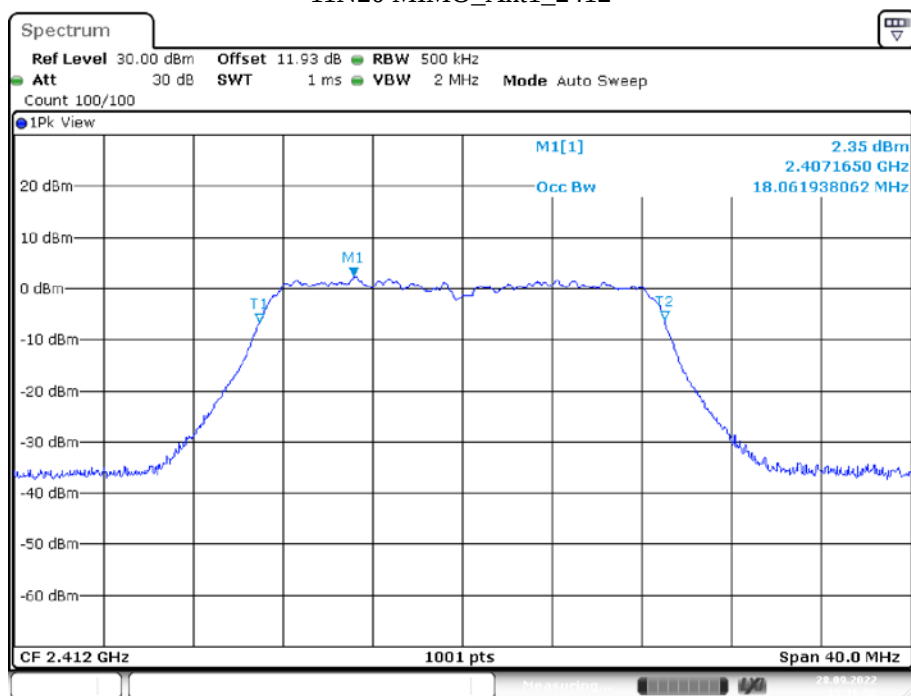
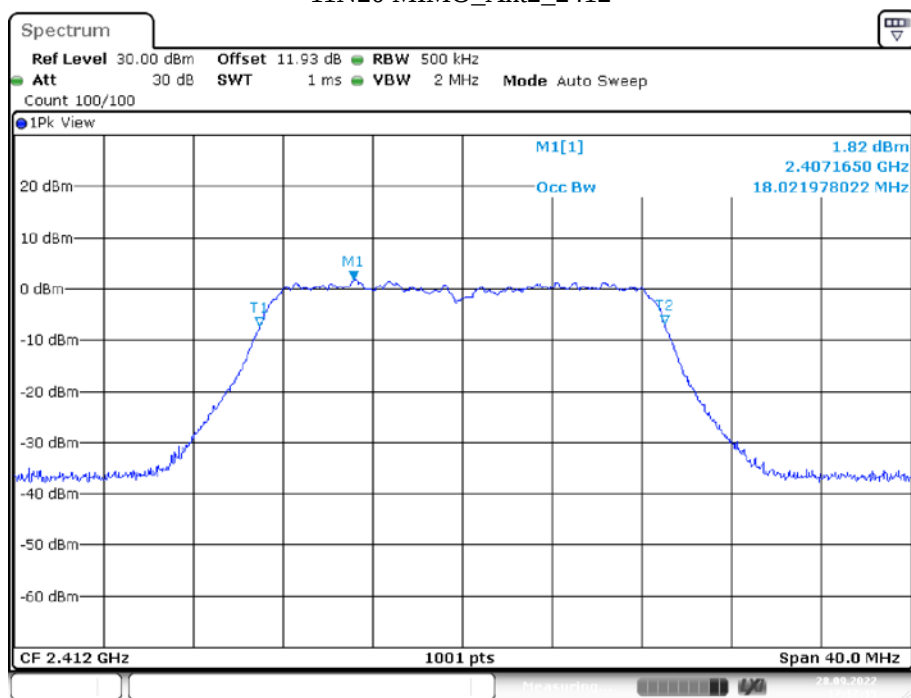


