

Test Result Average

| Test Mode | Antenna | Channel | Result[dBm] | Limit[dBm] | EIRP [dBm] | EIRP Limit[dBm] | Verdict |
|------------|---------|---------|-------------|------------|------------|-----------------|---------|
| 11B | Ant0 | 2412 | 17.92 | ≤30.00 | 21.53 | ≤36.00 | PASS |
| | Ant1 | 2412 | 14.88 | ≤30.00 | 18.85 | ≤36.00 | PASS |
| | Ant0 | 2437 | 17.49 | ≤30.00 | 21.10 | ≤36.00 | PASS |
| | Ant1 | 2437 | 14.29 | ≤30.00 | 18.26 | ≤36.00 | PASS |
| | Ant0 | 2462 | 18.32 | ≤30.00 | 21.93 | ≤36.00 | PASS |
| | Ant1 | 2462 | 15.24 | ≤30.00 | 19.21 | ≤36.00 | PASS |
| 11G | Ant0 | 2412 | 19.22 | ≤30.00 | 22.83 | ≤36.00 | PASS |
| | Ant1 | 2412 | 20.40 | ≤30.00 | 24.37 | ≤36.00 | PASS |
| | Ant0 | 2437 | 20.90 | ≤30.00 | 24.51 | ≤36.00 | PASS |
| | Ant1 | 2437 | 22.36 | ≤30.00 | 26.33 | ≤36.00 | PASS |
| | Ant0 | 2462 | 18.33 | ≤30.00 | 21.94 | ≤36.00 | PASS |
| | Ant1 | 2462 | 19.32 | ≤30.00 | 23.29 | ≤36.00 | PASS |
| 11N20MIMO | Ant0 | 2412 | 17.92 | ≤29.03 | 24.89 | ≤36.00 | PASS |
| | Ant1 | 2412 | 19.00 | ≤29.03 | 25.97 | ≤36.00 | PASS |
| | total | 2412 | 21.50 | ≤29.03 | 28.47 | ≤36.00 | PASS |
| | Ant0 | 2437 | 18.39 | ≤29.03 | 25.36 | ≤36.00 | PASS |
| | Ant1 | 2437 | 19.44 | ≤29.03 | 26.41 | ≤36.00 | PASS |
| | total | 2437 | 21.96 | ≤29.03 | 28.93 | ≤36.00 | PASS |
| | Ant0 | 2462 | 18.35 | ≤29.03 | 25.32 | ≤36.00 | PASS |
| | Ant1 | 2462 | 19.44 | ≤29.03 | 26.41 | ≤36.00 | PASS |
| 11N40MIMO | total | 2462 | 21.94 | ≤29.03 | 28.91 | ≤36.00 | PASS |
| | Ant0 | 2422 | 17.03 | ≤29.03 | 24.00 | ≤36.00 | PASS |
| | Ant1 | 2422 | 17.89 | ≤29.03 | 24.86 | ≤36.00 | PASS |
| | total | 2422 | 20.49 | ≤29.03 | 27.46 | ≤36.00 | PASS |
| | Ant0 | 2437 | 18.32 | ≤29.03 | 25.29 | ≤36.00 | PASS |
| | Ant1 | 2437 | 19.37 | ≤29.03 | 26.34 | ≤36.00 | PASS |
| | total | 2437 | 21.89 | ≤29.03 | 28.86 | ≤36.00 | PASS |
| | Ant0 | 2452 | 16.52 | ≤29.03 | 23.49 | ≤36.00 | PASS |
| 11AX20MIMO | Ant1 | 2452 | 17.30 | ≤29.03 | 24.27 | ≤36.00 | PASS |
| | total | 2452 | 19.94 | ≤29.03 | 26.91 | ≤36.00 | PASS |
| | Ant0 | 2412 | 17.66 | ≤29.03 | 24.63 | ≤36.00 | PASS |
| | Ant1 | 2412 | 18.70 | ≤29.03 | 25.67 | ≤36.00 | PASS |
| | total | 2412 | 21.22 | ≤29.03 | 28.19 | ≤36.00 | PASS |
| | Ant0 | 2437 | 18.45 | ≤29.03 | 25.42 | ≤36.00 | PASS |
| | Ant1 | 2437 | 19.45 | ≤29.03 | 26.42 | ≤36.00 | PASS |
| | total | 2437 | 21.99 | ≤29.03 | 28.96 | ≤36.00 | PASS |
| 11AX40MIMO | total | 2462 | 20.65 | ≤29.03 | 27.62 | ≤36.00 | PASS |
| | Ant0 | 2462 | 17.20 | ≤29.03 | 24.17 | ≤36.00 | PASS |
| | Ant1 | 2462 | 18.04 | ≤29.03 | 25.01 | ≤36.00 | PASS |
| | total | 2462 | 20.65 | ≤29.03 | 27.62 | ≤36.00 | PASS |
| | Ant0 | 2422 | 16.77 | ≤29.03 | 23.74 | ≤36.00 | PASS |
| | Ant1 | 2422 | 17.61 | ≤29.03 | 24.58 | ≤36.00 | PASS |
| | total | 2422 | 20.22 | ≤29.03 | 27.19 | ≤36.00 | PASS |
| | Ant0 | 2437 | 18.37 | ≤29.03 | 25.34 | ≤36.00 | PASS |
| 11AX40MIMO | Ant1 | 2437 | 19.42 | ≤29.03 | 26.39 | ≤36.00 | PASS |
| | total | 2437 | 21.94 | ≤29.03 | 28.91 | ≤36.00 | PASS |
| | Ant0 | 2452 | 16.22 | ≤29.03 | 23.19 | ≤36.00 | PASS |
| | Ant1 | 2452 | 16.97 | ≤29.03 | 23.94 | ≤36.00 | PASS |
| | total | 2452 | 19.62 | ≤29.03 | 26.59 | ≤36.00 | PASS |

Note: the device employ Beam-forming for the MIMO mode, according to KDB 662911 D01 Multiple Transmitter Output v02r01:

Directional gain = $G_{ANT} + 10 \log(N_{ANT})$
 $G_{ANT0} = 3.61\text{dBi}$, $G_{ANT1} = 3.97\text{dBi}$, used the higher for calculate,
 Directional gain = $3.97 + 10\log(2) = 6.97\text{dBi} > 6\text{dBi}$
 So the limit need reduced 0.97dB

Appendix D: Maximum power spectral density

Test Result

| Test Mode | Antenna | Channel | Result[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|------------|---------|---------|------------------|-----------------|---------|
| 11B | Ant0 | 2412 | -3.13 | ≤8.00 | PASS |
| | Ant1 | 2412 | -6.21 | ≤8.00 | PASS |
| | Ant0 | 2437 | -3.44 | ≤8.00 | PASS |
| | Ant1 | 2437 | -8.37 | ≤8.00 | PASS |
| | Ant0 | 2462 | -2.14 | ≤8.00 | PASS |
| | Ant1 | 2462 | -6.93 | ≤8.00 | PASS |
| 11G | Ant0 | 2412 | -4.16 | ≤8.00 | PASS |
| | Ant1 | 2412 | -3.16 | ≤8.00 | PASS |
| | Ant0 | 2437 | -2.18 | ≤8.00 | PASS |
| | Ant1 | 2437 | -2.28 | ≤8.00 | PASS |
| | Ant0 | 2462 | -4.36 | ≤8.00 | PASS |
| | Ant1 | 2462 | -5.46 | ≤8.00 | PASS |
| 11N20MIMO | Ant0 | 2412 | -4.60 | ≤7.03 | PASS |
| | Ant1 | 2412 | -4.58 | ≤7.03 | PASS |
| | total | 2412 | -1.58 | ≤7.03 | PASS |
| | Ant0 | 2437 | -5.08 | ≤7.03 | PASS |
| | Ant1 | 2437 | -4.81 | ≤7.03 | PASS |
| | total | 2437 | -1.93 | ≤7.03 | PASS |
| | Ant0 | 2462 | -5.45 | ≤7.03 | PASS |
| | Ant1 | 2462 | -5.04 | ≤7.03 | PASS |
| total | 2462 | -2.23 | ≤7.03 | PASS | |
| 11N40MIMO | Ant0 | 2422 | -9.14 | ≤7.03 | PASS |
| | Ant1 | 2422 | -8.50 | ≤7.03 | PASS |
| | total | 2422 | -5.80 | ≤7.03 | PASS |
| | Ant0 | 2437 | -8.81 | ≤7.03 | PASS |
| | Ant1 | 2437 | -8.16 | ≤7.03 | PASS |
| | total | 2437 | -5.46 | ≤7.03 | PASS |
| | Ant0 | 2452 | -10.92 | ≤7.03 | PASS |
| | Ant1 | 2452 | -9.88 | ≤7.03 | PASS |
| total | 2452 | -7.36 | ≤7.03 | PASS | |
| 11AX20MIMO | Ant0 | 2412 | -7.12 | ≤7.03 | PASS |
| | Ant1 | 2412 | -6.56 | ≤7.03 | PASS |
| | total | 2412 | -3.82 | ≤7.03 | PASS |
| | Ant0 | 2437 | -7.06 | ≤7.03 | PASS |
| | Ant1 | 2437 | -6.70 | ≤7.03 | PASS |
| | total | 2437 | -3.87 | ≤7.03 | PASS |
| | Ant0 | 2462 | -6.93 | ≤7.03 | PASS |
| | Ant1 | 2462 | -7.46 | ≤7.03 | PASS |
| total | 2462 | -4.18 | ≤7.03 | PASS | |
| 11AX40MIMO | Ant0 | 2422 | -10.76 | ≤7.03 | PASS |
| | Ant1 | 2422 | -10.63 | ≤7.03 | PASS |
| | total | 2422 | -7.68 | ≤7.03 | PASS |
| | Ant0 | 2437 | -8.92 | ≤7.03 | PASS |
| | Ant1 | 2437 | -9.43 | ≤7.03 | PASS |
| | total | 2437 | -6.16 | ≤7.03 | PASS |
| | Ant0 | 2452 | -11.11 | ≤7.03 | PASS |
| | Ant1 | 2452 | -11.62 | ≤7.03 | PASS |
| total | 2452 | -8.35 | ≤7.03 | PASS | |

Note: the device employ Beam-forming for the MIMO mode, according to KDB 662911 D01 Multiple Transmitter Output v02r01:

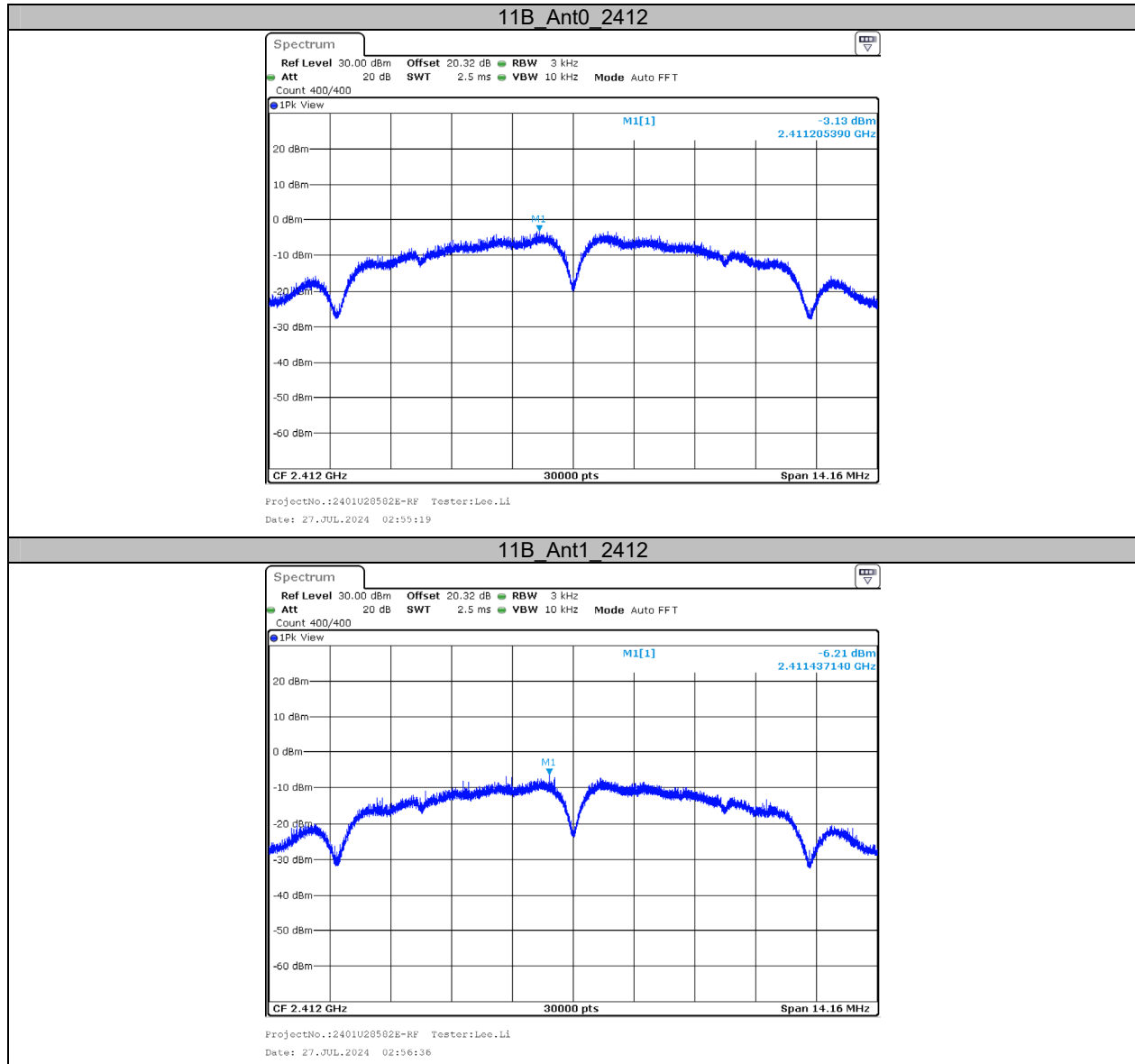
Directional gain = $G_{ANT} + 10 \log(N_{ANT})$

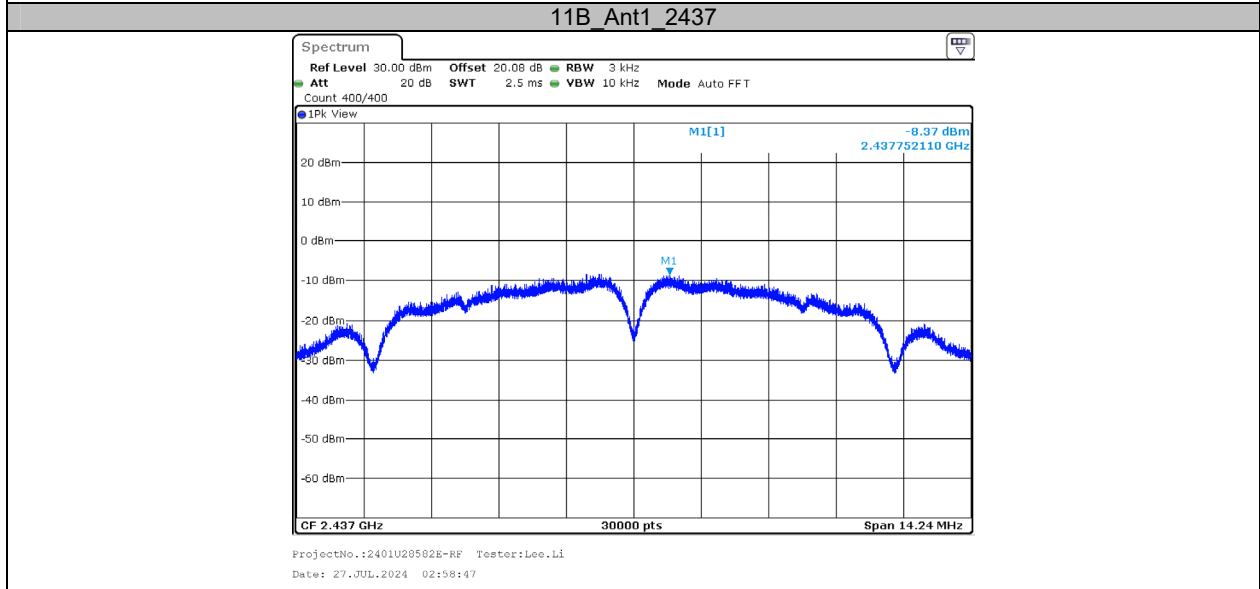
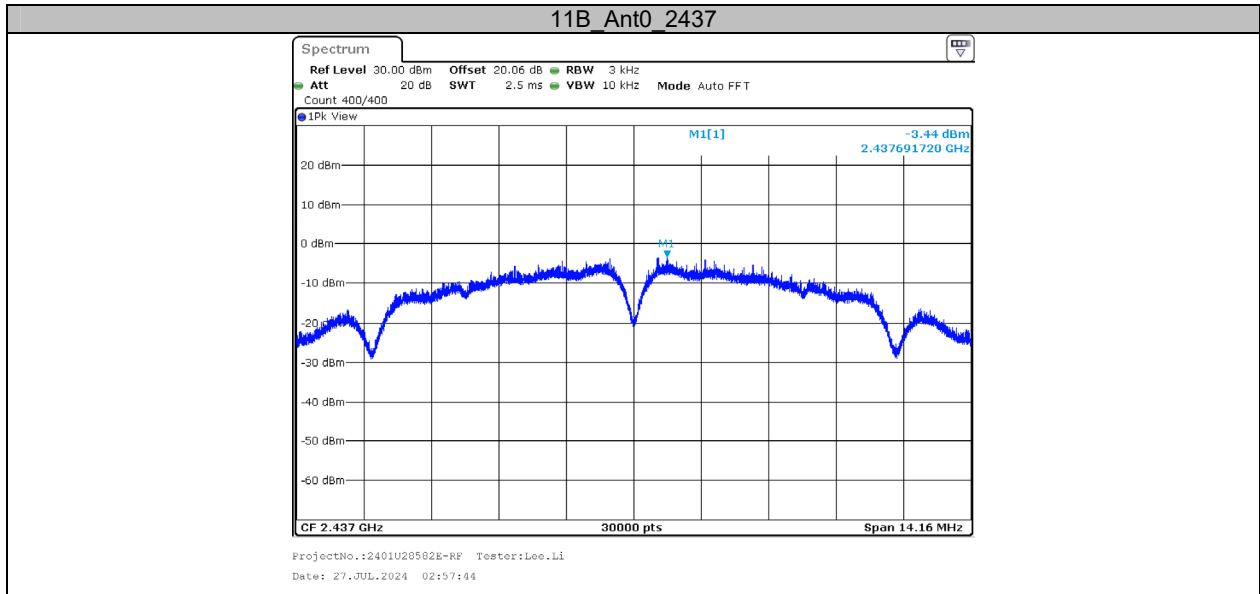
$G_{ANT0} = 3.61\text{dBi}$, $G_{ANT1} = 3.97\text{dBi}$, used the higher for calculate,

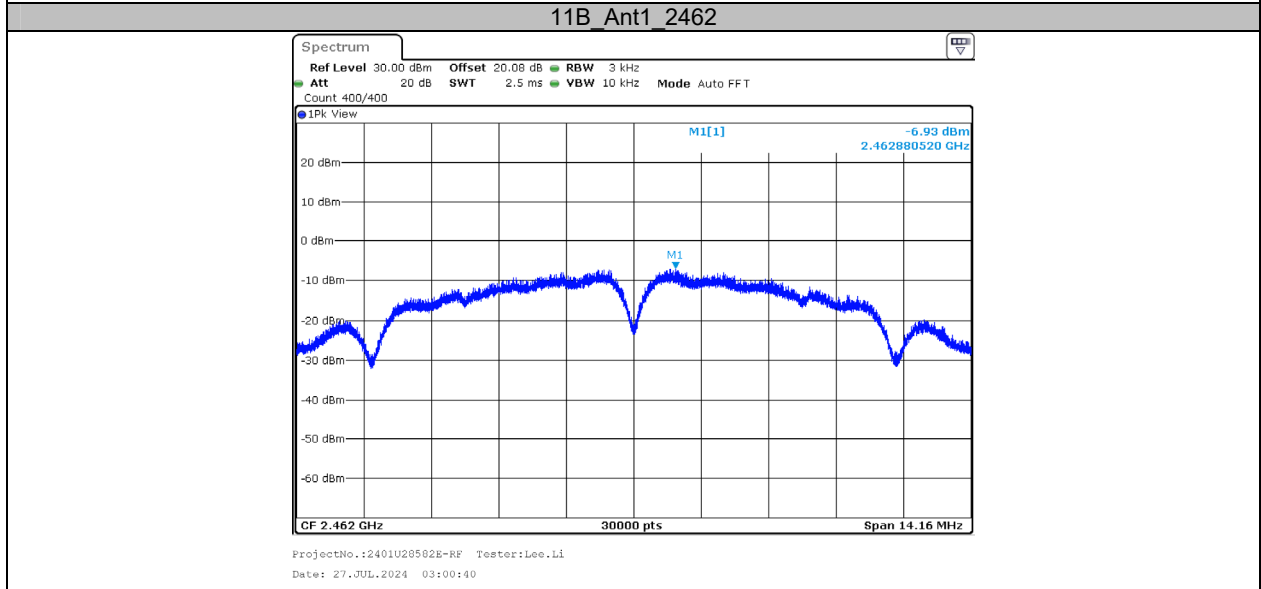
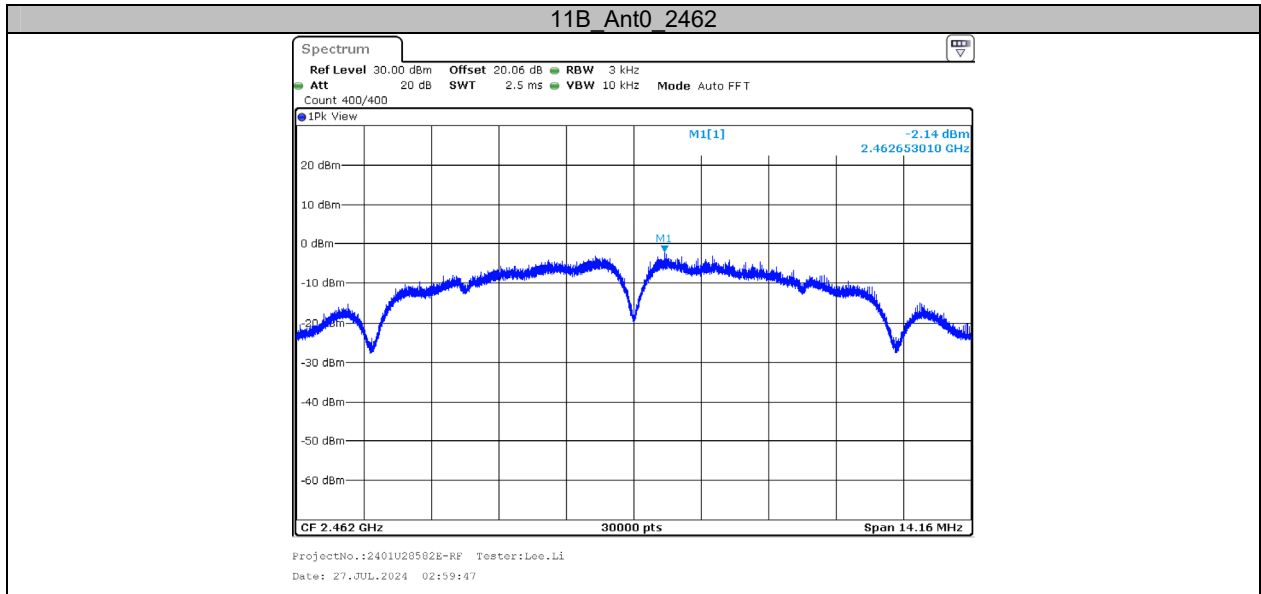
Directional gain = $3.97 + 10\log(2) = 6.97\text{dBi} > 6\text{dBi}$

