

|                                                                |                                  |
|----------------------------------------------------------------|----------------------------------|
| Case No. : <u>GTS20221124022-1-1</u>                           |                                  |
| Ambient Condition: <u>25</u> °C, <u>45</u> %RH, Atmos100.1Kpa, |                                  |
| Test Date: <u>2022.12.08</u>                                   | Test Engineer: <u>Jenny zeng</u> |

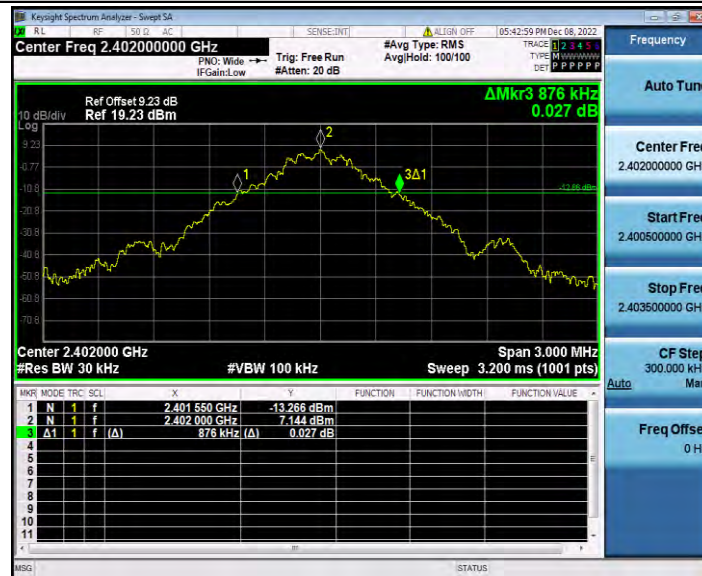
## Appendix A.1: 20dB Emission Bandwidth

### Test Result

| TestMode | Antenna | Frequency[MHz] | 20db<br>EBW[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|----------------|------------------|----------|----------|------------|---------|
| DH1      | Ant1    | 2402           | 0.876            | 2401.550 | 2402.426 | ---        | ---     |
|          |         | 2441           | 0.909            | 2440.550 | 2441.459 | ---        | ---     |
|          |         | 2480           | 0.909            | 2479.550 | 2480.459 | ---        | ---     |
| 2DH1     | Ant1    | 2402           | 1.485            | 2401.223 | 2402.708 | ---        | ---     |
|          |         | 2441           | 1.419            | 2440.274 | 2441.693 | ---        | ---     |
|          |         | 2480           | 1.431            | 2479.268 | 2480.699 | ---        | ---     |
| 3DH1     | Ant1    | 2402           | 1.434            | 2401.271 | 2402.705 | ---        | ---     |
|          |         | 2441           | 1.431            | 2440.286 | 2441.717 | ---        | ---     |
|          |         | 2480           | 1.437            | 2479.277 | 2480.714 | ---        | ---     |

## 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           | 0.84018   | 2401.577 | 2402.418 | ---        | ---     |
|          |         | 2441           | 0.85836   | 2440.579 | 2441.438 | ---        | ---     |
|          |         | 2480           | 0.85937   | 2479.574 | 2480.433 | ---        | ---     |
| 2DH1     | Ant1    | 2402           | 1.3327    | 2401.328 | 2402.660 | ---        | ---     |
|          |         | 2441           | 1.3442    | 2440.323 | 2441.667 | ---        | ---     |
|          |         | 2480           | 1.3443    | 2479.316 | 2480.660 | ---        | ---     |
| 3DH1     | Ant1    | 2402           | 1.3354    | 2401.326 | 2402.662 | ---        | ---     |
|          |         | 2441           | 1.3426    | 2440.331 | 2441.673 | ---        | ---     |
|          |         | 2480           | 1.3383    | 2479.327 | 2480.666 | ---        | ---     |

## 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           | 8.36                      | ≤30.00               | PASS    |
|           |         | 2441           | 9.03                      | ≤30.00               | PASS    |
|           |         | 2480           | 9.81                      | ≤30.00               | PASS    |
| 2DH1      | Ant1    | 2402           | 6.84                      | ≤20.97               | PASS    |
|           |         | 2441           | 7.54                      | ≤20.97               | PASS    |
|           |         | 2480           | 8.18                      | ≤20.97               | PASS    |
| 3DH1      | Ant1    | 2402           | 6.92                      | ≤20.97               | PASS    |
|           |         | 2441           | 7.61                      | ≤20.97               | PASS    |
|           |         | 2480           | 8.33                      | ≤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           | $\geq 0.909$ | PASS    |
|          |         | Hop_2441       | 0.992       | $\geq 0.909$ | PASS    |
|          |         | Hop_2480       | 1.156       | $\geq 0.909$ | PASS    |
| 2DH1     | Ant1    | Hop_2402       | 0.996       | $\geq 0.990$ | PASS    |
|          |         | Hop_2441       | 1.138       | $\geq 0.990$ | PASS    |
|          |         | Hop_2480       | 0.992       | $\geq 0.990$ | PASS    |
| 3DH1     | Ant1    | Hop_2402       | 0.998       | $\geq 0.958$ | PASS    |
|          |         | Hop_2441       | 0.998       | $\geq 0.958$ | PASS    |
|          |         | Hop_2480       | 0.996       | $\geq 0.958$ | 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



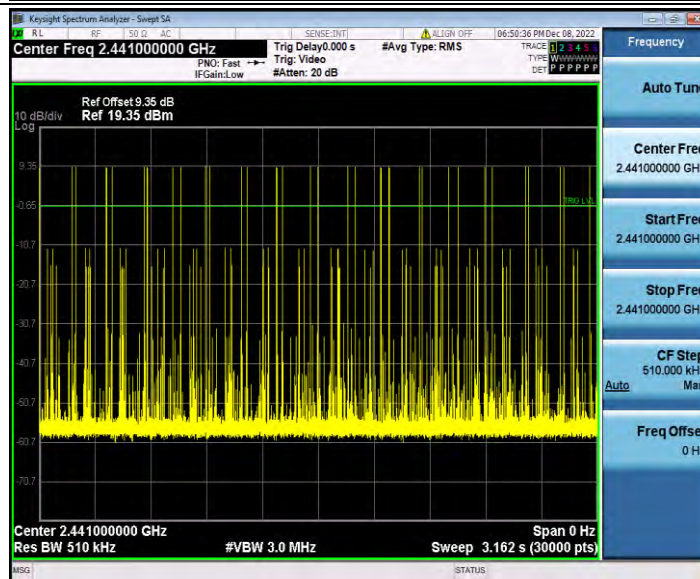
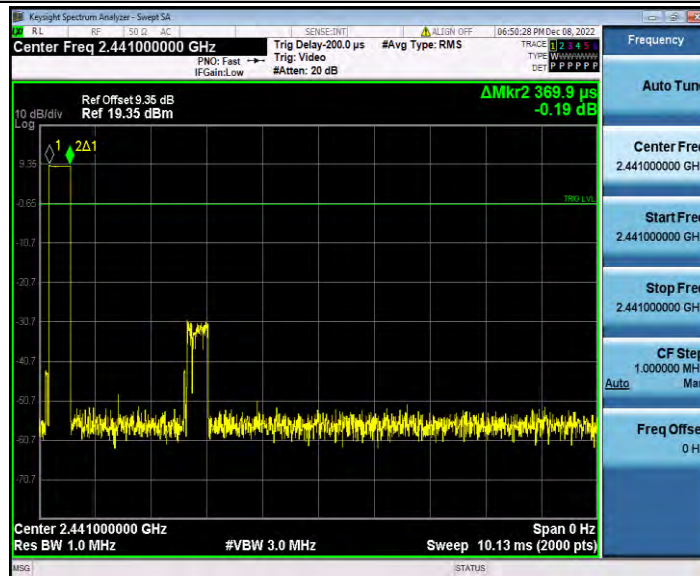
## Appendix A.5: Time of occupancy

