APPENDIXD -RADIATED EMISSION- ABOVE 1000MHZ

Test Result of Radiated Spurious at Band edges.
Note: All test plots below include both horizontal and vertical

Test Results				PASS				
Frequency Range				2310MHz~2410MHz				
Test Mode				TX B Mode 2412 MHz				
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	71.35	-21.47	49.88	74.00	-24.12	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	75.51	-26.12	49.39	74.00	-24.61	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	66.36	-21.47	44.89	74.00	-29.11	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	75.51	-26.12	49.39	74.00	-24.61	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results				PASS				
Frequency Range				2450MHz~2550MHz				
Test Mode				TX B Mode 2462 MHz				
1	2483.5	H	75.35	-25.29	50.06	74.00	-23.94	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	75.75	-25.29	50.46	74.00	-23.54	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg

Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.

2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.

Result=Reading + Correct Factor.

Margin= Result-Limit.

3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

Test Results				PASS				
Frequency Range				2310MHz~2410MHz				
Test Mode				TX G Mode 2412 MHz				
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	71.02	-21.47	49.55	74.00	-24.45	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	69.98	-26.12	43.86	74.00	-30.14	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	70.53	-21.47	49.06	74.00	-24.94	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	77.25	-26.12	51.13	74.00	-22.87	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results				PASS				
Frequency Range				2450MHz~2550MHz				
Test Mode				TX G Mode 2462 MHz				
1	2483.5	H	79.36	-25.29	54.07	74.00	-19.93	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	80.12	-25.29	54.83	74.00	-19.17	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg

Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.

2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.

Result=Reading + Correct Factor.

Margin= Result-Limit.

3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

Test Results				PASS				
Frequency Range				2310MHz~2410MHz				
Test Mode				TX N(HT20) Mode 2412 MHz				
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	78.25	-21.47	56.78	74.00	-17.22	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	77.21	-26.12	51.09	74.00	-22.91	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	79.28	-21.47	57.81	74.00	-16.19	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	78.62	-26.12	52.50	74.00	-21.50	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results				PASS				
Frequency Range				2450MHz~2550MHz				
Test Mode				TX N(HT20) Mode 2462 MHz				
1	2483.5	H	77.53	-25.29	52.24	74.00	-21.76	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	78.52	-25.29	53.23	74.00	-20.77	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg

Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.

2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.

Result=Reading + Correct Factor.

Margin= Result-Limit.

3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

Test Results				PASS				
Frequency Range				2310MHz~2410MHz				
Test Mode				TX N(HT40) Mode 2422 MHz				
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	76.33	-21.47	54.86	74.00	-19.14	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	75.98	-26.12	49.86	74.00	-24.14	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	72.69	-21.47	51.22	74.00	-22.78	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	76.89	-26.12	50.77	74.00	-23.23	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results				PASS				
Frequency Range				2450MHz~2550MHz				
Test Mode				TX N(HT40) Mode 2452 MHz				
1	2483.5	H	79.31	-25.29	54.02	74.00	-19.98	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	78.25	-25.29	52.96	74.00	-21.04	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg

Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.

2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.

Result=Reading + Correct Factor.

Margin= Result-Limit.

3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

ABOVE 1000 MHz

Note: All the modes have been tested and recorded worst mode in the report.

Modulation Type:802.11b

Channel 1 / 2412 MHz									
Frequency	Ant.Pol. H/V	Peak reading (dBuV)	AV reading (dBuV)	Correction Factor	Emission Level		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
					Peak (dBuV/m)	AV (dBuV/m)			
4824.00	H	56.69	51.31	-1.88	54.81	49.43	74	54	-19.19
7236.00	H	42.35	---	7.80	50.15	---	74	54	-23.85
---	H	---	---	---	---	---	---	---	---
4824.00	V	54.56	---	-1.88	52.69	---	74	54	-21.32
7236.00	V	40.68	---	7.80	48.48	---	74	54	-25.52
---	V	---	---	---	---	---	---	---	---

Channel 6 / 2437 MHz									
Frequency	Ant.Pol. H/V	Peak reading (dBuV)	AV reading (dBuV)	Correction Factor	Emission Level		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
					Peak (dBuV/m)	AV (dBuV/m)			
4874.00	H	57.89	52.52	-1.59	56.30	50.93	74	54	-17.70
7311.00	H	42.57	---	8.10	50.67	---	74	54	-23.33
---	H	---	---	---	---	---	---	---	---
4874.00	V	55.31	---	-1.59	53.72	---	74	54	-20.28
7311.00	V	40.89	---	8.10	48.99	---	74	54	-25.01
---	V	---	---	---	---	---	---	---	---

Channel 11 / 2462 MHz									
Frequency	Ant.Pol. H/V	Peak reading (dBuV)	AV reading (dBuV)	Correction Factor	Emission Level		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
					Peak (dBuV/m)	AV (dBuV/m)			
4924.00	H	56.47	52.01	-1.30	54.91	50.71	74	54	-19.09
7386.00	H	42.72	---	9.00	51.72	---	74	54	-22.28
---	H	---	---	---	---	---	---	---	---
4924.00	V	54.86	---	-1.30	53.56	---	74	54	-20.44
7386.00	V	42.89	---	9.00	51.89	---	74	54	-22.11
---	V	---	---	---	---	---	---	---	---

Notes:

1). Radiated emissions measured in frequency range from 9 KHz~10th harmonic or 26.5GHz (which is less) were made with an instrument using Peak detector mode.

2). Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

3). Worst case data at 1Mbps at IEEE 802.11b.

4). Measured Level = Reading Level + Factor, Margin = Measured Level – Limit

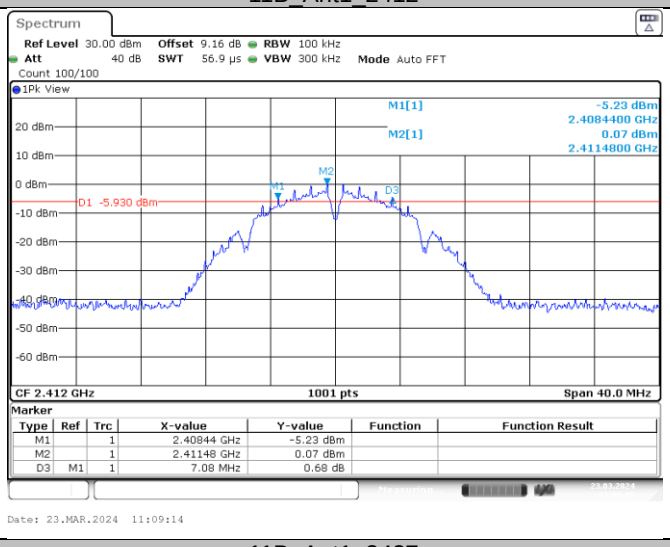
APPENDIXE - BANDWIDTH

1. DTS Bandwidth

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.08	2408.44	2415.52	0.5	PASS
		2437	8.08	2433.44	2441.52	0.5	PASS
		2462	8.56	2457.48	2466.04	0.5	PASS
11G	Ant1	2412	16.32	2403.84	2420.16	0.5	PASS
		2437	16.40	2428.80	2445.20	0.5	PASS
		2462	16.36	2453.80	2470.16	0.5	PASS
11N20SISO	Ant1	2412	17.56	2403.20	2420.76	0.5	PASS
		2437	17.64	2428.20	2445.84	0.5	PASS
		2462	17.60	2453.20	2470.80	0.5	PASS
11N40SISO	Ant1	2422	33.20	2406.96	2440.16	0.5	PASS
		2437	36.40	2418.76	2455.16	0.5	PASS
		2452	27.60	2442.56	2470.16	0.5	PASS

Test Graphs

11B_Ant1_2412



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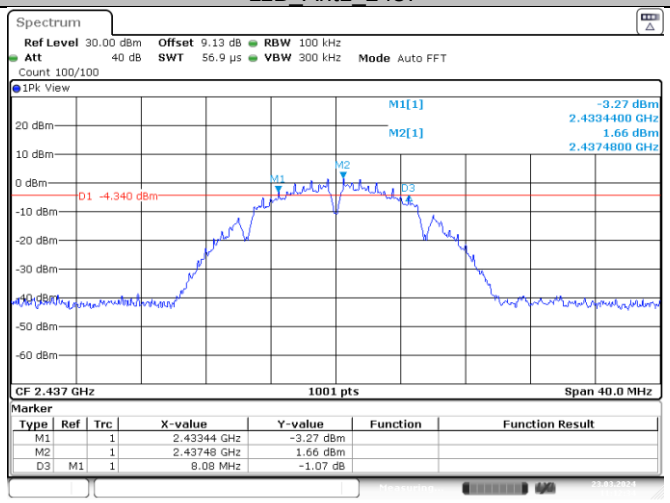

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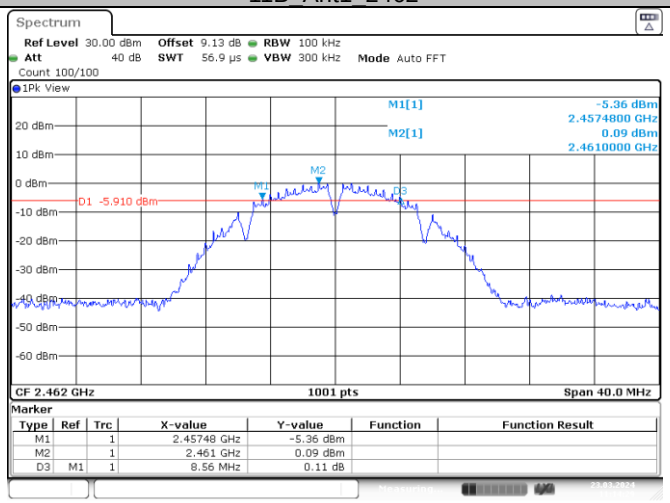
11B_Ant1_2462



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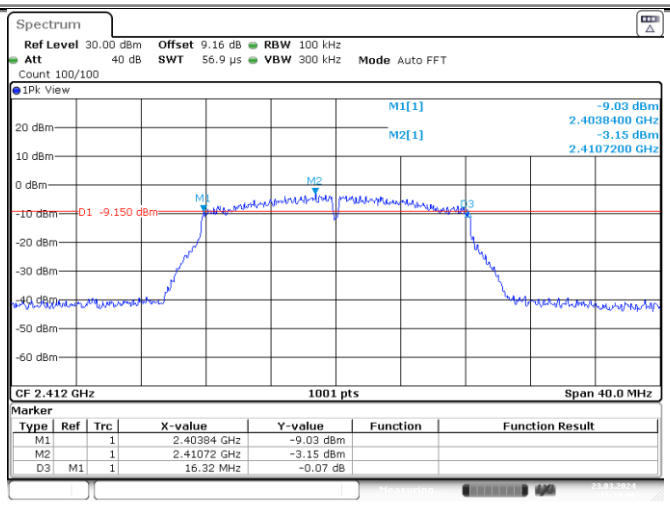
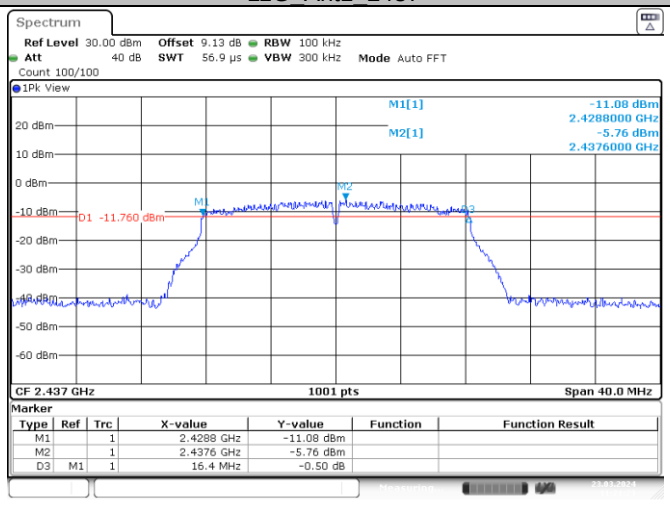
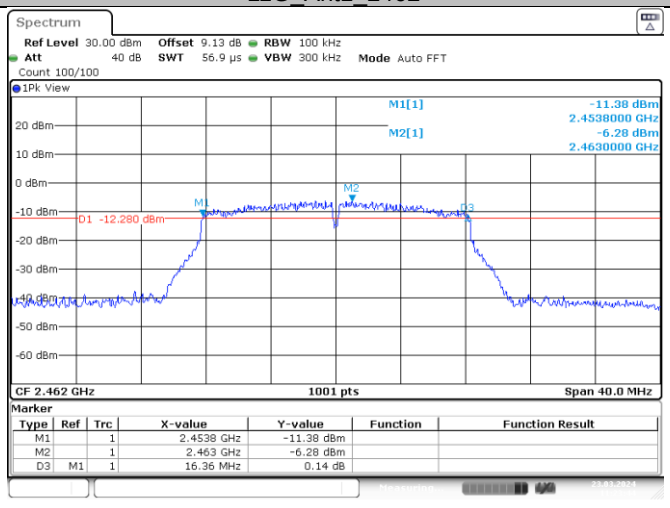
11G_Ant1_2412



