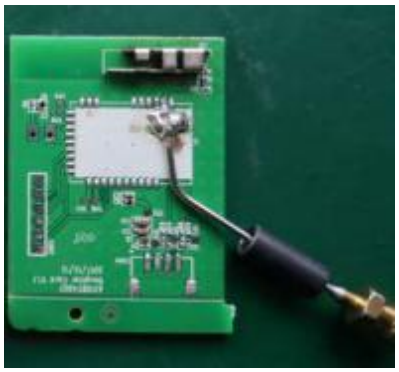
Shenzhen Runicc Wireless Technology Co.,Ltd

Customer / Project Name	WF 75	frequency range	2.4G
RN P/N	RN 0072	edition	A0
radio frequency	Jiang Ning	affirm	
structure	S teven		
date	2018-09-05		
Customer confirmation			
Shenzhen Runicc Wireless Technology Co., Ltd			

R & D project customer satisfaction survey (for the customer, please give a review of our R & D or PM management staff to urge us to better serve you)			
RF artisan	☐ satisfied	☐ be basically satisfied	☐ discontent
Structural technicians	☐ satisfied	☐ be basically satisfied	☐ discontent
Project Management (PM Manager)	☐ satisfied	☐ be basically satisfied	☐ discontent
Recommendation description:			

1. Picture of the antenna

The report mainly provides the testing status of various electrical performance parameters of the WF75 antenna. The WF75 antenna diagram and the assembly diagram are shown below.



Antenna assembly diagram

2. The antenna test equipment

2.1 Antenna input characteristic test uses Agilent E5071C vector network

analyzer; Satimo is used for antenna radiation characteristics test

Starlab 3D near-field microwave dark chamber using the instrument Agilent 8960 E5515 comprehensive ometer. The dark room test coordinates are as follows:

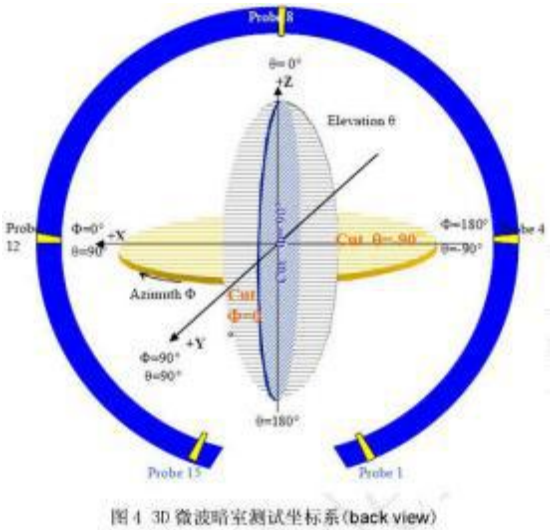
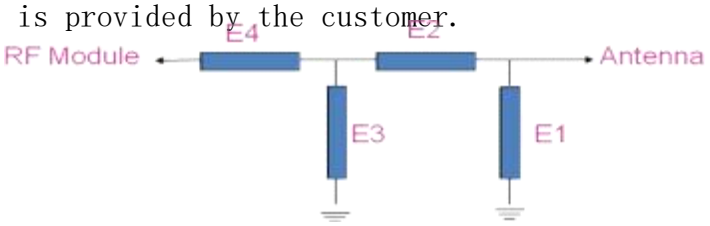


图 4 3D 微波暗室测试坐标系(back view)

2.2 Matching circuit of the antenna

The antenna is composed of the FP C + rear shell, and this item matching circuit is provided by the customer.



E lement	Value
E 1(0402)	provided by customer
E 2(0402)	provided by customer
E 3(0402)	provided by customer
E 4(0402)	provided by customer

3. Electrical performance

3.1 Specification and Standard

The WF 75 antenna operating frequency band is at 2400MHz ~2485MHz; the resonance is generated in this frequency band. The following table shows the performance test index of the WF 75 antenna.

