

# SPECIFICATION

## SHEET FOR APPROVAL

(Revision: R: A0)

CUSTOMER(客户名称)	惠科	
CS P/N(客户机种)	MB15B2F	T15B2
PART NAME(品名)	WIFI AP V	外露线长 L=108mm
FREQUENCY(频率)	2.4G~2.5GHz+5.15~5.85G	
ZTX NO.(物料编号)	2.00005723	
DATE(日期)	2022-08-09	

CUSTOMER			
QA CHECKED	ME CHECKED	RF CHECKED	MANAGER CHECKED

Remark(备注): \_\_\_\_\_

Sign(客户确认签字盖章): \_\_\_\_\_

ZHONG TIAN XUN TECHNOLOGY CO., LTD				
MANAGER CHECKED	MANAGER CHECKED	ME CHECKED	RF CHECKED	QA CHECKED
		赖宁平	杨显堂	



深圳市中天迅通信技术股份有限公司

SHENZHEN ZHONGTIAN XUN Communication Technology Co.,Ltd.

地址: 深圳市宝安区石岩镇石龙大道 34 号(腾达工业园) 邮编: 518000

电话: 0755-27588320 传真: 0755-27588045 <http://www.chinaztx.com>

# ANTENNA SPECIFICATION

CUS.P/N :MB15B2F WIFI 天线

Application Date:AUG,09, 2022

Rev: R:A0

Ace P/N : MB15B2F WIFI 天线

Editor:

Page 2 of 11

## Index

		<b>Revision history</b>	<b>1</b>
		<b>Index</b>	<b>2</b>
<b>1</b>		<b>Mechanical Specification</b>	<b>3</b>
	<b>1-1</b>	<b>Mechanical Specification (WIFI 天线组件)</b>	<b>3</b>
	<b>1-2</b>	<b>Mechanical Specification (WIFI 天线)</b>	<b>4</b>
	<b>1-3</b>	<b>Mechanical Specification (RF 端子)</b>	<b>5</b>
<b>2</b>		<b>Test equipment</b>	<b>6</b>
<b>3</b>		<b>Antenna test data</b>	<b>7</b>
	<b>3-1</b>	<b>VSWR</b>	<b>7</b>
	<b>3-2</b>	<b>No-source test data</b>	<b>7</b>
	<b>3-3</b>	<b>Environment treatment</b>	<b>7</b>
	<b>3-4</b>	<b>Directional drawing of horizontal plane of&amp;3D radiation drawing</b>	<b>8~9</b>
	<b>3-5</b>	<b>实物照片</b>	<b>9</b>
<b>4</b>		<b>Wire specification</b>	<b>10</b>
<b>5</b>		<b>Environment Characteristic</b>	<b>11</b>