11N20 MIMO_Ant1_2412



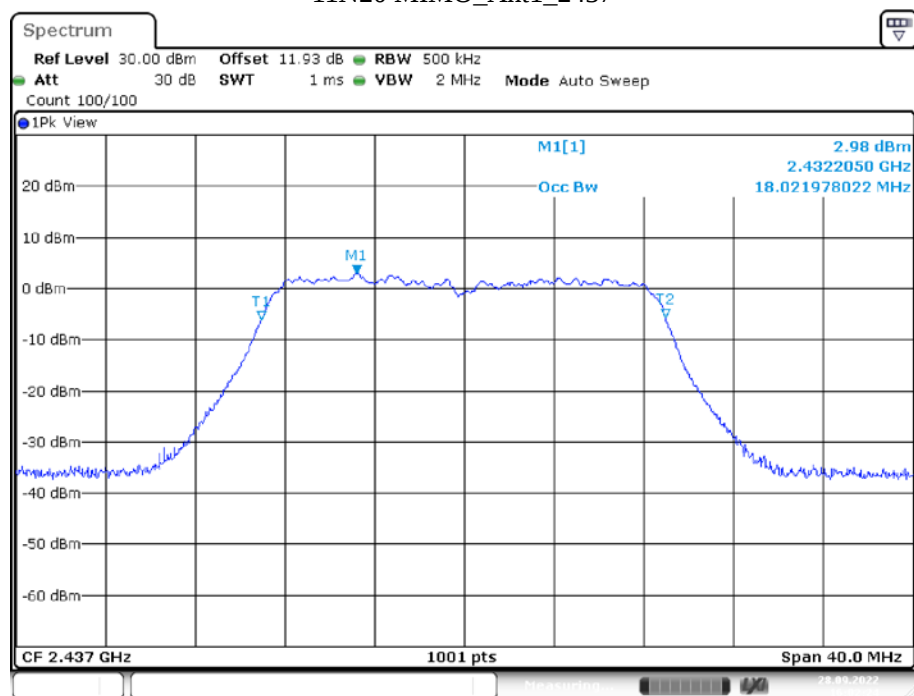
Date: 28.SEP.2022 15:16:50

11N20 MIMO_Ant2_2412



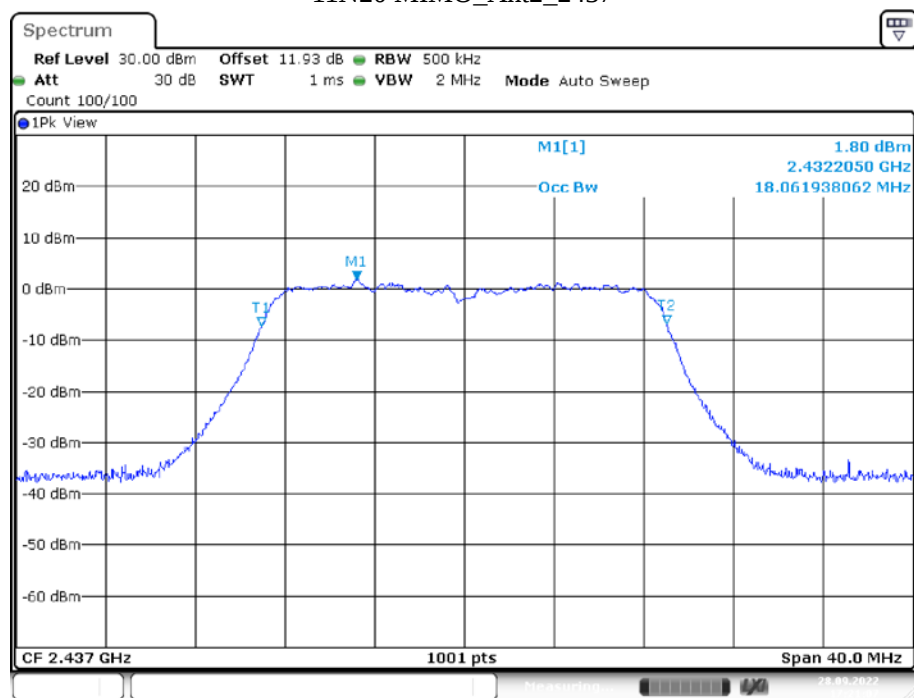
Date: 28.SEP.2022 17:17:16

11N20 MIMO_Ant1_2437



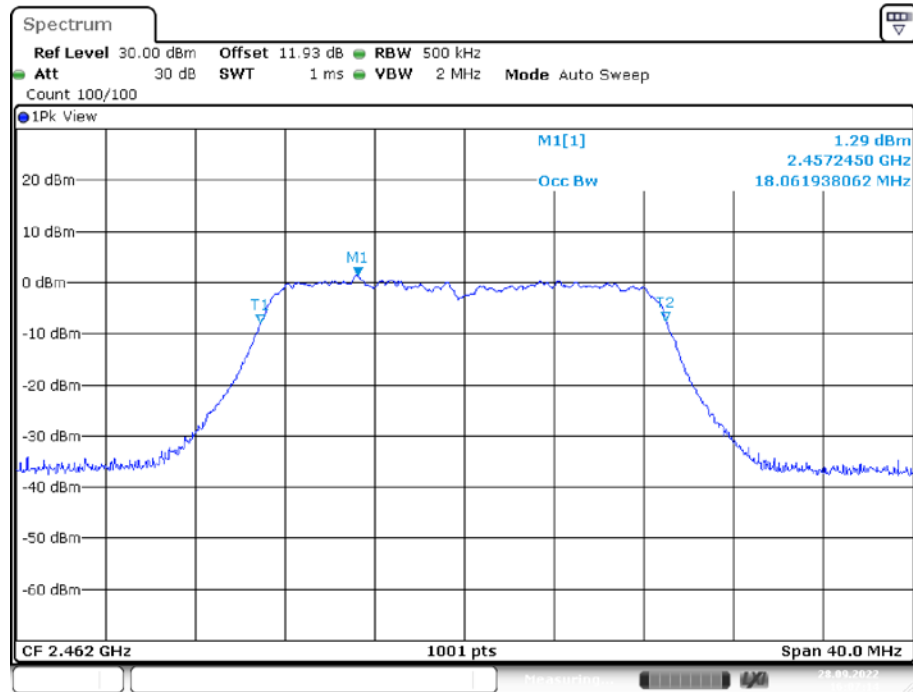
Date: 28.SEP.2022 16:02:24

11N20 MIMO_Ant2_2437

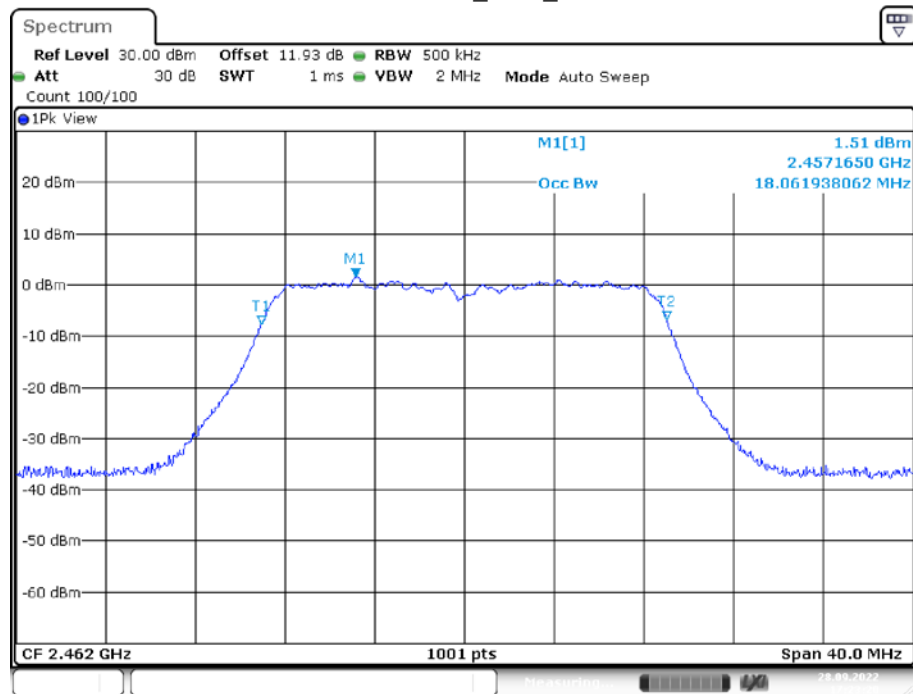


Date: 28.SEP.2022 17:21:08

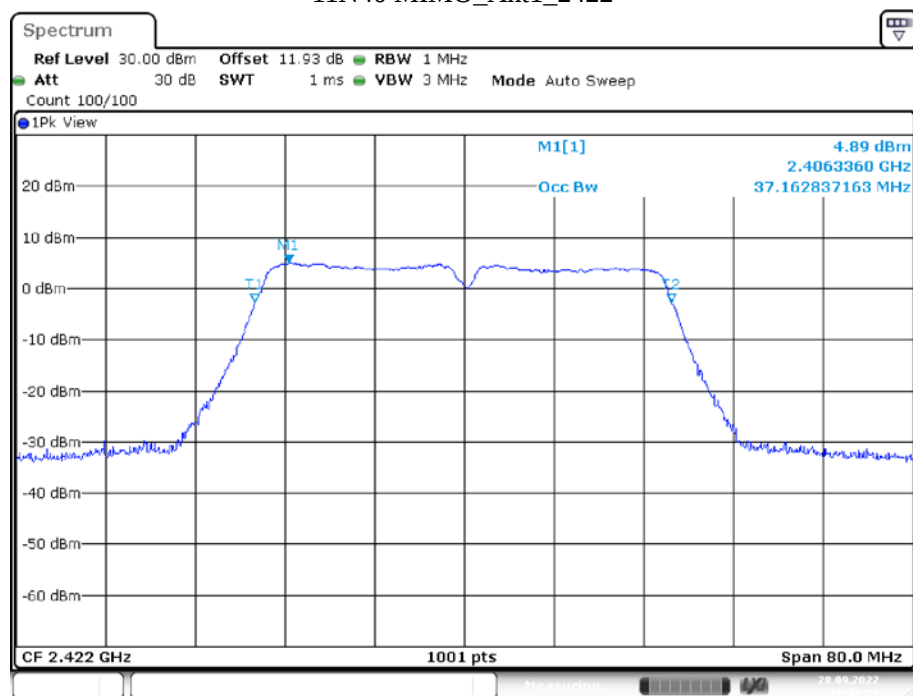
11N20 MIMO_Ant1_2462



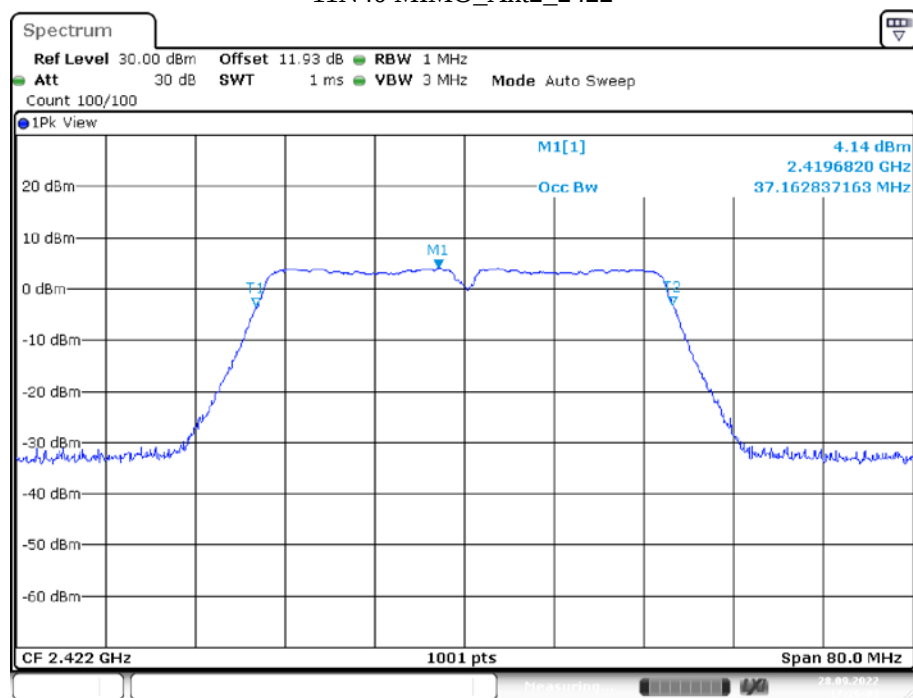
11N20 MIMO_Ant2_2462



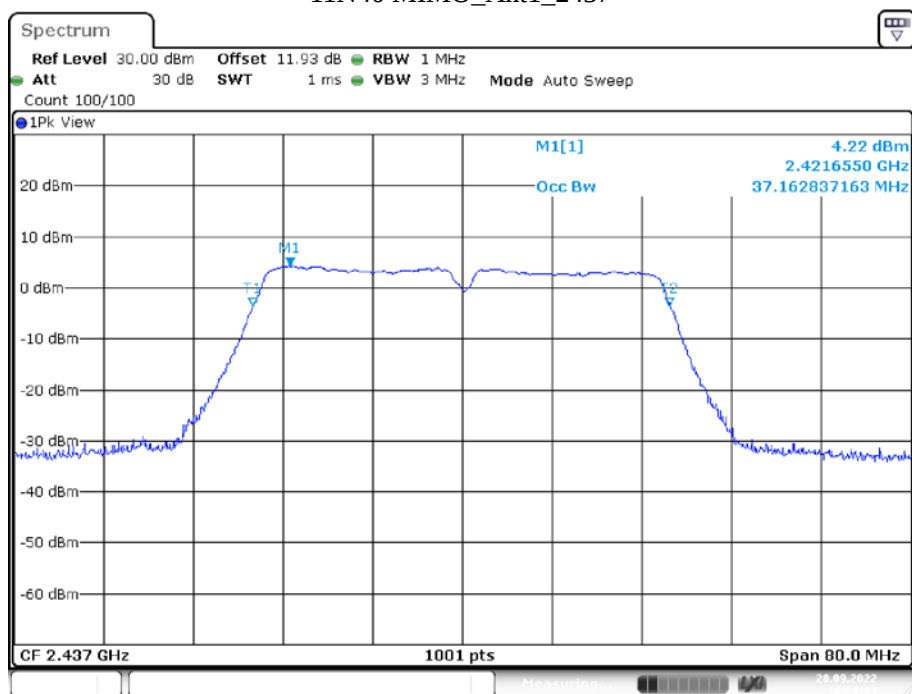
11N40 MIMO_Ant1_2422



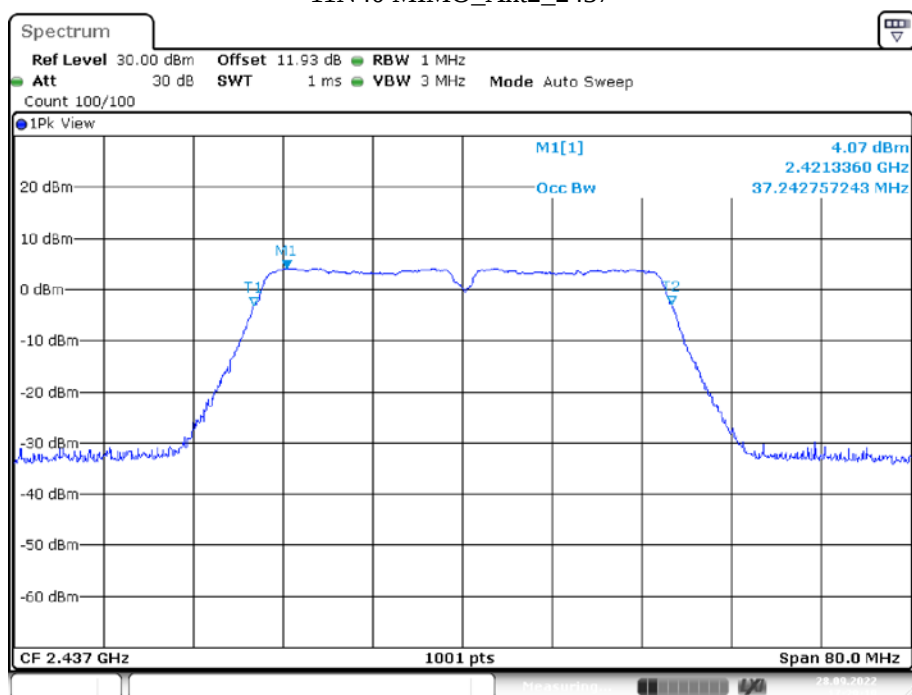
11N40 MIMO_Ant2_2422



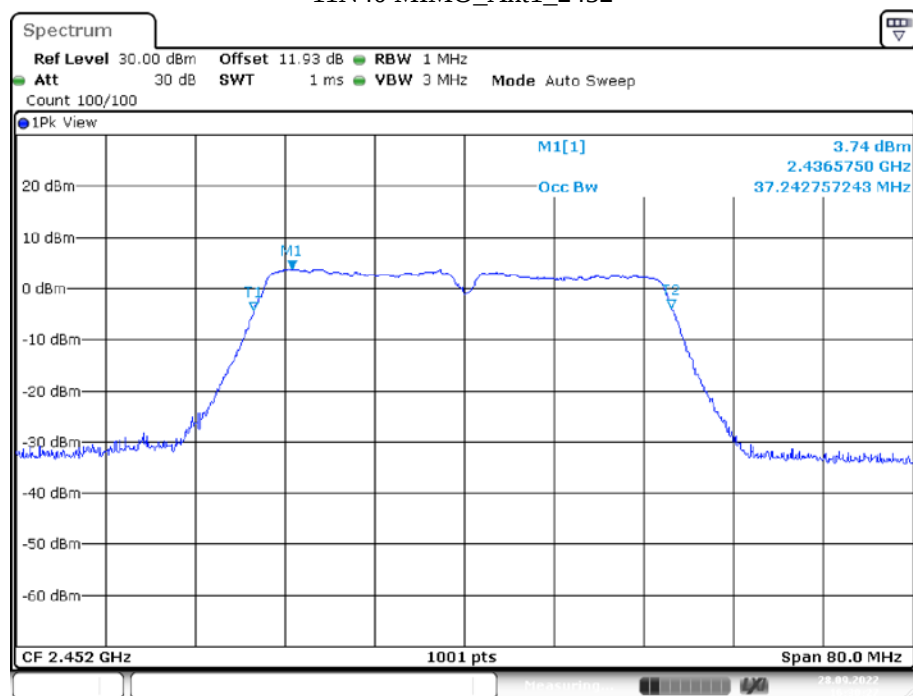
11N40 MIMO_Ant1_2437



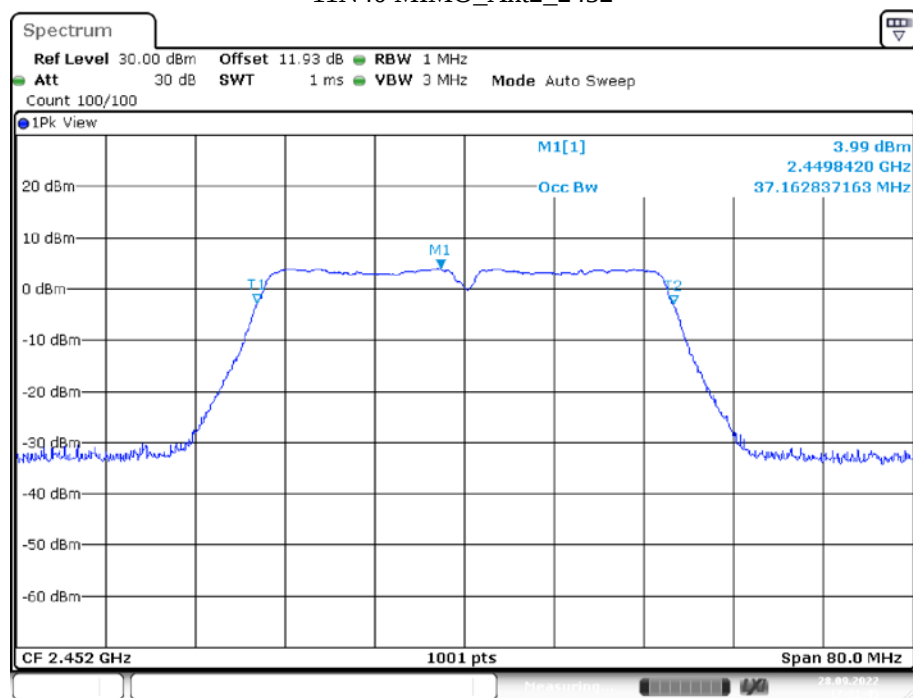
11N40 MIMO_Ant2_2437



11N40 MIMO_Ant1_2452



11N40 MIMO_Ant2_2452



APPENDIX C: Maximum conducted output power**Test Result**

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B MIMO	Ant1	2412	12.86	<=30	PASS
	Ant2	2412	13.39	<=30	PASS
	total	2412	16.14	<=30	PASS
	Ant1	2437	13.12	<=30	PASS
	Ant2	2437	12.63	<=30	PASS
	total	2437	15.89	<=30	PASS
	Ant1	2462	11.83	<=30	PASS
	Ant2	2462	12.81	<=30	PASS
	total	2462	15.36	<=30	PASS
11G MIMO	Ant1	2412	15.08	<=30	PASS
	Ant2	2412	14.29	<=30	PASS
	total	2412	17.71	<=30	PASS
	Ant1	2437	14.23	<=30	PASS
	Ant2	2437	14.17	<=30	PASS
	total	2437	17.21	<=30	PASS
	Ant1	2462	13.28	<=30	PASS
	Ant2	2462	13.90	<=30	PASS
	total	2462	16.61	<=30	PASS
11N20 MIMO	Ant1	2412	14.37	<=30	PASS
	Ant2	2412	13.74	<=30	PASS
	total	2412	17.08	<=30	PASS
	Ant1	2437	13.87	<=30	PASS
	Ant2	2437	13.87	<=30	PASS
	total	2437	16.88	<=30	PASS
	Ant1	2462	12.35	<=30	PASS
	Ant2	2462	13.88	<=30	PASS
	total	2462	16.19	<=30	PASS

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11N40 MIMO	Ant1	2422	16.39	<=30	PASS
	Ant2	2422	16.13	<=30	PASS
	total	2422	19.27	<=30	PASS
	Ant1	2437	16.27	<=30	PASS
	Ant2	2437	16.05	<=30	PASS
	total	2437	19.17	<=30	PASS
	Ant1	2452	15.96	<=30	PASS
	Ant2	2452	16.37	<=30	PASS
	total	2452	19.18	<=30	PASS

Note: The maximum antenna gain is 3.2 dBi. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

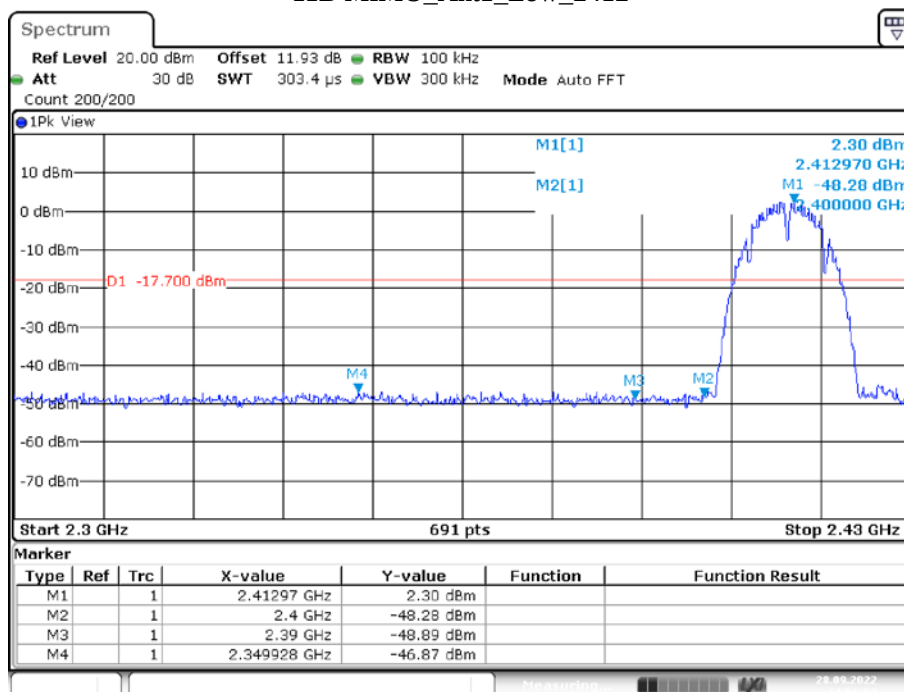
Array Gain = 0dB (i.e., no array gain) For $N_{ANT} \leq 4$;

So: Directional gain=6dBi, the limit is not reduced.

