

## **FCC Appendix RF Test Data**

**FCC ID** : 2BRMD-S32

**Company** : Guangzhou Lotson International Trading Co., Ltd.

**EUT** : Scent Diffuser

**Model Number** : S32

**Report No.** : CTA25062100402

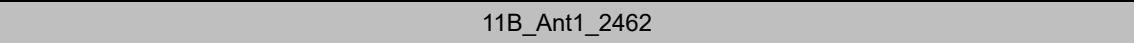
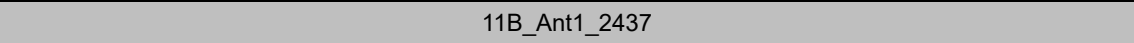
**Reviewed By** : Eric Wang

## Appendix A: DTS Bandwidth

### Test Result

| TestMode  | Antenna | Frequency[MHz] | DTS BW<br>[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|-----------|---------|----------------|-----------------|----------|----------|------------|---------|
| 11B       | Ant1    | 2412           | 8.960           | 2407.960 | 2416.920 | 0.5        | PASS    |
|           |         | 2437           | 9.560           | 2432.480 | 2442.040 | 0.5        | PASS    |
|           |         | 2462           | 9.080           | 2456.960 | 2466.040 | 0.5        | PASS    |
| 11G       | Ant1    | 2412           | 13.160          | 2407.000 | 2420.160 | 0.5        | PASS    |
|           |         | 2437           | 15.720          | 2428.840 | 2444.560 | 0.5        | PASS    |
|           |         | 2462           | 15.680          | 2454.480 | 2470.160 | 0.5        | PASS    |
| 11N20SISO | Ant1    | 2412           | 13.280          | 2407.000 | 2420.280 | 0.5        | PASS    |
|           |         | 2437           | 16.160          | 2428.400 | 2444.560 | 0.5        | PASS    |
|           |         | 2462           | 15.520          | 2454.520 | 2470.040 | 0.5        | PASS    |
| 11N40SISO | Ant1    | 2422           | 23.760          | 2410.720 | 2434.480 | 0.5        | PASS    |
|           |         | 2437           | 35.440          | 2419.080 | 2454.520 | 0.5        | PASS    |
|           |         | 2452           | 35.360          | 2434.480 | 2469.840 | 0.5        | PASS    |

