

# Acknowledgement

Customer name: SHENZHEN ECARE ELECTRONICS CO., LTD

Product name: built-in antenna

Specification and model: 2.4 G/5.8G 3dBi RF1.13  
Black wire L=90mm+IPEX

Customer material number: C.1 .2 6 0 2 3 5 0

Our Material No. : T J 0 6 8-N 0 5 0 0 0 6 - 0 1

Address: No.12, Zhuangyuan Bi Street, Mengang Village,  
Dalingshan Town, Dongguan City

Sample delivery date: February 19, 2023

Tel. :0769-81600637 Fax:0769-81600673

Email:tianji@dgtianji.com.cn

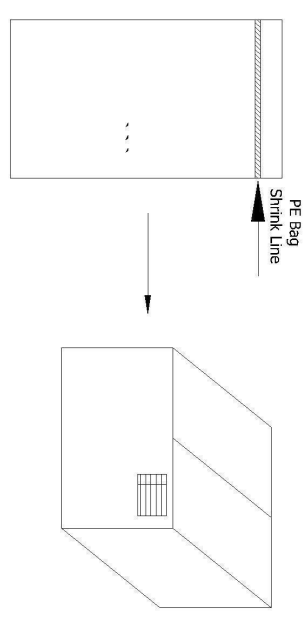
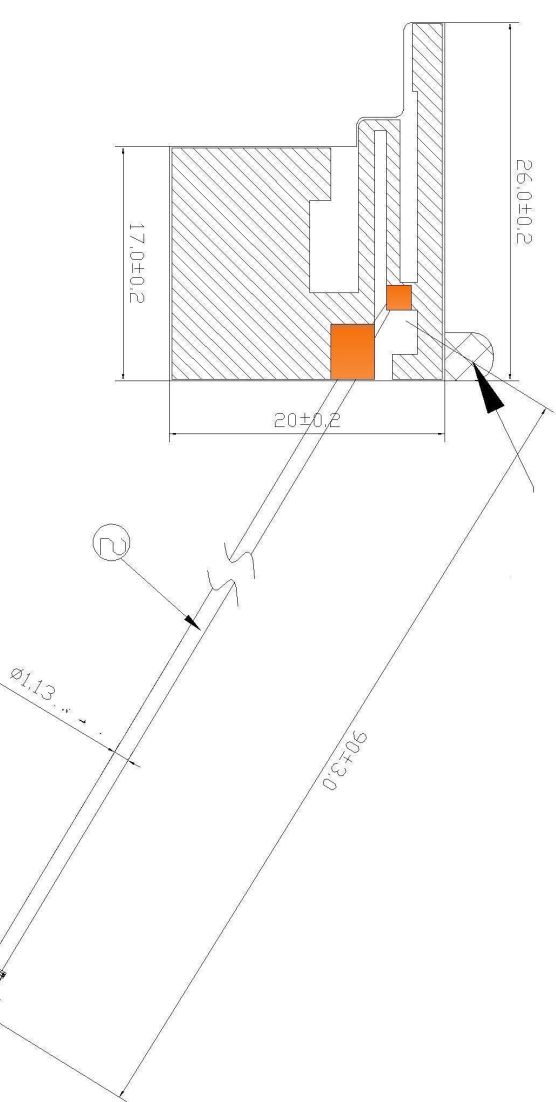
|                     | <b>MANUFACTURE<br/>SIGNATURE</b> | <b>CUSTOMER<br/>SIGNATURE</b> |
|---------------------|----------------------------------|-------------------------------|
| <b>CHECKED BAY:</b> | Wu j uan                         |                               |
| <b>AUDITOR BAY:</b> | /                                |                               |
| <b>APPROVED BAY</b> | JBM                              |                               |
| <b>DATE:</b>        | 2023-11-15                       |                               |



I. Specification Table:

| Main technical specifications |                                          |
|-------------------------------|------------------------------------------|
| Frequency Range<br>(MHz)      | 2400-2500MHz<br>5150-5850MHz             |
| Impedance( $\Omega$ )         | 50 $\pm$ 5                               |
| Peak Gain(dBi)                | 3 dBi                                    |
| VSWR                          | Max 2.0                                  |
| Admitted Power                | 2W                                       |
| Polarization                  | Linear Vertical                          |
| Radiation                     | Omni-directional                         |
| Connector Type                | IPEX                                     |
| Physical Properties           |                                          |
| Antenna cable                 | 1.13 Black Cable                         |
| Operating Temp                | -40 $^{\circ}$ C $\sim$ +70 $^{\circ}$ C |
| Storage Temp                  | -40 $^{\circ}$ C $\sim$ +70 $^{\circ}$ C |

| F   | G           |
|-----|-------------|
| REV | DESCRIPTION |
| A   | New Issue   |



| NO | DESCRIPTION           | QTY | REMARK |
|----|-----------------------|-----|--------|
| 3  | 1.13 IPEX             | 1   |        |
| 2  | Cable                 | 1   |        |
| 1  | 1.13 Cable Black, 50Ω | 1   |        |
| 1  | FPC                   | 1   |        |

