

## Appendix A

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

Product Name: Audio Player

Trade Mark:



Test Model: M600

FCC ID: 2A4NMM600

### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 23.8℃     |
| Relative Humidity: | 58%       |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Nancy Li  |
| Supervised by:     | Hugo Chen |

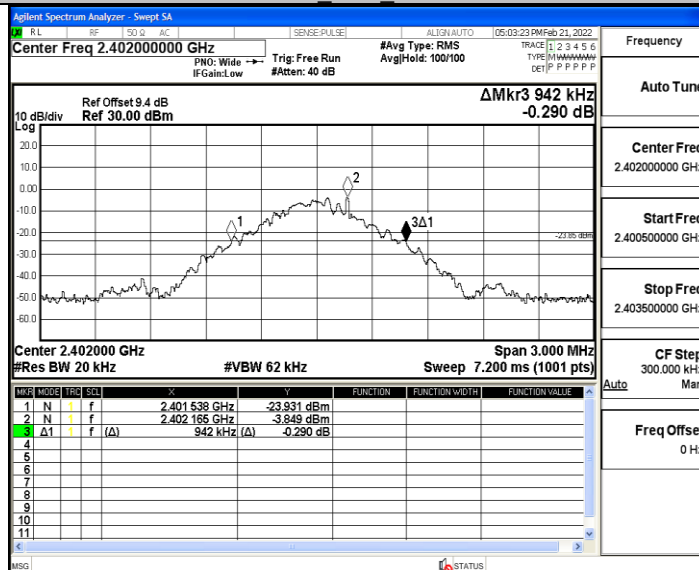
## Appendix A: 20dB Emission Bandwidth

### Test Result

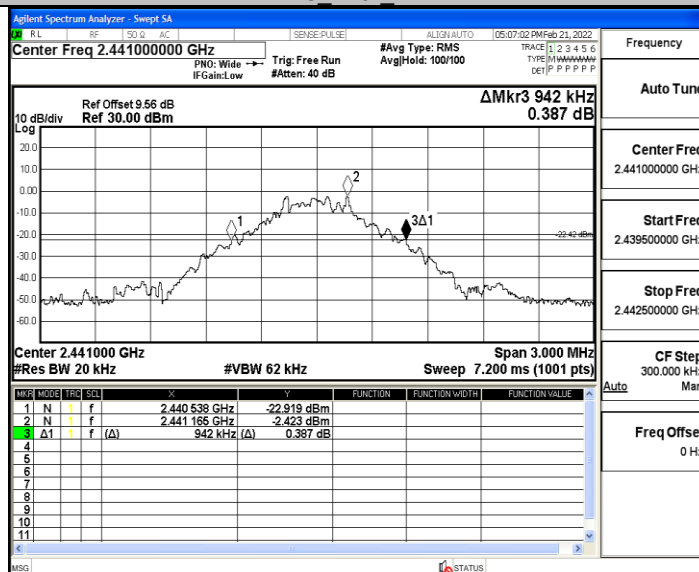
| TestMode | Antenna | Channel | 20db EBW[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|---------------|----------|----------|------------|---------|
| DH5      | Ant1    | 2402    | 0.942         | 2401.538 | 2402.480 | ---        | PASS    |
|          |         | 2441    | 0.942         | 2440.538 | 2441.480 | ---        | PASS    |
|          |         | 2480    | 0.942         | 2479.538 | 2480.480 | ---        | PASS    |
| 2DH5     | Ant1    | 2402    | 1.317         | 2401.340 | 2402.657 | ---        | PASS    |
|          |         | 2441    | 1.314         | 2440.340 | 2441.654 | ---        | PASS    |
|          |         | 2480    | 1.308         | 2479.343 | 2480.651 | ---        | PASS    |
| 3DH5     | Ant1    | 2402    | 1.311         | 2401.349 | 2402.660 | ---        | PASS    |
|          |         | 2441    | 1.290         | 2440.352 | 2441.642 | ---        | PASS    |
|          |         | 2480    | 1.314         | 2479.343 | 2480.657 | ---        | PASS    |

