



2. 天线测试设备简介

Antenna Test Equipment Introduction

测试天线输入特性使用 Agilent E5071C and Agilent 5071C 矢量网络分析仪；辐射特性利用 ETS 三维近场暗室进行测试，并分别使用 CMW500 和 Agilent 5071C 进行了分析。暗房的测试坐标如下：

Test of antenna input characteristics using Agilent E5071C and Agilent 5071C vector network analyzer; The radiation pattern of the antenna are tested using the ETS starlab 3D near field Anechoic Chamber, and the instrument is used to agilent8960 E5515 and Agilent E4438C. The test coordinates of the darkroom are as follows:

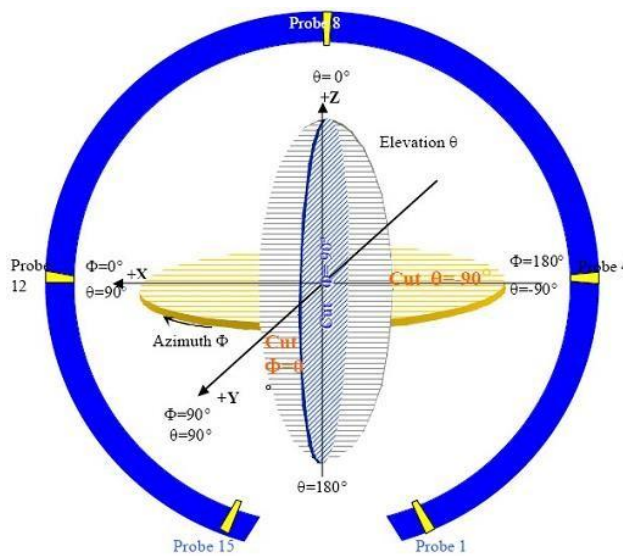


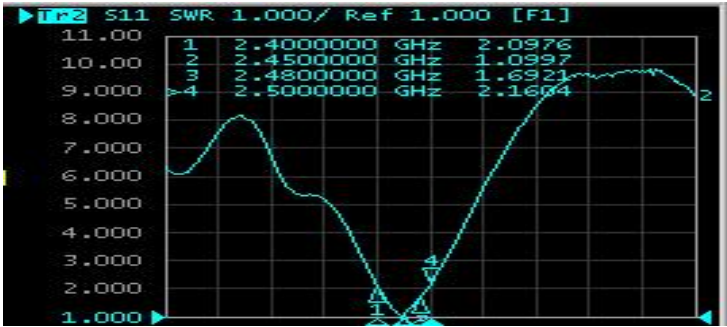
图 4 3D 微波暗室测试坐标系 (back view)

3. Electrical Specification

3-2 Passive S11 parameter

Measuring Method is a 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.

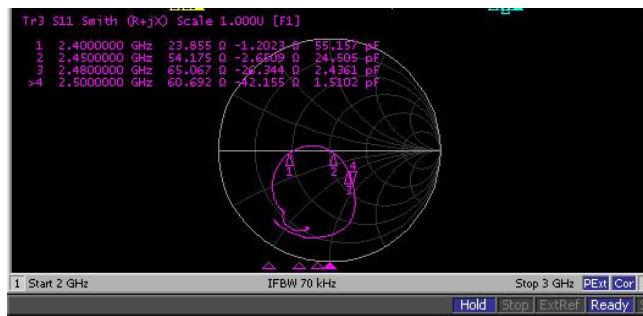
S11 Parameter-VSWR



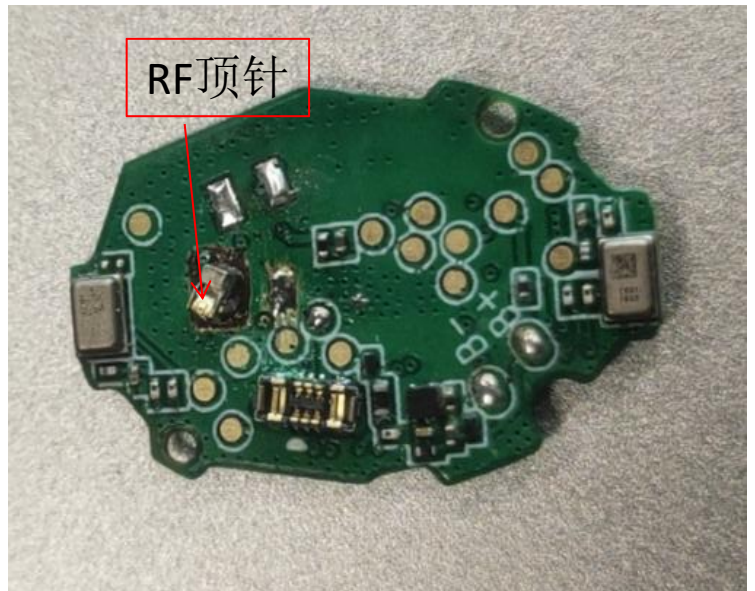
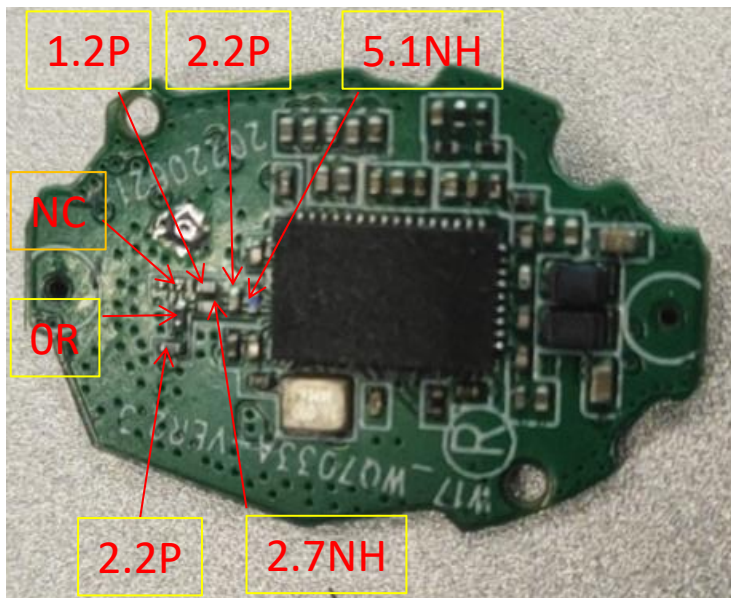
S11 Parameter-Log Mag



