Manufacturer address: 407-411, Floor 4, Building 2, South Taiyun Chuanggu Park, Southeast of intersection of Guangming Avenue and Dongchang Road, Guangming District, Shenzhen

acknowledgement

product description:	Manufacturer:	Shenzhen Yusheng Communication Equipment Co., LTD	Project model: GT5
	ANT type:	Metal mid-frame antenna	Specifications / Colors:
	Material Code:	R:a	Date of signature:
			Note: (This cover requires supplier seal)
			☐QC engineering drawing sample☐
appendix:	version number:		☐Reliability test report þ Packaging mode
	þ Electrical and mechanical performance description (specifications) ☐ manufacturing flow chart		(Everything that needs to be provided needs a filling color)
	☐☐The CPK reports the full-size measurement report		
	☐List of raw materials / RoHS Report / HF / REACH		ratify:

Supplier signature and approval: Review:
(All of the above require manual signature, and printing is not allowed)

The above should be filled in by the supplier and the following by Aidu

	department	**Confirm content**				**Confirm the results**	**Valfirm person / date**
Technical confirmation column	Supplier quality	☐ RoHS material ☐ Non-RoHS materials	☐ Compliance with the REACH requirements	☐ Meet the halogen-free requirements	☐ Other environmental protection requirements		
	Design department ID:	☐ Customer request ID	☐ color confirmation	☐ Surface process validation	☐ Shell, hardware, key material		
	construction engineer	☐ 2D drawing file dimensional confirmation ☐ Specification and technical requirements	☐ Focus on controlling the dimension labeling ☐ electrical performance parameters	☐ adaptation validation ☐ function	☐ Shell, hardware, key material ☐ effect		
	hardware engineer	☐ 2D drawing file dimensional confirmation ☐ Specification and technical requirements	☐ Focus on controlling the dimension labeling ☐ electrical performance parameters	☐ adaptation validation ☐ function	☐ Shell, hardware, key material ☐ effect		
	Research and development quality:	☐ Test criteria confirm the ☐ appearance	☐ Normative dimension labeling (key ruler cun)	☐ reliability verification ☐ adaptation validation	☐ Function ☐ effect		

Final Confirmation of the Project Manager:	☐ Acknowledge the integrity of the documents ☐ Normalization of dimensions (key dimensions)	☐ Specification and technical requirements ☐ appearance	☐ Electrical performance parameters ☐ function ☐ effect

Conditions of recognition: ☐ formal recognition

☐ limited recognition

☐ disallow

Distribution department: ☐ IQC ☐ supplier ☐ customer ☐ after-sales ☐ SQE / text control

☐ other_____

QF -QMP -QA 01-01

catalogue

1. Overview

1.1 Scope of application

This requirement specifies the antenna technical requirements and material requirements specifications for GT5 products.

This requirement applies to the selection, testing and acceptance of GT5 antenna.

2. Technical index requirements

2.1 Introduction of test items and equipment

inventory	test item	equipment
S11 parameter	Standing wave ratio, echo loss	network analyzer
Active test	TRP,TIS	Integrated tester, microwave darkroom
Passive test	Gain, efficiency	network analyzer

