

|   |
|---|
| <b>Case No. :</b> <u>GTS20221219016-1-1</u>                               |
| <b>Ambient Condition:</b> <u>25 °C, 45 %RH, Atmos100.1Kpa,</u>            |
| <b>Test Date:</b> <u>2023.1.4</u> <b>Test Engineer:</b> <u>Jenny zeng</u> |

## Appendix A.1: 20dB Emission Bandwidth

### Test Result

| TestMode | Antenna | Frequency[MHz] | 20db<br>EBW[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|----------------|------------------|----------|----------|------------|---------|
| DH1      | Ant1    | 2402           | 0.954            | 2401.535 | 2402.489 | ---        | ---     |
|          |         | 2441           | 0.942            | 2440.538 | 2441.480 | ---        | ---     |
|          |         | 2480           | 0.948            | 2479.532 | 2480.480 | ---        | ---     |
| 2DH1     | Ant1    | 2402           | 1.404            | 2401.283 | 2402.687 | ---        | ---     |
|          |         | 2441           | 1.431            | 2440.265 | 2441.696 | ---        | ---     |
|          |         | 2480           | 1.437            | 2479.256 | 2480.693 | ---        | ---     |
| 3DH1     | Ant1    | 2402           | 1.401            | 2401.265 | 2402.666 | ---        | ---     |
|          |         | 2441           | 1.455            | 2440.262 | 2441.717 | ---        | ---     |
|          |         | 2480           | 1.437            | 2479.271 | 2480.708 | ---        | ---     |

# Test Graphs

DH1\_Ant1\_2402



DH1\_Ant1\_2441



DH1\_Ant1\_2480



2DH1\_Ant1\_2402



2DH1\_Ant1\_2441



2DH1\_Ant1\_2480



3DH1\_Ant1\_2402



3DH1\_Ant1\_2441



3DH1\_Ant1\_2480



## Appendix A.2: Occupied Channel Bandwidth

### Test Result

| TestMode | Antenna | Frequency[MHz] | OCB [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|----------------|-----------|----------|----------|------------|---------|
| DH1      | Ant1    | 2402           | 0.84841   | 2401.570 | 2402.419 | ---        | ---     |
|          |         | 2441           | 0.84662   | 2440.568 | 2441.415 | ---        | ---     |
|          |         | 2480           | 0.84903   | 2479.566 | 2480.415 | ---        | ---     |
| 2DH1     | Ant1    | 2402           | 1.3434    | 2401.314 | 2402.657 | ---        | ---     |
|          |         | 2441           | 1.3350    | 2440.322 | 2441.657 | ---        | ---     |
|          |         | 2480           | 1.3507    | 2479.311 | 2480.662 | ---        | ---     |
| 3DH1     | Ant1    | 2402           | 1.3399    | 2401.314 | 2402.653 | ---        | ---     |
|          |         | 2441           | 1.3363    | 2440.320 | 2441.657 | ---        | ---     |
|          |         | 2480           | 1.3388    | 2479.322 | 2480.660 | ---        | ---     |

# Test Graphs

DH1\_Ant1\_2402



DH1\_Ant1\_2441



DH1\_Ant1\_2480



2DH1\_Ant1\_2402



2DH1\_Ant1\_2441





2DH1\_Ant1\_2480



3DH1\_Ant1\_2402



3DH1\_Ant1\_2441



3DH1\_Ant1\_2480



## Appendix A.3: Maximum conducted output power

### Test Result Peak

| Test Mode | Antenna | Frequency[MHz] | Conducted Peak Power[dBm] | Conducted Limit[dBm] | Verdict |
|-----------|---------|----------------|---------------------------|----------------------|---------|
| DH1       | Ant1    | 2402           | 6.92                      | ≤30.00               | PASS    |
|           |         | 2441           | 6.00                      | ≤30.00               | PASS    |
|           |         | 2480           | 8.88                      | ≤30.00               | PASS    |
| 2DH1      | Ant1    | 2402           | 5.72                      | ≤20.97               | PASS    |
|           |         | 2441           | 6.97                      | ≤20.97               | PASS    |
|           |         | 2480           | 7.46                      | ≤20.97               | PASS    |
| 3DH1      | Ant1    | 2402           | 5.80                      | ≤20.97               | PASS    |
|           |         | 2441           | 7.12                      | ≤20.97               | PASS    |
|           |         | 2480           | 7.65                      | ≤20.97               | PASS    |

## Appendix A.4: Carrier frequency separation

### Test Result

| TestMode | Antenna | Frequency[MHz] | Result[MHz] | Limit[MHz]   | Verdict |
|----------|---------|----------------|-------------|--------------|---------|
| DH1      | Ant1    | Hop_2402       | 0.998       | $\geq 0.954$ | PASS    |
|          |         | Hop_2441       | 1.014       | $\geq 0.954$ | PASS    |
|          |         | Hop_2480       | 1.308       | $\geq 0.954$ | PASS    |
| 2DH1     | Ant1    | Hop_2402       | 0.998       | $\geq 0.958$ | PASS    |
|          |         | Hop_2441       | 1.022       | $\geq 0.958$ | PASS    |
|          |         | Hop_2480       | 1.16        | $\geq 0.958$ | PASS    |
| 3DH1     | Ant1    | Hop_2402       | 0.988       | $\geq 0.970$ | PASS    |
|          |         | Hop_2441       | 1.01        | $\geq 0.970$ | PASS    |
|          |         | Hop_2480       | 0.982       | $\geq 0.970$ | PASS    |

# Test Graphs

DH1\_Ant1\_Hop\_2402



DH1\_Ant1\_Hop\_2441



DH1\_Ant1\_Hop\_2480



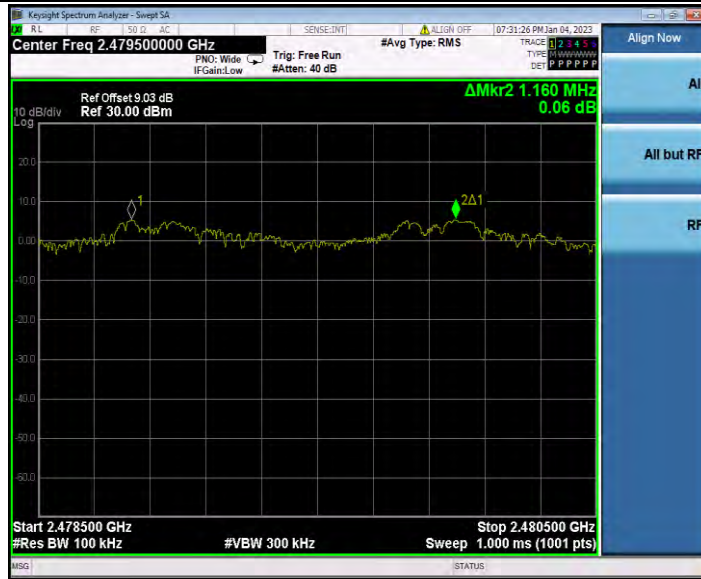
2DH1\_Ant1\_Hop\_2402



2DH1\_Ant1\_Hop\_2441



2DH1\_Ant1\_Hop\_2480



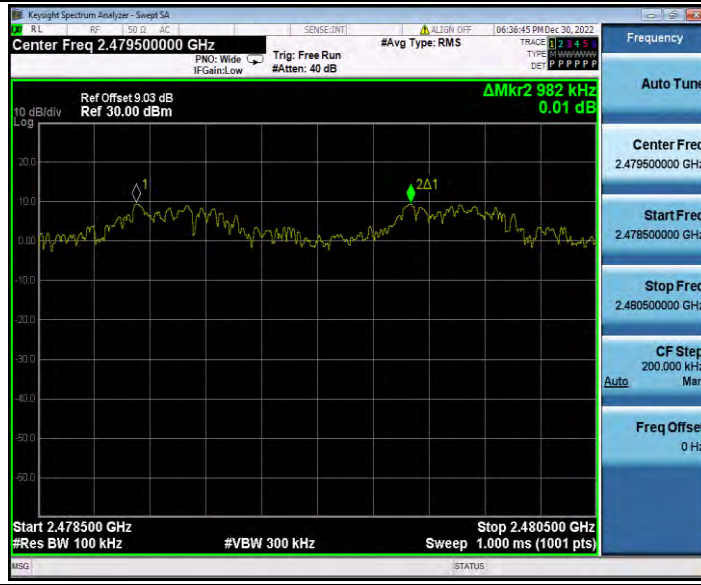
3DH1\_Ant1\_Hop\_2402



3DH1\_Ant1\_Hop\_2441



# 3DH1\_Ant1\_Hop\_2480





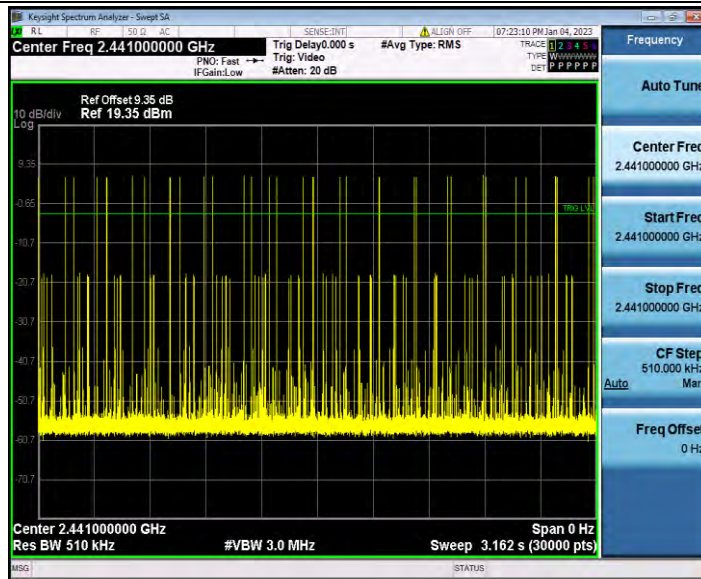
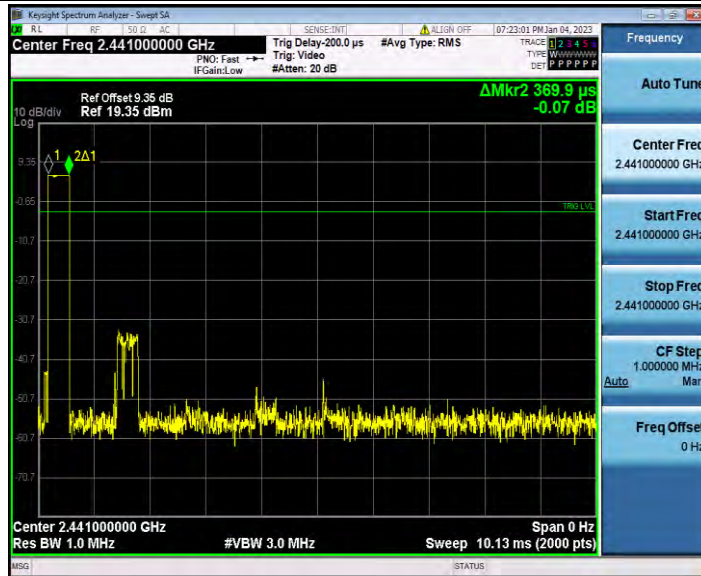
## Appendix A.5: Time of occupancy

