



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

Product Name: Wireless Speaker

Trade Mark: Vivitar, Paris Hilton

Test Model: PRHA5000

FCC ID: 2AL9B-PRHA5000

### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 23.5°C    |
| 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               | 0.984             | 2401.502    | 2402.486    | ---            | ---     |
| DH5       | Ant1    | 2441               | 0.957             | 2440.532    | 2441.489    | ---            | ---     |
| DH5       | Ant1    | 2480               | 0.954             | 2479.526    | 2480.480    | ---            | ---     |
| 2DH5      | Ant1    | 2402               | 1.284             | 2401.364    | 2402.648    | ---            | ---     |
| 2DH5      | Ant1    | 2441               | 1.344             | 2440.316    | 2441.660    | ---            | ---     |
| 2DH5      | Ant1    | 2480               | 1.281             | 2479.358    | 2480.639    | ---            | ---     |
| 3DH5      | Ant1    | 2402               | 1.308             | 2401.343    | 2402.651    | ---            | ---     |
| 3DH5      | Ant1    | 2441               | 1.281             | 2440.346    | 2441.627    | ---            | ---     |
| 3DH5      | Ant1    | 2480               | 1.311             | 2479.334    | 2480.645    | ---            | ---     |

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               | 0.86650      | 2401.5622   | 2402.4287   | ---            | ---     |
| DH5       | Ant1    | 2441               | 0.83973      | 2440.5686   | 2441.4084   | ---            | ---     |
| DH5       | Ant1    | 2480               | 0.85811      | 2479.5581   | 2480.4162   | ---            | ---     |
| 2DH5      | Ant1    | 2402               | 1.1888       | 2401.4007   | 2402.5895   | ---            | ---     |
| 2DH5      | Ant1    | 2441               | 1.1969       | 2440.3927   | 2441.5896   | ---            | ---     |
| 2DH5      | Ant1    | 2480               | 1.1945       | 2479.3950   | 2480.5895   | ---            | ---     |
| 3DH5      | Ant1    | 2402               | 1.1997       | 2401.3968   | 2402.5965   | ---            | ---     |
| 3DH5      | Ant1    | 2441               | 1.1930       | 2440.3909   | 2441.5839   | ---            | ---     |
| 3DH5      | Ant1    | 2480               | 1.1822       | 2479.4046   | 2480.5868   | ---            | ---     |

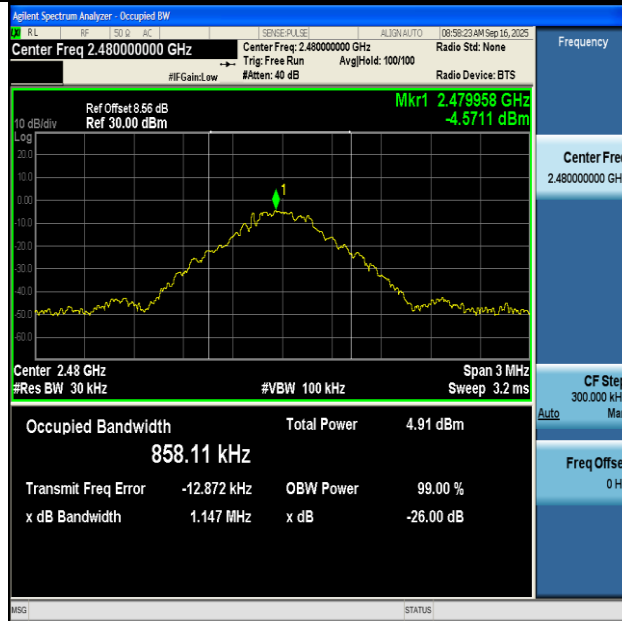
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



