# Appendix Test Data

| | | | |
|---|---|---|---|
| Report No.: | 182512C400394101 | Test Sample No.: | 1-2-2 |
| Start Test Date: | 2024.7.5 | Finish Test Date: | 2024.8.20 |
| Test Engineer: | Jokes Huang | Auditor: | Justin Feng |
| Temperature: | 24.4℃ | Relative Humidity: | 53% |
| Pressure: | 101kPa | | |

## Appendix A: 20dB Bandwidth

### Test Result

| TestMode | Antenna | Frequency[MHz] | 20db EBW[MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | 0.615 | 2401.706 | 2402.321 | --- | --- |
| DH5 | Ant1 | 2441 | 0.564 | 2440.757 | 2441.321 | --- | --- |
| DH5 | Ant1 | 2480 | 0.639 | 2479.706 | 2480.345 | --- | --- |
| 2DH5 | Ant1 | 2402 | 1.158 | 2401.445 | 2402.603 | --- | --- |
| 2DH5 | Ant1 | 2441 | 1.158 | 2440.445 | 2441.603 | --- | --- |
| 2DH5 | Ant1 | 2480 | 1.089 | 2479.499 | 2480.588 | --- | --- |
| 3DH5 | Ant1 | 2402 | 1.059 | 2401.457 | 2402.516 | --- | --- |
| 3DH5 | Ant1 | 2441 | 1.056 | 2440.481 | 2441.537 | --- | --- |
| 3DH5 | Ant1 | 2480 | 1.137 | 2479.451 | 2480.588 | --- | --- |

## 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 B: 99% Occupied Bandwidth

## Test Result

| TestMode | Antenna | Frequency[MHz] | OCB [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | 0.70707 | 2401.7053 | 2402.4124 | --- | --- |
| DH5 | Ant1 | 2441 | 0.79280 | 2440.6455 | 2441.4383 | --- | --- |
| DH5 | Ant1 | 2480 | 0.75334 | 2479.6276 | 2480.3809 | --- | --- |
| 2DH5 | Ant1 | 2402 | 1.0416 | 2401.4737 | 2402.5153 | --- | --- |
| 2DH5 | Ant1 | 2441 | 1.0524 | 2440.4775 | 2441.5299 | --- | --- |
| 2DH5 | Ant1 | 2480 | 0.92637 | 2479.5625 | 2480.4888 | --- | --- |
| 3DH5 | Ant1 | 2402 | 1.0412 | 2401.5040 | 2402.5452 | --- | --- |
| 3DH5 | Ant1 | 2441 | 1.0710 | 2440.4802 | 2441.5512 | --- | --- |
| 3DH5 | Ant1 | 2480 | 1.0720 | 2479.4808 | 2480.5528 | --- | --- |

## Test Graphs

DH5-Ant1-2402

DH5-Ant1-2441

DH5-Ant1-2480

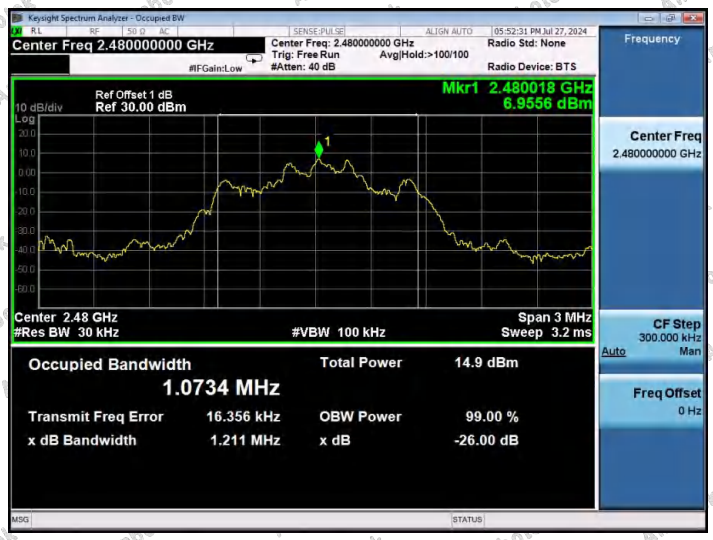
2DH5-Ant1-2402

2DH5-Ant1-2441

2DH5-Ant1-2480

3DH5-Ant1-2402

3DH5-Ant1-2441




3DH5-Ant1-2480

# Appendix C: Maximum Conducted Output Power

## Test Result Peak

| Test Mode | Antenna | Frequency[MHz] | Conducted Peak Power[dBm] | Conducted Limit[dBm] | Verdict |
|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | 10.49 | ≤20.97 | PASS |
| DH5 | Ant1 | 2441 | 10.45 | ≤20.97 | PASS |
| DH5 | Ant1 | 2480 | 10.09 | ≤20.97 | PASS |
| 2DH5 | Ant1 | 2402 | 9.74 | ≤20.97 | PASS |
| 2DH5 | Ant1 | 2441 | 9.67 | ≤20.97 | PASS |
| 2DH5 | Ant1 | 2480 | 9.34 | ≤20.97 | PASS |
| 3DH5 | Ant1 | 2402 | 9.80 | ≤20.97 | PASS |
| 3DH5 | Ant1 | 2441 | 9.69 | ≤20.97 | PASS |
| 3DH5 | Ant1 | 2480 | 9.38 | ≤20.97 | PASS |

## Test Graphs

DH5-Ant1-2402-PASS

DH5-Ant1-2441-PASS

DH5-Ant1-2480-PASS

2DH5-Ant1-2402-PASS

2DH5-Ant1-2441-PASS

2DH5-Ant1-2480-PASS

3DH5-Ant1-2402-PASS

3DH5-Ant1-2441-PASS

3DH5-Ant1-2480-PASS

# Appendix D: Carrier frequency separation

## Test Result

| TestMode | Antenna | Frequency[MHz] | Result[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|
| DH5 | Ant1 | Hop | 0.996 | ≥0.426 | PASS |
| 2DH5 | Ant1 | Hop | 0.988 | ≥0.772 | PASS |
| 3DH5 | Ant1 | Hop | 1.008 | ≥0.758 | PASS |

## Test Graphs

DH5-Ant1-Hop-PASS

2DH5-Ant1-Hop-PASS

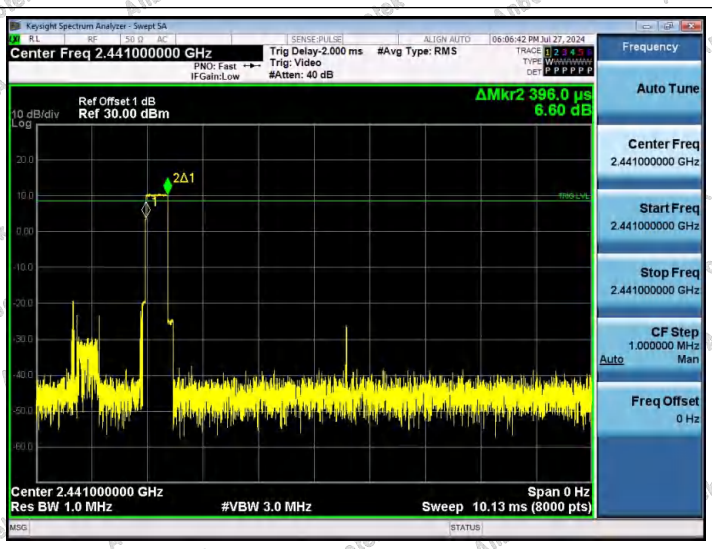
3DH5-Ant1-Hop-PASS

# Appendix E: Dwell Time

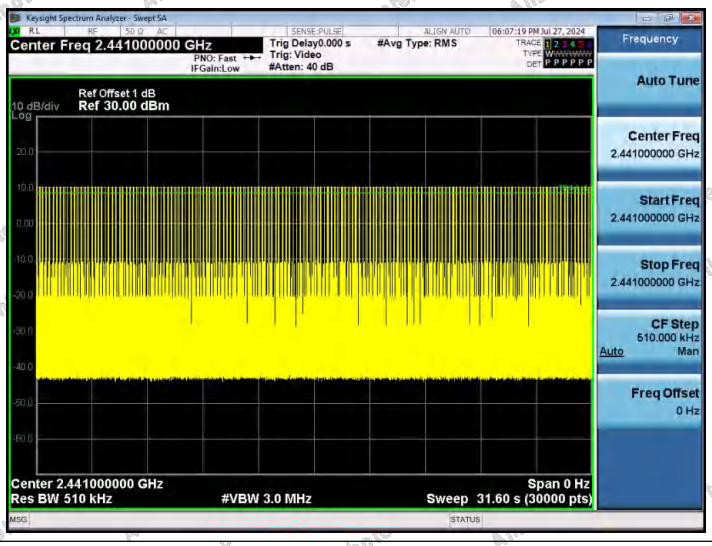
## Test Result

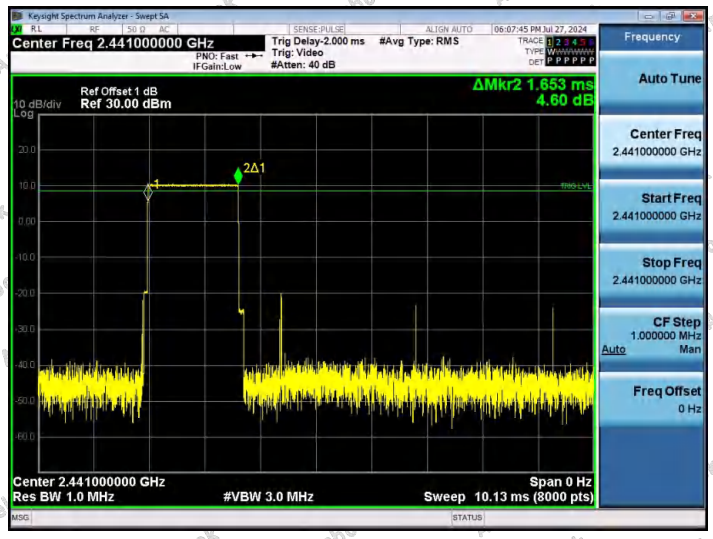
| TestMode | Antenna | Frequency[MHz] | BurstWidth [ms] | TotalHops [Num] | Result[s] | Limit[s] | Verdict |
|---|---|---|---|---|---|---|---|
| DH1 | Ant1 | Hop | 0.396 | 318 | 0.126 | ≤0.4 | PASS |
| DH3 | Ant1 | Hop | 1.653 | 161 | 0.266 | ≤0.4 | PASS |
| DH5 | Ant1 | Hop | 2.901 | 100 | 0.29 | ≤0.4 | PASS |
| 2DH1 | Ant1 | Hop | 0.388 | 318 | 0.123 | ≤0.4 | PASS |
| 2DH3 | Ant1 | Hop | 1.640 | 165 | 0.271 | ≤0.4 | PASS |
| 2DH5 | Ant1 | Hop | 2.888 | 115 | 0.332 | ≤0.4 | PASS |
| 3DH1 | Ant1 | Hop | 0.391 | 316 | 0.124 | ≤0.4 | PASS |
| 3DH3 | Ant1 | Hop | 1.635 | 157 | 0.257 | ≤0.4 | PASS |
| 3DH5 | Ant1 | Hop | 2.887 | 107 | 0.309 | ≤0.4 | PASS |

