



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

Product Name: Bluetooth Headphones+Transmitter

Trade Mark: SENTRY

Test Model: BTX100

FCC ID: 2ACP4CBTX100

### 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<br>[MHz] | 20db EBW<br>[MHz] | FL<br>[MHz] | FH<br>[MHz] | Limit<br>[MHz] | Verdict |
|-----------|---------|--------------------|-------------------|-------------|-------------|----------------|---------|
| DH5       | Ant1    | 2402               | 0.954             | 2401.520    | 2402.474    | ---            | ---     |
| DH5       | Ant1    | 2441               | 1.017             | 2440.460    | 2441.477    | ---            | ---     |
| DH5       | Ant1    | 2480               | 1.032             | 2479.451    | 2480.483    | ---            | ---     |
| 2DH5      | Ant1    | 2402               | 1.191             | 2401.385    | 2402.576    | ---            | ---     |
| 2DH5      | Ant1    | 2441               | 1.284             | 2440.352    | 2441.636    | ---            | ---     |
| 2DH5      | Ant1    | 2480               | 1.323             | 2479.322    | 2480.645    | ---            | ---     |
| 3DH5      | Ant1    | 2402               | 1.200             | 2401.394    | 2402.594    | ---            | ---     |
| 3DH5      | Ant1    | 2441               | 1.221             | 2440.358    | 2441.579    | ---            | ---     |
| 3DH5      | Ant1    | 2480               | 1.203             | 2479.394    | 2480.597    | ---            | ---     |

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





## Test Graphs





DH5-Ant1-2480



2DH5-Ant1-2402





2DH5-Ant1-2441

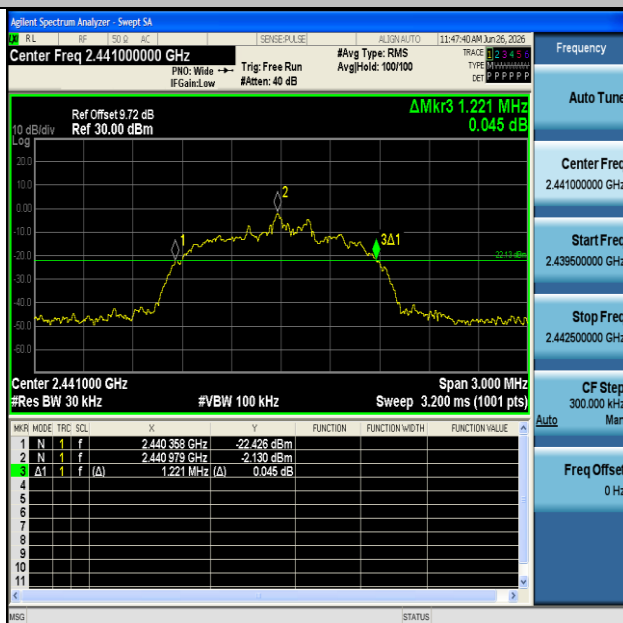


2DH5-Ant1-2480





3DH5-Ant1-2402



3DH5-Ant1-2441







## Appendix B: Occupied Channel Bandwidth

### Test Result

| Test Mode | Antenna | Frequency<br>[MHz] | OCB<br>[MHz] | FL<br>[MHz] | FH<br>[MHz] | Limit<br>[MHz] | Verdict |
|-----------|---------|--------------------|--------------|-------------|-------------|----------------|---------|
| DH5       | Ant1    | 2402               | 0.91149      | 2401.5319   | 2402.4434   | ---            | ---     |
| DH5       | Ant1    | 2441               | 0.90791      | 2440.5337   | 2441.4416   | ---            | ---     |
| DH5       | Ant1    | 2480               | 0.89766      | 2479.5412   | 2480.4388   | ---            | ---     |
| 2DH5      | Ant1    | 2402               | 1.1625       | 2401.4016   | 2402.5641   | ---            | ---     |
| 2DH5      | Ant1    | 2441               | 1.1574       | 2440.4031   | 2441.5605   | ---            | ---     |
| 2DH5      | Ant1    | 2480               | 1.1561       | 2479.4039   | 2480.5600   | ---            | ---     |
| 3DH5      | Ant1    | 2402               | 1.1631       | 2401.4062   | 2402.5693   | ---            | ---     |
| 3DH5      | Ant1    | 2441               | 1.1602       | 2440.4046   | 2441.5648   | ---            | ---     |
| 3DH5      | Ant1    | 2480               | 1.1634       | 2479.4033   | 2480.5667   | ---            | ---     |

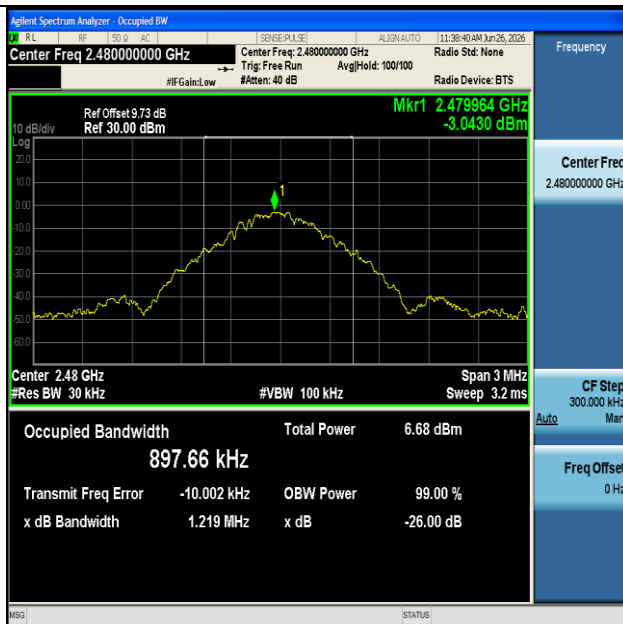
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