11B\_Ant1\_2412





11G\_Ant1\_2412



11G\_Ant1\_2437



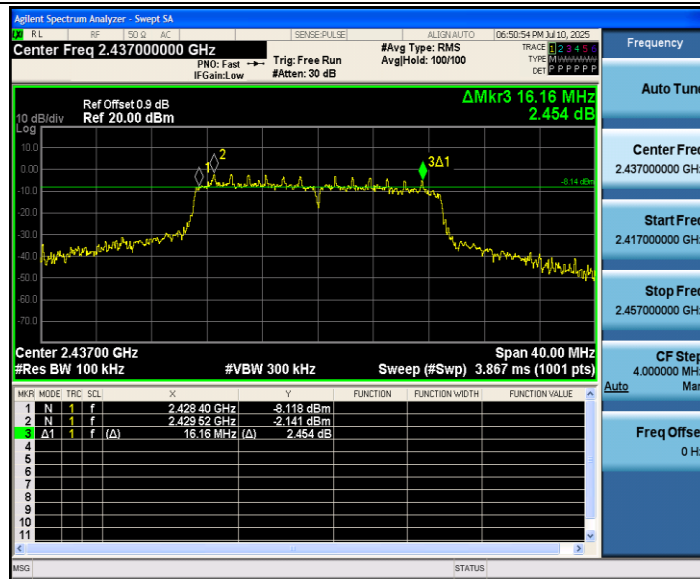
# 11G\_Ant1\_2462



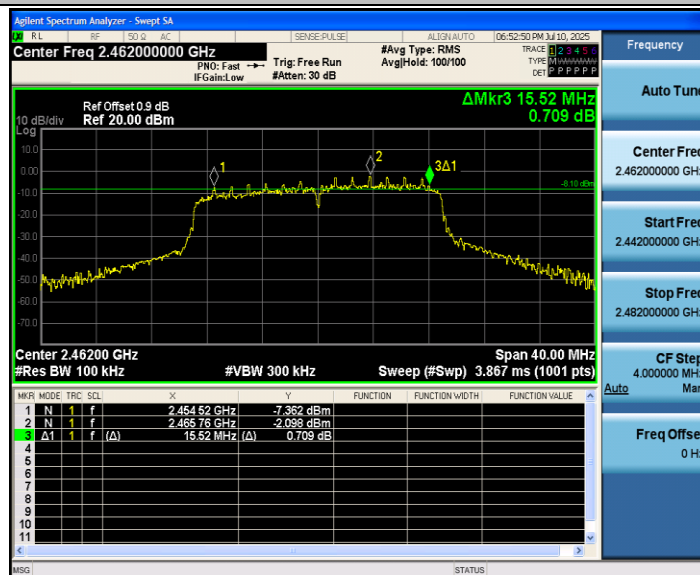
# 11N20SISO\_Ant1\_2412



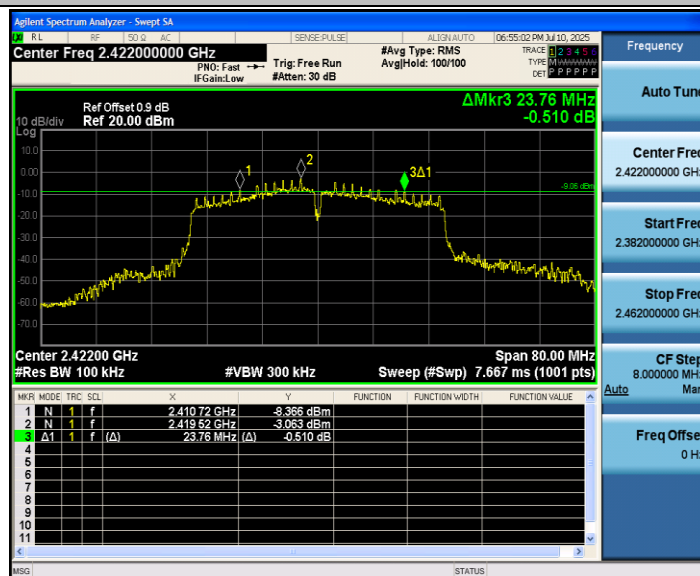
# 11N20SISO\_Ant1\_2437



11N20SISO\_Ant1\_2462



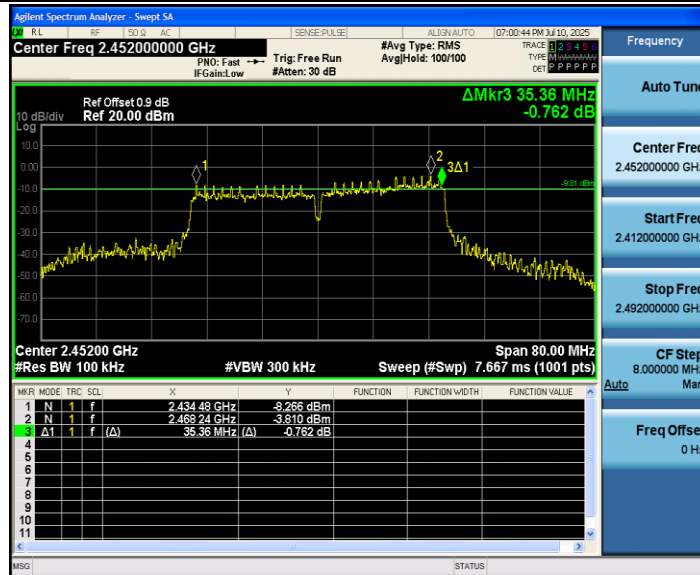
11N40SISO\_Ant1\_2422



# 11N40SISO\_Ant1\_2437



# 11N40SISO\_Ant1\_2452



## Appendix B: Occupied Channel Bandwidth

### Test Result

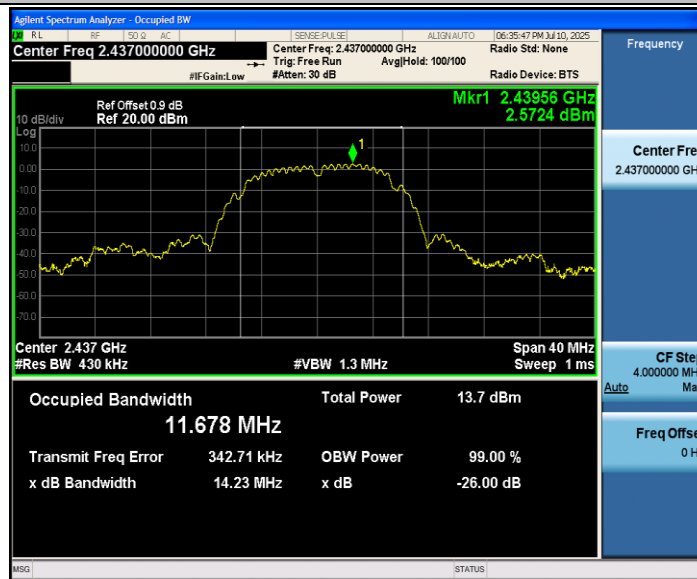
| TestMode  | Antenna | Channel Frequency[MHz] | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|-----------|---------|------------------------|-----------|-----------|-----------|------------|---------|
| 11B       | Ant1    | 2412                   | 12.056    | 2406.8509 | 2418.9069 | ---        | ---     |
|           |         | 2437                   | 11.678    | 2431.5037 | 2443.1817 | ---        | ---     |
|           |         | 2462                   | 11.755    | 2455.9635 | 2467.7185 | ---        | ---     |
| 11G       | Ant1    | 2412                   | 16.650    | 2404.0405 | 2420.6905 | ---        | ---     |
|           |         | 2437                   | 16.796    | 2428.4770 | 2445.2730 | ---        | ---     |
|           |         | 2462                   | 16.513    | 2453.9351 | 2470.4481 | ---        | ---     |
| 11N20SISO | Ant1    | 2412                   | 17.661    | 2403.6088 | 2421.2698 | ---        | ---     |
|           |         | 2437                   | 17.834    | 2427.9603 | 2445.7943 | ---        | ---     |
|           |         | 2462                   | 17.551    | 2453.4241 | 2470.9751 | ---        | ---     |
| 11N40SISO | Ant1    | 2422                   | 35.443    | 2404.4922 | 2439.9352 | ---        | ---     |
|           |         | 2437                   | 36.627    | 2418.5635 | 2455.1905 | ---        | ---     |
|           |         | 2452                   | 36.479    | 2433.9606 | 2470.4396 | ---        | ---     |