## Test Graphs

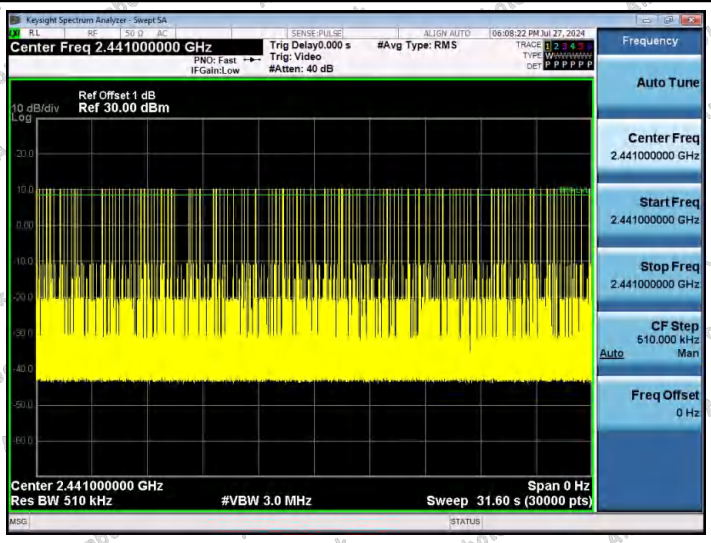


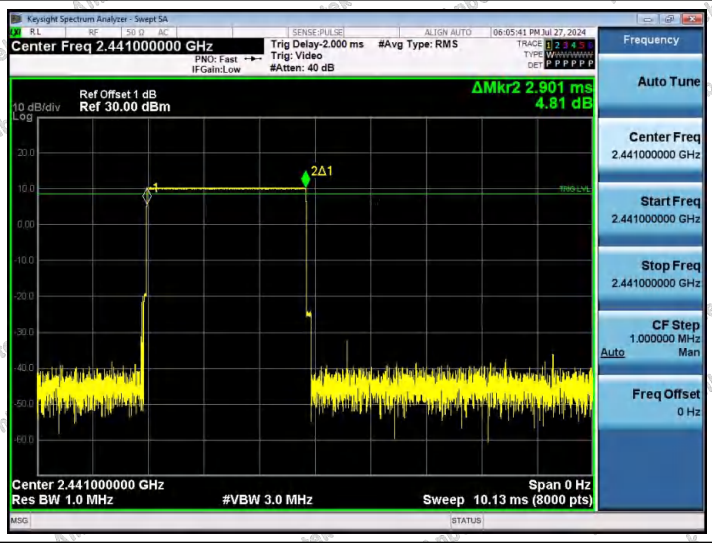

DH1-Ant1-Hop-PASS



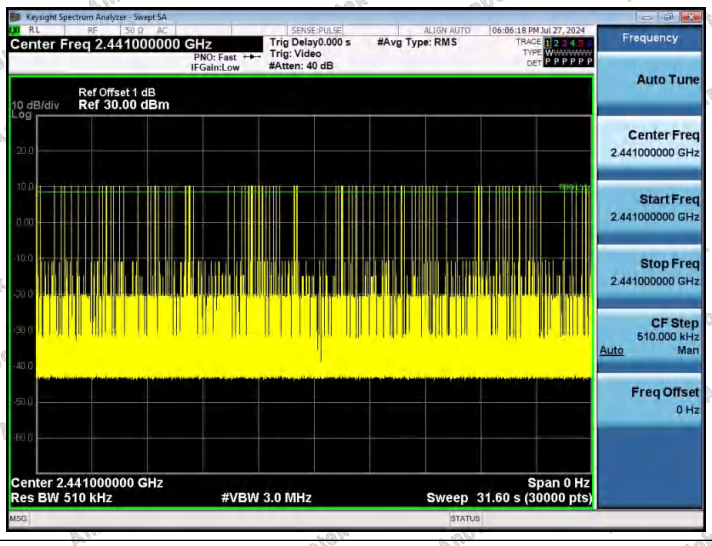



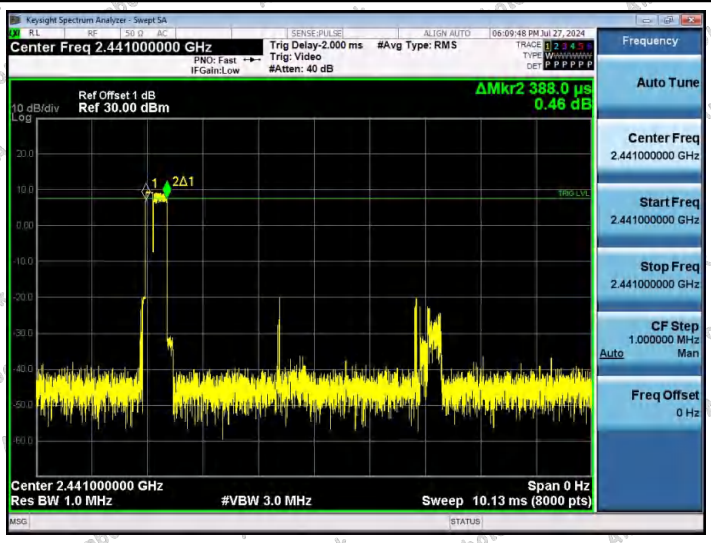

DH3-Ant1-Hop-PASS



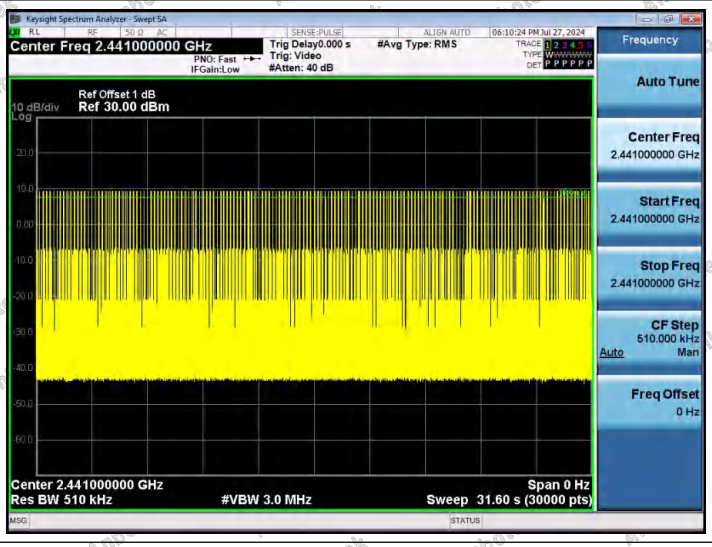



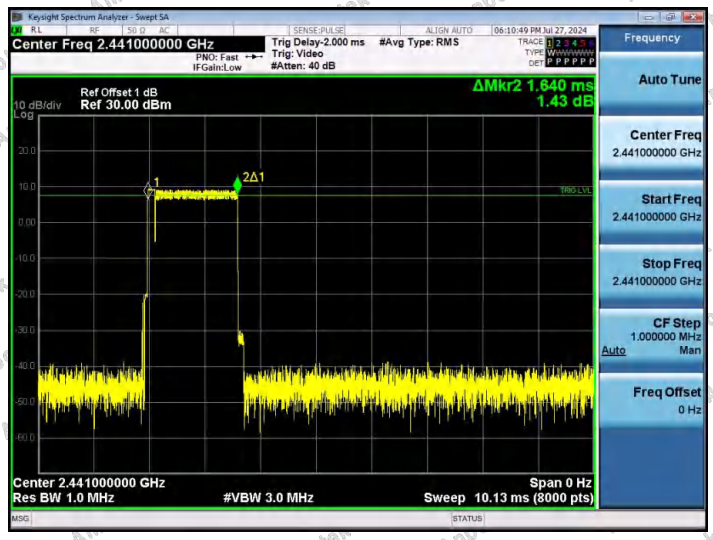

DH5-Ant1-Hop-PASS



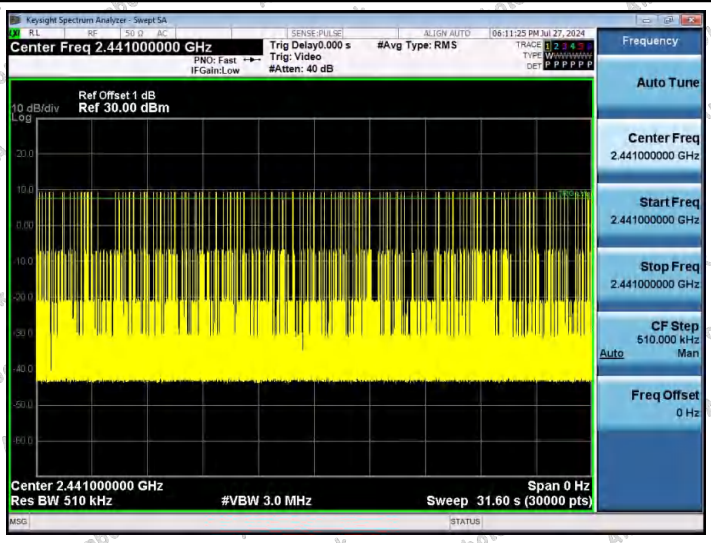


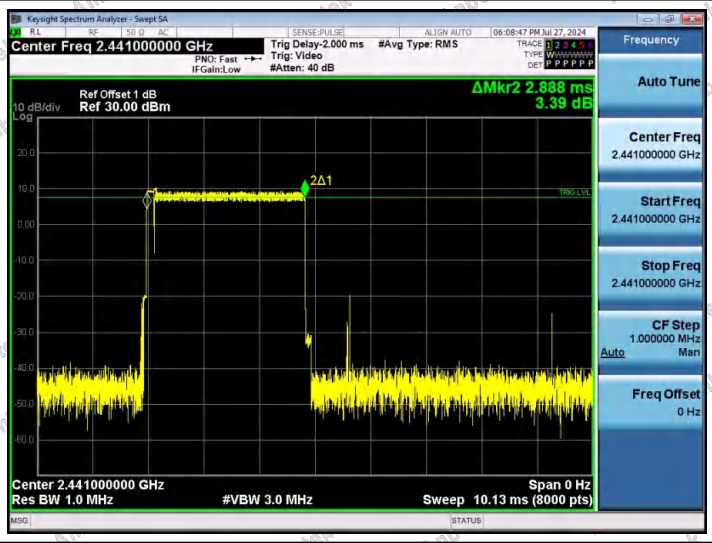

2DH1-Ant1-Hop-PASS



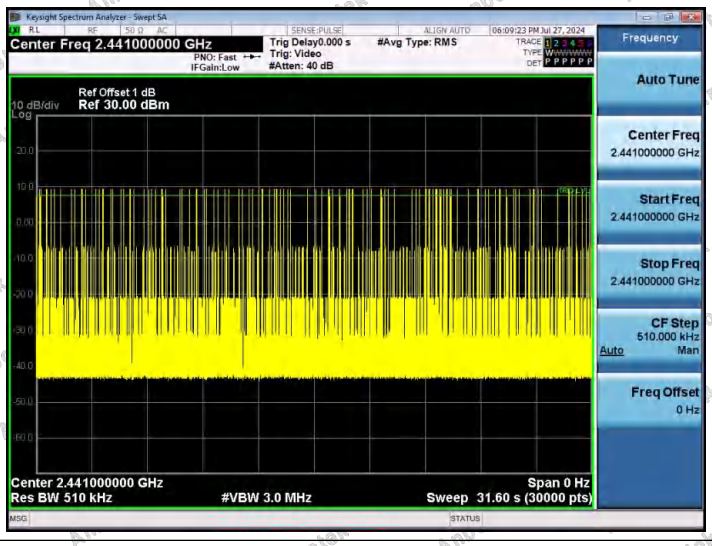



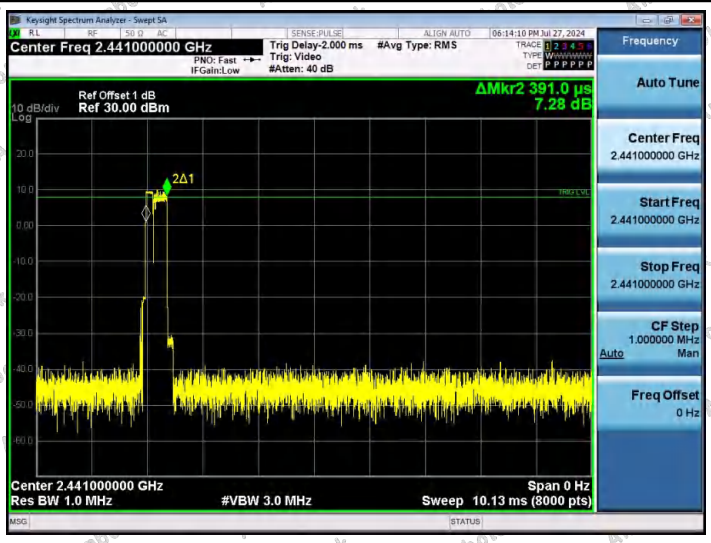

2DH3-Ant1-Hop-PASS



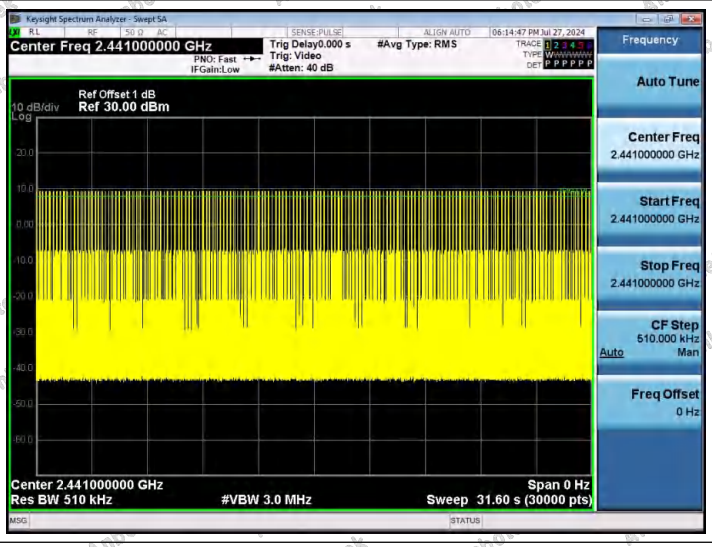



