

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

**FCC ID** : 2BEPT-NP-S601

**Company** : Newline Co., Ltd.

**EUT** : NewPie 92

**Model Number** : NP-S601

**Report No.** : CTA26051202201

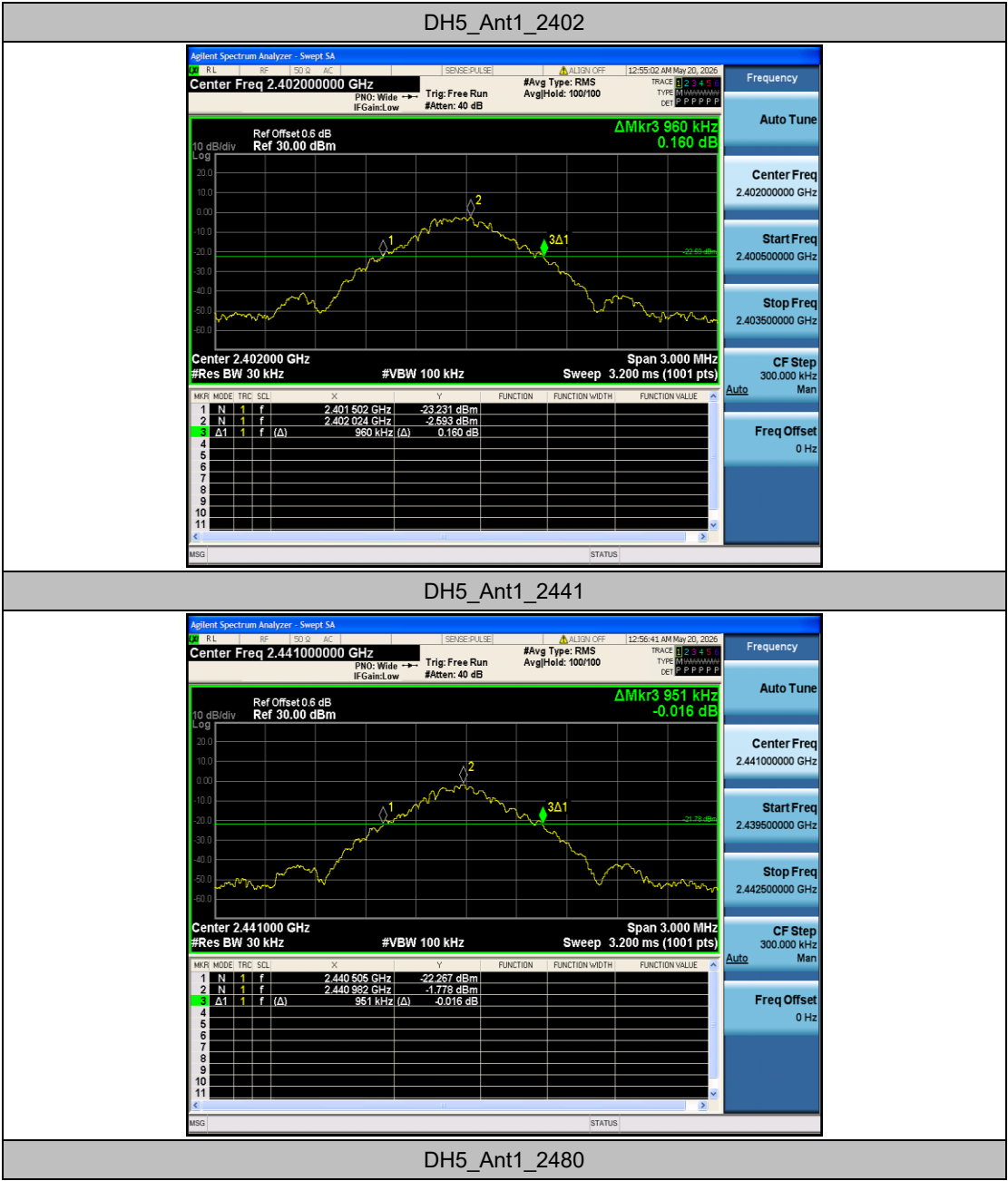
**Reviewed By** : Eric Wang

## 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      | 0.960            | 2401.502 | 2402.462 | ---        | ---     |
|          |         | 2441      | 0.951            | 2440.505 | 2441.456 | ---        | ---     |
|          |         | 2480      | 0.951            | 2479.505 | 2480.456 | ---        | ---     |
| 2DH5     | Ant1    | 2402      | 1.263            | 2401.343 | 2402.606 | ---        | ---     |
|          |         | 2441      | 1.338            | 2440.295 | 2441.633 | ---        | ---     |
|          |         | 2480      | 1.326            | 2479.301 | 2480.627 | ---        | ---     |

Test Graphs





2DH5\_Ant1\_2402



2DH5\_Ant1\_2441



# 2DH5\_Ant1\_2480

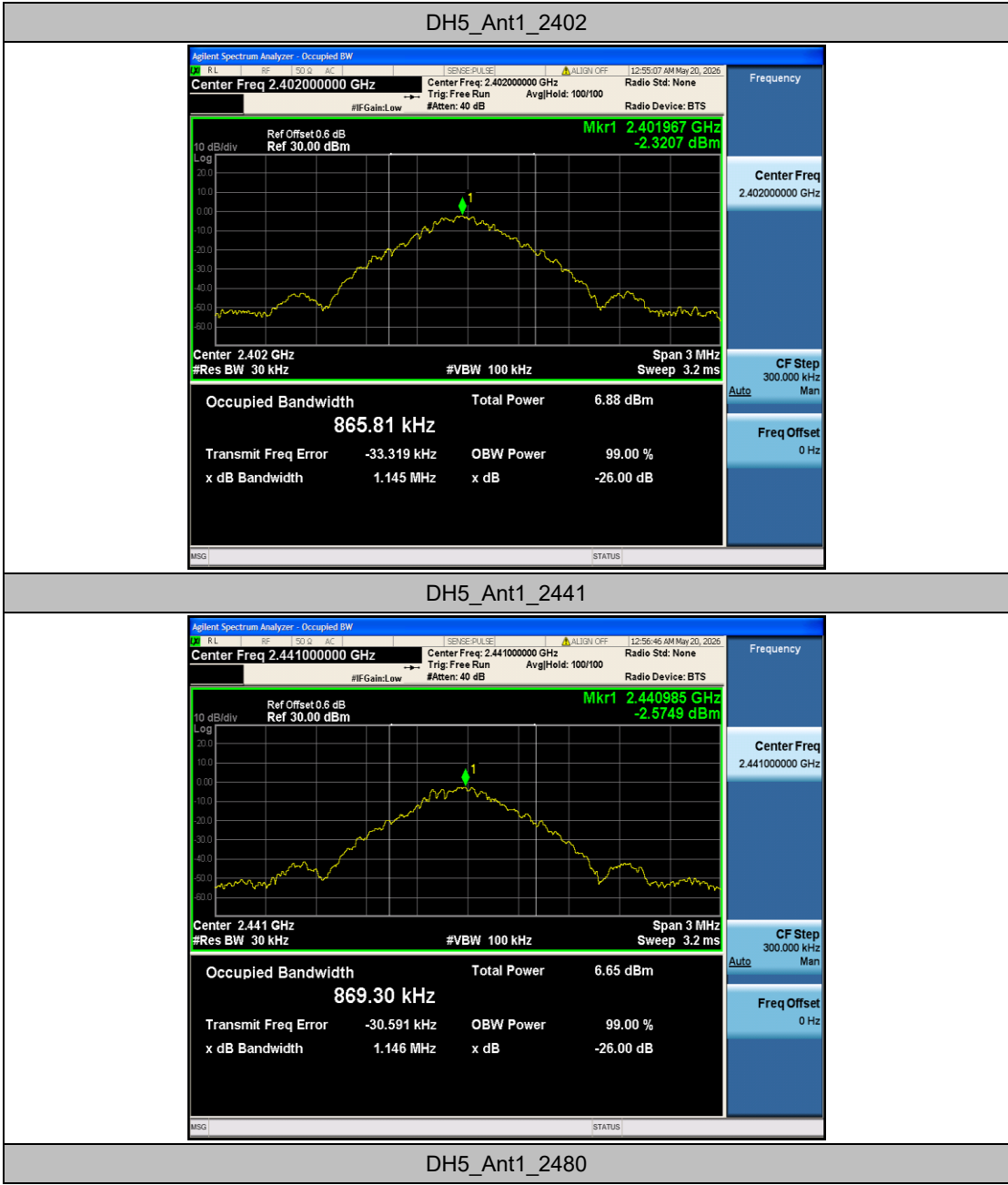


## Appendix B: Occupied Channel Bandwidth

### Test Result

| TestMode | Antenna | Freq(MHz) | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|----------|---------|-----------|-----------|-----------|-----------|------------|---------|
| DH5      | Ant1    | 2402      | 0.86581   | 2401.5338 | 2402.3996 | ---        | ---     |
|          |         | 2441      | 0.86930   | 2440.5348 | 2441.4041 | ---        | ---     |
|          |         | 2480      | 0.86670   | 2479.5333 | 2480.4000 | ---        | ---     |
| 2DH5     | Ant1    | 2402      | 1.1816    | 2401.3772 | 2402.5588 | ---        | ---     |
|          |         | 2441      | 1.1741    | 2440.3798 | 2441.5539 | ---        | ---     |
|          |         | 2480      | 1.1718    | 2479.3801 | 2480.5519 | ---        | ---     |