2.2 Active Reporting

2.2.1 Test instructions

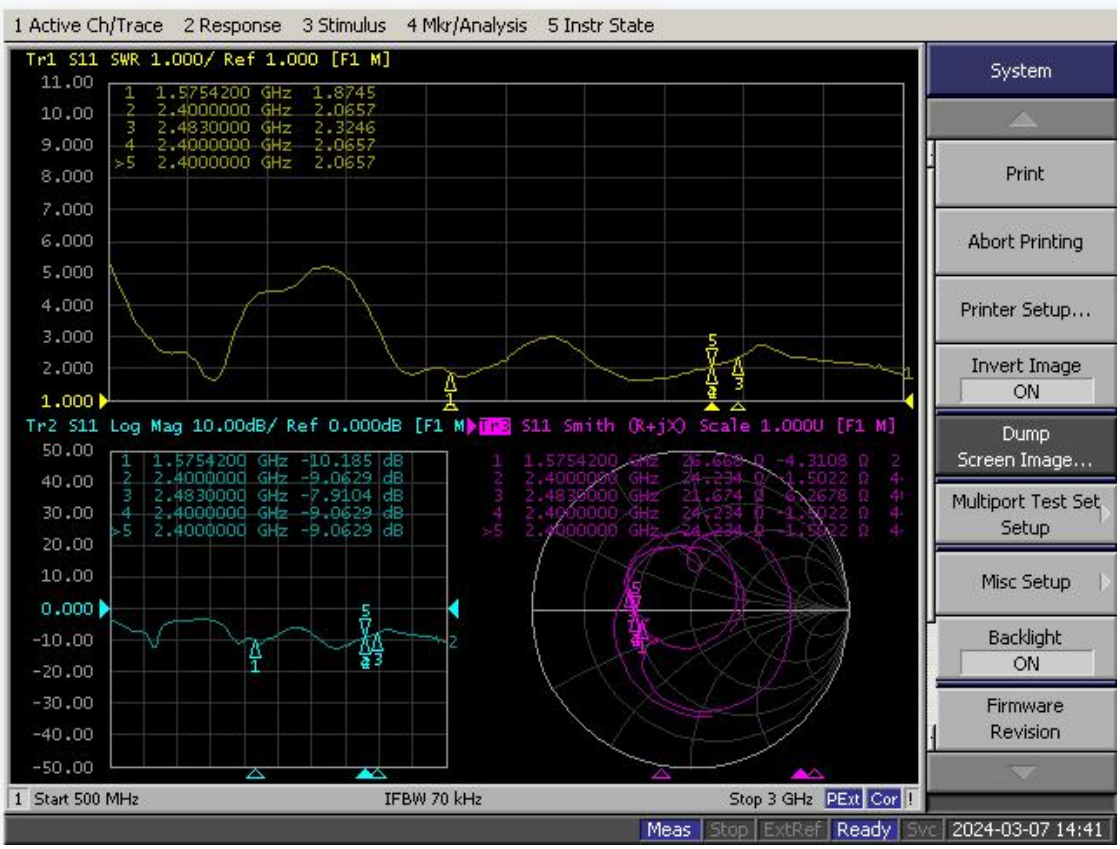
Test tools: Agilent8960 instrument, R & SCMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program

Test environment: temperature 22℃± 3℃, humidity 50% ± 15%

Test method: DUT is fixed in the center of the turntable with H plane, on the same horizontal line as the center of the horn antenna.

The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface.

