

## **FCC Appendix RF Test Data for 2.4GWIFI**

**FCC ID** : 2BVLN-QS-1208

**Company** : Wuhan Qinggou Intelligent Technology Co., Ltd.

**EUT** : Qingo AI Vending

**Model Number** : QS-1208CRSW(G)-US

**Report No.** : CTA26071002301

**Reviewed By** : Eric Wang

## Appendix A: DTS Bandwidth

### Test Result

| TestMode  | Antenna | Frequency[MHz] | DTS BW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|-----------|---------|----------------|--------------|----------|----------|------------|---------|
| 11B       | Ant1    | 2412           | 10.200       | 2406.960 | 2417.160 | 0.5        | PASS    |
|           |         | 2437           | 10.240       | 2431.920 | 2442.160 | 0.5        | PASS    |
|           |         | 2462           | 10.200       | 2456.920 | 2467.120 | 0.5        | PASS    |
| 11G       | Ant1    | 2412           | 15.680       | 2404.040 | 2419.720 | 0.5        | PASS    |
|           |         | 2437           | 15.640       | 2429.120 | 2444.760 | 0.5        | PASS    |
|           |         | 2462           | 15.880       | 2454.120 | 2470.000 | 0.5        | PASS    |
| 11N20SISO | Ant1    | 2412           | 16.920       | 2403.440 | 2420.360 | 0.5        | PASS    |
|           |         | 2437           | 16.480       | 2428.520 | 2445.000 | 0.5        | PASS    |
|           |         | 2462           | 16.360       | 2453.520 | 2469.880 | 0.5        | PASS    |
| 11N40SISO | Ant1    | 2422           | 34.560       | 2405.040 | 2439.600 | 0.5        | PASS    |
|           |         | 2437           | 35.040       | 2419.720 | 2454.760 | 0.5        | PASS    |
|           |         | 2452           | 35.760       | 2434.160 | 2469.920 | 0.5        | PASS    |

## Test Graphs

11B\_Ant1\_2412



11B\_Ant1\_2437



11B\_Ant1\_2462



11G\_Ant1\_2412



11G\_Ant1\_2437



# 11G\_Ant1\_2462



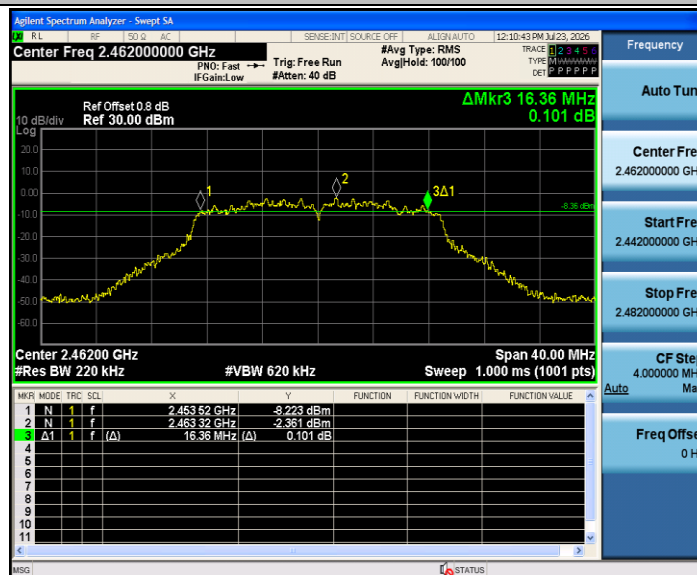
# 11N20SISO\_Ant1\_2412



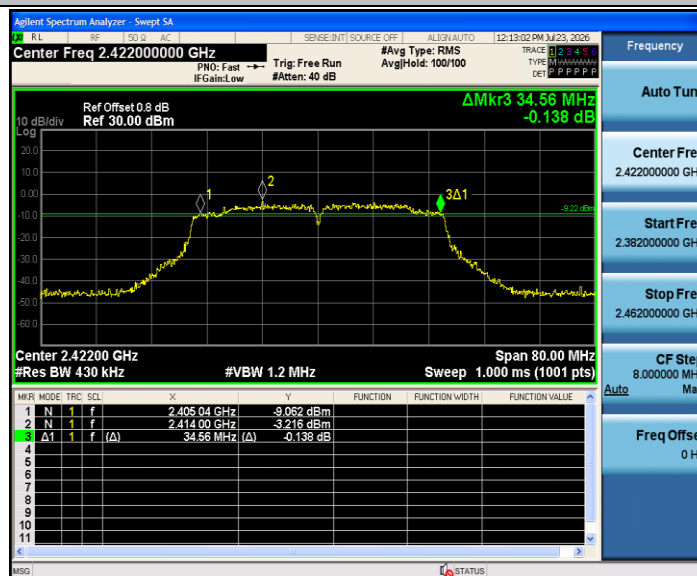
# 11N20SISO\_Ant1\_2437



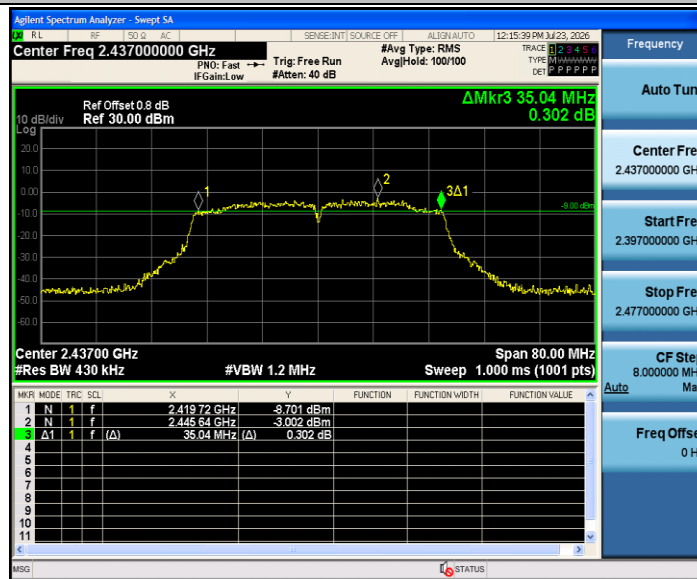
11N20SISO\_Ant1\_2462



11N40SISO\_Ant1\_2422



# 11N40SISO\_Ant1\_2437



# 11N40SISO\_Ant1\_2452



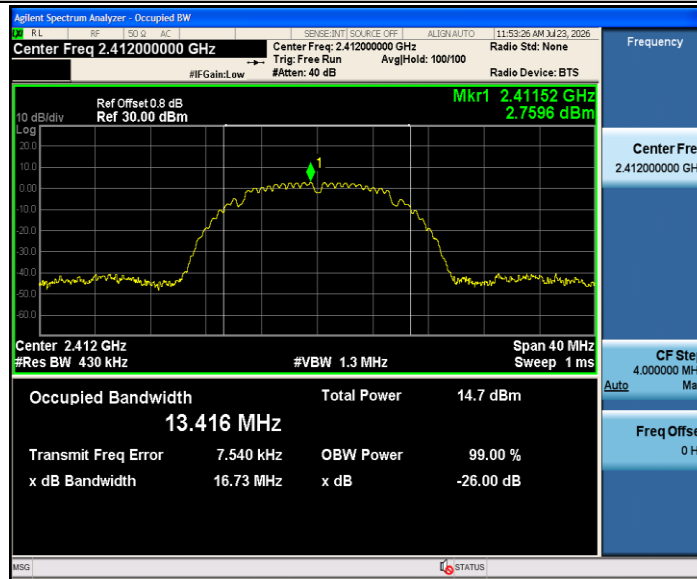
## Appendix B: Occupied Channel Bandwidth

