

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

**FCC ID** : 2A7KO-D1

**Company** : Shenzhen youfeiyang Electronics Co., Ltd

**EUT** : Battery camera

**Model Number** : D1

**Report No.** : CTA25111000501

**Reviewed By** : Eric Wang

## Appendix A: DTS Bandwidth

### Test Result

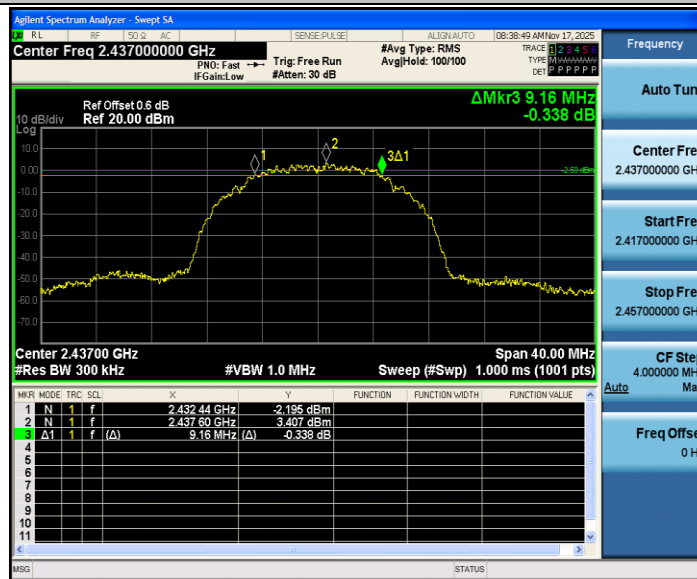
| TestMode   | Antenna | Frequency[MHz] | DTS BW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|------------|---------|----------------|--------------|----------|----------|------------|---------|
| 11B        | Ant1    | 2412           | 8.720        | 2407.880 | 2416.600 | 0.5        | PASS    |
|            |         | 2437           | 9.160        | 2432.440 | 2441.600 | 0.5        | PASS    |
|            |         | 2462           | 9.120        | 2457.480 | 2466.600 | 0.5        | PASS    |
| 11G        | Ant1    | 2412           | 16.440       | 2403.840 | 2420.280 | 0.5        | PASS    |
|            |         | 2437           | 16.240       | 2428.920 | 2445.160 | 0.5        | PASS    |
|            |         | 2462           | 16.320       | 2453.880 | 2470.200 | 0.5        | PASS    |
| 11N20SISO  | Ant1    | 2412           | 17.320       | 2403.440 | 2420.760 | 0.5        | PASS    |
|            |         | 2437           | 17.320       | 2428.360 | 2445.680 | 0.5        | PASS    |
|            |         | 2462           | 17.240       | 2453.400 | 2470.640 | 0.5        | PASS    |
| 11N40SISO  | Ant1    | 2422           | 33.840       | 2405.280 | 2439.120 | 0.5        | PASS    |
|            |         | 2437           | 33.840       | 2420.200 | 2454.040 | 0.5        | PASS    |
|            |         | 2452           | 34.000       | 2435.040 | 2469.040 | 0.5        | PASS    |
| 11AX20SISO | Ant1    | 2412           | 17.320       | 2403.360 | 2420.680 | 0.5        | PASS    |
|            |         | 2437           | 17.360       | 2428.360 | 2445.720 | 0.5        | PASS    |
|            |         | 2462           | 17.160       | 2453.480 | 2470.640 | 0.5        | PASS    |
| 11AX40SISO | Ant1    | 2422           | 34.000       | 2405.120 | 2439.120 | 0.5        | PASS    |
|            |         | 2437           | 34.160       | 2420.120 | 2454.280 | 0.5        | PASS    |
|            |         | 2452           | 34.080       | 2435.040 | 2469.120 | 0.5        | PASS    |

