

**Appendix Test Data for BT(BDR/EDR) (Conducted Measurement)****Product Name: Bluetooth Speaker****Trade Mark: N/A****Test Model: A500****FCC ID: 2BA87-A500****Environmental Conditions**

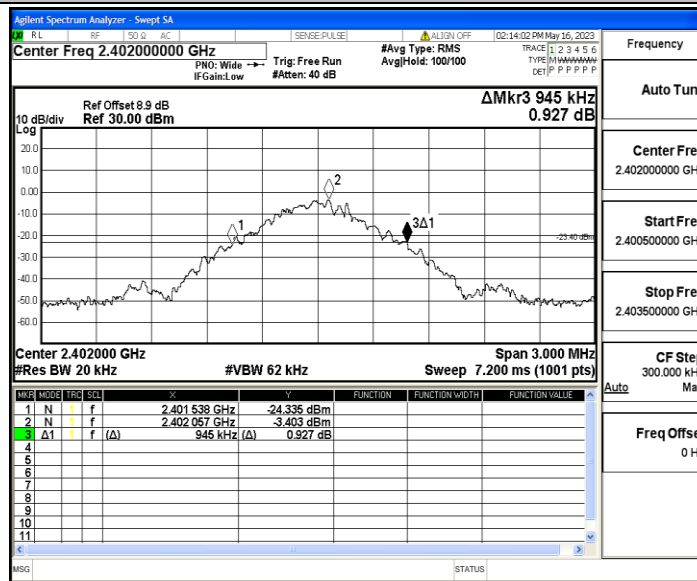
|                    |           |
|--------------------|-----------|
| Temperature:       | 23.5℃     |
| Relative Humidity: | 53%       |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Anna Hu   |
| Supervised by:     | Hugo Chen |
| NOTE               | N/A       |

**Appendix A: 20dB Emission Bandwidth****Test Result**

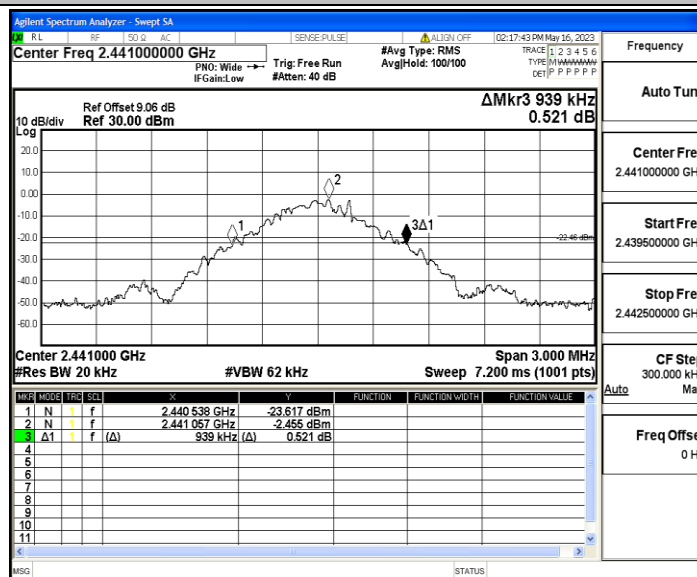
| TestMode | Antenna | Channel | 20db<br>EBW[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|------------------|----------|----------|------------|---------|
| DH5      | Ant1    | 2402    | 0.945            | 2401.538 | 2402.483 | ---        | ---     |
|          |         | 2441    | 0.939            | 2440.538 | 2441.477 | ---        | ---     |
|          |         | 2480    | 0.945            | 2479.538 | 2480.483 | ---        | ---     |
| 2DH5     | Ant1    | 2402    | 1.326            | 2401.337 | 2402.663 | ---        | ---     |
|          |         | 2441    | 1.329            | 2440.334 | 2441.663 | ---        | ---     |
|          |         | 2480    | 1.329            | 2479.334 | 2480.663 | ---        | ---     |

## Test Graphs

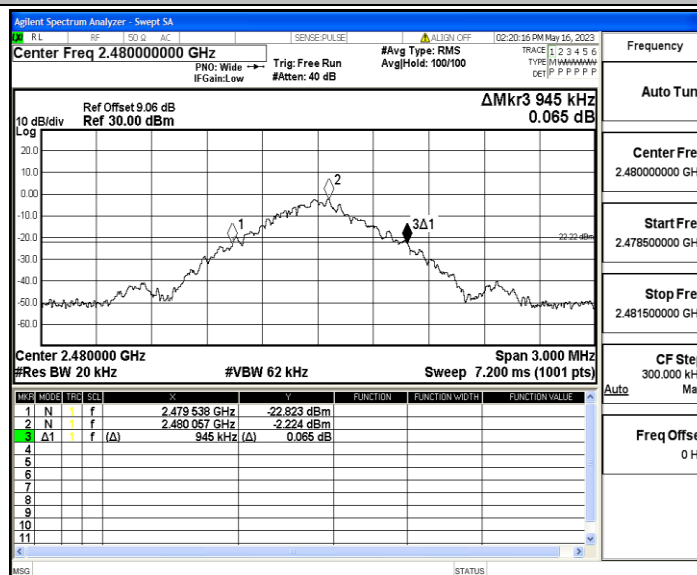
DH5\_Ant1\_2402



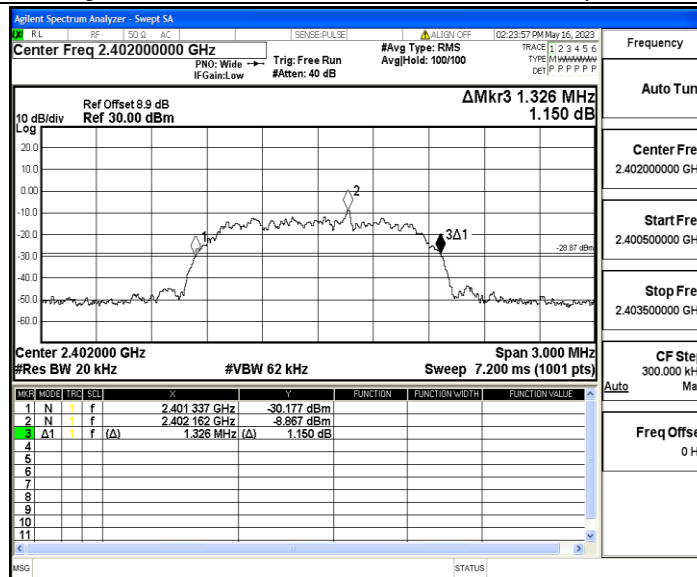
DH5\_Ant1\_2441



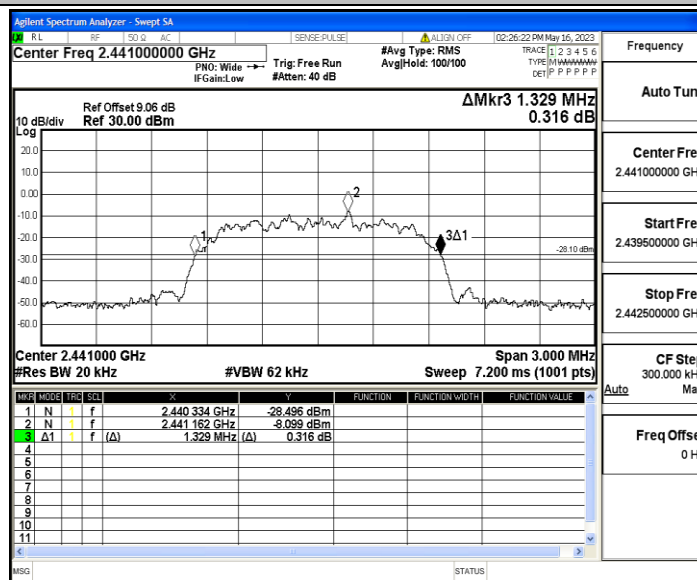
DH5\_Ant1\_2480



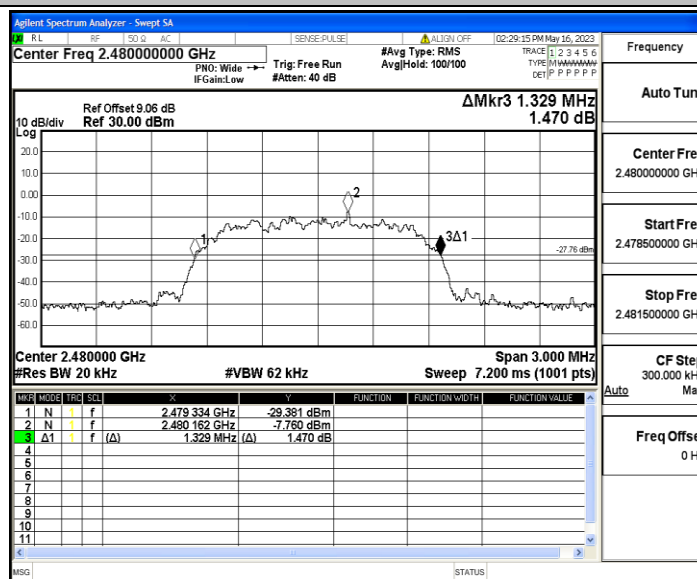
2DH5\_Ant1\_2402



2DH5\_Ant1\_2441



2DH5\_Ant1\_2480



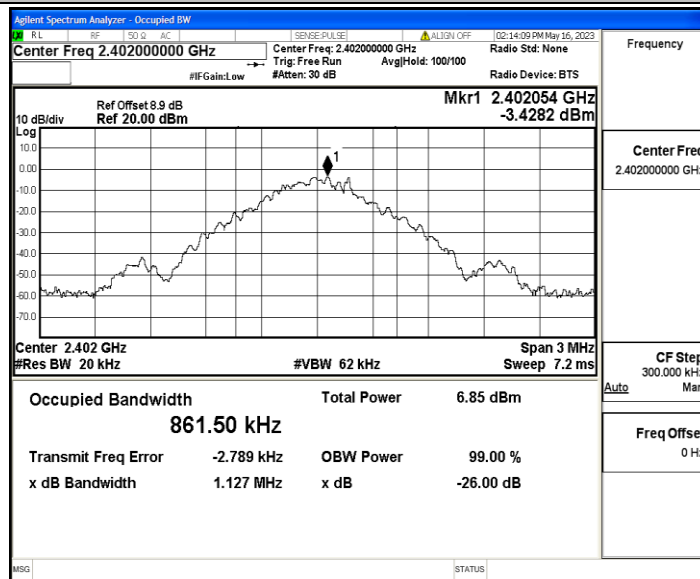
## Appendix B: Occupied Channel Bandwidth

### Test Result

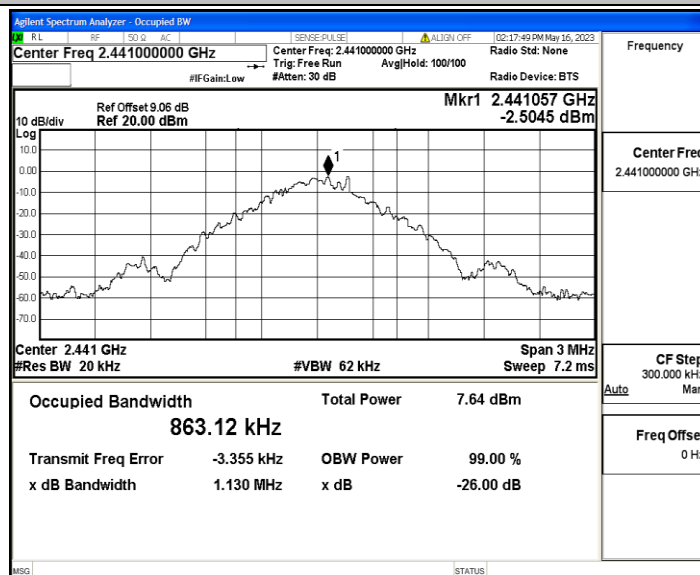
| TestMode | Antenna | Channel | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|----------|---------|---------|-----------|-----------|-----------|------------|---------|
| DH5      | Ant1    | 2402    | 0.86150   | 2401.5665 | 2402.4280 | ---        | ---     |
|          |         | 2441    | 0.86312   | 2440.5651 | 2441.4282 | ---        | ---     |
|          |         | 2480    | 0.85982   | 2479.5652 | 2480.4250 | ---        | ---     |
| 2DH5     | Ant1    | 2402    | 1.1906    | 2401.4044 | 2402.5950 | ---        | ---     |
|          |         | 2441    | 1.1905    | 2440.4049 | 2441.5954 | ---        | ---     |
|          |         | 2480    | 1.1907    | 2479.4060 | 2480.5967 | ---        | ---     |

