

# 样品规格书<sup>t</sup>

Sample Approved Shee

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## 1. Summary

This report summarizes the electrical results of the our antenna to support the project 无线投屏  
The test fixture is made for further testing, which is show below :



## 2. Antenna Test Equipment Introduction

Test of antenna input characteristics using Agilent E5071C and Agilent 5062A vector network analyzer; The radiation pattern of the antenna are tested using the Satimo starlab 3D near field Anechoic Chamber , and the instrument is used to agilent8960 E5515 and Agilent E4438C. The test coordinates of the darkroom are as follows:

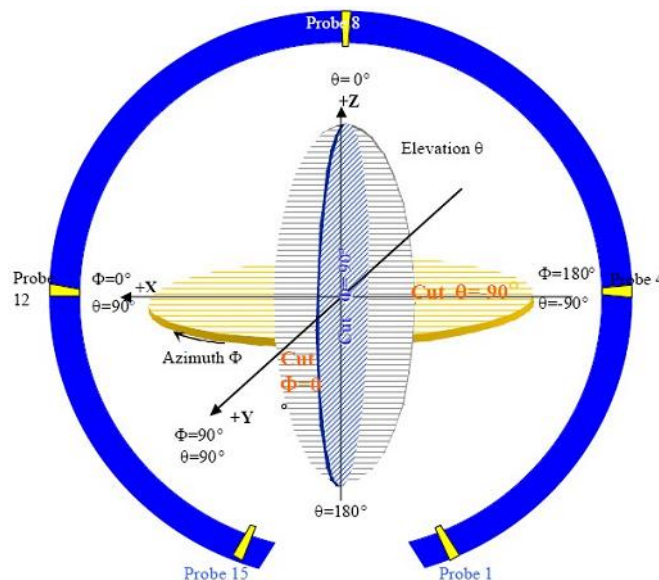
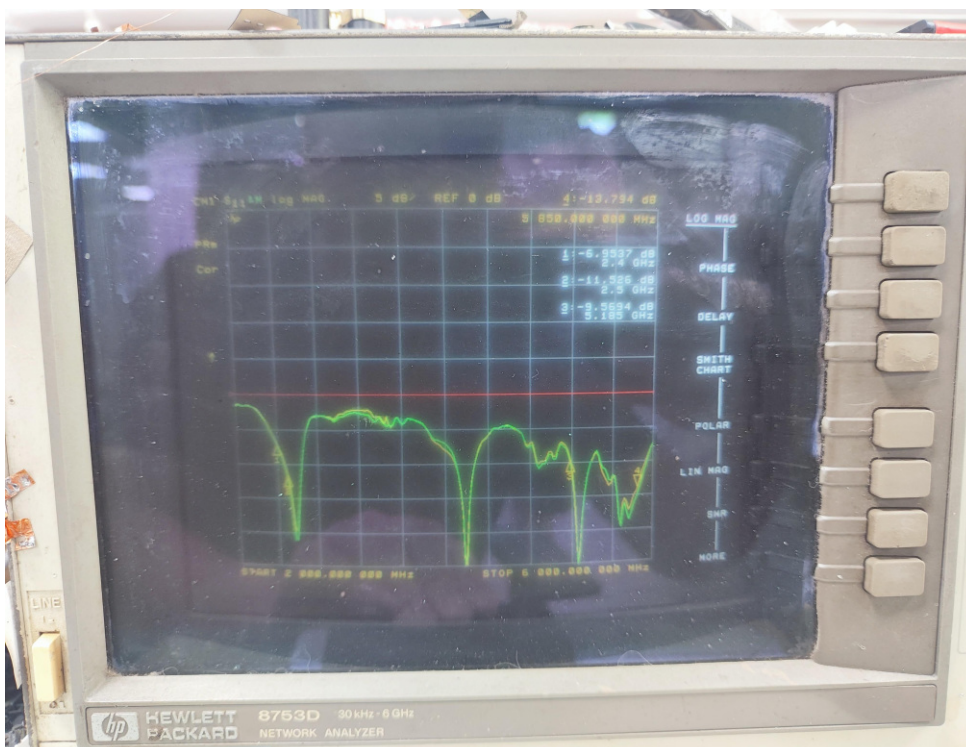
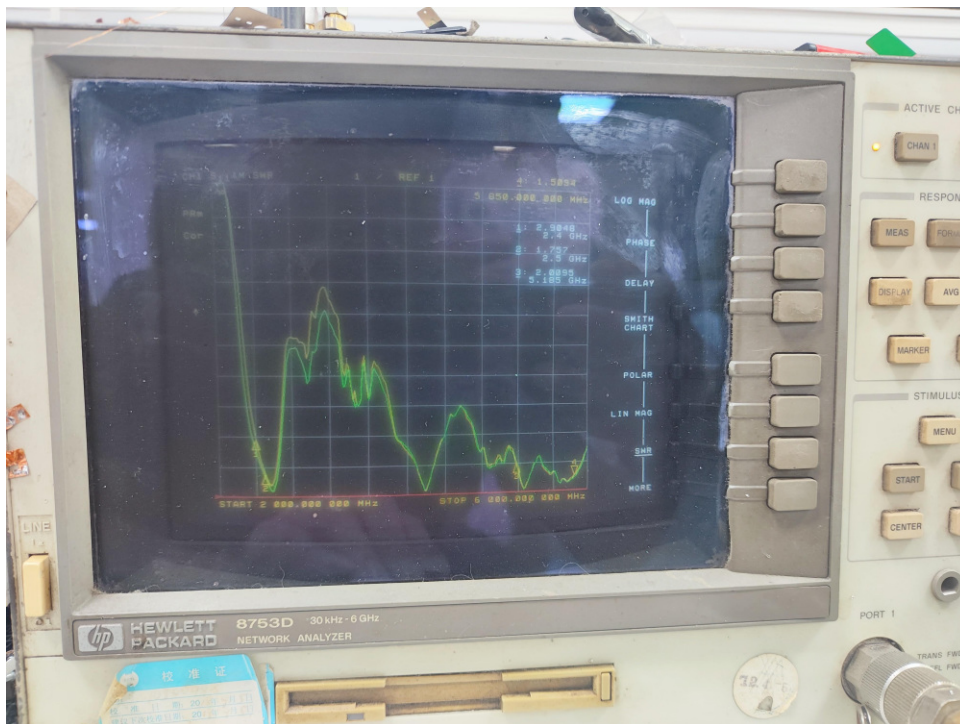