### Test Result

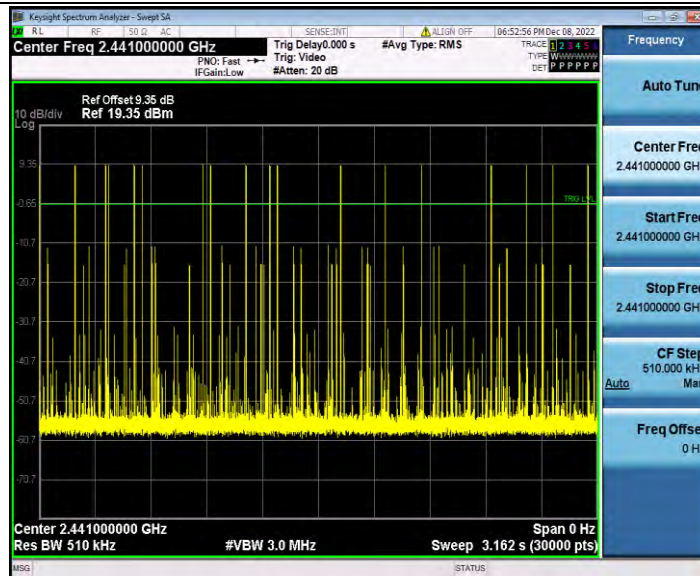
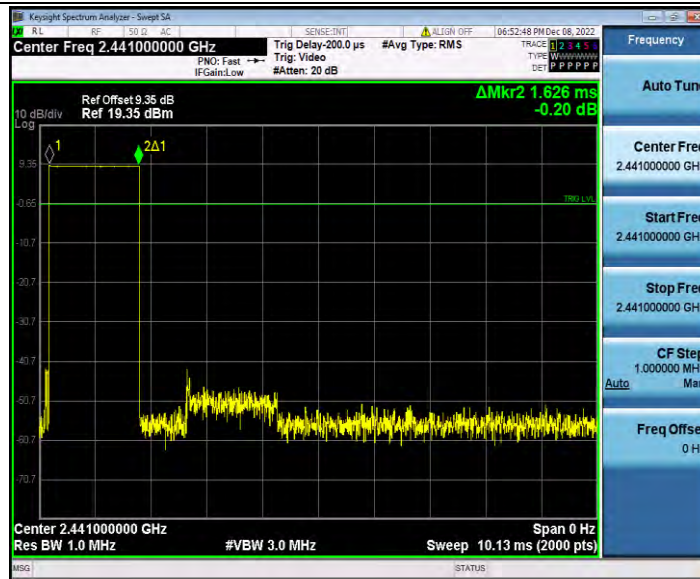
| TestMode | Antenna | Frequency[MHz] | BurstWidth<br>[ms] | TotalHops<br>[Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|----------------|--------------------|--------------------|-----------|----------|---------|
| DH1      | Ant1    | Hop            | 0.37               | 320                | 0.118     | ≤0.4     | PASS    |
| DH3      | Ant1    | Hop            | 1.63               | 180                | 0.293     | ≤0.4     | PASS    |
| DH5      | Ant1    | Hop            | 2.88               | 50                 | 0.144     | ≤0.4     | PASS    |
| 2DH1     | Ant1    | Hop            | 0.38               | 320                | 0.122     | ≤0.4     | PASS    |
| 2DH3     | Ant1    | Hop            | 1.63               | 180                | 0.294     | ≤0.4     | PASS    |
| 2DH5     | Ant1    | Hop            | 2.88               | 90                 | 0.259     | ≤0.4     | PASS    |
| 3DH1     | Ant1    | Hop            | 0.38               | 330                | 0.125     | ≤0.4     | PASS    |
| 3DH3     | Ant1    | Hop            | 1.63               | 170                | 0.277     | ≤0.4     | PASS    |
| 3DH5     | Ant1    | Hop            | 2.88               | 90                 | 0.259     | ≤0.4     | PASS    |

## Test Graphs

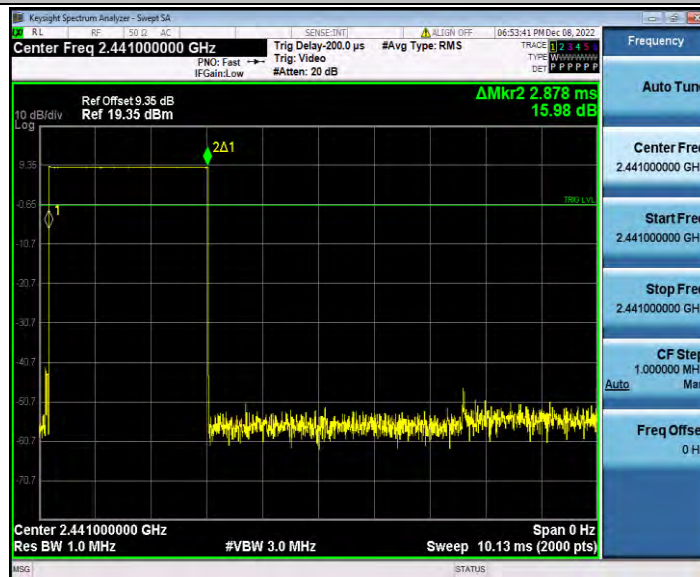
DH1\_Ant1\_Hop

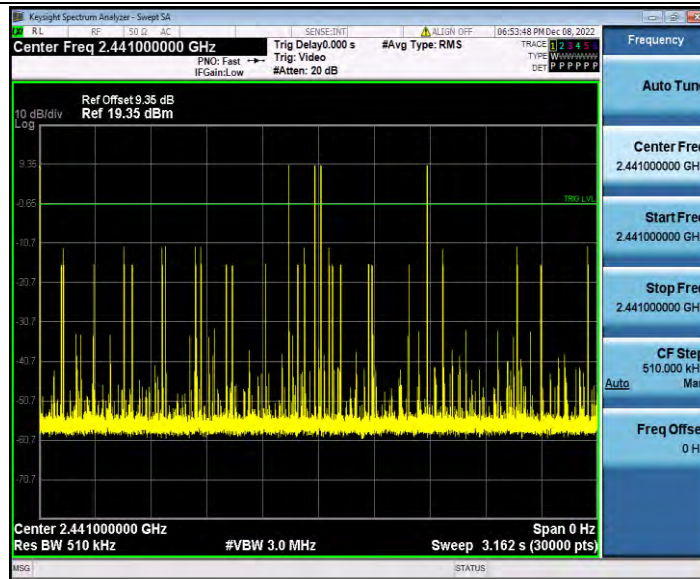


DH3\_Ant1\_Hop

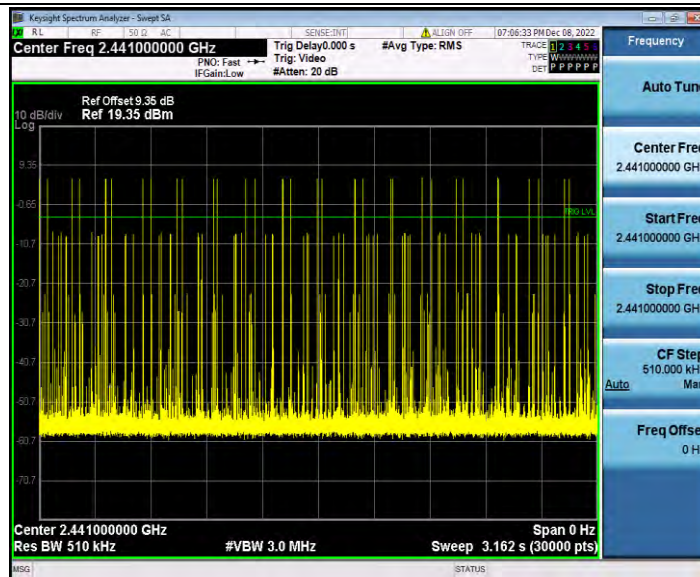
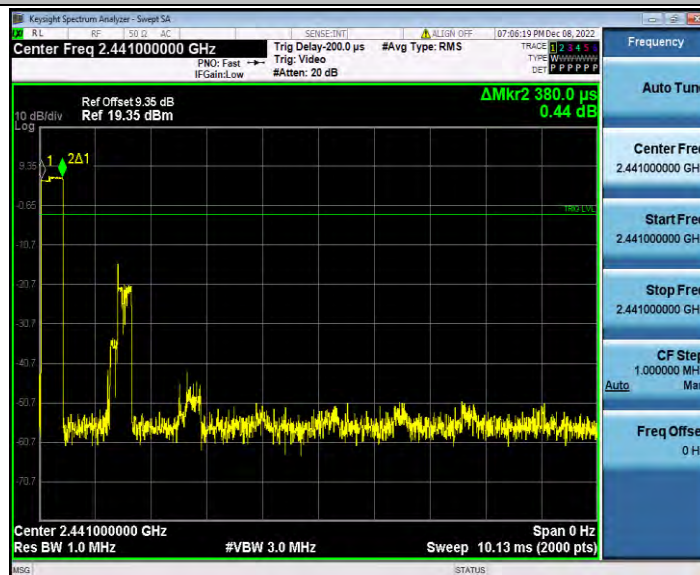