## Test Graphs

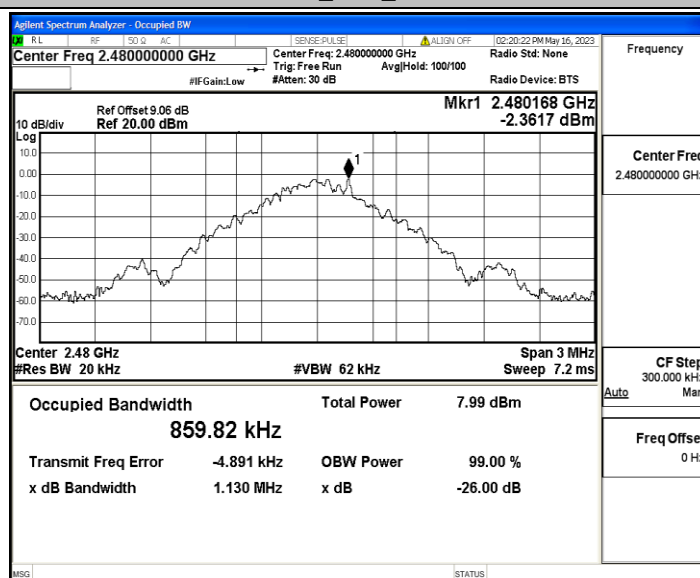
DH5\_Ant1\_2402



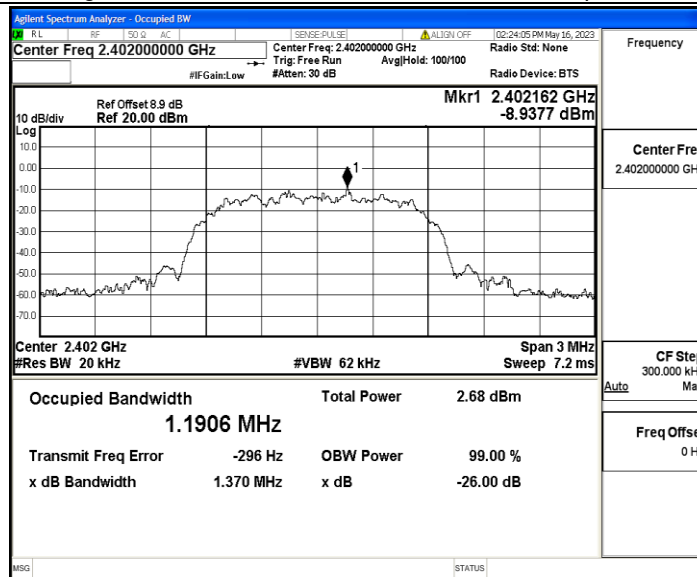
DH5\_Ant1\_2441



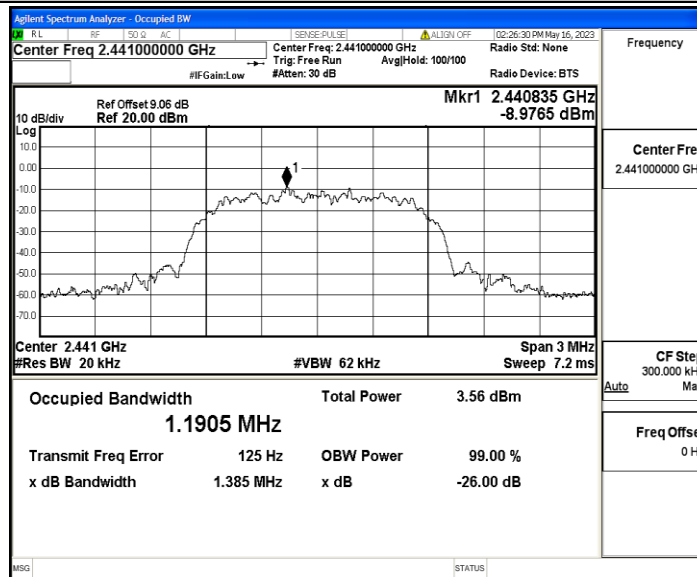
DH5\_Ant1\_2480



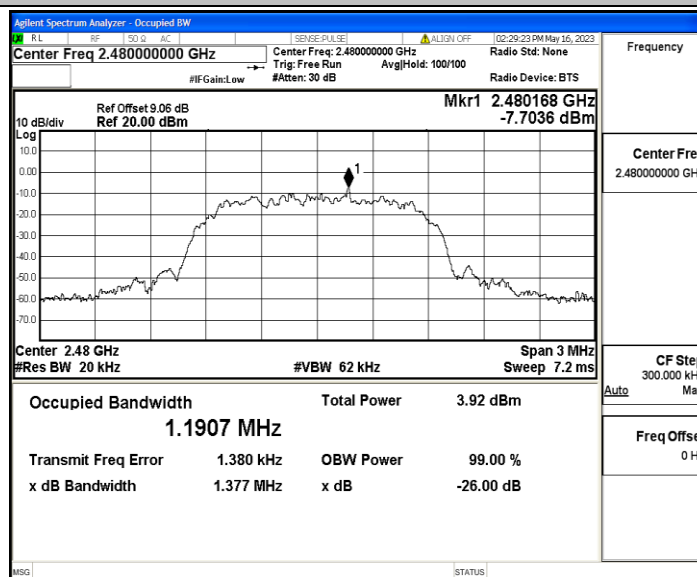
2DH5\_Ant1\_2402



## 2DH5\_Ant1\_2441



## 2DH5\_Ant1\_2480



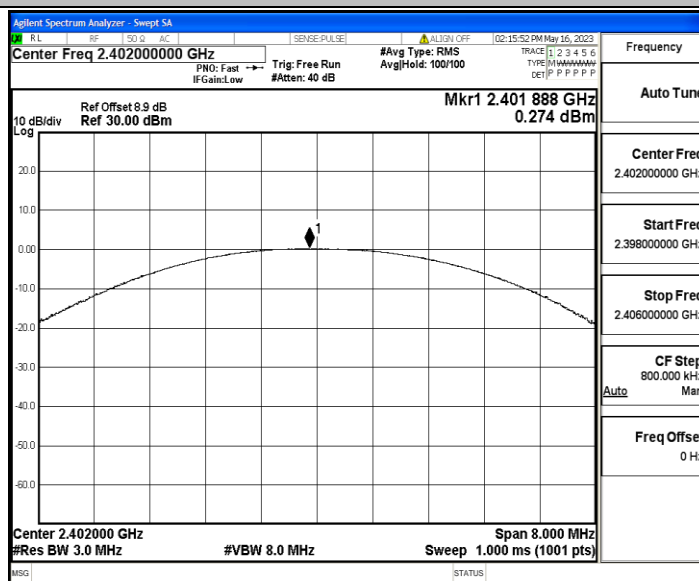
## Appendix C: Maximum Peak conducted output power

### Test Result

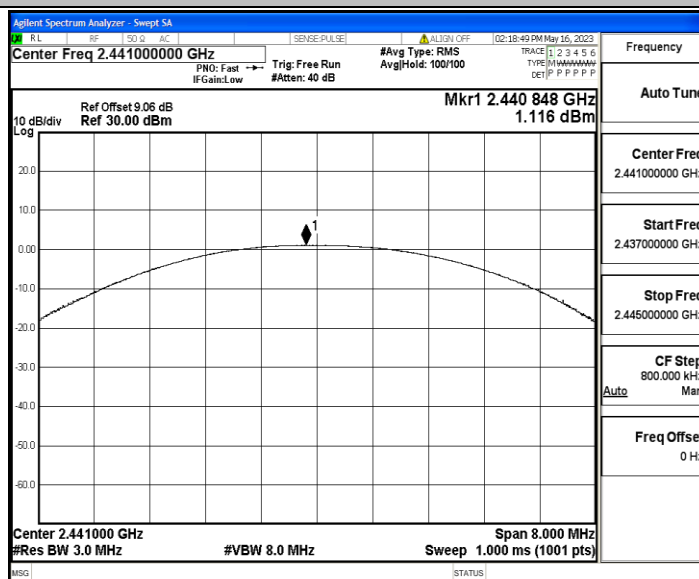
| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| DH5      | Ant1    | 2402    | 0.27        | ≤20.97     | PASS    |
|          |         | 2441    | 1.12        | ≤20.97     | PASS    |
|          |         | 2480    | 1.43        | ≤20.97     | PASS    |
| 2DH5     | Ant1    | 2402    | -1.38       | ≤20.97     | PASS    |
|          |         | 2441    | -0.64       | ≤20.97     | PASS    |
|          |         | 2480    | -0.18       | ≤20.97     | PASS    |

