



上海增信电子有限公司

ShangHai Signal Plus Technology Co.,Ltd.

规格承认书  
SPECIFICATION FOR APPROVAL

日期  
DATE: 2024.01.23

版本  
REV.: A

客户  
CUSTOMER: AsiaTelco Technologies Co.

客户料号  
CUSTOMER P/N:

品名  
PART NAME: 内置2.4G WIFI FPC天线 for BC20

供方料号  
SUPPLIER P/N: 6001F00397

送样日期Date: 送样数量Q'TY: Pcs

客户确认CUSTOMER APPROVED BY		
核准 Approved by	审核 Checked by	确认 Confirm by

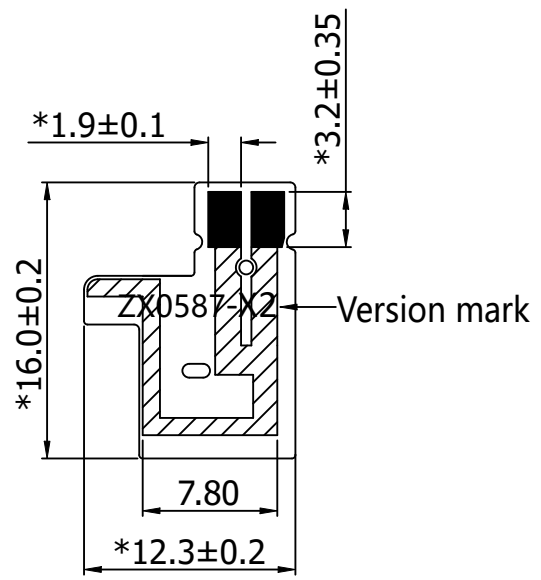
供方确认SUPPLIER SIGNATURE		
核准 Approved by	审核 Checked by	拟制 Prepared by
Jack		andy

ZX-QT-RD-0011-A1

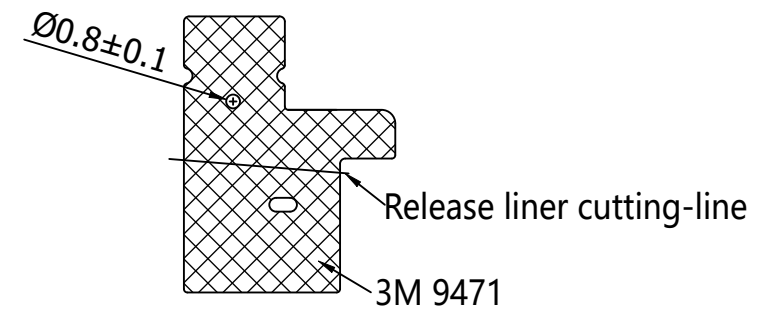
Add:上海市徐汇区桂箐路69号30栋603室 Tel:021-54266190 Fax:021-54266191

Manufacturer: Signal Plus Technology Co.,Ltd  
Add: 603-605,Building 30,No.69 Gui Qing Road, Xuhui District, Shanghai  
PR China

REV	DATE	DESCRIPTION
X1	01/23-2024	New Issue



Front view



Back view

- Gold Finger
- Pattern
- Adhesive

**NOTE:**  
 1. Antenna appearance :Black solder resist ink;  
 2. The Antenna structure: PI(0.5mil)+Cu(0.5 oz)+3M 9471 Adhesive;  
 3. The thickness of Gold-Plated  $\geq 0.025\mu\text{m}$ ;  
 4. The Gold Finger complied with the 48H salt spray test;  
 5. The appearance can not be creased or scratched, etc;  
 6. The antenna complied with ROHS 2.0 ;  
 7. Important dimensions marked with "\*" , and () for reference.

