

|                                                 |                           |
|-------------------------------------------------|---------------------------|
| Case No. : GTS20211218008-1-33                  |                           |
| Ambient Condition: 25 °C, 45 %RH, Atmos100.1Kpa |                           |
| Test Date: 2022.8.3                             | Test Engineer: Jenny zeng |

## 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           | 1.038            | 2401.469 | 2402.507 | ---        | ---     |
|          |         | 2441           | 1.044            | 2440.457 | 2441.501 | ---        | ---     |
|          |         | 2480           | 1.044            | 2479.460 | 2480.504 | ---        | ---     |
| 2DH1     | Ant1    | 2402           | 1.356            | 2401.319 | 2402.675 | ---        | ---     |
|          |         | 2441           | 1.347            | 2440.319 | 2441.666 | ---        | ---     |
|          |         | 2480           | 1.347            | 2479.304 | 2480.651 | ---        | ---     |
| 3DH1     | Ant1    | 2402           | 1.296            | 2401.364 | 2402.660 | ---        | ---     |
|          |         | 2441           | 1.287            | 2440.343 | 2441.630 | ---        | ---     |
|          |         | 2480           | 1.281            | 2479.337 | 2480.618 | ---        | ---     |

## 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           | 0.92942   | 2401.533 | 2402.463 | ---        | ---     |
|          |         | 2441           | 0.91303   | 2440.532 | 2441.445 | ---        | ---     |
|          |         | 2480           | 0.94130   | 2479.512 | 2480.453 | ---        | ---     |
| 2DH1     | Ant1    | 2402           | 1.1996    | 2401.384 | 2402.584 | ---        | ---     |
|          |         | 2441           | 1.1982    | 2440.380 | 2441.578 | ---        | ---     |
|          |         | 2480           | 1.1948    | 2479.371 | 2480.566 | ---        | ---     |
| 3DH1     | Ant1    | 2402           | 1.1831    | 2401.414 | 2402.597 | ---        | ---     |
|          |         | 2441           | 1.1809    | 2440.408 | 2441.589 | ---        | ---     |
|          |         | 2480           | 1.1794    | 2479.401 | 2480.580 | ---        | ---     |



## Test Graphs

DH1\_Ant1\_2402



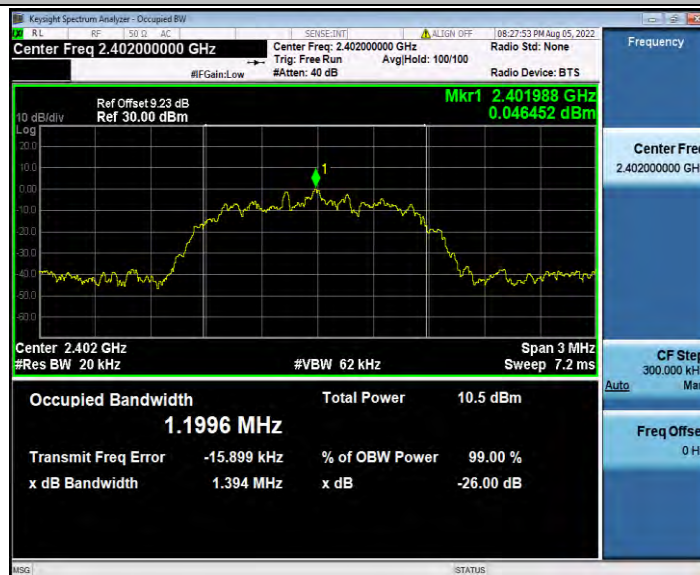
DH1\_Ant1\_2441



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           | 7.51                      | ≤20.97               | PASS    |
|           |         | 2441           | 8.92                      | ≤20.97               | PASS    |
|           |         | 2480           | 7.82                      | ≤20.97               | PASS    |
| 2DH1      | Ant1    | 2402           | 5.94                      | ≤20.97               | PASS    |
|           |         | 2441           | 7.50                      | ≤20.97               | PASS    |
|           |         | 2480           | 6.32                      | ≤20.97               | PASS    |
| 3DH1      | Ant1    | 2402           | 6.23                      | ≤20.97               | PASS    |
|           |         | 2441           | 7.92                      | ≤20.97               | PASS    |
|           |         | 2480           | 6.68                      | ≤20.97               | PASS    |

## Appendix A.4: Carrier frequency separation

### Test Result

| TestMode | Antenna | Frequency[MHz] | Result[MHz] | Limit[MHz]   | Verdict |
|----------|---------|----------------|-------------|--------------|---------|
| DH1      | Ant1    | Hop_2402       | 0.992       | $\geq 0.696$ | PASS    |
|          |         | Hop_2441       | 0.852       | $\geq 0.696$ | PASS    |
|          |         | Hop_2480       | 1.004       | $\geq 0.696$ | PASS    |
| 2DH1     | Ant1    | Hop_2402       | 1.002       | $\geq 0.904$ | PASS    |
|          |         | Hop_2441       | 1.008       | $\geq 0.904$ | PASS    |
|          |         | Hop_2480       | 0.996       | $\geq 0.904$ | PASS    |
| 3DH1     | Ant1    | Hop_2402       | 1.012       | $\geq 0.864$ | PASS    |
|          |         | Hop_2441       | 0.99        | $\geq 0.864$ | PASS    |
|          |         | Hop_2480       | 0.996       | $\geq 0.864$ | 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



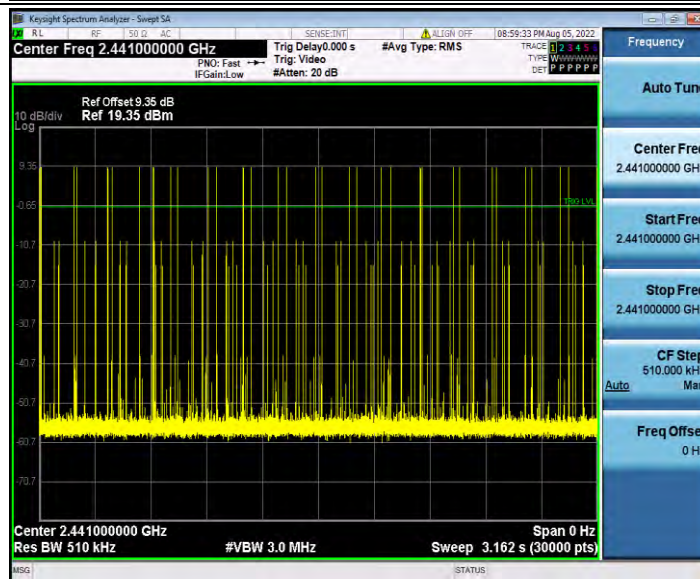
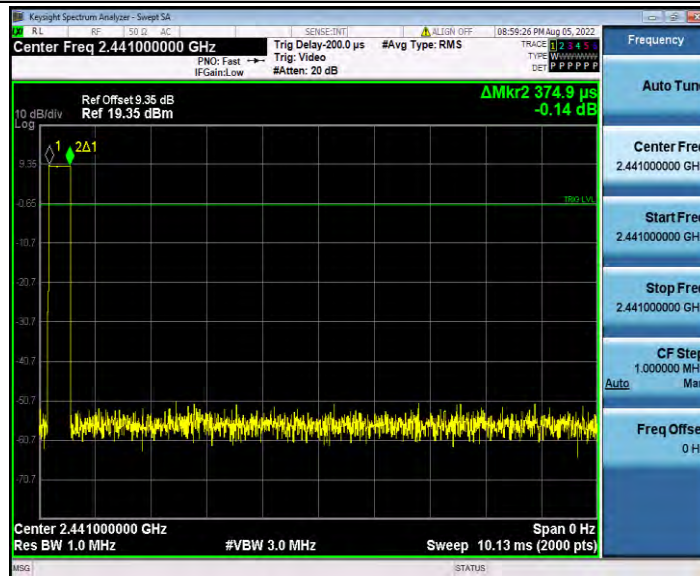
## Appendix A.5: Time of occupancy

