# Appendix Test Data for WLAN(2.4G) (Conducted Measurement)

**Product Name: SLEEP SOUND MACHINE**

**Trade Mark: N/A**

**Test Model: S2 Pro**

**FCC ID: 2AZ9T-S2PRO**

# Environmental Conditions

| | |
|---|---|
| Temperature: | 23.5℃ |
| Relative Humidity: | 56% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Anna Hu |
| Supervised by: | Hugo Chen |
| NOTE | N/A |

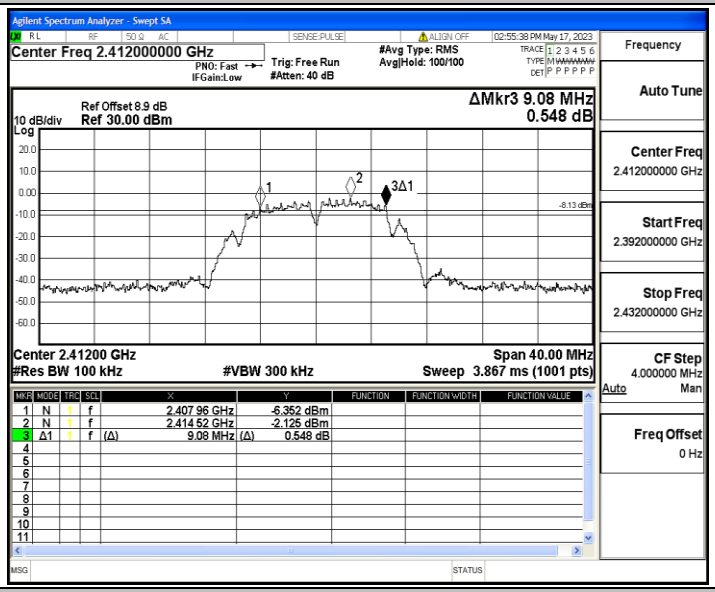
## Appendix A: DTS Bandwidth

### Test Result

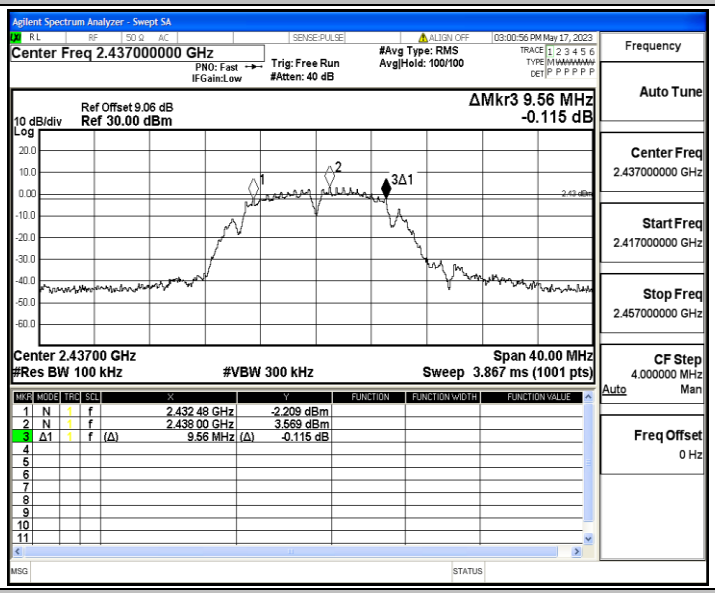
| TestMode | Antenna | Channel | DTS BW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | 9.080 | 2407.960 | 2417.040 | 0.5 | PASS |
| | | 2437 | 9.560 | 2432.480 | 2442.040 | 0.5 | PASS |
| | | 2462 | 8.920 | 2458.080 | 2467.000 | 0.5 | PASS |
| 11G | Ant1 | 2412 | 15.720 | 2404.480 | 2420.200 | 0.5 | PASS |
| | | 2437 | 15.720 | 2429.440 | 2445.160 | 0.5 | PASS |
| | | 2462 | 15.320 | 2454.840 | 2470.160 | 0.5 | PASS |
| 11N20SISO | Ant1 | 2412 | 16.040 | 2404.520 | 2420.560 | 0.5 | PASS |
| | | 2437 | 17.560 | 2428.200 | 2445.760 | 0.5 | PASS |
| | | 2462 | 16.080 | 2453.480 | 2469.560 | 0.5 | PASS |
| 11N40SISO | Ant1 | 2422 | 26.240 | 2413.280 | 2439.520 | 0.5 | PASS |
| | | 2437 | 20.080 | 2421.960 | 2442.040 | 0.5 | PASS |
| | | 2452 | 35.680 | 2433.840 | 2469.520 | 0.5 | PASS |

## Test Graphs

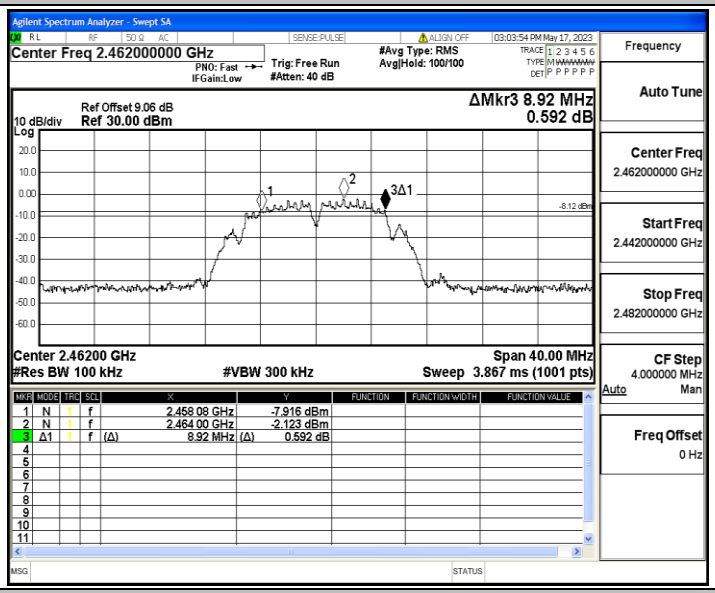
11B_Ant1_2412



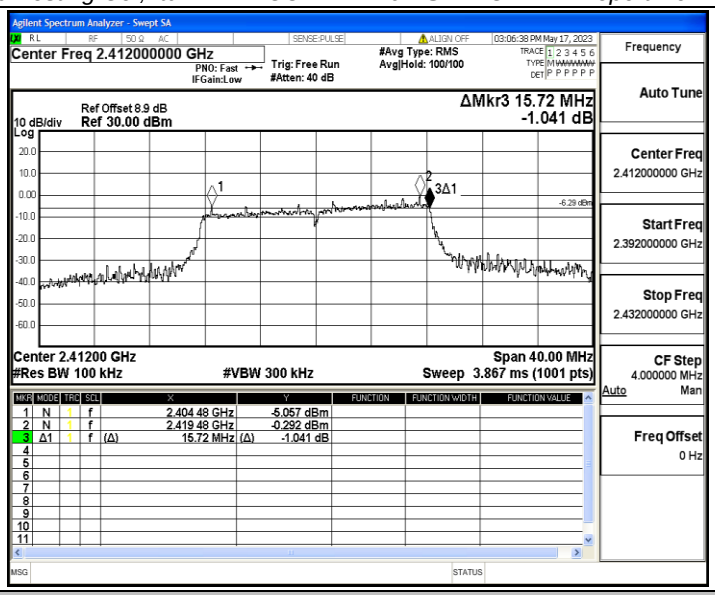

11B_Ant1_2437



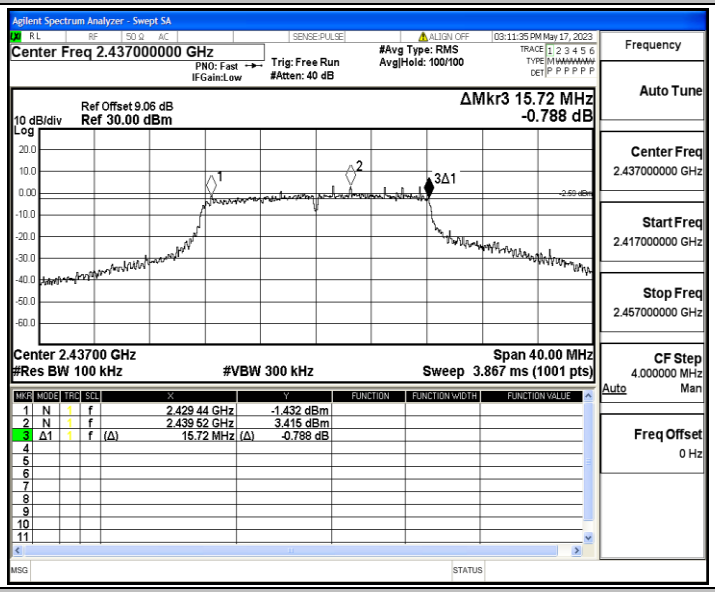

11B_Ant1_2462



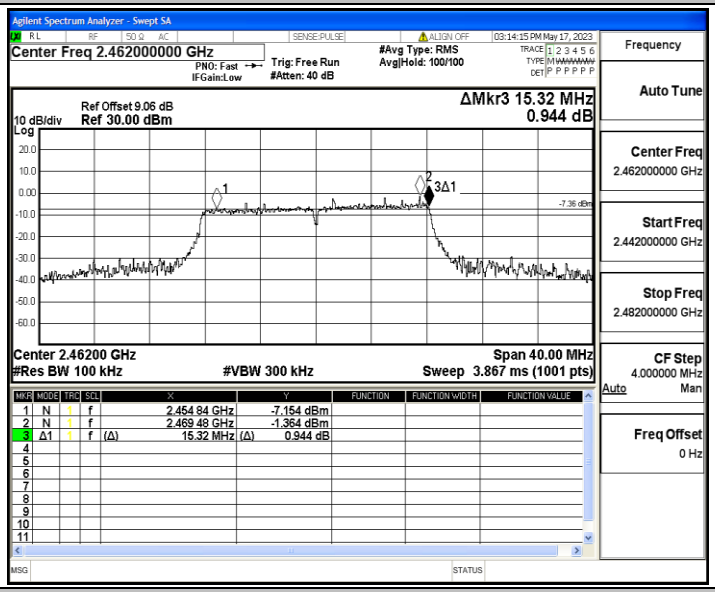

11G_Ant1_2412



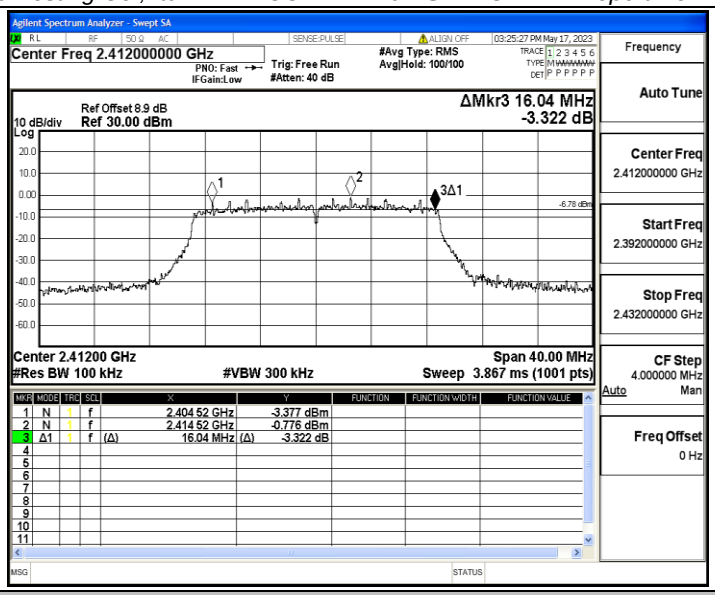

11G_Ant1_2437



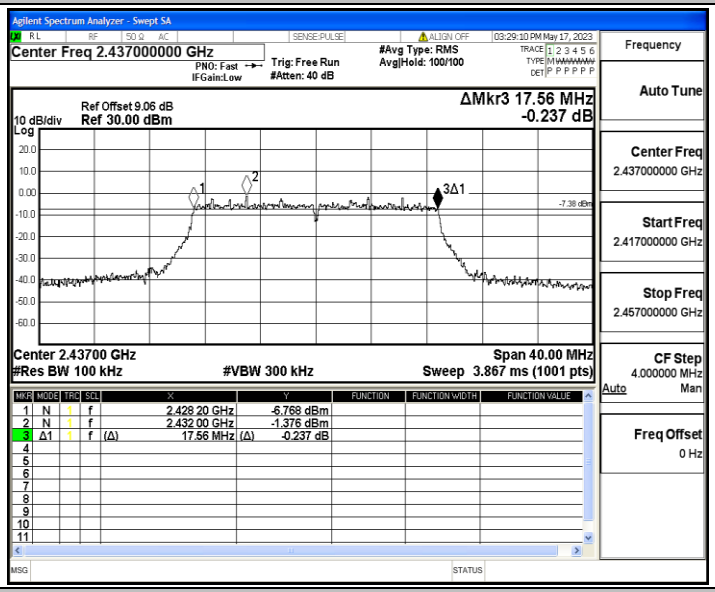

11G_Ant1_2462




11N20SISO_Ant1_2412




11N20SISO_Ant1_2437

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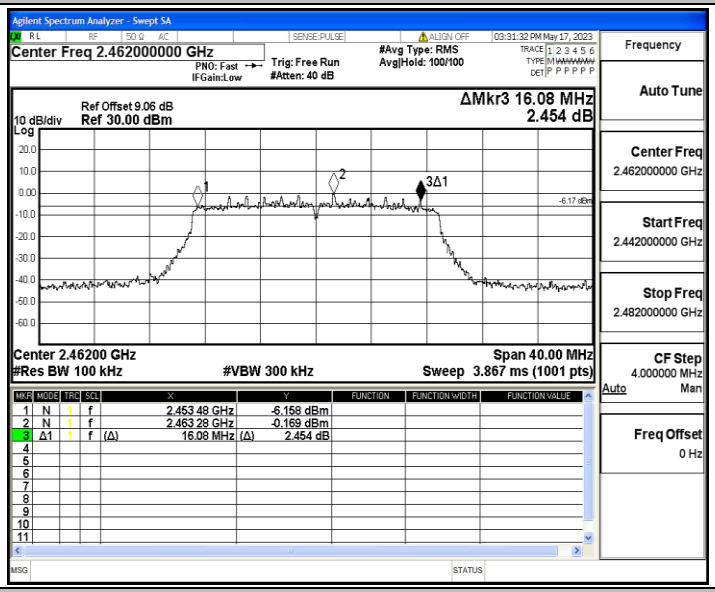
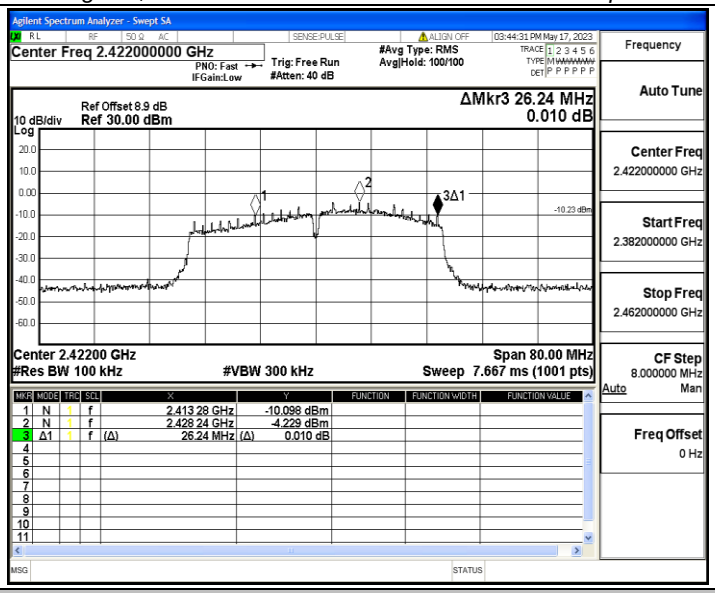



11N40SISO_Ant1_2422

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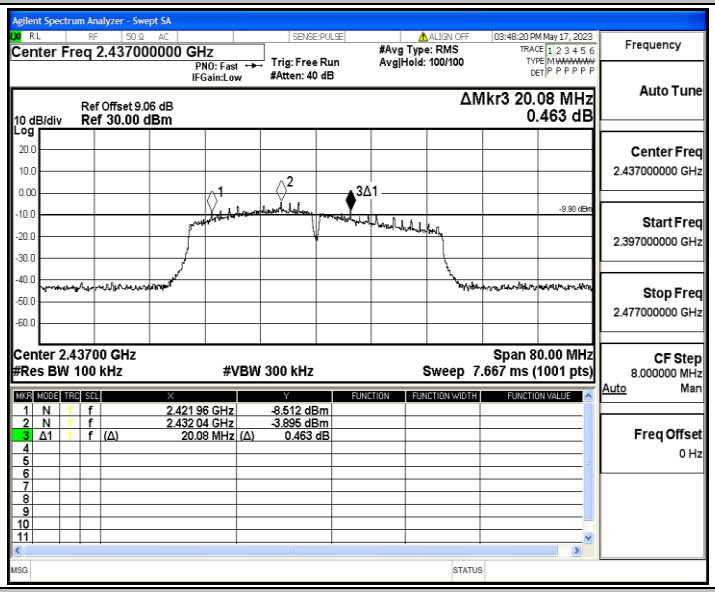
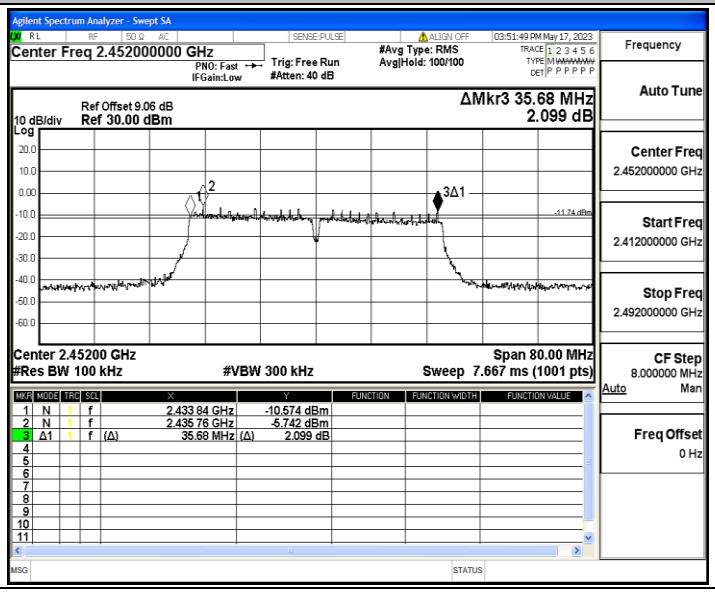