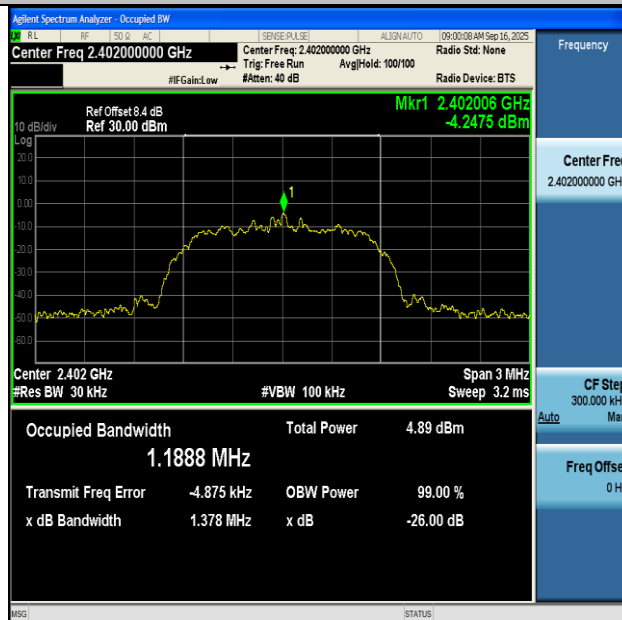


## Test Graphs



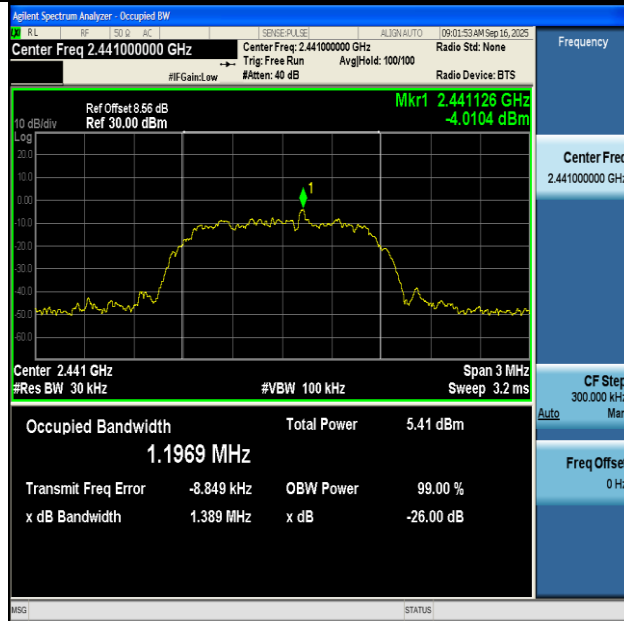


DH5-Ant1-2480



2DH5-Ant1-2402



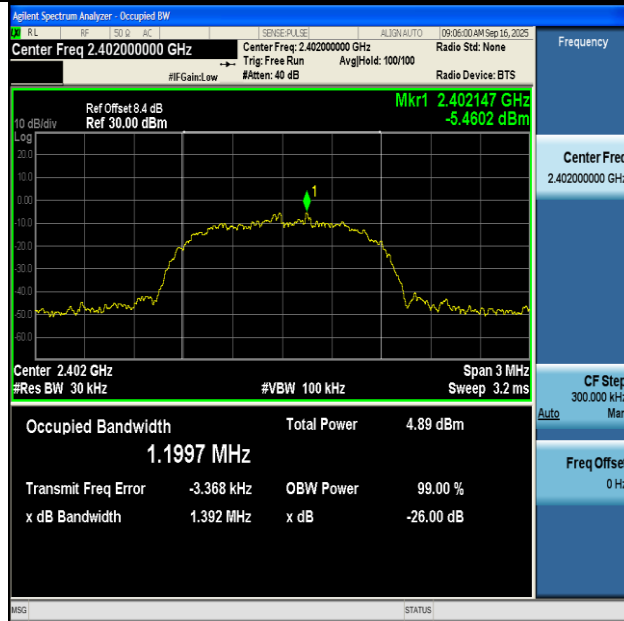


2DH5-Ant1-2441

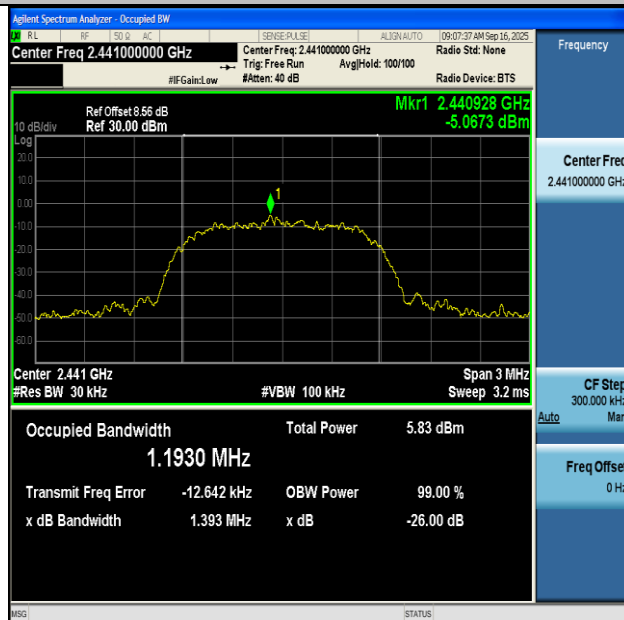


2DH5-Ant1-2480



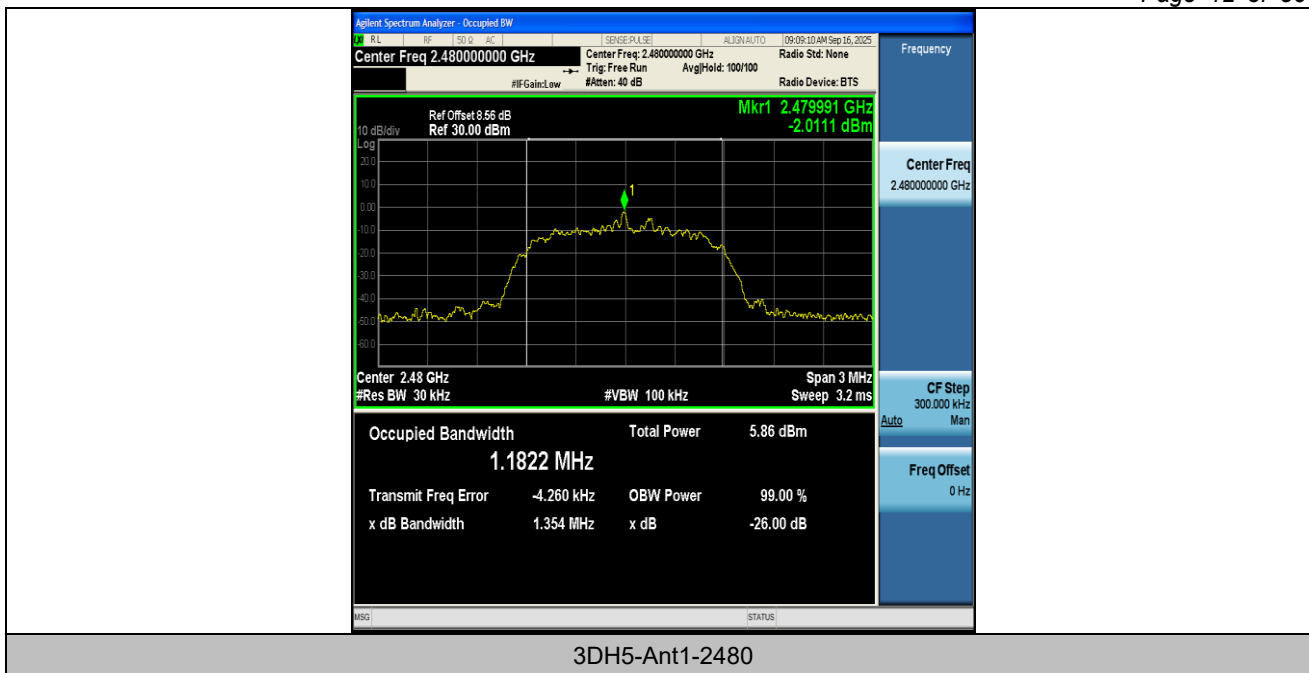


3DH5-Ant1-2402



3DH5-Ant1-2441







## Appendix C: Maximum peak conducted output power

### Test Result

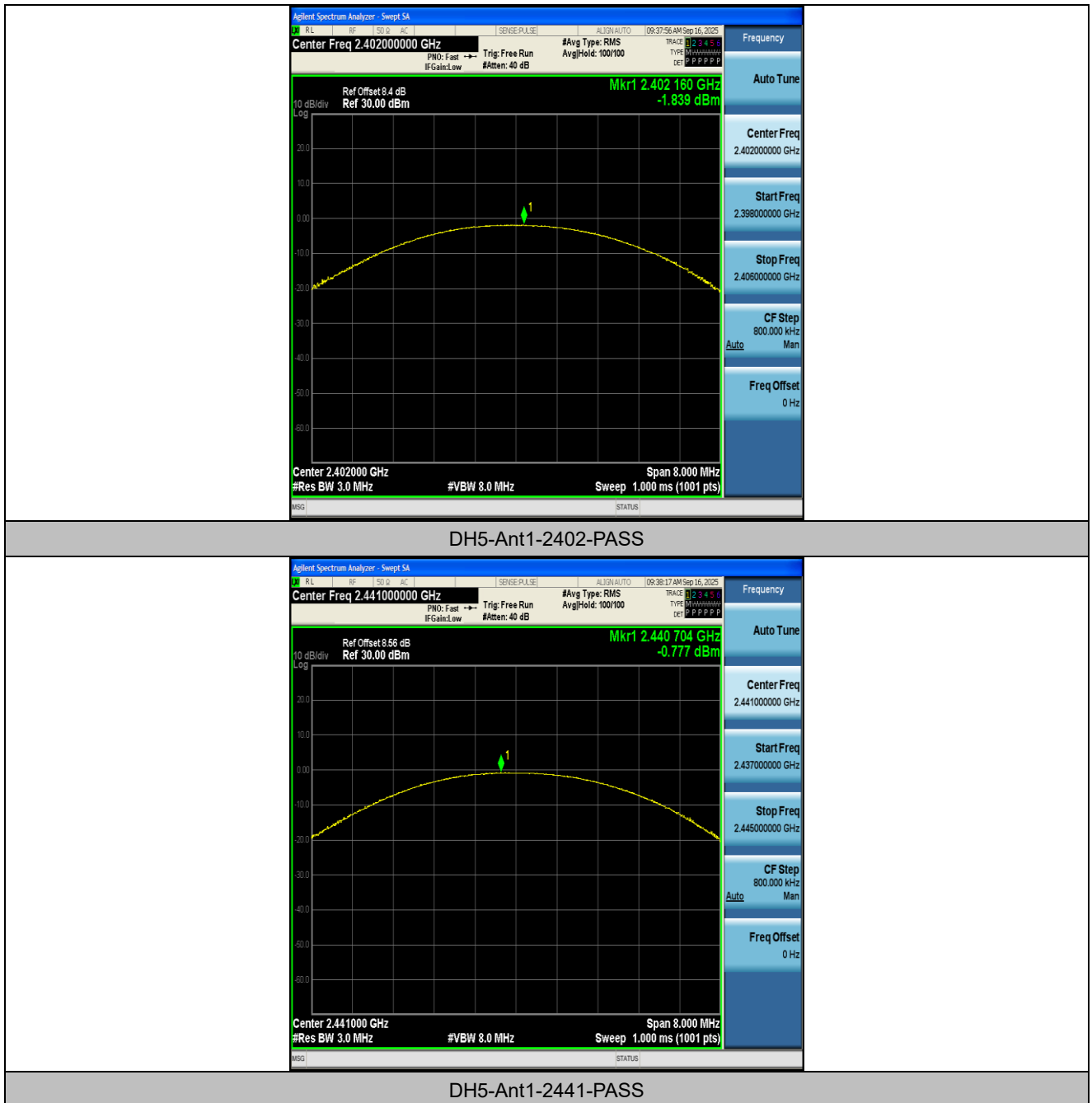
| Test Mode | Antenna | Frequency [MHz] | Conducted Peak Power [dBm] | Conducted Limit [dBm] | Verdict |
|-----------|---------|-----------------|----------------------------|-----------------------|---------|
| DH5       | Ant1    | 2402            | -1.84                      | ≤30                   | PASS    |
| DH5       | Ant1    | 2441            | -0.78                      | ≤30                   | PASS    |
| DH5       | Ant1    | 2480            | -1.36                      | ≤30                   | PASS    |
| 2DH5      | Ant1    | 2402            | 0.18                       | ≤20.97                | PASS    |
| 2DH5      | Ant1    | 2441            | 1.31                       | ≤20.97                | PASS    |
| 2DH5      | Ant1    | 2480            | 0.59                       | ≤20.97                | PASS    |
| 3DH5      | Ant1    | 2402            | 0.84                       | ≤20.97                | PASS    |
| 3DH5      | Ant1    | 2441            | 1.84                       | ≤20.97                | PASS    |
| 3DH5      | Ant1    | 2480            | 1.20                       | ≤20.97                | PASS    |

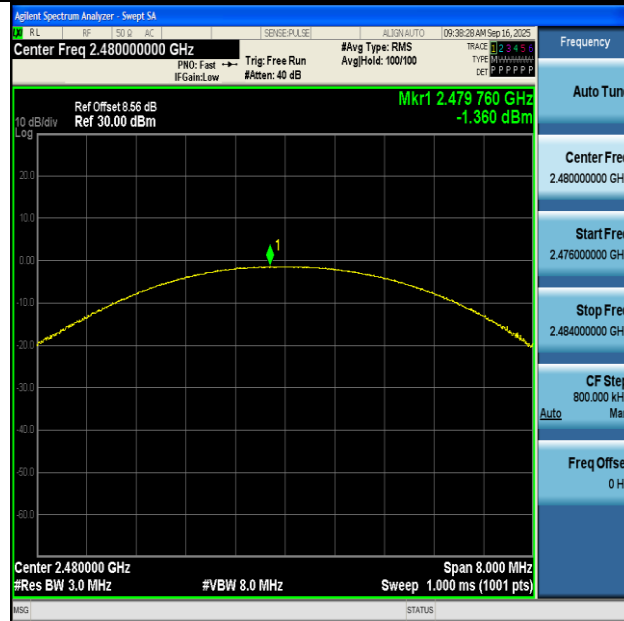
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



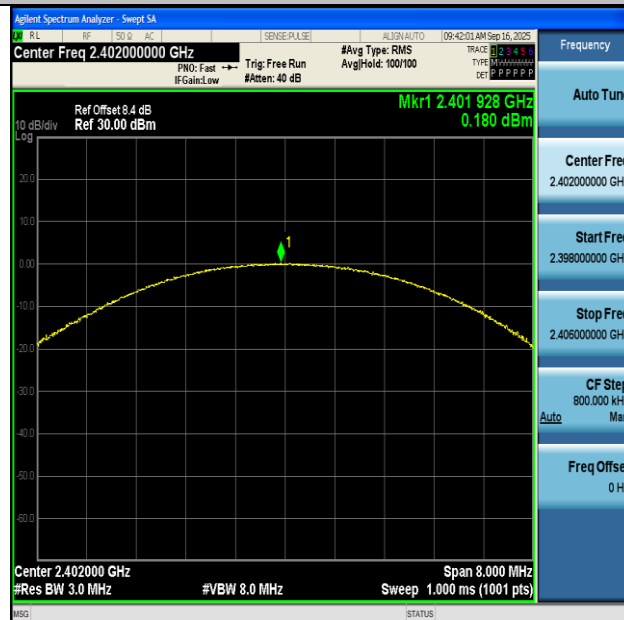


## Test Graphs



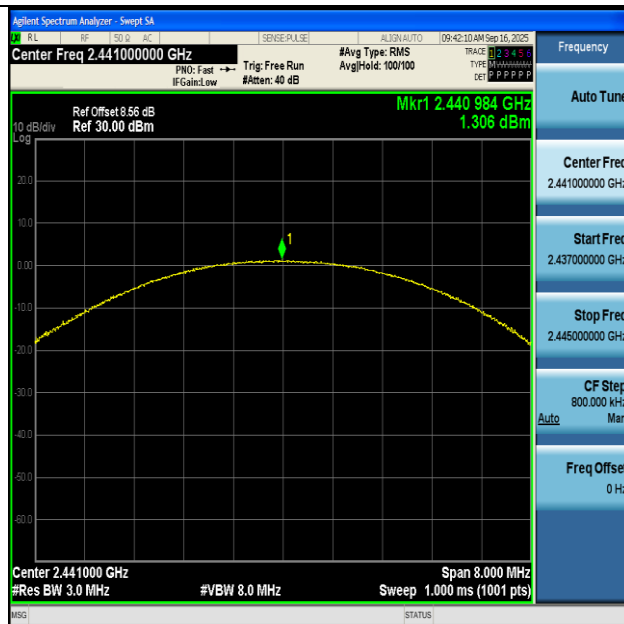


DH5-Ant1-2480-PASS

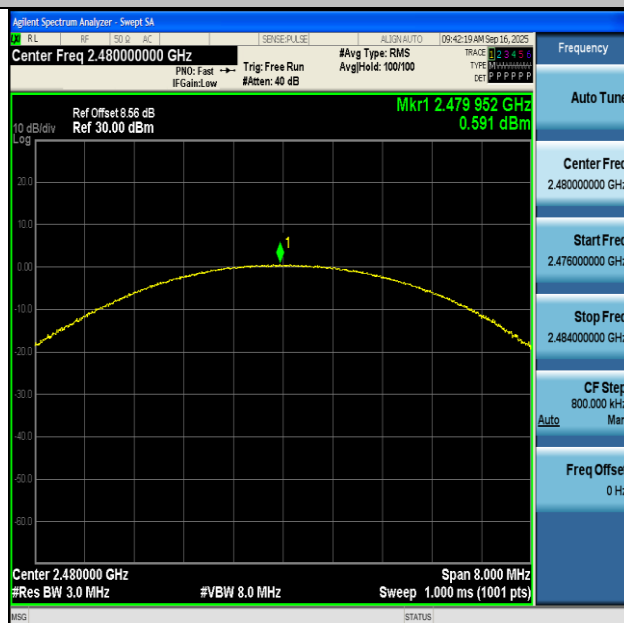


2DH5-Ant1-2402-PASS



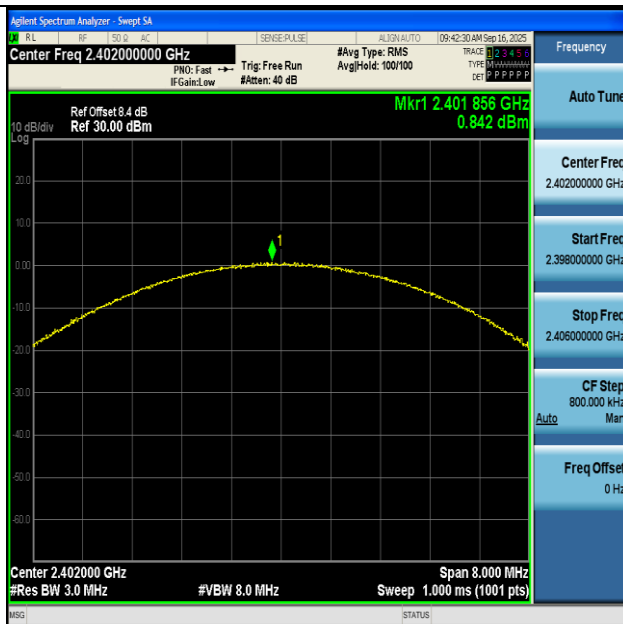


2DH5-Ant1-2441-PASS

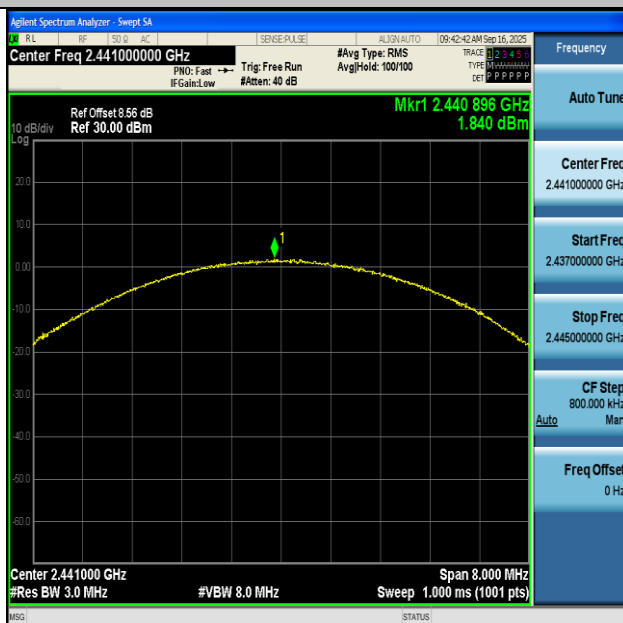


2DH5-Ant1-2480-PASS



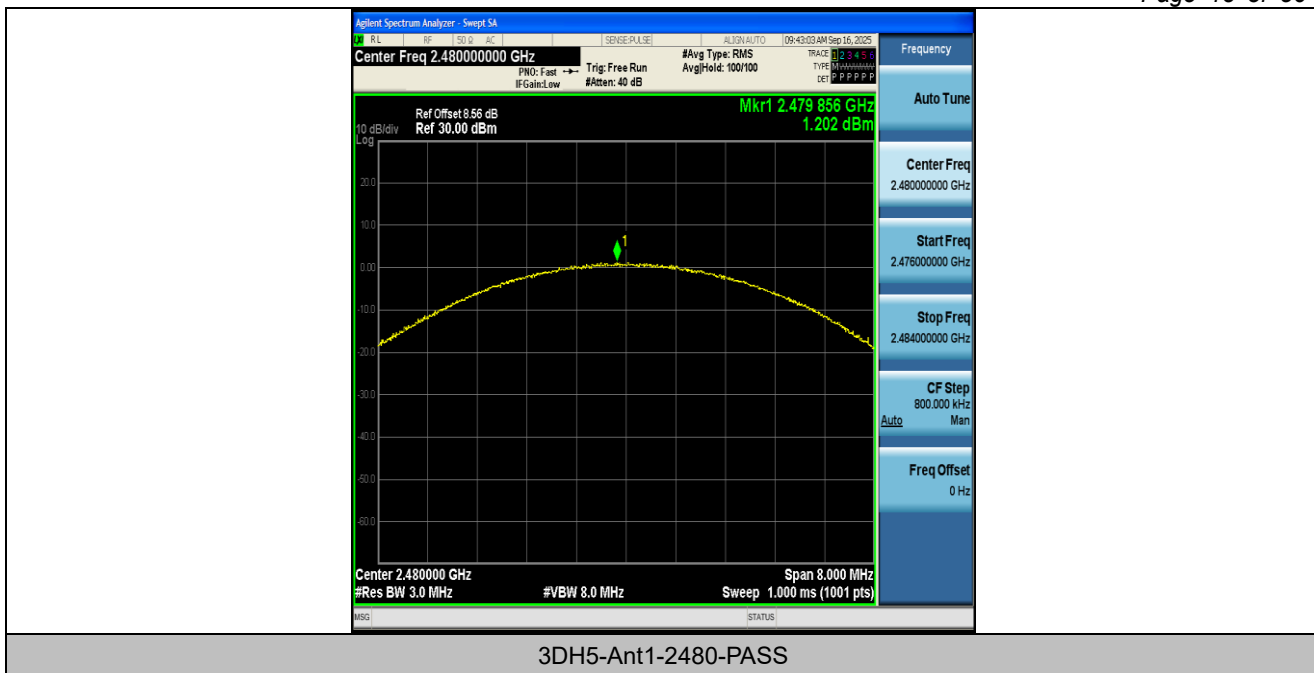


3DH5-Ant1-2402-PASS



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                | 1.028           | $\geq 0.984$   | PASS    |
| 2DH5      | Ant1    | Hop                | 0.968           | $\geq 0.896$   | PASS    |
| 3DH5      | Ant1    | Hop                | 1               | $\geq 0.874$   | PASS    |

