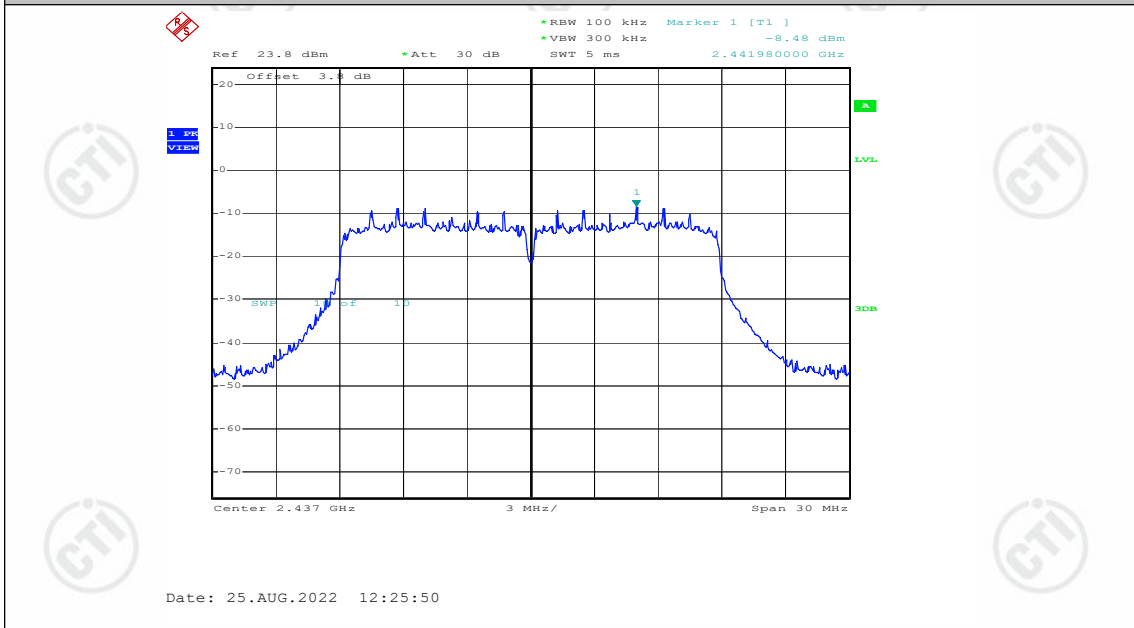
11N20SISO_Ant1_2412_0~Reference



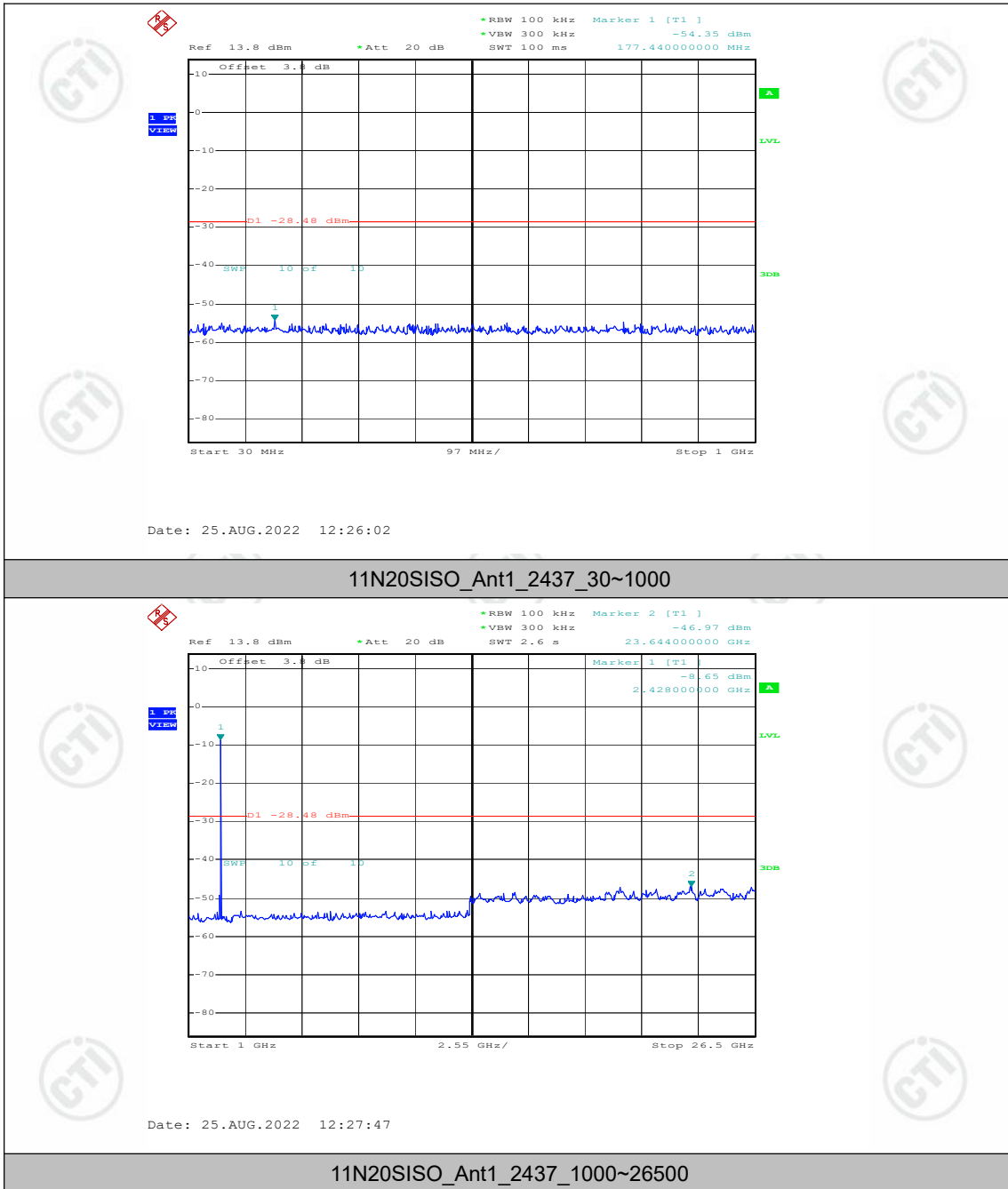
11N20SISO_Ant1_2412_30~100

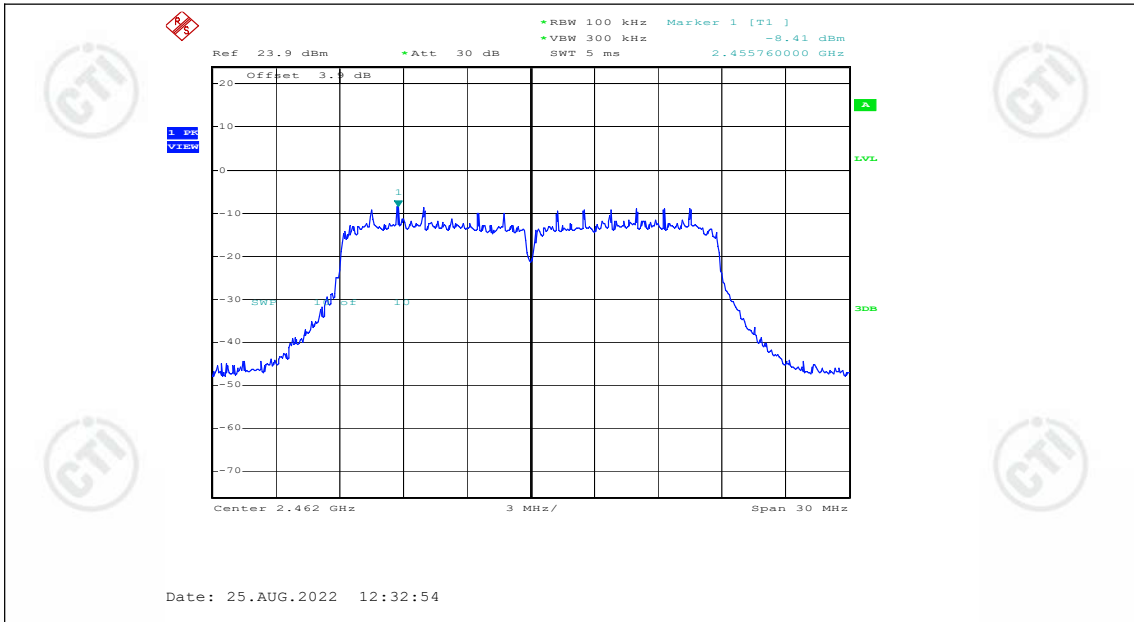


11N20SISO_Ant1_2412_1000~26500

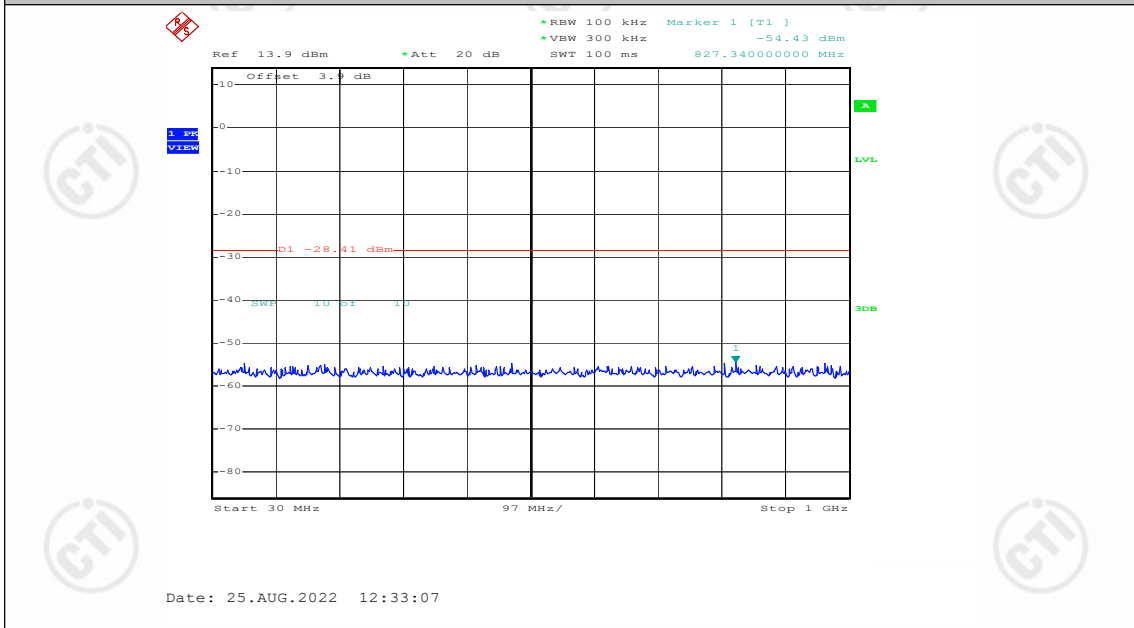


11N20SISO_Ant1_2437_0~Reference

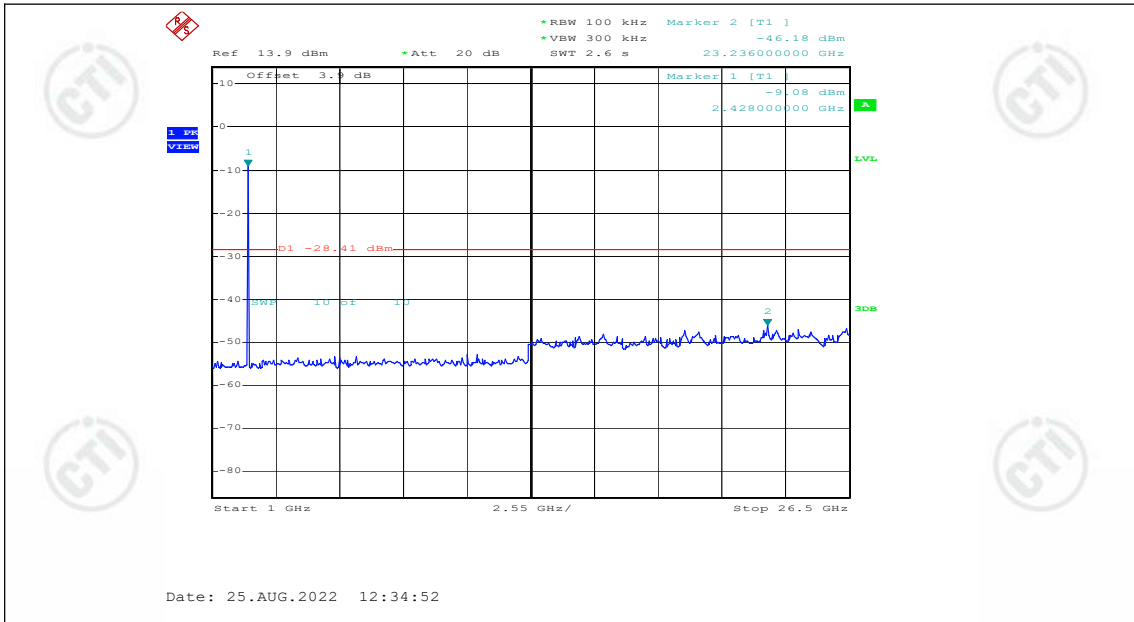




