Beijing Maxfatel Technology Co.Ltd

Seal of approval

☐ **Standard sea**

☐ **Limit seal** **Time**：2024.6.2

Project name: UT2 **Part Number**:

Name of Supplier： **Beijing Maxfatel Technology**

Material description：

Edition：

Supplier		
Manufacture	Check	Approved
Yu.Ci	Bin.Liu	Vicky.Xu

Catalogue

1. **Antenna part number**

2. **Test Fixture**

3. **Matching circuit**

4. **S11 test**

   4.1 Test method description of S11

   4.2 Return Loss

5. **Data of OTA**

   5.1 Test equipment

   5.2 Passive test data

   5.3 Peak antenna gain

   5.4 Antenna pattern

6. **Antenna drawing**

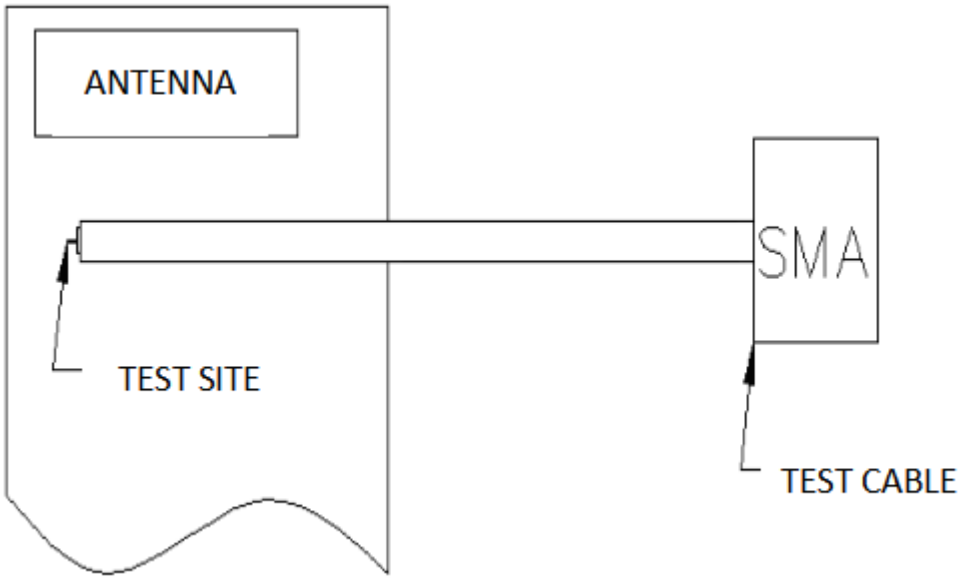
1. Antenna part number

Antenna name	Type Of Antenna	Antenna part number
T2S-WIFI1	FPC+cable	
T2S-WIFI2	FPC+cable	

2.Test Fixture

Destination: To test the passive parameters of antenna as accurately as possible.

Method: With the 50 ohm coaxial cable, one end is connected to the test point of the matching circuit back end of the motherboard to be tested (RF test hole front end), and the other end is connected to the SMA connector. The diagram is as follows：



3. Matching circuit

The antennas default to existing on-board matching circuits.