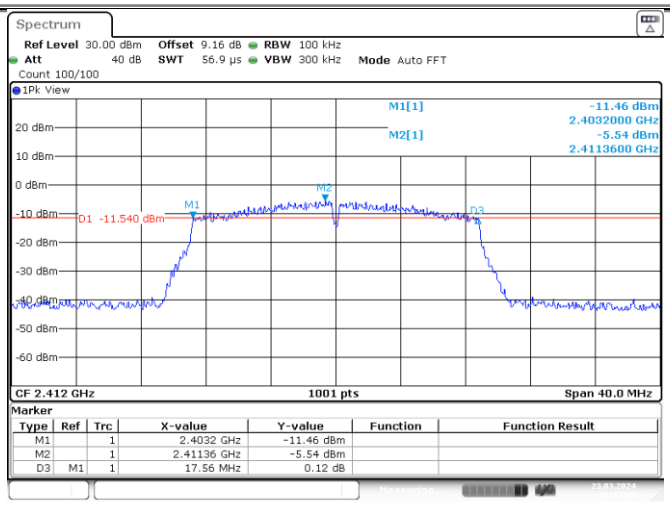
11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



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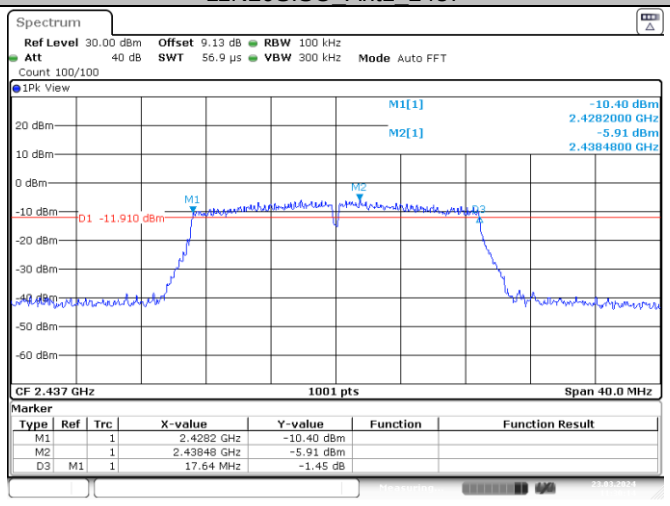
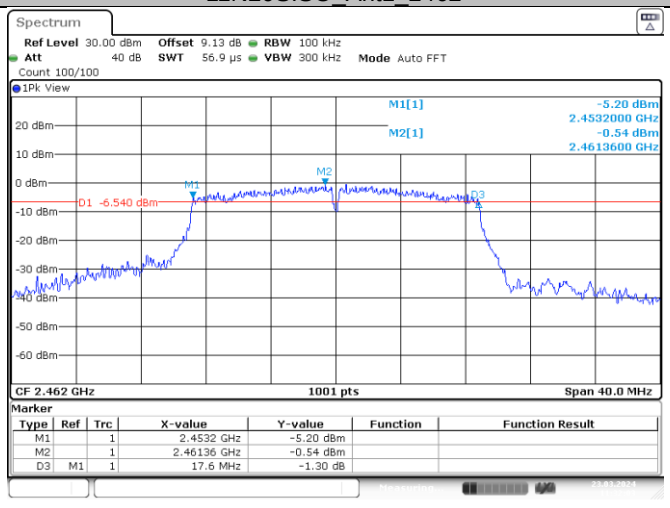


11N20SISO_Ant1_2462



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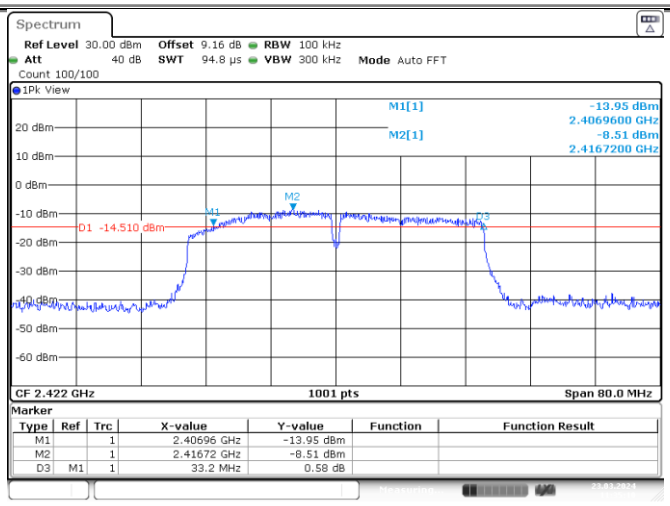
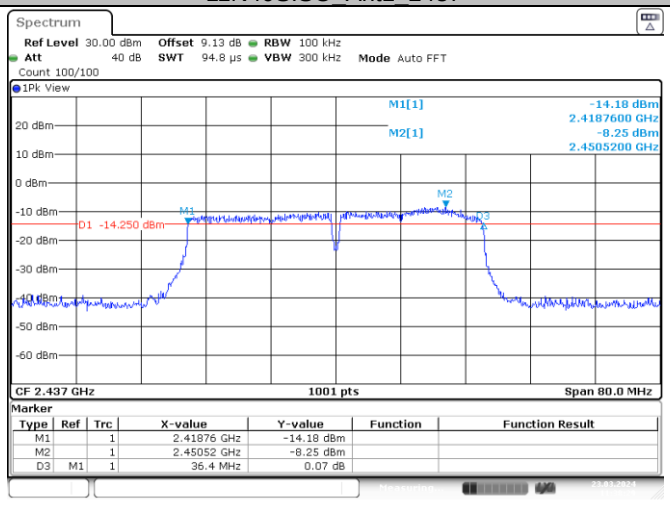
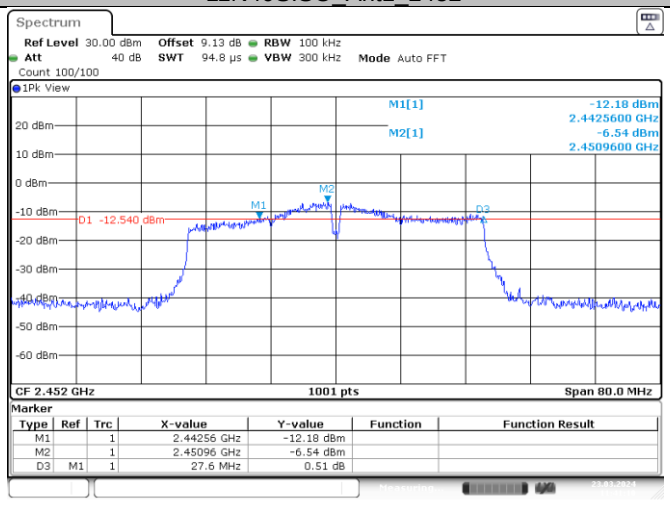


11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

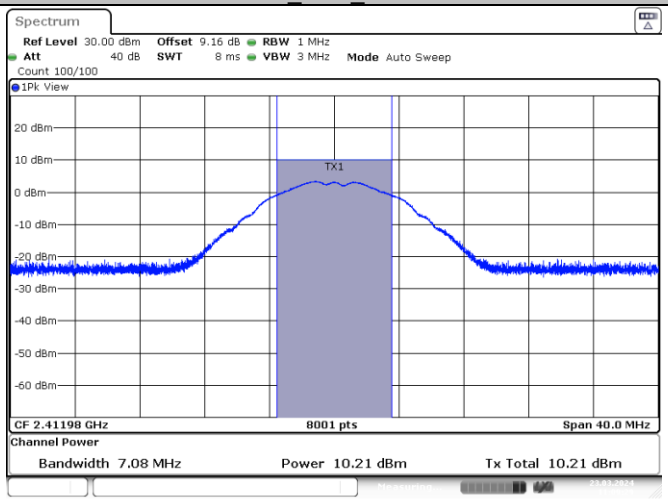


APPENDIXF - MAXIMUMOUTPUT POWER

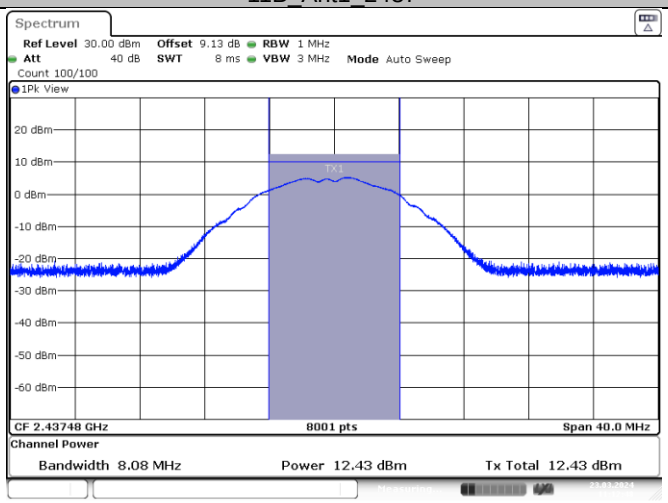
Test Mode	Antenna	Frequency [MHz]	Average power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11B	Ant1	2412	10.21	0	0	10.21	≤30.00	2.10	12.31	≤36.00	PASS
		2437	12.43	0	0	12.43	≤30.00	2.10	14.53	≤36.00	PASS
		2462	12.17	0	0	12.17	≤30.00	2.10	14.27	≤36.00	PASS
11G	Ant1	2412	16.65	0	0	16.65	≤30.00	2.10	18.75	≤36.00	PASS
		2437	14.69	0	0	14.69	≤30.00	2.10	16.79	≤36.00	PASS
		2462	14.36	0	0	14.36	≤30.00	2.10	16.46	≤36.00	PASS
11N20SISO	Ant1	2412	14.51	0	0	14.51	≤30.00	2.10	16.61	≤36.00	PASS
		2437	14.69	0	0	14.69	≤30.00	2.10	16.79	≤36.00	PASS
		2462	19.67	0	0	19.67	≤30.00	2.10	21.77	≤36.00	PASS
11N40SISO	Ant1	2422	14.44	0	0	14.44	≤30.00	2.10	16.54	≤36.00	PASS
		2437	15.02	0	0	15.02	≤30.00	2.10	17.12	≤36.00	PASS
		2452	14.59	0	0	14.59	≤30.00	2.10	16.69	≤36.00	PASS

TEST GRAPHS AVERAGE

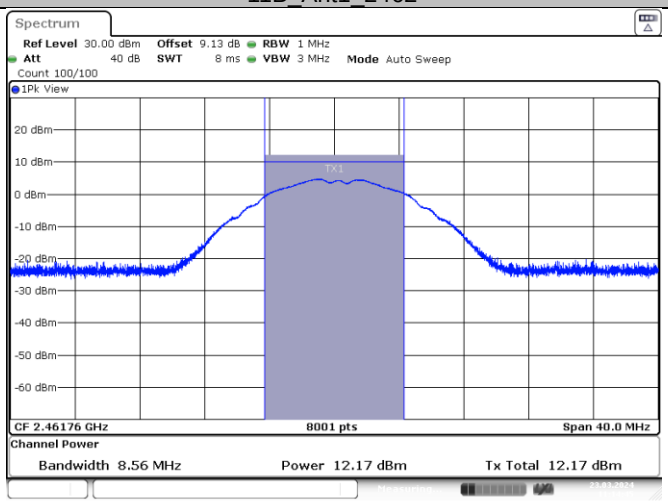
11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



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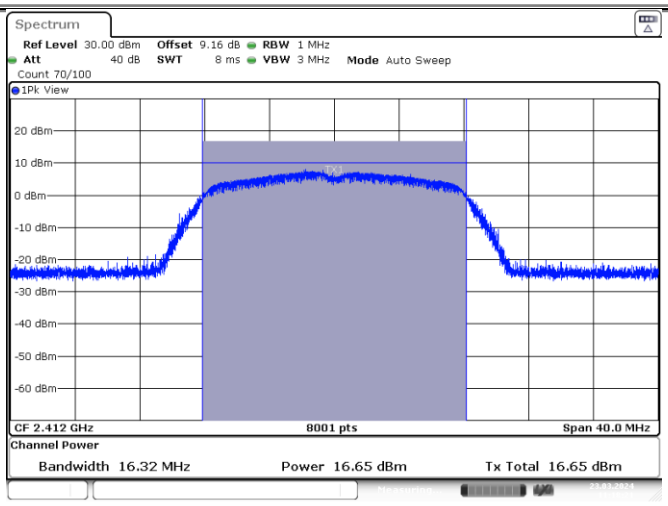

