

## **FCC Appendix RF Test Data**

**FCC ID** : 2BQVR-GQ-ZH-75H

**Company** : Dongguan Kingone Electronics Co., Ltd.

**EUT** : Interactive Smart Board 75inch TV

**Model Number** : GQ-ZH-75H

**Report No.** : CTA25060901102

**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      | 0.942            | 2401.553 | 2402.495 | ---        | ---     |
|          |         | 2441      | 0.939            | 2440.553 | 2441.492 | ---        | ---     |
|          |         | 2480      | 0.942            | 2479.553 | 2480.495 | ---        | ---     |
| 2DH5     | Ant1    | 2402      | 1.332            | 2401.343 | 2402.675 | ---        | ---     |
|          |         | 2441      | 1.311            | 2440.355 | 2441.666 | ---        | ---     |
|          |         | 2480      | 1.329            | 2479.349 | 2480.678 | ---        | ---     |
| 3DH5     | Ant1    | 2402      | 1.284            | 2401.379 | 2402.663 | ---        | ---     |
|          |         | 2441      | 1.272            | 2440.382 | 2441.654 | ---        | ---     |
|          |         | 2480      | 1.281            | 2479.382 | 2480.663 | ---        | ---     |

## 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 B: Occupied Channel Bandwidth

### Test Result

| TestMode | Antenna | Freq(MHz) | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|----------|---------|-----------|-----------|-----------|-----------|------------|---------|
| DH5      | Ant1    | 2402      | 0.86478   | 2401.5776 | 2402.4424 | ---        | ---     |
|          |         | 2441      | 0.87031   | 2440.5733 | 2441.4436 | ---        | ---     |
|          |         | 2480      | 0.87114   | 2479.5758 | 2480.4469 | ---        | ---     |
| 2DH5     | Ant1    | 2402      | 1.1909    | 2401.4157 | 2402.6066 | ---        | ---     |
|          |         | 2441      | 1.1861    | 2440.4180 | 2441.6041 | ---        | ---     |
|          |         | 2480      | 1.1901    | 2479.4155 | 2480.6056 | ---        | ---     |
| 3DH5     | Ant1    | 2402      | 1.1877    | 2401.4162 | 2402.6039 | ---        | ---     |
|          |         | 2441      | 1.1901    | 2440.4147 | 2441.6048 | ---        | ---     |
|          |         | 2480      | 1.1864    | 2479.4179 | 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      | 0.09                      | ≤20.97               | PASS    |
|           |         | 2441      | -0.15                     | ≤20.97               | PASS    |
|           |         | 2480      | -0.20                     | ≤20.97               | PASS    |
| 2DH5      | Ant1    | 2402      | -0.72                     | ≤20.97               | PASS    |
|           |         | 2441      | -0.93                     | ≤20.97               | PASS    |
|           |         | 2480      | -1.02                     | ≤20.97               | PASS    |
| 3DH5      | Ant1    | 2402      | -0.74                     | ≤20.97               | PASS    |
|           |         | 2441      | -0.98                     | ≤20.97               | PASS    |
|           |         | 2480      | -1.07                     | ≤20.97               | PASS    |

## Appendix D: Carrier frequency separation

### Test Result

| TestMode | Antenna | Freq(MHz) | Result[MHz] | Limit[MHz]   | Verdict |
|----------|---------|-----------|-------------|--------------|---------|
| DH5      | Ant1    | Hop       | 0.992       | $\geq 0.628$ | PASS    |
| 2DH5     | Ant1    | Hop       | 1.112       | $\geq 0.888$ | PASS    |
| 3DH5     | Ant1    | Hop       | 1.208       | $\geq 0.856$ | PASS    |

