



# Shen zhen Golden-Resource Electronic Co.,Ltd.

## SPECIFICATION FOR APPROVAL

Date 2023/08/02

File No 23080201

Revision 1.0

CUSTOMER : Shenzhen Suichen Technology Co.,Ltd

CUSTOMER NO: 1.SD.3711.700172/1.SD.3711.700173/1.SD.3711.700174

PART NAME: WiFi 1 Antenna / WiFi 2 Antenna / BT Antenna

Antenna type: FPC Antenna

SUPPLIER NO: YJWO1.029.064.301A/YJWO1.029.064.302A/YJWO1.029.064.303A

Date:

Q"TY: PCS

### CUSTOMER APPROVED BY

APPROVAL

CHIEF

SUPERVISOR

### SUPPLIER SIGNATURE

APPROVAL

CHECK

DESIGN

ChenGuoqiang

XieLi

ChenXingcheng

YJ-RD-F04-A

add: 17A-03A, Block B, Nanxian Commercial Plaza, Meilong Road, Longhua New District, Shenzhen



# Spec Item

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| 11      | N/A                   | N/A               | N/A       |
| 12      | -                     | -                 | -         |
| 13      | -                     | -                 | -         |

CUSTOMER  
PART NO

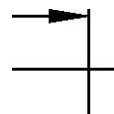
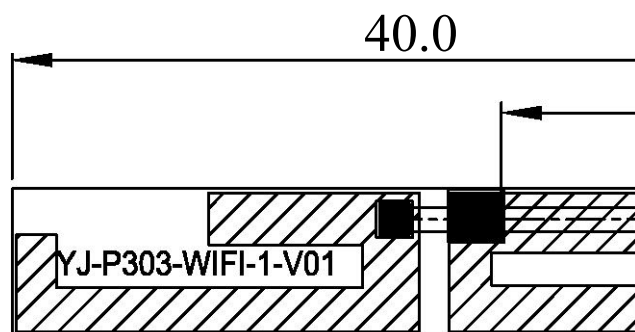
β  
LW

DESCRIPTION  
Initial Issue  
Modify Line Length And Color

DATE  
2021-03-23  
2021-04-09

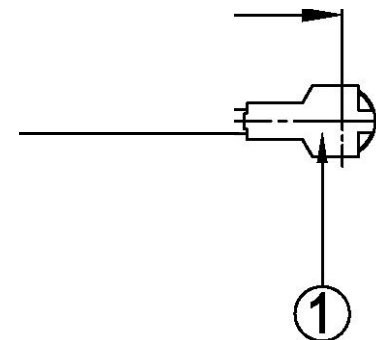
EI

E



150.0 ± 4.0

2



1

3

回

日

|     |                |               |               |               |
|-----|----------------|---------------|---------------|---------------|
| 3   | FPCB           | 40.0*7.3MM    | FPCB          | FPC1000XA.P01 |
| 2   | Coaxial Cable  | Coaxial Cable | Coaxial Cable | Coaxial Cable |
|     | Mini Connector | Au Plated 3代  | Cu            | TER1000XA.P01 |
| NOI | PART NAME      | DESCRIPTION   | Material      | Pa 此 Number   |

Q.TY

Shen zhen Golden-Resource Electronic Co.,Ltd.

PARTNAME: WiFi 1 Antenna

PART NO.: YJW01.029.064.301A

DATE: 2021-04-09

APPROVED BY

CHECKED BY

DESIGNED BY

G 再司

Tolerance

YinTao

LiaoMingyu

LvSenhua

SCALE: 1/1

REVISION: A

UNITS: mm

X.X ±0.50

X.XX±0.15

X" ±

RoHS

CUSTOMER  
PART NO

DESCRIPTION

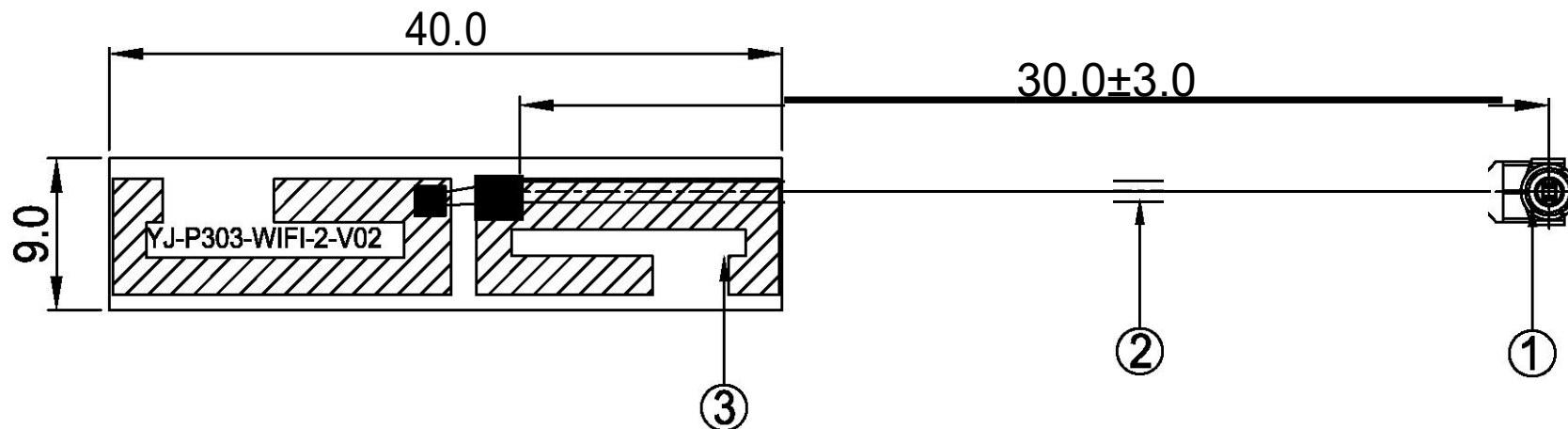
DATE

Initial Issue

2021-03-23

Modify Line Colo

2021-04-09



Shen zhen Golden-Resource Electronic Co.,Ltd.

