

R1300A **Antenna Test Report**

Customer	芯中芯
Project	R1300A
Antenna Revision	A1
Product Description	
Product No	
DATE	2023. 06. 19

# ***Product Overview & Dimension***

**Front**



# Purpose

This report is to measure the performance of BT antenna for **R1300A**. The antenna operating frequency at **2.4~2.5GHz**, All test data are showed as below.

## ***Content***

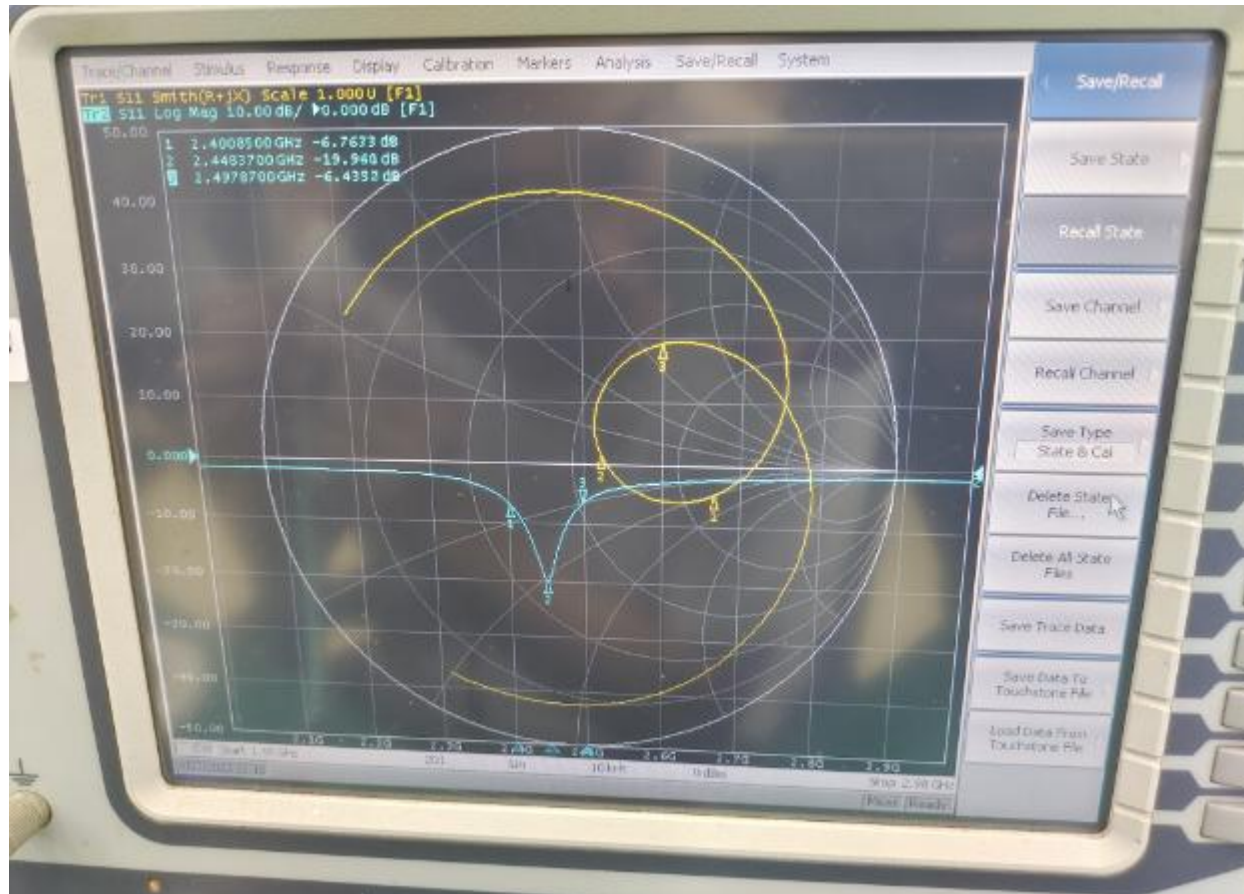
1. Product Overview & Dimension
2. Test system
3. Antenna Matching Network
4. Test Result
  - 4.1 S11 Parameter
  - 4.2 Test coordinate
  - 4.3 2D Pattern
  - 4.4 OTA Data
  - 4.5 BT Boot measured
  - 4.6 Antenna schematic diagram
5. Antenna Assembly & environmental processing

