

## Antenna Sample Datasheet

|                    |                                       |
|--------------------|---------------------------------------|
| customer:          | Dongguan Hele Electronics<br>Co., Ltd |
| entry name:        | QT30-R                                |
| Material category: | BT antenna                            |
| Antenna Type       | PIFA                                  |
| Antenna Material   | FPC                                   |
| edition:           | A0                                    |
| Date:              | 2024.01.02                            |



深圳市宇鸿实业有限公司

Shenzhen Yuhong Industrial Co., Ltd

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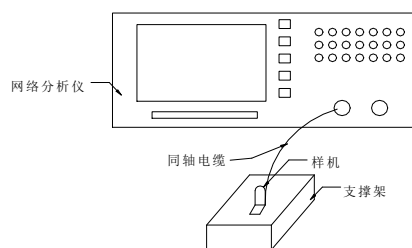
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## 1: Antenna test equipment

List of meters: Agilent 5071B;

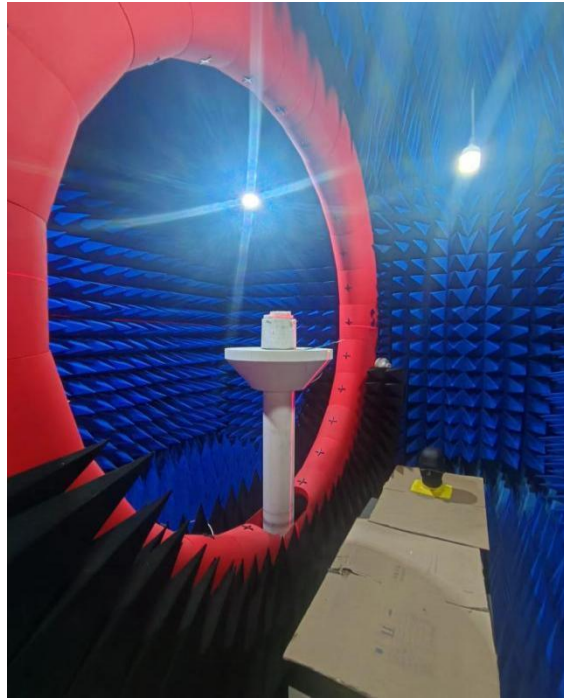


### 1.1 The principle diagram of the ETS anechoic chamber



Picture1. Antenna static test connection method

## 1.2 Pictures of the ETS anechoic chamber

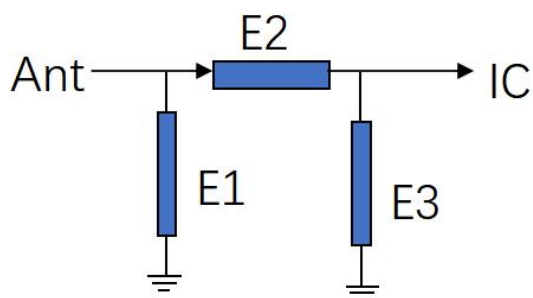


Inside the ETS anechoic chamber



Test Machine

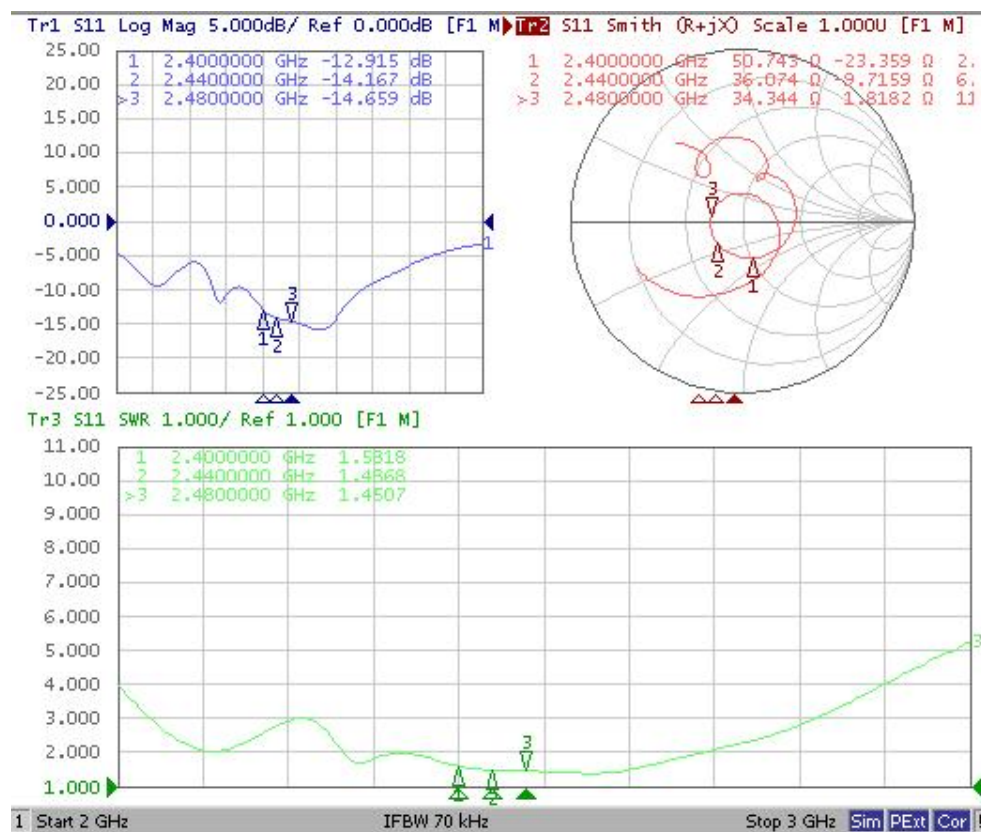
## 2: Matching circuit



| Element | Value |
|---------|-------|
| E1      | N/A   |
| E2      | 0R    |
| E3      | N/A   |