### Test Result

| TestMode | Antenna | Frequency[MHz] | BurstWidth<br>[ms] | TotalHops<br>[Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|----------------|--------------------|--------------------|-----------|----------|---------|
| DH1      | Ant1    | Hop            | 0.37               | 330                | 0.124     | ≤0.4     | PASS    |
| DH3      | Ant1    | Hop            | 1.63               | 190                | 0.31      | ≤0.4     | PASS    |
| DH5      | Ant1    | Hop            | 2.88               | 70                 | 0.201     | ≤0.4     | PASS    |
| 2DH1     | Ant1    | Hop            | 0.38               | 310                | 0.118     | ≤0.4     | PASS    |
| 2DH3     | Ant1    | Hop            | 1.63               | 200                | 0.326     | ≤0.4     | PASS    |
| 2DH5     | Ant1    | Hop            | 2.88               | 90                 | 0.259     | ≤0.4     | PASS    |
| 3DH1     | Ant1    | Hop            | 0.37               | 330                | 0.124     | ≤0.4     | PASS    |
| 3DH3     | Ant1    | Hop            | 1.62               | 190                | 0.308     | ≤0.4     | PASS    |
| 3DH5     | Ant1    | Hop            | 2.88               | 120                | 0.345     | ≤0.4     | PASS    |

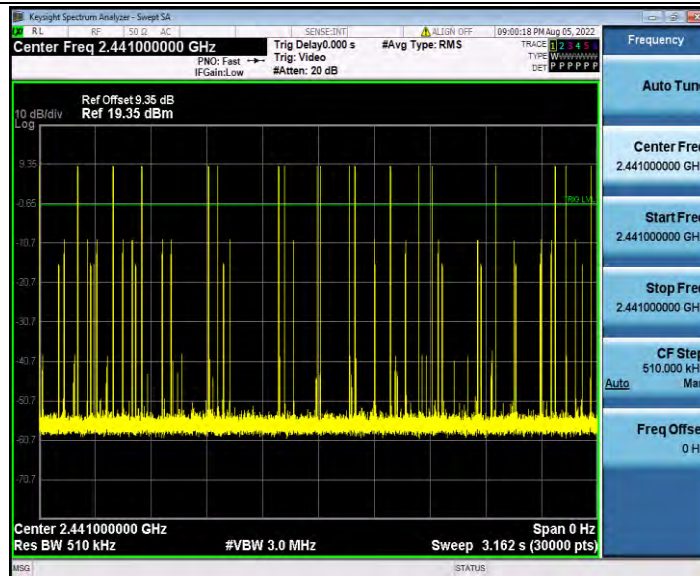
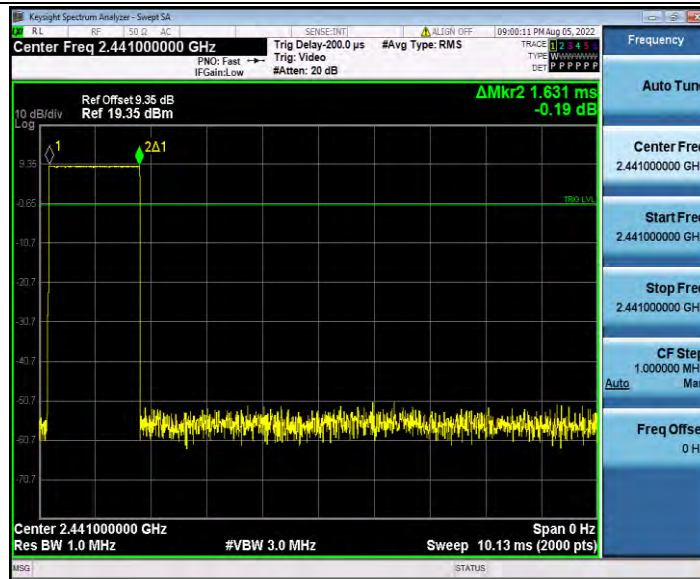
## Test Graphs