## 2. Test System

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5062A
OTA Test	TRP&TIS	CMW500 & CMW270 ETS&SATIMO
Gain & Efficiency	Gain & Efficiency	ETS&SATIMO Agilent 5071C



## S11—(BT ANT)

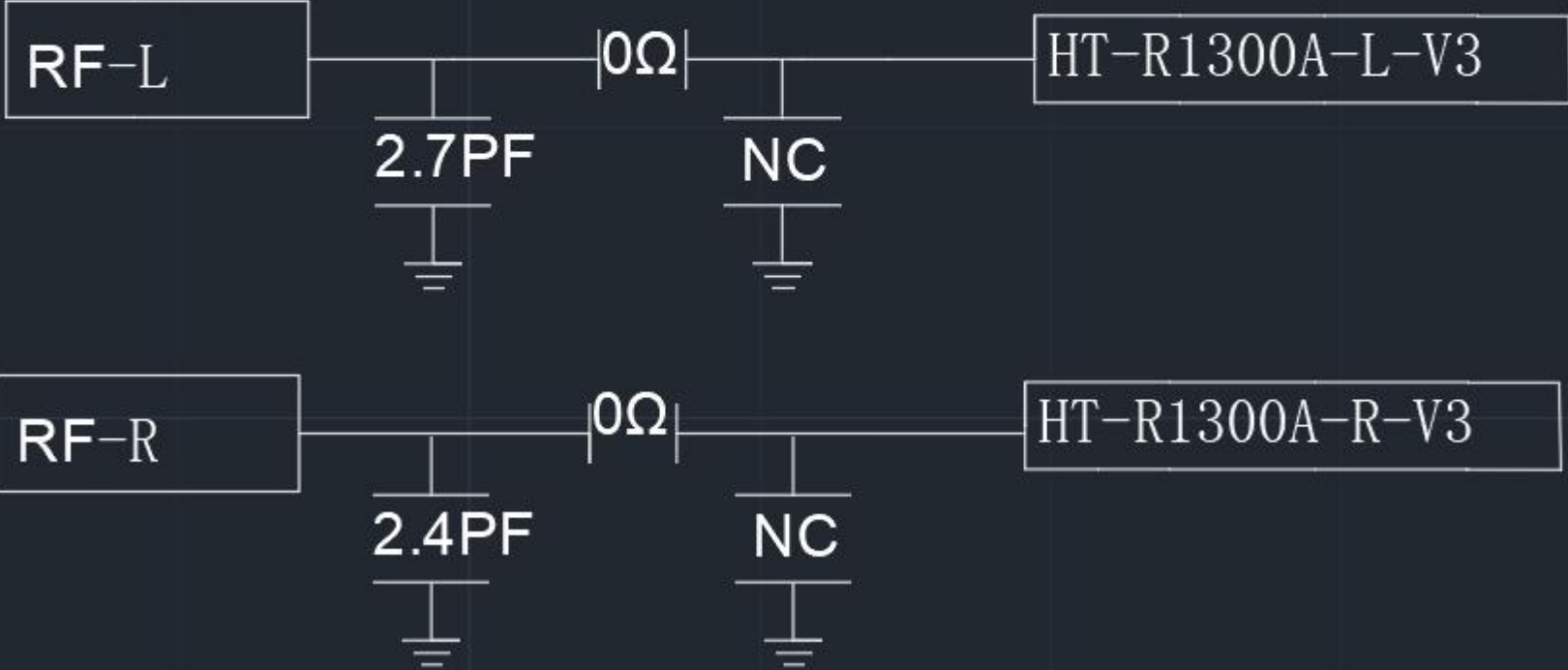


(L-R)