## Test Graphs

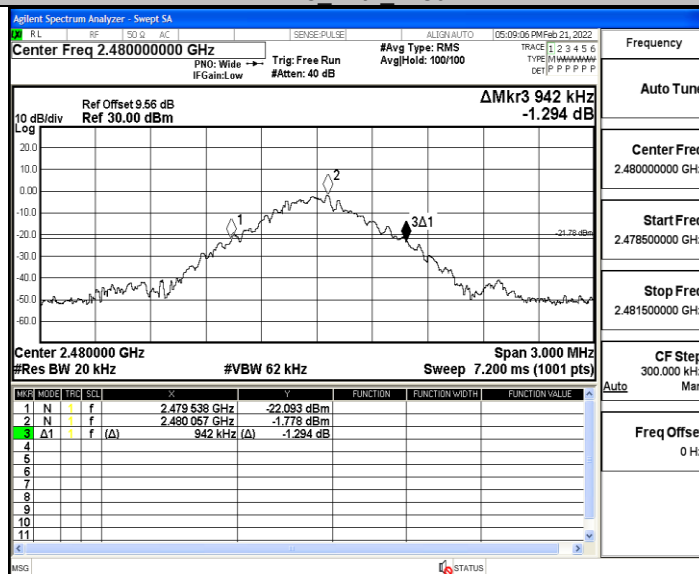
DH5 Ant1 2402



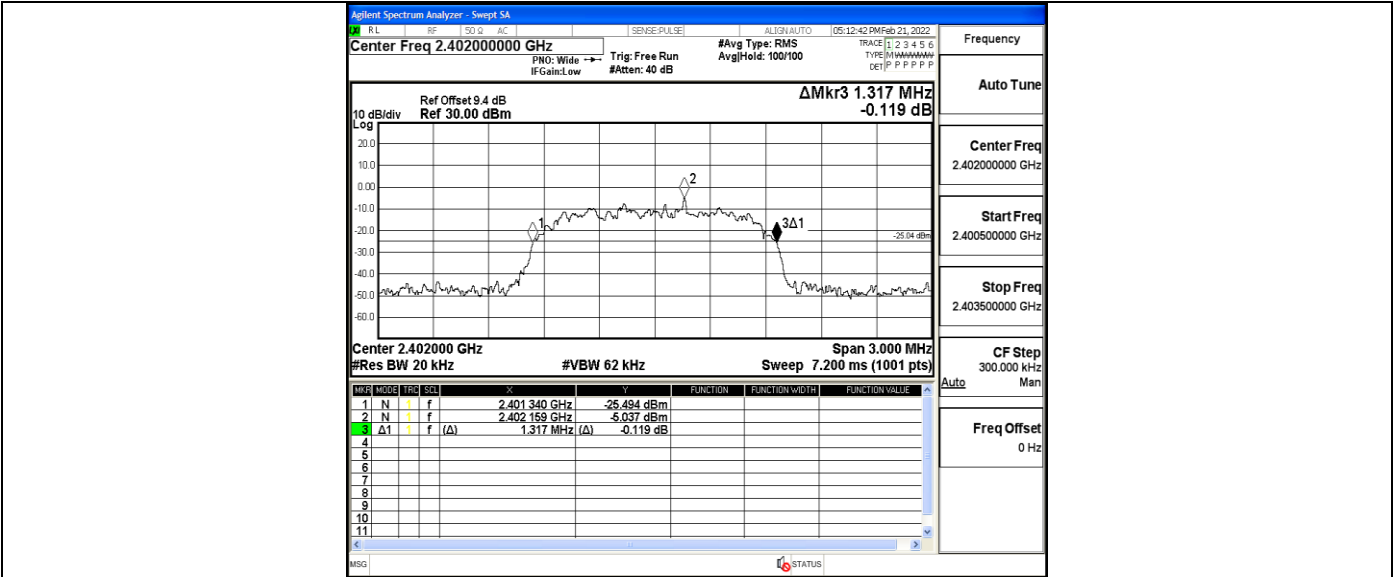
DH5 Ant1 2441



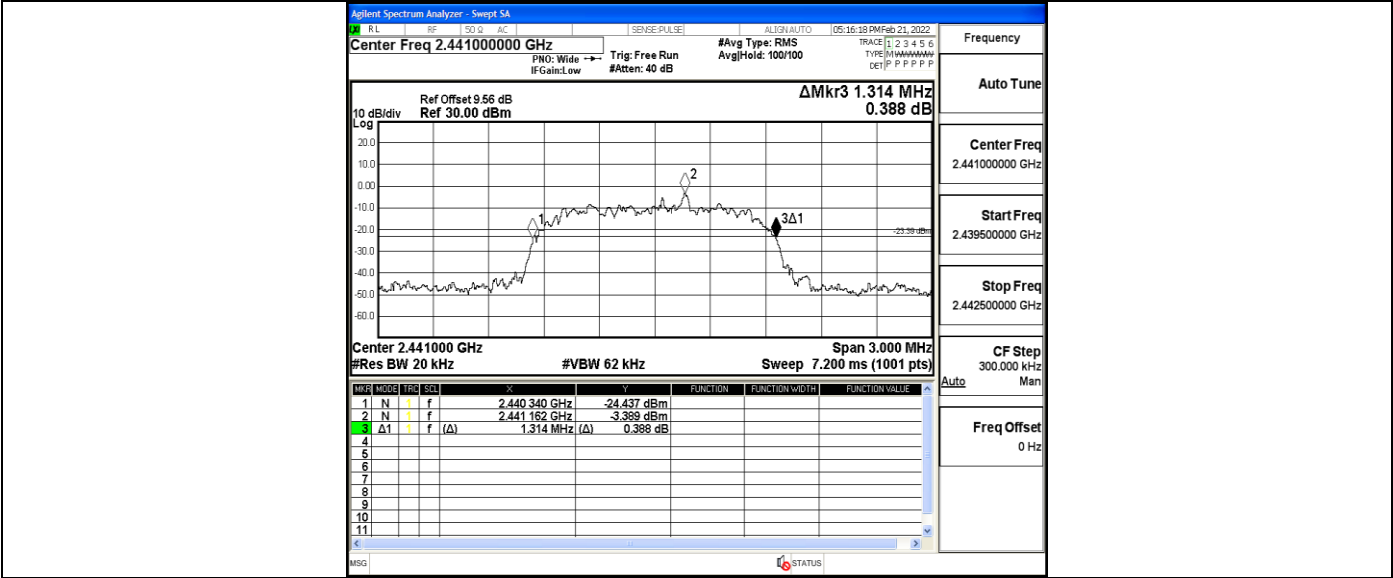
DH5 Ant1 2480



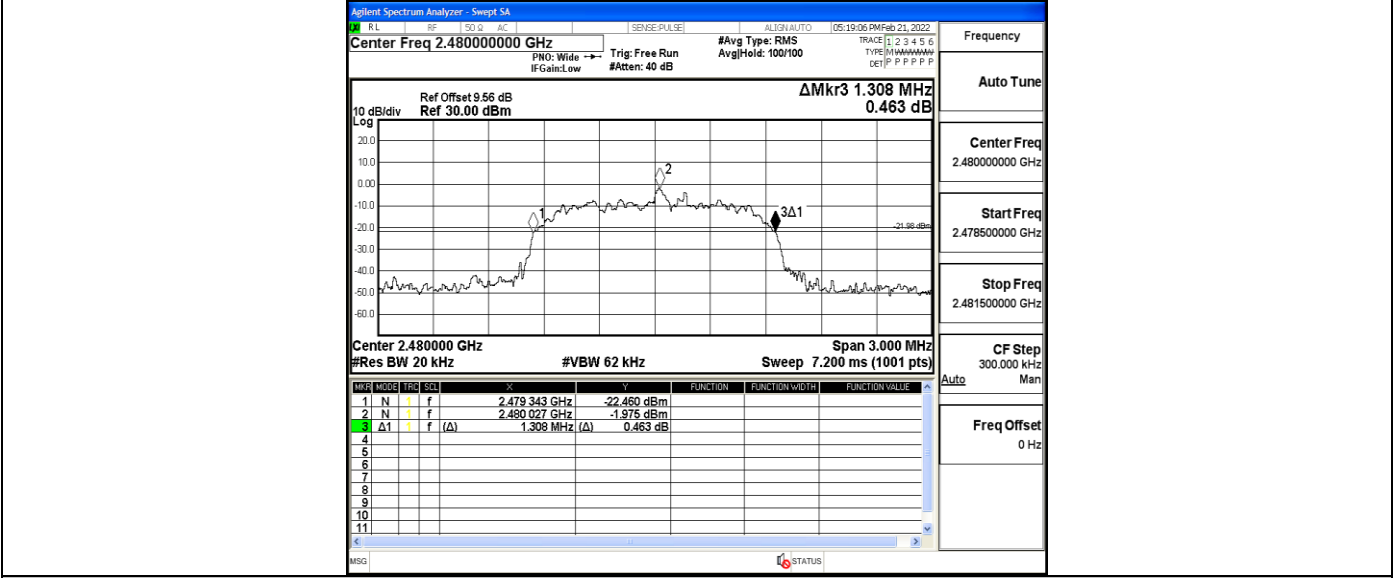
2DH5 Ant1 2402



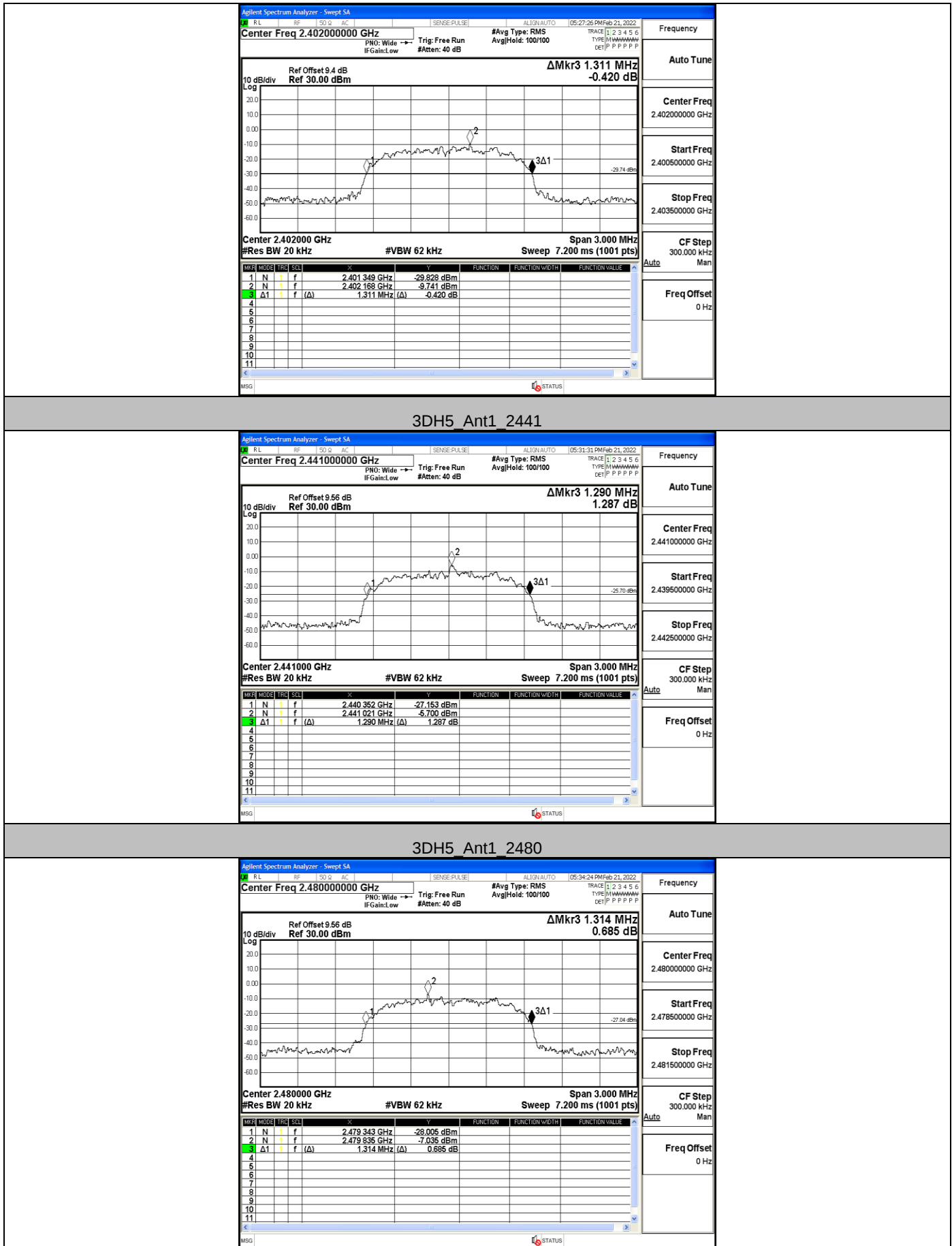
2DH5\_Ant1\_2441



2DH5\_Ant1\_2480



3DH5\_Ant1\_2402



## Appendix B: Occupied Channel Bandwidth

### Test Result

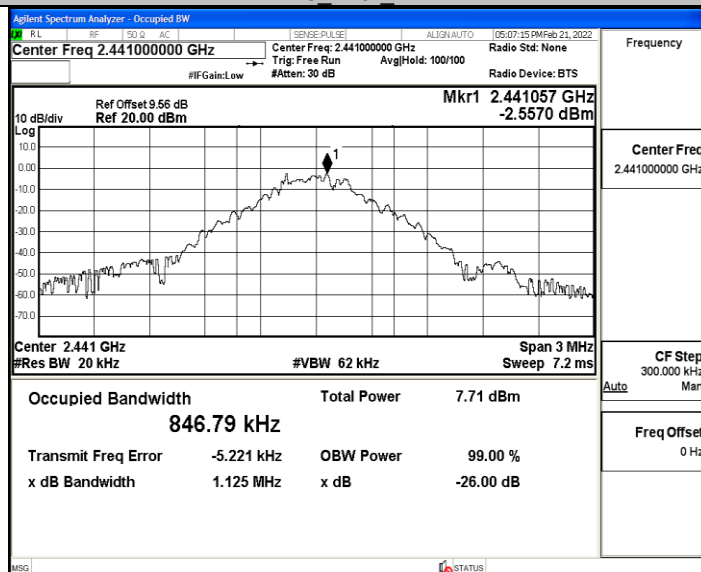
| TestMode | Antenna | Channel | OCB [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|-----------|----------|----------|------------|---------|
| DH5      | Ant1    | 2402    | 0.85458   | 2401.569 | 2402.423 | ---        | PASS    |
|          |         | 2441    | 0.84679   | 2440.571 | 2441.418 | ---        | PASS    |
|          |         | 2480    | 0.85638   | 2479.567 | 2480.423 | ---        | PASS    |
| 2DH5     | Ant1    | 2402    | 1.1866    | 2401.406 | 2402.593 | ---        | PASS    |
|          |         | 2441    | 1.1891    | 2440.405 | 2441.594 | ---        | PASS    |
|          |         | 2480    | 1.1955    | 2479.403 | 2480.599 | ---        | PASS    |
| 3DH5     | Ant1    | 2402    | 1.1916    | 2401.399 | 2402.591 | ---        | PASS    |
|          |         | 2441    | 1.1870    | 2440.404 | 2441.591 | ---        | PASS    |
|          |         | 2480    | 1.1915    | 2479.399 | 2480.590 | ---        | PASS    |