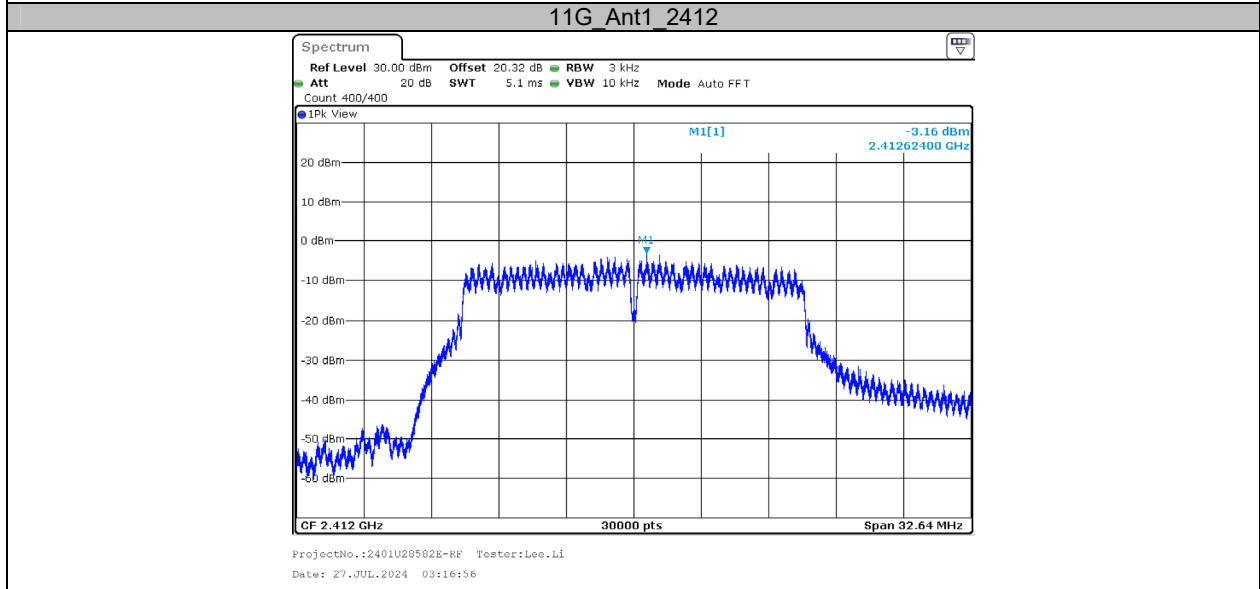
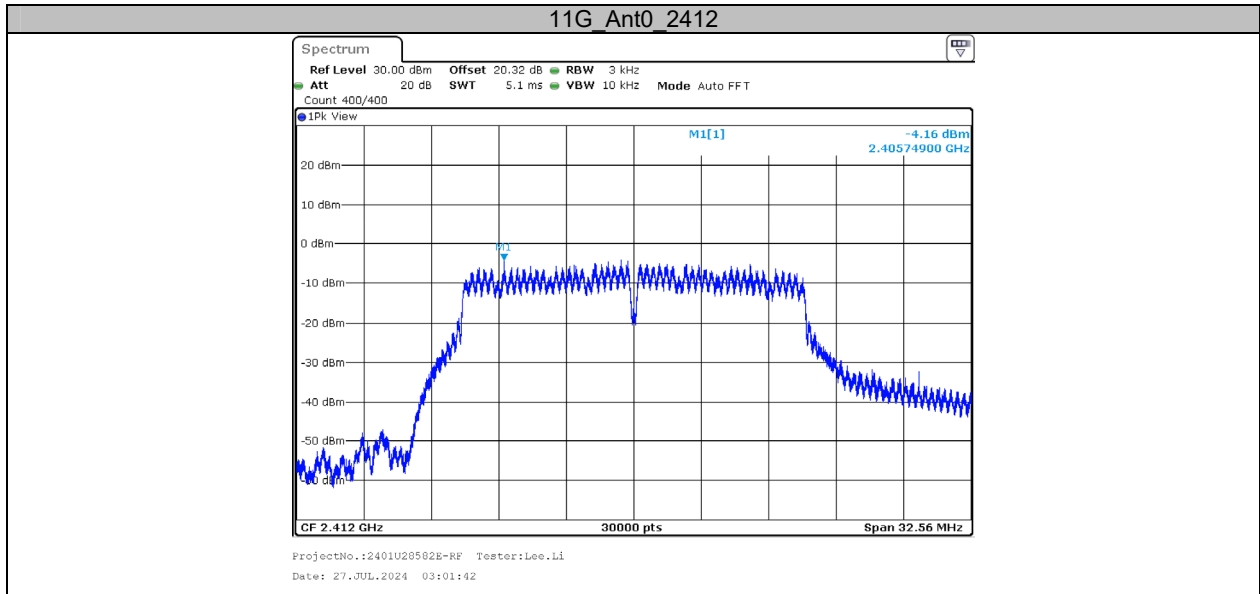
So the limit need reduced 0.97dB

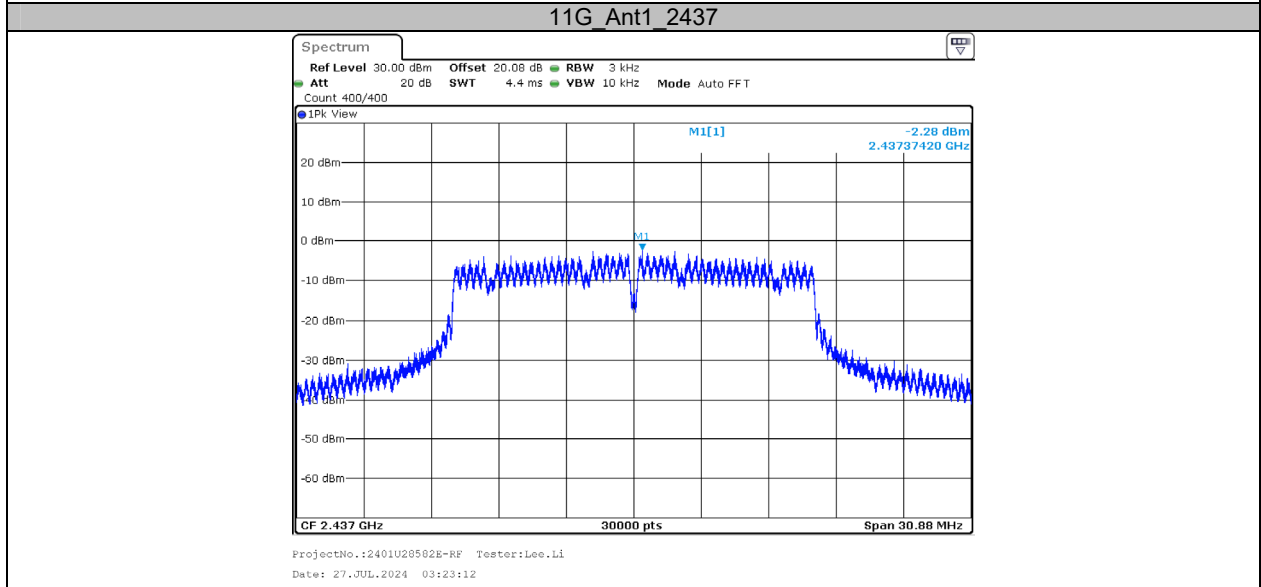
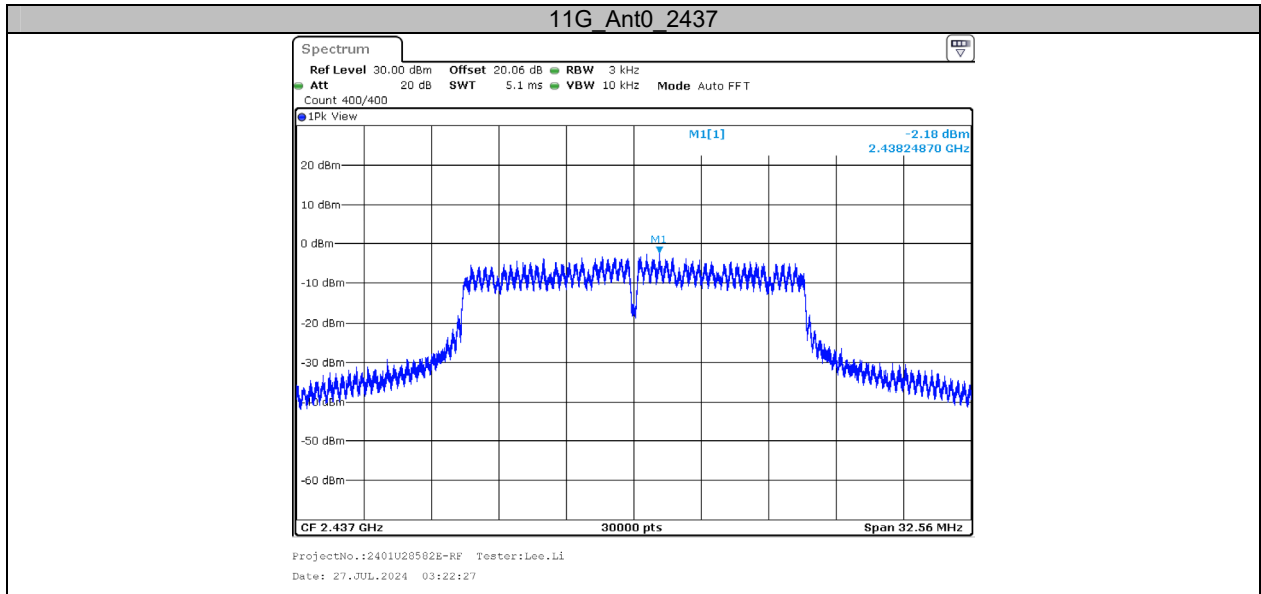
Test Graphs

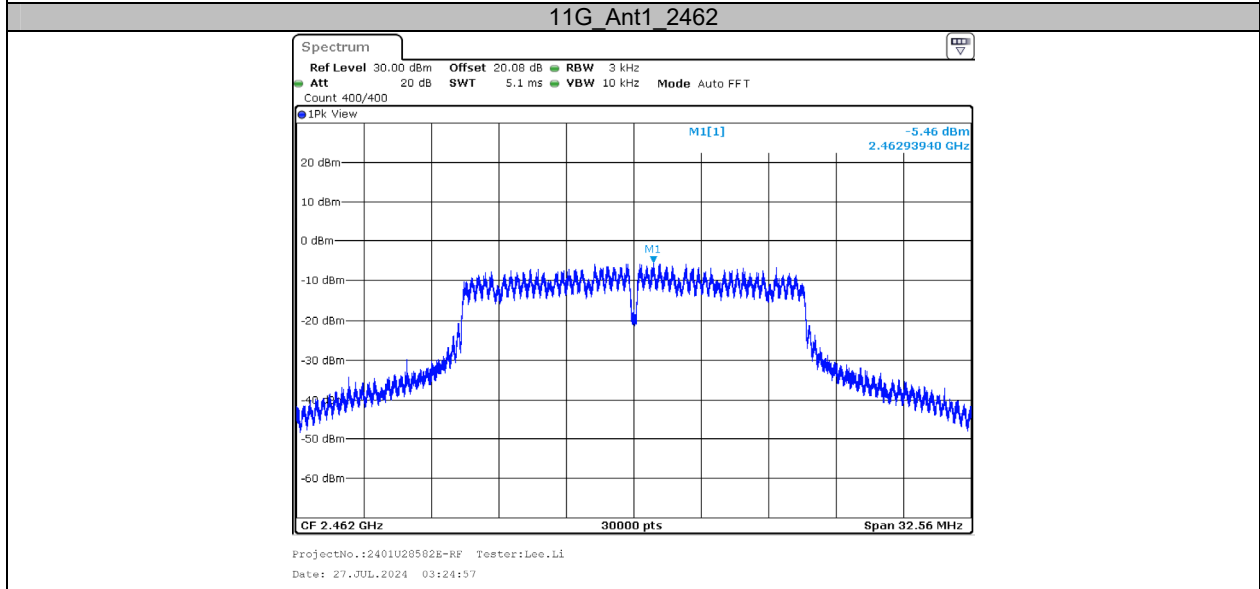
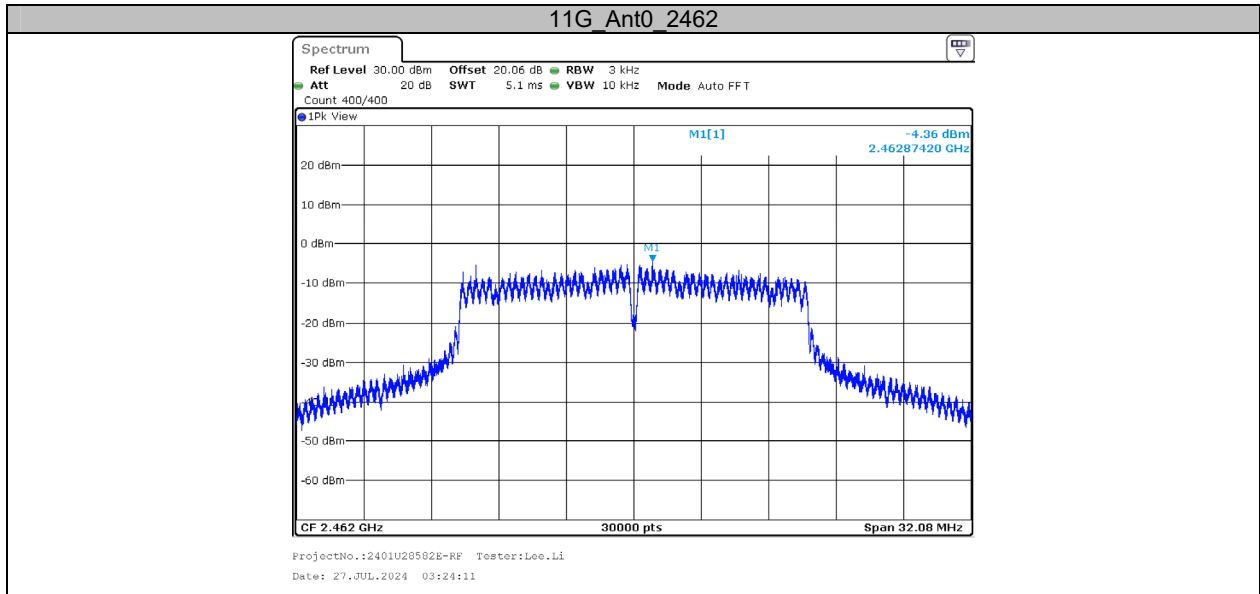


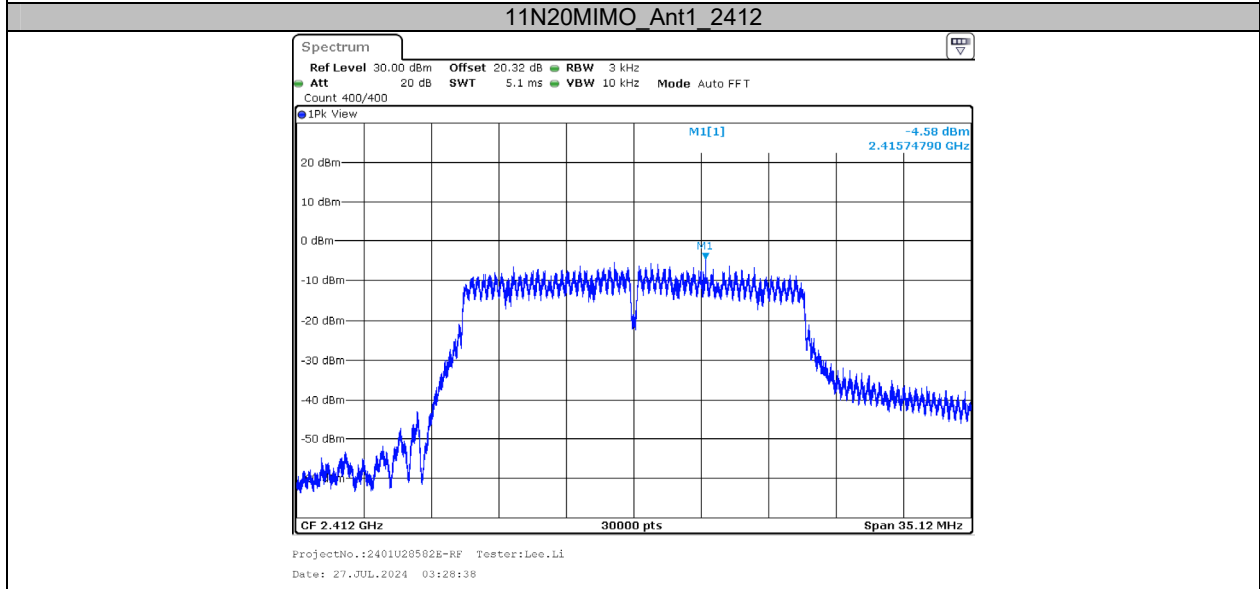
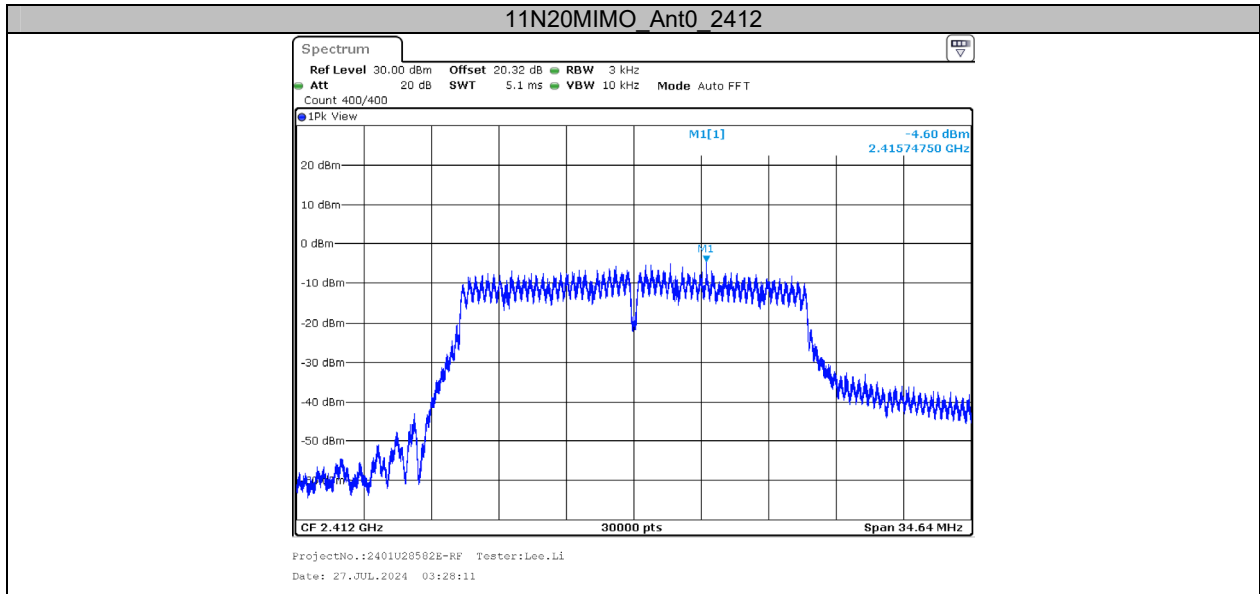