### Test Result

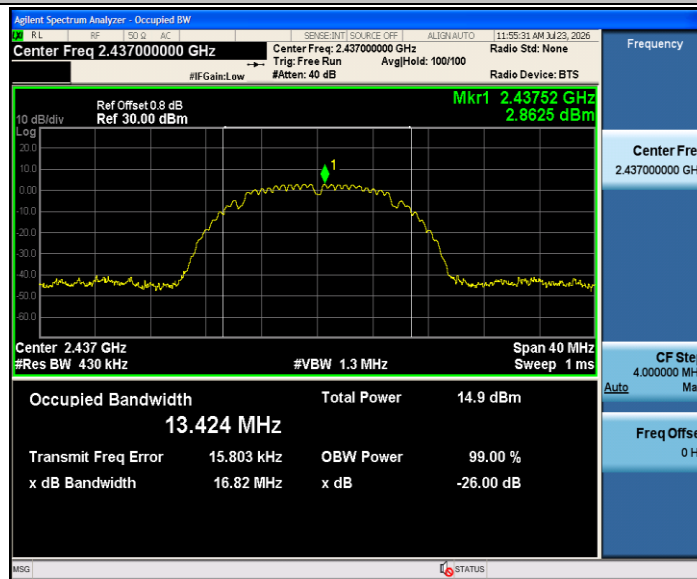
| TestMode  | Antenna | Channel Frequency[MHz] | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|-----------|---------|------------------------|-----------|-----------|-----------|------------|---------|
| 11B       | Ant1    | 2412                   | 13.416    | 2405.2995 | 2418.7155 | ---        | ---     |
|           |         | 2437                   | 13.424    | 2430.3038 | 2443.7278 | ---        | ---     |
|           |         | 2462                   | 13.427    | 2455.3088 | 2468.7358 | ---        | ---     |
| 11G       | Ant1    | 2412                   | 16.868    | 2403.5899 | 2420.4579 | ---        | ---     |
|           |         | 2437                   | 16.847    | 2428.5933 | 2445.4403 | ---        | ---     |
|           |         | 2462                   | 16.855    | 2453.6412 | 2470.4962 | ---        | ---     |
| 11N20SISO | Ant1    | 2412                   | 17.911    | 2403.0495 | 2420.9605 | ---        | ---     |
|           |         | 2437                   | 17.834    | 2428.1008 | 2445.9348 | ---        | ---     |
|           |         | 2462                   | 17.883    | 2453.0882 | 2470.9712 | ---        | ---     |
| 11N40SISO | Ant1    | 2422                   | 36.131    | 2404.0824 | 2440.2134 | ---        | ---     |
|           |         | 2437                   | 36.035    | 2419.1476 | 2455.1826 | ---        | ---     |
|           |         | 2452                   | 36.057    | 2434.1309 | 2470.1879 | ---        | ---     |