## Test Graphs

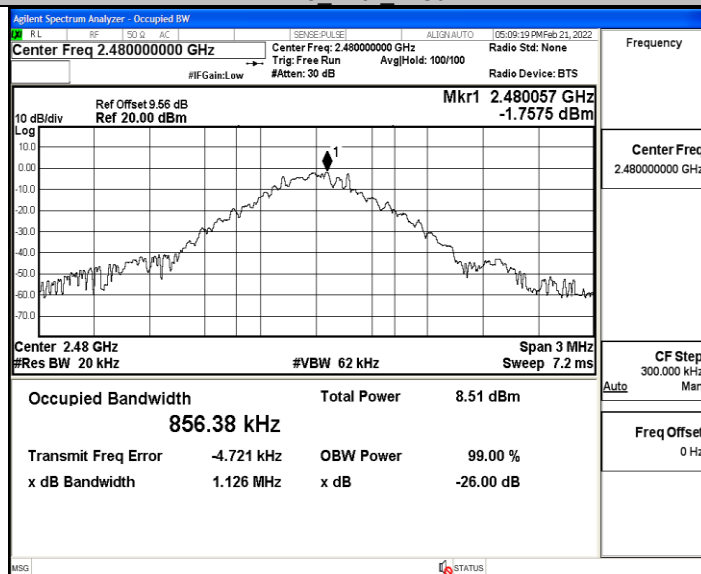
DH5\_Ant1\_2402



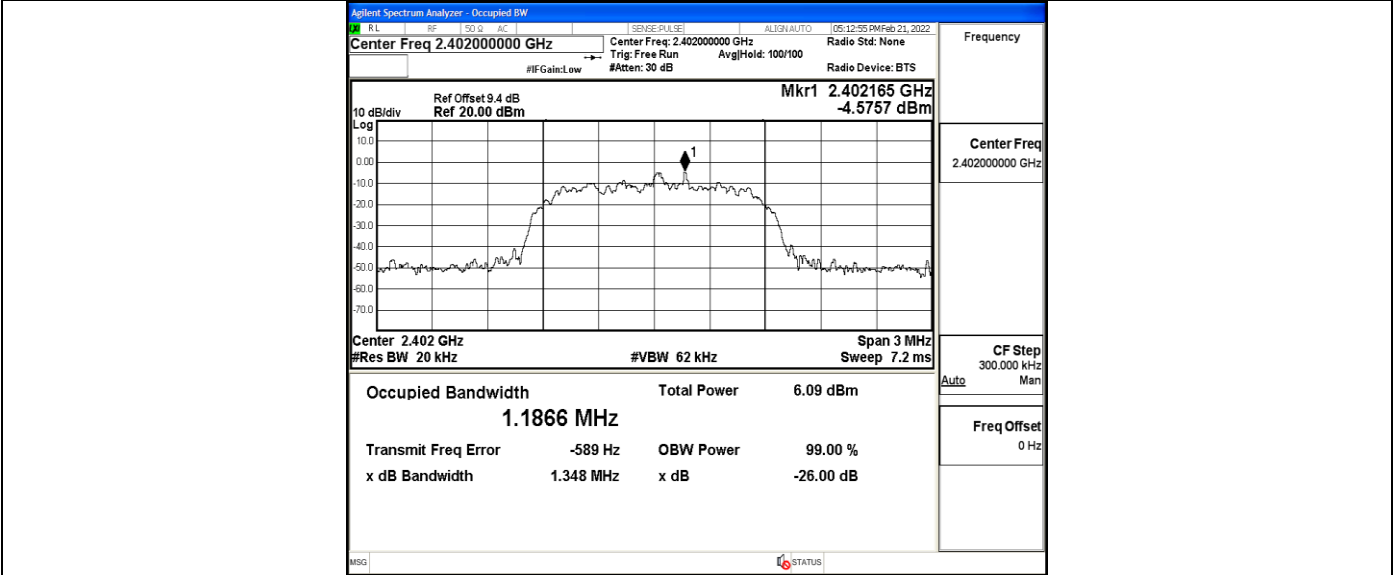
DH5\_Ant1\_2441



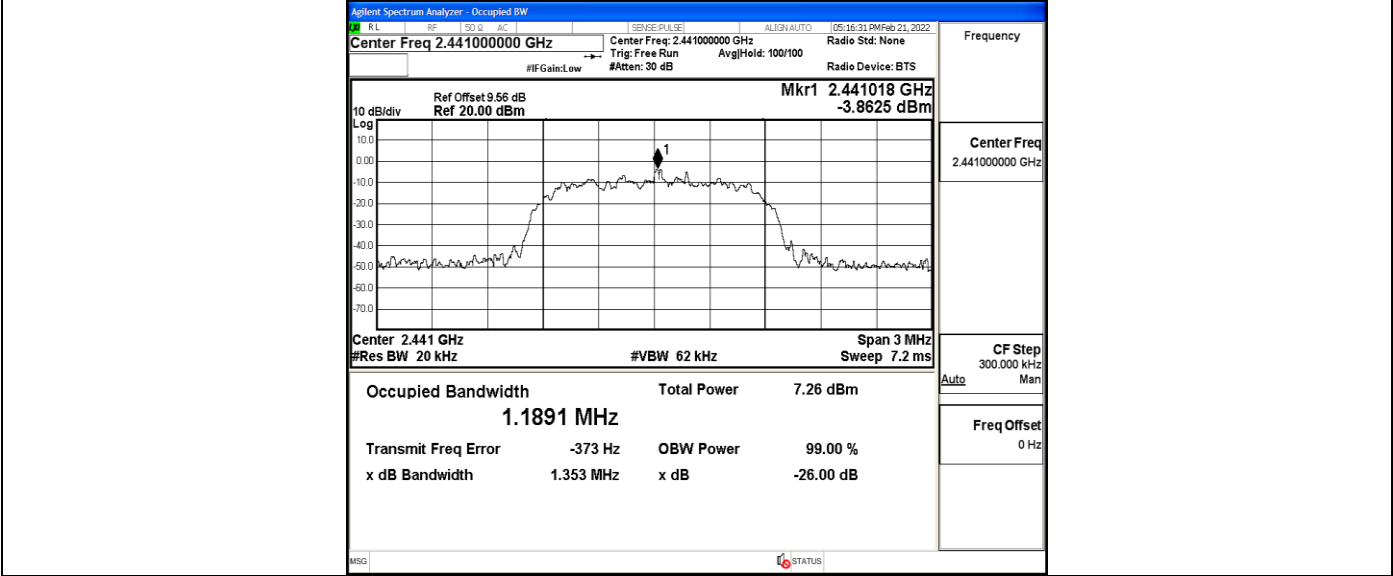
DH5\_Ant1\_2480



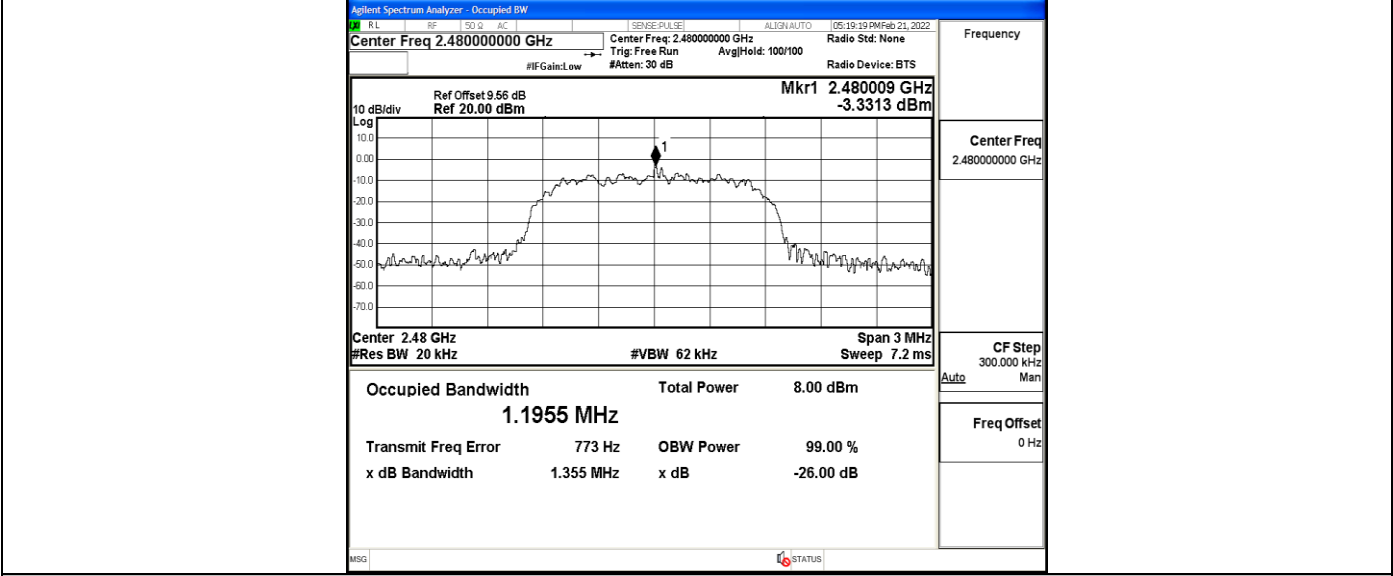
2DH5\_Ant1\_2402



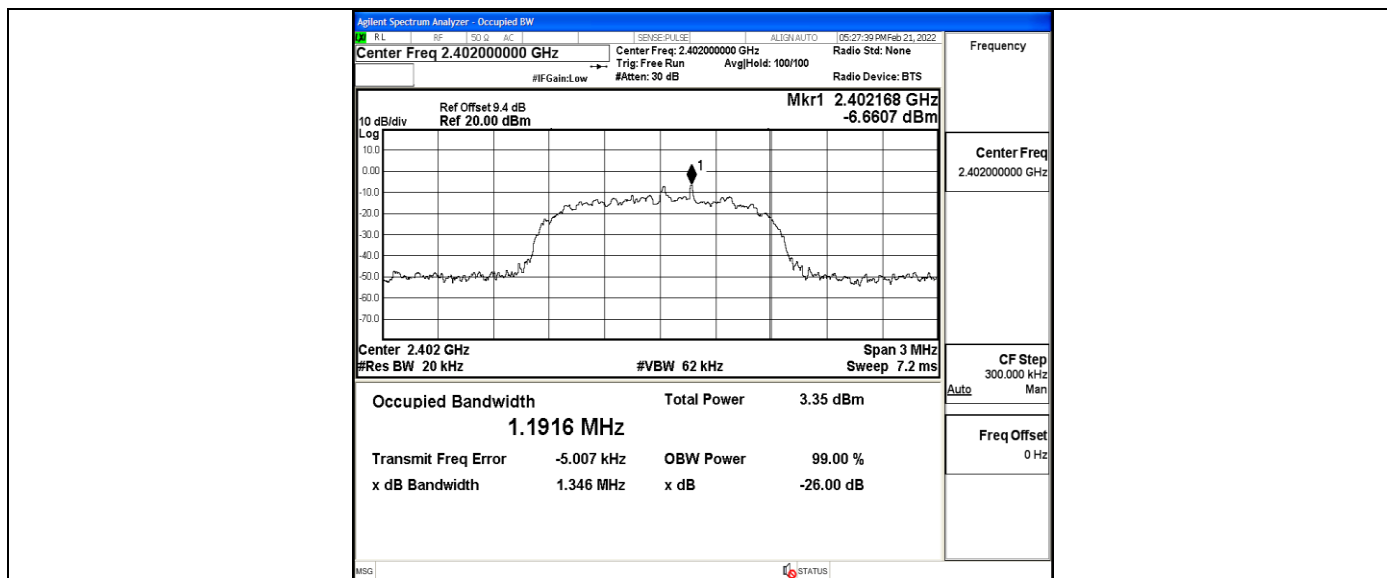
2DH5\_Ant1\_2441



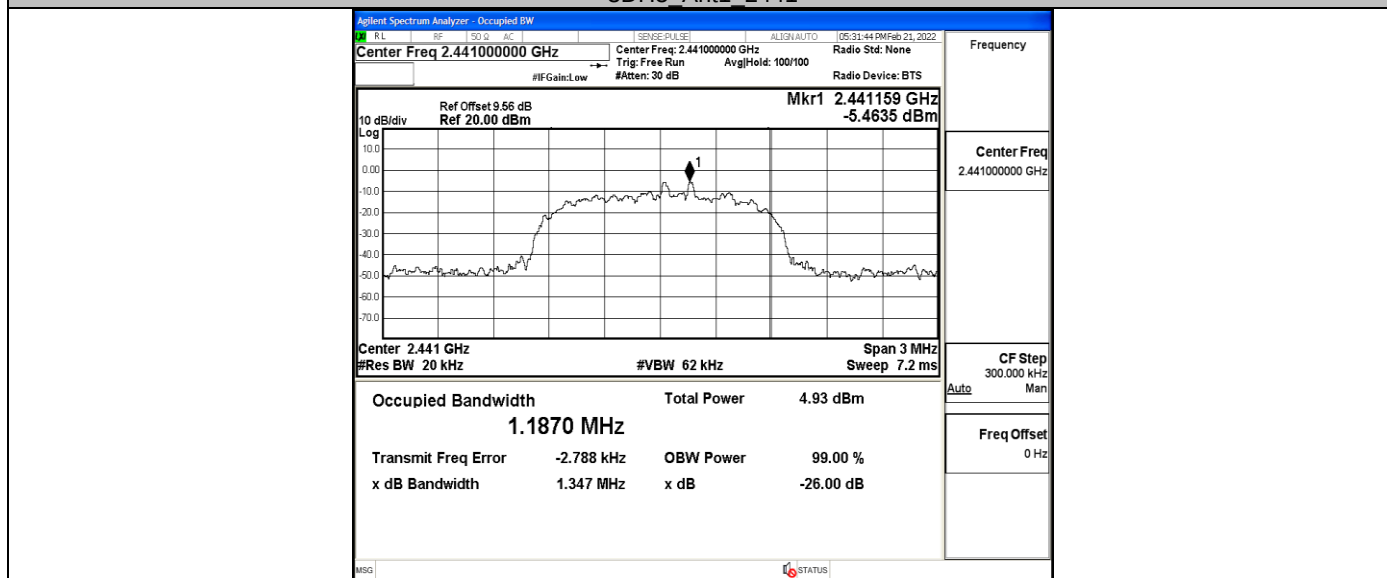
2DH5\_Ant1\_2480



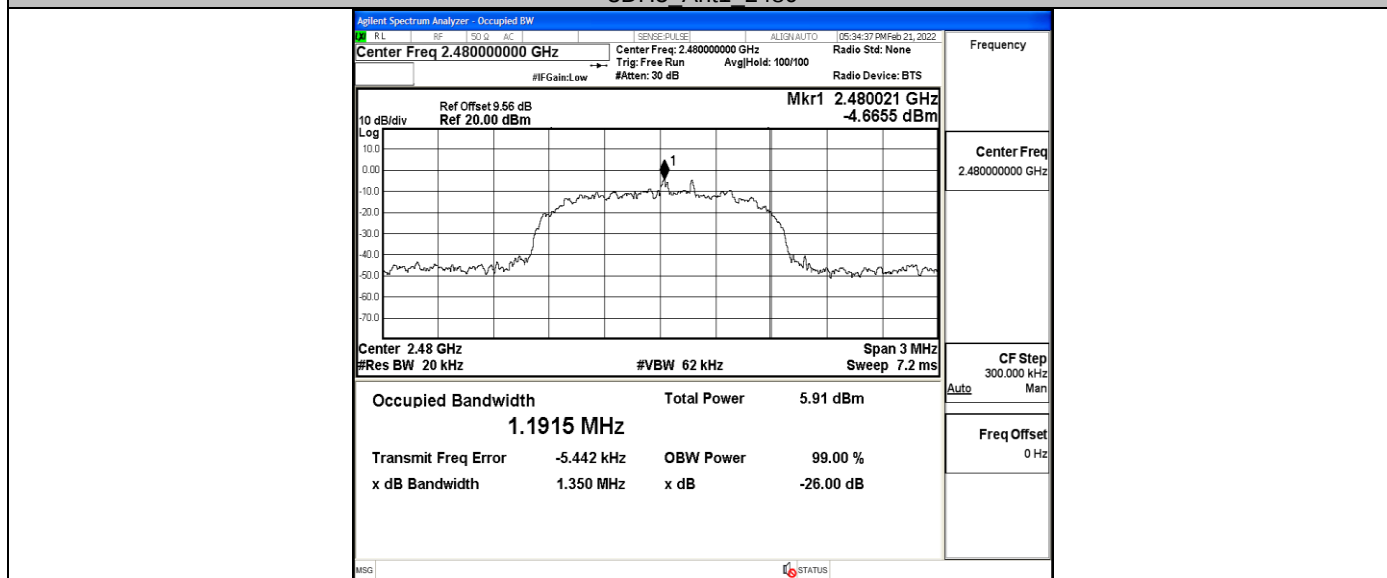
3DH5\_Ant1\_2402



## 3DH5\_Ant1\_2441



## 3DH5\_Ant1\_2480

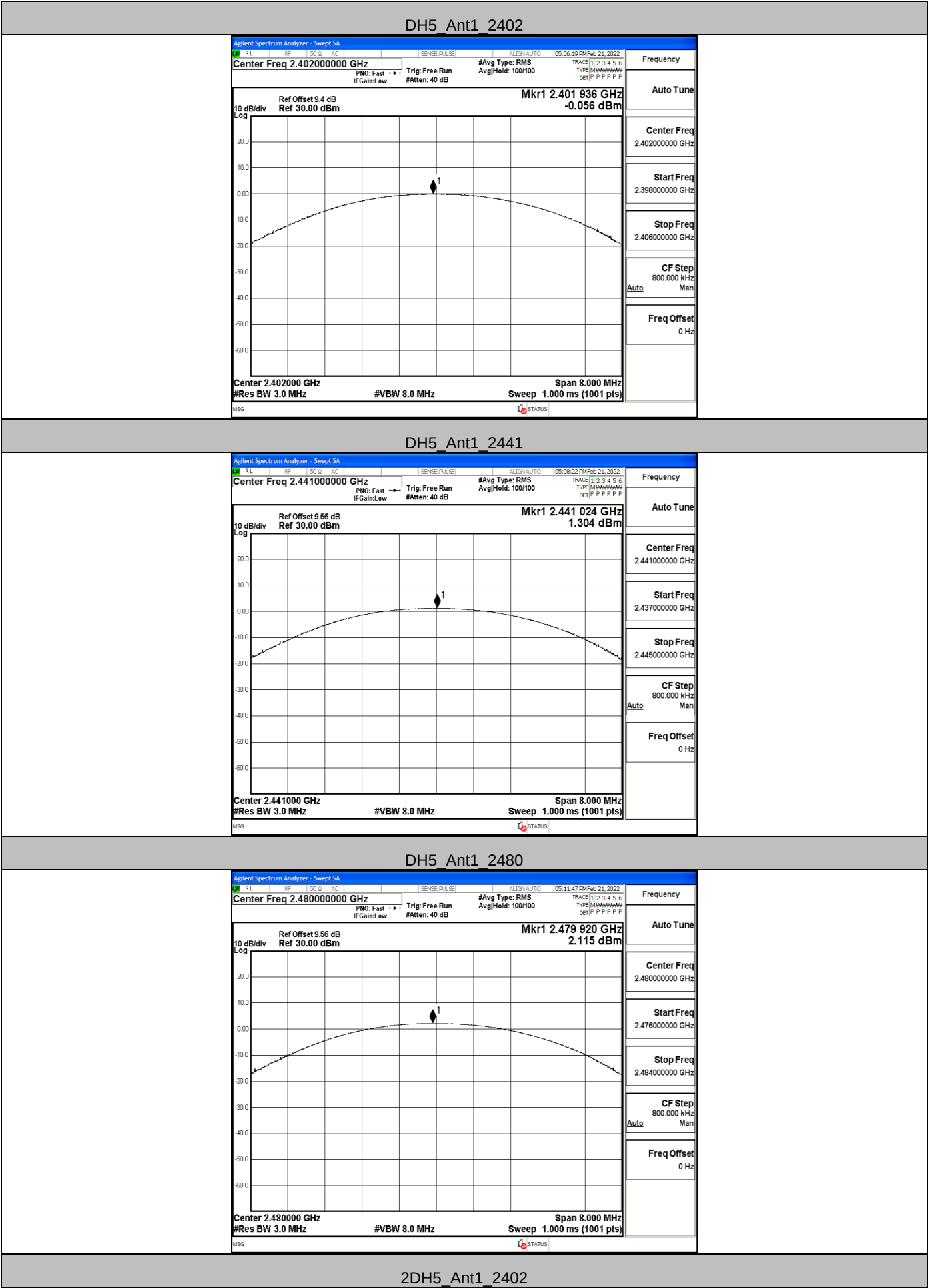


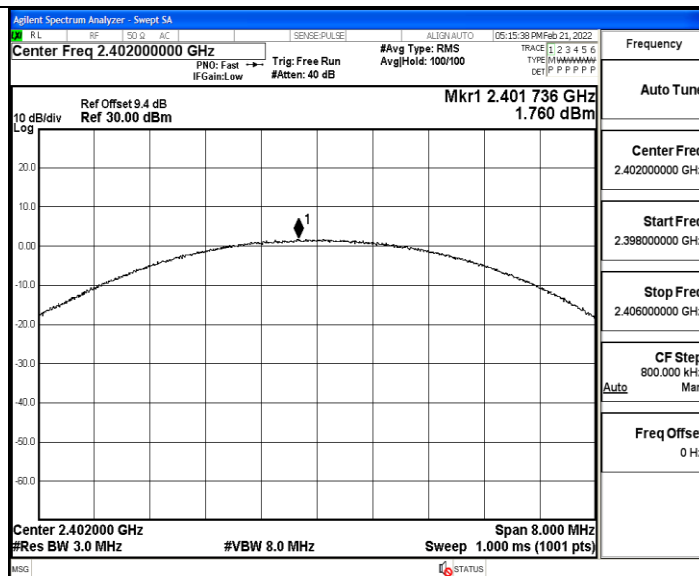
## Appendix C: Maximum conducted output power

### Test Result

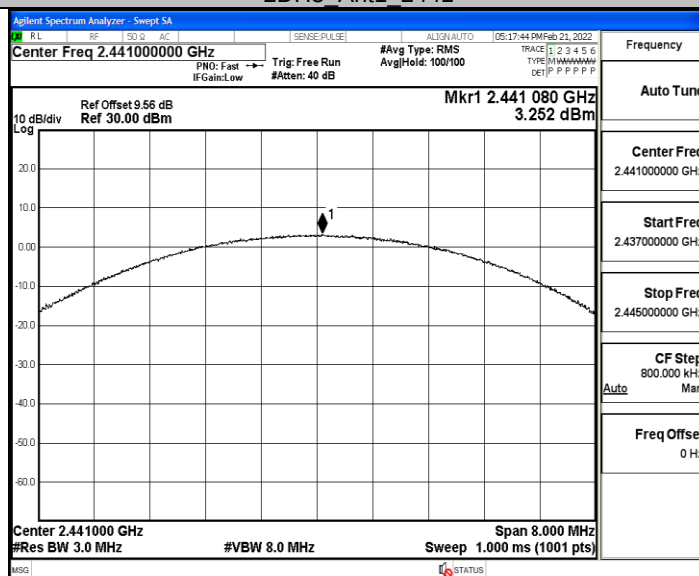
| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| DH5      | Ant1    | 2402    | -0.06       | <=30.00    | PASS    |
|          |         | 2441    | 1.3         | <=30.00    | PASS    |
|          |         | 2480    | 2.12        | <=30.00    | PASS    |
| 2DH5     | Ant1    | 2402    | 1.76        | <=20.97    | PASS    |
|          |         | 2441    | 3.25        | <=20.97    | PASS    |
|          |         | 2480    | 1.75        | <=20.97    | PASS    |
| 3DH5     | Ant1    | 2402    | -0.48       | <=20.97    | PASS    |
|          |         | 2441    | 1.03        | <=20.97    | PASS    |
|          |         | 2480    | 2.04        | <=20.97    | PASS    |