1	2.4G Antenna	FPC:PI+Cu+3M9471;Color:Black	1	502-1-0587-X2
NO	DESCRIPTION		Q*TY	REMARK

CUSTOMER'S SINGATURE	XXX.	±2.0	APPROVED	CUSTOMER:		
	XX.	±1.0		PART NO:		
	X.	±0.5	CHECKED	PART NAME: 2.4G WIFI for BC20		
	.X	±0.2		Z&X P/NO: 6001F00397		
	.XX	±0.1	DRAWING	REV	UNIT	FILE:
			X1	mm	SHEET: 1/1	





## Antenna Test Report

BC20

Tel:021-54266190 Fax:021-54266191 Web:[www.zxsignal.com](http://www.zxsignal.com)

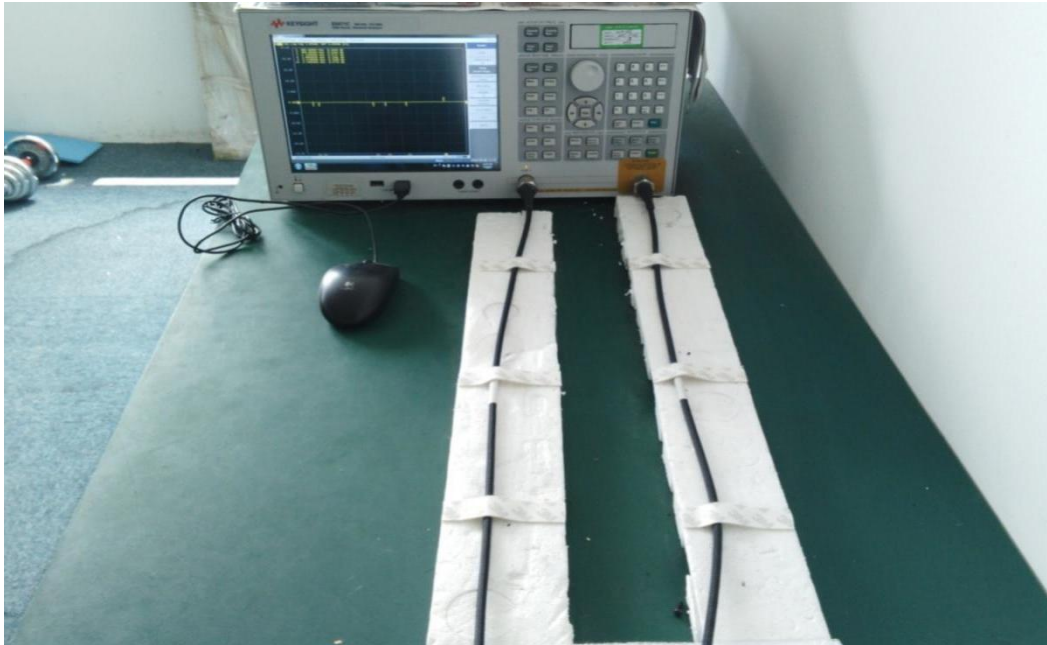
Manufacturer: Signal Plus Technology Co.,Ltd  
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PR China