## Test Graphs

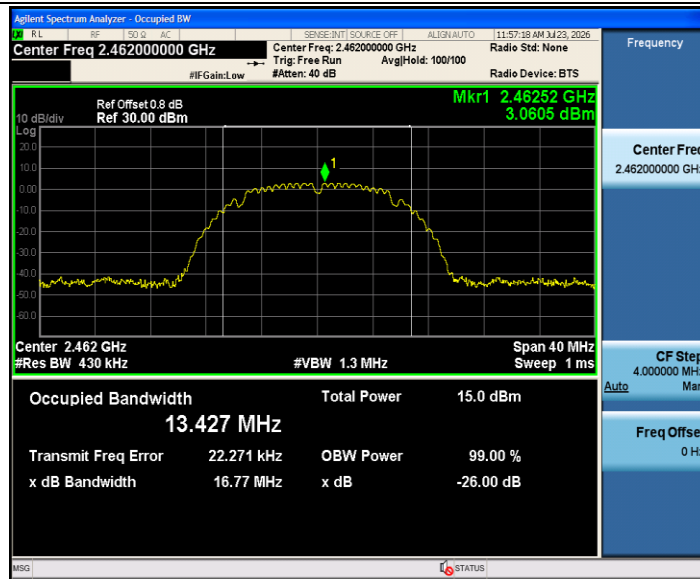
11B\_Ant1\_2412



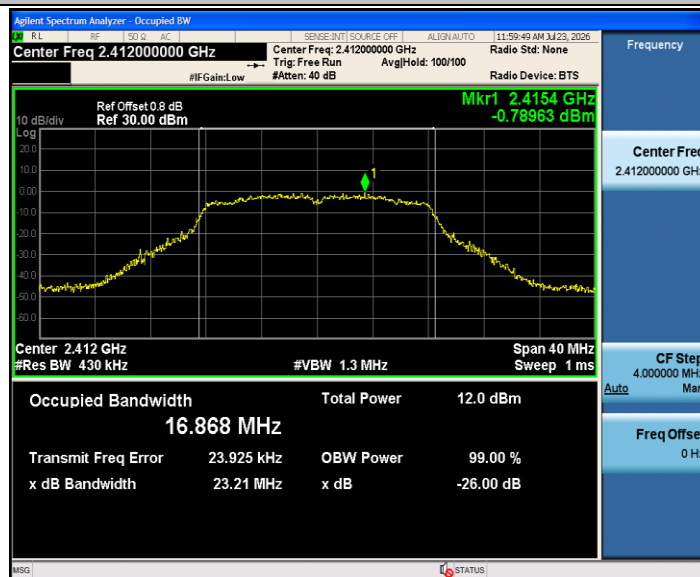
11B\_Ant1\_2437



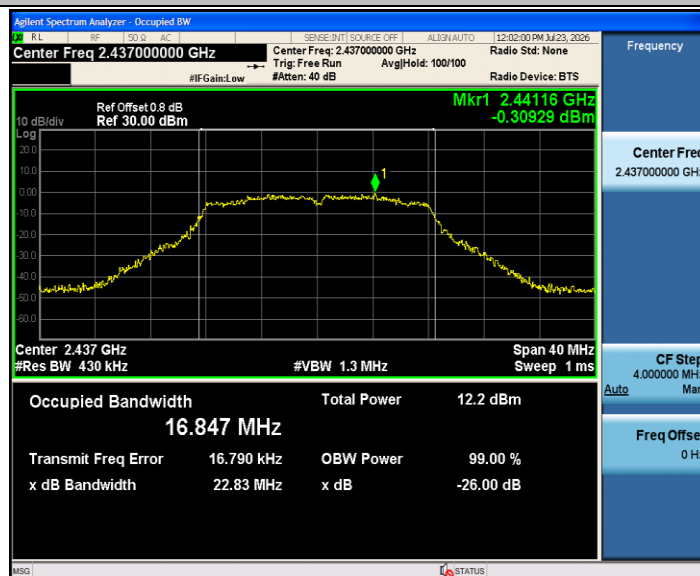
11B\_Ant1\_2462



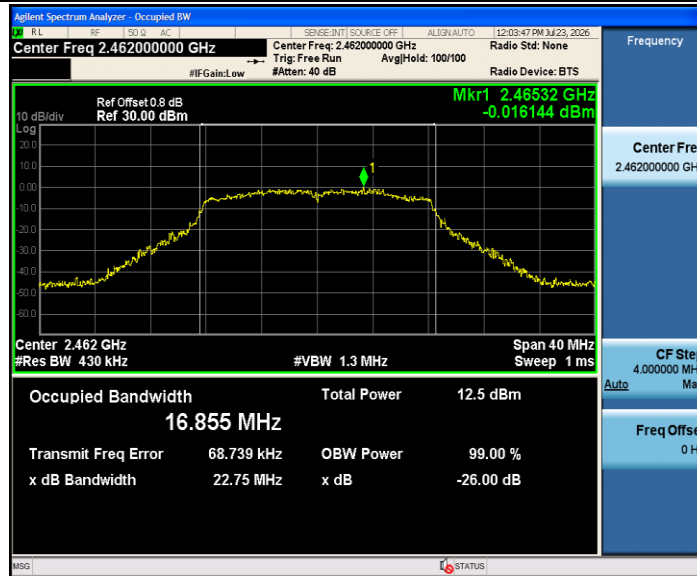
11G\_Ant1\_2412



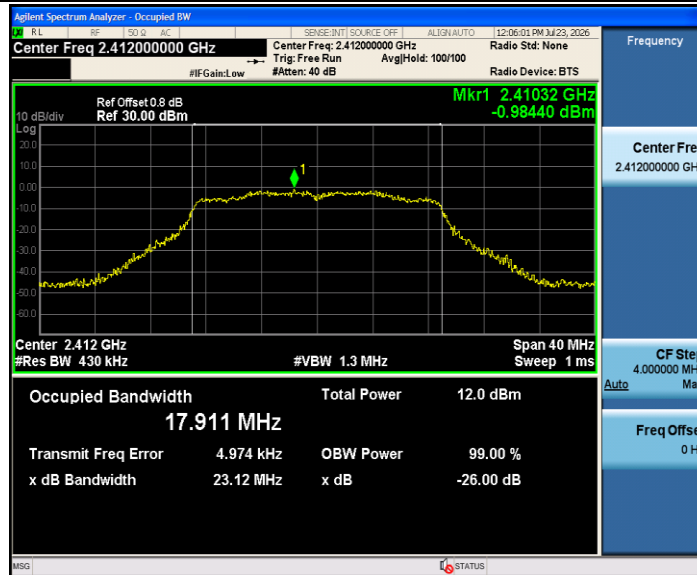
11G\_Ant1\_2437



# 11G\_Ant1\_2462



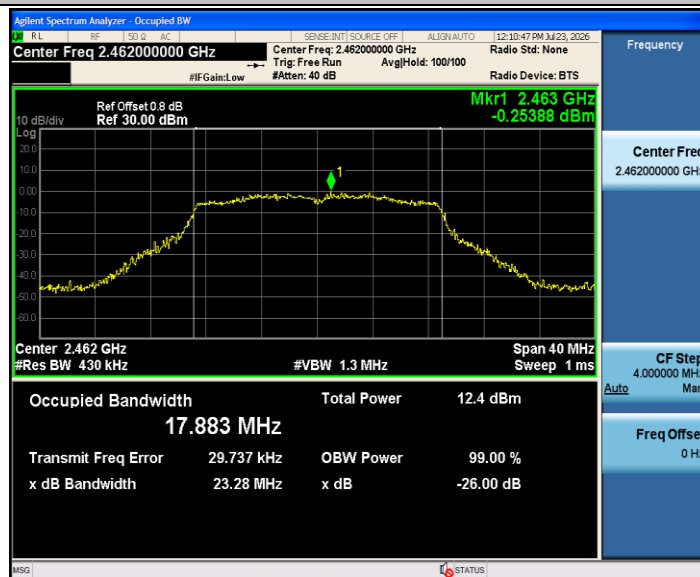
# 11N20SISO\_Ant1\_2412



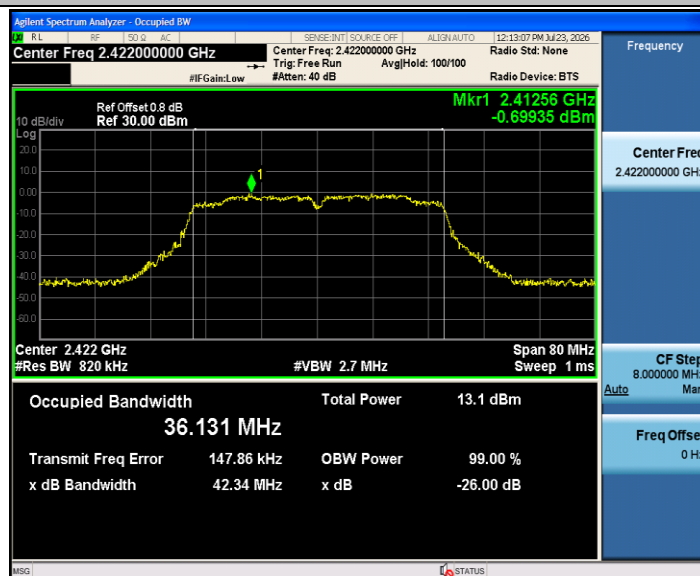
# 11N20SISO\_Ant1\_2437



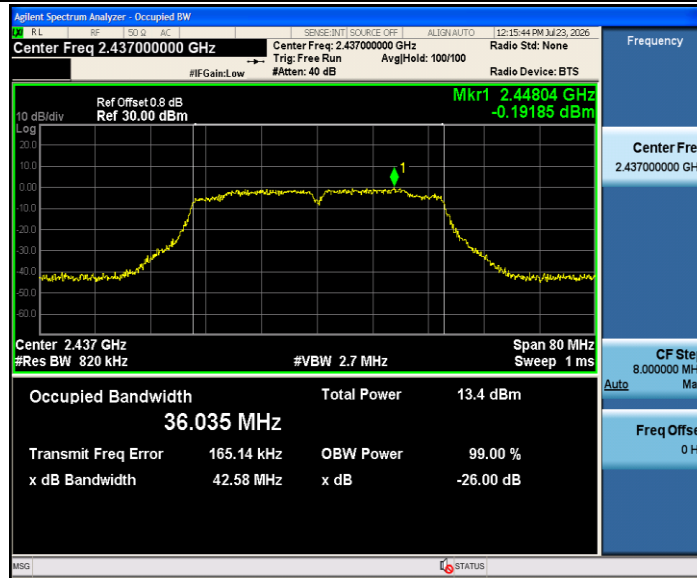
11N20SISO\_Ant1\_2462



11N40SISO\_Ant1\_2422



# 11N40SISO\_Ant1\_2437



# 11N40SISO\_Ant1\_2452



## Appendix C: Maximum conducted output power

### Test Result

| Test Mode | Antenna | Frequency[MHz] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|---------|----------------|--------------|-------------|---------|
| 11B       | Ant1    | 2412           | 14.41        | ≤30.00      | PASS    |
|           |         | 2437           | 14.48        | ≤30.00      | PASS    |
|           |         | 2462           | 14.70        | ≤30.00      | PASS    |
| 11G       | Ant1    | 2412           | 13.03        | ≤30.00      | PASS    |
|           |         | 2437           | 13.12        | ≤30.00      | PASS    |
|           |         | 2462           | 13.34        | ≤30.00      | PASS    |
| 11N20SISO | Ant1    | 2412           | 12.82        | ≤30.00      | PASS    |
|           |         | 2437           | 13.05        | ≤30.00      | PASS    |
|           |         | 2462           | 13.06        | ≤30.00      | PASS    |
| 11N40SISO | Ant1    | 2422           | 13.24        | ≤30.00      | PASS    |
|           |         | 2437           | 13.44        | ≤30.00      | PASS    |
|           |         | 2452           | 13.56        | ≤30.00      | PASS    |