Test Graphs

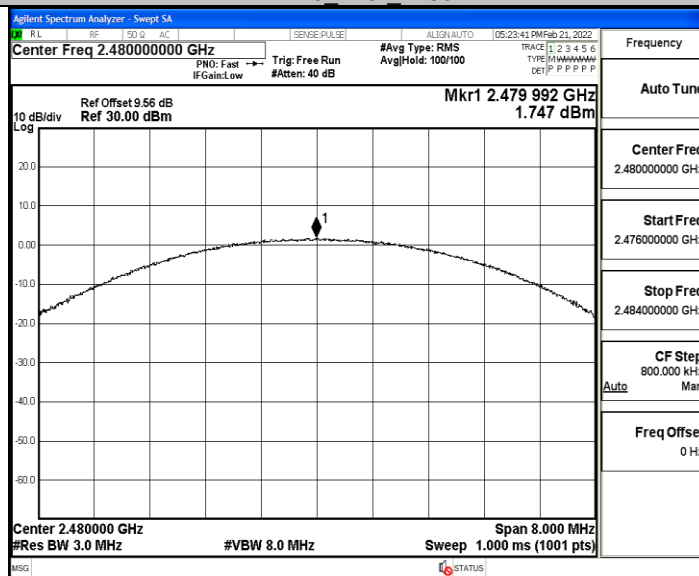




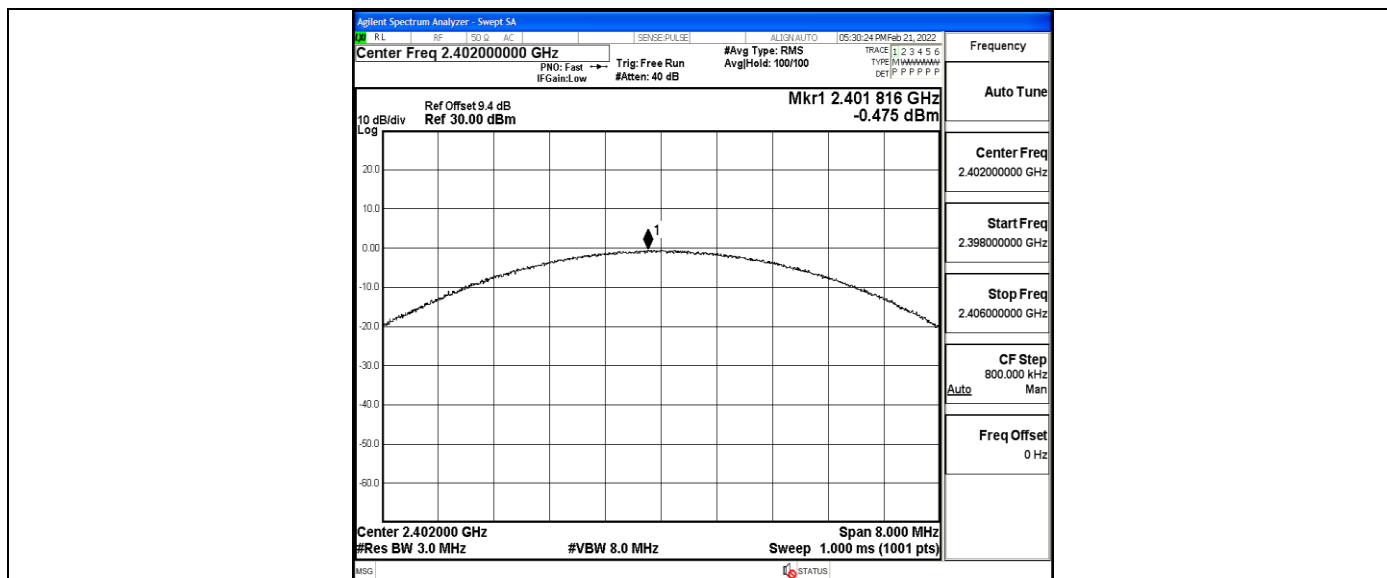
2DH5\_Ant1\_2441



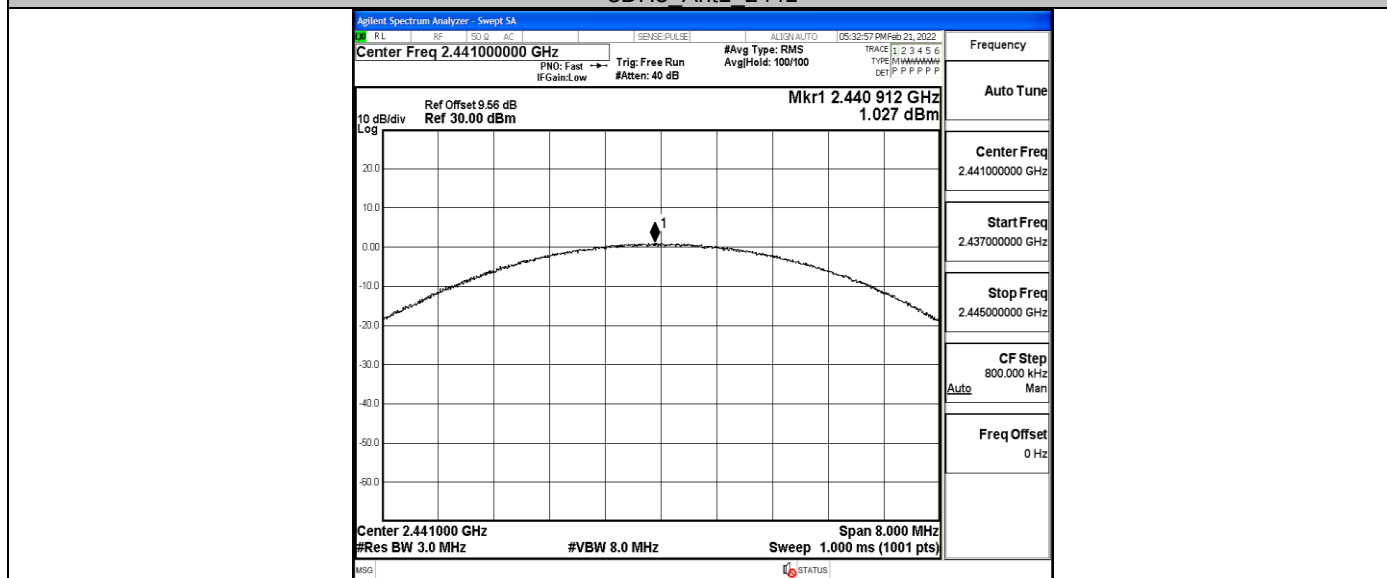
2DH5\_Ant1\_2480



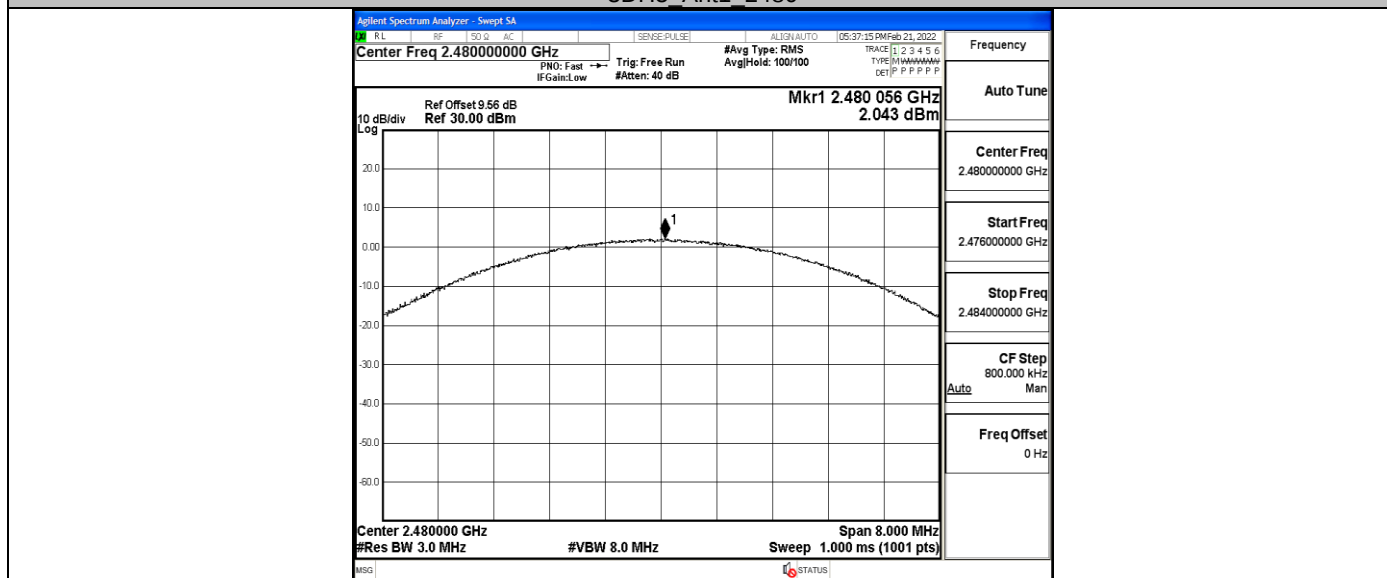
3DH5\_Ant1\_2402



3DH5\_Ant1\_2441



3DH5\_Ant1\_2480



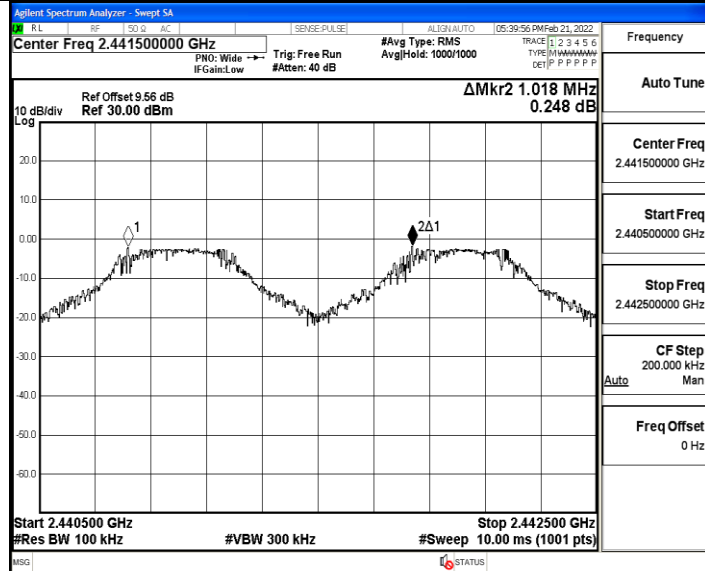
## Appendix D: Carrier frequency separation

### Test Result

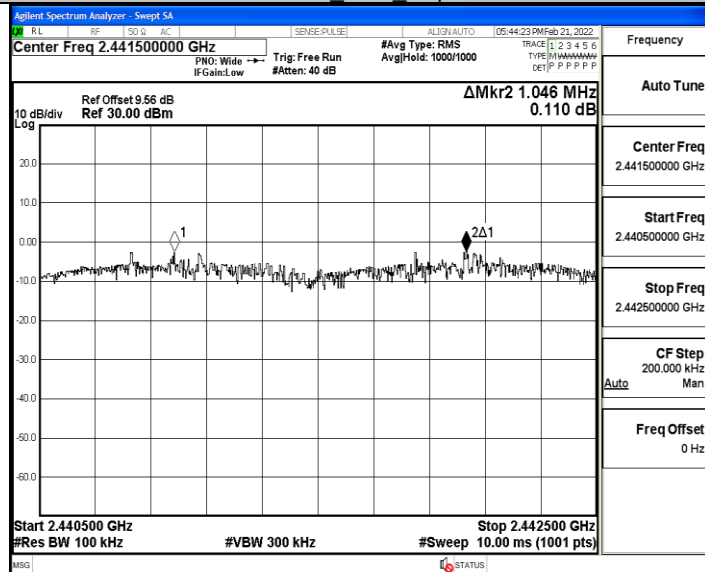
| TestMode | Antenna | Channel | Result[MHz] | Limit[MHz]   | Verdict |
|----------|---------|---------|-------------|--------------|---------|
| DH5      | Ant1    | Hop     | 1.018       | $\geq 0.942$ | PASS    |
| 2DH5     | Ant1    | Hop     | 1.046       | $\geq 0.878$ | PASS    |
| 3DH5     | Ant1    | Hop     | 0.986       | $\geq 0.876$ | PASS    |

## Test Graphs

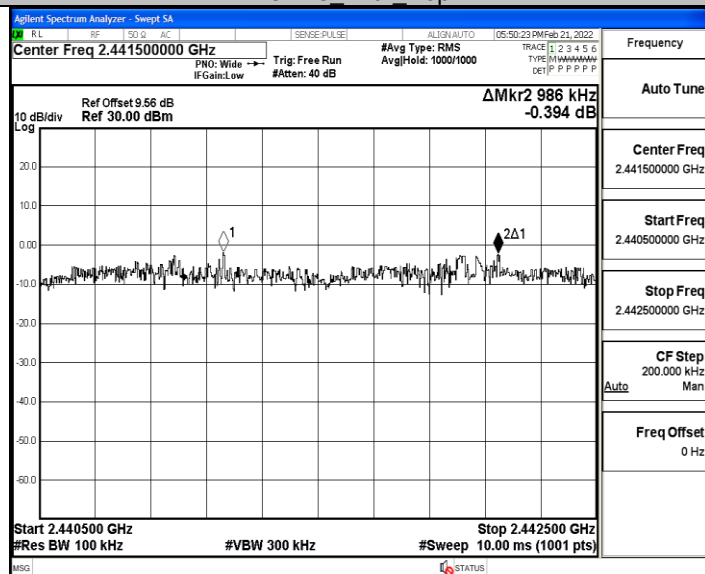
DH5\_Ant1\_Hop



2DH5\_Ant1\_Hop



3DH5\_Ant1\_Hop

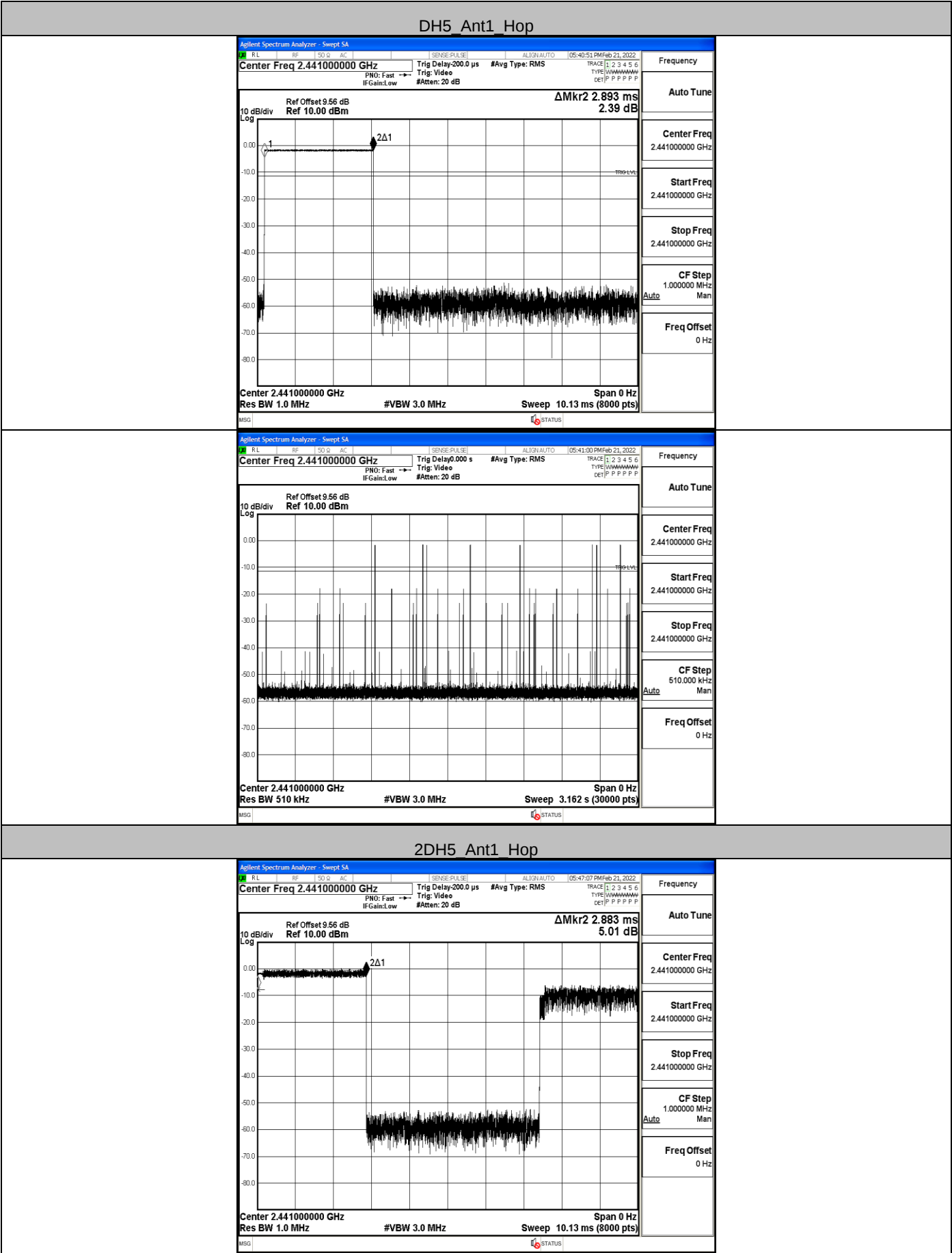


## Appendix E: Time of occupancy

### Test Result

| TestMode | Antenna | Channel | BurstWidth<br>[ms] | TotalHops<br>[Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|---------|--------------------|--------------------|-----------|----------|---------|
| DH5      | Ant1    | Hop     | 2.89               | 90                 | 0.26      | <=0.4    | PASS    |
| 2DH5     | Ant1    | Hop     | 2.88               | 70                 | 0.202     | <=0.4    | PASS    |
| 3DH5     | Ant1    | Hop     | 2.88               | 80                 | 0.231     | <=0.4    | PASS    |

Test Graphs



2DH5 Ant1 Hop

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.441000000 GHz

Ref Offset 9.56 dB

Ref 10.00 dBm

10 dB/div

Log

0.00

-10.00

-20.00

-30.00

-40.00

-50.00

-60.00

-70.00

-80.00

Center 2.441000000 GHz

Res BW 1.0 MHz

#VBW 3.0 MHz

Sweep 10.13 ms (8000 pts)