# ANTENNA SPECIFICATION

CUS.P/N :MB15B2F WIFI 天线

Application Date:AUG,09, 2022

Rev: R:A0

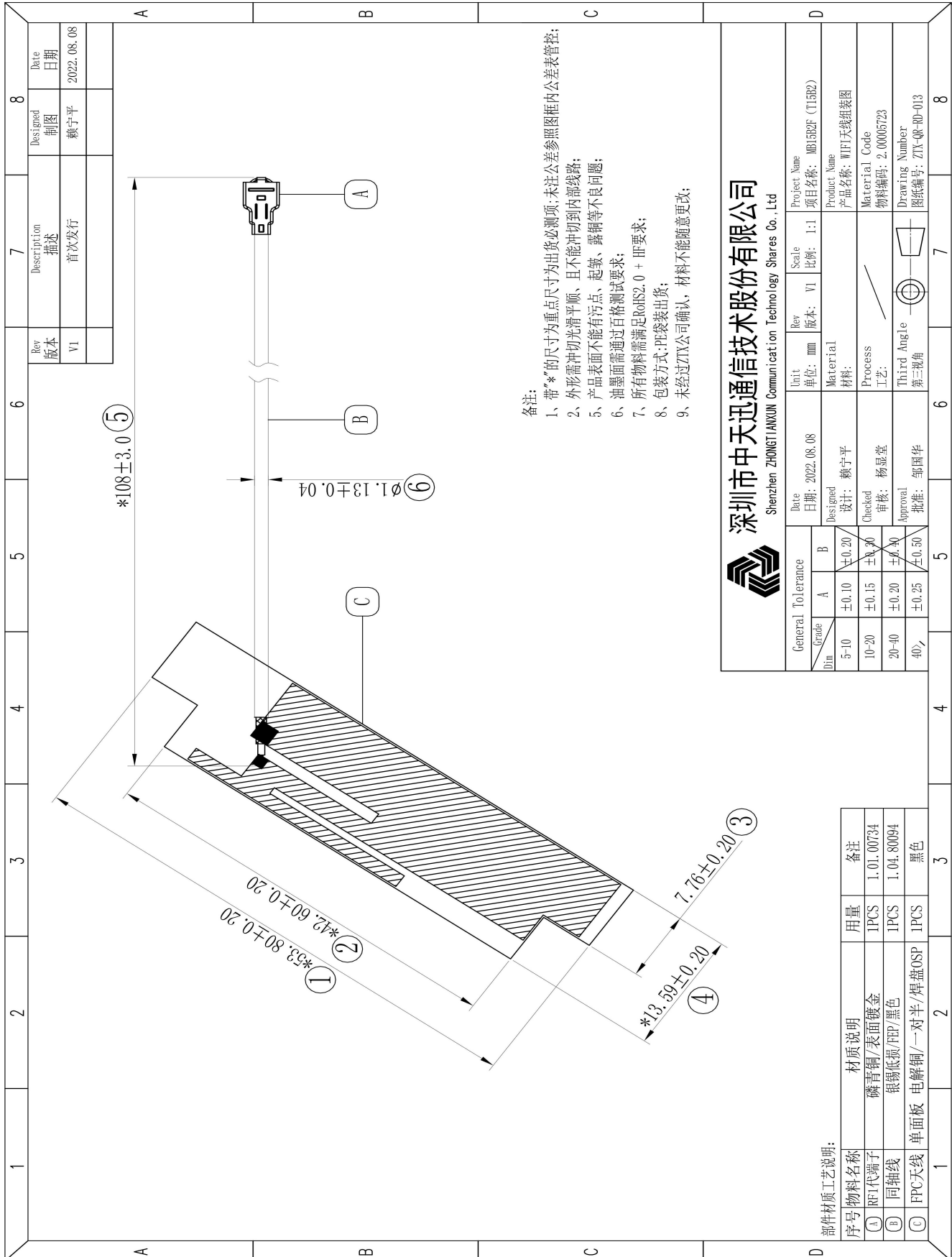
Ace P/N : MB15B2F WIFI 天线

Editor:

Page 3 of 11

## 1.Mechanical Specification

### 1-1 Mechanical Configuration(WIFI 天线组件)



# ANTENNA SPECIFICATION

CUS.P/N :MB15B2F WIFI 天线

Application Date:AUG,09, 2022

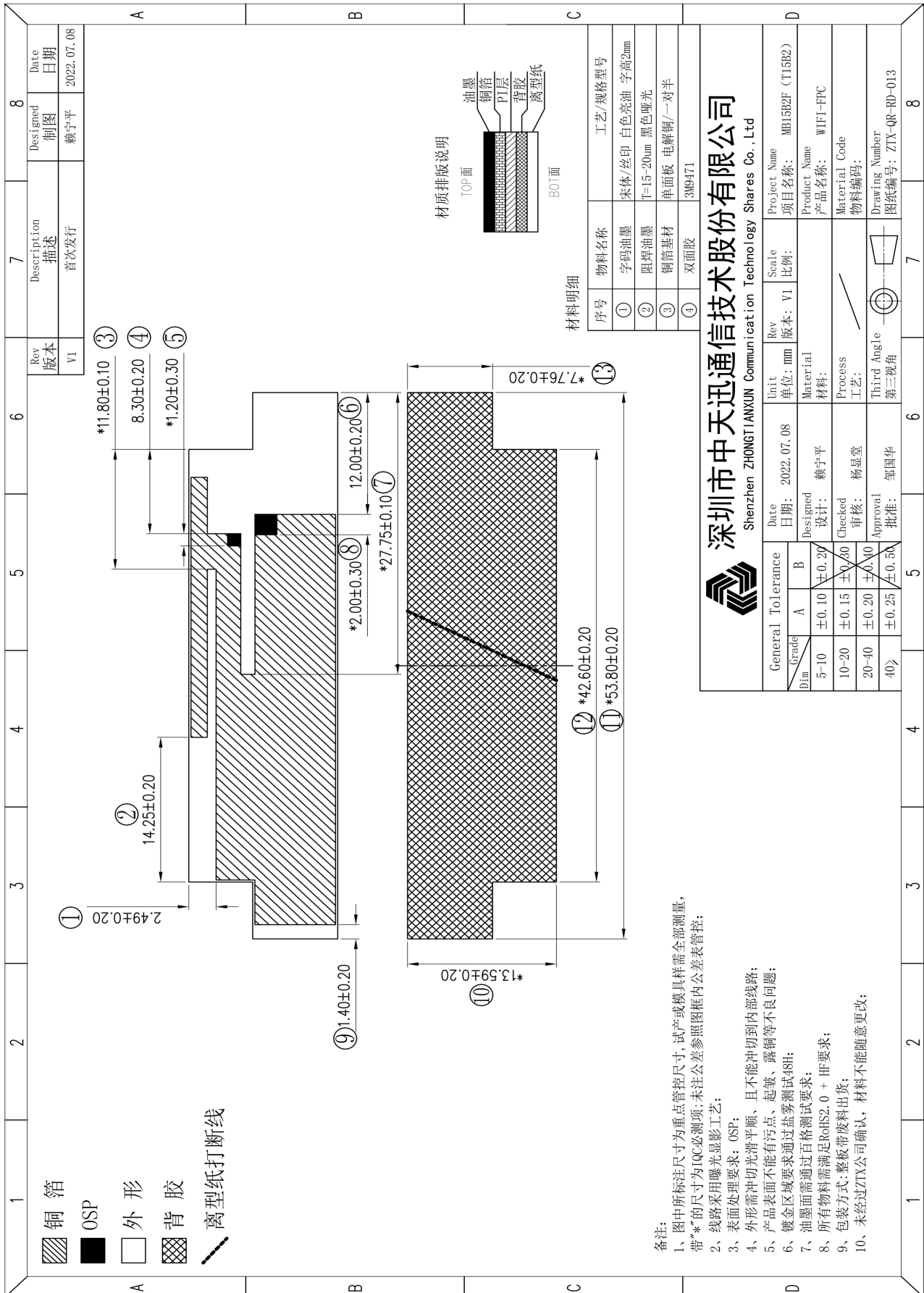
Rev: R:A0

Ace P/N : MB15B2F WIFI 天线

Editor:

Page 4 of 11

## 1-2 Mechanical Configuration(WIFI 天线)



- 备注:
- 图中所标注尺寸为重点管控尺寸, 试产或模具样需全部测量, 带"\*"的尺寸为IQC必测项, 未注公差参照图框内公差表管控;
  - 线路采用曝光显影工艺;
  - 表面处理要求: OSP;
  - 外形需冲切光滑平顺, 且不能冲切到内部线路;
  - 产品表面不能有污点、起皱、露铜等不良问题;
  - 镀金区域要求通过盐雾测试48h;
  - 油墨面需通过百格测试要求;
  - 所有物料需满足RoHS2.0 + HF要求;
  - 包装方式: 整板带废料出货;
  - 未经过ZTX公司确认, 材料不能随意更改;