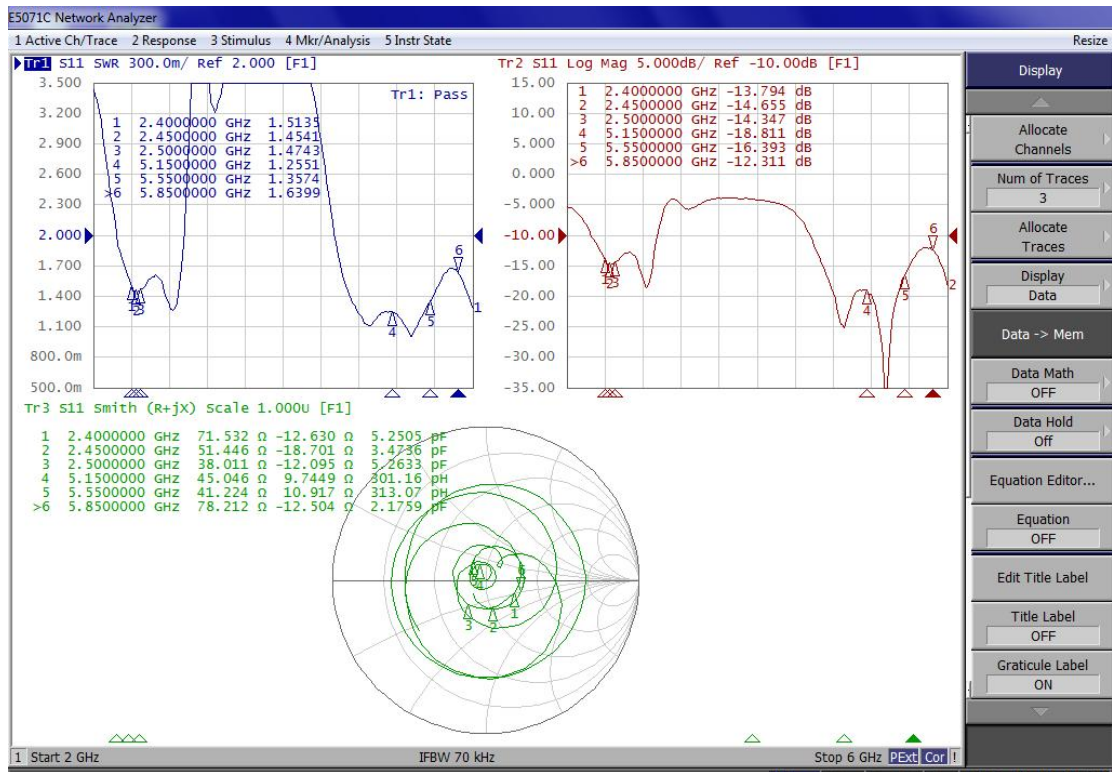
| XX   | ±5   | APPROVED |
|------|------|----------|
| X    | ±3.0 | CHECKED  |
| .X   | ±1.0 |          |
| .XX  | ±0.5 |          |
| .xxx | ±0.1 | DRAWING  |

| CUSTOMER:  |                     |
|------------|---------------------|
| PART NO :  | C.1.28002380        |
| PART NAME: | RF Antenna Assembly |
| T.J P/NO : | TJ068-V050006-01    |
| REV        | UNIT FILE :         |
| A          | m/m SHEET : 1/1     |

