

# ANTENNA SPECIFICATION

CUS P/N :A3947 BT-R天线

ZTX P/N :A3947 BT-R天线

ApplicationDate:Feb,10,2023

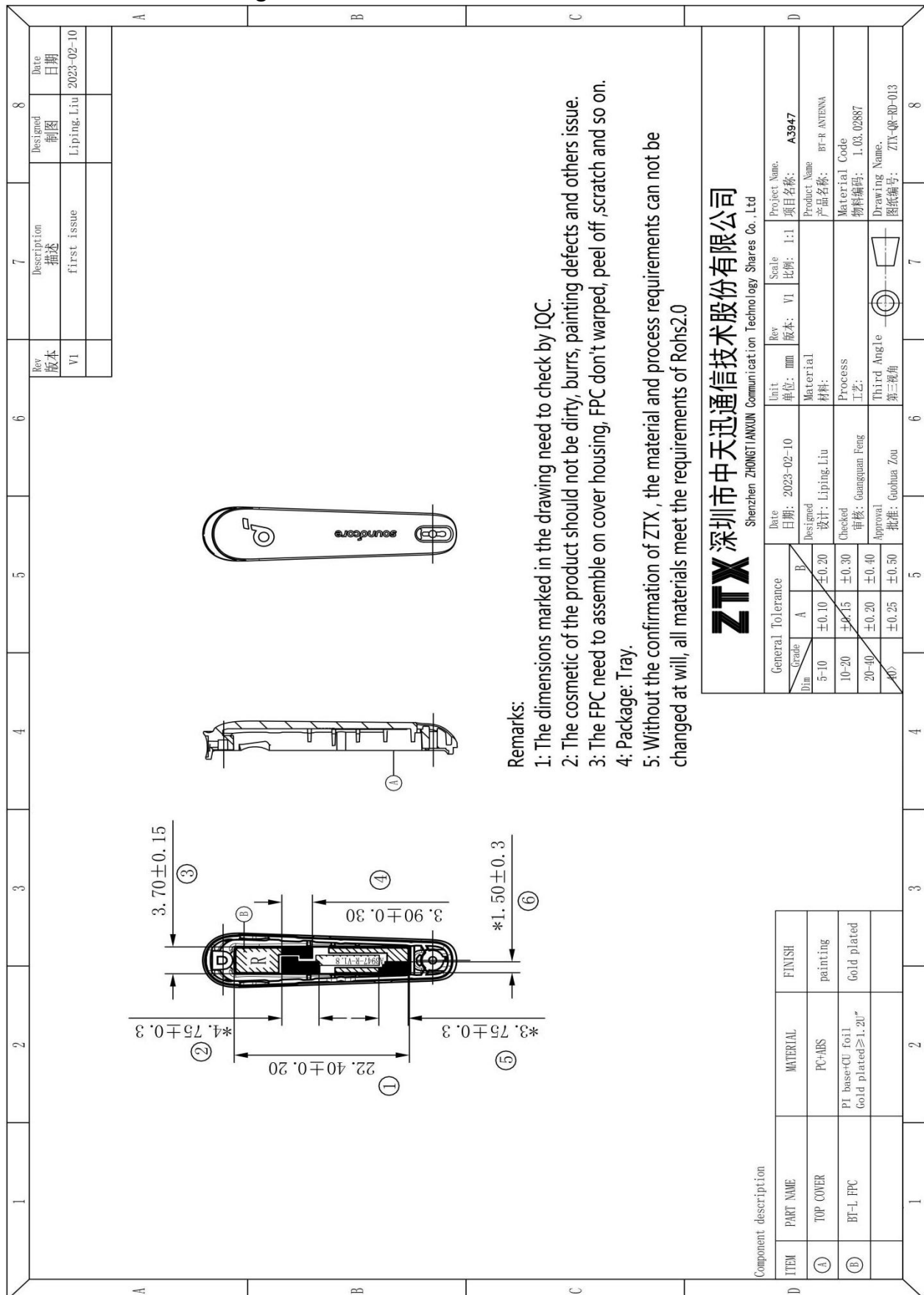
Editor:

Rev: R:A0

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## 1. Mechanical Specification