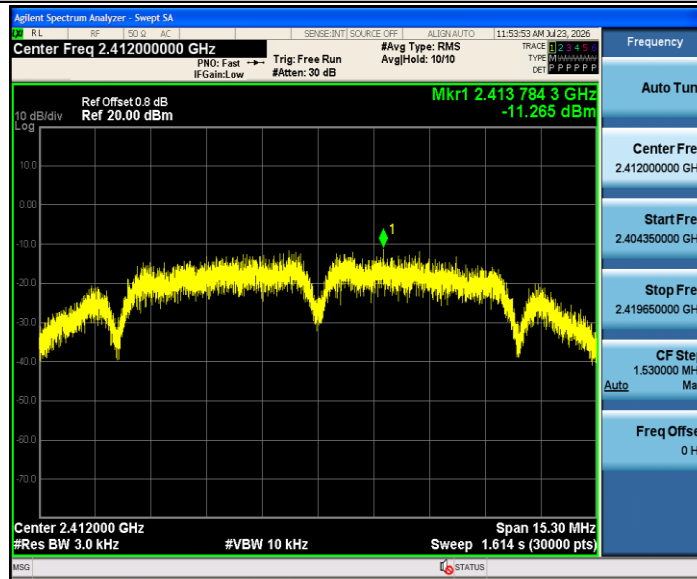
## Appendix D: Maximum power spectral density

### Test Result

| TestMode  | Antenna | Frequency[MHz] | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|-----------|---------|----------------|----------------------|-----------------|---------|
| 11B       | Ant1    | 2412           | -11.27               | ≤8.00           | PASS    |
|           |         | 2437           | -11.24               | ≤8.00           | PASS    |
|           |         | 2462           | -11.97               | ≤8.00           | PASS    |
| 11G       | Ant1    | 2412           | -19.62               | ≤8.00           | PASS    |
|           |         | 2437           | -18.61               | ≤8.00           | PASS    |
|           |         | 2462           | -18.50               | ≤8.00           | PASS    |
| 11N20SISO | Ant1    | 2412           | -18.58               | ≤8.00           | PASS    |
|           |         | 2437           | -18.30               | ≤8.00           | PASS    |
|           |         | 2462           | -18.13               | ≤8.00           | PASS    |
| 11N40SISO | Ant1    | 2422           | -21.48               | ≤8.00           | PASS    |
|           |         | 2437           | -20.95               | ≤8.00           | PASS    |
|           |         | 2452           | -21.23               | ≤8.00           | PASS    |

