

MT3000 Project Antenna Material Requirements Specification

Customer name: Shenzhen Guanglian Zhitong Technology Co., Ltd.

Customer Name: MT3000

Product Name: Left PCB Ultrasonic Antenna Assembly

Product specifications: User-supplied material ultrasonic, PCB + coaxial wire bonding-left

Material code: Left Antenna Assembly 205-2048

Resume of changes:

Serial number	Version	Status	Start and end date	Responsible person	Page number	Remarks
1	R: A	First edition	2023-01-11	Zhong QiuHong	10	
2						

Supplier acknowledges signature:

Responsible person/date		IQC/Date	Review/Date	Approval/Date
MD	Feng Jiwu	Yiguanfa	Zeng Xianghao	
RF	He Lei			

The buyer acknowledges the signature (please send it back after acknowledging the signature):

Demander's judgment result:-qualified-unqualified			
Development Design Engr/Date	SQE Engr/Date	Person in charge of procurement/date	Approval by Development Manager/Date

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1. Overview

1.1 Scope of application

This requirement specifies the antenna technical requirements and material requirements specifications of MT3000 products.

This requirement is applicable to antenna selection, testing and acceptance of MT3000 products.

1.2 Basic Project Information

Antenna name:	MT3000
Antenna band:	WIFI-2.4g/5.8g
Antenna material:	PCB + Coaxial Line Bonding Wire
Antenna version:	V0.1

2. Requirements for technical indicators

2.1 Introduction of Test Items and Equipment

List	Test item	Equipment
S11 Parameters	Standing wave ratio, return loss	Network analyzer
Active test	TRP, TIS	Comprehensive tester, microwave darkroom
Passive test	Gain, efficiency	Network analyzer

2.2 Test Instructions

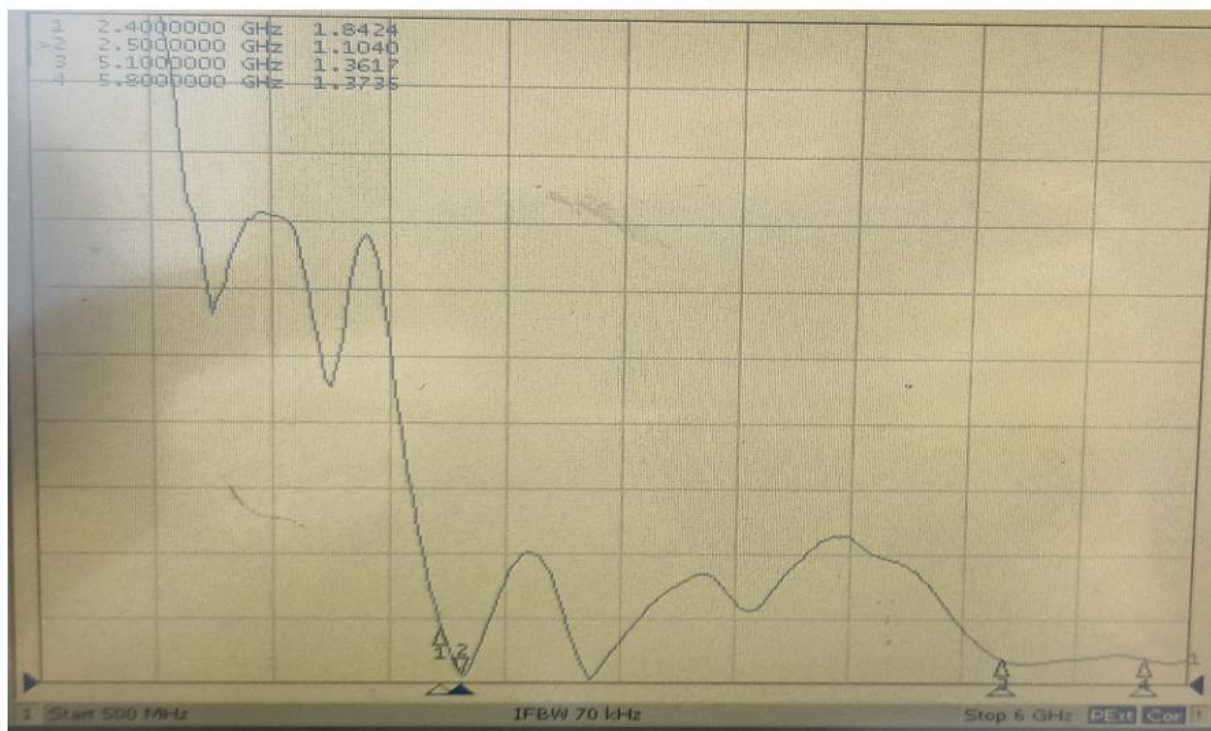
Test tools: Agilent 8960, R&SCMW500, all-wave far-field ETS darkroom, high-precision positioning system and its controller, and computer with automatic test program

