

## MIC Appendix RF Test Data for BT

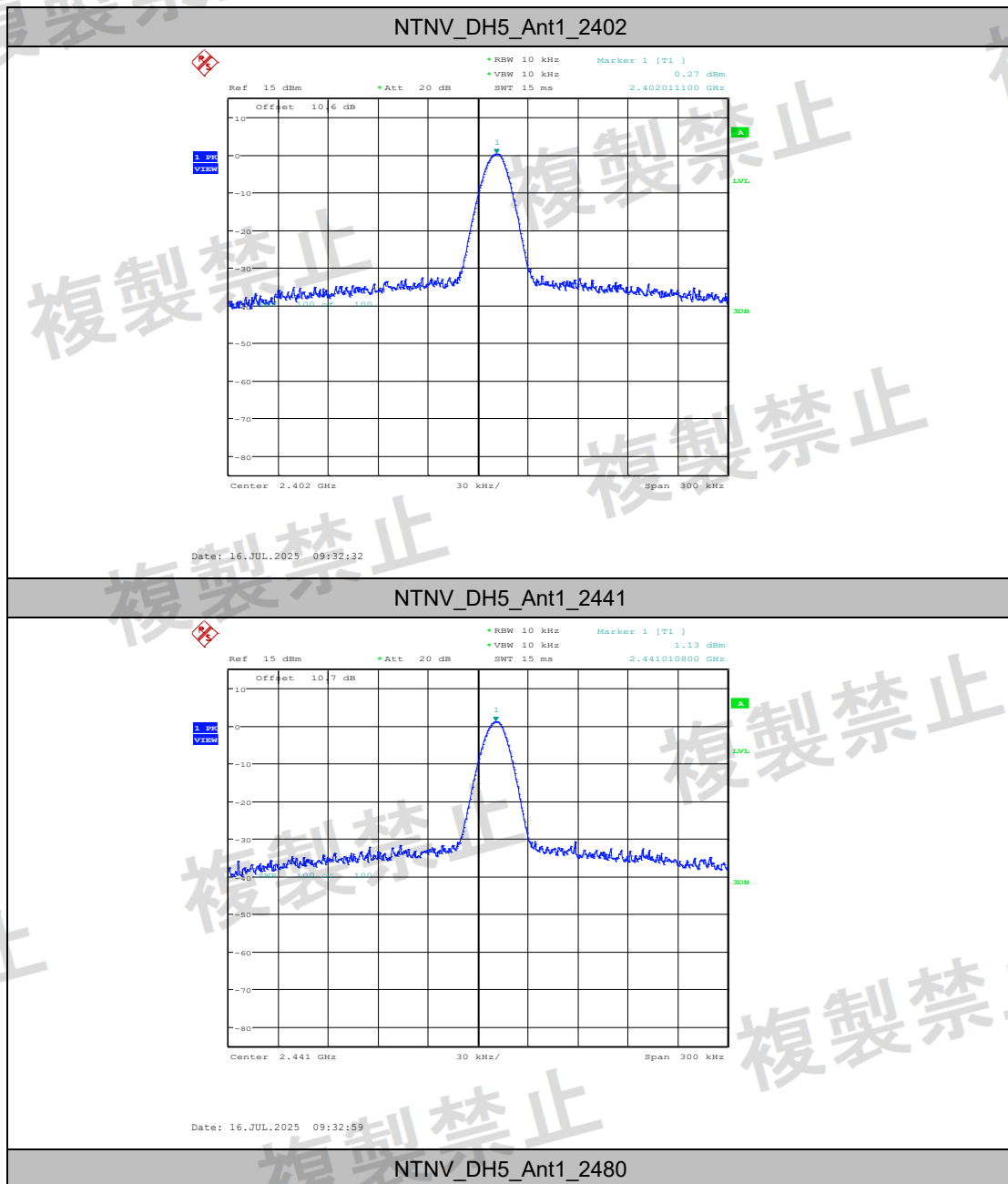
Company : Shanxi zhengdezhao Technology Co., Ltd  
EUT : carplay screen for car  
Model Number : FBD-SMTK1  
Report No. : CTA25071500402  
Reviewed By : Eric Wang

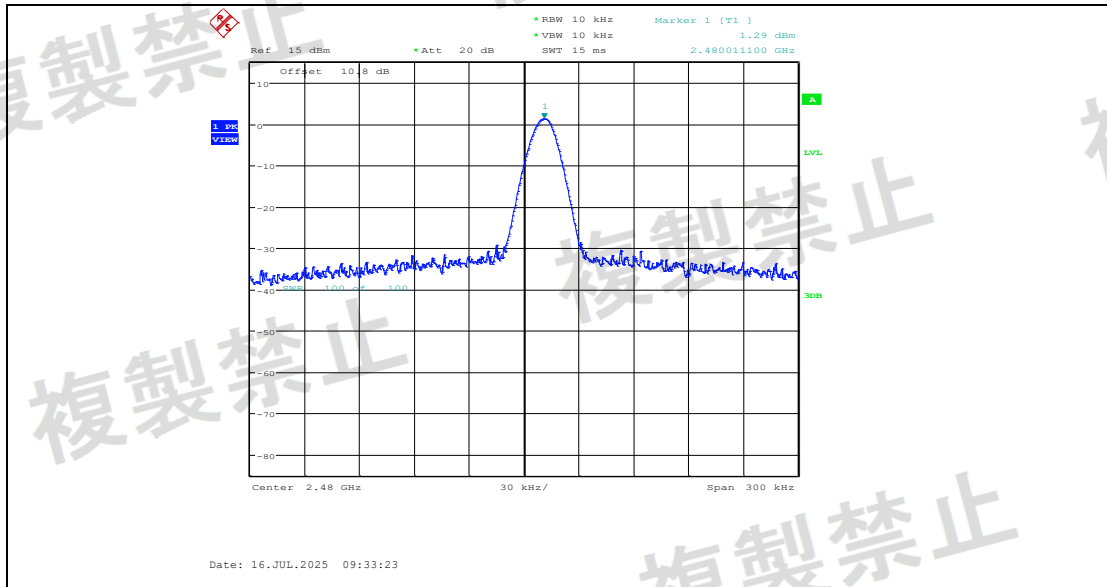
## Appendix A: Frequency\_Error

### Test Result

| Test Condition | Antenna | Freq(MHz) | Result[ppm] | Limit[ppm] | Verdict |
|----------------|---------|-----------|-------------|------------|---------|
| NTNV           | Ant1    | 2402      | 4.62115     | ±50        | PASS    |
|                |         | 2441      | 4.42442     | ±50        | PASS    |
|                |         | 2480      | 4.47581     | ±50        | PASS    |

## Test Graphs



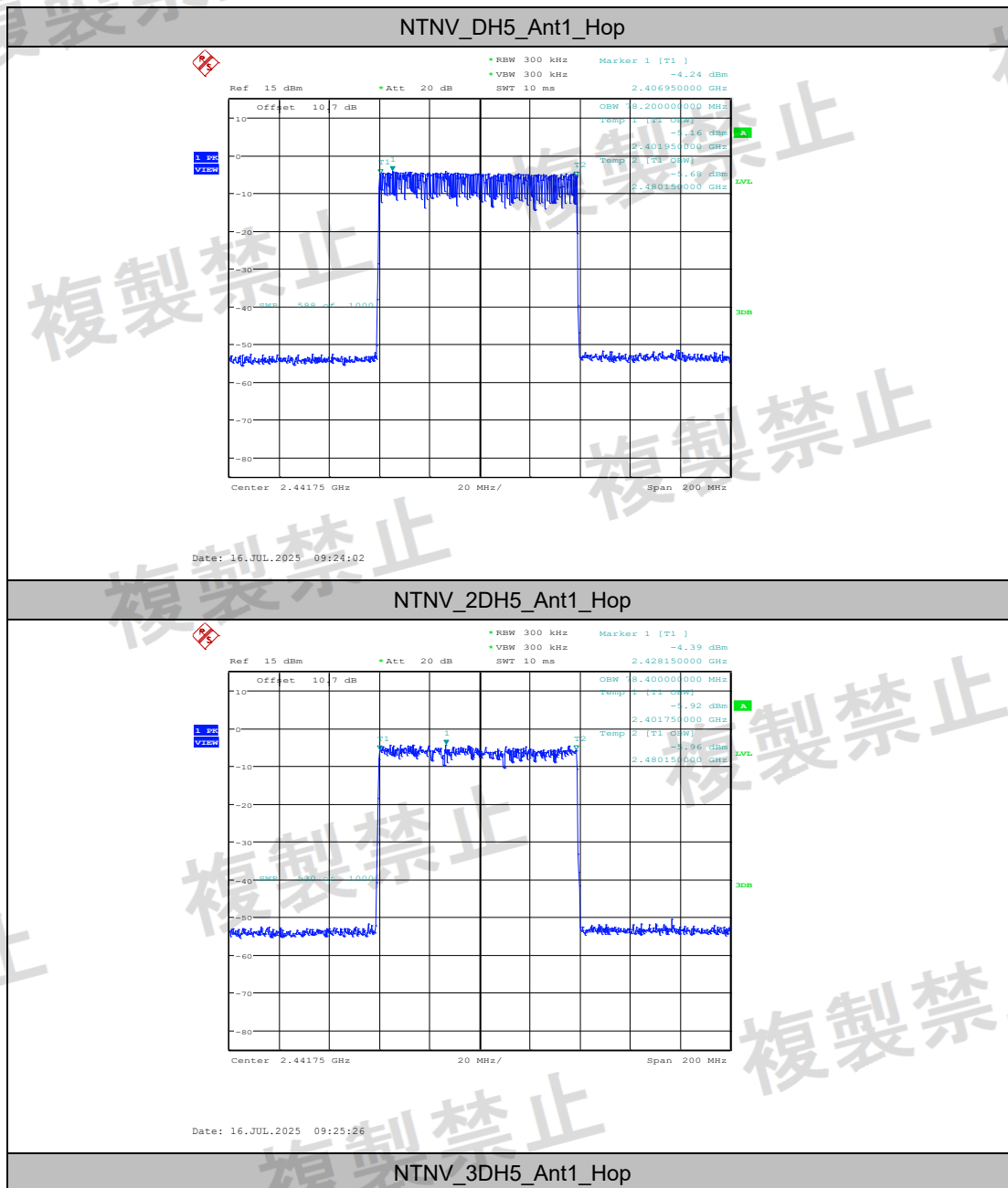


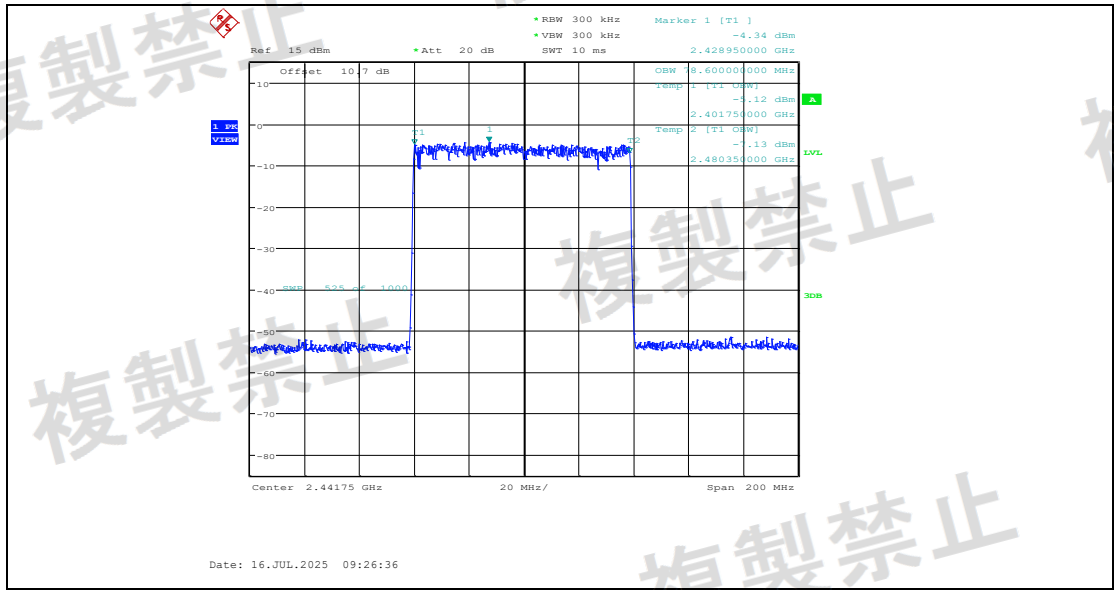
## Appendix B: Occupied Bandwidth

### Test Result

| Test Condition | Test Mode | Antenna | Freq(MHz) | Result [MHz] | Limit [MHz] | Verdict |
|----------------|-----------|---------|-----------|--------------|-------------|---------|
| NTNV           | DH5       | Ant1    | Hop       | 78.200       | ≤83.5       | PASS    |
|                | 2DH5      | Ant1    | Hop       | 78.400       | ≤83.5       | PASS    |
|                | 3DH5      | Ant1    | Hop       | 78.600       | ≤83.5       | PASS    |

## Test Graphs



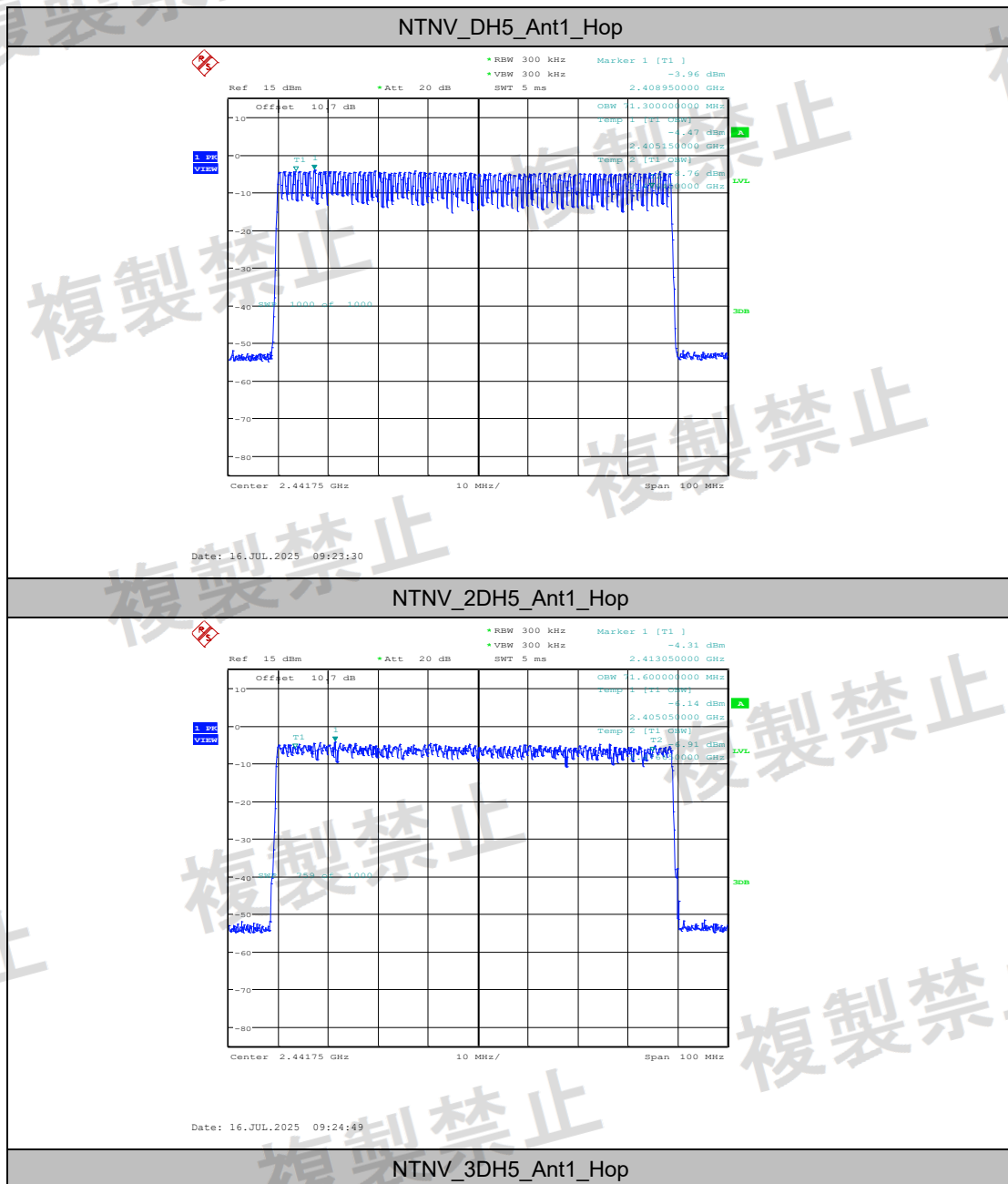


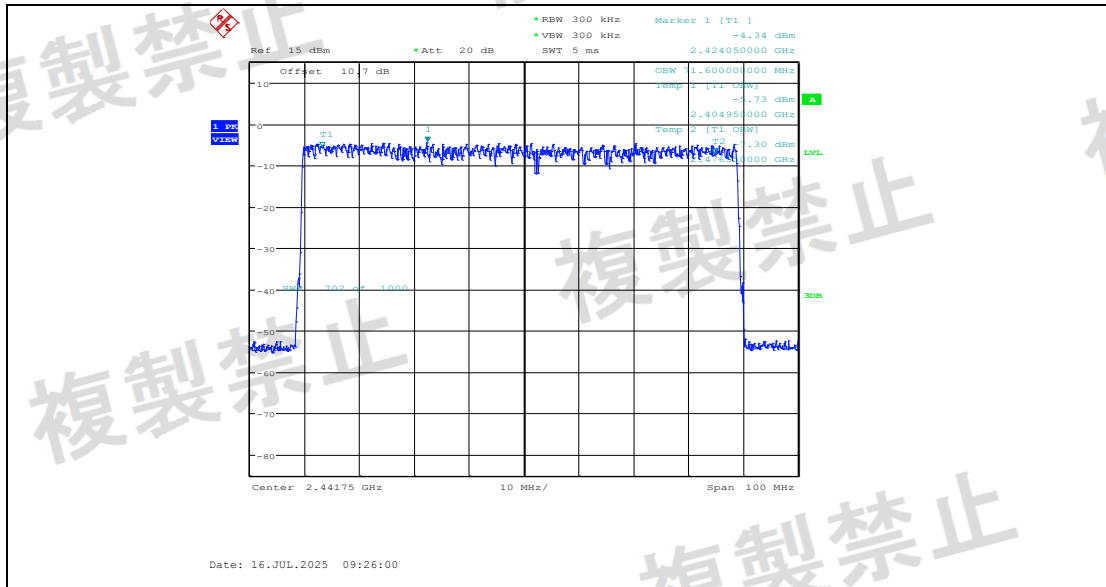
## Appendix C: Spread Bandwidth

### Test Result

| Test Condition | Test Mode | Antenna | Freq(MHz) | Result [MHz] | Limit [MHz] | Spread Factor | Limit | Verdict |
|----------------|-----------|---------|-----------|--------------|-------------|---------------|-------|---------|
| NTNV           | DH5       | Ant1    | Hop       | 71.300       | $\geq 0.5$  | 71.300        | >5    | PASS    |
|                | 2DH5      | Ant1    | Hop       | 71.600       | $\geq 0.5$  | 71.600        | >5    | PASS    |
|                | 3DH5      | Ant1    | Hop       | 71.600       | $\geq 0.5$  | 71.600        | >5    | PASS    |

