

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

Product Name: Wireless clock speaker

Trade Mark: /

Test Model: KS-BT0096

FCC ID: 2AO47-KS-BT0096

### Environmental Conditions

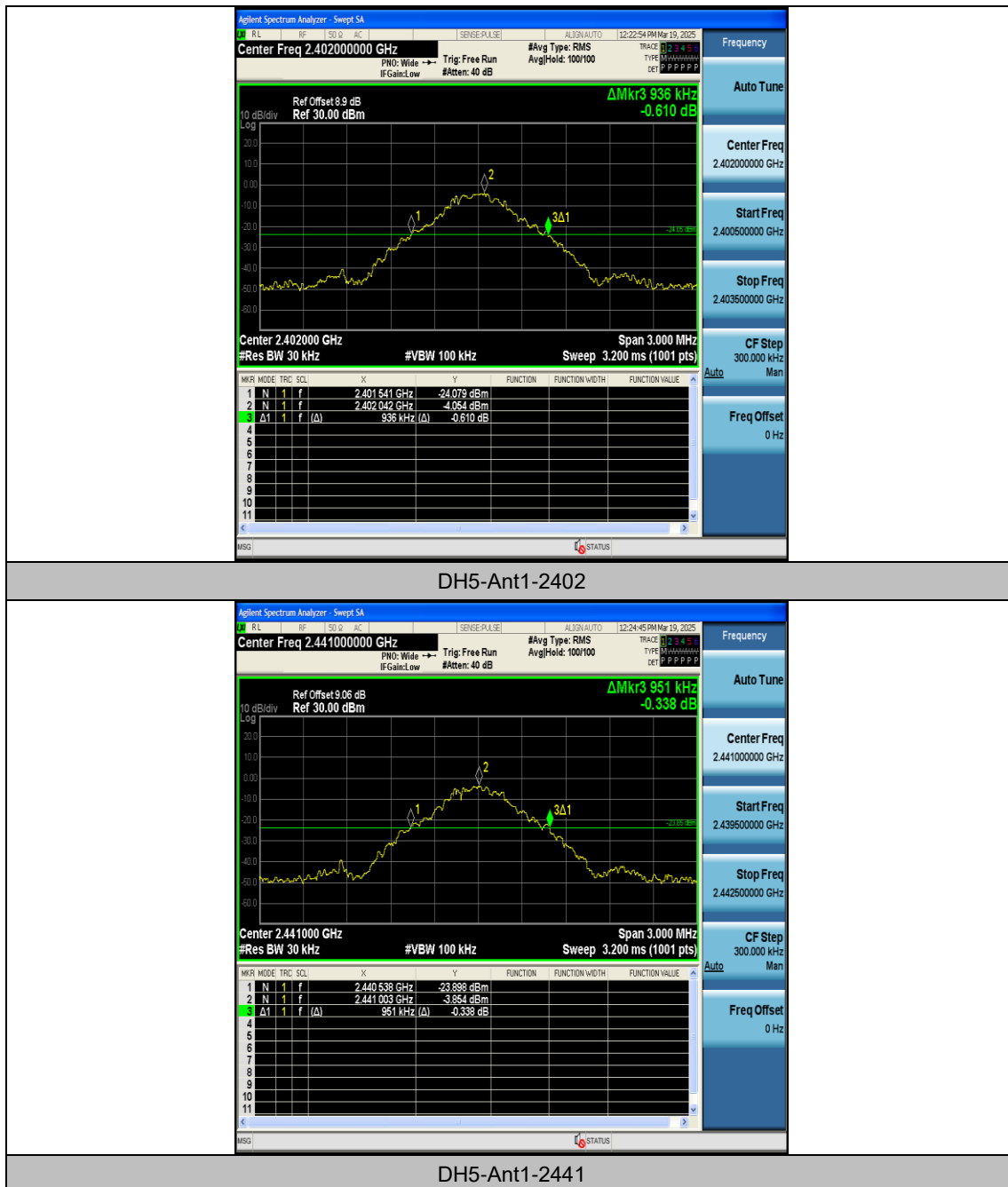
|                    |           |
|--------------------|-----------|
| Temperature:       | 23.5℃     |
| Relative Humidity: | 58%       |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Allen Lai |
| Supervised by:     | Max Zhang |
| NOTE               | N/A       |

## Appendix A: 20dB Emission Bandwidth

### Test Result

| Test Mode | Antenna | Frequency [MHz] | 20db EBW [MHz] | FL [MHz] | FH [MHz] | Limit [MHz] | Verdict |
|-----------|---------|-----------------|----------------|----------|----------|-------------|---------|
| DH5       | Ant1    | 2402            | 0.936          | 2401.541 | 2402.477 | ---         | ---     |
| DH5       | Ant1    | 2441            | 0.951          | 2440.538 | 2441.489 | ---         | ---     |
| DH5       | Ant1    | 2480            | 0.933          | 2479.541 | 2480.474 | ---         | ---     |
| 2DH5      | Ant1    | 2402            | 1.284          | 2401.373 | 2402.657 | ---         | ---     |
| 2DH5      | Ant1    | 2441            | 1.314          | 2440.340 | 2441.654 | ---         | ---     |
| 2DH5      | Ant1    | 2480            | 1.320          | 2479.334 | 2480.654 | ---         | ---     |
| 3DH5      | Ant1    | 2402            | 1.290          | 2401.367 | 2402.657 | ---         | ---     |
| 3DH5      | Ant1    | 2441            | 1.275          | 2440.355 | 2441.630 | ---         | ---     |
| 3DH5      | Ant1    | 2480            | 1.296          | 2479.346 | 2480.642 | ---         | ---     |

## Test Graphs





DH5-Ant1-2480



2DH5-Ant1-2402



2DH5-Ant1-2441



2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441

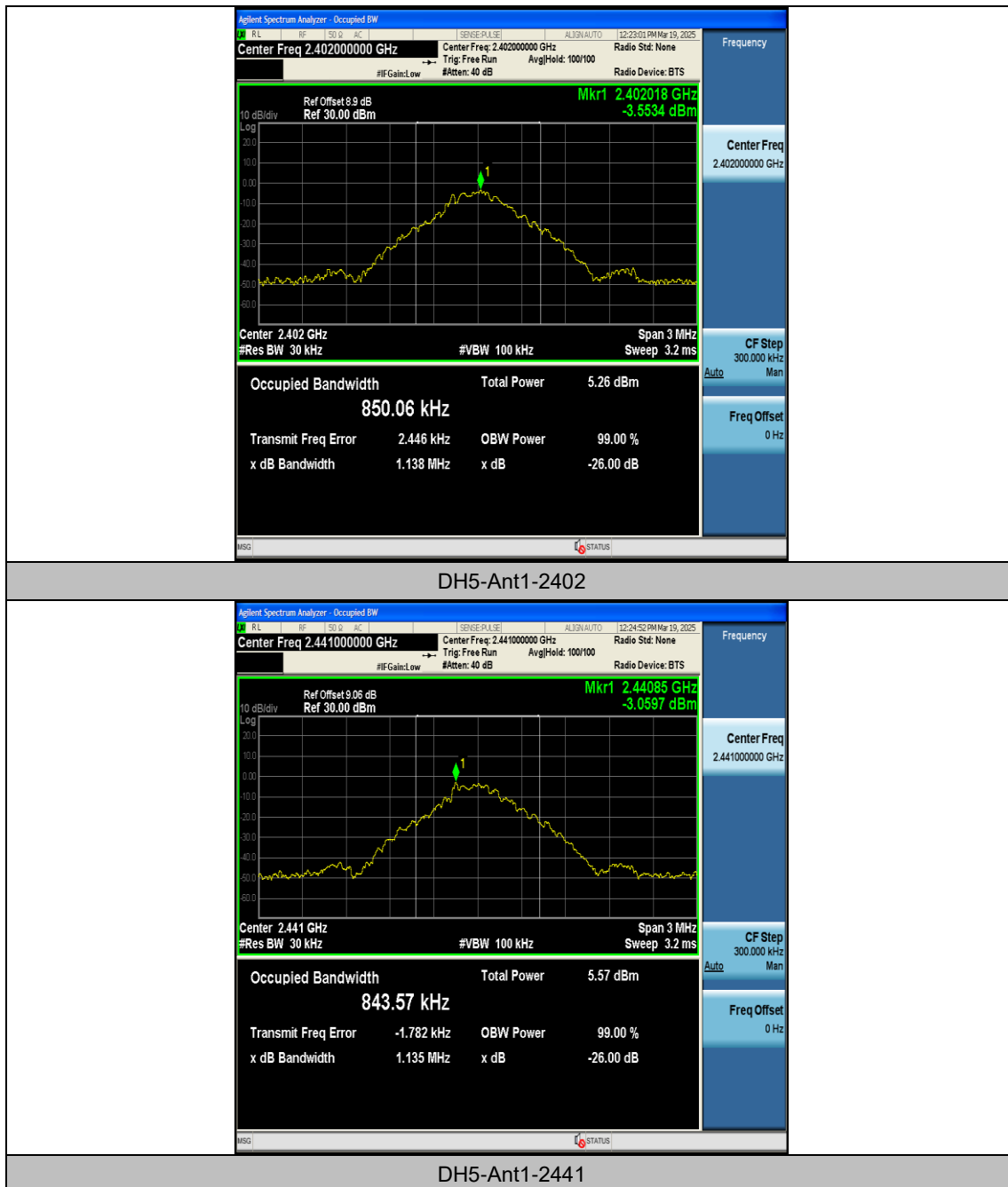


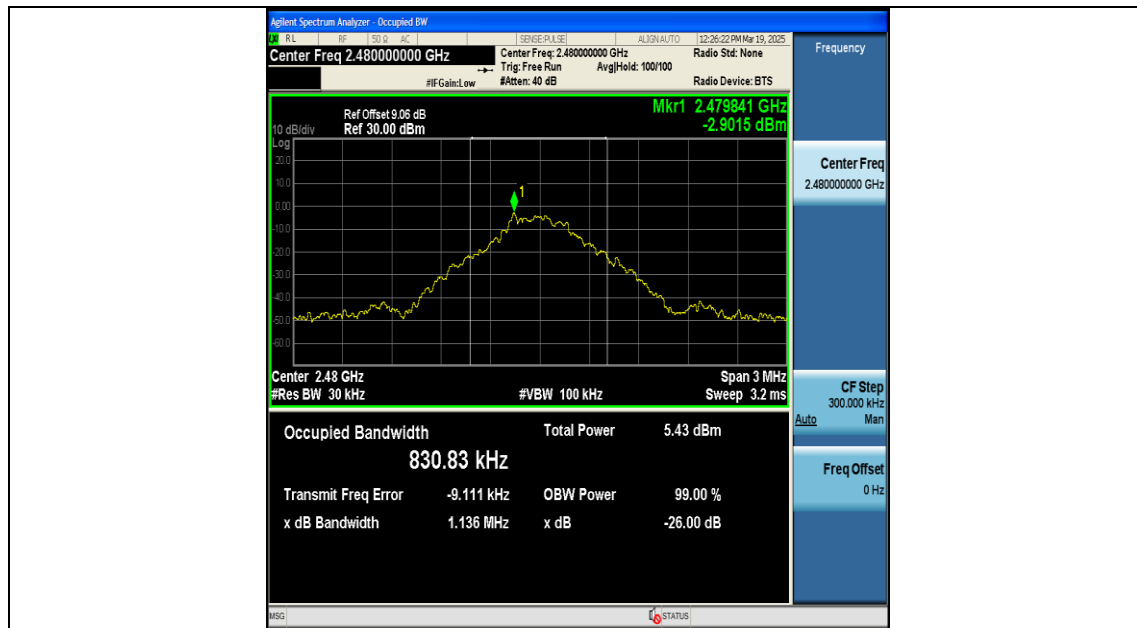
## Appendix B: Occupied Channel Bandwidth

### Test Result

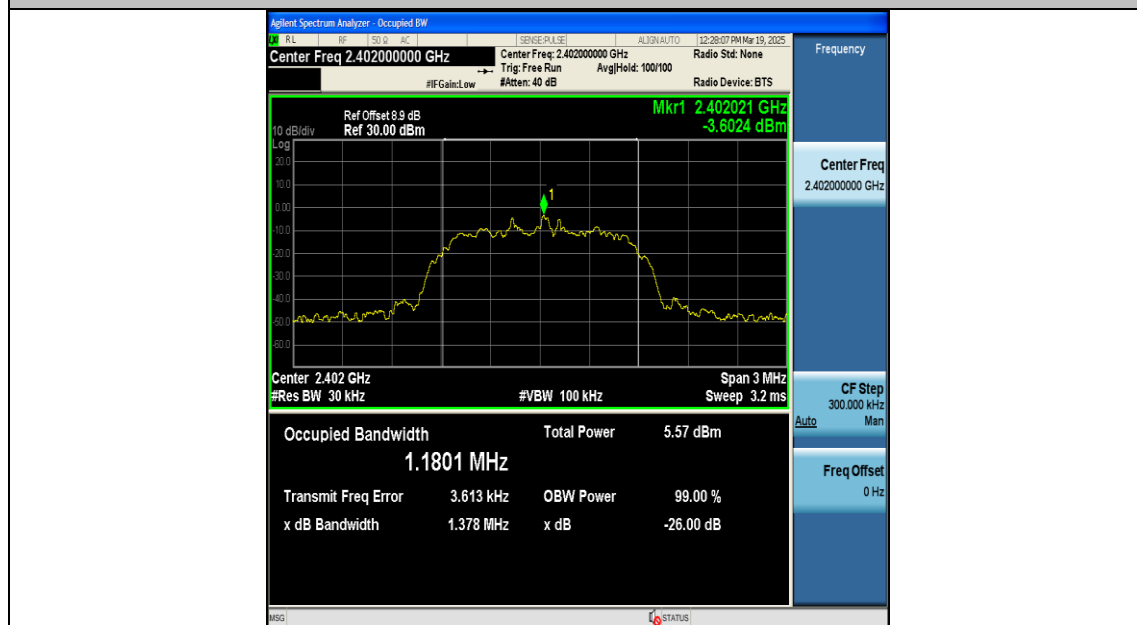
| Test Mode | Antenna | Frequency [MHz] | OCB [MHz] | FL [MHz]  | FH [MHz]  | Limit [MHz] | Verdict |
|-----------|---------|-----------------|-----------|-----------|-----------|-------------|---------|
| DH5       | Ant1    | 2402            | 0.85006   | 2401.5774 | 2402.4275 | ---         | ---     |
| DH5       | Ant1    | 2441            | 0.84357   | 2440.5764 | 2441.4200 | ---         | ---     |
| DH5       | Ant1    | 2480            | 0.83083   | 2479.5755 | 2480.4063 | ---         | ---     |
| 2DH5      | Ant1    | 2402            | 1.1801    | 2401.4136 | 2402.5937 | ---         | ---     |
| 2DH5      | Ant1    | 2441            | 1.1869    | 2440.4071 | 2441.5940 | ---         | ---     |
| 2DH5      | Ant1    | 2480            | 1.1809    | 2479.4060 | 2480.5869 | ---         | ---     |
| 3DH5      | Ant1    | 2402            | 1.1744    | 2401.4151 | 2402.5895 | ---         | ---     |
| 3DH5      | Ant1    | 2441            | 1.1817    | 2440.4081 | 2441.5898 | ---         | ---     |
| 3DH5      | Ant1    | 2480            | 1.1715    | 2479.4135 | 2480.5850 | ---         | ---     |

