

## Appendix A. Test Result of Antenna Power, Antenna Power Tolerance and E.I.R.P

### Antenna Power

| Test Conditions  | Modulation      | Frequency (MHz) | Reading Value (dBm) | Antenna Power (mW/MHz) | Limit (mW/MHz) | Result |
|------------------|-----------------|-----------------|---------------------|------------------------|----------------|--------|
| V <sub>nom</sub> | GFSK(2Mbps)     | Hopping         | 6.37                | 0.11                   | 3.0000         | Pass   |
|                  | GFSK(2Mbps)-AFH |                 | 6.43                | 0.86                   | 3.0000         | Pass   |

Antenna Power (mW/MHz) =  $10^{(\text{Reading value (dBm)}/10)}$  / Burst Ratio / Spread bandwidth (MHz).

### Antenna Power Tolerance

| Test Conditions  | Modulation      | Frequency (MHz) | Declared Antenna Power (mW/MHz) | Antenna Power (mW/MHz) | Antenna Power Tolerance (%) | Limit (%) | Result |
|------------------|-----------------|-----------------|---------------------------------|------------------------|-----------------------------|-----------|--------|
| V <sub>nom</sub> | GFSK(2Mbps)     | Hopping         | 0.11                            | 0.11                   | 0.00                        | +20       | Pass   |
|                  | GFSK(2Mbps)-AFH |                 | 0.86                            | 0.86                   | 0.00                        | +20       | Pass   |

Note: Antenna Power Tolerance (%) =  $(\text{Antenna Power (mW/MHz)} - \text{Declared Antenna Power (mW/MHz)}) / \text{Declared Antenna Power (mW/MHz)} * 100\%$ .

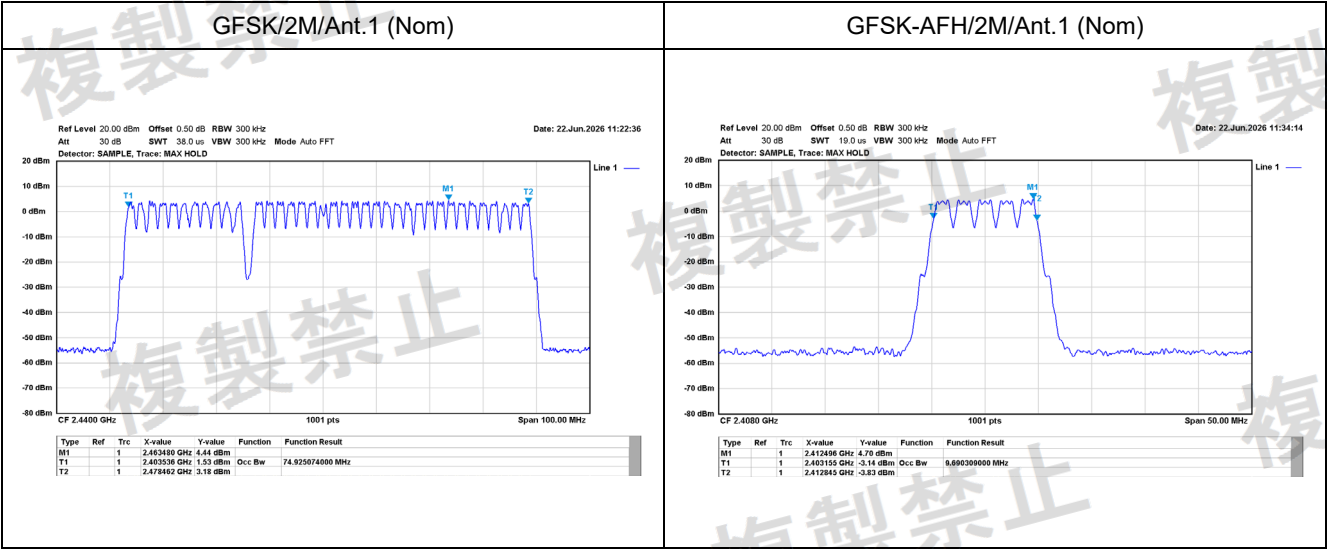
### E.I.R.P.