## Test Graphs





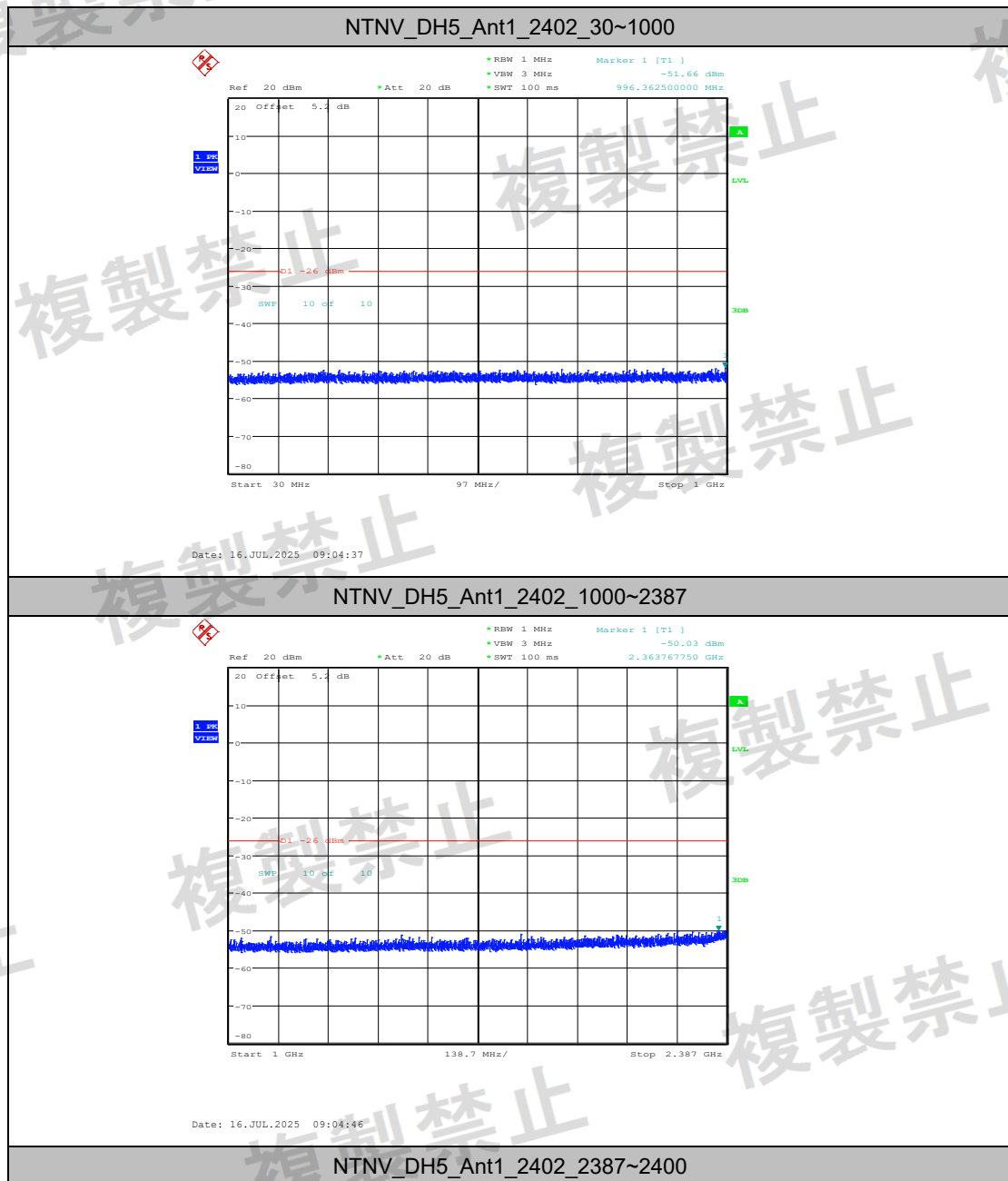
## Appendix D: Spurious Emission of TX

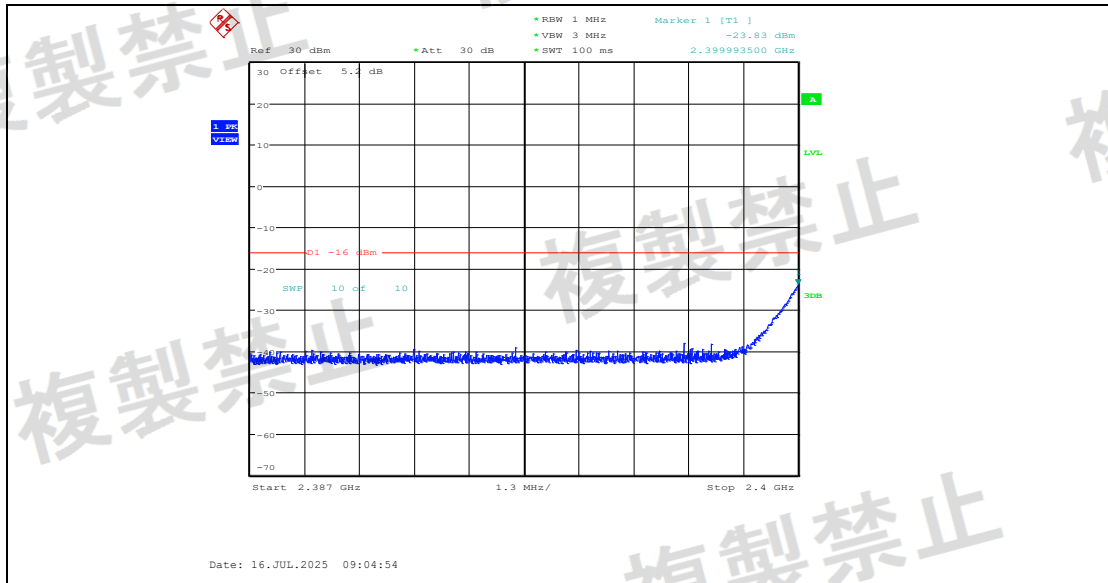
### Test Result

| Test Condition | Test Mode | Antenna | Freq(MHz) | Freq.Range [MHz] | Freq. [MHz] | Result [dBm] | Limit [dBm] | Result [μW] | Limit [μW] | Verdict |
|----------------|-----------|---------|-----------|------------------|-------------|--------------|-------------|-------------|------------|---------|
| NTNV           | DH5       | Ant1    | 2402      | 30~1000          | 996.36      | -51.66       | ≤-26        | 0.00682     | ≤2.5       | PASS    |
|                |           |         |           | 1000~2387        | 2363.77     | -50.03       | ≤-26        | 0.00993     | ≤2.5       | PASS    |
|                |           |         |           | 2387~2400        | 2399.99     | -23.83       | ≤-16        | 4.14000     | ≤25        | PASS    |
|                |           |         |           | 2483.5~2496.5    | 2492.82     | -38.75       | ≤-16        | 0.13335     | ≤25        | PASS    |
|                |           |         |           | 2496.5~13000     | 4804.12     | -46.07       | ≤-26        | 0.02472     | ≤2.5       | PASS    |
|                |           |         | 2441      | 30~1000          | 911.49      | -48.27       | ≤-26        | 0.01489     | ≤2.5       | PASS    |
|                |           |         |           | 1000~2387        | 2376.60     | -50.12       | ≤-26        | 0.00973     | ≤2.5       | PASS    |
|                |           |         |           | 2387~2400        | 2387.51     | -39.26       | ≤-16        | 0.11858     | ≤25        | PASS    |
|                |           |         |           | 2483.5~2496.5    | 2489.36     | -39.19       | ≤-16        | 0.12050     | ≤25        | PASS    |
|                |           |         |           | 2496.5~13000     | 5194.32     | -36.93       | ≤-26        | 0.20277     | ≤2.5       | PASS    |
|                |           |         | 2480      | 30~1000          | 906.64      | -50.67       | ≤-26        | 0.00857     | ≤2.5       | PASS    |
|                |           |         |           | 1000~2387        | 2229.92     | -49.97       | ≤-26        | 0.01007     | ≤2.5       | PASS    |
|                |           |         |           | 2387~2400        | 2398.30     | -39.36       | ≤-16        | 0.11588     | ≤25        | PASS    |
|                |           |         |           | 2483.5~2496.5    | 2483.57     | -38.32       | ≤-16        | 0.14723     | ≤25        | PASS    |
|                |           |         |           | 2496.5~13000     | 5203.25     | -42.64       | ≤-26        | 0.05445     | ≤2.5       | PASS    |
|                | 2DH5      | Ant1    | 2402      | 30~1000          | 906.15      | -39.35       | ≤-26        | 0.11614     | ≤2.5       | PASS    |
|                |           |         |           | 1000~2387        | 2370.70     | -49.77       | ≤-26        | 0.01054     | ≤2.5       | PASS    |
|                |           |         |           | 2387~2400        | 2399.98     | -22.29       | ≤-16        | 5.90201     | ≤25        | PASS    |
|                |           |         |           | 2483.5~2496.5    | 2488.05     | -38.85       | ≤-16        | 0.13032     | ≤25        | PASS    |
|                |           |         |           | 2496.5~13000     | 5205.88     | -44.34       | ≤-26        | 0.03681     | ≤2.5       | PASS    |
|                |           |         | 2441      | 30~1000          | 826.13      | -51.05       | ≤-26        | 0.00785     | ≤2.5       | PASS    |
|                |           |         |           | 1000~2387        | 2103.01     | -50.27       | ≤-26        | 0.00940     | ≤2.5       | PASS    |
|                |           |         |           | 2387~2400        | 2397.28     | -39.01       | ≤-16        | 0.12560     | ≤25        | PASS    |
|                |           |         |           | 2483.5~2496.5    | 2488.54     | -38.39       | ≤-16        | 0.14488     | ≤25        | PASS    |
|                |           |         |           | 2496.5~13000     | 4881.32     | -48.11       | ≤-26        | 0.01545     | ≤2.5       | PASS    |
|                |           |         | 2480      | 30~1000          | 865.66      | -50.83       | ≤-26        | 0.00826     | ≤2.5       | PASS    |
|                |           |         |           | 1000~2387        | 2275.35     | -49.91       | ≤-26        | 0.01021     | ≤2.5       | PASS    |
|                |           |         |           | 2387~2400        | 2390.12     | -39.68       | ≤-16        | 0.10765     | ≤25        | PASS    |
|                |           |         |           | 2483.5~2496.5    | 2483.57     | -38.36       | ≤-16        | 0.14588     | ≤25        | PASS    |
|                |           |         |           | 2496.5~13000     | 4960.10     | -46.20       | ≤-26        | 0.02399     | ≤2.5       | PASS    |
|                | 3DH5      | Ant1    | 2402      | 30~1000          | 894.51      | -51.01       | ≤-26        | 0.00793     | ≤2.5       | PASS    |
|                |           |         |           | 1000~2387        | 2363.07     | -50.04       | ≤-26        | 0.00991     | ≤2.5       | PASS    |
|                |           |         |           | 2387~2400        | 2399.97     | -22.57       | ≤-16        | 5.53350     | ≤25        | PASS    |
|                |           |         |           | 2483.5~2496.5    | 2485.02     | -38.59       | ≤-16        | 0.13836     | ≤25        | PASS    |
|                |           |         |           | 2496.5~13000     | 4803.59     | -49.39       | ≤-26        | 0.01151     | ≤2.5       | PASS    |
|                |           |         | 2441      | 30~1000          | 940.10      | -51.48       | ≤-26        | 0.00711     | ≤2.5       | PASS    |
|                |           |         |           | 1000~2387        | 2298.58     | -50.56       | ≤-26        | 0.00879     | ≤2.5       | PASS    |

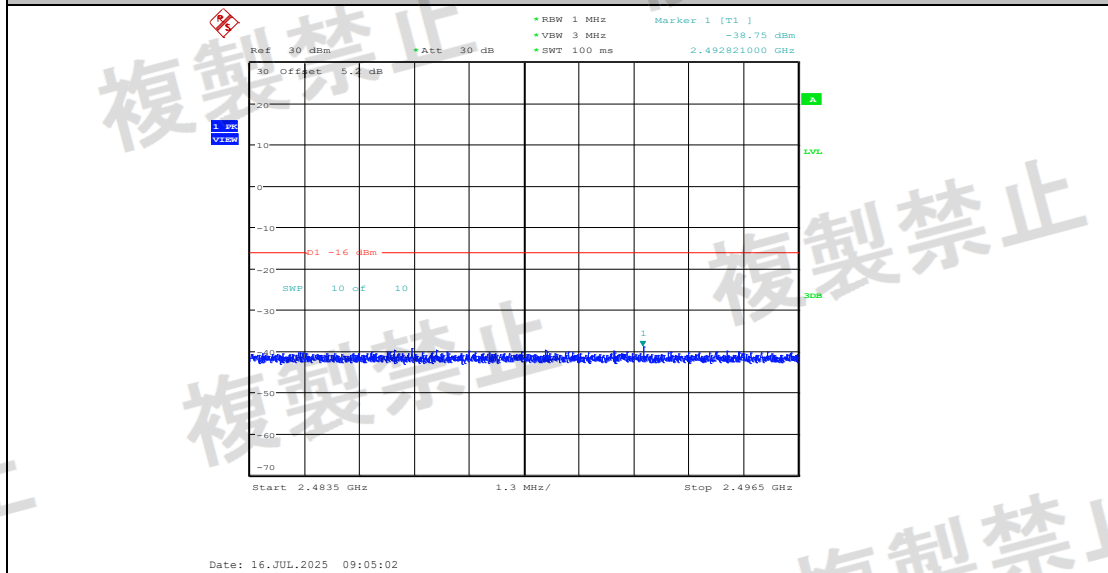
|  |  |  |      |               |         |        |      |         |      |      |
|--|--|--|------|---------------|---------|--------|------|---------|------|------|
|  |  |  |      | 2387~2400     | 2394.01 | -39.53 | ≤-16 | 0.11143 | ≤25  | PASS |
|  |  |  |      | 2483.5~2496.5 | 2490.54 | -39.33 | ≤-16 | 0.11668 | ≤25  | PASS |
|  |  |  |      | 2496.5~13000  | 4881.32 | -48.22 | ≤-26 | 0.01507 | ≤2.5 | PASS |
|  |  |  | 2480 | 30~1000       | 994.91  | -51.91 | ≤-26 | 0.00644 | ≤2.5 | PASS |
|  |  |  |      | 1000~2387     | 2283.67 | -50.17 | ≤-26 | 0.00962 | ≤2.5 | PASS |
|  |  |  |      | 2387~2400     | 2399.32 | -38.82 | ≤-16 | 0.13122 | ≤25  | PASS |
|  |  |  |      | 2483.5~2496.5 | 2483.70 | -37.91 | ≤-16 | 0.16181 | ≤25  | PASS |
|  |  |  |      | 2496.5~13000  | 4959.57 | -47.04 | ≤-26 | 0.01977 | ≤2.5 | PASS |