PART NAME: WiFi 2 Antenna

PARTNO.: YJW01 III 9.064.302A

DATE: 2021-04-09

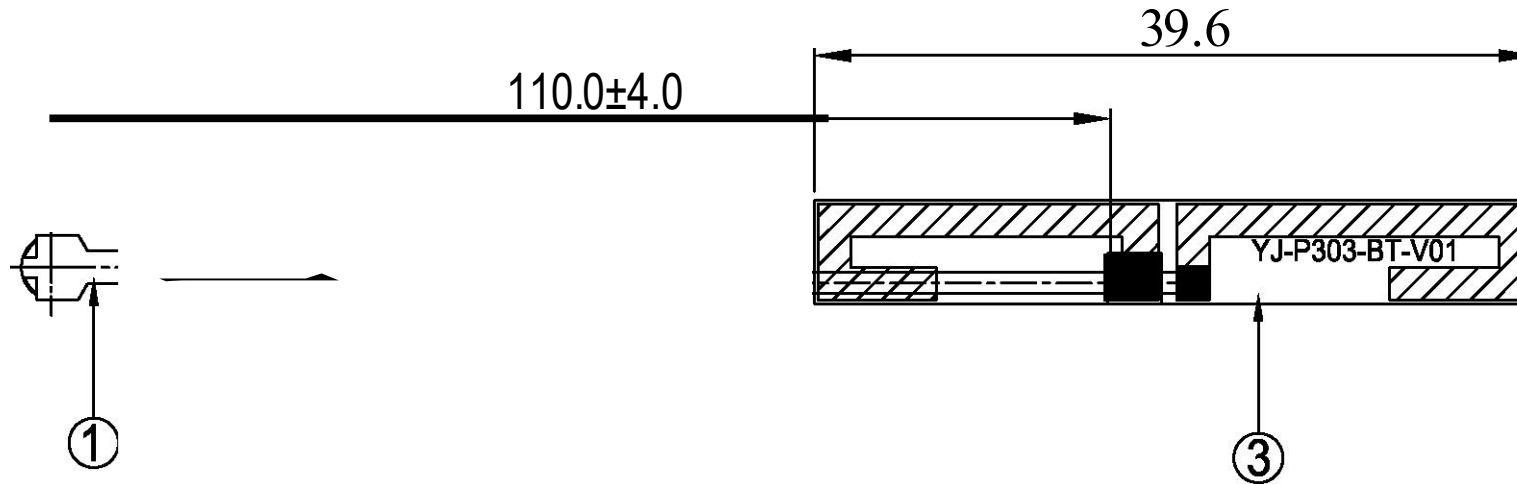
| APPROVED BY | CHECKED BY | DESIGNED BY |
|-------------|------------|-------------|
| YinTao      | LiaoMingyu | LvSenhua    |

|             |
|-------------|
| @ 司         |
| UNIT mm     |
| SCALE: 1/1  |
| REVISION: A |

File name  
XX ±  
0.50  
X.XX±0.15  
X' ± 3'

| 3    | FPCB           | 40.0*9.0MM     | FPCB     | FPC1000XA.P01 |
|------|----------------|----------------|----------|---------------|
| 2    | Coaxial Cable  | O.D.0.81 Black | O.D.0.81 | GOA1000XA.P01 |
|      | Mini Connector | Au Plated 3代   | Cu       | TER1000XA.P01 |
| NO I | PART NAME      | DESCRIPTION    | Material | Part Number   |

RoHS

CUSTOMER  
PART NOB  
WDESCRIPTION  
Initial Issue  
Modify Line ColorDATE  
2021-03-23  
2021-04-09

B

|      |                 |                |          |               |      |
|------|-----------------|----------------|----------|---------------|------|
| AL 3 | FPCB            | 39.6*5.7MM     | FPCB     | FPC1000XA.P01 |      |
| 2    | Co 创 al Cable   | 0.D.0.81 Black | 0.D.0.81 | COA1000XA.P01 |      |
|      | Mini Connecto r | Au Pl 鍍 d 3 代  | Cu       | TER1000XA.P01 |      |
| NO   | PARTNAME        | DESCRIPTION    | Material | Part Number   | Q.TY |

Shen zhen Golden-Resource Electronic Co.,Ltd.