## Test Graphs

DH5\_Ant1\_Hop



2DH5\_Ant1\_Hop



3DH5\_Ant1\_Hop

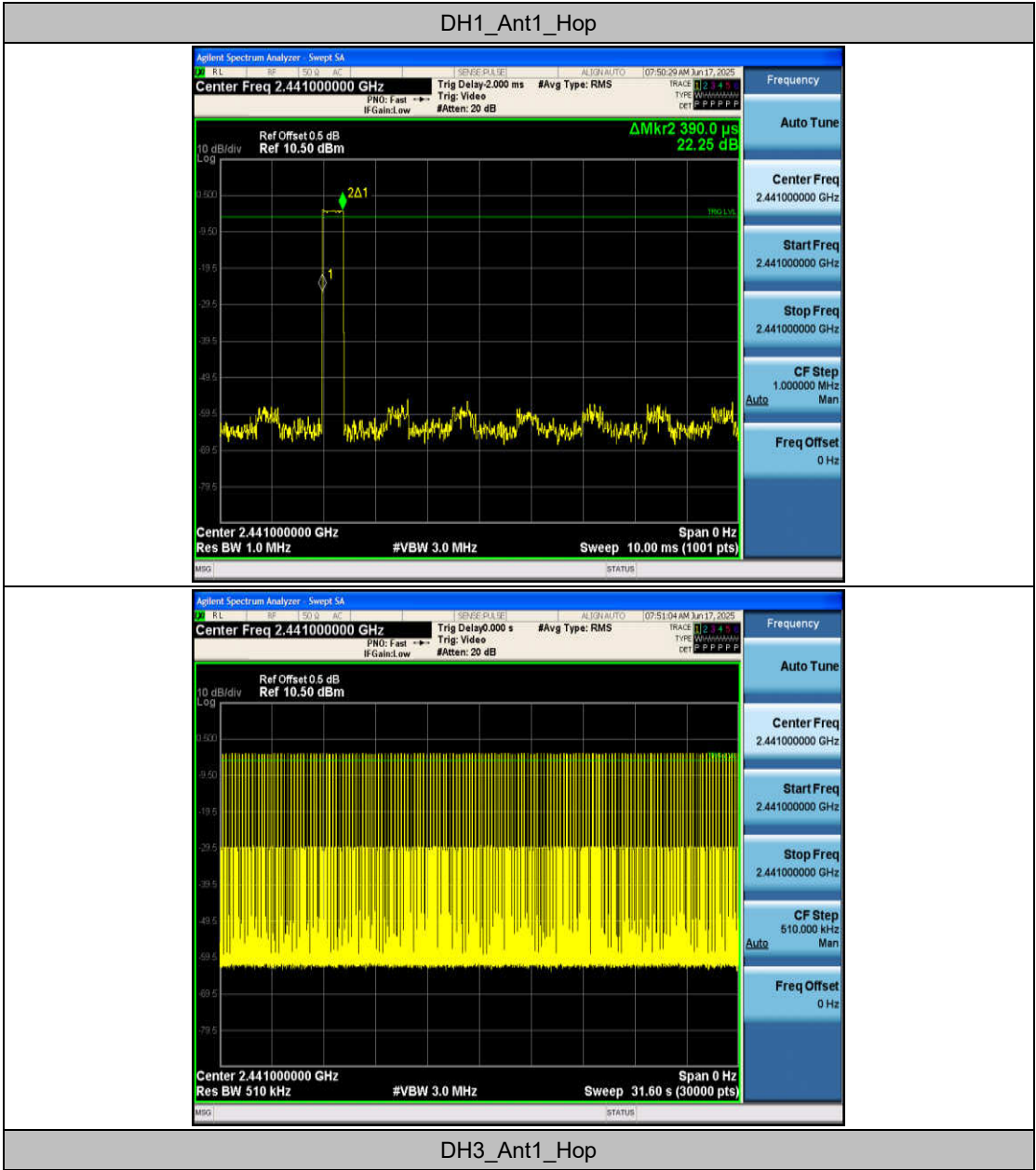


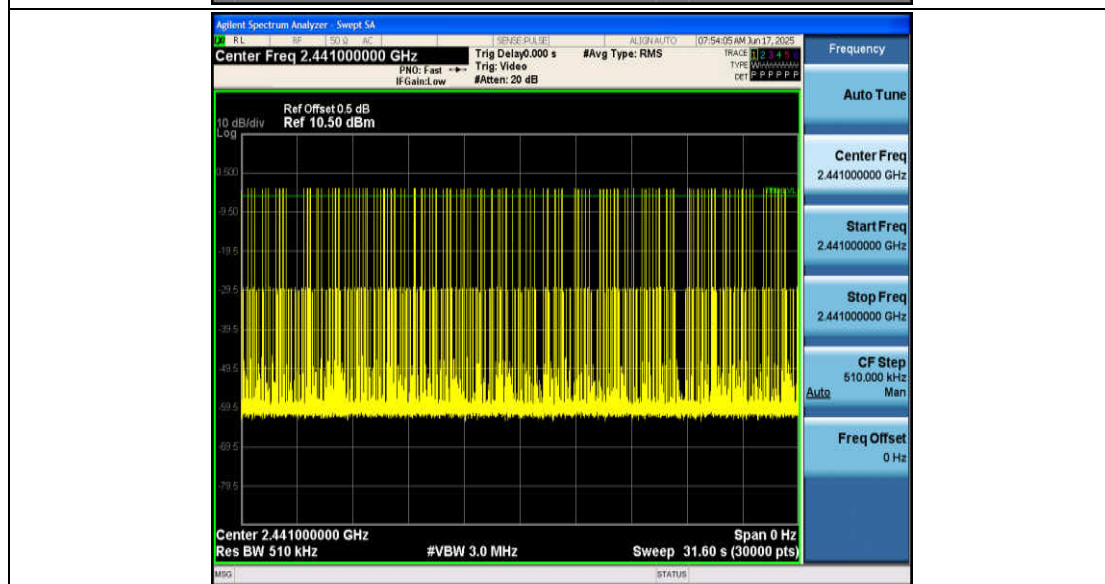
## Appendix E: Time of occupancy

### Test Result

| TestMode | Antenna | Freq(MHz) | BurstWidth<br>[ms] | TotalHops<br>[Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|-----------|--------------------|--------------------|-----------|----------|---------|
| DH1      | Ant1    | Hop       | 0.390              | 317                | 0.124     | ≤0.4     | PASS    |
| DH3      | Ant1    | Hop       | 1.640              | 156                | 0.256     | ≤0.4     | PASS    |
| DH5      | Ant1    | Hop       | 2.890              | 100                | 0.289     | ≤0.4     | PASS    |
| 2DH1     | Ant1    | Hop       | 0.390              | 316                | 0.123     | ≤0.4     | PASS    |
| 2DH3     | Ant1    | Hop       | 1.650              | 165                | 0.272     | ≤0.4     | PASS    |
| 2DH5     | Ant1    | Hop       | 2.900              | 107                | 0.31      | ≤0.4     | PASS    |
| 3DH1     | Ant1    | Hop       | 0.390              | 319                | 0.124     | ≤0.4     | PASS    |
| 3DH3     | Ant1    | Hop       | 1.640              | 152                | 0.249     | ≤0.4     | PASS    |
| 3DH5     | Ant1    | Hop       | 2.900              | 109                | 0.316     | ≤0.4     | PASS    |