DH5\_Ant1\_Hop

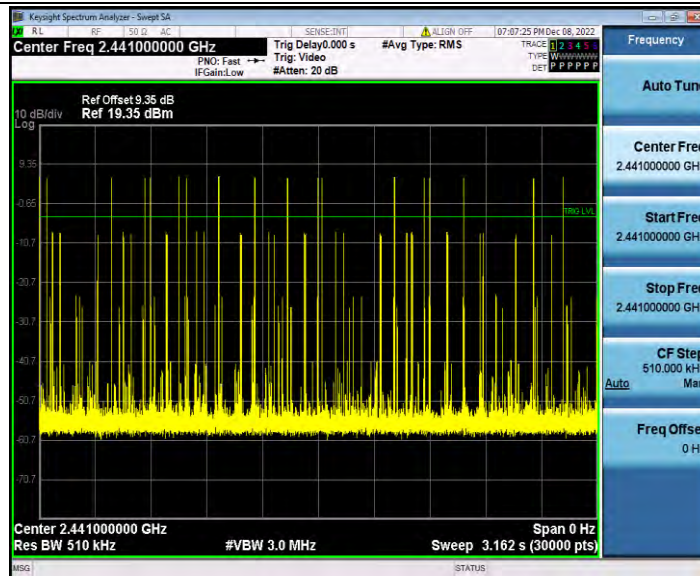
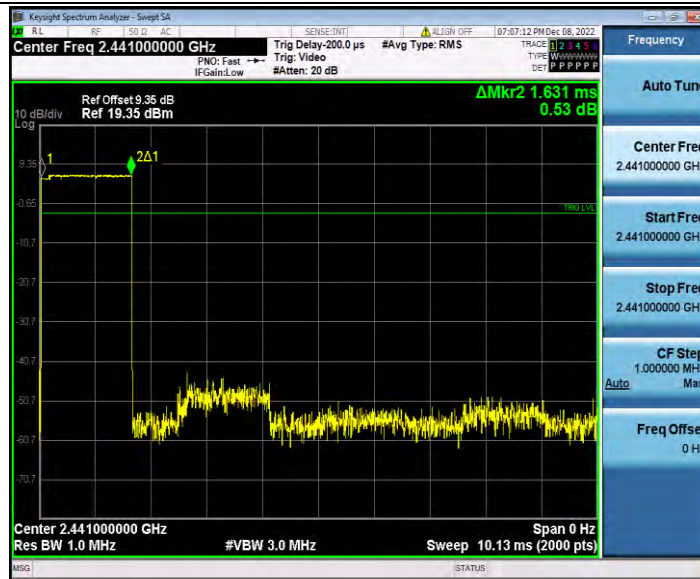




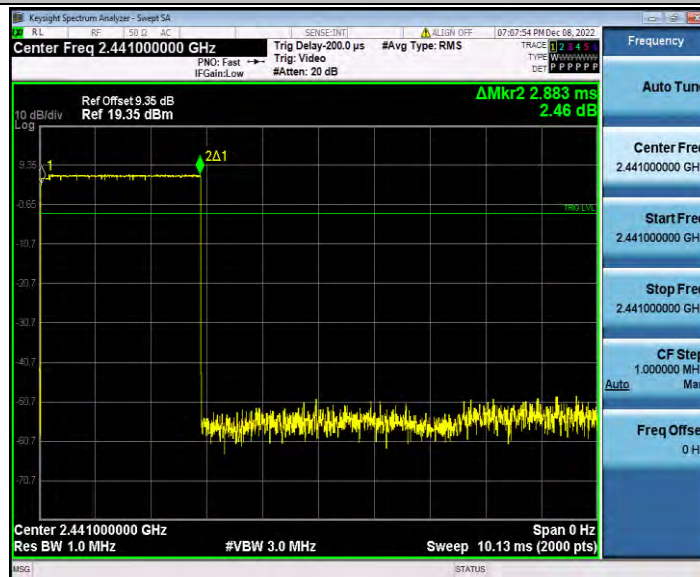
2DH1\_Ant1\_Hop

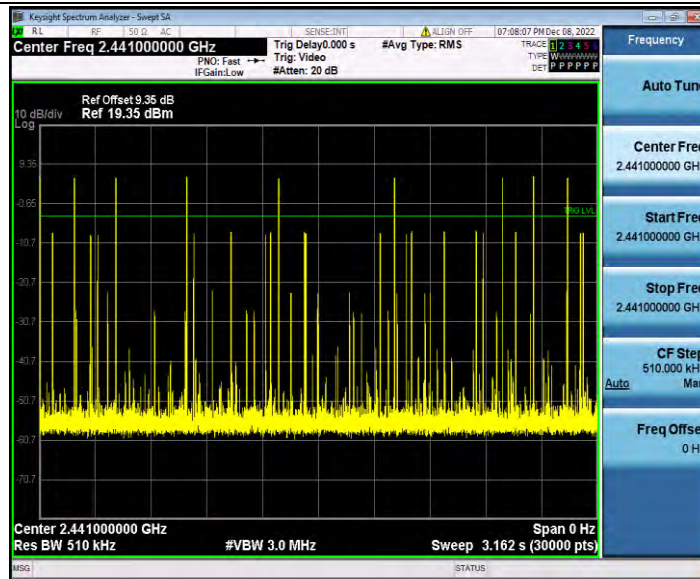


2DH3\_Ant1\_Hop

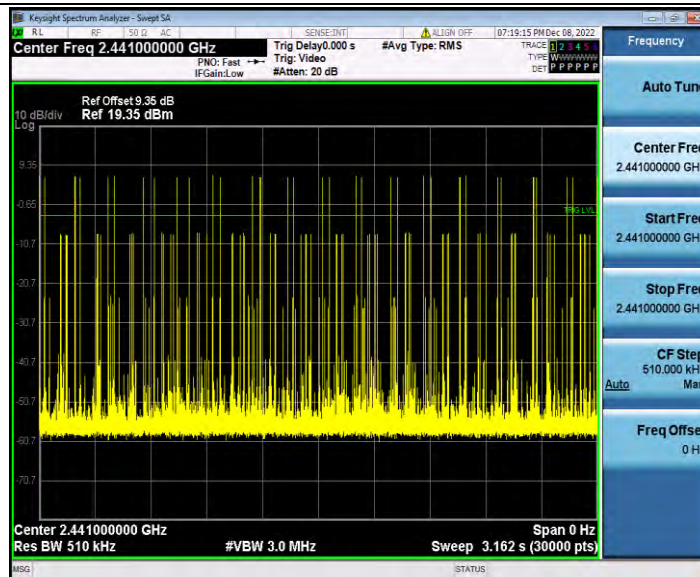
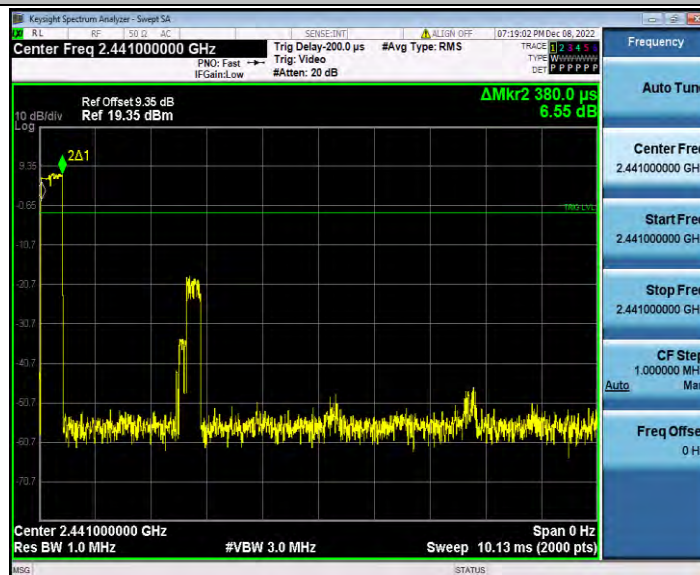


2DH5\_Ant1\_Hop

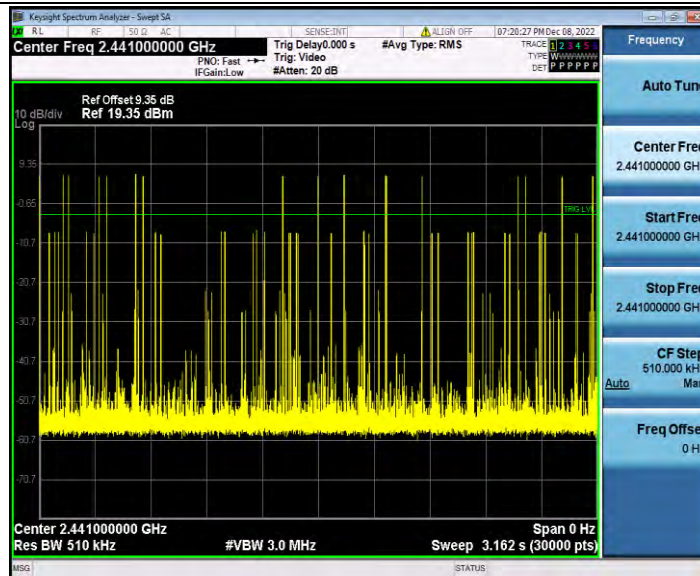
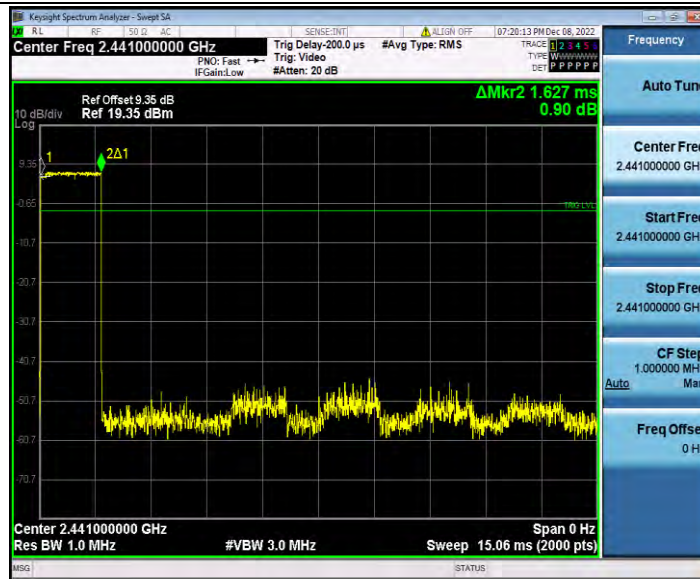




