

Antenna Test Report

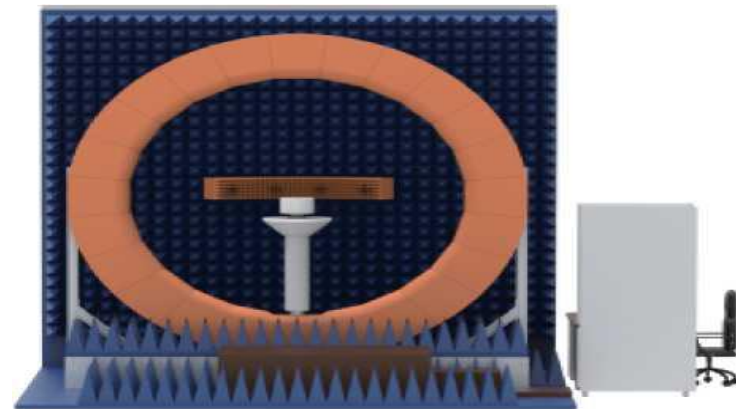
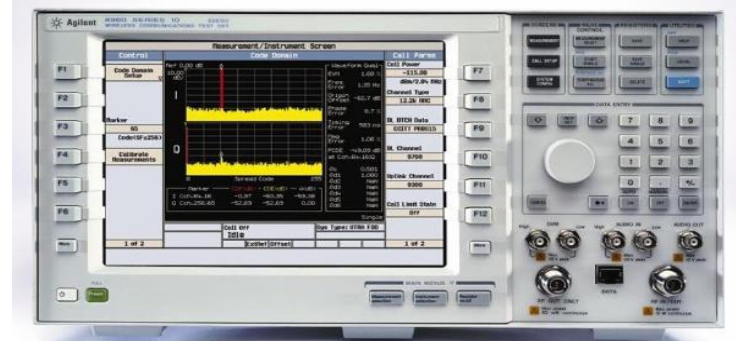
Manufacturer Name: Shenzhen Helixun Technology Co., Ltd.

Company Address: Room 1004, Building 1, Jinhuanu Mansion, No.56 Tiezai Road, Gongle Community, Xixiang Subdistrict, Bao'an District, Shenzhen

Project	BS007
Antenna Revision	A0
Prepared by	/
Checked by	/
Date :	2025. 11. 27

2. Test System

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5071B
OTA Test	TRP&TIS	Agilent 8960 & CMW500 STIMO
Gain & Efficiency	Gain & Efficiency	SATIMO Agilent 5071C



Purpose

This report is to measure the performance of antenna for B S 0 0 7 The antenna operating frequency at 2400MHz0-2500MHz 。 All test data are showed as below.