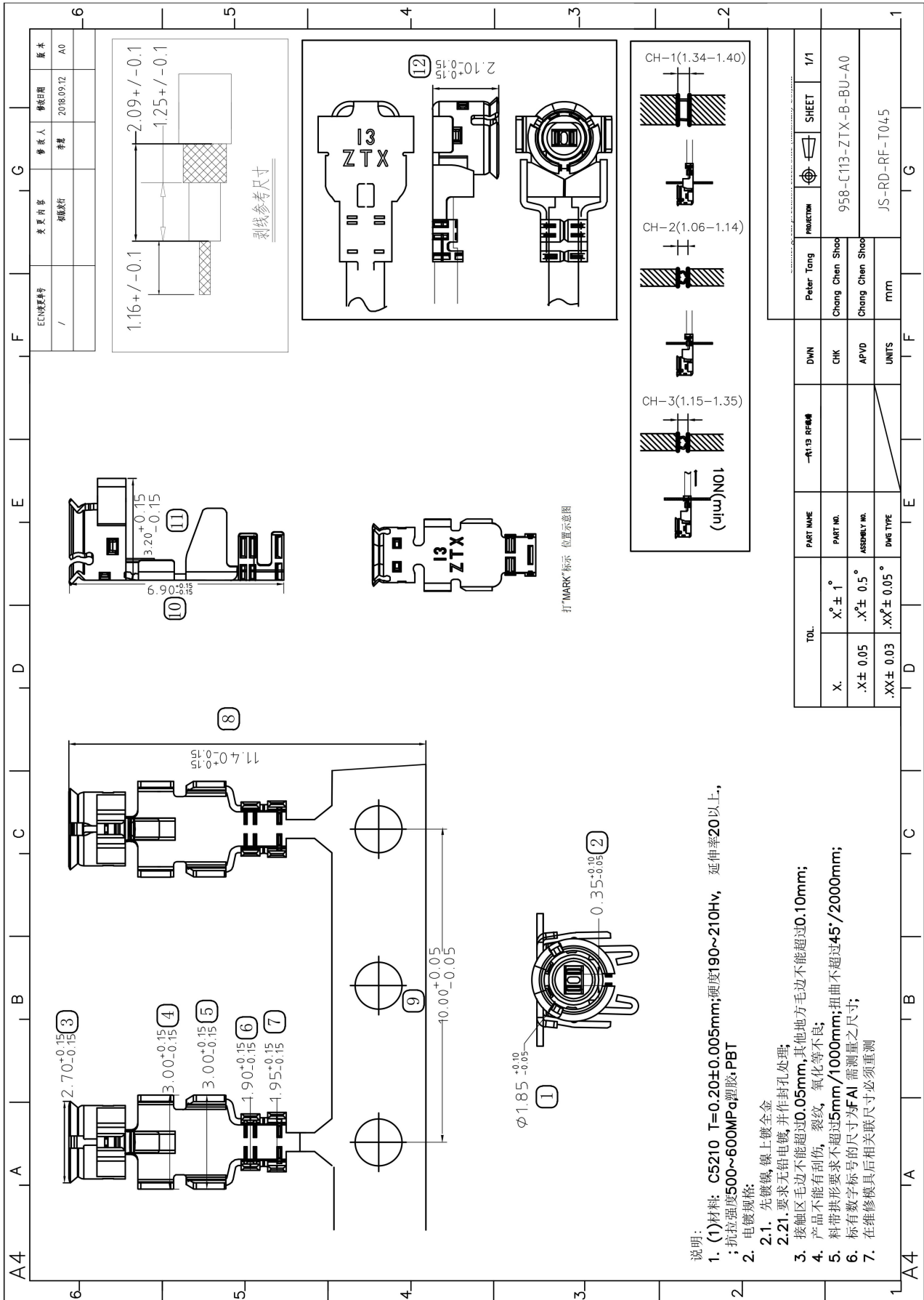
# ANTENNA SPECIFICATION

CUS.P/N :MB15B2F WIFI 天线  
Ace P/N : MB15B2F WIFI 天线

Application Date:AUG,09, 2022  
Editor:

Rev: R:A0  
Page 5 of 11

## 1-3 Mechanical Configuration(RF 端子)



说明:  
 1. (1)材料: C5210 T=0.20±0.005mm;硬度190~210HV, 延伸率20以上,  
 ;抗拉强度500~600MPa;塑胶,PBT  
 2. 电镀规格:  
 2.1. 先镀镍,镀上镀金  
 2.2. 要求无铅电镀,并作封孔处理;  
 3. 接触区毛边不能超过0.05mm,其他地方毛边不能超过0.10mm;  
 4. 产品不能有刮伤,裂纹,氧化等不良;  
 5. 料带拱形要求不超过5mm/1000mm;扭曲不超过45°/2000mm;  
 6. 标有数字标号的尺寸为FAI 需测量之尺寸;  
 7. 在维修模具后相关尺寸必须重测

# ANTENNA SPECIFICATION

CUS.P/N :MB15B2F WIFI 天线

Application Date:AUG,09, 2022

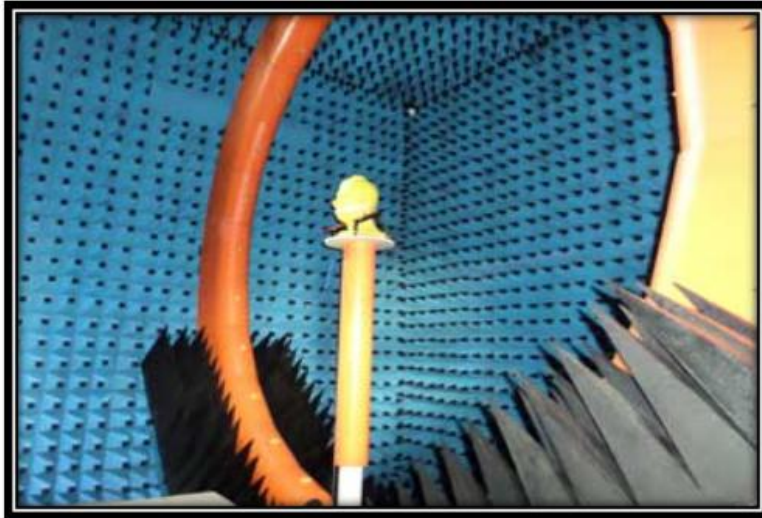
Rev: R:A0

Ace P/N : MB15B2F WIFI 天线

Editor:

Page 6 of 11

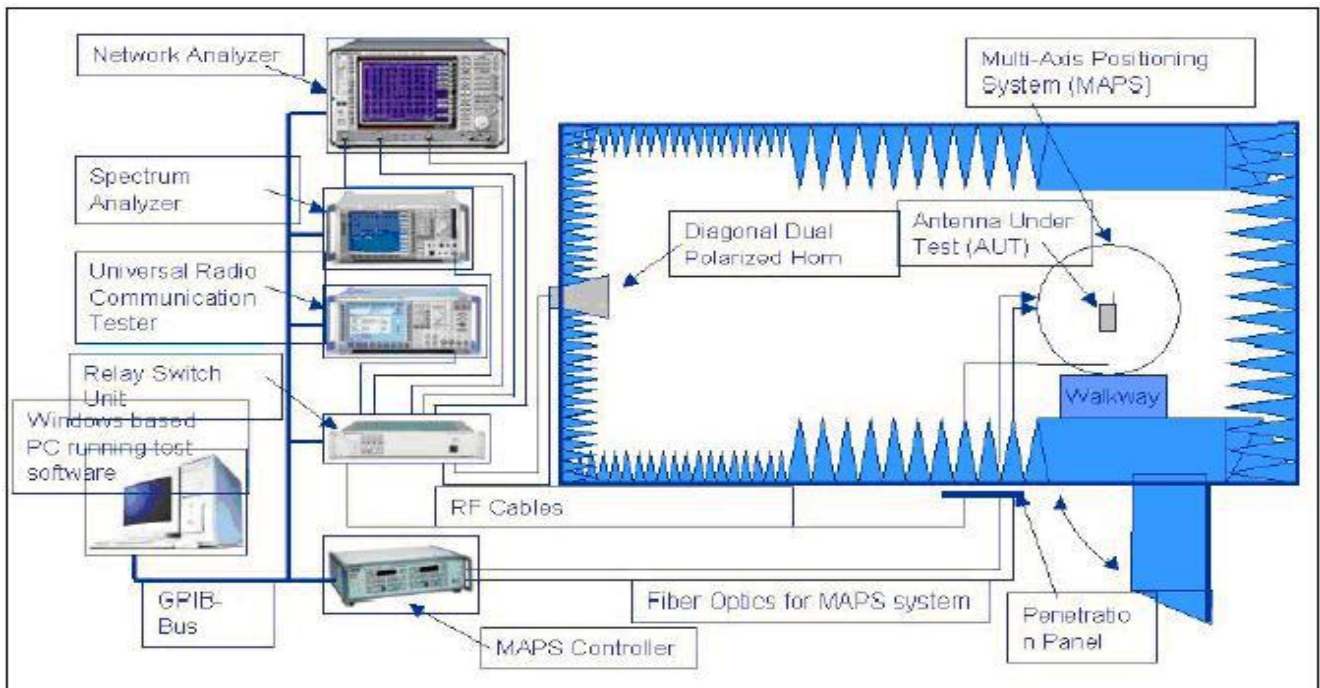
## 2. Test equipment



Owned 6 microwave dark room, equipped 2 sets world leading France Satimo SG24 OTA certification test systems (one in SHENZHEN, another one in Shanghai), ETS OTA Standard test system, Blue test reverberation test system which is High repeatability, high accuracy and high resolution. It can quickly provide accurate test reports, fully meet the CITA standards.

Testing range:

Support active, passive testing of GSM/CDMA/WCDMA/TD-SCDMA/LTE/WIFI/WLAN/WiMax/BT/GPS/MIMO/UWB within 0.4-6G.



# ANTENNA SPECIFICATION

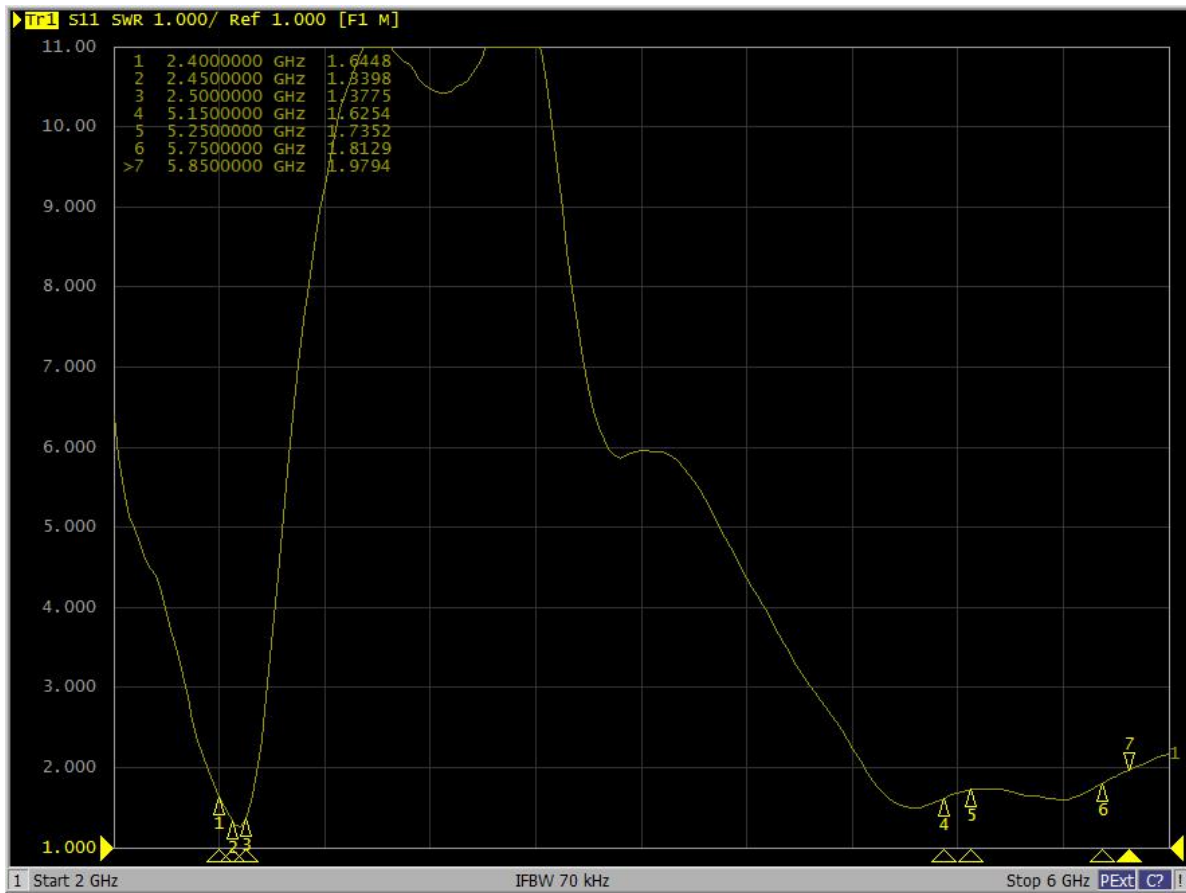
CUS.P/N :MB15B2F WIFI 天线  
Ace P/N : MB15B2F WIFI 天线