## Test Graphs





DH5-Ant1-2480

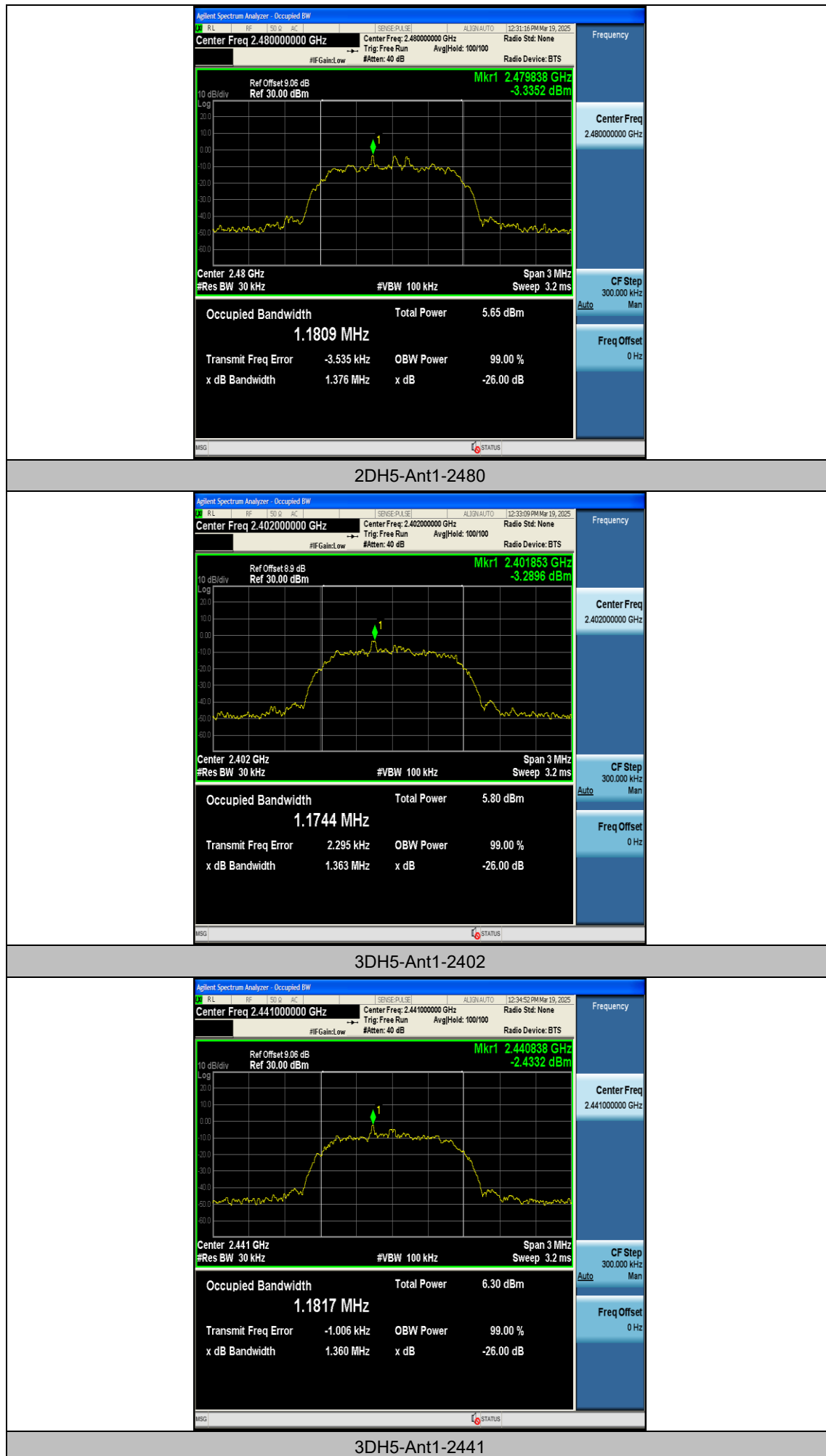


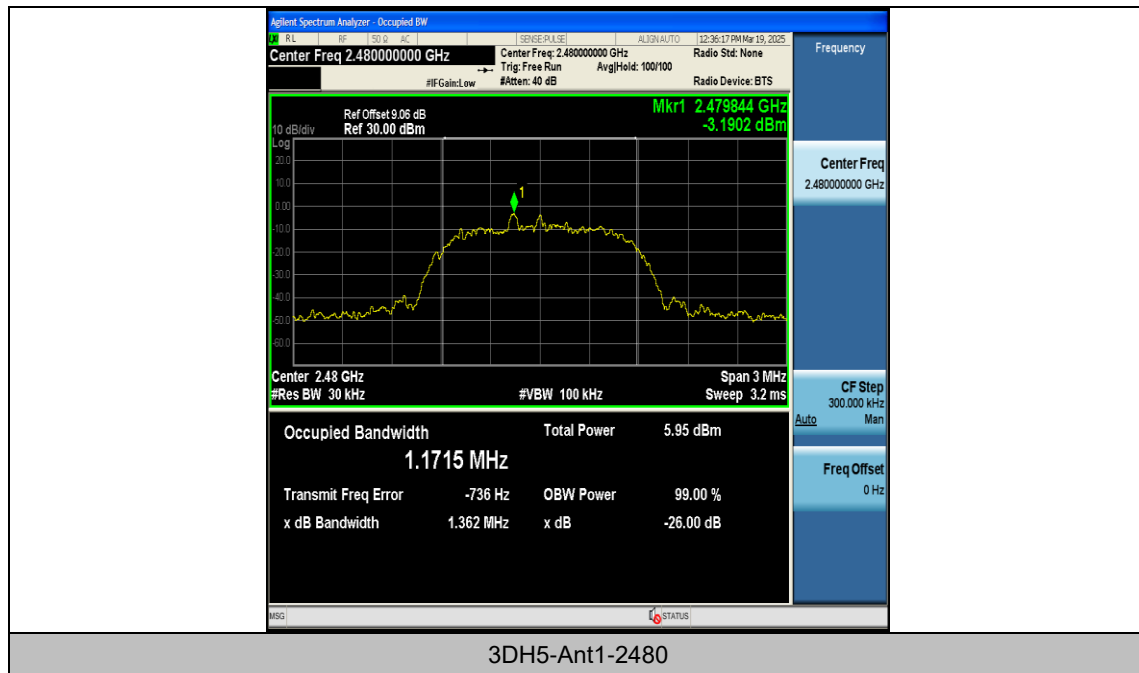
2DH5-Ant1-2402



2DH5-Ant1-2441





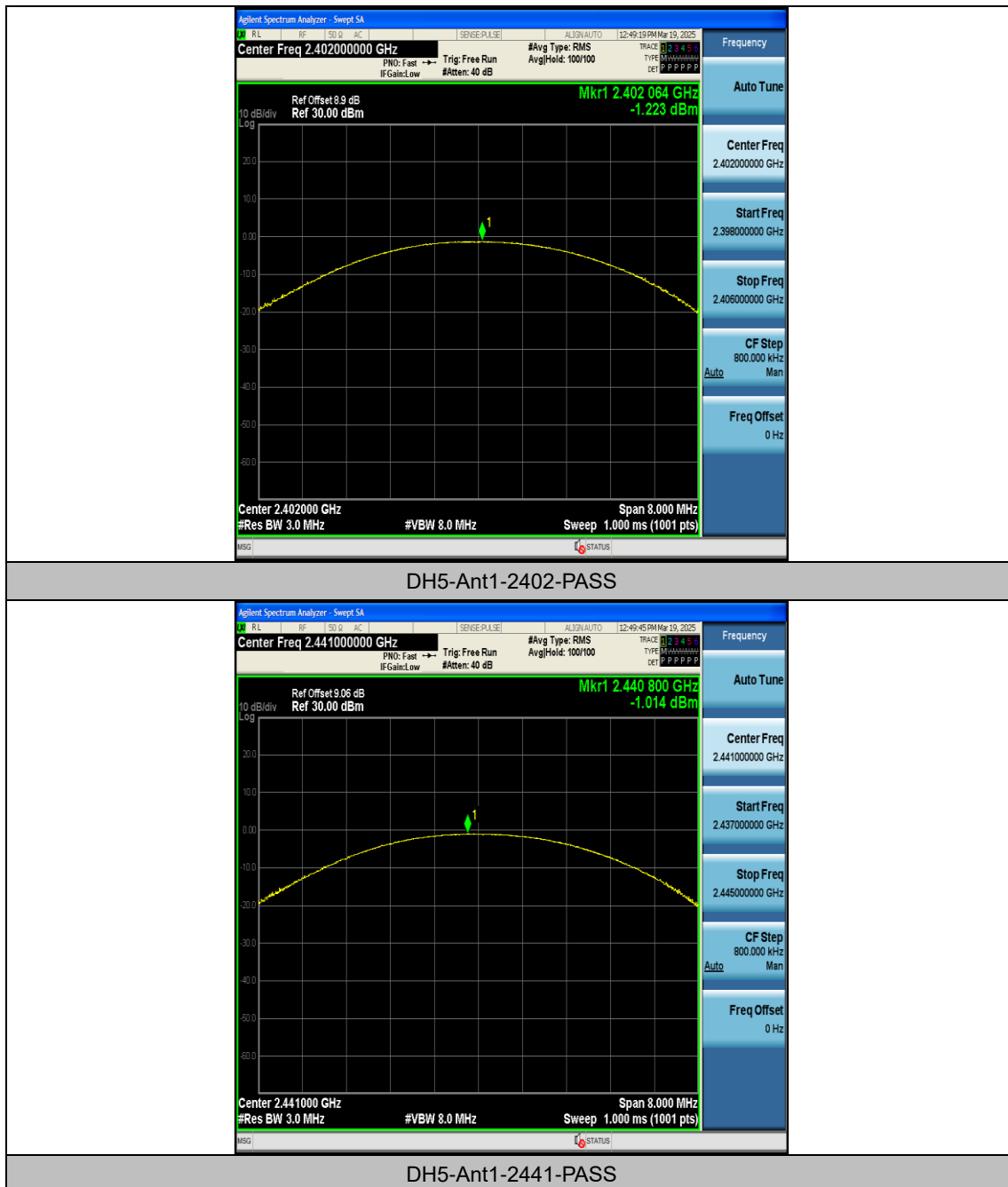


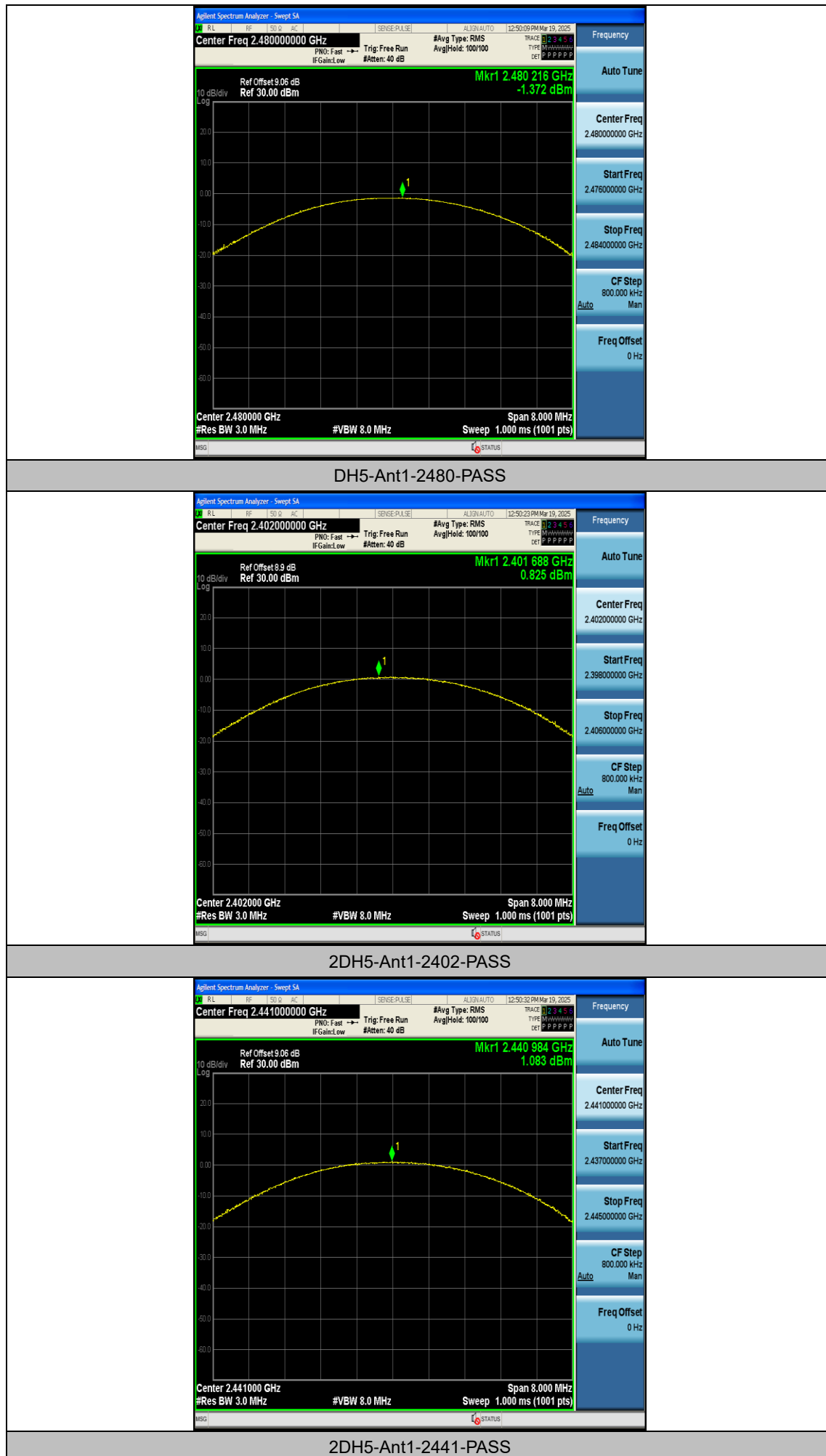
## Appendix C: Maximum peak conducted output power

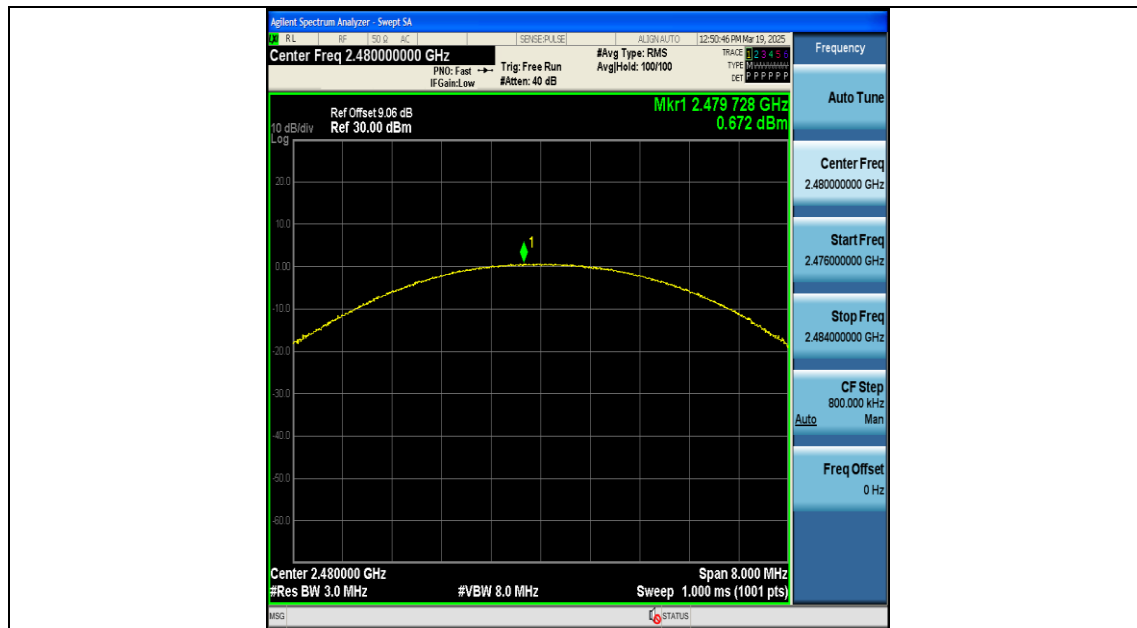
### Test Result

| Test Mode | Antenna | Frequency [MHz] | Conducted Peak Power [dBm] | Conducted Limit [dBm] | Verdict |
|-----------|---------|-----------------|----------------------------|-----------------------|---------|
| DH5       | Ant1    | 2402            | -1.22                      | ≤30                   | PASS    |
| DH5       | Ant1    | 2441            | -1.01                      | ≤30                   | PASS    |
| DH5       | Ant1    | 2480            | -1.37                      | ≤30                   | PASS    |
| 2DH5      | Ant1    | 2402            | 0.83                       | ≤20.97                | PASS    |
| 2DH5      | Ant1    | 2441            | 1.08                       | ≤20.97                | PASS    |
| 2DH5      | Ant1    | 2480            | 0.67                       | ≤20.97                | PASS    |
| 3DH5      | Ant1    | 2402            | 1.42                       | ≤20.97                | PASS    |
| 3DH5      | Ant1    | 2441            | 1.67                       | ≤20.97                | PASS    |
| 3DH5      | Ant1    | 2480            | 1.28                       | ≤20.97                | PASS    |