DH1\_Ant1\_Hop

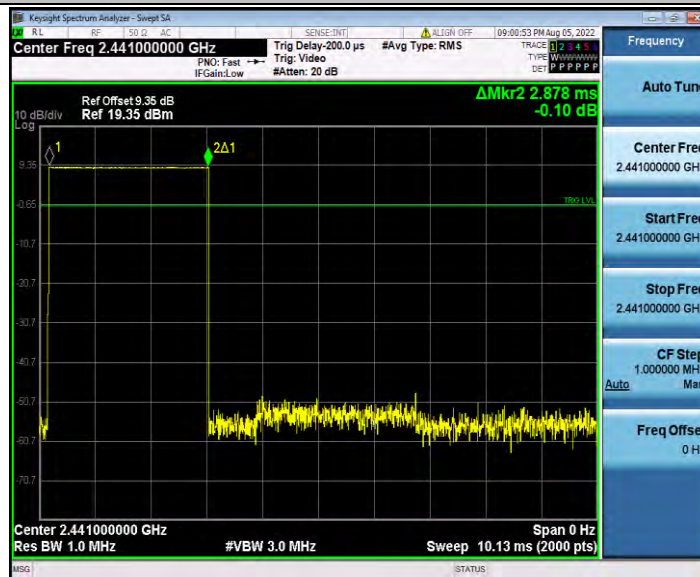


DH3\_Ant1\_Hop

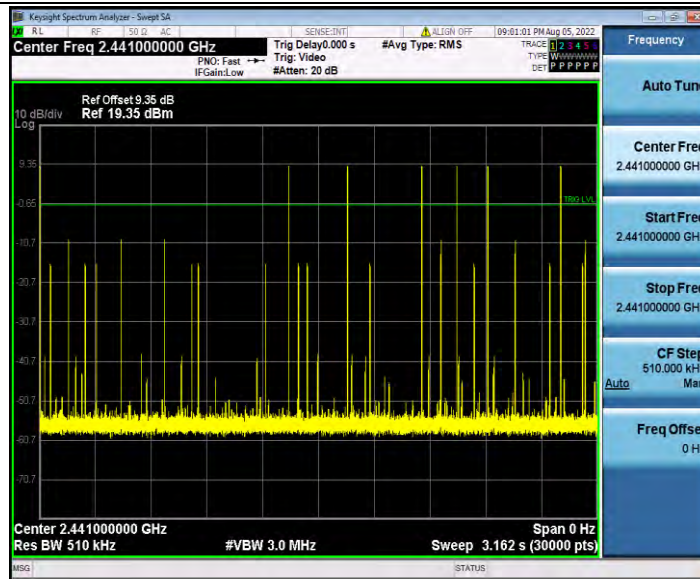




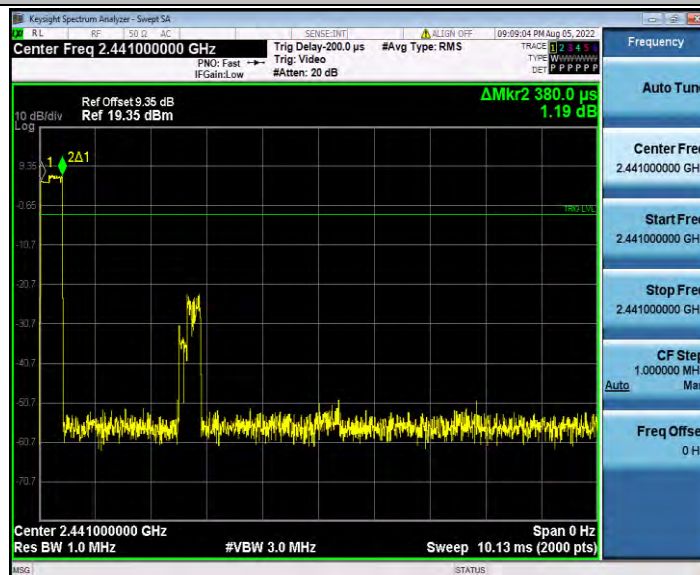
DH5\_Ant1\_Hop



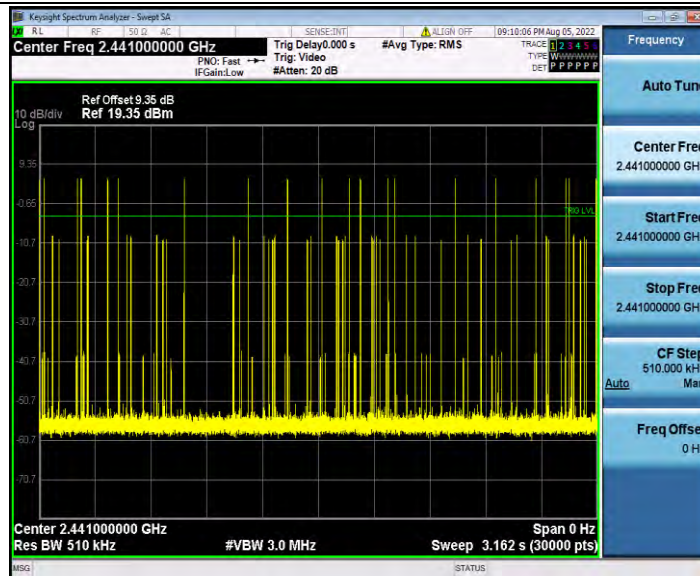
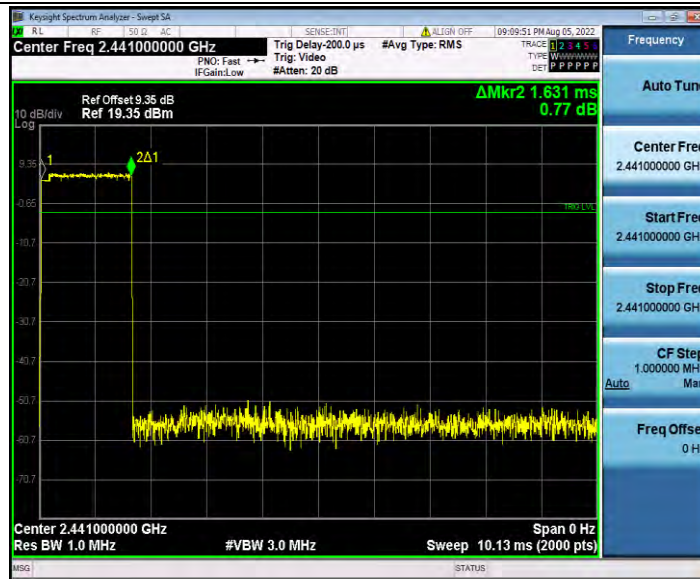