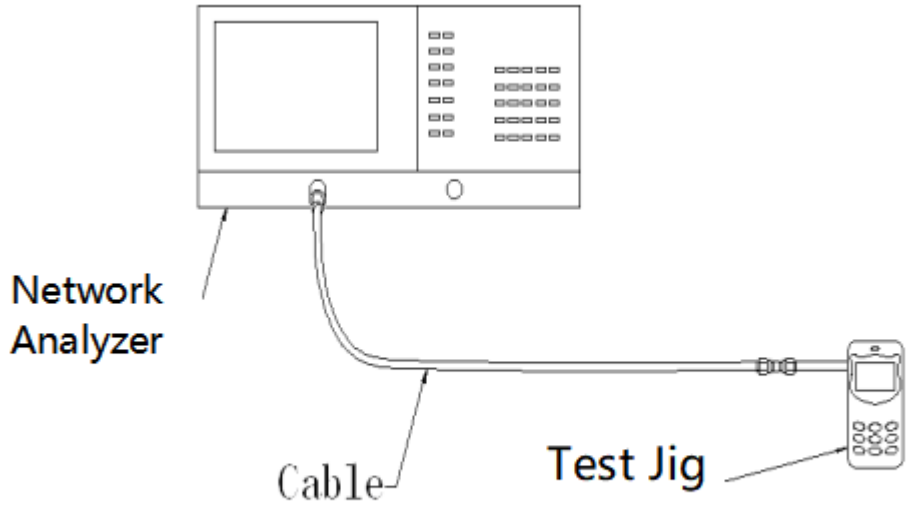
4.S11 test

4. 1 Test method description of S11

Test Equipment: Network Analyzer (HP 5071E)

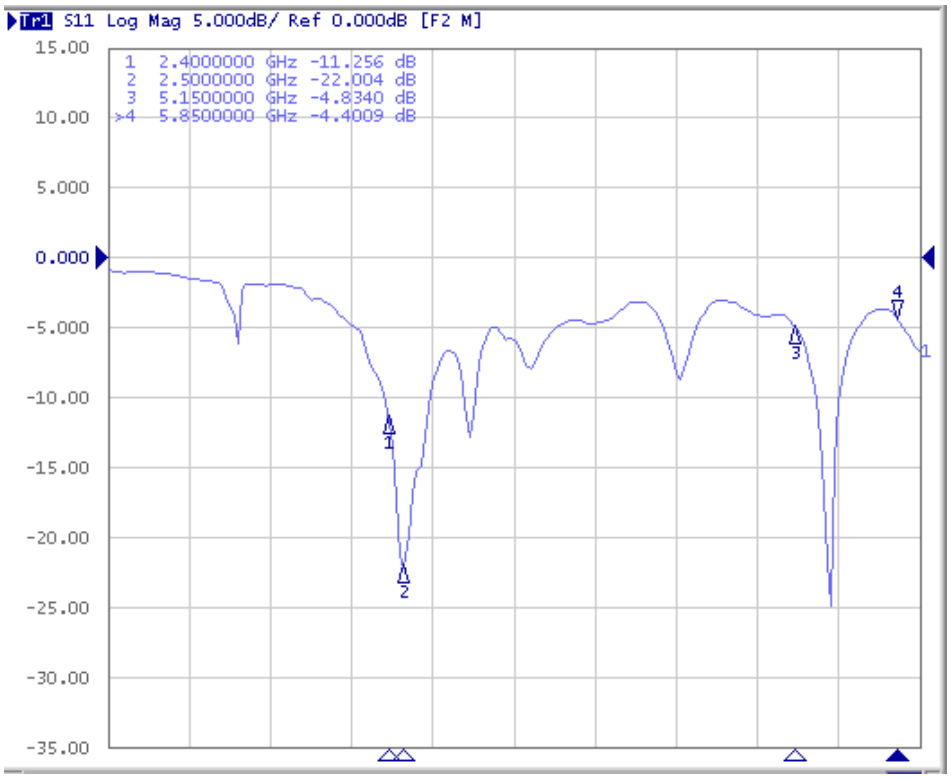
Test method: A 50 ohm CABLE is exported from the instrument test port, and the SMA connector of the test device is connected after calibration with the calibration piece. The return loss and standing wave ratio corresponding to the relevant frequency points are recorded.

