



Appendix A

RF Test Data for BT V5.0(BDR/EDR) (Conducted Measurement)

Product Name: Karaoke Microphone

Trade Mark: CJ TECH

Test Model: 53864-DI

Environmental Conditions

| | |
|--------------------|-----------|
| Temperature: | 22.4° C |
| Relative Humidity: | 53.8% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Carl Fu |
| Supervised by: | Li Huan |

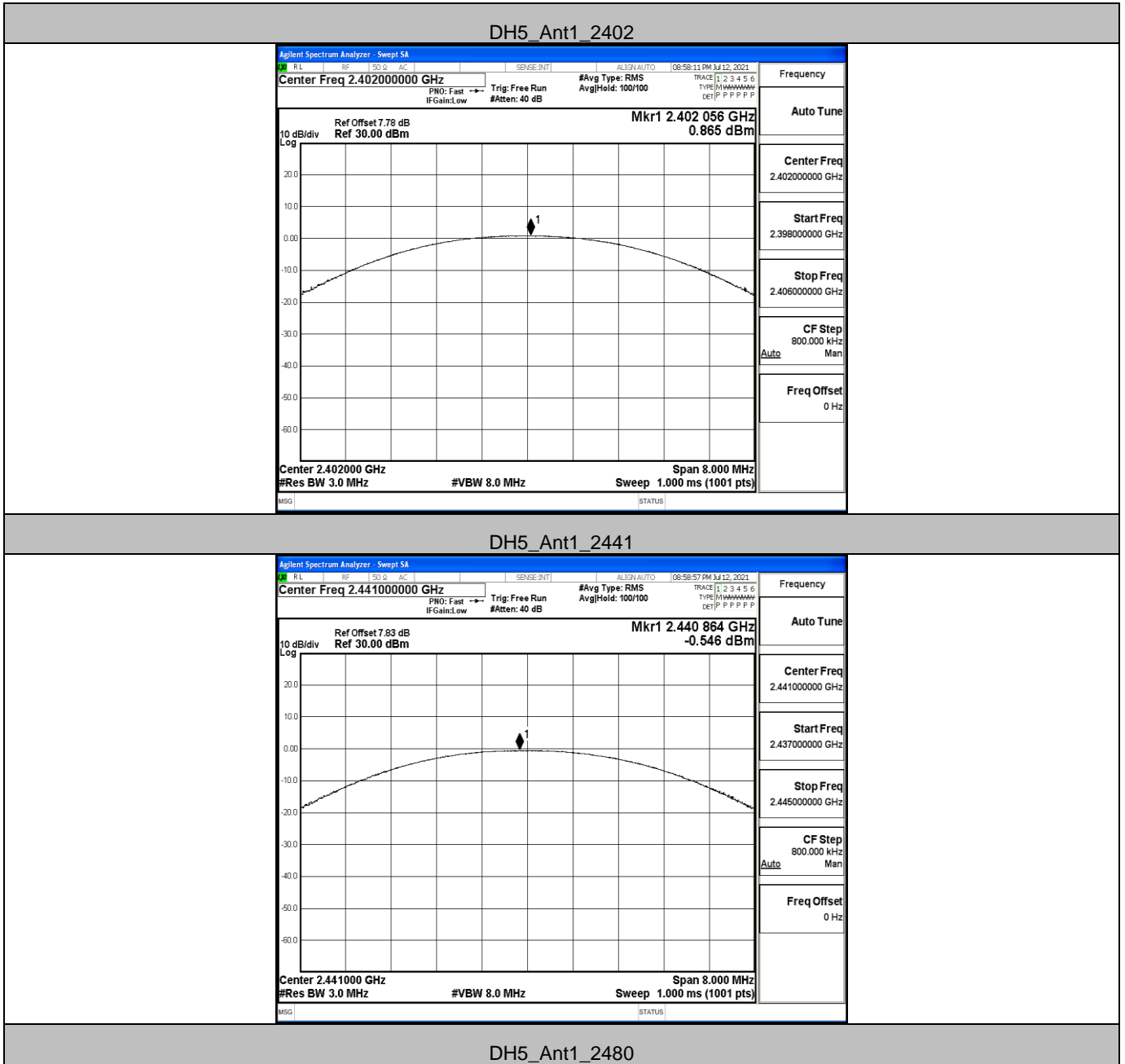
A.1 Maxmum Conducted Peak Output Power

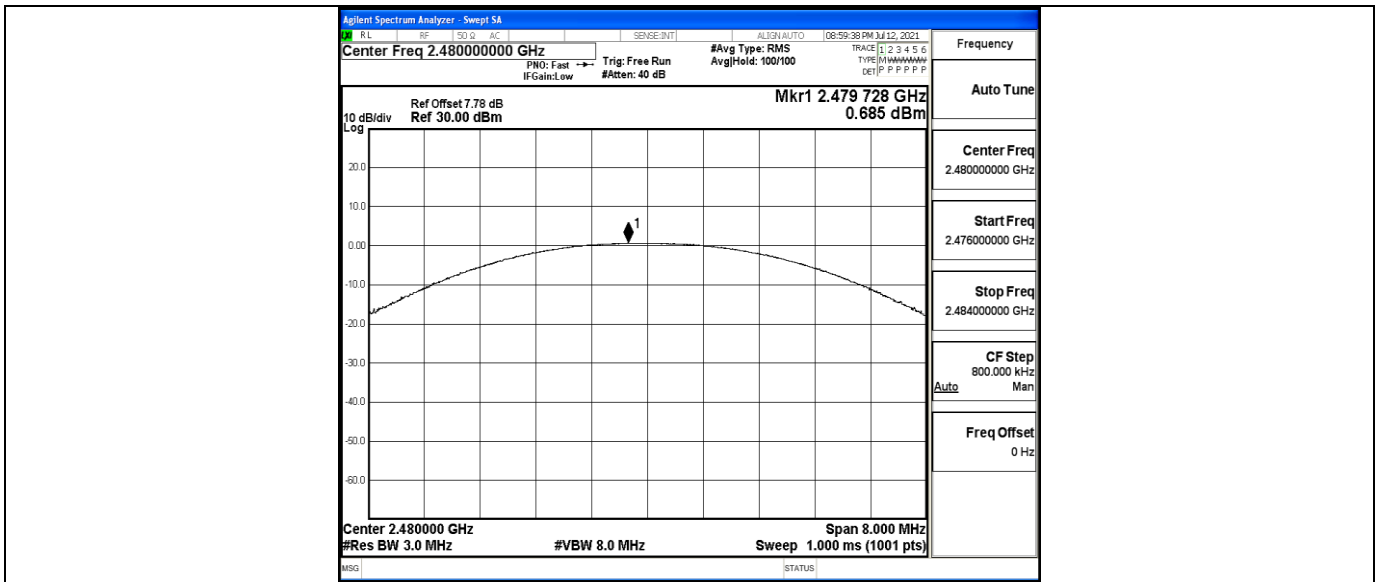
Test Result

| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| DH5 | Ant1 | 2402 | 0.87 | ≤21 | PASS |
| | | 2441 | -0.55 | ≤21 | PASS |
| | | 2480 | 0.69 | ≤21 | PASS |
| 2DH5 | Ant1 | 2402 | -0.13 | ≤21 | PASS |
| | | 2441 | -1.22 | ≤21 | PASS |
| | | 2480 | -0.22 | ≤21 | PASS |

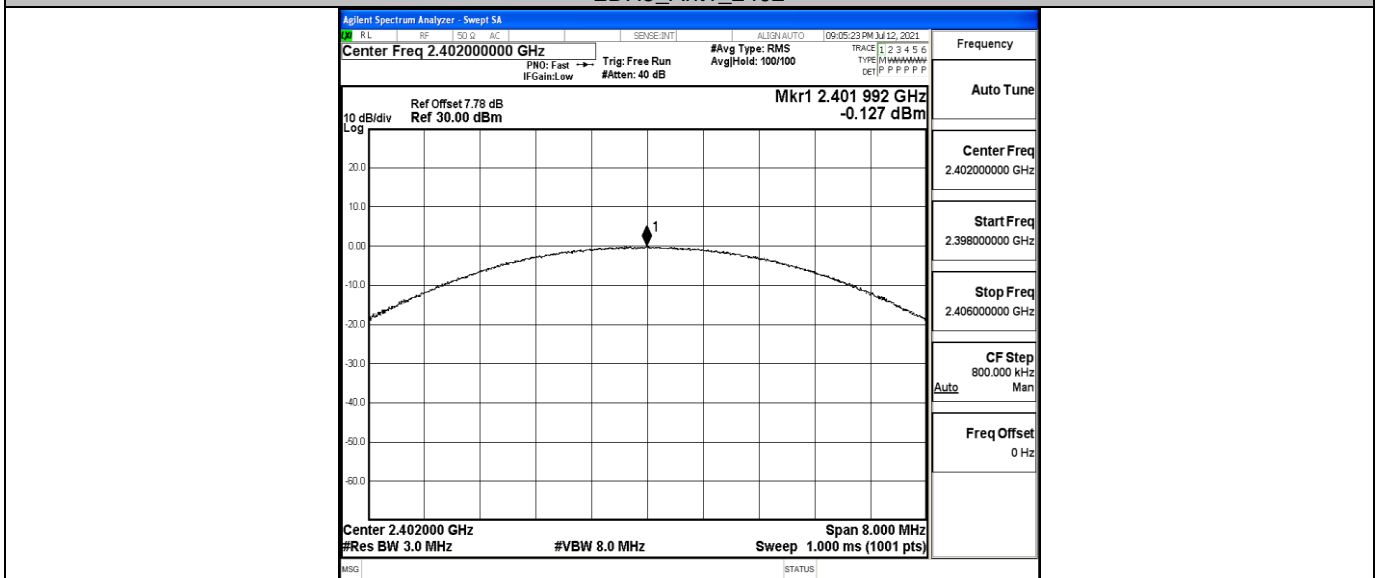


Test Graphs

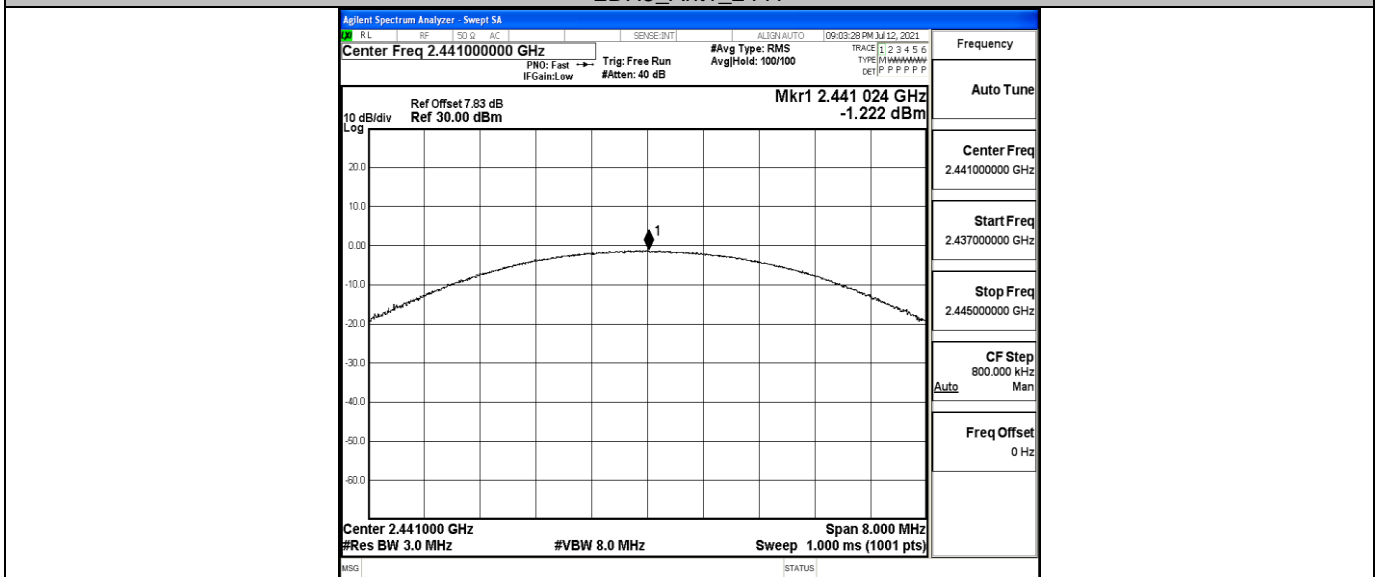




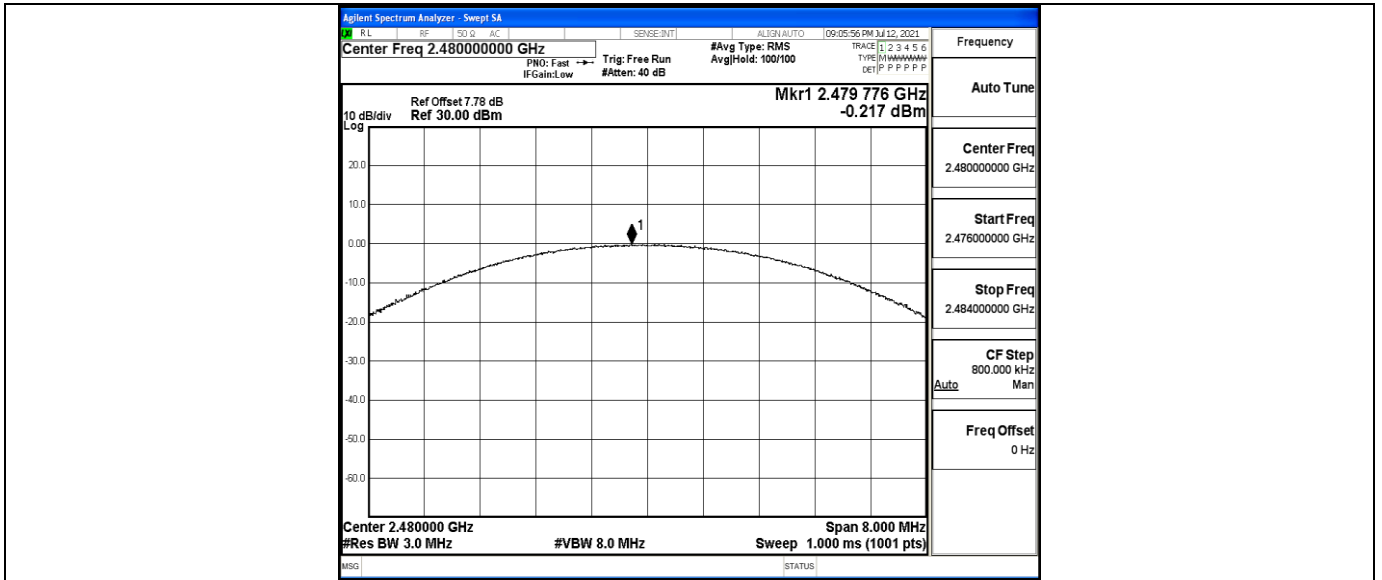
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480