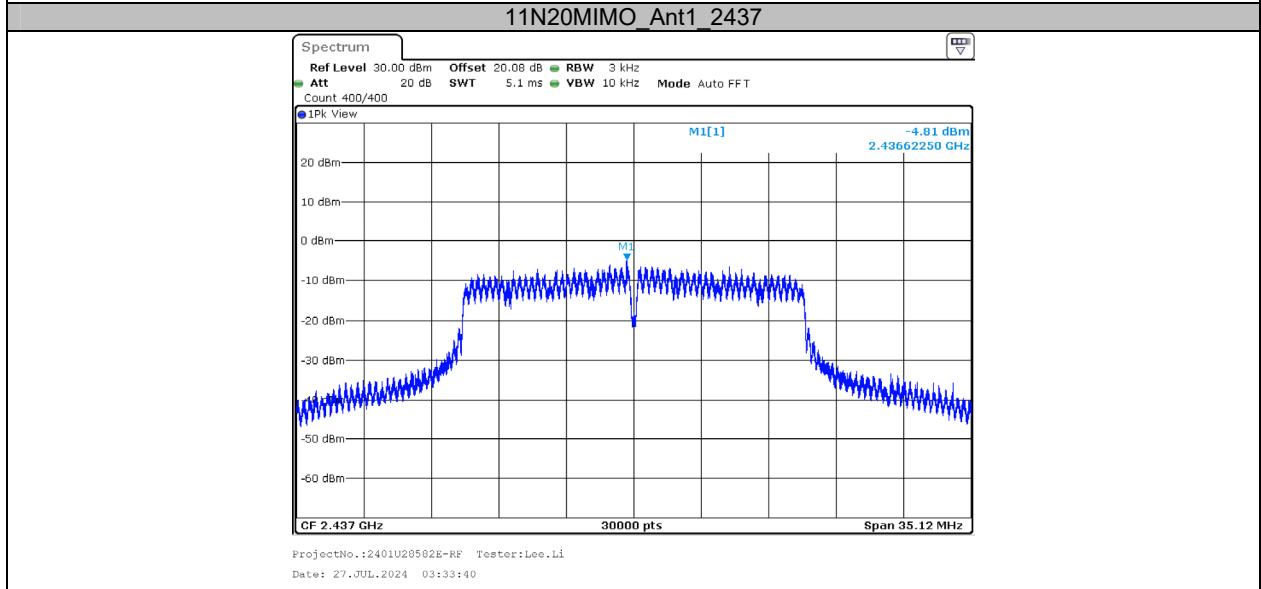
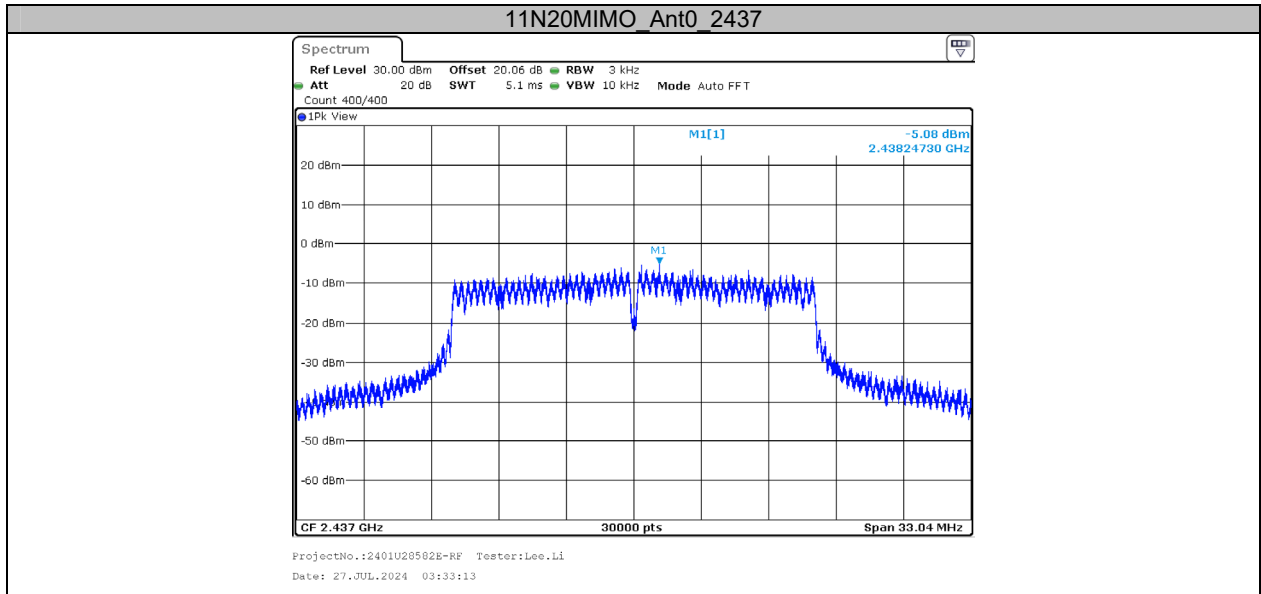


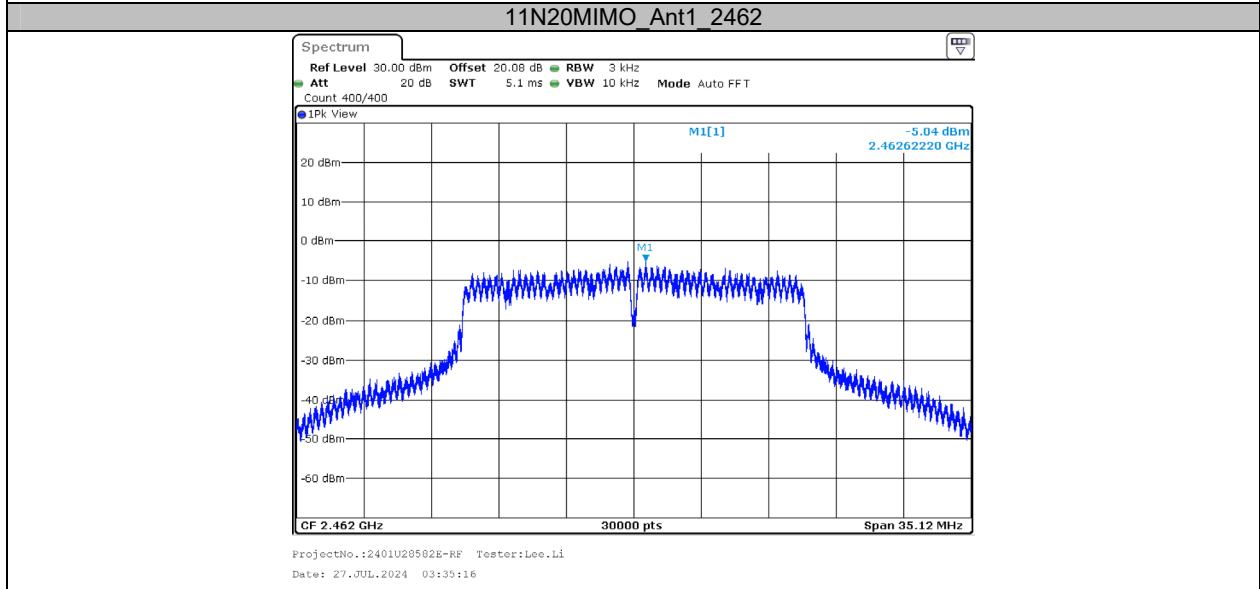
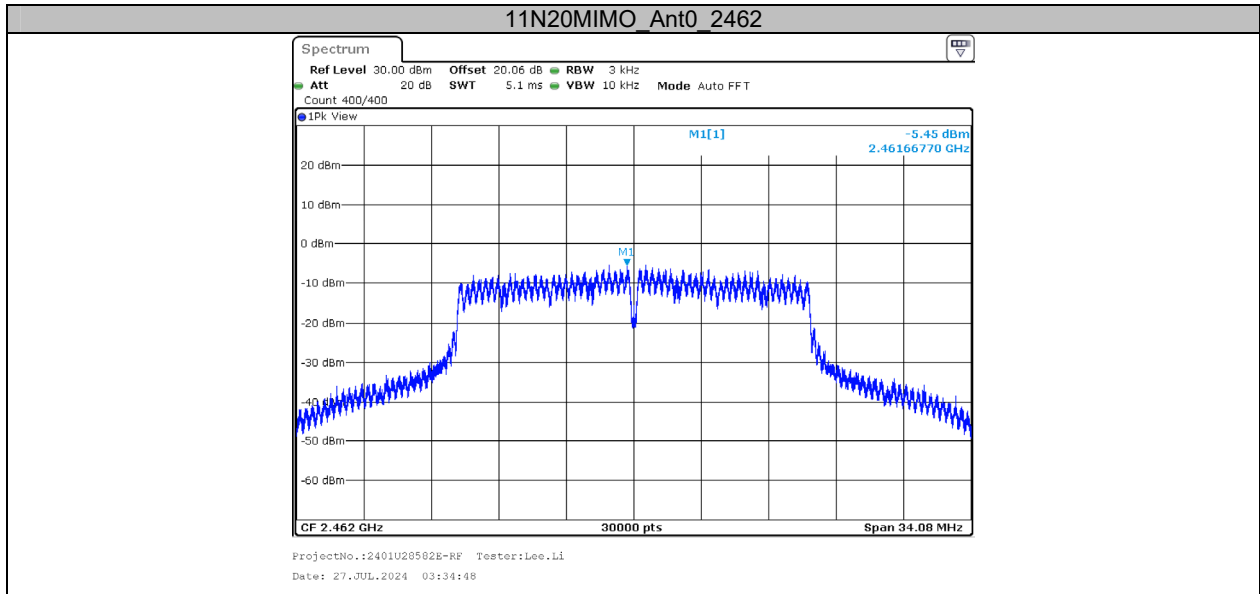


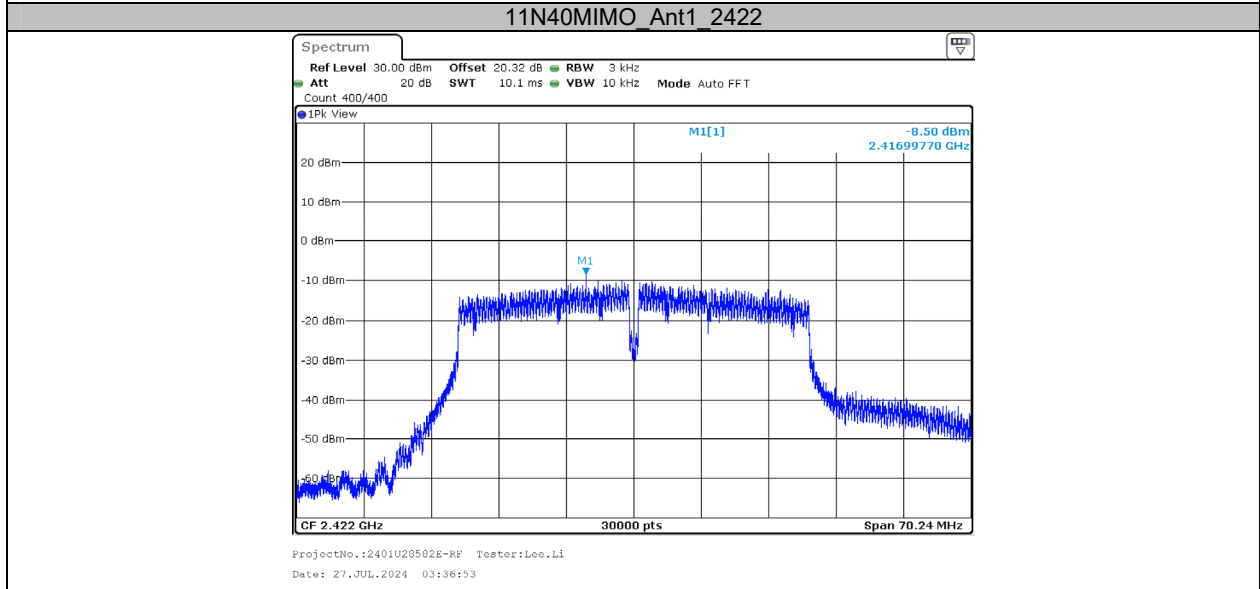
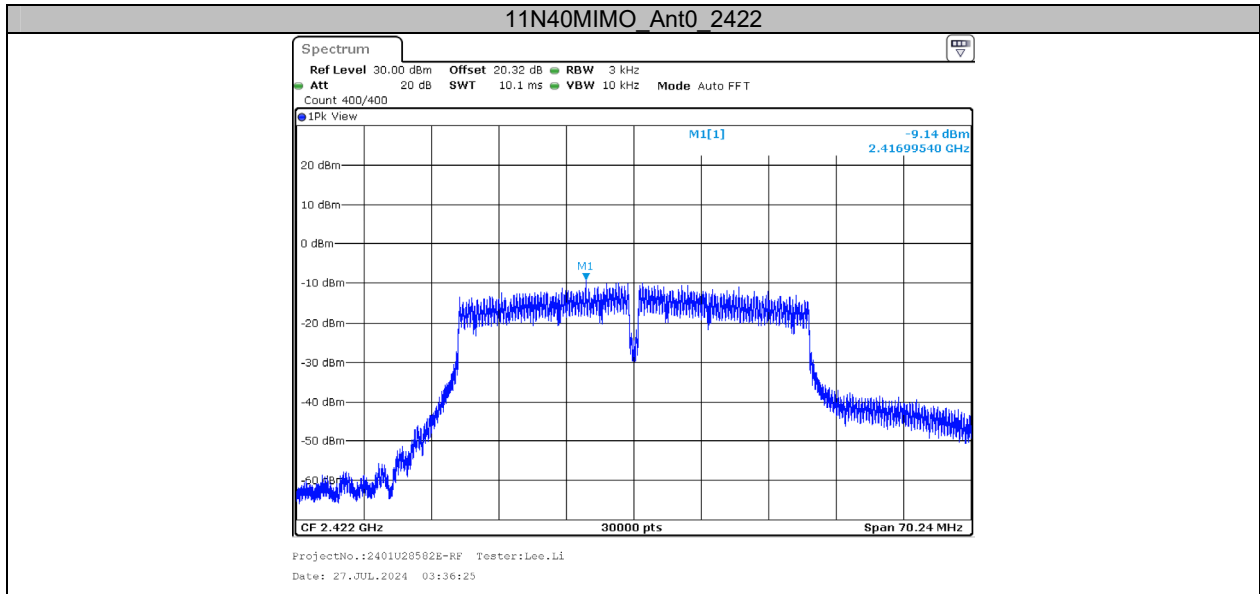


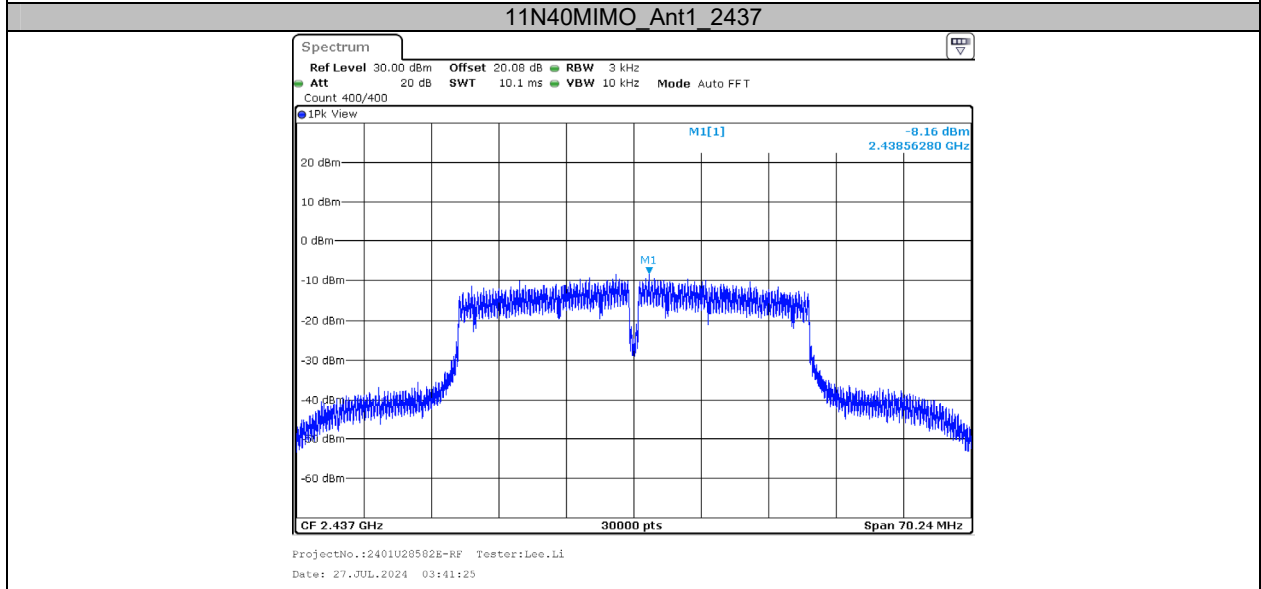
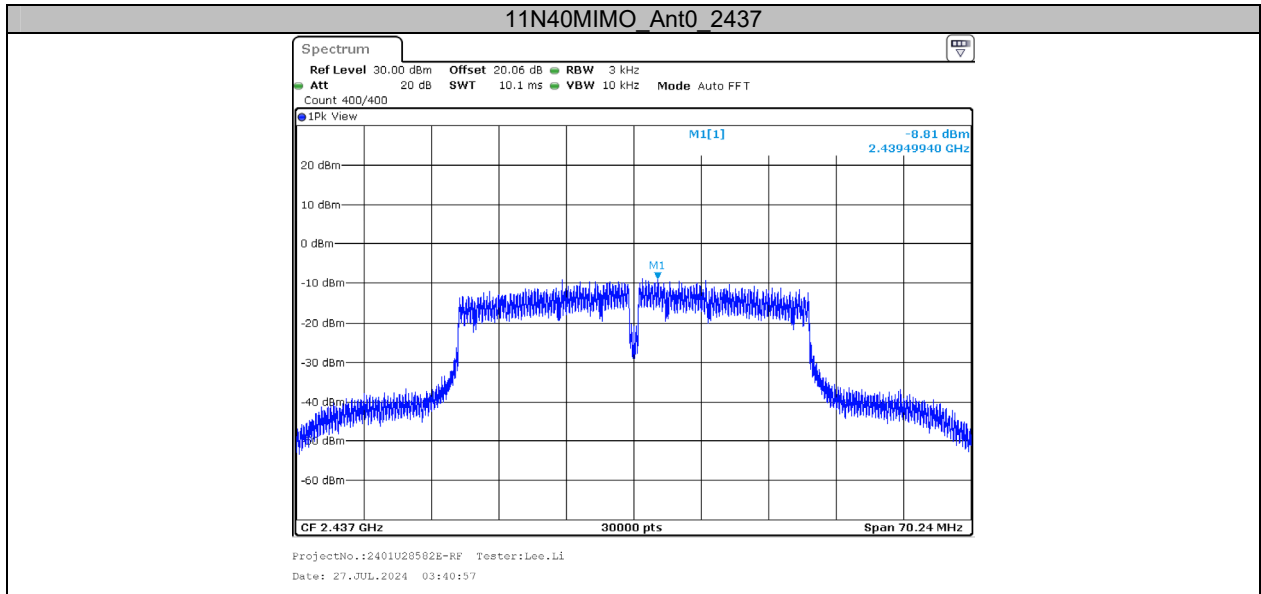


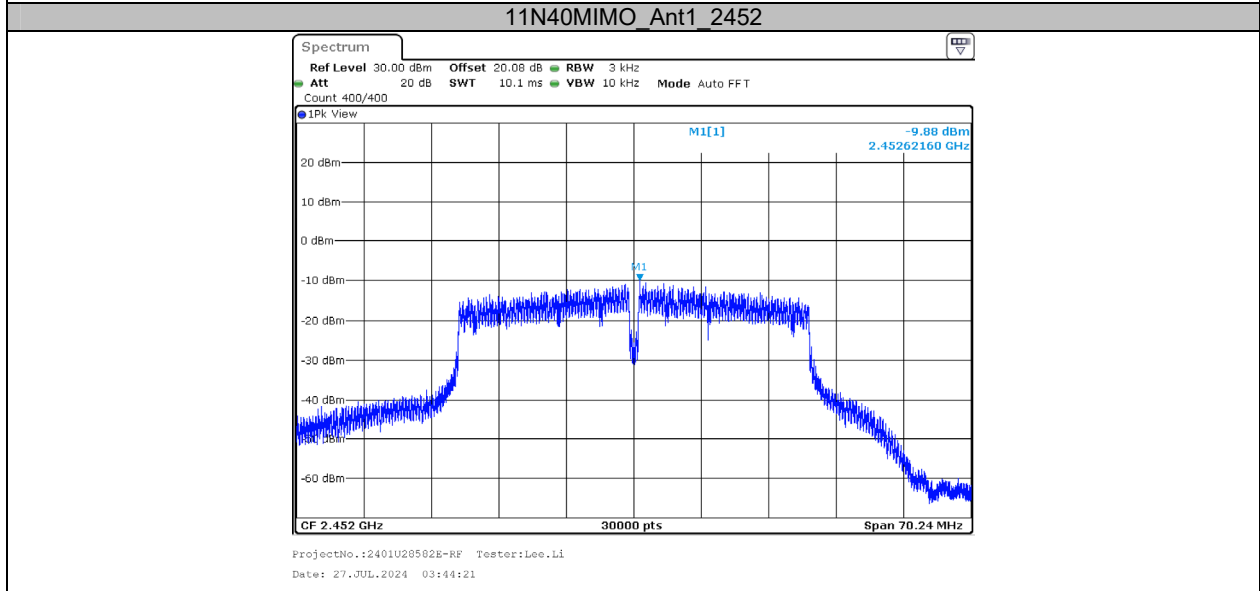
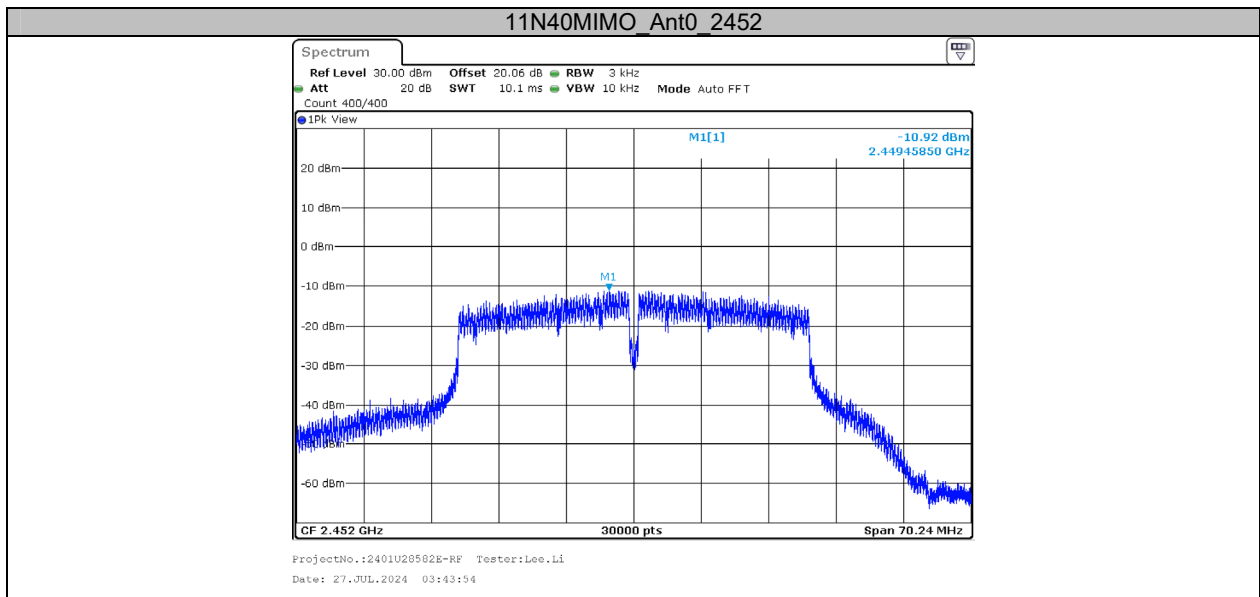