The test diagram is as follows:

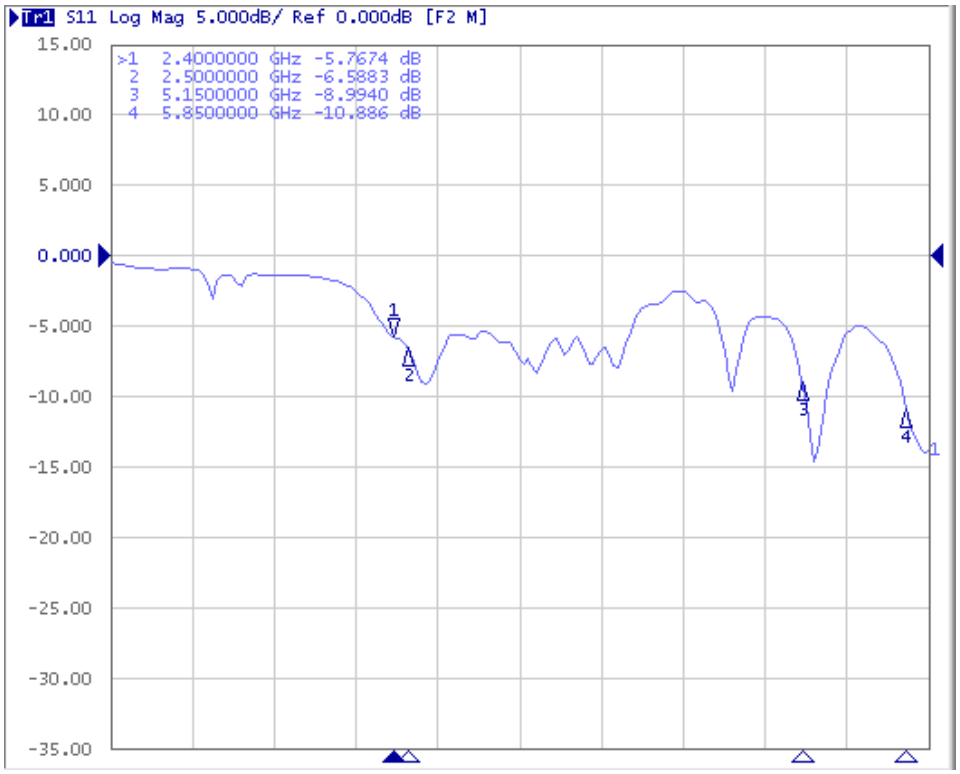


4.2 Return Loss

ANT1



ANT2



5. Data Of OTA

5.1 Test Equipment

Test system: microwave chamber

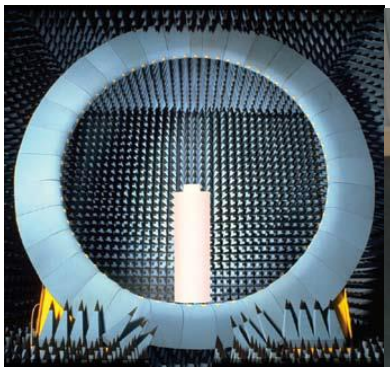
Test environment: Temperature 22℃±3℃, humidity 50%±15%

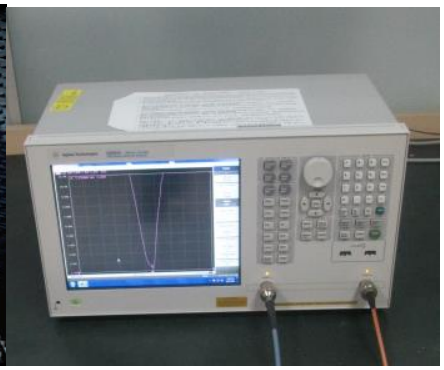
Test equipment: Agilent E5071C is used for passive data testing and Amway 8820C instrument is used for OTA testing.