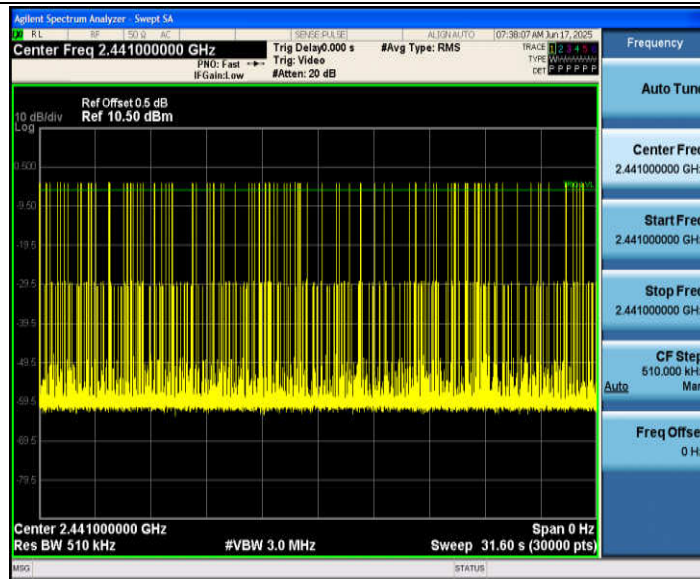
Test Graphs



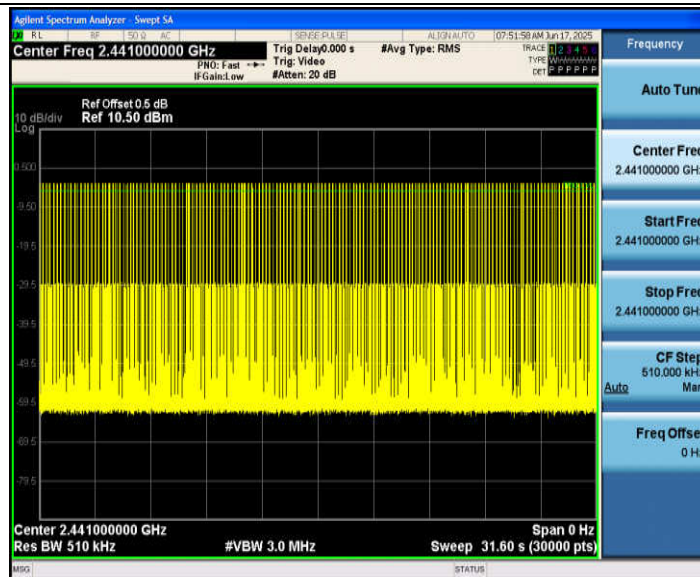


DH5\_Ant1\_Hop

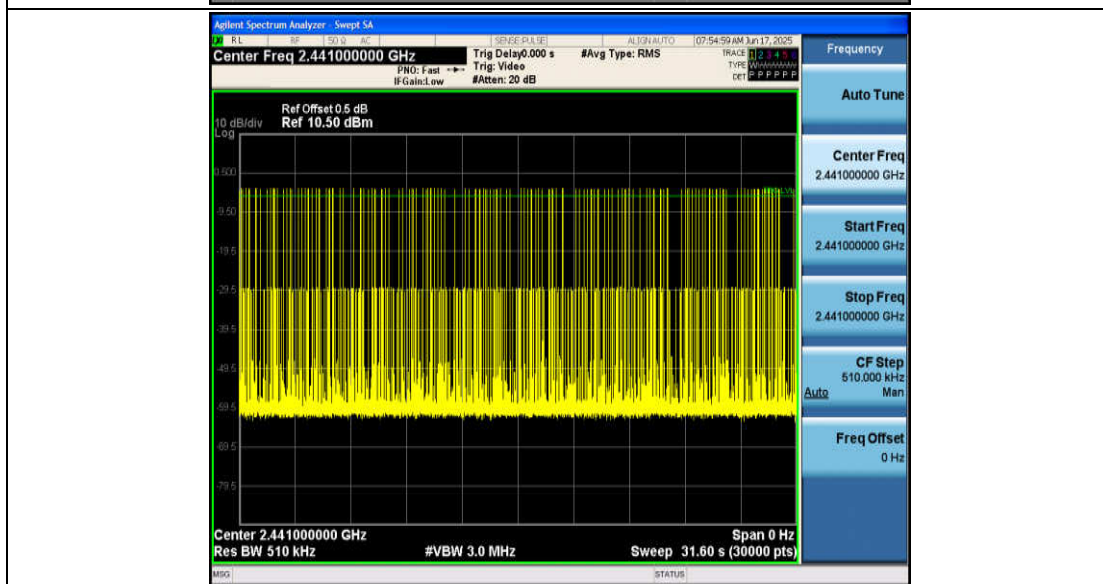




2DH1\_Ant1\_Hop

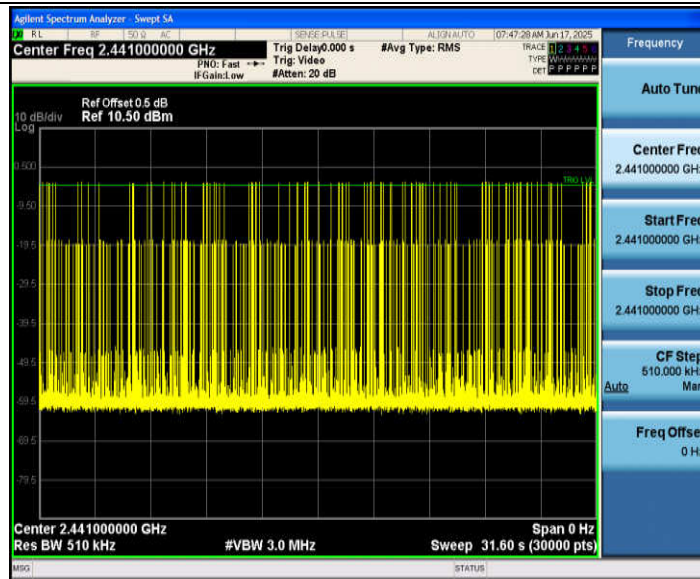


2DH3\_Ant1\_Hop

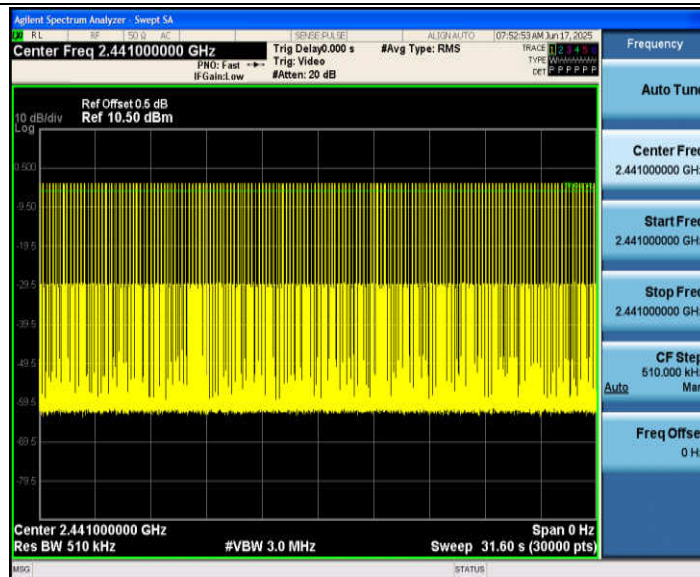


2DH5\_Ant1\_Hop

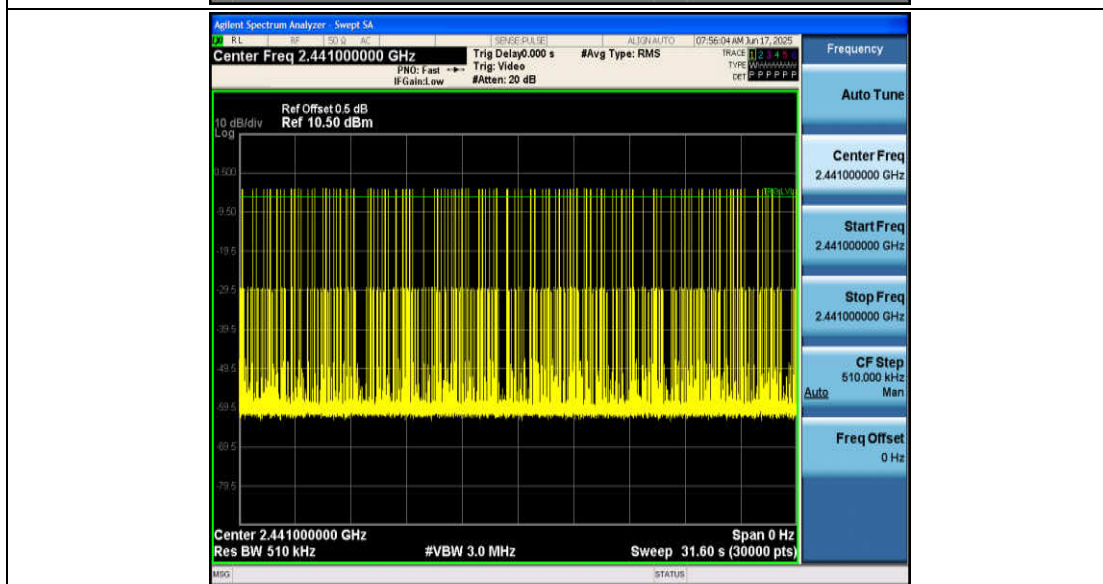




3DH1\_Ant1\_Hop

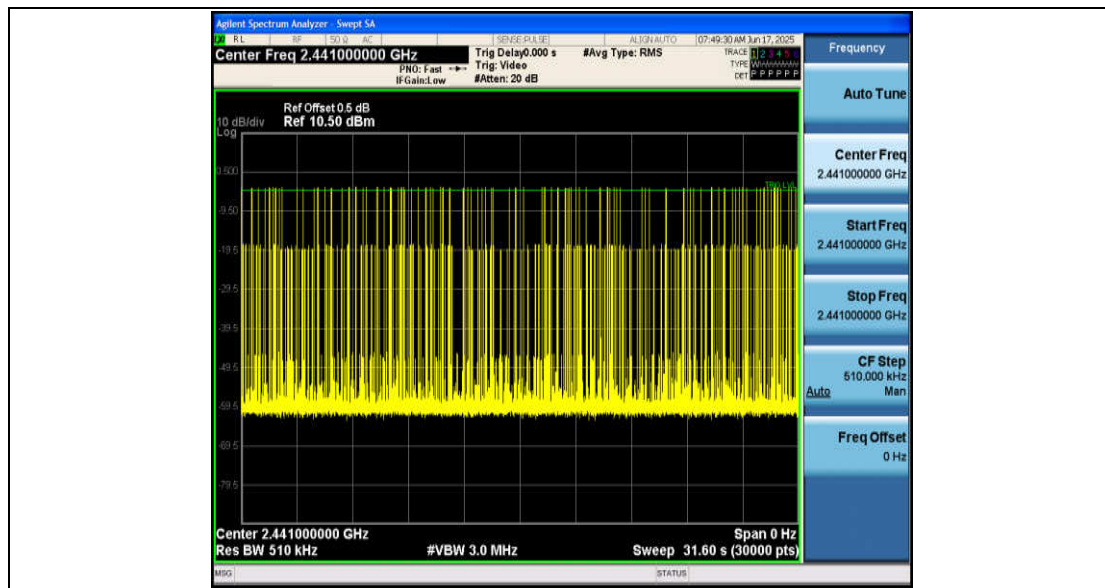


3DH3\_Ant1\_Hop



3DH5\_Ant1\_Hop





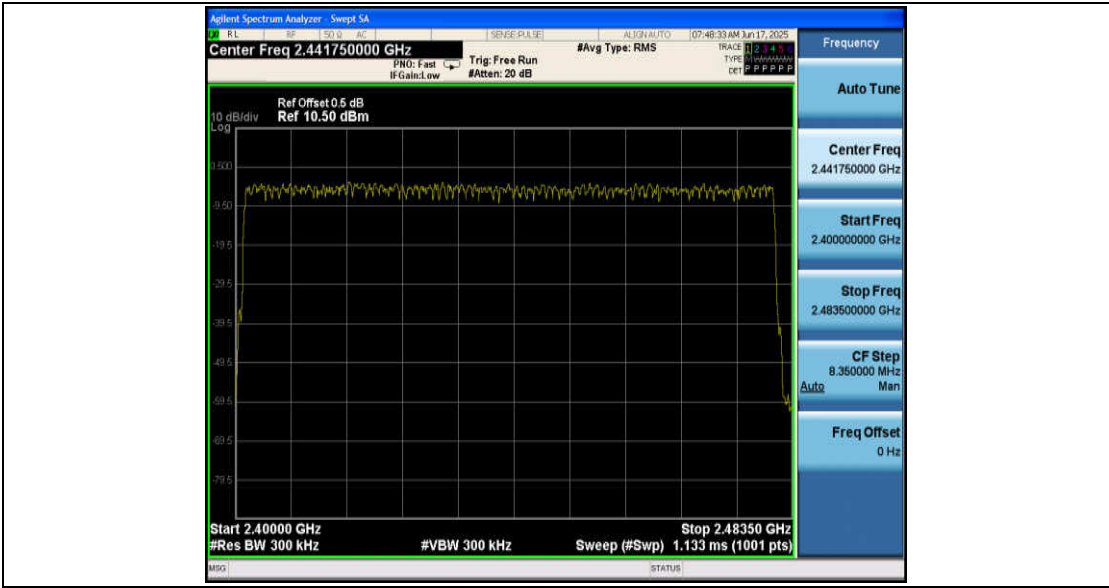
## Appendix F: Number of hopping channels

### 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

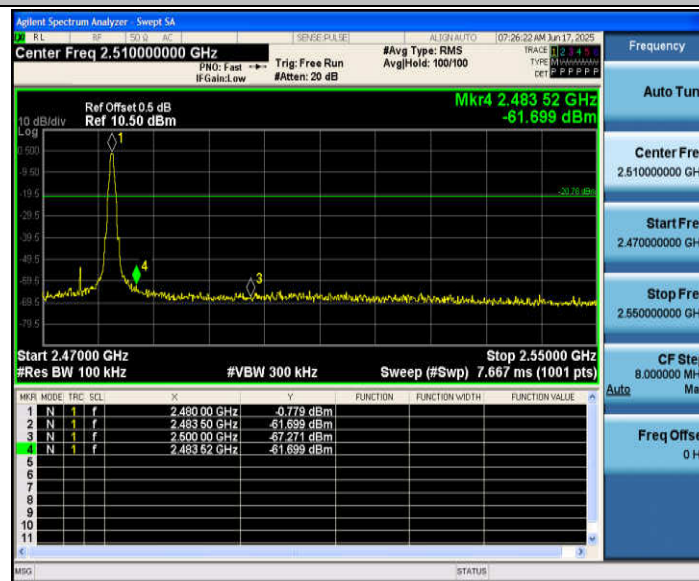
| TestMode | Antenna | ChName | Freq(MHz) | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|--------|-----------|----------------|--------------|-------------|---------|
| DH5      | Ant1    | Low    | 2402      | -0.12          | -56.15       | ≤-20.12     | PASS    |
|          |         | High   | 2480      | -0.78          | -61.7        | ≤-20.78     | PASS    |
|          |         | Low    | Hop_2402  | -3.97          | -64.01       | ≤-23.97     | PASS    |
|          |         | High   | Hop_2480  | -4.97          | -56          | ≤-24.97     | PASS    |
| 2DH5     | Ant1    | Low    | 2402      | -3.51          | -59.25       | ≤-23.51     | PASS    |
|          |         | High   | 2480      | -4.11          | -57.16       | ≤-24.11     | PASS    |
|          |         | Low    | Hop_2402  | -4.66          | -63.99       | ≤-24.66     | PASS    |
|          |         | High   | Hop_2480  | -6.85          | -64.12       | ≤-26.85     | PASS    |
| 3DH5     | Ant1    | Low    | 2402      | -3.46          | -59.94       | ≤-23.46     | PASS    |
|          |         | High   | 2480      | -4.88          | -63.15       | ≤-24.88     | PASS    |
|          |         | Low    | Hop_2402  | -5.14          | -60.97       | ≤-25.14     | PASS    |
|          |         | High   | Hop_2480  | -4.29          | -63.66       | ≤-24.29     | PASS    |