### Test Result

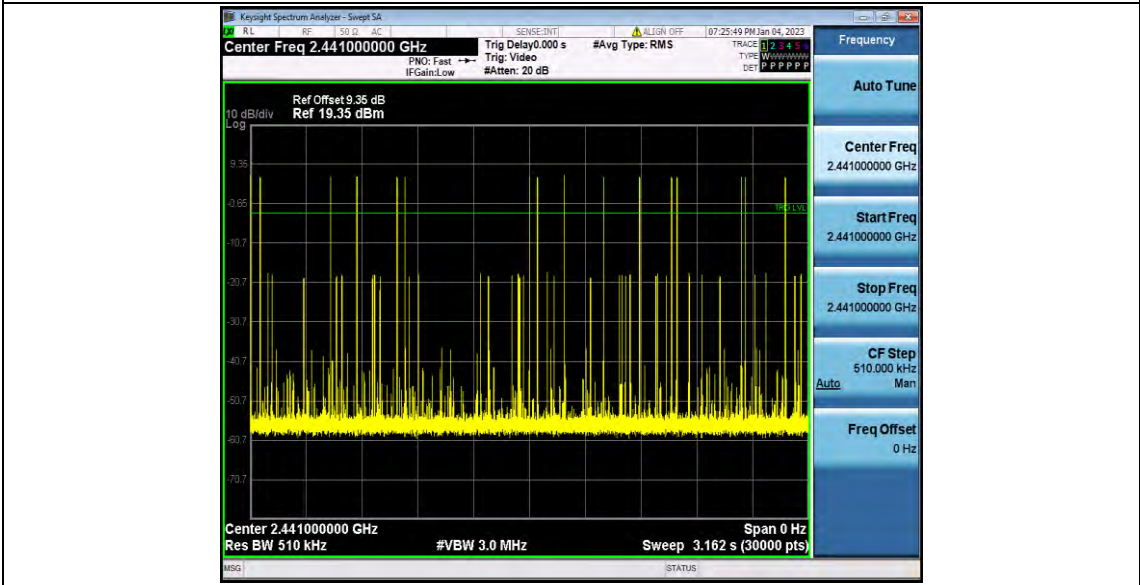
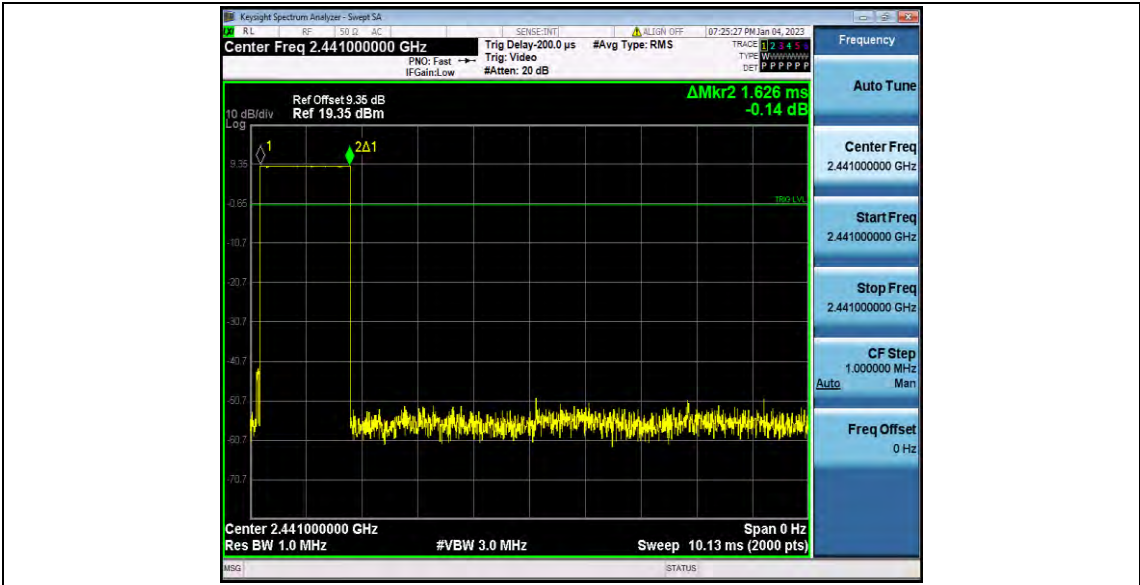
| TestMode | Antenna | Frequency[MHz] | BurstWidth [ms] | TotalHops [Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|----------------|-----------------|-----------------|-----------|----------|---------|
| DH1      | Ant1    | Hop            | 0.37            | 330             | 0.122     | ≤0.4     | PASS    |
| DH3      | Ant1    | Hop            | 1.63            | 160             | 0.26      | ≤0.4     | PASS    |
| DH5      | Ant1    | Hop            | 2.88            | 120             | 0.345     | ≤0.4     | PASS    |
| 2DH1     | Ant1    | Hop            | 0.38            | 330             | 0.125     | ≤0.4     | PASS    |
| 2DH3     | Ant1    | Hop            | 1.63            | 150             | 0.245     | ≤0.4     | PASS    |
| 2DH5     | Ant1    | Hop            | 2.88            | 50              | 0.144     | ≤0.4     | PASS    |
| 3DH1     | Ant1    | Hop            | 0.38            | 330             | 0.125     | ≤0.4     | PASS    |
| 3DH3     | Ant1    | Hop            | 1.63            | 140             | 0.228     | ≤0.4     | PASS    |
| 3DH5     | Ant1    | Hop            | 2.88            | 50              | 0.144     | ≤0.4     | PASS    |

# Test Graphs

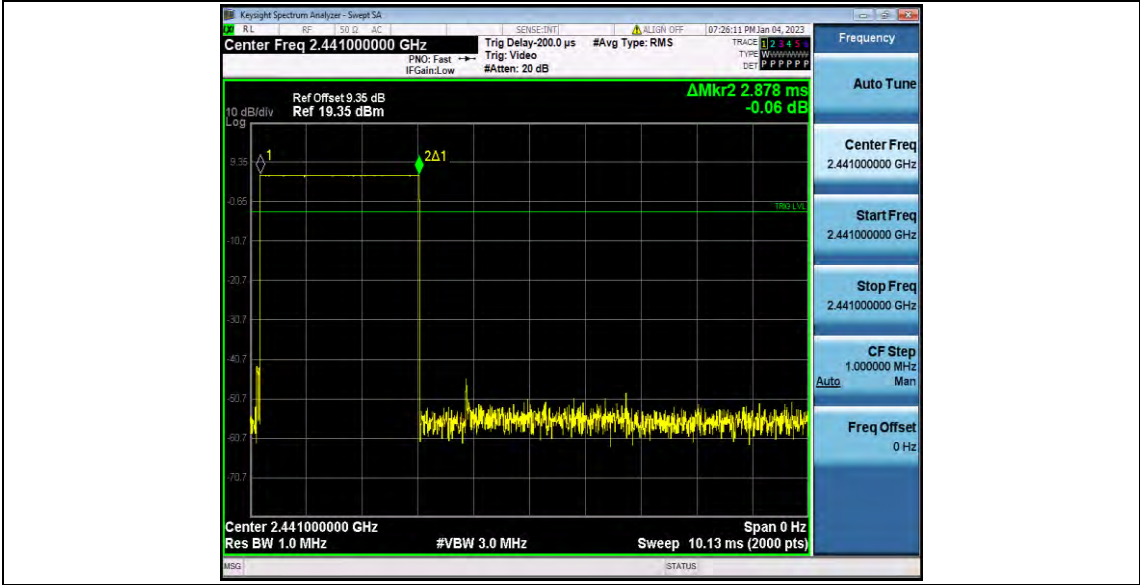
DH1\_Ant1\_Hop

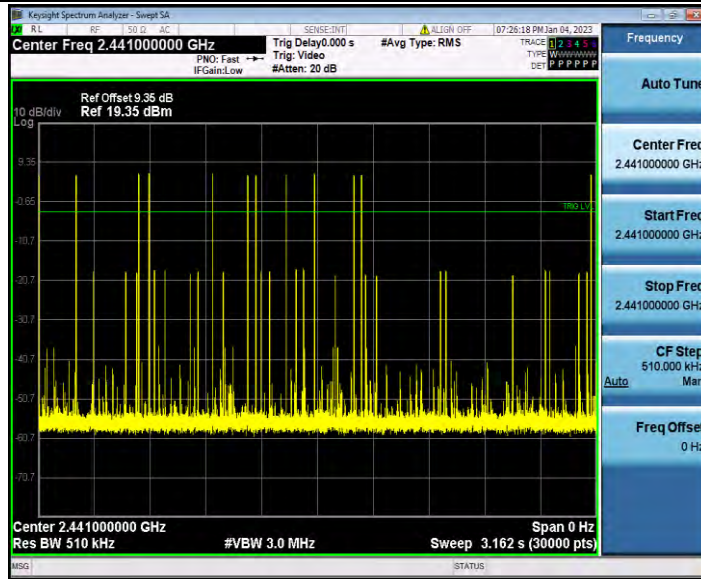


DH3\_Ant1\_Hop

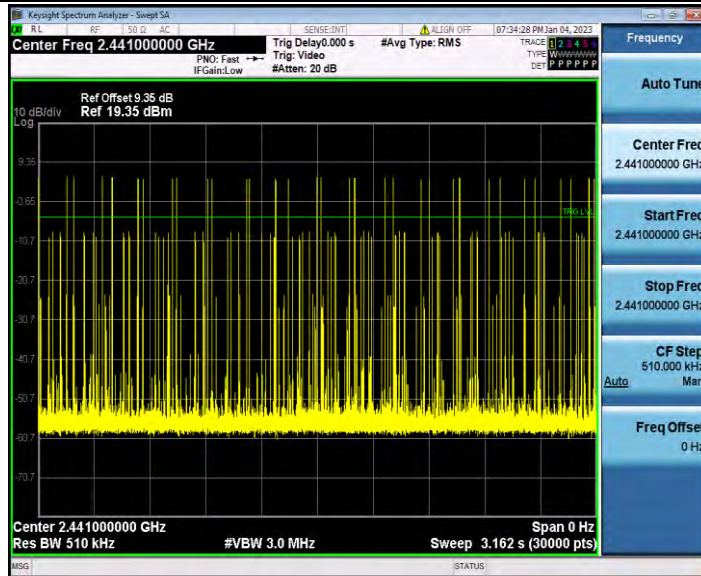
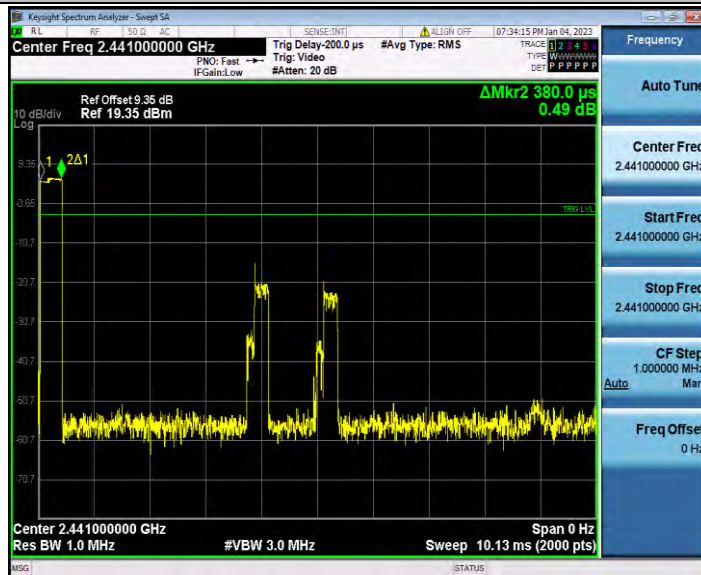