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

Test method: DUT is fixed in the center position of turntable with H plane, which is on the same horizontal line as the center position of horn antenna. The positioning system makes DUT rotate on the whole spherical surface, which meets the requirements of high-precision three-dimensional positioning. Each RF instrument, turntable controller and PC with automatic test software communicate through GPIB interface

3. Test report

3.1: Antenna Passive Parameters-2. 4G/5G



3.2: Antenna Passive Parameters-2. 4GWIFI

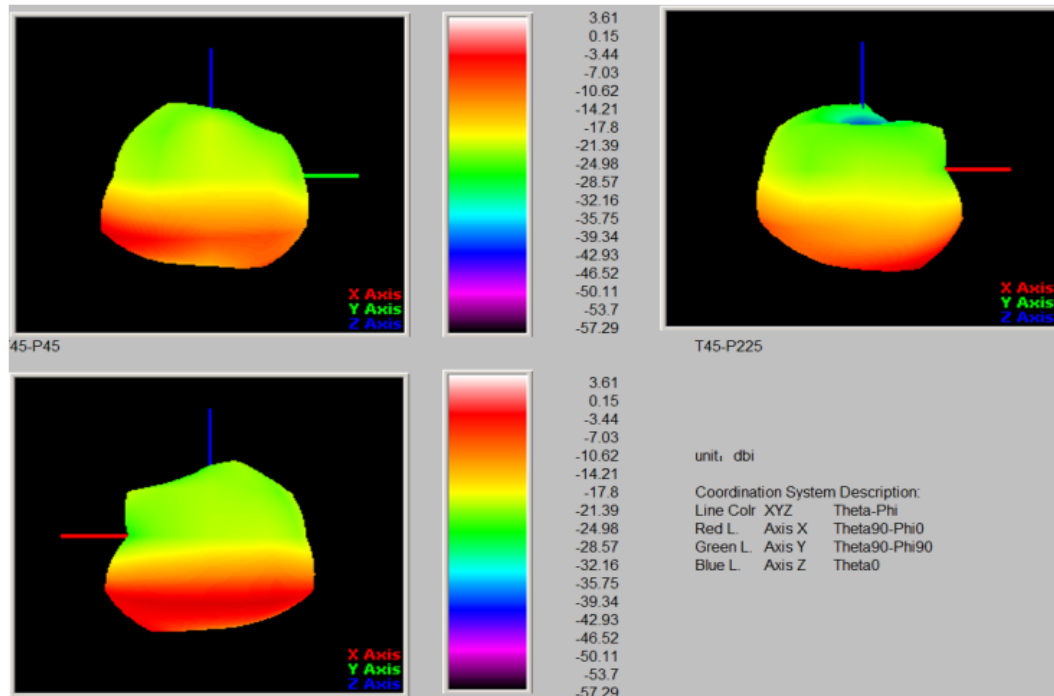
Test Point ID	1	2	3	4	5	6	7	8	9	10	11
Freq. (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	3.09	3.18	3.29	3.38	3.44	3.61	3.67	3.62	3.45	3.29	3.11
Efficiency (%)	60.8%	61.4%	61.7%	62.3%	63.5%	65.4%	64.1%	63.5%	62.9%	61.6%	61.2%