MSG

STATUS

Frequency

Auto Tune

Center Freq 2.441000000 GHz

Start Freq 2.441000000 GHz

Stop Freq 2.441000000 GHz

CF Step 1.000000 MHz

Auto

Freq Offset 0 Hz

Trig Delay: 200.0  $\mu$ s

Trig: Video

#Atten: 20 dB

#Avg Type: RMS

Trace 1 2 3 4 5 6

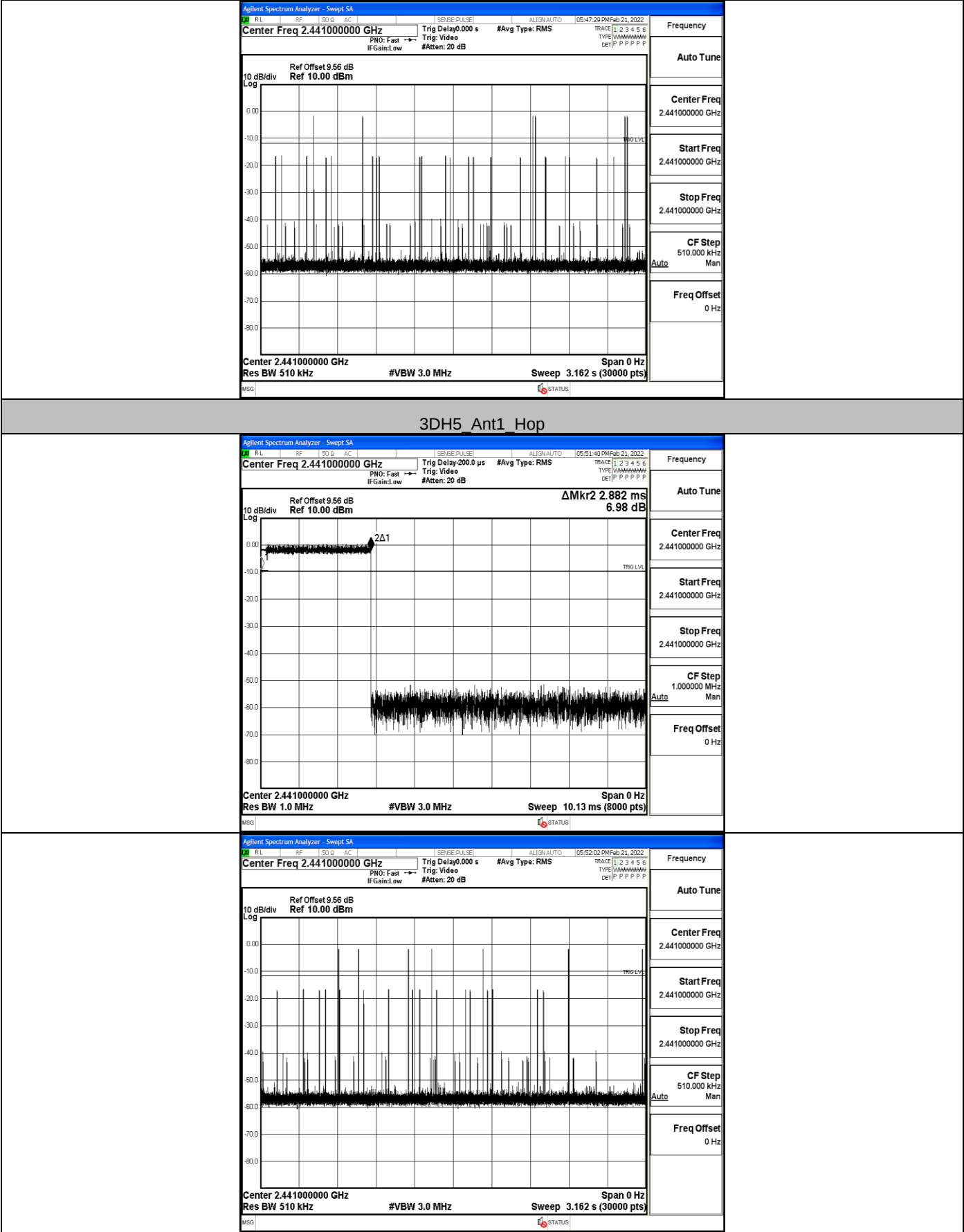
TYPE: WWWWMMW

DET: P P P P P P

$\Delta$ Mkr2 2.893 ms

5.01 dB

2 $\Delta$ 1



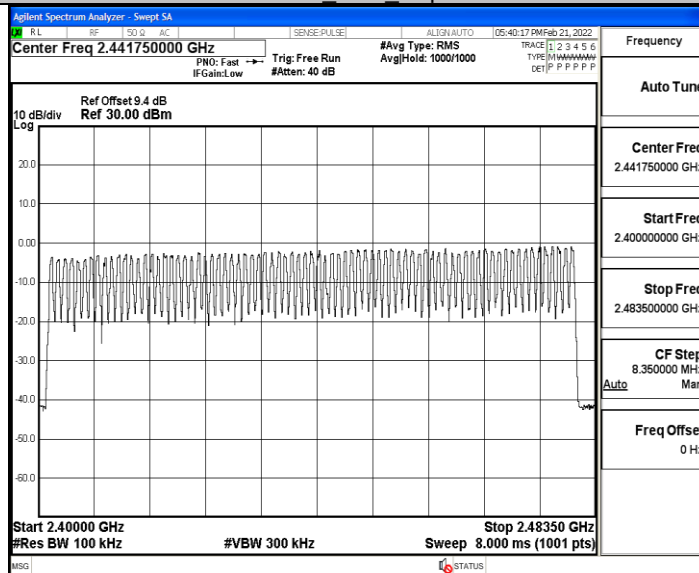
## Appendix F: Number of hopping channels

### Test Result

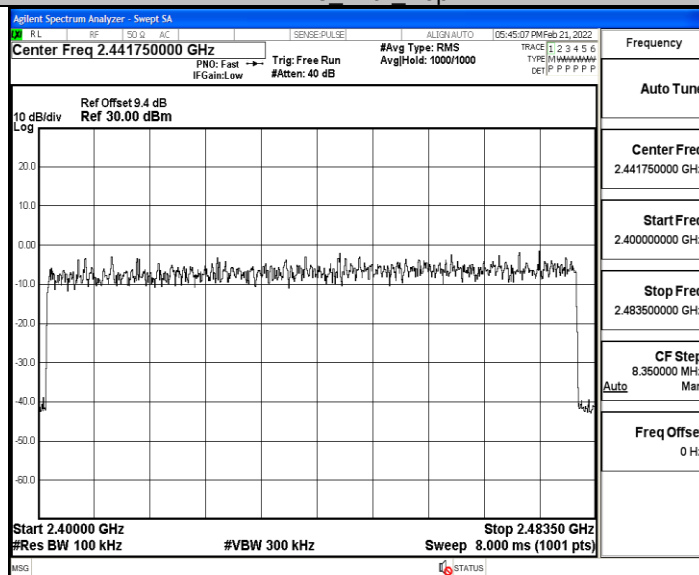
| TestMode | Antenna | Channel | Result[Num] | Limit[Num] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| DH5      | Ant1    | Hop     | 79          | >=15       | PASS    |
| 2DH5     | Ant1    | Hop     | 79          | >=15       | PASS    |
| 3DH5     | Ant1   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

## Test Graphs

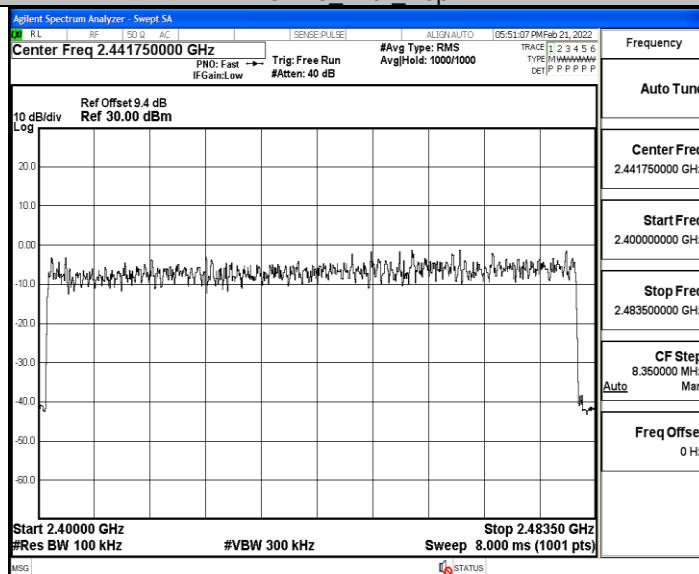
DH5\_Ant1\_Hop



2DH5\_Ant1\_Hop



3DH5\_Ant1\_Hop



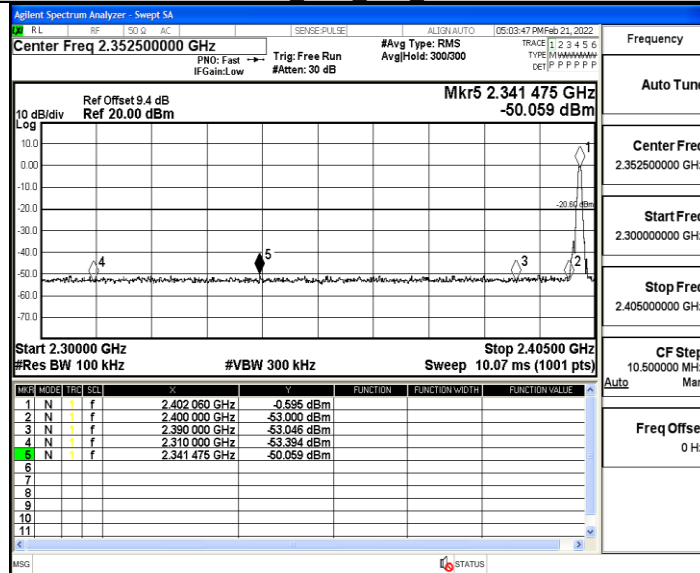
## Appendix G: Band edge measurements

### Test Result

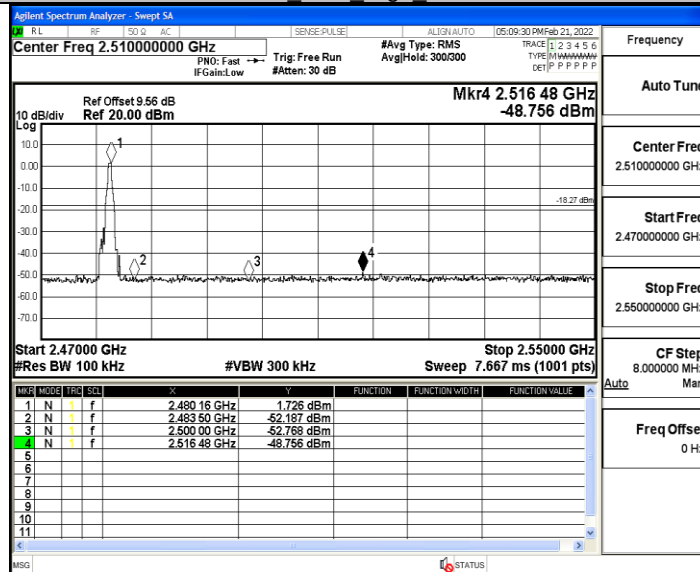
| TestMode | Antenna | ChName | Channel  | RefLevel<br>[dBm] | Result<br>[dBm] | Limit<br>[dBm] | Verdict |
|----------|---------|--------|----------|-------------------|-----------------|----------------|---------|
| DH5      | Ant1    | Low    | 2402     | -0.60             | -50.06          | $\leq -20.6$   | PASS    |
|          |         | High   | 2480     | 1.73              | -48.76          | $\leq -18.27$  | PASS    |
|          |         | Low    | Hop_2402 | -3.95             | -50.12          | $\leq -23.95$  | PASS    |
|          |         | High   | Hop_2480 | -1.53             | -48.68          | $\leq -21.53$  | PASS    |
| 2DH5     | Ant1    | Low    | 2402     | -1.24             | -50.43          | $\leq -21.24$  | PASS    |
|          |         | High   | 2480     | -0.80             | -48.98          | $\leq -20.8$   | PASS    |
|          |         | Low    | Hop_2402 | -6.87             | -50.42          | $\leq -26.87$  | PASS    |
|          |         | High   | Hop_2480 | -1.78             | -49.12          | $\leq -21.78$  | PASS    |
| 3DH5     | Ant1    | Low    | 2402     | -3.79             | -50.26          | $\leq -23.79$  | PASS    |
|          |         | High   | 2480     | -0.66             | -49             | $\leq -20.66$  | PASS    |
|          |         | Low    | Hop_2402 | -6.40             | -50.19          | $\leq -26.4$   | PASS    |
|          |         | High   | Hop_2480 | -1.94             | -49.25          | $\leq -21.94$  | PASS    |

