

acknowledgement

product description: Manufacturer: Shenzhen Yusheng Communication Equipment Co., LTD
 Specifications / Colors:
 Material: Date of signature:
 Name: Note: (This cover requires supplier seal)
 Material R:a ☐ QC engineering drawing sample ☐
 Code: ☐ Reliability test report ☐ Packaging mode
 appendix: version number:
☐ 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 ratify:
☐ List of raw materials / RoHS Report / HF / REACH

ADD: 407-411, Floor 4, Building 2, Yuntai Chuanggu Park,
 southeast of the intersection of Guangming Avenue and
 Dongchang Road, Guangming District, Shenzhen

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	☐ Test criteria confirm the	☐ Normative dimension annotation	☐ reliability verification	☐ Function ☐ effect		

	development quality:	☐ appearance	(key ruler cun)	☐ adaptation validation			
--	-------------------------	-------------------------------------	--------------------	---	--	--	--

Final Confirmation
of the Project
Manager:

☐ Acknowledge
the
completeness
of the book
and materials
☐
Normalization
of dimensions
(key
dimensions)

☐
Specification
and technical
requirements
☐ appearance

☐ Electrical performance parameters
effect

☐ function ☐

Conditions of recognition: ☐ formal recognition

☐ limited recognition

☐ disallow

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

☐ other_____

catalogue

1. OVERVIEW	4
1.1 SCOPE OF APPLICATION	4
2. TECHNICAL INDEX REQUIREMENTS	4
2.1 INTRODUCTION OF TEST ITEMS AND EQUIPMENT	4
2.2 ACTIVE REPORTING	4
2.2.1 TEST INSTRUCTIONS	4
2.2.2 ANTENNA S11 PASSIVE PARAMETERS	5
2.2.3 ACTIVE PARAMETER OF BT ANTENNA-FS	5
2.2.4 BT ANTENNA PASSIVE PARAMETER-ARM	6
2.2.5 ANTENNA DIRECTION DIAGRAM-BT	6
2.2.6 ANTENNA PLAN-BT-ARM	7
2.2.7 TREATMENT OF THE ANTENNA ENVIRONMENT	7
2.2.8 ANTENNA MATCHING	8
2.2.9 TEST PICTURE OF THE ANTENNA ENVIRONMENT	8

1. Overview

1.1 Scope of application

This requirement specifies the antenna technical requirements and material requirements specifications for TIT 21 products.

This requirement applies to the selection, testing and acceptance of TIT 21 antennas.

2. Technical index requirements

2.1 Introduction of test items and equipment

inventory	test item	equipment
S11 paramete r	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

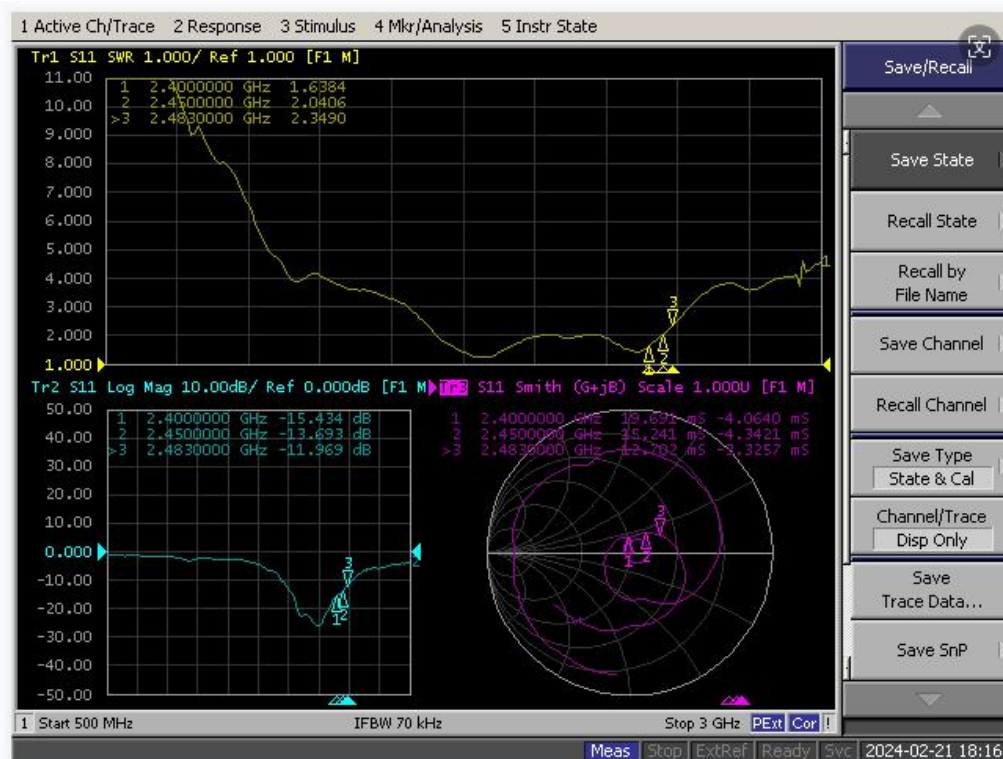
Test tools: Agilent8960 instrument, R & SCMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program

Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

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

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

2.2.2 Antenna S11 passive parameters



2.2.3 Active parameter of BT antenna-FS

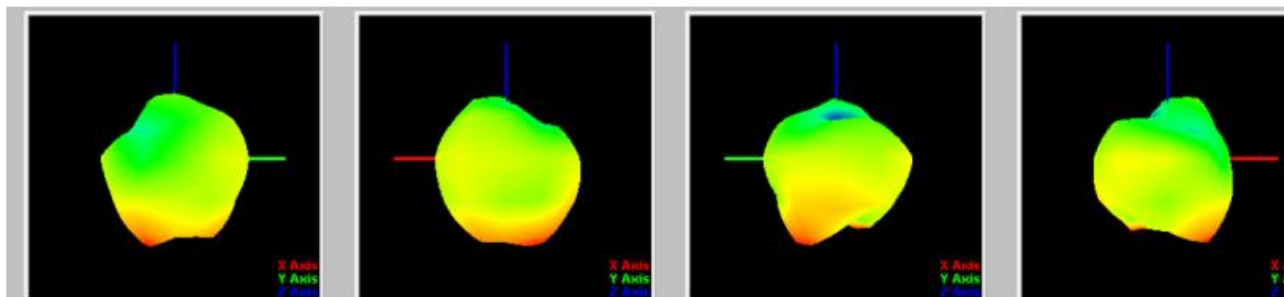
Test	FS								
Test Point ID	1	2	3	4	5	6	7	8	9
Freq.(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480
Efficiency (%)	14.7	15.1	15.7	16.2	16.6	15.5	15.2	14.8	14.3
productiveness (dB)	-8.3	-8.2	-8.0	-7.9	-7.8	-8.1	-8.2	-8.3	-8.4
gain (dBi)	-3.7	-3.5	-3.4	-3.3	-3.2	-3.4	-3.5	-3.6	-3.8

2.2.4BT Antenna passive parameter-ARM

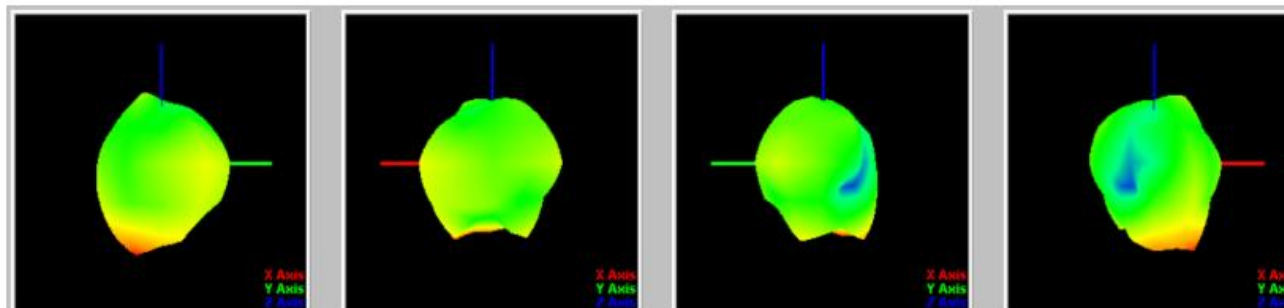
Test	ARM								
Test Point ID	1	2	3	4	5	6	7	8	9
Freq.(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480
Efficiency (%)	8.7	9.3	9.4	10.2	10.4	9.7	9.2	8.7	8.5
productiveness (dB)	-10.6	-10.3	-10.3	-9.9	-9.8	-10.1	-10.4	-10.6	-10.7
gain (dBi)	-5.8	-5.7	-5.4	-5.3	-5.2	-5.4	-5.5	-5.7	-5.9