Application Date:AUG,09, 2022  
Editor:

Rev: R:A0  
Page 7 of 11

## 3.Antenna test data

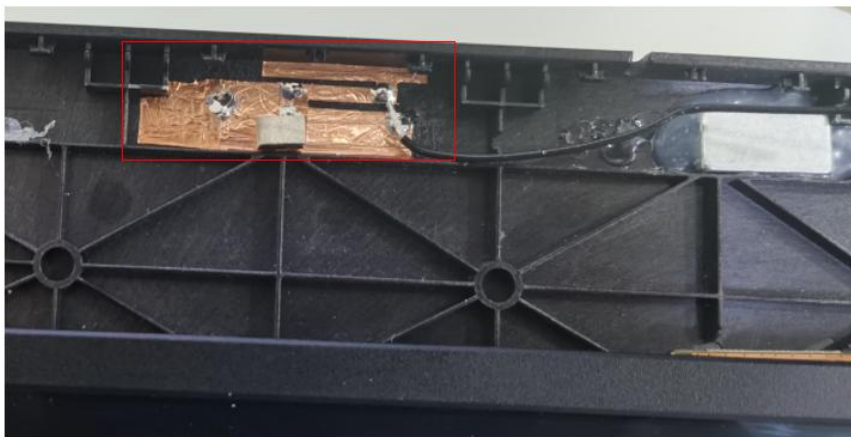
### 3-1 VSWR



### 3-2 No-source test data

Frequency (MHz)	2400	2450	2500	5150	5450	5850
Efficiency (dB)	-3.07	-3.12	-3.15	-3.58	-3.57	-3.67
Efficiency (%)	49	49	48	44	44	43
Gain (dBi)	4.19	4.64	4.71	4.03	3.47	4.15