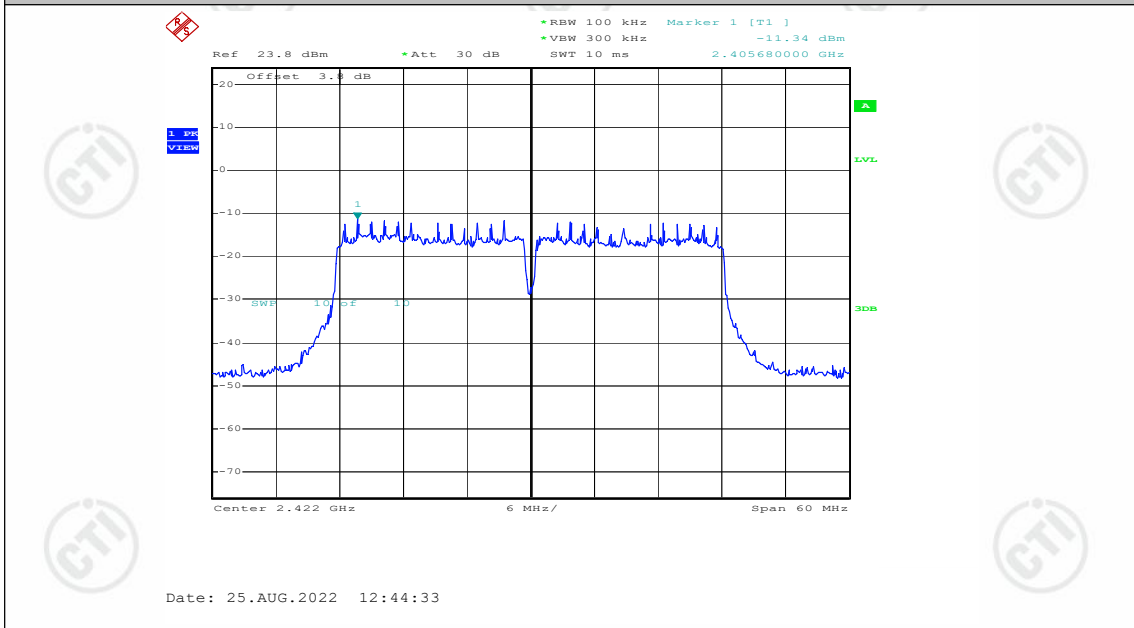
11N20SISO_Ant1_2462_0~Reference



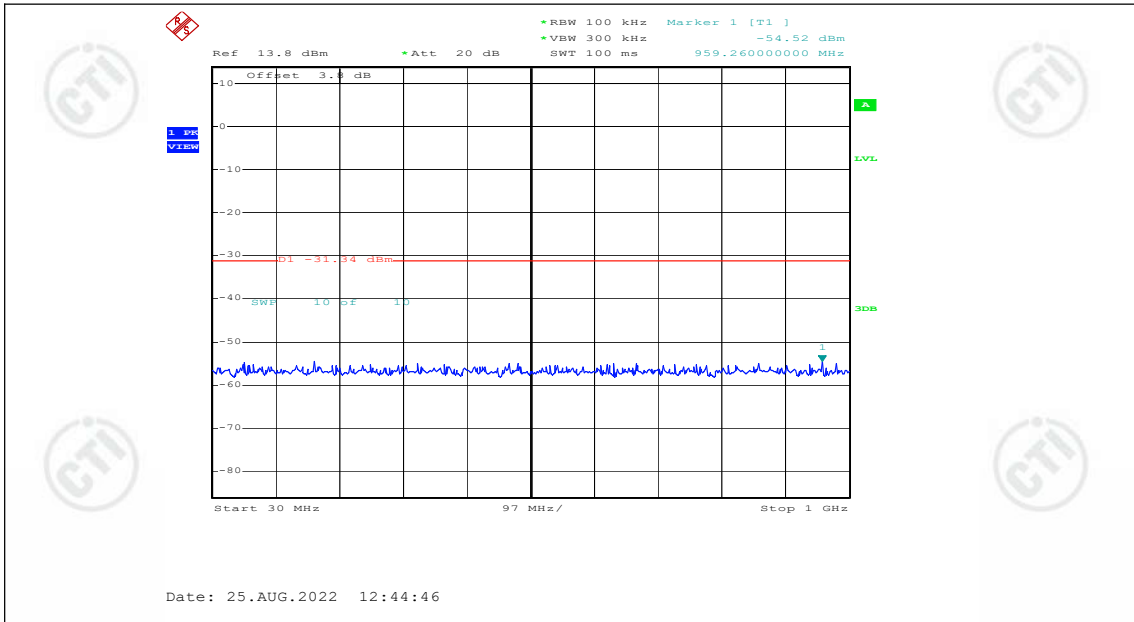
11N20SISO_Ant1_2462_30~1000



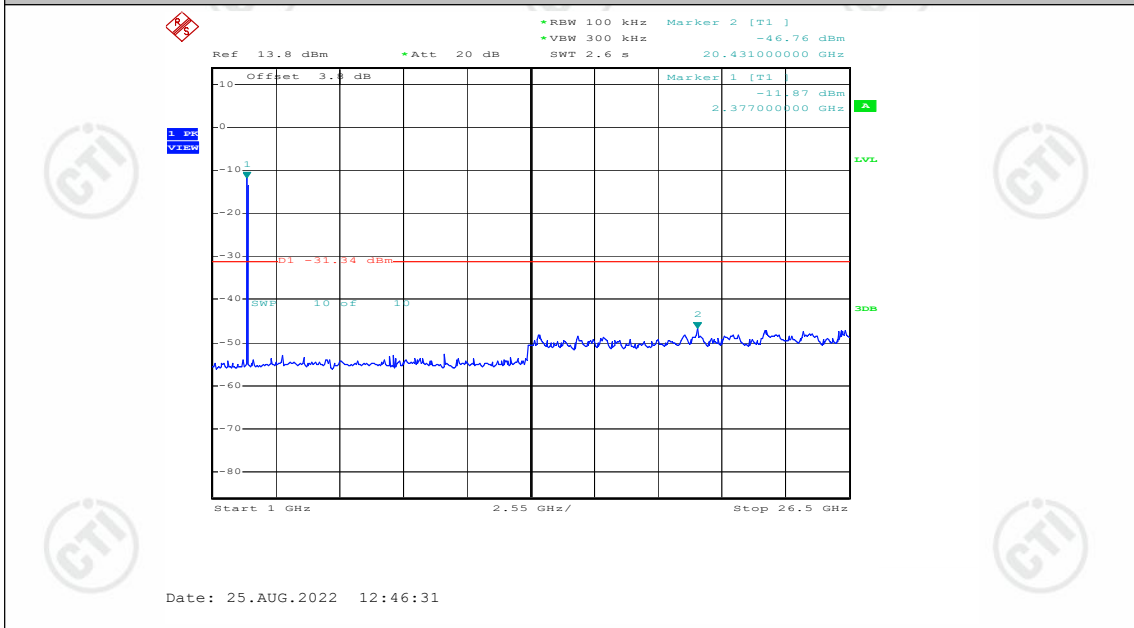
11N20SISO_Ant1_2462_1000~26500



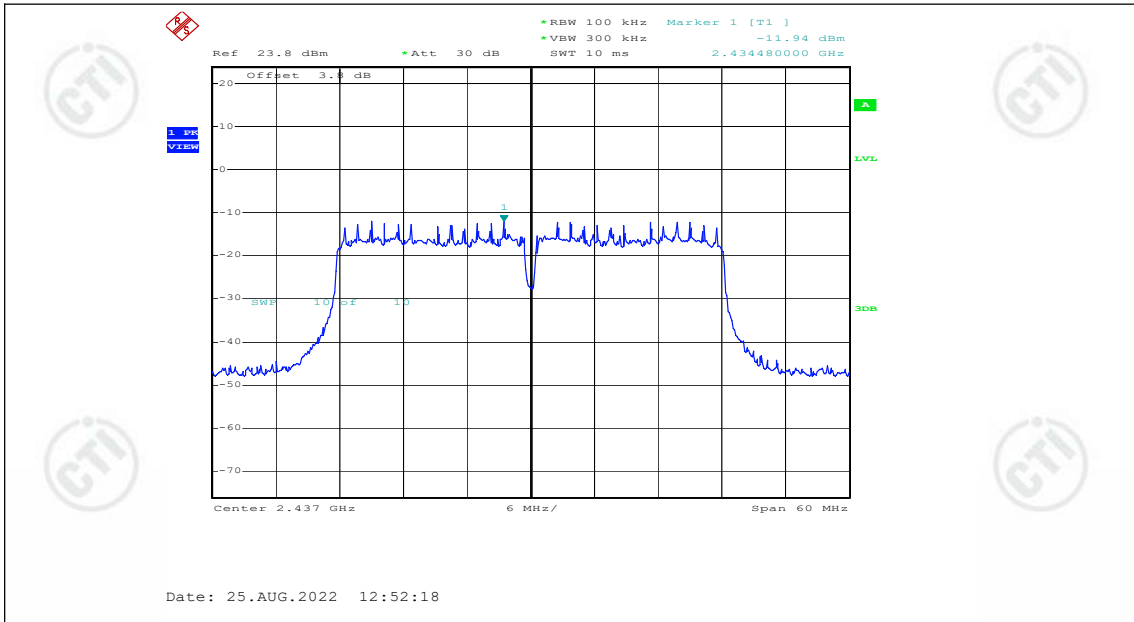
11N40SISO_Ant1_2422_0~Reference