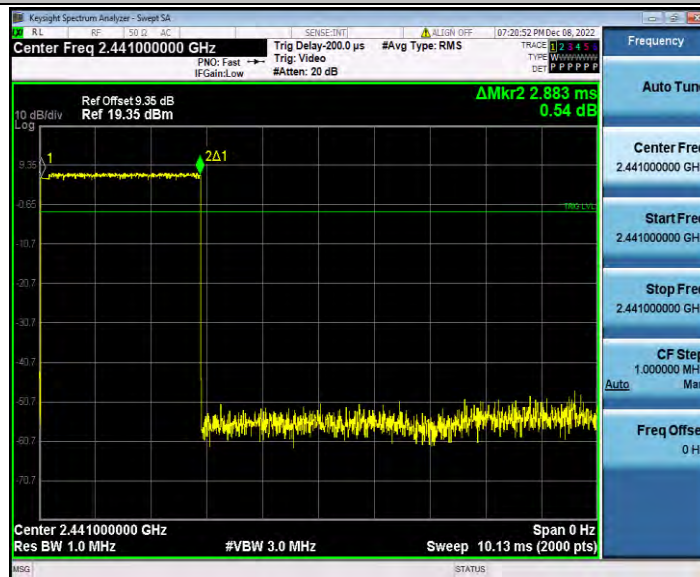
3DH1\_Ant1\_Hop

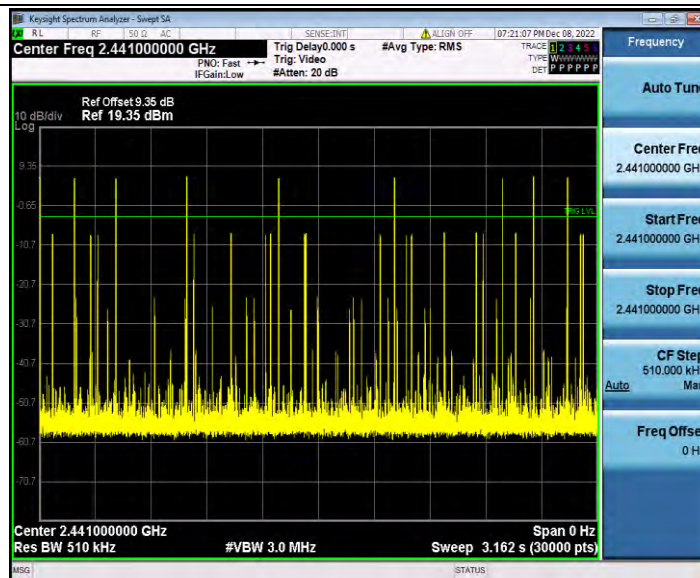


3DH3\_Ant1\_Hop



3DH5\_Ant1\_Hop





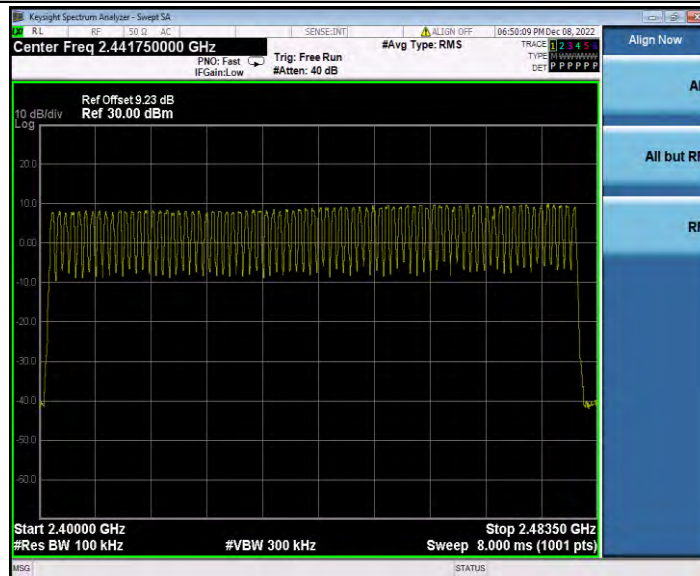
**Appendix A.6: Number of hopping channels**

**Test Result**

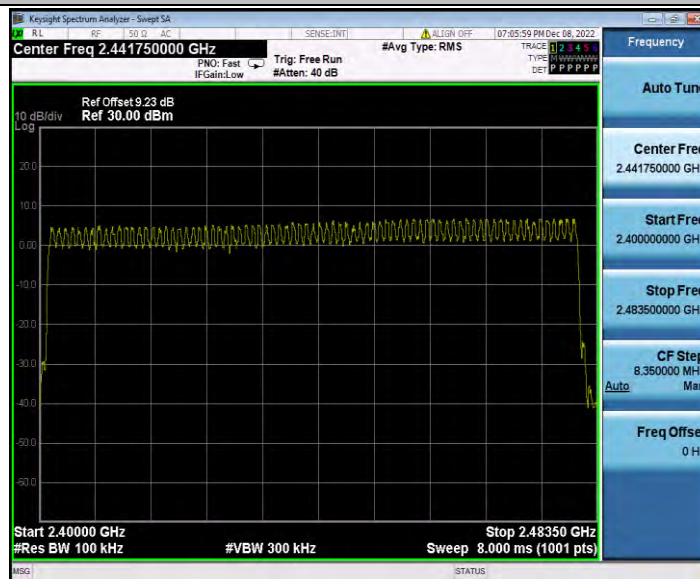
| TestMode | Antenna | Frequency[MHz] | Result[Num] | Limit[Num] | Verdict |
|----------|---------|----------------|-------------|------------|---------|
| DH1      | Ant1    | Hop            | 79          | ≥15        | PASS    |
| 2DH1     | Ant1    | Hop            | 79          | ≥15        | PASS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