## Test Graphs

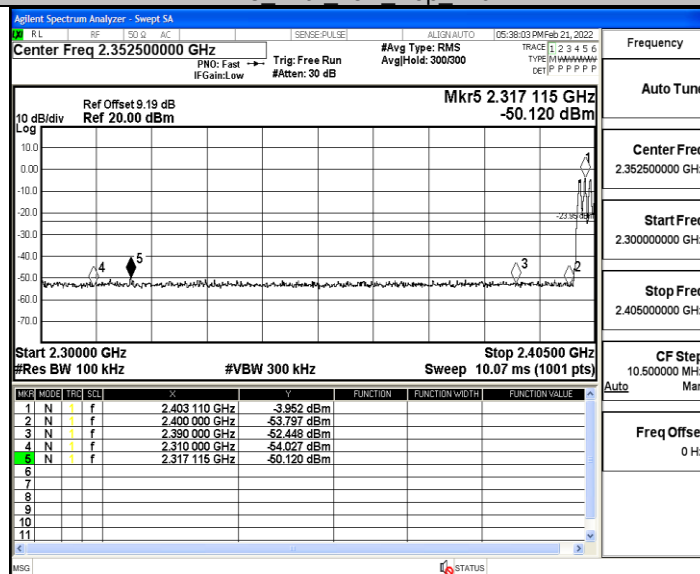
DH5\_Ant1\_Low\_2402



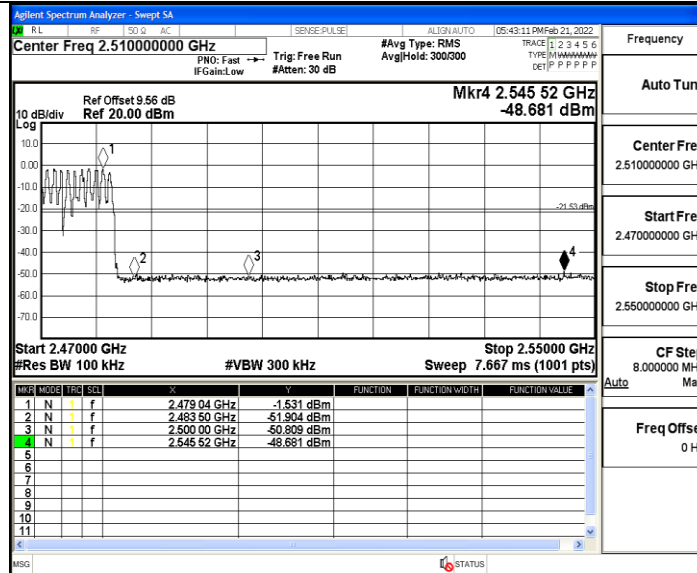
DH5\_Ant1\_High\_2480



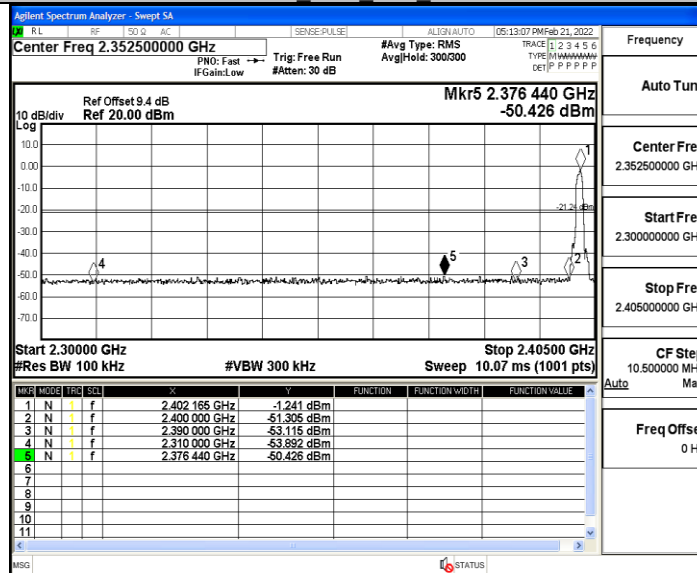
DH5\_Ant1\_Low\_Hop\_2402



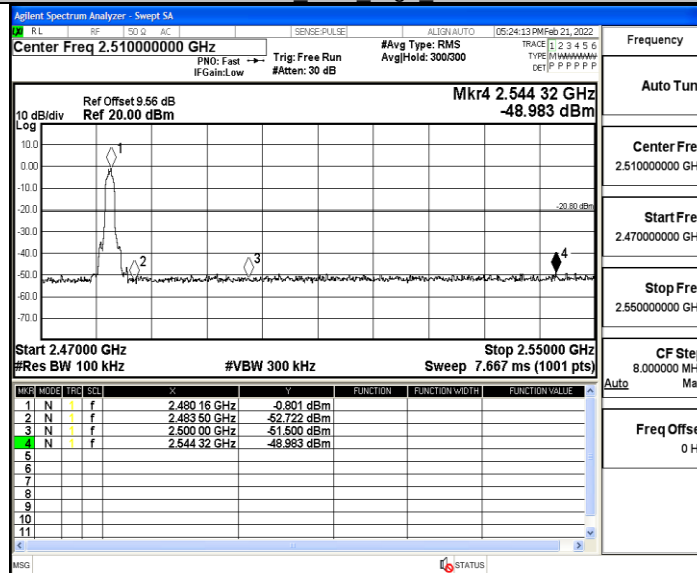
DH5\_Ant1\_High\_Hop\_2480



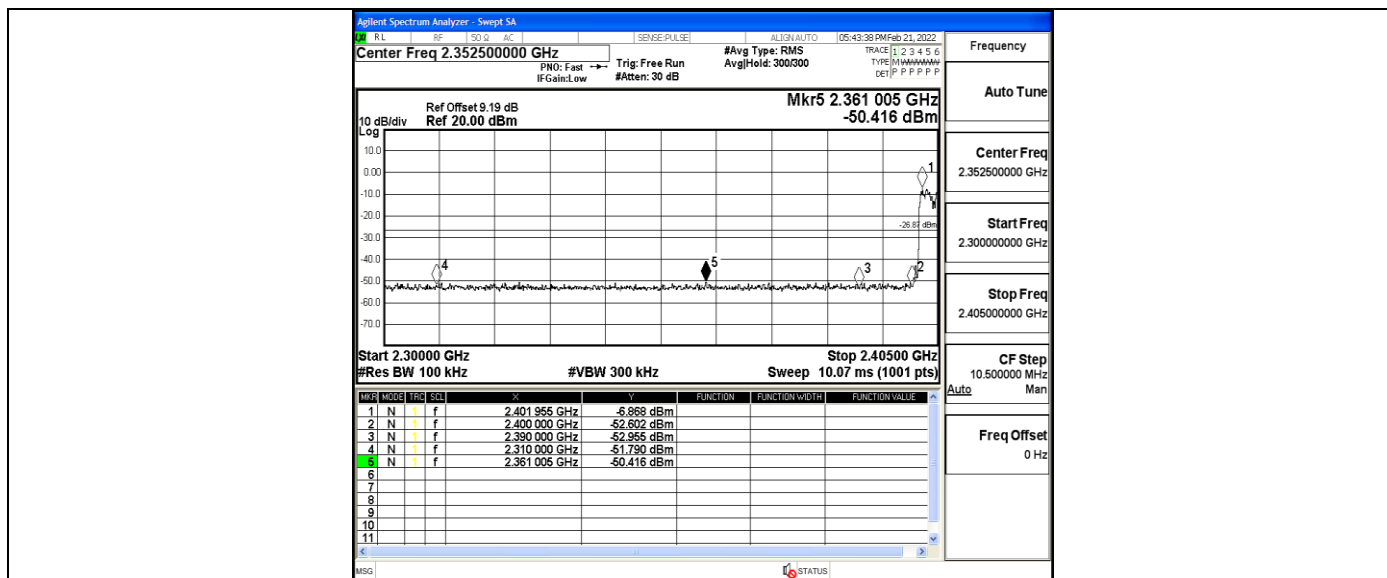
## 2DH5 Ant1 Low 2402



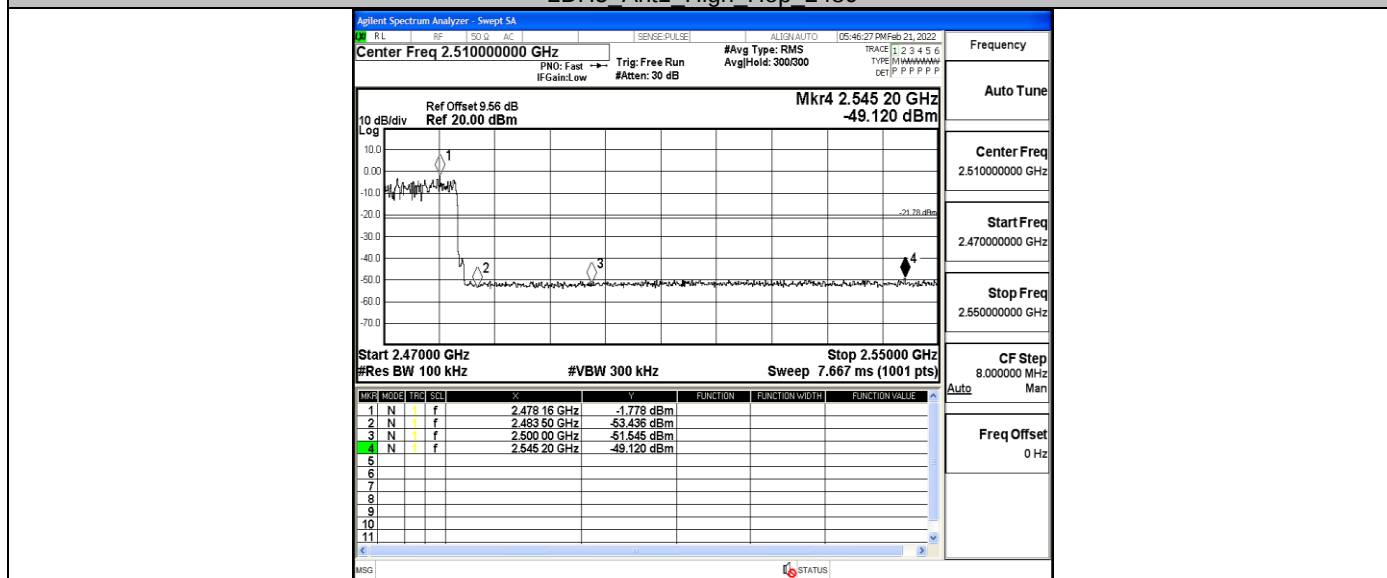
## 2DH5 Ant1 High 2480



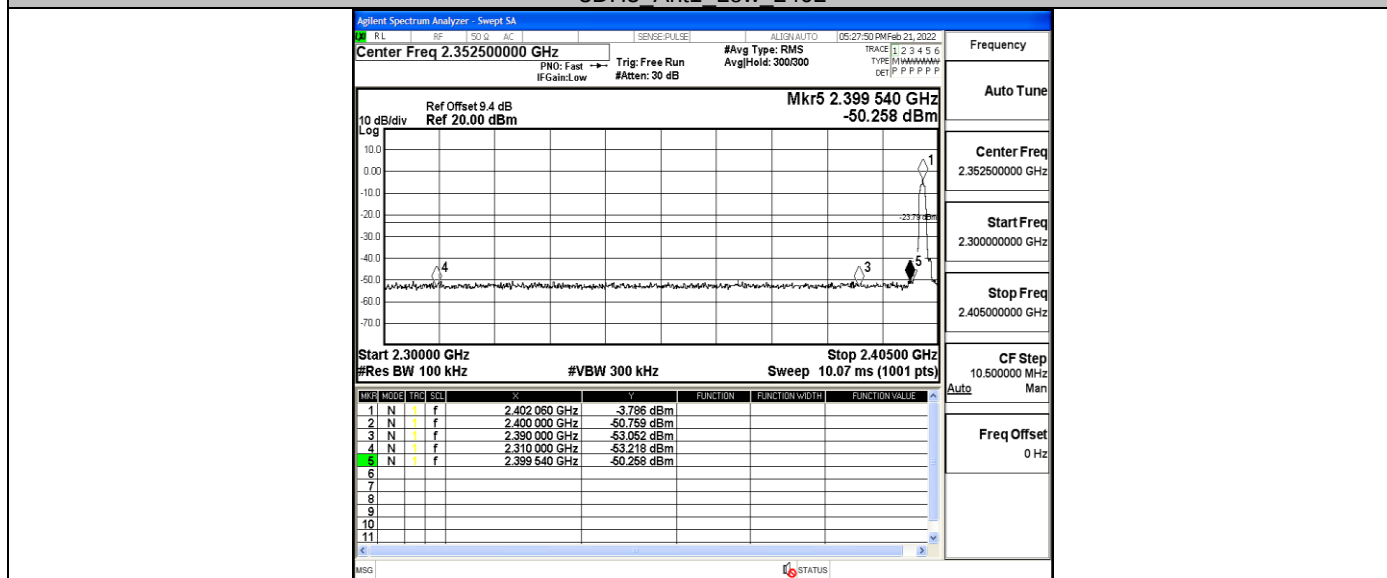
## 2DH5 Ant1 Low Hop 2402



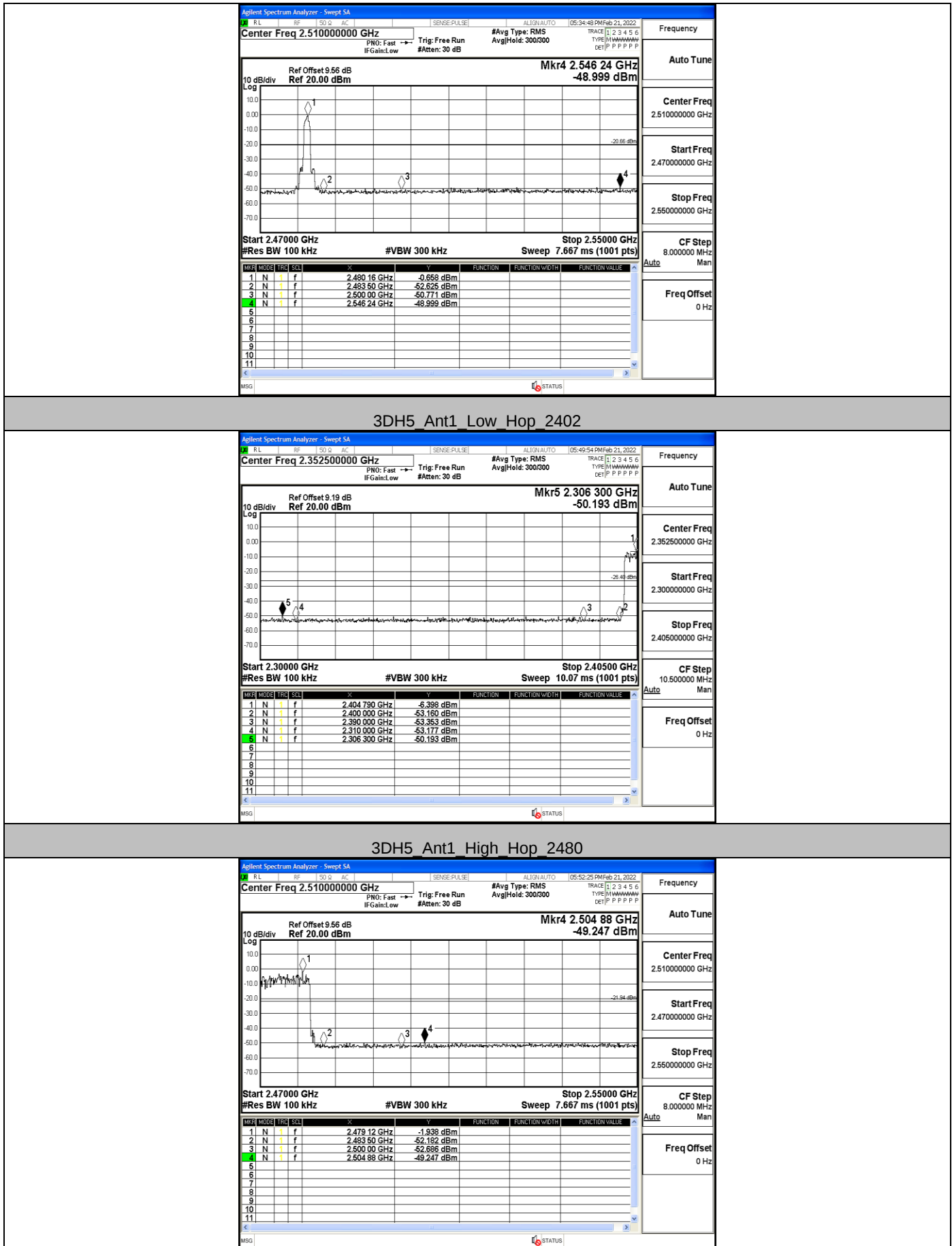
## 2DH5 Ant1 High Hop 2480



## 3DH5 Ant1 Low 2402



## 3DH5 Ant1 High 2480



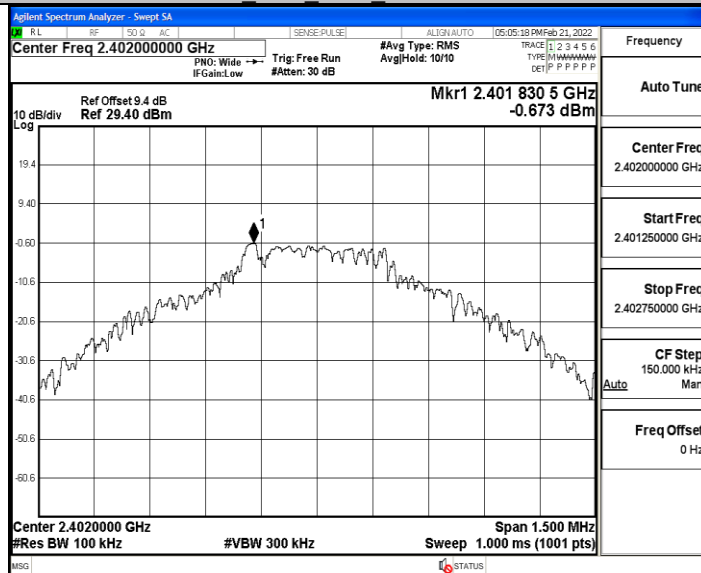
## Appendix H: Conducted Spurious Emission