图4 3D 微波暗室测试坐标系 (back view)

### 3. Electrical Specification

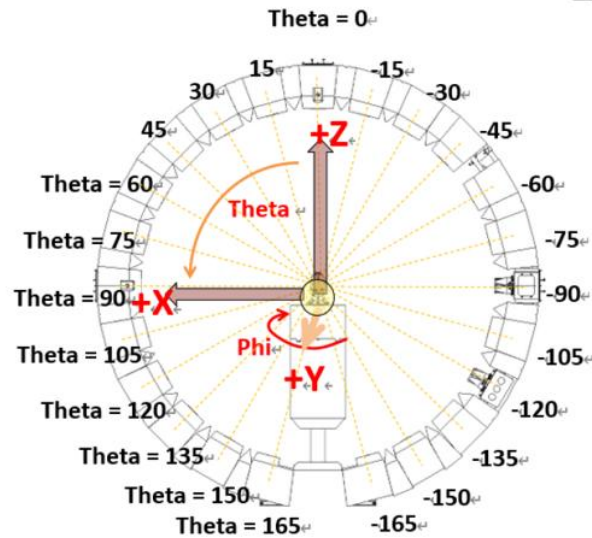
#### 3.2 Passive S11 parameter

Measuring Method is a 50  $\Omega$  coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.