## Test Graphs

11B\_Ant1\_2412



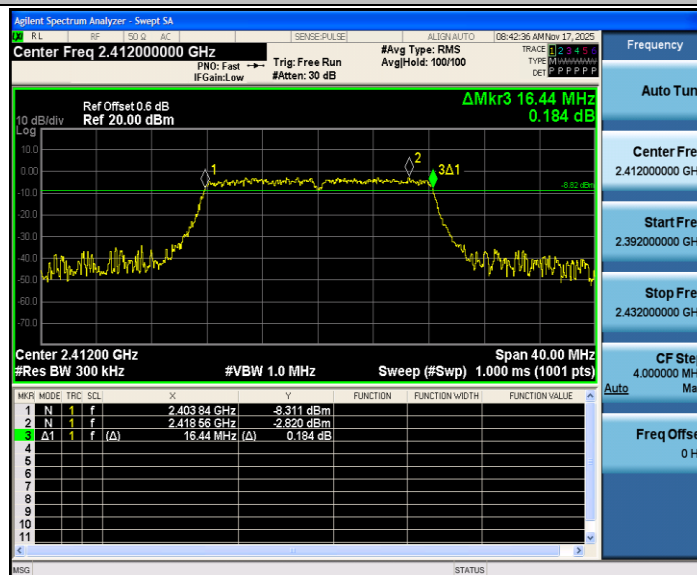
11B\_Ant1\_2437



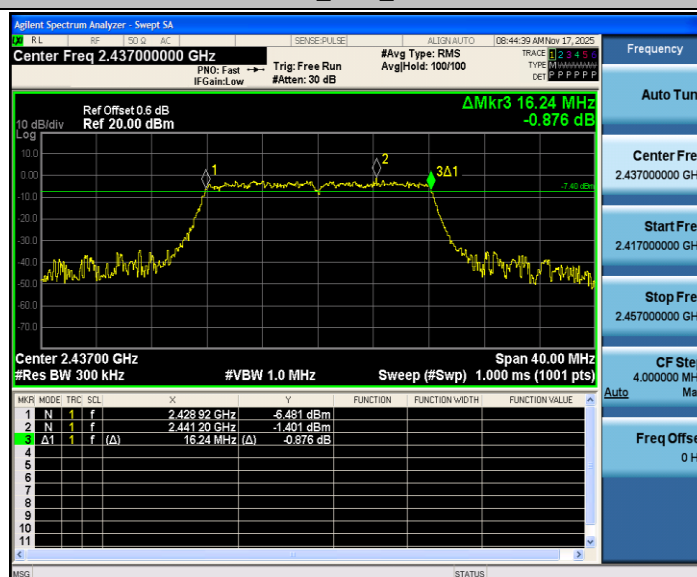
11B\_Ant1\_2462



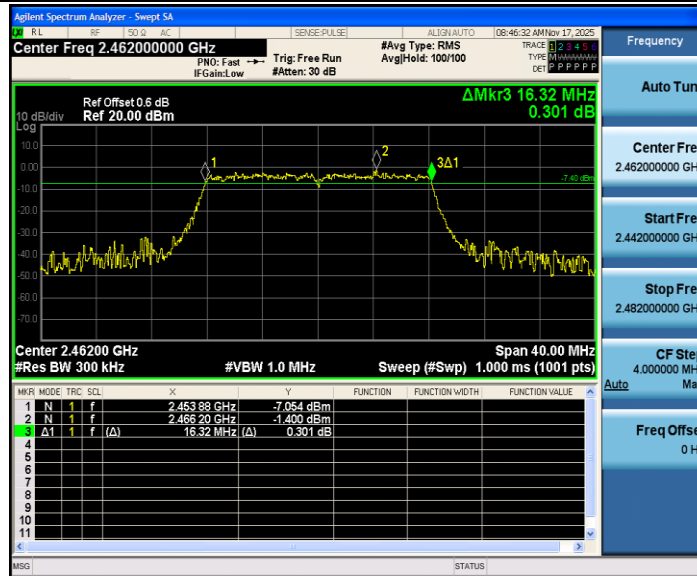
11G\_Ant1\_2412



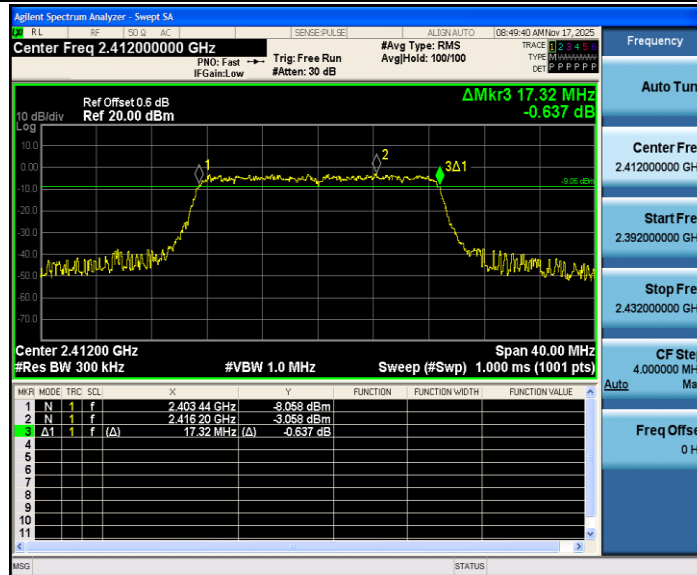
11G\_Ant1\_2437



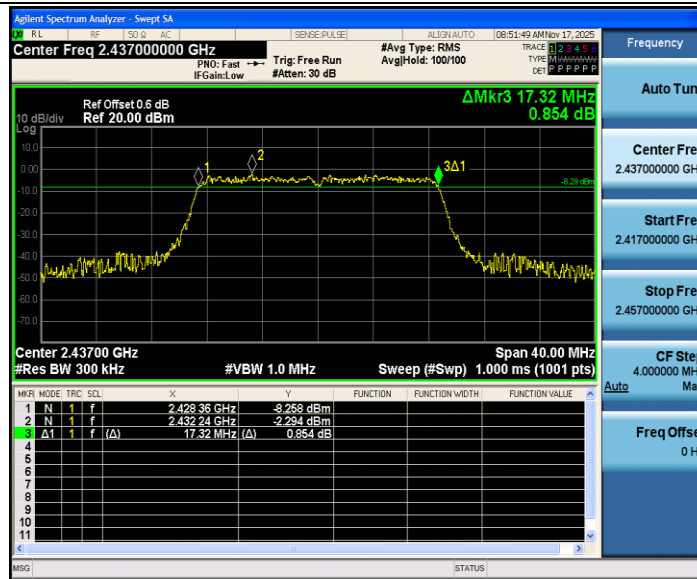
# 11G\_Ant1\_2462



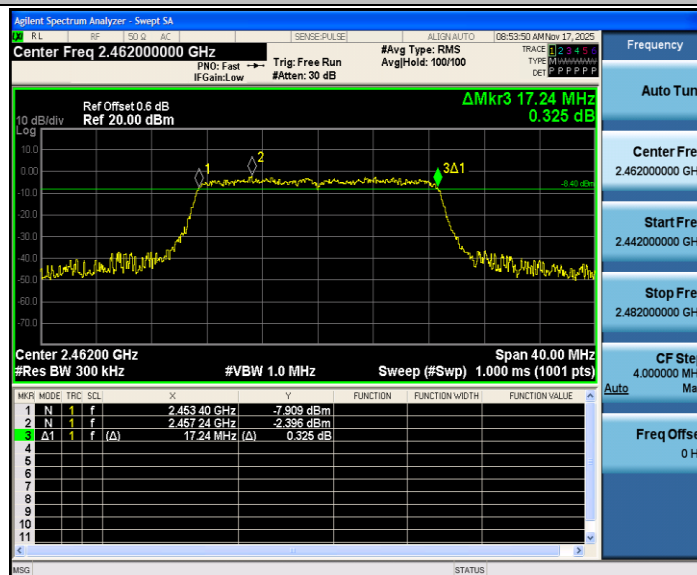
# 11N20SISO\_Ant1\_2412



# 11N20SISO\_Ant1\_2437



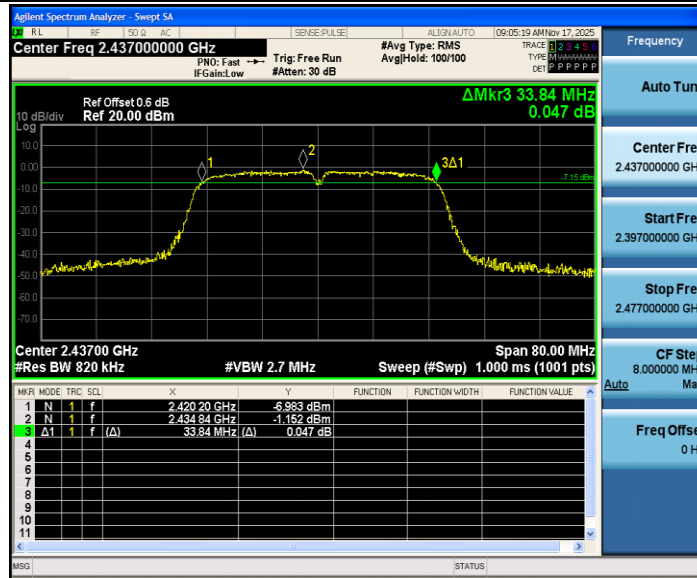
11N20SISO\_Ant1\_2462



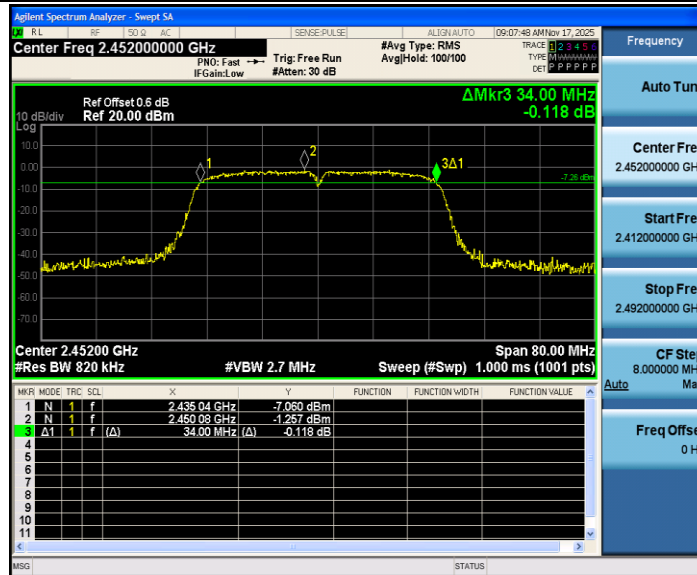
11N40SISO\_Ant1\_2422



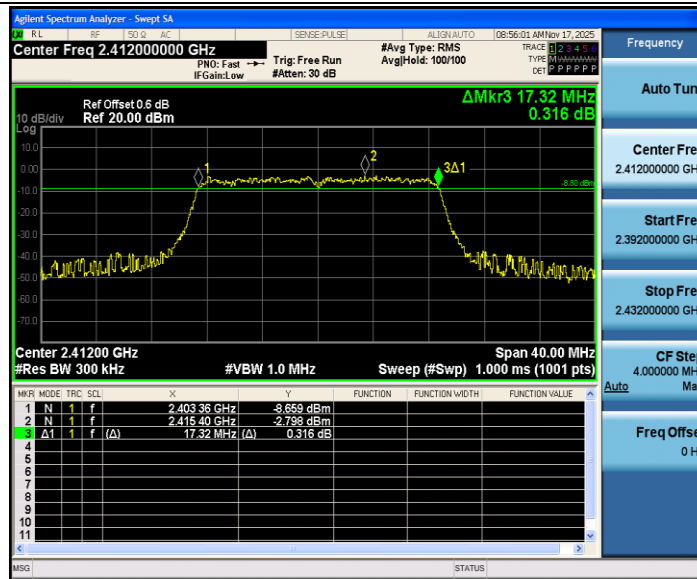
# 11N40SISO\_Ant1\_2437



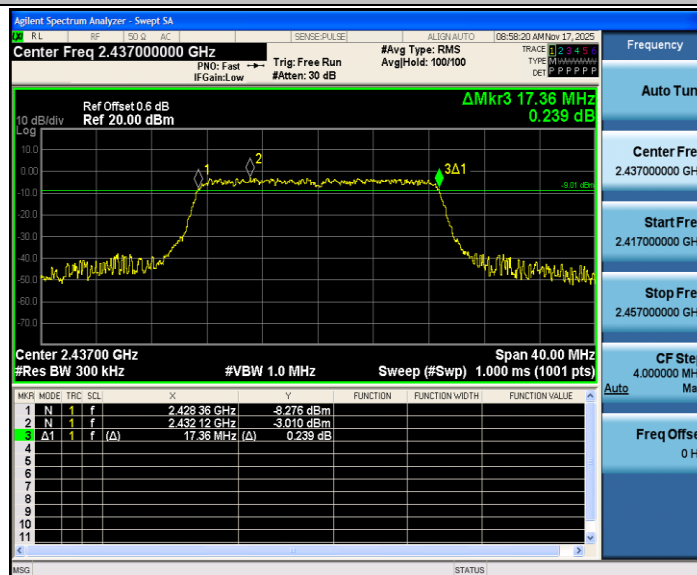
# 11N40SISO\_Ant1\_2452



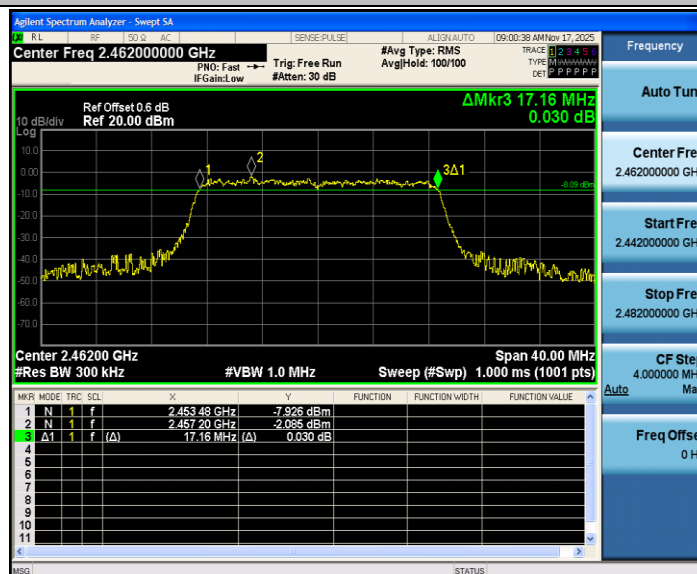
# 11AX20SISO\_Ant1\_2412



11AX20SISO\_Ant1\_2437



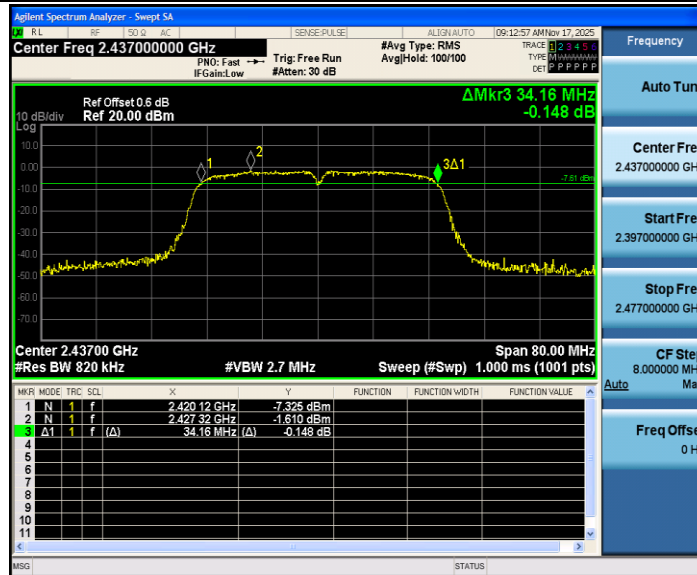
11AX20SISO\_Ant1\_2462



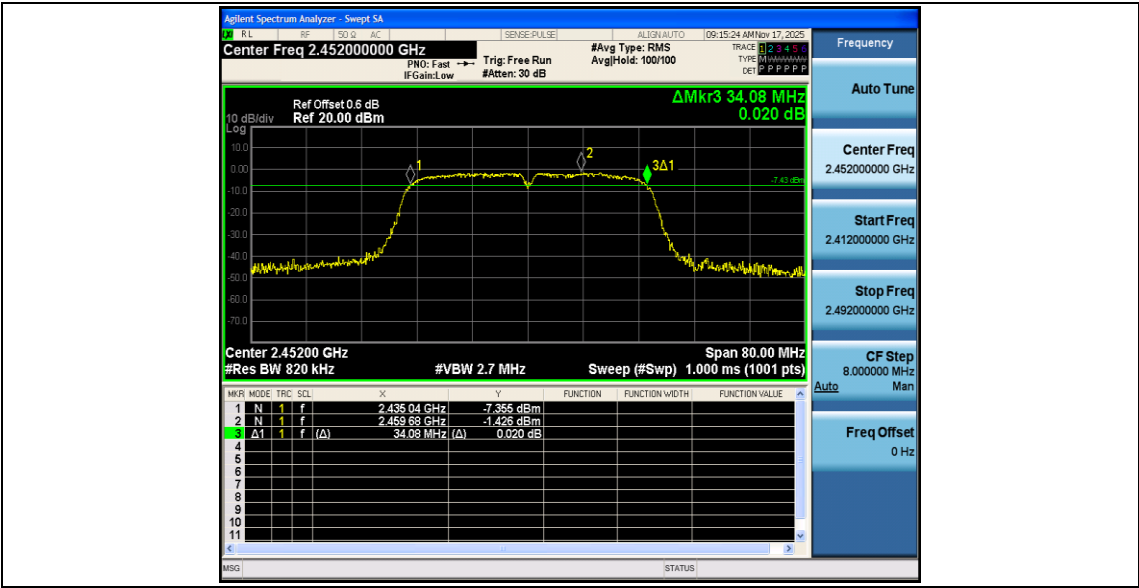
# 11AX40SISO\_Ant1\_2422



# 11AX40SISO\_Ant1\_2437



# 11AX40SISO\_Ant1\_2452



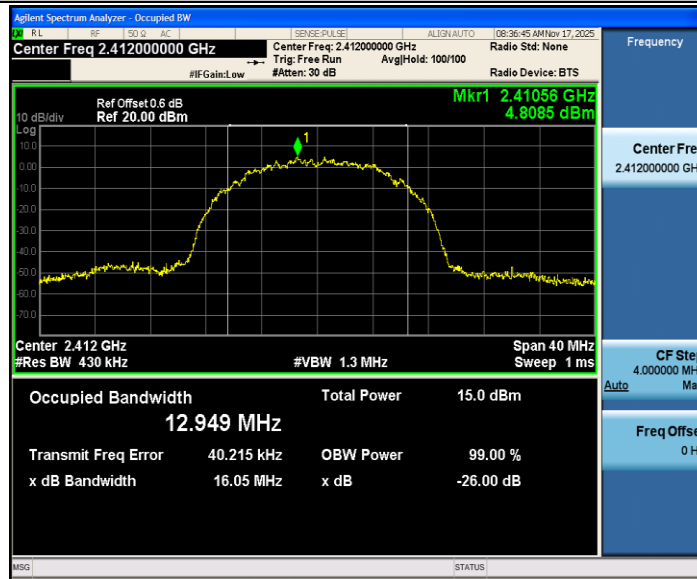
## Appendix B: Occupied Channel Bandwidth

