

## Appendix A

### RF Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: Multimedia car player

Trade Mark: DS18

Test Model: DDX9AD

FCC ID: 2AYOQ-DDX9AD

### Environmental Conditions

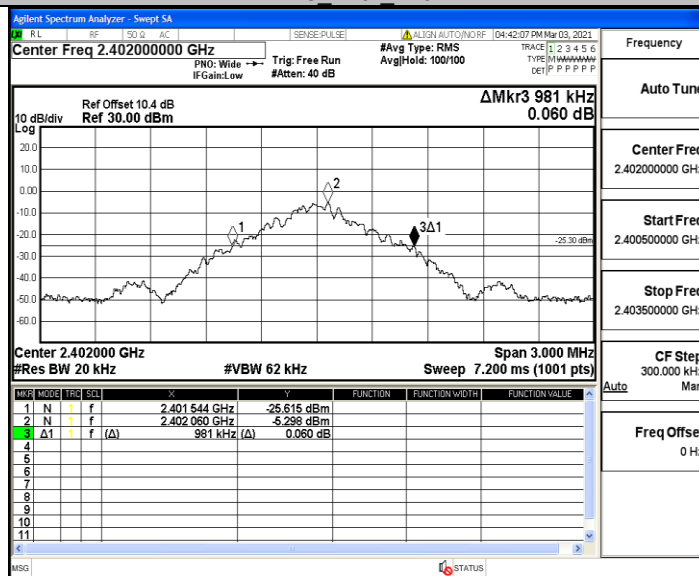
|                    |           |
|--------------------|-----------|
| Temperature:       | 22.8° C   |
| Relative Humidity: | 56%       |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Nancy Li  |
| Supervised by:     | Hugo Chen |

#### A.1 20 dB Bandwidth

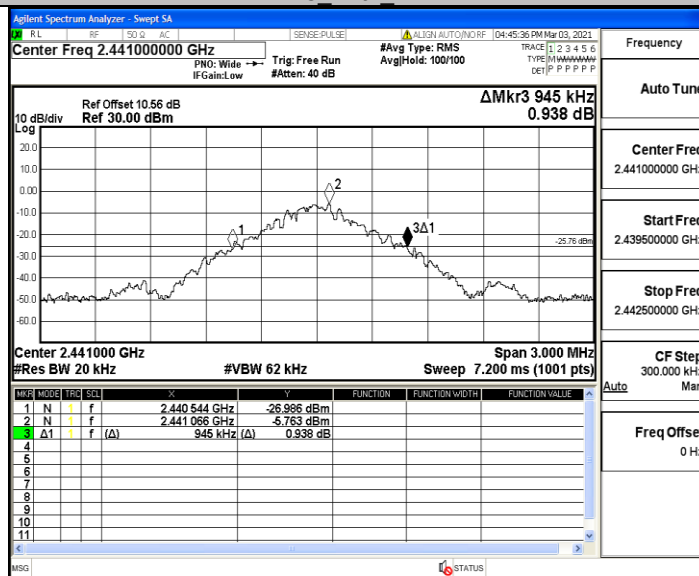
| TestMode | Antenna | Channel | 20db EBW[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|---------------|----------|----------|------------|---------|
| DH5      | Ant1    | 2402    | 0.981         | 2401.544 | 2402.525 | ---        | PASS    |
|          |         | 2441    | 0.945         | 2440.544 | 2441.489 | ---        | PASS    |
|          |         | 2480    | 0.930         | 2479.556 | 2480.486 | ---        | PASS    |
| 2DH5     | Ant1    | 2402    | 1.353         | 2401.328 | 2402.681 | ---        | PASS    |
|          |         | 2441    | 1.350         | 2440.337 | 2441.687 | ---        | PASS    |
|          |         | 2480    | 1.353         | 2479.340 | 2480.693 | ---        | PASS    |
| 3DH5     | Ant1    | 2402    | 1.311         | 2401.349 | 2402.660 | ---        | PASS    |
|          |         | 2441    | 1.350         | 2440.328 | 2441.678 | ---        | PASS    |
|          |         | 2480    | 1.317         | 2479.346 | 2480.663 | ---        | PASS    |

## Test Graph

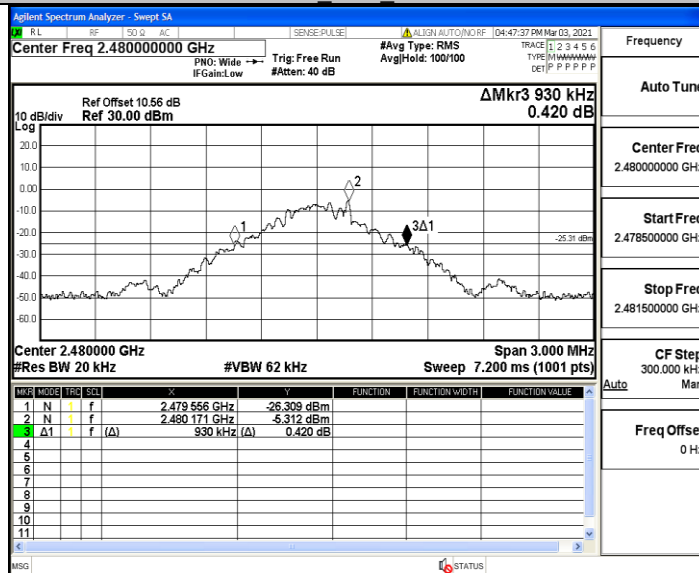
DH5\_Ant1\_2402



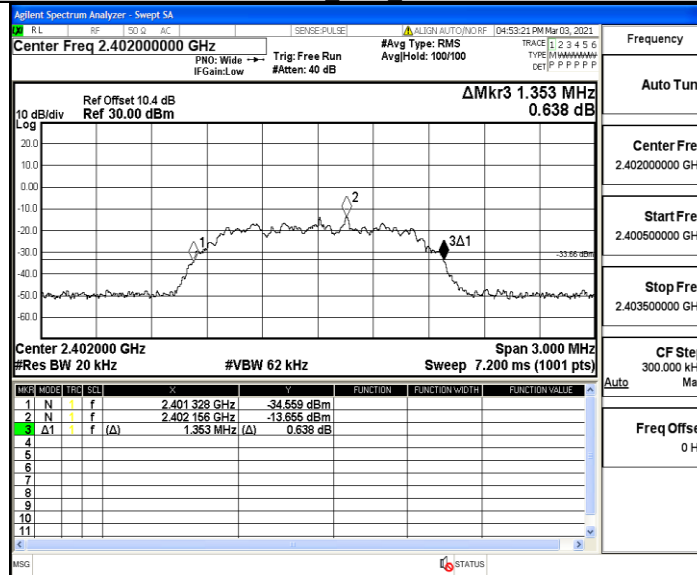
DH5\_Ant1\_2441



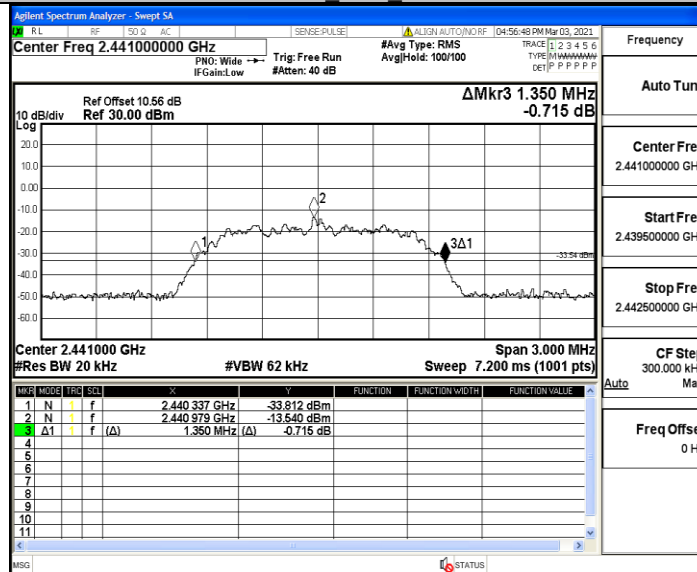
DH5\_Ant1\_2480



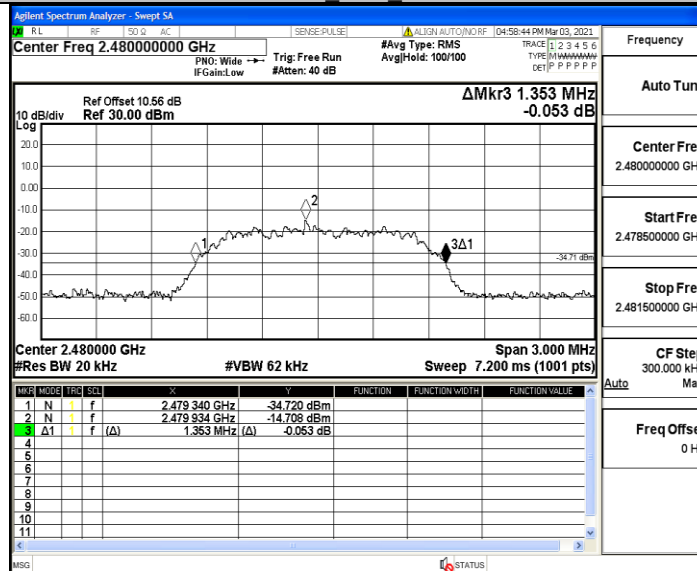
## 2DH5 Ant1\_2402



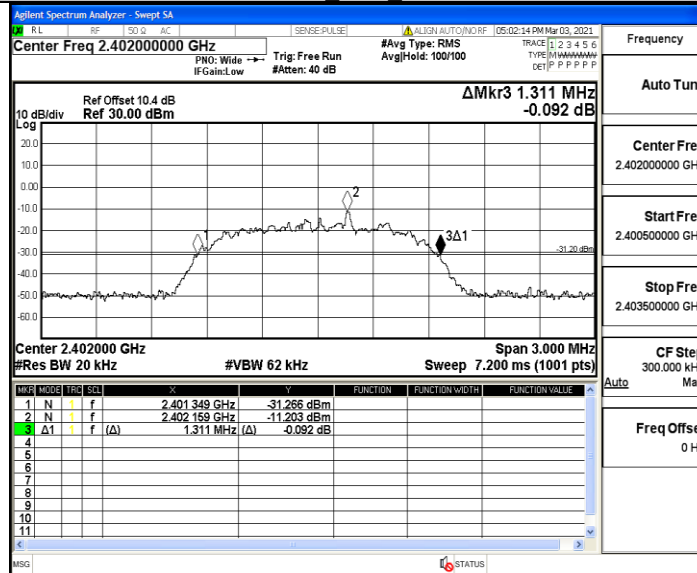
## 2DH5 Ant1\_2441



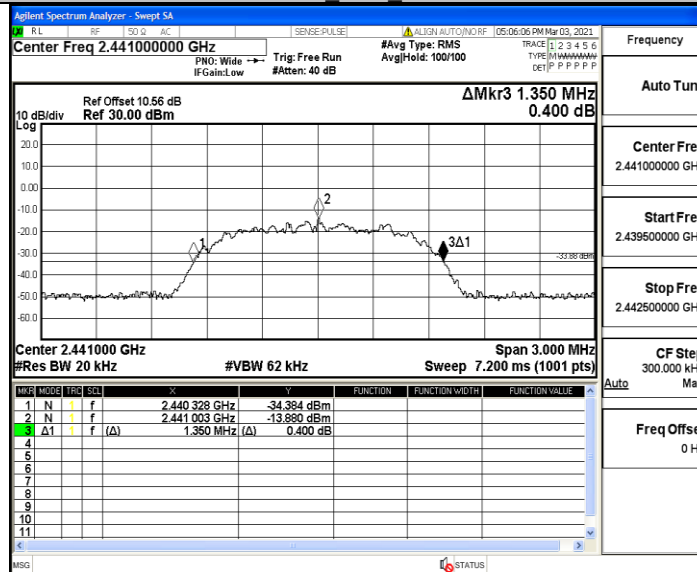
## 2DH5 Ant1\_2480



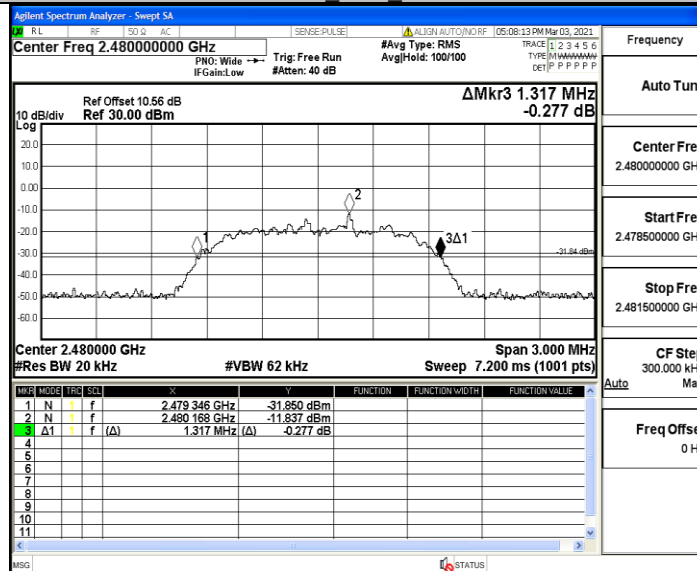
## 3DH5\_Ant1\_2402



## 3DH5\_Ant1\_2441



## 3DH5\_Ant1\_2480

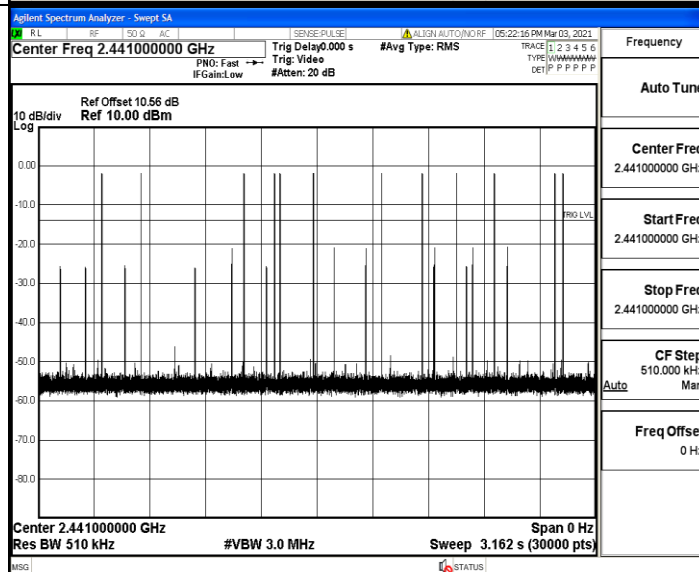
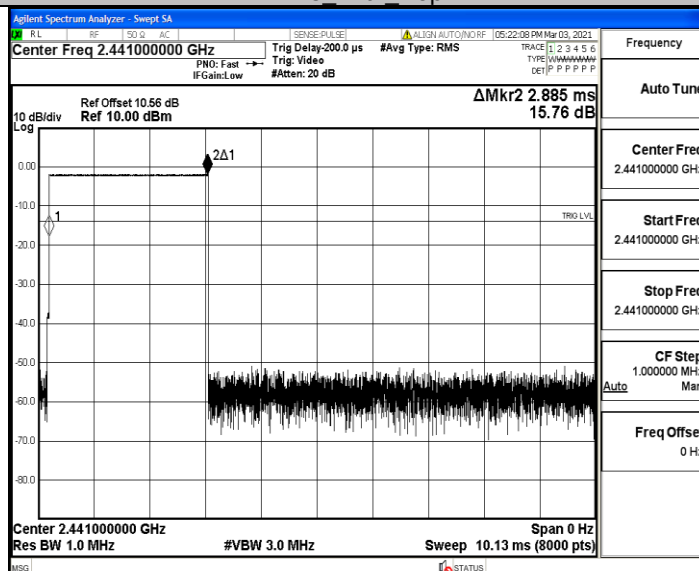


