

## **FCC Appendix RF Test Data for BT**

**FCC ID** : **R38YLCPK21**

**Company** : **Yulong Computer Telecommunication  
Scientific (Shenzhen) Co., Ltd**

**EUT** : **Smart Phone**

**Model Number** : **K21**

**Report No.** : **CTA25091901815**

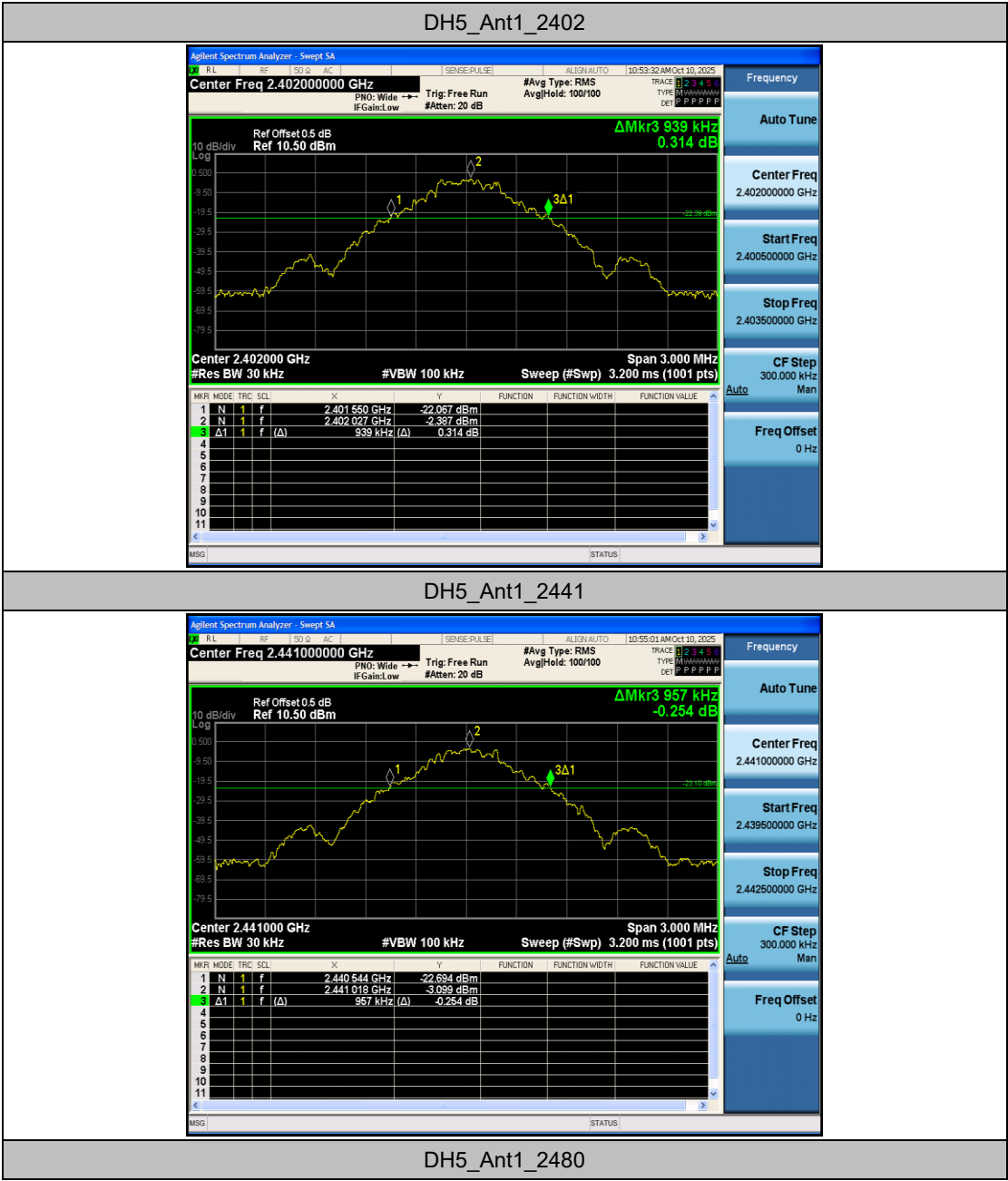
**Reviewed By** : **Eric Wang**

## Appendix A: 20dB Emission Bandwidth

### Test Result

| TestMode | Antenna | Freq(MHz) | 20dB<br>EBW[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|-----------|------------------|----------|----------|------------|---------|
| DH5      | Ant1    | 2402      | 0.939            | 2401.550 | 2402.489 | ---        | ---     |
|          |         | 2441      | 0.957            | 2440.544 | 2441.501 | ---        | ---     |
|          |         | 2480      | 0.945            | 2479.550 | 2480.495 | ---        | ---     |
| 2DH5     | Ant1    | 2402      | 1.302            | 2401.361 | 2402.663 | ---        | ---     |
|          |         | 2441      | 1.278            | 2440.382 | 2441.660 | ---        | ---     |
|          |         | 2480      | 1.326            | 2479.349 | 2480.675 | ---        | ---     |
| 3DH5     | Ant1    | 2402      | 1.278            | 2401.379 | 2402.657 | ---        | ---     |
|          |         | 2441      | 1.317            | 2440.349 | 2441.666 | ---        | ---     |
|          |         | 2480      | 1.308            | 2479.355 | 2480.663 | ---        | ---     |

Test Graphs





2DH5\_Ant1\_2402



2DH5\_Ant1\_2441



## 2DH5\_Ant1\_2480



## 3DH5\_Ant1\_2402



## 3DH5\_Ant1\_2441



3DH5\_Ant1\_2480



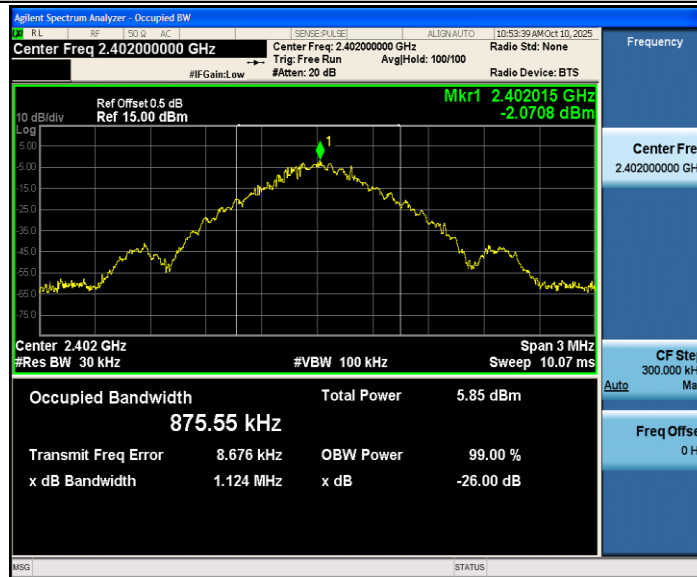
## Appendix B: Occupied Channel Bandwidth

### Test Result

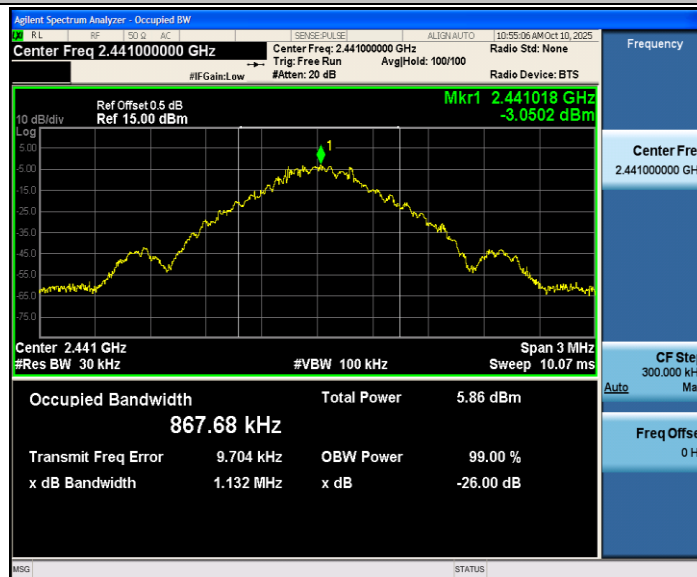
| TestMode | Antenna | Freq(MHz) | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|----------|---------|-----------|-----------|-----------|-----------|------------|---------|
| DH5      | Ant1    | 2402      | 0.87555   | 2401.5709 | 2402.4465 | ---        | ---     |
|          |         | 2441      | 0.86768   | 2440.5759 | 2441.4435 | ---        | ---     |
|          |         | 2480      | 0.86932   | 2479.5743 | 2480.4436 | ---        | ---     |
| 2DH5     | Ant1    | 2402      | 1.1861    | 2401.4170 | 2402.6031 | ---        | ---     |
|          |         | 2441      | 1.1896    | 2440.4148 | 2441.6044 | ---        | ---     |
|          |         | 2480      | 1.1873    | 2479.4167 | 2480.6040 | ---        | ---     |
| 3DH5     | Ant1    | 2402      | 1.1839    | 2401.4174 | 2402.6013 | ---        | ---     |
|          |         | 2441      | 1.1836    | 2440.4173 | 2441.6009 | ---        | ---     |
|          |         | 2480      | 1.1893    | 2479.4150 | 2480.6043 | ---        | ---     |