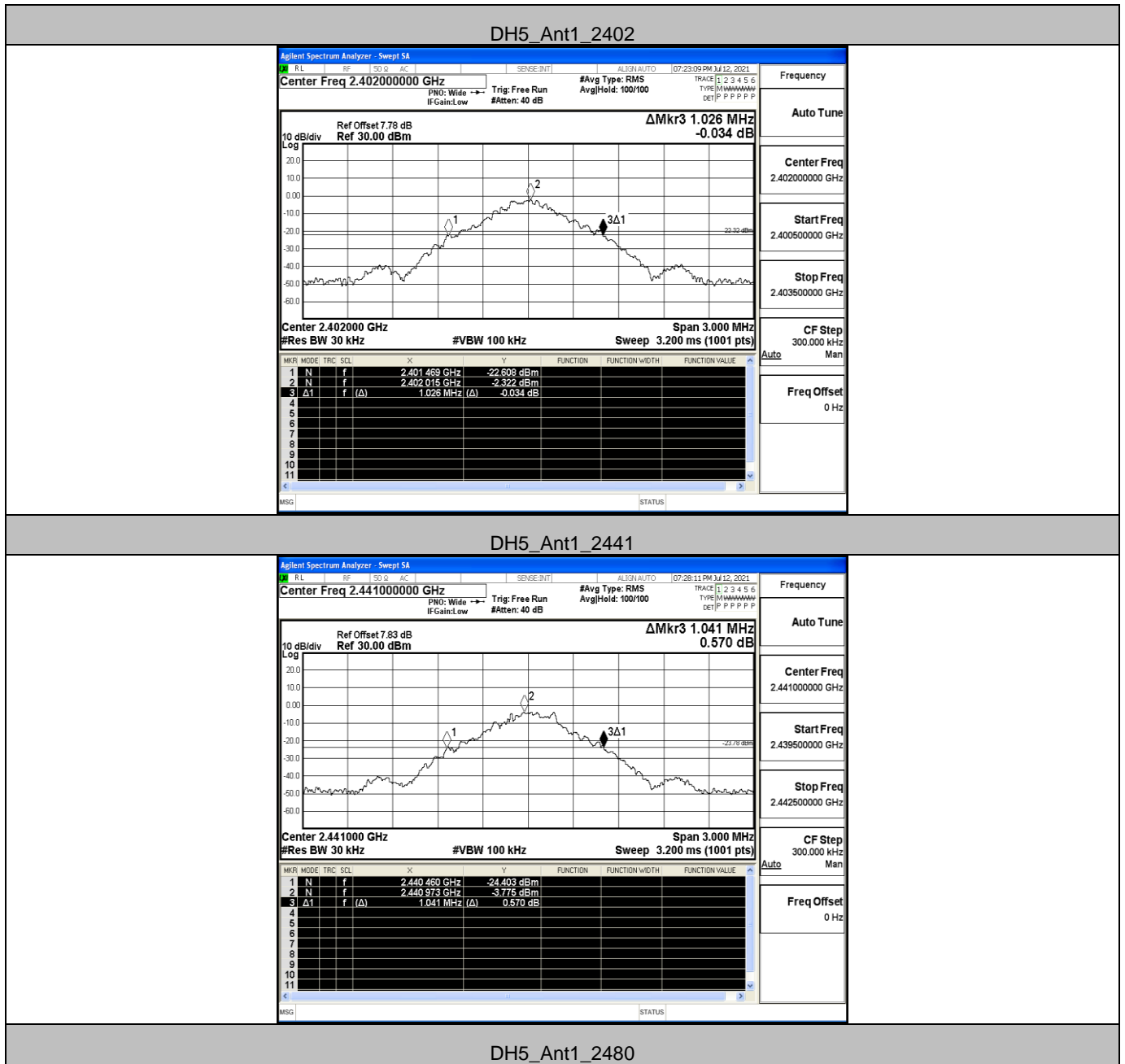
A.2 20dB Bandwidth

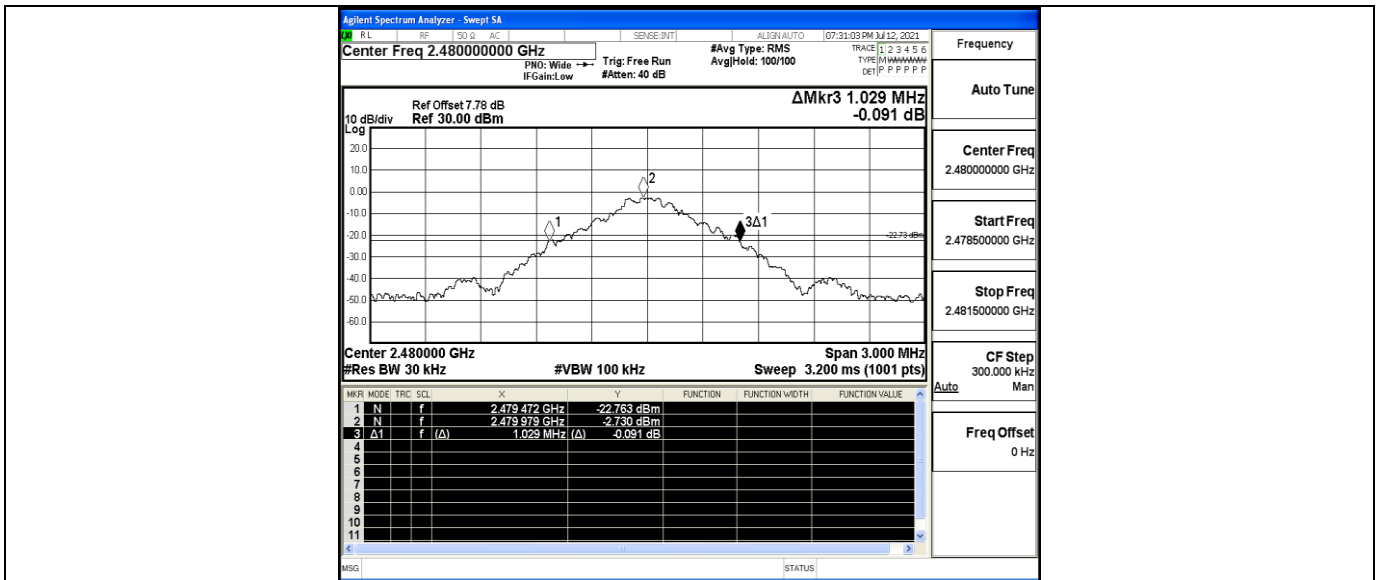
Test Result

| TestMode | Antenna | Channel | 20db EBW[MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----------|---------|---------|---------------|----------|----------|------------|---------|
| DH5 | Ant1 | 2402 | 1.026 | 2401.469 | 2402.495 | --- | PASS |
| | | 2441 | 1.041 | 2440.460 | 2441.501 | --- | PASS |
| | | 2480 | 1.029 | 2479.472 | 2480.501 | --- | PASS |
| 2DH5 | Ant1 | 2402 | 1.317 | 2401.340 | 2402.657 | --- | PASS |
| | | 2441 | 1.335 | 2440.334 | 2441.669 | --- | PASS |
| | | 2480 | 1.284 | 2479.361 | 2480.645 | --- | PASS |

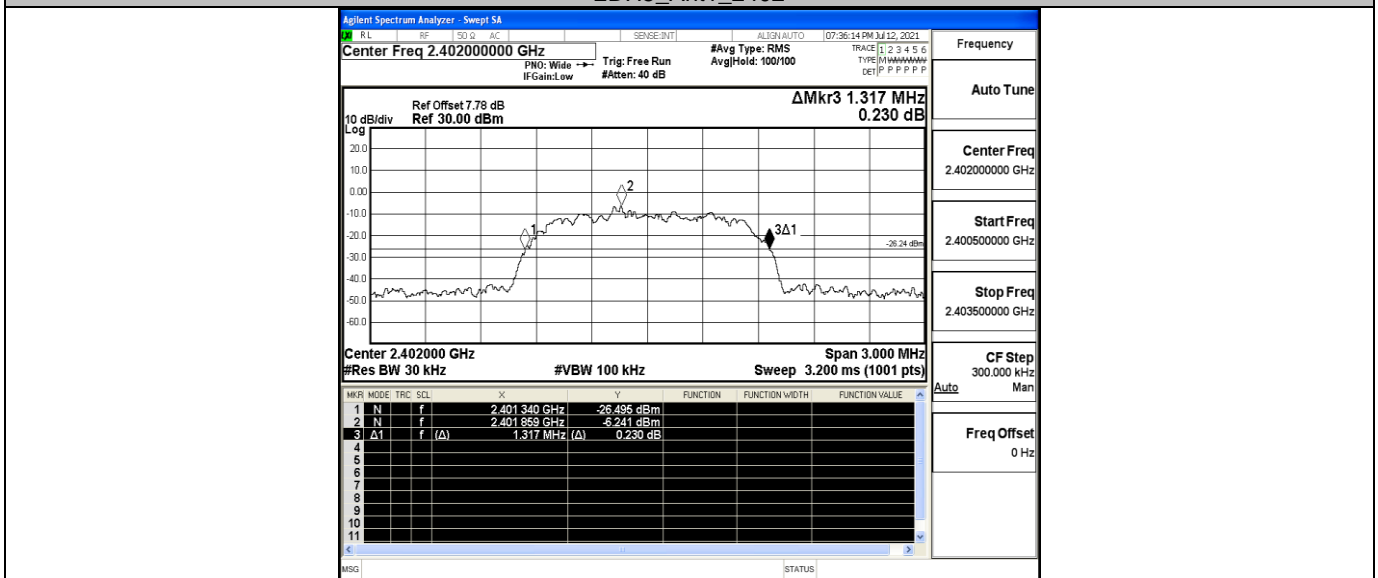


Test Graphs

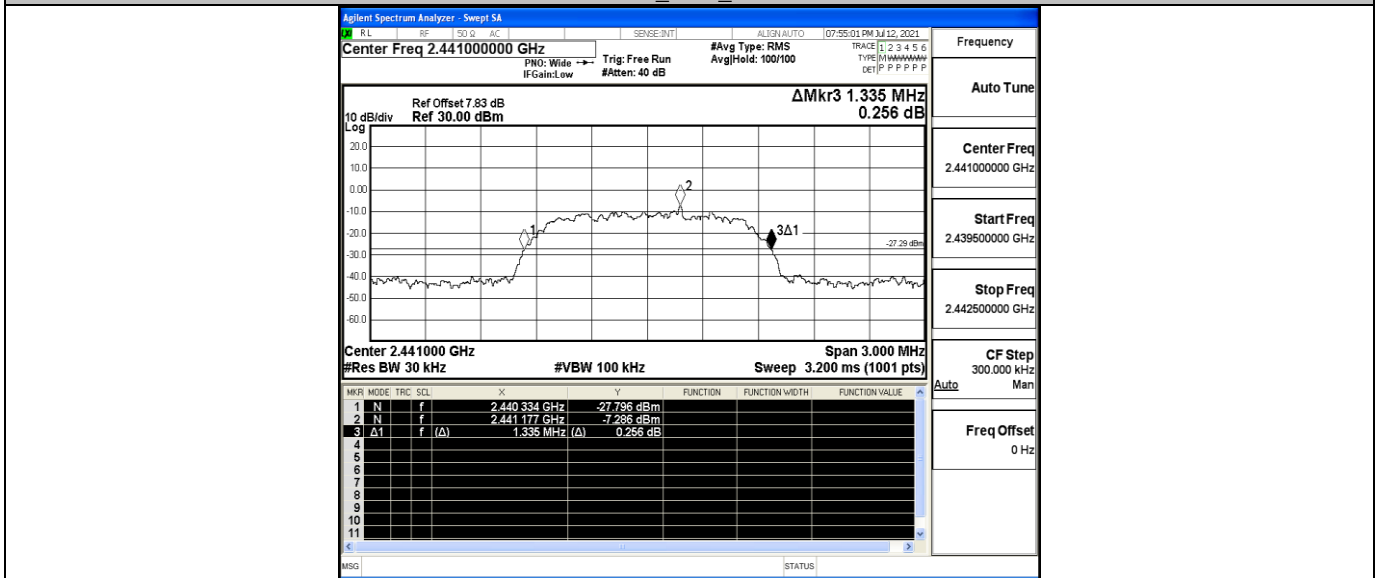




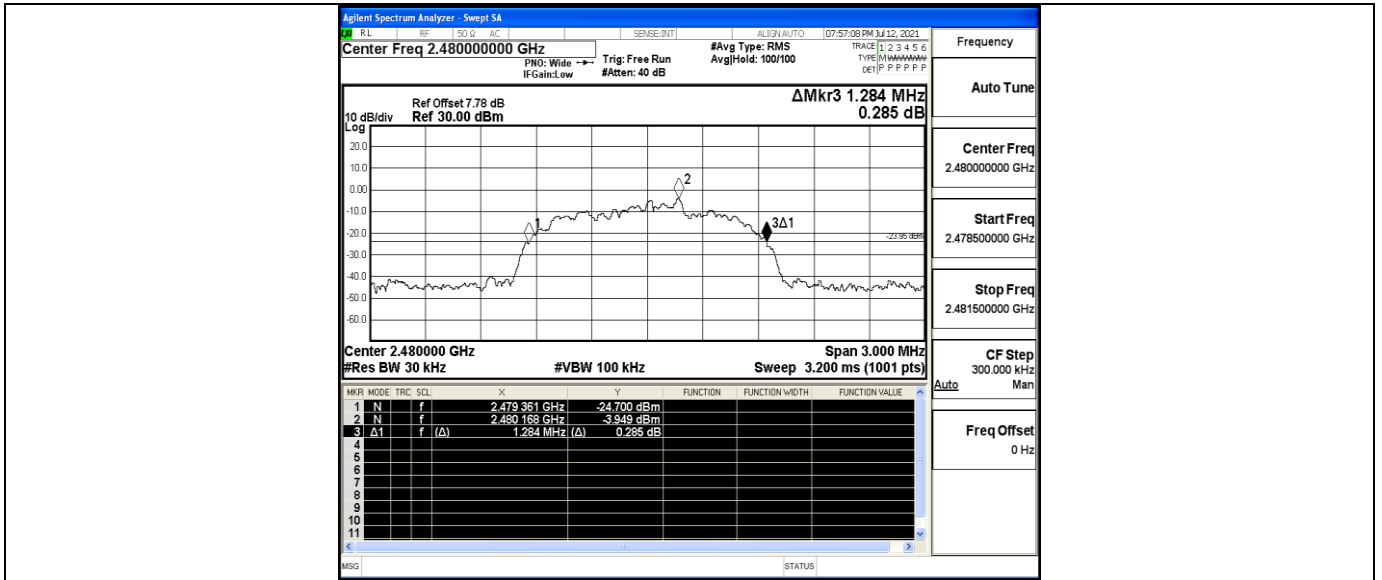
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



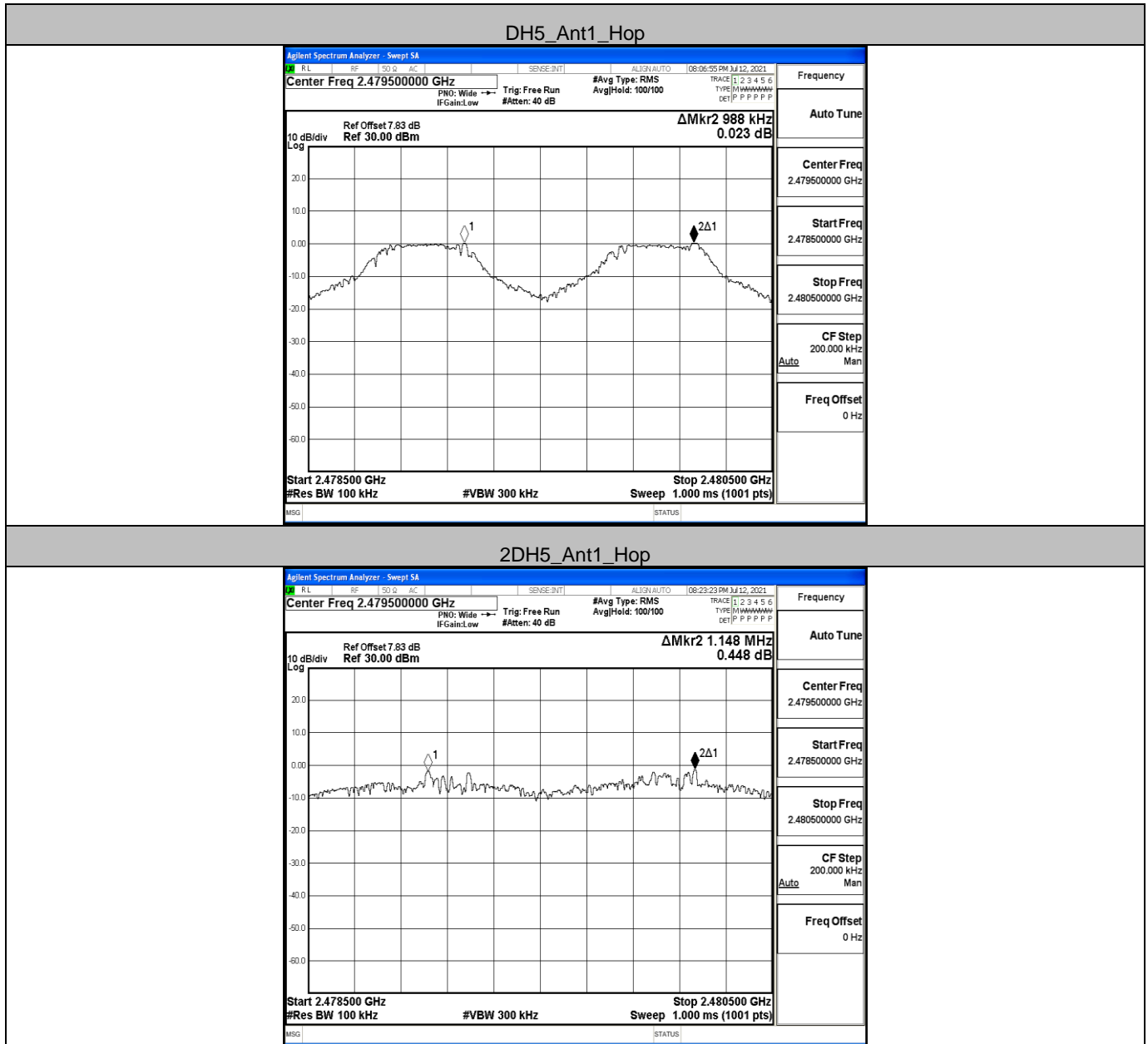


A.3 Carrier Frequency Separation

Test Result

| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| DH5 | Ant1 | Hop | 0.988 | ≥0.694 | PASS |
| 2DH5 | Ant1 | Hop | 1.148 | ≥0.890 | PASS |