2DH1\_Ant1\_Hop

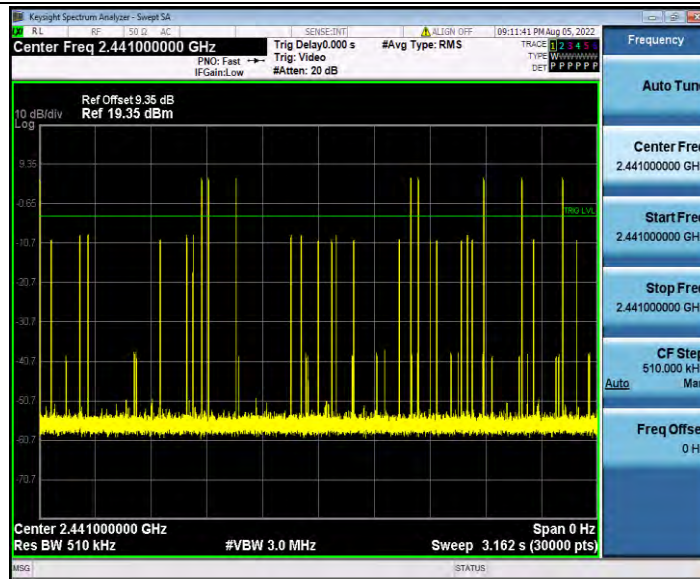


2DH3\_Ant1\_Hop

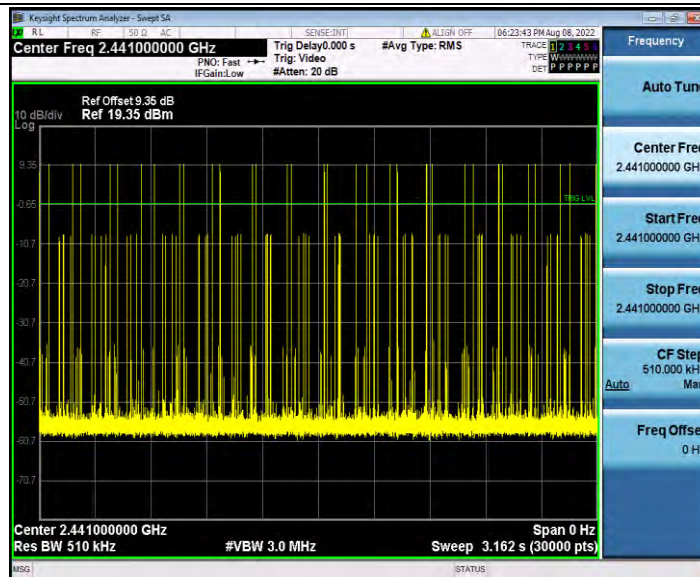
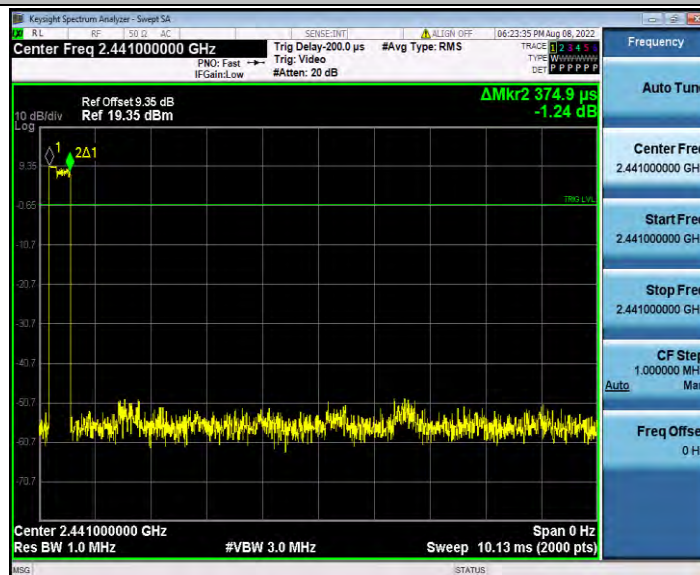


2DH5\_Ant1\_Hop



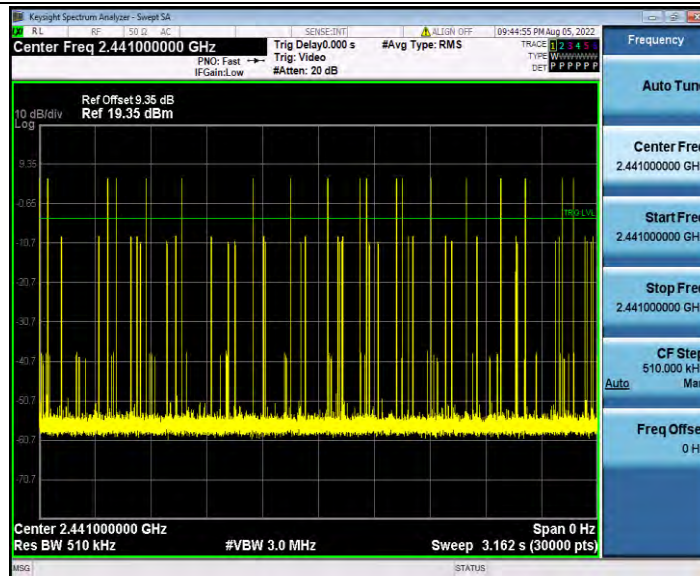
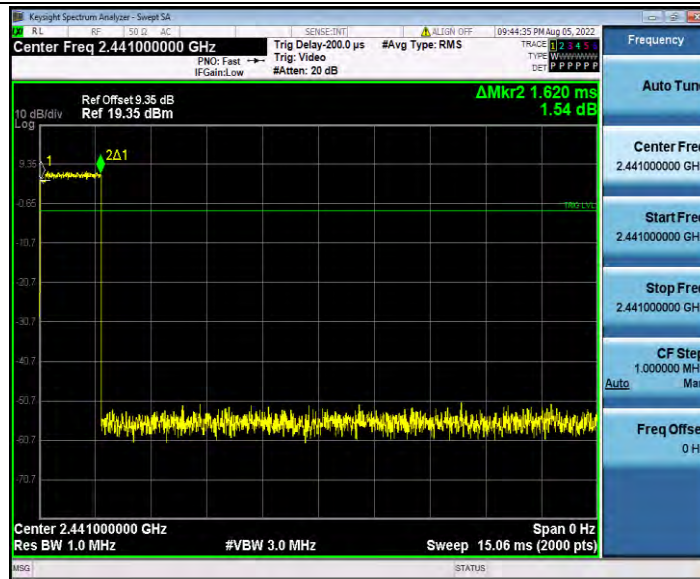