## Test Graphs

DH5\_Ant1\_2402



DH5\_Ant1\_2441



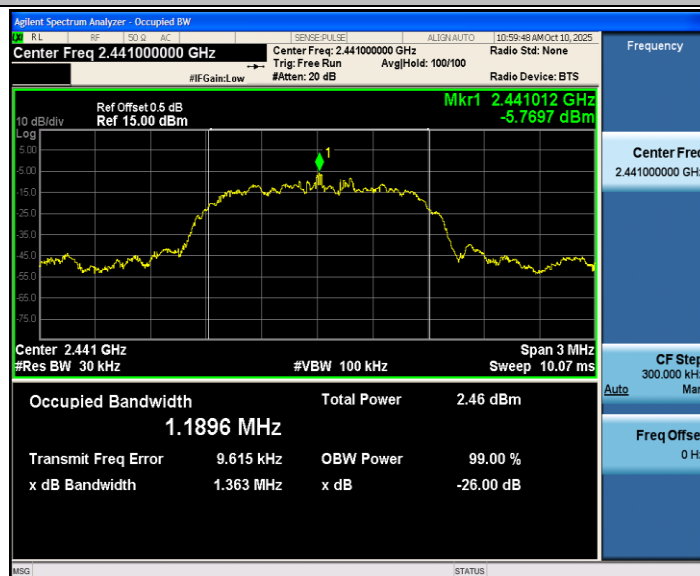
DH5\_Ant1\_2480



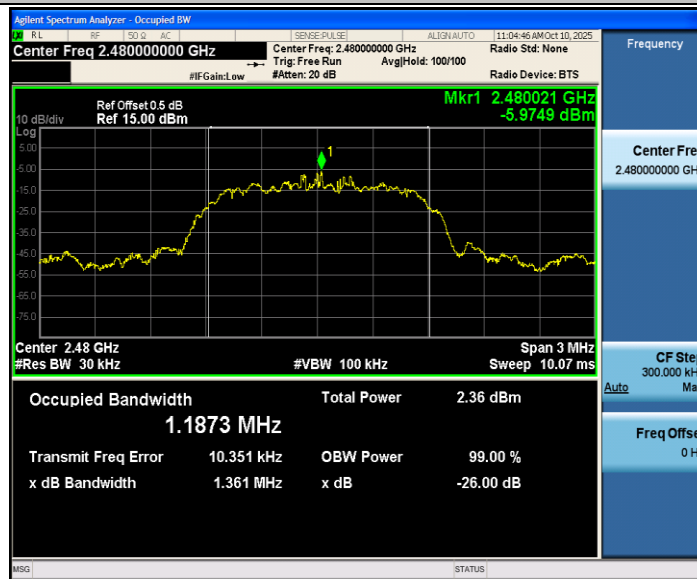
2DH5\_Ant1\_2402



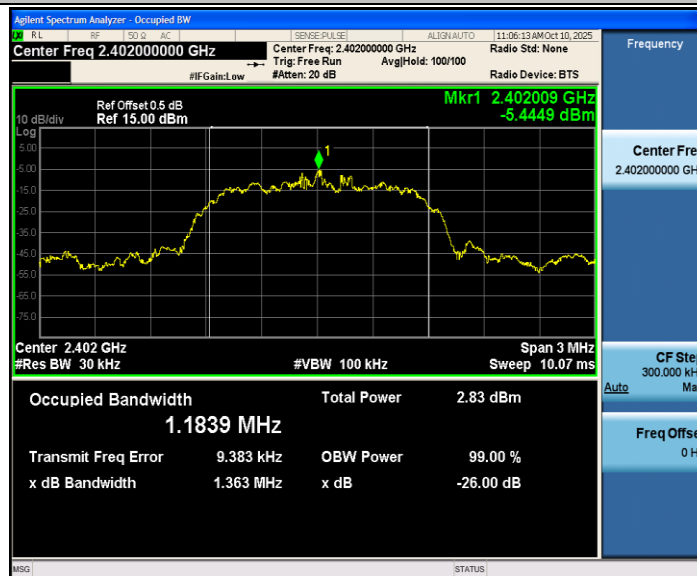
2DH5\_Ant1\_2441



### 2DH5\_Ant1\_2480



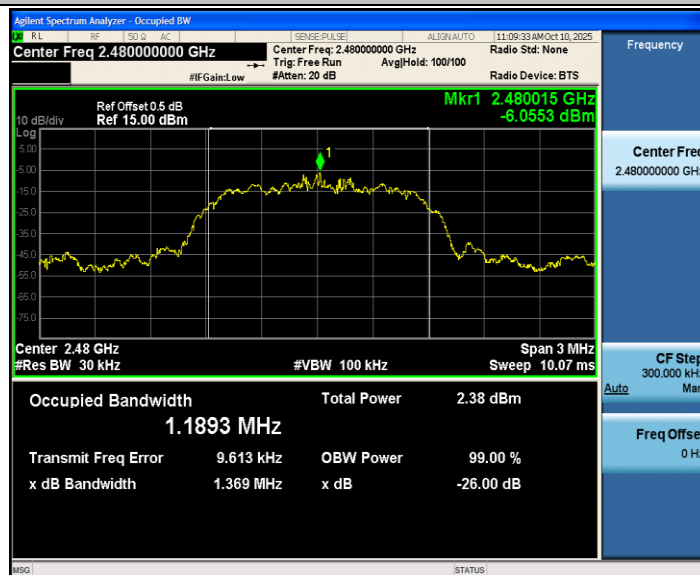
### 3DH5\_Ant1\_2402



### 3DH5\_Ant1\_2441



3DH5\_Ant1\_2480



## Appendix C: Maximum conducted output power

### Test Result Peak

| Test Mode | Antenna | Freq(MHz) | Conducted Peak Power[dBm] | Conducted Limit[dBm] | Verdict |
|-----------|---------|-----------|---------------------------|----------------------|---------|
| DH5       | Ant1    | 2402      | 0.04                      | ≤20.97               | PASS    |
|           |         | 2441      | -0.15                     | ≤20.97               | PASS    |
|           |         | 2480      | -0.24                     | ≤20.97               | PASS    |
| 2DH5      | Ant1    | 2402      | -0.74                     | ≤20.97               | PASS    |
|           |         | 2441      | -0.97                     | ≤20.97               | PASS    |
|           |         | 2480      | -1.07                     | ≤20.97               | PASS    |
| 3DH5      | Ant1    | 2402      | -0.88                     | ≤20.97               | PASS    |
|           |         | 2441      | -1.03                     | ≤20.97               | PASS    |
|           |         | 2480      | -1.10                     | ≤20.97               | PASS    |

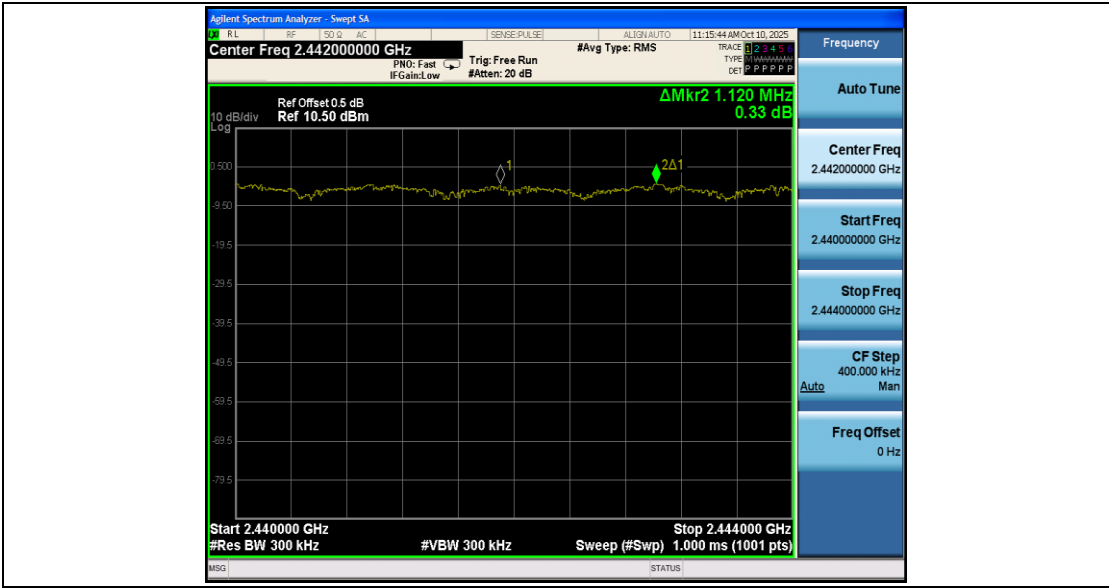
## Appendix D: Carrier frequency separation

### Test Result

| TestMode | Antenna | Freq(MHz) | Result[MHz] | Limit[MHz]   | Verdict |
|----------|---------|-----------|-------------|--------------|---------|
| DH5      | Ant1    | Hop       | 1.004       | $\geq 0.957$ | PASS    |
| 2DH5     | Ant1    | Hop       | 1.028       | $\geq 0.884$ | PASS    |
| 3DH5     | Ant1    | Hop       | 1.12        | $\geq 0.878$ | PASS    |