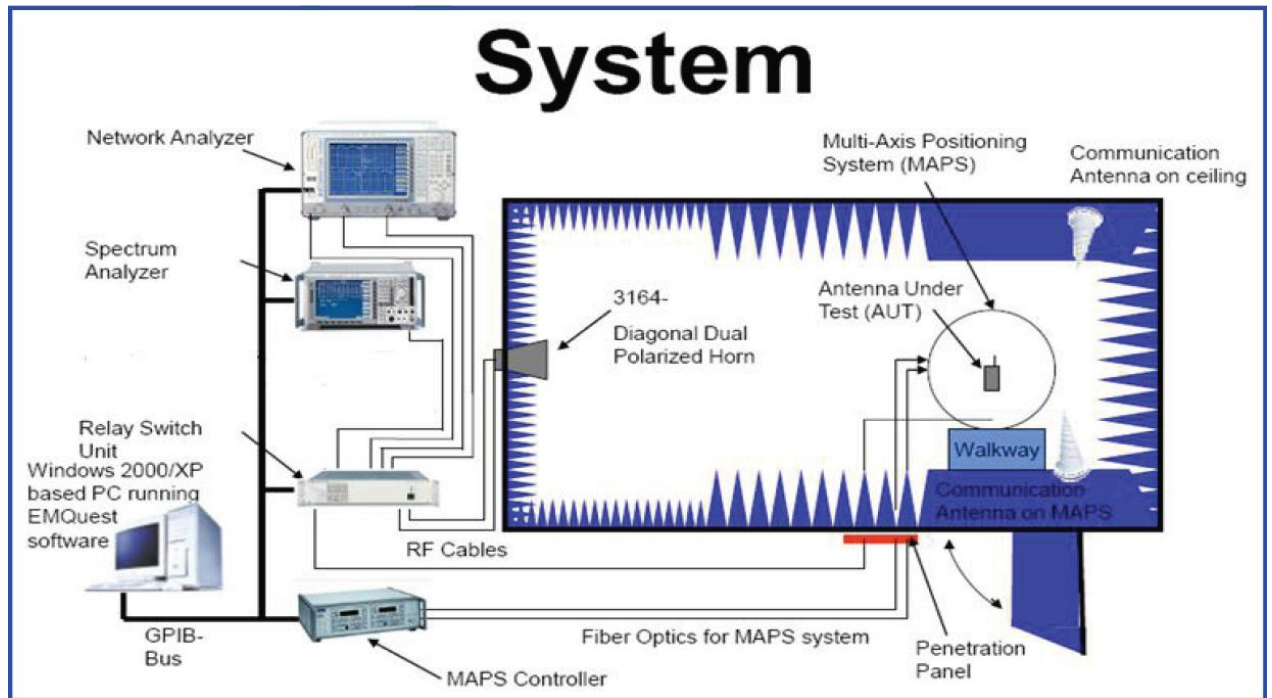
### 三、Product Characteristics

|                                 |                                                                                    |
|---------------------------------|------------------------------------------------------------------------------------|
| Agilent E5071C Network Analyzer |  |
|---------------------------------|------------------------------------------------------------------------------------|

### 2.4/5.8GHz VSWR Return Loss



# System

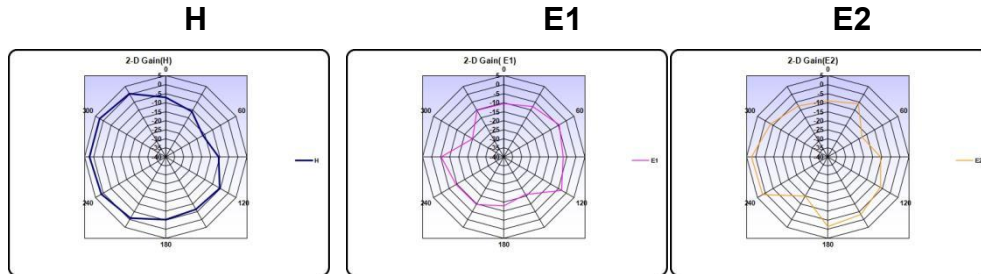


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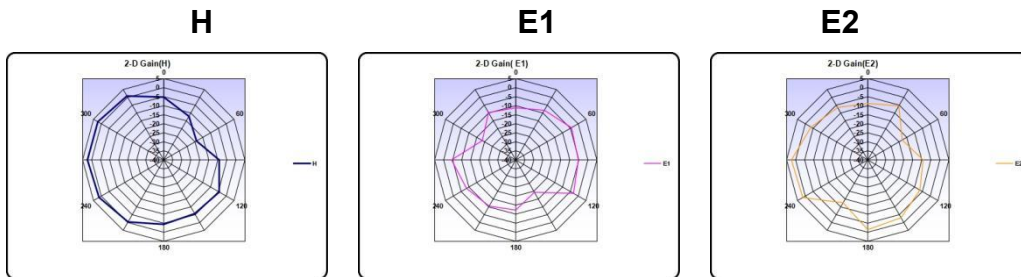
## 2D、3D Radiation Pattern