Content

1. Product Overview & Dimension
2. Test system
3. Test Result

3.1 S11 Parameter

3.2 Gain & Efficiency

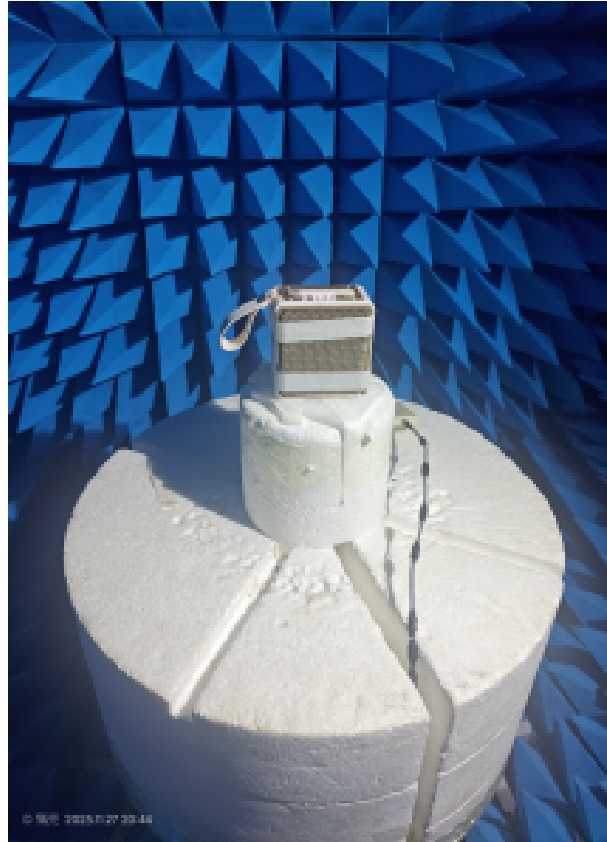
3.3 2D Pattern

4. OTA

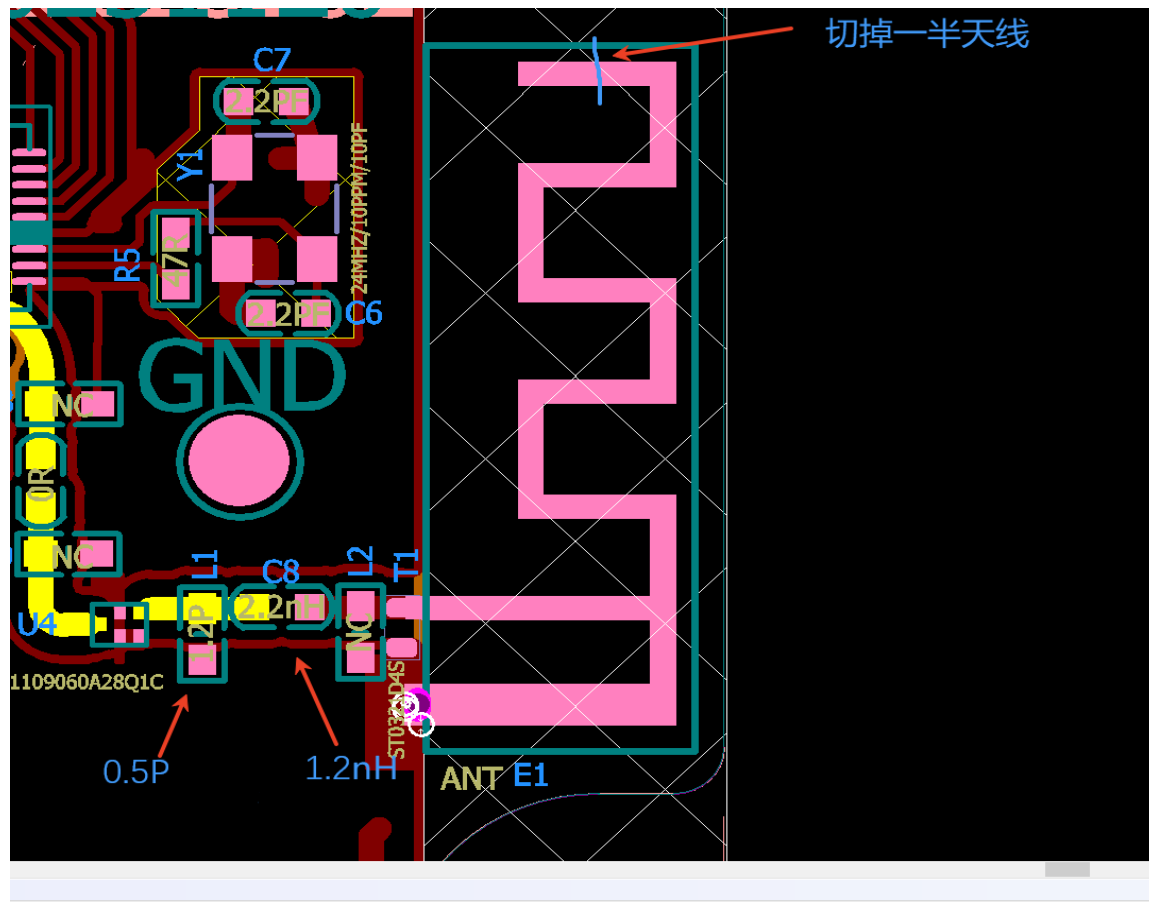
