



**Shenzhen DEWEIMA Communication Equipment Co.,Ltd**

# **SPECIFICATION SHEET FOR APPROVAL**

|                      |                                |
|----------------------|--------------------------------|
| <b>CUSTOMER NAME</b> | Shenzhen unique Scales Co.,Ltd |
| <b>CUSTOMER P/N</b>  | CF530                          |
| <b>PART NAME</b>     | BT Antenna                     |
| <b>DWM NO.</b>       |                                |
| <b>APPROVAL REV.</b> | DWM-V1.0                       |

| <b>CONTRACTOR</b>     |                       |                       | <b>DATE : 2023-07-02</b>   |
|-----------------------|-----------------------|-----------------------|----------------------------|
| <b>QA<br/>CHECKED</b> | <b>ME<br/>CHECKED</b> | <b>RF<br/>CHECKED</b> | <b>MANAGER<br/>CHECKED</b> |
|                       |                       |                       |                            |

| <b>CUSTOMER</b>    |                   | <b>DATE :</b>      |
|--------------------|-------------------|--------------------|
| <b>Approved By</b> | <b>Checked By</b> | <b>Prepared By</b> |
|                    |                   |                    |

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## Product Specification

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BT Antenna

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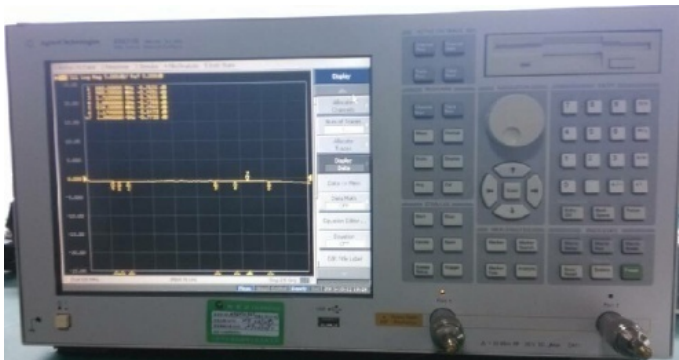
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### 1. Product Application

Terminal of the antenna products can only be used for BT antenna.