Test Graphs



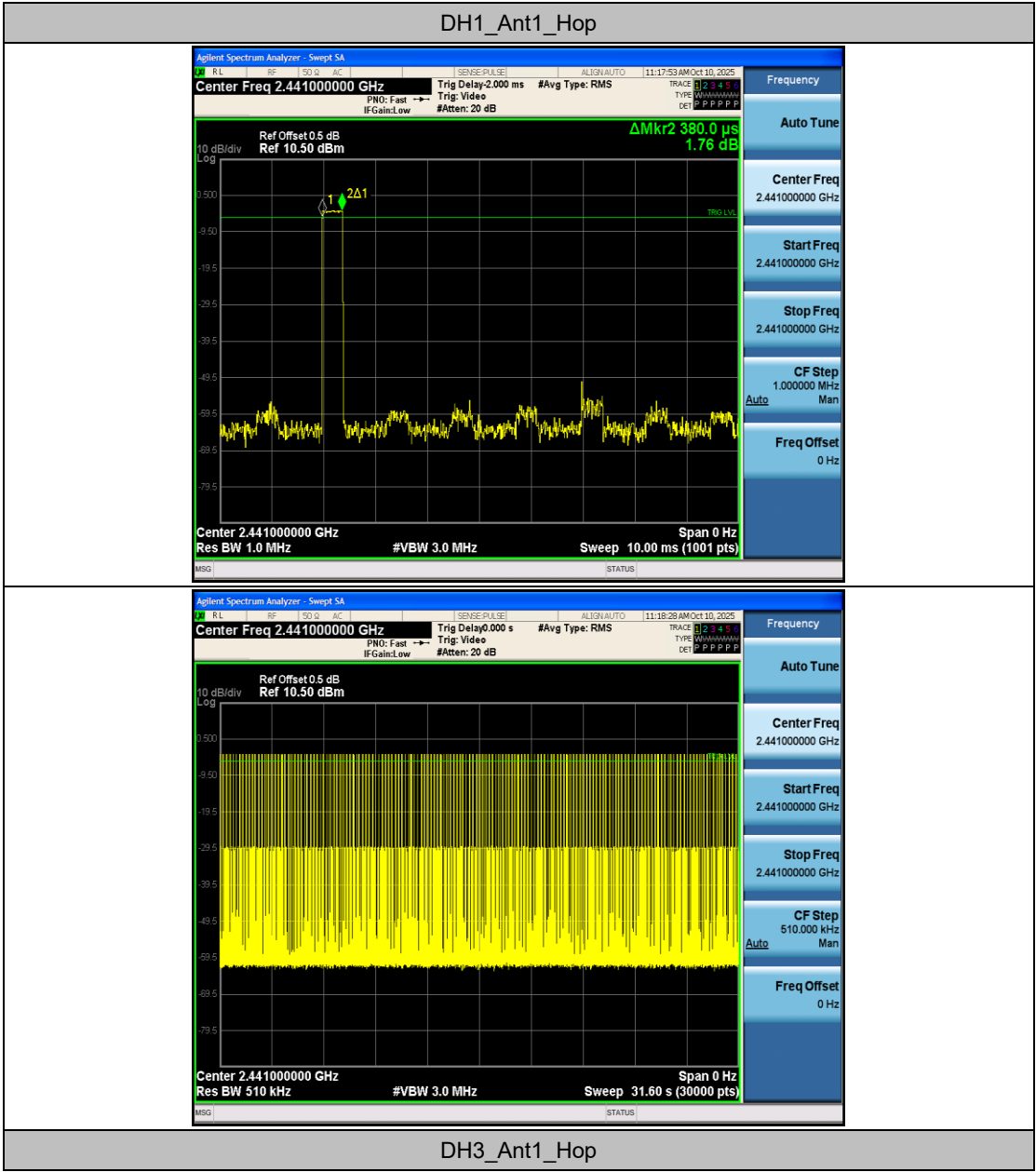


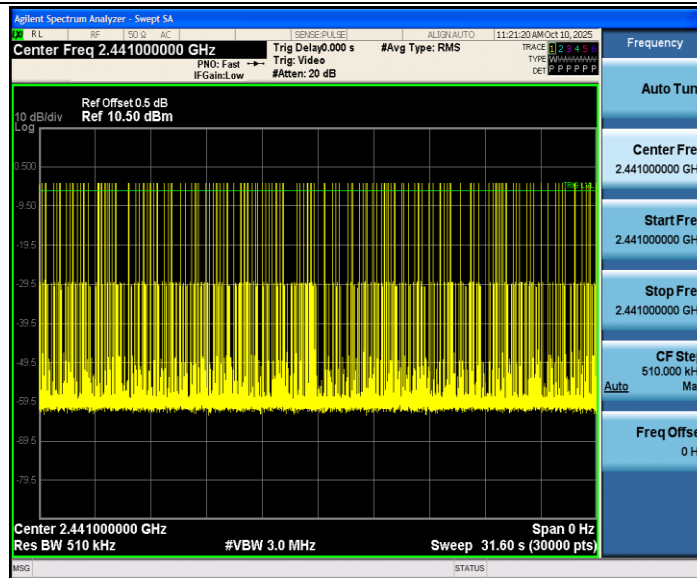
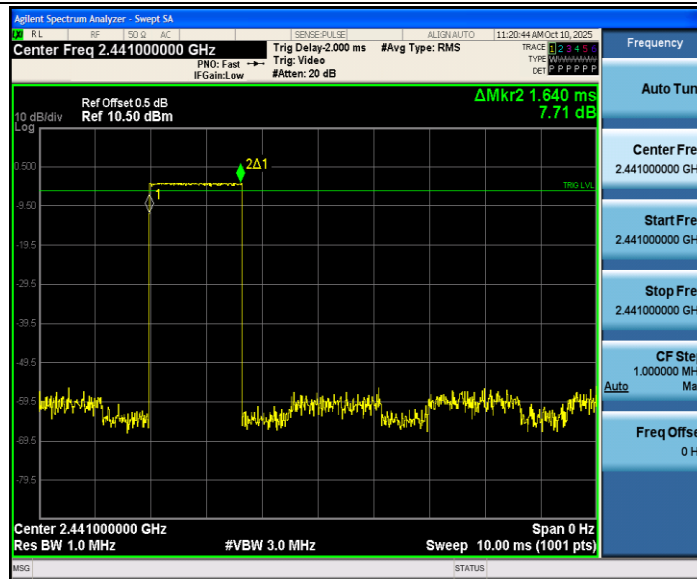
## Appendix E: Time of occupancy

### Test Result

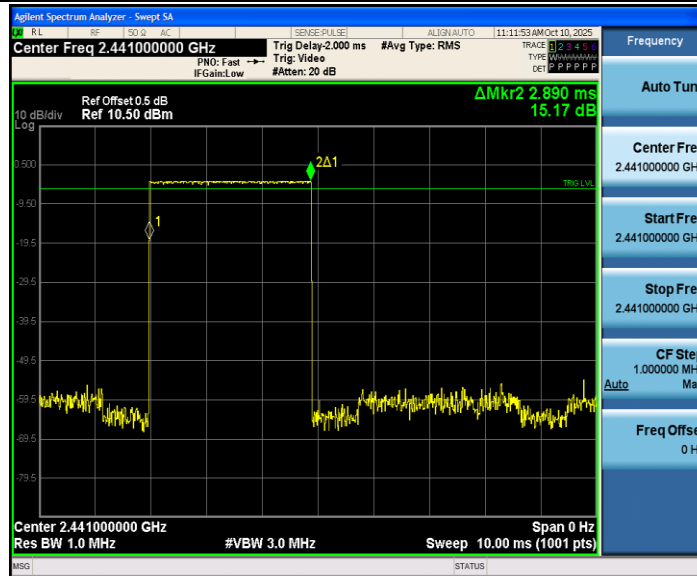
| TestMode | Antenna | Freq(MHz) | BurstWidth<br>[ms] | TotalHops<br>[Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|-----------|--------------------|--------------------|-----------|----------|---------|
| DH1      | Ant1    | Hop       | 0.380              | 318                | 0.121     | ≤0.4     | PASS    |
| DH3      | Ant1    | Hop       | 1.640              | 154                | 0.253     | ≤0.4     | PASS    |
| DH5      | Ant1    | Hop       | 2.890              | 114                | 0.329     | ≤0.4     | PASS    |
| 2DH1     | Ant1    | Hop       | 0.390              | 318                | 0.124     | ≤0.4     | PASS    |
| 2DH3     | Ant1    | Hop       | 1.640              | 169                | 0.277     | ≤0.4     | PASS    |
| 2DH5     | Ant1    | Hop       | 2.900              | 101                | 0.293     | ≤0.4     | PASS    |
| 3DH1     | Ant1    | Hop       | 0.390              | 318                | 0.124     | ≤0.4     | PASS    |
| 3DH3     | Ant1    | Hop       | 1.640              | 157                | 0.257     | ≤0.4     | PASS    |
| 3DH5     | Ant1    | Hop       | 2.900              | 99                 | 0.287     | ≤0.4     | PASS    |

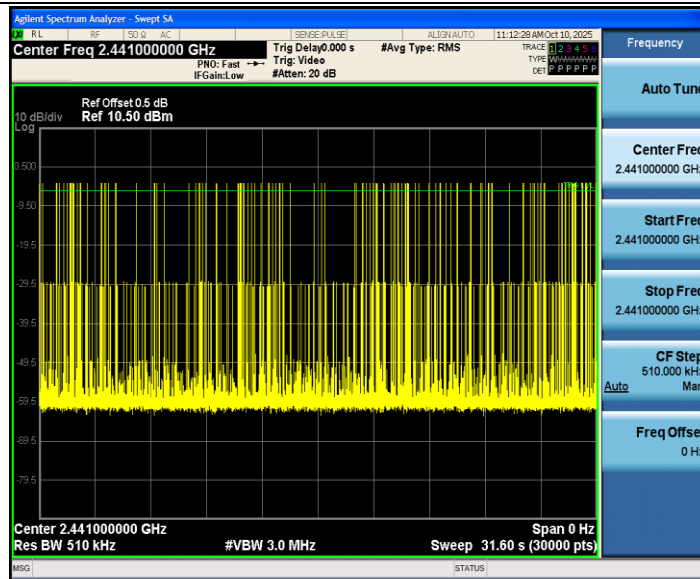
Test Graphs



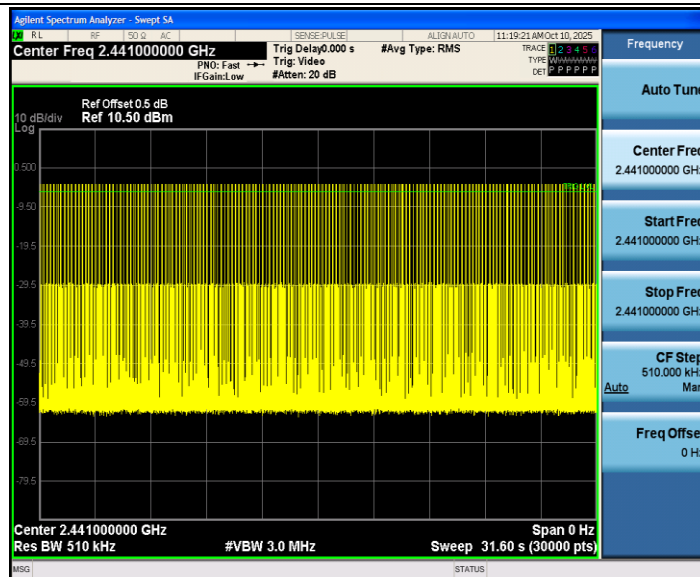
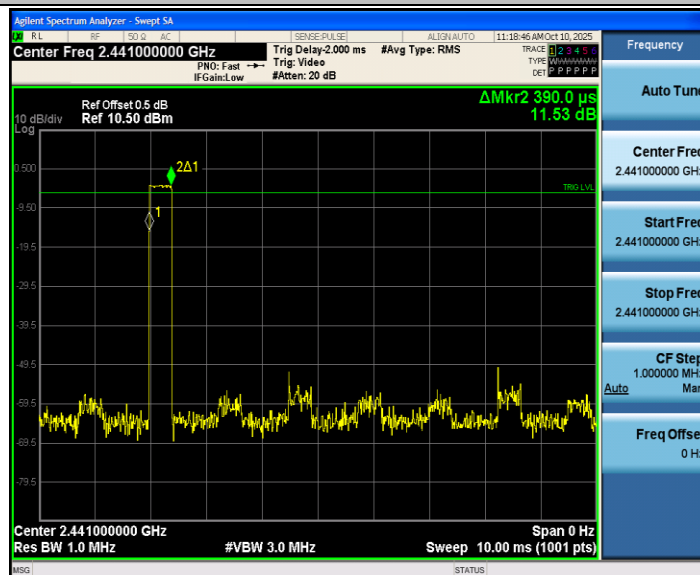