### 3-3 Environment treatment



天线位置如图所示

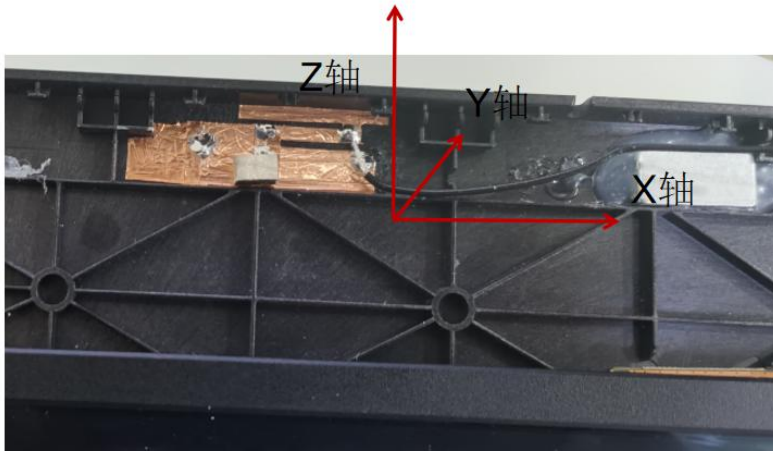
# ANTENNA SPECIFICATION

CUS.P/N :MB15B2F WIFI 天线  
Ace P/N : MB15B2F WIFI 天线

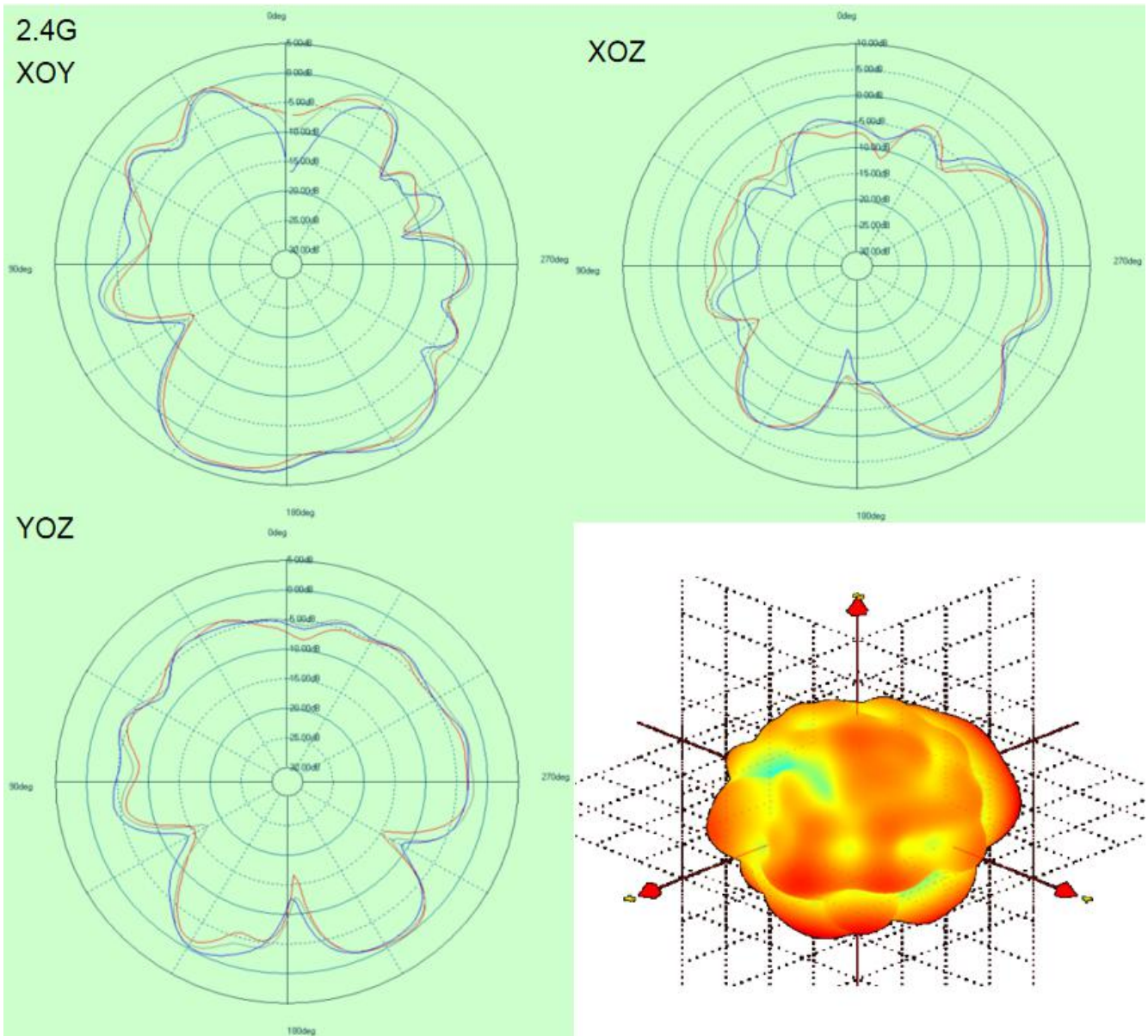
Application Date:AUG,09, 2022  
Editor:

Rev: R:A0  
Page 8 of 11

## 3-4 Directional drawing of horizontal plane of&3D radiation drawing



- X轴指平行于屏幕向右
- Y轴指垂直屏幕向后
- Z轴指垂直向上



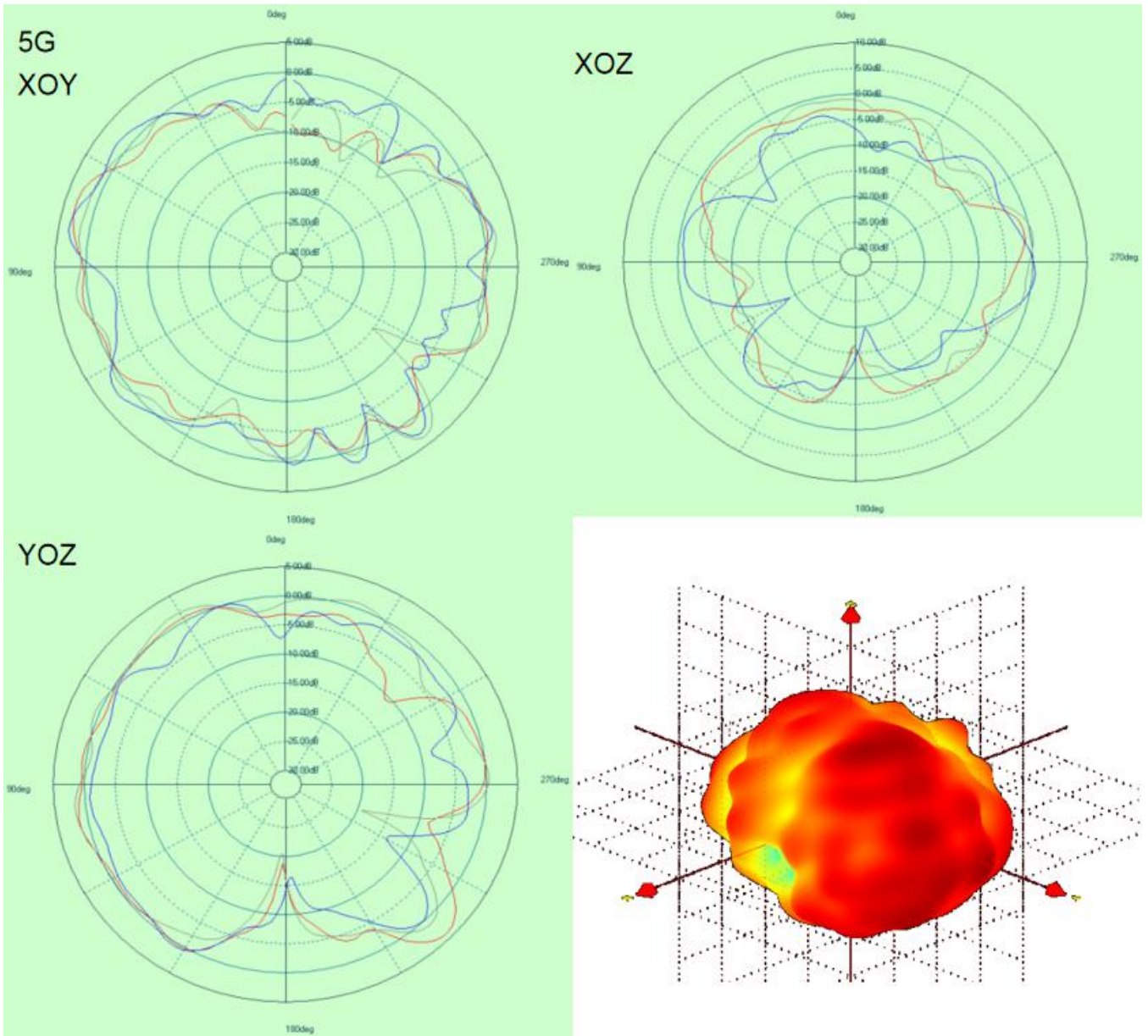


# ANTENNA SPECIFICATION

CUS.P/N :MB15B2F WIFI 天线  
Ace P/N : MB15B2F WIFI 天线

Application Date:AUG,09, 2022  
Editor:

Rev: R:A0  
Page 9 of 11



## 3-5 实物图片



# ANTENNA SPECIFICATION

CUS.P/N :MB15B2F WIFI 天线

Application Date:AUG,09, 2022

Rev: R:A0

Ace P/N : MB15B2F WIFI 天线

Editor:

Page 10 of 11

## 4.Wire specification

单位/Unit:mm

项目/Item		详细资料/Details
导体/Conductor	材料/Material	镀银铜线/Silver plated Copper
	构成(根/mm)/Composition(No./mm)	7/0.08±0.005
	标称直径/NOM. O. D	0.24±0.01
绝缘层/Insulation	材料/Material	聚全氟乙丙烯/FEP
	标称外径/NOM. O. D	0.73±0.03
	颜色/Color	Natural
包带/Tape	材料/Material	Copper PET Tape
编织层/Braid Shield	材料/Material	镀锡铜线 Tinned copper
	构成/Composition	16/4/0.05±0.005
	遮蔽率/ Shielding rate	≥90%
	标称直径/NOM. O. D	0.98±0.03
护套/Jacket	材料/Material	聚全氟乙丙烯/FEP
	标称外径/NOM. O. D	1.15±0.05
	颜色/Color	/

## 3. 电气特性(20℃时)/Electrical Properties(at 20℃)

项目/Item	单位/Unit	详细资料/Details	
电容/Capacitance	pF/m	98	
特性阻抗/Conductor Resistance	Ω	50±3.0	
耐压强度/Dielectric Strength	A. C V/lmin	1000	
最大工作频率/Max. oper. frequency	MHz	6000	
抗拉强度/Tensile strength	kgf/mm <sup>2</sup>	1.76	
工作温度范围/Operating Temp.	℃	-55to200	
衰减/Attenuation	/	频率 /Frequency (MHz)	dB/1m
		1000	≤1.75
		2000	≤2.57
		3000	≤3.17
		4000	≤3.6
		5000	≤4.24
6000	≤4.7		
驻波比/Standing wave(0-6GHz)	/	≤1.4	



# ANTENNA SPECIFICATION

CUS.P/N :MB15B2F WIFI 天线

Application Date:AUG,09, 2022

Rev: R:A0

Ace P/N : MB15B2F WIFI 天线

Editor:

Page 11 of 11

## 5.Environment Characteristic

NO.	ITEM	TEST CONDITION	SPECIFICATION
5-1	High Temperature/Humidity Storage Test(non operating)	1.Temperature: $+70 \pm 2^{\circ}\text{C}$ 2.Humidity: $90\sim 95\%RH$ 3.Time: 48hrs	No material deformation is allowed.
5-2	Low Temperature/Humidity Storage Test(non operating)	1.Temperature: $-30 \pm 2^{\circ}\text{C}$ 2.Humidity: $0\%RH$ 3.Time:48hrs	The VSWR, Gain, Radiation Pattern must be met specifications after these test.