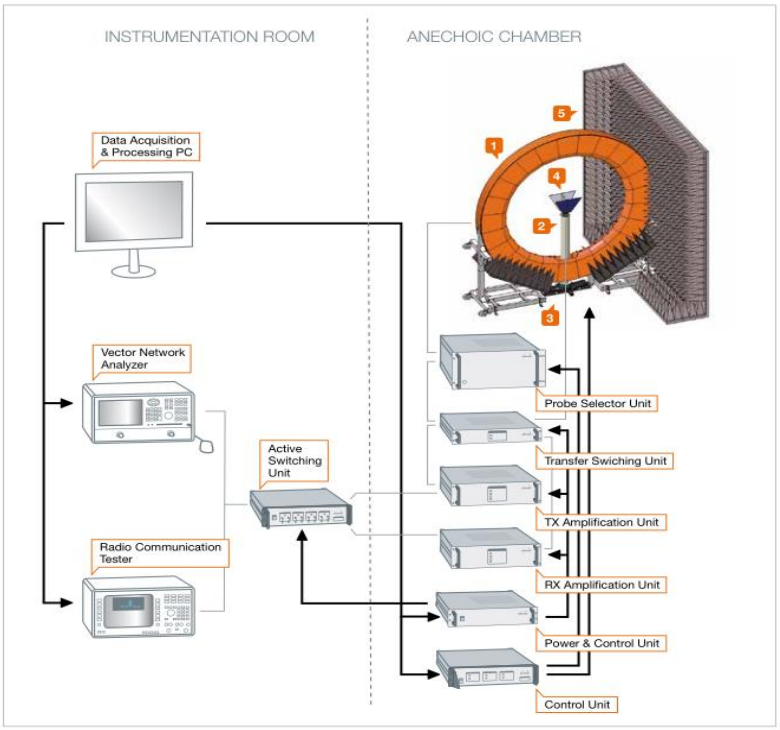
test equipment

SATIMO SG24

- Antenna Measurement
- OTA Testing
- CTIA Certifiable Measurement
- Linear Array Antenna Measurement







Note: The experimental equipment used for testing is owned by the company, not the third-party certification laboratory, and the test data is for reference only.

5.2 Passive test data

ANT1			
频率（MHz）	效率（dB）	Gain（dBi）	效率(%)
2400	-4.38	0.08	36.49
2410	-4.38	-0.01	36.44
2420	-4.23	-0.02	37.8
2430	-4.08	-0.04	39.08
2440	-3.96	0.01	40.2
2450	-3.85	0.11	41.24
2460	-3.85	0.14	41.19
2470	-3.99	0.01	39.89
2480	-4.31	-0.31	37.09
2490	-4.9	-1.02	32.39
2500	-5.47	-1.71	28.39
5150	-5.33	-1.09	29.33
5200	-5.81	-1.91	26.26
5250	-6.08	-1.82	24.67
5300	-6.81	-2.4	20.82
5350	-7.14	-2.69	19.32
5400	-6.77	-2.32	21.03
5450	-6.71	-2.53	21.33
5500	-6.36	-2.31	23.13
5550	-5.87	-1.5	25.89
5600	-5.33	-1.03	29.28
5650	-4.73	-0.34	33.64
5700	-4.81	-0.43	33.05
5750	-4.81	0.26	33.06
5800	-5.29	0.11	29.55
5850	-5.77	-0.27	26.46

