

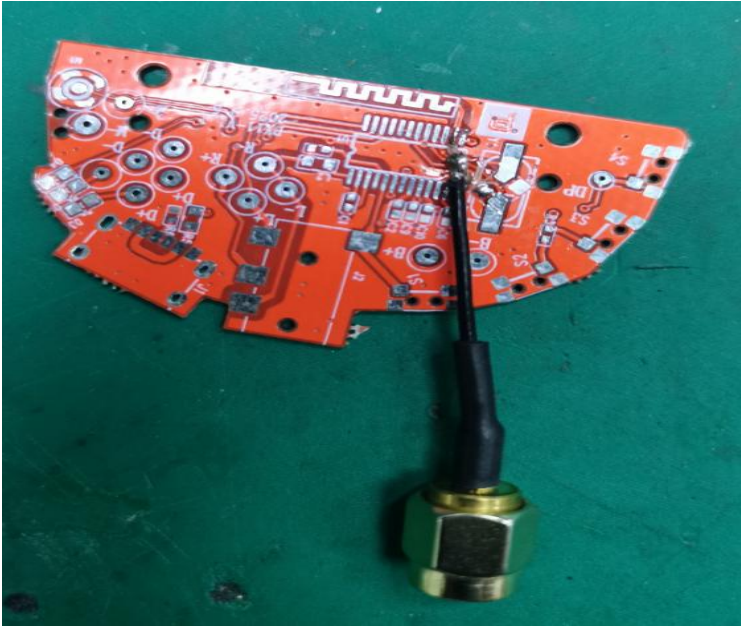
Antenna Efficiency Test

- 1、 Hardware Testing
- 2、 Software Testing
- 3、 Data Reading

1、 Hardware Testing

1.1 PCBA Bare Board Testing

Solder the RF cable to the bare board, and then connect it to the OTA device. The connection diagram of the RF cable and the bare board is shown in Figure 1.



1.2 、 Device Environment

The equipment needed for this test includes a computer, a spectrum analyzer, an amplifier, and a darkroom. Connect them as shown in Figures 2, 3, and 4:

