

深圳市华创翔科技有限公司

SHEN ZHEN WACOSUN TECHNOLOGY CO, LTD

# 产品规格书

## PRODUCT SPECIFICATION SHEET

Customer: \_\_\_\_\_

Product Name: 2.4GHz Bluetooth onboard Antenna

Product code: HCX-TX-Module

Customer code: \_\_\_\_\_

Sample date: 2024-7-20

HCX Confirm:

| Approval | Quality | Engineer | Signature |
|----------|---------|----------|-----------|
| David    | Henry   | LISA     |           |



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## SPECIFICATION ITEM

| Item   | Description      |
|--------|------------------|
| 1..... | SPEC             |
| 2..... | SPEC ITEM        |
| 3..... | Engineer drawing |
| 4..... | Performance      |

## RF Antenna Cable Assembly

### Specification

#### 1. Electrical Properties

- 1.1 Frequency Range.....2.4GHz-2.5GHz
- 1.2 Impedance.....50 $\Omega$  Nominal
- 1.3 VSWR.....3.28 MAX
- 1.4 Return Loss.....-10dB Max
- 1.5 Gain(peak) .....0.42dBi
- 1.6 Cable loss.....0.02dBi Max
- 1.7 Polarization.....Linear Vertical
- 1.8 Conn.....N/A

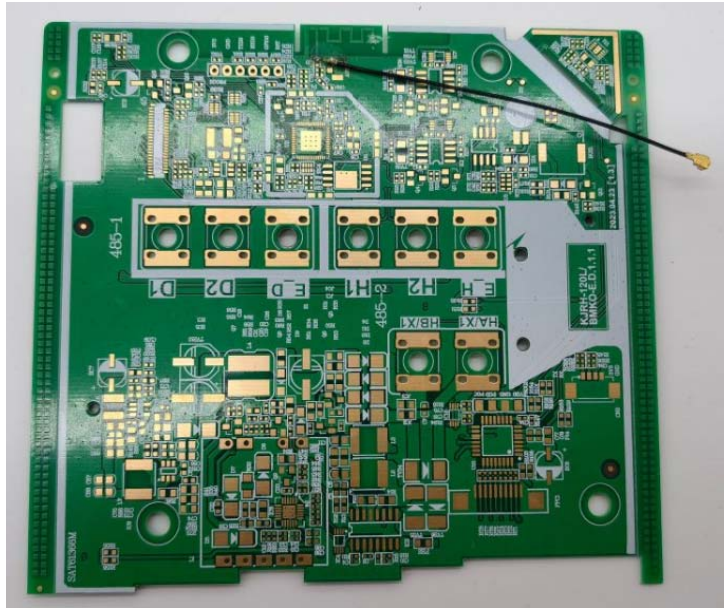
#### 2. Physical Properties:

- 2.1 Antenna Material.....Cu
- 2.2 Operating Temp.....-20°C- +65°C
- 2.3 Storage Temp.....-30°C- +75°C

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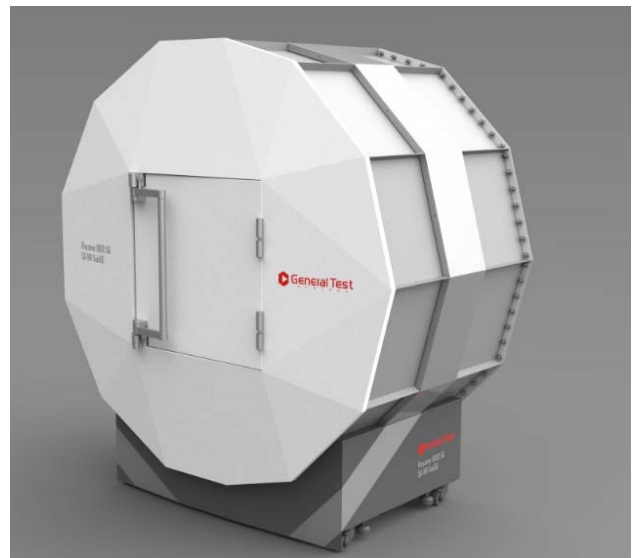
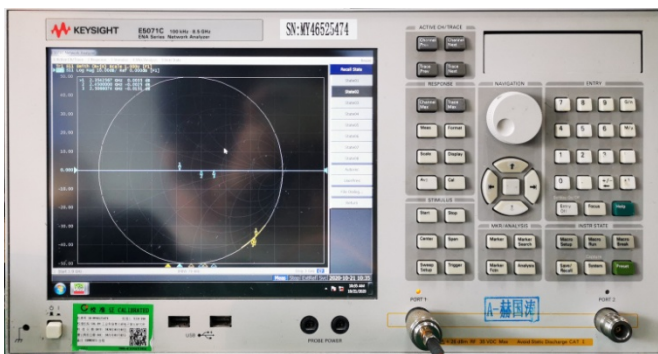
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Module onboard Antenna Test equipment  
SPEC:2.4GHz Bluetooth Antenna

