# Antenna sample admission letter

## The Main Antenna Samp le Confirmation

| | | | |
|---|---|---|---|
| Customer Name | | | |
| Project Name | The ANT wire antenna | Date | 2023-2-23 |
| Material Number | 2.4G antenna (white) | Notes | Electronic wire |
| Frequency Range | Bluetooth 2.4G (2400 MHz-2500 MHz) | | |
| Designed By | RF Engineer | Structural Enginer | |
| | | | |
| Checked By | Engineering Manager | | |
| | | | |
| Customer Confirmation *Client 's Approva l* | | | |

design unit:

Address: Chenghai, Guangdong, China

## 1 The wire internal material

| main material | range of application | remarks |
|---|---|---|
| Clear PVC-adhesive material | Outside of the wire is used | environmental protection |
| copper wire | Lead conductor copper diameter of 0. 14 | environmental protection |
| Environmental tin | The wire is covered with tin | environmental protection |
| | | |
| | | |

## 2 Product performance

Specifications and dimensions

| name of a part | scope of application | wire length | Wire color | surface |
|---|---|---|---|---|
| 2.4G antenna (white) | The ire on the board | 35MM | white | No surface damage, scratch Traces, oil stains and other defects |

## 3 Wire performance

| order number | project | standard |
|---|---|---|
| 1 | withstand voltage | 60V |
| 2 | Current resistance | 1500MA |
| 3 | contact resistance | 30m Q MAX |
| 4 | insulation resistance | 1000m Q MIX |
| 5 | pulling | 0.9 Kg |
| 6 | temperature resistance | 80 Degrees |

## 4. Reliability test

| order number | project | standard | test method |
|---|---|---|---|
| 1 | Excluding 16P and ROHS | The 16 components were less than 0. 1% | Third-party authoritative testing agency (such as: SGS) |

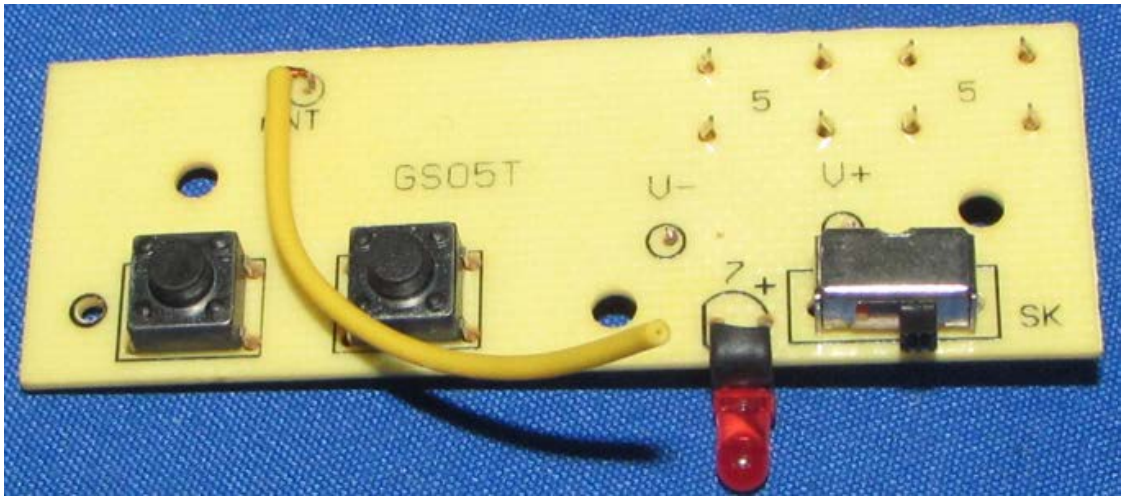
## 5 The shelf life

6 months after the delivery

## 6 Notes for use

Note: The temperature should not exceed 80℃, and the current should not be above 1.5A.

**7 Illustration**




Note: 2.4G antenna specification is 7 core 0. 14 copper diameter bare copper wire outer wire diameter 1.3MM wire, white, length of 35MM, wire head peeling 3MM tin. Meet the environmental protection standards: EU EN 71 (19E), ROHS, PAHS, 6P ~ 16P, Europe and America
CPSIA 、HR 4040。

**8 Appendix**

# Product Specification

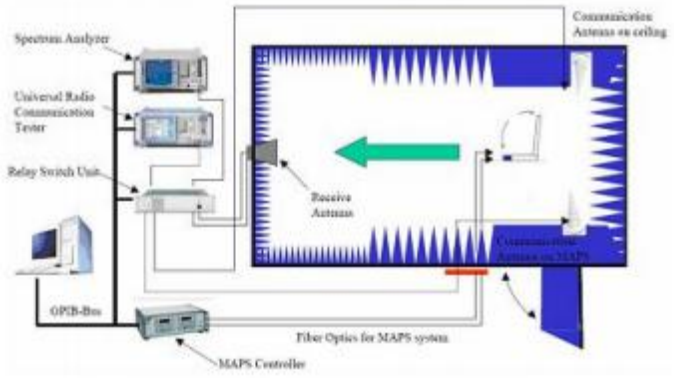
A .Electrical Characteristics
**Frequency 2400MHz ~2500MHz**
**VSWR <3.0**
**Efficiency >30%**
**Impedance 50 Ohm**
**Polarization Line**
**Gain 2DBi**
B .Material & Mechanical Characteristics
**Material of Radiator Cu**
**Cable Type 1.0 19P in white**
**Connector Type : NO**
**D imension**
C .Environmental
**Operation Temperature - 30 °C ~ + 80 °C**
**Storage Temperature - 30 °C ~ + 85 °C**