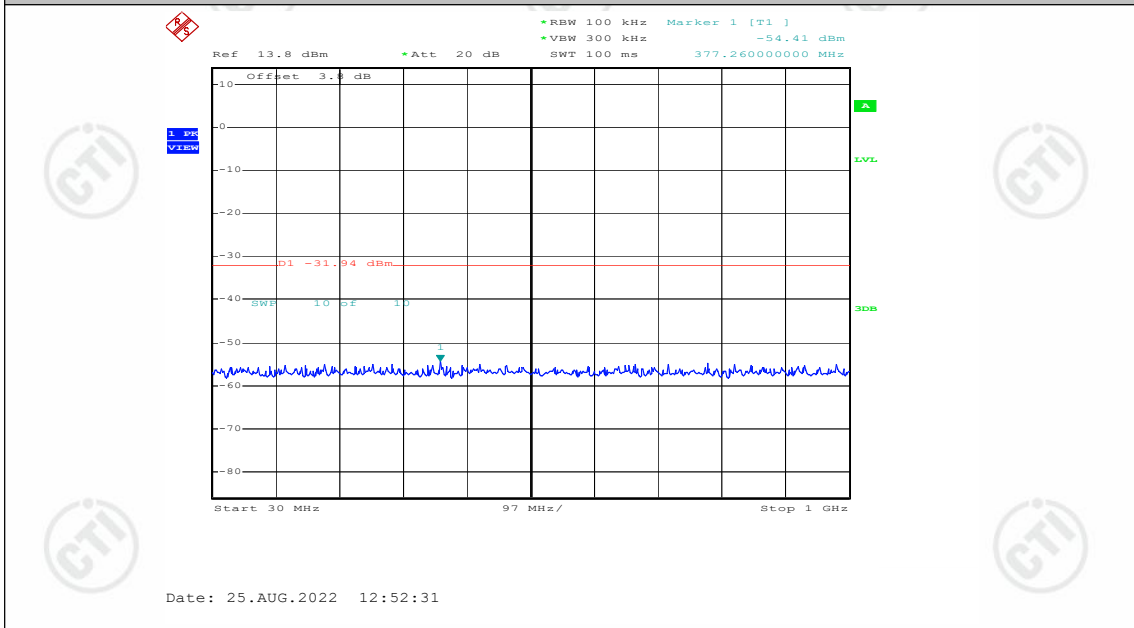
11N40SISO_Ant1_2422_30~1000



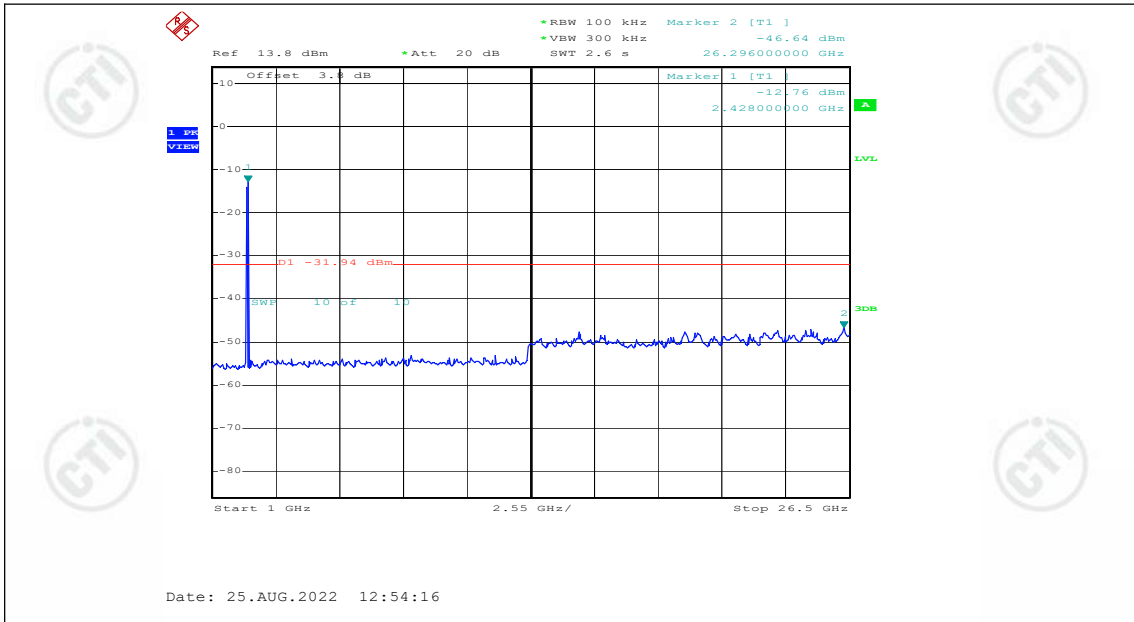
11N40SISO_Ant1_2422_1000~26500



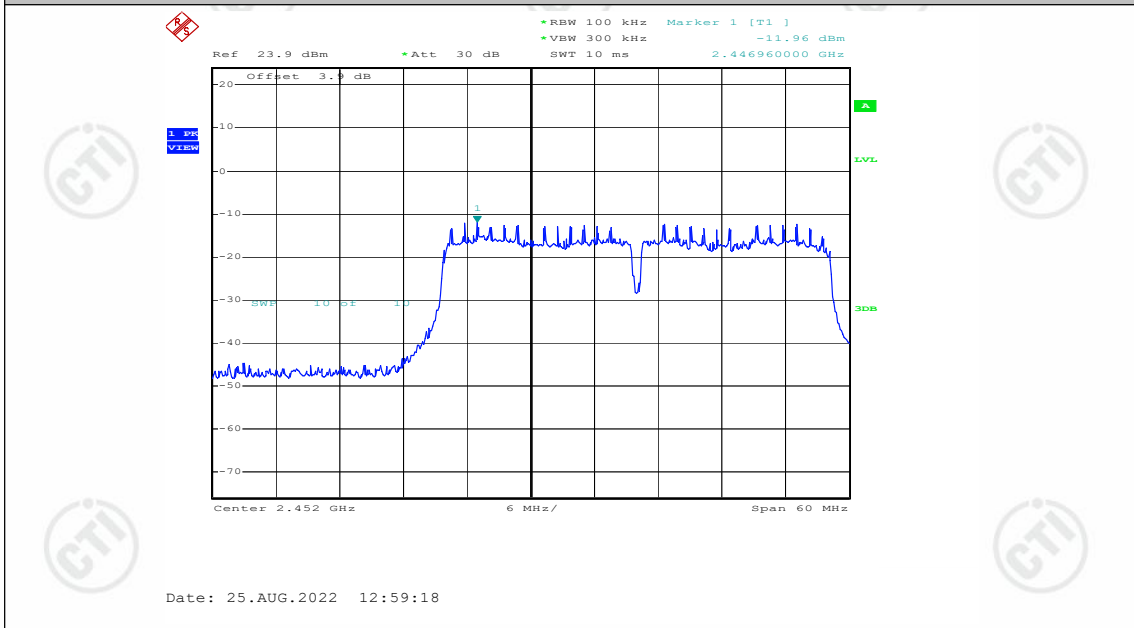
11N40SISO_Ant1_2437_0~Reference



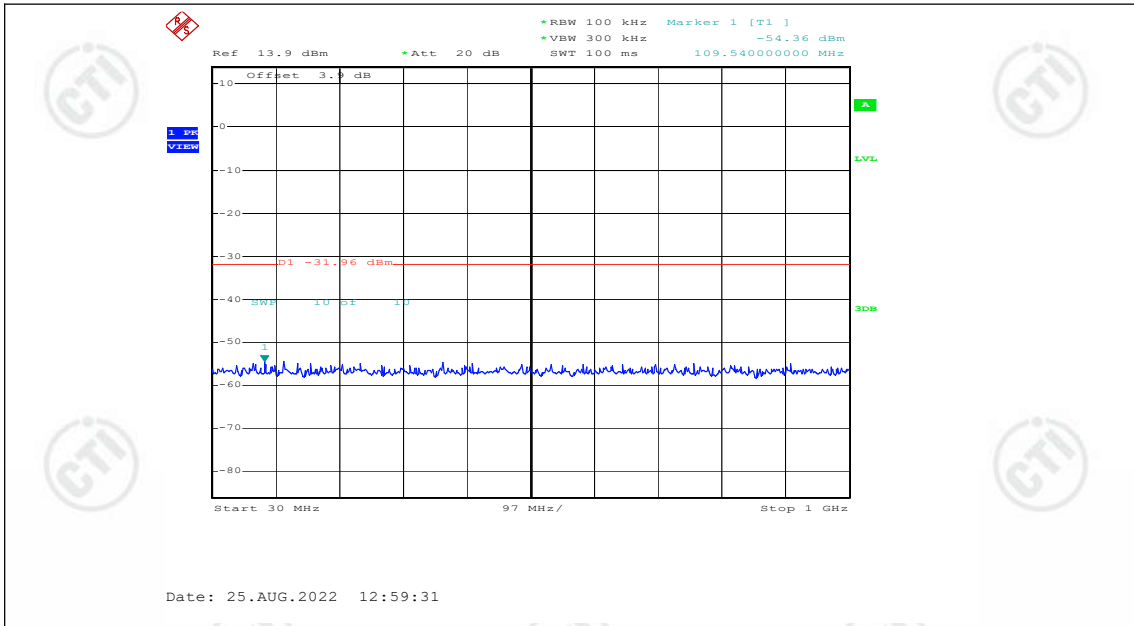
11N40SISO_Ant1_2437_30~100



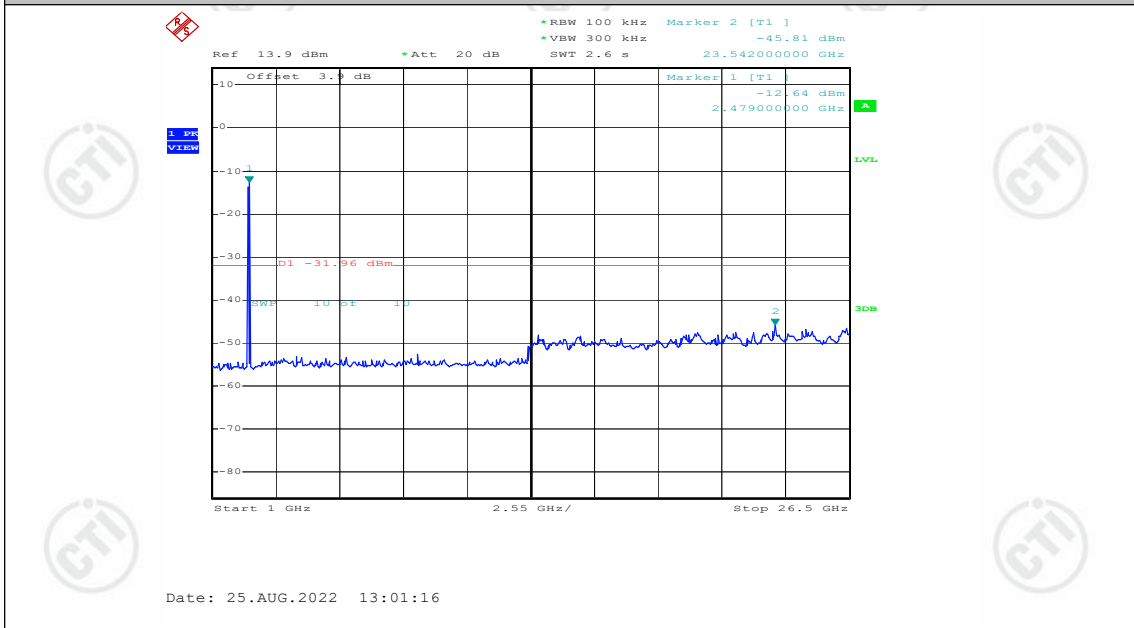