## 1. RF Fixture Experiment

### 1.1 Test Setup

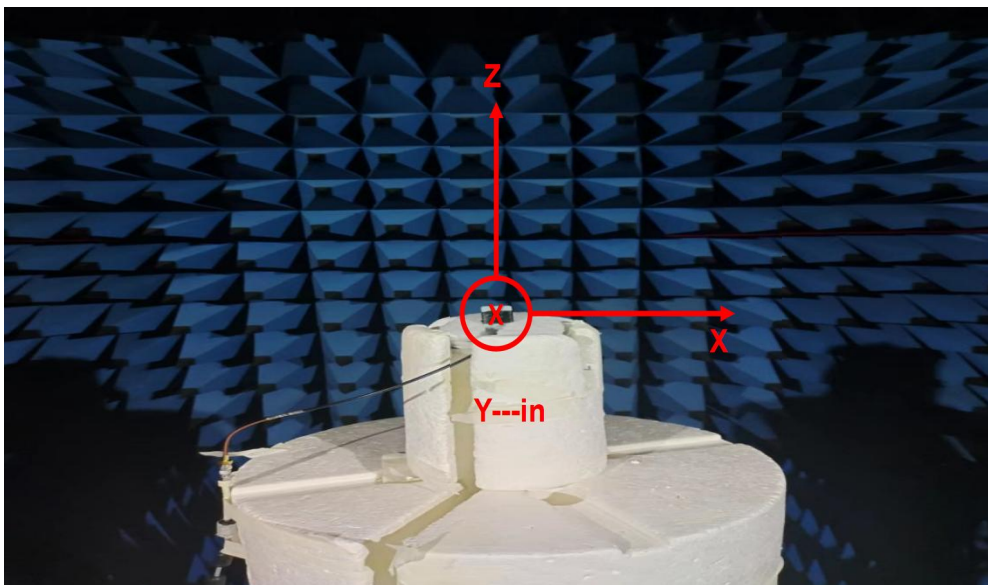
#### 1.1.1 VNA Test Setup

VSWR and Return Loss measurements ( $S_{11}$ ) were performed using an Keysight E5071C Network Analyzer. The isolation between antennas is also tested. The testing was performed with apparatus in free space.