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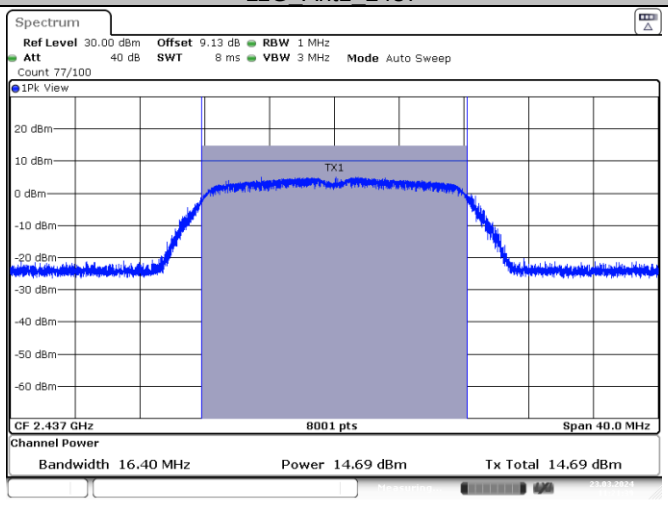
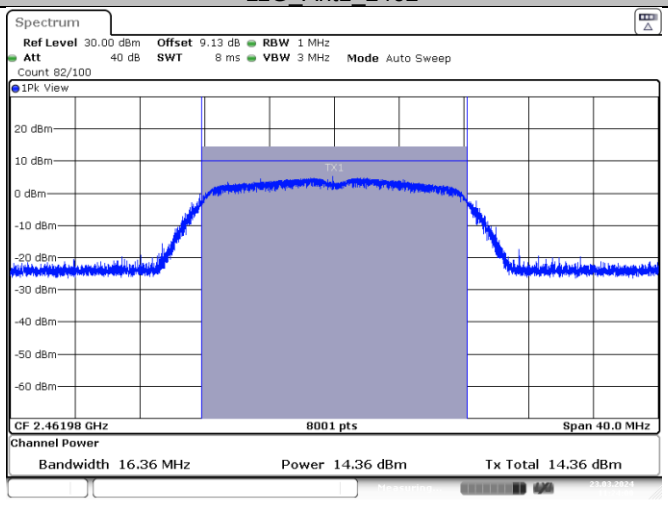


11G_Ant1_2462



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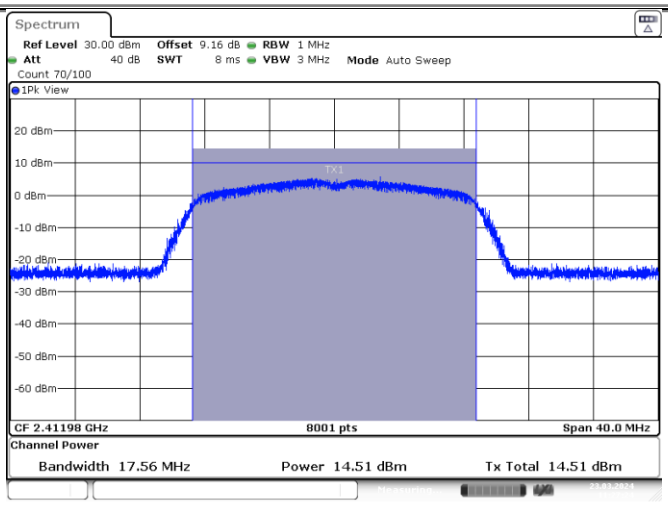

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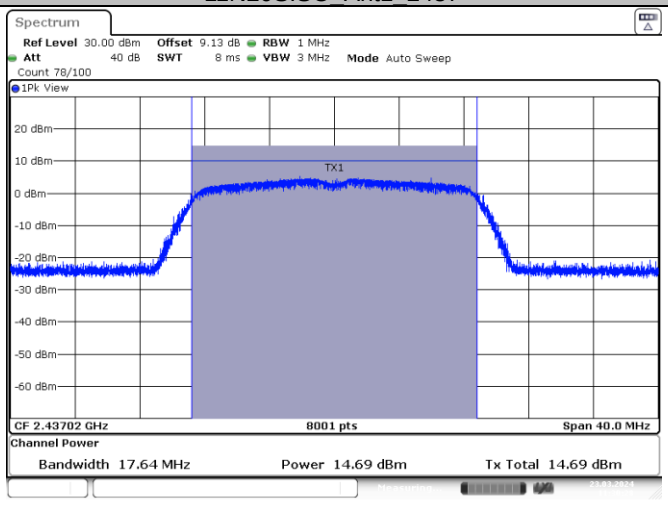

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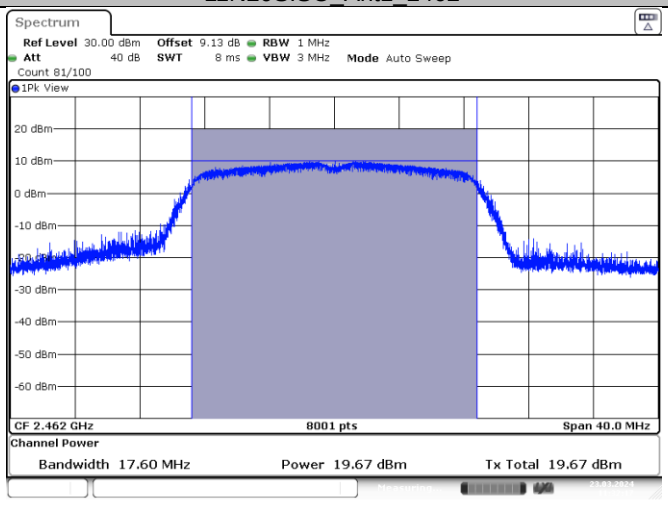

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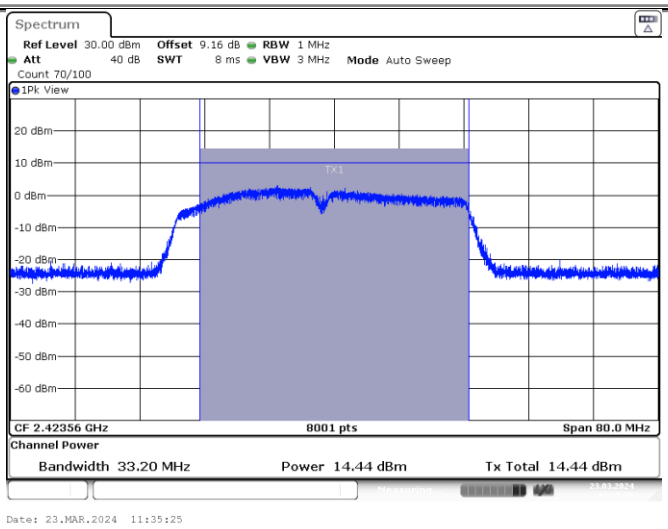
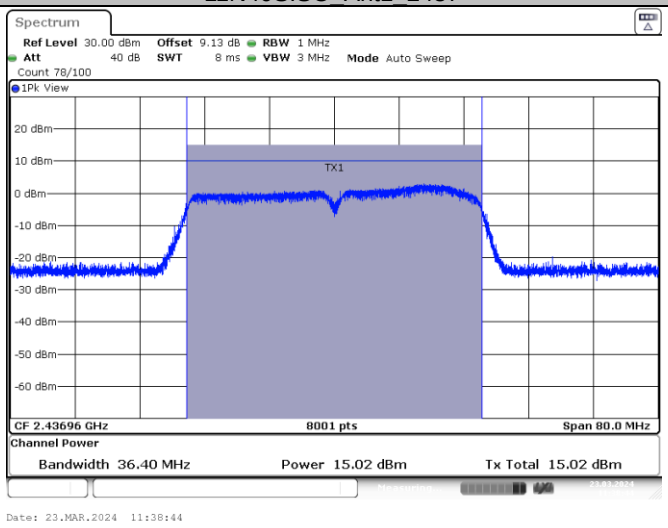


11N40SISO_Ant1_2437



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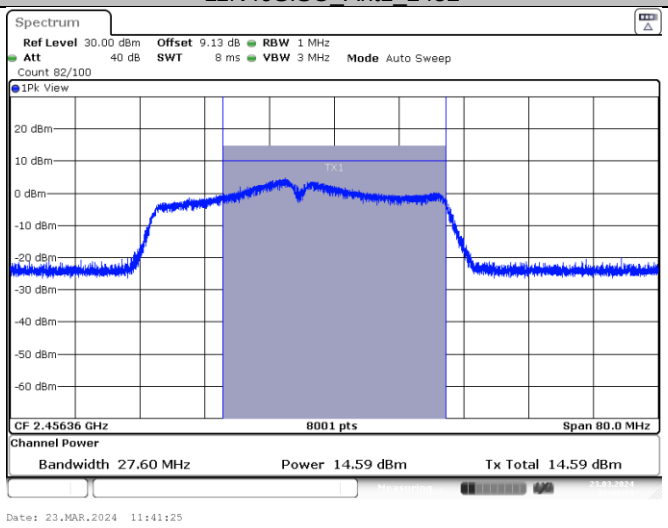


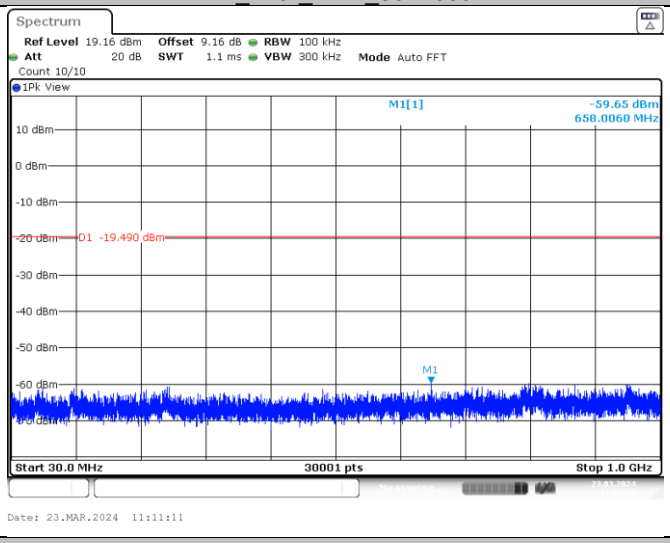
APPENDIXG - CONDUCTED SPURIOUS EMISSIONS

1. Conducted Spurious Emission

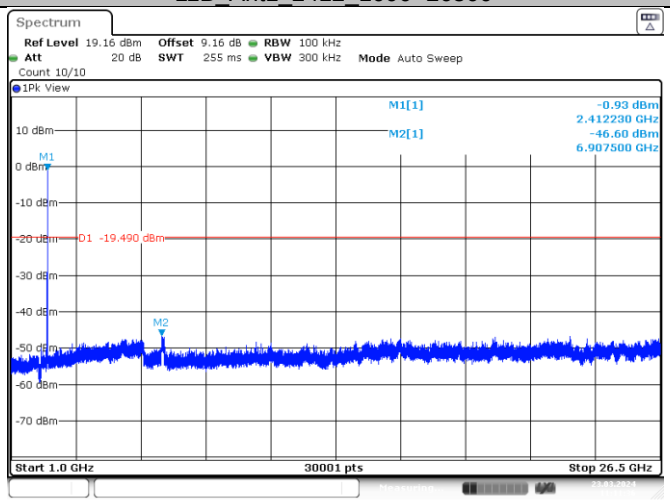
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	30~1000	0.51	-59.65	≤-19.49	PASS
			1000~26500	0.51	-46.6	≤-19.49	PASS
		2437	30~1000	1.91	-59.67	≤-18.09	PASS
			1000~26500	1.91	-46.4	≤-18.09	PASS
		2462	30~1000	1.52	-59.3	≤-18.48	PASS
			1000~26500	1.52	-46.92	≤-18.48	PASS
11G	Ant1	2412	30~1000	-3.14	-59.55	≤-23.14	PASS
			1000~26500	-3.14	-46.29	≤-23.14	PASS
		2437	30~1000	-5.64	-58.86	≤-25.64	PASS
			1000~26500	-5.64	-46.78	≤-25.64	PASS
		2462	30~1000	-5.02	-60.14	≤-25.02	PASS
			1000~26500	-5.02	-45.83	≤-25.02	PASS
11N20SISO	Ant1	2412	30~1000	-5.34	-59.26	≤-25.34	PASS
			1000~26500	-5.34	-46.84	≤-25.34	PASS
		2437	30~1000	-6.05	-60.01	≤-26.05	PASS
			1000~26500	-6.05	-45.81	≤-26.05	PASS
		2462	30~1000	-0.62	-59.41	≤-20.62	PASS
			1000~26500	-0.62	-46.62	≤-20.62	PASS
11N40SISO	Ant1	2422	30~1000	-8.40	-58.75	≤-28.4	PASS
			1000~26500	-8.40	-45.99	≤-28.4	PASS
		2437	30~1000	-7.61	-60.02	≤-27.61	PASS
			1000~26500	-7.61	-46.61	≤-27.61	PASS
		2452	30~1000	-6.28	-58.81	≤-26.28	PASS
			1000~26500	-6.28	-46.39	≤-26.28	PASS