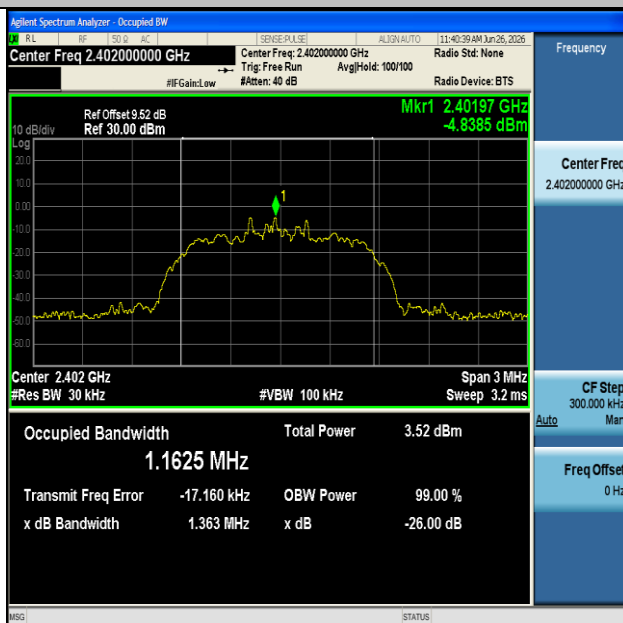


Test Graphs



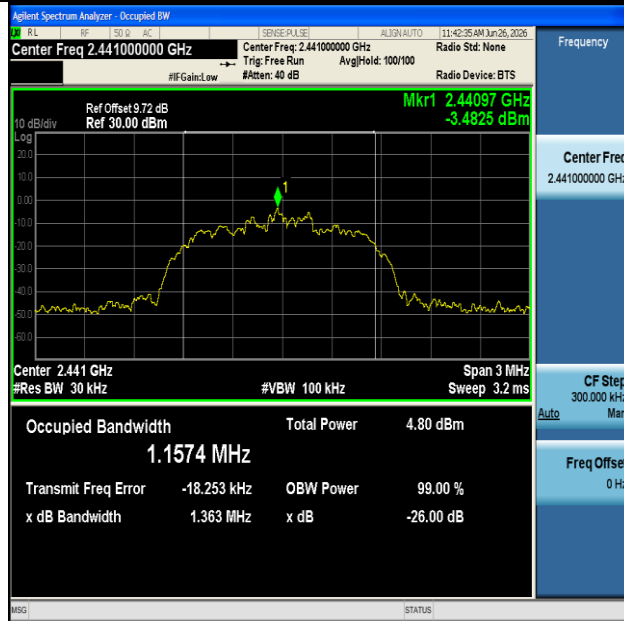


DH5-Ant1-2480

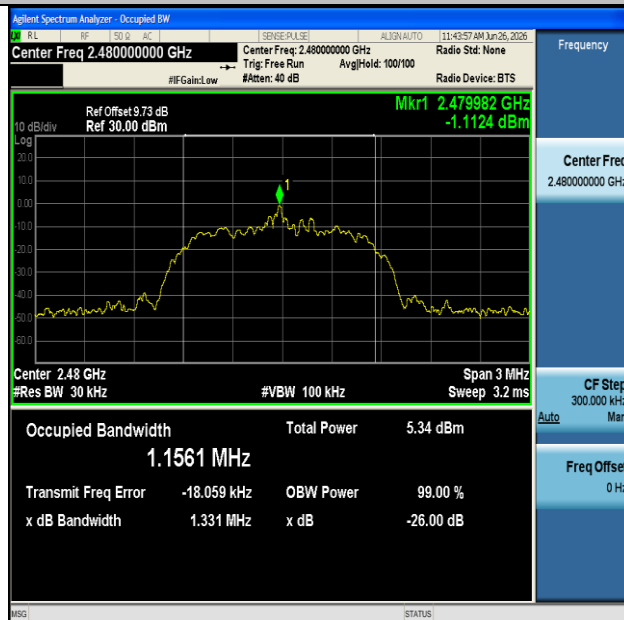


2DH5-Ant1-2402



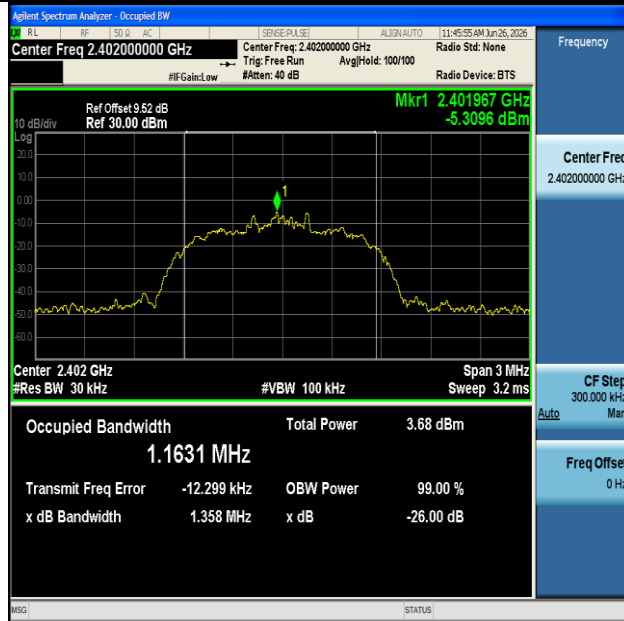


2DH5-Ant1-2441

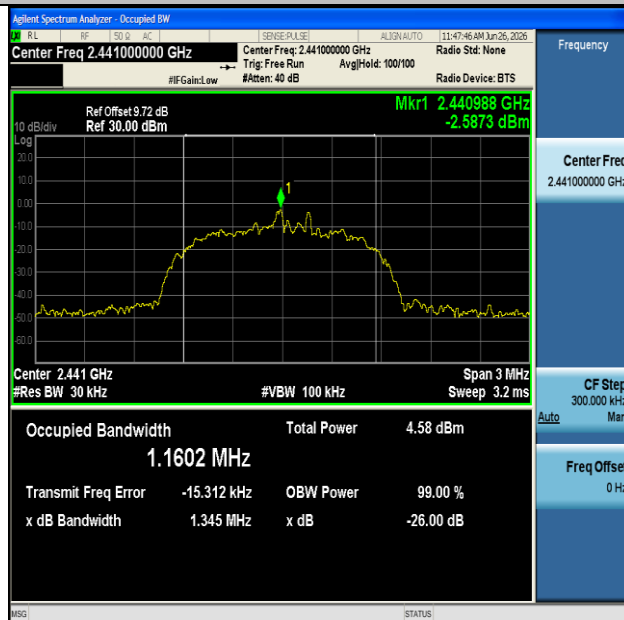


2DH5-Ant1-2480



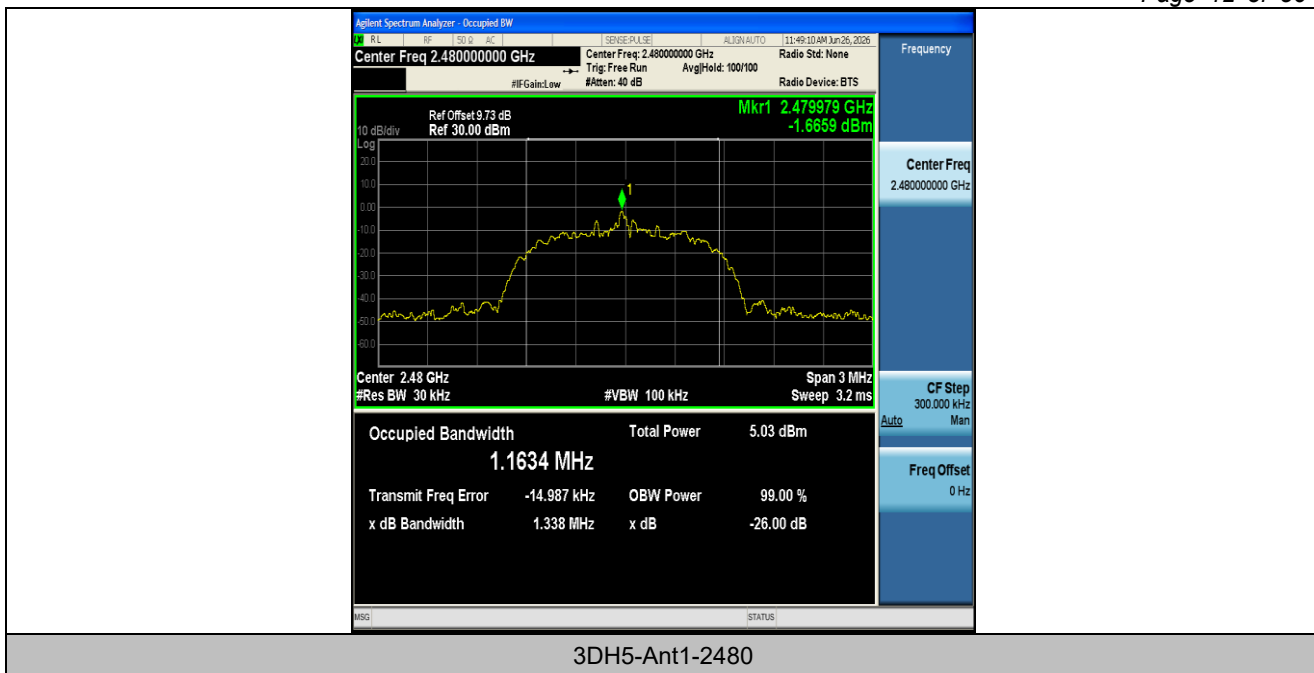


3DH5-Ant1-2402



3DH5-Ant1-2441







## Appendix C: Maximum peak conducted output power

### Test Result

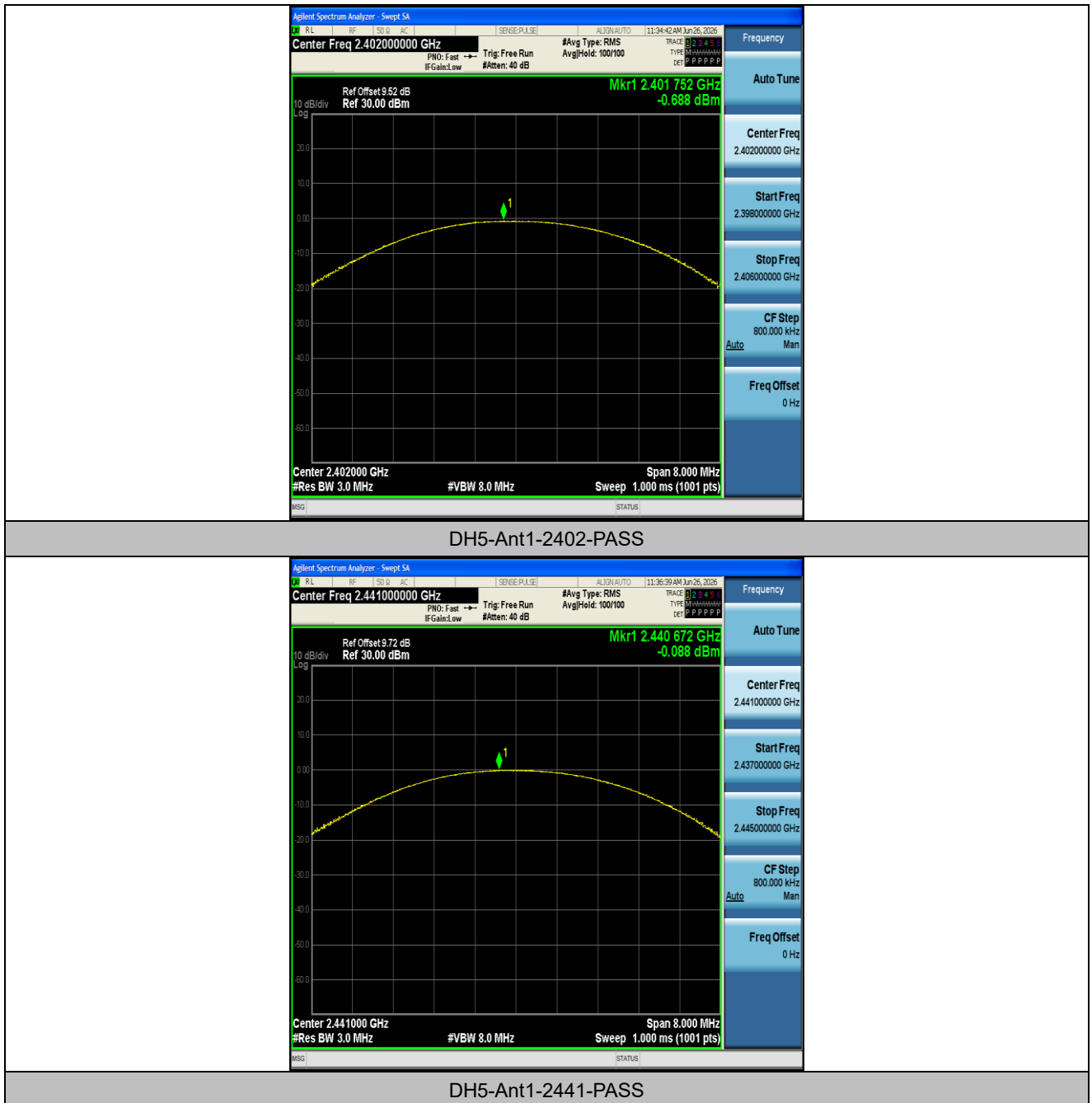
| Test Mode | Antenna | Frequency [MHz] | Conducted Peak Power [dBm] | Conducted Limit [dBm] | Verdict |
|-----------|---------|-----------------|----------------------------|-----------------------|---------|
| DH5       | Ant1    | 2402            | -0.69                      | ≤20.97                | PASS    |
| DH5       | Ant1    | 2441            | -0.09                      | ≤20.97                | PASS    |
| DH5       | Ant1    | 2480            | 0.78                       | ≤20.97                | PASS    |
| 2DH5      | Ant1    | 2402            | -1.02                      | ≤20.97                | PASS    |
| 2DH5      | Ant1    | 2441            | -0.25                      | ≤20.97                | PASS    |
| 2DH5      | Ant1    | 2480            | 0.59                       | ≤20.97                | PASS    |
| 3DH5      | Ant1    | 2402            | -1.01                      | ≤20.97                | PASS    |
| 3DH5      | Ant1    | 2441            | -0.29                      | ≤20.97                | PASS    |
| 3DH5      | Ant1    | 2480            | 0.35                       | ≤20.97                | PASS    |

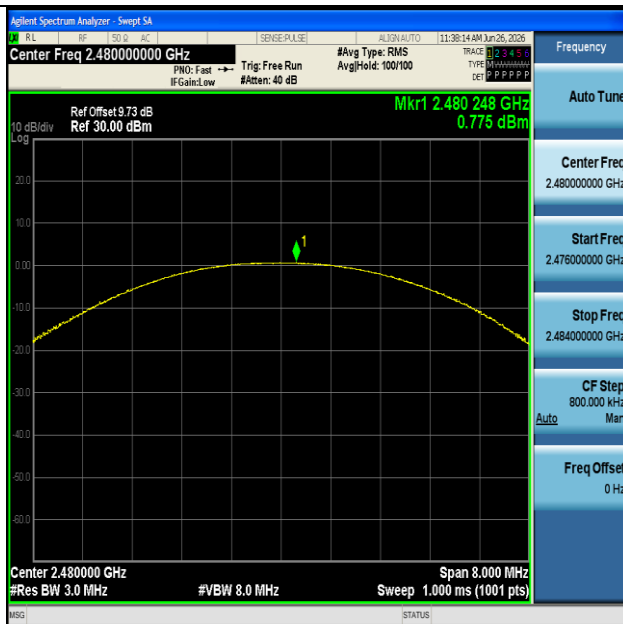
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