芯中芯

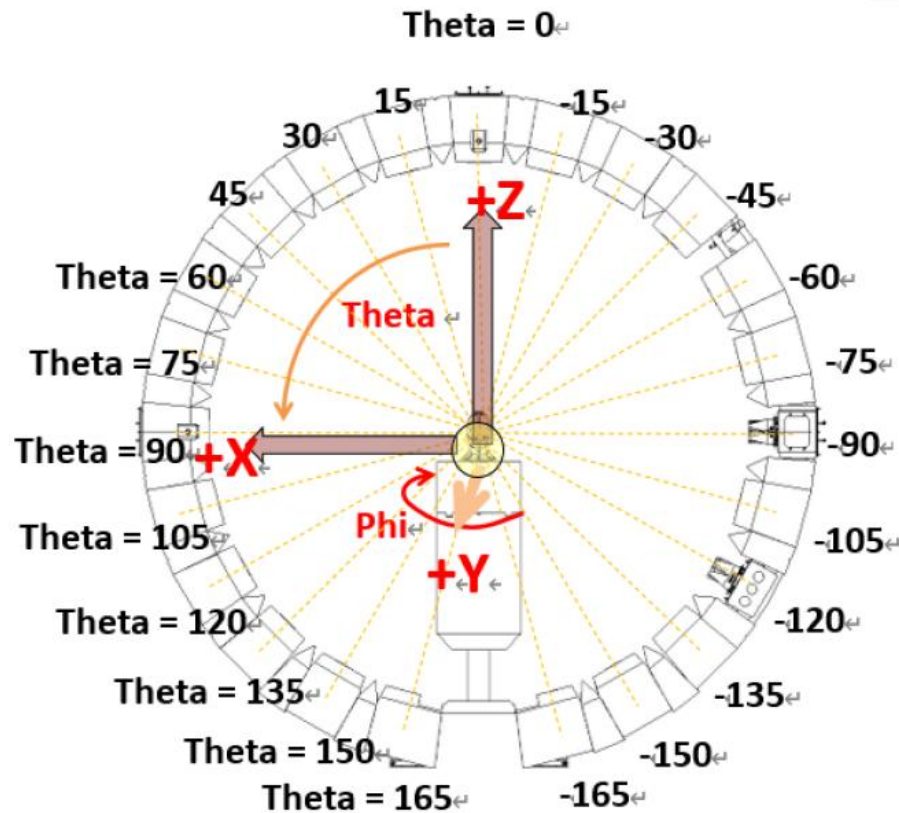
R1300A

2023.05.16



# Test Result

## Sample status & coordinates



# Test Result

Gain & Efficiency—**BT- ANT(L/R)**

Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	20.77	-1.28
2410	20.81	-1.31
2420	20.50	-1.08
2430	20.47	-1.04
2440	19.60	-1.25
2450	19.18	-1.23
2460	18.45	-1.52
2470	17.76	-1.78
2480	16.03	-2.12
2490	15.66	-2.23
2500	15.05	-2.57

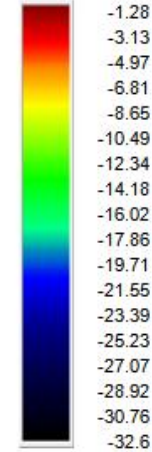
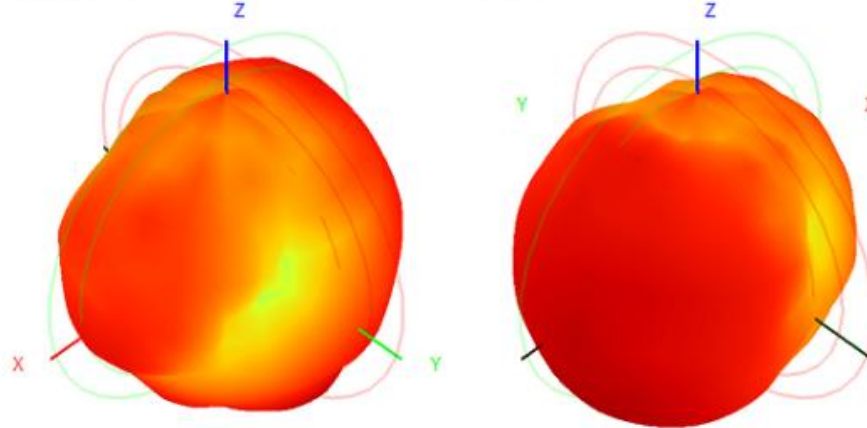