Test Graphs





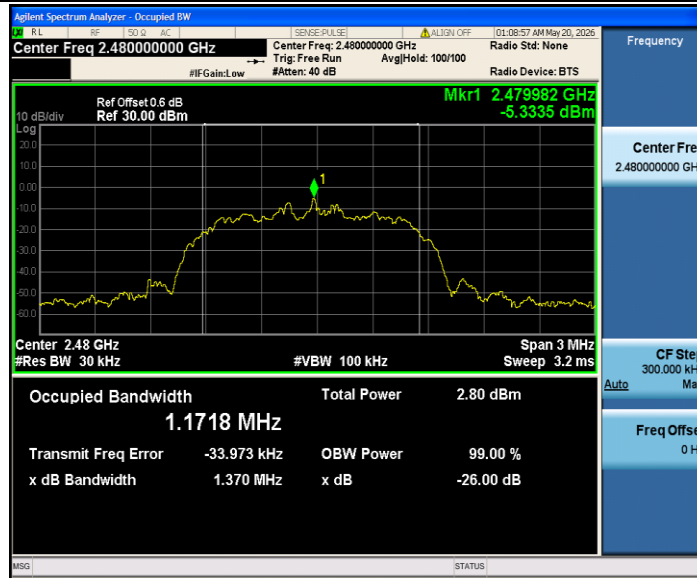
2DH5\_Ant1\_2402



2DH5\_Ant1\_2441



# 2DH5\_Ant1\_2480



## Appendix C: Maximum conducted output power

### Test Result Peak

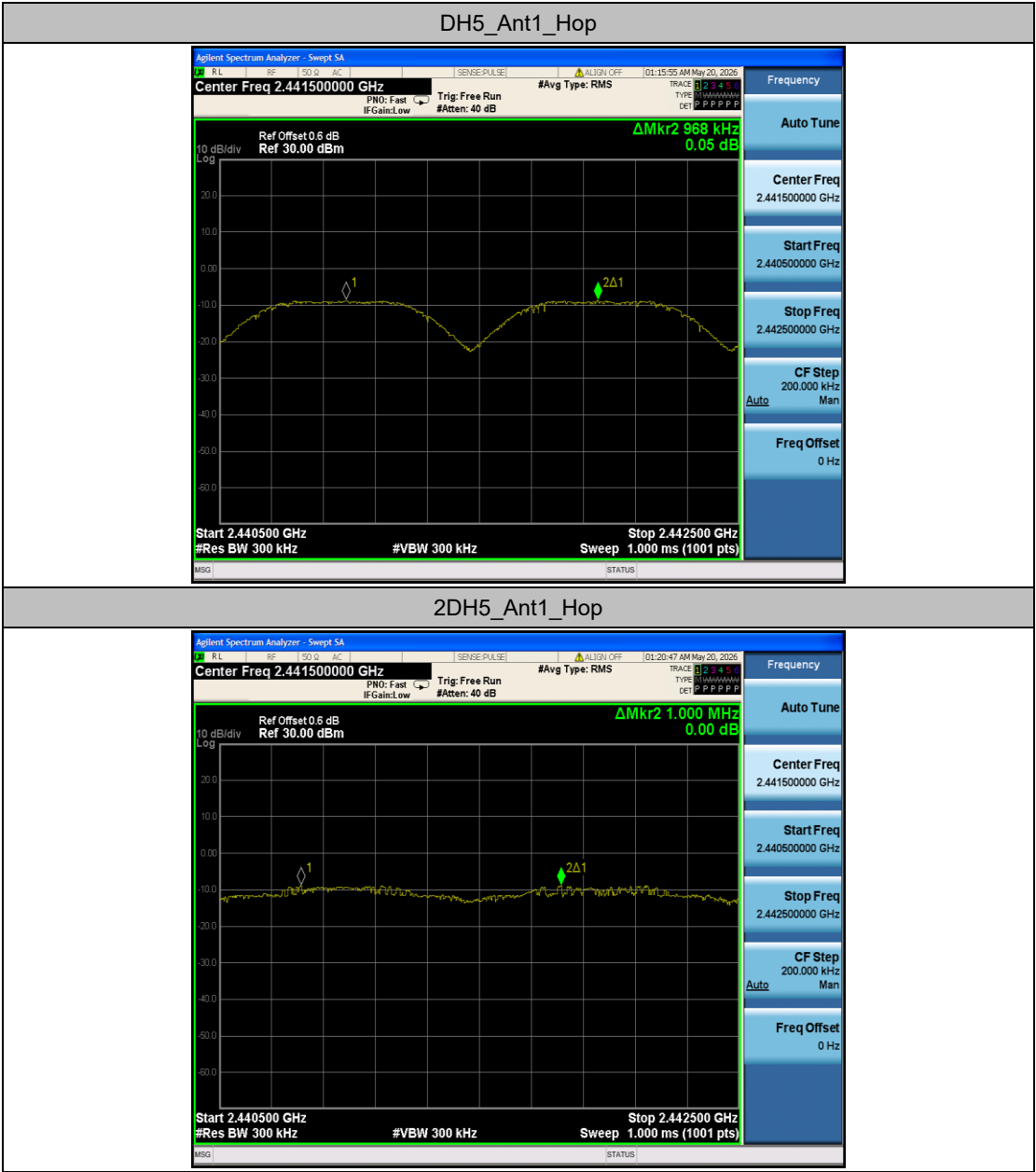
| Test Mode | Antenna | Freq(MHz) | Conducted Peak Power[dBm] | Conducted Limit[dBm] | Verdict |
|-----------|---------|-----------|---------------------------|----------------------|---------|
| DH5       | Ant1    | 2402      | 0.52                      | ≤20.97               | PASS    |
|           |         | 2441      | 0.33                      | ≤20.97               | PASS    |
|           |         | 2480      | -0.23                     | ≤20.97               | PASS    |
| 2DH5      | Ant1    | 2402      | -1.69                     | ≤20.97               | PASS    |
|           |         | 2441      | -1.94                     | ≤20.97               | PASS    |
|           |         | 2480      | -2.41                     | ≤20.97               | PASS    |

## Appendix D: Carrier frequency separation

### Test Result

| TestMode | Antenna | Freq(MHz) | Result[MHz] | Limit[MHz]   | Verdict |
|----------|---------|-----------|-------------|--------------|---------|
| DH5      | Ant1    | Hop       | 0.968       | $\geq 0.960$ | PASS    |
| 2DH5     | Ant1    | Hop       | 1.0         | $\geq 0.892$ | PASS    |