3DH1\_Ant1\_Hop

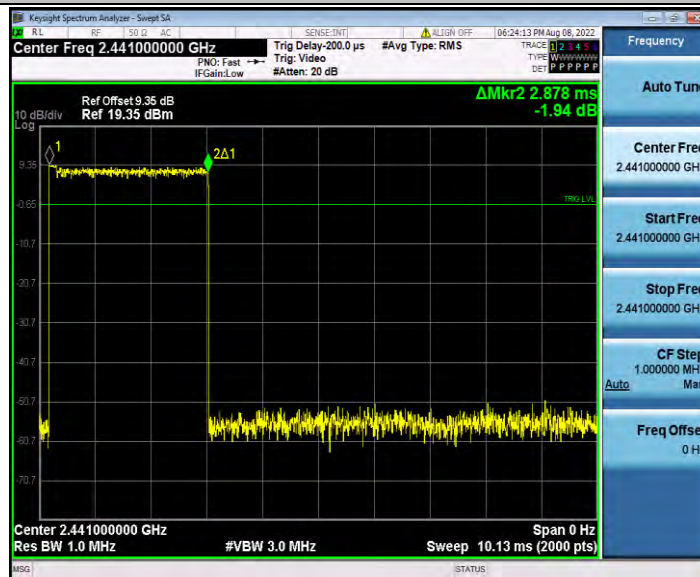


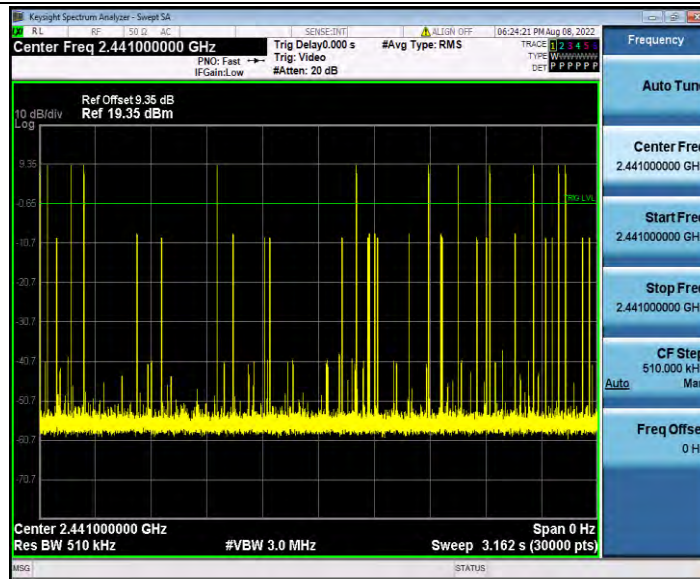
3DH3\_Ant1\_Hop





3DH5\_Ant1\_Hop





## Appendix A.6: Number of hopping channels

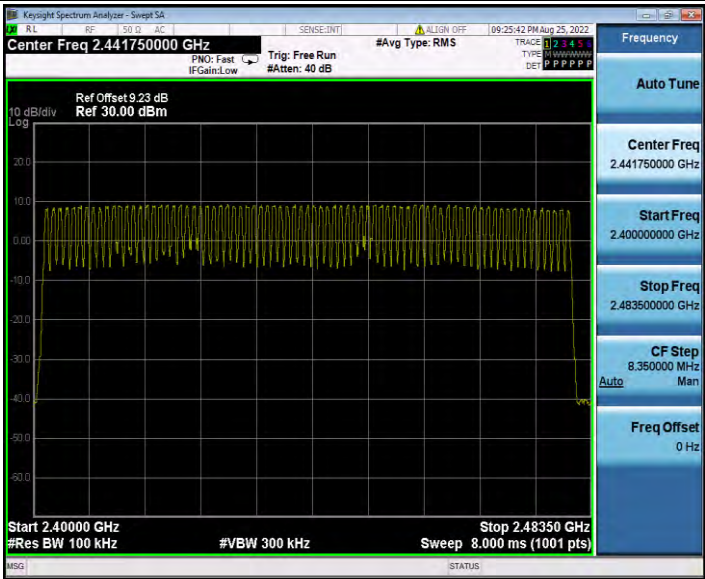
### Test Result

| 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    |

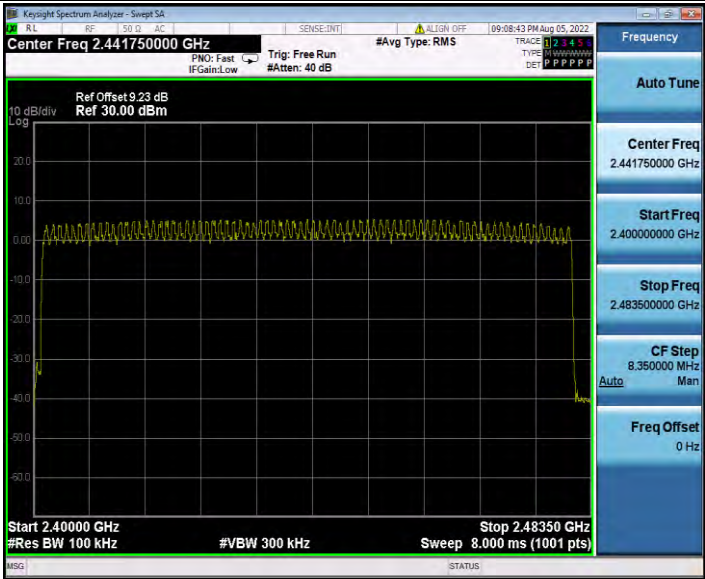


Test Graphs

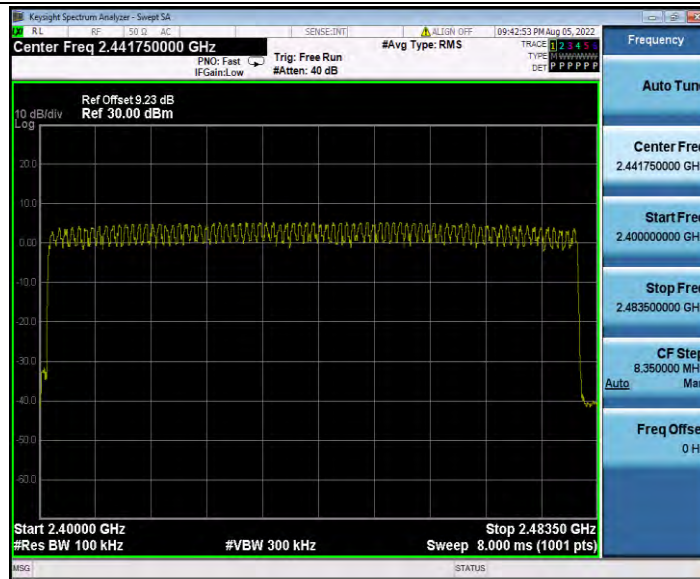
DH1\_Ant1\_Hop



2DH1\_Ant1\_Hop



3DH1\_Ant1\_Hop



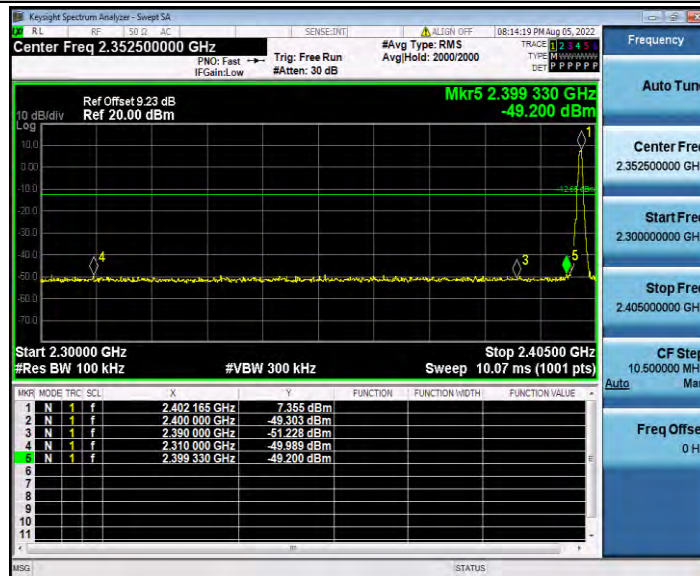
## Appendix A.7: Band edge measurements

### Test Result

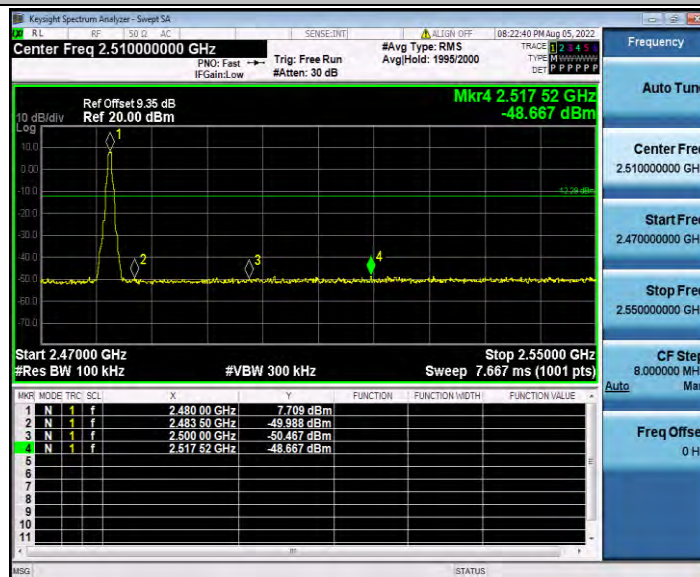
| TestMode | Antenna | ChName | Frequency[MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|--------|----------------|----------------|--------------|-------------|---------|
| DH1      | Ant1    | Low    | 2402           | 7.36           | -49.2        | ≤-12.65     | PASS    |
|          |         | High   | 2480           | 7.71           | -48.67       | ≤-12.29     | PASS    |
|          |         | Low    | Hop_2402       | 6.51           | -49.36       | ≤-13.49     | PASS    |
|          |         | High   | Hop_2480       | 7.97           | -45.08       | ≤-12.03     | PASS    |
| 2DH1     | Ant1    | Low    | 2402           | 3.81           | -49.01       | ≤-16.19     | PASS    |
|          |         | High   | 2480           | 3.93           | -48.93       | ≤-16.07     | PASS    |
|          |         | Low    | Hop_2402       | 3.98           | -48.85       | ≤-16.02     | PASS    |
|          |         | High   | Hop_2480       | 4.66           | -48.18       | ≤-15.34     | PASS    |
| 3DH1     | Ant1    | Low    | 2402           | 3.80           | -47.96       | ≤-16.2      | PASS    |
|          |         | High   | 2480           | 3.97           | -47.07       | ≤-16.03     | PASS    |
|          |         | Low    | Hop_2402       | 3.45           | -49.53       | ≤-16.55     | PASS    |
|          |         | High   | Hop_2480       | 4.52           | -47.92       | ≤-15.48     | PASS    |