| Test Conditions  | Modulation      | Frequency (MHz) | Antenna Power (dBm/MHz) | Maximum Antenna Gain (dBi) | E.I.R.P. (dBm/MHz) | Limit (dBm/MHz) | Result |
|------------------|-----------------|-----------------|-------------------------|----------------------------|--------------------|-----------------|--------|
| V <sub>nom</sub> | GFSK(2Mbps)     | Hopping         | -9.58                   | 3.20                       | -6.38              | 6.91            | Pass   |
|                  | GFSK(2Mbps)-AFH |                 | -0.63                   | 3.20                       | 2.57               | 6.91            | Pass   |

Note: E.I.R.P. (dBm/MHz) = Antenna Power (dBm/MHz) + Maximum Antenna Gain (dBi).

**Appendix B. Test Result of Occupied Bandwidth**

| Test Conditions  | Modulation      | Frequency (MHz) | Occupied Bandwidth (MHz) | Limit (MHz)  | Result |
|------------------|-----------------|-----------------|--------------------------|--------------|--------|
| V <sub>nom</sub> | GFSK(2Mbps)     | Hopping         | 74.93                    | $\leq 83.50$ | Pass   |
|                  | GFSK(2Mbps)-AFH |                 | 9.69                     | $\leq 83.50$ | Pass   |



**Appendix C. Test Result of Frequency Tolerance**

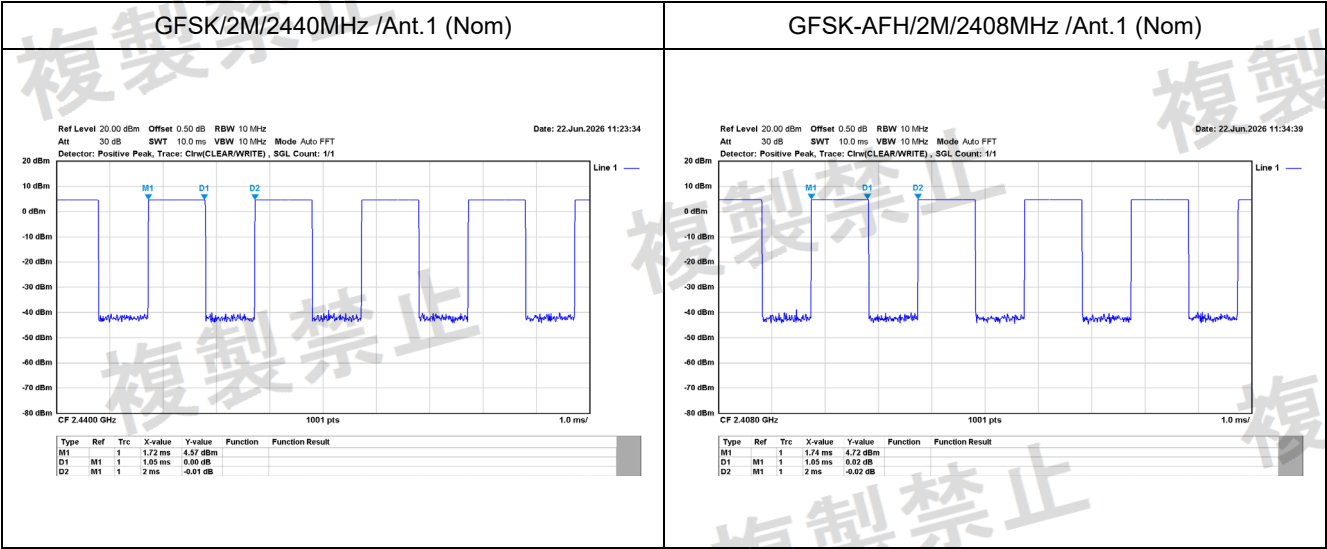
| Test Conditions  | Modulation      | Frequency<br>(MHz) | Reading Value<br>(MHz) | Frequency<br>Tolerance<br>(ppm) | Limit<br>(ppm) | Result |
|------------------|-----------------|--------------------|------------------------|---------------------------------|----------------|--------|
| V <sub>nom</sub> | GFSK(2Mbps)     | 2404               | 2403.9940              | -2.50                           | ± 50           | Pass   |
|                  |                 | 2440               | 2439.9934              | -2.70                           | ± 50           | Pass   |
|                  |                 | 2478               | 2477.9937              | -2.54                           | ± 50           | Pass   |
|                  | GFSK(2Mbps)-AFH | 2404               | 2403.9940              | -2.50                           | ± 50           | Pass   |
|                  |                 | 2408               | 2407.9937              | -2.62                           | ± 50           | Pass   |
|                  |                 | 2412               | 2411.9940              | -2.49                           | ± 50           | Pass   |