**A.2 Dwell Time**

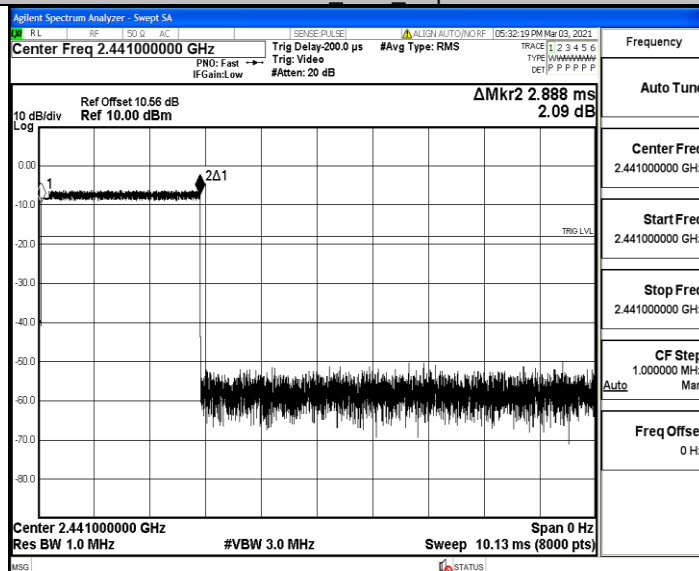
| TestMode | Antenna | Channel | BurstWidth<br>[ms] | TotalHops<br>[Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|---------|--------------------|--------------------|-----------|----------|---------|
| DH5      | Ant1    | Hop     | 2.89               | 130                | 0.375     | <=0.4    | PASS    |
| 2DH5     | Ant1    | Hop     | 2.89               | 100                | 0.289     | <=0.4    | PASS    |
| 3DH5     | Ant1    | Hop     | 2.89               | 90                 | 0.26      | <=0.4    | PASS    |

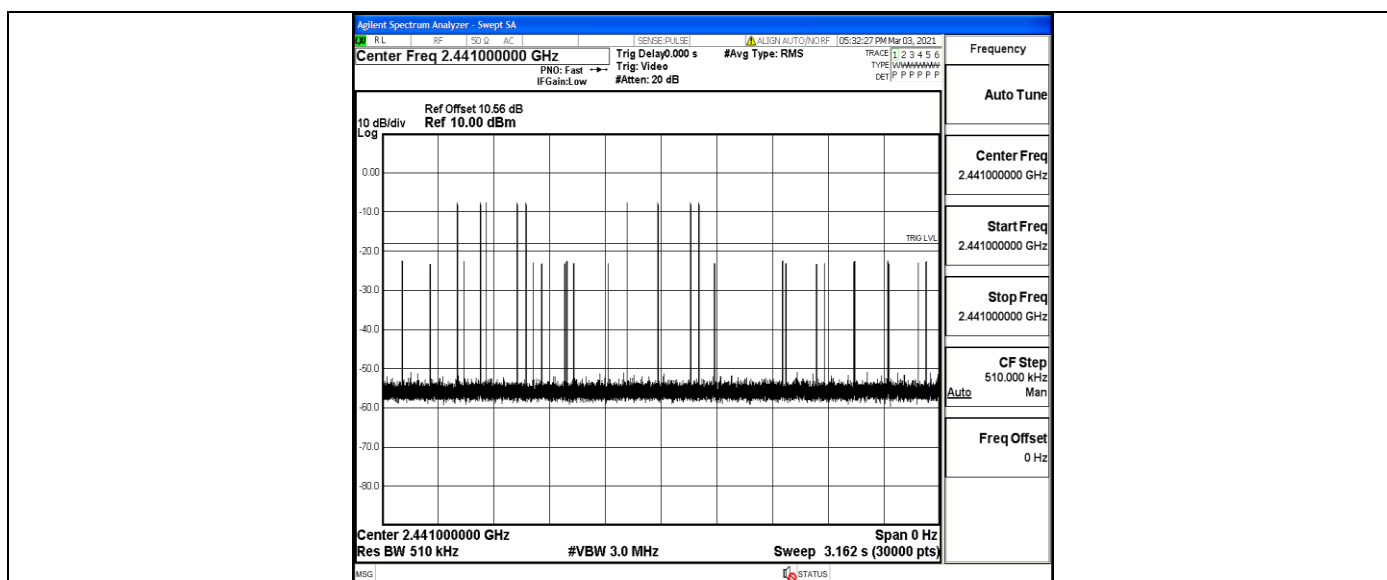
## Test Graph

## DH5\_Ant1\_Hop

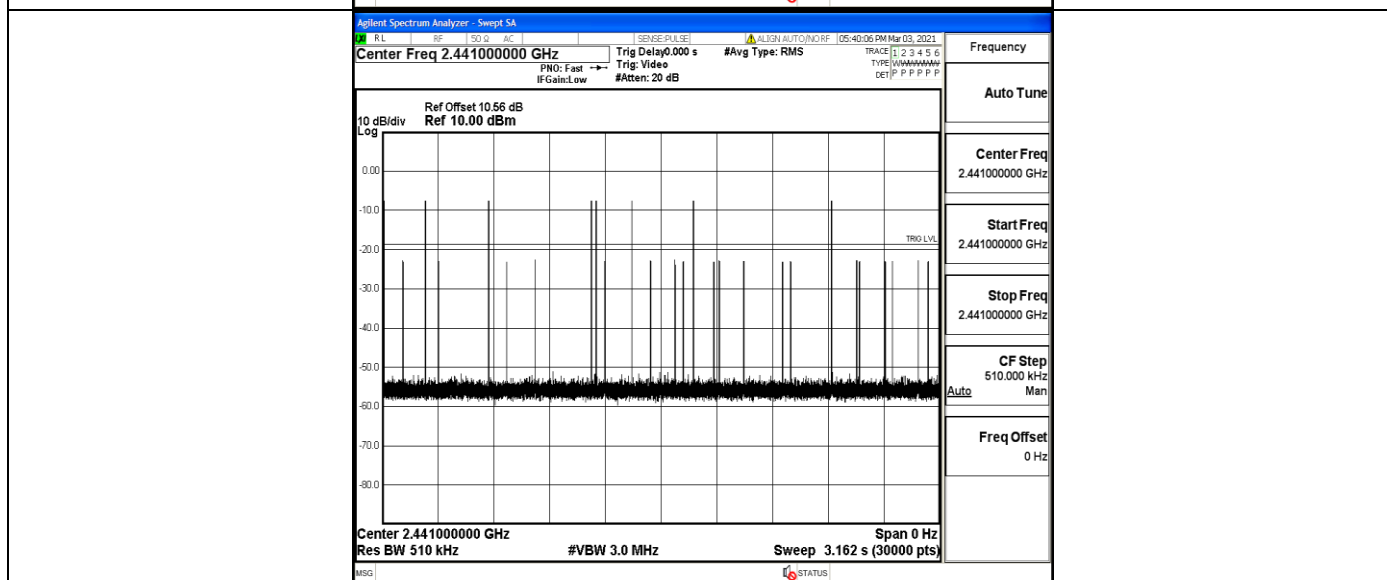
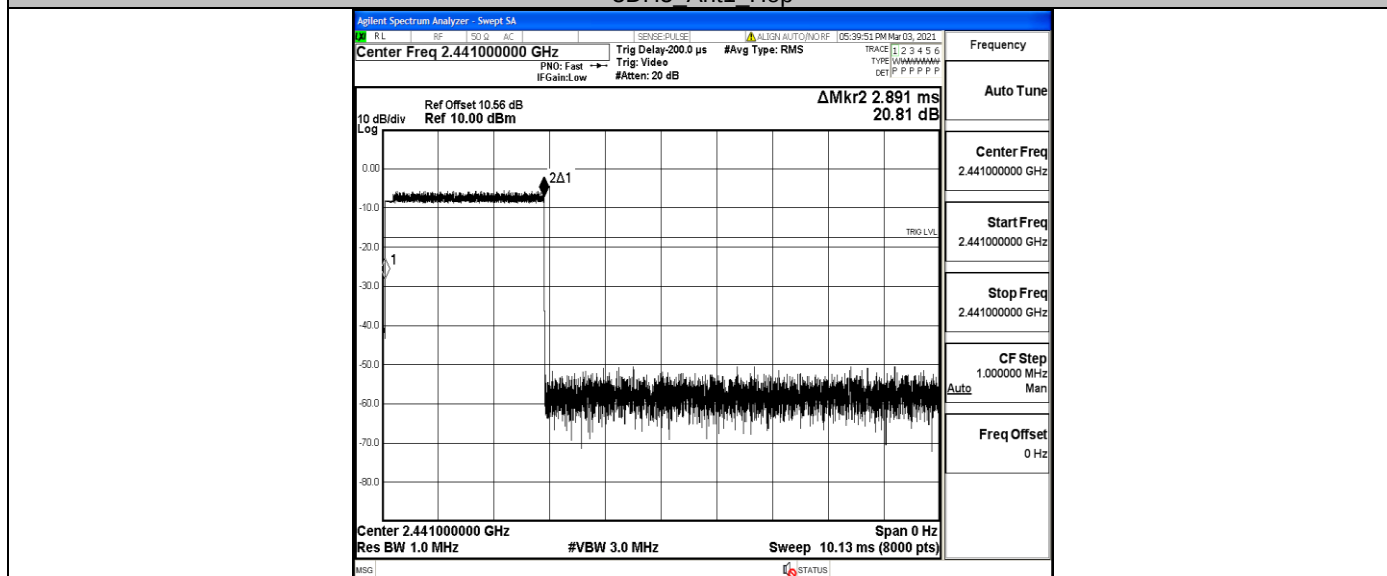


## 2DH5\_Ant1\_Hop





## 3DH5\_Ant1\_Hop

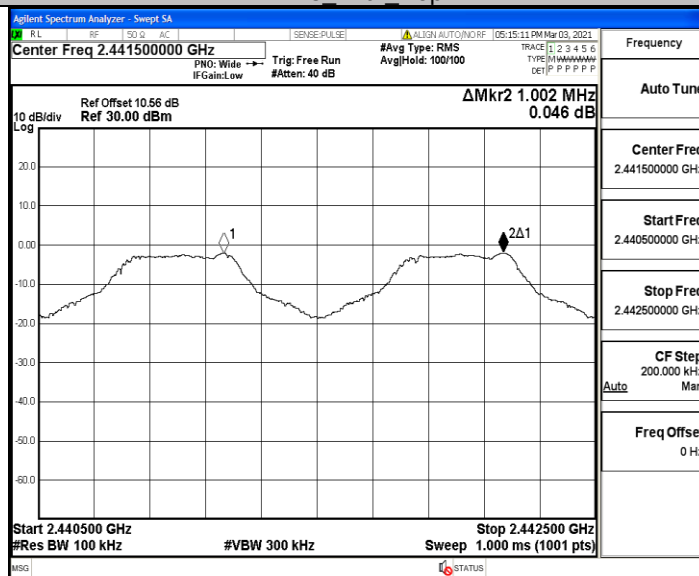


### A.3 Carrier Frequency Separation

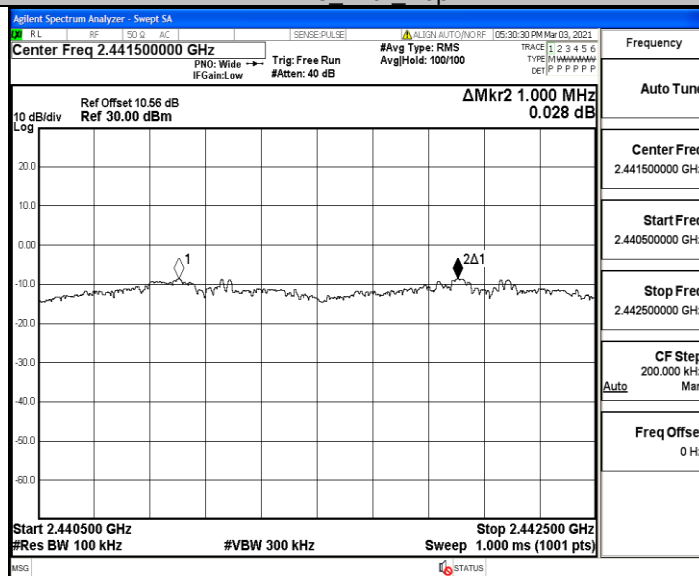
| TestMode | Antenna | Channel | Result[MHz] | Limit[MHz]   | Verdict |
|----------|---------|---------|-------------|--------------|---------|
| DH5      | Ant1    | Hop     | 1.002       | $\geq 0.981$ | PASS    |
| 2DH5     | Ant1    | Hop     | 1.000       | $\geq 0.902$ | PASS    |
| 3DH5     | Ant1    | Hop     | 1.004       | $\geq 0.900$ | PASS    |