## Test Graphs

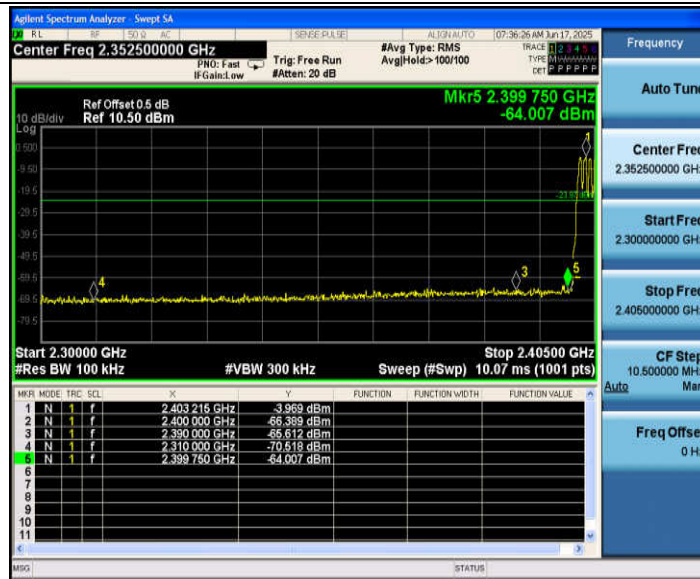
DH5\_Ant1\_Low\_2402



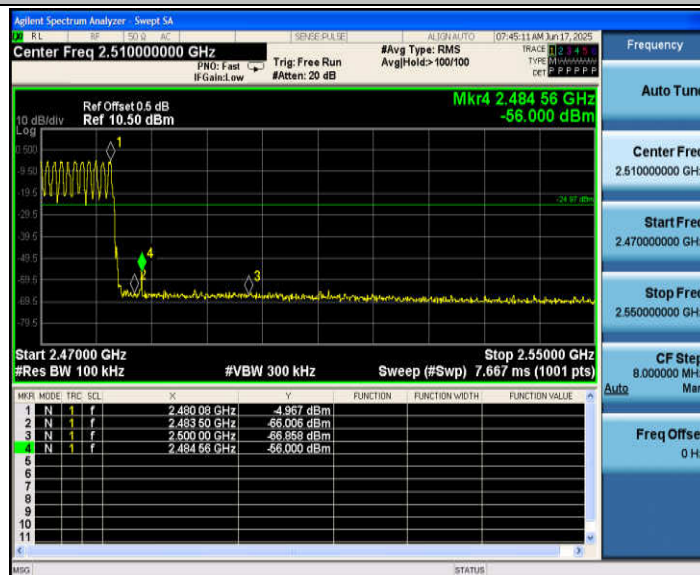
DH5\_Ant1\_High\_2480



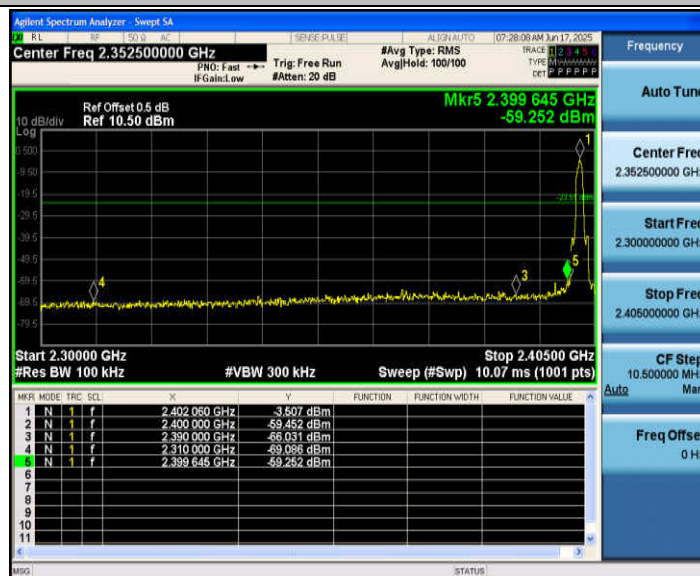
DH5\_Ant1\_Low\_Hop\_2402



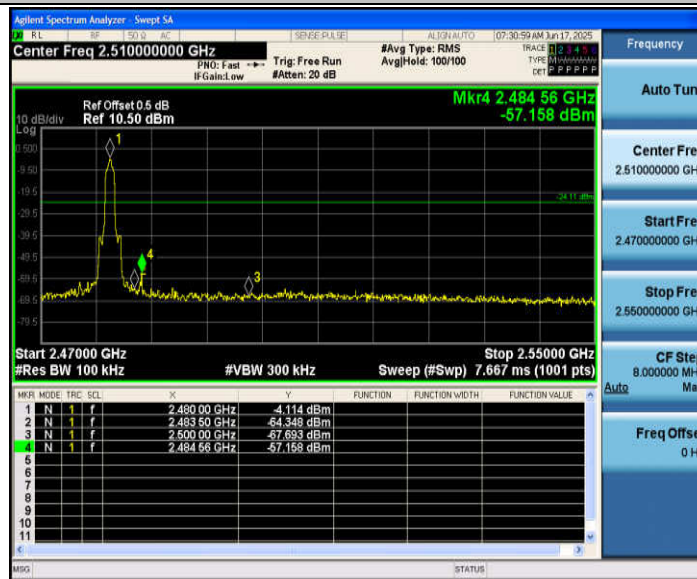
DH5\_Ant1\_High\_Hop\_2480



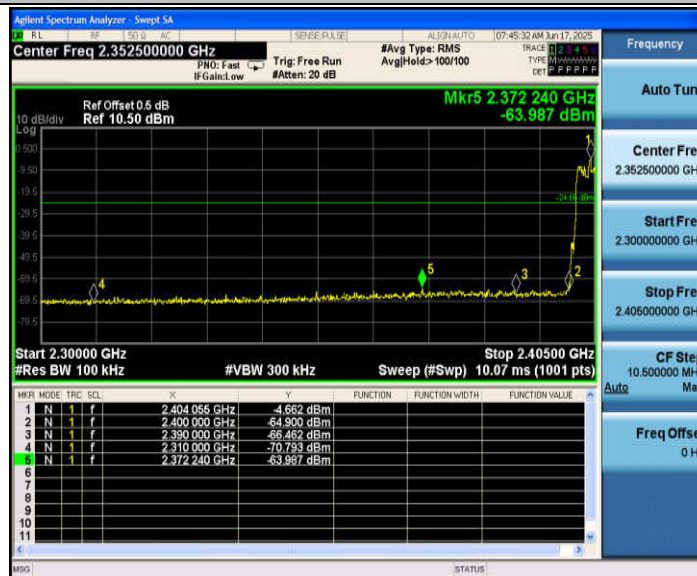
2DH5\_Ant1\_Low\_2402



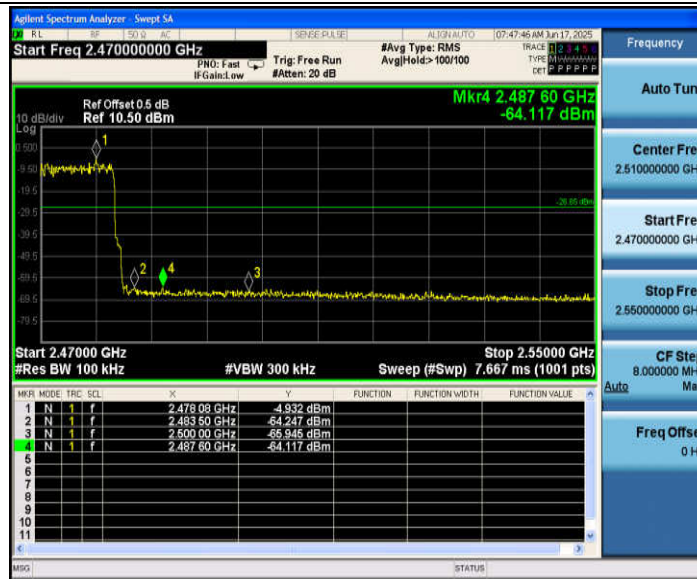
# 2DH5\_Ant1\_High\_2480



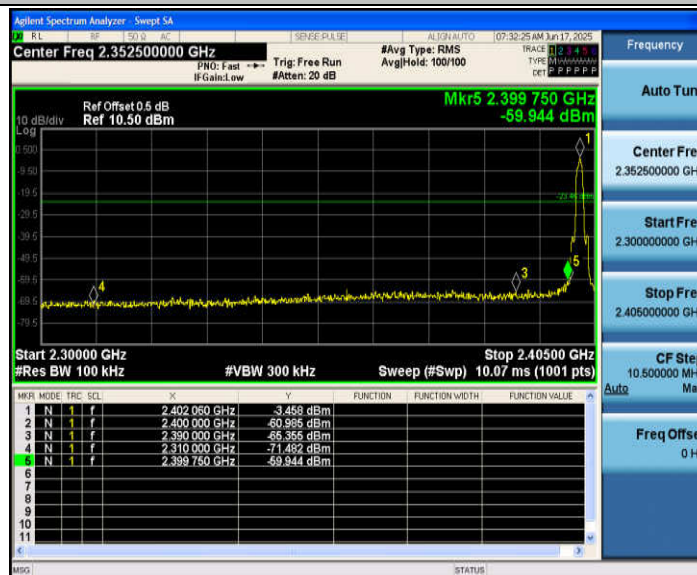
# 2DH5\_Ant1\_Low\_Hop\_2402



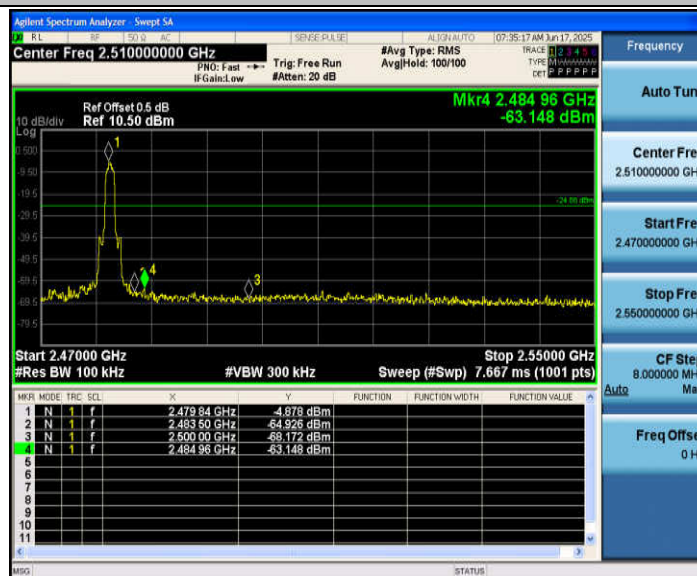
# 2DH5\_Ant1\_High\_Hop\_2480



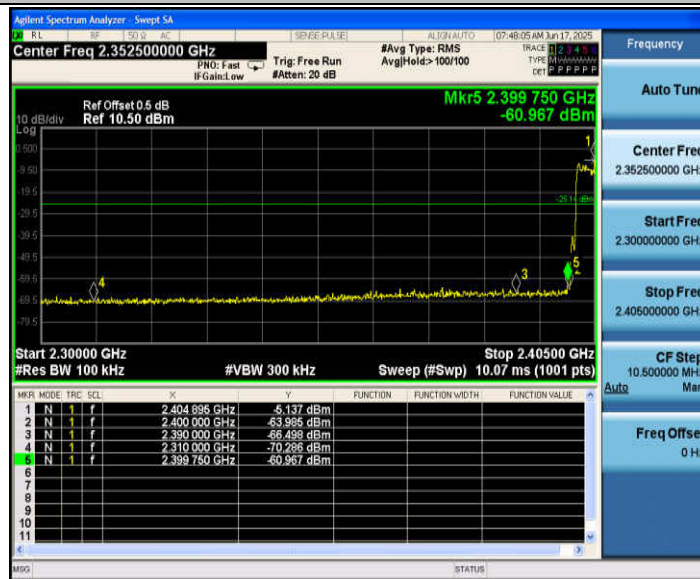
3DH5\_Ant1\_Low\_2402



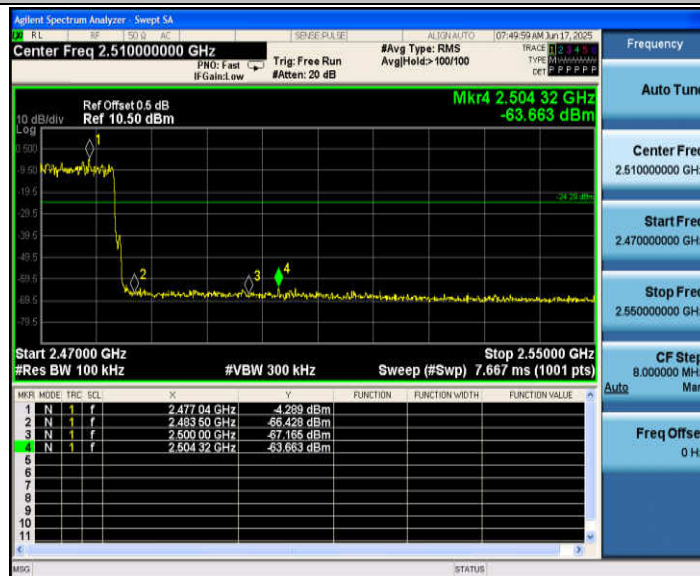
3DH5\_Ant1\_High\_2480



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



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



## Appendix H: Conducted Spurious Emission

### Test Result

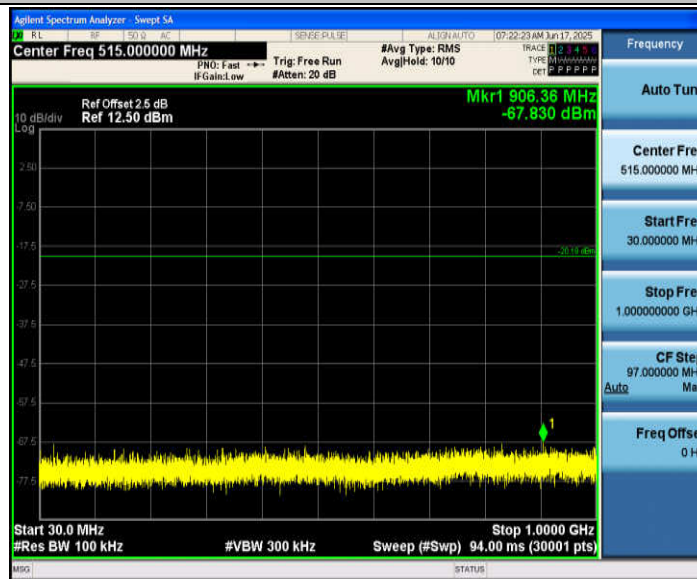
| TestMode | Antenna | Freq(MHz) | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|-----------|-----------------|----------------|--------------|-------------|---------|
| DH5      | Ant1    | 2402      | Reference       | -0.18          | -0.18        | ---         | PASS    |
|          |         |           | 30~1000         | -0.18          | -67.83       | ≤-20.18     | PASS    |
|          |         |           | 1000~26500      | -0.18          | -44.27       | ≤-20.18     | PASS    |
|          |         | 2441      | Reference       | -0.28          | -0.28        | ---         | PASS    |
|          |         |           | 30~1000         | -0.28          | -67.17       | ≤-20.28     | PASS    |
|          |         |           | 1000~26500      | -0.28          | -44.03       | ≤-20.28     | PASS    |
|          |         | 2480      | Reference       | -1.22          | -1.22        | ---         | PASS    |
|          |         |           | 30~1000         | -1.22          | -67.43       | ≤-21.22     | PASS    |