APPENDIX D: Band edge measurements

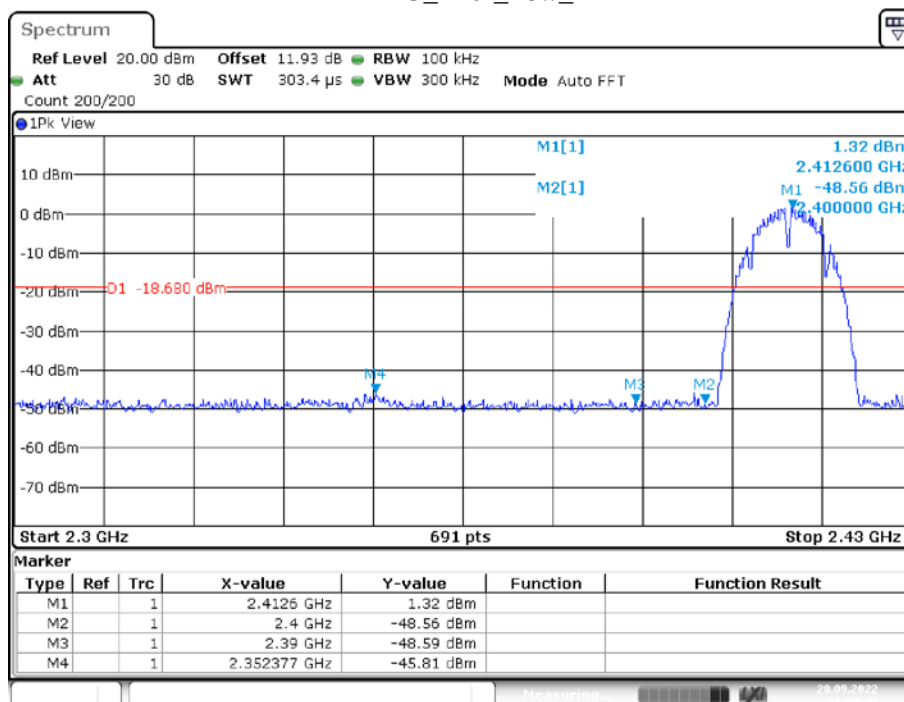
Test Graphs

11B MIMO_Ant1_Low_2412



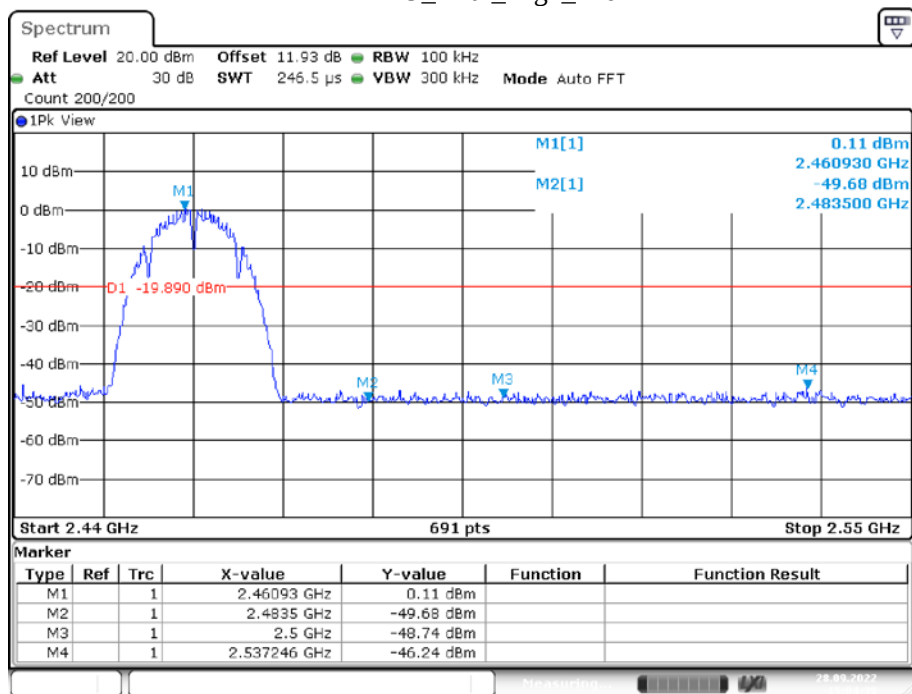
Date: 28.SEP.2022 14:56:53

11B MIMO_Ant2_Low_2412



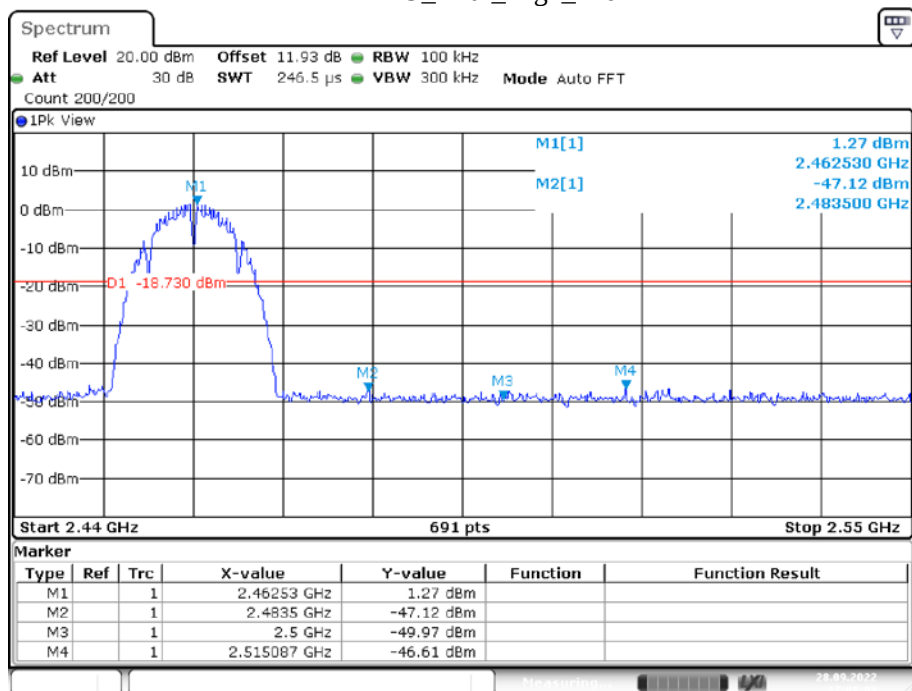
Date: 28.SEP.2022 16:59:23

11B MIMO_Ant1_High_2462



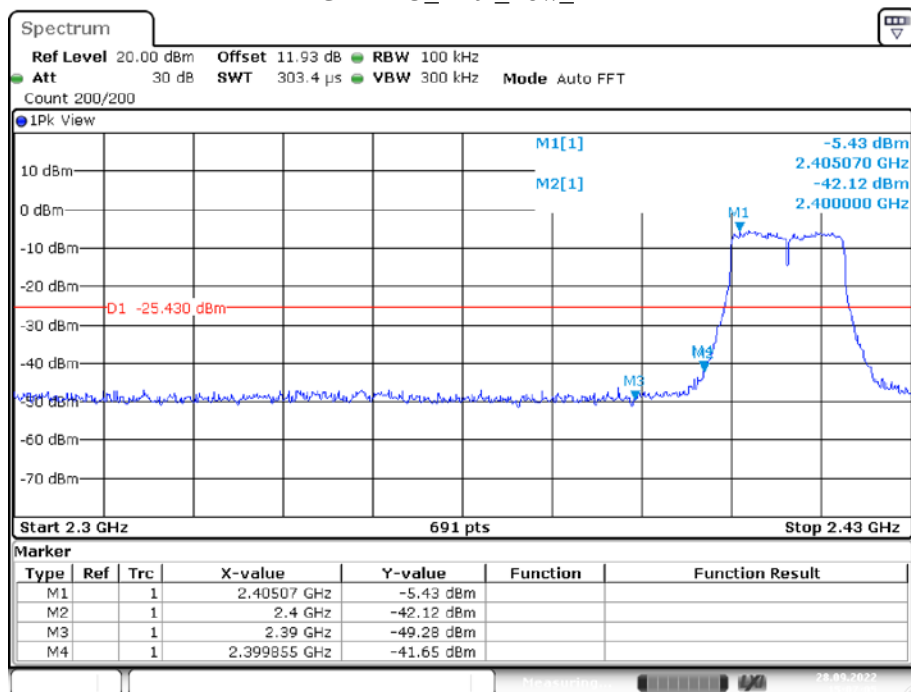
Date: 28.SEP.2022 15:04:39

11B MIMO_Ant2_High_2462



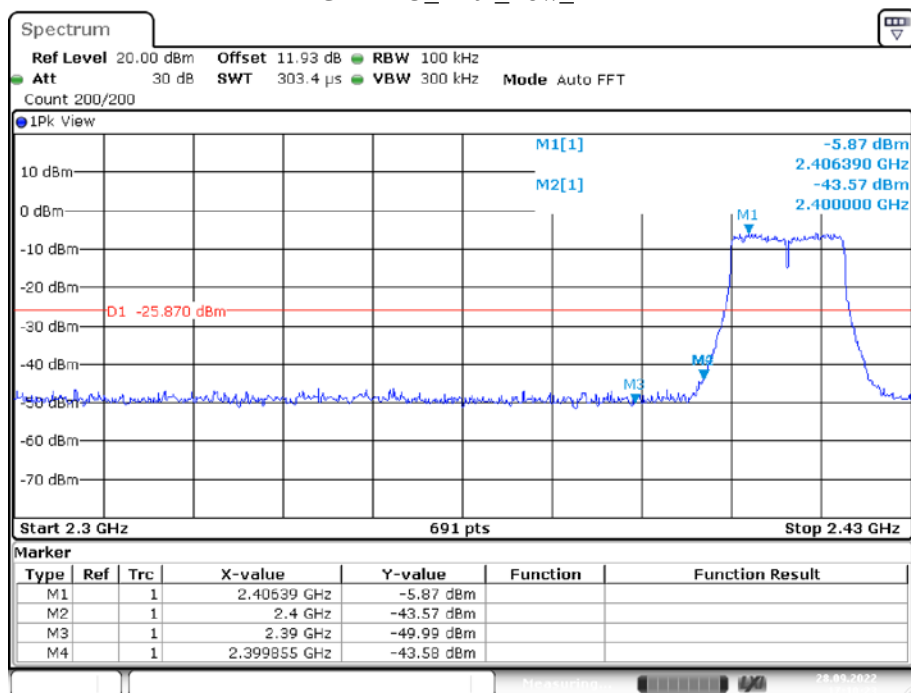
Date: 28.SEP.2022 17:08:04

11G MIMO_Ant1_Low_2412



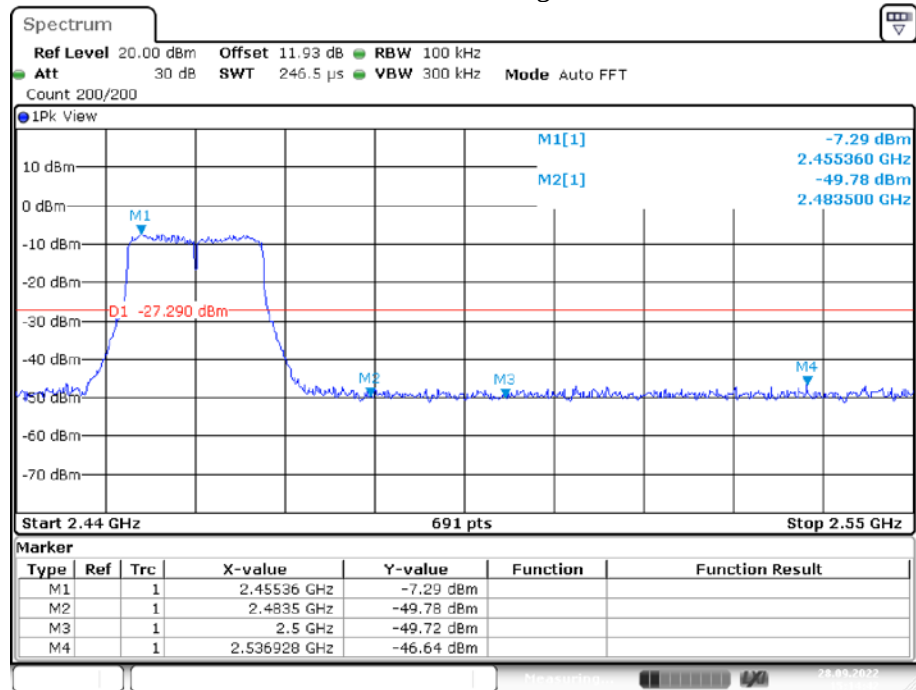
Date: 28.SEP.2022 15:07:06

11G MIMO_Ant2_Low_2412

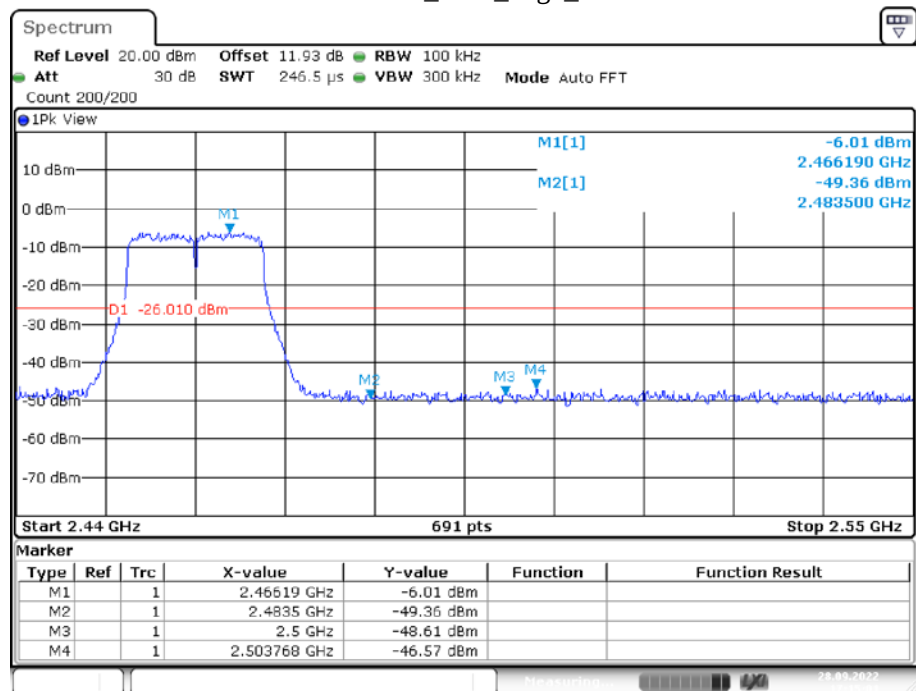


Date: 28.SEP.2022 17:10:24

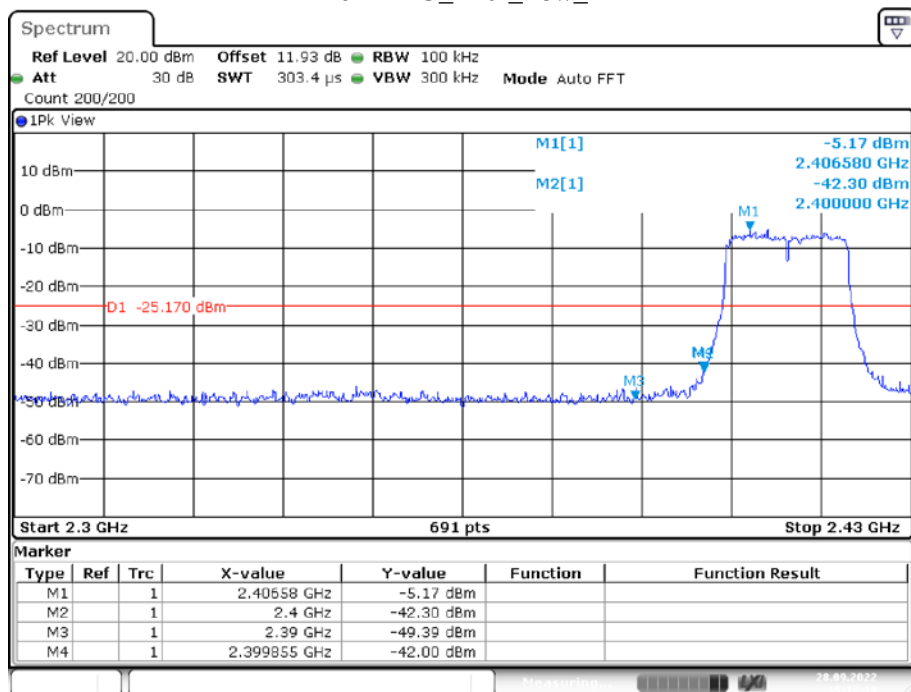
11G MIMO_Ant1_High_2462



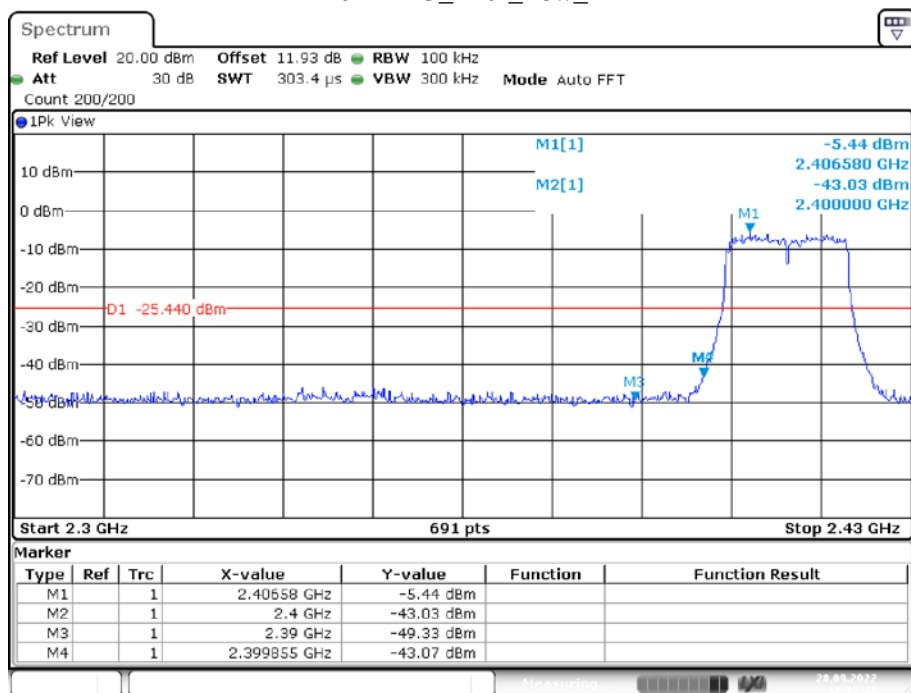
11G MIMO_Ant2_High_2462



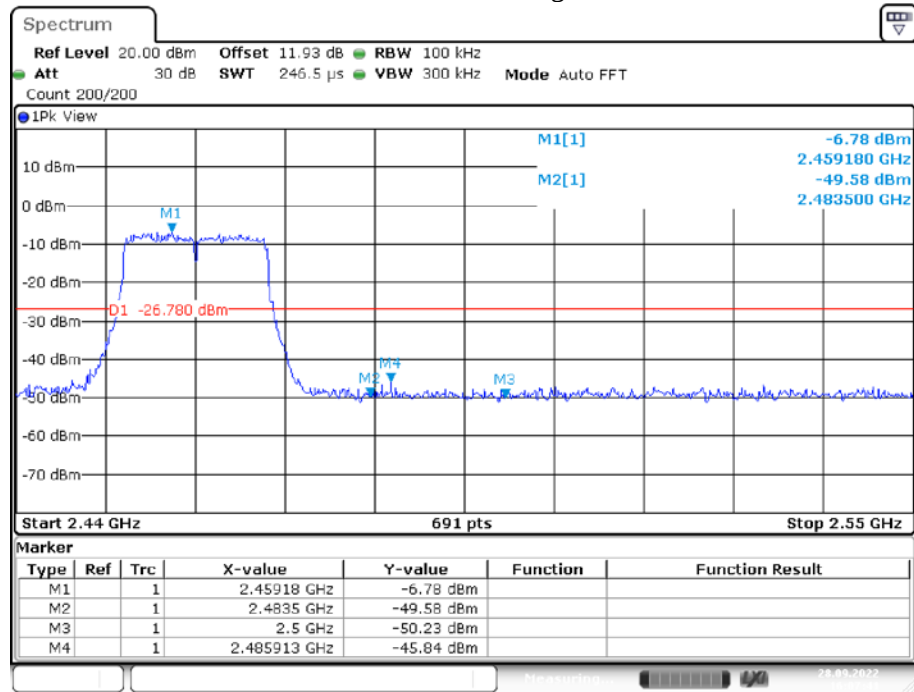
11N20 MIMO_Ant1_Low_2412



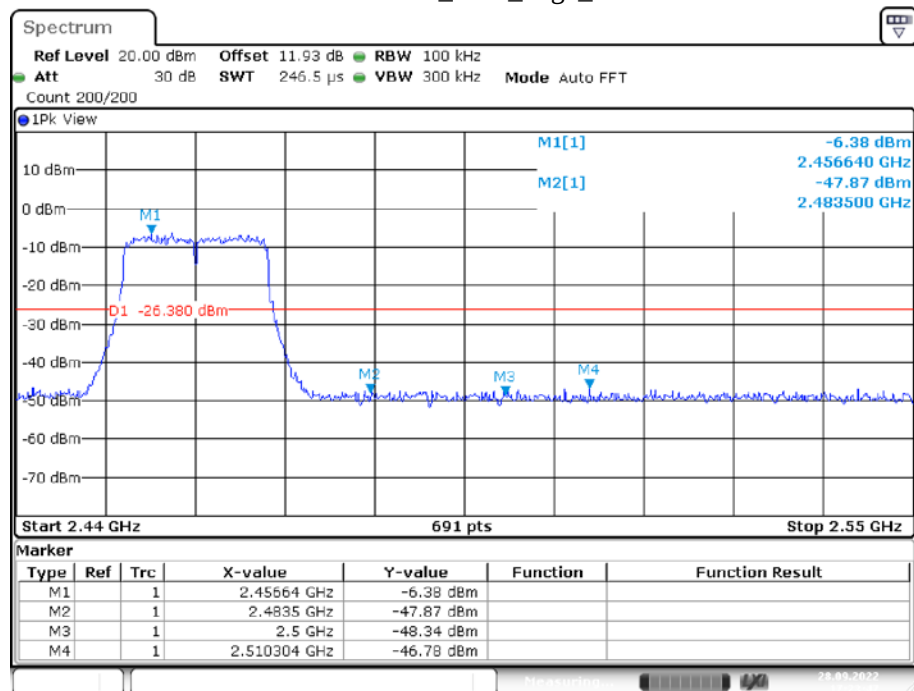
11N20 MIMO_Ant2_Low_2412



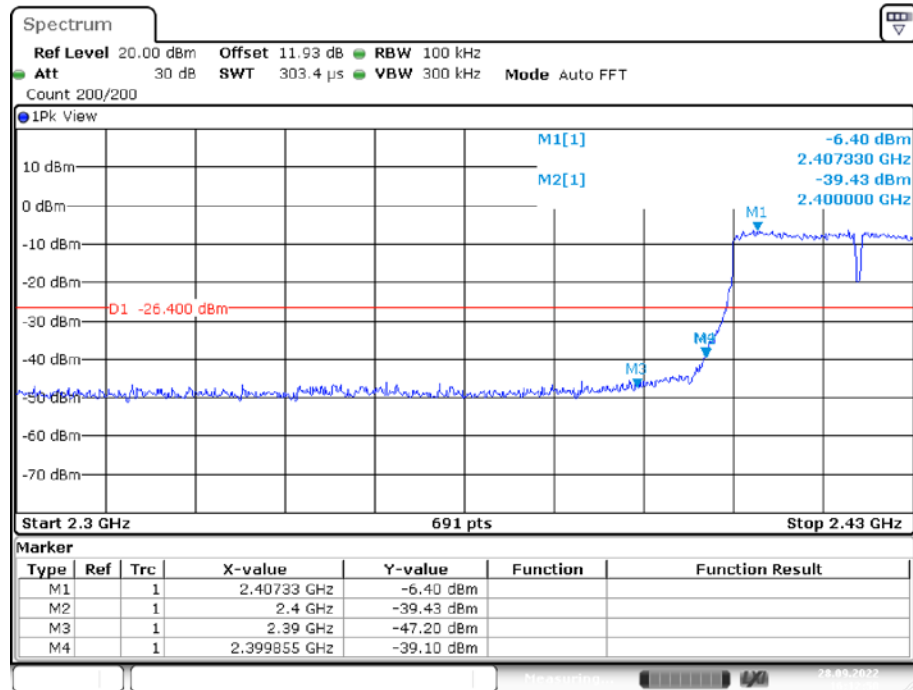
11N20 MIMO_Ant1_High_2462



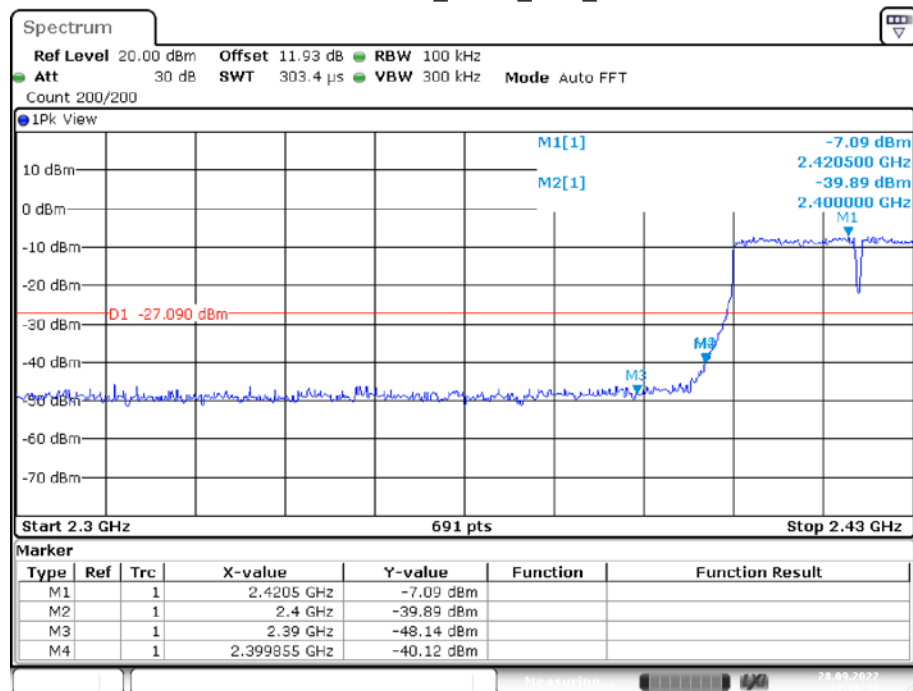
11N20 MIMO_Ant2_High_2462



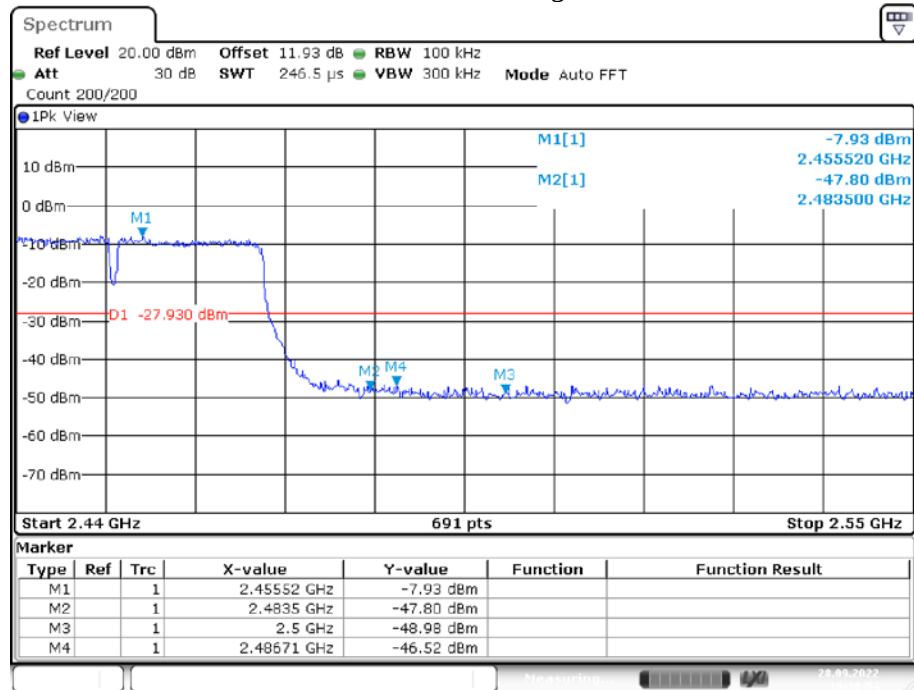
11N40 MIMO_Ant1_Low_2422



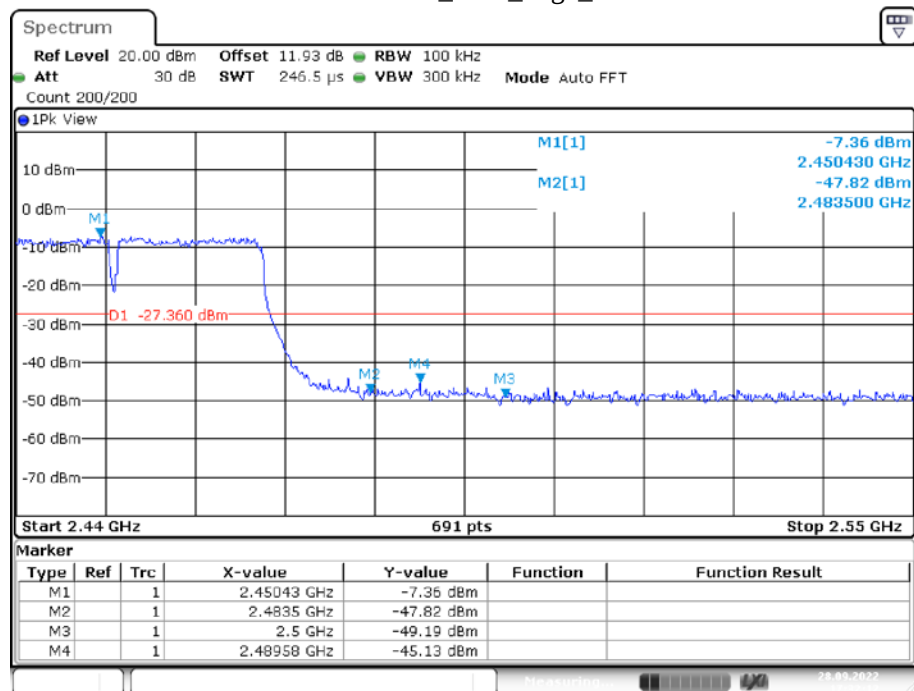
11N40 MIMO_Ant12_Low_2422



11N40 MIMO_Ant1_High_2452



11N40 MIMO_Ant2_High_2452



APPENDIX E: Maximum power spectral density**Test Result**

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B MIMO	Ant1	2412	-18.05	<=7.8	PASS
	Ant2	2412	-18.97	<=7.8	PASS
	total	2412	-15.48	<=7.8	PASS
	Ant1	2437	-19.28	<=7.8	PASS
	Ant2	2437	-19.17	<=7.8	PASS
	total	2437	-16.21	<=7.8	PASS
	Ant1	2462	-20.32	<=7.8	PASS
	Ant2	2462	-19.23	<=7.8	PASS
	total	2462	-16.73	<=7.8	PASS
11G MIMO	Ant1	2412	-20.32	<=7.8	PASS
	Ant2	2412	-20.25	<=7.8	PASS
	total	2412	-17.27	<=7.8	PASS
	Ant1	2437	-20.99	<=7.8	PASS
	Ant2	2437	-20.71	<=7.8	PASS
	total	2437	-17.84	<=7.8	PASS
	Ant1	2462	-21.82	<=7.8	PASS
	Ant2	2462	-20.38	<=7.8	PASS
	total	2462	-18.03	<=7.8	PASS
11N20 MIMO	Ant1	2412	-19.06	<=7.8	PASS
	Ant2	2412	-19.45	<=7.8	PASS
	total	2412	-16.24	<=7.8	PASS
	Ant1	2437	-18.22	<=7.8	PASS
	Ant2	2437	-19.64	<=7.8	PASS
	total	2437	-15.86	<=7.8	PASS
	Ant1	2462	-20.05	<=7.8	PASS
	Ant2	2462	-19.59	<=7.8	PASS
	total	2462	-16.80	<=7.8	PASS