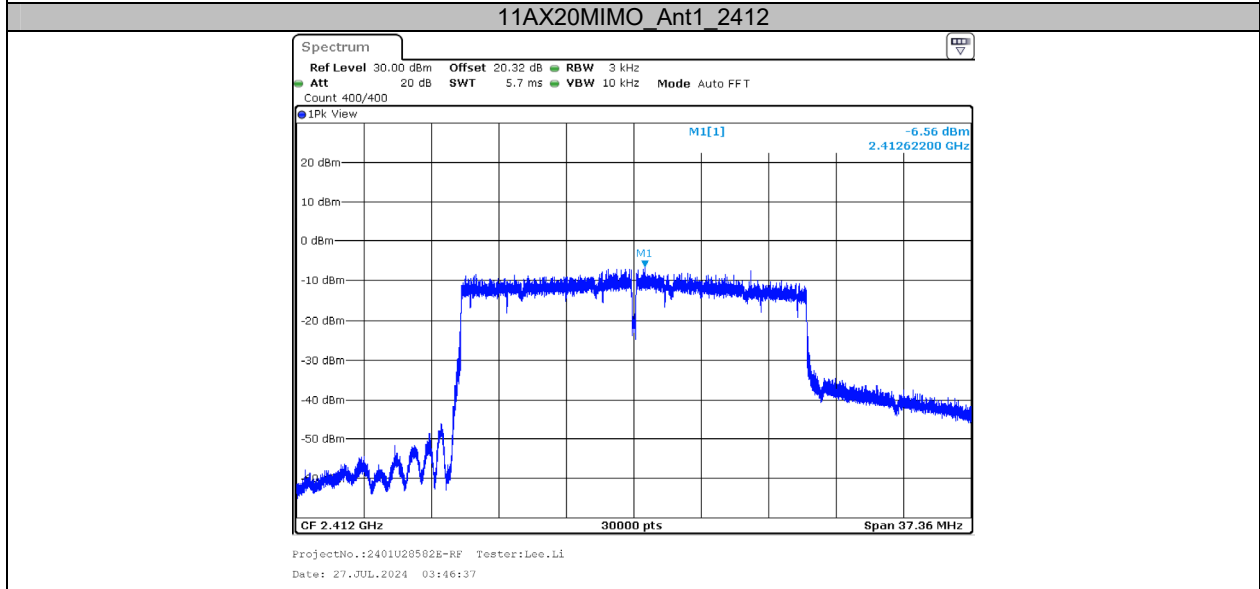
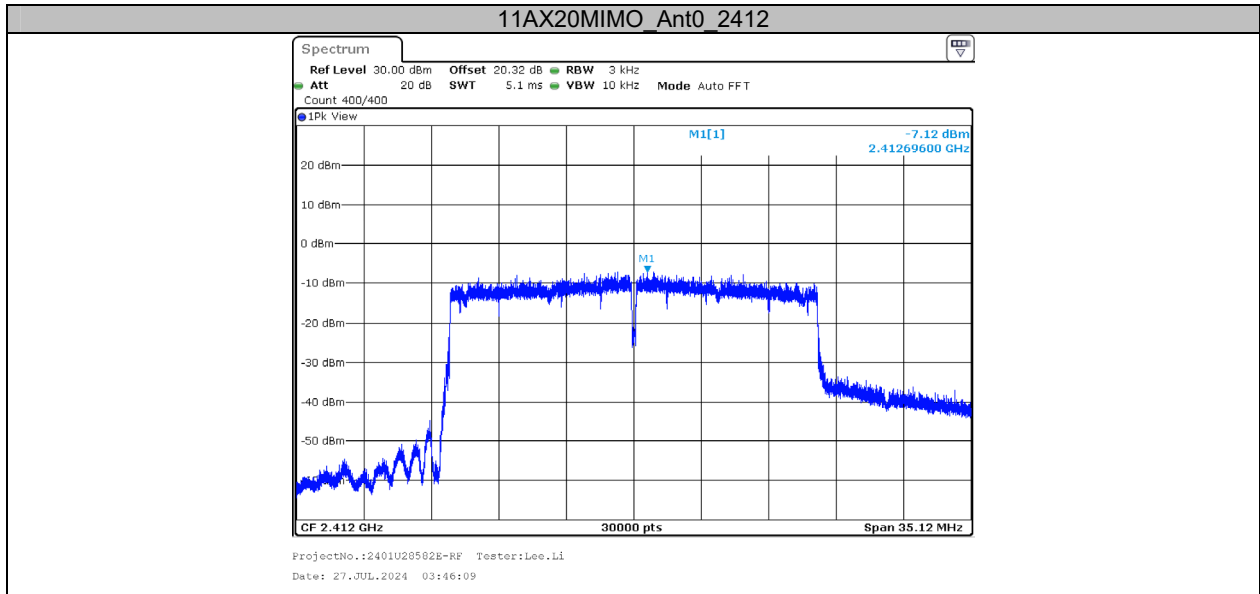


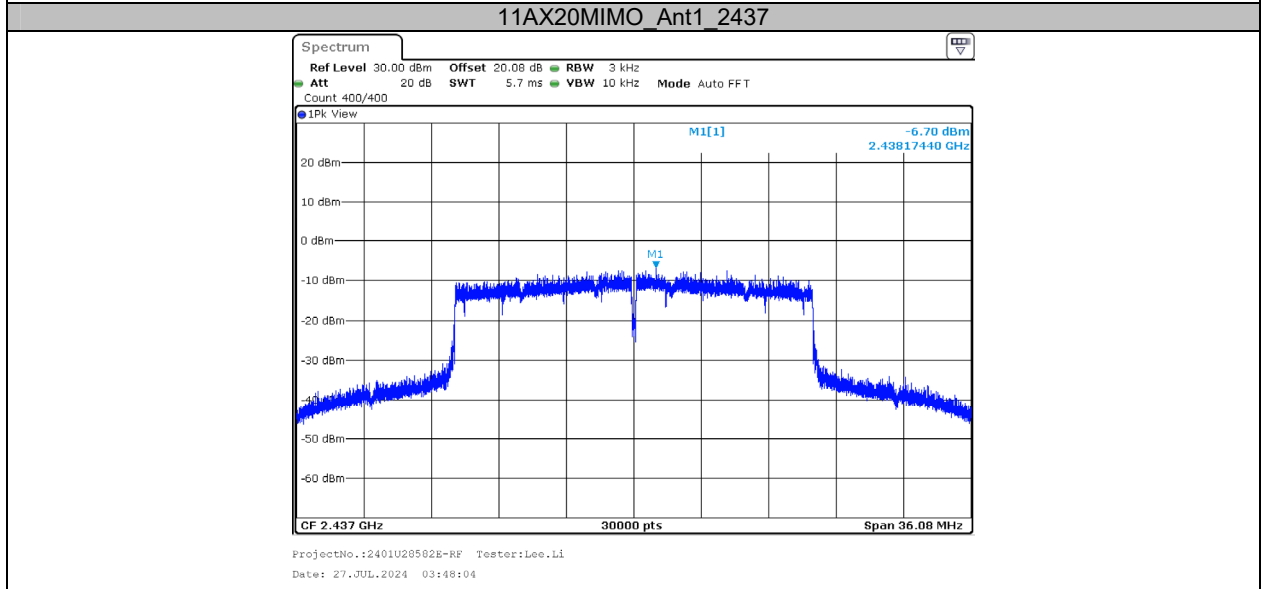
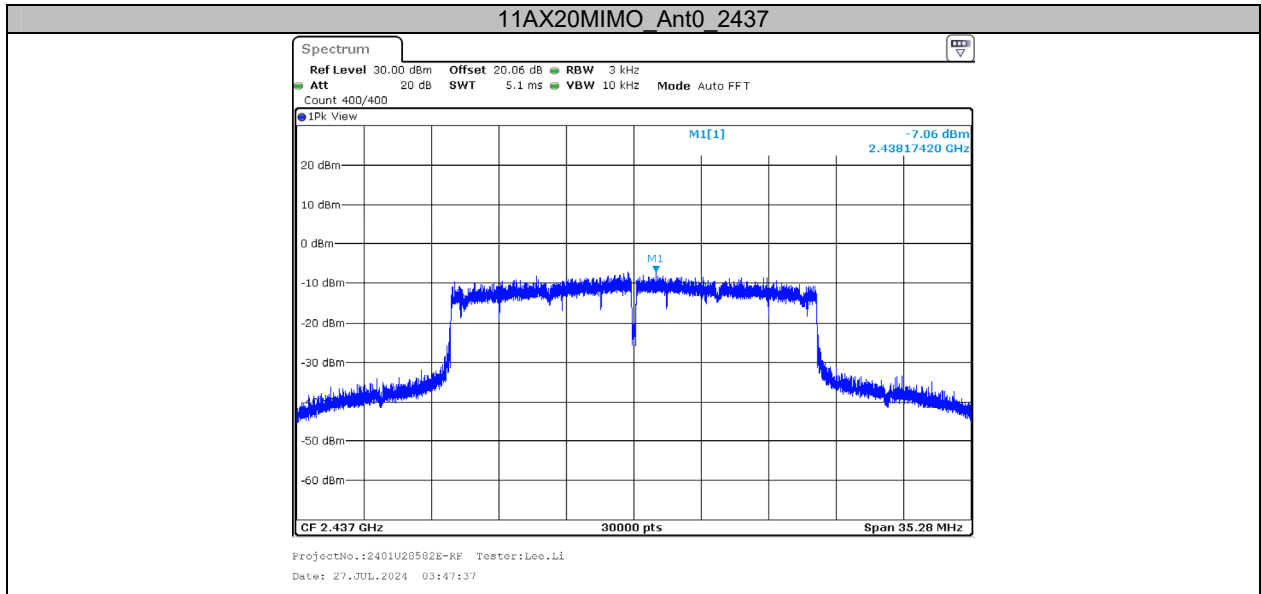


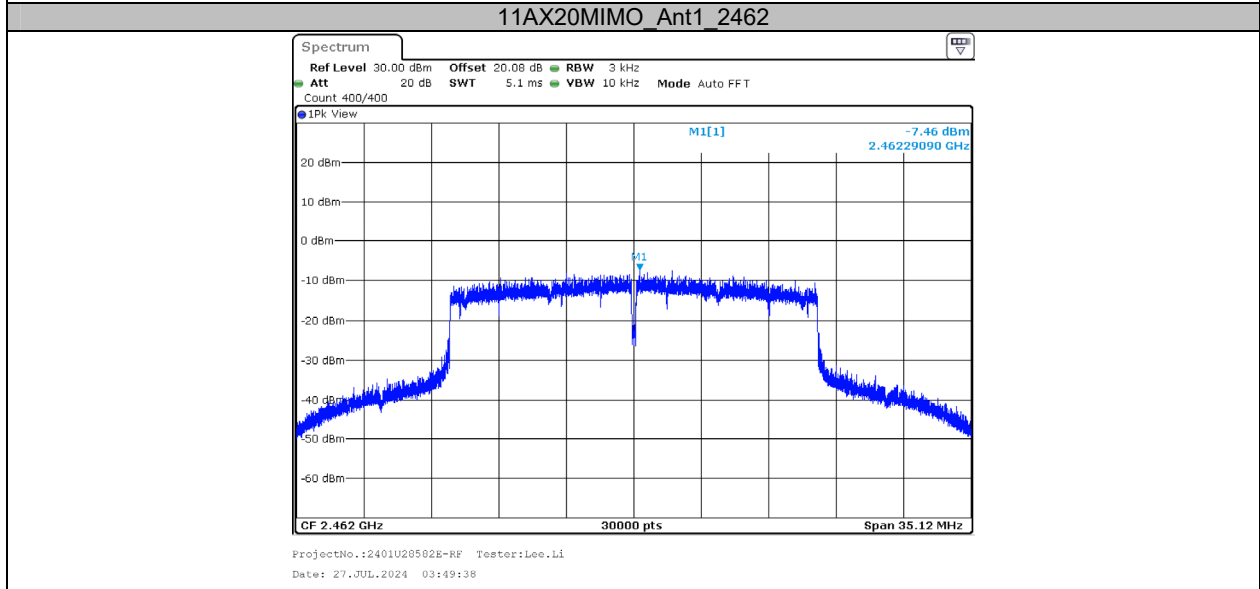
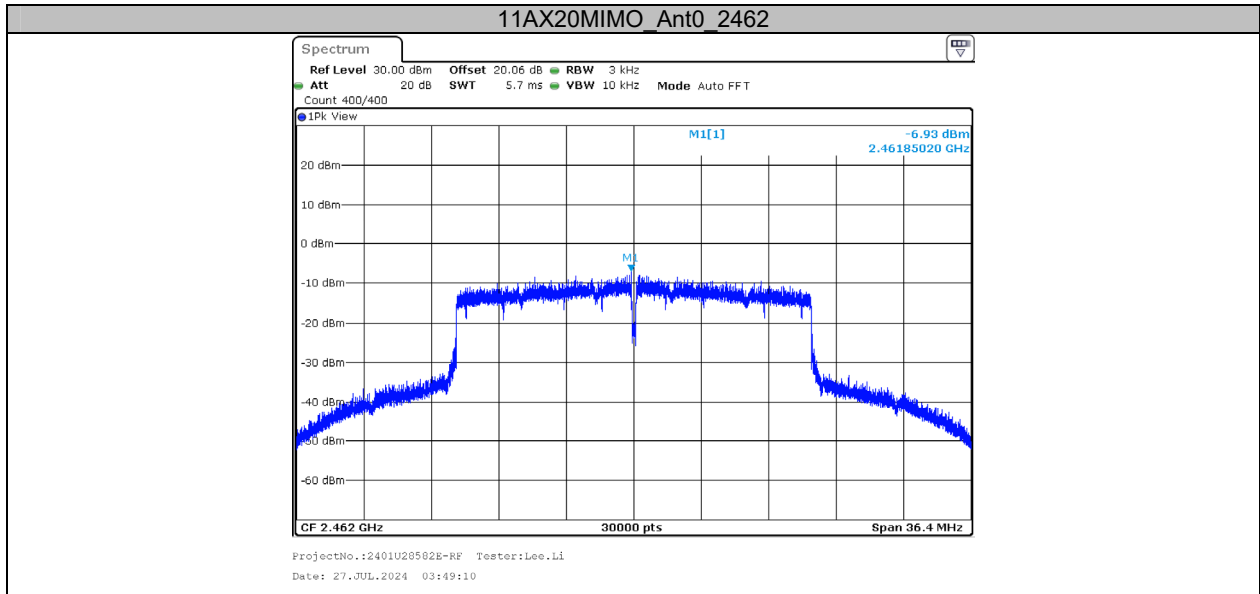


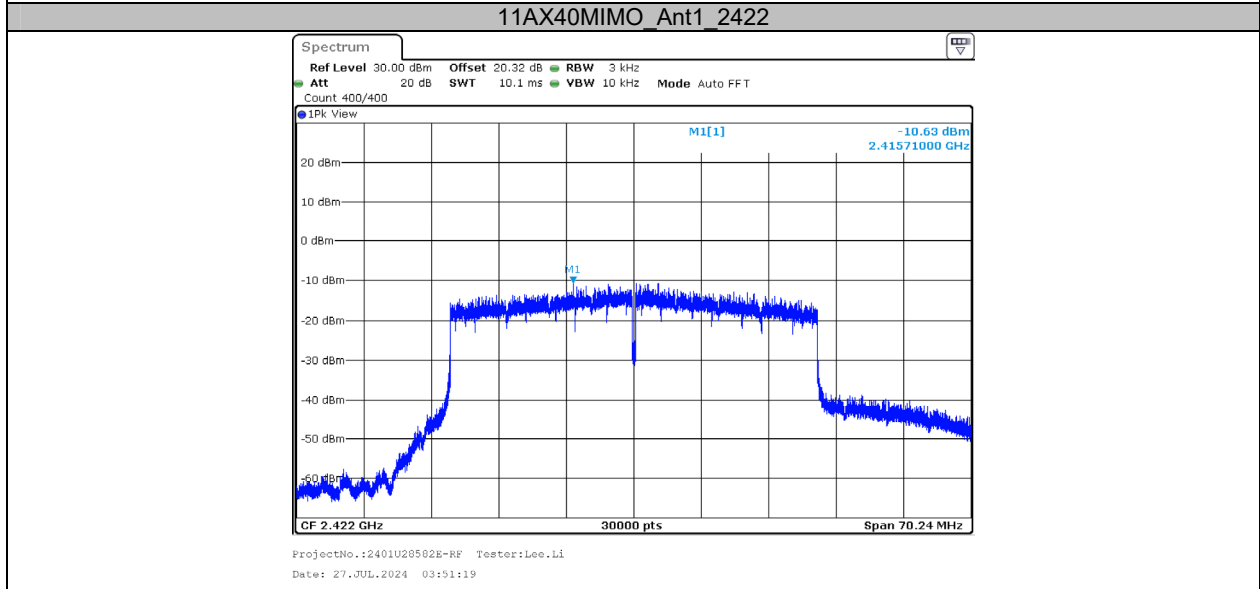
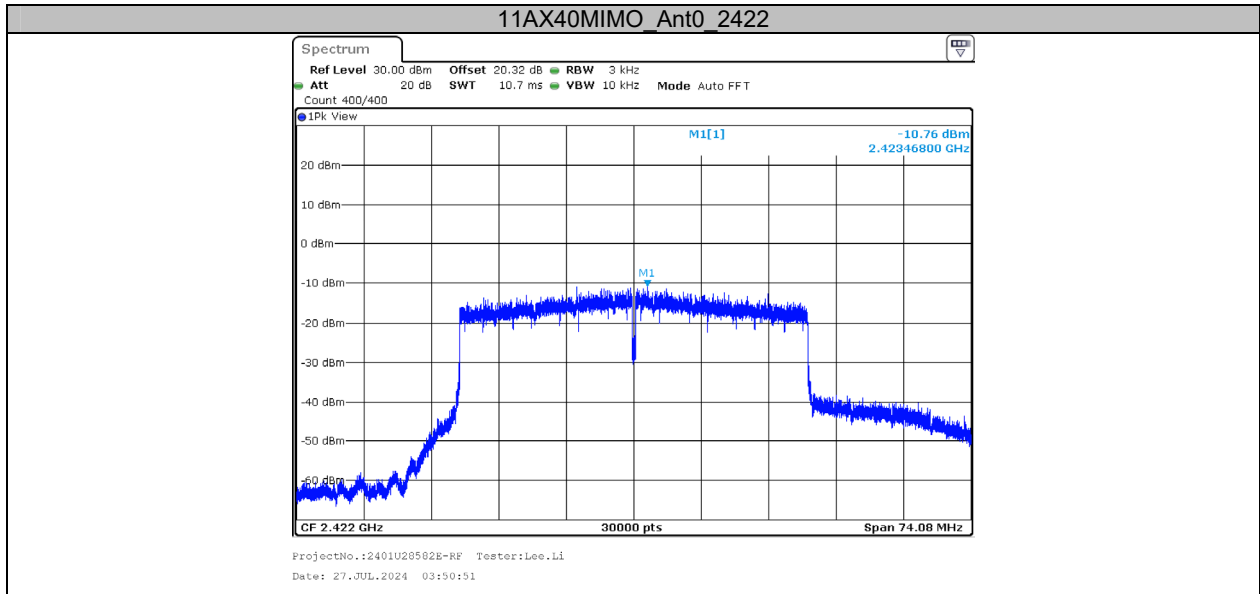