# Test Result

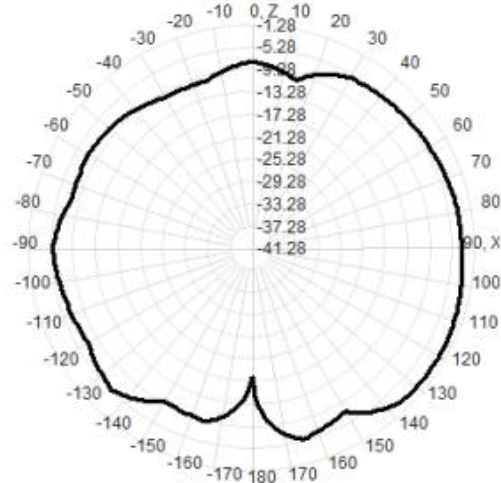
2D&3D — BT-ANT

2400.0MHz H+V, Eff: 20.8%

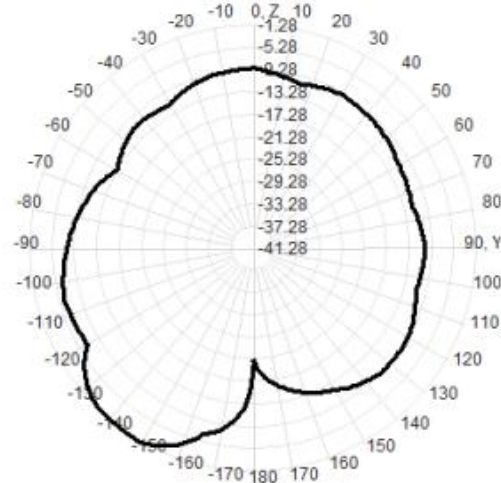
Back View



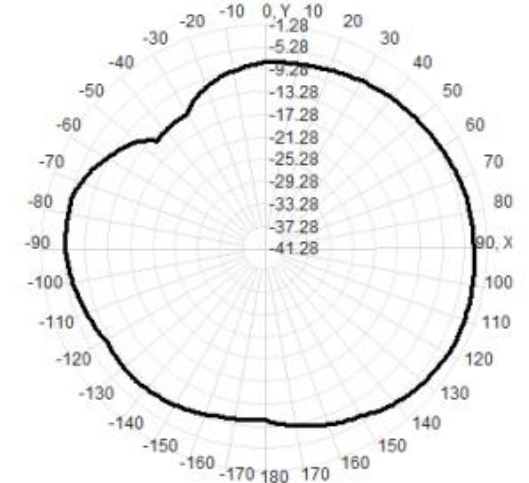
2400.0MHz Total(E1-XZ), Max=-2.71dBi



2400.0MHz Total(E2-YZ), Max=-1.28dBi



Total(H-XY), Max=-3.38dBi, CirD=10.65

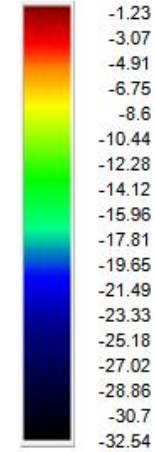
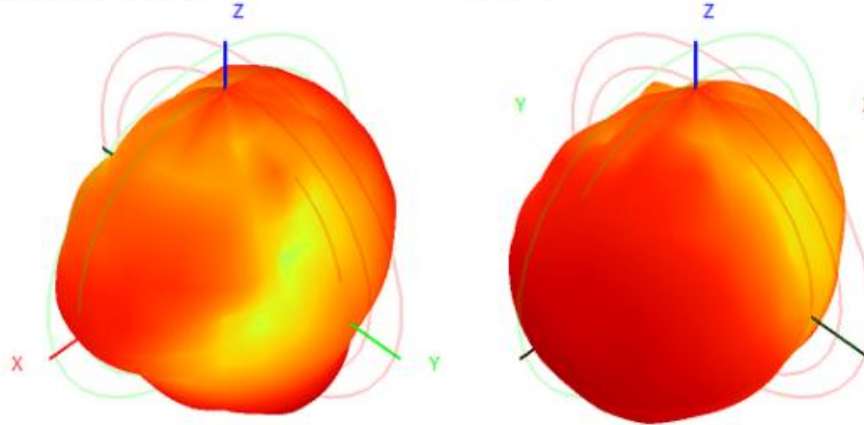