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11N40 MIMO	Ant1	2422	-18.32	≤ 7.8	PASS
	Ant2	2422	-19.89	≤ 7.8	PASS
	total	2462	-16.02	≤ 7.8	PASS
	Ant1	2437	-19.88	≤ 7.8	PASS
	Ant2	2437	-18.38	≤ 7.8	PASS
	total	2437	-16.06	≤ 7.8	PASS
	Ant1	2452	-20.17	≤ 7.8	PASS
	Ant2	2452	-19.41	≤ 7.8	PASS
	total	2452	-16.76	≤ 7.8	PASS

Note:

The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:

Array Gain = $10 \log(N_{\text{ANT}}/N_{\text{ss}})$ dB

Directional gain = $G_{\text{ANT}} + \text{Array Gain}$

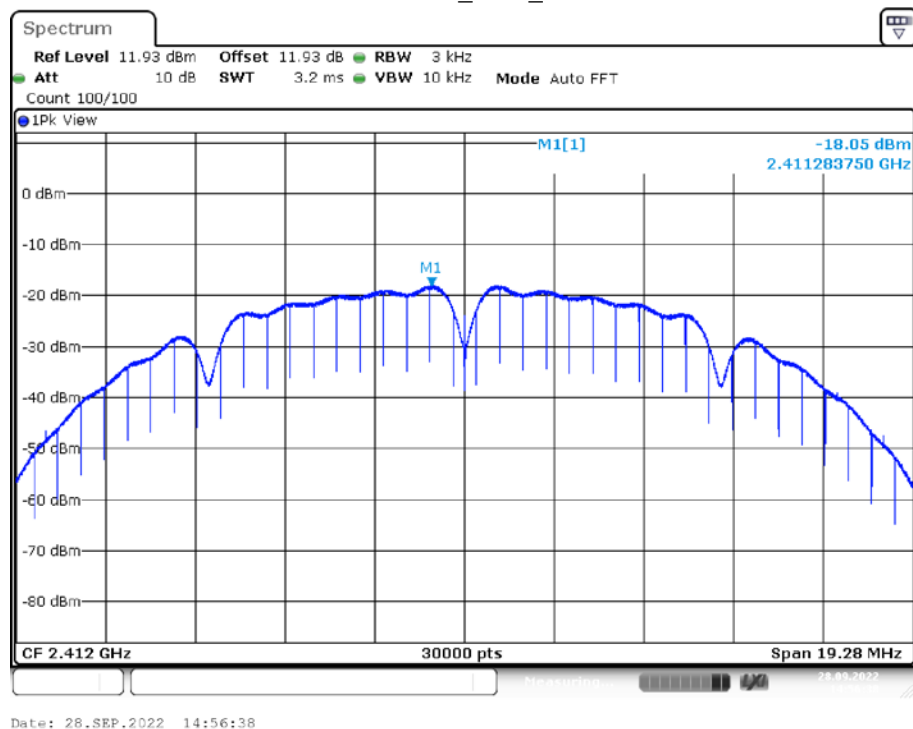
The $G_{\text{ANT}1} = 3.2\text{dBi}$, $G_{\text{ANT}2} = 2.73\text{dBi}$, use the higher antenna gain 3.2dBi to calculate the worst case

Directional gain = $3.2\text{dBi} + 10 \cdot \log(2/1) = 6.2\text{dBi} > 6\text{dBi}$

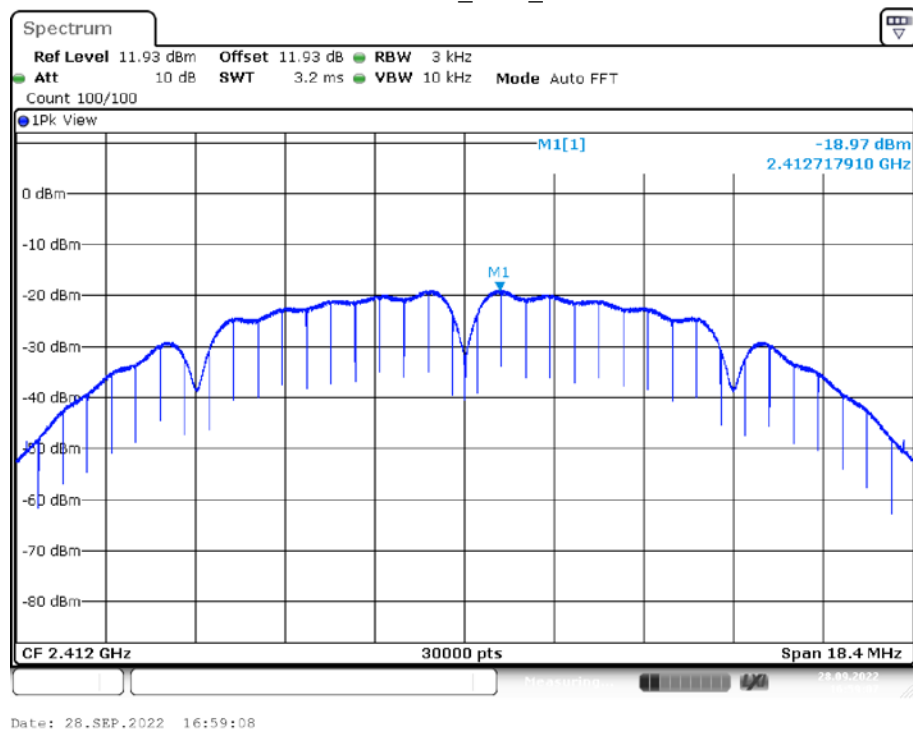
So the limit should be reduce $(6.2 - 6)\text{dB} = 0.2\text{dB}$.