# Test Equipment & Conditions

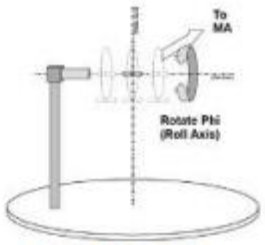
**1 . Network Analyzers :**
**Agilent 8753D 5071B**
**2 . Communications Test Set :**

Agilent E 5515C

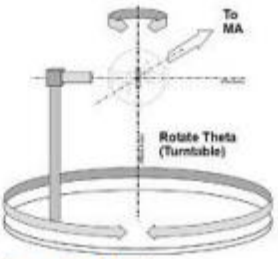
**3 . 3D Chamber Test Syst e m Effiency &Gain**




(Testing by 3D anechoic chamber)




Phi axis test

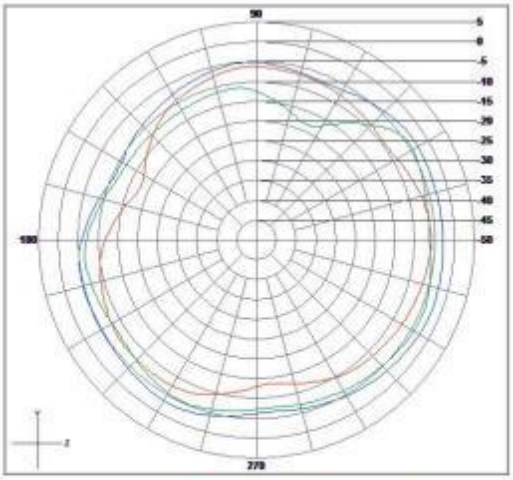



Theta axis test

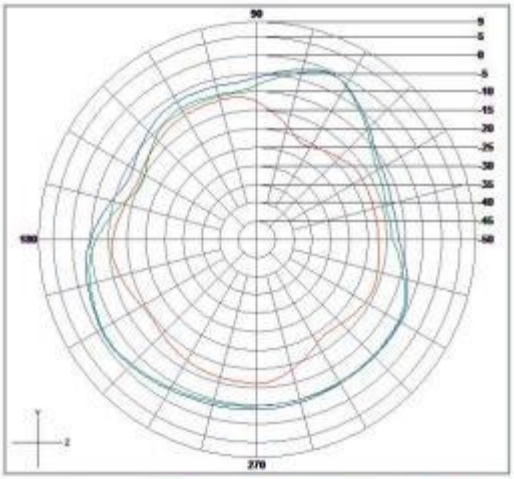
# Effiency &Gain

**2.40 2.00**
**.4402 1.11**
**2.48 1.30**

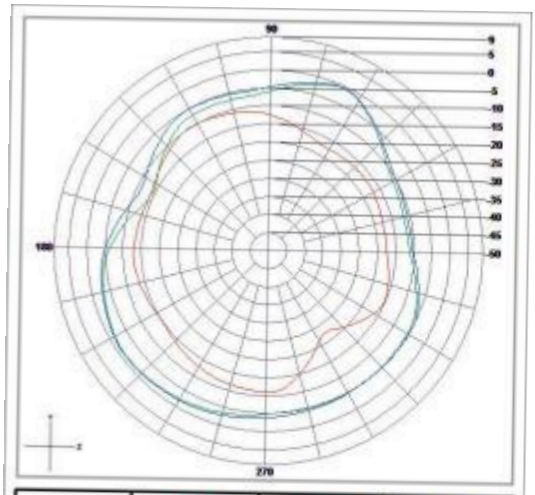
# Radiation Pattern



| | Vertical | Horizontal | Total |
|---|---|---|---|
| Avg. Gain | -8.4 | -6.99 | -4.63 |
| Peak Gain | -5.48 | -3.77 | -2.17 |



| | Vertical | Horizontal | Total |
|---|---|---|---|
| Avg. Gain | -13.34 | -5.06 | -4.46 |
| Peak Gain | -10.3 | 0.09 | 0.12 |



| | Vertical | Horizontal | Total |
|---|---|---|---|
| Avg. Gain | -13.42 | -4.6 | -4.06 |
| Peak Gain | -9.47 | 0.1 | 0.17 |