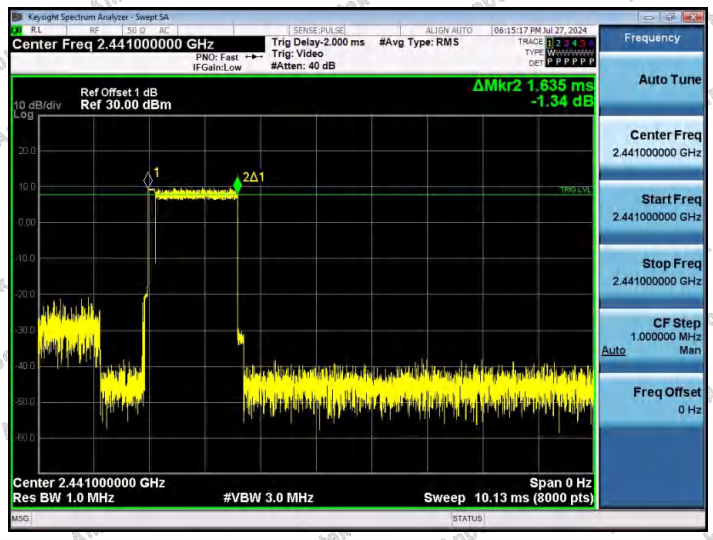

2DH5-Ant1-Hop-PASS



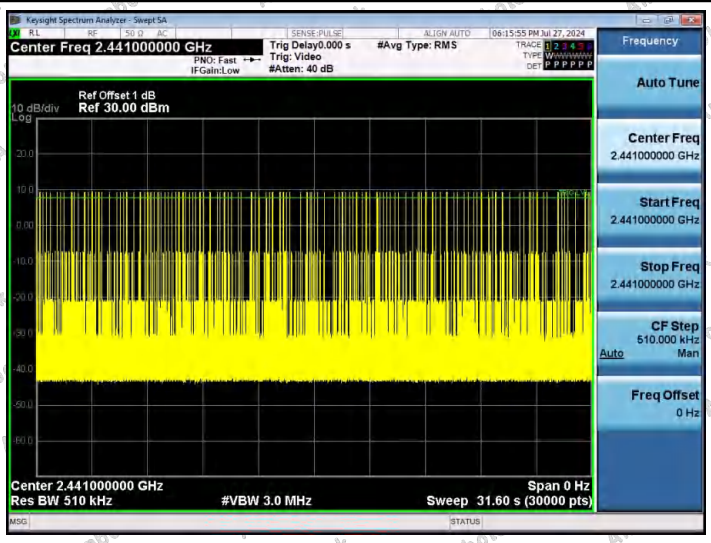


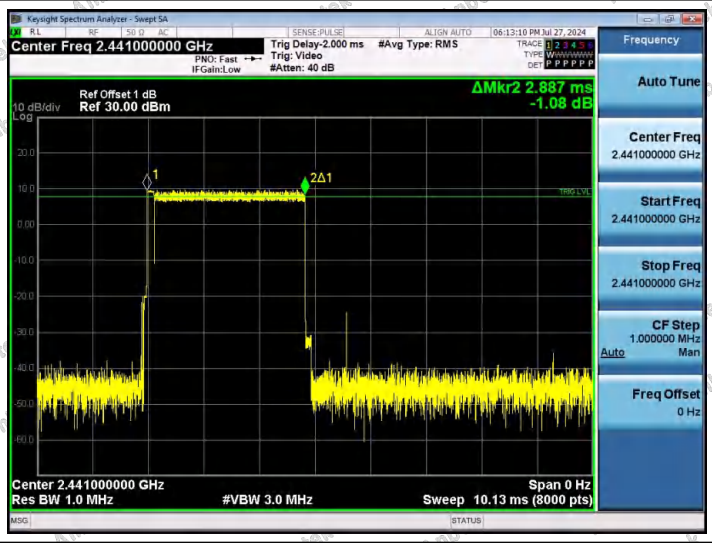

3DH1-Ant1-Hop-PASS



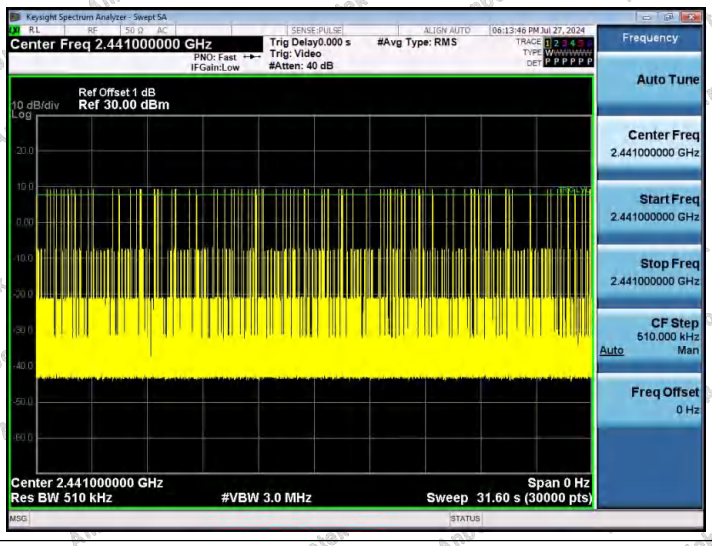




3DH3-Ant1-Hop-PASS




3DH5-Ant1-Hop-PASS



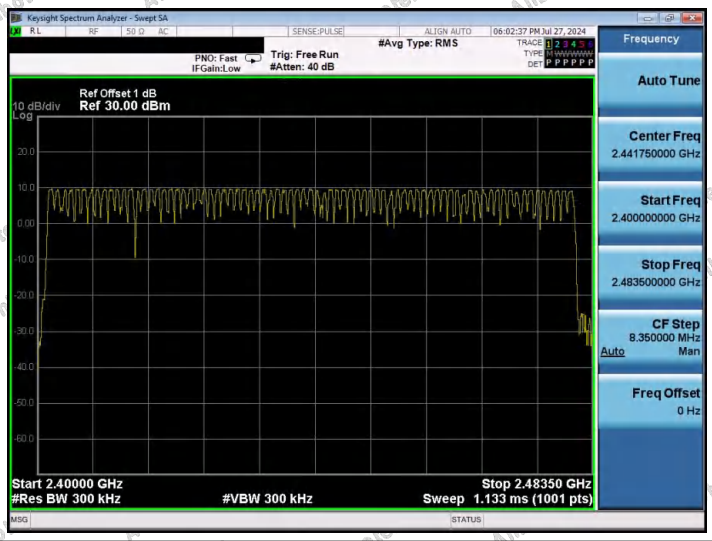
# Appendix F: Number of Hopping Channel

## Test Result

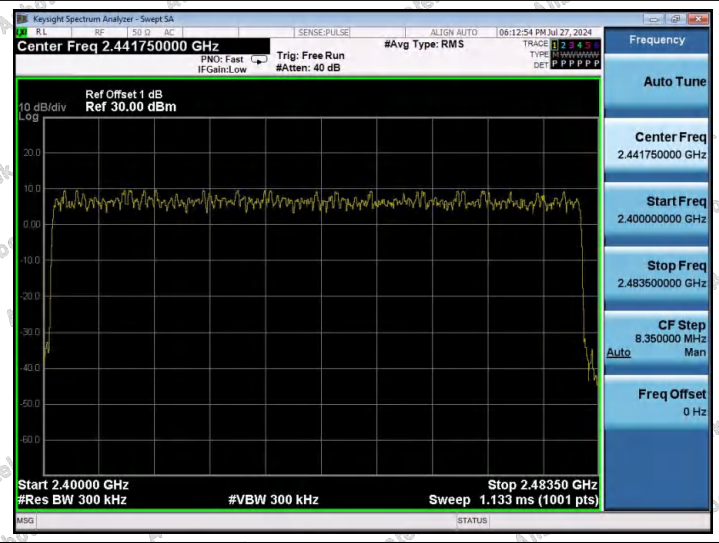
| TestMode | Antenna | Frequency[MHz] | Result[Num] | Limit[Num] | Verdict |
|---|---|---|---|---|---|
| DH5 | Ant1 | Hop | 79 | ≥15 | PASS |
| 2DH5 | Ant1 | Hop | 79 | ≥15 | PASS |
| 3DH5 | Ant1 | Hop | 79 | ≥15 | PASS |