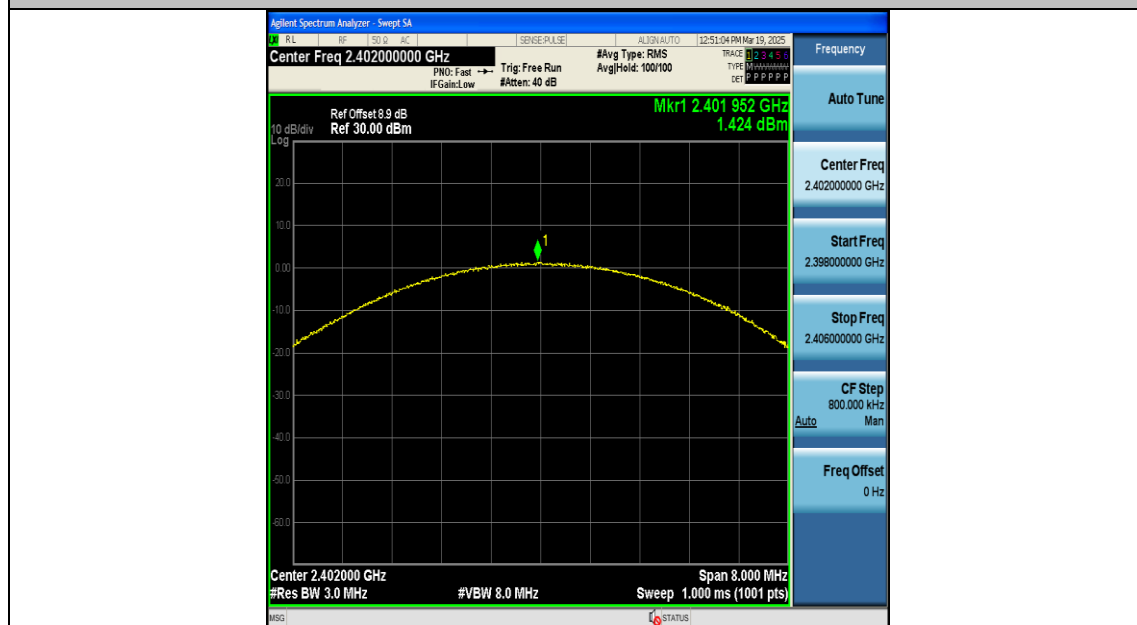
## Test Graphs



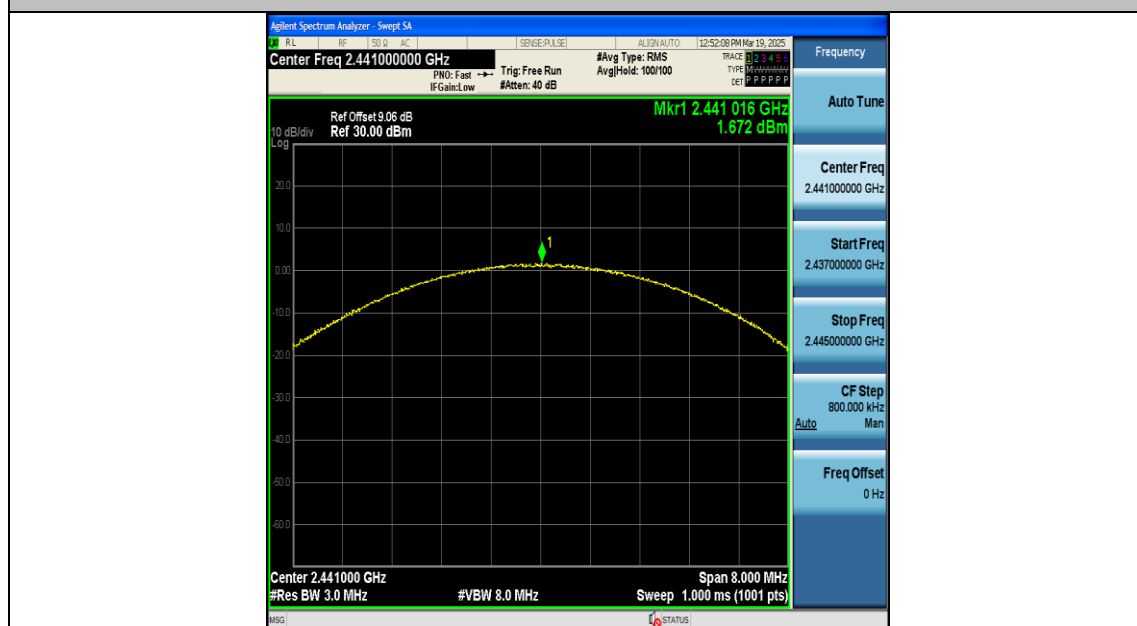




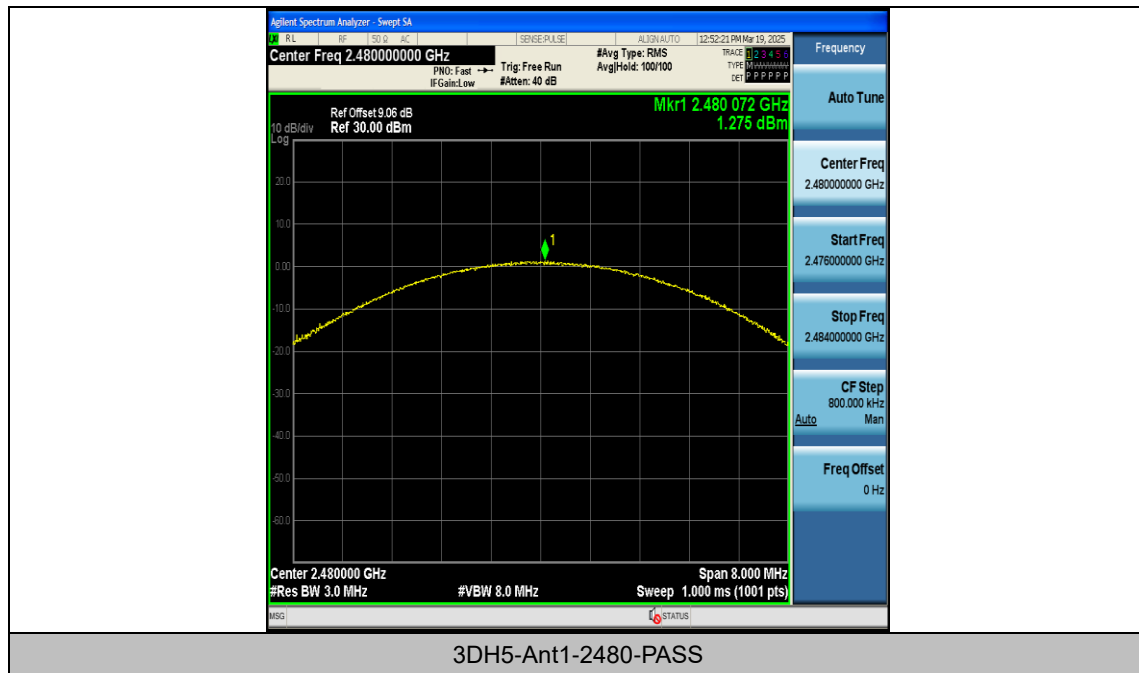
2DH5-Ant1-2480-PASS



3DH5-Ant1-2402-PASS



3DH5-Ant1-2441-PASS



## Appendix D: Carrier frequency separation

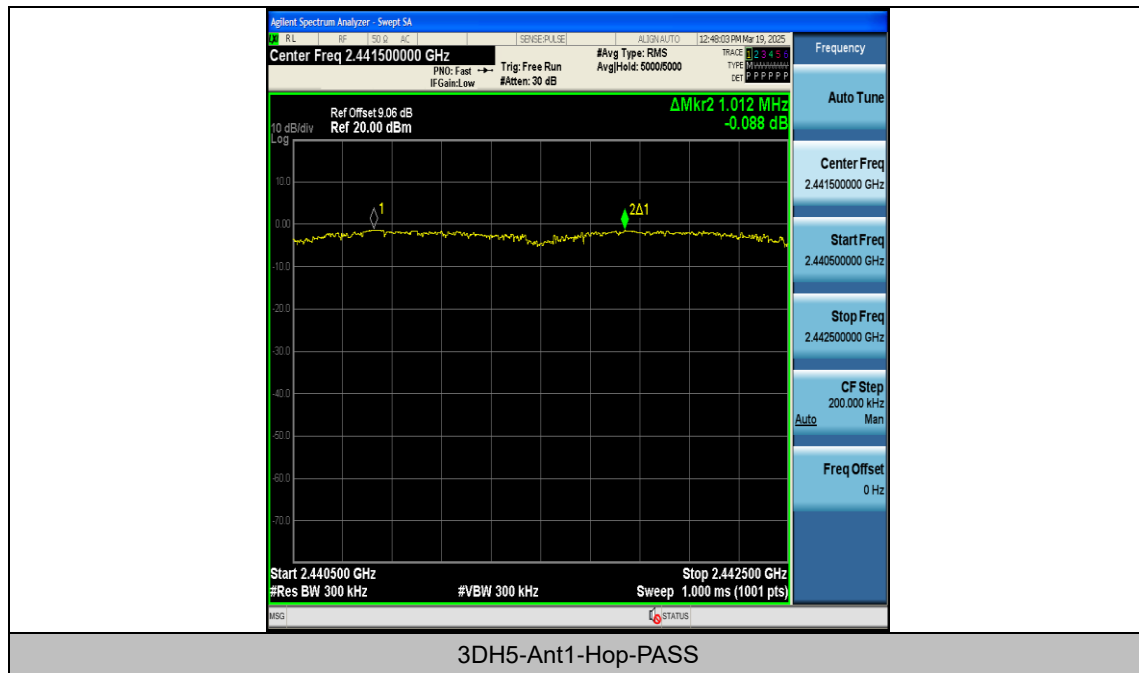
### Test Result

| Test Mode | Antenna | Frequency<br>[MHz] | Result<br>[MHz] | Limit<br>[MHz] | Verdict |
|-----------|---------|--------------------|-----------------|----------------|---------|
| DH5       | Ant1    | Hop                | 0.998           | $\geq 0.951$   | PASS    |
| 2DH5      | Ant1    | Hop                | 0.984           | $\geq 0.880$   | PASS    |
| 3DH5      | Ant1    | Hop                | 1.012           | $\geq 0.864$   | PASS    |



## Test Graphs



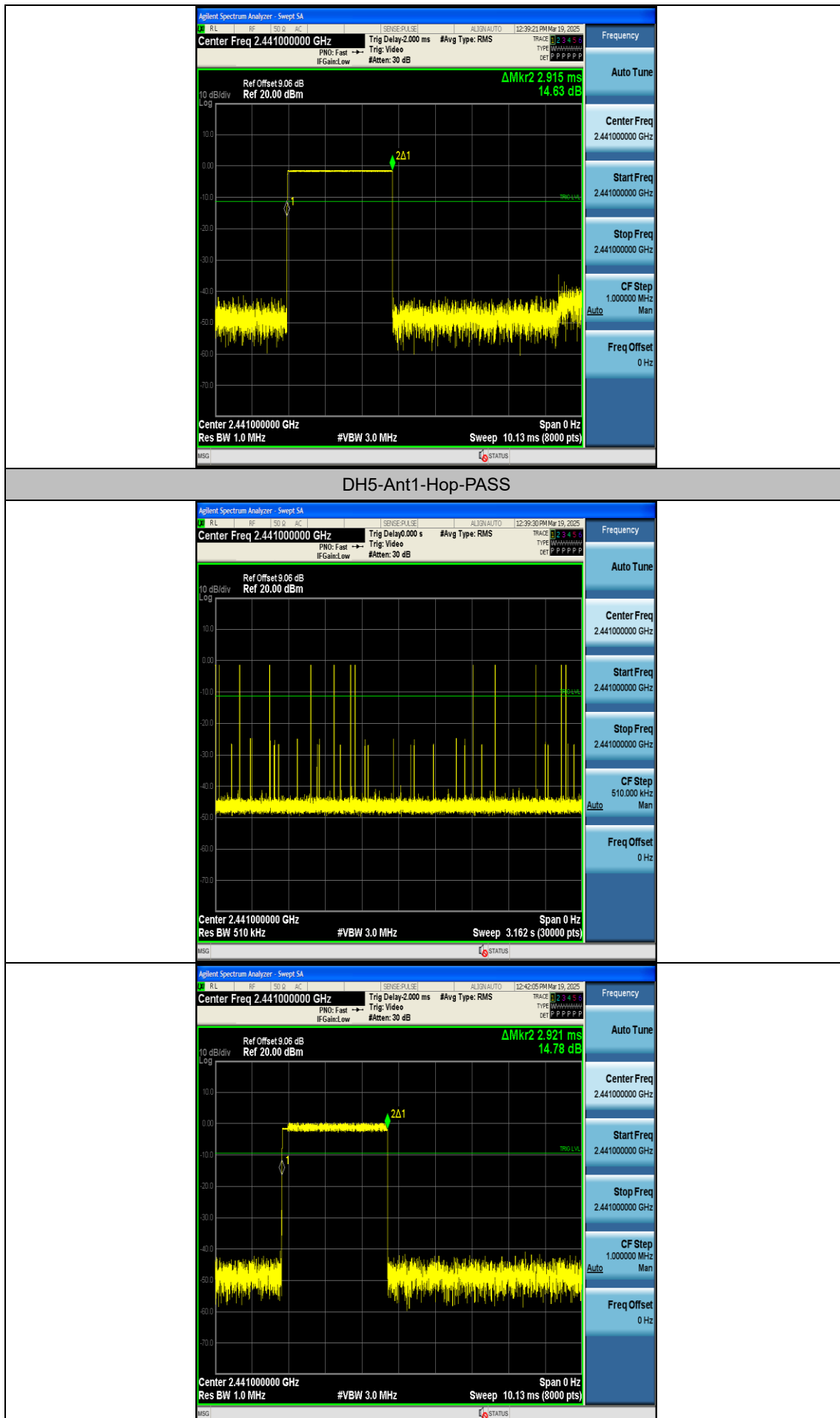


## Appendix E: Time of occupancy

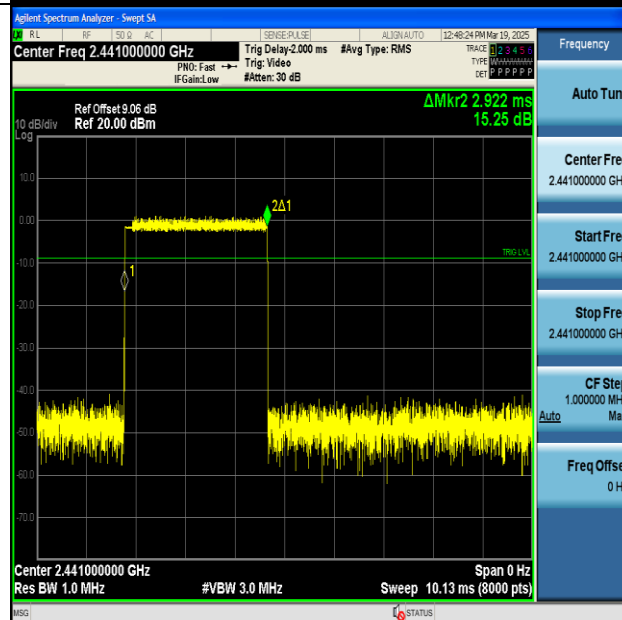
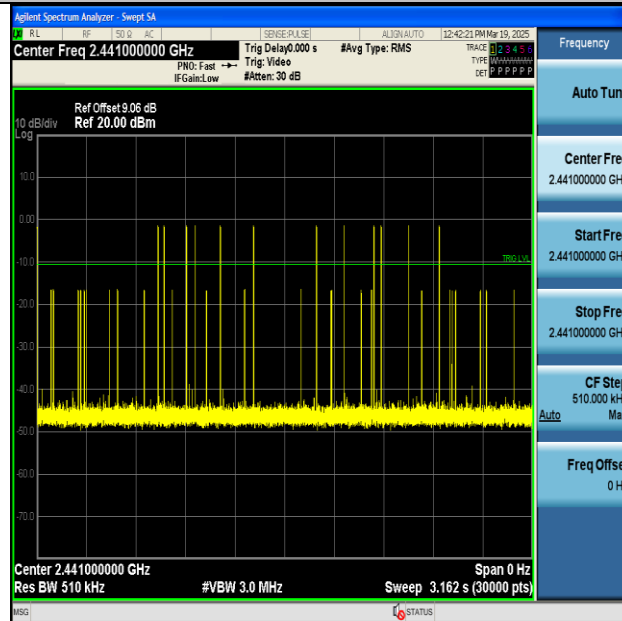
### Test Result

| Test Mode | Antenna | Frequency [MHz] | Burst Width [ms] | TotalHops [Num] | Result [s] | Limit [s] | Verdict |
|-----------|---------|-----------------|------------------|-----------------|------------|-----------|---------|
| DH5       | Ant1    | Hop             | 2.915            | 130             | 0.379      | ≤0.4      | PASS    |
| 2DH5      | Ant1    | Hop             | 2.921            | 130             | 0.38       | ≤0.4      | PASS    |
| 3DH5      | Ant1    | Hop             | 2.922            | 110             | 0.321      | ≤0.4      | PASS    |

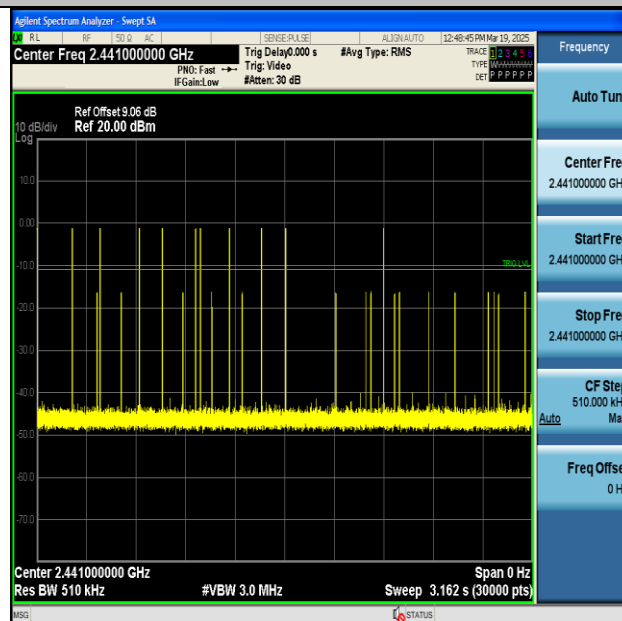
## Test Graphs



## 2DH5-Ant1-Hop-PASS



## 3DH5-Ant1-Hop-PASS

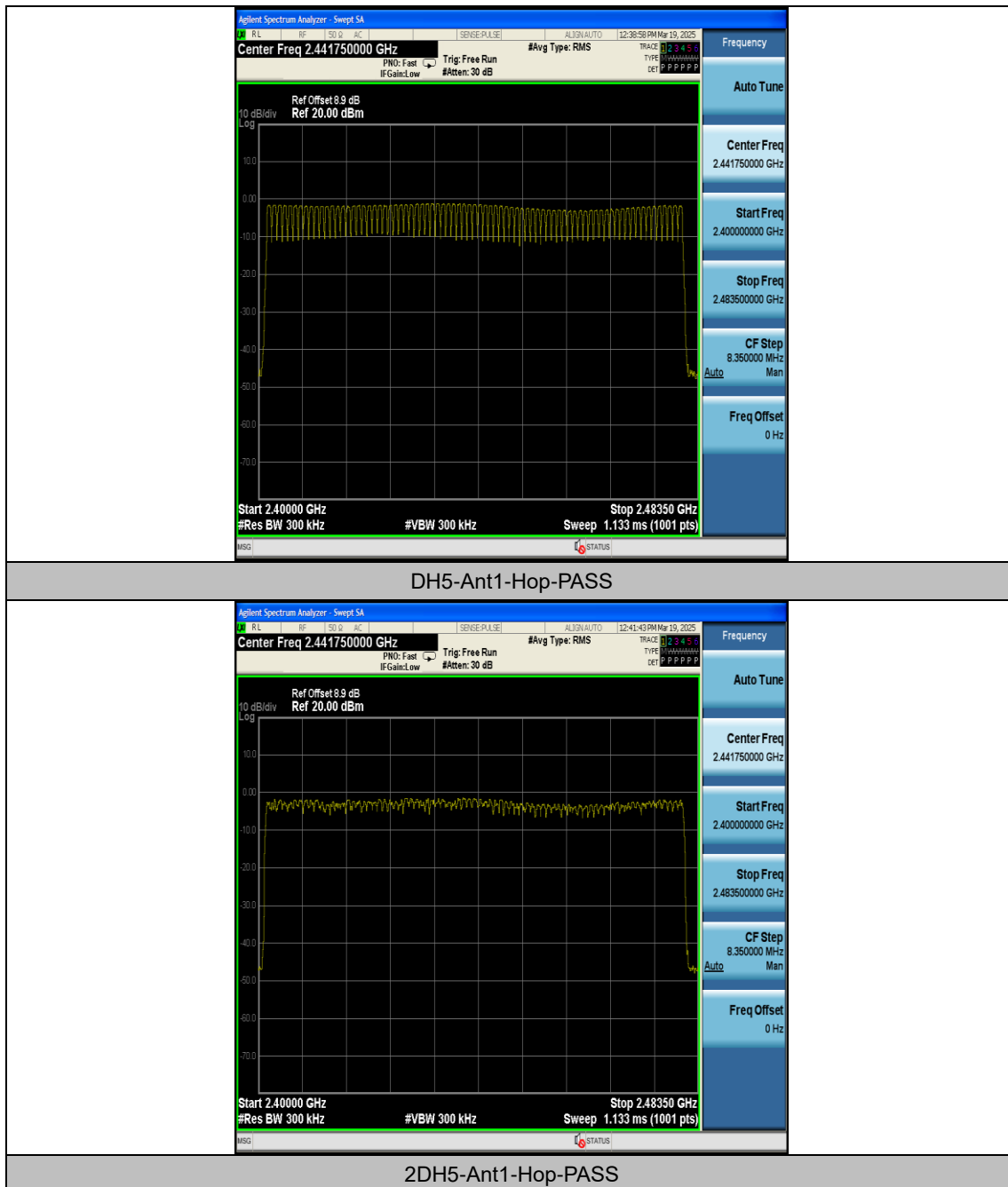


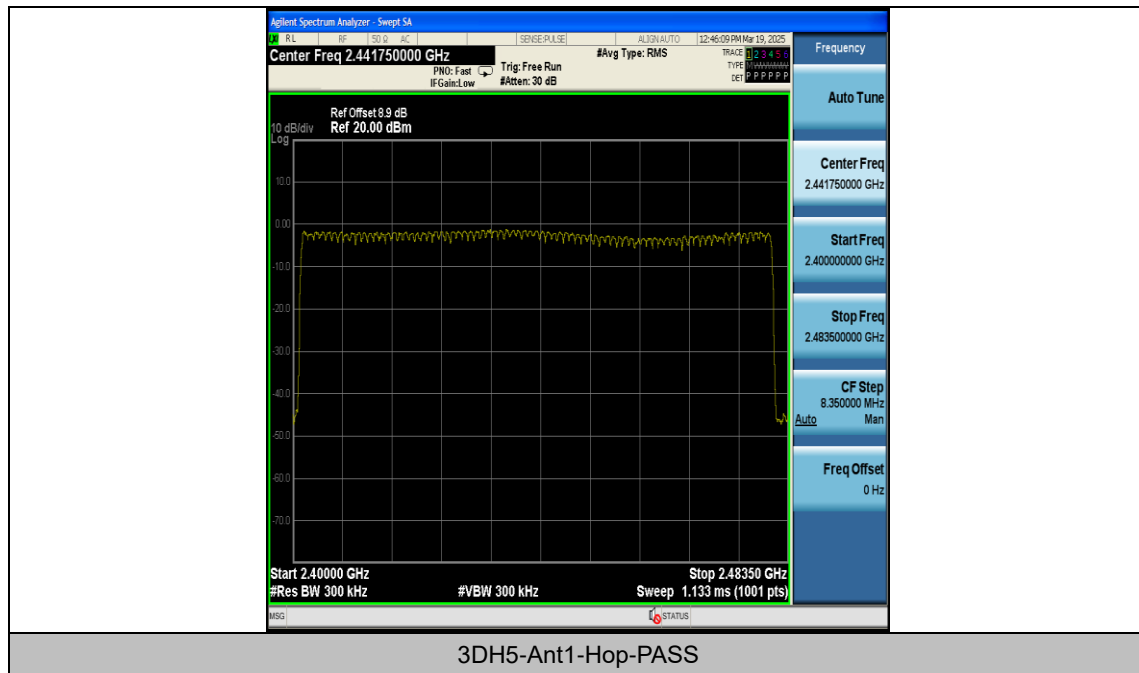
## Appendix F: Number of hopping channels