### 2. The test environment, equipment

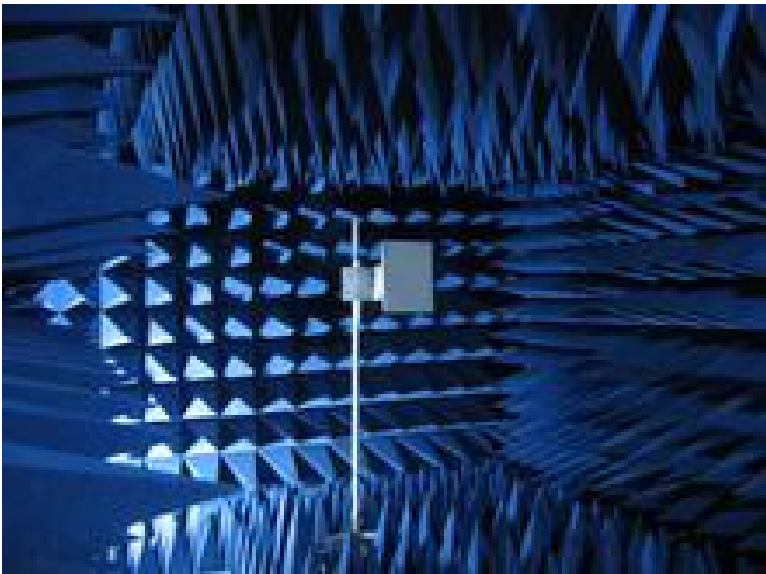
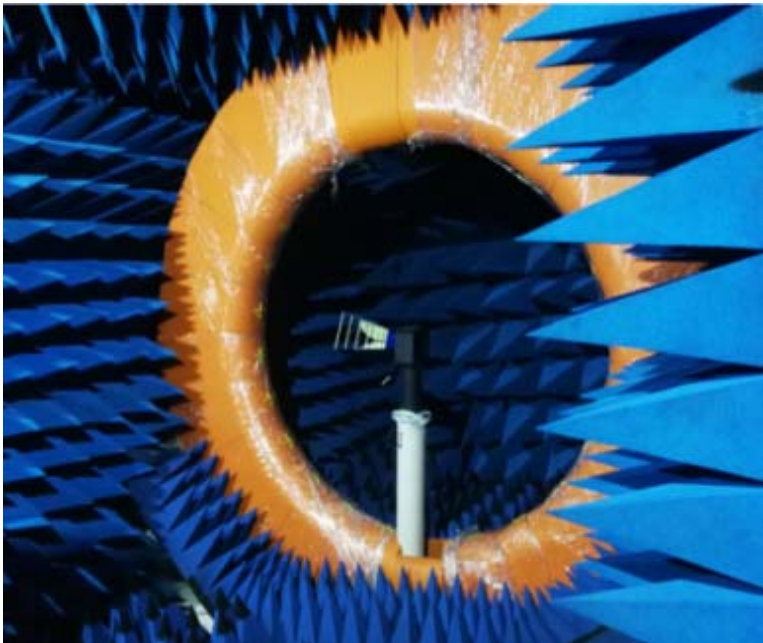
| Item | Description     | Test Condition                                                                                                                                                                                                                     | Requirement               |
|------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 2.1  | Passive testing | The VSWR measurement devices are connected in sequence: Agilent 5071B Network Analyzer → measurement Cable → Customer-providing Devices.                                                                                           | VSWR:<br>2400-2500MHz ≤ 2 |
|      |                 | Test equipment                                                                                                                                                                                                                     |                           |
|      |                 |                                                                                                                                                |                           |