## Test Graphs

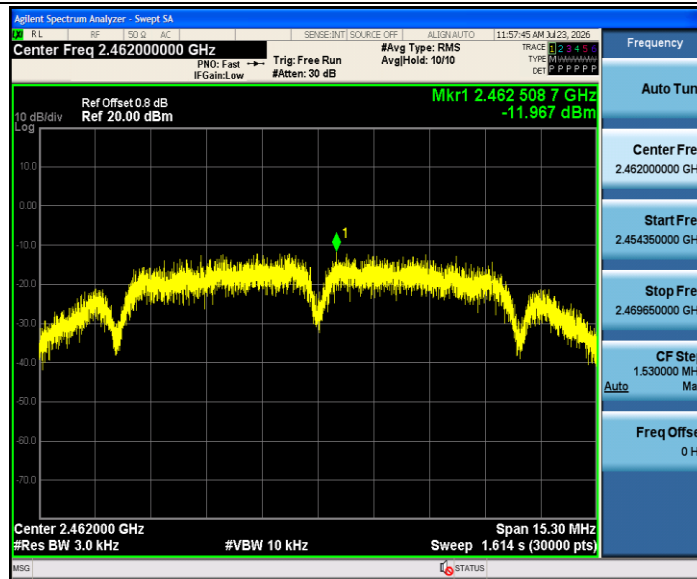
11B\_Ant1\_2412



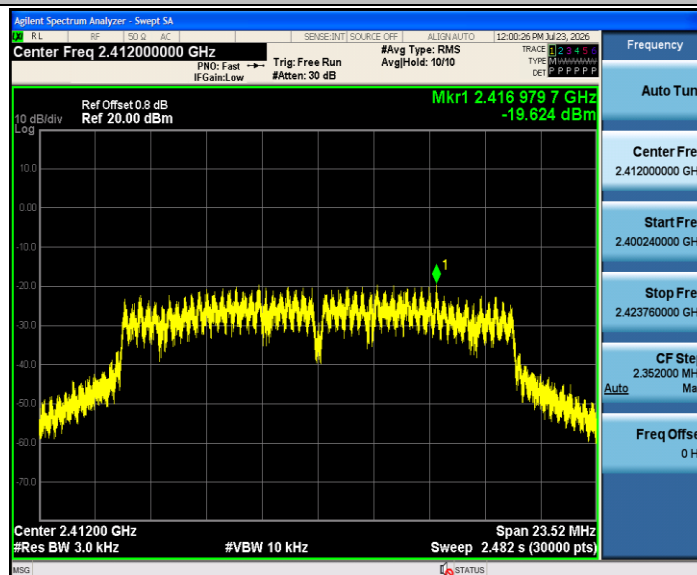
11B\_Ant1\_2437



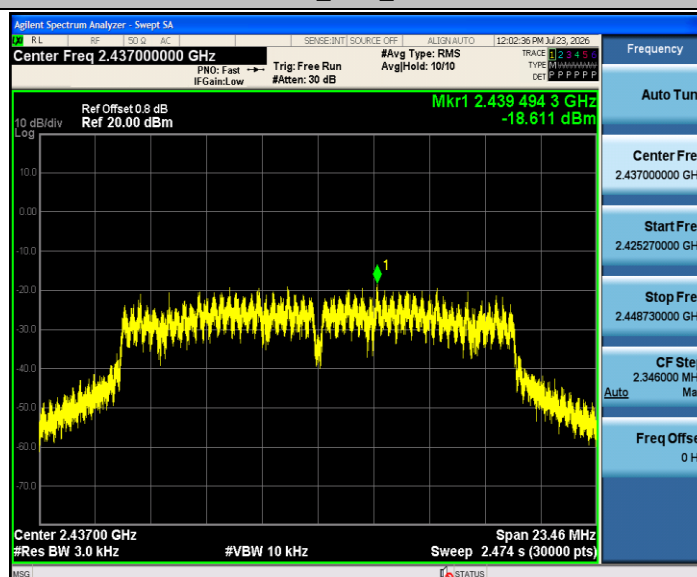
11B\_Ant1\_2462



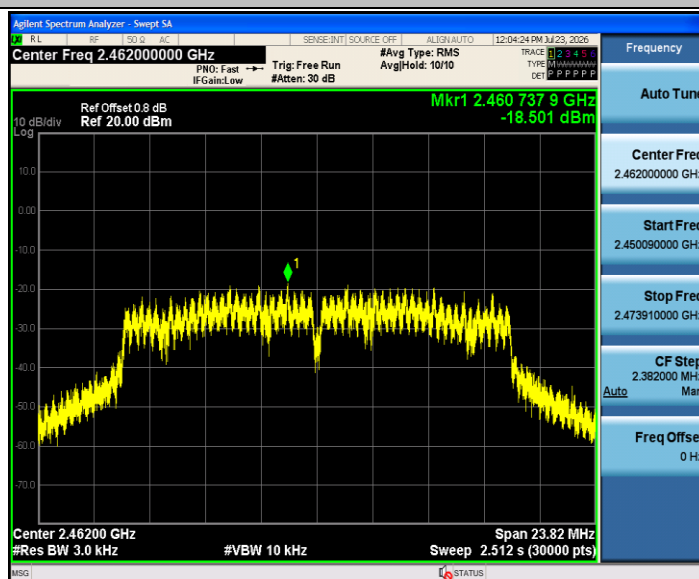
11G\_Ant1\_2412



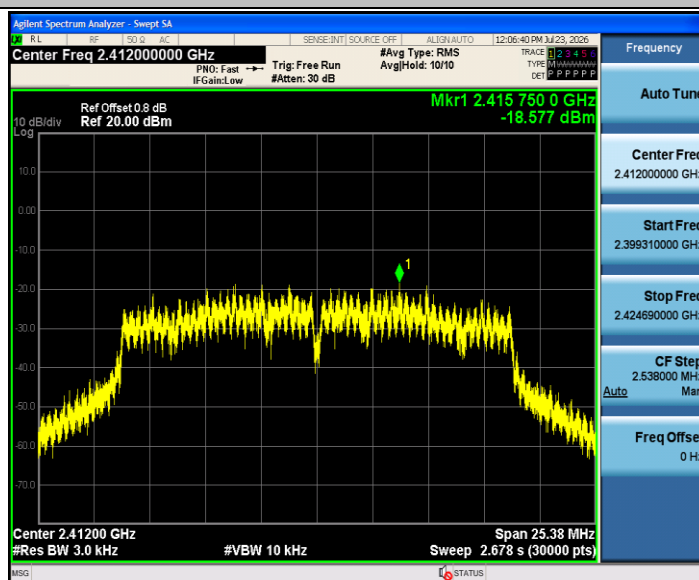
11G\_Ant1\_2437



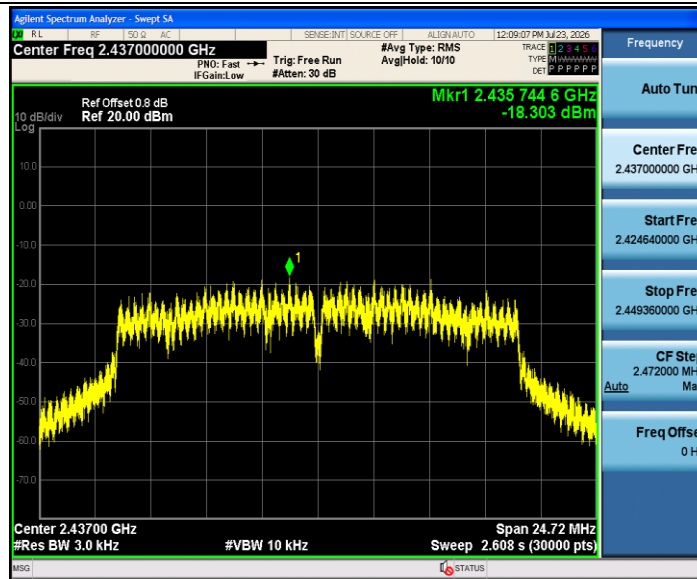
# 11G\_Ant1\_2462



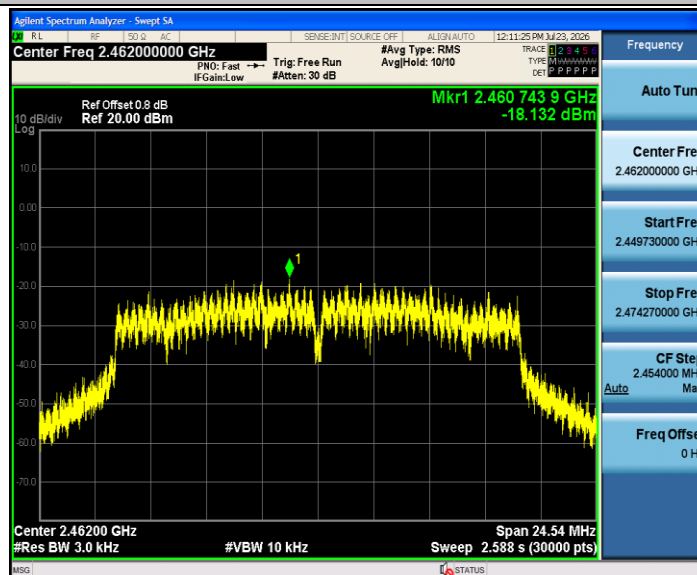
# 11N20SISO\_Ant1\_2412



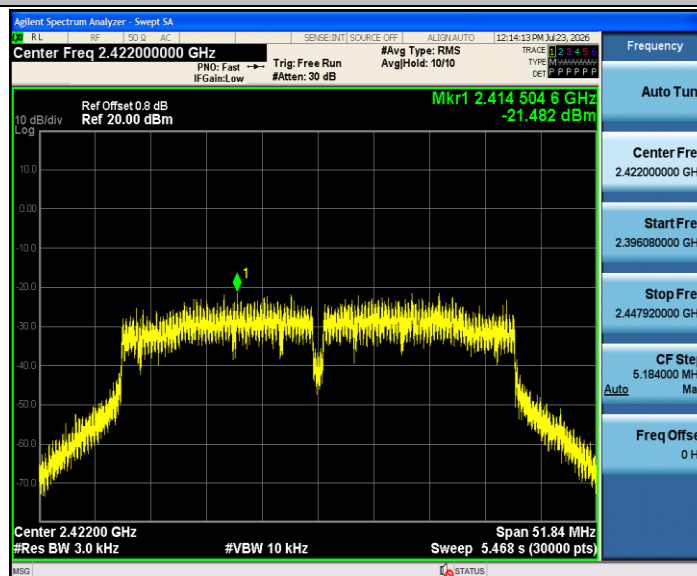
# 11N20SISO\_Ant1\_2437



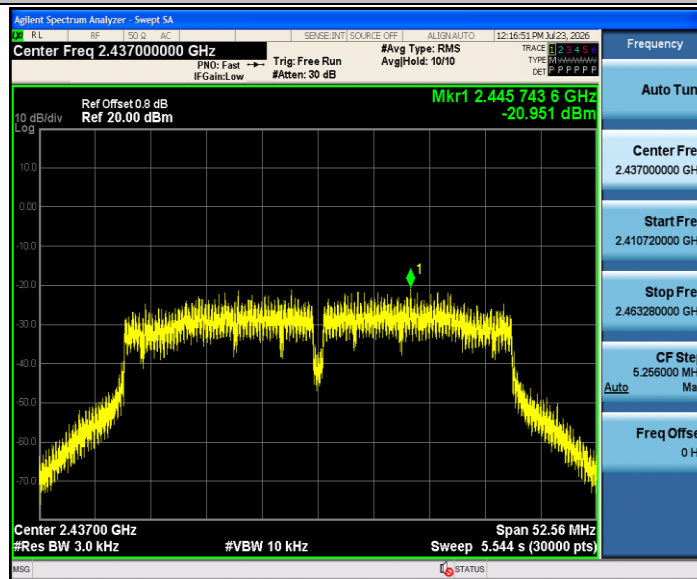
11N20SISO\_Ant1\_2462



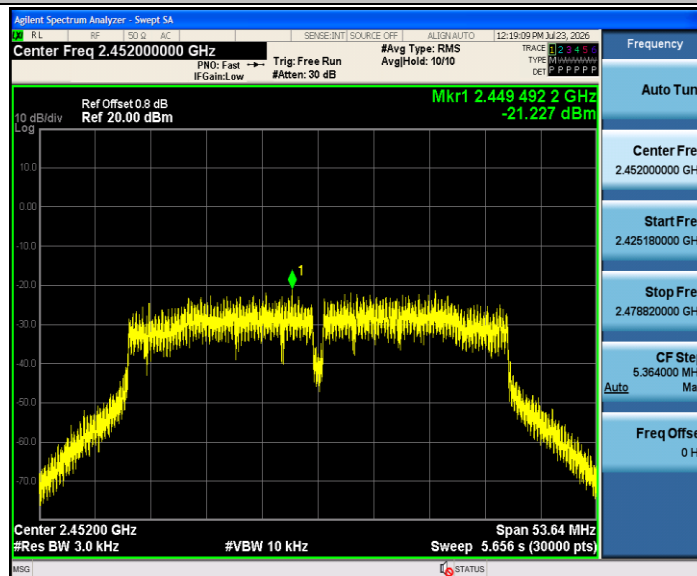
11N40SISO\_Ant1\_2422



# 11N40SISO\_Ant1\_2437



# 11N40SISO\_Ant1\_2452



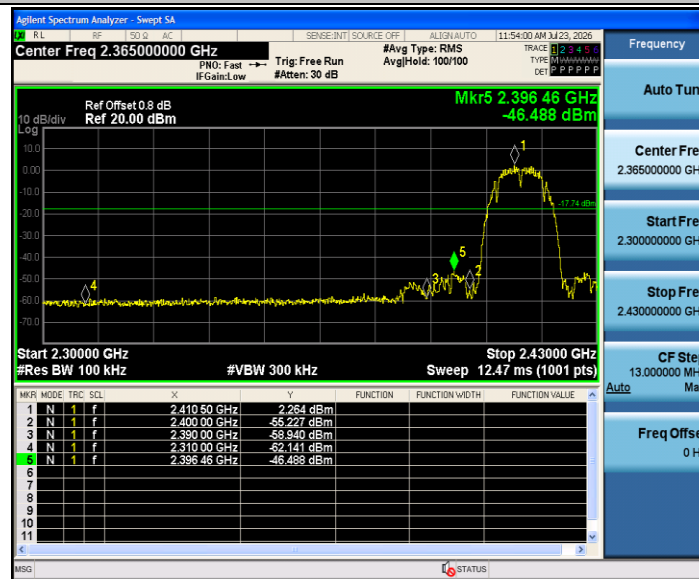
## Appendix E: Band edge measurements

### Test Result

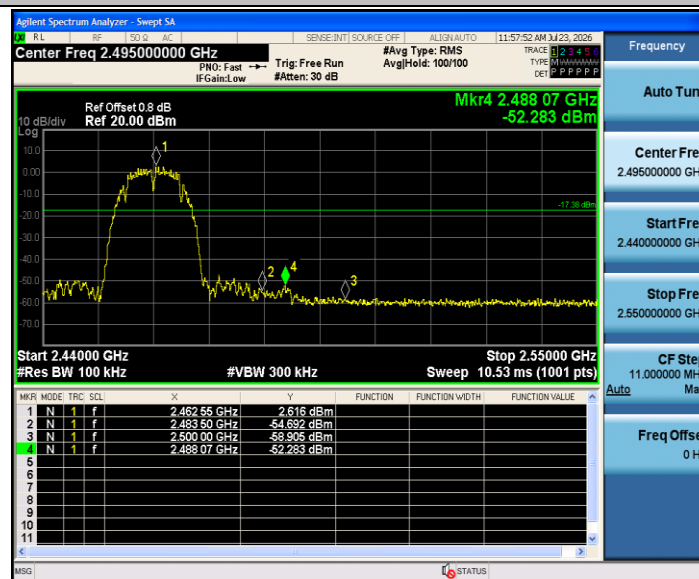
| TestMode  | Antenna | Channel Name | Frequency[MHz] | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|-----------|---------|--------------|----------------|---------------|-------------|------------|---------|
| 11B       | Ant1    | Low          | 2412           | 2.26          | -46.49      | ≤-17.74    | PASS    |
|           |         | High         | 2462           | 2.62          | -52.28      | ≤-17.38    | PASS    |
| 11G       | Ant1    | Low          | 2412           | -3.44         | -34.65      | ≤-23.44    | PASS    |
|           |         | High         | 2462           | -3.02         | -57.62      | ≤-23.02    | PASS    |
| 11N20SISO | Ant1    | Low          | 2412           | -3.56         | -33.63      | ≤-23.56    | PASS    |
|           |         | High         | 2462           | -2.94         | -56.89      | ≤-22.94    | PASS    |
| 11N40SISO | Ant1    | Low          | 2422           | -6.58         | -34.72      | ≤-26.58    | PASS    |
|           |         | High         | 2452           | -6.45         | -57.31      | ≤-26.45    | PASS    |