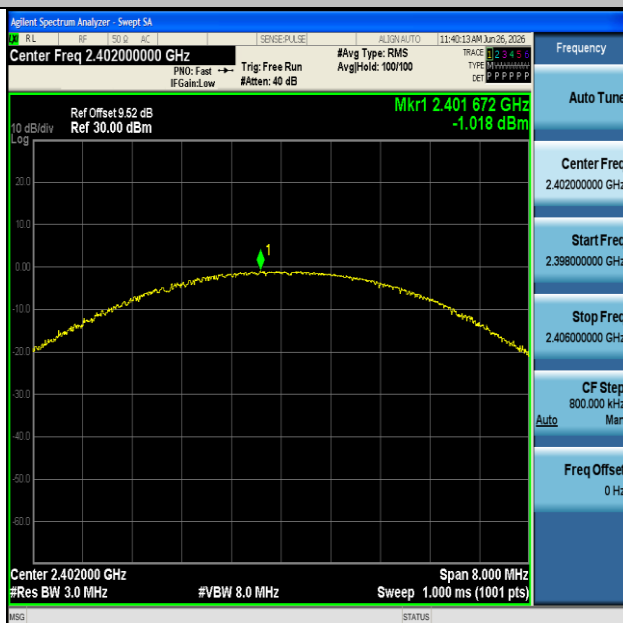


## Test Graphs



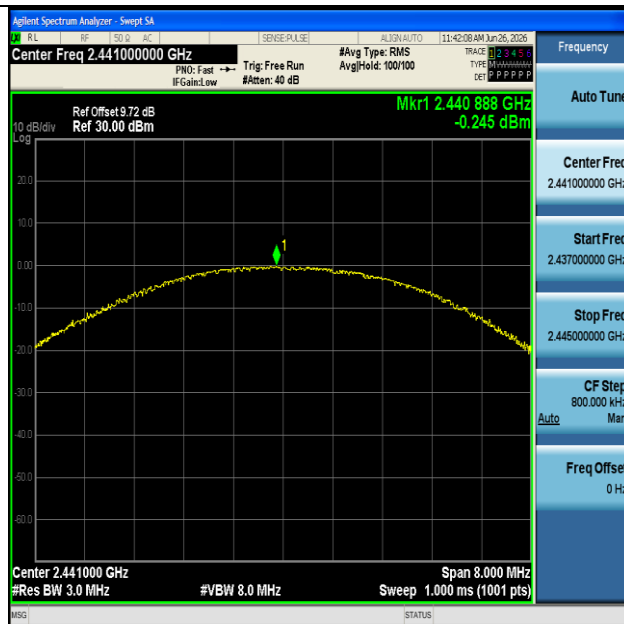


DH5-Ant1-2480-PASS

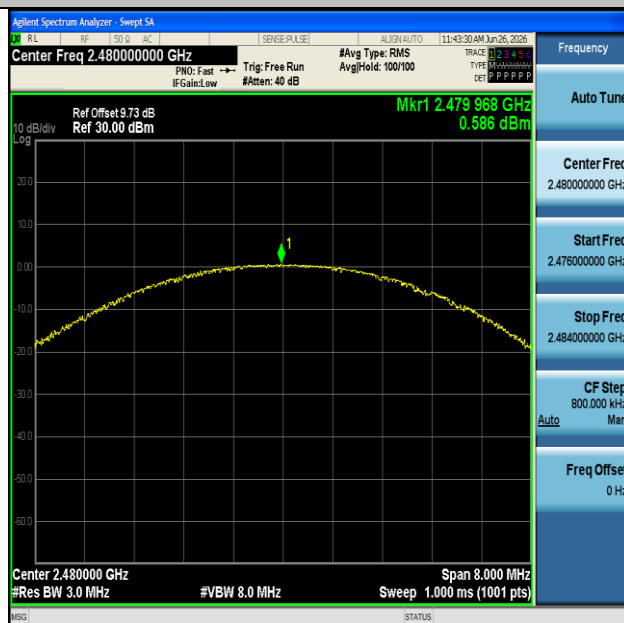


2DH5-Ant1-2402-PASS



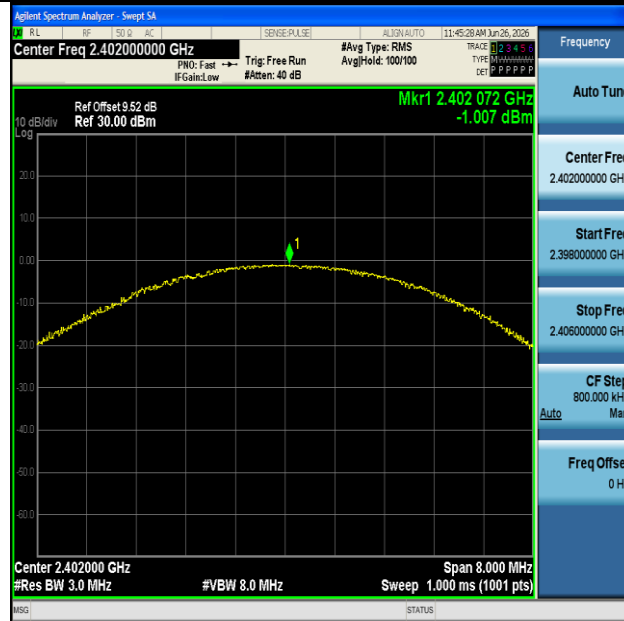


2DH5-Ant1-2441-PASS

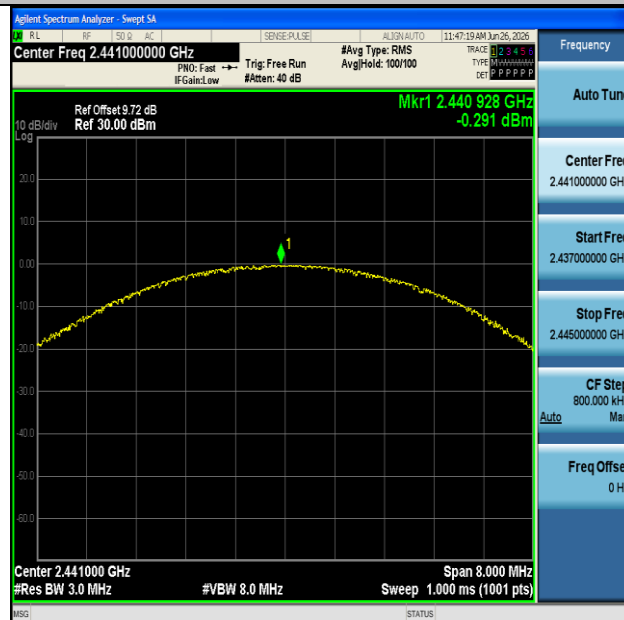


2DH5-Ant1-2480-PASS



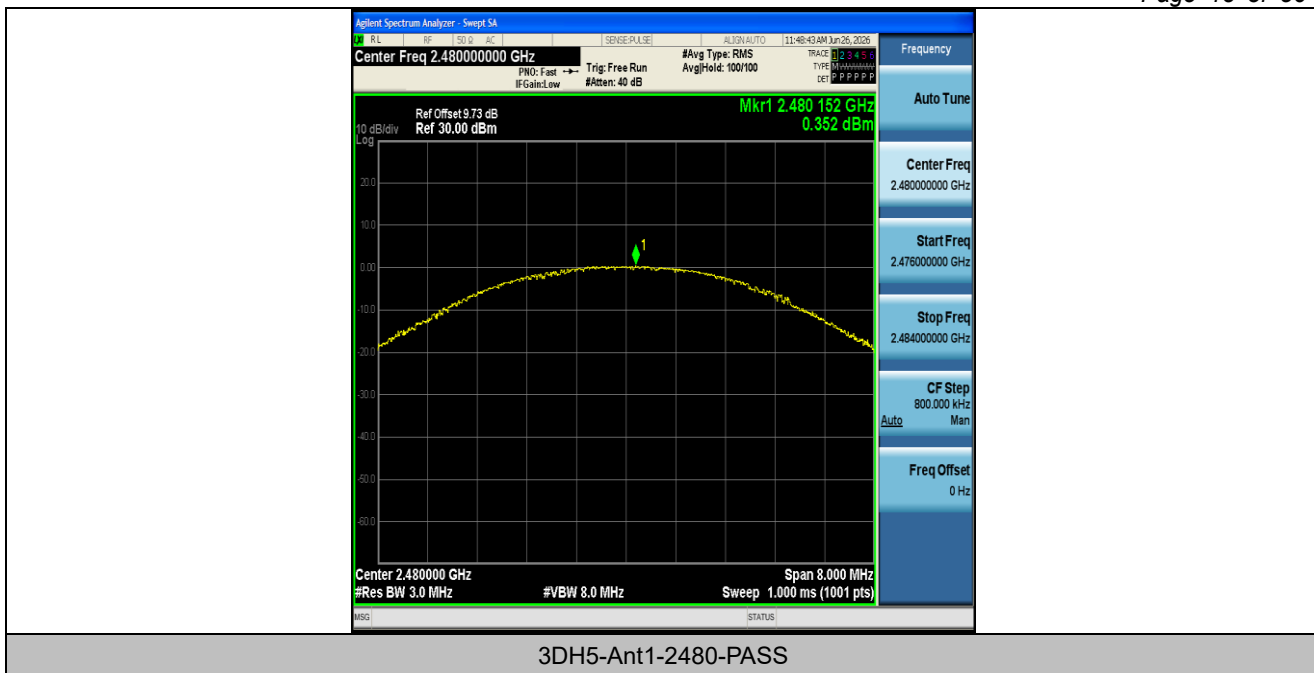


3DH5-Ant1-2402-PASS



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                | 0.98            | $\geq 0.688$   | PASS    |
| 2DH5      | Ant1    | Hop                | 1.032           | $\geq 0.882$   | PASS    |
| 3DH5      | Ant1    | Hop                | 1.002           | $\geq 0.814$   | PASS    |

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





## Test Graphs







## Appendix E: Time of occupancy

### Test Result

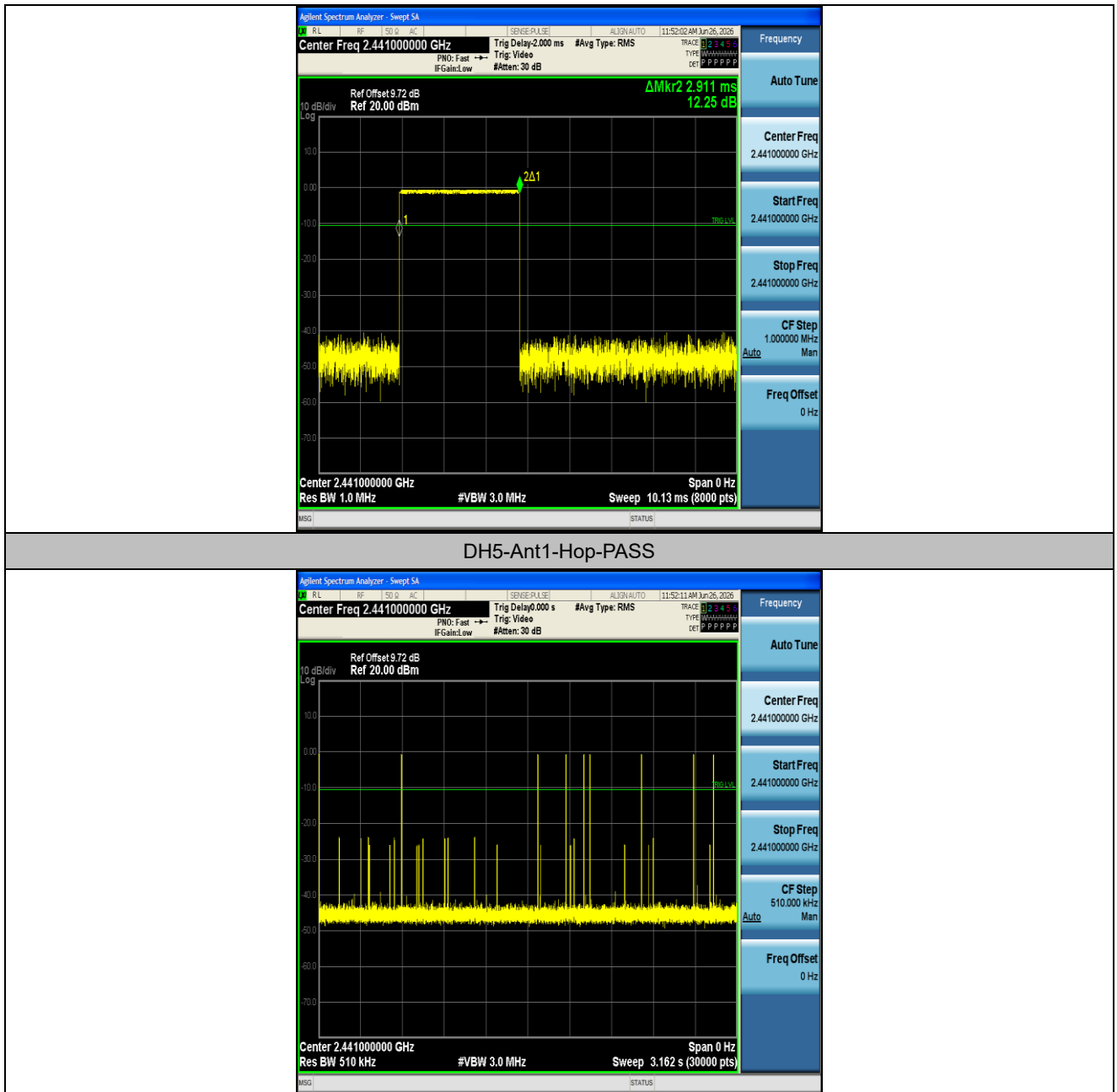
| Test Mode | Antenna | Frequency<br>[MHz] | Burst Width<br>[ms] | TotalHops<br>[Num] | Result<br>[s] | Limit<br>[s] | Verdict |
|-----------|---------|--------------------|---------------------|--------------------|---------------|--------------|---------|
| DH5       | Ant1    | Hop                | 2.911               | 90                 | 0.262         | ≤0.4         | PASS    |
| 2DH5      | Ant1    | Hop                | 2.916               | 110                | 0.321         | ≤0.4         | PASS    |
| 3DH5      | Ant1    | Hop                | 2.917               | 110                | 0.321         | ≤0.4         | PASS    |

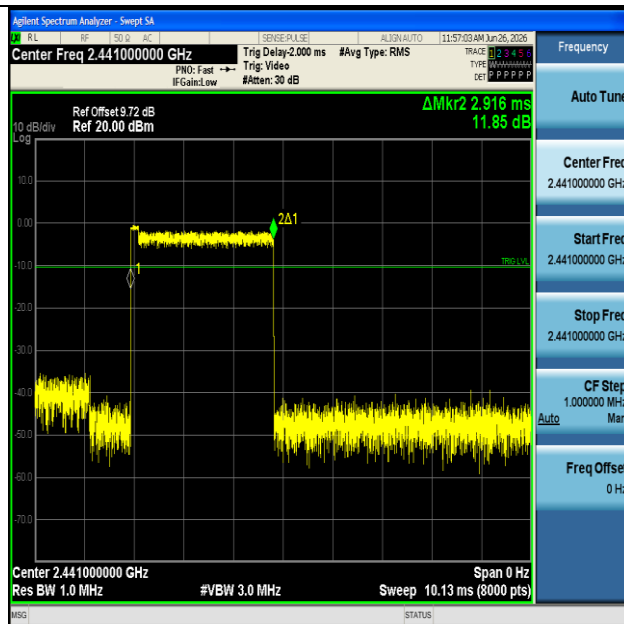
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