4.1 Test Result

4.2 2D Pattern

Calibration Photos



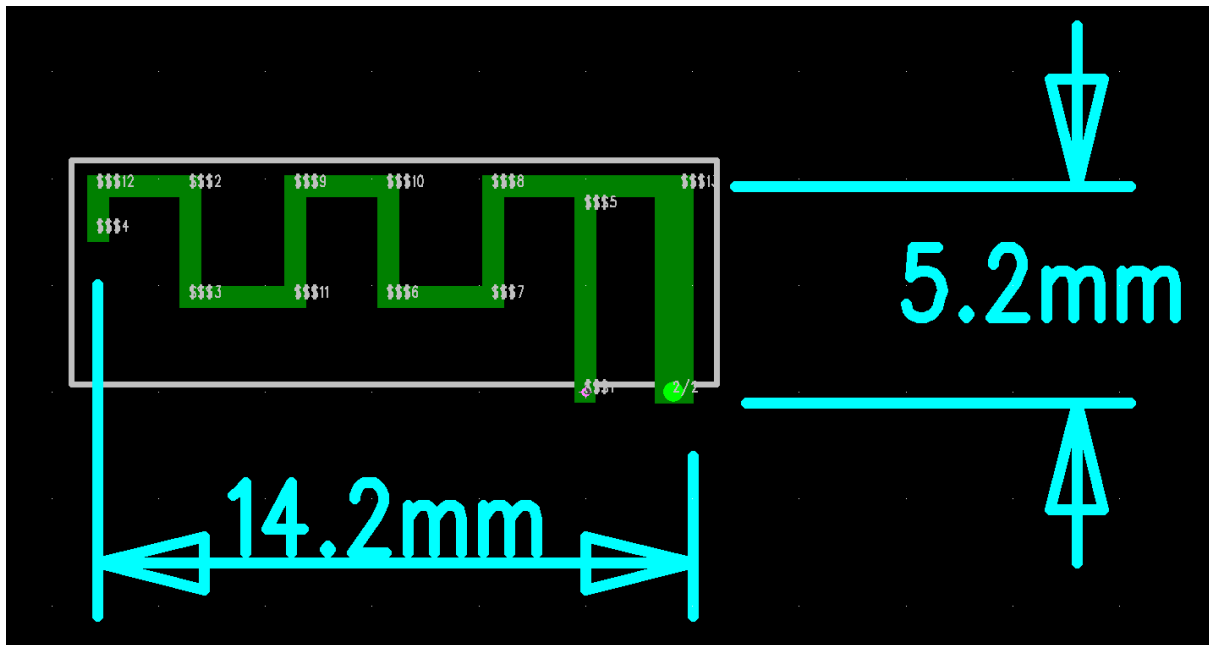
Matching Diagram



2.1 Antenna Type: PCB Antenna

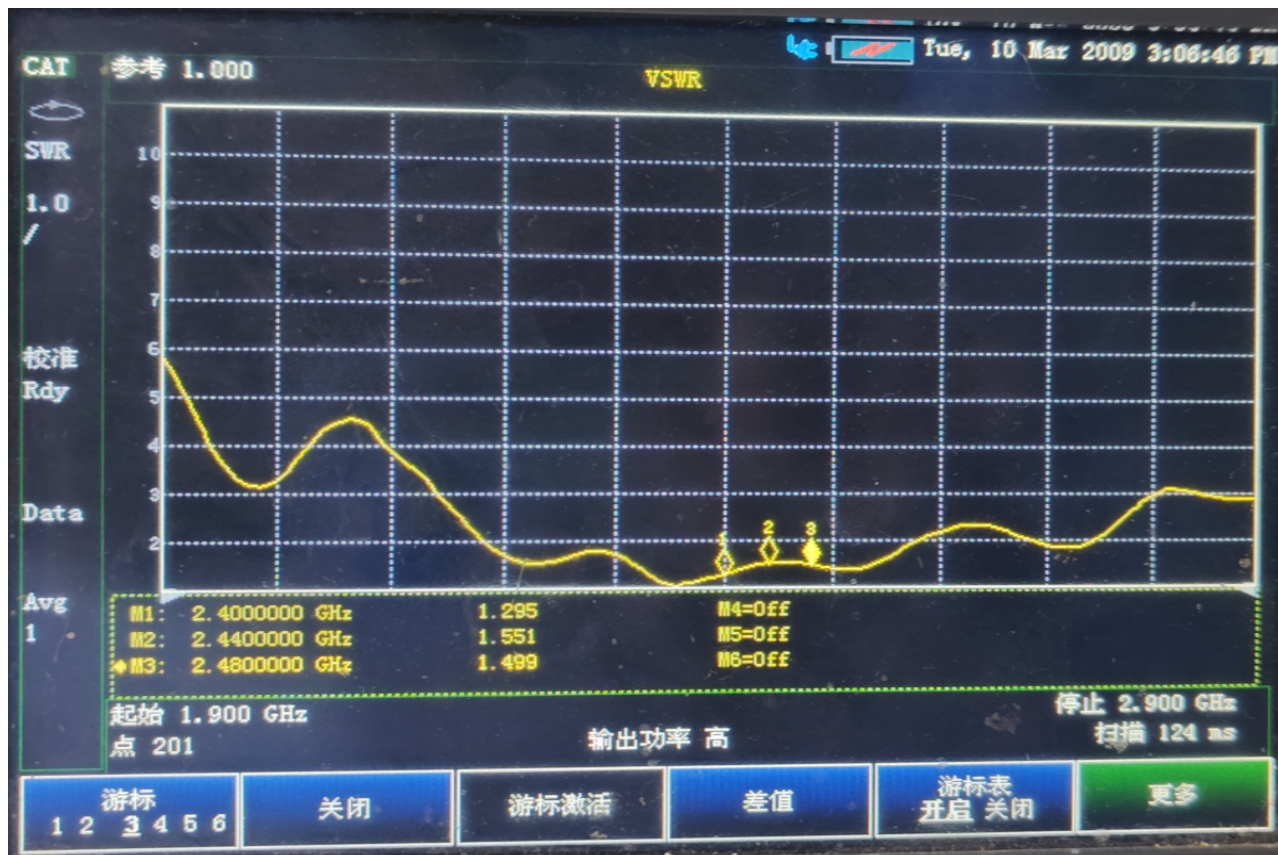
2.2 Antenna Model: PCB IFA-2.4G-1450-SMD