### 3.3 2.4G Gain&Efficiency

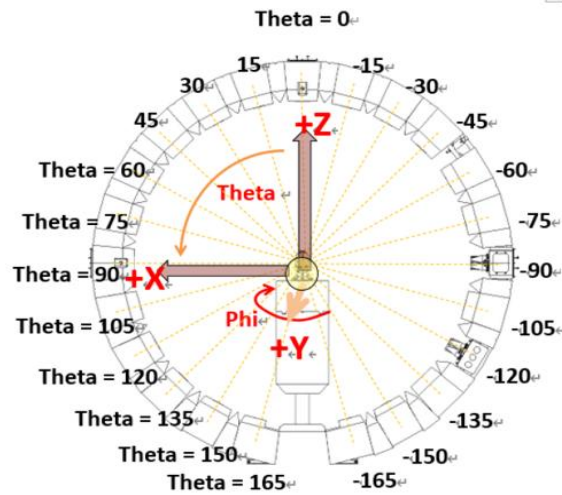
## Sample status & coordinates



| Freq  | Effi  | Effi  | Gain  |
|-------|-------|-------|-------|
| (MHz) | (%)   | (dB)  | (dBi) |
| 2400  | 38.98 | -4.09 | -0.1  |
| 2410  | 42.43 | -3.72 | 0.32  |
| 2420  | 43.22 | -3.64 | 0.57  |
| 2430  | 43.72 | -3.59 | 0.61  |
| 2440  | 44.86 | -3.48 | 0.71  |
| 2450  | 47.85 | -3.2  | 1.05  |
| 2460  | 47.79 | -3.21 | 1.14  |
| 2470  | 46.34 | -3.34 | 0.98  |
| 2480  | 46.81 | -3.3  | 1.17  |
| 2490  | 48.53 | -3.14 | 1.39  |
| 2500  | 46.06 | -3.37 | 1.1   |