S11 Parameter-Smith



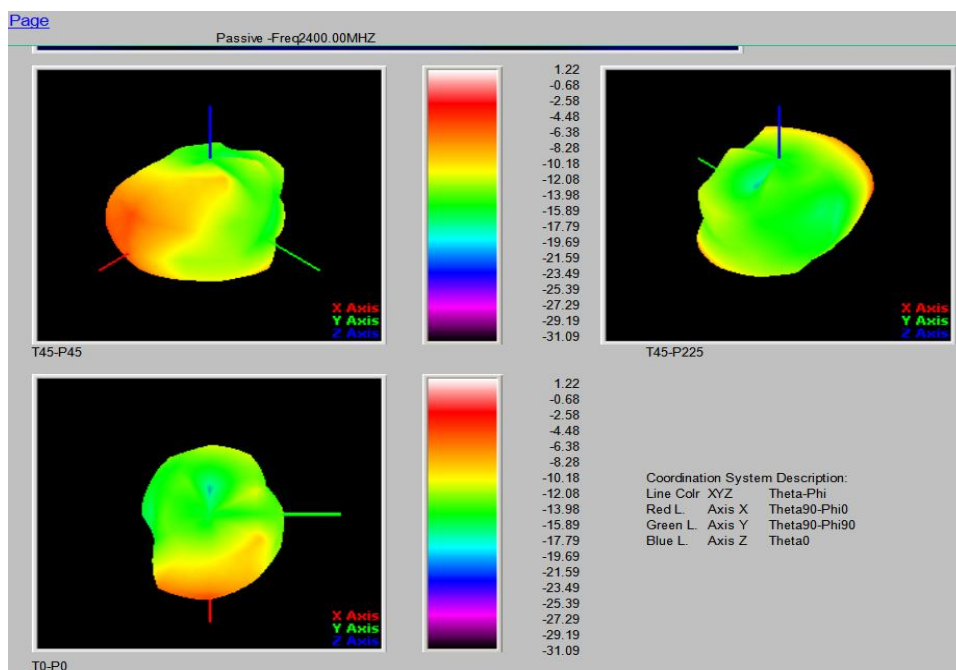
3-3 Antenna Matching Network



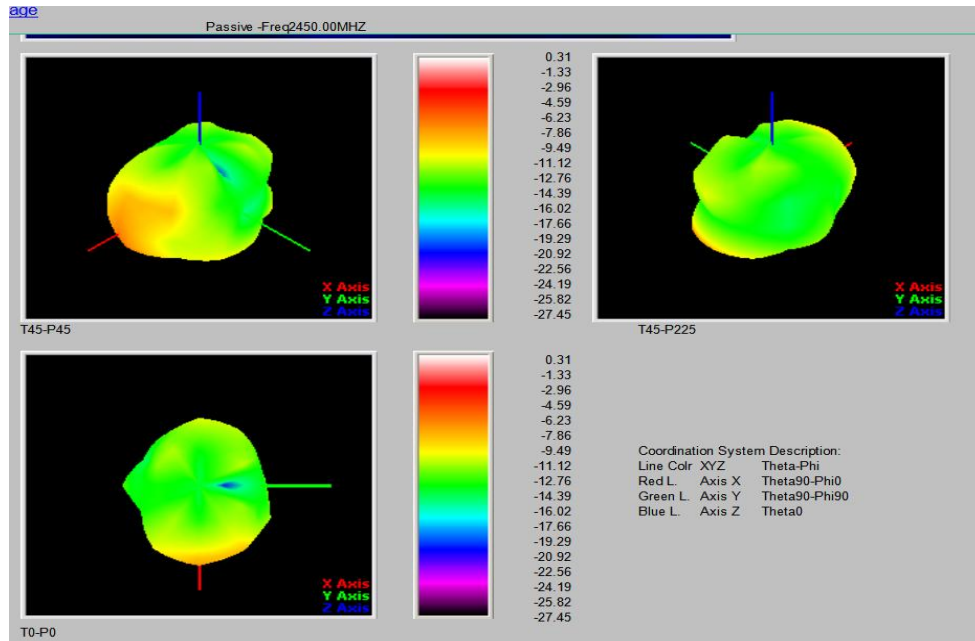
Gain & Efficiency—ANT

Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	20.56%	-2.46
2410	21.19%	-2.35
2420	22.08%	-2.52
2430	24.87%	-1.66
2440	25.45%	-1.78
2450	26.31%	-1.08
2460	25.02%	-1.20
2470	24.76%	-1.66
2480	22.85%	-1.57

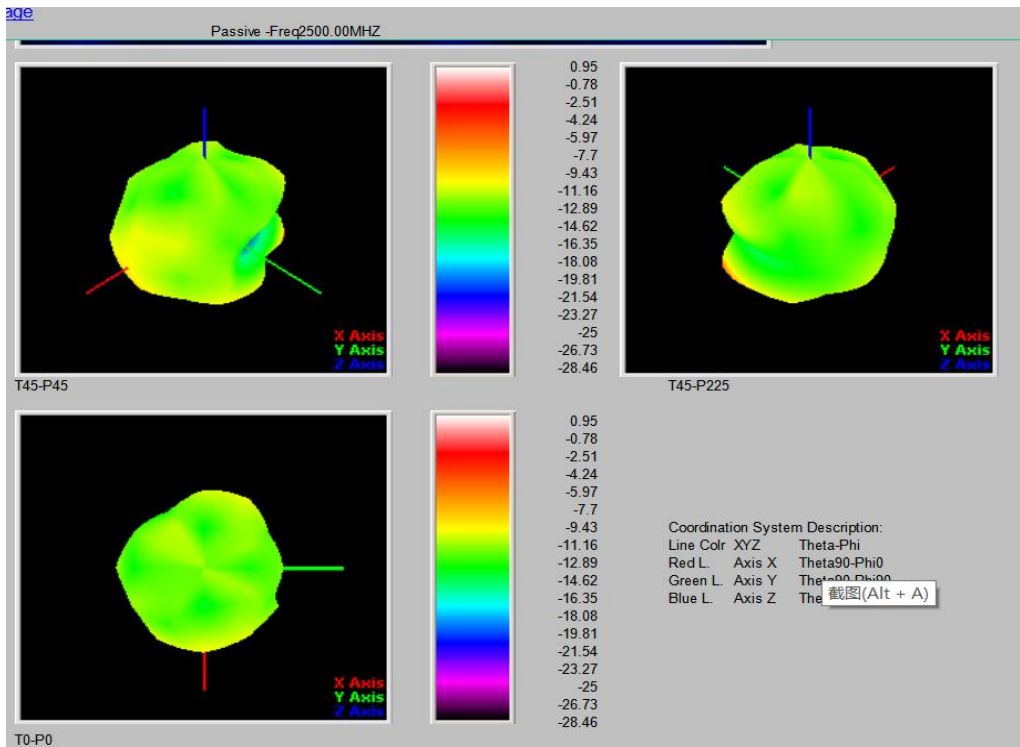
2D Pattern—BT ANT



2D Pattern—BT ANT



2D Pattern—BT ANT



4. Mechanical Specification:

Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing Figure 8

丝印白色亮光, 天线白色亚光

注:

- 1、背胶采用3M 9471 300LSE, 粘性在300MP以上, 背胶外形与基材一致, 覆在基材背面, 背胶禁止剪;