**Appendix D. Test Result of Dwell Time**

| Test Conditions  | Modulation      | Frequency (MHz) | ON Time (ms) | OFF Time (ms) | Burst Ratio | Dwell Time (sec) | Limit (sec) | Result |
|------------------|-----------------|-----------------|--------------|---------------|-------------|------------------|-------------|--------|
| V <sub>nom</sub> | GFSK(2Mbps)     | 2440            | 1.05         | 0.95          | 0.53        | 0.21             | 0.40        | Pass   |
|                  | GFSK(2Mbps)-AFH | 2408            | 1.05         | 0.95          | 0.53        | 0.20             | 0.40        | Pass   |

Note:

1. Burst Ratio = ON Time (ms) / (ON Time (ms) + OFF Time (ms))
2. Dwell Time = (spreading rate \* 0.4) \* (Burst Ratio / Channel Number)

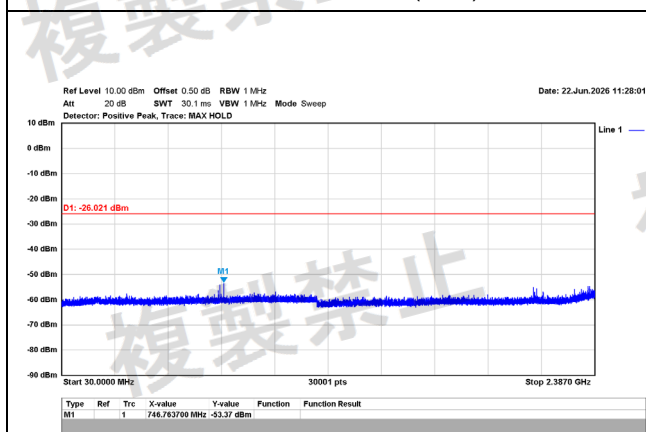


## Appendix E. Test Result of Unwanted Emission Strength

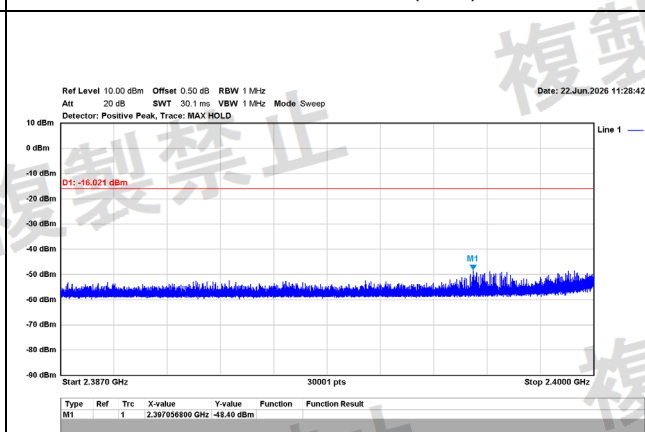
| Test Conditions  | Modulation      | Frequency Range (MHz) | Measurement Value (μW/MHz) | Limit (μW/MHz) | Result |
|------------------|-----------------|-----------------------|----------------------------|----------------|--------|
| V <sub>nom</sub> | GFSK(2Mbps)     | 30 ~ 2387             | 0.00460                    | 2.50000        | Pass   |
|                  |                 | 2387 ~ 2400           | 0.01445                    | 25.00000       | Pass   |
|                  |                 | 2483.5 ~ 2496.5       | 0.01400                    | 25.00000       | Pass   |
|                  |                 | 2496.5 ~ 12500        | 0.00728                    | 2.50000        | Pass   |
|                  | GFSK(2Mbps)-AFH | 30 ~ 2387             | 0.00385                    | 2.50000        | Pass   |
|                  |                 | 2387 ~ 2400           | 0.01758                    | 25.00000       | Pass   |
|                  |                 | 2483.5 ~ 2496.5       | 0.00272                    | 25.00000       | Pass   |
|                  |                 | 2496.5 ~ 12500        | 0.00733                    | 2.50000        | Pass   |

Measurement Value = (Worst value) x (Number of antenna ports).