### Test Result

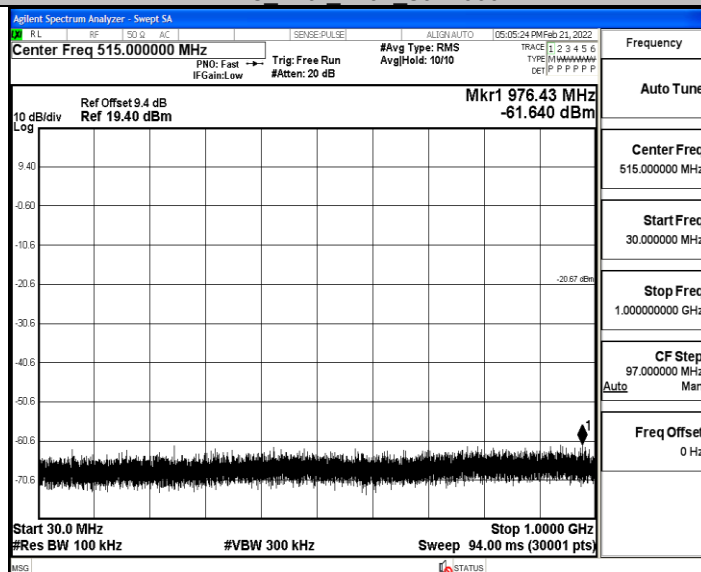
| TestMode | Antenna | Channel | FreqRange<br>[MHz] | RefLevel<br>[dBm] | Result<br>[dBm] | Limit<br>[dBm] | Verdict |
|----------|---------|---------|--------------------|-------------------|-----------------|----------------|---------|
| DH5      | Ant1    | 2402    | Reference          | -0.67             | -0.67           | ---            | PASS    |
|          |         |         | 30~1000            | -0.67             | -61.64          | ≤-20.67        | PASS    |
|          |         |         | 1000~26500         | -0.67             | -52.53          | ≤-20.67        | PASS    |
|          |         | 2441    | Reference          | -0.19             | -0.19           | ---            | PASS    |
|          |         |         | 30~1000            | -0.19             | -61.58          | ≤-20.19        | PASS    |
|          |         |         | 1000~26500         | -0.19             | -52.09          | ≤-20.19        | PASS    |
|          |         | 2480    | Reference          | 0.97              | 0.97            | ---            | PASS    |
|          |         |         | 30~1000            | 0.97              | -60.97          | ≤-19.03        | PASS    |
|          |         |         | 1000~26500         | 0.97              | -52.21          | ≤-19.03        | PASS    |
| 2DH5     | Ant1    | 2402    | Reference          | -2.93             | -2.93           | ---            | PASS    |
|          |         |         | 30~1000            | -2.93             | -61.05          | ≤-22.93        | PASS    |
|          |         |         | 1000~26500         | -2.93             | -52.38          | ≤-22.93        | PASS    |
|          |         | 2441    | Reference          | -0.53             | -0.53           | ---            | PASS    |
|          |         |         | 30~1000            | -0.53             | -61.34          | ≤-20.53        | PASS    |
|          |         |         | 1000~26500         | -0.53             | -51.66          | ≤-20.53        | PASS    |
|          |         | 2480    | Reference          | -4.02             | -4.02           | ---            | PASS    |
|          |         |         | 30~1000            | -4.02             | -60.83          | ≤-24.02        | PASS    |
|          |         |         | 1000~26500         | -4.02             | -52.09          | ≤-24.02        | PASS    |
| 3DH5     | Ant1    | 2402    | Reference          | -4.05             | -4.05           | ---            | PASS    |
|          |         |         | 30~1000            | -4.05             | -60.74          | ≤-24.05        | PASS    |
|          |         |         | 1000~26500         | -4.05             | -52.95          | ≤-24.05        | PASS    |
|          |         | 2441    | Reference          | -1.98             | -1.98           | ---            | PASS    |
|          |         |         | 30~1000            | -1.98             | -61.52          | ≤-21.98        | PASS    |
|          |         |         | 1000~26500         | -1.98             | -52             | ≤-21.98        | PASS    |
|          |         | 2480    | Reference          | -3.38             | -3.38           | ---            | PASS    |
|          |         |         | 30~1000            | -3.38             | -61.15          | ≤-23.38        | PASS    |
|          |         |         | 1000~26500         | -3.38             | -52.1           | ≤-23.38        | PASS    |

## Test Graphs

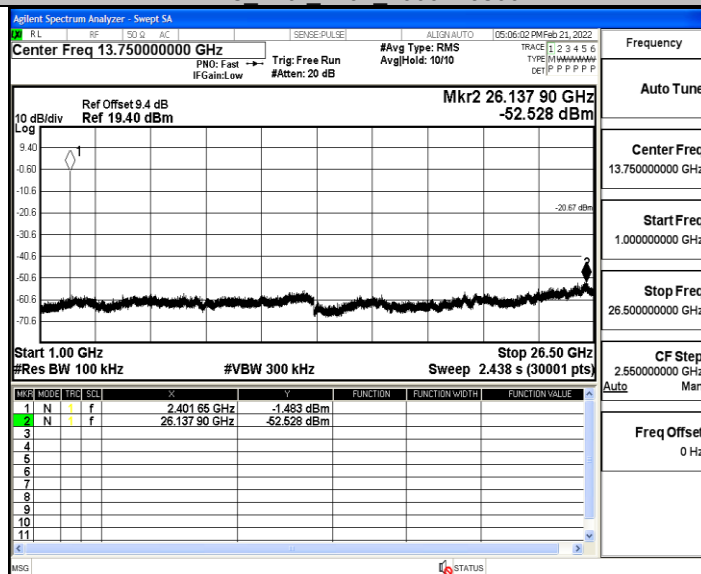
DH5\_Ant1\_2402\_0-Reference



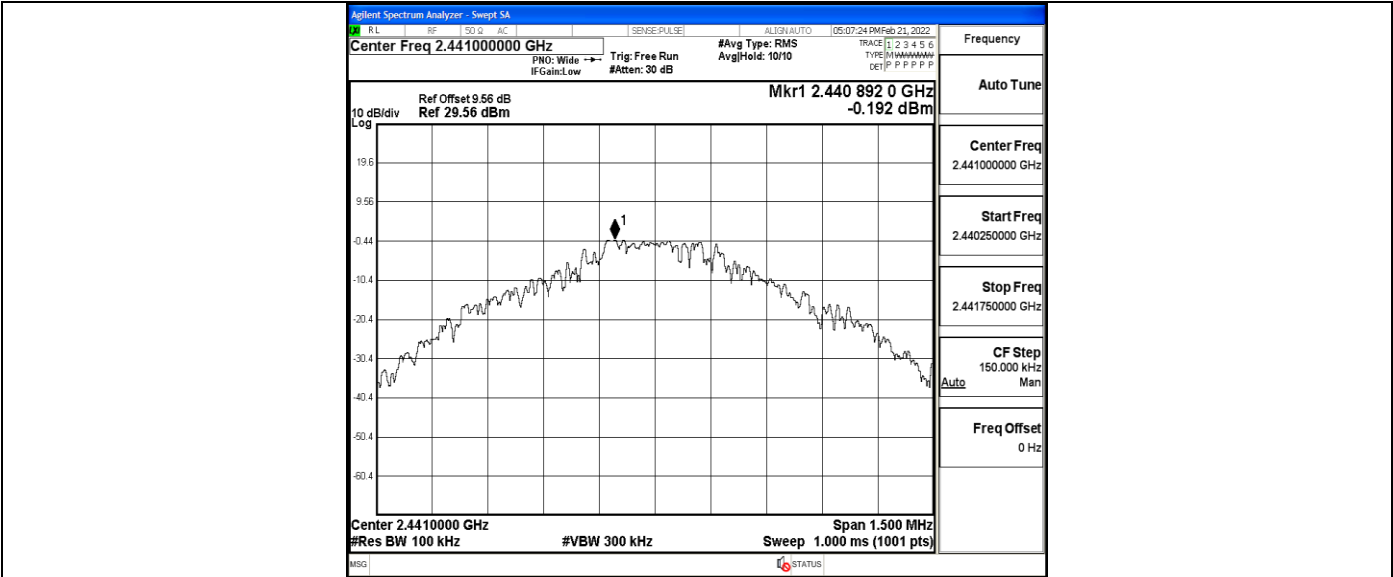
DH5\_Ant1\_2402\_30-1000



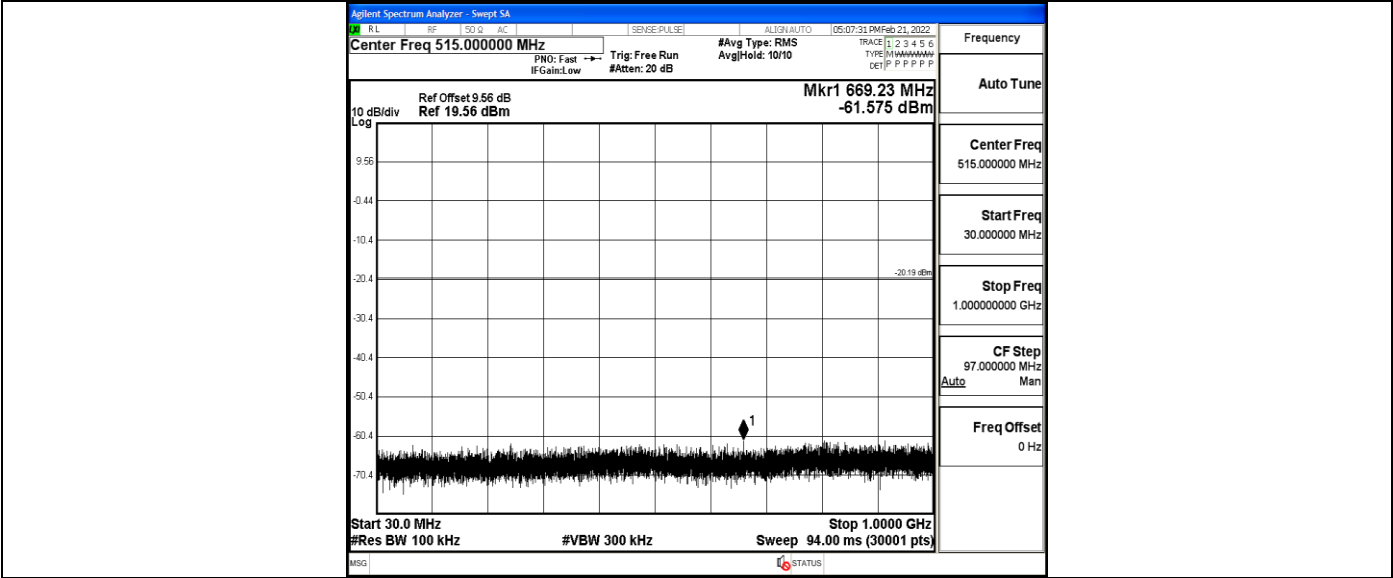
DH5\_Ant1\_2402\_1000-26500



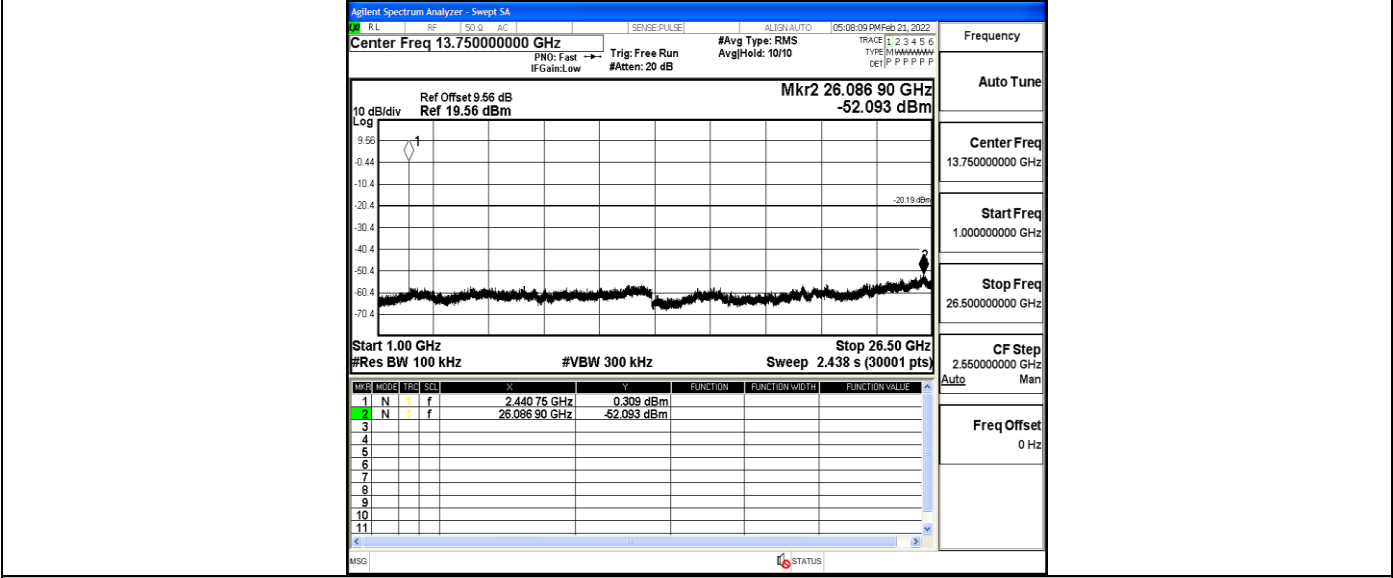
DH5\_Ant1\_2441\_0-Reference



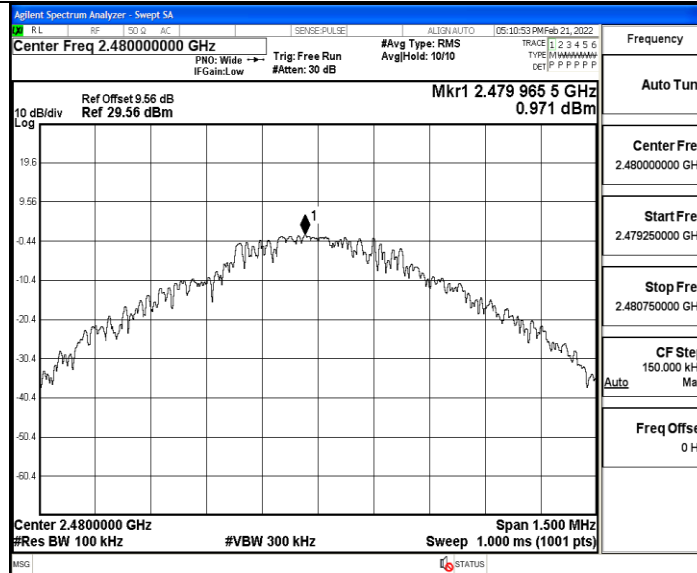
DH5\_Ant1\_2441\_30~1000



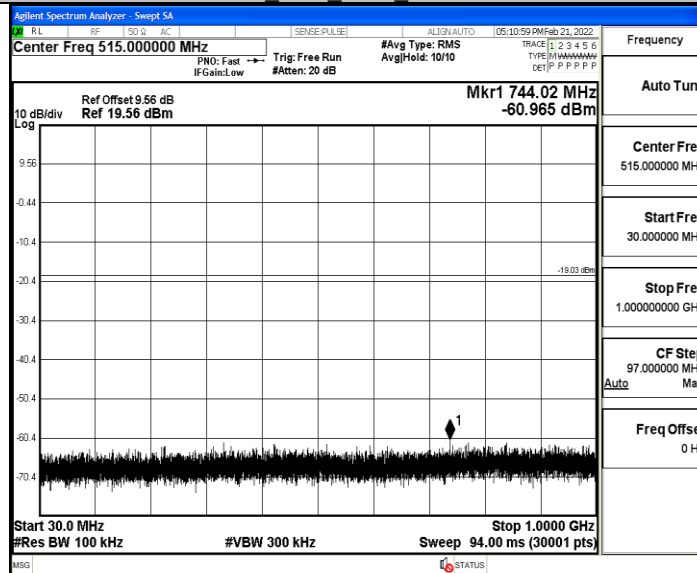
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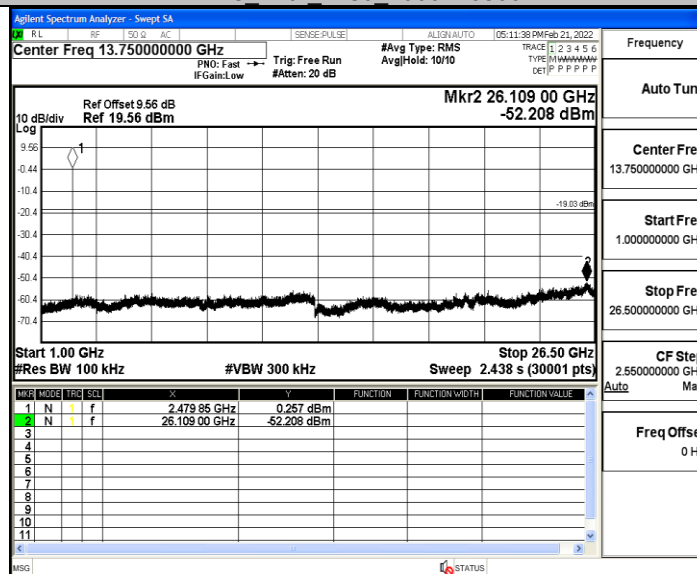
DH5\_Ant1\_2480\_0~Reference



