



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:

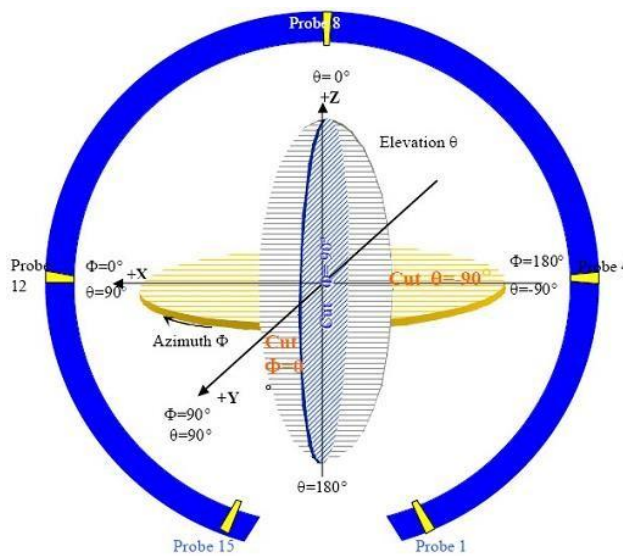


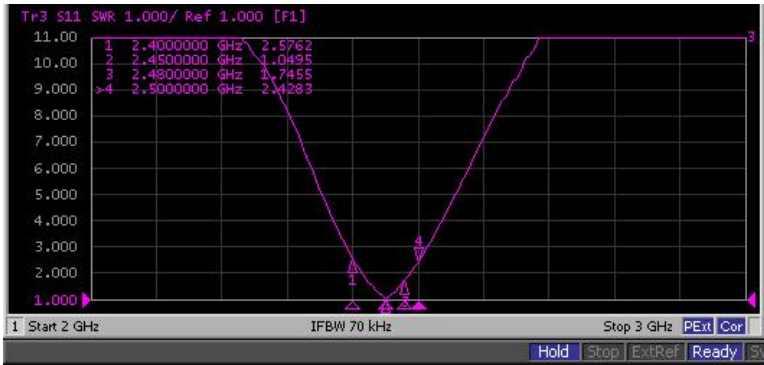
图 4 3D 微波暗室测试坐标系 (back view)

3. Electrical Specification

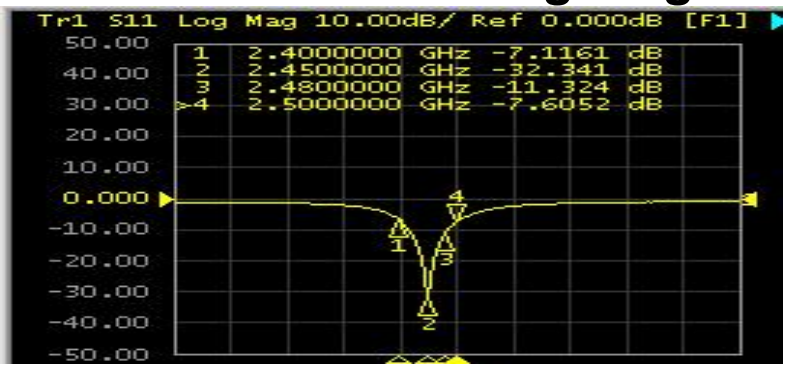
3-2 Passive S11 parameter

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.