Test Graphs

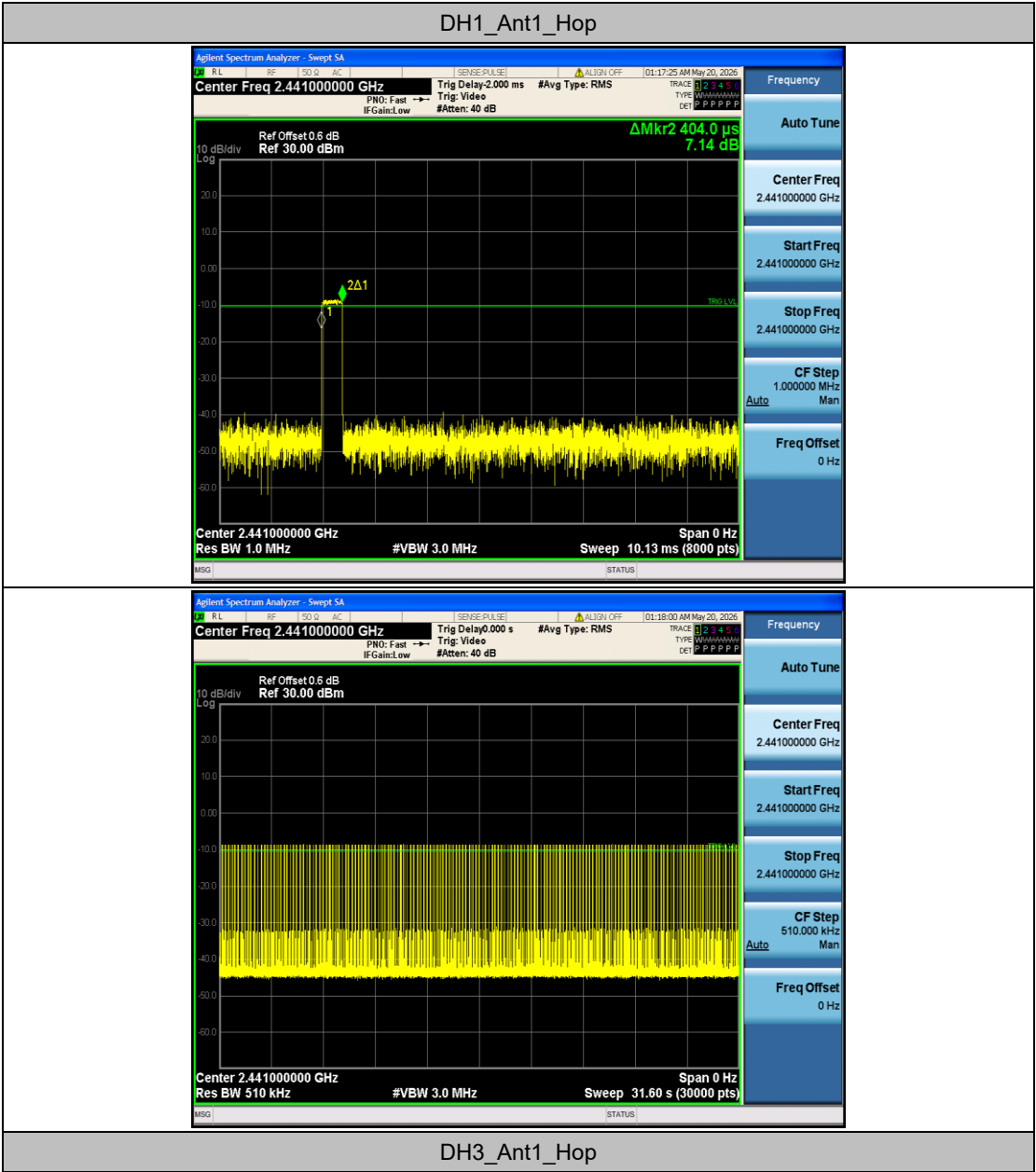


## Appendix E: Time of occupancy

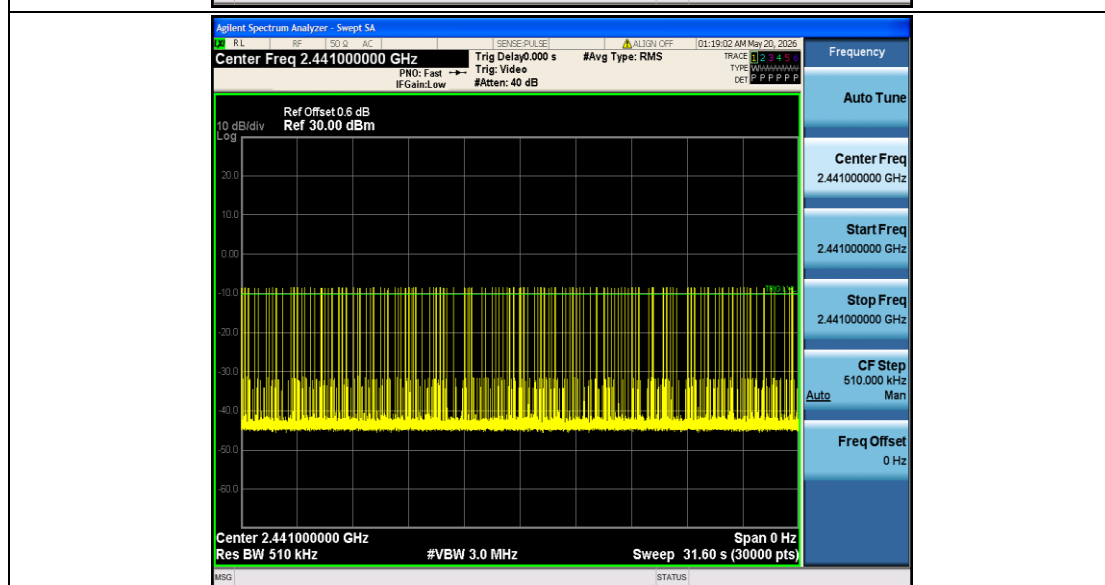
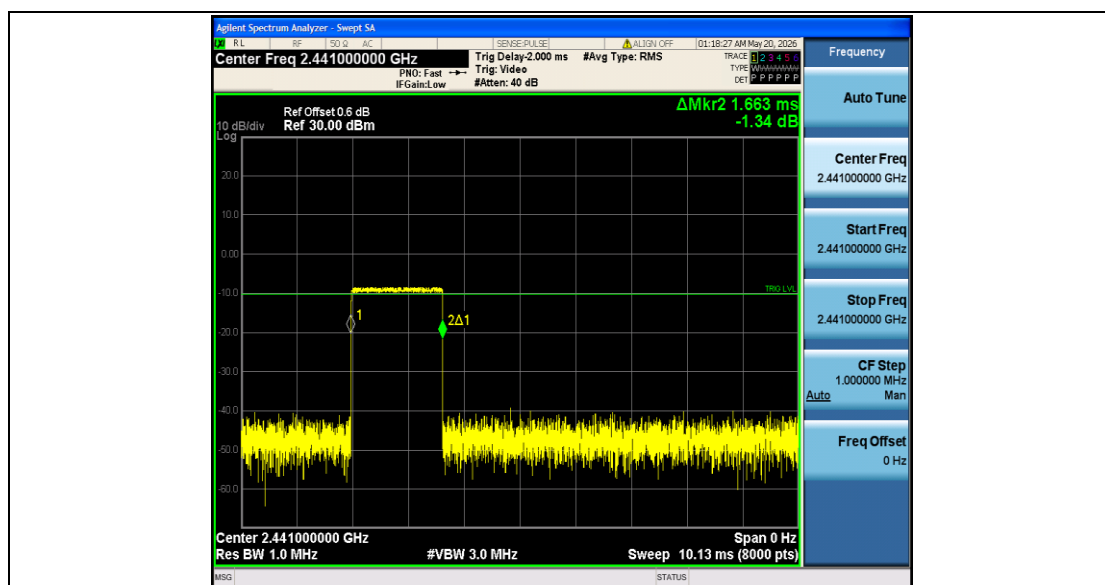
### Test Result

| TestMode | Antenna | Freq(MHz) | BurstWidth<br>[ms] | TotalHops<br>[Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|-----------|--------------------|--------------------|-----------|----------|---------|
| DH1      | Ant1    | Hop       | 0.404              | 316                | 0.128     | ≤0.4     | PASS    |
| DH3      | Ant1    | Hop       | 1.663              | 161                | 0.268     | ≤0.4     | PASS    |
| DH5      | Ant1    | Hop       | 2.910              | 111                | 0.323     | ≤0.4     | PASS    |
| 2DH1     | Ant1    | Hop       | 0.414              | 317                | 0.131     | ≤0.4     | PASS    |
| 2DH3     | Ant1    | Hop       | 1.669              | 159                | 0.265     | ≤0.4     | PASS    |
| 2DH5     | Ant1    | Hop       | 2.916              | 109                | 0.318     | ≤0.4     | PASS    |

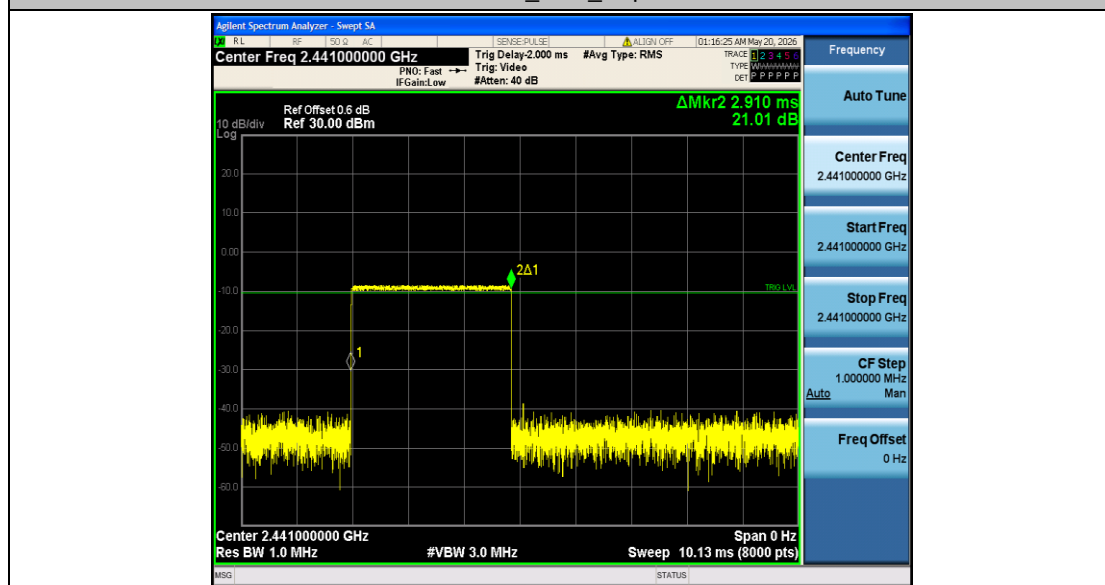
Test Graphs

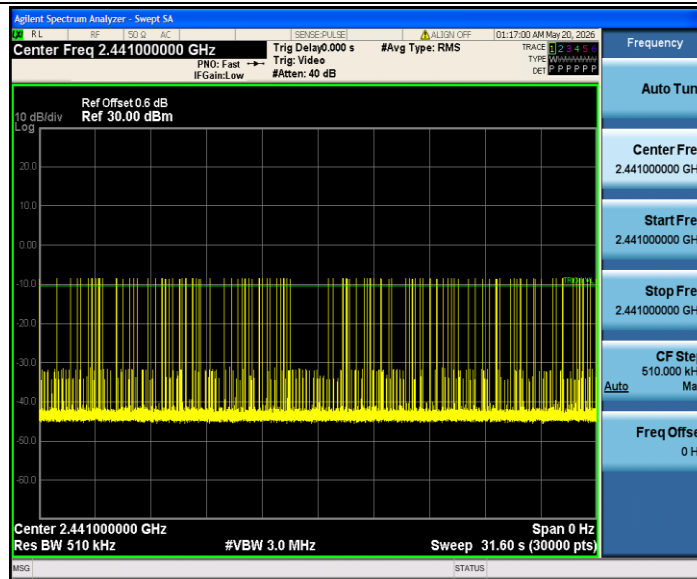


DH3\_Ant1\_Hop

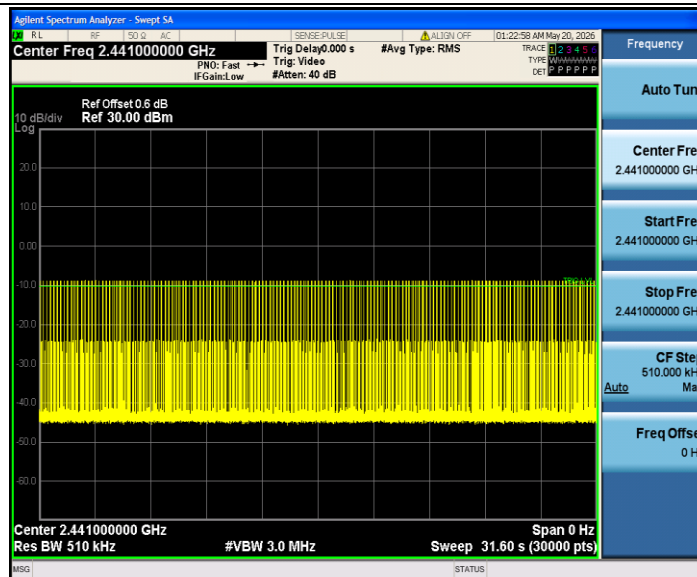
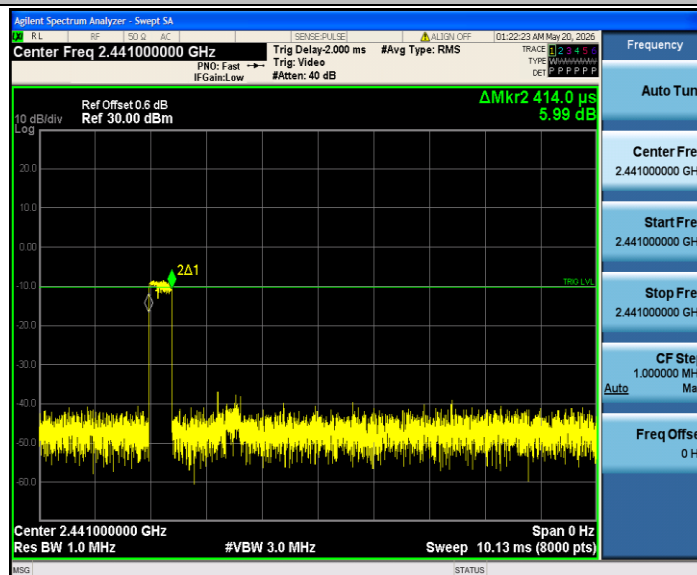