DH5\_Ant1\_Hop

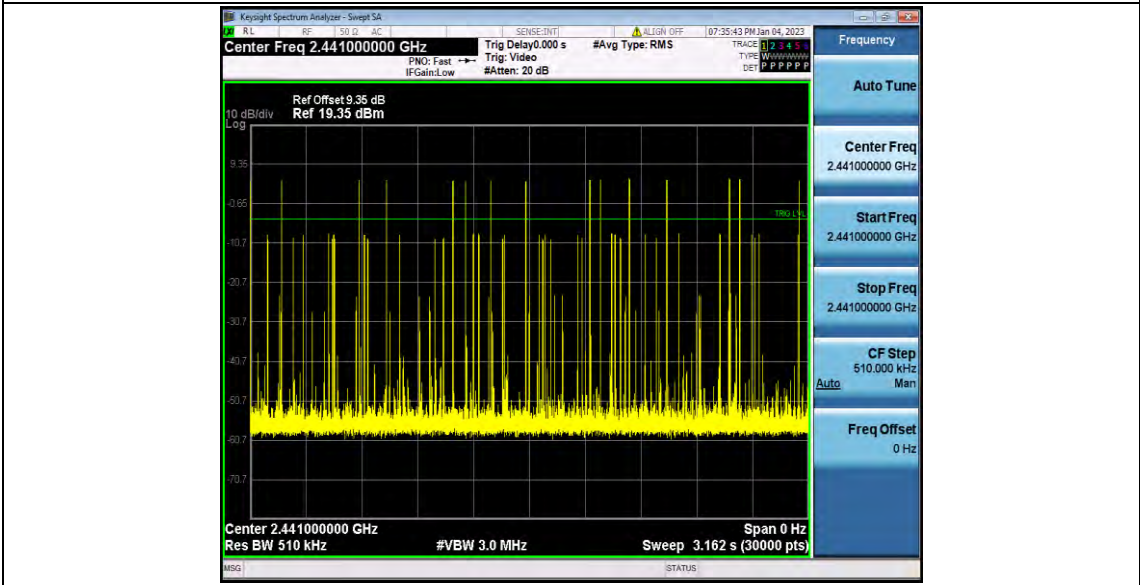
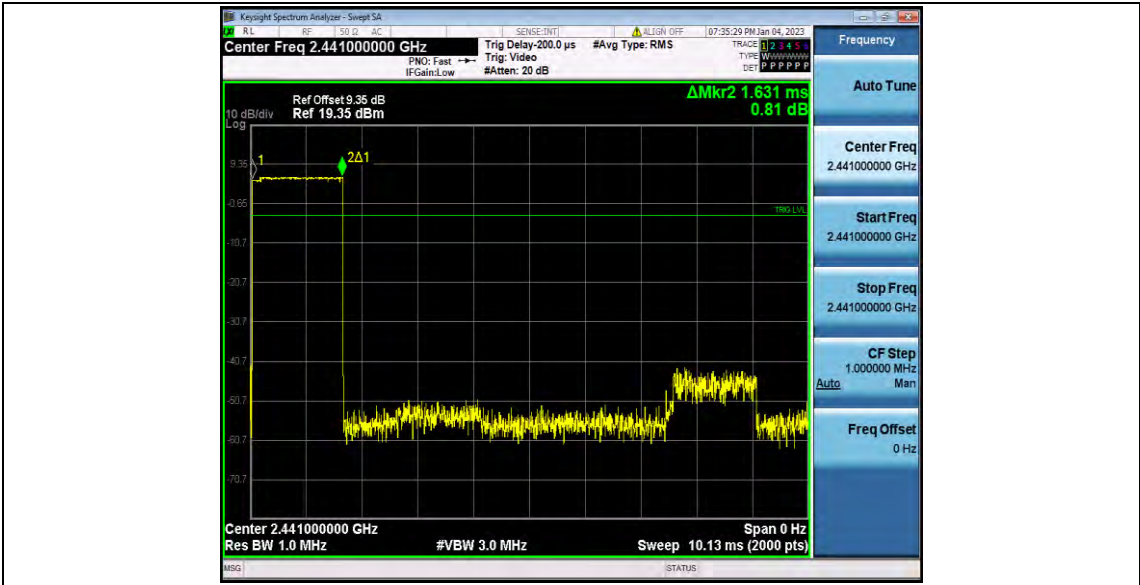




