

|                                                  |                           |
|--------------------------------------------------|---------------------------|
| Case No. : GTS20220909003-2-1                    |                           |
| Ambient Condition: 24 °C, 49 %RH, Atmos100.1Kpa, |                           |
| Test Date: 2022.11.30                            | 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           | 1.059            | 2401.442 | 2402.501 | ---        | ---     |
|          |         | 2441           | 1.020            | 2440.463 | 2441.483 | ---        | ---     |
|          |         | 2480           | 1.056            | 2479.454 | 2480.510 | ---        | ---     |
| 2DH1     | Ant1    | 2402           | 1.362            | 2401.283 | 2402.645 | ---        | ---     |
|          |         | 2441           | 1.356            | 2440.295 | 2441.651 | ---        | ---     |
|          |         | 2480           | 1.365            | 2479.292 | 2480.657 | ---        | ---     |
| 3DH1     | Ant1    | 2402           | 1.281            | 2401.322 | 2402.603 | ---        | ---     |
|          |         | 2441           | 1.275            | 2440.334 | 2441.609 | ---        | ---     |
|          |         | 2480           | 1.332            | 2479.307 | 2480.639 | ---        | ---     |

## Test Graphs

DH1\_Ant1\_2402



DH1\_Ant1\_2441



DH1\_Ant1\_2480



2DH1\_Ant1\_2402



2DH1\_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           | 0.93594   | 2401.494 | 2402.430 | ---        | ---     |
|          |         | 2441           | 0.92923   | 2440.502 | 2441.431 | ---        | ---     |
|          |         | 2480           | 0.92960   | 2479.508 | 2480.437 | ---        | ---     |
| 2DH1     | Ant1    | 2402           | 1.1979    | 2401.357 | 2402.555 | ---        | ---     |
|          |         | 2441           | 1.2062    | 2440.355 | 2441.562 | ---        | ---     |
|          |         | 2480           | 1.1998    | 2479.362 | 2480.562 | ---        | ---     |
| 3DH1     | Ant1    | 2402           | 1.1774    | 2401.386 | 2402.564 | ---        | ---     |
|          |         | 2441           | 1.1789    | 2440.391 | 2441.570 | ---        | ---     |
|          |         | 2480           | 1.1763    | 2479.397 | 2480.573 | ---        | ---     |



## Test Graphs

DH1\_Ant1\_2402



DH1\_Ant1\_2441



DH1\_Ant1\_2480



2DH1\_Ant1\_2402



2DH1\_Ant1\_2441





## 2DH1\_Ant1\_2480



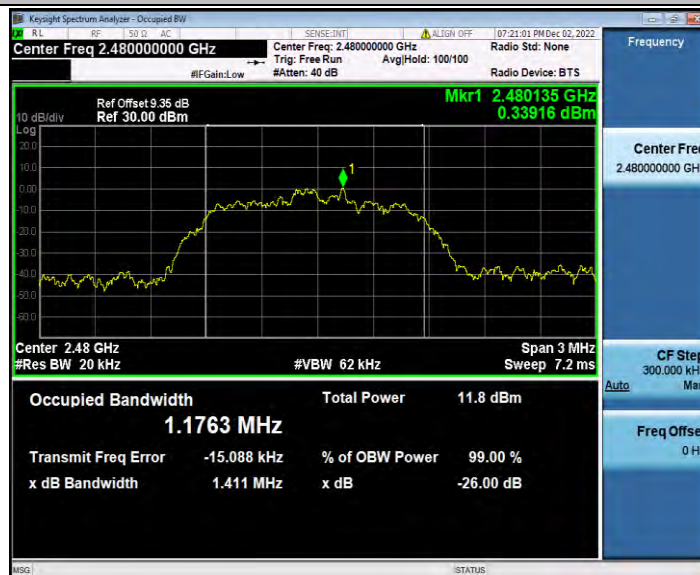
## 3DH1\_Ant1\_2402



## 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           | 8.05                      | ≤20.97               | PASS    |
|           |         | 2441           | 9.04                      | ≤20.97               | PASS    |
|           |         | 2480           | 9.27                      | ≤20.97               | PASS    |
| 2DH1      | Ant1    | 2402           | 5.82                      | ≤20.97               | PASS    |
|           |         | 2441           | 6.95                      | ≤20.97               | PASS    |
|           |         | 2480           | 7.13                      | ≤20.97               | PASS    |
| 3DH1      | Ant1    | 2402           | 6.39                      | ≤20.97               | PASS    |
|           |         | 2441           | 7.48                      | ≤20.97               | PASS    |
|           |         | 2480           | 7.52                      | ≤20.97               | PASS    |

## Appendix A.4: Carrier frequency separation

### Test Result

| TestMode | Antenna | Frequency[MHz] | Result[MHz] | Limit[MHz]   | Verdict |
|----------|---------|----------------|-------------|--------------|---------|
| DH1      | Ant1    | Hop_2402       | 1.008       | $\geq 0.706$ | PASS    |
|          |         | Hop_2441       | 0.994       | $\geq 0.706$ | PASS    |
|          |         | Hop_2480       | 1.008       | $\geq 0.706$ | PASS    |
| 2DH1     | Ant1    | Hop_2402       | 1.002       | $\geq 0.910$ | PASS    |
|          |         | Hop_2441       | 1.002       | $\geq 0.910$ | PASS    |
|          |         | Hop_2480       | 1.018       | $\geq 0.910$ | PASS    |
| 3DH1     | Ant1    | Hop_2402       | 1.01        | $\geq 0.888$ | PASS    |
|          |         | Hop_2441       | 1.008       | $\geq 0.888$ | PASS    |
|          |         | Hop_2480       | 1.012       | $\geq 0.888$ | 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



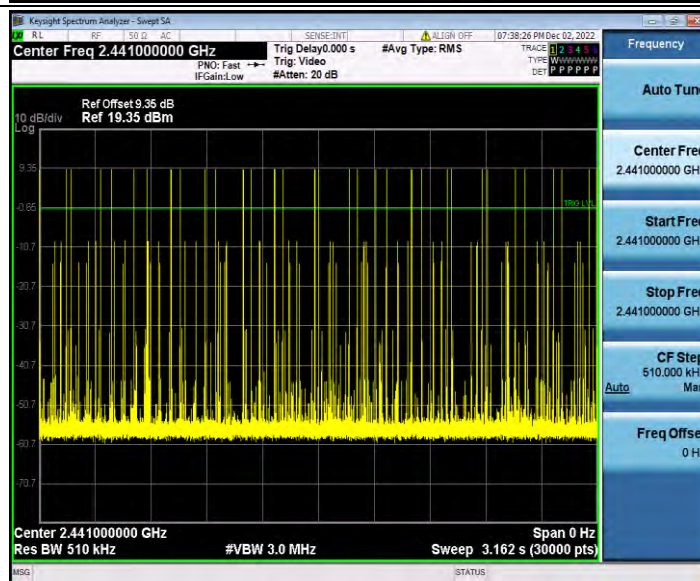
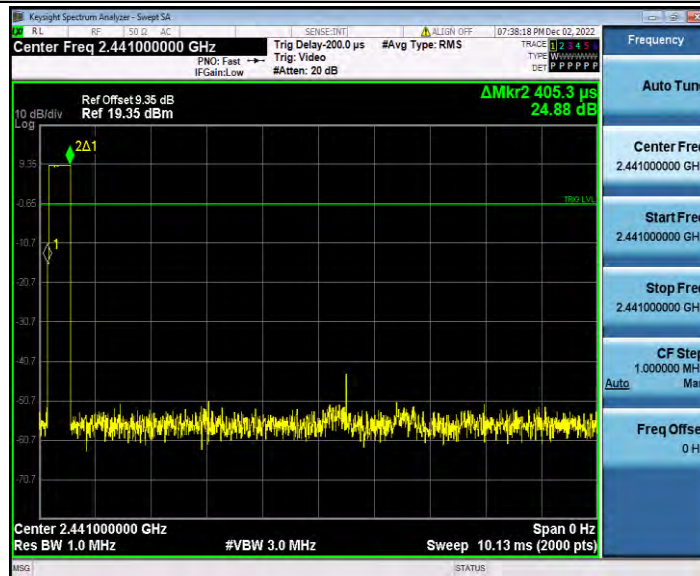
## Appendix A.5: Time of occupancy

### Test Result

| TestMode | Antenna | Frequency[MHz] | BurstWidth<br>[ms] | TotalHops<br>[Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|----------------|--------------------|--------------------|-----------|----------|---------|
| DH1      | Ant1    | Hop            | 0.41               | 330                | 0.134     | ≤0.4     | PASS    |
| DH3      | Ant1    | Hop            | 1.66               | 150                | 0.249     | ≤0.4     | PASS    |
| DH5      | Ant1    | Hop            | 2.91               | 90                 | 0.262     | ≤0.4     | PASS    |
| 2DH1     | Ant1    | Hop            | 0.38               | 310                | 0.118     | ≤0.4     | PASS    |
| 2DH3     | Ant1    | Hop            | 1.63               | 180                | 0.294     | ≤0.4     | PASS    |
| 2DH5     | Ant1    | Hop            | 2.88               | 130                | 0.375     | ≤0.4     | PASS    |
| 3DH1     | Ant1    | Hop            | 0.38               | 320                | 0.122     | ≤0.4     | PASS    |
| 3DH3     | Ant1    | Hop            | 1.63               | 150                | 0.245     | ≤0.4     | PASS    |
| 3DH5     | Ant1    | Hop            | 2.88               | 110                | 0.317     | ≤0.4     | PASS    |