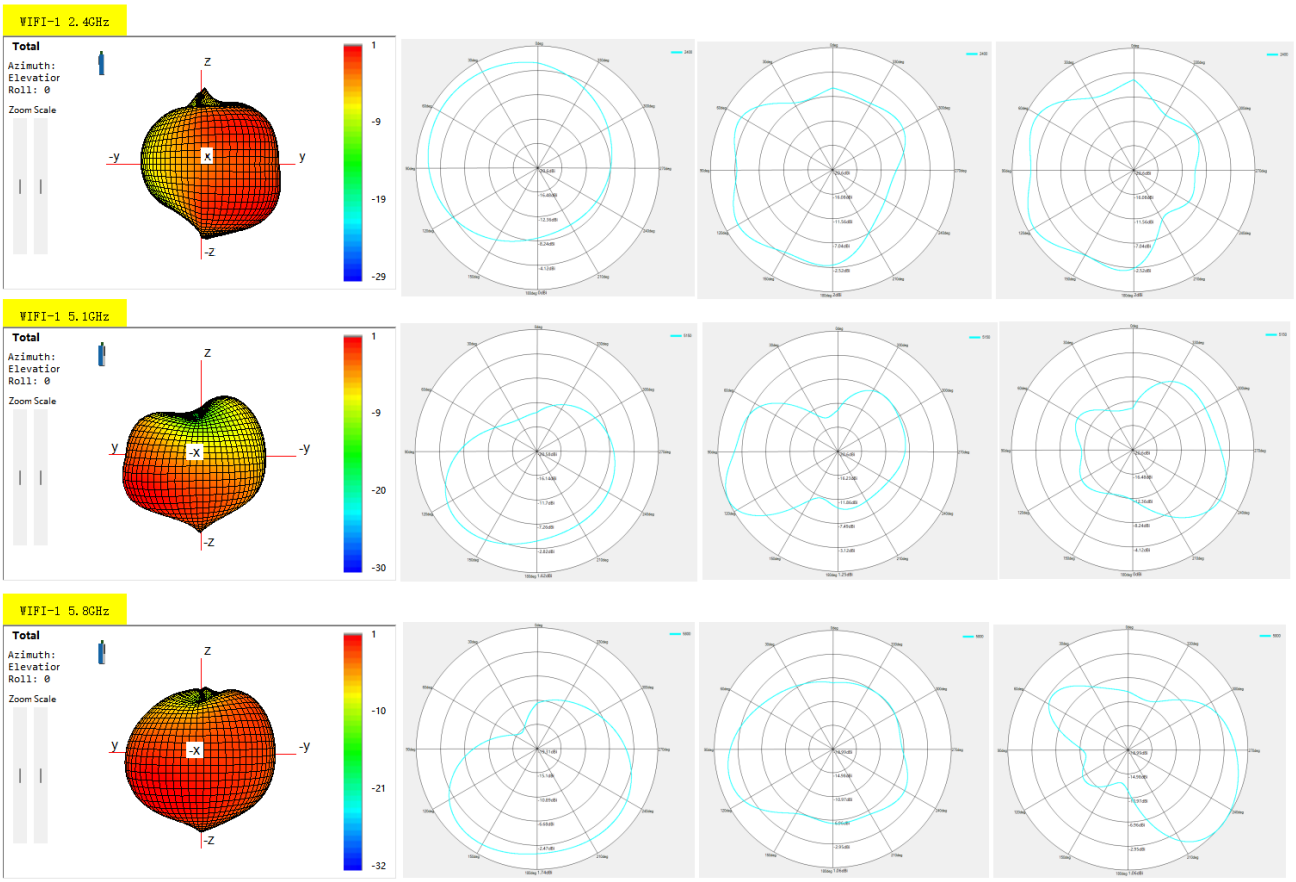
ANT2			
频率（MHz）	效率（dB）	Gain（dBi）	效率(%)
2400	-3.99	-0.28	39.88
2410	-3.95	-0.08	40.31
2420	-4.08	-0.17	39.06
2430	-4.04	-0.19	39.46
2440	-3.99	-0.24	39.9
2450	-3.98	-0.46	40.01
2460	-4.15	-0.61	38.42
2470	-4.35	-0.93	36.71
2480	-4.52	-1.14	35.35
2490	-4.64	-1.26	34.34
2500	-4.63	-1.18	34.43
5150	-5.97	-1.02	25.27
5200	-5.5	-0.35	28.16
5250	-4.91	-0.19	32.26
5300	-4.75	-0.55	33.51
5350	-4.67	-0.88	34.12
5400	-4.52	-1.19	35.33
5450	-4.97	-1.19	31.87
5500	-5.07	-2.06	31.11
5550	-5.11	-1.56	30.82
5600	-5.11	-1.07	30.8
5650	-4.62	1.54	34.52
5700	-4.76	1.75	33.45
5750	-4.37	2.49	36.58
5800	-4.26	2.68	37.46
5850	-3.95	2.99	40.24