## Test Graphs

DH5-Ant1-Hop-PASS




2DH5-Ant1-Hop-PASS



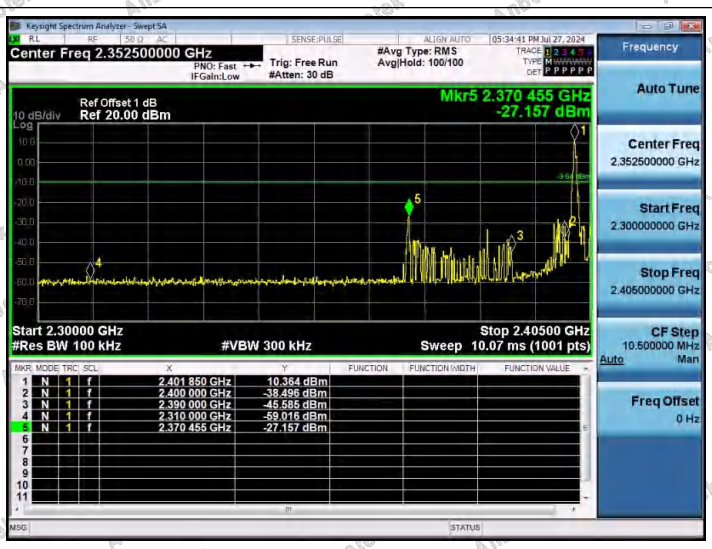

3DH5-Ant1-Hop-PASS

# Appendix G: Conducted Band edge

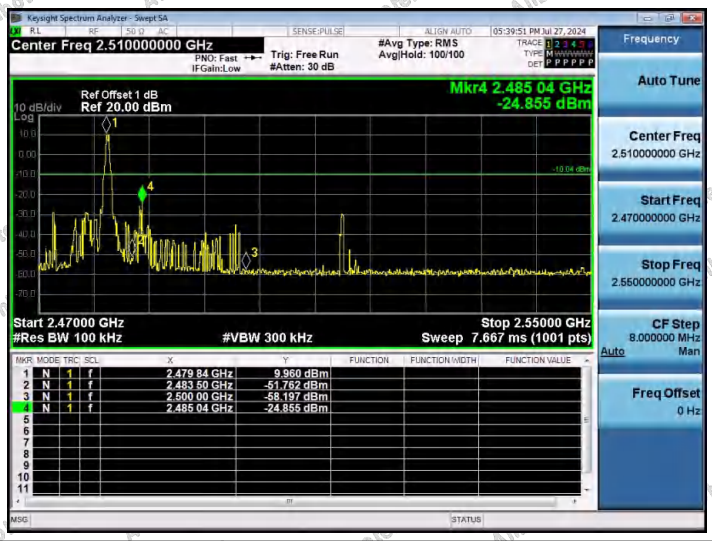
## Test Result

| TestMode | Antenna | ChName | Frequency[MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | Low | 2402 | 10.36 | -27.16 | ≤-9.64 | PASS |
| DH5 | Ant1 | High | 2480 | 9.96 | -24.86 | ≤-10.04 | PASS |
| DH5 | Ant1 | Low | Hop_2402 | 10.35 | -27.31 | ≤-9.65 | PASS |
| DH5 | Ant1 | High | Hop_2480 | 10.05 | -33.44 | ≤-9.95 | PASS |
| 2DH5 | Ant1 | Low | 2402 | 9.31 | -28.88 | ≤-10.7 | PASS |
| 2DH5 | Ant1 | High | 2480 | 8.53 | -30.05 | ≤-11.47 | PASS |
| 2DH5 | Ant1 | Low | Hop_2402 | 7.94 | -28.51 | ≤-12.06 | PASS |
| 2DH5 | Ant1 | High | Hop_2480 | 7.27 | -26.59 | ≤-12.73 | PASS |
| 3DH5 | Ant1 | Low | 2402 | 8.81 | -28.4 | ≤-11.19 | PASS |
| 3DH5 | Ant1 | High | 2480 | 8.58 | -36.89 | ≤-11.42 | PASS |
| 3DH5 | Ant1 | Low | Hop_2402 | 6.92 | -27.88 | ≤-13.08 | PASS |
| 3DH5 | Ant1 | High | Hop_2480 | 8.91 | -34.51 | ≤-11.09 | PASS |