Test Graphs

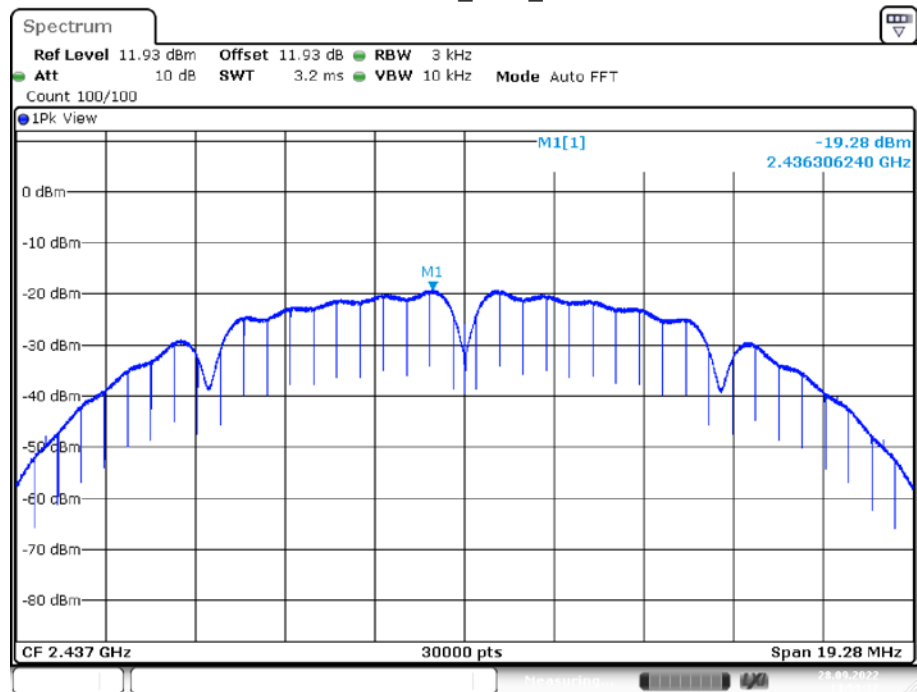
11B MIMO_Ant1_2412



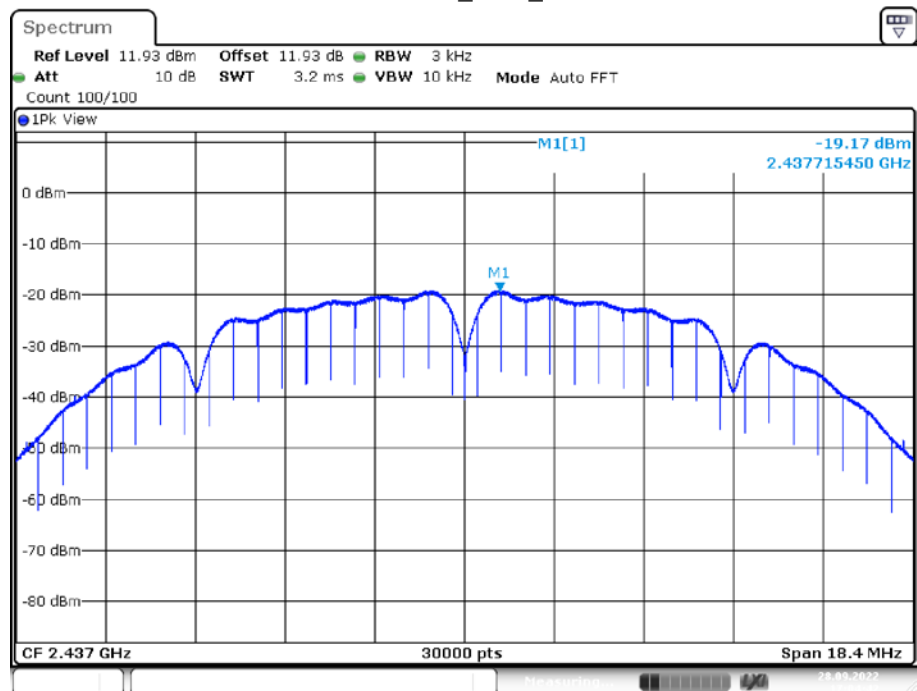
11B MIMO_Ant2_2412



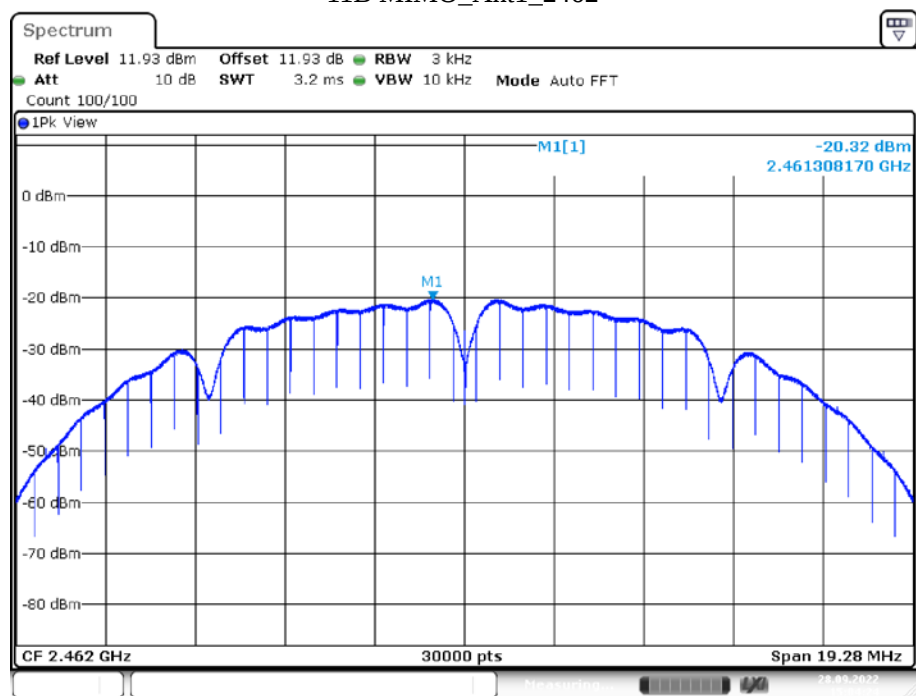
11B MIMO_Ant1_2437



11B MIMO_Ant2_2437

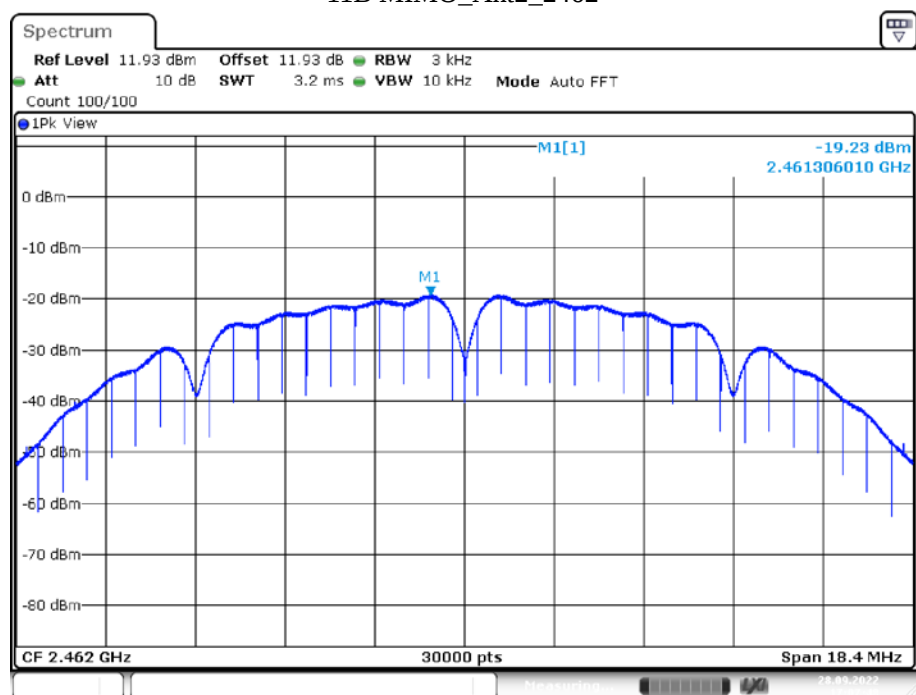


11B MIMO_Ant1_2462



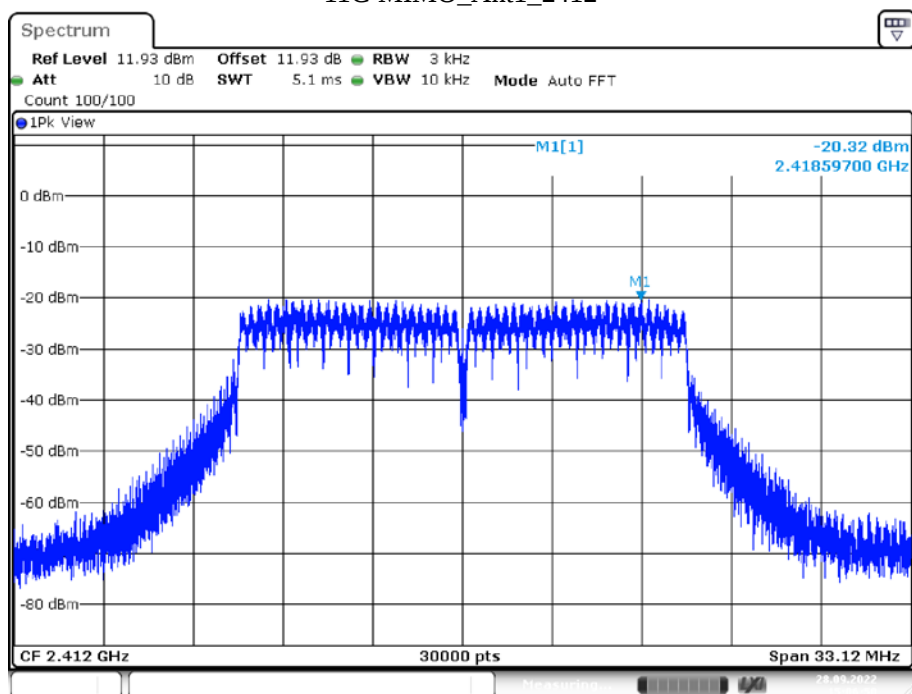
Date: 28.SEP.2022 15:04:24

11B MIMO_Ant2_2462



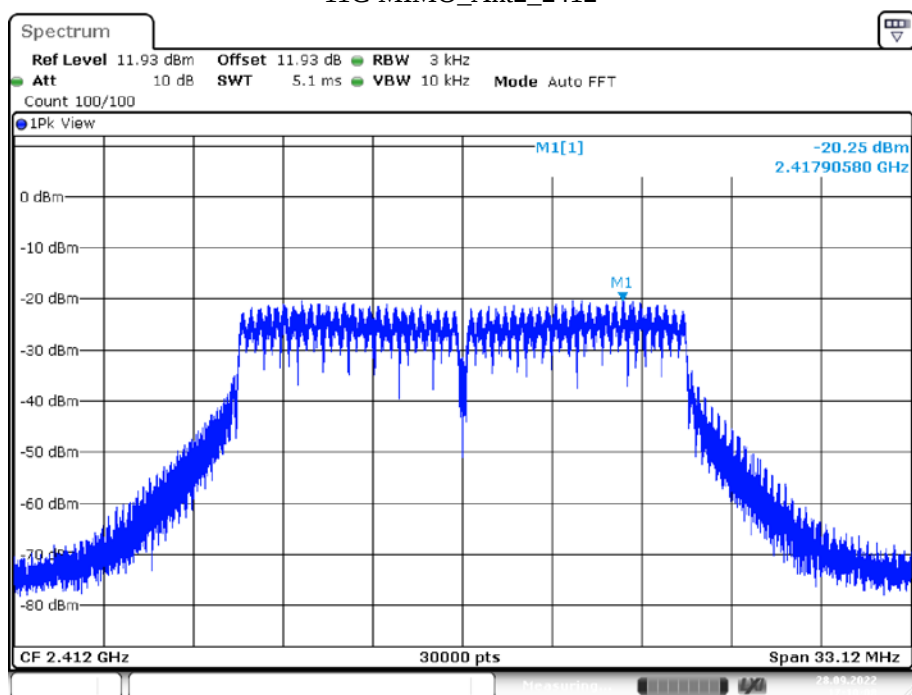
Date: 28.SEP.2022 17:07:49

11G MIMO_Ant1_2412



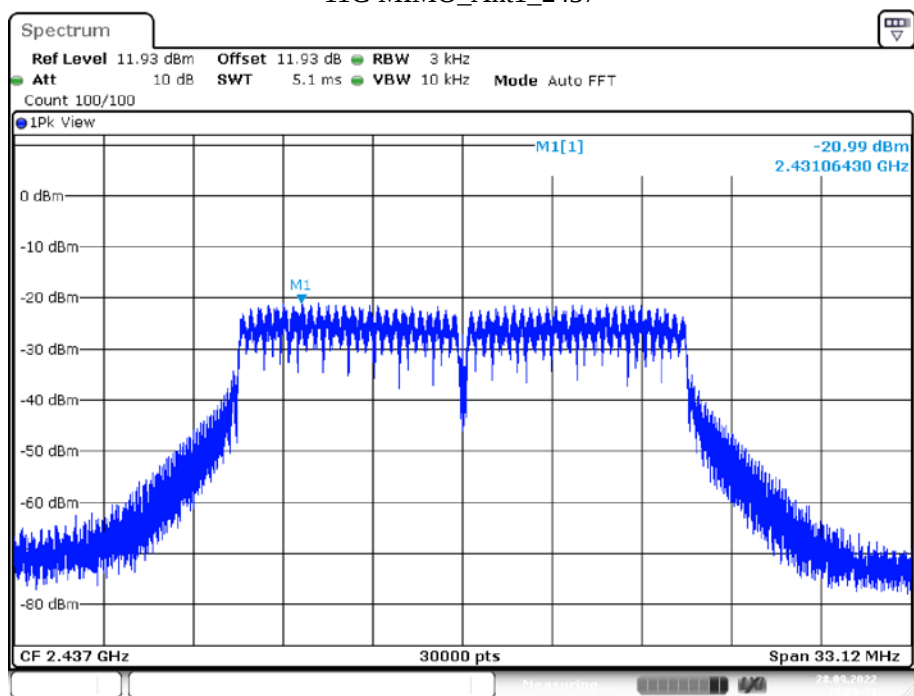
Date: 28.SEP.2022 15:06:51

11G MIMO_Ant2_2412

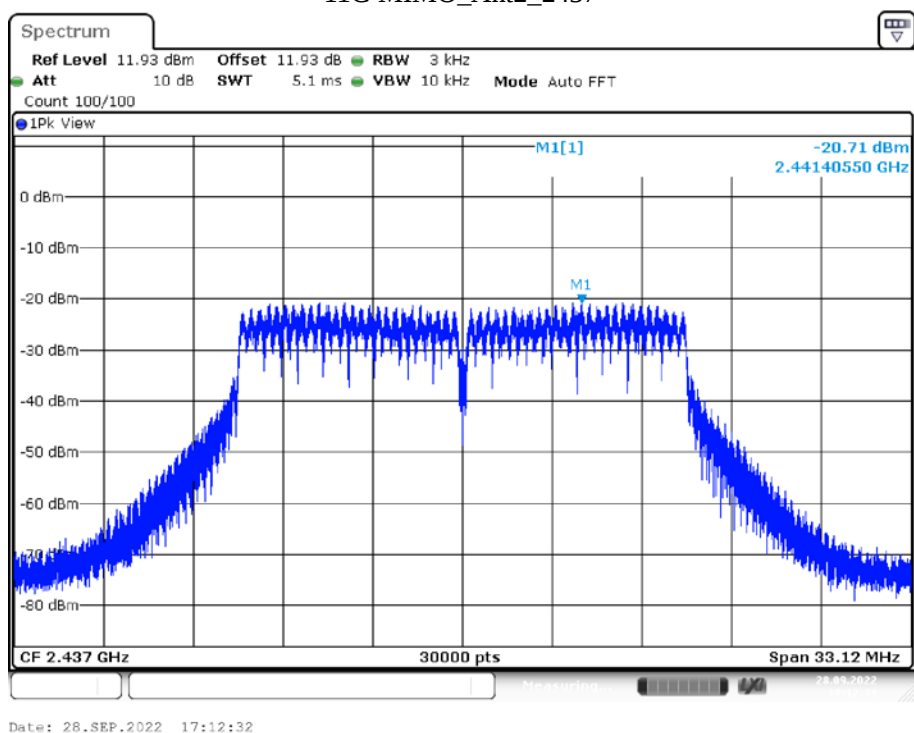


Date: 28.SEP.2022 17:10:09

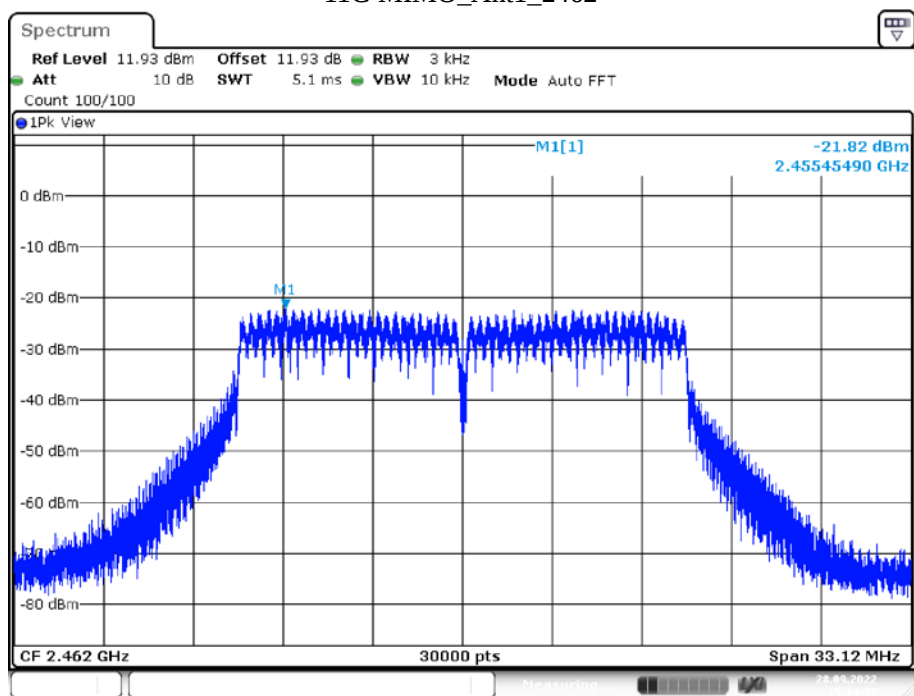
11G MIMO_Ant1_2437



11G MIMO_Ant2_2437

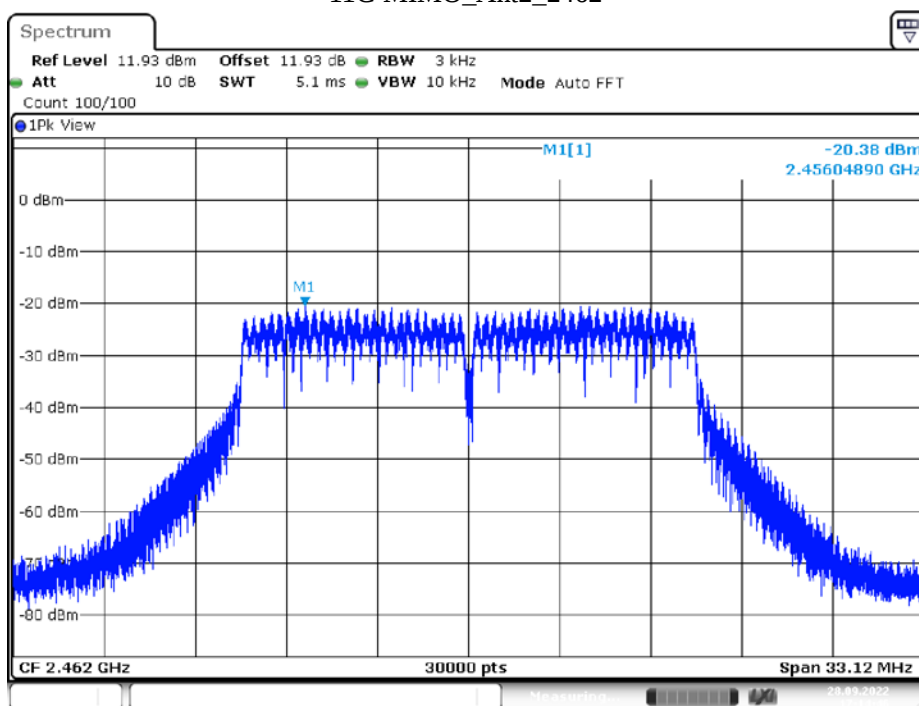


11G MIMO_Ant1_2462



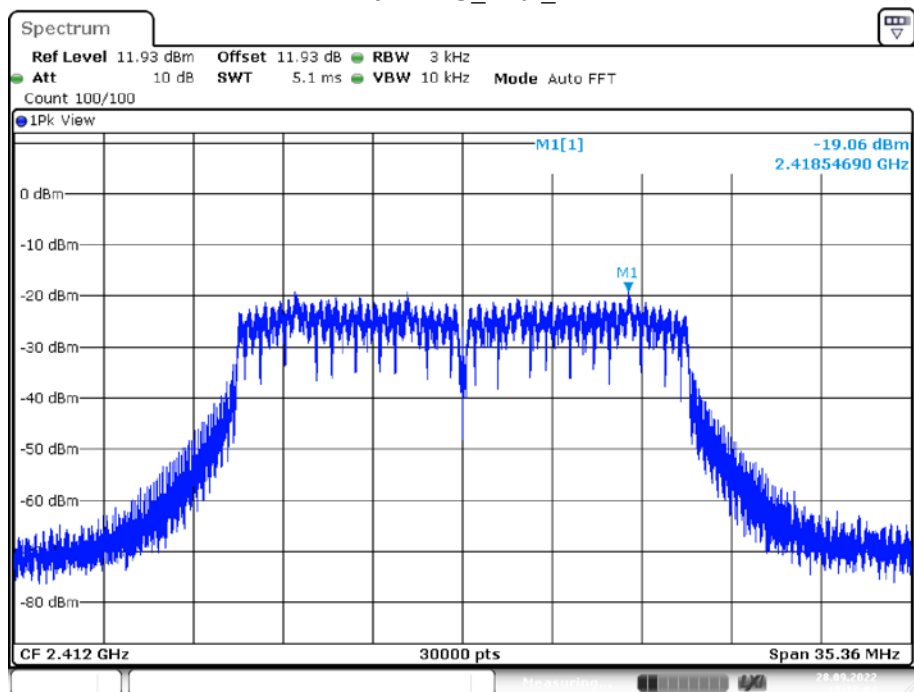
Date: 28.SEP.2022 15:14:27

11G MIMO_Ant2_2462



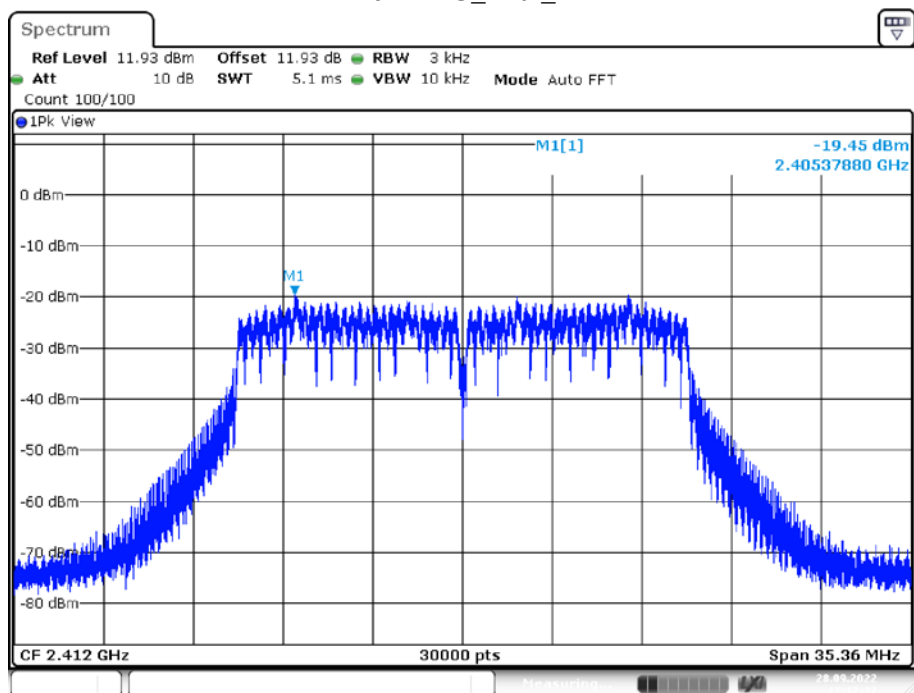
Date: 28.SEP.2022 17:14:46

11N20 MIMO_Ant1_2412



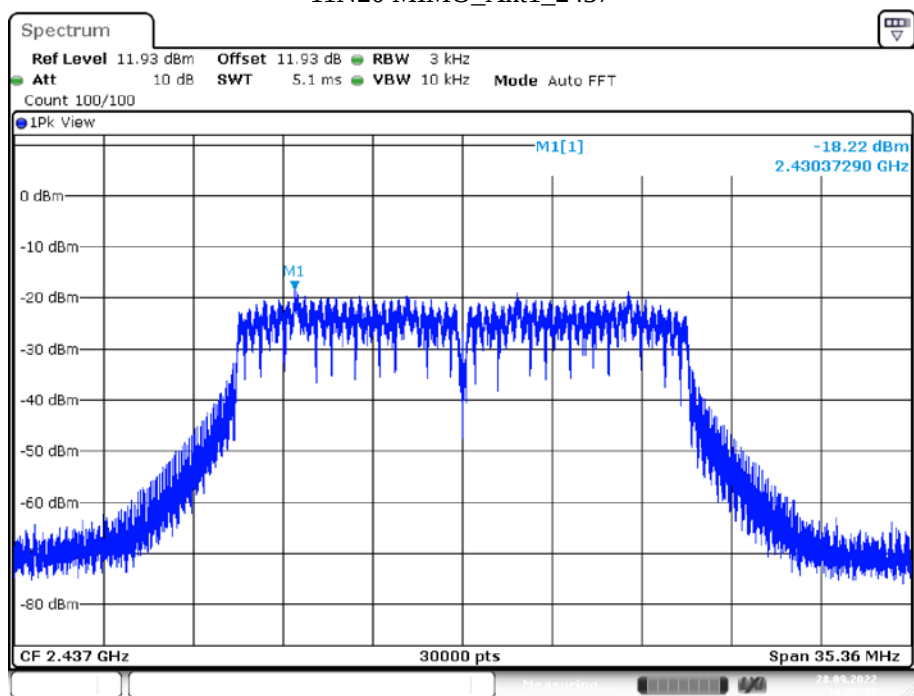
Date: 28.SEP.2022 15:17:04

11N20 MIMO_Ant2_2412

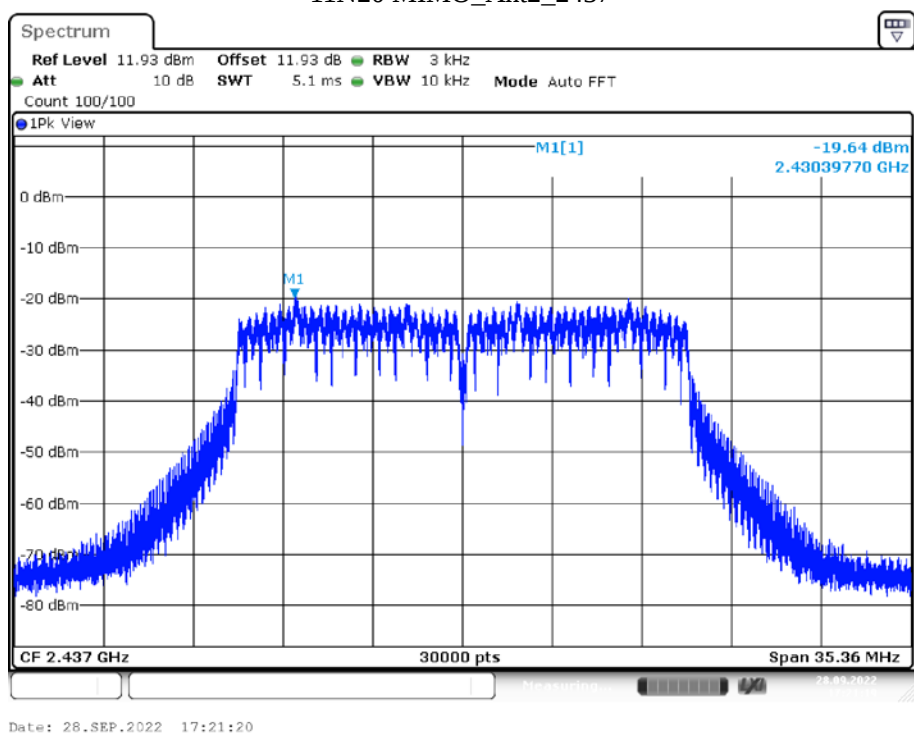


Date: 28.SEP.2022 17:17:27

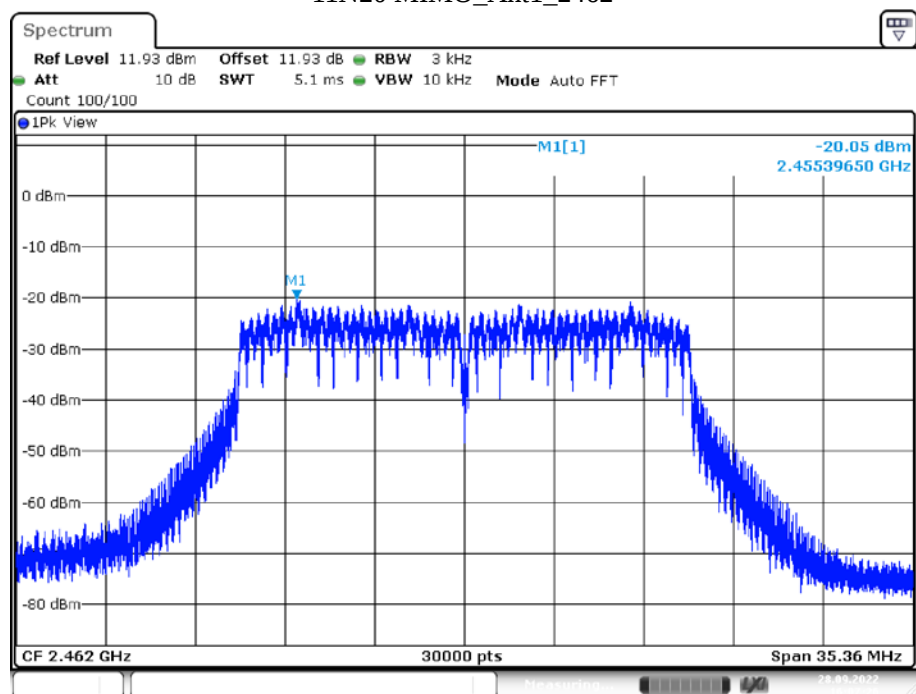
11N20 MIMO_Ant1_2437



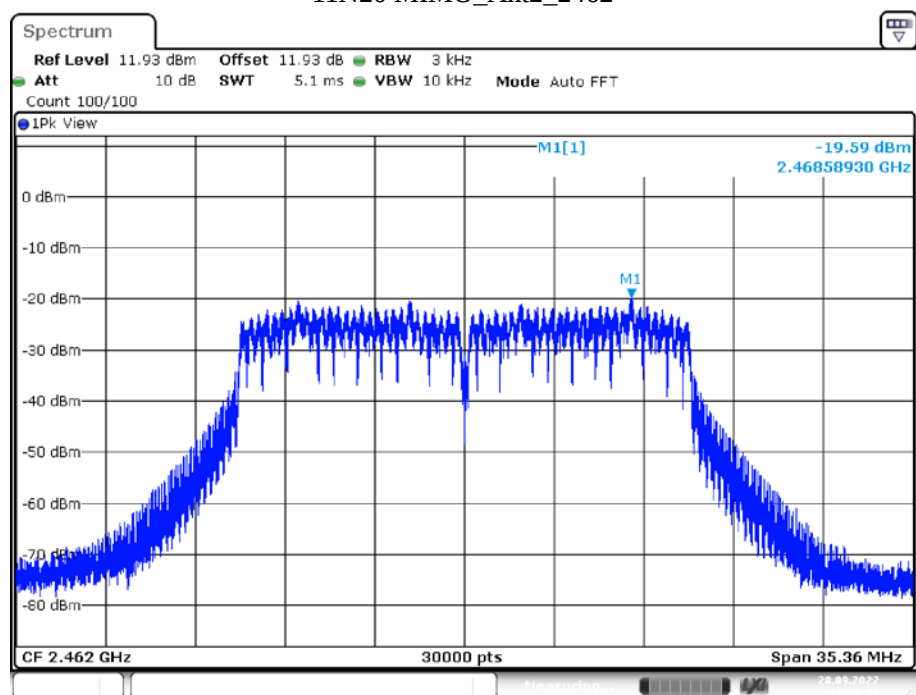
11N20 MIMO_Ant2_2437



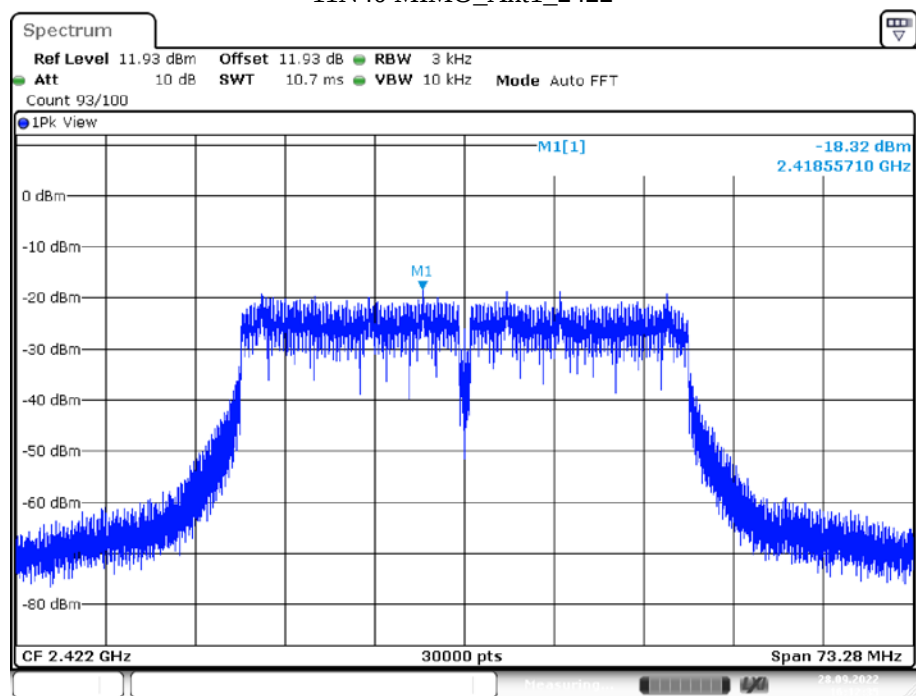
11N20 MIMO_Ant1_2462



11N20 MIMO_Ant2_2462