## Test Graphs

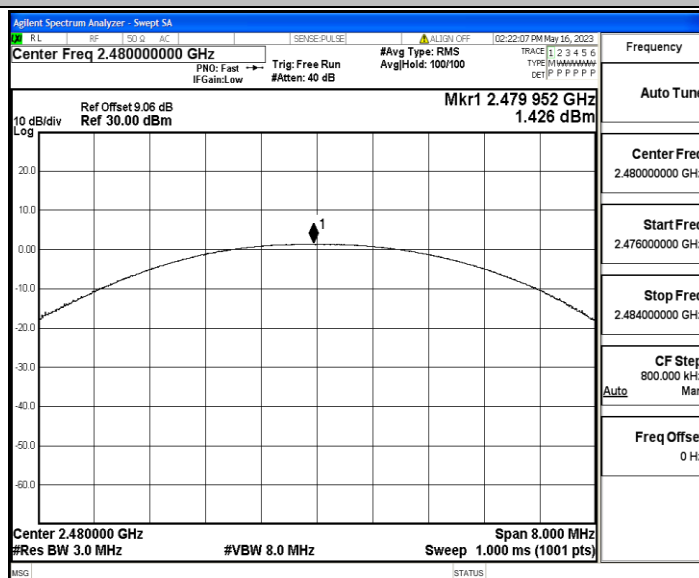
DH5\_Ant1\_2402



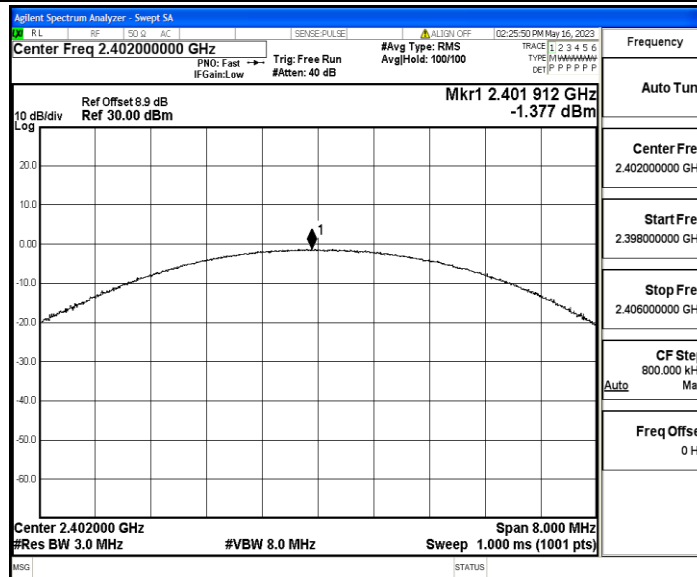
DH5\_Ant1\_2441



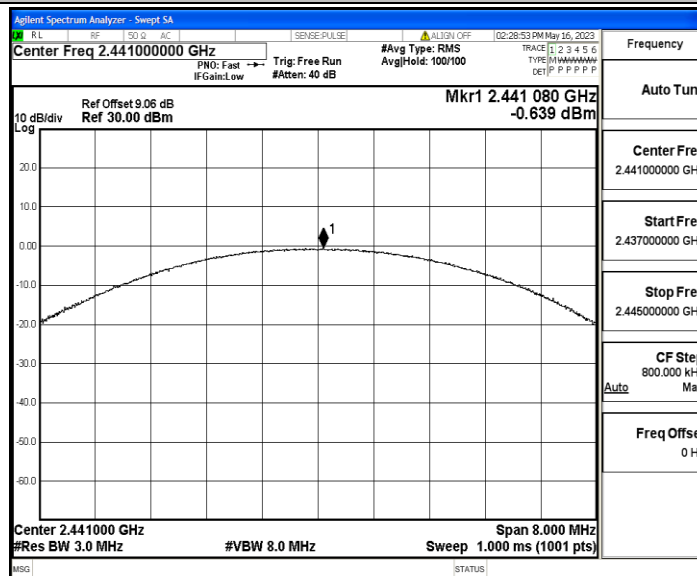
DH5\_Ant1\_2480



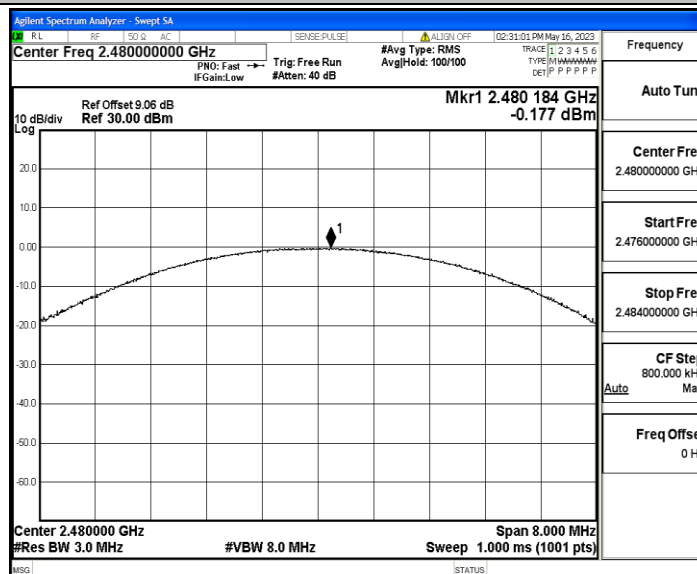
## 2DH5\_Ant1\_2402



## 2DH5\_Ant1\_2441



## 2DH5\_Ant1\_2480

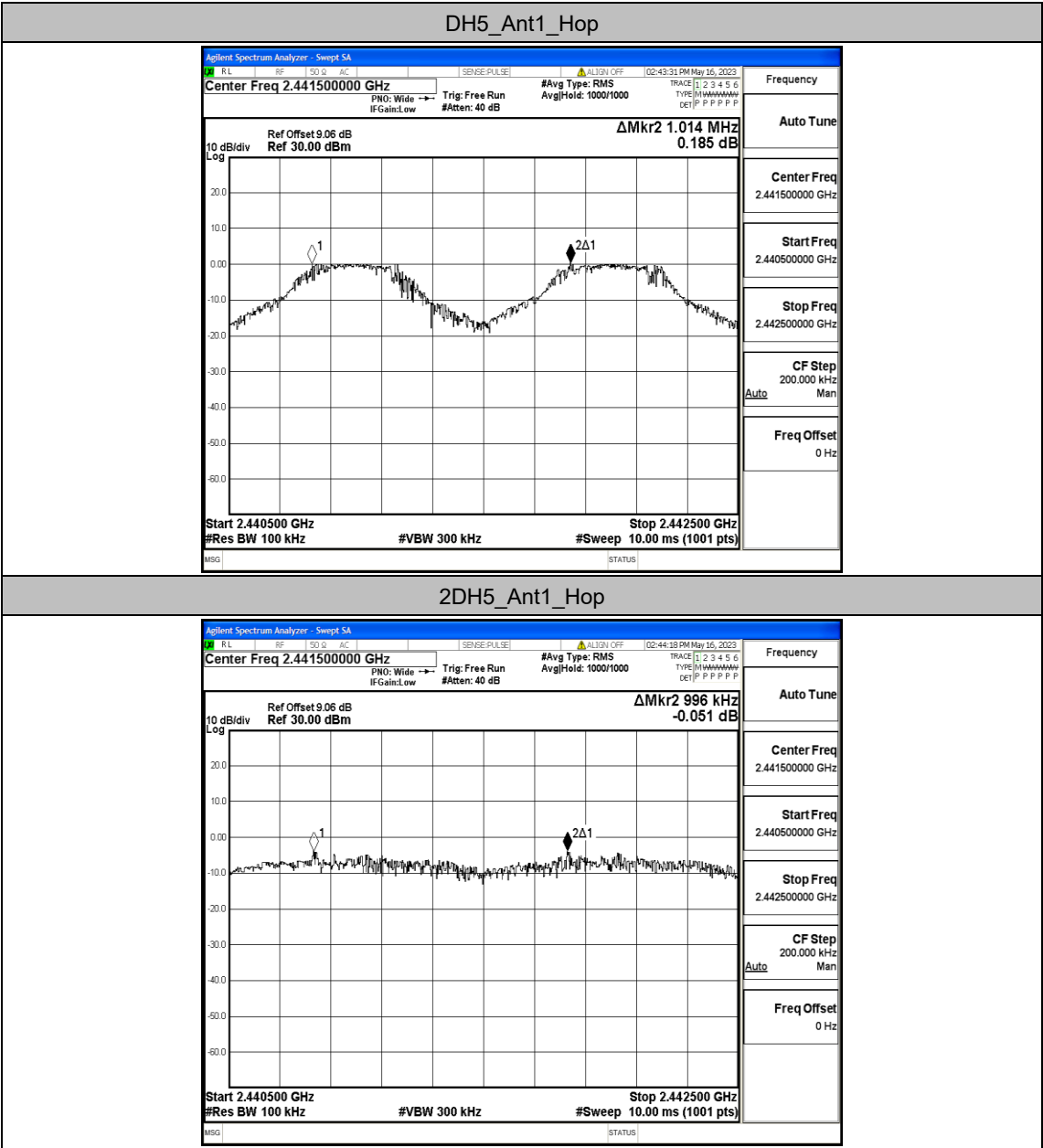


## Appendix D: Carrier frequency separation

### Test Result

| TestMode | Antenna | Channel | Result[MHz] | Limit[MHz]   | Verdict |
|----------|---------|---------|-------------|--------------|---------|
| DH5      | Ant1    | Hop     | 1.014       | $\geq 0.945$ | PASS    |
| 2DH5     | Ant1    | Hop     | 0.996       | $\geq 0.886$ | PASS    |

Test Graphs

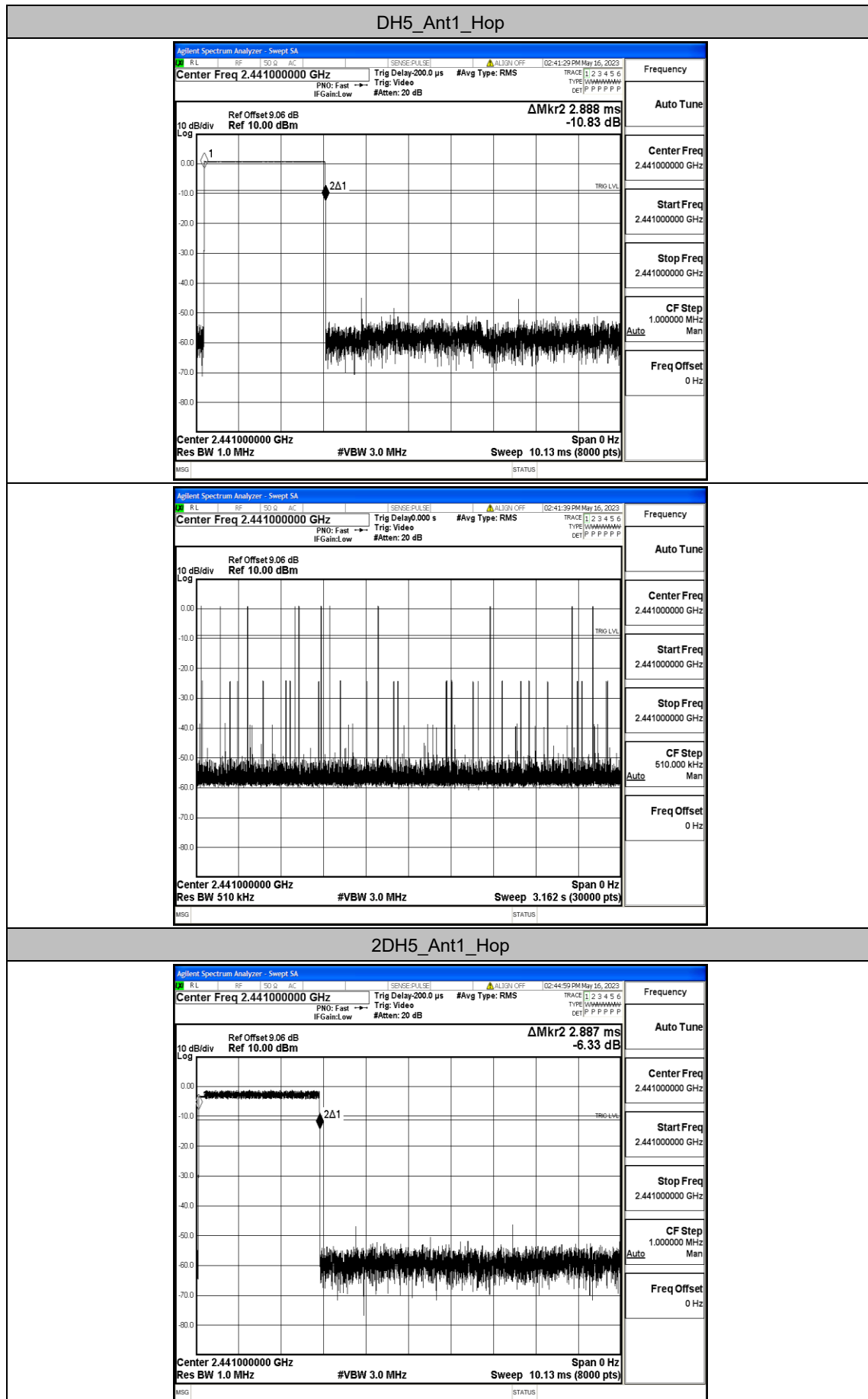


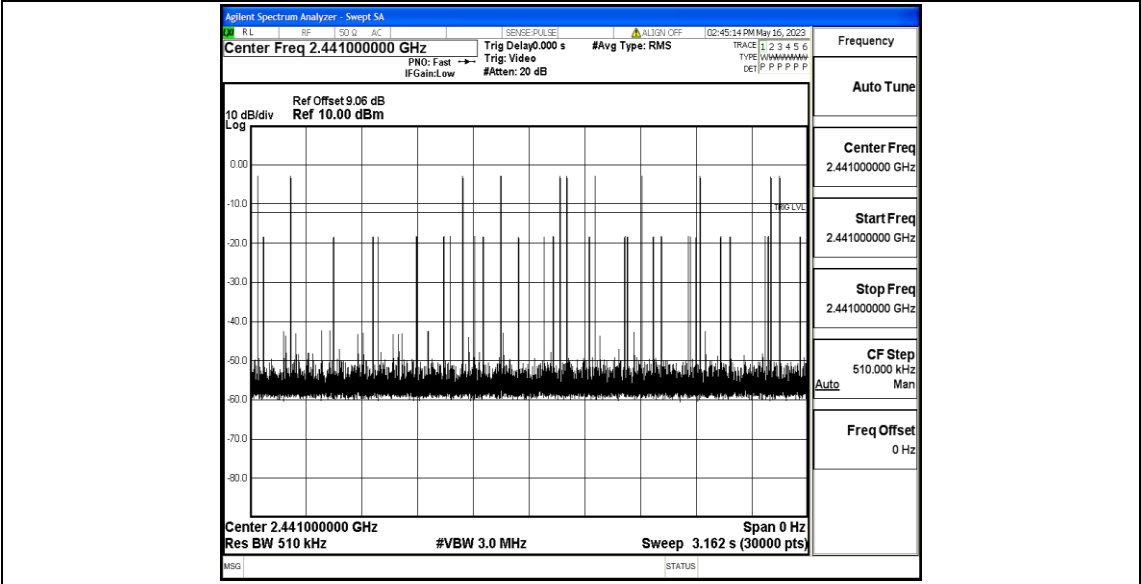
## Appendix E: Time of occupancy

### Test Result

| TestMode | Antenna | Channel | BurstWidth<br>[ms] | TotalHops<br>[Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|---------|--------------------|--------------------|-----------|----------|---------|
| DH5      | Ant1    | Hop     | 2.888              | 120                | 0.347     | ≤0.4     | PASS    |
| 2DH5     | Ant1    | Hop     | 2.887              | 120                | 0.346     | ≤0.4     | PASS    |