2400MHz	≤2.5
2450MHz	≤2.1
2500MHz	≤2.1

3 . 2 Passive S11 parameters:

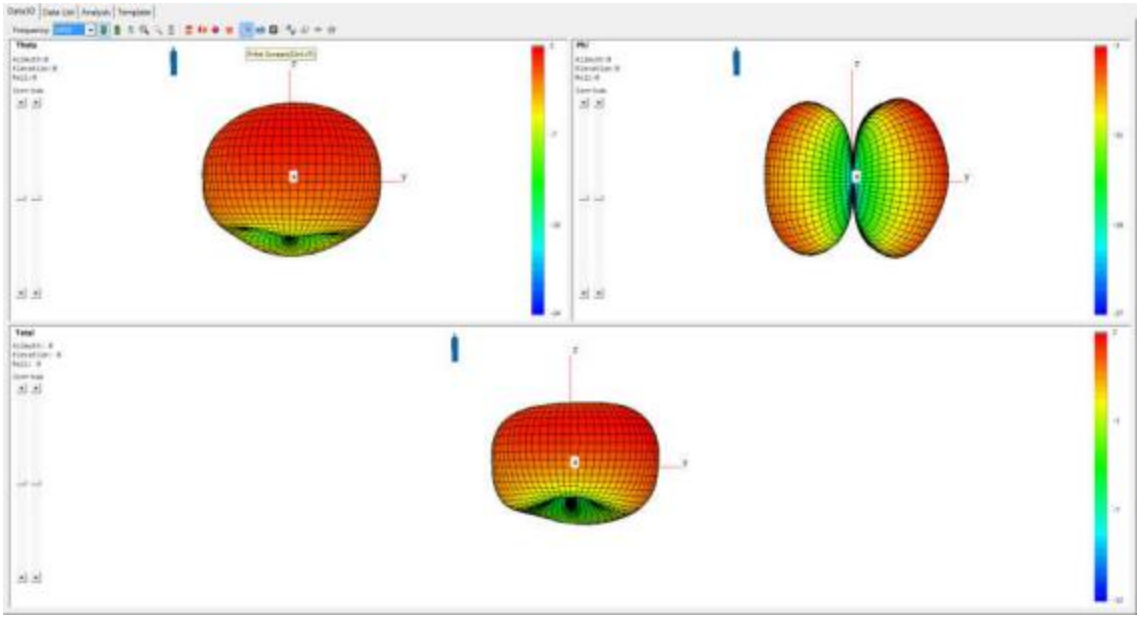
回波损耗（Return loss）、驻波比（VSWR）、阻抗图（Smith chart）测试

V SWR

Rturn Loss

Smi t hChart

3.3 Antenna orientation diagram test data



3.4 Antenna Radiation gain and efficiency data

chNo	Freq	TRP	PeakEIRP	Directivity	Gain	Efficiency_dB	Efficiency_Percent
1	2400	-1.56	2.44	4.00	2.44	-1.56	69.83
2	2410	-1.42	2.53	3.95	2.53	-1.42	72.05
3	2420	-1.37	2.54	3.92	2.54	-1.37	72.90
4	2430	-1.46	2.27	3.72	2.27	-1.46	71.52
5	2440	-1.73	1.84	3.56	1.84	-1.73	67.19
6	2450	-1.66	1.87	3.52	1.87	-1.66	68.31
7	2460	-1.60	1.73	3.33	1.73	-1.60	69.12
8	2470	-1.55	1.59	3.13	1.59	-1.55	70.05
9	2480	-1.65	1.38	3.03	1.38	-1.65	68.41
10	2490	-1.56	1.26	2.82	1.26	-1.56	69.79
11	2500	-1.37	1.52	2.90	1.52	-1.37	72.87