Test Graphs



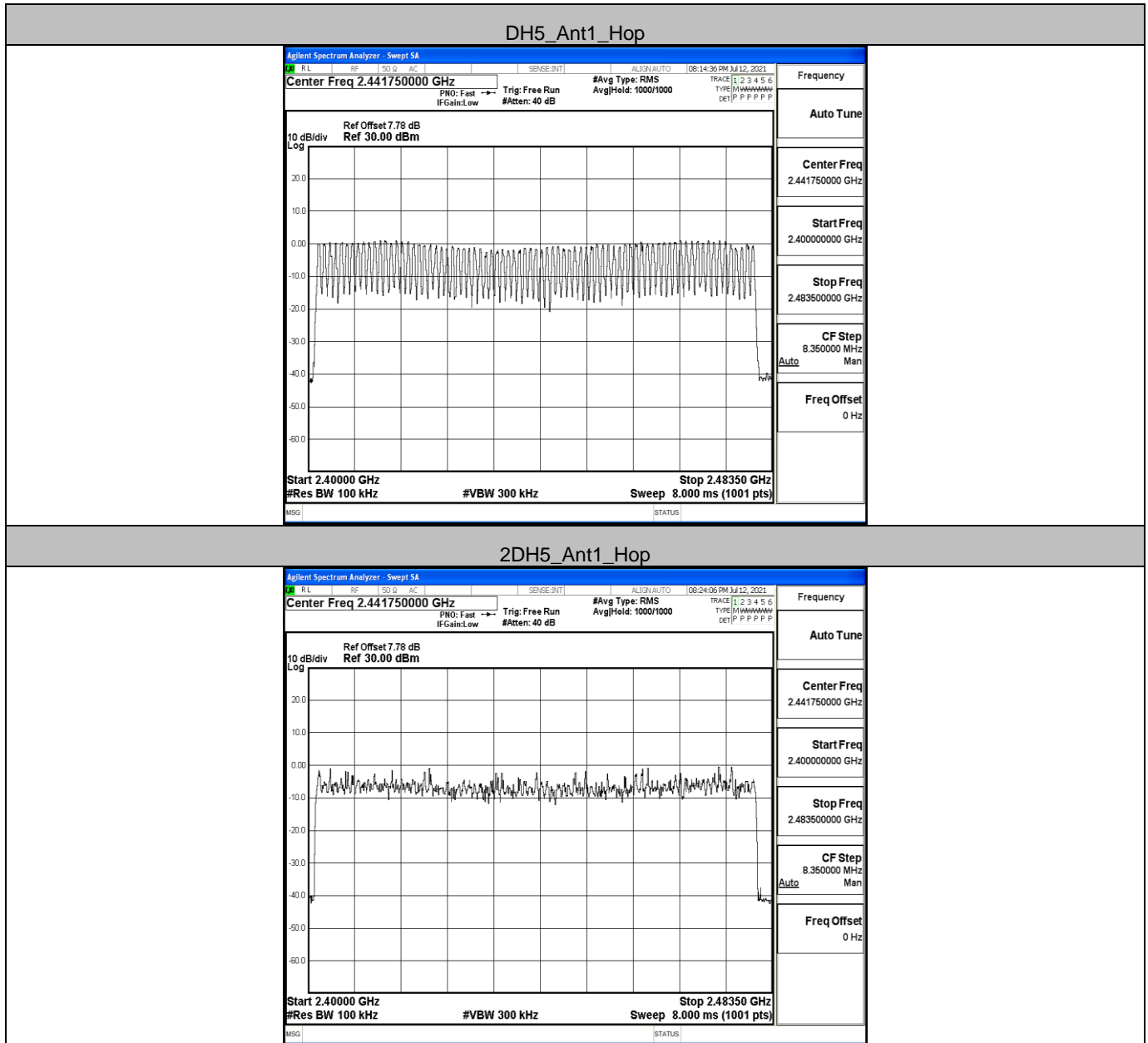


A.4 Hopping Channel Number

Test Result

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

Test Graphs

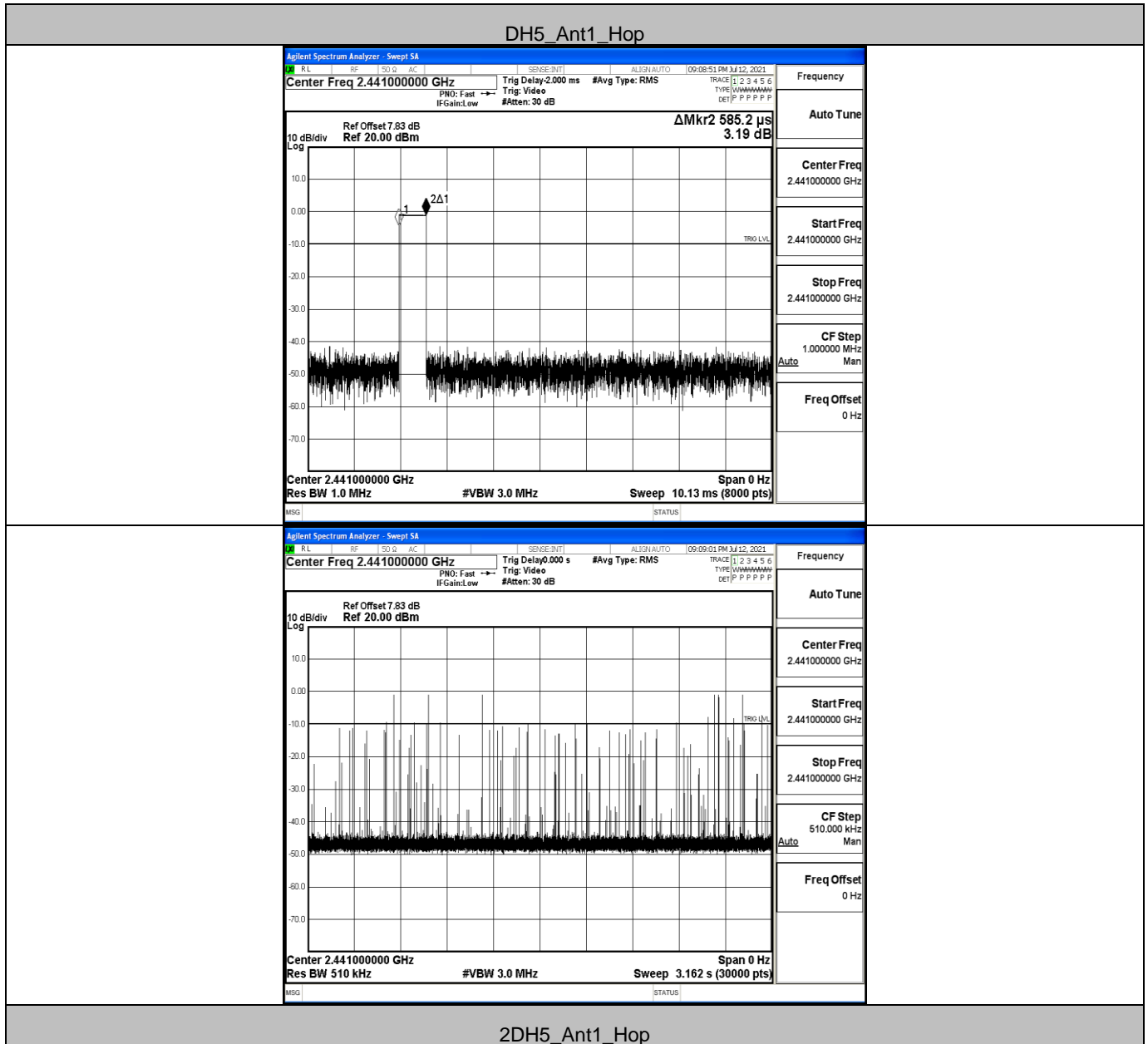


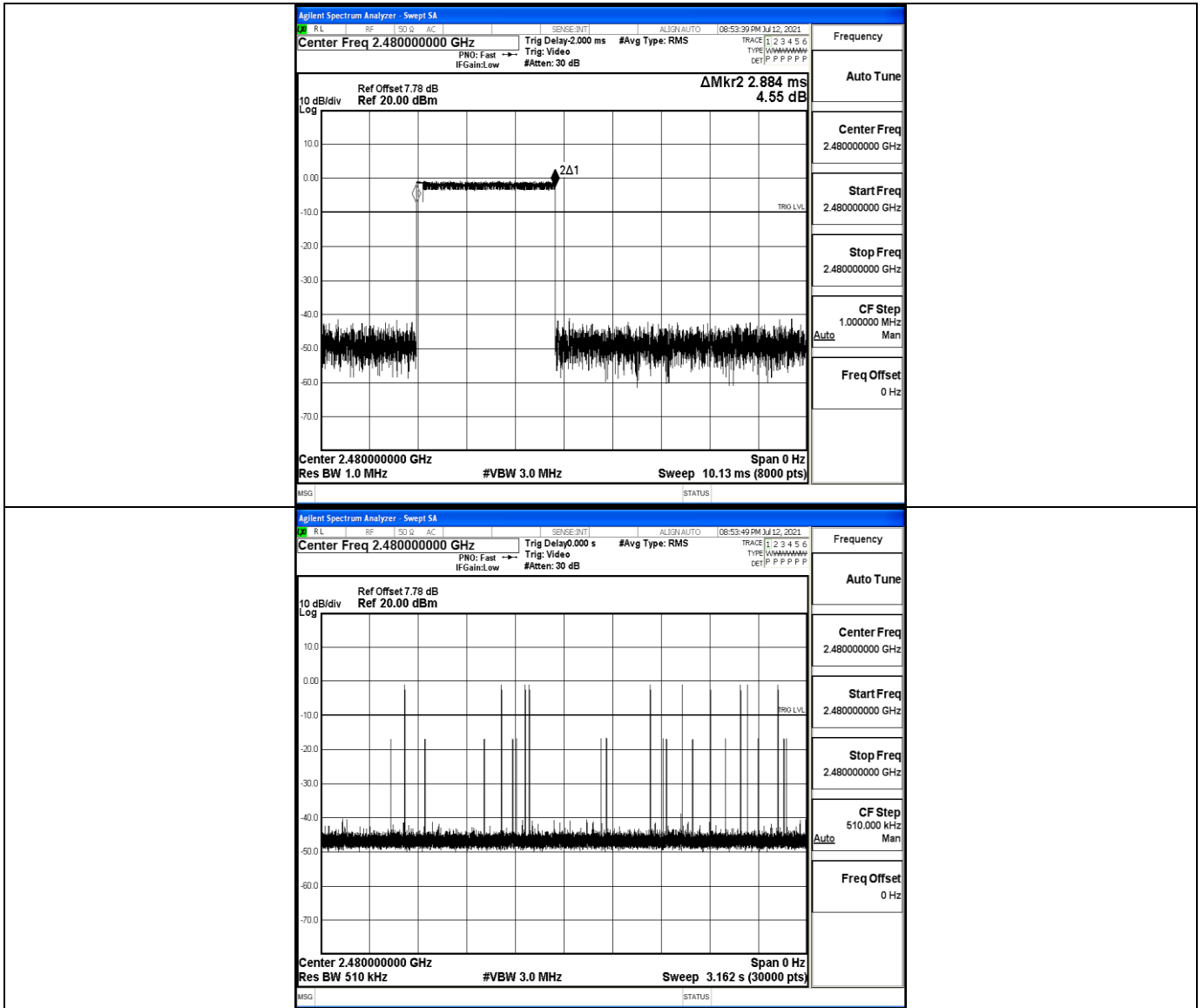


A.5 Dwell Time

| TestMode | Antenna | Channel | BurstWidth [ms] | TotalHops [Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|---------|--------------------|--------------------|-----------|----------|---------|
| DH5 | Ant1 | Hop | 0.59 | 70 | 0.041 | ≤0.4 | PASS |
| 2DH5 | Ant1 | Hop | 2.88 | 110 | 0.317 | ≤0.4 | PASS |

Test Graphs







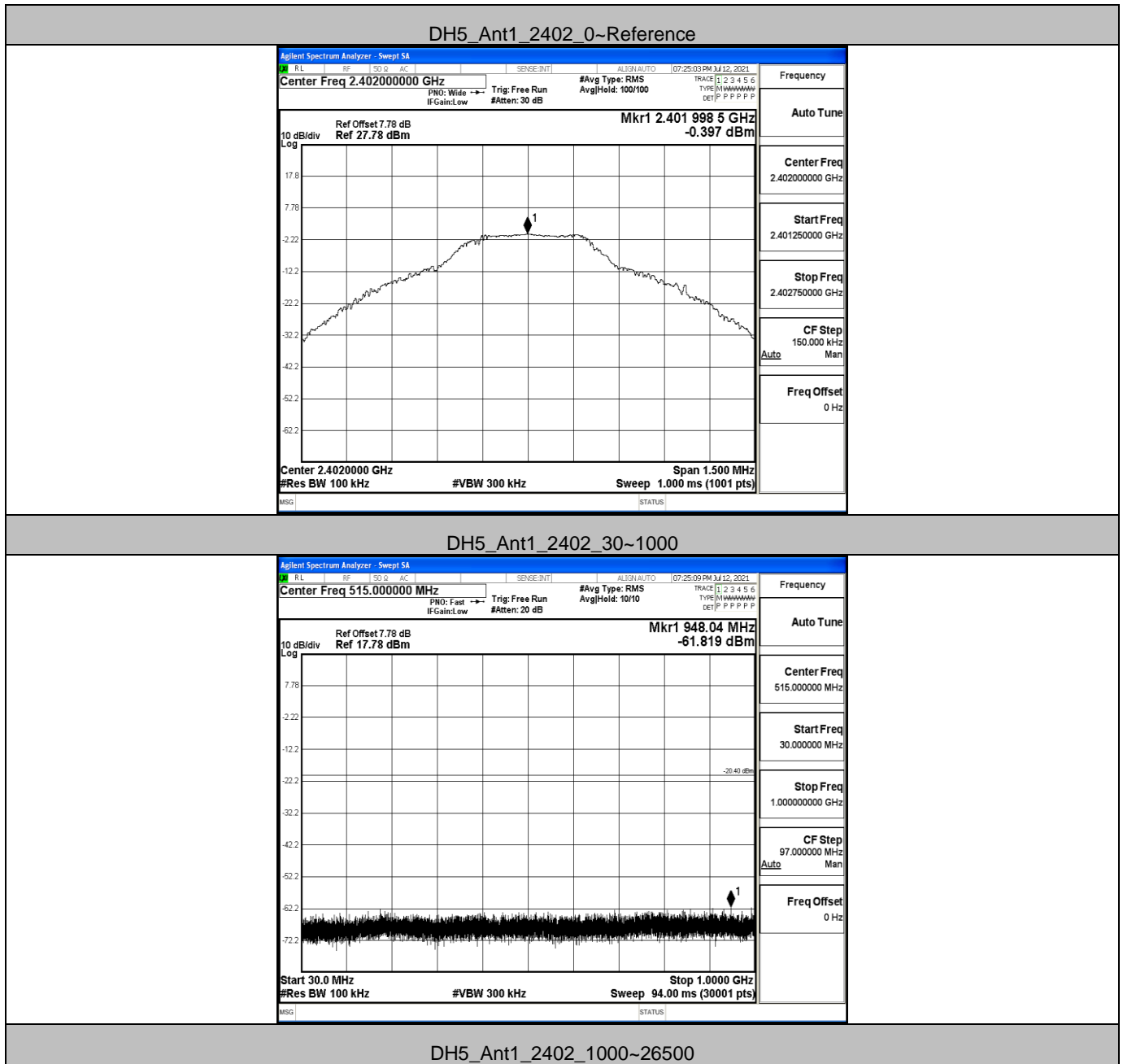
A.6 RF Conducted Spurious Emissions

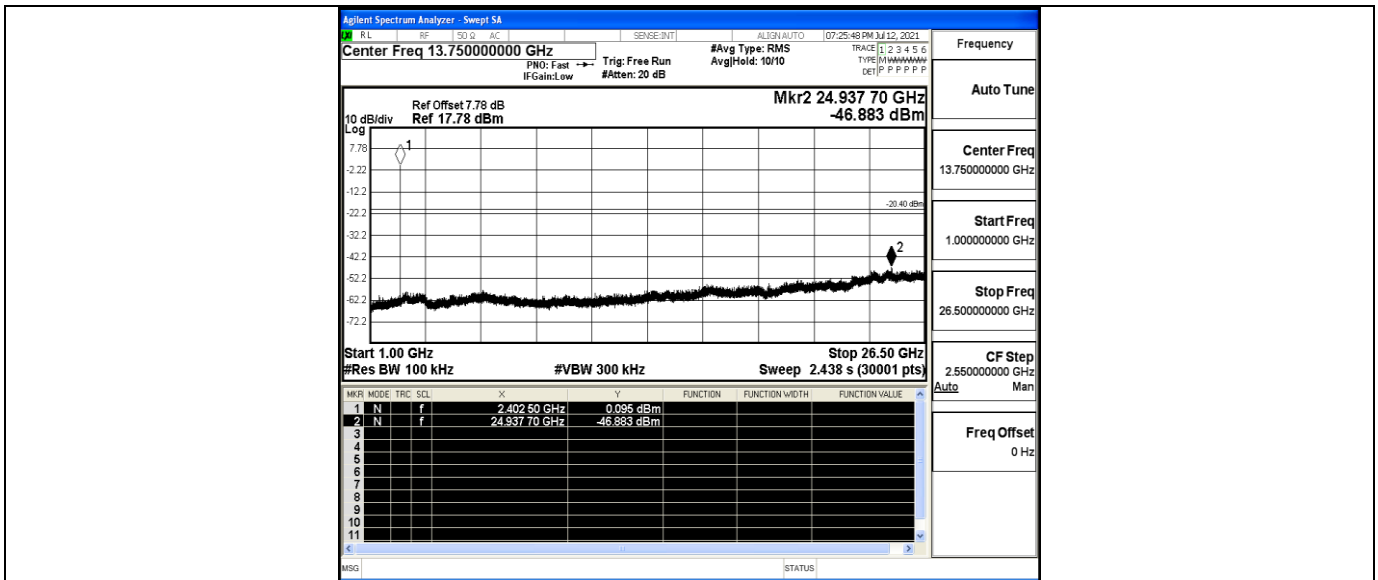
Test Result

| TestMode | Antenna | Channel | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|---------|--------------------|-------------------|-----------------|----------------|---------|
| DH5 | Ant1 | 2402 | Reference | -0.40 | -0.40 | --- | PASS |
| | | | 30~1000 | -0.40 | -61.82 | ≤ -20.4 | PASS |
| | | | 1000~26500 | -0.40 | -46.88 | ≤ -20.4 | PASS |
| | | 2441 | Reference | -1.82 | -1.82 | --- | PASS |
| | | | 30~1000 | -1.82 | -60.89 | ≤ -21.82 | PASS |
| | | | 1000~26500 | -1.82 | -46.94 | ≤ -21.82 | PASS |
| | | 2480 | Reference | -0.44 | -0.44 | --- | PASS |
| | | | 30~1000 | -0.44 | -60.82 | ≤ -20.44 | PASS |
| | | | 1000~26500 | -0.44 | -47.39 | ≤ -20.44 | PASS |
| 2DH5 | Ant1 | 2402 | Reference | -1.65 | -1.65 | --- | PASS |
| | | | 30~1000 | -1.65 | -61.43 | ≤ -21.65 | PASS |
| | | | 1000~26500 | -1.65 | -47 | ≤ -21.65 | PASS |
| | | 2441 | Reference | -2.25 | -2.25 | --- | PASS |
| | | | 30~1000 | -2.25 | -60.69 | ≤ -22.25 | PASS |
| | | | 1000~26500 | -2.25 | -47.09 | ≤ -22.25 | PASS |
| | | 2480 | Reference | -1.29 | -1.29 | --- | PASS |
| | | | 30~1000 | -1.29 | -62.1 | ≤ -21.29 | PASS |
| | | | 1000~26500 | -1.29 | -47.51 | ≤ -21.29 | PASS |