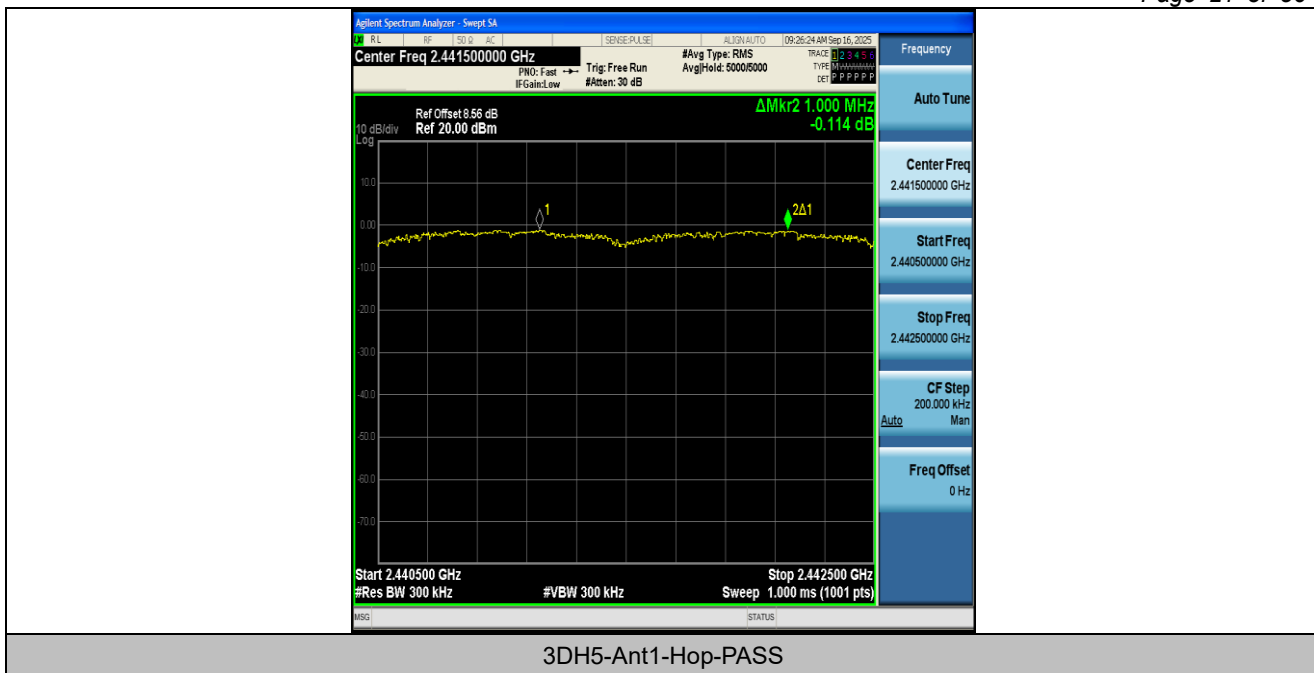
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





## Test Graphs







## Appendix E: Time of occupancy

### Test Result

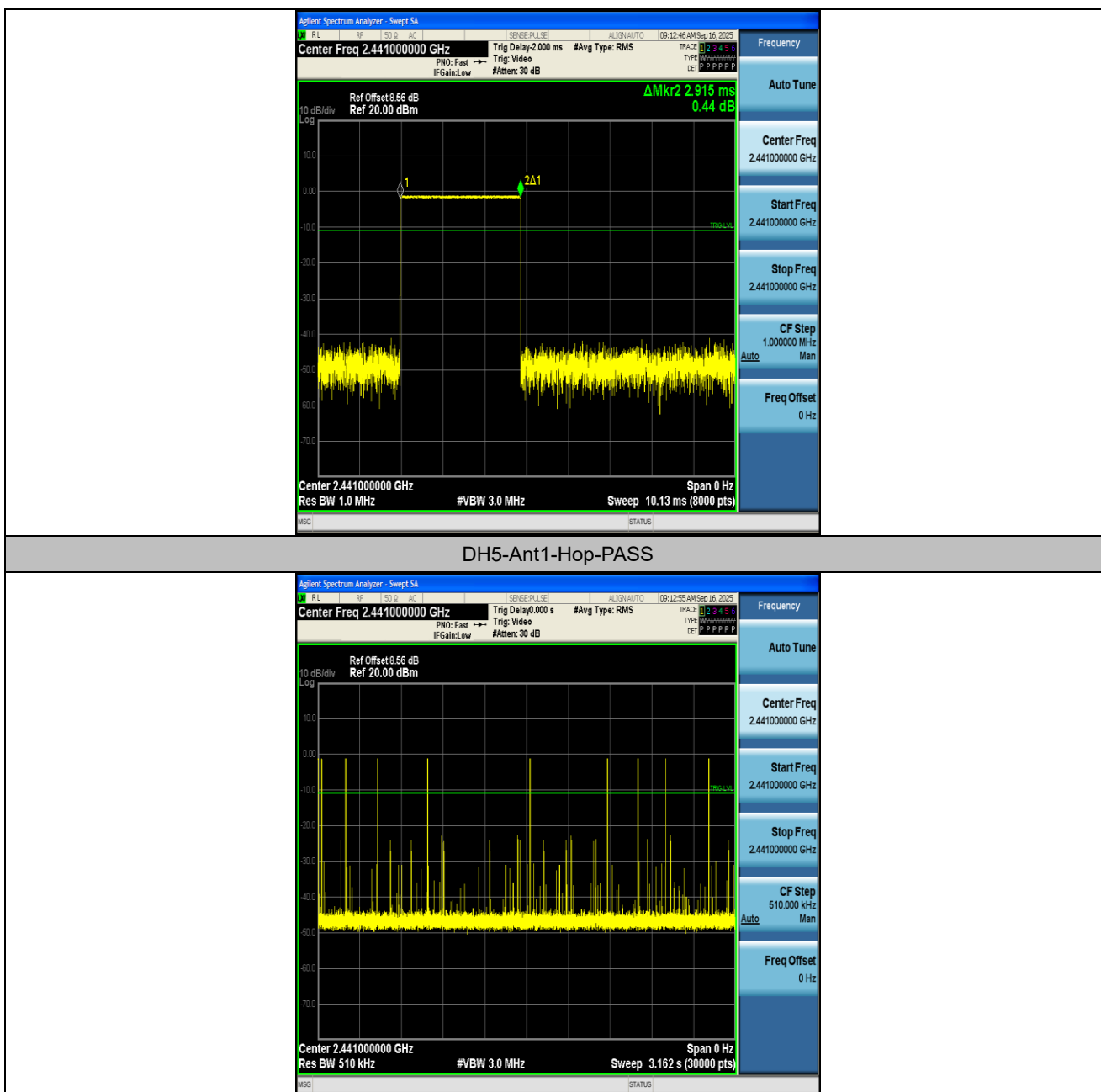
| Test Mode | Antenna | Frequency<br>[MHz] | Burst Width<br>[ms] | TotalHops<br>[Num] | Result<br>[s] | Limit<br>[s] | Verdict |
|-----------|---------|--------------------|---------------------|--------------------|---------------|--------------|---------|
| DH5       | Ant1    | Hop                | 2.915               | 100                | 0.292         | ≤0.4         | PASS    |
| 2DH5      | Ant1    | Hop                | 2.921               | 100                | 0.292         | ≤0.4         | PASS    |
| 3DH5      | Ant1    | Hop                | 2.923               | 70                 | 0.205         | ≤0.4         | PASS    |

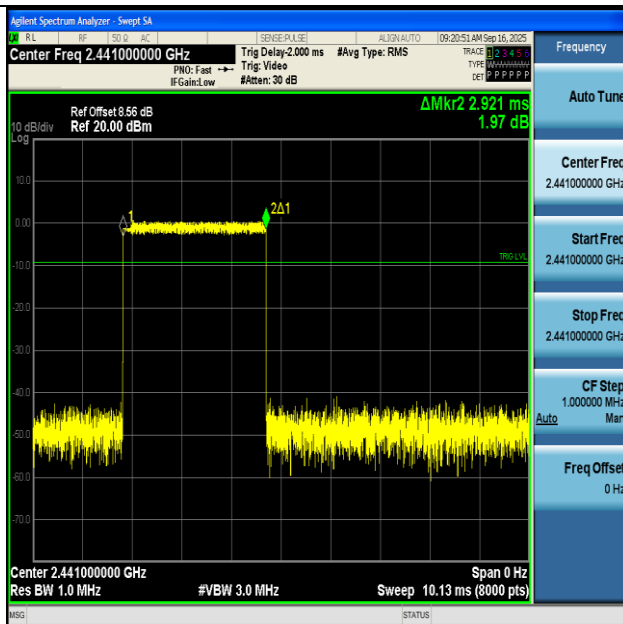
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