2.2.2 Antenna S11 passive parameters



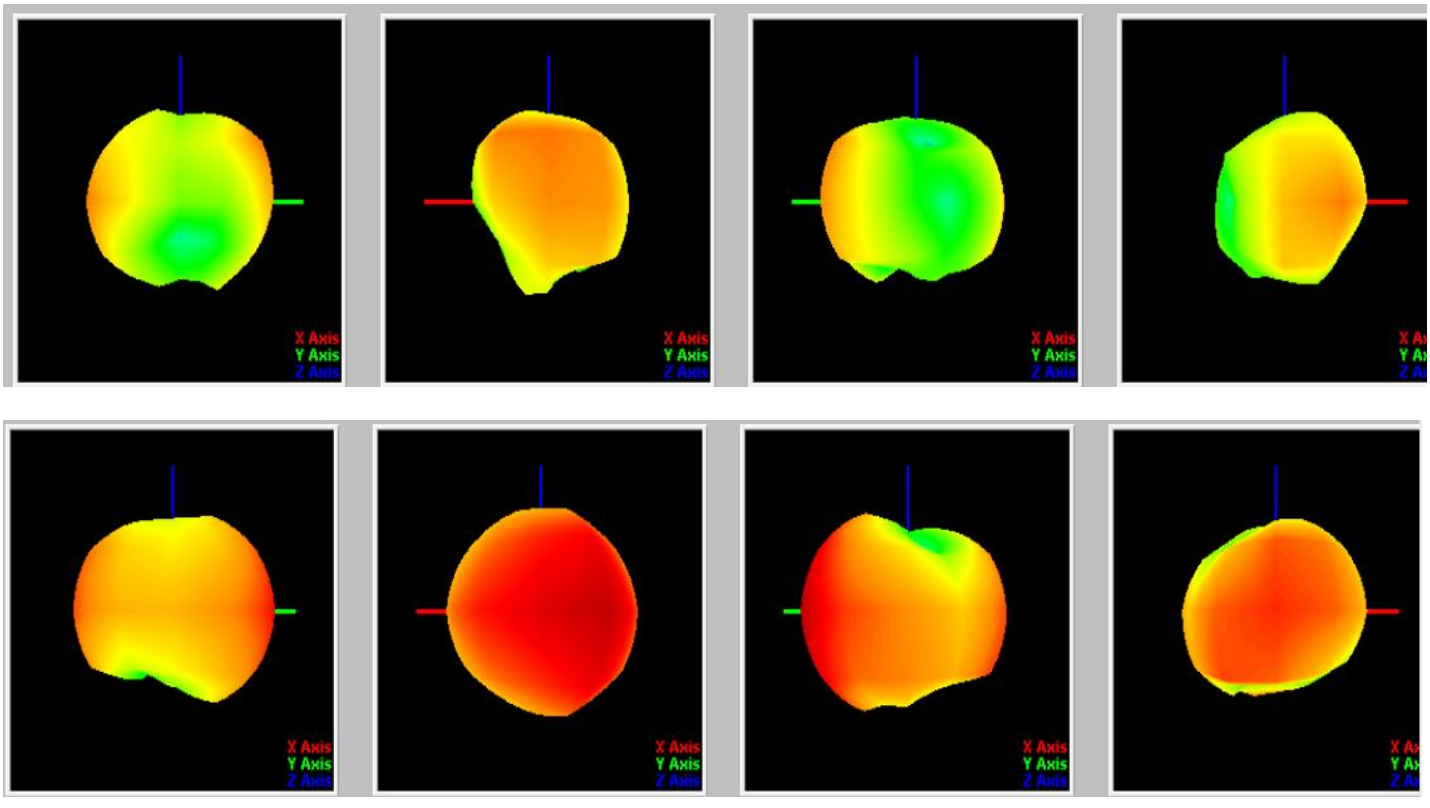
2.2.3 Active parameter of BT antenna-FS

Test	FS								
Test Point ID	1	2	3	4	5	6	7	8	9
Freq.(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480
Efficiency (%)	19.4	20.5	21.1	21.6	21.7	21.1	20.5	19.6	19.1
productiveness (dB)	-7.1	-6.9	-6.8	-6.7	-6.6	-6.8	-6.9	-7.1	-7.2
gain (dBi)	-2.7	-2.5	-2.4	-2.3	-2.3	-2.3	-2.5	-2.7	-2.9