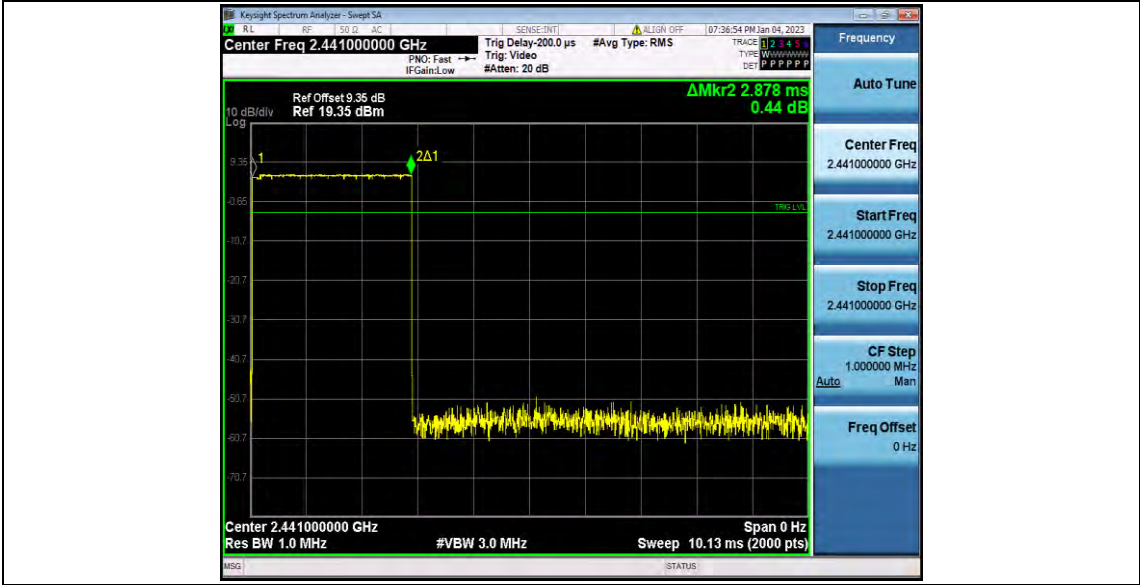
2DH1\_Ant1\_Hop

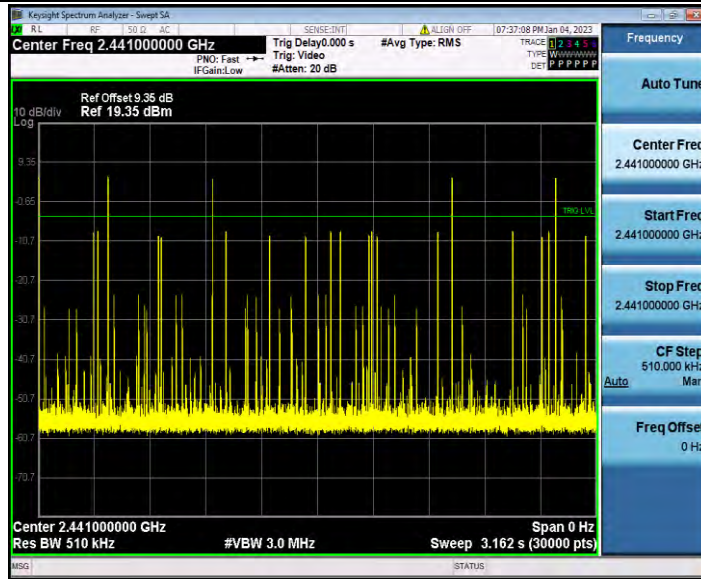


2DH3\_Ant1\_Hop

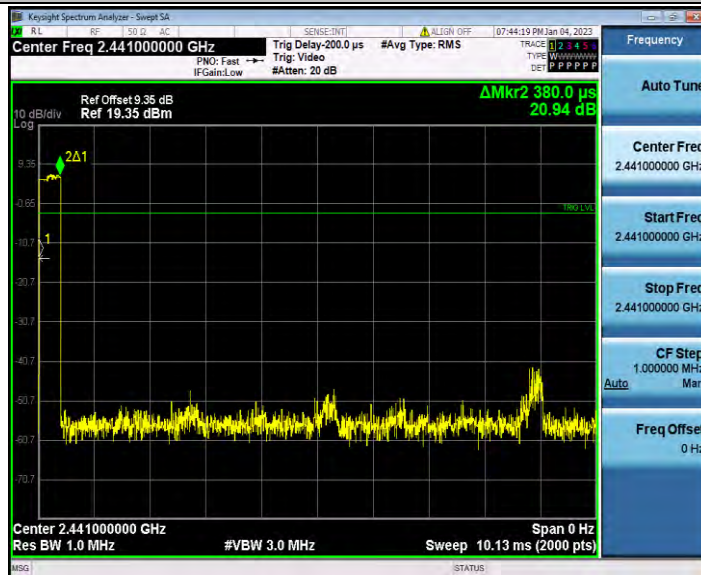


2DH5\_Ant1\_Hop

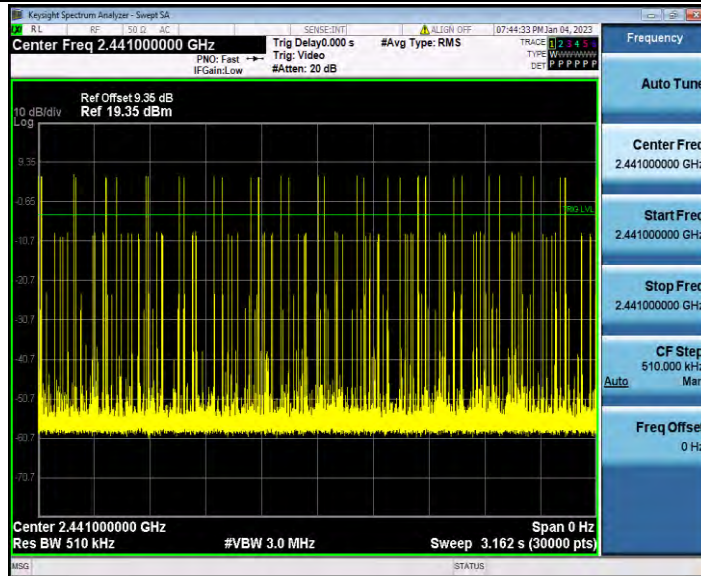


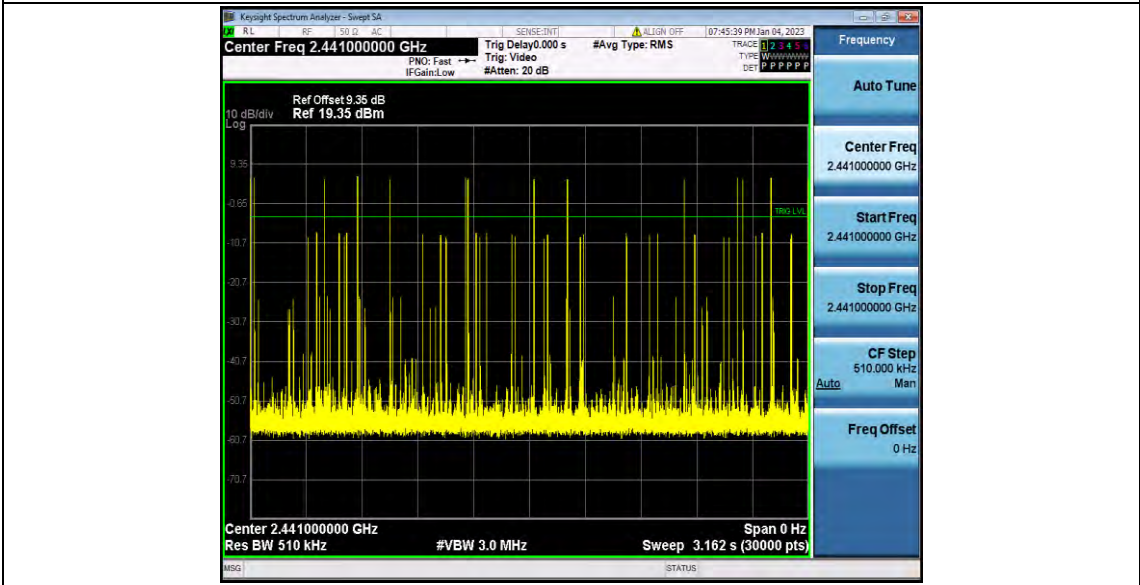
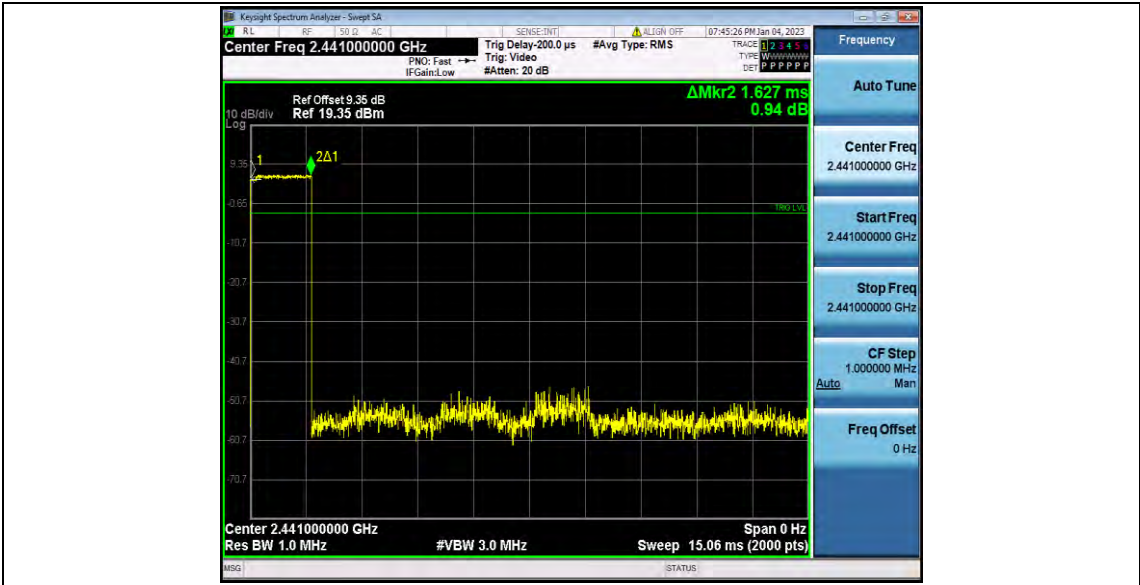


3DH1\_Ant1\_Hop

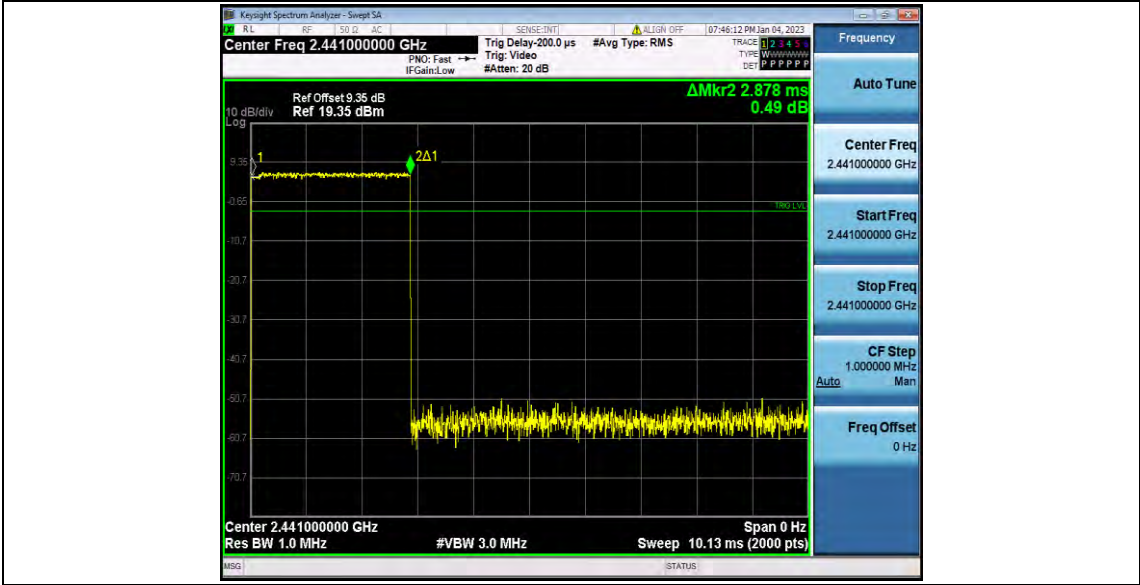


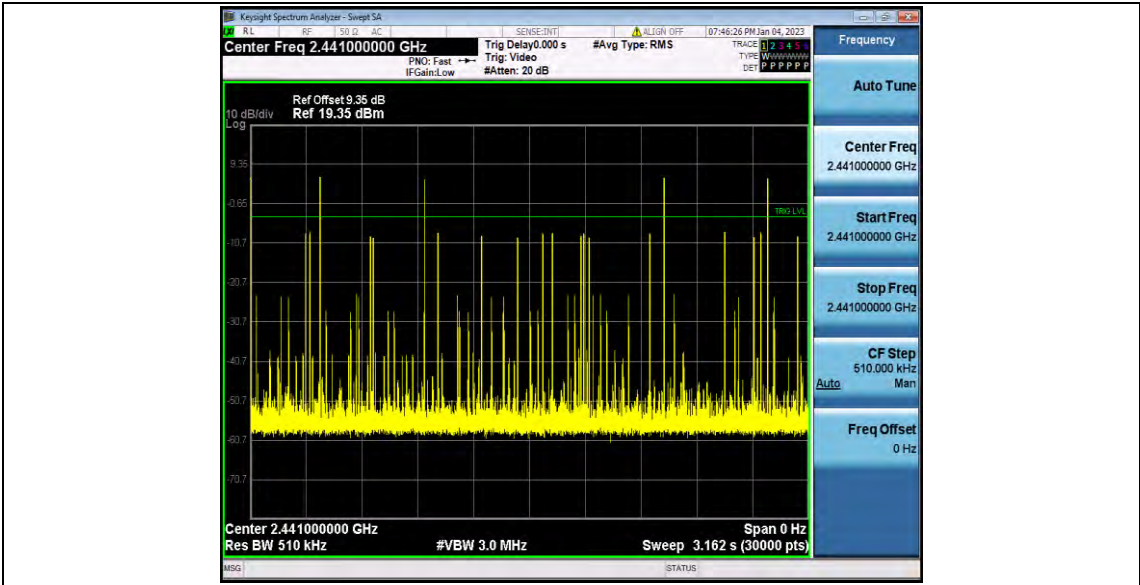
3DH3\_Ant1\_Hop





3DH5\_Ant1\_Hop







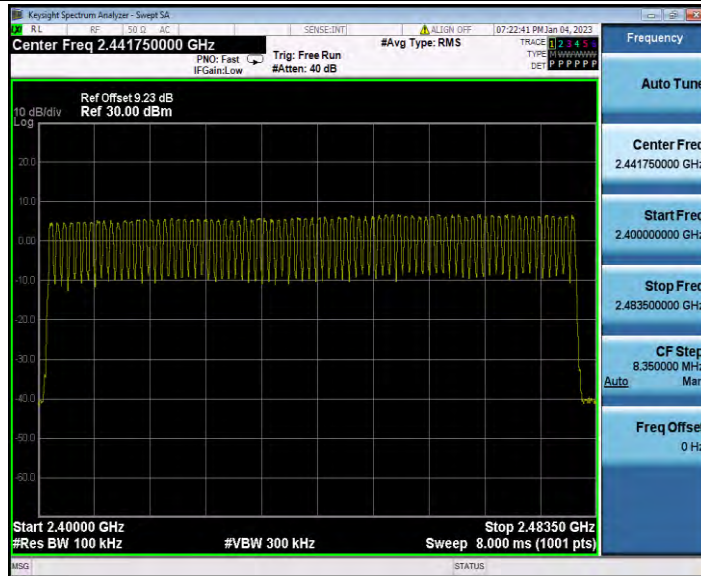
## Appendix A.6: Number of hopping channels

### Test Result

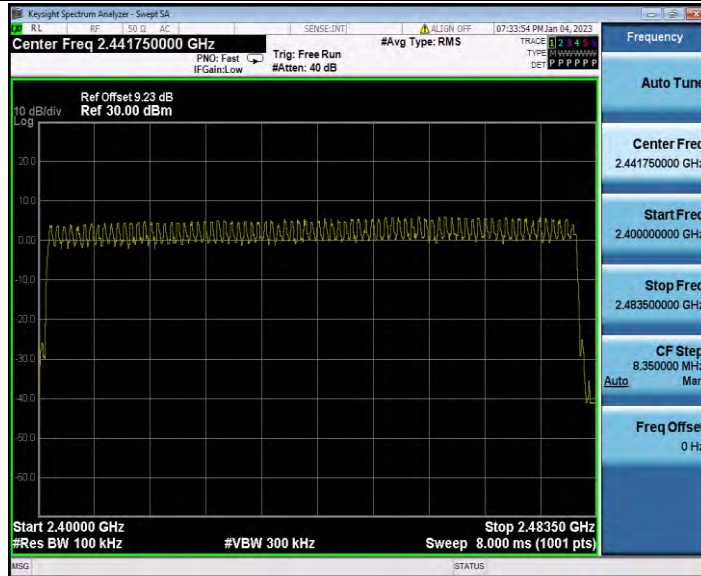
| TestMode | Antenna | Frequency[MHz] | Result[Num] | Limit[Num] | Verdict |
|----------|---------|----------------|-------------|------------|---------|
| DH1      | Ant1    | Hop            | 79          | ≥15        | PASS    |
| 2DH1     | Ant1    | Hop            | 79          | ≥15        | PASS    |
| 3DH1     | Ant1    | Hop            | 79          | ≥15        | PASS    |