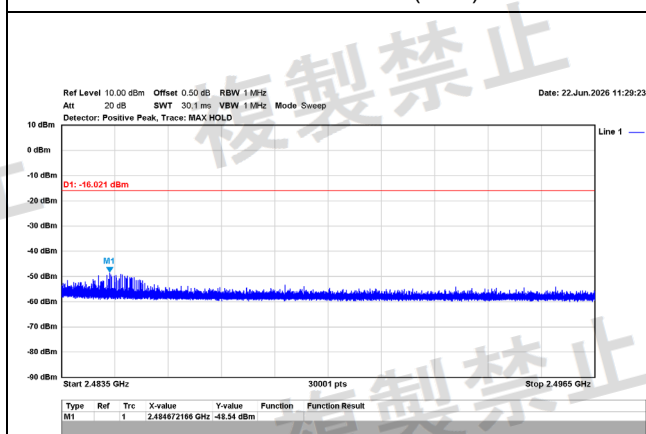
GFSK/2M/Ant.1/1-4 (Nom)



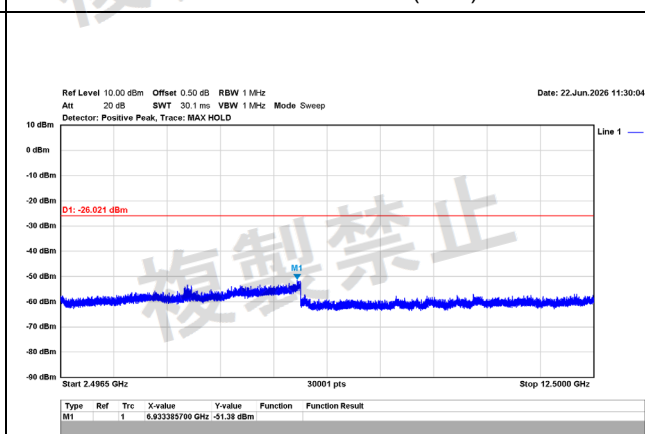
GFSK/2M/Ant.1/2-4 (Nom)



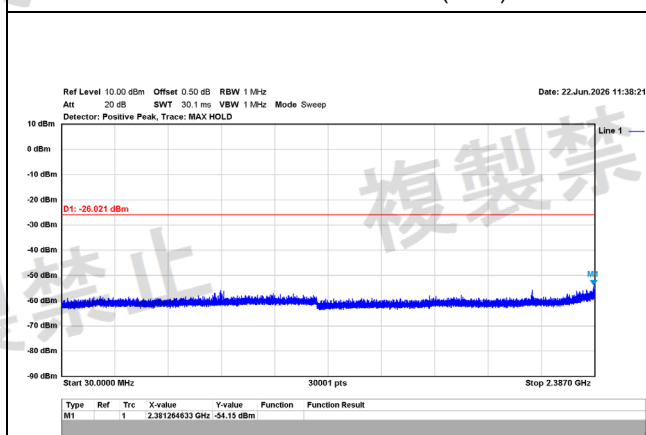
GFSK/2M/Ant.1/3-4 (Nom)



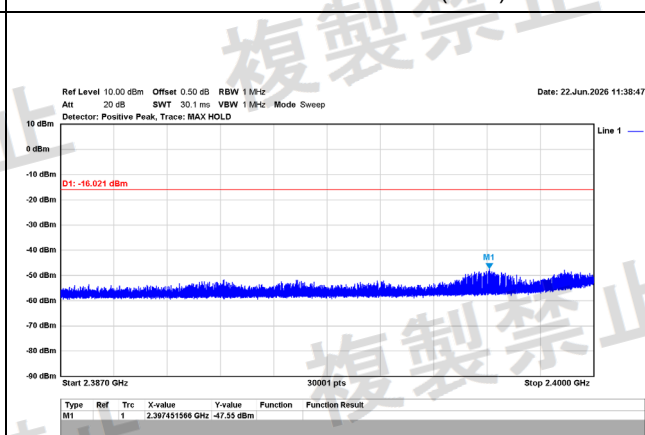
GFSK/2M/Ant.1/4-4 (Nom)