### Test Result

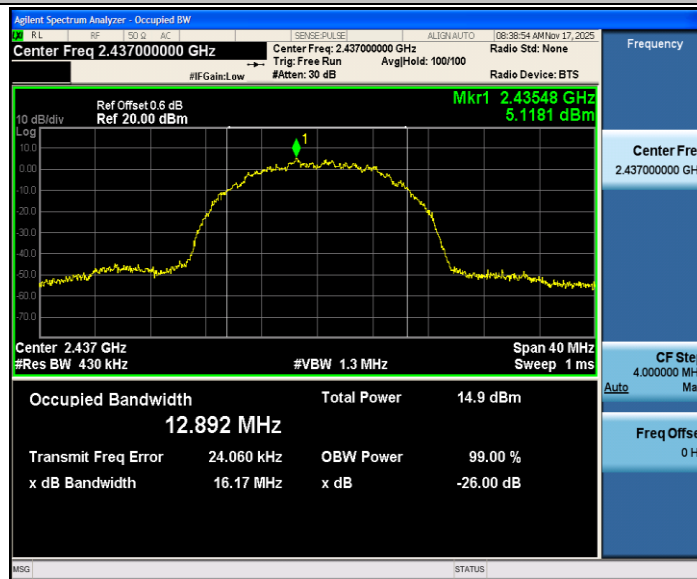
| TestMode   | Antenna | Channel Frequency[MHz] | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|------------|---------|------------------------|-----------|-----------|-----------|------------|---------|
| 11B        | Ant1    | 2412                   | 12.949    | 2405.5657 | 2418.5147 | ---        | ---     |
|            |         | 2437                   | 12.892    | 2430.5781 | 2443.4701 | ---        | ---     |
|            |         | 2462                   | 12.986    | 2455.5062 | 2468.4922 | ---        | ---     |
| 11G        | Ant1    | 2412                   | 16.627    | 2403.7115 | 2420.3385 | ---        | ---     |
|            |         | 2437                   | 16.557    | 2428.7571 | 2445.3141 | ---        | ---     |
|            |         | 2462                   | 16.581    | 2453.7267 | 2470.3077 | ---        | ---     |
| 11N20SISO  | Ant1    | 2412                   | 17.457    | 2403.3178 | 2420.7748 | ---        | ---     |
|            |         | 2437                   | 17.462    | 2428.2989 | 2445.7609 | ---        | ---     |
|            |         | 2462                   | 17.453    | 2453.3156 | 2470.7686 | ---        | ---     |
| 11N40SISO  | Ant1    | 2422                   | 34.833    | 2404.7399 | 2439.5729 | ---        | ---     |
|            |         | 2437                   | 34.794    | 2419.7255 | 2454.5195 | ---        | ---     |
|            |         | 2452                   | 34.816    | 2434.6727 | 2469.4887 | ---        | ---     |
| 11AX20SISO | Ant1    | 2412                   | 17.430    | 2403.3444 | 2420.7744 | ---        | ---     |
|            |         | 2437                   | 17.467    | 2428.3162 | 2445.7832 | ---        | ---     |
|            |         | 2462                   | 17.450    | 2453.3112 | 2470.7612 | ---        | ---     |
| 11AX40SISO | Ant1    | 2422                   | 34.755    | 2404.7622 | 2439.5172 | ---        | ---     |
|            |         | 2437                   | 34.813    | 2419.7203 | 2454.5333 | ---        | ---     |
|            |         | 2452                   | 34.833    | 2434.6468 | 2469.4798 | ---        | ---     |