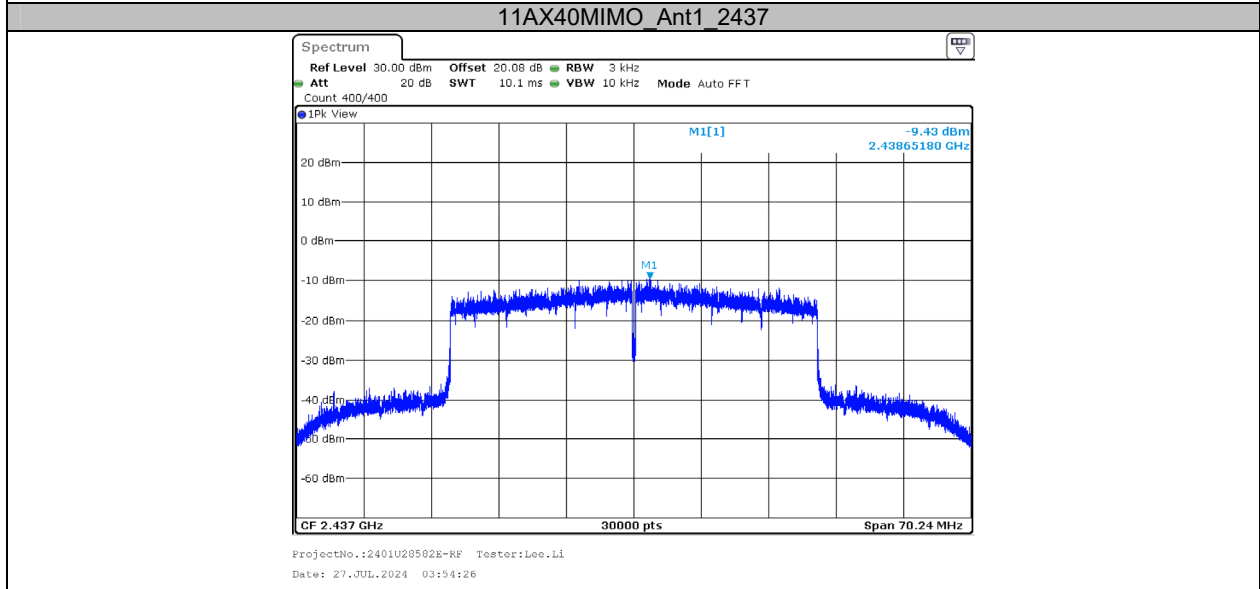
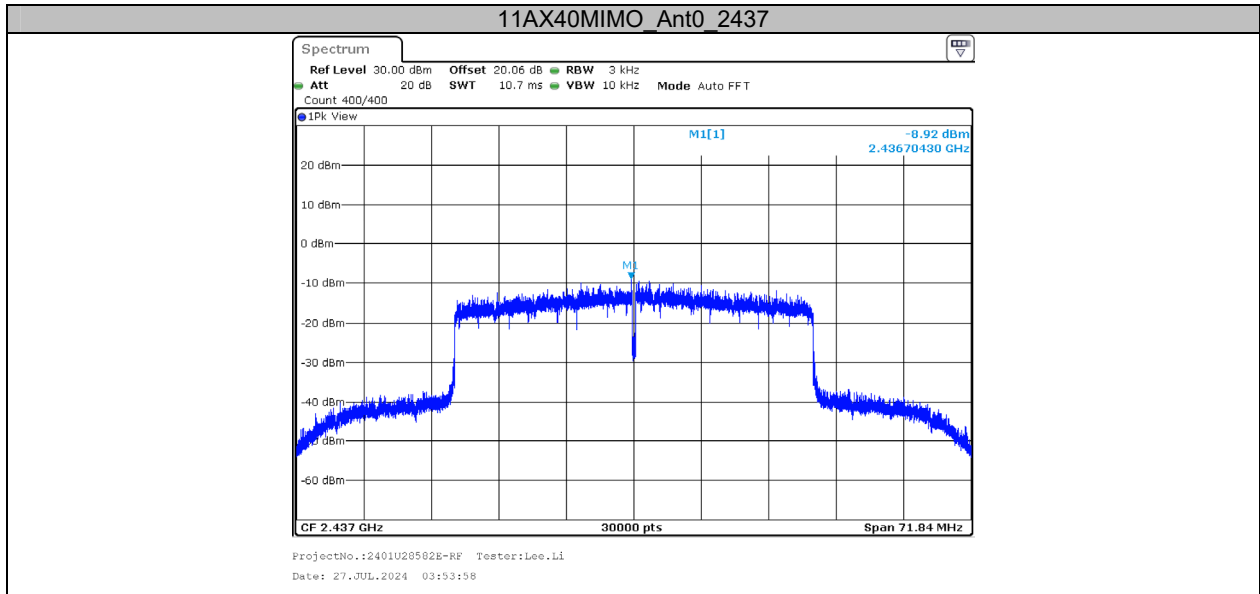


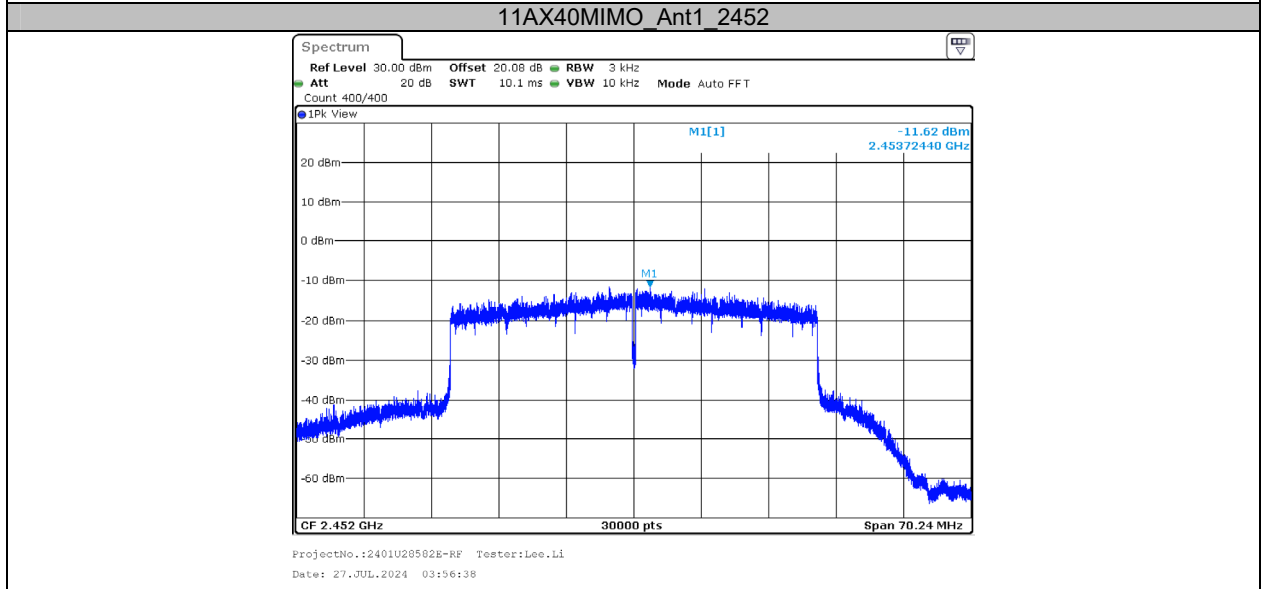
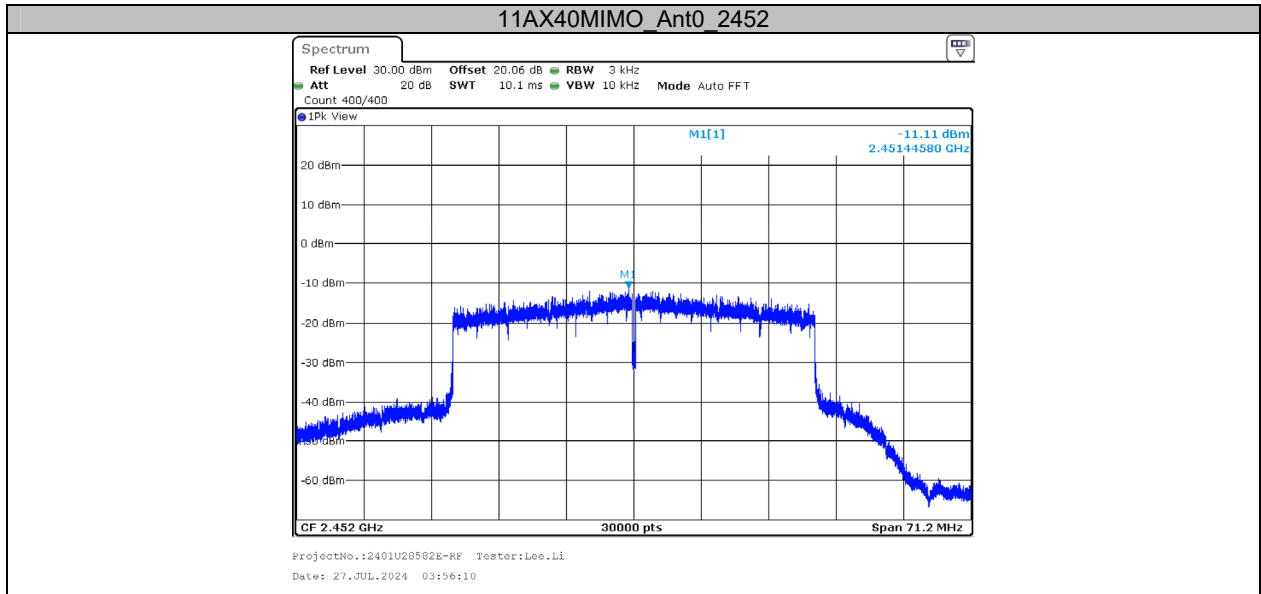






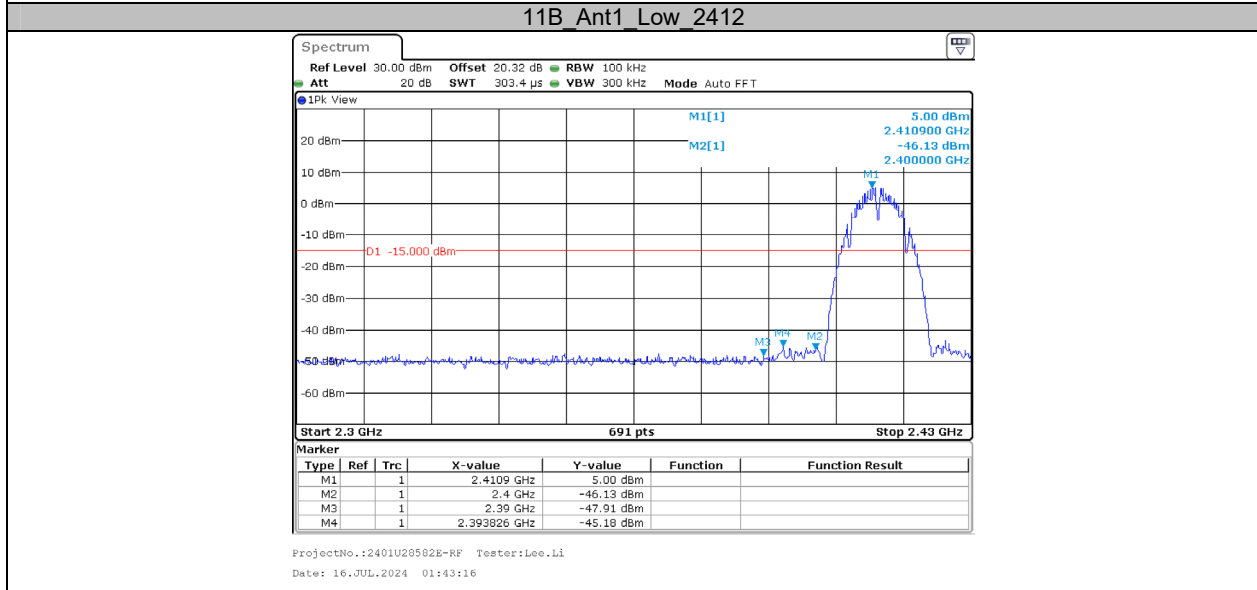
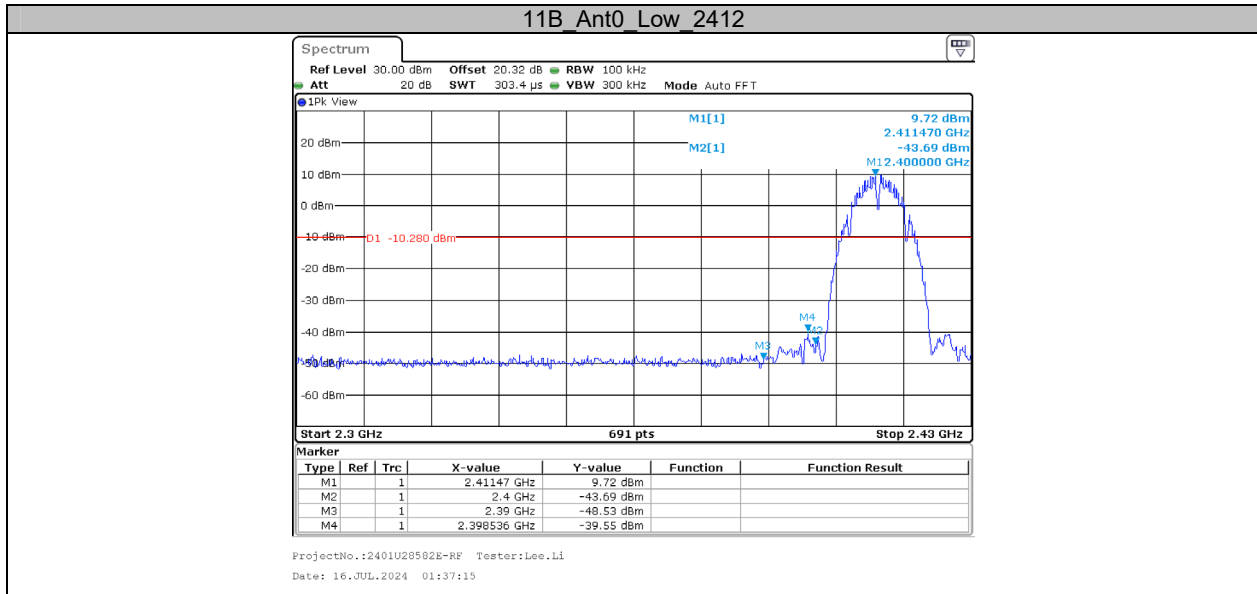




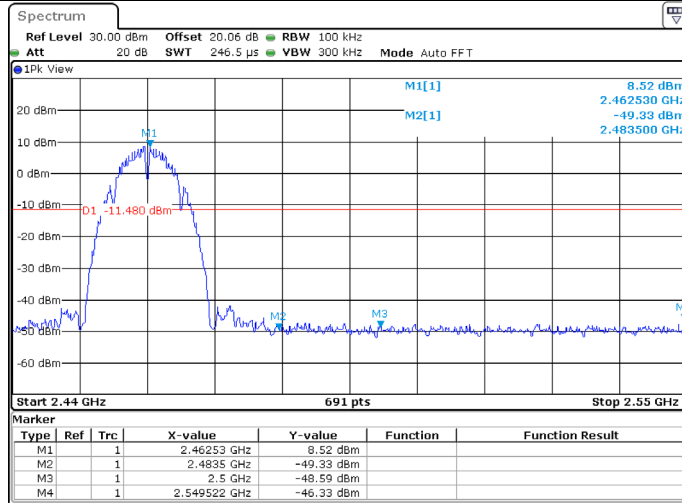


Appendix E: Band edge measurements

Test Graphs

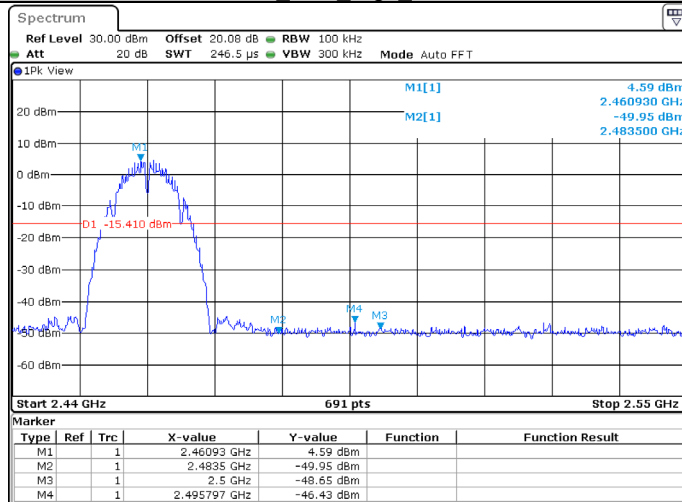


11B_Ant0_High_2462

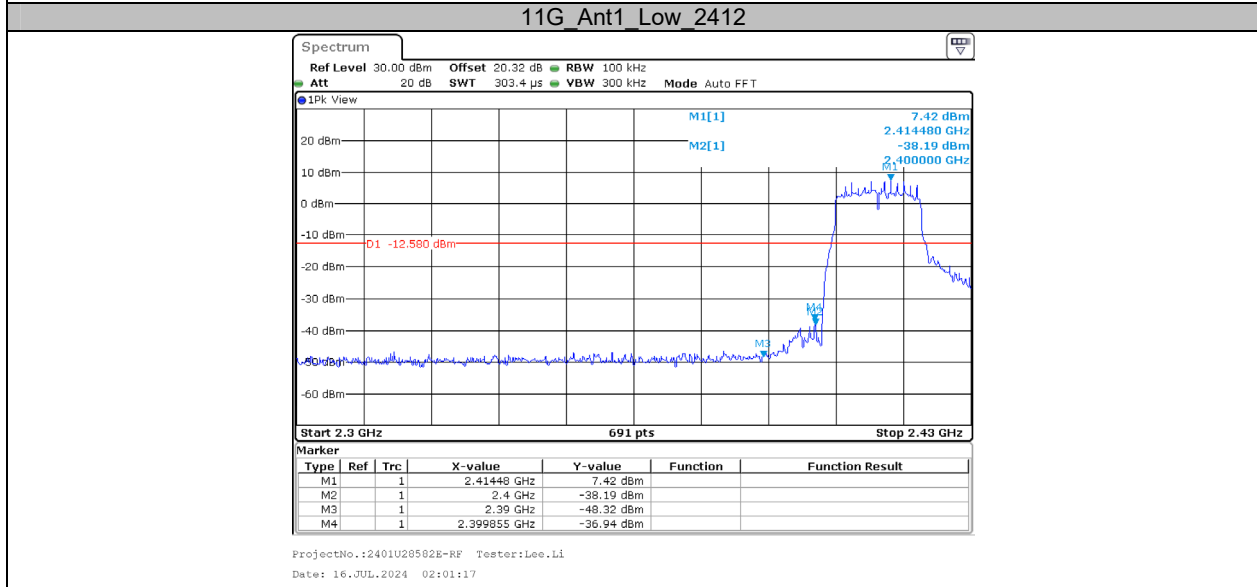
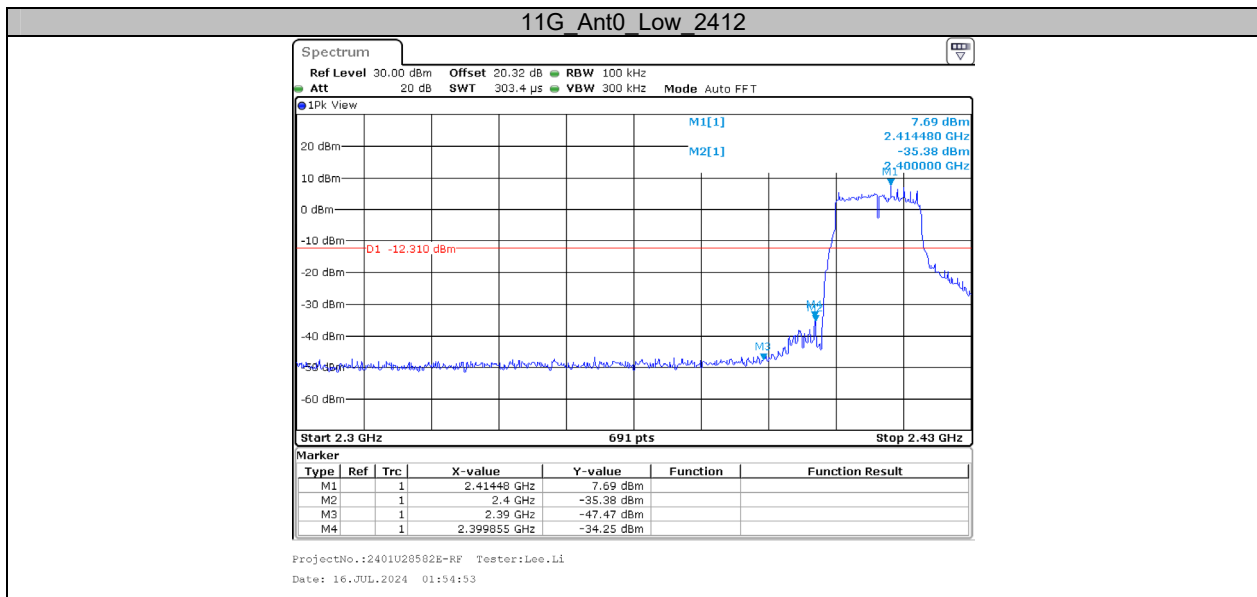


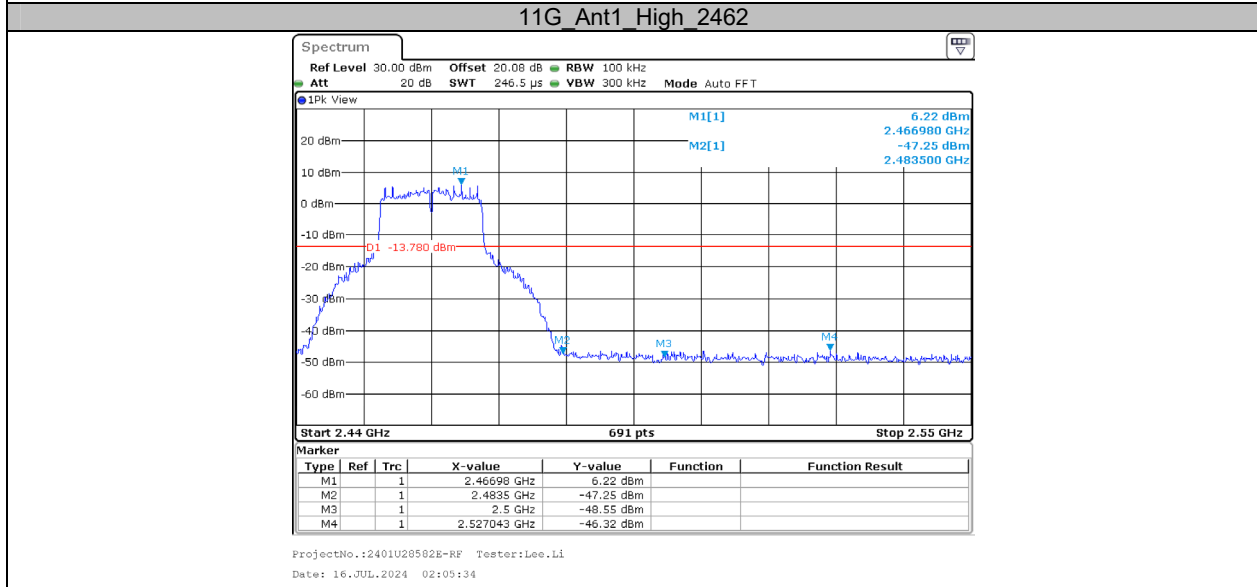
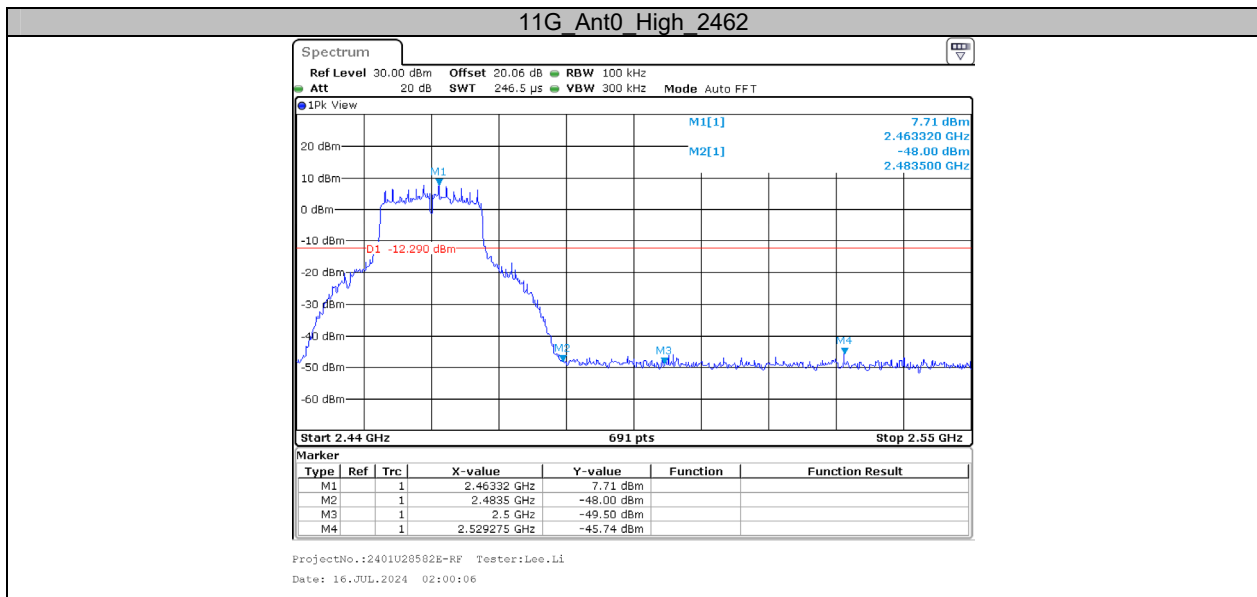
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Date: 16.JUL.2024 01:42:03