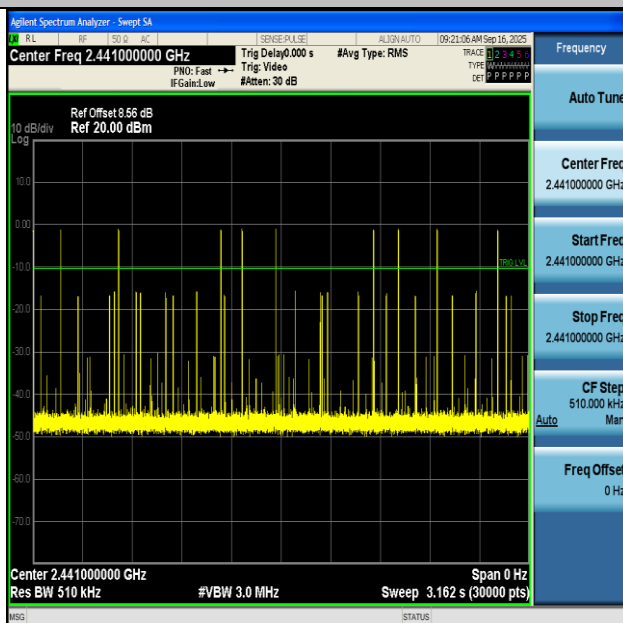


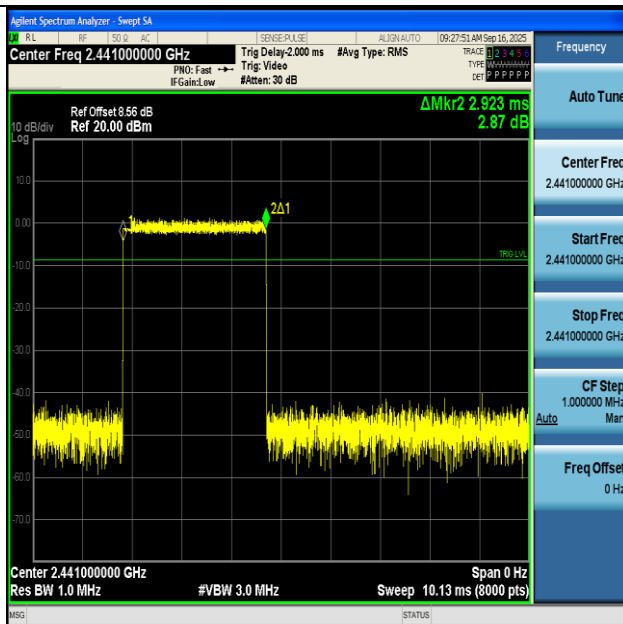
## Test Graphs



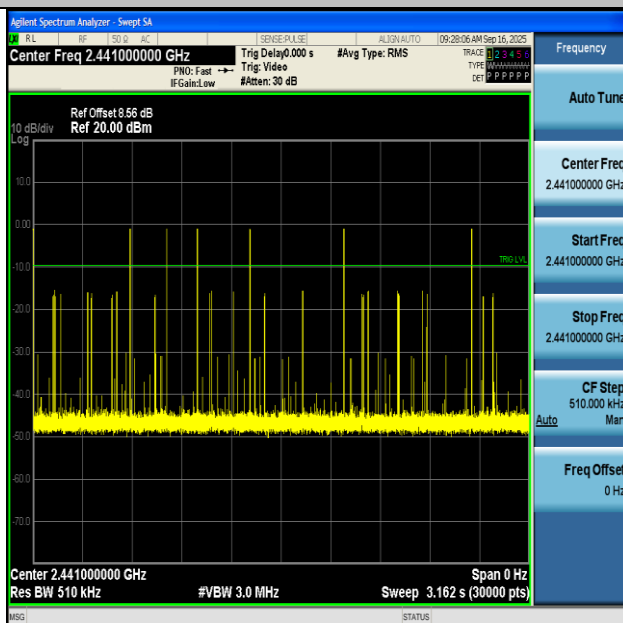


### 2DH5-Ant1-Hop-PASS





### 3DH5-Ant1-Hop-PASS





## Appendix F: Number of hopping channels

### Test Result

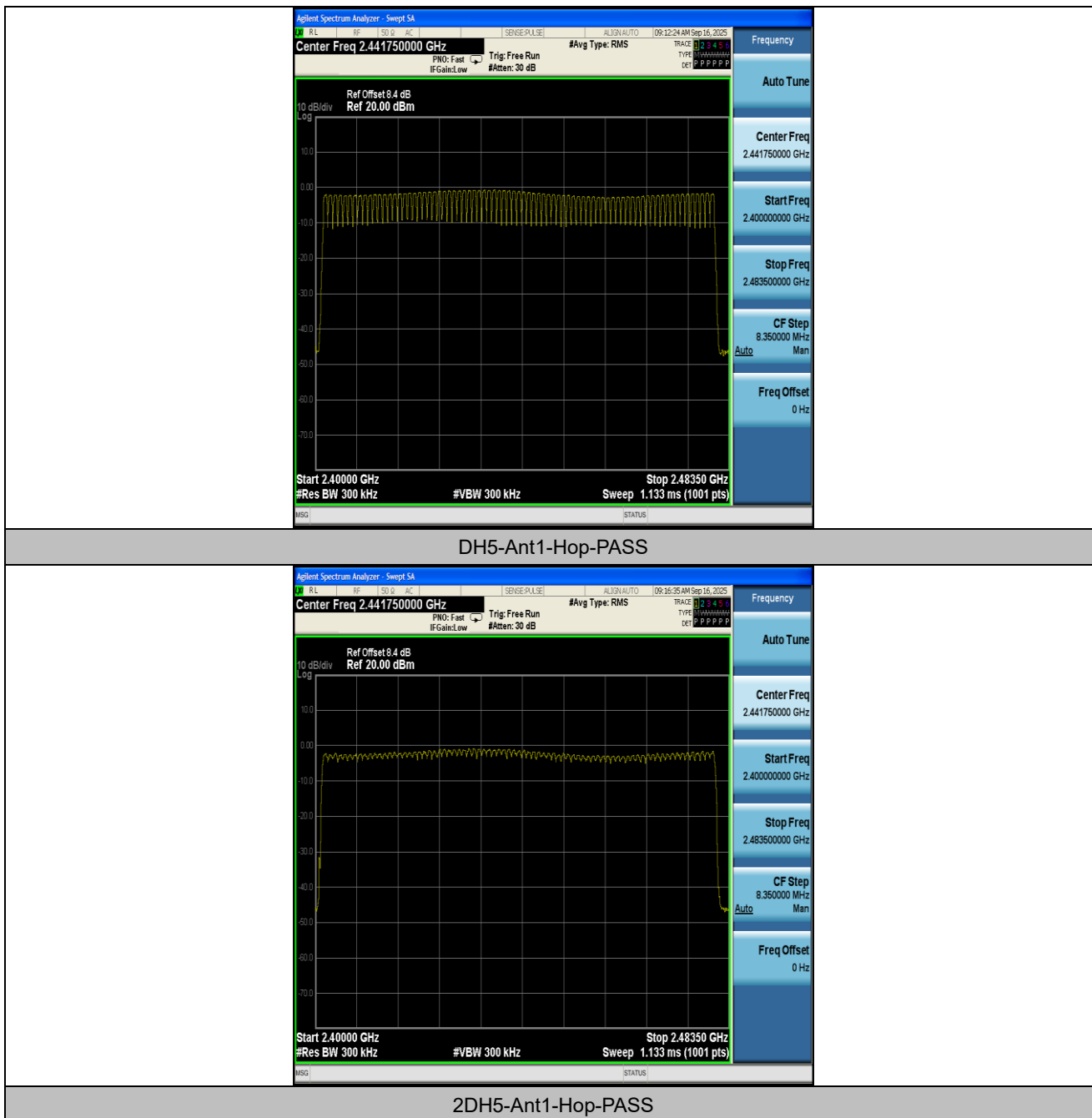
| Test Mode | Antenna | Frequency<br>[MHz] | Result<br>[Num] | Limit<br>[Num] | Verdict |
|-----------|---------|--------------------|-----------------|----------------|---------|
| DH5       | Ant1    | Hop                | 79              | ≥15            | PASS    |
| 2DH5      | Ant1    | Hop   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

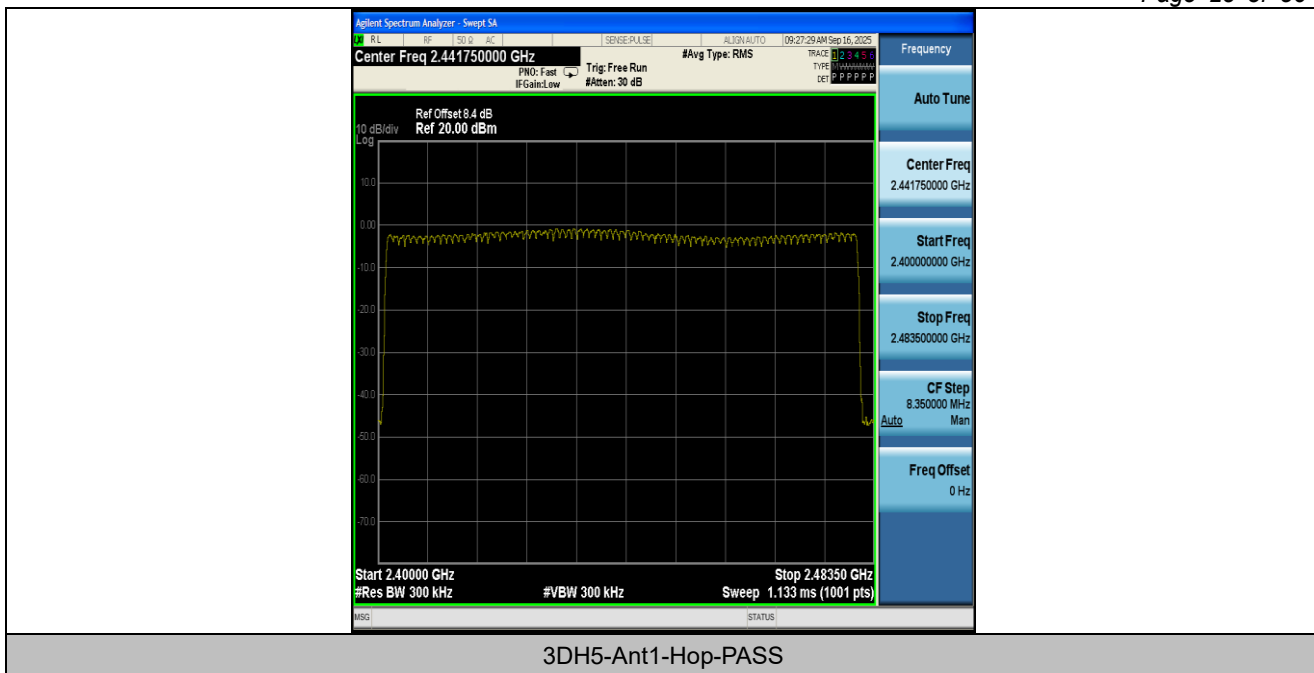
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





## Test Graphs







## Appendix G: Band edge measurements

### Test Result

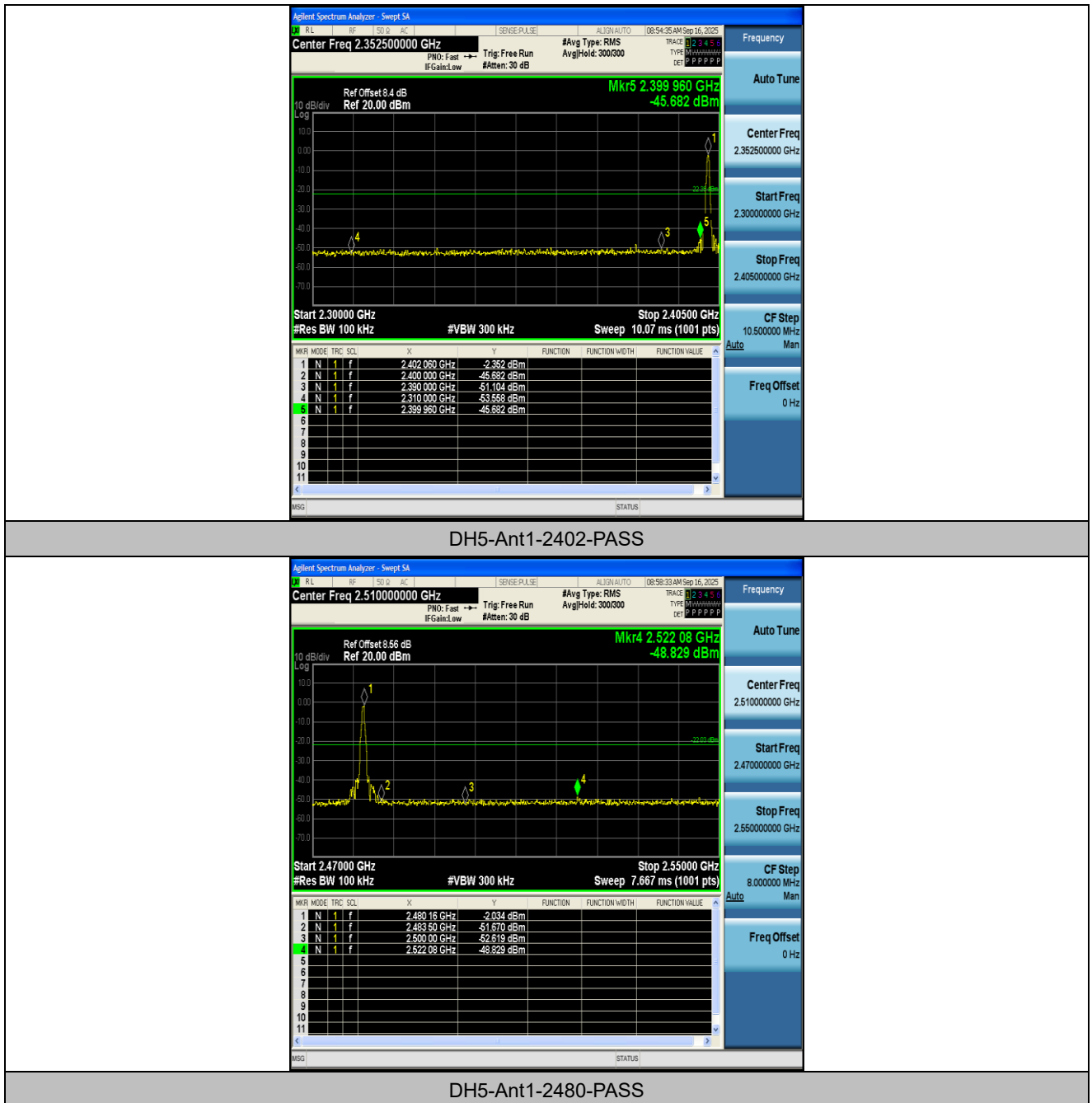
| Test Mode | Antenna | Ch.Name | Frequency [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm]   | Verdict |
|-----------|---------|---------|-----------------|----------------|--------------|---------------|---------|
| DH5       | Ant1    | Low     | 2402            | -2.35          | -45.68       | $\leq -22.35$ | PASS    |
| DH5       | Ant1    | High    | 2480            | -2.03          | -48.83       | $\leq -22.03$ | PASS    |
| DH5       | Ant1    | Low     | Hop_2402        | -2.82          | -49.46       | $\leq -22.82$ | PASS    |
| DH5       | Ant1    | High    | Hop_2480        | -2.22          | -48.63       | $\leq -22.22$ | PASS    |
| 2DH5      | Ant1    | Low     | 2402            | -2.65          | -48.15       | $\leq -22.65$ | PASS    |
| 2DH5      | Ant1    | High    | 2480            | -3.46          | -49.07       | $\leq -23.46$ | PASS    |
| 2DH5      | Ant1    | Low     | Hop_2402        | -5.25          | -49.72       | $\leq -25.25$ | PASS    |
| 2DH5      | Ant1    | High    | Hop_2480        | -1.90          | -48.81       | $\leq -21.9$  | PASS    |
| 3DH5      | Ant1    | Low     | 2402            | -2.34          | -45.74       | $\leq -22.34$ | PASS    |
| 3DH5      | Ant1    | High    | 2480            | -2.02          | -48.6        | $\leq -22.02$ | PASS    |
| 3DH5      | Ant1    | Low     | Hop_2402        | -4.29          | -46.96       | $\leq -24.29$ | PASS    |
| 3DH5      | Ant1    | High    | Hop_2480        | -3.61          | -48.97       | $\leq -23.61$ | PASS    |

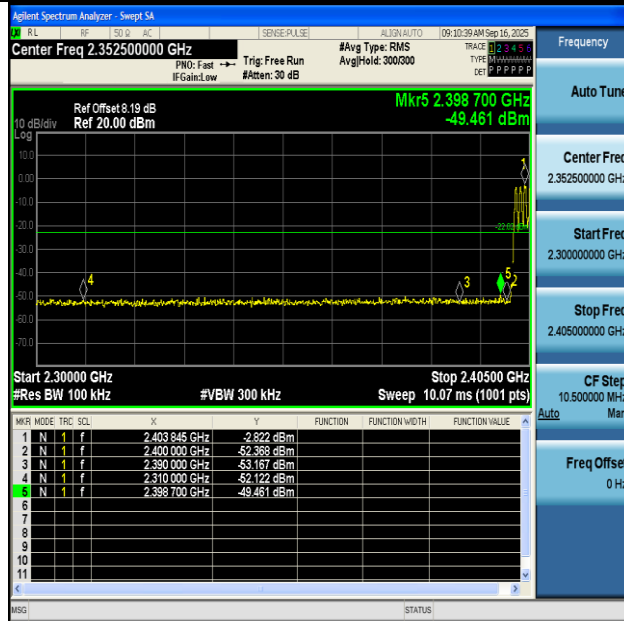
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