### 1-1 Mechanical Configuration (A3947 BT-R Antenna)



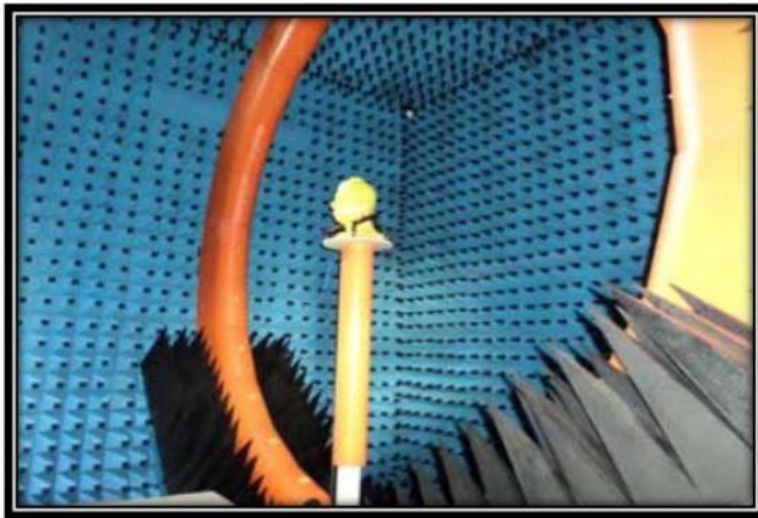
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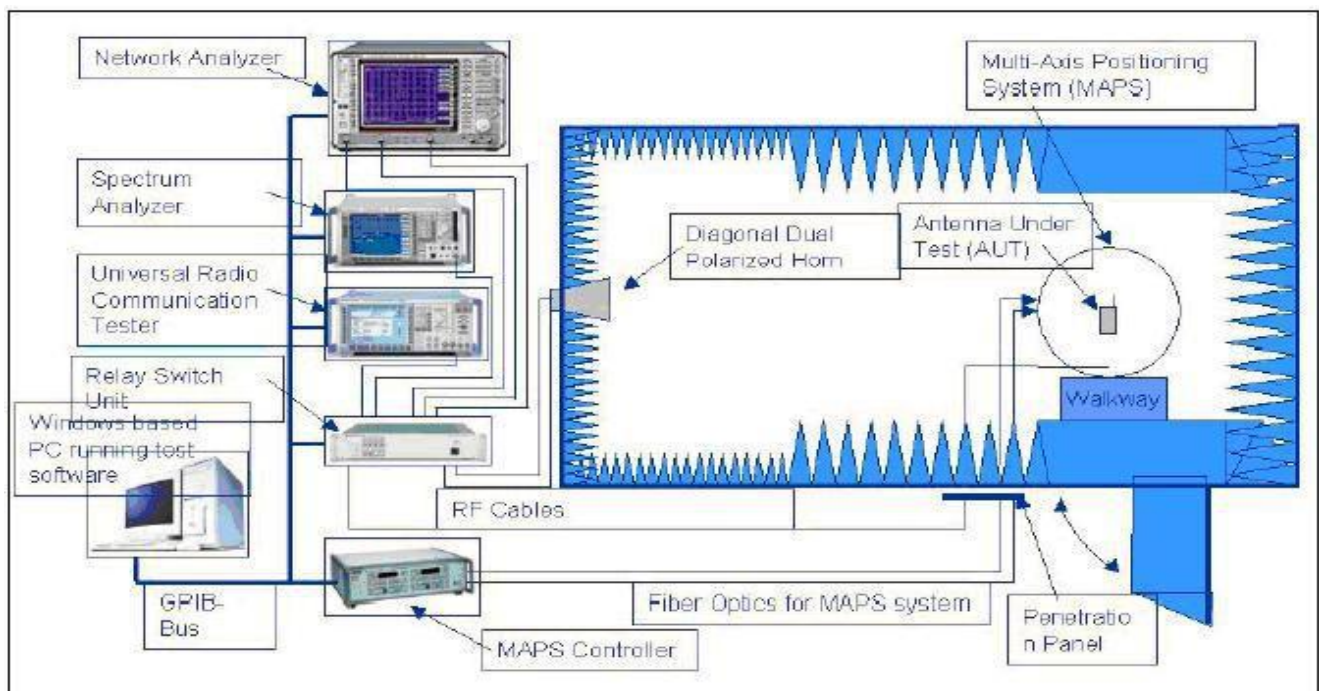
## 2.Test equipment



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 CTIA 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.