# Test Graphs

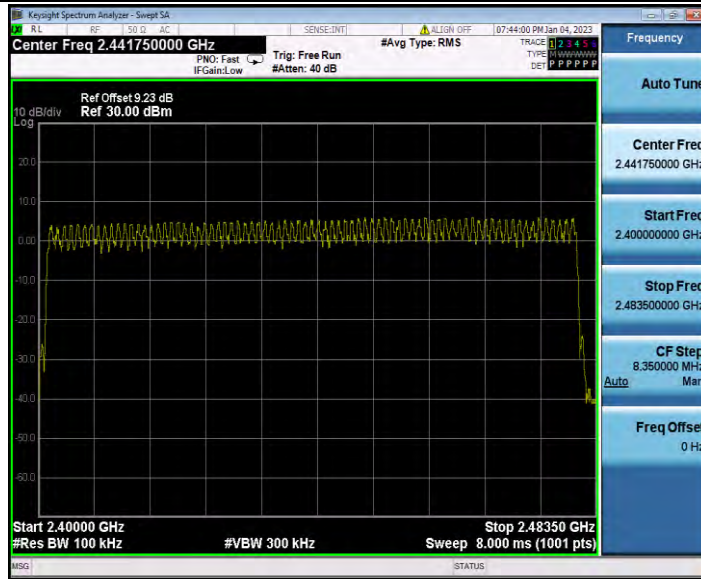
## DH1\_Ant1\_Hop



## 2DH1\_Ant1\_Hop



## 3DH1\_Ant1\_Hop



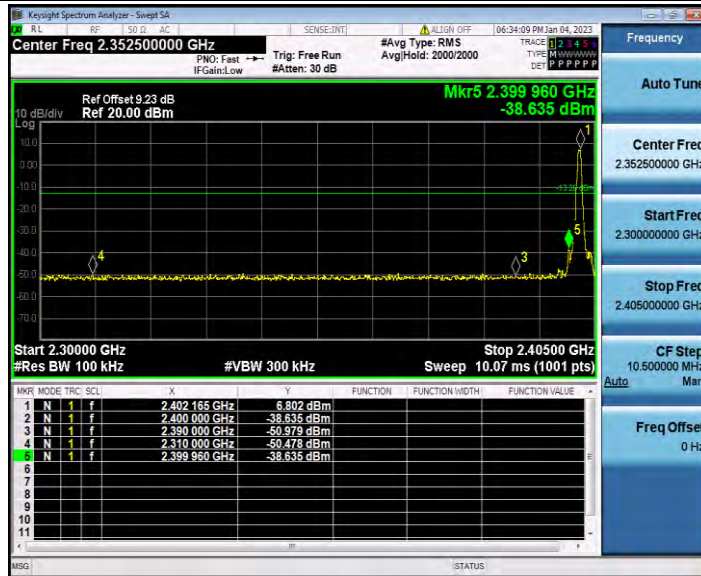
## Appendix A.7: Band edge measurements

### Test Result

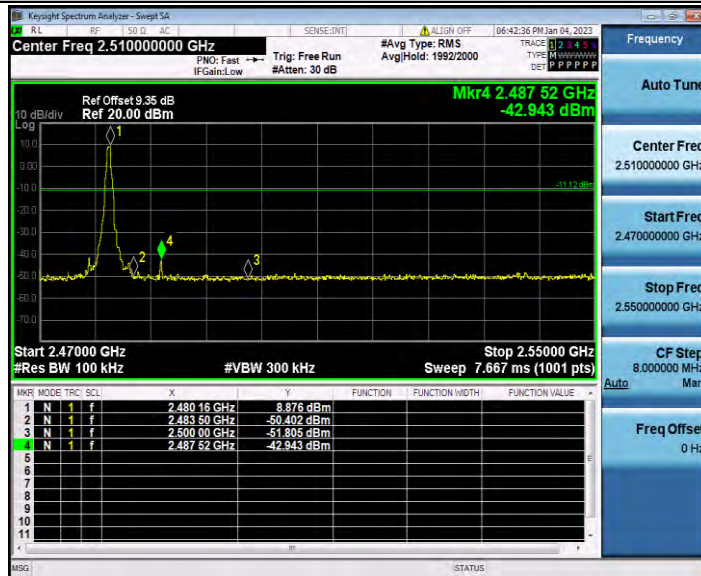
| TestMode | Antenna | ChName | Frequency[MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|--------|----------------|----------------|--------------|-------------|---------|
| DH1      | Ant1    | Low    | 2402           | 6.80           | -38.64       | ≤-13.2      | PASS    |
|          |         | High   | 2480           | 8.88           | -42.94       | ≤-11.12     | PASS    |
|          |         | Low    | Hop_2402       | 4.39           | -48.94       | ≤-15.61     | PASS    |
|          |         | High   | Hop_2480       | 6.36           | -48.27       | ≤-13.64     | PASS    |
| 2DH1     | Ant1    | Low    | 2402           | 3.99           | -38.47       | ≤-16.01     | PASS    |
|          |         | High   | 2480           | 5.64           | -43.26       | ≤-14.37     | PASS    |
|          |         | Low    | Hop_2402       | 3.55           | -48.89       | ≤-16.45     | PASS    |
|          |         | High   | Hop_2480       | 5.58           | -47.84       | ≤-14.43     | PASS    |
| 3DH1     | Ant1    | Low    | 2402           | 4.03           | -37.87       | ≤-15.97     | PASS    |
|          |         | High   | 2480           | 5.74           | -42.94       | ≤-14.26     | PASS    |
|          |         | Low    | Hop_2402       | 3.56           | -49.66       | ≤-16.44     | PASS    |
|          |         | High   | Hop_2480       | 5.63           | -48.51       | ≤-14.38     | PASS    |