11N40SISO_Ant1_2437_1000~26500



11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000

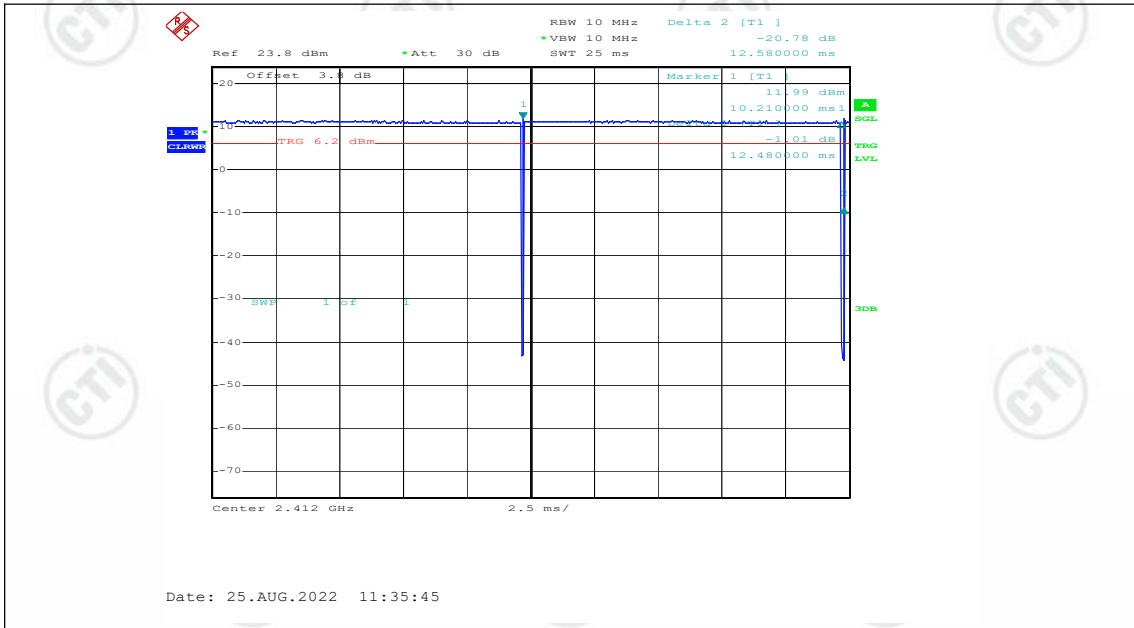


11N40SISO_Ant1_2452_1000~26500

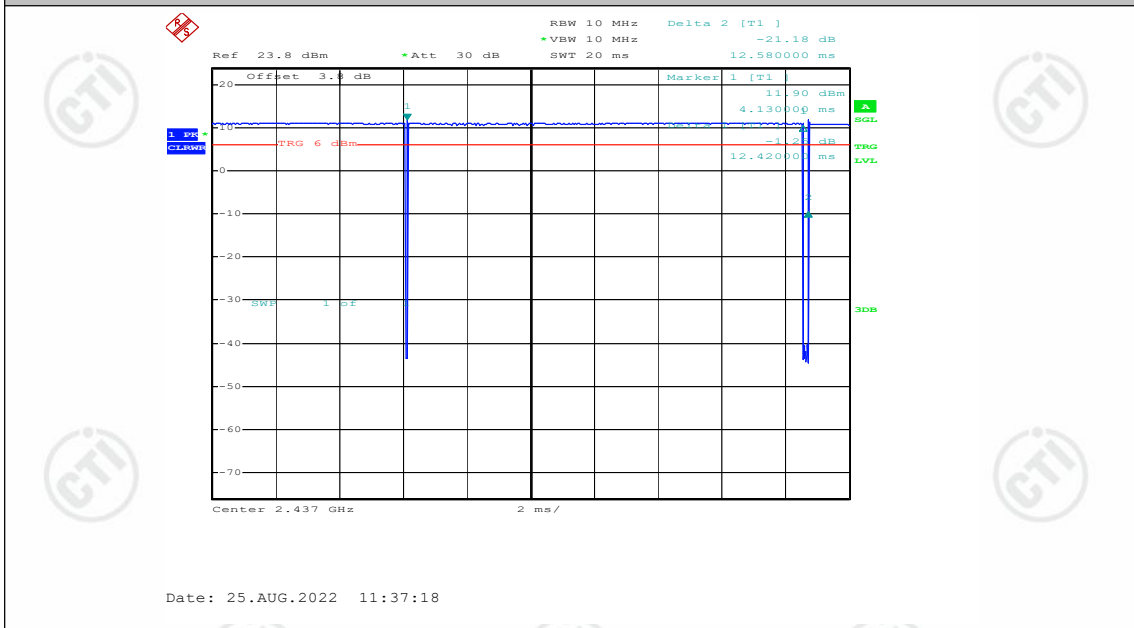
Appendix G: Duty Cycle**Test Result**

Test Mode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11B	Ant1	2412	12.48	12.58	99.21
		2437	12.42	12.58	98.73
		2462	12.42	12.57	98.81
11G	Ant1	2412	2.06	2.22	92.79
		2437	2.07	2.21	93.67
		2462	2.07	2.21	93.67
11N20SISO	Ant1	2412	1.92	2.04	94.12
		2437	1.92	2.06	93.20
		2462	1.92	2.05	93.66
11N40SISO	Ant1	2422	0.95	1.11	85.59
		2437	0.94	1.11	84.68
		2452	0.95	1.12	84.82