# Test Result

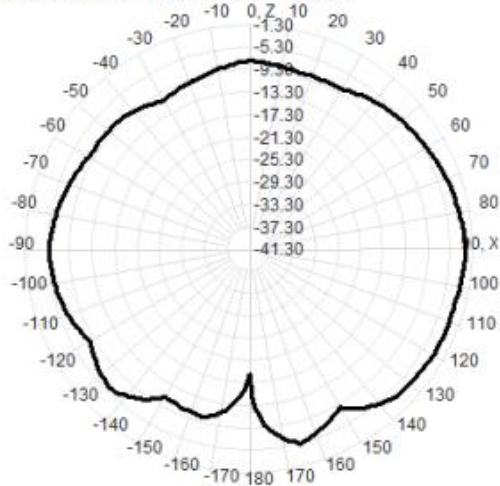
2D&3D — BT-ANT

2450.0MHz H+V, Eff: 19.2%

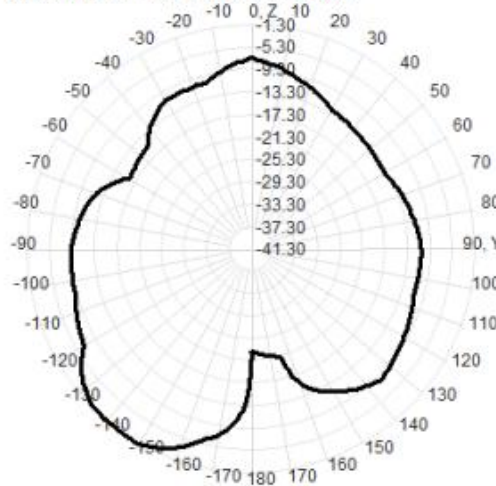
Back View



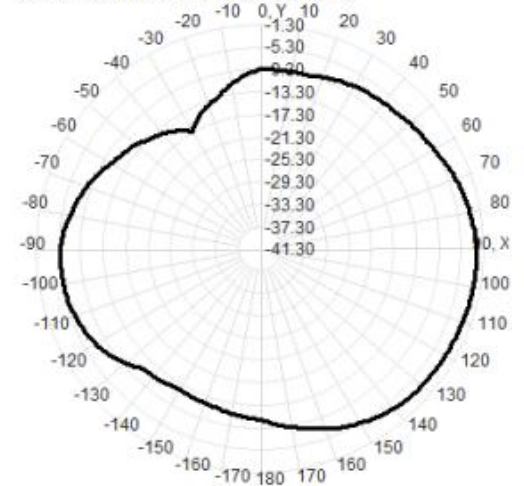
2450.0MHz Total(E1-XZ), Max=-2.80dBi



2450.0MHz Total(E2-YZ), Max=-1.30dBi



Total(H-XY), Max=-2.80dBi, CirD=14.31

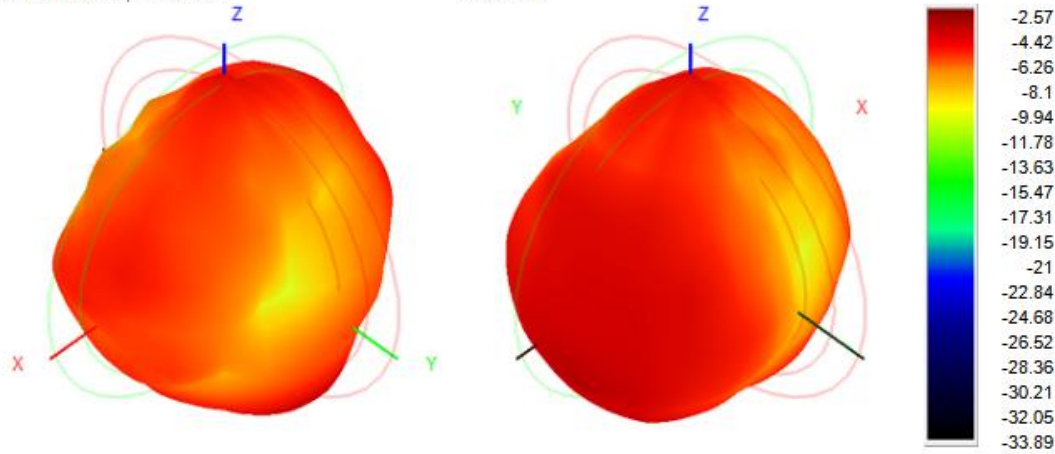