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## 3.Test Results Summary

### 3-1 Active Test

| Main board conduction         | channel | TX   | RX    |
|-------------------------------|---------|------|-------|
| BT-R                          | 0       | 11.5 | -93.5 |
|                               | 39      | 11.5 | -93.5 |
|                               | 78      | 11.5 | -93.5 |
| free space                    | channel | TRP  | TIS   |
| BT-R                          | 0       | 6.3  | -88.0 |
|                               | 39      | 7.2  | -88.2 |
|                               | 78      | 6.8  | -88.3 |
| The second generation of head | channel | TRP  | TIS   |
| BT-R                          | 0       | 1.8  | -83.7 |
|                               | 39      | 2.4  | -83.1 |
|                               | 78      | 2.0  | -83.4 |

### 3-2 Passive Test

| Fre  | Effi | Effi . dB | Gain dB |
|------|------|-----------|---------|
| 2400 | 31%  | -4.93     | -2.03   |
| 2410 | 31%  | -5.07     | -1.83   |
| 2420 | 31%  | -5.15     | -1.45   |
| 2430 | 30%  | -5.27     | -1.19   |
| 2440 | 29%  | -5.41     | -1.32   |
| 2450 | 29%  | -5.45     | -1.32   |
| 2460 | 29%  | -5.38     | -2.03   |
| 2470 | 29%  | -5.32     | -1.74   |
| 2480 | 29%  | -5.34     | -1.63   |
| 2490 | 28%  | -5.58     | -1.84   |
| 2500 | 27%  | -5.78     | -2.03   |

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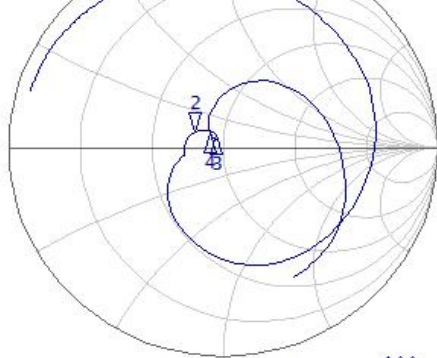
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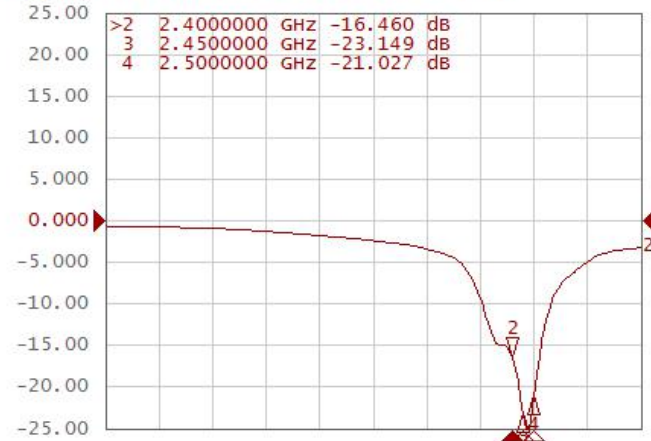
## 3-4 VSWR&Return loss plot&Smith Chart

Tr1 S22 Smith (Re/Im) Scale 1.000U [F1]

|    | Frequency (GHz) | Re (mU) | Im (mU) |
|----|-----------------|---------|---------|
| >2 | 2.4000000       | -132.57 | 70.843  |
| 3  | 2.4500000       | -31.966 | 61.818  |
| 4  | 2.5000000       | -59.815 | 65.699  |

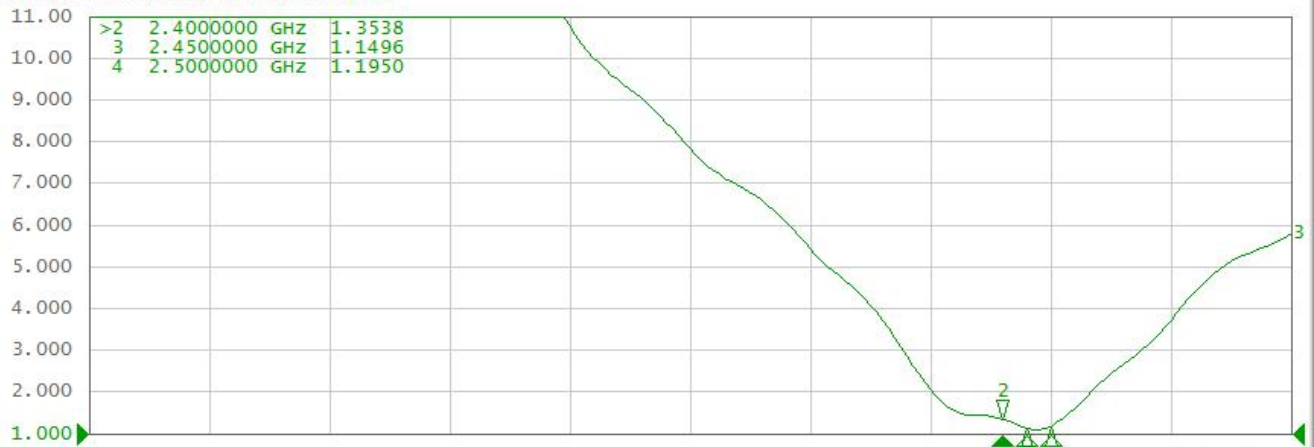


Tr2 S22 Log Mag 5.000dB/ Ref 0.000dB [F1]