PART NAME: BT Antenna

PART NO.: YJW01.029.064.303A

DATE:2021-04-09

APPROVED BY

CHECKED BY

DESIGNED BY

@ 司

Tolerance  
X.X

YinTao

LiaoMingy

LvSenhua

Tolerance  
X.X

SCALE: 1月

±0.50

X.XX ±0.15

X.XX ±0.15

X.XX ±0.15

言



# Antenna Specification **WiFi1**

## Electrical Properties

|              |                                            |
|--------------|--------------------------------------------|
| Frequency    | 2.4-2.5GHz<br>5.15-5.85GHz                 |
| Impedance    | 50 Ohm Nominal                             |
| V.S.W.R      | 2.0 Max@2.4-2.5GHz<br>3.0 Max@5.15-5.85GHz |
| Gain         | 1.6dBi@2.4-2.5GHz<br>2.1dBi@5.15-5.85GHz   |
| Radiation    | Omni-directional                           |
| Polarization | Linear                                     |

## Physical Properties

|                         |                   |
|-------------------------|-------------------|
| Connector               | 3 Generation IPEX |
| Cable Type              | O.D.0.81mm        |
| Cable Length            | 150mm             |
| Cable Color             | Black             |
| Operating Temp.         | -40 ~ +85 °C      |
| Storage Temp / Humidity | 25±5°C / <70%     |

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# Antenna Specification **WiFi2**

## Electrical Properties

|              |                                            |
|--------------|--------------------------------------------|
| Frequency    | 2.4-2.5GHz<br>5.15-5.85GHz                 |
| Impedance    | 50 Ohm Nominal                             |
| V.S.W.R      | 3.0 Max@2.4-2.5GHz<br>4.5 Max@5.15-5.85GHz |
| Gain         | 1.8dBi@2.4-2.5GHz<br>2.3dBi@5.15-5.85GHz   |
| Radiation    | Omni-directional                           |
| Polarization | Linear                                     |

## Physical Properties

|                         |                   |
|-------------------------|-------------------|
| Connector               | 3 Generation IPEX |
| Cable Type              | O.D.0.81mm        |
| Cable Length            | 30mm              |
| Cable Color             | Black             |
| Operating Temp.         | -40 ~ +85 °C      |
| Storage Temp / Humidity | 25±5°C / <70%     |

add: 17A-03A, Block B, Nanxian Commercial Plaza, Meilong Road, Longhua New District, Shenzhen



# Antenna Specification **BT**

## Electrical Properties

|              |                  |
|--------------|------------------|
| Frequency    | 2.4-2.5GHz       |
| Impedance    | 50 Ohm Nominal   |
| V.S.W.R      | 2.0 Max          |
| Gain         | 2.3dBi           |
| Radiation    | Omni-directional |
| Polarization | Linear           |

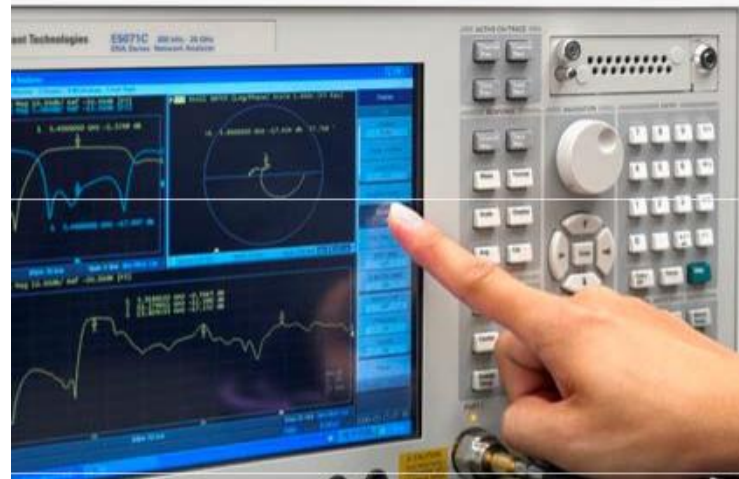
## Physical Properties

|                         |                   |
|-------------------------|-------------------|
| Connector               | 3 Generation IPEX |
| Cable Type              | O.D.0.81mm        |
| Cable Length            | 110mm             |
| Cable Color             | Black             |
| Operating Temp.         | -40 ~ +85 °C      |
| Storage Temp / Humidity | 25±5°C / <70%     |

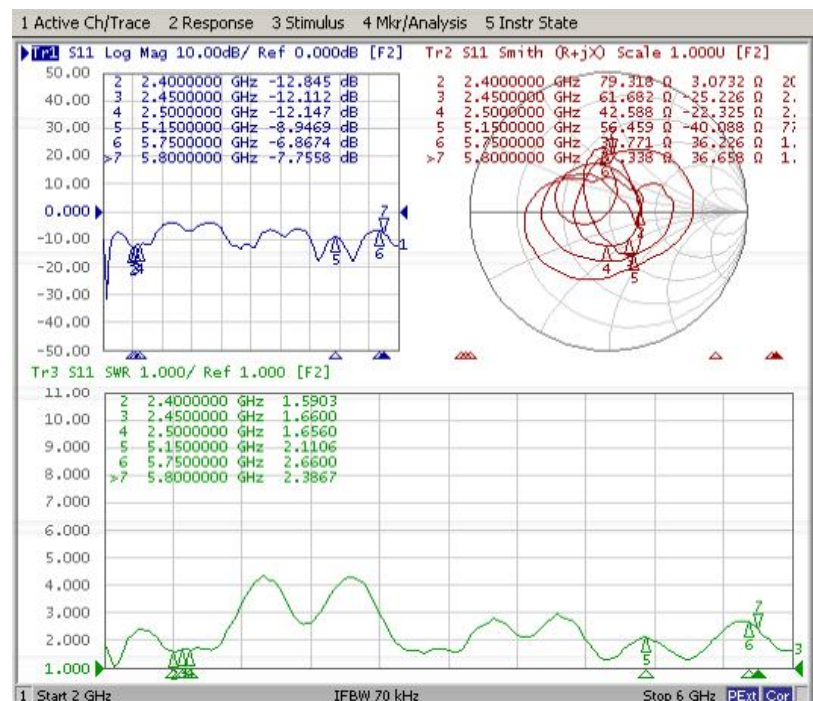
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# Agilent E5071B