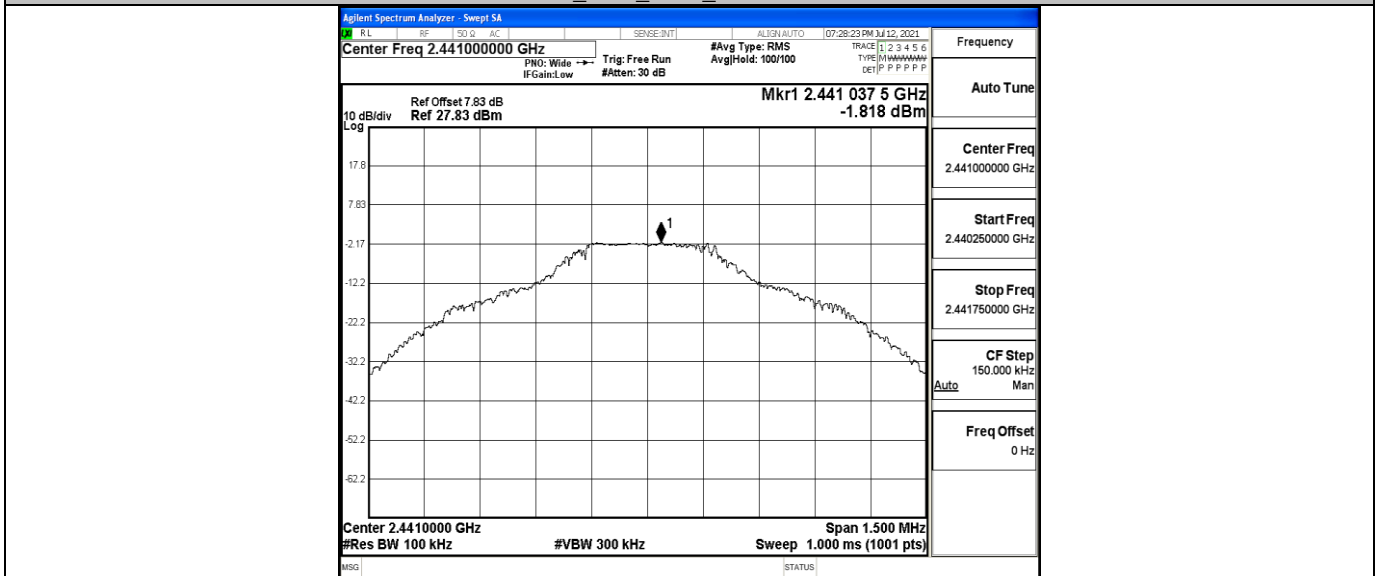


Test Graphs

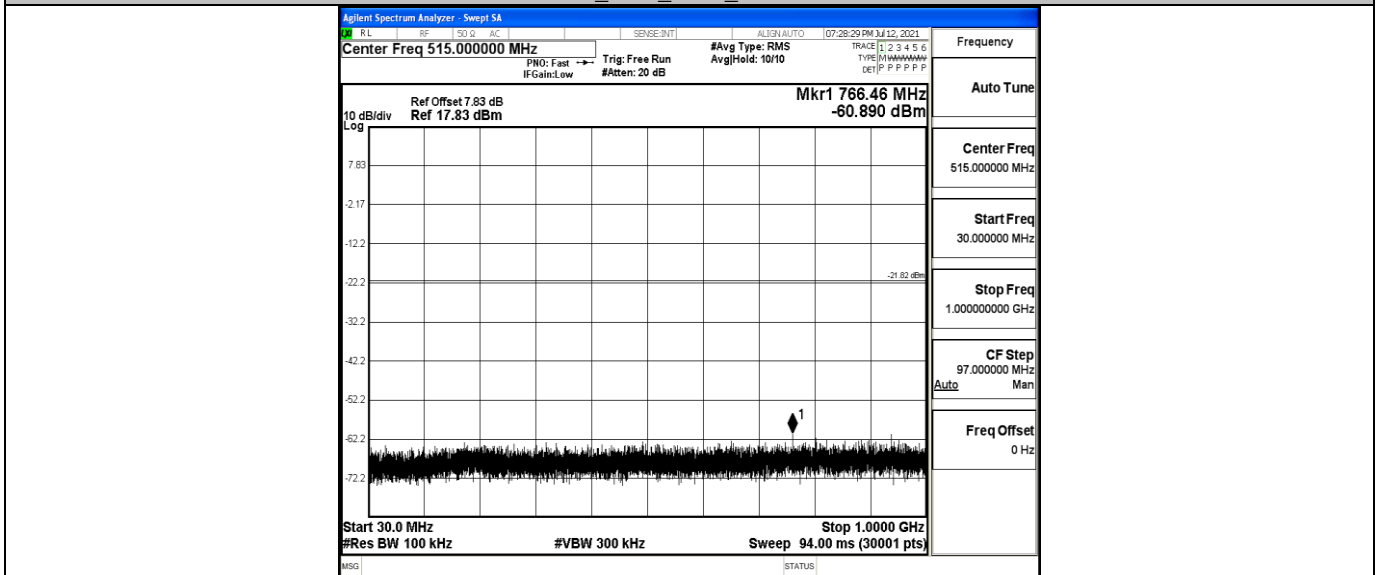




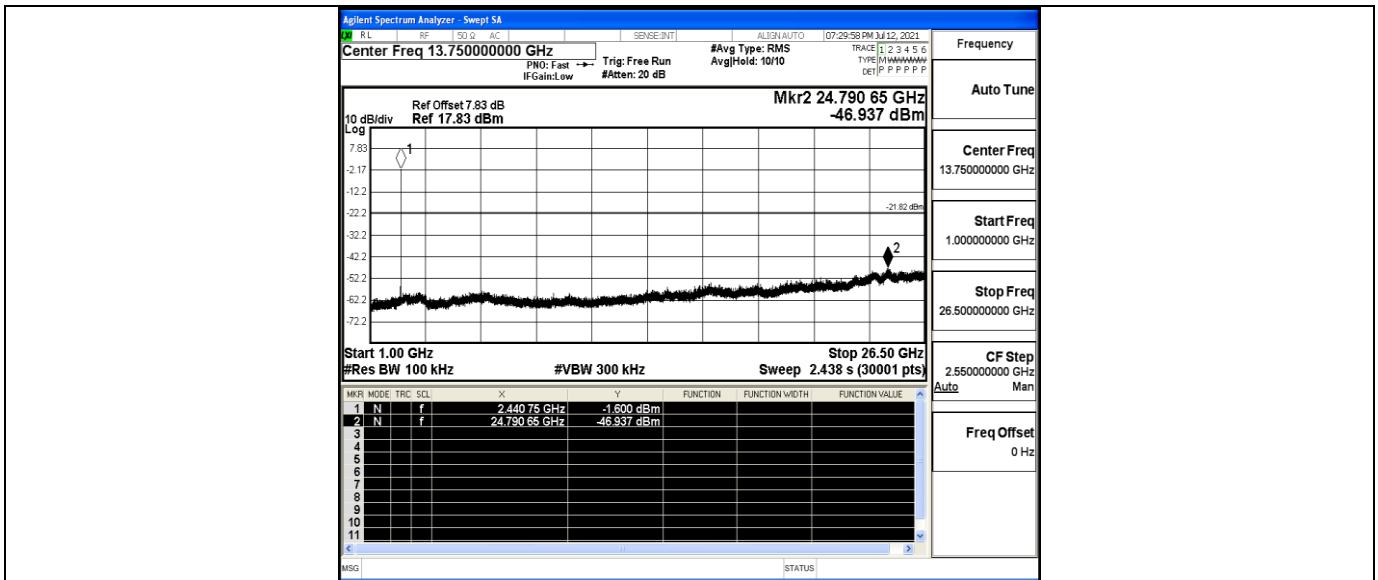
DH5_Ant1_2441_0~Reference



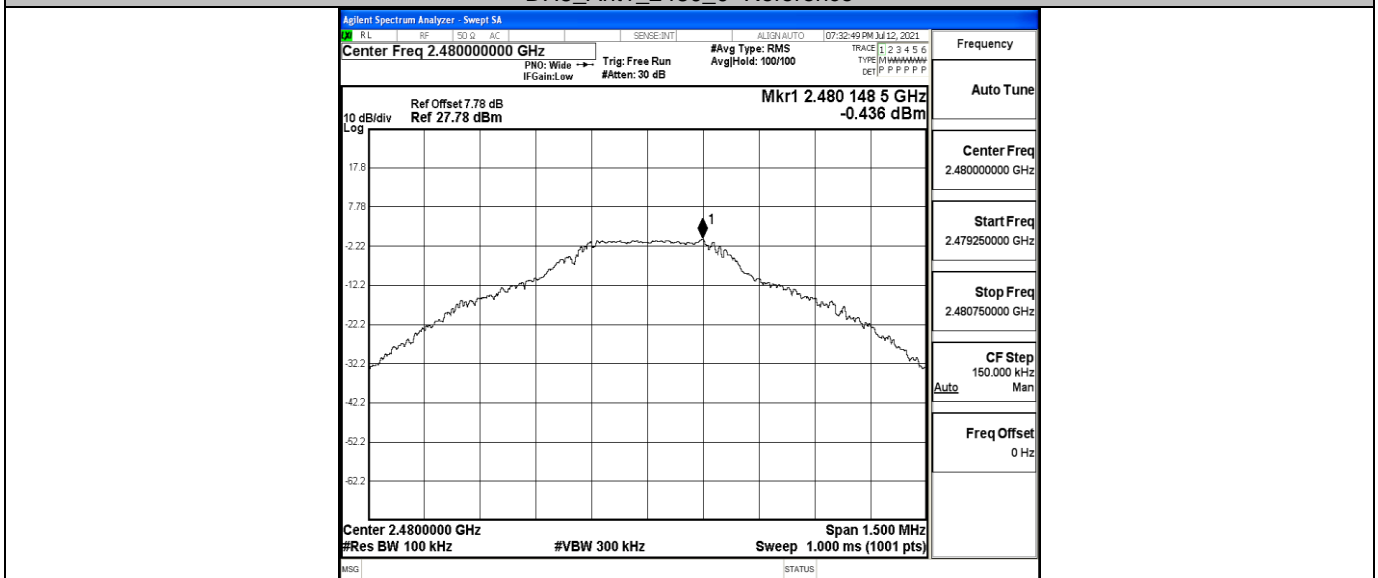
DH5_Ant1_2441_30~1000



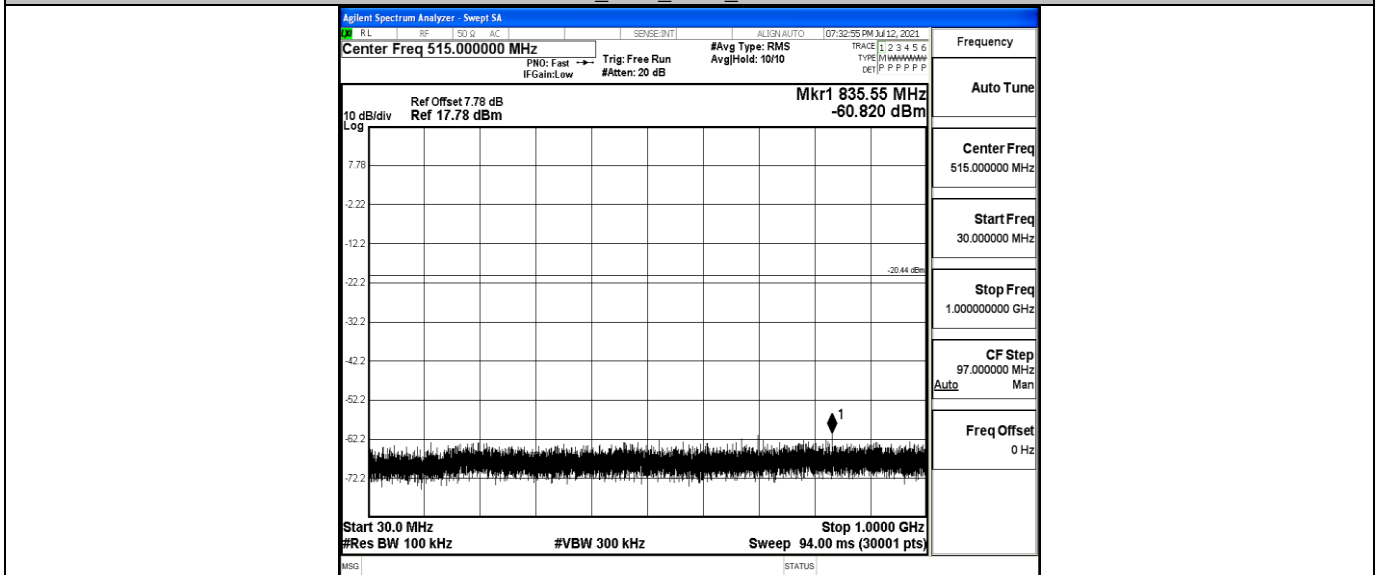
DH5_Ant1_2441_1000~26500



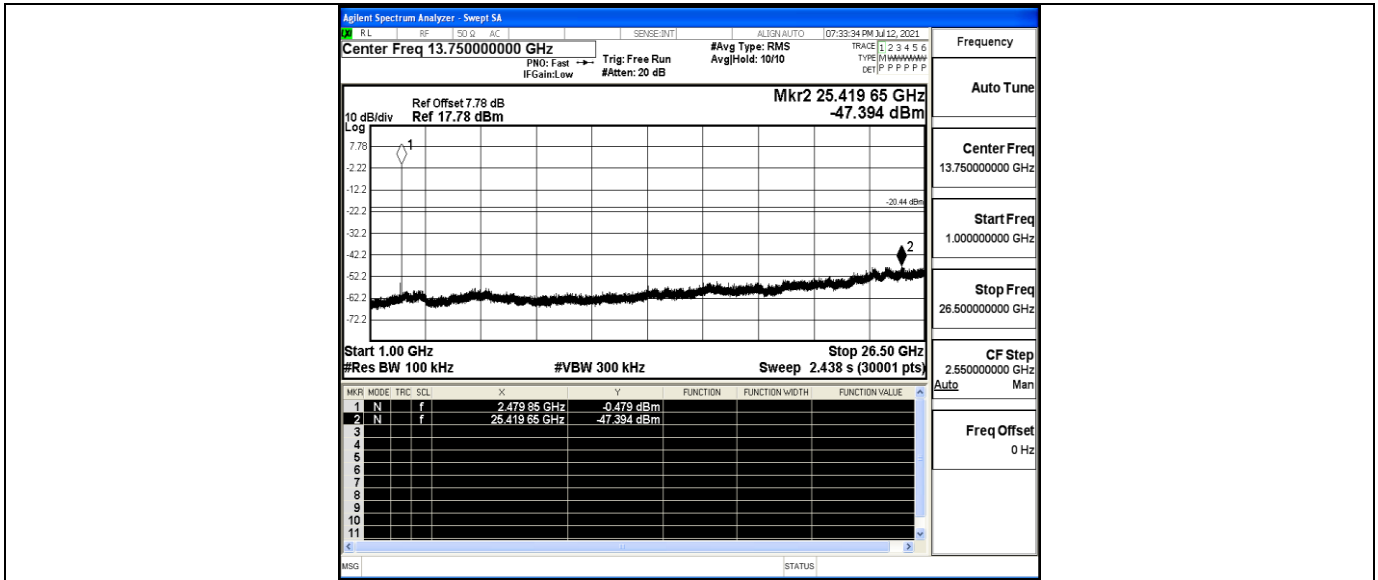
DH5_Ant1_2480_0-Reference



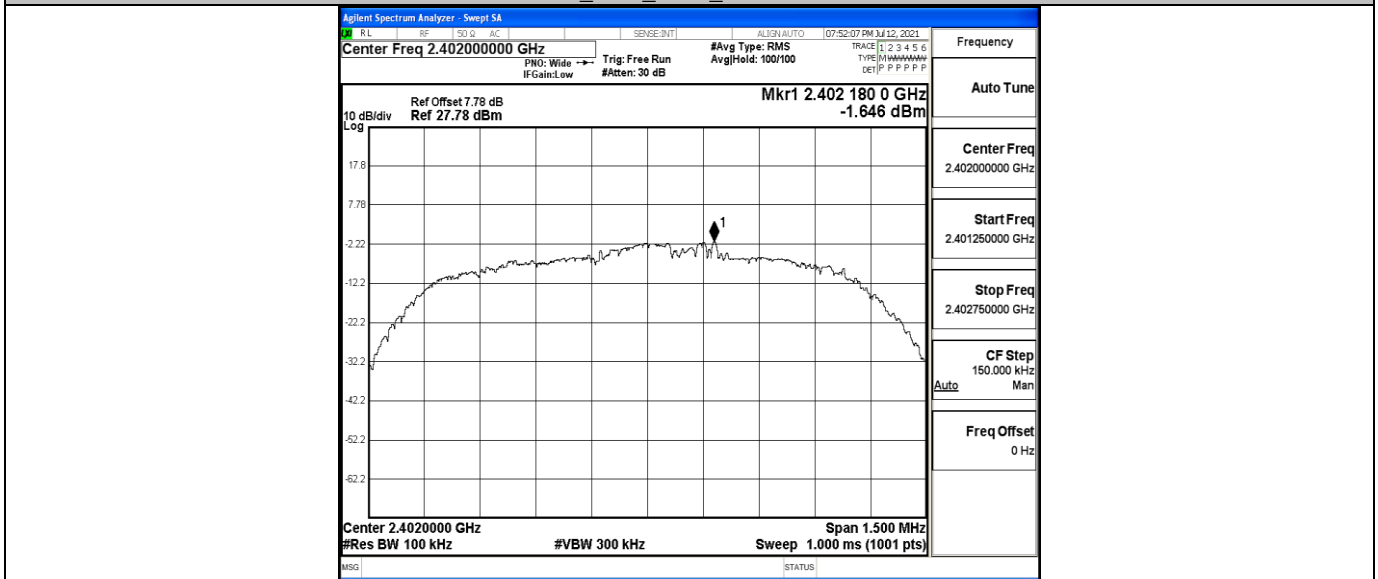
DH5_Ant1_2480_30-1000



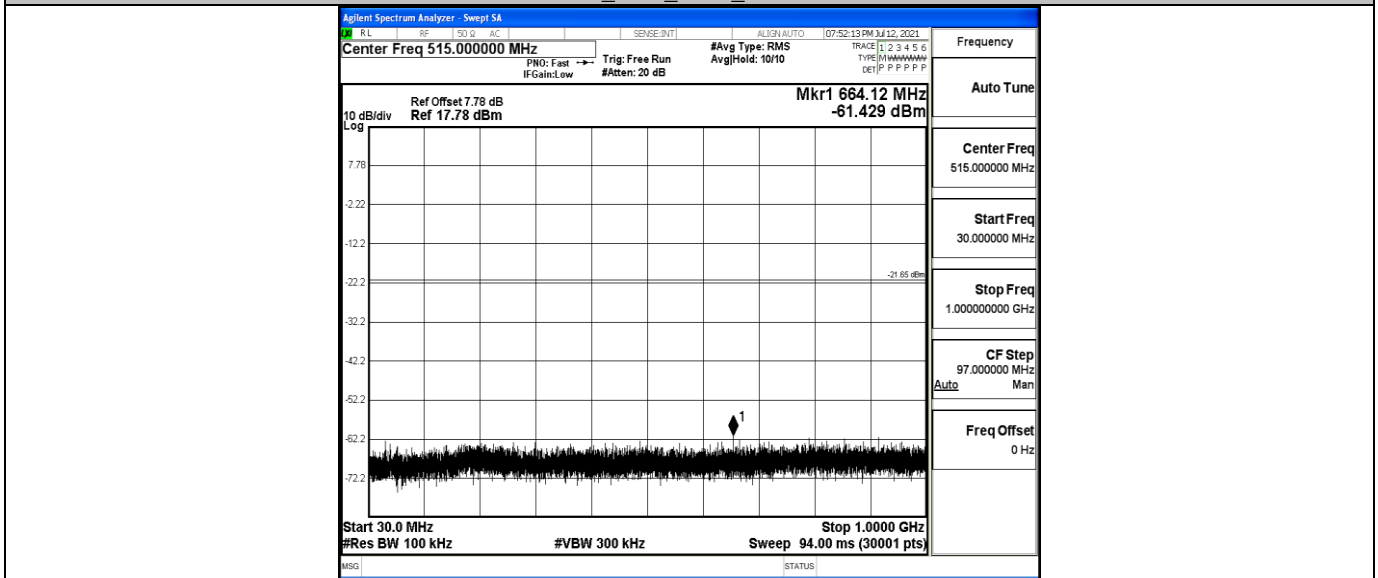
DH5_Ant1_2480_1000-26500



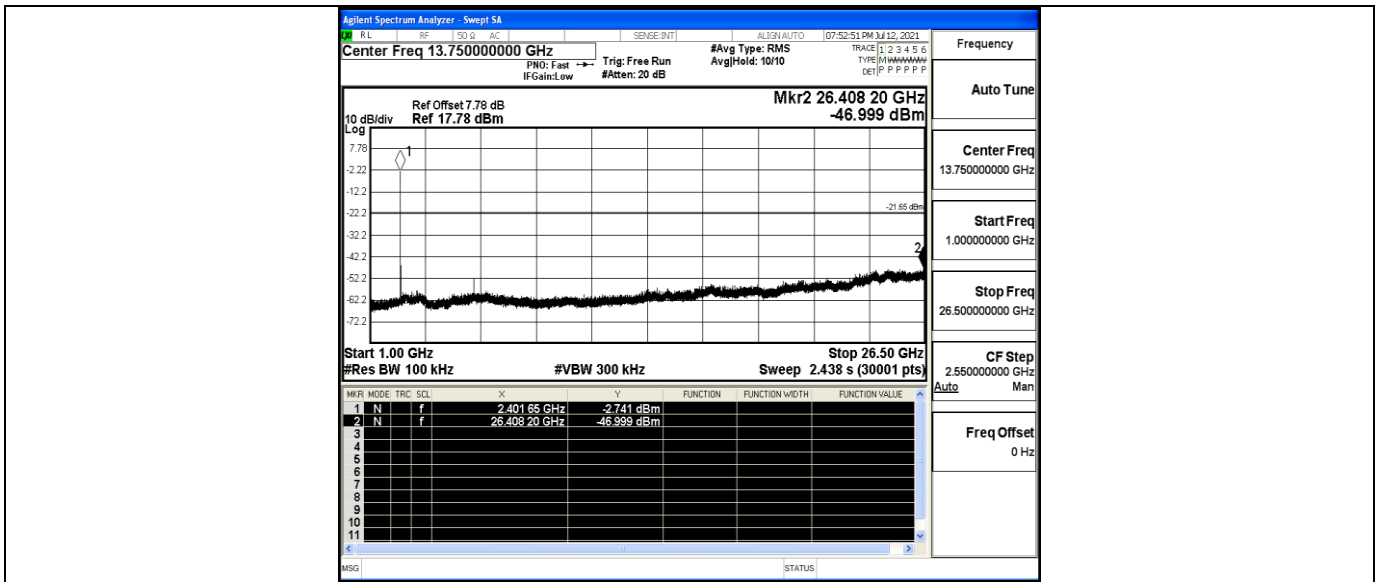
2DH5_Ant1_2402_0-Reference



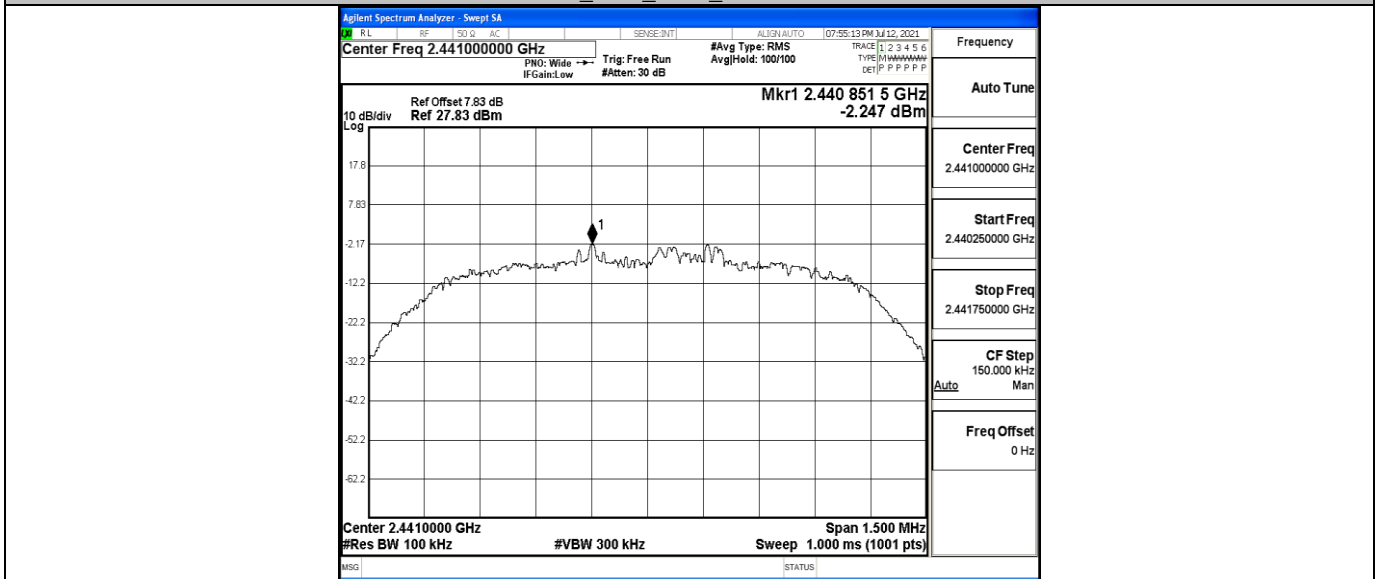