## Test Graphs

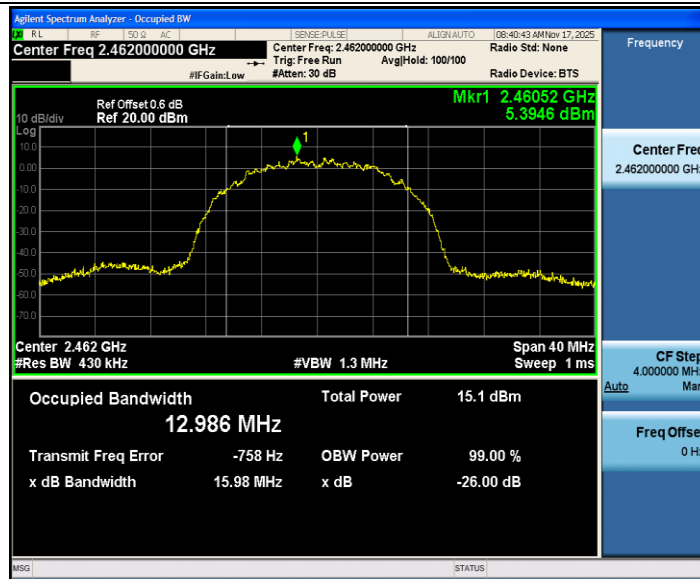
11B\_Ant1\_2412



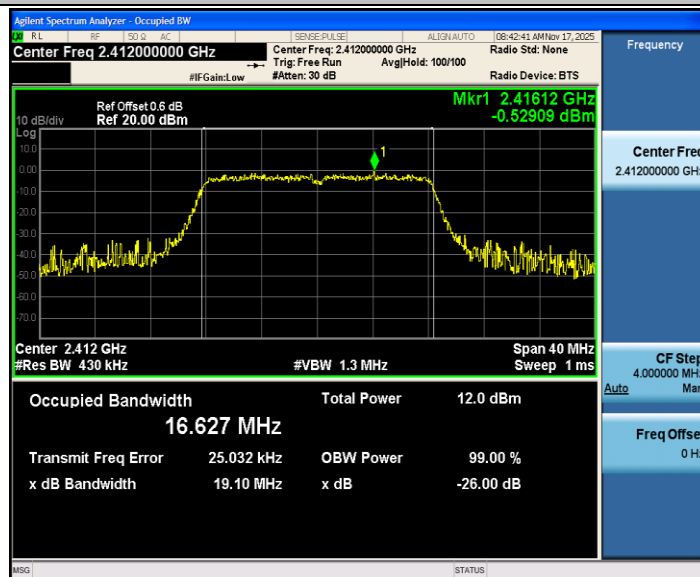
11B\_Ant1\_2437



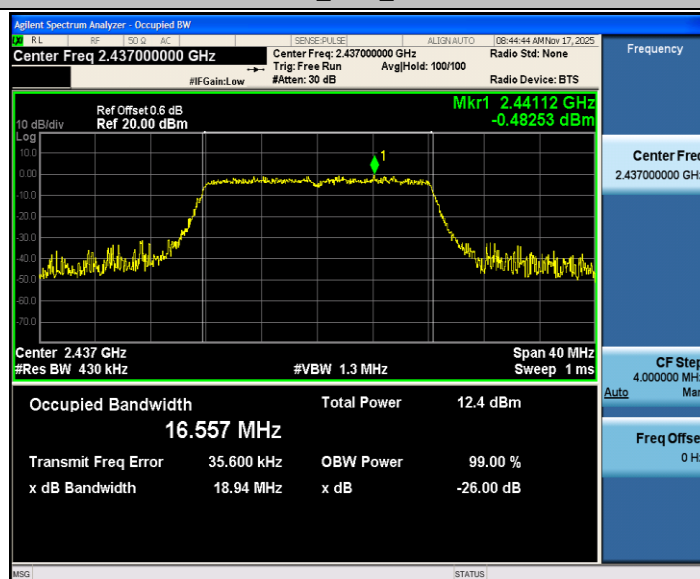
11B\_Ant1\_2462



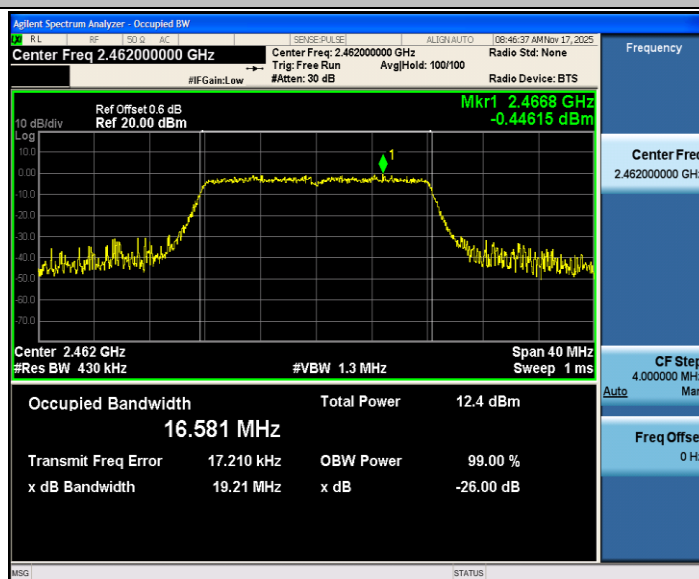
11G\_Ant1\_2412



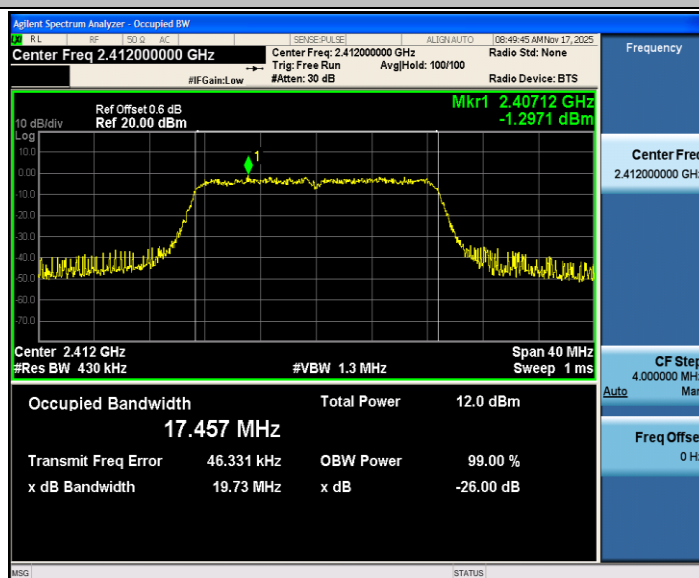
11G\_Ant1\_2437



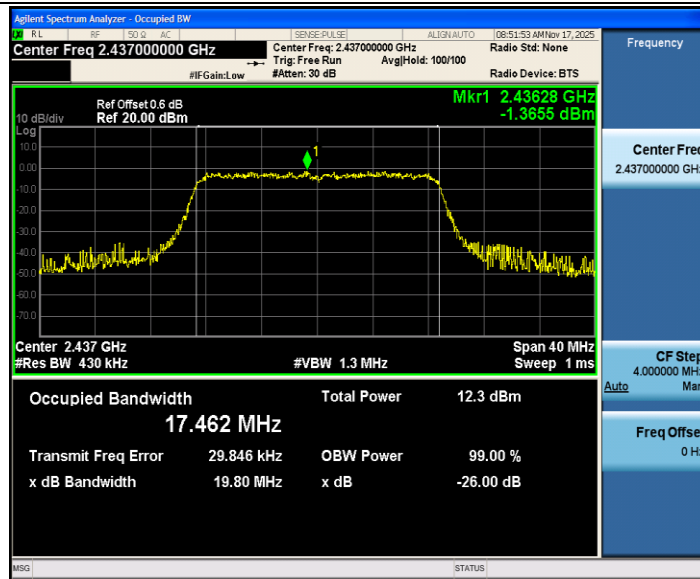
# 11G\_Ant1\_2462



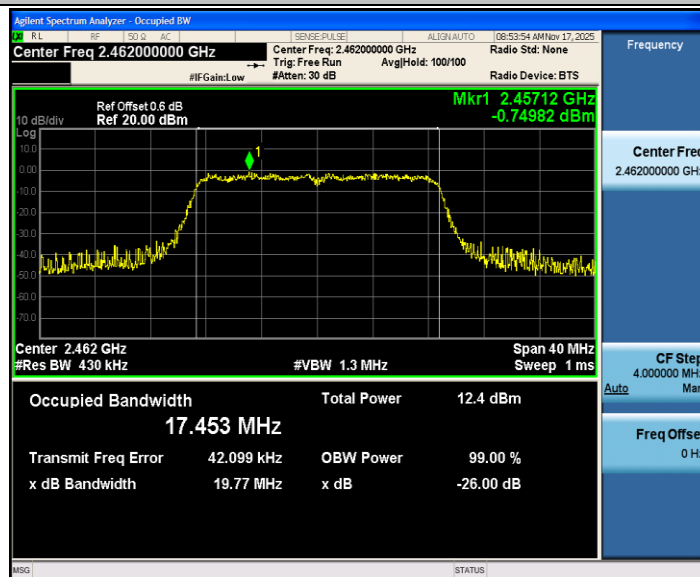
# 11N20SISO\_Ant1\_2412



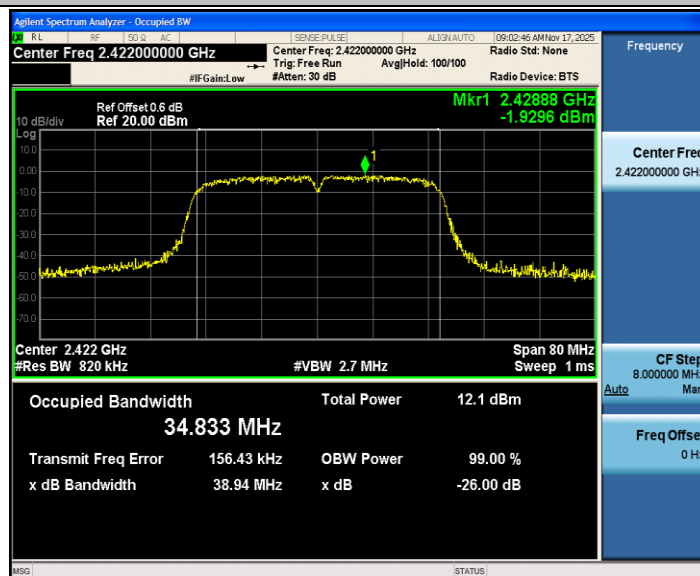
# 11N20SISO\_Ant1\_2437



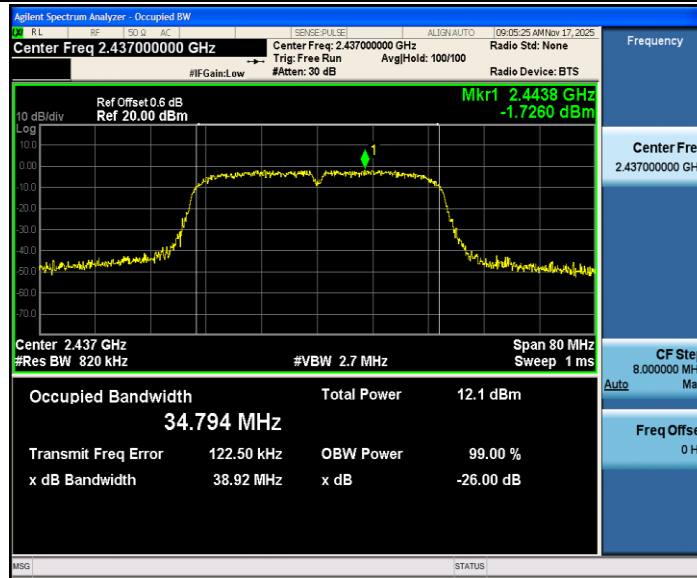
11N20SISO\_Ant1\_2462



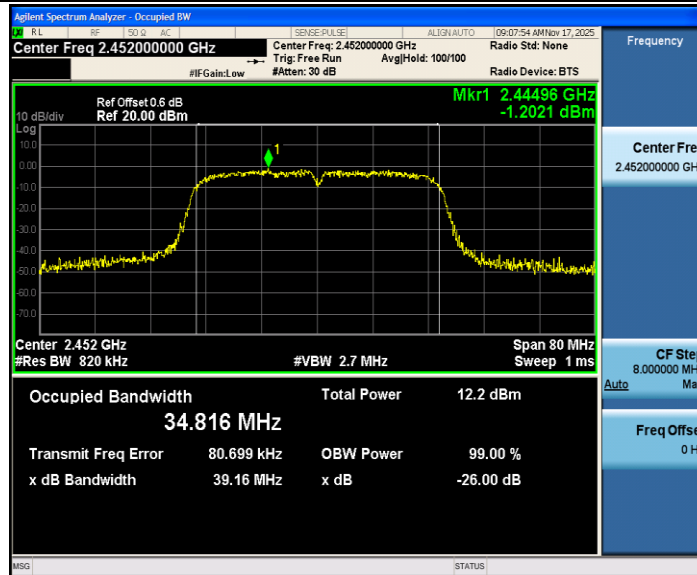
11N40SISO\_Ant1\_2422



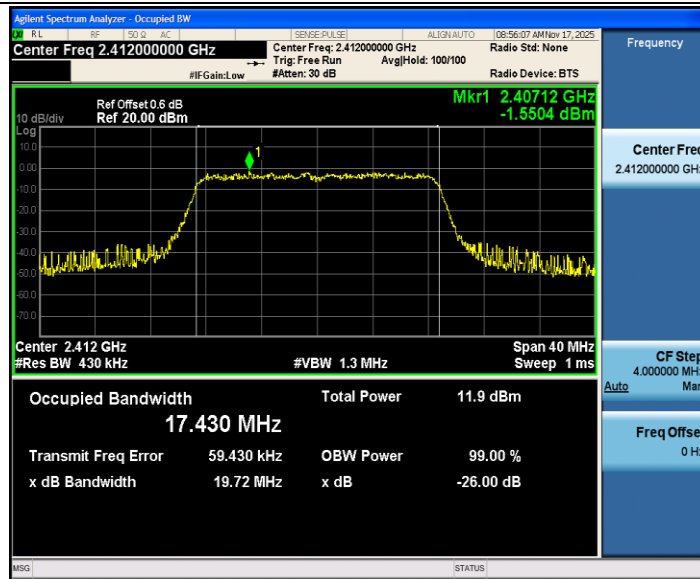
# 11N40SISO\_Ant1\_2437



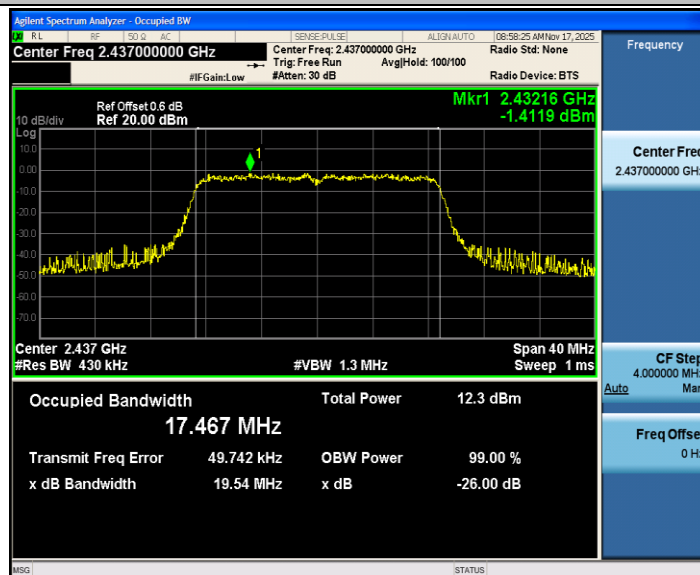
# 11N40SISO\_Ant1\_2452



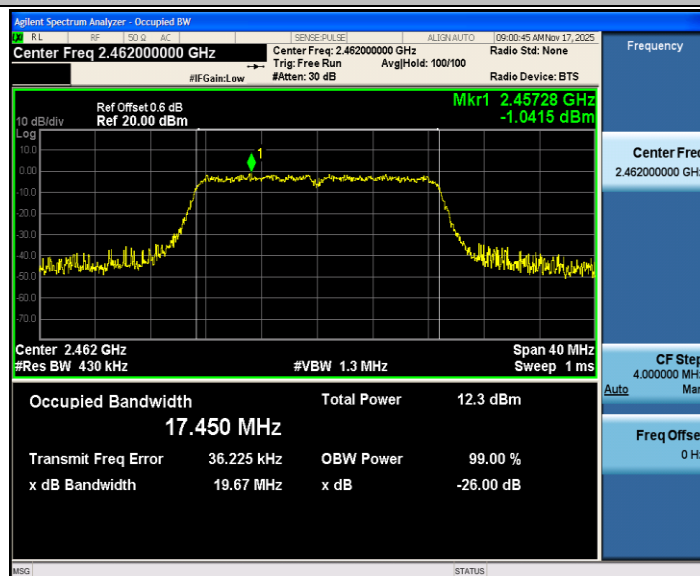
# 11AX20SISO\_Ant1\_2412



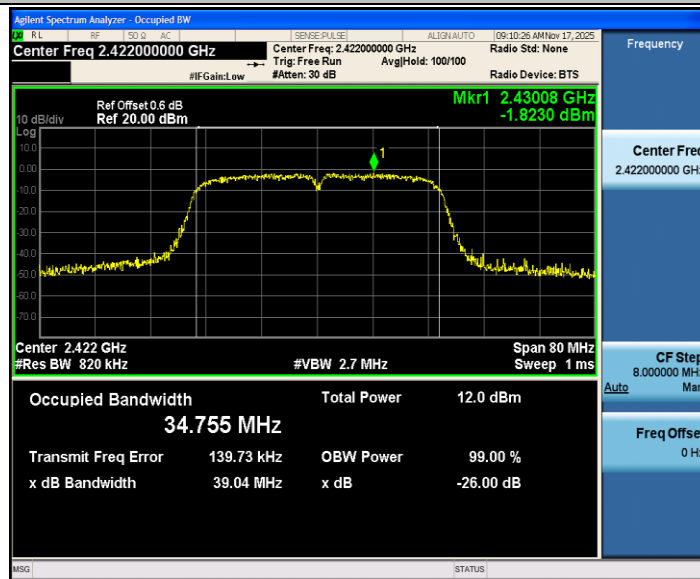
11AX20SISO\_Ant1\_2437



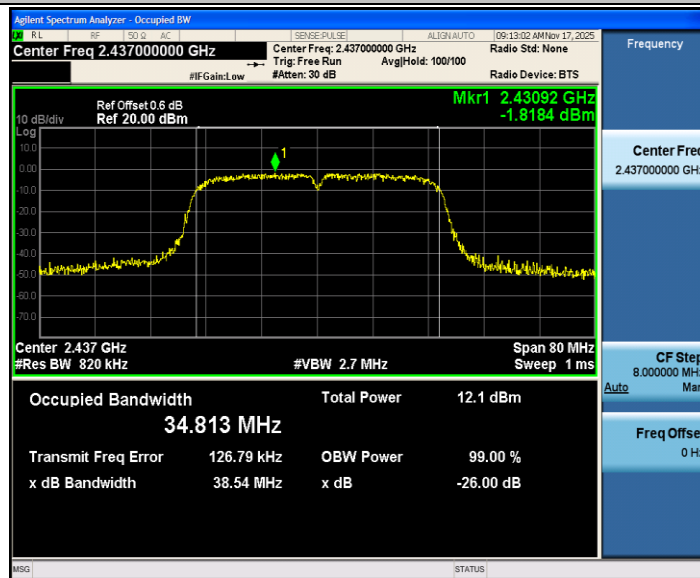
11AX20SISO\_Ant1\_2462



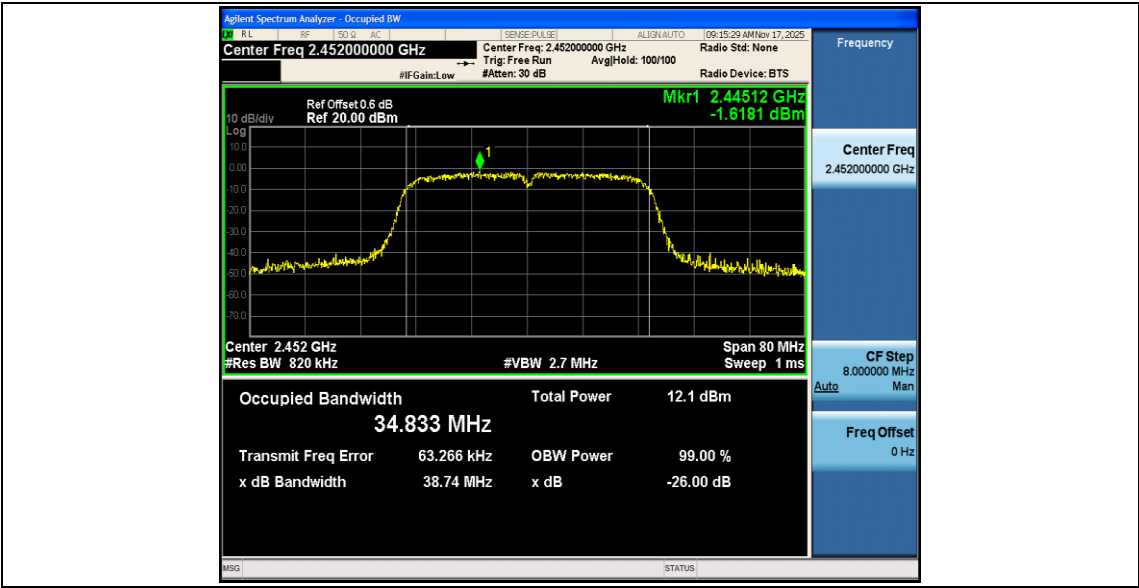
# 11AX40SISO\_Ant1\_2422



# 11AX40SISO\_Ant1\_2437



# 11AX40SISO\_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           | 14.39            | ≤30.00      | PASS    |
|            |         | 2437           | 14.42            | ≤30.00      | PASS    |
|            |         | 2462           | 14.73            | ≤30.00      | PASS    |
| 11G        | Ant1    | 2412           | 12.82            | ≤30.00      | PASS    |
|            |         | 2437           | 13.12            | ≤30.00      | PASS    |
|            |         | 2462           | 13.25            | ≤30.00      | PASS    |
| 11N20SISO  | Ant1    | 2412           | 13.21            | ≤30.00      | PASS    |
|            |         | 2437           | 13.48            | ≤30.00      | PASS    |
|            |         | 2462           | 13.59            | ≤30.00      | PASS    |
| 11N40SISO  | Ant1    | 2422           | 12.29            | ≤30.00      | PASS    |
|            |         | 2437           | 12.33            | ≤30.00      | PASS    |
|            |         | 2452           | 12.56            | ≤30.00      | PASS    |