|          |         |           | 1000~26500      | -1.22          | -44.63       | ≤-21.22     | PASS    |
| 2DH5     | Ant1    | 2402      | Reference       | -4.30          | -4.30        | ---         | PASS    |
|          |         |           | 30~1000         | -4.30          | -68.05       | ≤-24.3      | PASS    |
|          |         |           | 1000~26500      | -4.30          | -50.07       | ≤-24.3      | PASS    |
|          |         | 2441      | Reference       | -5.97          | -5.97        | ---         | PASS    |
|          |         |           | 30~1000         | -5.97          | -67.38       | ≤-25.97     | PASS    |
|          |         |           | 1000~26500      | -5.97          | -48.29       | ≤-25.97     | PASS    |
|          |         | 2480      | Reference       | -6.53          | -6.53        | ---         | PASS    |
|          |         |           | 30~1000         | -6.53          | -67.78       | ≤-26.53     | PASS    |
|          |         |           | 1000~26500      | -6.53          | -46.69       | ≤-26.53     | PASS    |
| 3DH5     | Ant1    | 2402      | Reference       | -4.32          | -4.32        | ---         | PASS    |
|          |         |           | 30~1000         | -4.32          | -59.62       | ≤-24.32     | PASS    |
|          |         |           | 1000~26500      | -4.32          | -50.17       | ≤-24.32     | PASS    |
|          |         | 2441      | Reference       | -7.22          | -7.22        | ---         | PASS    |
|          |         |           | 30~1000         | -7.22          | -61.97       | ≤-27.22     | PASS    |
|          |         |           | 1000~26500      | -7.22          | -51.05       | ≤-27.22     | PASS    |
|          |         | 2480      | Reference       | -4.44          | -4.44        | ---         | PASS    |
|          |         |           | 30~1000         | -4.44          | -67.33       | ≤-24.44     | PASS    |
|          |         |           | 1000~26500      | -4.44          | -47          | ≤-24.44     | PASS    |