2.2.5 Antenna direction diagram-BT

FS

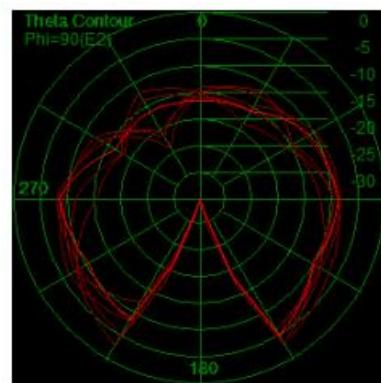
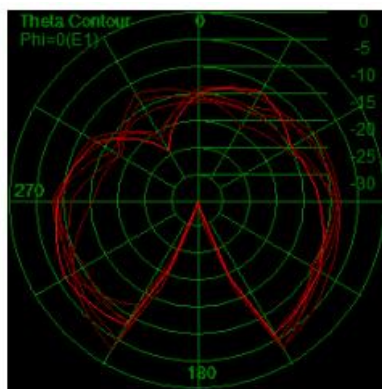
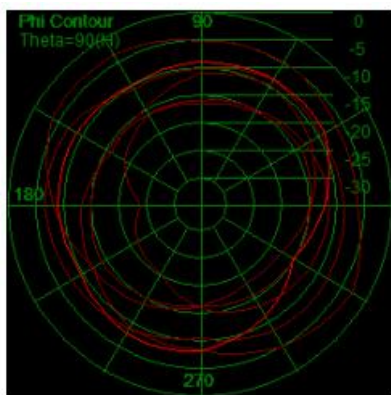


ARM

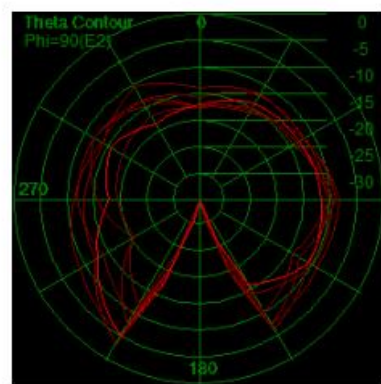
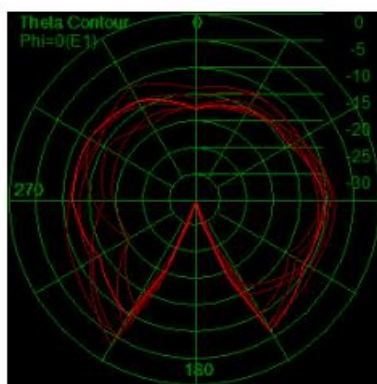
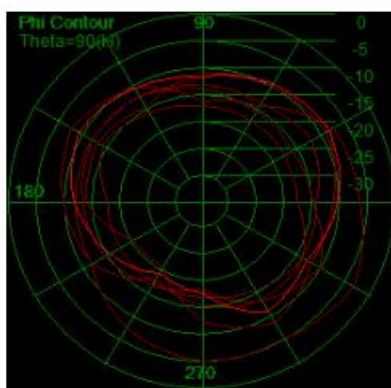


2.2.6 Antenna Plan-BT-ARM

FS



ARM



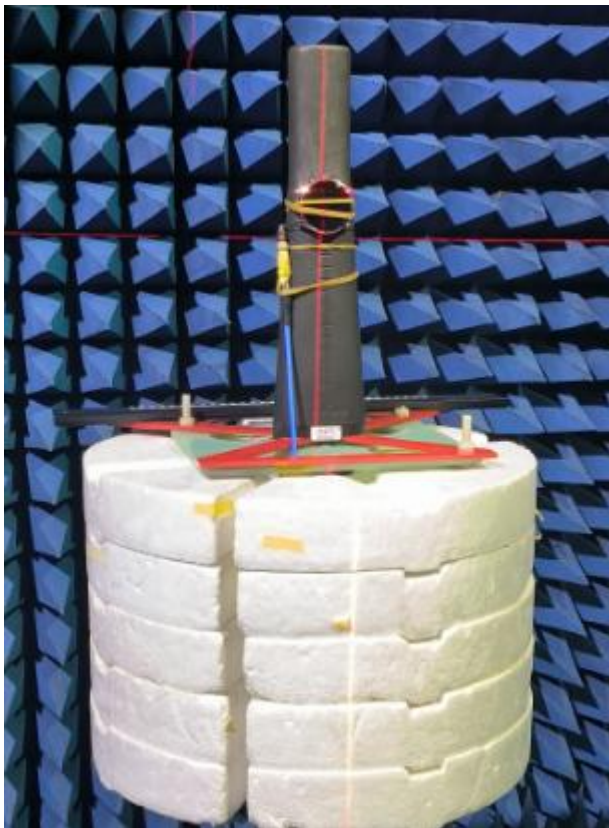
2.2.7 Treatment of the antenna environment



2.2.8 Antenna matching



2.2.9 Test picture of the antenna environment



Antenna size