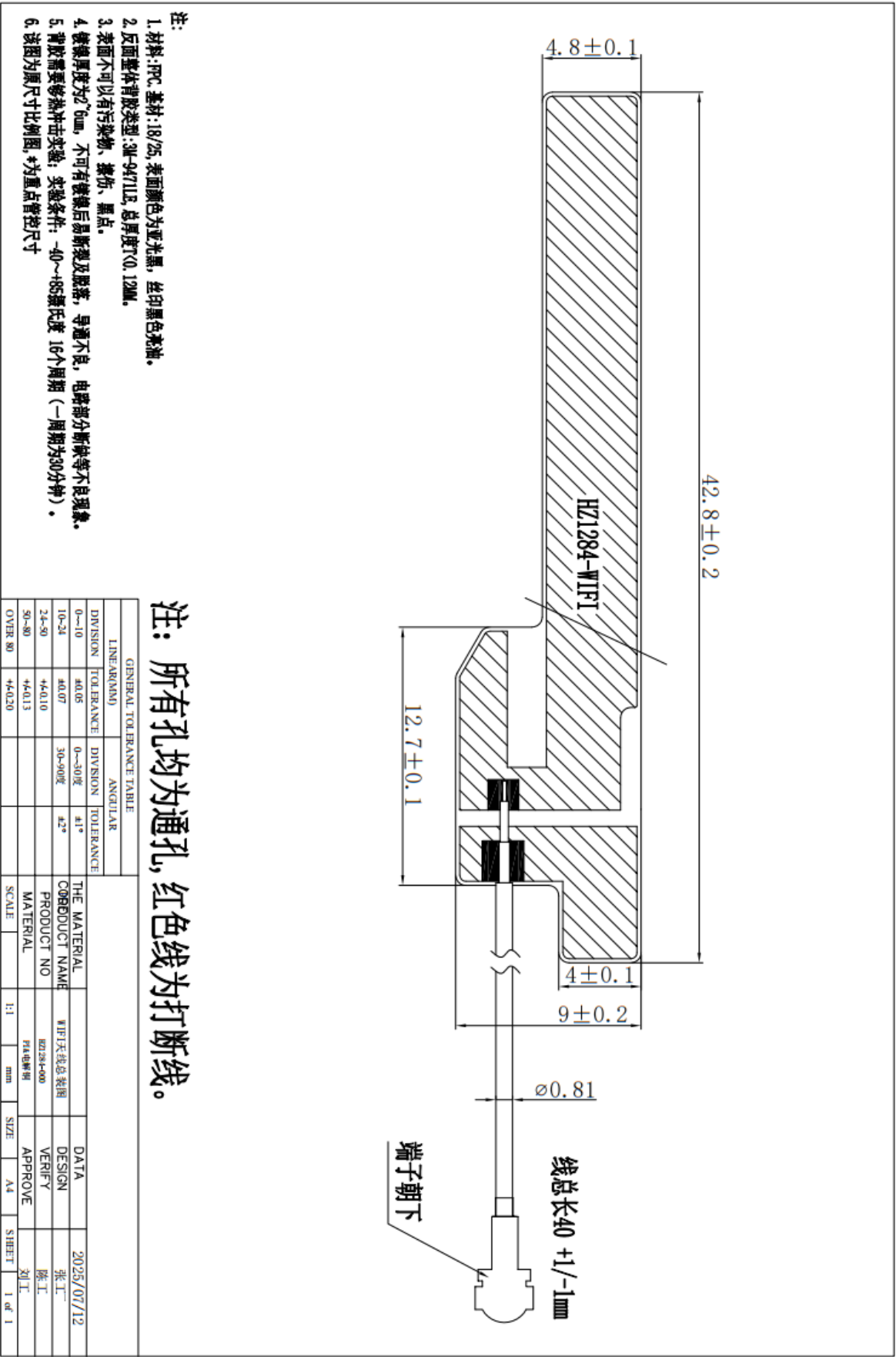
### 3.4 5.8G Gain&Efficiency

#### Sample status & coordinates



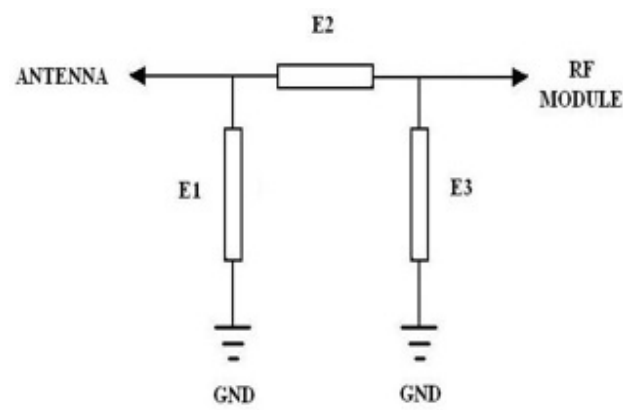
| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) | Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) | Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|---------------|-------------|--------------|---------------|---------------|-------------|--------------|---------------|
| 5150          | 29.29       | -5.33        | 2.22          | 5420          | 21.04       | -6.77        | 0.23          | 5690          | 24.25       | -6.15        | -1.63         |
| 5160          | 30.97       | -5.09        | 2.59          | 5430          | 23.53       | -6.28        | 0.93          | 5700          | 24.17       | -6.17        | -0.97         |
| 5170          | 31.1        | -5.07        | 2.6           | 5440          | 22.98       | -6.39        | 0.83          | 5710          | 24.25       | -6.15        | -1.24         |
| 5180          | 32.01       | -4.95        | 2.63          | 5450          | 21.41       | -6.69        | 0.55          | 5720          | 24.21       | -6.16        | -1.26         |
| 5190          | 29.23       | -5.34        | 2.31          | 5460          | 22.39       | -6.5         | 0.77          | 5730          | 20.43       | -6.9         | -1.2          |
| 5200          | 33.19       | -4.79        | 2.65          | 5470          | 21.86       | -6.6         | 0.67          | 5740          | 21.99       | -6.58        | -0.5          |
| 5210          | 37.48       | -4.26        | 2.93          | 5480          | 23.36       | -6.31        | 0.95          | 5750          | 23.62       | -6.27        | -0.37         |
| 5220          | 38.27       | -4.17        | 2.95          | 5490          | 24.35       | -6.13        | 1.17          | 5760          | 26.12       | -5.83        | 0.33          |
| 5230          | 41.24       | -3.85        | 3.19          | 5500          | 22.26       | -6.53        | 0.68          | 5770          | 25.56       | -5.93        | 0.05          |
| 5240          | 35.78       | -4.46        | 2.37          | 5510          | 21.14       | -6.75        | 0.31          | 5780          | 22.51       | -6.48        | -0.17         |
| 5250          | 33.47       | -4.75        | 1.93          | 5520          | 21.98       | -6.58        | 0.33          | 5790          | 23.67       | -6.26        | 0.29          |
| 5260          | 35.49       | -4.5         | 2.18          | 5530          | 22.12       | -6.55        | 0.3           | 5800          | 25.54       | -5.93        | 0.44          |
| 5270          | 37.03       | -4.31        | 2.19          | 5540          | 23.44       | -6.3         | 0.23          | 5810          | 28.6        | -5.44        | 1.1           |