| Item | Description     | Test Condition                                                                                                                                                                                                                     |                           |
| 2.2  | Active test     | The antenna is tested within the cell mainboard provided by clients. Follow picture shows the measurement condition of the antenna been put on the measurement device, which is used for all measurement of electric performances. |                           |
| 2.3  | Microwave       | Test equipment                                                                                                                                                                                                                     |                           |



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Anechoic chamber  
(Satimo&ETS  
)





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BT Antenna

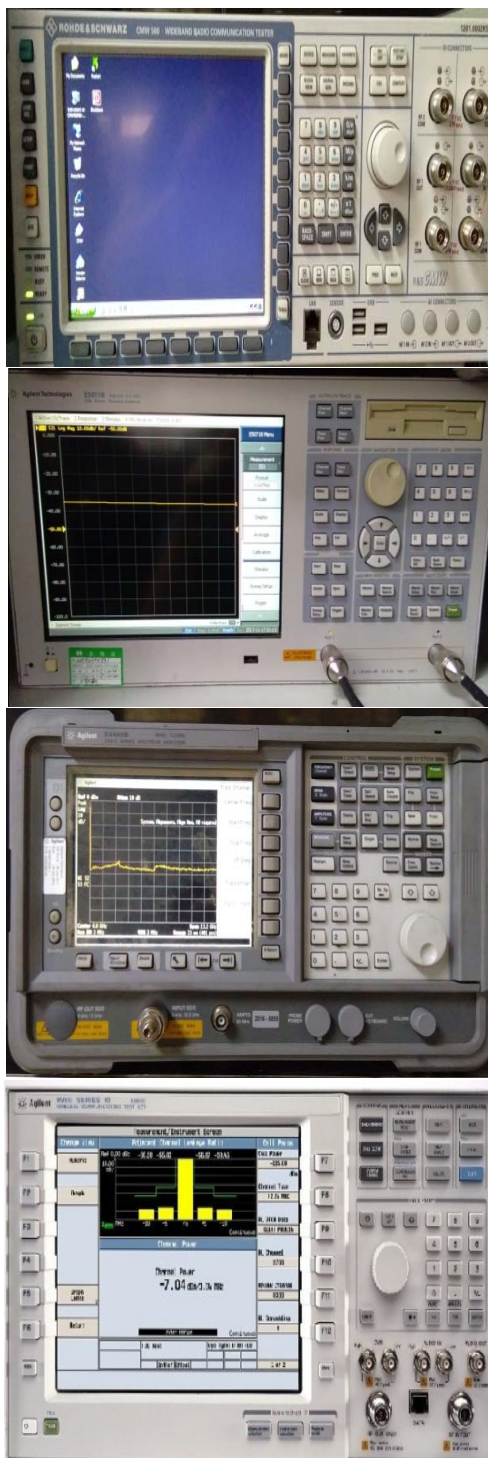
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CMW500  
Agilent5071B  
2.4 AgilentE4405B  
Agilent8960