Test Graphs

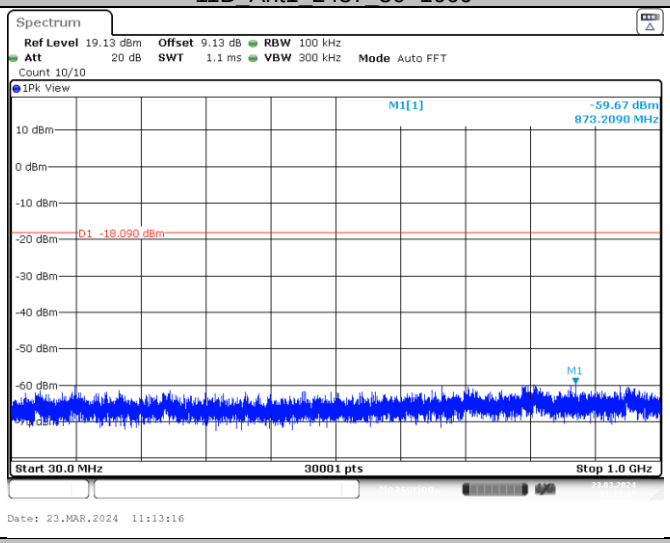
11B_Ant1_2412_30~1000



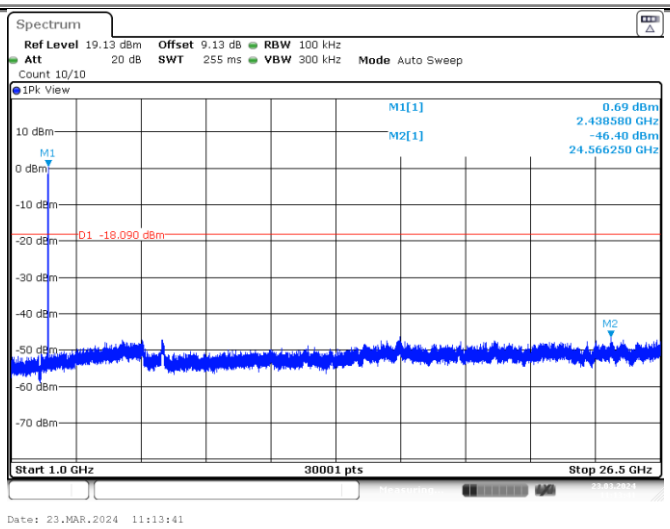
11B_Ant1_2412_1000~26500



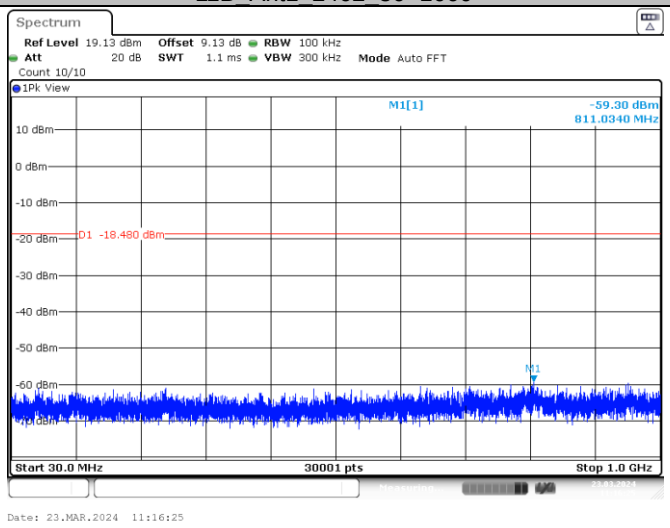
11B_Ant1_2437_30~1000



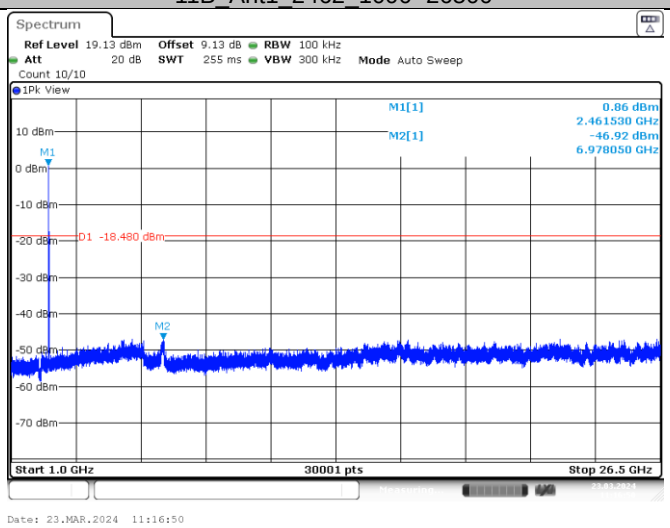
11B_Ant1_2437_1000~26500



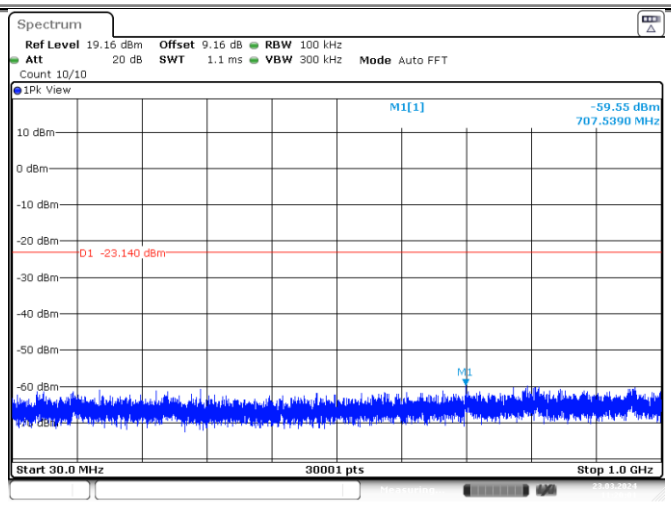
11B_Ant1_2462_30~1000



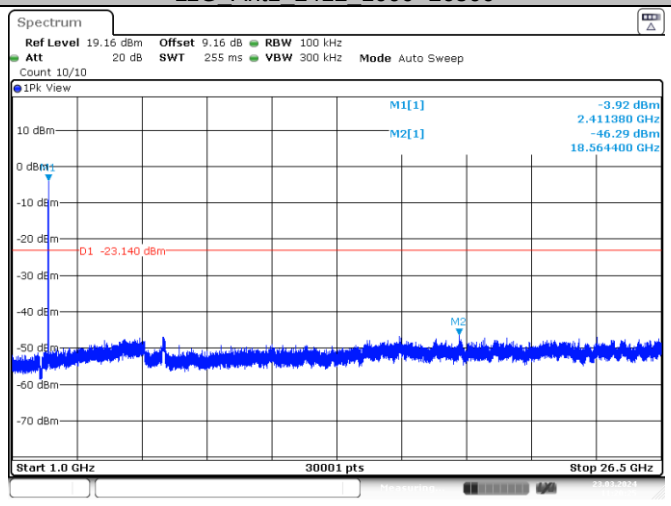
11B_Ant1_2462_1000~26500



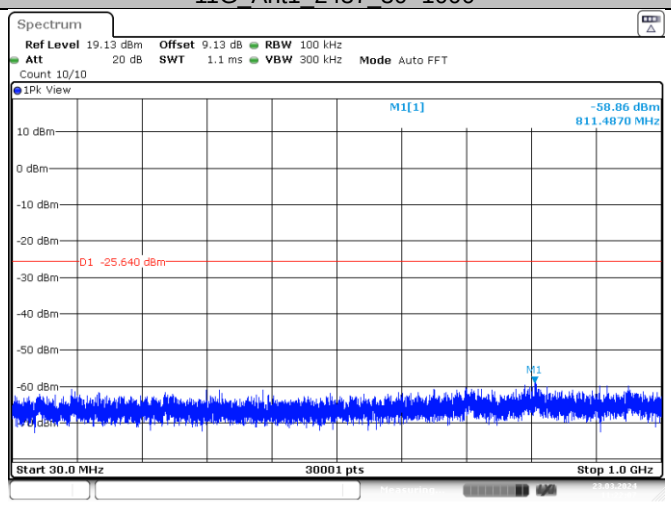
11G_Ant1_2412_30~1000



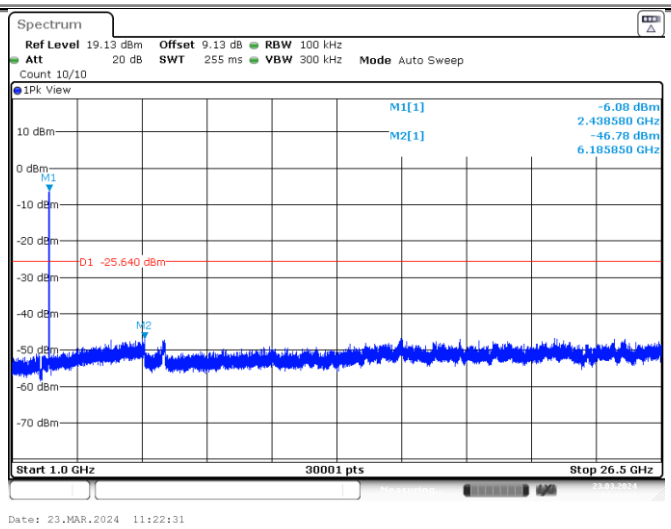
11G_Ant1_2412_1000~26500



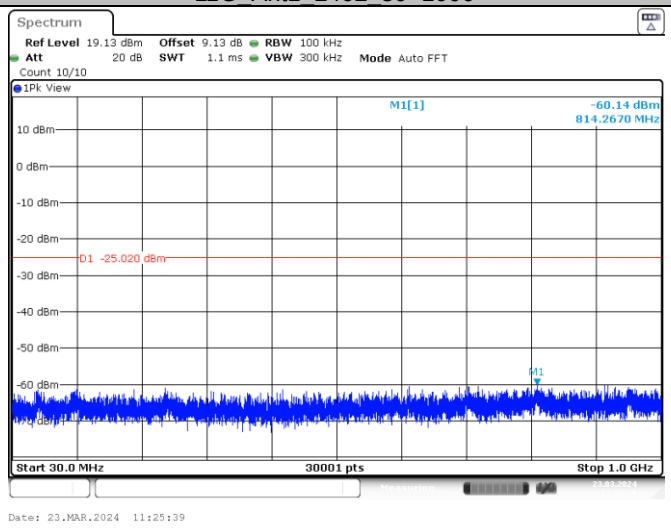
11G_Ant1_2437_30~1000



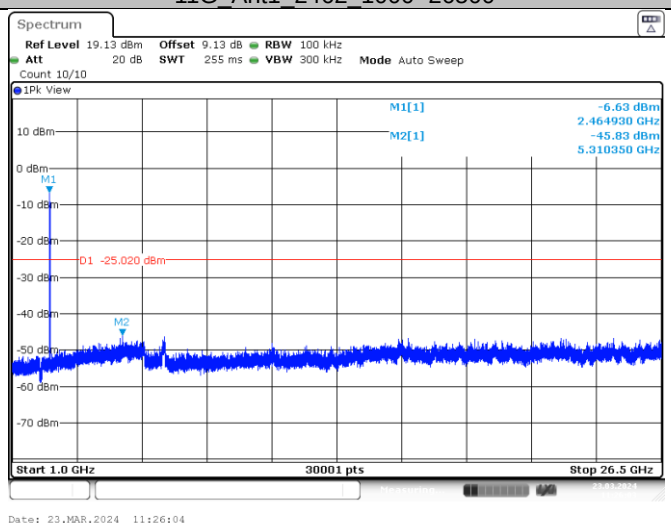
11G_Ant1_2437_1000~26500



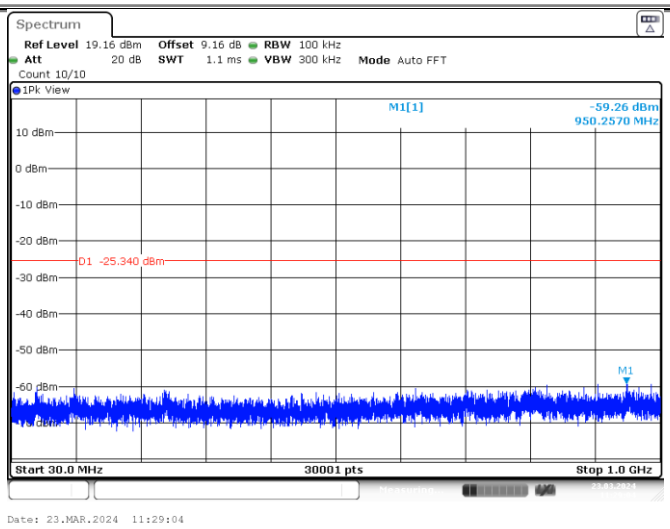
11G_Ant1_2462_30~1000



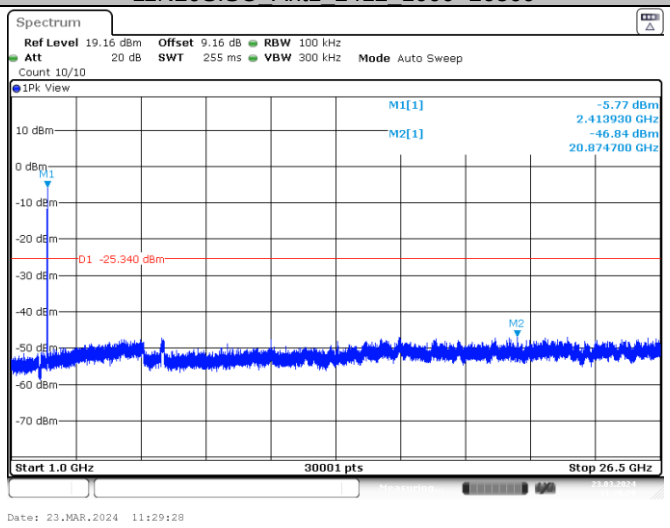
11G_Ant1_2462_1000~26500



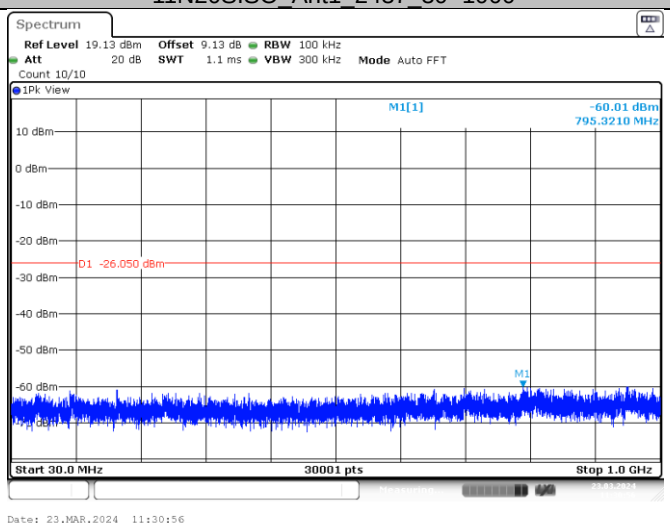
11N20SISO_Ant1_2412_30~1000



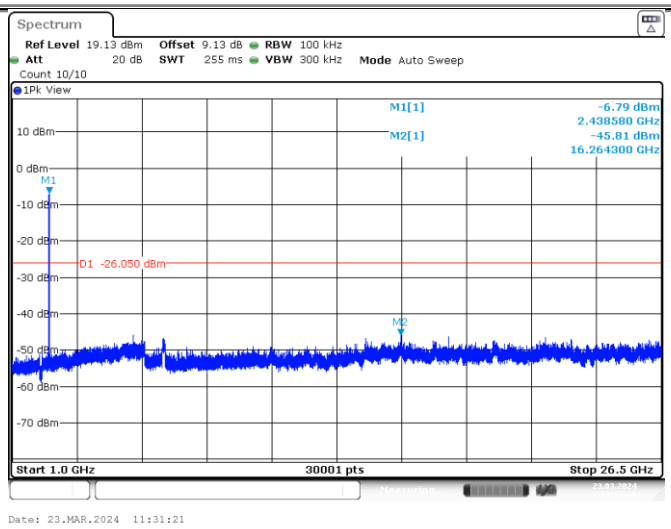