2.3 Antenna Dimension :



3.1 Test Result

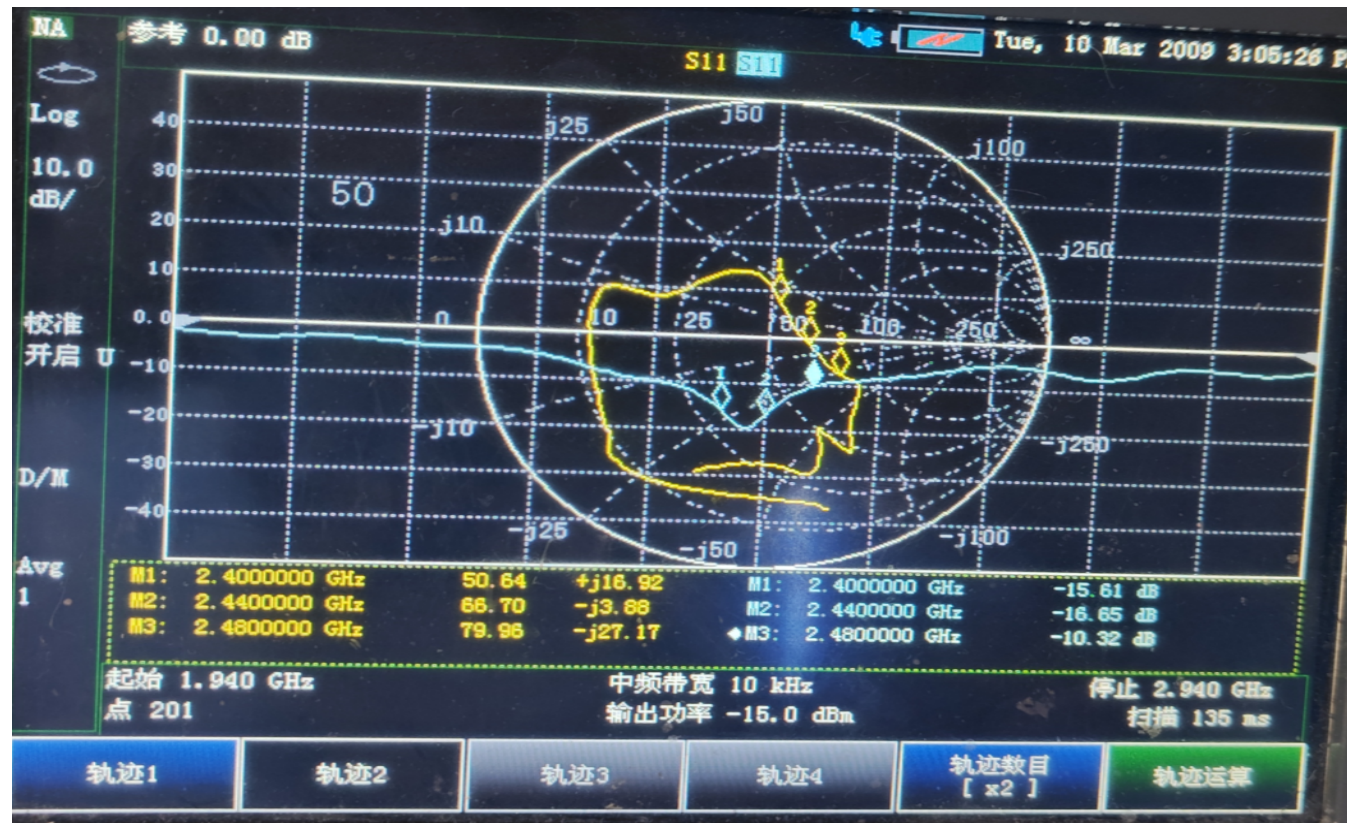
1 .S11 Parameter-VSWR



Frequency (MHz)	2400	2450	2480	
VSWR	1.295	1.55	1.50	

3.1 Test Result

2. S11 Parameter-Log Mag



Frequency (MHz)	2400	2450	2480	
Log Mag	-15.61	-16.65	-10.32	

3.1 Test Result

3.S11 Parameter-Smith



Frequency (MHz)	2400	2450	2480	
Smith(Ω)	50.64	66.7	79.96	

3.2 Test Result

1 Gain & Efficiency——**ANT**

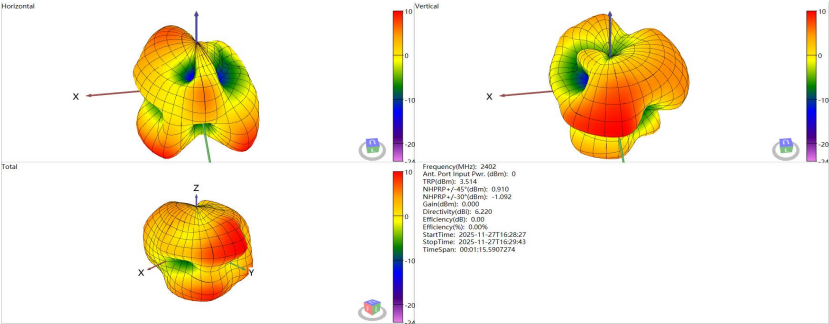
Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	52.43%	1.918
2410	47.41%	1.181
2420	47.18%	1.229
2430	41.41%	0.486
2440	38.99%	0.122
2450	41.74%	0.486
2460	46.36%	0.624
2470	46.21%	0.767
2480	50.75%	0.897

4.1 OTA Data

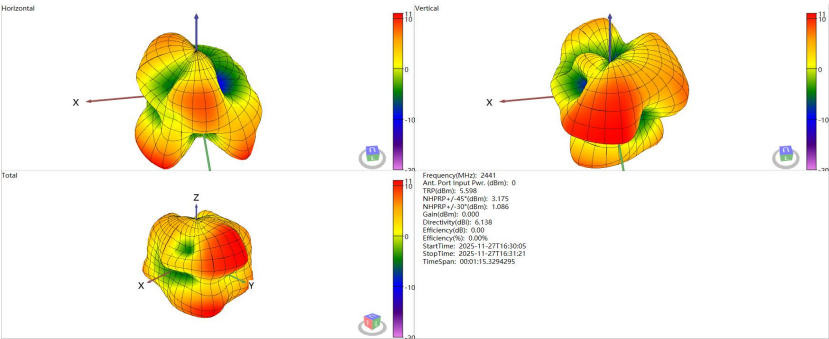
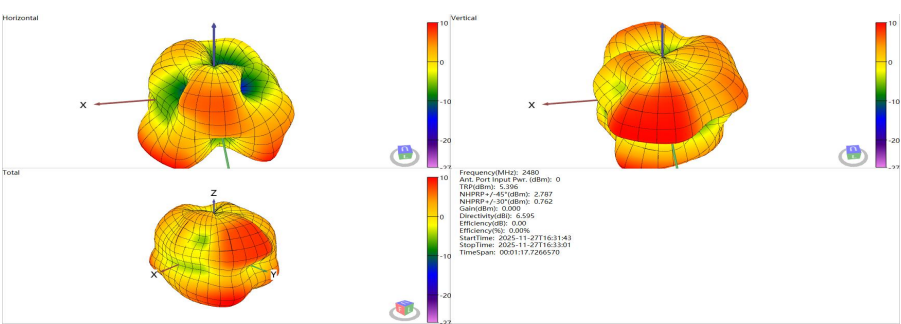
Test Equipment:	R&S CMW500		
Test Condition:	2 D chamber		
Band	Channel	TRP(dBm)	TIS(dBm)
BT	0	3.514	-80.66
	39	2.48	-85.90
	78	2.02	-84.50