11N40SISO_Ant1_2452



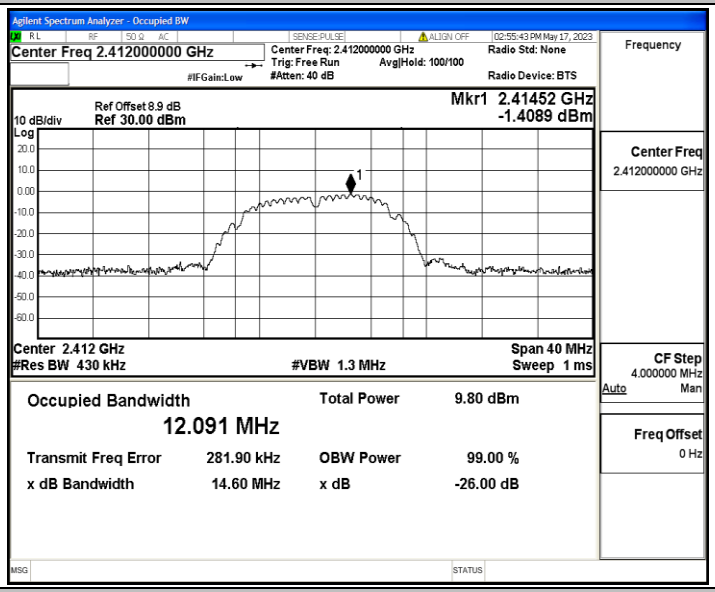
# Appendix B: Occupied Channel Bandwidth

## Test Result

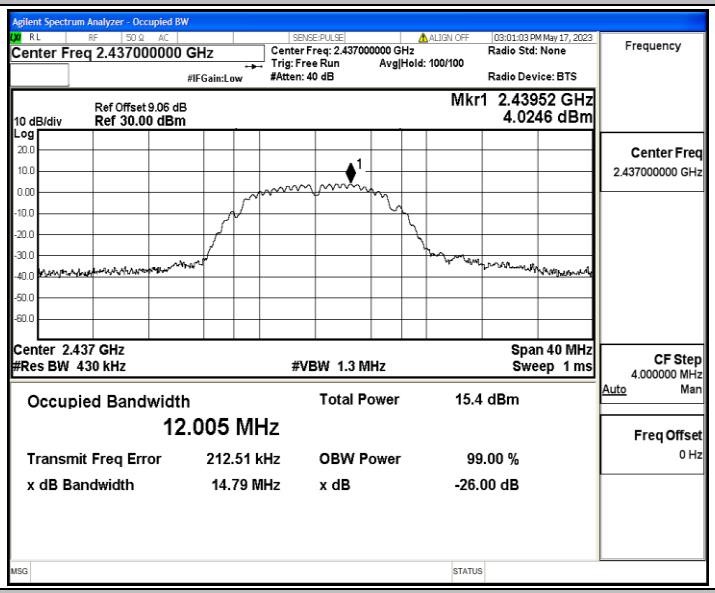
| TestMode | Antenna | Channel | OCB [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | 12.091 | 2406.2364 | 2418.3274 | --- | --- |
| | | 2437 | 12.005 | 2431.2100 | 2443.2150 | --- | --- |
| | | 2462 | 12.175 | 2456.0423 | 2468.2173 | --- | --- |
| 11G | Ant1 | 2412 | 17.167 | 2403.7231 | 2420.8901 | --- | --- |
| | | 2437 | 16.910 | 2428.7779 | 2445.6879 | --- | --- |
| | | 2462 | 17.130 | 2453.5521 | 2470.6821 | --- | --- |
| 11N20SISO | Ant1 | 2412 | 17.869 | 2403.2036 | 2421.0726 | --- | --- |
| | | 2437 | 18.043 | 2427.9817 | 2446.0247 | --- | --- |
| | | 2462 | 17.842 | 2453.0796 | 2470.9216 | --- | --- |
| 11N40SISO | Ant1 | 2422 | 35.439 | 2404.5664 | 2440.0054 | --- | --- |
| | | 2437 | 35.417 | 2419.1025 | 2454.5195 | --- | --- |
| | | 2452 | 36.907 | 2433.4741 | 2470.3811 | --- | --- |