11N20SISO_Ant1_2412_1000~26500



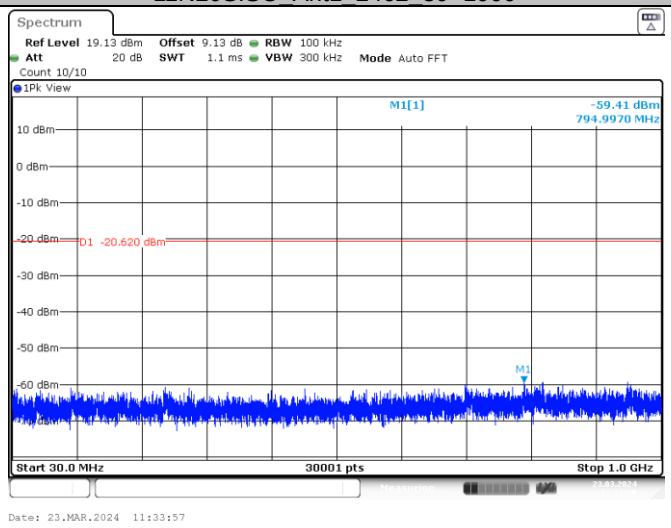
11N20SISO_Ant1_2437_30~1000



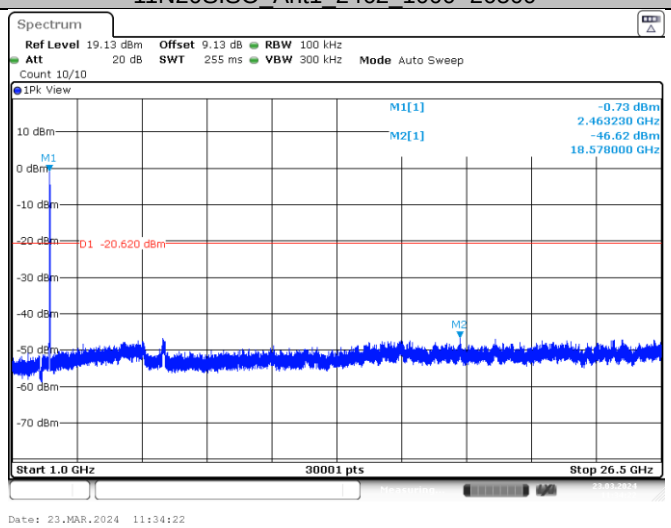
11N20SISO_Ant1_2437_1000~26500



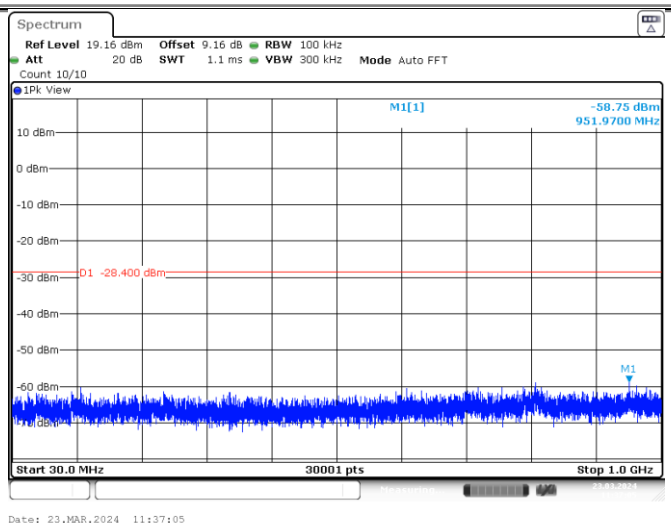
11N20SISO_Ant1_2462_30~1000



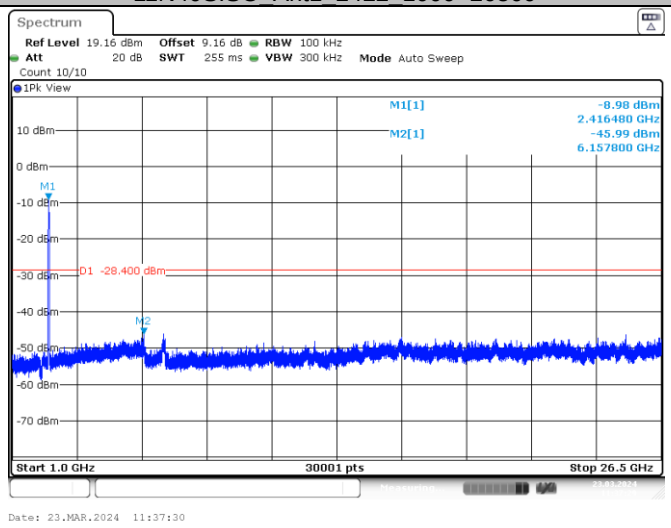
11N20SISO_Ant1_2462_1000~26500



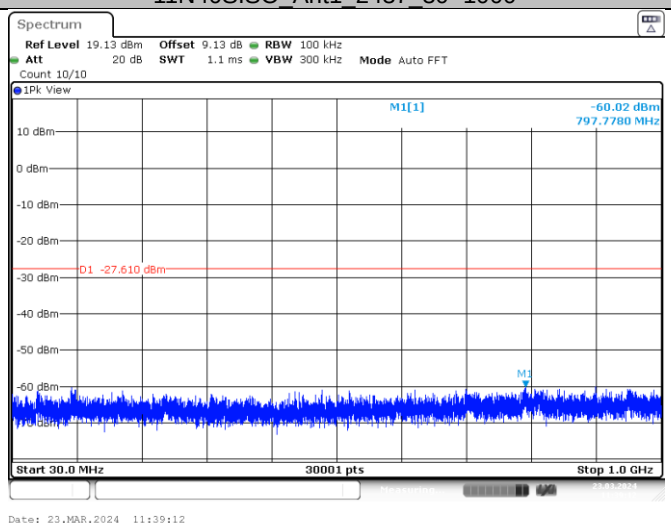
11N40SISO_Ant1_2422_30~1000



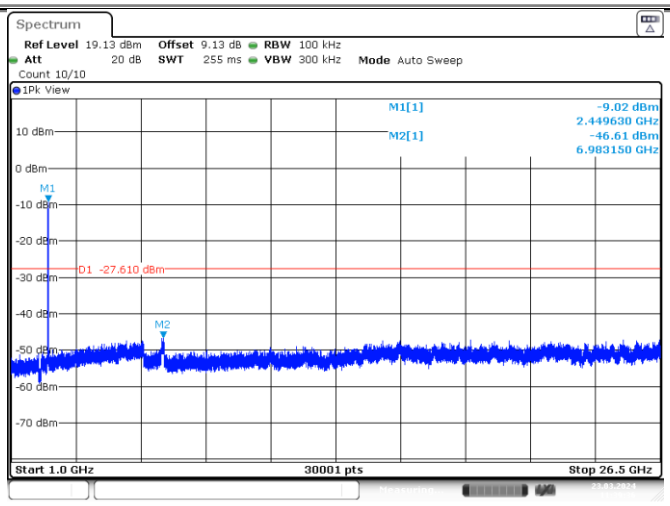
11N40SISO_Ant1_2422_1000~26500



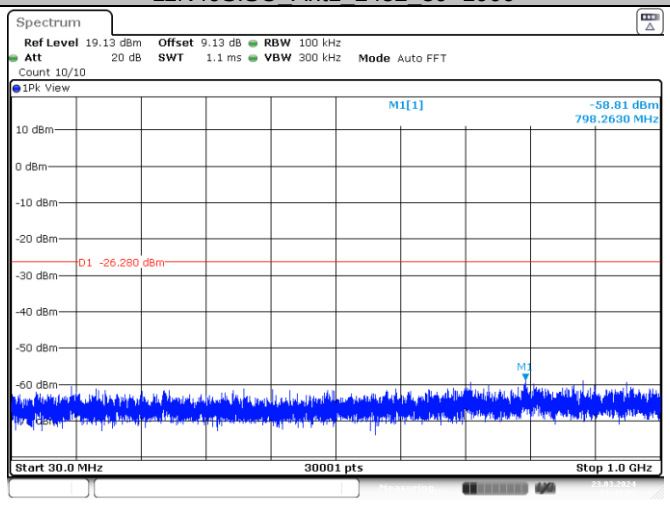
11N40SISO_Ant1_2437_30~1000



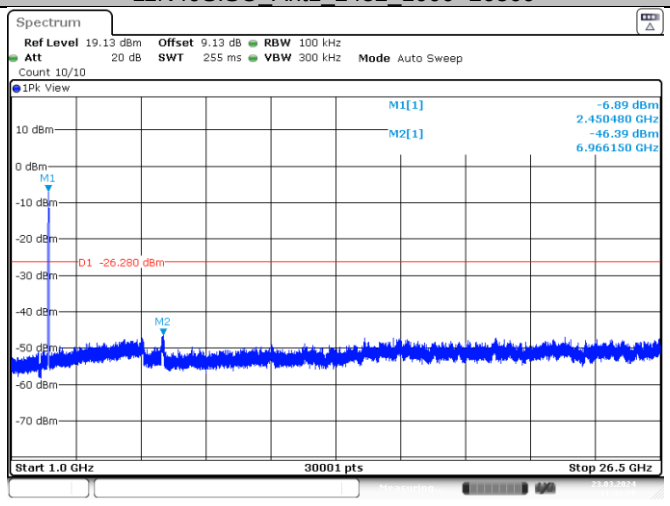
11N40SISO_Ant1_2437_1000~26500



11N40SISO_Ant1_2452_30~1000



11N40SISO_Ant1_2452_1000~26500



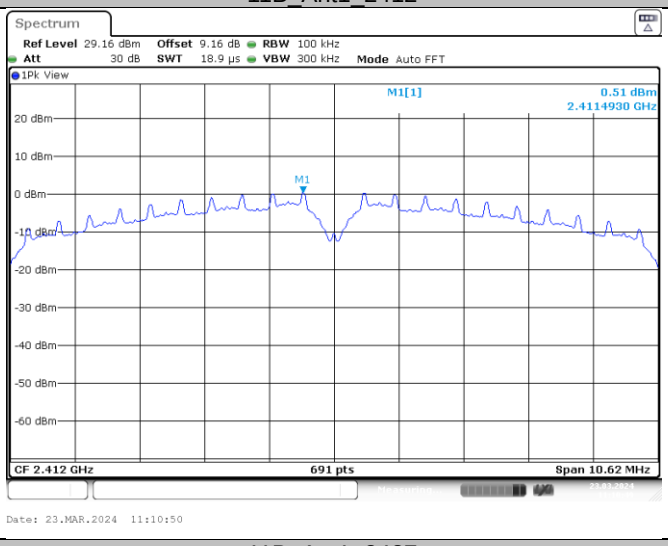
2. Band edge measurements

Reference level measurement

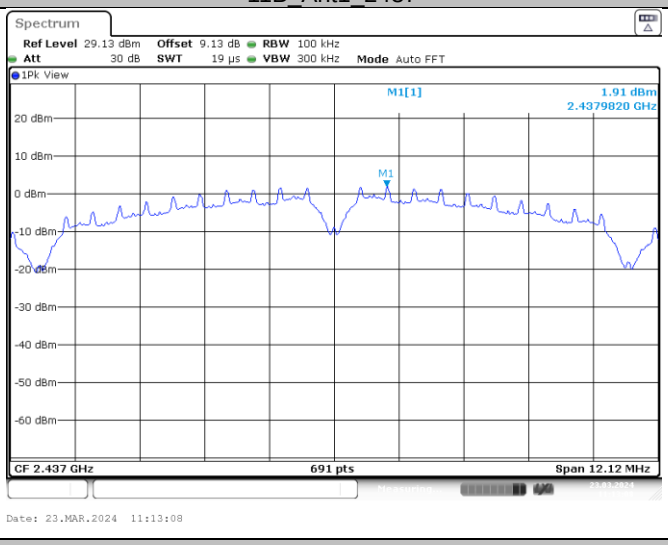
TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
11B	Ant1	2412	2411.49	0.51