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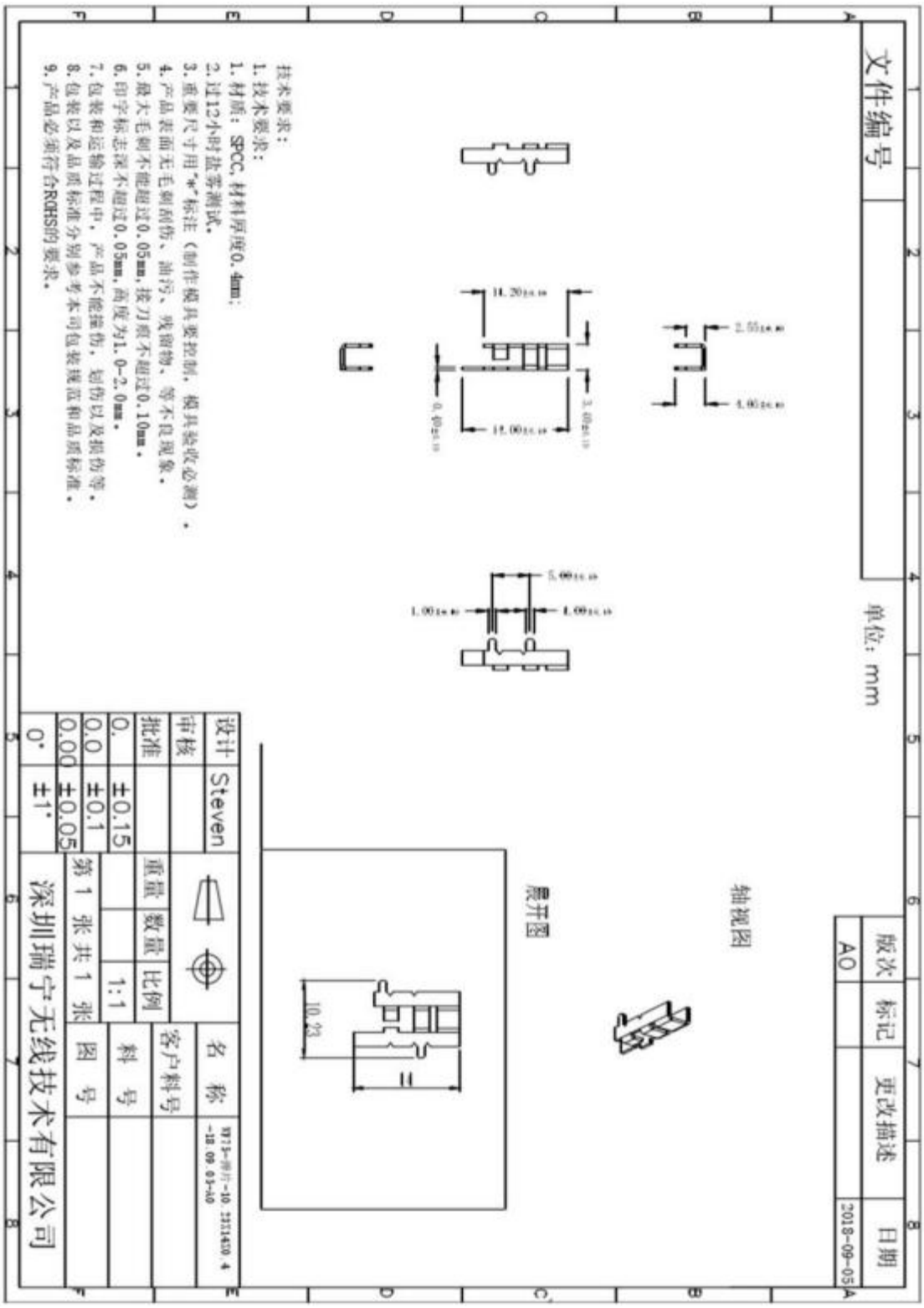
4. Engineering drawing file



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