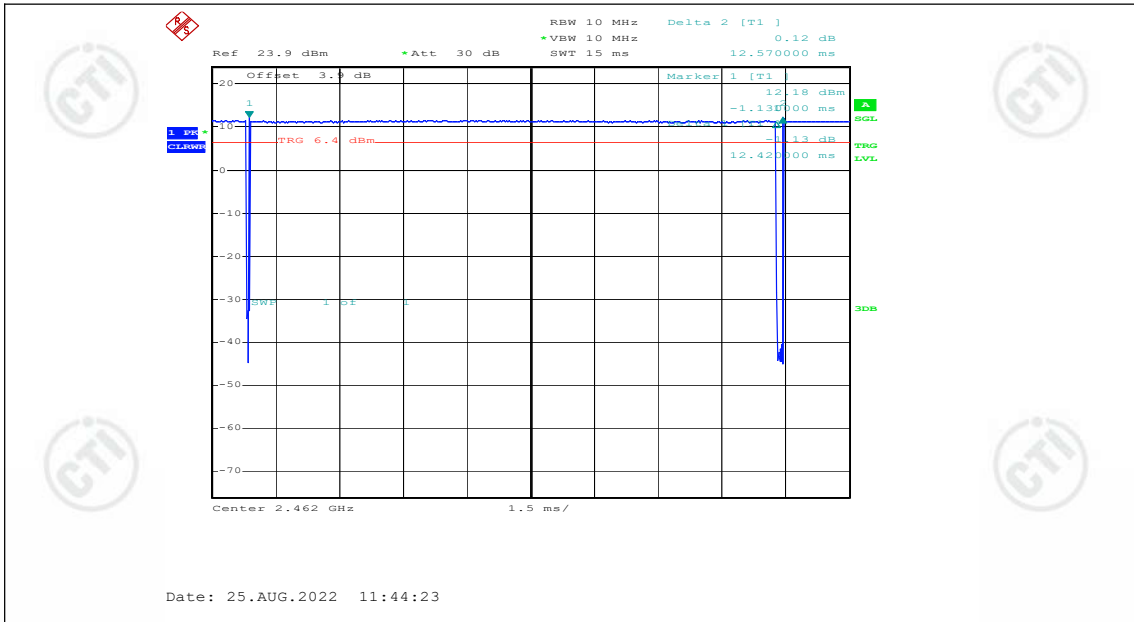
Test Graphs



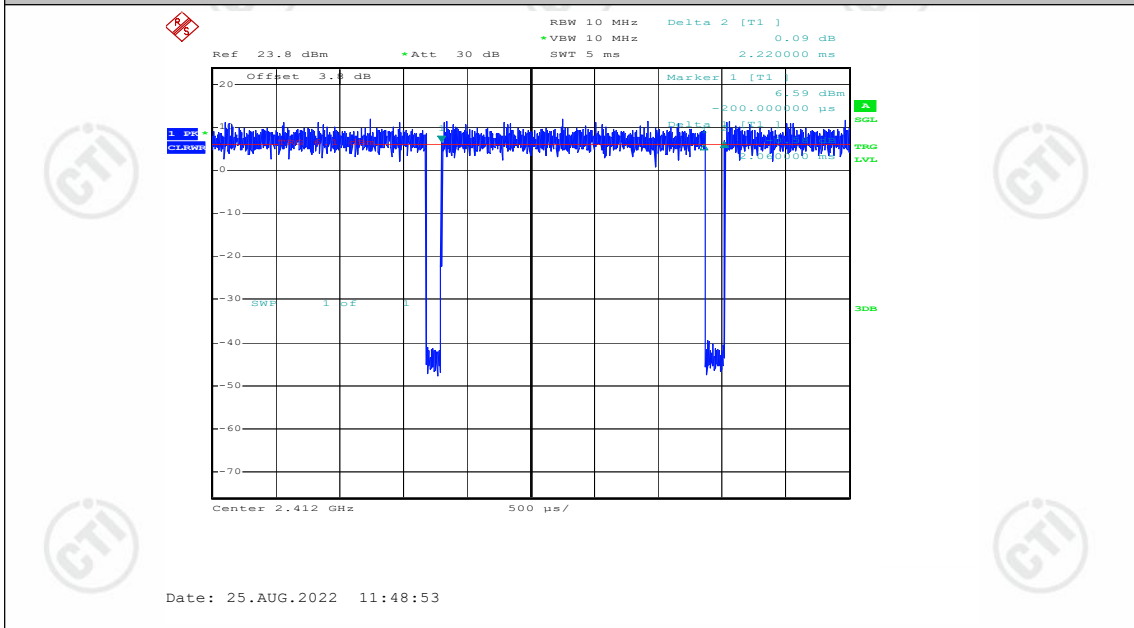
11B_Ant1_2412



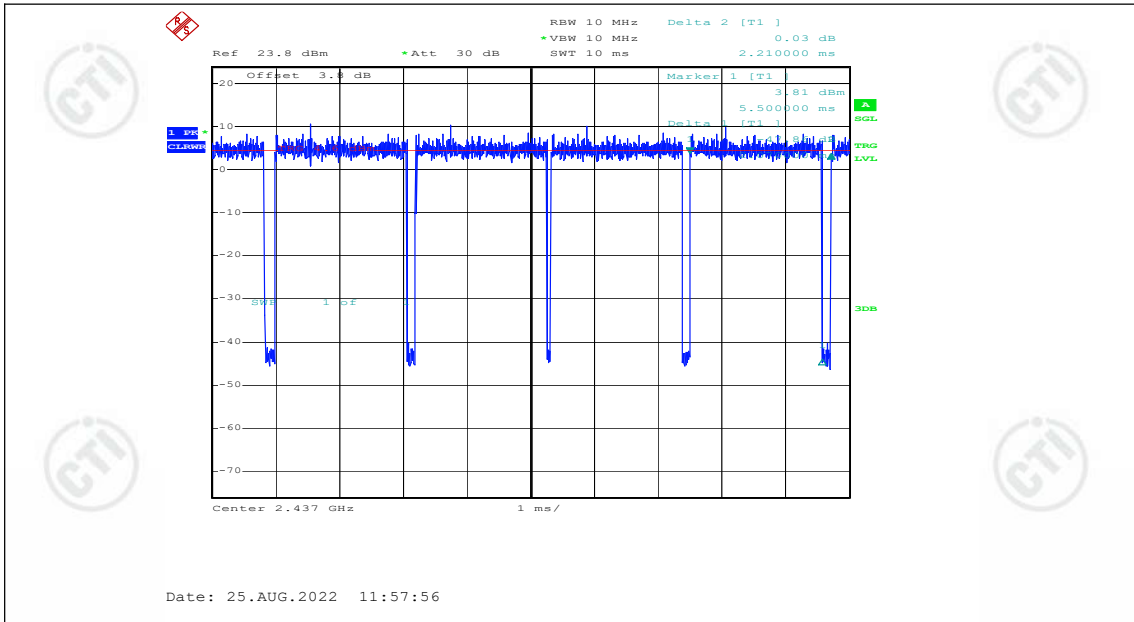
11B_Ant1_2437



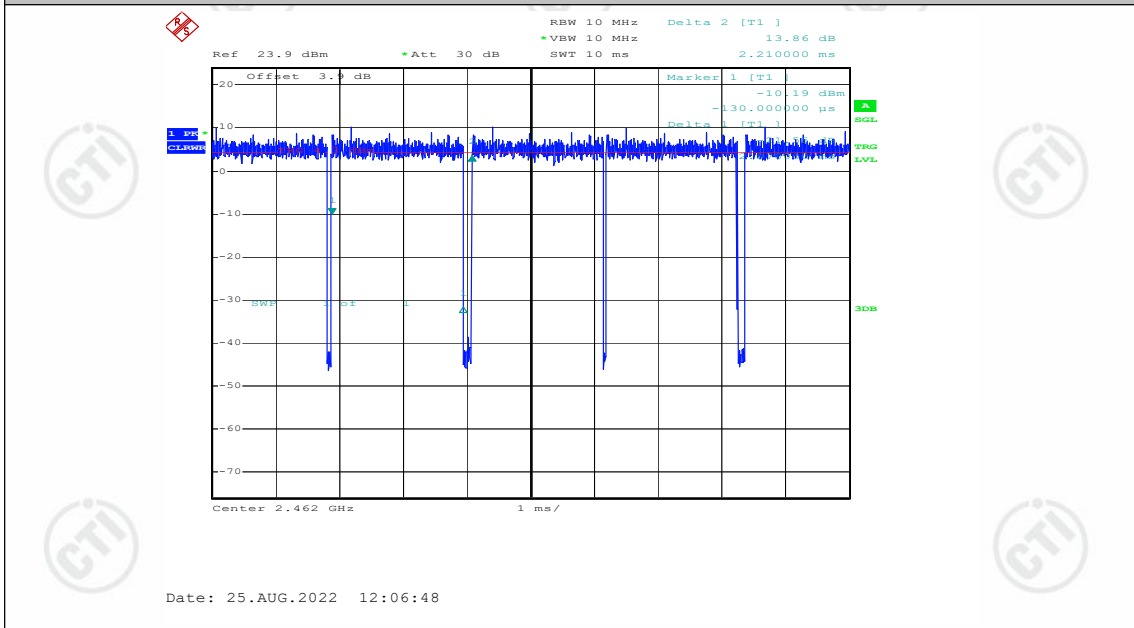