DH5\_Ant1\_Hop

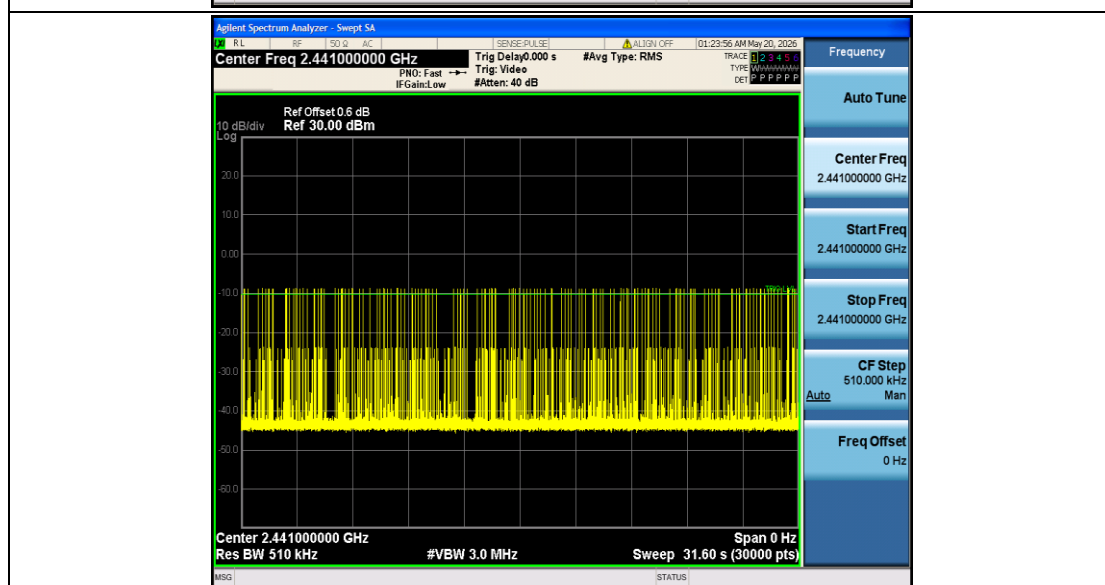
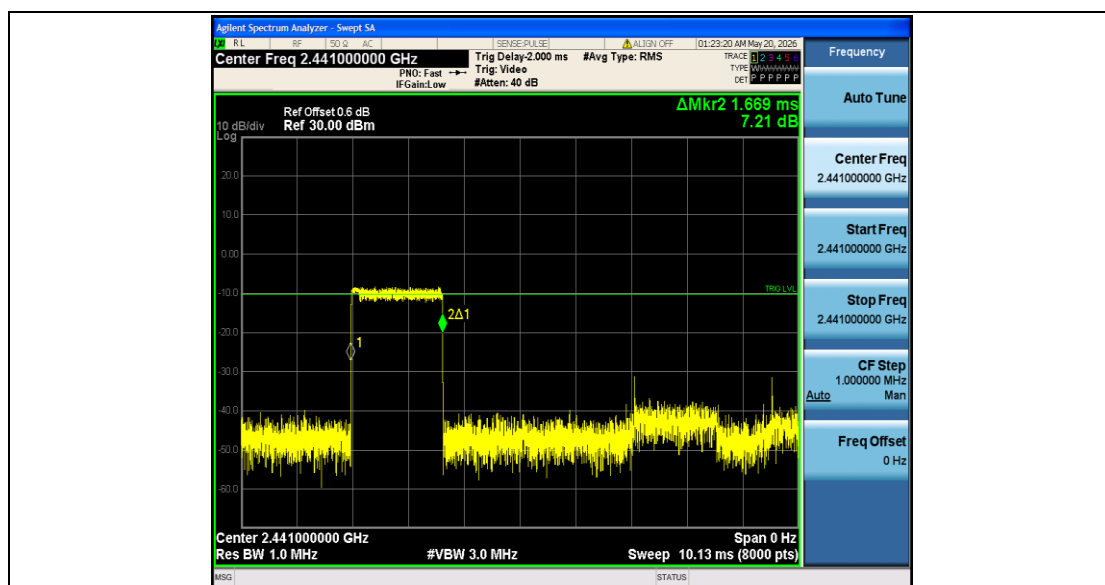