## 3: Passive test report

### 3.1: BT antenna S11 parameters

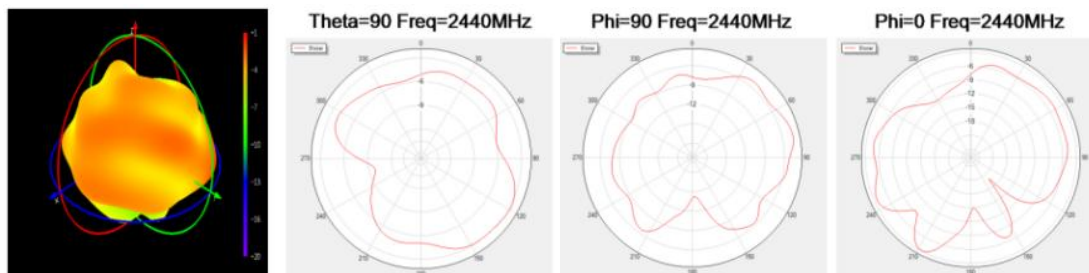




### 3.2: Passive efficiency of antenna

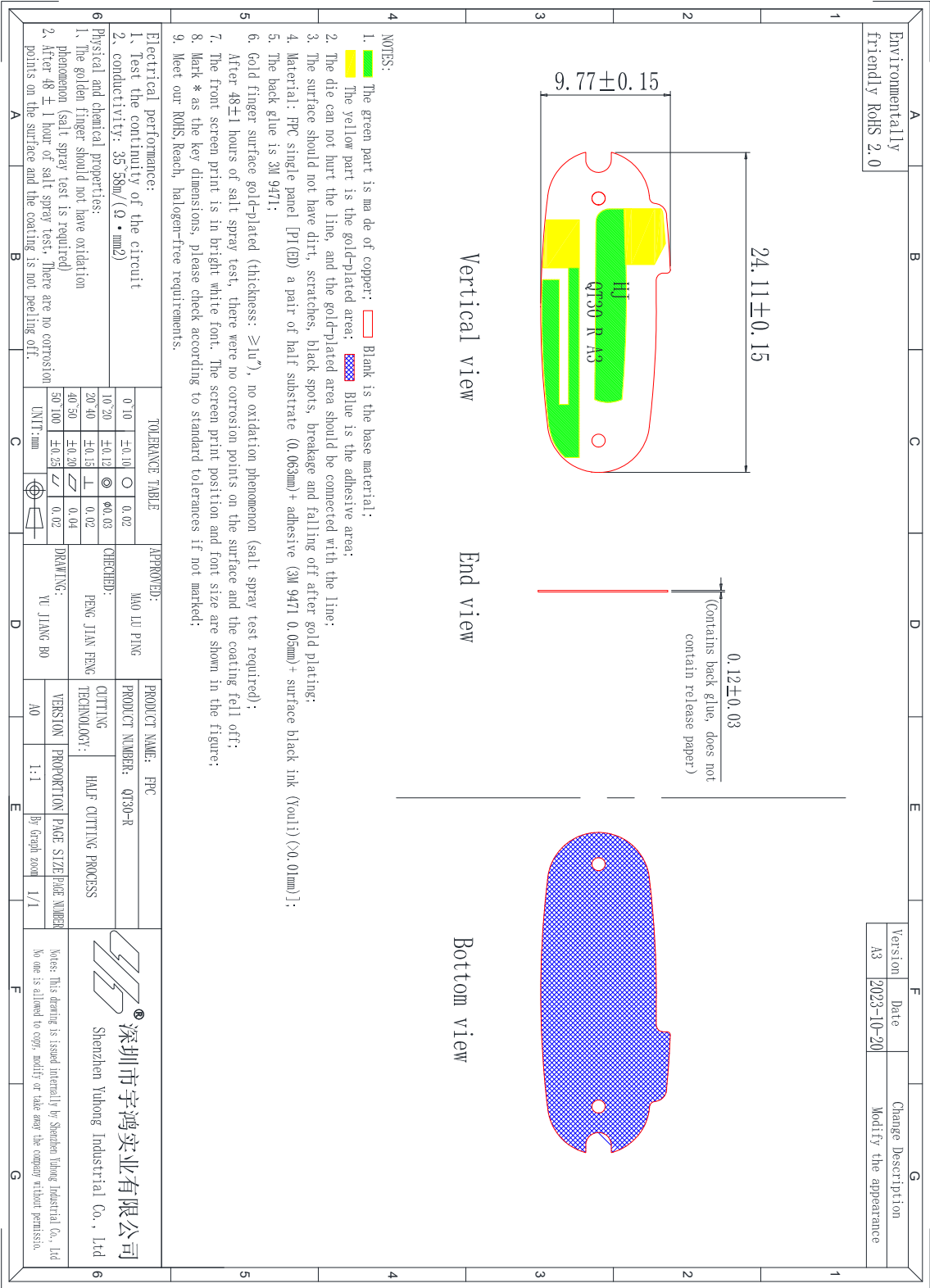
| Freq(MHz)  | Gain(dBi)          | Efficiency(%)      | Gain(dBi)           | Efficiency(%)       |
|------------|--------------------|--------------------|---------------------|---------------------|
|            | free<br>space-Left | free<br>space-Left | free<br>space-Right | free<br>space-Right |
| 2400       | -1.38              | 27.79              | -5.79               | 9.94                |
| 2410       | -0.91              | 28.81              | -5.78               | 9.41                |
| 2420       | -0.38              | 28.5               | -5.46               | 9.49                |
| 2430       | -0.17              | 28.95              | -5.21               | 9.21                |
| 2440       | -0.68              | 30.1               | -5.81               | 9.4                 |
| 2450       | -1.07              | 29.25              | -5.61               | 9.07                |
| 2460       | -1.28              | 28.54              | -5.02               | 10.82               |
| 2470       | -1.28              | 28.99              | -5.35               | 10.53               |
| 2480       | -1.23              | 29.87              | -5.59               | 10.68               |
| Mean value | -0.93              | 28.98              | -5.51               | 9.84                |

### 3.3: Passive pattern of BT antenna





4: Structural drawing



## 5: OTA Test data

| R          | Channel | TRP (dbm) | TIS (dbm) |
|------------|---------|-----------|-----------|
| Free space | 0       | 2.06      | -87.87    |
|            | 39      | 2.18      | -88.66    |
|            | 78      | 2.33      | -88.42    |
| R          | Channel | TRP (dbm) | TIS (dbm) |
| Head model | 0       | -1.96     | -83.09    |
|            | 39      | -1.65     | -83.25    |
|            | 78      | -1.66     | -83.14    |

## 6: Antenna diagram