# Test Result

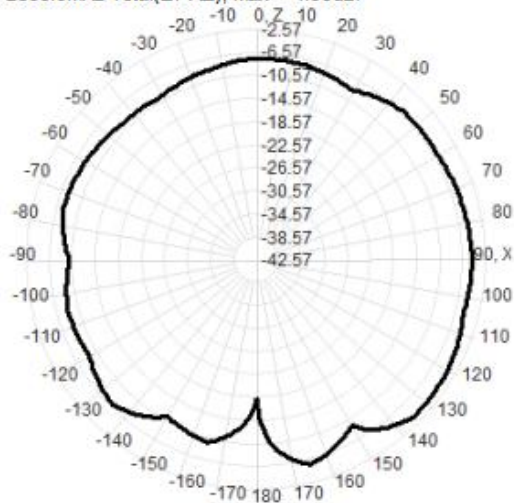
2D&3D — BT-ANT

2500.0MHz H+V, Eff: 15.0%

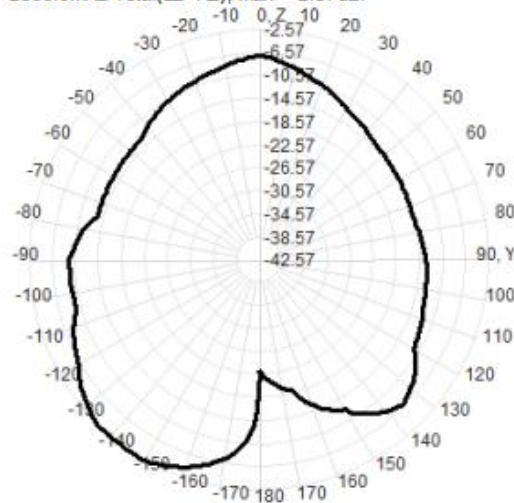
Back View



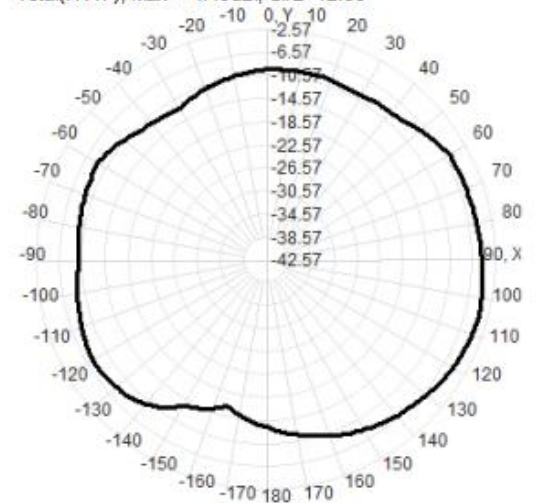
2500.0MHz Total(E1-XZ), Max=-4.06dBi



2500.0MHz Total(E2-YZ), Max=-2.57dBi



Total(H-XY), Max=-4.48dBi, CirD=12.06



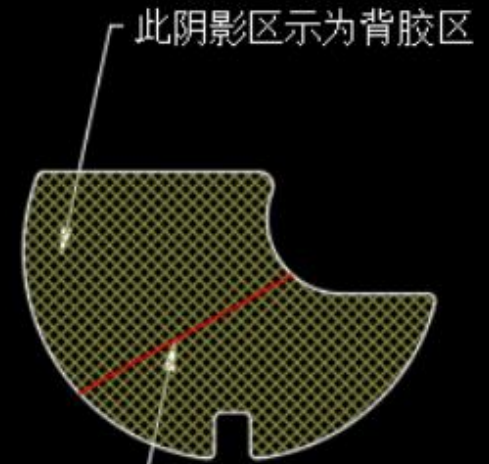
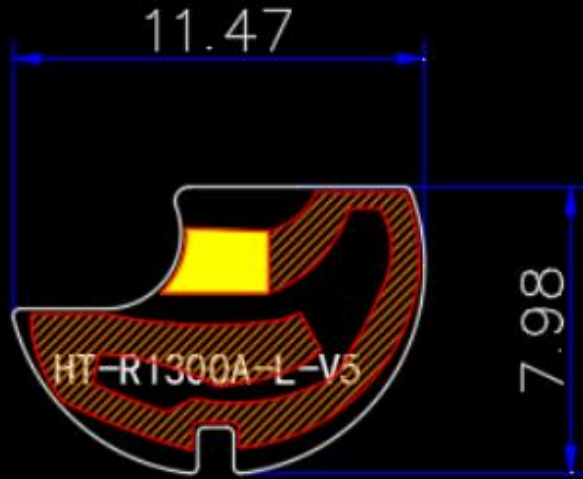