## Test Graphs

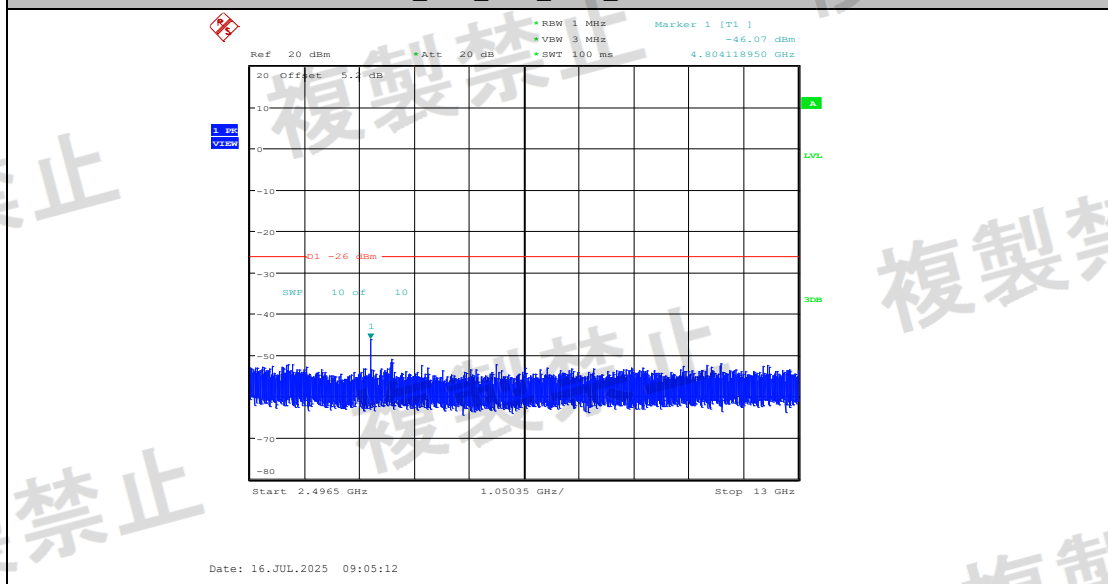


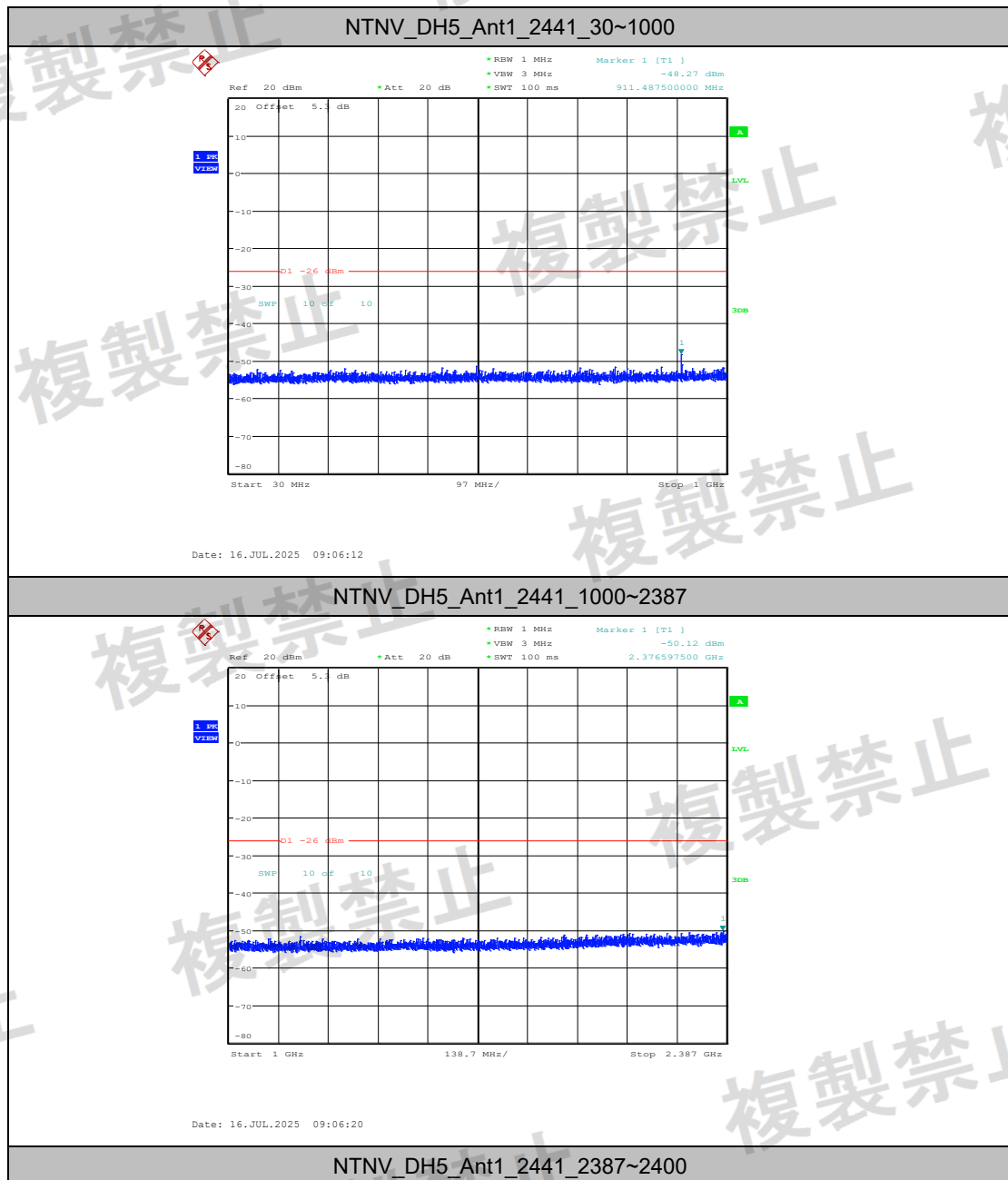


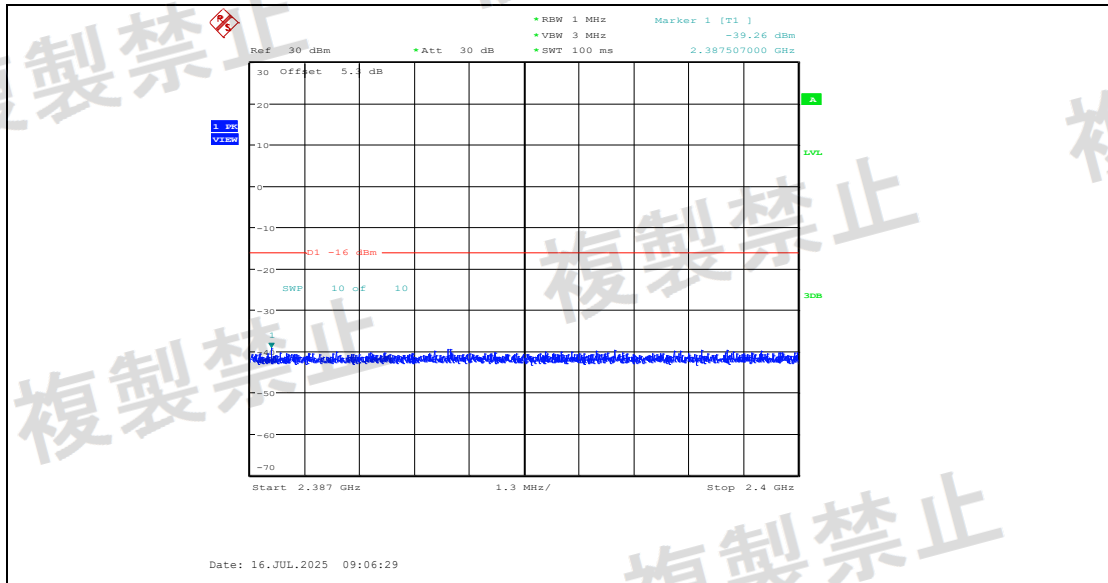
NTVN\_DH5\_Ant1\_2402\_2483.5~2496.5



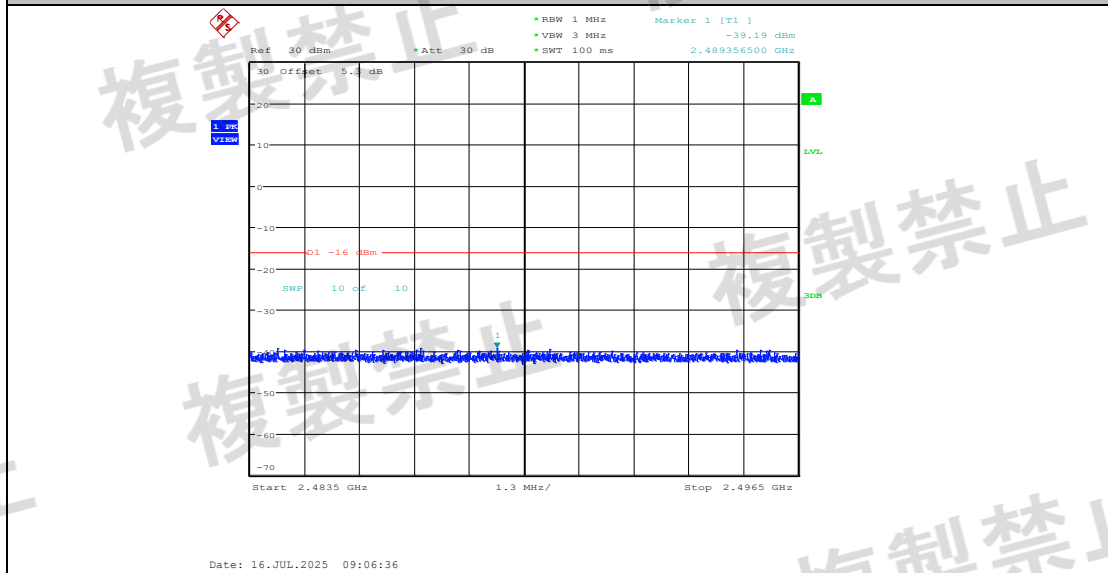
NTVN\_DH5\_Ant1\_2402\_2496.5~13000



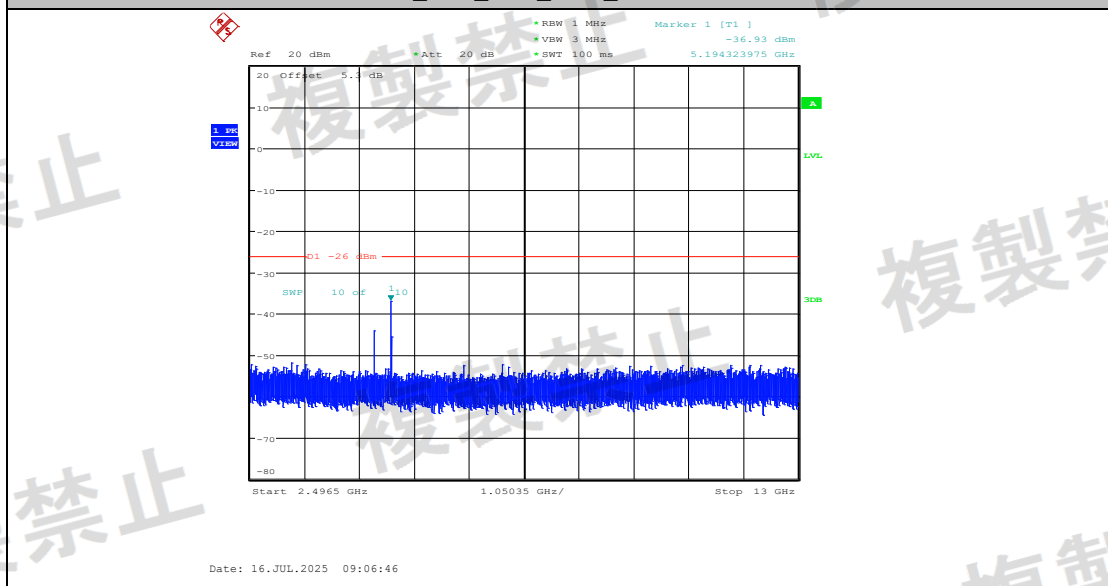


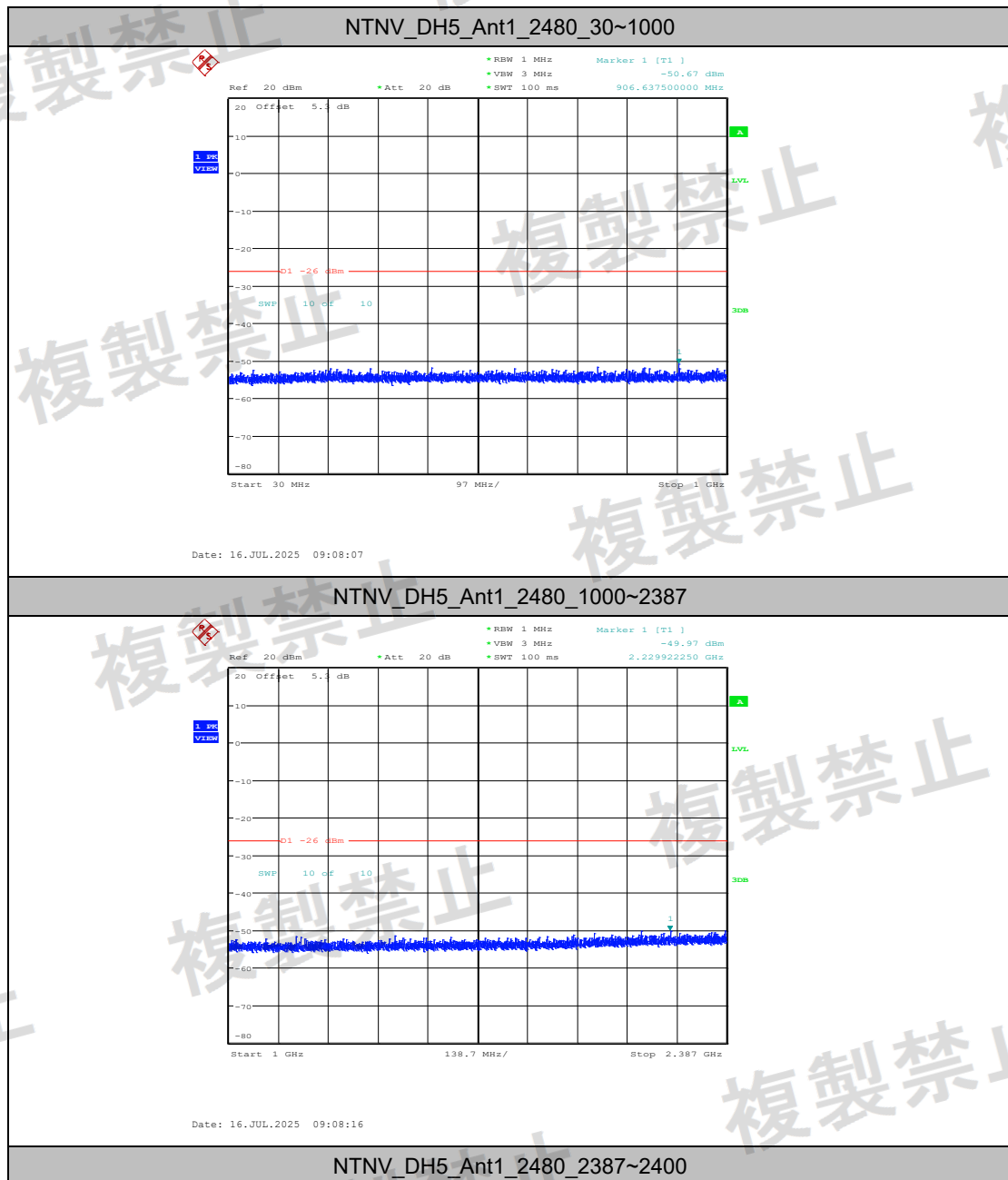


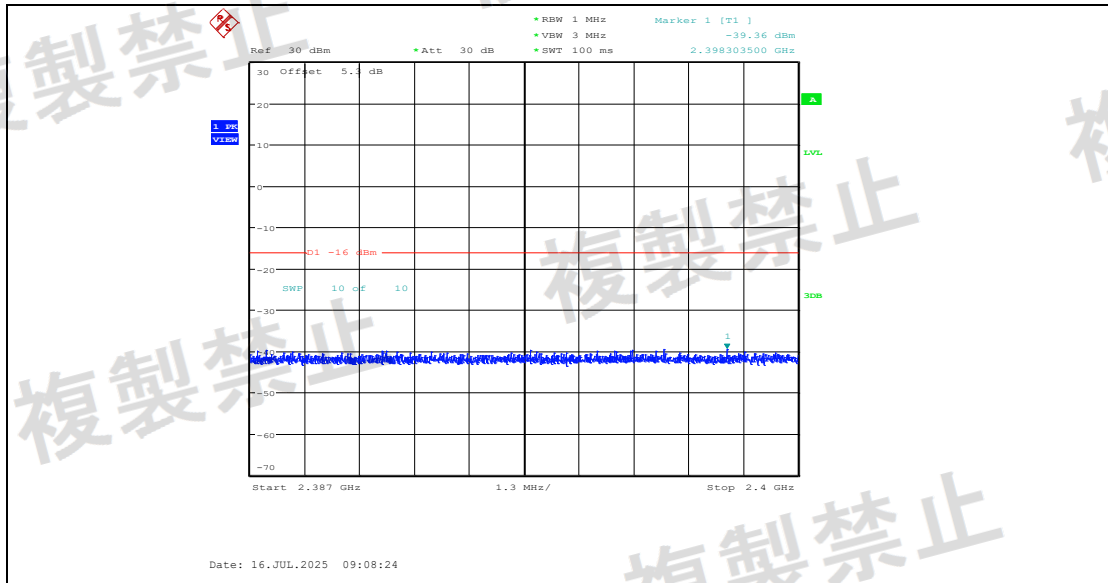
NTNV\_DH5\_Ant1\_2441\_2483.5~2496.5



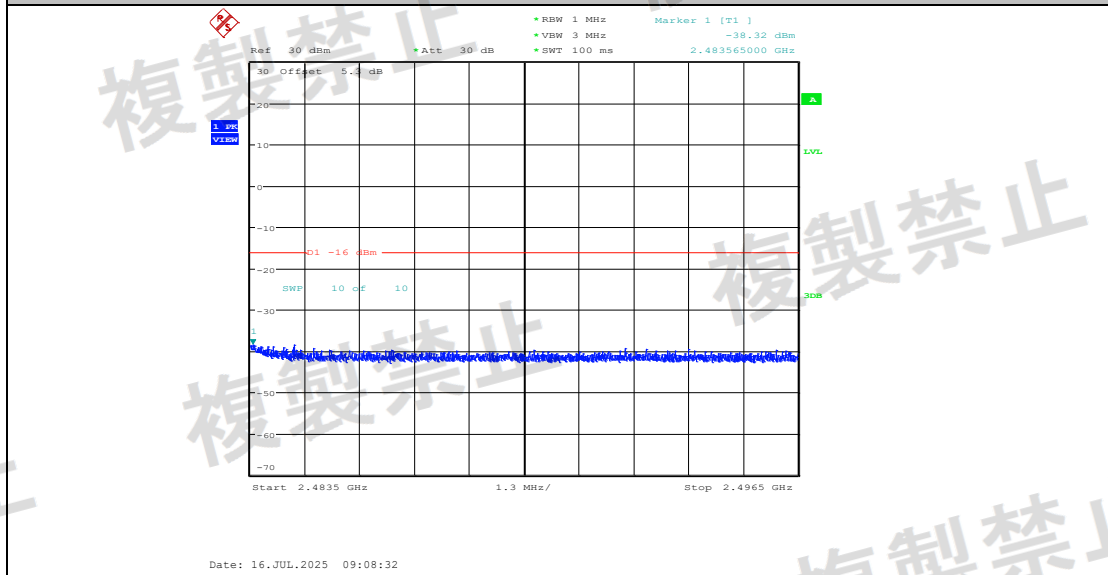
NTNV\_DH5\_Ant1\_2441\_2496.5~13000



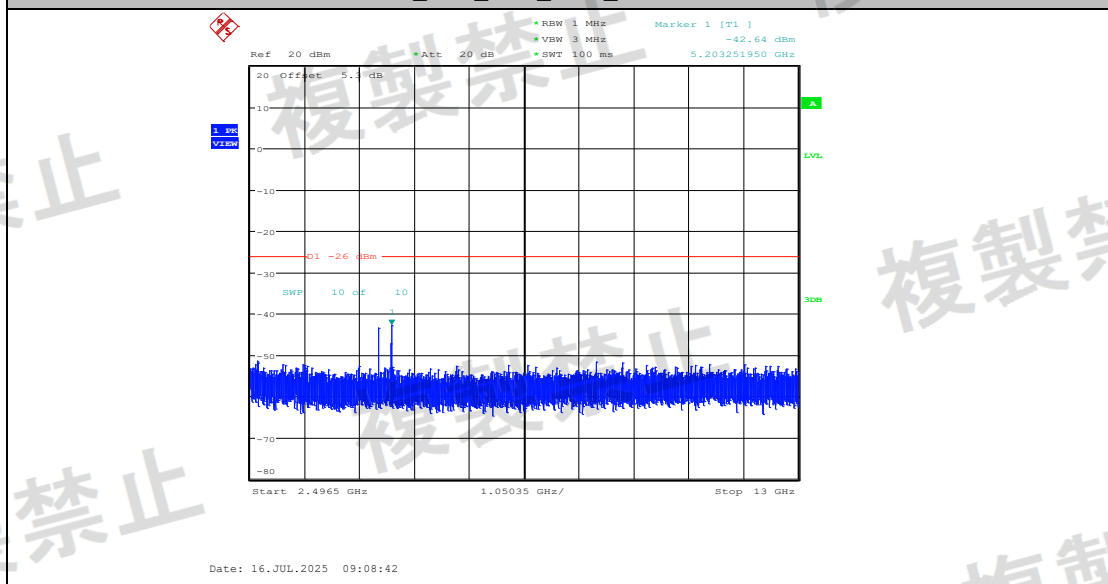


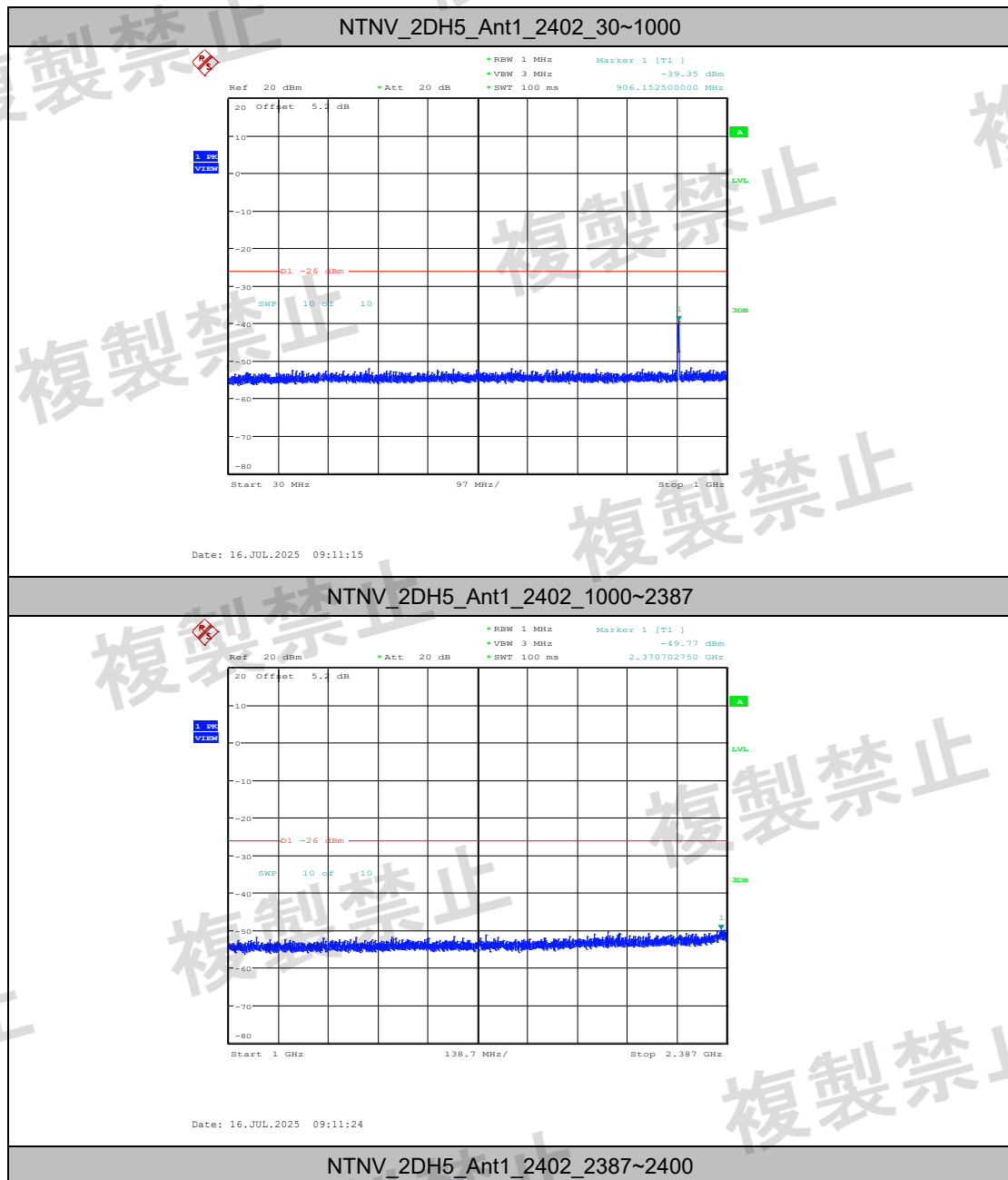


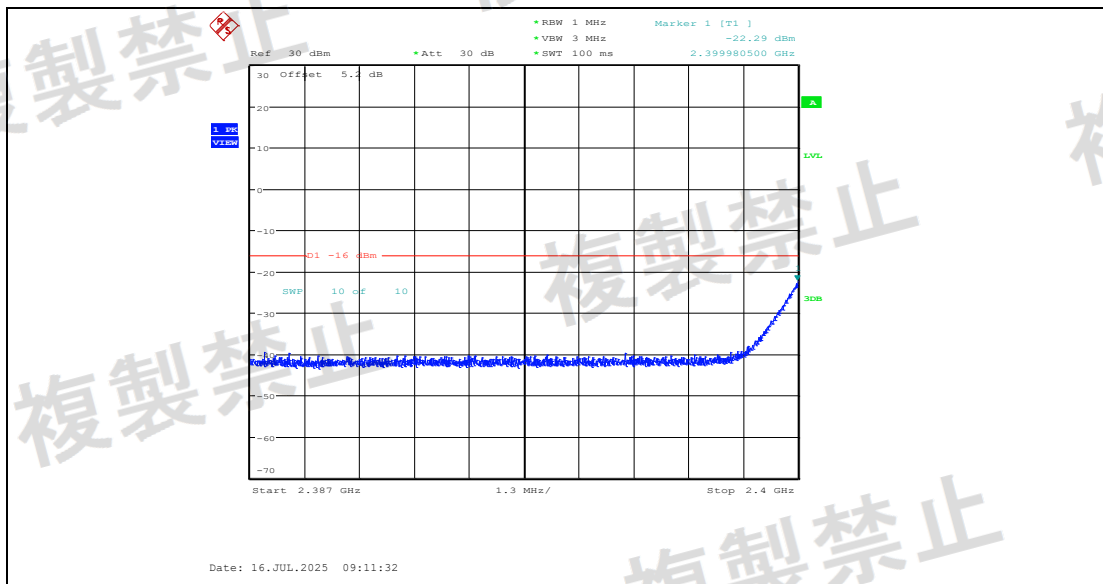
NTNV\_DH5\_Ant1\_2480\_2483.5~2496.5



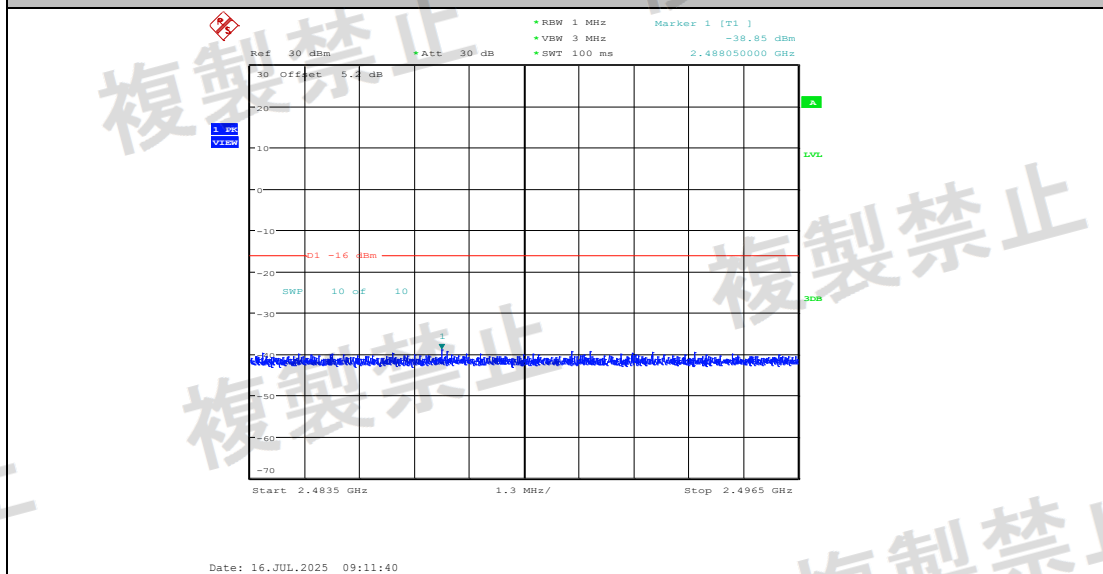
NTNV\_DH5\_Ant1\_2480\_2496.5~13000