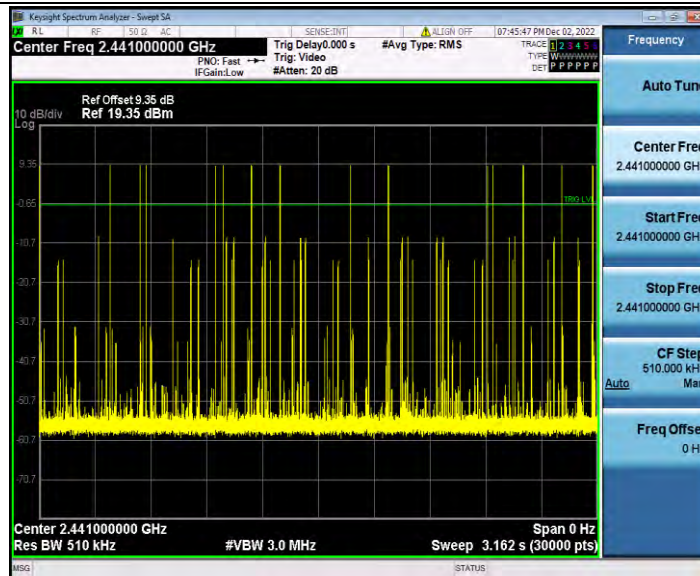
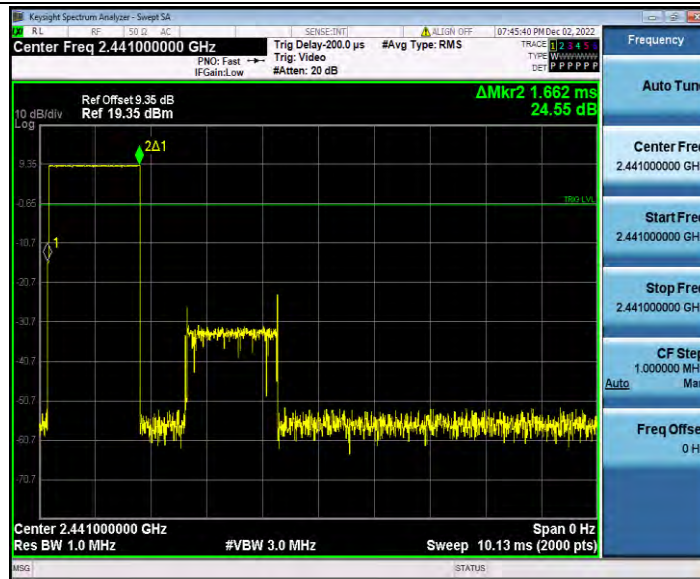
## Test Graphs

DH1\_Ant1\_Hop

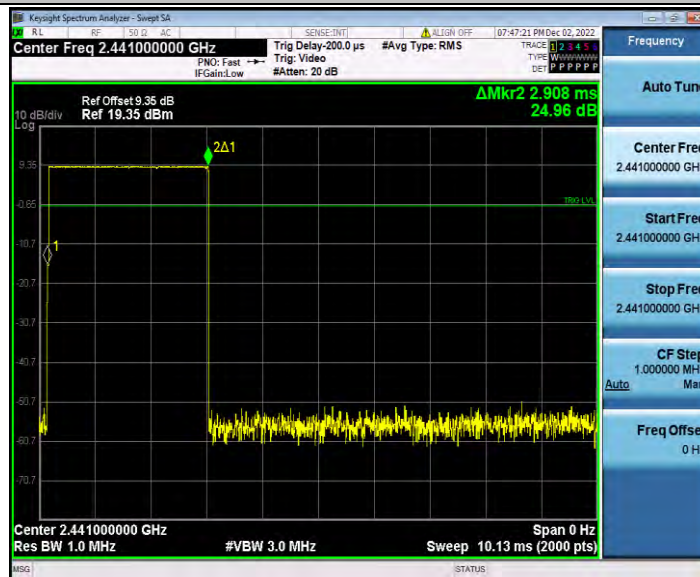


DH3\_Ant1\_Hop

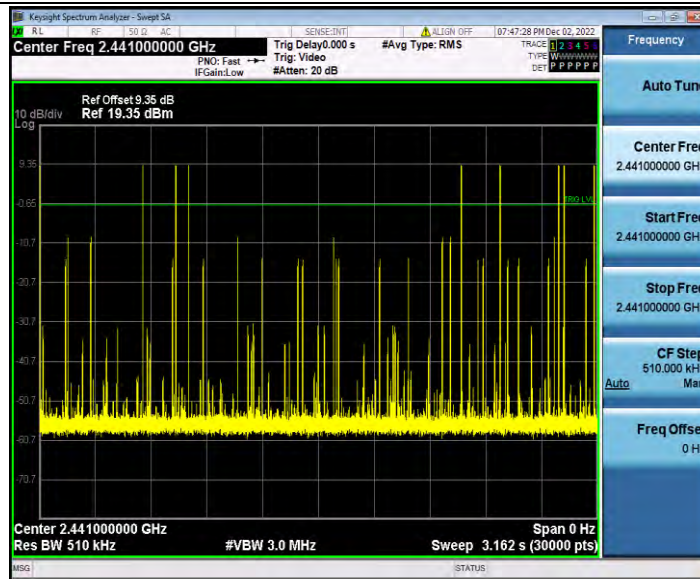




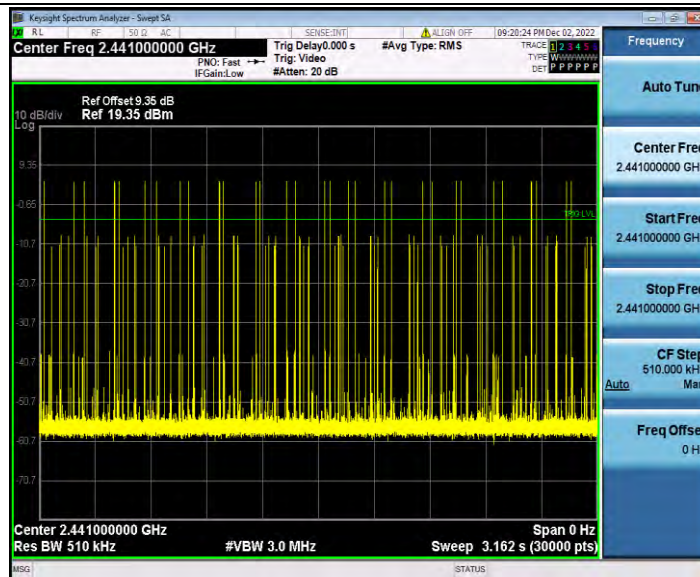
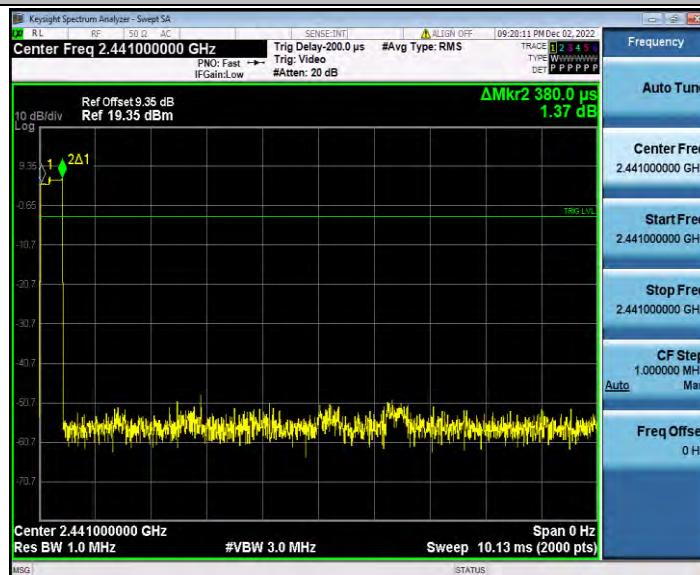
DH5\_Ant1\_Hop