## Test Graph

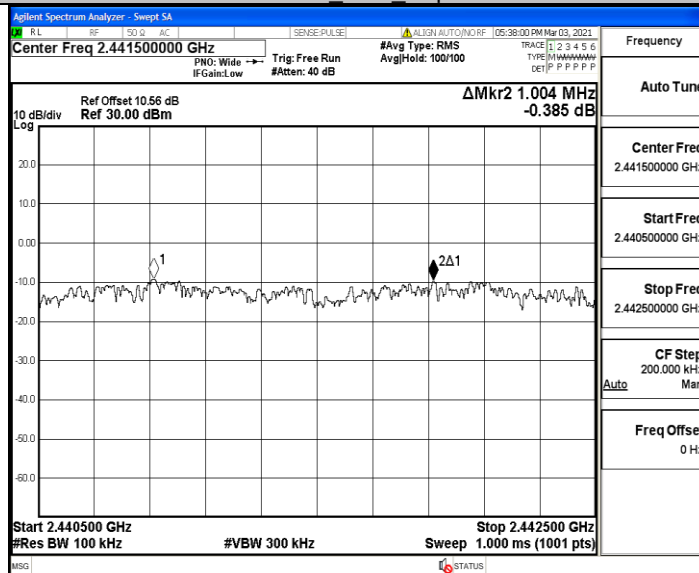
DH5\_Ant1\_Hop



2DH5\_Ant1\_Hop



3DH5\_Ant1\_Hop

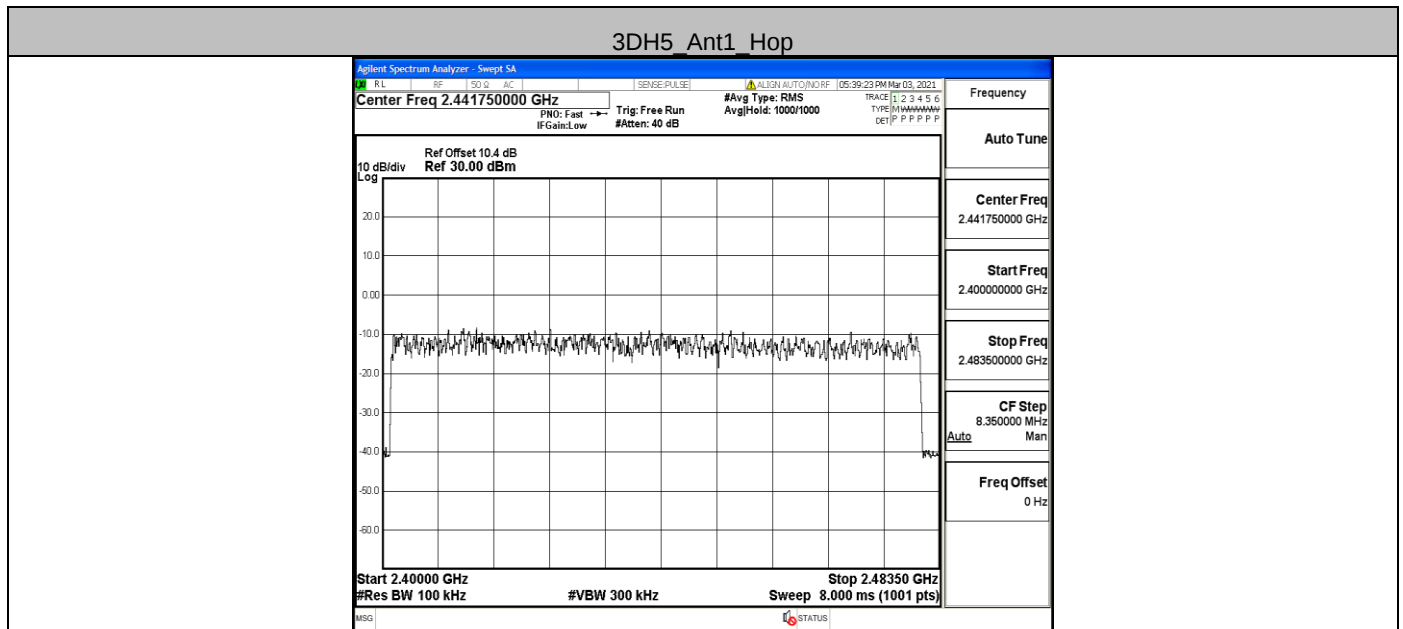


## A.4 Hopping Channel Number

| TestMode | Antenna | Channel | Result[Num] | Limit[Num] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| DH5      | Ant1    | Hop     | 79          | >=15       | PASS    |
| 2DH5     | Ant1    | Hop     | 79          | >=15       | PASS    |
| 3DH5     | Ant1    | Hop     | 79          | >=15       | PASS    |

## Test Graph



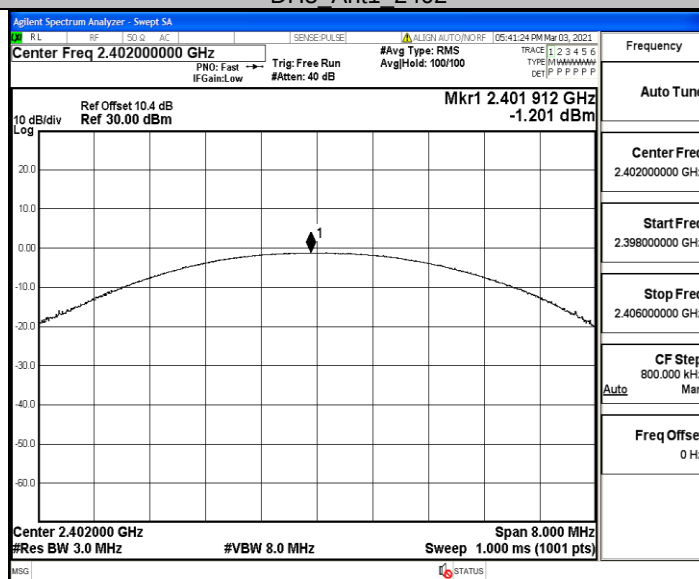


**A.5 Conducted Peak Output Power**

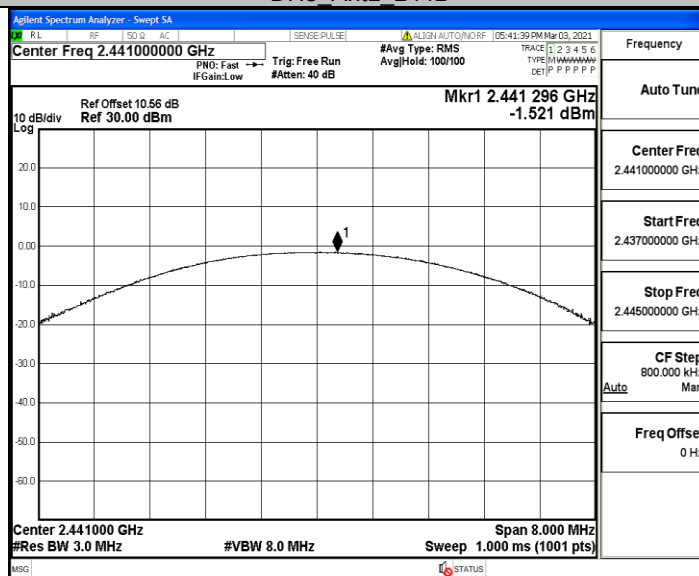
| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| DH5      | Ant1    | 2402    | -1.20       | <=30       | PASS    |
|          |         | 2441    | -1.52       | <=30       | PASS    |
|          |         | 2480    | -2.00       | <=30       | PASS    |
| 2DH5     | Ant1    | 2402    | -5.4        | <=20.97    | PASS    |
|          |         | 2441    | -5.27       | <=20.97    | PASS    |
|          |         | 2480    | -6.13       | <=20.97    | PASS    |
| 3DH5     | Ant1    | 2402    | -4.9        | <=20.97    | PASS    |
|          |         | 2441    | -5.04       | <=20.97    | PASS    |
|          |         | 2480    | -5.89       | <=20.97    | PASS    |