## Test Graphs

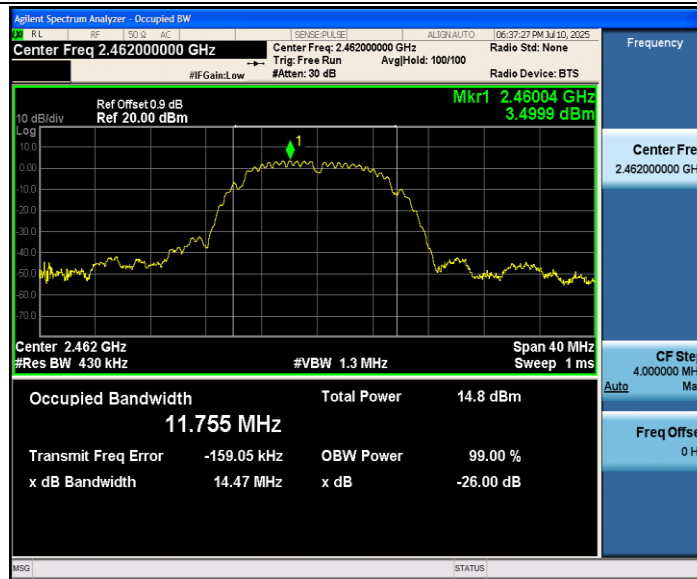
11B\_Ant1\_2412



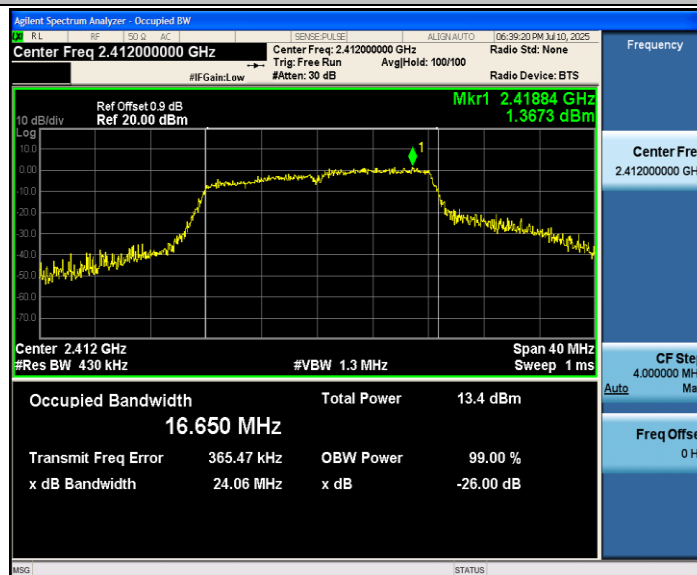
11B\_Ant1\_2437



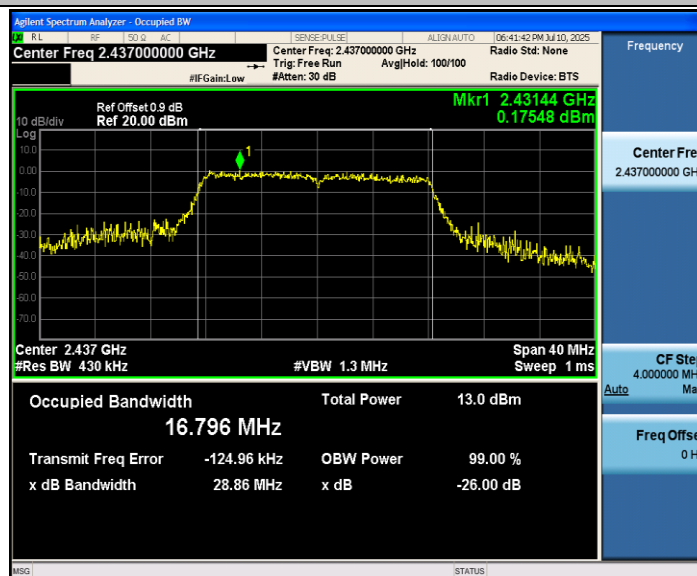
11B\_Ant1\_2462



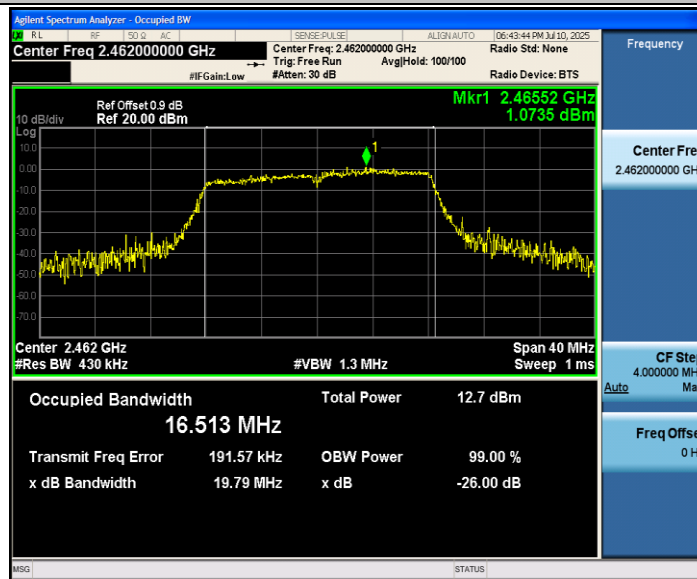
11G\_Ant1\_2412



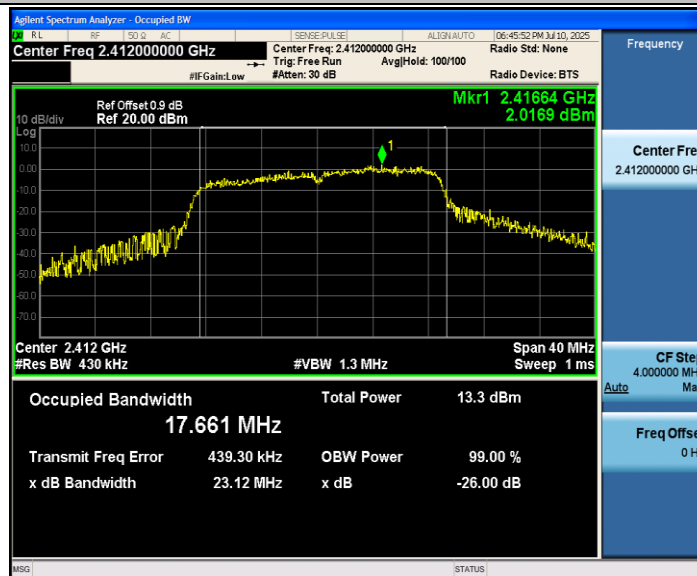
11G\_Ant1\_2437



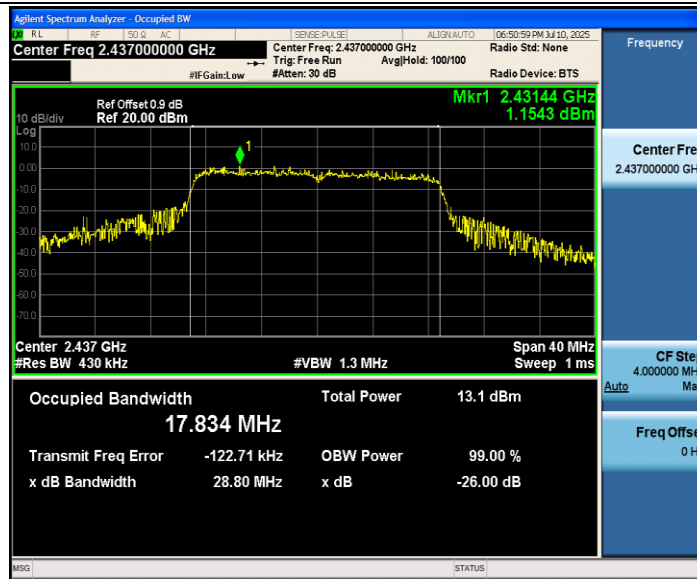
# 11G\_Ant1\_2462



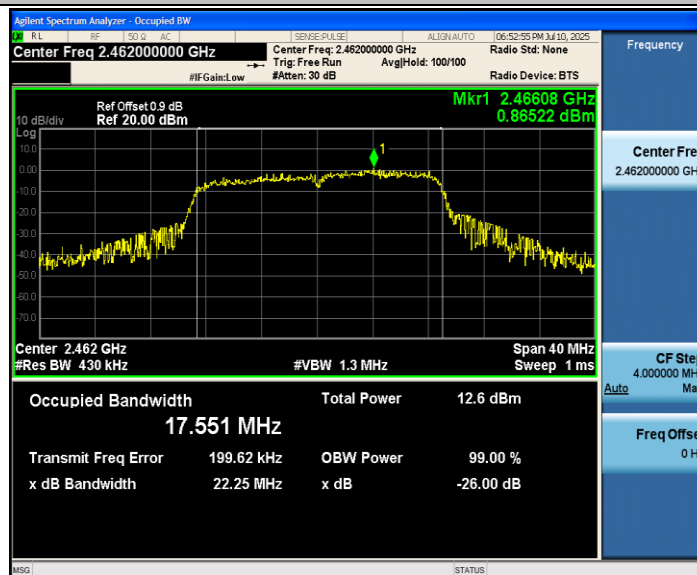
# 11N20SISO\_Ant1\_2412



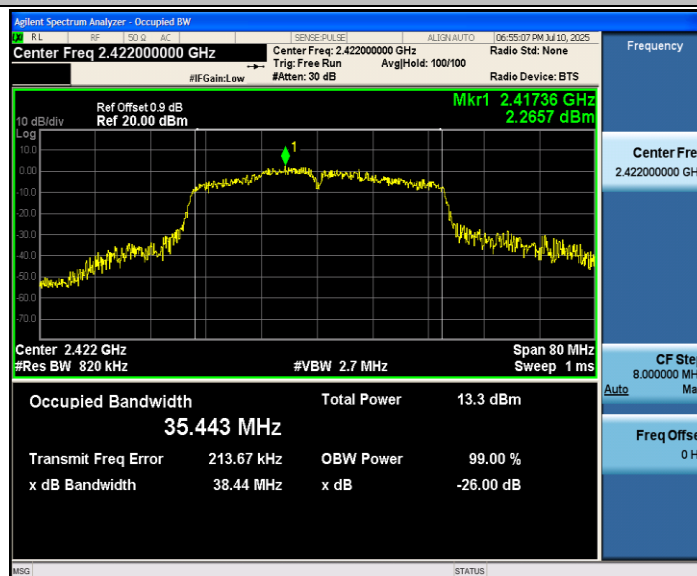
# 11N20SISO\_Ant1\_2437



11N20SISO\_Ant1\_2462



11N40SISO\_Ant1\_2422



# 11N40SISO\_Ant1\_2437



# 11N40SISO\_Ant1\_2452



## Appendix C: Maximum conducted output power

### Test Result Peak

| Test Mode | Antenna | Frequency[MHz] | Peak power [dBm] | Limit [dBm] | Verdict |
|-----------|---------|----------------|------------------|-------------|---------|
| 11B       | Ant1    | 2412           | 14.99            | ≤30.00      | PASS    |
|           |         | 2437           | 13.61            | ≤30.00      | PASS    |
|           |         | 2462           | 14.60            | ≤30.00      | PASS    |
| 11G       | Ant1    | 2412           | 13.82            | ≤30.00      | PASS    |
|           |         | 2437           | 13.48            | ≤30.00      | PASS    |
|           |         | 2462           | 13.23            | ≤30.00      | PASS    |
| 11N20SISO | Ant1    | 2412           | 13.72            | ≤30.00      | PASS    |
|           |         | 2437           | 13.51            | ≤30.00      | PASS    |
|           |         | 2462           | 13.18            | ≤30.00      | PASS    |
| 11N40SISO | Ant1    | 2422           | 12.67            | ≤30.00      | PASS    |
|           |         | 2437           | 13.29            | ≤30.00      | PASS    |
|           |         | 2452           | 13.24            | ≤30.00      | PASS    |

## Appendix D: Maximum power spectral density

### Test Result

| TestMode  | Antenna | Frequency[MHz] | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|-----------|---------|----------------|----------------------|-----------------|---------|
| 11B       | Ant1    | 2412           | -10.48               | ≤8.00           | PASS    |
|           |         | 2437           | -11.53               | ≤8.00           | PASS    |
|           |         | 2462           | -11.45               | ≤8.00           | PASS    |
| 11G       | Ant1    | 2412           | -16.45               | ≤8.00           | PASS    |
|           |         | 2437           | -19.03               | ≤8.00           | PASS    |
|           |         | 2462           | -18.40               | ≤8.00           | PASS    |
| 11N20SISO | Ant1    | 2412           | -16.49               | ≤8.00           | PASS    |
|           |         | 2437           | -18.87               | ≤8.00           | PASS    |
|           |         | 2462           | -18.61               | ≤8.00           | PASS    |
| 11N40SISO | Ant1    | 2422           | -18.89               | ≤8.00           | PASS    |
|           |         | 2437           | -20.47               | ≤8.00           | PASS    |
|           |         | 2452           | -20.16               | ≤8.00           | PASS    |