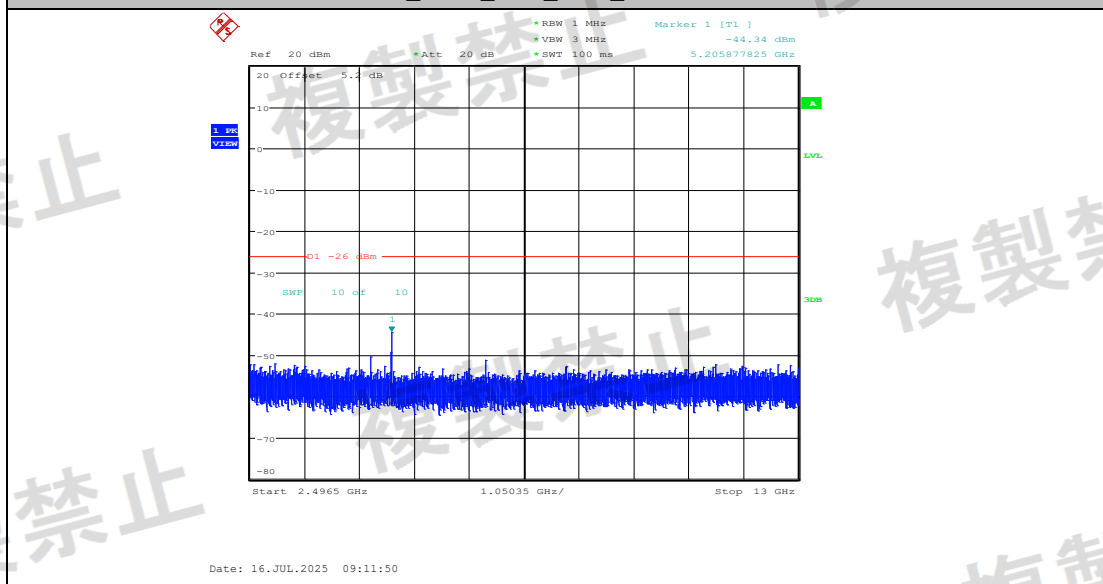


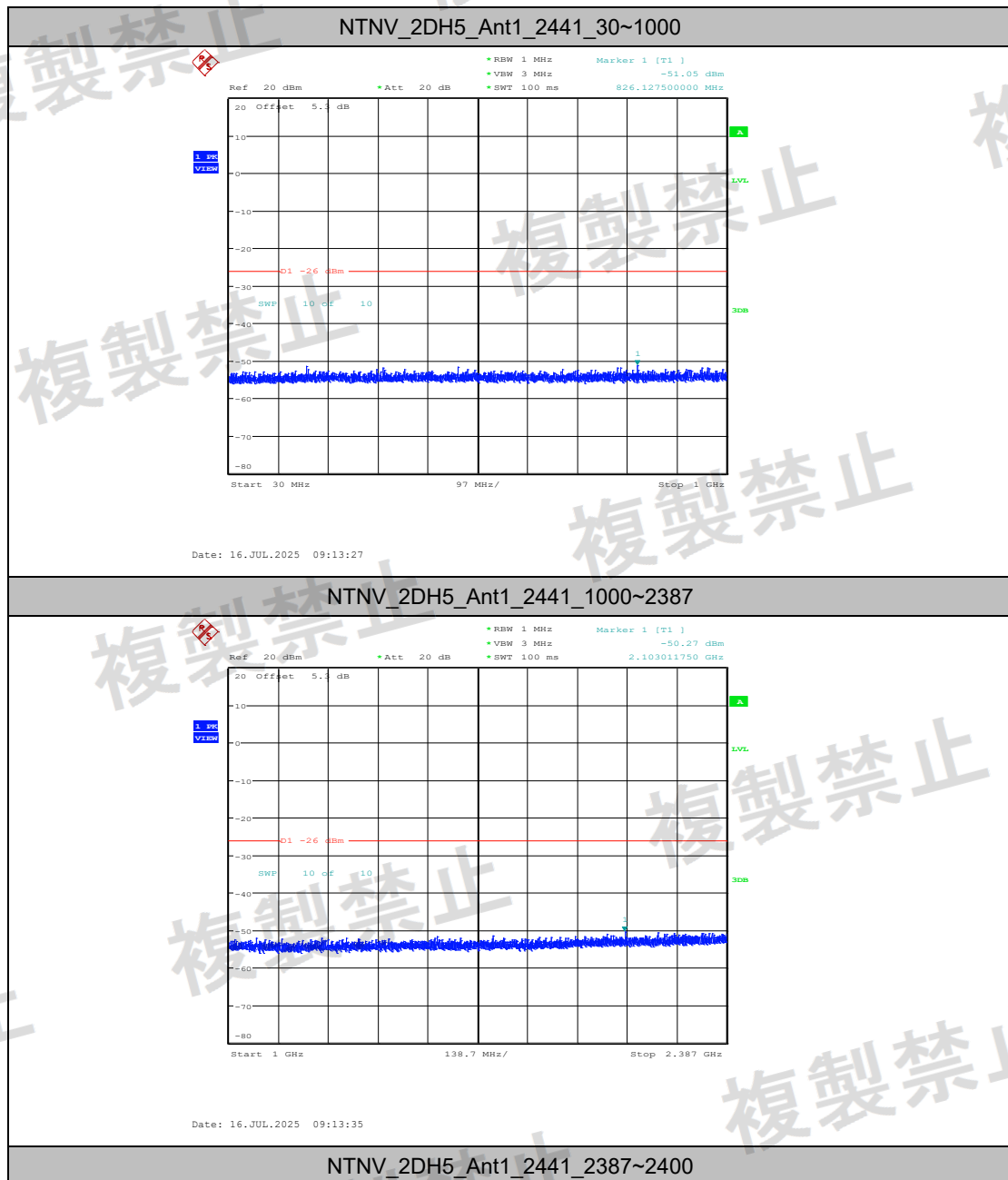


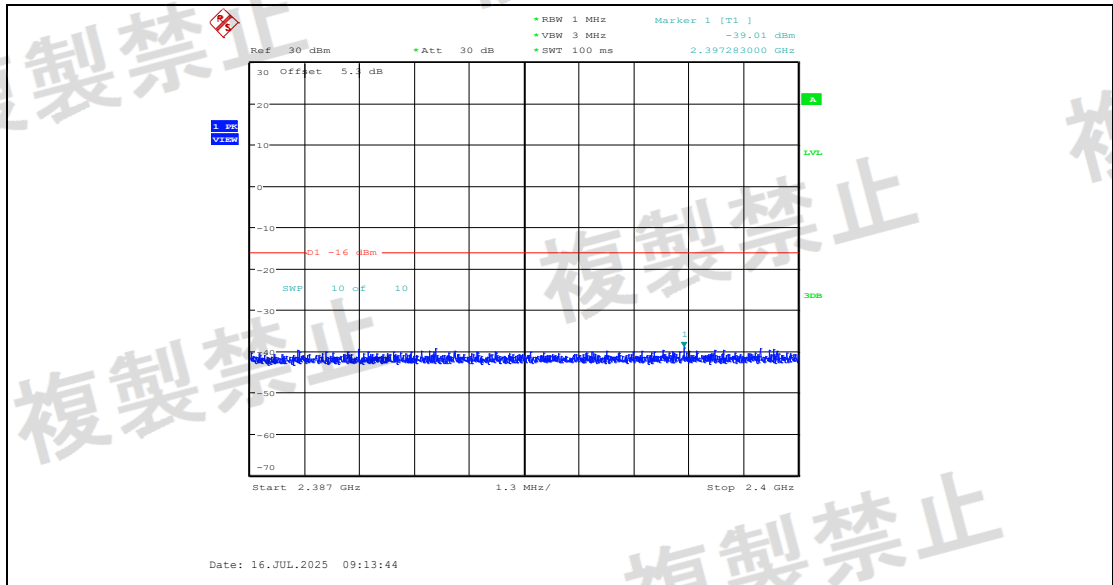
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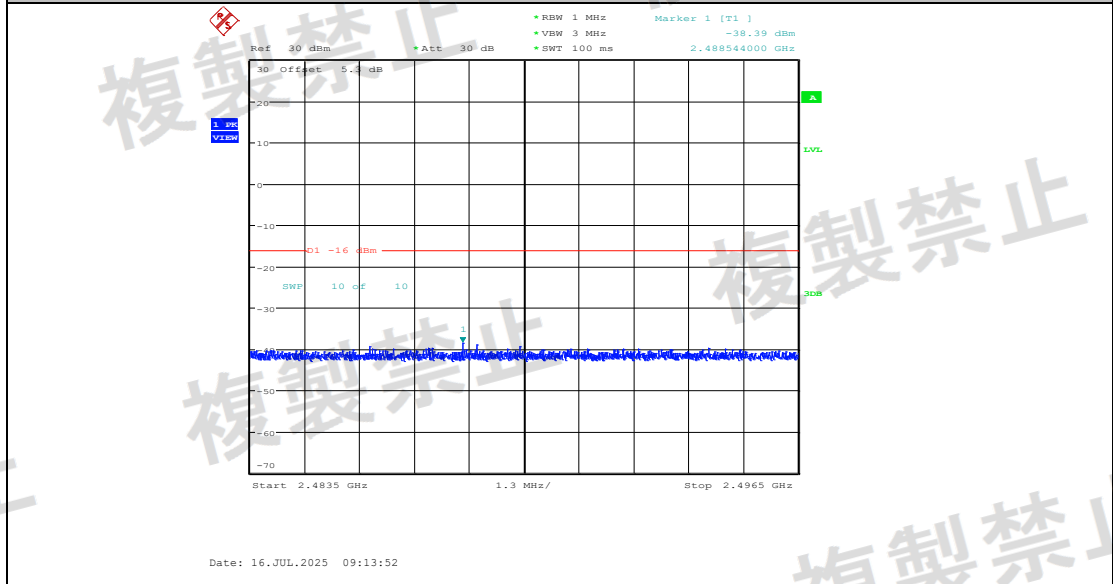
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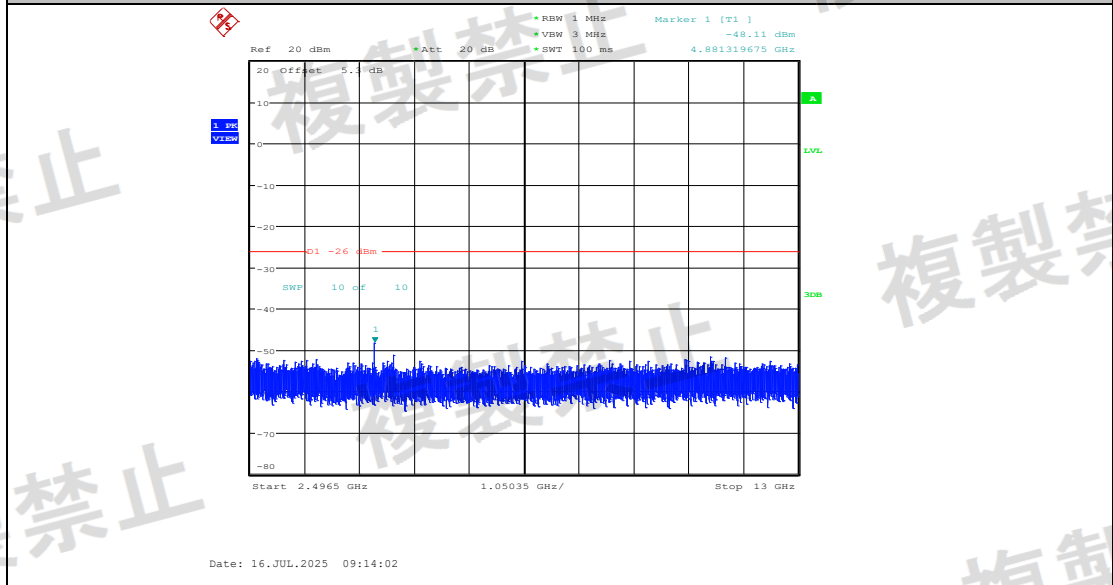


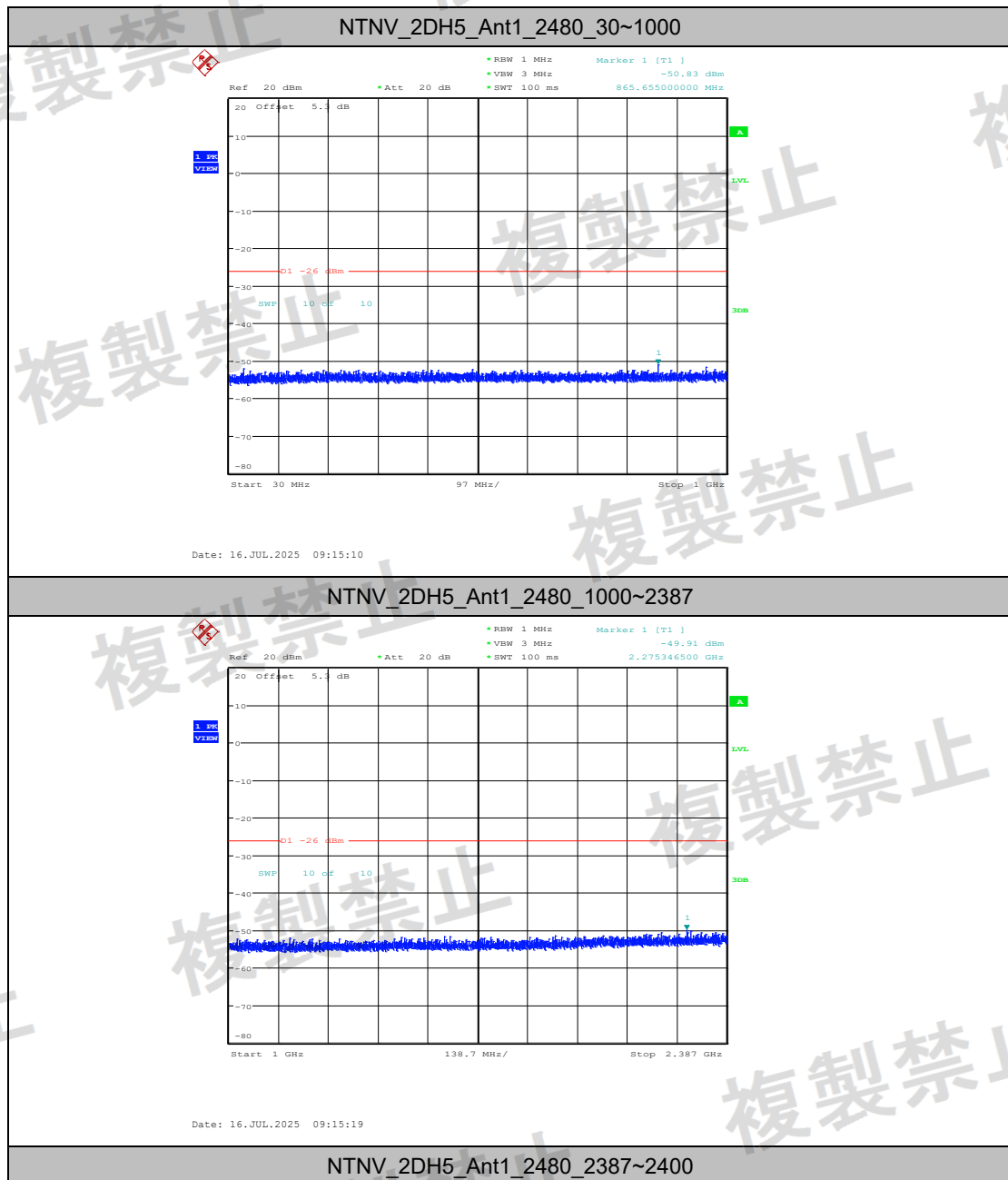


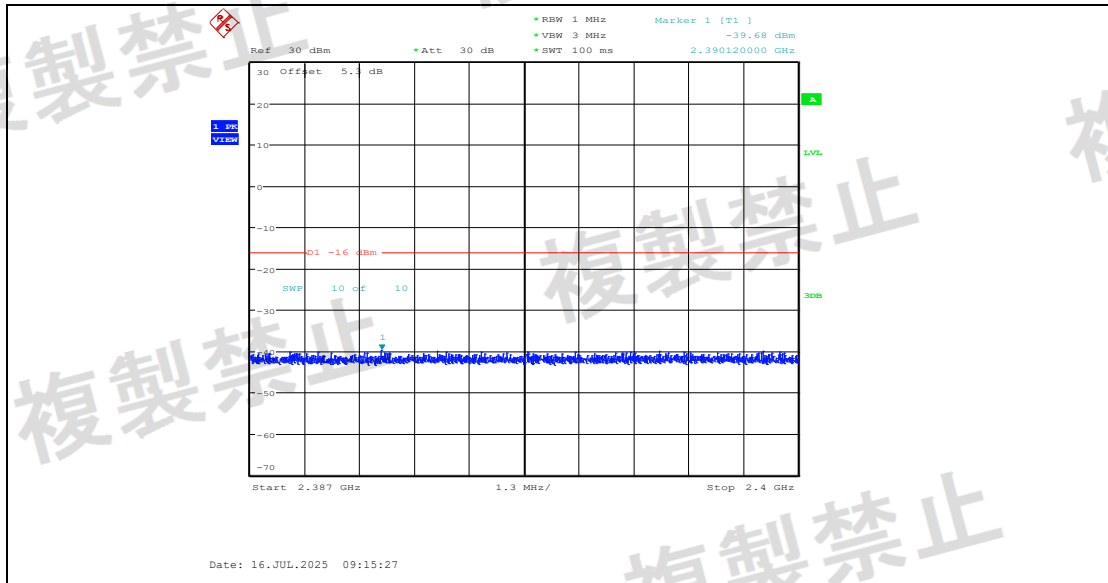
NTNV\_2DH5\_Ant1\_2441\_2483.5~2496.5



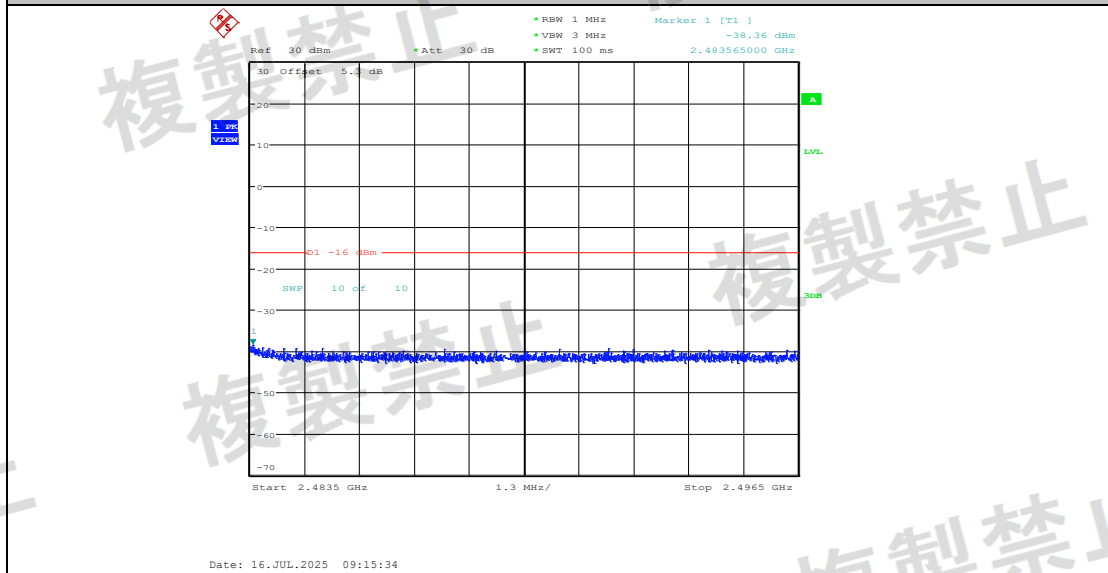
NTNV\_2DH5\_Ant1\_2441\_2496.5~13000



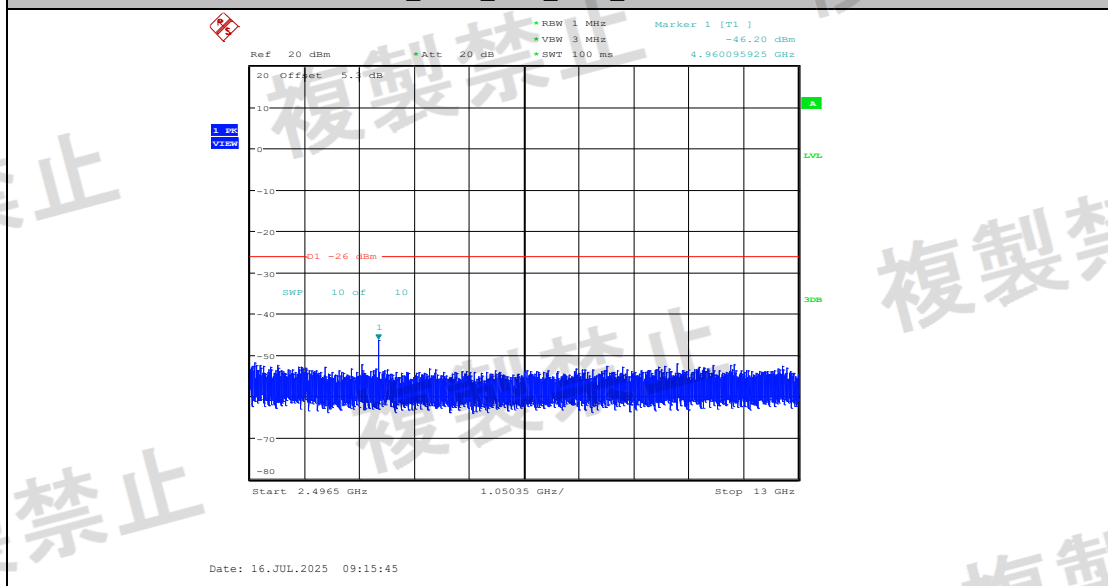


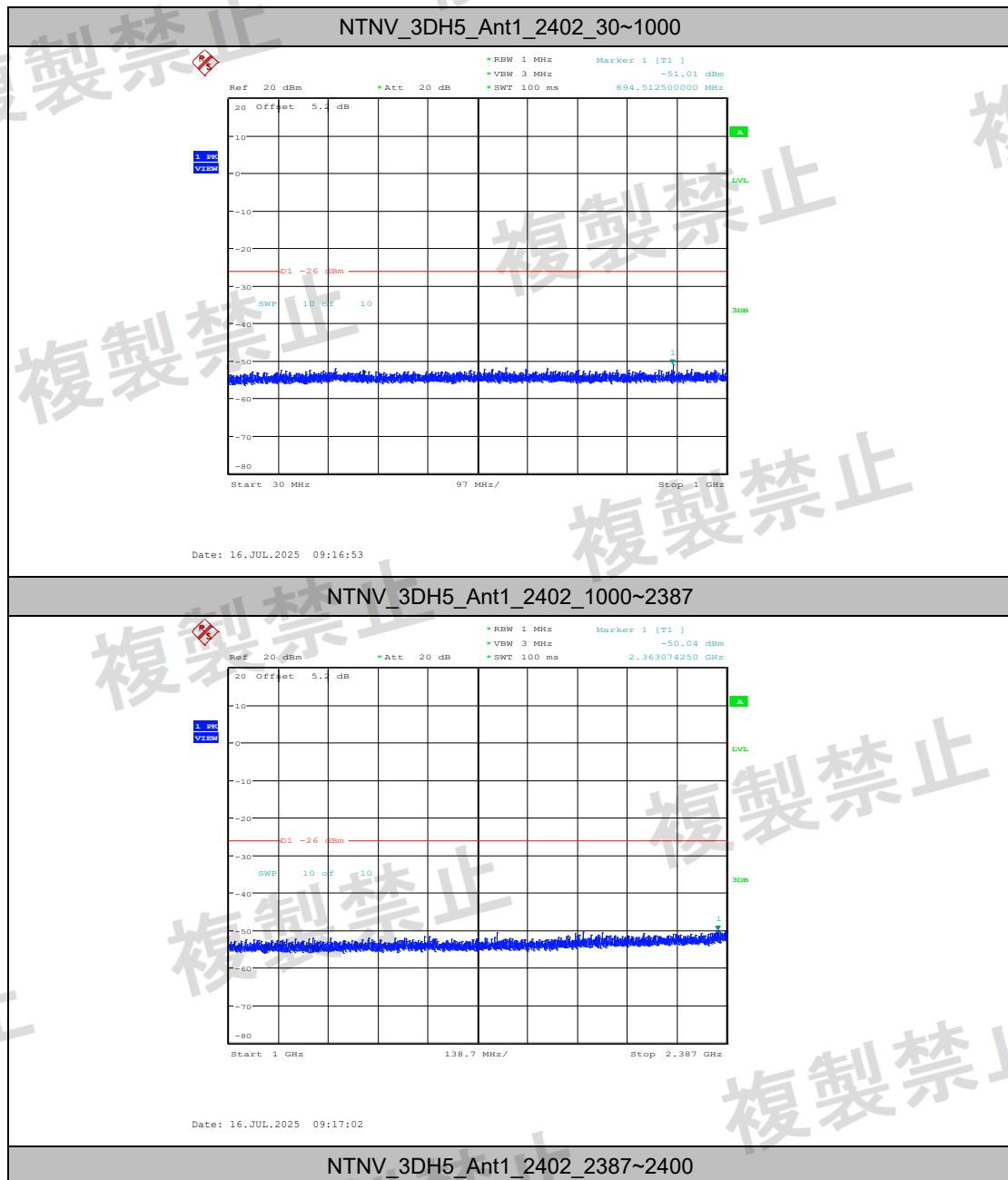


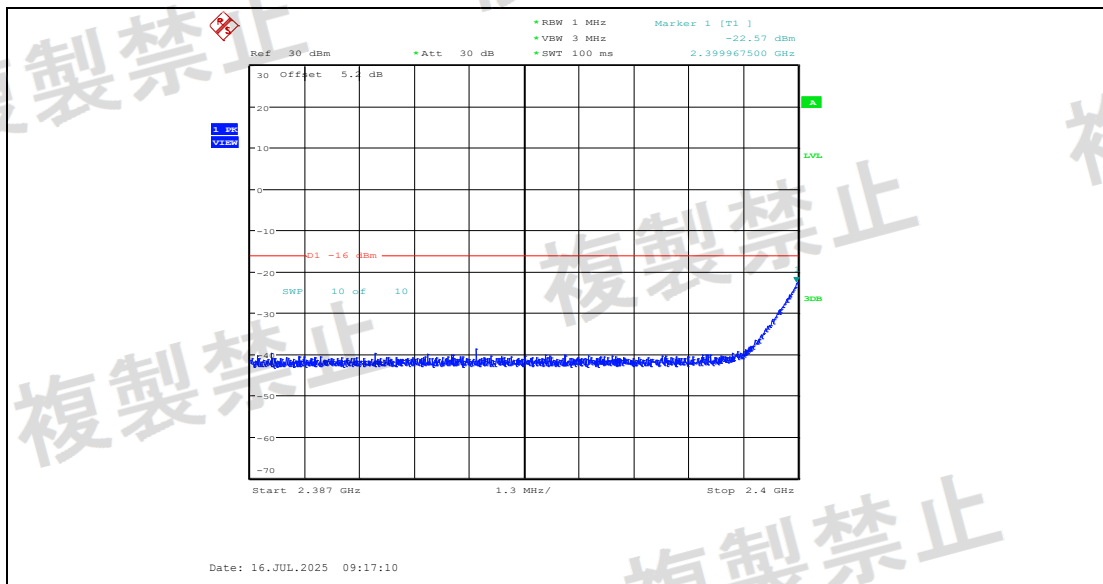
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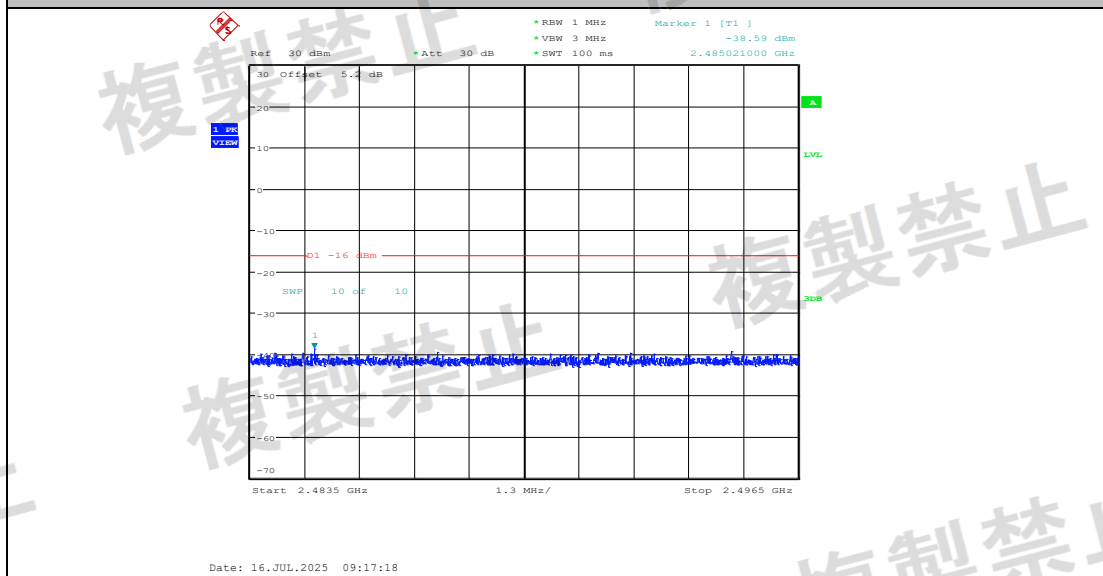
### NTNV\_2DH5\_Ant1\_2480\_2496.5~13000