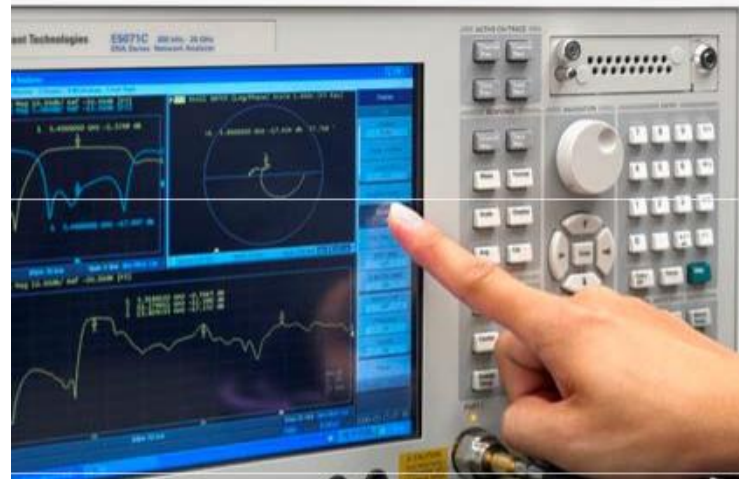


## S Parameter Test // WIFI(1) Antenna

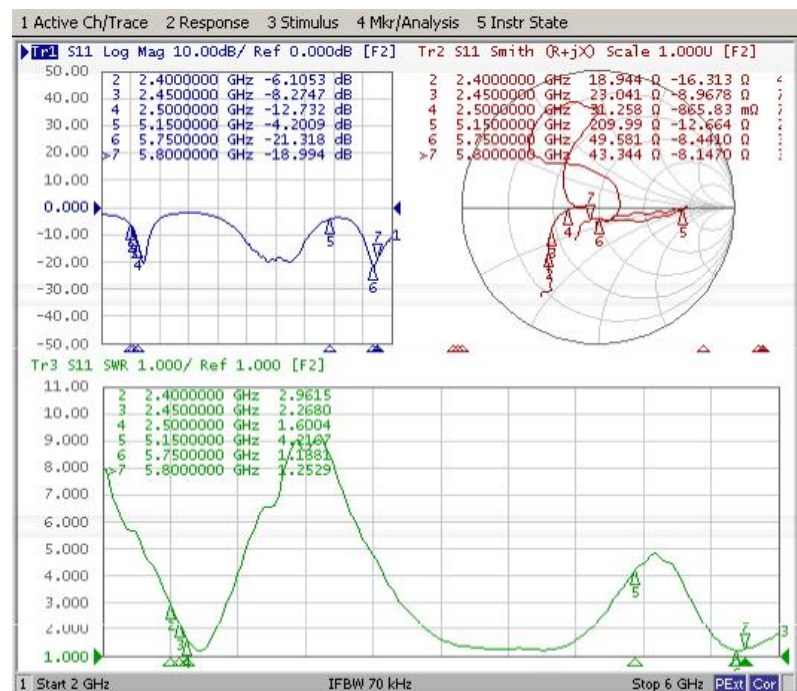




## Agilent E5071B

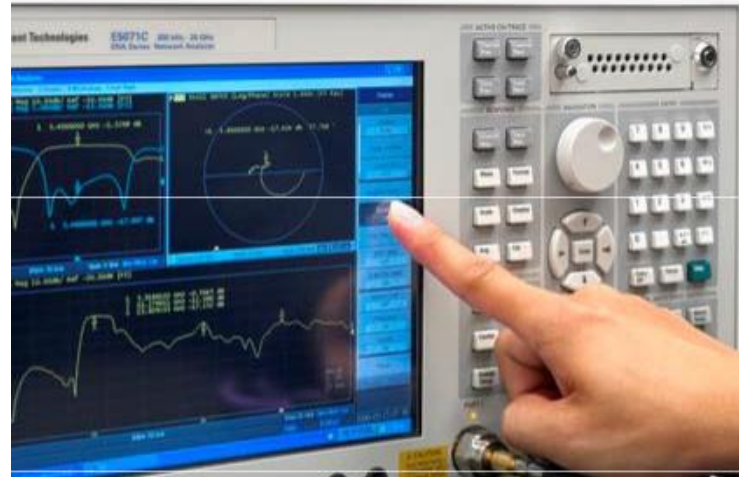