5.3 Max Peak antenna gain

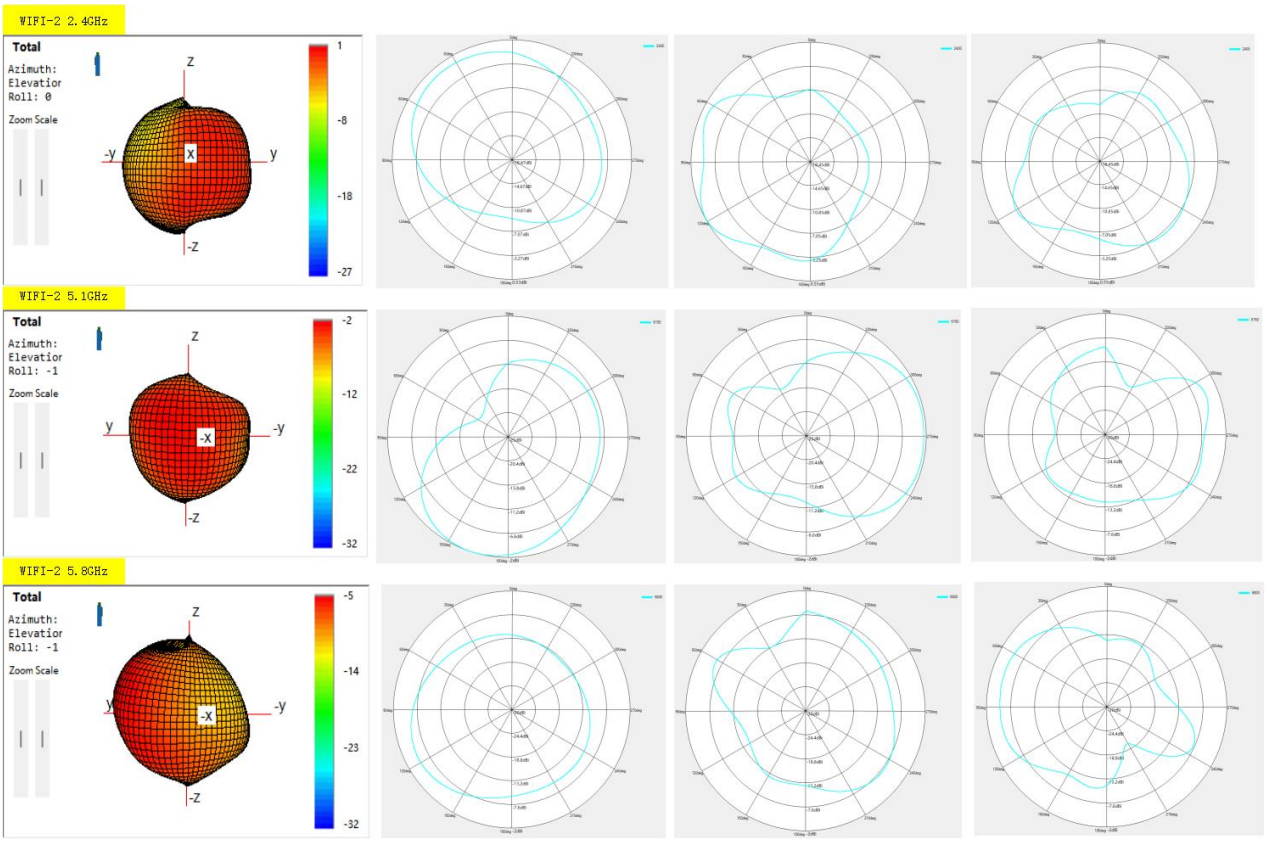
Antenna Name	2.4GHz 2400-2500MHz	5GHz 5150-5850MHz
ANT1	0.08dBi	0.11dBi
ANT2	-0.28dBi	2.68dBi