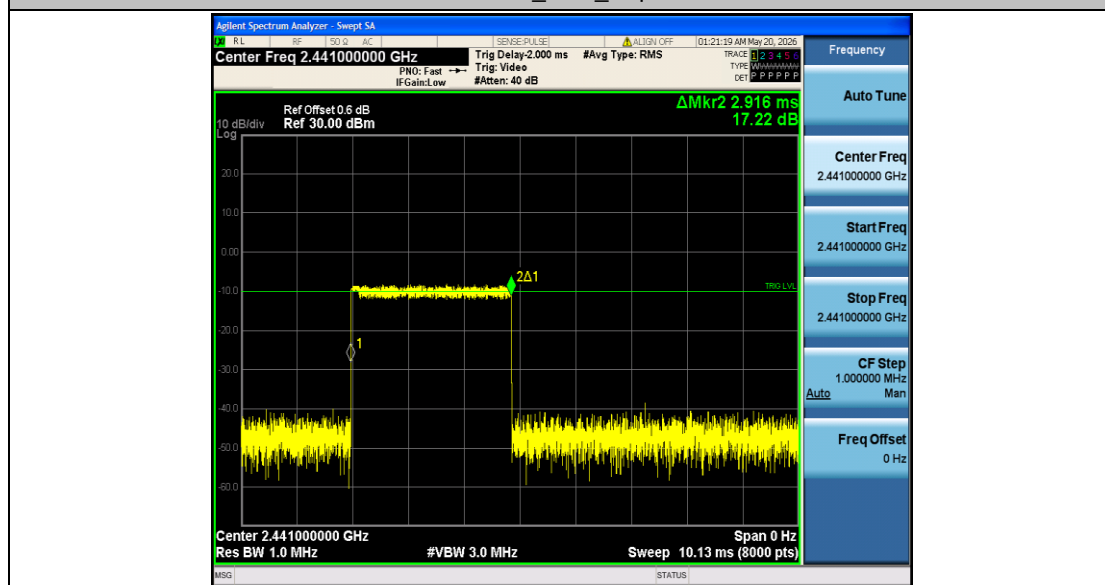
2DH1\_Ant1\_Hop

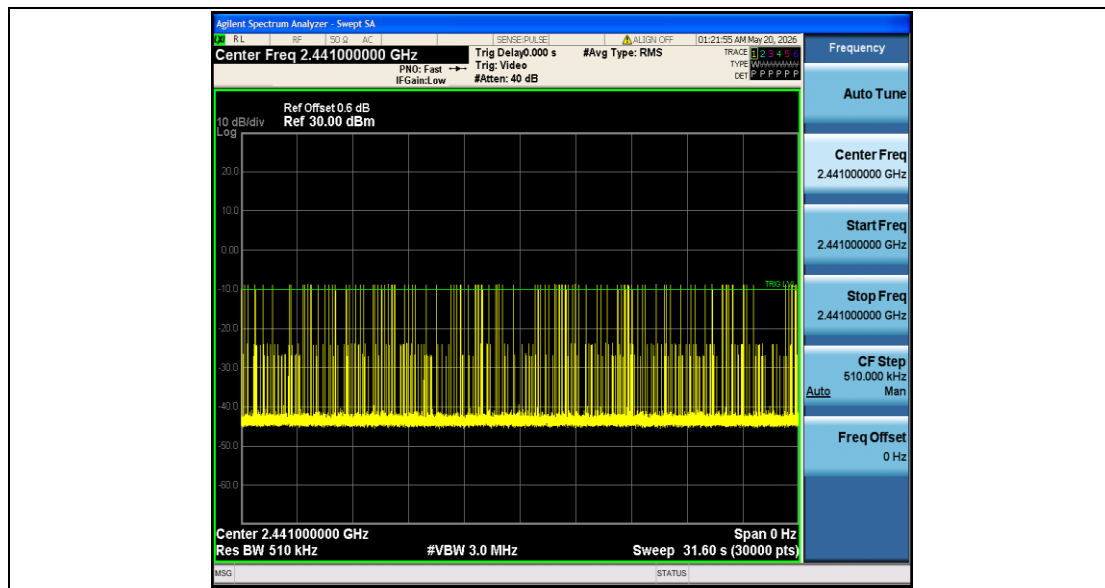


2DH3\_Ant1\_Hop



2DH5\_Ant1\_Hop



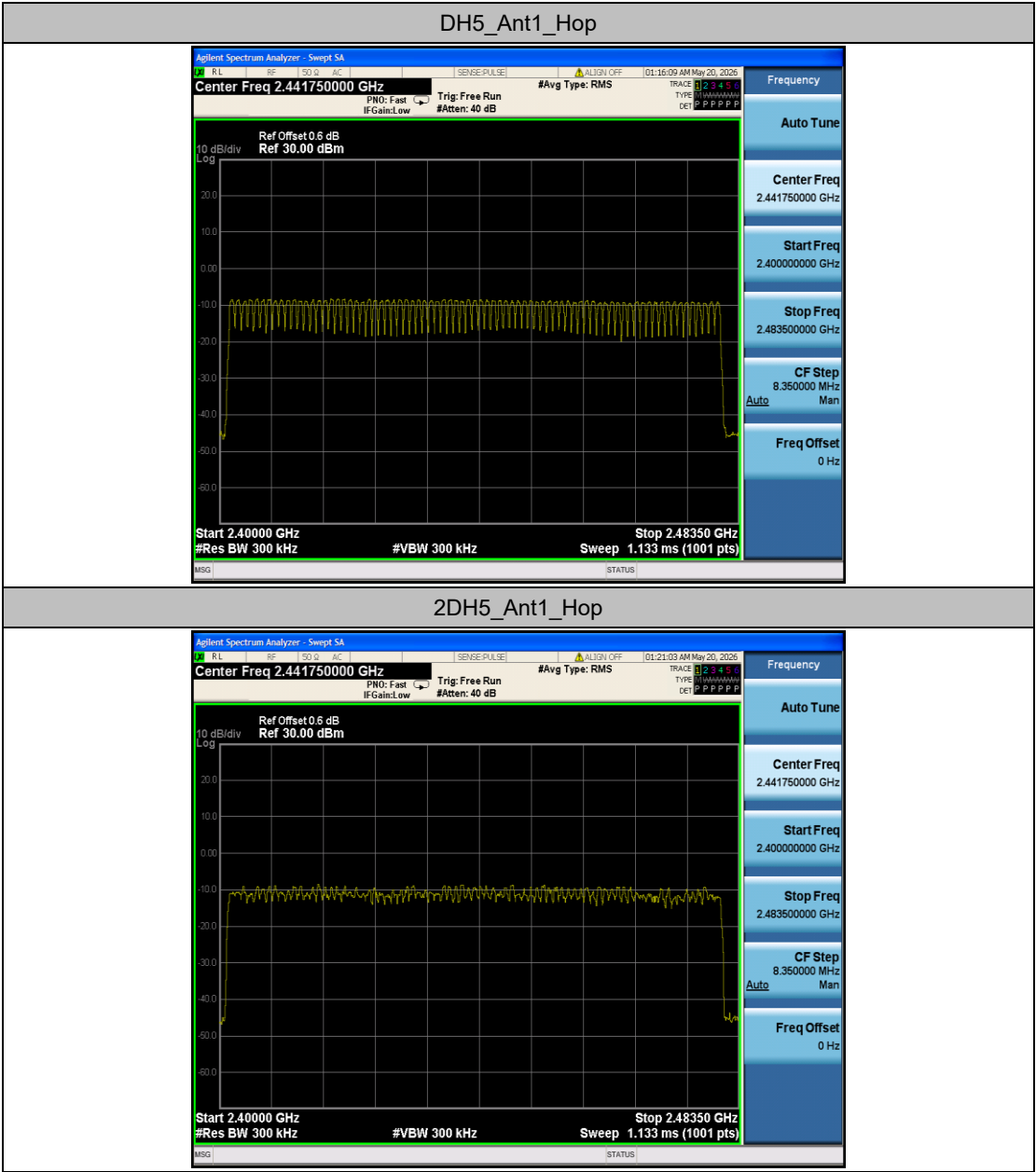


## Appendix F: Number of hopping channels

### Test Result

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

Test Graphs

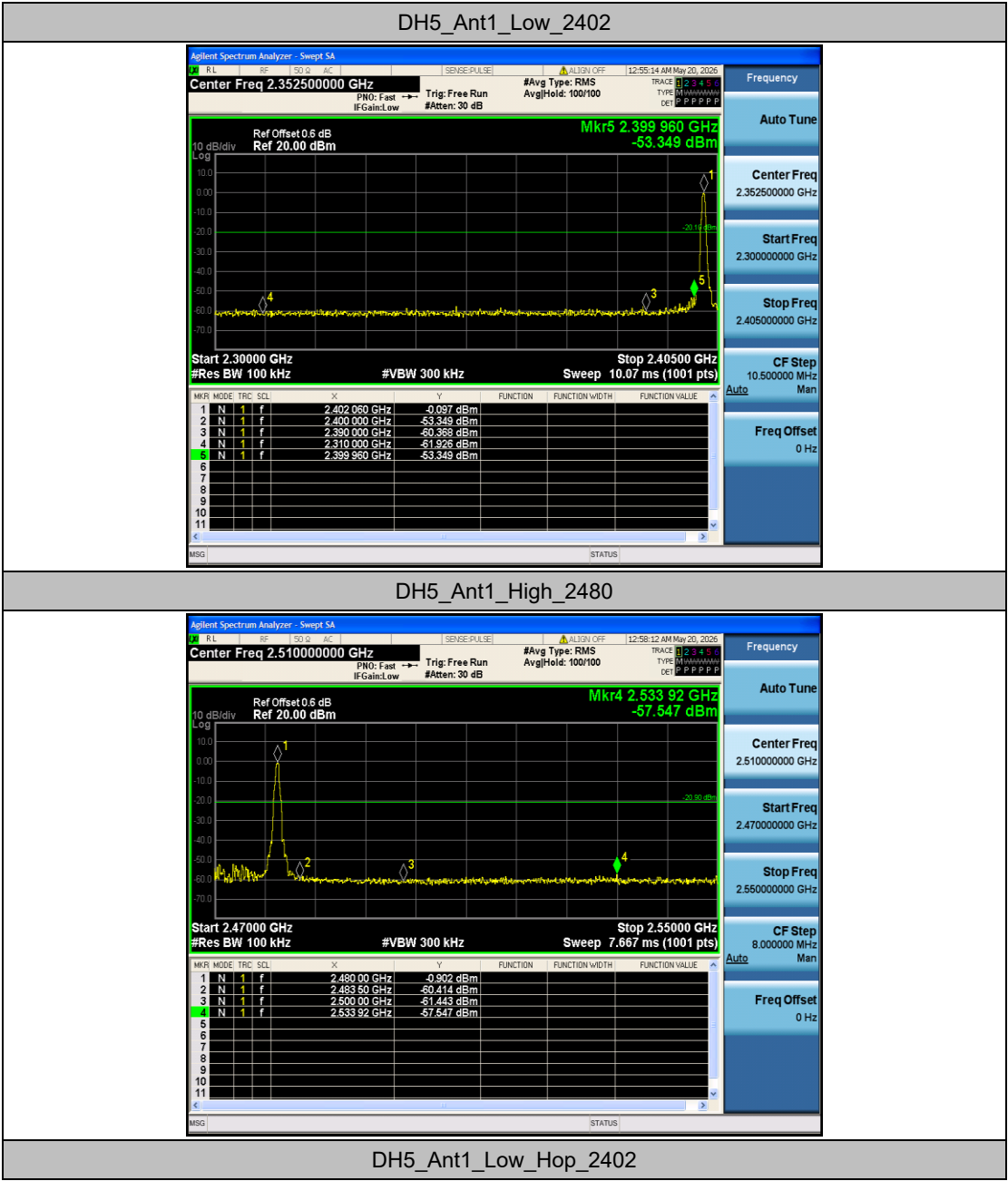


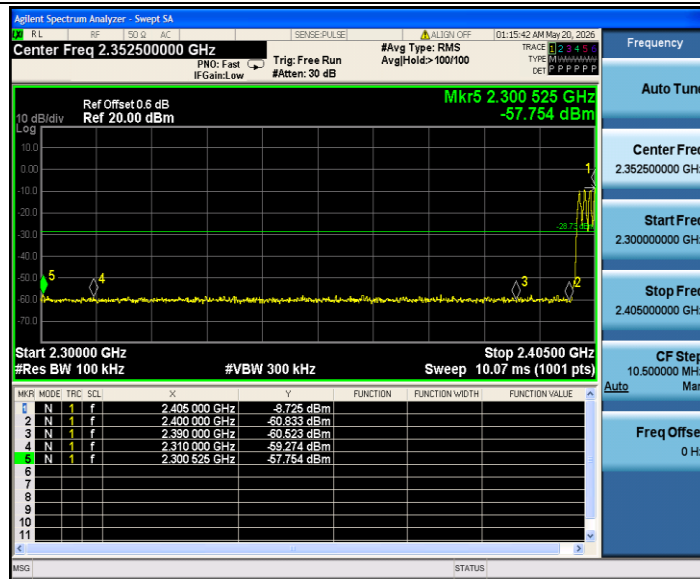
## Appendix G: Band edge measurements

### Test Result

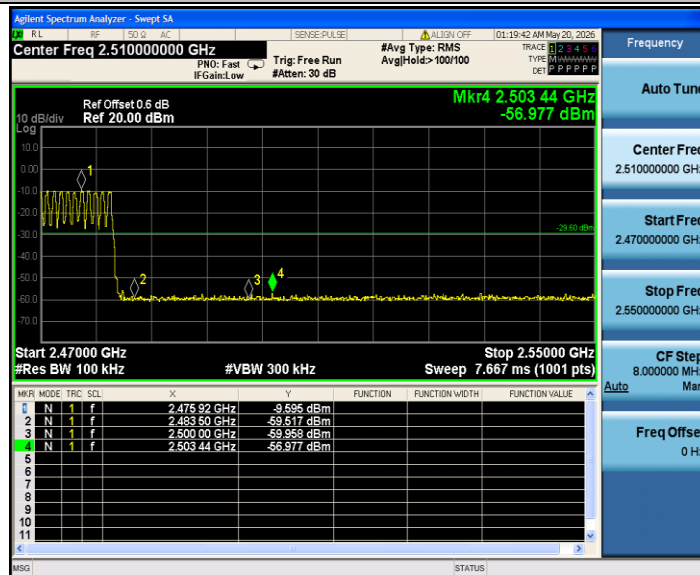
| TestMode | Antenna | ChName | Freq(MHz) | RefLevel<br>[dBm] | Result<br>[dBm] | Limit<br>[dBm] | Verdict |
|----------|---------|--------|-----------|-------------------|-----------------|----------------|---------|
| DH5      | Ant1    | Low    | 2402      | -0.10             | -53.35          | ≤-20.1         | PASS    |
|          |         | High   | 2480      | -0.90             | -57.55          | ≤-20.9         | PASS    |
|          |         | Low    | Hop_2402  | -8.73             | -57.75          | ≤-28.73        | PASS    |
|          |         | High   | Hop_2480  | -9.60             | -56.98          | ≤-29.6         | PASS    |
| 2DH5     | Ant1    | Low    | 2402      | -5.98             | -56.04          | ≤-25.98        | PASS    |
|          |         | High   | 2480      | -3.67             | -57.81          | ≤-23.67        | PASS    |
|          |         | Low    | Hop_2402  | -10.03            | -57.69          | ≤-30.03        | PASS    |
|          |         | High   | Hop_2480  | -11.95            | -56.89          | ≤-31.95        | PASS    |