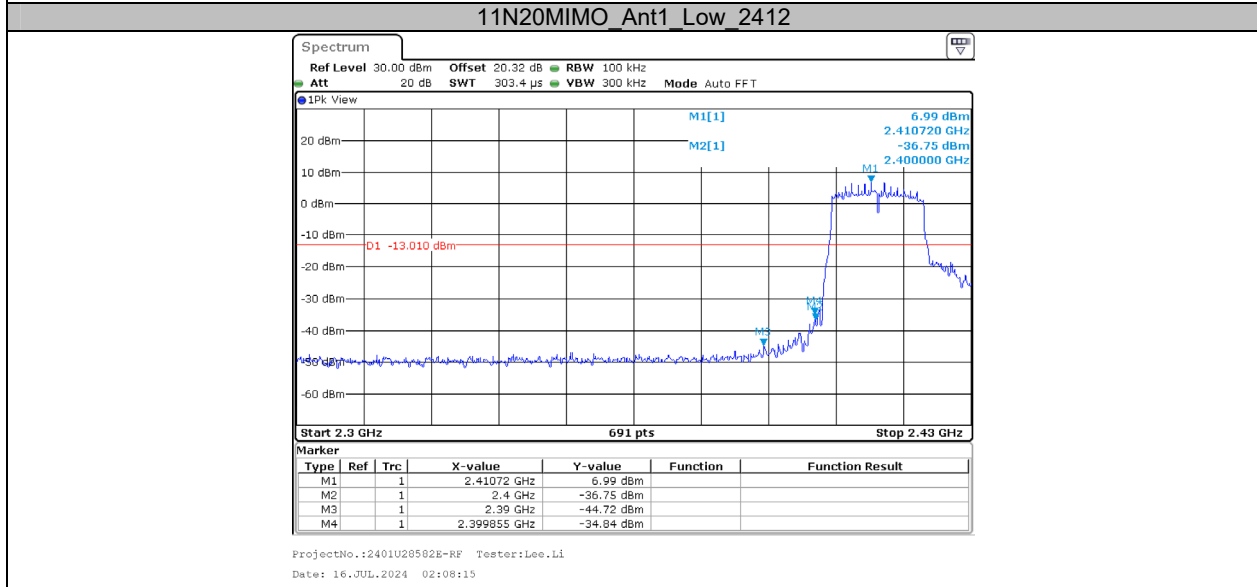
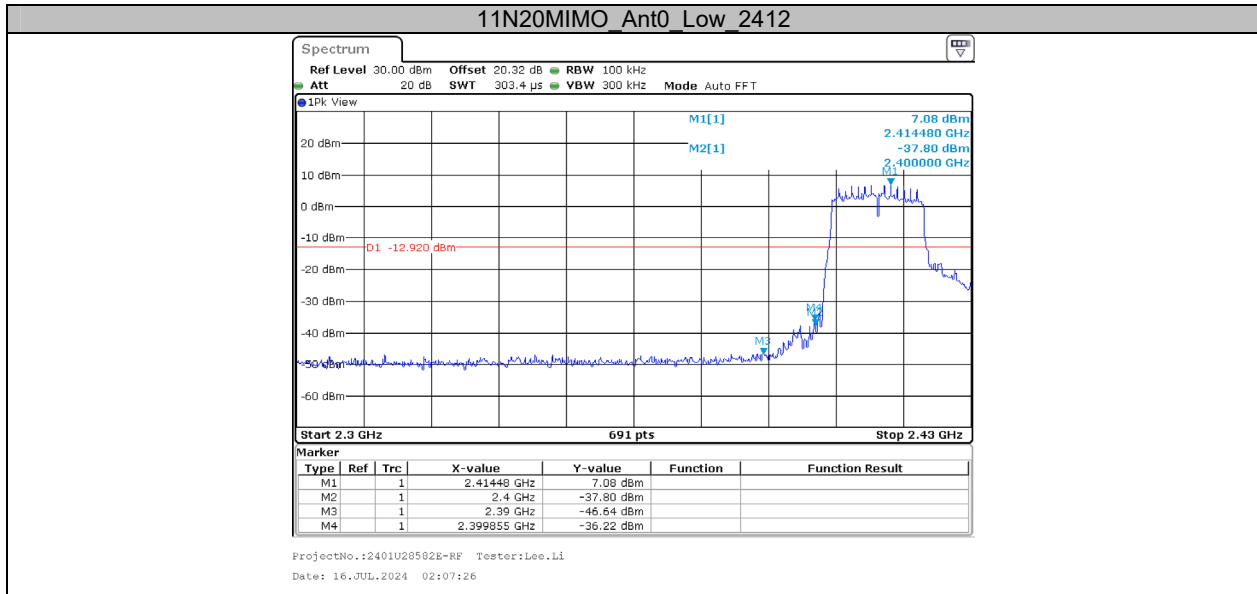
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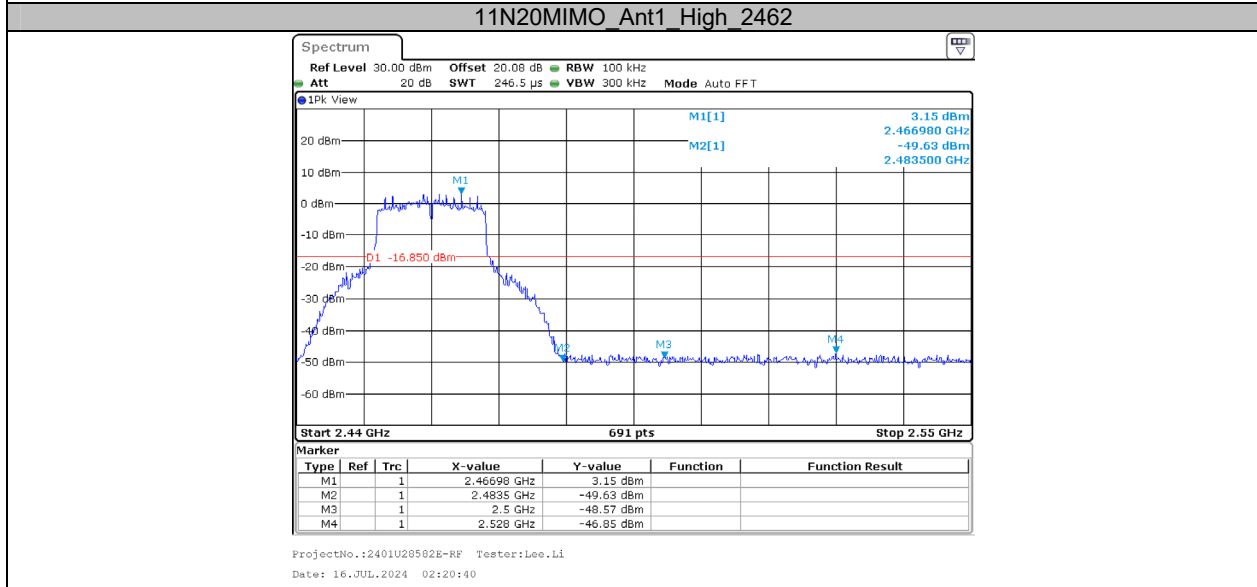
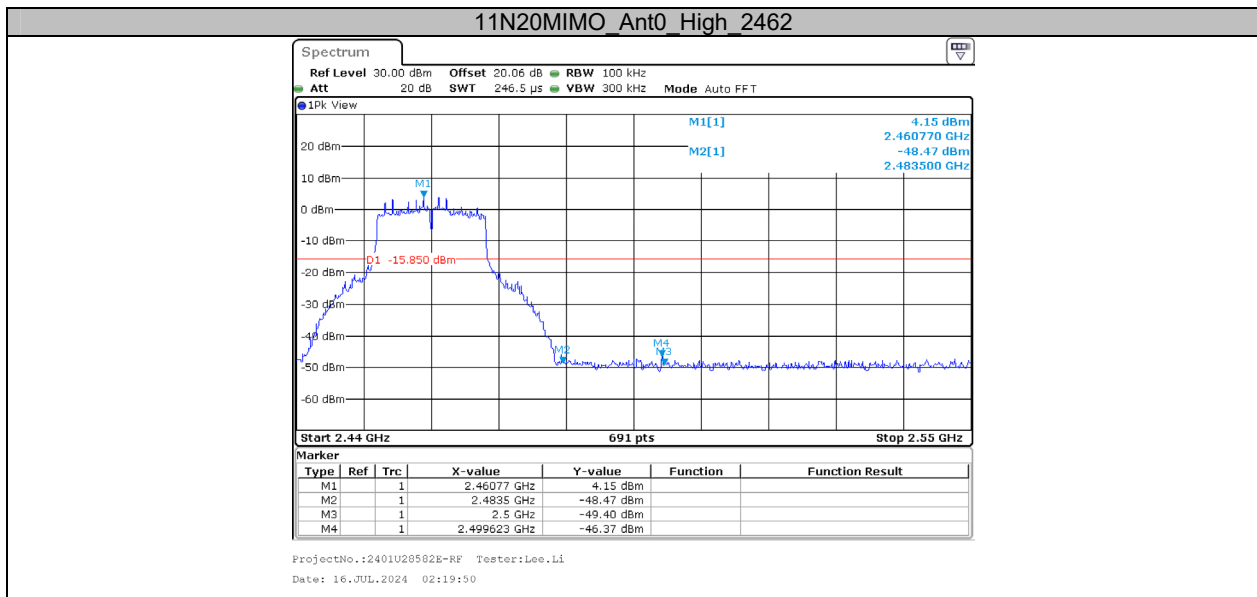


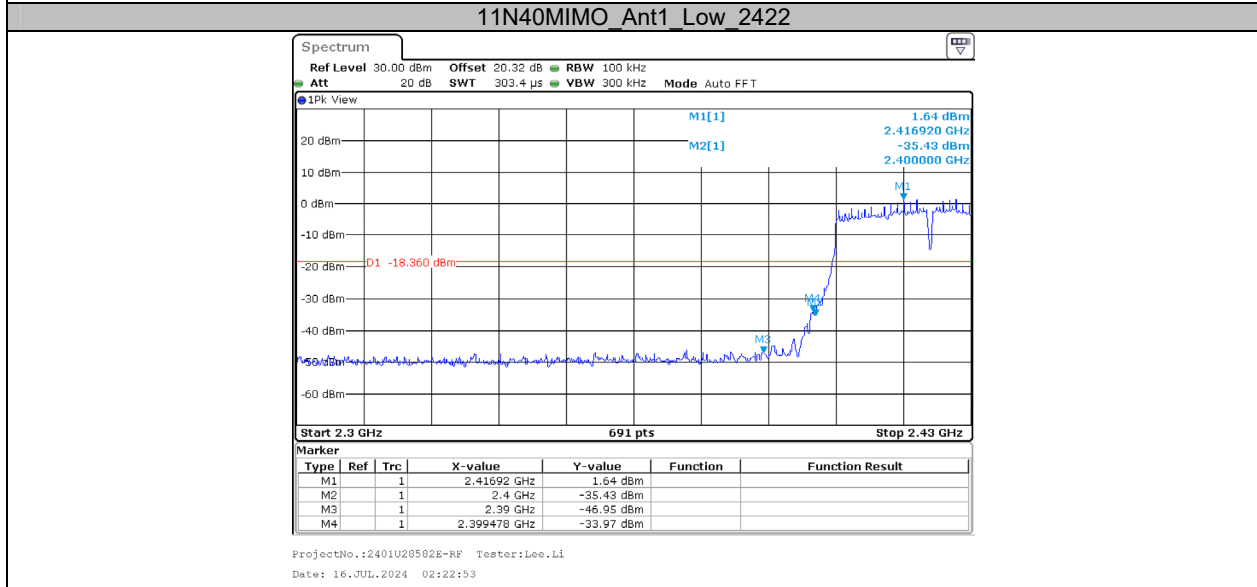
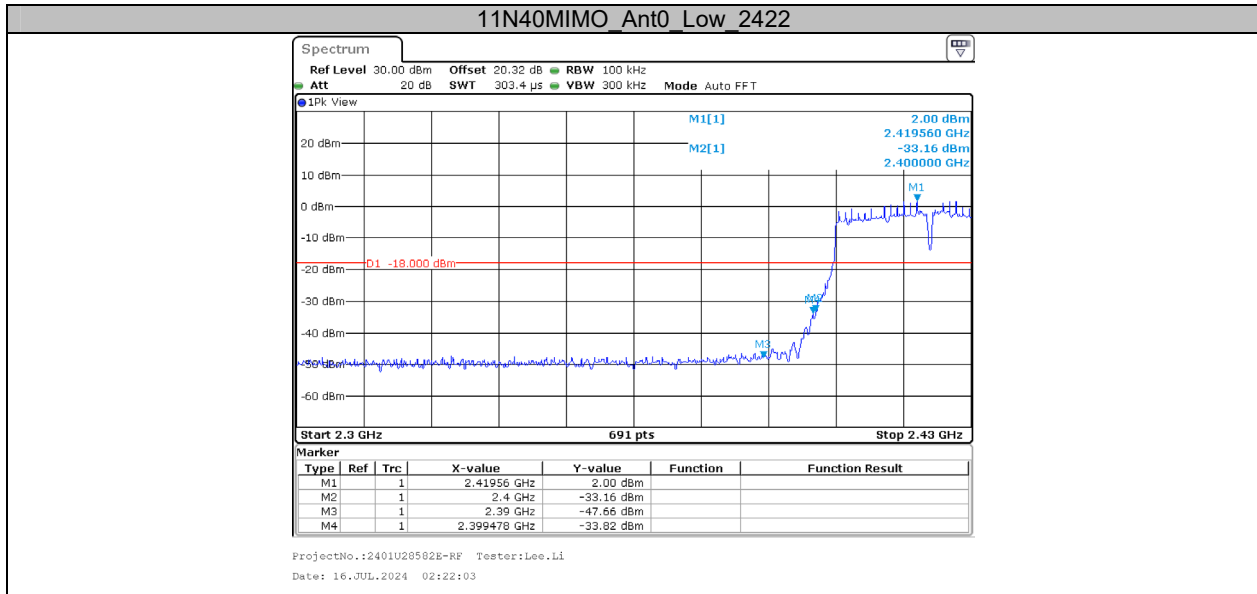
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Date: 16.JUL.2024 01:53:18

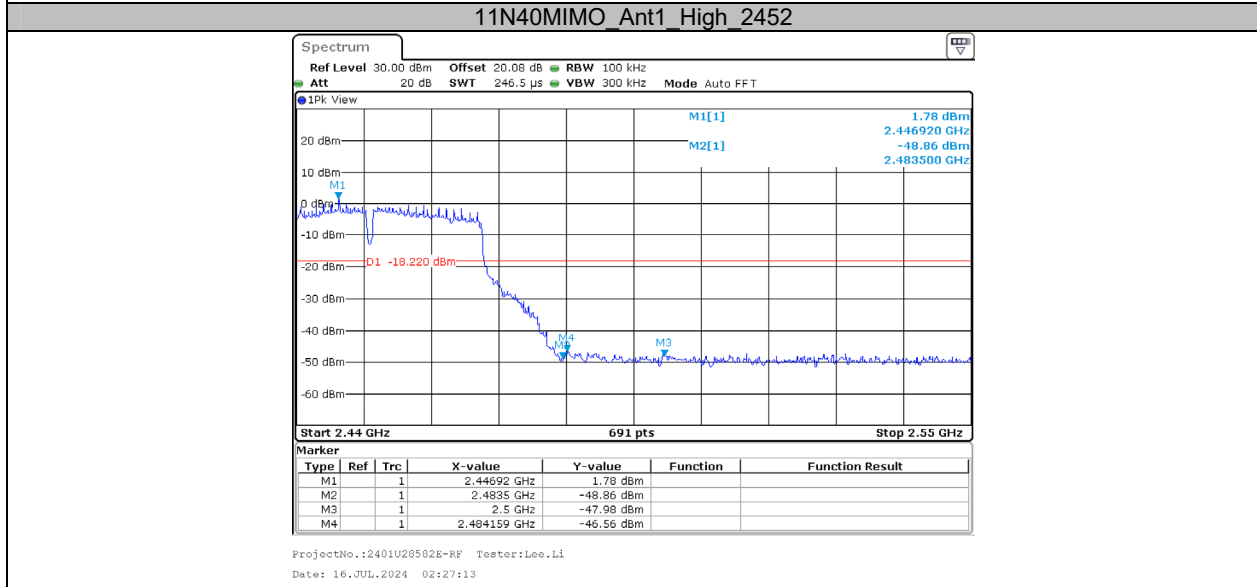
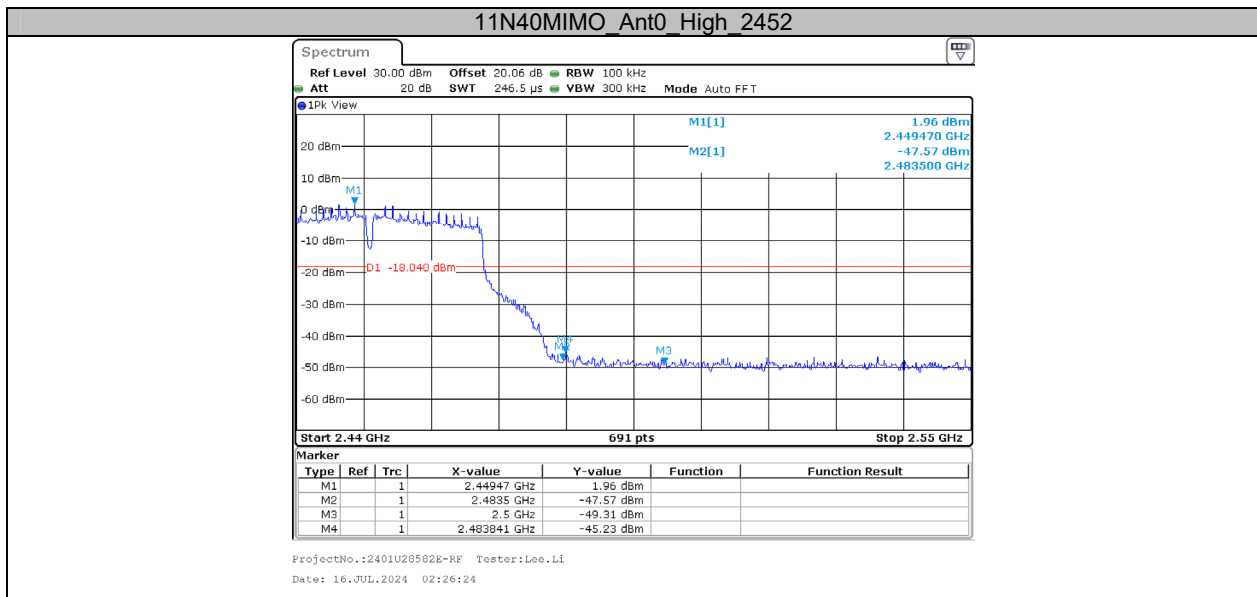