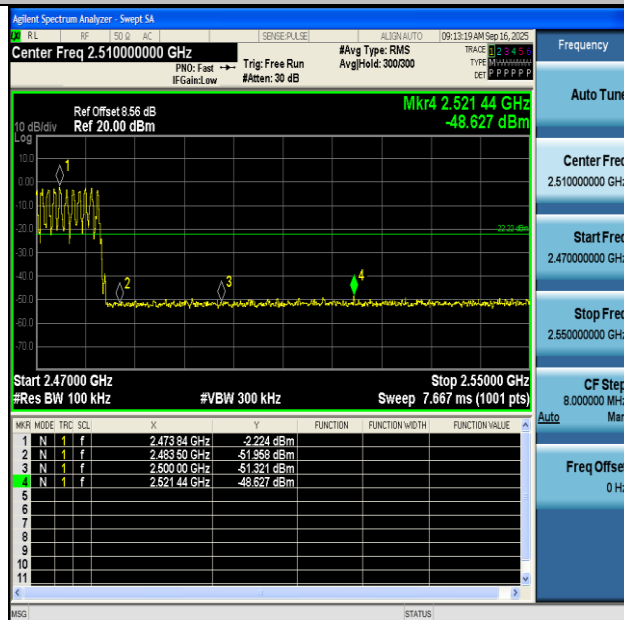


## Test Graphs



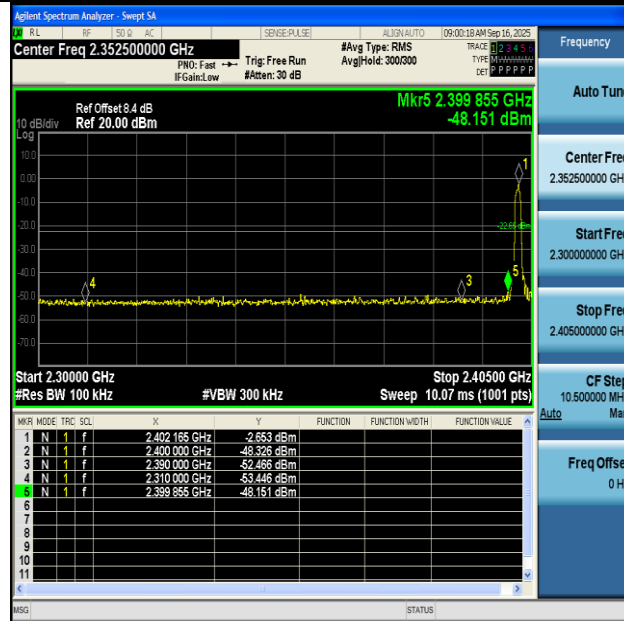


DH5-Ant1-Hop\_2402-PASS

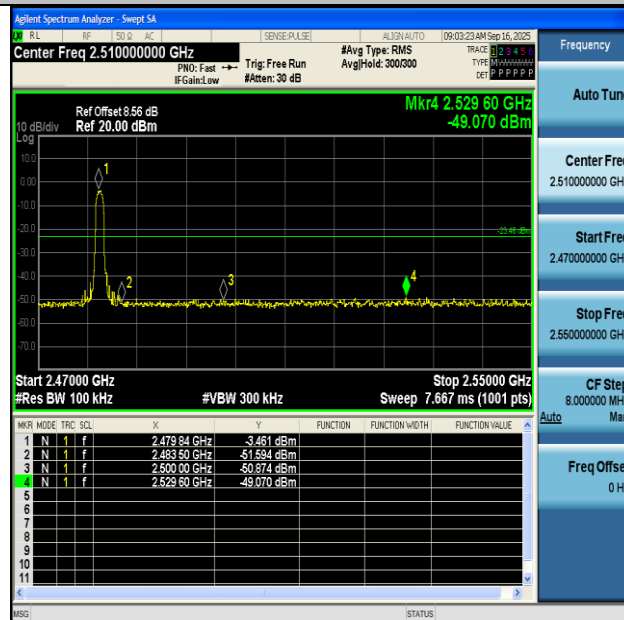


DH5-Ant1-Hop\_2480-PASS



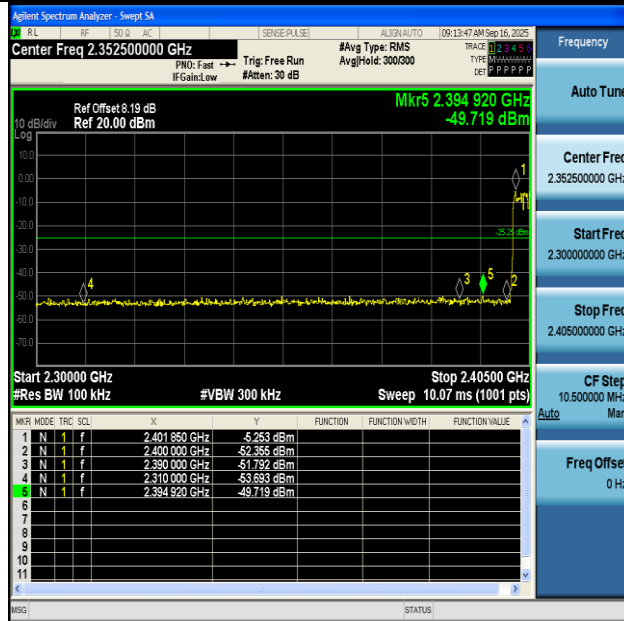


2DH5-Ant1-2402-PASS

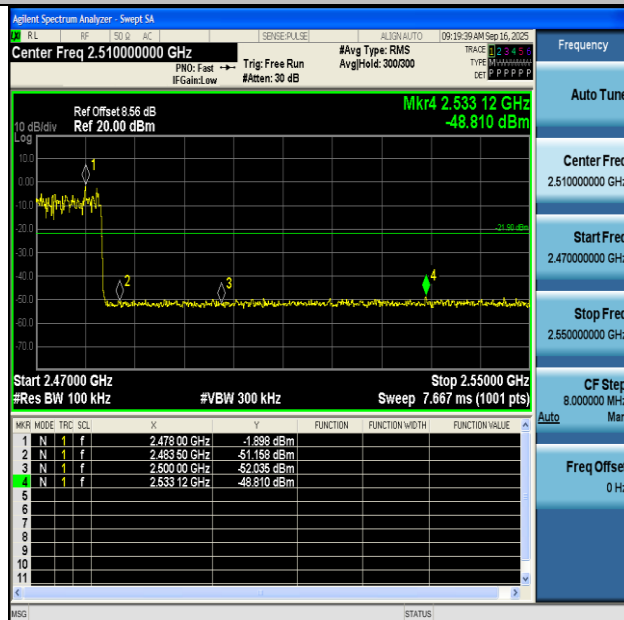


2DH5-Ant1-2480-PASS



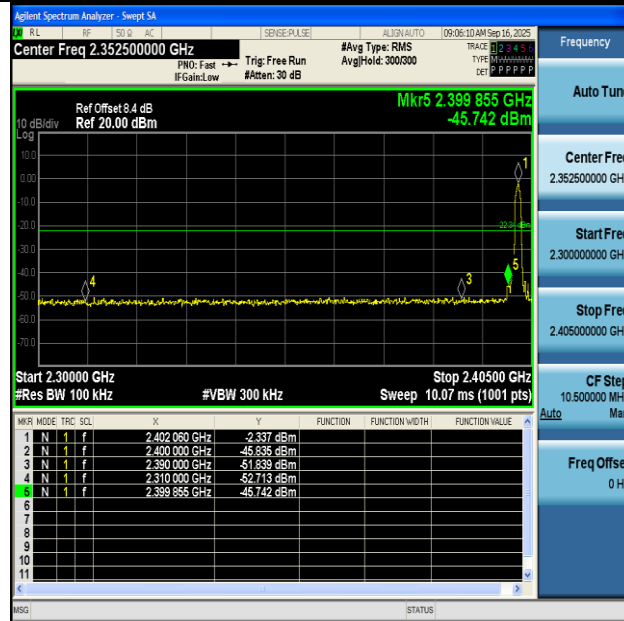


2DH5-Ant1-Hop\_2402-PASS

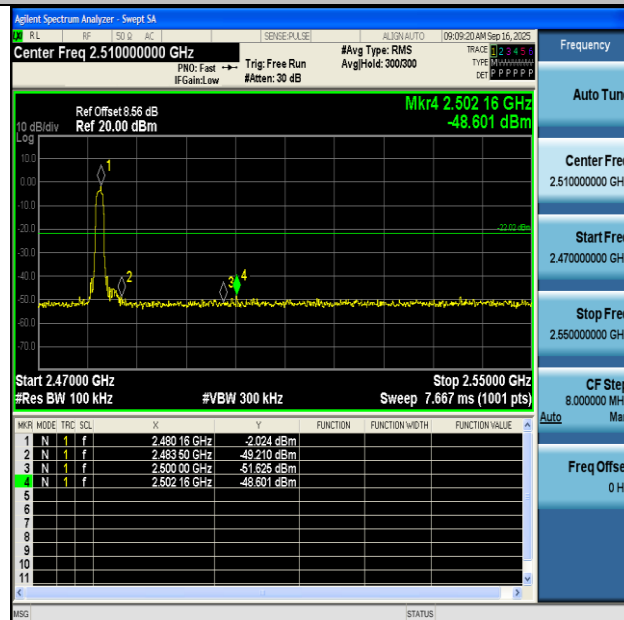


2DH5-Ant1-Hop\_2480-PASS



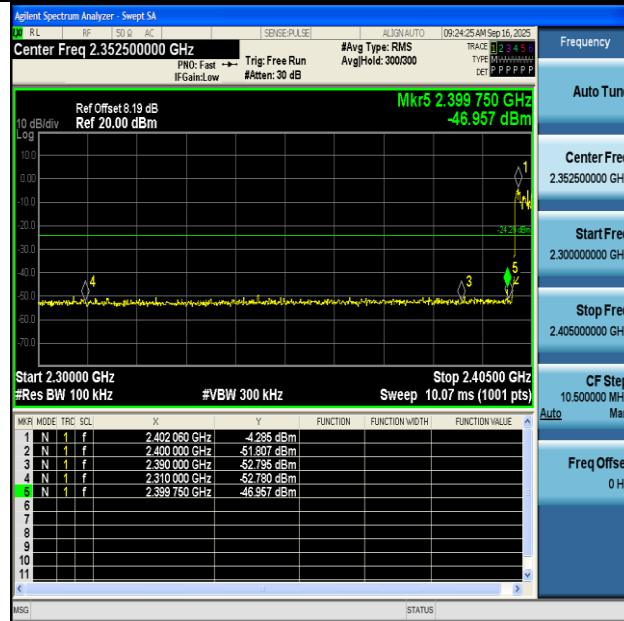


3DH5-Ant1-2402-PASS

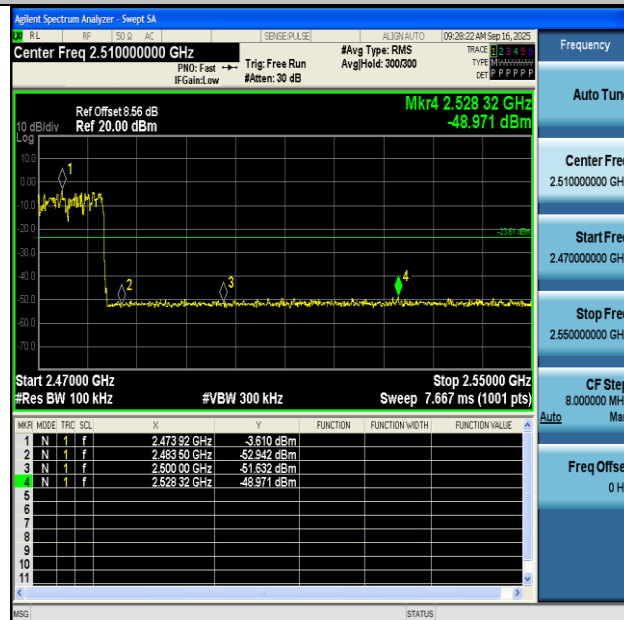


3DH5-Ant1-2480-PASS





3DH5-Ant1-Hop\_2402-PASS



3DH5-Ant1-Hop\_2480-PASS





## Appendix H: Conducted Spurious Emission

### Test Result

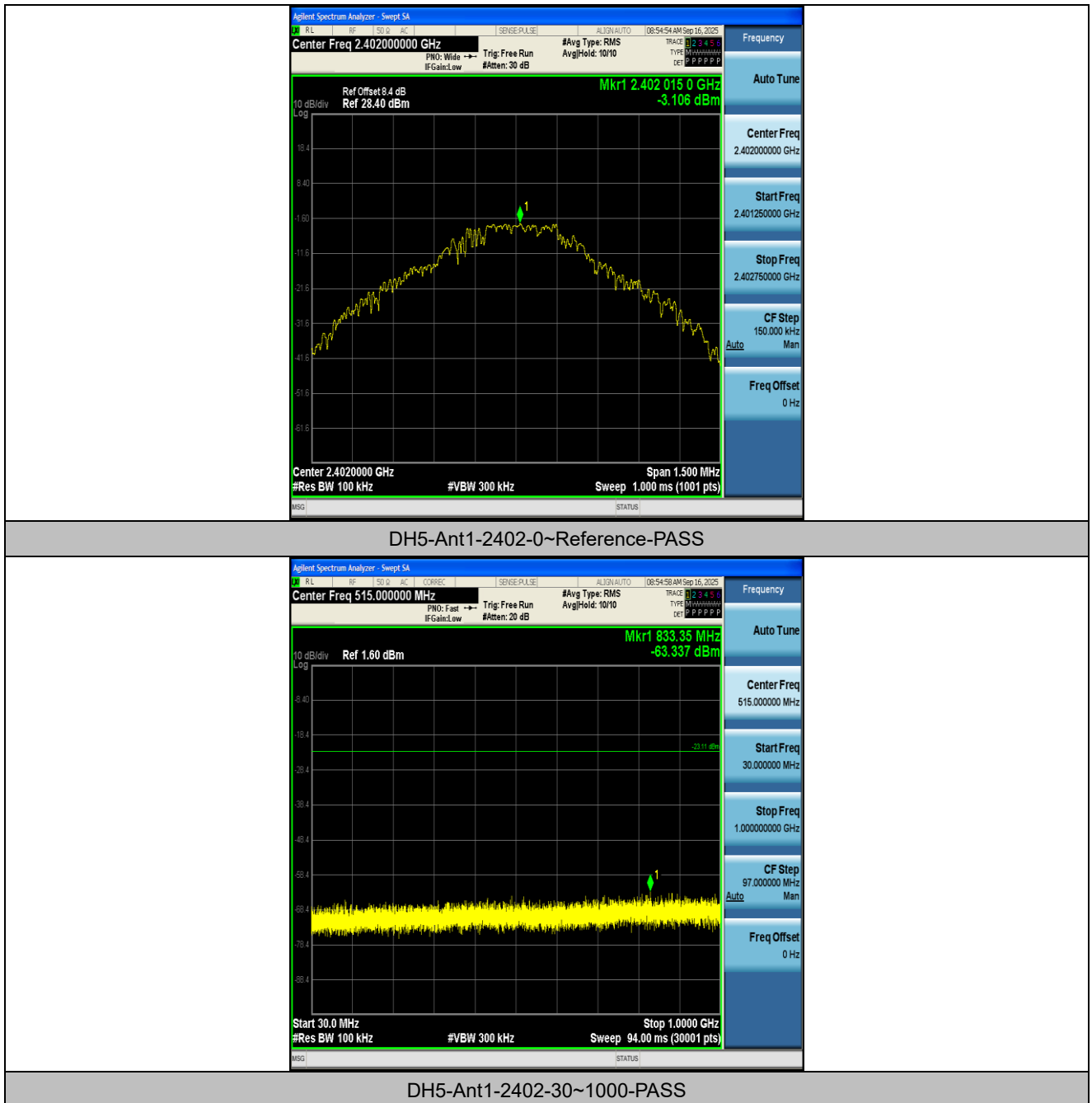
| Test Mode | Antenna | Frequency [MHz] | Freq. Range [MHz] | Ref. Level [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|---------|-----------------|-------------------|------------------|--------------|-------------|---------|
| DH5       | Ant1    | 2402            | 0~Reference       | -3.11            | -3.11        | ---         | PASS    |
| DH5       | Ant1    | 2402            | 30~1000           | -3.11            | -63.34       | ≤-23.11     | PASS    |
| DH5       | Ant1    | 2402            | 1000~26500        | -3.11            | -32.5        | ≤-23.11     | PASS    |
| DH5       | Ant1    | 2441            | 0~Reference       | -1.59            | -1.59        | ---         | PASS    |
| DH5       | Ant1    | 2441            | 30~1000           | -1.59            | -62.96       | ≤-21.59     | PASS    |
| DH5       | Ant1    | 2441            | 1000~26500        | -1.59            | -32.53       | ≤-21.59     | PASS    |
| DH5       | Ant1    | 2480            | 0~Reference       | -2.05            | -2.05        | ---         | PASS    |
| DH5       | Ant1    | 2480            | 30~1000           | -2.05            | -63.04       | ≤-22.05     | PASS    |
| DH5       | Ant1    | 2480            | 1000~26500        | -2.05            | -34.03       | ≤-22.05     | PASS    |
| 2DH5      | Ant1    | 2402            | 0~Reference       | -4.22            | -4.22        | ---         | PASS    |
| 2DH5      | Ant1    | 2402            | 30~1000           | -4.22            | -63.65       | ≤-24.22     | PASS    |
| 2DH5      | Ant1    | 2402            | 1000~26500        | -4.22            | -34.09       | ≤-24.22     | PASS    |
| 2DH5      | Ant1    | 2441            | 0~Reference       | -2.09            | -2.09        | ---         | PASS    |
| 2DH5      | Ant1    | 2441            | 30~1000           | -2.09            | -62.69       | ≤-22.09     | PASS    |
| 2DH5      | Ant1    | 2441            | 1000~26500        | -2.09            | -35.03       | ≤-22.09     | PASS    |
| 2DH5      | Ant1    | 2480            | 0~Reference       | -4.63            | -4.63        | ---         | PASS    |
| 2DH5      | Ant1    | 2480            | 30~1000           | -4.63            | -63.2        | ≤-24.63     | PASS    |
| 2DH5      | Ant1    | 2480            | 1000~26500        | -4.63            | -38.15       | ≤-24.63     | PASS    |
| 3DH5      | Ant1    | 2402            | 0~Reference       | -4.90            | -4.90        | ---         | PASS    |
| 3DH5      | Ant1    | 2402            | 30~1000           | -4.90            | -63.71       | ≤-24.9      | PASS    |
| 3DH5      | Ant1    | 2402            | 1000~26500        | -4.90            | -32.76       | ≤-24.9      | PASS    |
| 3DH5      | Ant1    | 2441            | 0~Reference       | -3.82            | -3.82        | ---         | PASS    |
| 3DH5      | Ant1    | 2441            | 30~1000           | -3.82            | -61.68       | ≤-23.82     | PASS    |
| 3DH5      | Ant1    | 2441            | 1000~26500        | -3.82            | -31.97       | ≤-23.82     | PASS    |
| 3DH5      | Ant1    | 2480            | 0~Reference       | -2.10            | -2.10        | ---         | PASS    |
| 3DH5      | Ant1    | 2480            | 30~1000           | -2.10            | -62.19       | ≤-22.1      | PASS    |
| 3DH5      | Ant1    | 2480            | 1000~26500        | -2.10            | -37.04       | ≤-22.1      | PASS    |