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### 3. BT Antenna description

#### 3.1 BT Technology Parameters

BT Frequency Range: 2400MHz-2500MHz

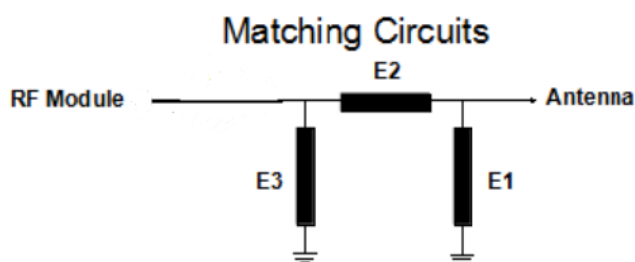
BT antenna type: IFA Antenna (PCB Antenna)

Operating Humidity: 90% R.H.MAX

Temperature Rating: 0°C ~ +40°C

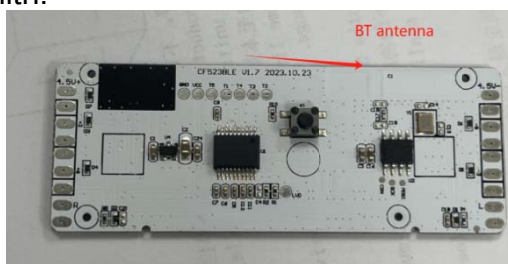
#### 3.2 BT matching circuit

| Element               | Value |
|-----------------------|-------|
| E1(0402)              | NC    |
| E2(0402)              | 1.2nH |
| E3(0402)              | NC    |
| Parameter not changed |       |



#### 3.3 BT antenna position

#### 3.4 BT VSWR/Return Loss/Smith:





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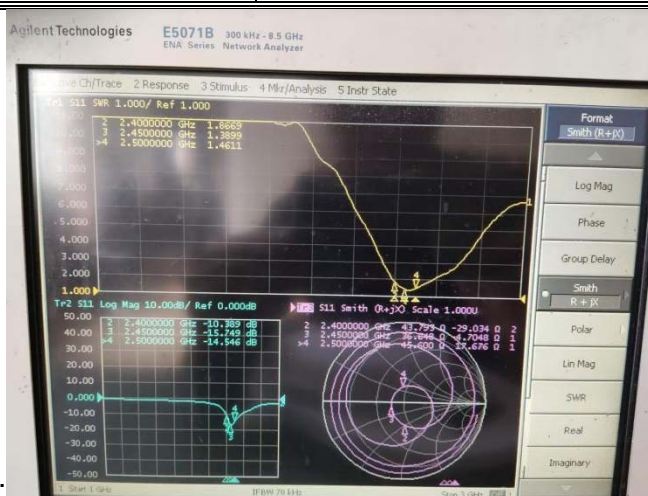
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### 3.5 BT Efficiency And Gain:

| Frequency/Mhz | Efficiency / % | MaxGain/dBi |
|---------------|----------------|-------------|
| 2400          | 40.27          | 2.12        |
| 2410          | 38.9           | 1.98        |
| 2420          | 41.02          | 2.59        |
| 2430          | 41.98          | 2.81        |
| 2440          | 41.11          | 2.08        |
| 2450          | 43.35          | 2.18        |
| 2460          | 44.36          | 2.26        |
| 2470          | 43.25          | 1.89        |
| 2480          | 43.85          | 1.89        |
| 2490          | 44.67          | 2.35        |
| 2500          | 41.59          | 1.87        |