## Test Graphs

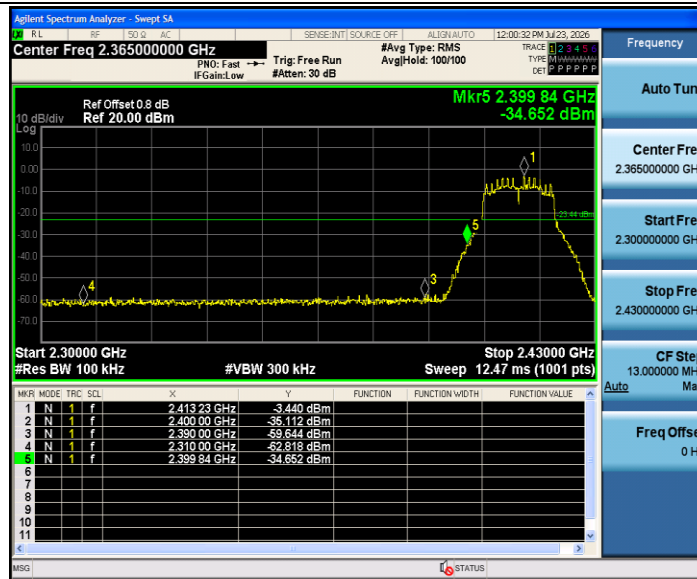
11B\_Ant1\_Low\_2412



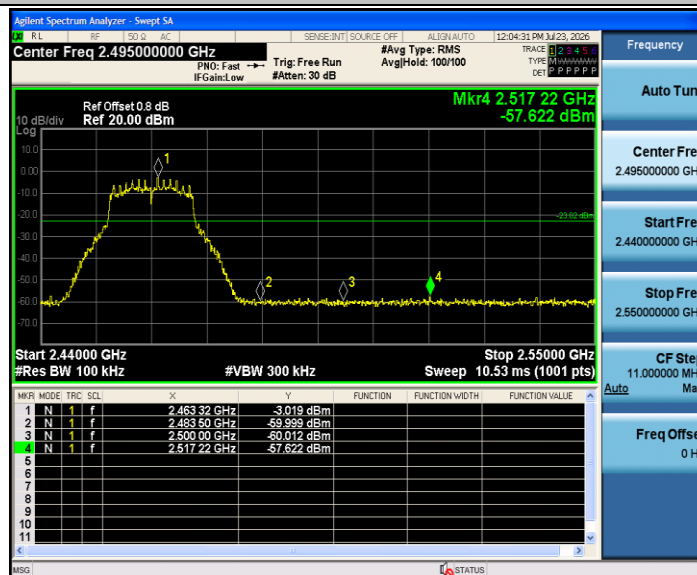
11B\_Ant1\_High\_2462



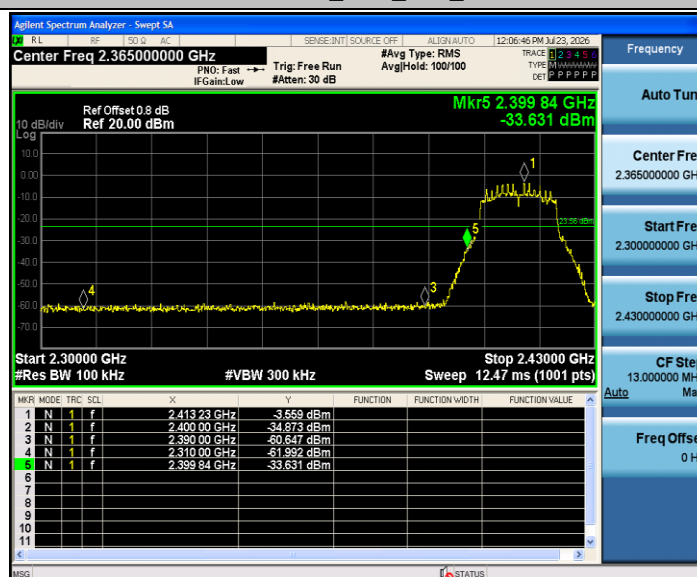
11G\_Ant1\_Low\_2412



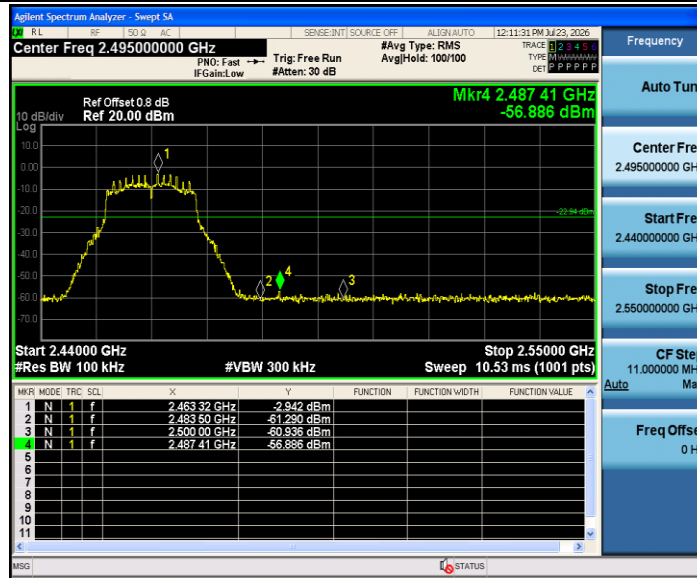
11G\_Ant1\_High\_2462



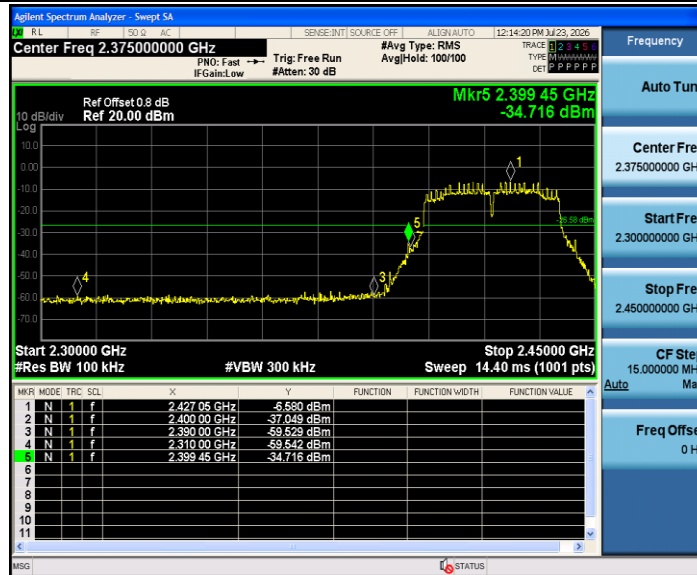
11N20SISO\_Ant1\_Low\_2412



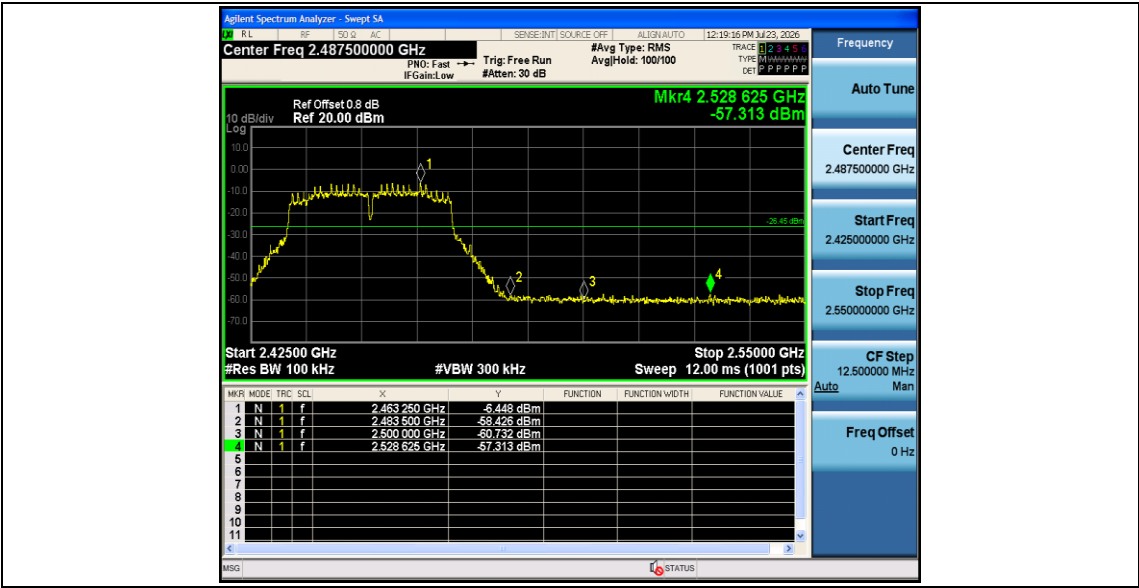
# 11N20SISO\_Ant1\_High\_2462



# 11N40SISO\_Ant1\_Low\_2422



# 11N40SISO\_Ant1\_High\_2452



## Appendix F: Conducted Spurious Emission

### Test Result

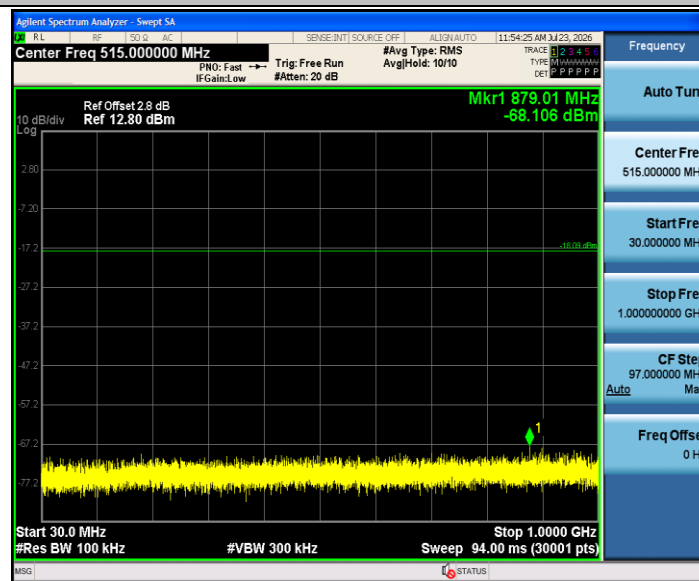
| TestMode  | Antenna | Frequency[MHz] | FreqRange [Mhz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|---------|----------------|-----------------|----------------|--------------|-------------|---------|
| 11B       | Ant1    | 2412           | Reference       | 1.91           | 1.91         | ---         | PASS    |
|           |         |                | 30~1000         | 1.91           | -68.11       | ≤-18.09     | PASS    |
|           |         |                | 1000~26500      | 1.91           | -46.45       | ≤-18.09     | PASS    |
|           |         | 2437           | Reference       | 1.35           | 1.35         | ---         | PASS    |
|           |         |                | 30~1000         | 1.35           | -68.68       | ≤-18.65     | PASS    |
|           |         |                | 1000~26500      | 1.35           | -46.52       | ≤-18.65     | PASS    |
|           |         | 2462           | Reference       | 1.63           | 1.63         | ---         | PASS    |
|           |         |                | 30~1000         | 1.63           | -68.36       | ≤-18.37     | PASS    |
|           |         |                | 1000~26500      | 1.63           | -46.15       | ≤-18.37     | PASS    |
| 11G       | Ant1    | 2412           | Reference       | -4.07          | -4.07        | ---         | PASS    |
|           |         |                | 30~1000         | -4.07          | -68.84       | ≤-24.07     | PASS    |
|           |         |                | 1000~26500      | -4.07          | -46.33       | ≤-24.07     | PASS    |
|           |         | 2437           | Reference       | -4.14          | -4.14        | ---         | PASS    |
|           |         |                | 30~1000         | -4.14          | -67.86       | ≤-24.14     | PASS    |
|           |         |                | 1000~26500      | -4.14          | -45.8        | ≤-24.14     | PASS    |
|           |         | 2462           | Reference       | -3.47          | -3.47        | ---         | PASS    |