## Test Graphs

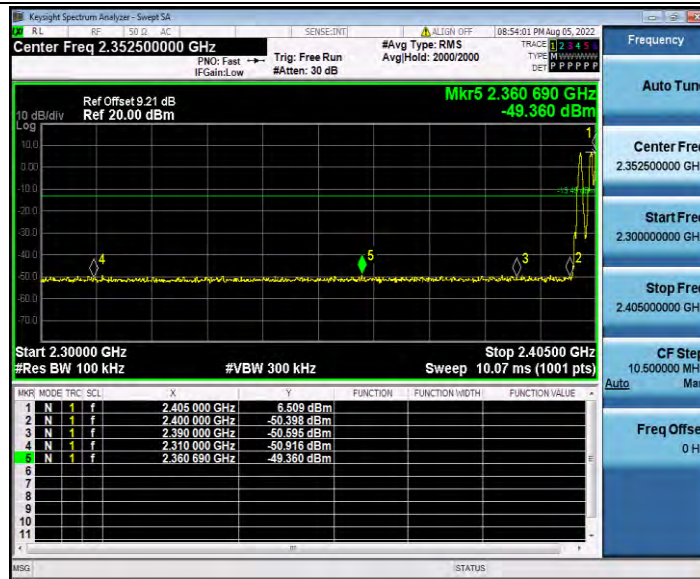
DH1\_Ant1\_Low\_2402



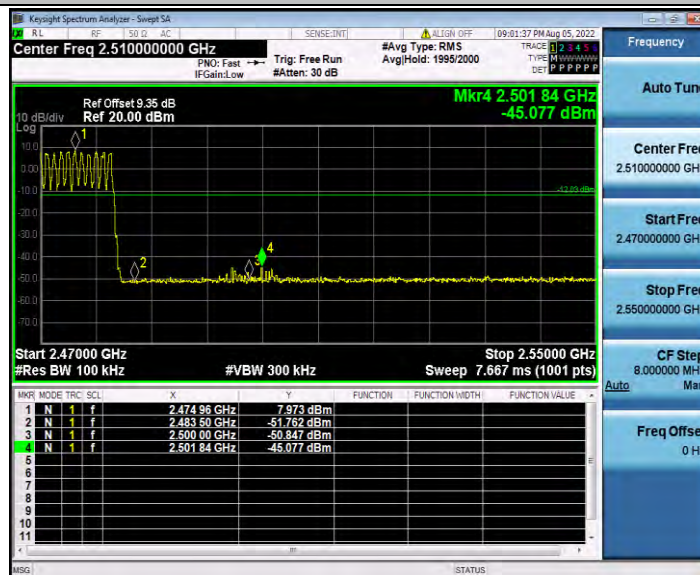
DH1\_Ant1\_High\_2480



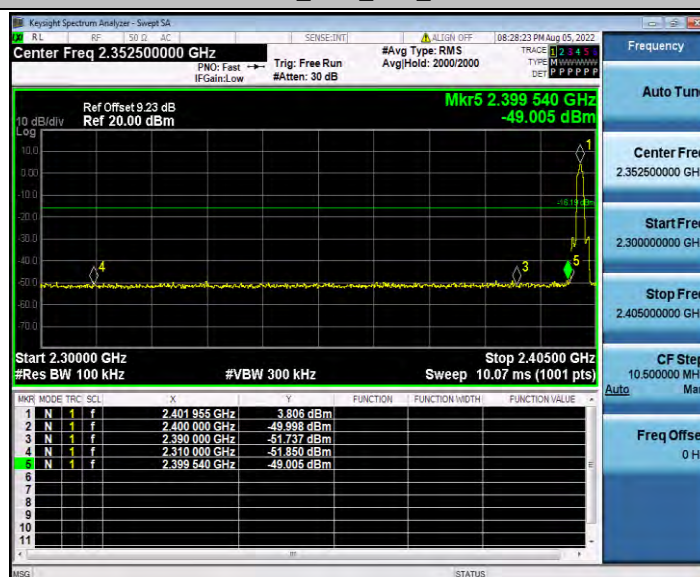
DH1\_Ant1\_Low\_Hop\_2402



DH1\_Ant1\_High\_Hop\_2480

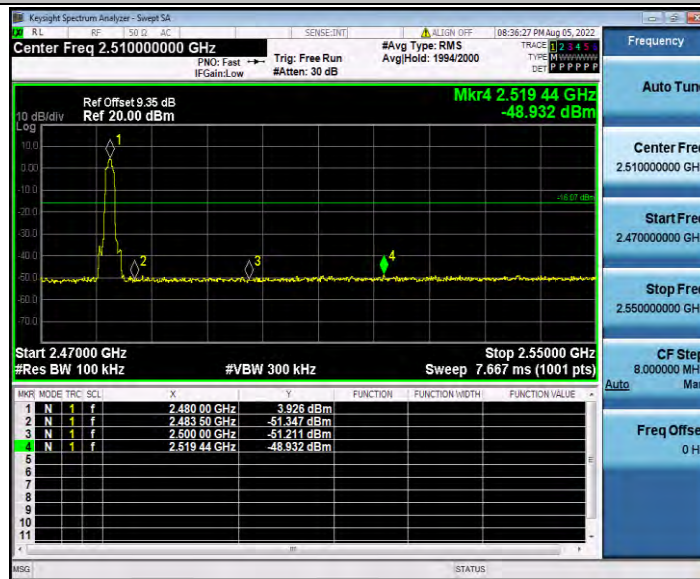


2DH1\_Ant1\_Low\_2402

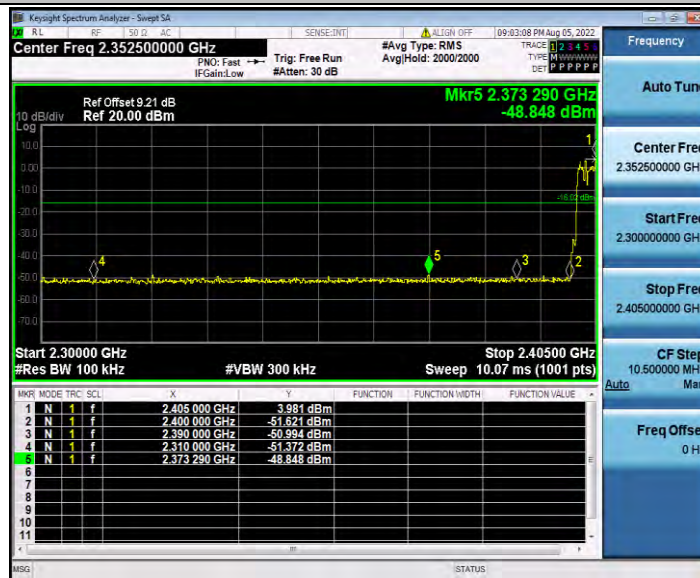




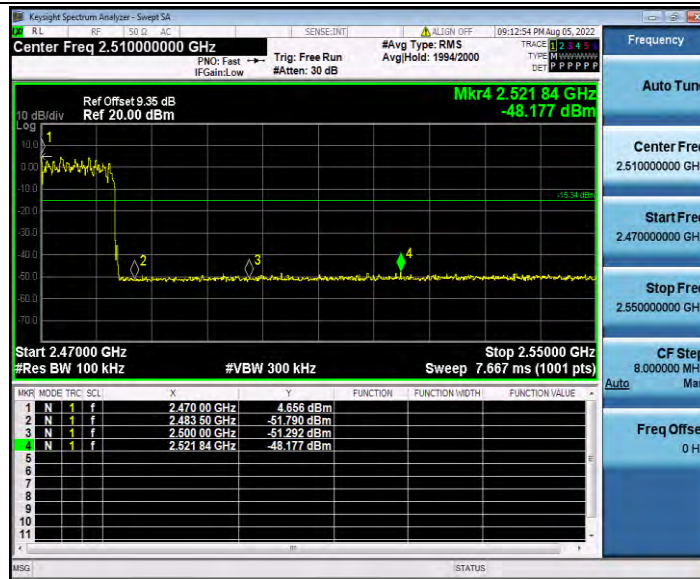
## 2DH1\_Ant1\_High\_2480



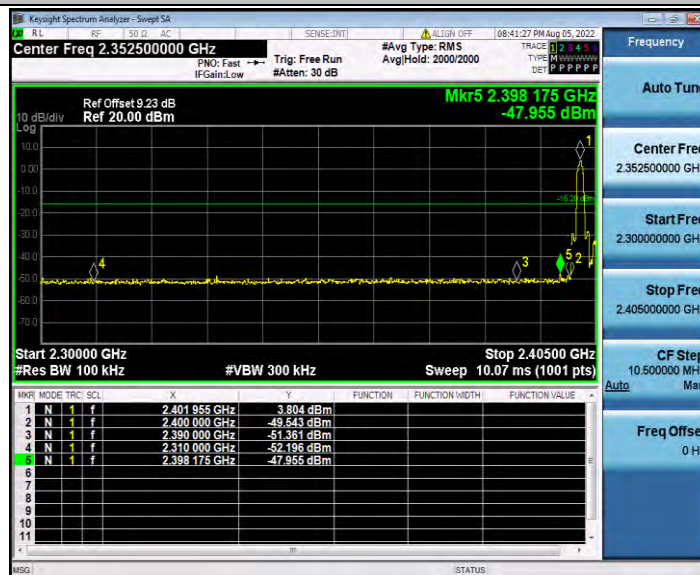
## 2DH1\_Ant1\_Low\_Hop\_2402



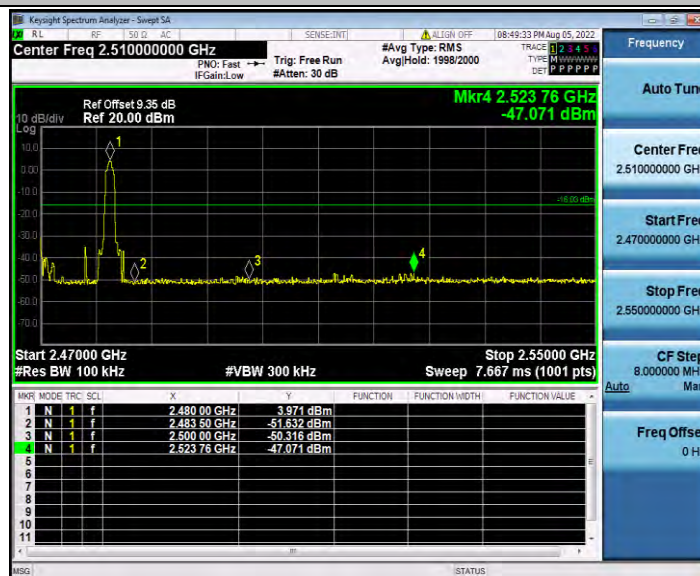
## 2DH1\_Ant1\_High\_Hop\_2480



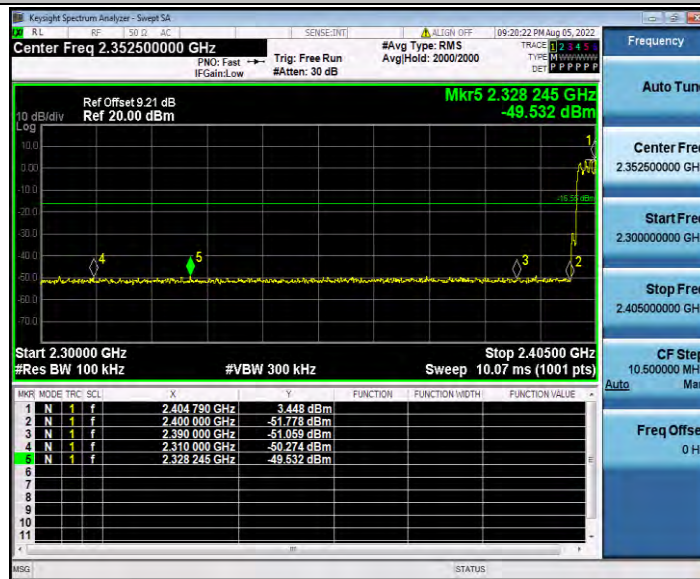
3DH1\_Ant1\_Low\_2402



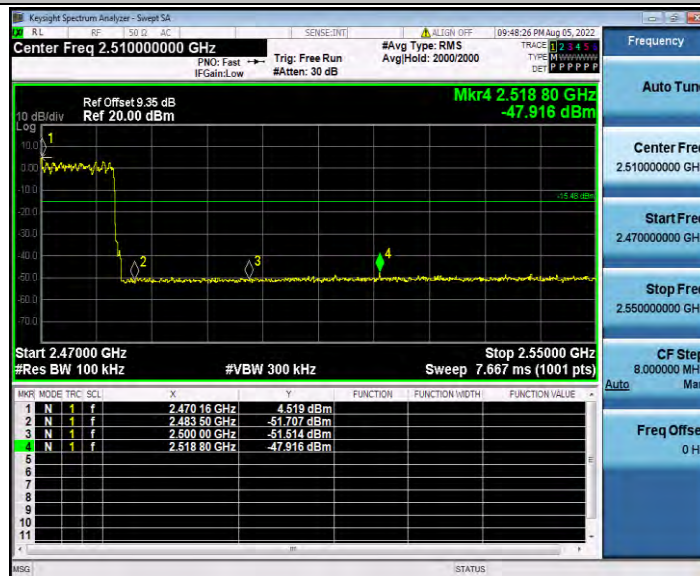
3DH1\_Ant1\_High\_2480



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



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



## Appendix A.8: Conducted Spurious Emission

### Test Result

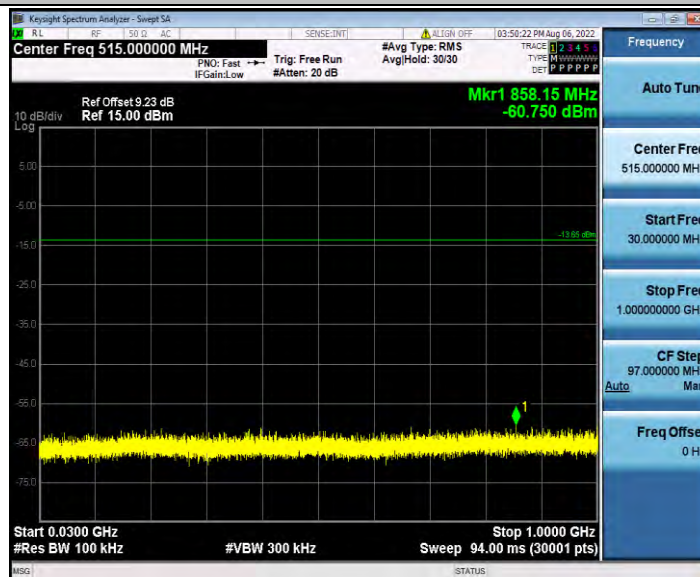
| TestMode | Antenna | Frequency[MHz] | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|----------------|-----------------|----------------|--------------|-------------|---------|
| DH1      | Ant1    | 2402           | Reference       | 6.35           | 6.35         | ---         | PASS    |
|          |         |                | 30~1000         | 6.35           | -60.75       | ≤-13.65     | PASS    |
|          |         |                | 1000~26500      | 6.35           | -47.67       | ≤-13.65     | PASS    |
|          |         | 2441           | Reference       | 8.35           | 8.35         | ---         | PASS    |
|          |         |                | 30~1000         | 8.35           | -60.48       | ≤-11.65     | PASS    |
|          |         |                | 1000~26500      | 8.35           | -47.88       | ≤-11.65     | PASS    |
|          |         | 2480           | Reference       | 7.51           | 7.51         | ---         | PASS    |
|          |         |                | 30~1000         | 7.51           | -60.51       | ≤-12.49     | PASS    |
|          |         |                | 1000~26500      | 7.51           | -47.69       | ≤-12.49     | PASS    |