DH5\_Ant1\_Hop

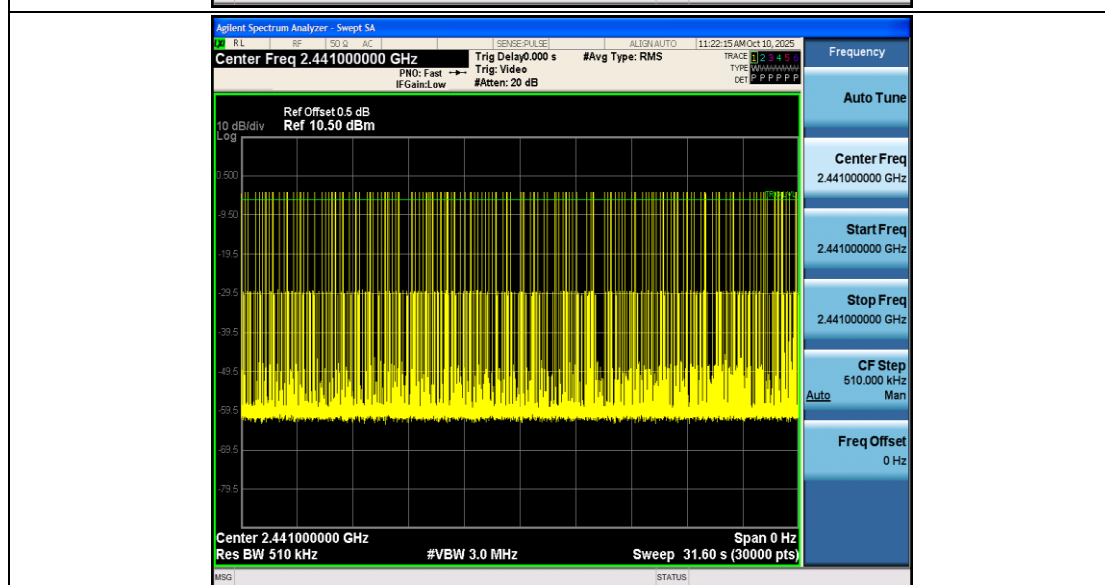




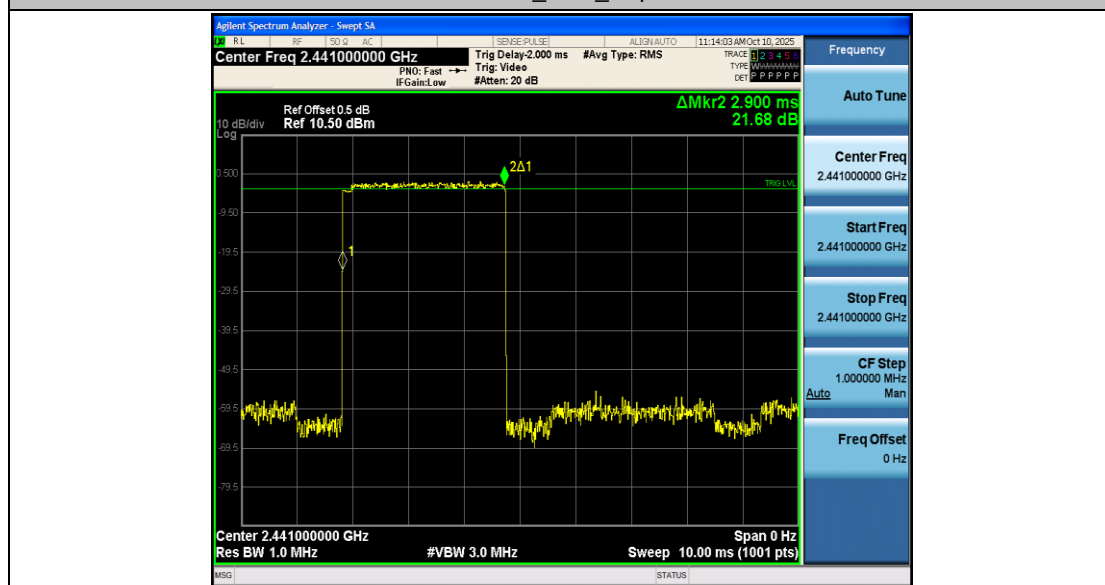
2DH1\_Ant1\_Hop

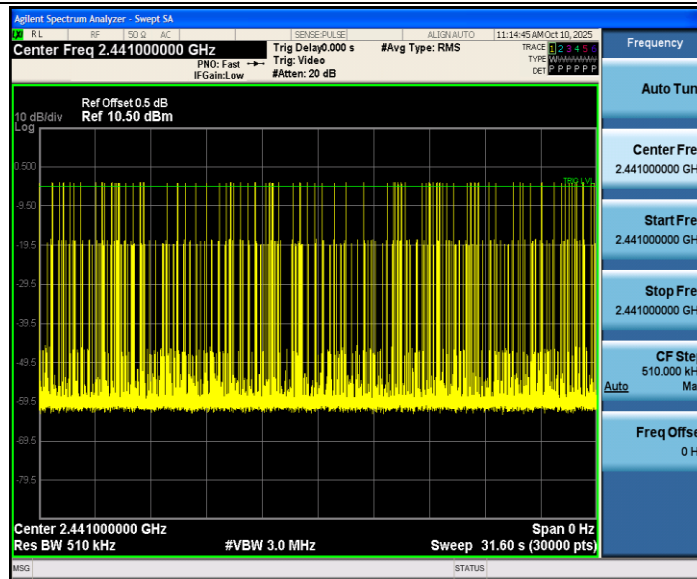


2DH3\_Ant1\_Hop

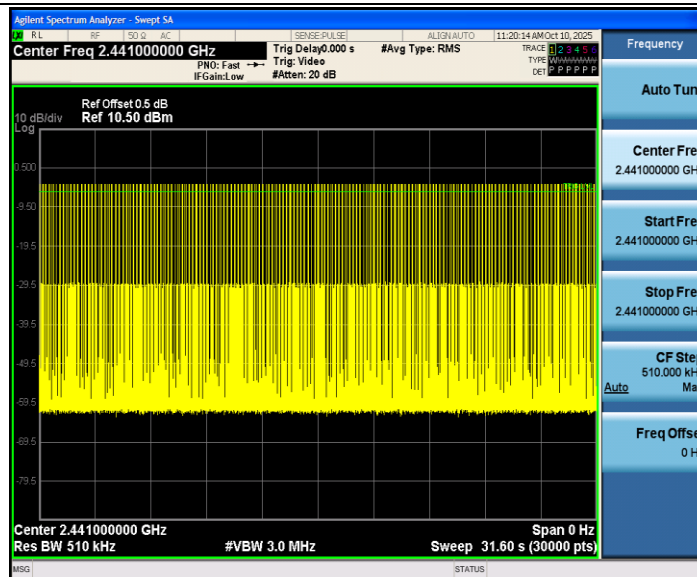
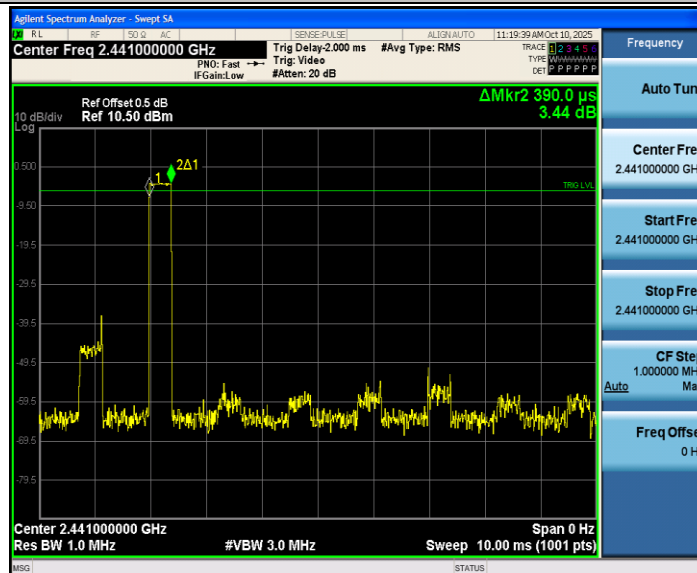