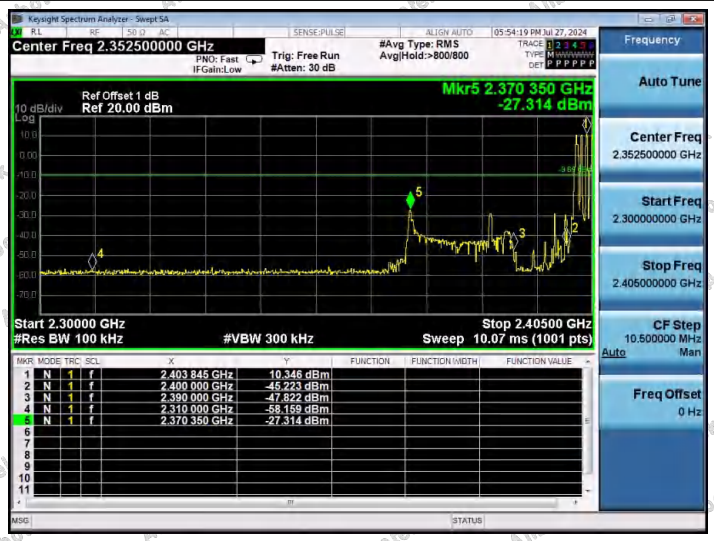
## Test Graphs



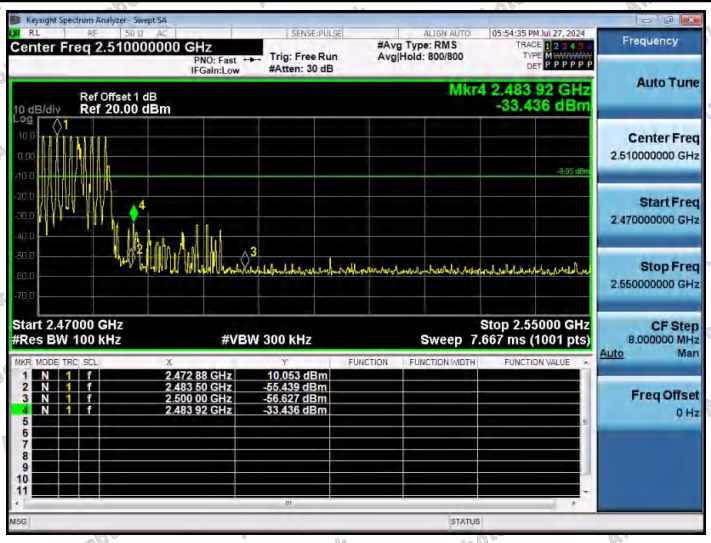

DH5-Ant1-2402-PASS



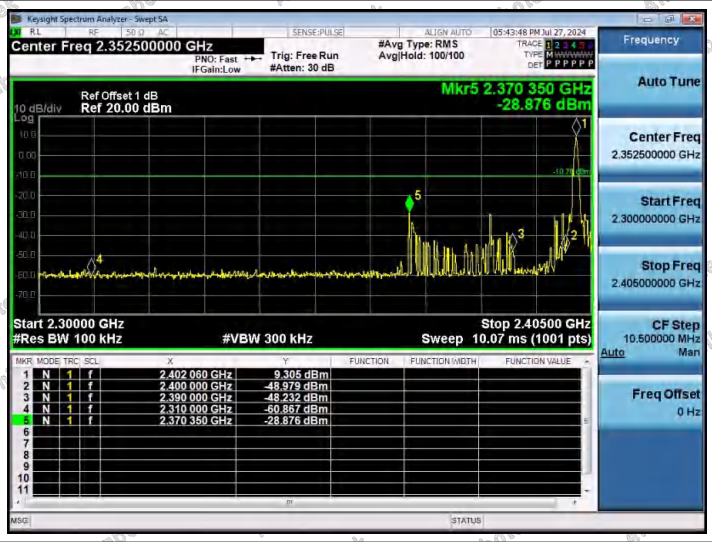

DH5-Ant1-2480-PASS



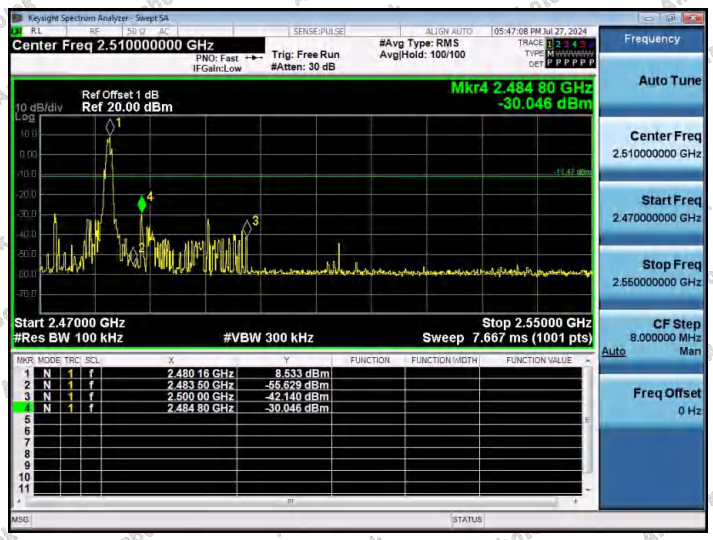

DH5-Ant1-Hop_2402-PASS



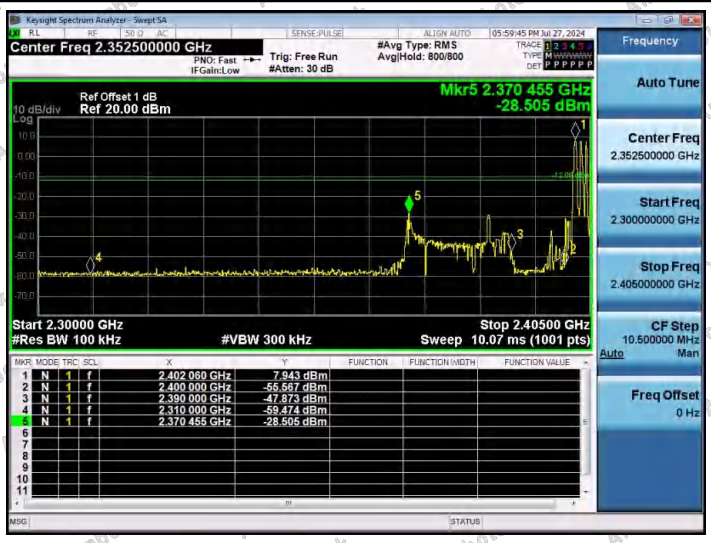

DH5-Ant1-Hop_2480-PASS



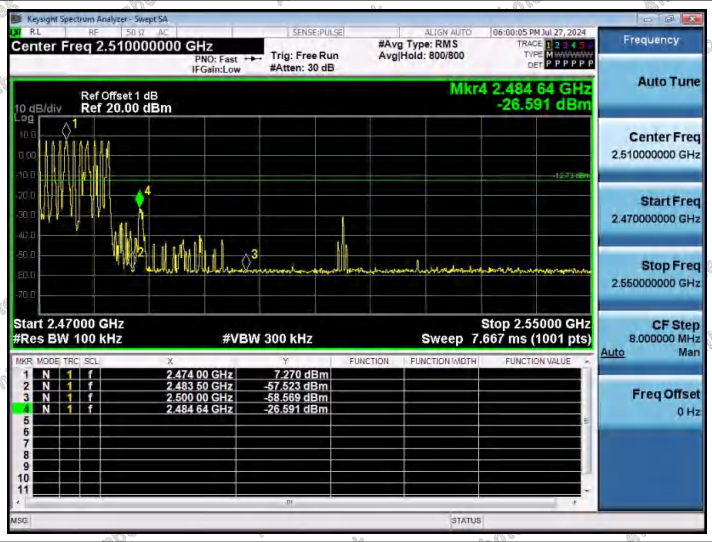

2DH5-Ant1-2402-PASS



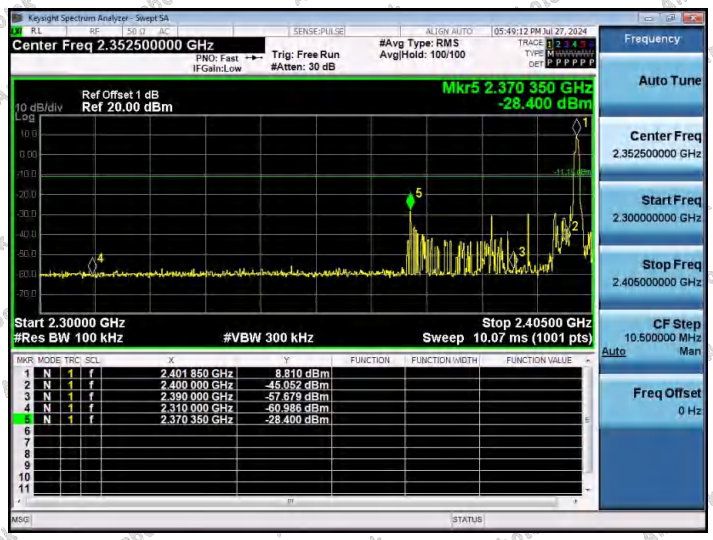

2DH5-Ant1-2480-PASS



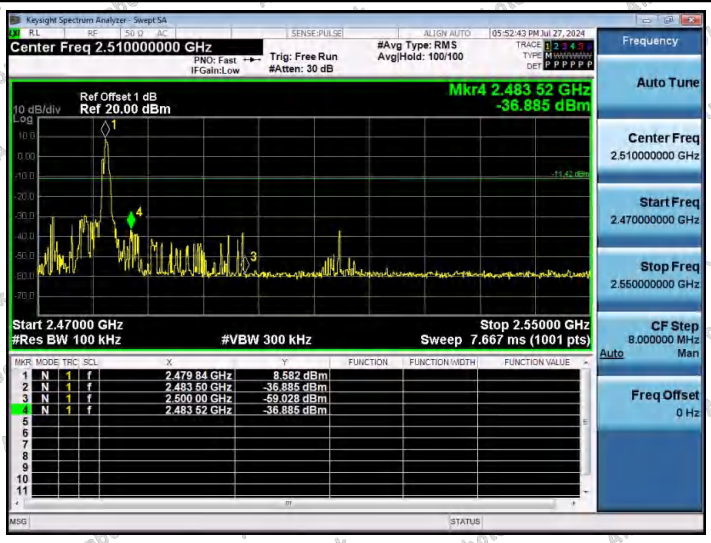

2DH5-Ant1-Hop_2402-PASS



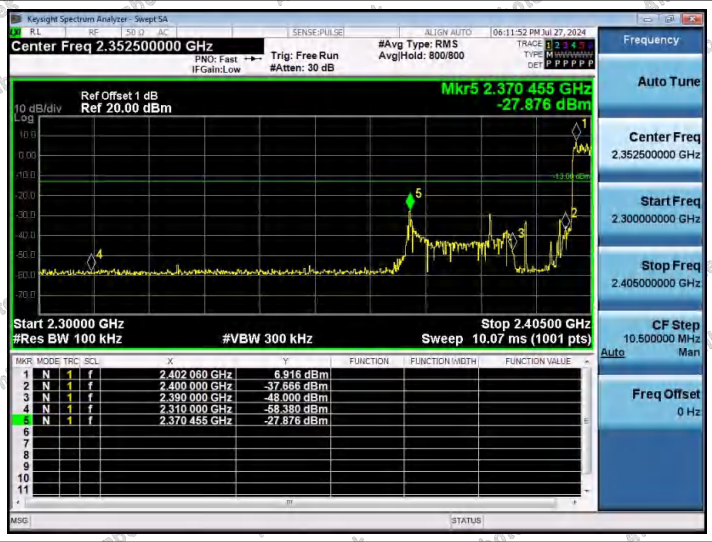

2DH5-Ant1-Hop_2480-PASS



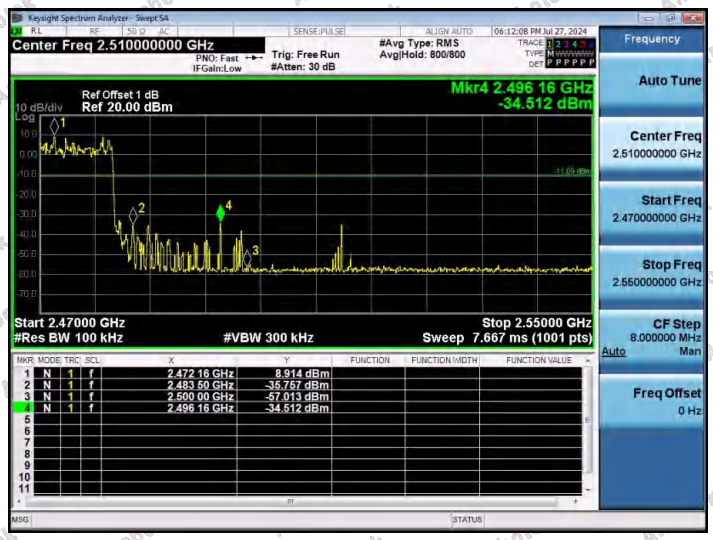

3DH5-Ant1-2402-PASS




3DH5-Ant1-2480-PASS




3DH5-Ant1-Hop_2402-PASS




3DH5-Ant1-Hop_2480-PASS

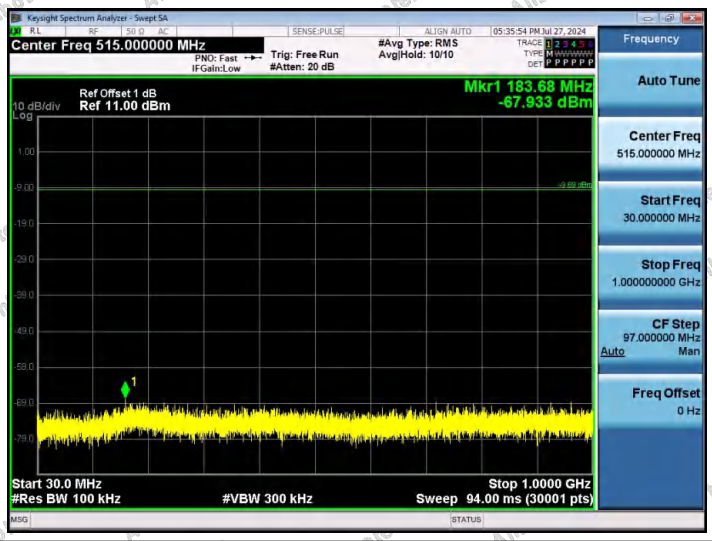
# Appendix H: Conducted Spurious Emission