| 11AX20SISO | Ant1    | 2412           | 13.09            | ≤30.00      | PASS    |
|            |         | 2437           | 13.52            | ≤30.00      | PASS    |
|            |         | 2462           | 13.45            | ≤30.00      | PASS    |
| 11AX40SISO | Ant1    | 2422           | 12.51            | ≤30.00      | PASS    |
|            |         | 2437           | 12.39            | ≤30.00      | PASS    |
|            |         | 2452           | 12.48            | ≤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           | -14.79               | ≤8.00           | PASS    |
|            |         | 2437           | -14.37               | ≤8.00           | PASS    |
|            |         | 2462           | -14.08               | ≤8.00           | PASS    |
| 11G        | Ant1    | 2412           | -21.57               | ≤8.00           | PASS    |
|            |         | 2437           | -21.13               | ≤8.00           | PASS    |
|            |         | 2462           | -21.31               | ≤8.00           | PASS    |
| 11N20SISO  | Ant1    | 2412           | -21.34               | ≤8.00           | PASS    |
|            |         | 2437           | -20.73               | ≤8.00           | PASS    |
|            |         | 2462           | -20.76               | ≤8.00           | PASS    |
| 11N40SISO  | Ant1    | 2422           | -22.09               | ≤8.00           | PASS    |
|            |         | 2437           | -22.70               | ≤8.00           | PASS    |
|            |         | 2452           | -22.25               | ≤8.00           | PASS    |
| 11AX20SISO | Ant1    | 2412           | -21.58               | ≤8.00           | PASS    |
|            |         | 2437           | -21.13               | ≤8.00           | PASS    |
|            |         | 2462           | -20.95               | ≤8.00           | PASS    |
| 11AX40SISO | Ant1    | 2422           | -23.39               | ≤8.00           | PASS    |
|            |         | 2437           | -22.98               | ≤8.00           | PASS    |
|            |         | 2452           | -22.94               | ≤8.00           | PASS    |