		2437	2437.98	1.91
		2462	2461.00	1.52
11G	Ant1	2412	2410.73	-3.14
		2437	2435.36	-5.64
		2462	2463.49	-5.02
11N20SISO	Ant1	2412	2411.01	-5.34
		2437	2437.61	-6.05
		2462	2464.25	-0.62
11N40SISO	Ant1	2422	2419.77	-8.40
		2437	2449.09	-7.61
		2452	2450.14	-6.28

TEST GRAPHS

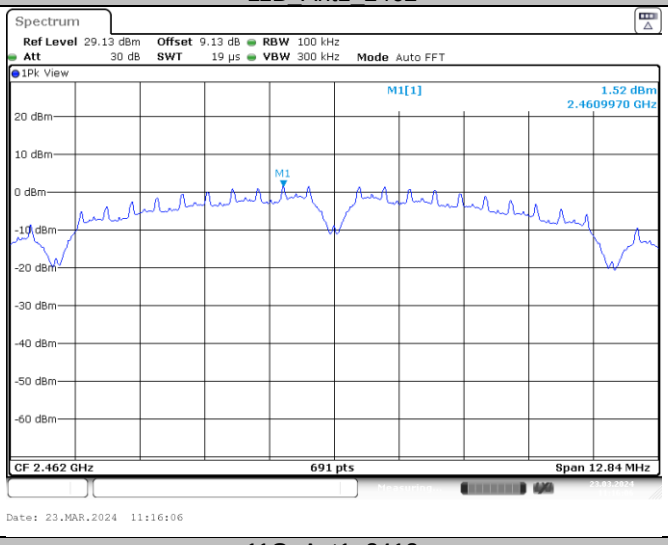
11B_Ant1_2412



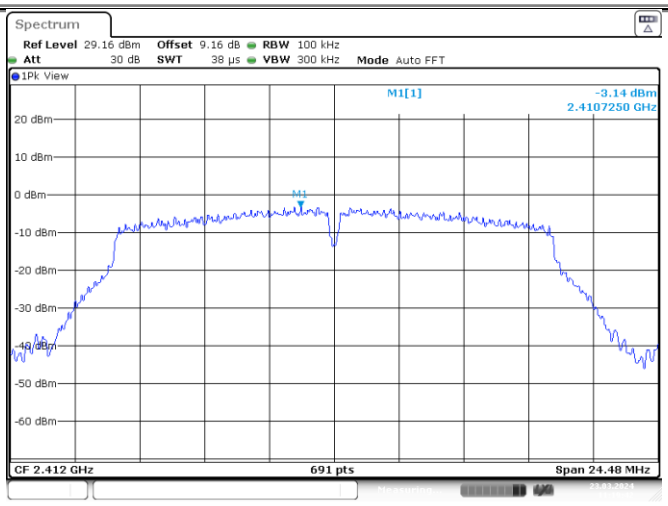
11B_Ant1_2437



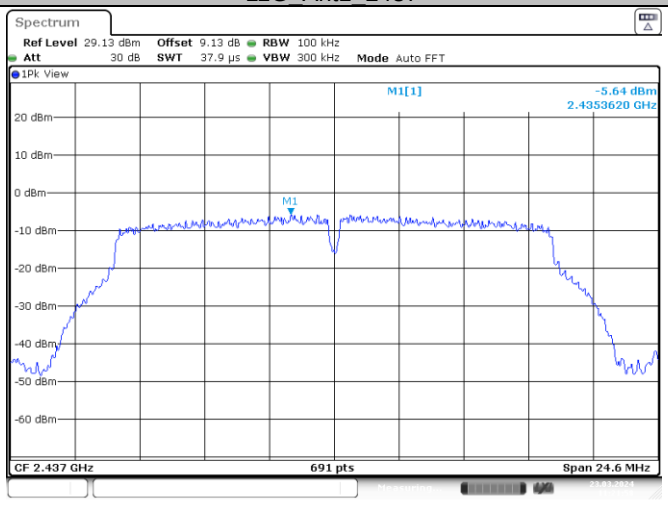
11B_Ant1_2462



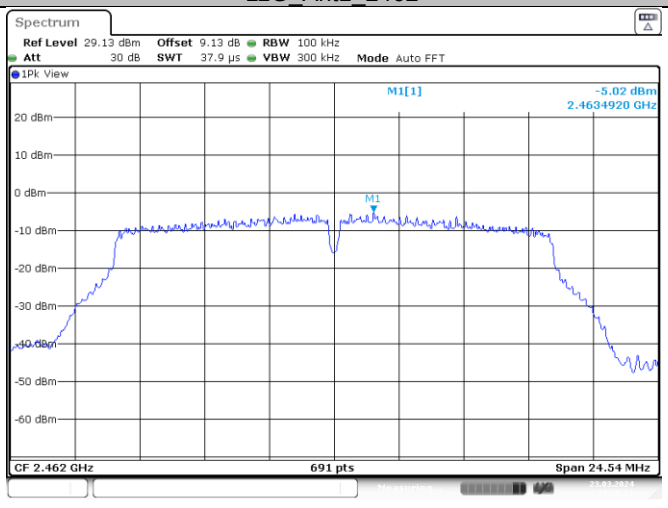
11G_Ant1_2412



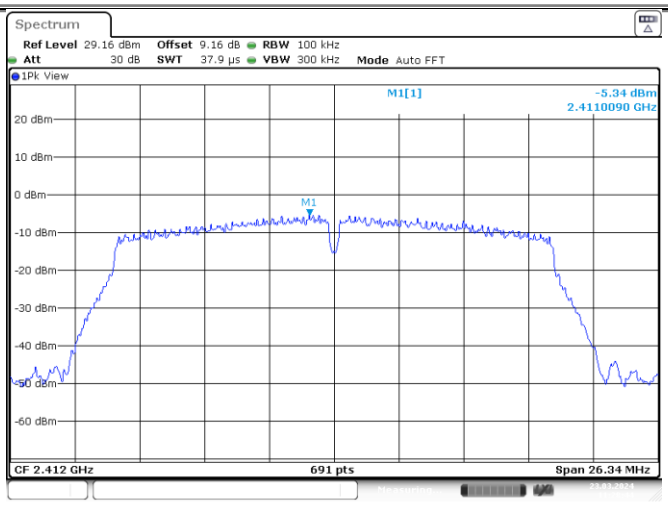
11G_Ant1_2437



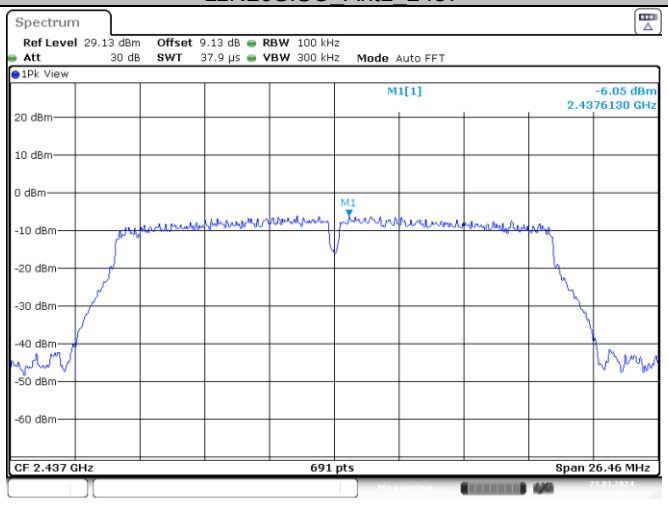
11G_Ant1_2462



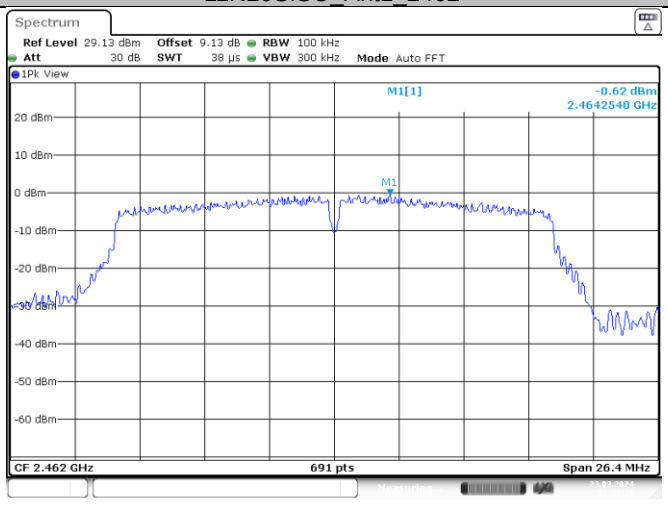
11N20SISO_Ant1_2412



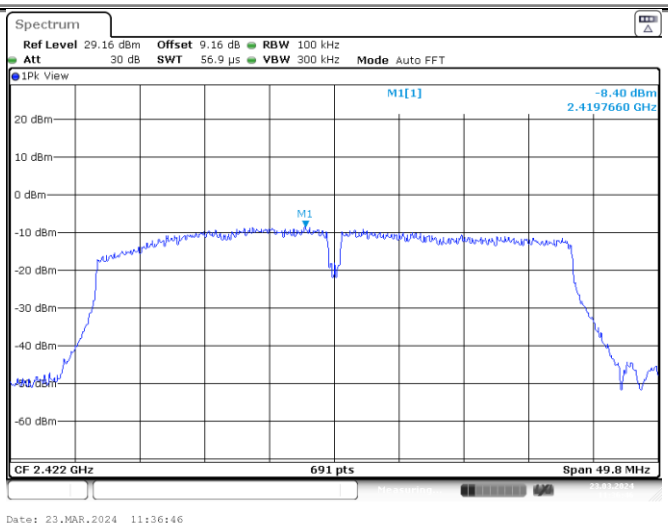
11N20SISO_Ant1_2437



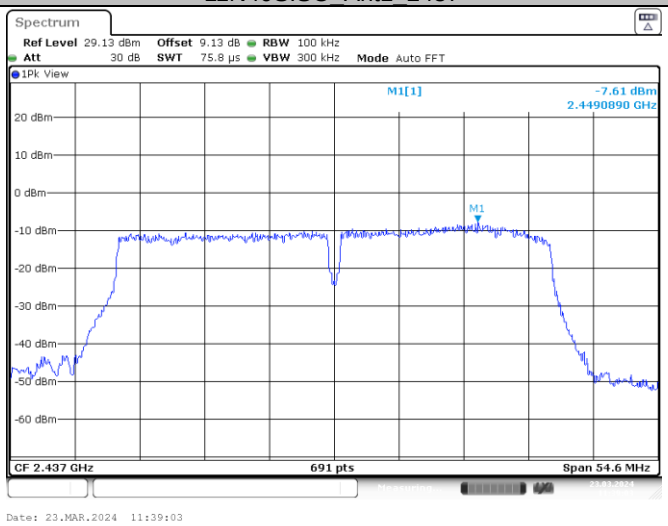
11N20SISO_Ant1_2462



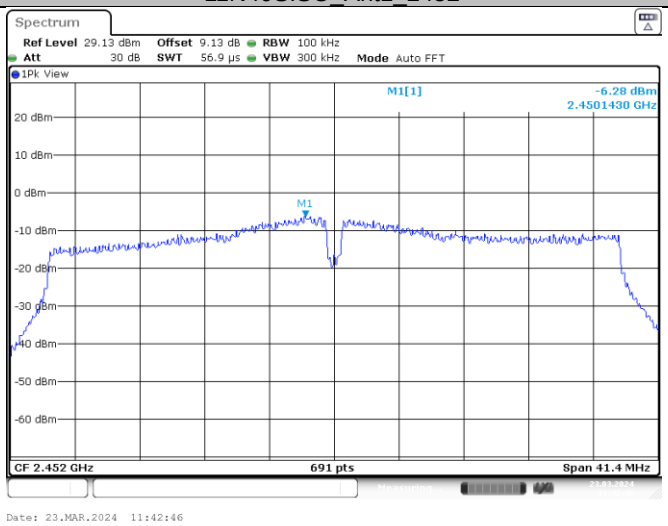
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