## Test Graphs

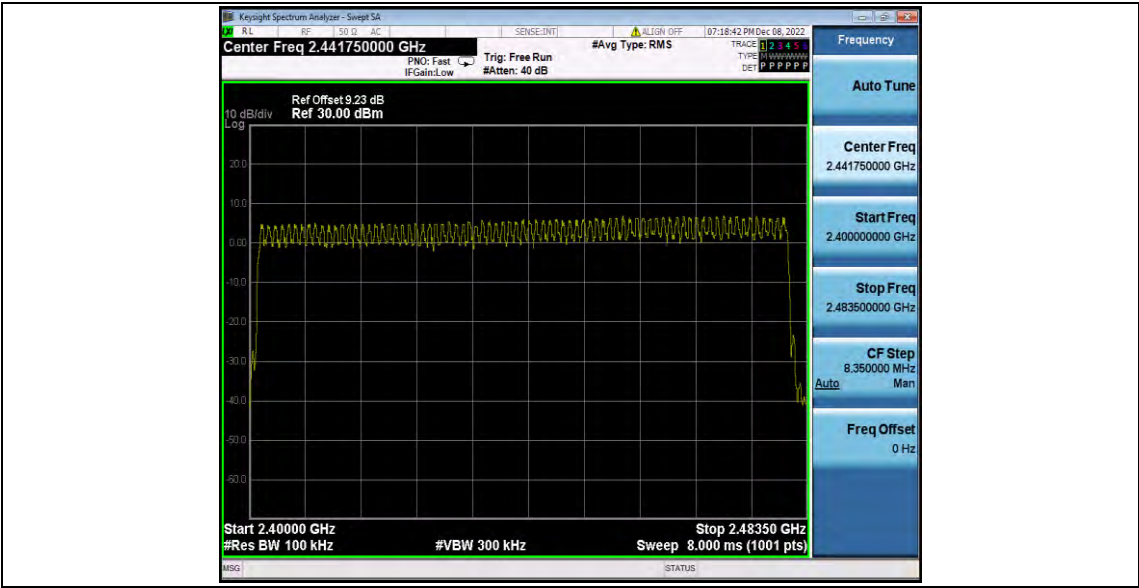
DH1\_Ant1\_Hop



2DH1\_Ant1\_Hop



3DH1\_Ant1\_Hop



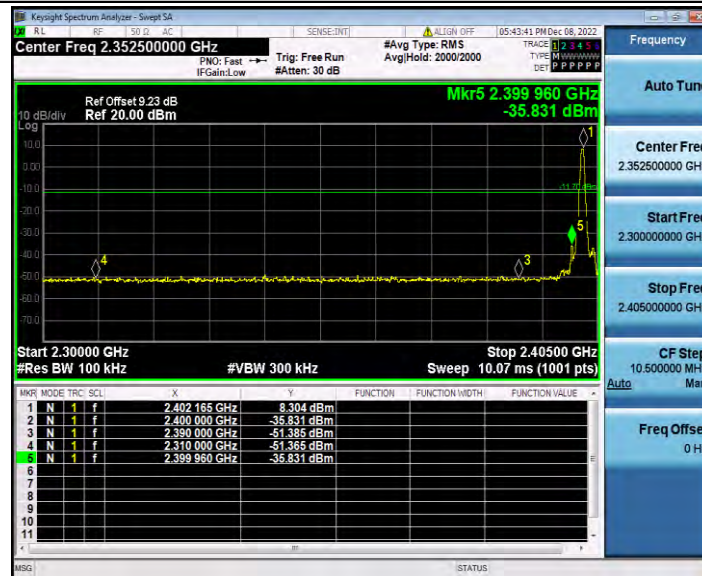
## Appendix A.7: Band edge measurements

### Test Result

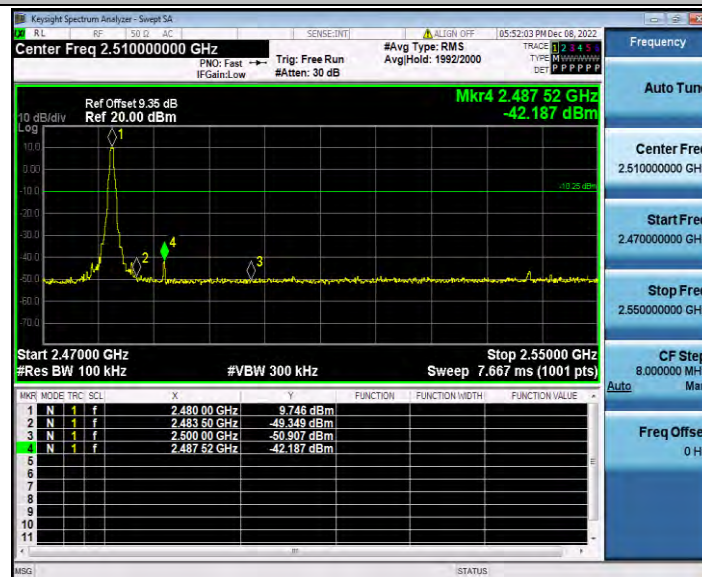
| TestMode | Antenna | ChName | Frequency[MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|--------|----------------|----------------|--------------|-------------|---------|
| DH1      | Ant1    | Low    | 2402           | 8.30           | -35.83       | ≤-11.7      | PASS    |
|          |         | High   | 2480           | 9.75           | -42.19       | ≤-10.25     | PASS    |
|          |         | Low    | Hop_2402       | 8.24           | -49.32       | ≤-11.76     | PASS    |
|          |         | High   | Hop_2480       | 9.85           | -47.73       | ≤-10.15     | PASS    |
| 2DH1     | Ant1    | Low    | 2402           | 4.76           | -38.16       | ≤-15.24     | PASS    |
|          |         | High   | 2480           | 6.24           | -42.2        | ≤-13.76     | PASS    |
|          |         | Low    | Hop_2402       | 4.69           | -47.72       | ≤-15.31     | PASS    |
|          |         | High   | Hop_2480       | 6.90           | -48.63       | ≤-13.1      | PASS    |
| 3DH1     | Ant1    | Low    | 2402           | 4.84           | -37.69       | ≤-15.16     | PASS    |
|          |         | High   | 2480           | 6.22           | -42.41       | ≤-13.78     | PASS    |
|          |         | Low    | Hop_2402       | 4.90           | -47.57       | ≤-15.1      | PASS    |
|          |         | High   | Hop_2480       | 6.91           | -48.81       | ≤-13.09     | PASS    |