### 3.6. BT 3D Pattern 2400MHz



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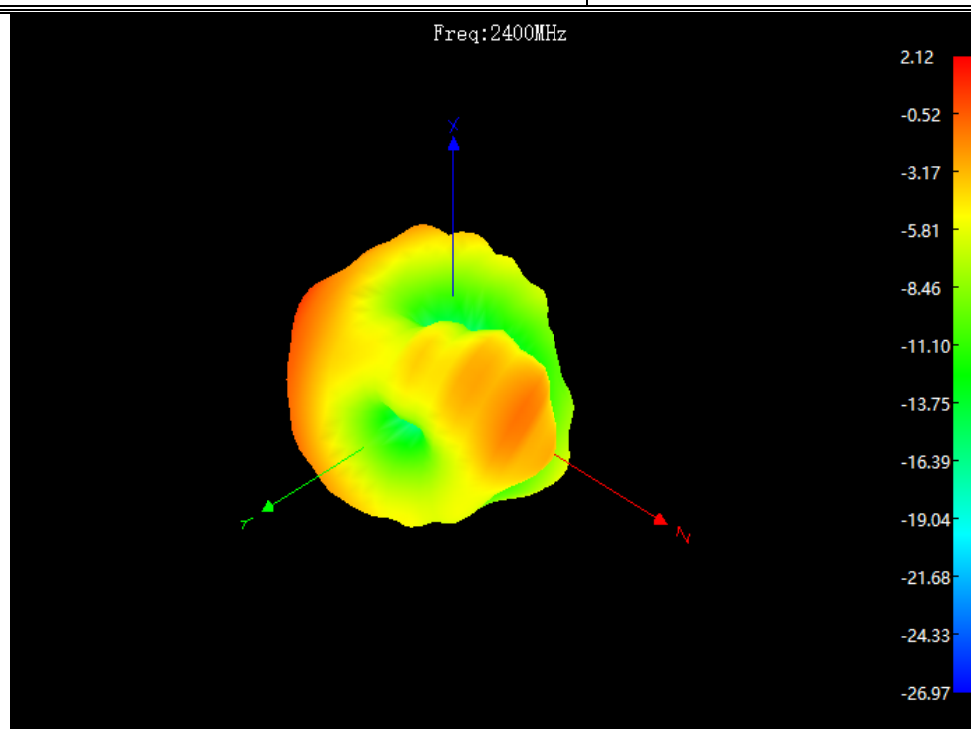
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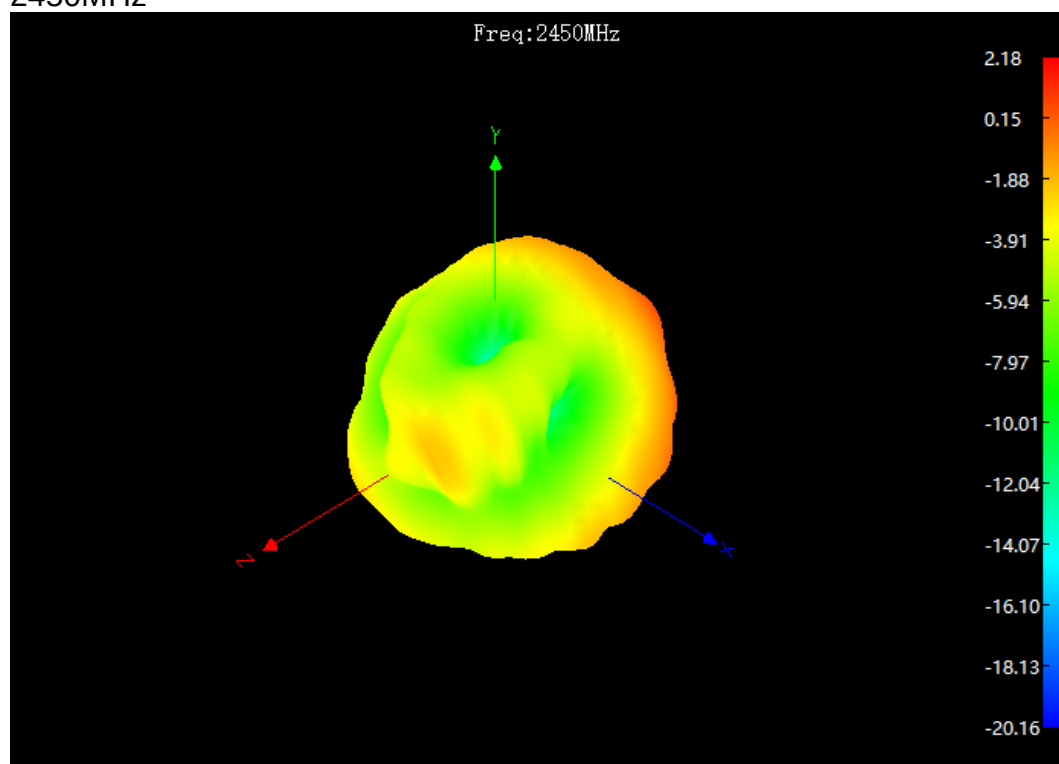
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2450MHz