## Test Graphs

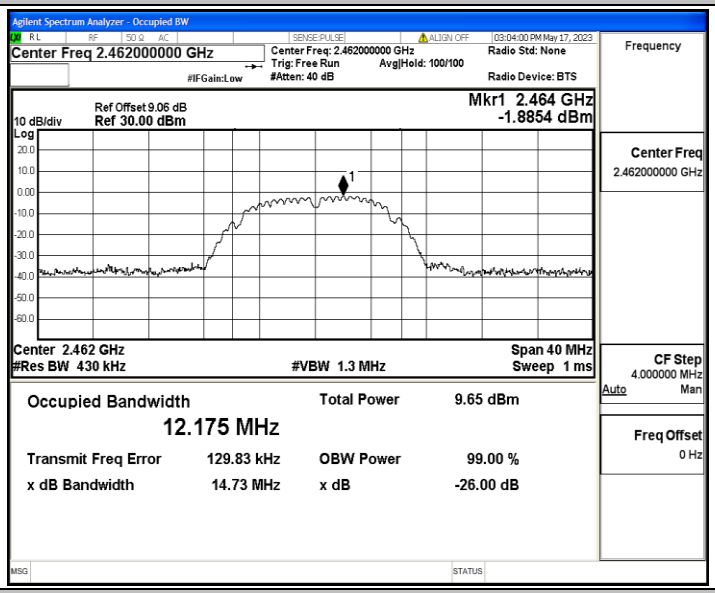
11B_Ant1_2412



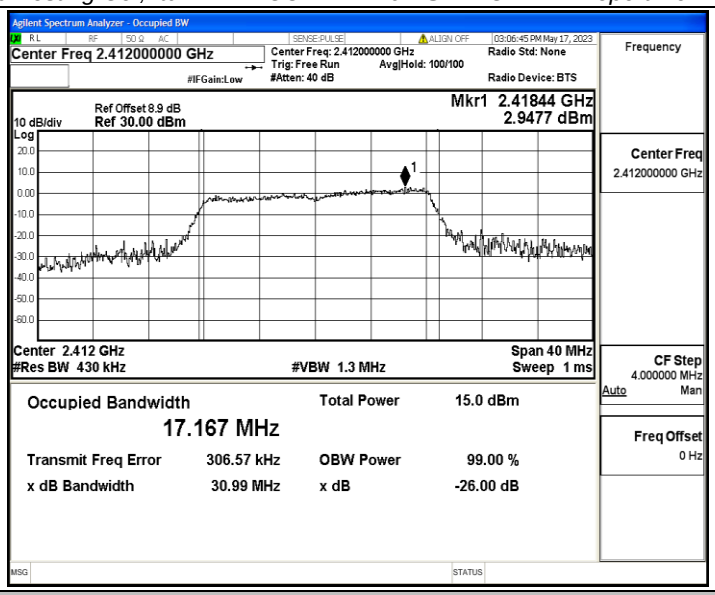

11B_Ant1_2437



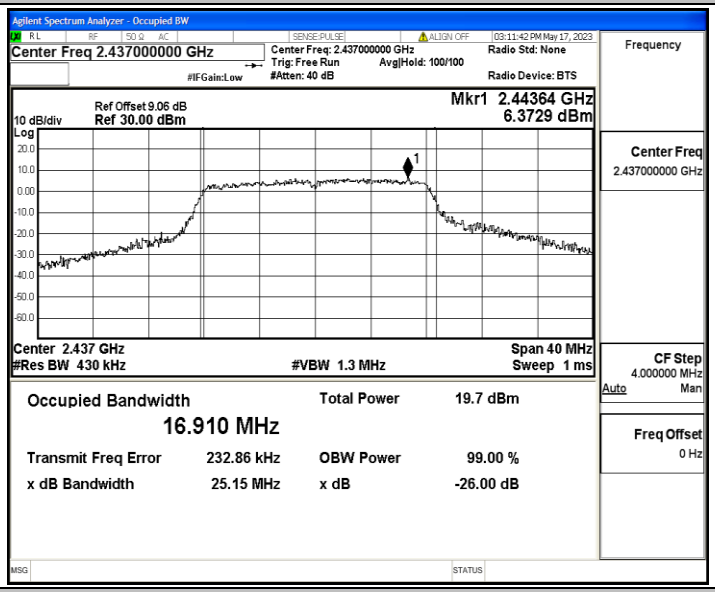

11B_Ant1_2462



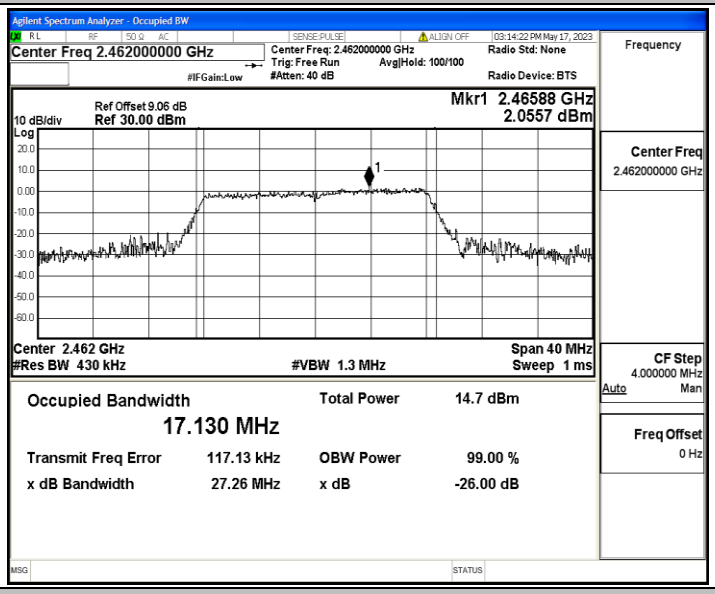

11G_Ant1_2412



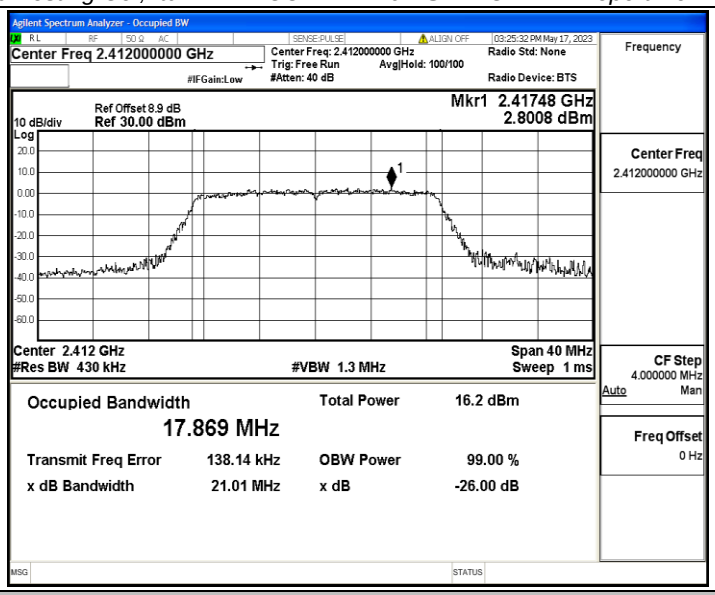

11G_Ant1_2437



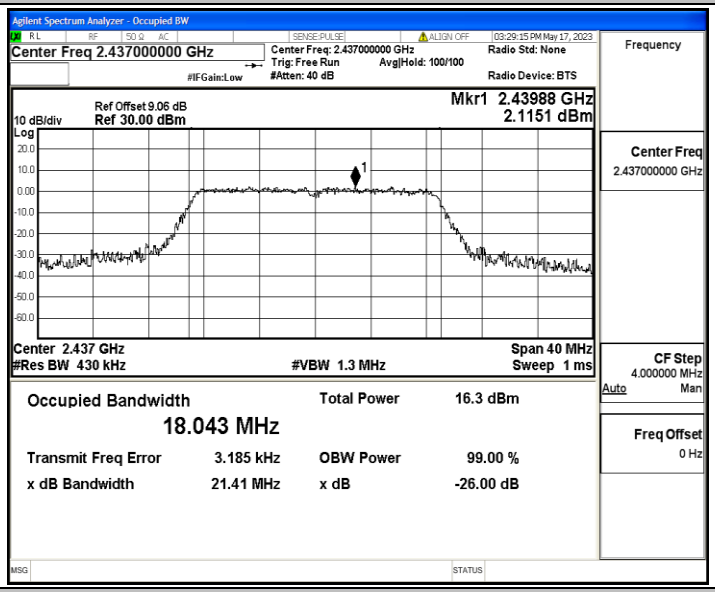

11G_Ant1_2462



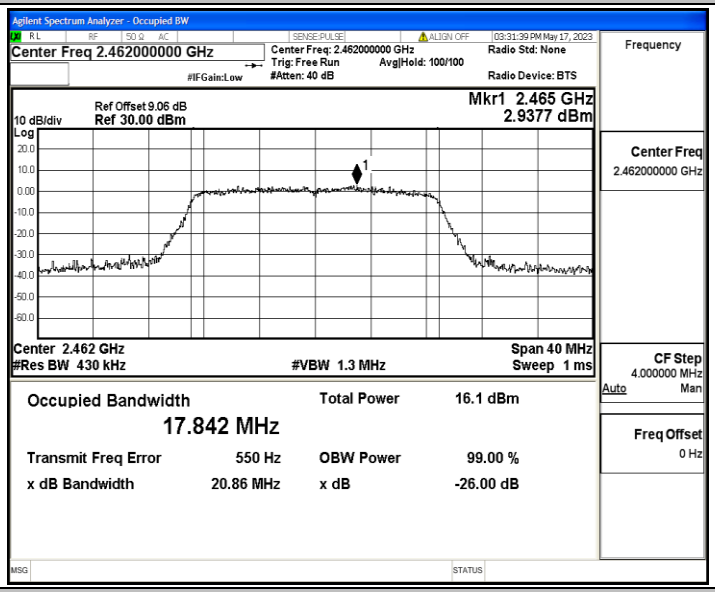

11N20SISO_Ant1_2412



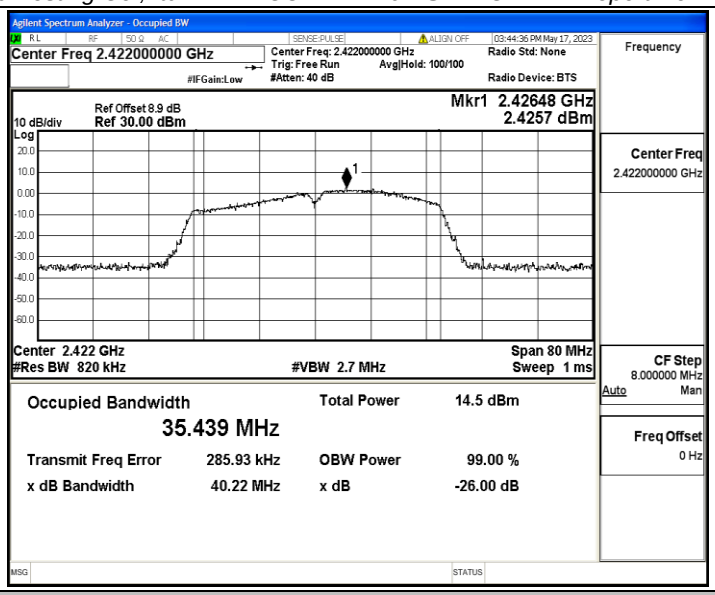

11N20SISO_Ant1_2437



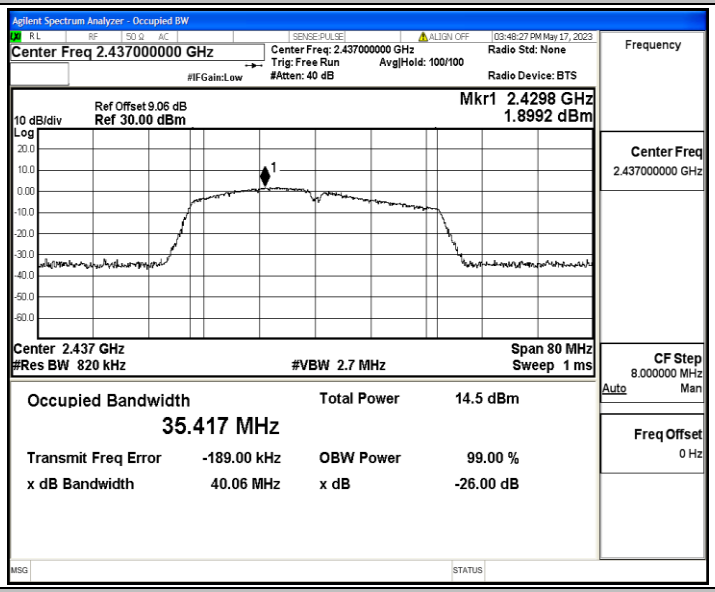

11N20SISO_Ant1_2462



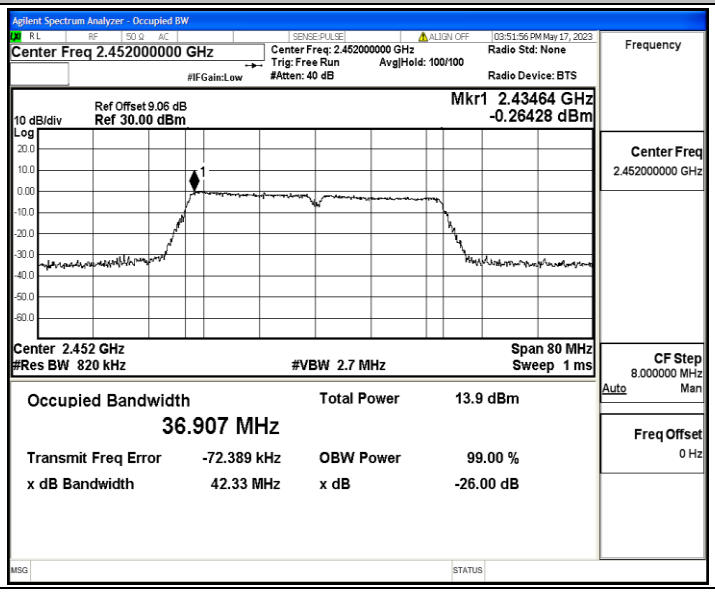

11N40SISO_Ant1_2422




11N40SISO_Ant1_2437




11N40SISO_Ant1_2452



# Appendix C: Maximum conducted output power

## Test Result

| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | 6.85 | ≤30.00 | PASS |
| | | 2437 | 12.45 | ≤30.00 | PASS |
| | | 2462 | 6.63 | ≤30.00 | PASS |
| 11G | Ant1 | 2412 | 9.05 | ≤30.00 | PASS |
| | | 2437 | 13.64 | ≤30.00 | PASS |
| | | 2462 | 8.76 | ≤30.00 | PASS |
| 11N20SISO | Ant1 | 2412 | 10.41 | ≤30.00 | PASS |
| | | 2437 | 10.05 | ≤30.00 | PASS |
| | | 2462 | 10.37 | ≤30.00 | PASS |
| 11N40SISO | Ant1 | 2422 | 7.61 | ≤30.00 | PASS |
| | | 2437 | 7.61 | ≤30.00 | PASS |
| | | 2452 | 7.05 | ≤30.00 | PASS |

Note：The Duty Cycle Factor is compensated in the test result.

# Appendix D: Maximum power spectral density

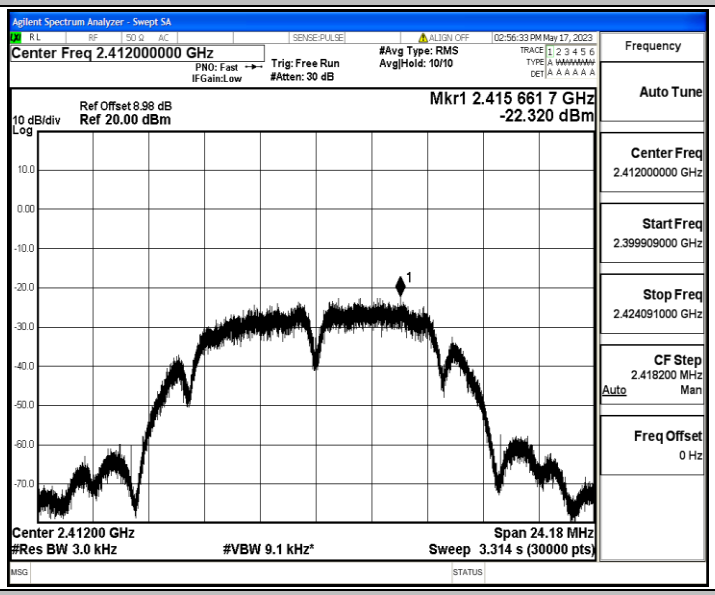
## Test Result

| TestMode | Antenna | Channel | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | -22.32 | ≤8.00 | PASS |
| | | 2437 | -16.41 | ≤8.00 | PASS |
| | | 2462 | -22.32 | ≤8.00 | PASS |
| 11G | Ant1 | 2412 | -20.81 | ≤8.00 | PASS |
| | | 2437 | -18.15 | ≤8.00 | PASS |
| | | 2462 | -22.61 | ≤8.00 | PASS |
| 11N20SISO | Ant1 | 2412 | -19.83 | ≤8.00 | PASS |
| | | 2437 | -22.17 | ≤8.00 | PASS |
| | | 2462 | -19.84 | ≤8.00 | PASS |
| 11N40SISO | Ant1 | 2422 | -25.32 | ≤8.00 | PASS |
| | | 2437 | -24.37 | ≤8.00 | PASS |
| | | 2452 | -26.55 | ≤8.00 | PASS |

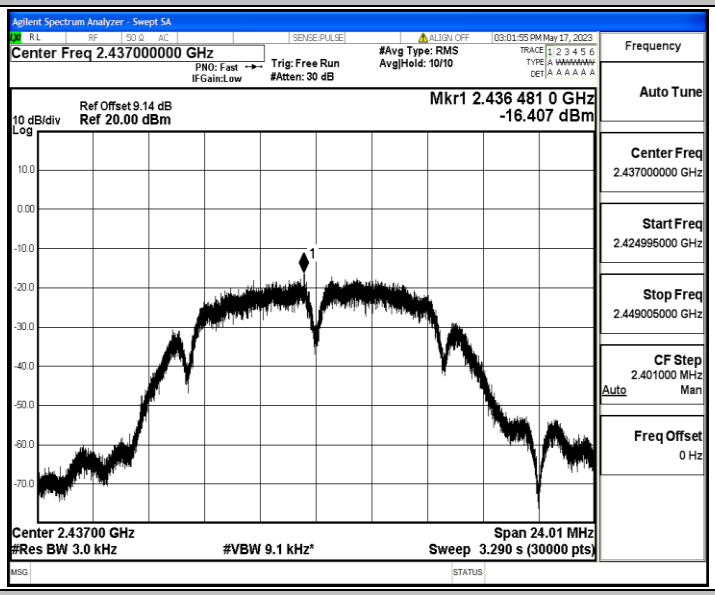
Note：The Duty Cycle Factor is compensated in the test result.