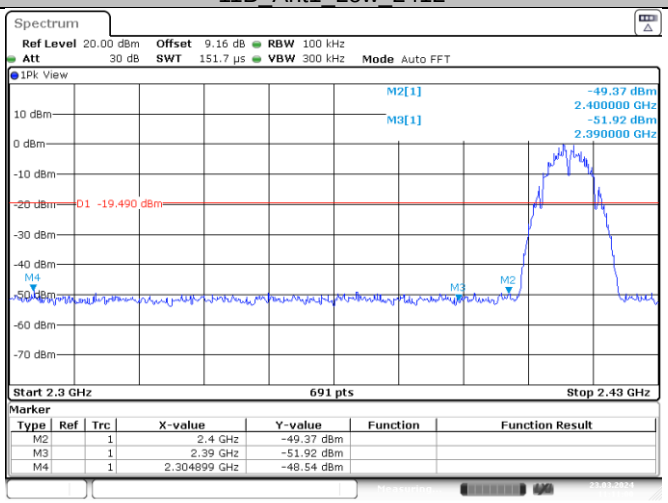


Note：

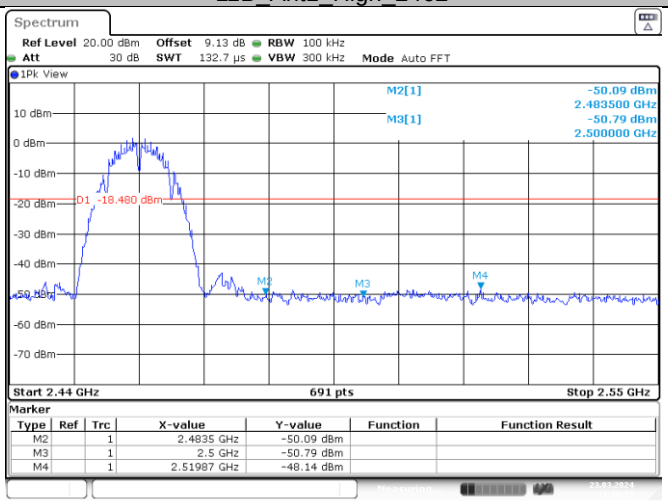
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	0.51	-48.54	≤-19.49	PASS
		High	2462	1.52	-48.14	≤-18.48	PASS
11G	Ant1	Low	2412	-3.14	-39.86	≤-23.14	PASS
		High	2462	-5.02	-48.27	≤-25.02	PASS
11N20SISO	Ant1	Low	2412	-5.34	-46.11	≤-25.34	PASS
		High	2462	-0.62	-43.45	≤-20.62	PASS
11N40SISO	Ant1	Low	2422	-8.40	-47.88	≤-28.4	PASS
		High	2452	-6.28	-47.45	≤-26.28	PASS

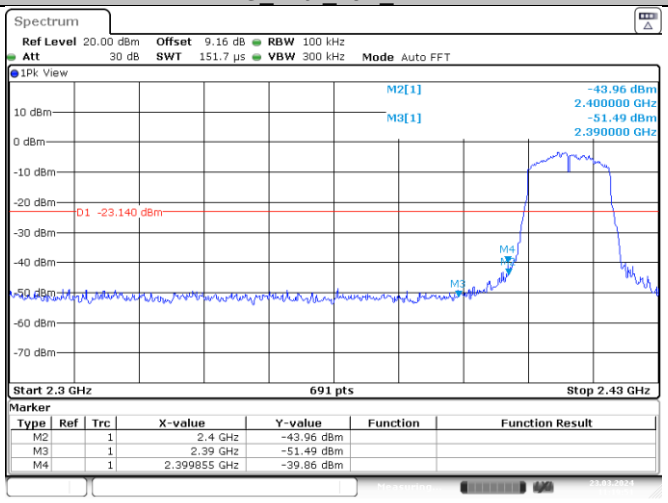
11B_Ant1_Low_2412



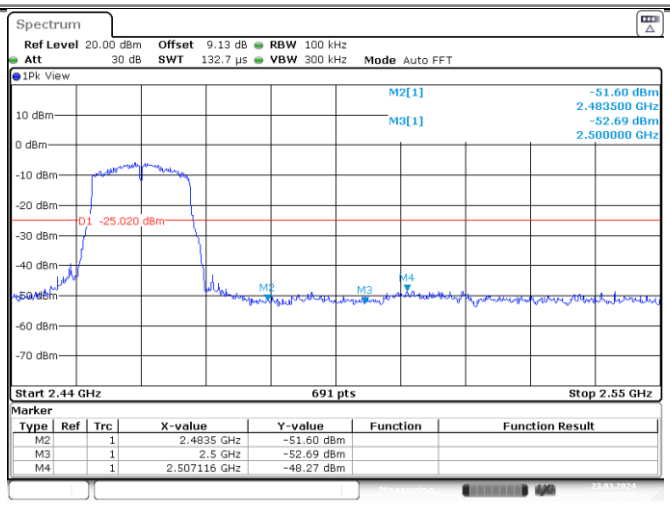
11B_Ant1_High_2462



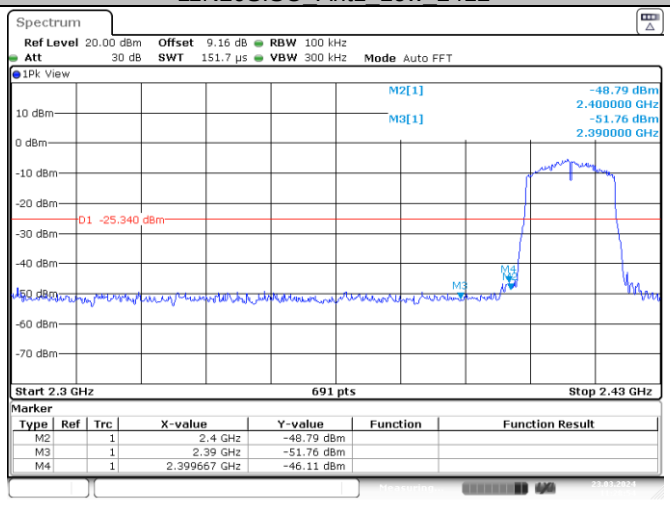
11G_Ant1_Low_2412



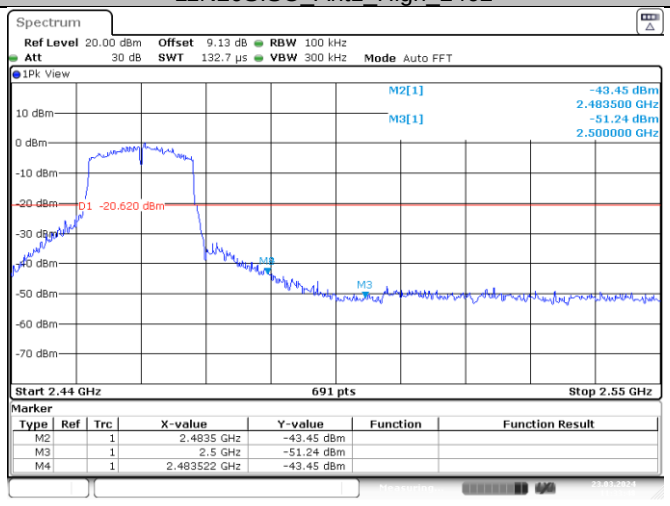
11G_Ant1_High_2462



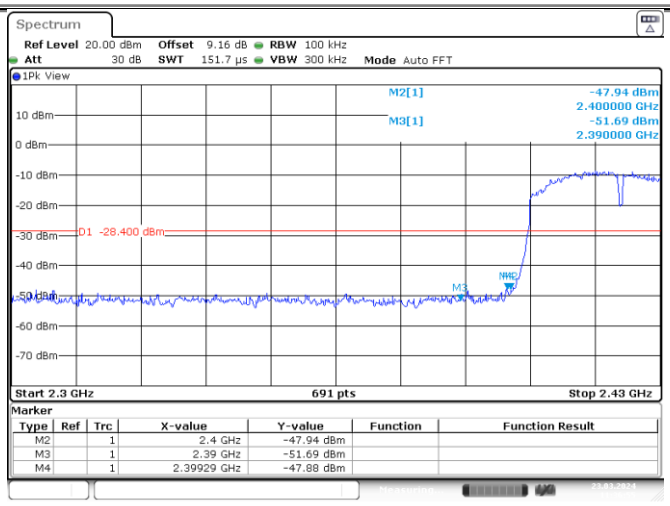
11N20SISO_Ant1_Low_2412



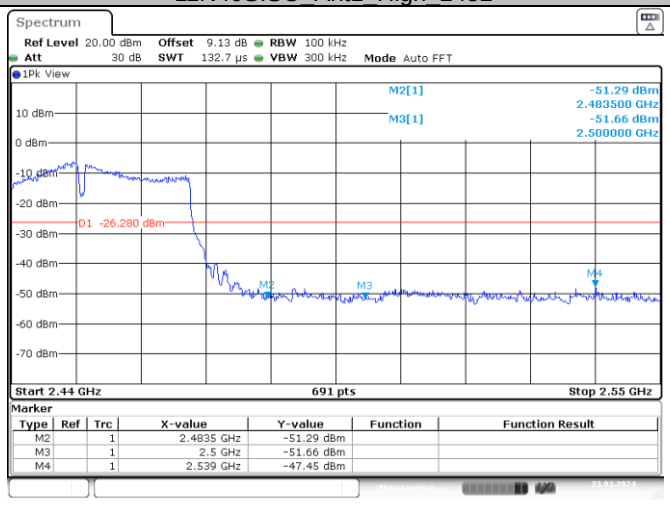
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