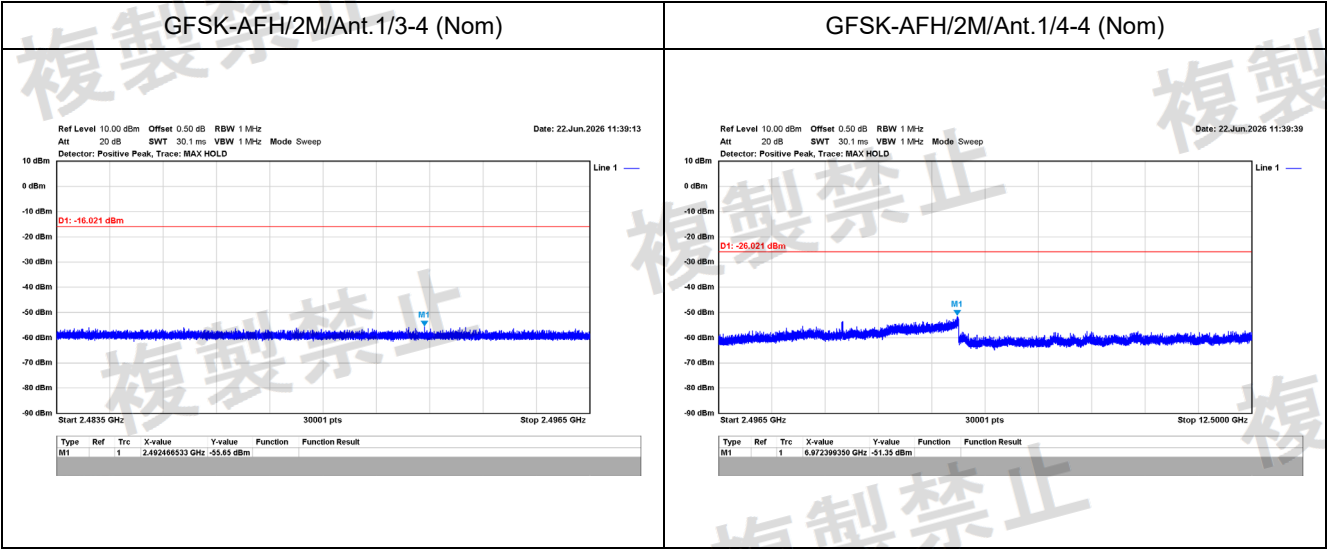


GFSK-AFH/2M/Ant.1/1-4 (Nom)