## S Parameter Test // WIFI(2) Antenna

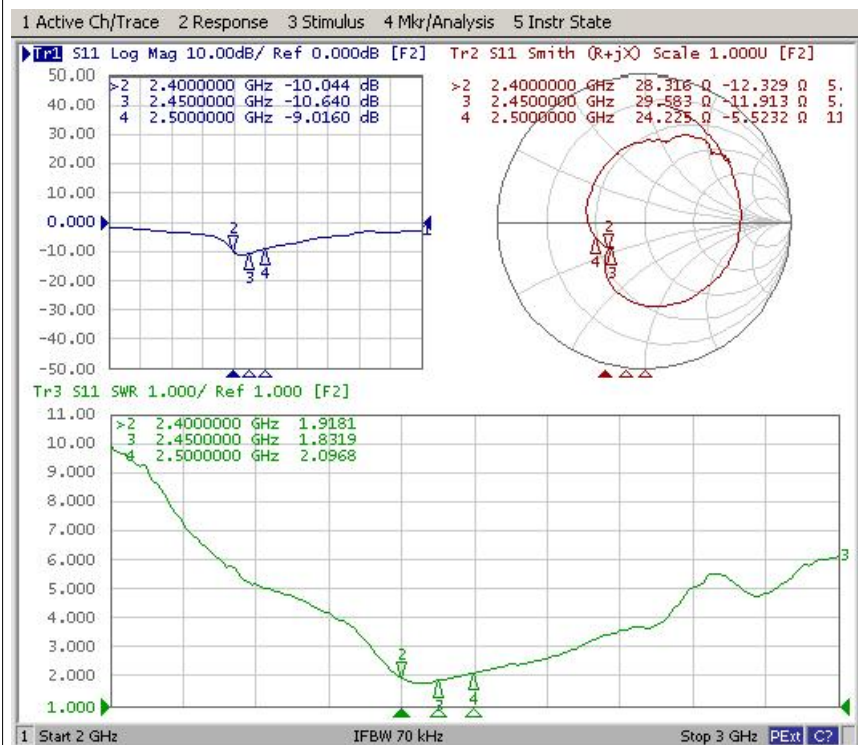




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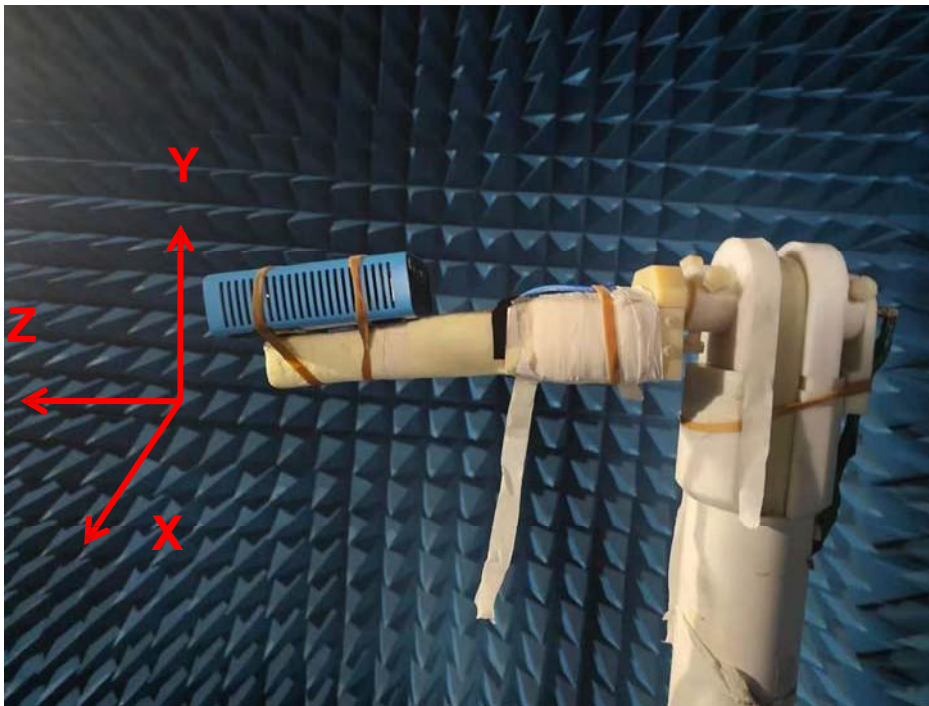
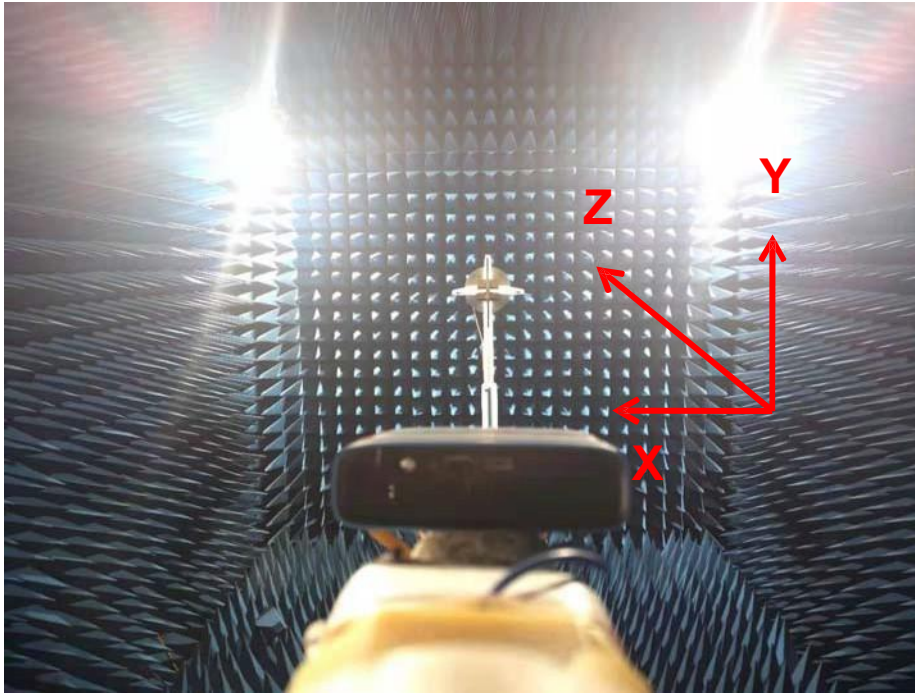