4.2 Test Result

1 2D Pattern——BTANT



TRP

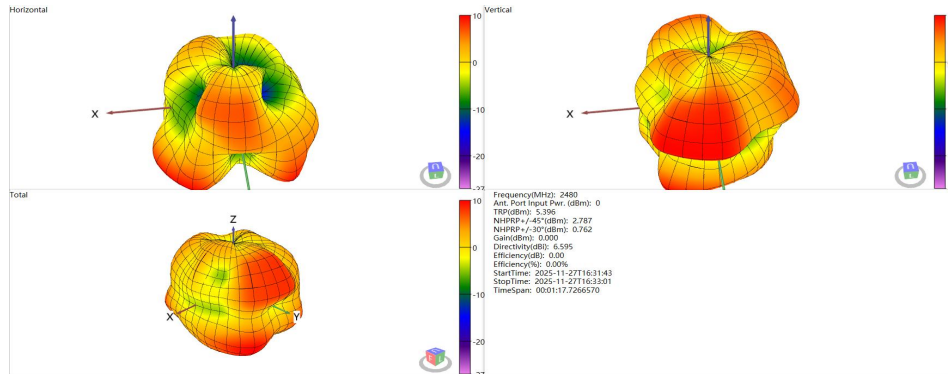
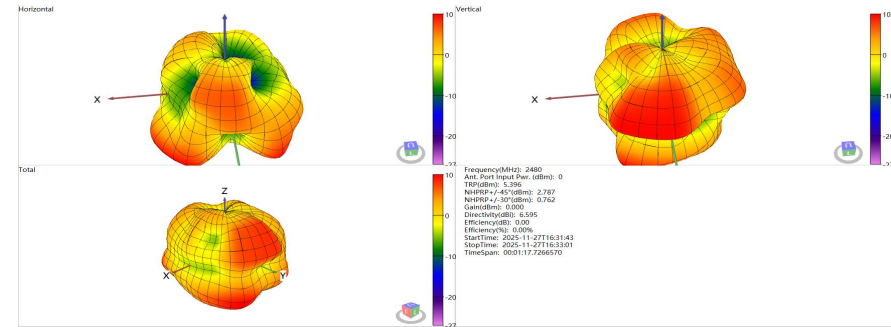
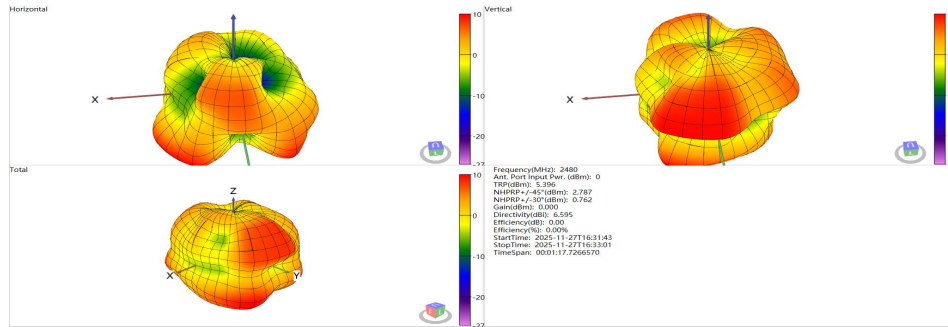


Frequency(MHz): 2400
Ant. Port Input Pwr. (dBm): 0
TRP(dBm): 5.396
NRPB+/-45°(dBm): 2.787
NRPB+/-30°(dBm): 0.762
Gain(dBm): 0.000
Directivity(dB): 1.035
Efficiency(dB): 0.00
Efficiency(%): 0.000
StartTime: 2025-11-27T16:31:43
StopTime: 2025-11-27T16:33:01
TimeSpan: 00:01:17.266570

4.2 Test Result

2 2D Pattern——BTANT

TIS



Thank you!