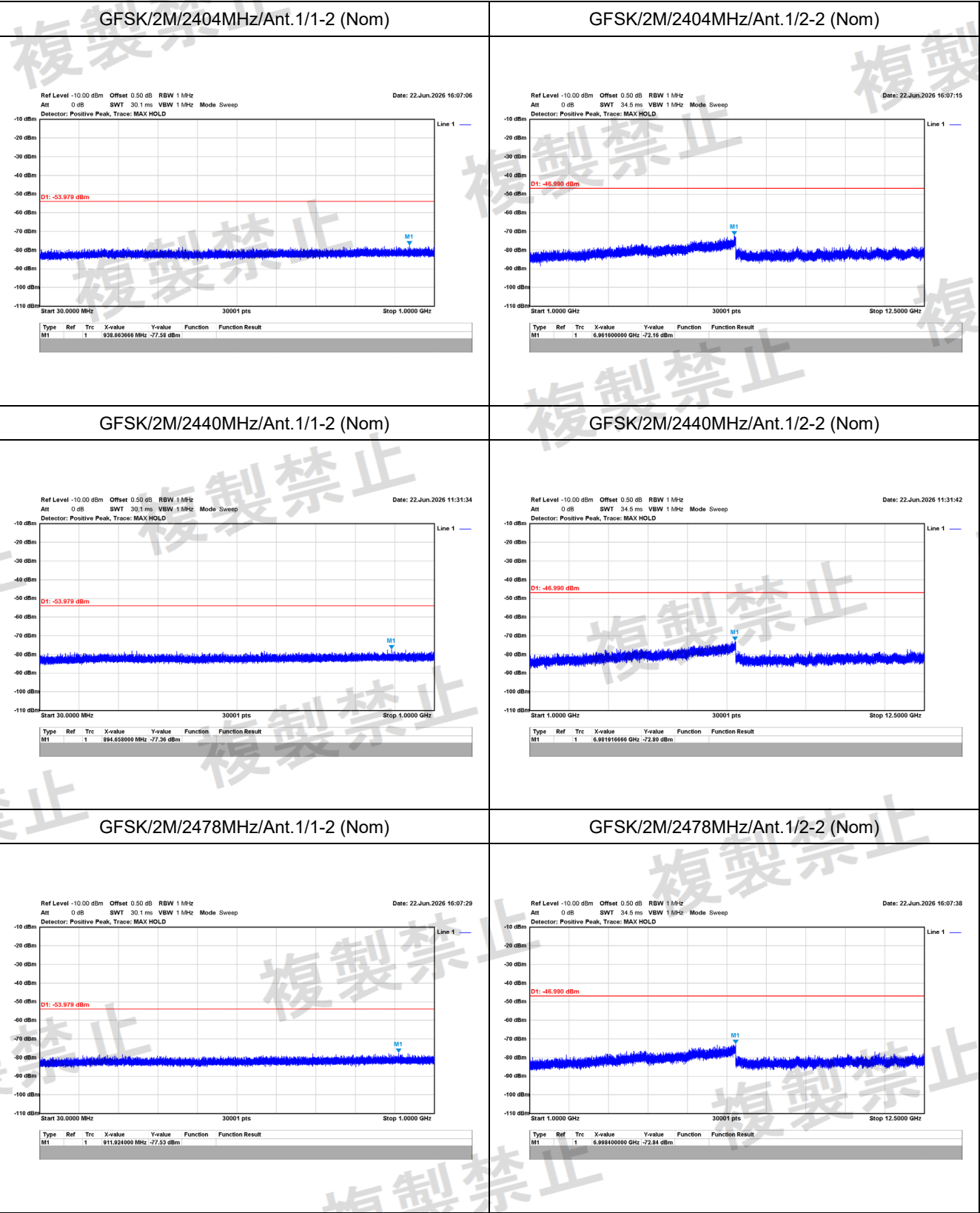
GFSK-AFH/2M/Ant.1/2-4 (Nom)