## OTA DATA(L-R)

L

Test Equipment:	R&S CMW500			
Test Condition:	3D chamber			
Band	Wireless Protocol	Channel	TRP(dBm)	TIS(dBm)
BT		0	3.93	-85.39
		39	3.45	-84.80
		78	3.44	-84.76

R

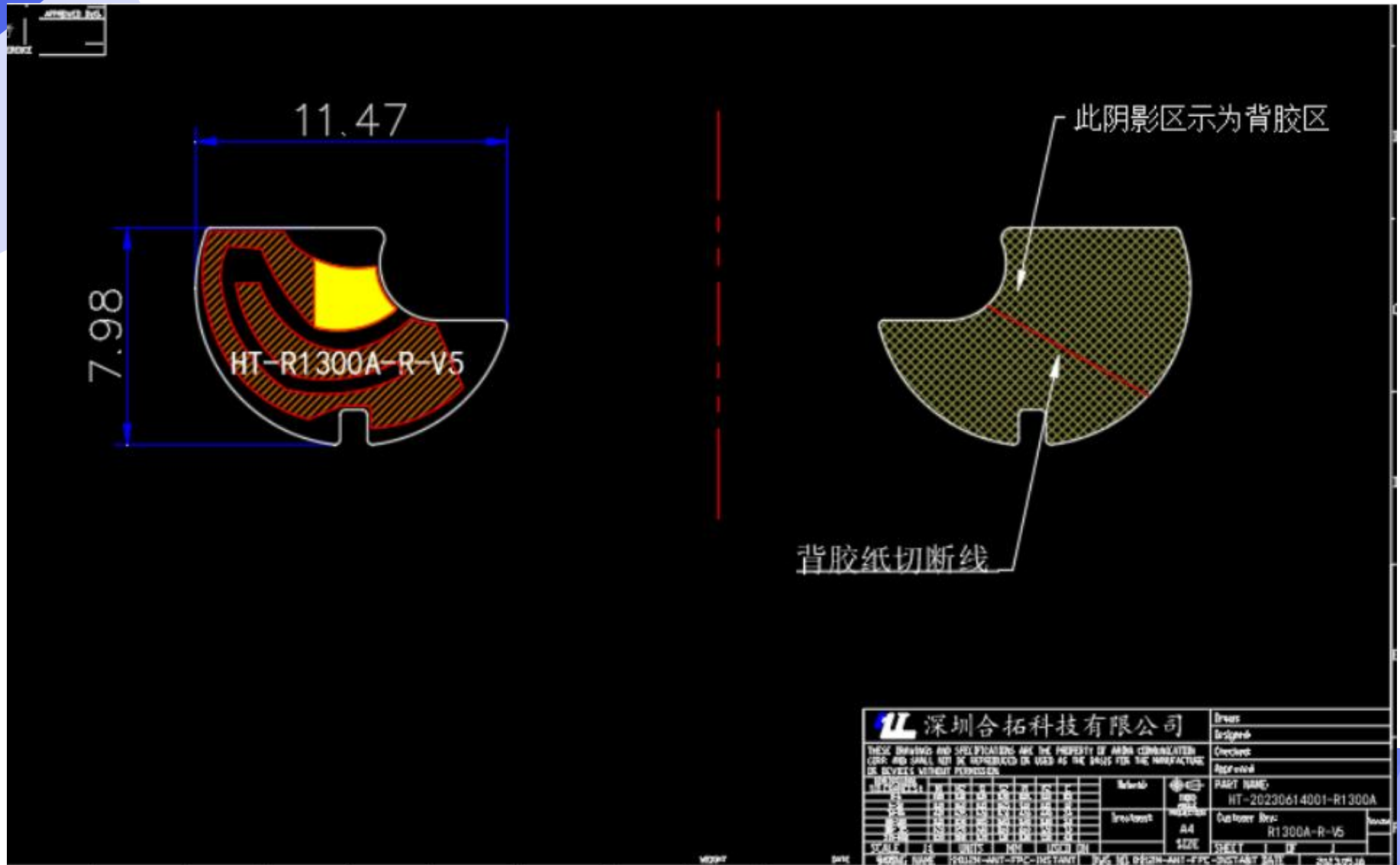
Test Equipment:	R&S CMW500			
Test Condition:	3D chamber			
Band	Wireless Protocol	Channel	TRP(dBm)	TIS(dBm)
BT		0	2.11	-85.06
		39	2.86	-84.71
		78	2.44	-84.47



