



Antenna Part Specification

Project name:	TWS-2029 (Sunflower)
Material category:	BT antenna
Version:	V3.0
Date:	2023.08.02
Supplier:	Shenzhen Cicent Communication Technology Co., Ltd.
Supplier Address:	505-506 ,ABlock,Donglian Building,Chuangye 2 road,Baoan District,Shenzhen,Guangdong,P.R china



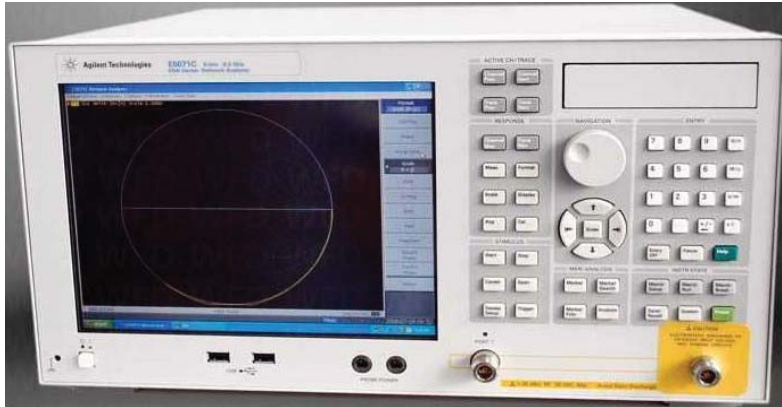
Contents

I: The report of passive data 3
 II: 3D Active test report of antenna..... 8
 III: Matching circuit 9
 IV: Environmental treatment..... 10
 V: Structure file: 12

Change record			
Compile / change date	Reason for change	Changed content	Version
2022.12.06	first edition	first edition	V1.0
2023.04.12	Antenna optimization	Antenna optimization	V2.0
2023.08.02	Antenna optimization	Change appearance	V3.0



I: The report of passive data



Angilent E5071C

VSWR parameter (L) :

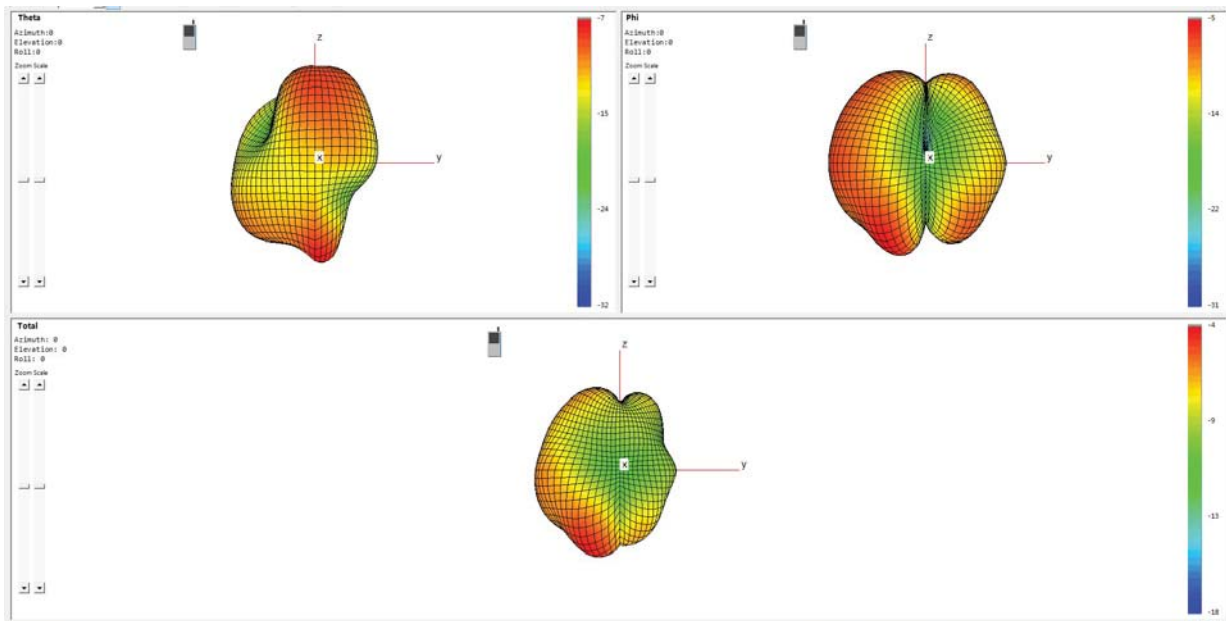




Efficiency:

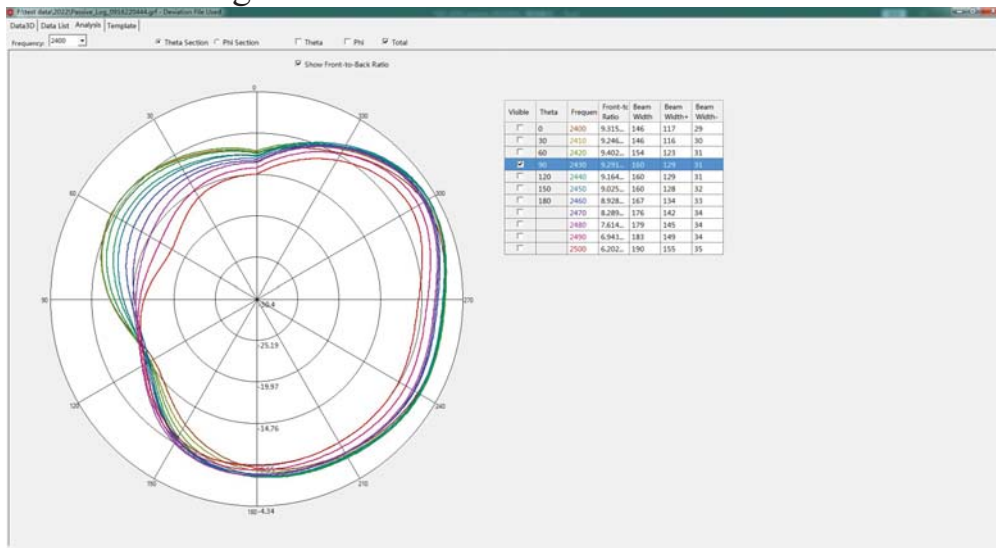
L			
Frequency (MHz)	Efficiency	Gain (dBi)	Efficiency (dB)
2400	10.3%	-6.1	-9.9
2410	11.6%	-5.6	-9.3
2420	12.8%	-5.1	-8.9
2430	12.6%	-5.2	-9.0
2440	12.7%	-5.3	-9.0
2450	12.6%	-5.4	-9.0
2460	12.3%	-5.6	-9.1
2470	11.7%	-5.8	-9.3
2480	10.4%	-6.3	-9.8
Average value	11.9%	-5.6	-9.3

3D Antenna radiation pattern:

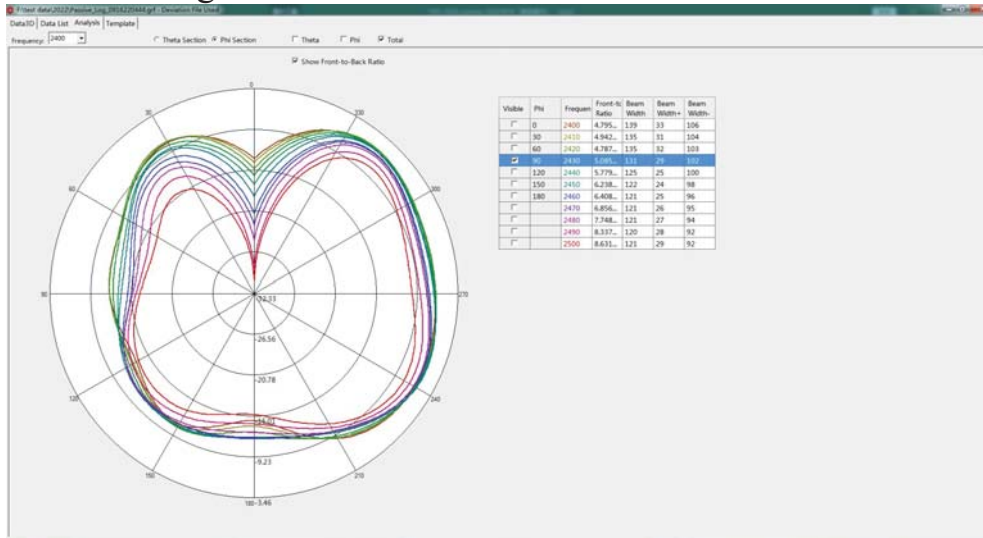




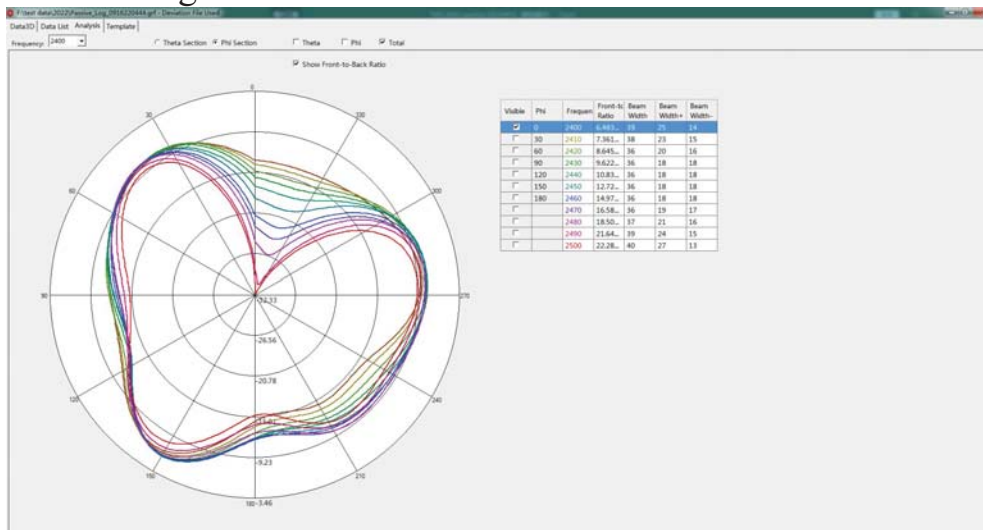
Antenna radiation pattern: Theta=90.00deg



Phi=90.00deg



Phi=0.00deg





VSWR parameter (R) :

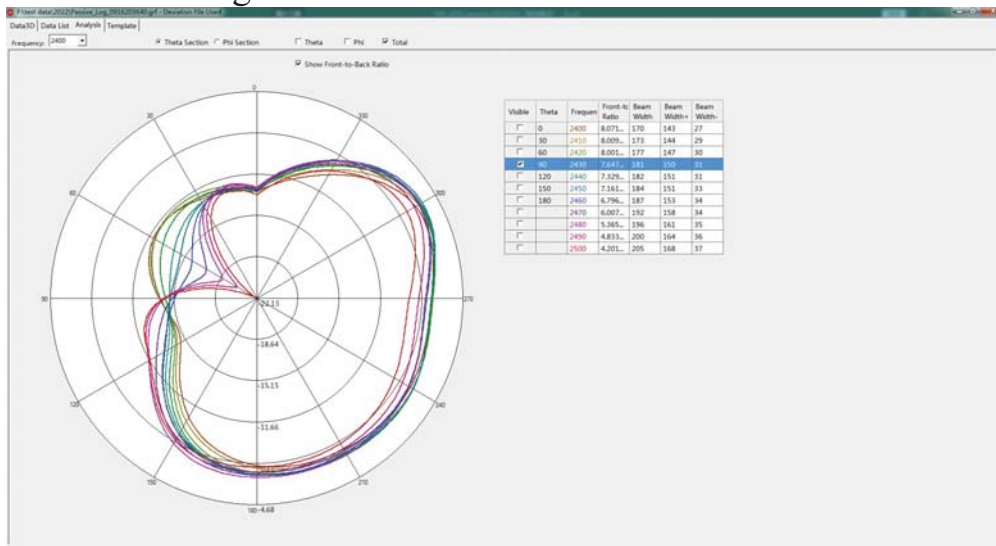


Efficiency:

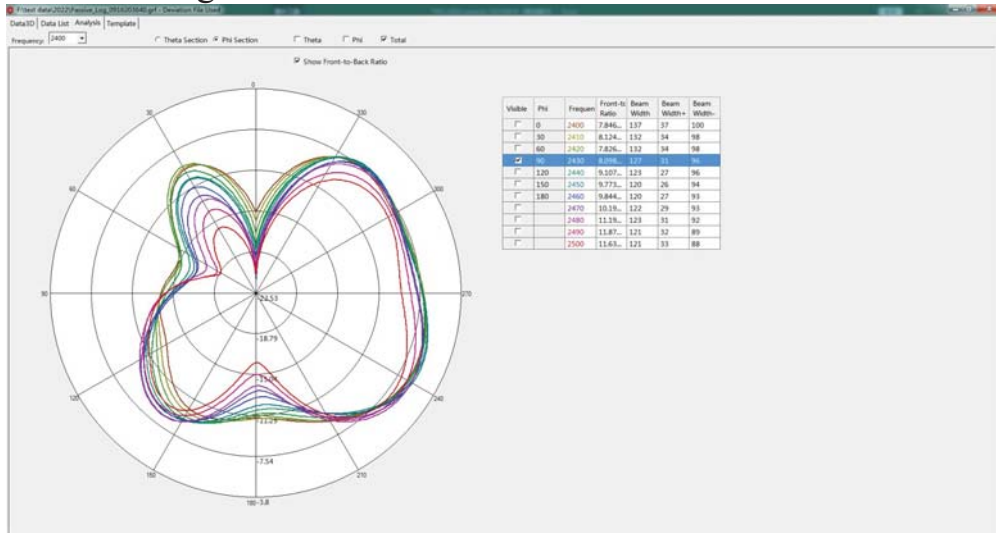
R			
Frequency (MHz)	Efficiency	Gain (dBi)	Efficiency (dB)
2400	14.6%	-5.0	-8.4
2410	15.1%	-4.6	-8.2
2420	14.7%	-4.6	-8.3
2430	14.3%	-4.6	-8.5
2440	14.5%	-4.4	-8.4
2450	13.9%	-4.5	-8.6
2460	14.4%	-4.3	-8.4
2470	14.9%	-4.0	-8.3
2480	14.0%	-4.3	-8.6
Average value	14.5%	-4.5	-8.4



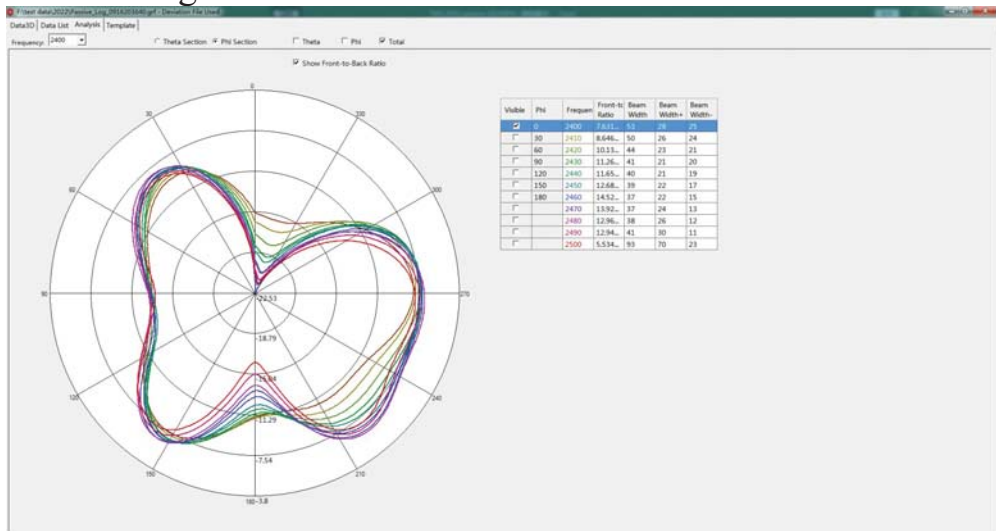
Antenna radiation pattern: Theta=90.00deg



Phi=90.00deg

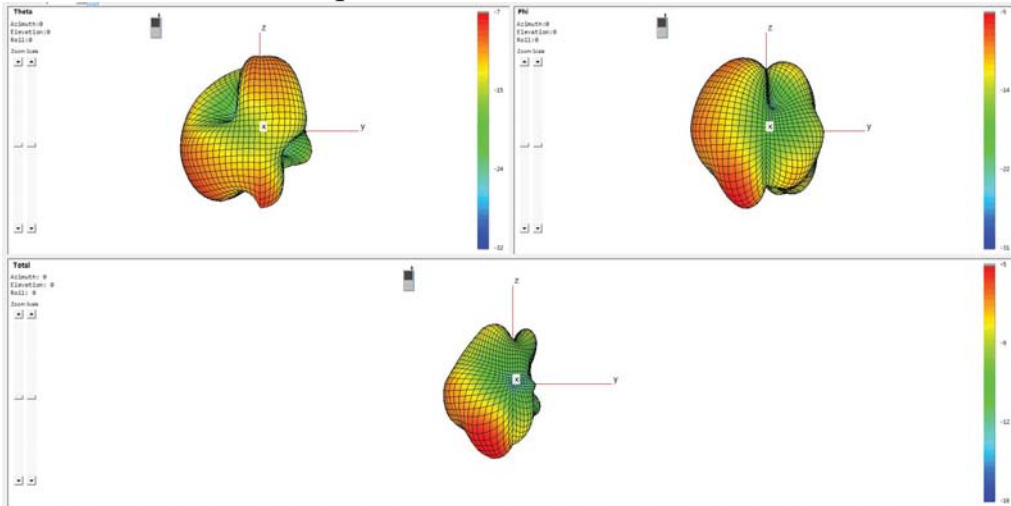


Phi=0.00deg





3D Antenna radiation pattern:



II: 3D Active test report of antenna

free	Channel	TRP (dBm)	TIS (dBm)
L	CH 0	-1.2	-83.4
	CH 39	1.7	-83.7
	CH 78	2.7	-84.2

headform	Channel	TRP (dBm)	TIS (dBm)
L	CH 0	-5.4	-77.9
	CH 39	-4.5	-78.0
	CH 78	-6.6	-77.0

free	Channel	TRP (dBm)	TIS (dBm)
R	CH 0	3.6	-85.7
	CH 39	4.5	-86.2
	CH 78	3.0	-84.3

headform	Channel	TRP (dBm)	TIS (dBm)
R	CH 0	-4.9	-78.3
	CH 39	-4.0	-79.2
	CH 78	-6.1	-77.3



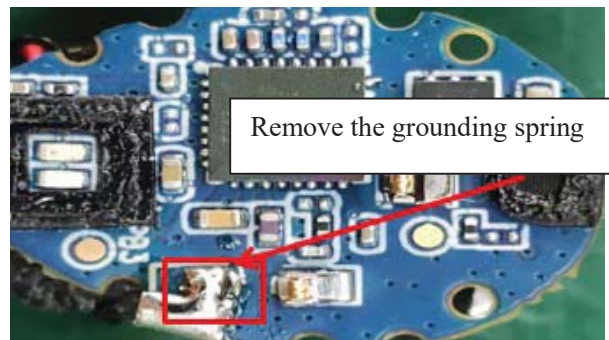
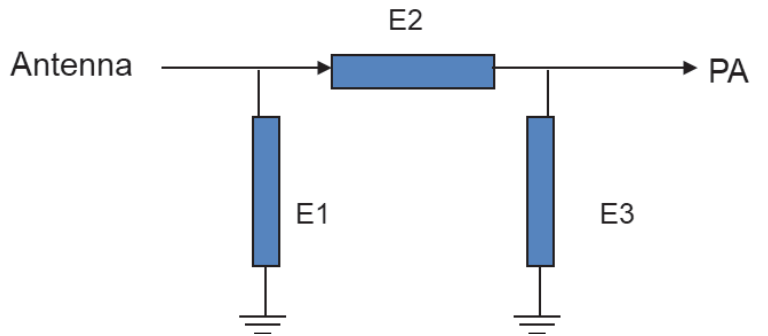
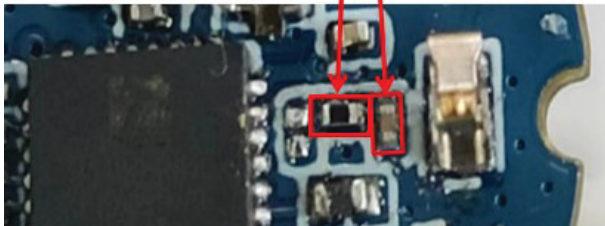
OTA Standard Chamber



III: Matching circuit

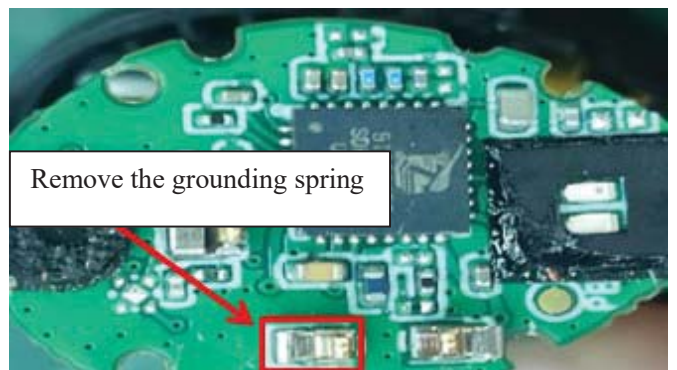
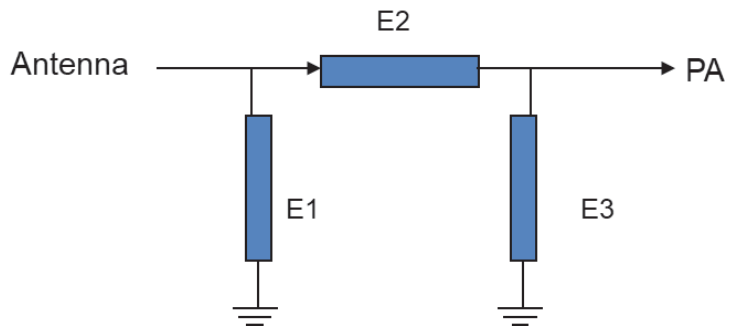
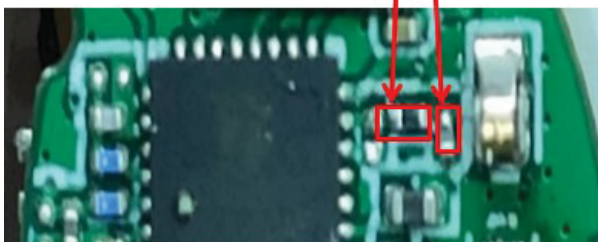
Left:

L	
Element	Value
E1(0201)	2.7pF
E2(0201)	10PF
E3(0201)	N/A



Right:

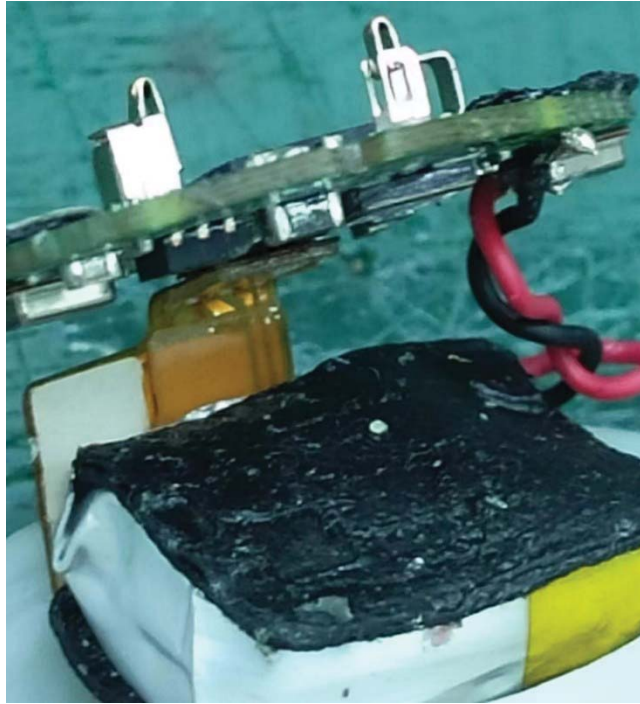
R	
Element	Value
E1(0201)	2.7pF
E2(0201)	10PF
E3(0201)	N/A





IV: Environmental treatment

- 1、 Twist the battery cable for 3-4 turns and place it in the direction of the speaker

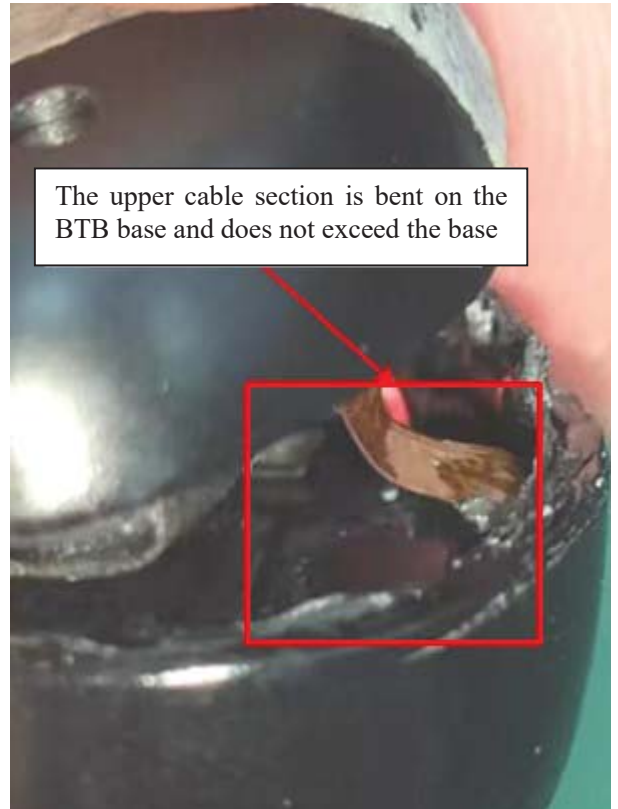


- 2、 After disassembling the problematic prototype, it was found that the wiring was different from the previous version, and if the wiring was bent and protruded too much, it would come into contact with the upper motherboard, affecting data and consistency.