**Test Graph**

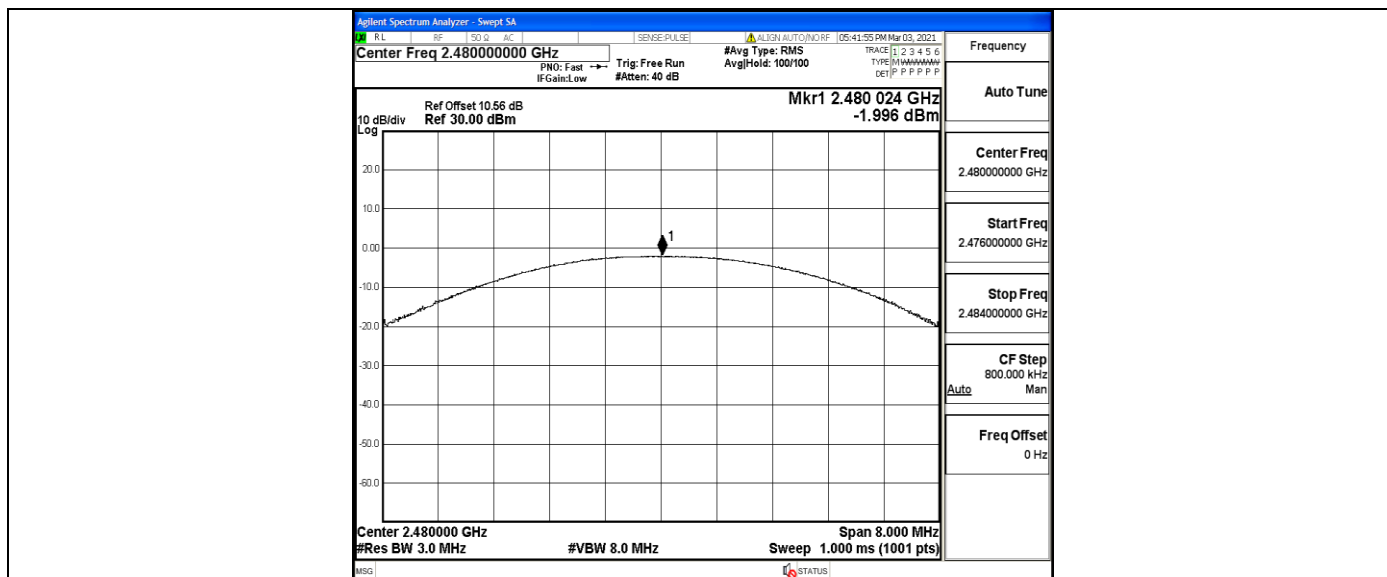
DH5 Ant1 2402



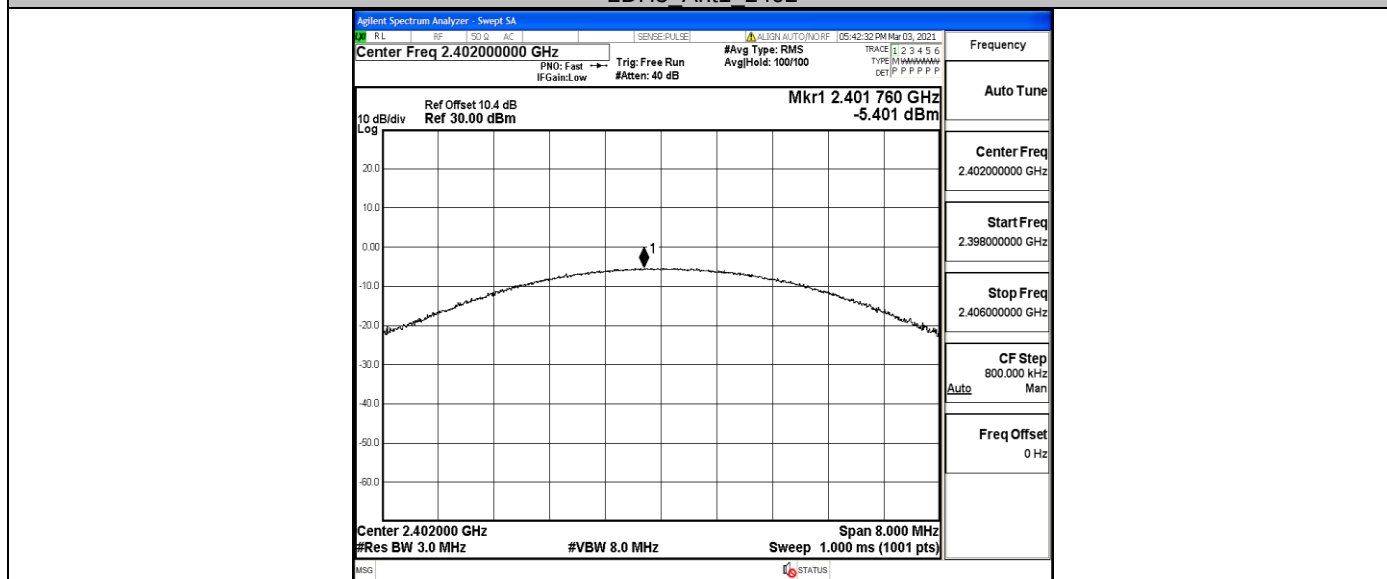
DH5 Ant1 2441



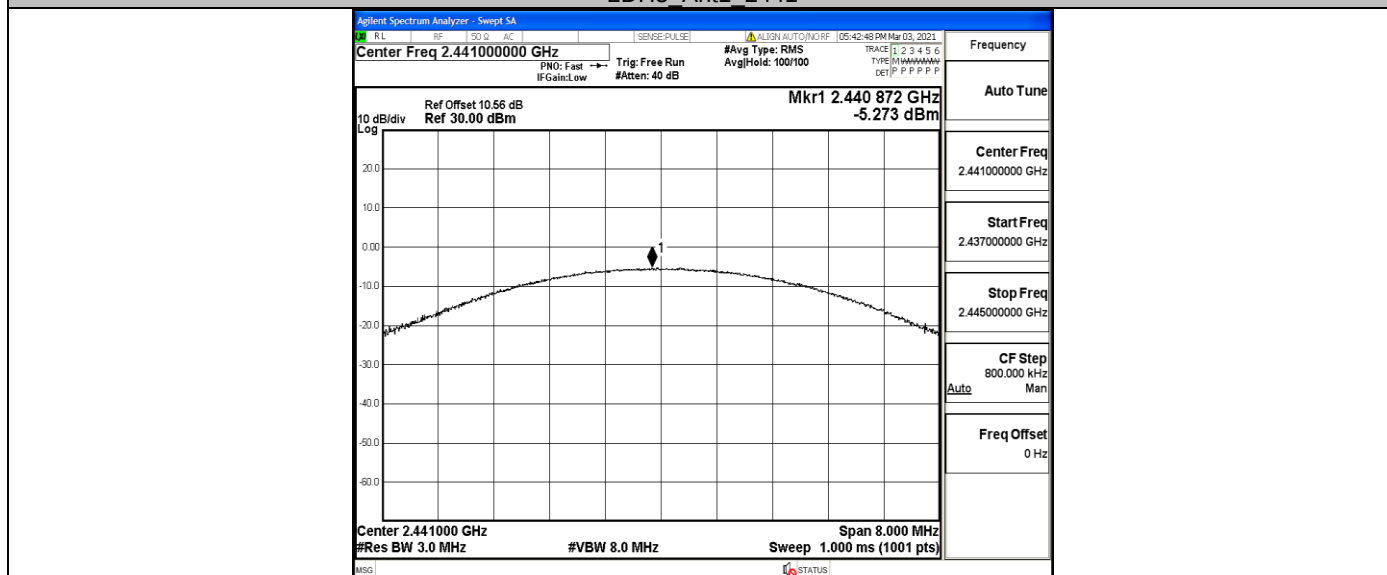
DH5 Ant1 2480



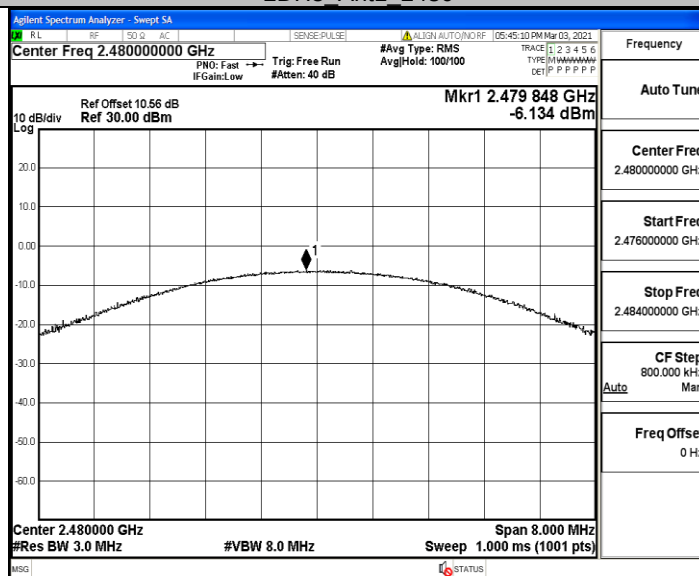
## 2DH5 Ant1 2402



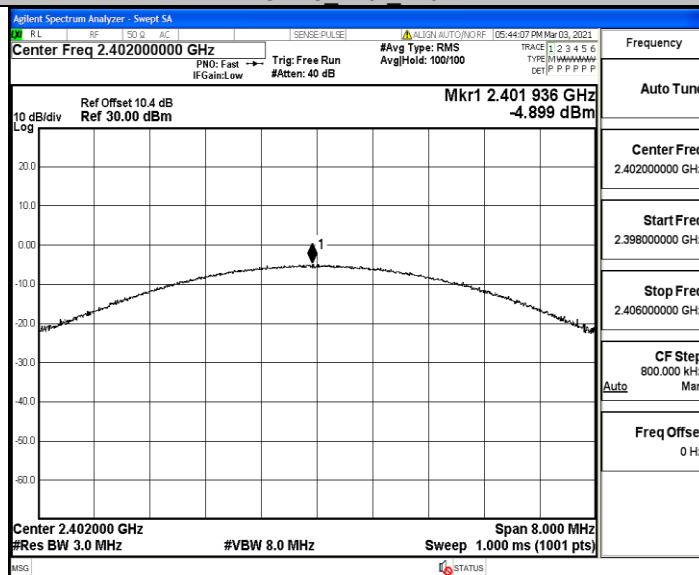
## 2DH5 Ant1 2441



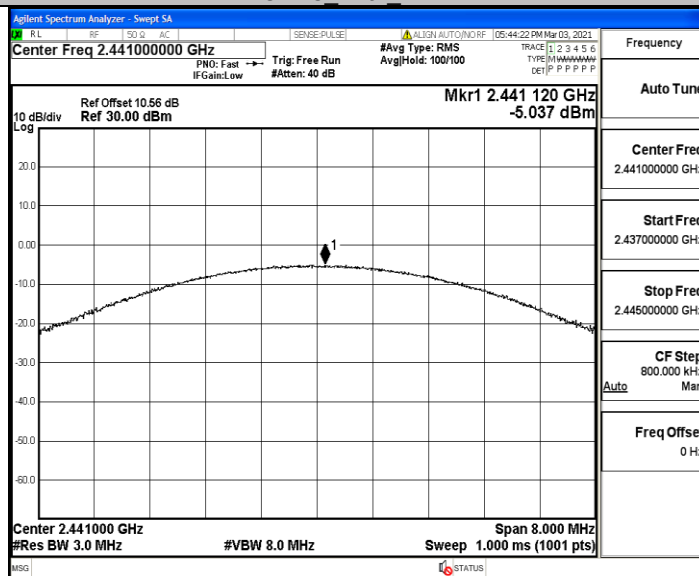
## 2DH5 Ant1 2480

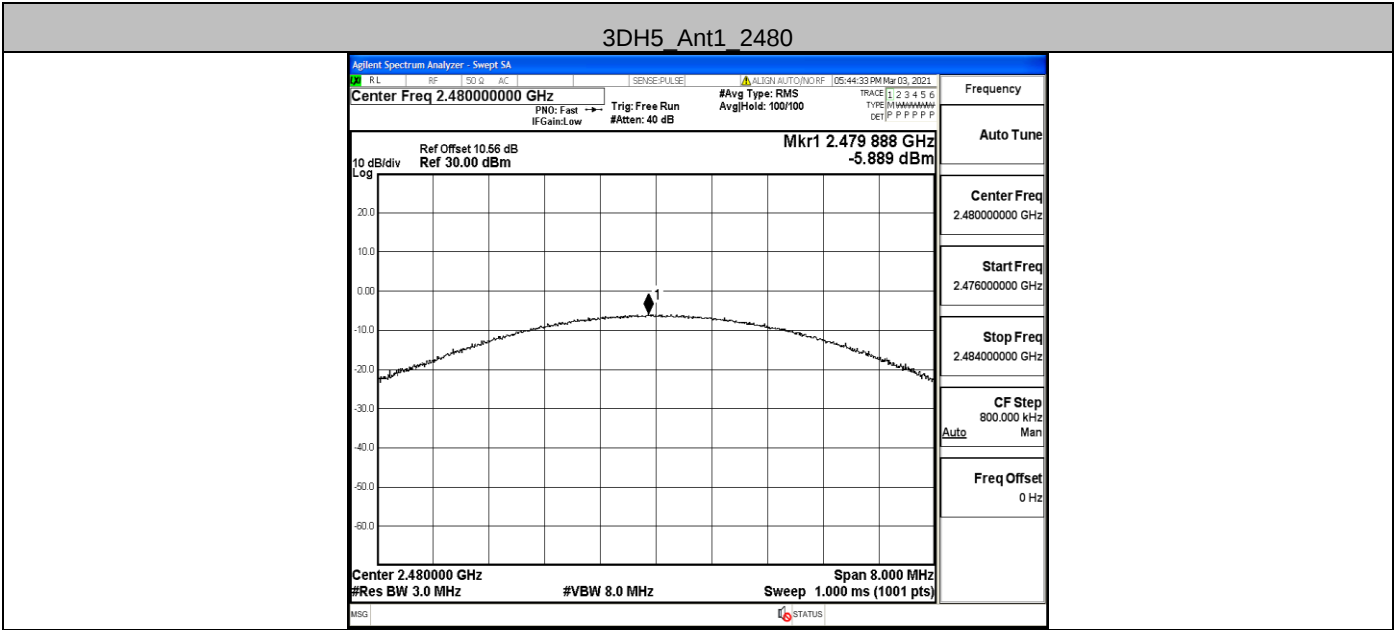


## 3DH5 Ant1 2402



## 3DH5 Ant1 2441



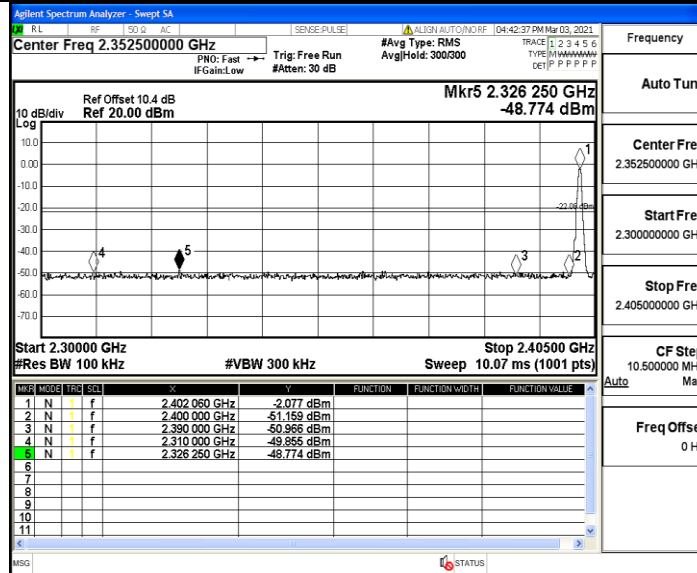


**A.6 Band-edge for RF Conducted Emissions**

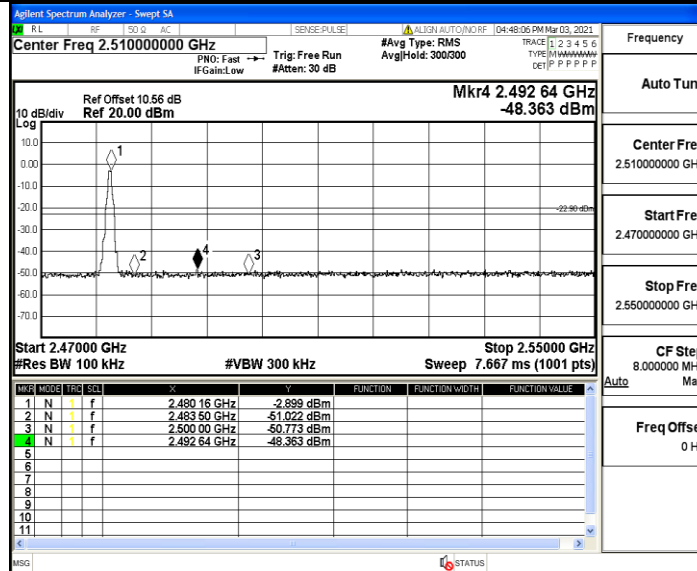
| TestMode | Antenna | ChName | Channel  | RefLevel<br>[dBm] | Result<br>[dBm] | Limit<br>[dBm] | Verdict |
|----------|---------|--------|----------|-------------------|-----------------|----------------|---------|
| DH5      | Ant1    | Low    | 2402     | -2.08             | -48.77          | <=-22.08       | PASS    |
|          |         | High   | 2480     | -2.90             | -48.36          | <=-22.9        | PASS    |
|          |         | Low    | Hop_2402 | -2.22             | -49.49          | <=-22.22       | PASS    |
|          |         | High   | Hop_2480 | -2.93             | -48.03          | <=-22.93       | PASS    |
| 2DH5     | Ant1    | Low    | 2402     | -9.02             | -49.39          | <=-29.02       | PASS    |
|          |         | High   | 2480     | -9.80             | -47.57          | <=-29.8        | PASS    |
|          |         | Low    | Hop_2402 | -10.60            | -49.25          | <=-30.6        | PASS    |
|          |         | High   | Hop_2480 | -11.27            | -47.1           | <=-31.27       | PASS    |
| 3DH5     | Ant1    | Low    | 2402     | -8.68             | -49.18          | <=-28.68       | PASS    |
|          |         | High   | 2480     | -9.58             | -47.57          | <=-29.58       | PASS    |
|          |         | Low    | Hop_2402 | -9.39             | -49             | <=-29.39       | PASS    |
|          |         | High   | Hop_2480 | -10.05            | -47.63          | <=-30.05       | PASS    |