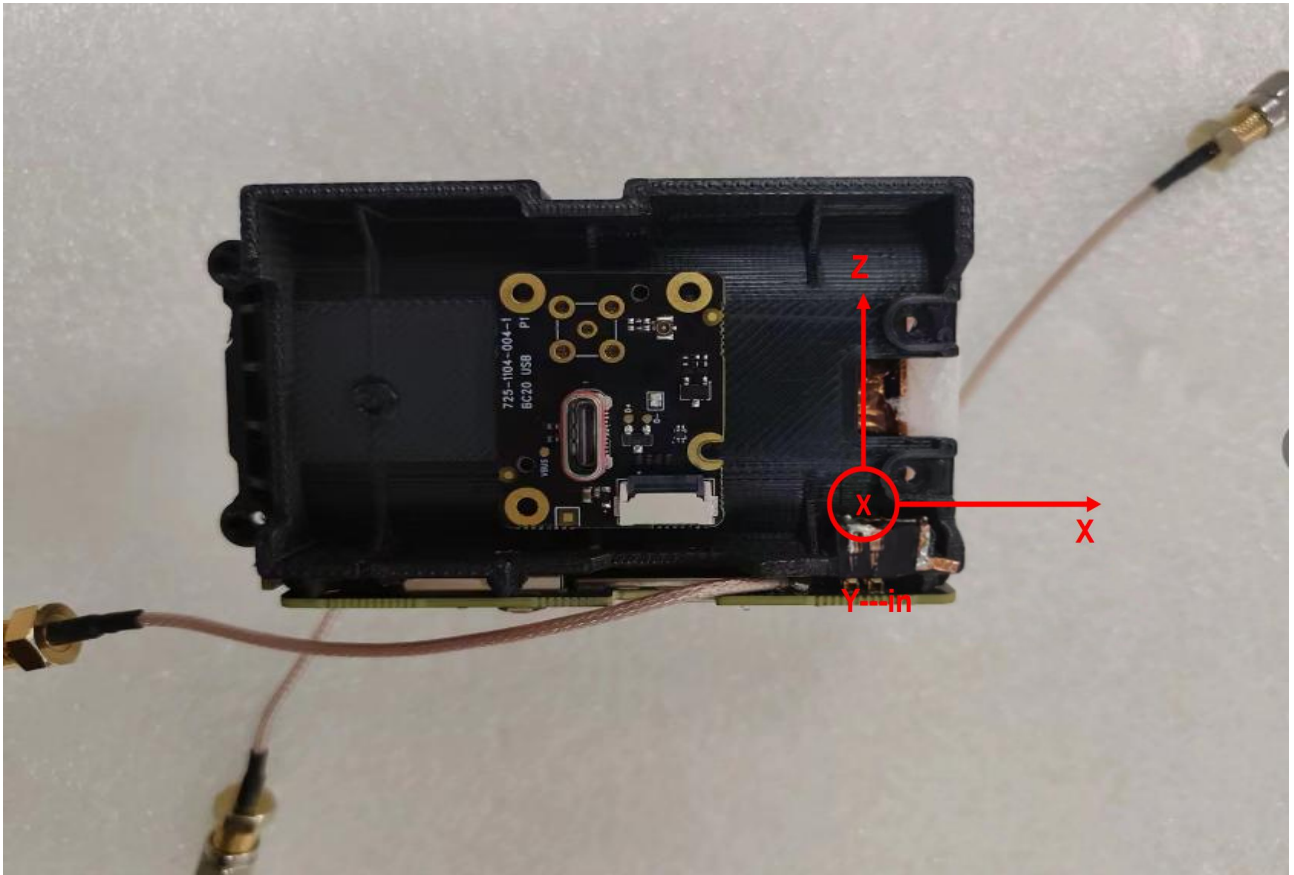
#### 1.1.2 Anechoic Chamber Test Setup

The gain of the antenna was measured in the anechoic chamber. The chamber provides less than  $-30$  dB reflectivity from 400 MHz through 6 GHz. The chamber size is: 7m\*4m\*3m. The measurement results are calibrated using a leaky wave horn standard. We can measure the antenna gain and efficiency accurately.