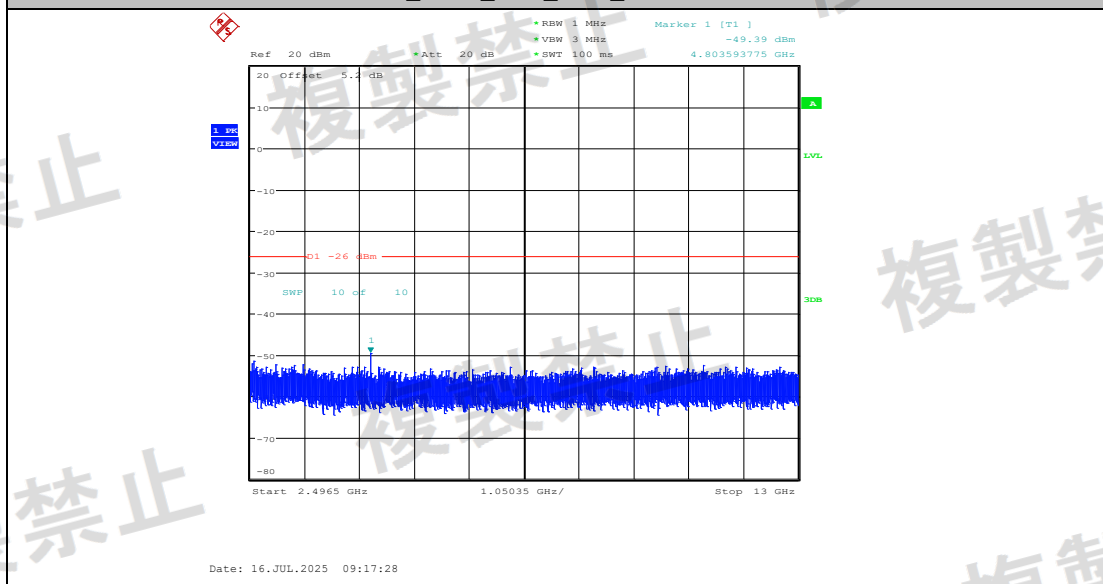


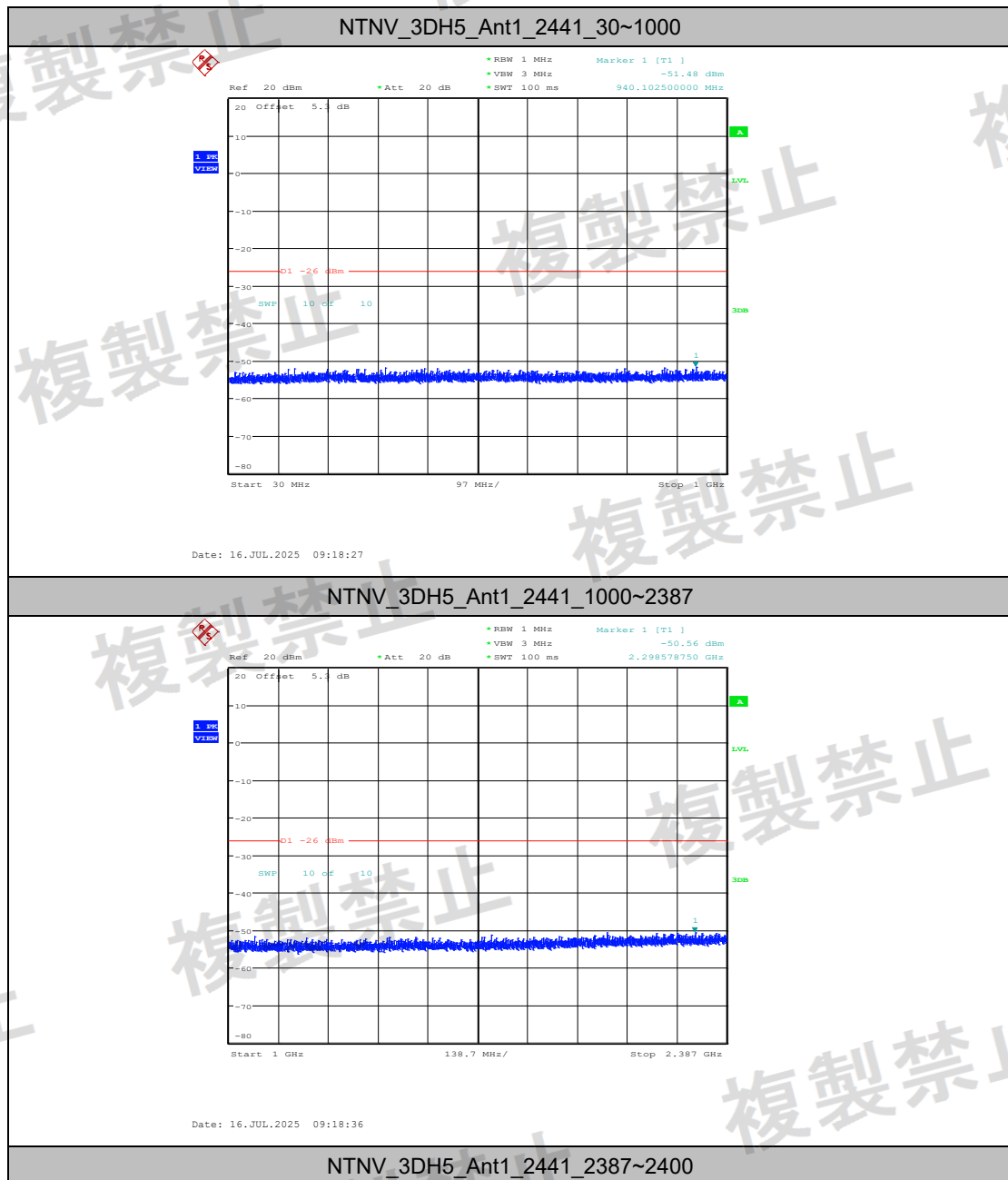


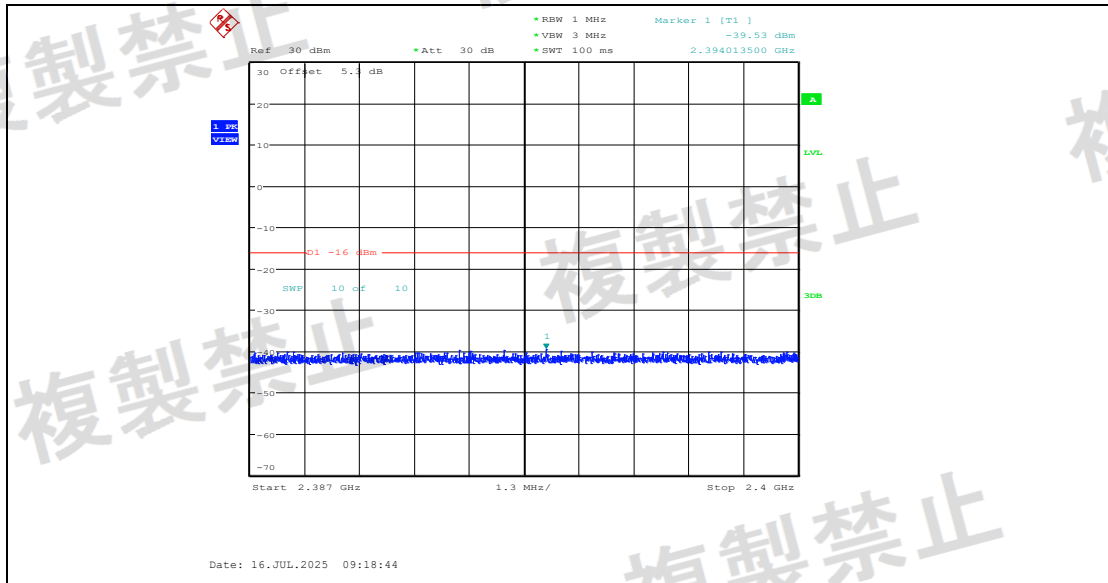
NTNV\_3DH5\_Ant1\_2402\_2483.5~2496.5



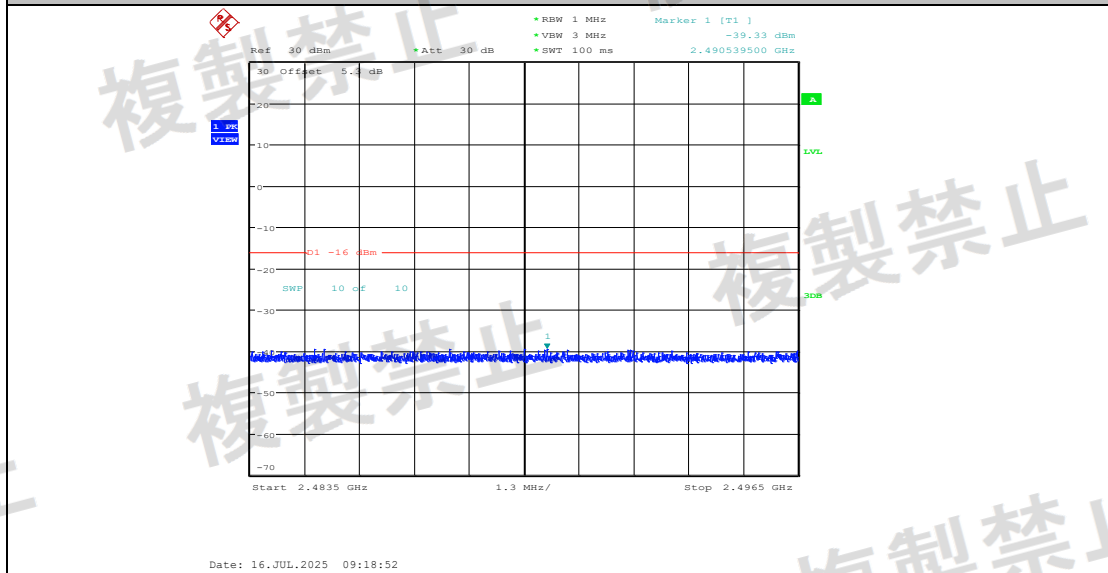
NTNV\_3DH5\_Ant1\_2402\_2496.5~13000



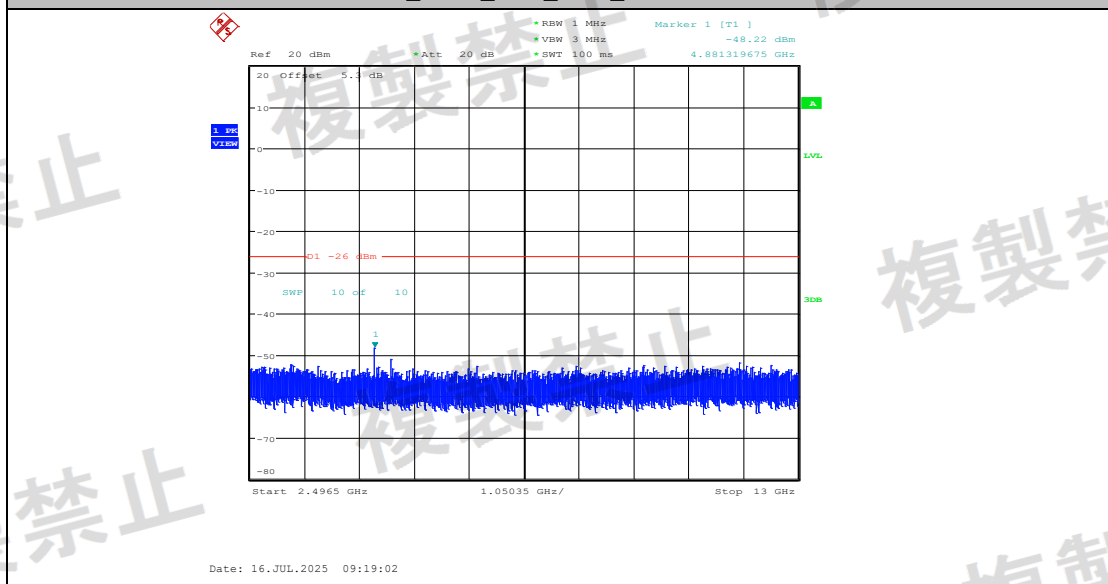


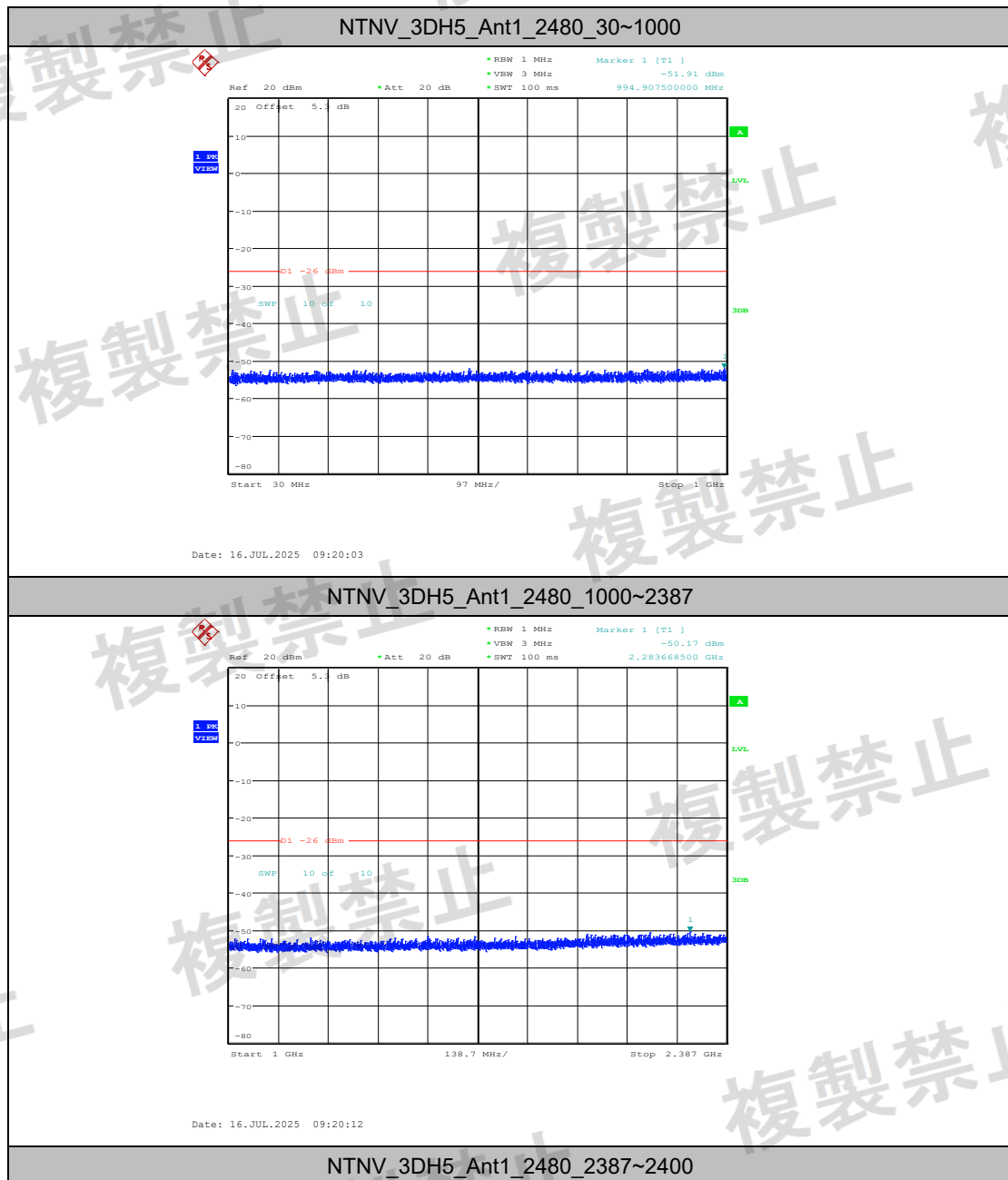


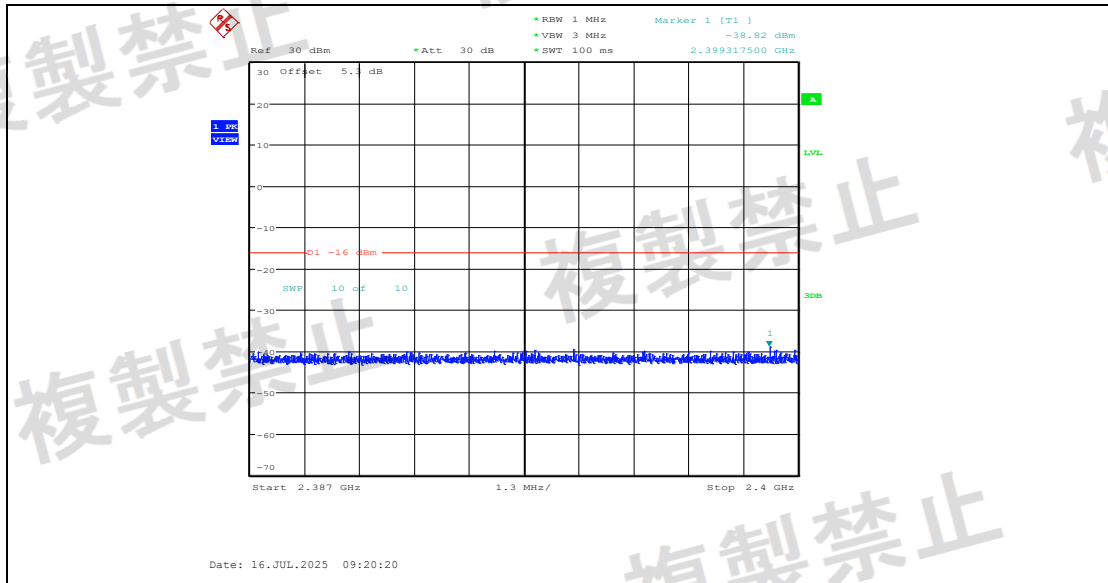
### NTNV\_3DH5\_Ant1\_2441\_2483.5~2496.5



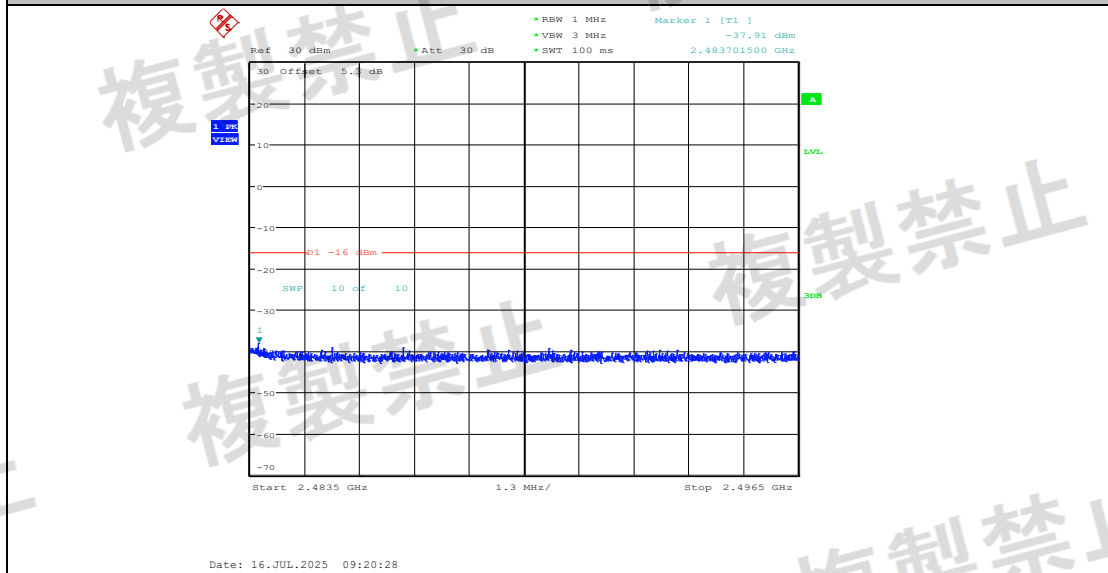
### NTNV\_3DH5\_Ant1\_2441\_2496.5~13000