| 2DH1     | Ant1    | 2402           | Reference       | 3.52           | 3.52         | ---         | PASS    |
|          |         |                | 30~1000         | 3.52           | -60.8        | ≤-16.48     | PASS    |
|          |         |                | 1000~26500      | 3.52           | -47.52       | ≤-16.48     | PASS    |
|          |         | 2441           | Reference       | 4.68           | 4.68         | ---         | PASS    |
|          |         |                | 30~1000         | 4.68           | -59.85       | ≤-15.32     | PASS    |
|          |         |                | 1000~26500      | 4.68           | -47.36       | ≤-15.32     | PASS    |
|          |         | 2480           | Reference       | 3.59           | 3.59         | ---         | PASS    |
|          |         |                | 30~1000         | 3.59           | -59.83       | ≤-16.41     | PASS    |
|          |         |                | 1000~26500      | 3.59           | -47.44       | ≤-16.41     | PASS    |
| 3DH1     | Ant1    | 2402           | Reference       | 3.65           | 3.65         | ---         | PASS    |
|          |         |                | 30~1000         | 3.65           | -60.33       | ≤-16.35     | PASS    |
|          |         |                | 1000~26500      | 3.65           | -47.75       | ≤-16.35     | PASS    |
|          |         | 2441           | Reference       | 4.49           | 4.49         | ---         | PASS    |
|          |         |                | 30~1000         | 4.49           | -59.93       | ≤-15.51     | PASS    |
|          |         |                | 1000~26500      | 4.49           | -47.45       | ≤-15.51     | PASS    |
|          |         | 2480           | Reference       | 3.26           | 3.26         | ---         | PASS    |
|          |         |                | 30~1000         | 3.26           | -58.04       | ≤-16.74     | PASS    |
|          |         |                | 1000~26500      | 3.26           | -47.6        | ≤-16.74     | PASS    |