## Test Graph

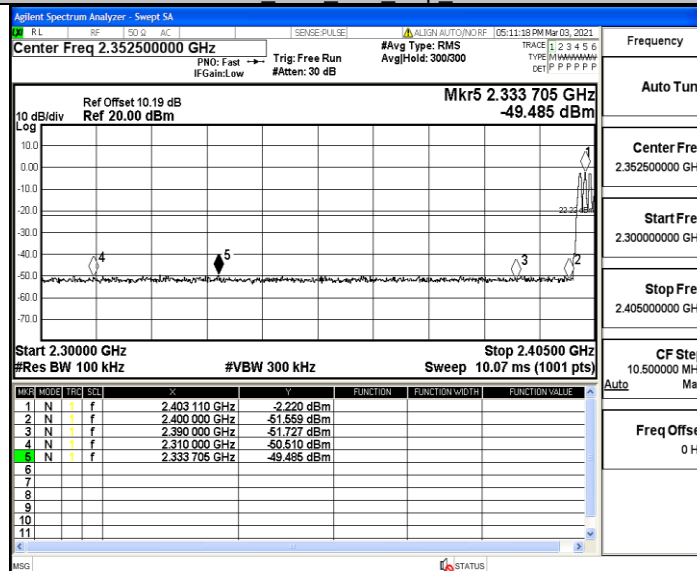
DH5\_Ant1\_Low\_2402



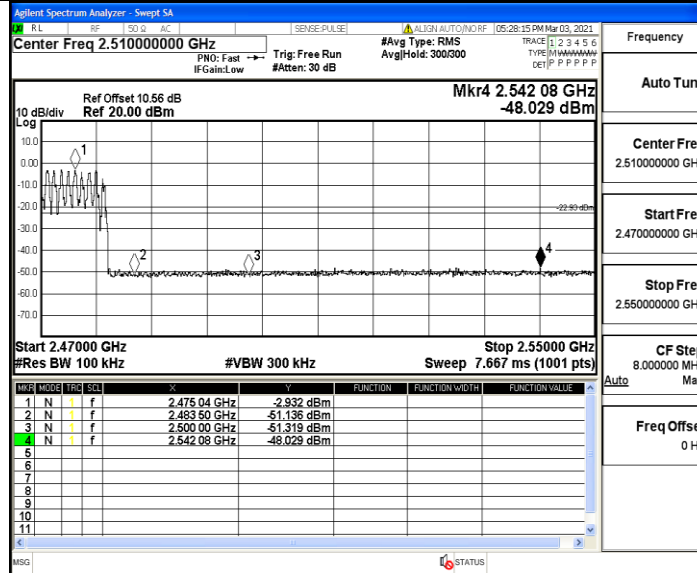
DH5\_Ant1\_High\_2480



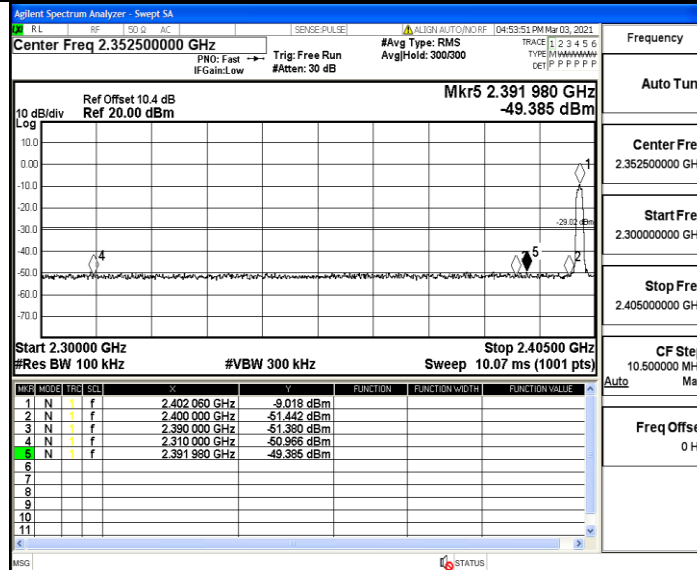
DH5\_Ant1\_Low\_Hop\_2402



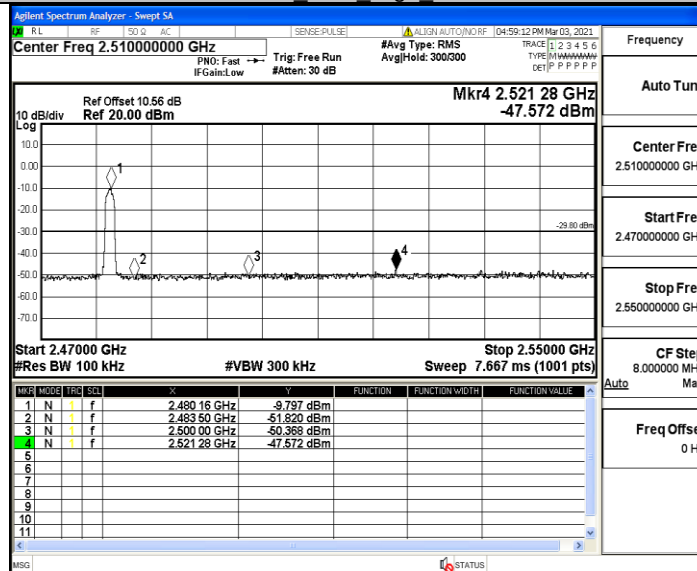
## DH5 Ant1 High Hop 2480



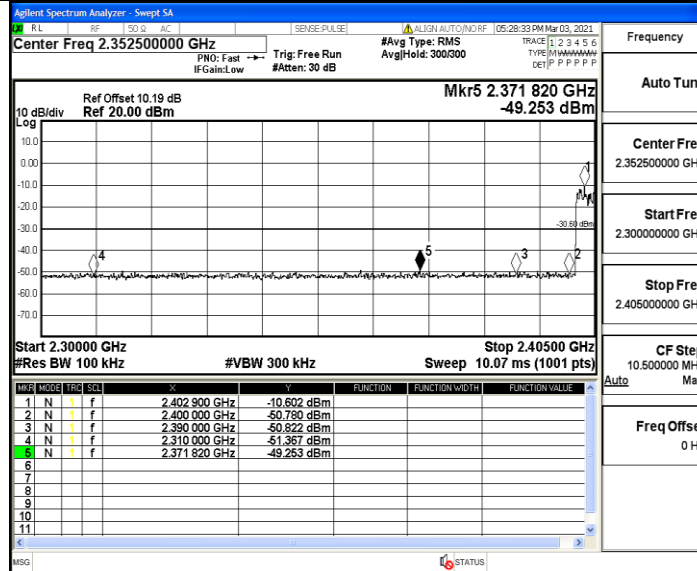
## 2DH5 Ant1 Low 2402



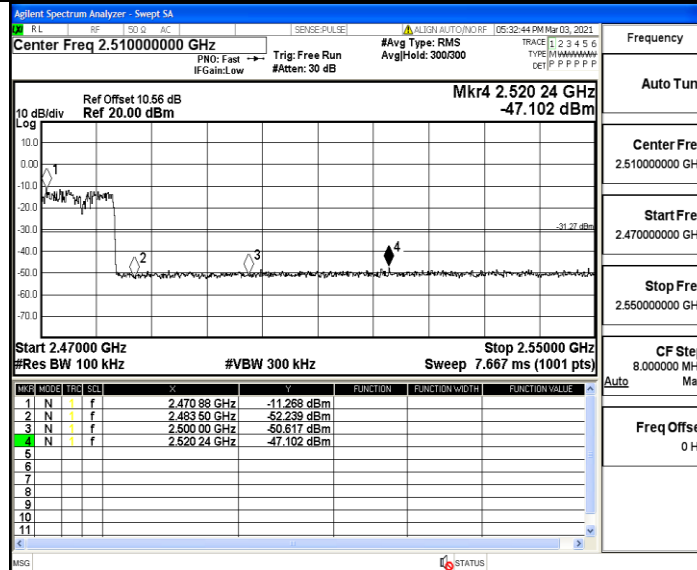
## 2DH5 Ant1 High 2480



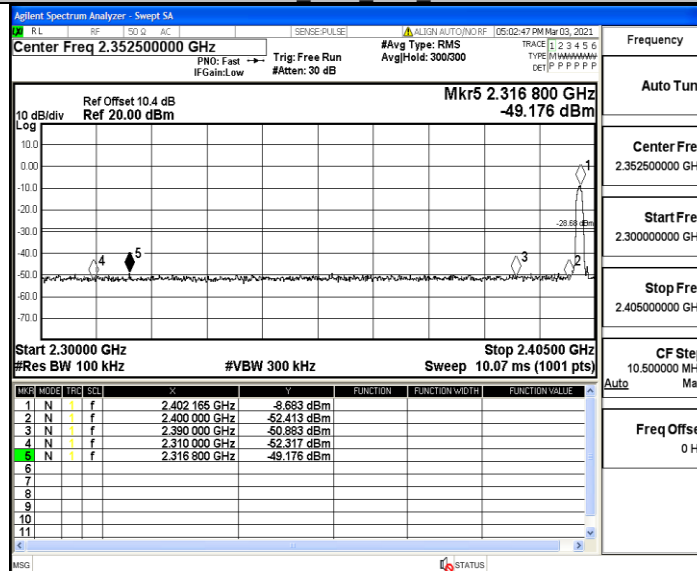
## 2DH5 Ant1 Low Hop 2402



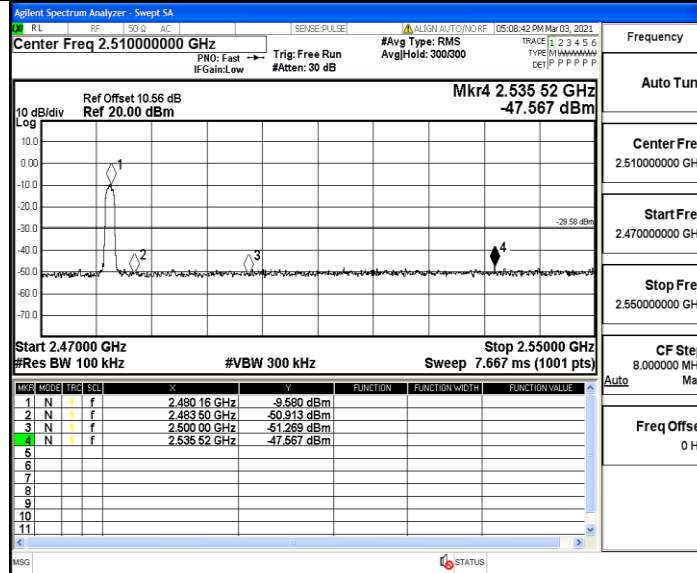
## 2DH5 Ant1 High Hop 2480



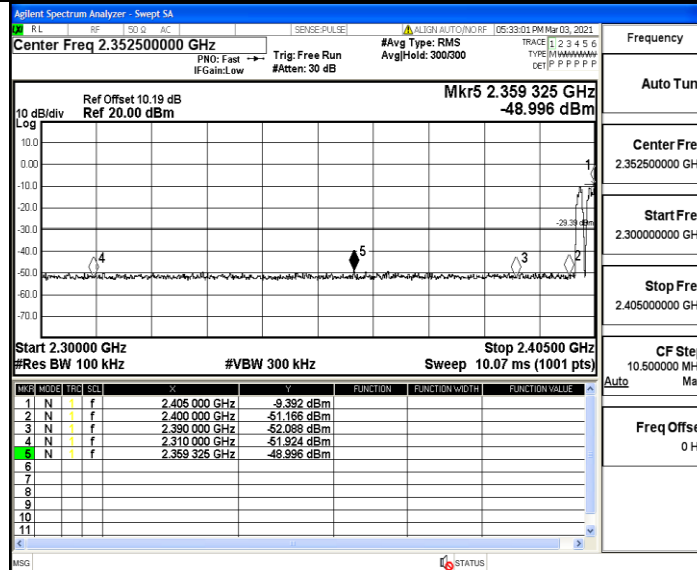
## 3DH5 Ant1 Low 2402



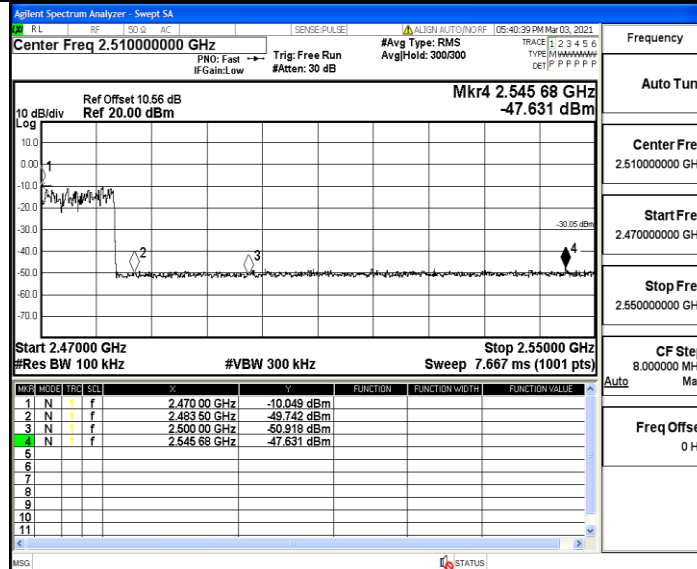
## 3DH5 Ant1 High 2480



## 3DH5 Ant1 Low Hop 2402

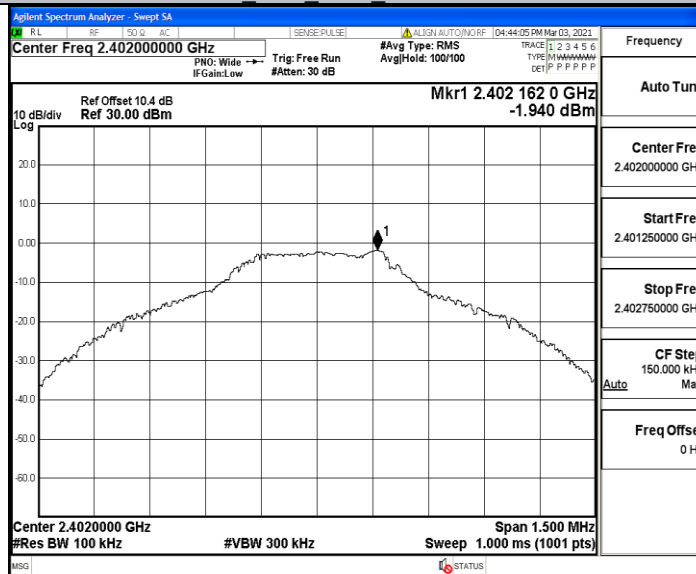


## 3DH5 Ant1 High Hop 2480

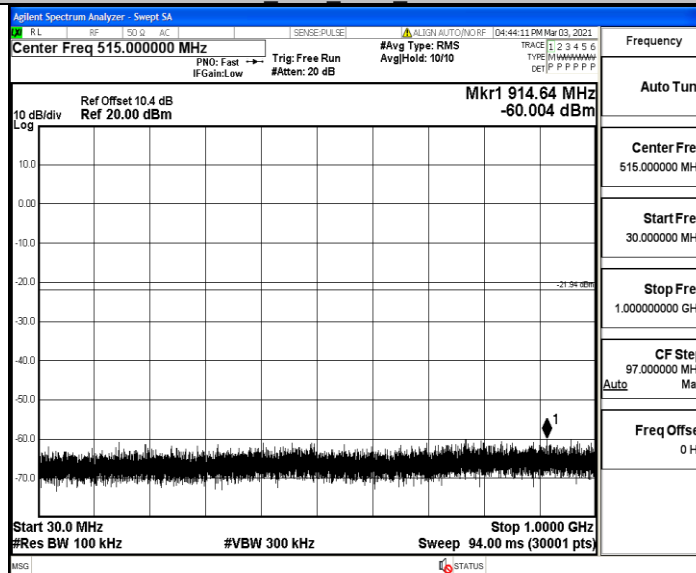


## A.7 RF Conducted Spurious Emissions Test Graph

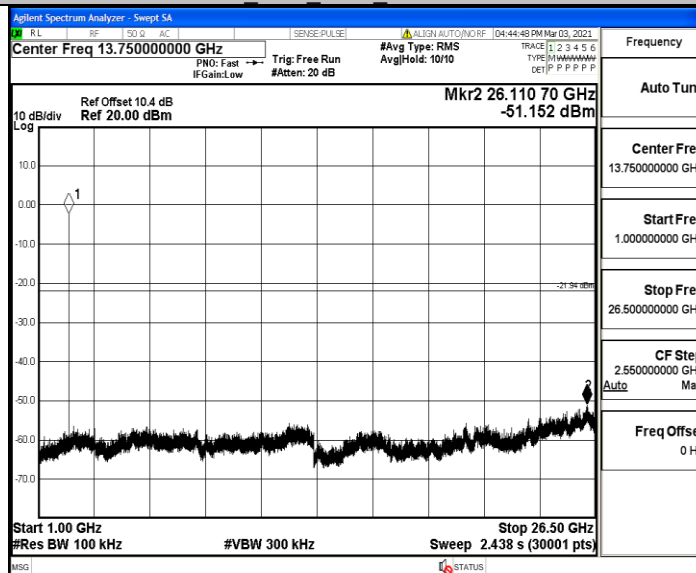
DH5\_Ant1\_2402\_0-Reference



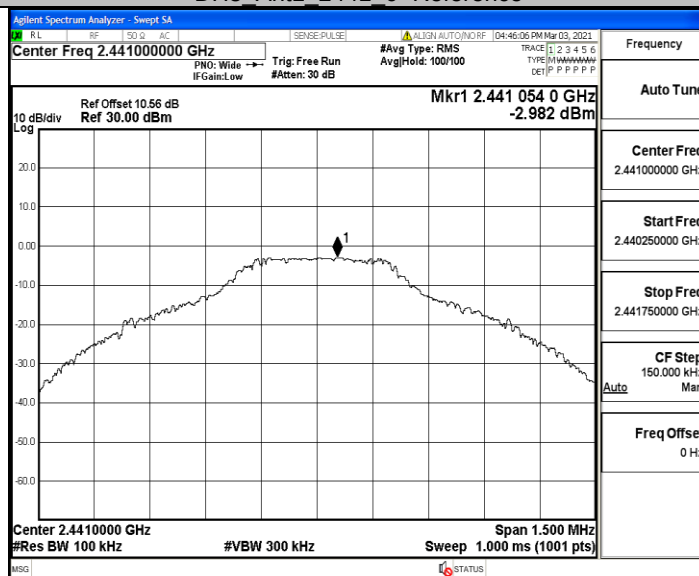