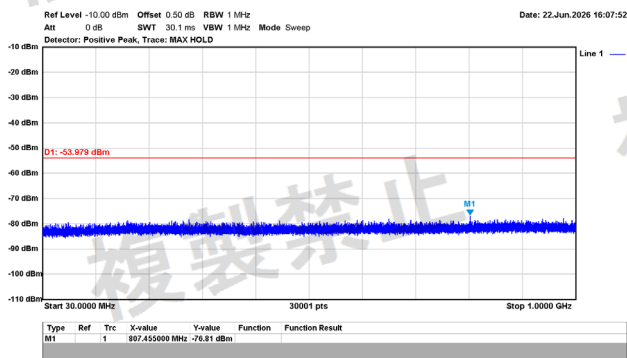


## Appendix F. Test Result of Secondary Radiated Emission Strength

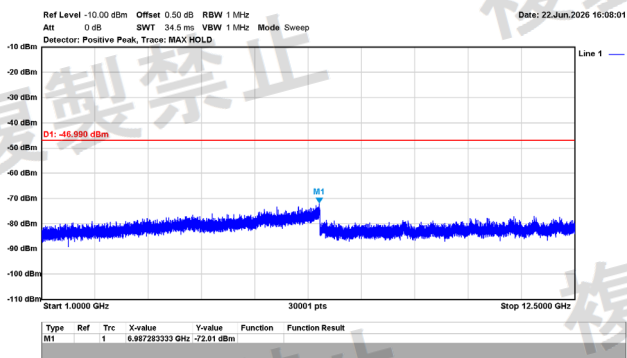
| Test Conditions  | Modulation      | Frequency (MHz) | Frequency Range (MHz) | Measurement Value (nW) | Limit (nW) | Result |
|------------------|-----------------|-----------------|-----------------------|------------------------|------------|--------|
| V <sub>nom</sub> | GFSK(2Mbps)     | 2404            | 30 ~ 1000             | 0.01746                | 4.00000    | Pass   |
|                  |                 |                 | 1000 ~ 12500          | 0.06081                | 20.00000   | Pass   |
|                  |                 | 2440            | 30 ~ 1000             | 0.01837                | 4.00000    | Pass   |
|                  |                 |                 | 1000 ~ 12500          | 0.05248                | 20.00000   | Pass   |
|                  |                 | 2478            | 30 ~ 1000             | 0.01766                | 4.00000    | Pass   |
|                  |                 |                 | 1000 ~ 12500          | 0.05200                | 20.00000   | Pass   |
|                  | GFSK(2Mbps)-AFH | 2404            | 30 ~ 1000             | 0.02084                | 4.00000    | Pass   |
|                  |                 |                 | 1000 ~ 12500          | 0.06295                | 20.00000   | Pass   |
|                  |                 | 2408            | 30 ~ 1000             | 0.01633                | 4.00000    | Pass   |
|                  |                 |                 | 1000 ~ 12500          | 0.04550                | 20.00000   | Pass   |
|                  |                 | 2412            | 30 ~ 1000             | 0.01782                | 4.00000    | Pass   |
|                  |                 |                 | 1000 ~ 12500          | 0.05297                | 20.00000   | Pass   |



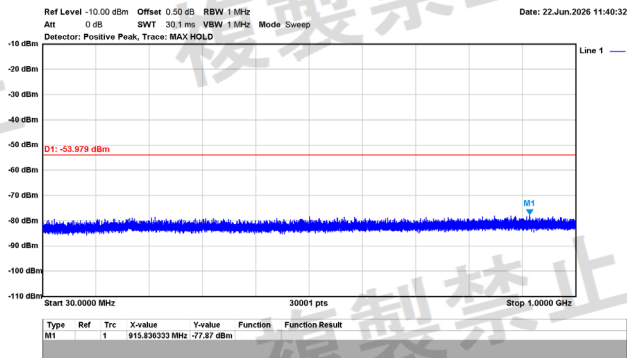
GFSK-AFH/2M/2404MHzAnt. 1/1-2 (Nom)



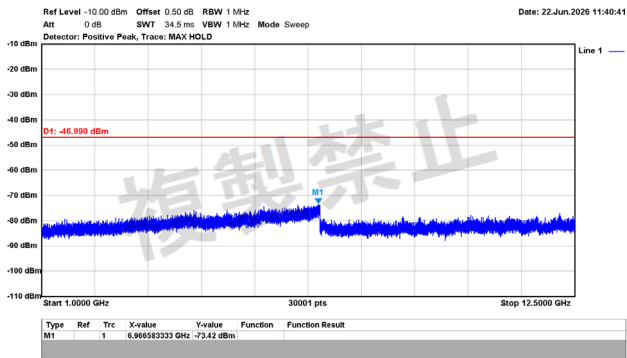
GFSK-AFH/2M/2404MHzAnt. 1/2-2 (Nom)



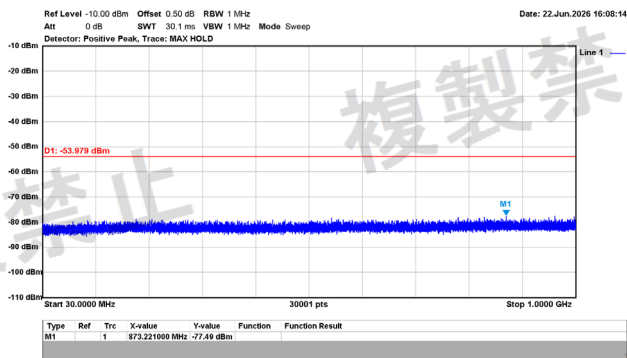
GFSK-AFH/2M/2408MHz/ Ant. 1/1-2 (Nom)