## Test Graphs

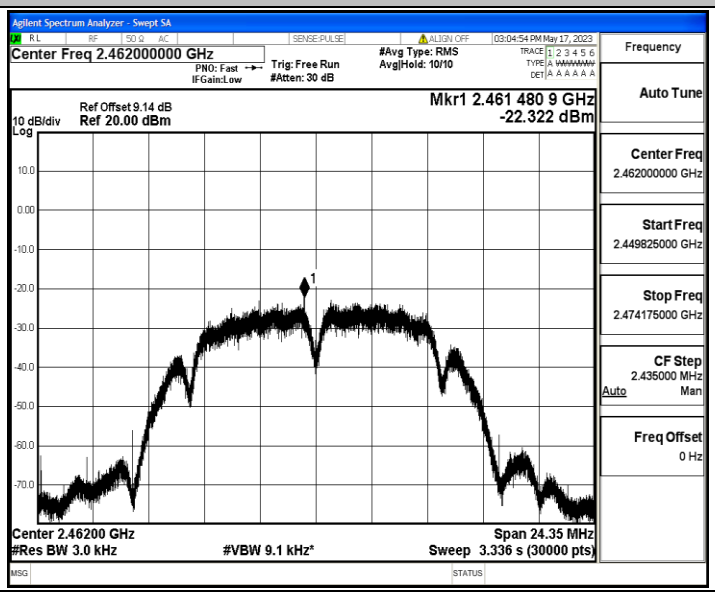
11B_Ant1_2412



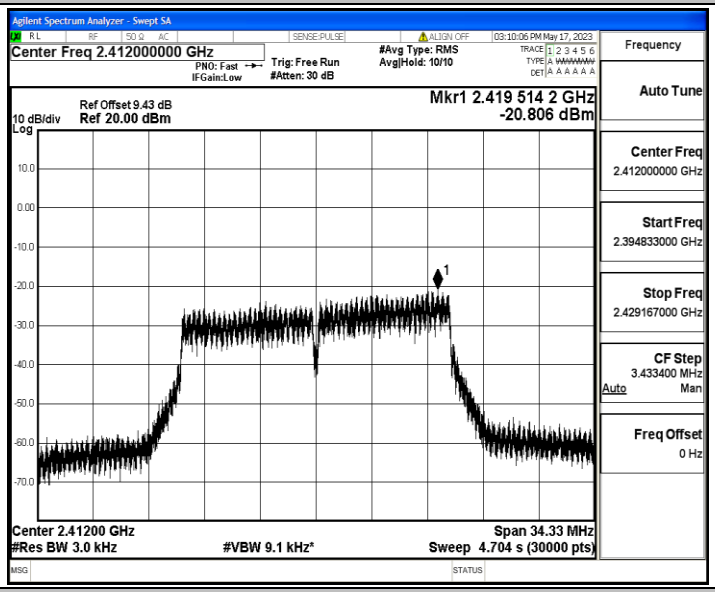

11B_Ant1_2437



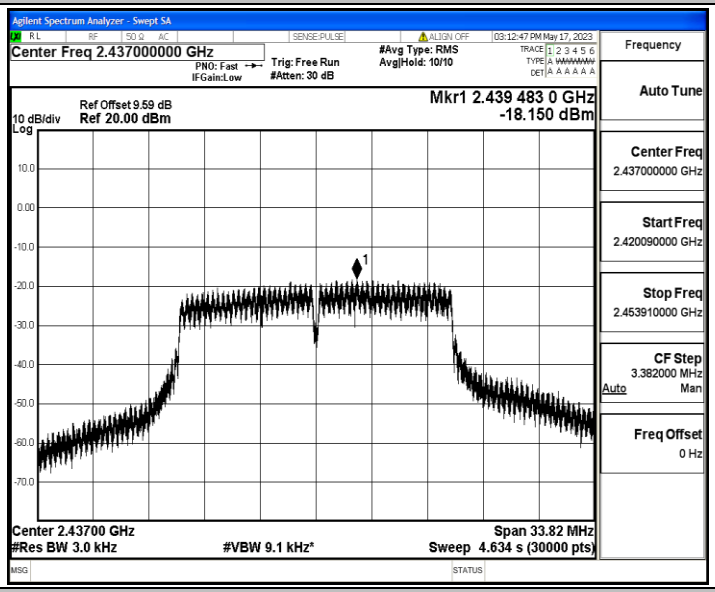

11B_Ant1_2462



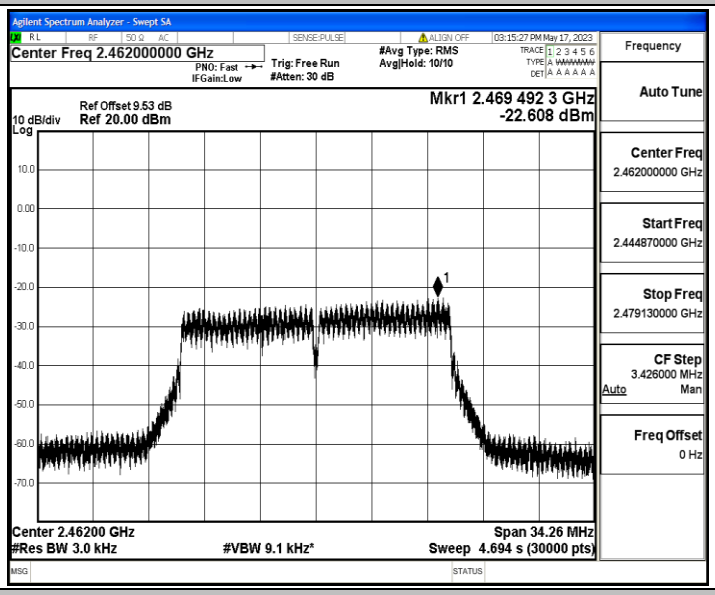
11G_Ant1_2412



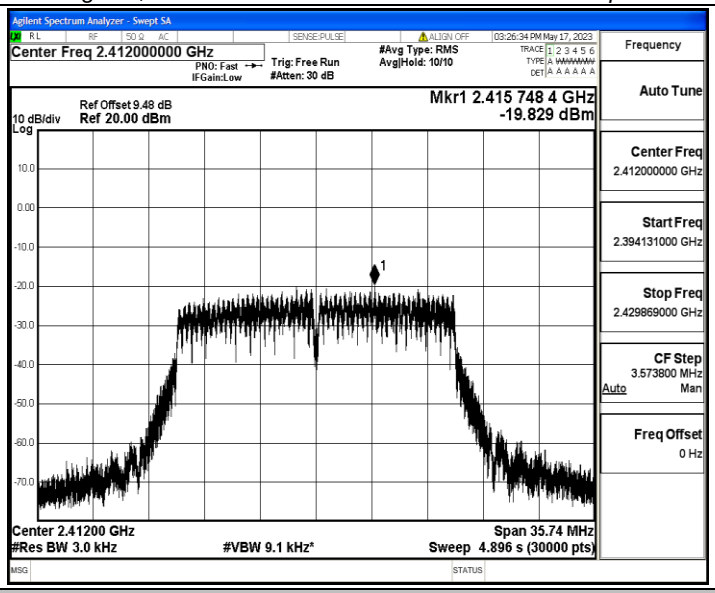

11G_Ant1_2437



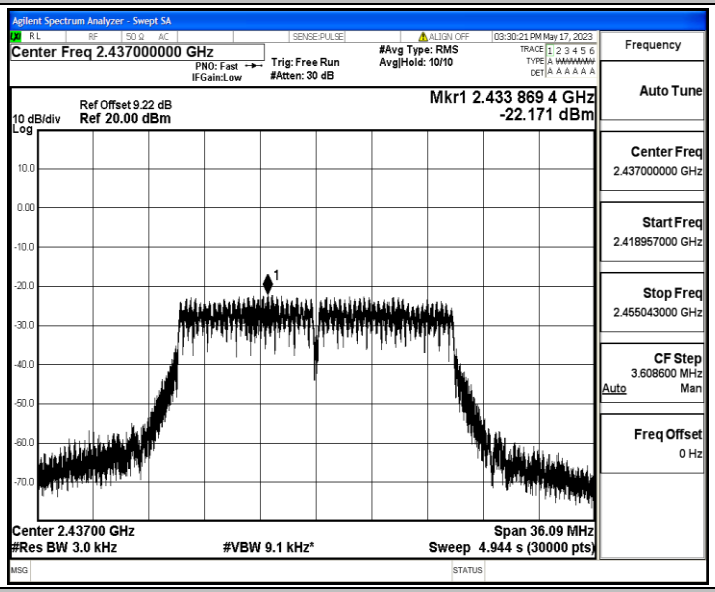

11G_Ant1_2462



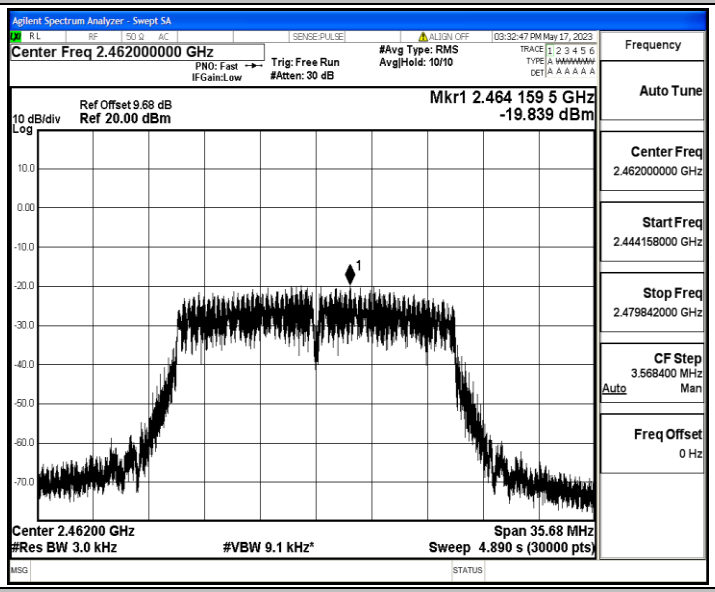

11N20SISO_Ant1_2412



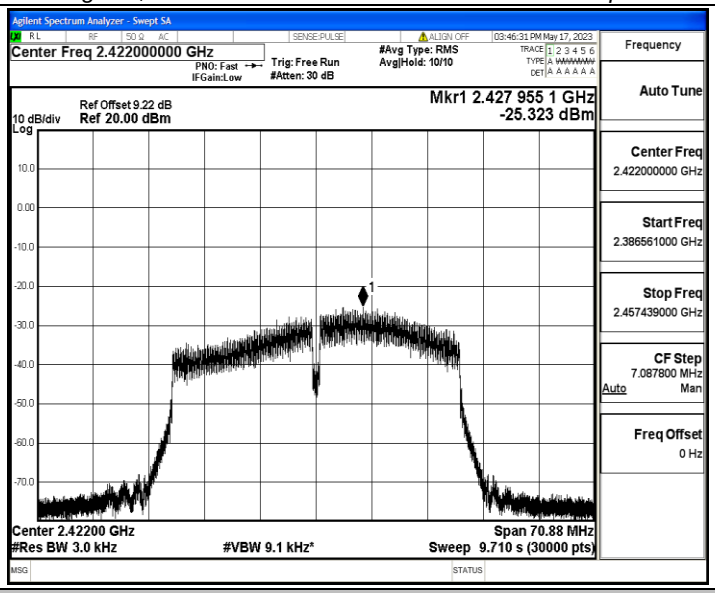

11N20SISO_Ant1_2437



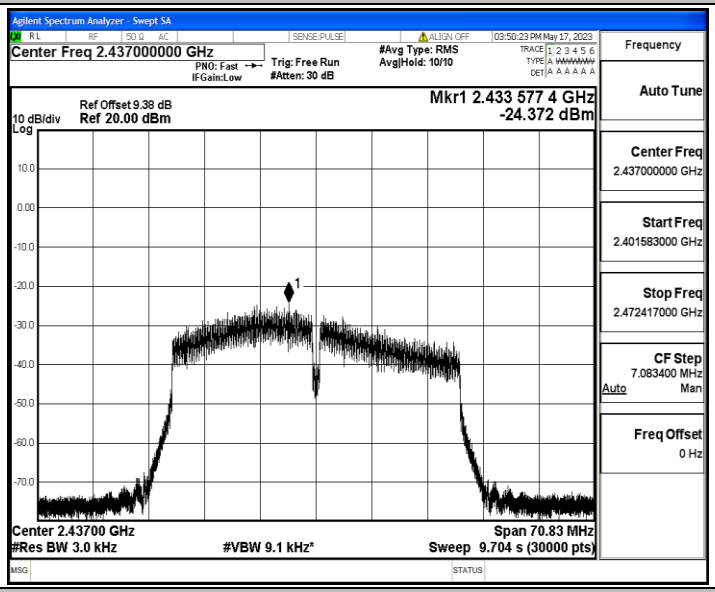

11N20SISO_Ant1_2462



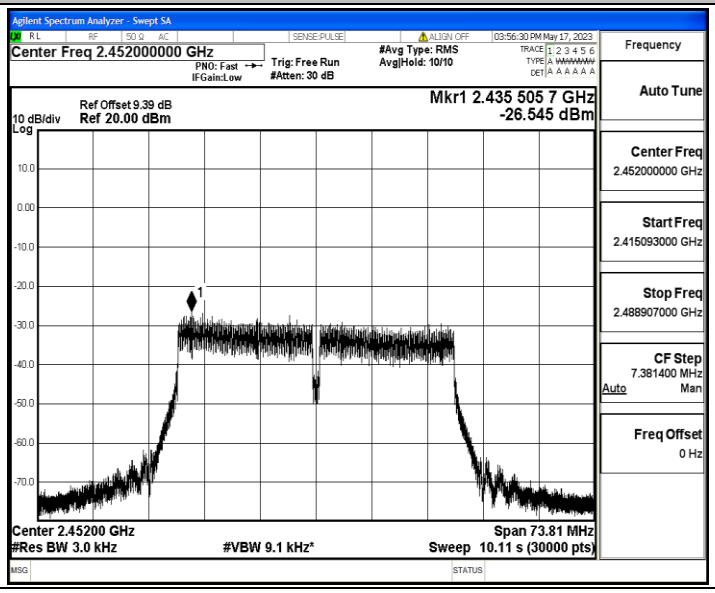

11N40SISO_Ant1_2422




11N40SISO_Ant1_2437




11N40SISO_Ant1_2452



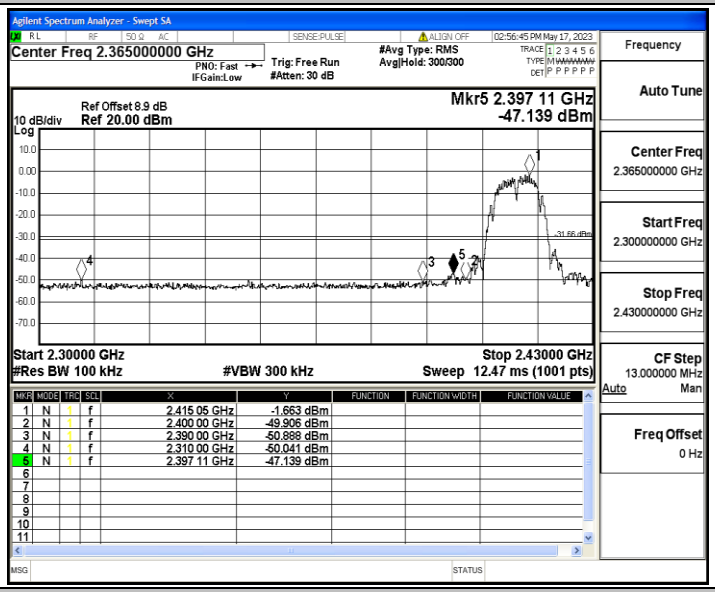
# Appendix E: Band edge measurements

## Test Result

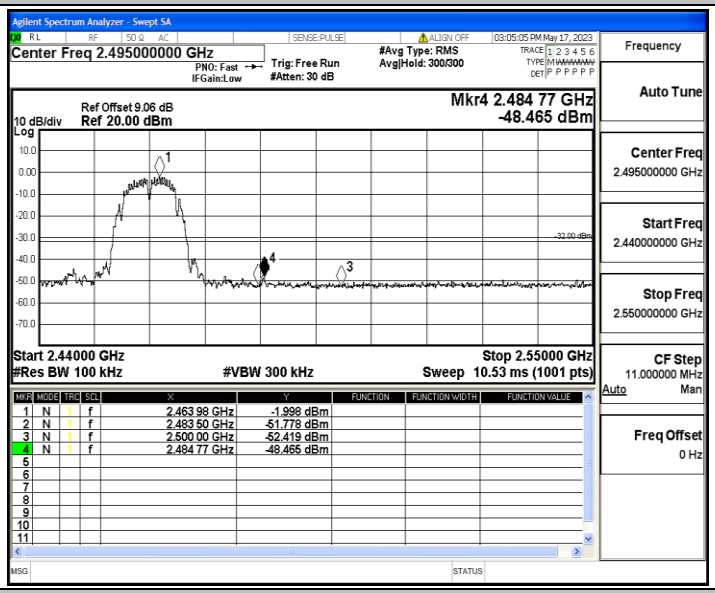
| TestMode | Antenna | ChName | Channel | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|---|---|---|---|---|---|---|---|
| 11B | Ant1 | Low | 2412 | -1.66 | -47.14 | ≤-31.66 | PASS |
| | | High | 2462 | -2.00 | -48.47 | ≤-32 | PASS |
| 11G | Ant1 | Low | 2412 | -1.04 | -31.05 | ≤-31.04 | PASS |
| | | High | 2462 | -2.28 | -36.88 | ≤-32.28 | PASS |
| 11N20SISO | Ant1 | Low | 2412 | -0.02 | -40.66 | ≤-30.02 | PASS |
| | | High | 2462 | -0.47 | -49.27 | ≤-30.47 | PASS |
| 11N40SISO | Ant1 | Low | 2422 | -3.88 | -44.54 | ≤-33.88 | PASS |
| | | High | 2452 | -6.92 | -49.33 | ≤-36.92 | PASS |

## Test Graphs

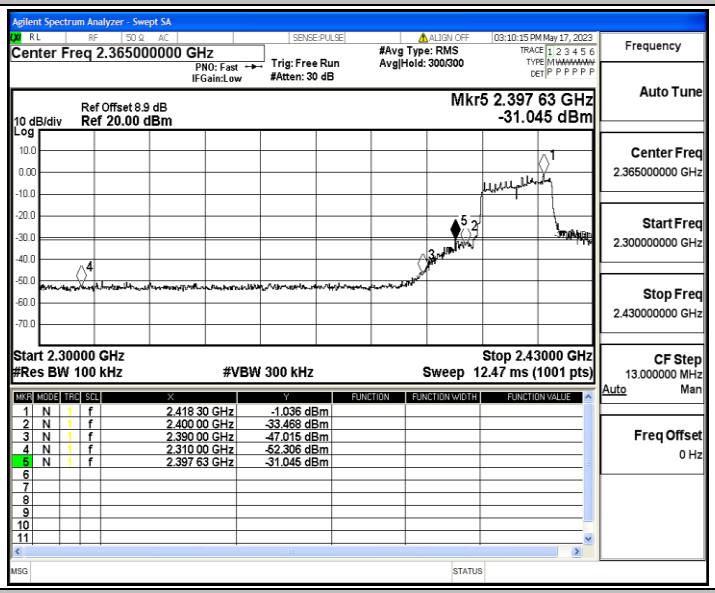
11B_Ant1_Low_2412



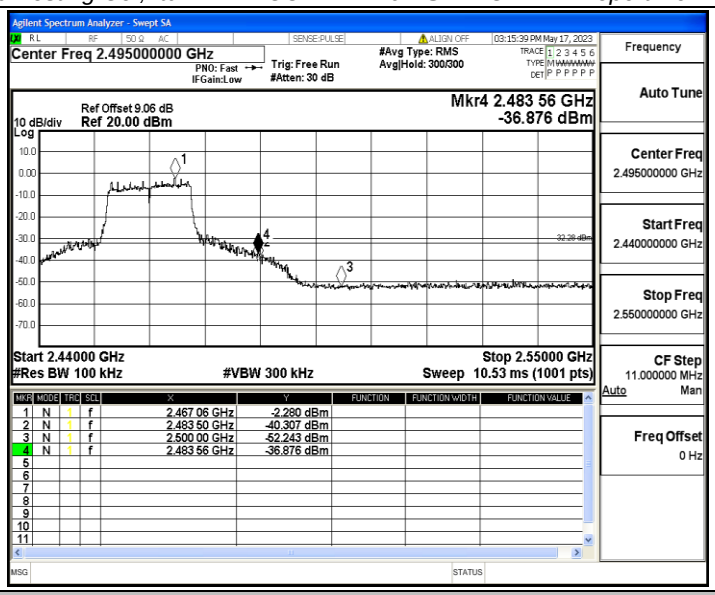

11B_Ant1_High_2462



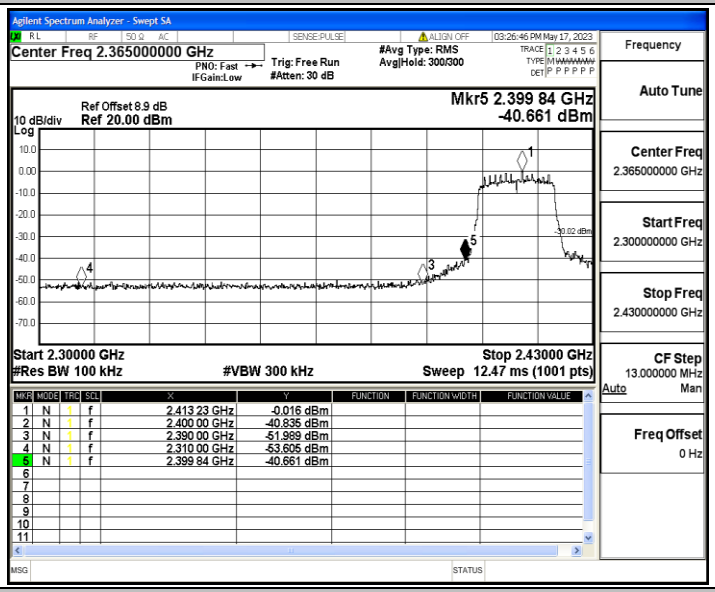

11G_Ant1_Low_2412



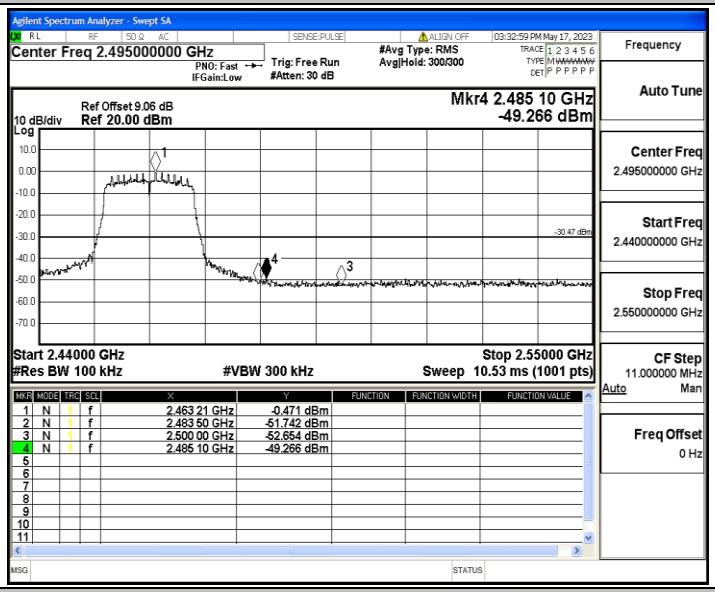

11G_Ant1_High_2462



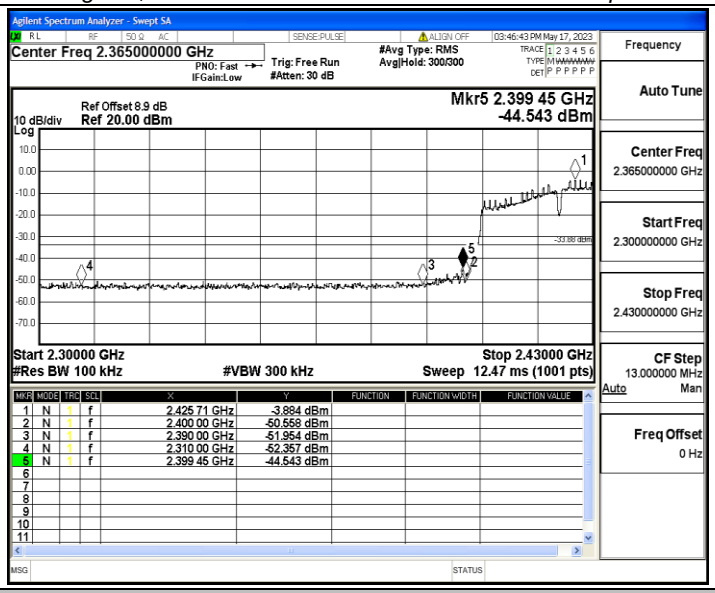

11N20SISO_Ant1_Low_2412



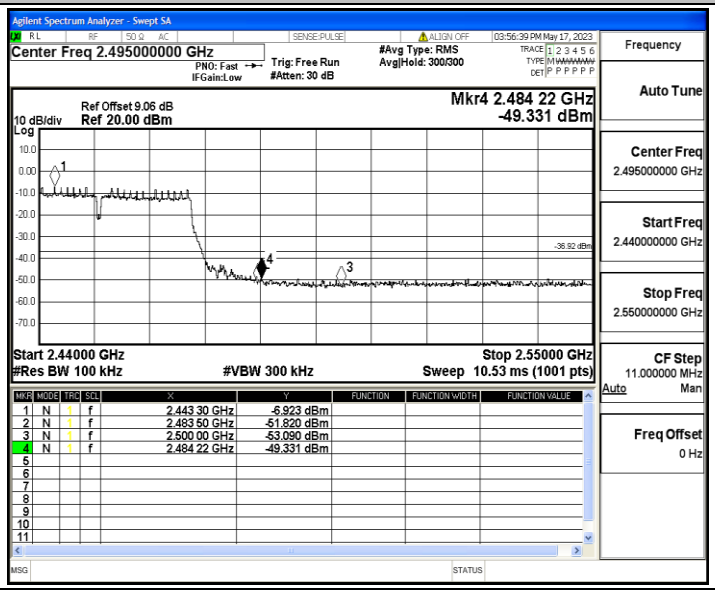

11N20SISO_Ant1_High_2462




11N40SISO_Ant1_Low_2422




11N40SISO_Ant1_High_2452



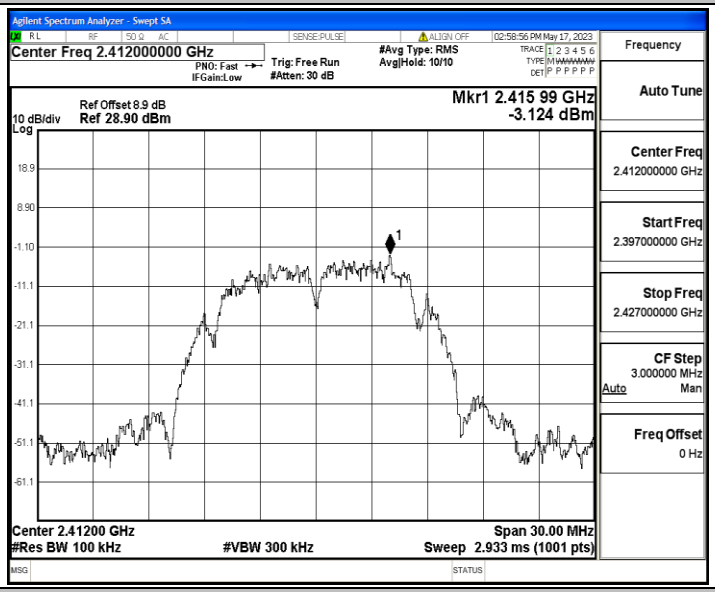
# Appendix F: Conducted Spurious Emission