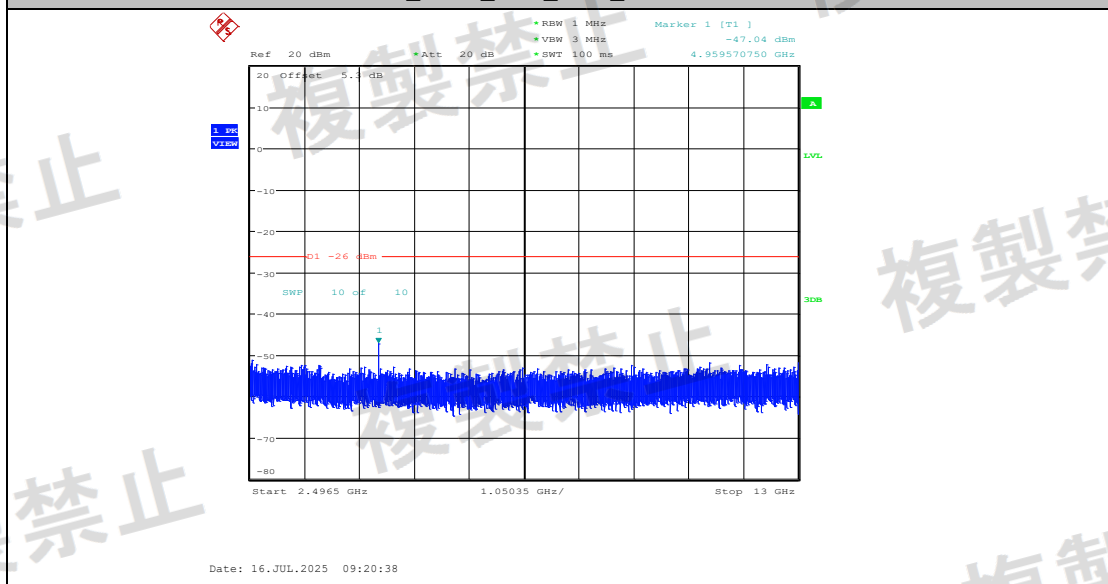




NTNV\_3DH5\_Ant1\_2480\_2483.5~2496.5



NTNV\_3DH5\_Ant1\_2480\_2496.5~13000

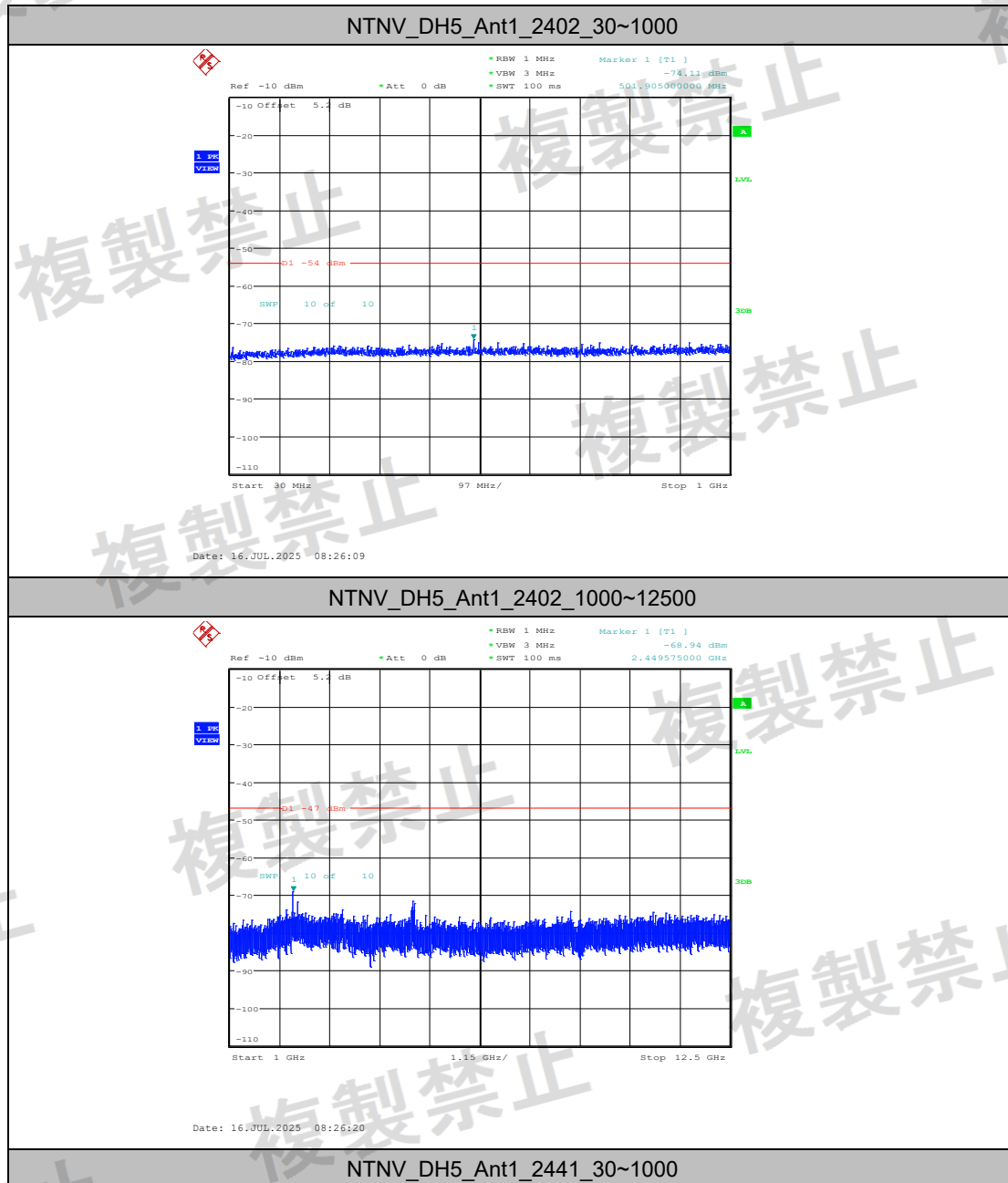


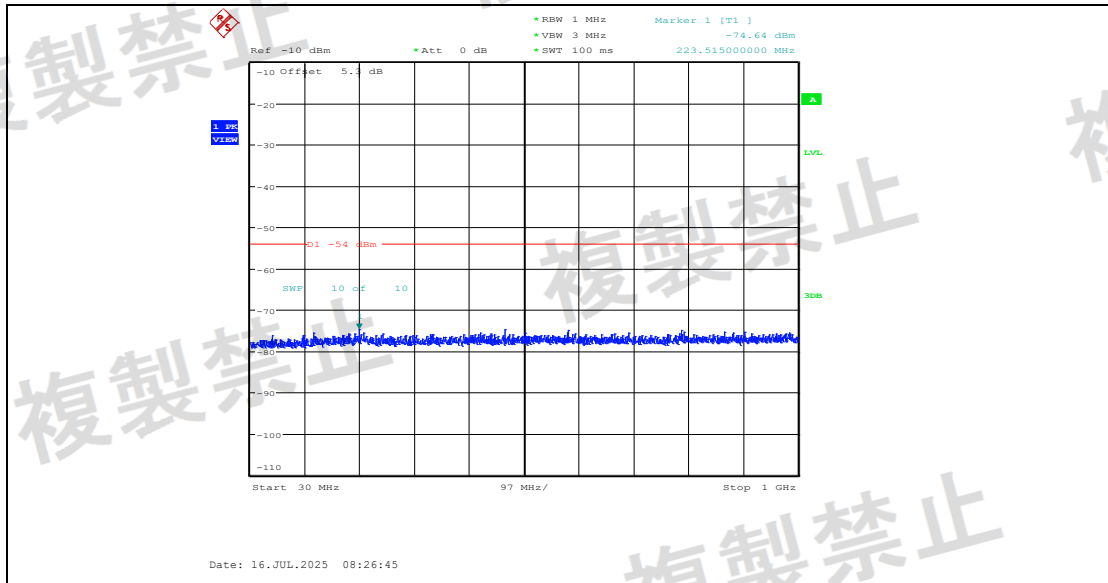
## Appendix E: Spurious Emission of RX

### Test Result

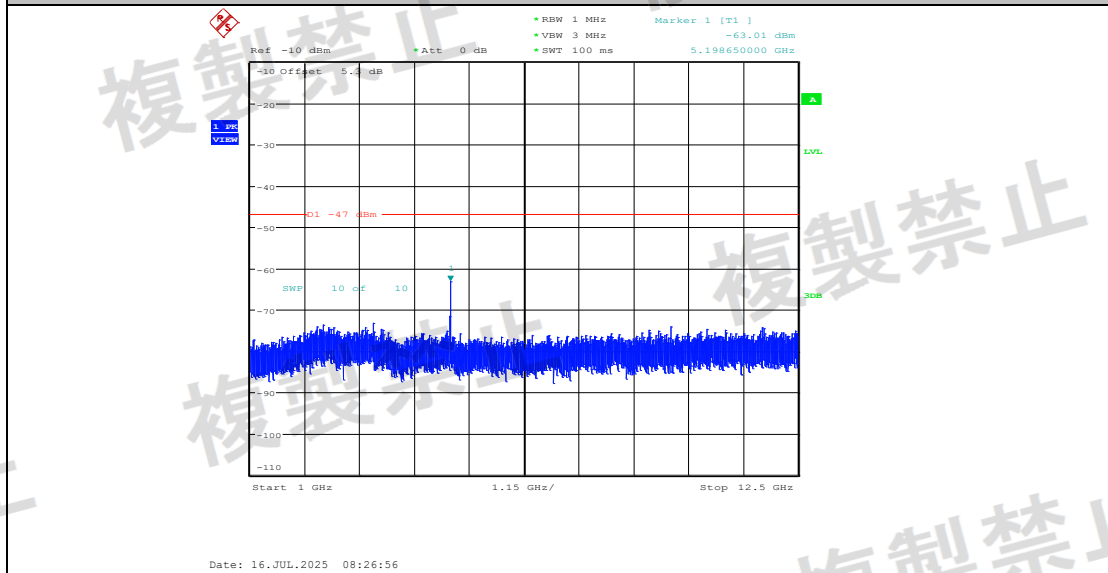
| Test Condition | Test Mode | Antenna | Freq(M Hz) | Freq.Range [MHz] | Freq. [MHz] | Result [dBm] | Limit [dBm] | Result [nW] | Limit [nW] | Verdict |
|----------------|-----------|---------|------------|------------------|-------------|--------------|-------------|-------------|------------|---------|
| NTNV           | DH5       | Ant1    | 2402       | 30~1000          | 501.91      | -74.11       | ≤-54        | 0.0388<br>2 | ≤4         | PASS    |
|                |           |         |            | 1000~12500       | 2449.5<br>8 | -68.94       | ≤-47        | 0.1276<br>4 | ≤20        | PASS    |
|                |           |         | 2441       | 30~1000          | 223.52      | -74.64       | ≤-54        | 0.0343<br>6 | ≤4         | PASS    |
|                |           |         |            | 1000~12500       | 5198.6<br>5 | -63.01       | ≤-47        | 0.5000<br>3 | ≤20        | PASS    |
|                |           |         | 2480       | 30~1000          | 811.34      | -74.55       | ≤-54        | 0.0350<br>8 | ≤4         | PASS    |
|                |           |         |            | 1000~12500       | 5194.0<br>5 | -60.56       | ≤-47        | 0.8790<br>2 | ≤20        | PASS    |
|                | 2DH5      | Ant1    | 2402       | 30~1000          | 477.66      | -74.91       | ≤-54        | 0.0322<br>8 | ≤4         | PASS    |
|                |           |         |            | 1000~12500       | 5196.9<br>3 | -73.04       | ≤-47        | 0.0496<br>6 | ≤20        | PASS    |
|                |           |         | 2441       | 30~1000          | 904.94      | -74.62       | ≤-54        | 0.0345<br>1 | ≤4         | PASS    |
|                |           |         |            | 1000~12500       | 5120.4<br>5 | -73.32       | ≤-47        | 0.0465<br>6 | ≤20        | PASS    |
|                |           |         | 2480       | 30~1000          | 273.47      | -74.63       | ≤-54        | 0.0344<br>3 | ≤4         | PASS    |
|                |           |         |            | 1000~12500       | 5194.6<br>3 | -73.09       | ≤-47        | 0.0490<br>9 | ≤20        | PASS    |
|                | 3DH5      | Ant1    | 2402       | 30~1000          | 905.91      | -73.66       | ≤-54        | 0.0430<br>5 | ≤4         | PASS    |
|                |           |         |            | 1000~12500       | 2447.8<br>5 | -71.23       | ≤-47        | 0.0753<br>4 | ≤20        | PASS    |
|                |           |         | 2441       | 30~1000          | 237.58      | -74.57       | ≤-54        | 0.0349<br>1 | ≤4         | PASS    |
|                |           |         |            | 1000~12500       | 2435.2<br>0 | -71.57       | ≤-47        | 0.0696<br>6 | ≤20        | PASS    |
|                |           |         | 2480       | 30~1000          | 573.69      | -74.59       | ≤-54        | 0.0347<br>5 | ≤4         | PASS    |
|                |           |         |            | 1000~12500       | 2423.7<br>0 | -72.72       | ≤-47        | 0.0534<br>6 | ≤20        | PASS    |