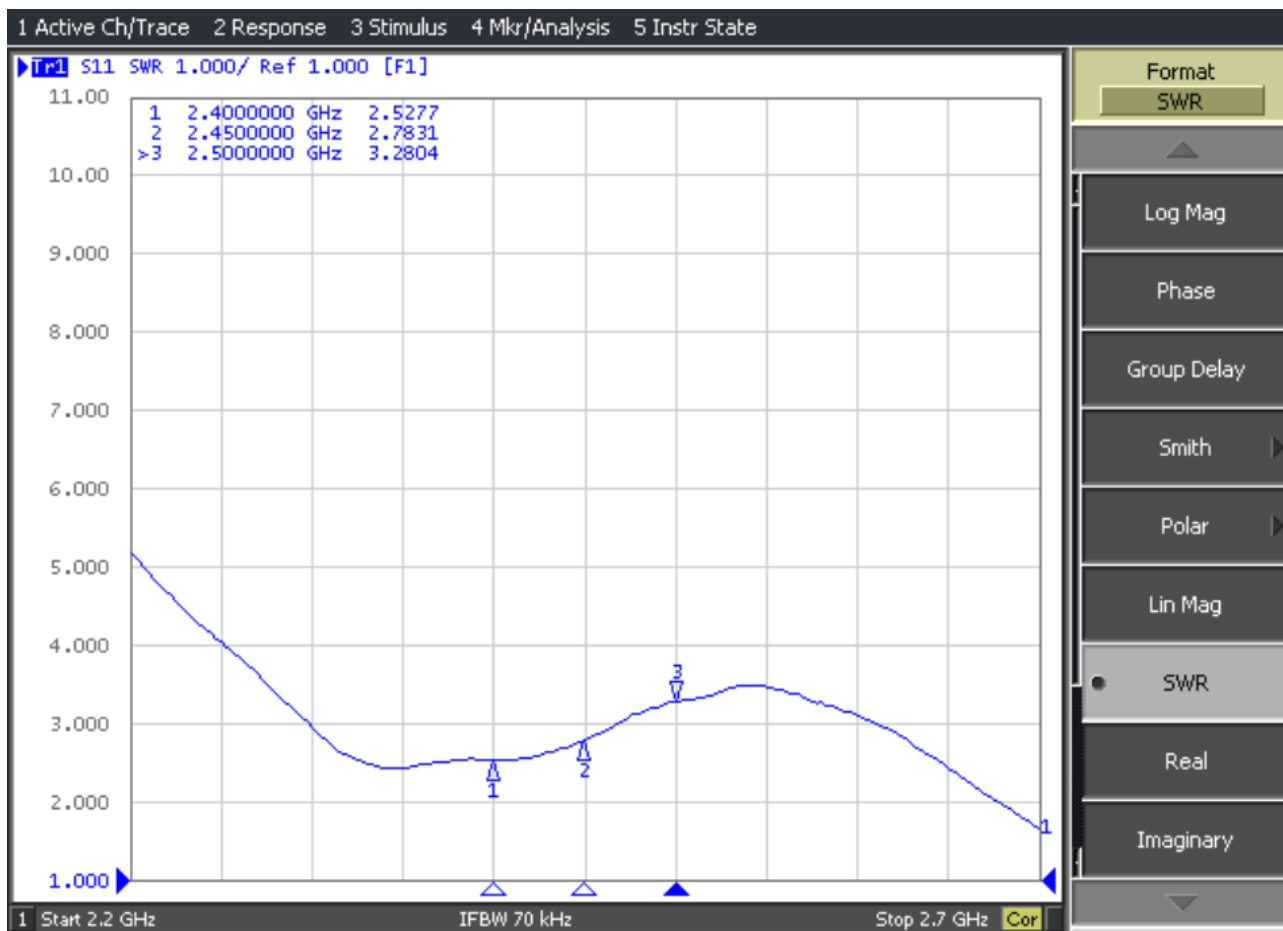


板载匹配电路: N/A

Module PCB Antenna



### 1.0 驻波比V.S.W.R



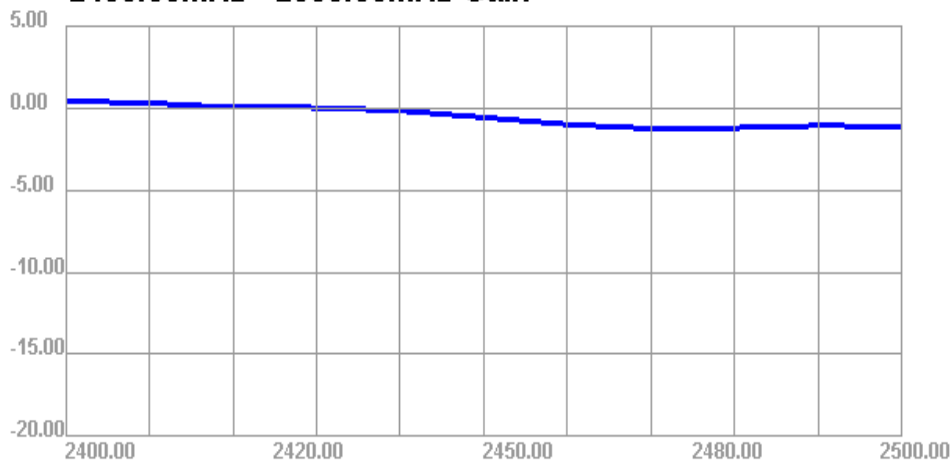