Test Graphs

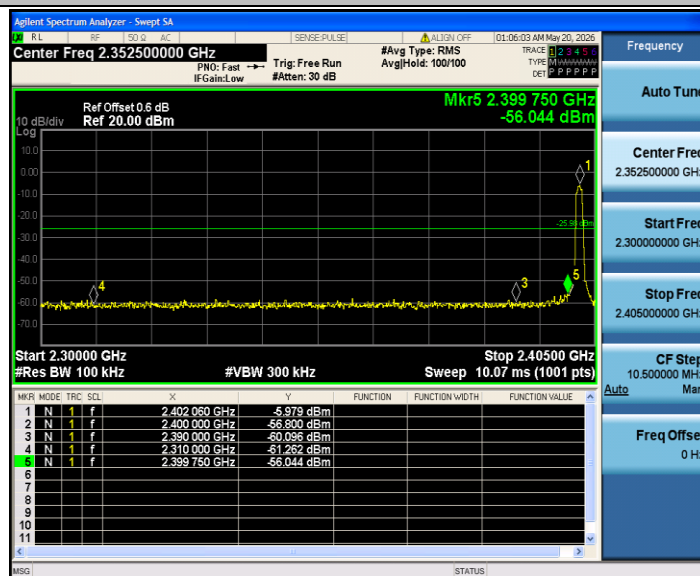




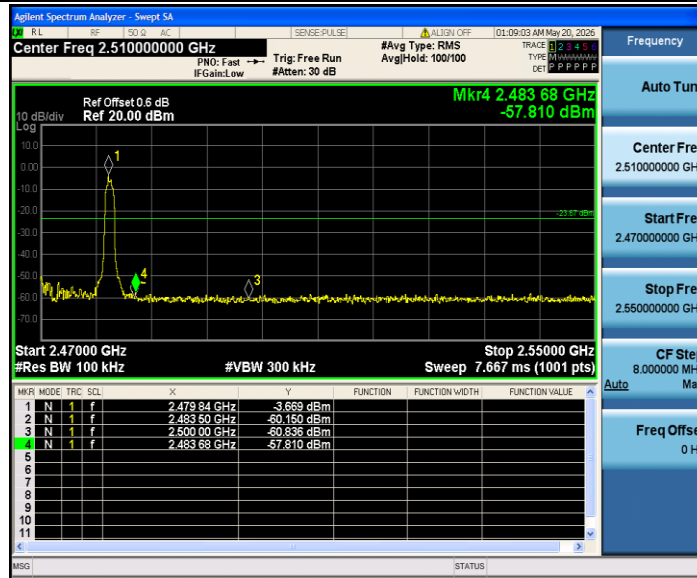
DH5\_Ant1\_High\_Hop\_2480



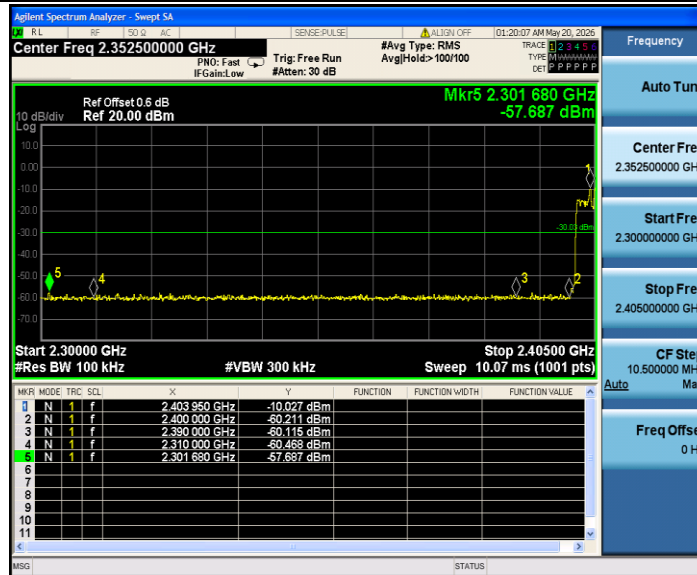
2DH5\_Ant1\_Low\_2402



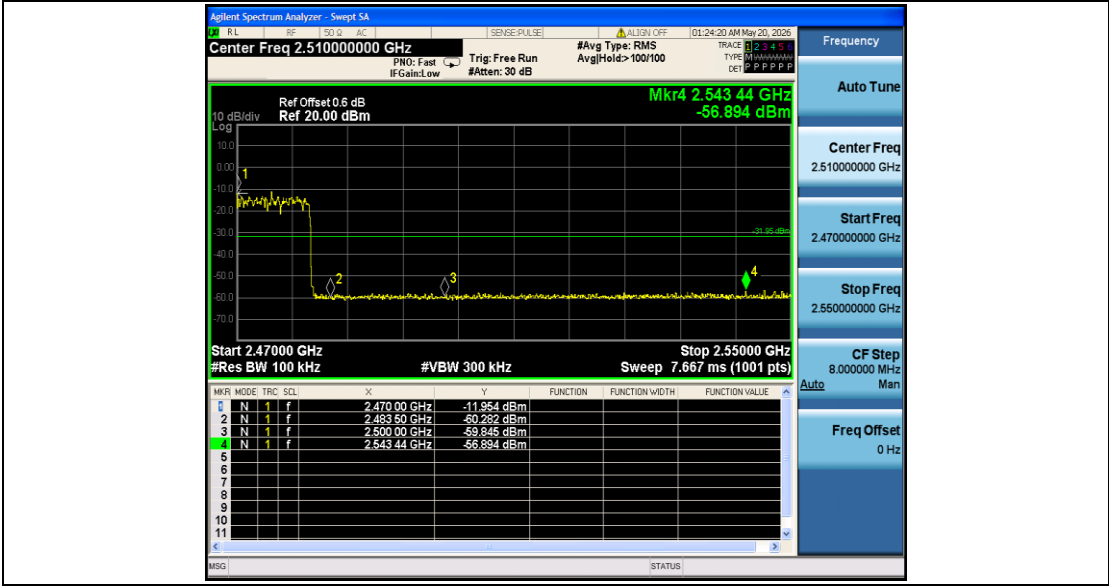
# 2DH5\_Ant1\_High\_2480



# 2DH5\_Ant1\_Low\_Hop\_2402



# 2DH5\_Ant1\_High\_Hop\_2480

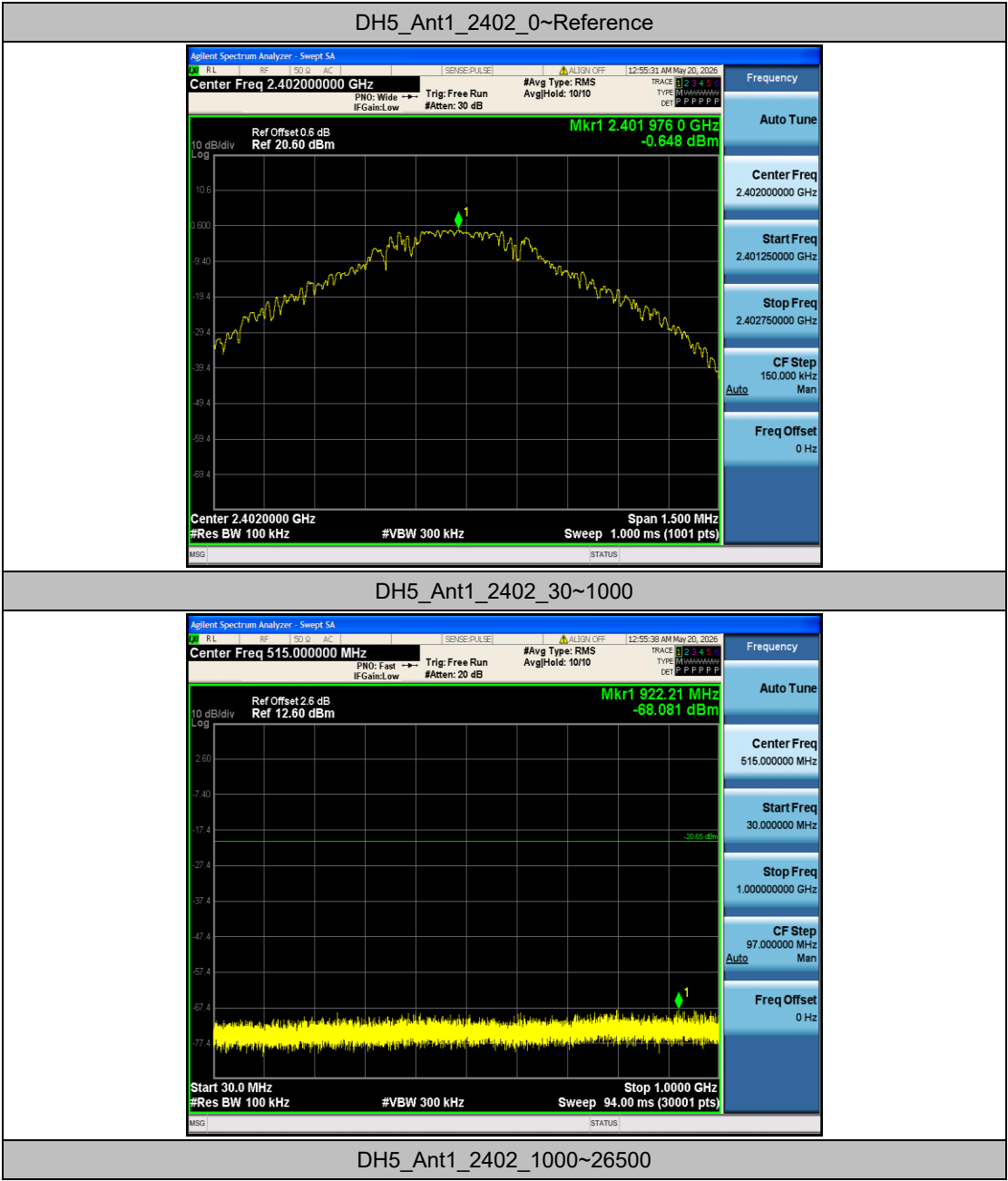


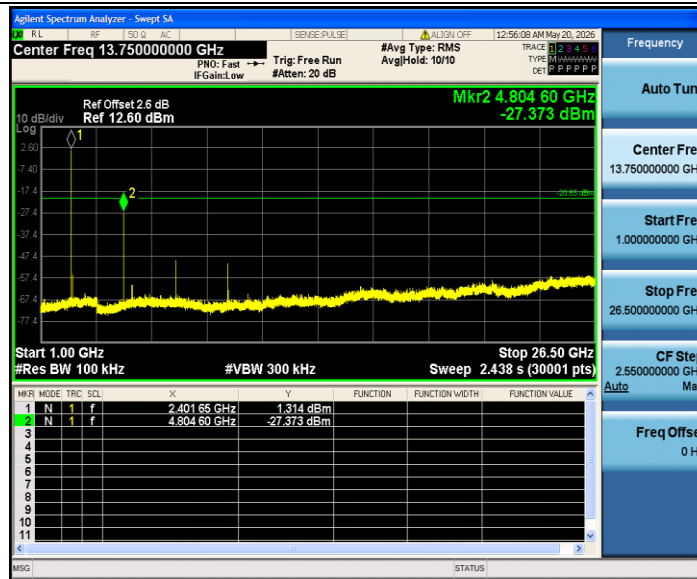
## Appendix H: Conducted Spurious Emission