## Test Graphs



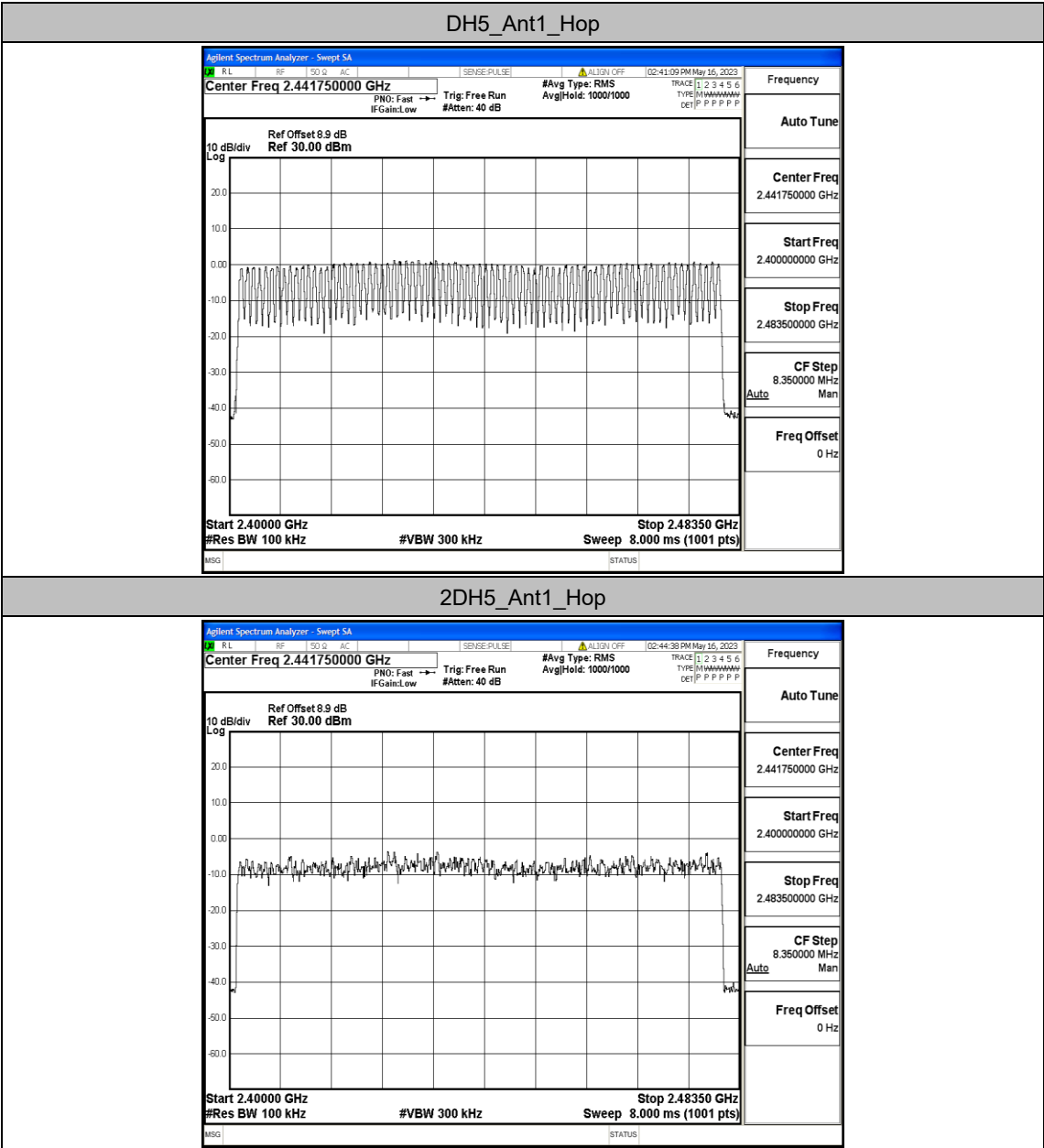


## Appendix F: Number of hopping channels

### Test Result

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

Test Graphs



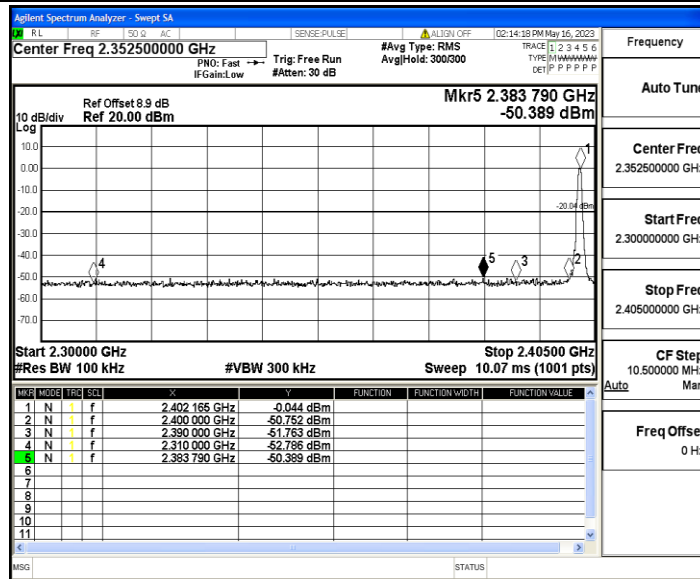
## Appendix G: Band edge measurements

### Test Result

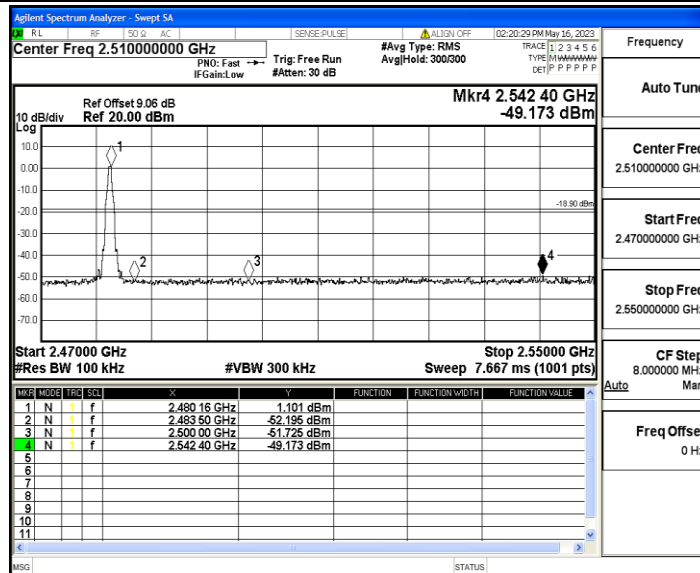
| TestMode | Antenna | ChName | Channel  | RefLevel<br>[dBm] | Result<br>[dBm] | Limit<br>[dBm] | Verdict |
|----------|---------|--------|----------|-------------------|-----------------|----------------|---------|
| DH5      | Ant1    | Low    | 2402     | -0.04             | -50.39          | $\leq -20.04$  | PASS    |
|          |         | High   | 2480     | 1.10              | -49.17          | $\leq -18.9$   | PASS    |
|          |         | Low    | Hop_2402 | -1.05             | -50.94          | $\leq -21.05$  | PASS    |
|          |         | High   | Hop_2480 | 0.63              | -49.22          | $\leq -19.37$  | PASS    |
| 2DH5     | Ant1    | Low    | 2402     | -4.16             | -50.4           | $\leq -24.16$  | PASS    |
|          |         | High   | 2480     | -3.33             | -49.53          | $\leq -23.33$  | PASS    |
|          |         | Low    | Hop_2402 | -7.84             | -50.76          | $\leq -27.84$  | PASS    |
|          |         | High   | Hop_2480 | -4.92             | -49.71          | $\leq -24.92$  | PASS    |