11B_Ant1_2462



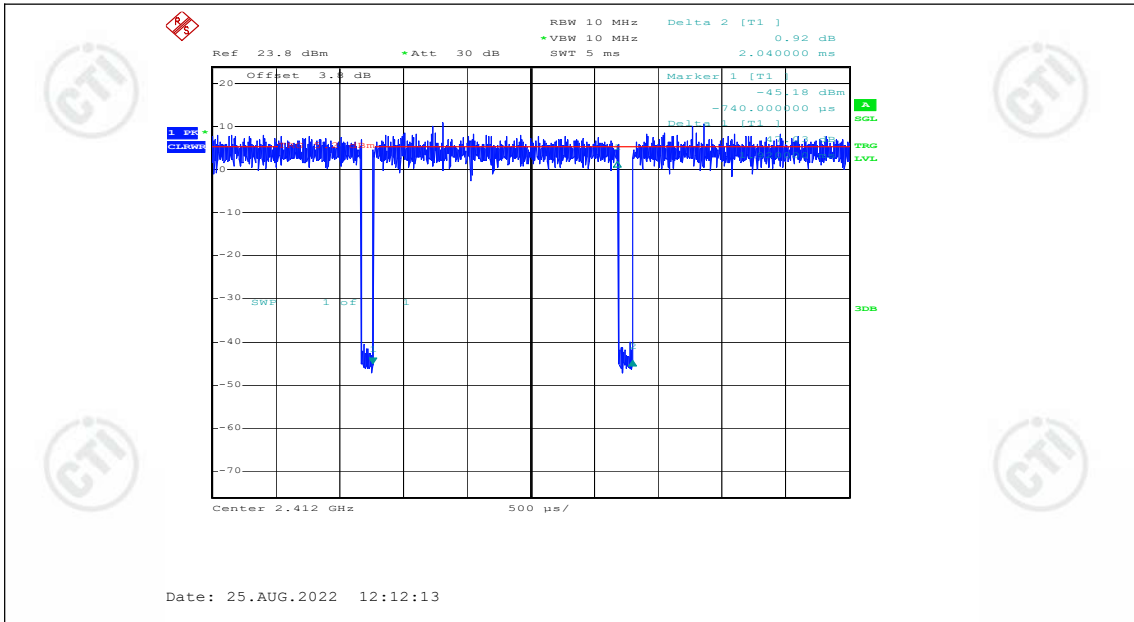
11G_Ant1_2412



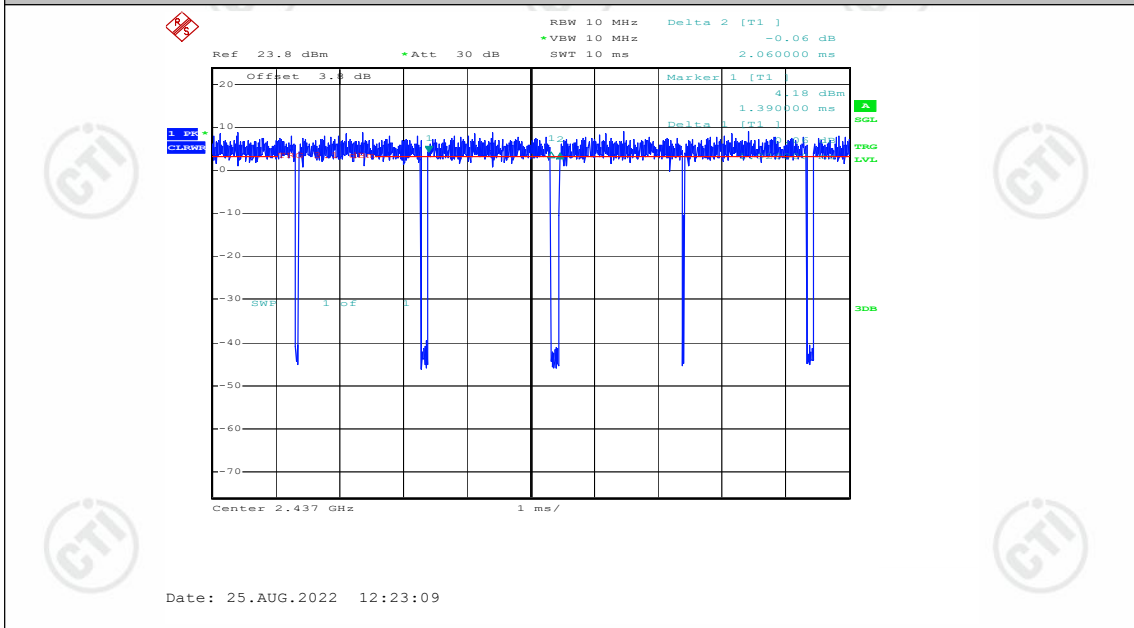
11G_Ant1_2437



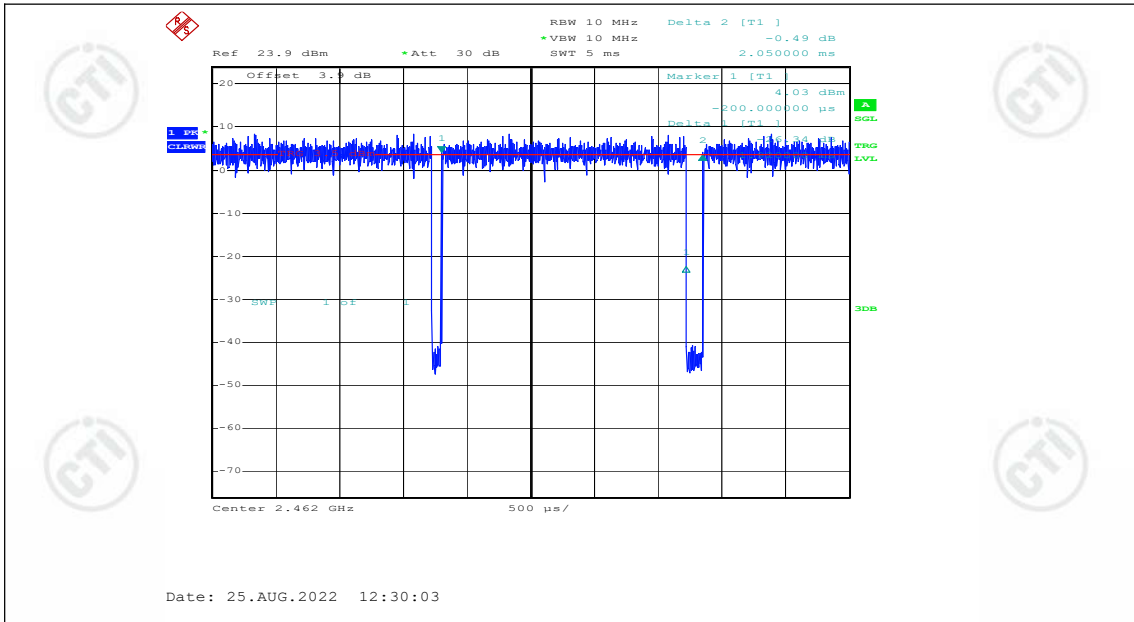
11G_Ant1_2462



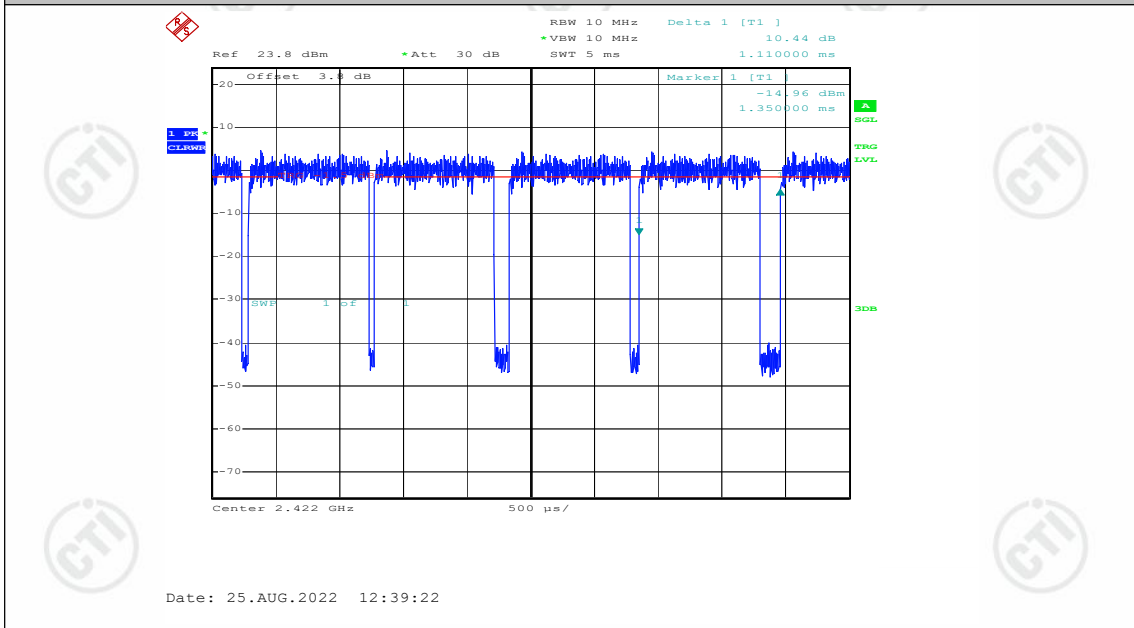