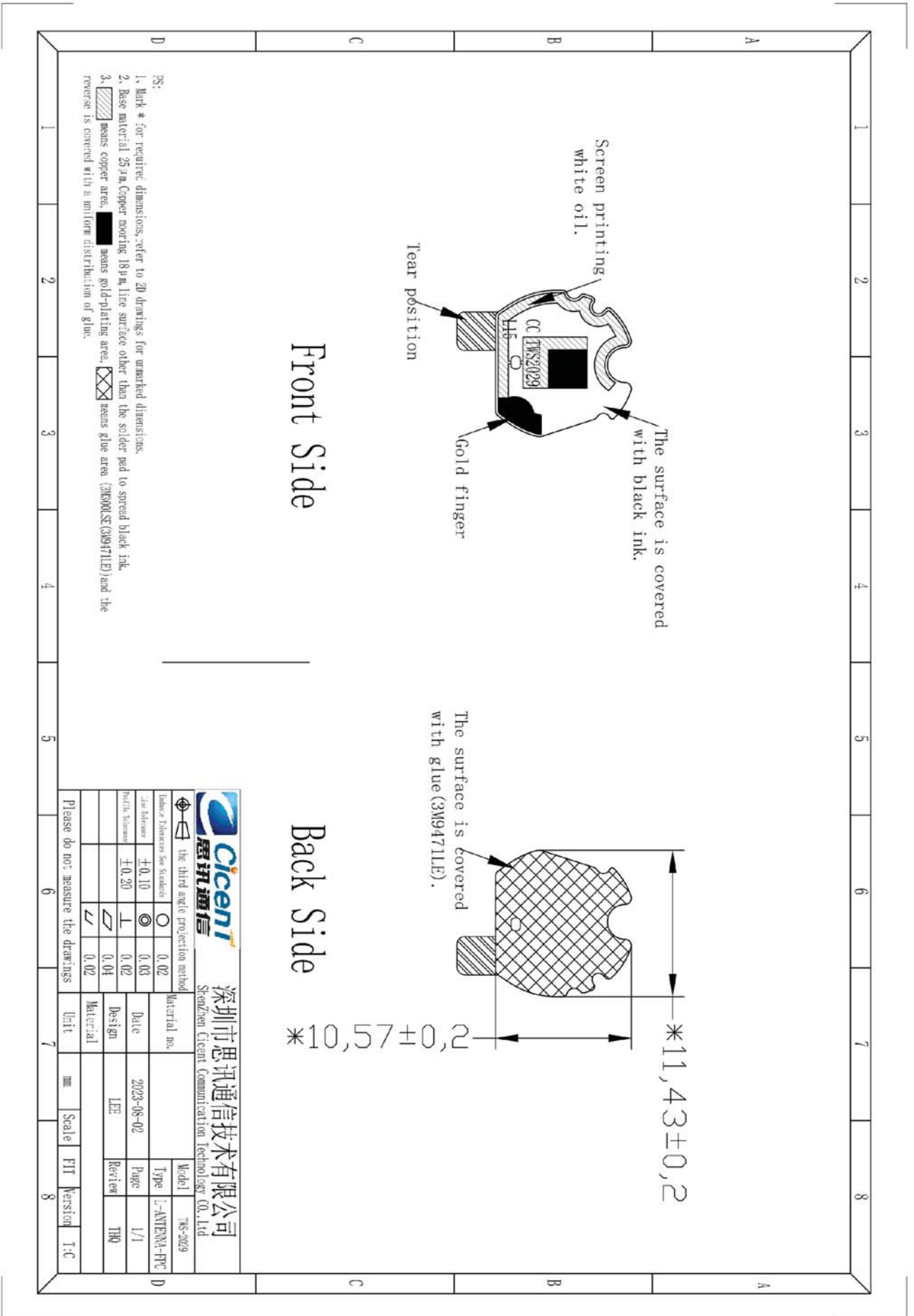


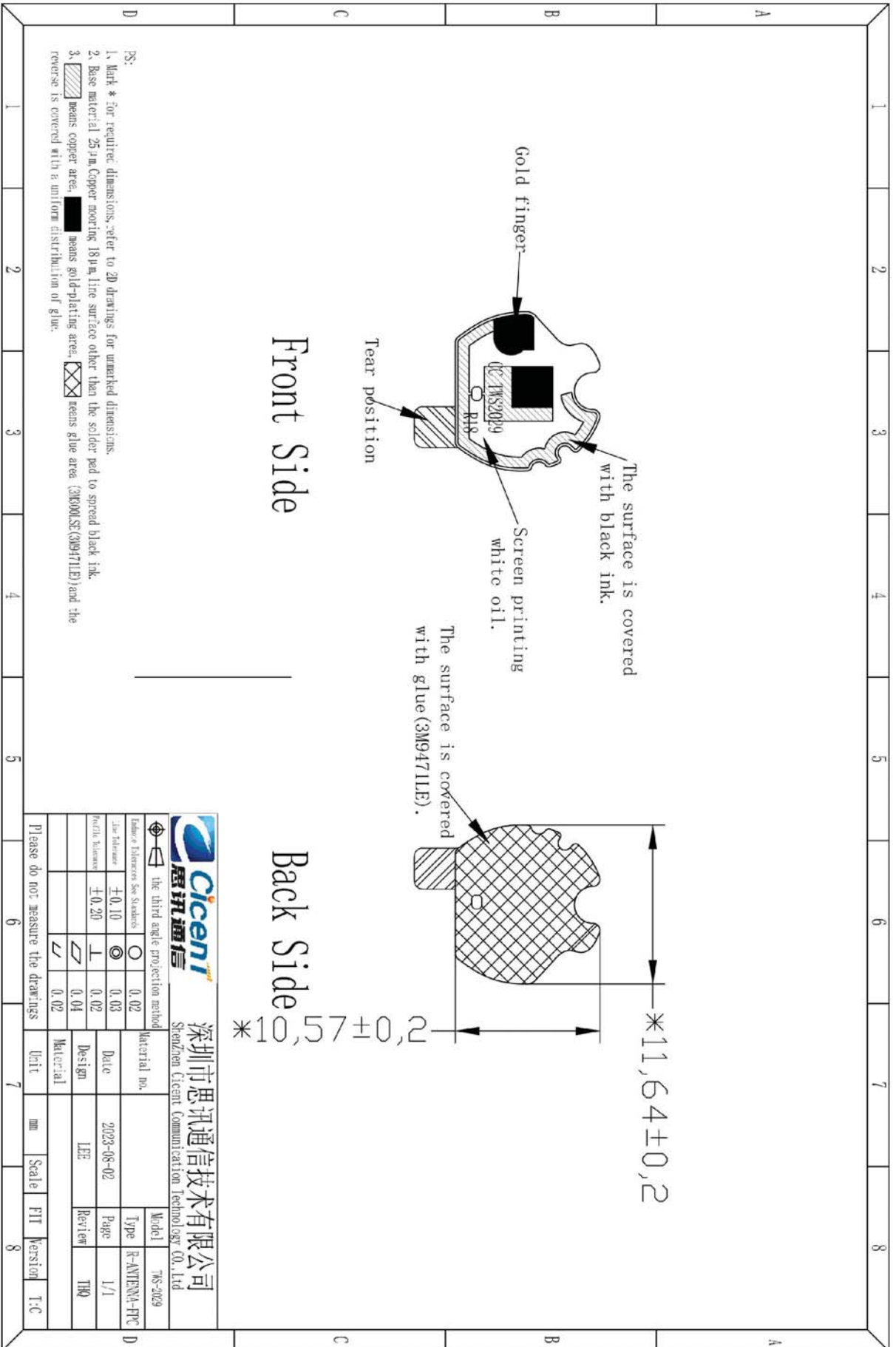
3、 Reassemble, press the bottom shell of the ribbon cable down in the middle and fix it with glue, so that there is not too much coupling between the upper ribbon cable and the motherboard. After reassembly, the data is normal.





V: Structure file:





- PS:
1. Mark * for require dimensions, refer to 2D drawings for unmarked dimensions.
 2. Base material: 25µm Copper, mounting: 18µm, line surface other than the solder pad to spread black ink.
 3. means copper area, means gold-plating area, means glue area (3M9005F, 3M9471LE) and the reverse is covered with a uniform distribution of glue.

		深圳市思讯通信技术有限公司 Shenzhen Cicent Communication Technology Co., Ltd	
the third angle projection method	Material no.	Model	TS-2029
Factor's Tolerances See Standards	±0.10	Type	R-ANTENNA-PPC
Profile Tolerances	±0.20	Date	2023-08-02
	∠	Design	LEE
	∇	Page	1/1
	0.02	Reviewer	THQ
	0.04	Material	
	0.02	Unit	mm
Please do not measure the drawings		Scale	FIT
		Version	T:C