DH5\_Ant1\_2402\_30~1000



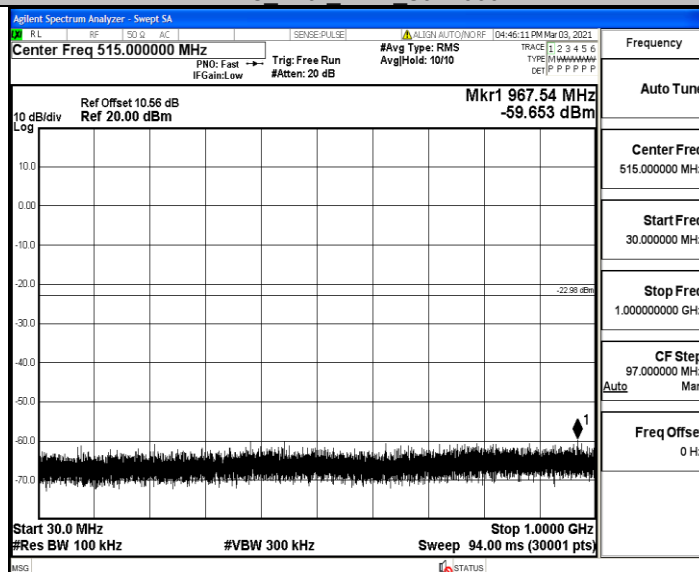
DH5\_Ant1\_2402\_1000~26500



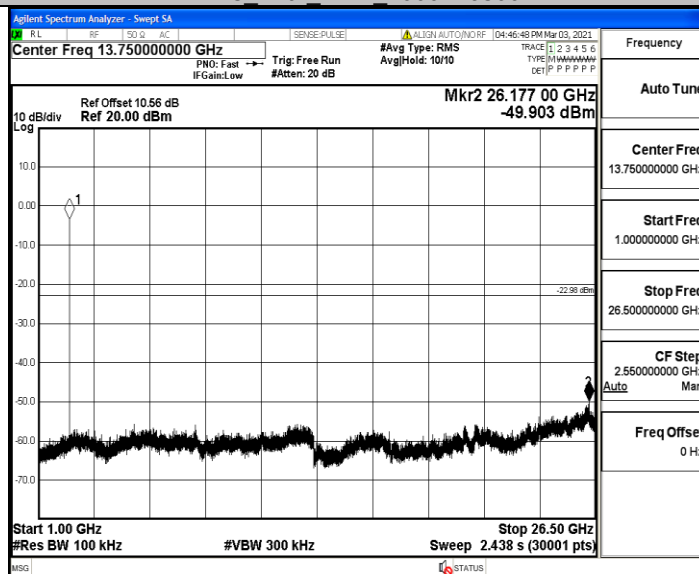
## DH5\_Ant1\_2441\_0-Reference



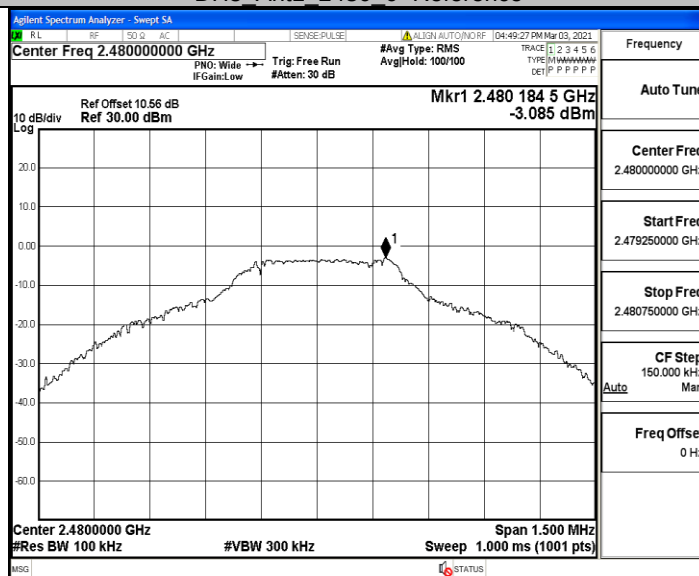
## DH5\_Ant1\_2441\_30~1000



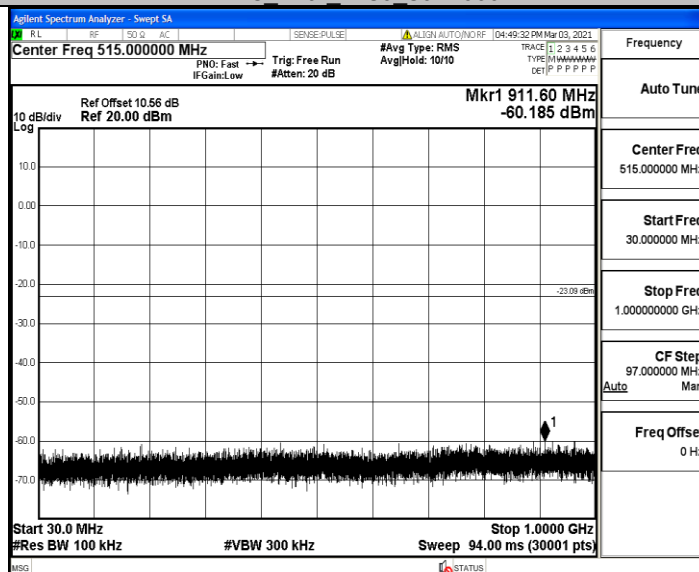
## DH5\_Ant1\_2441\_1000~26500



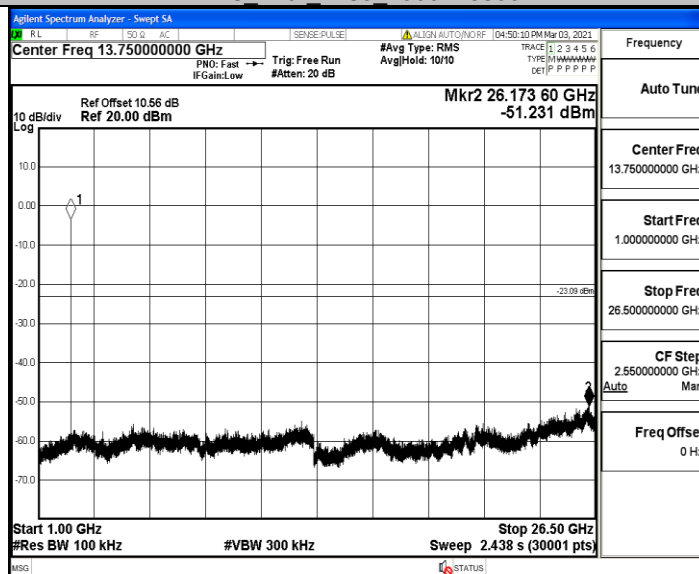
## DH5\_Ant1\_2480\_0-Reference



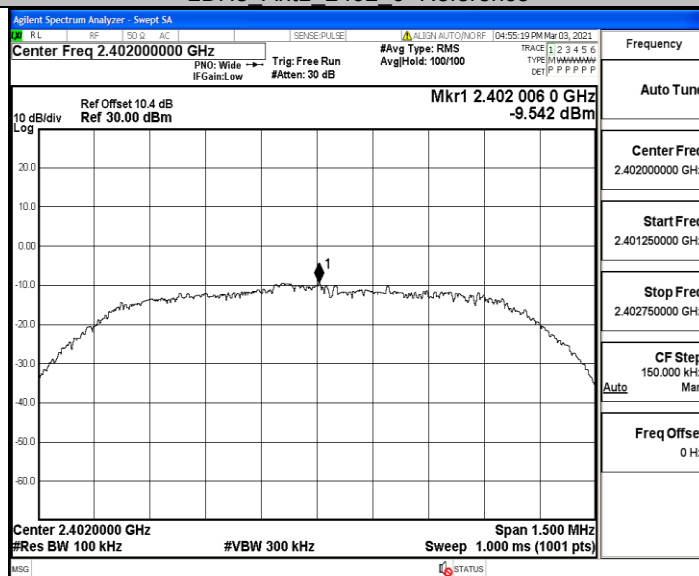
## DH5\_Ant1\_2480\_30~1000



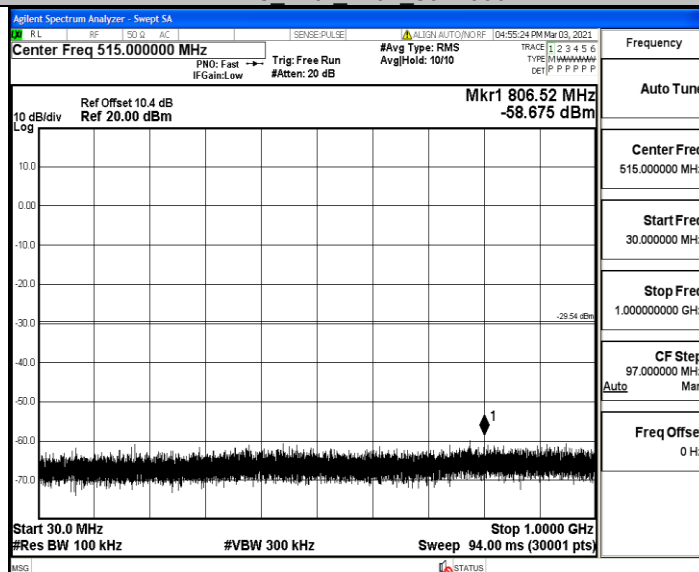
## DH5\_Ant1\_2480\_1000~26500



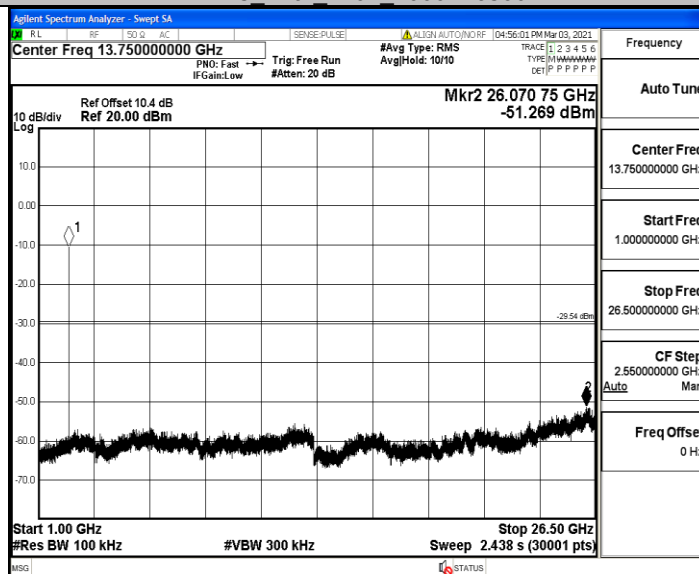
## 2DH5\_Ant1\_2402\_0~Reference



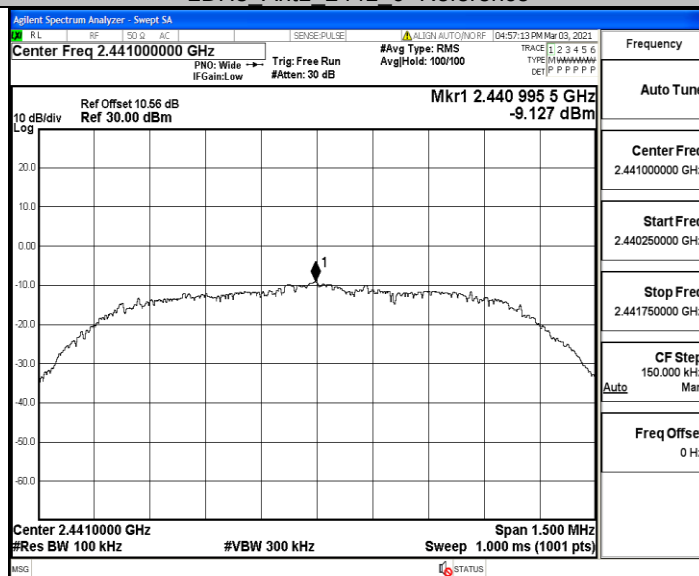
## 2DH5\_Ant1\_2402\_30~1000



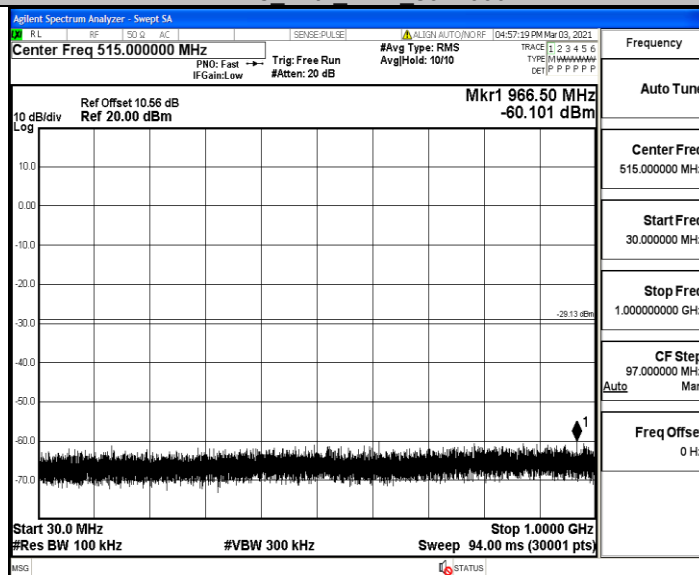
## 2DH5\_Ant1\_2402\_1000~26500



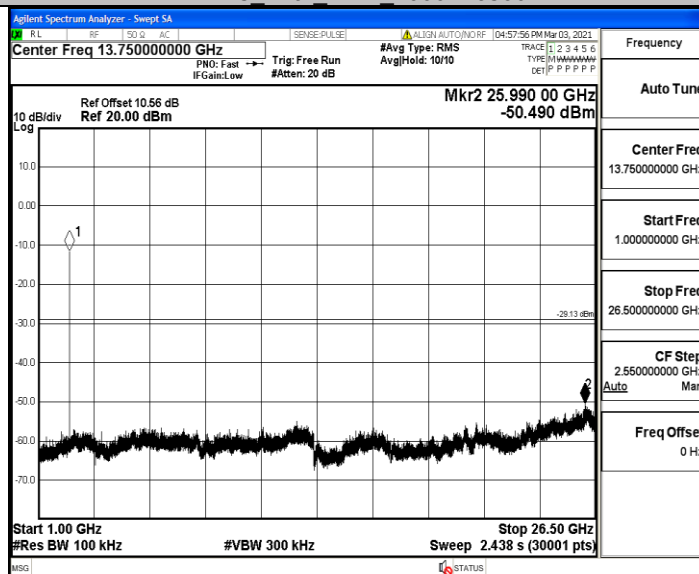
## 2DH5\_Ant1\_2441\_0~Reference



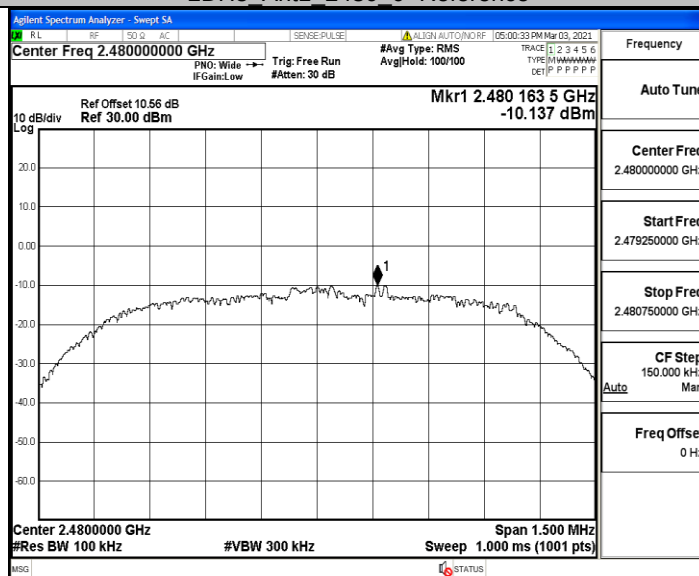
## 2DH5\_Ant1\_2441\_30~1000



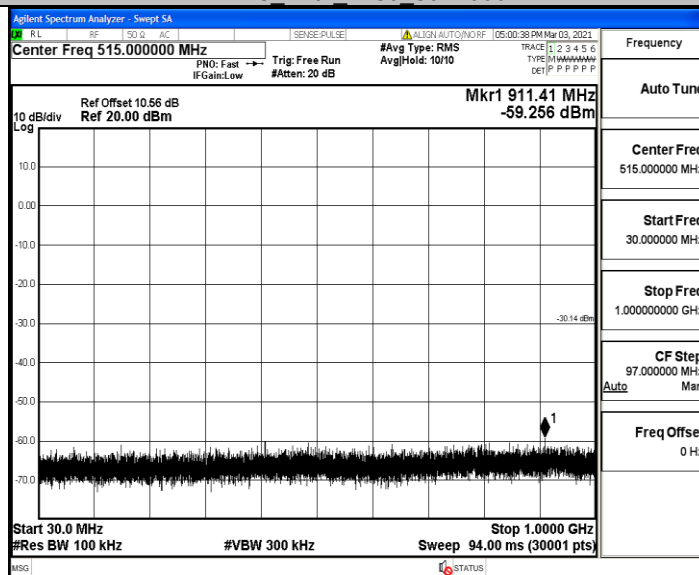