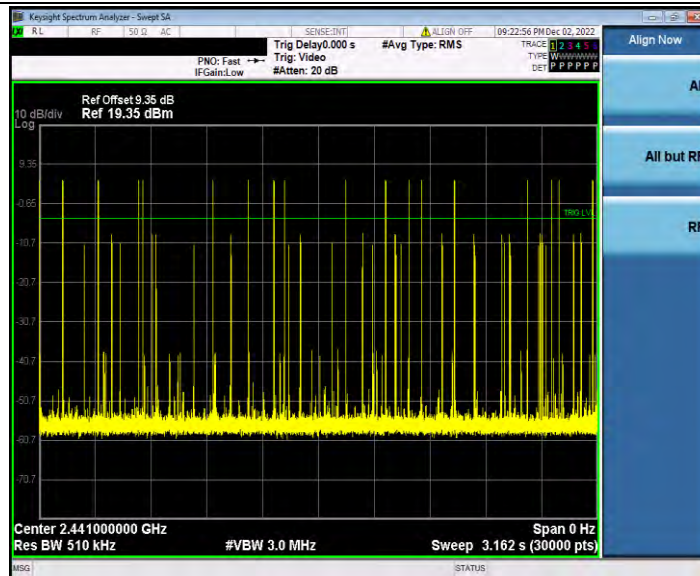
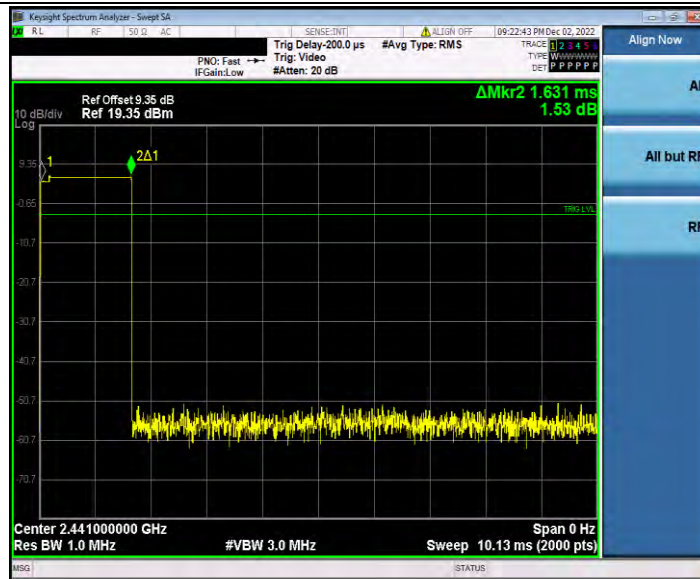




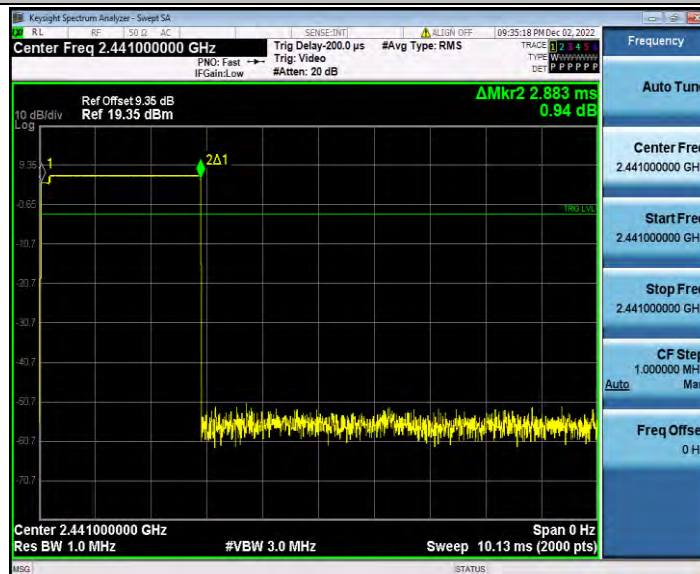
2DH1\_Ant1\_Hop

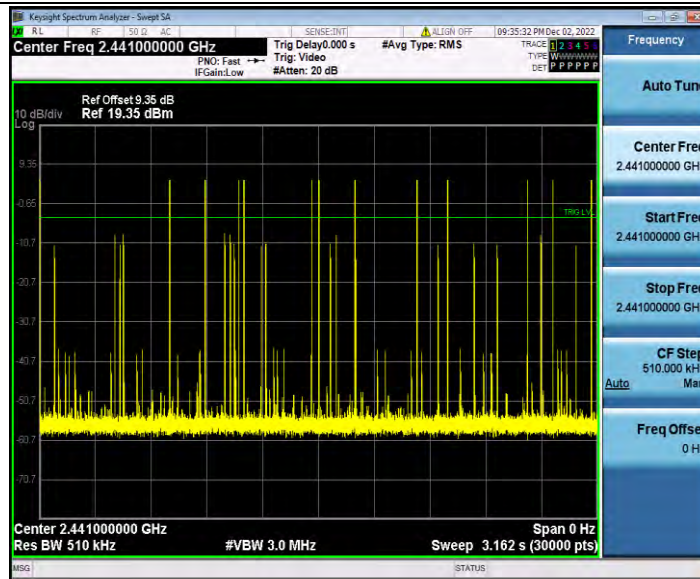


2DH3\_Ant1\_Hop

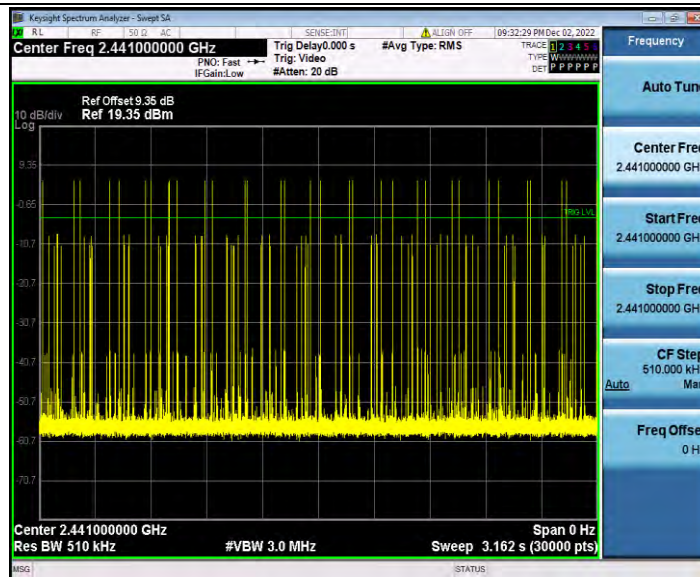
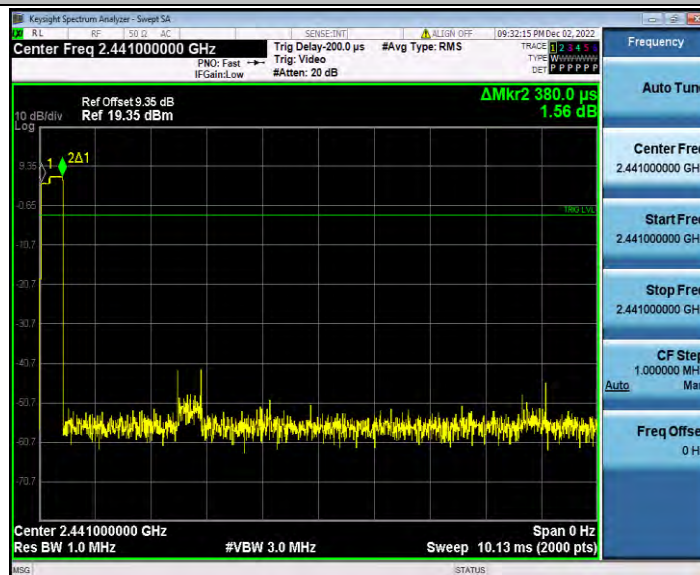