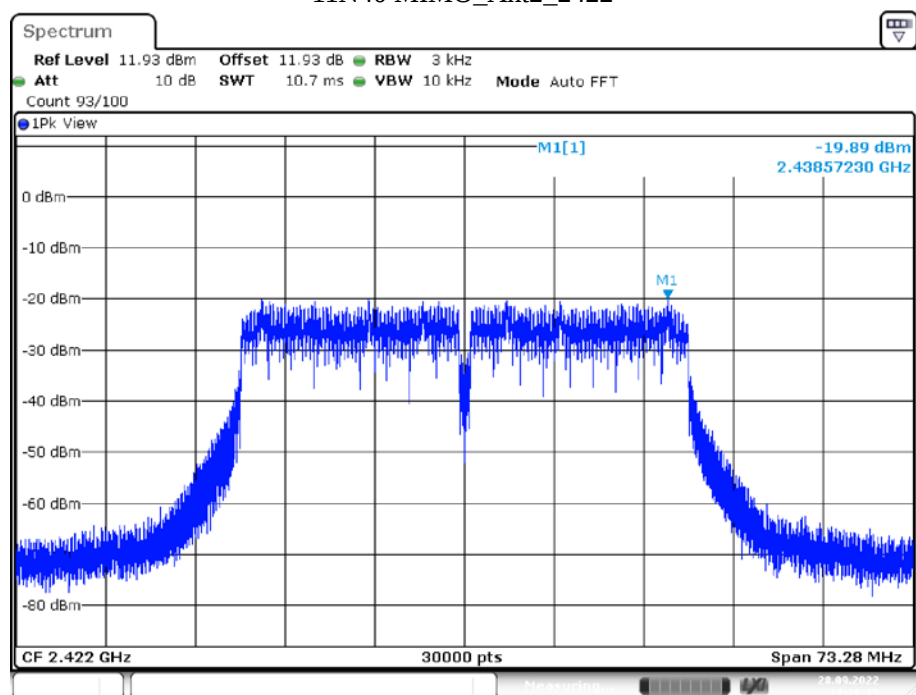


11N40 MIMO_Ant1_2422



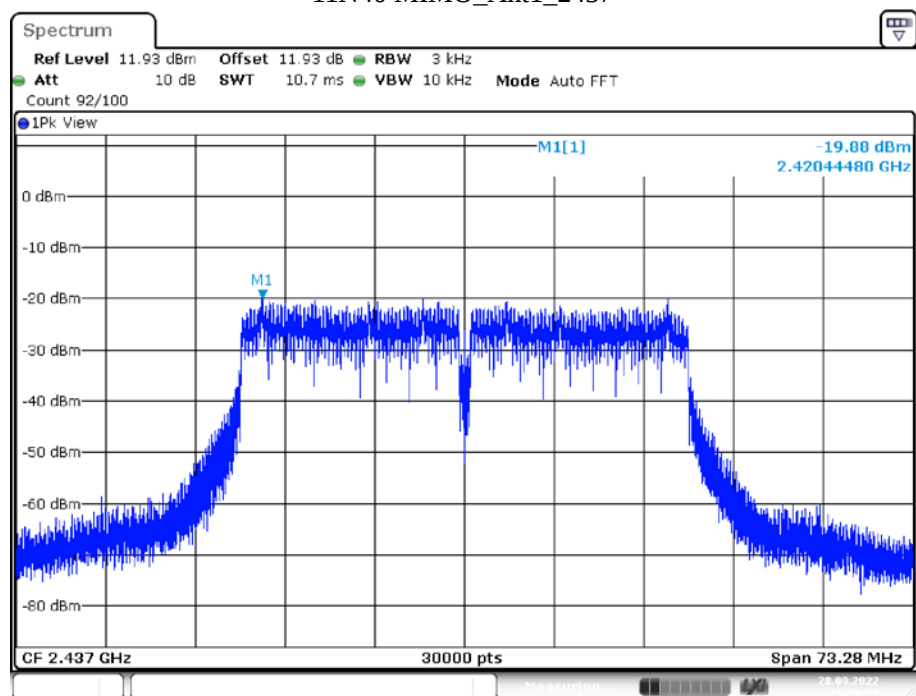
Date: 28.SEP.2022 16:12:36

11N40 MIMO_Ant2_2422

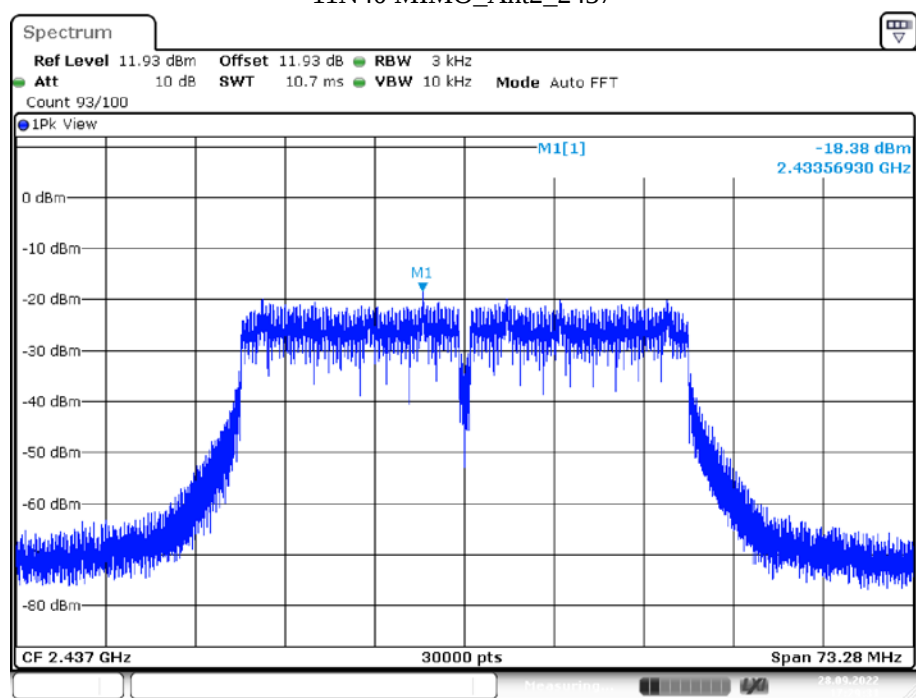


Date: 28.SEP.2022 17:26:16

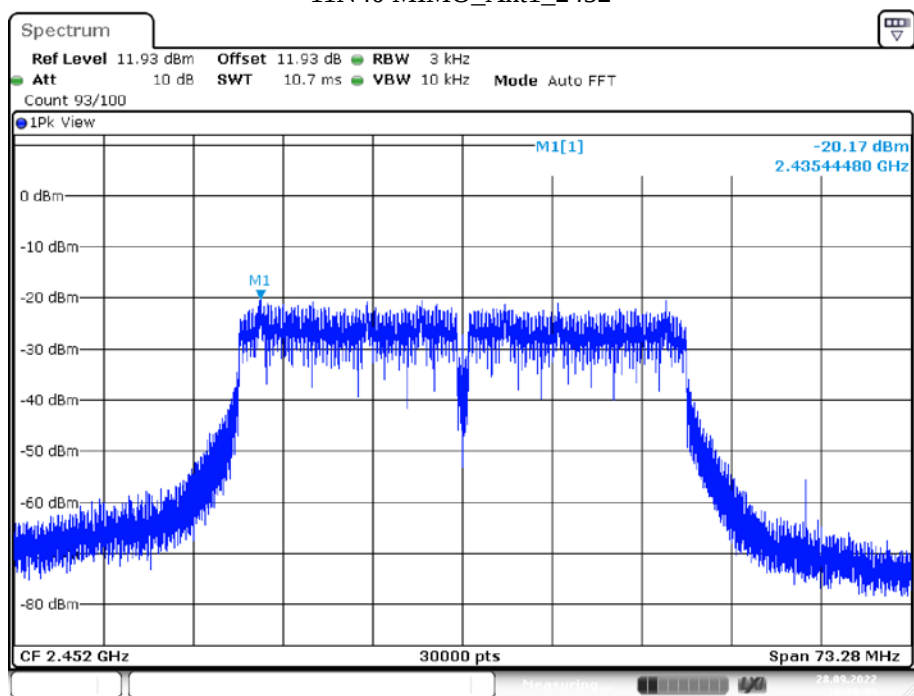
11N40 MIMO_Ant1_2437



11N40 MIMO_Ant2_2437

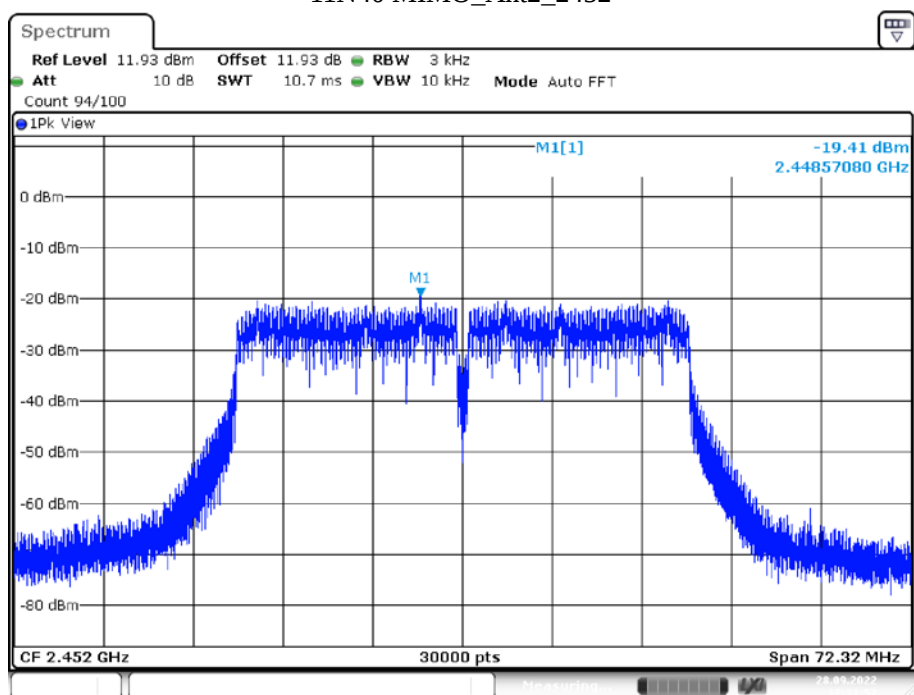


11N40 MIMO_Ant1_2452



Date: 28.SEP.2022 16:30:39

11N40 MIMO_Ant2_2452



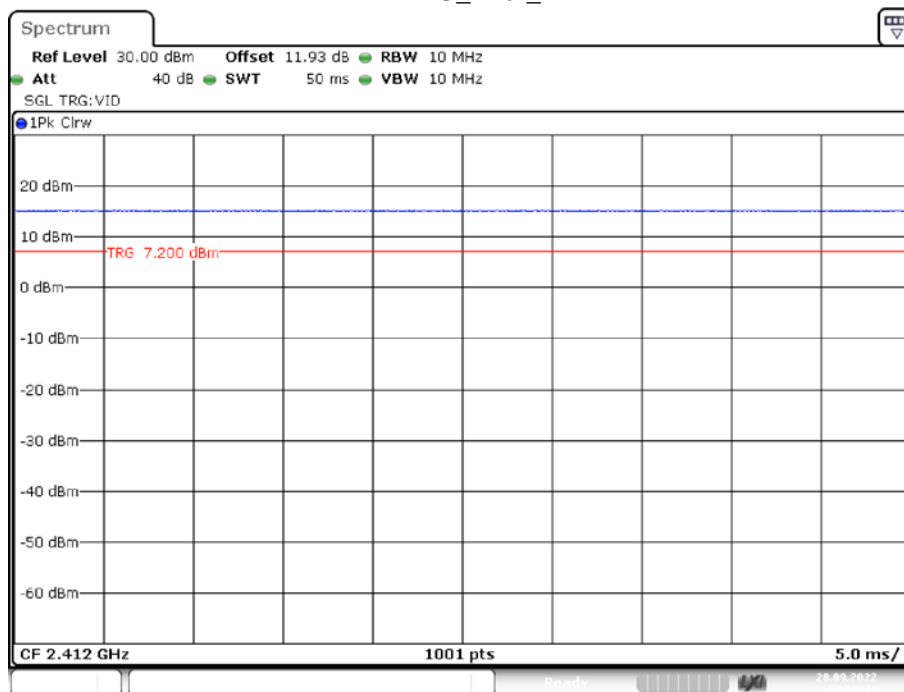
Date: 28.SEP.2022 17:31:57

APPENDIX F: Duty Cycle**Test Result**

Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11B MIMO	Ant1	2412	50.00	50.00	100.00
	Ant2	2412	50.00	50.00	100.00
	Ant1	2437	50.00	50.00	100.00
	Ant2	2437	50.00	50.00	100.00
	Ant1	2462	50.00	50.00	100.00
	Ant2	2462	50.00	50.00	100.00
11G MIMO	Ant1	2412	50.00	50.00	100.00
	Ant2	2412	50.00	50.00	100.00
	Ant1	2437	50.00	50.00	100.00
	Ant2	2437	50.00	50.00	100.00
	Ant1	2462	50.00	50.00	100.00
	Ant2	2462	50.00	50.00	100.00
11N20 MIMO	Ant1	2412	50.00	50.00	100.00
	Ant2	2412	50.00	50.00	100.00
	Ant1	2437	50.00	50.00	100.00
	Ant2	2437	50.00	50.00	100.00
	Ant1	2462	50.00	50.00	100.00
	Ant2	2462	50.00	50.00	100.00
11N40 MIMO	Ant1	2422	50.00	50.00	100.00
	Ant2	2422	50.00	50.00	100.00
	Ant1	2437	50.00	50.00	100.00
	Ant2	2437	50.00	50.00	100.00
	Ant1	2452	50.00	50.00	100.00
	Ant2	2452	50.00	50.00	100.00