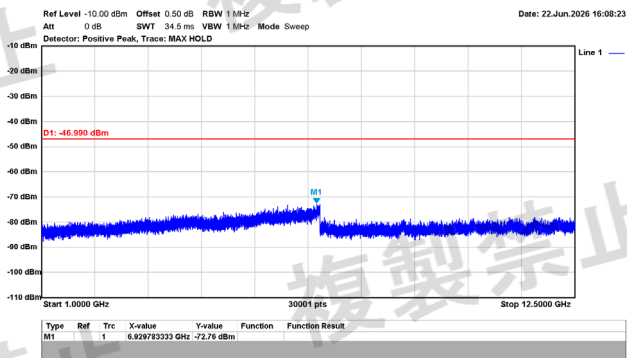
GFSK-AFH/2M/2408MHz/ Ant. 1/2-2 (Nom)



GFSK-AFH/2M/2412MHz/ Ant. 1/1-2 (Nom)



GFSK-AFH/2M/2412MHz/ Ant. 1/2-2 (Nom)



**Appendix G. Test Result of Interference Prevention Function**

| Test Mode   | Test Result |
|-------------|-------------|
| Normal Link | Pass        |

## Appendix H. Test Result of Test Setup Photograph

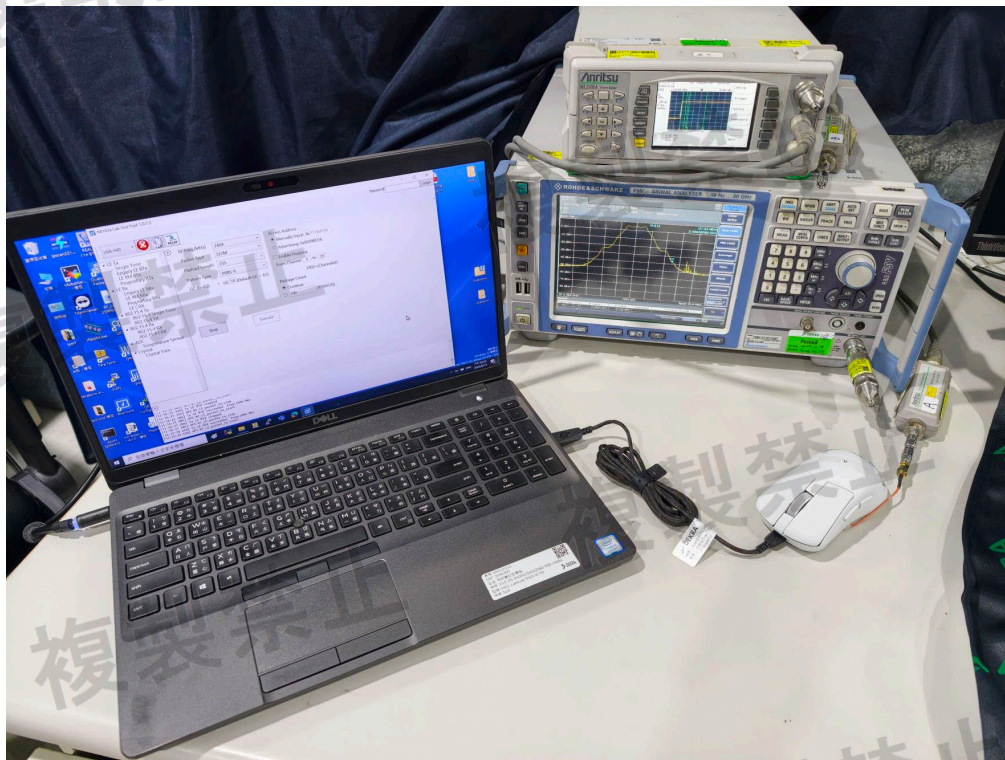
Description: Test Setup (Spectrum Analyzer)



Description: Test Setup (Spectrum Analyzer)



Description: Test Setup (Power Meter)



Description: Test Setup (Power Meter)