2DH5\_Ant1\_Hop



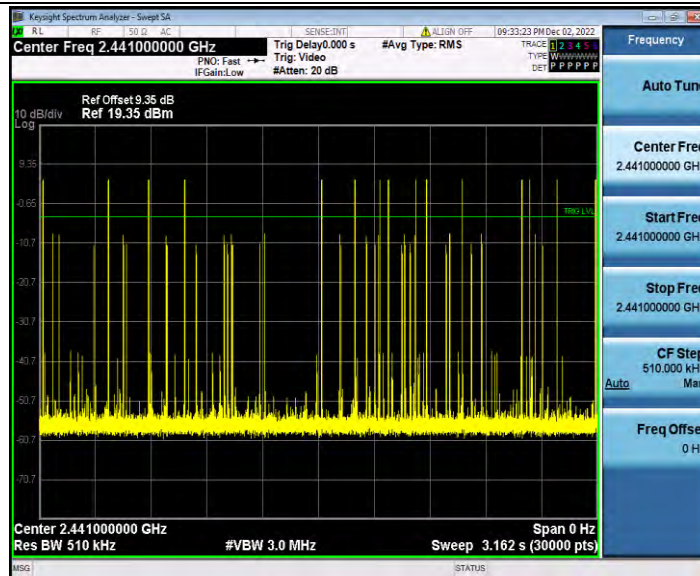


3DH1\_Ant1\_Hop

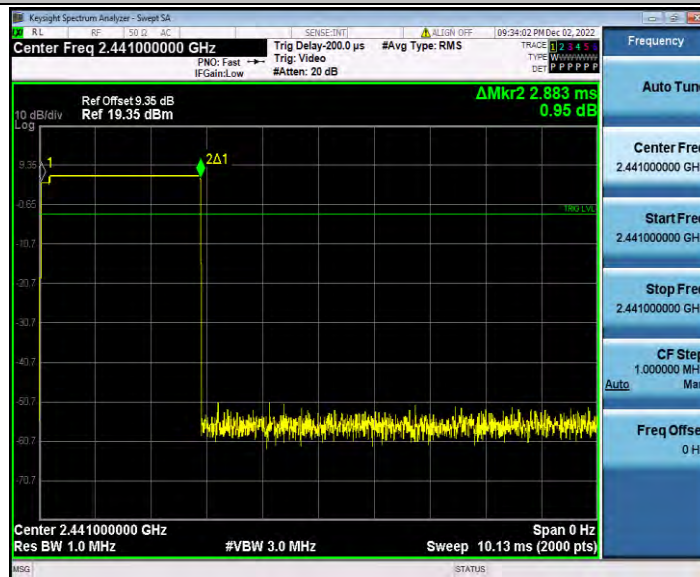


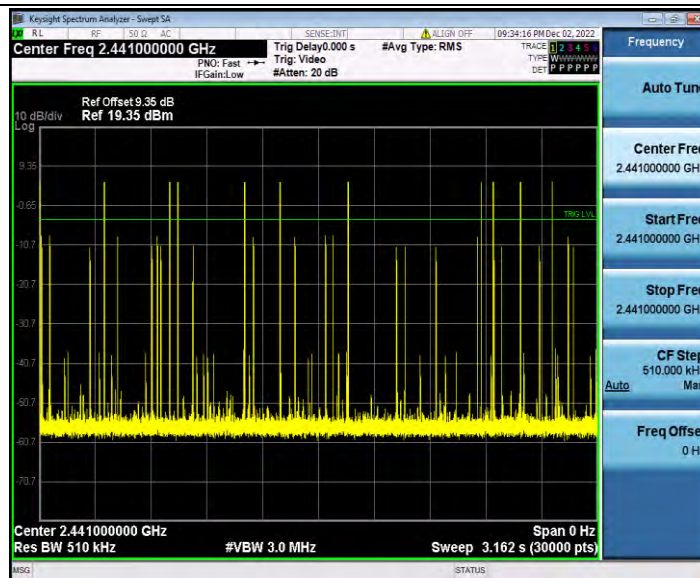
3DH3\_Ant1\_Hop





3DH5\_Ant1\_Hop





## Appendix A.6: Number of hopping channels

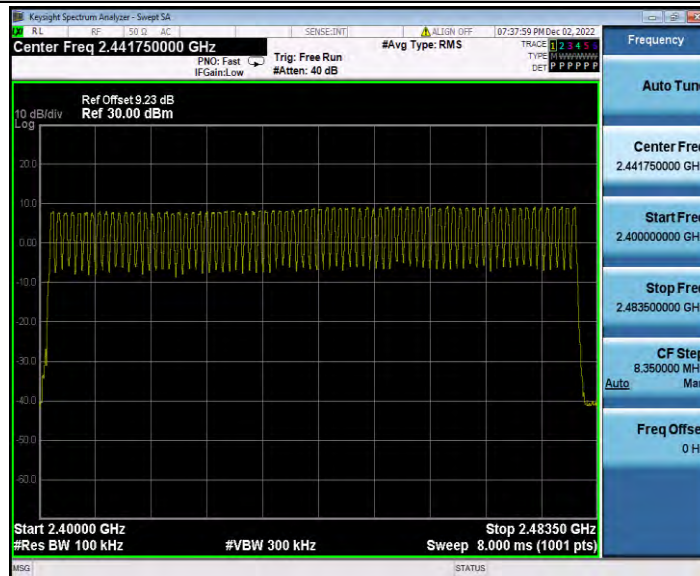
### Test Result

| 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    |

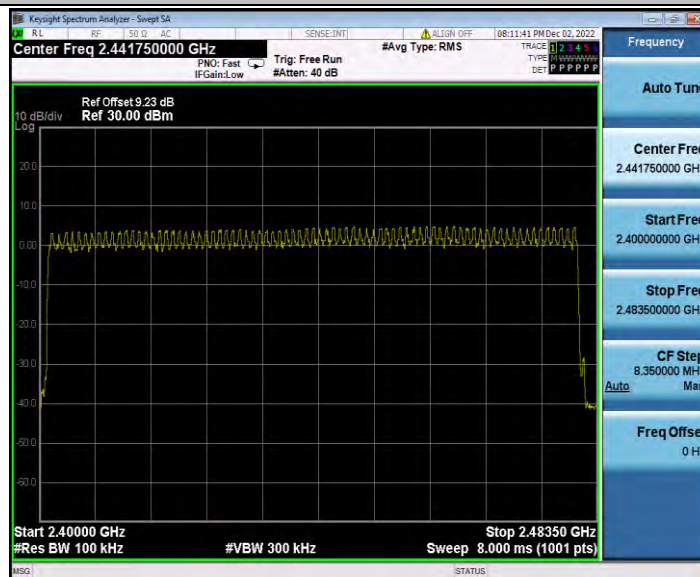


## Test Graphs

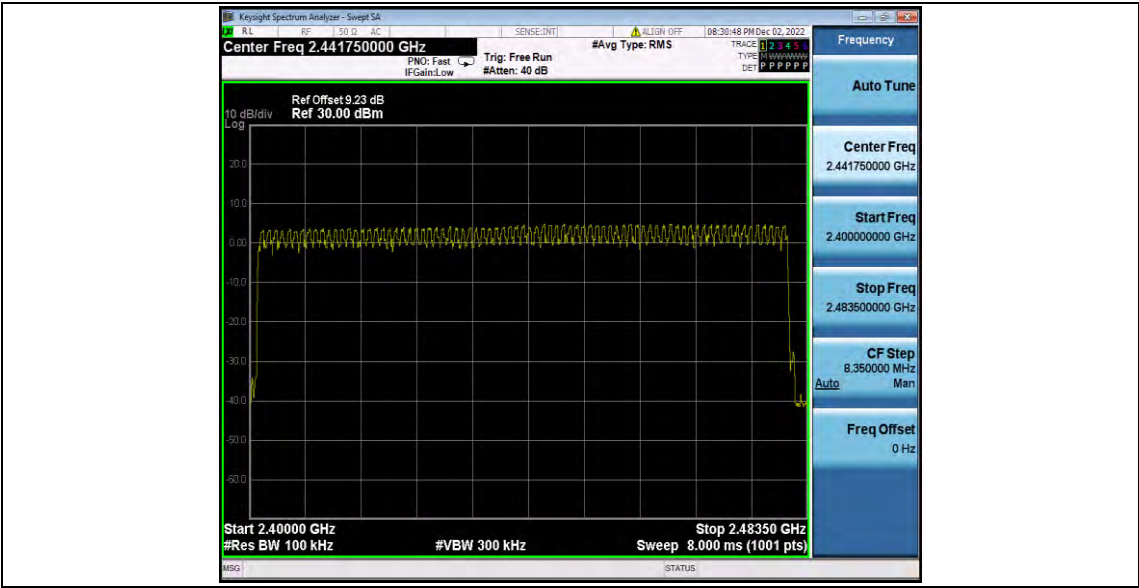
DH1\_Ant1\_Hop



2DH1\_Ant1\_Hop



3DH1\_Ant1\_Hop



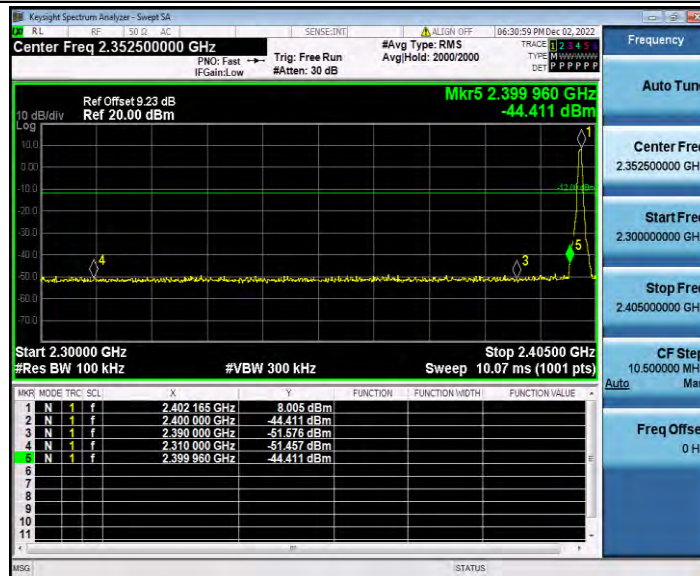
## Appendix A.7: Band edge measurements

### Test Result

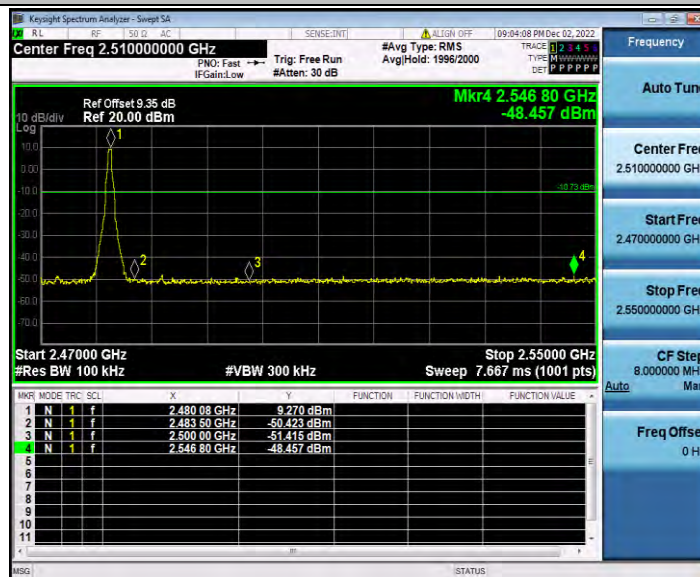
| TestMode | Antenna | ChName | Frequency[MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|--------|----------------|----------------|--------------|-------------|---------|
| DH1      | Ant1    | Low    | 2402           | 8.01           | -44.41       | ≤-12        | PASS    |
|          |         | High   | 2480           | 9.27           | -48.46       | ≤-10.73     | PASS    |
|          |         | Low    | Hop_2402       | 7.35           | -49.17       | ≤-12.66     | PASS    |
|          |         | High   | Hop_2480       | 9.08           | -48.56       | ≤-10.92     | PASS    |
| 2DH1     | Ant1    | Low    | 2402           | 3.37           | -48.99       | ≤-16.63     | PASS    |
|          |         | High   | 2480           | 4.88           | -48.25       | ≤-15.12     | PASS    |
|          |         | Low    | Hop_2402       | 3.25           | -48.89       | ≤-16.76     | PASS    |
|          |         | High   | Hop_2480       | 4.64           | -48.89       | ≤-15.36     | PASS    |
| 3DH1     | Ant1    | Low    | 2402           | 3.57           | -49.05       | ≤-16.43     | PASS    |
|          |         | High   | 2480           | 4.96           | -48.28       | ≤-15.04     | PASS    |
|          |         | Low    | Hop_2402       | 3.09           | -49.57       | ≤-16.91     | PASS    |
|          |         | High   | Hop_2480       | 4.93           | -48.67       | ≤-15.07     | PASS    |