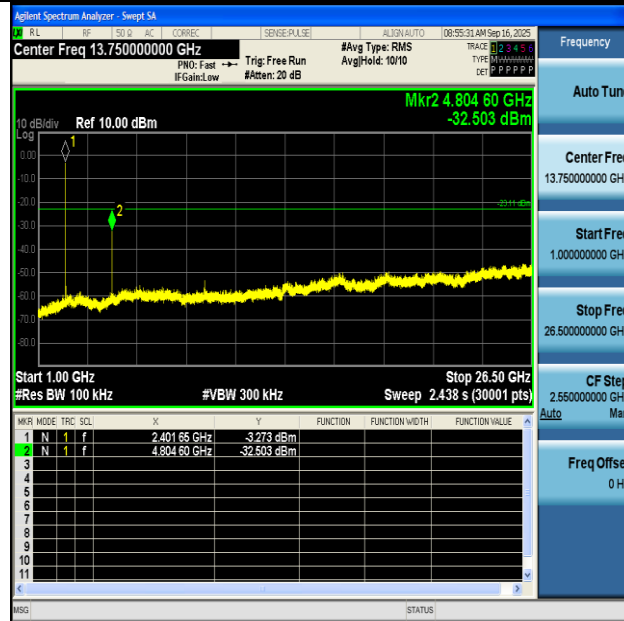
Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 26.5GHz, the cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.