## 2DH5\_Ant1\_2441\_1000~26500



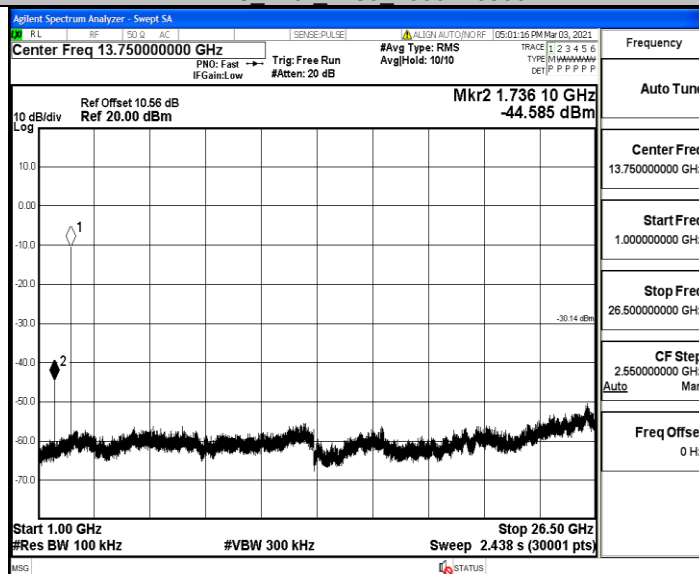
## 2DH5\_Ant1\_2480\_0~Reference



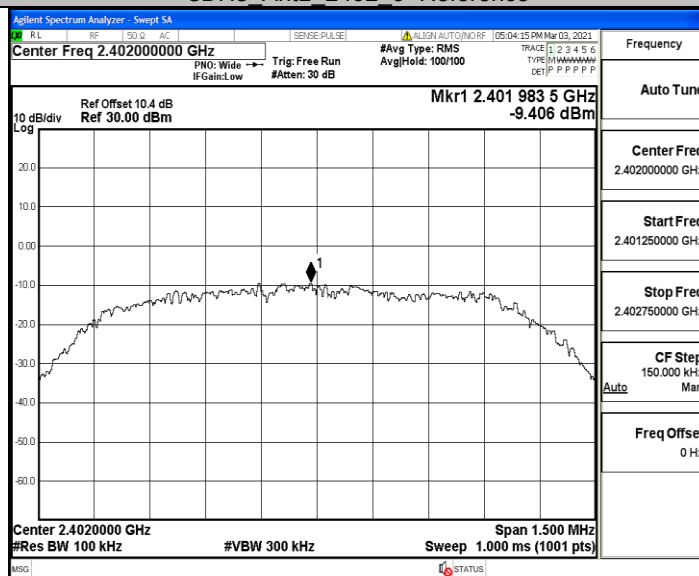
## 2DH5\_Ant1\_2480\_30~1000



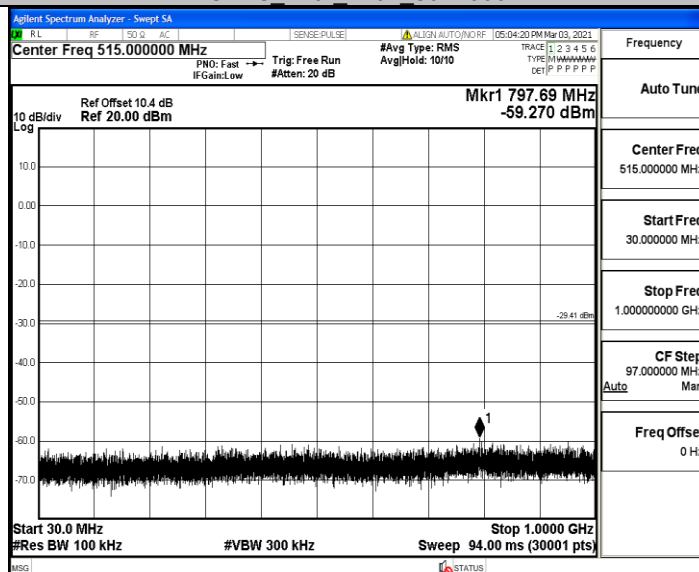
## 2DH5\_Ant1\_2480\_1000~26500



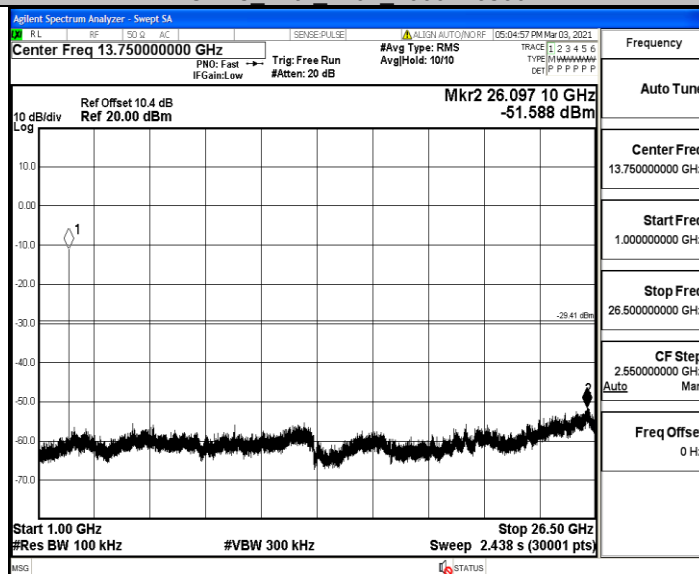
## 3DH5\_Ant1\_2402\_0~Reference



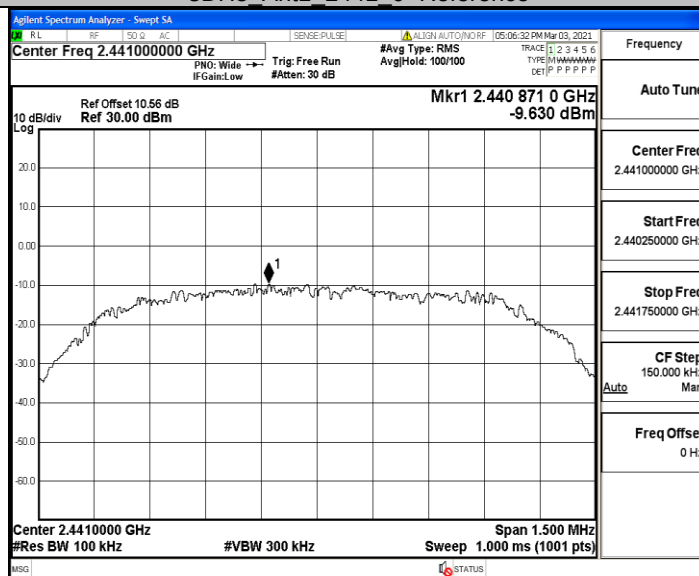
## 3DH5\_Ant1\_2402\_30~1000



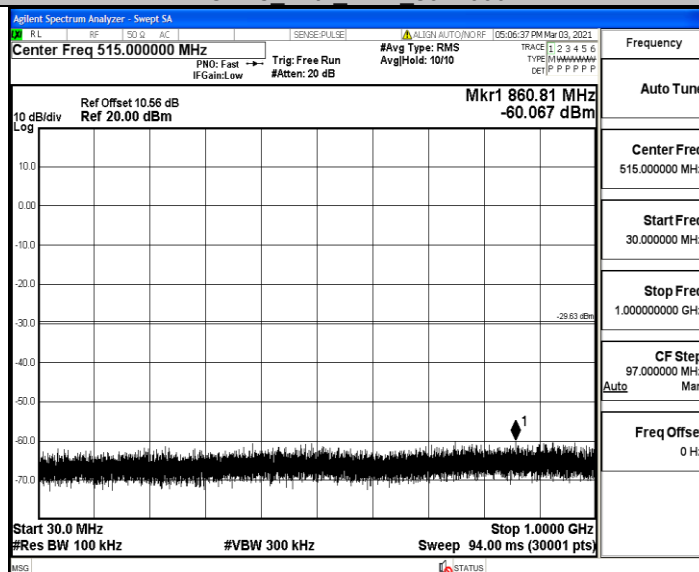
## 3DH5\_Ant1\_2402\_1000~26500



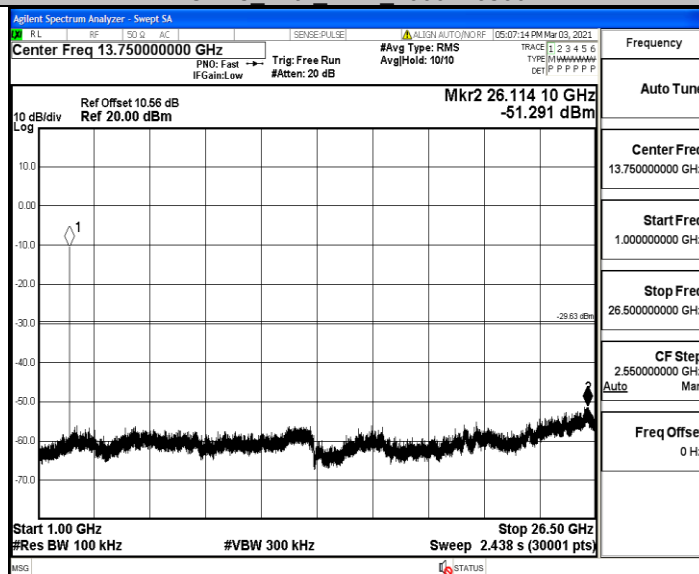
## 3DH5\_Ant1\_2441\_0~Reference



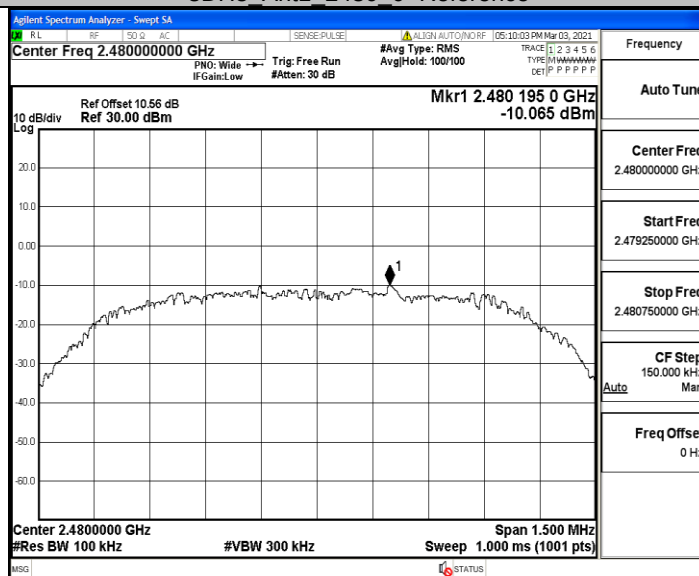
## 3DH5\_Ant1\_2441\_30~1000



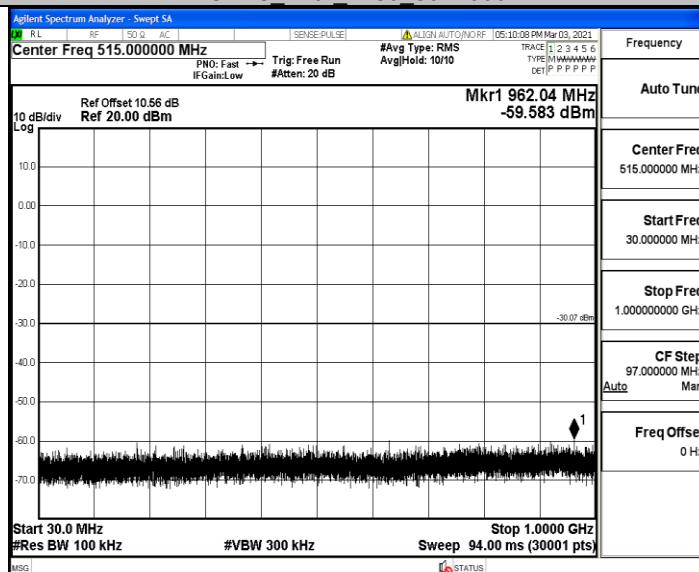
## 3DH5\_Ant1\_2441\_1000~26500



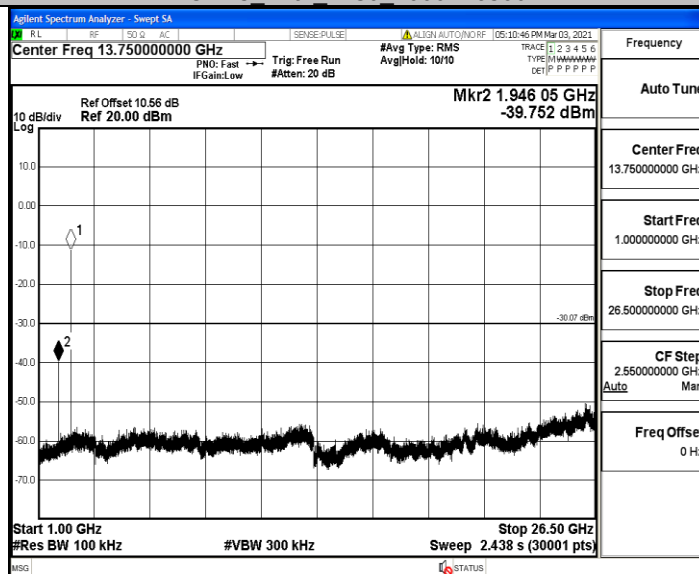
## 3DH5\_Ant1\_2480\_0~Reference



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



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



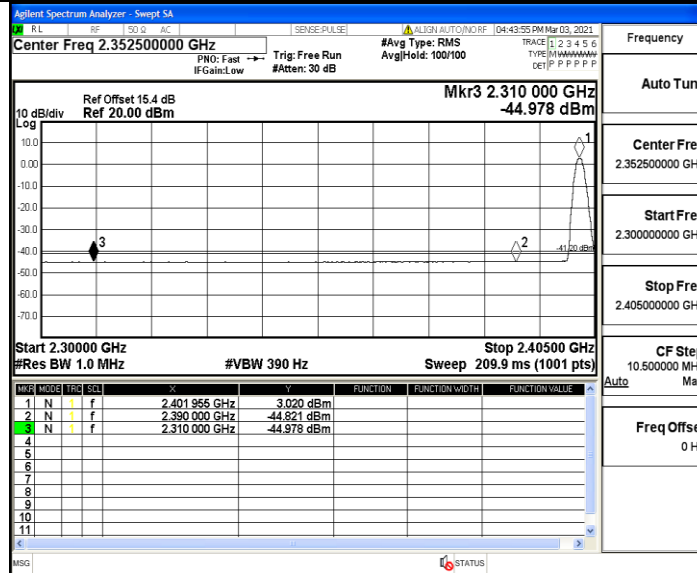
## A.8 Restrict-band band-edge measurements