## Test Graphs

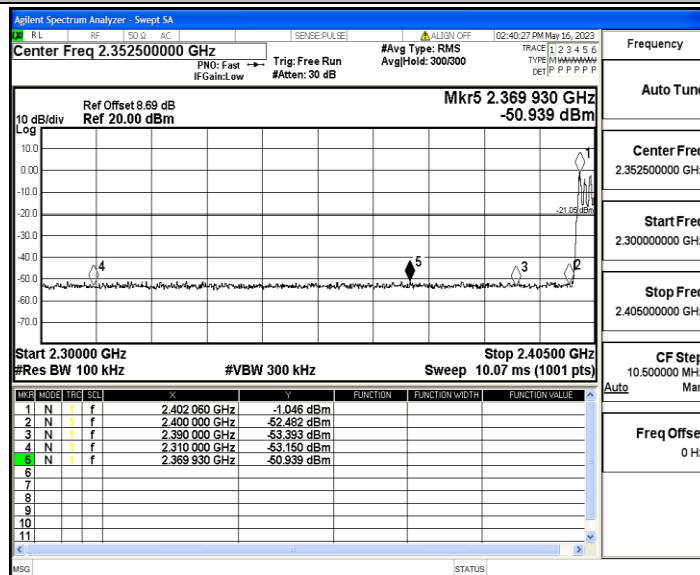
DH5\_Ant1\_Low\_2402



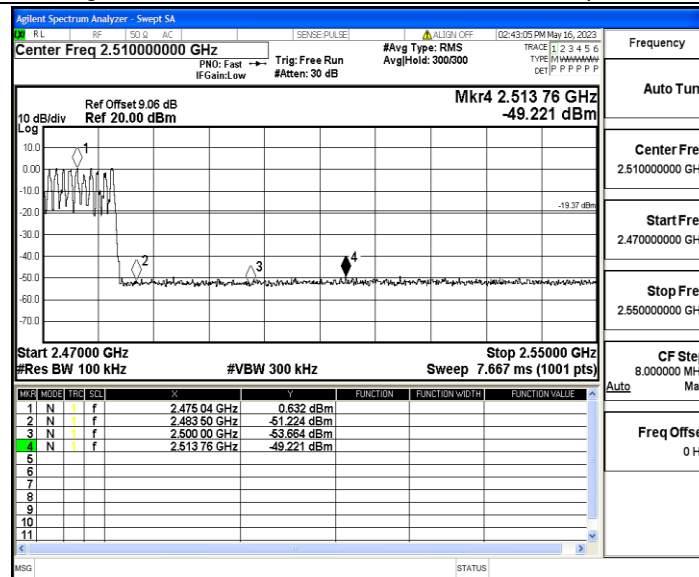
DH5\_Ant1\_High\_2480



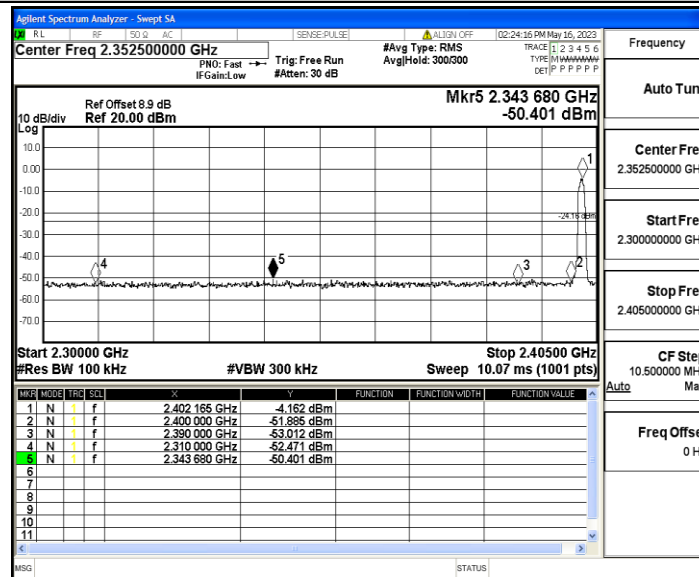
DH5\_Ant1\_Low\_Hop\_2402



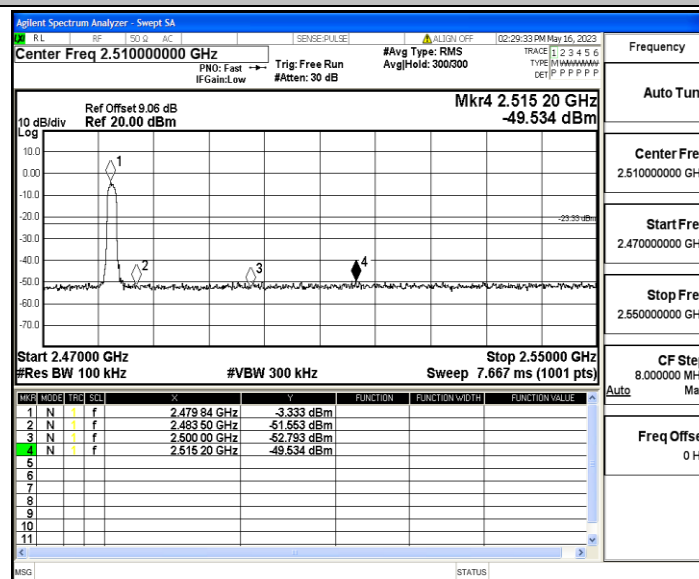
DH5\_Ant1\_High\_Hop\_2480



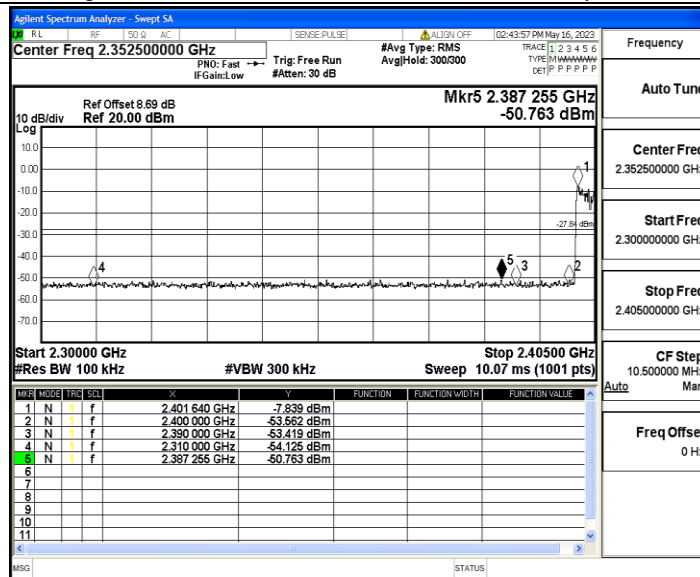
2DH5\_Ant1\_Low\_2402



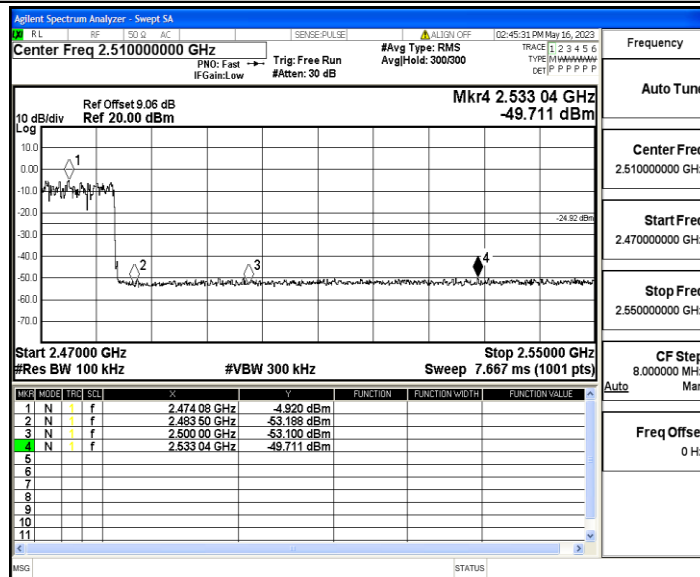
2DH5\_Ant1\_High\_2480



2DH5\_Ant1\_Low\_Hop\_2402



## 2DH5\_Ant1\_High\_Hop\_2480



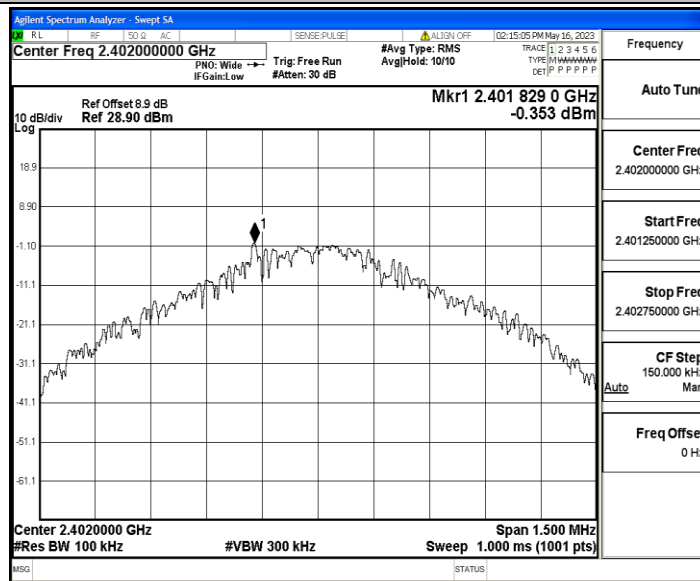
## Appendix H: Conducted Spurious Emission

### Test Result

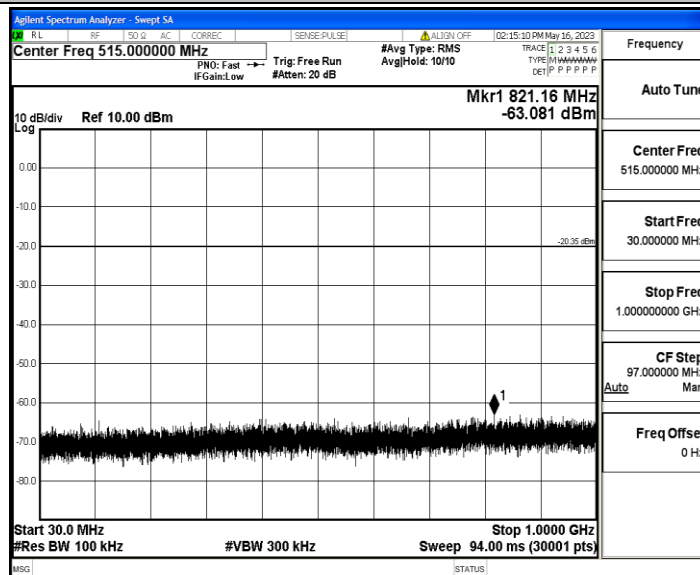
| TestMode | Antenna | Channel | FreqRange<br>[MHz] | RefLevel<br>[dBm] | Result<br>[dBm] | Limit<br>[dBm] | Verdict |
|----------|---------|---------|--------------------|-------------------|-----------------|----------------|---------|
| DH5      | Ant1    | 2402    | Reference          | -0.35             | -0.35           | ---            | PASS    |
|          |         |         | 30~1000            | -0.35             | -63.08          | ≤-20.35        | PASS    |
|          |         |         | 1000~26500         | -0.35             | -31.17          | ≤-20.35        | PASS    |
|          |         | 2441    | Reference          | 0.07              | 0.07            | ---            | PASS    |
|          |         |         | 30~1000            | 0.07              | -62.59          | ≤-19.93        | PASS    |
|          |         |         | 1000~26500         | 0.07              | -33.58          | ≤-19.93        | PASS    |
|          |         | 2480    | Reference          | 0.39              | 0.39            | ---            | PASS    |
|          |         |         | 30~1000            | 0.39              | -63.14          | ≤-19.61        | PASS    |
|          |         |         | 1000~26500         | 0.39              | -35.98          | ≤-19.61        | PASS    |
| 2DH5     | Ant1    | 2402    | Reference          | -6.29             | -6.29           | ---            | PASS    |
|          |         |         | 30~1000            | -6.29             | -62.26          | ≤-26.29        | PASS    |
|          |         |         | 1000~26500         | -6.29             | -37.31          | ≤-26.29        | PASS    |
|          |         | 2441    | Reference          | -5.45             | -5.45           | ---            | PASS    |
|          |         |         | 30~1000            | -5.45             | -62.22          | ≤-25.45        | PASS    |
|          |         |         | 1000~26500         | -5.45             | -36.22          | ≤-25.45        | PASS    |
|          |         | 2480    | Reference          | -5.64             | -5.64           | ---            | PASS    |
|          |         |         | 30~1000            | -5.64             | -62.9           | ≤-25.64        | PASS    |
|          |         |         | 1000~26500         | -5.64             | -39.32          | ≤-25.64        | PASS    |