## Test Graphs

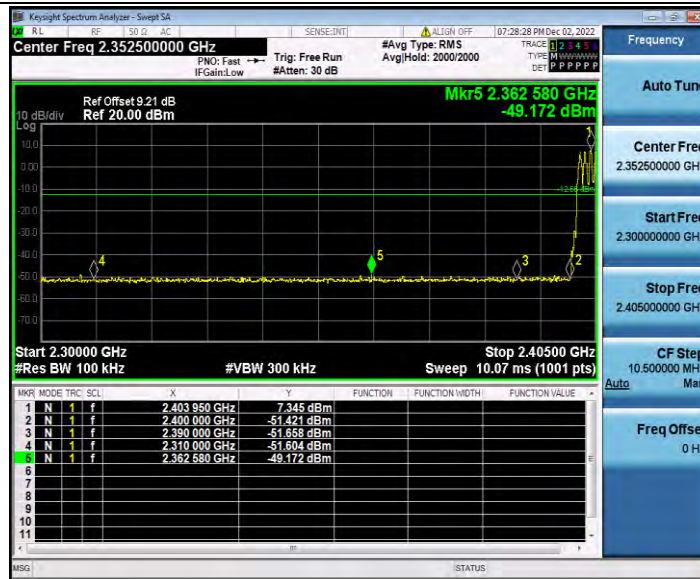
DH1\_Ant1\_Low\_2402



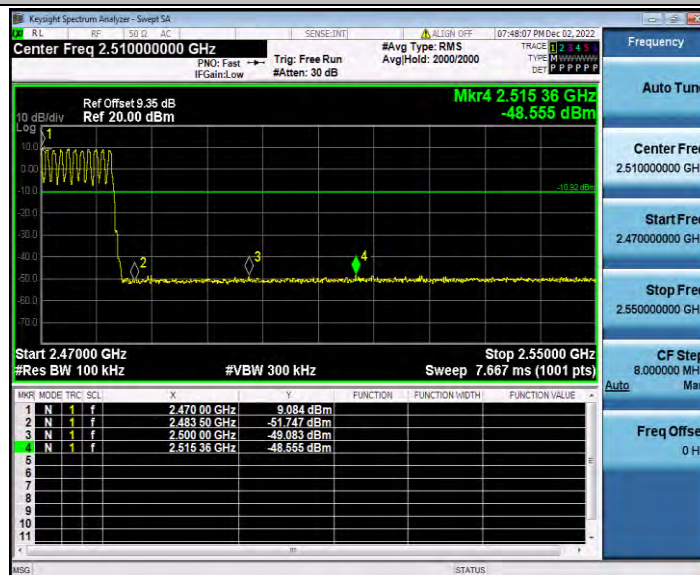
DH1\_Ant1\_High\_2480



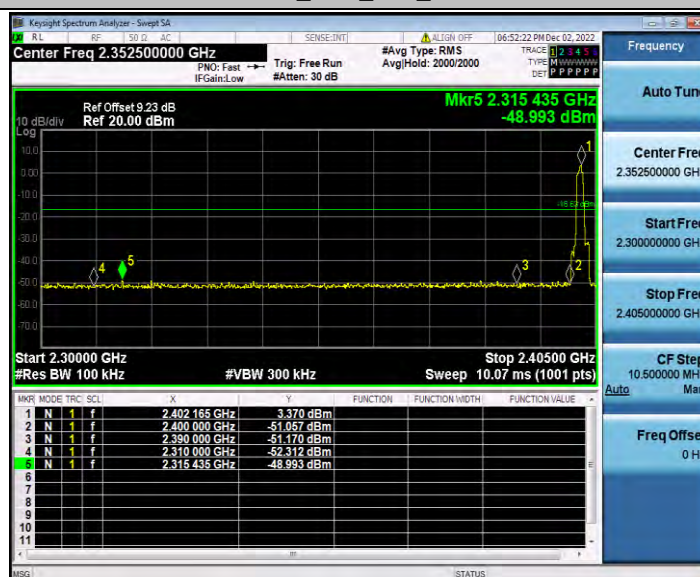
DH1\_Ant1\_Low\_Hop\_2402



DH1\_Ant1\_High\_Hop\_2480

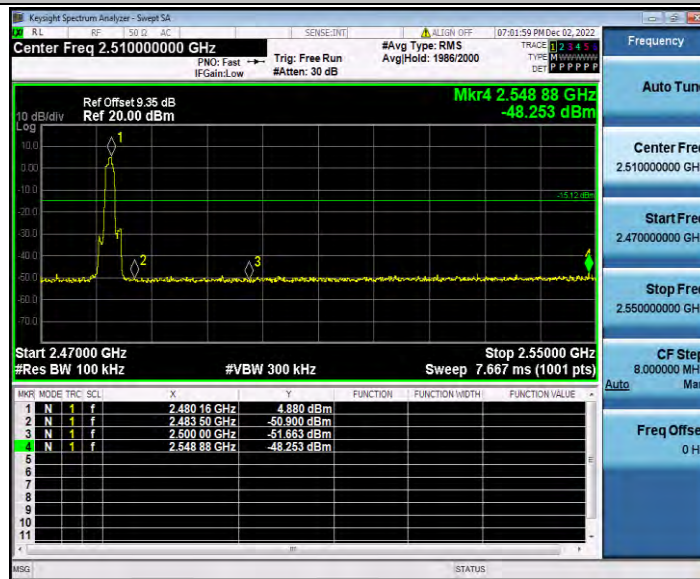


2DH1\_Ant1\_Low\_2402

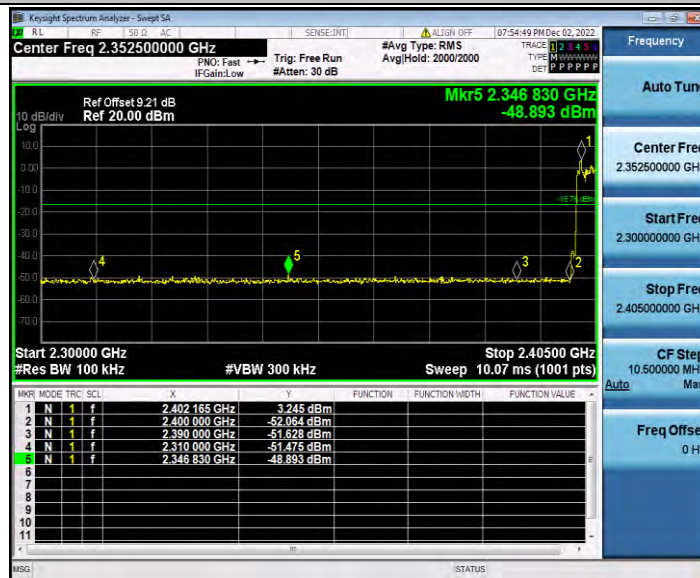




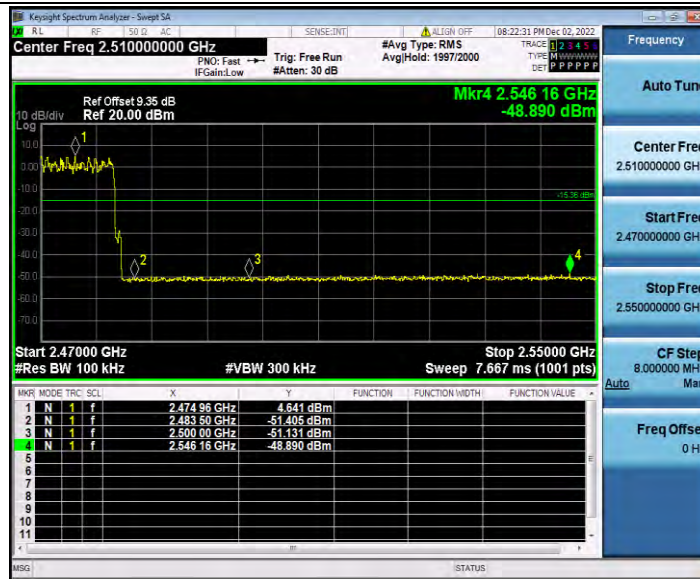
## 2DH1\_Ant1\_High\_2480



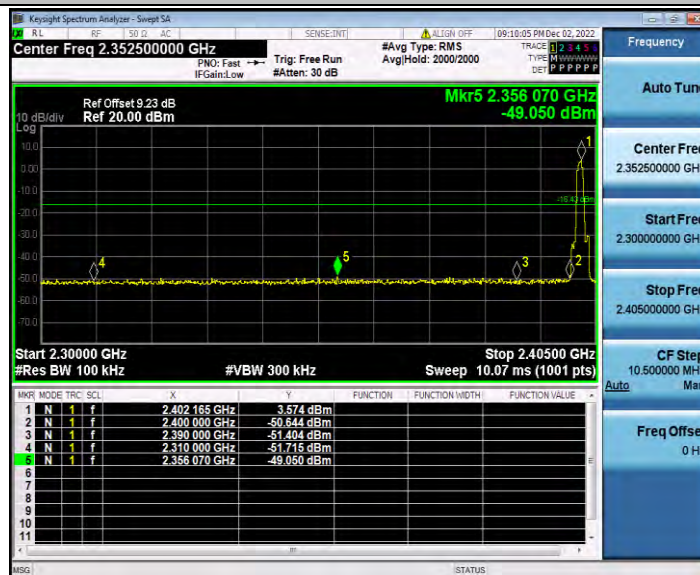
## 2DH1\_Ant1\_Low\_Hop\_2402



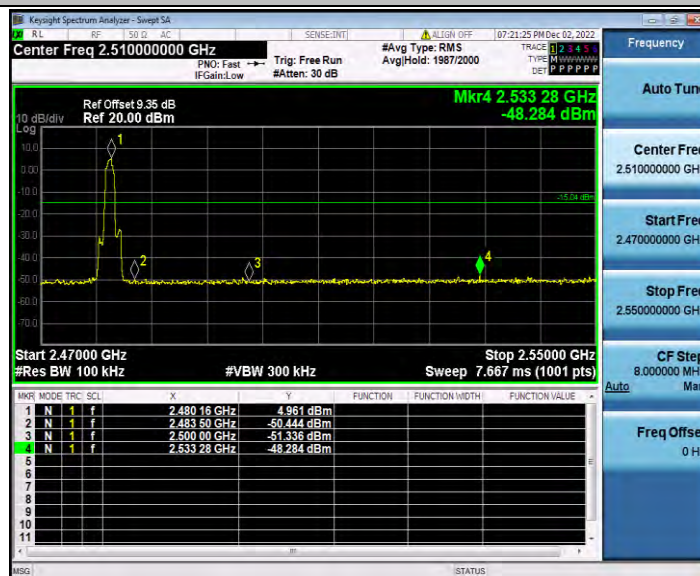
## 2DH1\_Ant1\_High\_Hop\_2480



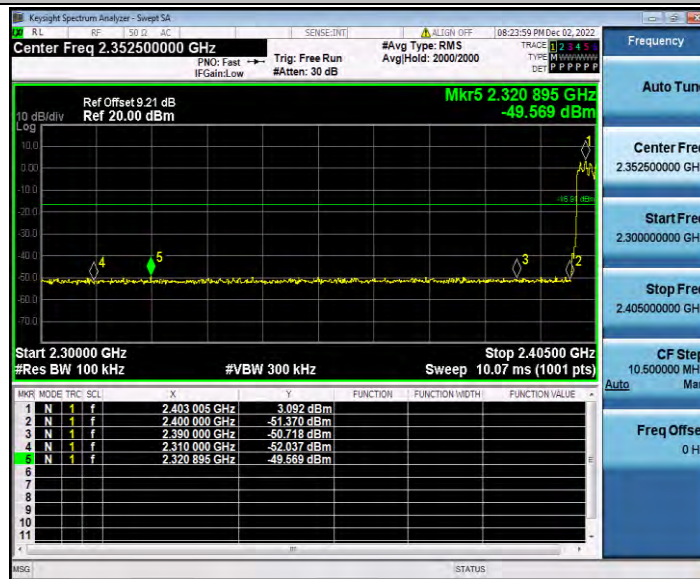
3DH1\_Ant1\_Low\_2402



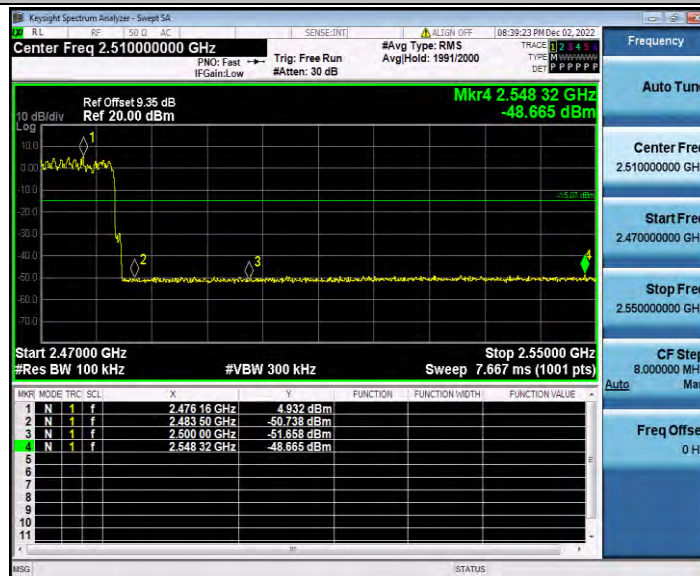
3DH1\_Ant1\_High\_2480



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



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



## Appendix A.8: Conducted Spurious Emission

### Test Result

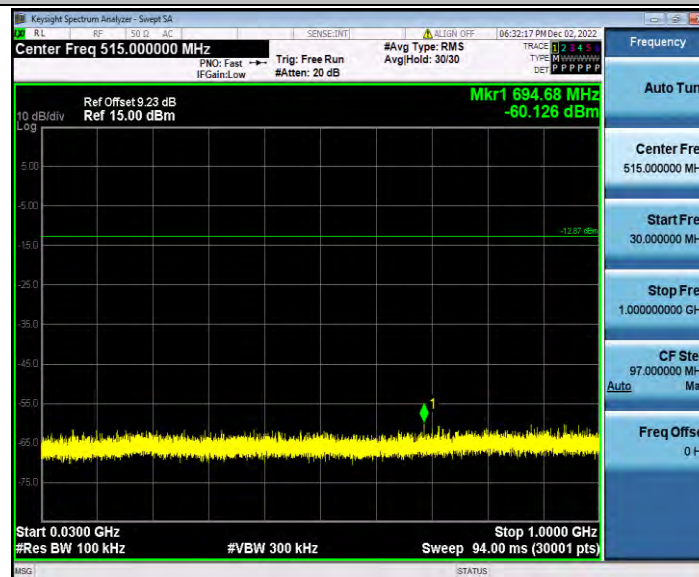
| TestMode | Antenna | Frequency[MHz] | FreqRange<br>[MHz] | RefLevel<br>[dBm] | Result<br>[dBm] | Limit<br>[dBm] | Verdict |
|----------|---------|----------------|--------------------|-------------------|-----------------|----------------|---------|
| DH1      | Ant1    | 2402           | Reference          | 7.13              | 7.13            | ---            | PASS    |
|          |         |                | 30~1000            | 7.13              | -60.13          | ≤-12.87        | PASS    |
|          |         |                | 1000~26500         | 7.13              | -46.98          | ≤-12.87        | PASS    |
|          |         | 2441           | Reference          | 8.26              | 8.26            | ---            | PASS    |
|          |         |                | 30~1000            | 8.26              | -60.18          | ≤-11.74        | PASS    |
|          |         |                | 1000~26500         | 8.26              | -47.7           | ≤-11.74        | PASS    |
|          |         | 2480           | Reference          | 8.78              | 8.78            | ---            | PASS    |
|          |         |                | 30~1000            | 8.78              | -60.83          | ≤-11.22        | PASS    |
|          |         |                | 1000~26500         | 8.78              | -47.84          | ≤-11.22        | PASS    |