## Test Graphs

11B\_Ant1\_2412



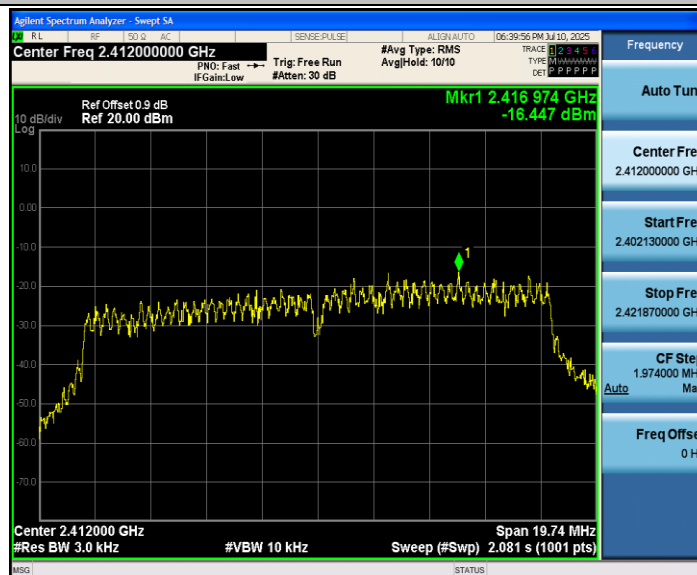
11B\_Ant1\_2437



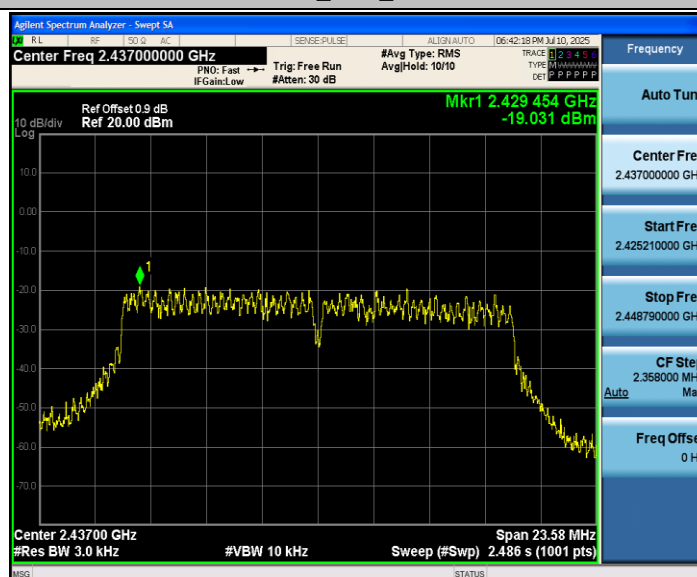
11B\_Ant1\_2462



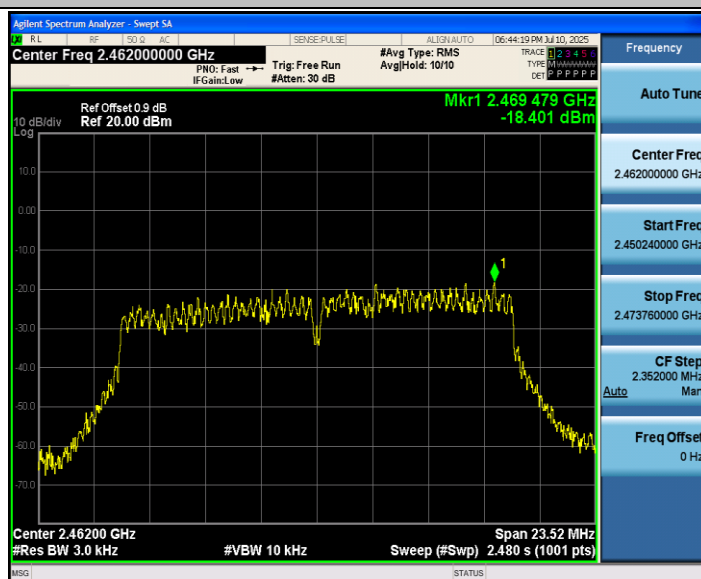
11G\_Ant1\_2412



11G\_Ant1\_2437



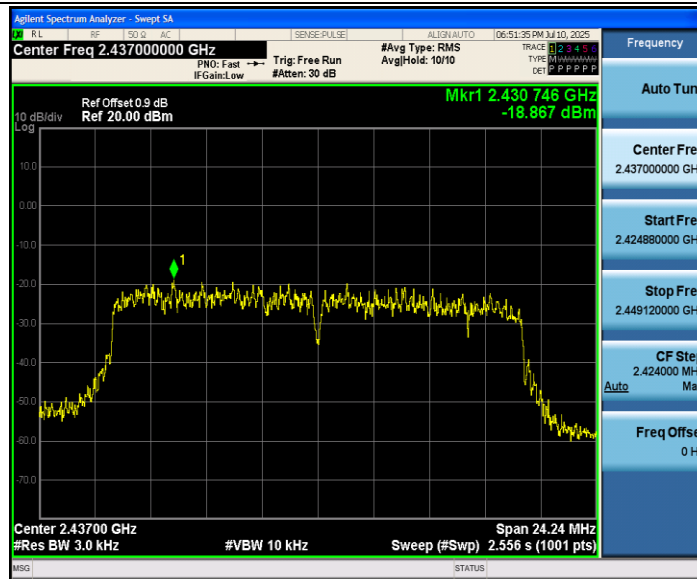
# 11G\_Ant1\_2462



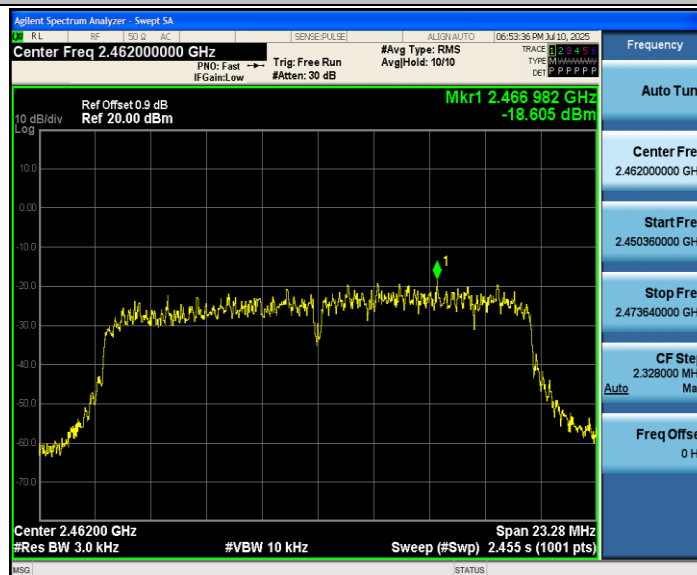
# 11N20SISO\_Ant1\_2412



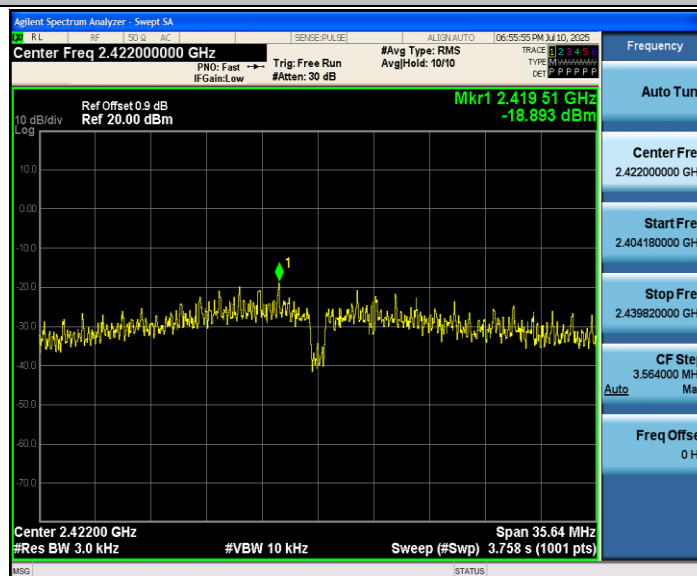
# 11N20SISO\_Ant1\_2437



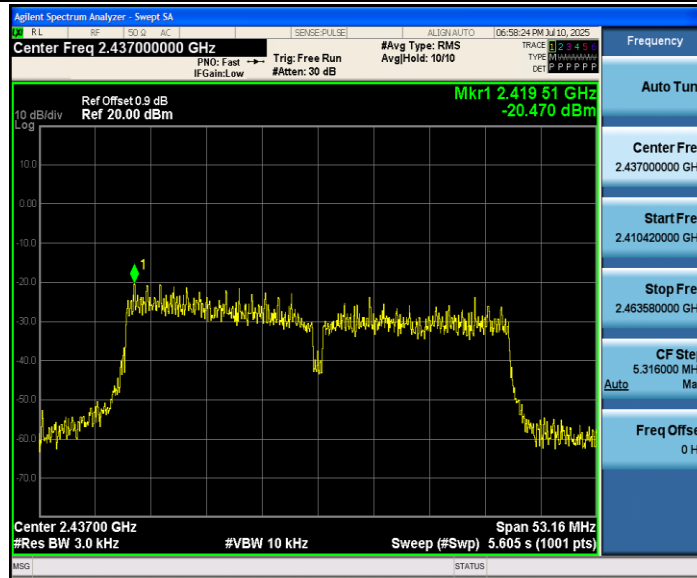
11N20SISO\_Ant1\_2462



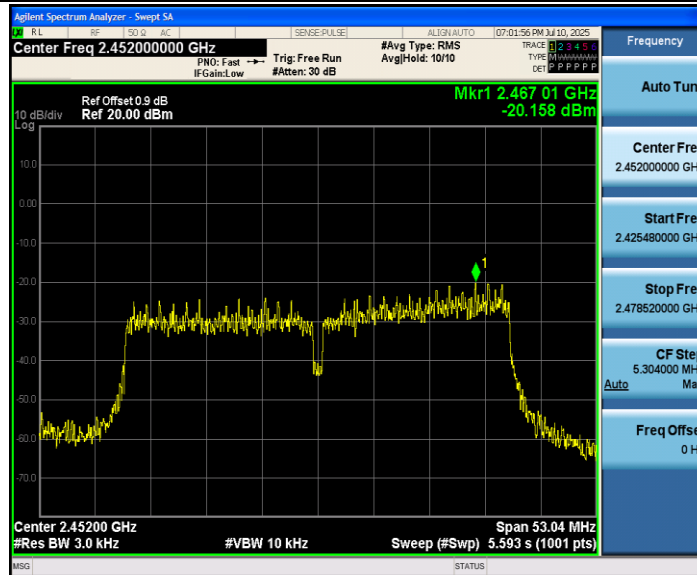
11N40SISO\_Ant1\_2422



# 11N40SISO\_Ant1\_2437



# 11N40SISO\_Ant1\_2452



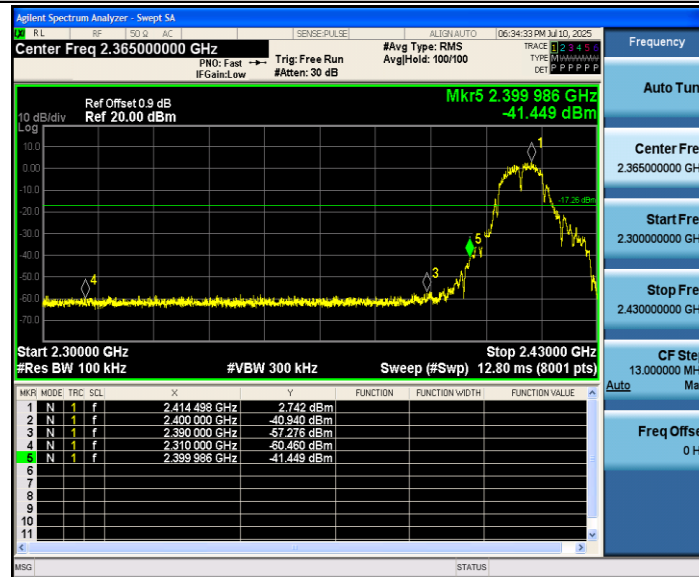
## Appendix E: Band edge measurements

### Test Result

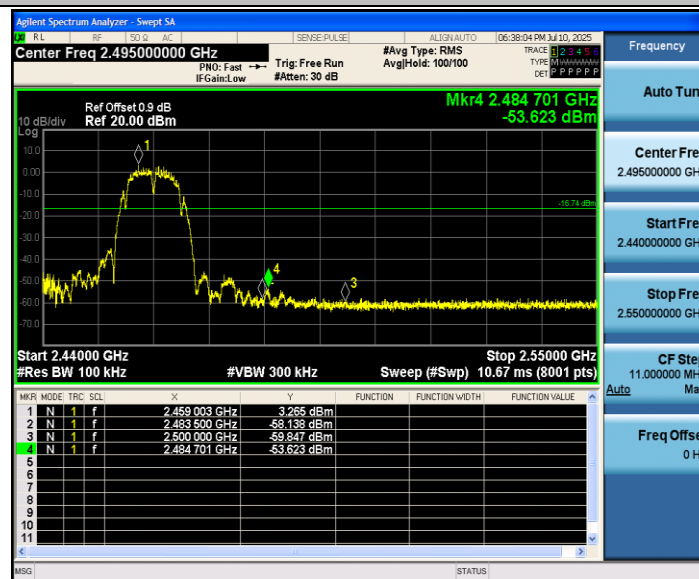
| TestMode  | Antenna | Channel Name | Frequency[MHz] | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|-----------|---------|--------------|----------------|---------------|-------------|------------|---------|
| 11B       | Ant1    | Low          | 2412           | 2.74          | -41.45      | ≤-17.26    | PASS    |
|           |         | High         | 2462           | 3.27          | -53.62      | ≤-16.74    | PASS    |
| 11G       | Ant1    | Low          | 2412           | -0.95         | -43.09      | ≤-20.95    | PASS    |
|           |         | High         | 2462           | -2.29         | -53.13      | ≤-22.29    | PASS    |
| 11N20SISO | Ant1    | Low          | 2412           | -1.01         | -38.74      | ≤-21.01    | PASS    |
|           |         | High         | 2462           | -2.21         | -51.57      | ≤-22.21    | PASS    |
| 11N40SISO | Ant1    | Low          | 2422           | -3.50         | -43.36      | ≤-23.5     | PASS    |
|           |         | High         | 2452           | -3.82         | -42.04      | ≤-23.82    | PASS    |