## Test Graphs

DH1\_Ant1\_2402\_0~Reference



DH1\_Ant1\_2402\_30~1000



DH1\_Ant1\_2402\_1000~26500

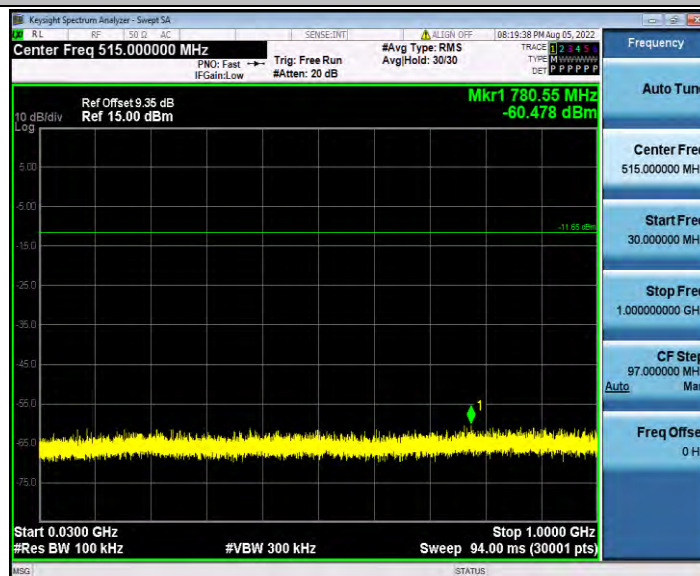




DH1\_Ant1\_2441\_0~Reference



DH1\_Ant1\_2441\_30~1000



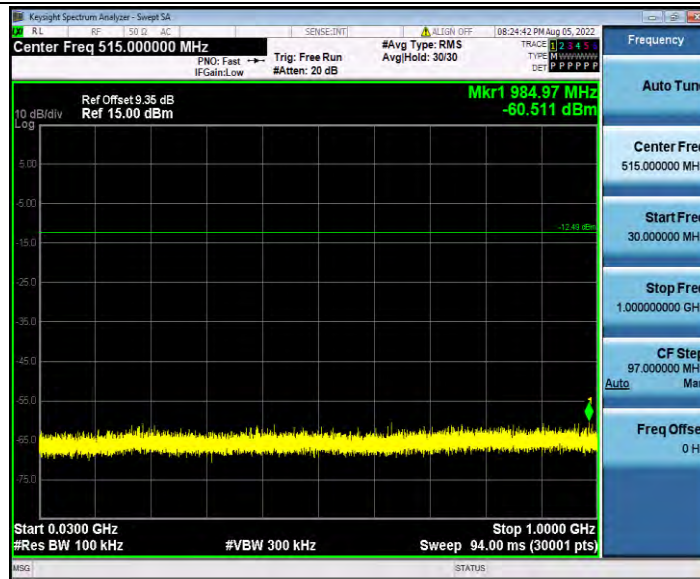
# DH1\_Ant1\_2441\_1000~26500



# DH1\_Ant1\_2480\_0~Reference



# DH1\_Ant1\_2480\_30~1000



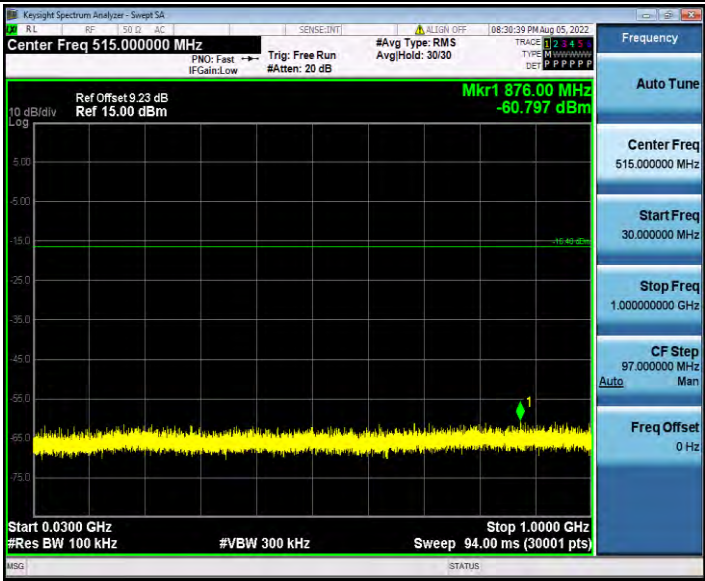
DH1\_Ant1\_2480\_1000~26500



2DH1\_Ant1\_2402\_0~Reference



2DH1\_Ant1\_2402\_30~1000



2DH1\_Ant1\_2402\_1000~26500

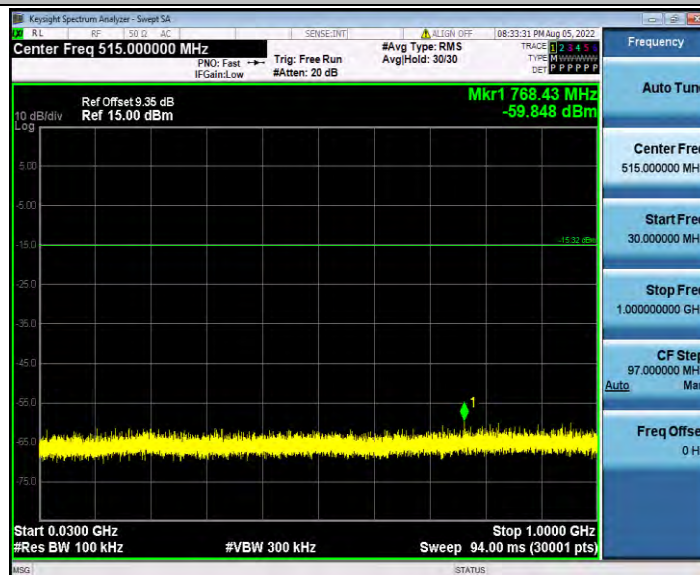


2DH1\_Ant1\_2441\_0~Reference





2DH1\_Ant1\_2441\_30~1000



2DH1\_Ant1\_2441\_1000~26500

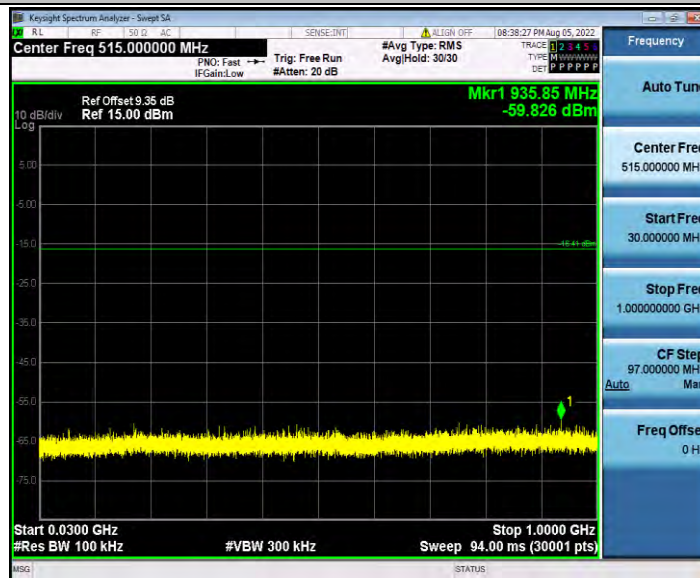




## 2DH1\_Ant1\_2480\_0~Reference



## 2DH1\_Ant1\_2480\_30~1000



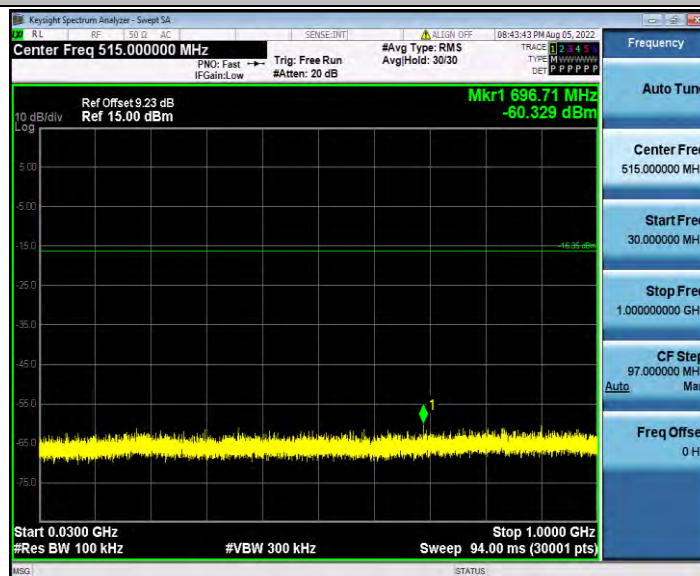
## 2DH1\_Ant1\_2480\_1000~26500



3DH1\_Ant1\_2402\_0~Reference



3DH1\_Ant1\_2402\_30~1000



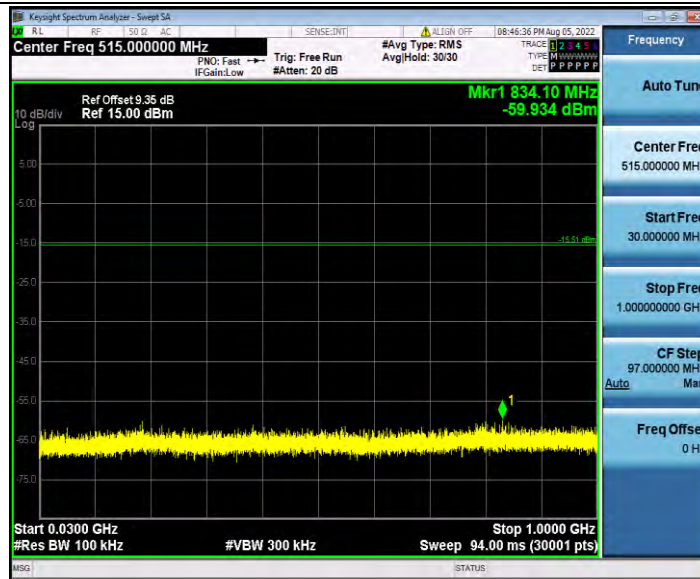
### 3DH1\_Ant1\_2402\_1000~26500



### 3DH1\_Ant1\_2441\_0~Reference



### 3DH1\_Ant1\_2441\_30~1000



3DH1\_Ant1\_2441\_1000~26500

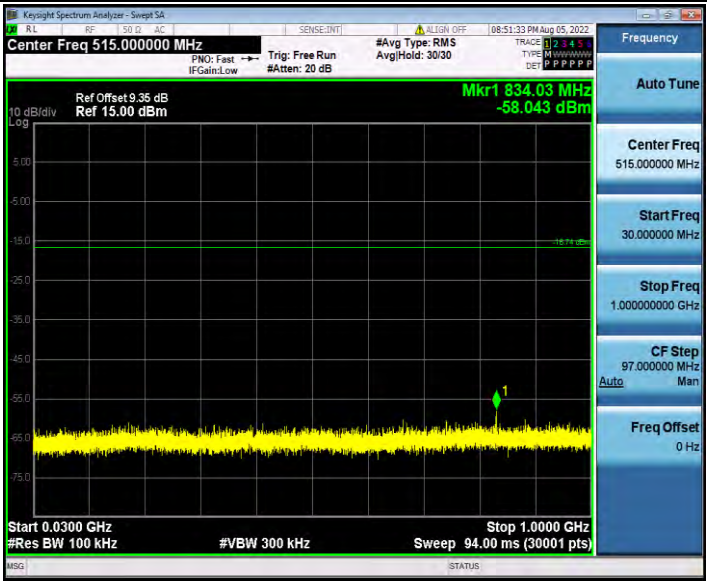


3DH1\_Ant1\_2480\_0~Reference





3DH1\_Ant1\_2480\_30~1000



3DH1\_Ant1\_2480\_1000~26500