2DH5_Ant1_2402_30~1000



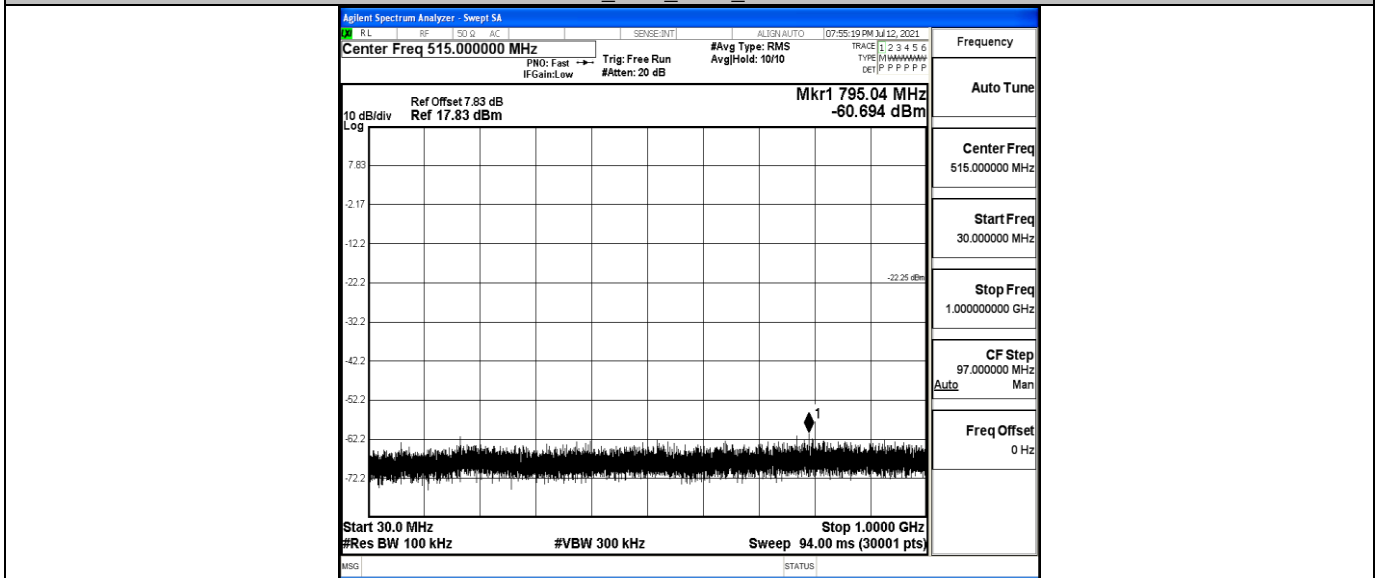
2DH5_Ant1_2402_1000~26500



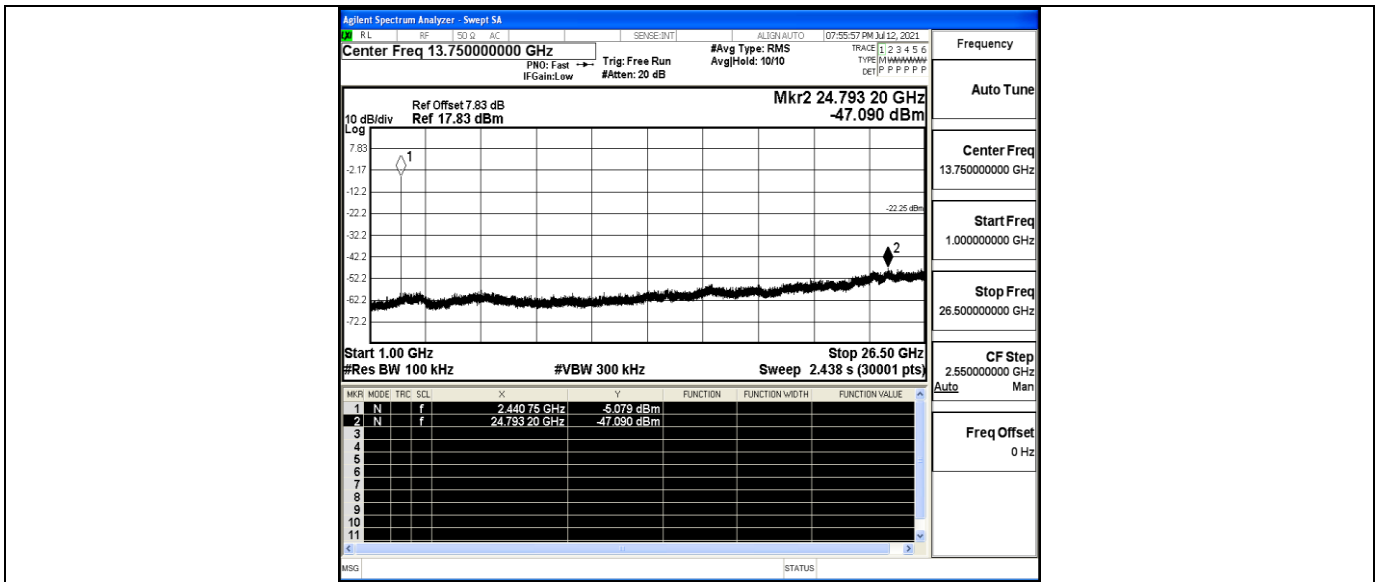
2DH5_Ant1_2441_0~Reference



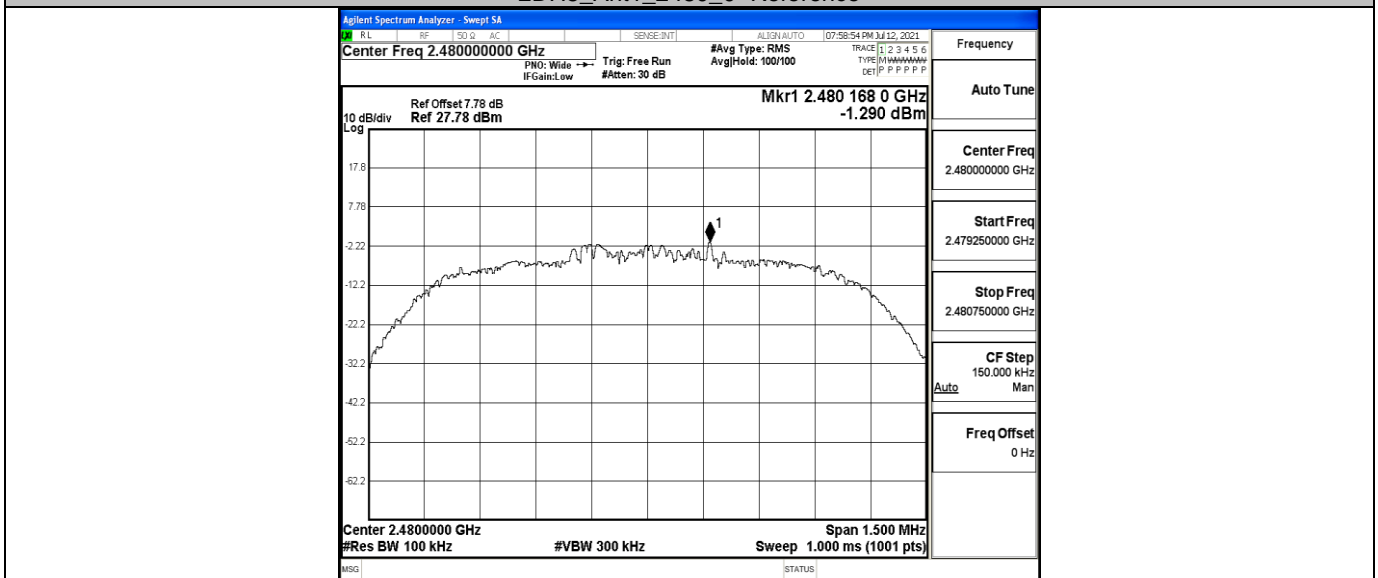
2DH5_Ant1_2441_30~1000



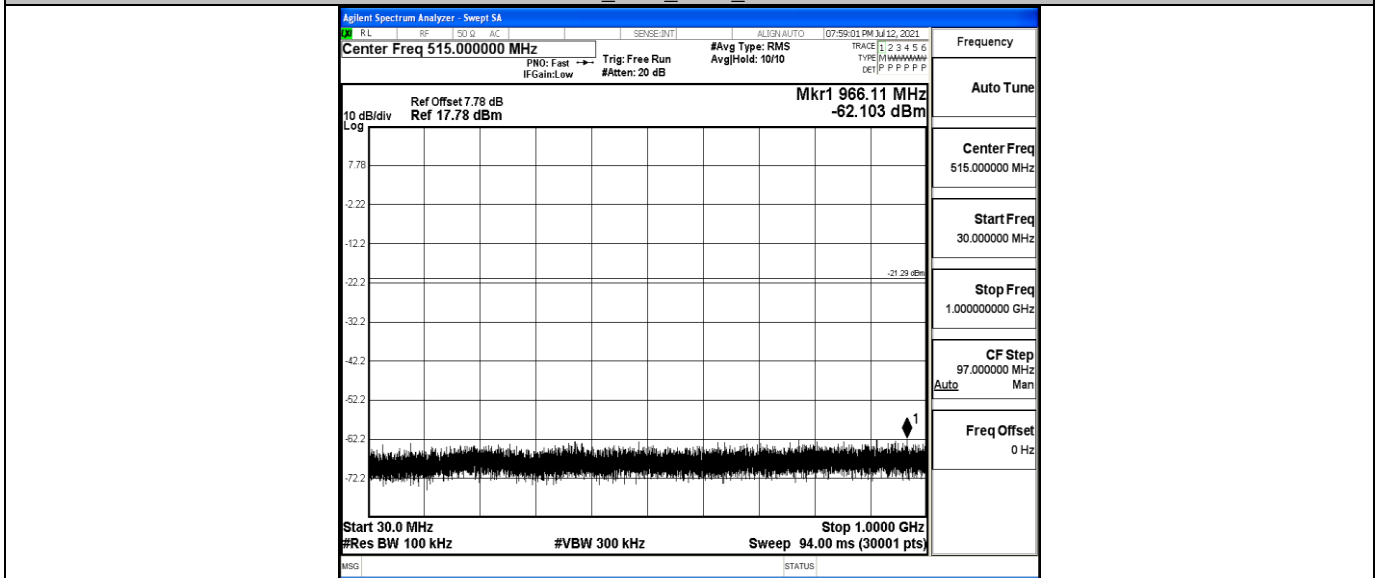
2DH5_Ant1_2441_1000~26500



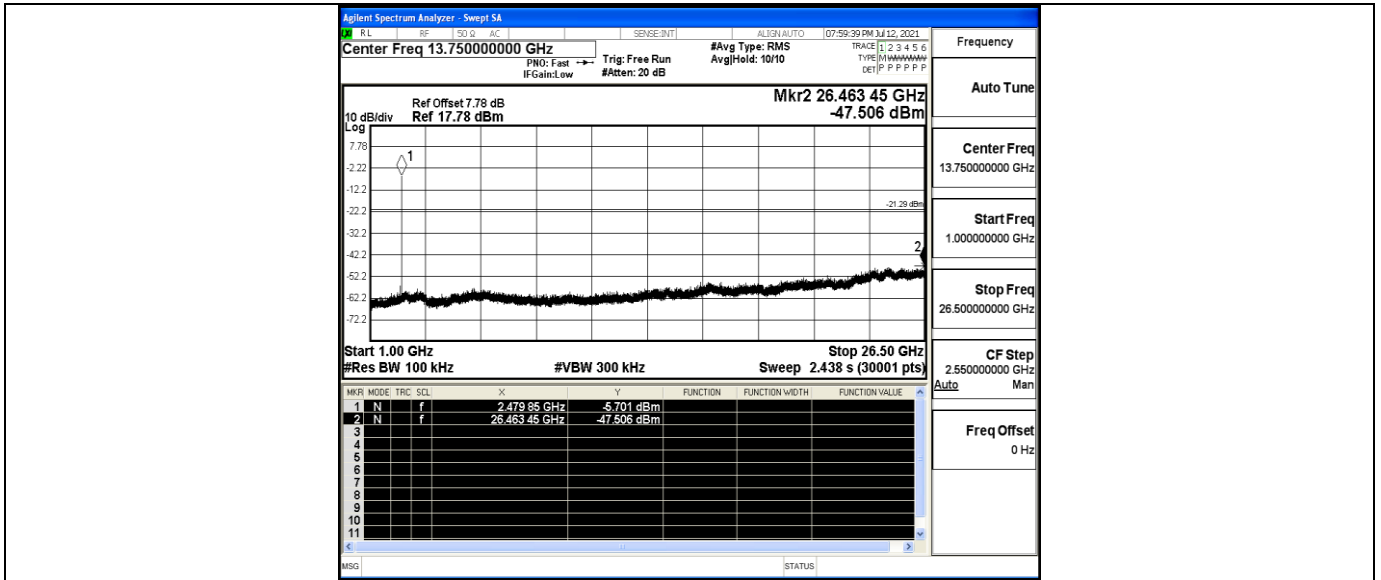
2DH5_Ant1_2480_0-Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500



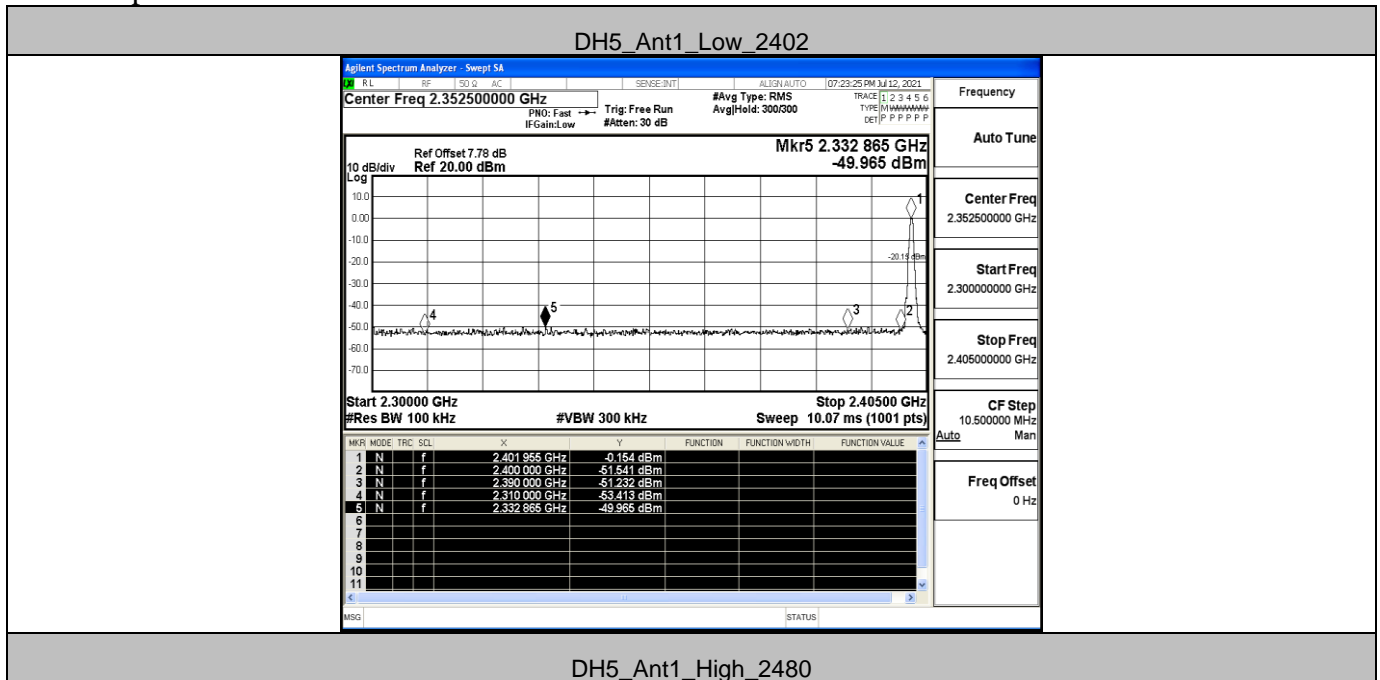


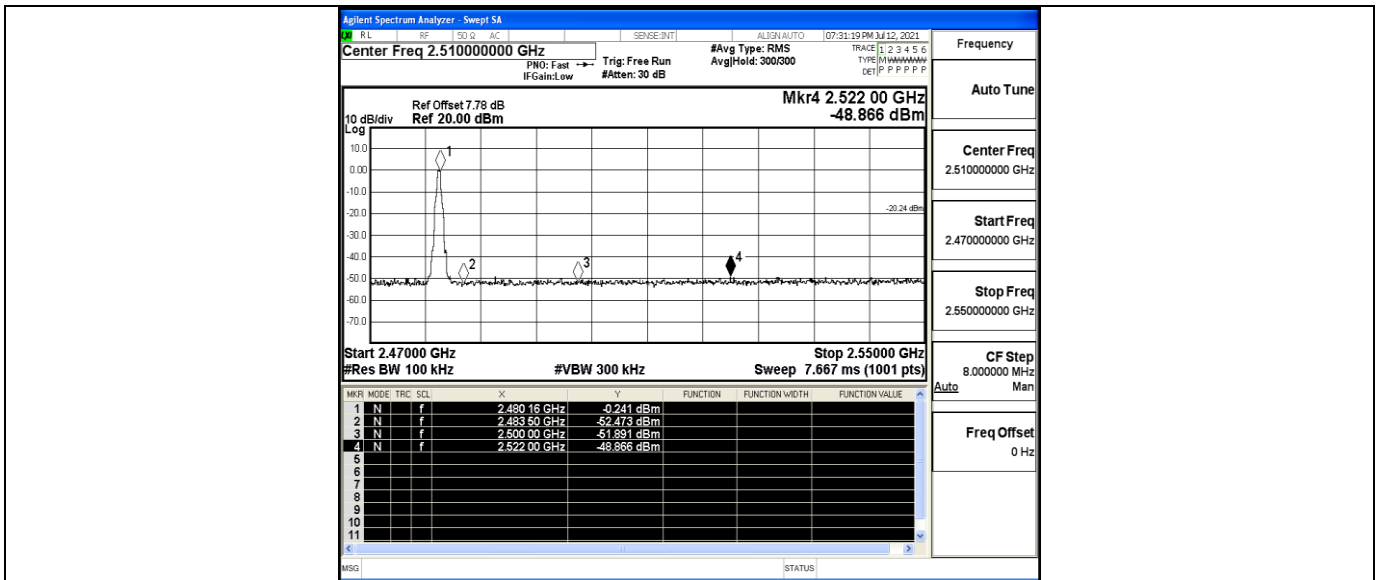
A.7 Band-edge for RF Conducted Emissions

Test Result

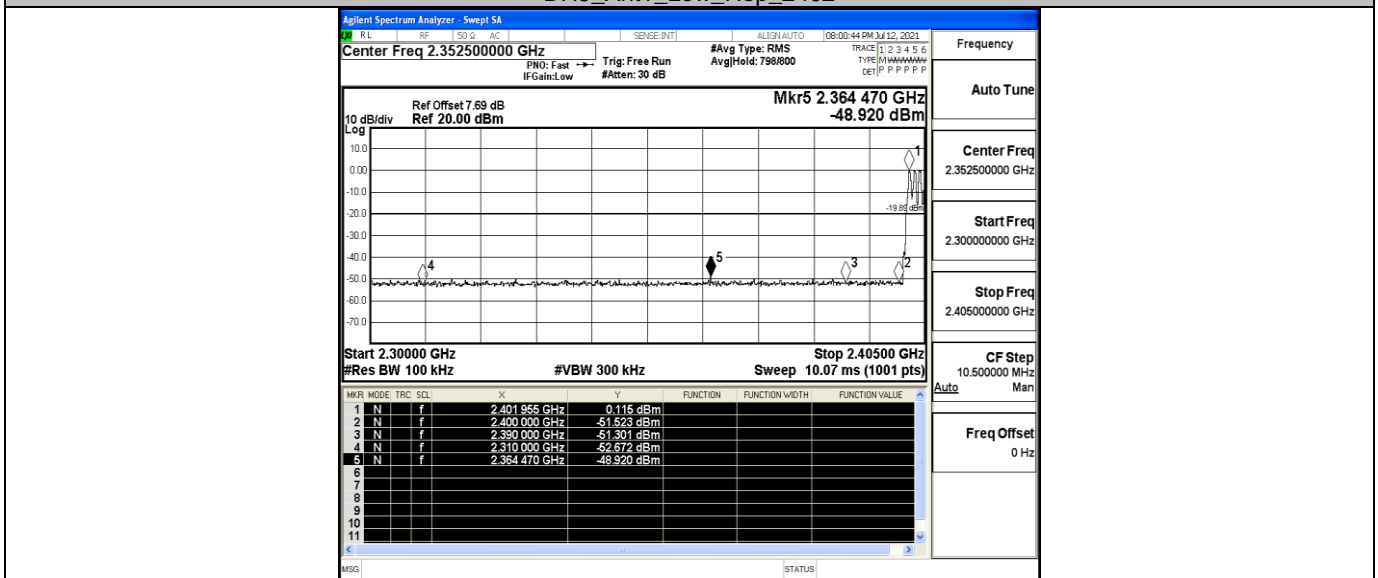
| TestMode | Antenna | ChName | Channel | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|--------|----------|----------------|--------------|-------------|---------|
| DH5 | Ant1 | Low | 2402 | -0.15 | -49.97 | ≤-20.15 | PASS |
| | | High | 2480 | -0.24 | -48.87 | ≤-20.24 | PASS |
| | | Low | Hop_2402 | 0.12 | -48.92 | ≤-19.89 | PASS |
| | | High | Hop_2480 | 1.12 | -49.26 | ≤-18.88 | PASS |
| 2DH5 | Ant1 | Low | 2402 | -1.54 | -49.3 | ≤-21.54 | PASS |
| | | High | 2480 | -1.38 | -48.75 | ≤-21.38 | PASS |
| | | Low | Hop_2402 | -2.92 | -49.62 | ≤-22.92 | PASS |
| | | High | Hop_2480 | -1.37 | -49.1 | ≤-21.37 | PASS |