## Test Graphs

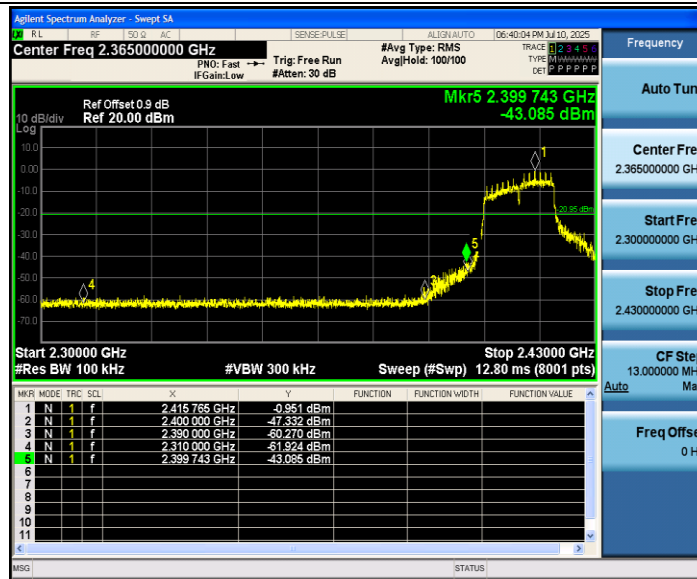
11B\_Ant1\_Low\_2412



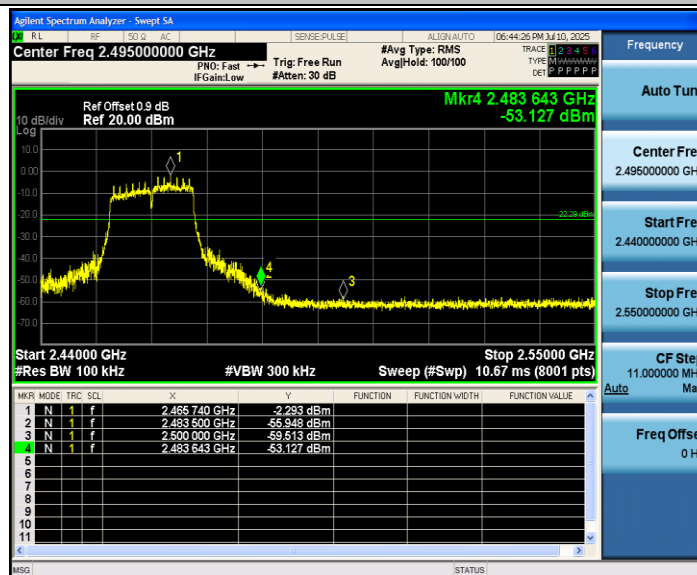
11B\_Ant1\_High\_2462



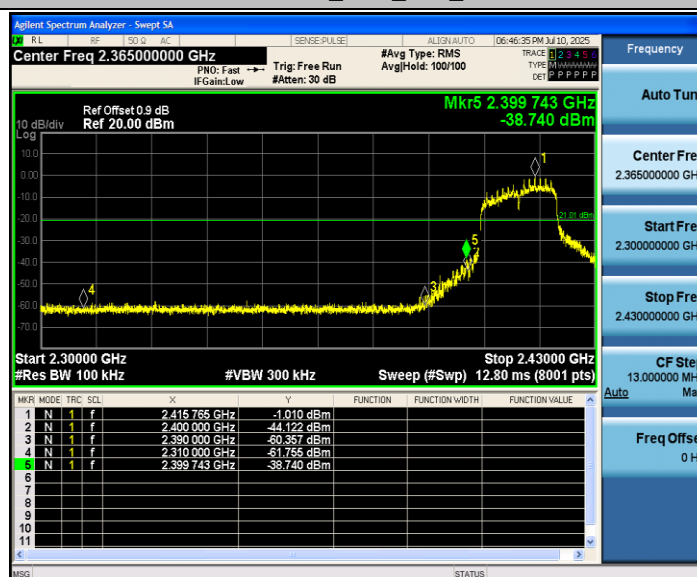
11G\_Ant1\_Low\_2412



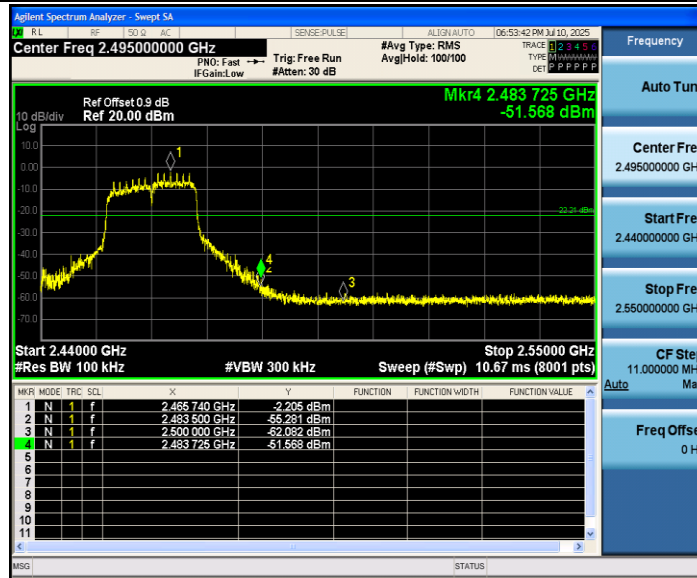
11G\_Ant1\_High\_2462



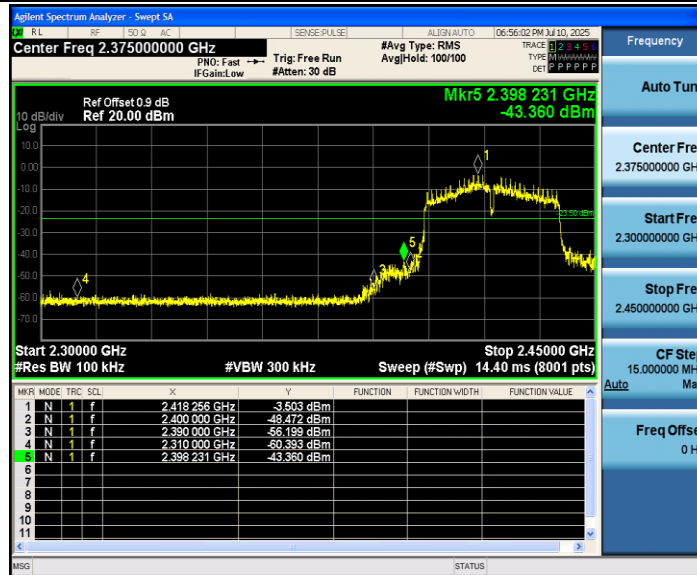
11N20SISO\_Ant1\_Low\_2412



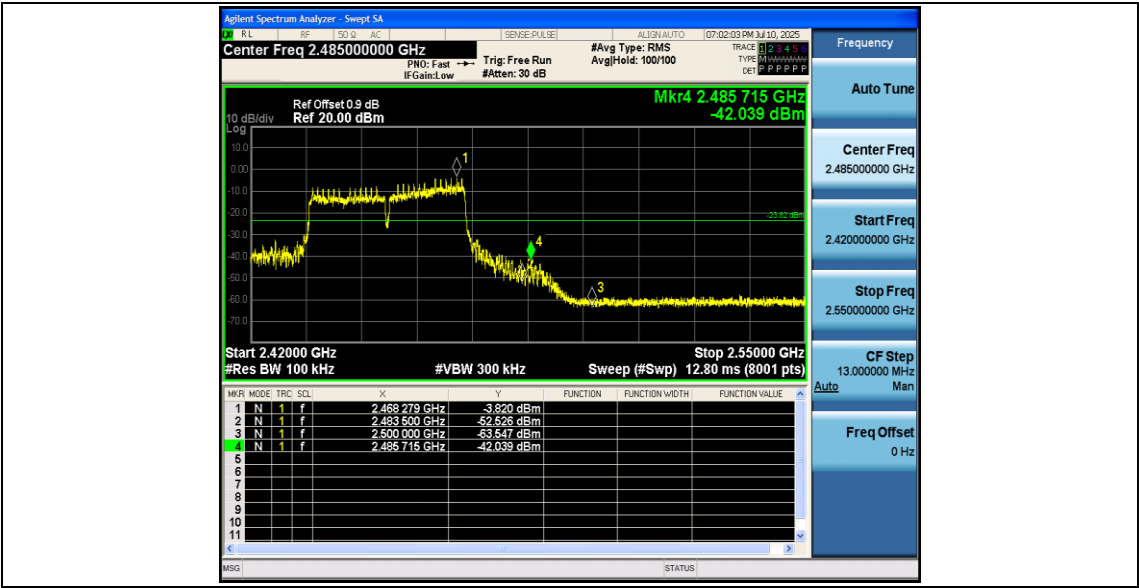
# 11N20SISO\_Ant1\_High\_2462



# 11N40SISO\_Ant1\_Low\_2422



# 11N40SISO\_Ant1\_High\_2452



## Appendix F: Conducted Spurious Emission

### Test Result

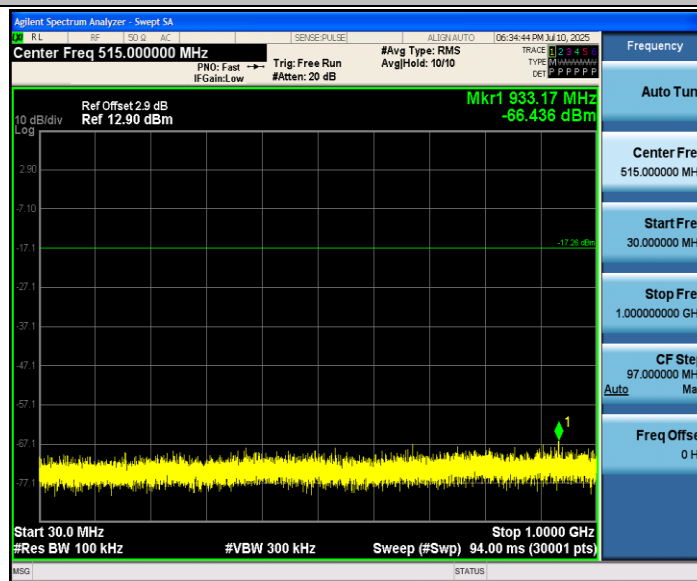
| TestMode  | Antenna | Frequency[MHz] | FreqRange [Mhz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|---------|----------------|-----------------|----------------|--------------|-------------|---------|
| 11B       | Ant1    | 2412           | Reference       | 2.74           | 2.74         | ---         | PASS    |
|           |         |                | 30~1000         | 2.74           | -66.44       | ≤-17.26     | PASS    |
|           |         |                | 1000~26500      | 2.74           | -40.57       | ≤-17.26     | PASS    |
|           |         | 2437           | Reference       | 0.73           | 0.73         | ---         | PASS    |
|           |         |                | 30~1000         | 0.73           | -66.96       | ≤-19.27     | PASS    |
|           |         |                | 1000~26500      | 0.73           | -40.47       | ≤-19.27     | PASS    |
|           |         | 2462           | Reference       | 1.43           | 1.43         | ---         | PASS    |
|           |         |                | 30~1000         | 1.43           | -67.76       | ≤-18.57     | PASS    |
|           |         |                | 1000~26500      | 1.43           | -42.64       | ≤-18.57     | PASS    |
| 11G       | Ant1    | 2412           | Reference       | -1.27          | -1.27        | ---         | PASS    |
|           |         |                | 30~1000         | -1.27          | -67.37       | ≤-21.27     | PASS    |
|           |         |                | 1000~26500      | -1.27          | -48.46       | ≤-21.27     | PASS    |
|           |         | 2437           | Reference       | -2.42          | -2.42        | ---         | PASS    |
|           |         |                | 30~1000         | -2.42          | -66.69       | ≤-22.42     | PASS    |
|           |         |                | 1000~26500      | -2.42          | -47.14       | ≤-22.42     | PASS    |
|           |         | 2462           | Reference       | -2.64          | -2.64        | ---         | PASS    |
|           |         |                | 30~1000         | -2.64          | -67.18       | ≤-22.64     | PASS    |
|           |         |                | 1000~26500      | -2.64          | -49.29       | ≤-22.64     | PASS    |
| 11N20SISO | Ant1    | 2412           | Reference       | -1.87          | -1.87        | ---         | PASS    |
|           |         |                | 30~1000         | -1.87          | -67.24       | ≤-21.87     | PASS    |
|           |         |                | 1000~26500      | -1.87          | -46.49       | ≤-21.87     | PASS    |
|           |         | 2437           | Reference       | -2.32          | -2.32        | ---         | PASS    |
|           |         |                | 30~1000         | -2.32          | -67.59       | ≤-22.32     | PASS    |
|           |         |                | 1000~26500      | -2.32          | -49.41       | ≤-22.32     | PASS    |
|           |         | 2462           | Reference       | -3.04          | -3.04        | ---         | PASS    |
|           |         |                | 30~1000         | -3.04          | -66.89       | ≤-23.04     | PASS    |
|           |         |                | 1000~26500      | -3.04          | -50.59       | ≤-23.04     | PASS    |
| 11N40SISO | Ant1    | 2422           | Reference       | -4.40          | -4.40        | ---         | PASS    |
|           |         |                | 30~1000         | -4.40          | -66.99       | ≤-24.4      | PASS    |
|           |         |                | 1000~26500      | -4.40          | -41.33       | ≤-24.4      | PASS    |
|           |         | 2437           | Reference       | -4.52          | -4.52        | ---         | PASS    |
|           |         |                | 30~1000         | -4.52          | -67.35       | ≤-24.52     | PASS    |
|           |         |                | 1000~26500      | -4.52          | -47.12       | ≤-24.52     | PASS    |
|           |         | 2452           | Reference       | -4.59          | -4.59        | ---         | PASS    |
|           |         |                | 30~1000         | -4.59          | -66.5        | ≤-24.59     | PASS    |
|           |         |                | 1000~26500      | -4.59          | -49.02       | ≤-24.59     | PASS    |