2DH5\_Ant1\_Hop

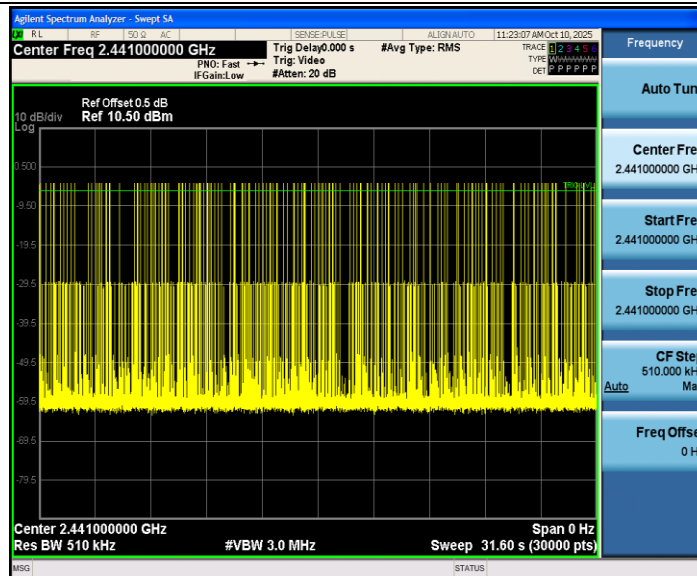




3DH1\_Ant1\_Hop

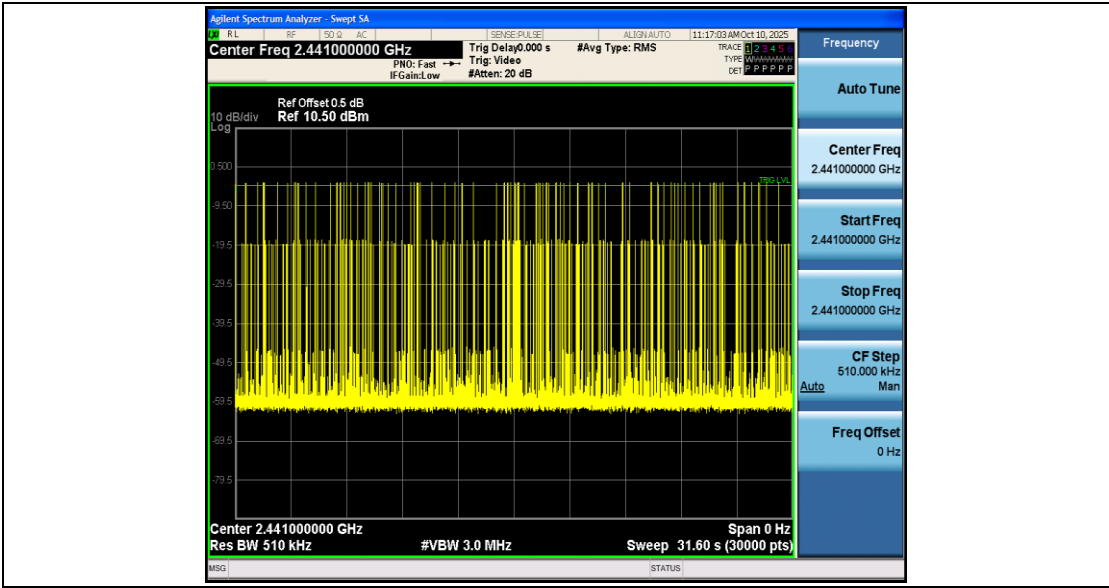


3DH3\_Ant1\_Hop



3DH5\_Ant1\_Hop





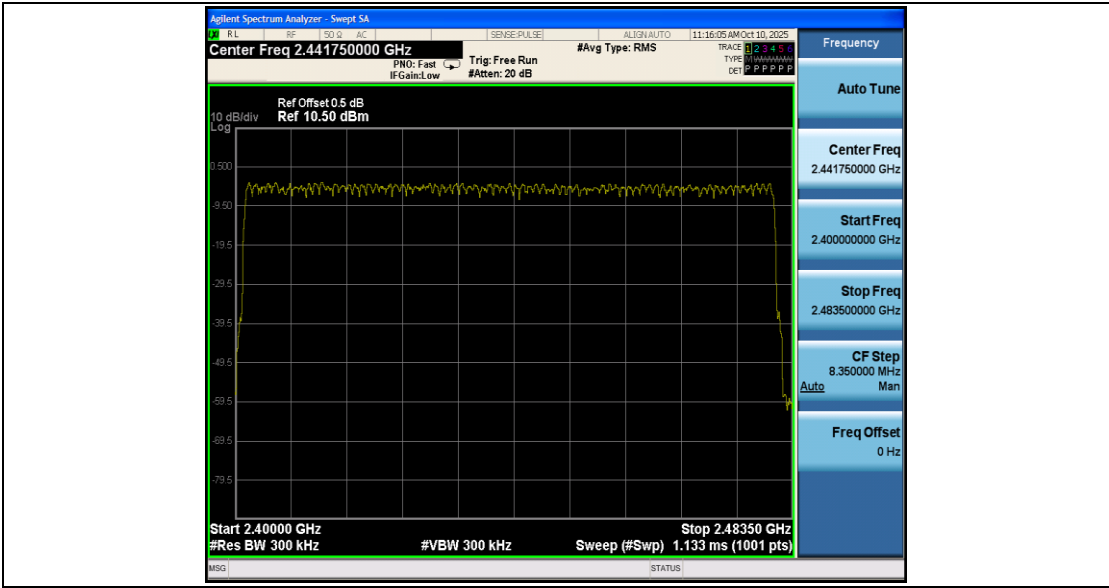
## Appendix F: Number of hopping channels

### Test Result

| TestMode | Antenna | Freq(MHz) | Result[Num] | Limit[Num] | Verdict |
|----------|---------|-----------|-------------|------------|---------|
| DH5      | Ant1    | Hop       | 79          | ≥15        | PASS    |
| 2DH5     | Ant1    | Hop       | 79          | ≥15        | PASS    |
| 3DH5     | Ant1    | Hop       | 79          | ≥15        | PASS    |