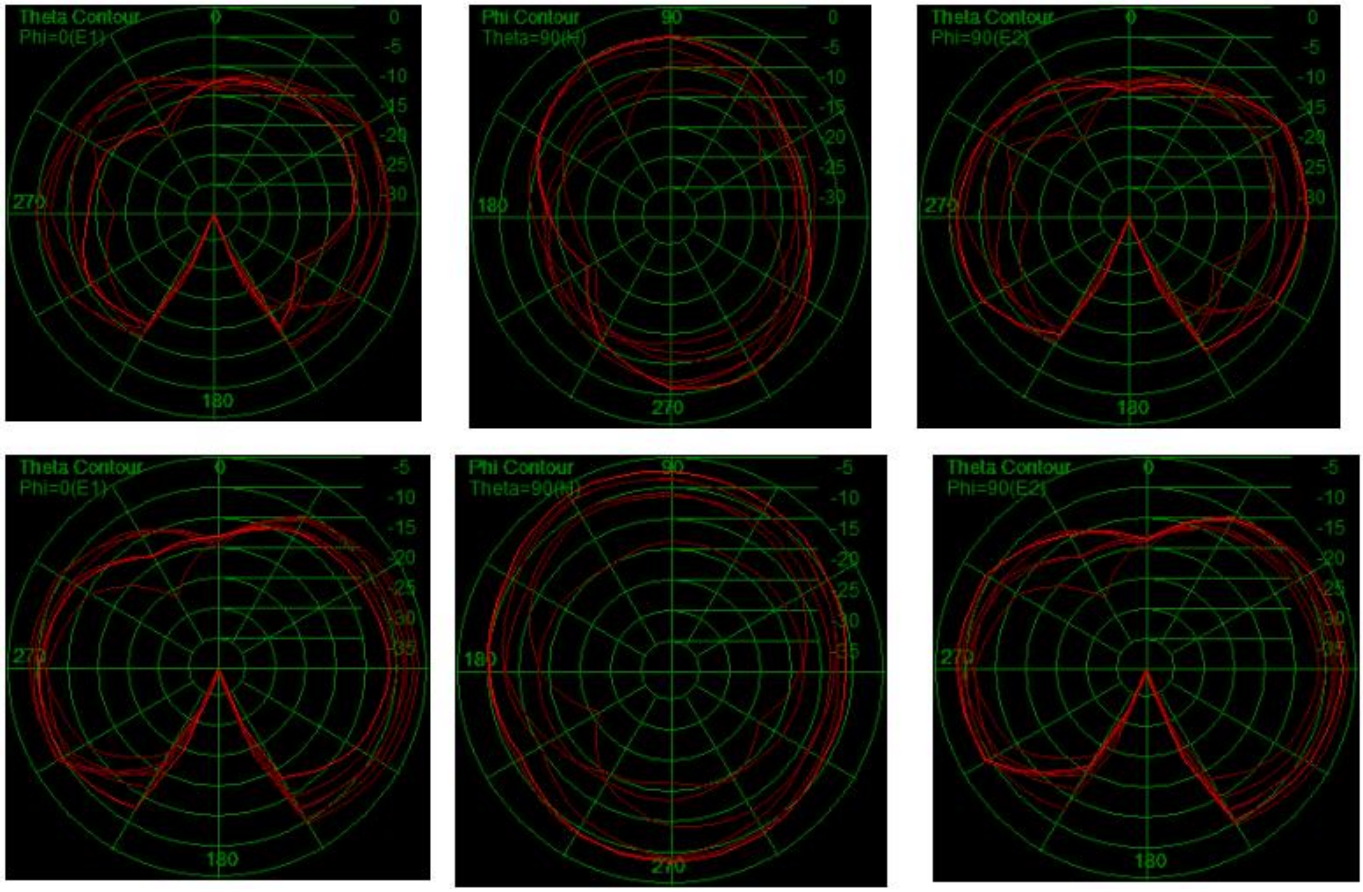
2.2.4BT Antenna passive parameter-ARM

Test	ARM								
Test Point ID	1	2	3	4	5	6	7	8	9
Freq.(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480
Efficiency (%)	7.2	7.4	7.6	7.7	7.8	7.5	7.4	7.1	6.9
productiveness (dB)	-11.4	-11.3	-11.2	-11.1	-11.1	-11.2	-11.3	-11.5	-11.6
gain (dBi)	-6.5	-6.3	-6.1	-5.9	-5.7	-5.9	-6.1	-6.3	-6.5

