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Specification Book

for

WJ14 WIFI antenna

Customer Material Number

The material number of our company

QM-2.4-5.8G-WIFI- Magenta copper

Compiled by Zeng Xiaofeng. Reviewed by Li Ming

Date： 2025.04.21

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CATALOGUE

东莞市千木电子科技有限公司

1.be confirmed by both sides

1.1Customer confirmation signature

client：

Customer Department/Position	Signature of the confirmer	confirmation date
Hardware/Radio Frequency		
structure		

project manager		
Business/Procurement		
check		

1.2Qianmu Technology confirms and signs

Department/Position	Signature of the confirmer	confirmation date
Antenna engineer		
structural engineer		
project manager		
QA		
audit		

2.general precautions

2.1 range of application

WJ07 2.4G-5.8G WIFI antenna

2.2 using temperature range

The operating temperature range of this product is -20 to +65 ℃

2.3 Storage temperature range

This product should be stored at -30 to +75 ℃

3.General specifications of the product

NO.	ITEMS	DETAILS

1	type	WJ14 2.4G-5.8G WIFI
2	frequency band	2400-2500MHZ 5100-5900MHZ
3	VSWR	≤2.0
4	Gain	2.87dBi
5	Radiation Efficiency	≥50%
6	impedance	50Ω
7	Antenna type	PIFA
8	Antenna implementation form	Copper-Nickel Alloy
9	Antenna picture	

4.Product Specification details

4.1Product structure parameters

4.11Product material composition:

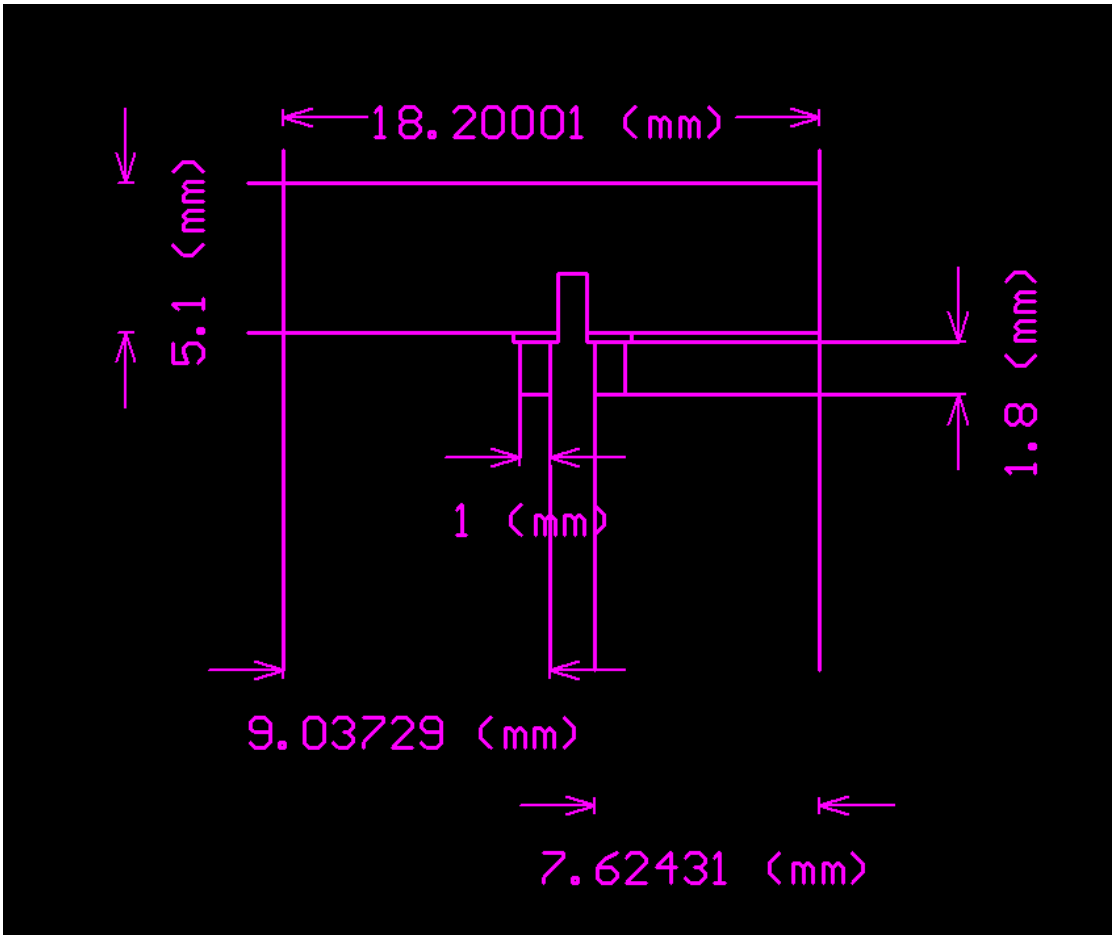
numerical order	materials	Specification (MM)
1	copper-Nickel Alloy	18.2*5.1*3.5 silver