Test Graphs



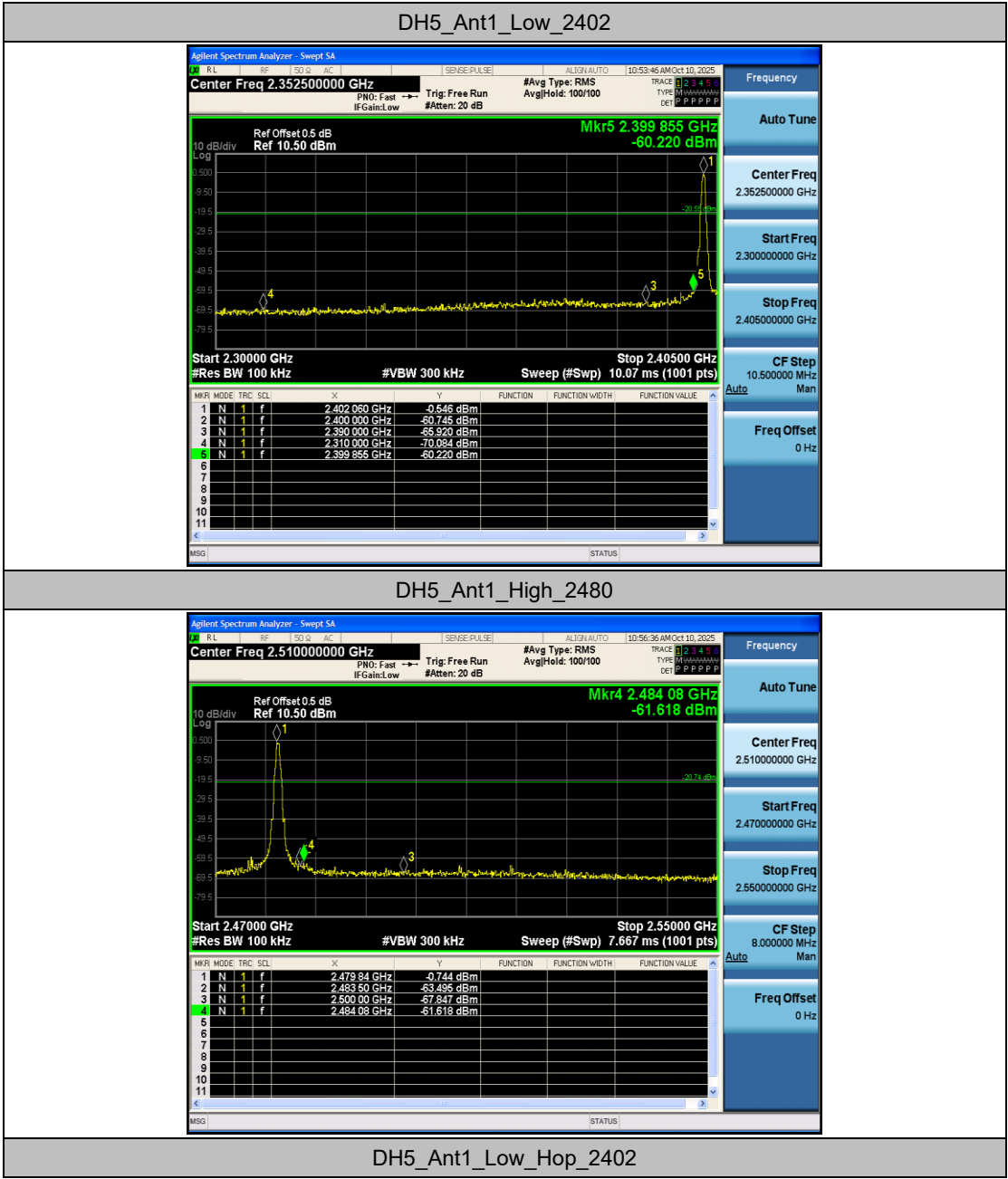


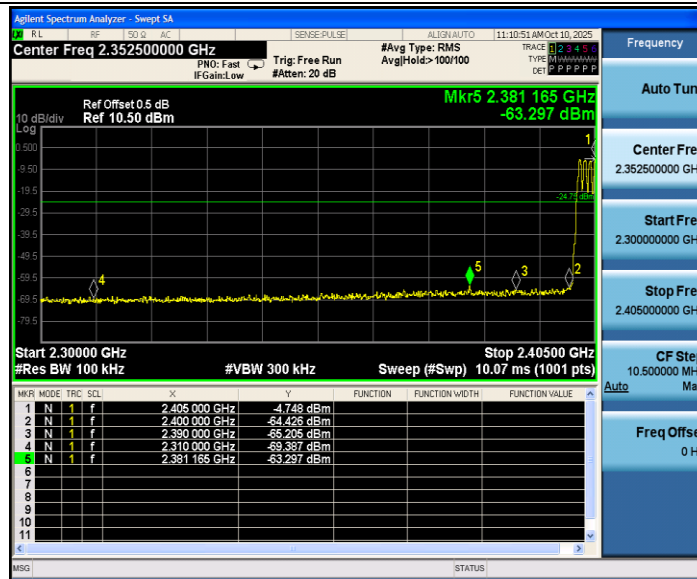
## Appendix G: Band edge measurements

### Test Result

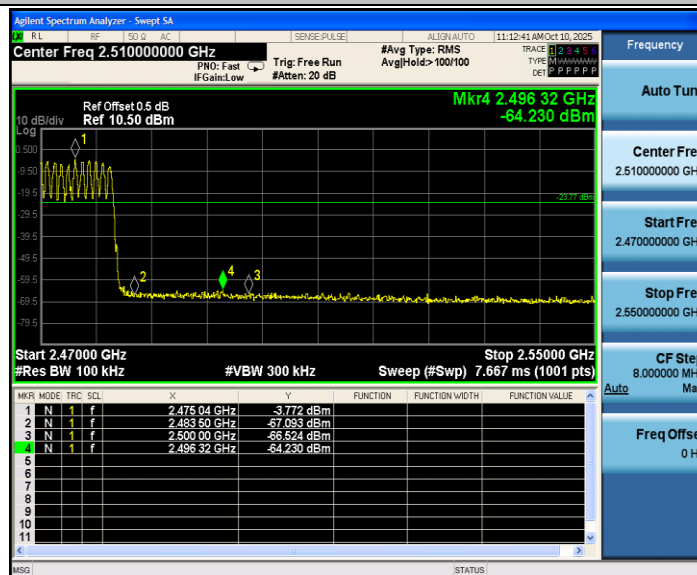
| TestMode | Antenna | ChName | Freq(MHz) | RefLevel<br>[dBm] | Result<br>[dBm] | Limit<br>[dBm] | Verdict |
|----------|---------|--------|-----------|-------------------|-----------------|----------------|---------|
| DH5      | Ant1    | Low    | 2402      | -0.55             | -60.22          | $\leq -20.55$  | PASS    |
|          |         | High   | 2480      | -0.74             | -61.62          | $\leq -20.74$  | PASS    |
|          |         | Low    | Hop_2402  | -4.75             | -63.3           | $\leq -24.75$  | PASS    |
|          |         | High   | Hop_2480  | -3.77             | -64.23          | $\leq -23.77$  | PASS    |
| 2DH5     | Ant1    | Low    | 2402      | -4.79             | -57.08          | $\leq -24.79$  | PASS    |
|          |         | High   | 2480      | -4.49             | -63.74          | $\leq -24.49$  | PASS    |
|          |         | Low    | Hop_2402  | -4.46             | -56.84          | $\leq -24.46$  | PASS    |
|          |         | High   | Hop_2480  | -3.96             | -62.11          | $\leq -23.96$  | PASS    |
| 3DH5     | Ant1    | Low    | 2402      | -4.71             | -60.48          | $\leq -24.71$  | PASS    |
|          |         | High   | 2480      | -5.31             | -63.81          | $\leq -25.31$  | PASS    |
|          |         | Low    | Hop_2402  | -4.35             | -61.71          | $\leq -24.35$  | PASS    |
|          |         | High   | Hop_2480  | -3.81             | -63.87          | $\leq -23.81$  | PASS    |