## Test Result

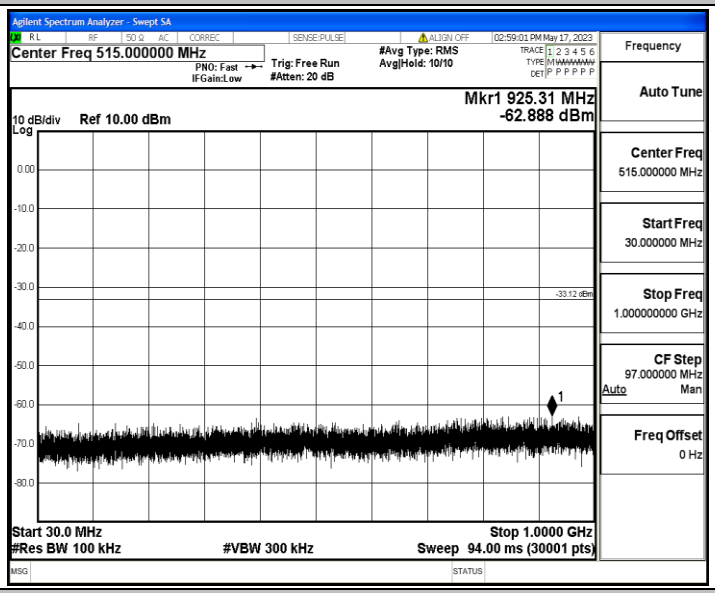
| TestMode | Antenna | Channel | FreqRange [Mhz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | Reference | -3.12 | -3.12 | --- | PASS |
| | | | 30~1000 | -3.12 | -62.89 | ≤-33.12 | PASS |
| | | | 1000~26500 | -3.12 | -49.87 | ≤-33.12 | PASS |
| | | 2437 | Reference | 3.53 | 3.53 | --- | PASS |
| | | | 30~1000 | 3.53 | -63.06 | ≤-26.47 | PASS |
| | | | 1000~26500 | 3.53 | -50.31 | ≤-26.47 | PASS |
| | | 2462 | Reference | -4.06 | -4.06 | --- | PASS |
| | | | 30~1000 | -4.06 | -63.06 | ≤-34.06 | PASS |
| | | | 1000~26500 | -4.06 | -50.1 | ≤-34.06 | PASS |
| 11G | Ant1 | 2412 | Reference | -1.67 | -1.67 | --- | PASS |
| | | | 30~1000 | -1.67 | -63.05 | ≤-31.67 | PASS |
| | | | 1000~26500 | -1.67 | -50.28 | ≤-31.67 | PASS |
| | | 2437 | Reference | 1.53 | 1.53 | --- | PASS |
| | | | 30~1000 | 1.53 | -62.95 | ≤-28.47 | PASS |
| | | | 1000~26500 | 1.53 | -50.65 | ≤-28.47 | PASS |
| | | 2462 | Reference | -3.65 | -3.65 | --- | PASS |
| | | | 30~1000 | -3.65 | -62.86 | ≤-33.65 | PASS |
| | | | 1000~26500 | -3.65 | -49.43 | ≤-33.65 | PASS |
| 11N20SISO | Ant1 | 2412 | Reference | -1.88 | -1.88 | --- | PASS |
| | | | 30~1000 | -1.88 | -62.33 | ≤-31.88 | PASS |
| | | | 1000~26500 | -1.88 | -50.43 | ≤-31.88 | PASS |
| | | 2437 | Reference | -3.42 | -3.42 | --- | PASS |
| | | | 30~1000 | -3.42 | -62.93 | ≤-33.42 | PASS |
| | | | 1000~26500 | -3.42 | -50.31 | ≤-33.42 | PASS |
| | | 2462 | Reference | -1.79 | -1.79 | --- | PASS |
| | | | 30~1000 | -1.79 | -62.99 | ≤-31.79 | PASS |
| | | | 1000~26500 | -1.79 | -45.72 | ≤-31.79 | PASS |
| 11N40SISO | Ant1 | 2422 | Reference | -6.44 | -6.44 | --- | PASS |
| | | | 30~1000 | -6.44 | -62.39 | ≤-36.44 | PASS |
| | | | 1000~26500 | -6.44 | -50.99 | ≤-36.44 | PASS |
| | | 2437 | Reference | -3.83 | -3.83 | --- | PASS |
| | | | 30~1000 | -3.83 | -62.61 | ≤-33.83 | PASS |
| | | | 1000~26500 | -3.83 | -49.83 | ≤-33.83 | PASS |
| | | 2452 | Reference | -5.81 | -5.81 | --- | PASS |
| | | | 30~1000 | -5.81 | -61.7 | ≤-35.81 | PASS |
| | | | 1000~26500 | -5.81 | -49.56 | ≤-35.81 | PASS |