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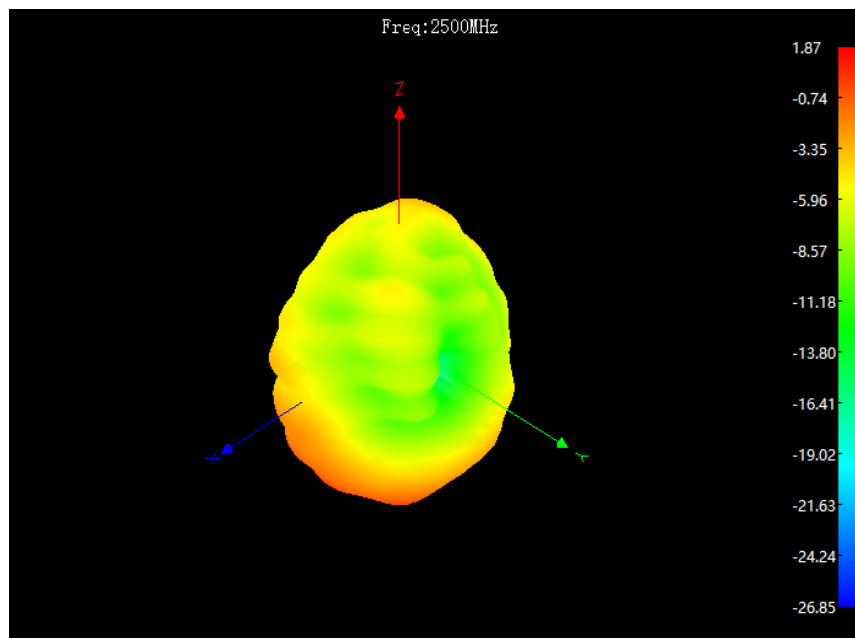
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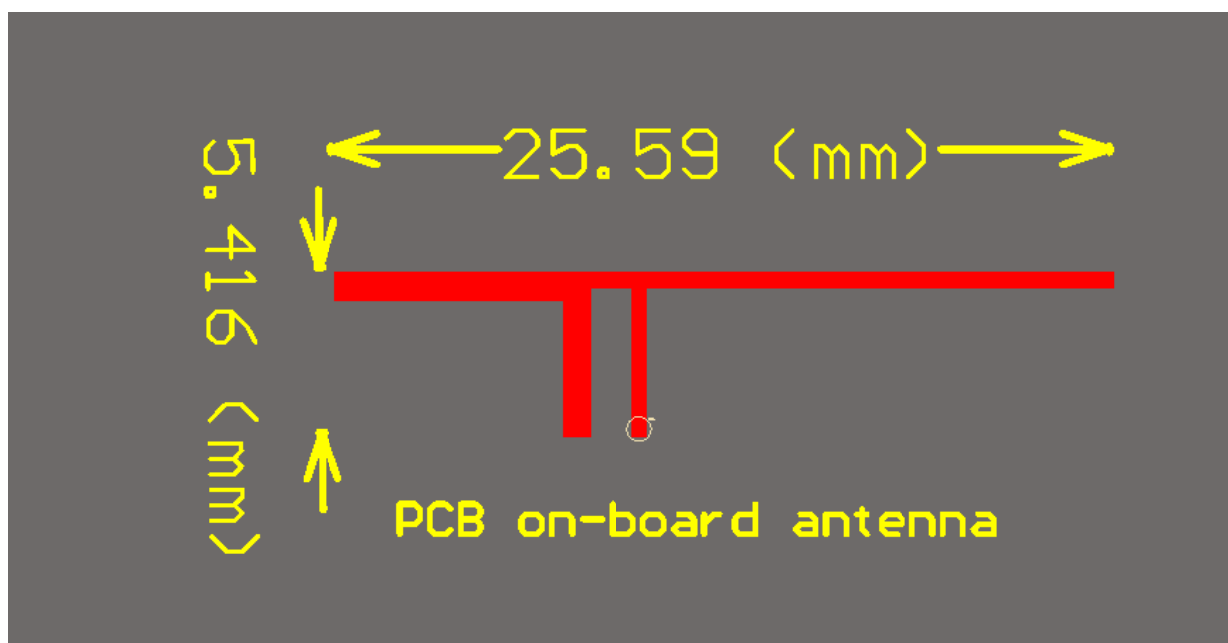
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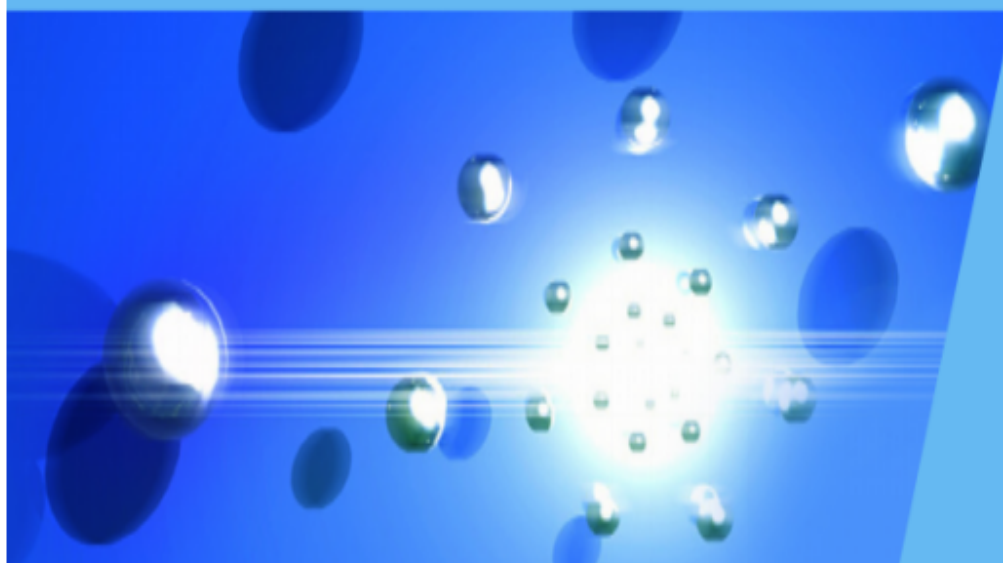
2500MHz



### 3.7 BT Engineering drawings:



Professional RF R&D institutions



# Thank You !

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