技术要求

- 1.需符合欧盟RoHs,REACH, 具体详见附件;
- 2.单机用量: 1 PCS
- 3.A面FPC 铜箔走线部分, 线路曝光工艺 B面代表 3M 9471 胶基部分;
- 4.FPC 总厚度为0.11~1.15mm(不包括背胶离型纸, 接触点及焊盘需做沉金工艺)
- 5.请使用PII对李基材, 电解铜 表面黑色油墨 丝印白色字符
- 6.油墨不含汞或金属粒子, 表面JV 耐磨擦紫外线;
- 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, 如200mmx200mm 面积中, 氧化点个数不超过10个, 每点直径< 0.1mm

<b>深圳合拓科技有限公司</b>		Draft Design Checked Approved
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF AERIAL COMMUNICATIONS CORP. AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR REVISIONS WITHOUT PERMISSION.		PART NAME: HT-20230614001-R1300A
DATE: 2023.06.14 DESIGNED BY: [Name] CHECKED BY: [Name] APPROVED BY: [Name]	DATE: [Date] DRAWN BY: [Name] CHECKED BY: [Name] APPROVED BY: [Name]	CUSTOMER NO: R1300A-L-V5



 <b>深圳合拓科技有限公司</b>										Drawn: Designer:																									
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF ANHAI COMMUNICATION CORP. AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OF DEVICES WITHOUT PERMISSION.												Checked: Approved:																							
<table border="1"> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHK</th> <th>APP</th> <th>REVISION</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHK</th> <th>APP</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>										REV	DATE	DESCRIPTION	BY	CHK	APP	REVISION	DATE	DESCRIPTION	BY	CHK	APP													PART NAME: HT-20230614001-R1300A	
REV	DATE	DESCRIPTION	BY	CHK	APP	REVISION	DATE	DESCRIPTION	BY	CHK	APP																								
SCALE: 1:1 UNIT: mm TITLE: FROTH-ANTI-FPC-INSTANT										Customer Des: R1300A-R-V5																									
SHEET: 1 OF 1										SHEET: 1 OF 1																									