## Test Graphs

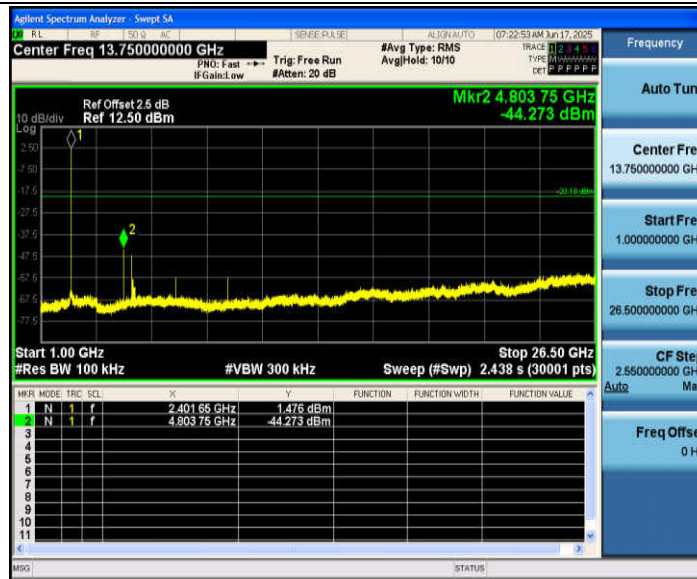
DH5\_Ant1\_2402\_0~Reference



DH5\_Ant1\_2402\_30~1000



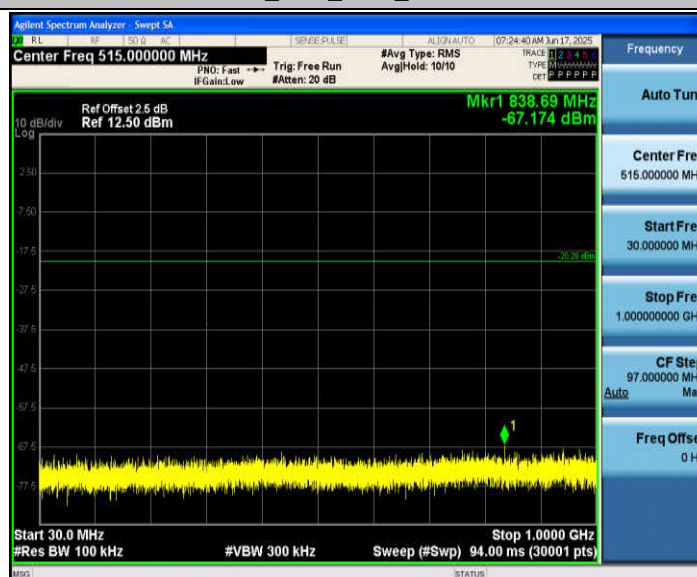
DH5\_Ant1\_2402\_1000~26500



DH5\_Ant1\_2441\_0~Reference



DH5\_Ant1\_2441\_30~1000



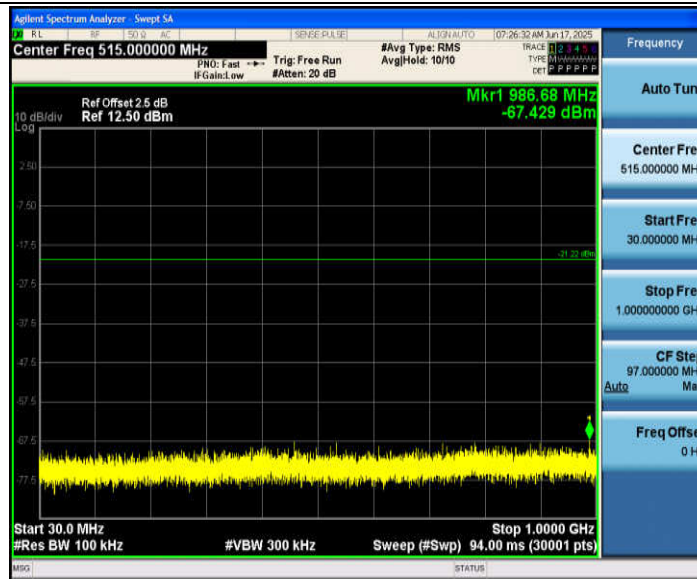
# DH5\_Ant1\_2441\_1000~26500



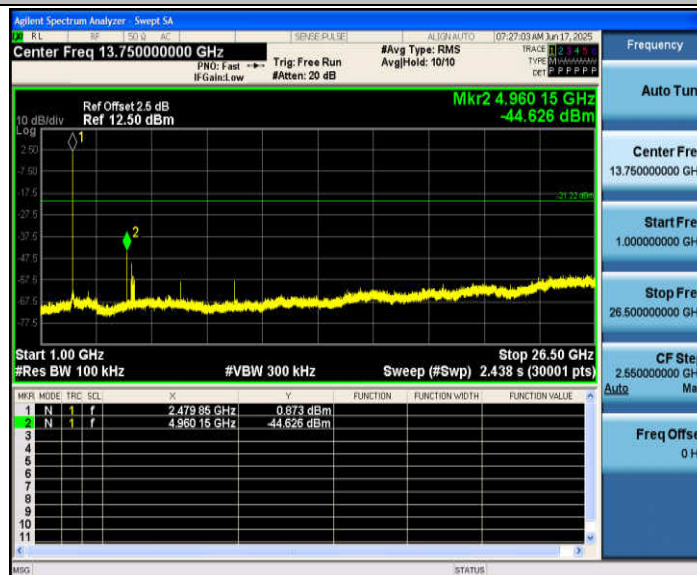
# DH5\_Ant1\_2480\_0~Reference



# DH5\_Ant1\_2480\_30~1000



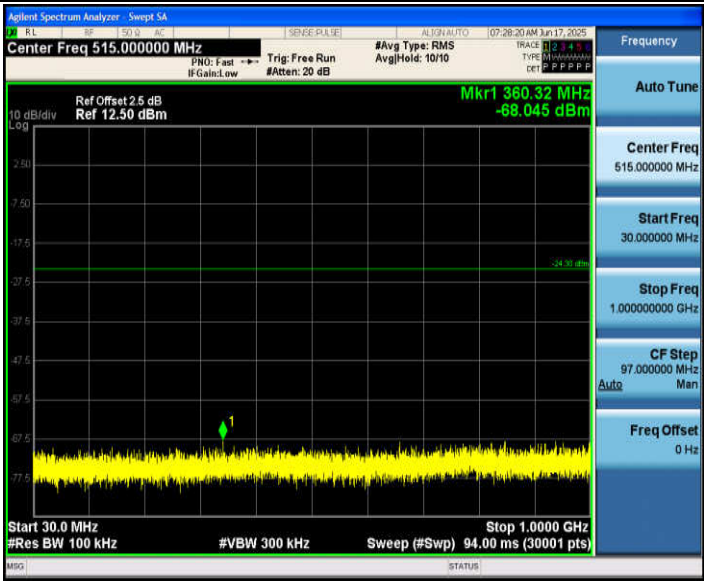
DH5\_Ant1\_2480\_1000~26500



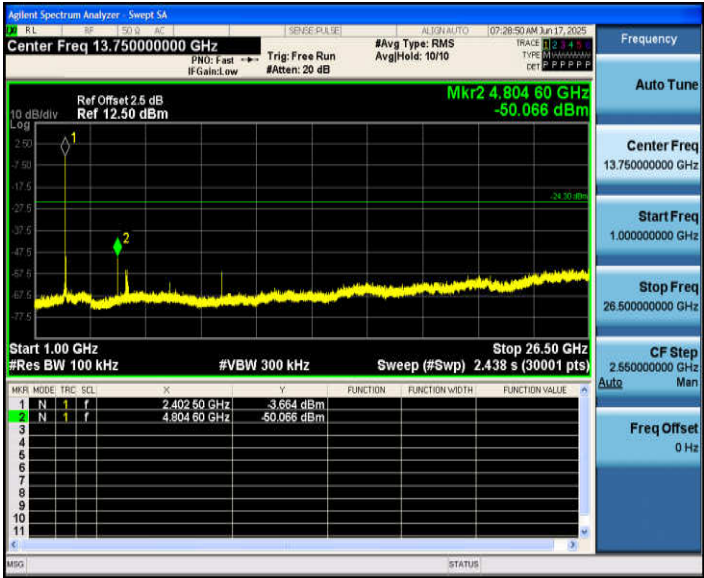
2DH5\_Ant1\_2402\_0~Reference



2DH5\_Ant1\_2402\_30~1000



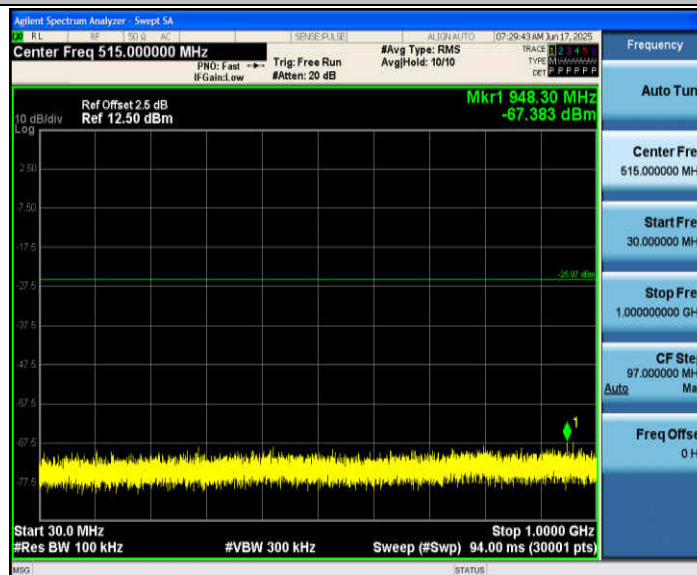
2DH5\_Ant1\_2402\_1000~26500



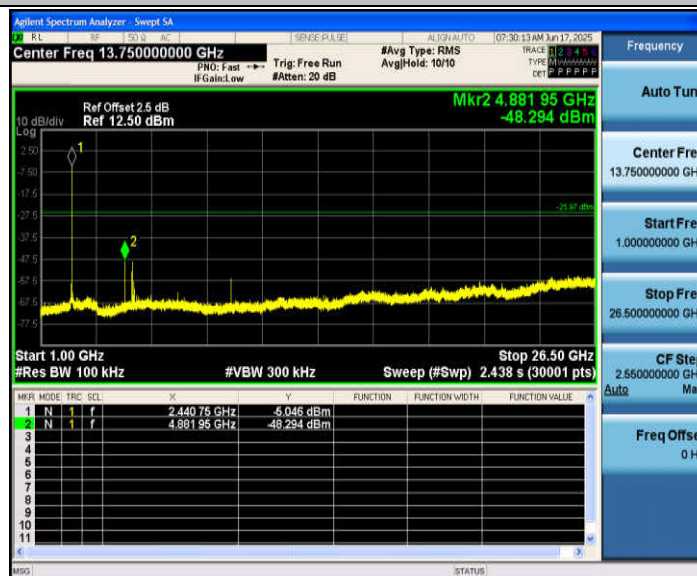
2DH5\_Ant1\_2441\_0~Reference



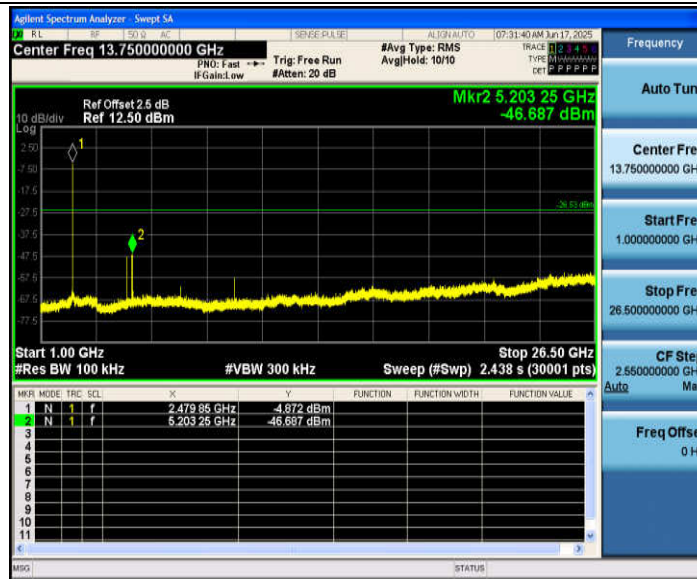
2DH5\_Ant1\_2441\_30~1000



2DH5\_Ant1\_2441\_1000~26500



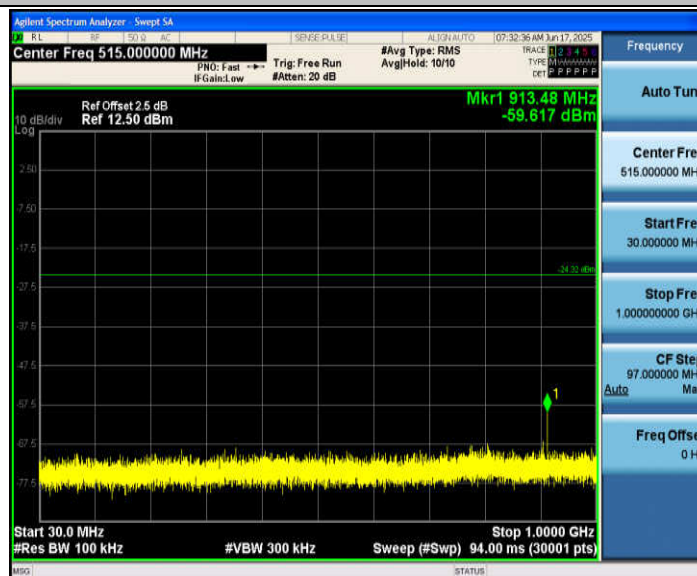




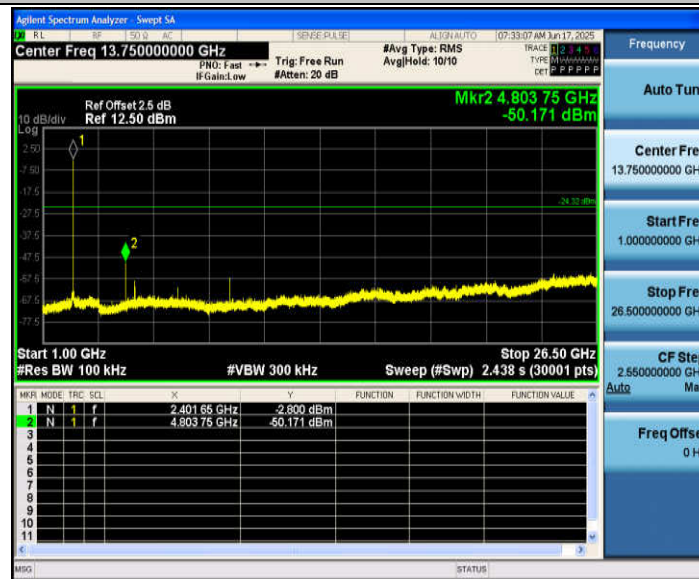
3DH5\_Ant1\_2402\_0~Reference