Tr3 S22 Swr 1.000/ Ref 1.000 [F1]

|    | Frequency (GHz) | SWR    |
|----|-----------------|--------|
| >2 | 2.4000000       | 1.3538 |
| 3  | 2.4500000       | 1.1496 |
| 4  | 2.5000000       | 1.1950 |

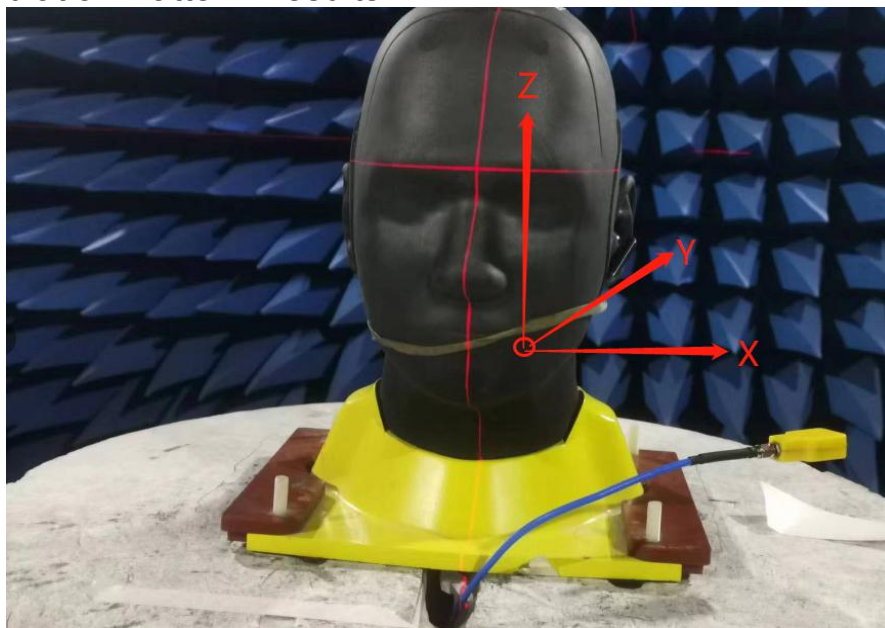


1 Start 500 MHz

IFBW 70 kHz

Stop 3 GHz Sim PExt Cor

## 3-5 2D/3D Radiation Pattern Results



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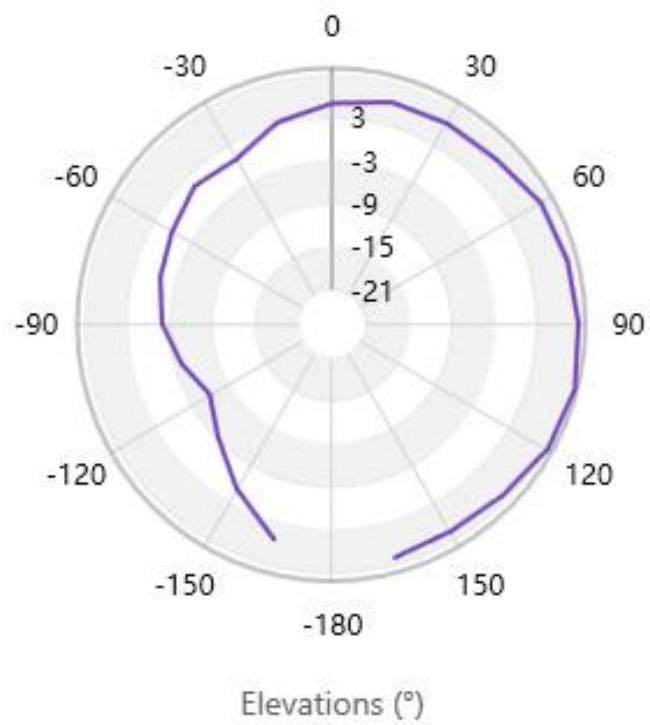
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— 2.441 GHz 0.00 ° Total



3-6 Environment treatment  
N/A