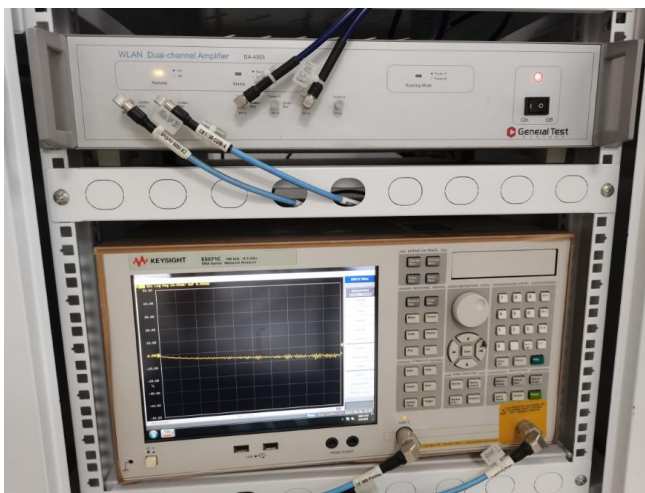


图 2

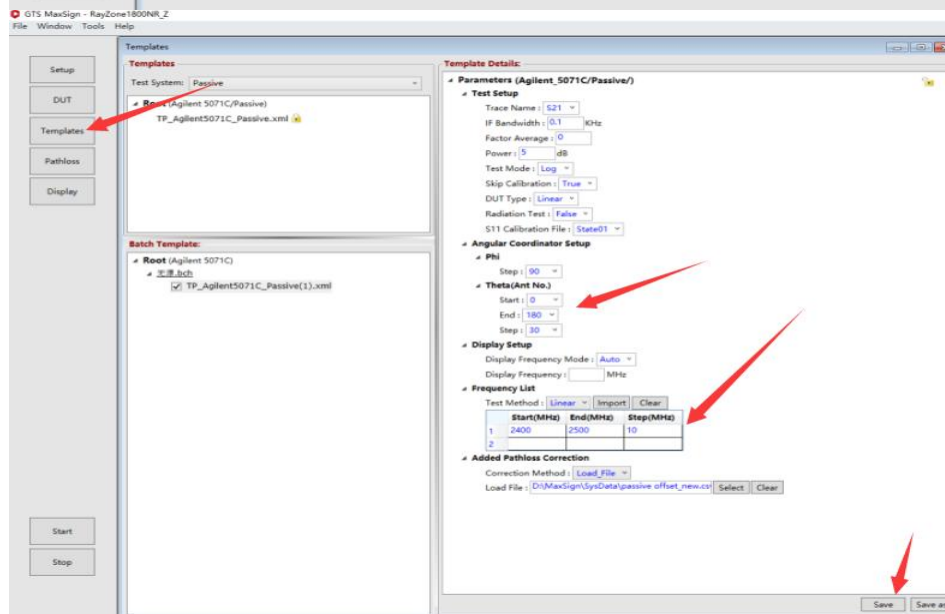
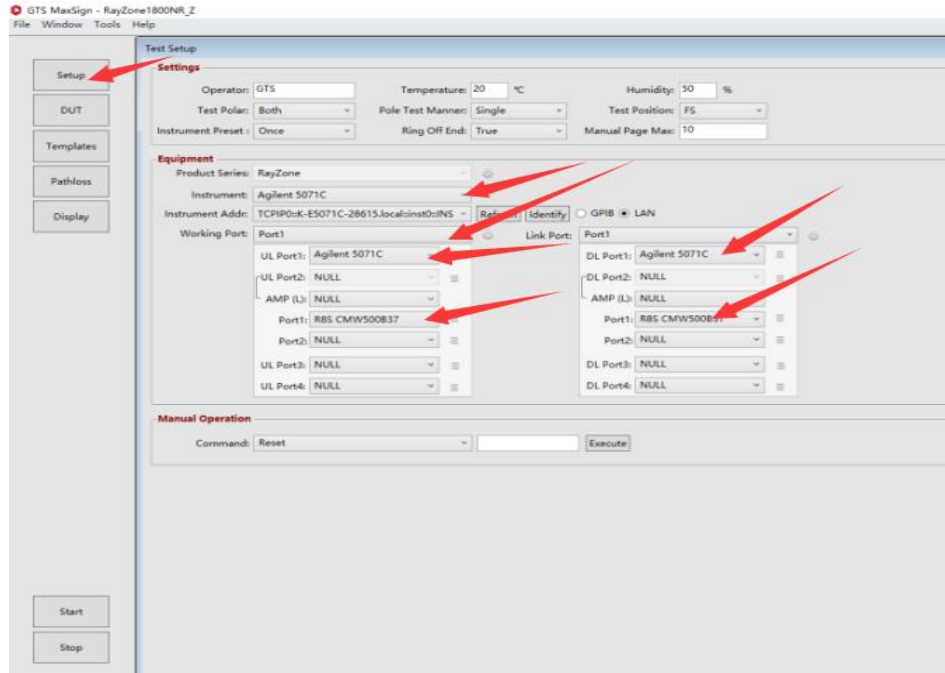