## Test Graphs

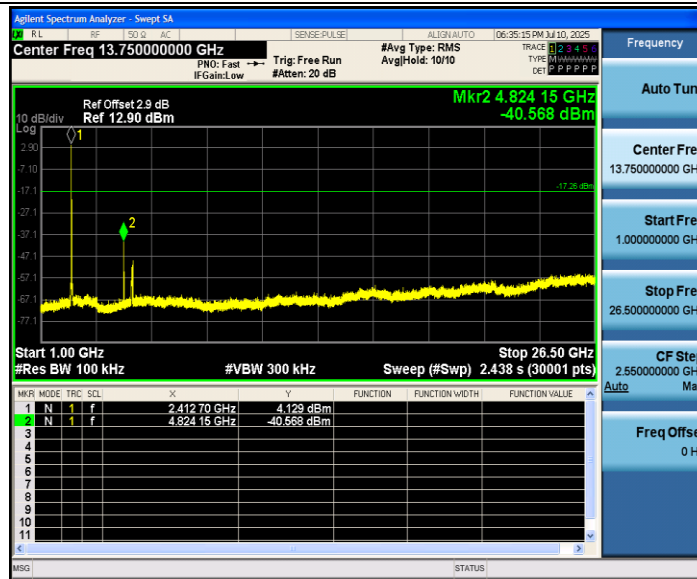
11B\_Ant1\_2412\_0~Reference



11B\_Ant1\_2412\_30~1000



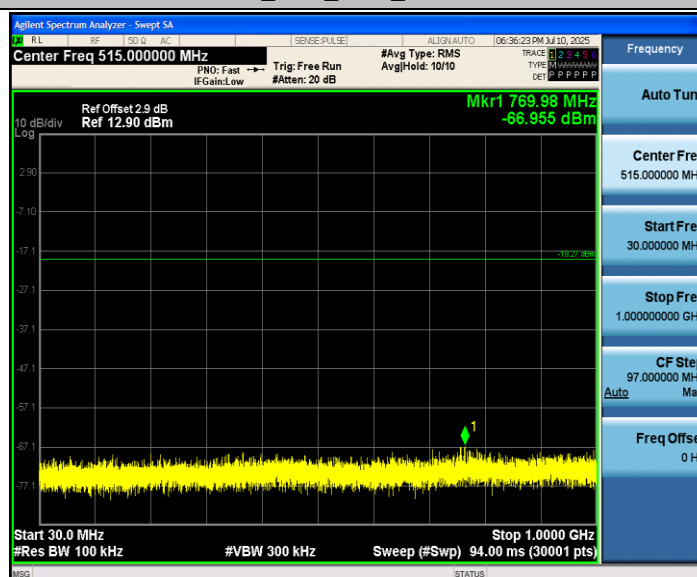
11B\_Ant1\_2412\_1000~26500



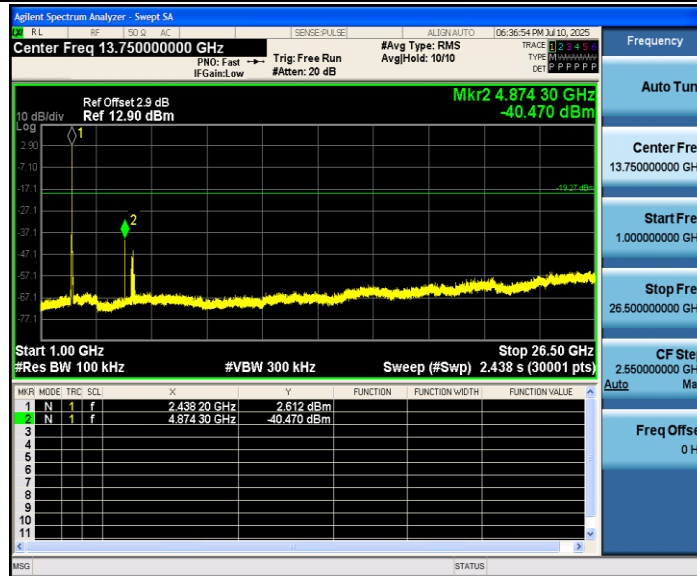
11B\_Ant1\_2437\_0~Reference



11B\_Ant1\_2437\_30~1000



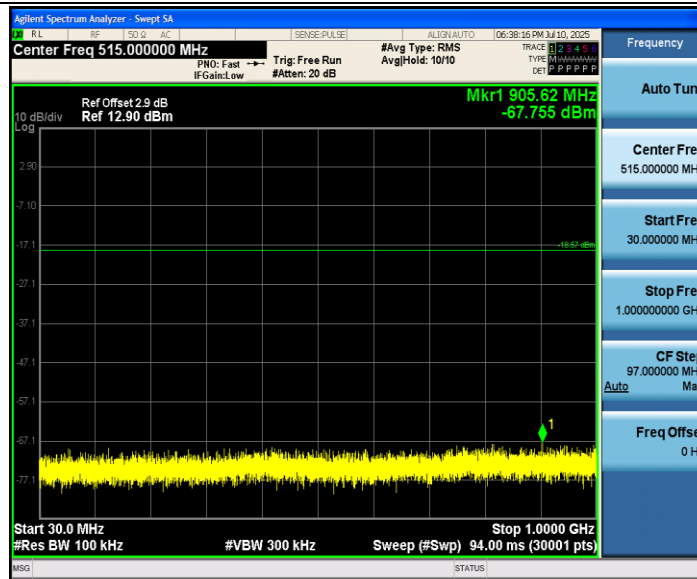
# 11B\_Ant1\_2437\_1000~26500



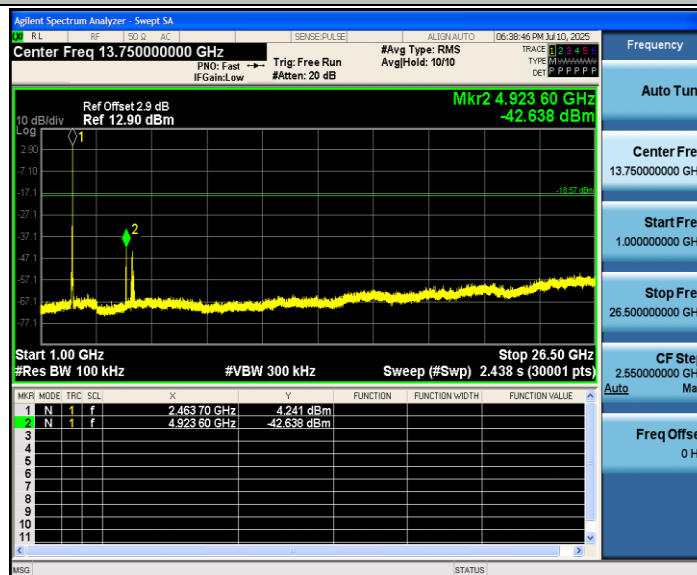
# 11B\_Ant1\_2462\_0~Reference



# 11B\_Ant1\_2462\_30~1000



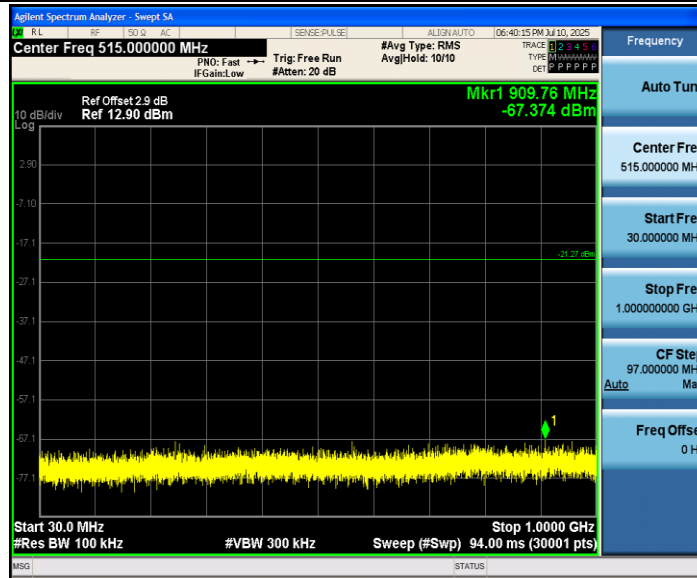
11B\_Ant1\_2462\_1000~26500



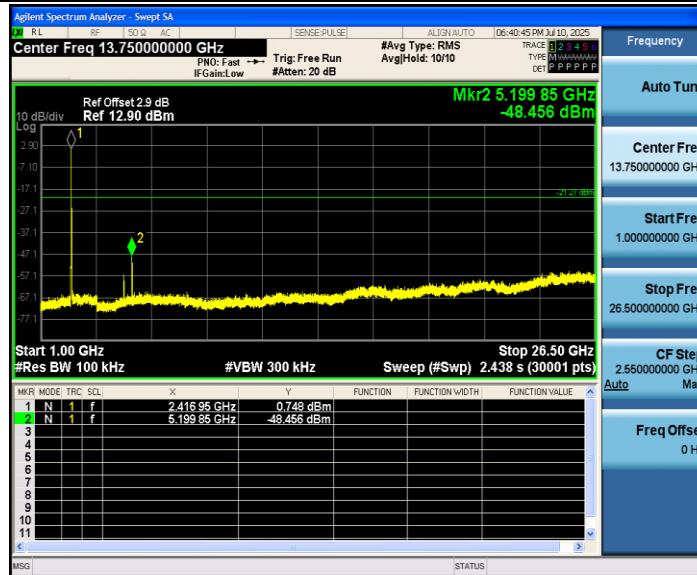