# Test Graphs

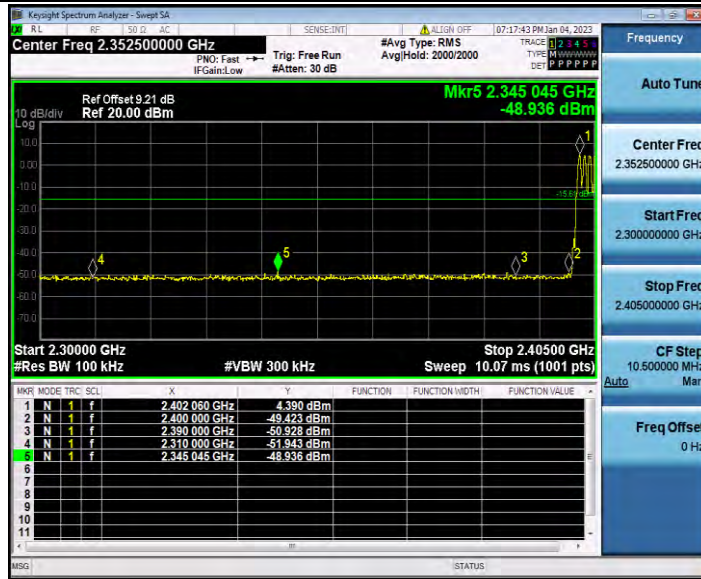
DH1\_Ant1\_Low\_2402



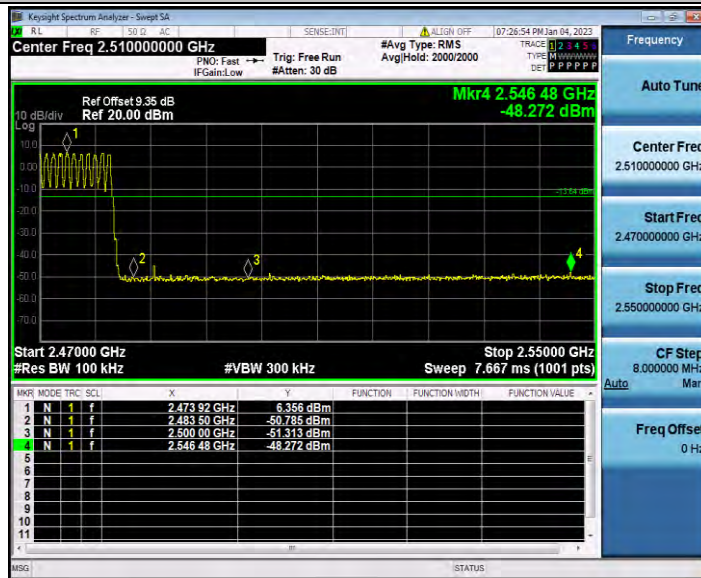
DH1\_Ant1\_High\_2480



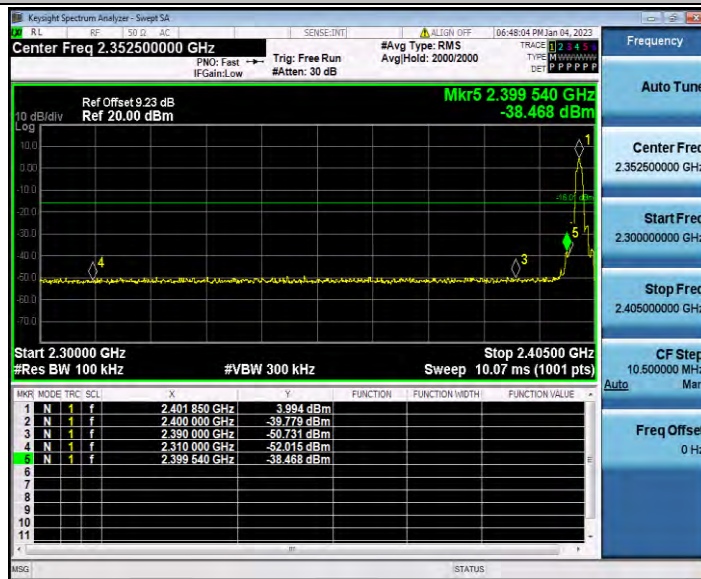
DH1\_Ant1\_Low\_Hop\_2402



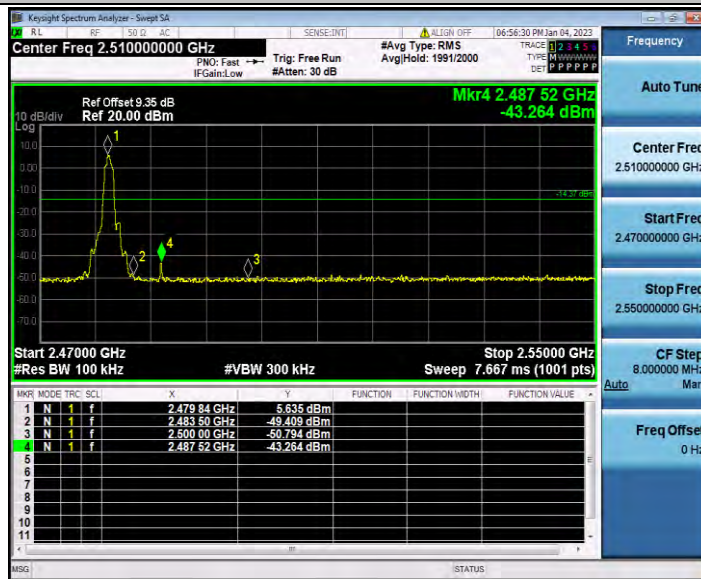
DH1\_Ant1\_High\_Hop\_2480



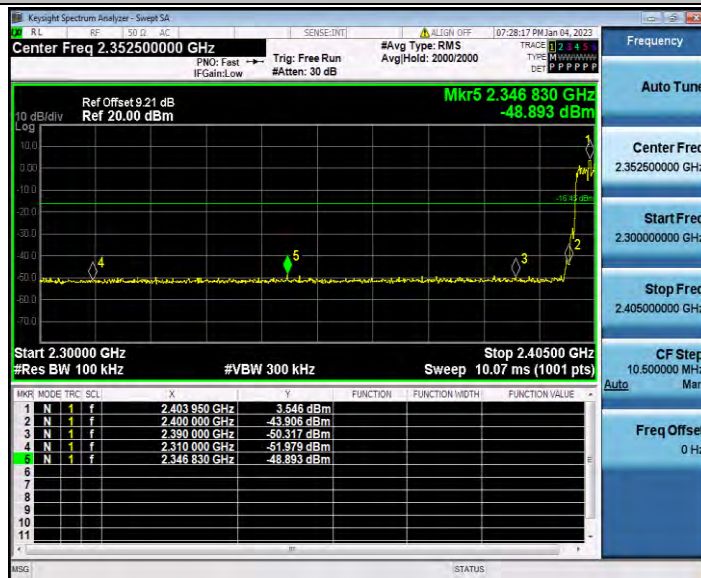
2DH1\_Ant1\_Low\_2402



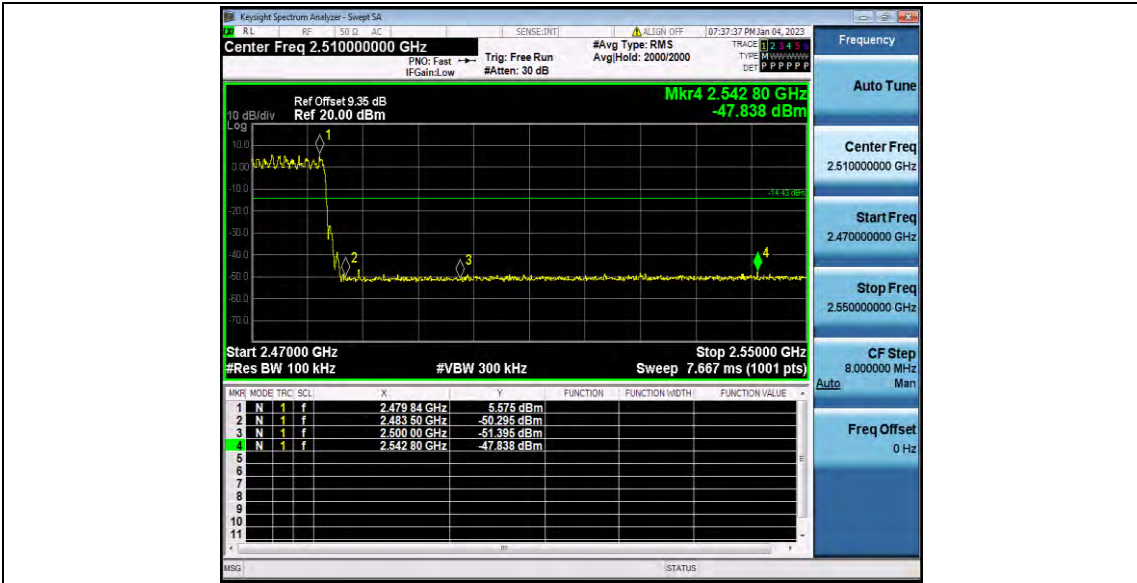
2DH1\_Ant1\_High\_2480



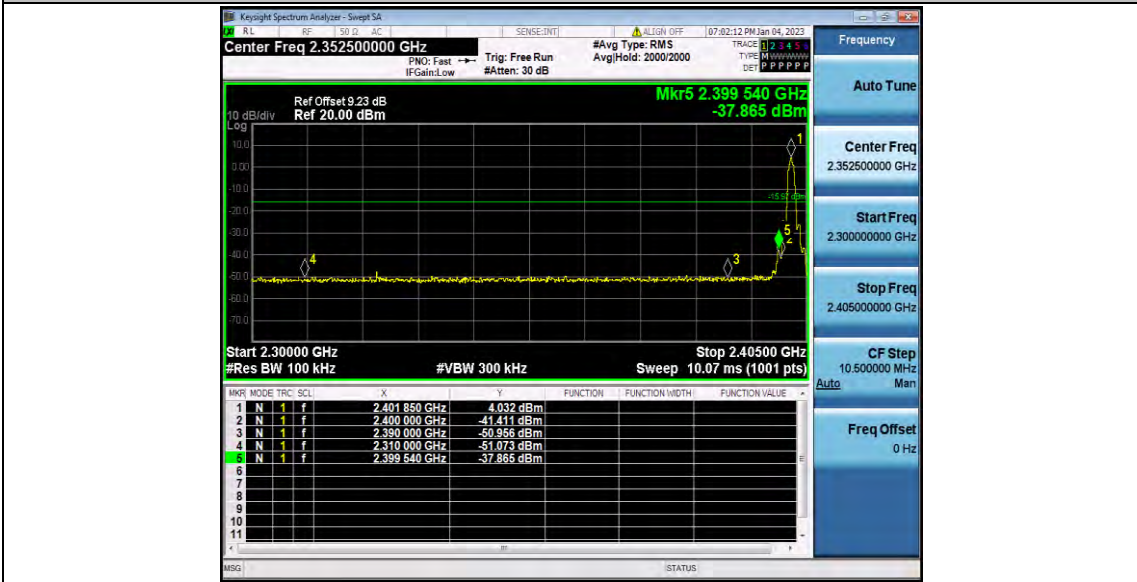
2DH1\_Ant1\_Low\_Hop\_2402



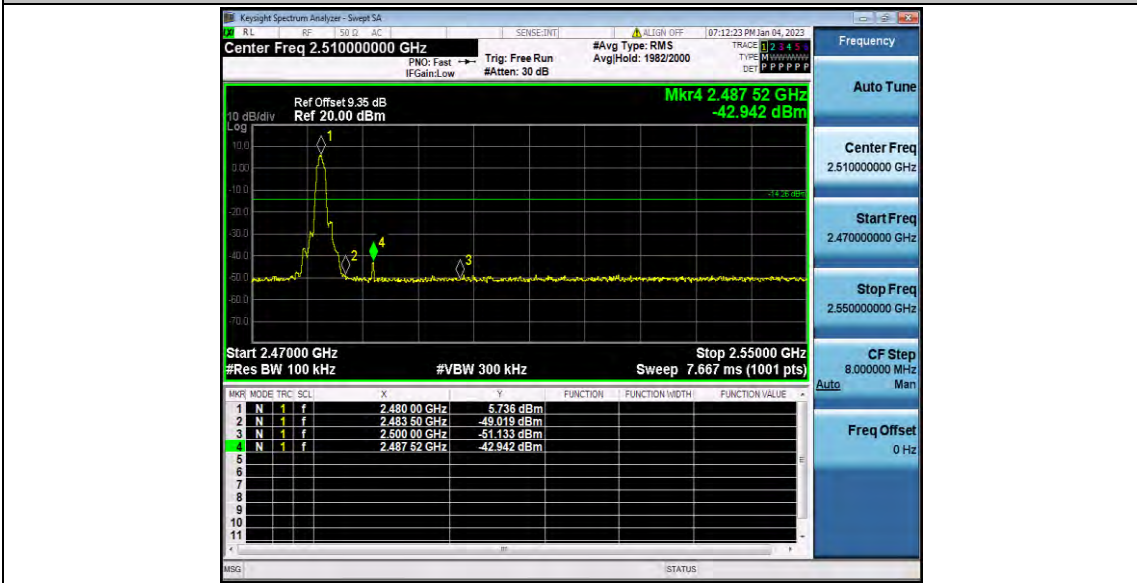
2DH1\_Ant1\_High\_Hop\_2480



3DH1\_Ant1\_Low\_2402

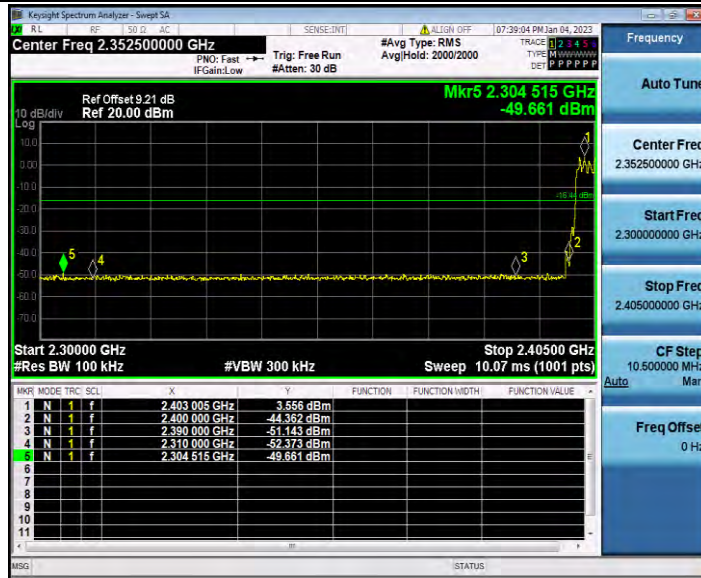


3DH1\_Ant1\_High\_2480

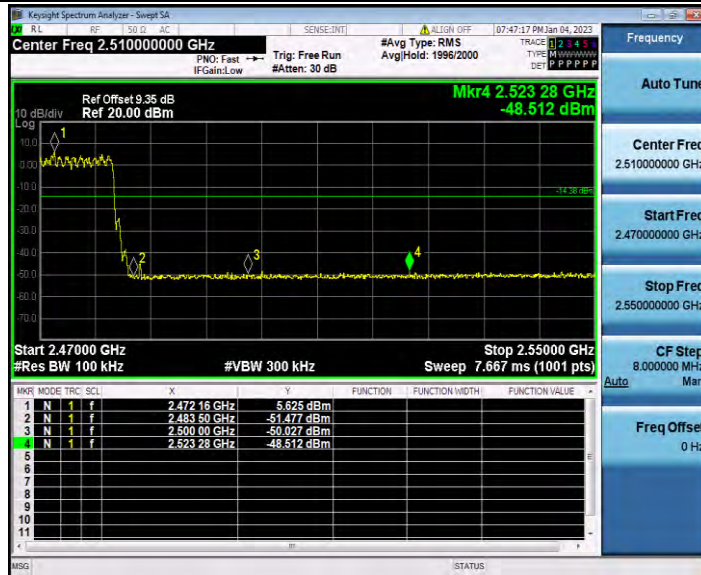




### 3DH1\_Ant1\_Low\_Hop\_2402



### 3DH1\_Ant1\_High\_Hop\_2480



## Appendix A.8: Conducted Spurious Emission

### Test Result

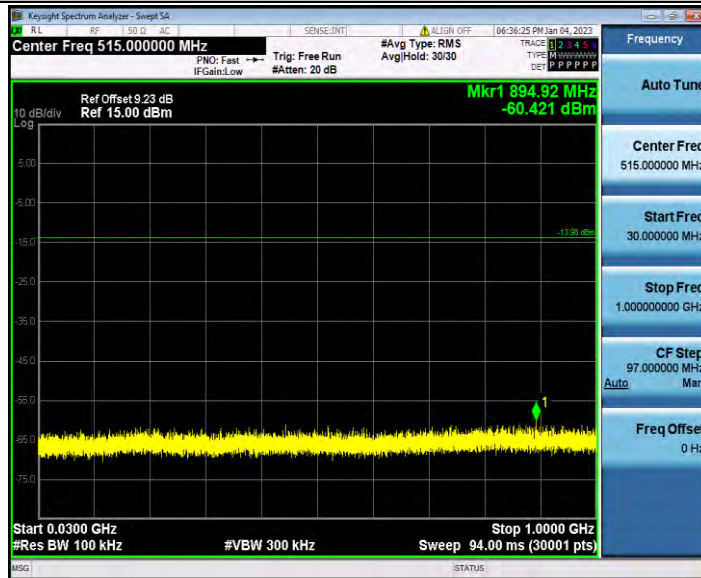
| TestMode | Antenna | Frequency[MHz] | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|----------------|-----------------|----------------|--------------|-------------|---------|
| DH1      | Ant1    | 2402           | Reference       | 6.02           | 6.02         | ---         | PASS    |
|          |         |                | 30~1000         | 6.02           | -60.42       | ≤-13.98     | PASS    |
|          |         |                | 1000~26500      | 6.02           | -47.36       | ≤-13.98     | PASS    |
|          |         | 2441           | Reference       | 8.43           | 8.43         | ---         | PASS    |
|          |         |                | 30~1000         | 8.43           | -60.53       | ≤-11.57     | PASS    |
|          |         |                | 1000~26500      | 8.43           | -44.19       | ≤-11.57     | PASS    |
|          |         | 2480           | Reference       | 8.46           | 8.46         | ---         | PASS    |
|          |         |                | 30~1000         | 8.46           | -59.96       | ≤-11.54     | PASS    |
|          |         |                | 1000~26500      | 8.46           | -47.26       | ≤-11.54     | PASS    |
| 2DH1     | Ant1    | 2402           | Reference       | 3.81           | 3.81         | ---         | PASS    |
|          |         |                | 30~1000         | 3.81           | -60.49       | ≤-16.19     | PASS    |
|          |         |                | 1000~26500      | 3.81           | -47.78       | ≤-16.19     | PASS    |
|          |         | 2441           | Reference       | 4.79           | 4.79         | ---         | PASS    |
|          |         |                | 30~1000         | 4.79           | -60.2        | ≤-15.21     | PASS    |
|          |         |                | 1000~26500      | 4.79           | -47.61       | ≤-15.21     | PASS    |
|          |         | 2480           | Reference       | 5.45           | 5.45         | ---         | PASS    |
|          |         |                | 30~1000         | 5.45           | -60.37       | ≤-14.55     | PASS    |
|          |         |                | 1000~26500      | 5.45           | -47.19       | ≤-14.55     | PASS    |
| 3DH1     | Ant1    | 2402           | Reference       | 3.38           | 3.38         | ---         | PASS    |
|          |         |                | 30~1000         | 3.38           | -60.87       | ≤-16.62     | PASS    |
|          |         |                | 1000~26500      | 3.38           | -47.61       | ≤-16.62     | PASS    |
|          |         | 2441           | Reference       | 4.54           | 4.54         | ---         | PASS    |
|          |         |                | 30~1000         | 4.54           | -60.33       | ≤-15.46     | PASS    |
|          |         |                | 1000~26500      | 4.54           | -47.63       | ≤-15.46     | PASS    |
|          |         | 2480           | Reference       | 5.66           | 5.66         | ---         | PASS    |
|          |         |                | 30~1000         | 5.66           | -60.53       | ≤-14.34     | PASS    |
|          |         |                | 1000~26500      | 5.66           | -47.38       | ≤-14.34     | PASS    |