## Test Graphs

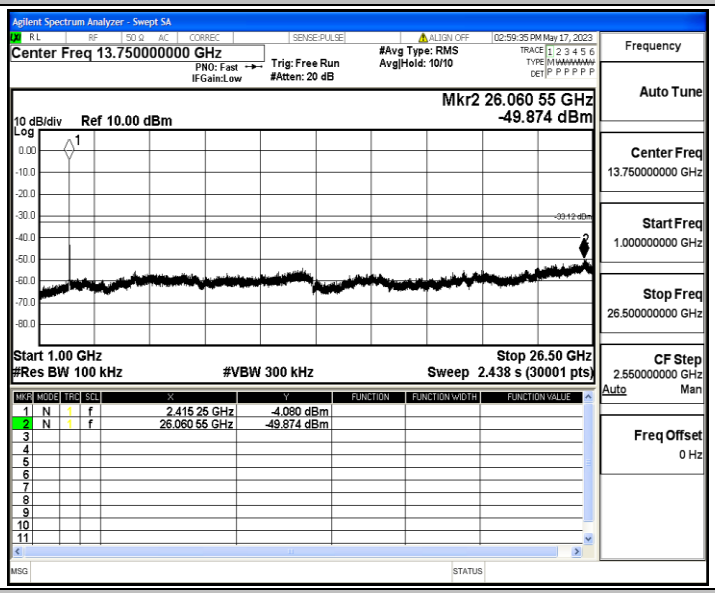
11B_Ant1_2412_0~Reference



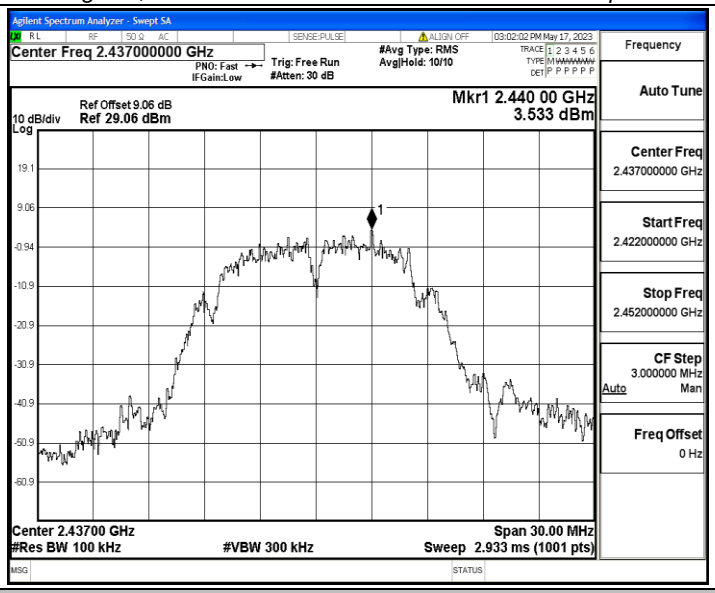

11B_Ant1_2412_30~1000



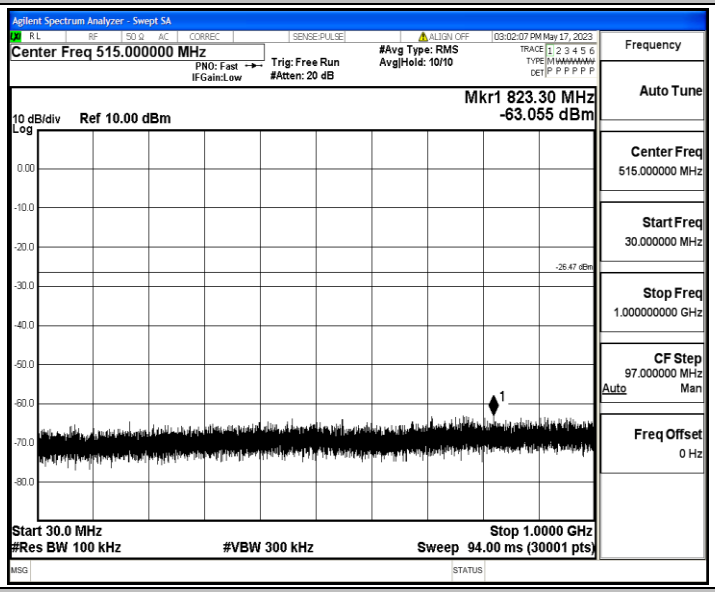

11B_Ant1_2412_1000~26500



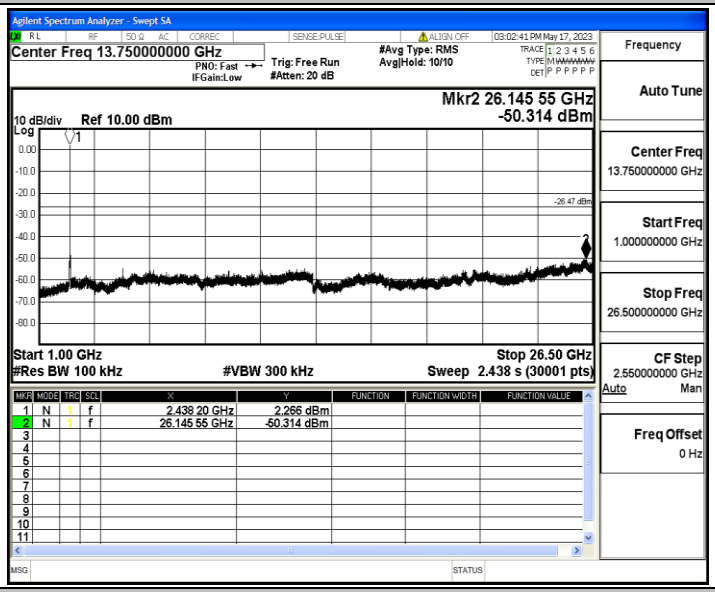

11B_Ant1_2437_0~Reference



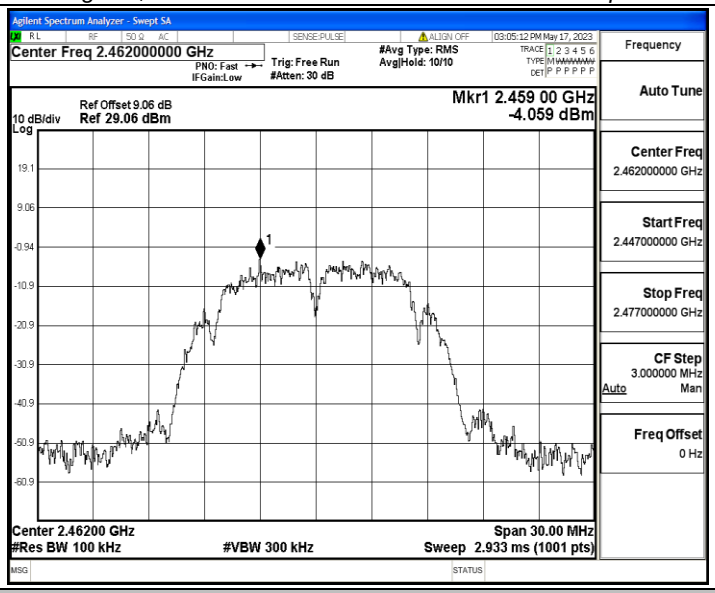

11B_Ant1_2437_30~1000



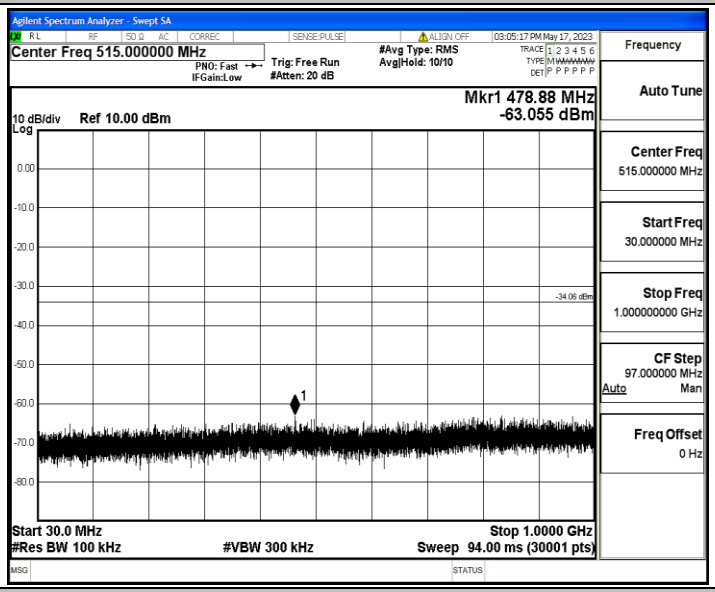

11B_Ant1_2437_1000~26500



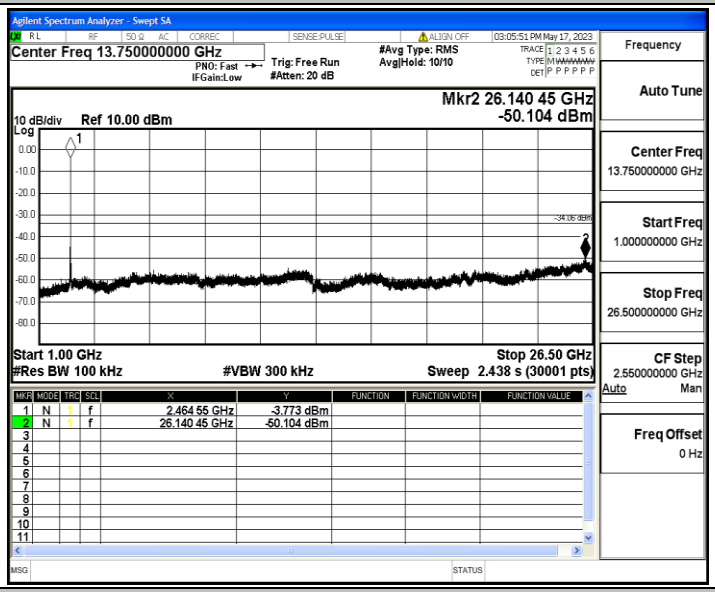

11B_Ant1_2462_0~Reference



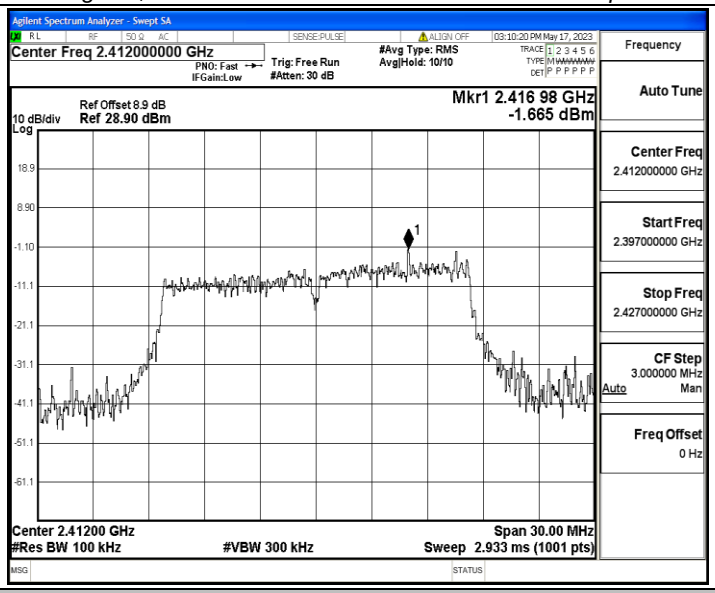

11B_Ant1_2462_30~1000



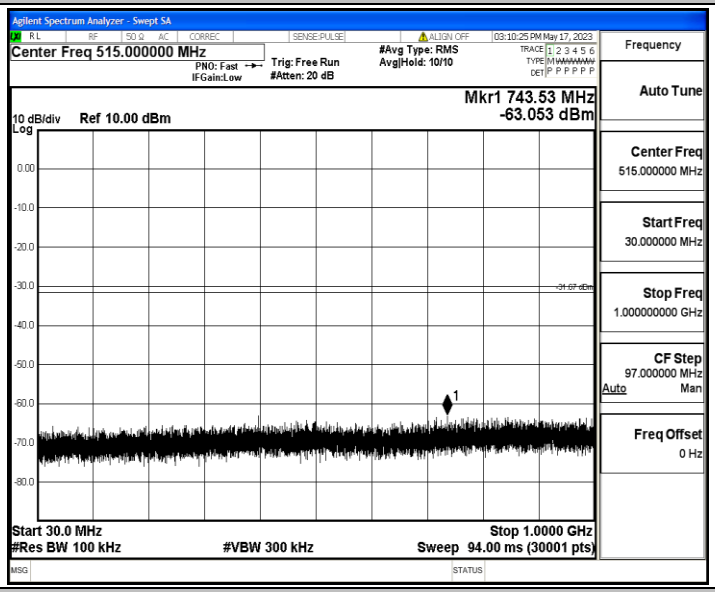

11B_Ant1_2462_1000~26500



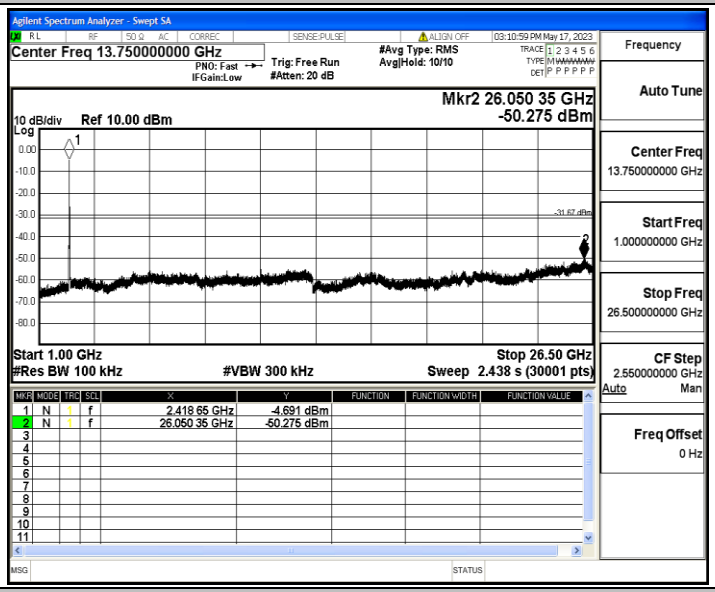

11G_Ant1_2412_0~Reference



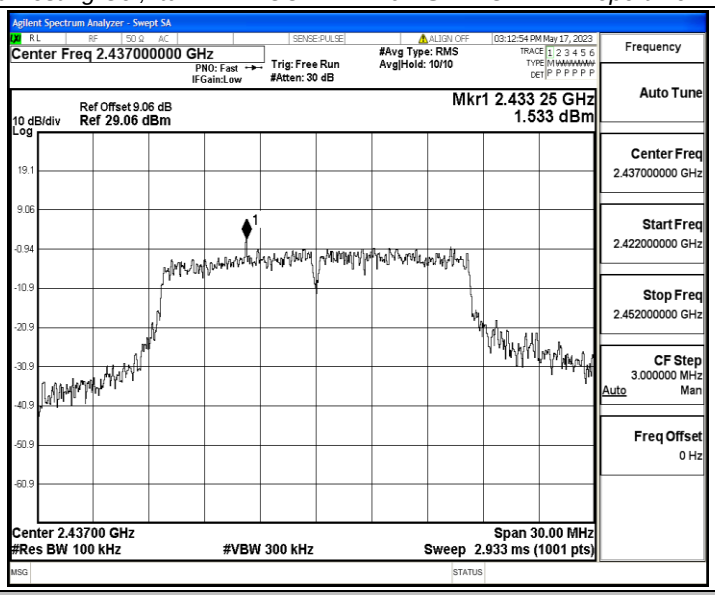

11G_Ant1_2412_30~1000



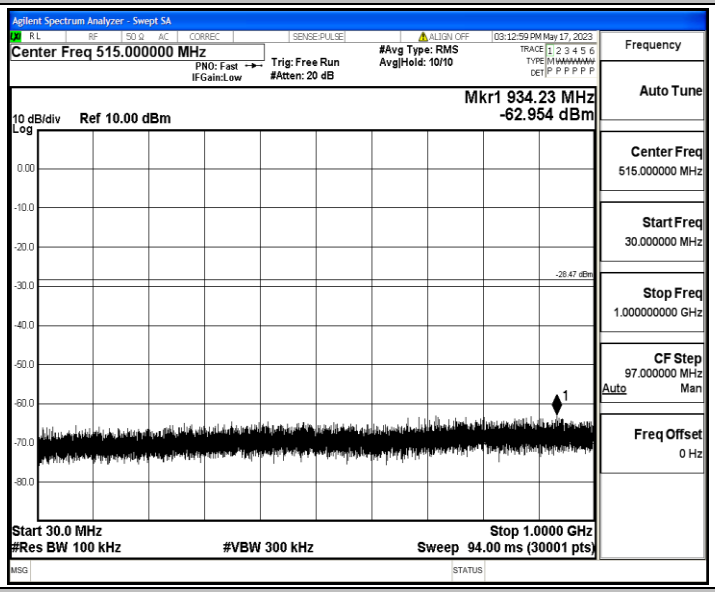

11G_Ant1_2412_1000~26500



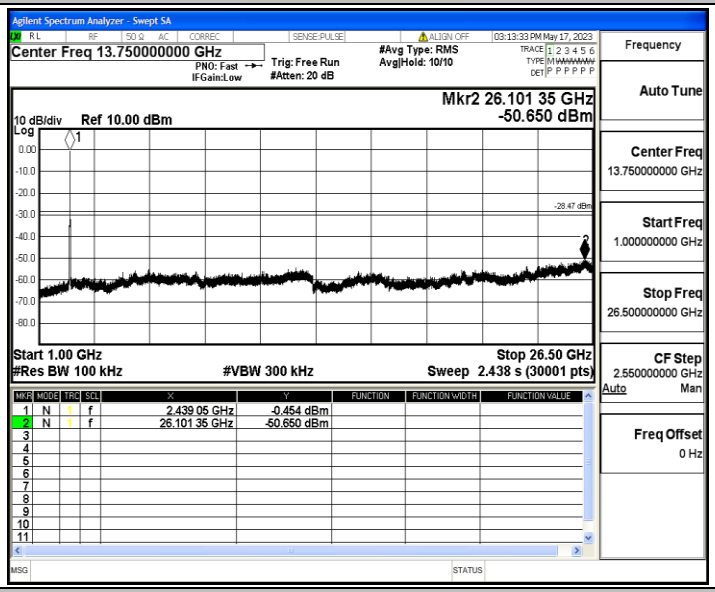

11G_Ant1_2437_0~Reference



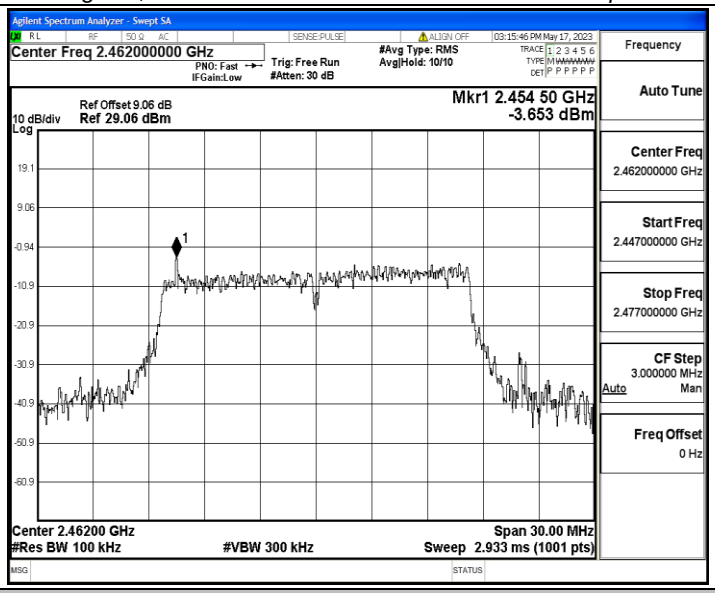

11G_Ant1_2437_30~1000



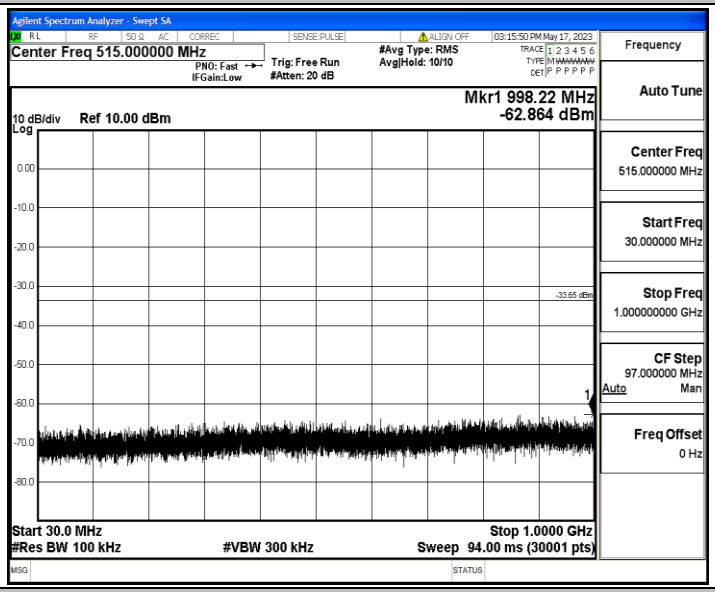

11G_Ant1_2437_1000~26500



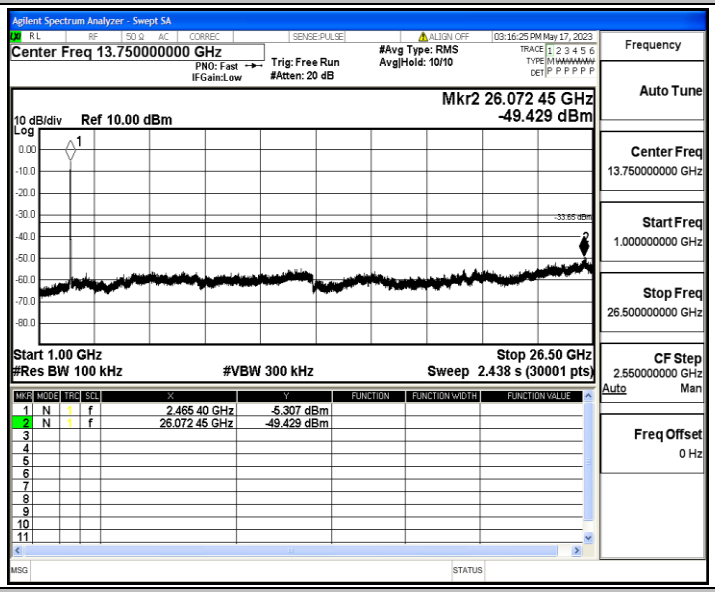

11G_Ant1_2462_0~Reference




11G_Ant1_2462_30~1000




11G_Ant1_2462_1000~26500

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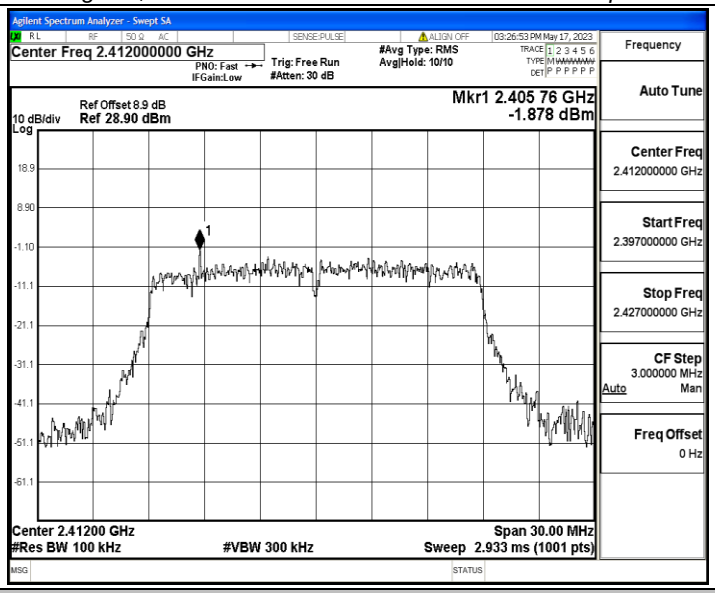


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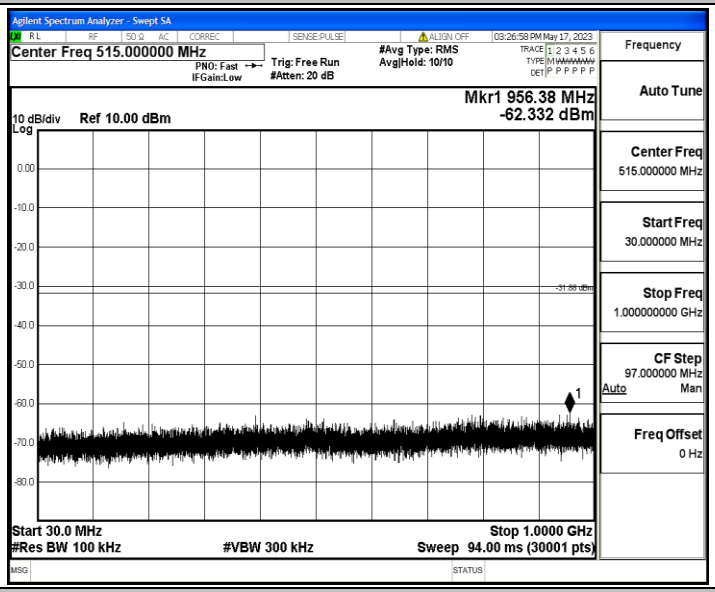
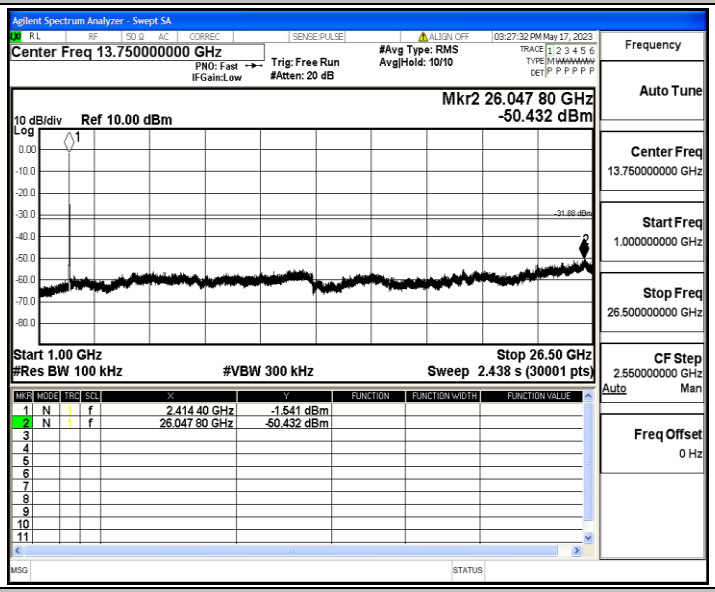
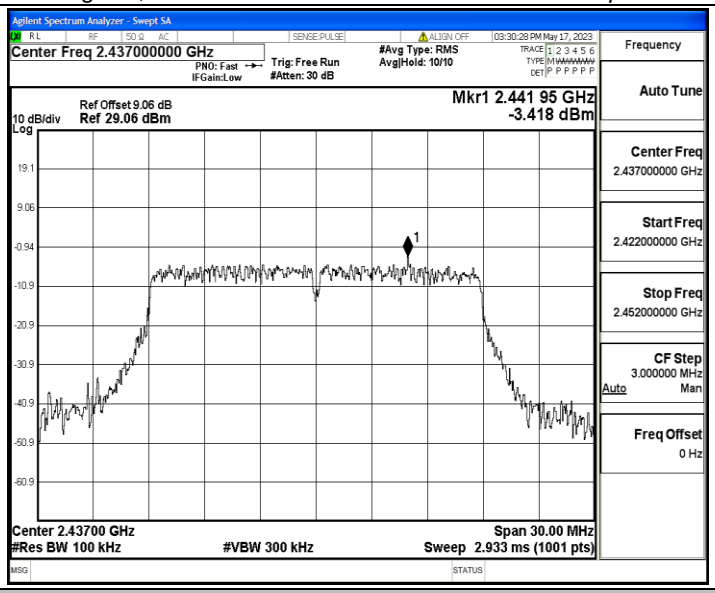