### Test Result

| Test Mode | Antenna | Frequency<br>[MHz] | Result<br>[Num] | Limit<br>[Num] | Verdict |
|-----------|---------|--------------------|-----------------|----------------|---------|
| DH5       | Ant1    | Hop                | 79              | ≥15            | PASS    |
| 2DH5      | Ant1    | Hop                | 79              | ≥15            | PASS    |
| 3DH5      | Ant1    | Hop                | 79              | ≥15            | PASS    |

## Test Graphs





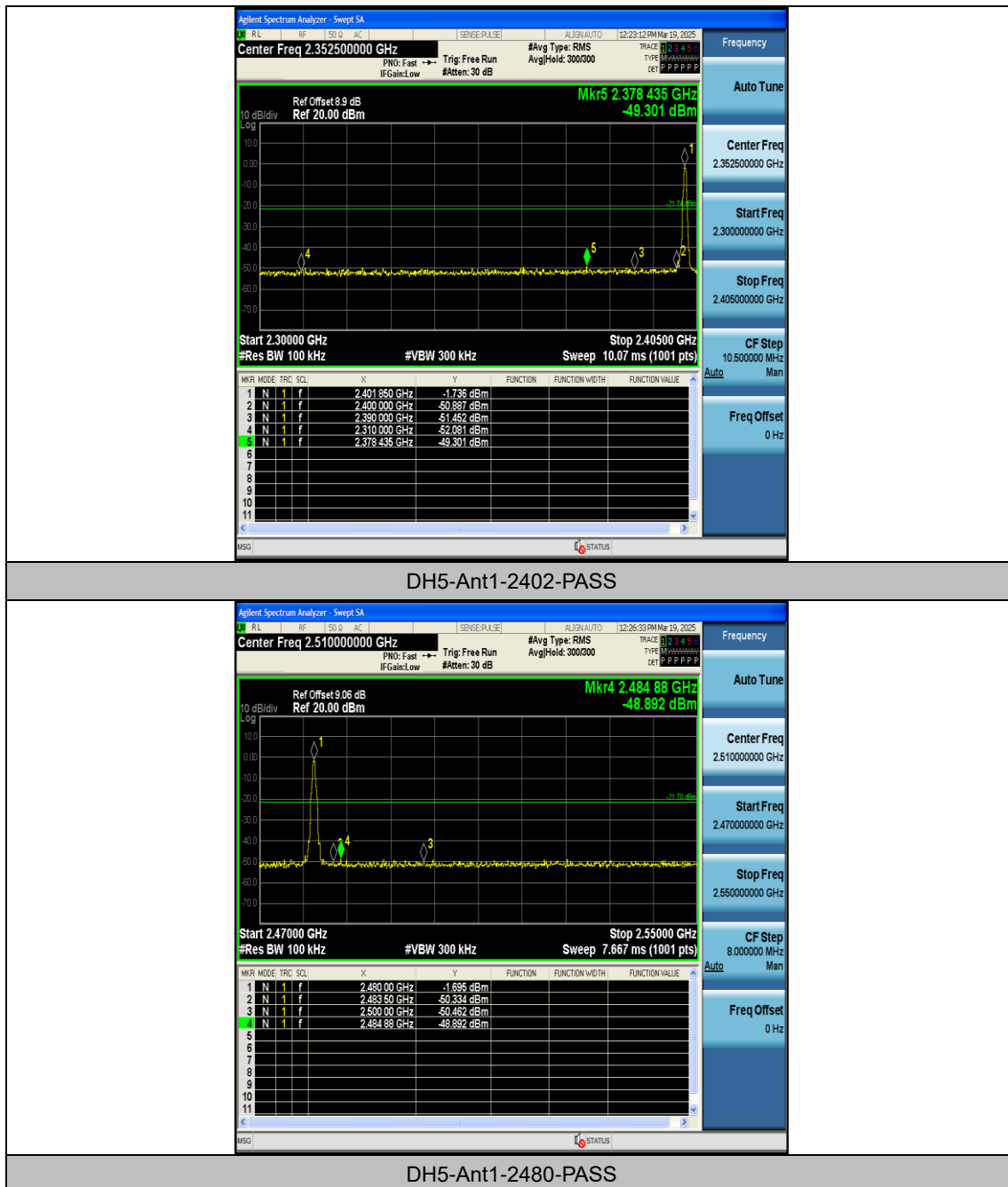


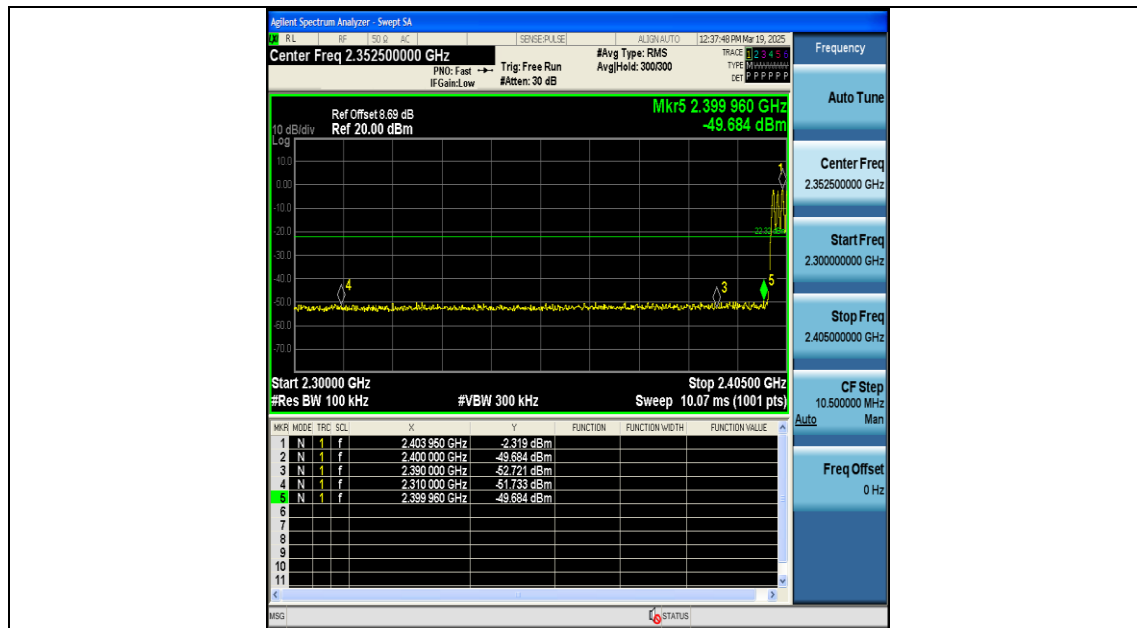
## Appendix G: Band edge measurements

### Test Result

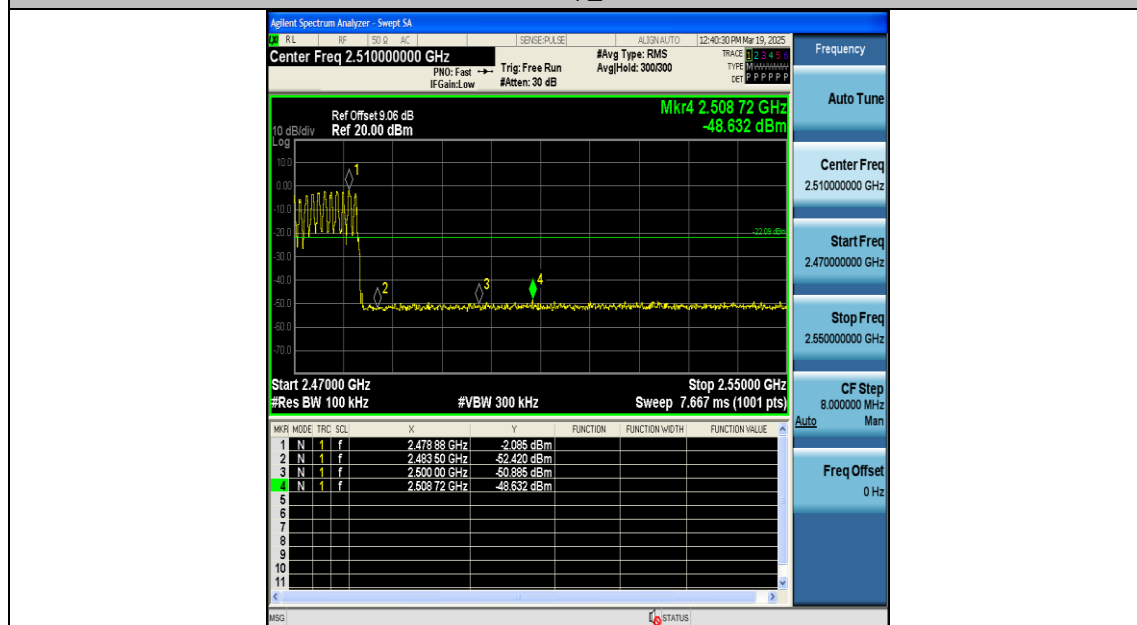
| Test Mode | Antenna | Ch.Name | Frequency [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm]   | Verdict |
|-----------|---------|---------|-----------------|----------------|--------------|---------------|---------|
| DH5       | Ant1    | Low     | 2402            | -1.74          | -49.3        | $\leq -21.74$ | PASS    |
| DH5       | Ant1    | High    | 2480            | -1.70          | -48.89       | $\leq -21.7$  | PASS    |
| DH5       | Ant1    | Low     | Hop_2402        | -2.32          | -49.68       | $\leq -22.32$ | PASS    |
| DH5       | Ant1    | High    | Hop_2480        | -2.09          | -48.63       | $\leq -22.09$ | PASS    |
| 2DH5      | Ant1    | Low     | 2402            | -1.77          | -49.36       | $\leq -21.77$ | PASS    |
| 2DH5      | Ant1    | High    | 2480            | -1.75          | -48.16       | $\leq -21.75$ | PASS    |
| 2DH5      | Ant1    | Low     | Hop_2402        | -3.90          | -48.81       | $\leq -23.9$  | PASS    |
| 2DH5      | Ant1    | High    | Hop_2480        | -3.56          | -47.37       | $\leq -23.56$ | PASS    |
| 3DH5      | Ant1    | Low     | 2402            | -1.71          | -49.16       | $\leq -21.71$ | PASS    |
| 3DH5      | Ant1    | High    | 2480            | -1.74          | -48.33       | $\leq -21.74$ | PASS    |
| 3DH5      | Ant1    | Low     | Hop_2402        | -4.02          | -49.51       | $\leq -24.02$ | PASS    |
| 3DH5      | Ant1    | High    | Hop_2480        | -3.78          | -48.74       | $\leq -23.78$ | PASS    |