| 5280          | 40.59       | -3.92        | 2.31          | 5550          | 24.1        | -6.18        | 0.29          | 5820          | 30.62       | -5.14        | 1.36          |
| 5290          | 37.59       | -4.25        | 2.12          | 5560          | 20.76       | -6.83        | -0.67         | 5830          | 30.71       | -5.13        | 1.27          |
| 5300          | 33.27       | -4.78        | 1.32          | 5570          | 24.13       | -6.17        | -2.98         | 5840          | 32.26       | -4.91        | 1.67          |
| 5310          | 30.26       | -5.19        | 0.64          | 5580          | 26.99       | -5.69        | -4.14         | 5850          | 32.24       | -4.92        | 1.43          |
| 5320          | 30.63       | -5.14        | 0.38          | 5590          | 24.39       | -6.13        | -4.55         |               |             |              |               |
| 5330          | 31.7        | -4.99        | 0.21          | 5600          | 23.16       | -6.35        | -2.23         |               |             |              |               |
| 5340          | 32.71       | -4.85        | 0.3           | 5610          | 27.63       | -5.59        | -4.29         |               |             |              |               |
| 5350          | 32.51       | -4.88        | 0.1           | 5620          | 28.59       | -5.44        | -1.48         |               |             |              |               |
| 5360          | 26.95       | -5.69        | -0.88         | 5630          | 29.68       | -5.4         | -3.31         |               |             |              |               |
| 5370          | 21.93       | -6.59        | -1.66         | 5640          | 28.53       | -5.45        | -3.11         |               |             |              |               |
| 5380          | 21.81       | -6.61        | -1.69         | 5650          | 22.97       | -6.39        | -3.52         |               |             |              |               |
| 5390          | 21.29       | -6.72        | -1.98         | 5660          | 28.08       | -5.52        | -3.11         |               |             |              |               |
| 5400          | 25.1        | -6           | -1.07         | 5670          | 20.24       | -6.94        | -2.75         |               |             |              |               |
| 5410          | 24.86       | -6.04        | -1.28         | 5680          | 22.81       | -6.42        | -2.53         |               |             |              |               |

4 Antenna Engineer drawing



# 匹配电路

匹配是否修改：是



| 主天线     |                                          |  |  |
|---------|------------------------------------------|--|--|
| Element | Value                                    |  |  |
| E1      | <span style="color: red;">并8.2 NH</span> |  |  |
| E2      |                                          |  |  |
| E3      |                                          |  |  |