11G\_Ant1\_2412\_0~Reference



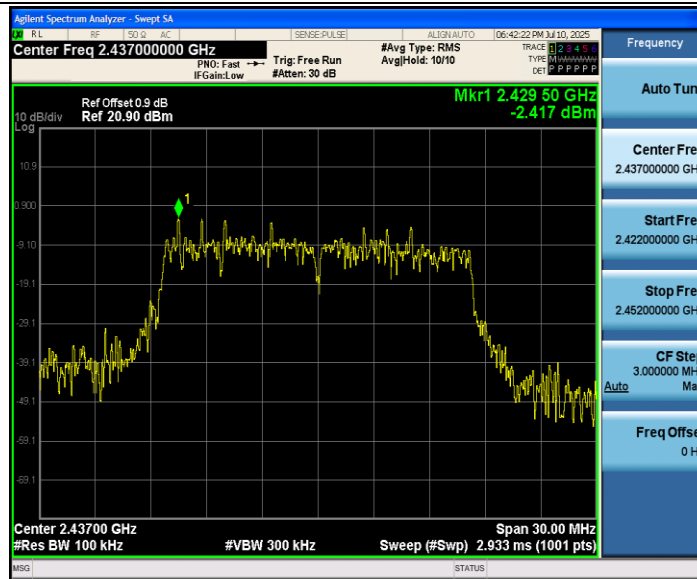
# 11G\_Ant1\_2412\_30~1000



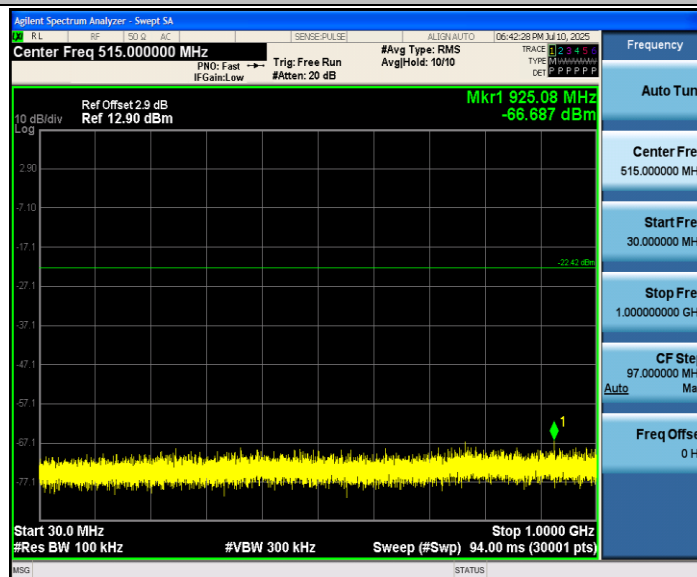
# 11G\_Ant1\_2412\_1000~26500



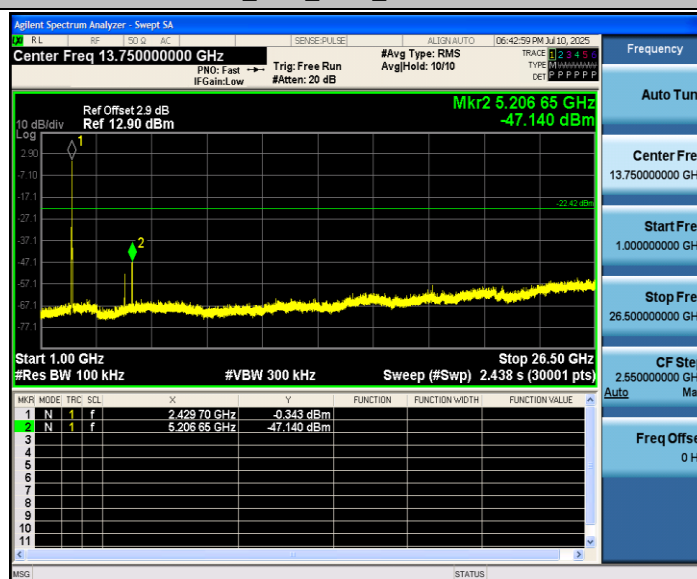
# 11G\_Ant1\_2437\_0~Reference



11G\_Ant1\_2437\_30~1000



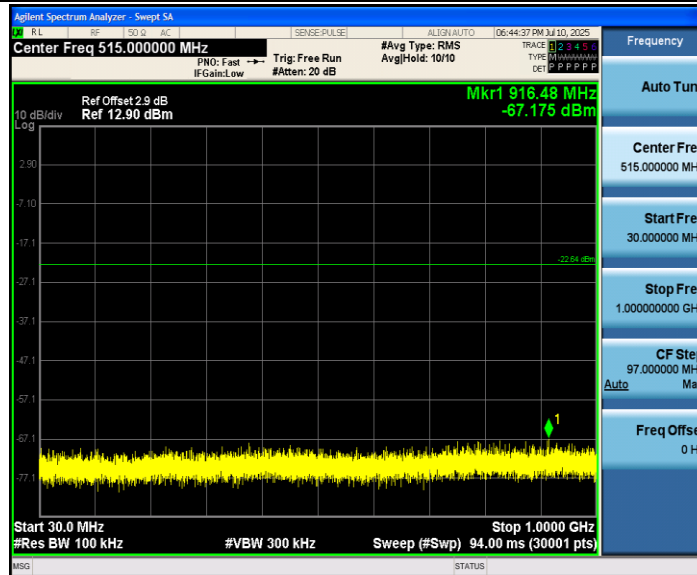
11G\_Ant1\_2437\_1000~26500



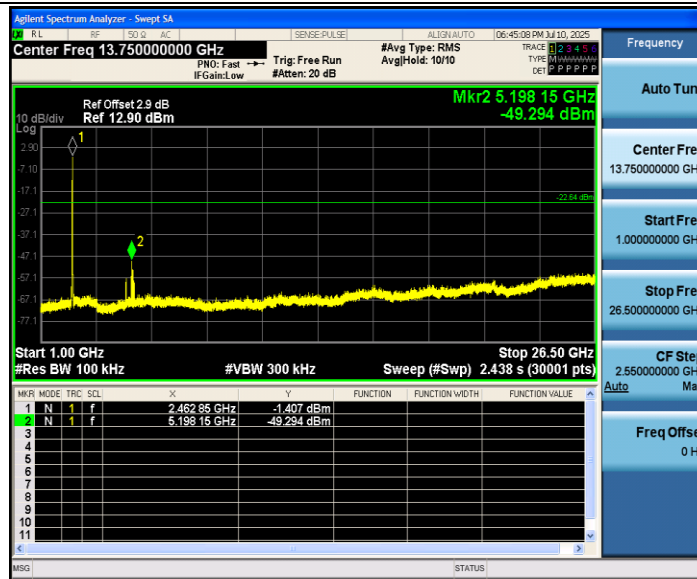
# 11G\_Ant1\_2462\_0~Reference



# 11G\_Ant1\_2462\_30~1000



# 11G\_Ant1\_2462\_1000~26500



11N20SISO\_Ant1\_2412\_0~Reference



11N20SISO\_Ant1\_2412\_30~1000