3.3: Antenna Passive Parameter-5GWIFI

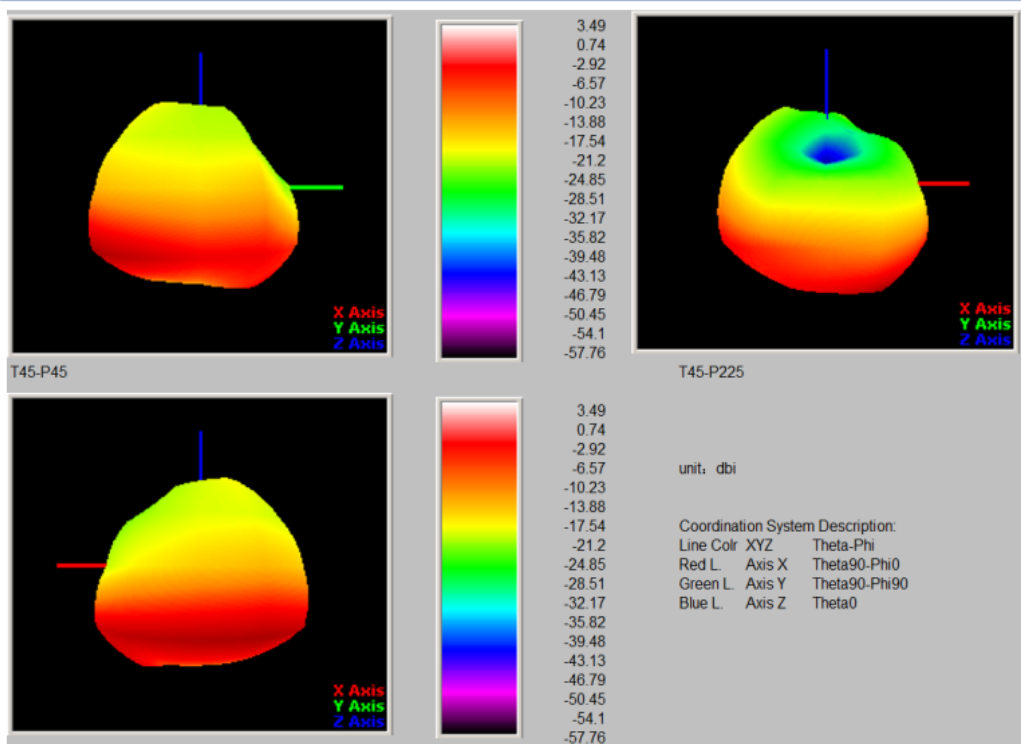
Test Point ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Freq. (MHz)	5100.0	5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0	5700.0	5750.0	5800.0
Gain (dBi)	3.45	3.63	3.81	3.96	4.05	4.14	3.89	3.68	3.52	3.41	3.49	3.66	3.88	3.74	3.63
Efficiency (%)	56.2%	57.5%	58.7%	60.1%	61.1%	62.5%	61.8%	61.4%	62.7%	60.6%	60.2%	58.9%	58.7%	56.9%	56.1%

3.4: Apple Map

Radiation Pattern For WIFI Antenna (2450MHz) , Peak Gain: 3.61dbi

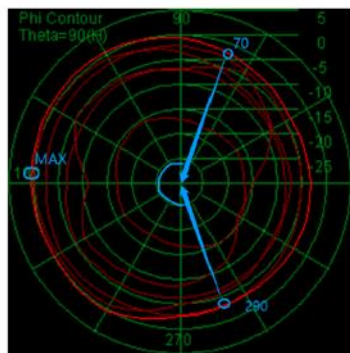


Radiation Pattern For WIFI Antenna (5600MHz) , Peak Gain: 3.49dbi



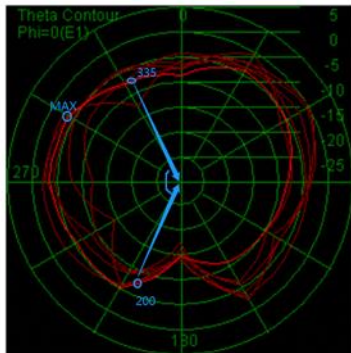
天线无源参数-2. 4G方向图

Thete=90 (Phi=270° 为正前方)



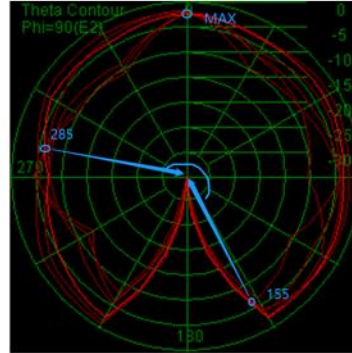
FWHM=220°

Phi=90°



FWHM=135°

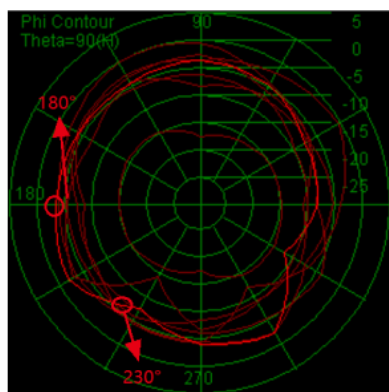
Phi=180°



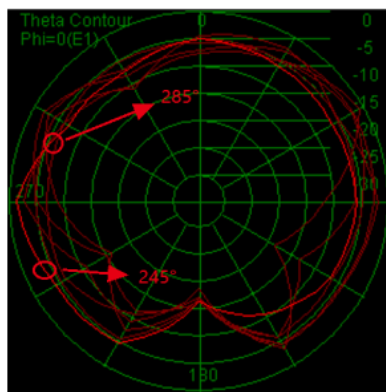
FWHM=230°

天线无源参数-5G方向图

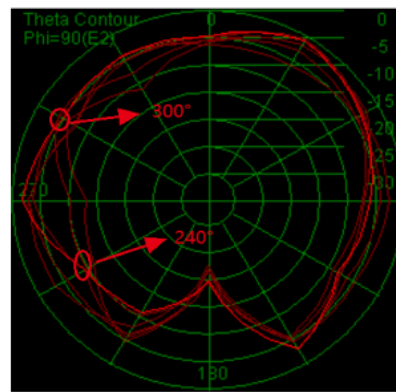
Thete=90 (Phi=270° 为正前方)