## Test Graphs

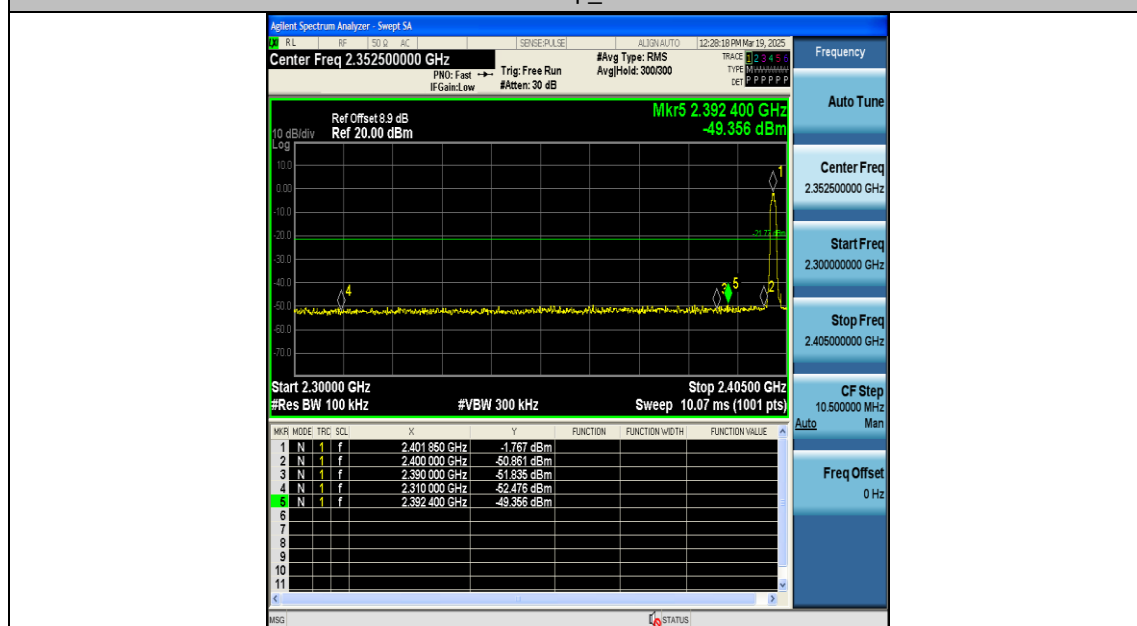




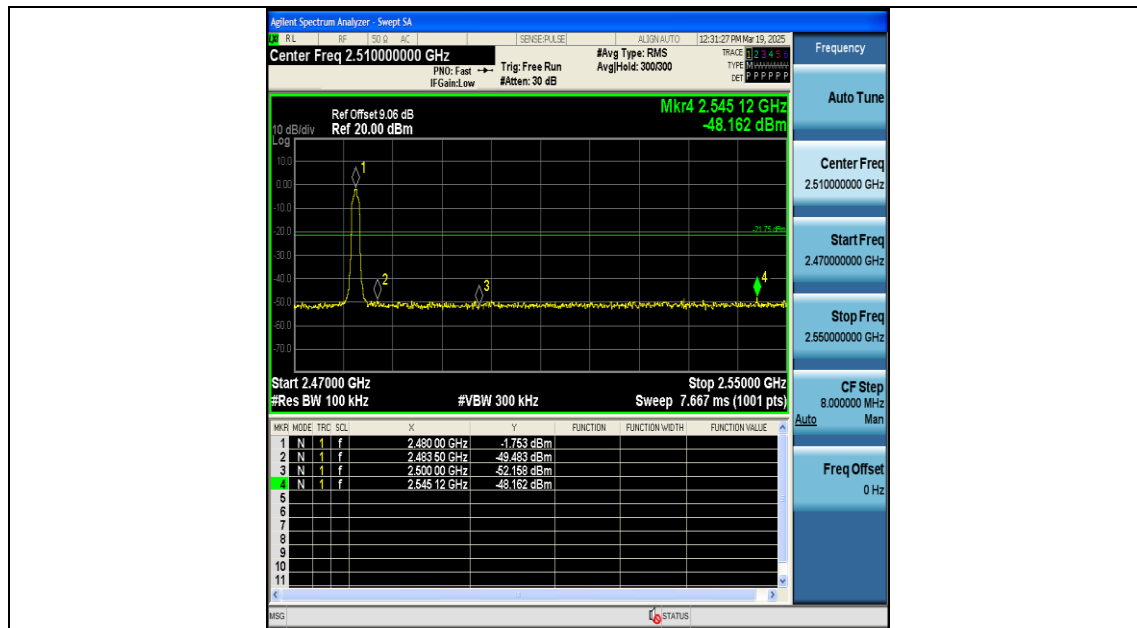
DH5-Ant1-Hop\_2402-PASS



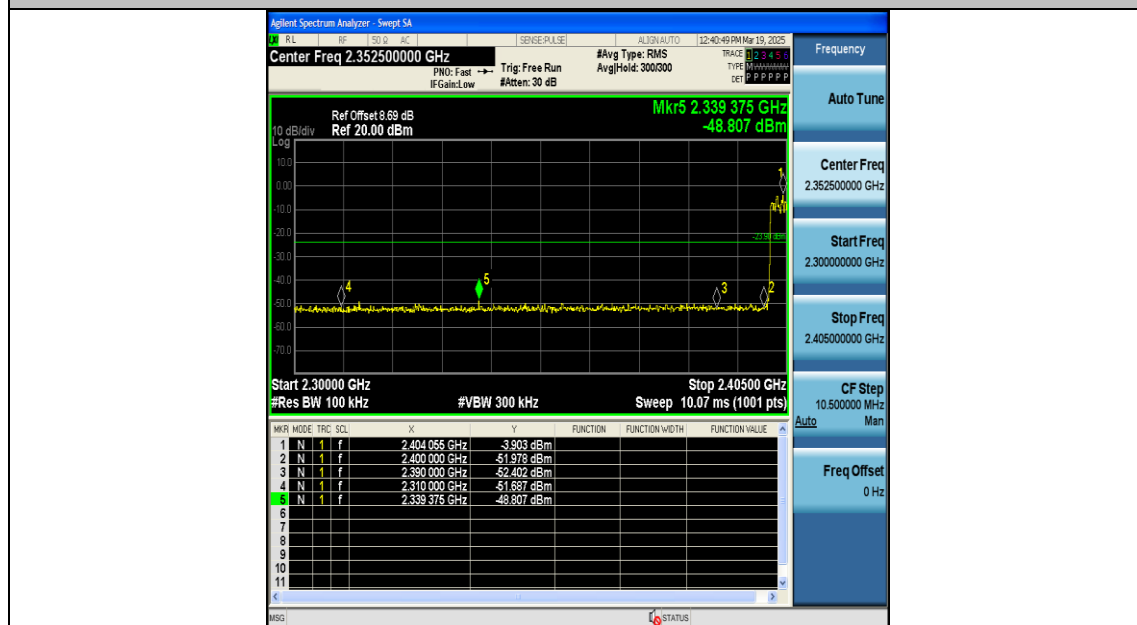
DH5-Ant1-Hop\_2480-PASS



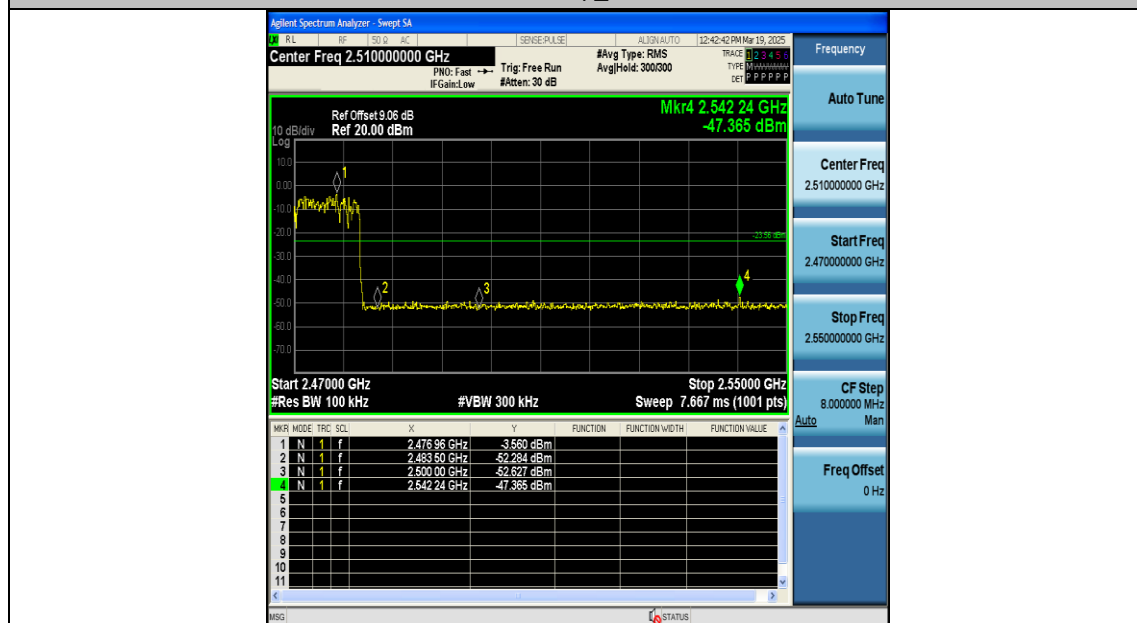
2DH5-Ant1-2402-PASS



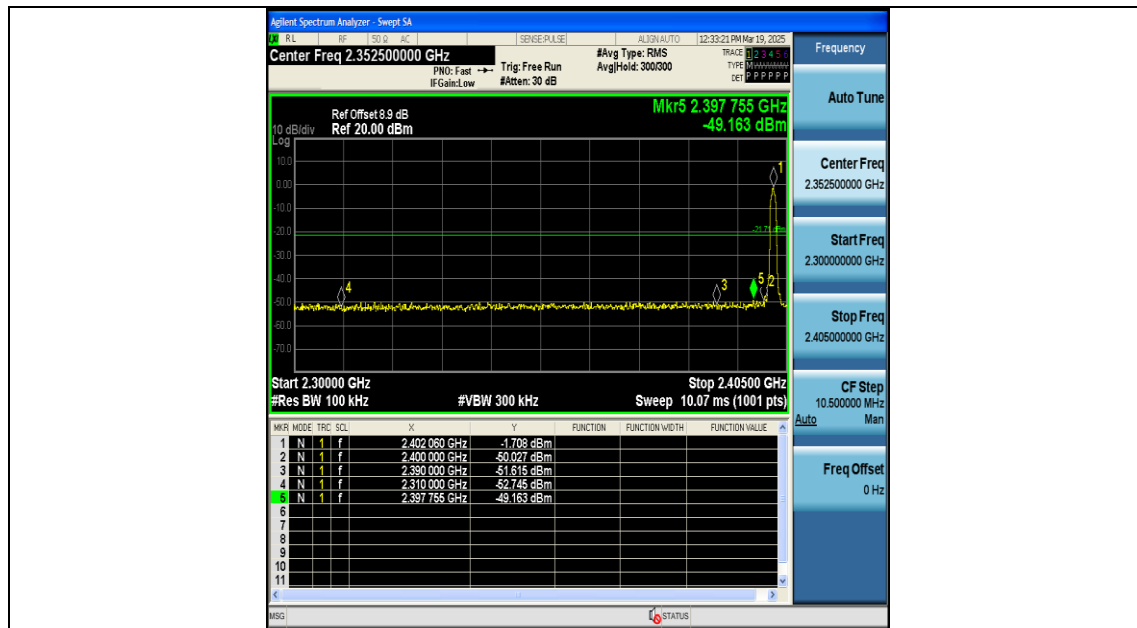
## 2DH5-Ant1-2480-PASS



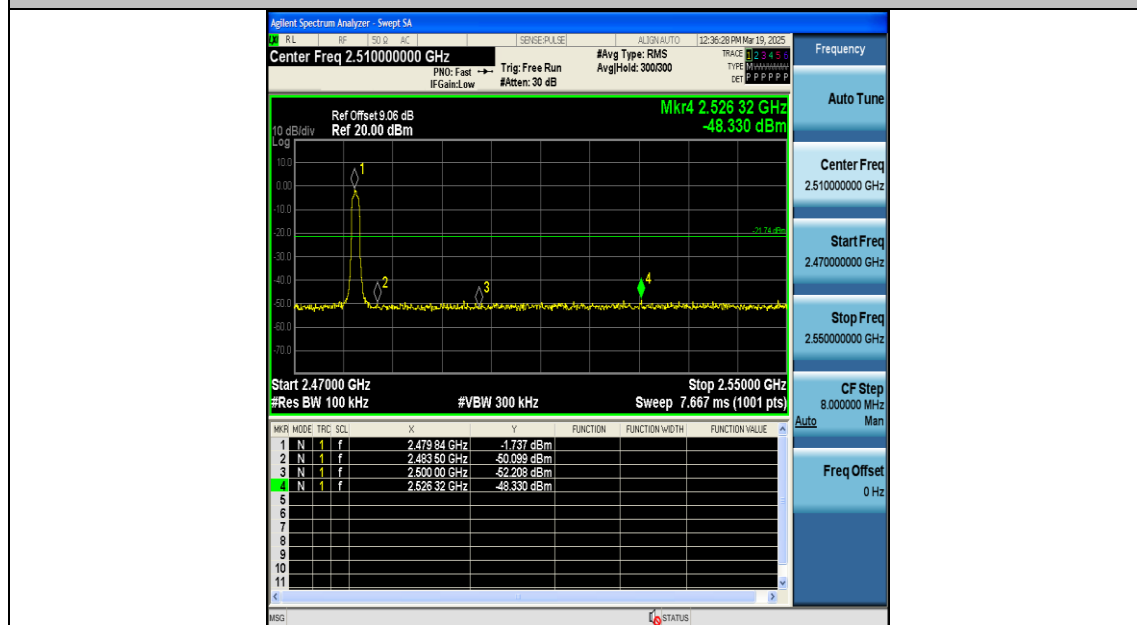
## 2DH5-Ant1-Hop\_2402-PASS



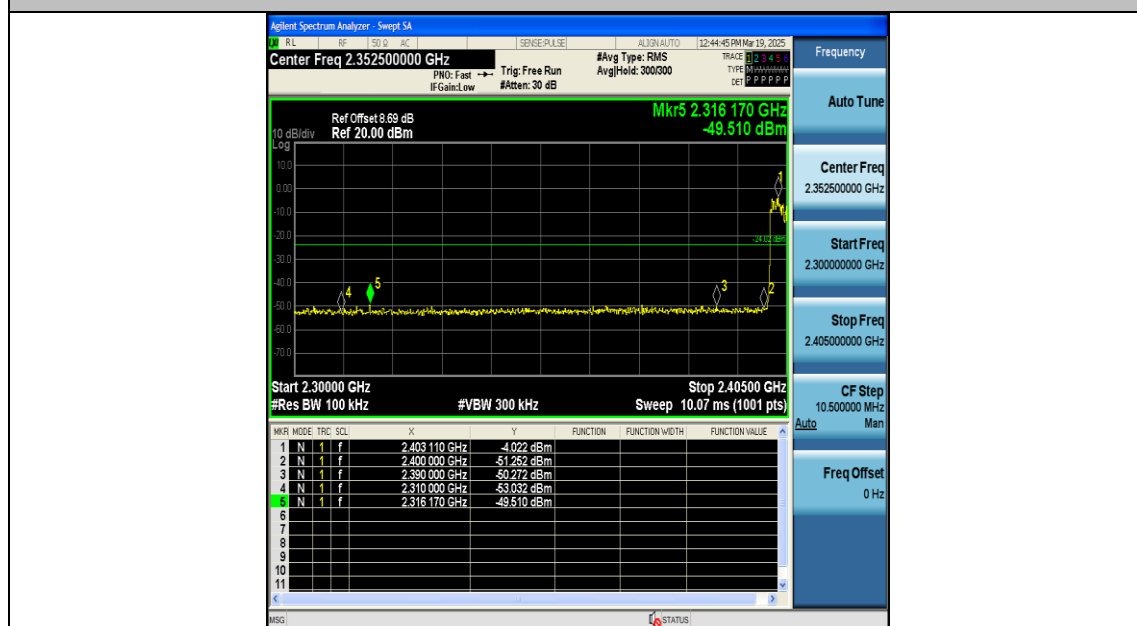
## 2DH5-Ant1-Hop\_2480-PASS



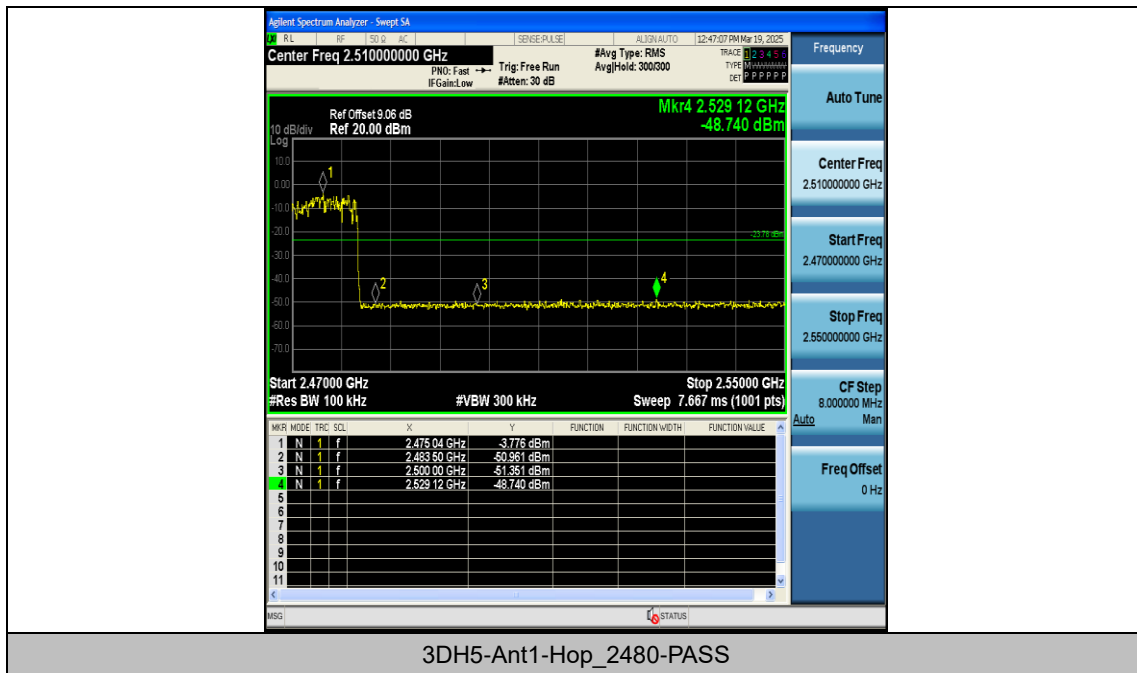
3DH5-Ant1-2402-PASS



3DH5-Ant1-2480-PASS



3DH5-Ant1-Hop\_2402-PASS

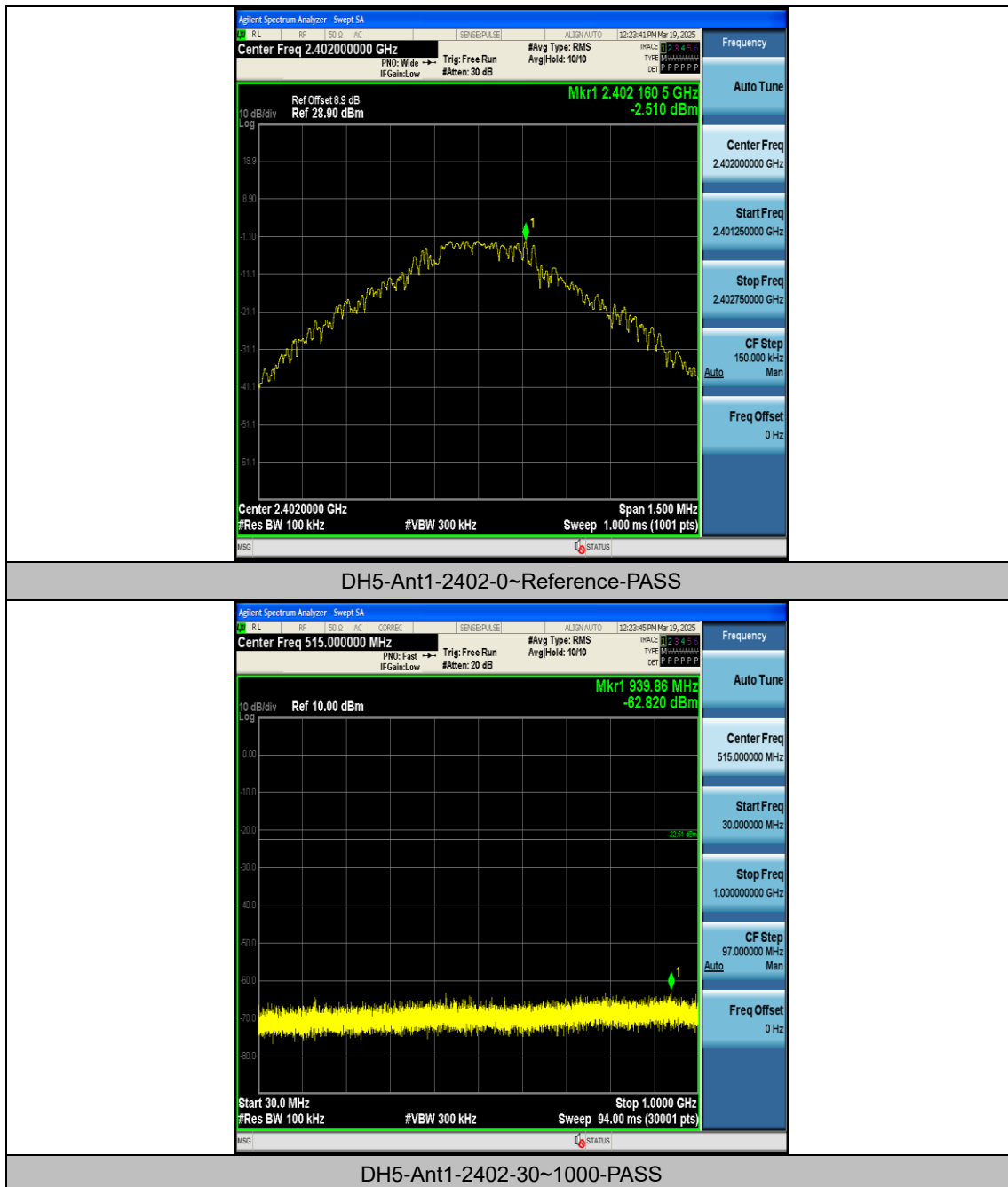


## Appendix H: Conducted Spurious Emission

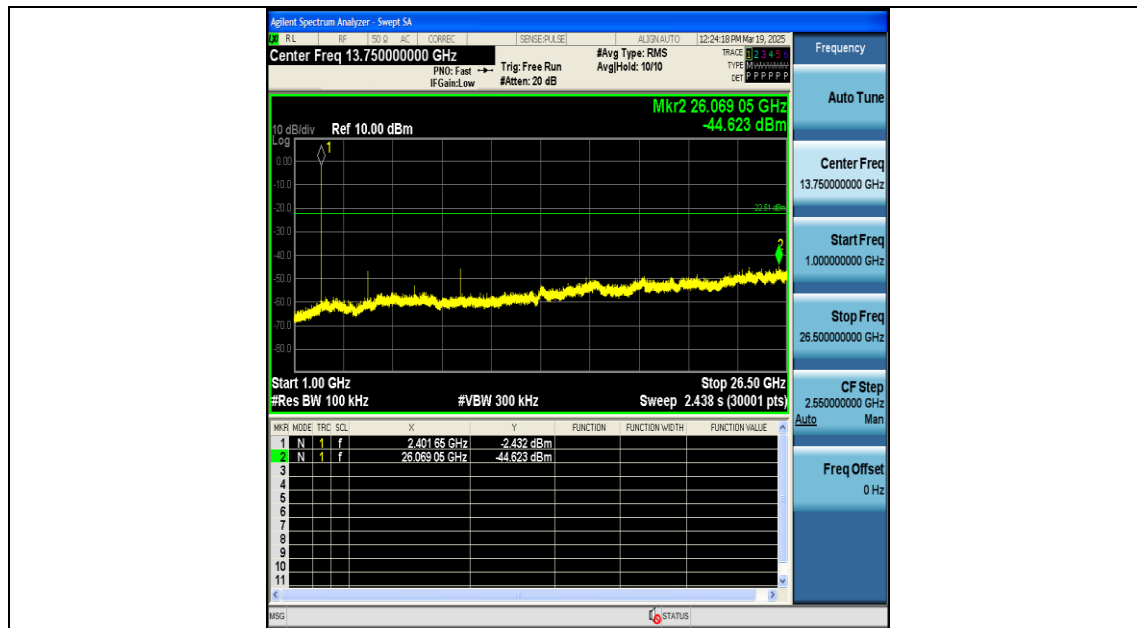
### Test Result

| Test Mode | Antenna | Frequency [MHz] | Freq. Range [MHz] | Ref. Level [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|---------|-----------------|-------------------|------------------|--------------|-------------|---------|
| DH5       | Ant1    | 2402            | 0~Reference       | -2.51            | -2.51        | ---         | PASS    |
| DH5       | Ant1    | 2402            | 30~1000           | -2.51            | -62.82       | ≤-22.51     | PASS    |
| DH5       | Ant1    | 2402            | 1000~26500        | -2.51            | -44.62       | ≤-22.51     | PASS    |
| DH5       | Ant1    | 2441            | 0~Reference       | -2.15            | -2.15        | ---         | PASS    |
| DH5       | Ant1    | 2441            | 30~1000           | -2.15            | -63.08       | ≤-22.15     | PASS    |
| DH5       | Ant1    | 2441            | 1000~26500        | -2.15            | -45.35       | ≤-22.15     | PASS    |
| DH5       | Ant1    | 2480            | 0~Reference       | -1.86            | -1.86        | ---         | PASS    |
| DH5       | Ant1    | 2480            | 30~1000           | -1.86            | -61.96       | ≤-21.86     | PASS    |
| DH5       | Ant1    | 2480            | 1000~26500        | -1.86            | -45.34       | ≤-21.86     | PASS    |
| 2DH5      | Ant1    | 2402            | 0~Reference       | -2.48            | -2.48        | ---         | PASS    |
| 2DH5      | Ant1    | 2402            | 30~1000           | -2.48            | -61.56       | ≤-22.48     | PASS    |
| 2DH5      | Ant1    | 2402            | 1000~26500        | -2.48            | -43.5        | ≤-22.48     | PASS    |
| 2DH5      | Ant1    | 2441            | 0~Reference       | -2.02            | -2.02        | ---         | PASS    |
| 2DH5      | Ant1    | 2441            | 30~1000           | -2.02            | -62.61       | ≤-22.02     | PASS    |
| 2DH5      | Ant1    | 2441            | 1000~26500        | -2.02            | -43.82       | ≤-22.02     | PASS    |
| 2DH5      | Ant1    | 2480            | 0~Reference       | -2.16            | -2.16        | ---         | PASS    |
| 2DH5      | Ant1    | 2480            | 30~1000           | -2.16            | -62.94       | ≤-22.16     | PASS    |
| 2DH5      | Ant1    | 2480            | 1000~26500        | -2.16            | -45.38       | ≤-22.16     | PASS    |
| 3DH5      | Ant1    | 2402            | 0~Reference       | -2.40            | -2.40        | ---         | PASS    |
| 3DH5      | Ant1    | 2402            | 30~1000           | -2.40            | -62.74       | ≤-22.4      | PASS    |
| 3DH5      | Ant1    | 2402            | 1000~26500        | -2.40            | -45.43       | ≤-22.4      | PASS    |
| 3DH5      | Ant1    | 2441            | 0~Reference       | -1.50            | -1.50        | ---         | PASS    |
| 3DH5      | Ant1    | 2441            | 30~1000           | -1.50            | -62.33       | ≤-21.5      | PASS    |
| 3DH5      | Ant1    | 2441            | 1000~26500        | -1.50            | -45.07       | ≤-21.5      | PASS    |
| 3DH5      | Ant1    | 2480            | 0~Reference       | -4.35            | -4.35        | ---         | PASS    |
| 3DH5      | Ant1    | 2480            | 30~1000           | -4.35            | -62.88       | ≤-24.35     | PASS    |
| 3DH5      | Ant1    | 2480            | 1000~26500        | -4.35            | -44.89       | ≤-24.35     | PASS    |