## Test Result

| TestMode | Antenna | Frequency[MHz] | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | 0~Reference | 10.31 | 10.31 | --- | PASS |
| DH5 | Ant1 | 2402 | 30~1000 | 10.31 | -67.93 | ≤-9.69 | PASS |
| DH5 | Ant1 | 2402 | 1000~26500 | 10.31 | -49.22 | ≤-9.69 | PASS |
| DH5 | Ant1 | 2441 | 0~Reference | 10.25 | 10.25 | --- | PASS |
| DH5 | Ant1 | 2441 | 30~1000 | 10.25 | -60.89 | ≤-9.75 | PASS |
| DH5 | Ant1 | 2441 | 1000~26500 | 10.25 | -30.24 | ≤-9.75 | PASS |
| DH5 | Ant1 | 2480 | 0~Reference | 9.93 | 9.93 | --- | PASS |
| DH5 | Ant1 | 2480 | 30~1000 | 9.93 | -66.44 | ≤-10.07 | PASS |
| DH5 | Ant1 | 2480 | 1000~26500 | 9.93 | -42.62 | ≤-10.07 | PASS |
| 2DH5 | Ant1 | 2402 | 0~Reference | 7.44 | 7.44 | --- | PASS |
| 2DH5 | Ant1 | 2402 | 30~1000 | 7.44 | -67.39 | ≤-12.56 | PASS |
| 2DH5 | Ant1 | 2402 | 1000~26500 | 7.44 | -50.72 | ≤-12.56 | PASS |
| 2DH5 | Ant1 | 2441 | 0~Reference | 9.21 | 9.21 | --- | PASS |
| 2DH5 | Ant1 | 2441 | 30~1000 | 9.21 | -67.55 | ≤-10.79 | PASS |
| 2DH5 | Ant1 | 2441 | 1000~26500 | 9.21 | -37.08 | ≤-10.79 | PASS |
| 2DH5 | Ant1 | 2480 | 0~Reference | 8.68 | 8.68 | --- | PASS |
| 2DH5 | Ant1 | 2480 | 30~1000 | 8.68 | -68.14 | ≤-11.32 | PASS |
| 2DH5 | Ant1 | 2480 | 1000~26500 | 8.68 | -43.47 | ≤-11.32 | PASS |
| 3DH5 | Ant1 | 2402 | 0~Reference | 9.32 | 9.32 | --- | PASS |
| 3DH5 | Ant1 | 2402 | 30~1000 | 9.32 | -68.15 | ≤-10.68 | PASS |
| 3DH5 | Ant1 | 2402 | 1000~26500 | 9.32 | -51.48 | ≤-10.68 | PASS |
| 3DH5 | Ant1 | 2441 | 0~Reference | 7.95 | 7.95 | --- | PASS |
| 3DH5 | Ant1 | 2441 | 30~1000 | 7.95 | -68.15 | ≤-12.05 | PASS |
| 3DH5 | Ant1 | 2441 | 1000~26500 | 7.95 | -36.72 | ≤-12.05 | PASS |
| 3DH5 | Ant1 | 2480 | 0~Reference | 7.74 | 7.74 | --- | PASS |
| 3DH5 | Ant1 | 2480 | 30~1000 | 7.74 | -67.39 | ≤-12.26 | PASS |
| 3DH5 | Ant1 | 2480 | 1000~26500 | 7.74 | -45.44 | ≤-12.26 | PASS |

