

# 深圳市合拓科技有限公司

## 样品承认书

Sample Approved Sheet

### 合拓（BT0032-V10）承认书

客户名称 广州由我科技股份有限公司

客户机型 BS531Z2L-1

品 牌 合拓自产 HT-BT0032-V10

#### 合拓 判定审核组

制订	审核	批准	承认书完成时间
钟晓鸣	胡雪文	戴庭庭	2023.4.7

#### 由我（客户）判定审核组

承认书编号 \_\_\_\_\_ 承认书提供时间 \_\_\_\_\_

承认	审核	批准	承认日期
评审项目： <input type="checkbox"/> 承认书 4 份 <input type="checkbox"/> 规格书/图纸 <input type="checkbox"/> 检测报告 <input type="checkbox"/> 样品__PCS <input type="checkbox"/> 安规 <input type="checkbox"/> HSF			
评审结果： <input type="checkbox"/> 接受 <input type="checkbox"/> 有条件接受 <input type="checkbox"/> 拒绝			





Antenna picture & assembly picture

## 2. Antenna Test Equipment Introduction

Test of antenna input characteristics using Agilent E5071C and Agilent 5062A vector network analyzer; The radiation pattern of the antenna are tested using the Satimo 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:

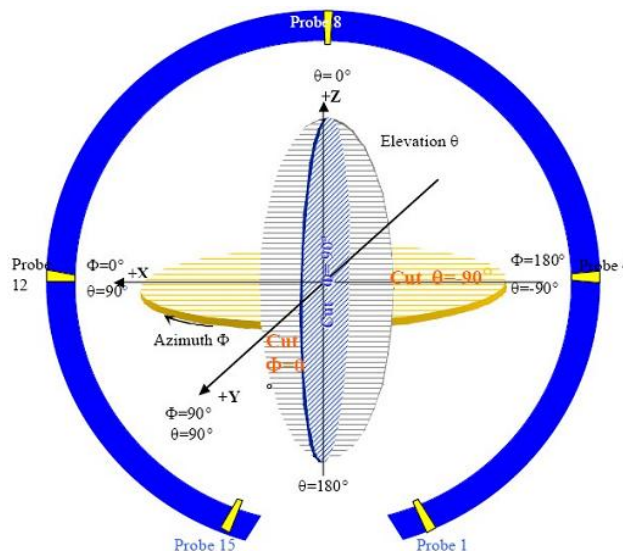


图 4 3D 微波暗室测试坐标系 (back view)

## 3. Electrical Specification

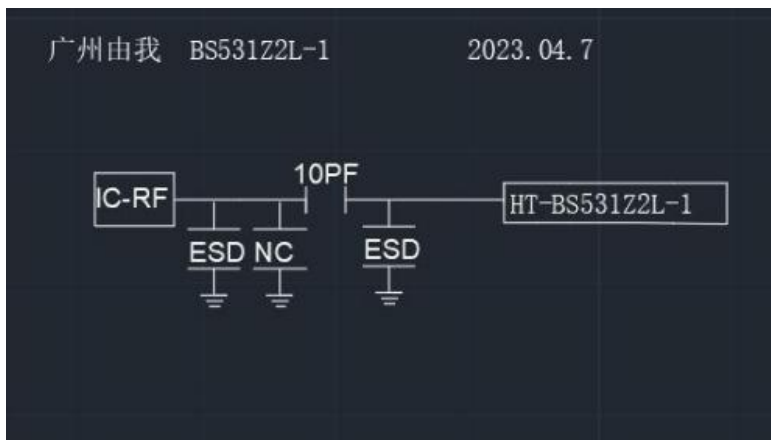
### 3-2 Passive S11 parameter

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.