图 3



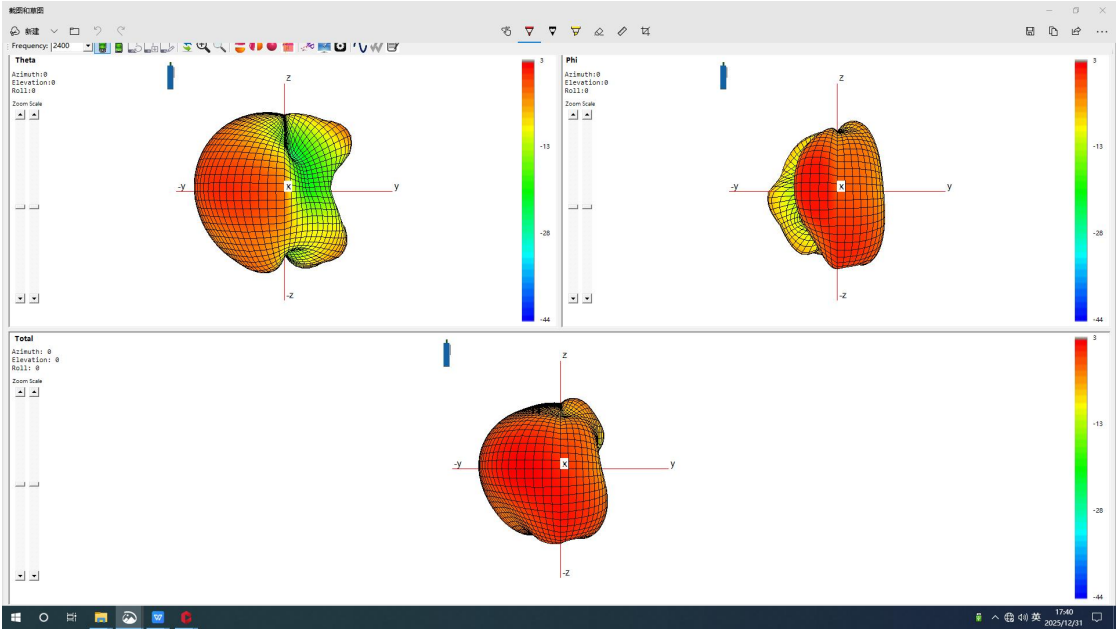
图 4

2、Software Testing

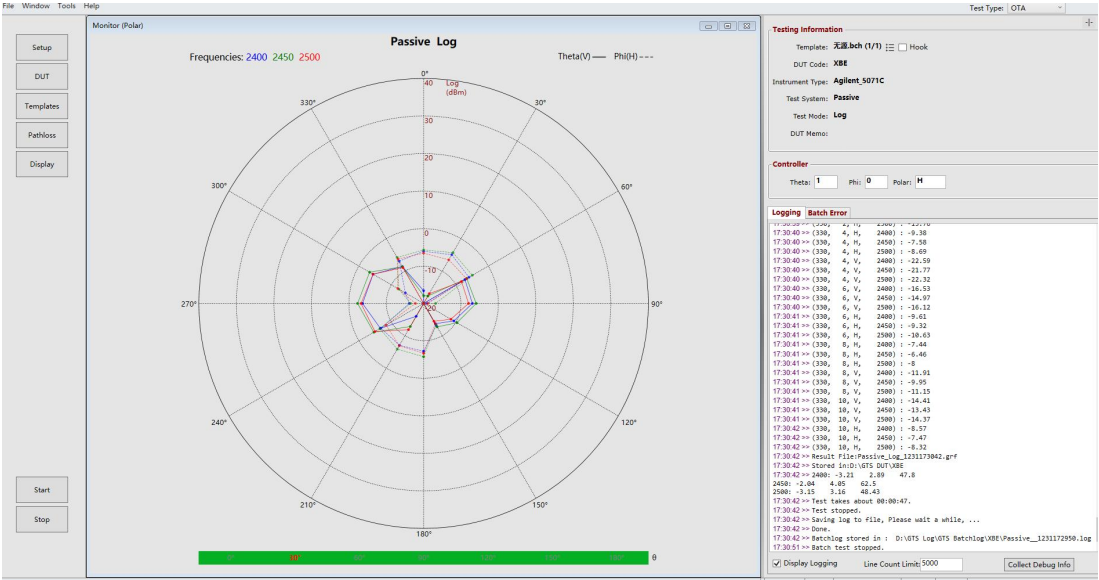


3、Data Reading

3.1、3D Radiation Pattern of the Scanning Antenna



3.2、2D Radiation Pattern of the Scanning Antenna



3.3、Detailed scan output data results

Data3D UWBa List Analysis Template																			
Frequency: 2400																			
TestItem	Pas_Log	TestSyst	Passive	StartTime	17:29:55	EndTime	17:30:42	TotalTime	00:00:47	CreateTL	2025/1...	Polariza...	Linear						
Model	XBE	TestBand	Product	RayZon...	O Polar	NHPRP...	NHPRP...	UHRP	ERP_X	Polariza...	Theta X	Phi X	ThetaM...	PhiMax	ThetaMin	PhiMin	Directi...	UHRP/T...	Efficien...
chNo	Freq	Efficien...	Gain	MinIRP	BoreSig...	O Polar	NHPRP...	NHPRP...	UHRP	ERP_X	Polariza...	Theta X	Phi X	ThetaM...	PhiMax	ThetaMin	PhiMin	Directi...	UHRP/T...
1	2400	-3.2044...	2.89630...	-18.717...	90	330	-5.7632...	-4.4180...	-6.7935...	-5.7040...	1.44392...	Phi	120	0	1.25415	1.44392...	-43.605...	-22.232...	6.10075...
2	2410	-2.8058...	3.20572...	-18.599...	90	330	-5.3814...	-4.0242...	-6.4059...	-5.2969...	1.89814...	Phi	120	0	1.57201...	1.89814...	-42.727...	-22.151...	6.01154...
3	2420	-2.3158...	3.64248...	-17.906...	90	330	-4.8951...	-3.5295...	-5.9093...	-4.8120...	2.45937	Phi	120	0	1.98763	2.45937	-41.112...	-21.338...	5.95833...
4	2430	-2.1818...	3.84099...	-17.368...	90	330	-4.7400...	-3.3888...	-5.7755...	-4.6778...	2.63343...	Phi	120	0	2.23598	2.63343...	-40.414...	-21.306...	6.02271...