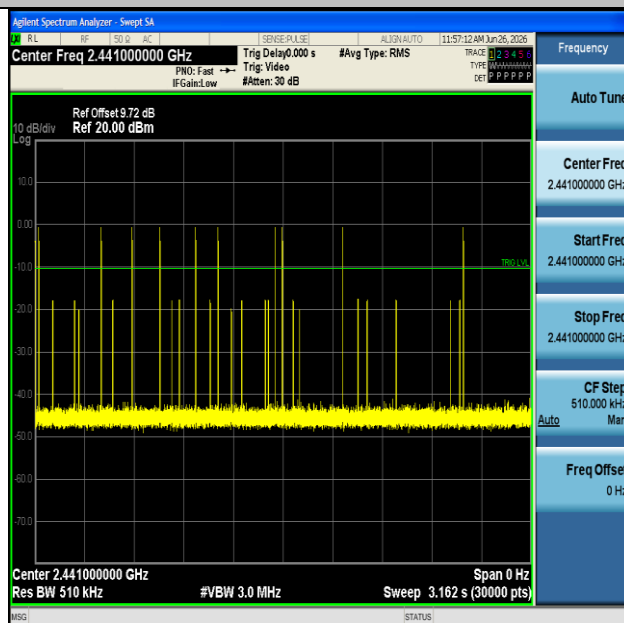


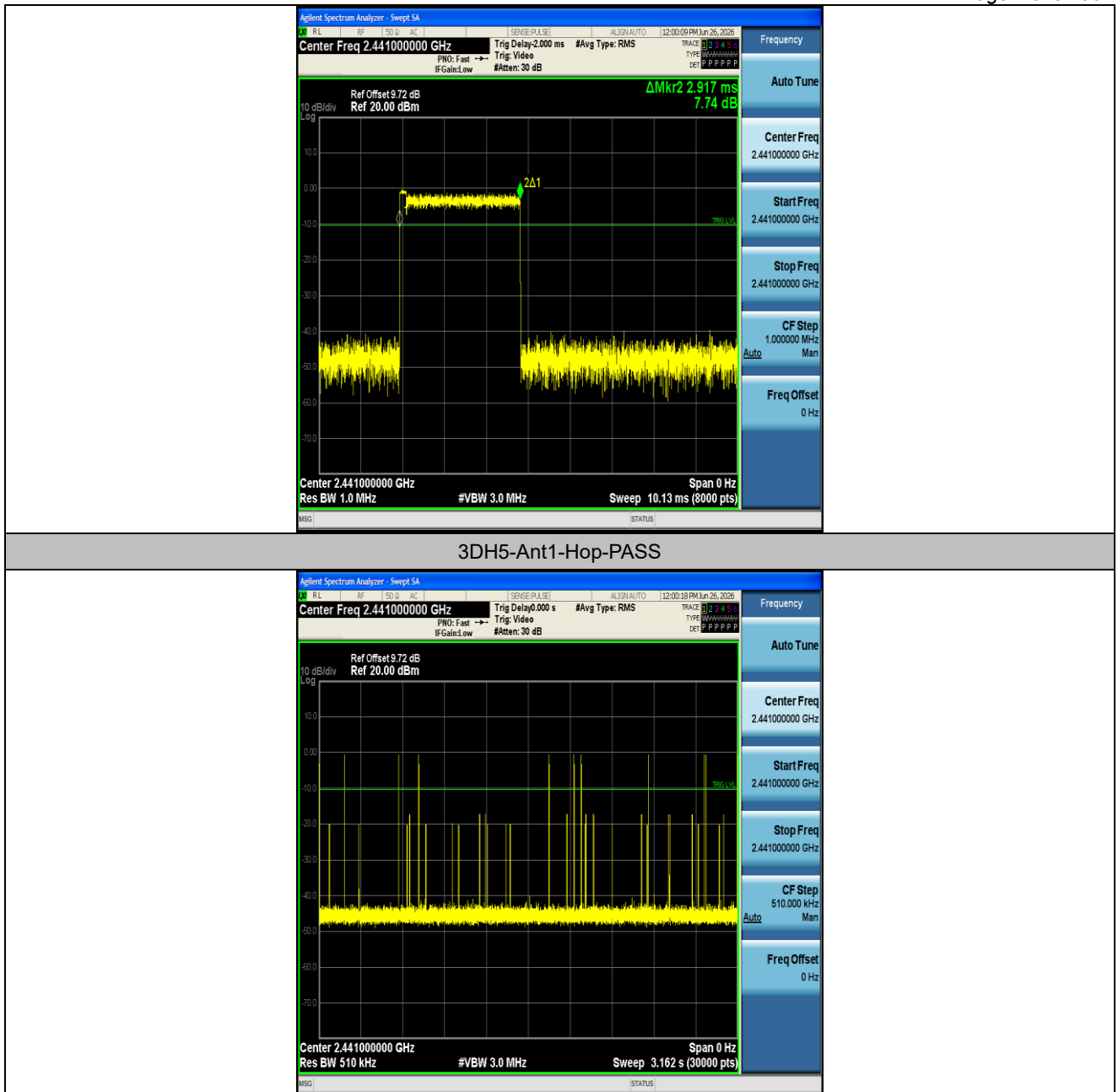
## Test Graphs





### 2DH5-Ant1-Hop-PASS







## Appendix F: Number of hopping channels

### Test Result

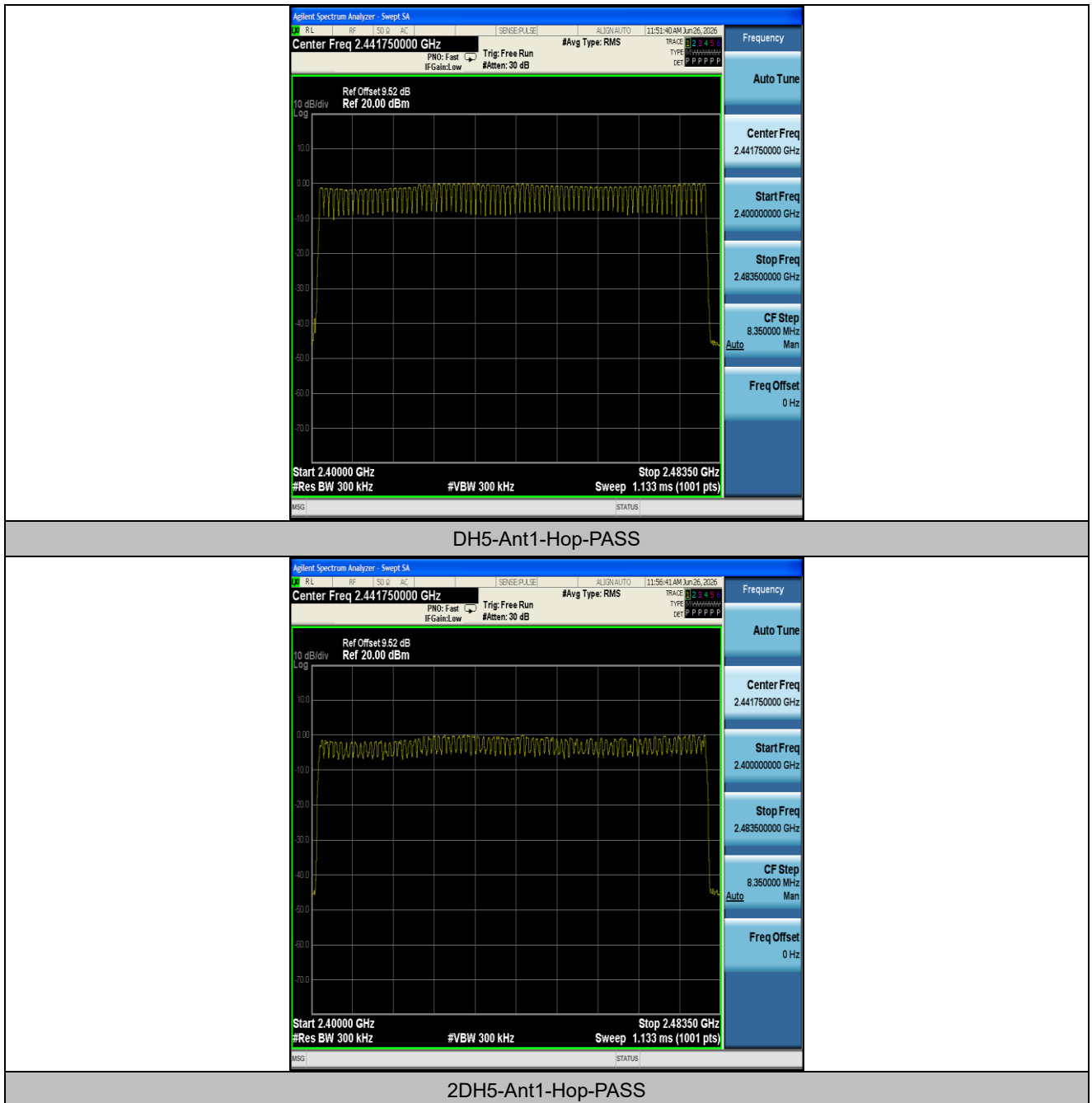
| Test Mode | Antenna | Frequency<br>[MHz] | Result<br>[Num] | Limit<br>[Num] | Verdict |
|-----------|---------|--------------------|-----------------|----------------|---------|
| DH5       | Ant1    | Hop                | 79              | ≥15            | PASS    |
| 2DH5      | Ant1    | Hop   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

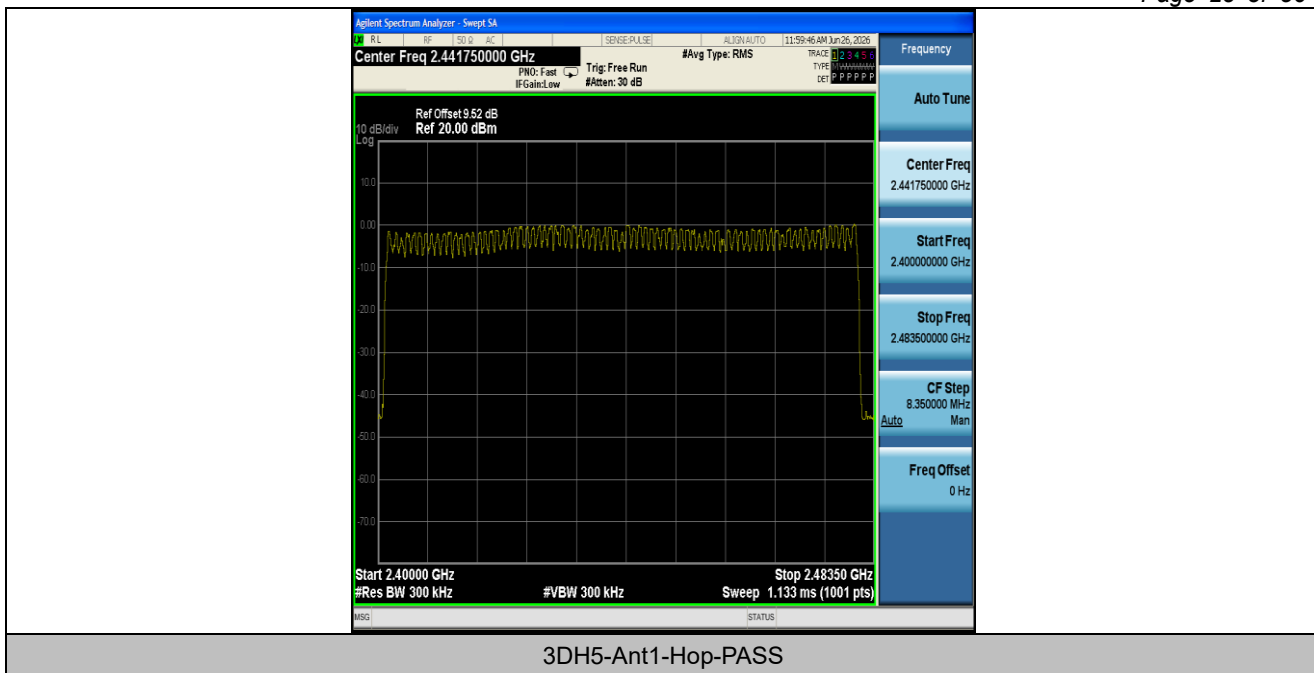
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





## Test Graphs







## Appendix G: Band edge measurements

### Test Result

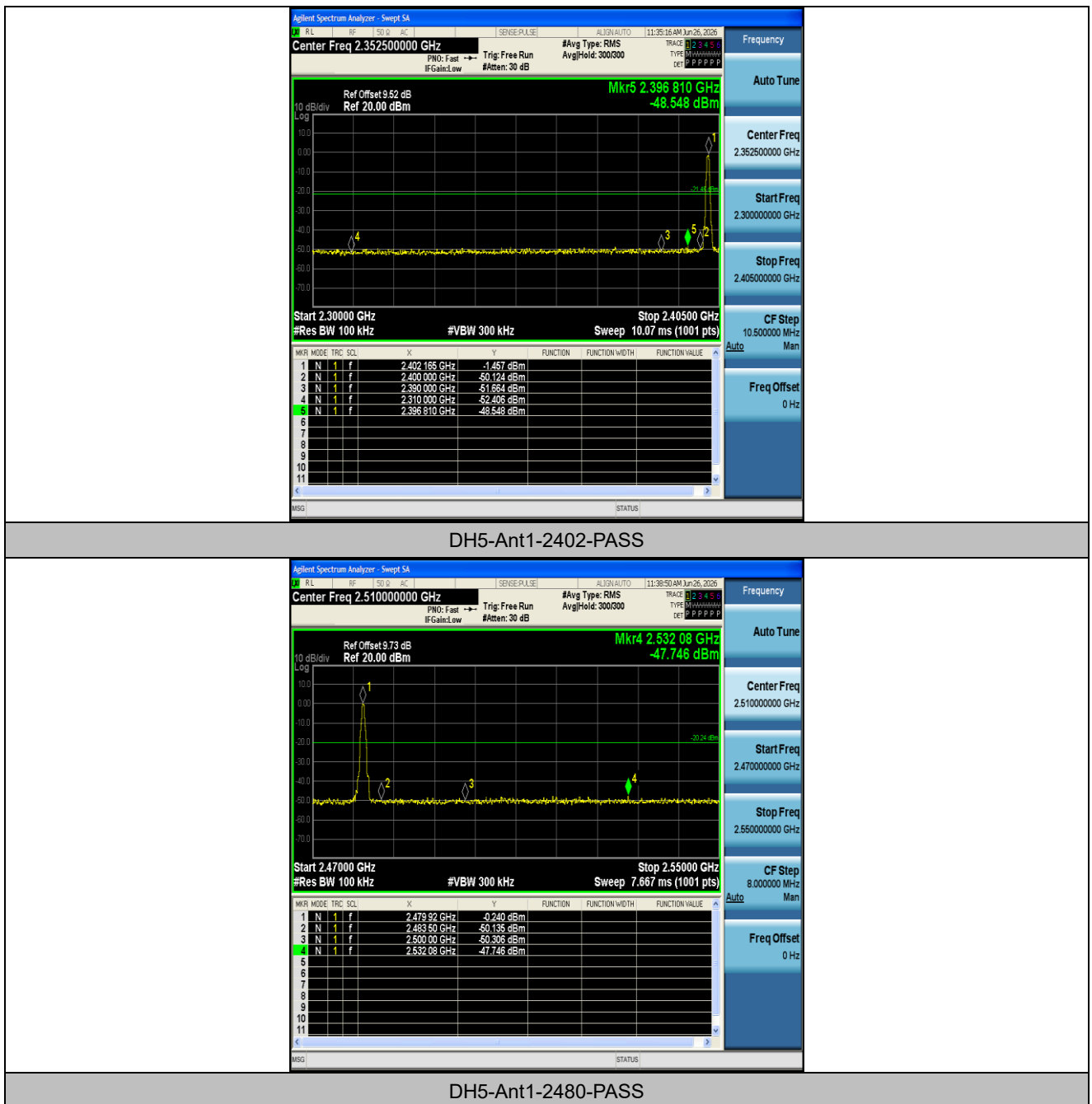
| Test Mode | Antenna | Ch.Name | Frequency [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|---------|---------|-----------------|----------------|--------------|-------------|---------|
| DH5       | Ant1    | Low     | 2402            | -1.46          | -48.55       | ≤-21.46     | PASS    |
| DH5       | Ant1    | High    | 2480            | -0.24          | -47.75       | ≤-20.24     | PASS    |
| DH5       | Ant1    | Low     | Hop_2402        | -1.97          | -49.16       | ≤-21.97     | PASS    |
| DH5       | Ant1    | High    | Hop_2480        | -0.92          | -38.03       | ≤-20.92     | PASS    |
| 2DH5      | Ant1    | Low     | 2402            | -1.88          | -48.93       | ≤-21.88     | PASS    |
| 2DH5      | Ant1    | High    | 2480            | -0.19          | -46.64       | ≤-20.19     | PASS    |
| 2DH5      | Ant1    | Low     | Hop_2402        | -5.17          | -47.81       | ≤-25.17     | PASS    |
| 2DH5      | Ant1    | High    | Hop_2480        | -0.80          | -47.29       | ≤-20.8      | PASS    |
| 3DH5      | Ant1    | Low     | 2402            | -1.88          | -46.99       | ≤-21.88     | PASS    |
| 3DH5      | Ant1    | High    | 2480            | -2.32          | -46.77       | ≤-22.32     | PASS    |
| 3DH5      | Ant1    | Low     | Hop_2402        | -6.91          | -48.82       | ≤-26.91     | PASS    |
| 3DH5      | Ant1    | High    | Hop_2480        | -2.32          | -47.83       | ≤-22.32     | PASS    |