## Test Graphs

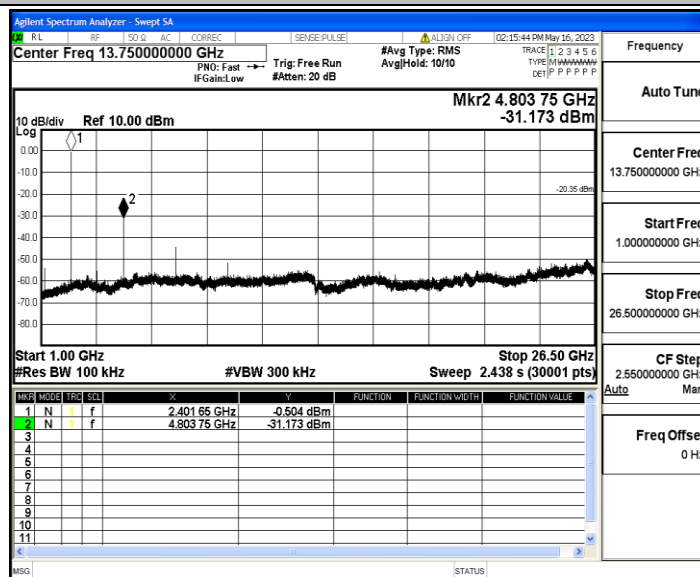
DH5\_Ant1\_2402\_0~Reference



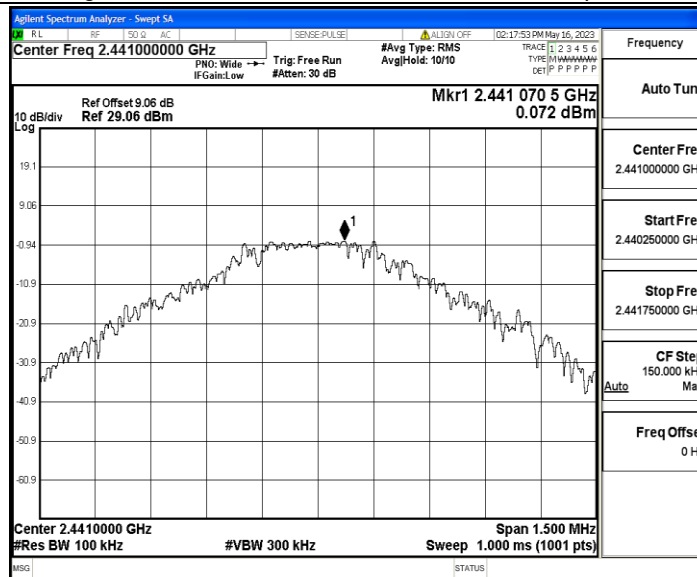
DH5\_Ant1\_2402\_30~1000



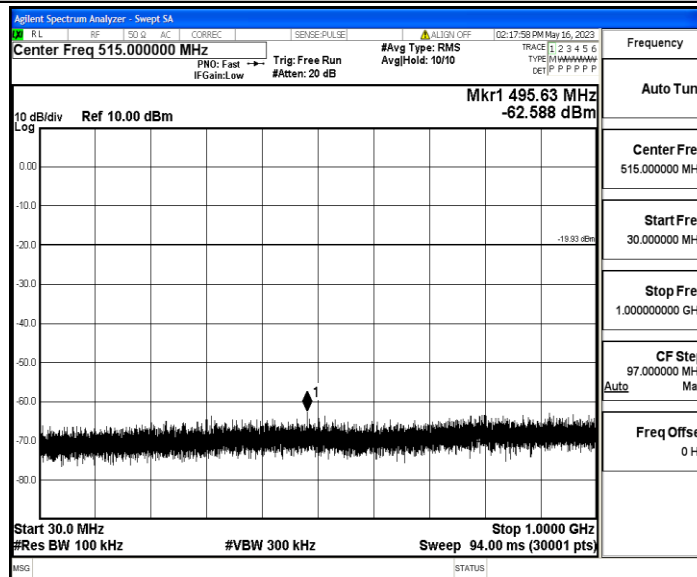
DH5\_Ant1\_2402\_1000~26500



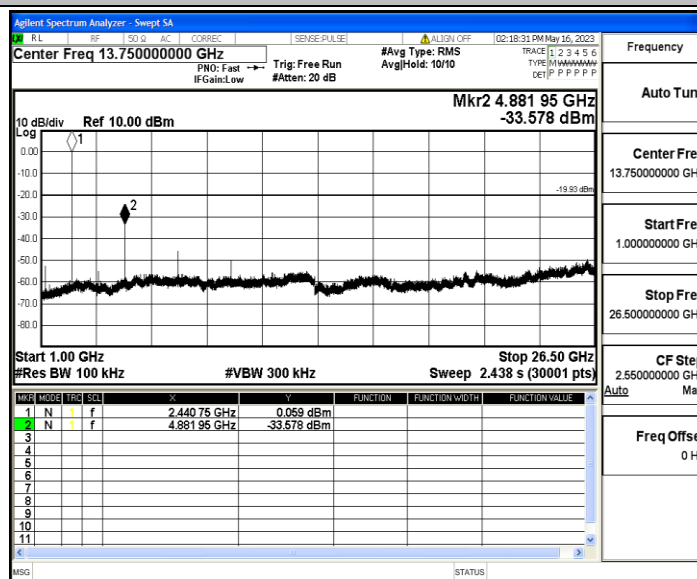
DH5\_Ant1\_2441\_0~Reference



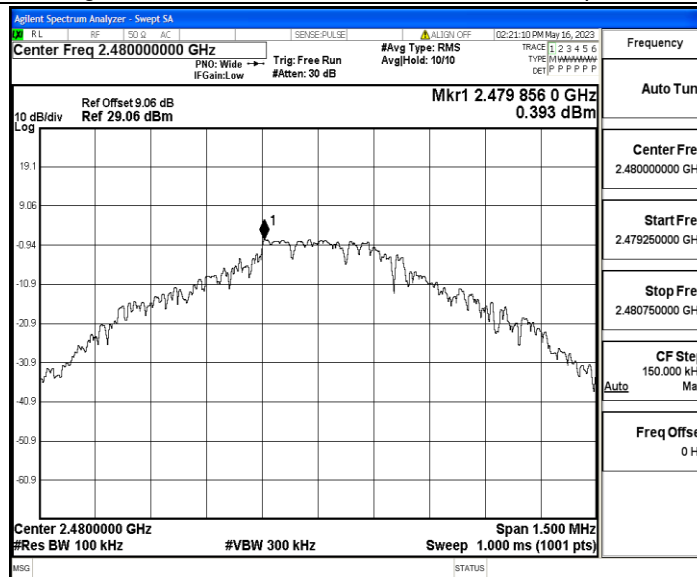
DH5\_Ant1\_2441\_30~1000



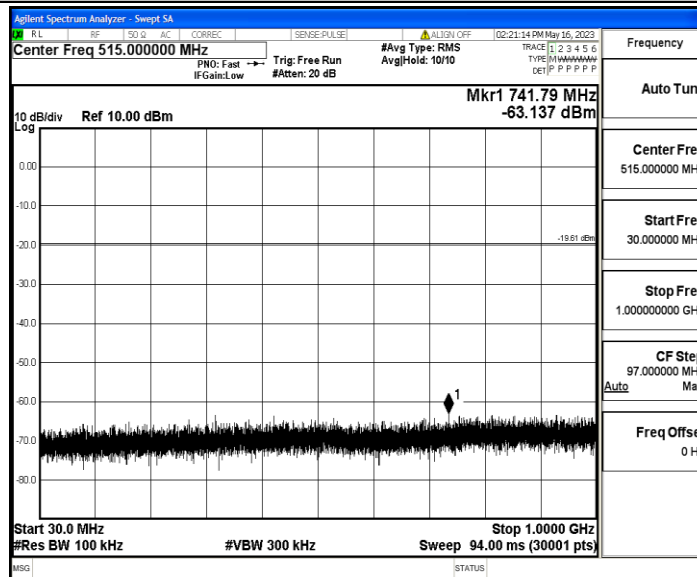
DH5\_Ant1\_2441\_1000~26500



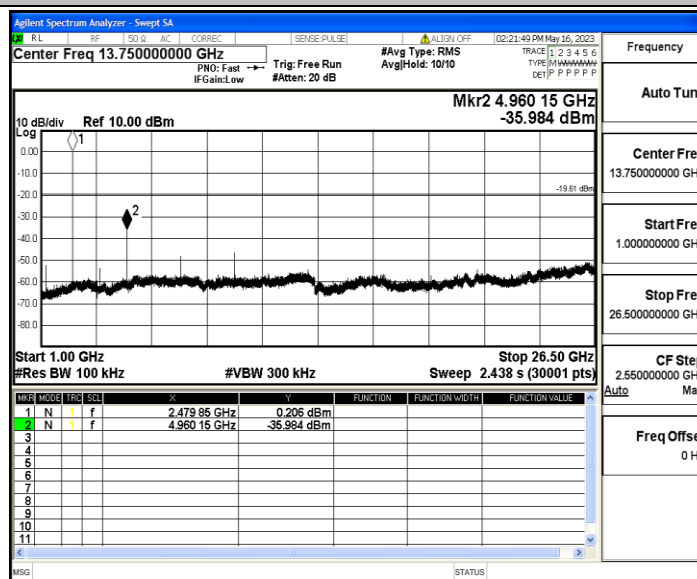
DH5\_Ant1\_2480\_0~Reference



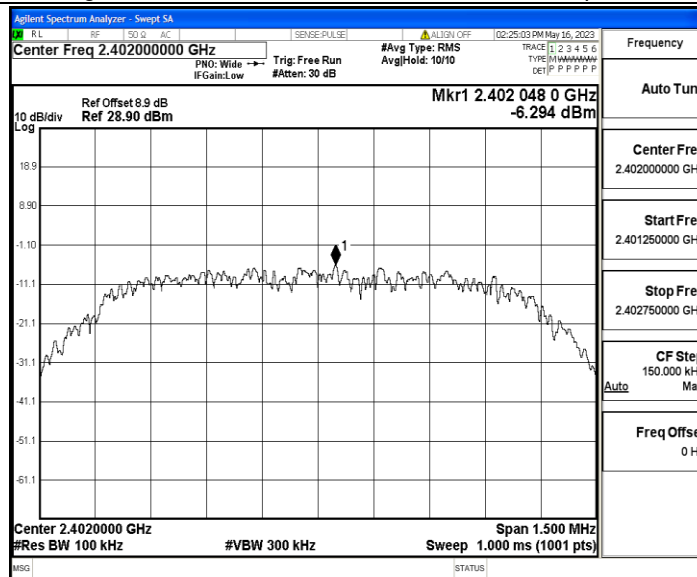
DH5\_Ant1\_2480\_30~1000



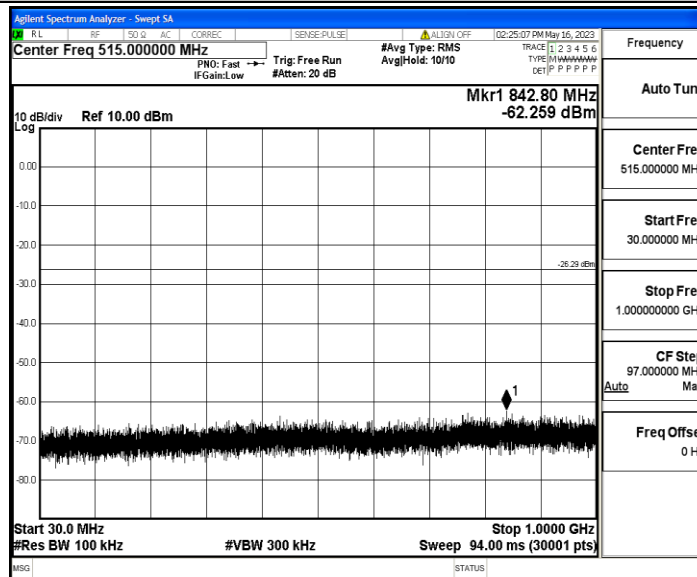
DH5\_Ant1\_2480\_1000~26500



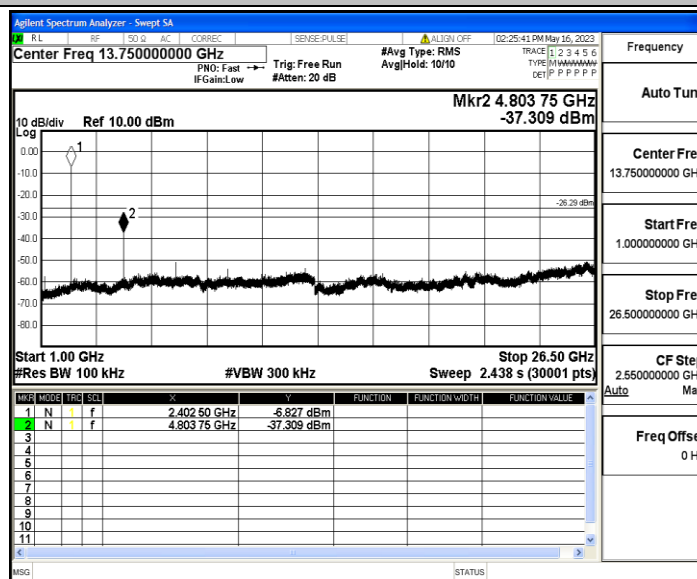
2DH5\_Ant1\_2402\_0~Reference



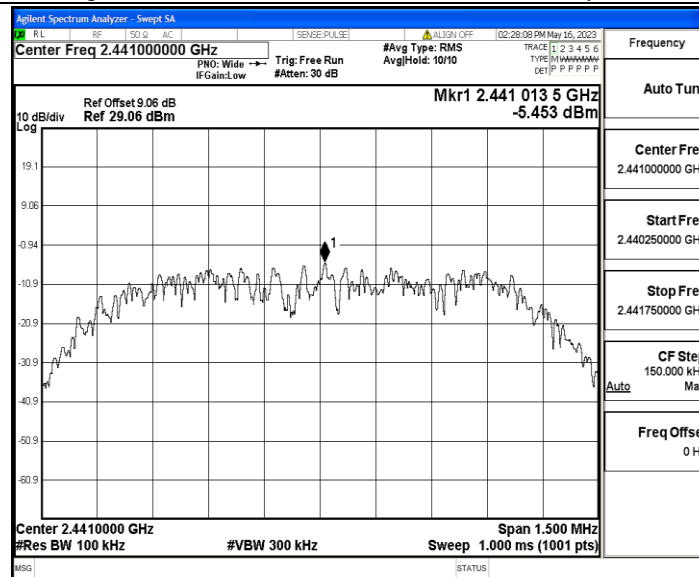
2DH5\_Ant1\_2402\_30~1000



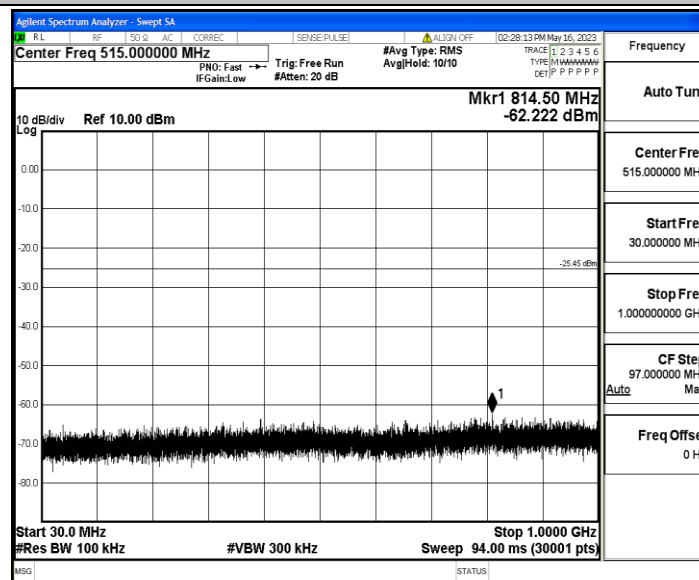
2DH5\_Ant1\_2402\_1000~26500



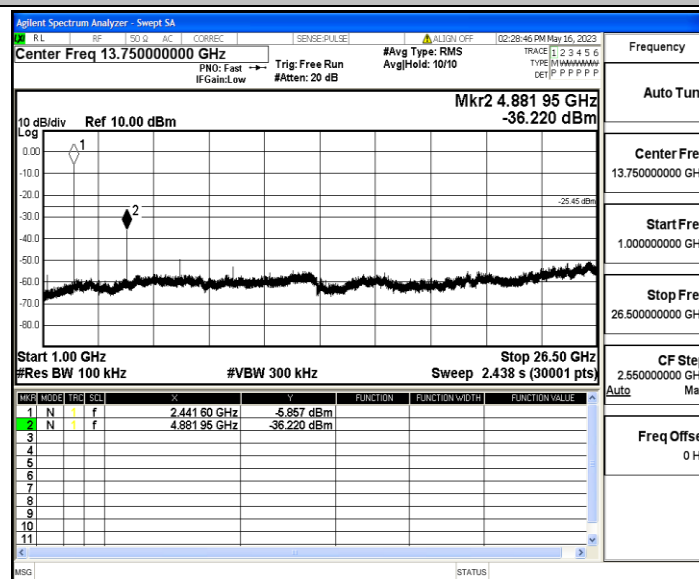
2DH5\_Ant1\_2441\_0~Reference



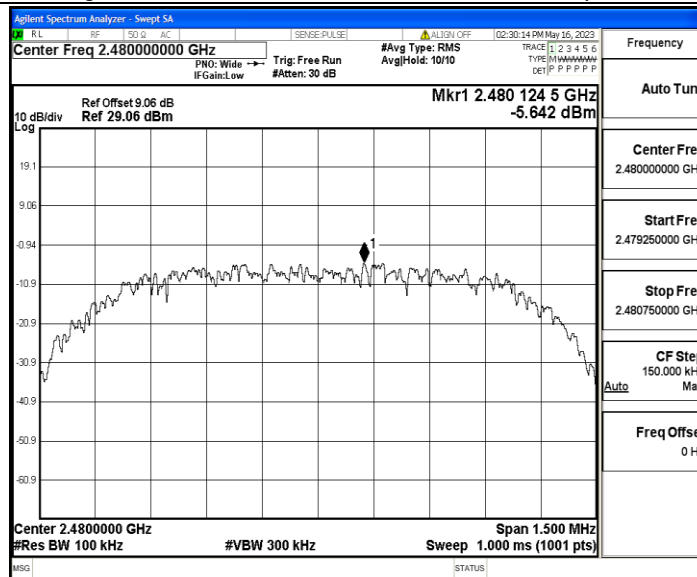
2DH5\_Ant1\_2441\_30~1000



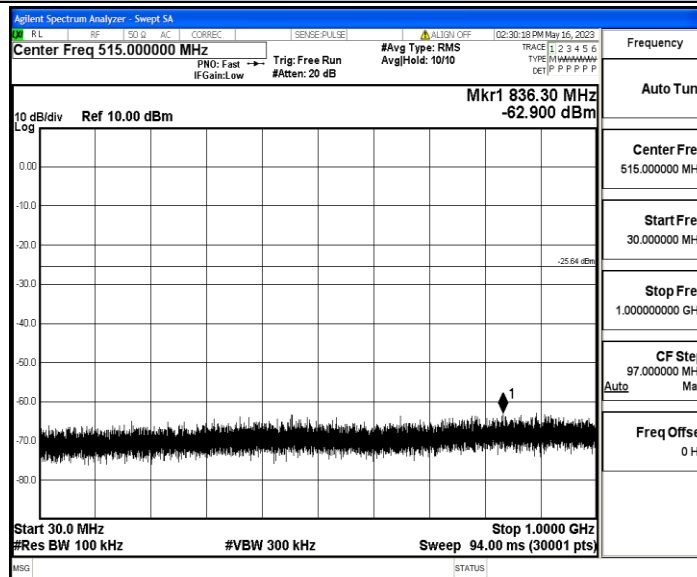
2DH5\_Ant1\_2441\_1000~26500



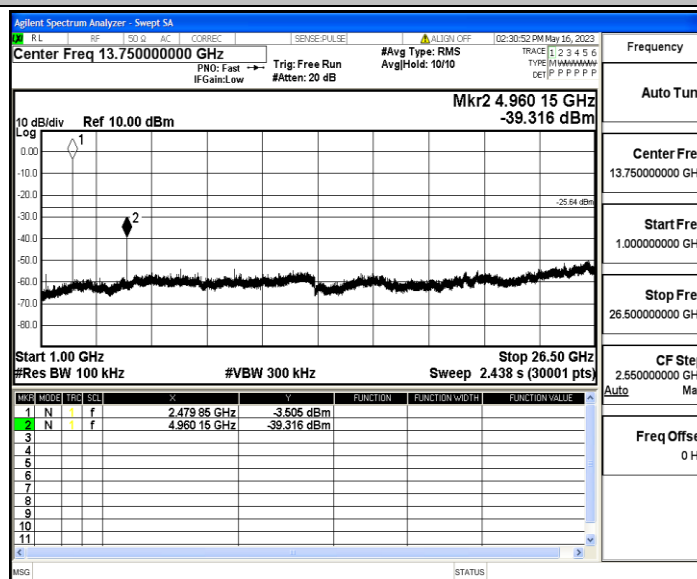
2DH5\_Ant1\_2480\_0~Reference