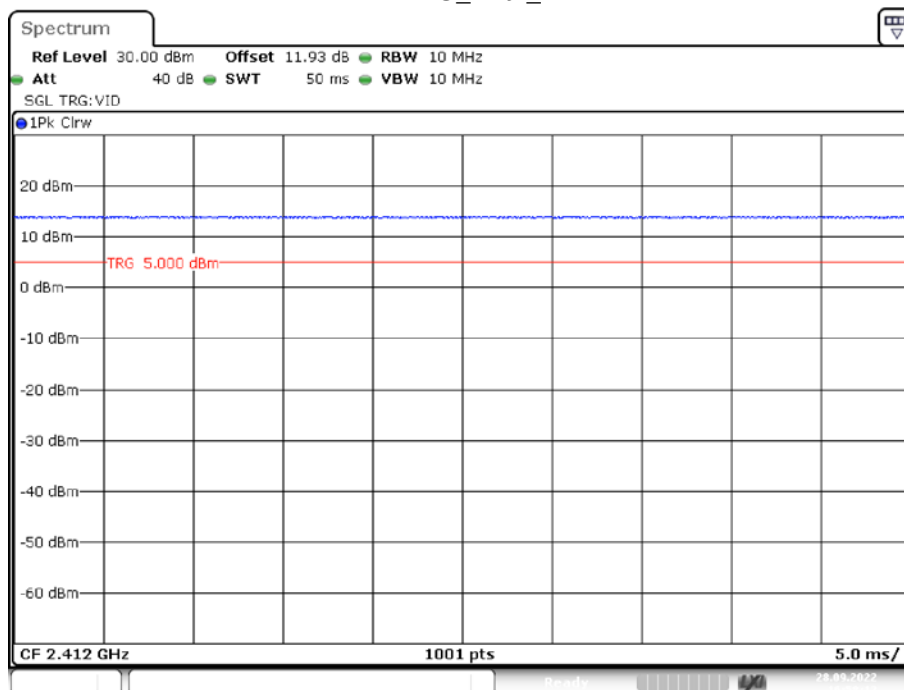
Test Graphs

11B MIMO_Ant1_2412



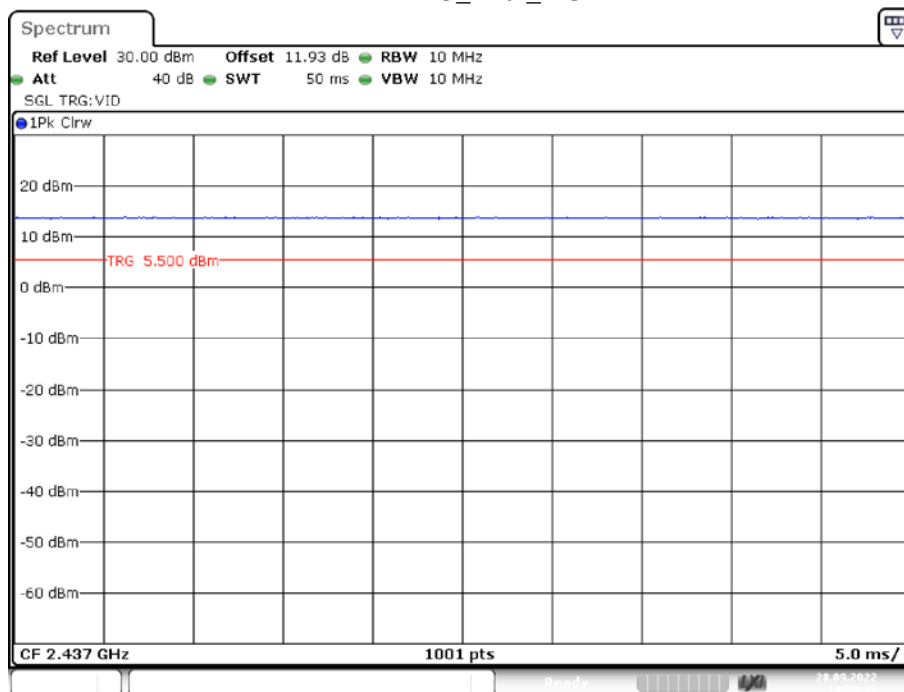
Date: 28.SEP.2022 14:55:43

11B MIMO_Ant2_2412



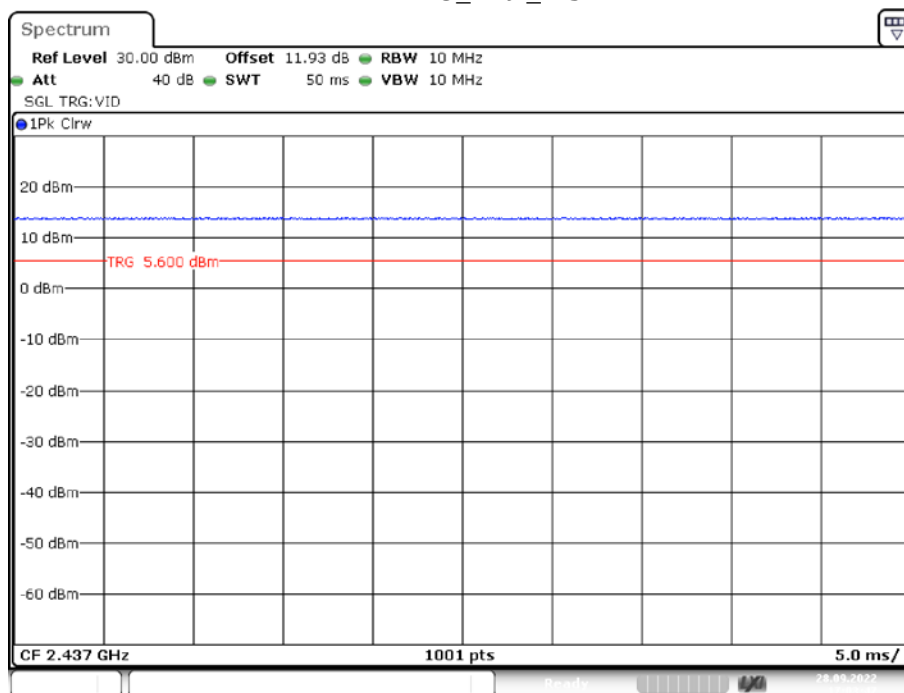
Date: 28.SEP.2022 16:58:13

11B MIMO_Ant1_2437



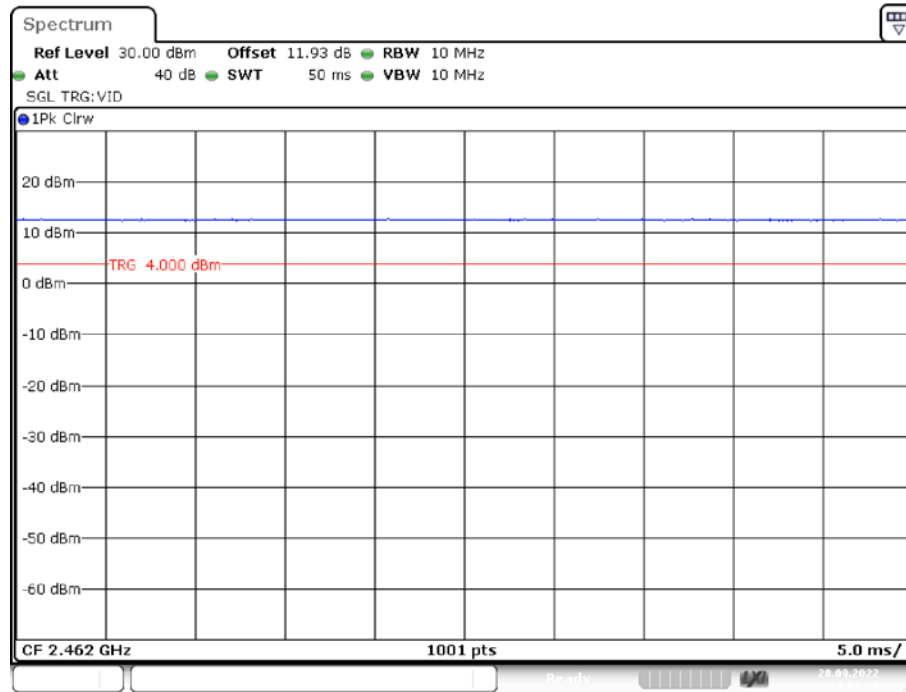
Date: 28.SEP.2022 14:58:18

11B MIMO_Ant2_2437



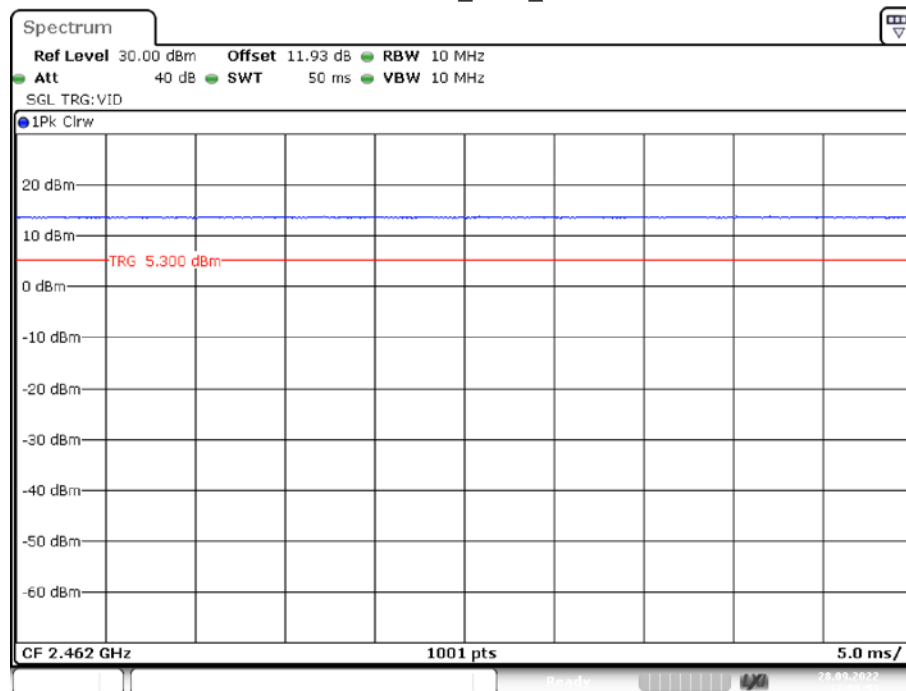
Date: 28.SEP.2022 17:03:48

11B MIMO_Ant1_2462



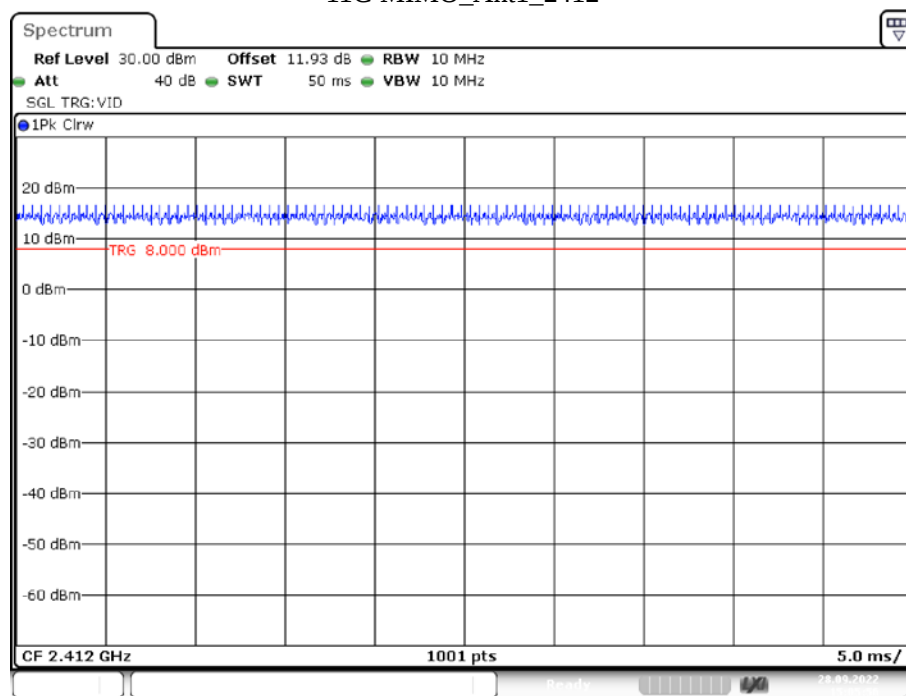
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11B MIMO_Ant2_2462



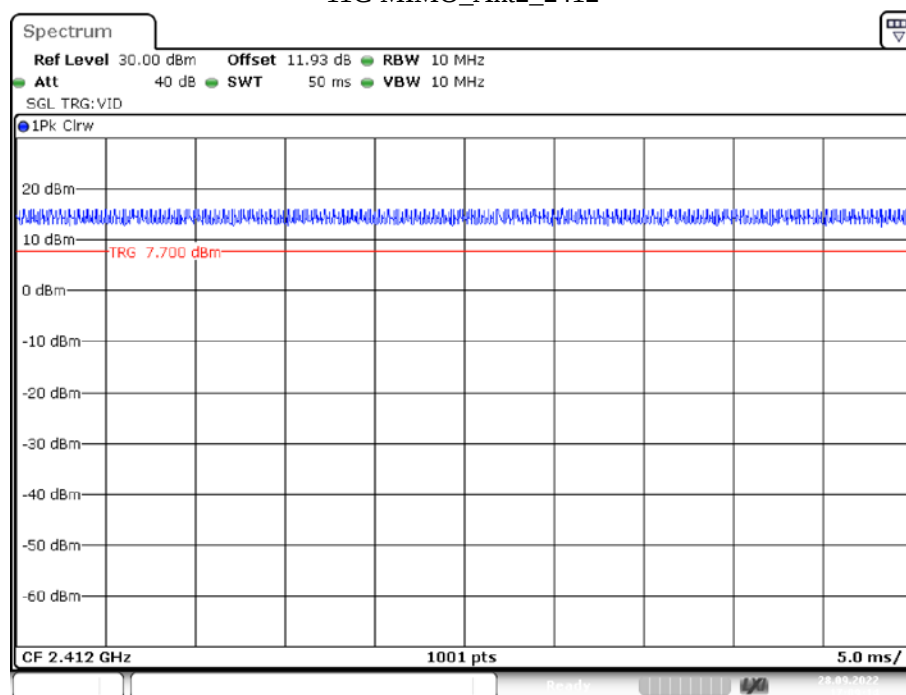
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11G MIMO_Ant1_2412



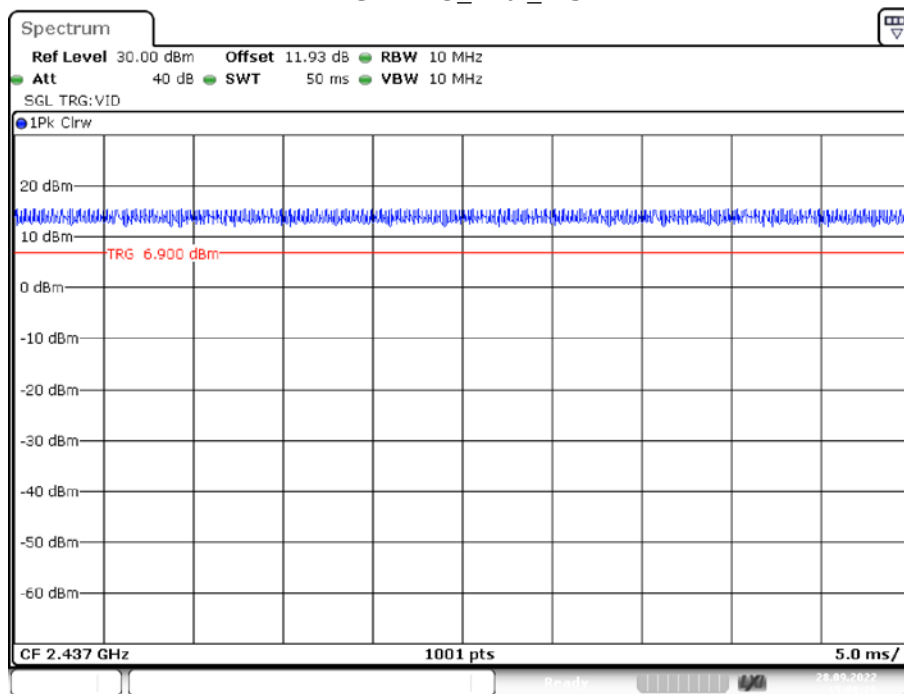
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11G MIMO_Ant2_2412



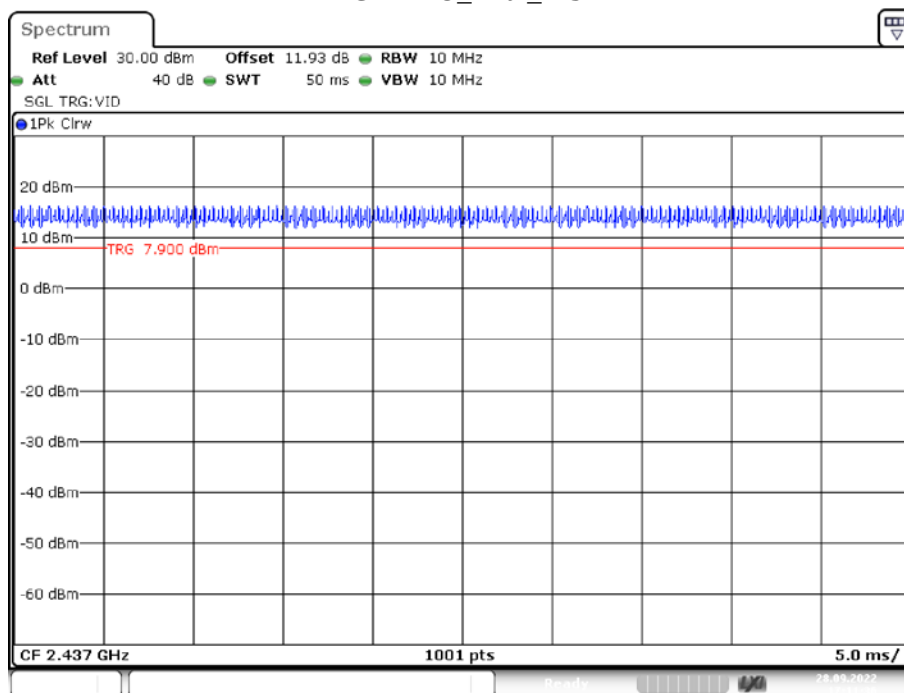
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11G MIMO_Ant1_2437



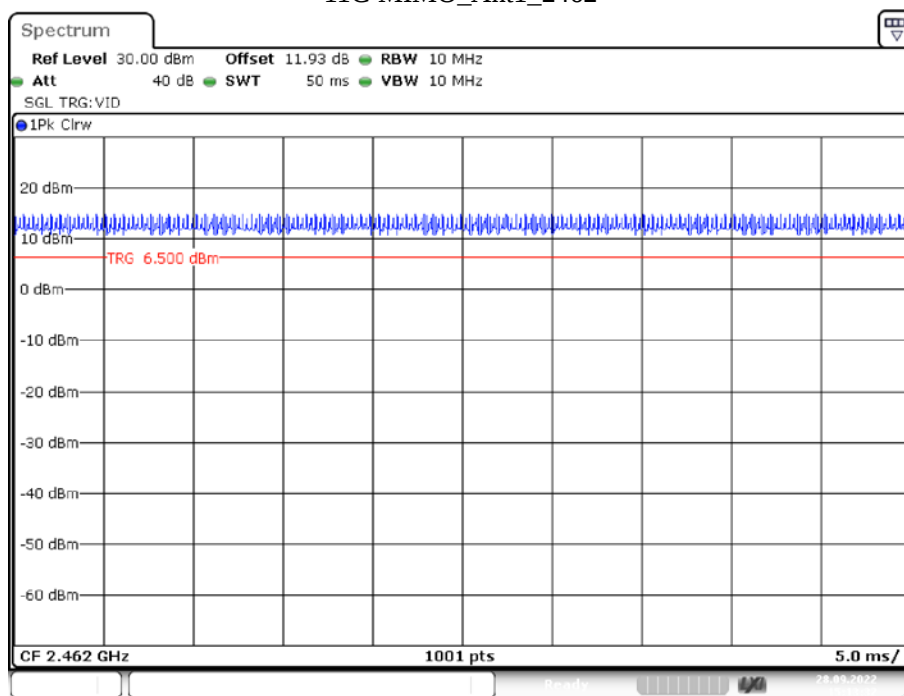
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11G MIMO_Ant2_2437



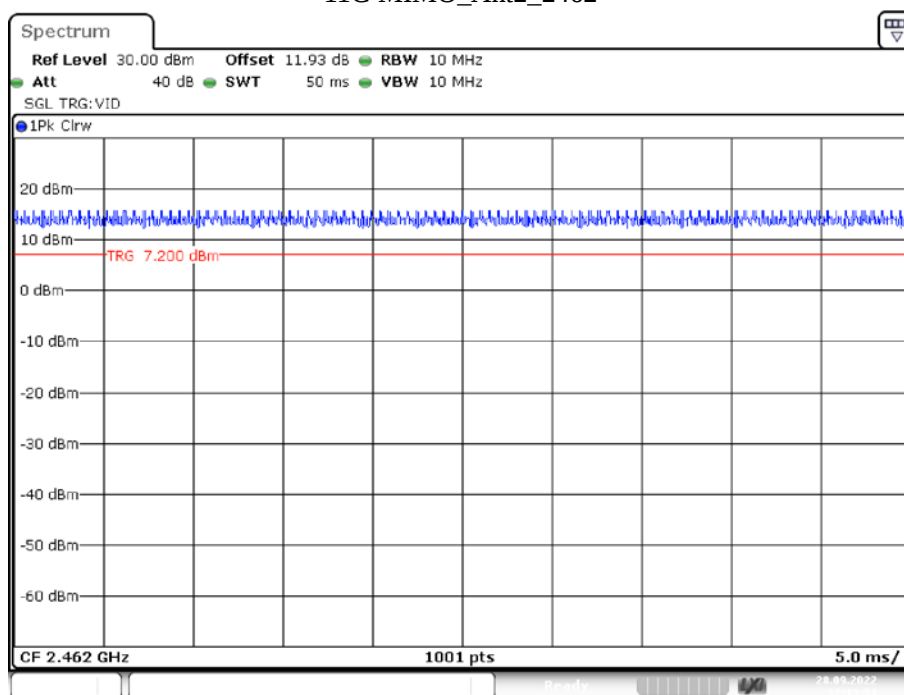
Date: 28.SEP.2022 17:11:37

11G MIMO_Ant1_2462



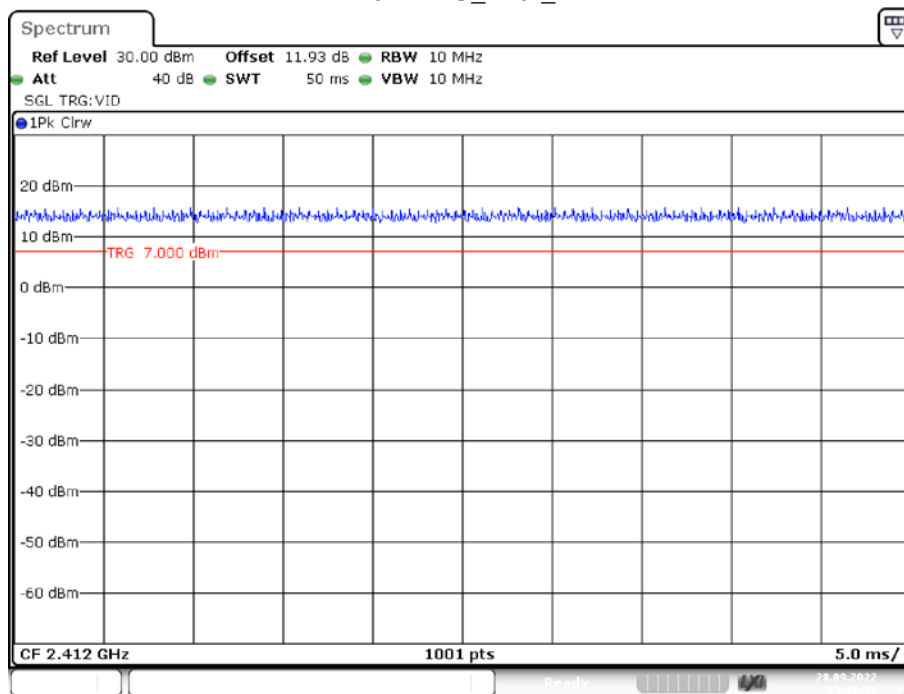
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11G MIMO_Ant2_2462



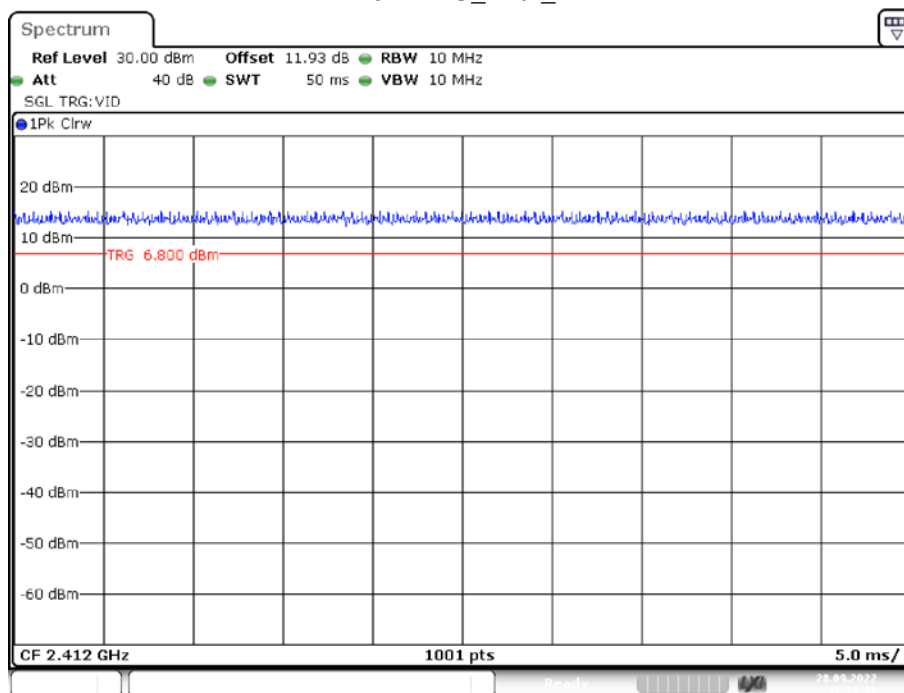
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11N20 MIMO_Ant1_2412