2.2.5 Antenna direction diagram-BT



2.2.6 Antenna Plan-BT-ARM

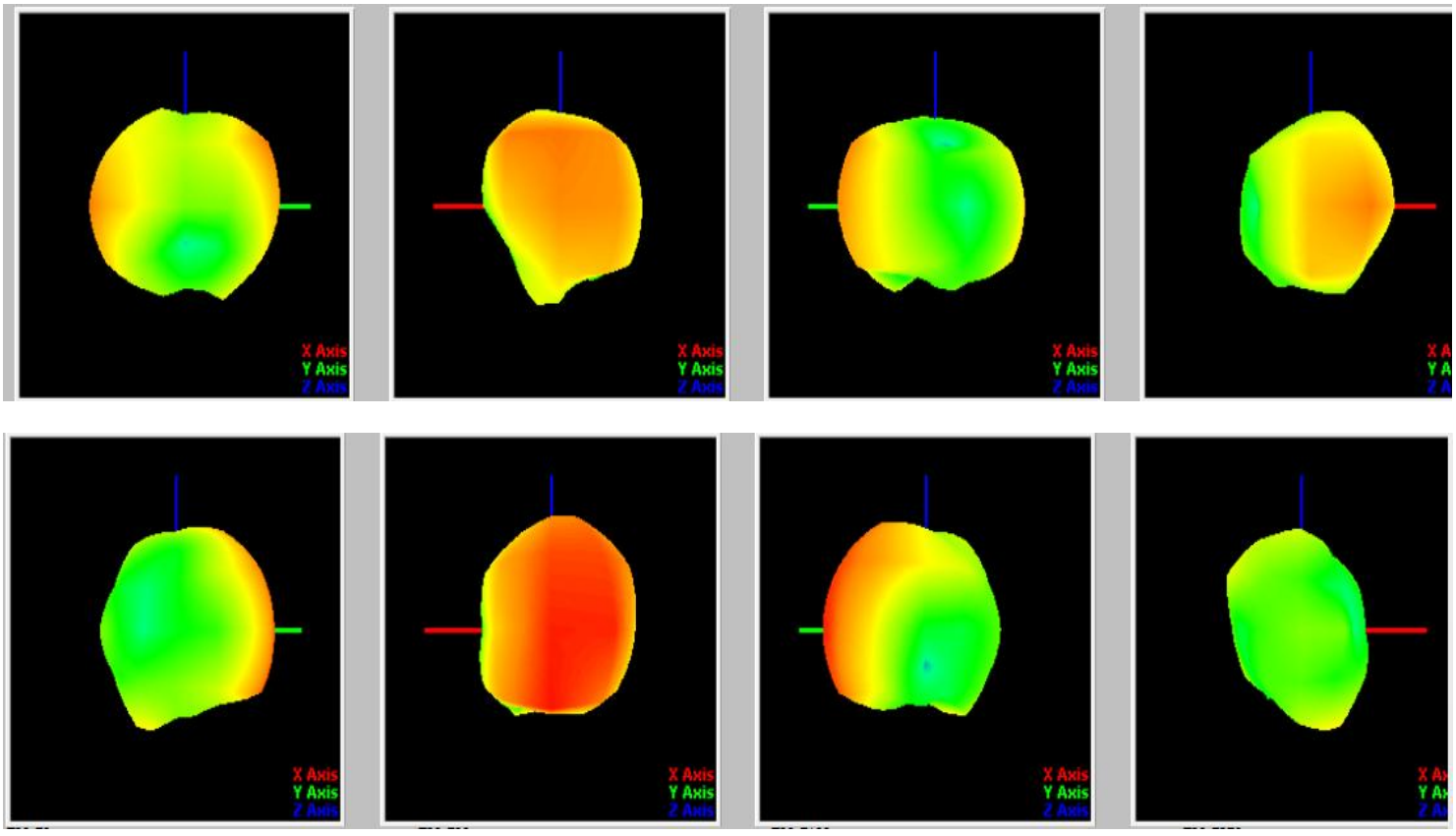


2.2.7 GPS antenna passive parameters

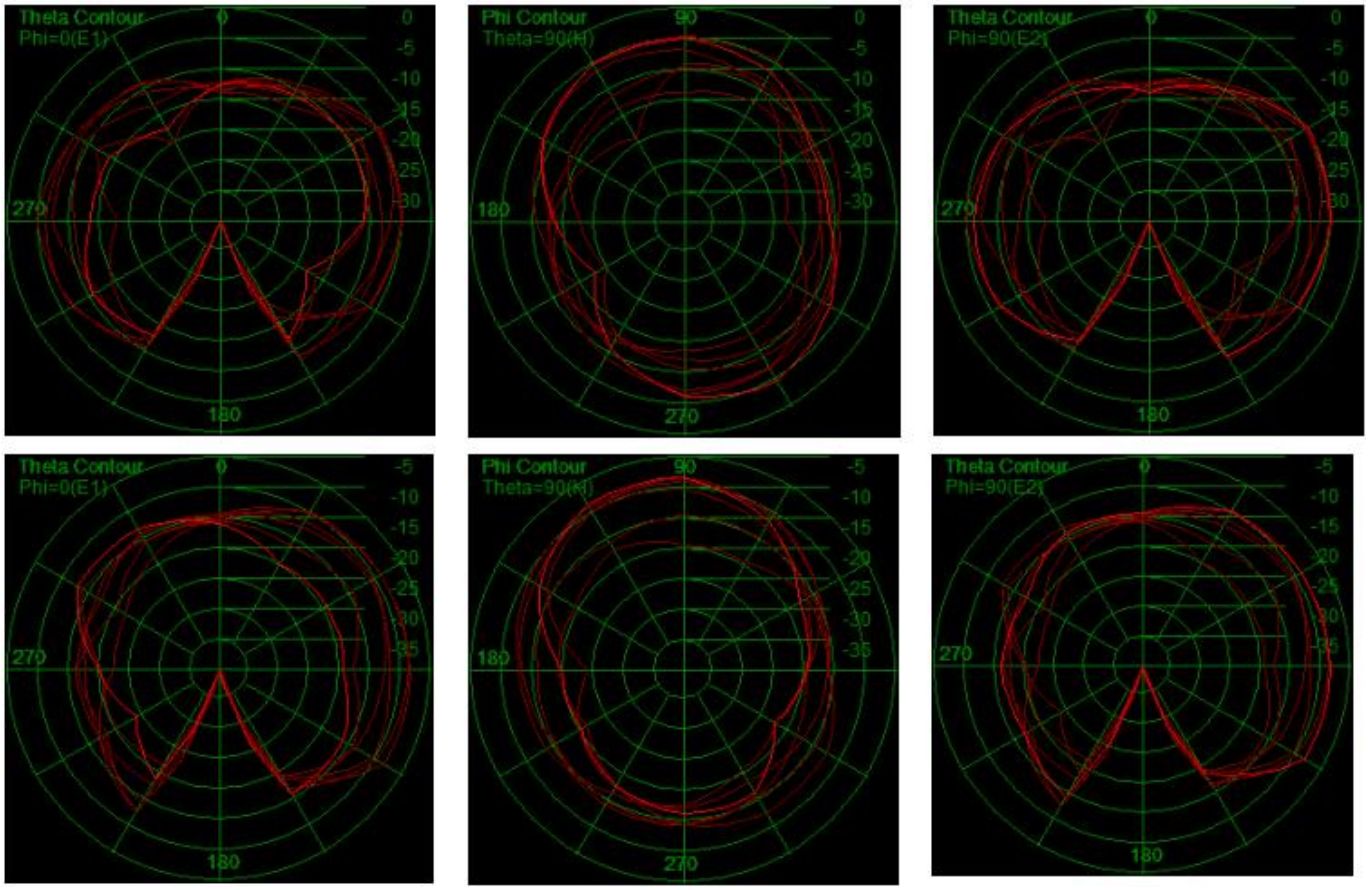
Test	FS							
Test Point ID	1	2	3	4	5	6	7	8
Freq.(MHz)	1550	1555	1560	1565	1570	1575	1580	1585
Efficiency (%)	13.9	15.1	15.4	16.1	15.7	15.3	14.4	13.7
productiveness (dB)	-8.5	-8.2	-8.1	-7.9	-8.1	-8.1	-8.4	-8.6
gain (dBi)	-3.9	-3.6	-3.4	-3.1	-3.3	-3.6	-3.8	-4.1

Test	ARM							
Test Point ID	1	2	3	4	5	6	7	8
Freq.(MHz)	1550	1555	1560	1565	1570	1575	1580	1585
Efficiency (%)	6.4	6.9	7.2	7.4	7.5	7.4	7.2	7.0
productiveness (dB)	-11.9	-11.6	-11.4	-11.3	-11.3	-11.3	-11.4	-11.5
gain (dBi)	-6.9	-6.6	-6.5	-6.3	-6.2	-6.4	-6.6	-6.7