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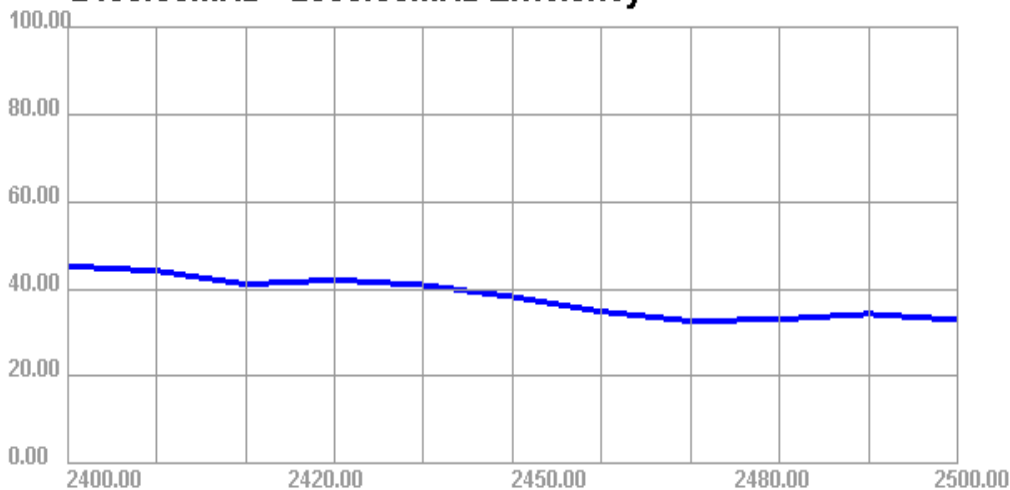
## 2.4Ghz Performance data:

| Passive Test For WIFI-2.4G |          |           |            |            |         |         |          |          |                 |                 |
|----------------------------|----------|-----------|------------|------------|---------|---------|----------|----------|-----------------|-----------------|
| Freq (MHz)                 | Effi (%) | Effi (dB) | Gain (dBi) | Gain (dBd) | UHS (%) | DHS (%) | Max (dB) | Min (dB) | irectivit (dBi) | Beamwidth (3dB) |
| 2400                       | 45.25    | -3.44     | 0.42       | -1.73      | 24.794  | 20.454  | 0.42     | -14.9    | 3.86            | 0               |
| 2410                       | 44.17    | -3.55     | 0.3        | -1.85      | 24.165  | 20.002  | 0.3      | -14.99   | 3.85            | 0               |
| 2420                       | 41.12    | -3.86     | 0.04       | -2.11      | 22.192  | 18.928  | 0.04     | -14.92   | 3.9             | 0               |
| 2430                       | 42.11    | -3.76     | 0.03       | -2.12      | 22.052  | 20.055  | 0.03     | -14.75   | 3.78            | 0               |
| 2440                       | 40.93    | -3.88     | -0.16      | -2.31      | 20.684  | 20.243  | -0.16    | -14.58   | 3.72            | 0               |
| 2450                       | 38.22    | -4.18     | -0.58      | -2.73      | 18.837  | 19.386  | -0.58    | -14.98   | 3.6             | 0               |
| 2460                       | 34.85    | -4.58     | -1         | -3.15      | 17.091  | 17.763  | -1       | -15.71   | 3.58            | 0               |
| 2470                       | 32.7     | -4.85     | -1.25      | -3.4       | 16.163  | 16.539  | -1.25    | -16.21   | 3.6             | 0               |
| 2480                       | 33.11    | -4.8      | -1.21      | -3.36      | 16.577  | 16.532  | -1.21    | -16.41   | 3.59            | 0               |
| 2490                       | 34.32    | -4.65     | -1.07      | -3.22      | 17.282  | 17.034  | -1.07    | -16.5    | 3.57            | 30              |
| 2500                       | 32.95    | -4.82     | -1.12      | -3.27      | 16.559  | 16.394  | -1.12    | -16.74   | 3.7             | 0               |

2400.00MHz - 2500.00MHz Gain



2400.00MHz - 2500.00MHz Efficiency



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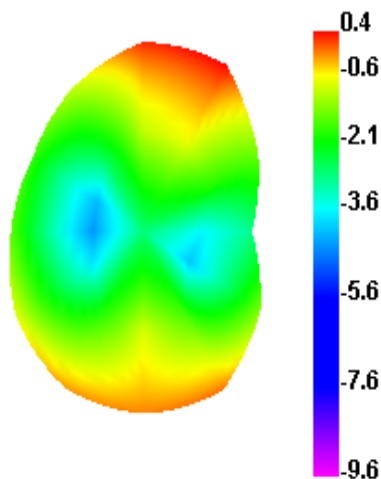
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Frequency:2.40GHz