5.4 Antenna pattern

ANT1：

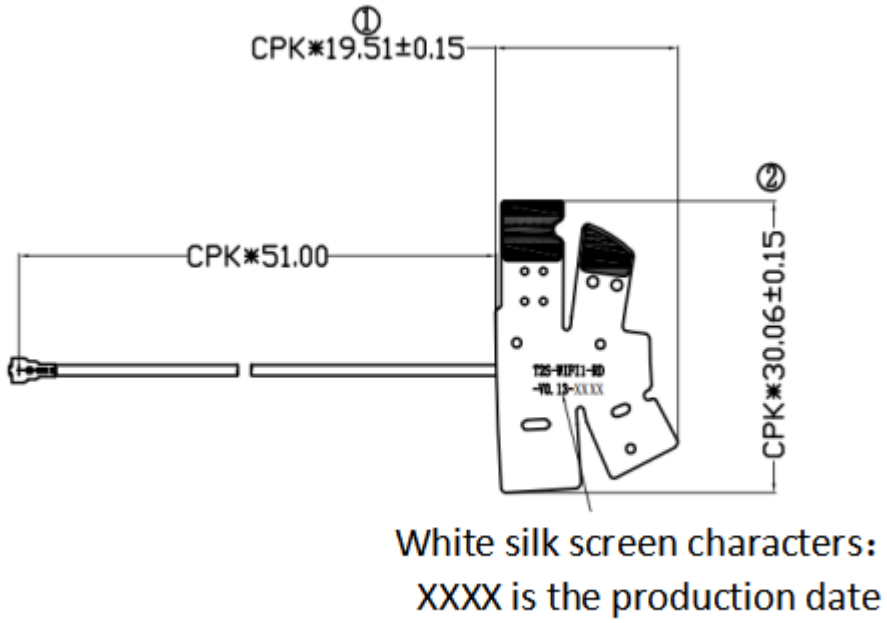
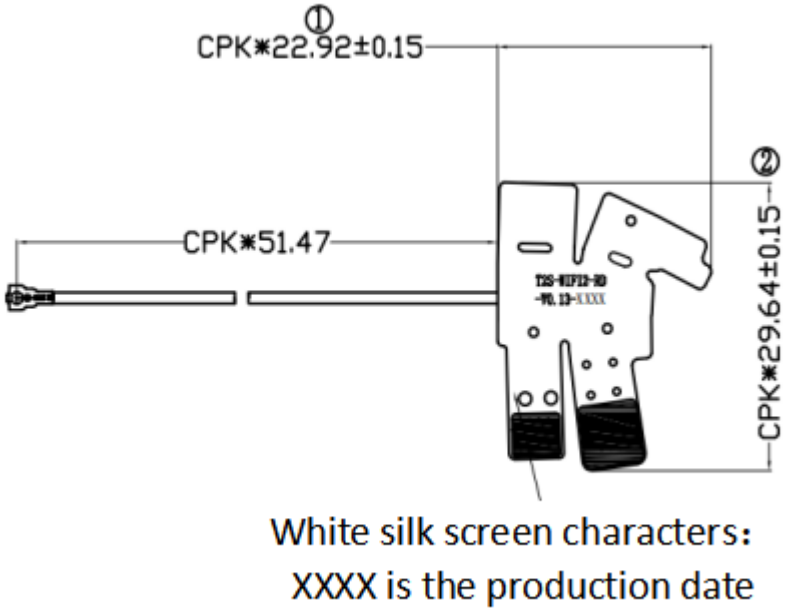


ANT2:


WIFI-2 2.4GHz
Total
Azimuth:
Elevation
Roll: 0
Zoom Scale
1
-8
-18
-27
WIFI-2 5.1GHz
Total
Azimuth:
Elevation
Roll: -1
Zoom Scale
-2
-12
-22
-32
WIFI-2 5.8GHz
Total
Azimuth:
Elevation
Roll: -1
Zoom Scale
-5
-14
-23
-32

6. Antenna picture

ANT1：



ANT2：