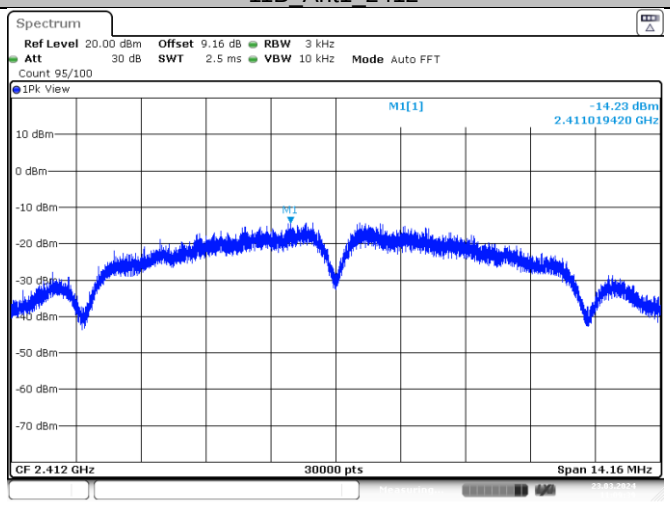


APPENDIXH - POWER SPECTRAL DENSITY

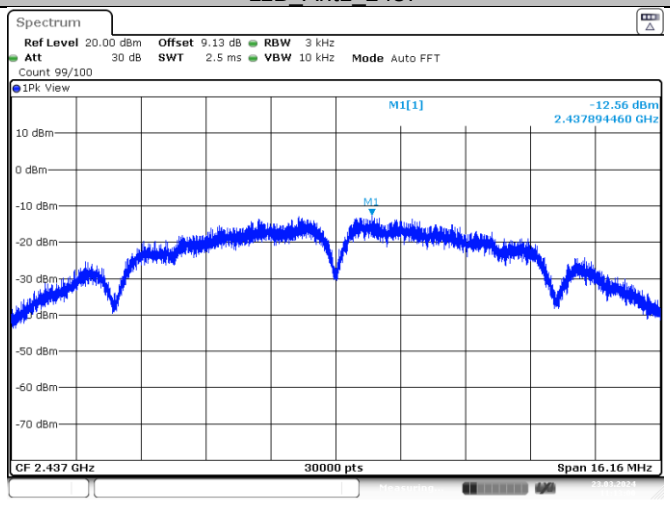
TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-14.23	≤8.00	PASS
		2437	-12.56	≤8.00	PASS
		2462	-12.10	≤8.00	PASS
11G	Ant1	2412	-14.92	≤8.00	PASS
		2437	-16.80	≤8.00	PASS
		2462	-17.31	≤8.00	PASS
11N20SISO	Ant1	2412	-16.75	≤8.00	PASS
		2437	-16.85	≤8.00	PASS
		2462	-11.23	≤8.00	PASS
11N40SISO	Ant1	2422	-20.27	≤8.00	PASS
		2437	-19.59	≤8.00	PASS
		2452	-17.49	≤8.00	PASS

Test Graphs

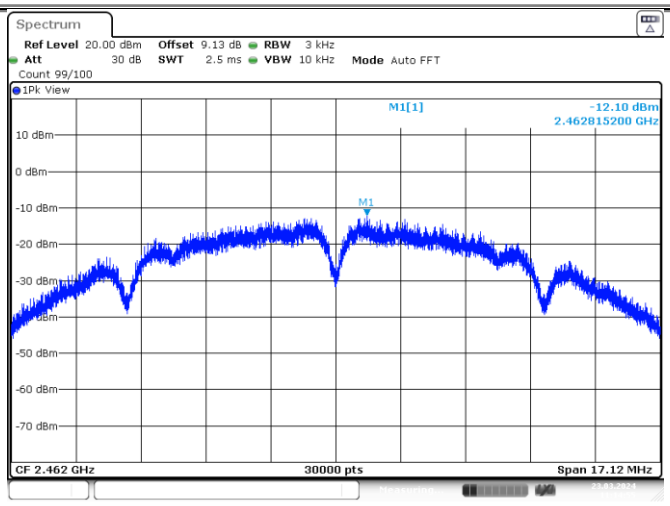
11B_Ant1_2412



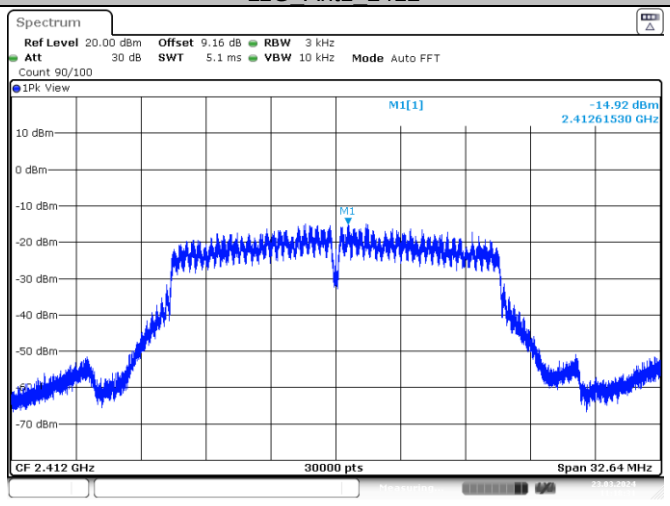
11B_Ant1_2437



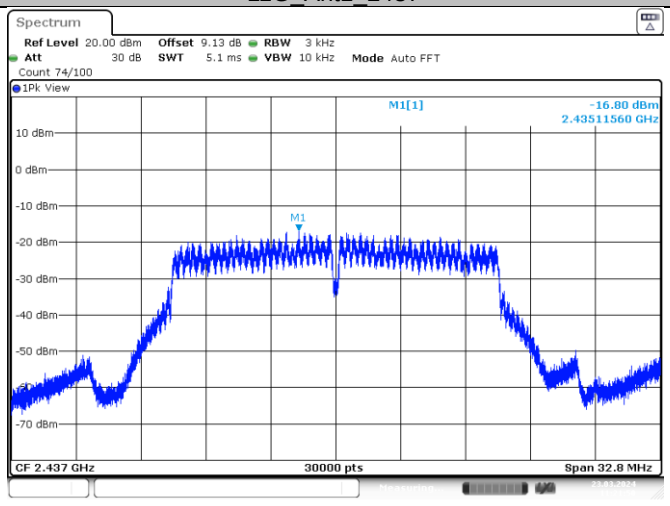
11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



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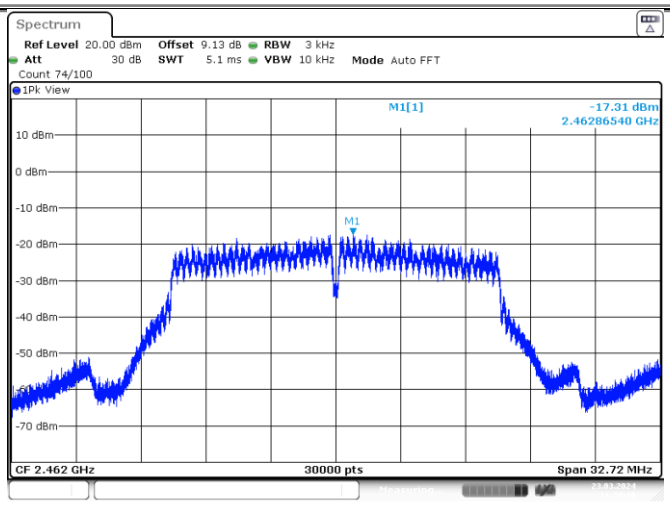

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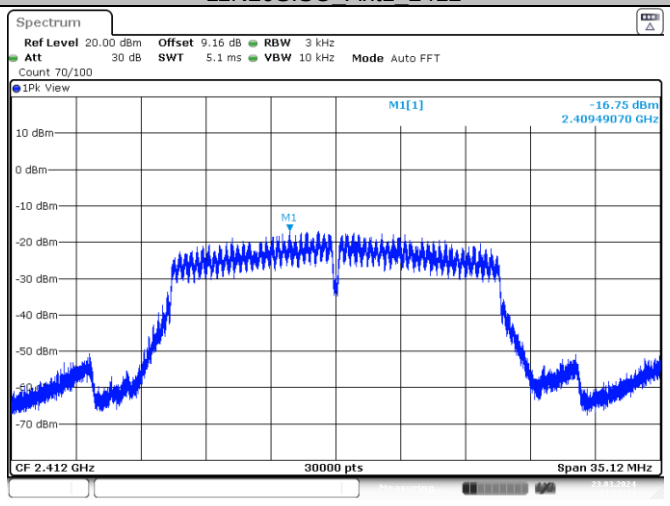

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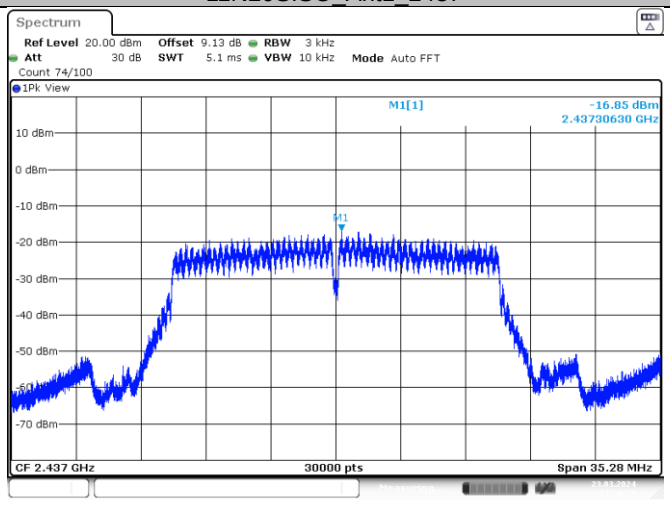

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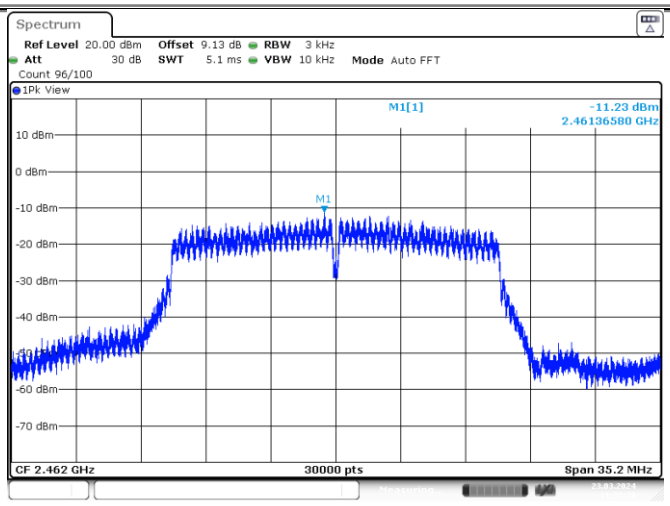

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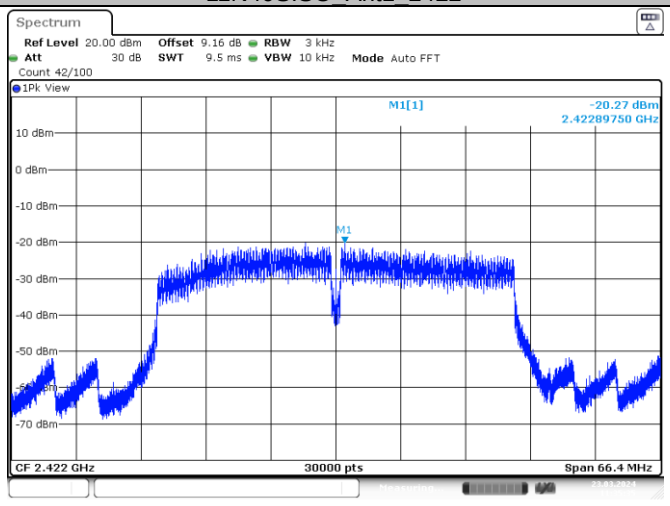

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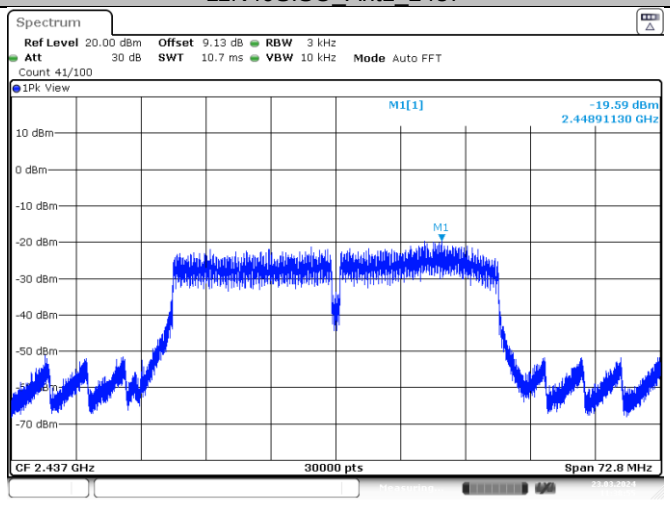

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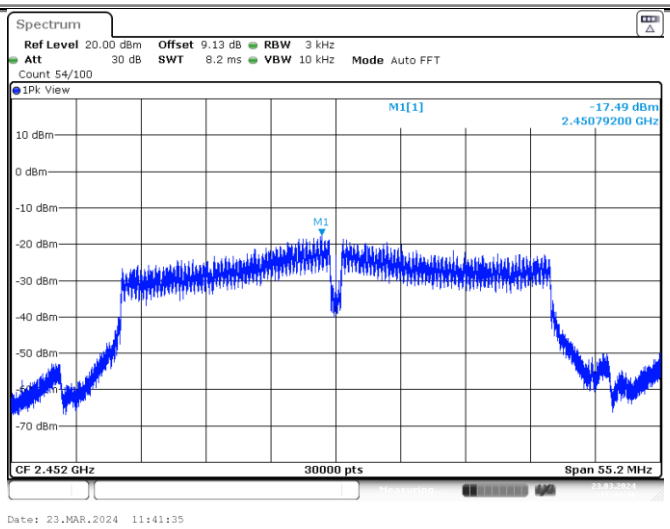

End of Test Report