Test Graphs

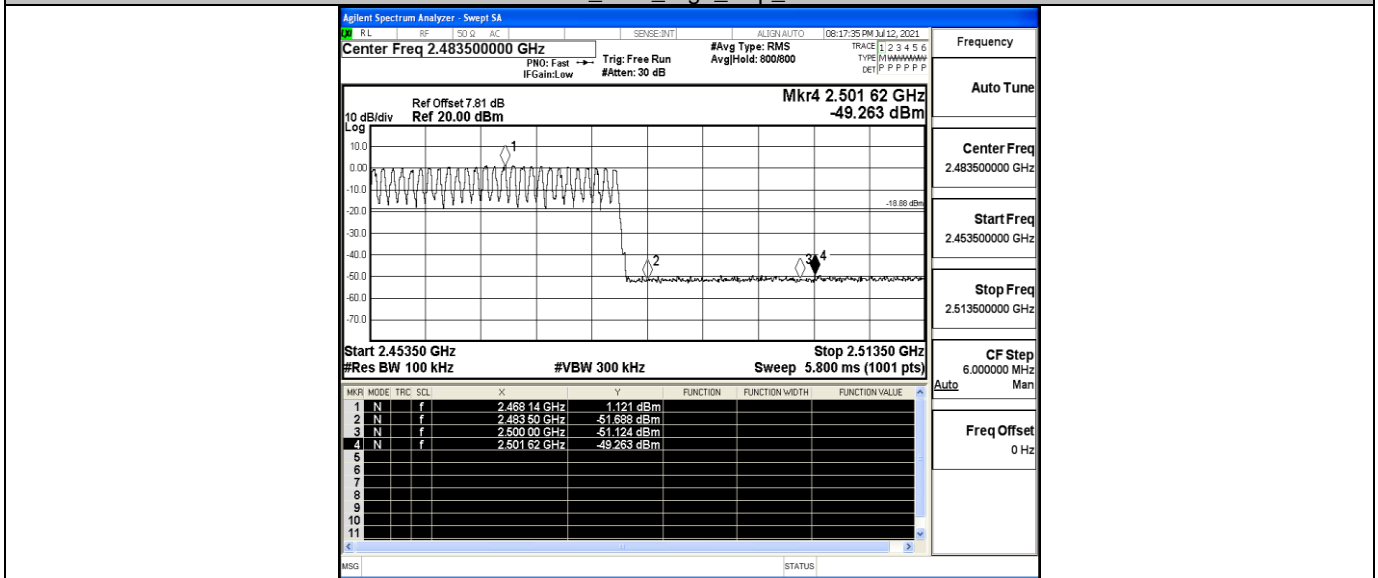




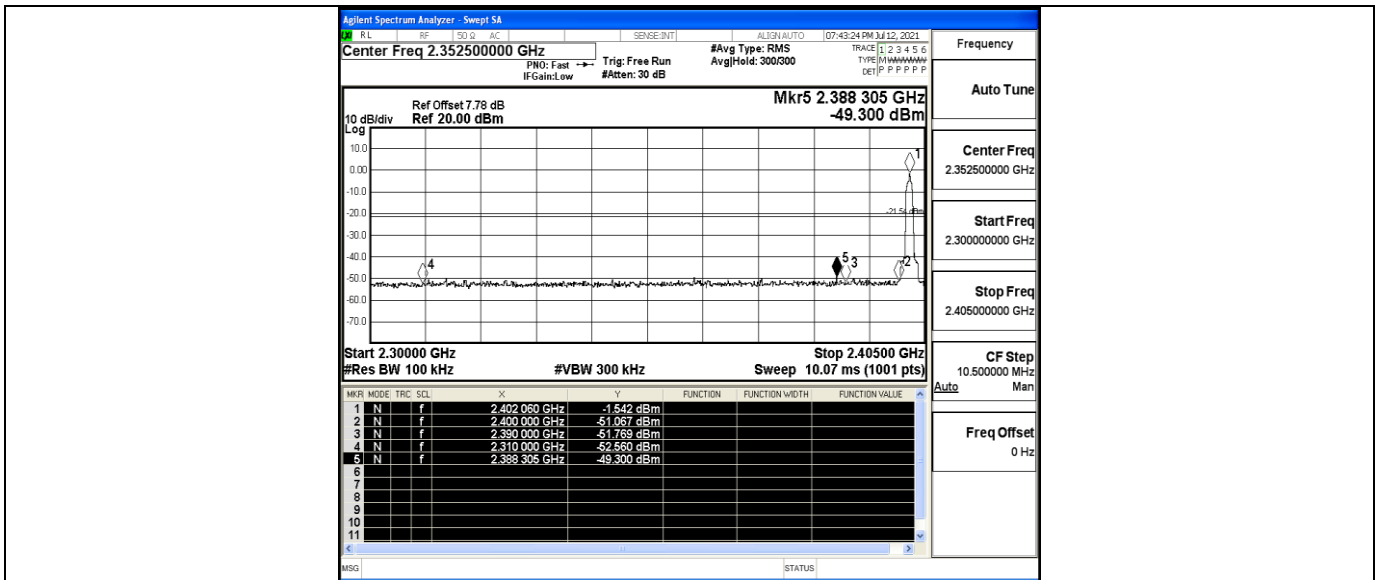
DH5_Ant1_Low_Hop_2402



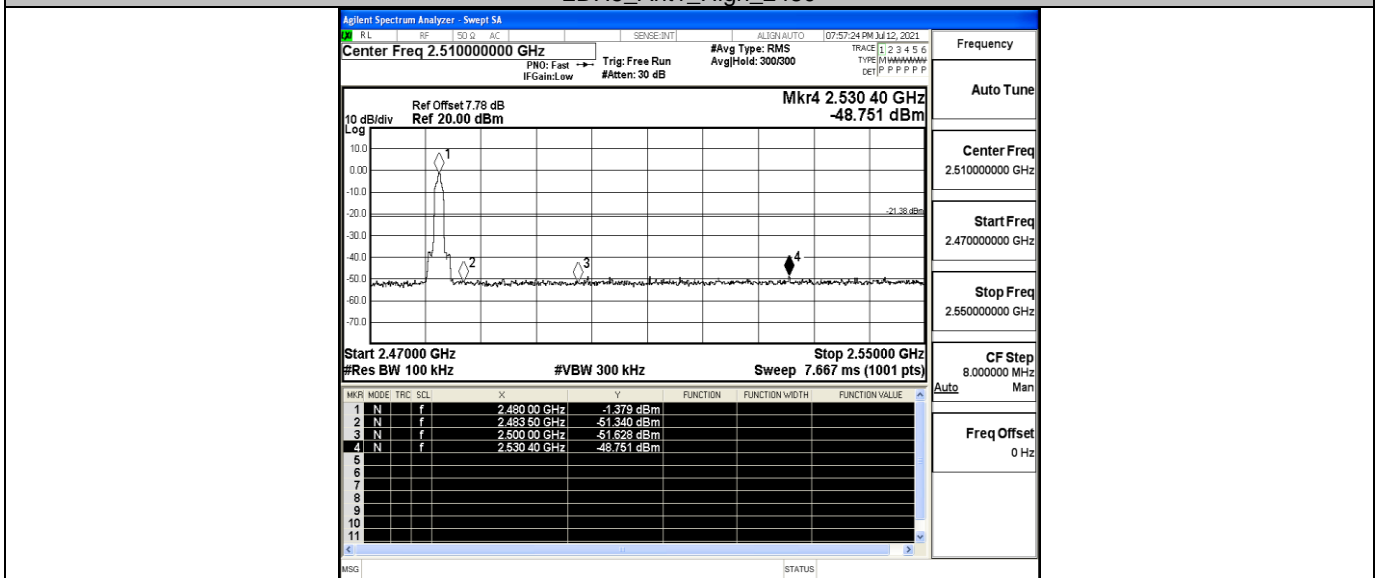
DH5_Ant1_High_Hop_2480



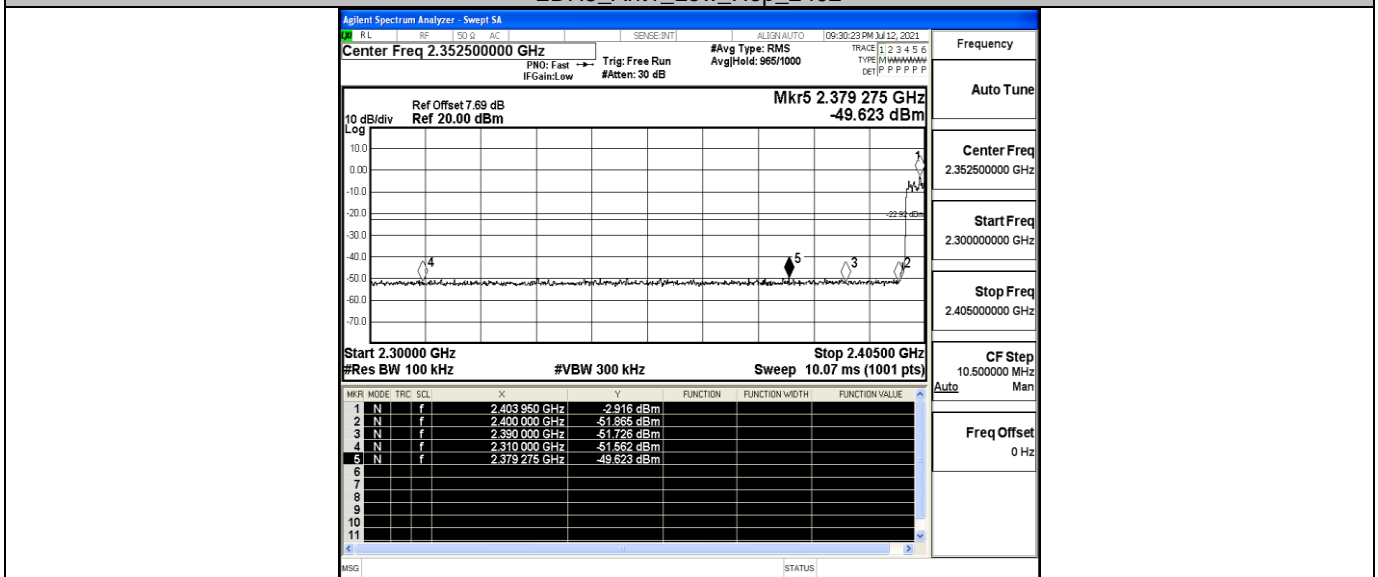
2DH5_Ant1_Low_2402



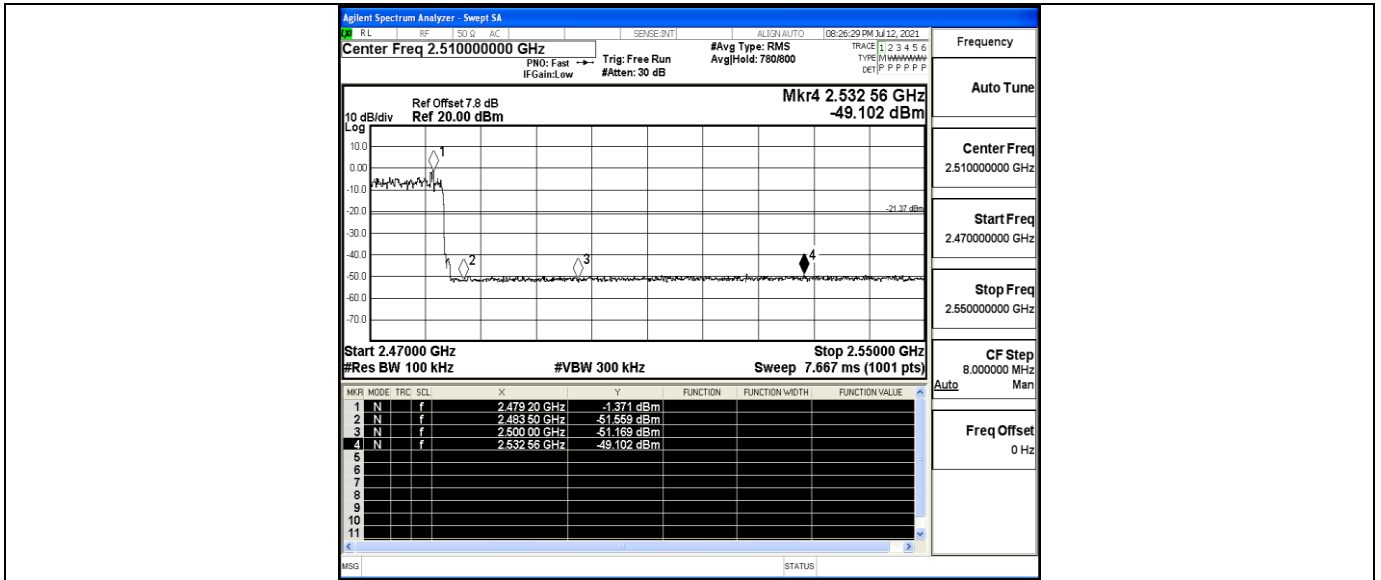
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480





A.8 Restrict-band band-edge measurements

Test Result

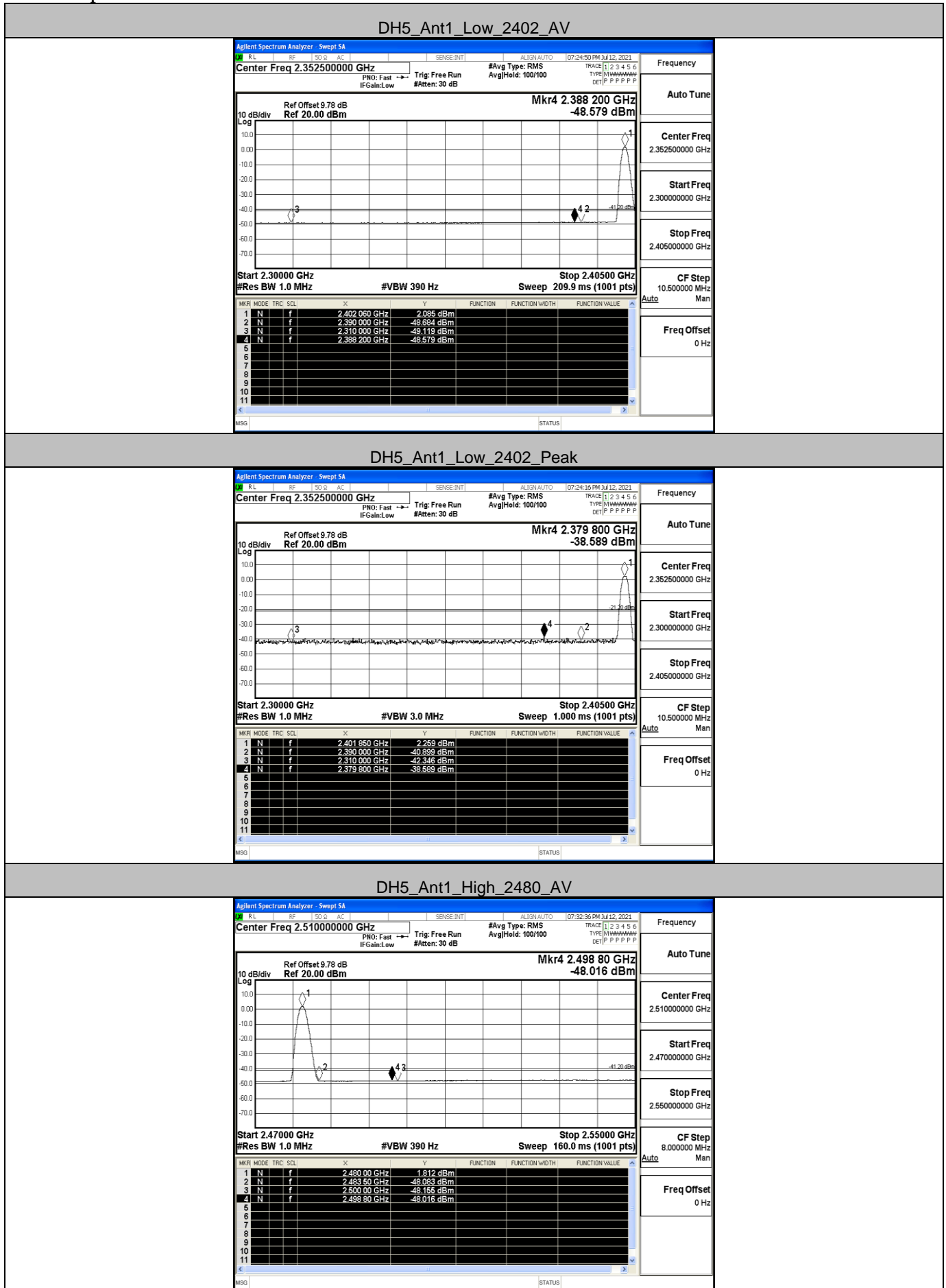
| TestMode | Antenna | ChName | Channel | Detector | Freq | Result | Limit | Verdict |
|----------|---------|--------|----------|----------|----------|--------|---------|---------|
| DH5 | Ant1 | Low | 2402 | AV | 2310.000 | -49.12 | ≤-41.20 | PASS |
| | | | | AV | 2388.200 | -48.58 | ≤-41.20 | PASS |
| | | | | AV | 2390.000 | -48.68 | ≤-41.20 | PASS |
| | | | | Peak | 2310.000 | -42.35 | ≤-21.20 | PASS |
| | | | | Peak | 2379.800 | -38.59 | ≤-21.20 | PASS |
| | | | | Peak | 2390.000 | -40.9 | ≤-21.20 | PASS |
| | | High | 2480 | AV | 2483.500 | -48.08 | ≤-41.20 | PASS |
| | | | | AV | 2498.800 | -48.02 | ≤-41.20 | PASS |
| | | | | AV | 2500.000 | -48.16 | ≤-41.20 | PASS |
| | | | | Peak | 2483.500 | -40.87 | ≤-21.20 | PASS |
| | | | | Peak | 2499.120 | -37.74 | ≤-21.20 | PASS |
| | | | | Peak | 2500.000 | -41.4 | ≤-21.20 | PASS |
| | | Low | Hop_2402 | Peak | 2310.000 | -40.72 | ≤-21.20 | PASS |
| | | | | Peak | 2315.225 | -38.09 | ≤-21.20 | PASS |
| | | | | Peak | 2390.000 | -41.4 | ≤-21.20 | PASS |
| | | High | Hop_2480 | Peak | 2483.500 | -39.57 | ≤-21.20 | PASS |
| | | | | Peak | 2499.840 | -37.69 | ≤-21.20 | PASS |
| | | | | Peak | 2500.000 | -40.37 | ≤-21.20 | PASS |
| 2DH5 | Ant1 | Low | 2402 | AV | 2310.000 | -49.11 | ≤-41.20 | PASS |
| | | | | AV | 2386.625 | -48.47 | ≤-41.20 | PASS |
| | | | | AV | 2390.000 | -48.73 | ≤-41.20 | PASS |
| | | | | Peak | 2310.000 | -42.32 | ≤-21.20 | PASS |
| | | | | Peak | 2376.545 | -37.56 | ≤-21.20 | PASS |
| | | | | Peak | 2390.000 | -42.55 | ≤-21.20 | PASS |
| | | High | 2480 | AV | 2483.500 | -48.1 | ≤-41.20 | PASS |
| | | | | AV | 2497.600 | -48.03 | ≤-41.20 | PASS |
| | | | | AV | 2500.000 | -48.2 | ≤-41.20 | PASS |
| | | | | Peak | 2483.500 | -40.67 | ≤-21.20 | PASS |
| | | | | Peak | 2499.200 | -38.44 | ≤-21.20 | PASS |
| | | | | Peak | 2500.000 | -40.4 | ≤-21.20 | PASS |
| | | Low | Hop_2402 | Peak | 2310.000 | -40.96 | ≤-21.20 | PASS |
| | | | | Peak | 2325.095 | -38.75 | ≤-21.20 | PASS |
| | | | | Peak | 2390.000 | -40.35 | ≤-21.20 | PASS |
| | | High | Hop_2480 | Peak | 2483.500 | -40.83 | ≤-21.20 | PASS |
| | | | | Peak | 2486.400 | -37.69 | ≤-21.20 | PASS |
| | | | | Peak | 2500.000 | -39.82 | ≤-21.20 | PASS |

Note :