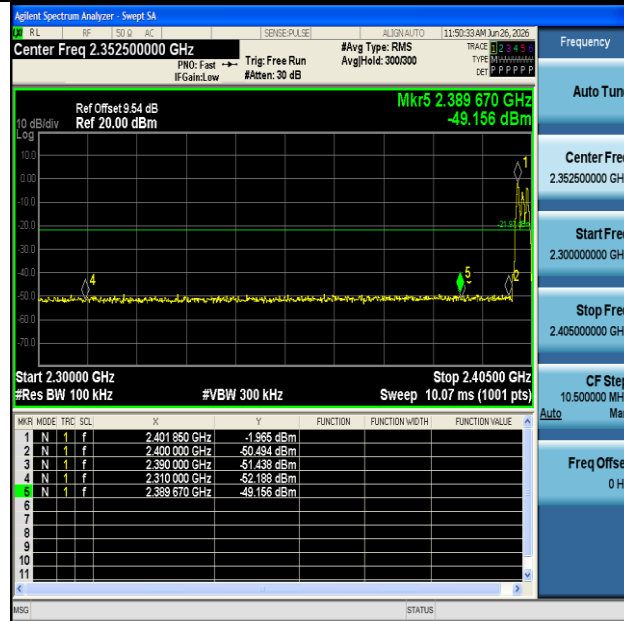
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