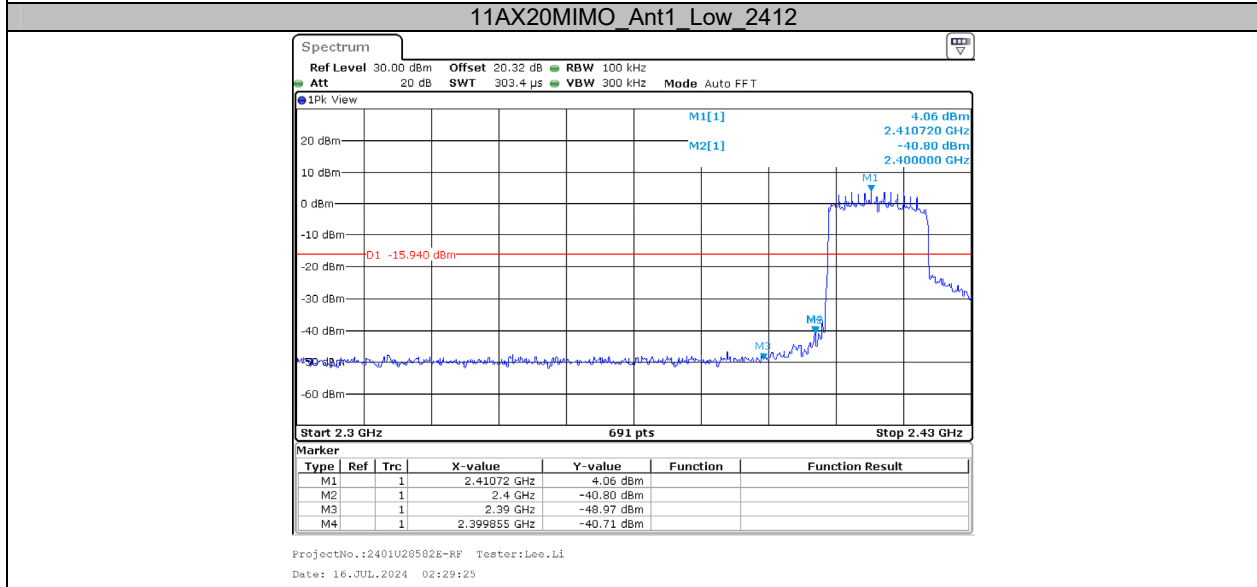
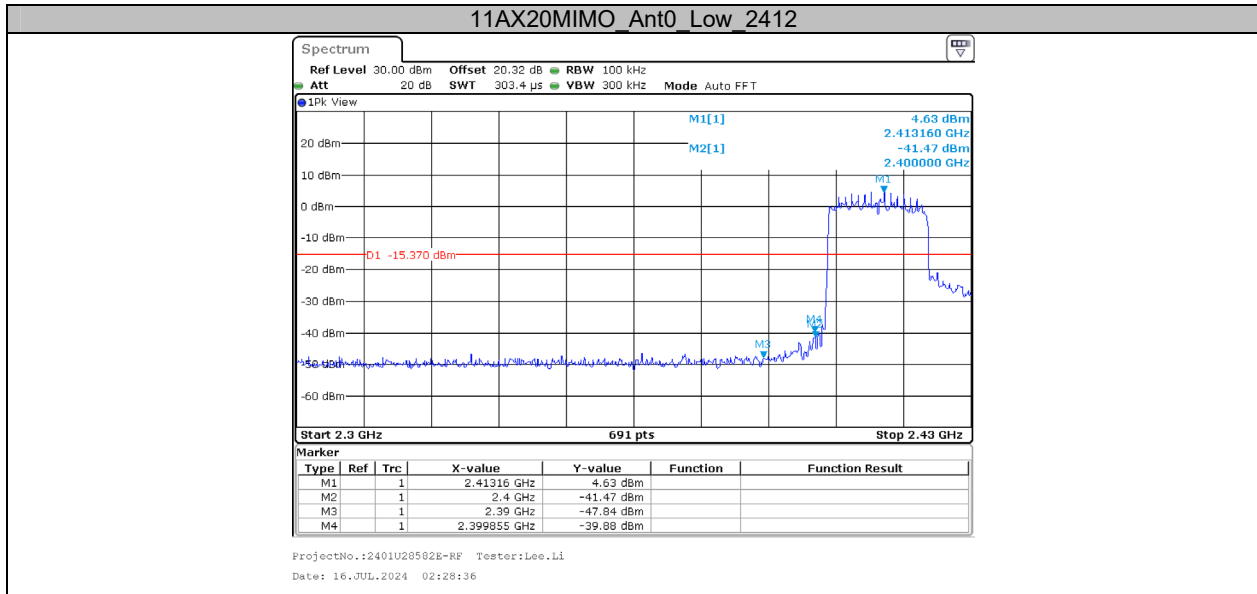


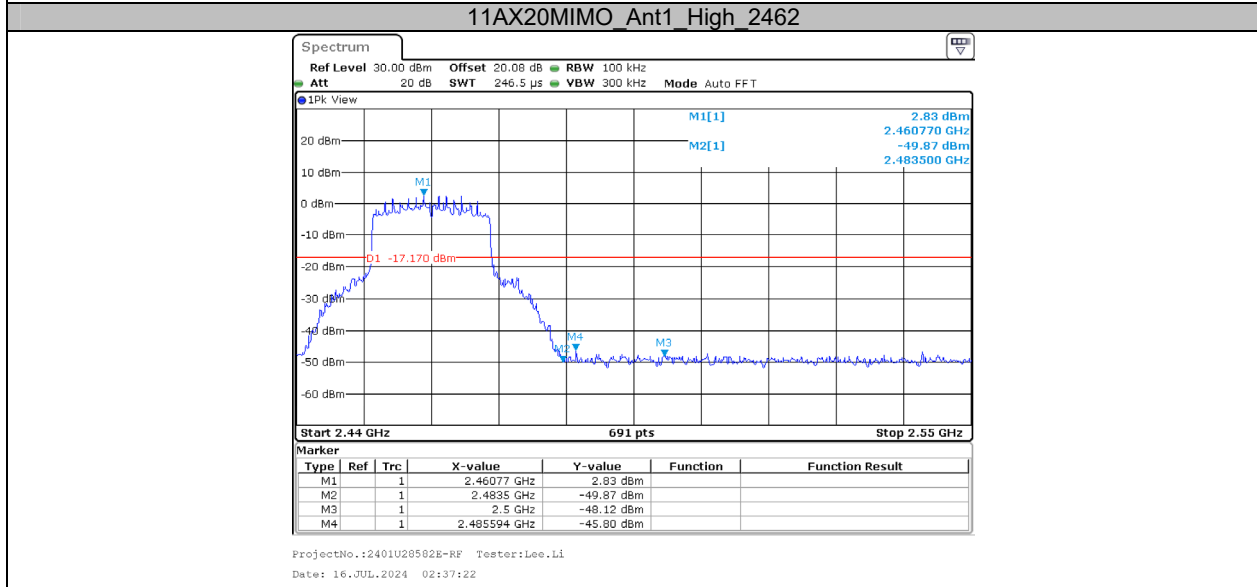
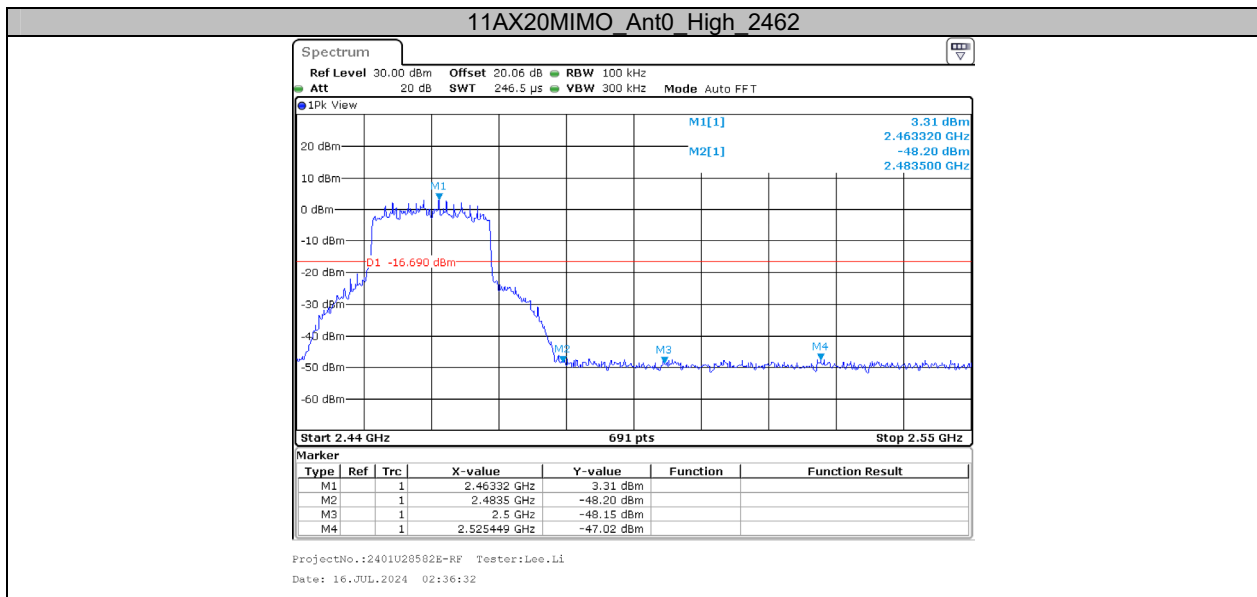


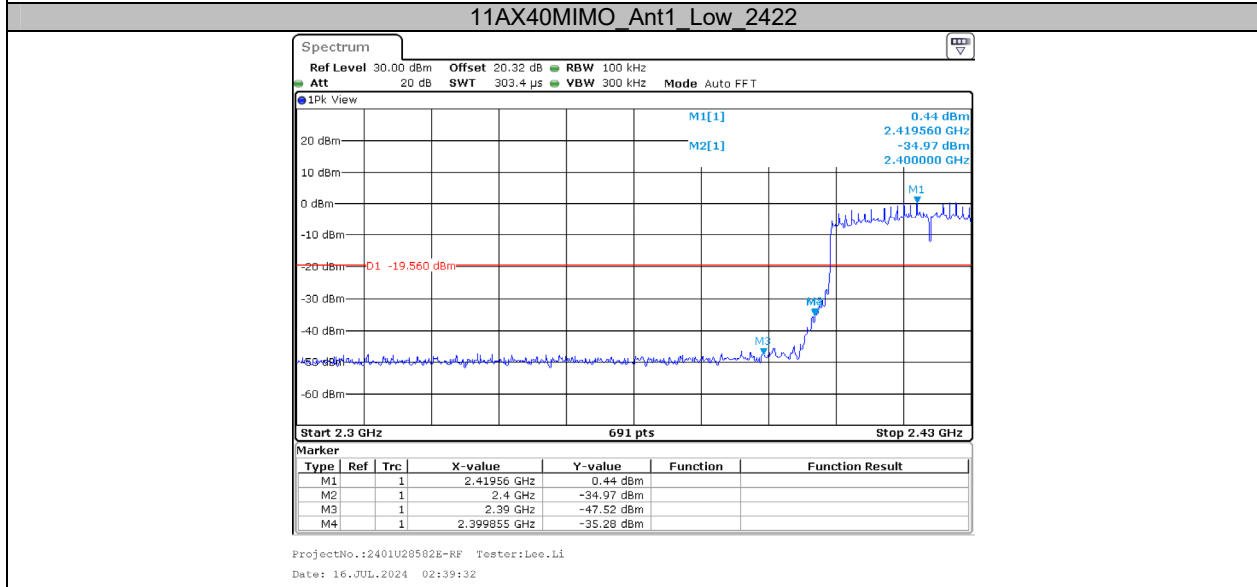
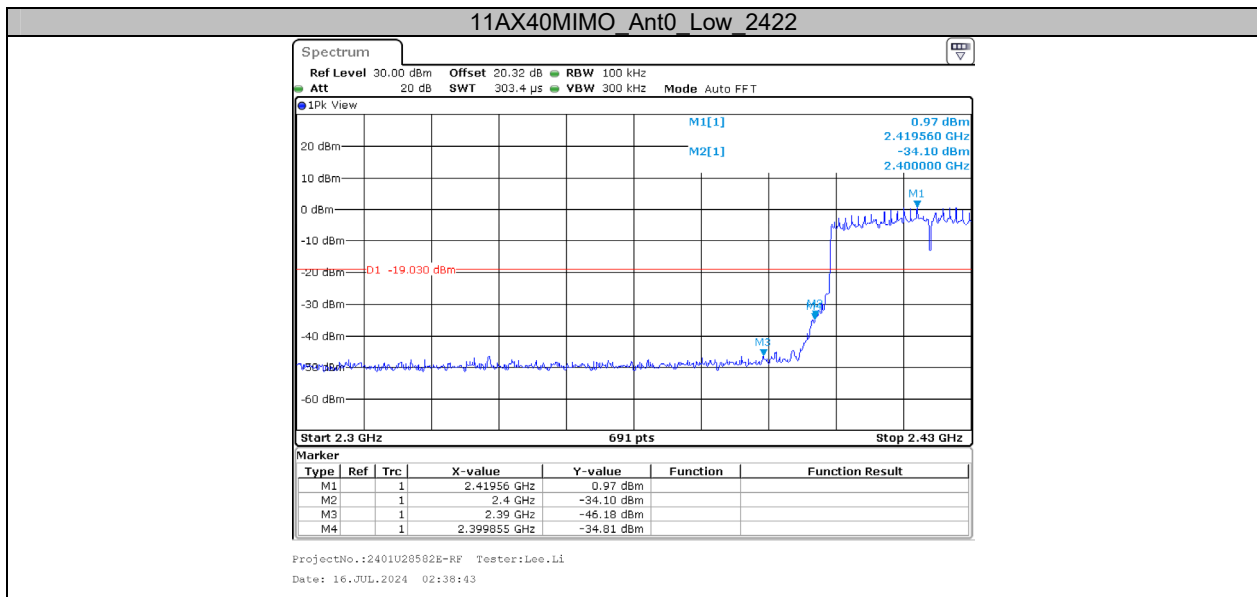


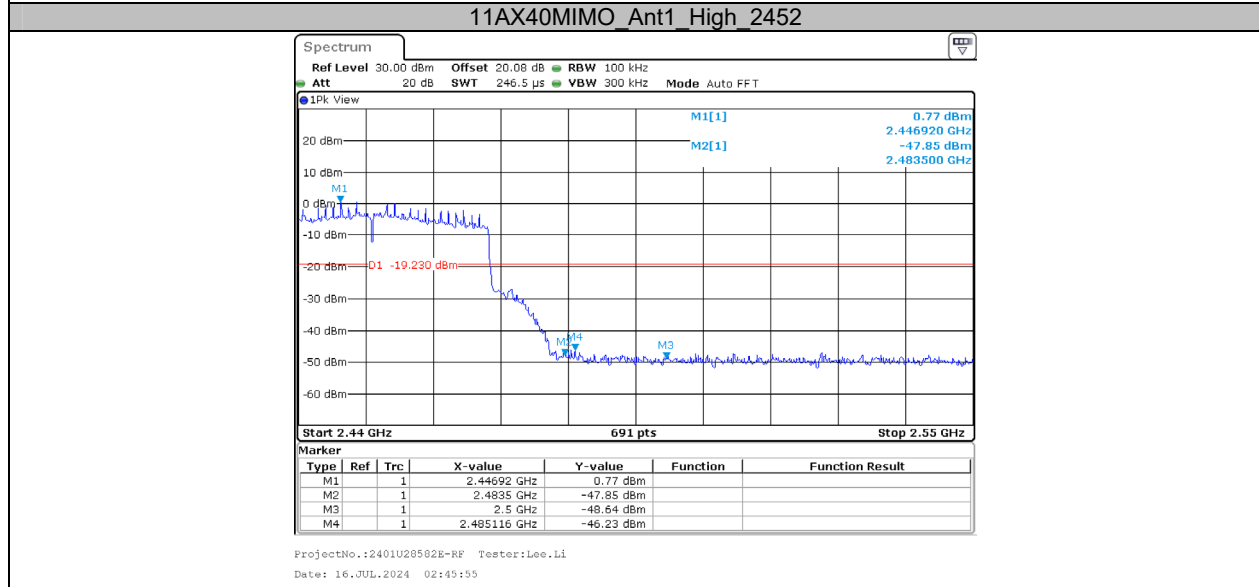
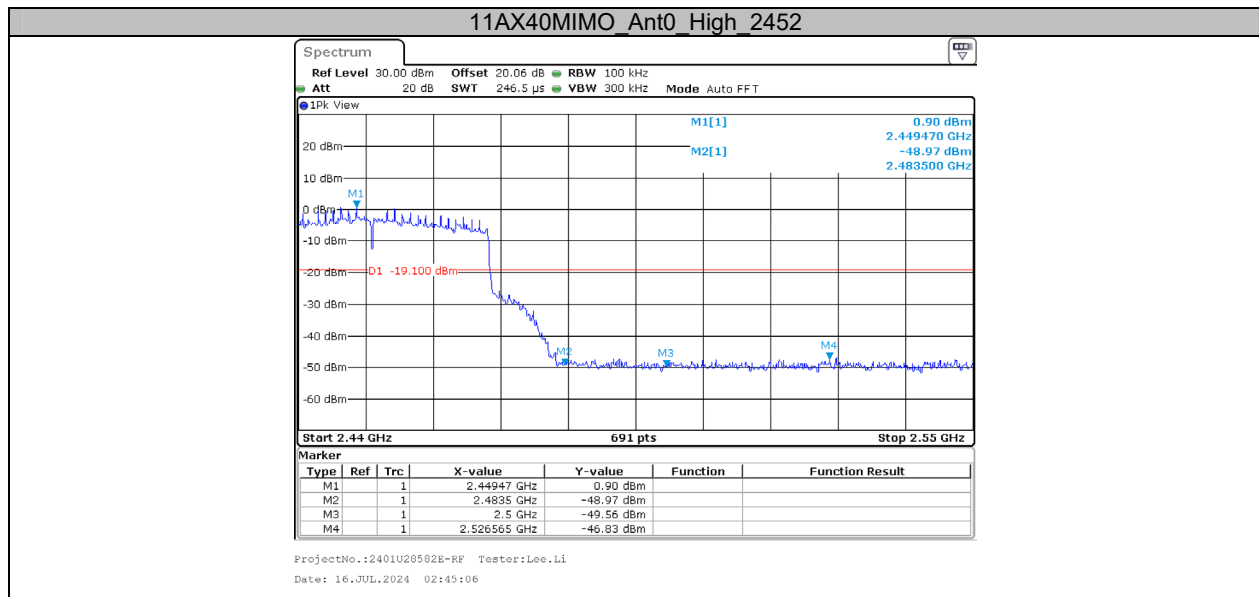








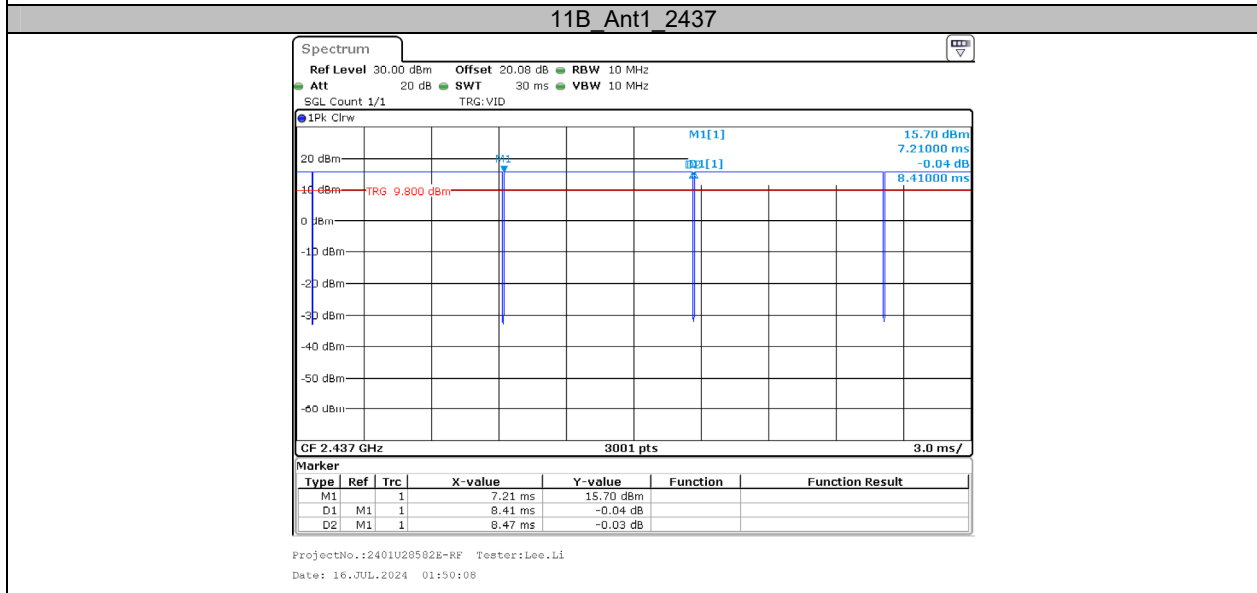
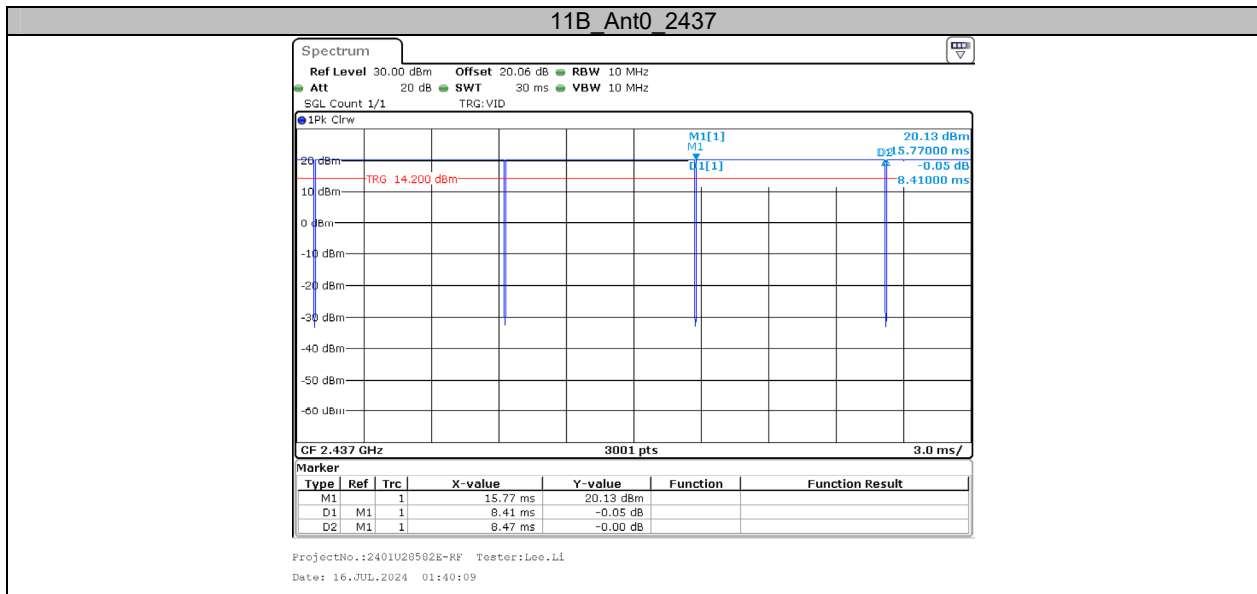