| 2DH1     | Ant1    | 2402           | Reference          | 2.92              | 2.92            | ---            | PASS    |
|          |         |                | 30~1000            | 2.92              | -59.97          | ≤-17.08        | PASS    |
|          |         |                | 1000~26500         | 2.92              | -47.46          | ≤-17.08        | PASS    |
|          |         | 2441           | Reference          | 4.34              | 4.34            | ---            | PASS    |
|          |         |                | 30~1000            | 4.34              | -60.48          | ≤-15.66        | PASS    |
|          |         |                | 1000~26500         | 4.34              | -46.94          | ≤-15.66        | PASS    |
|          |         | 2480           | Reference          | 4.69              | 4.69            | ---            | PASS    |
|          |         |                | 30~1000            | 4.69              | -60.99          | ≤-15.31        | PASS    |
|          |         |                | 1000~26500         | 4.69              | -47.4           | ≤-15.31        | PASS    |
| 3DH1     | Ant1    | 2402           | Reference          | 3.25              | 3.25            | ---            | PASS    |
|          |         |                | 30~1000            | 3.25              | -60.47          | ≤-16.75        | PASS    |
|          |         |                | 1000~26500         | 3.25              | -47.07          | ≤-16.75        | PASS    |
|          |         | 2441           | Reference          | 4.39              | 4.39            | ---            | PASS    |
|          |         |                | 30~1000            | 4.39              | -60.31          | ≤-15.61        | PASS    |
|          |         |                | 1000~26500         | 4.39              | -47.65          | ≤-15.61        | PASS    |
|          |         | 2480           | Reference          | 4.75              | 4.75            | ---            | PASS    |
|          |         |                | 30~1000            | 4.75              | -60.59          | ≤-15.25        | PASS    |
|          |         |                | 1000~26500         | 4.75              | -47.29          | ≤-15.25        | PASS    |