11N20SISO_Ant1_2412



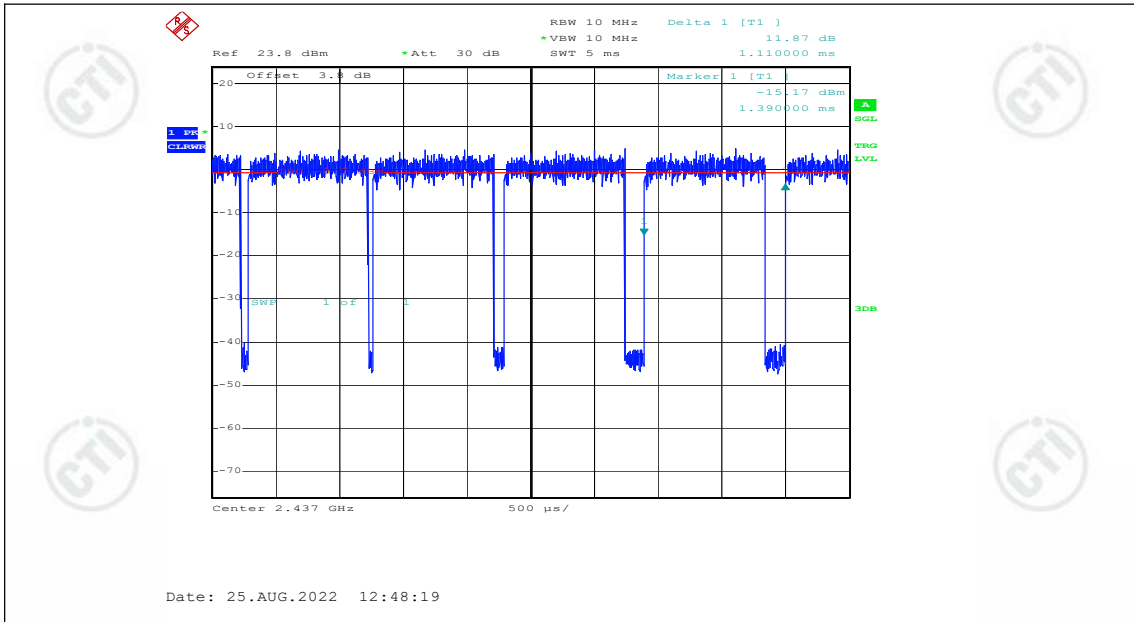
11N20SISO_Ant1_2437



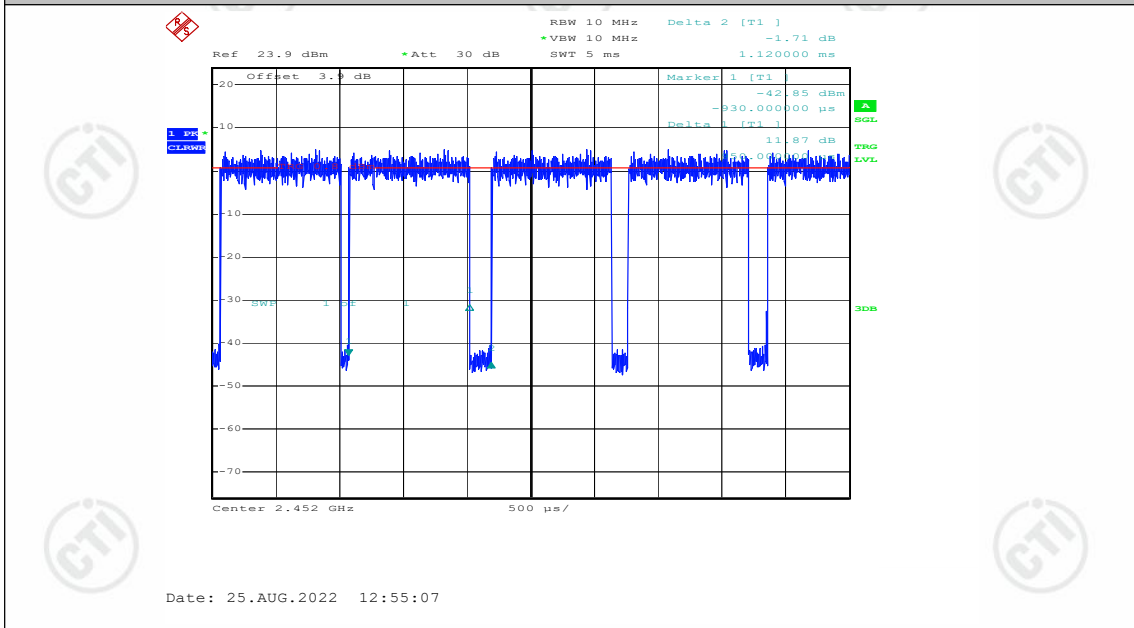
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

*** End of Report ***