- 2、材料单面版, 半对半基材, 柔性要好;
- 3、产品覆贴后经180°折弯表面无裂痕现象, 柔性要好;
- 4、金手指表面镀金 $\leq 0.5\mu\text{m}$, 不可有氧化现象, 以铜箔相接处, 经180°折弯之后无裂痕, 不导电现象;
- 5、走线及孔精确公差范围: $\pm 0.03\text{mm}$, 外形尺寸公差控制在 0.1mm 以内;
- 6、打 ϕ 号为严格控制尺寸, 标注有 ϕ 后尺寸, 未标注尺寸按GD&S电子图档1:1量取;
- 7、表面印字, 具体内容按位置图;
- 8、所来半裁样, 需要切割好外形之后, 在送样到我司。

No.	Layer	Description (Thickness)	Manufacturer Ref No.
1	背胶	300LSE(12 μm)	九江得米克斯
2	基材	IME-800F NMG3(10 μm)	贝力
3	印油	CU(10) (18 μm)+PT (12.5 μm)	凯耀

第三角法	机种	品名	材料	表面处理
<input checked="" type="checkbox"/>	HT7	HT天线	HT20013-HT	FR3-280471
<input type="checkbox"/>				

日期	类别	何勤文	页码	核准
2022-06-29	设计		1 of 1	
	审核			

深圳合立讯科技有限公司

外形
 镀金区
 线路区
 高阻焊手撕位

V.1
 V.2
 V.3
 V.4
 V.5
 V.6