# Test Graphs

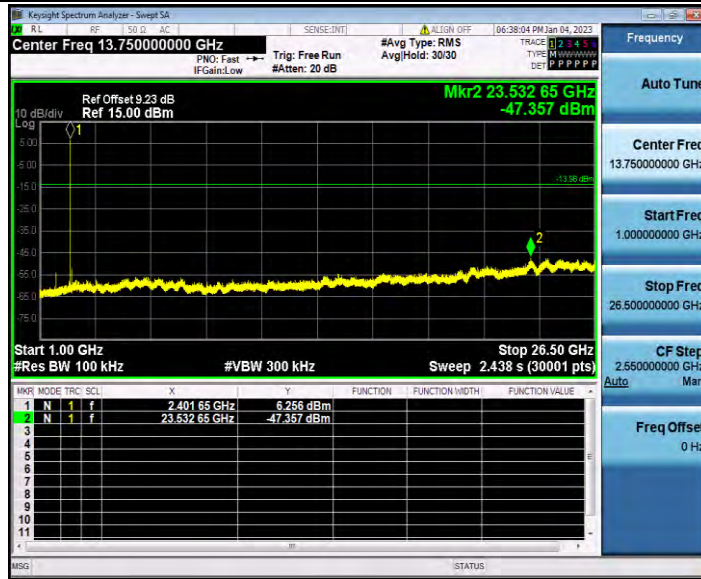
DH1\_Ant1\_2402\_0~Reference



DH1\_Ant1\_2402\_30~1000



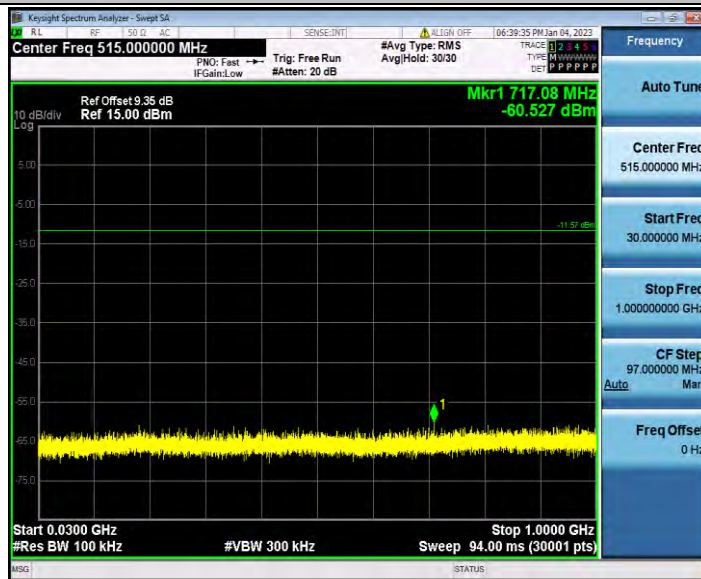
DH1\_Ant1\_2402\_1000~26500



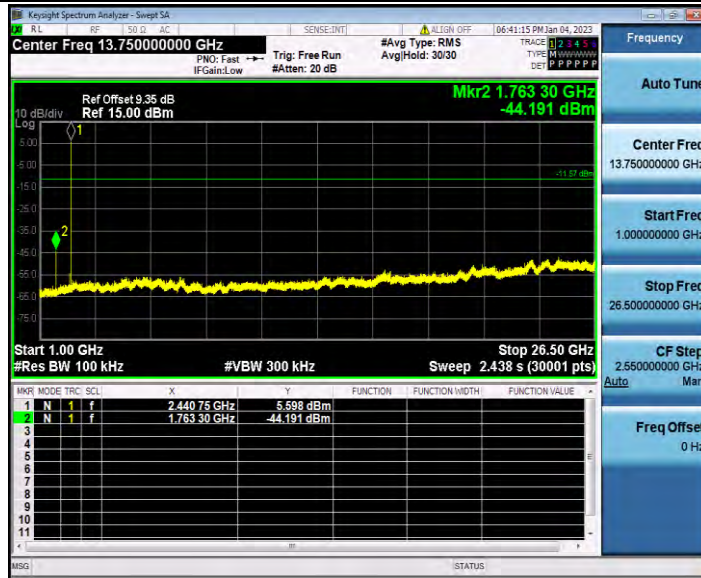
DH1\_Ant1\_2441\_0~Reference



DH1\_Ant1\_2441\_30~1000



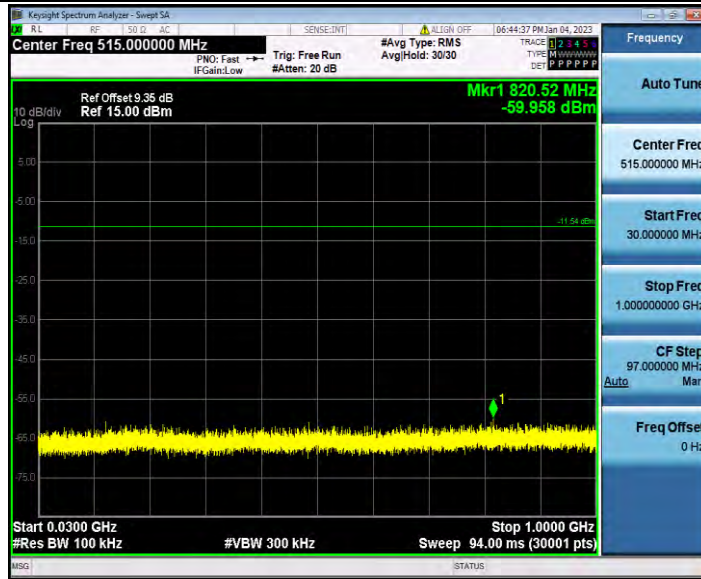
DH1\_Ant1\_2441\_1000~26500



DH1\_Ant1\_2480\_0~Reference



DH1\_Ant1\_2480\_30~1000



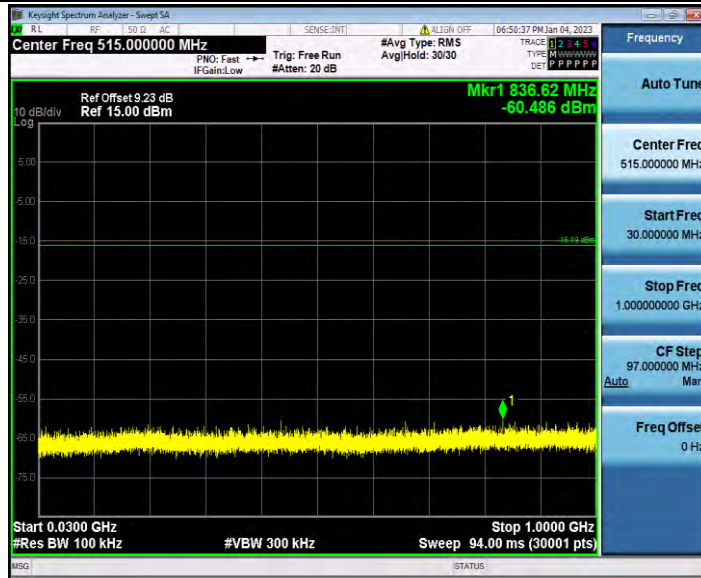
DH1\_Ant1\_2480\_1000~26500



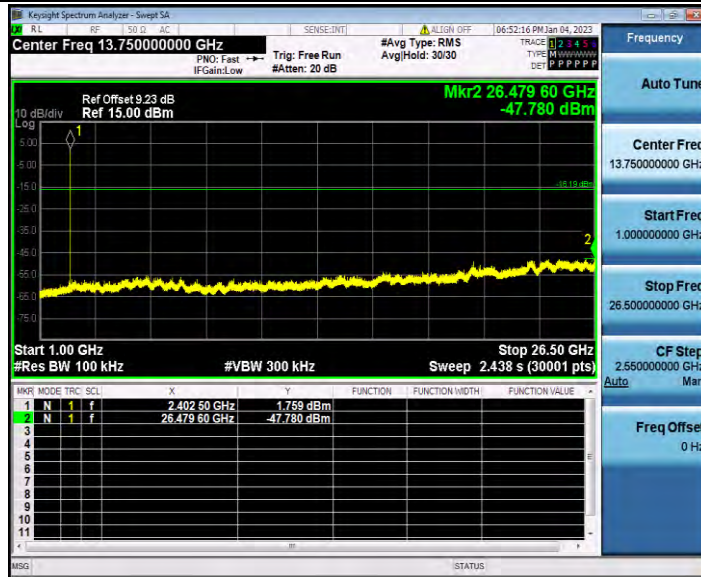
2DH1\_Ant1\_2402\_0~Reference



2DH1\_Ant1\_2402\_30~1000



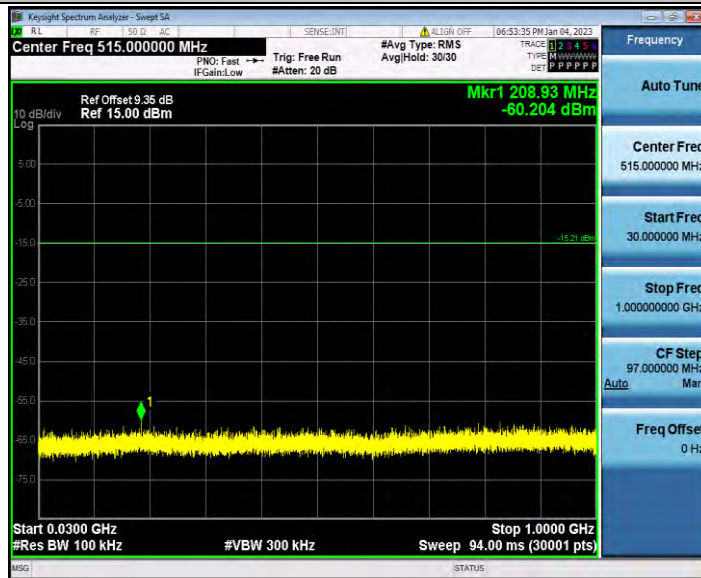
2DH1\_Ant1\_2402\_1000~26500



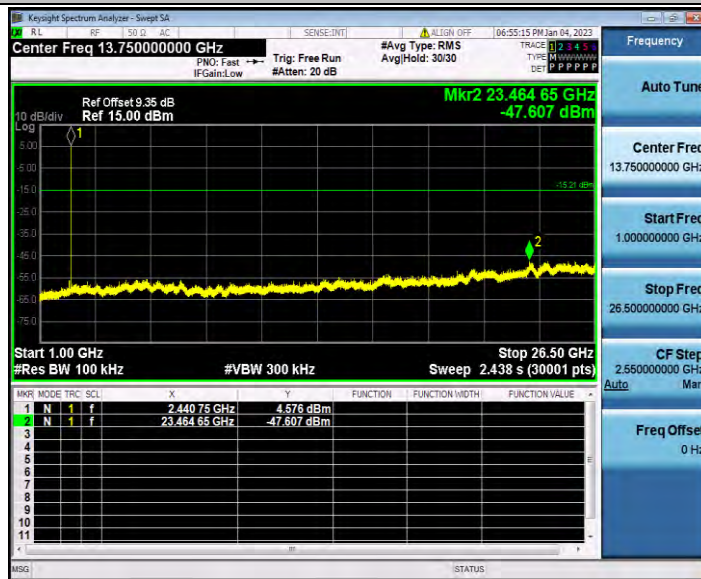
2DH1\_Ant1\_2441\_0~Reference



2DH1\_Ant1\_2441\_30~100