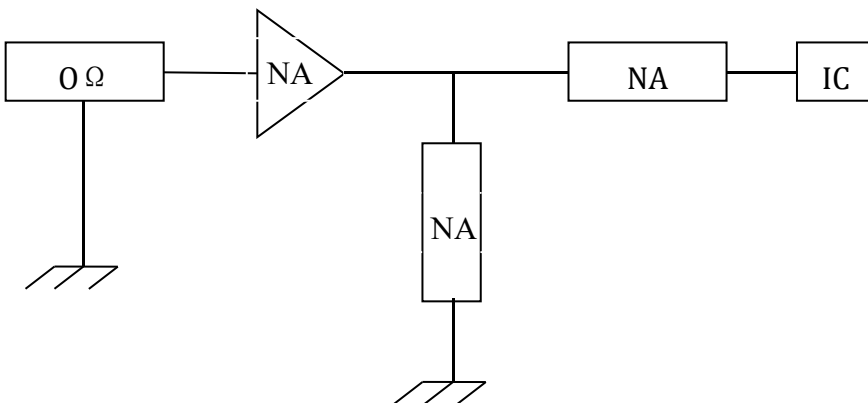


## 2. Antenna Solution

ANT-WIFI



## 3. RF matching circuit for different antennas



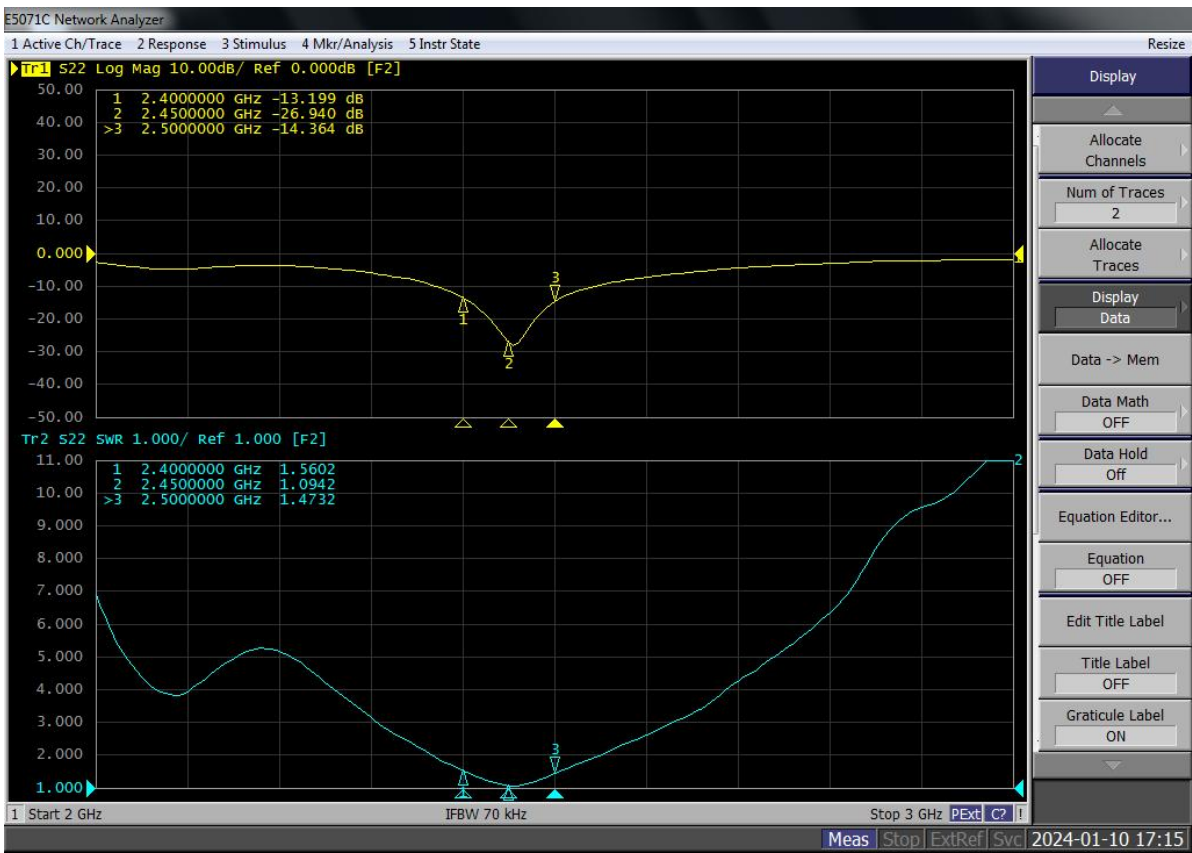
# Data Preview

## ANT-WIFI

Freq.(MHz)	2400	2450	2500
VSWR	1.56	1.09	1.47
Gain(dBi)	3.36	3.11	3.83
Eff. (%)	61.1	63.3	60.5