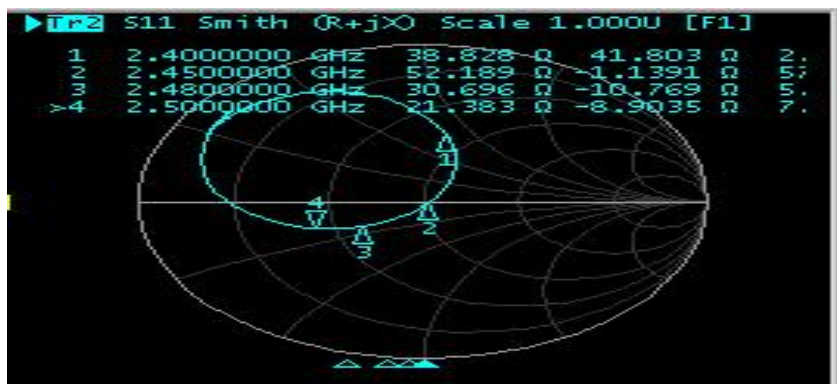
S11 Parameter-VSWR



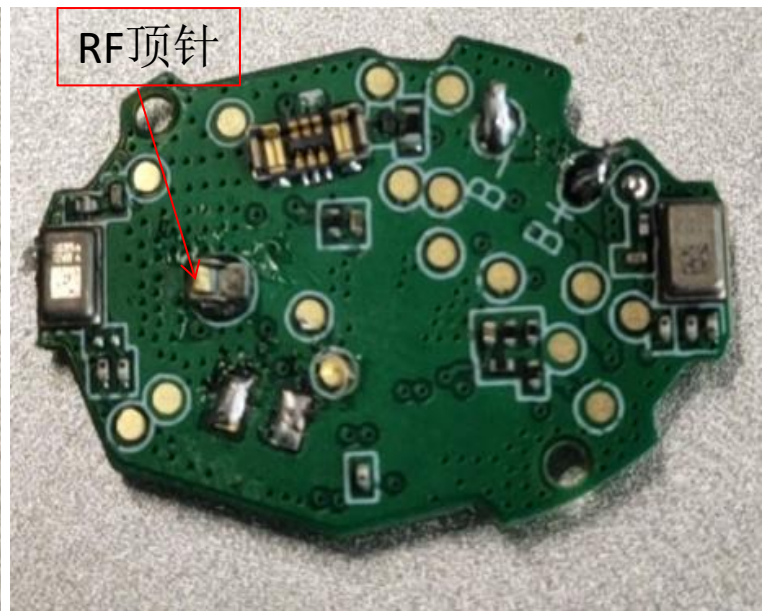
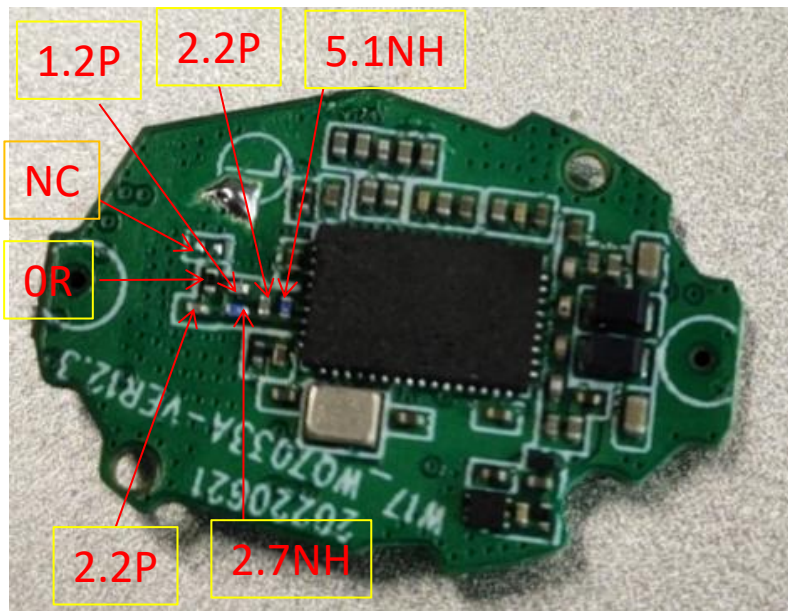
S11 Parameter-Log Mag