Phi=90°



Phi=180°



5. BOM (Bill of Materials)

深圳市昱晟通讯设备有限公司
YUSHENG COMMUNICATION TECHNOLOGY CO.,LTD.
385013 (MT3000) –BOM表

Edition: R:B

client:385

Model: 385013

date: 20221031

NO	prat no	Name	Types of	version	specification	Material quality	unit	colour	Quantity	Craf t
1	385013-IA	L(长线)-antenna	Z	T:A	71.67*21.12*12.97MM				PCS	1
1.1	385013-IA-01	PCB	Z	T: A	50.00*10.00*0.8MM	PCBT0.8MM	Tinning	Green	PCS	1
1.1.1	385013-IA-02	L-CABLE	Z	T: A	1.13*109MM	1.13 CABLE+1代 Terminal	Terminal Gilding	Black	PCS	1
1.2	385013-IA-03	Upper cover	Z	T: A	71.67*21.12*12.97MM	PC	Fine Lines	Black	PCS	1
1.3	385013-IA-04	Lower cover	Z	T: A		PC	Fine Lines	Black	PCS	1
2	385013-IB	R(短线)-antenna	Z	T:A	71.67*21.12*12.97MM				PCS	1
2.1	385013-IB-01	PCB	Z	T: A	50.00*10.00*0.8MM	PCBT0.8MM	Tinning	Green	PCS	1
2.1.1	385013-IB-02	R-CABLE	Z	T: A	1.13*66MM	1.13 CABLE+1代 Terminal	Terminal Gilding	Black	PCS	1
2.2	385013-IB-03	Upper cover	Z	T: A	71.67*21.12*12.97MM	PC	Fine Lines	Black	PCS	1
2.3	385013-IB-04	Lower cover	Z	T: A		PC	Fine Lines	Black	PCS	1
3.1	385015-IC	5.8GWIFI组件	Z	T: A	32.70*13.60*0.12MM			Black	PCS	1
3.1	385015-IC-01	WIFI-FPC	Z	T: A	32.70*13.60*0.12MM	电解铜 半对半	Tinning	Black	PCS	1
3.2	385013-IC-02	WIFI-CABLE	Z	T: A	1.13*79MM	1.13 CABLE+1代 Terminal	Terminal Gilding	Black	PCS	1

Type: W. Outsourcing B. Semi-finished products Z. Finished products C. Customer supply

Confirmation:

Review:

Production: FJW

6. Packaging drawings

Packaging mode diagram														
Product name	Antenna assembly													
Material number	385013													
Project model	MT3000													
Packing details	Carton size 1: 270*260*200MM Carton size 2: 260*200*200MM Carton size 3: Depending on order quantity/volume													
	Packing mode	Packing according to order quantity												
	Total number of packing	Packing according to order quantity												
Label requirements	Label size 1: Universal 100*100mm Label size 2: According to customer requirements	深圳市昱晟通讯设备有限公司 <table><tr><td>客户名称</td><td>*****</td></tr><tr><td>订单编号</td><td>*****</td></tr><tr><td>项目名称</td><td>*****</td></tr><tr><td>物料编码</td><td>*****</td></tr><tr><td>数 量</td><td>****pcs</td></tr><tr><td>出货日期</td><td>****年**月**日</td></tr></table> 地址：深圳市光明新区光明大道南太云创谷园区2栋4楼4A	客户名称	*****	订单编号	*****	项目名称	*****	物料编码	*****	数 量	****pcs	出货日期	****年**月**日
客户名称	*****													
订单编号	*****													
项目名称	*****													
物料编码	*****													
数 量	****pcs													
出货日期	****年**月**日													
Matters needing attention														
1. Due to the limitation of order quantity, the packing method of each material selects the box size according to the total order quantity or physical volume														
2. Storage temperature: Normal temperature														
3. Storage conditions: Store in a cool and dry place														

This diagram is the packaging schematic diagram of this project, and the specific mass production objects shall prevail)