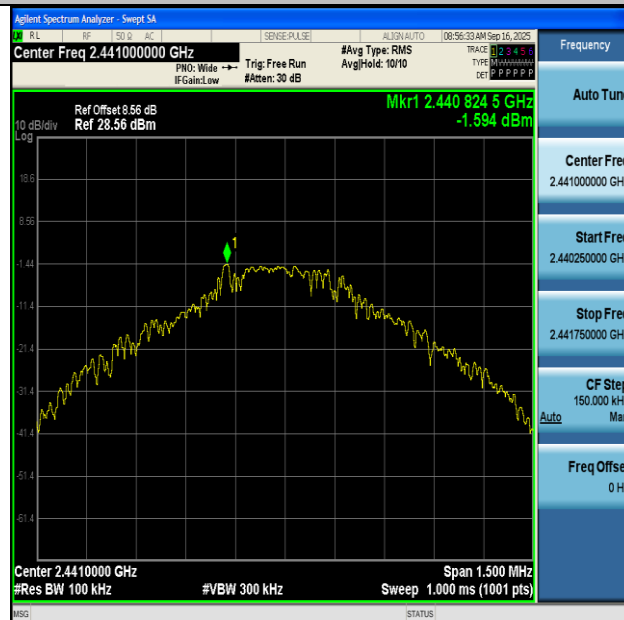


## Test Graphs



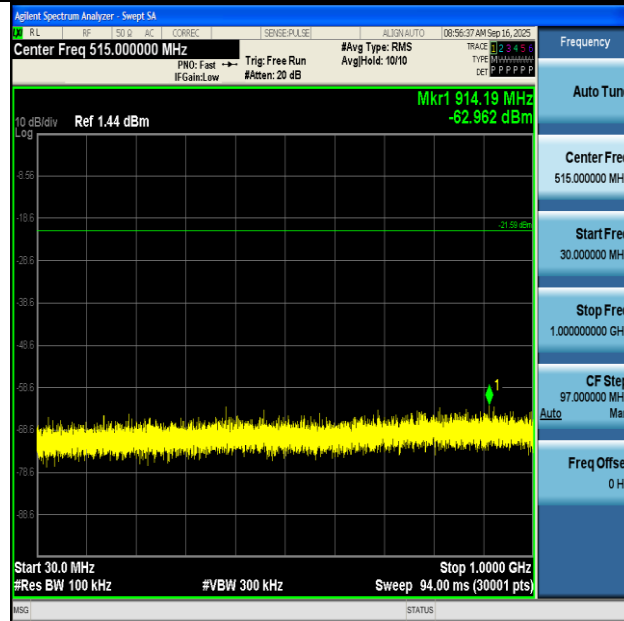


DH5-Ant1-2402-1000~26500-PASS

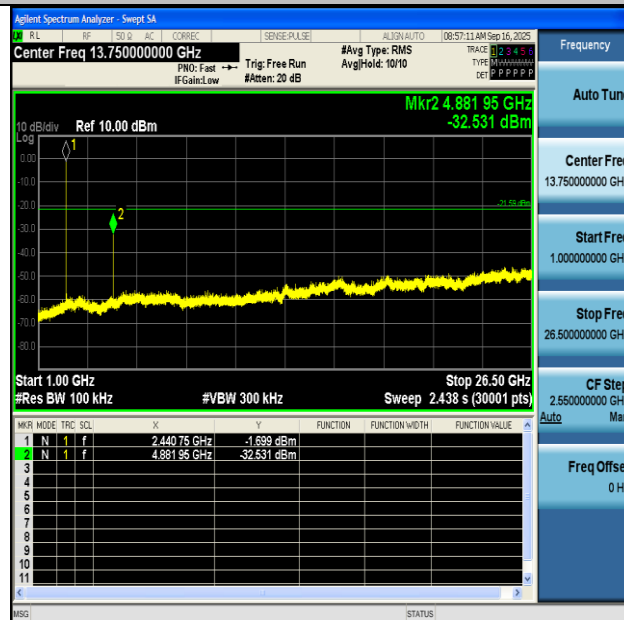


DH5-Ant1-2441-0~Reference-PASS





DH5-Ant1-2441-30~1000-PASS

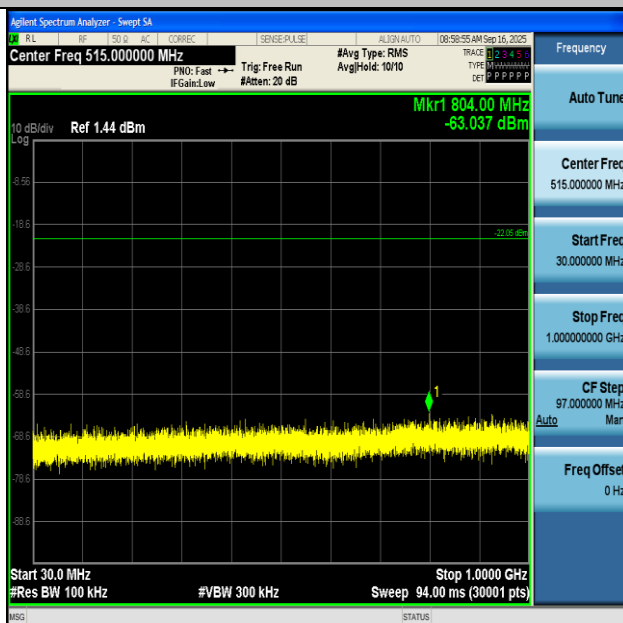


DH5-Ant1-2441-1000~26500-PASS



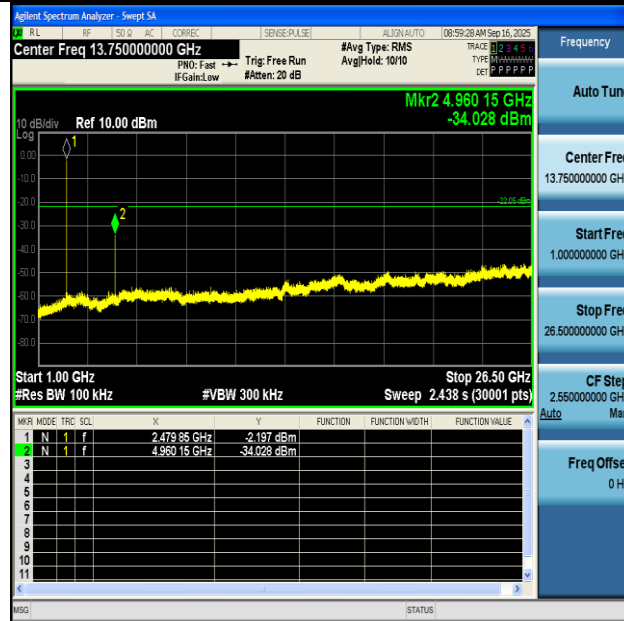


DH5-Ant1-2480-0~Reference-PASS

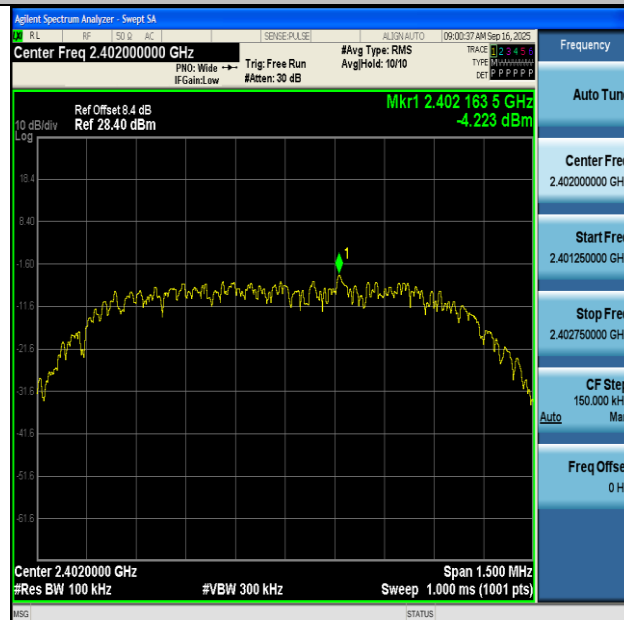


DH5-Ant1-2480-30~1000-PASS



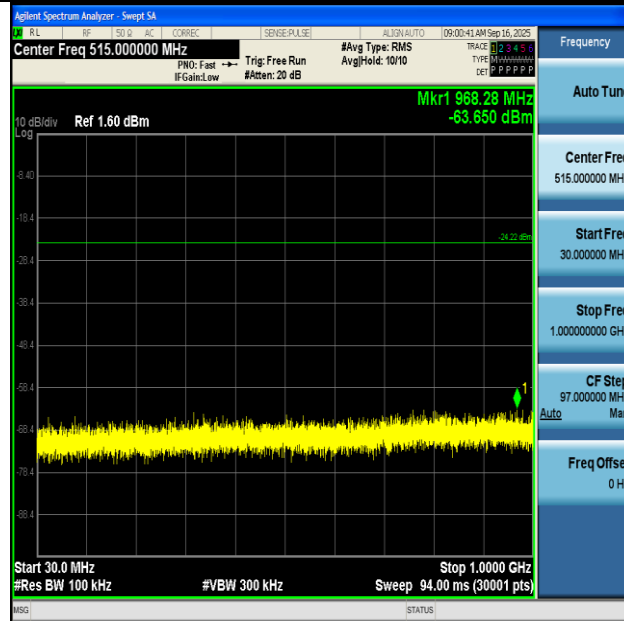


DH5-Ant1-2480-1000~26500-PASS

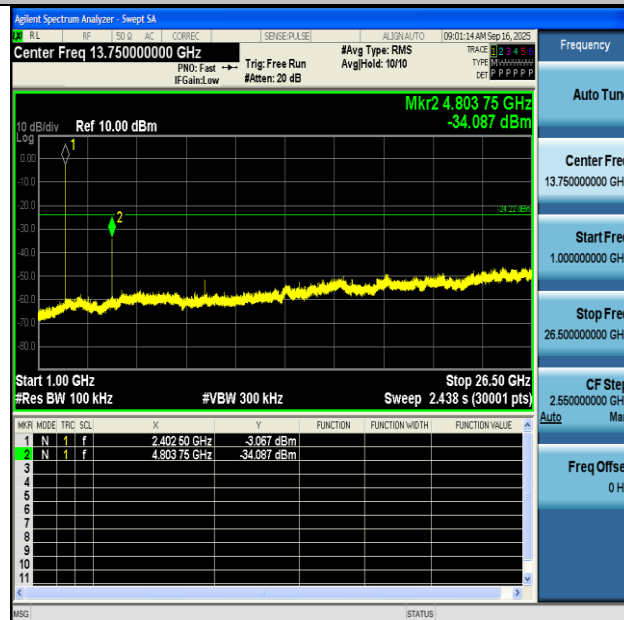


2DH5-Ant1-2402-0~Reference-PASS





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

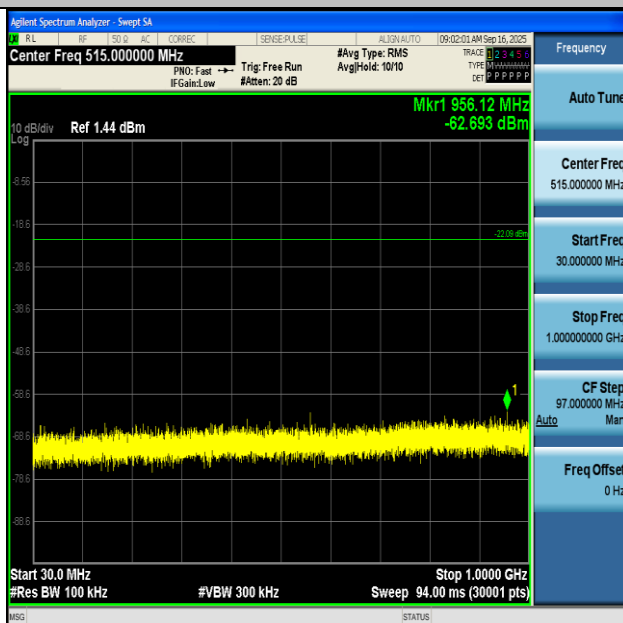


2DH5-Ant1-2402-1000~26500-PASS



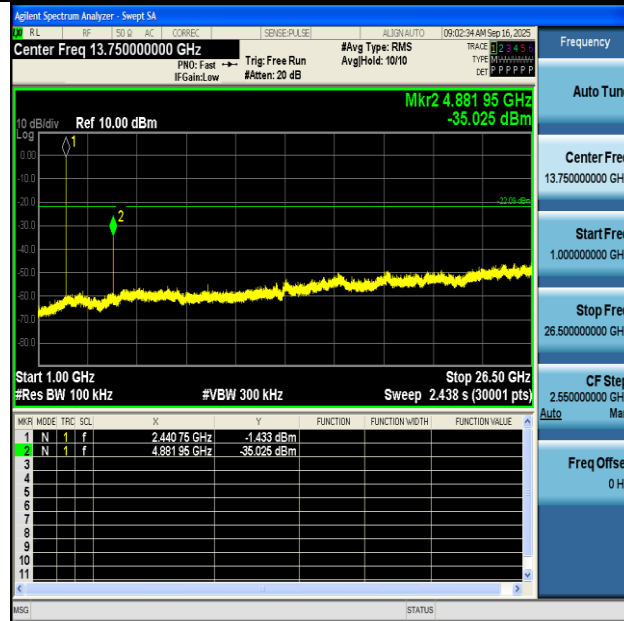


2DH5-Ant1-2441-0~Reference-PASS



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



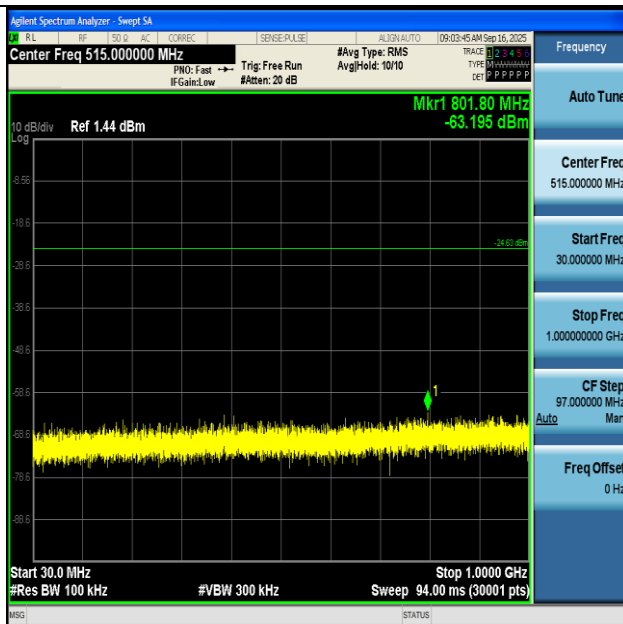


2DH5-Ant1-2441-1000~26500-PASS

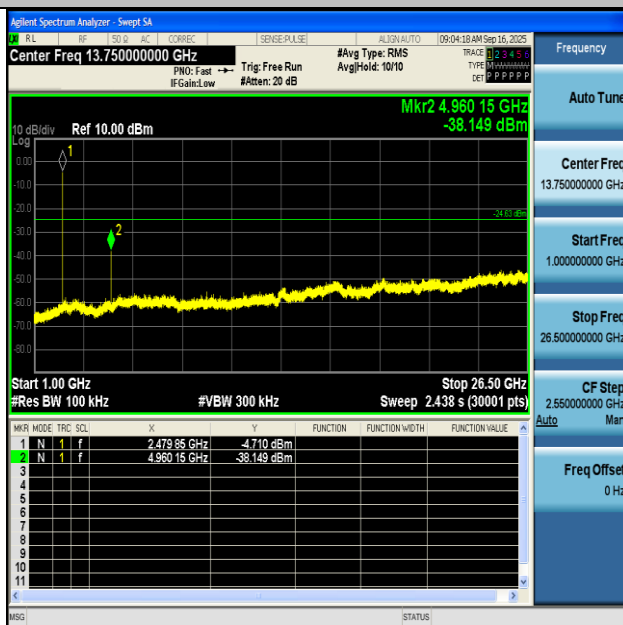


2DH5-Ant1-2480-0~Reference-PASS





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

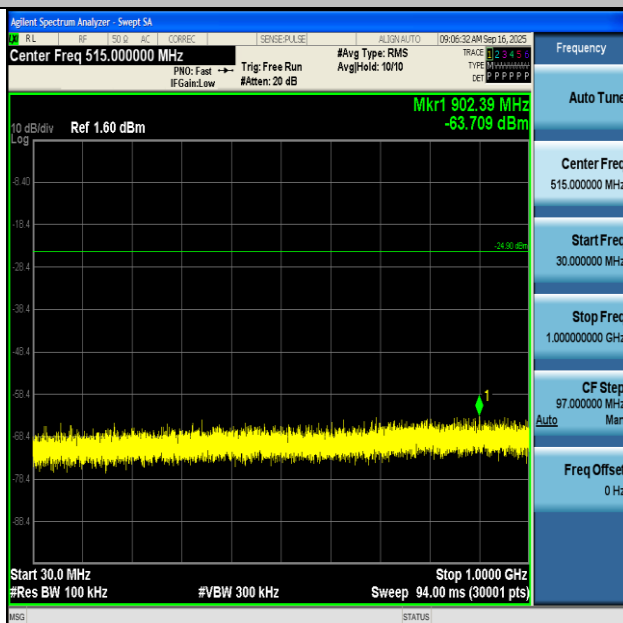


2DH5-Ant1-2480-1000~26500-PASS



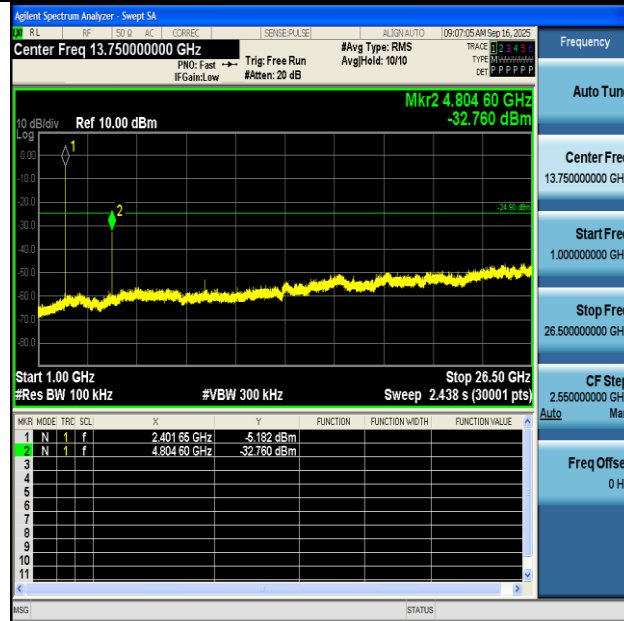


3DH5-Ant1-2402-0~Reference-PASS

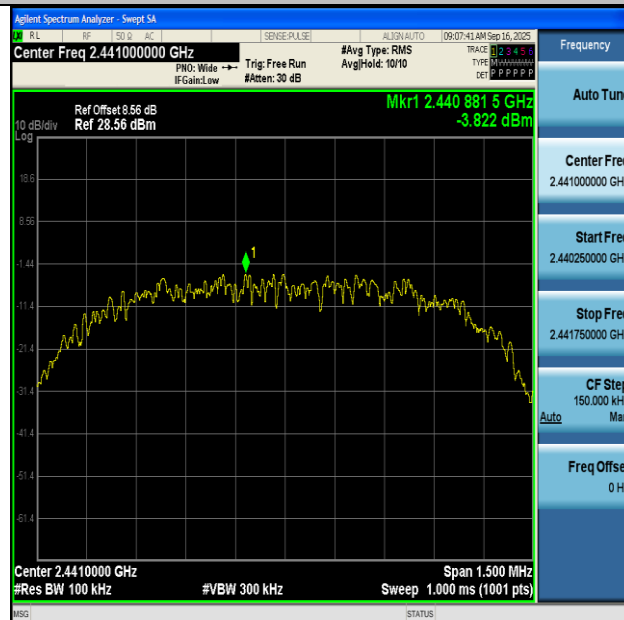


3DH5-Ant1-2402-30~1000-PASS



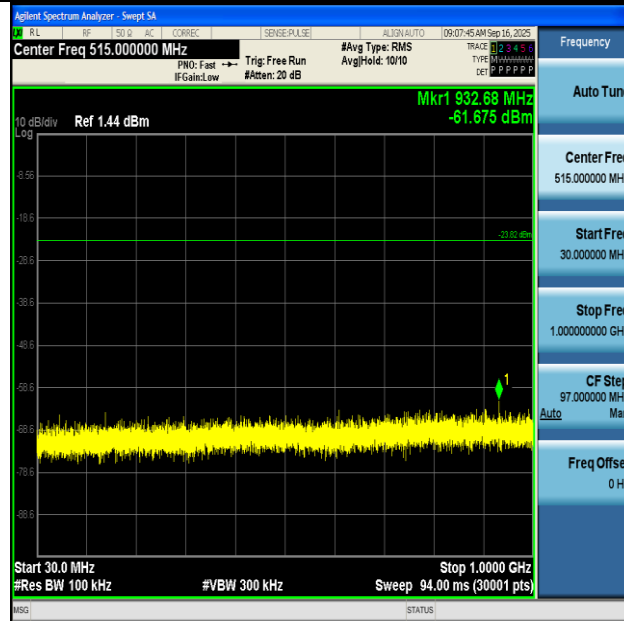


3DH5-Ant1-2402-1000~26500-PASS

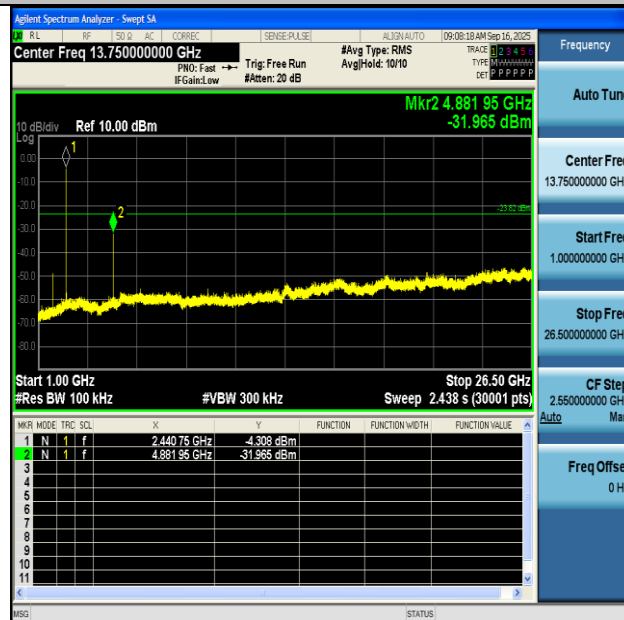


3DH5-Ant1-2441-0~Reference-PASS





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

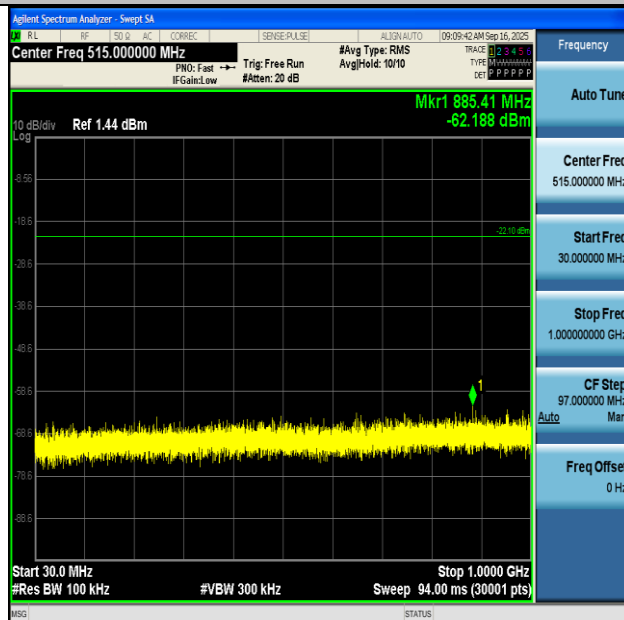


3DH5-Ant1-2441-1000~26500-PASS



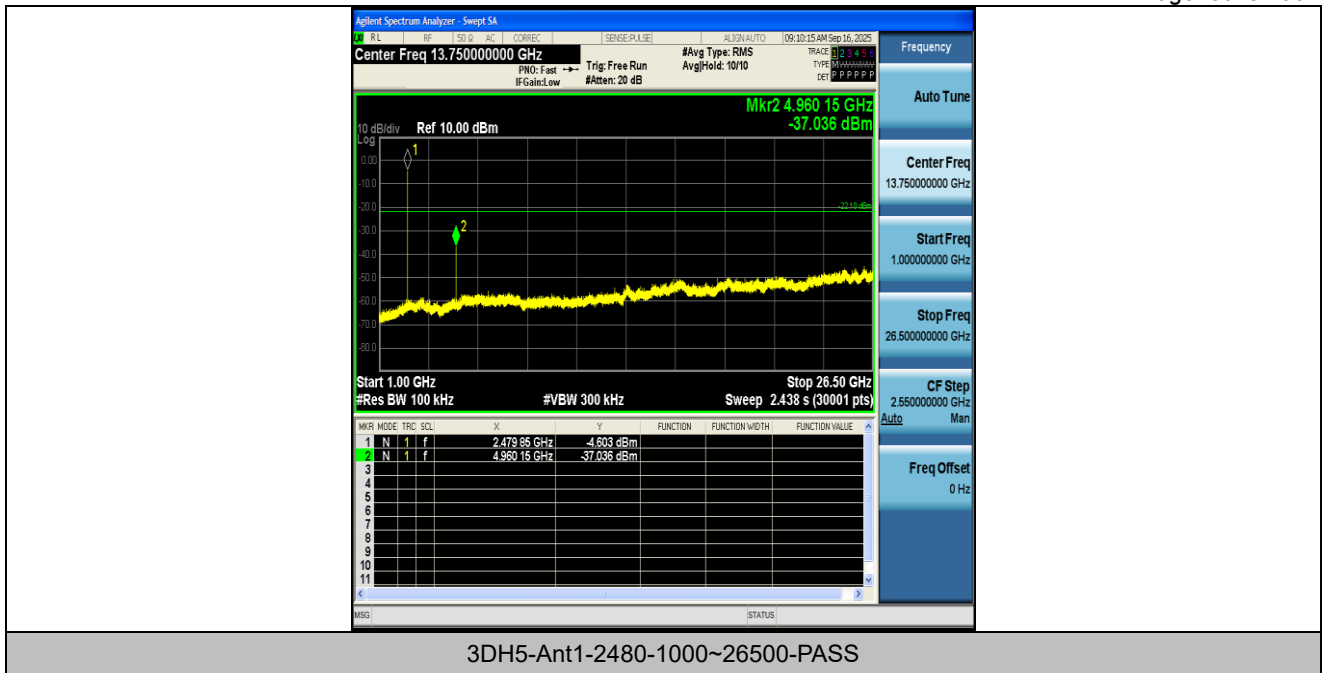


3DH5-Ant1-2480-0~Reference-PASS



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