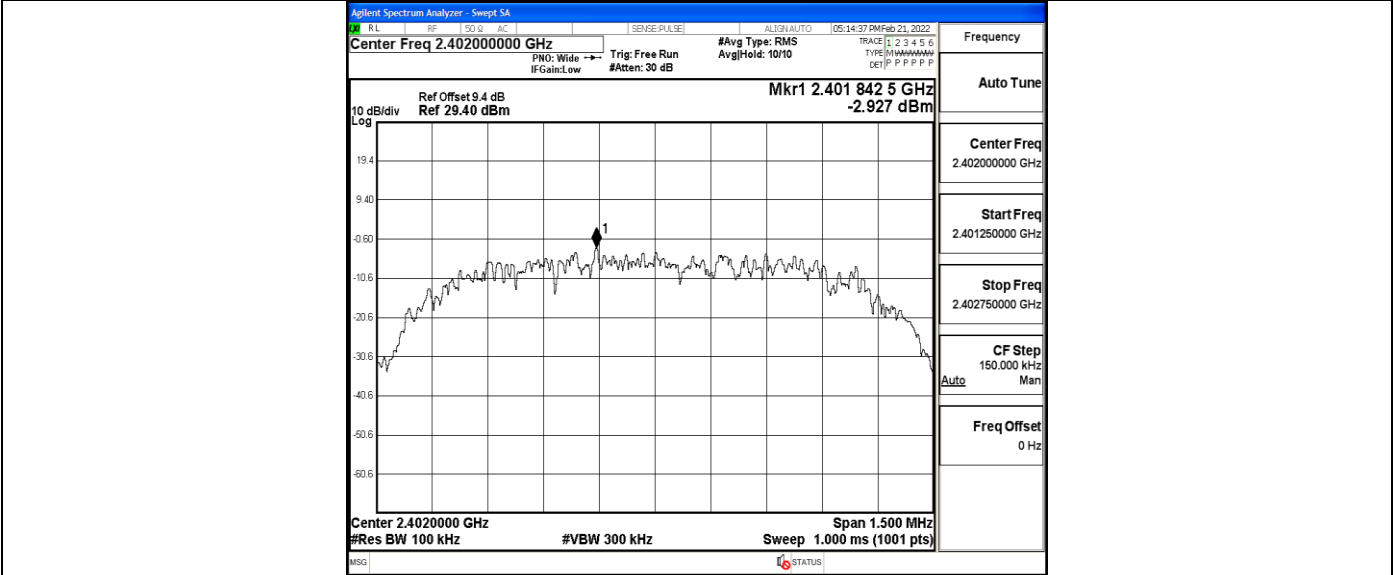
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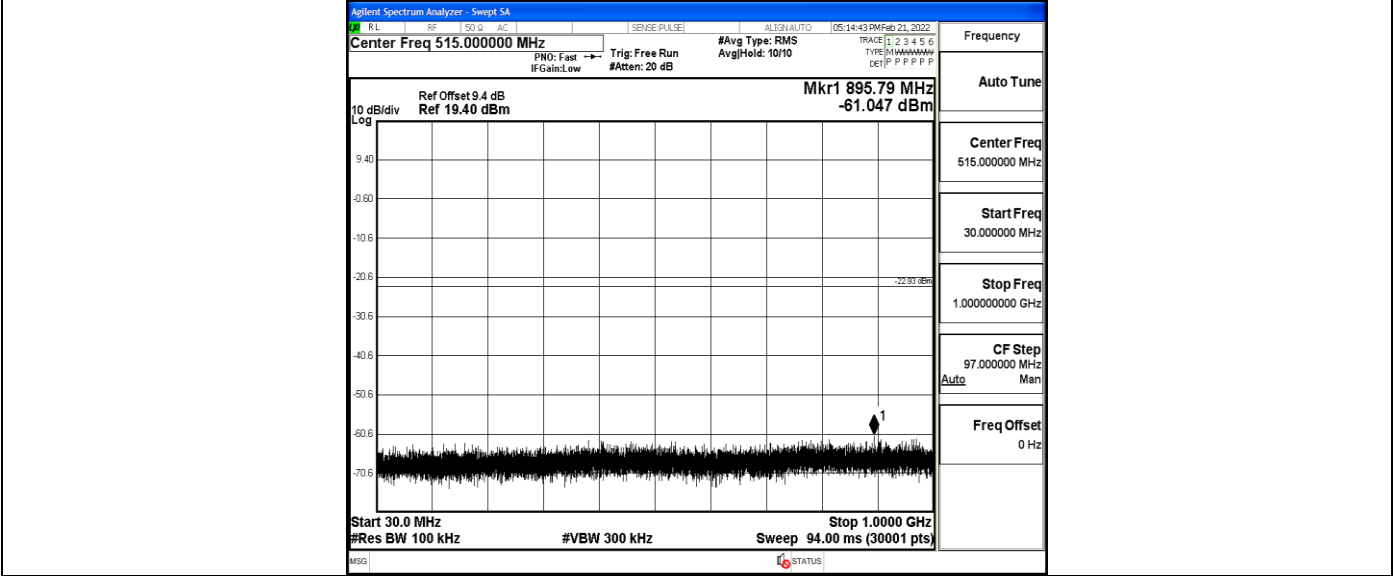
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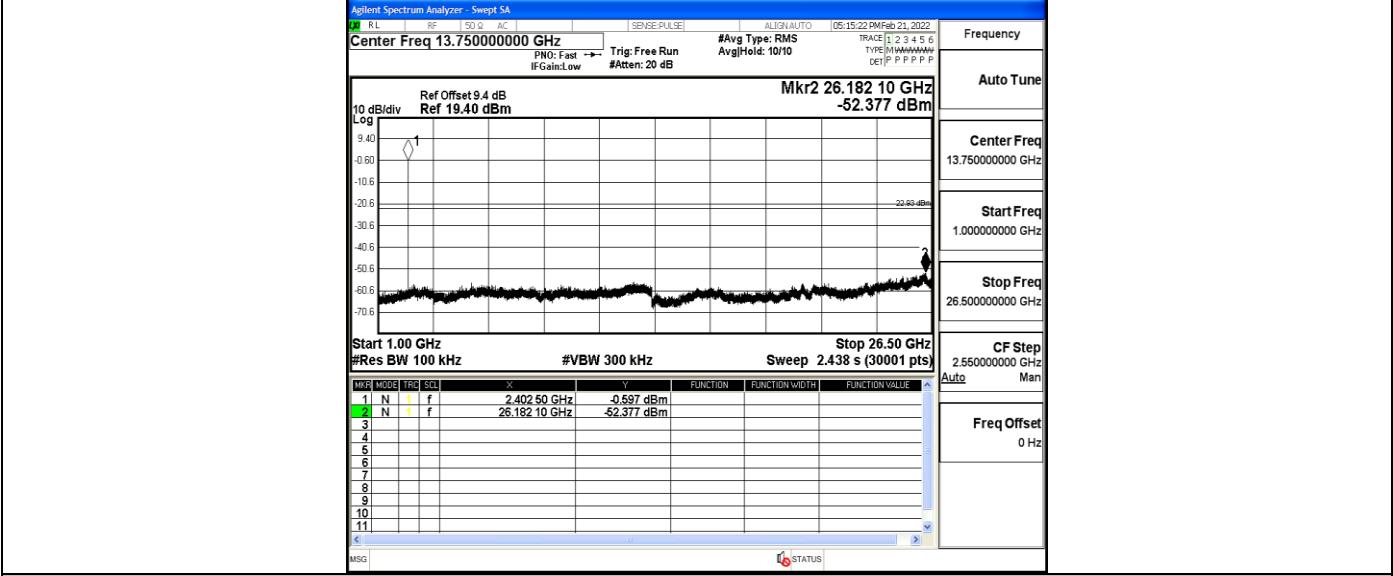
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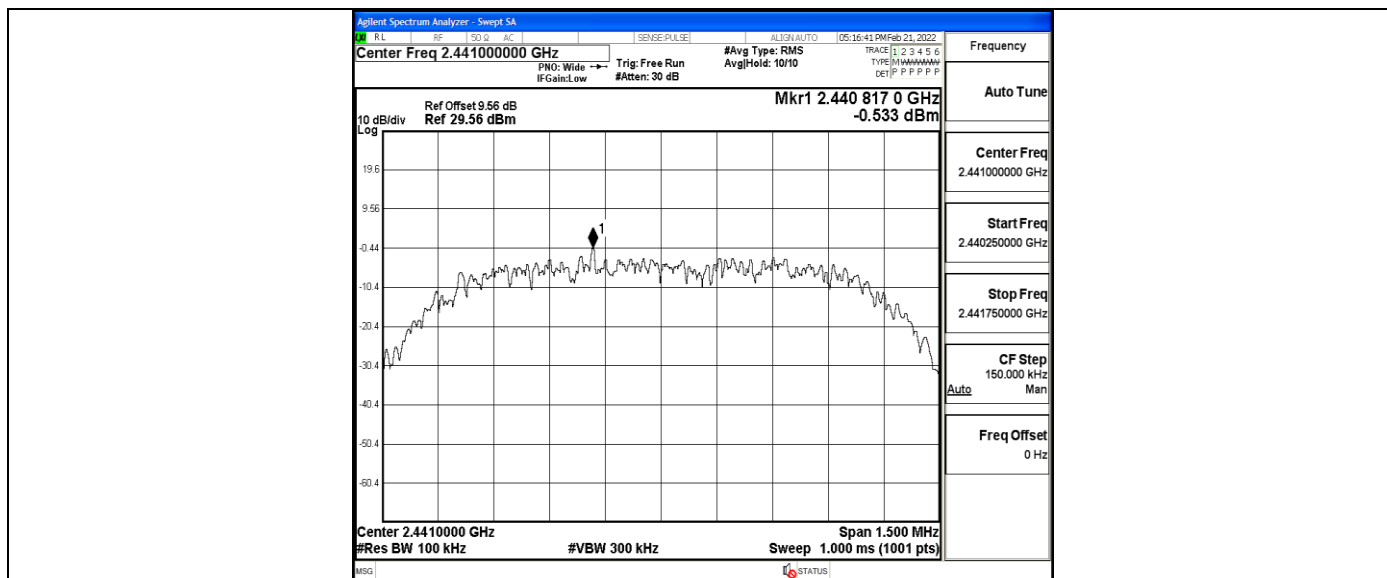
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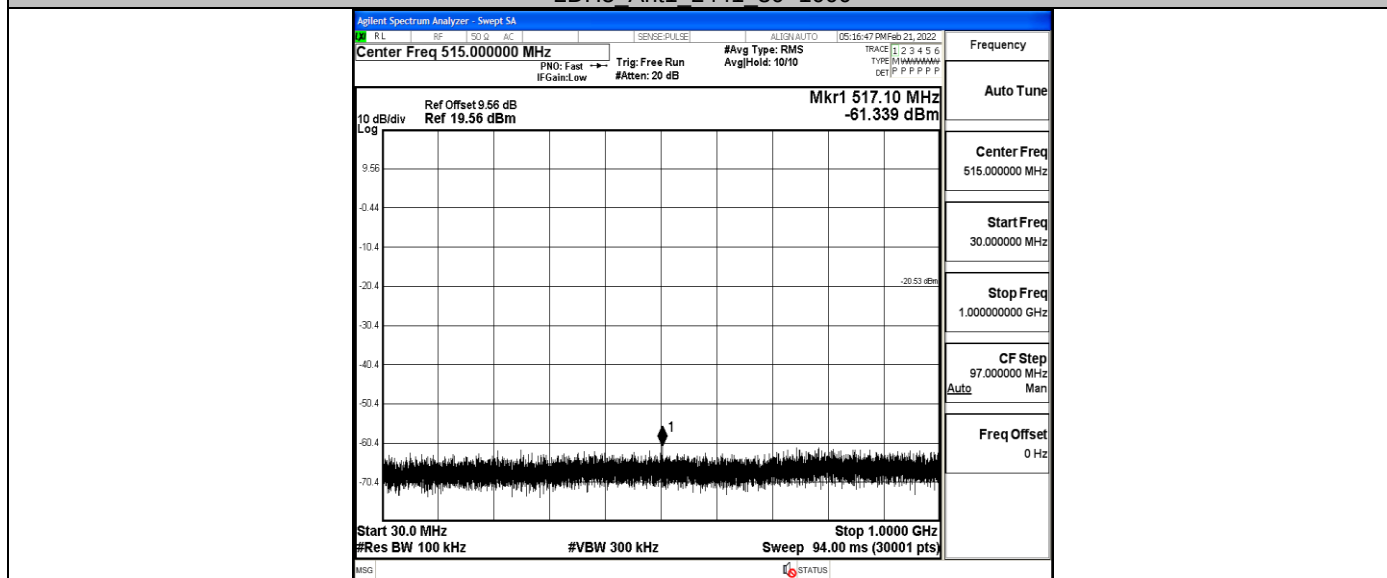
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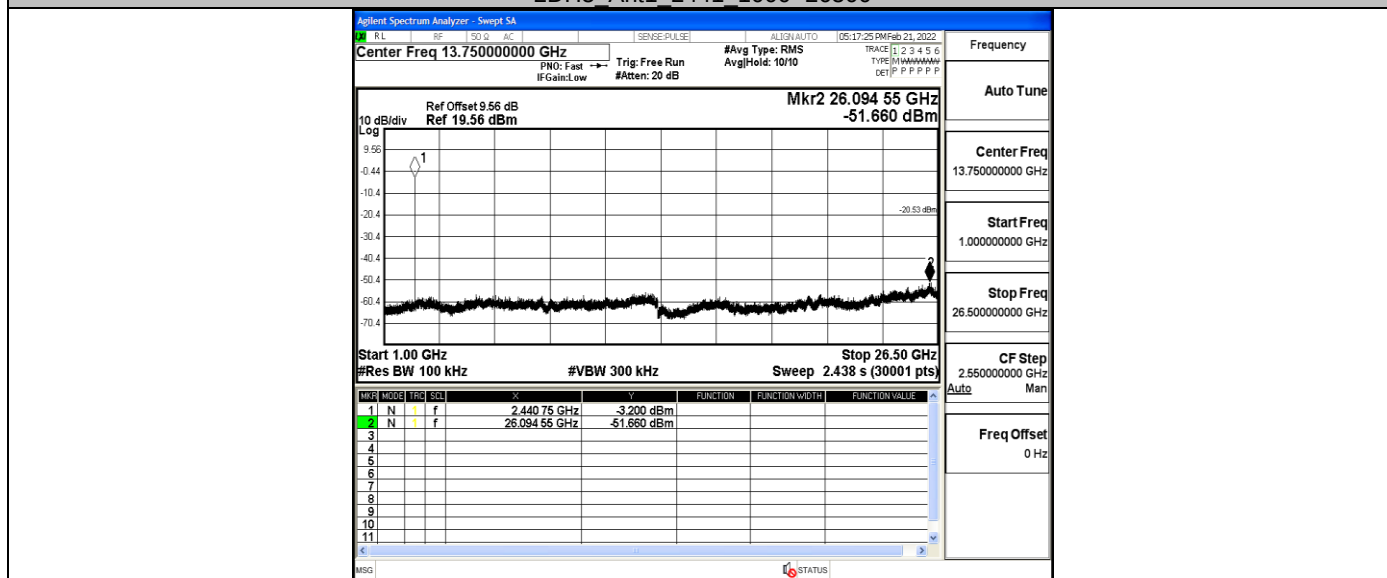
2DH5 Ant1 2441 0~Reference



## 2DH5 Ant1 2441 30~1000



## 2DH5 Ant1 2441 1000~26500



## 2DH5 Ant1 2480 0~Reference