# Test Graphs

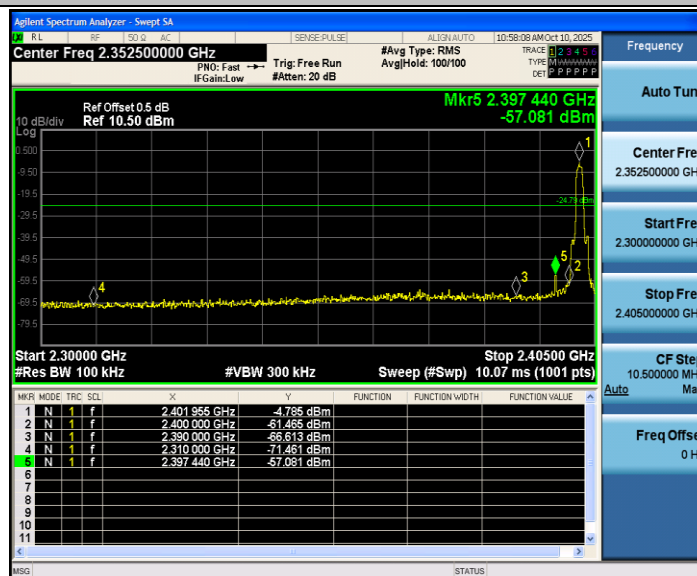




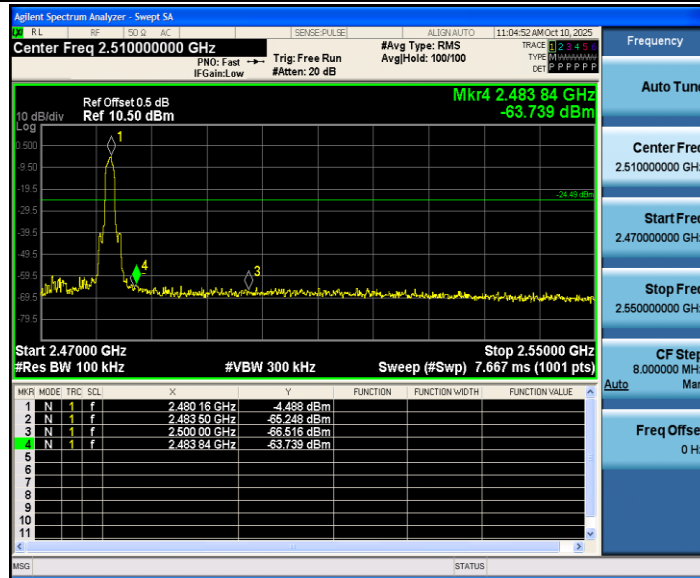
DH5\_Ant1\_High\_Hop\_2480



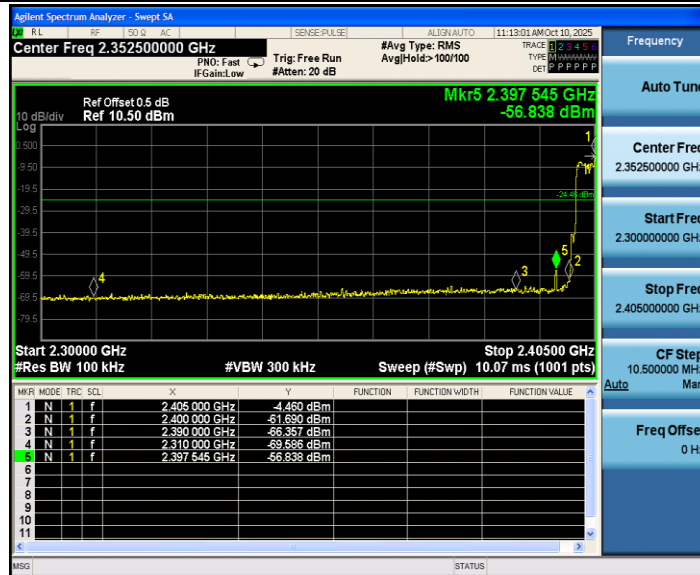
2DH5\_Ant1\_Low\_2402



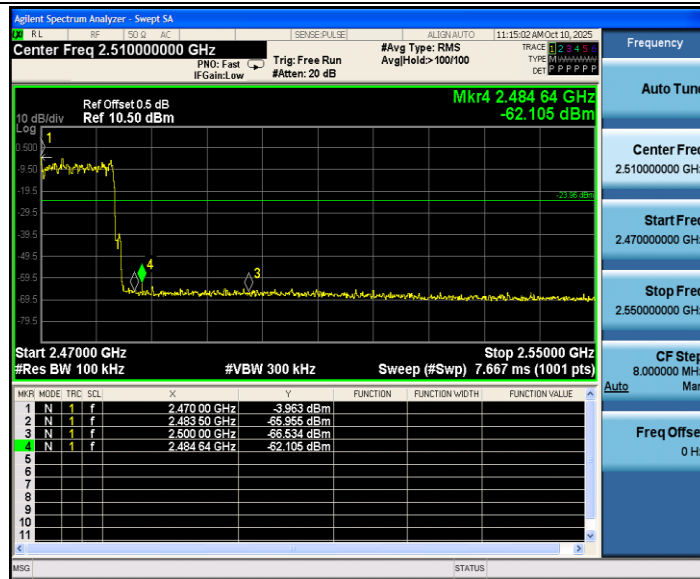
### 2DH5\_Ant1\_High\_2480



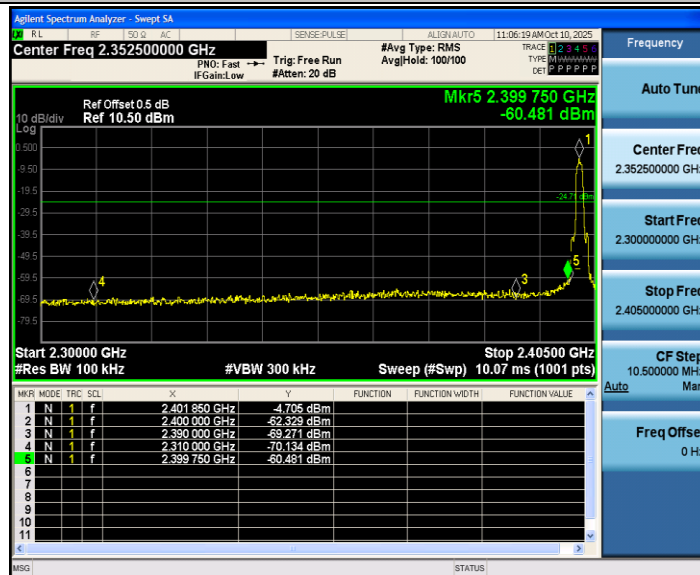
### 2DH5\_Ant1\_Low\_Hop\_2402



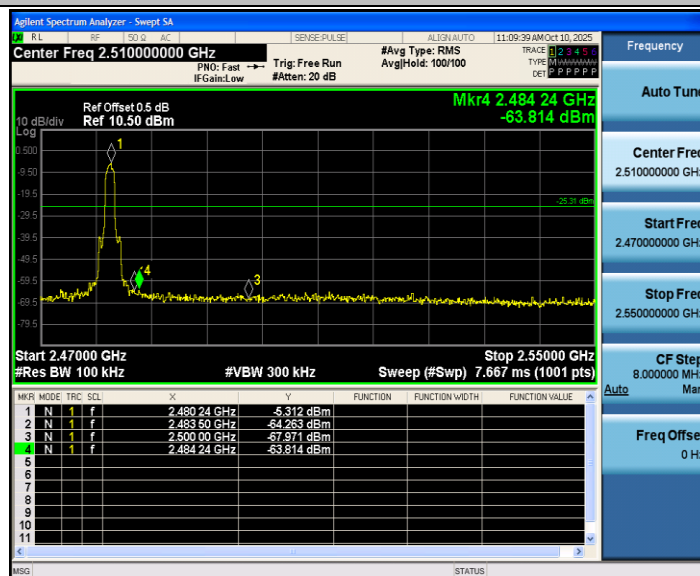
### 2DH5\_Ant1\_High\_Hop\_2480



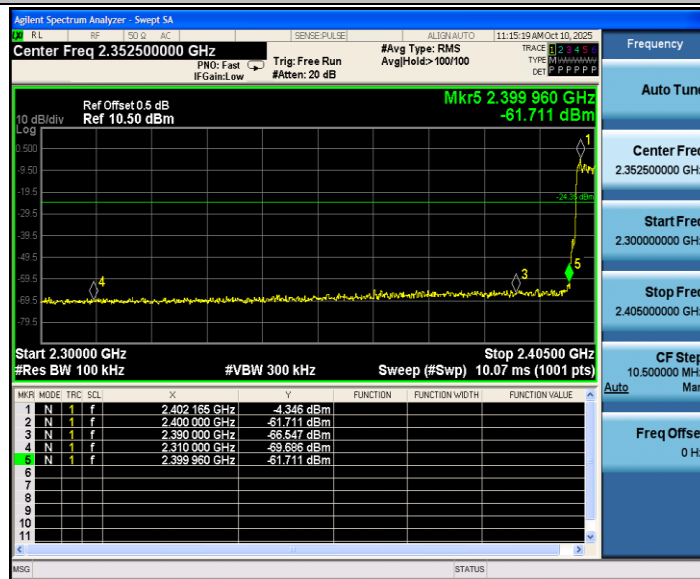
3DH5\_Ant1\_Low\_2402



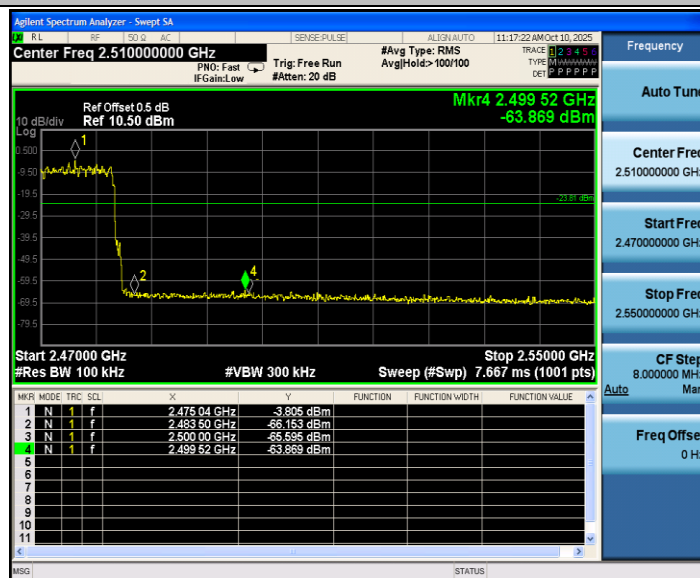
3DH5\_Ant1\_High\_2480



### 3DH5\_Ant1\_Low\_Hop\_2402



### 3DH5\_Ant1\_High\_Hop\_2480



## Appendix H: Conducted Spurious Emission

### Test Result

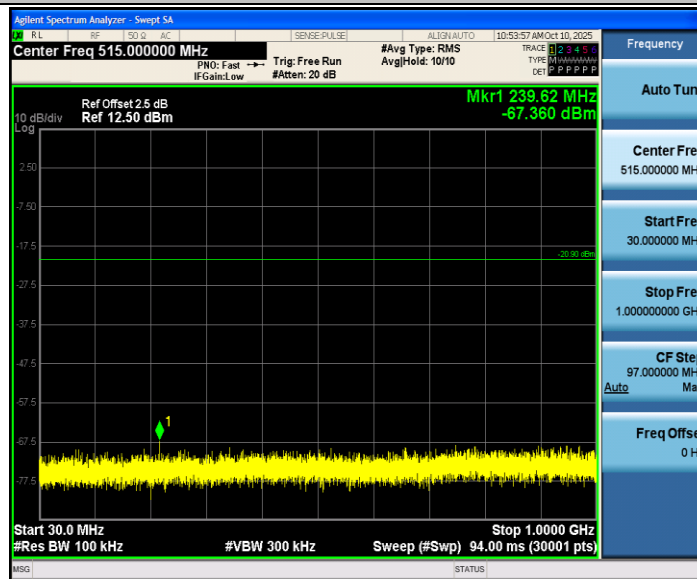
| TestMode | Antenna | Freq(MHz) | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|-----------|-----------------|----------------|--------------|-------------|---------|
| DH5      | Ant1    | 2402      | Reference       | -0.90          | -0.90        | ---         | PASS    |
|          |         |           | 30~1000         | -0.90          | -67.36       | ≤-20.9      | PASS    |
|          |         |           | 1000~26500      | -0.90          | -43.81       | ≤-20.9      | PASS    |
|          |         | 2441      | Reference       | -1.10          | -1.10        | ---         | PASS    |
|          |         |           | 30~1000         | -1.10          | -67.79       | ≤-21.1      | PASS    |
|          |         |           | 1000~26500      | -1.10          | -44.39       | ≤-21.1      | PASS    |
|          |         | 2480      | Reference       | -1.46          | -1.46        | ---         | PASS    |
|          |         |           | 30~1000         | -1.46          | -67.82       | ≤-21.46     | PASS    |
|          |         |           | 1000~26500      | -1.46          | -44.49       | ≤-21.46     | PASS    |
| 2DH5     | Ant1    | 2402      | Reference       | -3.45          | -3.45        | ---         | PASS    |
|          |         |           | 30~1000         | -3.45          | -67.98       | ≤-23.45     | PASS    |
|          |         |           | 1000~26500      | -3.45          | -49.47       | ≤-23.45     | PASS    |
|          |         | 2441      | Reference       | -5.55          | -5.55        | ---         | PASS    |
|          |         |           | 30~1000         | -5.55          | -68.03       | ≤-25.55     | PASS    |
|          |         |           | 1000~26500      | -5.55          | -47.12       | ≤-25.55     | PASS    |
|          |         | 2480      | Reference       | -6.62          | -6.62        | ---         | PASS    |
|          |         |           | 30~1000         | -6.62          | -28.82       | ≤-26.62     | PASS    |
|          |         |           | 1000~26500      | -6.62          | -51.22       | ≤-26.62     | PASS    |
| 3DH5     | Ant1    | 2402      | Reference       | -6.71          | -6.71        | ---         | PASS    |
|          |         |           | 30~1000         | -6.71          | -67.27       | ≤-26.71     | PASS    |
|          |         |           | 1000~26500      | -6.71          | -50.55       | ≤-26.71     | PASS    |
|          |         | 2441      | Reference       | -4.56          | -4.56        | ---         | PASS    |
|          |         |           | 30~1000         | -4.56          | -63.43       | ≤-24.56     | PASS    |
|          |         |           | 1000~26500      | -4.56          | -49.2        | ≤-24.56     | PASS    |
|          |         | 2480      | Reference       | -6.49          | -6.49        | ---         | PASS    |
|          |         |           | 30~1000         | -6.49          | -67.88       | ≤-26.49     | PASS    |
|          |         |           | 1000~26500      | -6.49          | -47.79       | ≤-26.49     | PASS    |