3DH5\_Ant1\_2402\_30~1000



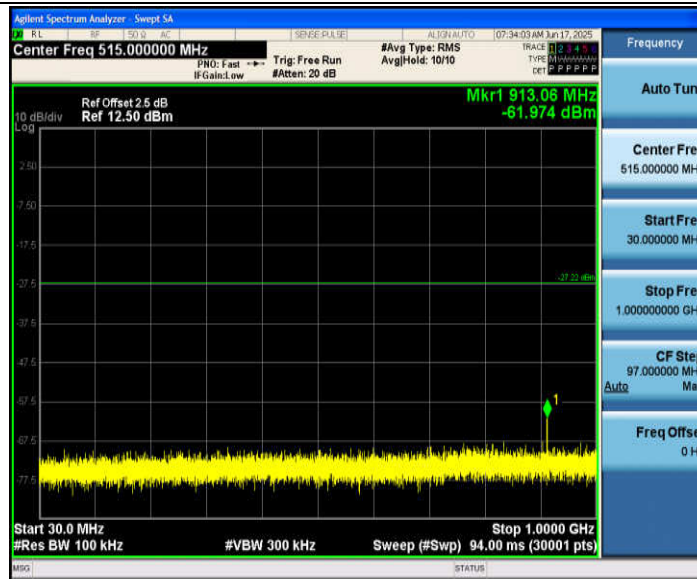
### 3DH5\_Ant1\_2402\_1000~26500



### 3DH5\_Ant1\_2441\_0~Reference



### 3DH5\_Ant1\_2441\_30~1000



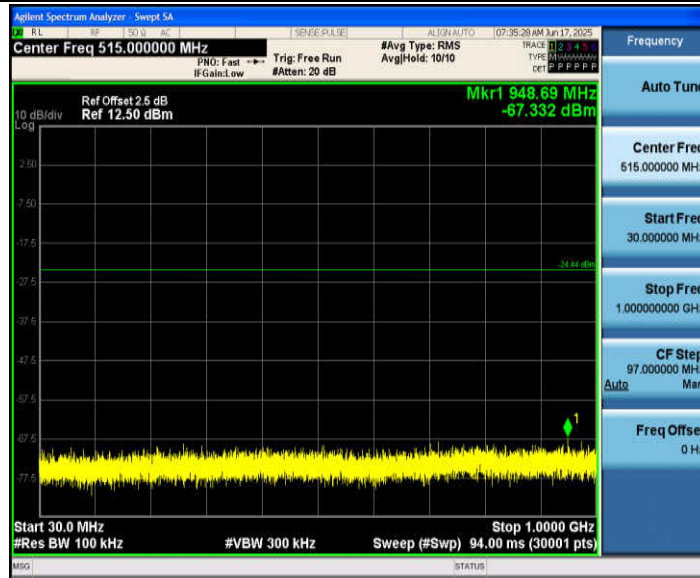
3DH5\_Ant1\_2441\_1000~26500



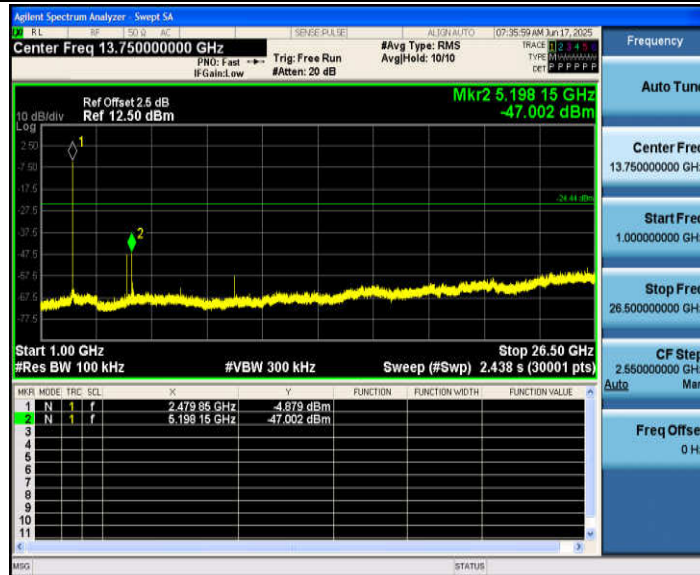
3DH5\_Ant1\_2480\_0~Reference



### 3DH5\_Ant1\_2480\_30~1000



### 3DH5\_Ant1\_2480\_1000~26500

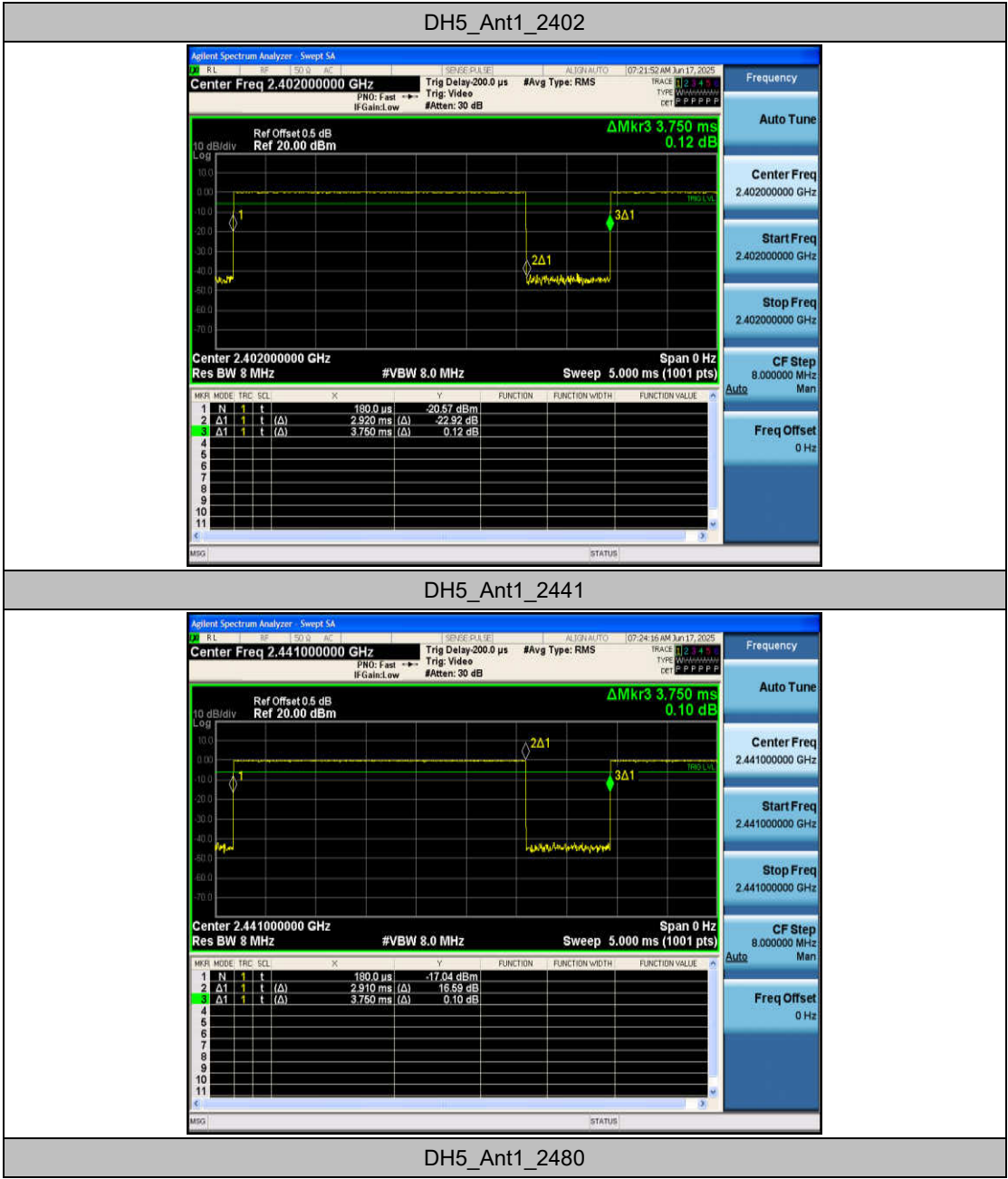


## Appendix I: Duty Cycle

### Test Result

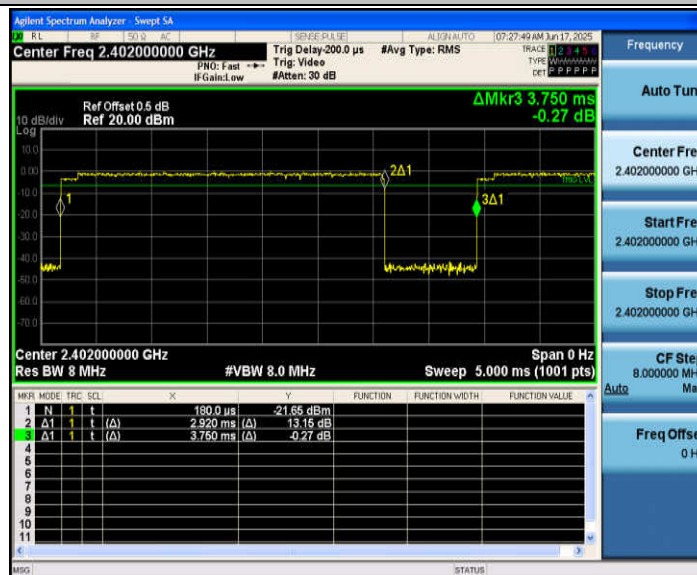
| TestMode | Antenna | Freq(MHz) | ON Time<br>[ms] | Period<br>[ms] | DC<br>[%] | xFactor | Limit | Verdict |
|----------|---------|-----------|-----------------|----------------|-----------|---------|-------|---------|
| DH5      | Ant1    | 2402      | 2.92            | 3.75           | 77.87     | 1.09    | ---   | ---     |
|          |         | 2441      | 2.91            | 3.75           | 77.60     | 1.10    | ---   | ---     |