## Test Graphs

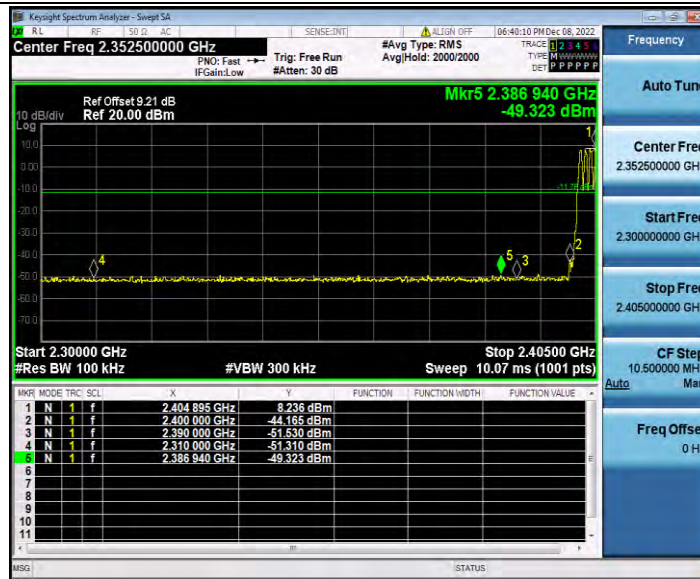
DH1\_Ant1\_Low\_2402



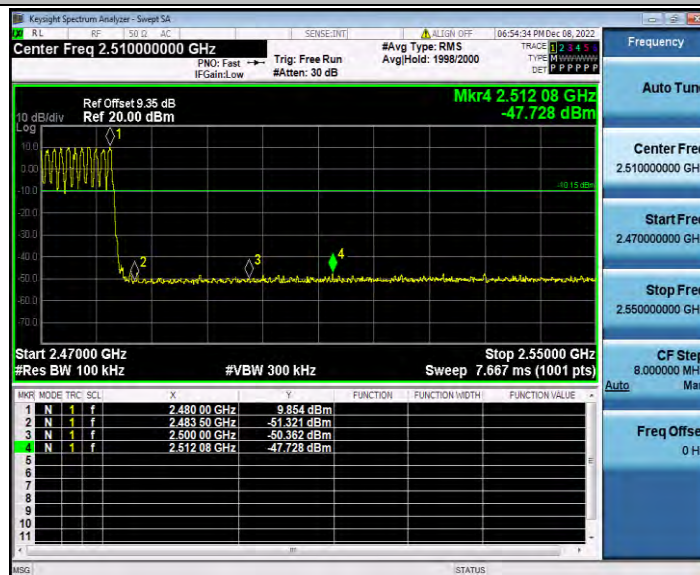
DH1\_Ant1\_High\_2480



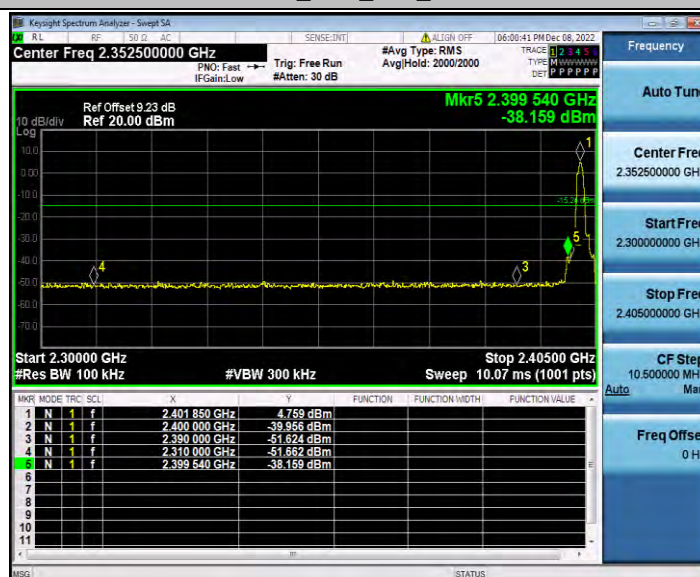
DH1\_Ant1\_Low\_Hop\_2402



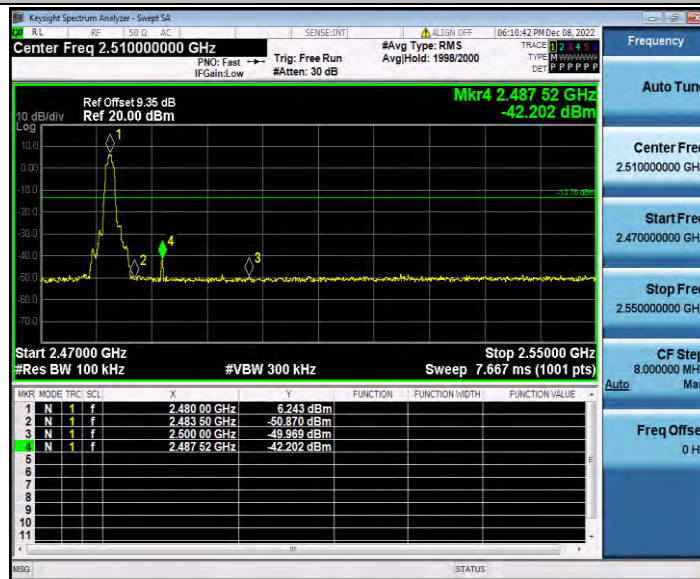
DH1\_Ant1\_High\_Hop\_2480



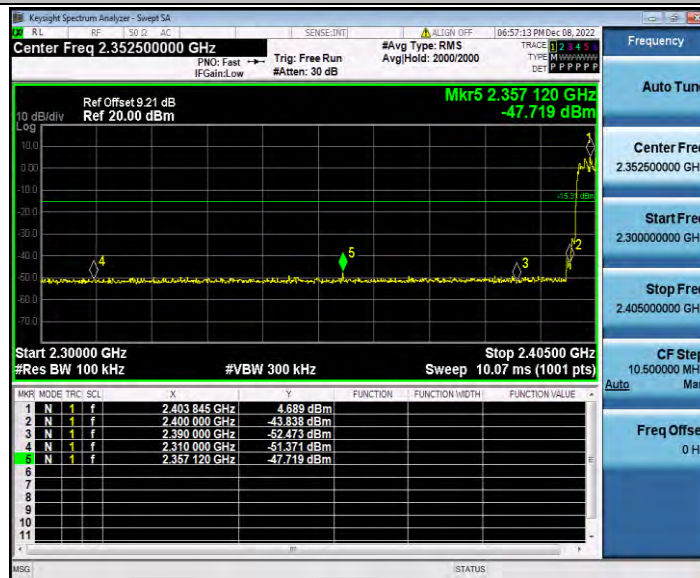
2DH1\_Ant1\_Low\_2402



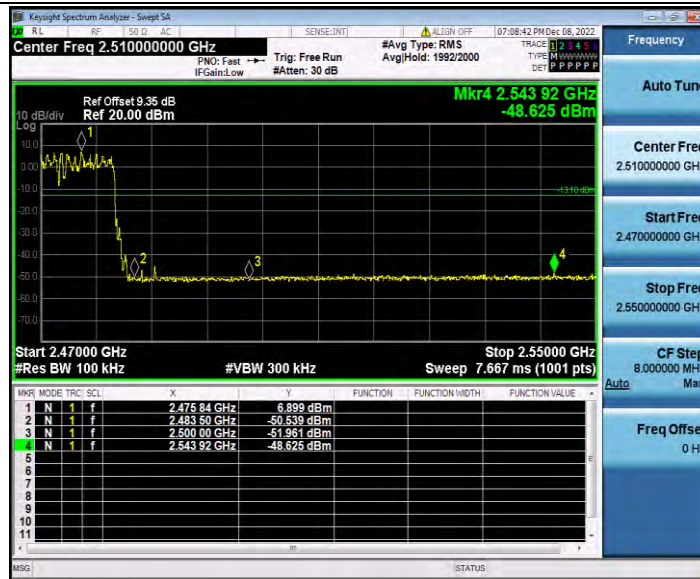
## 2DH1\_Ant1\_High\_2480



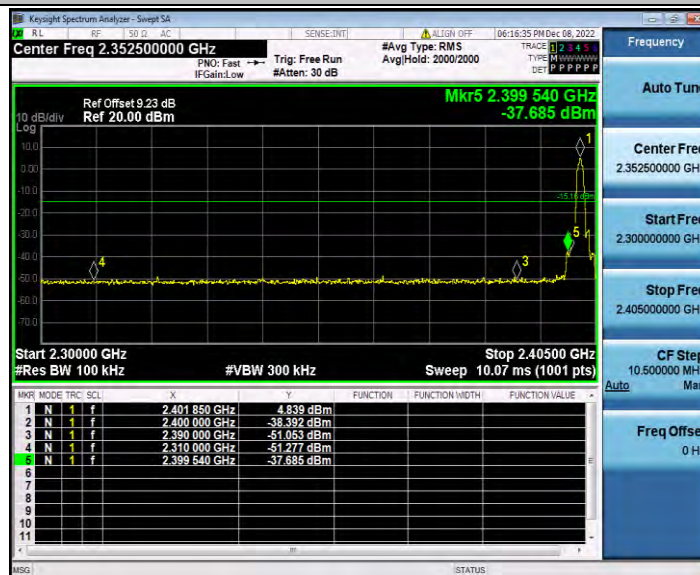
## 2DH1\_Ant1\_Low\_Hop\_2402



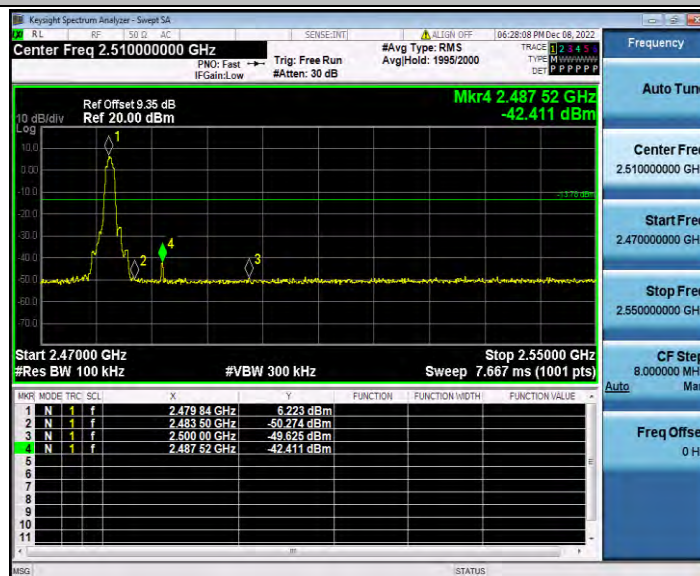
## 2DH1\_Ant1\_High\_Hop\_2480



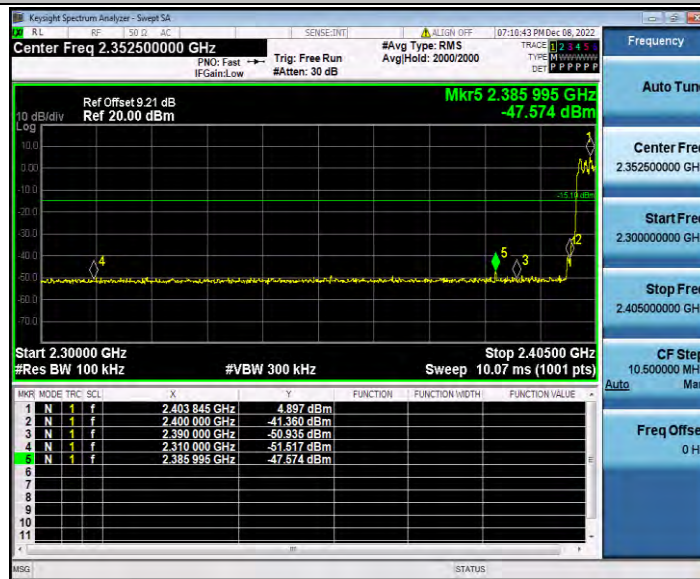
3DH1\_Ant1\_Low\_2402



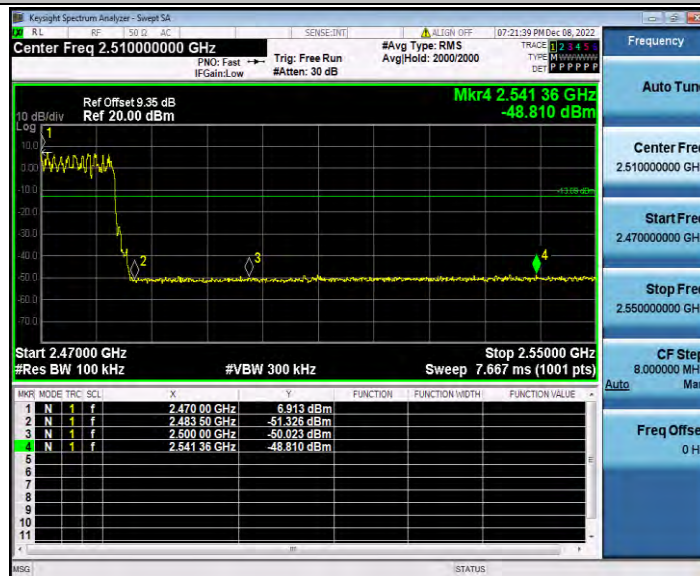
3DH1\_Ant1\_High\_2480



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



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



## Appendix A.8: Conducted Spurious Emission

### Test Result

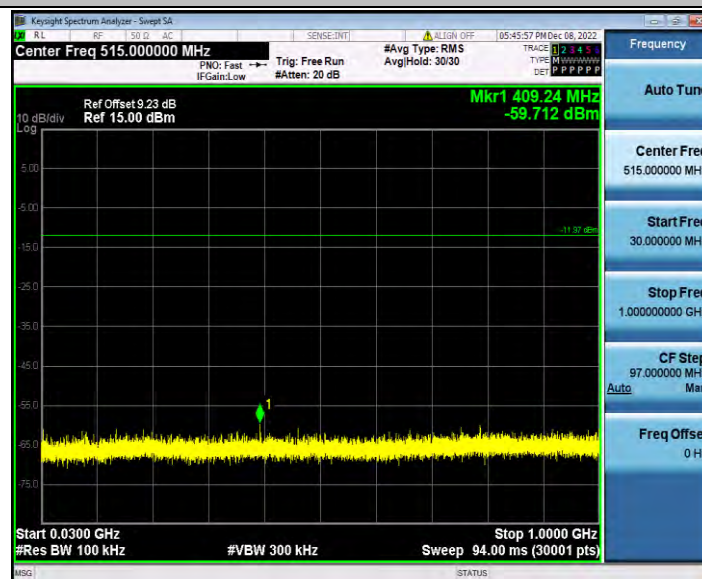
| TestMode | Antenna | Frequency[MHz] | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|----------------|-----------------|----------------|--------------|-------------|---------|
| DH1      | Ant1    | 2402           | Reference       | 8.03           | 8.03         | ---         | PASS    |
|          |         |                | 30~1000         | 8.03           | -59.71       | ≤-11.97     | PASS    |
|          |         |                | 1000~26500      | 8.03           | -47.46       | ≤-11.97     | PASS    |
|          |         | 2441           | Reference       | 8.59           | 8.59         | ---         | PASS    |
|          |         |                | 30~1000         | 8.59           | -59.8        | ≤-11.41     | PASS    |
|          |         |                | 1000~26500      | 8.59           | -47.23       | ≤-11.41     | PASS    |
|          |         | 2480           | Reference       | 9.67           | 9.67         | ---         | PASS    |
|          |         |                | 30~1000         | 9.67           | -60.38       | ≤-10.33     | PASS    |
|          |         |                | 1000~26500      | 9.67           | -47.47       | ≤-10.33     | PASS    |