2DH1\_Ant1\_2441\_1000~26500

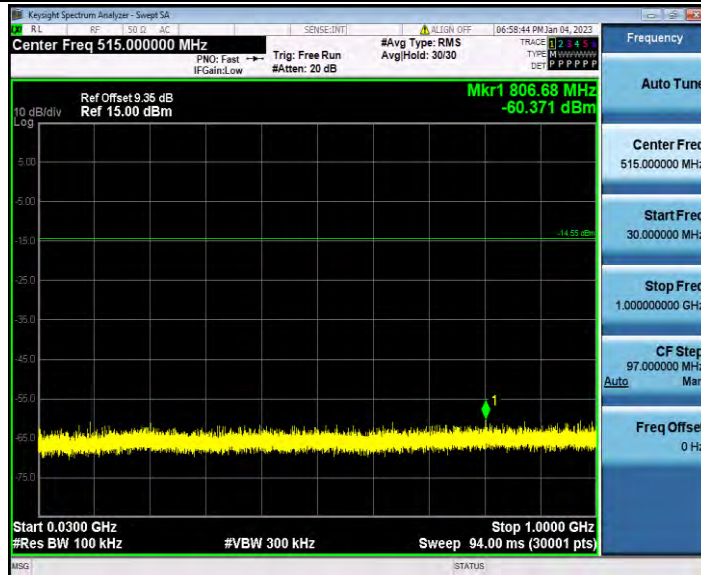




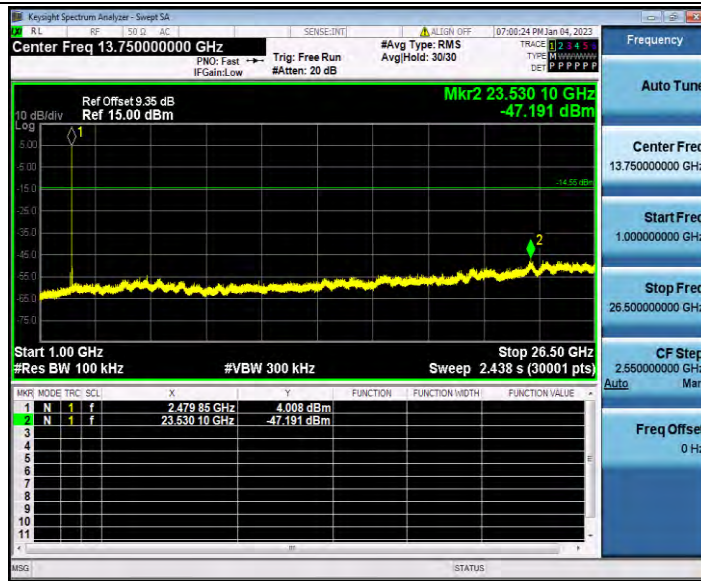
2DH1\_Ant1\_2480\_0~Reference



2DH1\_Ant1\_2480\_30~1000



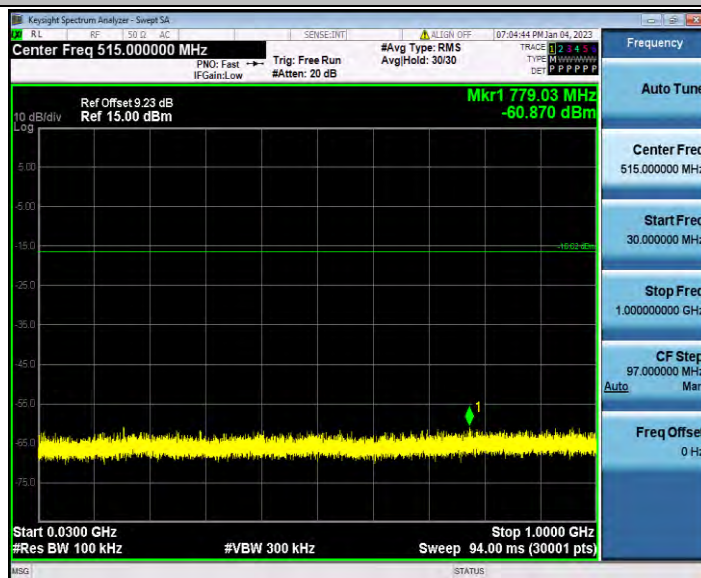
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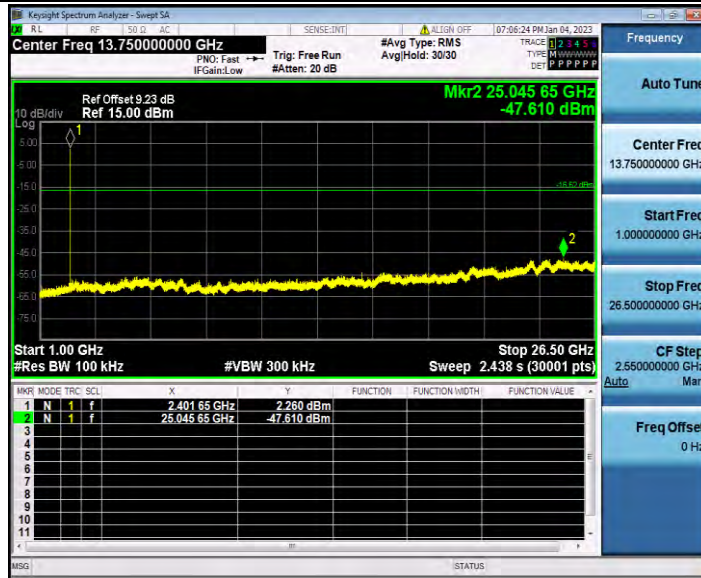
3DH1\_Ant1\_2402\_0~Reference



3DH1\_Ant1\_2402\_30~1000



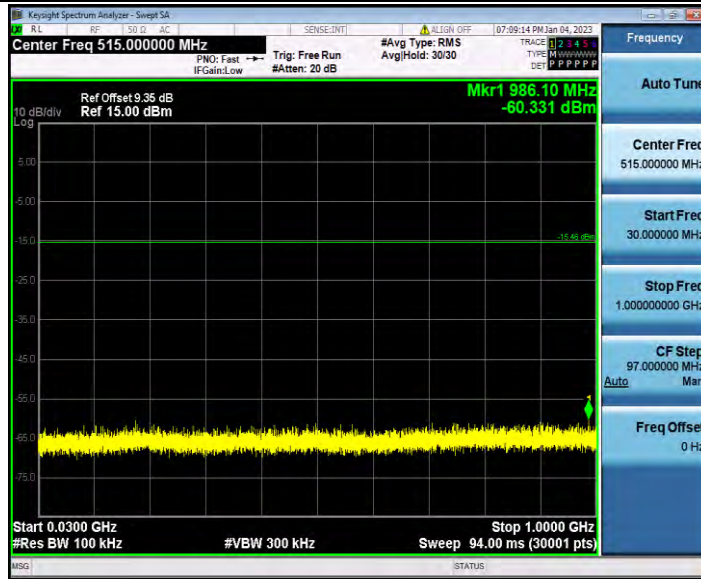
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3DH1\_Ant1\_2441\_0~Reference



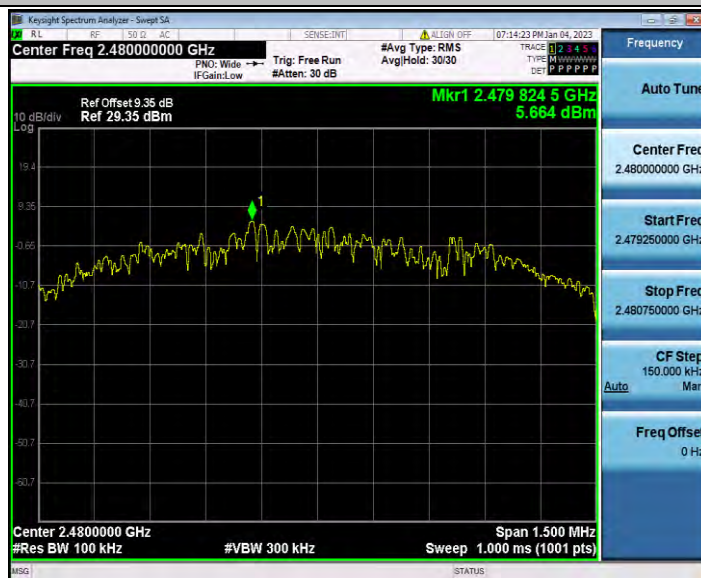
3DH1\_Ant1\_2441\_30~1000



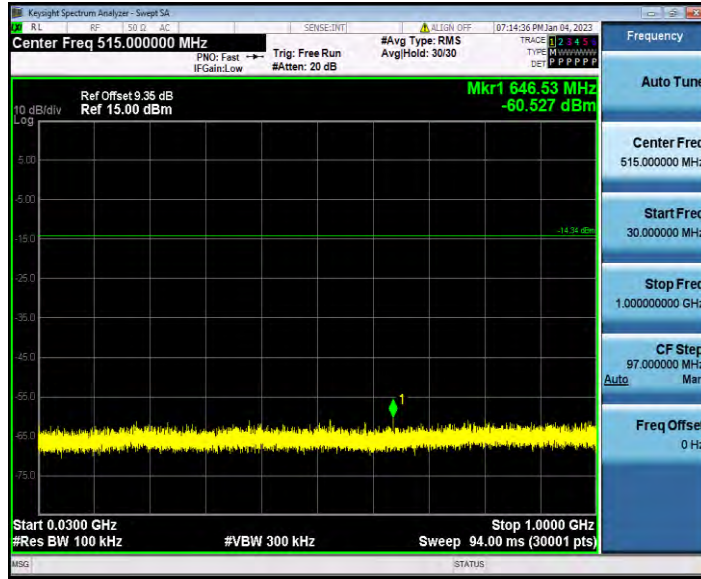
3DH1\_Ant1\_2441\_1000~26500



3DH1\_Ant1\_2480\_0~Reference



### 3DH1\_Ant1\_2480\_30~1000



### 3DH1\_Ant1\_2480\_1000~26500