## 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               | 2.92            | 3.75           | 77.87             | 1.09                         |
| DH5       | Ant1    | 2441               | 2.92            | 3.75           | 77.87             | 1.09                         |
| DH5       | Ant1    | 2480               | 2.91            | 3.75           | 77.60             | 1.10                         |
| 2DH5      | Ant1    | 2402               | 2.92            | 3.75           | 77.87             | 1.09                         |
| 2DH5      | Ant1    | 2441               | 2.92            | 3.75           | 77.87             | 1.09                         |
| 2DH5      | Ant1    | 2480               | 2.92            | 3.75           | 77.87             | 1.09                         |
| 3DH5      | Ant1    | 2402               | 2.92            | 3.75           | 77.87             | 1.09                         |
| 3DH5      | Ant1    | 2441               | 2.92            | 3.75           | 77.87             | 1.09                         |
| 3DH5      | Ant1    | 2480               | 2.92            | 3.75           | 77.87             | 1.09                         |

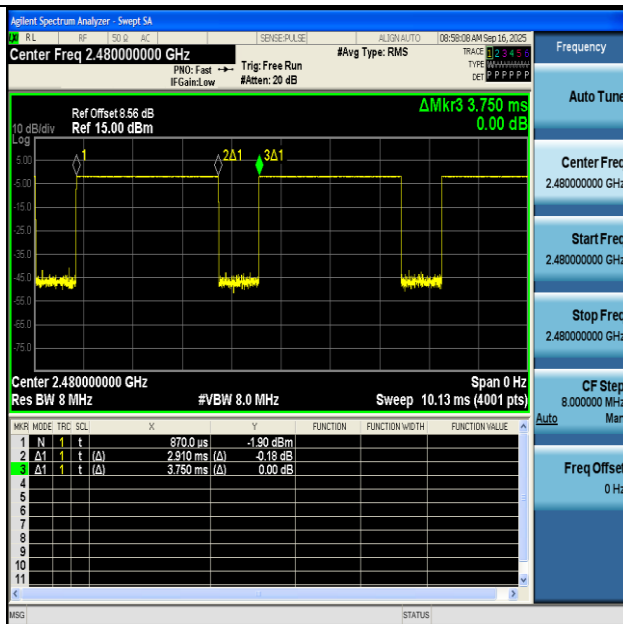
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



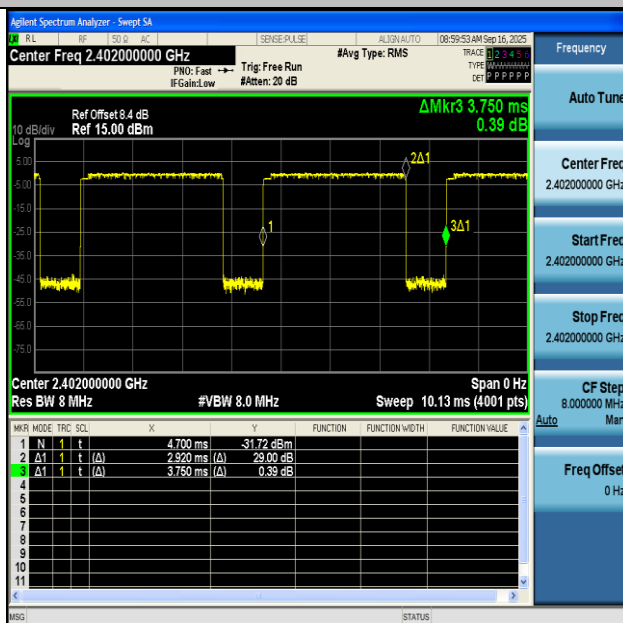


## Test Graphs



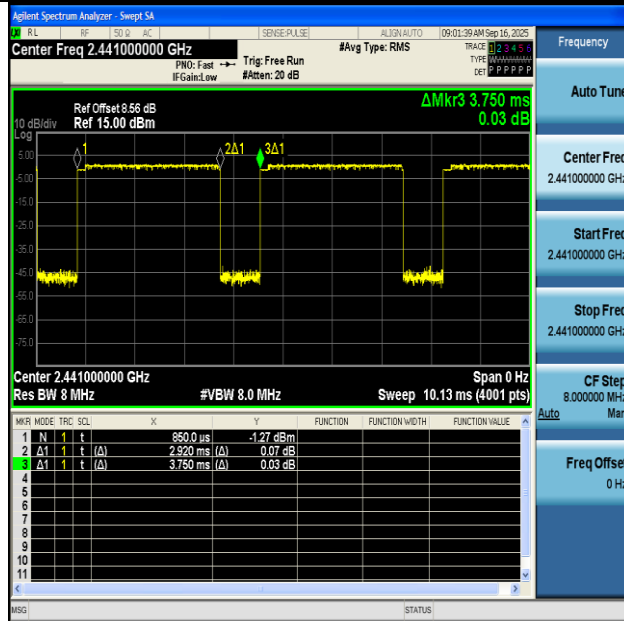


NTNV-DH5-Ant1-2480

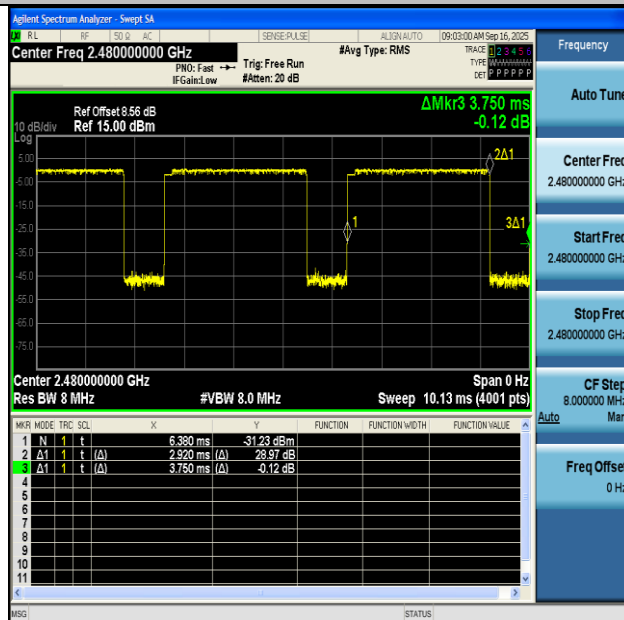


NTNV-2DH5-Ant1-2402



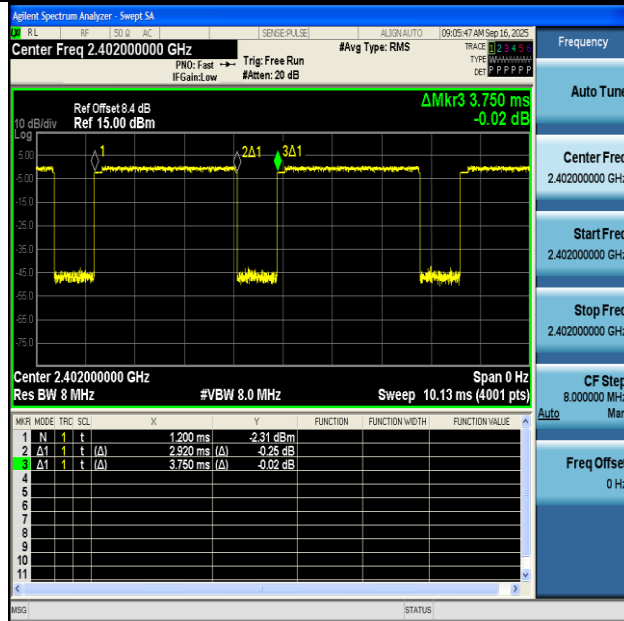


NTNV-2DH5-Ant1-2441

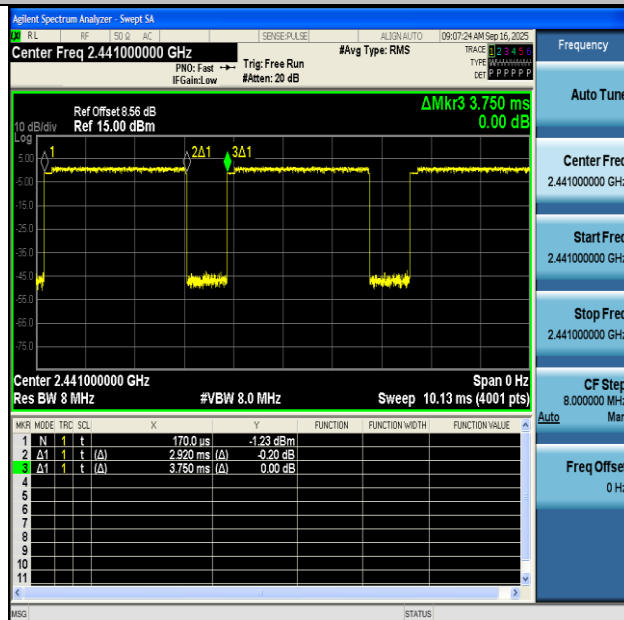


NTNV-2DH5-Ant1-2480



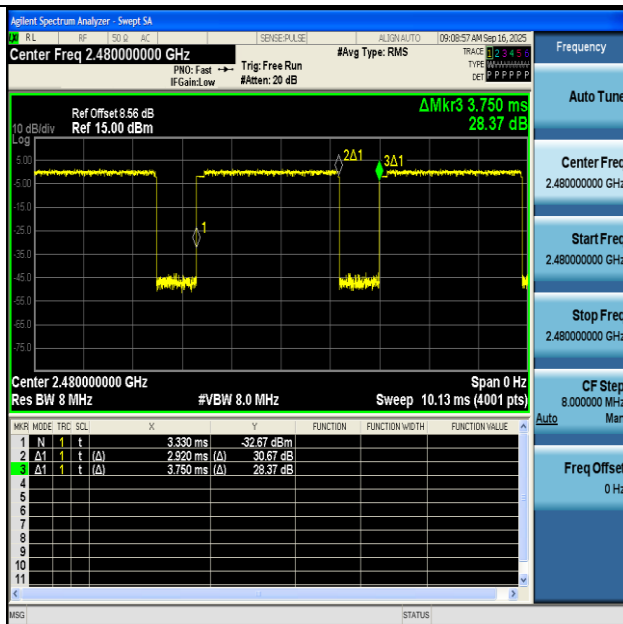


NTNV-3DH5-Ant1-2402



NTNV-3DH5-Ant1-2441





NTNV-3DH5-Ant1-2480