## Test Graphs

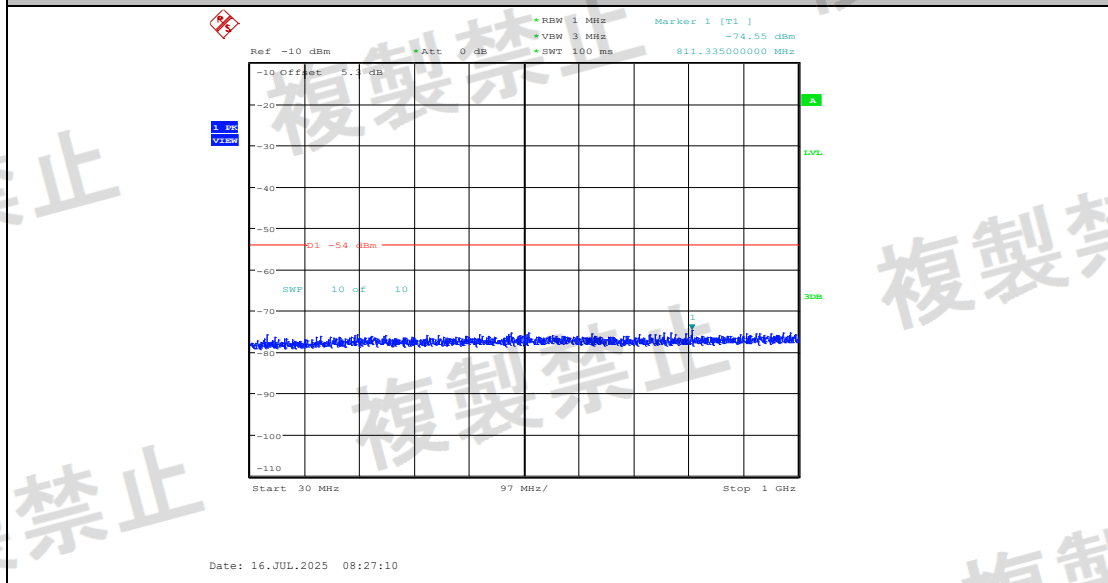


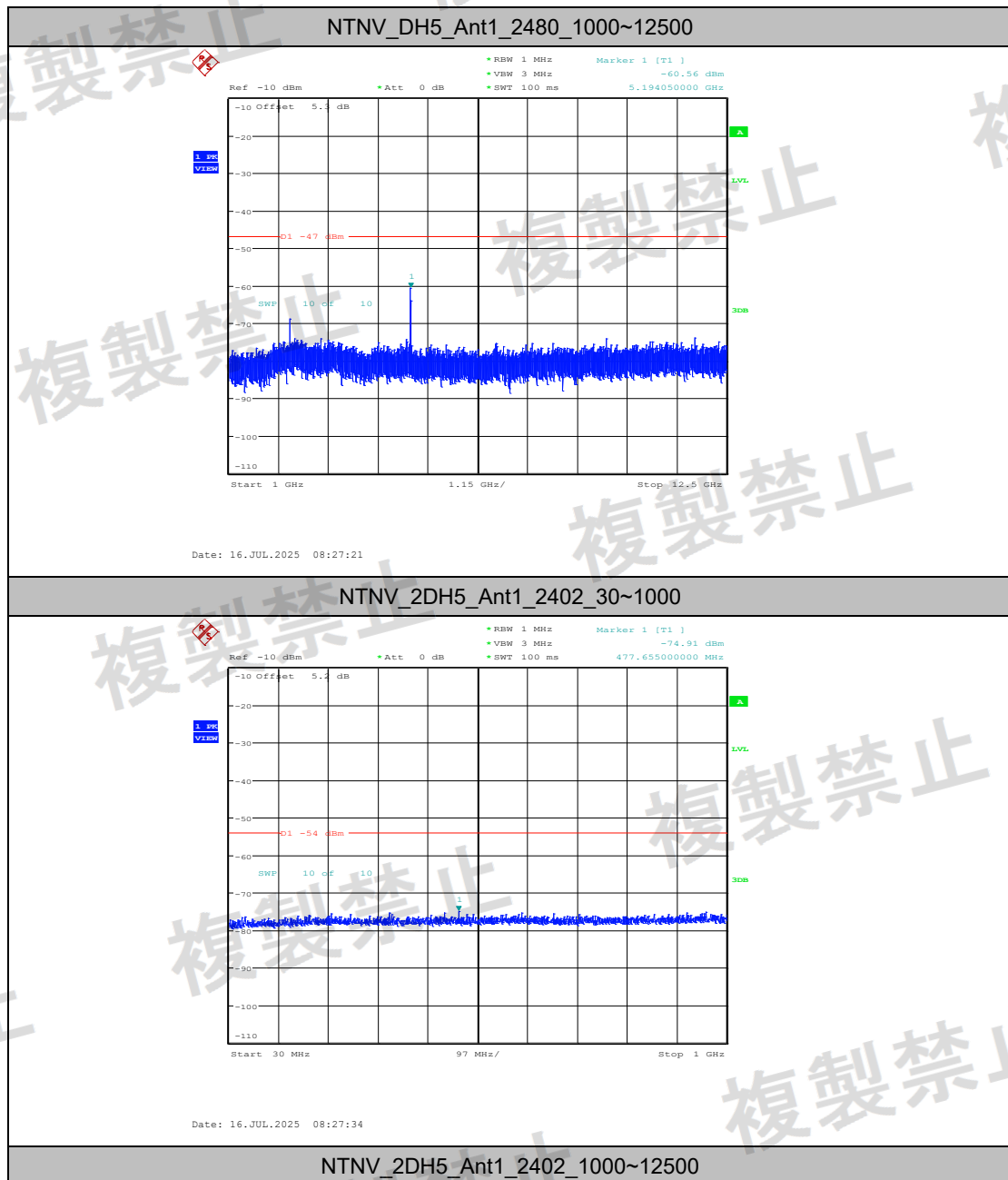


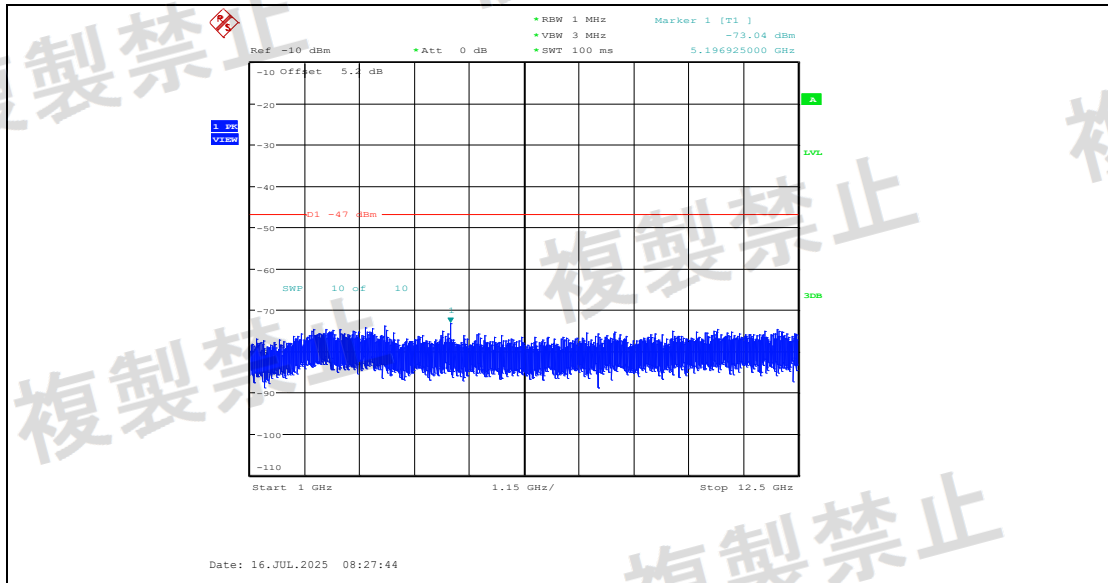
### NTNV\_DH5\_Ant1\_2441\_1000~12500



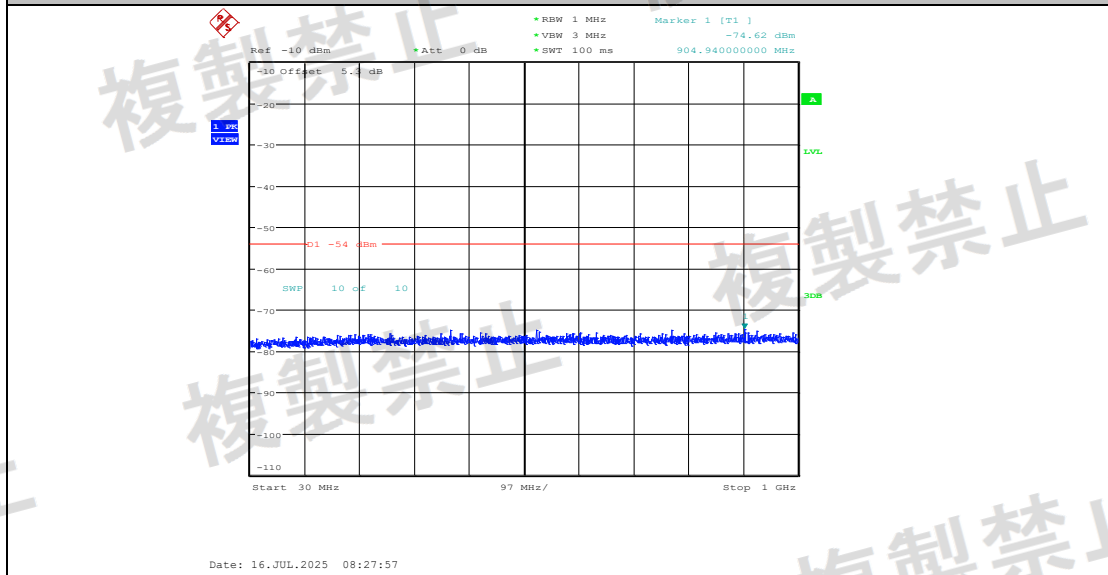
### NTNV\_DH5\_Ant1\_2480\_30~1000



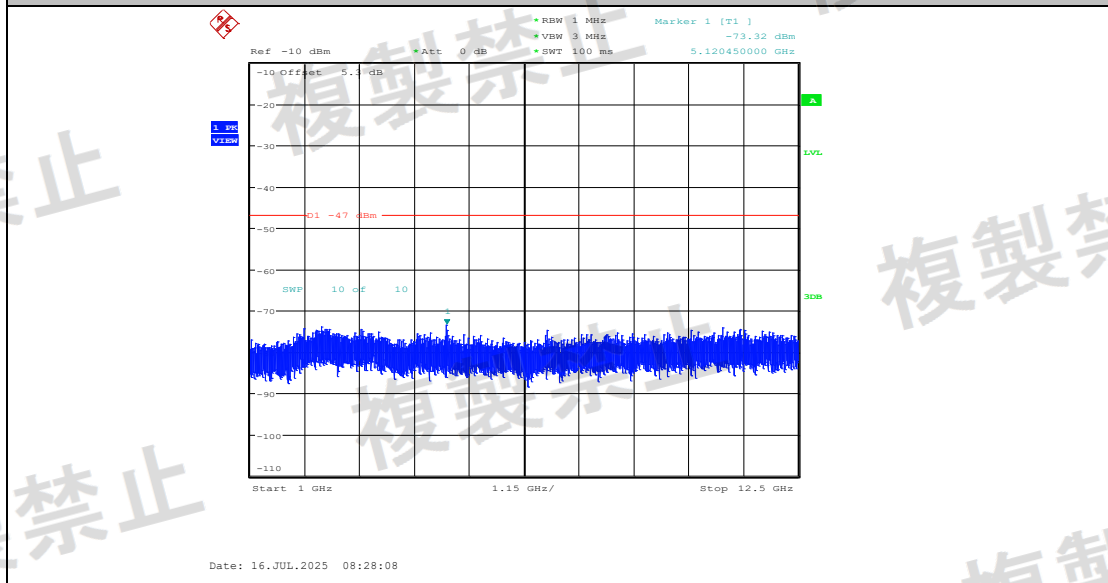


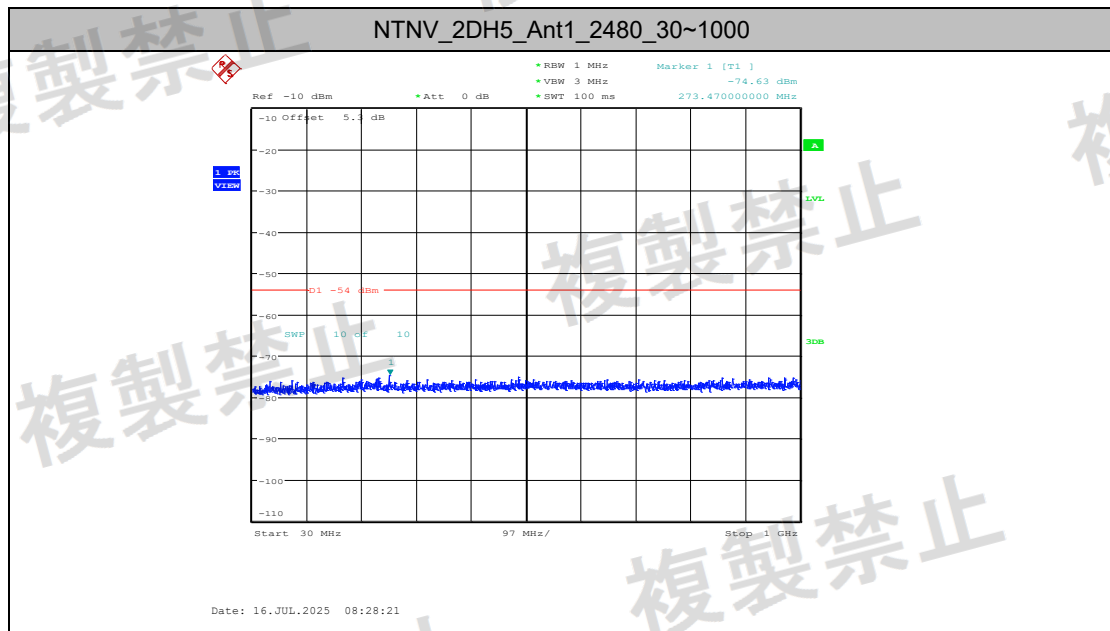
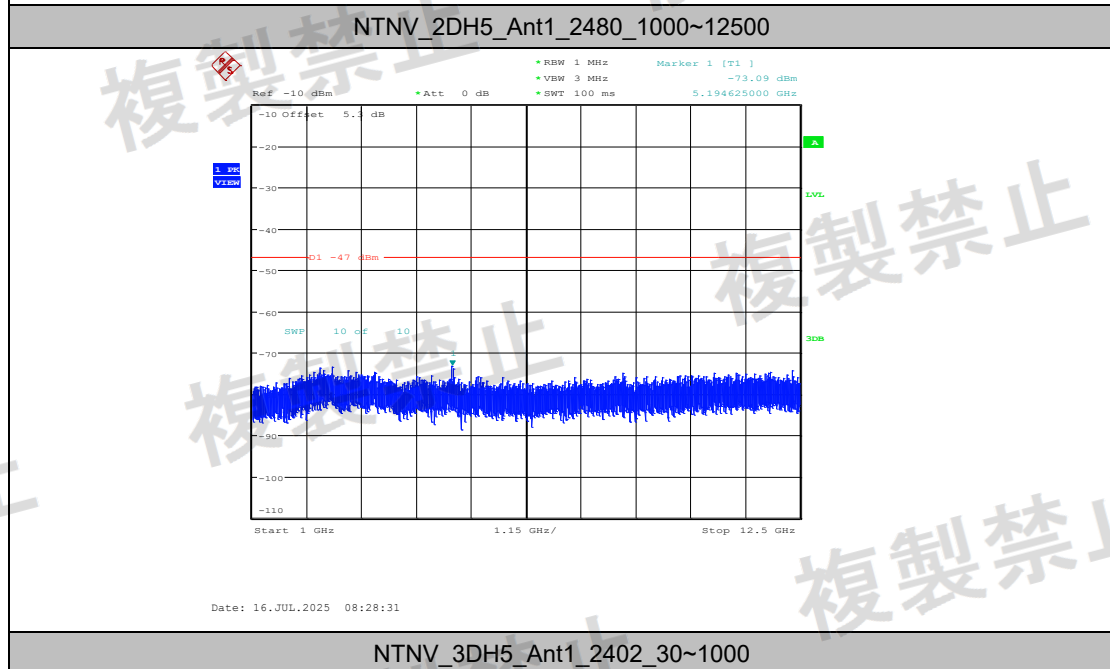


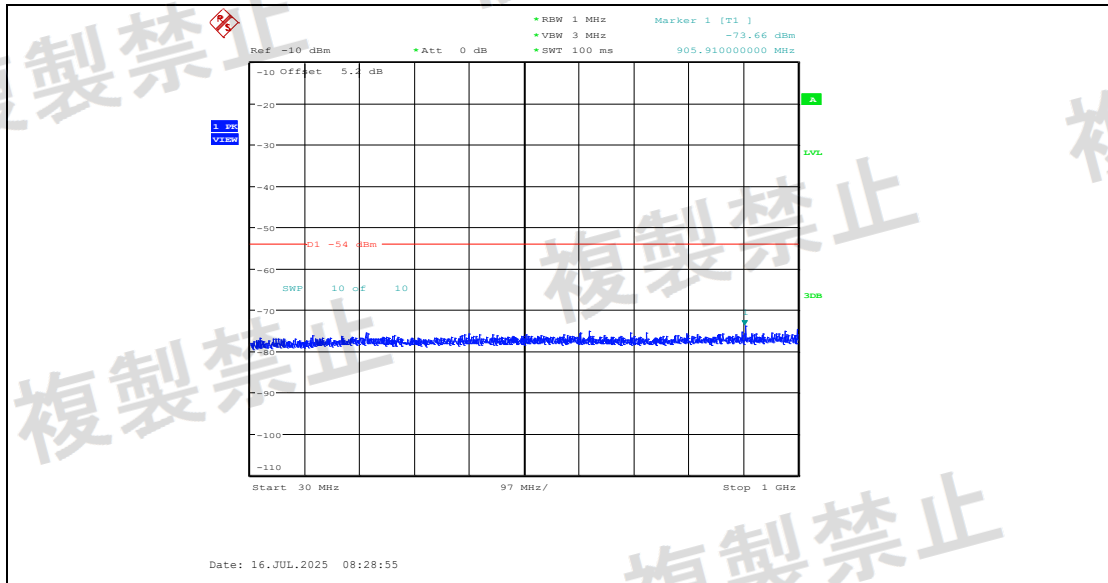
### NTNV\_2DH5\_Ant1\_2441\_30~1000



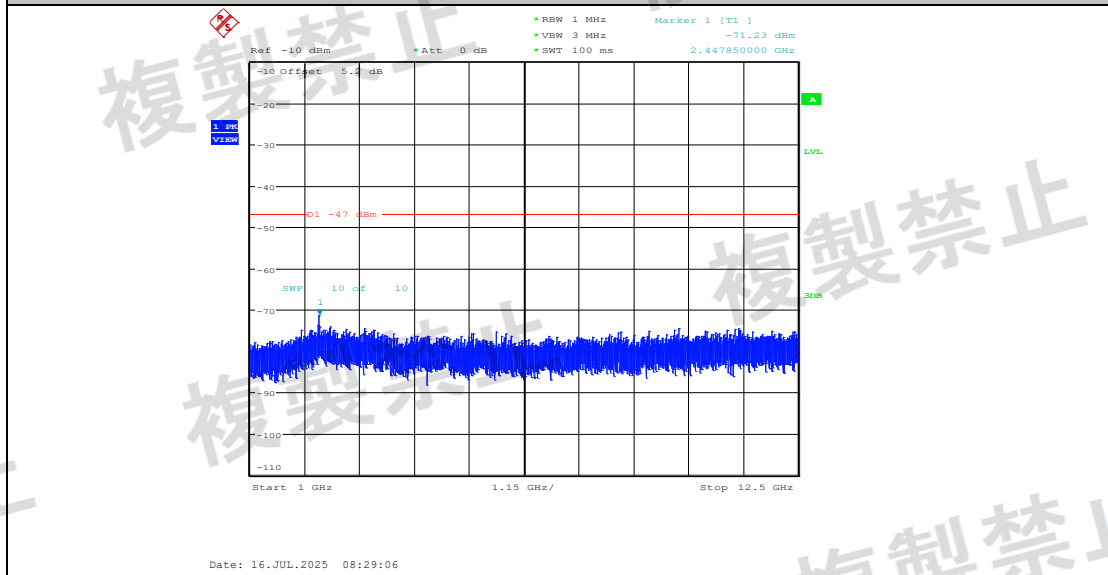
### NTNV\_2DH5\_Ant1\_2441\_1000~12500



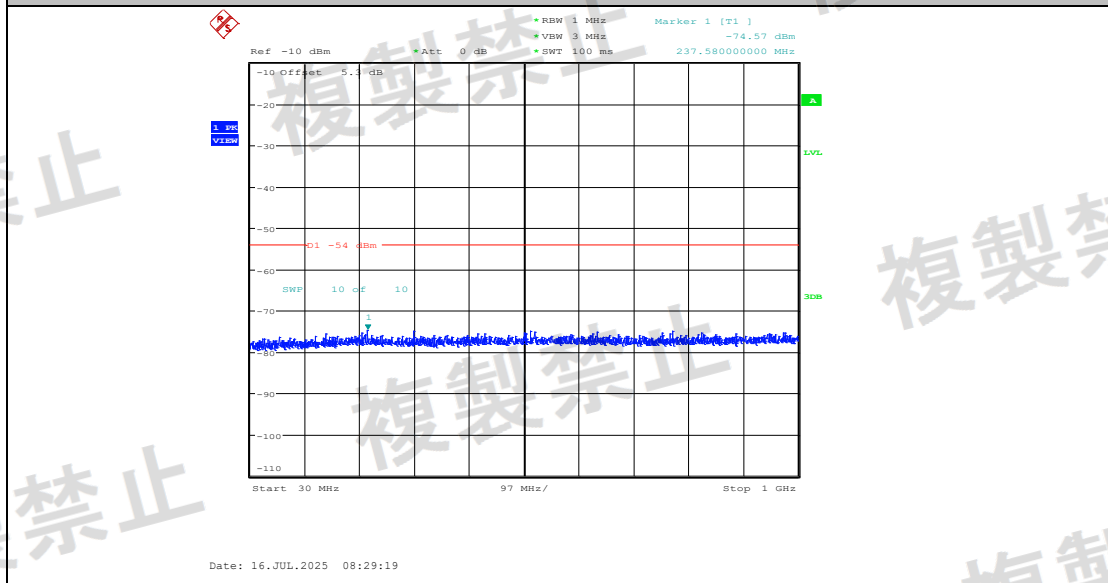


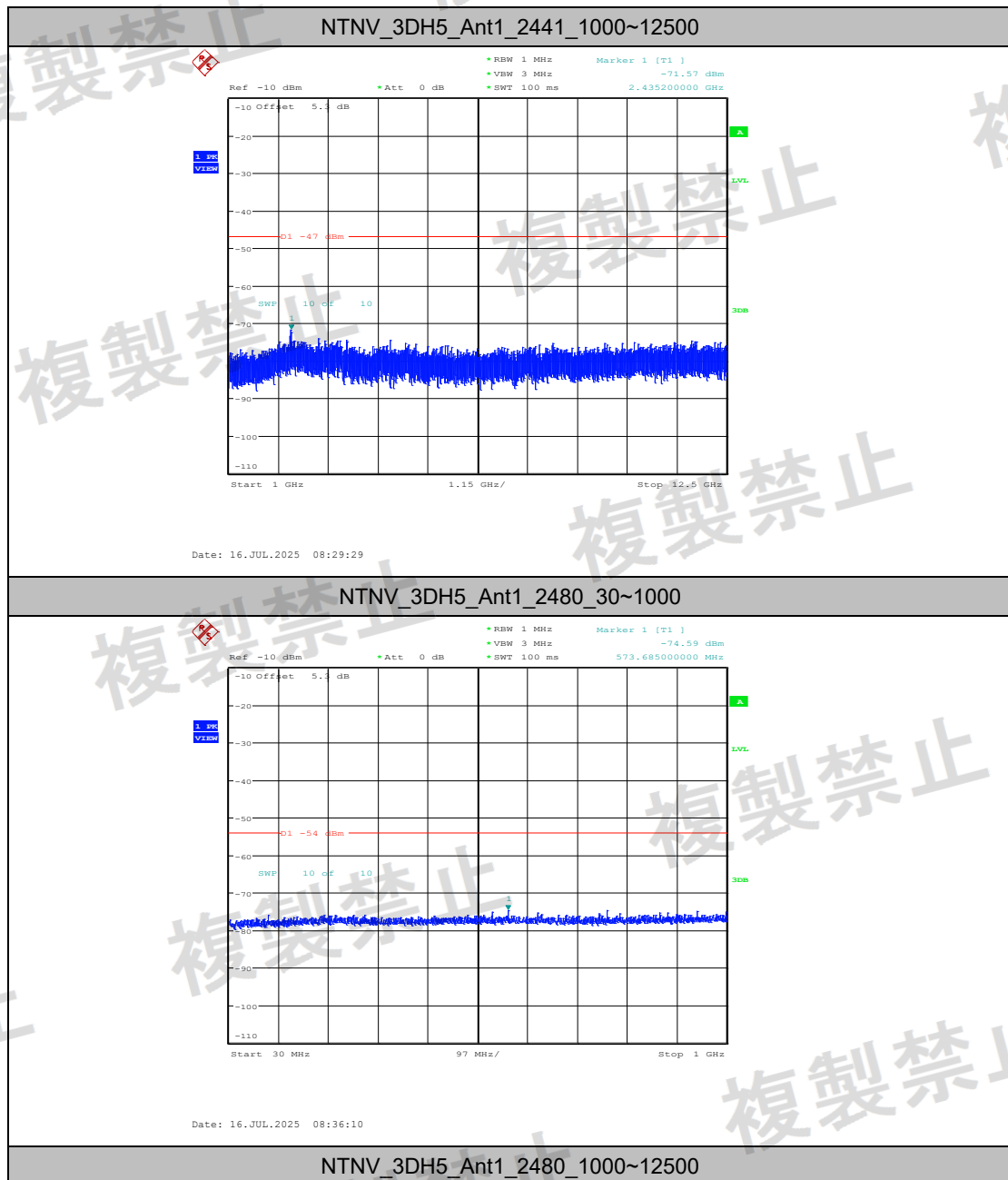


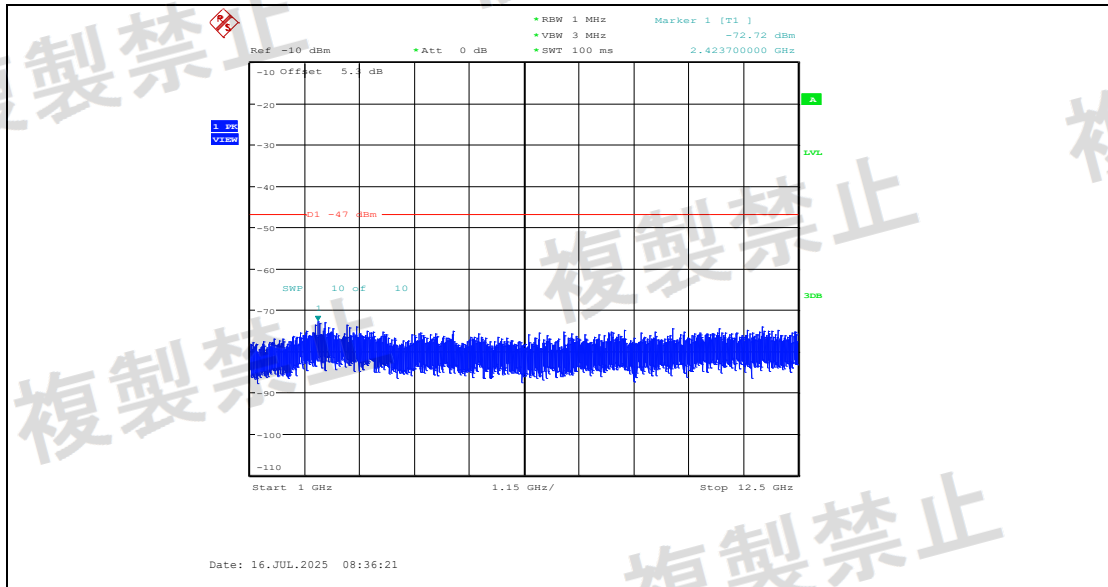
### NTNV\_3DH5\_Ant1\_2402\_1000~12500



### NTNV\_3DH5\_Ant1\_2441\_30~1000







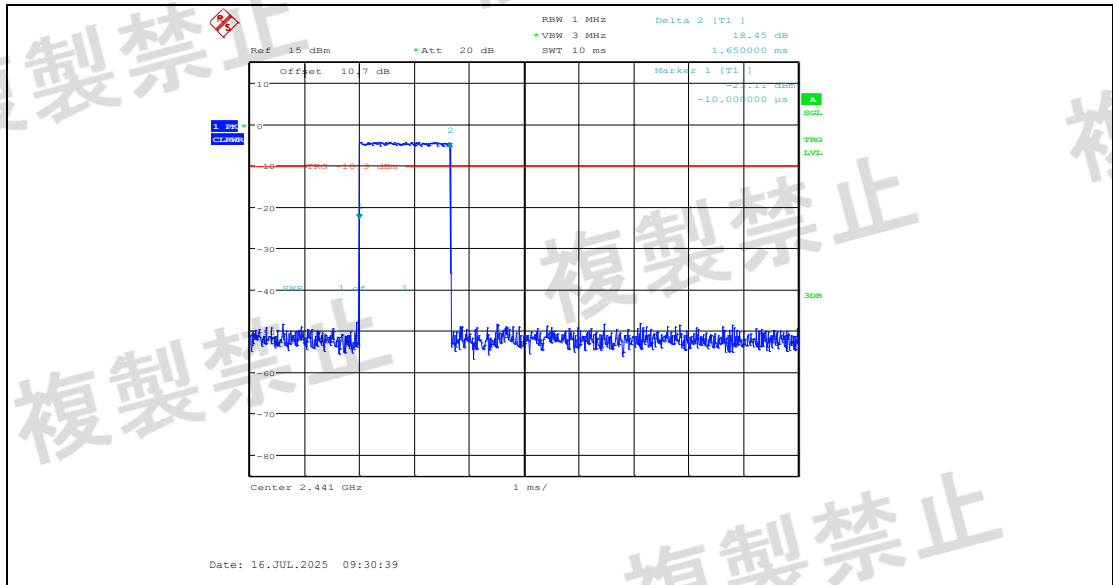
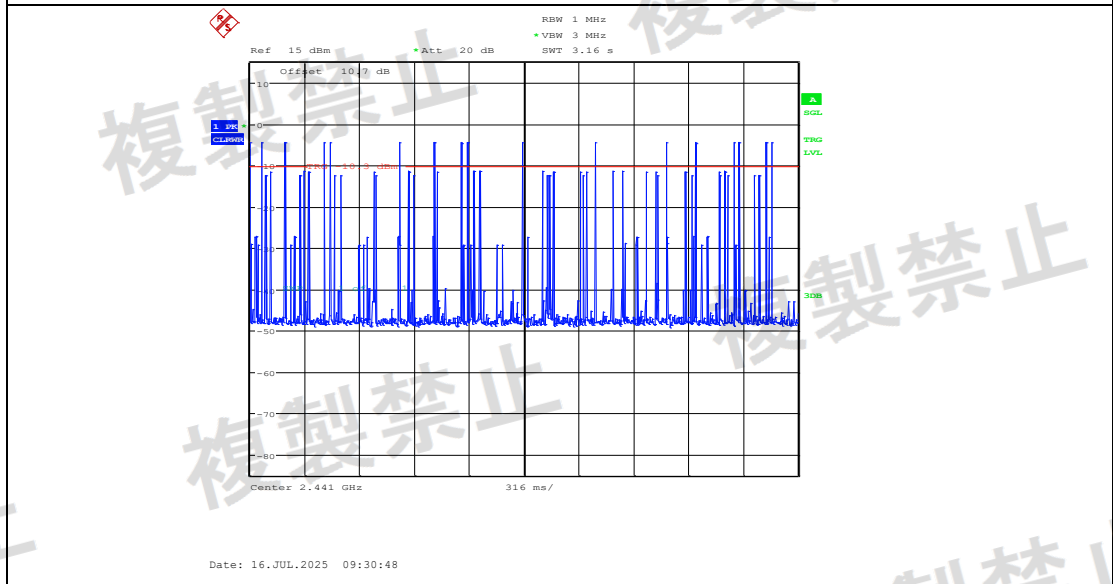
## Appendix F: Dwell Time

### Test Result

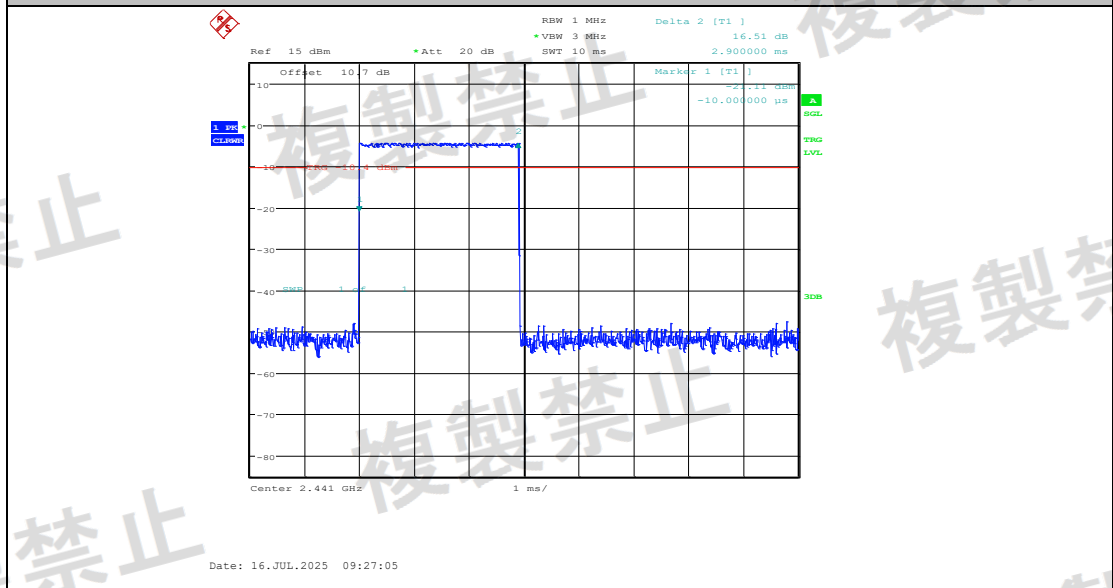
| Test Condition | Test Mode | Antenna | Freq(M Hz) | BurstWidth [ms] | TotalHops [Num] | Result[s] | Limit [s] | Verdict |
|----------------|-----------|---------|------------|-----------------|-----------------|-----------|-----------|---------|
| NTNV           | DH1       | Ant1    | Hop        | 0.39            | 320             | 0.125     | ≤0.4      | PASS    |
|                | DH3       | Ant1    | Hop        | 1.65            | 170             | 0.281     | ≤0.4      | PASS    |
|                | DH5       | Ant1    | Hop        | 2.90            | 80              | 0.232     | ≤0.4      | PASS    |
|                | 2DH1      | Ant1    | Hop        | 0.39            | 300             | 0.117     | ≤0.4      | PASS    |
|                | 2DH3      | Ant1    | Hop        | 1.65            | 180             | 0.297     | ≤0.4      | PASS    |
|                | 2DH5      | Ant1    | Hop        | 2.91            | 130             | 0.378     | ≤0.4      | PASS    |
|                | 3DH1      | Ant1    | Hop        | 0.39            | 320             | 0.125     | ≤0.4      | PASS    |
|                | 3DH3      | Ant1    | Hop        | 1.65            | 160             | 0.264     | ≤0.4      | PASS    |
|                | 3DH5      | Ant1    | Hop        | 2.90            | 120             | 0.348     | ≤0.4      | PASS    |