S11 Parameter-Smith



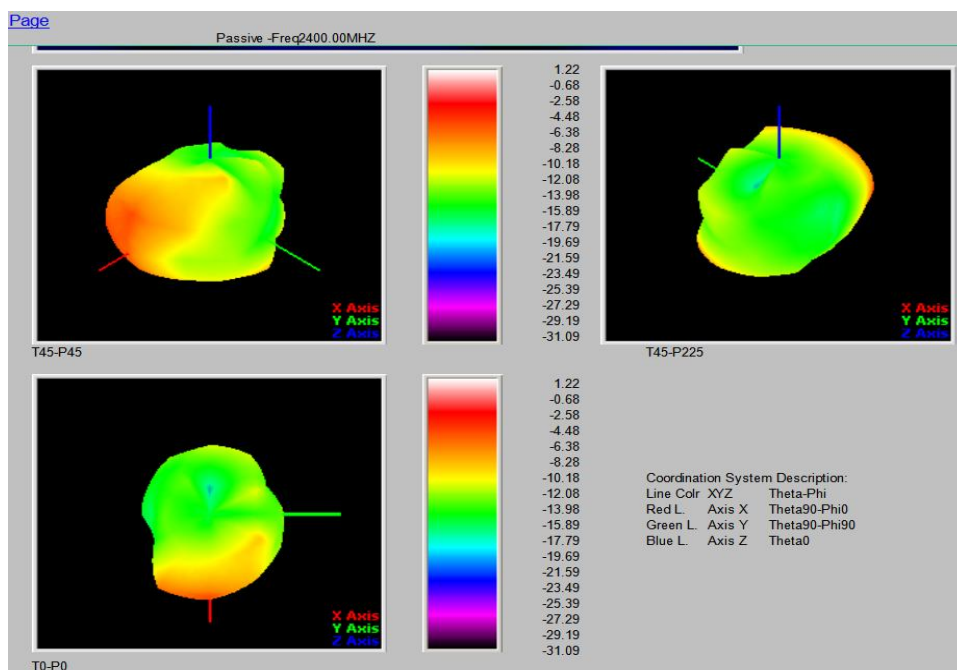
3-3 Antenna Matching Network



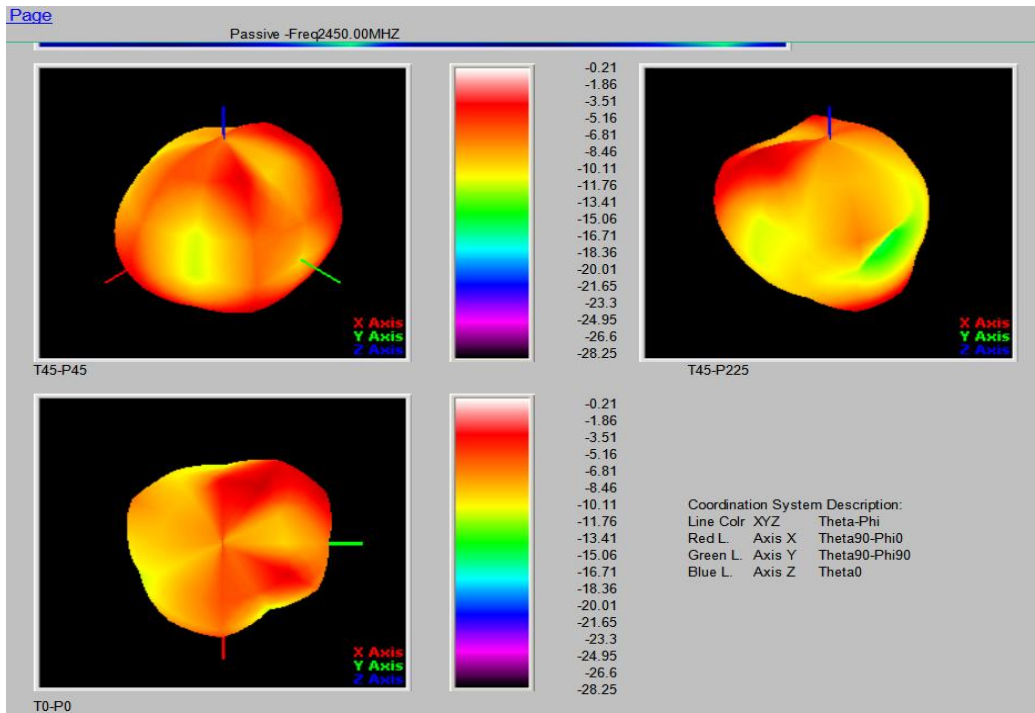
Gain & Efficiency—**ANT**

Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	18.24%	-2.61
2410	22.65%	-2.56
2420	23.96%	-1.35
2430	24.45%	-1.55
2440	25.04%	-1.82
2450	26.59%	-1.94
2460	27.86%	-1.02
2470	24.91%	-2.36
2480	23.22%	-2.33