# S Parameter Test // BT Antenna





## *Antenna Passive Test*



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| Passive Test For WIFI(1)2.4G |             |              |               |
|------------------------------|-------------|--------------|---------------|
| Freq<br>(MHz)                | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
| 2400                         | 47.3        | -3.3         | 1.2           |
| 2410                         | 48.5        | -3.1         | 1.3           |
| 2420                         | 48.5        | -3.1         | 1.4           |
| 2430                         | 50.0        | -3.0         | 1.5           |
| 2440                         | 50.3        | -3.0         | 1.5           |
| 2450                         | 52.5        | -2.8         | 1.6           |
| 2460                         | 52.7        | -2.8         | 1.6           |
| 2470                         | 51.7        | -2.9         | 1.6           |
| 2480                         | 51.4        | -2.9         | 1.6           |
| 2490                         | 48.6        | -3.1         | 1.4           |
| 2500                         | 48.5        | -3.1         | 1.4           |

add: 17A-03A, Block B, Nanxian Commercial Plaza, Meilong Road, Longhua New District, Shenzhen



### Passive Test For WiFi (1) 5.8G

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 5150          | 34.4        | -4.6         | 0.1           |
| 5200          | 36.3        | -4.4         | 0.2           |
| 5250          | 37.2        | -4.3         | 0.5           |
| 5300          | 39.9        | -4.0         | 1.7           |
| 5350          | 40.3        | -3.9         | 1.8           |
| 5400          | 41.2        | -3.9         | 2.1           |
| 5450          | 40.3        | -3.9         | 1.9           |
| 5500          | 39.1        | -4.1         | 1.5           |
| 5550          | 38.5        | -4.1         | 0.9           |
| 5600          | 35.7        | -4.5         | 0.1           |
| 5650          | 34.9        | -4.6         | 0.1           |
| 5700          | 34.4        | -4.6         | 0.1           |
| 5750          | 34.9        | -4.6         | 0.1           |
| 5800          | 35.7        | -4.5         | 0.1           |
| 5850          | 36.3        | -4.4         | 0.2           |

add: 17A-03A, Block B, Nanxian Commercial Plaza, Meilong Road, Longhua New District, Shenzhen



### Passive Test For WIFI(2)2.4G

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 2400          | 37.2        | -4.3         | 0.4           |
| 2410          | 38.5        | -4.1         | 0.7           |
| 2420          | 39.4        | -4.0         | 0.8           |
| 2430          | 40.7        | -3.9         | 1.2           |
| 2440          | 40.7        | -3.9         | 1.4           |
| 2450          | 42.5        | -3.7         | 1.7           |
| 2460          | 42.9        | -3.7         | 1.8           |
| 2470          | 41.7        | -3.8         | 1.6           |
| 2480          | 41.1        | -3.9         | 1.6           |
| 2490          | 40.6        | -3.9         | 1.0           |
| 2500          | 40.5        | -3.9         | 0.9           |

add: 17A-03A, Block B, Nanxian Commercial Plaza, Meilong Road, Longhua New District, Shenzhen



### Passive Test For WiFi (2) 5.8G

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 5150          | 31.2        | -5.1         | -0.1          |
| 5200          | 36.2        | -4.4         | 1.0           |
| 5250          | 36.7        | -4.4         | 1.5           |
| 5300          | 38.9        | -4.1         | 1.8           |
| 5350          | 39.9        | -4.0         | 2.0           |
| 5400          | 40.4        | -3.9         | 2.3           |
| 5450          | 40.3        | -3.9         | 2.1           |
| 5500          | 37.7        | -4.2         | 1.7           |
| 5550          | 37.3        | -4.3         | 1.6           |
| 5600          | 35.4        | -4.5         | 0.5           |
| 5650          | 34.4        | -4.6         | 0.1           |
| 5700          | 31.2        | -5.1         | -0.1          |
| 5750          | 34.4        | -4.6         | 0.1           |
| 5800          | 35.4        | -4.5         | 0.5           |
| 5850          | 36.2        | -4.4         | 1.0           |

add: 17A-03A, Block B, Nanxian Commercial Plaza, Meilong Road, Longhua New District, Shenzhen



### Passive Test For BT2.4G

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 2400          | 33.3        | -4.8         | 0.6           |
| 2410          | 34.8        | -4.6         | 1.0           |
| 2420          | 35.4        | -4.5         | 1.1           |
| 2430          | 37.3        | -4.3         | 1.4           |
| 2440          | 37.8        | -4.2         | 2.0           |
| 2450          | 38.6        | -4.1         | 2.1           |
| 2460          | 38.6        | -4.1         | 2.3           |
| 2470          | 38.0        | -4.2         | 2.0           |
| 2480          | 37.8        | -4.2         | 2.0           |
| 2490          | 36.7        | -4.4         | 1.4           |
| 2500          | 35.8        | -4.5         | 1.3           |