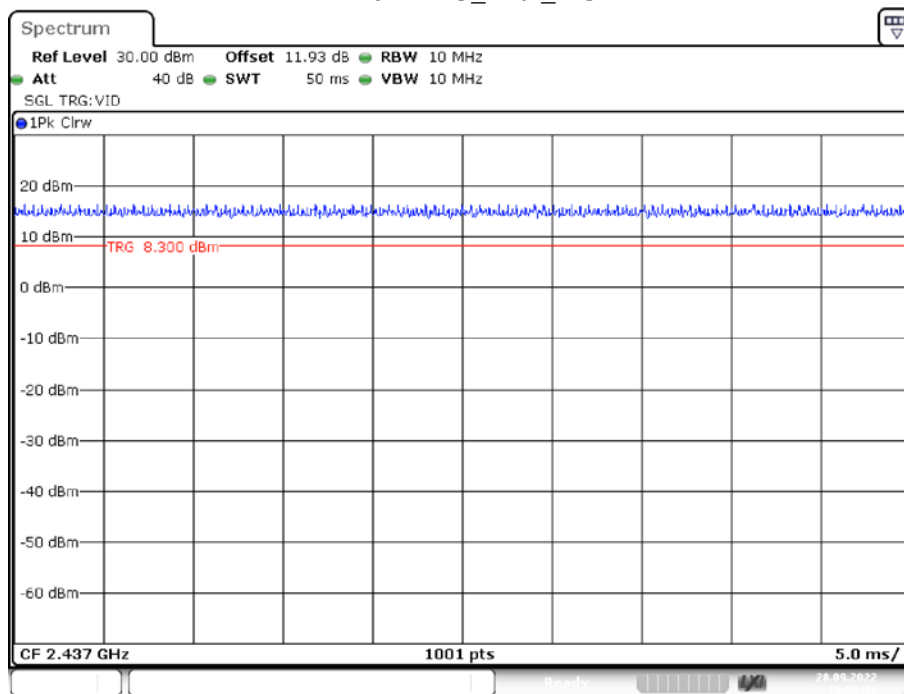
Date: 28.SEP.2022 15:16:07

11N20 MIMO_Ant2_2412



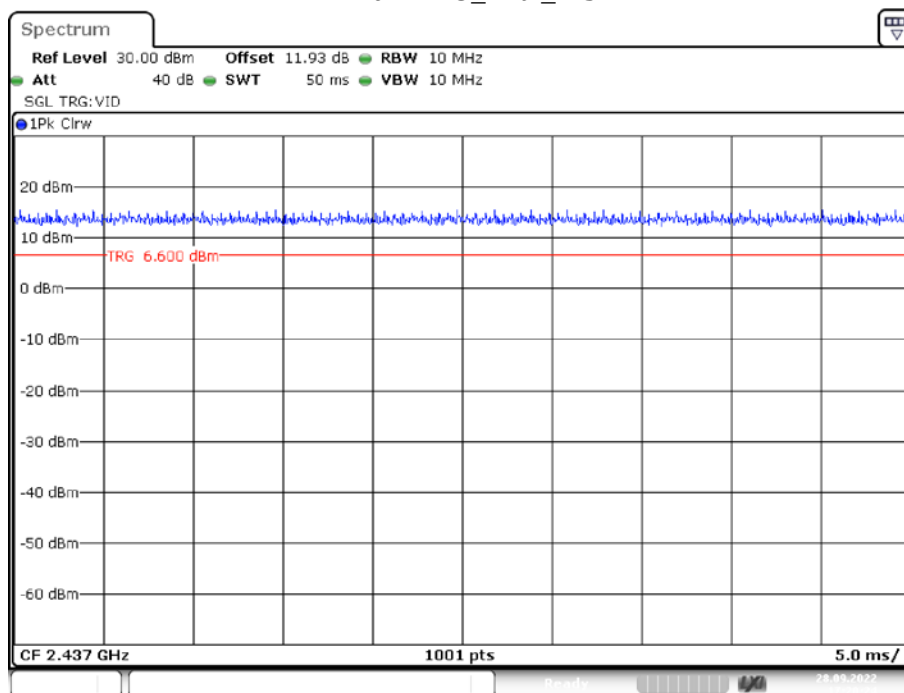
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11N20 MIMO_Ant1_2437



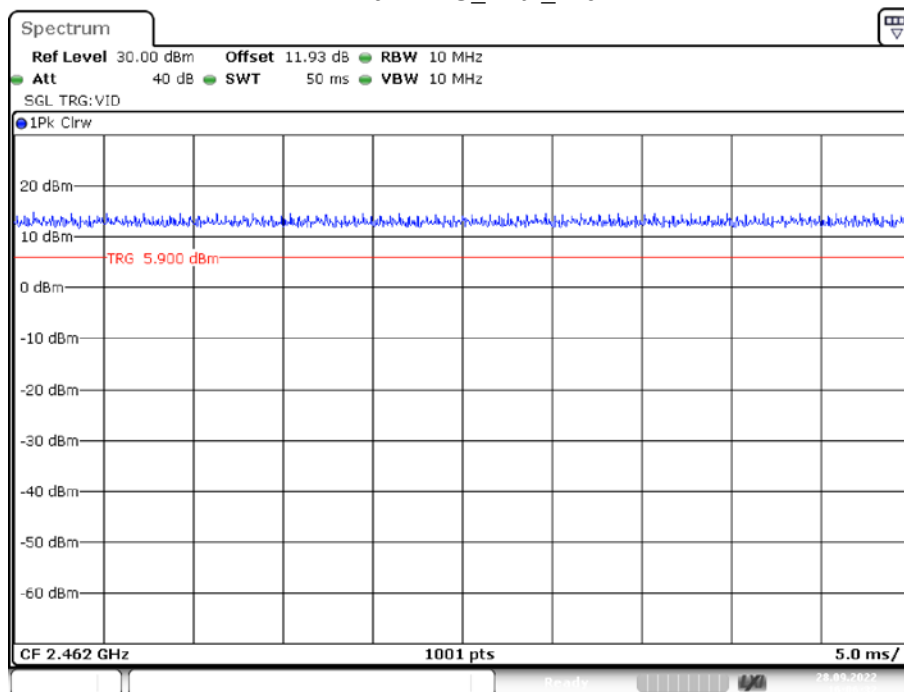
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11N20 MIMO_Ant2_2437



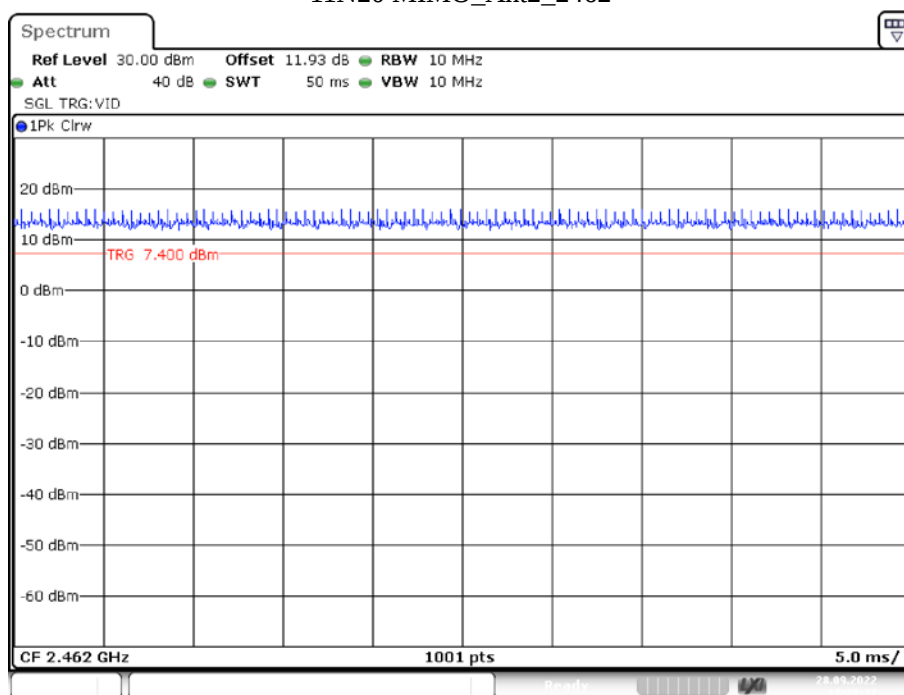
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11N20 MIMO_Ant1_2462



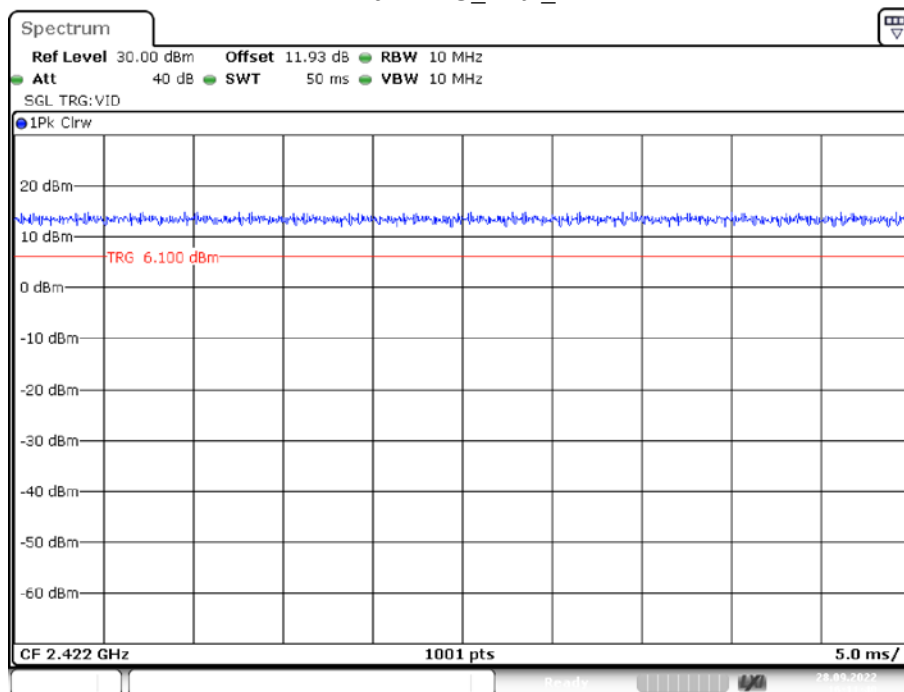
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11N20 MIMO_Ant2_2462



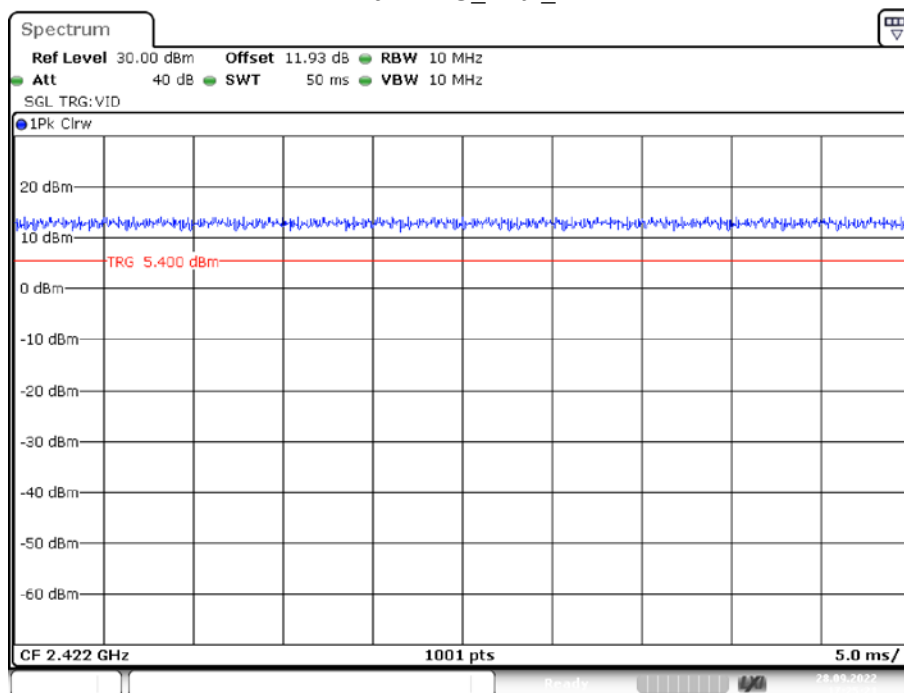
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11N40 MIMO_Ant1_2422



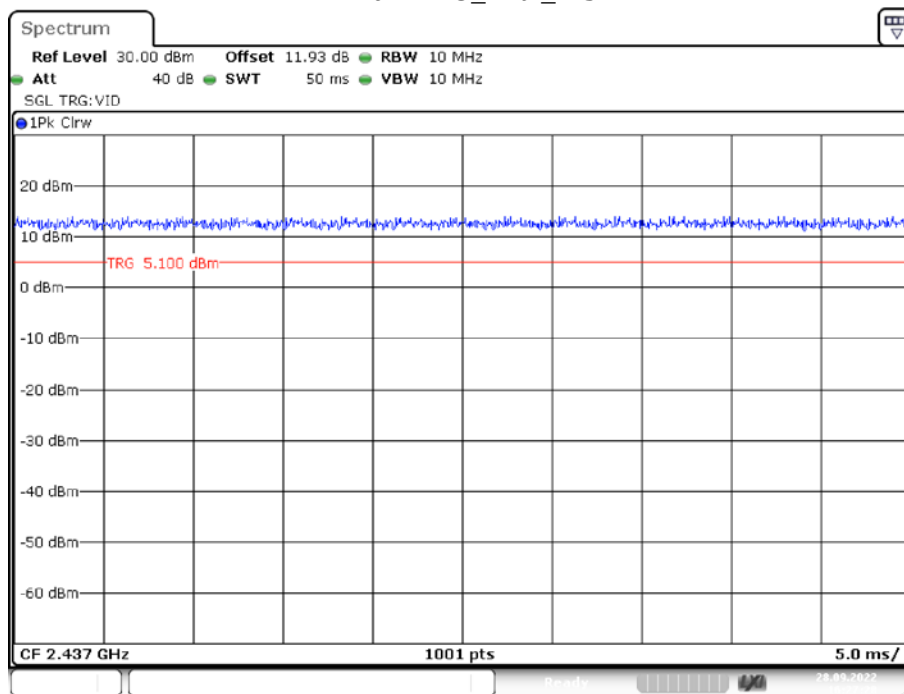
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11N40 MIMO_Ant2_2422



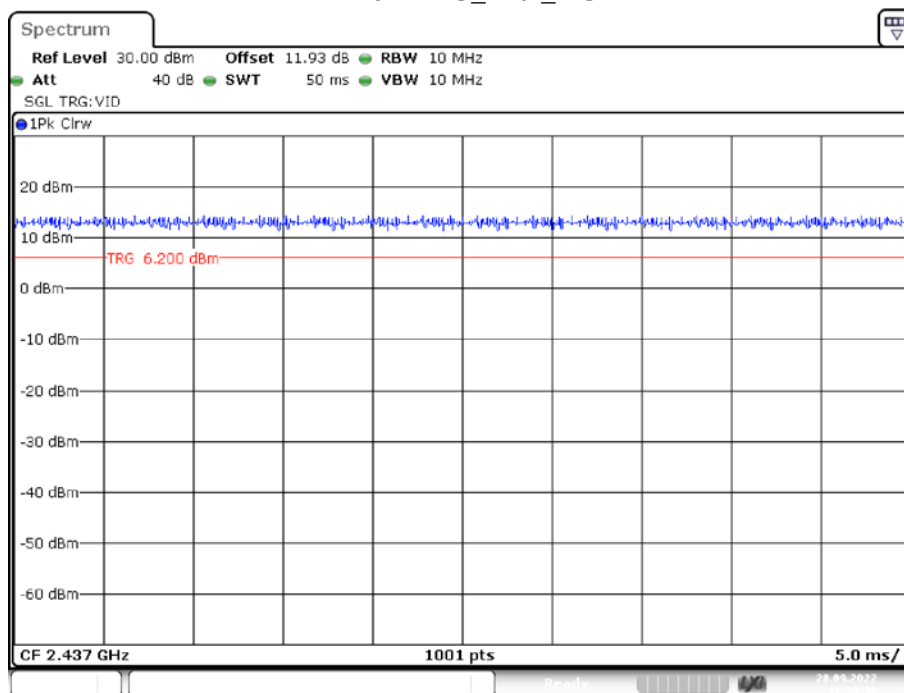
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11N40 MIMO_Ant1_2437



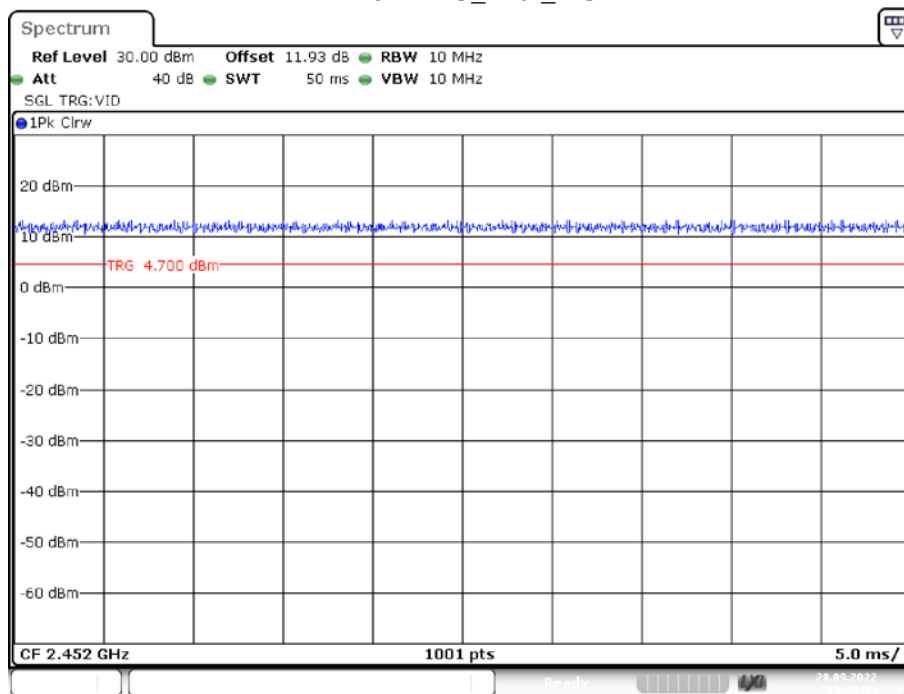
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11N40 MIMO_Ant2_2437



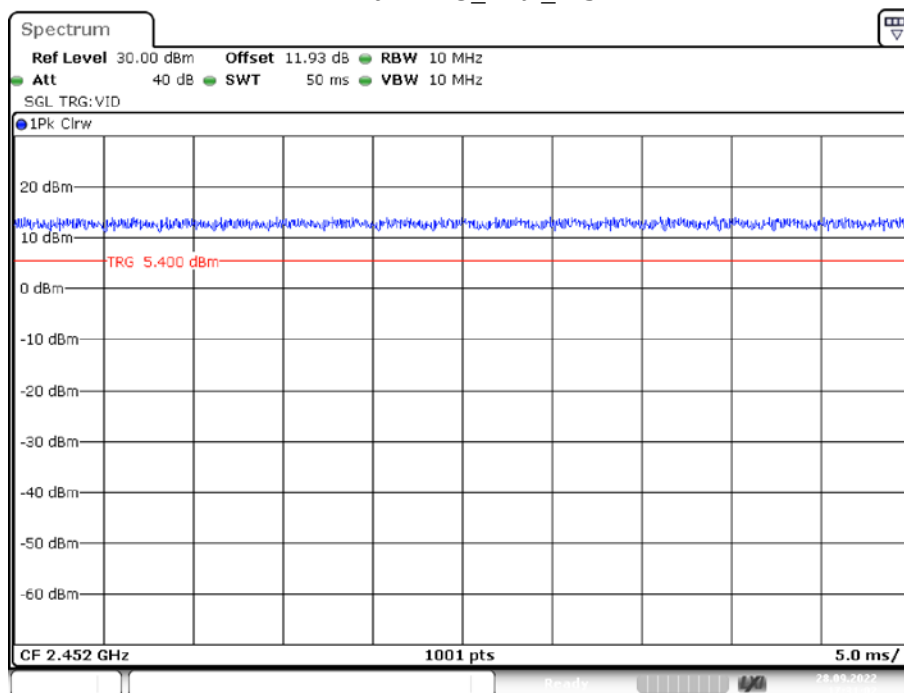
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11N40 MIMO_Ant1_2452



Date: 28.SEP.2022 16:29:45

11N40 MIMO_Ant1_2452



Date: 28.SEP.2022 17:31:02

***** END OF REPORT *****