2DH5\_Ant1\_2480\_30~1000



2DH5\_Ant1\_2480\_1000~26500



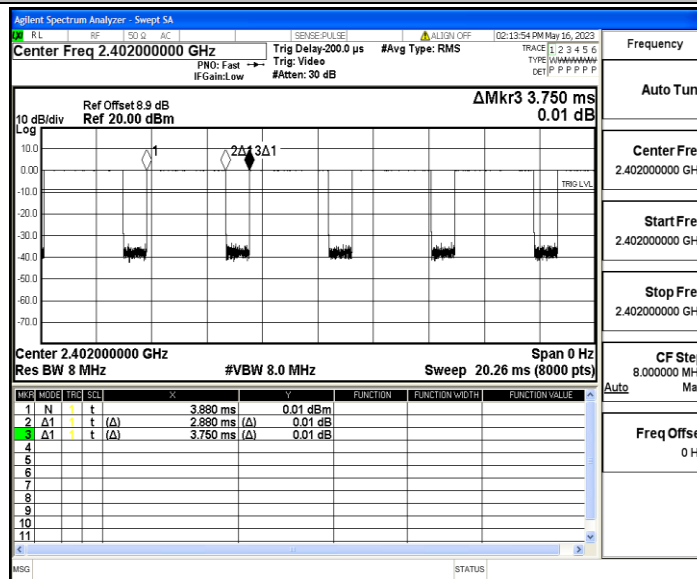
## Appendix I: Duty Cycle

### Test Result

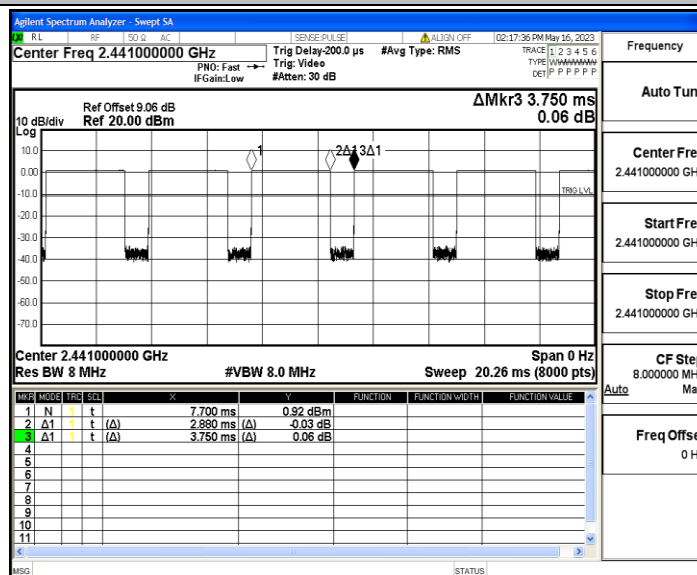
| TestMode | Antenna | Channel | Transmission<br>Duration [ms] | Transmission<br>Period [ms] | Duty Cycle [%] | 1/T[kHz] |
|----------|---------|---------|-------------------------------|-----------------------------|----------------|----------|
| DH5      | Ant1    | 2402    | 2.88                          | 3.75                        | 76.80          | 0.35     |
|          |         | 2441    | 2.88                          | 3.75                        | 76.80          | 0.35     |
|          |         | 2480    | 2.88                          | 3.74                        | 77.01          | 0.35     |
| 2DH5     | Ant1    | 2402    | 2.89                          | 3.75                        | 77.07          | 0.35     |
|          |         | 2441    | 2.89                          | 3.75                        | 77.07          | 0.35     |
|          |         | 2480    | 2.89                          | 3.75                        | 77.07          | 0.35     |