4.12 appearance

The product has a good appearance, free from scratches, sweat stains, protrusions and other serious defects that affect the appearance.

4.13 structure size

product drawing



4. 2Product electrical performance test data

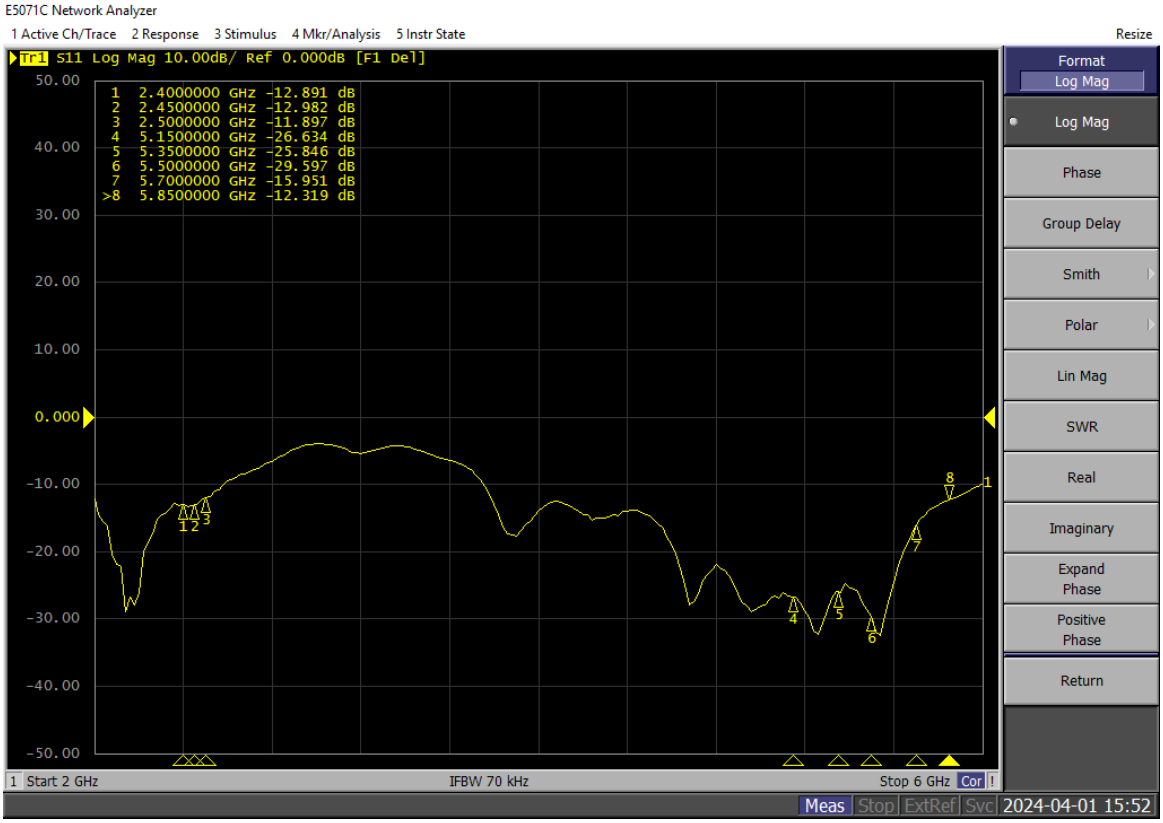
4. 21 Test environment and instruments and equipment