### Test Result

| TestMode | Antenna | Freq(MHz) | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|-----------|-----------------|----------------|--------------|-------------|---------|
| DH5      | Ant1    | 2402      | Reference       | -0.65          | -0.65        | ---         | PASS    |
|          |         |           | 30~1000         | -0.65          | -68.08       | ≤-20.65     | PASS    |
|          |         |           | 1000~26500      | -0.65          | -27.37       | ≤-20.65     | PASS    |
|          |         | 2441      | Reference       | -0.35          | -0.35        | ---         | PASS    |
|          |         |           | 30~1000         | -0.35          | -68.27       | ≤-20.35     | PASS    |
|          |         |           | 1000~26500      | -0.35          | -26.54       | ≤-20.35     | PASS    |
|          |         | 2480      | Reference       | -1.33          | -1.33        | ---         | PASS    |
|          |         |           | 30~1000         | -1.33          | -68.22       | ≤-21.33     | PASS    |
|          |         |           | 1000~26500      | -1.33          | -30.24       | ≤-21.33     | PASS    |
| 2DH5     | Ant1    | 2402      | Reference       | -6.71          | -6.71        | ---         | PASS    |
|          |         |           | 30~1000         | -6.71          | -67.8        | ≤-26.71     | PASS    |
|          |         |           | 1000~26500      | -6.71          | -37.4        | ≤-26.71     | PASS    |
|          |         | 2441      | Reference       | -4.76          | -4.76        | ---         | PASS    |
|          |         |           | 30~1000         | -4.76          | -67.74       | ≤-24.76     | PASS    |
|          |         |           | 1000~26500      | -4.76          | -35.91       | ≤-24.76     | PASS    |
|          |         | 2480      | Reference       | -4.23          | -4.23        | ---         | PASS    |
|          |         |           | 30~1000         | -4.23          | -67.25       | ≤-24.23     | PASS    |
|          |         |           | 1000~26500      | -4.23          | -36.47       | ≤-24.23     | PASS    |