## Test Graphs

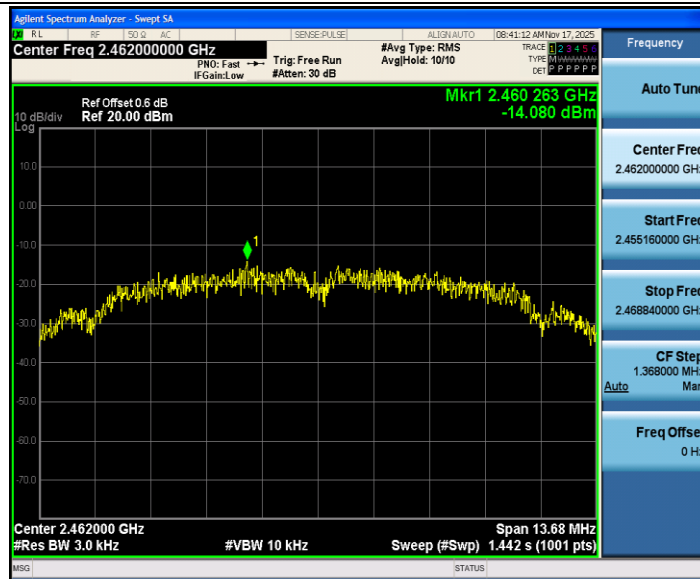
11B\_Ant1\_2412



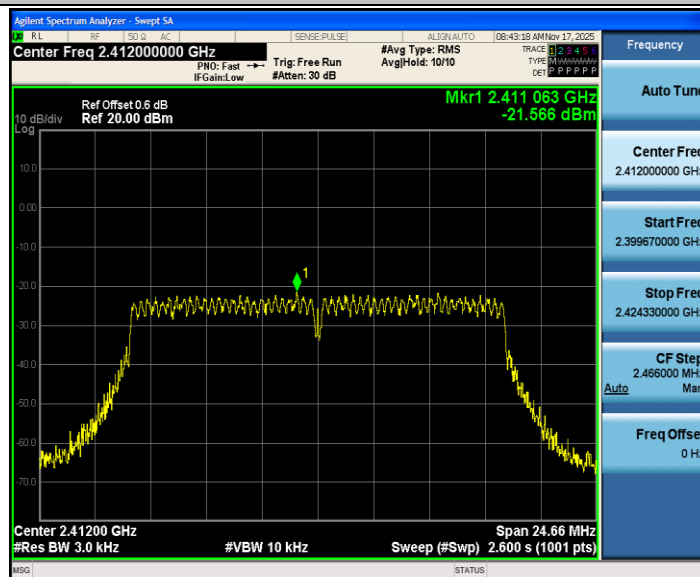
11B\_Ant1\_2437



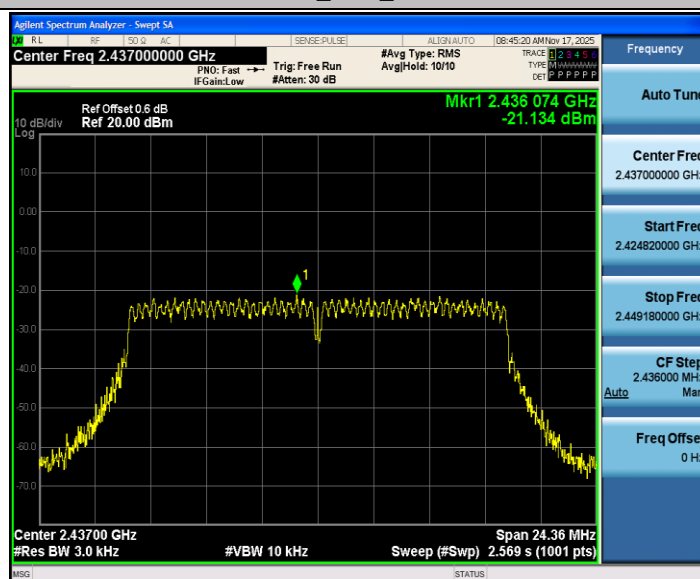
11B\_Ant1\_2462



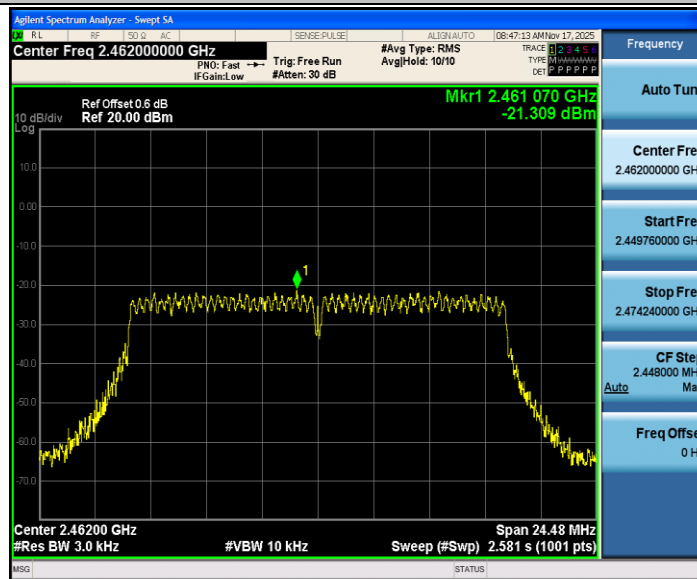
11G\_Ant1\_2412



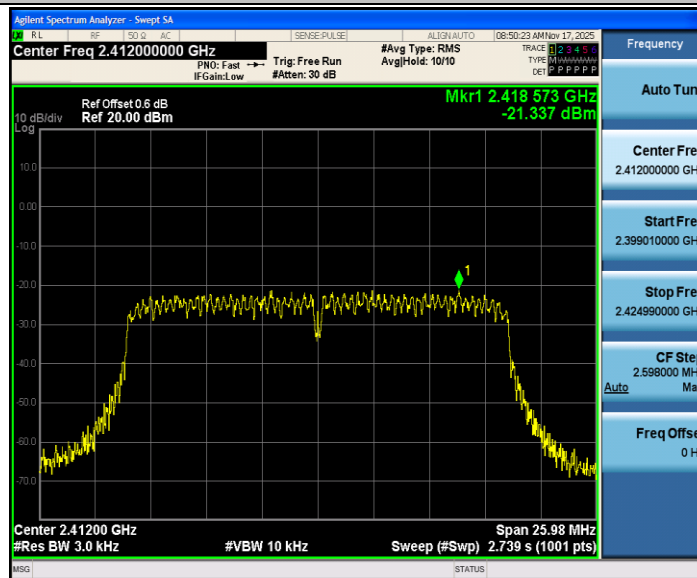
11G\_Ant1\_2437



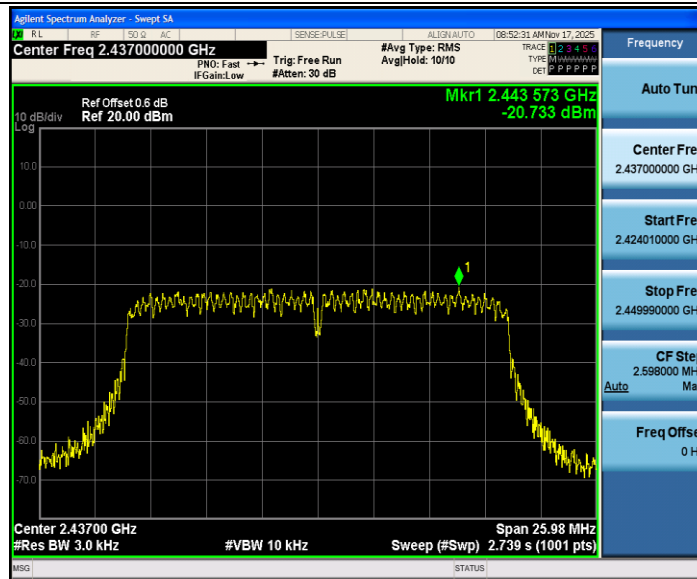
# 11G\_Ant1\_2462



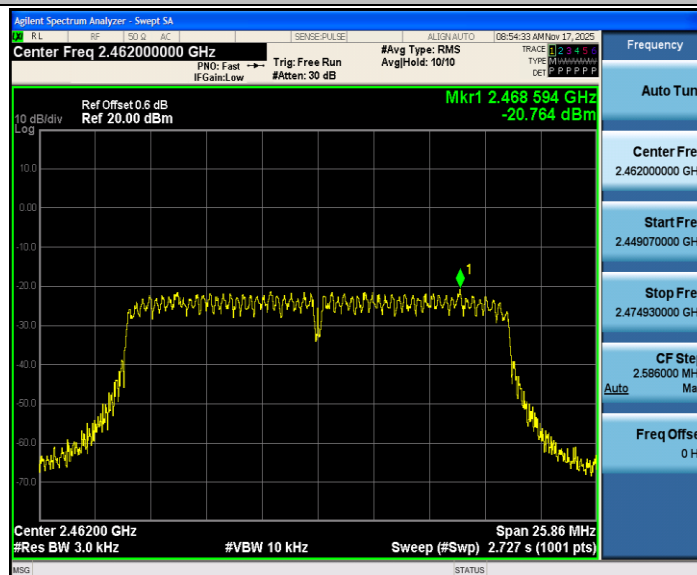
# 11N20SISO\_Ant1\_2412



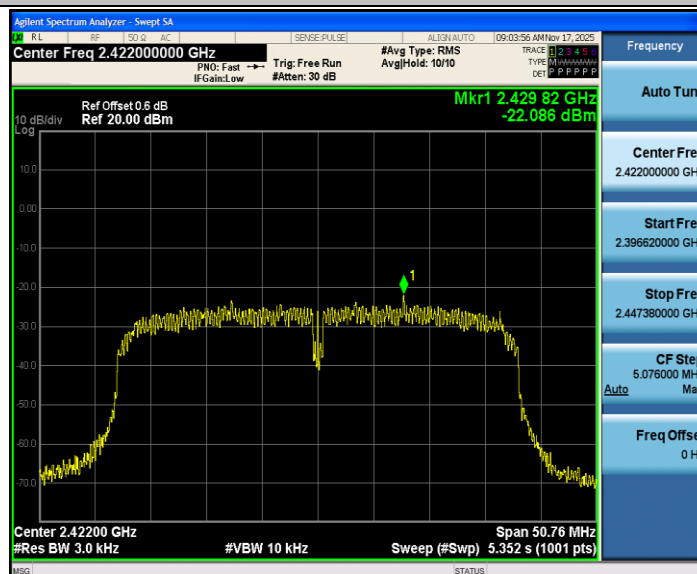
# 11N20SISO\_Ant1\_2437



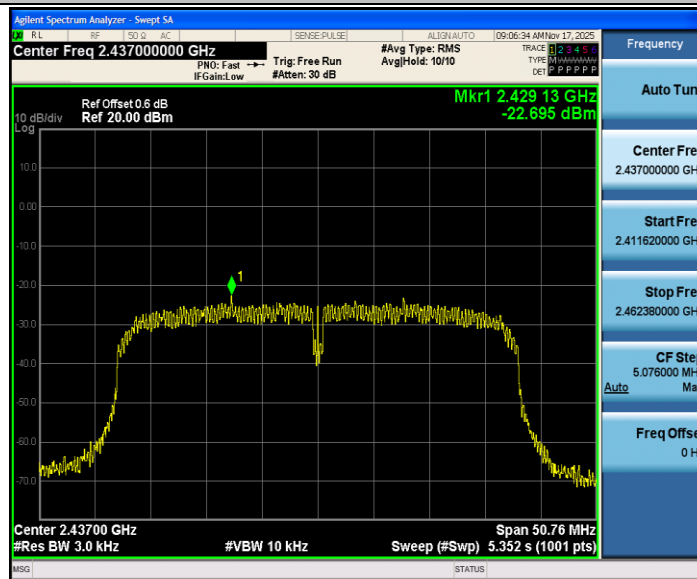
11N20SISO\_Ant1\_2462



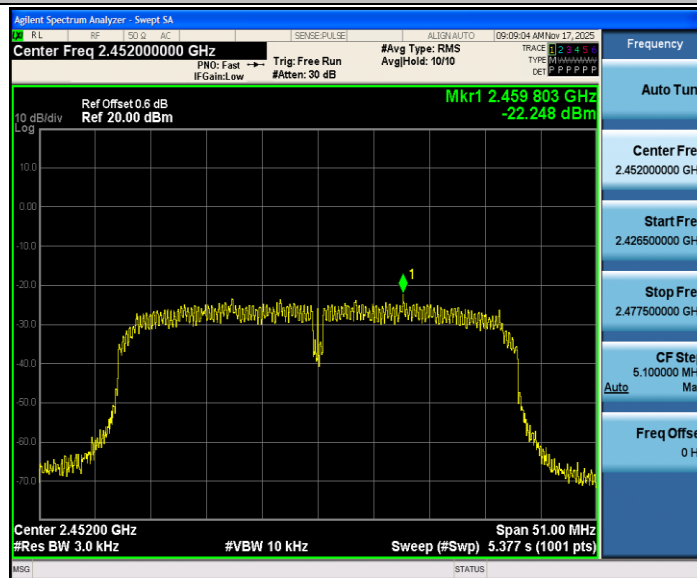
11N40SISO\_Ant1\_2422



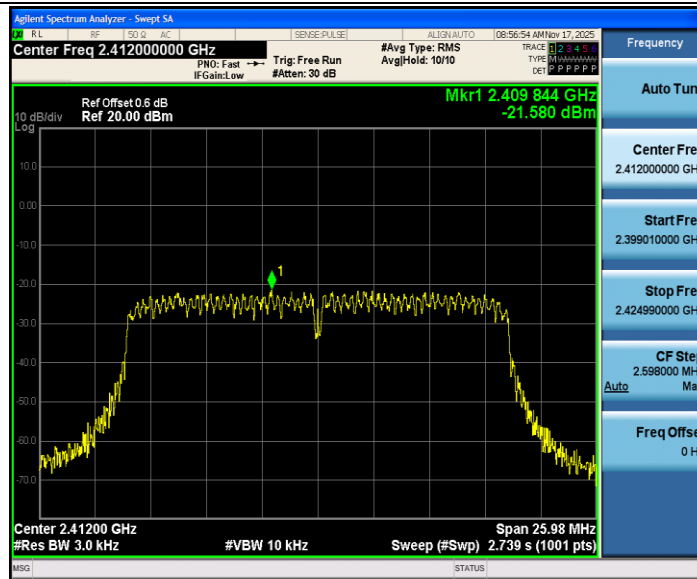
# 11N40SISO\_Ant1\_2437



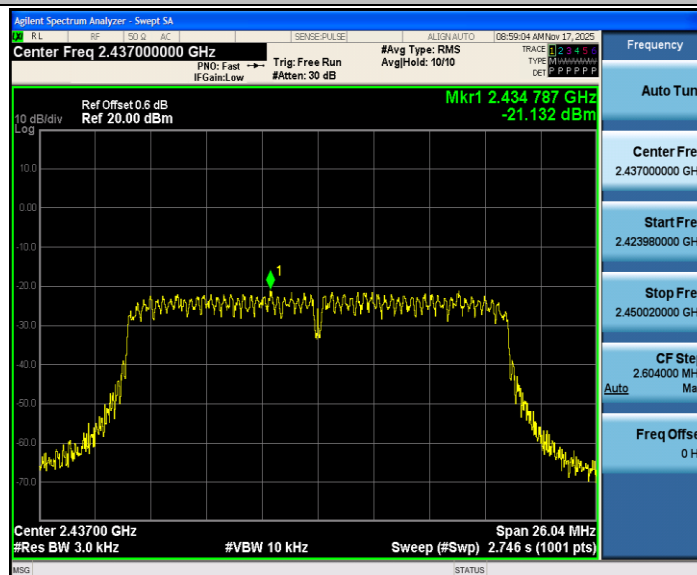
# 11N40SISO\_Ant1\_2452



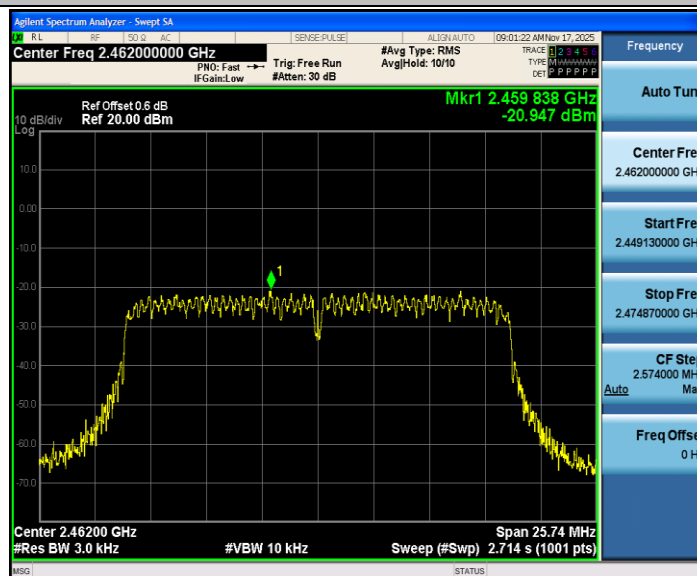
# 11AX20SISO\_Ant1\_2412



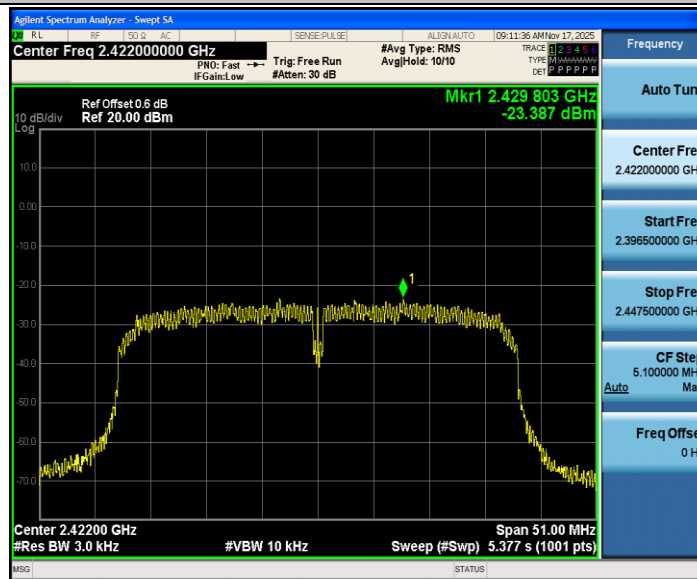
11AX20SISO\_Ant1\_2437



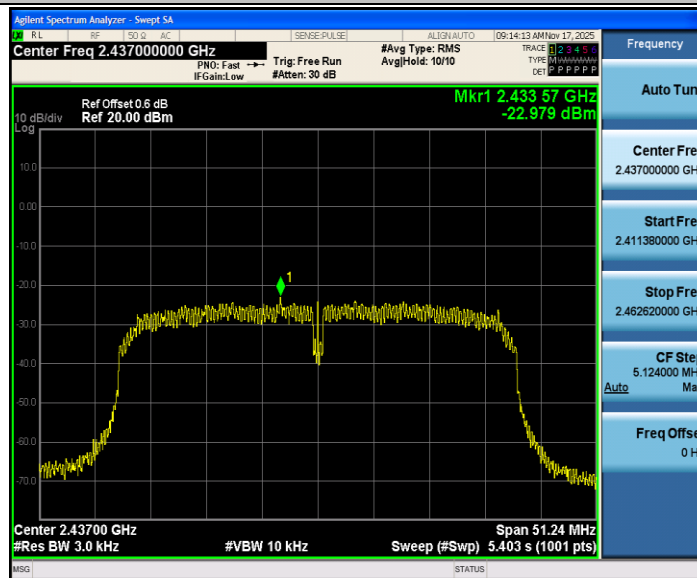
11AX20SISO\_Ant1\_2462



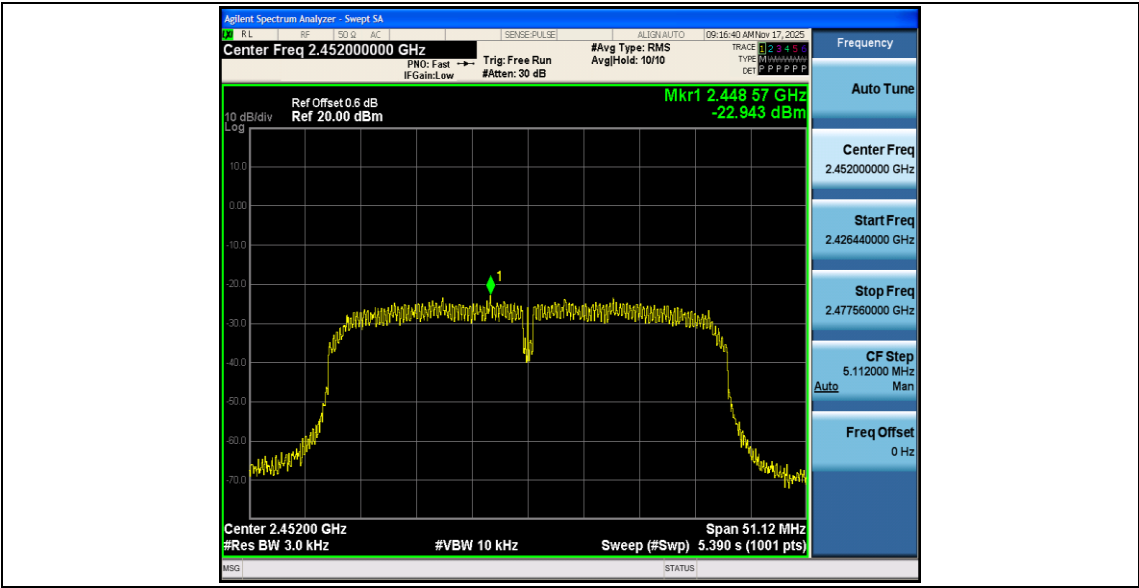
# 11AX40SISO\_Ant1\_2422



# 11AX40SISO\_Ant1\_2437



# 11AX40SISO\_Ant1\_2452



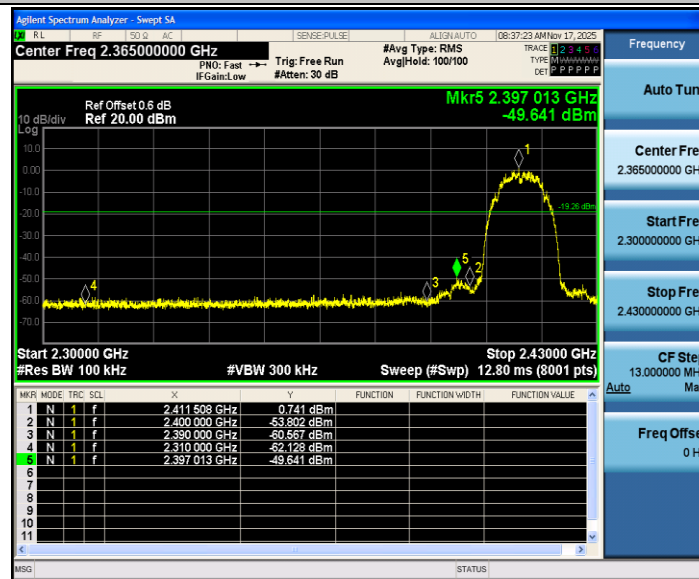
## Appendix E: Band edge measurements

### Test Result

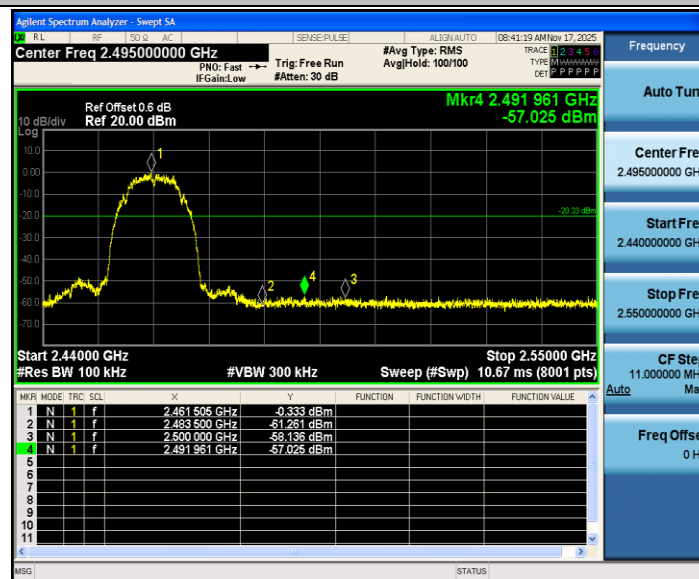
| TestMode   | Antenna | Channel | Frequency[MHz] | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|------------|---------|---------|----------------|---------------|-------------|------------|---------|