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### Active Test For WIFI

| Band                 | Channel | Data Rate | TRP  | EIRP | Data Rate | TIS   | EIS   |
|----------------------|---------|-----------|------|------|-----------|-------|-------|
| WIFI 2.4G<br>802.11b | 1       | 11Mbps    | 15.2 | 20.0 | 11Mbps    | -70.9 | -75.7 |
|                      | 7       |           | 14.5 | 19.2 |           | -69.7 | -74.5 |
|                      | 13      |           | 13.9 | 19.2 |           | -72.2 | -77.5 |
| WIFI 5G<br>802.11a   | 36      | 6Mbps     | 10.5 | 15.3 | 54Mbps    | -70.5 | -75.3 |
|                      | 149     |           | 12.1 | 17.6 |           | -67.5 | -72.5 |
|                      | 165     |           | 15.3 | 19.5 |           | -69.1 | -73.3 |

add: 17A-03A, Block B, Nanxian Commercial Plaza, Meilong Road, Longhua New District, Shenzhen



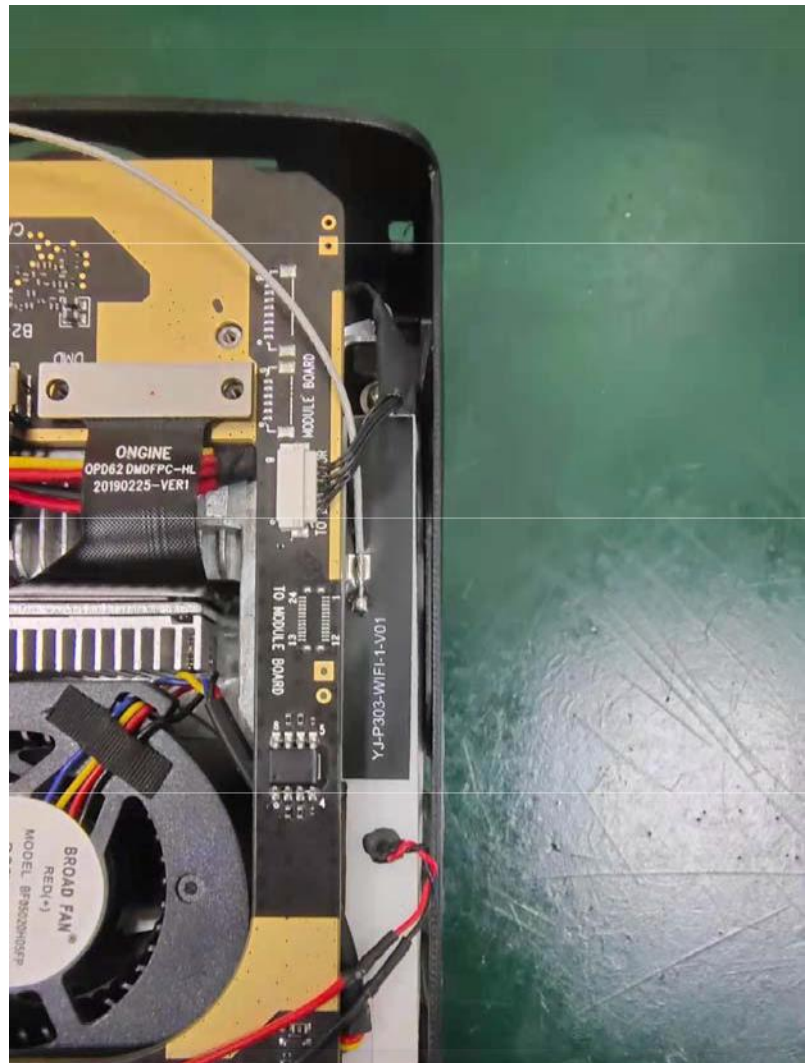
*Device*



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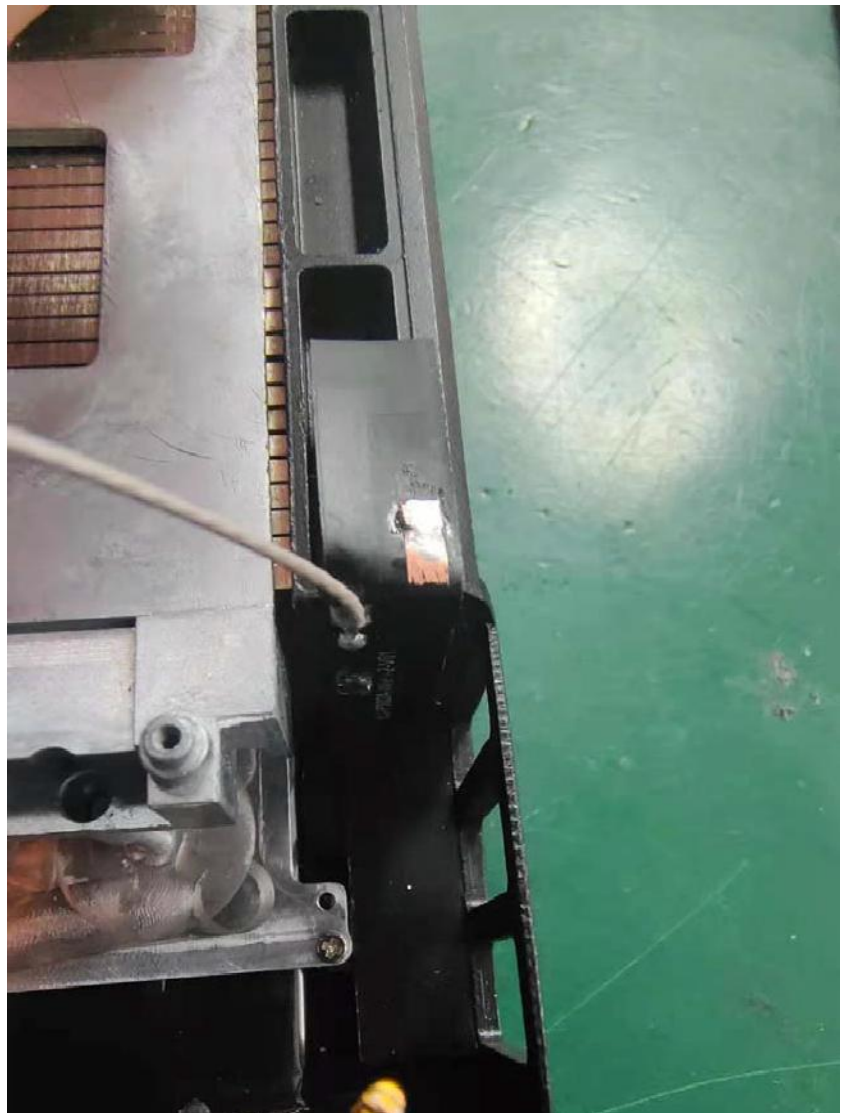


## ***WIFI(1) Antenna***





## ***WIFI(2) Antenna***





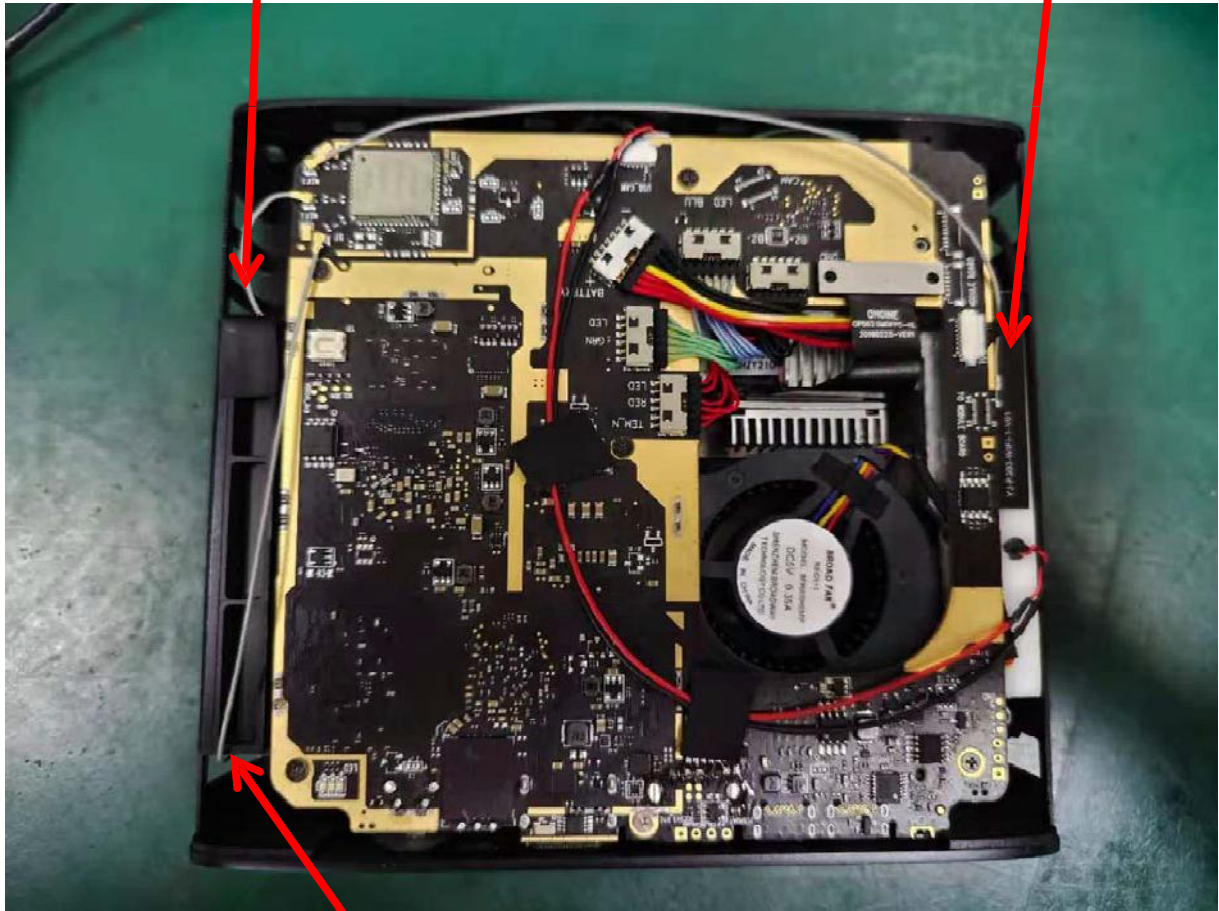
## ***BT Antenna***





**WIFI(2)**

**WIFI(1)**



**BT**

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