Test Graphs

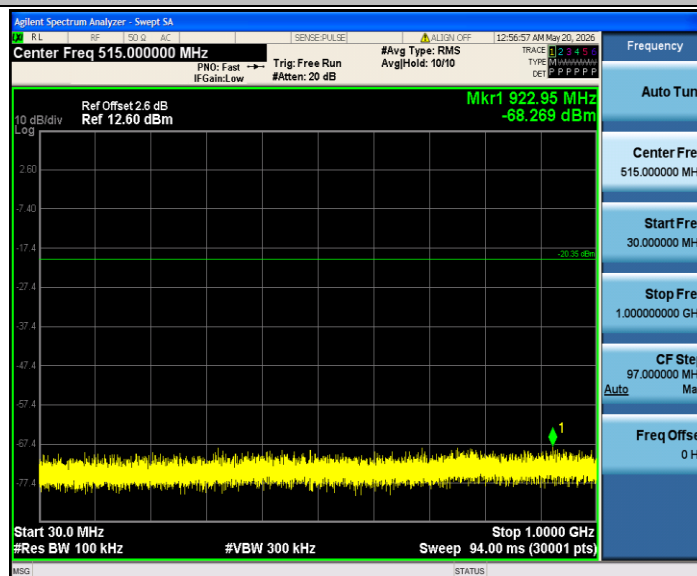




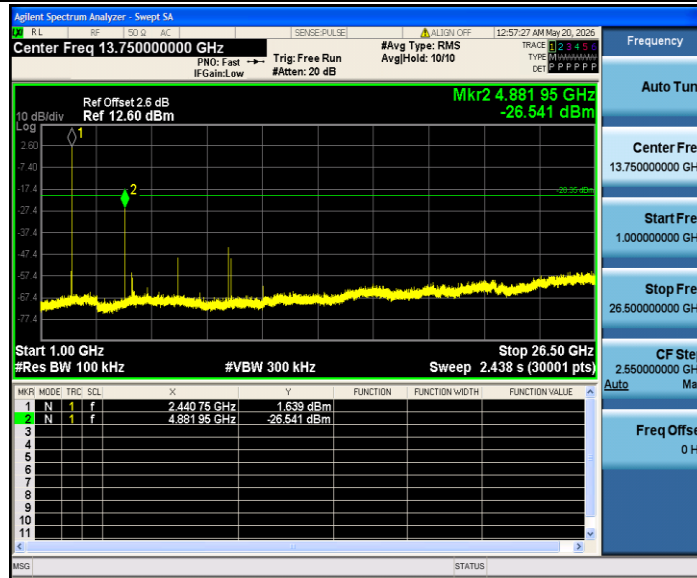
DH5\_Ant1\_2441\_0~Reference



DH5\_Ant1\_2441\_30~1000



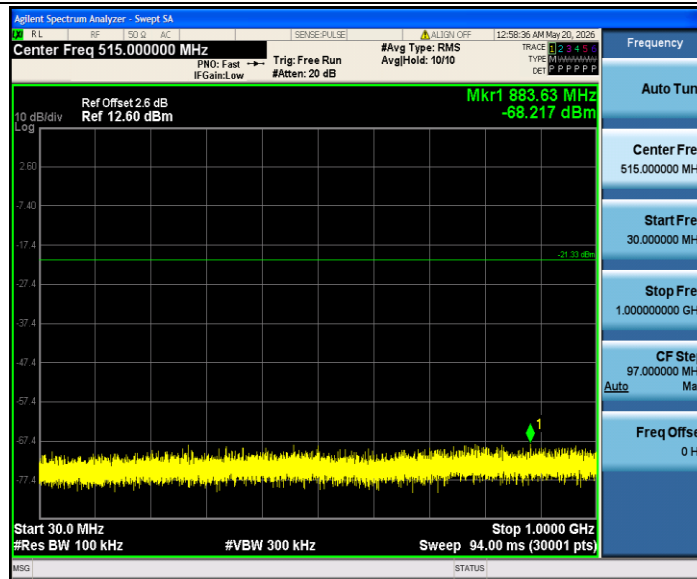
# DH5\_Ant1\_2441\_1000~26500



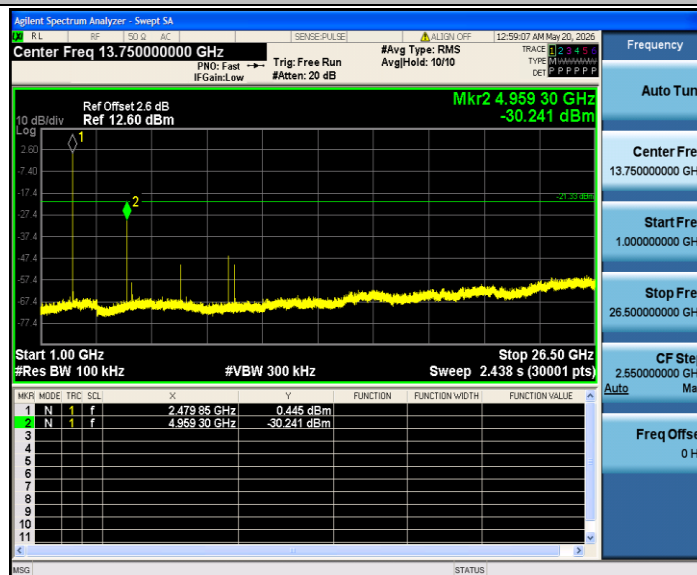
# DH5\_Ant1\_2480\_0~Reference



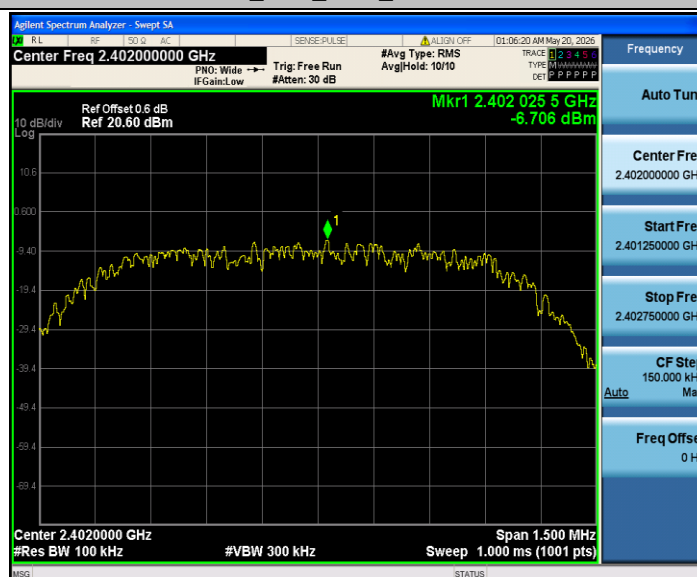
# DH5\_Ant1\_2480\_30~1000



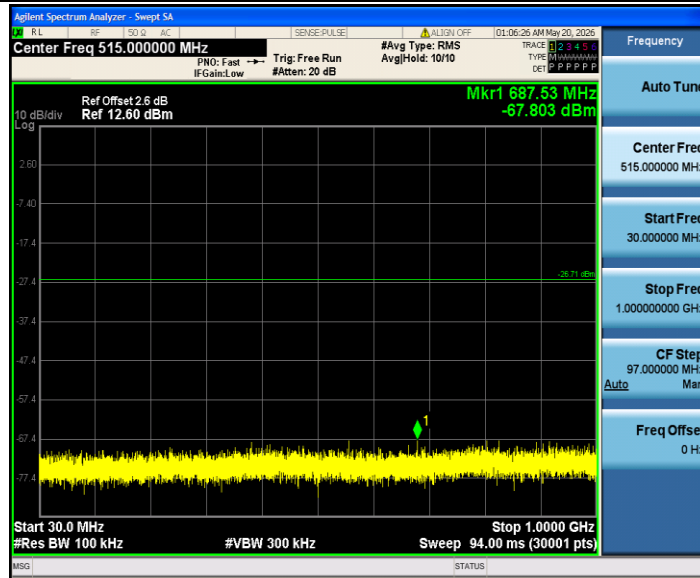
DH5\_Ant1\_2480\_1000~26500



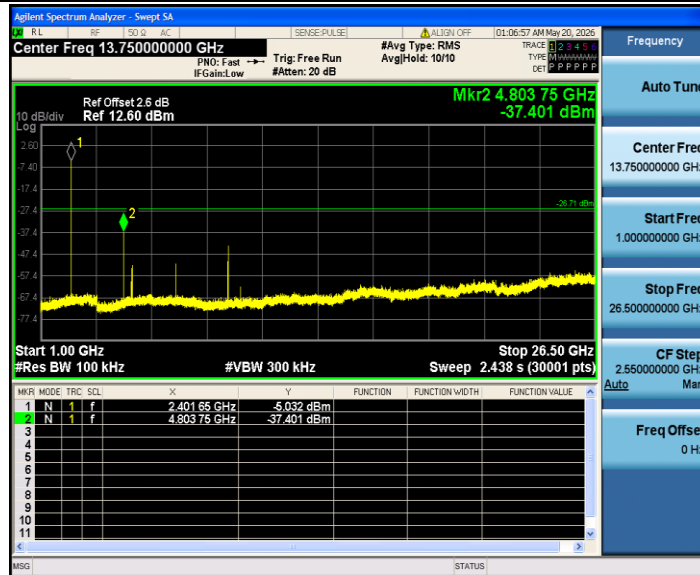
2DH5\_Ant1\_2402\_0~Reference



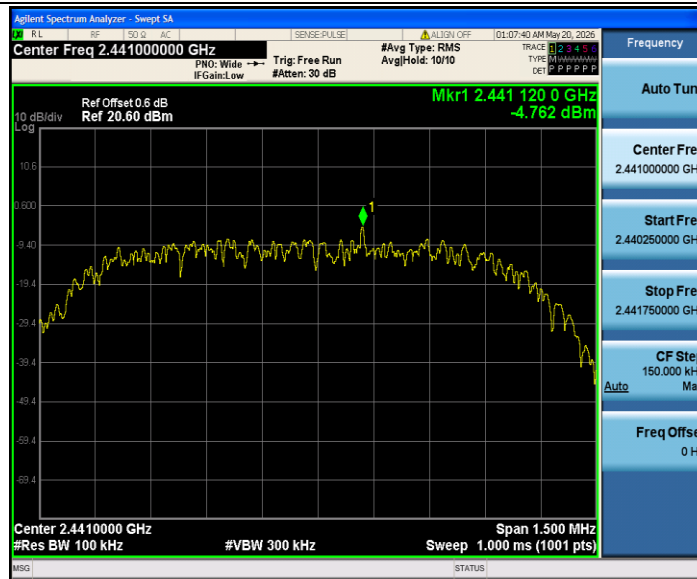
# 2DH5\_Ant1\_2402\_30~1000



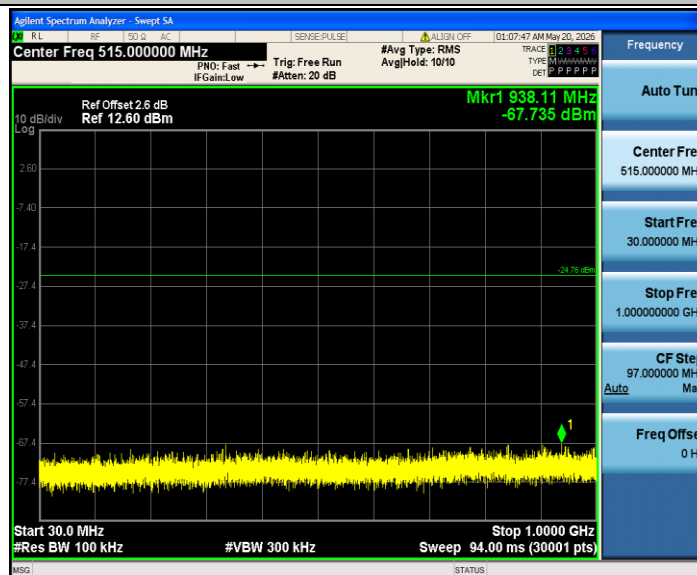
# 2DH5\_Ant1\_2402\_1000~26500



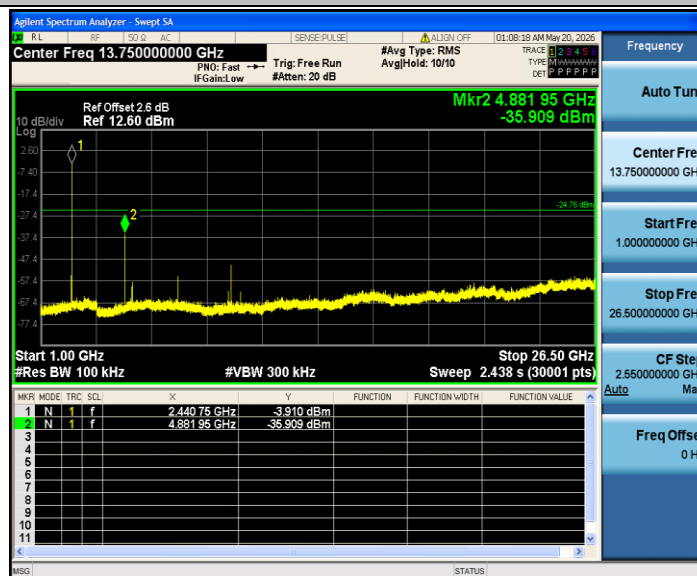
# 2DH5\_Ant1\_2441\_0~Reference



2DH5\_Ant1\_2441\_30~1000



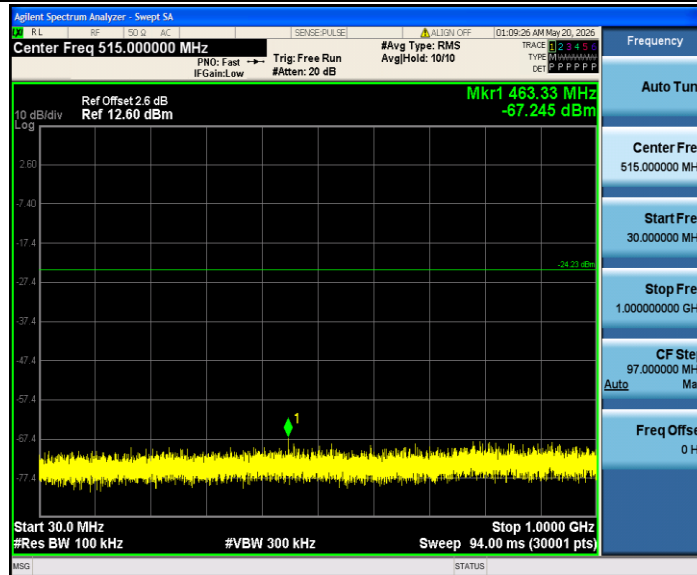
2DH5\_Ant1\_2441\_1000~26500



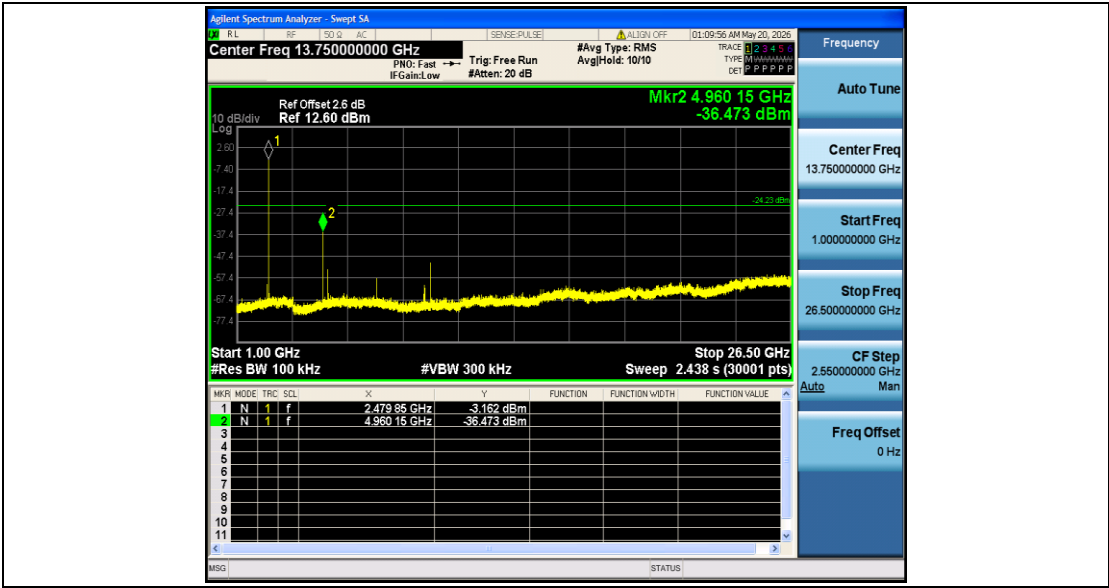
# 2DH5\_Ant1\_2480\_0~Reference



# 2DH5\_Ant1\_2480\_30~1000



# 2DH5\_Ant1\_2480\_1000~26500



## Appendix I: Duty Cycle

### Test Result

| TestMode | Antenna | Freq(MHz) | ON Time<br>[ms] | Period<br>[ms] | DC<br>[%] | xFactor | Limit | Verdict |
|----------|---------|-----------|-----------------|----------------|-----------|---------|-------|---------|
| DH5      | Ant1    | 2402      | 2.91            | 3.75           | 77.60     | 1.10    | ---   | ---     |
|          |         | 2441      | 2.90            | 3.74           | 77.54     | 1.10    | ---   | ---     |
|          |         | 2480      | 2.91            | 3.75           | 77.60     | 1.10    | ---   | ---     |
| 2DH5     | Ant1    | 2402      | 2.91            | 3.74           | 77.81     | 1.09    | ---   | ---     |
|          |         | 2441      | 2.91            | 3.74           | 77.81     | 1.09    | ---   | ---     |
|          |         | 2480      | 2.92            | 3.75           | 77.87     | 1.09    | ---   | ---     |