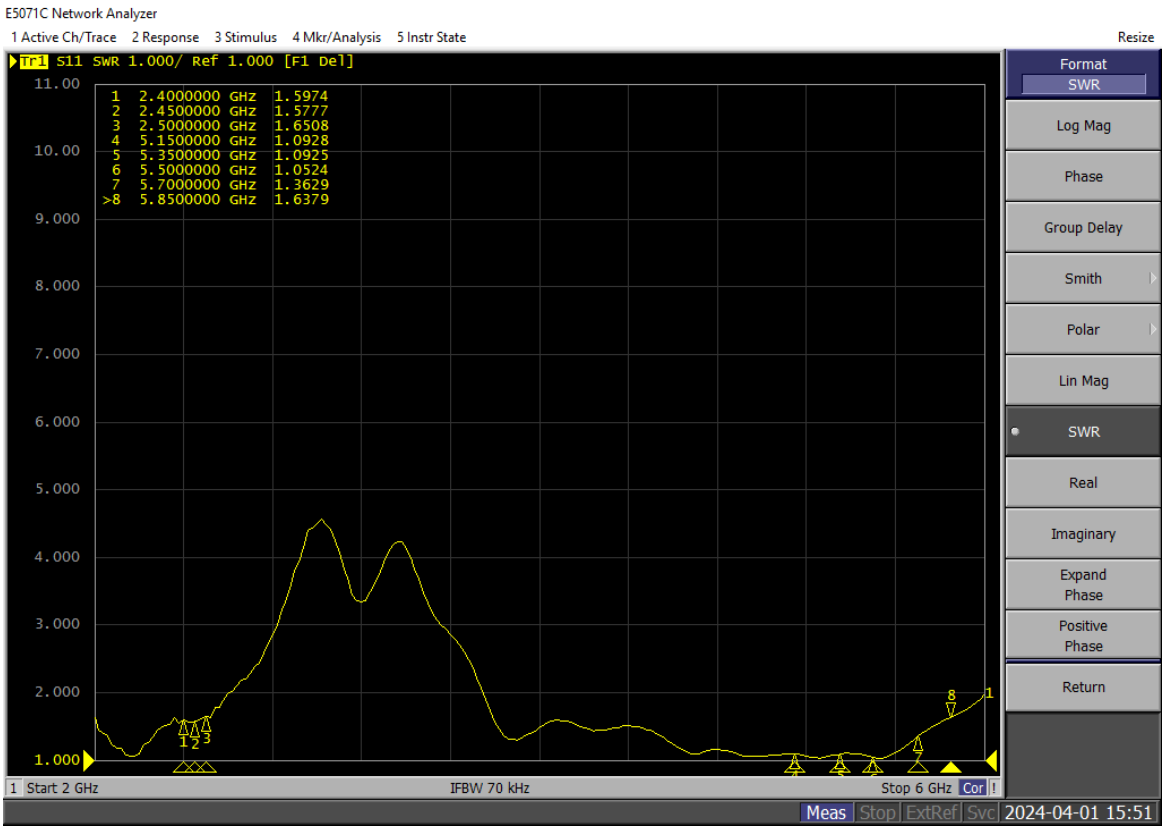
testing environment:	test equipment:
temperature: 10℃——+30℃ relative humidity: ≤80%(+40℃) barometric pressure: 750mmkg±30mmkg	network analyzer KEYSIGHT E5071C Multi-probe microwave anechoic chamber