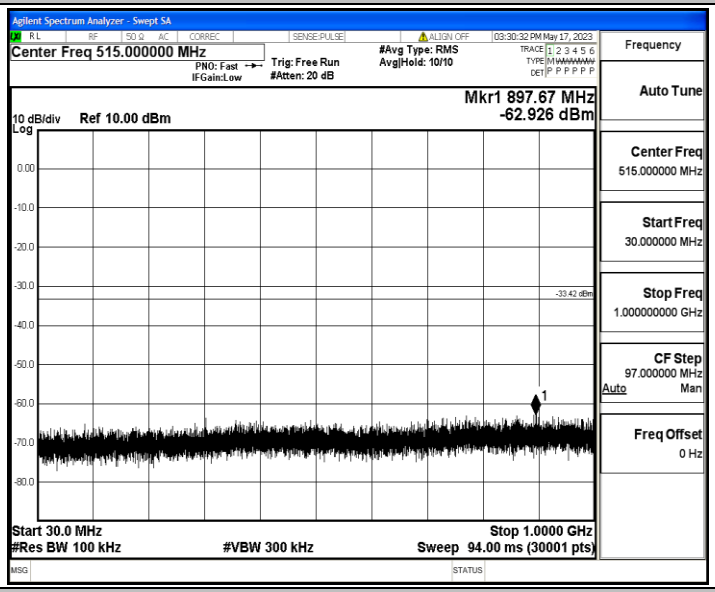

11N20SISO_Ant1_2412_1000~26500



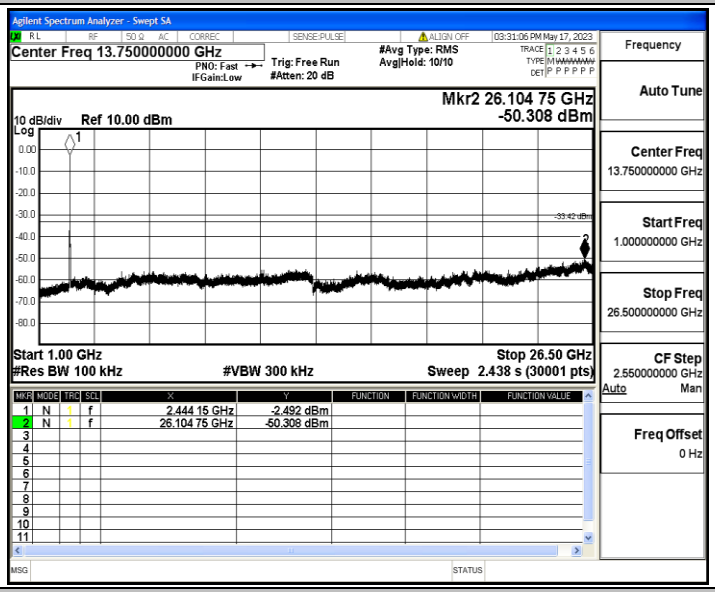

11N20SISO_Ant1_2437_0~Reference



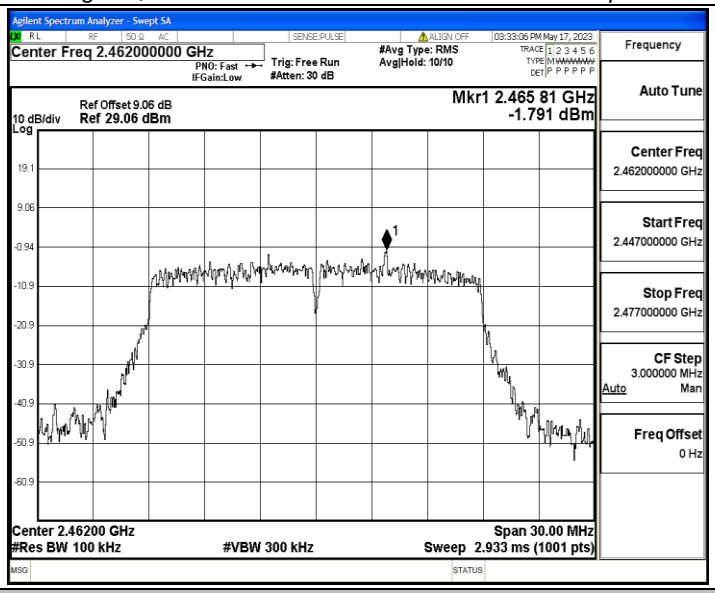

11N20SISO_Ant1_2437_30~1000



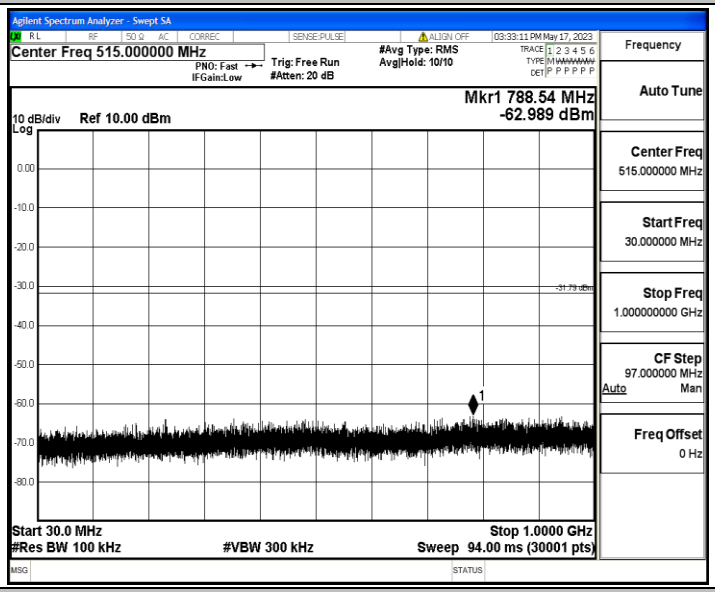

11N20SISO_Ant1_2437_1000~26500



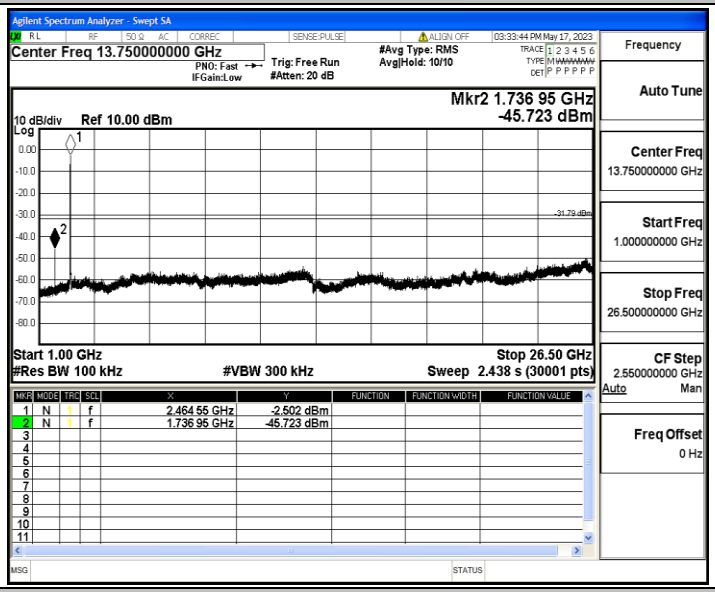

11N20SISO_Ant1_2462_0~Reference



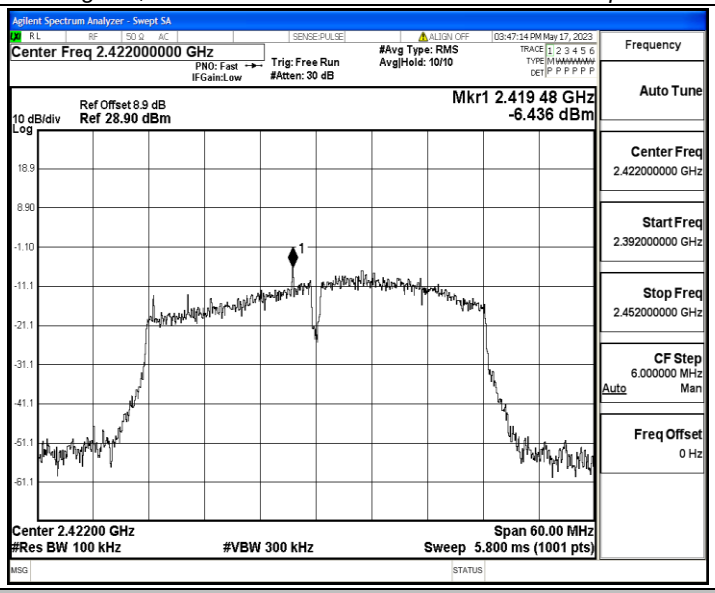

11N20SISO_Ant1_2462_30~1000



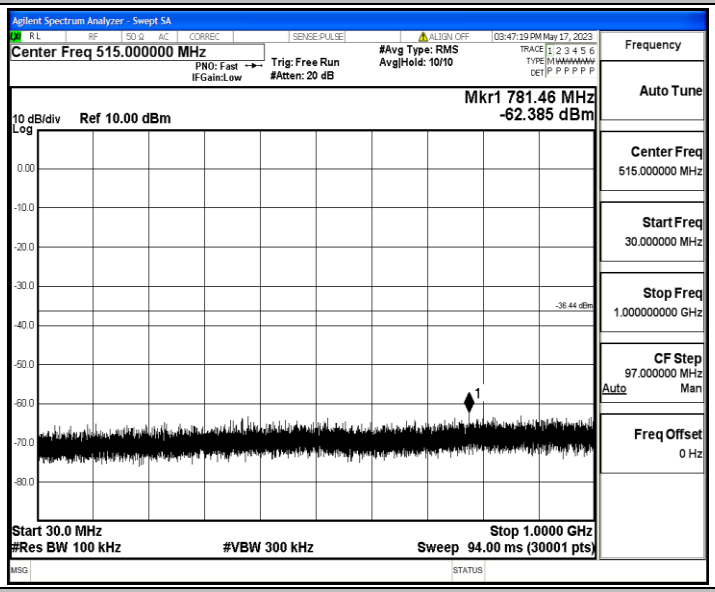

11N20SISO_Ant1_2462_1000~26500



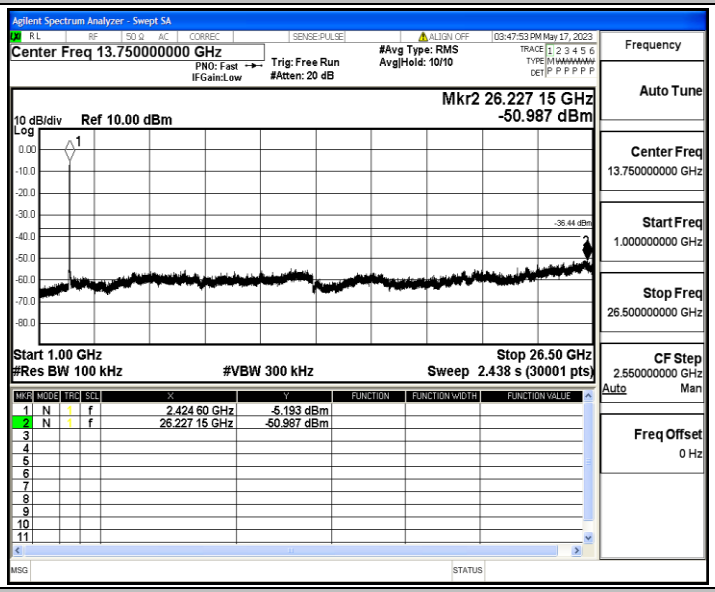

11N40SISO_Ant1_2422_0~Reference



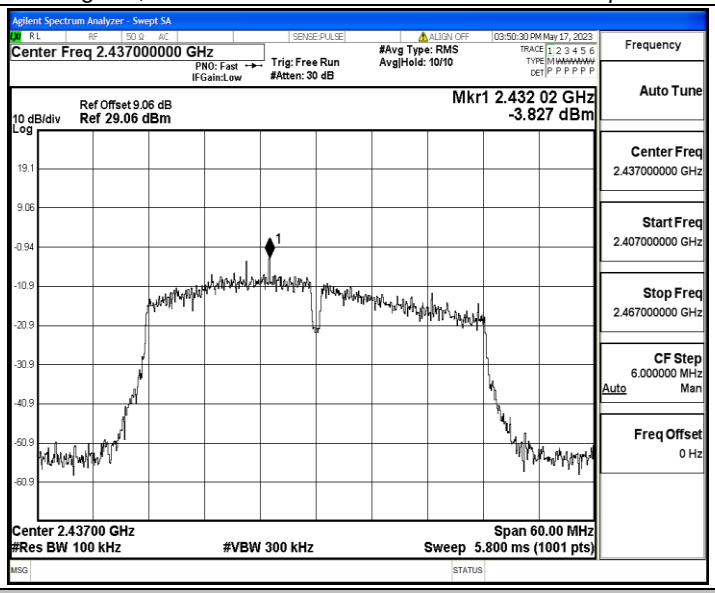

11N40SISO_Ant1_2422_30~1000



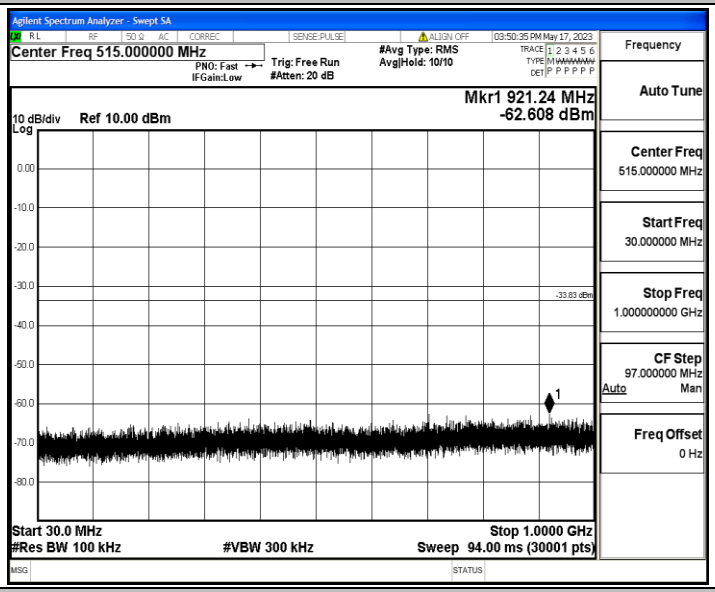

11N40SISO_Ant1_2422_1000~26500



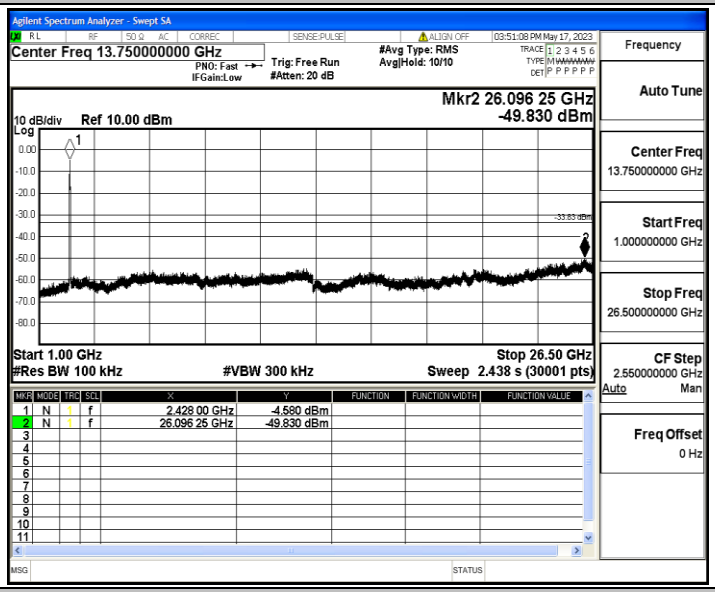

11N40SISO_Ant1_2437_0~Reference



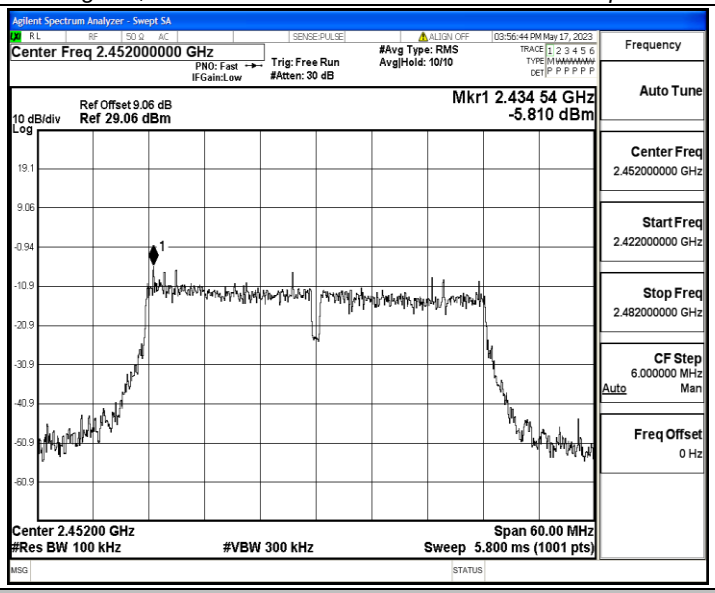

11N40SISO_Ant1_2437_30~1000



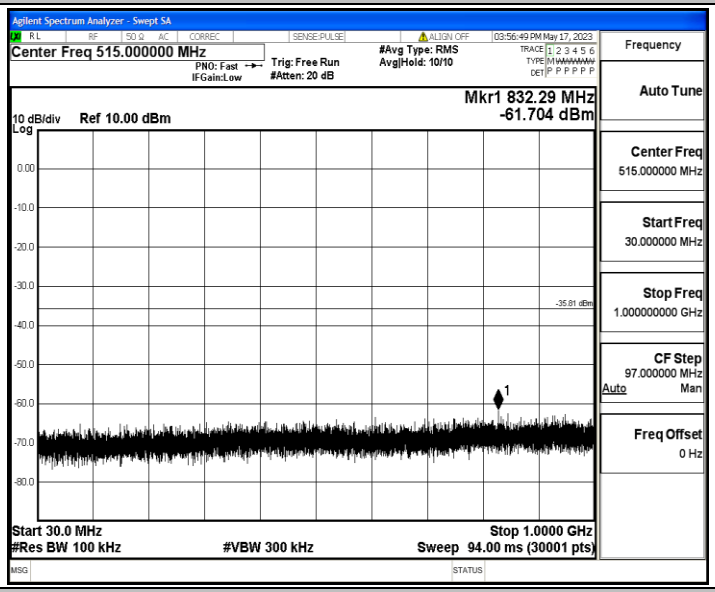

11N40SISO_Ant1_2437_1000~26500



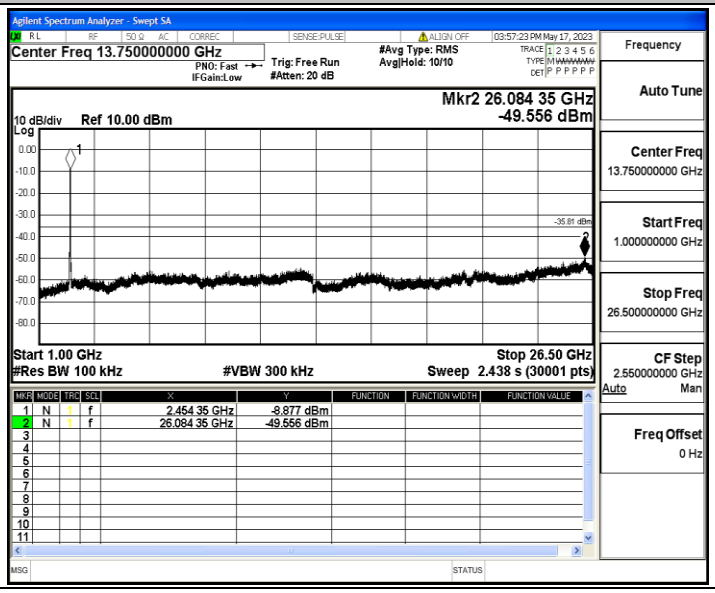

11N40SISO_Ant1_2452_0~Reference




11N40SISO_Ant1_2452_30~1000




11N40SISO_Ant1_2452_1000~26500



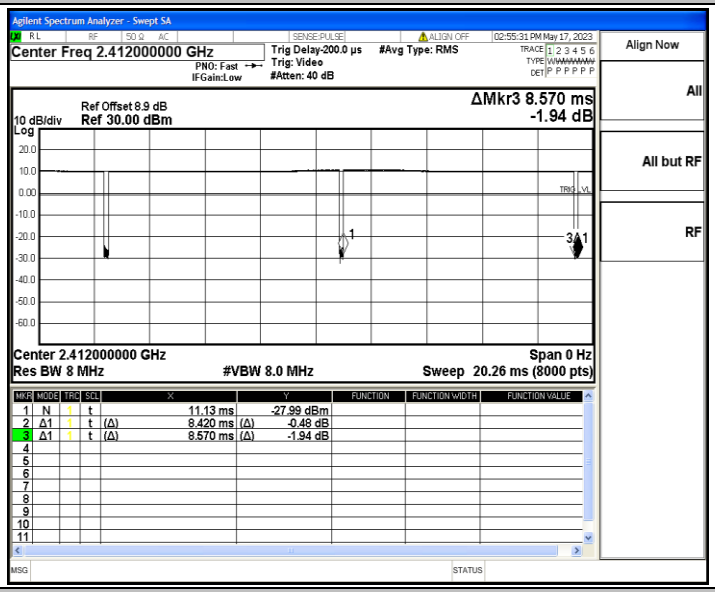
# Appendix G: Duty Cycle

## Test Result

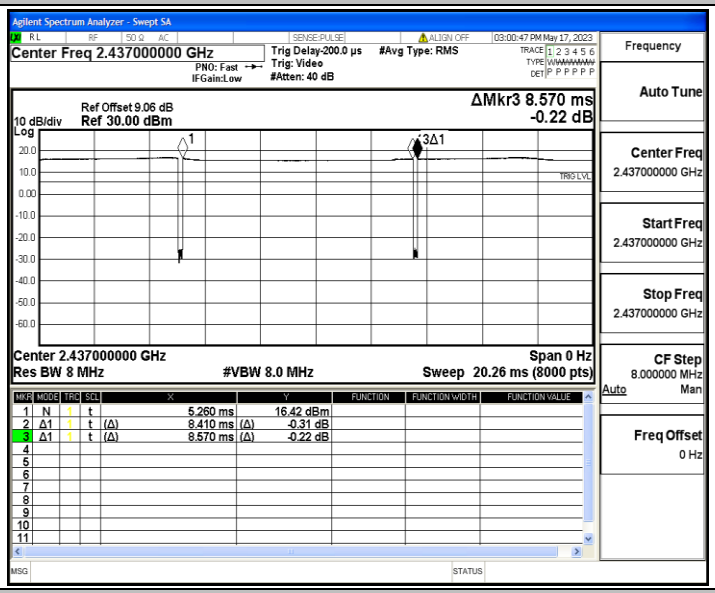
| TestMode | Antenna | Channel | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] | 1/T[kHz] |
|---|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | 8.42 | 8.57 | 98.25 | 0.12 |
| | | 2437 | 8.41 | 8.57 | 98.13 | 0.12 |