| TestMode | Antenna | ChName | Channel(MHz) | Detector | Freq(MHz) | Result(dBm) | Limit(dBm) | Verdict |
|----------|---------|--------|--------------|----------|-----------|-------------|------------|---------|
| DH5      | Ant1    | Low    | 2402         | AV       | 2310.000  | -44.97      | <=-41.20   | PASS    |
|          |         |        |              | AV       | 2390.000  | -44.83      | <=-41.20   | PASS    |
|          |         |        |              | Peak     | 2310.000  | -38.67      | <=-21.20   | PASS    |
|          |         |        |              | Peak     | 2390.000  | -36.60      | <=-21.20   | PASS    |
|          |         | High   | 2480         | AV       | 2483.500  | -44.11      | <=-41.20   | PASS    |
|          |         |        |              | AV       | 2500.000  | -43.98      | <=-41.20   | PASS    |
|          |         |        |              | Peak     | 2483.500  | -36.42      | <=-21.20   | PASS    |
|          |         |        |              | Peak     | 2500.000  | -37.09      | <=-21.20   | PASS    |
| 2DH5     | Ant1    | Low    | 2402         | AV       | 2310.000  | -45.03      | <=-41.20   | PASS    |
|          |         |        |              | AV       | 2390.000  | -44.67      | <=-41.20   | PASS    |
|          |         |        |              | Peak     | 2310.000  | -35.64      | <=-21.20   | PASS    |
|          |         |        |              | Peak     | 2390.000  | -36.59      | <=-21.20   | PASS    |
|          |         | High   | 2480         | AV       | 2483.500  | -44.27      | <=-41.20   | PASS    |
|          |         |        |              | AV       | 2500.000  | -44.02      | <=-41.20   | PASS    |
|          |         |        |              | Peak     | 2483.500  | -38.42      | <=-21.20   | PASS    |
|          |         |        |              | Peak     | 2500.000  | -37.38      | <=-21.20   | PASS    |
| 3DH5     | Ant1    | Low    | 2402         | AV       | 2310.000  | -45.02      | <=-41.20   | PASS    |
|          |         |        |              | AV       | 2390.000  | -44.80      | <=-41.20   | PASS    |
|          |         |        |              | Peak     | 2310.000  | -38.77      | <=-21.20   | PASS    |
|          |         |        |              | Peak     | 2390.000  | -37.25      | <=-21.20   | PASS    |
|          |         | High   | 2480         | AV       | 2483.500  | -44.30      | <=-41.20   | PASS    |
|          |         |        |              | AV       | 2500.000  | -44.09      | <=-41.20   | PASS    |
|          |         |        |              | Peak     | 2483.500  | -37.36      | <=-21.20   | PASS    |
|          |         |        |              | Peak     | 2500.000  | -36.80      | <=-21.20   | PASS    |

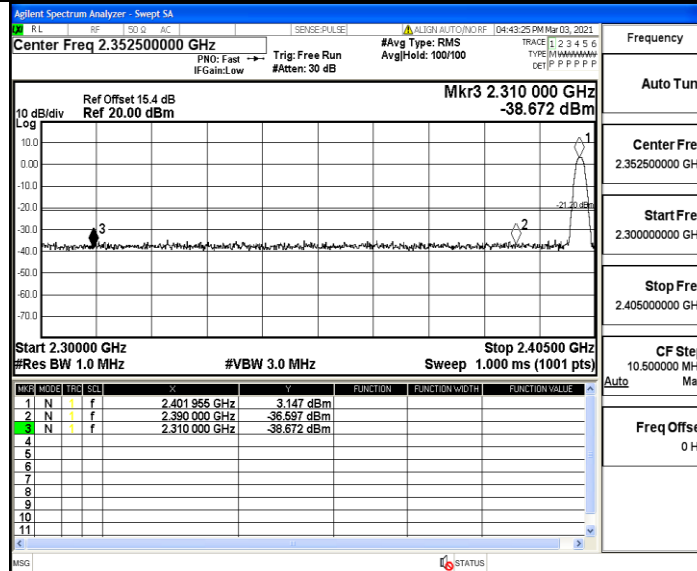
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

## Test Graphs

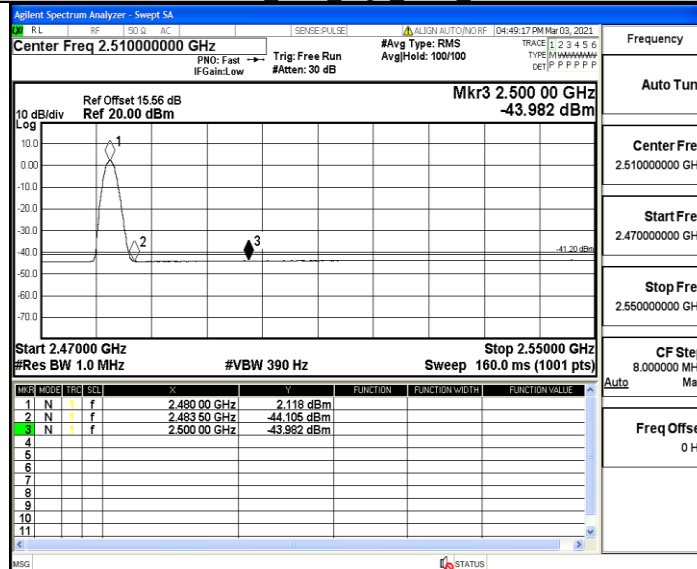
DH5 Ant1 Low 2402 AV



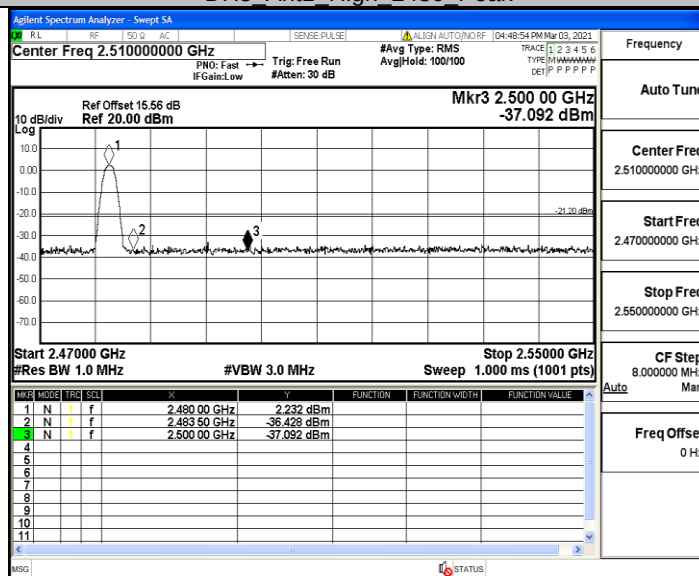
DH5 Ant1 Low 2402 Peak



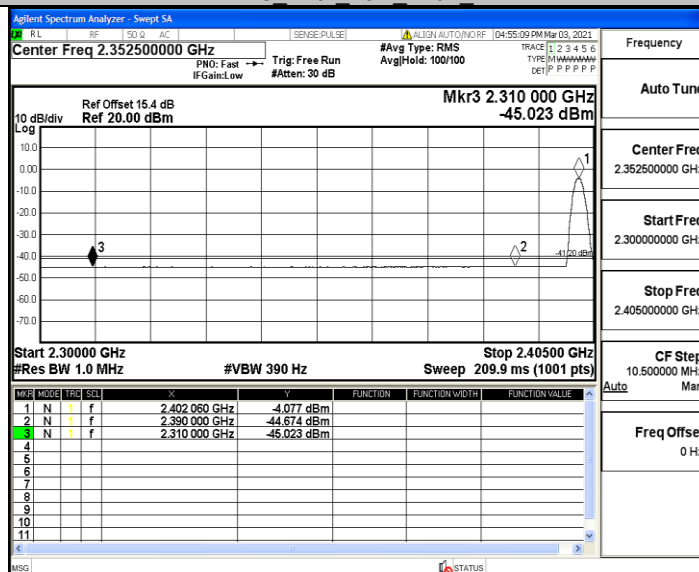
DH5 Ant1 High 2480 AV



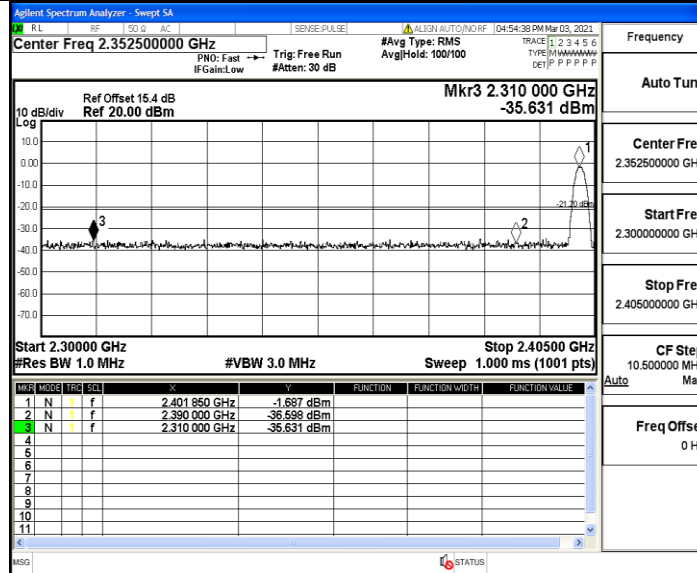
## DH5\_Ant1\_High\_2480\_Peak



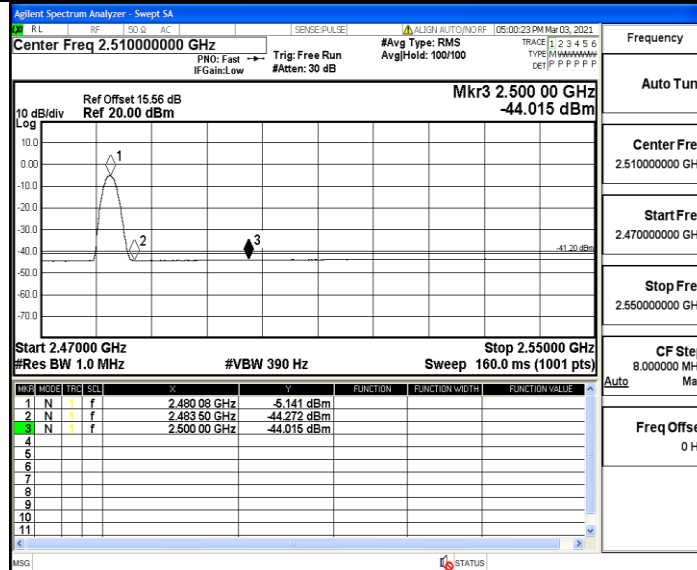
## 2DH5\_Ant1\_Low\_2402\_AV



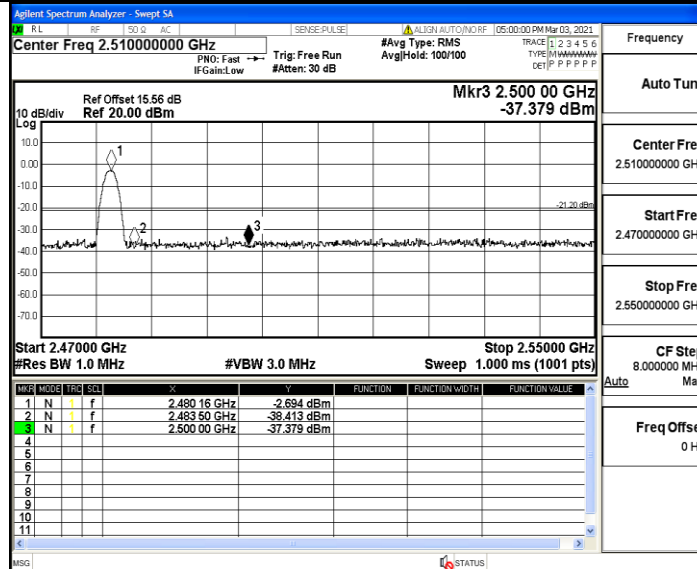
## 2DH5 Ant1 Low 2402 Peak



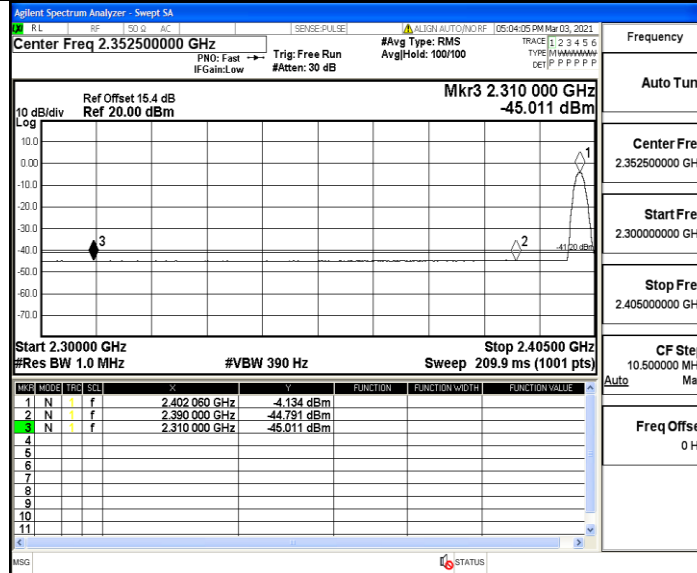
## 2DH5 Ant1 High 2480 AV



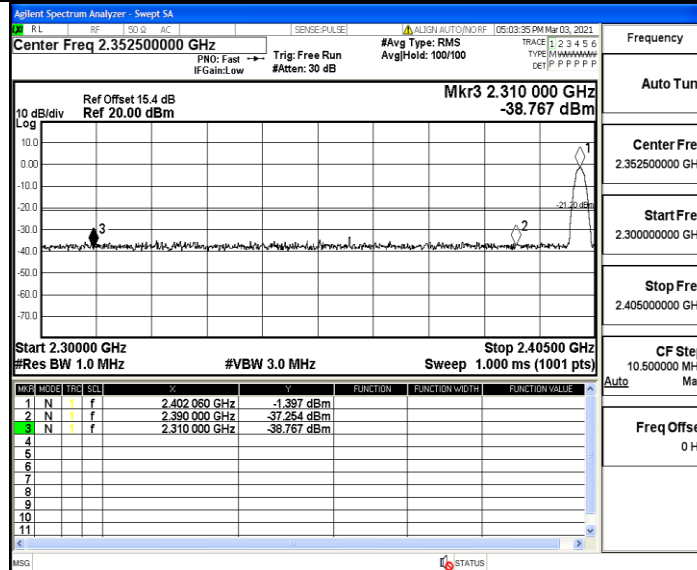
## 2DH5 Ant1 High 2480 Peak



## 3DH5\_Ant1\_Low\_2402\_AV



## 3DH5\_Ant1\_Low\_2402\_Peak



## 3DH5\_Ant1\_High\_2480\_AV