## Test Graphs

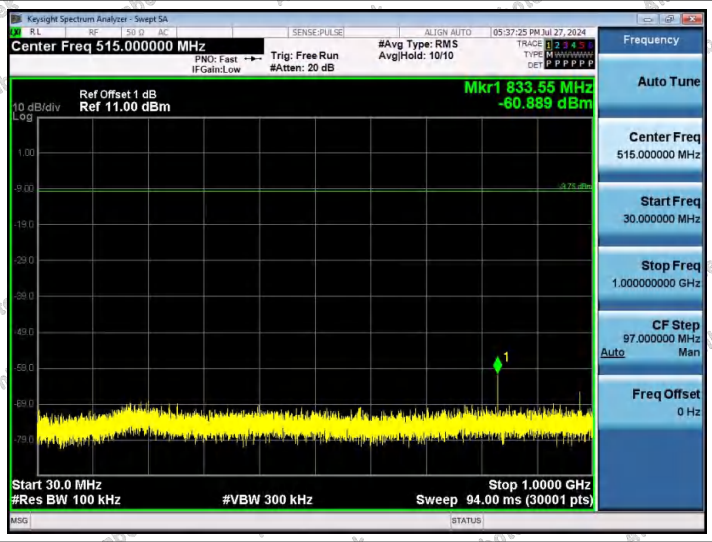
DH5-Ant1-2402-0~Reference-PASS



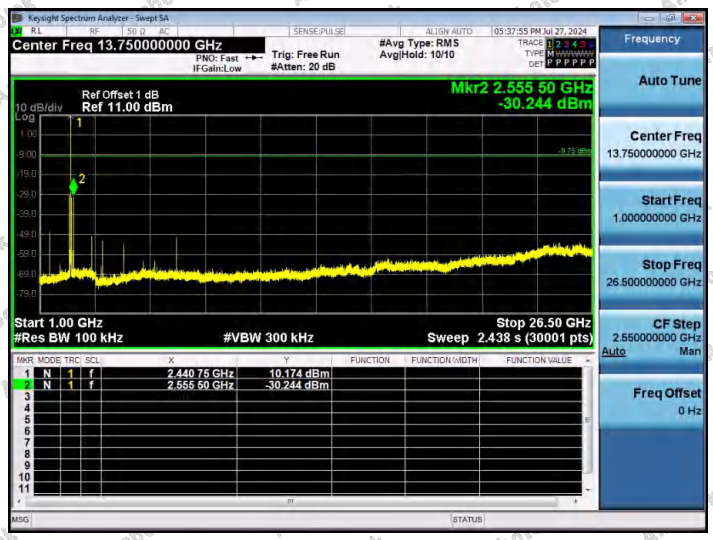

DH5-Ant1-2402-30~1000-PASS

DH5-Ant1-2402-1000~26500-PASS

DH5-Ant1-2441-0~Reference-PASS

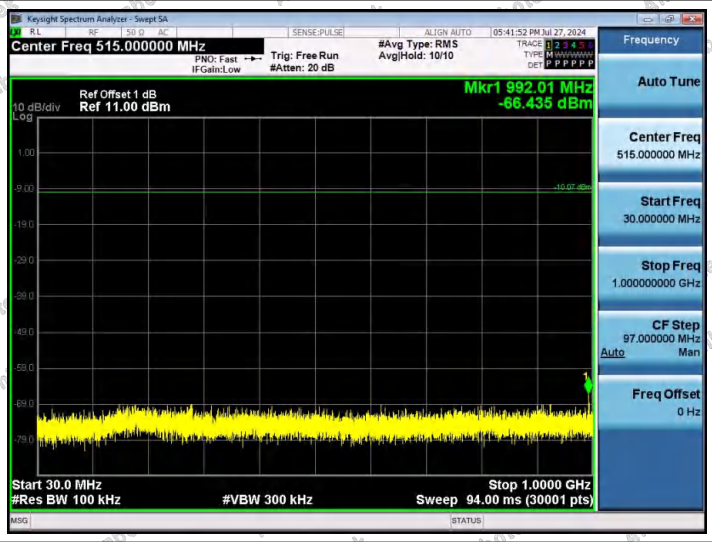



DH5-Ant1-2441-30~1000-PASS




DH5-Ant1-2441-1000~26500-PASS

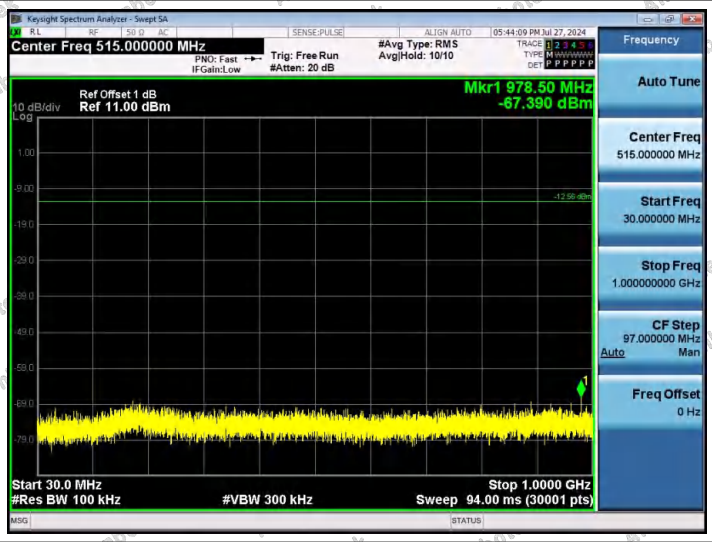
DH5-Ant1-2480-0~Reference-PASS



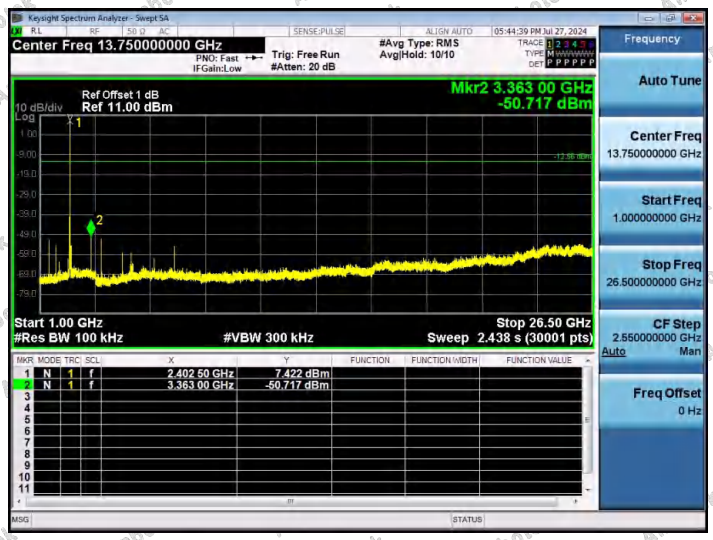

DH5-Ant1-2480-30~1000-PASS

DH5-Ant1-2480-1000~26500-PASS

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

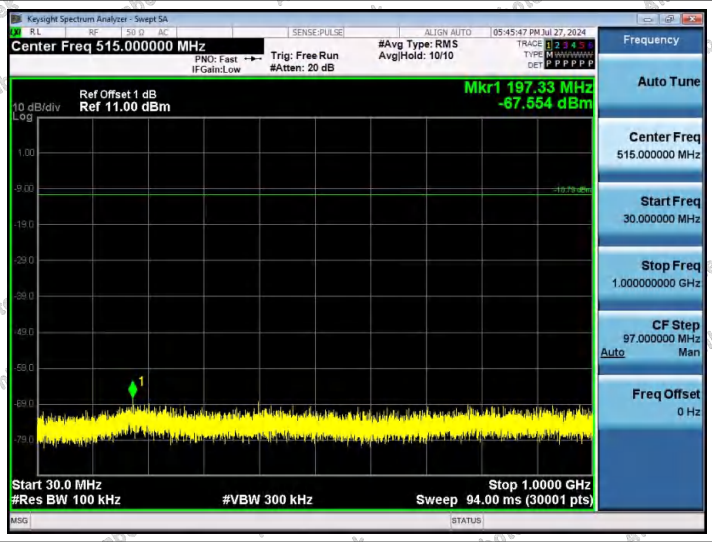



2DH5-Ant1-2402-30~1000-PASS




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

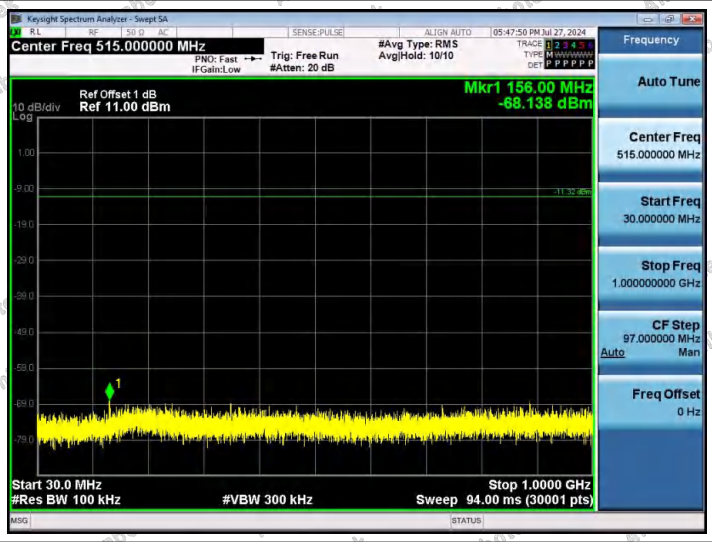
2DH5-Ant1-2441-0~Reference-PASS




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

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

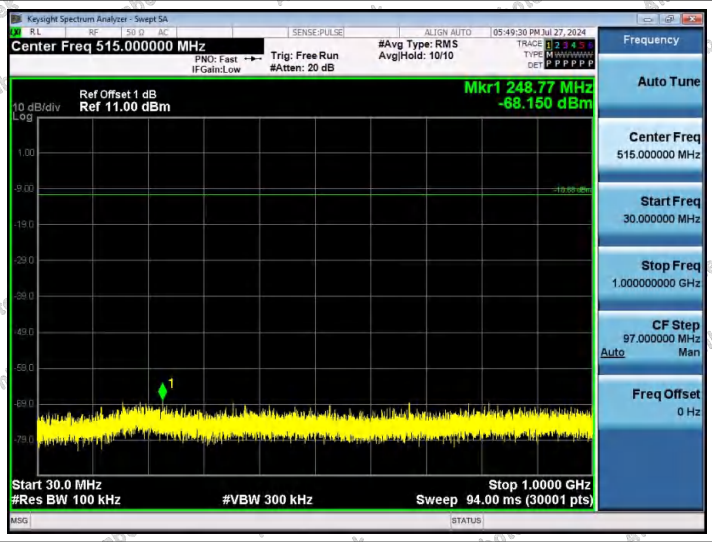
2DH5-Ant1-2480-0~Reference-PASS



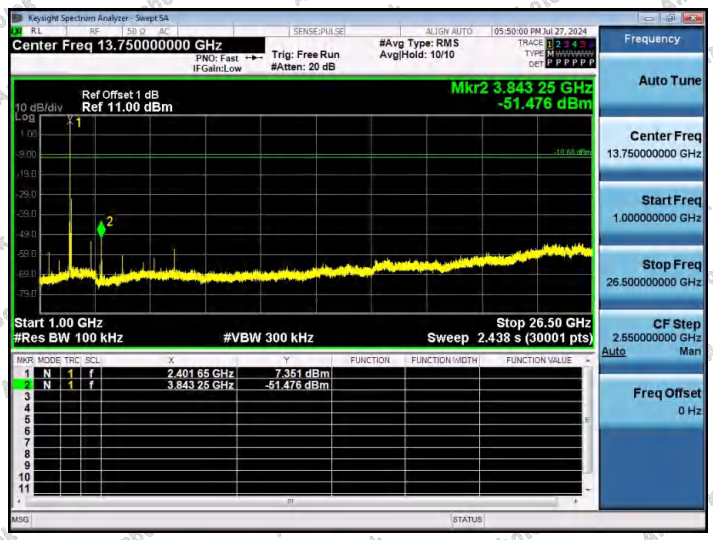

2DH5-Ant1-2480-30~1000-PASS

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

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

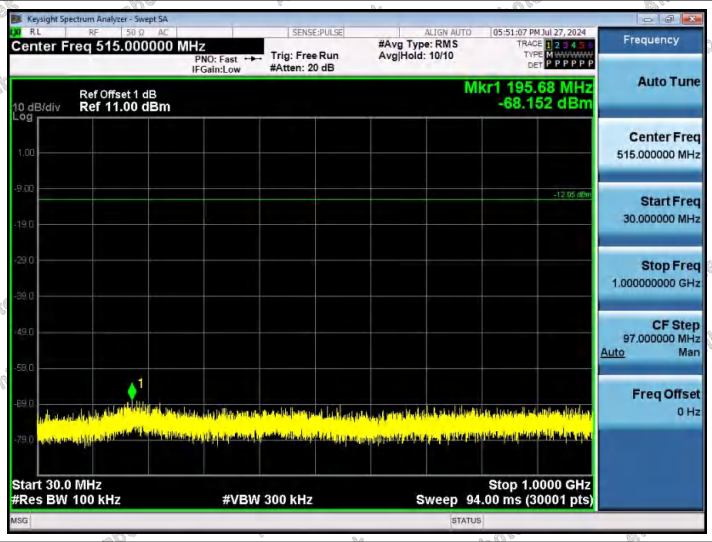



3DH5-Ant1-2402-30~1000-PASS

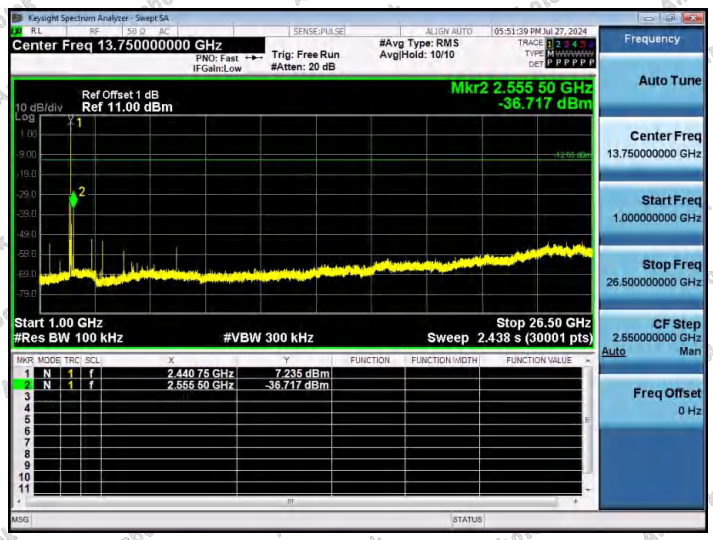



3DH5-Ant1-2402-1000~26500-PASS

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

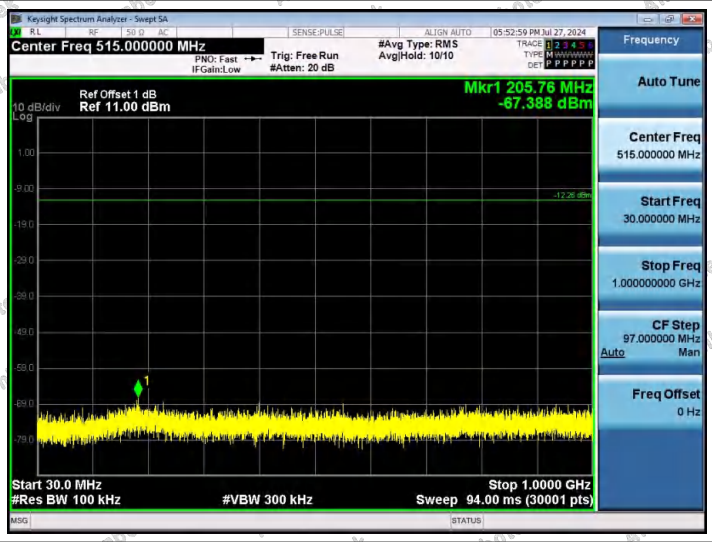



3DH5-Ant1-2441-30~1000-PASS

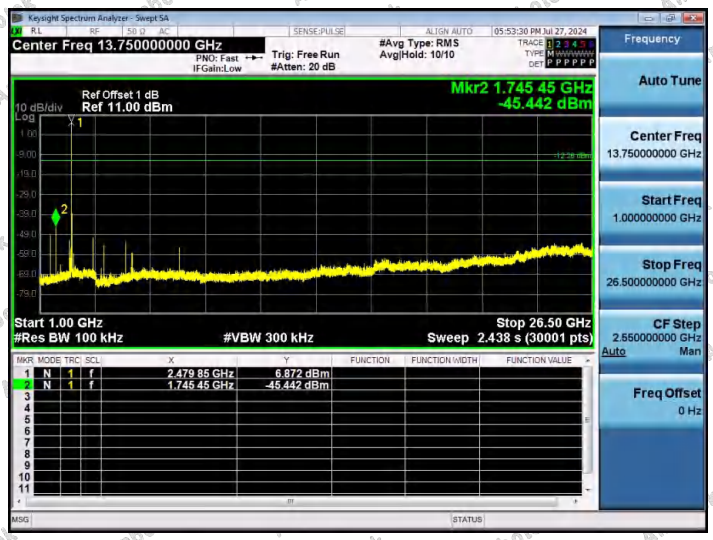



3DH5-Ant1-2441-1000~26500-PASS

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




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



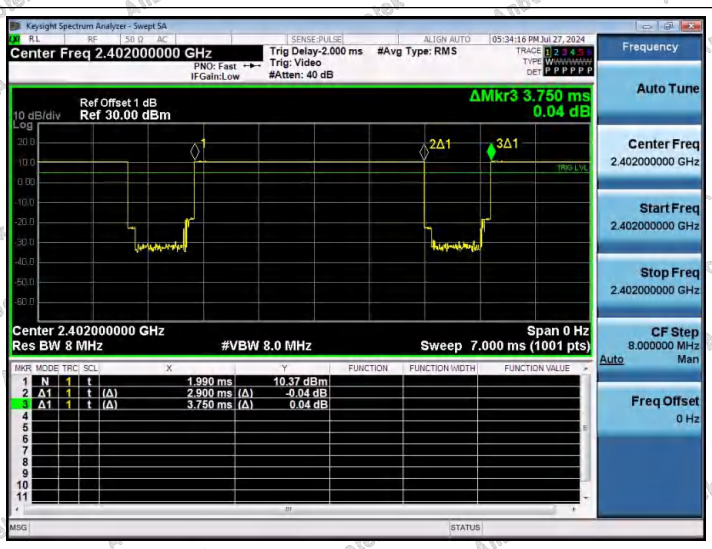

3DH5-Ant1-2480-1000~26500-PASS

# Appendix I: Duty Cycle

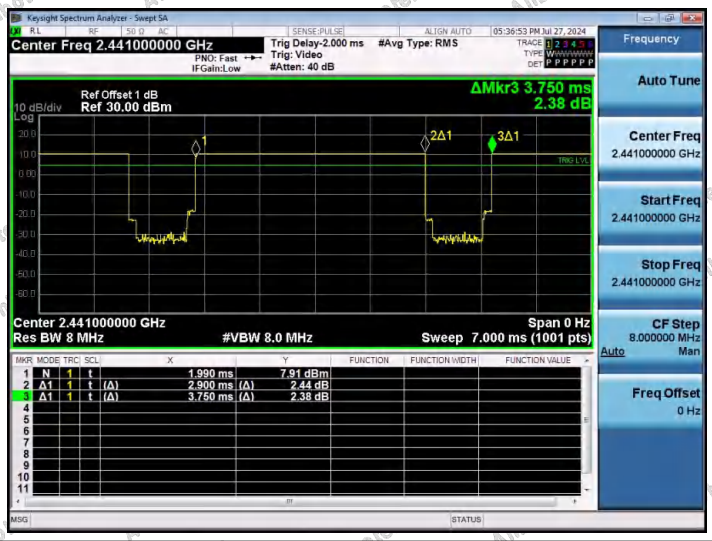
## Test Result

| TestMode | 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 | 2.90 | 3.74 | 77.54 | 1.10 |
| 2DH5 | Ant1 | 2402 | 2.89 | 3.75 | 77.07 | 1.13 |
| 2DH5 | Ant1 | 2441 | 2.89 | 3.75 | 77.07 | 1.13 |
| 2DH5 | Ant1 | 2480 | 2.89 | 3.75 | 77.07 | 1.13 |
| 3DH5 | Ant1 | 2402 | 2.89 | 3.76 | 76.86 | 1.14 |
| 3DH5 | Ant1 | 2441 | 2.89 | 3.76 | 76.86 | 1.14 |
| 3DH5 | Ant1 | 2480 | 2.89 | 3.76 | 76.86 | 1.14 |