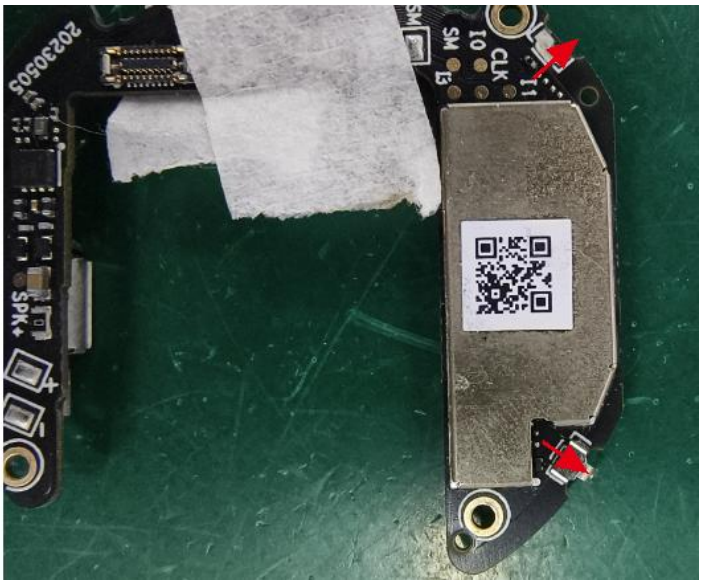
2.2.8, antenna plane plan



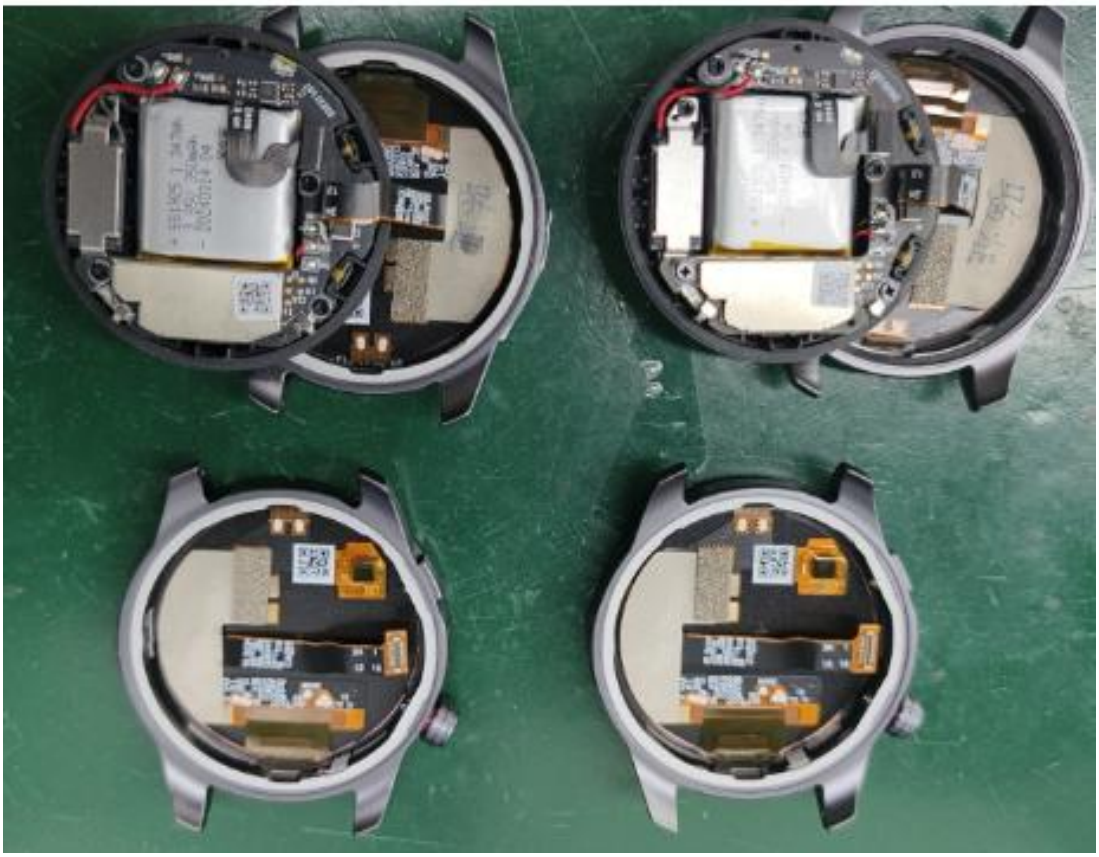
2.2.9, antenna plane plan



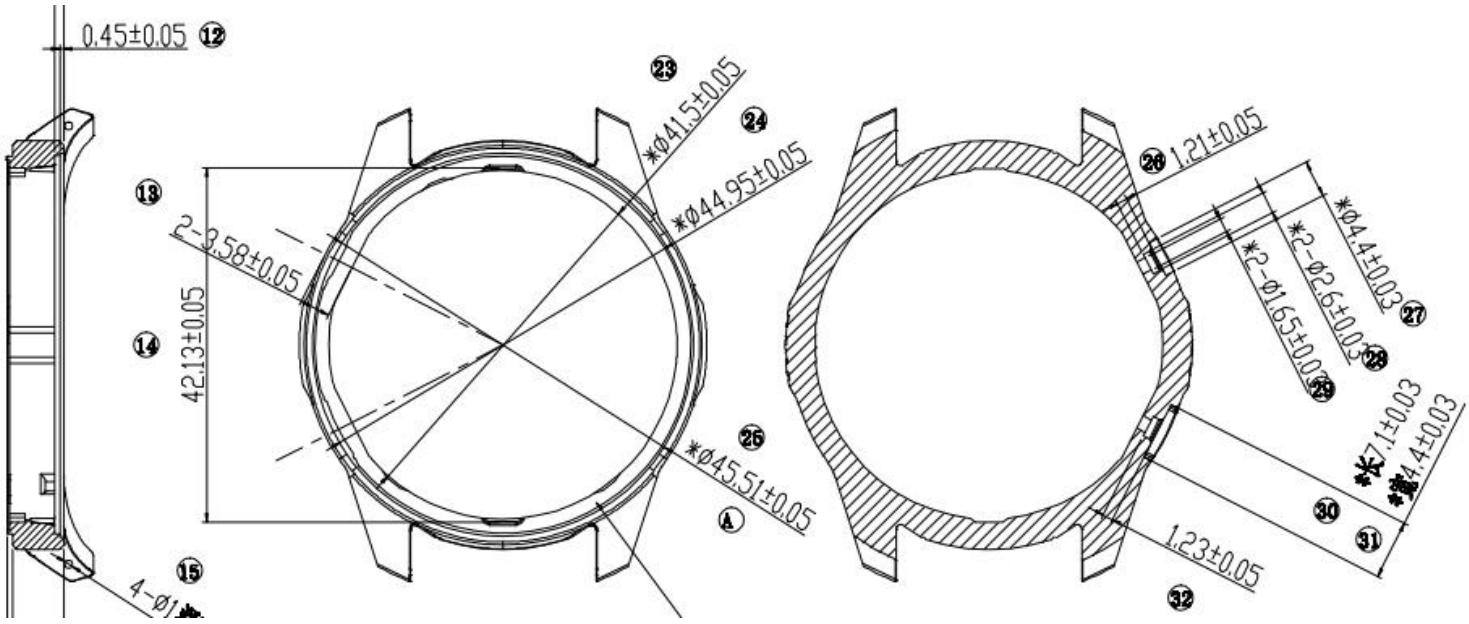
2.3 Antenna Plan-ARM



At present, the antenna uses these two shrapnel, matching series 0 ohm, ground empty paste



2.3.1 antenna 2D



2.3.2 Antenna test environment