5	2440	-2.3779...	3.69618...	-16.743...	90	330	-4.9322...	-3.5840...	-5.9842...	-4.8642...	2.44326...	Phi	120	0	2.11445...	2.44326...	-42.105...	-22.363...	6.07412...
6	2450	-2.0410...	4.05958...	-16.085...	90	330	-4.5865...	-3.2406...	-5.6435...	-4.5302...	2.80529...	Phi	120	0	2.45635	2.80529...	-31.383...	-21.986...	6.10063...
7	2460	-1.9426...	4.21289...	-15.907...	90	330	-4.4720...	-3.1300...	-5.5461...	-4.4310...	3.01301...	Phi	120	0	2.61951...	3.01301...	-29.030...	-22.087...	6.15550...
8	2470	-2.2933...	3.89600...	-16.114...	90	330	-4.8215...	-3.4791...	-5.8877...	-4.7889...	2.61674...	Phi	120	0	2.26779...	2.61674...	-27.882...	-22.677...	6.18935...
9	2480	-2.4152...	3.80462...	-16.434...	120	0	-4.9572...	-3.6079...	-6.0151...	-4.9065...	2.52889	Phi	120	0	2.1095	2.52889	-28.105...	-23.410...	6.21989...
10	2490	-2.8900...	3.37733...	-16.639...	90	330	-5.4266...	-4.0816...	-6.4729...	-5.3945...	2.02226...	Phi	120	0	1.71047...	2.02226...	-27.419...	-25.281...	6.26737...
11	2500	-3.1501...	3.15933...	-16.524...	90	330	-5.6687...	-4.3296...	-6.7387...	-5.6501...	1.82798...	Phi	120	0	1.50193...	1.82798...	-27.088...	-26.520...	6.30947...

Summary

ITEM	ANT SPEC		
Model Name	2.4G ANT		
Antenna plate	PCB antenna		
Center Frequency	2400MHz	2450MHz	2500MHz
	2.8	4.0	3.1
MAX. Gain	4.2		
Polarization	Horizontal and Vertical		
Impedance	50Ohm		
Manufacture			

AntennaPhoto&Length(mm)