| 11B        | Ant1    | Low     | 2412           | 0.74          | -49.64      | ≤-19.26    | PASS    |
|            |         | High    | 2462           | -0.33         | -57.03      | ≤-20.33    | PASS    |
| 11G        | Ant1    | Low     | 2412           | -7.44         | -42.1       | ≤-27.44    | PASS    |
|            |         | High    | 2462           | -7.22         | -51.29      | ≤-27.22    | PASS    |
| 11N20SISO  | Ant1    | Low     | 2412           | -7.45         | -45.37      | ≤-27.45    | PASS    |
|            |         | High    | 2462           | -7.29         | -52.2       | ≤-27.29    | PASS    |
| 11N40SISO  | Ant1    | Low     | 2422           | -10.49        | -49.95      | ≤-30.49    | PASS    |
|            |         | High    | 2452           | -10.53        | -53.86      | ≤-30.53    | PASS    |
| 11AX20SISO | Ant1    | Low     | 2412           | -7.63         | -44.87      | ≤-27.63    | PASS    |
|            |         | High    | 2462           | -6.88         | -53.33      | ≤-26.88    | PASS    |
| 11AX40SISO | Ant1    | Low     | 2422           | -10.88        | -49.21      | ≤-30.88    | PASS    |
|            |         | High    | 2452           | -10.82        | -52.39      | ≤-30.82    | PASS    |