# S11

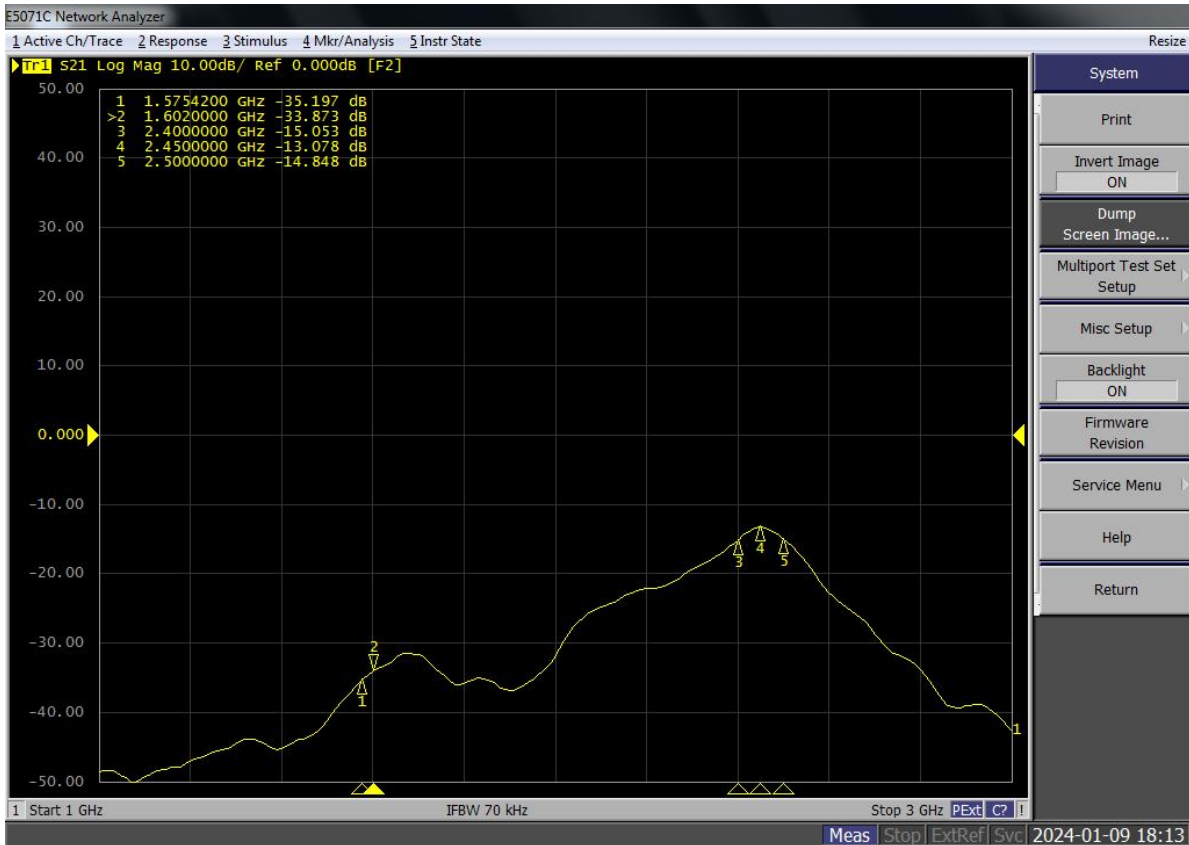
## ANT-WIFI



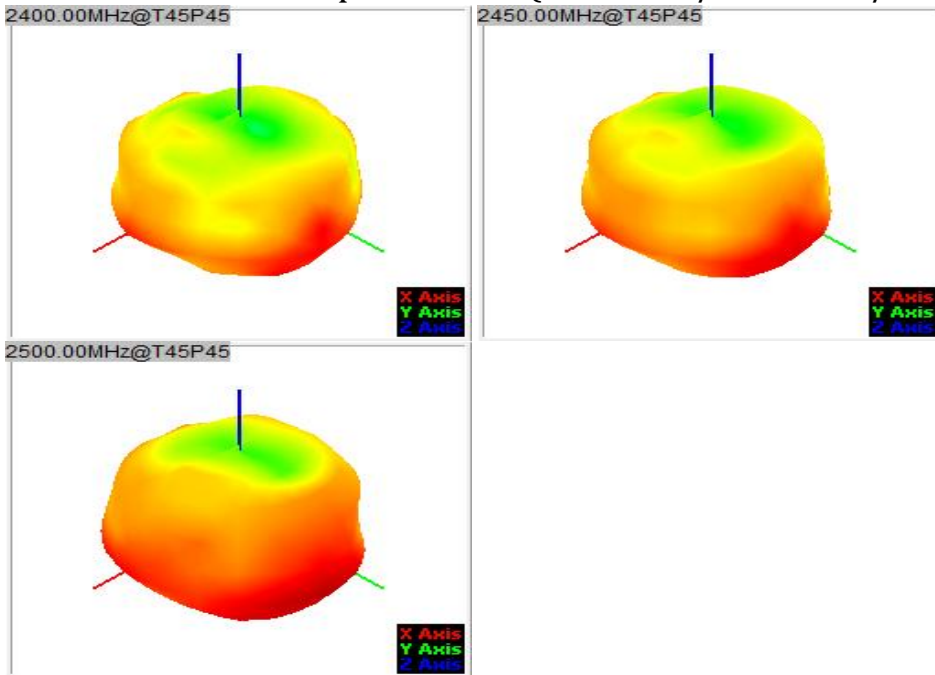
# S21 WIFI&GPS



# WIFI&BT



### ANT-WIFI-Radiation patterns:3D(2400MHz/2450MHz/2500MHz)



### ANT-WIFI-Radiation patterns:2D (2400MHz/2450MHz/2500MHz)