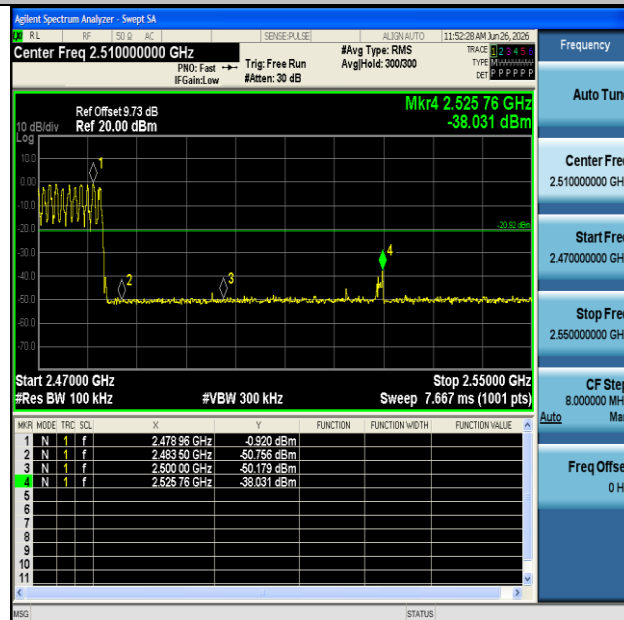


## Test Graphs



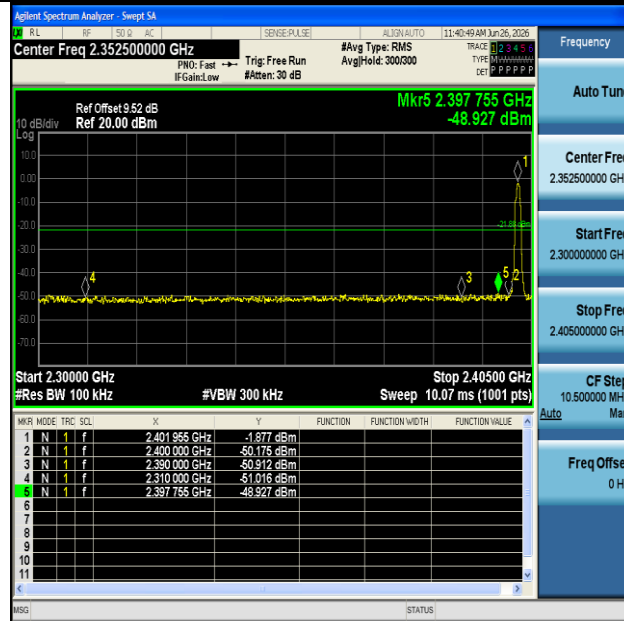


DH5-Ant1-Hop\_2402-PASS

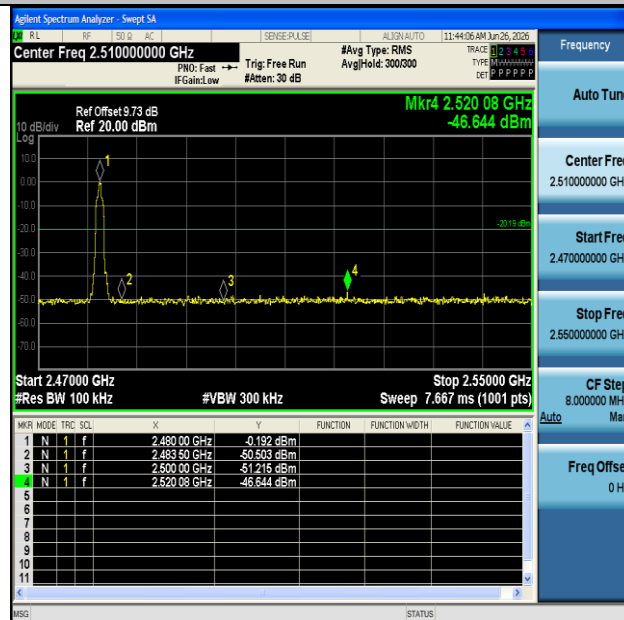


DH5-Ant1-Hop\_2480-PASS



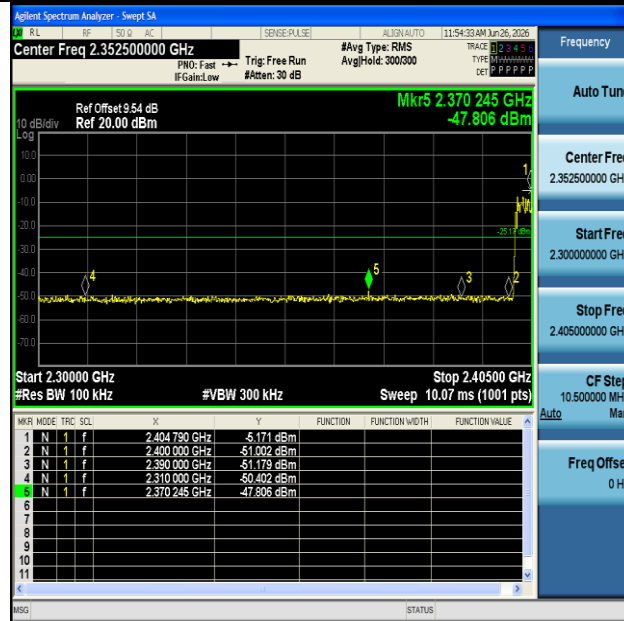


2DH5-Ant1-2402-PASS

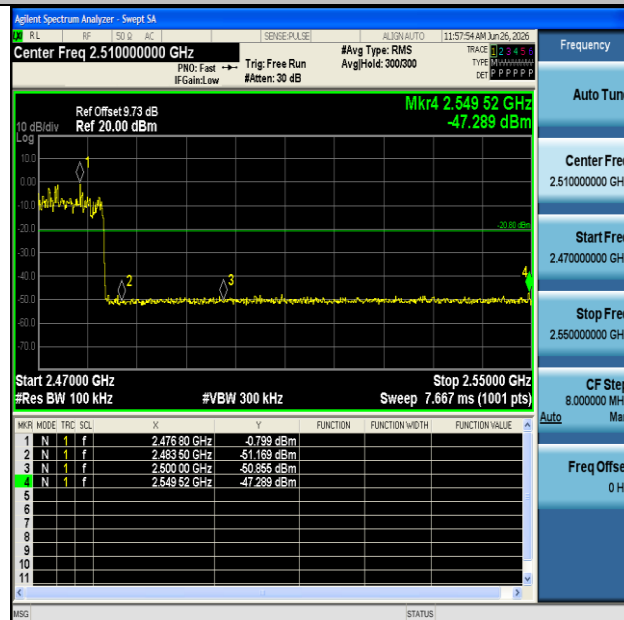


2DH5-Ant1-2480-PASS



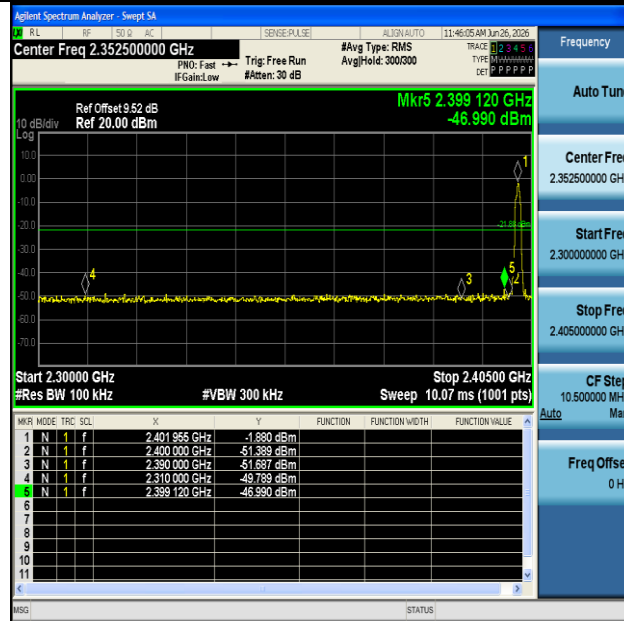


2DH5-Ant1-Hop\_2402-PASS

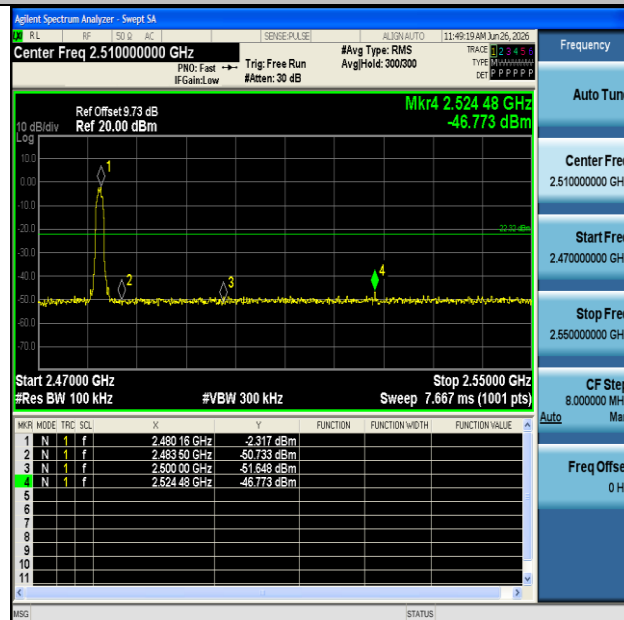


2DH5-Ant1-Hop\_2480-PASS



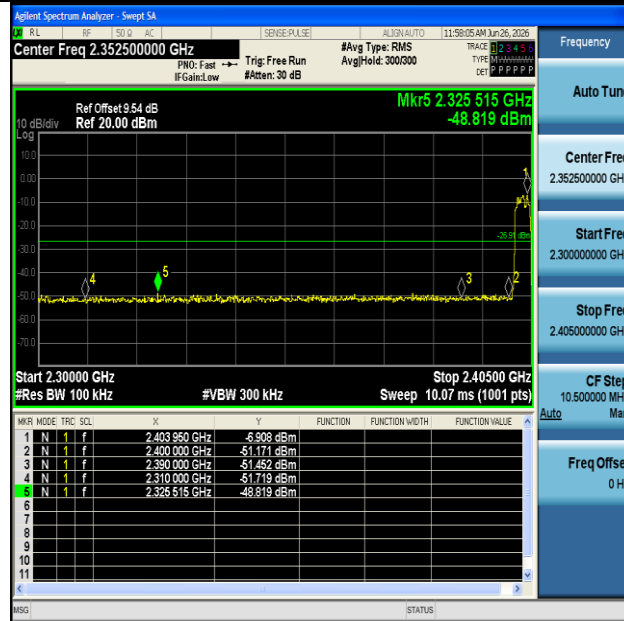


3DH5-Ant1-2402-PASS

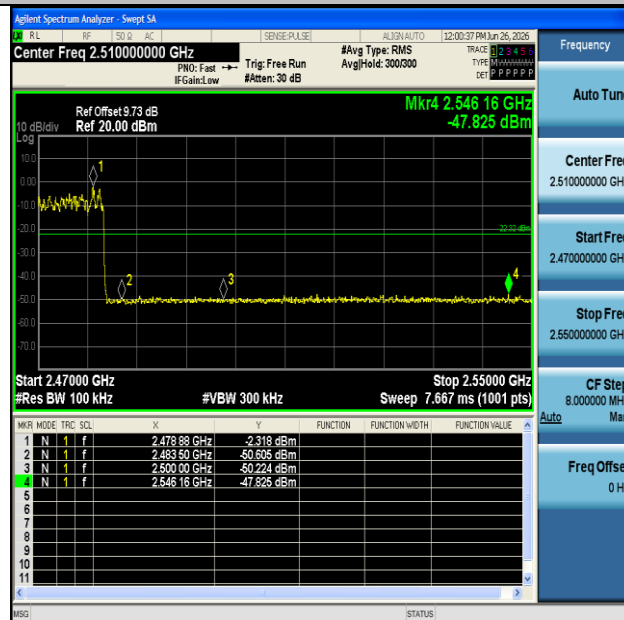


3DH5-Ant1-2480-PASS





3DH5-Ant1-Hop\_2402-PASS



3DH5-Ant1-Hop\_2480-PASS





## Appendix H: Conducted Spurious Emission

### Test Result

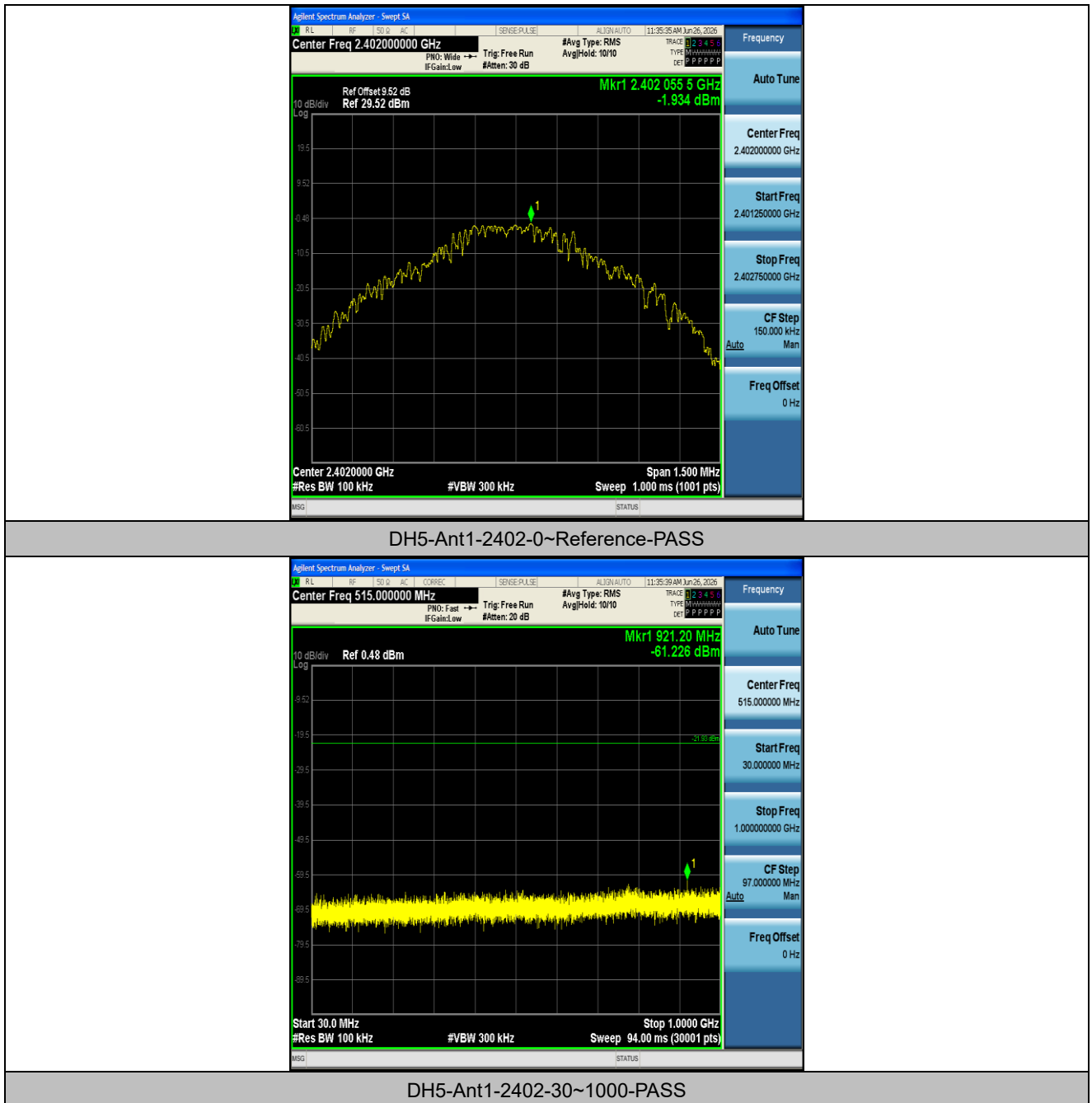
| Test Mode | Antenna | Frequency [MHz] | Freq. Range [MHz] | Ref. Level [dBm] | Result [dBm] | Limit [dBm]   | Verdict |
|-----------|---------|-----------------|-------------------|------------------|--------------|---------------|---------|
| DH5       | Ant1    | 2402            | 0~Reference       | -1.93            | -1.93        | ---           | PASS    |
| DH5       | Ant1    | 2402            | 30~1000           | -1.93            | -61.23       | $\leq -21.93$ | PASS    |
| DH5       | Ant1    | 2402            | 1000~26500        | -1.93            | -37.55       | $\leq -21.93$ | PASS    |
| DH5       | Ant1    | 2441            | 0~Reference       | -1.66            | -1.66        | ---           | PASS    |
| DH5       | Ant1    | 2441            | 30~1000           | -1.66            | -62.24       | $\leq -21.66$ | PASS    |
| DH5       | Ant1    | 2441            | 1000~26500        | -1.66            | -36.43       | $\leq -21.66$ | PASS    |
| DH5       | Ant1    | 2480            | 0~Reference       | -0.69            | -0.69        | ---           | PASS    |
| DH5       | Ant1    | 2480            | 30~1000           | -0.69            | -62.21       | $\leq -20.69$ | PASS    |
| DH5       | Ant1    | 2480            | 1000~26500        | -0.69            | -37.26       | $\leq -20.69$ | PASS    |
| 2DH5      | Ant1    | 2402            | 0~Reference       | -3.13            | -3.13        | ---           | PASS    |
| 2DH5      | Ant1    | 2402            | 30~1000           | -3.13            | -62.32       | $\leq -23.13$ | PASS    |
| 2DH5      | Ant1    | 2402            | 1000~26500        | -3.13            | -37.23       | $\leq -23.13$ | PASS    |
| 2DH5      | Ant1    | 2441            | 0~Reference       | -2.55            | -2.55        | ---           | PASS    |
| 2DH5      | Ant1    | 2441            | 30~1000           | -2.55            | -61.76       | $\leq -22.55$ | PASS    |
| 2DH5      | Ant1    | 2441            | 1000~26500        | -2.55            | -37.18       | $\leq -22.55$ | PASS    |
| 2DH5      | Ant1    | 2480            | 0~Reference       | -0.17            | -0.17        | ---           | PASS    |
| 2DH5      | Ant1    | 2480            | 30~1000           | -0.17            | -60.93       | $\leq -20.17$ | PASS    |
| 2DH5      | Ant1    | 2480            | 1000~26500        | -0.17            | -36.43       | $\leq -20.17$ | PASS    |
| 3DH5      | Ant1    | 2402            | 0~Reference       | -1.48            | -1.48        | ---           | PASS    |
| 3DH5      | Ant1    | 2402            | 30~1000           | -1.48            | -60.15       | $\leq -21.48$ | PASS    |
| 3DH5      | Ant1    | 2402            | 1000~26500        | -1.48            | -37.02       | $\leq -21.48$ | PASS    |
| 3DH5      | Ant1    | 2441            | 0~Reference       | -2.58            | -2.58        | ---           | PASS    |
| 3DH5      | Ant1    | 2441            | 30~1000           | -2.58            | -61.35       | $\leq -22.58$ | PASS    |
| 3DH5      | Ant1    | 2441            | 1000~26500        | -2.58            | -37.41       | $\leq -22.58$ | PASS    |
| 3DH5      | Ant1    | 2480            | 0~Reference       | -1.52            | -1.52        | ---           | PASS    |
| 3DH5      | Ant1    | 2480            | 30~1000           | -1.52            | -61.6        | $\leq -21.52$ | PASS    |
| 3DH5      | Ant1    | 2480            | 1000~26500        | -1.52            | -37.58       | $\leq -21.52$ | PASS    |

Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 26.5GHz, the cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.