## Test Graphs

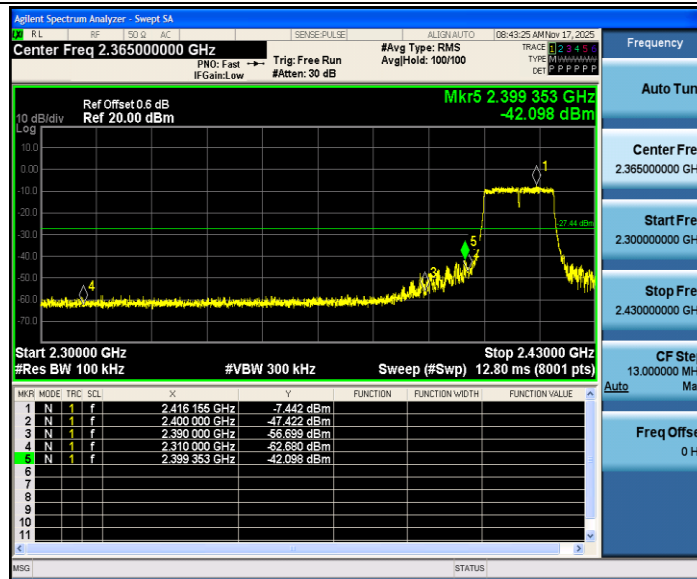
11B\_Ant1\_Low\_2412



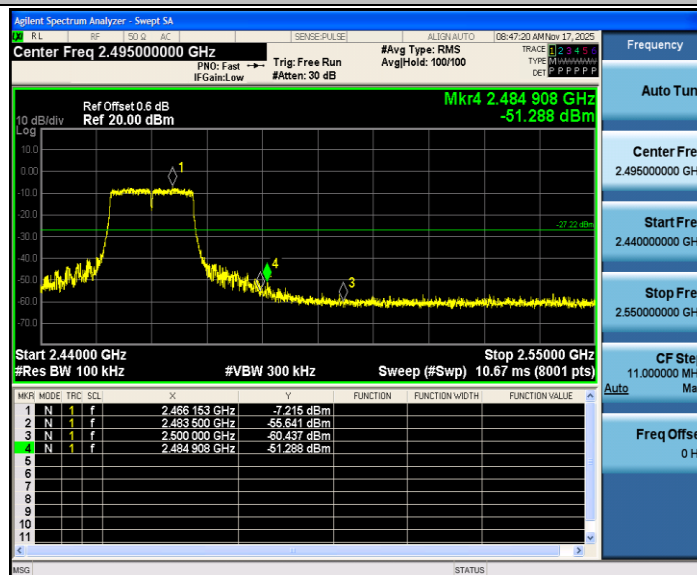
11B\_Ant1\_High\_2462



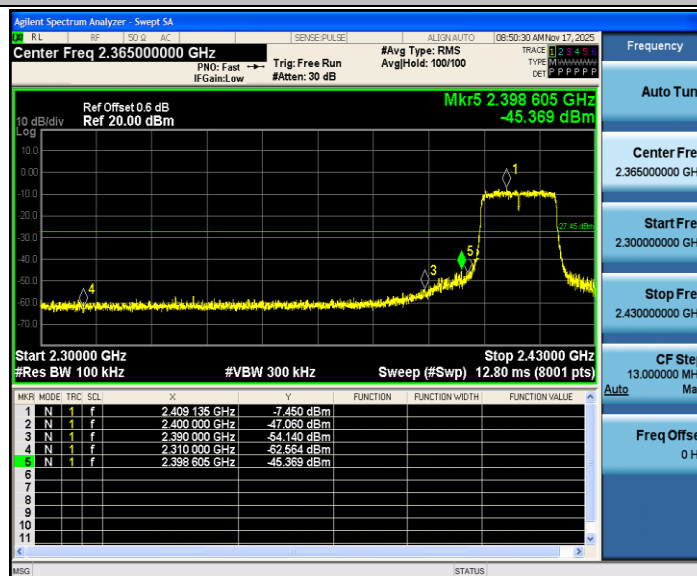
11G\_Ant1\_Low\_2412



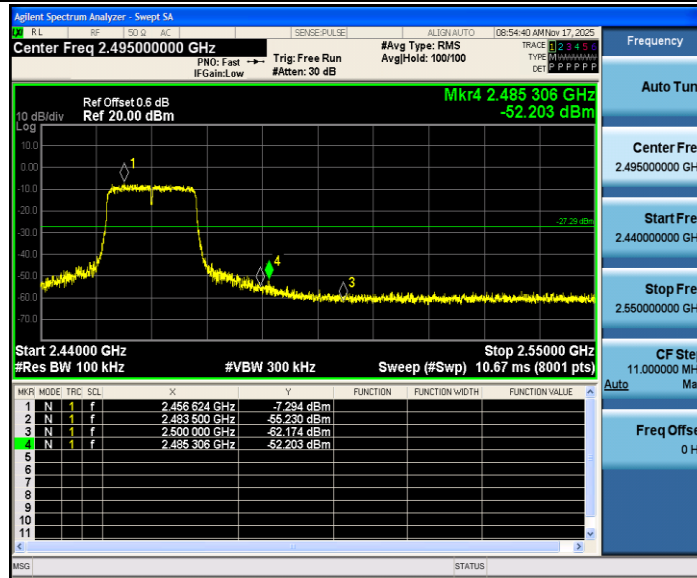
11G\_Ant1\_High\_2462



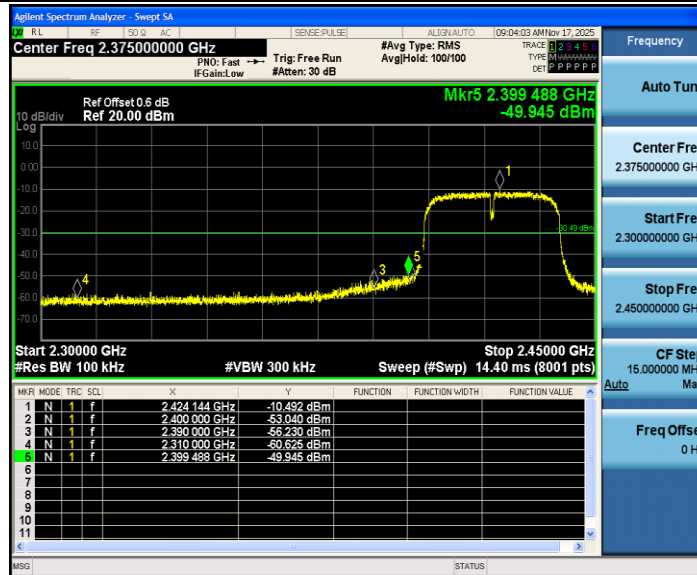
11N20SISO\_Ant1\_Low\_2412



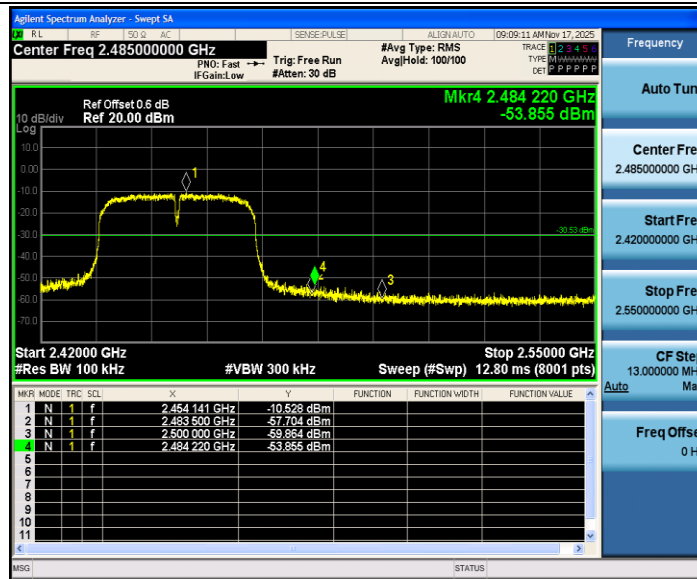
# 11N20SISO\_Ant1\_High\_2462



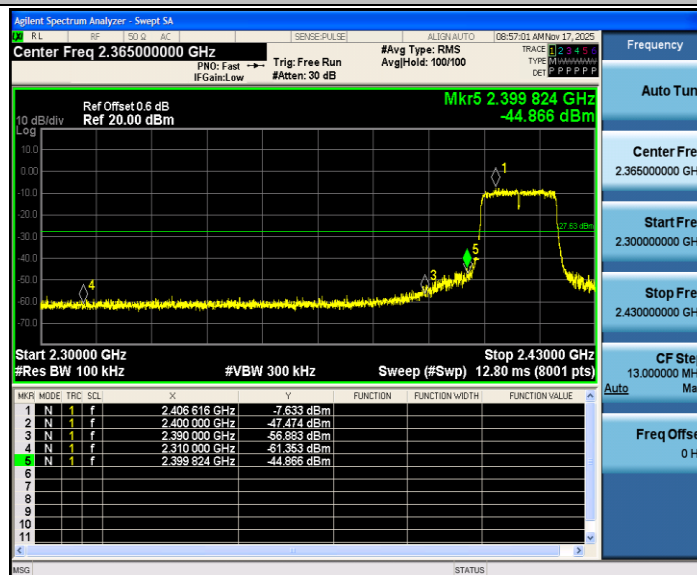
# 11N40SISO\_Ant1\_Low\_2422



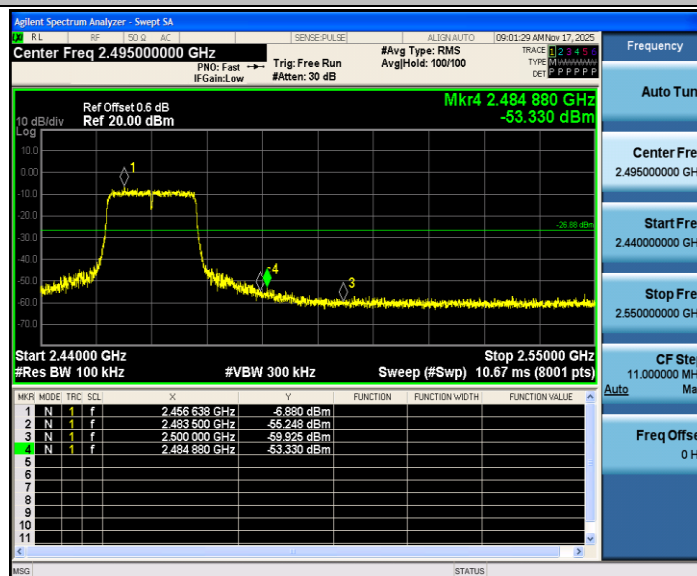
# 11N40SISO\_Ant1\_High\_2452



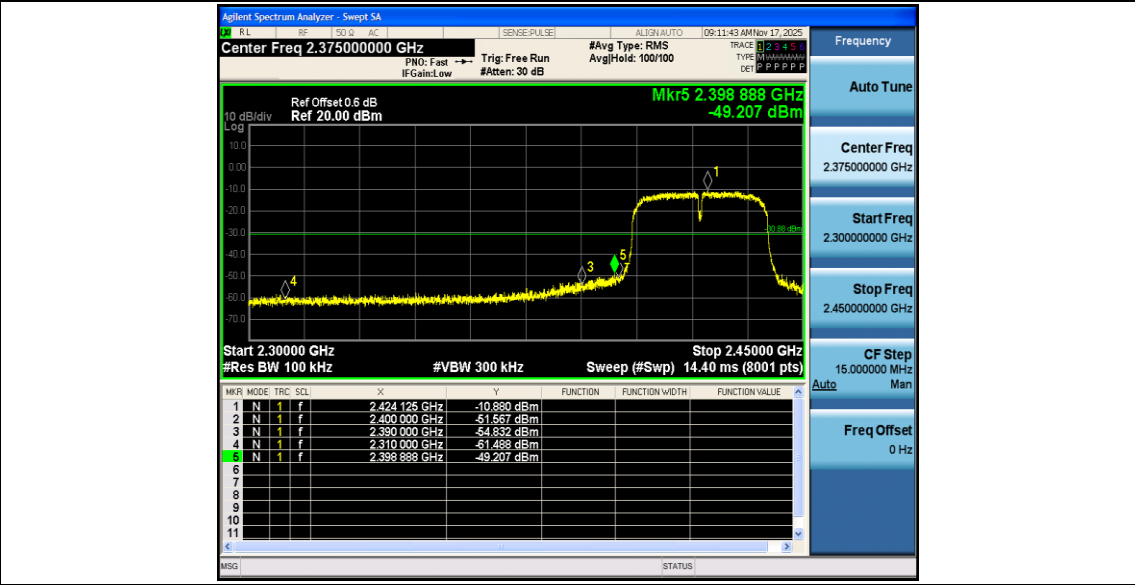
11AX20SISO\_Ant1\_Low\_2412



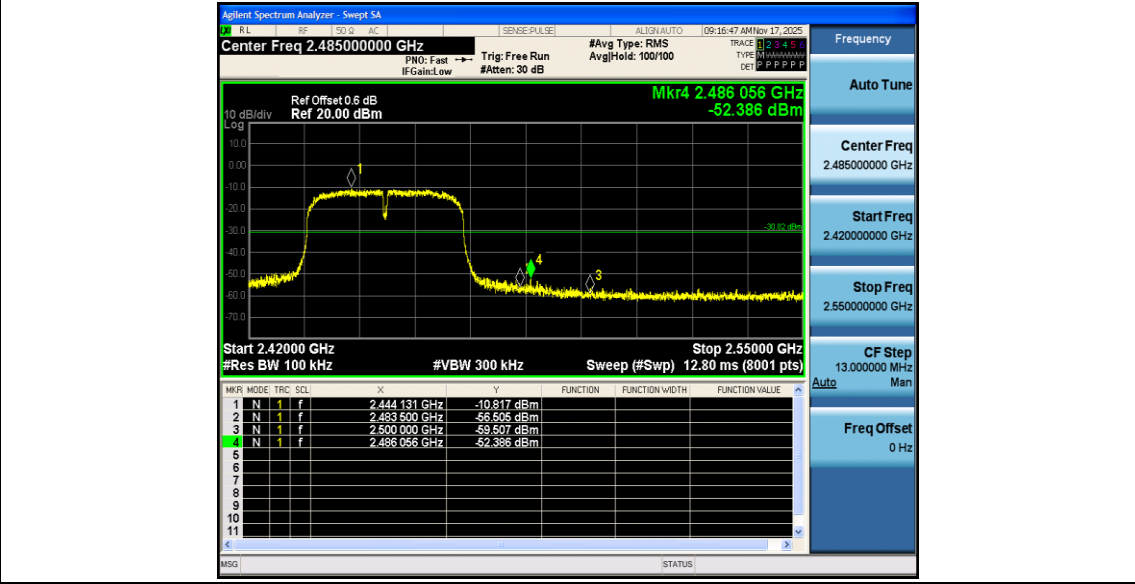
11AX20SISO\_Ant1\_High\_2462



## 11AX40SISO\_Ant1\_Low\_2422



|                           |
|---------------------------|
| 11AX40SISO_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       | -0.77          | -0.77        | ---         | PASS    |
|            |         |                | 30~1000         | -0.77          | -55.6        | ≤-20.77     | PASS    |
|            |         |                | 1000~26500      | -0.77          | -45.22       | ≤-20.77     | PASS    |
|            |         | 2437           | Reference       | -0.98          | -0.98        | ---         | PASS    |
|            |         |                | 30~1000         | -0.98          | -55.62       | ≤-20.98     | PASS    |
|            |         |                | 1000~26500      | -0.98          | -45.49       | ≤-20.98     | PASS    |
|            |         | 2462           | Reference       | 0.67           | 0.67         | ---         | PASS    |
|            |         |                | 30~1000         | 0.67           | -54.2        | ≤-19.33     | PASS    |
|            |         |                | 1000~26500      | 0.67           | -46.07       | ≤-19.33     | PASS    |
| 11G        | Ant1    | 2412           | Reference       | -7.75          | -7.75        | ---         | PASS    |
|            |         |                | 30~1000         | -7.75          | -59.63       | ≤-27.75     | PASS    |
|            |         |                | 1000~26500      | -7.75          | -44.78       | ≤-27.75     | PASS    |
|            |         | 2437           | Reference       | -7.85          | -7.85        | ---         | PASS    |
|            |         |                | 30~1000         | -7.85          | -60.08       | ≤-27.85     | PASS    |
|            |         |                | 1000~26500      | -7.85          | -45.28       | ≤-27.85     | PASS    |
|            |         | 2462           | Reference       | -7.55          | -7.55        | ---         | PASS    |
|            |         |                | 30~1000         | -7.55          | -59.33       | ≤-27.55     | PASS    |
|            |         |                | 1000~26500      | -7.55          | -45.7        | ≤-27.55     | PASS    |
| 11N20SISO  | Ant1    | 2412           | Reference       | -8.25          | -8.25        | ---         | PASS    |
|            |         |                | 30~1000         | -8.25          | -60.11       | ≤-28.25     | PASS    |
|            |         |                | 1000~26500      | -8.25          | -44.67       | ≤-28.25     | PASS    |
|            |         | 2437           | Reference       | -8.03          | -8.03        | ---         | PASS    |
|            |         |                | 30~1000         | -8.03          | -59.18       | ≤-28.03     | PASS    |
|            |         |                | 1000~26500      | -8.03          | -45.1        | ≤-28.03     | PASS    |
|            |         | 2462           | Reference       | -7.16          | -7.16        | ---         | PASS    |
|            |         |                | 30~1000         | -7.16          | -59.59       | ≤-27.16     | PASS    |
|            |         |                | 1000~26500      | -7.16          | -45.26       | ≤-27.16     | PASS    |
| 11N40SISO  | Ant1    | 2422           | Reference       | -11.37         | -11.37       | ---         | PASS    |
|            |         |                | 30~1000         | -11.37         | -61.51       | ≤-31.37     | PASS    |
|            |         |                | 1000~26500      | -11.37         | -44.79       | ≤-31.37     | PASS    |
|            |         | 2437           | Reference       | -11.12         | -11.12       | ---         | PASS    |
|            |         |                | 30~1000         | -11.12         | -62.1        | ≤-31.12     | PASS    |
|            |         |                | 1000~26500      | -11.12         | -42.53       | ≤-31.12     | PASS    |
|            |         | 2452           | Reference       | -10.91         | -10.91       | ---         | PASS    |
|            |         |                | 30~1000         | -10.91         | -62.61       | ≤-30.91     | PASS    |
|            |         |                | 1000~26500      | -10.91         | -45.22       | ≤-30.91     | PASS    |
| 11AX20SISO | Ant1    | 2412           | Reference       | -8.37          | -8.37        | ---         | PASS    |