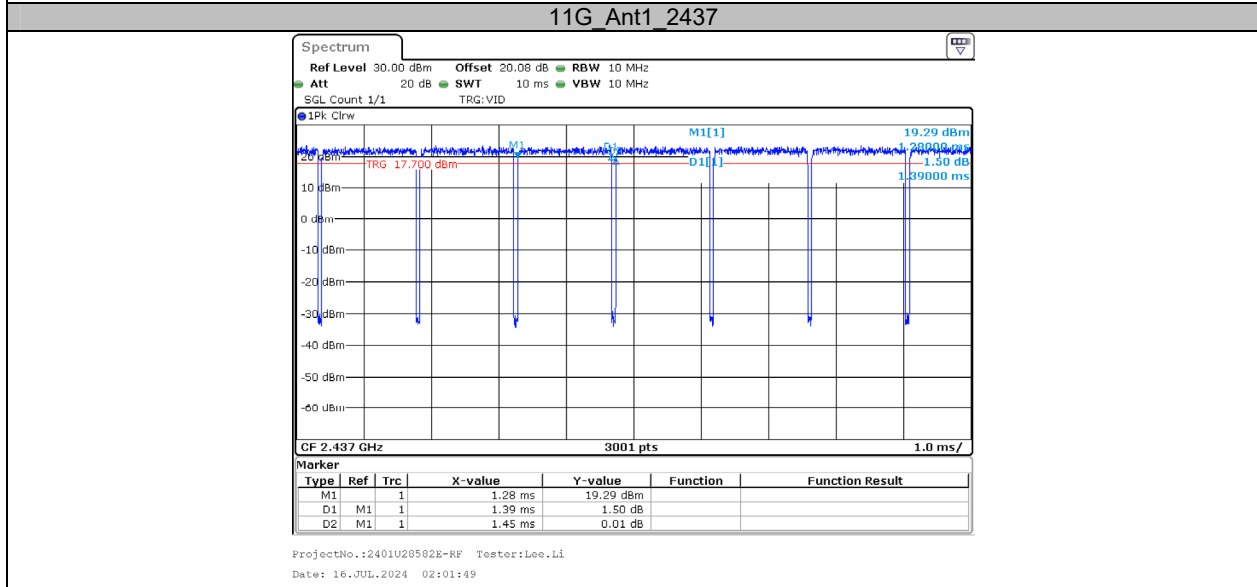
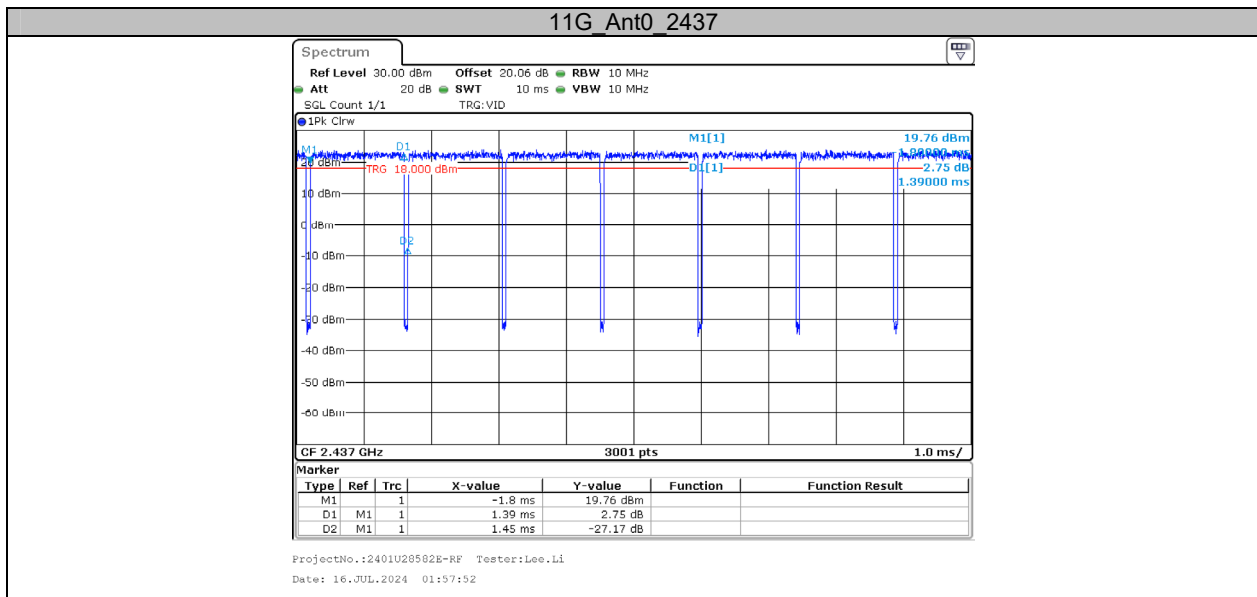


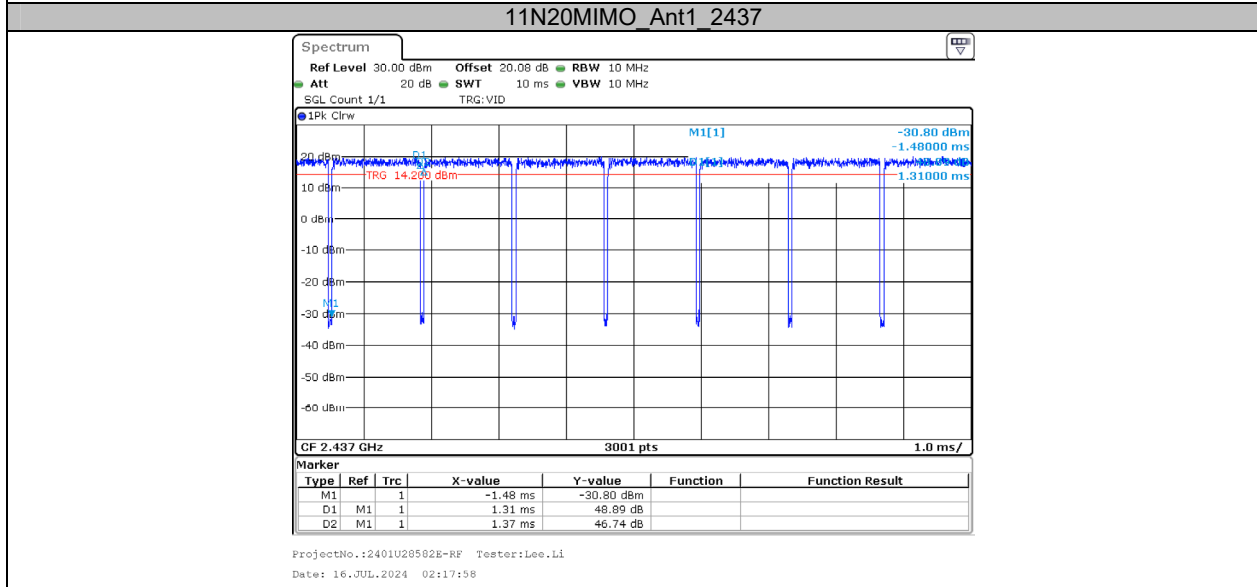
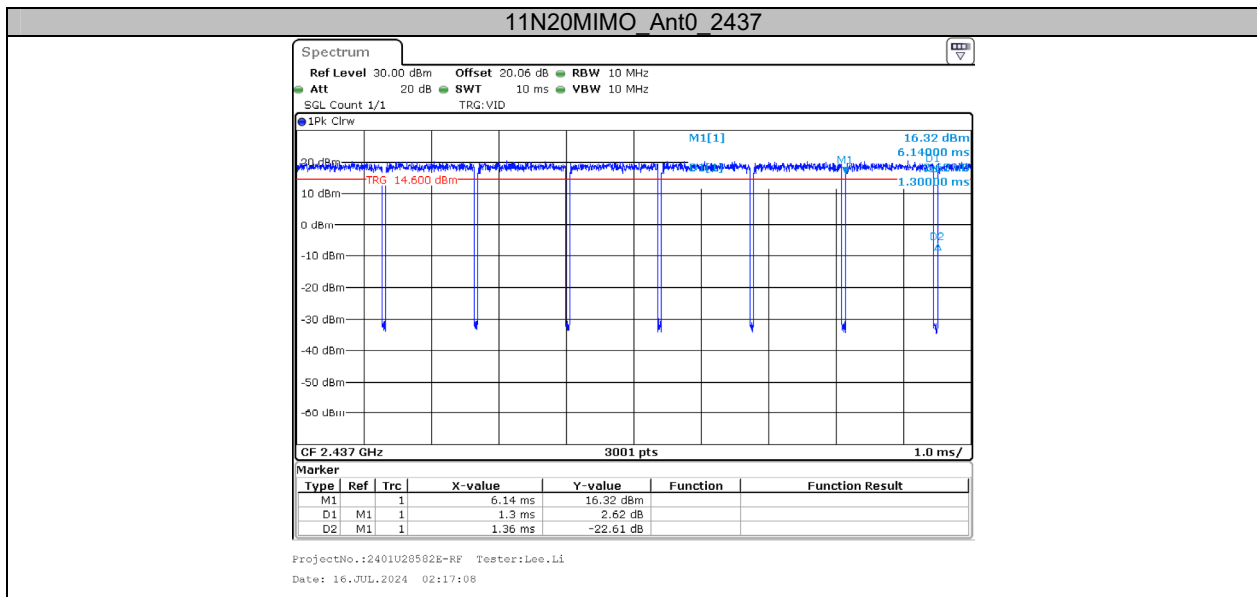
Appendix F: Duty Cycle**Test Result**

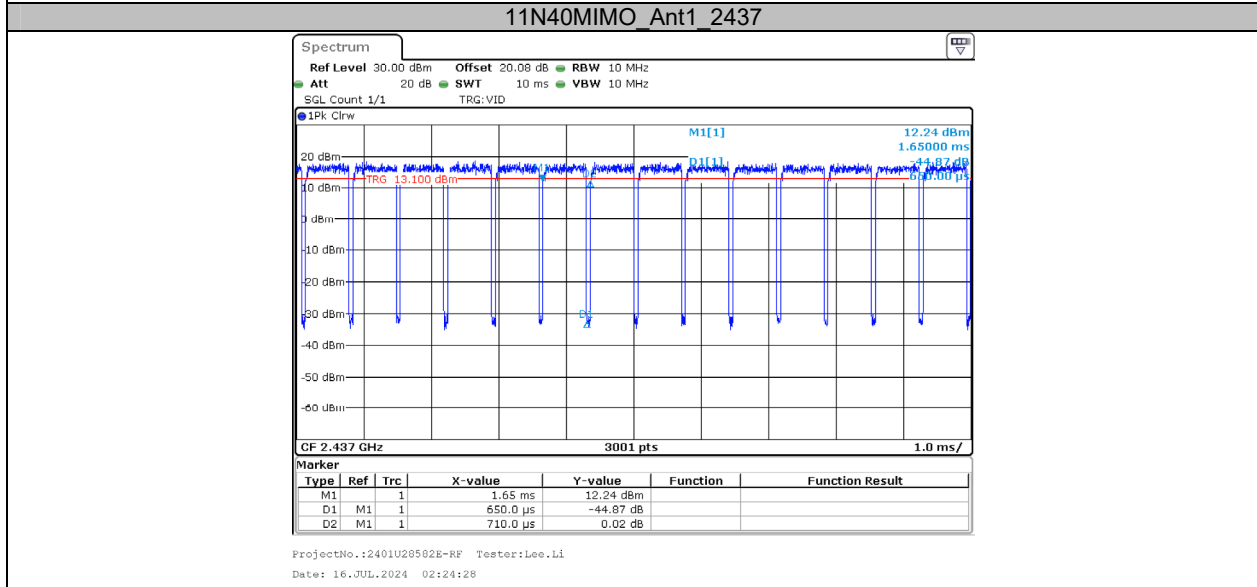
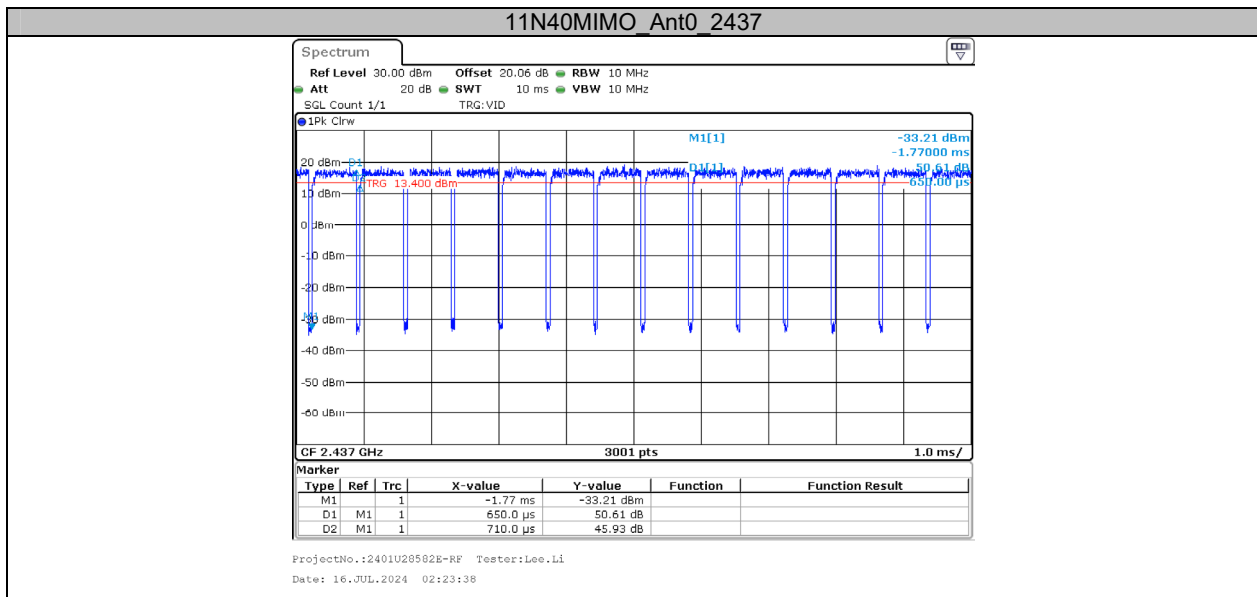
| Test Mode | Antenna | Channel | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] | 1/T (Hz) | VBW Setting (Hz) |
|------------|---------|---------|----------------------------|--------------------------|----------------|----------|------------------|
| 11B | Ant0 | 2437 | 8.41 | 8.47 | 99.29 | / | / |
| | Ant1 | 2437 | 8.41 | 8.47 | 99.29 | / | / |
| 11G | Ant0 | 2437 | 1.39 | 1.45 | 95.86 | 719 | 1000 |
| | Ant1 | 2437 | 1.39 | 1.45 | 95.86 | 719 | 1000 |
| 11N20MIMO | Ant0 | 2437 | 1.30 | 1.36 | 95.59 | 769 | 1000 |
| | Ant1 | 2437 | 1.31 | 1.37 | 95.62 | 763 | 1000 |
| 11N40MIMO | Ant0 | 2437 | 0.65 | 0.71 | 91.55 | 1538 | 2000 |
| | Ant1 | 2437 | 0.65 | 0.71 | 91.55 | 1538 | 2000 |
| 11AX20MIMO | Ant0 | 2437 | 0.32 | 0.37 | 86.49 | 3125 | 5000 |
| | Ant1 | 2437 | 0.32 | 0.37 | 86.49 | 3125 | 5000 |
| 11AX40MIMO | Ant0 | 2437 | 0.31 | 0.37 | 83.78 | 3226 | 5000 |
| | Ant1 | 2437 | 0.31 | 0.37 | 83.78 | 3226 | 5000 |

Test Graphs

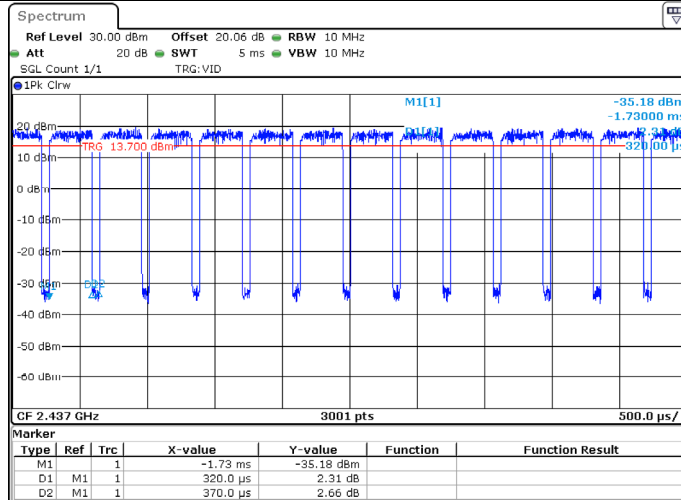






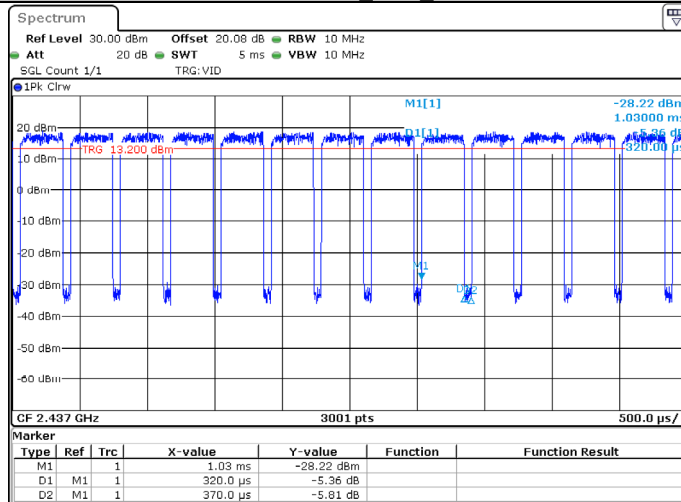


11AX20MIMO Ant0_2437

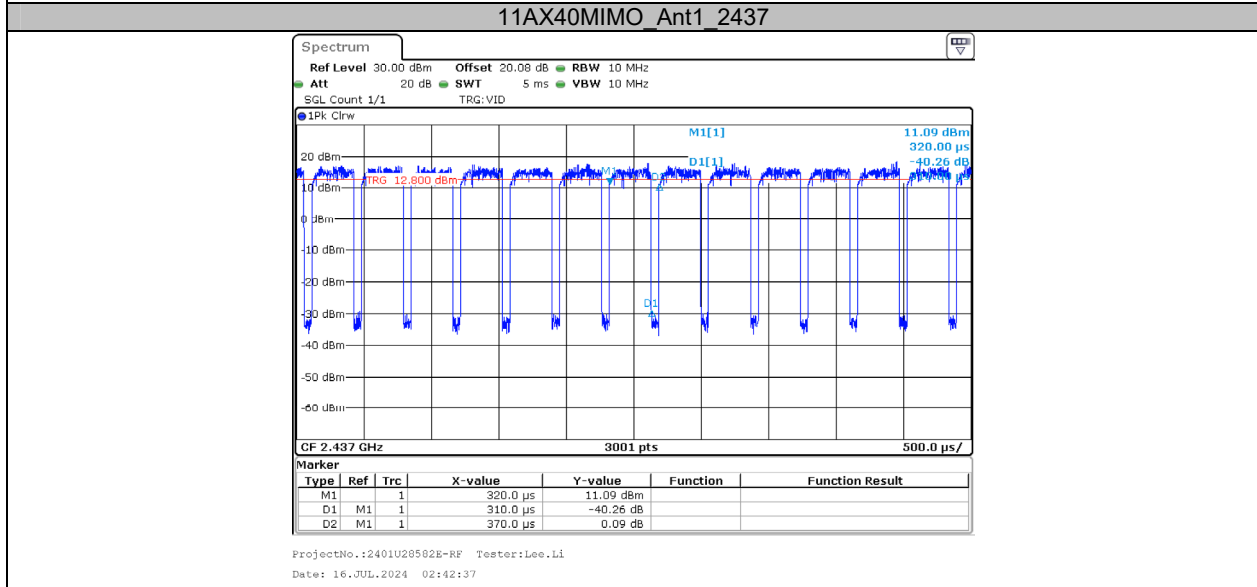
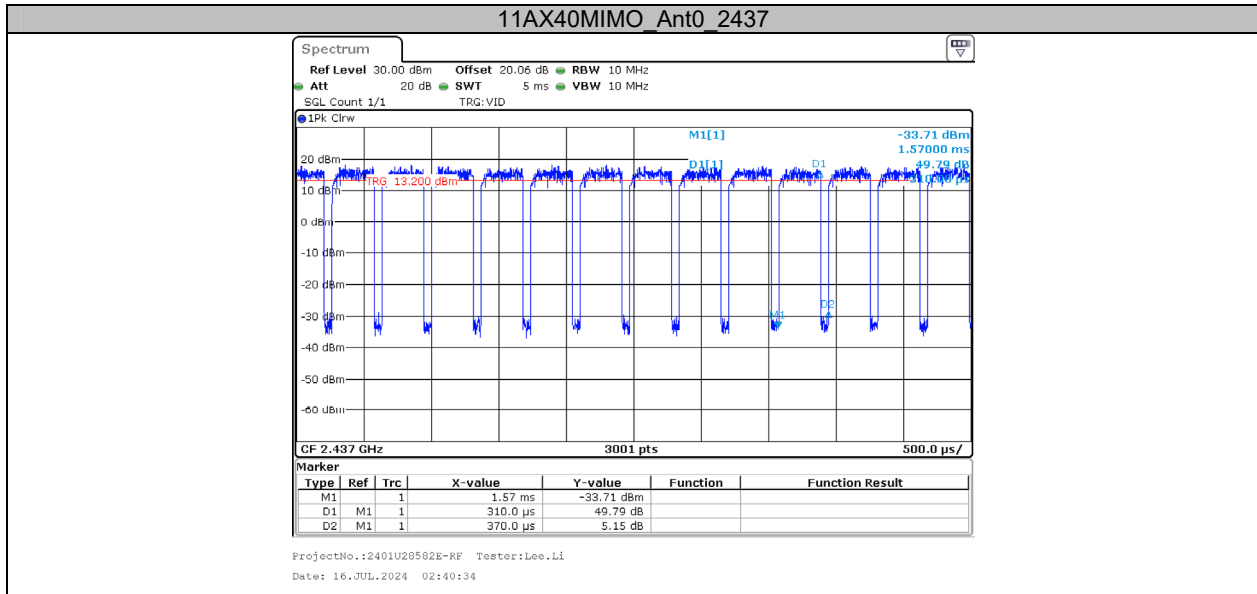


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11AX20MIMO Ant1_2437



ProjectNo.: 2401U28582E-RF Tester: Lee.Li
 Date: 16.JUL.2024 02:34:56



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