### Radiation Pattern

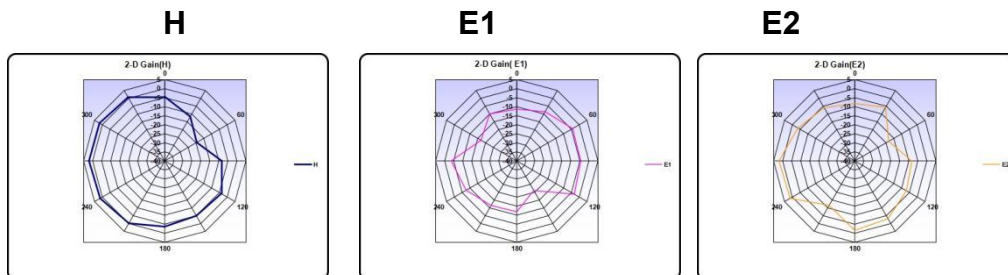
2.4GHz



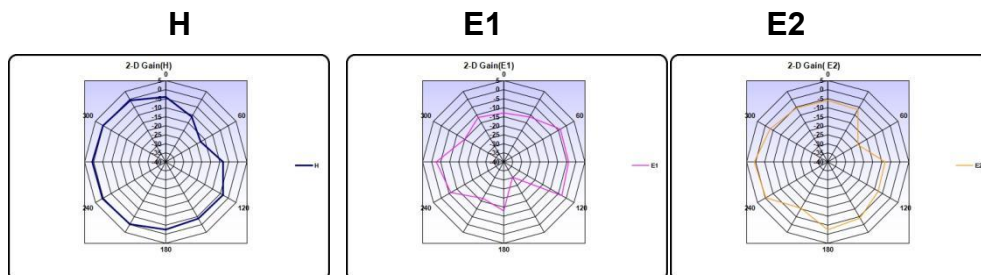
2.45GHz



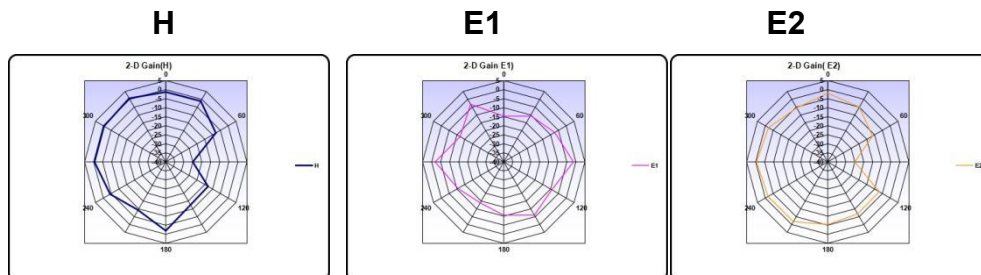
2.5GHz



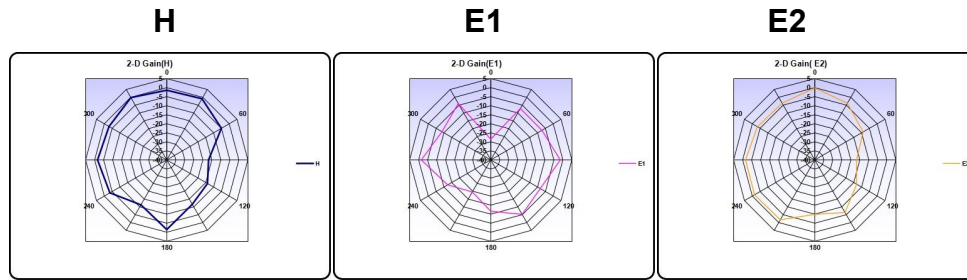
5.15GHz



5.55GHz



**5.85GHz**



**Summary  
VSWR**

|         | Antenna 1 |
|---------|-----------|
| 2400MHz | 1.51      |
| 2450MHz | 1.45      |
| 2500MHz | 1.47      |
| 5150MHz | 1.25      |
| 5550MHz | 1.35      |
| 5850MHz | 1.63      |

**3D Peak Gain & Efficiency**

| Frequency | Antel 2.4/5.8GHz |                |
|-----------|------------------|----------------|
|           | Peak Gain (dBi)  | Efficiency (%) |
| 2400      | 3.00             | 65.38          |
| 2450      | 2.78             | 63.26          |
| 2500      | 2.93             | 66.55          |
| 5150      | 2.65             | 63.48          |
| 5550      | 3.00             | 65.46          |
| 5850      | 2.69             | 62.35          |