4. 22. 1 Product electrical performance test data:

S11 diagram of the antenna::

Marker (MHZ)	2400	2450	2500	5150	5350	5500	5700	5850
Returnloss	-12.8	-12.9	-11.8	-26.6	-25.8	-29.5	-15.9	-12.3
VSWR	1.5	1.5	1.6	1.0	1.0	1.0	1.3	1.6



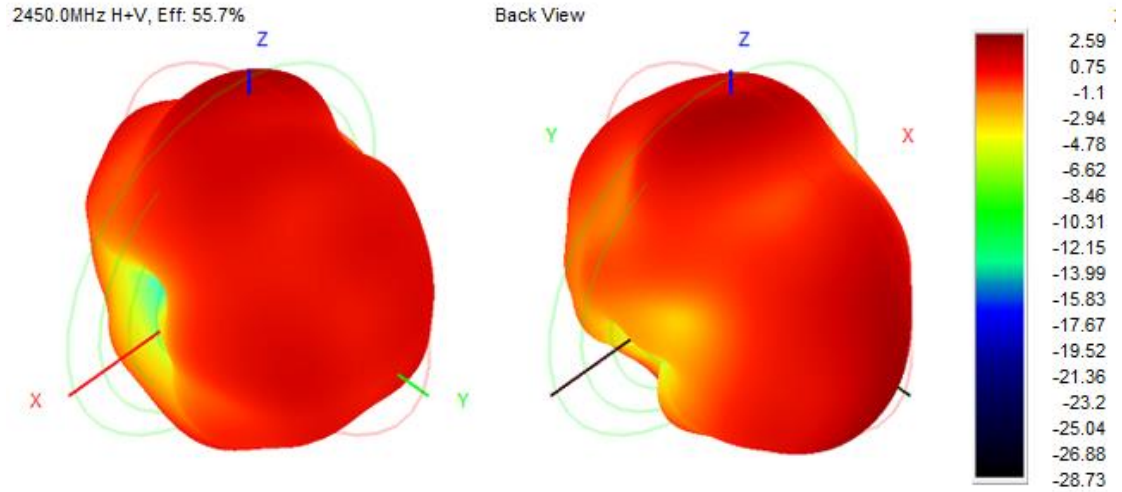


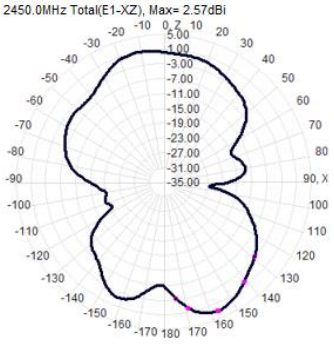
4.22.2 Gain efficiency of the antenna:

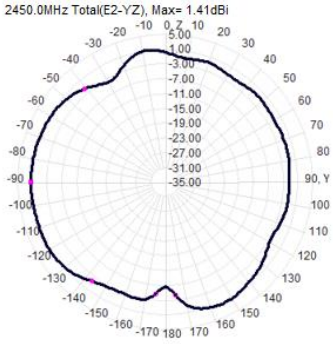
Marker (MHz)	2400	2450	2500	5150	5350	5500	5700	5850
Gain (dBi)	2.69	2.59	2.87	2.82	3.73	3.27	4.74	3.75
Efficiency (%)	58.75	55.66	53.14	50.57	53.37	55.29	67.42	51.38

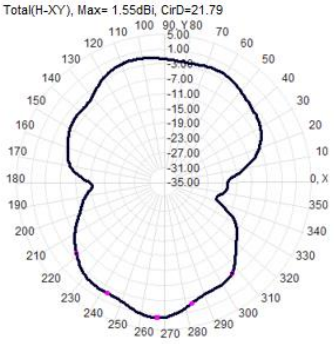
4.22.3 The radiation pattern of the antenna:

2450 MHz:

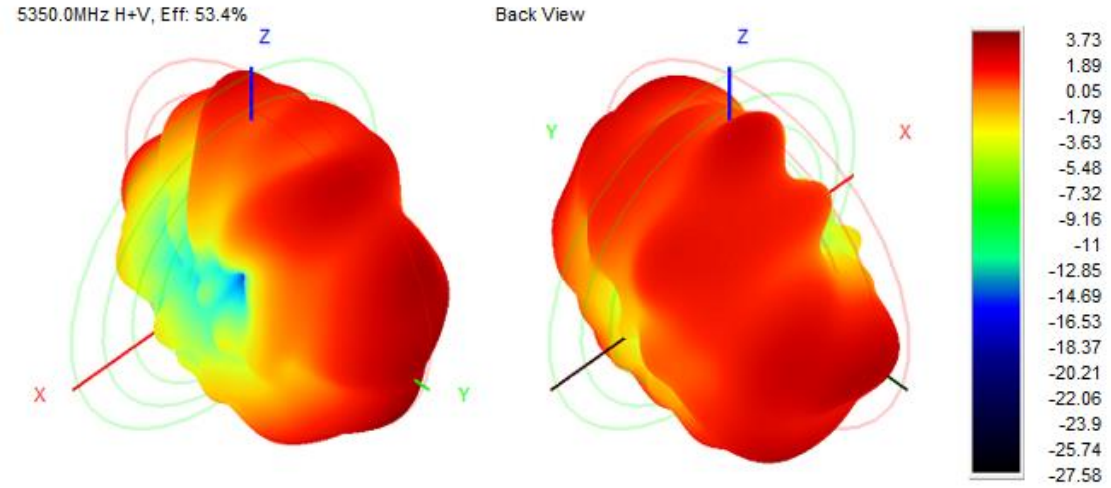

2450.0MHz H+V, Eff: 55.7%
Back View
Z
X
Y
2.59
0.75
-1.1
-2.94
-4.78
-6.62
-8.46
-10.31
-12.15
-13.99
-15.83
-17.67
-19.52
-21.36
-23.2
-25.04
-26.88
-28.73