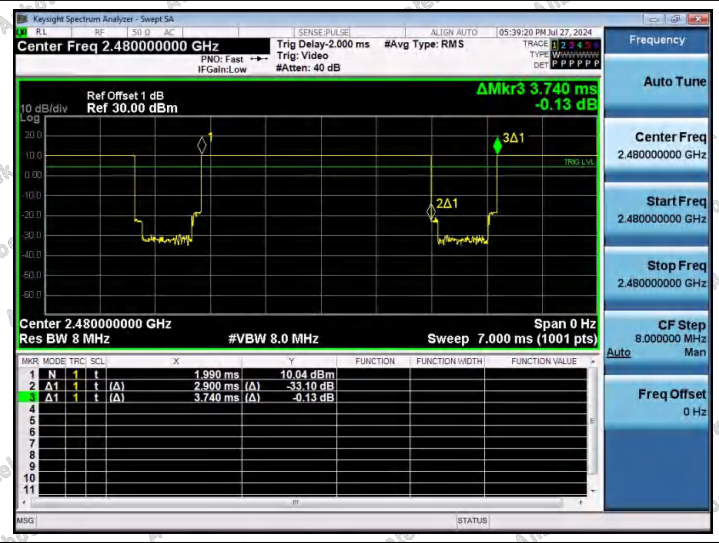
## Test Graphs



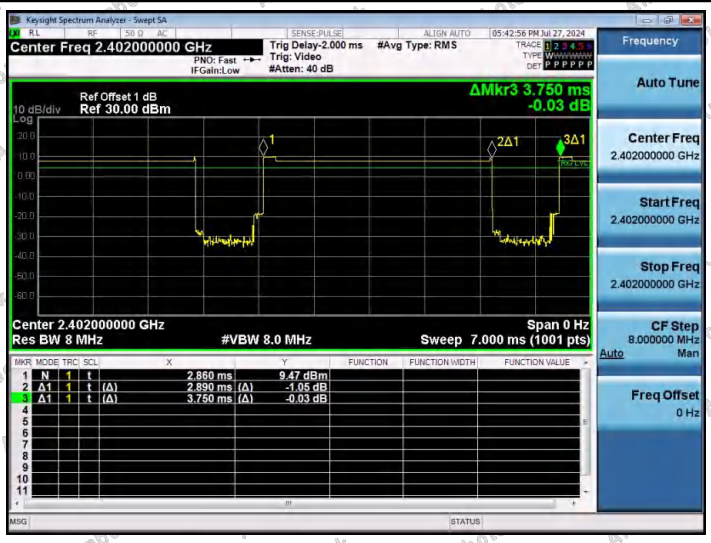

NTNV-DH5-Ant1-2402



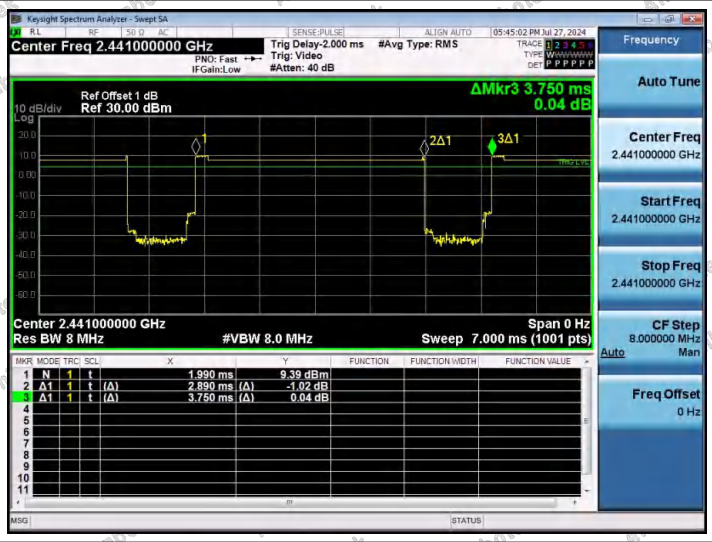

NTNV-DH5-Ant1-2441



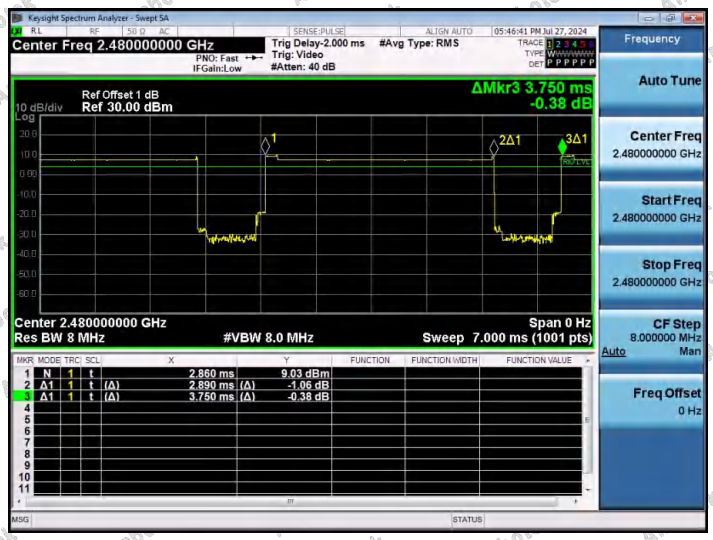

NTNV-DH5-Ant1-2480



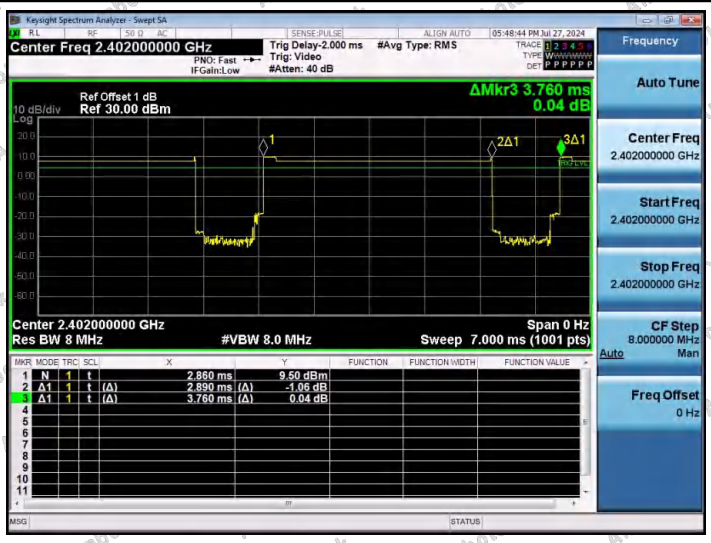

NTNV-2DH5-Ant1-2402



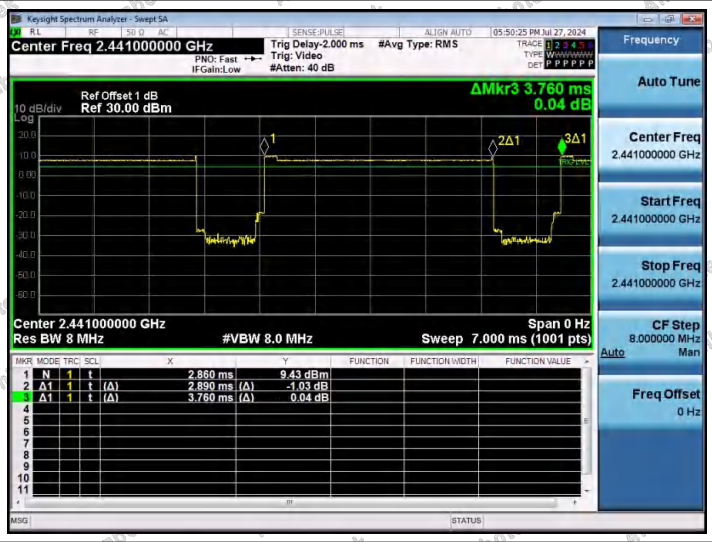

NTNV-2DH5-Ant1-2441



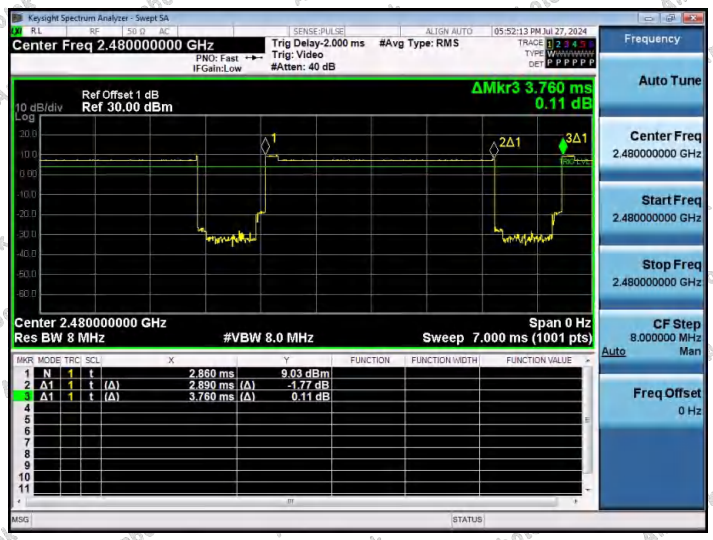

NTNV-2DH5-Ant1-2480




NTNV-3DH5-Ant1-2402




NTNV-3DH5-Ant1-2441




NTNV-3DH5-Ant1-2480

---End---