## Test Graphs

DH1\_Ant1\_2402\_0~Reference

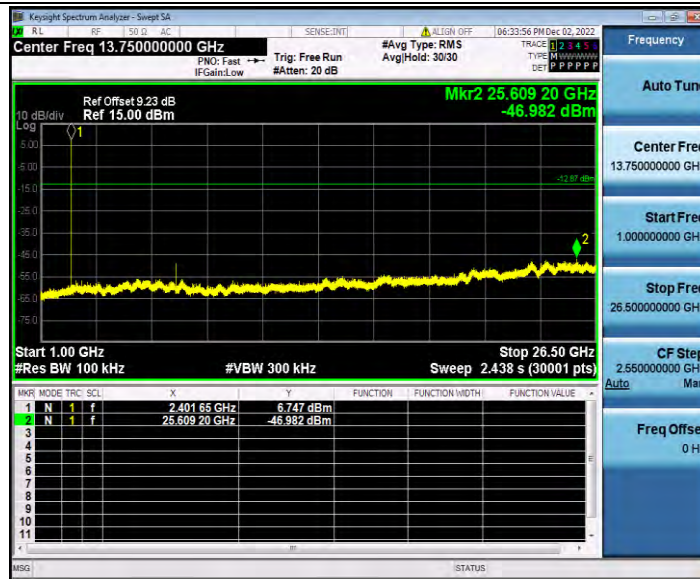


DH1\_Ant1\_2402\_30~1000



DH1\_Ant1\_2402\_1000~26500

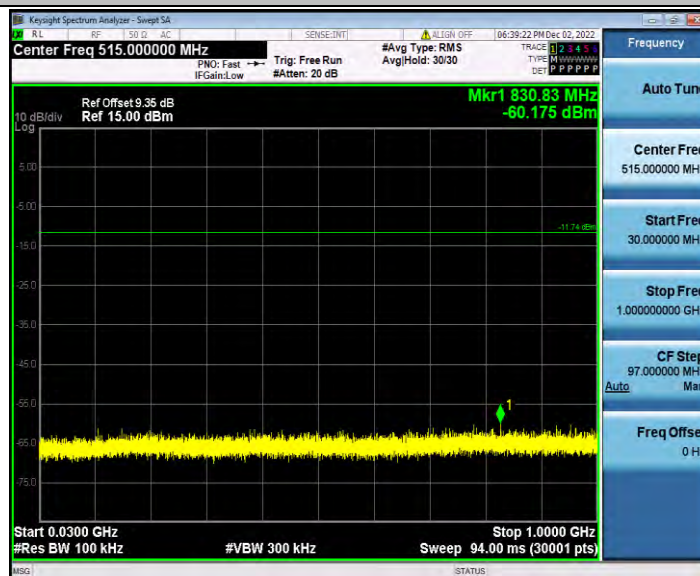




DH1\_Ant1\_2441\_0~Reference



DH1\_Ant1\_2441\_30~1000



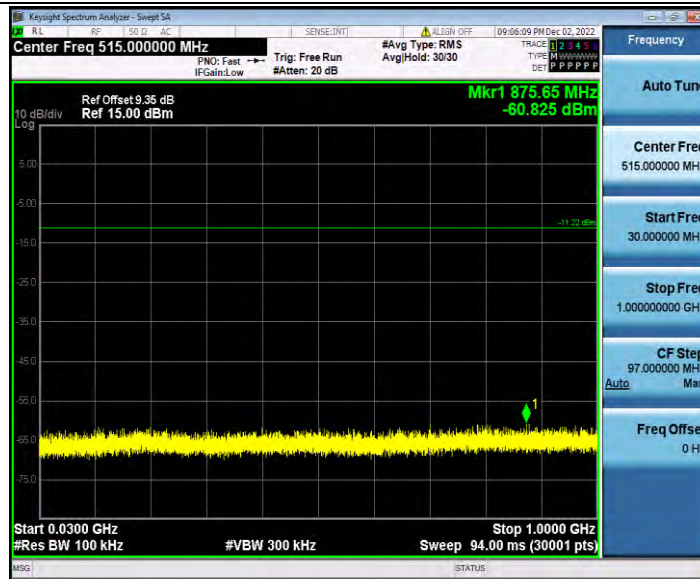
# DH1\_Ant1\_2441\_1000~26500



# DH1\_Ant1\_2480\_0~Reference



# DH1\_Ant1\_2480\_30~1000



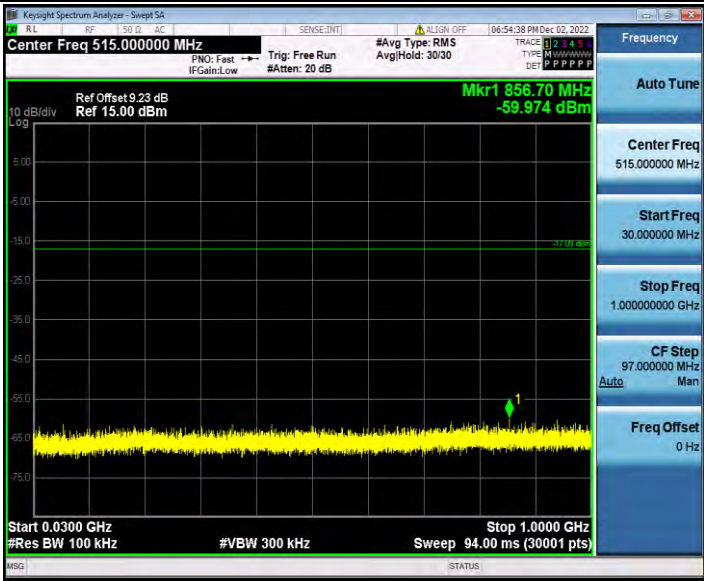
DH1\_Ant1\_2480\_1000~26500



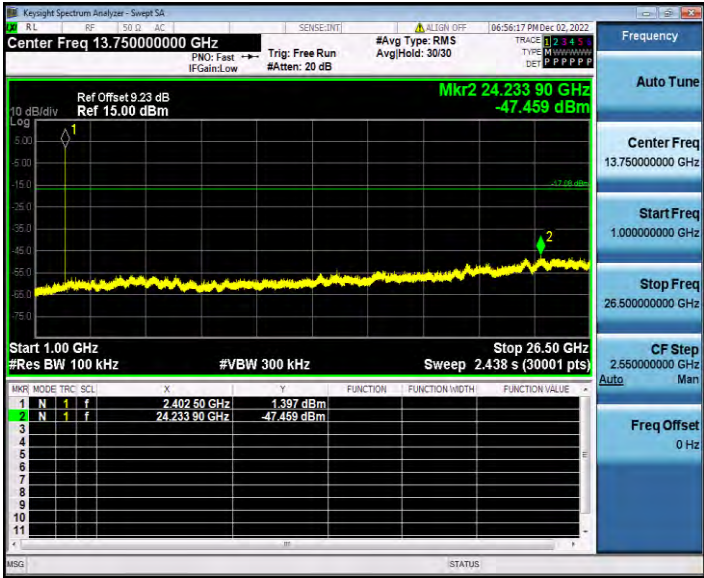
2DH1\_Ant1\_2402\_0~Reference



2DH1\_Ant1\_2402\_30~1000



2DH1\_Ant1\_2402\_1000~26500

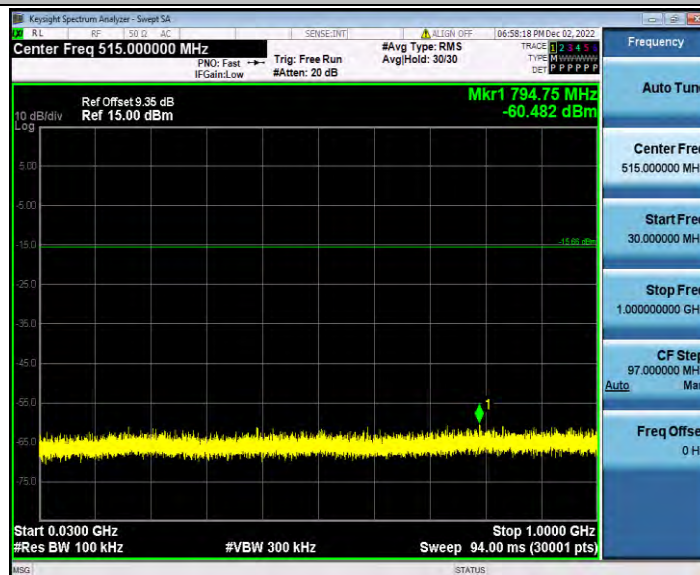


2DH1\_Ant1\_2441\_0~Reference





2DH1\_Ant1\_2441\_30~1000



2DH1\_Ant1\_2441\_1000~26500