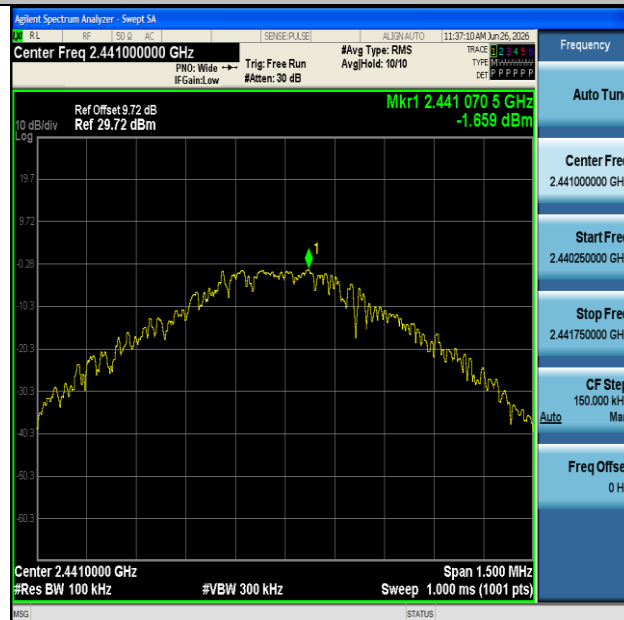


## Test Graphs



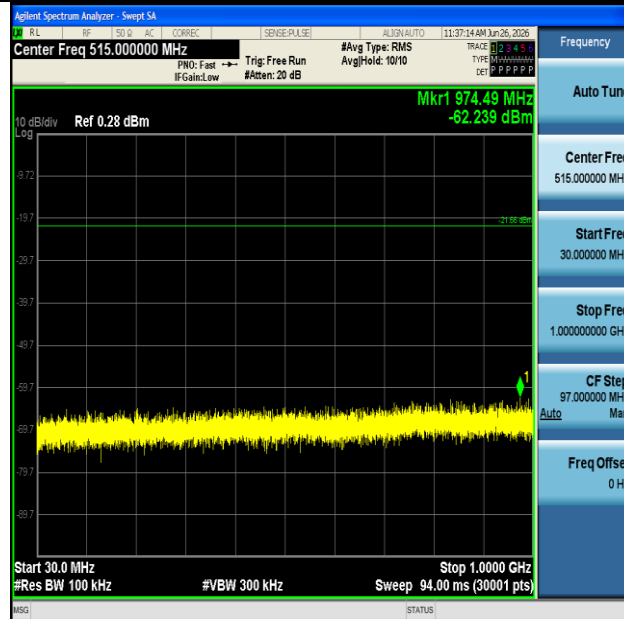


DH5-Ant1-2402-1000~26500-PASS

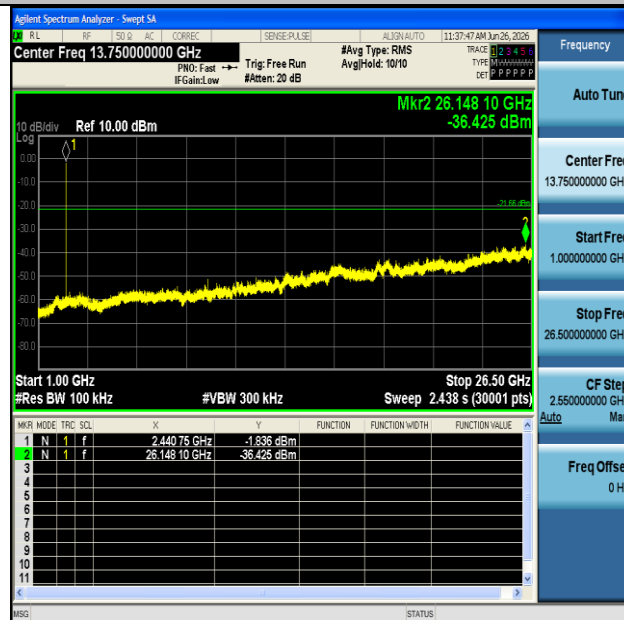


DH5-Ant1-2441-0~Reference-PASS



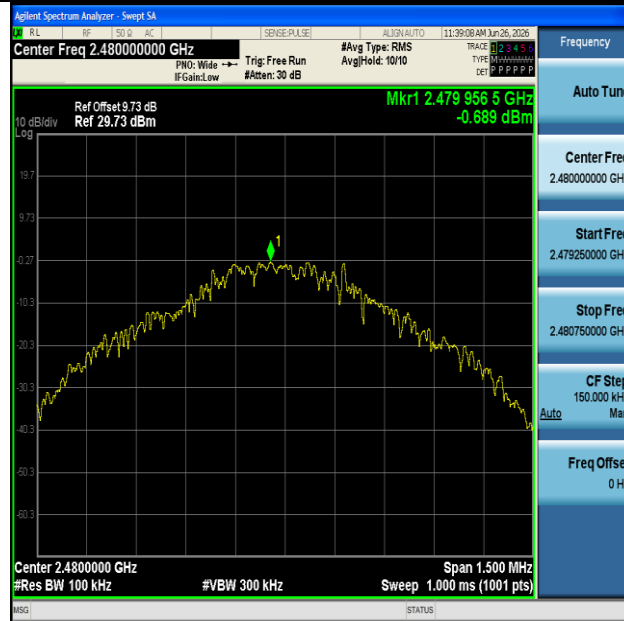


DH5-Ant1-2441-30~1000-PASS

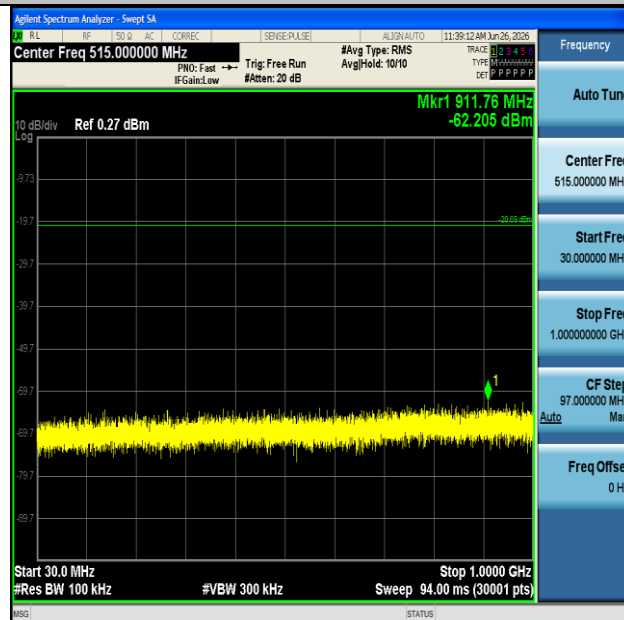


DH5-Ant1-2441-1000~26500-PASS



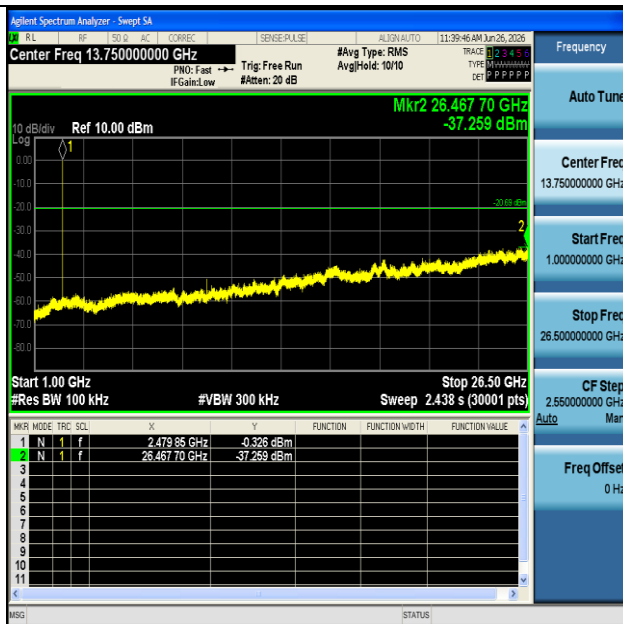


DH5-Ant1-2480-0~Reference-PASS

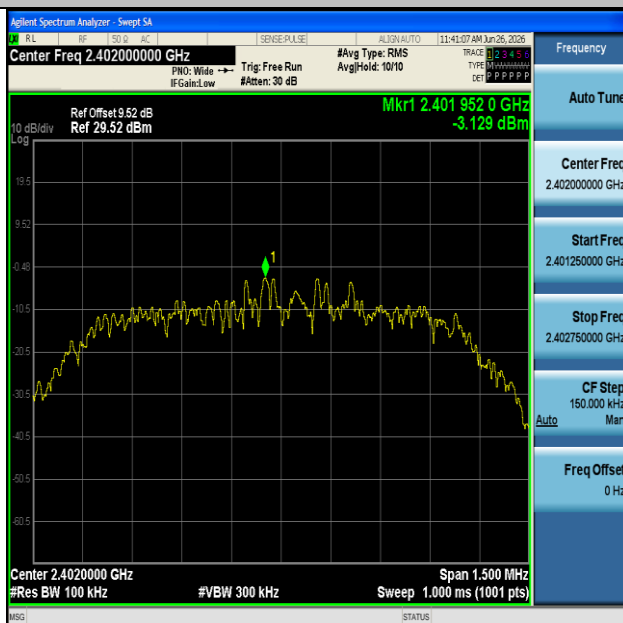


DH5-Ant1-2480-30~1000-PASS



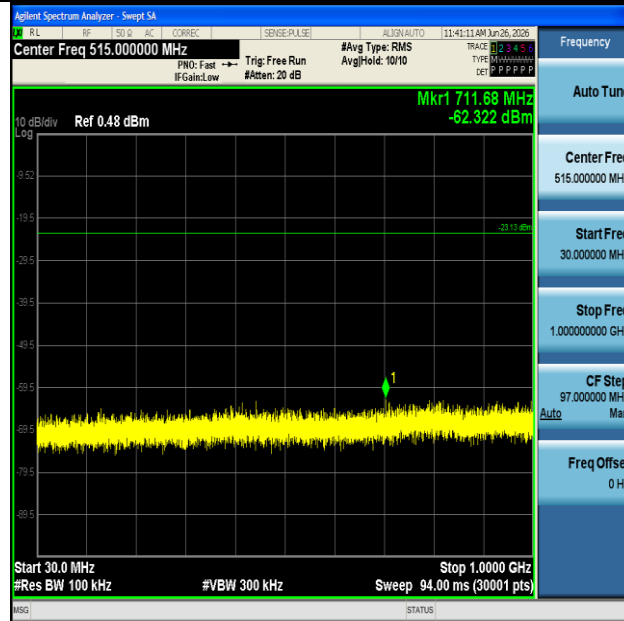


DH5-Ant1-2480-1000~26500-PASS



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



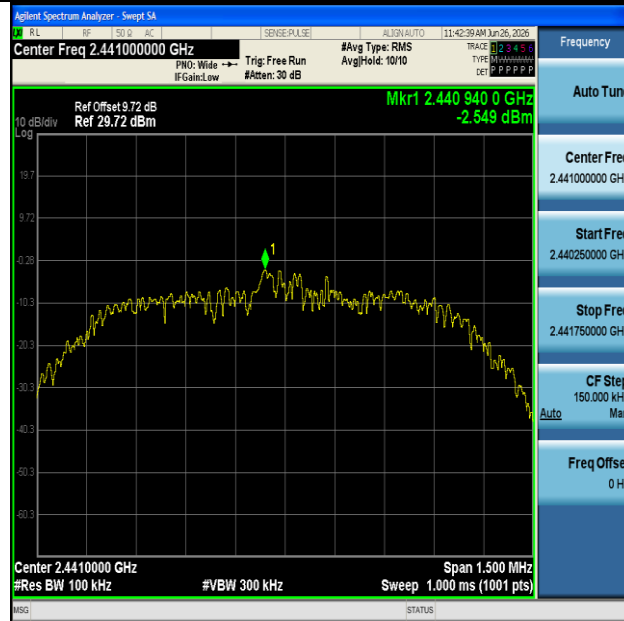


2DH5-Ant1-2402-30~1000-PASS

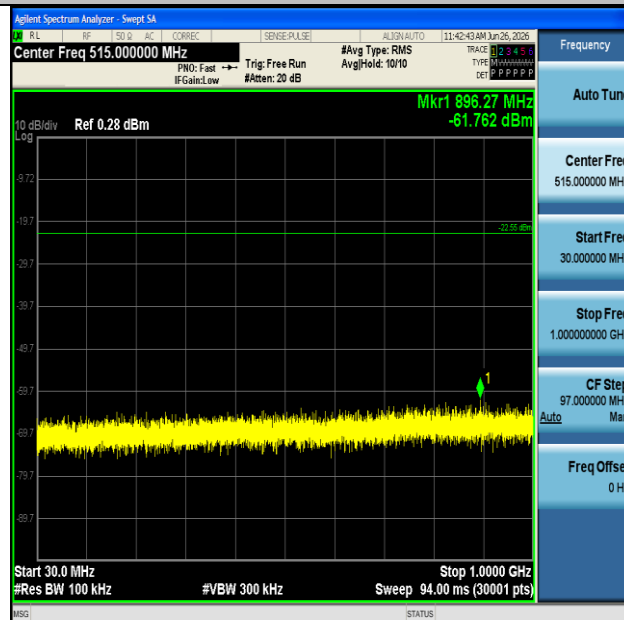


2DH5-Ant1-2402-1000~26500-PASS



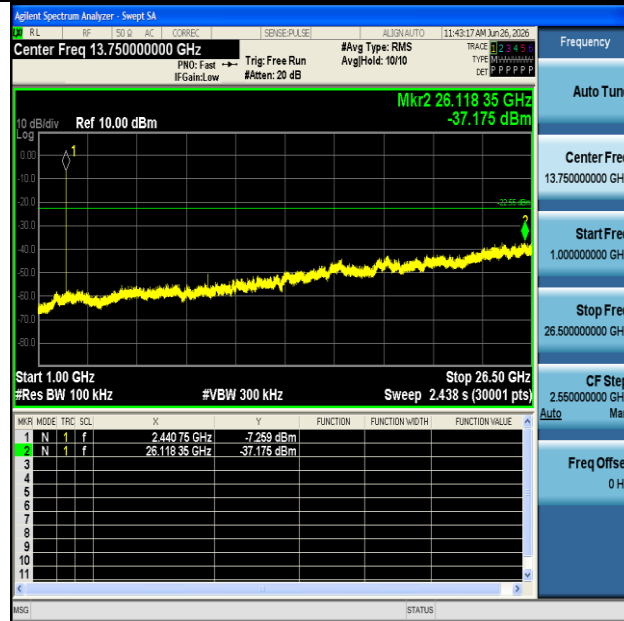


2DH5-Ant1-2441-0~Reference-PASS

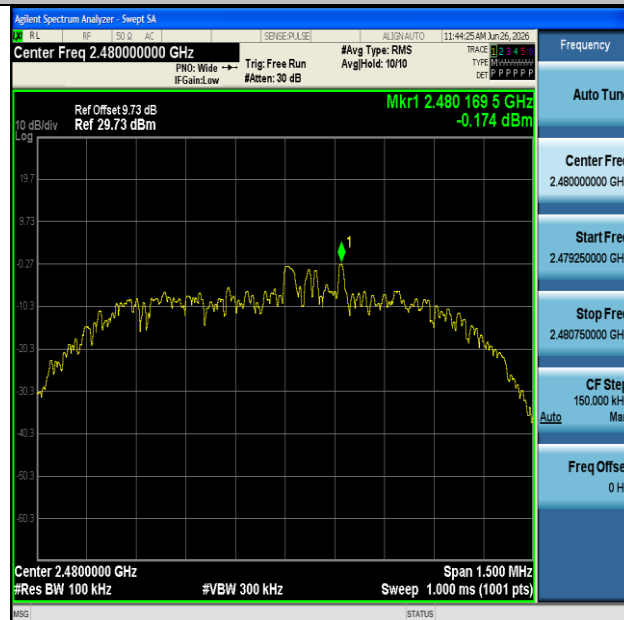


2DH5-Ant1-2441-30~1000-PASS





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

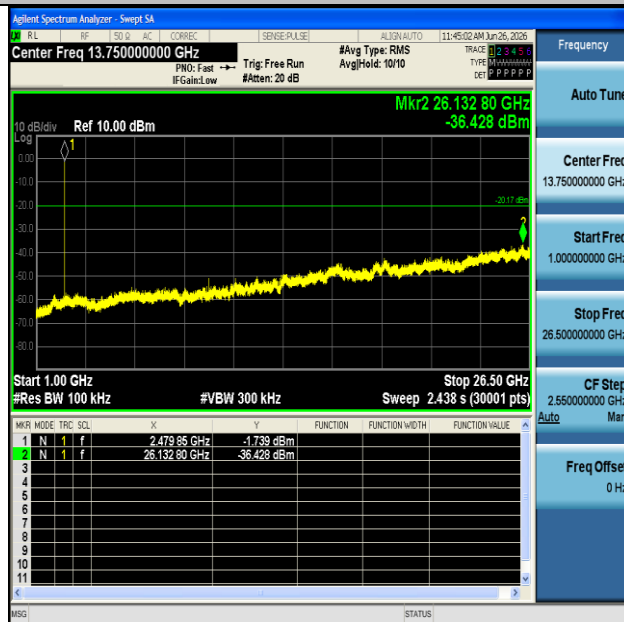


2DH5-Ant1-2480-0~Reference-PASS





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

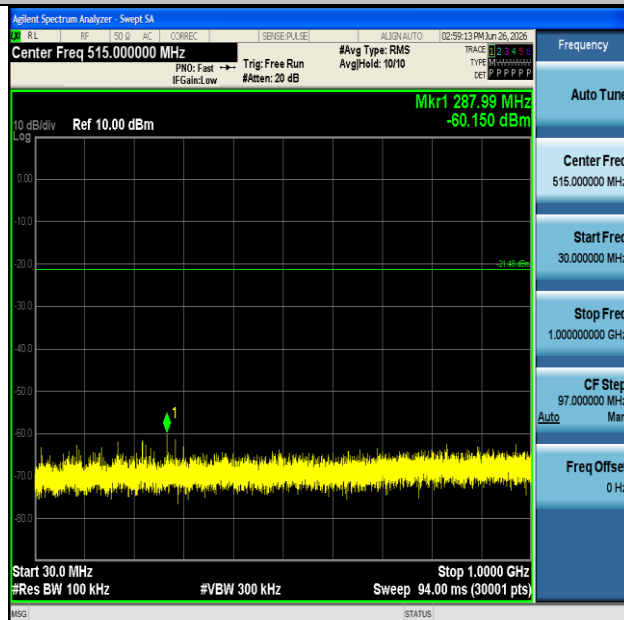


2DH5-Ant1-2480-1000~26500-PASS



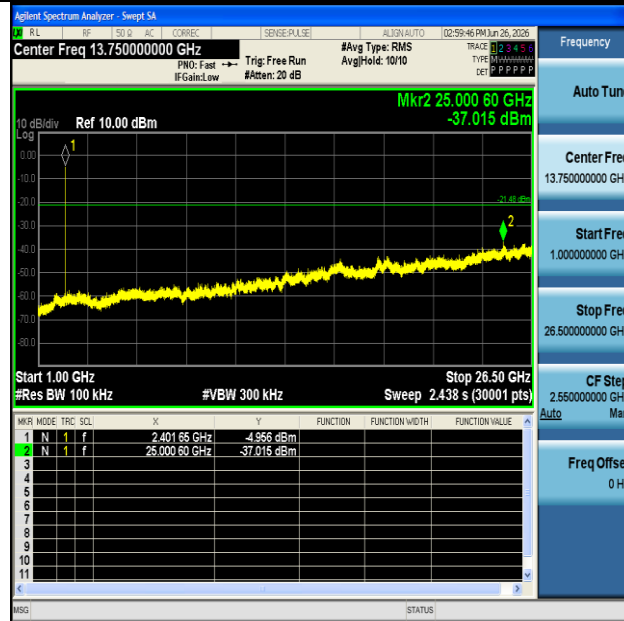


3DH5-Ant1-2402-0~Reference-PASS

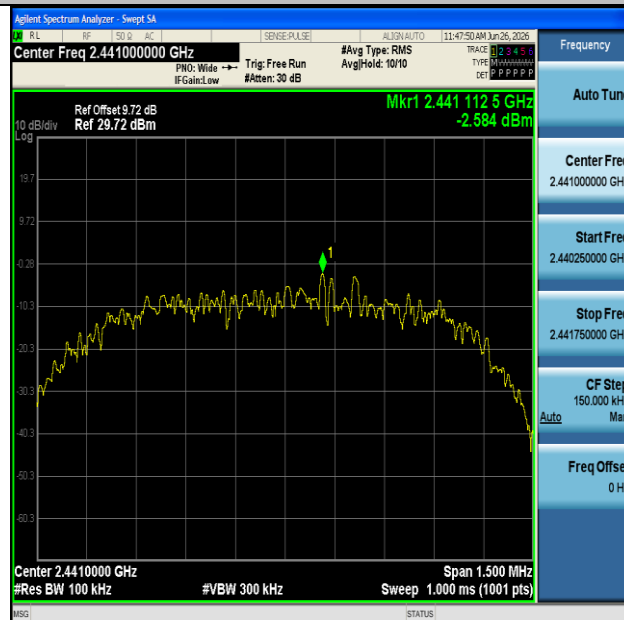


3DH5-Ant1-2402-30~1000-PASS



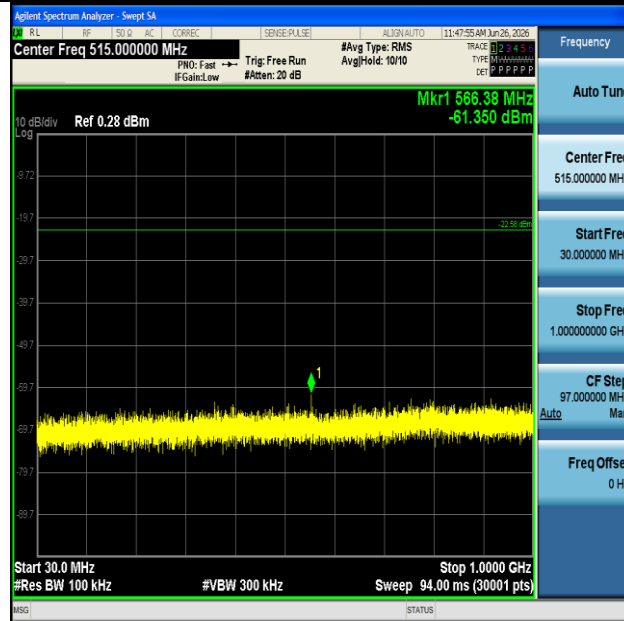


3DH5-Ant1-2402-1000~26500-PASS



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





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

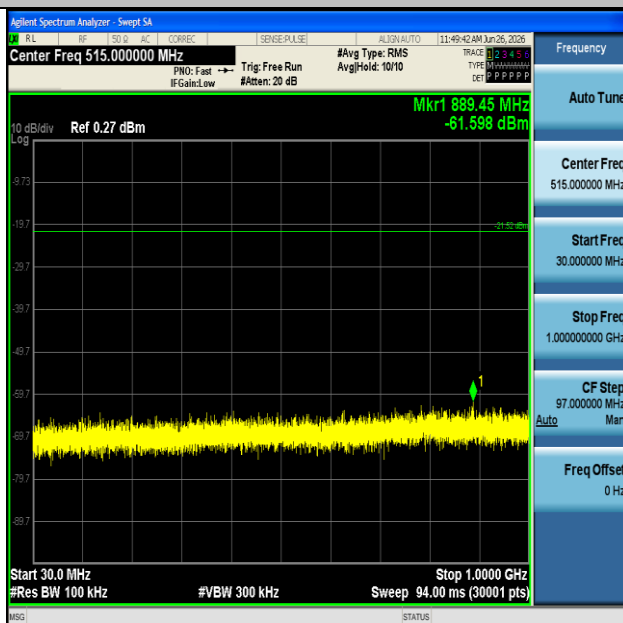


3DH5-Ant1-2441-1000~26500-PASS



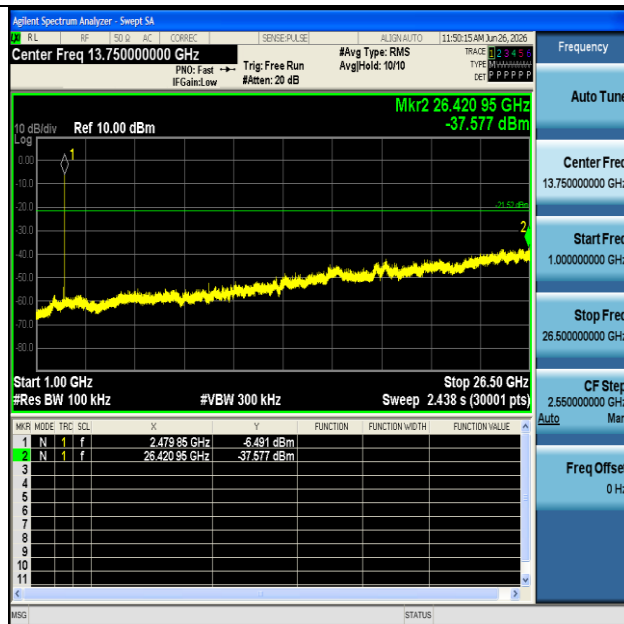


3DH5-Ant1-2480-0~Reference-PASS



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





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