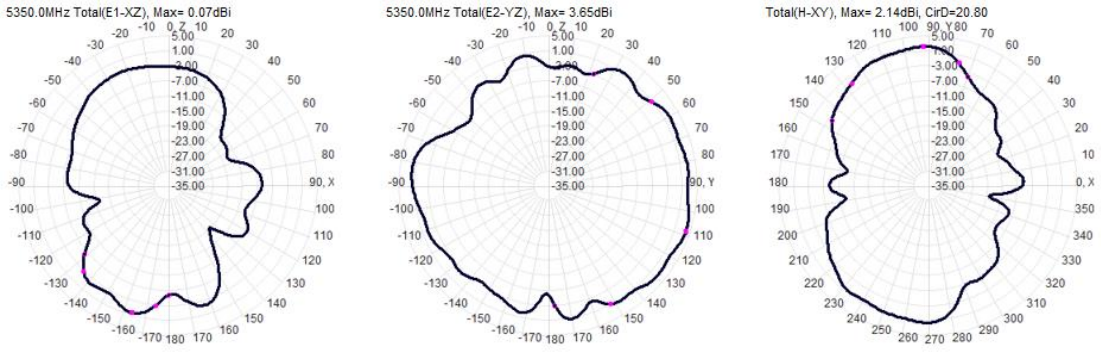

2450.0MHz Total(E1-XZ), Max= 2.57dBi


2450.0MHz Total(E2-YZ), Max= 1.41dBi

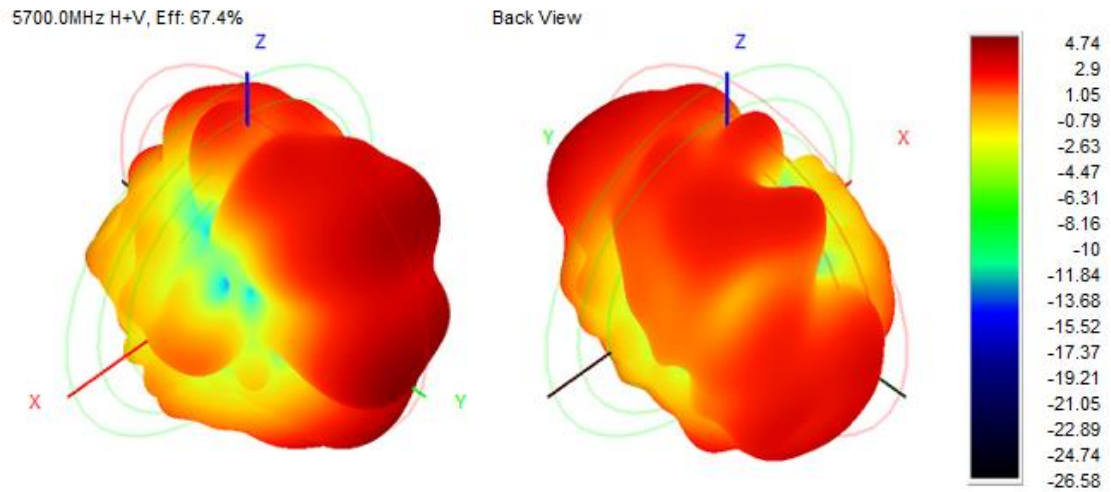

Total(H-XY), Max= 1.55dBi, CirD=21.79

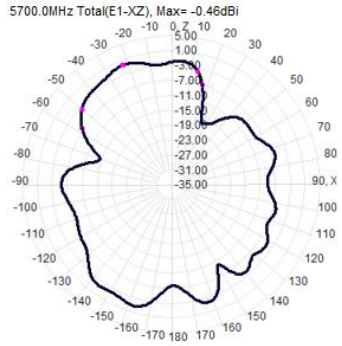
5350MHz:

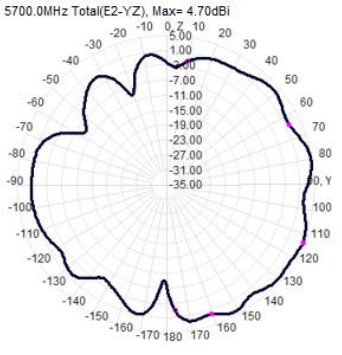

5350.0MHz H+V, Eff: 53.4%
Back View
Z
X
Y
3.73
1.89
0.05
-1.79
-3.63
-5.48
-7.32
-9.16
-11
-12.85
-14.69
-16.53
-18.37
-20.21
-22.06
-23.9
-25.74
-27.58

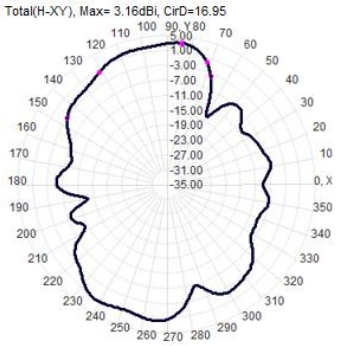

5350.0MHz Total(E1-XZ), Max= 0.07dBi
5350.0MHz Total(E2-YZ), Max= 3.65dBi
Total(H-XY), Max= 2.14dBi, CirD=20.80

5700 MHz：


5700.0MHz H+V, Eff: 67.4%
Back View
Z
X
Y
4.74
2.9
1.05
-0.79
-2.63
-4.47
-6.31
-8.16
-10
-11.84
-13.68
-15.52
-17.37
-19.21
-21.05
-22.89
-24.74
-26.58







5. Product packaging method

manner of packing: Self-sealing bag packaging, 200PCS per bag.

6. Document resume

Document No.	
Release Date	2025/04/21
Author	Hungjie
Review	WH

Revised History

Date	Version	Revised Record
2025/04/21	1.00	New Project