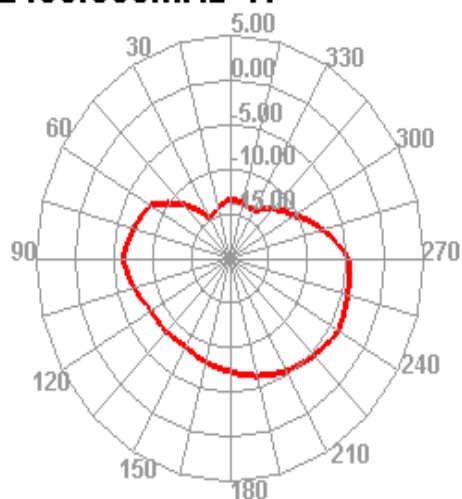
Peak Gain:0.4dBi

Efficiency:45.25%

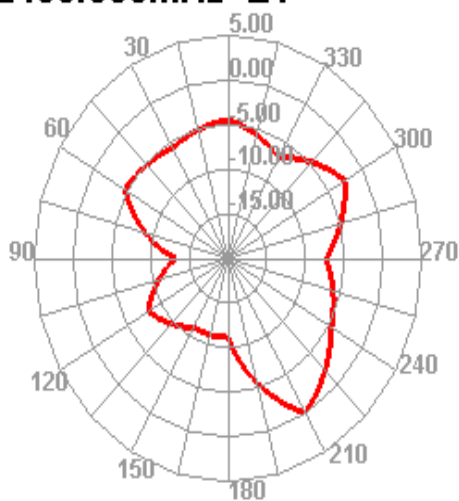
**2400.000MHz**



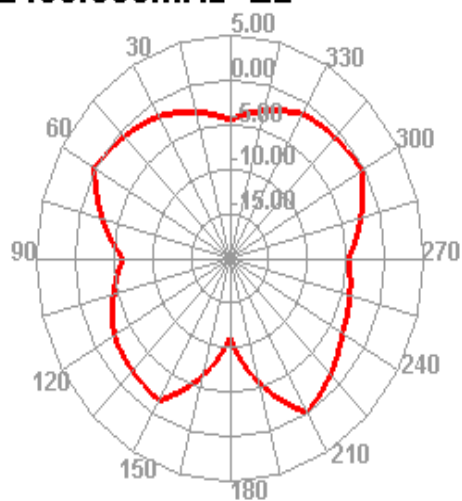
**2400.000MHz H**



**2400.000MHz E1**



**2400.000MHz E2**



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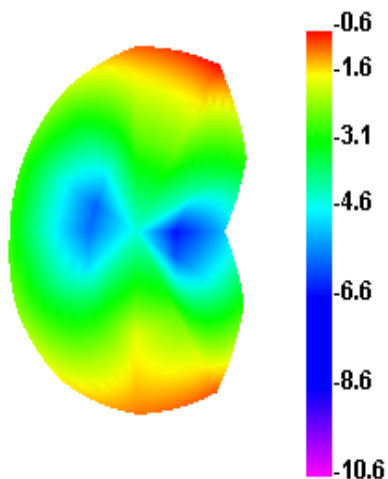
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Frequency:2.45GHz