1. The Antenna Gain is compensated in the graph.
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.

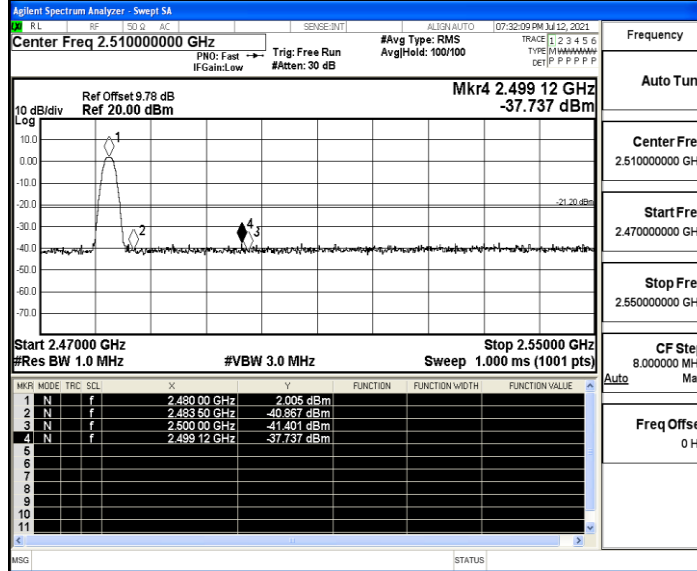


Test Graphs

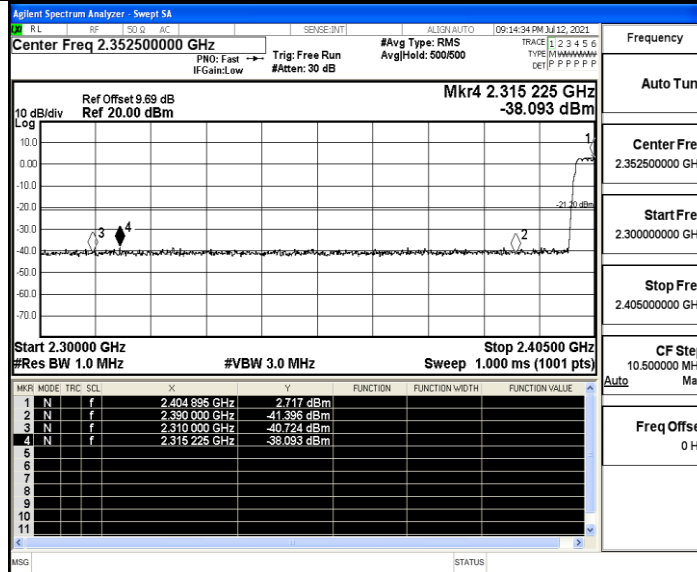




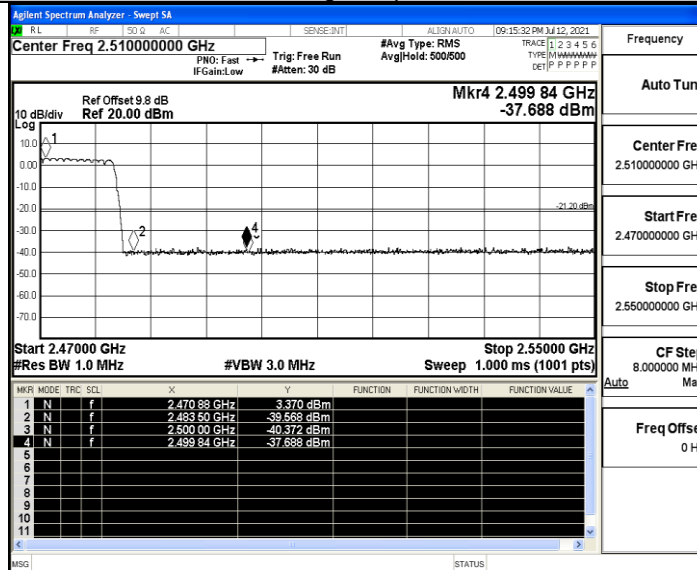
DH5_Ant1_High_2480_Peak



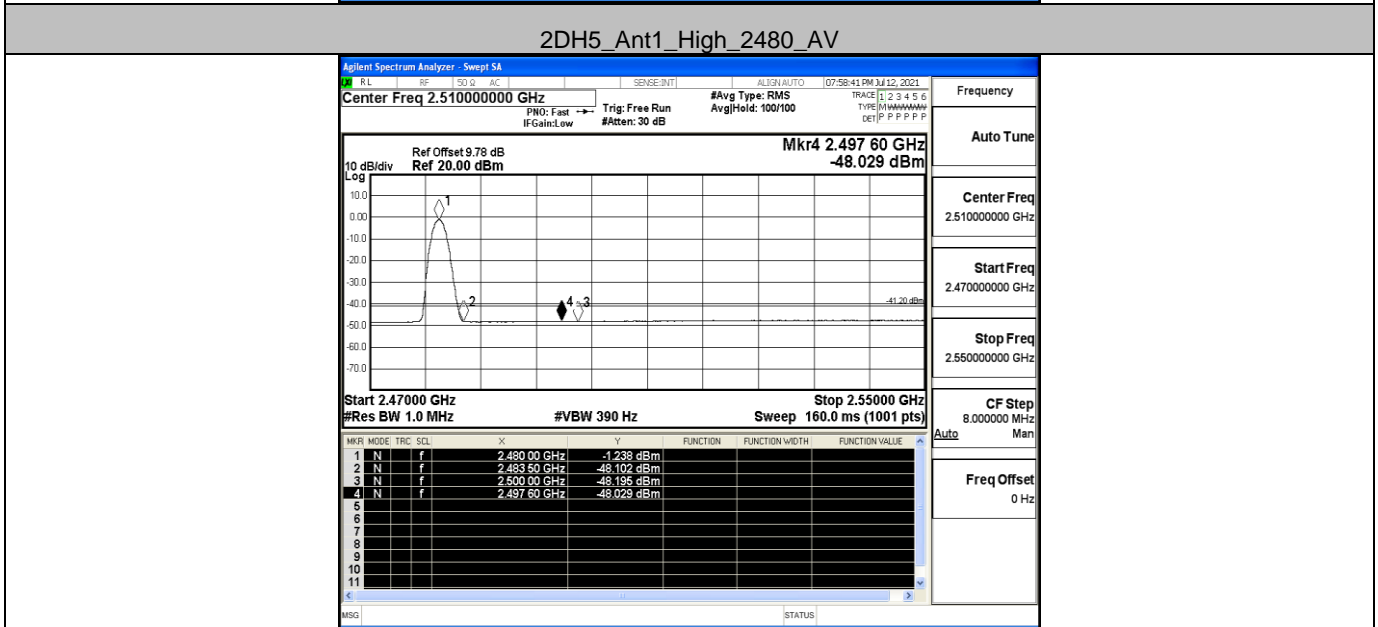
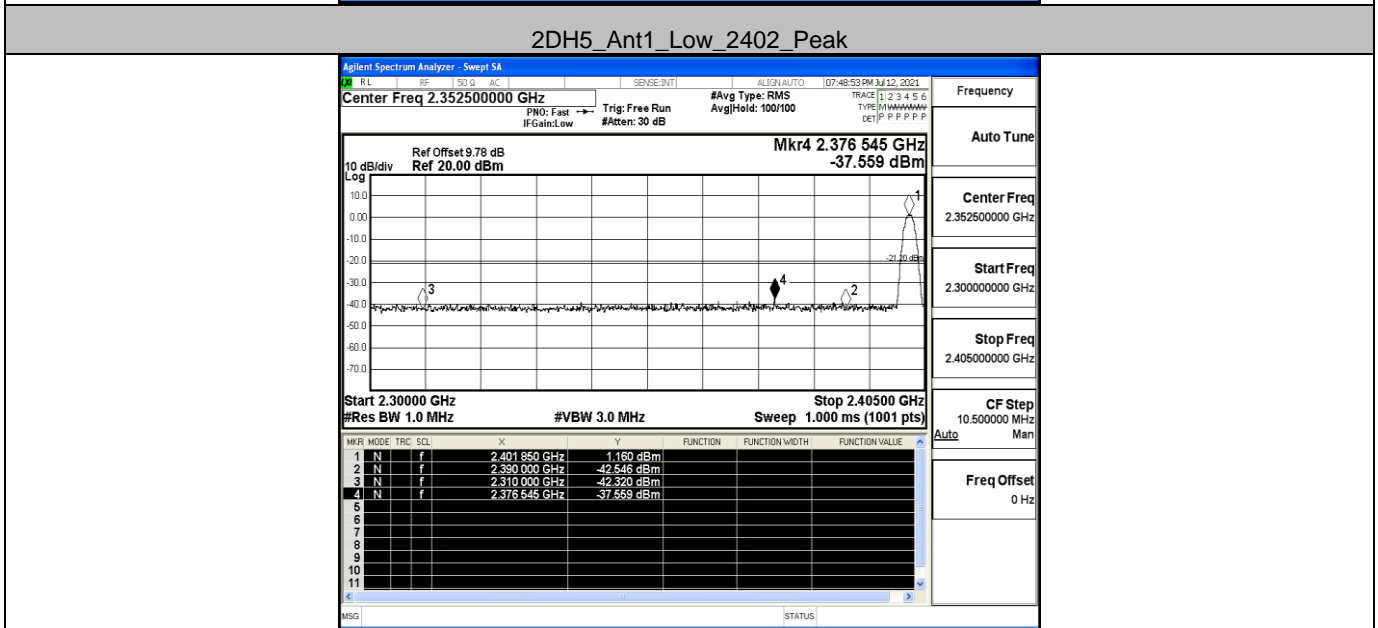
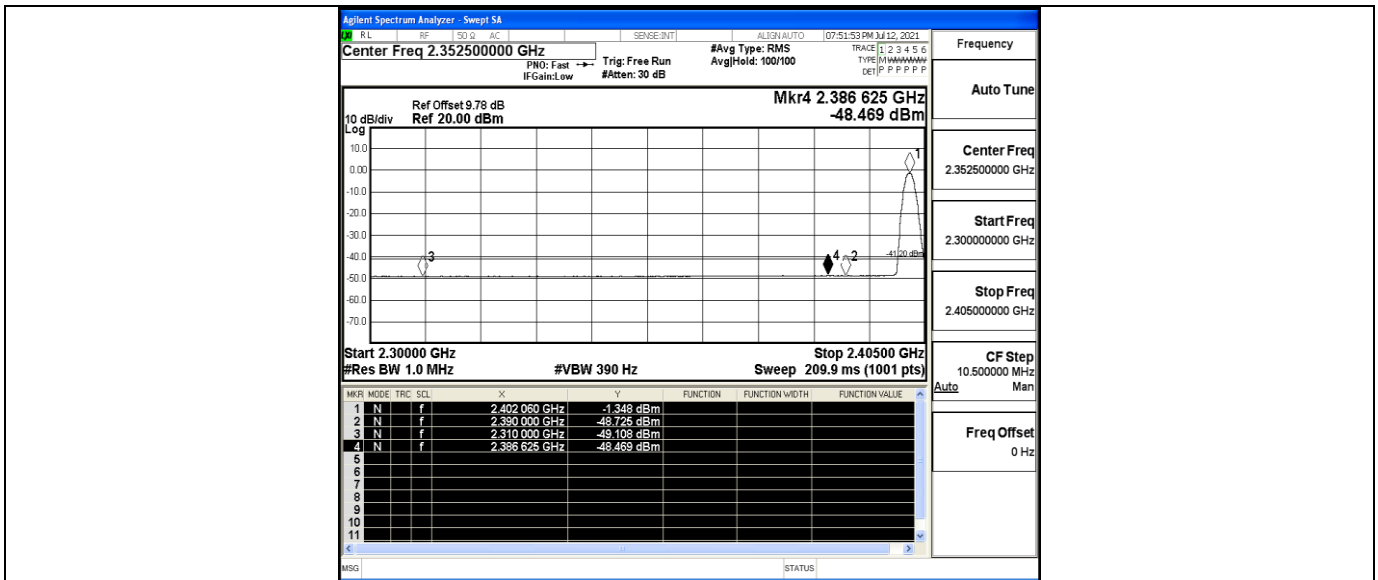
DH5_Ant1_Low_Hop_2402_Peak

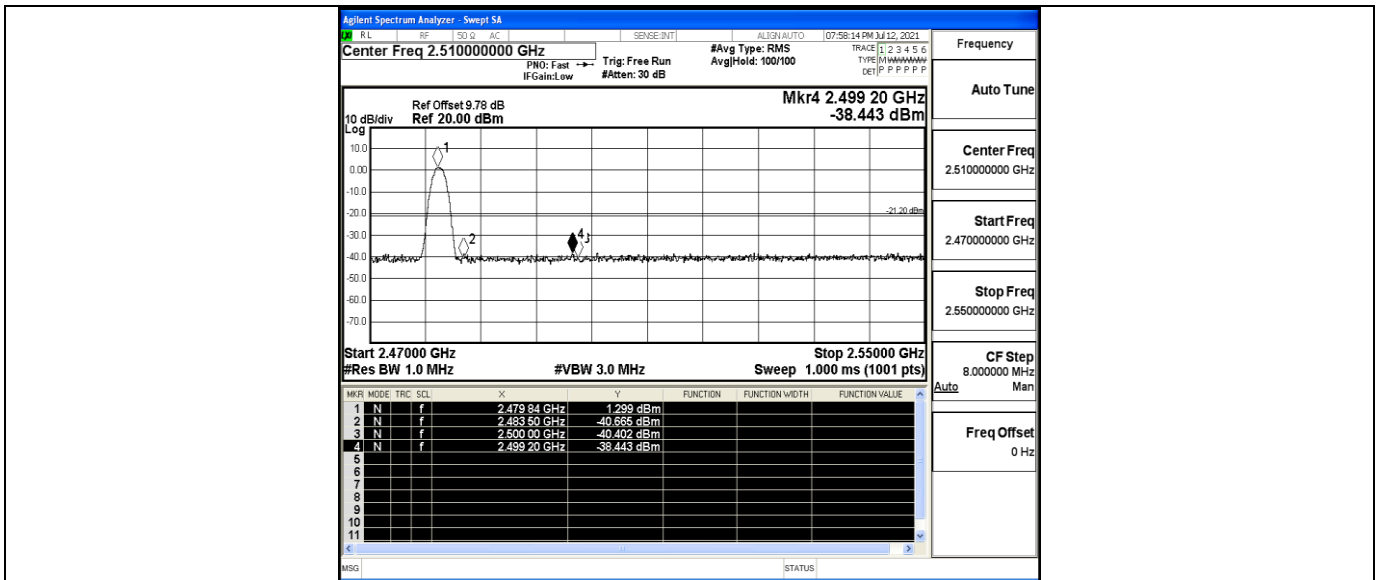


DH5_Ant1_High_Hop_2480_Peak

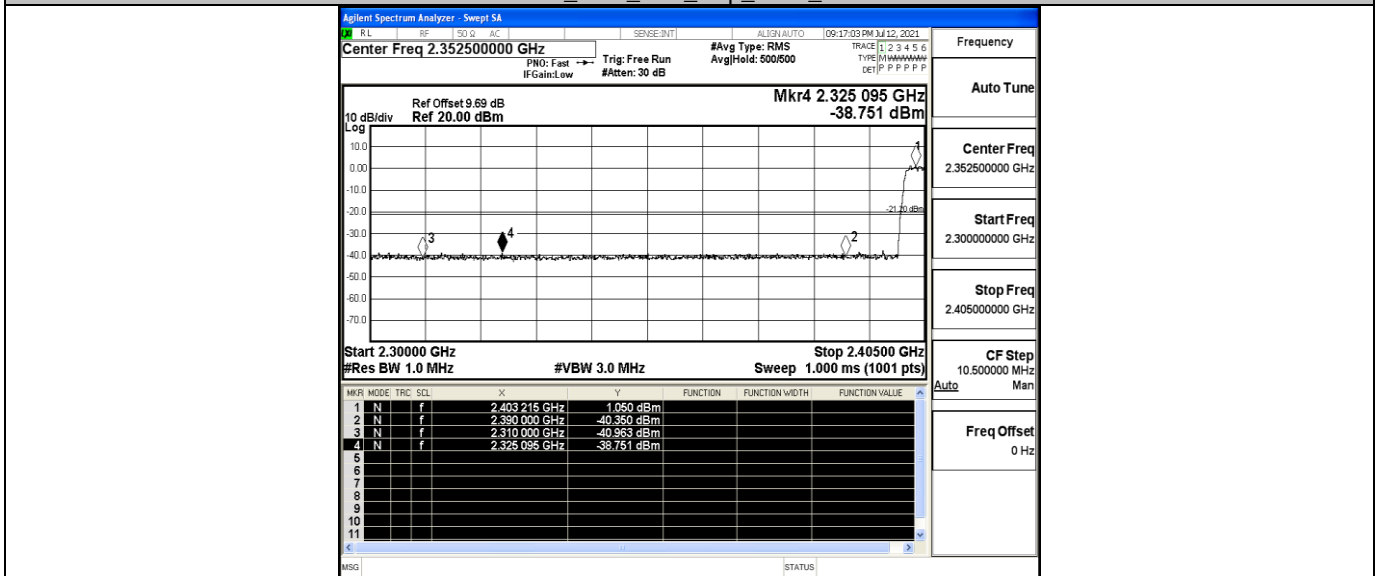


2DH5_Ant1_Low_2402_AV





2DH5_Ant1_Low_Hop_2402_Peak



2DH5_Ant1_High_Hop_2480_Peak