| 2DH1     | Ant1    | 2402           | Reference       | 4.69           | 4.69         | ---         | PASS    |
|          |         |                | 30~1000         | 4.69           | -60.27       | ≤-15.31     | PASS    |
|          |         |                | 1000~26500      | 4.69           | -47.82       | ≤-15.31     | PASS    |
|          |         | 2441           | Reference       | 5.30           | 5.30         | ---         | PASS    |
|          |         |                | 30~1000         | 5.30           | -60.13       | ≤-14.7      | PASS    |
|          |         |                | 1000~26500      | 5.30           | -47.22       | ≤-14.7      | PASS    |
|          |         | 2480           | Reference       | 5.98           | 5.98         | ---         | PASS    |
|          |         |                | 30~1000         | 5.98           | -59.77       | ≤-14.02     | PASS    |
|          |         |                | 1000~26500      | 5.98           | -47.01       | ≤-14.02     | PASS    |
| 3DH1     | Ant1    | 2402           | Reference       | 4.57           | 4.57         | ---         | PASS    |
|          |         |                | 30~1000         | 4.57           | -60.6        | ≤-15.43     | PASS    |
|          |         |                | 1000~26500      | 4.57           | -47.64       | ≤-15.43     | PASS    |
|          |         | 2441           | Reference       | 5.24           | 5.24         | ---         | PASS    |
|          |         |                | 30~1000         | 5.24           | -60.15       | ≤-14.76     | PASS    |
|          |         |                | 1000~26500      | 5.24           | -47.44       | ≤-14.76     | PASS    |
|          |         | 2480           | Reference       | 6.02           | 6.02         | ---         | PASS    |
|          |         |                | 30~1000         | 6.02           | -60.17       | ≤-13.98     | PASS    |
|          |         |                | 1000~26500      | 6.02           | -47.7        | ≤-13.98     | PASS    |