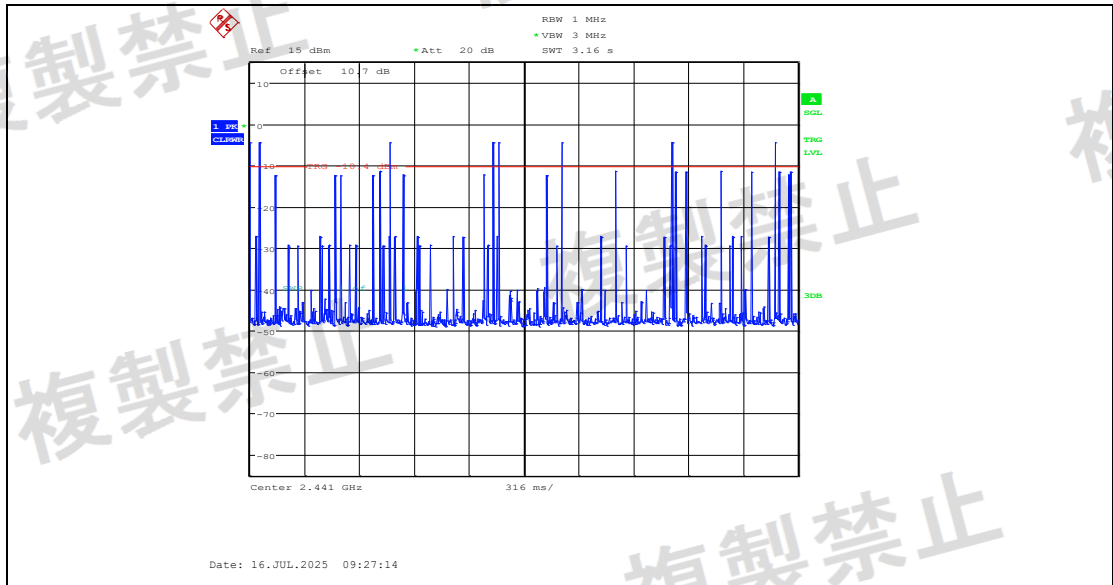
複製禁止



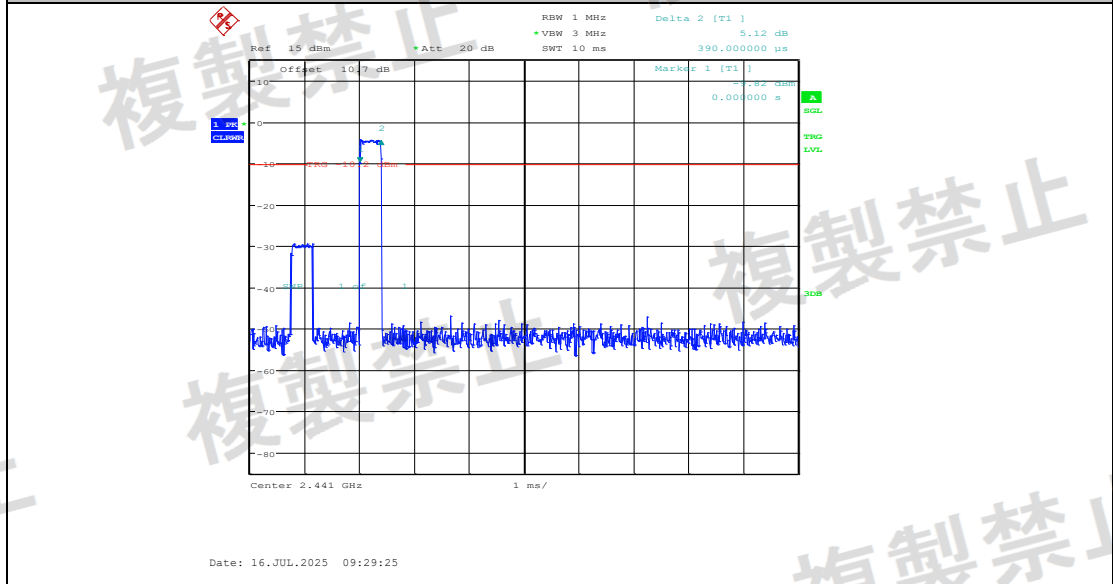
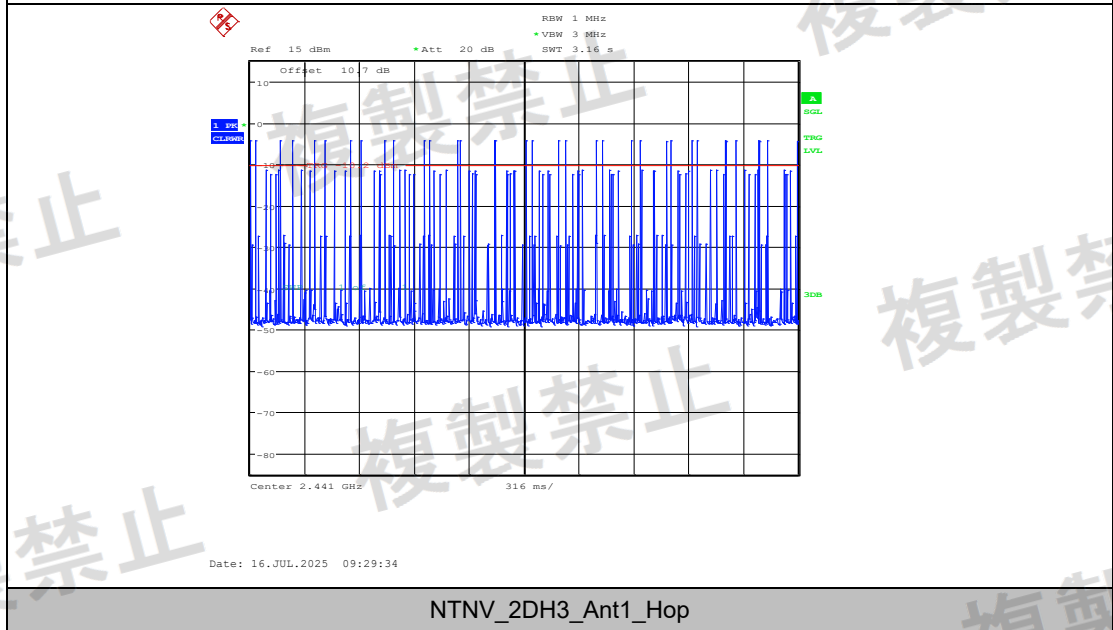


### NTNV\_DH5\_Ant1\_Hop

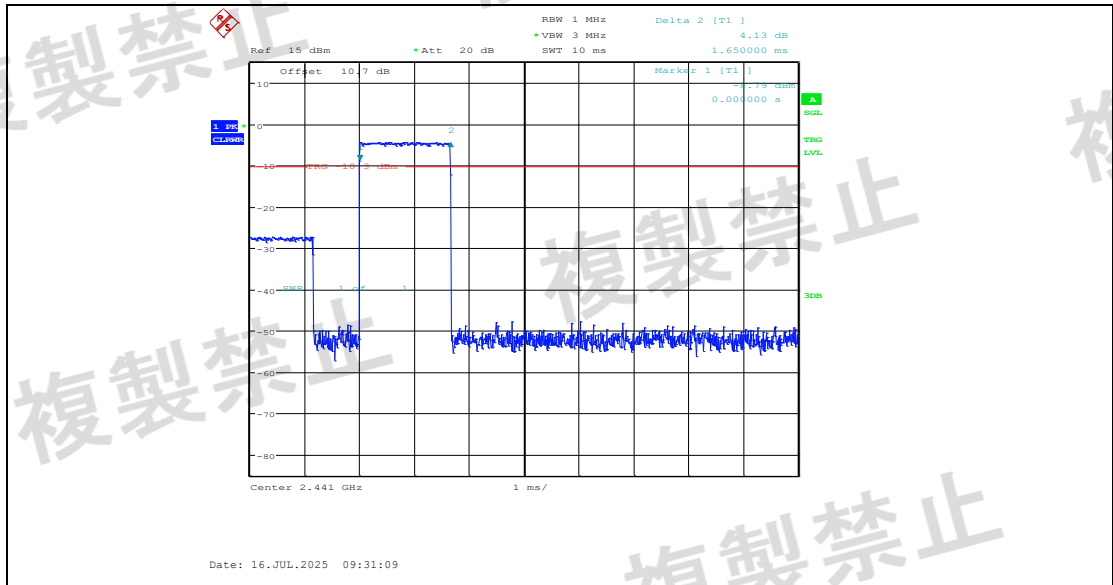
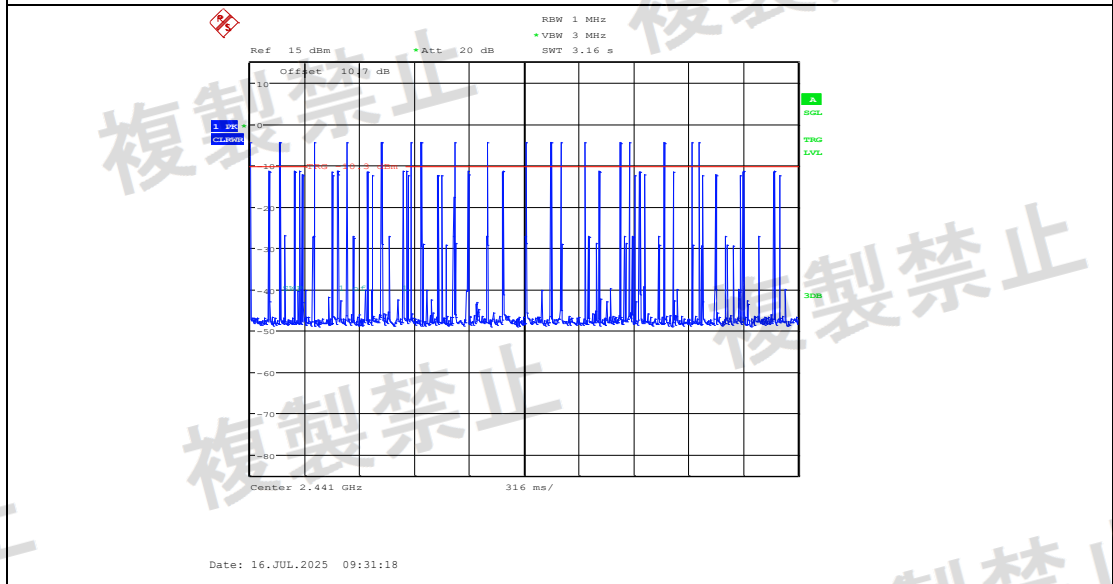




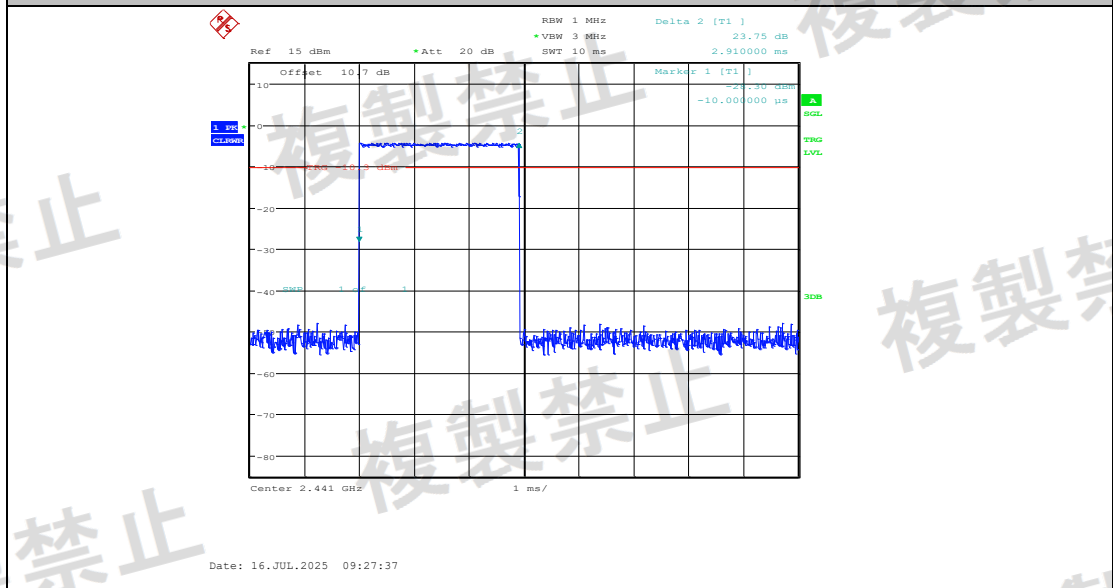
NTNV\_2DH1\_Ant1\_Hop

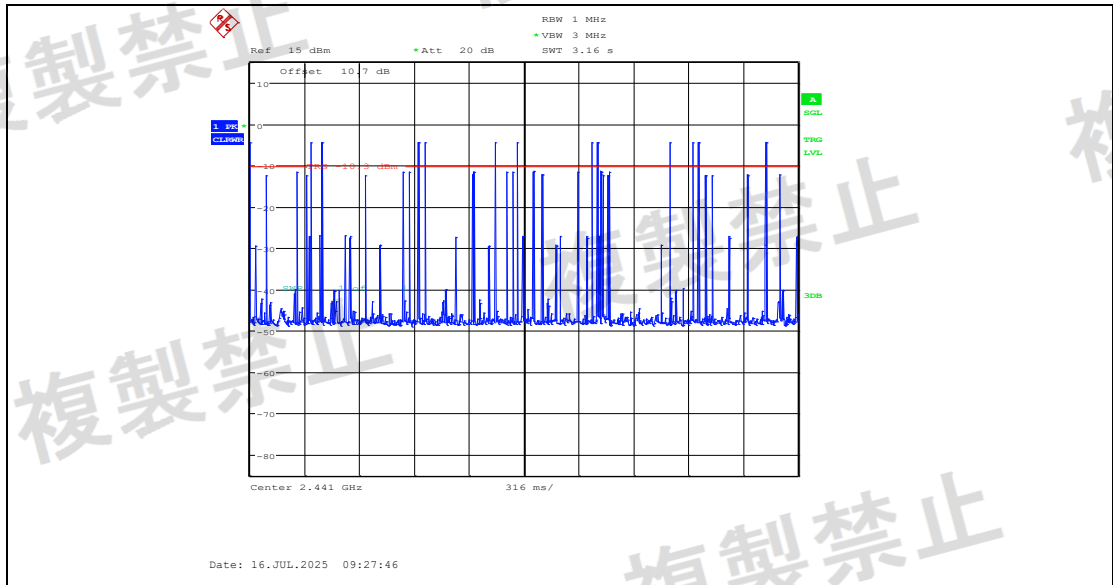
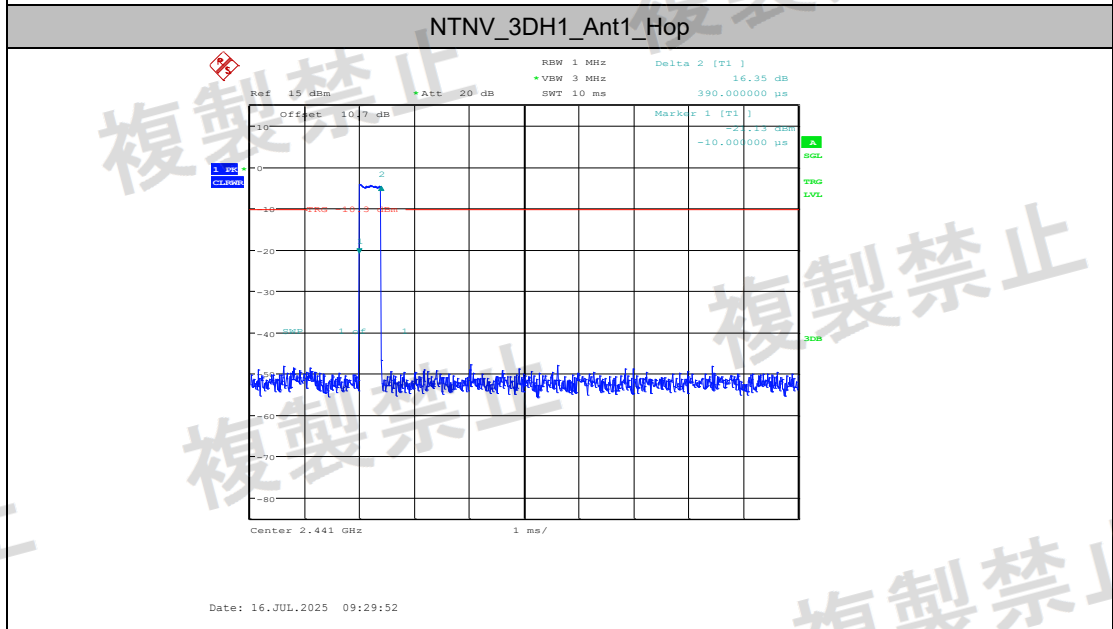
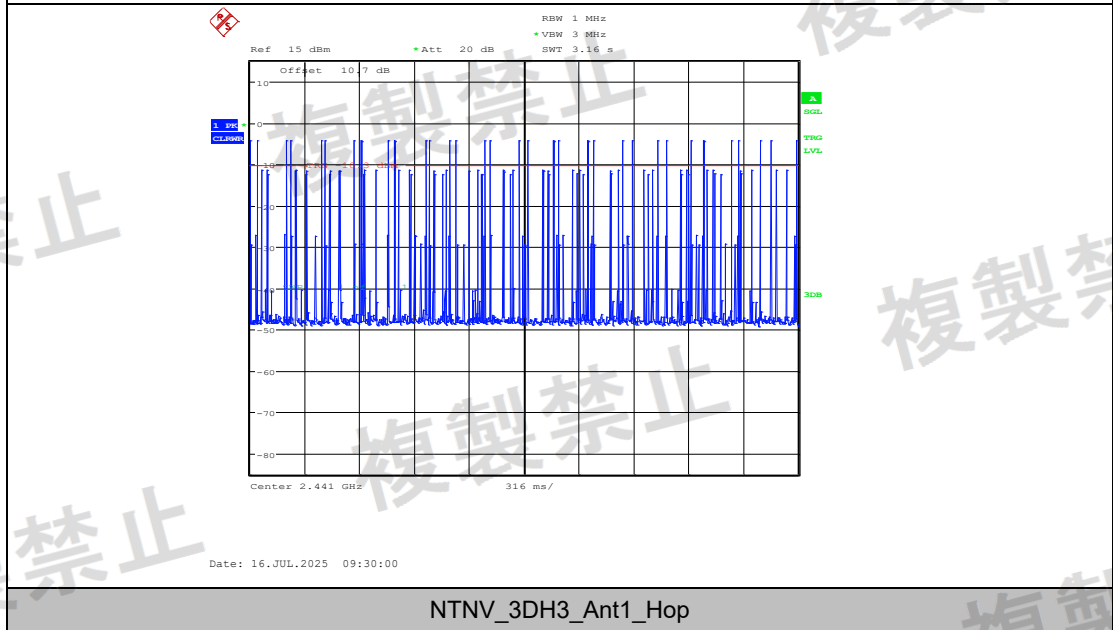


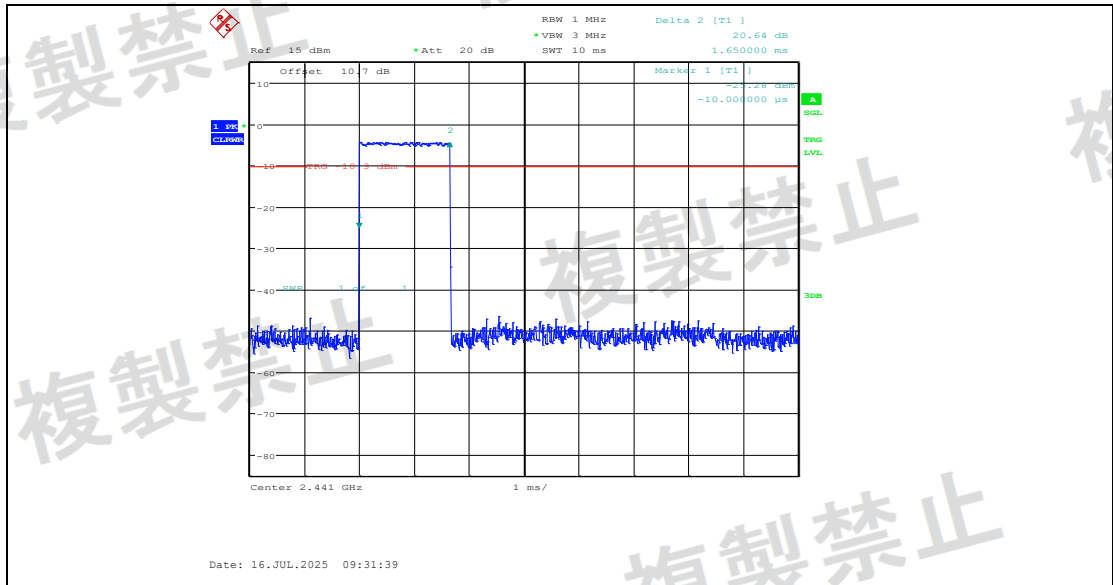
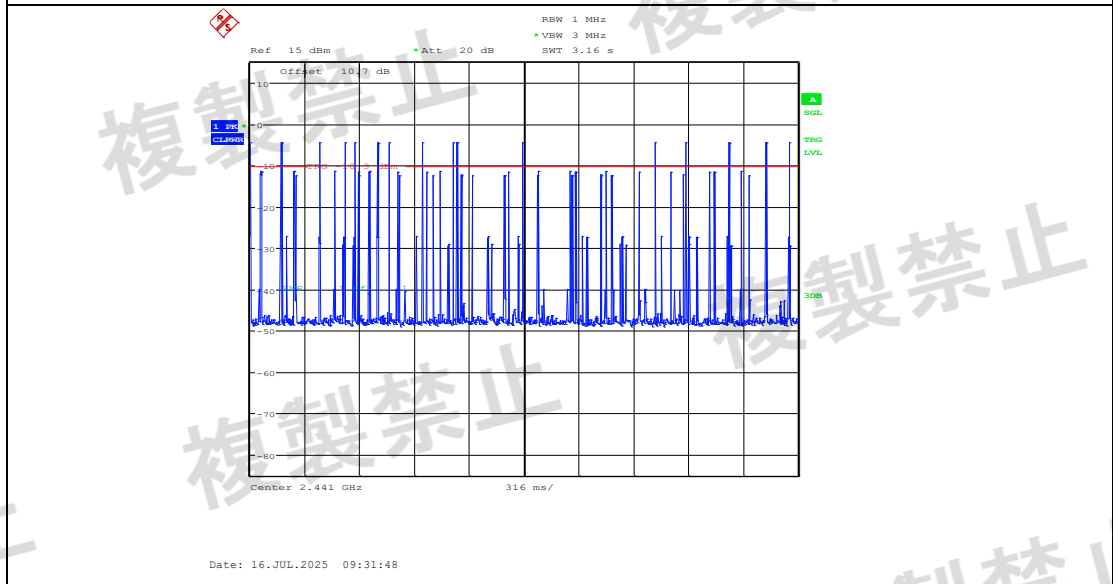
NTNV\_2DH3\_Ant1\_Hop



### NTNV\_2DH5\_Ant1\_Hop







### NTNV\_3DH5\_Ant1\_Hop