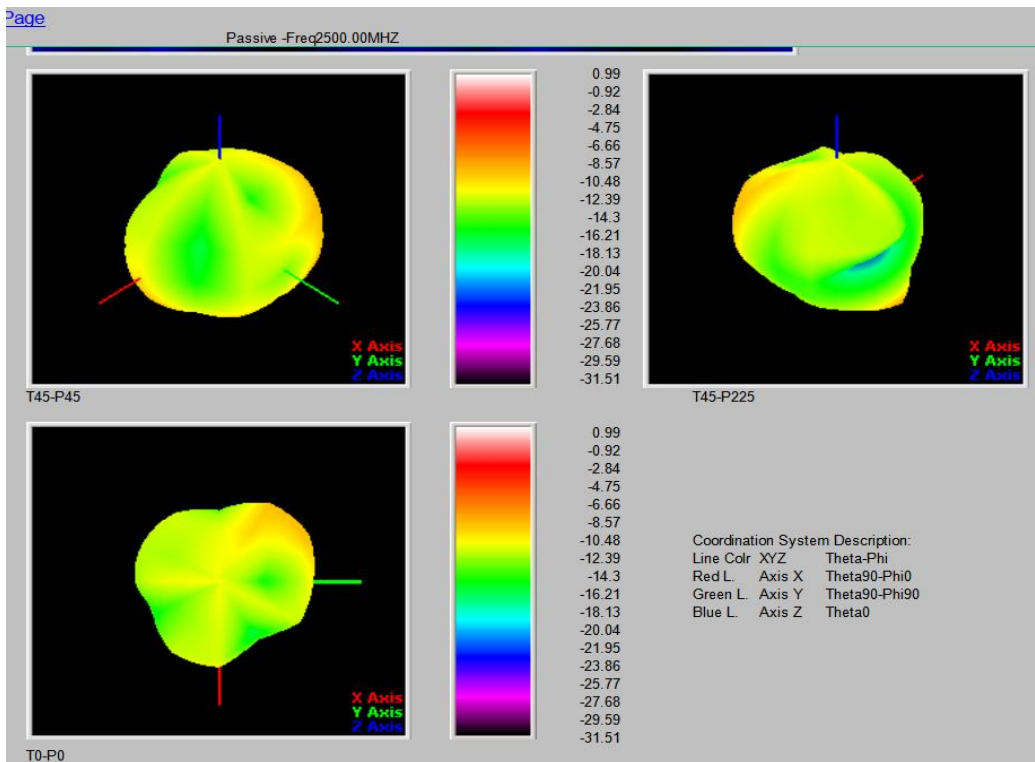
2D Pattern—BT ANT



2D Pattern—BT ANT



2D Pattern—BT ANT

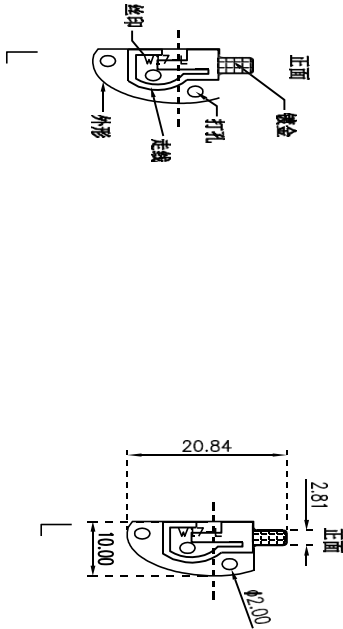


4. Mechanical Specification:

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9471 300LSE, 粘性在3000以上, 背胶外形与基材一致, 覆在基材背面, 背胶做半切;
2. 材料单面胶, 半对半基材, 柔韧性要好;
3. 产品覆油后经180°折弯表面无裂痕现象, 柔韧性要好;
4. 金子指表面镀金0.5um, 不可有氧化现象, 以铜箔接触处, 经180°折弯之后无裂痕, 不导电现象;
5. 走线及孔精度公差范围: ±0.03mm, 外形尺寸公差控制在0.1mm以内;
6. 打点号为严格控制尺寸, 标有标重点尺寸, 未标注尺寸按如电子图档1:1量取;
7. 表面印字, 具体内容及位置见图;
8. 所有非裁样, 需要切割好外形之后, 在送样给我司。

No.	Layer	Description (Thickness)	Manufacturer #P/N
1	背胶	300LSE (2.0um)	九江福来芬斯
2	基材	FR-300F FR-3 (0.1um)	贝力
3	印油	CU(20) (18um)+PI (2.5um)	凯耀

第三角法	位置	表面处理
0~10	±0.10	0.02
10~20	±0.12	0.03
20~40	±0.15	0.02
40~	±0.20	0.04

机种	品名	料号	料质	表面处理	外观处理
W17	RF天线	WJ0013-W17	FR-300F471		

日期	设计	审核
2022-06-29		

单位	比例
	1:1

深圳合立讯科技有限公司