## Test Graphs

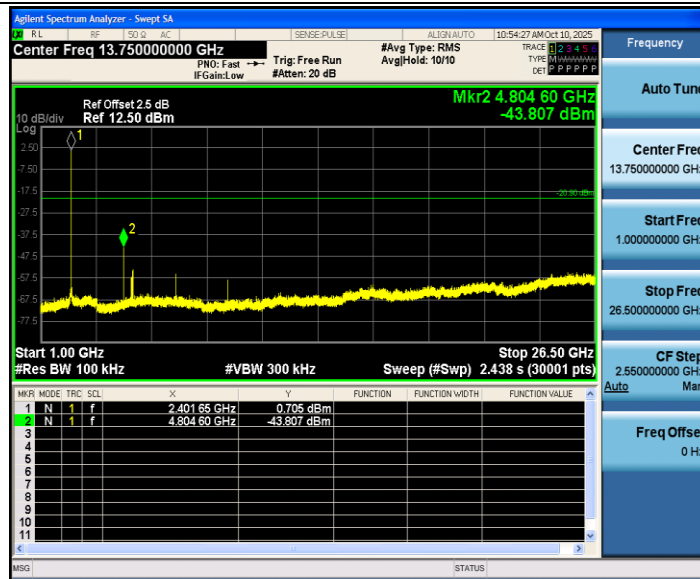
DH5\_Ant1\_2402\_0~Reference



DH5\_Ant1\_2402\_30~1000



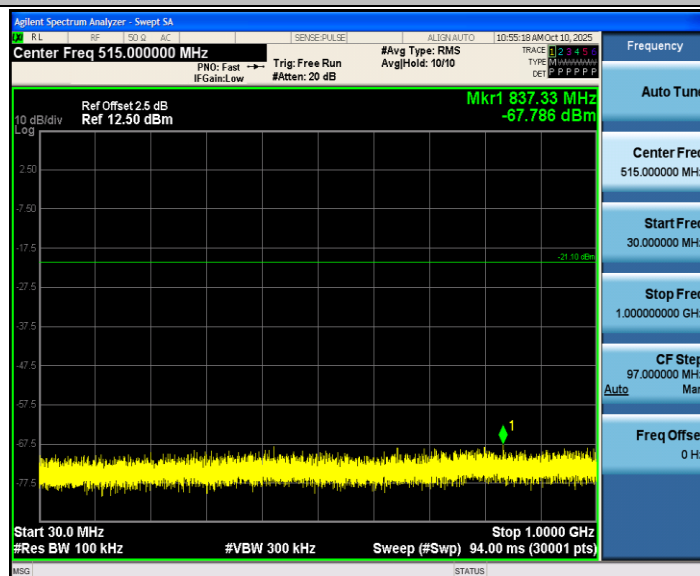
DH5\_Ant1\_2402\_1000~26500



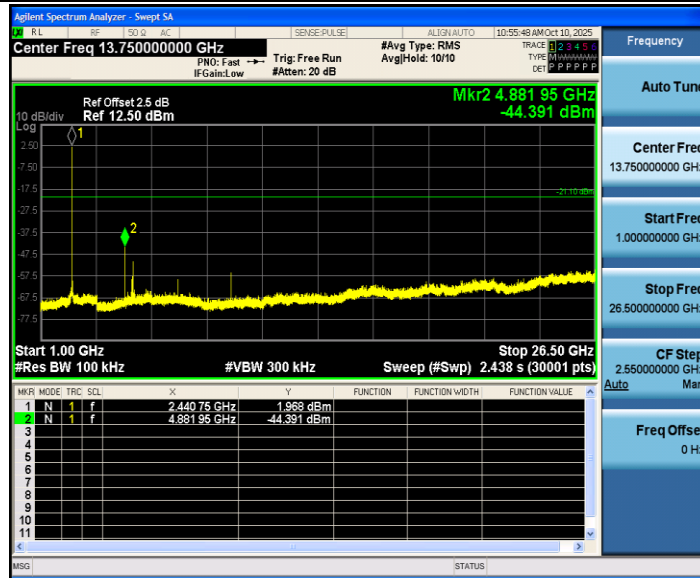
DH5\_Ant1\_2441\_0~Reference



DH5\_Ant1\_2441\_30~1000



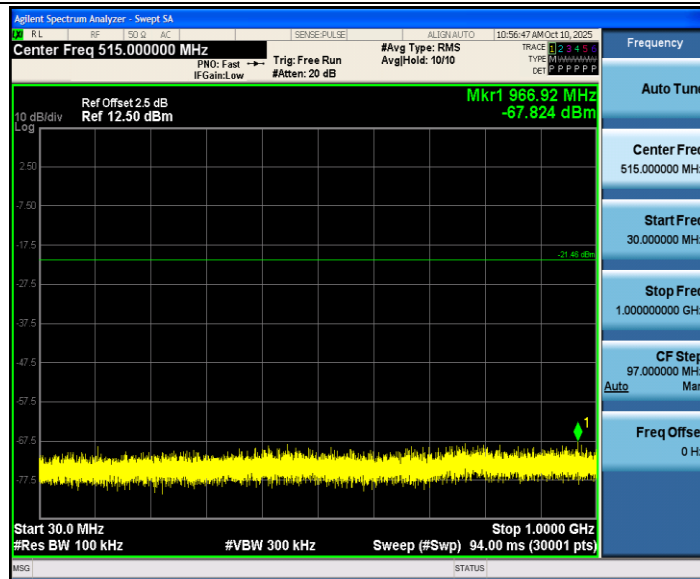
# DH5\_Ant1\_2441\_1000~26500



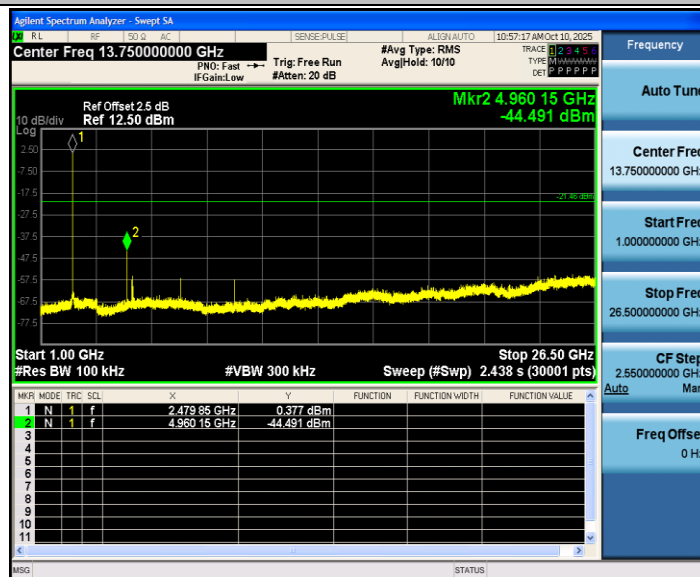
# DH5\_Ant1\_2480\_0~Reference



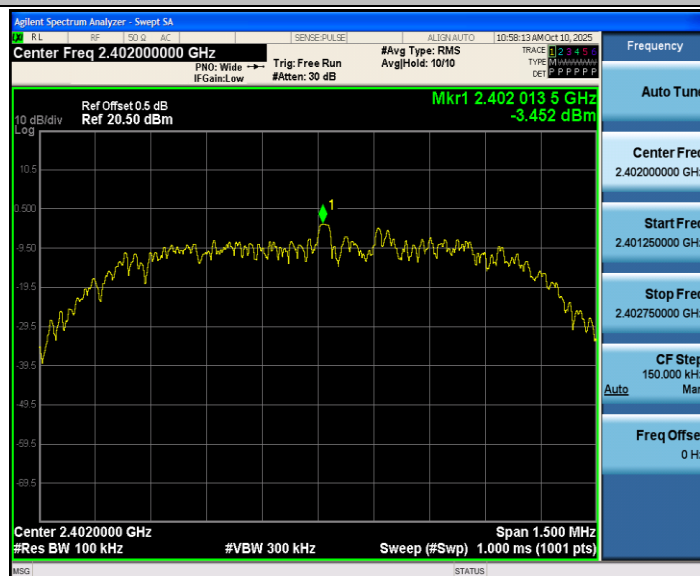
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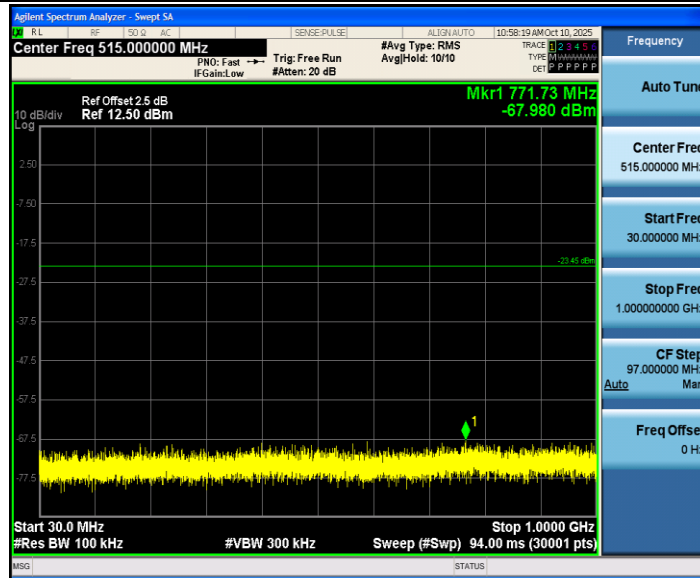
DH5\_Ant1\_2480\_1000~26500



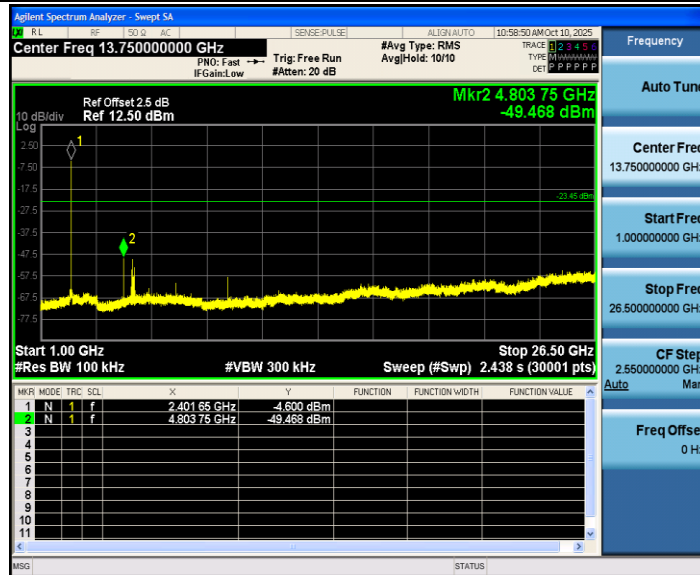
2DH5\_Ant1\_2402\_0~Reference



### 2DH5\_Ant1\_2402\_30~1000



### 2DH5\_Ant1\_2402\_1000~26500



### 2DH5\_Ant1\_2441\_0~Reference