|          |         | 2480      | 2.92            | 3.75           | 77.87     | 1.09    | ---   | ---     |
| 2DH5     | Ant1    | 2402      | 2.92            | 3.75           | 77.87     | 1.09    | ---   | ---     |
|          |         | 2441      | 2.92            | 3.75           | 77.87     | 1.09    | ---   | ---     |
|          |         | 2480      | 2.92            | 3.75           | 77.87     | 1.09    | ---   | ---     |
| 3DH5     | Ant1    | 2402      | 2.92            | 3.75           | 77.87     | 1.09    | ---   | ---     |
|          |         | 2441      | 2.91            | 3.75           | 77.60     | 1.10    | ---   | ---     |
|          |         | 2480      | 2.92            | 3.75           | 77.87     | 1.09    | ---   | ---     |

Test Graphs





2DH5\_Ant1\_2402



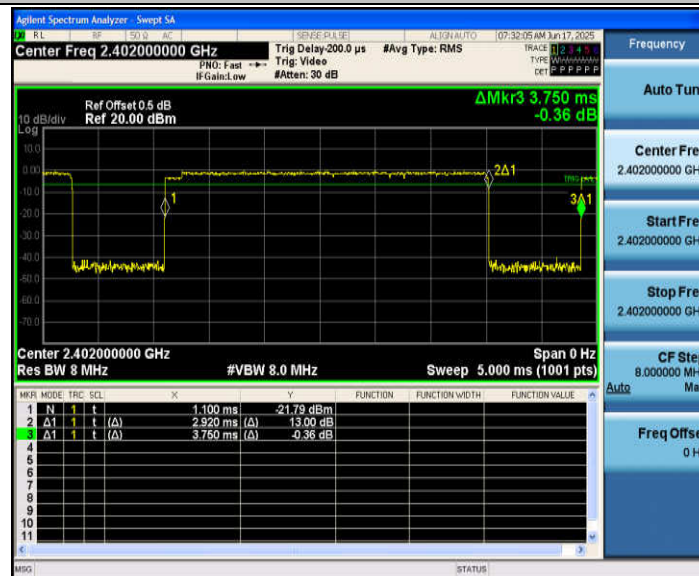
2DH5\_Ant1\_2441



## 2DH5\_Ant1\_2480



## 3DH5\_Ant1\_2402



## 3DH5\_Ant1\_2441



3DH5\_Ant1\_2480