## Appendix I: Duty Cycle

### Test Result

| Test Mode | Antenna | Frequency<br>[MHz] | ON Time<br>[ms] | Period<br>[ms] | Duty Cycle<br>[%] | Duty Cycle<br>Factor<br>[dB] |
|-----------|---------|--------------------|-----------------|----------------|-------------------|------------------------------|
| DH5       | Ant1    | 2402               | 2.91            | 3.75           | 77.60             | 1.10                         |
| DH5       | Ant1    | 2441               | 2.91            | 3.75           | 77.60             | 1.10                         |
| DH5       | Ant1    | 2480               | 2.90            | 3.74           | 77.54             | 1.10                         |
| 2DH5      | Ant1    | 2402               | 2.92            | 3.75           | 77.87             | 1.09                         |
| 2DH5      | Ant1    | 2441               | 2.91            | 3.75           | 77.60             | 1.10                         |
| 2DH5      | Ant1    | 2480               | 2.91            | 3.75           | 77.60             | 1.10                         |
| 3DH5      | Ant1    | 2402               | 2.92            | 3.75           | 77.87             | 1.09                         |
| 3DH5      | Ant1    | 2441               | 2.91            | 3.75           | 77.60             | 1.10                         |
| 3DH5      | Ant1    | 2480               | 2.92            | 3.75           | 77.87             | 1.09                         |

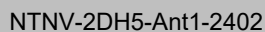
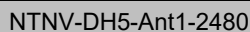
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

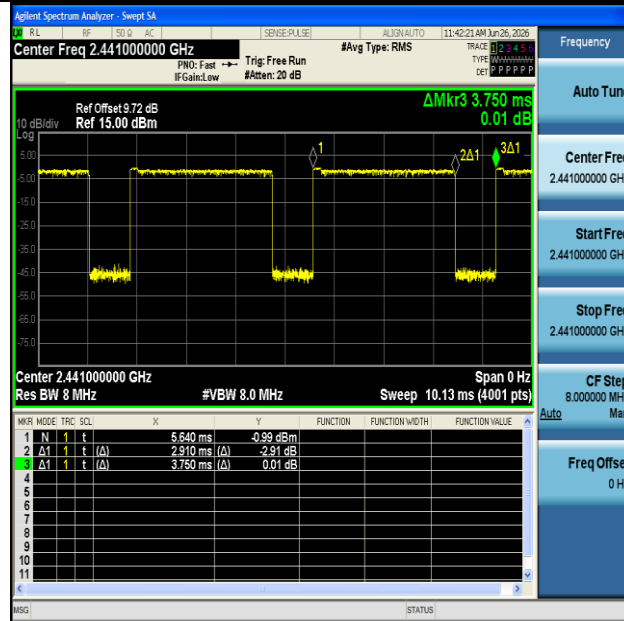




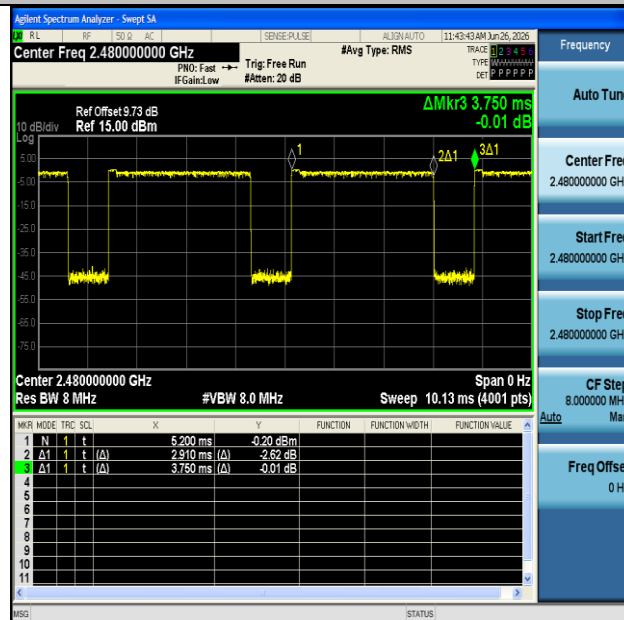
## Test Graphs





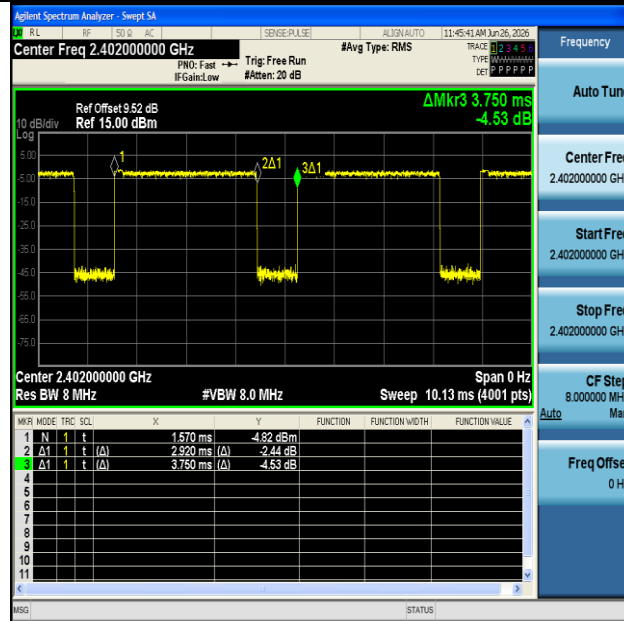


NTNV-2DH5-Ant1-2441

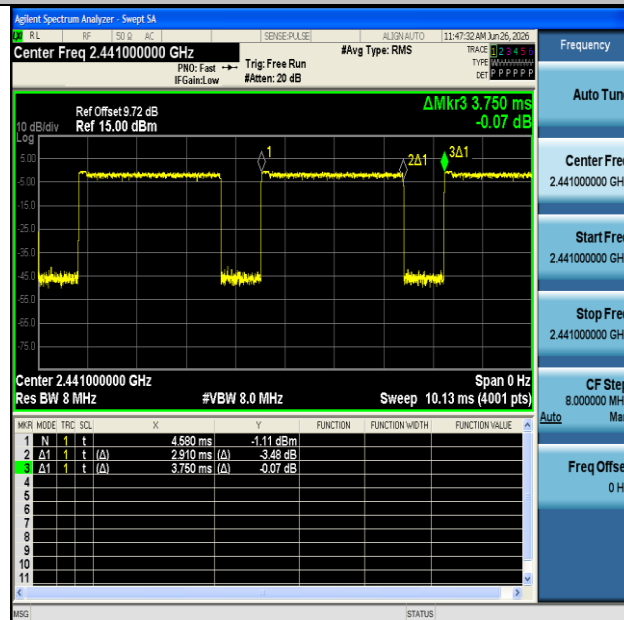


NTNV-2DH5-Ant1-2480



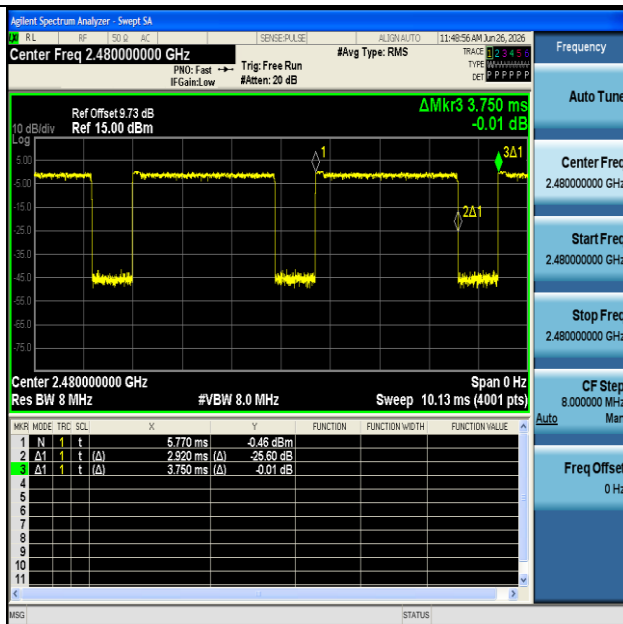


NTNV-3DH5-Ant1-2402



NTNV-3DH5-Ant1-2441





NTNV-3DH5-Ant1-2480