## Test Graphs

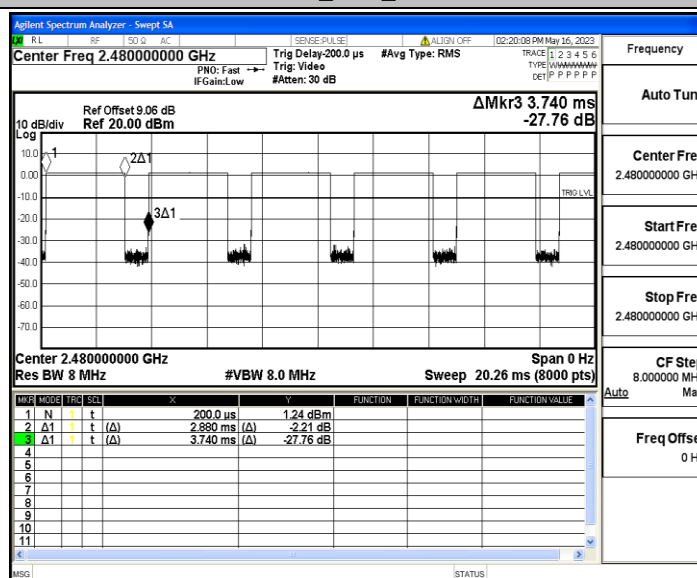
DH5\_Ant1\_2402



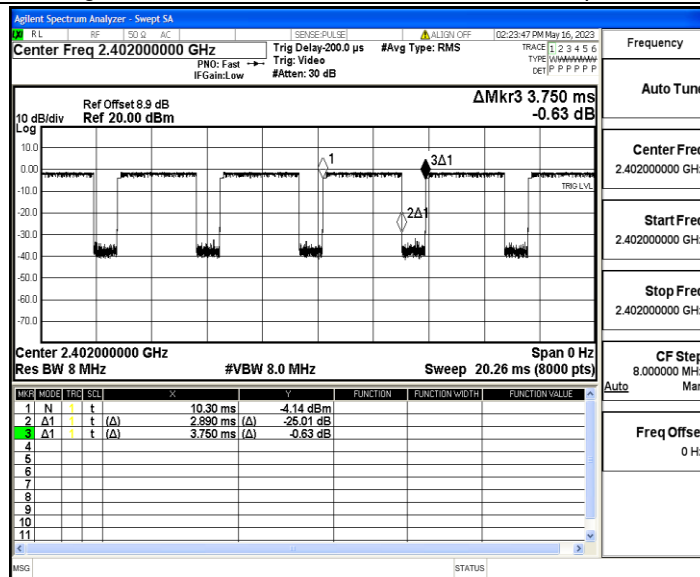
DH5\_Ant1\_2441



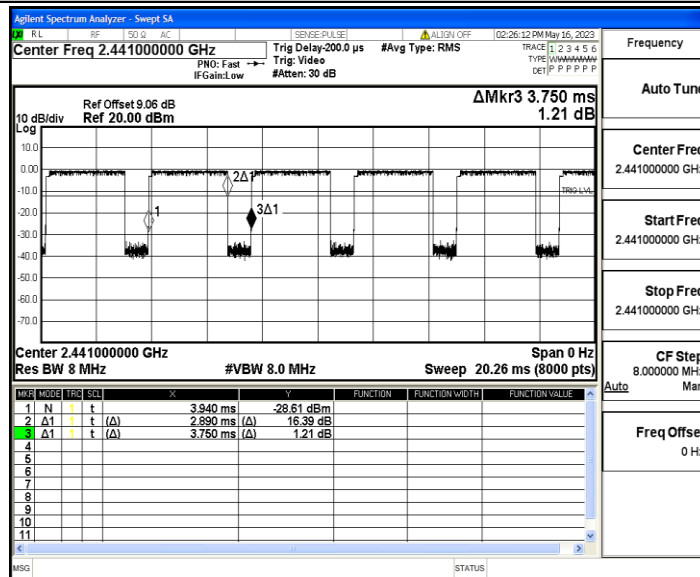
DH5\_Ant1\_2480



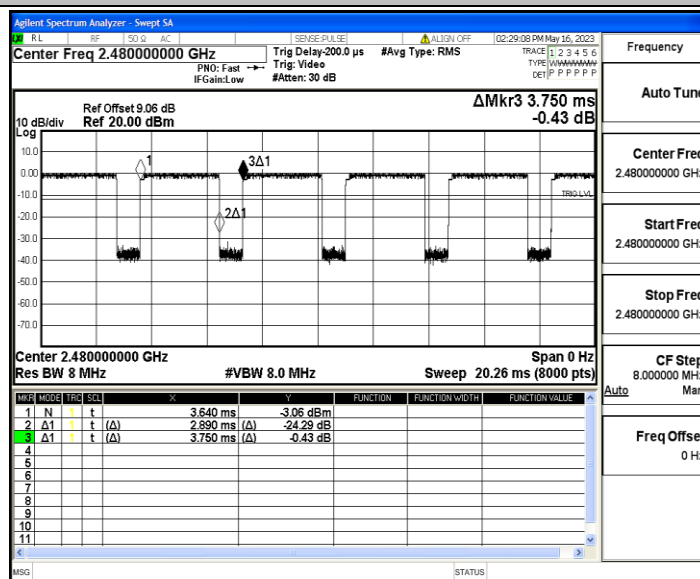
2DH5\_Ant1\_2402



2DH5\_Ant1\_2441



2DH5\_Ant1\_2480



## Appendix J: Emissions in Restricted Bands

### Test Result

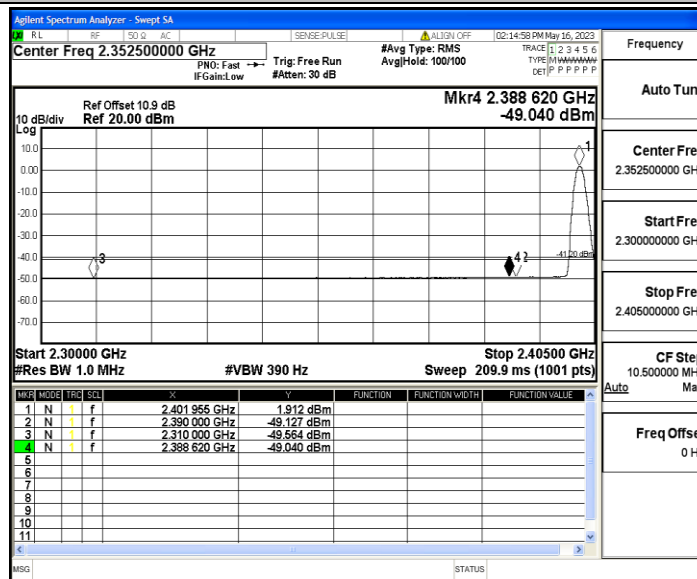
| TestMode | Antenna | ChName | Channel | Detector | Freq(MHz) | Result(dBm) | Limit(dBm) | Verdict |
|----------|---------|--------|---------|----------|-----------|-------------|------------|---------|
| DH5      | Ant1    | Low    | 2402    | AV       | 2310.000  | -49.56      | ≤-41.20    | PASS    |
|          |         |        |         | AV       | 2388.620  | -49.04      | ≤-41.20    | PASS    |
|          |         |        |         | AV       | 2390.000  | -49.13      | ≤-41.20    | PASS    |
|          |         |        |         | Peak     | 2310.000  | -42.33      | ≤-21.20    | PASS    |
|          |         |        |         | Peak     | 2345.990  | -39.41      | ≤-21.20    | PASS    |
|          |         |        |         | Peak     | 2390.000  | -43.2       | ≤-21.20    | PASS    |
|          |         | High   | 2480    | AV       | 2483.500  | -48.1       | ≤-41.20    | PASS    |
|          |         |        |         | AV       | 2483.520  | -48.1       | ≤-41.20    | PASS    |
|          |         |        |         | AV       | 2500.000  | -48.5       | ≤-41.20    | PASS    |
|          |         |        |         | Peak     | 2483.500  | -40.07      | ≤-21.20    | PASS    |
|          |         |        |         | Peak     | 2483.600  | -38.86      | ≤-21.20    | PASS    |
|          |         |        |         | Peak     | 2500.000  | -41.84      | ≤-21.20    | PASS    |
| 2DH5     | Ant1    | Low    | 2402    | AV       | 2310.000  | -49.52      | ≤-41.20    | PASS    |
|          |         |        |         | AV       | 2388.200  | -49.05      | ≤-41.20    | PASS    |
|          |         |        |         | AV       | 2390.000  | -49.06      | ≤-41.20    | PASS    |
|          |         |        |         | Peak     | 2310.000  | -43.01      | ≤-21.20    | PASS    |
|          |         |        |         | Peak     | 2338.955  | -39.33      | ≤-21.20    | PASS    |
|          |         |        |         | Peak     | 2390.000  | -43.12      | ≤-21.20    | PASS    |
|          |         | High   | 2480    | AV       | 2483.500  | -48.19      | ≤-41.20    | PASS    |
|          |         |        |         | AV       | 2483.520  | -48.19      | ≤-41.20    | PASS    |
|          |         |        |         | AV       | 2500.000  | -48.59      | ≤-41.20    | PASS    |
|          |         |        |         | Peak     | 2483.500  | -41.73      | ≤-21.20    | PASS    |
|          |         |        |         | Peak     | 2499.680  | -38.63      | ≤-21.20    | PASS    |
|          |         |        |         | Peak     | 2500.000  | -41.65      | ≤-21.20    | PASS    |

#### Note:

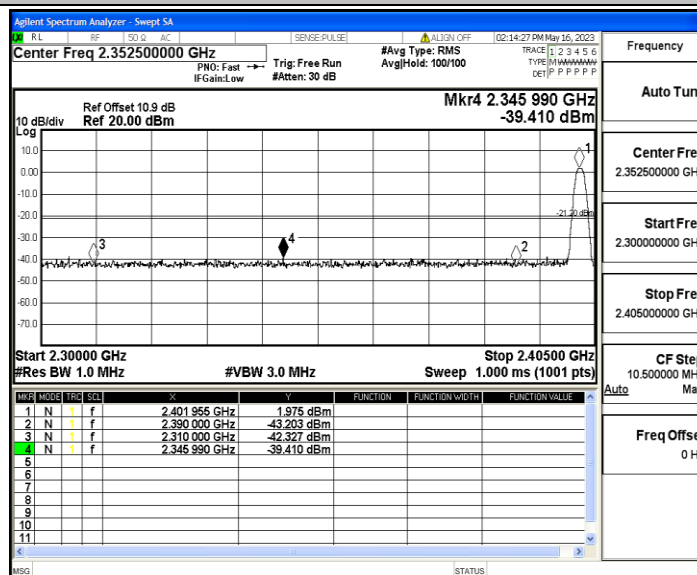
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

## Test Graphs

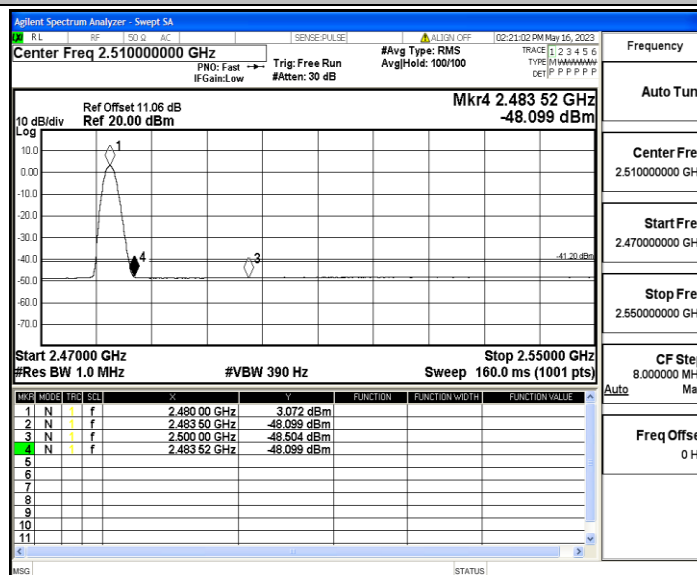
DH5\_Ant1\_Low\_2402\_AV



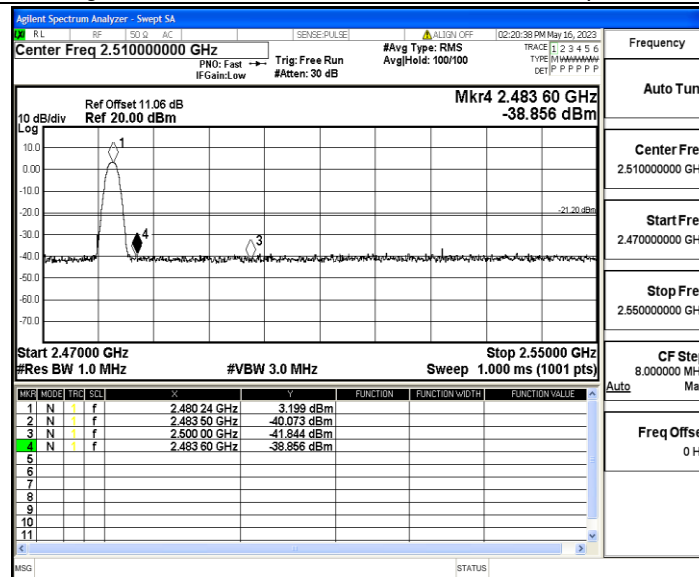
DH5\_Ant1\_Low\_2402\_Peak



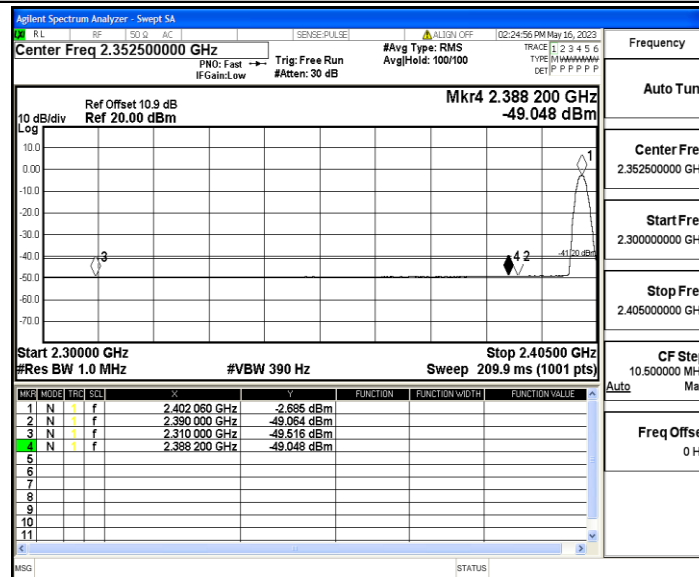
DH5\_Ant1\_High\_2480\_AV



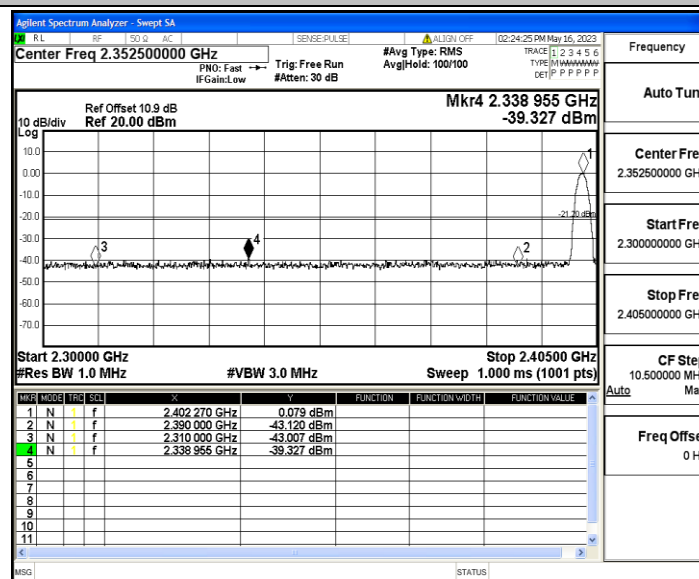
DH5\_Ant1\_High\_2480\_Peak



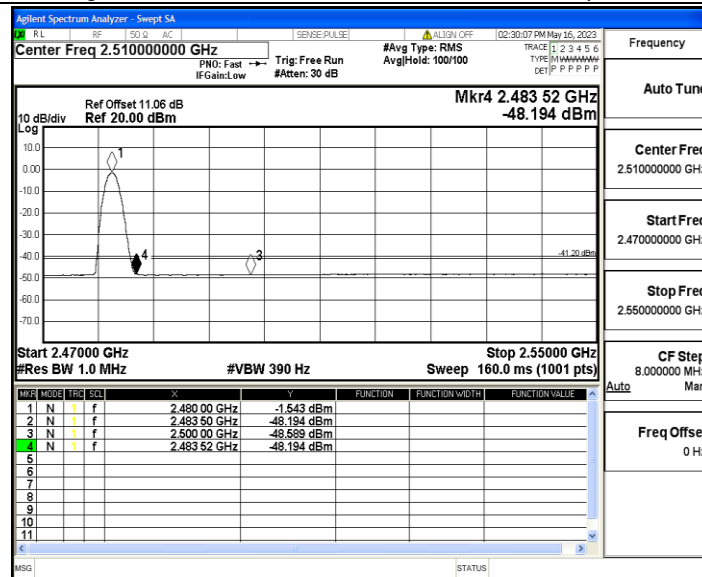
2DH5\_Ant1\_Low\_2402\_AV



2DH5\_Ant1\_Low\_2402\_Peak



2DH5\_Ant1\_High\_2480\_AV



## 2DH5\_Ant1\_High\_2480\_Peak