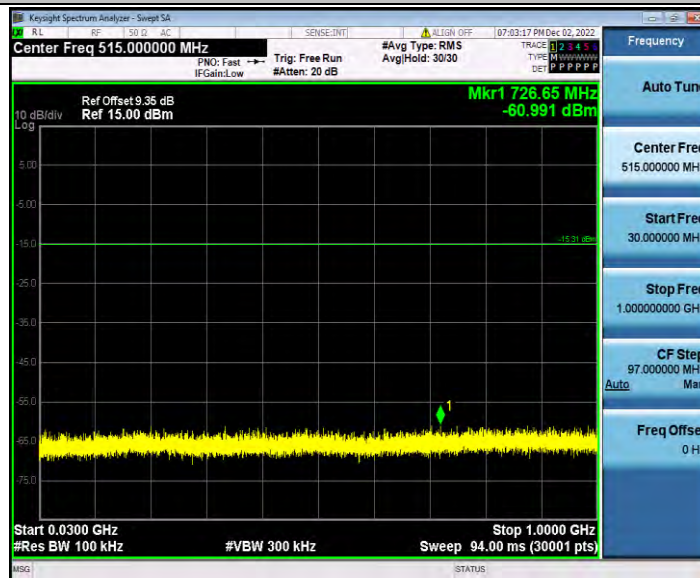




## 2DH1\_Ant1\_2480\_0~Reference



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



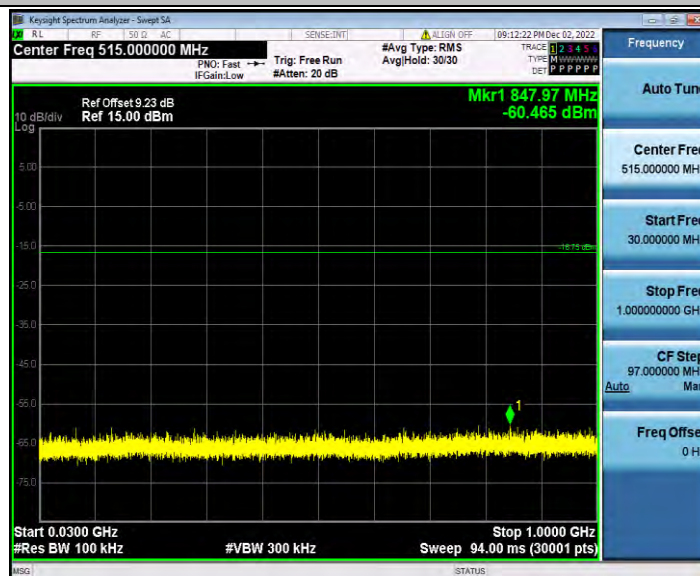
## 2DH1\_Ant1\_2480\_1000~26500



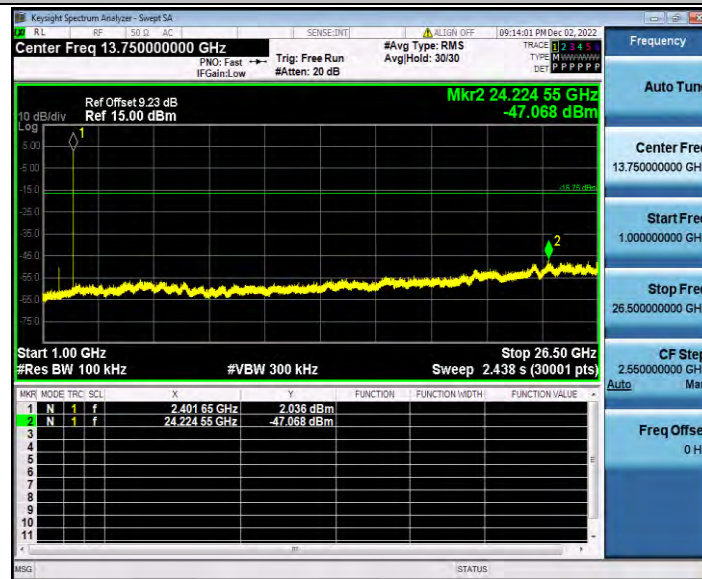
3DH1\_Ant1\_2402\_0~Reference



3DH1\_Ant1\_2402\_30~1000



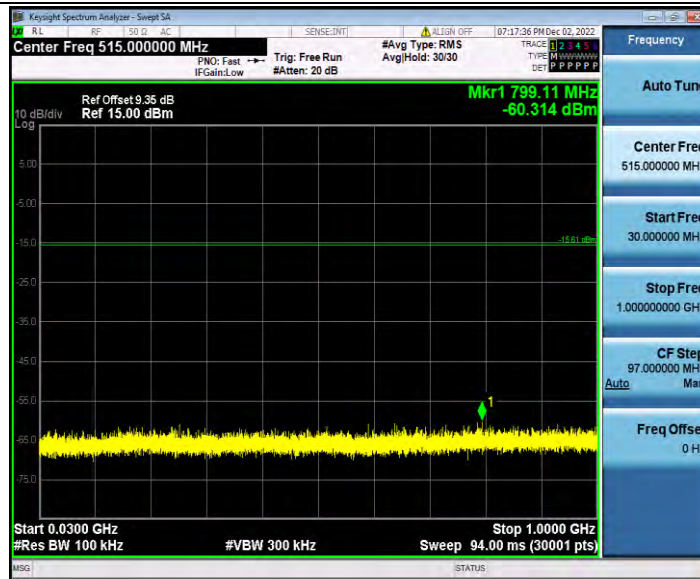
### 3DH1\_Ant1\_2402\_1000~26500



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



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



3DH1\_Ant1\_2441\_1000~26500

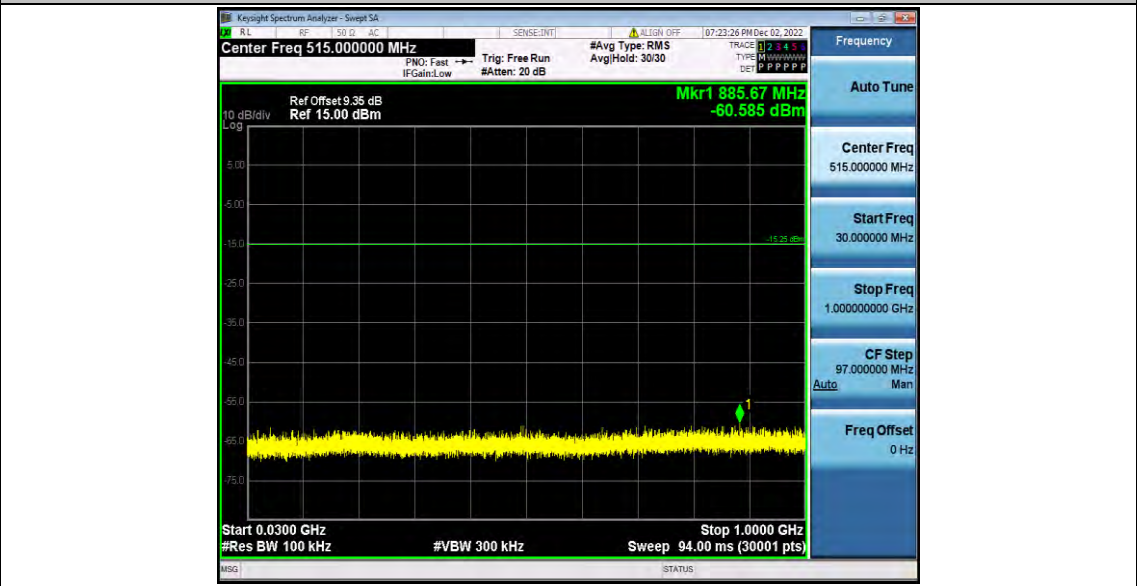


3DH1\_Ant1\_2480\_0~Reference





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



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