| | | 2462 | 8.42 | 8.57 | 98.25 | 0.12 |
| 11G | Ant1 | 2412 | 1.40 | 1.58 | 88.61 | 0.71 |
| | | 2437 | 1.40 | 1.58 | 88.61 | 0.71 |
| | | 2462 | 1.40 | 1.56 | 89.74 | 0.71 |
| 11N20SISO | Ant1 | 2412 | 1.18 | 1.35 | 87.41 | 0.85 |
| | | 2437 | 1.30 | 1.35 | 96.30 | 0.77 |
| | | 2462 | 0.46 | 0.53 | 86.79 | 2.17 |
| 11N40SISO | Ant1 | 2422 | 0.65 | 0.70 | 92.86 | 1.54 |
| | | 2437 | 0.65 | 0.70 | 92.86 | 1.54 |
| | | 2452 | 0.64 | 0.69 | 92.75 | 1.56 |

## Test Graphs

11B_Ant1_2412




11B_Ant1_2437

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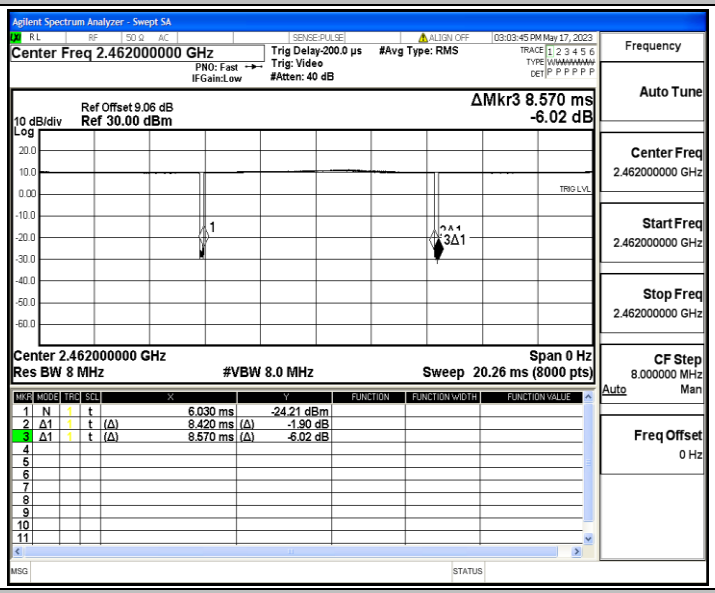


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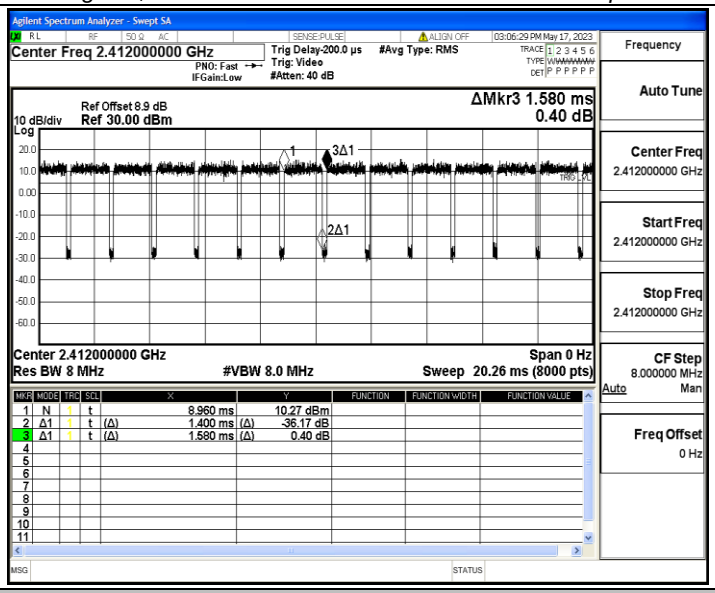


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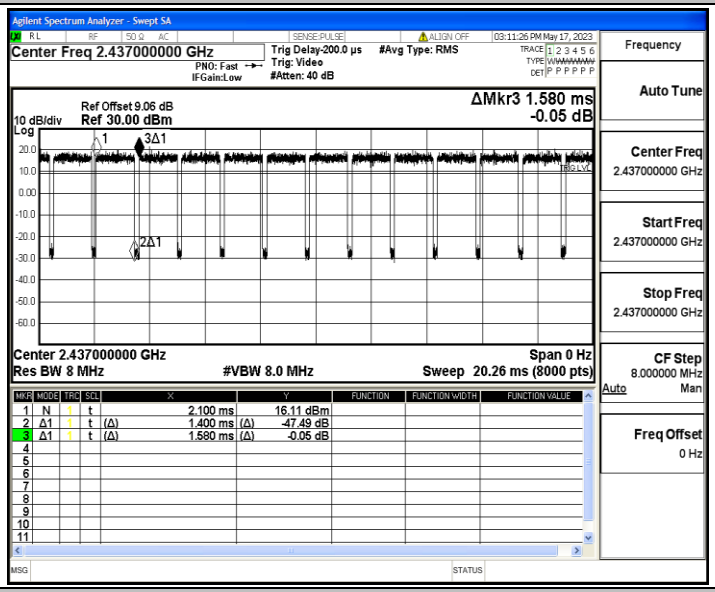


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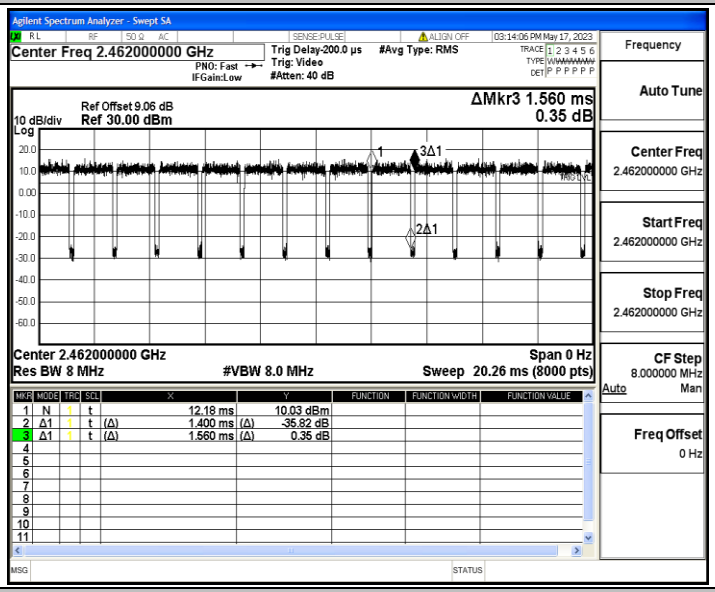


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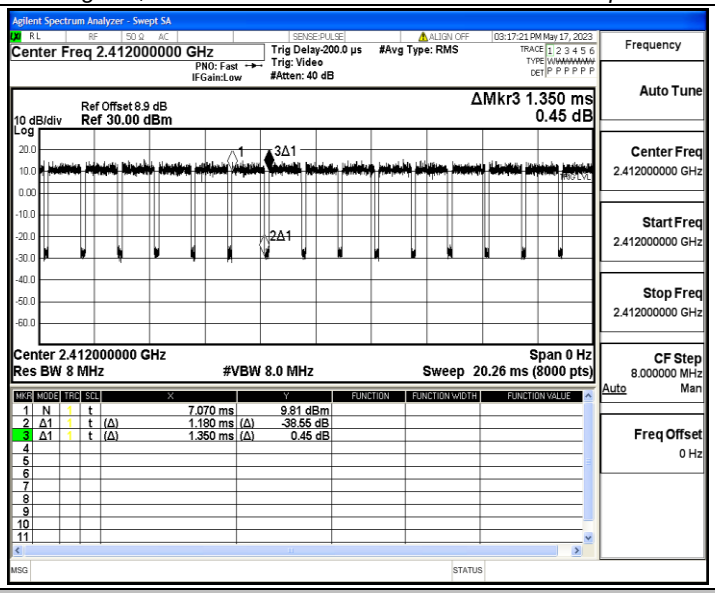


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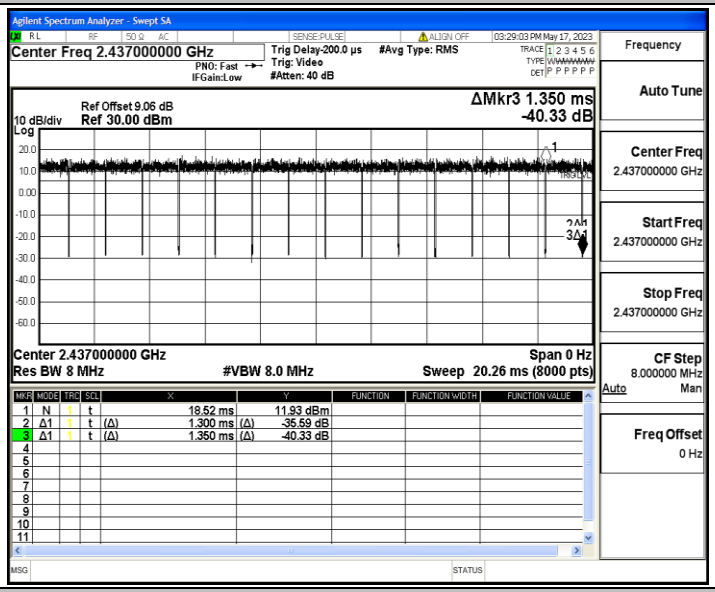


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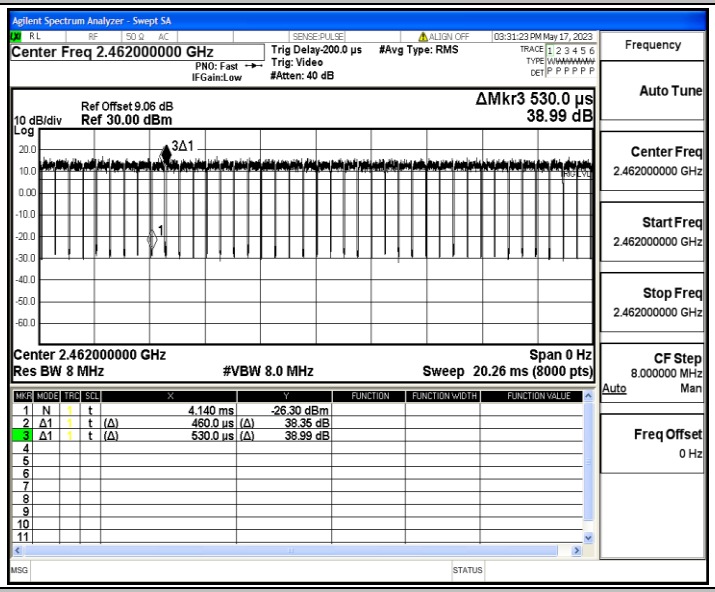


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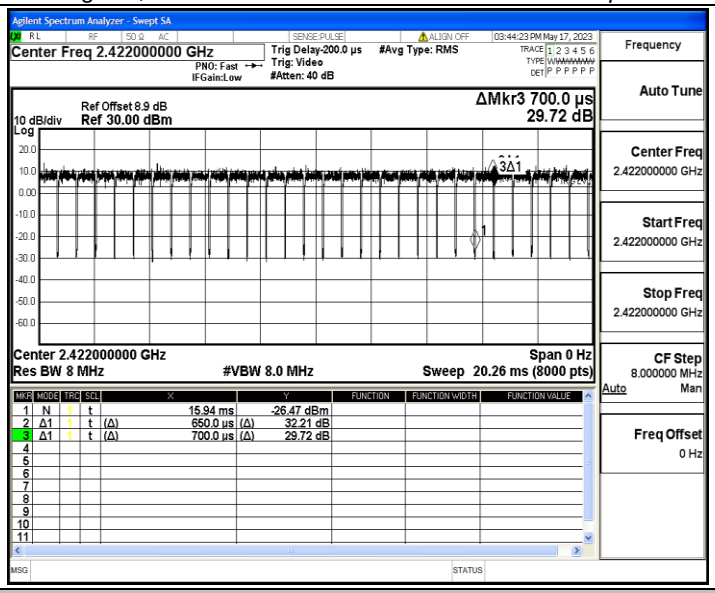


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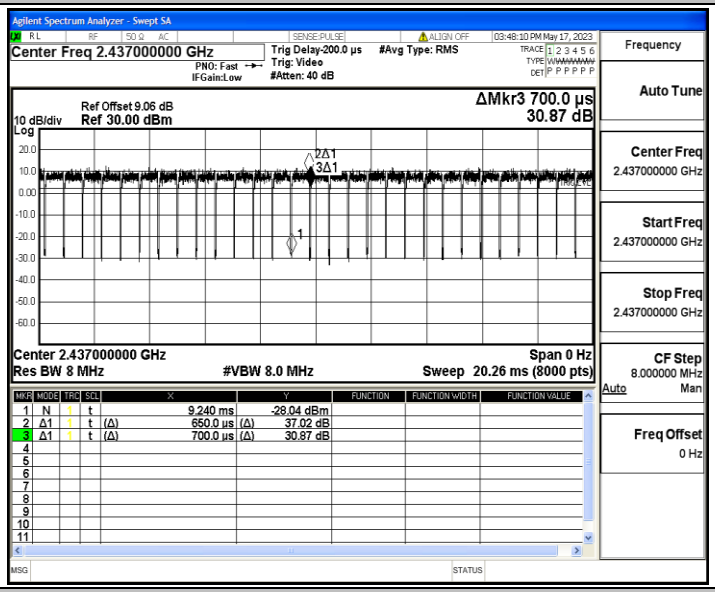

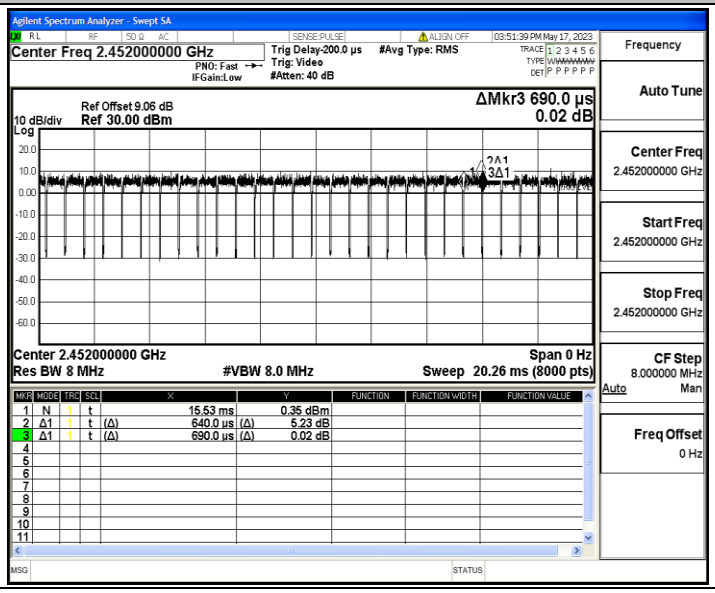
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