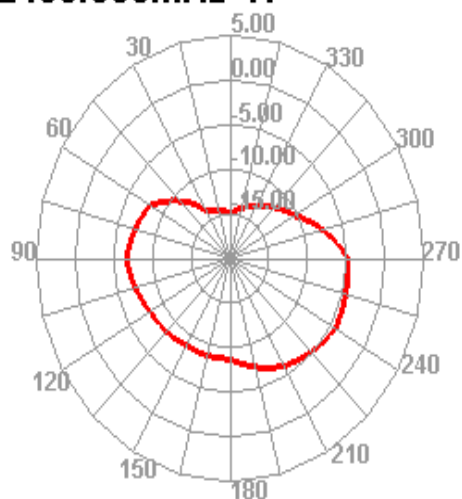
Peak Gain:-0.60dBi

Efficiency:38.22%

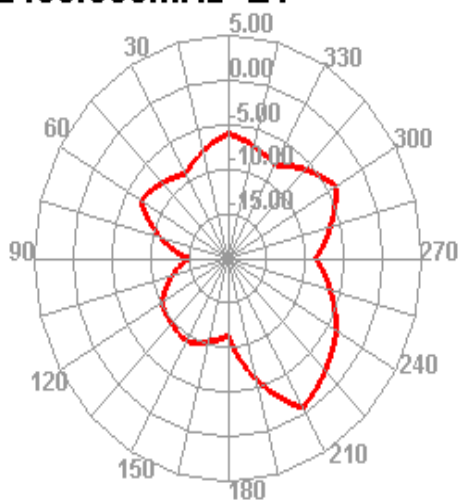
**2450.000MHz**



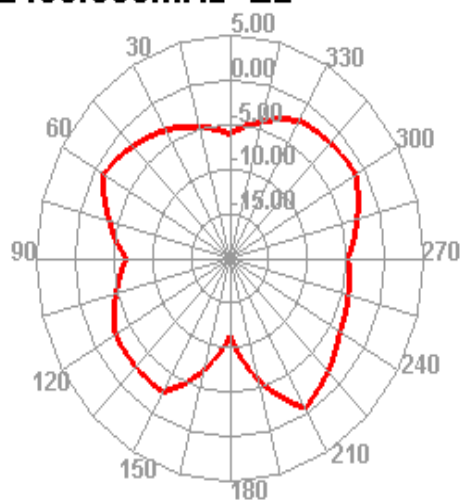
**2450.000MHz H**



**2450.000MHz E1**



**2450.000MHz E2**



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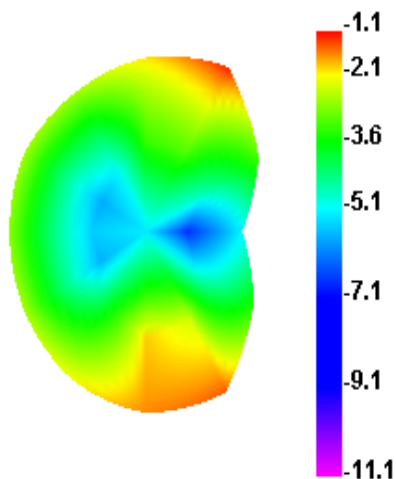
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Frequency:2.50GHz

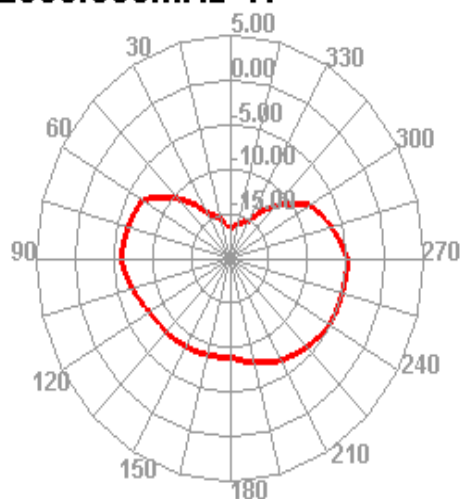
Peak Gain:-1.12dBi

Efficiency:32.95%

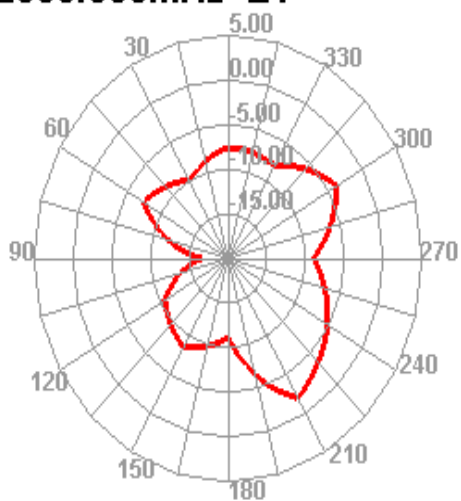
2500.000MHz



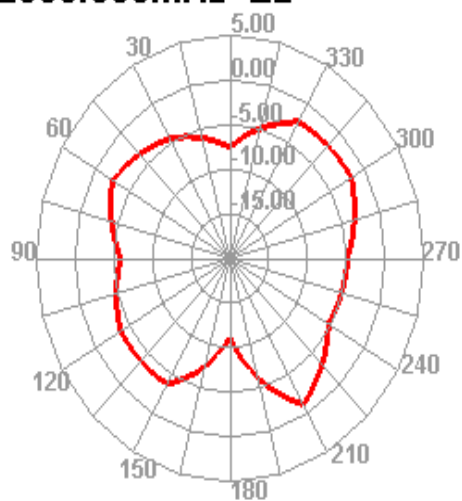
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



~~报告结束~~

~~The end~~