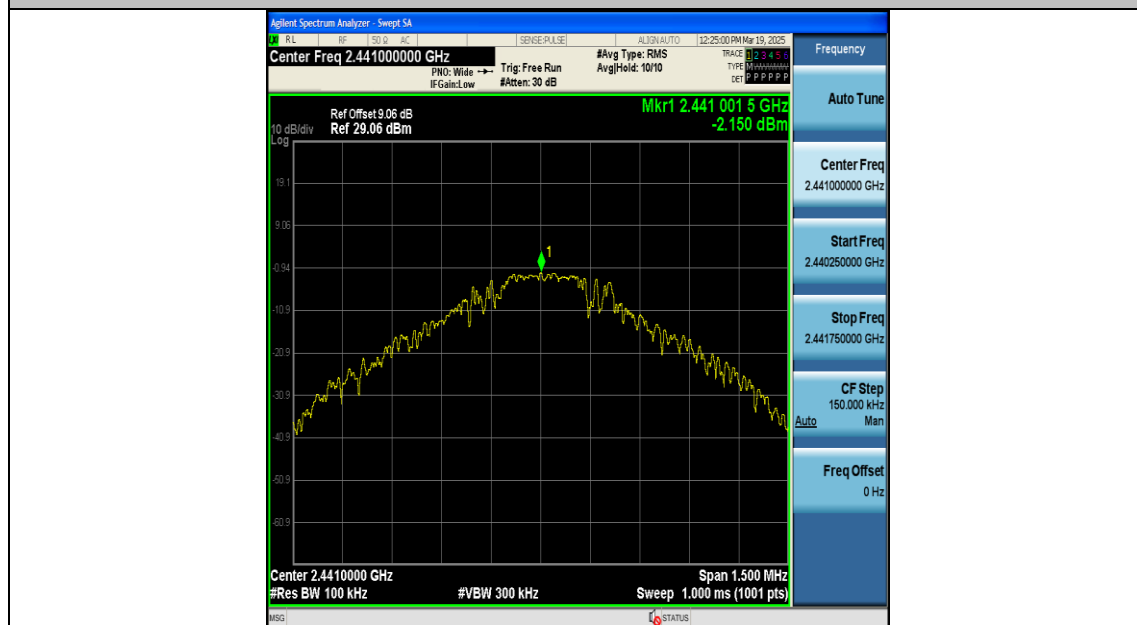
## Test Graphs



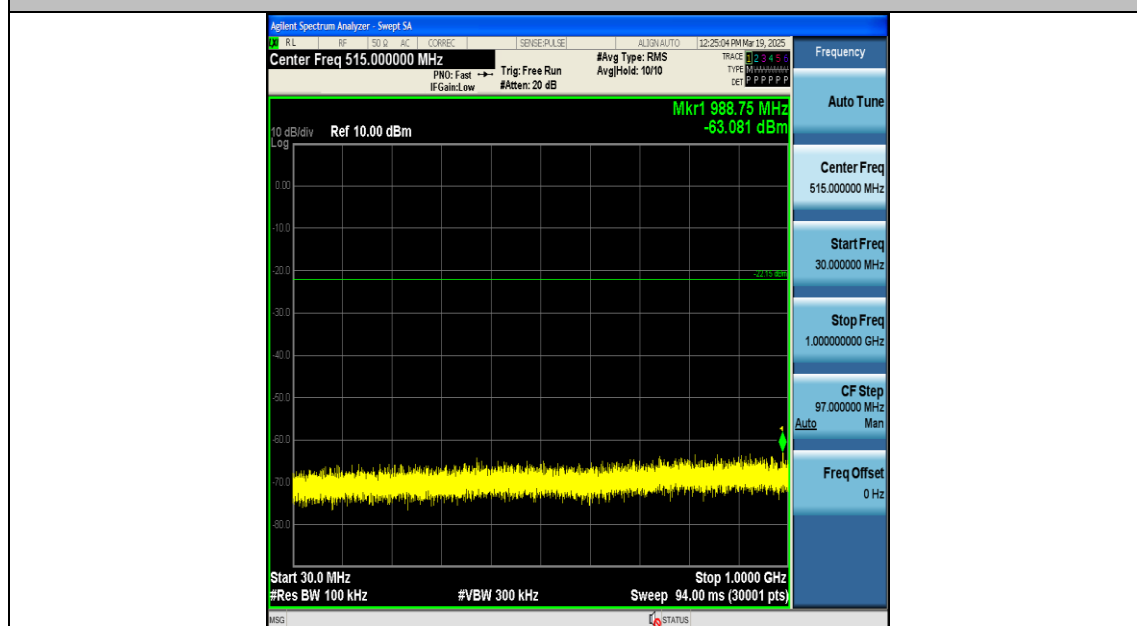




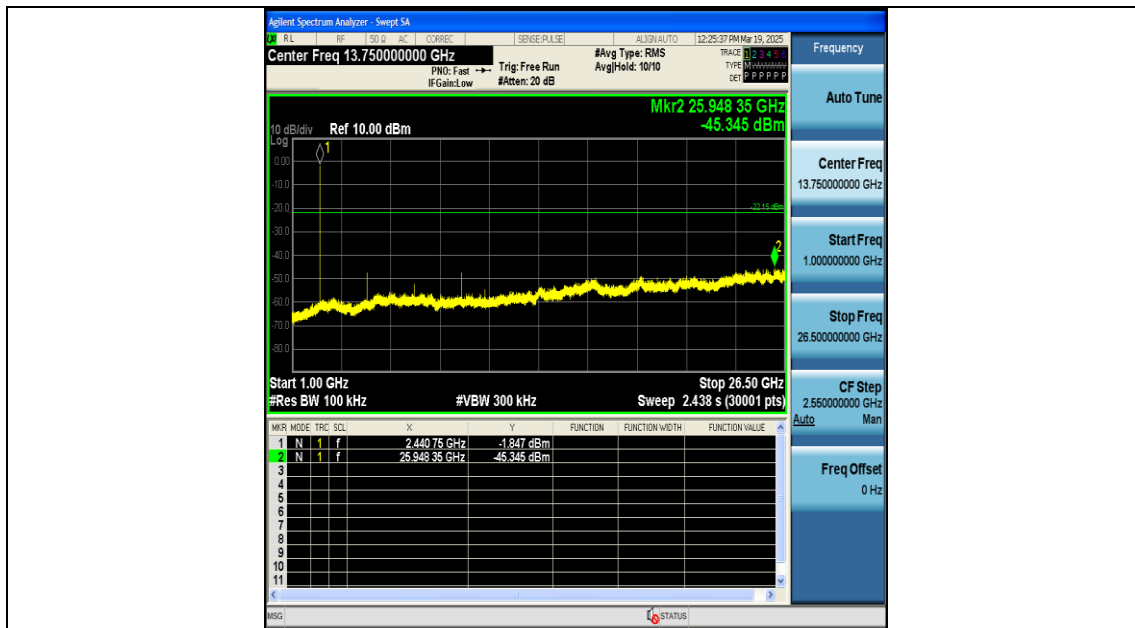
DH5-Ant1-2402-1000~26500-PASS



DH5-Ant1-2441-0~Reference-PASS



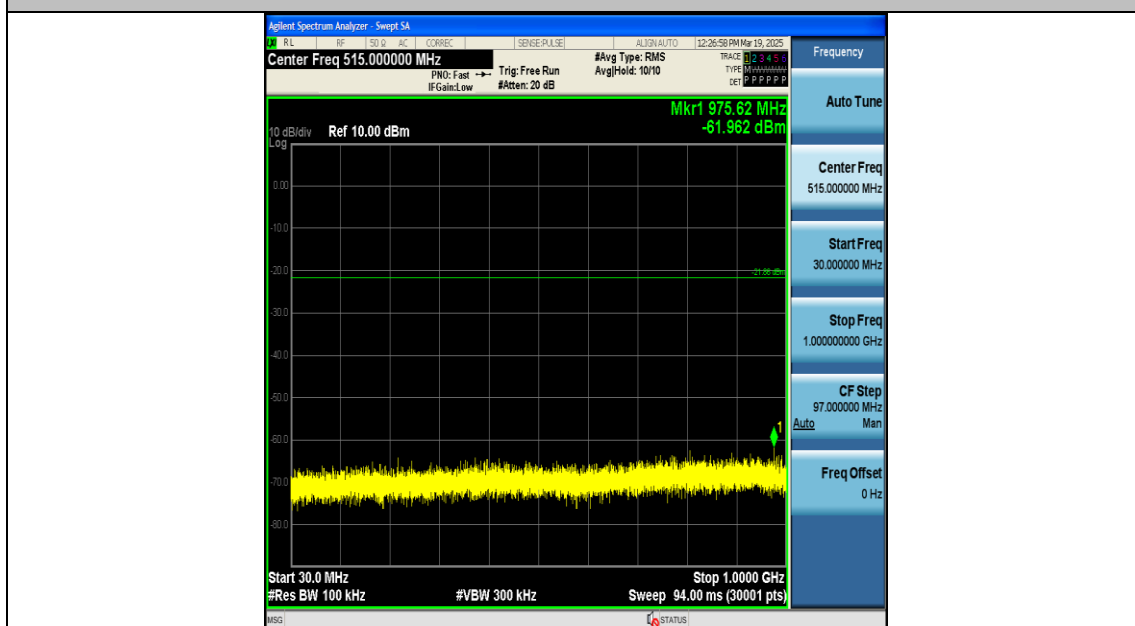
DH5-Ant1-2441-30~1000-PASS



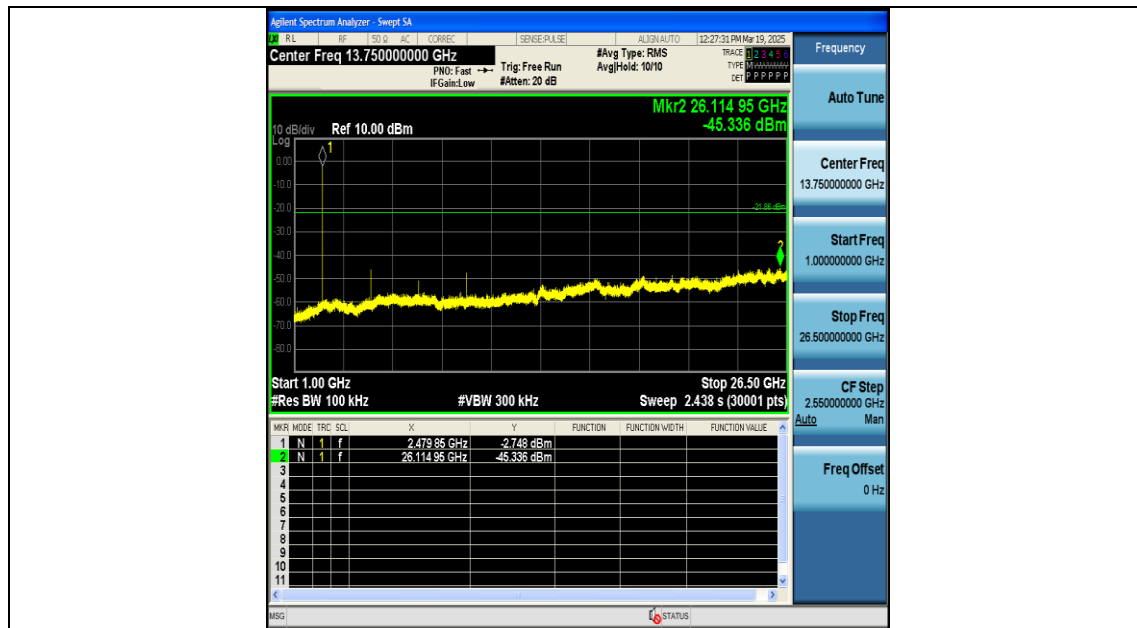
DH5-Ant1-2441-1000~26500-PASS



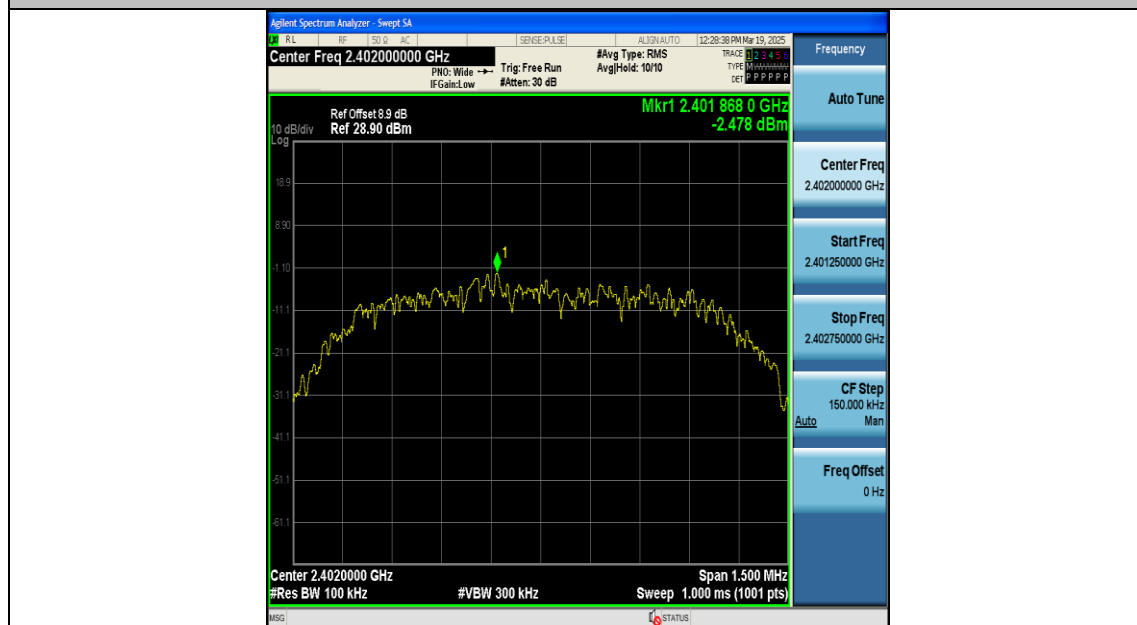
DH5-Ant1-2480-0~Reference-PASS



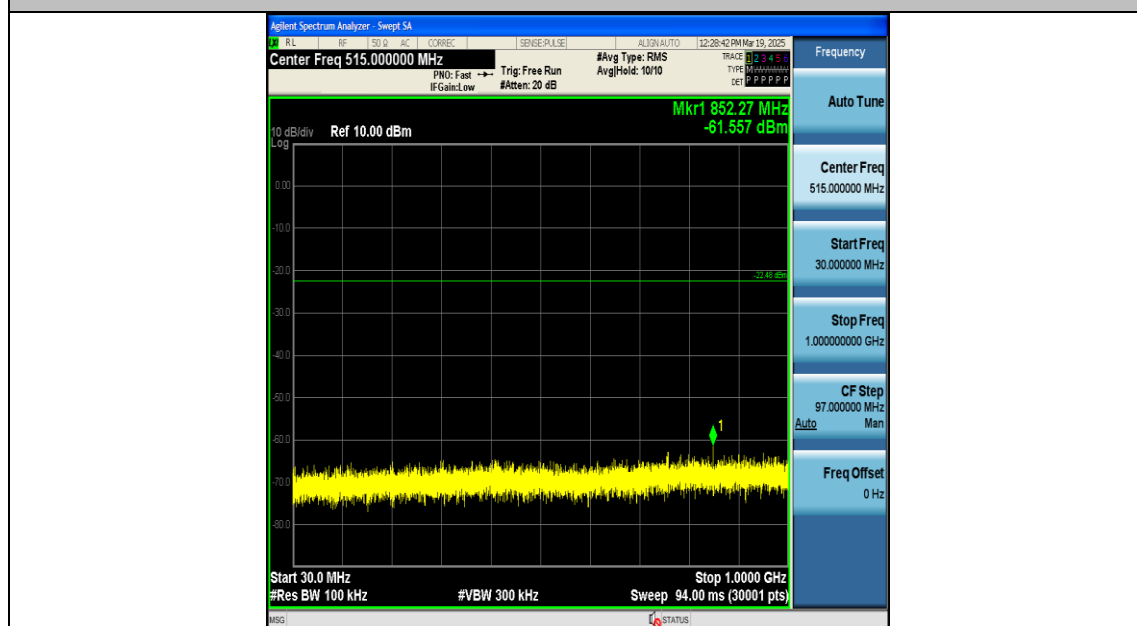
DH5-Ant1-2480-30~1000-PASS



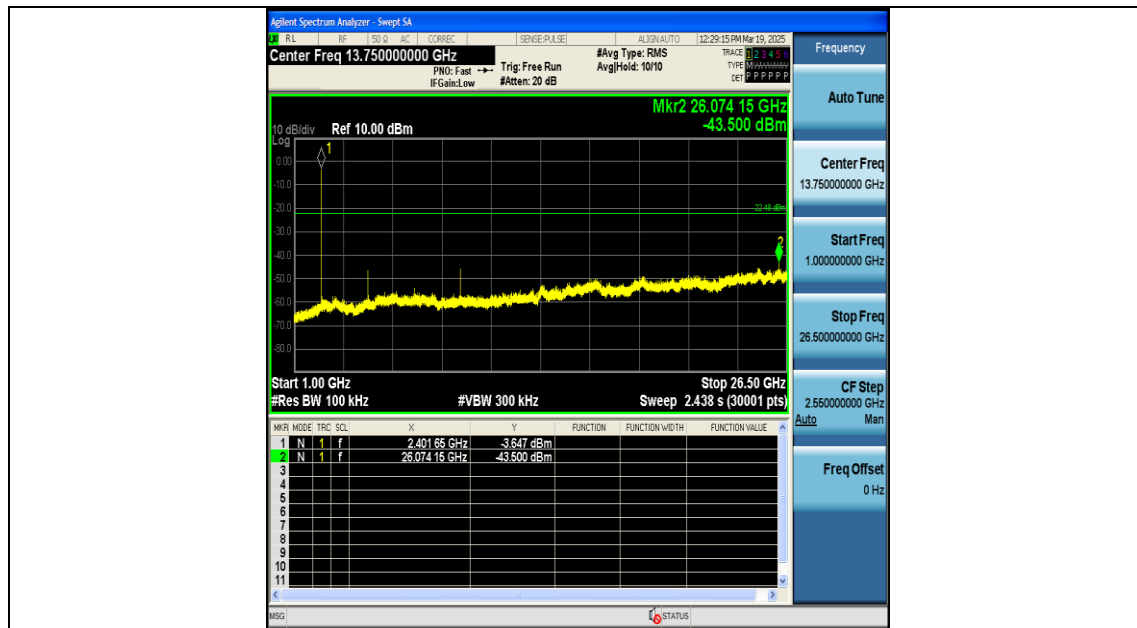
DH5-Ant1-2480-1000~26500-PASS



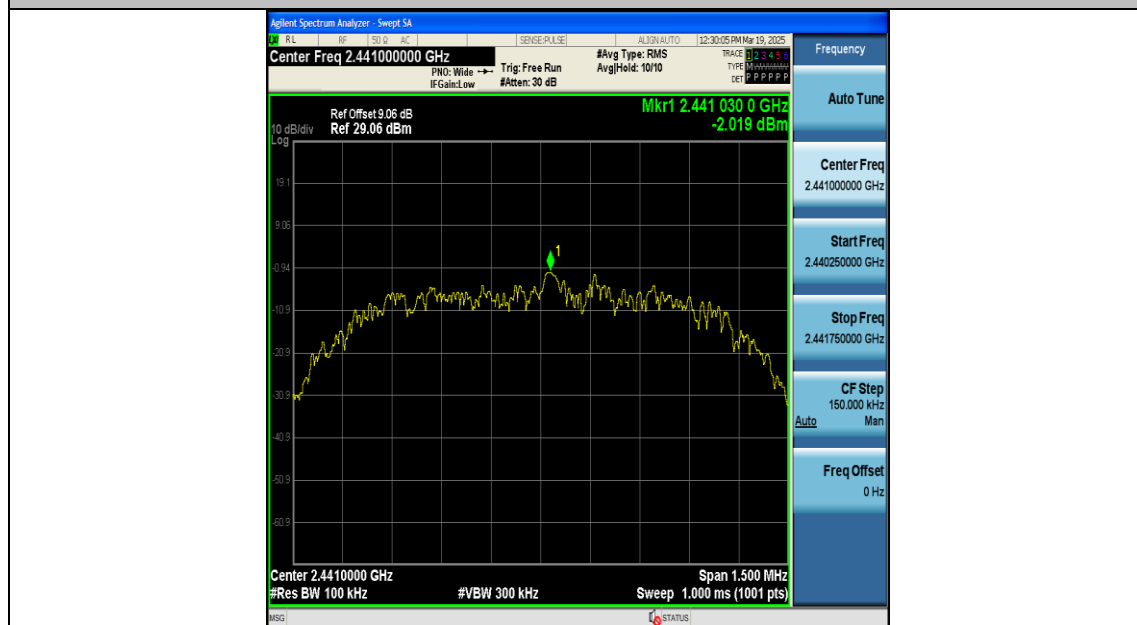
2DH5-Ant1-2402-0~Reference-PASS



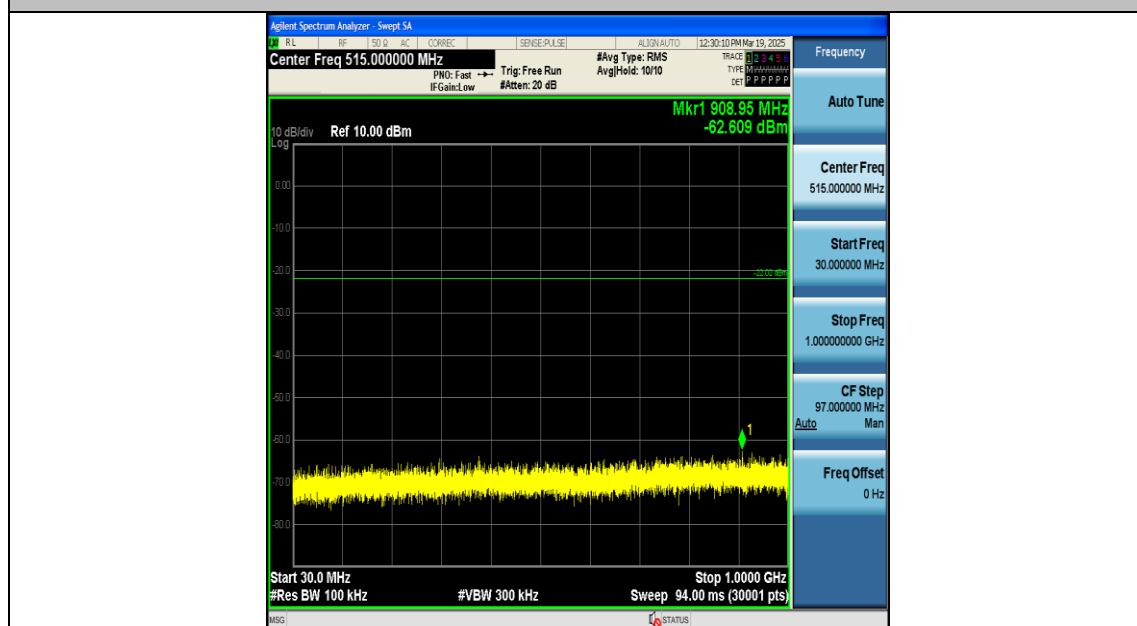
2DH5-Ant1-2402-30~1000-PASS



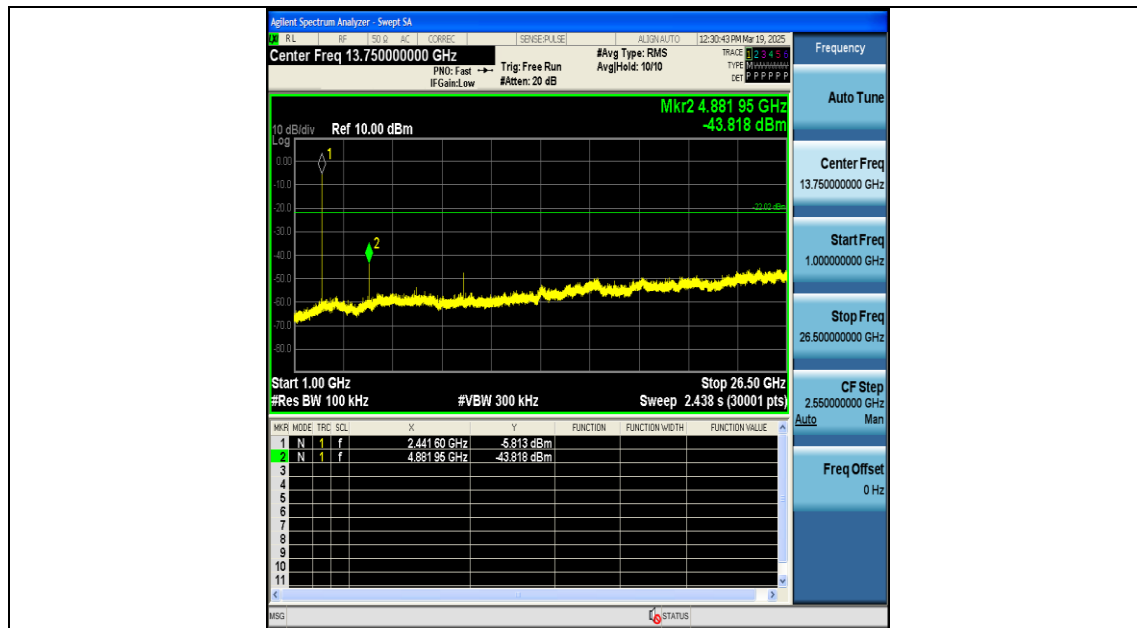
2DH5-Ant1-2402-1000~26500-PASS



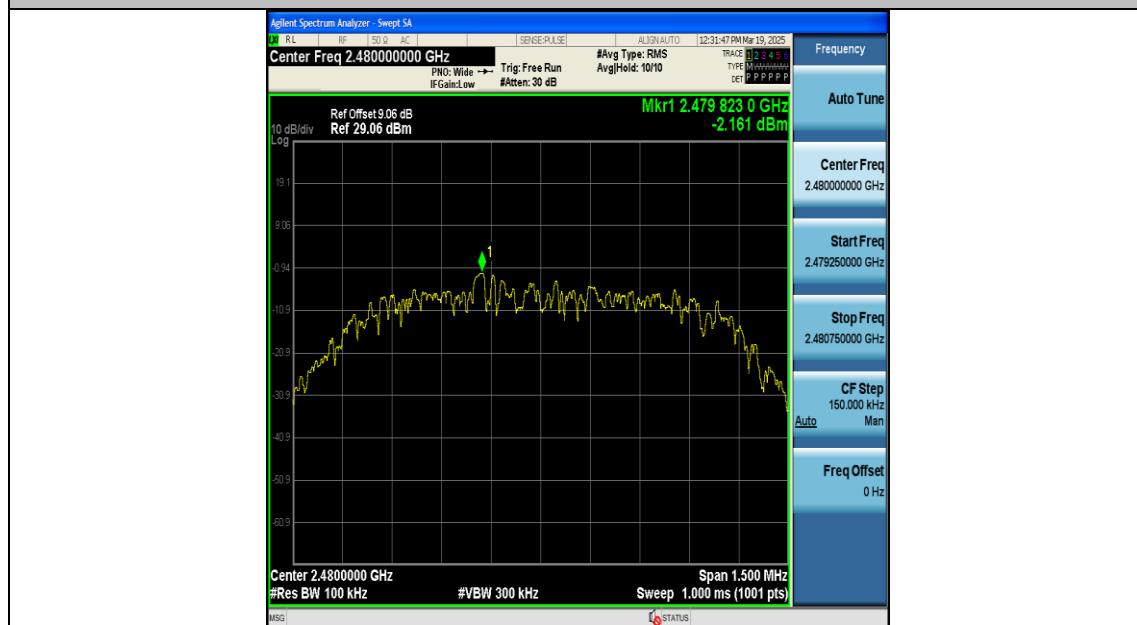
2DH5-Ant1-2441-0~Reference-PASS



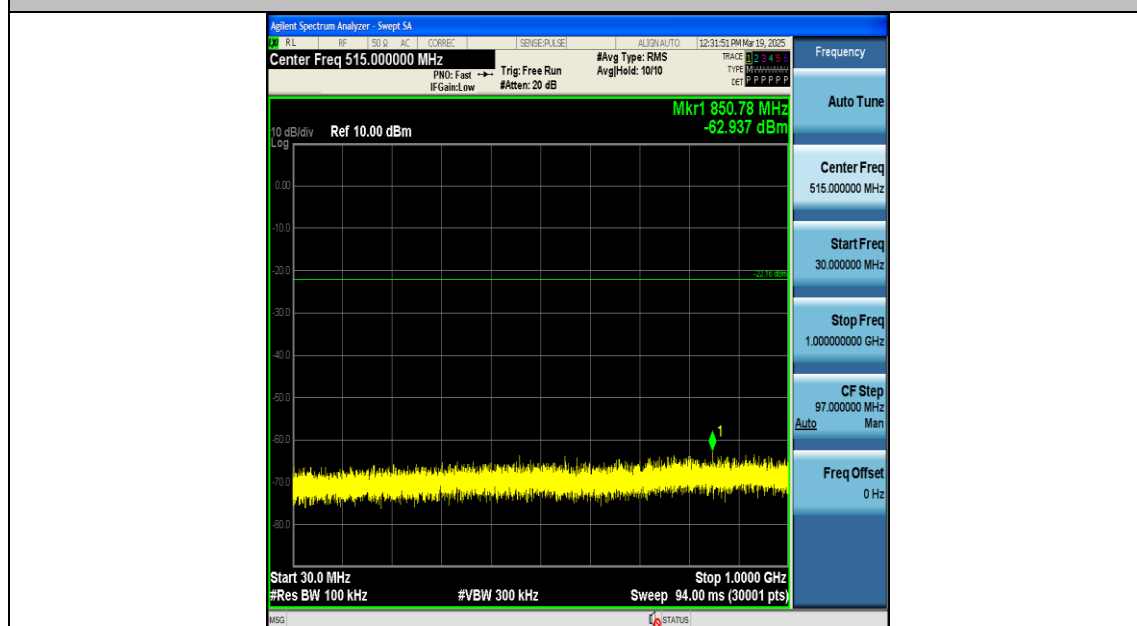
2DH5-Ant1-2441-30~1000-PASS



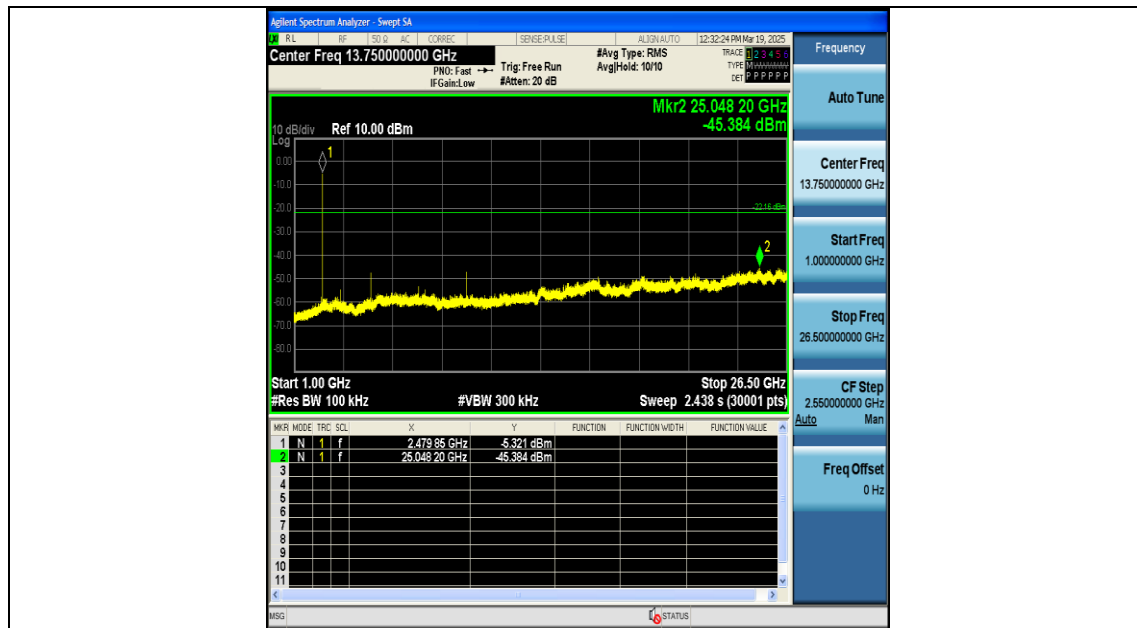
2DH5-Ant1-2441-1000~26500-PASS