## Test Graphs

DH1\_Ant1\_2402\_0~Reference



DH1\_Ant1\_2402\_30~1000



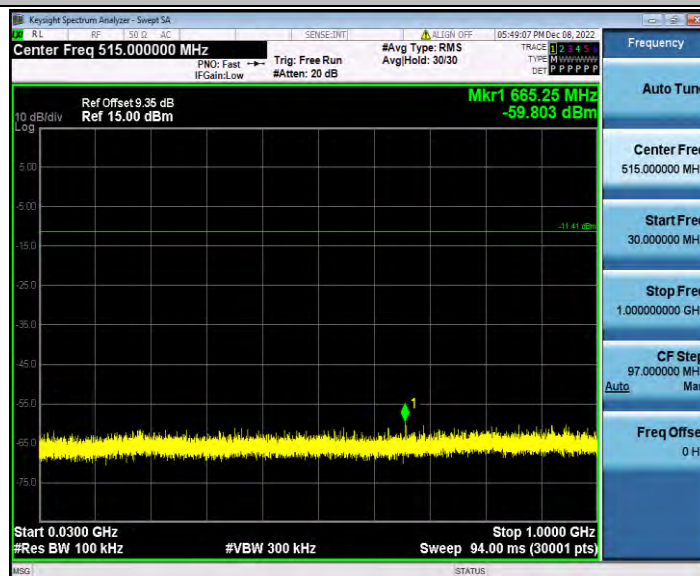
DH1\_Ant1\_2402\_1000~26500



DH1\_Ant1\_2441\_0~Reference



DH1\_Ant1\_2441\_30~1000



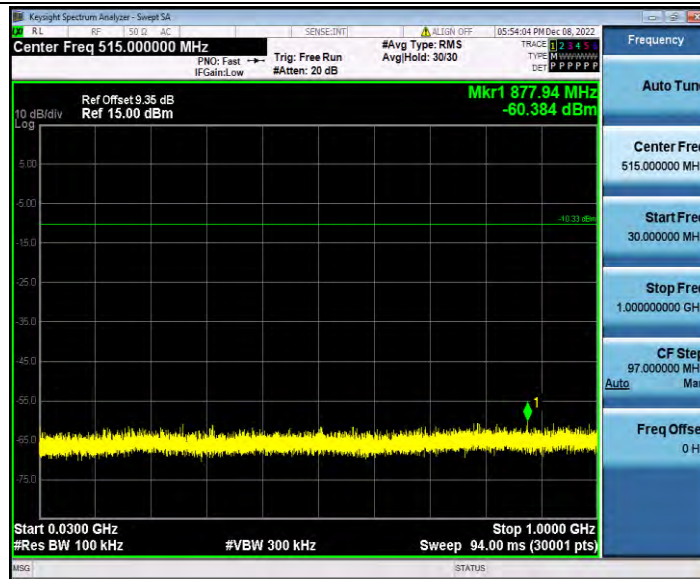
# DH1\_Ant1\_2441\_1000~26500



# DH1\_Ant1\_2480\_0~Reference



# DH1\_Ant1\_2480\_30~1000



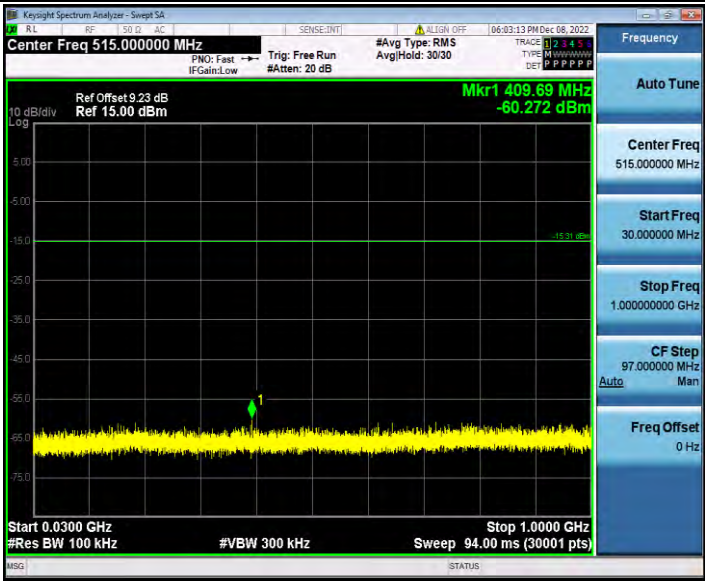
DH1\_Ant1\_2480\_1000~26500



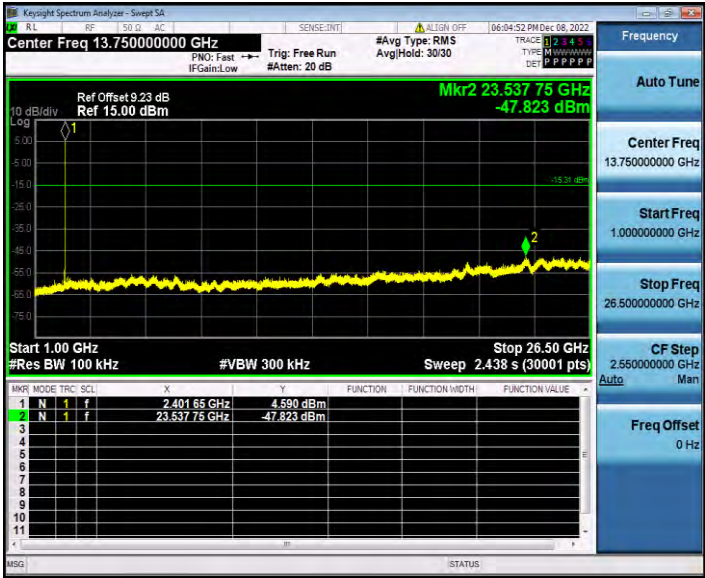
2DH1\_Ant1\_2402\_0~Reference



2DH1\_Ant1\_2402\_30~1000



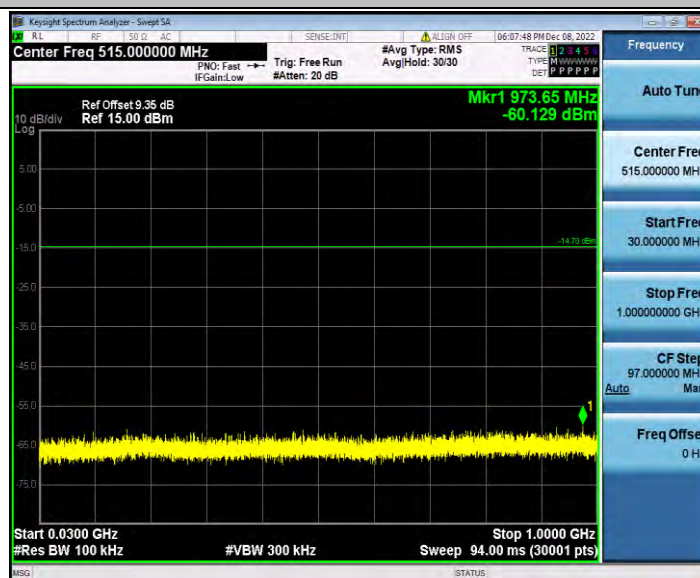
2DH1\_Ant1\_2402\_1000~26500



2DH1\_Ant1\_2441\_0~Reference



2DH1 Ant1 2441 30~1000



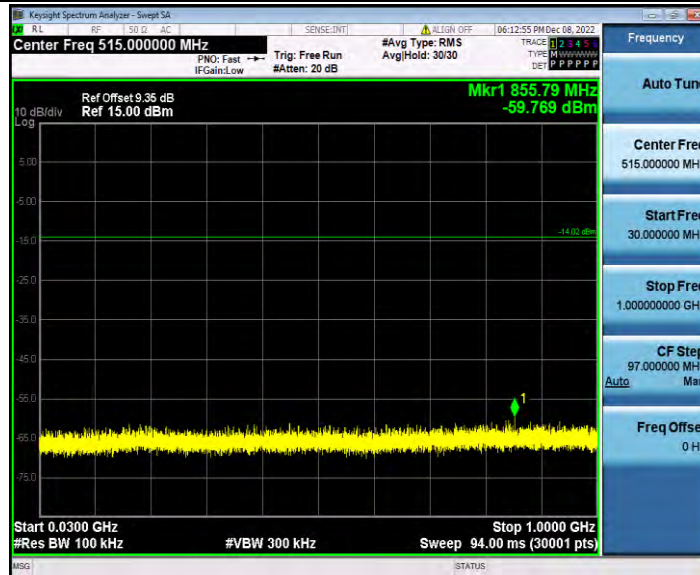
2DH1 Ant1 2441 1000~26500



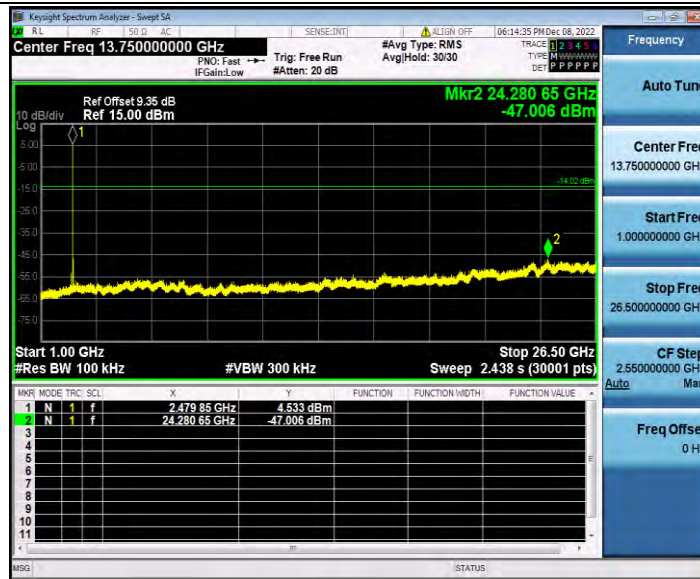
# 2DH1\_Ant1\_2480\_0~Reference



# 2DH1\_Ant1\_2480\_30~1000



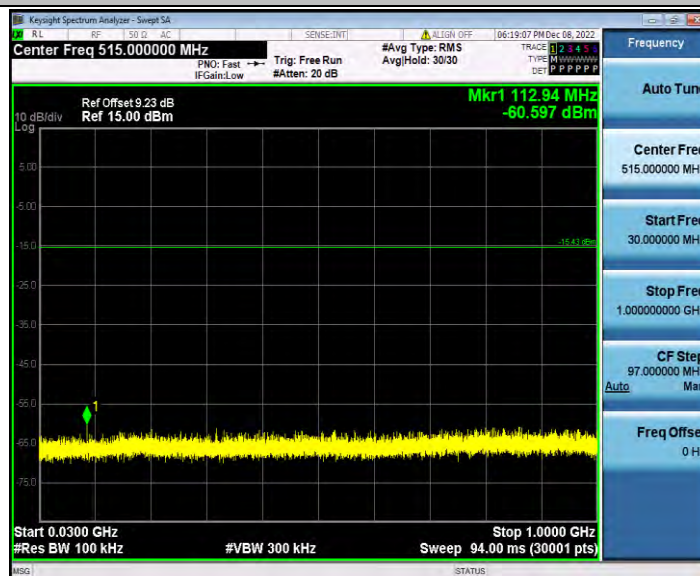
# 2DH1\_Ant1\_2480\_1000~26500



3DH1\_Ant1\_2402\_0~Reference



3DH1\_Ant1\_2402\_30~1000



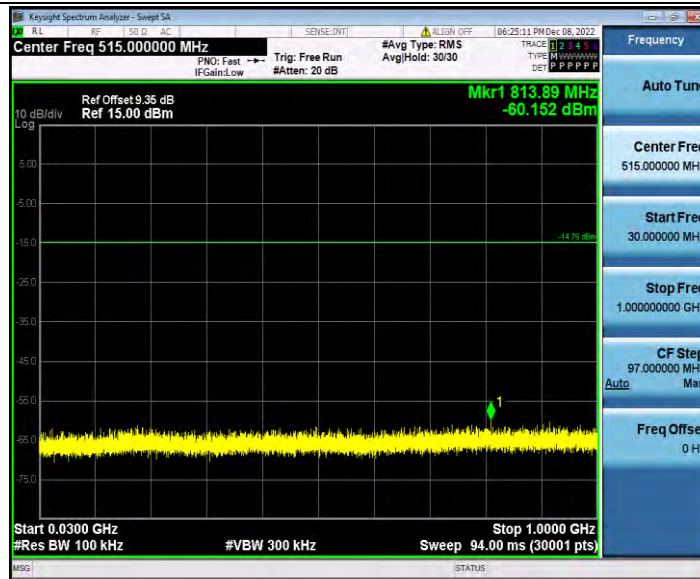
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### 3DH1\_Ant1\_2441\_0~Reference



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



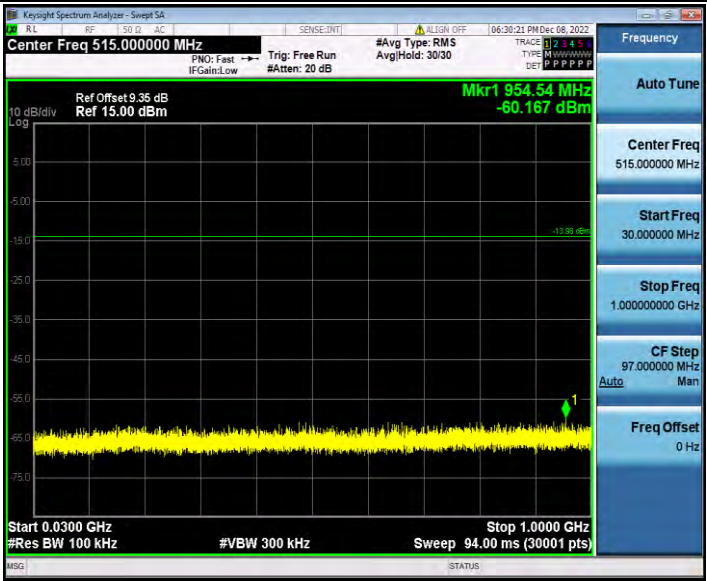
3DH1\_Ant1\_2441\_1000~26500



3DH1\_Ant1\_2480\_0~Reference



3DH1\_Ant1\_2480\_30~1000



3DH1\_Ant1\_2480\_1000~26500