VSWR



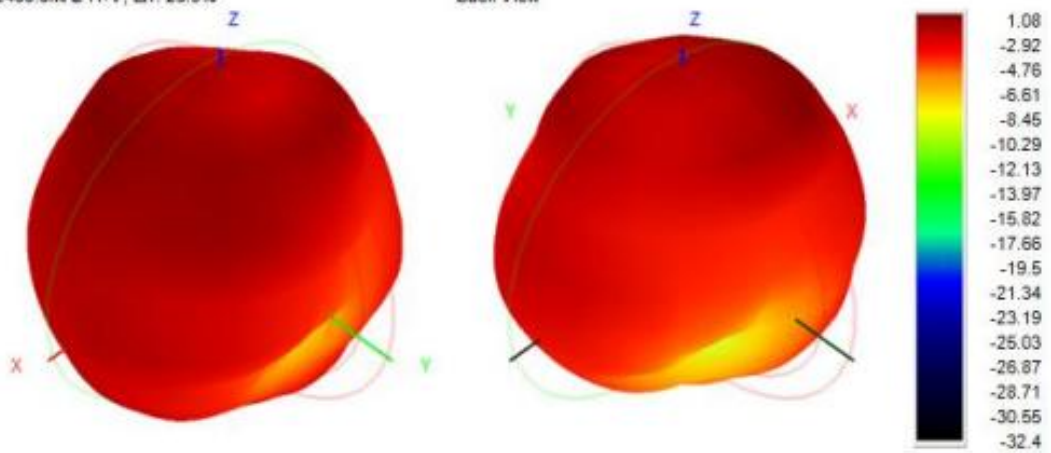
3-3 Antenna Matching Network



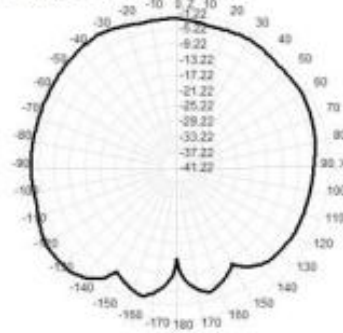
Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	25.87	1.08
2410	27.61	1.32
2420	28.32	1.29
2430	29.67	1.35
2440	31.92	1.43
2450	32.40	1.26
2460	30.91	1.24
2470	29.45	1.31
2480	28.49	1.34
2490	27.18	1.27
2500	26.41	1.38