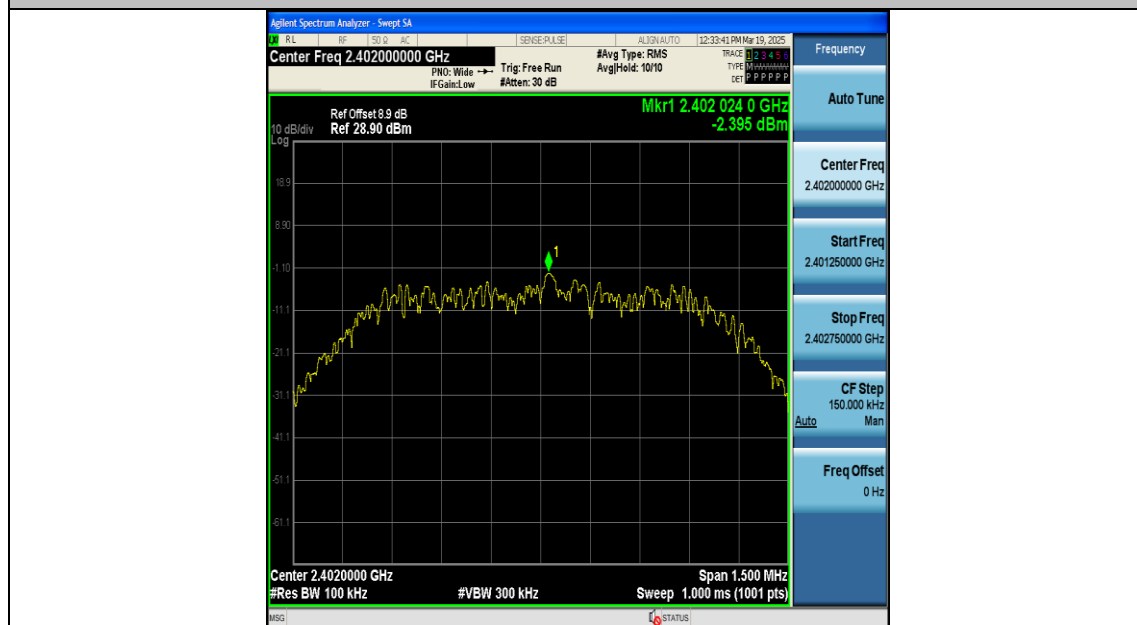
2DH5-Ant1-2480-0~Reference-PASS



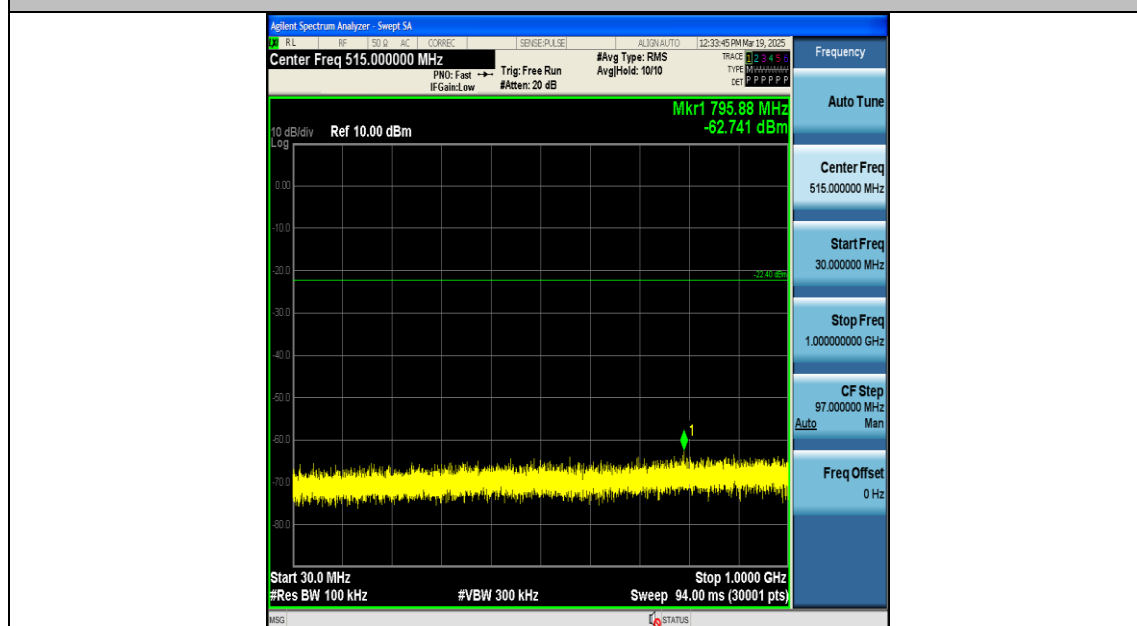
2DH5-Ant1-2480-30~1000-PASS



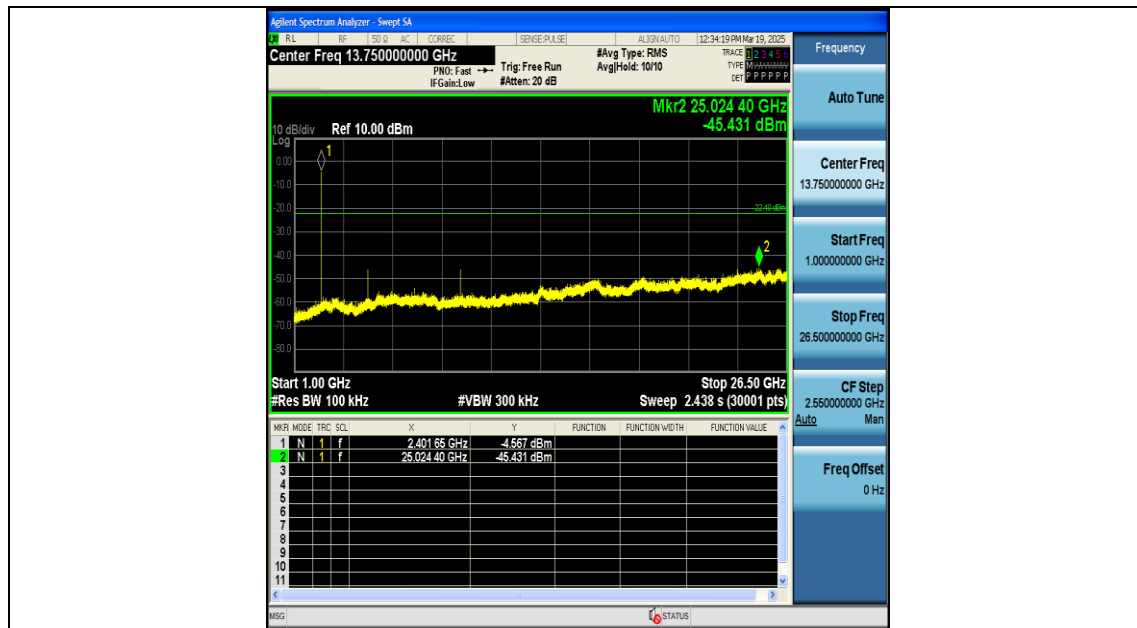
2DH5-Ant1-2480-1000~26500-PASS



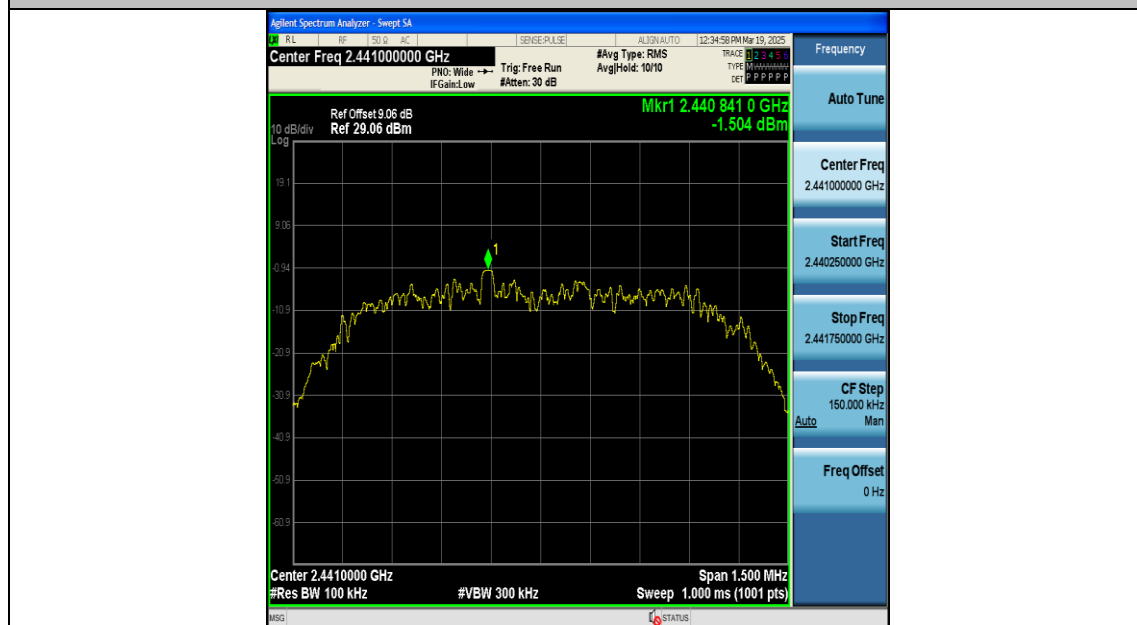
3DH5-Ant1-2402-0~Reference-PASS



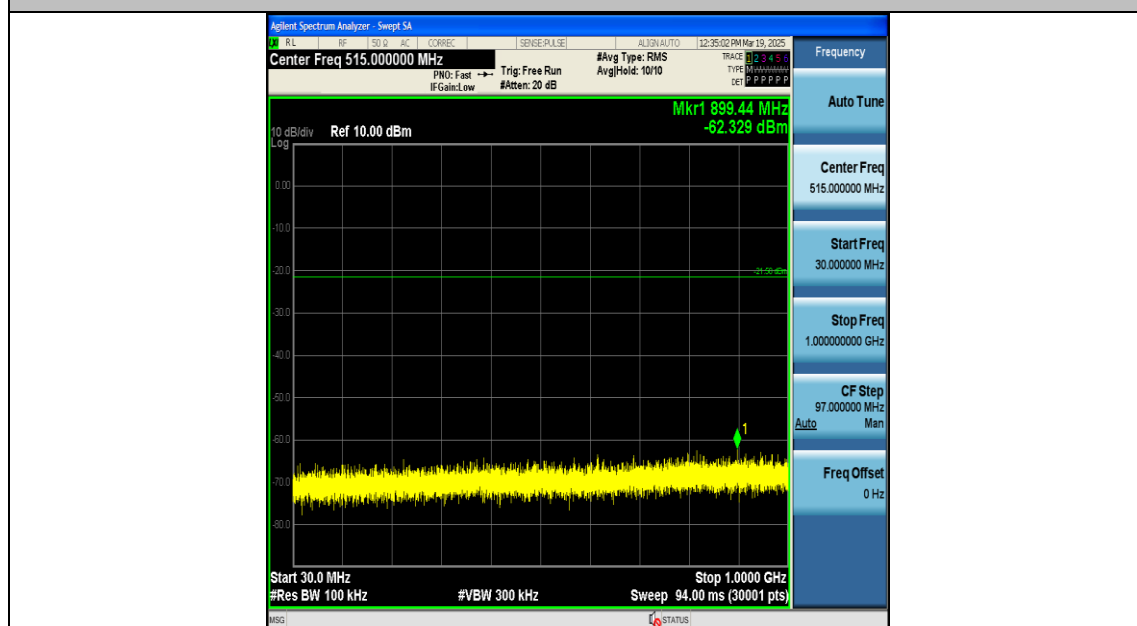
3DH5-Ant1-2402-30~1000-PASS



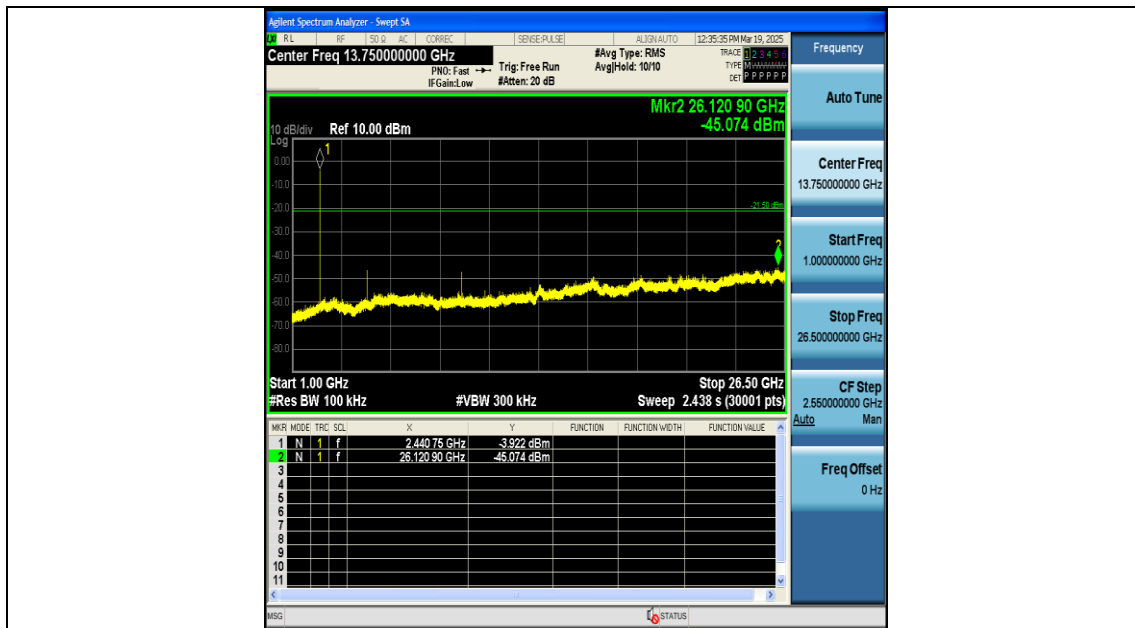
3DH5-Ant1-2402-1000~26500-PASS



3DH5-Ant1-2441-0~Reference-PASS



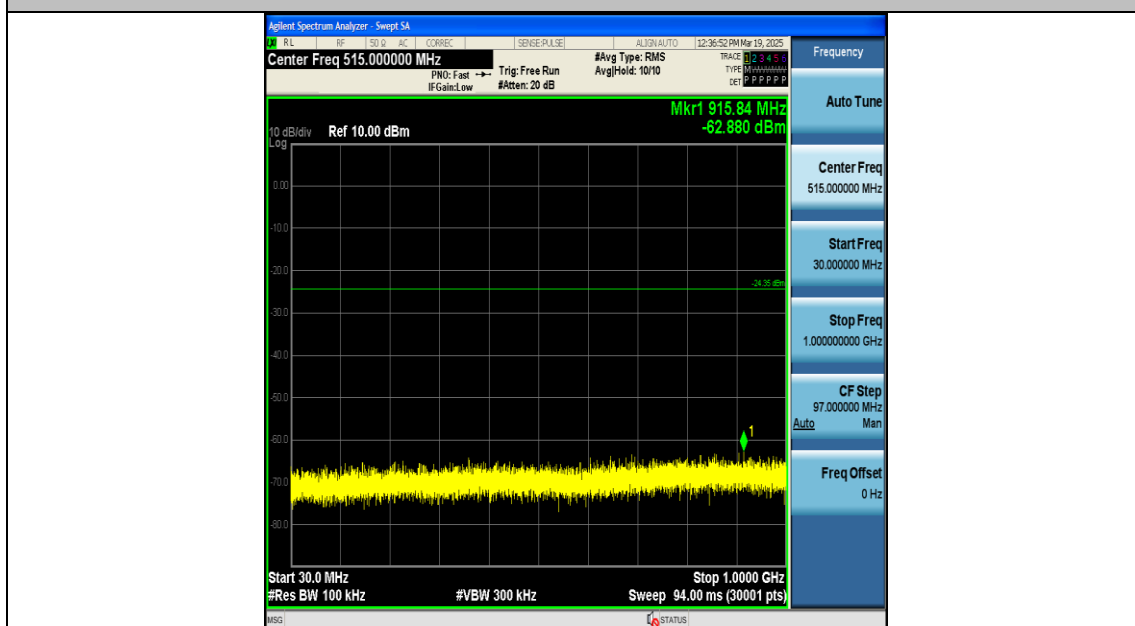
3DH5-Ant1-2441-30~1000-PASS



3DH5-Ant1-2441-1000~26500-PASS

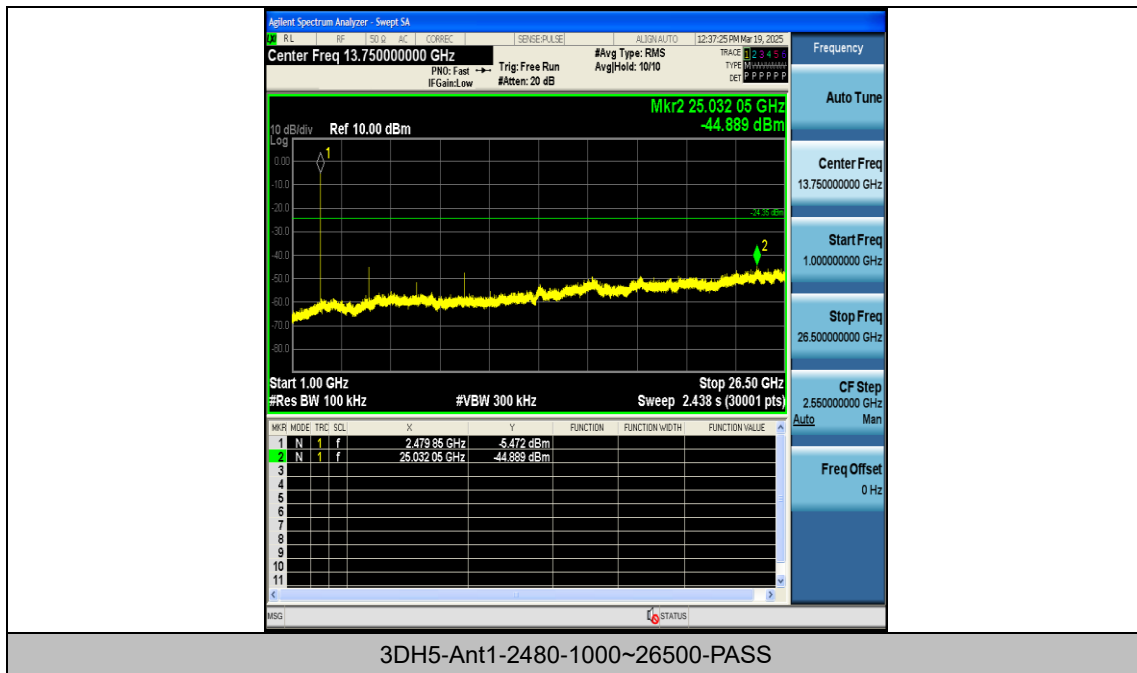


3DH5-Ant1-2480-0~Reference-PASS



3DH5-Ant1-2480-30~1000-PASS





## Appendix I: Duty Cycle

### Test Result

| Test Mode | Antenna | Frequency [MHz] | ON Time [ms] | Period [ms] | Duty Cycle [%] | Duty Cycle Factor [dB] |
|-----------|---------|-----------------|--------------|-------------|----------------|------------------------|
| DH5       | Ant1    | 2402            | 2.90         | 3.75        | 77.33          | 1.12                   |
| DH5       | Ant1    | 2441            | 2.90         | 3.75        | 77.33          | 1.12                   |
| DH5       | Ant1    | 2480            | 2.91         | 3.75        | 77.60          | 1.10                   |
| 2DH5      | Ant1    | 2402            | 2.91         | 3.75        | 77.60          | 1.10                   |
| 2DH5      | Ant1    | 2441            | 2.90         | 3.75        | 77.33          | 1.12                   |
| 2DH5      | Ant1    | 2480            | 2.90         | 3.75        | 77.33          | 1.12                   |
| 3DH5      | Ant1    | 2402            | 2.91         | 3.75        | 77.60          | 1.10                   |
| 3DH5      | Ant1    | 2441            | 2.90         | 3.75        | 77.33          | 1.12                   |
| 3DH5      | Ant1    | 2480            | 2.90         | 3.75        | 77.33          | 1.12                   |

## Test Graphs