|           |         |                | 30~1000         | -3.47          | -68.6        | ≤-23.47     | PASS    |
|           |         |                | 1000~26500      | -3.47          | -46.41       | ≤-23.47     | PASS    |
| 11N20SISO | Ant1    | 2412           | Reference       | -3.90          | -3.90        | ---         | PASS    |
|           |         |                | 30~1000         | -3.90          | -68.85       | ≤-23.9      | PASS    |
|           |         |                | 1000~26500      | -3.90          | -46.03       | ≤-23.9      | PASS    |
|           |         | 2437           | Reference       | -4.29          | -4.29        | ---         | PASS    |
|           |         |                | 30~1000         | -4.29          | -68.62       | ≤-24.29     | PASS    |
|           |         |                | 1000~26500      | -4.29          | -45.83       | ≤-24.29     | PASS    |
|           |         | 2462           | Reference       | -3.50          | -3.50        | ---         | PASS    |
|           |         |                | 30~1000         | -3.50          | -68.89       | ≤-23.5      | PASS    |
|           |         |                | 1000~26500      | -3.50          | -46.2        | ≤-23.5      | PASS    |
| 11N40SISO | Ant1    | 2422           | Reference       | -6.85          | -6.85        | ---         | PASS    |
|           |         |                | 30~1000         | -6.85          | -68.57       | ≤-26.85     | PASS    |
|           |         |                | 1000~26500      | -6.85          | -46.64       | ≤-26.85     | PASS    |
|           |         | 2437           | Reference       | -6.30          | -6.30        | ---         | PASS    |
|           |         |                | 30~1000         | -6.30          | -68.69       | ≤-26.3      | PASS    |
|           |         |                | 1000~26500      | -6.30          | -46.03       | ≤-26.3      | PASS    |
|           |         | 2452           | Reference       | -7.02          | -7.02        | ---         | PASS    |
|           |         |                | 30~1000         | -7.02          | -68.52       | ≤-27.02     | PASS    |
|           |         |                | 1000~26500      | -7.02          | -45.43       | ≤-27.02     | PASS    |

## Test Graphs

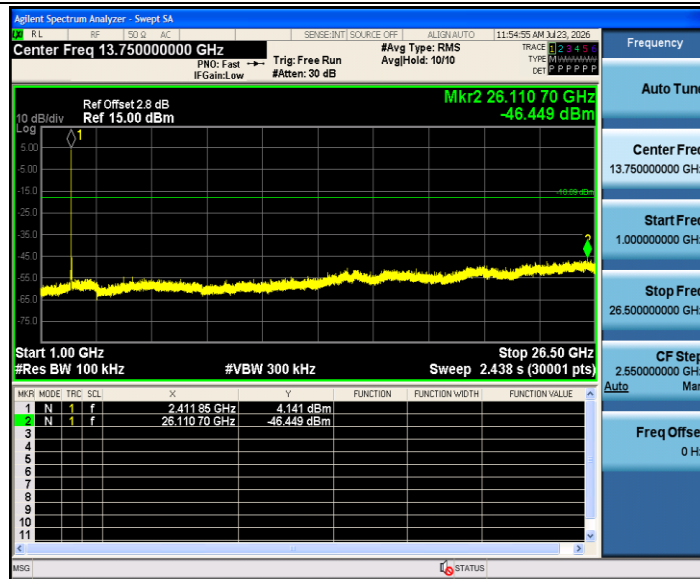
11B\_Ant1\_2412\_0~Reference



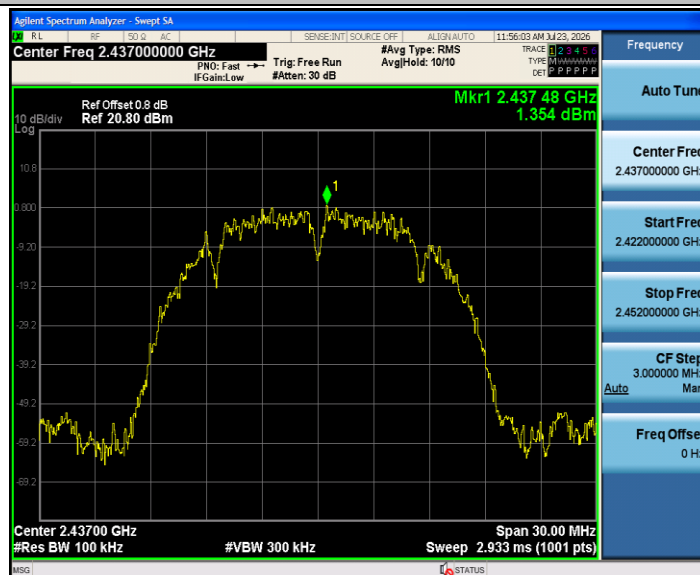
11B\_Ant1\_2412\_30~1000



11B\_Ant1\_2412\_1000~26500



11B\_Ant1\_2437\_0~Reference



11B\_Ant1\_2437\_30~1000