**2D&3D BT- ANT**

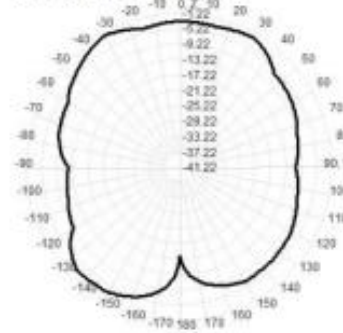
2400.0MHz H+V, Eff: 25.9%



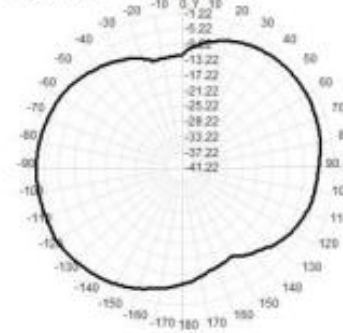
2400.0MHz Total(E1-XZ), Max=-1.22dB



2400.0MHz Total(E2-YZ), Max=-1.83dB

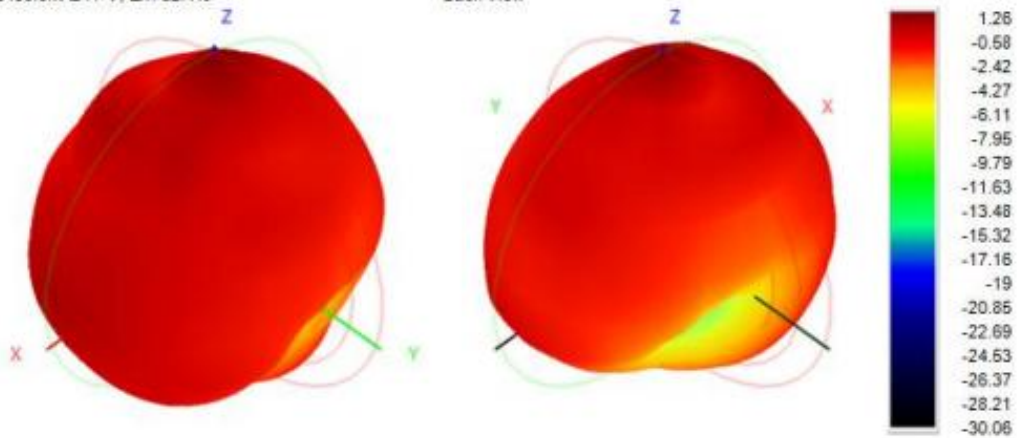


Total(H-XY), Max=-3.21dB, CrD=11.52

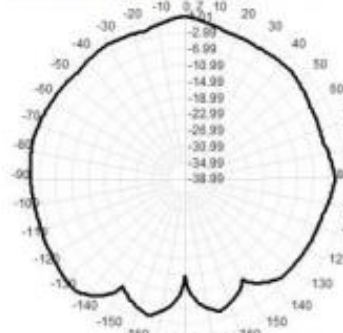


**2D&3D BT- ANT**

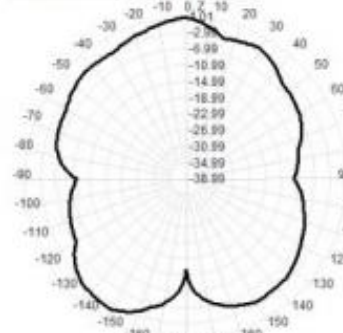
2450.0MHz H+V, Eff: 32.4%



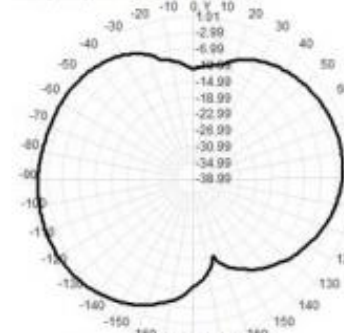
2450.0MHz Total(E1-XZ), Max= 1.01dB

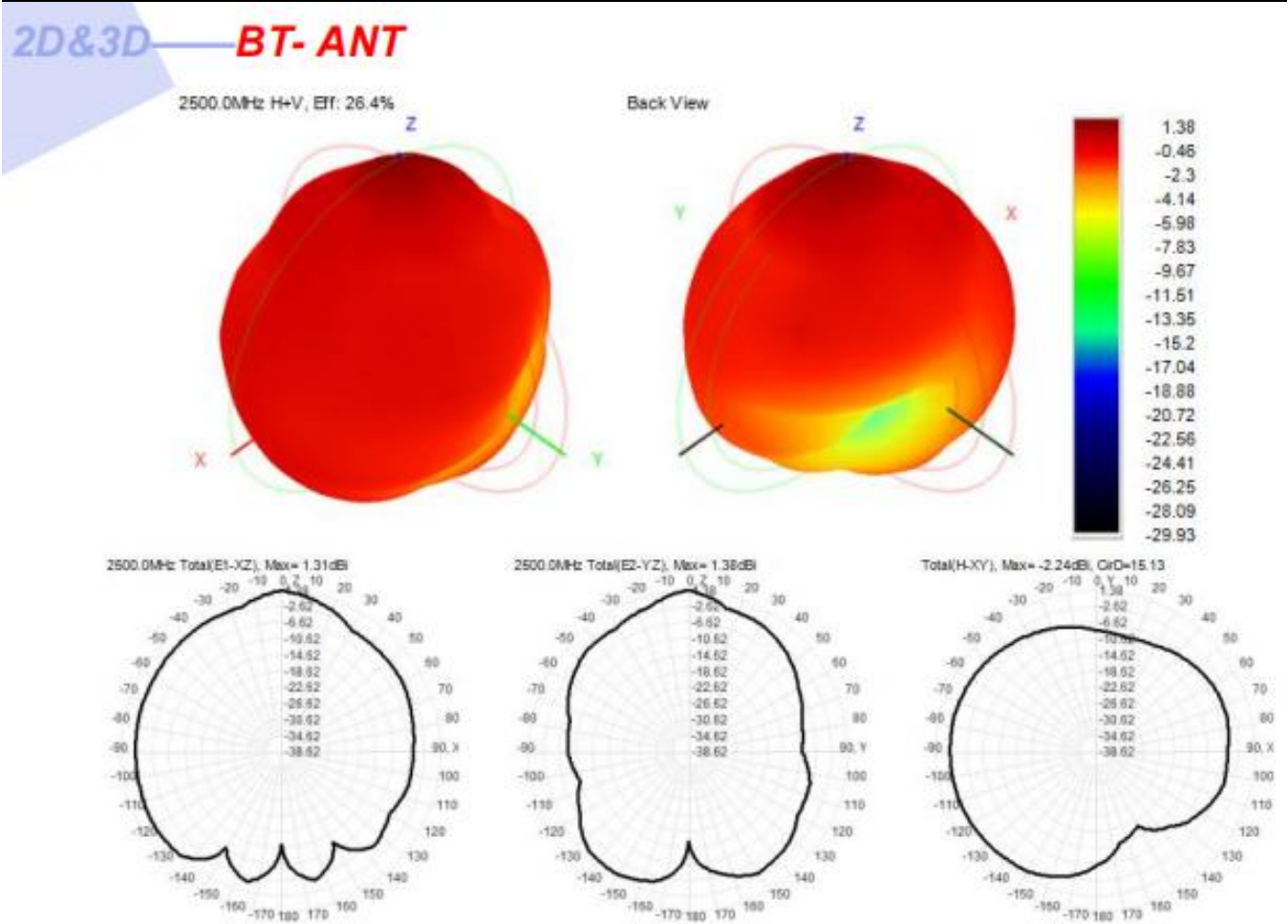


2450.0MHz Total(E2-YZ), Max= 0.76dB



Total(H-XY), Max=-0.55dB, CrD=18.83



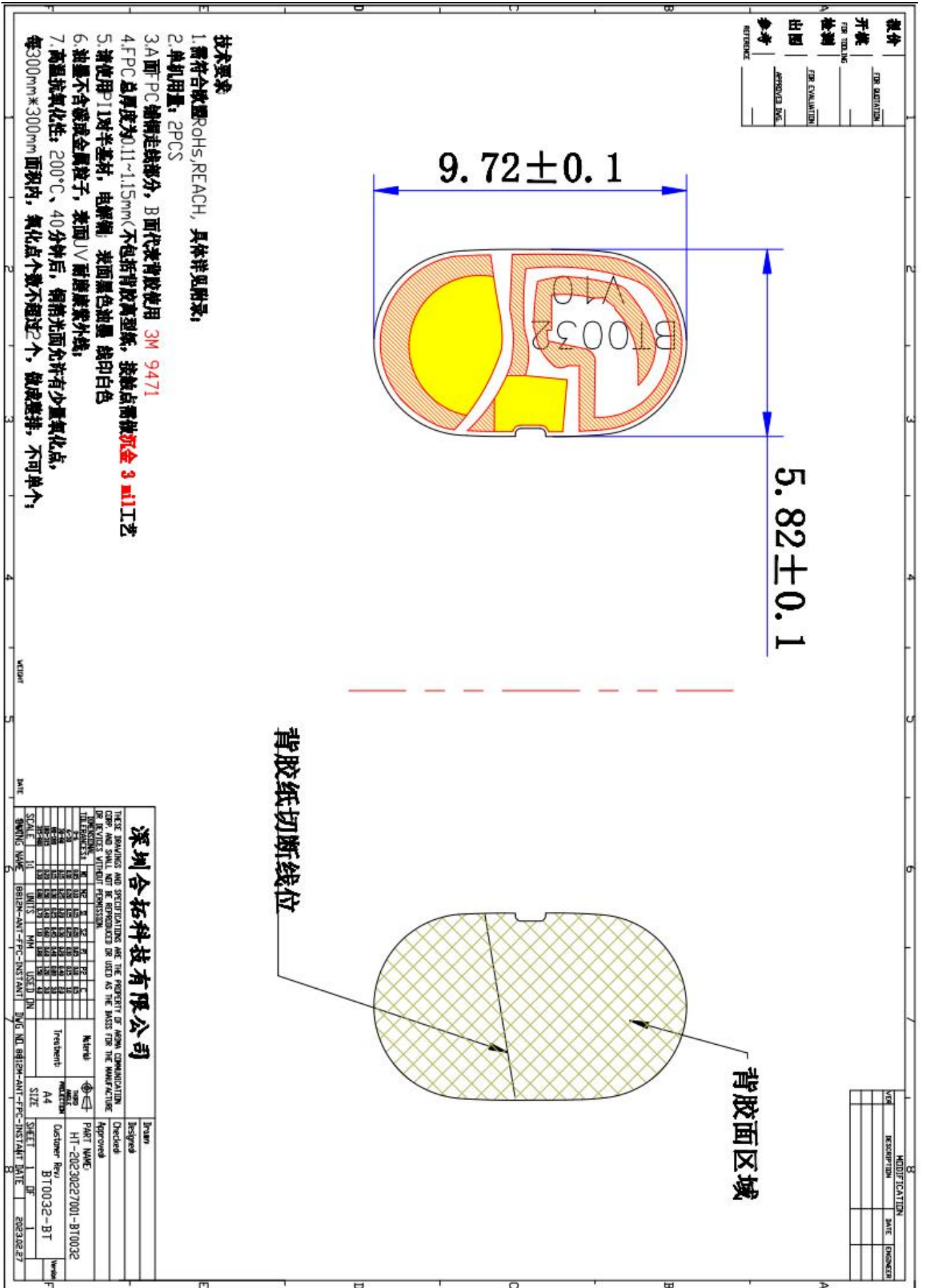


#### 4. Mechanical Specification:

Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing Figure 8





报价	FOR QUOTATION
开模	FOR TOOLING
检测	FOR EVALUATION
出图	APPROVED P&I
参考	REFERENCE

MODIFICATION	
NO.	DATE
DESCRIPTION	ENGINEER

**技术要求**

1. 需符合欧盟ROHS,REACH, 具体详见附录;
2. 单机用量: 2PCS
3. A面:PC 铜箔走线部分, B面代表背胶使用 3M 9471
4. FPC 总厚度为0.11~1.15mm(不包括背胶成型纸, 按触点需做沉金 3 μm工艺)
5. 请使用P11对半基材, 电镀铜, 表面黑色油墨 线印白色
6. 油墨不含重金属离子, 表面UV耐紫外线;
7. 高温抗氧化性: 200°C、40分钟后, 铜箔表面允许有少量氧化点, 每300mm\*300mm 面积内, 氧化点个数不超过2个, 做成竖排, 不可单个;

**深圳合拓科技有限公司**

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PART NAME: H1-20230227001-B10032		Approved	Customer Rev: B10032-BT
DATE	SCALE	SHEET	OF
2023.02.27	1:1	1	1